AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

75 Ohm Radiating Cable 1/2″

Description	Product Number
Standard Cable	
½", Black Polyethylene Jacket	AR012J75
Fire Retardant Cable	
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR012FX75
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	AR012F75
Riser Rated Cable	
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR012R75
Physical Dimensions	
Center Dia., in (mm)	0.123 (3.12)
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)	0.642 (16.30)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Dual Slotted Solid Aluminum
Electrical Characteristics	
Maximum Frequency, GHz	12
Peak Power Rating, KW	32
DC Res, Ohms/1000 ft (1000m)	
Center	1.09 (3.58)
Outer	0.57 (1.87)
DC Breakdown, kV	3.2
Capacitance, pF/ft (m)	14.9 (48.9)
Inductance, mH/ft (m)	0.082 (0.269)
Jacket Spark, kV RMS	8
Typical VSWR	1.3
Impedance, Ohms	75
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)	0.103 (0.156)
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			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
30	0.45	1.48	57
50	0.58	1.90	57
88	0.77	2.53	57
100	0.83	2.72	57
108	0.86	2.82	57
150	1.02	3.35	59
174	1.10	3.61	59
200	1.18	3.87	59
300	1.46	4.79	59
400	1.70	5.58	60
450	1.80	5.91	60
500	1.91	6.27	60
512	1.93	6.33	60
600	2.10	6.89	61
700	2.28	7.48	61
800	2.45	8.04	61
824	2.48	8.14	61
894	2.58	8.46	61
900	2.61	8.56	61
960	2.68	8.79	62
1000	2.76	9.06	64
1250	3.06	10.04	64
1500	3.37	11.06	67
1700	3.57	11.71	69
1800	3.92	12.86	70
1920	3.79	12.43	71
2000	3.86	12.66	71
2300	4.13	13.55	73
3000	4.70	15.42	73

Standard Conditions:

Test per IEC61196-4

*50% Coupling Loss at 6 ft (2 m), ± 5 dB
**Attenuation ± 10% at 68°F