



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 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 or Exceeds: IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24 (formerly IEC 60332-3-C)**



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, LSOH |
| Flame Retardant Jacket Specifications | | Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24 (formerly IEC 60332-3-C); UL 1581; UL 1666; NFPA130 (ed. 2014) Ch.12 (NFPA70) via UL-1685/FT4/IEEE1202; NEC type CATVR; CPR: https://www.rfsworld.com/searchengine/construction-products-regulation-cpr |
| 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) |
| 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) | 0.39 (0.26) |
| 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 |
|----------------|-------------|--------------|-----------|
| 1 | 0.11 | 0.03 | 87.96 |
| 100 | 1.17 | 0.36 | 8.50 |
| 200 | 1.68 | 0.51 | 5.92 |
| 450 | 2.58 | 0.79 | 3.85 |
| 700 | 3.28 | 1.00 | 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 | 2.00 | 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

[CELLFLEX Drum Selection Guide](#)

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