



LCF12-50J
1/2" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable



CELLFLEX® 1/2" low loss flexible cable

Feature / Benefits

- **Ultra Low Attenuation**
The reduced attenuation of CELLFLEX® coaxial cable results in extremely efficient signal transfer in your RF system, especially at high frequencies.
- **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

Technical features

APPLICATIONS

Applications	OEM jumpers, Main feed transitions to equipment, GPS lines, intended for outdoor usage
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STRUCTURE

Cable Type	Foam-Dielectric, Corrugated
Size	1/2
Jacket Option	Black
Inner Conductor Diameter	4.8mm (0.189in)
Inner Conductor Material	Copper-Clad Aluminum Wire
Dielectric Diameter	11.3mm (0.445in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	13.8mm (0.543in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	15.8mm (0.622in)
Jacket Material	Black Polyethylene

TESTING AND ENVIRONMENTAL

Fire Performance	Halogen free, outdoor-rated
Installation Temperature	-40°C to 60°C (-40°F to 140°F)
Storage Temperature	-70°C to 85°C (-94°F to 185°F)
Operation Temperature	-50°C to 85°C (-58°F to 185°F)
Compliance	DIN EN ISO 9001:2015
	ISO 14001:2015
	RoHS 2011/65/EU - China RoHS SJ/T 11364-2006
	REACH (EC 1907/2006)



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ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 1 Ω
Maximum Frequency	8.8 GHz
Velocity	87 %
Capacitance	76pF/m (23.2pF/ft)
Inductance	0.19μH/m (0.058μH/ft)
Peak Power Rating	38 kW
RF Peak Voltage	1950 Volts
Jacket Spark	8000 Volt RMS
Inner Conductor dc Resistance	1.62ohm/1000 m (0.5ohm/1000 ft)
Outer Conductor dc Resistance	3.55ohm/1000 m (1.08ohm/1000 ft)
Passive Intermodulation PIM	-160 typ. dBc
Return Loss (VSWR) Performance	Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies
Phase Stabilized	Phase stabilized and phase matched cables and accessories are available upon request.

MECHANICAL SPECIFICATIONS

Cable Weight	0.18kg/m (0.125lb/ft)
Minimum Bending Radius	70mm (2.756in)
Minimum Bending Radius	125mm (4.921in)
Bending Moment	6.5 (4.79)
Tensile Strength	1050N (236lb)
Recommended / Maximum Clamp Spacing	0.6 / 1 (2 / 3.25)



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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
100	2.18	0.66	3.45
200	3.12	0.95	2.41
450	4.77	1.45	1.57
700	6.03	1.83	1.24
800	6.48	1.97	1.16
900	6.91	2.1	1.09
1800	10.09	3.07	0.74
2000	10.7	3.26	0.7
2200	11.28	3.44	0.67
2400	11.84	3.61	0.63
2700	12.66	3.86	0.59
3000	13.43	4.01	0.56
3500	14.67	4.47	0.51
4000	15.84	4.83	0.47
5000	18.03	5.51	0.42
6000	20.07	6.14	0.37
7000	22	6.73	0.34
8800	25,24	7.73	0.3

External Document Links
[CELLFLEX Drum Selection Guide](#)

Notes

NOTES

- Notes LCF12-50JTC: TC cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.