



Description:

20 AWG solid .031" bare copper conductor, polyethylene insulation, tinned copper/bare copper braid shield (98% coverage), PVC jacket.

Physical Characteristics (Overall)

Conductor

AWG:

| # Coax | AWG | Stranding | Conductor Material | Dia. (in.) |
|--------|-----|-----------|--------------------|------------|
| 1 | 20 | Solid | BC - Bare Copper | .031 |

Insulation

Insulation Material:

| Insulation Material | Dia. (in.) |
|---------------------|------------|
| PE - Polyethylene | .198 |

Outer Shield

Outer Shield Material:

| Layer # | Type | Outer Shield Material | Coverage (%) |
|---------|-------|-----------------------|--------------|
| 1 | Braid | TC - Tinned Copper | 98 |
| 2 | Braid | TC - Tinned Copper | 95 |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material |
|--|
| PVCNC - Polyvinyl Chloride Non-Contaminating |

Overall Cabling

Overall Nominal Diameter: 0.305 in.

Mechanical Characteristics (Overall)

Operating Temperature Range: -40°C To +60°C

UL Temperature Rating: 60°C

Bulk Cable Weight: 71 lbs/1000 ft.

Max. Recommended Pulling Tension: 168 lbs.

Min. Bend Radius (Install)/Minor Axis: 3 in.

Min. Bend Radius (Continuous Flexing): 6 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMH

CEC/C(UL) Specification: CMH

EU CE Mark: Yes

EU Directive 2000/53/EC (ELV): Yes

EU Directive 2002/95/EC (RoHS): Yes

EU RoHS Compliance Date (mm/dd/yyyy): 10/01/2005

| | |
|-----------------------------------|------|
| EU Directive 2002/96/EC (WEEE): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |
| RG Type: | 59/U |

Flame Test

| | |
|----------------|-------------------------|
| UL Flame Test: | UL1685 UL Loading, VW-1 |
|----------------|-------------------------|

Suitability

| | |
|------------------------|--|
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | Yes |
| Suitability - Aerial: | Yes - When supported by a messenger wire |

Plenum/Non-Plenum

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

| |
|-----------------|
| Impedance (Ohm) |
| 75 |

Nom. Inductance:

| |
|--------------------|
| Inductance (µH/ft) |
| 0.118 |

Nom. Capacitance Conductor to Shield:

| |
|---------------------|
| Capacitance (pF/ft) |
| 21 |

Nominal Velocity of Propagation:

| |
|--------|
| VP (%) |
| 66 |

Nominal Delay:

| |
|---------------|
| Delay (ns/ft) |
| 1.54 |

Nom. Conductor DC Resistance:

| |
|--------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 9.9 |

Nominal Outer Shield DC Resistance:

| |
|--------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 1.1 |

Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 1 | 0.3 |
| 3.6 | 0.5 |
| 10 | 0.8 |
| 71.5 | 2.0 |
| 135 | 3.5 |
| 270 | 4.3 |
| 360 | 5.0 |
| 540 | 6.2 |
| 720 | 7.2 |
| 750 | 7.4 |
| 1000 | 9.1 |

Max. Operating Voltage - UL:

| |
|-----------|
| Voltage |
| 300 V RMS |

Max. Operating Voltage - Non-UL:

| Voltage |
|------------|
| 1700 V RMS |

Other Electrical Characteristic 1: Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2 using a 75 Ohm fixed bridge and termination. 75 +/- 1.5 Ohms

Other Electrical Characteristic 2: Return Loss tested in accordance with ASTM D-4566 paragraph 45.3, using a 75 ohm fixed bridge and termination. 720A Series is available by special request.

Minimum Return Loss:

| Start Freq. (MHz) | Stop Freq. (MHz) | Min. RL (dB) |
|-------------------|------------------|--------------|
| 5 | 216 | 27 |
| 217 | 850 | 23 |

Sweep Test

Sweep Testing: 100% sweep tested. 5 Mhz to 850 MHz.

Notes (Overall)

Notes: Non-Plenum versions comply with Telcordia Specification GR-139-CORE.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|--------------|----------|-------------|-------|-------|--------------------|
| 9231 0081000 | 1,000 FT | 76.000 LB | GRAY | C | #20 PE DBL BRD PVC |
| 9231 008500 | 500 FT | 39.000 LB | GRAY | | #20 PE DBL BRD PVC |

Notes:
C = CRATE REEL PUT-UP.

Precision Video Cable for Analog and Digital

RG-59/U Type



| Description | Part No. | UL NEC/ C(UL) CEC Type | Standard Lengths | | Standard Unit Weight | | Conductor (stranding) Diameter Nom. DCR | Nominal Core OD | | Shielding Materials Nom. DCR | Nominal OD | | Nom. Imp. (Ω) | Nom. Vel. of Prop. | Nominal Capacitance | | Nominal Attenuation | | |
|-------------|----------|------------------------------|------------------|---|----------------------|----|--|-----------------|----|------------------------------------|------------|----|------------------|-----------------------|---------------------|------|---------------------|----------------|-------------|
| | | | Ft. | m | Lbs. | kg | | Inch | mm | | Inch | mm | | | pF/Ft. | pF/m | MHz | dB/ 100 Ft. | dB/ 100m |

20 AWG Solid .032" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*

| | | | | | | | | | | | | | | | | | | | |
|---------------|--------------|---------|-------------------|--------|-------|------|----------|------|------|----------|---------|------|----|-----|------|------|------|------|------|
| SDI/HDTV | 1505A | NEC: | 500 [▲] | 152.4 | 17.0 | 8.0 | 20 AWG | .145 | 3.68 | Duofoil | .233 | 5.92 | 75 | 83% | 16.3 | 53.5 | 1 | .3 | 1.0 |
| Digital Video | | CMR: | 1000 | 304.8 | 35.0 | 16.4 | (solid) | | | + 95% | | | | | | | 3.6 | .6 | 1.8 |
| 75°C | | CEC: | 5000 [▼] | 1524.0 | 165.0 | 74.8 | .032" | | | TC Braid | | | | | | | 10 | .9 | 2.9 |
| | | CMG FT4 | | | | | | | | BC | 3.8Ω/M' | | | | | | 71.5 | 2.1 | 6.9 |
| | | | | | | | 10.0Ω/M' | | | 12.5Ω/km | | | | | | | 135 | 2.7 | 8.9 |
| | | | | | | | 32.8Ω/km | | | | | | | | | | 270 | 3.8 | 12.5 |
| | | | | | | | | | | | | | | | | | 360 | 4.4 | 14.4 |
| | | | | | | | | | | | | | | | | | 540 | 5.5 | 18.0 |
| | | | | | | | | | | | | | | | | | 720 | 6.4 | 21.0 |
| | | | | | | | | | | | | | | | | | 750 | 6.5 | 21.3 |
| | | | | | | | | | | | | | | | | | 1000 | 7.6 | 24.9 |
| | | | | | | | | | | | | | | | | | 1500 | 9.3 | 30.5 |
| | | | | | | | | | | | | | | | | | 2250 | 11.6 | 38.0 |
| | | | | | | | | | | | | | | | | | 3000 | 13.4 | 44.0 |

*500 ft. put-up available in Black, Red or Blue only.

▼5000 ft. put-up may vary in length by -0 to +10%.

▲1000 ft. and 5000 ft. put-ups available in all ten colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or White.

22 AWG Stranded (7x29) .031" Bare Compacted Copper Conductor* • Tinned Copper/Bare Copper Double Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Matte Black, Red, Green, Blue, Yellow, Orange, White or Purple)

| | | | | | | | | | | | | | | | | | | | |
|-------------|--------------|------|------|-------|------|------|----------|------|------|------------|---------|------|----|-----|------|------|------|------|------|
| High-Flex | 1505F | NEC: | 1000 | 304.8 | 45.0 | 20.4 | 22 AWG | .145 | 3.68 | TC Double | .242 | 6.15 | 75 | 80% | 17.0 | 55.7 | 1 | .2 | .7 |
| SDI/HDTV | | CM | | | | | (7x29) | | | Braid | | | | | | | 3.6 | .5 | 1.6 |
| Video Patch | | CEC: | | | | | .031" | | | 95% Shield | | | | | | | 10 | .9 | 2.9 |
| 75°C | | CM | | | | | | | | BCC | 3.8Ω/M' | | | | | | 71.5 | 2.5 | 8.2 |
| | | | | | | | 12.2Ω/M' | | | 2.4Ω/M' | | | | | | | 135 | 3.5 | 11.5 |
| | | | | | | | 40.0Ω/km | | | 7.8Ω/km | | | | | | | 270 | 5.1 | 16.7 |
| | | | | | | | | | | | | | | | | | 360 | 6.0 | 19.7 |
| | | | | | | | | | | | | | | | | | 540 | 7.4 | 24.3 |
| | | | | | | | | | | | | | | | | | 720 | 8.7 | 28.5 |
| | | | | | | | | | | | | | | | | | 750 | 8.9 | 29.2 |
| | | | | | | | | | | | | | | | | | 1000 | 10.5 | 34.4 |
| | | | | | | | | | | | | | | | | | 1500 | 13.3 | 43.6 |
| | | | | | | | | | | | | | | | | | 2250 | 16.9 | 55.4 |
| | | | | | | | | | | | | | | | | | 3000 | 20.3 | 66.6 |

*Compacted conductor combines impedance uniformity of solid conductors and "nick-resistance" of stranded conductor.

20 AWG Solid .032" Bare Copper Conductor • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Plenum • Foam FEP Insulation • Flamarest® Jacket (Available in 10 colors)*

| | | | | | | | | | | | | | | | | | | | |
|---------------|--------------|---------|--------------------|-------|------|------|----------|------|------|----------|---------|------|----|-----|------|------|------|------|------|
| SDI/HDTV | 1506A | NEC: | 500 ^{†*} | 152.4 | 14.5 | 6.6 | 20 AWG | .133 | 3.38 | Duofoil | .196 | 4.93 | 75 | 84% | 16.1 | 52.8 | 1 | .3 | 1.0 |
| Digital Video | | CMP | 1000 ^{†*} | 304.8 | 29.0 | 13.2 | (solid) | | | + 95% | | | | | | | 3.6 | .6 | 2.0 |
| 75°C | | CEC: | | | | | .032" | | | TC Braid | | | | | | | 10 | 1.1 | 3.4 |
| | | CMH FT6 | | | | | | | | BC | 3.8Ω/M' | | | | | | 71.5 | 2.3 | 7.4 |
| | | | | | | | 10.0Ω/M' | | | 10.5Ω/km | | | | | | | 135 | 3.2 | 10.5 |
| | | | | | | | 32.8Ω/km | | | | | | | | | | 270 | 4.6 | 14.9 |
| | | | | | | | | | | | | | | | | | 360 | 5.3 | 17.2 |
| | | | | | | | | | | | | | | | | | 540 | 6.4 | 21.0 |
| | | | | | | | | | | | | | | | | | 720 | 7.3 | 23.9 |
| | | | | | | | | | | | | | | | | | 750 | 7.5 | 24.6 |
| | | | | | | | | | | | | | | | | | 1000 | 9.4 | 30.8 |
| | | | | | | | | | | | | | | | | | 1500 | 12.8 | 42.0 |
| | | | | | | | | | | | | | | | | | 2250 | 17.5 | 57.4 |
| | | | | | | | | | | | | | | | | | 3000 | 21.9 | 71.8 |

Suitable for Outdoor and Direct Burial applications.

†500 ft. put-up available in Black or Natural only.

*1000 ft. put-up available in all ten colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or Natural.

20 AWG Solid .031" Bare Copper Conductor • Tinned Copper/Bare Copper Double Braid Shield (98% Coverage)

Polyethylene Insulation • Gray PVC Jacket

| | | | | | | | | | | | | | | | | | | | |
|------|-------------|---------|------|-------|------|------|----------|------|------|------------|------|------|----|-----|------|------|------|-----|------|
| 60°C | 9231 | NEC: | 500 | 152.4 | 39.0 | 17.7 | 20 AWG | .198 | 5.03 | TC Double | .305 | 7.75 | 75 | 66% | 21.0 | 68.9 | 1 | .3 | 1.0 |
| VW-1 | | CMH | 1000 | 304.8 | 76.0 | 34.5 | (solid) | | | Braid | | | | | | | 3.6 | .5 | 1.6 |
| | | CEC: | | | | | .031" | | | 98% Shield | | | | | | | 10.0 | .8 | 2.6 |
| | | CMH FT1 | | | | | | | | Coverage | | | | | | | 71.5 | 2.0 | 6.6 |
| | | | | | | | 9.9Ω/M' | | | 1.1Ω/M' | | | | | | | 135 | 3.5 | 11.5 |
| | | | | | | | 32.5Ω/km | | | 3.6Ω/km | | | | | | | 270 | 4.3 | 14.1 |
| | | | | | | | | | | | | | | | | | 360 | 5.0 | 16.4 |
| | | | | | | | | | | | | | | | | | 540 | 6.2 | 20.3 |
| | | | | | | | | | | | | | | | | | 720 | 7.2 | 23.6 |
| | | | | | | | | | | | | | | | | | 750 | 7.4 | 24.3 |
| | | | | | | | | | | | | | | | | | 1000 | 9.1 | 29.8 |

BC = Bare Copper • BCC = Bare Compacted Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • HDPE = High-density Polyethylene • TC = Tinned Copper

Final put-up length may vary ±10% for spools or reels, ±5% for Unreel cartons from length shown.