



**Product:** [83265](#)

Mil-Spec Coax, 50 Ohm, RG-178, 30 AWG Str SCCS, 95% SC Braid, FEP Jkt, Commercial Non-QPL

Product Description

Mil-Spec Coax, 50 Ohm, RG-178, 30 AWG (7x38) Silvered Copper Covered Steel Conductor, PTFE Insulation, 95% Silvered Copper Braid Shield, FEP Jacket, Commercial, non-QPL

Technical Specifications

Product Overview

|                        |                                  |
|------------------------|----------------------------------|
| Suitable Applications: | Aerospace wireless communication |
|------------------------|----------------------------------|

Construction Details

|          |     |
|----------|-----|
| RG Type: | 178 |
|----------|-----|

Conductor

| Size   | Stranding | Nom. Diameter | Material                             |
|--------|-----------|---------------|--------------------------------------|
| 30 AWG | 7x38      | 0.012 in      | SCCS - Silvered Copper Covered Steel |

Insulation

| Material                       | Nom. Insulation Diameter | Color Code |
|--------------------------------|--------------------------|------------|
| PTFE - Polytetrafluoroethylene | 0.033 in (0.84 mm)       | White      |

Outer Shield

| Layer | Outer Shield Type | Material             | Coverage |
|-------|-------------------|----------------------|----------|
| 1     | Braid             | Silvered Copper (SC) | 95%      |

Outer Jacket

| Material                             | Nom. Diameter     |
|--------------------------------------|-------------------|
| FEP - Fluorinated Ethylene Propylene | 0.071 in (1.8 mm) |

|                                   |                   |
|-----------------------------------|-------------------|
| Overall Cable Diameter (Nominal): | 0.071 in (1.8 mm) |
|-----------------------------------|-------------------|

Electrical Characteristics

VSWR

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

Attenuation

| Frequency | Nom. Attenuation |
|-----------|------------------|
| 1 MHz     | 2.6 dB/100ft     |
| 10 MHz    | 5.6 dB/100ft     |
| 50 MHz    | 10.5 dB/100ft    |
| 100 MHz   | 14.0 dB/100ft    |
| 200 MHz   | 19.0 dB/100ft    |
| 400 MHz   | 28.0 dB/100ft    |
| 700 MHz   | 37.0 dB/100ft    |
| 900 MHz   | 42.5 dB/100ft    |
| 1000 MHz  | 46.0 dB/100ft    |

Power Rating

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

Electricals

| Nom. Conductor DCR          | Nom. Outer Shield DCR         | Nom. Capacitance Cond-to-Shield | Nom. Characteristic Impedance | Nom. Velocity of Prop. |
|-----------------------------|-------------------------------|---------------------------------|-------------------------------|------------------------|
| 232 Ohm/1000ft (761 Ohm/km) | 14.6 Ohm/1000ft (47.9 Ohm/km) | 29 pF/ft (95 pF/m)              | 50 Ohm                        | 70%                    |

Voltage

| UL Voltage Rating  | Voltage Rating   |
|--------------------|------------------|
| 30 V (UL AWM 1637) | 750 V (Mil-Spec) |

Mechanical Characteristics

Temperature

| UL Temperature     | Operating       |
|--------------------|-----------------|
| 90°C (UL AWM 1637) | -70°C to +200°C |

Bend Radius

| Installation Min. |
|-------------------|
| 1 in (25 mm)      |

|                    |                 |
|--------------------|-----------------|
| Max. Pull Tension: | 12 lbs (5.4 kg) |
| Bulk Cable Weight: | 5 lbs/1000ft    |

Standards and Compliance

|                                |                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability:     | Indoor/Outdoor, Indoor, Outdoor, Aerial - When supported by messenger wire                                                       |
| Sustainability:                | CA Prop 65                                                                                                                       |
| AWM Compliance:                | AWM 1637                                                                                                                         |
| Military Compliance:           | Commercial, non-QPL product (M17/93-RG178)                                                                                       |
| European Directive Compliance: | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE) |
| APAC Compliance:               | China RoHS II (GB/T 26572-2011)                                                                                                  |

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.501 Revision Date: 04-13-2023 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item #        | Color | Putup Type | Length   | UPC          | Footnote |
|---------------|-------|------------|----------|--------------|----------|
| 83265 009100  | White | Reel       | 100 ft   | 612825203698 | E        |
| 83265 009500  | White | Reel       | 500 ft   | 612825203711 | E        |
| 83265 0091000 | White | Reel       | 1,000 ft | 612825203704 | E        |