PRODUCT DATASHEET

LCF78-50JFNA

7/8" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable, Flame Retardant Jacket



CELLFLEX® 7/8" 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	7/8"
Jacket Option	Indoor
Inner Conductor Material	Copper Tube
Dielectric Material	Foam Polyethylen
Outer Conductor Material	Corrugated Copper
Jacket Material	Black Polyethylen, Metalhydroxite Filling

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

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MECHANICAL SPECIFICATION

Inner Conductor Diameter	9.05mm (0.356in)
Dielectric Diameter	21.5mm (0.846in)
Outer Conductor Diameter	25.2mm (0.992in)
Jacket Diameter	27.8mm (1.094in)
Cable Weight	0.46kg/m (0.309lb/ft)
Min. Bending Radius, Single Bend	120mm (4.724in)
Min. Bending Radius, Repeated Bends	250mm (9.842in)
Bending Moment	13Nm (9.594ft-lbf)
Tensile Strength	1,440N (323.725lb)
Max. Pulling Length per Hoisting Grip	60m (2,362.205in)
Recommended Clamp Spacing	0.8m (2.625ft)
Max. Clamp Spacing	1m (3.281ft)

ELECTRICAL SPECIFICATION

Impedance	50 ±1 Ω
Max. Operating Frequency	5 GHz
Velocity	90 %
Capacitance	74pF/m (22.555pF/ft)
Peak Power Rating	85 kW
RF Peak Voltage	2.92 kV
Jacket Spark	11 kV
DC-Resistance Inner Conductor	2.04Ω/km (0.622Ω/kft)
DC-Resistance Outer Conductor	1.55Ω/km (0.472Ω/kft)
Return Loss (VSWR) Performance	Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies.

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TESTING AND ENVIRONMENTAL

Fire Performance	Flame Retardant, Halogen Free, Low Smoke (LS0H)
Compliance	RoHS 2011/65/EU China RoHS SJ/T 11364-2006 IEC 60754-1/-2 Halogen Acid Gases REACH (EC 1907/2006) IEC 60332-1 Single-Cable Flame Test IEC 61034-1, -2 Smoke Density Measurement LCF78-50JFN_EXP - EN 50575:2014 + A1:2016 Construction Products Regulation
Phase Stabilized	Phase stabilized and phase matched cables are available upon request.
Installation Temperature, Minimum	-25°C (-13°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)

ATTENUATION AND POWER RATING

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
75	1.01	0.31	9.85
100	1.17	0.36	8.49
150	1.44	0.44	6.89
200	1.68	0.51	5.93
450	2.57	0.78	3.87
700	3.25	0.99	3.06
800	3.49	1.06	2.85
870	3.65	1.11	2.72
900	3.72	1.13	2.67
960	3.85	1.17	2.58
1800	5.45	1.66	1.83
2000	5.78	1.76	1.72
2200	6.09	1.86	1.63
2400	6.40	1.95	1.55
2600	6.70	2.04	1.48
2700	6.84	2.09	1.45
3000	7.27	2.22	1.37
3500	7.94	2.42	1.25
4000	8.58	2.62	1.16
5000	9.78	2.99	1.02
Note	@ 20°C (68°F) and power rating @ 40°C (104°F).		

NOTES

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

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