

Cable Specifications

50 Ohm Radiating Cable 1/2" – AR012J50/ AR012FX50/ AR012F50

Description	Product Number
Standard Cable	
1/2", Black Polyethylene Jacket	AR012J50
Fire Retardant Cable	
1/2", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR012FX50
1/2", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	AR012F50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.510 (12.95)
Max. Dia. Over Jacket, in (mm)	0.652 (16.56)
Center Conductor	Copper Clad Aluminum
Outer Conductor	Dual Slotted Solid Aluminum
Electrical Characteristics	
Maximum Frequency, GHz	11
Peak Power Rating, KW	32
DC Res, Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.52 (1.71)
DC Breakdown, kV	3.2
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	2 (50.8)
Min. Bend. Rad., in (mm) – Multiple	6 (152)
Cable Weight, lb/ft (kg/m)	0.12 (0.18)
Bending Moment, ft.lb (N·m)	7.5 (10.2)
Tensile Strength, lb (kg)	465 (211)
Flat Plate Crush, lb/in (kg/mm)	62 (1.11)
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
150	1.10	3.60	64
450	1.86	6.10	66
500	1.98	6.50	66
700	2.28	7.48	67
800	2.42	7.93	67
870	1.68	5.52	67
900	2.55	8.36	67
960	2.62	8.60	67
1700	3.52	11.56	68
1800	2.70	8.85	68
1900	2.83	9.28	68
2000	3.88	12.72	68
2100	3.90	12.79	68
2200	3.92	12.85	68
2400	3.99	13.09	68
2600	4.10	13.45	68
2650	4.21	13.81	68

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