

Ceramic Low Pass Filter

50Ω

DC to 1700 MHz

LFCN-1700D+



CASE STYLE: FV1206

Maximum Ratings

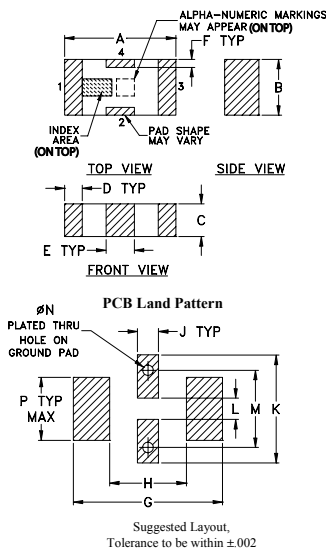
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max. at 25°C
Max. DC Voltage at pins 1&3	25 VDC
DC Current Input to Output	0.5A max. at 25°C

* Derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

Outline Drawing



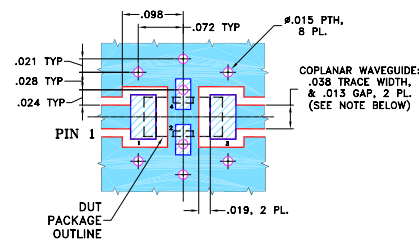
Suggested Layout,
Tolerance to be within ±0.002

Outline Dimensions (inch)

A	B	C	D	E	F	G
.126	.063	.037	.020	.032	.009	.169
3.20	1.60	0.94	0.51	0.81	0.23	4.29

H	J	K	L	M	N	P	wt
.087	.024	.122	.024	.087	.012	.071	grams
2.21	0.61	3.10	0.61	2.21	0.30	1.80	.020

Demo Board MCL P/N: TB-270 Suggested PCB Layout (PL-137)



NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- excellent power handling, 10W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S Patent 6,943,646

Applications

- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

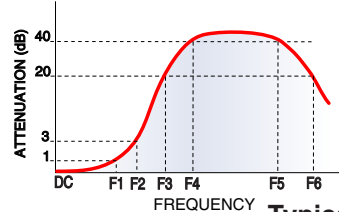
Electrical Specifications^{1,2} at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-1700	—	—	1.0	dB
	Freq. Cut-Off	F2	2050	—	3.0	—	dB
	VSWR	DC-F1	DC-1700	—	1.2	—	:1
Stop Band	Rejection Loss	F3	2375	20	—	—	dB
		F4-F5	2500-6500	—	30	—	dB
		F6	7000	—	20	—	dB
	VSWR	F3-F6	2375-7000	—	20	—	:1

(1) DC Resistance to ground is 100 Mohms min.

(2) Measured on Mini-Circuits Characterization Test Board TB-270.

Typical Frequency Response

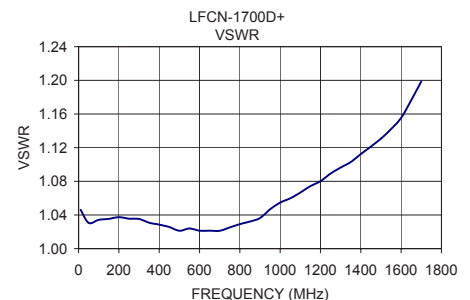
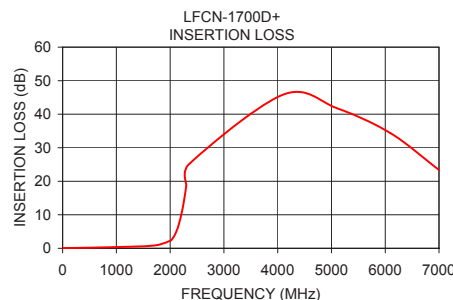


Electrical Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10.00	0.06	1.05
1000.00	0.37	1.05
1700.00	0.83	1.20
2000.00	2.24	1.81
2050.00	3.07	2.19
2100.00	4.43	2.83
2150.00	6.53	3.82
2200.00	9.56	5.17
2250.00	13.56	6.76
2300.00	18.64	8.27
2350.00	25.08	9.58
4100.00	45.82	34.75
5100.00	41.80	43.44
6100.00	34.32	34.75
7000.00	23.37	22.58



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