



Product: [7814A](#)

CAT 6 Cable, U/UTP, PVC, 4 Pair, AWG 24, Indoor

Product Description

CAT 6 Cable, 4 Pair, 24 AWG, Solid Bare Copper Conductor, U/UTP, PO Insulation, PVC Jacket, Indoor

Technical Specifications

Product Overview

| | |
|------------------------|---|
| Suitable Applications: | Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, 250MHz Category 6 |
|------------------------|---|

Physical Characteristics (Overall)

Conductor

| AWG | Stranding | Material | No. of Pairs |
|-----|-----------|------------------|--------------|
| 24 | Solid | BC - Bare Copper | 4 |

Insulation

| Material |
|-----------------|
| PO - Polyolefin |

Color Chart

| Number | Color |
|---------|-----------------------------------|
| Pair #1 | Blue & White with Blue Stripe |
| Pair #2 | Orange & White with Orange Stripe |
| Pair #3 | Green & White with Green Stripe |
| Pair #4 | Brown & White with Brown Stripe |

Outer Jacket Material

| Material | Nominal Diameter | Diameter +/- Tolerance | Ripcord |
|--------------------------|------------------|------------------------|---------|
| PVC - Polyvinyl Chloride | 5.8 mm | 0.3 mm | Yes |

Electrical Characteristics

Conductor DCR

| Max. Conductor DCR | Max DCR Unbalanced Between Pairs [%] |
|--------------------|--------------------------------------|
| 93.8 Ohm/km | 5 % |

Capacitance

| Max. Capacitance Unbalance | Nom. Mutual Capacitance |
|----------------------------|-------------------------|
| 330 pF/100m | 56 pF/m |

| | |
|--------------------|---------|
| Operating Voltage: | 72 V DC |
|--------------------|---------|

Impedance

| Nominal Characteristic Impedance |
|----------------------------------|
| 100 Ohm |

Delay

| Frequency [MHz] | Max. Delay | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-----------------|------------|-----------------|--|
|-----------------|------------|-----------------|--|

| | | | |
|---------|-------------|------------|-----|
| 100 MHz | 538 ns/100m | 45 ns/100m | 70% |
|---------|-------------|------------|-----|

High Freq

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. NEXT [dB] | Min. PSNEXT [dB] | Min. ACRF (ELFEXT) [dB] | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Min. TCL [dB] | Min. ELTCTL [dB] |
|-----------------|-----------------------------------|----------------|------------------|-------------------------|-----------------------------|----------------------------|---------------|------------------|
| 1 MHz | 2 dB/100m | 74.3 dB | 72.3 dB | 67.8 dB | 64.8 dB | 20 dB | 40 dB | 35.0 dB |
| 4 MHz | 3.8 dB/100m | 65.3 dB | 63.3 dB | 55.8 dB | 52.8 dB | 23 dB | 40 dB | 23.0 dB |
| 8 MHz | 5.3 dB/100m | 60.8 dB | 58.8 dB | 49.7 dB | 46.7 dB | 24.5 dB | 40 dB | 16.9 dB |
| 10 MHz | 6 dB/100m | 59.3 dB | 57.3 dB | 47.8 dB | 44.8 dB | 25 dB | 40 dB | 15.0 dB |
| 16 MHz | 7.6 dB/100m | 56.2 dB | 54.2 dB | 43.7 dB | 40.7 dB | 25 dB | 38 dB | 10.9 dB |
| 20 MHz | 8.5 dB/100m | 54.8 dB | 52.8 dB | 41.8 dB | 38.8 dB | 25 dB | 37 dB | 9.0 dB |
| 25 MHz | 9.5 dB/100m | 53.3 dB | 51.3 dB | 39.8 dB | 36.8 dB | 24.3 dB | 36 dB | 7.0 dB |
| 31.25 MHz | 10.7 dB/100m | 51.9 dB | 49.9 dB | 37.9 dB | 34.9 dB | 23.6 dB | 35.1 dB | |
| 62.5 MHz | 15.4 dB/100m | 47.4 dB | 45.4 dB | 31.9 dB | 28.9 dB | 21.5 dB | 32 dB | |
| 100 MHz | 19.8 dB/100m | 44.3 dB | 42.3 dB | 27.8 dB | 24.8 dB | 20.1 dB | 30 dB | |
| 200 MHz | 29 dB/100m | 39.8 dB | 37.8 dB | 21.8 dB | 18.8 dB | 18 dB | 27 dB | |
| 250 MHz | 32.8 dB/100m | 38.3 dB | 36.3 dB | 19.8 dB | 16.8 dB | 17.3 dB | 26 dB | |

Table Notes: Third party verified to TIA 568.2-D, Category 6. Typical Values are for reference only

Temperature Range

Operating Temp Range: -20°C to +75°C

Mechanical Characteristics

| | |
|--------------------------------------|------------|
| Bulk Cable Weight: | 36.0 kg/km |
| Max. Pull Tension: | 110 N |
| Min Bend Radius During Installation: | 23.2 mm |

Standards

| | |
|-----------------------|--|
| NEC/(UL) Compliance: | CM |
| CEC/C(UL) Compliance: | CM |
| IEC Compliance: | ISO/IEC 11801 |
| Data Category: | Category 6 |
| ANSI Compliance: | TIA 568.2-D Category 6 |
| NEMA Compliance: | NEMA WC-63.1 Category 6, UL verified to Category 6 |

Applicable Environmental and Other Programs

| | |
|------------------------------------|--------|
| Environmental Space: | Indoor |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| EU Directive 2015/863/EU: | Yes |

Suitability

| | |
|------------------------------------|-----|
| Suitability - Indoor: | Yes |
| Suitability - Oil Resistance: | No |
| Suitability - Outdoor: | No |
| Suitability - Sunlight Resistance: | No |

Flammability, LS0H, Toxicity Testing

UL Flammability: UL1685

Part Number

Variants

| Item # | Color | Putup Type | Length |
|----------------|-------|-------------|----------|
| 7814A 010A1000 | Black | Reel in Box | 1,000 ft |
| 7814A 010U1000 | Black | Box | 1,000 ft |
| 7814A 006A1000 | Blue | Reel in Box | 1,000 ft |
| 7814A 006U1000 | Blue | Box | 1,000 ft |
| 7814A 005A1000 | Green | Reel in Box | 1,000 ft |
| 7814A 005U1000 | Green | Box | 1,000 ft |
| 7814A 008A1000 | Grey | Reel in Box | 1,000 ft |

| | | | |
|----------------|--------|-------------|----------|
| 7814A 008U1000 | Grey | Box | 1,000 ft |
| 7814A 003A1000 | Orange | Reel in Box | 1,000 ft |
| 7814A 003U1000 | Orange | Box | 1,000 ft |
| 7814A 002A1000 | Red | Reel in Box | 1,000 ft |
| 7814A 002U1000 | Red | Box | 1,000 ft |
| 7814A 007A1000 | Violet | Reel in Box | 1,000 ft |
| 7814A 007U1000 | Violet | Box | 1,000 ft |
| 7814A 009A1000 | White | Reel in Box | 1,000 ft |
| 7814A 009U1000 | White | Box | 1,000 ft |
| 7814A 004A1000 | Yellow | Reel in Box | 1,000 ft |
| 7814A 004U1000 | Yellow | Box | 1,000 ft |

History

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| Update and Revision: | Revision Number: 0.27 Revision Date: 03-16-2021 |
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