



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.



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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)	1.57 (0.48)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	2.7 (0.82)
Return Loss (VSWR) Performance		Premium for 380-410, 694-960, 1695-2200, 2400-2496, 3500 MHz Standard for 500-694, 1452-1496, 2300-2400, 2496-2700 MHz
Maximum Return Loss	dB (VSWR)	Premium: 24 (1.135) and Standard: 20 (1.222)
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)

PRODUCT DATASHEET

LCF12-50CPR

RADIO FREQUENCY SYSTEMS
The Clear Choice®

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

ATTENUATION AND POWER RATING

Frequency MHz	Attenuation		Power kW
	dB/100m	dB/100ft	
0.5	0.15	0.045	38.00
1	0.21	0.064	38.00
1.5	0.26	0.079	32.90
2	0.30	0.091	28.50
10	0.67	0.204	12.70
20	0.95	0.29	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	0.81	3.19
174	2.87	0.875	2.96
200	3.08	0.94	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	1.21
1000	7.20	2.19	1.18
1250	8.12	2.48	1.05
1400	8.64	2.63	0.983
1500	8.97	2.73	0.947
1700	9.61	2.93	0.884
1800	9.91	3.02	0.857
2000	10.50	3.20	0.809
2100	10.80	3.29	0.787
2200	11.10	3.38	0.765
2400	11.60	3.54	0.732
2500	11.90	3.62	0.714
2600	12.20	3.70	0.696
2700	12.40	3.78	0.685
3000	13.20	4.01	0.644
3500	14.40	4.38	0.59
4000	15.50	4.72	0.548
5000	17.60	5.37	0.483
6000	19.60	5.97	0.433
7000	21.40	6.54	0.397
8000	23.20	7.07	0.366
8800	24.60	7.49	0.345

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, -3.C; UL 1581; UL 1666; NEC type CATVR, CPR: https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf
Installation Temperature	-15 to 60 (5 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

Web URL to CPR resources with DoP and CE-label download folders

Notes

Phase stabilized versions available upon request.

LCF12-50CPR

REV: C

REV DATE: 23.July.2019

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