Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION



8281 Coax - Double Braided RG-59/U Type

For more Information please call

1-800-Belden1



General Description:

20 AWG solid .031" bare copper conductor, polyethylene insulation, tinned copper/bare copper double braid shield (95% coverage), polyethylene jacket.

1

Physical Characteristics (Overall)

Conductor

AWG:

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

Total Number of Conductors:

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 | 95.000 |
| 2 | Braid | TC - Tinned Copper | 95.000 |

Outer Jacket

Outer Jacket Material:



Overall Cable

Overall Nominal Diameter: 0.305 in.

Mechanical Characteristics (Overall)

| Operating Temperature Range: | -55°C To +80°C |
|-----------------------------------|-----------------|
| Non-UL Temperature Rating: | 80°C |
| Bulk Cable Weight: | 69 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 168 lbs. |
| Min. Bend Radius/Minor Axis: | 3 in. |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| EU Directive 2011/65/EU (ROHS II): | Yes |
|---------------------------------------|------------|
| EU CE Mark: | No |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004 |
| 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 |
| Plenum/Non-Plenum | |
| Plenum (Y/N): | No |
| Plenum Number: | 88281 |

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Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
75

Nom. Inductance:

Inductance (µH/ft) 0.131

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft) 21

Nominal Velocity of Propagation:

VP (%)

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 | .3 |
| 3.6 | .5 |
| 10.0 | .8 |
| 71.5 | 2.1 |
| 135 | 3.0 |
| 270 | 4.3 |
| 360 | 5.1 |
| 540 | 6.3 |
| 720 | 7.4 |
| 750 | 7.6 |
| 1000 | 9.2 |

Max. Operating Voltage - Non-UL:

Voltage 2900 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 \pm 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.

Minimum Structural Return Loss:

| St | art Freq. (MHz) | Stop Freq. (MHz) | Min. SRL (dB) |
|----|-----------------|------------------|---------------|
| 5 | | 216 | 27 |
| 21 | 7 | 850 | 23 |

Sweep Test

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

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|--------------|----------|-------------|-------------|-------|-------------------|
| 600006215 | 1 EA | 0.416 LB | | | RSTS 5-183/3 M |
| 8281 0021000 | 1,000 FT | 73.000 LB | RED | С | 75 OHM VIDEO COAX |
| 8281 002500 | 500 FT | 37.500 LB | RED | С | 75 OHM VIDEO COAX |
| 8281 0031000 | 1,000 FT | 73.000 LB | ORANGE | С | 75 OHM VIDEO COAX |
| 8281 0041000 | 1,000 FT | 73.000 LB | YELLOW | С | 75 OHM VIDEO COAX |
| 8281 004500 | 500 FT | 37.500 LB | YELLOW | | 75 OHM VIDEO COAX |
| 8281 0051000 | 1,000 FT | 73.000 LB | GREEN, DARK | С | 75 OHM VIDEO COAX |
| 8281 005500 | 500 FT | 37.500 LB | GREEN, DARK | С | 75 OHM VIDEO COAX |
| 8281 0061000 | 1,000 FT | 73.000 LB | BLUE, LIGHT | С | 75 OHM VIDEO COAX |
| 8281 006500 | 500 FT | 37.500 LB | BLUE, LIGHT | | 75 OHM VIDEO COAX |
| 8281 0091000 | 1,000 FT | 73.000 LB | WHITE | С | 75 OHM VIDEO COAX |

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| 8281 0101000 | 1,000 FT | 73.000 LB | BLACK | С | 75 OHM VIDEO COAX |
|--------------|----------|------------|-------|----|-------------------|
| 8281 010500 | 500 FT | 37.500 LB | BLACK | С | 75 OHM VIDEO COAX |
| 8281 0105000 | 5,000 FT | 380.000 LB | BLACK | CZ | 75 OHM VIDEO COAX |

Notes:

C = CRATE REEL PUT-UP.

Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND(+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

Revision Number: 2 Revision Date: 07-29-2013

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