

## PRODUCT DATASHEET

LCF78-50JFNA-A0 / PLU030613

RADIO FREQUENCY SYSTEMS  
The Clear Choice®

## 7/8" CELLFLEX® Premium Attenuation Low-Loss Foam-Dielectric Coaxial Cable

CELLFLEX®7/8" premium attenuation low loss flexible cable

## FEATURES / BENEFITS

- ➔ **Ultra Low Attenuation**  
The further reduced attenuation of CELLFLEX® premium attenuation coaxial cable results in extremely efficient signal transfer in your RF system, especially at high frequencies.
- ➔ **Complete Shielding**  
The solid outer conductor of CELLFLEX® coaxial cable creates a continuous RF/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.



7/8" CELLFLEX® Low-Loss Foam Dielectric Coaxial Cable

### Technical Features

## APPLICATIONS

Applications	Main feed line, Riser-rated In-Building
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## STRUCTURE

Cable Type		Foam-Dielectric, Corrugated
Size		7/8"
Jacket Option		Black
Inner Conductor	mm (in)	9.32 (0.37) Copper Tube
Dielectric	mm (in)	22.4 (0.88) Foam Polyethylene
Outer Conductor	mm (in)	25.2 (0.99) Corrugated Copper
Jacket	mm (in)	27.8 (1.09) Polyethylene, PE, Metalhydroxite Filling

## ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	5.0
Velocity	%	90.0
Capacitance	pF/m (pF/ft)	74 (22.5)
Inductance	μH/m (μH/ft)	0.185 (0.056)
Peak Power Rating	kW	85.0
RF Peak Voltage	Volts	2920.0
Jacket Spark	Volt RMS	8000.0
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.54 (0.47)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.55 (0.47)
Return Loss (VSWR) Performance		Standard
Maximum Return Loss	dB (VSWR)	18 (1.288)
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.
Temperature & Power		Standard

## MECHANICAL SPECIFICATIONS

Cable Weight	kg/m (lb/ft)	0.48 (0.32)
Minimum Bending Radius, Single Bend	mm (in)	120 (5)
Minimum Bending Radius, Repeated Bends	mm (in)	250 (10)
Bending Moment	Nm (lb*ft)	13
Tensile Strength	N (lb)	1440 (324)
Recommended / Maximum Clamp Spacing	m (ft)	0.8 / 1 (2.75 / 3.25)

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### ATTENUATION AND POWER RATING

Frequency MHz	Attenuation		Power kW
	dB/100m	dB/100ft	
0.5	0.08	0.024	85.00
1	0.11	0.034	85.00
1.5	0.14	0.041	73.60
2	0.16	0.048	63.70
10	0.35	0.107	28.30
20	0.50	0.152	20.00
30	0.61	0.186	16.20
50	0.79	0.242	12.50
88	1.06	0.323	9.38
100	1.13	0.345	8.80
108	1.18	0.358	8.42
150	1.39	0.425	7.15
174	1.50	0.458	6.63
200	1.62	0.493	6.14
300	2.00	0.608	4.97
400	2.32	0.707	4.28
450	2.47	0.753	4.02
500	2.61	0.796	3.81
512	2.64	0.806	3.77
600	2.88	0.876	3.45
700	3.12	0.951	3.19
750	3.24	0.987	3.07
800	3.35	1.02	2.97
824	3.41	1.04	2.91
894	3.56	1.08	2.79
900	3.57	1.09	2.78
925	3.62	1.10	2.75
960	3.70	1.13	2.69
1000	3.78	1.15	2.63
1250	4.27	1.30	2.33
1400	4.54	1.38	2.19
1500	4.71	1.44	2.11
1700	5.05	1.54	1.97
1800	5.21	1.59	1.91
2000	5.52	1.68	1.80
2100	5.67	1.73	1.75
2200	5.82	1.77	1.71
2400	6.11	1.86	1.63
2500	6.25	1.91	1.59
2600	6.39	1.95	1.56
2700	6.53	1.99	1.52
3000	6.93	2.11	1.43
3500	7.56	2.30	1.31
4000	8.16	2.49	1.22
4900	9.17	2.80	1.08
5000	9.28	2.83	1.07

Attenuation at 20°C (68°F) cable temperature;  
 tolerance +/- 5% max.; Mean power rating at  
 40°C (104°F) ambient temperature

### 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, -3.C; UL 1581; UL 1666; NEC type CATVR
<b>Installation Temperature</b>	-25 to 60 (-13 to 140) °C(°F)
<b>Storage Temperature</b>	-70 to 85 (-94 to 185) °C(°F)
<b>Operation Temperature</b>	-50 to 85 (-58 to 185) °C(°F)

### External Document Links

### Notes

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