



## DESIGNED TO MEET THE HIGHEST STANDARDS IN THE INDUSTRY

RCA12-50JPLR is the first RADIAFLEX® radiating cable that can be installed anywhere inside a building, including air handling spaces (plenums), to provide even coverage for all types of wireless communications systems including Wi-Fi, 5G and public safety. By machining precision openings in the outer conductor of our ICA12-50 plenum cable we achieve a good balance between longitudinal transmission and radiation.

With our patent-pending flame barrier and jacket, the RCA12-50JPLR cable passes the plenum test and has a CMP listing, per the National Electrical Code (Conforms to NFPA-262, UL-444, Canadian CSA 22.2/FT6). RCA12-50JPLR uses the same connectors as ICA12-50 and LCF12-50.

## FEATURES / BENEFITS

- CMP Certified and Listed by ETL to UL444, test to NFPA262 Plenum Rating
- **Can be installed anywhere inside a building including plenum air spaces**
- **Provides more consistent RF coverage than discrete antennas**
- Provides support for Wi-Fi, Cellular, Public Safety, and other applications up to 6 GHz
- **Uses same connectors and accessories as ICA12-50, RCF12-50 and LCF12-50**
- Small bend radius allows easy installation

<b>ELECTRICAL SPECIFICATIONS</b>		
Operating Frequency	MHz	DC-6000
Cable type		Plenum rated radiating
Impedance	Ohm	50 +/- 2
Velocity, percent	%	88
Capacitance	pF/ft (pF/m)	23.2 (76)
Inductance	μH/ft (μH/m)	0.058 (0.19)
DC-resistance inner conductor	ohm/1000ft (ohm/km)	0.45 (1.48)
DC-resistance outer conductor	ohm/1000ft (ohm/km)	0.68 (2.23)
<b>MECHANICAL SPECIFICATIONS</b>		
Jacket Color		Red
Jacket Description		PLENUM Rated PVC with Flame barrier tape
Slot Design		Milled (Two-Row)
Inner Conductor Material		Copper Plated Aluminum Wire
Outer Conductor Material		Corrugated Copper Tube
Diameter Inner Conductor	in (mm)	0.19 (4.8)
Diameter Outer Conductor	in (mm)	0.54 (13.8)
Diameter over Jacket	in (mm)	0.64 (16.2)
Minimum Bending Radius, Single Bend	in (mm)	5 (127)
Cable Weight	lb/ft (kg/m)	0.165 (0.246)
Tensile Strength	lb (N)	221 (1000)
Recommended / Maximum Clamp Spacing	ft (m)	2 (0.6)
Minimum Distance to Wall	in (mm)	2 (50)
<b>TESTING AND ENVIRONMENTAL</b>		
Testing Methods		ETL Listed to UL444, NEC 820-53 (a) CMP, NFPA-262 Canadian CSA C.22.2/FT6 IEC flame/fire retardant
<b>TEMPERATURE SPECIFICATIONS</b>		
Storage Temperature	°F (°C)	-40 to 185 (-40 to 85)
Installation Temperature	°F (°C)	-4 to 140 (-20 to 60)
Operation Temperature	°F (°C)	-40 to 185 (-40 to 85)



### LONGITUDINAL LOSS AND COUPLING LOSS

Frequency, MHz	Longitudinal Loss, dB/100 ft (dB/100 m)	Coupling Loss 50%, dB	Coupling Loss 95%, dB
75	0.67 (2.2)	50	62
150	0.96 (3.1)	59	71
450	1.74 (5.7)	64	75
800	2.39 (7.8)	65	77
870	2.51 (8.2)		
900	2.56 (8.4)		
960	2.64 (8.6)		
1700	3.78 (12.3)		
1800	3.92 (12.8)		
1900	4.05 (13.2)		
2000	4.23 (13.8)		
2200	4.49 (14.7)		
2400	4.78 (15.6)		
2600	5.04 (16.5)		
3500	5.95 (19.5)		
3700	6.18 (20.2)		
3980	6.47 (21.2)		
4200	6.77 (22.2)		
5000	7.82 (25.6)		
5200	8.15 (26.7)		
5800	9.05 (29.6)		
6000	9.32 (30.5)		

#### NOTES:

- Coupling loss and longitudinal loss are measured by the free space method according to IEC 61196-4.
- Coupling loss values are average of three spatial orientations (radial, parallel and orthogonal) of a dipole antenna.
- Coupling loss values are given with a tolerance of +10 dB and longitudinal loss values with a tolerance of +5%. Note: Measured values below nominal are better. They are not limited by any tolerance-range.
- Installed performance may differ from the free space figures shown due to effects of the environment

