

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

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.



1/2" CELLFLEX® Superflexible Foam Dielectric Coaxial Cable

Technical Features

APPLICATIONS

Applications	OEM jumpers, Main feed transitions to equipment, GPS lines
--------------	--

STRUCTURE

Cable Type		Foam-Dielectric, Superflexible
Size		1/2"
Jacket Option		Black
Inner Conductor	mm (in)	3.56 (0.14) Copper-Clad Aluminum Wire
Dielectric	mm (in)	9.3 (0.366) Foam Polyethylene
Outer Conductor	mm (in)	12.3 (0.48) Corrugated Copper
Jacket	mm (in)	13.75 (0.54) Polyethylene, PE

ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	10.6
Velocity	%	77
Capacitance	pF/m (pF/ft)	86 (26)
Inductance	μH/m (μH/ft)	0.215 (0.066)
Peak Power Rating	kW	24
RF Peak Voltage	Volts	1550
Jacket Spark	Volt RMS	5000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	2.9 (0.88)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	4.5 (1.37)
Return Loss (VSWR) Performance		Premium for 698 - 794, 824 - 960, 1710 - 1755, 1850 - 1990, 2110 - 2155 MHz
Maximum Return Loss	dB (VSWR)	24 (1.135)
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.
Temperature & Power		Standard

MECHANICAL SPECIFICATIONS

Cable Weight	kg/m (lb/ft)	0.17 (0.11)
Minimum Bending Radius, Repeated Bends	mm (in)	32 (1.3)
Bending Moment	Nm (lb*ft)	1.8 (1.33)
Tensile Strength	N (lb)	650 (146)
Recommended / Maximum Clamp Spacing	m (ft)	0.3 / 0.5 (1 / 1.64)

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

ATTENUATION AND POWER RATING

Frequency MHz	Attenuation		Power kW
	dB/100m	dB/100ft	
0.5	0.22	0.067	24.00
1	0.31	0.095	22.60
1.5	0.38	0.117	18.40
2	0.44	0.135	16.00
10	1.00	0.303	7.10
20	1.41	0.43	5.01
30	1.73	0.529	4.08
50	2.25	0.686	3.14
88	3.01	0.916	2.35
100	3.21	0.978	2.20
108	3.34	1.02	2.11
150	3.96	1.21	1.78
174	4.27	1.30	1.65
200	4.60	1.40	1.53
300	5.68	1.73	1.24
400	6.61	2.01	1.07
450	7.04	2.14	1.00
500	7.44	2.27	0.949
512	7.53	2.30	0.938
600	8.20	2.50	0.861
700	8.91	2.71	0.792
750	9.24	2.82	0.764
800	9.57	2.92	0.738
824	9.72	2.96	0.726
894	10.20	3.10	0.692
900	10.20	3.11	0.692
925	10.40	3.16	0.679
960	10.60	3.22	0.666
1000	10.80	3.29	0.654
1250	12.20	3.72	0.579
1400	13.00	3.96	0.543
1500	13.50	4.11	0.523
1700	14.50	4.41	0.487
1800	14.90	4.55	0.474
2000	15.80	4.82	0.447
2100	16.30	4.96	0.433
2200	16.70	5.09	0.423
2400	17.50	5.35	0.403
2500	17.90	5.47	0.394
2600	18.40	5.59	0.384
2700	18.80	5.72	0.376
3000	19.90	6.07	0.355
3500	21.80	6.63	0.324
4000	23.50	7.16	0.30
5000	26.80	8.16	0.263
6000	29.80	9.09	0.237
7000	32.70	9.97	0.216
8000	35.50	10.80	0.199
9000	38.10	11.60	0.185
10000	40.60	12.40	0.174

Attenuation at 20°C (68°F) cable temperature;
tolerance +/- 5% max.; Mean power rating at
40°C (104°F) ambient temperature

TESTING AND ENVIRONMENTAL

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

PREMIUM PERFORMANCE CODES

Properties	Values			
no suffix	Specify when ordering	24.0 dB	1.135:1	6.30%
P1	410-470 MHz	23.0 dB	1.152:1	7.10%
P2	790-960 MHz	24.0 dB	1.135:1	6.30%
P3	2500-2700 MHz	24.0 dB	1.135:1	6.30%
P4	1700-1880 MHz	24.0 dB	1.135:1	6.30%
P5	1710-2155 MHz	28.0 dB	1.083:1	4.00%
P6	1900-2200 MHz	24.0 dB	1.135:1	6.30%
P7	698-794, 824-960, 1710-1755, 1850-1990 and 2110-2155 MHz	24.0 dB	1.135:1	6.30%
P8	790-960 MHz and 1710-2200 MHz	23.0 dB	1.152:1	7.10%

External Document Links

Notes

Phase stabilized versions available upon request.