



CELLFLEX® 1/2" low loss flexible cable; flame retardant/ halogen free jacket

**FEATURES / BENEFITS**

• **BAA Compliant**

The RFS Technologies is proud to announce that the product of LCF12-50JFN-BAA manufactured by RFS Technologies Meriden Factory in CT, U.S. is BAA compliant with Federal Transit Administration's requirements.

• **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)**



1/2" CELLFLEX® Low-Loss Foam Dielectric Coaxial Cable

**Technical features**

**APPLICATIONS**

<b>Applications</b>		OEM jumpers, Main feed transitions to equipment, GPS lines, Riser-rated In-Building, CPR classified cable
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**STRUCTURE**

Size		1/2
Jacket Option		Black
Inner Conductor Diameter	mm (in)	4.8 (0.19)
Inner Conductor Material		Copper-Clad Aluminum Wire
Dielectric Diameter	mm (in)	11.3 (0.44)
Dielectric Material		Foam Polyethylene
Outer Conductor Diameter	mm (in)	13.8 (0.54)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	15.8 (0.62)
Jacket Material		Polyethylene, PE, Metalhydroxite Filling
Cable Type		Foam-Dielectric, Corrugated

**TESTING AND ENVIRONMENTAL**

Fire Performance		Flame Retardant, LS0H
Flame Retardant Jacket Specifications		Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24 (formerly IEC 60332-3-C); UL 1581; UL 1666; NFPA 130; NEC type CATVR, CPR: <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>
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
Maximum Frequency	GHz	8.8
Velocity	%	88
Capacitance	pF/m (pF/ft)	76 (23.2)
Inductance	uH/m (uH/ft)	0.19 (0.058)
Peak Power Rating	kW	38
RF Peak Voltage	Volts	1950
Jacket Spark	Volt RMS	8000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.62 (0.5)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	3.55 (1.08)
Return Loss (VSWR) Performance		Standard or Premium according to B-Class
Min. Return Loss (Max. VSWR)	dB (VSWR)	Standard 20 (1.222), Premium 24 (1.135)/ 23 (1.152)
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.
Temperature & Power		Standard

**MECHANICAL SPECIFICATIONS**

<b>Cable Weight, Nominal</b>	kg/m (lb/ft)	0.201 (0.135)
<b>Minimum Bending Radius, Single Bend</b>	mm (in)	70 (3)
<b>Minimum Bending Radius, Repeated Bends</b>	mm (in)	125 (5)
<b>Bending Moment</b>	Nm (lb-ft)	6.5 (4.79)
<b>Tensile Strength</b>	N (lb)	1100 (247)
<b>Recommended / Maximum Clamp Spacing</b>	m (ft)	0.6 / 1 (2 / 3.25)



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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
1	0.21	0.07	35.30
1.5	0.26	0.08	28.80
2	0.30	0.09	25
10	0.68	0.21	11.10
20	0.96	0.29	7.83
30	1.18	0.36	6.37
50	1.53	0.47	4.91
88	2.04	0.62	3.68
100	2.18	0.66	3.45
108	2.27	0.69	3.31
150	2.69	0.82	2.80
174	2.90	0.88	2.59
200	3.12	0.95	2.41
300	3.85	1.17	1.95
400	4.48	1.37	1.68
450	4.77	1.45	1.57
500	5.04	1.54	1.49
512	5.11	1.56	1.47
600	5.56	1.69	1.35
700	6.03	1.84	1.24
750	6.26	1.91	1.20
800	6.48	1.98	1.16
824	6.58	2.01	1.14
894	6.88	2.10	1.09
900	6.91	2.10	1.09
925	7.01	2.14	1.07
960	7.15	2.18	1.05
1000	7.31	2.23	1.03
1250	8.25	2.52	0.91
1400	8.78	2.68	0.86
1500	9.12	2.78	0.82
1700	9.77	2.98	0.77
1800	10.10	3.07	0.75
2000	10.70	3.26	0.70
2100	11	3.35	0.68
2200	11.30	3.44	0.67



<b>2400</b>	11.80	3.61	0.63
<b>2500</b>	12.10	3.69	0.62
<b>2600</b>	12.40	3.78	0.61
<b>2700</b>	12.70	3.86	0.59
<b>3000</b>	13.40	4.09	0.56
<b>3500</b>	14.70	4.47	0.51
<b>4000</b>	15.80	4.83	0.47
<b>5000</b>	18	5.50	0.42
<b>6000</b>	20.10	6.12	0.37
<b>7000</b>	22	6.70	0.34
<b>8000</b>	23.80	7.26	0.32
<b>8800</b>	25.20	7.69	0.30

External Document Links

Notes

Phase stabilized versions available upon request.  
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