# 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 |

| | |
|---|---|
| Shielding: | Braid(s) |

**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 |
| RG / Series Type: | 178/U Type |
| 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 |
| MII 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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