



LCF14-50J
1/4" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable



CELLFLEX® 1/4" 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, BTS inter-cabinet connections, GPS lines, Microwave IF cabling, intended for outdoor usage
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STRUCTURE

Cable Type	Foam-Dielectric, Corrugated
Size	1/4
Jacket Option	Black
Inner Conductor Diameter	2.4mm (0.094in)
Inner Conductor Material	Copper-Clad Aluminum Wire
Dielectric Diameter	6mm (0.236in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	7.5mm (0.295in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	10mm (0.394in)
Jacket Material	Black Polyethylene

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TESTING AND ENVIRONMENTAL

Fire Performance	Halogene Free
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)

ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 1.5 Ω
Maximum Frequency	15.8 GHz
Velocity	83 %
Capacitance	80pF/m (24pF/ft)
Inductance	0.205 μ H/m (0.063 μ H/ft)
Peak Power Rating	10.9 kW
RF Peak Voltage	1050 Volts
Jacket Spark	5000 Volt RMS
Inner Conductor dc Resistance	6.1ohm/1000 m (1.86ohm/1000 ft)
Outer Conductor dc Resistance	4.4ohm/1000 m (1.34ohm/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	0.095kg/m (0.064lb/ft)
Minimum Bending Radius	40mm (1.575in)
Minimum Bending Radius	85mm (3.346in)
Bending Moment	1.9 (1.4)
Tensile Strength	890N (200lb)
Recommended / Maximum Clamp Spacing	0.5 / 1 (1.75 / 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
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100	4.2	1.28	1.73
200	6	1.83	1.21
450	9.13	2.78	0.8
700	11.52	3.51	0.63
800	12.36	3.77	0.59
900	13.16	4.01	0.55
1800	19.1	5.82	0.38
2000	20.22	6.17	0.36
2200	21.31	6.49	0.34
2400	22.35	6.81	0.33
2700	23.85	7.27	0.31
3000	25.28	7.7	0.29
3500	27.54	8.4	0.26
4000	29.68	9.05	0.25
5000	33.67	10.26	0.22
15800	66.21	20.19	0.11

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

Notes