



1/2" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable

Product Description

CELLFLEX® 1/2" superflexible 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, Superflexible
Size	1/2"
Jacket	Standard
Return Loss (VSWR) Performance	Standard
Maximum Return Loss, dB (VSWR)	Contact RFS for your VSWR performance specification for your required frequency band.
Impedance, ohm	50 +/- 1
Maximum Frequency, GHz	11,7

All information contained in the present datasheet is subject to confirmation at time of ordering.



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Velocity, percent	82
Peak Power Rating, kW	20.5
Inner Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	2.9 (0.88)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	3.4 (1.04)
RF Peak Voltage, Volts	1430
Jacket Spark, Volt RMS	5000
Capacitance, pF/m (pF/ft)	82.0 (25.0)
Inductance, μ H/m (μ H/ft)	0.207 (0.063)
Outer Conductor Material	Corrugated Copper
Inner Conductor Material	Copper-Clad Aluminum Wire
Diameter over Jacket Nominal, mm (in)	13.7 (0.54)
Diameter Copper Outer Conductor, mm (in)	12.3 (0.48)
Diameter Inner Conductor, mm (in)	3.6 (0.14)
Diameter Dielectric, mm (in)	8.3 (0.33)
Minimum Bending Radius, Repeated Bends, mm (in)	32 (1.25)
Bending Moment, N•m (lb-ft)	1.8 (1.3)
Cable Weight, kg/m (lb/ft)	0.21 (0.14)
Tensile Strength, N (lb)	650 (146)
Flat Plate Crush Strength, N/mm (lb/in)	20.4 (110)
Recommended / Maximum Clamp Spacing, m (ft)	0.30 / 0.30 (1.00 / 1.00)
Installation Temperature, °C(°F)	-40 to +60 (-40 to +140)
Storage Temperature, °C (°F)	-70 to +85 (-94 to +185)
Operation Temperature, °C(°F)	-40 to +85 (-40 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

Note

Phase stabilized versions available upon request.

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SCF12-50J/JFN ATTENUATION AND AVERAGE POWER

Frequency MHz	Attenuation dB/100 m	Attenuation dB/100 ft.	Average Power kW
0.5	0.229	0.070	20.5
1	0.324	0.099	20.5
1.5	0.397	0.121	20.5
2	0.458	0.140	18.8
10	1.03	0.314	8.37
20	1.46	0.446	5.90
30	1.80	0.548	4.80
50	2.33	0.710	3.70
88	3.11	0.949	2.77
100	3.33	1.01	2.59
108	3.46	1.05	2.49
150	4.10	1.25	2.10
174	4.43	1.35	1.95
200	4.76	1.45	1.81
300	5.89	1.79	1.47
400	6.85	2.09	1.26
450	7.29	2.22	1.18
500	7.71	2.35	1.12
512	7.81	2.38	1.10
600	8.50	2.59	1.01
700	9.23	2.81	0.934
800	9.92	3.02	0.869
824	10.1	3.07	0.855
894	10.5	3.21	0.818
900	10.6	3.22	0.816
925	10.7	3.27	0.803
960	11.0	3.34	0.787
1000	11.2	3.41	0.770
1250	12.7	3.86	0.682
1500	14.0	4.26	0.616
1700	15.0	4.57	0.575
1800	15.5	4.72	0.557
2000	16.4	5.01	0.525
2100	16.9	5.15	0.511
2200	17.3	5.28	0.498
2400	18.2	5.55	0.474
3000	20.7	6.30	0.417
3500	22.6	6.88	0.382
4000	24.4	7.44	0.353
5000	27.8	8.48	0.310
6000	31.0	9.44	0.278
7000	34.0	10.4	0.254
8000	36.8	11.2	0.234
9000	39.6	12.1	0.218
10000	42.3	12.9	0.204
11700	46.6	14.2	0.185

Standard Conditions:
 For attenuation: VSWR 1.0, ambient 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.

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