

# Category 6A UTP Cable - International

Siemon's Category 6A UTP cable exceeds ANSI/TIA and ISO/IEC transmission performance requirements including alien crosstalk. When combined with Z-MAX 6A UTP connectivity, the result is a channel capable of supporting 10GBASE-T operation over 100-meter, 4-connector topologies. The 6A UTP cabling system supports emerging and converging IP applications like Voice Over IP (VoIP), IP video and other 10GBase-T applications.

## CABLE FEATURES

- UTP
- Nominal jacket OD: 7.95 (0.31 in.)
- 23 AWG 0.58mm (0.023 in.) solid bare copper
- Center Isolation Member
- 75° C temperature rating

## STANDARD COMPLIANCE

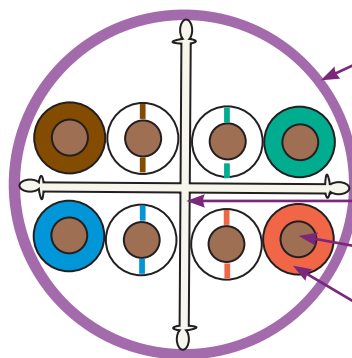
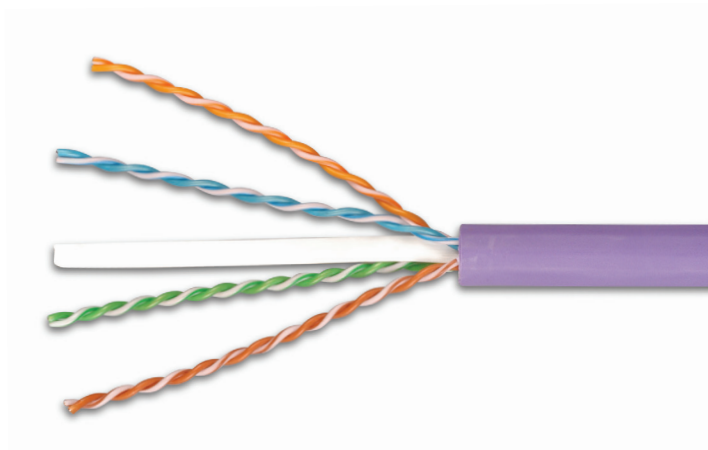
- ISO/IEC 11801-1 Ed 1.0
- ANSI/TIA-568.2-E
- IEC 61156-5 Ed 2.1
- CM: UL, IEC, 60332-1
- LSOH: ISO/IEC 60332-1, IEC 60754 and IEC 61034
- EN 50575 Class Eca

## 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)



Data | Power | Reach | Delivered



### Jacket

- Cable O.D.: 7.95mm (0.31 in.)  $\pm$  0.3mm
- Jacket Material: LSOH  
LSOH – Polyethylene  
CM – Polyethylene

### Center Isolation Member

### Conductor

- 23AWG solid  
0.58mm (0.023 in.)

### Insulation

- Conductor Insulation: HDPE  
1.05mm nominal outside diameter

# Product Information

## ELECTRICAL SPECIFICATIONS

|                         |                       |
|-------------------------|-----------------------|
| DC Resistance           | 8.6Ω/100m nominal     |
| DC Resistance Unbalance | ≤ 4% (@ 20° C)        |
| Mutual Capacitance      | 5.6 nF/100m           |
| Capacitance Unbalance   | <330 pF/100m          |
| NVP                     | 65%                   |
| TCL                     | ≥50-10* log(f/100) dB |
| Delay Skew              | ≤45ns                 |

## PHYSICAL PROPERTIES

| LSOH/CM                  |                           |
|--------------------------|---------------------------|
| Pulling Tension (max)    | 110 N (25 lbf)            |
| Bend Radius (min)        | 32 mm (1.26 in.)          |
| Installation Temperature | 0 to 50°C (+32 to 122°F)  |
| Storage Temperature      | -20 to 75°C (-4 to 167°F) |
| Operating Temperature    | -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-F (dB) |      | PS ACR-F (dB) |      | Return Loss (dB) |      | ACR-N (dB) |       | PS ACR-N (dB) |       | Propagation Delay (ns) |     |
|-----------------|-------------------------|------|-----------|-------|--------------|------|------------|------|---------------|------|------------------|------|------------|-------|---------------|-------|------------------------|-----|
| 1.0             | 2.1                     | 1.8  | 75.3      | 101.6 | 73.3         | 99.0 | 73.3       | 91.7 | 71.3          | 89.0 | 20.0             | 24.6 | 73.2       | 99.8  | 71.2          | 97.2  | 570                    | 557 |
| 4.0             | 3.8                     | 3.7  | 66.3      | 82.7  | 64.3         | 81.6 | 61.3       | 81.0 | 59.3          | 78.0 | 23.0             | 29.7 | 62.5       | 79.1  | 60.5          | 78.0  | 552                    | 542 |
| 10.0            | 5.9                     | 5.9  | 60.3      | 77.4  | 58.3         | 77.1 | 53.3       | 74.3 | 51.3          | 71.4 | 25.0             | 37.4 | 54.4       | 71.7  | 52.4          | 71.3  | 545                    | 536 |
| 16.0            | 7.5                     | 7.4  | 57.2      | 81.3  | 55.2         | 79.2 | 49.2       | 68.2 | 47.2          | 66.2 | 25.0             | 36.7 | 49.8       | 74.0  | 47.8          | 71.9  | 543                    | 534 |
| 20.0            | 8.4                     | 8.3  | 55.8      | 82.1  | 53.8         | 78.7 | 47.3       | 65.1 | 45.3          | 63.5 | 25.0             | 35.8 | 47.4       | 74.0  | 45.4          | 70.6  | 542                    | 534 |
| 31.25           | 10.5                    | 10.4 | 52.9      | 72.7  | 50.9         | 69.9 | 43.4       | 59.5 | 41.4          | 58.3 | 23.7             | 34.8 | 42.4       | 62.5  | 40.4          | 59.8  | 540                    | 532 |
| 62.5            | 15.0                    | 14.8 | 48.4      | 67.6  | 46.4         | 66.6 | 37.4       | 50.7 | 35.4          | 49.9 | 21.5             | 31.7 | 33.4       | 53.2  | 31.4          | 52.3  | 539                    | 530 |
| 100.0           | 19.1                    | 18.7 | 45.3      | 67.6  | 43.3         | 65.9 | 33.3       | 49.2 | 31.3          | 47.4 | 20.1             | 33.6 | 26.2       | 49.3  | 24.2          | 47.8  | 538                    | 530 |
| 160.0           | 24.5                    | 23.8 | 42.2      | 61.0  | 40.2         | 58.4 | 29.2       | 49.0 | 27.2          | 46.3 | 18.7             | 29.8 | 17.7       | 37.7  | 15.7          | 35.3  | 537                    | 529 |
| 200.0           | 27.6                    | 26.6 | 40.8      | 58.0  | 38.8         | 55.1 | 27.3       | 43.2 | 25.3          | 41.3 | 18.0             | 29.1 | 13.2       | 32.0  | 11.2          | 29.1  | 537                    | 529 |
| 250.0           | 31.1                    | 29.9 | 39.3      | 56.9  | 37.3         | 54.9 | 25.3       | 44.2 | 23.3          | 42.3 | 17.3             | 27.5 | 8.3        | 28.0  | 6.3           | 26.0  | 536                    | 528 |
| 300.0           | 34.3                    | 32.9 | 38.1      | 49.4  | 36.1         | 49.3 | 23.8       | 42.1 | 21.8          | 39.1 | 17.3             | 24.8 | 3.9        | 17.3  | 1.9           | 17.1  | 536                    | 528 |
| 400.0           | 40.1                    | 38.3 | 36.3      | 47.5  | 34.3         | 47.2 | 21.3       | 37.5 | 19.3          | 35.1 | 17.3             | 21.2 | -3.8       | 10.1  | -5.8          | 9.8   | 536                    | 528 |
| 500.0           | 45.3                    | 43.1 | 34.8      | 47.3  | 32.8         | 46.3 | 19.3       | 32.3 | 17.3          | 31.8 | 17.3             | 21.6 | -10.4      | 5.1   | -12.4         | 3.9   | 536                    | 528 |
| 550.0*          | -                       | 45.2 | -         | 44.9  | -            | 43.4 | -          | 30.5 | -             | 29.3 | -                | 20.6 | -          | 0.4   | -             | -1.1  | -                      | 528 |
| 625.0*          | -                       | 48.1 | -         | 35.1  | -            | 35.0 | -          | 29.0 | -             | 26.8 | -                | 20.0 | -          | -12.3 | -             | -13.0 | -                      | 528 |
| 750.0*          | -                       | 54.2 | -         | 41.8  | -            | 39.5 | -          | 32.6 | -             | 30.0 | -                | 21.0 | -          | -10.9 | -             | -13.1 | -                      | 528 |

\*Values above 500 MHz are for information only.

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

## Ordering Information

### Part Number Description

9C6L4-A5..... LSOH (IEC 60332-1), class E<sub>ca</sub> violet jacket 305m (1000 ft.) reel

9C6M4-A5-04-R1A.. CM (IEC 60332-1), class E<sub>ca</sub> gray jacket, 305m (1000 ft.) reel

Standard colors shown above.

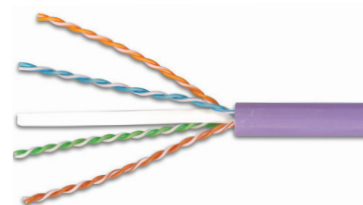
For additional colors, use the following color codes in the (XX) position, 9C6L4-A5-(XX).

01=Black, 02=White, 03=Red, 04=Gray, 0=Yellow, 06=Blue, 07=Green, 08=Violet.

Example: 9C6L4-A5-02, Cat 6A, LSOH, White.

Minimum order quantity and extended lead time may apply to non-standard colors.

Contact Siemon Customer Service for more information.



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