



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

Product Description

ClearFill®Line 1/2" low loss air dielectric cable, Plenum-rated, CMP

Application: Plenum In-Building



1/2" Plenum-Rated In-Building Cable

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.

Technical Features

Structure

Inner conductor:	Copper-Clad Aluminum Wire	[mm (in)]	4.8 (0.19)
Dielectric:	Extruded Polyethylene	[mm (in)]	11.8 (0.464)
Outer conductor:	Corrugated Copper	[mm (in)]	13.8 (0.54)
Jacket:	Plenum Rated / color blue	[mm (in)]	15.93 (0.627)

Mechanical Properties

Weight, approximately	[kg/m (lb/ft)]	0.37 (0.25)
Minimum bending radius, single bending	[mm (in)]	125 (5)
Minimum bending radius, repeated bending	[mm (in)]	254 (10)
Bending moment	[Nm (lb-ft)]	4.1 (3)
Max. tensile force	[N (lb)]	1112 (250)
Recommended / maximum clamp spacing	[m (ft)]	0.5 / 0.9 (1.8 / 3)

Electrical Properties

Characteristic impedance	[Ω]	50 +/- 1
Relative propagation velocity	[%]	91
Capacitance	[pF/m (pF/ft)]	76 (23.2)
Inductance	[μH/m (μH/ft)]	0.19 (0.058)
Max. operating frequency	[GHz]	6
Jacket spark test RMS	[V]	8000
Peak power rating	[kW]	21.4
RF Peak voltage rating	[V]	1.5
DC-resistance inner conductor	[Ω/km (Ω/1000ft)]	1.48 (0.45)
DC-resistance outer conductor	[Ω/km (Ω/1000ft)]	1.9 (0.58)

Recommended Temperature Range

Storage temperature	[°C (°F)]	-40 to 85 (-40 to 185)
Installation temperature	[°C (°F)]	-20 to 60 (-4 to 140)
Operation temperature	[°C (°F)]	-40 to 85 (-40 to 185)

Other Characteristics

Fire Performance:	Flame Retardant, Plenum Rated		
Regulatory Compliance:	NEC Article 800 Communication Circuits ETL Listed to UL444 Canadian CSA C.22.2/FT6		
VSWR Performance:	24.3 (1.13) @ 806-960 MHz 24.3 (1.13) @ 1700-2155 MHz	[dB (VSWR)]	18 (1.228) in other specified bands
Other Options:			

Frequency [MHz]	Attenuation		Power [kW]
	[dB/100m]	[dB/100ft]	
0.5	0.148	0.0452	40.0
1.0	0.210	0.0641	40.0
1.5	0.258	0.0785	32.9
2.0	0.298	0.0908	28.5
10	0.671	0.204	12.7
20	0.954	0.291	8.91
30	1.17	0.358	7.26
50	1.52	0.465	5.59
88	2.04	0.622	4.16
100	2.18	0.665	3.90
108	2.27	0.692	3.74
150	2.70	0.822	3.15
174	2.92	0.889	2.91
200	3.14	0.957	2.71
300	3.89	1.19	2.18
400	4.54	1.39	1.87
450	4.84	1.48	1.76
500	5.13	1.56	1.66
512	5.19	1.58	1.64
600	5.66	1.73	1.50
700	6.16	1.88	1.38
750	6.40	1.95	1.33
800	6.64	2.02	1.28
824	6.75	2.06	1.26
894	7.06	2.15	1.20
900	7.08	2.16	1.20
925	7.19	2.19	1.18
960	7.34	2.24	1.16
1000	7.51	2.29	1.13
1250	8.52	2.60	0.997
1400	9.08	2.77	0.936
1500	9.45	2.88	0.899
1700	10.2	3.09	0.833
1800	10.5	3.20	0.809
2000	11.2	3.40	0.759
2100	11.5	3.50	0.739
2200	11.8	3.59	0.720
2300	12.1	3.69	0.702
2400	12.4	3.78	0.685
2500	12.7	3.87	0.669
2600	13.0	3.96	0.654
2700	13.3	4.05	0.639
3000	14.1	4.31	0.603
3500	15.5	4.73	0.548
3600	15.8	4.81	0.538
4000	16.8	5.13	0.506
4500	18.1	5.51	0.469
5000	19.3	5.88	0.440
5500	20.4	6.23	0.416
6000	21.6	6.58	0.393

Attenuation at 20°C (68°F) cable temperature
Mean power rating at 40°C (104°F) ambient temperature

All information contained in the present datasheet is subject to confirmation at time of ordering