



LCF78-50JA
7/8" CELLFLEX® Premium Attenuation Low-Loss Foam-Dielectric Coaxial Cable



CELLFLEX® 7/8" low loss flexible cable

Feature / Benefits

- **Ultra Low Attenuation**
The reduced attenuation of CELLFLEX® 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 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

Technical features

APPLICATIONS

| | |
|--------------|--------------------------------------------|
| Applications | Main feed line, intended for outdoor usage |
|--------------|--------------------------------------------|

STRUCTURE

| | |
|--------------------------|-----------------------------|
| Cable Type | Foam-Dielectric, Corrugated |
| Size | 7/8 |
| Jacket Option | Black |
| 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 |



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TESTING AND ENVIRONMENTAL

| | |
|--------------------------|----------------------------------------------|
| Installation Temperature | -40°C to 60°C (-40°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) |
| Compliance | DIN EN ISO 9001:2015 |
| | ISO 14001:2015 |
| | RoHS 2011/65/EU - China RoHS SJ/T 11364-2006 |
| | REACH (EC 1907/2006) |

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 | 0.39kg/m (0.262lb/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 |
|----------------|-------------|--------------|-----------|
| 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](#)
[CELLFLEX Drum Selection Guide](#)

Notes

NOTES

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