RADIO FREQUENCY SYSTEMS
The Clear Choice®

1/4" CELLFLEX® Low loss Flexible Cable; Flame Retardant/ Halogen Free Jacket

CELLFLEX® 1/4" low loss flexible cable; flame retardant/ halogen free jacket

FEATURES / BENEFITS

Low Attenuation
The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transferin 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.

1/4" CELLFLEX® Superflexible Foam Dielectric Coaxial Cable

Technical Features

APPLICATIONS		
Applications		OEM jumpers, BTS inter-cabinet connections, GPS lines, Riser-rated In-Building, Microwave IF cabling
STRUCTURE		
Cable Type		Foam-Dielectric, Corrugated
Size		1/4"
Jacket Option		Black
Inner Conductor	mm (in)	2.4 (0.09) Copper-Clad Aluminum Wire
Dielectric	mm (in)	6 (0.24) Foam Polyethylene
Outer Conductor	mm (in)	7.5 (0.3) Corrugated Copper
Jacket	mm (in)	10 (0.39) Polyethylene, PE, Metalhydroxite Filling
ELECTRICAL SPECIFICATIONS		
Impedance	Ω	50 +/- 1.5
Maximum Frequency	GHz	15.8
Velocity	%	83.0
Capacitance	pF/m (pF/ft)	80 (24)
Inductance	µH/m (µH/ft)	0.205 (0.063)
Peak Power Rating	kW	10.9
RF Peak Voltage	Volts	1050.0
Jacket Spark	Volt RMS	5000.0
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	6.1 (1.86)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	4.4 (1.34)
Return Loss (VSWR) Performance		Standard
Maximum Return Loss	dB (VSWR)	Contact RFS for your VSWR performance specification for your required frequency band.
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)	0.11 (0.074)
Minimum Bending Radius, Single Bend	mm (in)	40 (1.6)
Minimum Bending Radius, Repeated Bends	mm (in)	85 (3.3)
Bending Moment	Nm (lb*ft)	1.9
Tensile Strength	N (lb)	890 (200)
Recommended / Maximum Clamp Spacing	m (ft)	0.5 / 1 (1.75 / 3.25)

All values nominal unless tolerances provided; information contained in the present datasheet is subject to confirmation at time of ordering

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ATTENUATION AND POWER RATING

Frequency MHz	Attenuation dB/100m	dB/100ft	Power kW
0.5	0.29	0.089	10.90
1	0.41	0.126	10.90
1.5	0.51	0.154	10.90
2	0.58	0.178	10.90
10	1.31	0.399	5.56
20	1.86	0.566	3.92
30	2.28	0.695	3.20
50	2.95	0.90	2.47
88	3.94	1.20	1.85
100	4.20	1.28	1.73
108	4.37	1.33	1.67
150	5.17	1.58	1.41
174	5.58	1.70	1.30
200	6.00	1.83	1.21
300	7.40	2.25	0.985
400	8.59	2.62	0.848
450	9.13	2.78	0.798
500	9.65	2.94	0.755
512	9.77	2.98	0.745
600	10.60	3.24	0.686
700	11.50	3.51	0.632
800	12.40	3.77	0.589
824	12.60	3.83	0.58
894	13.10	4.00	0.556
900	13.20	4.01	0.554
925	13.40	4.07	0.546
960	13.60	4.15	0.535
1000	13.90	4.24	0.523
1250	15.70	4.78	0.464
1500	17.30	5.27	0.421
1700	18.50	5.64	0.393
1800	19.10	5.82	0.381
2000	20.20	6.16	0.36
2100	20.80	6.33	0.351
2200	21.30	6.49	0.342
2400	22.30	6.81	0.326
3000	25.30	7.70	0.288
3500	27.50	8.39	0.265
4000	29.70	9.05	0.245
5000	33.70	10.30	0.216
6000	37.40	11.40	0.195
7000	40.80	12.40	0.178
8000	44.10	13.50	0.165
9000	47.30	14.40	0.154
10000	50.30	15.30	0.145
12000	56.10	17.10	0.13
14000	61.50	18.80	0.118
15800	66.20	20.20	0.11

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	Flame Retardant, LS0H
Installation Temperature	-25 to 60 (-13 to 140) °C(°F)
Storage Temperature	-70 to 85 (-94 to 185) °C(°F)
Operation Temperature	-50 to 85 (-58 to 185) °C(°F)

External Document Links

Notes

Phase stabilized versions available upon request.

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