



1-5/8" CELLFLEX® Premium Attenuation Low-Loss Foam-Dielectric Coaxial Cable

Product Description

CELLFLEX®1-5/8" premium attenuation low loss flexible cable

Application: Main feed line



1-5/8" CELLFLEX® Low-Loss Foam Dielectric Coaxial Cable

Features/Benefits

- Ultra Low Attenuation**
The further reduced attenuation of CELLFLEX® premium attenuation coaxial cable results in extremely efficient signal transfer in your RF system, especially at high frequencies.
- Complete Shielding**
The solid outer conductor of CELLFLEX® coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.
- Low VSWR**
Special low VSWR versions of CELLFLEX® coaxial cables contribute to low system noise.
- Outstanding Intermodulation Performance**
CELLFLEX® 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.
- High Power Rating**
Due to their low attenuation, outstanding heat transfer properties and temperature stabilized dielectric materials, CELLFLEX® cable provides safe long term operating life at high transmit power levels.
- Wide Range of Application**
Typical areas of application are: feedlines for broadcast and terrestrial microwave antennas, wireless cellular, PCS and ESMR base stations, cabling of antenna arrays, and radio equipment interconnects.

Technical Features

Structure

Inner conductor:	Corrugated Copper Tube	[mm (in)]	17.6 (0.69)
Dielectric:	Foam Polyethylene	[mm (in)]	40.9 (1.61)
Outer conductor:	Corrugated Copper	[mm (in)]	46.5 (1.83)
Jacket:	Polyethylene, PE	[mm (in)]	50.3 (1.98)

Mechanical Properties

Weight, approximately	[kg/m (lb/ft)]	1.19 (0.80)
Minimum bending radius, single bending	[mm (in)]	200 (8)
Minimum bending radius, repeated bending	[mm (in)]	500 (20)
Bending moment	[Nm (lb-ft)]	46.0 (34.0)
Max. tensile force	[N (lb)]	2500 (562)
Recommended / maximum clamp spacing	[m (ft)]	1.2 / 1.5 (4.0 / 5.0)

Electrical Properties

Characteristic impedance	[Ω]	50 +/- 1
Relative propagation velocity	[%]	90
Capacitance	[pF/m (pF/ft)]	74.0 (22.5)
Inductance	[μH/m (μH/ft)]	0.185 (0.056)
Max. operating frequency	[GHz]	2.75
Jacket spark test RMS	[V]	10000
Peak power rating	[kW]	310
RF Peak voltage rating	[V]	5600
DC-resistance inner conductor	[Ω/km (Ω/1000ft)]	1.26 (0.38)
DC-resistance outer conductor	[Ω/km (Ω/1000ft)]	0.47 (0.14)

Recommended Temperature Range

Storage temperature	[°C (°F)]	-70 to +85 (-94 to +185)
Installation temperature	[°C (°F)]	-40 to +60 (-40 to +140)
Operation temperature	[°C (°F)]	-50 to +85 (-58 to +185)

Other Characteristics

Fire Performance: Halogene Free
 VSWR Performance: Standard [dB (VSWR)] 18 (1.288:1)
 Other Options: Phase stabilized and phase matched cables and assemblies are available upon request.

Frequency	Attenuation		Power
Frequency	Attenuation	Attenuation	Mean Power
[MHz]	[dB/100m]	[dB/100ft]	[kW]
0.5	0.0435	0.0133	258
1.0	0.0617	0.0188	182
1.5	0.0756	0.0230	148
2.0	0.0874	0.0266	128
10	0.197	0.0601	56.9
20	0.281	0.0855	39.9
30	0.345	0.105	32.5
50	0.449	0.137	25.0
88	0.603	0.184	18.6
100	0.644	0.196	17.4
108	0.671	0.205	16.7
150	0.798	0.243	14.0
174	0.863	0.263	13.0
200	0.930	0.283	12.1
300	1.16	0.352	9.66
400	1.35	0.412	8.30
450	1.44	0.439	7.78
500	1.53	0.465	7.33
512	1.55	0.471	7.23
600	1.69	0.515	6.63
700	1.84	0.561	6.09
750	1.91	0.583	5.87
800	1.98	0.604	5.66
824	2.02	0.615	5.55
894	2.11	0.644	5.31
900	2.12	0.646	5.29
925	2.15	0.656	5.21
960	2.20	0.670	5.10
1000	2.25	0.686	4.98
1250	2.56	0.779	4.38
1400	2.73	0.832	4.11
1500	2.84	0.866	3.95
1700	3.06	0.932	3.66
1800	3.16	0.963	3.55
2000	3.36	1.03	3.34
2100	3.46	1.06	3.24
2200	3.56	1.08	3.15
2400	3.75	1.14	2.99
2500	3.84	1.17	2.92
2600	3.93	1.20	2.85
2700	4.02	1.23	2.79
2750	4.07	1.24	2.75

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