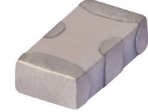


Ceramic High Pass Filter

HFCN-650D+

50Ω 710 to 2490 MHz



Generic photo used for illustration purposes only
CASE STYLE: FV1206

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	7W max. at 25°C
Max. DC Voltage at pins 1&3	25 VDC

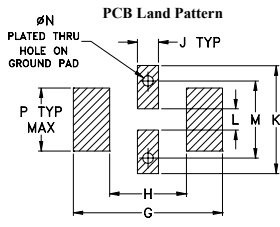
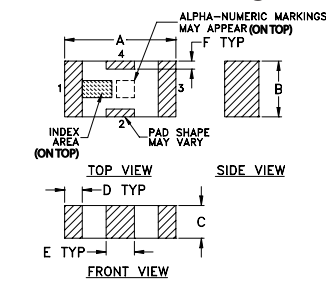
* Passband rating, derate linearly to 3W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

Product Marking: BT

Outline Drawing



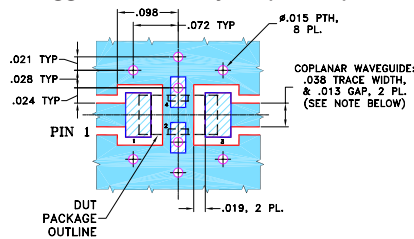
Suggested Layout, Tolerance to be within ±0.02

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.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/WCLStore/terms.jsp

Features

- low cost
- small size
- 7 sections
- temperature stable
- hermetically sealed
- LTCC construction
- excellent power handling, 7W

Applications

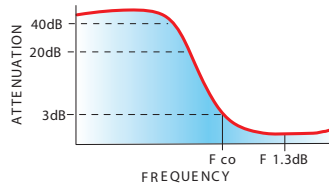
- sub-harmonic rejection
- transmitters/receivers
- lab use

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

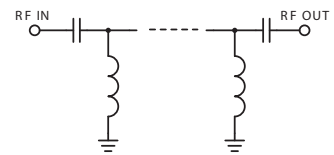
STOP BAND (MHz)		f _{co} , MHz	PASSBAND (MHz)		VSWR (:1)	POWER INPUT (W)	NO. OF SECTIONS
Min.	Typ.	Nom.	Min.	Max.	Typ.		
(loss > 40 dB)	(loss > 20 dB)	Typ.	(loss < 1.3 dB)	(loss < 2 dB)	Stopband	7	7
390	480	650	850-2000	710-2490	Frequency 1.5:1		

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)
1.00	96.55	1737.18
390.00	51.73	56.04
480.00	28.47	28.96
560.00	14.13	12.44
550.00	15.77	14.26
600.00	8.26	6.63
650.00	3.61	2.89
710.00	1.66	1.66
850.00	0.90	1.42
1500.00	0.44	1.27
2000.00	0.99	2.13
2490.00	1.89	3.29
2800.00	2.61	4.25
4000.00	5.86	9.74

