



CERAMIC

# High Pass Filter

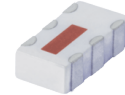
## HFCN-7150+

Mini-Circuits

50Ω 7900 to 11000 MHz

### THE BIG DEAL

- Small size
- 5 sections
- Temperature stable
- Excellent power handling, 6W
- 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<sup>1,2</sup> AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Stop Band	Rejection Loss	5100	—	30	—
		6150	20	—	—
	Freq. Cut-Off	7150	—	3.0	—
	VSWR	5100-6150	—	20	—
Pass Band	Insertion Loss	7900-11000	—	2.0	dB
		8500-10500	—	1.5	dB
	VSWR	7250-11000	—	1.5	—

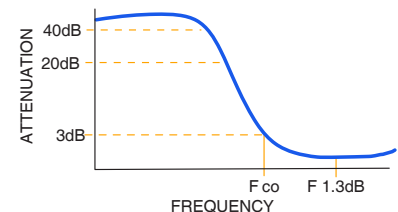
1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required.
2. Measured on Mini-Circuits Characterization Test Board TB-285.

### MAXIMUM RATINGS

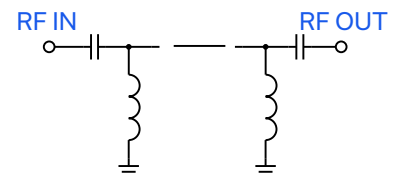
Parameter	Ratings
Operating temperature	-55°C to 100°C
Storage temperature	-55°C to 100°C
RF Power Input <sup>3</sup>	6 W max. at 25°C

3. Passband rating, 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. G  
ECO-012367  
HFCN-7150+  
RAV/CP/AM  
220308





### PIN CONNECTIONS

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

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-285  
SUGGESTED PCB LAYOUT (PL-158)

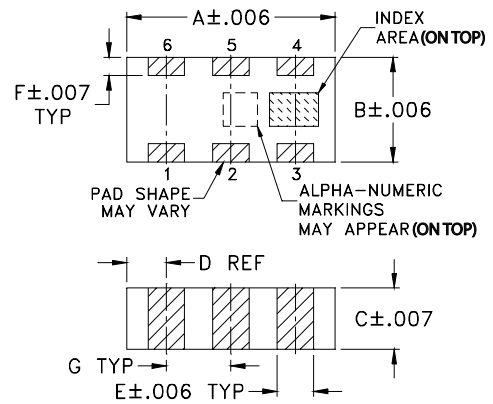


**NOTE:** 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350 WITH DIELECTRIC THICKNESS:  $.020 \pm .0015$ ; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

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  $\pm .002$

### 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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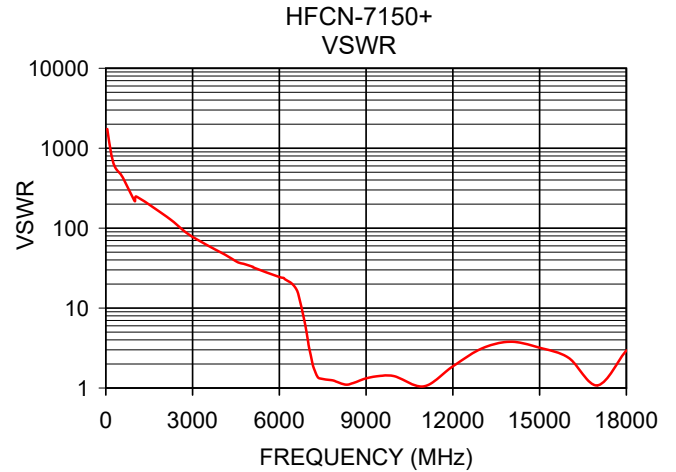
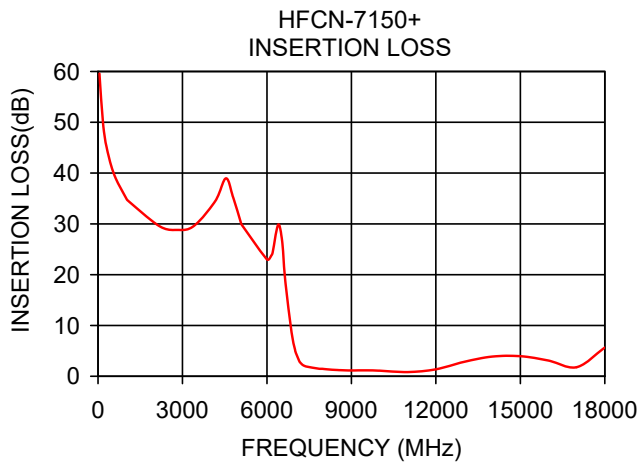
# High Pass Filter

## HFCN-7150+

Mini-Circuits

### TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	59.58	1737.18
1000	35.04	217.15
2800	28.81	86.86
4540	38.96	37.77
5100	29.87	32.18
6150	23.72	23.81
6650	18.85	15.26
7020	4.74	3.34
7150	2.97	2.01
7250	2.31	1.56
7900	1.46	1.23
8500	1.24	1.14
10500	0.92	1.29
11000	0.82	1.05
12000	1.37	1.87
15000	3.95	3.19
18000	5.64	2.95



#### 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](http://www.minicircuits.com/MCLStore/terms.jsp)

