

7/8" CELLFLEX® Ultraflexible Foam-Dielectric Coaxial Cable

Product Description

CELLFLEX® 7/8" Ultraflexible cable

Application: Main feed line, Riser-rated In-Building, Jumper for attenuation sensitive application



7/8" CELLFLEX® Ultra-Flexible 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:	Corrugated Copper Tube	[mm (in)]	9.5 (0.374)
Dielectric:	Foam Polyethylene	[mm (in)]	21.5 (0.85)
Outer conductor:	Corrugated Copper	[mm (in)]	25.2 (0.99)
Jacket:	Polyethylene, PE, Metalhydroxite Filling	[mm (in)]	27.8 (1.09)

Mechanical Properties

Weight, approximately	[kg/m (lb/ft)]	0.45 (0.302)
Minimum bending radius, single bending	[mm (in)]	90 (3.5)
Minimum bending radius, repeated bending	[mm (in)]	125 (5)
Bending moment	[Nm (lb-ft)]	13 (9.6)
Max. tensile force	[N (lb)]	1440 (324)
Recommended / maximum clamp spacing	[m (ft)]	0.8 / 1 (2.75 / 3.25)

Electrical Properties

Characteristic impedance	[Ω]	50 +/- 1
Relative propagation velocity	[%]	88
Capacitance	[pF/m (pF/ft)]	76 (23.2)
Inductance	[μH/m (μH/ft)]	0.19 (0.058)
Max. operating frequency	[GHz]	4.9
Jacket spark test RMS	[V]	8000
Peak power rating	[kW]	83
RF Peak voltage rating	[V]	2880
DC-resistance inner conductor	[Ω/km (Ω/1000ft)]	3 (0.914)
DC-resistance outer conductor	[Ω/km (Ω/1000ft)]	1.15 (0.35)

Recommended Temperature Range

Storage temperature	[°C (°F)]	-70 to 85 (-94 to 185)
Installation temperature	[°C (°F)]	-25 to 60 (-13 to 140)
Operation temperature	[°C (°F)]	-50 to 85 (-58 to 185)

Other Characteristics

Fire Performance: Flame Retardant, LS0H

VSWR Performance: Standard [dB (VSWR)]

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

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

Frequency [MHz]	Attenuation		Power [kW]
	[dB/100m]	[dB/100ft]	
0.5	0.0841	0.0256	83.0
1.0	0.119	0.0363	83.0
1.5	0.146	0.0445	69.3
2.0	0.169	0.0514	59.9
10	0.379	0.116	26.7
20	0.539	0.164	18.8
30	0.662	0.202	15.3
50	0.860	0.262	11.8
88	1.15	0.351	8.80
100	1.23	0.375	8.23
108	1.28	0.390	7.91
150	1.52	0.462	6.66
174	1.64	0.500	6.17
200	1.76	0.537	5.75
300	2.18	0.665	4.64
400	2.54	0.775	3.98
450	2.71	0.826	3.73
500	2.87	0.874	3.53
512	2.90	0.885	3.49
600	3.16	0.964	3.20
700	3.44	1.05	2.94
750	3.57	1.09	2.83
800	3.70	1.13	2.74
824	3.76	1.15	2.69
894	3.93	1.20	2.58
900	3.94	1.20	2.57
925	4.0	1.22	2.53
960	4.09	1.25	2.47
1000	4.18	1.27	2.42
1250	4.73	1.44	2.14
1400	5.04	1.54	2.01
1500	5.24	1.60	1.93
1700	5.62	1.71	1.80
1800	5.81	1.77	1.74
2000	6.16	1.88	1.64
2100	6.34	1.93	1.60
2200	6.51	1.98	1.55
2400	6.84	2.09	1.48
2500	7.0	2.13	1.45
2600	7.16	2.18	1.41
2700	7.32	2.23	1.38
3000	7.79	2.37	1.30
3500	8.52	2.60	1.19
4000	9.22	2.81	1.10
4900	10.4	3.17	0.973

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