



CELLFLEX® 1/2" low loss flexible cable

FEATURES / 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

INFORMATION

| | |
|---------------------|--|
| Applications | OEM jumpers, Main feed transitions to equipment, GPS lines, intended for outdoor usage |
|---------------------|--|

STRUCTURE

| | | |
|---------------------------------|---------|---------------------------|
| Size | | 1/2 |
| Inner Conductor Diameter | mm (in) | 4.8 (0.189) |
| Inner Conductor Material | | Copper-Clad Aluminum Wire |
| Dielectric Diameter | mm (in) | 11.3 (0.445) |
| Dielectric Material | | Foam Polyethylene |
| Outer Conductor Diameter | mm (in) | 13.8 (0.543) |
| Outer Conductor Material | | Corrugated Copper |
| Jacket Diameter | mm (in) | 15.8 (0.622) |
| Jacket Material | | Black Polyethylene |

TESTING AND ENVIRONMENTAL

| | | |
|---------------------------------|---------|---|
| Phase Stabilized | | Phase stabilized and phase matched cables and accessories are available upon request. |
| Compliance | | DIN EN ISO 9001:2015 ISO 14001:2015 RoHS 2011/65/EU - China RoHS SJ/T 11364-2006 REACH (EC 1907/2006) UL1581 - UV Resistance Jacket IEC 60754-1/-2 |
| Installation Temperature | °C(°F) | -40 to 60 (-40 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 | 8.8 |
| Velocity | % | 87 |
| Capacitance | pF/m (pF/ft) | 76 (23.2) |
| Inductance | uH/m (uH/ft) | 0.19 (0.058) |
| Peak Power Rating | kW | 38 |
| RF Peak Voltage | Volts | 1950 |
| Jacket Spark | Volt RMS | 8000 |
| Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 1.62 (0.5) |
| Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 3.55 (1.08) |
| Passive Intermodulation PIM | min. dBc | -160 |
| Return Loss (VSWR) Performance | Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies | |

MECHANICAL SPECIFICATIONS

| | | |
|--|--------------|--------------------|
| Cable Weight, Nominal | kg/m (lb/ft) | 0.18 (0.125) |
| Minimum Bending Radius, Single Bend | mm (in) | 70 (2.756) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 125 (4.921) |
| Bending Moment | Nm (lb-ft) | 6.5 (4.79) |
| Tensile Strength | N (lb) | 1050 (236) |
| Recommended / Maximum Clamp Spacing | m (ft) | 0.6 / 1 (2 / 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 | 0.21 | 0.06 | 35.34 |
| 100 | 2.18 | 0.66 | 3.45 |
| 200 | 3.12 | 0.95 | 2.41 |
| 450 | 4.77 | 1.45 | 1.57 |
| 700 | 6.03 | 1.83 | 1.24 |
| 800 | 6.48 | 1.97 | 1.16 |
| 900 | 6.91 | 2.10 | 1.09 |
| 1800 | 10.09 | 3.07 | 0.74 |
| 2000 | 10.70 | 3.26 | 0.70 |
| 2200 | 11.28 | 3.44 | 0.67 |
| 2400 | 11.84 | 3.61 | 0.63 |
| 2700 | 12.66 | 3.86 | 0.59 |
| 3000 | 13.43 | 4.01 | 0.56 |
| 3500 | 14.67 | 4.47 | 0.51 |



| | | | |
|------|-------|------|------|
| 4000 | 15.84 | 4.83 | 0.47 |
| 5000 | 18.03 | 5.51 | 0.42 |
| 6000 | 20.07 | 6.14 | 0.37 |
| 7000 | 22.0 | 6.73 | 0.34 |
| 8800 | 25,24 | 7.73 | 0.30 |

RELATED PRODUCTS

| Connector Interface | Standard Connector Series C03 | Premium Connector Series E01 | Premium Connector Series D01 *only on request |
|--|---|--|--|
| N Male | NM-LCF12-C03 | NM-LCF12-E01 | NM-LCF12-D01 |
| N Female | NF-LCF12-C03 | NF-LCF12-E01 | NF-LCF12-D01 |
| 4.3-10 Male | 43M-LCF12-C03 | 43M-LCF12-E01 | 43M-LCF12-D01 |
| 4.3-10 Female | 43F-LCF12-C03 | 43F-LCF12-E01 | 43F-LCF12-D01 |
| 7/16 Male | 716M-LCF12-C03 | 716M-LCF12-E01 | 716M-LCF12-D01 |
| 7/16 Female | 716F-LCF12-C03 | 716F-LCF12-E01 | 716F-LCF12-D01 |
| Mandatory Tool | TRIM-SET-L12-C02 | TRIM-SET-L12-D01 | |
| Tool Information | Universal Trimming Tool For *-C02 And *-C03 Connector Series | Universal Trimming Tool For *-D01 And *-E01 Connector Series | |
| Installation Video | ** -LCF12-C03 | ** -LCF12-E01 | ** -LCF12-D01 |
| General Accessories | | | |
| Hand Tool Kit | TRIM-T01 | | |
| Stripping Tool For Grounding Kits | JSTRIP-12-2 | | |
| Grounding Kit | GKSPEED20-12P | | |

External Document Links

[CELLFLEX Drum Selection Guide](#)

Notes