

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

CELLFLEX® 1/2" 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 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.
- ➔ **Meets or Exceeds: IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24 (formerly IEC 60332-3-C)**



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Technical Features

APPLICATIONS

Applications	OEM jumpers, Main feed transitions to equipment, GPS lines, Riser-rated In-Building, CPR classified cable
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STRUCTURE

Cable Type		Foam-Dielectric, Corrugated
Size		1/2"
Jacket Option		Black
Inner Conductor	mm (in)	4.8 (0.19) Copper-Clad Aluminum Wire
Dielectric	mm (in)	11.3 (0.44) Foam Polyethylene
Outer Conductor	mm (in)	13.8 (0.54) Corrugated Copper
Jacket	mm (in)	15.8 (0.62) Polyethylene, PE, Metalhydroxite Filling

ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	8.8
Velocity	%	88.0
Capacitance	pF/m (pF/ft)	76 (23.2)
Inductance	μH/m (μH/ft)	0.19 (0.058)
Peak Power Rating	kW	38.0
RF Peak Voltage	Volts	1950.0
Jacket Spark	Volt RMS	8000.0
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.62 (0.5)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	3.55 (1.08)
Return Loss (VSWR) Performance		Standard for 40-5925 MHz, Premium according to B-Class
Min. Return Loss (Max. VSWR)	dB (VSWR)	Standard 20 (1.222), Premium 24 (1.135)
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.
Temperature & Power		Standard

MECHANICAL SPECIFICATIONS

Cable Weight, Nominal	kg/m (lb/ft)	0.201 (0.135)
Minimum Bending Radius, Single Bend	mm (in)	70 (3)
Minimum Bending Radius, Repeated Bends	mm (in)	125 (5)
Bending Moment	Nm (lb*ft)	6.5
Tensile Strength	N (lb)	1100 (247)
Recommended / Maximum Clamp Spacing	m (ft)	0.6 / 1 (2 / 3.25)



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ATTENUATION AND POWER RATING

Frequency MHz	Attenuation		Power kW
	dB/100m	dB/100ft	
1	0.21	0.065	35.30
1.5	0.26	0.079	28.80
2	0.30	0.092	25.00
10	0.68	0.206	11.10
20	0.96	0.293	7.83
30	1.18	0.359	6.37
50	1.53	0.466	4.91
88	2.04	0.622	3.68
100	2.18	0.664	3.45
108	2.27	0.691	3.31
150	2.69	0.819	2.80
174	2.90	0.884	2.59
200	3.12	0.95	2.41
300	3.85	1.17	1.95
400	4.48	1.37	1.68
450	4.77	1.45	1.57
500	5.04	1.54	1.49
512	5.11	1.56	1.47
600	5.56	1.69	1.35
700	6.03	1.84	1.24
750	6.26	1.91	1.20
800	6.48	1.98	1.16
824	6.58	2.01	1.14
894	6.88	2.10	1.09
900	6.91	2.10	1.09
925	7.01	2.14	1.07
960	7.15	2.18	1.05
1000	7.31	2.23	1.03
1250	8.25	2.52	0.91
1400	8.78	2.68	0.855
1500	9.12	2.78	0.823
1700	9.77	2.98	0.768
1800	10.10	3.07	0.745
2000	10.70	3.26	0.702
2100	11.00	3.35	0.683
2200	11.30	3.44	0.666
2400	11.80	3.61	0.634
2500	12.10	3.69	0.62
2600	12.40	3.78	0.606
2700	12.70	3.86	0.593
3000	13.40	4.09	0.559
3500	14.70	4.47	0.512
4000	15.80	4.83	0.474
5000	18.00	5.50	0.416
6000	20.10	6.12	0.374
7000	22.00	6.70	0.341
8000	23.80	7.26	0.315
8800	25.20	7.69	0.298

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
Flame Retardant Jacket Specifications	Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24 (formerly IEC 60332-3-C); UL 1581; UL 1666; NFPA 130; NEC type CATVR, CPR: https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf
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.