AirCell®

Plenum Radiating Cable

TRILOGY Communications

Product Specification

50 Ohm Plenum Radiating, 1/2" - AQ012J50

Description	Product Number
Plenum Rated Cable	
1/2", Corrugated, Jacketed CMP, Conforms to NFPA-262, UL-444, Canadian CSA 22.2/FT6	AQ012J50
Physical Dimensions	
Center Diameter, in (mm)	0.188 (4.78)
Diameter Over Outer Conductor, in (mm)	0.550 (13.97)
Maximum Diameter Over Jacket, in (mm)	0.63 (16.00)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Aluminum
Jacket Color	Off White
Electrical Characteristics	
Maximum Frequency, GHz	3
Peak Power Rating, KW	35
DC Resistance, Ohms/1,000 ft (1,000 m)	
Center	0.46 (1.51)
Outer	0.51 (1.67)
DC Breakdown, kV	2
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.38 (16.0)
VSWR typical, 700-960 / 1700-2200 MHz (dB)	1.30 (17.7)
Impedance, Ohms	50 ± 2
Velocity of Propagation	94%
Mechanical Characteristics	
Minimum Bend Radius, in (mm) - Single	2 (50.8)
Minimum Bend Radius, in (mm) - Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.12 (0.18)
Bending Moment, ft lb (N m)	1 (1.4)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	50 (0.89)
Number of Bends, minimum	10
Recommended Install Temp., °F (°C)	+5° to 194° (-15° to 90°)
Recommended Storage Temp., °F (°C)	+5° to 194° (-15° to 90°)
Recommended Operating Temp., °F (°C)	+5° to 194° (-15° to 90°)
Standard Conditions	
For Attenuation: VSWR 1.0, Ambient Temperature 20°C (68°F)	
For Average Power: VSWR 1.0, Ambient Temperature 40°C (104°F), Inner Conductor Temperature 100°C (212°F), No Solar Loading	
Regulatory Compliance/Certifications	
RoHS 2011/65/EU Compliant	
TL 9000 H-V - All Cables designed and manufactured under this quality management system	

Electrical Perfomance			
Frequency, MHz	Attenuation dB/100 ft	Attenuation dB/100 m	Coupling Loss 95%, dB
150	1.34	4.38	71 (74)
220	1.61	5.30	71 (74)
450	2.30	7.53	71 (74)
500	2.38	7.82	78 (80)
700	2.82	9.25	78 (81)
800	3.00	9.85	79 (80)
900	3.14	10.31	76 (79)
1000	3.36	11.01	76 (79)
1700	4.47	14.67	77 (80)
1800	4.63	15.18	78 (79)
1900	4.79	15.70	77 (79)
2000	4.95	16.23	76 (78)
2100	5.09	16.70	78 (79)
2200	5.26	17.25	78 (79)
2400	5.57	18.26	78 (79)
2600	5.93	19.45	77 (79)
2700	6.09	19.98	77 (79)

Notes:

- Coupling Loss and Attenuation Values are measured in accordance with the IEC 61196-4 Free Space Test Method
- Coupling Loss values are measured with a radial (below 750 MHz) or orthogonal (above 750 MHz) orientated dipole antenna
- The Coupling Loss values in parentheses are the mean values of all three spatial orientations (radial, parallel and orthogonal) of dipole antenna
- Coupling Loss Tolerance of ± 10 dB at 6 ft (2m), 95%
- Attenuation Tolerance of ± 10% at 68°F
- As is the case with all radiating cables, performance in RF confined areas may differ from values in a free space.

Trilogy AirCell® Cable

Proud to be 100% Made in the USA