



Product: [7810SB](#)



50 Ohm Wireless Transmission Coax, RF 400, RG8, 10 AWG Solid BCCA, Foil + 95% TC Braid, LSZH Jkt, CMG-LS/CMR, ABS Certified

Product Description

50 Ohm Wireless Transmission Coax, RF 400, 10 AWG Solid Bare Copper Covered Aluminum, PE Insulation, Duobond® Foil + 95% Tinned Copper Braid Shield, LSZH Jacket, CMG-LS/CMR, Shipboard ABS Type Approved

Technical Specifications

Product Overview

| | |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | Point-to-point and point-to-multipoint wireless antenna communication; Wireless microphones, Two-Way Radios, Amateur (Ham) Radio, Low Power FM, GPS, RFID (Radio Frequency Identification); ABS approved for marine shipboard and offshore use |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Construction Details

| | |
|----------|---|
| RG Type: | 8 |
|----------|---|

Conductor

| Number of Element | Size | Stranding | Nom. Diameter | Material |
|-------------------|--------|-----------|---------------|-------------------------------------|
| 1 | 10 AWG | Solid | 0.108 in | BCCA - Bare Copper Covered Aluminum |

Insulation

| Material | Nom. Insulation Diameter | Color Code |
|-------------------|--------------------------|------------|
| PE - Polyethylene | 0.285 in (7.24 mm) | White |

| | |
|--------------|--------------|
| Table Notes: | Gas Injected |
|--------------|--------------|

Outer Shield

| Layer | Outer Shield Type | Material | Material Trade Name | Coverage |
|-------|-------------------|-------------------------------|---------------------|----------|
| 1 | Tape | Tri-Laminate (Alum+Poly+Alum) | Duofoil® | 100% |
| 2 | Braid | Tinned Copper (TC) | | 95% |

Outer Jacket

| Material | Nom. Diameter |
|-------------------------------------------------|--------------------|
| LSZH - Low Smoke Zero Halogen (Flame Retardant) | 0.405 in (10.3 mm) |

| | |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.405 in (10.3 mm) |
|-----------------------------------|--------------------|

Electrical Characteristics

VSWR

| Frequency | Max. VSWR |
|------------|-----------|
| 5-6000 MHz | 1.25:1 |

Attenuation

| Frequency | Nom. Attenuation | Max. Attenuation |
|-----------|------------------|------------------|
| 30 MHz | 0.7 dB/100ft | 0.7 dB/100ft |
| 50 MHz | 0.9 dB/100ft | 0.93 dB/100ft |
| 150 MHz | 1.5 dB/100ft | 1.58 dB/100ft |
| 220 MHz | 1.8 dB/100ft | 1.94 dB/100ft |
| 450 MHz | 2.7 dB/100ft | 2.83 dB/100ft |
| 900 MHz | 3.8 dB/100ft | 4.06 dB/100ft |

| | | |
|----------|---------------|----------------|
| 1500 MHz | 5.1 dB/100ft | 5.32 dB/100ft |
| 1800 MHz | 5.6 dB/100ft | 5.98 dB/100ft |
| 2000 MHz | 6 dB/100ft | 6.35 dB/100ft |
| 2500 MHz | 6.7 dB/100ft | 7.08 dB/100ft |
| 3000 MHz | 7.5 dB/100ft | 7.97 dB/100ft |
| 3500 MHz | 8.2 dB/100ft | 8.8 dB/100ft |
| 4500 MHz | 9.5 dB/100ft | 10.23 dB/100ft |
| 5800 MHz | 11.1 dB/100ft | 12 dB/100ft |
| 6000 MHz | 11.4 dB/100ft | 12.23 dB/100ft |

Power Rating

| Frequency | Max. Power Rating |
|-----------|-------------------|
| 30 MHz | 3,427 W |
| 50 MHz | 2,588 W |
| 150 MHz | 1,428 W |
| 220 MHz | 1,195 W |
| 450 MHz | 817 W |
| 900 MHz | 575 W |
| 1,500 MHz | 437 W |
| 2,000 MHz | 375 W |
| 2,500 MHz | 334 W |
| 3,500 MHz | 282 W |
| 4,500 MHz | 247 W |
| 6,000 MHz | 213 W |
| 4,500 MHz | 247 W |
| 5,800 MHz | 217 W |
| 6,000 MHz | 213 W |

Electricals

| Nom. Conductor DCR | Nom. Outer Shield DCR | Nom. Capacitance Cond-to-Shield | Nom. Characteristic Impedance | Nom. Velocity of Prop. |
|-------------------------------|-----------------------------|---------------------------------|-------------------------------|------------------------|
| 1.34 Ohm/1000ft (4.40 Ohm/km) | 2.0 Ohm/1000ft (6.6 Ohm/km) | 23 pF/ft (75 pF/m) | 50 Ohm | 86% |

Voltage

| Voltage Rating |
|----------------|
| 300 V RMS |

Mechanical Characteristics

Temperature

| UL Temperature | Operating |
|----------------|----------------|
| 75°C | -30°C To +75°C |

Bend Radius

| Stationary Min. | Installation Min. |
|------------------|-------------------|
| 4.00 in (102 mm) | 4.00 in (102 mm) |

| | |
|--------------------|-------------------|
| Max. Pull Tension: | 189 lbs (85.7 kg) |
| Bulk Cable Weight: | 88 lbs/1000ft |

Standards and Compliance

| | |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability: | Indoor/Outdoor - Euroclass Dca, Indoor, Outdoor, Sunlight Resistance, UV Resistance, Aerial - When supported by messenger wire |
| Flammability / Reaction to Fire: | UL1666 Vertical Shaft, UL1685 FT4 Loading, Limited Smoke, FT4, 1202, IEC 60332-1-2, IEC 60332-3-22 |
| CPR Compliance: | CPR Euroclass: Dca-s1,d1,a1 |
| NEC / UL Compliance: | Article 800, CMG-LS, CMR |
| CEC / C(UL) Compliance: | CMG-LS |
| IEEE Compliance: | Std. 45 clause 23 |
| European Directive Compliance: | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE) |
| UK Regulation Compliance: | UKCA Mark |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |
| Other Standard Compliance(s): | UL444, ABS Type Approval Certificate 06-HS184641B |

History

Update and Revision: Revision Number: 0.462 Revision Date: 05-01-2023

Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC |
|----------------|-------|------------|----------|--------------|
| 7810SB 0101000 | Black | Reel | 1,000 ft | 612825189831 |

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