

### Cable Specifications

#### 50 Ohm Radiating Cable 7/8"

Description	Product Number
<b>Standard Cable</b>	
7/8", Black Polyethylene Jacket	AR078J50
<b>Fire Retardant Cable</b>	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR078FX50
<b>Riser Rated Cable</b>	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR078R50
<b>Physical Dimensions</b>	
Center Dia., in (mm)	0.383 (9.73)
Dia. Over Dielectric, in (mm)	0.961 (24.58)
Dia. Over Outer Conductor, in (mm)	1.015 (25.70)
Max. Dia. Over Jacket, in (mm)	1.154 (29.31)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
<b>Electrical Characteristics</b>	
Maximum Frequency, GHz	5
Peak Power Rating, KW	90
DC Res, Ohms/1000 ft (1000m)	
Center	0.47 (1.54)
Outer	0.24 (0.78)
DC Breakdown, kV	6.7
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%
<b>Mechanical Characteristics</b>	
Min. Bend. Rad., in (mm) – Single	5 (127)
Min. Bend. Rad., in (mm) – Multiple	10 (254)
Cable Weight, lb/ft (kg/m)	0.29 (0.43)
Bending Moment, ft.lb (N·m)	26 (35.1)
Tensile Strength, lb (kg)	734 (333.6)
Flat Plate Crush, lb/in (kg/mm)	132 (2.36)
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)

Frequency MHz	Attenuation and Coupling Loss		*Coupling Loss dB
	**Attenuation dB/100 ft	dB/100m	
30	0.16	0.52	60
50	0.21	0.70	60
75	0.26	0.85	61
100	0.31	1.01	61
108	0.33	1.07	61
150	0.40	1.31	61
174	0.44	1.43	62
200	0.47	1.56	62
300	0.60	1.98	62
350	0.67	2.20	62
400	0.73	2.38	62
450	0.78	2.56	63
500	0.83	2.72	63
512	0.85	2.78	63
600	0.93	3.05	63
700	1.03	3.39	64
800	1.13	3.69	64
824	1.14	3.75	64
870	1.19	3.91	64
900	1.22	4.00	64
960	1.26	4.15	64
1000	1.30	4.27	64
1250	1.52	4.97	64
1500	1.72	5.64	65
1700	1.87	6.13	65
1800	1.94	6.38	65
1900	2.02	6.62	65
2000	2.10	6.90	65
2200	2.22	7.29	65
2400	2.33	7.66	65
3000	2.66	8.73	66

**Standard conditions:**

\*50% Coupling Loss at 6 ft (2 m), ± 5 dB

\*\*Attenuation ± 10% at 68°F

