

Electrical Performance

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|--------------------------------------|--------------------------------------|
| CAT5E UTP LAN CABLE | For details, please see Attachment 1 |
| RG6 Quad Shield Coaxial Cable | For details, please see Attachment 2 |

Description

One 4 Pair Cat5E UTP Cable
Complies to TIA 568-C.2
 24 Awg Solid Bare Copper Conductor / PE Insulation

One rg6 Quad Shield Coaxial Cable
Complies to SCTE ISP-IP-001
 18 Awg Copper Clad Steel (CCS)
 Al foil / 60% Al-Mg alloy Braid Shield +
 Al foil / 40% Al-Mg alloy Braid Shield

Electrical Characteristics

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|--------------------------------------|--------------------------------------|
| CAT5E UTP LAN CABLE | For details, please see Attachment 1 |
| RG6 Quad Shield Coaxial Cable | For details, please see Attachment 2 |

Applicable Standards

For use in Home Network Systems
Reference Standard
 SCTE IPS-SP-001, TIA-568-C.2

Mechanical Characteristics

| Test Object | | Outer Jacket | |
|-------------|-------------------------------|--------------|-------------------|
| | Test Material | | PVC |
| Before | Tensile Strength (Mpa) | | >=1.034 |
| Aging | Elongation (%) | | >=200 |
| | Aging Condition (°C x hrs) | | 113.0 ± 1.0 x 168 |
| After | Tensile Strength (Mpa) | | >=85% unaged |
| Aging | Elongation (%) | | >=50% unaged |
| | Cold Bend (-20 ± 2°C x 4 hrs) | | No crack |

Physical Characteristics

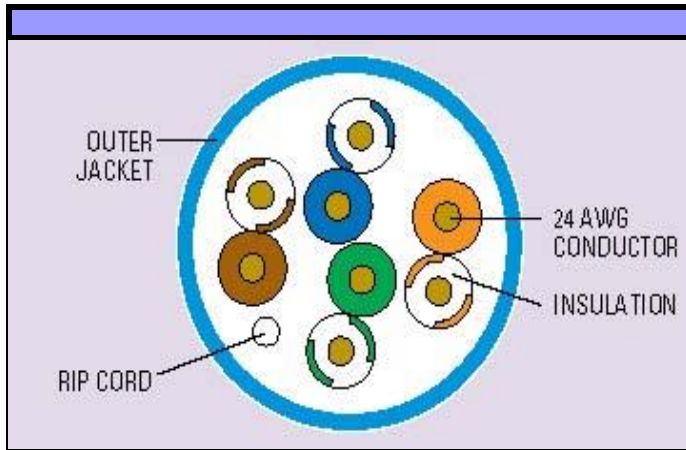
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|--------------------------------------|--------------------------------------|
| CAT5E TUP LAN CABLE | For details, please see Attachment 1 |
| RG6 Quad Shield Coaxial Cable | For details, please see Attachment 2 |
| Nominal Weight | 32 lbs. |

Cable Marking

CMR CAT5E 350 MHZ 4PR 24 AWG AND RG6 QUAD TYPE CMR FT4 18 AWG C(ETL)US XXXXXX SWEPT TO 3.0 GHZ RM A B C D E F 1 2 3 4 5 6 7 8**FT**

Part Numbers

| Part Number | Color | Put-up |
|-------------|-------|-----------|
| | Blue | 500' Reel |



Description

24 AWG Cat5E CMR, High-Performance Data Cable

Applicable Standards

- ETL Listed Type CMR
- C(ETL) listed CMG FT4
- ETL Verified to TIA - 568-C.2, and ISO/IEC 11801
- ROHS Compliant
- ATM 155 Mbps
- Ethernet 10BASE-T, 100BASE-TX, 100BASE-VG, 100BASE-T4,
- 1000 Mbps 1000BASE-T Gigabit Ethernet™ (IEEE 802.3)
- 16 Mbps Token Ring™ (IEEE 802.5)

Physical Characteristics

| | |
|-------------------------------------|----------------------------|
| Number of Conductor Pairs | 4 |
| Size | 24 AWG |
| Stranding | Solid |
| Conductor Material | Solid Annealed Bare Copper |
| Shield Material | Unshielded |
| Rip Cord | Yes |
| Insulation Material | Polyethylene |
| Insulation Overall Diameter | 0.035 in. ± 0.0002 in. |
| Insulation Average Thickness | 0.0081 in. |
| Jacket | Flame Retardant PVC |
| Outer Jacket Average Wall Thickness | 0.023 in. |
| Outer Jacket Nominal O.D. | 0.200 in. ± 0.008 in. |

Mechanical Characteristics

| | | |
|--------------------|--------------|--|
| Temperature Rating | Installation | 0 to + 60°C |
| | Operating | -20°C to + 75°C |
| Tensile Strength | Before | > = 13.8 Mpa |
| | Aging | > = 100% |
| Aging Condition | | 100°C x 240 hours |
| | After Aging | > = 85% of unaged > = 50% of unaged |

Color Code

| | | |
|--------|----------------|--------|
| Pair 1 | White / Blue | Blue |
| Pair 2 | White / Orange | Orange |
| Pair 3 | White / Green | Green |
| Pair 4 | White / Brown | Brown |

Electrical Performance

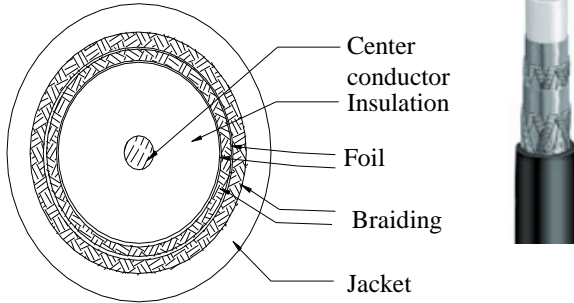
| Frequency (MHz) | Attenuation (dB/100m) | | Return loss (dB) | | NEXT (dB) | | PS-NEXT (dB) | |
|-----------------|-----------------------|------|------------------|------|-----------|------|--------------|------|
| | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. |
| 0.772 | 1.8 | 1.5 | 23.0 | 33.0 | 72.0 | 81.1 | 70.0 | 78.7 |
| 1 | 2.0 | 1.8 | 23.0 | 38.6 | 70.3 | 79.4 | 68.3 | 76.9 |
| 4 | 4.1 | 3.6 | 23.0 | 39.8 | 61.2 | 69.9 | 59.3 | 67.4 |
| 8 | 5.8 | 5.1 | 24.5 | 38.2 | 56.8 | 61.9 | 54.8 | 59.4 |
| 10 | 6.5 | 5.8 | 25.0 | 38.0 | 55.3 | 62.4 | 53.5 | 59.9 |
| 16 | 8.2 | 7.4 | 25.0 | 37.4 | 52.3 | 57.8 | 50.3 | 55.2 |
| 20 | 9.3 | 8.2 | 25.0 | 36.8 | 50.8 | 56.4 | 48.8 | 53.8 |
| 25 | 10.4 | 9.3 | 24.3 | 35.2 | 49.3 | 56.3 | 47.3 | 53.6 |
| 31.25 | 11.7 | 10.5 | 23.6 | 33.3 | 47.9 | 53.8 | 45.9 | 51.1 |
| 62.5 | 17.0 | 14.9 | 21.5 | 32.2 | 43.4 | 49.8 | 41.4 | 47.4 |
| 100 | 22.0 | 19.2 | 20.1 | 31.3 | 40.3 | 47.5 | 38.3 | 45.0 |
| 155 | 28.1 | 24.2 | 18.8 | 29.8 | 37.4 | 45.1 | 35.4 | 42.6 |
| 200 | 32.4 | 27.3 | 18.0 | 28.5 | 35.7 | 43.3 | 33.7 | 40.2 |
| 250 | 38.9 | 30.9 | 17.5 | 27.3 | 34.8 | 41.4 | 32.5 | 39.0 |
| 300 | 41.0 | 34.1 | 16.8 | 25.6 | 33.1 | 40.2 | 31.1 | 37.7 |
| 350 | 44.9 | 37.8 | 16.3 | 23.2 | 32.1 | 39.0 | 30.1 | 36.5 |

| Frequency (MHz) | ELFEXT (dB) | | PS-ELFEXT (dB) | | ACR (dB) | | PS-ACR (dB) | |
|-----------------|-------------|------|----------------|------|----------|------|-------------|------|
| | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. |
| 0.772 | 66.0 | 73.3 | 63.0 | 72.7 | 70.2 | 79.2 | 68.2 | 77.0 |
| 1 | 63.8 | 71.3 | 60.8 | 70.6 | 68.2 | 77.6 | 66.3 | 75.0 |
| 4 | 51.7 | 59.4 | 48.7 | 58.7 | 57.2 | 66.3 | 55.2 | 63.5 |
| 8 | 45.7 | 53.2 | 42.7 | 51.1 | 51.0 | 59.8 | 49.0 | 56.9 |
| 10 | 43.8 | 50.5 | 40.8 | 49.7 | 48.8 | 56.6 | 47.0 | 53.7 |
| 16 | 39.7 | 47.0 | 36.7 | 45.1 | 43.0 | 53.0 | 42.1 | 47.4 |
| 20 | 39.7 | 45.0 | 34.7 | 43.6 | 41.5 | 50.5 | 39.5 | 45.0 |
| 25 | 35.8 | 43.3 | 32.8 | 42.0 | 38.9 | 47.0 | 36.9 | 43.7 |
| 31.25 | 33.9 | 41.3 | 30.9 | 40.5 | 36.5 | 43.3 | 34.2 | 40.0 |
| 62.5 | 27.8 | 35.8 | 24.8 | 34.5 | 26.4 | 35.0 | 24.4 | 31.2 |
| 100 | 23.8 | 31.3 | 20.8 | 30.3 | 18.3 | 26.2 | 16.3 | 24.2 |
| 155 | 19.9 | 27.5 | 16.9 | 26.9 | 10.0 | 20.9 | 7.3 | 15.9 |
| 200 | 17.7 | 24.7 | 14.7 | 24.5 | 5.0 | 16.0 | 2.0 | 10.0 |
| 250 | 17.1 | 22.2 | 14.0 | 22.5 | 0.0 | 10.6 | - | 4.0 |
| 300 | 16.7 | 20.5 | 13.5 | 20.7 | - | 6.1 | - | -1.3 |
| 350 | 16.0 | 19.4 | 12.8 | 19.6 | - | 1.2 | - | -6.4 |

* Values above 100MHz are information only

Electrical Characteristics

| | |
|--|---------------------|
| Maximum Conductor DC Resistance @ 20°C | 9.38 Ω / 100 Meters |
| Maximum DC Resistance Unbalanced @ 20°C | 5% |
| Maximum Pair-to-Pair Ground Capacitance Unbalanced | 330 pF / 100 Meters |
| Characteristic Impedance (1 ~ 350 MHz) | 100 ± 15 Ω |
| Mutual Capacitance | 5.6 nF / 100 Meters |
| Maximum Delay Skew | 40 nS / 100 Meters |



Electrical Performance

| Frequency (MHz) | Attenuation (dB/100m) | Frequency (MHz) | Attenuation (dB/100m) |
|-----------------|-----------------------|-----------------|-----------------------|
| 1 | 0.89 | 1000 | 21.61 |
| 10 | 2.66 | 1200 | 23.67 |
| 50 | 4.79 | 1450 | 26.03 |
| 100 | 6.72 | 1800 | 28.98 |
| 200 | 9.28 | 2200 | 32.03 |
| 400 | 13.28 | 2400 | 32.83 |
| 700 | 18.36 | 3000 | 37.88 |
| 900 | 20.43 | | |

Description

RG-6/U QUAD CATV 75 Ω Coaxial Cable

Applicable Standards

Reference Standard

SCTE IPS-SP-001

UL 1655, UL 13, UL 444, ROHS

Physical Characteristics

| Conductor | | C.C.S. |
|--|-------------|---------------|
| AWG | | 18 |
| Diameter | (mm) | 1.02 |
| Insulation | | FOAM FEP |
| Nom. Thickness | | (mm) 1.78 |
| Insulation Diameter | (± 0.08mm) | 4.57 |
| First Braid Shield | | Aluminum Wire |
| First Al-maylar Shield (Overlapping, %) | | >=25 |
| Construction | (mm) | 16 / 4 / 0.16 |
| Coverage Area | (%) | >=60 |
| Second Braid Shield | | Aluminum Wire |
| Second Al-maylar Shield (Overlapping, %) | | >=25 |
| Construction | (mm) | 16 / 3 / 0.16 |
| Coverage Area | (%) | >=40 |
| Jacket | | PVC |
| Nom. Thickness | | (mm) 0.65 |
| Min. Thickness | | (mm) 0.50 |
| Cable Diameter | (± 0.20mm) | 7.30 |

Electrical Characteristics

| | | |
|-------------------------|-------------------|--------|
| Dielectric Strength | (kV/min) | 1.0 |
| Impedence | (± 3.0 Ohms) | 75.0 |
| SRL | (dB, 5-1,000 MHz) | >=20 |
| Capacitance | (pF/m) | 53.1 |
| Conductor DCR@20° C | (ohms/km) | <=21.4 |
| Velocity of Propagation | (%) | >=82 |

Mechanical Characteristics

| Test Object | | | Jacket |
|-------------------------------------|------------------|-------|------------------------------|
| Test Material | | | PVC |
| Before | Tensile Strength | (Mpa) | >=1.034 |
| Aging | Elongation | (%) | >=200 |
| Aging Condition | | | (°C x hrs) 113.0 ± 1.0 x 168 |
| After | Tensile Strength | (Mpa) | >=85% unaged |
| Aging | Elongation | (%) | >=50% unaged |
| Cold Bend | | | (-20 ± 2°C x 4 hrs) No crack |
| Jacket impact test | | | (-15°C) No crack |
| Jacket Longitudinal Shrinkage | | | (%) <=5 |
| Center Conductor Break Strength | | | (N) >=641 |
| Center Conductor Bond to dielectric | | | (N) >=2.3 |