CERAMIC

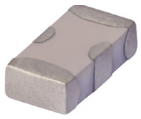
High Pass Filter

HFCN-1300D+

50Ω 1400 to 5000 MHz

THE BIG DEAL

- Small size
- 7 sections
- Temperature stable
- Excellent power handling, 7W
- Hermetically sealed
- LTCC construction
- Low cost



Generic photo used for illustration purposes only

CASE STYLE: FV1206

+RoHS Compliant

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

APPLICATIONS

- Sub-harmonic rejection
- Transmitters/receivers
- Lab use

ELECTRICAL SPECIFICATIONS[1,2] AT 25°C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Units
Stop Band	Rejection Loss	690	40	—	—	dB
		930	20	—	—	
	Freq. Cut-Off	1300	—	3.0	—	dB
	VSWR	690-930	—	20	—	:1
Pass Band	Insertion Loss	1400-5000	—	2.0	—	dB
		1510-4000	—	—	1.3	dB
	VSWR	1400-4000	—	1.5	—	:1

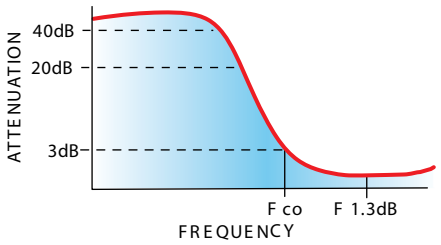
1. DC Resistance to ground is 100 Mohms min.
2. Measured on Mini-Circuits Characterization Test Board TB-270.

MAXIMUM RATINGS

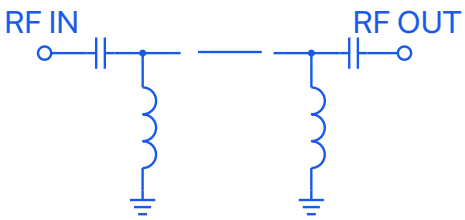
Parameter	Ratings
Operating temperature	-55°C to 100°C
Storage temperature	-55°C to 100°C
RF Power Input[3]	7 W max. at 25°C
Max. DC Voltage at pins 1&3	25 VDC

3. Derate linearly to 3W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



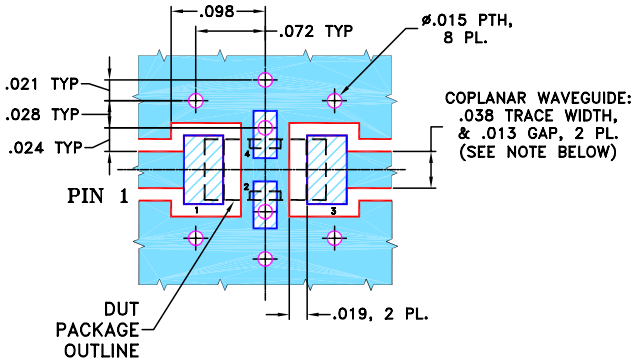
REV. C
ECO-011980
HFCN-1300D+
AD/CP/AM
220221

PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-270
SUGGESTED PCB LAYOUT (PL-137)

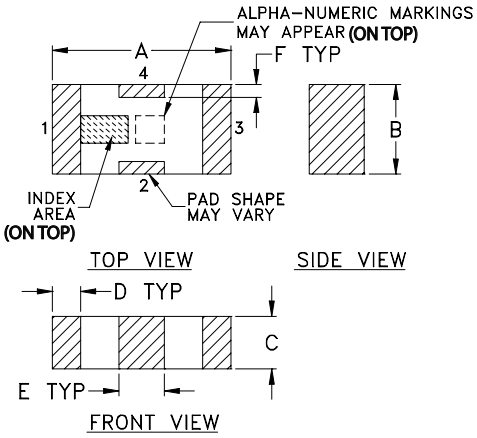


NOTES:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

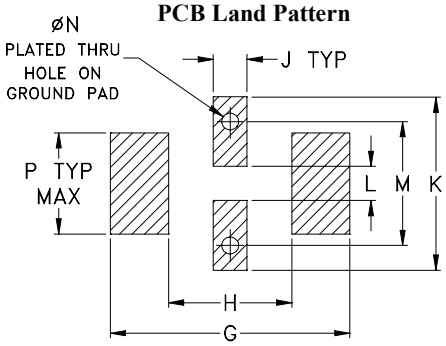
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inches / mm)

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

TAPE & REEL INFORMATION: F71

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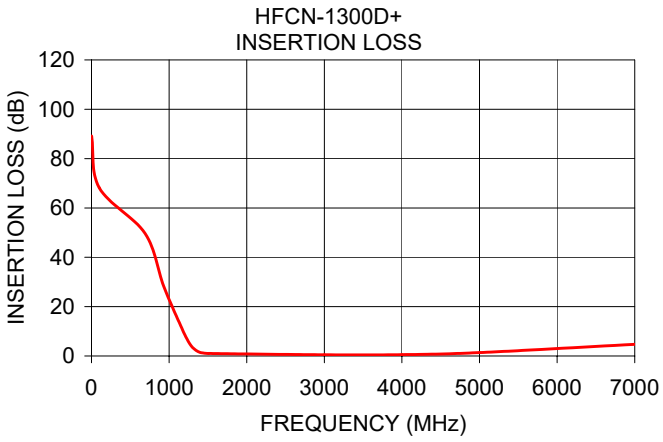
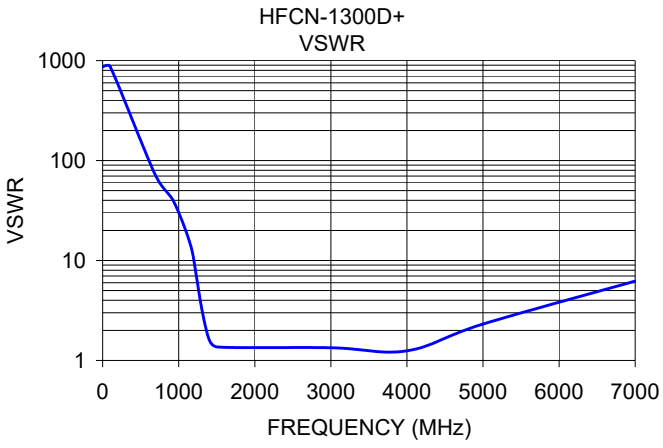
TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	89.20	868.59
100.00	68.18	868.59
690.00	49.67	72.39
930.00	28.30	39.49
1150.00	12.20	14.74
1230.00	6.92	7.11
1300.00	3.49	3.39
1400.00	1.44	1.61
1510.00	1.01	1.36
3000.00	0.51	1.34
4000.00	0.53	1.25
5000.00	1.39	2.32
7000.00	4.70	6.24





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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Mini-Circuits:

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