

# High Pass Filter

## HFCN-2700AD+

50Ω 2900 to 8700 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

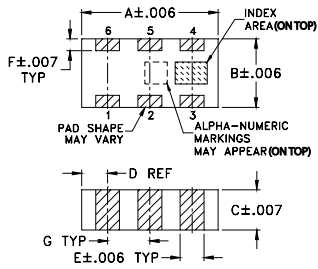
Max. DC Voltage at pins 1&3 25 VDC

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

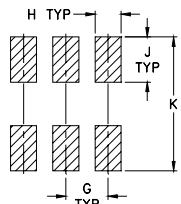
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



Suggested Layout, Tolerance to be within ±.002

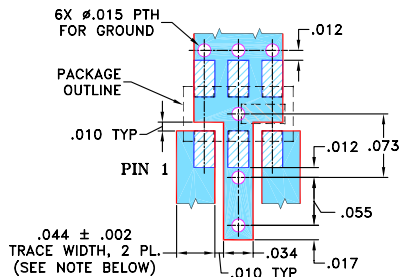
### Outline Dimensions (inch/mm)

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 R04350 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

### Notes

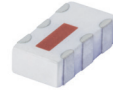
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### 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



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

+RoHS Compliant

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

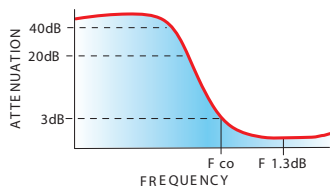
Available Tape and Reel at no extra cost  
Reel Size 7" Devices/Reel 20, 50, 100, 200, 500, 1000, 3000

### Electrical Specifications<sup>1,2</sup> at 25°C

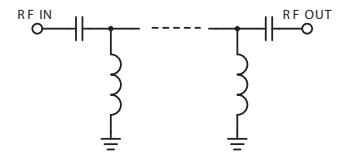
STOPBAND (MHz)	f <sub>co</sub> , MHz Nom.	PASSBAND (MHz)	VSWR Typ.	POWER INPUT (W)	NO. OF SECTIONS
(Loss > 30dB) Typ.	(Loss > 20dB) Min.	(Loss < 1.5dB) Max.	Frequency (MHz) 1.5:1	Max.	
2270	2150	3070-8500	20:1	7	5

1. DC Resistance to ground is 100 Mohms min.
2. Measured on Mini-Circuits Characterization Test Board TB-285.

### typical frequency response



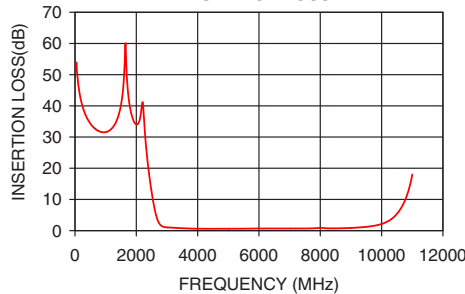
### electrical schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	53.91	1737.18
240	40.00	1737.18
1000	31.58	157.93
1650	60.06	69.49
2150	37.69	32.79
2270	32.83	27.16
2700	3.27	2.72
3000	1.04	1.40
3070	1.00	1.47
3400	0.82	1.46
6000	0.66	1.34
8500	0.73	1.40
8700	0.77	1.44
9000	0.87	1.52
10000	2.13	2.49
11000	18.01	11.31

### HFCN-2700AD+ INSERTION LOSS



### HFCN-2700AD+ VSWR

