# **High Pass Filter**

#### $50\Omega$ 6000 to 11500 MHz

#### **Maximum Ratings**

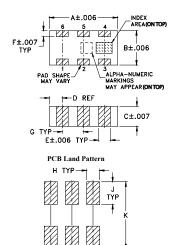
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	7W max. at 25°C
*Passhand rating derate linearly	to 3W at 100°C ambient

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

#### **Pin Connections**

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

#### **Outline Drawing**

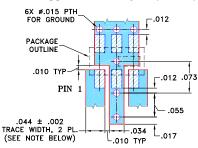


→ G TYP Suggested Layout, Tolerance to be within ±.002

### Outline Dimensions (inch)

	٠ ر	mm 🖊		
В	С	D	E	F
.063	.035	.024	.022	.011
1.60	0.89	0.61	0.56	0.28
Н	J	K		wt
.024	.042	.123		grams
0.61	1.07	3.12		.020
	.063 1.60 H .024	.063 .035 1.60 0.89 H J .024 .042	.063 .035 .024 1.60 0.89 0.61 H J K .024 .042 .123	B C D E .063 .035 .024 .022 1.60 0.89 0.61 0.56 H J K .024 .042 .123

#### 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 0Z. 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

#### **Features**

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

#### **Applications**

- Sub-harmonic rejection
- Transmitters / receivers

## HFCN-5500+ **HFCN-5500**



+RoHS Compliant The +Suffix identifies BoHS Compliance. See our web site for RoHS Compliance methodologies and qualification



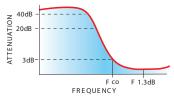
#### Electrical Specifications(1,2) at 25°C

	STOPBAND (MHz)		PASSBAND (MHz)			SWR yp. Frequency	POWER INPUT (W)	NO. OF SECTIONS
(Loss > 30dB) Typ.	(Loss > 20dB) Min.	(Loss 3 dB) Typ.	(Loss < 1.5dB) Max.	(Loss < 2dB) Max.	Stopband	(MHz) 1.5:1	Max.	
4000	4500	5500	6600-10000	6000-11500	20:1	5600-11000	7	5

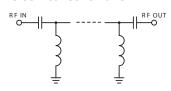
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, Mini-Circuits' "D" suffix version of this model will provide>100 MOhm isolation to ground.

(2) Measured on Mini-Circuits Characterization Test Board TB-285.

#### typical frequency response

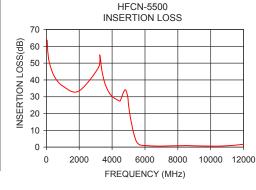


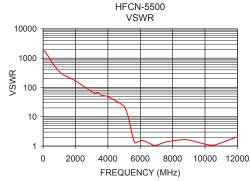
#### electrical schematic



#### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	63.32	1737.18
500	41.73	868.59
1000	36.12	434.30
3250	44.07	62.05
4000	32.16	45.72
4500	27.90	34.75
5000	26.03	22.29
5500	3.24	2.44
5600	2.05	1.53
6000	1.39	1.53
6600	1.05	1.22
9000	1.09	1.60
10000	0.79	1.24
11500	1.18	1.64
12000	1.71	2.05





OBS

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.
Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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 wist Mini-Circuits website at www.minicircuits.com/MCLStore/terms.jsp

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