PRODUCT DATASHEET

LCF14-50J

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

CELLFLEX® 1/4" low loss cable

Features / Benefits

- **Ultra Low Attenuation**
  The reduced attenuation of CELLFLEX® coaxial cable results in extremly 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

STRUCTURE

Cable Type	LCF
Size	1/4"
Jacket Option	Outdoor
Inner Conductor Material	Copper-Clad Aluminium Wire
Dielectric Material	Foam Polyethylen
Outer Conductor Material	Corrugated Copper
Jacket Material	Black Polyethylen

MECHANICAL SPECIFICATION

Inner Conductor Diameter	2.4mm (0.094in)
Dielectric Diameter	6mm (0.236in)
Outer Conductor Diameter	7.5mm (0.295in)
Jacket Diameter	10mm (0.394in)
Cable Weight	0.095kg/m (0.064lb/ft)
Min. Bending Radius, Single Bend	40mm (1.575in)
Min. Bending Radius, Repeated Bends	85mm (3.346in)
Bending Moment	1.9Nm (1.402ft-lbf)
Tensile Strength	890N (200.08lb)
Max. Pulling Length per Hoisting Grip	60m (2,362.205in)
Recommended Clamp Spacing	0.5m (1.64ft)
Max. Clamp Spacing	1m (3.281ft)

All values nominal unless tolerances provided; information contained in the present datasheet is subject to confirmation at time of ordering

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ELECTRICAL SPECIFICATION

Impedance	50 ±1.5 Ω
Max. Operating Frequency	15.8 GHz
Velocity	83 %
Capacitance	80pF/m (24.384pF/ft)
Inductance	0.205µH/m (0.062µH/ft)
Peak Power Rating	10.9 kW
RF Peak Voltage	1,050 V
Jacket Spark	5,000 V RMS
DC-Resistance Inner Conductor	6.1Ω/km (1.859Ω/kft)
DC-Resistance Outer Conductor	4.4Ω/km (1.341Ω/kft)
Return Loss (VSWR) Performance	Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies.

TESTING AND ENVIRONMENTAL

Fire Performance	Halogen Free
Compliance	RoHS 2011/65/EU China RoHS SJ/T 11364-2006 IEC 60754-1/-2 Halogen Acid Gases REACH (EC 1907/2006) IEC 60754-1/-2 Halogen Acid Gases
Phase Stabilized	Phase stabilized and phase matched cables are available upon request.
Installation Temperature, Minimum	-40°C (-40°F)
Installation Temperature, Maximum	60°C (140°F)
Storage Temperature, Minimum	-70°C (-94°F)
Storage Temperature, Maximum	85°C (185°F)
Operation Temperature, Minimum	-50°C (-58°F)
Operation Temperature, Maximum	85°C (185°F)

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ATTENUATION AND POWER RATING

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
75	3.63	1.11	2.01
100	4.20	1.28	1.73
150	5.17	1.58	1.41
200	6.00	1.83	1.21
450	9.13	2.78	0.80
700	11.52	3.51	0.63
800	12.36	3.77	0.59
870	12.93	3.94	0.56
900	13.16	4.01	0.55
960	13.62	4.15	0.53
1800	19.10	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
2600	23.35	7.12	0.31
2700	23.85	7.27	0.31
3000	25.25	7.71	0.29
3500	27.54	8.40	0.26
4000	29.68	9.05	0.25
5000	33.67	10.26	0.22
6000	37.36	11.39	0.19
Note	Standard Conditions: For attenuation: VSWR 1.0, cable temperature 20°C (68°F). For average power: VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F). No solar loading.		

NOTES

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

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