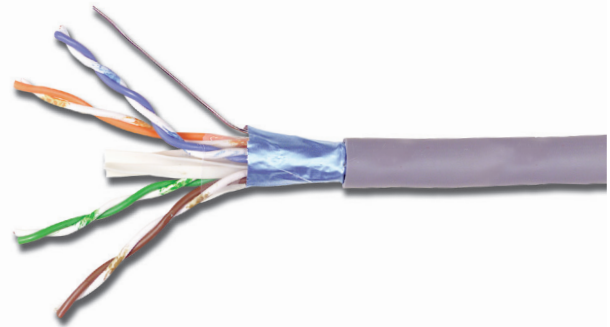


# Category 6A F/UTP 4-Pair Cable - International

Simon's Category 6A F/UTP cable supports channel performance exceeding ANSI/TIA-568.2-D and ISO/IEC 11801 Class E<sub>A</sub> requirements. When combined with our screened Category 6A series connectivity, the result is a channel capable of supporting 10GBASE-T operation over 100-metre, 4-connector topologies. In addition the screened construction ensures virtually zero alien crosstalk. The Category 6A F/UTP cabling system supports emerging and converging IP applications like Voice Over IP (VoIP), IP video and future 10 gigabit applications.



Simon's **PowerGUARD** technology with a 75°C operating temperature improves heat dissipation for reduced length derating and bundling requirements in remote powering applications, including PoE and power over HDBaseT (POH).



## CABLE FEATURES

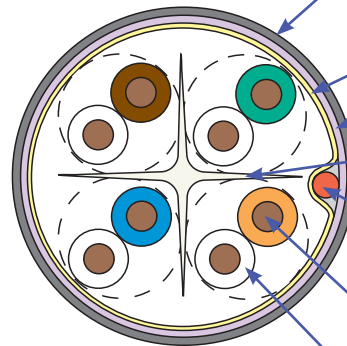
- FUTP
- Nominal jacket OD: 6.8mm (0.27 in.)
- 23 AWG 0.57mm (0.022 in.) solid (non-tinned) copper
- Central isolation member
- Shield is an aluminum foil tape enclosing a 0.51mm (24AWG) tinned copper drain wire
- 75° C temperature rating

## STANDARDS COMPLIANCE

- ISO/IEC 11801-1 Ed.1.0
- ANSI/TIA 568.2-D
- IEC 61156-5 Ed 2.0 (Category 6A)
- UL CMR and CSA FT4
- UL CM, IEC 60332-1, Class E<sub>ca</sub>
- LSOH: IEC 60332-1, IEC 60332-3-22, IEC 60754, IEC 61034, and EN 50575 Class D<sub>ca</sub>s1d1a1

## APPLICATIONS SUPPORT

- 10GBASE-T
- 1000BASE-T
- 100BASE-T
- 10BASE-T
- IEEE 802.3af (Type 1 PoE)
- IEEE 802.3at (Type 2 PoE)
- IEEE 802.3bt (Type 3 PoE)
- IEEE 802.3bt (Type 4 PoE)
- Power over HDBaseT (PoH)



### Jacket

- Nominal Cable O.D.: 6.8mm ± 0.6 (0.27 in. ± 0.02)
- Jacket Material: CM, LSOH and CMR options available

### Mylar Tape

### Aluminum Foil Tape

- Shield enclosing drain wire

### Isolation Member

- Maintains pair geometry before, during and after installation for optimal NEXT Loss performance

### Drain Wire

- Applied longitudinally under cable jacket
- 7-Strand 0.05mm (0.002 in.) tinned copper drain wire

### Conductor

- 0.57mm (23 AWG) solid bare copper

### Insulation

- Conductor Insulation: HDPE 1.18mm (0.046 in.) max conductor insulation diameter

## Ordering Information

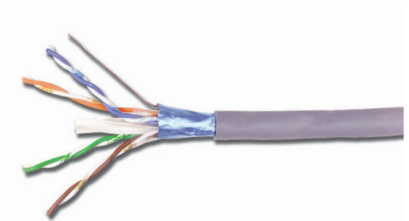
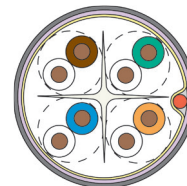
9A6(X)4-A5 ----- 305m (1000 ft.) Reel

### Jacket Material

**M** = PVC (CM, IEC 60332-1), Grey Jacket, Class E<sub>ca</sub>

**R** = Riser (CMR, CSA FT4), Blue Jacket

**L** = LSOH (IEC 60332-1, IEC 60332-3-22), Violet Jacket, Class E<sub>ca</sub>, D<sub>ca</sub>



To request different colors from the standard shown above, add the following color codes to the part number:

01=black, 02=white, 03=red, 04=grey, 05=yellow, 06=blue, 07=green, 08=violet, 09=orange. Example: 9A6L4-A5-06 LSOH, blue jacket.

To request additional put-ups from the standard, add the following to the part number: 5CR = 500m reel, 1KR = 1000m reel.

Example: 9A6L4-A5-06-5CR LSOH, blue jacket, 500 meter reel. Minimum order quantity and extended lead time may apply to non-standard items.

# Product Information

## ELECTRICAL SPECIFICATIONS

|                         |                                       |
|-------------------------|---------------------------------------|
| DC Resistance           | <8.5Ω/100m                            |
| DC Resistance Unbalance | ≤4% (@ 20°C)                          |
| Mutual Capacitance      | 5.6 nF/100m                           |
| Capacitance Unbalance   | <160 pF/100m                          |
| NVP                     | 67%                                   |
| TCL                     | 30-10 log(f/100) dB                   |
| Delay Skew              | ≤45ns                                 |
| PoE                     | Suitable for PoE Type 1,2,3,4 and PoE |

## PHYSICAL PROPERTIES

|                          | LSOH                      | CM/CMR                    |
|--------------------------|---------------------------|---------------------------|
| Pulling Tension (max)    | 110N (25 lbf)             | 110N (25 lbf)             |
| Bend Radius (min)        | 27mm (1.1 in.)            | 27mm (1.1 in.)            |
| Installation Temperature | 0 to 60°C (+32 to 140°F)  | 0 to 60°C (+32 to 140°F)  |
| Storage Temperature      | -20 to 75°C (-4 to 167°F) | -20 to 75°C (-4 to 167°F) |
| Operating Temperature    | -20 to 75°C (-4 to 167°F) | -20 to 75°C (-4 to 167°F) |

## TRANSMISSION PERFORMANCE



GUARANTEED WORST CASE



SIEMON TYPICAL

| Frequency (MHz) | Insertion Loss (dB/100) |      | NEXT (dB) |      | PS NEXT (dB) |      | ACR (dB) |      | PSACR (dB) |      | ACR-F (dB) |      | PS ACR-F (dB) |      | Return Loss (dB) |      | Propagation Delay (ns) |       |
|-----------------|-------------------------|------|-----------|------|--------------|------|----------|------|------------|------|------------|------|---------------|------|------------------|------|------------------------|-------|
| 1.0*            | 2.1                     | 1.8  | 75.3      | 86.0 | 73.3         | 82.3 | 73.2     | 84.2 | 71.2       | 80.5 | 73.3       | 91.0 | 71.3          | 85.0 | 20.0             | 33.0 | 570                    | 570   |
| 4.0             | 3.8                     | 3.4  | 66.3      | 77.0 | 64.3         | 73.3 | 62.5     | 73.6 | 60.5       | 69.9 | 61.3       | 79.0 | 59.3          | 73.0 | 23.0             | 35.5 | 545                    | 545   |
| 10.0            | 5.9                     | 5.4  | 60.3      | 71.0 | 58.3         | 67.3 | 54.4     | 65.6 | 52.4       | 61.9 | 53.3       | 71.0 | 51.3          | 65.0 | 25.0             | 38.0 | 543                    | 543   |
| 16.0            | 7.5                     | 6.9  | 57.2      | 68.0 | 55.2         | 64.2 | 49.8     | 61.1 | 47.8       | 57.3 | 49.2       | 67.0 | 47.2          | 61.0 | 25.0             | 35.2 | 542                    | 542   |
| 20.0            | 8.4                     | 7.7  | 55.8      | 67.0 | 53.8         | 62.8 | 47.4     | 59.3 | 45.4       | 55.1 | 47.3       | 65.0 | 45.3          | 59.0 | 25.0             | 35.0 | 540                    | 540.4 |
| 31.25           | 10.5                    | 9.9  | 52.9      | 64.0 | 50.9         | 59.9 | 42.4     | 54.1 | 40.4       | 50.0 | 43.4       | 61.0 | 41.4          | 55.0 | 23.6             | 33.1 | 539                    | 538.6 |
| 62.5            | 15.0                    | 14.3 | 48.4      | 59.0 | 46.4         | 55.4 | 33.4     | 44.7 | 31.4       | 41.1 | 37.4       | 55.0 | 35.4          | 49.0 | 21.5             | 32.2 | 538                    | 537.6 |
| 100.0           | 19.1                    | 18.1 | 45.3      | 56.0 | 43.3         | 52.0 | 26.2     | 37.9 | 24.2       | 33.9 | 33.3       | 51.0 | 31.3          | 45.0 | 20.1             | 31.6 | 537                    | 536.5 |
| 200.0           | 27.6                    | 27.3 | 40.8      | 52.0 | 38.8         | 47.8 | 13.2     | 24.7 | 11.2       | 20.5 | 27.3       | 45.0 | 25.3          | 39.0 | 18.0             | 29.8 | 536                    | 536.3 |
| 250.0           | 31.1                    | 31.1 | 39.3      | 50.0 | 37.3         | 46.0 | 8.3      | 18.9 | 6.3        | 14.9 | 25.3       | 43.0 | 23.3          | 37.0 | 17.3             | 28.7 | 536                    | 536.1 |
| 300.0           | 34.3                    | 35.0 | 38.1      | 49.0 | 36.1         | 45.0 | 3.9      | 14.0 | -1.9       | 10.0 | 23.8       | 38.0 | 21.8          | 35.0 | 17.3             | 28.0 | 536                    | 535.8 |
| 400.0           | 40.1                    | 40.0 | 36.3      | 47.0 | 34.3         | 43.0 | -3.8     | 7.0  | -5.8       | 3.0  | 21.3       | 36.0 | 19.3          | 33.0 | 17.3             | 27.1 | 536                    | 535.6 |
| 500.0           | 45.3                    | 42.0 | 34.8      | 47.0 | 32.8         | 42.0 | -10.4    | 5.0  | -12.4      | 0.0  | 19.3       | 34.0 | 17.3          | 32.0 | 17.3             | 26.0 | 536                    | 510   |
| 550.0*          | -                       | 43.0 | -         | 46.0 | -            | 42.0 | -        | 3.0  | -          | -1.0 | -          | 33.0 | -             | 31.0 | -                | 26.0 | 536                    | -     |
| 625.0*          | -                       | 44.9 | -         | 46.0 | -            | 41.0 | -        | 1.1  | -          | -3.9 | -          | 33.0 | -             | 29.0 | -                | 25.0 | 535                    | -     |
| 750.0*          | -                       | 49.0 | -         | 45.0 | -            | 41.0 | -        | -4.0 | -          | -8.0 | -          | 32.0 | -             | 27.0 | -                | 25.0 | 535                    | -     |

\*Values for frequencies above industry requirements are for information only.

All performance based on 100 meters (328 ft.).

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

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