

## DTX Series CableAnalyzer Limit Line Values



## Software Version 1.2 July 2005

### Notes:

- If Insertion Loss is less than 3 dB, the value is recorded but not used for PASS/FAIL criteria.
- If Insertion Loss is less than 4 dB, the value is recorded but not used for PASS/FAIL criteria.
- The value is recorded but not used for PASS/FAIL criteria.

- DRAFT Augmented Category 6 limits have been updated to reflect the June 2005 TIA meeting
- DRAFT Augmented Class E limits have been added to reflect JTC1/SC25/WG3N746, collation of comments on working draft TR24750 and working draft of ISO/IEC 11801 2nd Edition Amendment 1.
- In the application directory, entries have been added to allow testing of mid span PoE, details of which can be found at <http://kb.flukenetworks.com/link.asp?sid=5&rid=9832>
- DTX PL Selftest ELFEXT limits have been corrected

# TIA Standards

**TIA Cat 3 Channel**

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|----|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 100 m  | 555         | 50         | 1     | 4.2    | 39.1 |    | 34.9 |        |         |        |           |
|                        |          |        |             |            | 4     | 7.3    | 29.3 |    | 22.0 |        |         |        |           |
|                        |          |        |             |            | 8     | 10.2   | 24.3 |    | 14.0 |        |         |        |           |
| 12345678S<br>12345678S |          |        |             |            | 10    | 11.5   | 22.7 |    | 11.2 |        |         |        |           |
|                        |          |        |             |            | 16    | 14.9   | 19.2 |    | 4.3  |        |         |        |           |

**TIA Cat 5e Channel**

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 100 m  | 555         | 50         | 1     | 3      | 60.0 | 17.0 | 57.0 | 57.4   | 57.0    | 54.0   | 54.4      |
|                        |          |        |             |            | 4     | 4.5    | 53.5 | 17.0 | 49.1 | 45.4   | 50.5    | 46.1   | 42.4      |
|                        |          |        |             |            | 8     | 6.3    | 48.6 | 17.0 | 42.3 | 39.3   | 45.6    | 39.3   | 36.3      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 7.1    | 47.0 | 17.0 | 39.9 | 37.4   | 44.0    | 36.9   | 34.4      |
|                        |          |        |             |            | 16    | 9.1    | 43.6 | 17.0 | 34.5 | 33.3   | 40.6    | 31.5   | 30.3      |
|                        |          |        |             |            | 20    | 10.2   | 42.0 | 17.0 | 31.8 | 31.4   | 39.0    | 28.8   | 28.4      |
|                        |          |        |             |            | 25    | 11.4   | 40.3 | 16.0 | 28.9 | 29.4   | 37.3    | 25.9   | 26.4      |
|                        |          |        |             |            | 31.25 | 12.9   | 38.7 | 15.1 | 25.9 | 27.5   | 35.7    | 22.9   | 24.5      |
|                        |          |        |             |            | 62.5  | 18.6   | 33.6 | 12.1 | 15.0 | 21.5   | 30.6    | 12.0   | 18.5      |
|                        |          |        |             |            | 100   | 24     | 30.1 | 10.0 | 6.1  | 17.4   | 27.1    | 3.1    | 14.4      |

**TIA Cat 6 Channel**

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 100 m  | 555         | 50         | 1     | 3      | 65.0 | 19.0 | 62.0 | 63.3   | 62.0    | 59.0   | 60.3      |
|                        |          |        |             |            | 4     | 4      | 63.0 | 19.0 | 59.0 | 51.2   | 60.5    | 56.5   | 48.2      |
|                        |          |        |             |            | 8     | 5.7    | 58.2 | 19.0 | 52.5 | 45.2   | 55.6    | 49.9   | 42.2      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 6.3    | 56.6 | 19.0 | 50.2 | 43.3   | 54.0    | 47.7   | 40.3      |
|                        |          |        |             |            | 16    | 8      | 53.2 | 18.0 | 45.2 | 39.2   | 50.6    | 42.6   | 36.2      |
|                        |          |        |             |            | 20    | 9      | 51.6 | 17.5 | 42.6 | 37.2   | 49.0    | 39.9   | 34.2      |
|                        |          |        |             |            | 25    | 10.1   | 50.0 | 17.0 | 39.9 | 35.3   | 47.3    | 37.2   | 32.3      |
|                        |          |        |             |            | 31.25 | 11.4   | 48.4 | 16.5 | 37.0 | 33.4   | 45.7    | 34.3   | 30.4      |
|                        |          |        |             |            | 62.5  | 16.5   | 43.4 | 14.0 | 26.9 | 27.3   | 40.6    | 24.1   | 24.3      |
|                        |          |        |             |            | 100   | 21.3   | 39.9 | 12.0 | 18.6 | 23.3   | 37.1    | 15.8   | 20.3      |
|                        |          |        |             |            | 200   | 31.5   | 34.8 | 9.0  | 3.3  | 17.2   | 31.9    | 0.3    | 14.2      |
|                        |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  | -2.8 | 15.3   | 30.2    | -5.8   | 12.3      |

TIA AugCat 6 Ch dr 1.4b

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | 100 m  | 555         | 50         | 1     | 3      | 65.0 | 19.0 |     | 63.3   | 62.0    |        | 60.3      |
|                      |          |        |             |            | 4     | 4.1    | 63.0 | 19.0 |     | 51.2   | 60.5    |        | 48.2      |
|                      |          |        |             |            | 8     | 5.7    | 58.2 | 19.0 |     | 45.2   | 55.6    |        | 42.2      |
| 12345678S            |          |        |             |            | 10    | 6.4    | 56.6 | 19.0 |     | 43.3   | 54.0    |        | 40.3      |
| 12345678S            |          |        |             |            | 16    | 8.1    | 53.2 | 18.0 |     | 39.2   | 50.6    |        | 36.2      |
|                      |          |        |             |            | 20    | 9.1    | 51.6 | 17.5 |     | 37.2   | 49.0    |        | 34.2      |
|                      |          |        |             |            | 25    | 10.2   | 50.0 | 17.0 |     | 35.3   | 47.3    |        | 32.3      |
|                      |          |        |             |            | 31.25 | 11.4   | 48.4 | 16.5 |     | 33.4   | 45.7    |        | 30.4      |
|                      |          |        |             |            | 62.5  | 16.3   | 43.4 | 14.0 |     | 27.3   | 40.6    |        | 24.3      |
|                      |          |        |             |            | 100   | 20.8   | 39.9 | 12.0 |     | 23.3   | 37.1    |        | 20.3      |
|                      |          |        |             |            | 200   | 30     | 34.8 | 9.0  |     | 17.2   | 31.9    |        | 14.2      |
|                      |          |        |             |            | 250   | 33.8   | 33.1 | 8.0  |     | 15.3   | 30.2    |        | 12.3      |
|                      |          |        |             |            | 350   | 40.5   | 30.2 | 6.6  |     | 12.4   | 27.2    |        | 9.4       |
|                      |          |        |             |            | 500   | 49.3   | 24.9 | 6.0  |     | 9.3    | 21.8    |        | 6.3       |

TIA TSB155 Ch dr 1.3.2 0-55m

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | 555         | 50         | 1     | 3      | 65.0 | 19.0 |     | 63.3   | 62.0    |        | 60.3      |
|                      |          |        |             |            | 4     | 3      | 63.0 | 19.0 |     | 51.2   | 60.5    |        | 48.2      |
|                      |          |        |             |            | 8     | 3.3    | 58.2 | 19.0 |     | 45.2   | 55.6    |        | 42.2      |
| 12345678S            |          |        |             |            | 10    | 3.7    | 56.6 | 19.0 |     | 43.3   | 54.0    |        | 40.3      |
| 12345678S            |          |        |             |            | 16    | 4.7    | 53.2 | 18.0 |     | 39.2   | 50.6    |        | 36.2      |
|                      |          |        |             |            | 20    | 5.3    | 51.6 | 17.5 |     | 37.2   | 49.0    |        | 34.2      |
|                      |          |        |             |            | 25    | 5.9    | 50.0 | 17.0 |     | 35.3   | 47.3    |        | 32.3      |
|                      |          |        |             |            | 31.25 | 6.7    | 48.4 | 16.5 |     | 33.4   | 45.7    |        | 30.4      |
|                      |          |        |             |            | 62.5  | 9.6    | 43.4 | 14.0 |     | 27.3   | 40.6    |        | 24.3      |
|                      |          |        |             |            | 100   | 12.3   | 39.9 | 12.0 |     | 23.3   | 37.1    |        | 20.3      |
|                      |          |        |             |            | 200   | 18     | 34.8 | 9.0  |     | 17.2   | 31.9    |        | 14.2      |
|                      |          |        |             |            | 250   | 20.3   | 33.1 | 8.0  |     | 15.3   | 30.2    |        | 12.3      |
|                      |          |        |             |            | 350   | 24.6   | 29.7 | 6.6  |     | 12.4   | 26.9    |        | 9.4       |
|                      |          |        |             |            | 500   | 30.2   | 22.0 | 6.0  |     | 9.3    | 20.4    |        | 6.3       |

TIA TSB155 Ch dr1.3.2 55-100m

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | 100 m  | 555         | 50         | 1     | 3      | 65.0 | 19.0 |     | 63.3   | 62.0    |        | 60.3      |
|                      |          |        |             |            | 4     | 4      | 63.0 | 19.0 |     | 51.2   | 60.5    |        | 48.2      |
|                      |          |        |             |            | 8     | 5.7    | 58.2 | 19.0 |     | 45.2   | 55.6    |        | 42.2      |
| 12345678S            |          |        |             |            | 10    | 6.3    | 56.6 | 19.0 |     | 43.3   | 54.0    |        | 40.3      |
| 12345678S            |          |        |             |            | 16    | 8      | 53.2 | 18.0 |     | 39.2   | 50.6    |        | 36.2      |
|                      |          |        |             |            | 20    | 9      | 51.6 | 17.5 |     | 37.2   | 49.0    |        | 34.2      |
|                      |          |        |             |            | 25    | 10.1   | 50.0 | 17.0 |     | 35.3   | 47.3    |        | 32.3      |
|                      |          |        |             |            | 31.25 | 11.4   | 48.4 | 16.5 |     | 33.4   | 45.7    |        | 30.4      |
|                      |          |        |             |            | 62.5  | 16.5   | 43.4 | 14.0 |     | 27.3   | 40.6    |        | 24.3      |
|                      |          |        |             |            | 100   | 21.3   | 39.9 | 12.0 |     | 23.3   | 37.1    |        | 20.3      |
|                      |          |        |             |            | 200   | 31.5   | 34.8 | 9.0  |     | 17.2   | 31.9    |        | 14.2      |
|                      |          |        |             |            | 250   | 36     | 33.1 | 8.0  |     | 15.3   | 30.2    |        | 12.3      |
|                      |          |        |             |            | 350   | 43.5   | 29.7 | 6.6  |     | 12.4   | 26.9    |        | 9.4       |
|                      |          |        |             |            | 500   | 53.4   | 22.0 | 6.0  |     | 9.3    | 20.4    |        | 6.3       |

#### TIA Cat 3 Perm. Link

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|----|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 90 m   | 498         | 44         | 1     | 3.5    | 40.1 |    | 36.6 |        |         |        |           |
|                        |          |        |             |            | 4     | 6.2    | 30.6 |    | 24.4 |        |         |        |           |
|                        |          |        |             |            | 8     | 8.8    | 25.8 |    | 17.0 |        |         |        |           |
| 12345678S<br>12345678S |          |        |             |            | 10    | 9.9    | 24.3 |    | 14.3 |        |         |        |           |
|                        |          |        |             |            | 16    | 13     | 21.0 |    | 8.0  |        |         |        |           |

#### TIA Cat 5e Perm. Link

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 90 m   | 498         | 44         | 1     | 3      | 60.0 | 19.0 | 57.0 | 58.6   | 57.0    | 54.0   | 55.6      |
|                        |          |        |             |            | 4     | 3.9    | 54.8 | 19.0 | 50.9 | 46.6   | 51.8    | 47.9   | 43.6      |
|                        |          |        |             |            | 8     | 5.5    | 50.0 | 19.0 | 44.5 | 40.6   | 47.0    | 41.5   | 37.6      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 6.2    | 48.5 | 19.0 | 42.3 | 38.6   | 45.5    | 39.3   | 35.6      |
|                        |          |        |             |            | 16    | 7.9    | 45.2 | 19.0 | 37.3 | 34.5   | 42.2    | 34.3   | 31.5      |
|                        |          |        |             |            | 20    | 8.9    | 43.7 | 19.0 | 34.8 | 32.6   | 40.7    | 31.8   | 29.6      |
|                        |          |        |             |            | 25    | 10     | 42.1 | 18.0 | 32.1 | 30.7   | 39.1    | 29.1   | 27.7      |
|                        |          |        |             |            | 31.25 | 11.2   | 40.5 | 17.1 | 29.3 | 28.7   | 37.5    | 26.3   | 25.7      |
|                        |          |        |             |            | 62.5  | 16.2   | 35.7 | 14.1 | 19.4 | 22.7   | 32.7    | 16.4   | 19.7      |
|                        |          |        |             |            | 100   | 21     | 32.3 | 12.0 | 11.3 | 18.6   | 29.3    | 8.3    | 15.6      |

#### TIA Cat 6 Perm. Link

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 90 m   | 498         | 44         | 1     | 3      | 65.0 | 19.1 | 62.0 | 64.2   | 62.0    | 59.0   | 61.2      |
|                        |          |        |             |            | 4     | 3.5    | 64.1 | 21.0 | 60.6 | 52.1   | 61.8    | 58.3   | 49.1      |
|                        |          |        |             |            | 8     | 5      | 59.4 | 21.0 | 54.4 | 46.1   | 57.0    | 52.1   | 43.1      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 5.5    | 57.8 | 21.0 | 52.3 | 44.2   | 55.5    | 49.9   | 41.2      |
|                        |          |        |             |            | 16    | 7      | 54.6 | 20.0 | 47.6 | 40.1   | 52.2    | 45.2   | 37.1      |
|                        |          |        |             |            | 20    | 7.9    | 53.1 | 19.5 | 45.2 | 38.2   | 50.7    | 42.8   | 35.2      |
|                        |          |        |             |            | 25    | 8.9    | 51.5 | 19.0 | 42.7 | 36.2   | 49.1    | 40.2   | 33.2      |
|                        |          |        |             |            | 31.25 | 10     | 50.0 | 18.5 | 40.0 | 34.3   | 47.5    | 37.6   | 31.3      |
|                        |          |        |             |            | 62.5  | 14.4   | 45.1 | 16.0 | 30.8 | 28.3   | 42.7    | 28.3   | 25.3      |
|                        |          |        |             |            | 100   | 18.6   | 41.8 | 14.0 | 23.3 | 24.2   | 39.3    | 20.7   | 21.2      |
|                        |          |        |             |            | 200   | 27.4   | 36.9 | 11.0 | 9.6  | 18.2   | 34.3    | 7.0    | 15.2      |
|                        |          |        |             |            | 250   | 31.1   | 35.3 | 10.0 | 4.2  | 16.2   | 32.7    | 1.6    | 13.2      |

TIA AugCat 6 PL dr 1.4b

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 90 m   | 498         | 44         | 1     | 3      | 65.0 | 19.1 |     | 64.2   | 62.0    |        | 61.2      |
|                        |          |        |             |            | 4     | 3.5    | 64.1 | 21.0 |     | 52.1   | 61.8    |        | 49.1      |
|                        |          |        |             |            | 8     | 4.9    | 59.4 | 21.0 |     | 46.1   | 57.0    |        | 43.1      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 5.5    | 57.8 | 21.0 |     | 44.2   | 55.5    |        | 41.2      |
|                        |          |        |             |            | 16    | 6.9    | 54.6 | 20.0 |     | 40.1   | 52.2    |        | 37.1      |
|                        |          |        |             |            | 20    | 7.7    | 53.1 | 19.5 |     | 38.2   | 50.7    |        | 35.2      |
|                        |          |        |             |            | 25    | 8.7    | 51.5 | 19.0 |     | 36.2   | 49.1    |        | 33.2      |
|                        |          |        |             |            | 31.25 | 9.7    | 50.0 | 18.5 |     | 34.3   | 47.5    |        | 31.3      |
|                        |          |        |             |            | 62.5  | 13.9   | 45.1 | 16.0 |     | 28.3   | 42.7    |        | 25.3      |
|                        |          |        |             |            | 100   | 17.9   | 41.8 | 14.0 |     | 24.2   | 39.3    |        | 21.2      |
|                        |          |        |             |            | 200   | 26     | 36.9 | 11.0 |     | 18.2   | 34.3    |        | 15.2      |
|                        |          |        |             |            | 250   | 29.4   | 35.3 | 10.0 |     | 16.2   | 32.7    |        | 13.2      |
|                        |          |        |             |            | 350   | 35.6   | 31.8 | 7.1  |     | 13.3   | 29.1    |        | 10.3      |
|                        |          |        |             |            | 500   | 43.8   | 26.7 | 6.0  |     | 10.2   | 23.8    |        | 7.2       |

TIA TSB155 PL dr 1.3.2 0-45m

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 90 m   | 498         | 44         | 1     | 3      | 65.0 | 19.1 |     | 64.2   | 62.0    |        | 61.2      |
|                        |          |        |             |            | 4     | 3      | 64.1 | 21.0 |     | 52.1   | 61.8    |        | 49.1      |
|                        |          |        |             |            | 8     | 3      | 59.4 | 21.0 |     | 46.1   | 57.0    |        | 43.1      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 3      | 57.8 | 21.0 |     | 44.2   | 55.5    |        | 41.2      |
|                        |          |        |             |            | 16    | 3.6    | 54.6 | 20.0 |     | 40.1   | 52.2    |        | 37.1      |
|                        |          |        |             |            | 20    | 4.1    | 53.1 | 19.5 |     | 38.2   | 50.7    |        | 35.2      |
|                        |          |        |             |            | 25    | 4.6    | 51.5 | 19.0 |     | 36.2   | 49.1    |        | 33.2      |
|                        |          |        |             |            | 31.25 | 5.2    | 50.0 | 18.5 |     | 34.3   | 47.5    |        | 31.3      |
|                        |          |        |             |            | 62.5  | 7.5    | 45.1 | 16.0 |     | 28.3   | 42.7    |        | 25.3      |
|                        |          |        |             |            | 100   | 9.7    | 41.8 | 14.0 |     | 24.2   | 39.3    |        | 21.2      |
|                        |          |        |             |            | 200   | 14.3   | 36.9 | 11.0 |     | 18.2   | 34.3    |        | 15.2      |
|                        |          |        |             |            | 250   | 16.3   | 35.3 | 10.0 |     | 16.2   | 32.7    |        | 13.2      |
|                        |          |        |             |            | 350   | 20     | 30.8 | 7.1  |     | 13.3   | 28.7    |        | 10.3      |
|                        |          |        |             |            | 500   | 25     | 23.4 | 6.0  |     | 10.2   | 22.5    |        | 7.2       |

TIA TSB155 PL dr 1.3.2 45-90m

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 90 m   | 498         | 44         | 1     | 3      | 65.0 | 19.1 |     | 64.2   | 62.0    |        | 61.2      |
|                        |          |        |             |            | 4     | 3.5    | 64.1 | 21.0 |     | 52.1   | 61.8    |        | 49.1      |
|                        |          |        |             |            | 8     | 5      | 59.4 | 21.0 |     | 46.1   | 57.0    |        | 43.1      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 5.6    | 57.8 | 21.0 |     | 44.2   | 55.5    |        | 41.2      |
|                        |          |        |             |            | 16    | 7      | 54.6 | 20.0 |     | 40.1   | 52.2    |        | 37.1      |
|                        |          |        |             |            | 20    | 7.9    | 53.1 | 19.5 |     | 38.2   | 50.7    |        | 35.2      |
|                        |          |        |             |            | 25    | 8.9    | 51.5 | 19.0 |     | 36.2   | 49.1    |        | 33.2      |
|                        |          |        |             |            | 31.25 | 10     | 50.0 | 18.5 |     | 34.3   | 47.5    |        | 31.3      |
|                        |          |        |             |            | 62.5  | 14.4   | 45.1 | 16.0 |     | 28.3   | 42.7    |        | 25.3      |
|                        |          |        |             |            | 100   | 18.6   | 41.8 | 14.0 |     | 24.2   | 39.3    |        | 21.2      |
|                        |          |        |             |            | 200   | 27.4   | 36.9 | 11.0 |     | 18.2   | 34.3    |        | 15.2      |
|                        |          |        |             |            | 250   | 31.1   | 35.3 | 10.0 |     | 16.2   | 32.7    |        | 13.2      |
|                        |          |        |             |            | 350   | 37.9   | 30.8 | 7.1  |     | 13.3   | 28.7    |        | 10.3      |
|                        |          |        |             |            | 500   | 47.1   | 23.4 | 6.0  |     | 10.2   | 22.5    |        | 7.2       |

**TIA Cat 5 Ch (TSB-95)**

**OBSOLETE STANDARD**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | i        | 100 m  | 555         | 50         | 1     | 3      | 60.0 | 15.0 | 57.0 | 57.0   |         |        | 54.4      |
| 12345678  |          |        |             |            | 4     | 4.5    | 50.6 | 15.0 | 46.1 | 45.0   |         |        | 42.4      |
|           |          |        |             |            | 8     | 6.3    | 45.6 | 15.0 | 39.3 | 38.9   |         |        | 36.3      |
| 12345678S |          |        |             |            | 10    | 7.1    | 44.0 | 15.0 | 36.9 | 37.0   |         |        | 34.4      |
| 12345678S |          |        |             |            | 16    | 9.1    | 40.6 | 15.0 | 31.6 | 32.9   |         |        | 30.3      |
|           |          |        |             |            | 20    | 10.2   | 39.0 | 15.0 | 28.8 | 31.0   |         |        | 28.4      |
|           |          |        |             |            | 25    | 11.4   | 37.4 | 14.0 | 26.0 | 29.0   |         |        | 26.4      |
|           |          |        |             |            | 31.25 | 12.9   | 35.7 | 13.1 | 22.9 | 27.1   |         |        | 24.5      |
|           |          |        |             |            | 62.5  | 18.6   | 30.6 | 10.1 | 12.0 | 21.1   |         |        | 18.5      |
|           |          |        |             |            | 100   | 24     | 27.1 | 8.0  | 3.1  | 17.0   |         |        | 14.4      |

**TIA Cat 5 Ch (TSB-67)**

**OBSOLETE STANDARD**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | 90 m   | 498         | 44         | 1     | 3      | 60.3 |    |     |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 4.5    | 50.6 |    |     |        |         |        |           |
|           |          |        |             |            | 8     | 6.3    | 45.6 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 7      | 44.0 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 9.2    | 40.6 |    |     |        |         |        |           |
|           |          |        |             |            | 20    | 10.3   | 39.0 |    |     |        |         |        |           |
|           |          |        |             |            | 25    | 11.4   | 37.4 |    |     |        |         |        |           |
|           |          |        |             |            | 31.25 | 12.8   | 35.7 |    |     |        |         |        |           |
|           |          |        |             |            | 62.5  | 18.5   | 30.6 |    |     |        |         |        |           |
|           |          |        |             |            | 100   | 24     | 27.1 |    |     |        |         |        |           |

**TIA Cat 5 Ch (TSB-67)**

**OBSOLETE STANDARD**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | 100 m  | 555         | 50         | 1     | 3      | 60.3 |    |     |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 4.5    | 50.6 |    |     |        |         |        |           |
|           |          |        |             |            | 8     | 6.3    | 45.6 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 7      | 44.0 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 9.2    | 40.6 |    |     |        |         |        |           |
|           |          |        |             |            | 20    | 10.3   | 39.0 |    |     |        |         |        |           |
|           |          |        |             |            | 25    | 11.4   | 37.4 |    |     |        |         |        |           |
|           |          |        |             |            | 31.25 | 12.8   | 35.7 |    |     |        |         |        |           |
|           |          |        |             |            | 62.5  | 18.5   | 30.6 |    |     |        |         |        |           |
|           |          |        |             |            | 100   | 24     | 27.1 |    |     |        |         |        |           |

TIA Cat 5 BL (TSB-67)

**OBSOLETE STANDARD**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | 94 m   | i           | 50 ns      | 1     | 3      | 61.3 |    |     |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 4      | 51.8 |    |     |        |         |        |           |
|           |          |        |             |            | 8     | 5.7    | 47.1 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 6.3    | 45.5 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 8.2    | 42.3 |    |     |        |         |        |           |
|           |          |        |             |            | 20    | 9.2    | 40.7 |    |     |        |         |        |           |
|           |          |        |             |            | 25    | 10.3   | 39.1 |    |     |        |         |        |           |
|           |          |        |             |            | 31.25 | 11.5   | 37.6 |    |     |        |         |        |           |
|           |          |        |             |            | 62.5  | 16.7   | 32.7 |    |     |        |         |        |           |
|           |          |        |             |            | 100   | 21.6   | 29.3 |    |     |        |         |        |           |

# ISO Standards

**ISO11801 Channel Class C**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | 40       | i      | 555         | 50         | 1     | 4.2    | 39.1 | 15.0 | 34.9 |        |         |        |           |
|                      |          |        |             |            | 4     | 7.6    | 29.2 | 15.0 | 21.6 |        |         |        |           |
|                      |          |        |             |            | 8     | 10.4   | 24.3 | 15.0 | 13.9 |        |         |        |           |
| 12345678S            |          |        |             |            | 10    | 11.5   | 22.7 | 15.0 | 11.2 |        |         |        |           |
| 12345678S            |          |        |             |            | 16    | 14.4   | 19.4 | 15.0 | 5.0  |        |         |        |           |

**ISO11801 Channel Class D**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | 25       | i      | 555         | 50         | 1     | 4      | 60.0 | 17.0 | 56.0 | 57.4   | 57.0    | 53.0   | 54.4      |
|                      |          |        |             |            | 4     | 4.5    | 53.5 | 17.0 | 49.0 | 45.4   | 50.5    | 46.0   | 42.4      |
|                      |          |        |             |            | 8     | 6.4    | 48.6 | 17.0 | 42.2 | 39.3   | 45.6    | 39.2   | 36.3      |
| 12345678S            |          |        |             |            | 10    | 7.2    | 47.0 | 17.0 | 39.8 | 37.4   | 44.0    | 36.8   | 34.4      |
| 12345678S            |          |        |             |            | 16    | 9.1    | 43.6 | 17.0 | 34.5 | 33.3   | 40.6    | 31.5   | 30.3      |
|                      |          |        |             |            | 20    | 10.2   | 42.0 | 17.0 | 31.8 | 31.4   | 39.0    | 28.8   | 28.4      |
|                      |          |        |             |            | 25    | 11.5   | 40.3 | 16.0 | 28.9 | 29.4   | 37.3    | 25.9   | 26.4      |
|                      |          |        |             |            | 31.25 | 12.9   | 38.7 | 15.1 | 25.8 | 27.5   | 35.7    | 22.8   | 24.5      |
|                      |          |        |             |            | 62.5  | 18.6   | 33.6 | 12.0 | 15.0 | 21.5   | 30.6    | 12.0   | 18.5      |
|                      |          |        |             |            | 100   | 24     | 30.1 | 10.0 | 6.1  | 17.4   | 27.1    | 3.1    | 14.4      |

**ISO11801 Channel Class E**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 63.3   | 62.0    | 58.0   | 60.3      |
|                      |          |        |             |            | 4     | 4.2    | 63.0 | 19.0 | 58.9 | 51.2   | 60.5    | 56.4   | 48.2      |
|                      |          |        |             |            | 8     | 5.9    | 58.2 | 19.0 | 52.3 | 45.2   | 55.6    | 49.7   | 42.2      |
| 12345678S            |          |        |             |            | 10    | 6.6    | 56.6 | 19.0 | 50.0 | 43.3   | 54.0    | 47.4   | 40.3      |
| 12345678S            |          |        |             |            | 16    | 8.3    | 53.2 | 18.0 | 44.9 | 39.2   | 50.6    | 42.3   | 36.2      |
|                      |          |        |             |            | 20    | 9.3    | 51.6 | 17.5 | 42.3 | 37.2   | 49.0    | 39.7   | 34.2      |
|                      |          |        |             |            | 25    | 10.5   | 50.0 | 17.0 | 39.6 | 35.3   | 47.3    | 36.9   | 32.3      |
|                      |          |        |             |            | 31.25 | 11.7   | 48.4 | 16.5 | 36.7 | 33.4   | 45.7    | 34.0   | 30.4      |
|                      |          |        |             |            | 62.5  | 16.9   | 43.4 | 14.0 | 26.5 | 27.3   | 40.6    | 23.7   | 24.3      |
|                      |          |        |             |            | 100   | 21.7   | 39.9 | 12.0 | 18.2 | 23.3   | 37.1    | 15.4   | 20.3      |
|                      |          |        |             |            | 200   | 31.7   | 34.8 | 9.0  | 3.1  | 17.2   | 31.9    | 0.1    | 14.2      |
|                      |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  | -2.8 | 15.3   | 30.2    | -5.8   | 12.3      |

**ISO11801 Channel Class F**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                                                    |          |        |             |            | 4     | 4.1    | 65.0 | 19.0 | 60.9 | 65.0   | 62.0    | 57.9   | 62.0      |
|                                                    |          |        |             |            | 8     | 5.7    | 65.0 | 19.0 | 59.3 | 62.4   | 62.0    | 56.3   | 59.4      |
|                                                    |          |        |             |            | 10    | 6.4    | 65.0 | 19.0 | 58.6 | 60.8   | 62.0    | 55.6   | 57.8      |
|                                                    |          |        |             |            | 16    | 8.1    | 65.0 | 18.0 | 56.9 | 57.5   | 62.0    | 53.9   | 54.5      |
|                                                    |          |        |             |            | 20    | 9.1    | 65.0 | 17.5 | 55.9 | 55.9   | 62.0    | 52.9   | 52.9      |
|                                                    |          |        |             |            | 25    | 10.2   | 65.0 | 17.0 | 54.8 | 54.4   | 62.0    | 51.8   | 51.4      |
|                                                    |          |        |             |            | 31.25 | 11.4   | 65.0 | 16.5 | 53.6 | 52.8   | 62.0    | 50.6   | 49.8      |
|                                                    |          |        |             |            | 62.5  | 16.3   | 65.0 | 14.0 | 48.7 | 47.8   | 62.0    | 45.7   | 44.8      |
|                                                    |          |        |             |            | 100   | 20.8   | 62.9 | 12.0 | 42.1 | 44.4   | 59.9    | 39.1   | 41.4      |
|                                                    |          |        |             |            | 200   | 30     | 58.3 | 9.0  | 28.4 | 39.4   | 55.3    | 25.4   | 36.4      |
|                                                    |          |        |             |            | 250   | 33.8   | 56.9 | 8.0  | 23.1 | 37.8   | 53.9    | 20.1   | 34.8      |
|                                                    |          |        |             |            | 600   | 54.6   | 51.2 | 8.0  | -3.4 | 31.3   | 48.2    | -6.4   | 28.3      |

**ISO TR24750 Ch 3N746 0-55m**

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 25       |        | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 63.3   | 62.0    | 58.0   | 60.3      |
|                                                    |          |        |             |            | 4     | 4      | 63.0 | 19.0 | 59.0 | 51.2   | 60.5    | 56.5   | 48.2      |
|                                                    |          |        |             |            | 8     | 4      | 58.2 | 19.0 | 54.2 | 45.2   | 55.6    | 51.6   | 42.2      |
|                                                    |          |        |             |            | 10    | 4      | 56.6 | 19.0 | 52.6 | 43.3   | 54.0    | 50.0   | 40.3      |
|                                                    |          |        |             |            | 16    | 4.7    | 53.2 | 18.0 | 48.5 | 39.2   | 50.6    | 45.9   | 36.2      |
|                                                    |          |        |             |            | 20    | 5.3    | 51.6 | 17.5 | 46.3 | 37.2   | 49.0    | 43.7   | 34.2      |
|                                                    |          |        |             |            | 25    | 5.9    | 50.0 | 17.0 | 44.1 | 35.3   | 47.3    | 41.4   | 32.3      |
|                                                    |          |        |             |            | 31.25 | 6.7    | 48.4 | 16.5 | 41.8 | 33.4   | 45.7    | 39.1   | 30.4      |
|                                                    |          |        |             |            | 62.5  | 9.6    | 43.4 | 14.0 | 33.8 | 27.3   | 40.6    | 31.0   | 24.3      |
|                                                    |          |        |             |            | 100   | 12.3   | 39.9 | 12.0 | 27.6 | 23.3   | 37.1    | 24.8   | 20.3      |
|                                                    |          |        |             |            | 200   | 18     | 34.8 | 9.0  | 16.8 | 17.2   | 31.9    | 13.9   | 14.2      |
|                                                    |          |        |             |            | 250   | 20.3   | 33.1 | 8.0  | 12.8 | 15.3   | 30.2    | 9.8    | 12.3      |
|                                                    |          |        |             |            | 350   | 24.6   | 29.7 | 6.6  | 5.1  | 12.4   | 26.9    | 2.3    | 9.4       |
|                                                    |          |        |             |            | 500   | 30.2   | 22.0 | 6.0  | -8.2 | 9.3    | 20.4    | -9.8   | 6.3       |

**ISO TR24750 Ch 3N746 55-100m**

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR   | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|-------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB    | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0  | 63.3   | 62.0    | 58.0   | 60.3      |
|                                                    |          |        |             |            | 4     | 4.2    | 63.0 | 19.0 | 58.9  | 51.2   | 60.5    | 56.4   | 48.2      |
|                                                    |          |        |             |            | 8     | 5.9    | 58.2 | 19.0 | 52.3  | 45.2   | 55.6    | 49.7   | 42.2      |
|                                                    |          |        |             |            | 10    | 6.6    | 56.6 | 19.0 | 50.0  | 43.3   | 54.0    | 47.4   | 40.3      |
|                                                    |          |        |             |            | 16    | 8.3    | 53.2 | 18.0 | 44.9  | 39.2   | 50.6    | 42.3   | 36.2      |
|                                                    |          |        |             |            | 20    | 9.3    | 51.6 | 17.5 | 42.3  | 37.2   | 49.0    | 39.7   | 34.2      |
|                                                    |          |        |             |            | 25    | 10.5   | 50.0 | 17.0 | 39.6  | 35.3   | 47.3    | 36.9   | 32.3      |
|                                                    |          |        |             |            | 31.25 | 11.7   | 48.4 | 16.5 | 36.7  | 33.4   | 45.7    | 34.0   | 30.4      |
|                                                    |          |        |             |            | 62.5  | 16.9   | 43.4 | 14.0 | 26.5  | 27.3   | 40.6    | 23.7   | 24.3      |
|                                                    |          |        |             |            | 100   | 21.7   | 39.9 | 12.0 | 18.2  | 23.3   | 37.1    | 15.4   | 20.3      |
|                                                    |          |        |             |            | 200   | 31.7   | 34.8 | 9.0  | 3.1   | 17.2   | 31.9    | 0.1    | 14.2      |
|                                                    |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  | -2.8  | 15.3   | 30.2    | -5.8   | 12.3      |
|                                                    |          |        |             |            | 350   | 43.5   | 29.7 | 6.6  | -13.8 | 12.4   | 26.9    | -16.5  | 9.4       |
|                                                    |          |        |             |            | 500   | 53.4   | 22.0 | 6.0  | -31.4 | 9.3    | 20.4    | -33.0  | 6.3       |

ISO AugCI E Ch 3N753

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR   | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-------|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB    | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0  | 63.3   | 62.0    | 58.0   | 60.3      |
|                      |          |        |             |            | 4     | 4.1    | 63.0 | 19.0 | 59.0  | 51.2   | 60.5    | 56.5   | 48.2      |
|                      |          |        |             |            | 8     | 5.7    | 58.2 | 19.0 | 52.4  | 45.2   | 55.6    | 49.9   | 42.2      |
| 12345678S            |          |        |             |            | 10    | 6.4    | 56.6 | 19.0 | 50.2  | 43.3   | 54.0    | 47.6   | 40.3      |
| 12345678S            |          |        |             |            | 16    | 8.1    | 53.2 | 18.0 | 45.1  | 39.2   | 50.6    | 42.5   | 36.2      |
|                      |          |        |             |            | 20    | 9.1    | 51.6 | 17.5 | 42.6  | 37.2   | 49.0    | 39.9   | 34.2      |
|                      |          |        |             |            | 25    | 10.2   | 50.0 | 17.0 | 39.9  | 35.3   | 47.3    | 37.2   | 32.3      |
|                      |          |        |             |            | 31.25 | 11.4   | 48.4 | 16.5 | 37.0  | 33.4   | 45.7    | 34.3   | 30.4      |
|                      |          |        |             |            | 62.5  | 16.3   | 43.4 | 14.0 | 27.1  | 27.3   | 40.6    | 24.3   | 24.3      |
|                      |          |        |             |            | 100   | 20.8   | 39.9 | 12.0 | 19.2  | 23.3   | 37.1    | 16.3   | 20.3      |
|                      |          |        |             |            | 200   | 30     | 34.8 | 9.0  | 4.8   | 17.2   | 31.9    | 1.9    | 14.2      |
|                      |          |        |             |            | 250   | 33.8   | 33.1 | 8.0  | -0.7  | 15.3   | 30.2    | -3.6   | 12.3      |
|                      |          |        |             |            | 350   | 40.5   | 30.6 | 8.0  | -10.0 | 12.4   | 27.6    | -13.0  | 9.4       |
|                      |          |        |             |            | 500   | 49.3   | 27.9 | 8.0  | -21.4 | 9.3    | 24.8    | -24.5  | 6.3       |

ISO11801 PL max Class C

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | 34       | i      | 498         | 44         | 1     | 4      | 40.1 | 15.0 | 36.1 |        |         |        |           |
|                      |          |        |             |            | 4     | 6.4    | 30.6 | 15.0 | 24.2 |        |         |        |           |
|                      |          |        |             |            | 8     | 8.8    | 25.8 | 15.0 | 17.0 |        |         |        |           |
| 12345678S            |          |        |             |            | 10    | 9.8    | 24.3 | 15.0 | 14.5 |        |         |        |           |
| 12345678S            |          |        |             |            | 16    | 12.2   | 21.1 | 15.0 | 8.8  |        |         |        |           |

ISO11801 PL max Class D

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | 21       | i      | 498         | 44         | 1     | 4      | 60.0 | 19.0 | 56.0 | 58.6   | 57.0    | 53.0   | 55.6      |
|                      |          |        |             |            | 4     | 4      | 54.8 | 19.0 | 50.8 | 46.6   | 51.8    | 47.8   | 43.6      |
|                      |          |        |             |            | 8     | 5.4    | 50.0 | 19.0 | 44.6 | 40.6   | 47.0    | 41.6   | 37.6      |
| 12345678S            |          |        |             |            | 10    | 6.1    | 48.5 | 19.0 | 42.4 | 38.6   | 45.5    | 39.4   | 35.6      |
| 12345678S            |          |        |             |            | 16    | 7.7    | 45.2 | 19.0 | 37.5 | 34.5   | 42.2    | 34.5   | 31.5      |
|                      |          |        |             |            | 20    | 8.7    | 43.7 | 19.0 | 35.0 | 32.6   | 40.7    | 32.0   | 29.6      |
|                      |          |        |             |            | 25    | 9.7    | 42.1 | 18.0 | 32.4 | 30.7   | 39.1    | 29.4   | 27.7      |
|                      |          |        |             |            | 31.25 | 10.9   | 40.5 | 17.1 | 29.6 | 28.7   | 37.5    | 26.6   | 25.7      |
|                      |          |        |             |            | 62.5  | 15.8   | 35.7 | 14.0 | 19.8 | 22.7   | 32.7    | 16.8   | 19.7      |
|                      |          |        |             |            | 100   | 20.4   | 32.3 | 12.0 | 11.9 | 18.6   | 29.3    | 8.9    | 15.6      |

**ISO11801 PL max Class E**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 21.0 | 61.0 | 64.2   | 62.0    | 58.0   | 61.2      |
|                                                    |          |        |             |            | 4     | 4      | 64.1 | 21.0 | 60.1 | 52.1   | 61.8    | 57.8   | 49.1      |
|                                                    |          |        |             |            | 8     | 5      | 59.4 | 21.0 | 54.4 | 46.1   | 57.0    | 52.0   | 43.1      |
|                                                    |          |        |             |            | 10    | 5.6    | 57.8 | 21.0 | 52.2 | 44.2   | 55.5    | 49.9   | 41.2      |
|                                                    |          |        |             |            | 16    | 7.1    | 54.6 | 20.0 | 47.5 | 40.1   | 52.2    | 45.1   | 37.1      |
|                                                    |          |        |             |            | 20    | 7.9    | 53.1 | 19.5 | 45.1 | 38.2   | 50.7    | 42.7   | 35.2      |
|                                                    |          |        |             |            | 25    | 8.9    | 51.5 | 19.0 | 42.6 | 36.2   | 49.1    | 40.2   | 33.2      |
|                                                    |          |        |             |            | 31.25 | 10     | 50.0 | 18.5 | 40.0 | 34.3   | 47.5    | 37.5   | 31.3      |
|                                                    |          |        |             |            | 62.5  | 14.4   | 45.1 | 16.0 | 30.7 | 28.3   | 42.7    | 28.2   | 25.3      |
|                                                    |          |        |             |            | 100   | 18.5   | 41.8 | 14.0 | 23.3 | 24.2   | 39.3    | 20.8   | 21.2      |
|                                                    |          |        |             |            | 200   | 27.1   | 36.9 | 11.0 | 9.9  | 18.2   | 34.3    | 7.2    | 15.2      |
|                                                    |          |        |             |            | 250   | 30.7   | 35.3 | 10.0 | 4.7  | 16.2   | 32.7    | 2.0    | 13.2      |

**ISO11801 PL max Class F**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 21.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                                                    |          |        |             |            | 4     | 4      | 65.0 | 21.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                                                    |          |        |             |            | 8     | 4.9    | 65.0 | 21.0 | 60.1 | 64.3   | 62.0    | 57.1   | 61.3      |
|                                                    |          |        |             |            | 10    | 5.5    | 65.0 | 21.0 | 59.5 | 62.7   | 62.0    | 56.5   | 59.7      |
|                                                    |          |        |             |            | 16    | 6.9    | 65.0 | 20.0 | 58.1 | 59.3   | 62.0    | 55.1   | 56.3      |
|                                                    |          |        |             |            | 20    | 7.7    | 65.0 | 19.5 | 57.3 | 57.7   | 62.0    | 54.3   | 54.7      |
|                                                    |          |        |             |            | 25    | 8.7    | 65.0 | 19.0 | 56.3 | 56.1   | 62.0    | 53.3   | 53.1      |
|                                                    |          |        |             |            | 31.25 | 9.7    | 65.0 | 18.5 | 55.3 | 54.5   | 62.0    | 52.3   | 51.5      |
|                                                    |          |        |             |            | 62.5  | 13.9   | 65.0 | 16.0 | 51.1 | 49.5   | 62.0    | 48.1   | 46.5      |
|                                                    |          |        |             |            | 100   | 17.7   | 65.0 | 14.0 | 47.3 | 46.0   | 62.0    | 44.3   | 43.0      |
|                                                    |          |        |             |            | 200   | 25.6   | 61.9 | 11.0 | 36.3 | 40.9   | 58.9    | 33.3   | 37.9      |
|                                                    |          |        |             |            | 250   | 28.8   | 60.4 | 10.0 | 31.6 | 39.2   | 57.4    | 28.6   | 36.2      |
|                                                    |          |        |             |            | 600   | 46.6   | 54.7 | 10.0 | 8.1  | 32.6   | 51.7    | 5.1    | 29.6      |

**ISO AugCI E PL 3N753**

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR   | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|-------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB    | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 19.1 | 61.0  | 64.2   | 62.0    | 58.0   | 61.2      |
|                                                    |          |        |             |            | 4     | 4      | 64.1 | 21.0 | 60.1  | 52.1   | 61.8    | 57.8   | 49.1      |
|                                                    |          |        |             |            | 8     | 4.9    | 59.4 | 21.0 | 54.5  | 46.1   | 57.0    | 52.1   | 43.1      |
|                                                    |          |        |             |            | 10    | 5.5    | 57.8 | 21.0 | 52.4  | 44.2   | 55.5    | 50.0   | 41.2      |
|                                                    |          |        |             |            | 16    | 6.9    | 54.6 | 20.0 | 47.7  | 40.1   | 52.2    | 45.3   | 37.1      |
|                                                    |          |        |             |            | 20    | 7.7    | 53.1 | 19.5 | 45.3  | 38.2   | 50.7    | 42.9   | 35.2      |
|                                                    |          |        |             |            | 25    | 8.7    | 51.5 | 19.0 | 42.9  | 36.2   | 49.1    | 40.4   | 33.2      |
|                                                    |          |        |             |            | 31.25 | 9.7    | 50.0 | 18.5 | 40.3  | 34.3   | 47.5    | 37.8   | 31.3      |
|                                                    |          |        |             |            | 62.5  | 13.9   | 45.1 | 16.0 | 31.3  | 28.3   | 42.7    | 28.8   | 25.3      |
|                                                    |          |        |             |            | 100   | 17.7   | 41.8 | 14.0 | 24.1  | 24.2   | 39.3    | 21.6   | 21.2      |
|                                                    |          |        |             |            | 200   | 25.6   | 36.9 | 11.0 | 11.4  | 18.2   | 34.3    | 8.7    | 15.2      |
|                                                    |          |        |             |            | 250   | 28.8   | 35.3 | 10.0 | 6.5   | 16.2   | 32.7    | 3.9    | 13.2      |
|                                                    |          |        |             |            | 350   | 34.6   | 32.9 | 10.0 | -1.7  | 13.3   | 30.3    | -4.3   | 10.3      |
|                                                    |          |        |             |            | 500   | 42.1   | 30.4 | 10.0 | -11.7 | 10.2   | 27.6    | -14.4  | 7.2       |

ISO11801 Class D (1995)

**OBSOLETE STANDARD**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678  | 40       | 100    | 1000        | 50         | 1     | 2.5    | 54.0 |    |     |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 4.8    | 45.0 |    |     |        |         |        |           |
|           |          |        |             |            | 8     | 6.7    | 41.0 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 7.5    | 39.0 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 9.4    | 36.0 |    |     |        |         |        |           |
|           |          |        |             |            | 20    | 10.5   | 35.0 |    |     |        |         |        |           |
|           |          |        |             |            | 25    | 11.7   | 33.7 |    |     |        |         |        |           |
|           |          |        |             |            | 31.25 | 13.1   | 32.0 |    |     |        |         |        |           |
|           |          |        |             |            | 62.5  | 18.4   | 27.0 |    |     |        |         |        |           |
|           |          |        |             |            | 100   | 23.2   | 24.0 |    |     |        |         |        |           |

# Aus/NZ Standards

**Aus/NZ Channel Class C**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 40       | i      | 555         | 50         | 1     | 4.2    | 39.1 | 15.0 | 34.9 |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 7.6    | 29.2 | 15.0 | 21.6 |        |         |        |           |
|           |          |        |             |            | 8     | 10.4   | 24.3 | 15.0 | 13.9 |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 11.5   | 22.7 | 15.0 | 11.2 |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 14.4   | 19.4 | 15.0 | 5.0  |        |         |        |           |

**Aus/NZ Channel Class D**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 25       | i      | 555         | 50         | 1     | 4      | 60.0 | 17.0 | 56.0 | 57.4   | 57.0    | 53.0   | 54.4      |
| 12345678  |          |        |             |            | 4     | 4.5    | 53.5 | 17.0 | 49.0 | 45.4   | 50.5    | 46.0   | 42.4      |
|           |          |        |             |            | 8     | 6.4    | 48.6 | 17.0 | 42.2 | 39.3   | 45.6    | 39.2   | 36.3      |
| 12345678S |          |        |             |            | 10    | 7.2    | 47.0 | 17.0 | 39.8 | 37.4   | 44.0    | 36.8   | 34.4      |
| 12345678S |          |        |             |            | 16    | 9.1    | 43.6 | 17.0 | 34.5 | 33.3   | 40.6    | 31.5   | 30.3      |
|           |          |        |             |            | 20    | 10.2   | 42.0 | 17.0 | 31.8 | 31.4   | 39.0    | 28.8   | 28.4      |
|           |          |        |             |            | 25    | 11.5   | 40.3 | 16.0 | 28.9 | 29.4   | 37.3    | 25.9   | 26.4      |
|           |          |        |             |            | 31.25 | 12.9   | 38.7 | 15.1 | 25.8 | 27.5   | 35.7    | 22.8   | 24.5      |
|           |          |        |             |            | 62.5  | 18.6   | 33.6 | 12.0 | 15.0 | 21.5   | 30.6    | 12.0   | 18.5      |
|           |          |        |             |            | 100   | 24     | 30.1 | 10.0 | 6.1  | 17.4   | 27.1    | 3.1    | 14.4      |

**Aus/NZ Channel Class E**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 63.3   | 62.0    | 58.0   | 60.3      |
| 12345678  |          |        |             |            | 4     | 4.2    | 63.0 | 19.0 | 58.9 | 51.2   | 60.5    | 56.4   | 48.2      |
|           |          |        |             |            | 8     | 5.9    | 58.2 | 19.0 | 52.3 | 45.2   | 55.6    | 49.7   | 42.2      |
| 12345678S |          |        |             |            | 10    | 6.6    | 56.6 | 19.0 | 50.0 | 43.3   | 54.0    | 47.4   | 40.3      |
| 12345678S |          |        |             |            | 16    | 8.3    | 53.2 | 18.0 | 44.9 | 39.2   | 50.6    | 42.3   | 36.2      |
|           |          |        |             |            | 20    | 9.3    | 51.6 | 17.5 | 42.3 | 37.2   | 49.0    | 39.7   | 34.2      |
|           |          |        |             |            | 25    | 10.5   | 50.0 | 17.0 | 39.6 | 35.3   | 47.3    | 36.9   | 32.3      |
|           |          |        |             |            | 31.25 | 11.7   | 48.4 | 16.5 | 36.7 | 33.4   | 45.7    | 34.0   | 30.4      |
|           |          |        |             |            | 62.5  | 16.9   | 43.4 | 14.0 | 26.5 | 27.3   | 40.6    | 23.7   | 24.3      |
|           |          |        |             |            | 100   | 21.7   | 39.9 | 12.0 | 18.2 | 23.3   | 37.1    | 15.4   | 20.3      |
|           |          |        |             |            | 200   | 31.7   | 34.8 | 9.0  | 3.1  | 17.2   | 31.9    | 0.1    | 14.2      |
|           |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  | -2.8 | 15.3   | 30.2    | -5.8   | 12.3      |

#### Aus/NZ PL max Class C

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 34       | i      | 498         | 44         | 1     | 4      | 40.1 | 15.0 | 36.1 |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 6.4    | 30.6 | 15.0 | 24.2 |        |         |        |           |
|           |          |        |             |            | 8     | 8.8    | 25.8 | 15.0 | 17.0 |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 9.8    | 24.3 | 15.0 | 14.5 |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 12.2   | 21.1 | 15.0 | 8.8  |        |         |        |           |

#### Aus/NZ PL max Class D

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 21       | i      | 498         | 44         | 1     | 4      | 60.0 | 19.0 | 56.0 | 58.6   | 57.0    | 53.0   | 55.6      |
| 12345678  |          |        |             |            | 4     | 4      | 54.8 | 19.0 | 50.8 | 46.6   | 51.8    | 47.8   | 43.6      |
|           |          |        |             |            | 8     | 5.4    | 50.0 | 19.0 | 44.6 | 40.6   | 47.0    | 41.6   | 37.6      |
| 12345678S |          |        |             |            | 10    | 6.1    | 48.5 | 19.0 | 42.4 | 38.6   | 45.5    | 39.4   | 35.6      |
| 12345678S |          |        |             |            | 16    | 7.7    | 45.2 | 19.0 | 37.5 | 34.5   | 42.2    | 34.5   | 31.5      |
|           |          |        |             |            | 20    | 8.7    | 43.7 | 19.0 | 35.0 | 32.6   | 40.7    | 32.0   | 29.6      |
|           |          |        |             |            | 25    | 9.7    | 42.1 | 18.0 | 32.4 | 30.7   | 39.1    | 29.4   | 27.7      |
|           |          |        |             |            | 31.25 | 10.9   | 40.5 | 17.1 | 29.6 | 28.7   | 37.5    | 26.6   | 25.7      |
|           |          |        |             |            | 62.5  | 15.8   | 35.7 | 14.0 | 19.8 | 22.7   | 32.7    | 16.8   | 19.7      |
|           |          |        |             |            | 100   | 20.4   | 32.3 | 12.0 | 11.9 | 18.6   | 29.3    | 8.9    | 15.6      |

#### Aus/NZ PL max Class E

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 21.0 | 61.0 | 64.2   | 62.0    | 58.0   | 61.2      |
| 12345678  |          |        |             |            | 4     | 4      | 64.1 | 21.0 | 60.1 | 52.1   | 61.8    | 57.8   | 49.1      |
|           |          |        |             |            | 8     | 5      | 59.4 | 21.0 | 54.4 | 46.1   | 57.0    | 52.0   | 43.1      |
| 12345678S |          |        |             |            | 10    | 5.6    | 57.8 | 21.0 | 52.2 | 44.2   | 55.5    | 49.9   | 41.2      |
| 12345678S |          |        |             |            | 16    | 7.1    | 54.6 | 20.0 | 47.5 | 40.1   | 52.2    | 45.1   | 37.1      |
|           |          |        |             |            | 20    | 7.9    | 53.1 | 19.5 | 45.1 | 38.2   | 50.7    | 42.7   | 35.2      |
|           |          |        |             |            | 25    | 8.9    | 51.5 | 19.0 | 42.6 | 36.2   | 49.1    | 40.2   | 33.2      |
|           |          |        |             |            | 31.25 | 10     | 50.0 | 18.5 | 40.0 | 34.3   | 47.5    | 37.5   | 31.3      |
|           |          |        |             |            | 62.5  | 14.4   | 45.1 | 16.0 | 30.7 | 28.3   | 42.7    | 28.2   | 25.3      |
|           |          |        |             |            | 100   | 18.5   | 41.8 | 14.0 | 23.3 | 24.2   | 39.3    | 20.8   | 21.2      |
|           |          |        |             |            | 200   | 27.1   | 36.9 | 11.0 | 9.9  | 18.2   | 34.3    | 7.2    | 15.2      |
|           |          |        |             |            | 250   | 30.7   | 35.3 | 10.0 | 4.7  | 16.2   | 32.7    | 2.0    | 13.2      |

## Chinese Standards

China GBT 50312-2k Cat 3

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | 90     | i           | 45         | 1     | 3.2    | 40.1 |    |     |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 6.1    | 30.7 |    |     |        |         |        |           |
|           |          |        |             |            | 8     | 8.8    | 25.9 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 10     | 24.3 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 13.2   | 21.0 |    |     |        |         |        |           |

China GBT 50312-2k Cat 5

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | i        | 90     | 498         | 44         | 1     | 3      | 60.0 | 15.0 | 57.0 | 57.0   |         |        | 54.4      |
| 12345678  |          |        |             |            | 4     | 4      | 51.8 | 15.0 | 47.8 | 45.0   |         |        | 42.4      |
|           |          |        |             |            | 8     | 5.7    | 47.1 | 15.0 | 41.4 | 38.9   |         |        | 36.3      |
| 12345678S |          |        |             |            | 10    | 6.4    | 45.5 | 15.0 | 39.1 | 37.0   |         |        | 34.4      |
| 12345678S |          |        |             |            | 16    | 8.1    | 42.3 | 15.0 | 34.1 | 32.9   |         |        | 30.3      |
|           |          |        |             |            | 20    | 9.1    | 40.7 | 15.0 | 31.6 | 31.0   |         |        | 28.4      |
|           |          |        |             |            | 25    | 10.3   | 39.1 | 14.3 | 28.9 | 29.0   |         |        | 26.4      |
|           |          |        |             |            | 31.25 | 11.6   | 37.6 | 13.6 | 26.0 | 27.1   |         |        | 24.5      |
|           |          |        |             |            | 62.5  | 16.7   | 32.7 | 11.5 | 15.9 | 21.1   |         |        | 18.5      |
|           |          |        |             |            | 100   | 21.6   | 29.3 | 10.1 | 7.7  | 17.0   |         |        | 14.4      |

## EN (European) Standards

**EN50173 Channel Class C**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 40       | i      | 555         | 50         | 1     | 4.2    | 39.1 | 15.0 | 34.9 |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 7.6    | 29.2 | 15.0 | 21.6 |        |         |        |           |
|           |          |        |             |            | 8     | 10.4   | 24.3 | 15.0 | 13.9 |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 11.5   | 22.7 | 15.0 | 11.2 |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 14.4   | 19.4 | 15.0 | 5.0  |        |         |        |           |

**EN50173 Channel Class D**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 25       | i      | 555         | 50         | 1     | 4      | 60.0 | 17.0 | 56.0 | 57.4   | 57.0    | 53.0   | 54.4      |
| 12345678  |          |        |             |            | 4     | 4.5    | 53.5 | 17.0 | 49.0 | 45.4   | 50.5    | 46.0   | 42.4      |
|           |          |        |             |            | 8     | 6.4    | 48.6 | 17.0 | 42.2 | 39.3   | 45.6    | 39.2   | 36.3      |
| 12345678S |          |        |             |            | 10    | 7.2    | 47.0 | 17.0 | 39.8 | 37.4   | 44.0    | 36.8   | 34.4      |
| 12345678S |          |        |             |            | 16    | 9.1    | 43.6 | 17.0 | 34.5 | 33.3   | 40.6    | 31.5   | 30.3      |
|           |          |        |             |            | 20    | 10.2   | 42.0 | 17.0 | 31.8 | 31.4   | 39.0    | 28.8   | 28.4      |
|           |          |        |             |            | 25    | 11.5   | 40.3 | 16.0 | 28.9 | 29.4   | 37.3    | 25.9   | 26.4      |
|           |          |        |             |            | 31.25 | 12.9   | 38.7 | 15.1 | 25.8 | 27.5   | 35.7    | 22.8   | 24.5      |
|           |          |        |             |            | 62.5  | 18.6   | 33.6 | 12.0 | 15.0 | 21.5   | 30.6    | 12.0   | 18.5      |
|           |          |        |             |            | 100   | 24     | 30.1 | 10.0 | 6.1  | 17.4   | 27.1    | 3.1    | 14.4      |

**EN50173 Channel Class E**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678  | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 63.3   | 62.0    | 58.0   | 60.3      |
| 12345678  |          |        |             |            | 4     | 4.2    | 63.0 | 19.0 | 58.9 | 51.2   | 60.5    | 56.4   | 48.2      |
|           |          |        |             |            | 8     | 5.9    | 58.2 | 19.0 | 52.3 | 45.2   | 55.6    | 49.7   | 42.2      |
| 12345678S |          |        |             |            | 10    | 6.6    | 56.6 | 19.0 | 50.0 | 43.3   | 54.0    | 47.4   | 40.3      |
| 12345678S |          |        |             |            | 16    | 8.3    | 53.2 | 18.0 | 44.9 | 39.2   | 50.6    | 42.3   | 36.2      |
|           |          |        |             |            | 20    | 9.3    | 51.6 | 17.5 | 42.3 | 37.2   | 49.0    | 39.7   | 34.2      |
|           |          |        |             |            | 25    | 10.5   | 50.0 | 17.0 | 39.6 | 35.3   | 47.3    | 36.9   | 32.3      |
|           |          |        |             |            | 31.25 | 11.7   | 48.4 | 16.5 | 36.7 | 33.4   | 45.7    | 34.0   | 30.4      |
|           |          |        |             |            | 62.5  | 16.9   | 43.4 | 14.0 | 26.5 | 27.3   | 40.6    | 23.7   | 24.3      |
|           |          |        |             |            | 100   | 21.7   | 39.9 | 12.0 | 18.2 | 23.3   | 37.1    | 15.4   | 20.3      |
|           |          |        |             |            | 200   | 31.7   | 34.8 | 9.0  | 3.1  | 17.2   | 31.9    | 0.1    | 14.2      |
|           |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  | -2.8 | 15.3   | 30.2    | -5.8   | 12.3      |

#### EN50173 Channel Class F

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                        |          |        |             |            | 4     | 4.1    | 65.0 | 19.0 | 60.9 | 65.0   | 62.0    | 57.9   | 62.0      |
|                        |          |        |             |            | 8     | 5.7    | 65.0 | 19.0 | 59.3 | 62.4   | 62.0    | 56.3   | 59.4      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 6.4    | 65.0 | 19.0 | 58.6 | 60.8   | 62.0    | 55.6   | 57.8      |
|                        |          |        |             |            | 16    | 8.1    | 65.0 | 18.0 | 56.9 | 57.5   | 62.0    | 53.9   | 54.5      |
|                        |          |        |             |            | 20    | 9.1    | 65.0 | 17.5 | 55.9 | 55.9   | 62.0    | 52.9   | 52.9      |
|                        |          |        |             |            | 25    | 10.2   | 65.0 | 17.0 | 54.8 | 54.4   | 62.0    | 51.8   | 51.4      |
|                        |          |        |             |            | 31.25 | 11.4   | 65.0 | 16.5 | 53.6 | 52.8   | 62.0    | 50.6   | 49.8      |
|                        |          |        |             |            | 62.5  | 16.3   | 65.0 | 14.0 | 48.7 | 47.8   | 62.0    | 45.7   | 44.8      |
|                        |          |        |             |            | 100   | 20.8   | 62.9 | 12.0 | 42.1 | 44.4   | 59.9    | 39.1   | 41.4      |
|                        |          |        |             |            | 200   | 30     | 58.3 | 9.0  | 28.4 | 39.4   | 55.3    | 25.4   | 36.4      |
|                        |          |        |             |            | 250   | 33.8   | 56.9 | 8.0  | 23.1 | 37.8   | 53.9    | 20.1   | 34.8      |
|                        |          |        |             |            | 600   | 54.6   | 51.2 | 8.0  | -3.4 | 31.3   | 48.2    | -6.4   | 28.3      |

#### EN50173 PL Class C

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 34       | i      | 498         | 44         | 1     | 4      | 40.1 | 15.0 | 36.1 |        |         |        |           |
|                        |          |        |             |            | 4     | 6.4    | 30.6 | 15.0 | 24.2 |        |         |        |           |
|                        |          |        |             |            | 8     | 8.8    | 25.8 | 15.0 | 17.0 |        |         |        |           |
| 12345678S<br>12345678S |          |        |             |            | 10    | 9.8    | 24.3 | 15.0 | 14.5 |        |         |        |           |
|                        |          |        |             |            | 16    | 12.2   | 21.1 | 15.0 | 8.8  |        |         |        |           |

#### EN50173 PL Class D

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 21       | i      | 498         | 44         | 1     | 4      | 60.0 | 19.0 | 56.0 | 58.6   | 57.0    | 53.0   | 55.6      |
|                        |          |        |             |            | 4     | 4      | 54.8 | 19.0 | 50.8 | 46.6   | 51.8    | 47.8   | 43.6      |
|                        |          |        |             |            | 8     | 5.4    | 50.0 | 19.0 | 44.6 | 40.6   | 47.0    | 41.6   | 37.6      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 6.1    | 48.5 | 19.0 | 42.4 | 38.6   | 45.5    | 39.4   | 35.6      |
|                        |          |        |             |            | 16    | 7.7    | 45.2 | 19.0 | 37.5 | 34.5   | 42.2    | 34.5   | 31.5      |
|                        |          |        |             |            | 20    | 8.7    | 43.7 | 19.0 | 35.0 | 32.6   | 40.7    | 32.0   | 29.6      |
|                        |          |        |             |            | 25    | 9.7    | 42.1 | 18.0 | 32.4 | 30.7   | 39.1    | 29.4   | 27.7      |
|                        |          |        |             |            | 31.25 | 10.9   | 40.5 | 17.1 | 29.6 | 28.7   | 37.5    | 26.6   | 25.7      |
|                        |          |        |             |            | 62.5  | 15.8   | 35.7 | 14.0 | 19.8 | 22.7   | 32.7    | 16.8   | 19.7      |
|                        |          |        |             |            | 100   | 20.4   | 32.3 | 12.0 | 11.9 | 18.6   | 29.3    | 8.9    | 15.6      |

#### EN50173 PL Class E

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 21.0 | 61.0 | 64.2   | 62.0    | 58.0   | 61.2      |
|                        |          |        |             |            | 4     | 4      | 64.1 | 21.0 | 60.1 | 52.1   | 61.8    | 57.8   | 49.1      |
|                        |          |        |             |            | 8     | 5      | 59.4 | 21.0 | 54.4 | 46.1   | 57.0    | 52.0   | 43.1      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 5.6    | 57.8 | 21.0 | 52.2 | 44.2   | 55.5    | 49.9   | 41.2      |
|                        |          |        |             |            | 16    | 7.1    | 54.6 | 20.0 | 47.5 | 40.1   | 52.2    | 45.1   | 37.1      |
|                        |          |        |             |            | 20    | 7.9    | 53.1 | 19.5 | 45.1 | 38.2   | 50.7    | 42.7   | 35.2      |
|                        |          |        |             |            | 25    | 8.9    | 51.5 | 19.0 | 42.6 | 36.2   | 49.1    | 40.2   | 33.2      |
|                        |          |        |             |            | 31.25 | 10     | 50.0 | 18.5 | 40.0 | 34.3   | 47.5    | 37.5   | 31.3      |
|                        |          |        |             |            | 62.5  | 14.4   | 45.1 | 16.0 | 30.7 | 28.3   | 42.7    | 28.2   | 25.3      |
|                        |          |        |             |            | 100   | 18.5   | 41.8 | 14.0 | 23.3 | 24.2   | 39.3    | 20.8   | 21.2      |
|                        |          |        |             |            | 200   | 27.1   | 36.9 | 11.0 | 9.9  | 18.2   | 34.3    | 7.2    | 15.2      |
|                        |          |        |             |            | 250   | 30.7   | 35.3 | 10.0 | 4.7  | 16.2   | 32.7    | 2.0    | 13.2      |

#### EN50173 PL Class F

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 21.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                        |          |        |             |            | 4     | 4      | 65.0 | 21.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                        |          |        |             |            | 8     | 4.9    | 65.0 | 21.0 | 60.1 | 64.3   | 62.0    | 57.1   | 61.3      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 5.5    | 65.0 | 21.0 | 59.5 | 62.7   | 62.0    | 56.5   | 59.7      |
|                        |          |        |             |            | 16    | 6.9    | 65.0 | 20.0 | 58.1 | 59.3   | 62.0    | 55.1   | 56.3      |
|                        |          |        |             |            | 20    | 7.7    | 65.0 | 19.5 | 57.3 | 57.7   | 62.0    | 54.3   | 54.7      |
|                        |          |        |             |            | 25    | 8.7    | 65.0 | 19.0 | 56.3 | 56.1   | 62.0    | 53.3   | 53.1      |
|                        |          |        |             |            | 31.25 | 9.7    | 65.0 | 18.5 | 55.3 | 54.5   | 62.0    | 52.3   | 51.5      |
|                        |          |        |             |            | 62.5  | 13.9   | 65.0 | 16.0 | 51.1 | 49.5   | 62.0    | 48.1   | 46.5      |
|                        |          |        |             |            | 100   | 17.7   | 65.0 | 14.0 | 47.3 | 46.0   | 62.0    | 44.3   | 43.0      |
|                        |          |        |             |            | 200   | 25.6   | 61.9 | 11.0 | 36.3 | 40.9   | 58.9    | 33.3   | 37.9      |
|                        |          |        |             |            | 250   | 28.8   | 60.4 | 10.0 | 31.6 | 39.2   | 57.4    | 28.6   | 36.2      |
|                        |          |        |             |            | 600   | 46.6   | 54.7 | 10.0 | 8.1  | 32.6   | 51.7    | 5.1    | 29.6      |

## Japanese Standards

JIS X5150:2004 Cl. D Channel

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 25       | i      | 555         | 50         | 1     | 4      | 60.0 | 17.0 | 56.0 | 57.4   | 57.0    | 53.0   | 54.4      |
|                                                    |          |        |             |            | 4     | 4.5    | 53.5 | 17.0 | 49.0 | 45.4   | 50.5    | 46.0   | 42.4      |
|                                                    |          |        |             |            | 8     | 6.4    | 48.6 | 17.0 | 42.2 | 39.3   | 45.6    | 39.2   | 36.3      |
|                                                    |          |        |             |            | 10    | 7.2    | 47.0 | 17.0 | 39.8 | 37.4   | 44.0    | 36.8   | 34.4      |
|                                                    |          |        |             |            | 16    | 9.1    | 43.6 | 17.0 | 34.5 | 33.3   | 40.6    | 31.5   | 30.3      |
|                                                    |          |        |             |            | 20    | 10.2   | 42.0 | 17.0 | 31.8 | 31.4   | 39.0    | 28.8   | 28.4      |
|                                                    |          |        |             |            | 25    | 11.5   | 40.3 | 16.0 | 28.9 | 29.4   | 37.3    | 25.9   | 26.4      |
|                                                    |          |        |             |            | 31.25 | 12.9   | 38.7 | 15.1 | 25.8 | 27.5   | 35.7    | 22.8   | 24.5      |
|                                                    |          |        |             |            | 62.5  | 18.6   | 33.6 | 12.0 | 15.0 | 21.5   | 30.6    | 12.0   | 18.5      |
|                                                    |          |        |             |            | 100   | 24     | 30.1 | 10.0 | 6.1  | 17.4   | 27.1    | 3.1    | 14.4      |

JIS X5150:2004 Cl. E Channel

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 63.3   | 62.0    | 58.0   | 60.3      |
|                                                    |          |        |             |            | 4     | 4.2    | 63.0 | 19.0 | 58.9 | 51.2   | 60.5    | 56.4   | 48.2      |
|                                                    |          |        |             |            | 8     | 5.9    | 58.2 | 19.0 | 52.3 | 45.2   | 55.6    | 49.7   | 42.2      |
|                                                    |          |        |             |            | 10    | 6.6    | 56.6 | 19.0 | 50.0 | 43.3   | 54.0    | 47.4   | 40.3      |
|                                                    |          |        |             |            | 16    | 8.3    | 53.2 | 18.0 | 44.9 | 39.2   | 50.6    | 42.3   | 36.2      |
|                                                    |          |        |             |            | 20    | 9.3    | 51.6 | 17.5 | 42.3 | 37.2   | 49.0    | 39.7   | 34.2      |
|                                                    |          |        |             |            | 25    | 10.5   | 50.0 | 17.0 | 39.6 | 35.3   | 47.3    | 36.9   | 32.3      |
|                                                    |          |        |             |            | 31.25 | 11.7   | 48.4 | 16.5 | 36.7 | 33.4   | 45.7    | 34.0   | 30.4      |
|                                                    |          |        |             |            | 62.5  | 16.9   | 43.4 | 14.0 | 26.5 | 27.3   | 40.6    | 23.7   | 24.3      |
|                                                    |          |        |             |            | 100   | 21.7   | 39.9 | 12.0 | 18.2 | 23.3   | 37.1    | 15.4   | 20.3      |
|                                                    |          |        |             |            | 200   | 31.7   | 34.8 | 9.0  | 3.1  | 17.2   | 31.9    | 0.1    | 14.2      |
|                                                    |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  | -2.8 | 15.3   | 30.2    | -5.8   | 12.3      |

JIS X5150:2004 Cl. F Channel

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 25       | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                                                    |          |        |             |            | 4     | 4.1    | 65.0 | 19.0 | 60.9 | 65.0   | 62.0    | 57.9   | 62.0      |
|                                                    |          |        |             |            | 8     | 5.7    | 65.0 | 19.0 | 59.3 | 62.4   | 62.0    | 56.3   | 59.4      |
|                                                    |          |        |             |            | 10    | 6.4    | 65.0 | 19.0 | 58.6 | 60.8   | 62.0    | 55.6   | 57.8      |
|                                                    |          |        |             |            | 16    | 8.1    | 65.0 | 18.0 | 56.9 | 57.5   | 62.0    | 53.9   | 54.5      |
|                                                    |          |        |             |            | 20    | 9.1    | 65.0 | 17.5 | 55.9 | 55.9   | 62.0    | 52.9   | 52.9      |
|                                                    |          |        |             |            | 25    | 10.2   | 65.0 | 17.0 | 54.8 | 54.4   | 62.0    | 51.8   | 51.4      |
|                                                    |          |        |             |            | 31.25 | 11.4   | 65.0 | 16.5 | 53.6 | 52.8   | 62.0    | 50.6   | 49.8      |
|                                                    |          |        |             |            | 62.5  | 16.3   | 65.0 | 14.0 | 48.7 | 47.8   | 62.0    | 45.7   | 44.8      |
|                                                    |          |        |             |            | 100   | 20.8   | 62.9 | 12.0 | 42.1 | 44.4   | 59.9    | 39.1   | 41.4      |
|                                                    |          |        |             |            | 200   | 30     | 58.3 | 9.0  | 28.4 | 39.4   | 55.3    | 25.4   | 36.4      |
|                                                    |          |        |             |            | 250   | 33.8   | 56.9 | 8.0  | 23.1 | 37.8   | 53.9    | 20.1   | 34.8      |
|                                                    |          |        |             |            | 600   | 54.6   | 51.2 | 8.0  | -3.4 | 31.3   | 48.2    | -6.4   | 28.3      |

JIS X5150:2004 Cl. D PL

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 21       | i      | 498         | 44         | 1     | 4      | 60.0 | 19.0 | 56.0 | 58.6   | 57.0    | 53.0   | 55.6      |
|                        |          |        |             |            | 4     | 4      | 54.8 | 19.0 | 50.8 | 46.6   | 51.8    | 47.8   | 43.6      |
|                        |          |        |             |            | 8     | 5.4    | 50.0 | 19.0 | 44.6 | 40.6   | 47.0    | 41.6   | 37.6      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 6.1    | 48.5 | 19.0 | 42.4 | 38.6   | 45.5    | 39.4   | 35.6      |
|                        |          |        |             |            | 16    | 7.7    | 45.2 | 19.0 | 37.5 | 34.5   | 42.2    | 34.5   | 31.5      |
|                        |          |        |             |            | 20    | 8.7    | 43.7 | 19.0 | 35.0 | 32.6   | 40.7    | 32.0   | 29.6      |
|                        |          |        |             |            | 25    | 9.7    | 42.1 | 18.0 | 32.4 | 30.7   | 39.1    | 29.4   | 27.7      |
|                        |          |        |             |            | 31.25 | 10.9   | 40.5 | 17.1 | 29.6 | 28.7   | 37.5    | 26.6   | 25.7      |
|                        |          |        |             |            | 62.5  | 15.8   | 35.7 | 14.0 | 19.8 | 22.7   | 32.7    | 16.8   | 19.7      |
|                        |          |        |             |            | 100   | 20.4   | 32.3 | 12.0 | 11.9 | 18.6   | 29.3    | 8.9    | 15.6      |

JIS X5150:2004 Cl. E PL

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 21.0 | 61.0 | 64.2   | 62.0    | 58.0   | 61.2      |
|                        |          |        |             |            | 4     | 4      | 64.1 | 21.0 | 60.1 | 52.1   | 61.8    | 57.8   | 49.1      |
|                        |          |        |             |            | 8     | 5      | 59.4 | 21.0 | 54.4 | 46.1   | 57.0    | 52.0   | 43.1      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 5.6    | 57.8 | 21.0 | 52.2 | 44.2   | 55.5    | 49.9   | 41.2      |
|                        |          |        |             |            | 16    | 7.1    | 54.6 | 20.0 | 47.5 | 40.1   | 52.2    | 45.1   | 37.1      |
|                        |          |        |             |            | 20    | 7.9    | 53.1 | 19.5 | 45.1 | 38.2   | 50.7    | 42.7   | 35.2      |
|                        |          |        |             |            | 25    | 8.9    | 51.5 | 19.0 | 42.6 | 36.2   | 49.1    | 40.2   | 33.2      |
|                        |          |        |             |            | 31.25 | 10     | 50.0 | 18.5 | 40.0 | 34.3   | 47.5    | 37.5   | 31.3      |
|                        |          |        |             |            | 62.5  | 14.4   | 45.1 | 16.0 | 30.7 | 28.3   | 42.7    | 28.2   | 25.3      |
|                        |          |        |             |            | 100   | 18.5   | 41.8 | 14.0 | 23.3 | 24.2   | 39.3    | 20.8   | 21.2      |
|                        |          |        |             |            | 200   | 27.1   | 36.9 | 11.0 | 9.9  | 18.2   | 34.3    | 7.2    | 15.2      |
|                        |          |        |             |            | 250   | 30.7   | 35.3 | 10.0 | 4.7  | 16.2   | 32.7    | 2.0    | 13.2      |

JIS X5150:2004 Cl. F PL

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | 21       | i      | 498         | 44         | 1     | 4      | 65.0 | 21.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                        |          |        |             |            | 4     | 4      | 65.0 | 21.0 | 61.0 | 65.0   | 62.0    | 58.0   | 62.0      |
|                        |          |        |             |            | 8     | 4.9    | 65.0 | 21.0 | 60.1 | 64.3   | 62.0    | 57.1   | 61.3      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 5.5    | 65.0 | 21.0 | 59.5 | 62.7   | 62.0    | 56.5   | 59.7      |
|                        |          |        |             |            | 16    | 6.9    | 65.0 | 20.0 | 58.1 | 59.3   | 62.0    | 55.1   | 56.3      |
|                        |          |        |             |            | 20    | 7.7    | 65.0 | 19.5 | 57.3 | 57.7   | 62.0    | 54.3   | 54.7      |
|                        |          |        |             |            | 25    | 8.7    | 65.0 | 19.0 | 56.3 | 56.1   | 62.0    | 53.3   | 53.1      |
|                        |          |        |             |            | 31.25 | 9.7    | 65.0 | 18.5 | 55.3 | 54.5   | 62.0    | 52.3   | 51.5      |
|                        |          |        |             |            | 62.5  | 13.9   | 65.0 | 16.0 | 51.1 | 49.5   | 62.0    | 48.1   | 46.5      |
|                        |          |        |             |            | 100   | 17.7   | 65.0 | 14.0 | 47.3 | 46.0   | 62.0    | 44.3   | 43.0      |
|                        |          |        |             |            | 200   | 25.6   | 61.9 | 11.0 | 36.3 | 40.9   | 58.9    | 33.3   | 37.9      |
|                        |          |        |             |            | 250   | 28.8   | 60.4 | 10.0 | 31.6 | 39.2   | 57.4    | 28.6   | 36.2      |
|                        |          |        |             |            | 600   | 46.6   | 54.7 | 10.0 | 8.1  | 32.6   | 51.7    | 5.1    | 29.6      |

## Korean Standards

**Korean Cat 5e Channel**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678  | 40       | 100 m  | 555         | 50         | 1     | 2.2    | 60.0 | 17.0 |     | 57.4   | 57.0    |        | 54.4      |
| 12345678  |          |        |             |            | 4     | 4.5    | 53.5 | 17.0 |     | 45.4   | 50.5    |        | 42.4      |
|           |          |        |             |            | 8     | 6.3    | 48.6 | 17.0 |     | 39.3   | 45.6    |        | 36.3      |
| 12345678S |          |        |             |            | 10    | 7.1    | 47.0 | 17.0 |     | 37.4   | 44.0    |        | 34.4      |
| 12345678S |          |        |             |            | 16    | 9.2    | 43.6 | 17.0 |     | 33.3   | 40.6    |        | 30.3      |
|           |          |        |             |            | 100   | 24     | 30.1 | 10.0 |     | 17.4   | 27.1    |        | 14.4      |

**Korean Cat 3 Channel**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678  | 25       | 100 m  | 555         | 50         | 1     | 4.2    | 39.1 |    |     |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 7.3    | 29.3 |    |     |        |         |        |           |
|           |          |        |             |            | 8     | 10.2   | 24.3 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 11.5   | 22.7 |    |     |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 14.9   | 19.2 |    |     |        |         |        |           |
|           |          |        |             |            |       |        |      |    |     |        |         |        |           |
|           |          |        |             |            |       |        |      |    |     |        |         |        |           |
|           |          |        |             |            |       |        |      |    |     |        |         |        |           |
|           |          |        |             |            |       |        |      |    |     |        |         |        |           |
|           |          |        |             |            |       |        |      |    |     |        |         |        |           |

**Korean Pre-Deploy Comm**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | i      | i           | i          | 1     | 3.7    | 39.0 | 18.0 |     |        |         |        |           |
| 12345678  |          |        |             |            | 4     | 6.6    | 29.0 | 18.0 |     |        |         |        |           |
|           |          |        |             |            | 8     | 9.3    | 25.0 | 18.0 |     |        |         |        |           |
| 12345678S |          |        |             |            | 10    | 10.7   | 23.0 | 18.0 |     |        |         |        |           |
| 12345678S |          |        |             |            | 16    | 14     | 19.0 | 15.0 |     |        |         |        |           |

**Korean Pre-Deploy Res.**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | i      | i           | i          | 1     | 5.8    | 25.0 |    |     |        |         |        |           |
| 12345678  |          |        |             |            |       |        |      |    |     |        |         |        |           |
|           |          |        |             |            |       |        |      |    |     |        |         |        |           |
| 12345678S |          |        |             |            |       |        |      |    |     |        |         |        |           |
| 12345678S |          |        |             |            |       |        |      |    |     |        |         |        |           |

## Patch Cord Standards

ISO - ISO/IEC 11802:2002

TIA - ANSI/TIA/EIA-568-B.2-1

CLC - EN50173:2002

### ISO Patch Cord Cat5e 0.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 62.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 60.2 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 56.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 54.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 52.3 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 50.4 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 44.5 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 40.6 | 18.0 |     |        |         |        |           |

### ISO Patch Cord Cat5e 1.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 61.3 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 59.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 55.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 53.5 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 51.6 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 49.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 43.9 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.9 | 18.0 |     |        |         |        |           |

### ISO Patch Cord Cat5e 1.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 60.7 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 58.8 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 54.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 51.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 49.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 43.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.4 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 2.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 60.2 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 58.3 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 54.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 50.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 48.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.9 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.0 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 2.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 59.7 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.8 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.0 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 50.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 48.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.5 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.6 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 3.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 59.3 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 51.6 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.7 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.8 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.3 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 3.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 64.6 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 58.9 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.1 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 51.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.4 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.5 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.0 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 4.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 64.3 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 58.5 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 56.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 52.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 50.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.6 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 37.8 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 5.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 63.7 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 58.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 56.1 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 52.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 50.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 48.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 46.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 37.4 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 7.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 62.4 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 56.8 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 55.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 51.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 49.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 47.6 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 45.8 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 40.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 36.8 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 10.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 61.6 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 56.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 54.2 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 50.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 48.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 46.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 45.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 39.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 36.4 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat5e 20.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 59.5 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 54.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 52.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 48.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 47.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 45.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 43.9 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 39.0 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 35.8 | 18.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 0.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.9 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 61.0 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 59.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 57.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 51.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 47.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 41.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.4 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 1.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 60.5 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 58.6 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.8 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 41.0 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.1 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 1.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 60.1 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 58.2 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.3 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.4 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.5 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.7 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.9 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 2.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.6 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.8 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.0 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.5 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.6 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 2.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.9 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.5 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 3.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.1 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.2 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.4 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.6 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.7 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.1 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.3 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 3.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 64.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.5 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.9 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.2 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 4.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 64.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.5 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.6 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 56.7 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 54.9 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.3 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.8 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.1 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 5.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 63.9 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 56.3 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 54.5 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 48.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.0 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.6 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.9 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 7.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 64.8 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 63.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 59.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 57.3 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 55.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 53.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 48.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 44.5 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.7 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 10.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 64.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 62.3 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 58.5 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 56.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 54.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 53.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 47.7 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 44.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.1 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.6 | 14.0 |     |        |         |        |           |

#### ISO Patch Cord Cat6 20.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 62.4 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 60.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 57.1 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 55.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 53.7 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 52.0 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 47.0 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 43.7 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.1 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.6 | 14.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 0.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 62.3 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 60.3 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 56.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 54.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 52.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 50.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 44.7 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 40.7 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 1.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 61.6 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 59.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 55.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 53.8 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 51.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 50.0 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 44.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 40.1 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 1.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 61.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 59.2 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 55.1 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 53.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 51.3 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 49.4 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 43.6 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.7 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 2.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 60.6 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 58.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 54.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.8 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 50.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 49.0 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 43.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.3 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 2.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 60.2 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 58.3 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 54.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 50.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 48.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.9 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 3.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 59.8 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.9 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.9 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.0 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 50.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 48.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.5 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.6 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 3.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 59.4 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.5 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.6 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 51.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.8 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.9 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.4 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 4.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 59.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.2 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 51.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.9 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.1 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 5.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 64.4 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 58.6 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 56.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 52.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 50.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.5 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 37.8 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 7.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 63.3 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 57.5 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 55.6 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 51.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 49.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 48.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 46.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 40.7 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 37.1 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 10.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 62.4 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 56.7 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 54.8 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 51.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 49.1 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 47.4 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 45.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 40.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 36.6 | 18.0 |     |        |         |        |           |

#### TIA Patch Cord Cat5e 20.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 60.3 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 54.7 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 53.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 49.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 47.6 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 45.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 44.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 39.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 35.9 | 18.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 0.5m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 63.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 61.1 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 59.2 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 57.3 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 51.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 47.3 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 41.4 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.5 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 1.0m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.6 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 60.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 58.8 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.9 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 51.0 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 47.0 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 41.1 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.2 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 1.5m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 60.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 58.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.5 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.6 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.7 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.9 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.0 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 2.0m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 60.0 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 58.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.4 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.4 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.6 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.8 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 2.5m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.8 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.0 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.5 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.6 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 3.0m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.5 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.6 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.9 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.0 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.5 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 3.5m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.1 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.3 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.4 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.5 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.7 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.8 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.2 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.4 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 5.0m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 64.5 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.5 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.6 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 56.8 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 54.9 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.3 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.8 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.1 | 14.0 |     |        |         |        |           |

**TIA Patch Cord Cat6 7.5m**

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 63.6 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 59.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 57.8 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 56.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 54.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 48.5 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 44.8 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.5 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.8 | 14.0 |     |        |         |        |           |

#### TIA Patch Cord Cat6 10.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 64.8 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 62.9 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 59.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 57.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 55.4 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 53.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 48.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 44.4 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.6 | 14.0 |     |        |         |        |           |

#### TIA Patch Cord Cat6 20.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 | 19.8 |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 63.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 61.3 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 57.5 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 55.8 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 54.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 52.3 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 47.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 43.8 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.0 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.6 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 0.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 62.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 60.2 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 56.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 54.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 52.3 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 50.4 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 44.5 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 40.6 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 1.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 61.3 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 59.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 55.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 53.5 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 51.6 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 49.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 43.9 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.9 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 1.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 60.7 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 58.8 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 54.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 51.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 49.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 43.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.4 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 2.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 60.2 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 58.3 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 54.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 50.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 48.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.9 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 39.0 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 2.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 59.7 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.8 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 52.0 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 50.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 48.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.5 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.6 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 3.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 59.3 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 51.6 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.7 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.8 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 42.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.3 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 3.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 64.6 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 58.9 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 57.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 53.1 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 51.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.4 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.5 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 38.0 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 4.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 64.3 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 58.5 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 56.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 52.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 50.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 49.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 47.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.6 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 37.8 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 5.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 63.7 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 58.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 56.1 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 52.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 50.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 48.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 46.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 41.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 37.4 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 7.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 62.4 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 56.8 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 55.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 51.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 49.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 47.6 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 45.8 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 40.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 36.8 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 10.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 61.6 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 56.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 54.2 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 50.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 48.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 46.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 45.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 39.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 36.4 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat5e 20.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 59.5 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 54.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 52.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 48.8 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 47.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 45.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 43.9 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 39.0 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 35.8 | 18.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 0.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.9 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 61.0 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 59.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 57.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 51.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 47.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 41.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.4 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 0.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.9 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 61.0 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 59.1 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 57.2 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 51.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 47.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 41.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.4 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 1.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.4 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 60.5 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 58.6 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.8 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 41.0 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 39.1 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 1.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 62.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 60.1 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 58.2 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.3 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.4 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.5 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.7 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.9 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 2.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.6 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.8 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 56.0 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 50.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 46.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.5 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.6 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 2.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.3 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.4 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.6 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.9 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.5 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 3.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 65.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 61.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 59.1 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.2 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.4 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.6 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.7 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 40.1 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.3 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 3.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 64.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.5 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.9 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.2 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 3.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 64.7 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.7 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.9 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 57.0 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 55.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.3 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.5 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.9 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.2 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 4.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 64.4 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.5 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.6 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 56.7 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 54.9 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 49.1 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.3 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.8 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 38.1 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 5.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 65.0 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 63.9 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 60.0 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 58.2 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 56.3 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 54.5 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 48.8 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 45.0 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.6 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.9 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 7.5m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 64.8 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 63.0 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 59.2 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 57.3 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 55.5 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 53.7 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 48.2 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 44.5 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.3 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.7 | 14.0 |     |        |         |        |           |

#### CLC Patch Cord Cat6 10.0m

| Wire Map             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678 | i        | i      | i           | i          | 1     |        | 65.0 |      |     |        |         |        |           |
|                      |          |        |             |            | 4     |        | 65.0 | 21.6 |     |        |         |        |           |
|                      |          |        |             |            | 8     |        | 64.1 | 22.5 |     |        |         |        |           |
|                      |          |        |             |            | 10    |        | 62.3 | 22.8 |     |        |         |        |           |
|                      |          |        |             |            | 16    |        | 58.5 | 23.4 |     |        |         |        |           |
|                      |          |        |             |            | 20    |        | 56.7 | 23.7 |     |        |         |        |           |
|                      |          |        |             |            | 25    |        | 54.9 | 24.0 |     |        |         |        |           |
|                      |          |        |             |            | 31.25 |        | 53.1 | 23.0 |     |        |         |        |           |
|                      |          |        |             |            | 62.5  |        | 47.7 | 20.0 |     |        |         |        |           |
|                      |          |        |             |            | 100   |        | 44.2 | 18.0 |     |        |         |        |           |
|                      |          |        |             |            | 200   |        | 39.1 | 15.0 |     |        |         |        |           |
|                      |          |        |             |            | 250   |        | 37.6 | 14.0 |     |        |         |        |           |

CLC Patch Cord Cat6 20.0m

| Wire Map             | Res.     | Length | Prop.<br>Delay | Delay<br>Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS<br>ACR | PS<br>ELFEXT |
|----------------------|----------|--------|----------------|---------------|-------|--------|------|------|-----|--------|---------|-----------|--------------|
|                      | $\Omega$ | Max.   | nS             | nS            | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB        | dB           |
| 12345678<br>12345678 | i        | i      | i              | i             | 1     |        | 65.0 |      |     |        |         |           |              |
|                      |          |        |                |               | 4     |        | 65.0 | 21.6 |     |        |         |           |              |
|                      |          |        |                |               | 8     |        | 62.4 | 22.5 |     |        |         |           |              |
|                      |          |        |                |               | 10    |        | 60.7 | 22.8 |     |        |         |           |              |
|                      |          |        |                |               | 16    |        | 57.1 | 23.4 |     |        |         |           |              |
|                      |          |        |                |               | 20    |        | 55.4 | 23.7 |     |        |         |           |              |
|                      |          |        |                |               | 25    |        | 53.7 | 24.0 |     |        |         |           |              |
|                      |          |        |                |               | 31.25 |        | 52.0 | 23.0 |     |        |         |           |              |
|                      |          |        |                |               | 62.5  |        | 47.0 | 20.0 |     |        |         |           |              |
|                      |          |        |                |               | 100   |        | 43.7 | 18.0 |     |        |         |           |              |
|                      |          |        |                |               | 200   |        | 39.1 | 15.0 |     |        |         |           |              |
|                      |          |        |                |               | 250   |        | 37.6 | 14.0 |     |        |         |           |              |

## Application Standards

### 10BASE-T

| Wire Map           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|--------------------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 123 6<br>123 6     | i        | 100 m  | i           | i          |       |        |      |    |     |        |         |        |           |
|                    |          |        |             |            | 8     | 11.5   | 27.5 |    |     |        |         |        |           |
| 123 6 S<br>123 6 S |          |        |             |            | 10    | 11.5   | 26.0 |    |     |        |         |        |           |

### 100BASE-TX

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 100 m  | 570         | 50         | 1     | 2.5    | 60.7 | 15.0 |     |        |         |        |           |
|                        |          |        |             |            | 4     | 4.5    | 50.6 | 15.0 |     |        |         |        |           |
|                        |          |        |             |            | 8     | 6.4    | 45.5 | 15.0 |     |        |         |        |           |
| 12345678S<br>12345678S |          |        |             |            | 10    | 7.1    | 43.9 | 15.0 |     |        |         |        |           |
|                        |          |        |             |            | 16    | 9.1    | 40.5 | 15.0 |     |        |         |        |           |
|                        |          |        |             |            | 20    | 10.3   | 38.8 | 15.0 |     |        |         |        |           |
|                        |          |        |             |            | 25    | 11.5   | 37.2 | 14.0 |     |        |         |        |           |
|                        |          |        |             |            | 31.25 | 13     | 35.6 | 13.1 |     |        |         |        |           |
|                        |          |        |             |            | 62.5  | 18.7   | 30.5 | 10.1 |     |        |         |        |           |
|                        |          |        |             |            | 100   | 24     | 27.1 | 8.0  |     |        |         |        |           |

### 1000BASE-T

| Wire Map               | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                        | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678   | i        | 100 m  | 570         | 50         | 1     | 2.5    | 60.7 | 15.0 |     | 57.0   |         |        | 54.4      |
|                        |          |        |             |            | 4     | 4.5    | 50.6 | 15.0 |     | 45.0   |         |        | 42.4      |
|                        |          |        |             |            | 8     | 6.4    | 45.5 | 15.0 |     | 38.9   |         |        | 36.3      |
| 12345678S<br>12345678S |          |        |             |            | 10    | 7.1    | 43.9 | 15.0 |     | 37.0   |         |        | 34.4      |
|                        |          |        |             |            | 16    | 9.1    | 40.5 | 15.0 |     | 32.9   |         |        | 30.3      |
|                        |          |        |             |            | 20    | 10.3   | 38.8 | 15.0 |     | 31.0   |         |        | 28.4      |
|                        |          |        |             |            | 25    | 11.5   | 37.2 | 14.0 |     | 29.0   |         |        | 26.4      |
|                        |          |        |             |            | 31.25 | 13     | 35.6 | 13.1 |     | 27.1   |         |        | 24.5      |
|                        |          |        |             |            | 62.5  | 18.7   | 30.5 | 10.1 |     | 21.1   |         |        | 18.5      |
|                        |          |        |             |            | 100   | 24     | 27.1 | 8.0  |     | 17.0   |         |        | 14.4      |

### 10GBASE-T Ch C I E 55-100m

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | 100 m  | 555         | 50         | 1     | 4      | 65.0 | 19.0 |     | 63.3   | 62.0    |        | 60.3      |
| 12345678  |          |        |             |            | 4     | 4.2    | 63.0 | 19.0 |     | 51.2   | 60.5    |        | 48.2      |
|           |          |        |             |            | 8     | 5.9    | 58.2 | 19.0 |     | 45.2   | 55.6    |        | 42.2      |
| 12345678S |          |        |             |            | 10    | 6.6    | 56.6 | 19.0 |     | 43.3   | 54.0    |        | 40.3      |
| 12345678S |          |        |             |            | 16    | 8.3    | 53.2 | 18.0 |     | 39.2   | 50.6    |        | 36.2      |
|           |          |        |             |            | 20    | 9.3    | 51.6 | 17.5 |     | 37.2   | 49.0    |        | 34.2      |
|           |          |        |             |            | 25    | 10.5   | 50.0 | 17.0 |     | 35.3   | 47.3    |        | 32.3      |
|           |          |        |             |            | 31.25 | 11.7   | 48.4 | 16.5 |     | 33.4   | 45.7    |        | 30.4      |
|           |          |        |             |            | 62.5  | 16.9   | 43.4 | 14.0 |     | 27.3   | 40.6    |        | 24.3      |
|           |          |        |             |            | 100   | 21.7   | 39.9 | 12.0 |     | 23.3   | 37.1    |        | 20.3      |
|           |          |        |             |            | 200   | 31.7   | 34.8 | 9.0  |     | 17.2   | 31.9    |        | 14.2      |
|           |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  |     | 15.3   | 30.2    |        | 12.3      |
|           |          |        |             |            | 350   | 43.5   | 29.7 | 6.6  |     | 12.4   | 26.9    |        | 9.4       |
|           |          |        |             |            | 500   | 53.4   | 22.0 | 6.0  |     | 9.3    | 20.4    |        | 6.3       |

### 10GBASE-T Ch C I E 0-55m

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | i      | 555         | 50         | 1     | 4      | 65.0 | 19.0 |     | 63.3   | 62.0    |        | 60.3      |
| 12345678  |          |        |             |            | 4     | 4      | 63.0 | 19.0 |     | 51.2   | 60.5    |        | 48.2      |
|           |          |        |             |            | 8     | 4      | 58.2 | 19.0 |     | 45.2   | 55.6    |        | 42.2      |
| 12345678S |          |        |             |            | 10    | 4      | 56.6 | 19.0 |     | 43.3   | 54.0    |        | 40.3      |
| 12345678S |          |        |             |            | 16    | 4.7    | 53.2 | 18.0 |     | 39.2   | 50.6    |        | 36.2      |
|           |          |        |             |            | 20    | 5.3    | 51.6 | 17.5 |     | 37.2   | 49.0    |        | 34.2      |
|           |          |        |             |            | 25    | 5.9    | 50.0 | 17.0 |     | 35.3   | 47.3    |        | 32.3      |
|           |          |        |             |            | 31.25 | 6.7    | 48.4 | 16.5 |     | 33.4   | 45.7    |        | 30.4      |
|           |          |        |             |            | 62.5  | 9.6    | 43.4 | 14.0 |     | 27.3   | 40.6    |        | 24.3      |
|           |          |        |             |            | 100   | 12.3   | 39.9 | 12.0 |     | 23.3   | 37.1    |        | 20.3      |
|           |          |        |             |            | 200   | 18     | 34.8 | 9.0  |     | 17.2   | 31.9    |        | 14.2      |
|           |          |        |             |            | 250   | 20.3   | 33.1 | 8.0  |     | 15.3   | 30.2    |        | 12.3      |
|           |          |        |             |            | 350   | 24.6   | 29.7 | 6.6  |     | 12.4   | 26.9    |        | 9.4       |
|           |          |        |             |            | 500   | 30.2   | 22.0 | 6.0  |     | 9.3    | 20.4    |        | 6.3       |

### 10GBASE-T Ch C I F 0-100m

**DRAFT STANDARD - For Verification Purposes ONLY**

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678  | i        | 100 m  | 555         | 50         | 1     | 4      | 65.0 | 19.0 |     | 65.0   | 62.0    |        | 62.0      |
| 12345678  |          |        |             |            | 4     | 4.1    | 65.0 | 19.0 |     | 65.0   | 62.0    |        | 62.0      |
|           |          |        |             |            | 8     | 5.7    | 65.0 | 19.0 |     | 62.4   | 62.0    |        | 59.4      |
| 12345678S |          |        |             |            | 10    | 6.4    | 65.0 | 19.0 |     | 60.8   | 62.0    |        | 57.8      |
| 12345678S |          |        |             |            | 16    | 8.1    | 65.0 | 18.0 |     | 57.5   | 62.0    |        | 54.5      |
|           |          |        |             |            | 20    | 9.1    | 65.0 | 17.5 |     | 55.9   | 62.0    |        | 52.9      |
|           |          |        |             |            | 25    | 10.2   | 65.0 | 17.0 |     | 54.4   | 62.0    |        | 51.4      |
|           |          |        |             |            | 31.25 | 11.4   | 65.0 | 16.5 |     | 52.8   | 62.0    |        | 49.8      |
|           |          |        |             |            | 62.5  | 16.3   | 65.0 | 14.0 |     | 47.8   | 62.0    |        | 44.8      |
|           |          |        |             |            | 100   | 20.8   | 62.9 | 12.0 |     | 44.4   | 59.9    |        | 41.4      |
|           |          |        |             |            | 200   | 30     | 58.3 | 9.0  |     | 39.4   | 55.3    |        | 36.4      |
|           |          |        |             |            | 250   | 33.8   | 56.9 | 8.0  |     | 37.8   | 53.9    |        | 34.8      |
|           |          |        |             |            | 350   | 40.5   | 54.7 | 8.0  |     | 35.3   | 51.7    |        | 32.3      |
|           |          |        |             |            | 500   | 49.3   | 52.4 | 8.0  |     | 32.6   | 49.4    |        | 29.6      |

### CATV Broadband

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | i        | 90 m   | 498         | 44         | 1     | 3      | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 4     | 4      | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 8     | 5.7    | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 10    | 6.3    | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 16    | 8      | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 20    | 9      | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 25    | 10.1   | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 31.25 | 11.4   | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 62.5  | 16.5   | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 100   | 21.3   | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 200   | 31.5   | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 250   | 35.9   | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 600   | 55     | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 700   | 55     | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 800   | 55     | i    | i  | i   | i      | i       | i      | i         |
|                                                    |          |        |             |            | 865   | 55     | i    | i  | i   | i      | i       | i      | i         |

### Cat6 Selftest

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 2        | i      | 10          | 3          | 1     | 1      | 65.0 | 19.0 |     | 65.0   |         |        |           |
|                                                    |          |        |             |            | 4     | 1      | 64.0 | 19.0 |     | 65.0   |         |        |           |
|                                                    |          |        |             |            | 8     | 1      | 57.9 | 19.0 |     | 63.9   |         |        |           |
|                                                    |          |        |             |            | 10    | 1      | 56.0 | 19.0 |     | 62.0   |         |        |           |
|                                                    |          |        |             |            | 16    | 1      | 51.9 | 19.0 |     | 57.9   |         |        |           |
|                                                    |          |        |             |            | 20    | 1      | 50.0 | 19.0 |     | 56.0   |         |        |           |
|                                                    |          |        |             |            | 25    | 1      | 48.0 | 19.0 |     | 54.0   |         |        |           |
|                                                    |          |        |             |            | 31.25 | 1      | 46.1 | 17.8 |     | 52.1   |         |        |           |
|                                                    |          |        |             |            | 62.5  | 1      | 40.1 | 14.2 |     | 46.1   |         |        |           |
|                                                    |          |        |             |            | 100   | 1      | 36.0 | 11.8 |     | 42.0   |         |        |           |
|                                                    |          |        |             |            | 200   | 1      | 27.0 | 8.2  |     | 36.0   |         |        |           |
|                                                    |          |        |             |            | 250   | 1      | 24.1 | 7.0  |     | 34.0   |         |        |           |

### Class F Selftest

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678<br>12345678<br><br>12345678S<br>12345678S | 2        | i      | 10          | 3          | 1     | 1      | 75.0 | 20.0 |     | 75.0   |         |        |           |
|                                                    |          |        |             |            | 4     | 1      | 75.0 | 20.0 |     | 75.0   |         |        |           |
|                                                    |          |        |             |            | 8     | 1      | 75.0 | 20.0 |     | 74.5   |         |        |           |
|                                                    |          |        |             |            | 10    | 1      | 75.0 | 20.0 |     | 73.0   |         |        |           |
|                                                    |          |        |             |            | 16    | 1      | 75.0 | 20.0 |     | 69.9   |         |        |           |
|                                                    |          |        |             |            | 20    | 1      | 75.0 | 20.0 |     | 68.5   |         |        |           |
|                                                    |          |        |             |            | 25    | 1      | 75.0 | 20.0 |     | 67.0   |         |        |           |
|                                                    |          |        |             |            | 31.25 | 1      | 75.0 | 18.9 |     | 65.6   |         |        |           |
|                                                    |          |        |             |            | 62.5  | 1      | 70.5 | 15.6 |     | 61.1   |         |        |           |
|                                                    |          |        |             |            | 100   | 1      | 66.0 | 13.4 |     | 58.0   |         |        |           |
|                                                    |          |        |             |            | 200   | 1      | 59.4 | 10.1 |     | 53.5   |         |        |           |
|                                                    |          |        |             |            | 250   | 1      | 57.2 | 9.0  |     | 52.0   |         |        |           |
|                                                    |          |        |             |            | 600   | 1      | 48.9 | 9.0  |     | 46.3   |         |        |           |

#### DTX-PL Selftest

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|-----|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB  | dB     | dB      | dB     | dB        |
| 12345678  | 2        | i      | 10          | 3          | 1     | 0.6    | 79.0 |      |     | 79.0   |         |        |           |
| 12345678  |          |        |             |            | 4     | 0.6    | 79.0 | 25.0 |     | 79.0   |         |        |           |
|           |          |        |             |            | 8     | 0.6    | 78.9 | 25.0 |     | 79.0   |         |        |           |
| 12345678S |          |        |             |            | 10    | 0.7    | 77.0 | 25.0 |     | 79.0   |         |        |           |
| 12345678S |          |        |             |            | 16    | 0.7    | 72.9 | 25.0 |     | 74.9   |         |        |           |
|           |          |        |             |            | 20    | 0.7    | 71.0 | 25.0 |     | 73.0   |         |        |           |
|           |          |        |             |            | 25    | 0.7    | 69.0 | 25.0 |     | 71.0   |         |        |           |
|           |          |        |             |            | 31.25 | 0.8    | 67.1 | 23.6 |     | 69.1   |         |        |           |
|           |          |        |             |            | 62.5  | 0.9    | 61.1 | 19.1 |     | 63.1   |         |        |           |
|           |          |        |             |            | 100   | 1.1    | 57.0 | 16.0 |     | 59.0   |         |        |           |
|           |          |        |             |            | 200   | 1.6    | 51.0 | 11.5 |     | 53.0   |         |        |           |
|           |          |        |             |            | 250   | 1.9    | 49.0 | 10.0 |     | 51.0   |         |        |           |

#### TokenRing, 4Mb/s

| Wire Map | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------|----------|--------|-------------|------------|-------|--------|------|----|------|--------|---------|--------|-----------|
|          | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB   | dB     | dB      | dB     | dB        |
| 3456     | i        | 100 m  | i           | i          | 1     |        |      |    | 26.5 |        |         |        |           |
| 3456     |          |        |             |            | 4     | 19     |      |    | 17.5 |        |         |        |           |
|          |          |        |             |            | 8     |        |      |    | 13.0 |        |         |        |           |
| 3456 S   |          |        |             |            | 10    |        |      |    | 11.5 |        |         |        |           |
| 3456 S   |          |        |             |            |       |        |      |    |      |        |         |        |           |

#### TokenRing, 16Mb/s, Active

| Wire Map | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------|----------|--------|-------------|------------|-------|--------|------|----|------|--------|---------|--------|-----------|
|          | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB   | dB     | dB      | dB     | dB        |
| 3456     | i        | 100 m  | i           | i          | 1     |        |      |    | 32.1 |        |         |        |           |
| 3456     |          |        |             |            | 4     |        |      |    | 23.0 |        |         |        |           |
|          |          |        |             |            | 8     |        |      |    | 18.5 |        |         |        |           |
| 3456 S   |          |        |             |            | 10    |        |      |    | 17.1 |        |         |        |           |
| 3456 S   |          |        |             |            | 16    | 16     |      |    | 14.0 |        |         |        |           |
|          |          |        |             |            | 20    |        |      |    | 12.5 |        |         |        |           |
|          |          |        |             |            | 25    |        |      |    | 11.1 |        |         |        |           |

#### TokenRing, 16Mb/s, Passive

| Wire Map | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------|----------|--------|-------------|------------|-------|--------|------|----|------|--------|---------|--------|-----------|
|          | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB   | dB     | dB      | dB     | dB        |
| 3456     | i        | 100 m  | i           | i          | 1     |        |      |    | 33.6 |        |         |        |           |
| 3456     |          |        |             |            | 4     |        |      |    | 24.5 |        |         |        |           |
|          |          |        |             |            | 8     |        |      |    | 20.0 |        |         |        |           |
| 3456 S   |          |        |             |            | 10    |        |      |    | 18.6 |        |         |        |           |
| 3456 S   |          |        |             |            | 16    | 19     |      |    | 15.5 |        |         |        |           |
|          |          |        |             |            | 20    |        |      |    | 14.0 |        |         |        |           |
|          |          |        |             |            | 25    |        |      |    | 12.6 |        |         |        |           |

#### TP-PMD

| Wire Map | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------|----------|--------|-------------|------------|-------|--------|------|----|------|--------|---------|--------|-----------|
|          | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB   | dB     | dB      | dB     | dB        |
| 12 78    | i        | 100 m  | i           | i          | 1     |        | 51.1 |    | 48.6 |        |         |        |           |
| 12 78    |          |        |             |            | 4     |        | 42.0 |    | 39.5 |        |         |        |           |
|          |          |        |             |            | 8     |        | 37.5 |    | 35.0 |        |         |        |           |
| 12 78S   |          |        |             |            | 10    |        | 36.1 |    | 33.6 |        |         |        |           |
| 12 78S   |          |        |             |            | 16    | 10     | 33.0 |    | 30.5 |        |         |        |           |
|          |          |        |             |            | 20    |        | 31.5 |    | 29.0 |        |         |        |           |
|          |          |        |             |            | 25    |        | 30.1 |    | 27.6 |        |         |        |           |
|          |          |        |             |            | 31.25 |        | 28.6 |    | 26.1 |        |         |        |           |
|          |          |        |             |            | 62.5  |        | 24.1 |    | 21.6 |        |         |        |           |

#### POE 2-Pair Cat 5e Channel

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 123--6--  | i        | 100 m  | 555         | 50         | 1     | 3      | 60.0 | 17.0 | 57.0 | 57.4   | 57.0    | 54.0   | 54.4      |
| 123--6--  |          |        |             |            | 4     | 4.5    | 53.5 | 17.0 | 49.1 | 45.4   | 50.5    | 46.1   | 42.4      |
|           |          |        |             |            | 8     | 6.3    | 48.6 | 17.0 | 42.3 | 39.3   | 45.6    | 39.3   | 36.3      |
| 123--6--S |          |        |             |            | 10    | 7.1    | 47.0 | 17.0 | 39.9 | 37.4   | 44.0    | 36.9   | 34.4      |
| 123--6--S |          |        |             |            | 16    | 9.1    | 43.6 | 17.0 | 34.5 | 33.3   | 40.6    | 31.5   | 30.3      |
|           |          |        |             |            | 20    | 10.2   | 42.0 | 17.0 | 31.8 | 31.4   | 39.0    | 28.8   | 28.4      |
|           |          |        |             |            | 25    | 11.4   | 40.3 | 16.0 | 28.9 | 29.4   | 37.3    | 25.9   | 26.4      |
|           |          |        |             |            | 31.25 | 12.9   | 38.7 | 15.1 | 25.9 | 27.5   | 35.7    | 22.9   | 24.5      |
|           |          |        |             |            | 62.5  | 18.6   | 33.6 | 12.1 | 15.0 | 21.5   | 30.6    | 12.0   | 18.5      |
|           |          |        |             |            | 100   | 24     | 30.1 | 10.0 | 6.1  | 17.4   | 27.1    | 3.1    | 14.4      |

#### POE 2-Pair Cat 6 Channel

| Wire Map  | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|-----------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|           | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 123--6--  | i        | 100 m  | 555         | 50         | 1     | 3      | 65.0 | 19.0 | 62.0 | 63.3   | 62.0    | 59.0   | 60.3      |
| 123--6--  |          |        |             |            | 4     | 4      | 63.0 | 19.0 | 59.0 | 51.2   | 60.5    | 56.5   | 48.2      |
|           |          |        |             |            | 8     | 5.7    | 58.2 | 19.0 | 52.5 | 45.2   | 55.6    | 49.9   | 42.2      |
| 123--6--S |          |        |             |            | 10    | 6.3    | 56.6 | 19.0 | 50.2 | 43.3   | 54.0    | 47.7   | 40.3      |
| 123--6--S |          |        |             |            | 16    | 8      | 53.2 | 18.0 | 45.2 | 39.2   | 50.6    | 42.6   | 36.2      |
|           |          |        |             |            | 20    | 9      | 51.6 | 17.5 | 42.6 | 37.2   | 49.0    | 39.9   | 34.2      |
|           |          |        |             |            | 25    | 10.1   | 50.0 | 17.0 | 39.9 | 35.3   | 47.3    | 37.2   | 32.3      |
|           |          |        |             |            | 31.25 | 11.4   | 48.4 | 16.5 | 37.0 | 33.4   | 45.7    | 34.3   | 30.4      |
|           |          |        |             |            | 62.5  | 16.5   | 43.4 | 14.0 | 26.9 | 27.3   | 40.6    | 24.1   | 24.3      |
|           |          |        |             |            | 100   | 21.3   | 39.9 | 12.0 | 18.6 | 23.3   | 37.1    | 15.8   | 20.3      |
|           |          |        |             |            | 200   | 31.5   | 34.8 | 9.0  | 3.3  | 17.2   | 31.9    | 0.3    | 14.2      |
|           |          |        |             |            | 250   | 35.9   | 33.1 | 8.0  | -2.8 | 15.3   | 30.2    | -5.8   | 12.3      |

**POE 2-Pair Cat 5e Perm. Link**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 123--6--<br>123--6--<br><br>123--6--S<br>123--6--S | i        | 100 m  | 555         | 50         | 1     | 3      | 60.0 | 19.0 | 57.0 | 58.6   | 57.0    | 54.0   | 55.6      |
|                                                    |          |        |             |            | 4     | 3.9    | 54.8 | 19.0 | 50.9 | 46.6   | 51.8    | 47.9   | 43.6      |
|                                                    |          |        |             |            | 8     | 5.5    | 50.0 | 19.0 | 44.5 | 40.6   | 47.0    | 41.5   | 37.6      |
|                                                    |          |        |             |            | 10    | 6.2    | 48.5 | 19.0 | 42.3 | 38.6   | 45.5    | 39.3   | 35.6      |
|                                                    |          |        |             |            | 16    | 7.9    | 45.2 | 19.0 | 37.3 | 34.5   | 42.2    | 34.3   | 31.5      |
|                                                    |          |        |             |            | 20    | 8.9    | 43.7 | 19.0 | 34.8 | 32.6   | 40.7    | 31.8   | 29.6      |
|                                                    |          |        |             |            | 25    | 10     | 42.1 | 18.0 | 32.1 | 30.7   | 39.1    | 29.1   | 27.7      |
|                                                    |          |        |             |            | 31.25 | 11.2   | 40.5 | 17.1 | 29.3 | 28.7   | 37.5    | 26.3   | 25.7      |
|                                                    |          |        |             |            | 62.5  | 16.2   | 35.7 | 14.1 | 19.4 | 22.7   | 32.7    | 16.4   | 19.7      |
|                                                    |          |        |             |            | 100   | 21     | 32.3 | 12.0 | 11.3 | 18.6   | 29.3    | 8.3    | 15.6      |

**POE 2-Pair Cat 6 Perm. Link**

| Wire Map                                           | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL   | ACR  | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|----------------------------------------------------|----------|--------|-------------|------------|-------|--------|------|------|------|--------|---------|--------|-----------|
|                                                    | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB   | dB   | dB     | dB      | dB     | dB        |
| 123--6--<br>123--6--<br><br>123--6--S<br>123--6--S | i        | 100 m  | 555         | 50         | 1     | 3      | 65.0 | 19.1 | 62.0 | 64.2   | 62.0    | 59.0   | 61.2      |
|                                                    |          |        |             |            | 4     | 3.5    | 64.1 | 21.0 | 60.6 | 52.1   | 61.8    | 58.3   | 49.1      |
|                                                    |          |        |             |            | 8     | 5      | 59.4 | 21.0 | 54.4 | 46.1   | 57.0    | 52.1   | 43.1      |
|                                                    |          |        |             |            | 10    | 5.5    | 57.8 | 21.0 | 52.3 | 44.2   | 55.5    | 49.9   | 41.2      |
|                                                    |          |        |             |            | 16    | 7      | 54.6 | 20.0 | 47.6 | 40.1   | 52.2    | 45.2   | 37.1      |
|                                                    |          |        |             |            | 20    | 7.9    | 53.1 | 19.5 | 45.2 | 38.2   | 50.7    | 42.8   | 35.2      |
|                                                    |          |        |             |            | 25    | 8.9    | 51.5 | 19.0 | 42.7 | 36.2   | 49.1    | 40.2   | 33.2      |
|                                                    |          |        |             |            | 31.25 | 10     | 50.0 | 18.5 | 40.0 | 34.3   | 47.5    | 37.6   | 31.3      |
|                                                    |          |        |             |            | 62.5  | 14.4   | 45.1 | 16.0 | 30.8 | 28.3   | 42.7    | 28.3   | 25.3      |
|                                                    |          |        |             |            | 100   | 18.6   | 41.8 | 14.0 | 23.3 | 24.2   | 39.3    | 20.7   | 21.2      |
|                                                    |          |        |             |            | 200   | 27.4   | 36.9 | 11.0 | 9.6  | 18.2   | 34.3    | 7.0    | 15.2      |
|                                                    |          |        |             |            | 250   | 31.1   | 35.3 | 10.0 | 4.2  | 16.2   | 32.7    | 1.6    | 13.2      |

**Voice - 1 Pair**

| Wire Map                     | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|------------------------------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|                              | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 45<br>45<br><br>45 S<br>45 S | i        | i      | i           | N/A        |       |        |      |    |     |        |         |        |           |
|                              |          |        |             |            |       |        |      |    |     |        |         |        |           |
|                              |          |        |             |            |       |        |      |    |     |        |         |        |           |
|                              |          |        |             |            |       |        |      |    |     |        |         |        |           |

**Voice - 2 Pair**

| Wire Map                             | Res.     | Length | Prop. Delay | Delay Skew | Freq. | Atten. | NEXT | RL | ACR | ELFEXT | PS NEXT | PS ACR | PS ELFEXT |
|--------------------------------------|----------|--------|-------------|------------|-------|--------|------|----|-----|--------|---------|--------|-----------|
|                                      | $\Omega$ | Max.   | nS          | nS         | MHz   | dB     | dB   | dB | dB  | dB     | dB      | dB     | dB        |
| 3456<br>3456<br><br>3456 S<br>3456 S | i        | i      | i           | i          |       |        |      |    |     |        |         |        |           |
|                                      |          |        |             |            |       |        |      |    |     |        |         |        |           |
|                                      |          |        |             |            |       |        |      |    |     |        |         |        |           |
|                                      |          |        |             |            |       |        |      |    |     |        |         |        |           |