



CELLFLEX® 1/2" superflexible cable ; Huawei PN 25070682

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.

- **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) | 3.6 (0.142) |
| Inner Conductor Material | | Copper-Clad Aluminum Wire |
| Dielectric Diameter | mm (in) | 9.9 (0.39) |
| Dielectric Material | | Foam Polyethylene |
| Concentric Ratio | % | ≥96 |
| Outer Conductor Diameter | mm (in) | 11.9 (0.469) |
| Outer Conductor Outside Bottom Diameter | mm | 9.3 |
| Conductor Thickness | mm | ≥0.13 |
| Outer Conductor Material | | Corrugated Copper |
| Jacket Diameter | mm (in) | 13.4 (0.528) |
| Min. Thickness | mm | 0.5 |
| Jacket Material | | Black Polyethylene |
| Jacket Mark | | RFS_CELLFLEX®_SCF12-50J03_C_CE_KKKKK_*_XXXm_MM/DD/YYYY |

TESTING AND ENVIRONMENTAL

| | | |
|--------------------------|---------|---|
| Compliance | | Double 85: 85°C±2°C, 85%±5%, 1000h, no crack. Sunlight aging, 300h, aged jacket tensile strength and elongation variety rate: ≤ ±15% Sunlight aging, 720h, aged jacket tensile strength and elongation variety rate: ≤ ±20% Dielectric Strength: DC 2500V, 1min, no crack. RoHS 2015/863/EU ; CE 2006/95/EC(LVD) ; Other specification according to YD1092. |
| Installation Temperature | °C(°F) | -25 to 60 (-13 to 140) |
| Storage Temperature | °C (°F) | -55 to 85 (-67 to 185) |
| Operation Temperature | °C(°F) | -40 to 85 (-40 to 185) |



SCF12-50J03

1/2" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable

ELECTRICAL SPECIFICATIONS

| | | |
|--------------------------------|--|---|
| Impedance | Ω | 50 +/- 1 |
| Maximum Frequency | GHz | 10 |
| Velocity | % | 83 |
| Capacitance | pF/m (pF/ft) | 83 (25) |
| Insulation Resistance | M Ω .km | ≥ 10000 |
| Jacket Spark | Volt RMS | 5000 |
| Inner Conductor dc Resistance | $\Omega/1000$ m ($\Omega/1000$ ft) | 2.9 (0.9) |
| Outer Conductor dc Resistance | $\Omega/1000$ m ($\Omega/1000$ ft) | 5.3 (1.6) |
| Shielding Effectiveness | dB | 120 @30~1000MHz |
| Passive Intermodulation PIM | typ. dBc | -158 |
| Return Loss (VSWR) Performance | | 28.3dB (1.08) @0.4~1GHz; 24.9dB (1.12) @1.6~2.7GHz; 17.7dB (1.3) @3.2~5.8GHz. |

MECHANICAL SPECIFICATIONS

| | | |
|--|--------------|-------------|
| Cable Weight, Nominal | kg/m (lb/ft) | 0.14 (0.09) |
| Minimum Bending Radius, Single Bend | mm (in) | 17 (0.669) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 55 (2.2) |
| Flat Plate Crush Resistance | N/mm | 19.6 |
| Bending Moment | Nm (lb-ft) | 2.7 (1.98) |
| Tensile Strength | N (lb) | 800 (180) |

ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 800 | 9.8 | 2.98 | 0.85 |
| 894 | 10.4 | 3.17 | 0.8 |
| 1000 | 10.9 | 3.32 | 0.75 |
| 1800 | 15.1 | 4.6 | 0.55 |
| 2000 | 15.9 | 4.85 | 0.52 |
| 2200 | 16.9 | 5.15 | 0.5 |
| 2500 | 18.1 | 5.52 | 0.46 |
| 2700 | 19 | 5.79 | 0.44 |
| 3500 | 22 | 6.71 | 0.38 |
| 5000 | 27 | 8.23 | 0.31 |
| 6000 | 30 | 9.15 | 0.28 |

External Document Links

Notes

Jacket Mark?RFS_CELLFLEX®_SCF12-50J03_C_CE_KKKKK*_XXXXm_MM/DD/YYYY