



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



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

Technical features

APPLICATIONS

Applications		Main feed line, intended for outdoor usage
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STRUCTURE

Size		1-5/8
Jacket Option		Black
Inner Conductor	mm (in)	17.6 (0.69)
Inner Conductor Material		Corrugated Copper Tube
Dielectric	mm (in)	42.4 (1.67)
Dielectric Material		Foam Polyethylene
Outer Conductor	mm (in)	46.4 (1.83)
Outer Conductor Material		Corrugated Copper
Jacket	mm (in)	50.2 (1.98)
Jacket Material		Polyethylene, PE
Cable Type		Foam-Dielectric, Corrugated

TESTING AND ENVIRONMENTAL

Fire Performance		Halogene Free
Installation Temperature	°C(°F)	-40 to 60 (-40 to 140)
Storage Temperature	°C(°F)	-70 to 85 (-94 to 185)
Operation Temperature	°C(°F)	-50 to 85 (-58 to 185)



ELECTRICAL SPECIFICATIONS

Impedance, Ohm	Ω	50 +/- 1
Maximum Frequency	GHz	2.75
Velocity, percent	%	90
Capacitance	pF/m (pF/ft)	74 (22.5)
Inductance, uH/m (uH/ft)	μH/m (μH/ft)	0.185 (0.056)
Peak Power Rating	kW	310
RF Peak Voltage	Volts	5600
Jacket Spark	Volt RMS	10000
Inner Conductor dc Resistance, Ω/km (Ω/kft)	Ω/1000 m (Ω/1000 ft)	1.3 (0.4)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	Ω/1000 m (Ω/1000 ft)	0.47 (0.14)
Return Loss (VSWR) Performance		Standard for 40-2700 MHz, Premium according to B-Class
Min. Return Loss (Max. VSWR)	dB (VSWR)	Standard 20 (1.222), Premium 24 (1.135)
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.
Temperature & Power		Standard

MECHANICAL SPECIFICATIONS

Cable Weight, Nominal	kg/m (lb/ft)	1.07 (0.72)
Minimum Bending Radius, Single Bend	mm (in)	200 (8)
Minimum Bending Radius, Repeated Bends	mm (in)	500 (20)
Bending Moment, Nm (lb-ft)	Nm (lb*ft)	42 (31)
Tensile Strength	N (lb)	2500 (562)
Recommended / Maximum Clamp Spacing	m (ft)	1.2 / 1.5 (4 / 5)



ATTENUATION AND POWER RATING

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.04	0.01	258
1	0.06	0.02	182
1.5	0.08	0.02	148
2	0.09	0.03	128
10	0.20	0.06	56.90
20	0.28	0.09	39.90
30	0.35	0.11	32.50
50	0.45	0.14	25
88	0.60	0.18	18.60
100	0.64	0.20	17.40
108	0.67	0.21	16.70
150	0.80	0.24	14
174	0.86	0.26	13
200	0.93	0.28	12.10
300	1.16	0.35	9.66
400	1.35	0.41	8.30
450	1.44	0.44	7.78
500	1.53	0.47	7.33
512	1.55	0.47	7.23
600	1.69	0.52	6.63
700	1.84	0.56	6.09
750	1.91	0.58	5.87
800	1.98	0.60	5.66
824	2.02	0.62	5.55
894	2.11	0.64	5.31
900	2.12	0.65	5.29
925	2.15	0.66	5.21
960	2.20	0.67	5.10
1000	2.25	0.69	4.98
1250	2.56	0.78	4.38
1400	2.73	0.83	4.11
1500	2.84	0.87	3.95
1700	3.06	0.93	3.66
1800	3.16	0.96	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

External Document Links

Notes