

## 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.

**Physical Characteristics (Overall)****Conductor**

AWG:

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

Total Number of Conductors: 1

**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:

| Outer Jacket Material |
|-----------------------|
| PE - Polyethylene     |

**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        |
| MIL Order #39 (China RoHS):           | Yes        |
| RG Type:                              | 59/U       |

**Plenum/Non-Plenum**

|                |       |
|----------------|-------|
| Plenum (Y/N):  | No    |
| Plenum Number: | 88281 |

## 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 (%) |
|--------|
| 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           | .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 +/- 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:

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

## Sweep Test

## Sweep Testing:

100% Sweep tested 5MHz to 850MHz.

## Put Ups and Colors:

| Item #       | Putup    | Ship Weight | Color       | Notes | Item Desc         |
|--------------|----------|-------------|-------------|-------|-------------------|
| 8281         | 1 EA     | 0.000       |             |       | RSTS 5-183/3 M    |
| 8281 0021000 | 1,000 FT | 73.000 LB   | RED         | C     | 75 OHM VIDEO COAX |
| 8281 002500  | 500 FT   | 37.500 LB   | RED         | C     | 75 OHM VIDEO COAX |
| 8281 0031000 | 1,000 FT | 73.000 LB   | ORANGE      | C     | 75 OHM VIDEO COAX |
| 8281 0041000 | 1,000 FT | 73.000 LB   | YELLOW      | C     | 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 | C     | 75 OHM VIDEO COAX |
| 8281 005500  | 500 FT   | 37.500 LB   | GREEN, DARK | C     | 75 OHM VIDEO COAX |
| 8281 0061000 | 1,000 FT | 73.000 LB   | BLUE, LIGHT | C     | 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       | C     | 75 OHM VIDEO COAX |

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

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