



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 but also suitable for outdoor use due to jacket UV rating.



1/2" Aluminum Plenum-Rated In-Building Cable

**Technical features**

**APPLICATIONS**

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

**STRUCTURE**

Size		1/2
Inner Conductor	mm (in)	4.8 (0.19)
Inner Conductor Material		Copper-Clad Aluminum Wire
Dielectric	mm (in)	11.8 (0.464)
Dielectric Material		Extruded Polyethylene
Outer Conductor	mm (in)	13.8 (0.54)
Outer Conductor Material		Corrugated Aluminum
Jacket	mm (in)	15.93 (0.627)
Jacket Material		PVC, Plenum Rated / Color White UV rated to ASTM G155, 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**

<b>Impedance</b>	Ω	50 +/- 1
<b>Maximum Frequency</b>	GHz	6
<b>Velocity</b>	%	91
<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)	0.19 (0.13)
<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)	0.893 (50)



**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

External Document Links

[LINK TO VEX FILE](#)

Notes