

Cable Specifications

50 Ohm Radiating Cable 1-5/8" - AR158J50/ AR158FX50/ AR158FV50

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
Fire Retardant Cable	
1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	AR158FV50
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	2650
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
VSWR Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
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		*Coupling Loss dB
	dB/100 ft	dB/100m	
150	0.40	0.92	70
450	0.52	1.71	70
500	0.55	1.80	70
700	0.68	2.23	70
800	0.68	2.23	70
870	0.73	2.39	70
900	0.75	2.46	70
960	0.77	2.53	70
1700	1.13	3.71	71
1800	1.19	3.90	71
1900	1.24	4.07	71
2000	1.28	4.20	71
2100	1.33	4.37	71
2200	1.38	4.53	71
2400	1.50	4.92	71
2600	1.60	5.26	71
2650	1.64	5.39	71

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F