PRODUCT DATASHEET

ICA12-50JPLR

1/2" ClearFill® Line Plenum-Rated Air-Dielectric Coaxial Cable for In-Building Applications, Red Jacket

ClearFill®Line 1/2" low loss air dielectric cable, Plenum-rated, CMP



FEATURES / BENEFITS

- **Supports Multiple RF Signals**
- **Complete Shielding**
  The solid outer conductor of the ClearFill®Line coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.
- **Outstanding Intermodulation Performance**
  RFS Technologies coaxial cable's solid inner and outer conductors virtually eliminate intermods. Intermodulation performance is also confirmed with state-of-the-art equipment at the RFS Technologies factory.
- **Wide Range of Applications**
  Typical areas of application are feedlines for plenum-space installations within occupied buildings or structures.

Technical features

APPLICATIONS

Applications		Wireless Communication	TV & Radio	HF Defense	Mobile Radio	Cable Solutions	In Building

STRUCTURE

Size		1/2
Inner Conductor Diameter	mm (in)	4.8 (0.19)
Inner Conductor Material		Copper-Clad Aluminum Wire
Dielectric Diameter	mm (in)	11.8 (0.464)
Dielectric Material		Extruded Polyethylene
Outer Conductor Diameter	mm (in)	13.8 (0.54)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	15.93 (0.627)
Jacket Material		PVC, Plenum Rated / Color Red Water-resistant
Cable Type		Air-Dielectric, Corrugated

TESTING AND ENVIRONMENTAL

Fire Performance		Flame Retardant, Plenum Rated
Flame Retardant Jacket Specifications		Meets/Exceeds Steiner Tunnel Test Method UL 910, NEC 820-53 (a) CMP, NFPA-262.
Regulatory Compliance		NEC Article 800 Communication Circuits ETL Listed to UL444 Canadian CSA C.22.2/FT6
Installation Temperature	°C(°F)	-20 to 60 (-4 to 140)
Storage Temperature	°C (°F)	-40 to 85 (-40 to 185)
Operation Temperature	°C(°F)	-40 to 85 (-40 to 185)

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ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	6
Velocity	%	88
Capacitance	pF/m (pF/ft)	76 (23.2)
Inductance	uH/m (uH/ft)	0.19 (0.058)
Peak Power Rating	kW	40
RF Peak Voltage	Volts	2000
Jacket Spark	Volt RMS	8000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.48 (0.45)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.9 (0.58)
Return Loss (VSWR) Performance		24 (1.13) @ 698-960 MHz 24 (1.13) @ 1395-1432 MHz 24 (1.13) @ 1700-2155 MHz 20 (1.22) @ 2300-2700 MHz 18 (1.29) @ 3550-4200 MHz 18 (1.29) @ 5150-6000 MHz
Temperature & Power		High Power Rating

MECHANICAL SPECIFICATIONS

Cable Weight, Nominal	kg/m (lb/ft)	0.246 (0.165)
Minimum Bending Radius, Single Bend	mm (in)	76 (3)
Minimum Bending Radius, Repeated Bends	mm (in)	127 (5)
Bending Moment	Nm (lb-ft)	4.1 (3)
Tensile Strength	N (lb)	1112 (250)
Recommended / Maximum Clamp Spacing	m (ft)	0.5 / 0.9 (1.8 / 3)
Crush Strength	kg/mm (lb/ln)	1.964 (110)

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ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.15	0.05	40
1	0.21	0.06	34.30
1.5	0.26	0.08	27.90
2	0.30	0.09	24.20
10	0.67	0.20	10.70
20	0.95	0.29	7.55
30	1.17	0.36	6.15
50	1.52	0.47	4.74
88	2.04	0.62	3.53
100	2.18	0.67	3.30
108	2.27	0.69	3.17
150	2.70	0.82	2.67
174	2.92	0.89	2.47
200	3.14	0.96	2.30
300	3.89	1.19	1.85
400	4.54	1.39	1.59
450	4.84	1.48	1.49
500	5.13	1.56	1.41
512	5.19	1.58	1.39
600	5.66	1.73	1.28
700	6.16	1.88	1.17
750	6.40	1.95	1.13
800	6.64	2.02	1.09
824	6.75	2.06	1.07
894	7.06	2.15	1.02
900	7.08	2.16	1.02
925	7.19	2.19	1.01
960	7.34	2.24	0.99
1000	7.51	2.29	0.96
1250	8.52	2.60	0.85
1400	9.08	2.77	0.80
1500	9.45	2.88	0.77
1700	10.20	3.09	0.71
1800	10.50	3.20	0.69
2000	11.20	3.40	0.65
2100	11.50	3.50	0.63

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2200	11.80	3.59	0.62
2300	12.10	3.69	0.60
2400	12.40	3.78	0.59
2500	12.70	3.87	0.58
2600	13	3.96	0.56
2700	13.30	4.05	0.55
3000	14.10	4.31	0.52
3500	15.50	4.73	0.47
3600	15.80	4.81	0.47
4000	16.80	5.13	0.44
4500	18.10	5.51	0.41
5000	19.30	5.88	0.38
5500	20.40	6.23	0.36
6000	21.60	6.58	0.34

External Document Links
Link to VEX File
Link to VEX Zip file
LINK TO VEX FILE, 6GHz

Notes

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