Ceramic

High Pass Filter

HFCN-6010-5+

50Ω 6000 to 8500 MHz



CASE STYLE: FV1206-1

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500,1000, 3000

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1W max. at 25°C

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4,5,6

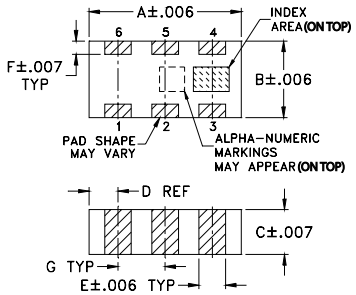
Features

- Low cost
- Small size
- 5 sections
- Temperature stable
- Hermetically sealed
- LTCC construction
- Protected by US Patent 7,760,485

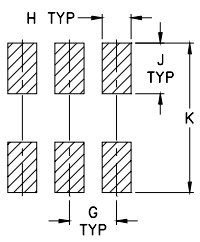
Applications

- Point-to-point radio
- Sub-harmonic rejection
- Transmitters / receivers
- Avionics & Air Traffic Control

Outline Drawing



PCB Land Pattern



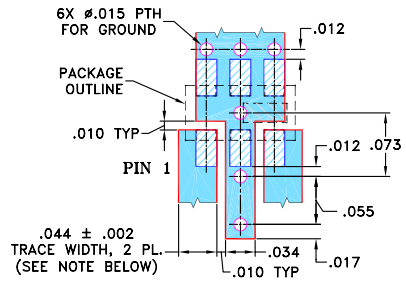
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28

G	H	J	K	wt
.039	.024	.042	.123	grams
0.99	0.61	1.07	3.12	.020

Demo Board MCL P/N: TB-285
Suggested PCB Layout (PL-158)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS: .020 ± .0015; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT

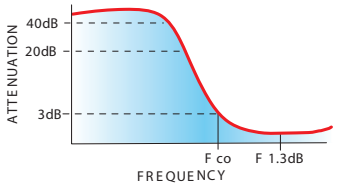
DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Electrical Specifications[1,2] at 25°C

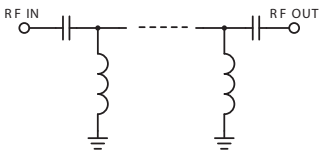
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Insertion Loss	6000-6400	—	10	—	dB
	6400-8500	—	1.8	4.5	
Rejection	5800	15	20	—	dB
	1000-5000	20	25	—	
VSWR	6400-7000	—	2.30	—	:1
	7000-8500	—	1.44	—	
Power Input		—	20	30	dBm

(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.
(2) Measured on Mini-Circuits Characterization Test Board TB-285.

typical frequency response

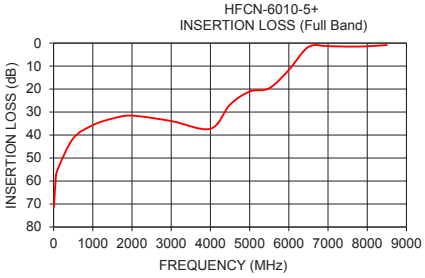


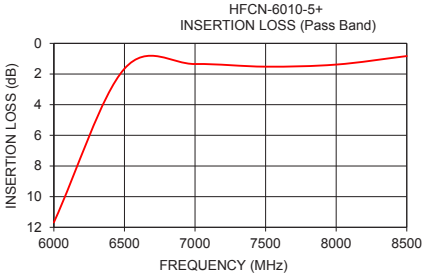
electrical schematic

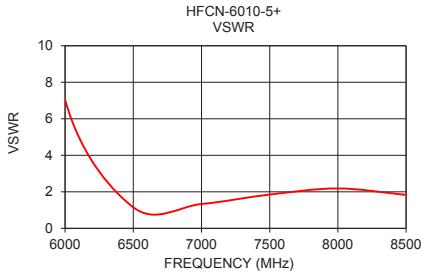


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	71.32	370.56
50	60.26	352.25
100	55.17	319.28
500	41.45	244.75
1000	35.73	189.75
1500	32.85	159.15
2000	31.55	134.69
3000	33.89	141.30
4000	37.27	133.68
4500	26.76	93.07
5000	21.06	53.72
5500	19.66	28.10
6000	11.68	7.05
6500	1.66	1.15
7000	1.35	1.33
7500	1.52	1.85
8000	1.38	2.18
8500	0.83	1.83







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/MCLStore/terms.jsp

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