PRODUCT DATASHEET

LCF14-50JFN

1/4" CELLFLEX® Low loss Flexible Cable; Flame Retardant/ Halogen Free Jacket

CELLFLEX® 1/4" low loss flexible cable support CBRS, C-Band and LAA up to 6GHz; flame retardant/ halogen free jacket

FEATURES / BENEFITS

- **Low Attenuation**
  The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transferin 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 Technologies 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)**



1/4" CELLFLEX® Superflexible Foam Dielectric Coaxial Cable

Technical features

APPLICATIONS

Applications		Indoor	Wireless Communication	HF Defense	Microwave	Mobile Radio	Cable Solutions

STRUCTURE

Size		1/4
Jacket Option		Black
Inner Conductor Diameter	mm (in)	2.4 (0.09)
Inner Conductor Material		Copper-Clad Aluminum Wire
Dielectric Diameter	mm (in)	6 (0.24)
Dielectric Material		Foam Polyethylene
Outer Conductor Diameter	mm (in)	7.5 (0.3)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	10 (0.39)
Jacket Material		Polyethylene, PE, Metalhydroxite Filling
Cable Type		Foam-Dielectric, Corrugated

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

TESTING AND ENVIRONMENTAL

Fire Performance		Flame Retardant, LS0H		
Flame Retardant Jacket Specifications		Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1;	IEC 60332-3-24 (formerly cat C); IEC61034-1, -2;	CPR (Hannover production): https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf
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 +/- 1.5
Maximum Frequency	GHz	15.8
Velocity	%	83
Capacitance	pF/m (pF/ft)	80 (24)
Inductance	uH/m (uH/ft)	0.205 (0.063)
Peak Power Rating	kW	10.9
RF Peak Voltage	Volts	1050
Jacket Spark	Volt RMS	5000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	6.1 (1.86)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	4.4 (1.34)
Return Loss (VSWR) Performance		20 (1.22) @ 450-617 MHz 24 (1.13) @ 617-960 MHz 24 (1.13) @ 1695-2200 MHz 20 (1.22) @ 2300-2700 MHz 18 (1.28) @ 3500-4200 MHz 16 (1.37) @ 5150-6000 MHz
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)	0.11 (0.074)
Minimum Bending Radius, Single Bend	mm (in)	40 (1.6)
Minimum Bending Radius, Repeated Bends	mm (in)	85 (3.3)
Bending Moment	Nm (lb-ft)	1.9 (1.4)
Tensile Strength	N (lb)	890 (200)
Recommended / Maximum Clamp Spacing	m (ft)	0.5 / 1 (1.75 / 3.25)

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

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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.29	0.09	10.90
1	0.41	0.13	10.90
1.5	0.51	0.15	10.90
2	0.58	0.18	10.90
10	1.31	0.40	5.56
20	1.86	0.57	3.92
30	2.28	0.70	3.20
50	2.95	0.90	2.47
88	3.94	1.20	1.85
100	4.20	1.28	1.73
108	4.37	1.33	1.67
150	5.17	1.58	1.41
174	5.58	1.70	1.30
200	6	1.83	1.21
300	7.40	2.25	0.99
400	8.59	2.62	0.85
450	9.13	2.78	0.80
500	9.65	2.94	0.76
512	9.77	2.98	0.75
600	10.60	3.24	0.69
700	11.50	3.51	0.63
800	12.40	3.77	0.59
824	12.60	3.83	0.58
894	13.10	4	0.56
900	13.20	4.01	0.55
925	13.40	4.07	0.55
960	13.60	4.15	0.54
1000	13.90	4.24	0.52
1250	15.70	4.78	0.46
1500	17.30	5.27	0.42
1700	18.50	5.64	0.39
1800	19.10	5.82	0.38
2000	20.20	6.16	0.36
2100	20.80	6.33	0.35
2200	21.30	6.49	0.34
2400	22.30	6.81	0.33

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

3000	25.30	7.70	0.29
3500	27.50	8.39	0.27
4000	29.70	9.05	0.25
5000	33.70	10.30	0.22
6000	37.40	11.40	0.20
7000	40.80	12.40	0.18
8000	44.10	13.50	0.17
9000	47.30	14.40	0.15
10000	50.30	15.30	0.15
12000	56.10	17.10	0.13
14000	61.50	18.80	0.12
15800	66.20	20.20	0.11

External Document Links

Notes

Phase stabilized versions available upon request.
Phase stabilized versions available upon request.

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