



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**

<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 Aluminum
<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, CMP
<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)	75 (22.86)
<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)	2.29 (0.7)
<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)	0.238 (0.16)
<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)	5.4 (4)
<b>Tensile Strength</b>	N (lb)	549 (150)
<b>Recommended / Maximum Clamp Spacing</b>	m (ft)	0.5 / 0.9 (1.8 / 3)
<b>Crush Strength</b>	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



<b>2200</b>	12.80	3.92	0.61
<b>2300</b>	13.20	4.02	0.59
<b>2400</b>	13.50	4.12	0.57
<b>2500</b>	13.80	4.22	0.56
<b>2600</b>	14.20	4.31	0.55
<b>2700</b>	14.50	4.41	0.54
<b>3000</b>	15.40	4.69	0.51
<b>3500</b>	16.90	5.14	0.46
<b>3600</b>	17.10	5.22	0.46
<b>4000</b>	18.30	5.56	0.43
<b>4500</b>	19.60	5.97	0.40
<b>5000</b>	20.90	6.36	0.38
<b>5500</b>	22.10	6.74	0.36
<b>6000</b>	23.30	7.11	0.34

External Document Links

[LINK TO VEX FILE](#)

Notes