

**Part Number: 83265**

50 Ohm Coax, RG178, 30 AWG Stranded SCCCS, SPC Braid, FEP Jacket, Commercial Non-QPL Product.



**Product Description**

RG-178/U, 30 AWG stranded (7x38) .012" silver-plated copper-covered steel conductor, TFE insulation, silver-plated copper braid shield (95% coverage), FEP jacket, commercial non-QPL product.

**Technical Specifications**

**Product Overview**

|                      |                  |
|----------------------|------------------|
| Environmental Space: | Outdoor - Aerial |
|----------------------|------------------|

**Physical Characteristics (Overall)**

**Conductor**

| AWG | Stranding | Material                                   | Nominal Diameter | No. of Coax |
|-----|-----------|--|------------------|-------------|
| 30  | Stranded  | SCCCS - Silver Coated Copper Covered Steel | 0.012 in         | 1           |

|                  |        |
|------------------|--------|
| Conductor Count: | 1      |
| Conductor Size:  | 30 AWG |

**Insulation**

| Material                  | Material Trade Name | Nominal Diameter |
|---------------------------|---------------------|------------------|
| TFE - Tetrafluoroethylene | Teflon®             | 0.033 in         |

**Outer Shield Material**

| Type  | Layer | Material                   | Coverage [%] |
|-------|-------|----------------------------|--------------|
| Braid | 1     | SPC - Silver Plated Copper | 95 %         |

**Outer Jacket Material**

| Material                             | Nominal Diameter |
|--------------------------------------|------------------|
| FEP - Fluorinated Ethylene Propylene | 0.071 in         |

**Electrical Characteristics**

**Conductor DCR**

| Nominal Conductor DCR | Nominal Outer Shield DCR | Outer Conductor DCR |
|-----------------------|--------------------------|---------------------|
| 244 Ohm/1000ft        | 14.6 Ohm/1000ft          | 14.6 Ohm/1000ft     |

**Capacitance**

| Nom. Capacitance Conductor to Shield |
|--------------------------------------|
| 29 pF/ft                             |

**Inductance**

| Nominal Inductance |
|--------------------|
| 0.072 µH/ft        |

**Impedance**

| Nominal Characteristic Impedance |
|----------------------------------|
| 50 Ohm                           |

**High Frequency (Nominal/Typical)**

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 1 MHz           | 2.6 dB/100ft        |
| 10 MHz          | 5.6 dB/100ft        |
| 50 MHz          | 10.5 dB/100ft       |
| 100 MHz         | 14 dB/100ft         |
| 200 MHz         | 19 dB/100ft         |
| 400 MHz         | 28 dB/100ft         |
| 700 MHz         | 37 dB/100ft         |
| 900 MHz         | 42.5 dB/100ft       |
| 1000 MHz        | 46 dB/100ft         |

#### Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.46 ns/ft    | 69.5 %                                   |

#### Power Rating

| Frequency [MHz] | Max. Power Rating [W] | Nominal Power Rating [W] |
|-----------------|-----------------------|--------------------------|
| 50 MHz          | 380 W                 | 380 W                    |
| 100 MHz         | 253 W                 | 253 W                    |
| 200 MHz         | 170 W                 | 170 W                    |
| 400 MHz         | 113 W                 | 113 W                    |
| 700 MHz         | 81 W                  | 81 W                     |
| 900 MHz         | 70 W                  | 70 W                     |
| 1,000 MHz       | 66 W                  | 66 W                     |

#### Voltage

| Description | Voltage Rating [V]   |
|-------------|----------------------|
| 750V RMS    | 750 V RMS (Mil Spec) |

#### VSWR

| Frequency [MHz]   | Max. VSWR        |
|-------------------|------------------|
| 50 MHz - 1000 MHz | per M17/93-RG178 |

#### Temperature Range

|                       |                 |
|-----------------------|-----------------|
| Non-UL Temp Rating:   | 200°C           |
| Operating Temp Range: | -70°C To +200°C |

#### Mechanical Characteristics

|                                  |              |
|----------------------------------|--------------|
| Bulk Cable Weight:               | 5 lbs/1000ft |
| Max Recommended Pulling Tension: | 12 lbs       |
| Min Bend Radius/Minor Axis:      | 1 in         |

#### Standards

|                             |  |
|-----------------------------|--|
| RG Type:                    | 178/U Type                                 |
| Military Specification:     | Commercial, non-QPL product (M17/93-RG178) |
| QPL (Qualified Parts List): | No   |
| Other Specification:        | UL Style 1637                              |

#### Applicable Environmental and Other Programs

|                                       |                               |
|---------------------------------------|-------------------------------|
| EU Directive 2000/53/EC (ELV):        | Yes                           |
| EU Directive 2003/96/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:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-04-01                    |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                           |
| MIL Order #39 (China RoHS):           | Yes                           |

#### Suitability

|                                    |  |
|------------------------------------|--|
| Suitability - Aerial:              | Yes - When supported by messenger wire |
| Suitability - Burial:              | No                                     |
| Suitability - Hazardous Locations: | No                                     |
| Suitability - Indoor:              | Yes                                    |
| Suitability - Outdoor:             | Yes                                    |
| Suitability - Sunlight Resistance: | No                                     |

**Plenum/Non-Plenum**

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

**Part Number**

**Variants**

| Item #        | Color | Footnote |
|---------------|-------|----------|
| 83265 009100  | White | E        |
| 83265 0091000 | White | E        |
| 83265 009500  | White | E        |

|           |  |
|-----------|--|
| Footnote: | E - MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 25'. |
|-----------|--|

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