

CORRUGATED CABLE ½"

(CELLFLEX ½" LCF12-50J)

Application:



CELLFLEX ½" LCF12-50J

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)	4.8	0.19
Dielectric	FP(2)	11.3	0.44
Inner shield	-	-	-
Outer shield	ACC(3)	13.8	0.54
Jacket black	PE(4)	15.8	0.62

(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	70 mm (5)	3 inch
weight	125mm (6)	5 inch
	0.22 kg / m	0.15 lbs / ft

(5) Single bending

(6) Repeated bending

ENVIRONMENTAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS

characteristic impedance	50Ω ± 1Ω	
operating frequency range	DC – 8.8 GHz	
shielding effectiveness	100 dB (DC-3GHz)	
voltage withstanding	8 000 V rms	
peak power	38 kW	
capacitance	76 pF / m	23 pF / ft
velocity of propagation	88 % (3.9 ns / m)	

Note: typical VSWR for the cable assembly

VSWR=1.2:1 @3GHz

FREQUENCY / ATTENUATION

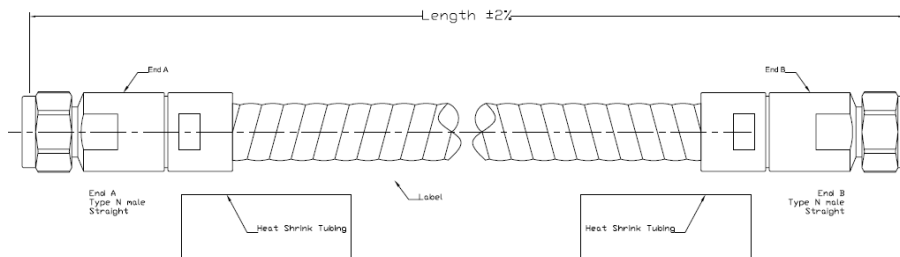
MAX POWER (sea level / 25 °C)

GHz	dB/ m	dB / ft	Watts
0.5	0.05	0.02	1710
1.0	0.07	0.02	1180
1.5	0.09	0.03	947
2.0	0.11	0.03	809
3.0	0.13	0.04	644
4.0	0.16	0.05	548
6.0	0.20	0.06	433
8.0	0.23	0.07	366
8.8	0.25	0.08	345

attenuation calculation (dB/m) (0.1 x √f GHz) + (0.01x f GHz)

power calculation (W) 1180 / √f GHz

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



CONNECTOR SELECTION (FOR LCF12-50J CABLE)

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SKU	Connector Type Series	Interface	Frequency (GHz)	Impedance (Ω)	Classic level (Mil Spec)
01-0369	N	Male Straight, Clamp	3	50	Commercial
01-0370	N	Female Straight, Clamp,	3	50	Commercial