

CORRUGATED SUPERFLEX CABLE 1/2"

(CELLFLEX 1/2" SCF12-50J)

Application:



CELLFLEX 1/2" SCF12-50J

The outer conductor of this cable is constituted of a corrugated tube (spiral winding). This construction allows perfect shielding and bendability while respecting large bending radius. The foam dielectric provides excellent loss and low return loss levels.

CONSTRUCTION / DIMENSIONS			
	material	mm	inches
Canter conductor	CCA(1)	3.56	0.14
Dielectric	FP(2)	9.3	0.37
Inner shield	-	-	-
Outer shield	ACC(3)	12.3	0.48
Jacket black	PE(4)	13.8	0.54

- (1) CCA= Copper-Clad Aluminium Wire
(2) FP = Foam Polyethylene
(3) ACC = Annularly Corrugated Copper
(4) PE = Polyethylene, PE

MECHANICAL CHARACTERISTICS		
recommended minimum bending radius	35 mm (5)	1.3 inch
weight	75mm (6)	2.7 inch
	0.165 kg / m	0.14 lbs / ft

- (5) Single bending
(6) Repeated bending

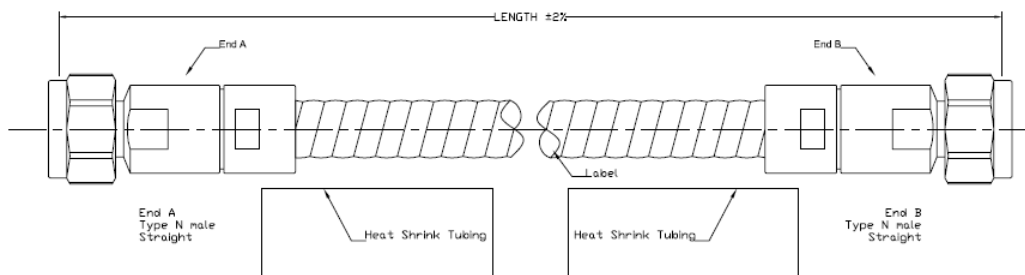
ENVIRONMENTAL CHARACTERISTICS		
operating temperature range	-50 / +85 °C	-58 / +185 °F
fire resistance	NO	
halogen free	YES	

ELECTRICAL CHARACTERISTICS	
characteristic impedance	50Ω ± 1Ω
operating frequency range	DC – 8.8 GHz
shielding effectiveness	100 dB (DC-3GHz)
voltage withstanding	5 000 V rms
peak power	24 kW
capacitance	86 pF / m 26 pF / ft
velocity of propagation	77 %

Note: typical VSWR for the cable assembly
VSWR=1.2:1 @3GHz

FREQUENCY / ATTENUATION MAX POWER (sea level / 25 °C)			
GHz	dB/ m	dB / ft	Watts
0.5	0.07	0.02	949
1.0	0.11	0.03	654
1.5	0.14	0.04	523
2.0	0.16	0.05	447
3.0	0.20	0.06	335
4.0	0.24	0.07	300
6.0	0.30	0.09	237
8.0	0.36	0.11	199
10.0	0.41	0.13	174
attenuation calculation (dB/m)	(0.1 x √f GHz) + (0.01x f GHz)		
power calculation (W)	654 / √f GHz		

Note: typical attenuation for a couple of connectors
(dB) = 0.075 x √f (GHz)



CONNECTOR SELECTION (FOR SCF12-50J CABLE)

CONNECTOR SELECTION (FOR SCF12-50J CABLE)					
SKU	Connector Type Series	Interface	Frequency (GHz)	Impedance (Ω)	Classic level (Mil Spec)
	N	Male Straight, Clamp	3	50	Commercial
	N	Female Straight, Clamp,	3	50	Commercial