

Cable Specifications

50 Ohm Radiating Cable 7/8"

Description	Product Number
Standard Cable	
7/8", Black Polyethylene Jacket	AR078J50
Fire Retardant Cable	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR078FX50
Riser Rated Cable	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR078R50
Physical Dimensions	
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
Electrical Characteristics	
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%
Mechanical Characteristics	
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
30	0.16	0.52	63
50	0.21	0.70	63
75	0.26	0.85	64
100	0.31	1.01	64
108	0.33	1.07	64
150	0.40	1.31	64
174	0.44	1.43	65
200	0.47	1.56	65
300	0.60	1.98	65
350	0.67	2.20	65
400	0.73	2.38	65
450	0.78	2.56	66
500	0.83	2.72	66
512	0.85	2.78	66
600	0.93	3.05	66
700	1.03	3.39	67
800	1.13	3.69	67
824	1.14	3.75	67
870	1.19	3.91	67
900	1.22	4.00	67
960	1.26	4.15	67
1000	1.30	4.27	67
1250	1.52	4.97	67
1500	1.72	5.64	68
1700	1.87	6.13	68
1800	1.94	6.38	68
1900	2.02	6.62	68
2000	2.10	6.90	68
2200	2.22	7.29	68
2400	2.33	7.66	68
3000	2.66	8.73	69

Standard Conditions:

Test per IEC61196-4

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

**Attenuation ± 10% at 68°F