



CELLFLEX® 7/8" low loss flexible cable support CBRS, C-Band up to 4.2GHz

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 Technologies 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



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[Notes](#)

[CELLFLEX Drum Selection Guide](#)

Technical features

INFORMATION

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

STRUCTURE

| | | |
|--------------------------|---------|--------------------|
| 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 |



TESTING AND ENVIRONMENTAL

| | | |
|---------------------------------|---------|---|
| Phase Stabilized | | Phase stabilized and phase matched cables and assemblies 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 | 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) | 2 (0.61) |
| Passive Intermodulation PIM | min. dBc | -160 |
| Return Loss (VSWR) Performance | | 20 (1.22) @ 450-617 MHz 24 (1.13) @ 617-960 MHz 24 (1.13) @ 1695-2200 MHz 20 (1.22) @ 2300-2700 MHz 18 (1.28) @ 3500-4200 MHz |

MECHANICAL SPECIFICATIONS

| | | |
|---|--------------|-----------------------|
| Cable Weight, Nominal | kg/m (lb/ft) | 0.35 (0.23) |
| 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 | 85.00 |
| 100 | 1.13 | 0.35 | 8.8 |
| 200 | 1.62 | 0.49 | 6.14 |
| 450 | 2.47 | 0.75 | 4.02 |
| 700 | 3.12 | 0.95 | 3.19 |
| 800 | 3.36 | 1.02 | 2.96 |
| 900 | 3.57 | 1.09 | 2.78 |
| 1800 | 5.21 | 1.59 | 1.91 |
| 2000 | 5.53 | 1.68 | 1.80 |
| 2200 | 5.83 | 1.78 | 1.70 |
| 2400 | 6.12 | 1.86 | 1.62 |
| 2700 | 6.54 | 1.99 | 1.52 |
| 3000 | 6.94 | 2.11 | 1.43 |
| 3500 | 7.57 | 2.31 | 1.31 |
| 4000 | 8.17 | 2.49 | 1.22 |
| 5000 | 9.30 | 2.83 | 1.07 |