



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 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 factory.

- **Wide Range of Applications**

Typical areas of application are feedlines for plenum-space installations within occupied buildings or structures.



**Technical features**

**APPLICATIONS**

<b>Applications</b>		Wireless Communication	TV & Radio	HF Defense	Mobile Radio	Cable Solutions	In Building
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**STRUCTURE**

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

**TESTING AND ENVIRONMENTAL**

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



**ELECTRICAL SPECIFICATIONS**

<b>Impedance</b>	Ω	50 +/- 1
<b>Maximum Frequency</b>	GHz	6
<b>Velocity</b>	%	88
<b>Capacitance</b>	pF/m (pF/ft)	76 (23.2)
<b>Inductance</b>	uH/m (uH/ft)	0.19 (0.058)
<b>Peak Power Rating</b>	kW	40
<b>RF Peak Voltage</b>	Volts	2000
<b>Jacket Spark</b>	Volt RMS	8000
<b>Inner Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	1.48 (0.45)
<b>Outer Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	1.9 (0.58)
<b>Return Loss (VSWR) Performance</b>		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
<b>Temperature &amp; Power</b>		High Power Rating

**MECHANICAL SPECIFICATIONS**

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



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



**ICA12-50JPLR**

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

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

Connector Interface	Standard Connector Series C03	Premium Connector Series D01 *only on request
N Male	NM-LCF12-C03	NM-LCF12-D01
N Female	NF-LCF12-C03	NF-LCF12-D01
4.3-10 Male	43M-LCF12-C03	43M-LCF12-D01
4.3-10 Female	43F-LCF12-C03	43F-LCF12-D01
7/16 Male	716M-LCF12-C03	716M-LCF12-D01
7/16 Female	716F-LCF12-C03	716F-LCF12-D01
Mandatory Tool	TRIM-SET-L12-C02	TRIM-SET-L12-D01
Tool Information	Universal Trimming Tool For *-C02 And *-C03 Connector Series	Universal Trimming Tool For *-D01
Automated Tool	TRIM-ICA12-C02	TRIM-LCF12-D01-A
Tool Information	Automated Trimming Tool For *-C02 And *-C03 Connector Series	Automated Trimming Tool For *-D01
Installation Video	** -LCF12-C03	** -LCF12-D01
General Accessories		
Hand Tool Kit		TRIM-T01
Stripping Tool For Grounding Kits		JSTRIP-12-2
Grounding Kit		GKSPEED20-12P

External Document Links

- [Link to VEX File](#)
- [Link to VEX Zip file](#)
- [LINK TO VEX FILE, 6GHz](#)

Notes