

## 8281F Coax - Double Braided RG-59/U Type

For more Information  
please call

1-800-Belden1



### Description:

22 AWG stranded (7x29) .031" bare compacted copper conductor, polyethylene insulation, tinned copper/bare copper double braid shield (95% coverage), PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Coax | AWG | Stranding | Conductor Material          | Dia. (in.) |
|--------|-----|-----------|-----------------------------|------------|
| 1      | 22  | 7x29      | BCC - Bare Compacted Copper | .031       |

Total Number of Conductors: 1

#### Insulation

Insulation Material:

| Insulation Material | Dia. (in.) |
|---------------------|------------|
| PE - Polyethylene   | .193       |

#### 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    |
|--------------------------|
| PVC - Polyvinyl Chloride |

#### Overall Cable

Overall Nominal Diameter: 0.304 in.

### Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +60°C

Non-UL Temperature Rating: 60°C

Bulk Cable Weight: 63 lbs/1000 ft.

Max. Recommended Pulling Tension: 168 lbs.

Min. Bend Radius/Minor Axis: 3 in.

Min. Flexing Radius: 4.500 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

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

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|                                   |      |
|-----------------------------------|------|
| 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 |

### Suitability

|                       |     |
|-----------------------|-----|
| Suitability - Indoor: | Yes |
|-----------------------|-----|

### 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) |
| 12.2                     |

### Nominal Outer Shield DC Resistance:

|                          |
|--------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 1.7                      |

### Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 1           | .3                       |
| 3.6         | .5                       |
| 10.0        | .9                       |
| 71.5        | 2.5                      |
| 135         | 3.6                      |
| 270         | 5.1                      |
| 360         | 6.0                      |
| 540         | 7.4                      |
| 720         | 8.7                      |
| 750         | 8.9                      |
| 1000        | 10.5                     |

### 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.

**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) |
|-------------------|------------------|---------------|

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|     |     |    |
|-----|-----|----|
| 5   | 216 | 27 |
| 217 | 830 | 23 |

### Sweep Test

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

### Notes (Overall)

**Notes:** Compacted copper combines the Impedance uniformity of solid conductors and the "nick-resistance" of stranded conductors.

### Put Ups and Colors:

| Item #        | Putup    | Ship Weight | Color              | Notes | Item Desc        |
|---------------|----------|-------------|--------------------|-------|------------------|
| 8281F G7V1000 | 1,000 FT | 68.000 LB   | RED, MATTE         | C     | #21H PE DBLB PVC |
| 8281F G7W1000 | 1,000 FT | 68.000 LB   | GREEN, MATTE       | C     | #21H PE DBLB PVC |
| 8281F G7X1000 | 1,000 FT | 68.000 LB   | BLUE, MATTE        | C     | #21H PE DBLB PVC |
| 8281F J5C1000 | 1,000 FT | 68.000 LB   | BLACK, VIVID MATTE | C     | #21H PE DBLB PVC |
| 8281F J5C500  | 500 FT   | 35.000 LB   | BLACK, VIVID MATTE |       | #21H PE DBLB PVC |
| 8281F U901000 | 1,000 FT | 68.000 LB   | GRAY, MATTE        | C     | #21H PE DBLB PVC |

**Notes:**

C = CRATE REEL PUT-UP.

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