PRODUCT DATASHEET

SCF12-50J

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

CELLFLEX® 1/2" superflexible cable

Features / Benefits

- **Ultra Low Attenuation**
  The reduced attenuation of CELLFLEX® coaxial cable results in extremly 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

STRUCTURE

Cable Type	SCF
Size	1/2"
Inner Conductor Material	Copper-Clad Aluminium Wire
Dielectric Material	Foam Polyethylen
Outer Conductor Material	Corrugated Copper

MECHANICAL SPECIFICATION

Inner Conductor Diameter	3.6mm (0.142in)
Dielectric Diameter	9.3mm (0.366in)
Outer Conductor Diameter	12.3mm (0.484in)
Jacket Diameter	13.7mm (0.539in)
Cable Weight	0.177kg/m (0.119lb/ft)
Min. Bending Radius, Repeated Bends	32mm (1.26in)
Bending Moment	2.5Nm (1.845ft-lbf)
Tensile Strength	650N (146.126lb)
Max. Pulling Length per Hoisting Grip	60m (2,362.205in)
Recommended Clamp Spacing	0.3m (0.984ft)

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ELECTRICAL SPECIFICATION

Impedance	50 ±1 Ω
Max. Operating Frequency	10.6 GHz
Velocity	77 %
Capacitance	86pF/m (26.213pF/ft)
Peak Power Rating	24 kW
RF Peak Voltage	1.55 kV
Jacket Spark	5 kV
DC-Resistance Inner Conductor	2.9Ω/km (0.884Ω/kft)
DC-Resistance Outer Conductor	5.3Ω/km (1.615Ω/kft)
Return Loss (VSWR) Performance	Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies.

TESTING AND ENVIRONMENTAL

Phase Stabilized	Phase stabilized and phase matched cables are available upon request.
Installation Temperature, Minimum	-40°C (-40°F)
Installation Temperature, Maximum	60°C (140°F)
Storage Temperature, Minimum	-70°C (-94°F)
Storage Temperature, Maximum	85°C (185°F)
Operation Temperature, Minimum	-50°C (-58°F)
Operation Temperature, Maximum	85°C (185°F)

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ATTENUATION AND POWER RATING

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
75	2.77	0.84	2.55
100	3.21	0.98	2.20
150	3.96	1.21	1.78
200	4.60	1.40	1.54
450	7.04	2.14	1.00
700	8.91	2.71	0.79
800	9.57	2.92	0.74
870	10.01	3.05	0.71
900	10.20	3.11	0.69
960	10.56	3.22	0.67
1800	14.93	4.55	0.47
2000	15.83	4.83	0.45
2200	16.70	5.09	0.42
2400	17.54	5.35	0.40
2600	18.35	5.59	0.38
2700	18.75	5.72	0.38
3000	19.91	6.07	0.35
3500	21.75	6.63	0.32
4000	23.50	7.16	0.30
5000	26.78	8.16	0.26
6000	29..83	9.09	0.24
Note	Standard Conditions: For attenuation: VSWR 1.0, cable temperature 20°C (68°F). For average power: VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F). No solar loading.		

NOTES

LCFXX-50JTC: TC cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.