



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

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 RF/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" Plenum-Rated In-Building Cable

## Technical Features

### APPLICATIONS

Applications	Suitable for plenum in-building/public safety or outdoor usage
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### STRUCTURE

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

### ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	6.0
Velocity	%	91.0
Capacitance	pF/m (pF/ft)	76 (23.2)
Inductance	μH/m (μH/ft)	0.19 (0.058)
Peak Power Rating	kW	40.0
RF Peak Voltage	Volts	2000.0
Jacket Spark	Volt RMS	8000.0
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		24.3 (1.13) @ 698-960 MHz 24.3 (1.13) @ 1700-2155 MHz 18 (1.29) @ 4400-5900 MHz
Maximum Return Loss	dB (VSWR)	19 (1.25) in other specified bands
Temperature & Power		High Power Rating

### MECHANICAL SPECIFICATIONS

Cable Weight	kg/m (lb/ft)	0.37 (0.25)
Minimum Bending Radius, Single Bend	mm (in)	125 (5)
Minimum Bending Radius, Repeated Bends	mm (in)	254 (10)
Bending Moment	Nm (lb*ft)	4.1
Tensile Strength	N (lb)	1112 (250)
Recommended / Maximum Clamp Spacing	m (ft)	0.5 / 0.9 (1.8 / 3)



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**ATTENUATION AND POWER RATING**

Frequency MHz	Attenuation		Power kW
	dB/100m	dB/100ft	
0.5	0.15	0.045	40.00
1	0.21	0.064	34.30
1.5	0.26	0.079	27.90
2	0.30	0.091	24.20
10	0.67	0.204	10.70
20	0.95	0.291	7.55
30	1.17	0.358	6.15
50	1.52	0.465	4.74
88	2.04	0.622	3.53
100	2.18	0.665	3.30
108	2.27	0.692	3.17
150	2.70	0.822	2.67
174	2.92	0.889	2.47
200	3.14	0.957	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	0.986
1000	7.51	2.29	0.964
1250	8.52	2.60	0.851
1400	9.08	2.77	0.799
1500	9.45	2.88	0.768
1700	10.20	3.09	0.713
1800	10.50	3.20	0.693
2000	11.20	3.40	0.65
2100	11.50	3.50	0.633
2200	11.80	3.59	0.618
2300	12.10	3.69	0.603
2400	12.40	3.78	0.588
2500	12.70	3.87	0.575
2600	13.00	3.96	0.562
2700	13.30	4.05	0.549
3000	14.10	4.31	0.519
3500	15.50	4.73	0.474
3600	15.80	4.81	0.465
4000	16.80	5.13	0.438
4500	18.10	5.51	0.408
5000	19.30	5.88	0.383
5500	20.40	6.23	0.364
6000	21.60	6.58	0.344

Attenuation at 20°C (68°F) cable temperature;  
tolerance +/- 5% max.; Mean power rating at  
40°C (104°F) ambient temperature

**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>	-20 to 60 (-4 to 140) °C(°F)
<b>Storage Temperature</b>	-40 to 85 (-40 to 185) °C(°F)
<b>Operation Temperature</b>	-40 to 85 (-40 to 185) °C(°F)

**External Document Links**

**Notes**