



- RADIAFLEX® functions as a distributed antenna to provide communications in tunnels, mines and large building complexes and is the solution for any application in confined areas.
- Slots in the copper outer conductor allow a controlled portion of the internal RF energy to be radiated into the surrounding environment. Conversely, a signal transmitted near the cable will couple into the slots and be carried along the cable length.
- RADIAFLEX® is used for both one-way and two-way communication systems and because of its broadband capability, a single radiating cable can handle multiple communication systems simultaneously.
- This RADIAFLEX® radiating cable utilize a low-loss cellular polyethylene foam dielectric and a smooth copper outer conductor which offers a superior electrical performance together with good bending properties.

**FEATURES / BENEFITS**

- Wideband from 30 MHz to 980 MHz
- For applications in tunnels and buildings
- Low coupling loss variations



RLK12-50JFNA

**Technical features**

**GENERAL SPECIFICATIONS**

Size		1/2
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**ELECTRICAL SPECIFICATIONS**

Max. Operating Frequency	MHz	980
Cable Type		RLK
Impedance	Ohm	50 +/- 2
Velocity, percent	%	87
Capacitance	pF/m (pF/ft)	75 (22.9)
Inductance, uH/m (uH/ft)	uH/m (uH/ft)	0.188 (0.057)
DC-resistance inner conductor, ohm/km (ohm/1000ft)	Ω/km (Ω/1000ft)	1.97 (0.6)
DC-resistance outer conductor, ohm/km (ohm/1000ft)	Ω/km (Ω/1000ft)	4.84 (1.48)
Stop bands	MHz	300-375, 675-685
Frequency Selection	MHz	600, 900



**MECHANICAL SPECIFICATIONS**

Jacket		JFN
Jacket Description		Halogen free, non corrosive, flame and fire retardant, low smoke, polyolefin
Slot Design		Groups of vertical slots at short intervals
Inner Conductor Material		Copper Clad Aluminum Wire
Outer Conductor Material		Overlapping Copper Strip
Diameter Inner Conductor	mm (in)	4.4 (0.17)
Diameter Outer Conductor	mm (in)	11.4 (0.45)
Diameter over Jacket Nominal	mm (in)	14.7 (0.58)
Minimum Bending Radius, Single Bend	mm (in)	200 (7.9)
Cable Weight	kg/m (lb/ft)	0.23 (0.16)
Tensile Force	N (lb)	1300 (292)
Indication of Slot Alignment		Bulge atop slots
Recommended / Maximum Clamp Spacing	m (ft)	0.5 (1.6)
Minimum Distance to Wall	mm (in)	80 (3.15)

**TESTING AND ENVIRONMENTAL**

Jacket Testing Methods		<p>Test methods for fire behaviour of cable :</p> <p>IEC 60754-1/-2 smoke emission: halogen free, non corrosive</p> <p>IEC 61034 low smoke</p> <p>IEC 60332-1 flame retardant</p> <p>IEC 60332-3-24 fire retardant</p> <p>UL1666, ASTM E 662, NES711 and NES713</p>
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**TEMPERATURE SPECIFICATIONS**

Storage Temperature	°C(°F)	-70 to 85 (-94 to 185 )
Installation Temperature	°C(°F)	-25 to 60 (-13 to 140 )
Operation Temperature	°C(°F)	-40 to 85 (-40 to 185 )

**ATTENUATION AND POWER RATING**

Frequency, MHz	Longitudinal Loss, dB/100 m (dB/100 ft)	Coupling Loss 50%, dB	Coupling Loss 95%, dB
75	2,17 (0,66)	46(50)	58(60)
150	3,11 (0,95)	54(58)	66(69)
400	5,59 (1,70)	53(55)	57(59)
450	5,88 (1,79)	52(55)	56(59)
470	6,01 (1,83)	52(55)	56(59)
500	6,20 (1,89)	52(55)	56(59)
800	8,50 (2,59)	55(58)	59(62)
870	9,07 (2,76)	56(59)	61(64)
900	9,41 (2,87)	57(60)	62(65)
960	10,51(3,20)	57(60)	62(65)