

Cable Specifications

50 Ohm Radiating Cable 1-5/8"

| Description | Product Number |
|--|----------------------------------|
| Standard Cable | |
| 1-5/8", Black Polyethylene Jacket | AR158J50 |
| Fire Retardant Cable | |
| 1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1 | AR158FX50 |
| Riser Rated Cable | |
| 1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR | AR158R50 |
| Physical Dimensions | |
| Center Dia., in (mm) | 0.728 (18.49) |
| Dia. Over Dielectric, in (mm) | 1.871 (47.52) |
| Dia. Over Outer Conductor, in (mm) | 1.888 (47.96) |
| Max. Dia. Over Jacket, in (mm) | 2.047 (51.99) |
| Center Conductor | Solid Copper Tube |
| Outer Conductor | Dual Slotted Solid Aluminum Tube |
| Electrical Characteristics | |
| Maximum Frequency, GHz | 3 |
| Peak Power Rating, KW | 306 |
| DC Res, Ohms/1000 ft (1000m) | |
| Center | 0.22 (0.72) |
| Outer | 0.10 (0.33) |
| DC Breakdown, kV | 11 |
| Capacitance, pF/ft (m) | 22.3 (73.16) |
| Inductance, mH/ft (m) | 0.056 (0.184) |
| Jacket Spark, kV RMS | 8 |
| Typical VSWR | < 1.3 |
| Impedance, Ohms | 50 |
| Velocity of Propagation | 91% |
| Mechanical Characteristics | |
| Min. Bend. Rad., in (mm) – Single | 8 (203) |
| Min. Bend. Rad., in (mm) – Multiple | 20 (508) |
| Cable Weight, lb/ft (kg/m) | 0.67 (1.00) |
| Bending Moment, ft.lb (N'm) | 60 (81) |
| Tensile Strength, lb (kg) | 1500 (682) |
| Flat Plate Crush, lb/in (kg/mm) | 150 (2.68) |
| Number of Bends | 20 |
| Temperature, °F (°C) | |
| Recommended Install | -40 to 170 (-40 to 77) |
| Recommended Storage | -94 to 170 (-70 to 77) |
| Operating | -40 to 170 (-40 to 77) |

| Attenuation and Coupling Loss (95%) | | | |
|-------------------------------------|-------------------------|---------|-------------------|
| Frequency MHz | **Attenuation dB/100 ft | dB/100m | *Coupling Loss dB |
| 30 | 0.11 | 0.36 | 63 |
| 50 | 0.18 | 0.59 | 63 |
| 75 | 0.21 | 0.69 | 64 |
| 100 | 0.22 | 0.72 | 64 |
| 108 | 0.23 | 0.75 | 64 |
| 150 | 0.28 | 0.92 | 64 |
| 174 | 0.30 | 0.98 | 65 |
| 200 | 0.34 | 1.12 | 65 |
| 300 | 0.41 | 1.35 | 65 |
| 350 | 0.48 | 1.57 | 65 |
| 400 | 0.48 | 1.57 | 65 |
| 450 | 0.52 | 1.71 | 66 |
| 500 | 0.55 | 1.80 | 66 |
| 512 | 0.59 | 1.94 | 66 |
| 600 | 0.64 | 2.10 | 66 |
| 700 | 0.68 | 2.23 | 67 |
| 800 | 0.68 | 2.23 | 67 |
| 824 | 0.69 | 2.26 | 67 |
| 870 | 0.73 | 2.39 | 67 |
| 900 | 0.75 | 2.46 | 67 |
| 960 | 0.77 | 2.53 | 67 |
| 1000 | 0.78 | 2.56 | 67 |
| 1250 | 1.01 | 3.31 | 67 |
| 1500 | 1.06 | 3.48 | 68 |
| 1700 | 1.13 | 3.71 | 68 |
| 1800 | 1.19 | 3.90 | 68 |
| 1900 | 1.24 | 4.07 | 68 |
| 2000 | 1.28 | 4.20 | 68 |
| 2200 | 1.38 | 4.53 | 68 |
| 2400 | 1.50 | 4.92 | 68 |
| 2700 | 1.67 | 5.48 | 68 |

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB

**Attenuation ± 10% at 68°F