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

Product Description

CELLFLEX® 1/2" low loss flexible cable

Application: OEM jumpers, Main feed transitions to equipment, GPS lines



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Features/Benefits

Low Attenuation

The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transferin your RF

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

	nd ESMR base stations, cabling of an		
Technical Fea	•	torma arrayo, arra radio o	14p
Structure			
Inner conductor:	Copper-Clad Aluminum Wire	[mm (in)]	4.8 (0.19)
Dielectric:	Foam Polyethylene	[mm (in)]	11.9 (0.47)
Outer conductor:	Corrugated Copper	[mm (in)]	13.8 (0.54)
Jacket:	Polyethylene, PE	[mm (in)]	15.8 (0.62)
Mechanical Prop	perties		
Weight, approximate	ely	[kg/m (lb/ft)]	0.2 (0.14)
Minimum bending radius, single bending		[mm (in)]	70 (3)
Minimum bending radius, repeated bending		[mm (in)]	125 (5)
Bending moment		[Nm (lb-ft)]	6.5 (4.79)
Max. tensile force		[N (lb)]	1100 (247)
Recommended / maximum clamp spacing		[m (ft)]	0.6 / 1 (2 / 3.25)
Electrical Proper	rties		
Characteristic impedance		[Ω]	50 +/- 1
Relative propagation velocity		[%]	88
Capacitance		[pF/m (pF/ft)]	76 (23.2)
Inductance		[µH/m (µH/ft)]	0.19 (0.058)
Max. operating frequ	uency	[GHz]	8.8
Jacket spark test RMS		[V]	8000
Peak power rating		[kW]	38
RF Peak voltage rat	ing	[V]	1950
DC-resistance inner conductor		[Ω/km (Ω/1000ft)]	1.57 (0.48)
DC-resistance outer	conductor	[Ω/km (Ω/1000ft)]	2.7 (0.82)
Recommended	Temperature Range		
Storage temperature		[°C (°F)]	-70 to 85 (-94 to 185)
Installation temperat	ture	[°C (°F)]	-40 to 60 (-40 to 140)

Operation temperature Other Characteristics

Other Options:

Fire Performance: Halogene Free

VSWR Performance: Standard

[dB (VSWR)]

Contact RFS for your VSWR performance specification for your required frequency

-50 to 85 (-58 to 185)

band.

Phase stabilized and phase matched cables and assemblies are available upon request.

Frequency	ncy Attenuation		Power
[MHz]	[dB/100m	[dB/100ft]	[kW]
]		
0.5	0.149	0.0454	38.0
1.0	0.211	0.0643	38.0
1.5	0.258	0.0788	32.9
2.0	0.298	0.0910	28.5
10	0.671	0.204	12.7
20	0.951	0.290	8.93
30	1.17	0.356	7.26
50	1.51	0.462	5.63
88	2.02	0.616	4.21
100	2.16	0.658	3.93
108	2.24	0.684	3.79
150	2.66	0.810	3.19
174	2.87	0.875	2.96
200	3.08	0.940	2.76
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
750	6.17	1.88	1.38
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	1.23
1000	7.04	2.19	1.18
1250	8.12	2.19	1.16
1400	8.64	2.40	0.983
1500	8.97	2.73	0.963
1700	9.61	2.73	0.884
1800	9.91	3.02 3.20	0.857
2000 2100	10.5		0.809
	10.8	3.29	0.787
2200	11.1	3.38	0.765
2400	11.6	3.54	0.732
2500	11.9	3.62	0.714
2600	12.2	3.70	0.696
2700	12.4	3.78	0.685
3000	13.2	4.01	0.644
3500	14.4	4.38	0.590
4000	15.5	4.72	0.548
5000	17.6	5.37	0.483
6000	19.6	5.97	0.433
7000	21.4	6.54	0.397
8000	23.2	7.07	0.366
8800	24.6	7.49	0.345

8800 24.6 7.49 0.345
Attenuation at 20°C (68°F) cable temperature
Mean power rating at 40°C (104°F) ambient temperature

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

[°C (°F)]