

7/8" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

Product Description

CELLFLEX® 7/8" SERIES "A" low loss flexible cable

Application: Main feed line



7/8" CELLFLEX® Low-Loss Foam Dielectric Coaxial Cable

Features/Benefits

• Low Attenuation

The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transfer in your RF system.

• 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:	Copper Tube	[mm (in)]	9.3 (0.37)
Dielectric:		[mm (in)]	21.5 (0.85)
Outer conductor:	Corrugated Copper	[mm (in)]	25.2 (0.99)
Jacket:	Polyethylene, PE	[mm (in)]	27.8 (1.09)

Mechanical Properties

Weight, approximately	[kg/m (lb/ft)]	0.48 (0.32)
Minimum bending radius, single bending	[mm (in)]	120 (5)
Minimum bending radius, repeated bending	[mm (in)]	250 (10)
Bending moment	[Nm (lb-ft)]	13.0 (9.6)
Max. tensile force	[N (lb)]	1440 (324)
Recommended / maximum clamp spacing	[m (ft)]	0.8 / 1.0 (2.75 / 3.25)

Electrical Properties

Characteristic impedance	[Ω]	50 +/- 1
Relative propagation velocity	[%]	89
Capacitance	[pF/m (pF/ft)]	75.0 (22.9)
Inductance	[μH/m (μH/ft)]	0.188 (0.057)
Max. operating frequency	[GHz]	5
Jacket spark test RMS	[V]	8000
Peak power rating	[kW]	85
RF Peak voltage rating	[V]	2910
DC-resistance inner conductor	[Ω/km (Ω/1000ft)]	1.54 (0.469)
DC-resistance outer conductor	[Ω/km (Ω/1000ft)]	1.09 (0.33)

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)]

Contact RFS for your VSWR performance specification for your required frequency band.

Other Options: Phase stabilized and phase matched cables and assemblies are available upon request.

Frequency [MHz]	Attenuation		Power [kW]
	[dB/100m]	[dB/100ft]	
0.5	0.0780	0.0238	85.0
1.0	0.110	0.0337	85.0
1.5	0.135	0.0413	77.1
2.0	0.157	0.0477	66.8
10	0.353	0.107	29.6
20	0.501	0.153	20.9
30	0.616	0.188	17.0
50	0.801	0.244	13.1
88	1.07	0.327	9.75
100	1.15	0.349	9.12
108	1.19	0.363	8.76
150	1.42	0.431	7.38
174	1.53	0.466	6.83
200	1.65	0.502	6.35
300	2.04	0.622	5.12
400	2.38	0.726	4.39
450	2.54	0.773	4.12
500	2.69	0.819	3.89
512	2.72	0.829	3.84
600	2.97	0.904	3.52
700	3.23	0.983	3.24
800	3.47	1.06	3.01
824	3.53	1.08	2.96
894	3.69	1.13	2.83
900	3.71	1.13	2.82
925	3.76	1.15	2.78
960	3.84	1.17	2.72
1000	3.93	1.20	2.66
1250	4.45	1.36	2.35
1500	4.94	1.50	2.12
1700	5.30	1.62	1.97
1800	5.48	1.67	1.91
2000	5.82	1.77	1.80
2100	5.99	1.83	1.75
2200	6.15	1.88	1.70
2400	6.47	1.97	1.61
3000	7.38	2.25	1.42
3500	8.09	2.46	1.29
4000	8.76	2.67	1.19
4900	9.91	3.02	1.05
5000	10.0	3.06	1.04

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