

CELLFLEX® Cable

SCF12-50 Series 1/2" Superflexible Foam Coax



APPLICATIONS

OEM jumpers, Main feed transitions to equipment, GPS lines, Riser-rated In-Building (JFN types)

GENERAL INFORMATION

Cable Type	Foam-Dielectric, Superflexible
Size	1/2"

STRUCTURE

Inner Conductor Material	Copper-Clad Aluminum Wire
Diameter Inner Conductor, mm (in)	3.6 (0.14)
Diameter Dielectric, mm (in)	8.3 (0.33)
Outer Conductor Material	Corrugated Copper
Diameter Copper Outer Conductor, mm (in)	12.3 (0.48)
Diameter over Jacket Nominal, mm (in)	13.7 (0.54)

MECHANICAL SPECIFICATIONS

Cable Weight, kg/m (lb/ft)	0.21 (0.14)
Minimum Bending Radius, Repeated Bends, mm (in)	32 (1.25)
Bending Moment, N•m (lb-ft)	1.8 (1.3)
Flat Plate Crush Strength, N/mm (lb/in)	20.4 (110)
Tensile Strength, N (lb)	650 (146)
Recommended / Maximum Clamp Spacing, m (ft)	0.30 / 0.30 (1.00 / 1.00)

ELECTRICAL SPECIFICATIONS

Impedance, ohm	50 +/- 1
Velocity, percent	82
Capacitance, pF/m (pF/ft)	82.0 (25.0)
Inductance, µH/m (µH/ft)	0.207 (0.063)
Maximum Frequency, GHz	11.7
Peak Power Rating, kW	20.5
RF Peak Voltage, volts	1430
Jacket Spark, volt RMS	5000
Inner Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	2.9 (0.88)
Outer Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	3.4 (1.04)

See Installation, Operation and Storage Temperatures on page 16.

CONNECTORS AND ACCESSORIES

Connectors	See pages 53-55
Jumpers	See pages 60-65
Accessories	See pages 75-80
Coaxial Devices	See pages 84-85
Technical Appendix	See pages 831-840

SCF12-50J/JFN ATTENUATION AND AVERAGE POWER

Frequency MHz	Attenuation dB/100 m	Attenuation dB/100 ft.	Average Power kW
0.5	0.229	0.070	20.5
1	0.324	0.099	20.5
1.5	0.397	0.121	20.5
2	0.458	0.140	18.8
10	1.03	0.314	8.37
20	1.46	0.446	5.90
30	1.80	0.548	4.80
50	2.33	0.710	3.70
88	3.11	0.949	2.77
100	3.33	1.01	2.59
108	3.46	1.05	2.49
150	4.10	1.25	2.10
174	4.43	1.35	1.95
200	4.76	1.45	1.81
300	5.89	1.79	1.47
400	6.85	2.09	1.26
450	7.29	2.22	1.18
500	7.71	2.35	1.12
512	7.81	2.38	1.10
600	8.50	2.59	1.01
700	9.23	2.81	0.934
800	9.92	3.02	0.869
824	10.1	3.07	0.855
894	10.5	3.21	0.818
900	10.6	3.22	0.816
925	10.7	3.27	0.803
960	11.0	3.34	0.787
1000	11.2	3.41	0.770
1250	12.7	3.86	0.682
1500	14.0	4.26	0.616
1700	15.0	4.57	0.575
1800	15.5	4.72	0.557
2000	16.4	5.01	0.525
2100	16.9	5.15	0.511
2200	17.3	5.28	0.498
2400	18.2	5.55	0.474
3000	20.7	6.30	0.417
3500	22.6	6.88	0.382
4000	24.4	7.44	0.353
5000	27.8	8.48	0.310
6000	31.0	9.44	0.278
7000	34.0	10.4	0.254
8000	36.8	11.2	0.234
9000	39.6	12.1	0.218
10000	42.3	12.9	0.204
11700	46.6	14.2	0.185

Standard Conditions:

For attenuation: VSWR 1.0, ambient 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.

ORDERING INFORMATION

Model Number	Jacket
SCF12-50J	Standard
SCF12-50JFN	Flame Retardant
SCF12-50JGR	Standard, Gray

Phase stabilized versions available upon request.