Product Data Sheet **SCF38-50J**

3/8" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable

Product Description

CELLFLEX® 3/8" superflexible cable

Application: OEM jumpers, BTS inter-cabinet connections, GPS lines

3/8" CELLFLEX® Superflexible Foam Dielectric Coaxial Cable

Features/Benefits

- **Low Attenuation**
  The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transferin 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.

Technical Features

Structure

Inner conductor:	Copper-Clad Aluminum Wire	[mm (in)]	2.6 (0.1)
Dielectric:	Foam Polyethylene	[mm (in)]	6.3 (0.25)
Outer conductor:	Corrugated Copper	[mm (in)]	9.1 (0.36)
Jacket:	Polyethylene, PE	[mm (in)]	10.2 (0.4)

Mechanical Properties

Weight, approximately	[kg/m (lb/ft)]	0.12 (0.08)
Minimum bending radius, single bending	[mm (in)]	
Minimum bending radius, repeated bending	[mm (in)]	25 (1)
Bending moment	[Nm (lb-ft)]	1.4 (1)
Max. tensile force	[N (lb)]	600 (135)
Recommended / maximum clamp spacing	[m (ft)]	0.25 / 0.25 (0.8 / 0.8)

Electrical Properties

Characteristic impedance	[Ω]	50 +/- 1
Relative propagation velocity	[%]	82
Capacitance	[pF/m (pF/ft)]	82 (25)
Inductance	[µH/m (µH/ft)]	0.207 (0.063)
Max. operating frequency	[GHz]	13.4
Jacket spark test RMS	[V]	5000
Peak power rating	[kW]	11.9
RF Peak voltage rating	[V]	1090
DC-resistance inner conductor	[Ω/km (Ω/1000ft)]	5.3 (1.62)
DC-resistance outer conductor	[Ω/km (Ω/1000ft)]	5.6 (1.71)

Recommended Temperature Range

Storage temperature	[°C (°F)]	-70 to 85 (-94 to 185)
Installation temperature	[°C (°F)]	-40 to 60 (-40 to 140)
Operation temperature	[°C (°F)]	-50 to 85 (-58 to 185)

Other Characteristics

Fire Performance:	Halogene Free		
VSWR Performance:	Standard	[dB (VSWR)]	Contact RFS for your VSWR performance specification for your required frequency band.

Other Options: Phase stabilized and phase matched cables and assemblies are available upon request.

Frequency	Attenuation		Power
[MHz]	[dB/100m]	[dB/100ft]	[kW]
0.5	0.291	0.089	11.9
1.0	0.412	0.126	11.9
1.5	0.505	0.154	11.9
2.0	0.584	0.178	11.9
10	1.31	0.400	6.02
20	1.86	0.567	4.24
30	2.28	0.696	3.46
50	2.96	0.903	2.67
88	3.95	1.20	2.00
100	4.22	1.29	1.87
108	4.39	1.34	1.80
150	5.20	1.58	1.52
174	5.61	1.71	1.41
200	6.03	1.84	1.31
300	7.45	2.27	1.06
400	8.66	2.64	0.912
450	9.22	2.81	0.857
500	9.74	2.97	0.810
512	9.87	3.01	0.800
600	10.7	3.27	0.736
700	11.6	3.55	0.678
800	12.5	3.81	0.631
824	12.7	3.87	0.621
894	13.3	4.05	0.595
900	13.3	4.06	0.593
925	13.5	4.12	0.584
960	13.8	4.20	0.572
1000	14.1	4.30	0.560
1250	15.9	4.85	0.496
1500	17.6	5.36	0.449
1700	18.8	5.74	0.420
1800	19.4	5.92	0.407
2000	20.6	6.27	0.384
2100	21.1	6.45	0.373
2200	21.7	6.61	0.364
2400	22.8	6.94	0.347
3000	25.8	7.87	0.306
3500	28.2	8.59	0.280
4000	30.4	9.27	0.260
5000	34.6	10.5	0.228
6000	38.4	11.7	0.205
7000	42.1	12.8	0.188
8000	45.6	13.9	0.173
9000	48.9	14.9	0.161
10000	52.1	15.9	0.152
12000	58.2	17.7	0.136
13400	62.3	19.0	0.127

Attenuation at 20°C (68°F) cable temperature
Mean power rating at 40°C (104°F) ambient temperature