CERAMIC

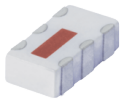
High Pass Filter

HFCN-5050+

50Ω 5500 to 10000 MHz

THE BIG DEAL

- Small Size
- 5 Sections
- Temperature Stable
- Excellent Power Handling, 7 W
- Hermetically Sealed
- LTCC Construction
- Low Cost
- Protected by US Patent 7,760,485



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

+RoHS Compliant
The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- Sub-Harmonic Rejection
- Transmitters/Receivers

ELECTRICAL SPECIFICATIONS[1,2] AT +25°C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Units
Stopband	Rejection Loss	3600	20	30		dB
		4200				
	Freq. Cut-Off	5050		3.0		dB
	VSWR	3600-4200		20		:1
Passband	Insertion Loss	5500-10000			2.0	dB
		5650-9700			1.5	dB
	VSWR	5200-10000		1.5		:1

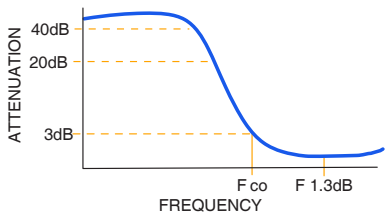
1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required.
2. Measured on Mini-Circuits Characterization Test Board TB-HFCN-5050+.

ABSOLUTE MAXIMUM RATINGS

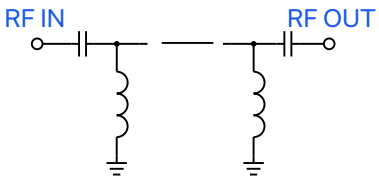
Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input[3]	7 W max. at +25°C

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. H
ECO-025301
HFCN-5050+
MCL NY
250702

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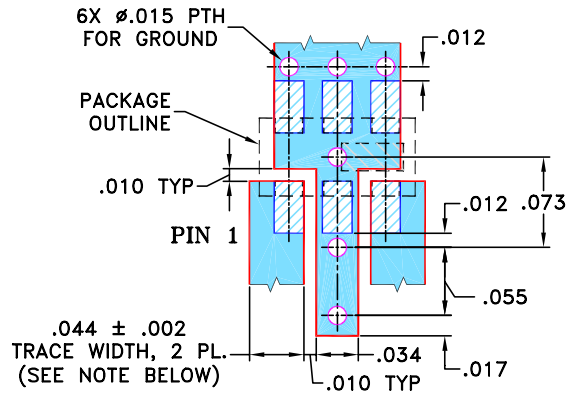
PIN CONNECTIONS

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

PRODUCT MARKING: ZH

DEMO BOARD MCL P/N: TB-HFCN-5050+

SUGGESTED PCB LAYOUT (PL-158)



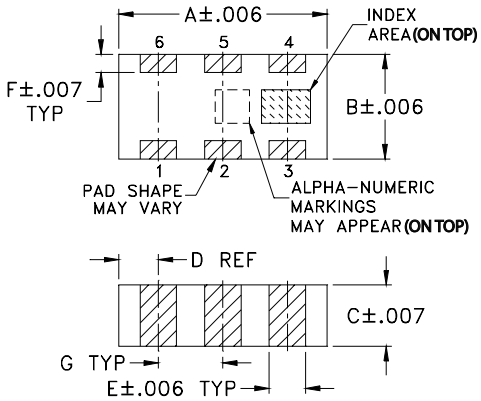
NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS: .020 ± .0015; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

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

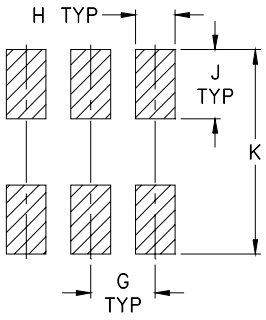
DENOTES PCB COPPER LAYOUT

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inches / 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

TAPE & REEL INFORMATION: F75

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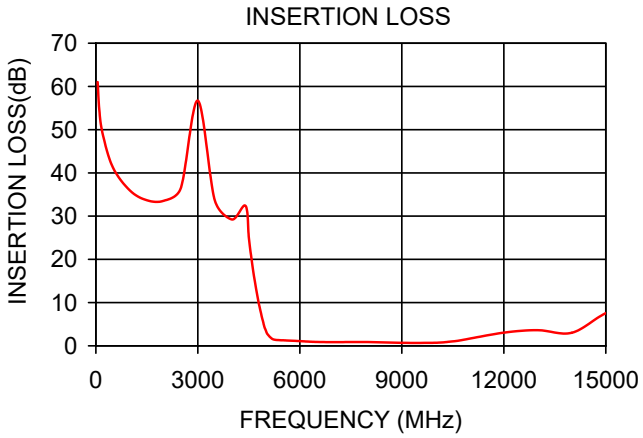
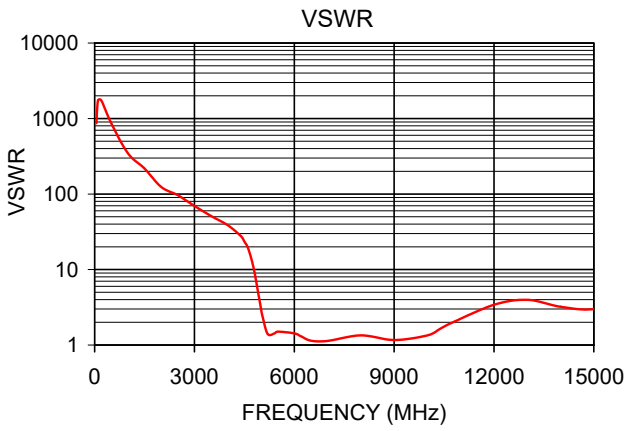
TYPICAL PERFORMANCE DATA AT +25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	61.01	868.59
1000	35.93	347.44
3600	32.03	48.26
4200	31.40	32.79
4700	13.75	14.38
4800	9.47	9.38
4950	4.60	4.01
5050	2.70	2.35
5200	1.55	1.40
5500	1.29	1.51
5650	1.27	1.55
9700	0.65	1.16
10000	0.72	1.34
10700	1.24	1.94
12000	3.06	3.42
14000	3.02	3.21
15000	7.56	3.00





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/terms/viewterm.html