



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

Product Description

CELLFLEX® 1-5/8" SERIES "A" low loss flexible cable

Application: Wireless Communication, In Tunnel, TV & Radio, HF Defense, Mobile Radio

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 RF/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:		[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)
Flat plate crush strength	[N/mm (lb/in)]	25 (143)
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)]	0.190 (0.058)
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)]

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	0.0436	0.0133	266
1.0	0.0618	0.0188	188
1.5	0.0758	0.0231	153
2.0	0.0877	0.0267	132
10	0.199	0.0605	58.5
20	0.283	0.0864	41.0
30	0.350	0.107	33.2
50	0.456	0.139	25.5
88	0.615	0.187	18.9
100	0.658	0.201	17.6
108	0.686	0.209	16.9
150	0.819	0.250	14.2
174	0.888	0.271	13.1
200	0.958	0.292	12.1
300	1.20	0.365	9.70
400	1.41	0.429	8.25
450	1.50	0.458	7.72
500	1.60	0.487	7.27
512	1.62	0.493	7.18
600	1.77	0.540	6.55
700	1.94	0.591	5.99
800	2.10	0.639	5.54
824	2.13	0.650	5.45
894	2.24	0.682	5.19
900	2.25	0.684	5.17
925	2.28	0.696	5.09
960	2.33	0.711	4.98
1000	2.39	0.728	4.86
1250	2.73	0.833	4.25
1500	3.05	0.93	3.81
1700	3.29	1.00	3.53
1800	3.41	1.04	3.40
2000	3.64	1.11	3.19
2100	3.76	1.14	3.09
2200	3.87	1.18	3.00
2400	4.09	1.25	2.84
2750	4.45	1.36	2.61

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