



SCF12-50JFN
1/2" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable



CELLFLEX® 1/2" superflexible cable; flame retardant/ halogen free jacket

Feature / Benefits

- **Low Attenuation**
The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transfer in your RF system.
- **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/Exceeds:** IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24; EN45545-2; [EN50575](#)

Technical features

APPLICATIONS

Applications	OEM jumpers, Main feed transitions to equipment, GPS lines, Riser-rated In-Building, CPR classified cable
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STRUCTURE

Cable Type	Foam-Dielectric, Superflexible
Size	1/2
Inner Conductor Diameter	3.56mm (0.14in)
Inner Conductor Material	Copper-Clad Aluminum Wire
Dielectric Diameter	9.3mm (0.366in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	12.3mm (0.48in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	13.75mm (0.54in)
Jacket Material	Black Polyethylene, Metalhydroxite Filling

TESTING AND ENVIRONMENTAL

Fire Performance	Flame Retardant, LS0H
Installation Temperature	-25°C to 60°C (-13°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)

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ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 1 Ω
Maximum Frequency	10.6 GHz
Velocity	77 %
Capacitance	86pF/m (26pF/ft)
Inductance	0.215 μ H/m (0.066 μ H/ft)
Peak Power Rating	24 kW
RF Peak Voltage	1550 Volts
Jacket Spark	5000 Volt RMS
Inner Conductor dc Resistance	2.97ohm/1000 m (0.9ohm/1000 ft)
Outer Conductor dc Resistance	6.5ohm/1000 m (1.88ohm/1000 ft)
Passive Intermodulation PIM	-160 typ. dBc
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	0.15kg/m (0.1lb/ft)
Minimum Bending Radius	32mm (1.3in)
Bending Moment	2.5 (1.84)
Tensile Strength	650N (146lb)
Recommended / Maximum Clamp Spacing	0.3 / 0.5 (1 / 1.64)

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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
100	3.21	0.978	2.2
200	4.6	1.4	1.53
450	7.04	2.14	1
700	8.91	2.71	0.792
800	9.57	2.92	0.738
900	10.2	3.11	0.692
1800	14.9	4.55	0.474
2000	15.8	4.82	0.447
2200	16.7	5.09	0.423
2400	17.5	5.35	0.403
2700	18.8	5.72	0.376
3000	19.9	6.07	0.355
3500	21.8	6.63	0.324
4000	23.5	7.16	0.3
5000	26.8	8.16	0.263
10600	42.14	12.85	0.17

External Document Links

Notes



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NOTES

- Notes SCF12-50JFNTC: TC cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.
- Europe ordering code:

SCF12-50JFN-1-50: SCF12-50JFN, 50m length, Carton

SCF12-50JFN-1-100: SCF12-50JFN, 100m length, Carton

SCF12-50JFN-1-500: SCF12-50JFN, 500m length, Drum 08-053-X