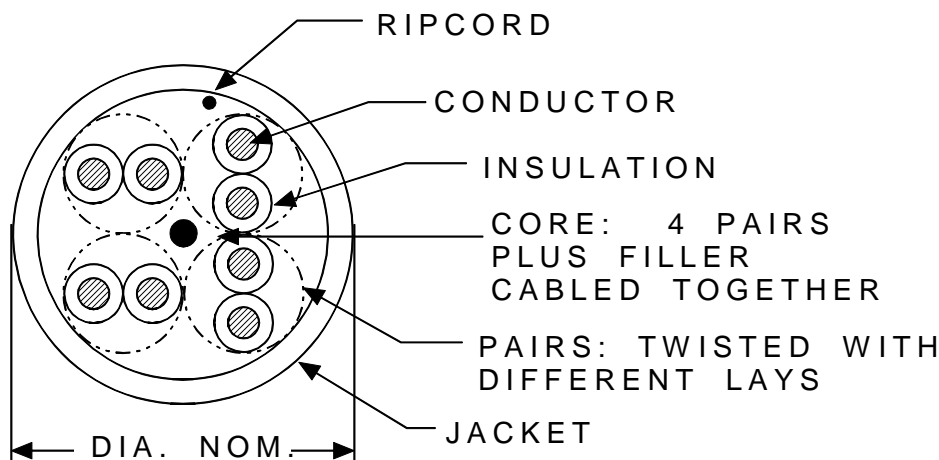


Category 6 UTP Cable Cut Sheet

219560-X, 219567-X



Description

AMP NETCONNECT Category 6 cables exceed TIA/EIA-568-B.2-1 Category 6 and ISO/IEC 11801 Class E performance requirements by significant margins on all parameters. The AMP NETCONNECT Category 6 System complies with all of the performance requirements for current and proposed applications such as Gigabit Ethernet (1000BASE-Tx), 10/100BASE-Tx, token ring, 155 Mbps ATM, 100 Mbps TP-PMD, ISDN, analog and digital video and analog and digital voice (VoIP).

AMP NETCONNECT Category 6 UTP cables are available in both plenum and non-plenum, with standard colors including white, gray, blue and yellow. Category 6 Cables from AMP NETCONNECT feature lead-free jacketing. Packaging is either on bulk reels or in a reel-in-box, with standard put-ups being 1000ft splice-free lengths.

Specification (text in brackets [] requires a choice)

Horizontal cabling shall be 23 AWG, 4-pair UTP, NEC/NFPA [CMP or CMR] rated and be independently verified for compliance. Cable jacketing shall be [white, gray, blue or yellow] and shall be lead-free. [Individual conductors shall be 100% virgin FEP insulated (if plenum)]. Cable shall exceed all TIA/EIA and ISO Category 6/Class E requirements as well as meet the performance requirements listed in the following table: [include Performance Characteristics tables from pages 2 & 3].

Cable performance shall be independently verified and characterized to 600 MHz. Cable shall be supplied [on wooden reels or in a reel-in-box]. Independent verification for flammability compliance shall be to NEC article 800 and NFPA 70; [CMP (NFPA 262, UL 910) or CMR (ANSI/UL 1666, IEC 332-1)]. Horizontal cable shall be AMP NETCONNECT part number [219560-X, 219567-X].

Part Numbers

| Description | Packaging | Part Numbers | | | |
|--|-----------|--------------|----------|----------|----------|
| | | White | Gray | Blue | Yellow |
| Category 6 UTP Cable, 4-Pair, Riser (CMR) Rated | RB | 219560-2 | 219560-4 | 219560-6 | 219560-8 |
| | WR | 219560-1 | 219560-3 | 219560-5 | 219560-7 |
| Category 6 UTP Cable, 4-Pair, Plenum (CMP) Rated | RB | 219567-2 | 219567-4 | 219567-6 | 219567-8 |
| | WR | 219567-1 | 219567-3 | 219567-5 | 219567-7 |

Package: WR = Wooden Reel, RB = Reel-in-Box (1000 ft.)

Category 6 UTP Cable Cut Sheet

219560-X, 219567-X

Performance Characteristics (meet or exceed TIA/EIA-568-B.2-1 Category 6 requirements)

| Frequency (MHz) | Insertion Loss (Attenuation) dB/100m | | | | | NEXT (dB) | | | | |
|-----------------|--------------------------------------|----------|---------|----------|---------|-----------|----------|---------|----------|---------|
| | Standard | Cat6 CMR | | Cat6 CMP | | Standard | Cat6 CMR | | Cat6 CMP | |
| | | Maximum | Typical | Maximum | Typical | | Minimum | Typical | Minimum | Typical |
| 0.772 | 1.8 | 1.6 | 1.6 | 1.6 | 1.5 | 76.0 | 80.0 | 87.0 | 86.0 | 93.0 |
| 1 | 2.0 | 1.8 | 1.8 | 1.8 | 1.7 | 74.3 | 78.0 | 86.0 | 85.0 | 92.0 |
| 4 | 3.8 | 3.8 | 3.7 | 3.5 | 3.4 | 65.3 | 68.0 | 77.0 | 73.0 | 82.0 |
| 8 | 5.3 | 5.3 | 5.0 | 4.9 | 4.8 | 60.8 | 67.0 | 76.0 | 72.0 | 81.0 |
| 10 | 6.0 | 5.8 | 5.5 | 5.6 | 5.4 | 59.3 | 66.0 | 72.0 | 71.0 | 76.0 |
| 16 | 7.6 | 7.4 | 7.0 | 7.1 | 6.9 | 56.2 | 66.0 | 70.0 | 70.0 | 75.0 |
| 20 | 8.5 | 8.4 | 7.9 | 7.9 | 7.7 | 54.8 | 55.0 | 64.0 | 66.0 | 68.0 |
| 25 | 9.5 | 9.2 | 8.9 | 8.4 | 8.7 | 53.3 | 55.0 | 62.0 | 59.0 | 66.0 |
| 31.25 | 10.7 | 10.3 | 10.1 | 9.9 | 9.8 | 51.9 | 55.0 | 65.0 | 59.0 | 69.0 |
| 62.5 | 15.4 | 14.8 | 14.5 | 14.4 | 14.3 | 47.4 | 54.0 | 61.0 | 57.0 | 65.0 |
| 100 | 19.8 | 18.7 | 18.5 | 18.8 | 18.5 | 44.3 | 52.0 | 56.0 | 55.0 | 60.0 |
| 200 | 29.0 | 27.0 | 27.8 | 27.9 | 27.5 | 39.8 | 50.0 | 52.0 | 53.0 | 56.0 |
| 250 | 32.8 | 30.5 | 32.0 | 31.8 | 31.3 | 38.3 | 48.0 | 52.0 | 52.0 | 56.0 |
| 300 | 36.4 | 33.5 | 35.0 | 35.5 | 34.9 | 37.1 | 45.0 | 51.0 | 48.0 | 55.0 |
| 350 | 39.8 | 37.0 | 37.0 | 38.9 | 36.3 | 36.1 | 42.0 | 49.0 | 45.0 | 52.0 |
| 400 | 43.0 | 39.3 | 40.1 | 41.1 | 39.6 | 35.3 | 39.0 | 45.0 | 42.0 | 49.0 |
| 500 | 48.9 | 44.3 | 46.2 | 48.6 | 45.4 | 33.8 | 38.0 | 43.0 | 41.0 | 46.0 |
| 550 | 51.8 | 46.4 | 49.0 | 51.7 | 48.3 | 33.2 | 37.0 | 40.0 | 40.0 | 43.0 |
| 600 | 54.5 | 49.5 | 51.2 | 54.5 | 50.8 | 32.6 | 34.0 | 33.0 | 37.0 | 35.0 |

| Frequency (MHz) | PSNEXT (dB) | | | | | ELFEXT (dB) | | | | |
|-----------------|-------------|----------|---------|----------|---------|-------------|----------|---------|----------|---------|
| | Standard | Cat6 CMR | | Cat6 CMP | | Standard | Cat6 CMR | | Cat6 CMP | |
| | | Minimum | Typical | Minimum | Typical | | Minimum | Typical | Minimum | Typical |
| 0.772 | 74.0 | 83.0 | 89.4 | 83.0 | 85.9 | 70.0 | 87.0 | 89.4 | 82.9 | 86.4 |
| 1 | 72.3 | 82.8 | 89.2 | 82.7 | 85.8 | 67.8 | 78.0 | 87.3 | 74.2 | 84.3 |
| 4 | 63.3 | 71.8 | 78.9 | 71.8 | 75.8 | 55.8 | 65.3 | 76.0 | 62.2 | 73.1 |
| 8 | 58.8 | 71.7 | 77.5 | 71.7 | 74.5 | 49.7 | 60.1 | 70.5 | 57.2 | 67.8 |
| 10 | 57.3 | 69.0 | 73.2 | 69.0 | 70.4 | 47.8 | 57.2 | 67.9 | 55.2 | 65.3 |
| 16 | 54.2 | 61.0 | 66.9 | 60.1 | 64.3 | 43.7 | 54.1 | 65.6 | 51.1 | 62.7 |
| 20 | 52.8 | 63.4 | 67.6 | 63.1 | 65.0 | 41.8 | 51.6 | 64.0 | 49.7 | 61.2 |
| 25 | 51.3 | 57.5 | 63.0 | 57.7 | 60.6 | 39.8 | 50.2 | 64.5 | 48.3 | 62.6 |
| 31.25 | 49.9 | 57.1 | 63.9 | 57.2 | 61.5 | 37.9 | 49.5 | 63.4 | 47.4 | 61.6 |
| 62.5 | 45.4 | 53.3 | 59.1 | 53.4 | 56.8 | 31.9 | 45.7 | 53.4 | 43.7 | 50.9 |
| 100 | 42.3 | 50.2 | 53.6 | 49.7 | 51.5 | 27.8 | 41.3 | 47.3 | 40.0 | 45.0 |
| 200 | 37.8 | 49.9 | 53.4 | 49.8 | 51.3 | 21.8 | 34.1 | 39.5 | 33.0 | 37.8 |
| 250 | 36.3 | 49.2 | 52.7 | 49.5 | 50.7 | 19.8 | 29.2 | 39.7 | 28.5 | 38.3 |
| 300 | 35.1 | 46.5 | 50.1 | 46.3 | 48.2 | 18.3 | 28.7 | 38.1 | 28.0 | 35.9 |
| 350 | 34.1 | 44.1 | 46.9 | 43.5 | 45.1 | 16.9 | 24.5 | 34.7 | 23.7 | 33.7 |
| 400 | 33.3 | 41.1 | 45.9 | 40.9 | 44.2 | 15.8 | 23.4 | 33.6 | 20.1 | 32.3 |
| 500 | 31.8 | 39.6 | 43.7 | 39.2 | 42.0 | 13.8 | 13.4 | 21.5 | 10.9 | 20.9 |
| 550 | 31.2 | 37.3 | 42.2 | 36.9 | 40.6 | 13.0 | 10.8 | 17.1 | 7.6 | 16.8 |
| 600 | 30.6 | 35.6 | 44.7 | 34.8 | 43.0 | 12.2 | 7.3 | 17.1 | 4.1 | 17.2 |

Category 6 UTP Cable Cut Sheet

219560-X, 219567-X

Performance Characteristics (meet or exceed TIA/EIA-568-B.2-1 Category 6 requirements), continued...

| Frequency (MHz) | PSELFEXT (dB) | | | | | RL (dB) | | | | |
|-----------------|---------------|----------|---------|----------|---------|----------|----------|---------|----------|---------|
| | Standard | Cat6 CMR | | Cat6 CMP | | Standard | Cat6 CMR | | Cat6 CMP | |
| | | Minimum | Typical | Minimum | Typical | | Minimum | Typical | Minimum | Typical |
| 0.772 | 67.0 | 75.9 | 82.4 | 75.4 | 81.1 | - | 24.0 | 23.0 | 25.0 | 26.0 |
| 1 | 64.8 | 72.8 | 80.2 | 73.2 | 78.1 | 20.0 | 25.0 | 25.0 | 29.0 | 30.0 |
| 4 | 52.8 | 61.1 | 73.7 | 61.3 | 71.2 | 23.0 | 32.0 | 30.0 | 29.0 | 33.0 |
| 8 | 46.7 | 57.2 | 67.9 | 56.3 | 66.1 | 24.5 | 34.0 | 30.0 | 35.0 | 32.0 |
| 10 | 44.8 | 55.2 | 65.8 | 54.3 | 64.1 | 25.0 | 38.0 | 32.0 | 32.0 | 34.0 |
| 16 | 40.7 | 49.8 | 62.0 | 50.1 | 60.4 | 25.0 | 35.0 | 33.0 | 35.0 | 36.0 |
| 20 | 38.8 | 48.5 | 59.4 | 48.6 | 58.1 | 25.0 | 34.0 | 34.0 | 34.0 | 35.0 |
| 25 | 36.8 | 46.8 | 58.2 | 47.2 | 56.9 | 24.3 | 36.0 | 34.0 | 32.0 | 35.0 |
| 31.25 | 34.9 | 46.2 | 57.2 | 45.9 | 55.9 | 23.6 | 27.0 | 33.0 | 35.0 | 38.0 |
| 62.5 | 28.9 | 42.6 | 50.1 | 42.8 | 49.8 | 21.5 | 25.0 | 34.0 | 32.0 | 35.0 |
| 100 | 24.8 | 39.1 | 44.7 | 39.4 | 43.3 | 20.1 | 23.0 | 33.0 | 35.0 | 36.0 |
| 200 | 18.8 | 30.8 | 38.1 | 31.5 | 36.7 | 18.0 | 27.0 | 34.0 | 23.0 | 33.0 |
| 250 | 16.8 | 27.7 | 37.9 | 28.4 | 37.1 | 17.3 | 29.0 | 30.0 | 26.0 | 29.0 |
| 300 | 15.3 | 28.2 | 37.3 | 28.8 | 37.1 | 16.8 | 23.0 | 29.0 | 25.0 | 32.0 |
| 350 | 13.9 | 22.1 | 35.6 | 22.8 | 34.9 | 16.3 | 21.0 | 28.0 | 26.0 | 30.0 |
| 400 | 12.8 | 17.5 | 25.5 | 18.9 | 20.9 | 15.9 | 19.0 | 29.0 | 24.0 | 27.0 |
| 500 | 10.8 | 10.2 | 15.3 | 10.7 | 14.9 | 15.2 | 18.0 | 25.0 | 24.0 | 27.0 |
| 550 | 10.0 | 8.2 | 17.8 | 6.5 | 9.0 | 14.9 | 17.0 | 25.0 | 23.0 | 26.0 |
| 600 | 9.2 | 7.5 | 14.3 | 5.0 | 8.7 | 14.7 | 15.0 | 21.0 | 21.0 | 24.0 |

| Frequency (MHz) | ACR (dB) | | | | | PSACR (dB) | | | | |
|-----------------|----------|----------|---------|----------|---------|------------|----------|---------|----------|---------|
| | Standard | Cat6 CMR | | Cat6 CMP | | Standard | Cat6 CMR | | Cat6 CMP | |
| | | Minimum | Typical | Minimum | Typical | | Minimum | Typical | Minimum | Typical |
| 0.772 | 74.2 | 78.4 | 85.4 | 84.5 | 91.5 | 72.2 | 81.4 | 87.8 | 81.5 | 84.4 |
| 1 | 72.3 | 76.2 | 84.2 | 83.2 | 90.3 | 70.3 | 81.0 | 87.4 | 80.9 | 84.1 |
| 4 | 61.5 | 64.2 | 73.3 | 69.5 | 78.6 | 59.5 | 68.0 | 75.2 | 68.3 | 72.4 |
| 8 | 55.5 | 61.7 | 71.0 | 67.1 | 76.2 | 53.5 | 66.4 | 72.5 | 66.8 | 69.7 |
| 10 | 53.3 | 60.2 | 66.5 | 65.4 | 70.6 | 51.3 | 63.2 | 67.7 | 63.4 | 65.0 |
| 16 | 48.6 | 58.6 | 63.0 | 63.0 | 68.1 | 46.6 | 53.6 | 59.9 | 53.0 | 57.4 |
| 20 | 46.3 | 46.6 | 56.1 | 58.1 | 60.3 | 44.3 | 55.0 | 59.7 | 55.3 | 57.3 |
| 25 | 43.8 | 45.8 | 53.1 | 50.6 | 57.3 | 41.8 | 48.3 | 54.1 | 49.3 | 51.9 |
| 31.25 | 41.2 | 44.7 | 54.9 | 49.1 | 59.2 | 39.2 | 46.8 | 53.8 | 47.3 | 51.7 |
| 62.5 | 32.0 | 39.2 | 46.5 | 42.6 | 50.7 | 30.0 | 38.5 | 44.6 | 39.0 | 42.5 |
| 100 | 24.5 | 33.3 | 37.5 | 36.2 | 41.5 | 22.5 | 31.5 | 35.1 | 30.9 | 33.0 |
| 200 | 10.8 | 23.0 | 24.2 | 25.1 | 28.5 | 8.8 | 22.9 | 25.6 | 21.9 | 23.8 |
| 250 | 5.5 | 17.5 | 20.0 | 20.2 | 24.7 | 3.5 | 18.7 | 20.7 | 17.7 | 19.4 |
| 300 | 0.7 | 11.5 | 16.0 | 12.5 | 20.1 | -1.3 | 13.0 | 15.1 | 10.8 | 13.3 |
| 350 | -3.7 | 5.0 | 12.0 | 6.1 | 15.7 | -5.7 | 7.1 | 9.9 | 4.6 | 8.8 |
| 400 | -7.7 | -0.3 | 4.9 | 0.9 | 9.4 | -9.7 | 1.8 | 5.8 | -0.2 | 4.6 |
| 500 | -15.1 | -6.3 | -3.2 | -7.6 | 0.6 | -17.1 | -4.7 | -2.5 | -9.4 | -3.4 |
| 550 | -18.6 | -9.4 | -9.0 | -11.7 | -5.3 | -20.6 | -9.1 | -6.8 | -14.8 | -7.7 |
| 600 | -21.9 | -15.5 | -18.2 | -17.5 | -15.8 | -23.9 | -13.9 | -6.5 | -19.7 | -7.8 |

Category 6 UTP Cable Cut Sheet

219560-X, 219567-X

Technical Details

| | CMR | CMP | |
|--|---------------------------------|--|--|
| Mutual Capacitance | 5.6nF/100m nominal | 5.6nF/100m nominal | |
| Characteristic Impedance | 100Ω ±15%, 1 - 600MHz | 100Ω ±15%, 1 - 600MHz | |
| Conductor DC Resistance | 66.58Ω/km maximum | 66.58Ω/km maximum | |
| Voltage | 300VAC or VDC | 300VAC or VDC | |
| Delay Skew | 45ns | 45ns | |
| Propagation Delay | 536ns/100m @ 250MHz | 536ns/100m @ 250MHz | |
| Nominal Velocity of Propagation | 69% | 72% | |
| Operating Temperature | -20° C – 60° C (-4° F – 140° F) | -20° C – 60° C (-4° F – 140° F) | |
| Storage Temperature | -20° C – 80° C (-4° F – 176° F) | -20° C – 80° C (-4° F – 176° F) | |
| Bend Radius | (4 x cable diameter) ≈ 1" | (4 x cable diameter) ≈ 1" | |
| Packaging: | 1000ft Reel-in-a-Box | 26 lbs/kft | 24 lbs/kft |
| | 1000ft Wooden Reel | 26 lbs/kft | 24 lbs/kft |
| Materials: | Conductors – | 23 AWG, Solid Copper, (Ø.0226 nominal) | 23 AWG, Solid Copper, (Ø.0226 nominal) |
| | Insulation – | 0.0097in (Ø.042 nominal), Polyethylene | 0.0087in (Ø.040 nominal), FEP (fluoropolymer) |
| | Jacket – | 0.025in nominal (Ø.230 nominal), PVC | 0.015in nominal (Ø.230 nominal), FEP (fluoropolymer) |

ETL LISTED for safety to:

Safety – CMR – (UL 1666, IEC 332-1)
CMP – (NFPA 262, UL 910)



Approvals:

ETL Verified to:

Performance – TIA/EIA-568-B.2-1 "Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling"



Specifications subject to change without notice.

Revised - 4/29/2004

In the U.S.A 1-800-553-0938
Canada 905-475-6222
Mexico 525-729-0400
South and Central Americas 54-11-4733-2200
web: <http://www.ampnetconnect.com/>
e-mail: networking.help@tycoelectronics.com

tyco
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