

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

CELLFLEX® 7/8" low loss flexible cable



Product Specifications	
Cable Type	Foam-Dielectric, Corrugated
Size	7/8"
Jacket	Standard
Return Loss (VSWR) Performance	Standard
Maximum Return Loss, dB (VSWR)	Contact RFS for your frequency band. Typically 18 dB (1.29:1 VSWR)
Impedance, ohm	50 +/- 1
Maximum Frequency, GHz	5
Velocity, percent	88
Peak Power Rating, kW	85
Inner Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	1.04 (0.32)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	1.05 (0.32)
RF Peak Voltage, Volts	2910
Jacket Spark, Volt RMS	8000
Capacitance, pF/m (pF/ft)	76.0 (23.2)
Inductance, µH/m (µH/ft)	0.187 (0.057)
Outer Conductor Material	Corrugated Copper
Inner Conductor Material	Copper Tube
Diameter over Jacket Nominal, mm (in)	28 (1.10)
Diameter Copper Outer Conductor, mm (in)	24.9 (0.98)
Diameter Inner Conductor, mm (in)	9.0 (0.35)
Diameter Dielectric, mm (in)	21.4 (0.84)
Minimum Bending Radius, Single Bend, mm (in)	120 (5)
Minimum Bending Radius, Repeated Bends, mm (in)	250 (10)
Bending Moment, N•m (lb-ft)	13.0 (9.6)

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

Cable Weight, kg/m (lb/ft)	0.53 (0.36)
Tensile Strength, N (lb)	1440 (324)
Flat Plate Crush Strength, N/mm (lb/in)	14.3 (80)
Recommended / Maximum Clamp Spacing, m (ft)	0.8 / 1.0 (2.75 / 3.25)
Installation Temperature, °C(°F)	-40 to +60 (-40 to +140)
Storage Temperature, °C (°F)	-40 to +85 (-40 to +185)
Operation Temperature, °C(°F)	-40 to +85 (-40 to +185)
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.

#### 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 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

**LCF78-50J/JFN**

**ATTENUATION AND AVERAGE POWER**

Frequency MHz	Attenuation dB/100 m	Attenuation dB/100 ft.	Average Power kW
0.5	0.081	0.025	85.0
1.0	0.114	0.035	85.0
1.5	0.140	0.043	73.1
2.0	0.162	0.049	63.3
10	0.365	0.111	28.1
20	0.519	0.158	19.7
30	0.639	0.195	16.1
50	0.830	0.253	12.4
88	1.11	0.339	9.22
100	1.19	0.362	8.63
108	1.24	0.377	8.29
150	1.47	0.448	6.98
174	1.59	0.484	6.45
200	1.71	0.521	6.00
300	2.12	0.646	4.83
400	2.48	0.755	4.14
450	2.64	0.804	3.88
500	2.80	0.852	3.67
512	2.83	0.863	3.62
600	3.09	0.941	3.32
700	3.36	1.02	3.05
800	3.62	1.10	2.83
824	3.68	1.12	2.79
894	3.85	1.17	2.66
900	3.87	1.18	2.65
925	3.92	1.20	2.61
960	4.01	1.22	2.56
1000	4.10	1.25	2.50
1250	4.65	1.42	2.21
1500	5.16	1.57	1.99
1700	5.54	1.69	1.85
1800	5.73	1.75	1.79
2000	6.09	1.86	1.68
2200	6.44	1.96	1.59
2300	6.61	2.01	1.55
3000	7.74	2.36	1.33

Standard Conditions:

For attenuation: VSWR 1.0, cable temperature 20° C (68° F).

For average power: VSWR 1.0, ambient temperature 40° C (104°F),  
inner conductor temperature 100° C (212° F). No solar loading.

