PRODUCT DATASHEET

LCF78-50JFNA

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

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

Feature / 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, -2; 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	9.1mm (0.358in)
Inner Conductor Material	Copper Tube
Dielectric Diameter	21.5mm (0.846in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	25.2mm (0.992in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	27.8mm (1.094in)
Jacket Material	Black Polyethylene, Metalhydroxite Filling

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TESTING AND ENVIRONMENTAL

Fire Performance	Flame Retardant, LS0H
Installation Temperature	-15°C to 60°C (5°F to 140°F)
Storage Temperature	-70°C to 85°C (-94°F to 185°F)
Operation Temperature	-50°C to 85°C (-58°F to 185°F)

ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 1 Ω
Maximum Frequency	5 GHz
Velocity	88 %
Capacitance	74pF/m (22.5pF/ft)
Inductance	0.185µH/m (0.056µH/ft)
Peak Power Rating	85 kW
RF Peak Voltage	2920 Volts
Jacket Spark	8000 Volt RMS
Inner Conductor dc Resistance	2.04ohm/1000 m (0.62ohm/1000 ft)
Outer Conductor dc Resistance	1.55ohm/1000 m (0.472ohm/1000 ft)
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	0.46kg/m (0.309lb/ft)
Minimum Bending Radius	120mm (5in)
Minimum Bending Radius	250mm (10in)
Bending Moment	13 (10)
Tensile Strength	1440N (324lb)
Recommended / Maximum Clamp Spacing	0.8 / 1 (2.75 / 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
100	1.16	0.35	7.22
200	1.66	0.51	5.05
450	2.55	0.78	3.29
700	3.23	0.99	2.59
800	3.48	1.06	2.41
900	3.71	1.13	2.26
1800	5.44	1.66	1.54
2000	5.77	1.76	1.45
2200	6.09	1.86	1.38
2400	6.40	1.95	1.31
2700	6.84	2.09	1.23
3000	7.27	2.22	1.15
3500	7.95	2.42	1.05
4000	8.60	2.62	0.97
5000	9.81	2.99	0.85

External Document Links

Notes

NOTES

- Notes LCF78-50JFNTC: TC cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.