



# 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 transfer in 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



**TESTING AND ENVIRONMENTAL**

<b>Fire Performance</b>		Flame Retardant, LS0H		
<b>Flame Retardant Jacket Specifications</b>		Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1;	IEC 60332-3-24 (formerly cat C); IEC61034-1, -2;	CPR (Hannover production): <a href="https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf">https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf</a>
<b>Installation Temperature</b>	°C(°F)	-25 to 60 (-13 to 140)		
<b>Storage Temperature</b>	°C (°F)	-70 to 85 (-94 to 185)		
<b>Operation Temperature</b>	°C(°F)	-50 to 85 (-58 to 185)		

**ELECTRICAL SPECIFICATIONS**

<b>Impedance</b>	Ω	50 +/- 1.5		
<b>Maximum Frequency</b>	GHz	15.8		
<b>Velocity</b>	%	83		
<b>Capacitance</b>	pF/m (pF/ft)	80 (24)		
<b>Inductance</b>	uH/m (uH/ft)	0.205 (0.063)		
<b>Peak Power Rating</b>	kW	10.9		
<b>RF Peak Voltage</b>	Volts	1050		
<b>Jacket Spark</b>	Volt RMS	5000		
<b>Inner Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	6.1 (1.86)		
<b>Outer Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	4.4 (1.34)		
<b>Return Loss (VSWR) Performance</b>		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		
<b>Phase Stabilized</b>		Phase stabilized and phase matched cables and assemblies are available upon request.		
<b>Temperature &amp; Power</b>		Standard		

**MECHANICAL SPECIFICATIONS**

<b>Cable Weight, Nominal</b>	kg/m (lb/ft)	0.11 (0.074)		
<b>Minimum Bending Radius, Single Bend</b>	mm (in)	40 (1.6)		
<b>Minimum Bending Radius, Repeated Bends</b>	mm (in)	85 (3.3)		
<b>Bending Moment</b>	Nm (lb-ft)	1.9 (1.4)		
<b>Tensile Strength</b>	N (lb)	890 (200)		
<b>Recommended / Maximum Clamp Spacing</b>	m (ft)	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
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



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

External Document Links

Notes

Phase stabilized versions available upon request.

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