

**Part Number: 88281**

Precision Video Coax, RG59, #20 Solid BC, Double 98% TC/BC Braid



**Product Description**

20 AWG solid .032" bare copper conductor, plenum, FEP insulation, tinned copper braid shields (95% coverage), fluorocopolymer jacket.

**Technical Specifications**

**Product Overview**

|                      |                         |
|----------------------|-------------------------|
| Environmental Space: | Outdoor - Direct Burial |
|----------------------|-------------------------|

**Physical Characteristics (Overall)**

**Conductor**

| AWG | Stranding | Material         | Nominal Diameter | No. of Coax |
|-----|-----------|------------------|------------------|-------------|
| 20  | Solid     | BC - Bare Copper | 0.032 in         | 1           |

|                  |   |
|------------------|---|
| Conductor Count: | 1 |
|------------------|---|

**Insulation**

| Material                             | Nominal Diameter |
|--------------------------------------|------------------|
| FEP - Fluorinated Ethylene Propylene | 0.185 in         |

**Outer Shield Material**

| Type  | Layer | Material           | Coverage [%] |
|-------|-------|--------------------|--------------|
| Braid | 1     | TC - Tinned Copper | 95 %         |
| Braid | 2     | TC - Tinned Copper | 95 %         |

**Outer Jacket Material**

| Material               | Nominal Diameter |
|------------------------|------------------|
| PVDF - Fluorocopolymer | 0.271 in         |

**Electrical Characteristics**

**Conductor DCR**

| Nominal Conductor DCR | Nominal Conductor DCR Conductor Resistance | Nominal Outer Shield DCR | Outer Conductor DCR |
|-----------------------|--|--------------------------|---------------------|
| 9.9 Ohm/1000ft        | 9.9 Ohm/1000ft                             | 1.1 Ohm/1000ft           | 1.1 Ohm/1000ft      |

**Capacitance**

| Nom. Capacitance Conductor to Shield |
|--------------------------------------|
| 19 pF/ft                             |

**Inductance**

| Nominal Inductance |
|--------------------|
| 0.125 µH/ft        |

**Impedance**

| Nominal Characteristic Impedance |
|----------------------------------|
| 75 Ohm                           |

**Return Loss (RL)**

| Frequency [MHz] | Minimum Return (RL) |
|-----------------|---------------------|
| 5-216 MHz       | 27 dB               |

#### High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 1 MHz           | 0.2 dB/100ft        |
| 3.6 MHz         | 0.5 dB/100ft        |
| 10 MHz          | 0.8 dB/100ft        |
| 71.5 MHz        | 2.3 dB/100ft        |
| 135 MHz         | 3.3 dB/100ft        |
| 270 MHz         | 5.1 dB/100ft        |
| 360 MHz         | 6.1 dB/100ft        |
| 540 MHz         | 8 dB/100ft          |
| 720 MHz         | 9.7 dB/100ft        |
| 750 MHz         | 10 dB/100ft         |
| 1000 MHz        | 12.3 dB/100ft       |

#### Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.43 ns/ft    | 70 %                                     |

#### Voltage

| Non-UL Voltage Rating | UL Voltage Rating |
|-----------------------|-------------------|
| 2900 V RMS            | 300 V RMS         |

#### Temperature Range

|                       |                 |
|-----------------------|-----------------|
| UL Temp Rating:       | 150°C           |
| Operating Temp Range: | -20°C To +150°C |

#### Mechanical Characteristics

|                                  |               |
|----------------------------------|---------------|
| Bulk Cable Weight:               | 82 lbs/1000ft |
| Max Recommended Pulling Tension: | 168 lbs       |
| Min Bend Radius/Minor Axis:      | 2.75 in       |

#### Standards

|                          |           |
|--------------------------|-----------|
| NEC/(UL) Specification:  | CMP       |
| CEC/C(UL) Specification: | CMP       |
| RG Type:                 | 59/U Type |

#### Applicable Environmental and Other Programs

|                                       |                               |
|---------------------------------------|-------------------------------|
| EU Directive 2000/53/EC (ELV):        | Yes                           |
| EU Directive 2003/11/EC (BFR):        | Yes                           |
| EU Directive 2011/65/EU (ROHS II):    | Yes                           |
| EU Directive 2012/19/EU (WEEE):       | Yes                           |
| EU Directive 2015/863/EU:             | Yes                           |
| EU Directive Compliance:              | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                           | No                            |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-04-01                    |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                           |
| MII Order #39 (China RoHS):           | Yes                           |

#### Suitability

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

#### Flammability, LSOH, Toxicity Testing

|                    |           |
|--------------------|-----------|
| UL Flammability:   | NFPA 262  |
| UL voltage rating: | 300 V RMS |

## Plenum/Non-Plenum

Plenum (Y/N): Yes

## Part Number

Non-Plenum Number: 8281

## Variants

| Item #        | Color | UPC          | Length   | Footnote |
|---------------|-------|--------------|----------|----------|
| 88281 0101000 | Black | 612825216964 | 1,000 ft | C        |
| 88281 010500  | Black | 612825218302 | 500 ft   | C        |

Footnote: C - CRATE REEL PUT-UP.

## History

Update and Revision: Revision Number: 0.268 Revision Date: 08-22-2019

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