PRODUCT DATASHEET

LCF78-50JFNA

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 extremly efficient signal transfer in your RF system, especially at high frequencies.
- **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.
- **Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1-1; IEC 61034-1, -2; IEC 60332-3-24; EN50575**

Technical features

APPLICATIONS

Applications		Indoor, Wireless Communication, TV & Radio, HF Defense, Microwave, Mobile Radio, Cable Solutions

STRUCTURE

Cable Type		Foam-Dielectric, Corrugated
Size		7/8
Inner Conductor Diameter	mm (in)	9.1 (0.358)
Inner Conductor Material		Copper Tube
Dielectric Diameter	mm (in)	21.5 (0.846)
Dielectric Material		Foam Polyethylene
Outer Conductor Diameter	mm (in)	25.2 (0.992)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	27.8 (1.094)
Jacket Material		Black Polyethylene, Metalhydroxite Filling

TESTING AND ENVIRONMENTAL

Fire Performance		Flame Retardant, LS0H
Installation Temperature	°C(°F)	-15 to 60 (5 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	5
Velocity	%	88
Capacitance	pF/m (pF/ft)	74 (22.5)
Inductance	uH/m (uH/ft)	0.185 (0.056)
Peak Power Rating	kW	85
RF Peak Voltage	Volts	2920
Jacket Spark	Volt RMS	8000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	2.04 (0.62)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.55 (0.472)
Passive Intermodulation PIM	typ. dBc	-160
Return Loss (VSWR) Performance		Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.

MECHANICAL SPECIFICATIONS

Cable Weight, Nominal	kg/m (lb/ft)	0.46 (0.309)
Minimum Bending Radius, Single Bend	mm (in)	120 (5)
Minimum Bending Radius, Repeated Bends	mm (in)	250 (10)
Bending Moment	Nm (lb-ft)	13 (10)
Tensile Strength	N (lb)	1440 (324)
Recommended / Maximum Clamp Spacing	m (ft)	0.8 / 1 (2.75 / 3.25)

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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
100	1.17	0.36	8.50
200	1.68	0.51	5.92
450	2.58	0.79	3.85
700	3.28	1	3.03
800	3.53	1.08	2.82
900	3.76	1.15	2.64
1800	5.55	1.70	1.79
2000	5.89	1.80	1.69
2200	6.23	1.90	1.60
2400	6.55	2	1.52
2700	7.01	2.14	1.42
3000	7.46	2.28	1.33
3500	8.17	2.49	1.22
4000	8.84	2.70	1.12
5000	10.11	3.09	0.98

External Document Links

Notes

- Notes LCF78-50JFNTC: TC cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.
- Europe ordering code:
  LCF78-50JFNA-1-50: LCF78-50JFN, 50m length, Carton
  LCF78-50JFNA-1-500: LCF78-50JFN, 500m length, Drum 11-077-X
  LCF78-50JFNA-3-500: LCF78-50JFN, CoO China, 500m length, Drum standard