

### Product Specification

#### 50 Ohm Plenum Radiating, 1/2"

#### Copper Outer Conductor - AQC012J50



Description	Product Number
<b>Plenum Rated Cable</b>	
1/2", Corrugated, Copper Outer Conductor, Jacketed CMP, Conforms to NFPA-262, UL-444, Canadian CSA 22.2/FT6	AQC012J50
<b>Physical Dimensions</b>	
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 Copper
Jacket Color	Off White
<b>Electrical Characteristics</b>	
Maximum Frequency, GHz	4
Peak Power Rating, KW	40
DC Resistance, Ohms/1,000 ft (1,000 m)	
Center	0.46 (1.51)
Outer	0.53 (1.74)
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%
<b>Mechanical Characteristics</b>	
Minimum Bend Radius, in (mm) - Single	2 (50.8)
Minimum Bend Radius, in (mm) - Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.18 (0.27)
Bending Moment, ft lb (N m)	3.0 (4.1)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	110 (2.0)
Number of Bends, minimum	15
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°)
<b>Standard Conditions</b>	
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	
<b>Regulatory Compliance/Certifications</b>	
RoHS 2011/65/EU Compliant	
TL 9000 H-V - All Cables designed and manufactured under this quality management system	

Electrical Performance			
Frequency, MHz	Attenuation		Coupling Loss
	dB/100 ft	dB/100 m	95%, dB
150	0.75	2.46	54 (56)
220	0.97	3.18	60 (61)
450	1.47	4.82	67 (68)
500	1.54	5.05	71 (72)
700	1.90	6.23	69 (72)
800	2.07	6.79	69 (71)
900	2.23	7.32	71 (73)
960	2.31	7.58	72 (74)
1700	3.21	10.53	70 (71)
1800	3.32	10.89	70 (71)
1900	3.39	11.12	70 (71)
2000	3.57	11.71	69 (70)
2100	3.74	12.27	68 (69)
2200	3.96	12.99	67 (68)
2400	4.36	14.30	66 (67)
2600	4.41	14.47	67 (68)
2700	4.43	14.53	68 (69)
3500	5.14	16.86	68 (69)
3600	5.21	17.09	68 (68)
3700	5.42	17.78	68 (68)

**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.

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