



LCF12-50JFN

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)**



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
Inner Conductor Diameter	mm (in)	4.8 (0.19)
Inner Conductor Material		Copper-Clad Aluminum Wire
Dielectric Diameter	mm (in)	11.3 (0.44)
Dielectric Material		Foam Polyethylene
Outer Conductor Diameter	mm (in)	13.8 (0.54)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	15.8 (0.62)
Jacket Material		Black Polyethylene, Metalhydroxite Filling



TESTING AND ENVIRONMENTAL

Fire Performance		Flame Retardant, LSOH
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; EN45545-2(GER production); CPR: https://www.rfsworld.com/searchengine/construction-products-regulation-cpr
Installation Temperature	°C(°F)	-25 to 60 (-13 to 140)
Storage Temperature	°C (°F)	-70 to 85 (-94 to 185)
Operation Temperature	°C(°F)	-50 to 85 (-58 to 185)

ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	8.8
Velocity	%	87
Capacitance	pF/m (pF/ft)	76 (23.2)
Inductance	uH/m (uH/ft)	0.19 (0.058)
Peak Power Rating	kW	38
RF Peak Voltage	Volts	1950
Jacket Spark	Volt RMS	8000
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 or Premium
Min. Return Loss (Max. VSWR)	dB (VSWR)	Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies
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 (4.79)
Tensile Strength	N (lb)	1050 (236)
Recommended / Maximum Clamp Spacing	m (ft)	0.6 / 1 (2 / 3.25)



ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
1	0.21	0.07	35.30
100	2.18	0.66	3.45
200	3.12	0.95	2.41
450	4.77	1.45	1.57
700	6.03	1.84	1.24
800	6.48	1.98	1.16
900	6.91	2.10	1.09
1800	10.10	3.07	0.75
2000	10.70	3.26	0.70
2200	11.30	3.44	0.67
2400	11.80	3.61	0.63
2700	12.70	3.86	0.59
3000	13.40	4.09	0.56
3500	14.70	4.47	0.51
4000	15.80	4.83	0.47
5000	18	5.50	0.42
6000	20.70	6.30	0.37
7000	22	6.70	0.34
8800	25.20	7.69	0.30

External Document Links

Notes

- LCF12-50JFN**TC**: **TC** cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.
- Europe ordering code:
 LCF12-50JFN-**1-50**: LCF12-50JFN, 50m length, Carton
 LCF12-50JFN-**1-100**: LCF12-50JFN, 100m length, Carton
 LCF12-50JFN-**1-240**: LCF12-50JFN, 240m length, Drum 06-042-X
 LCF12-50JFN-**1-500**: LCF12-50JFN, 500m length, Drum 08-053-X