



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

Applications		Wireless Communication	TV & Radio	HF Defense	Mobile Radio	Cable Solutions	In Building
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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 Aluminum
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, CMP
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)



ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	6
Velocity	%	88
Capacitance	pF/m (pF/ft)	75 (22.86)
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)	2.29 (0.7)
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)	0.238 (0.16)
Minimum Bending Radius, Single Bend	mm (in)	76 (3)
Minimum Bending Radius, Repeated Bends	mm (in)	127 (5)
Bending Moment	Nm (lb-ft)	5.4 (4)
Tensile Strength	N (lb)	549 (150)
Recommended / Maximum Clamp Spacing	m (ft)	0.5 / 0.9 (1.8 / 3)
Crush Strength	kg/mm (lb/in)	1.25 (70)



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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.16	0.05	40
1	0.23	0.07	32.80
1.5	0.29	0.09	26.80
2	0.33	0.10	23.20
10	0.74	0.23	10.30
20	1.06	0.32	7.22
30	1.30	0.40	5.89
50	1.68	0.51	4.55
88	2.25	0.69	3.40
100	2.41	0.73	3.18
108	2.51	0.76	3.05
150	2.98	0.91	2.57
174	3.22	0.98	2.38
200	3.46	1.05	2.21
300	4.29	1.31	1.79
400	5	1.52	1.53
450	5.32	1.62	1.44
500	5.63	1.72	1.36
512	5.71	1.74	1.34
600	6.22	1.90	1.23
700	6.76	2.06	1.14
750	7.02	2.14	1.09
800	7.28	2.22	1.06
824	7.40	2.25	1.04
894	7.74	2.36	0.99
900	7.76	2.37	0.99
925	7.88	2.40	0.98
960	8.05	2.45	0.96
1000	8.23	2.51	0.93
1250	9.32	2.84	0.83
1400	9.93	3.03	0.78
1500	10.30	3.15	0.75
1700	11.10	3.38	0.70
1800	11.50	3.49	0.67
2000	12.20	3.71	0.63
2100	12.50	3.81	0.62
2200	12.80	3.92	0.61
2300	13.20	4.02	0.59
2400	13.50	4.12	0.57
2500	13.80	4.22	0.56



2600	14.20	4.31	0.55
2700	14.50	4.41	0.54
3000	15.40	4.69	0.51
3500	16.90	5.14	0.46
3600	17.10	5.22	0.46
4000	18.30	5.56	0.43
4500	19.60	5.97	0.40
5000	20.90	6.36	0.38
5500	22.10	6.74	0.36
6000	23.30	7.11	0.34

RELATED PRODUCTS

Related Product(s) 1	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

Notes