

1/2" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

Product Description

CELLFLEX® 1/2" low loss flexible 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

Cable Type	Foam-Dielectric, Corrugated
Size	1/2"
Jacket	Standard
Return Loss (VSWR) Performance	Standard
Maximum Return Loss, dB (VSWR)	
Impedance, Ohm	50 +/- 1
Maximum Frequency, GHz	8.8
Velocity, percent	88
Peak Power Rating, kW	38
Inner Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	1.57 (0.48)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	1.93 (0.59)
RF Peak Voltage, Volts	1950
Jacket Spark, Volt RMS	8000
Capacitance, pF/m (pF/ft)	76.0 (23.2)
Inductance, µH/m (µH/ft)	0.190 (0.058)
Outer Conductor Material	Annularly Corrugated Copper
Inner Conductor Material	Copper-Clad Aluminum Wire
Diameter over Jacket Nominal, mm (in)	16.2 (0.64)
Diameter Outer Conductor, mm (in)	13.8 (0.54)
Diameter Inner Conductor, mm (in)	4.8 (0.190)

1/2" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

Diameter Dielectric, mm (in)	11.3 (0.44)
Minimum Bending Radius, Single Bend, mm (in)	70 (3)
Minimum Bending Radius, Repeated Bends, mm (in)	125 (5)
Bending Moment, N•m (lb-ft)	5.0 (3.7)
Cable Weight, kg/m (lb/ft)	0.22 (0.15)
Tensile Strength, N (lb)	1100 (247)
Flat Plate Crush Strength, N/mm (lb/in)	20.4 (110)
Recommended / Maximum Clamp Spacing, m (ft)	0.6 / 1.0 (2.0 / 3.25)
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)
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.
Applications	OEM jumpers, Main feed transitions to equipment, GPS lines
<b>Notes</b>	
Phase stabilized versions available upon request.	

1/2" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

**LCF12-50J/JFN ATTENUATION AND AVERAGE POWER**

Frequency MHz	Attenuation dB/100 m	Attenuation dB/100 ft.	Average Power kW
0.5	0.149	0.045	20.5
1	0.211	0.064	20.5
1.5	0.258	0.079	20.5
2	0.298	0.091	20.5
10	0.671	0.204	12.7
20	0.951	0.290	8.93
30	1.17	0.356	7.27
50	1.51	0.462	5.61
88	2.02	0.616	4.20
100	2.16	0.658	3.94
108	2.24	0.684	3.78
150	2.66	0.810	3.20
174	2.87	0.875	2.96
200	3.08	0.940	2.75
300	3.81	1.16	2.23
400	4.43	1.35	1.92
450	4.71	1.44	1.80
500	4.98	1.52	1.71
512	5.04	1.54	1.69
600	5.48	1.67	1.55
700	5.95	1.81	1.43
800	6.39	1.95	1.33
824	6.49	1.98	1.31
894	6.78	2.07	1.25
900	6.80	2.07	1.25
925	6.90	2.10	1.23
960	7.04	2.15	1.21
1000	7.20	2.20	1.18
1250	8.12	2.48	1.05
1500	8.97	2.73	0.947
1700	9.61	2.93	0.884
1800	9.91	3.02	0.857
2000	10.5	3.20	0.809
2100	10.8	3.29	0.787
2200	11.1	3.38	0.767
2400	11.6	3.54	0.731
3000	13.2	4.01	0.645
3500	14.4	4.38	0.591
4000	15.5	4.73	0.548
4900	17.4	5.31	0.488
6000	19.6	5.97	0.434
7000	21.4	6.54	0.396
8000	23.2	7.08	0.366
8800	24.6	7.49	0.346

Standard Conditions:

For attenuation: VSWR 1.0, cable temperature 20° C (68° F).

For average power: VSWR 1.0, ambient temperature 40° C (104° F),  
inner conductor temperature 100° C (212° F). No solar loading.