1-5/8" RADIAFLEX® RLKU Cable, A-series

## Product Description

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.

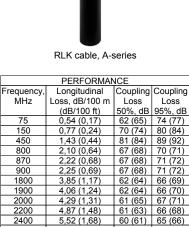
RADIAFLEX® is used for both one-way and two-way communication systems and because of its broadband capability, a single radiating cable can handle multiple communication systems simultaneously.

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

Ultra wideband from 30 MHz to 2700 MHz

- · For applications in tunnels and buildings
- · Low coupling loss variations



5,52 (1,68)

 60 (61)
 65 (66)

 62 (63)
 68 (69)

1

2600 6,39 (1,95) 2700 6,85 (2,09) ndard

2400

Technical Specifications		
		4.510
Size:	[in]	1-5/8"
Max. operating frequency:	[MHz]	2700
Cable Type:		RLK
Jacket	JFN	
Jacket Description	methods for fire behaviour of free, non corrosive IEC 610	e, flame and fire retardant, low smoke, polyolefin Test of cable : IEC 60754-1/-2 smoke emission: halogen 034 low smoke IEC 60332-1 flame retardant IEC L1666, ASTM E 662, NES711 and NES713
Slot Design		Groups of vertical slots at short intervals
Impedance	[Ω]	50 +/-2
Relative propagation velocity	[%]	89
Capacitance	[pF/m (pF/ft)]	76 (23.2)
Inductance	[µH/m (µH/ft)]	0.190 (0.058)
DC-resistance inner conductor	[Ω/km (Ω/1000ft)]	1.62 (0.49)
DC-resistance outer conductor	[Ω/km (Ω/1000ft)]	1.47 (0.45)
Outer Conductor Material		Overlapping Copper Foil
Inner Conductor Material		Corrugated Copper Tube
Diameter over Jacket	[mm (in)]	48.2 (1.90)
Diameter Outer Conductor	[mm (in)]	44.2 (1.74)
Diameter Inner Conductor	[mm (in)]	17.6 (0.69)
Minimum Bending Radius, Single Bend	[mm (in)]	700 (28.0)
Cable Weight	[kg/m (lb/ft)]	1.01 (0.68)
Max. tensile force	[N (lb)]	1200 (270)
Indication of Slot Alignment		Guides opposite to slots
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)
Stop bands	[MHz]	650-750, 1000-1050, 1330-1430, 2025-2100
Recommended / maximum clamp spacing	[m (ft)]	1.5 (5)
Minimum Distance to Wall	[mm (in)]	80 (3.15)
Length	[m (ft)]	

· Coupling loss as well as longitudinal attenuation of RADIAFLEX® cables are measured by the free

• Coupling loss values are measured with a radial (below 650 MHz) or parallel (above 650 MHz)

The coupling loss values given in brackets are average values of all three spatial orientations

 Coupling loss values are given with a tolerance of +5 dB and longitudinal loss values with a tolerance of +5%. Note: Measured values below nominal are better. They are not limited by any

· In case of a conflict of operational and stop band, please contact RFS for further assistance. · As with any radiating cable, the performance in building or tunnel environments may deviate from

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Notes

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space method according to IEC 61196-4.

figures based on free space method.

(radial, parallel and orthogonal) of dipole antenna.

orientated dipole antenna.

tolerance-range.

RLKU158-50JFNA