

# High Pass Filter

## RHP-250+

50Ω 400 to 3000 MHz

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W at 25°C

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

### Pin Connections

INPUT	2
OUTPUT	6
GROUND	1, 3, 4, 5, 7, 8

### Features

- low insertion loss, 0.4dB typ. @ passband
- high rejection
- shielded case
- aqueous washable

### Applications

- transmitters / receivers
- sub-harmonic rejection
- military communications



Generic photo used for illustration purposes only  
CASE STYLE: GP731

**+RoHS Compliant**

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

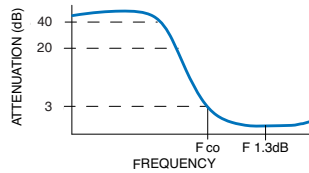
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500, 1000

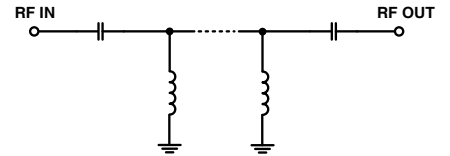
### High Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

STOPBAND (MHz)		f <sub>co</sub> , MHz Nom.	PASSBAND (MHz)	VSWR (:1)	
(Loss > 40dB)	(Loss > 20dB)	(Loss 3dB)	(Loss < 1dB)	Stopband Typ.	Passband Typ.
DC - 135	DC - 180	250	400 - 3000	18	1.2

### Typical Frequency Response



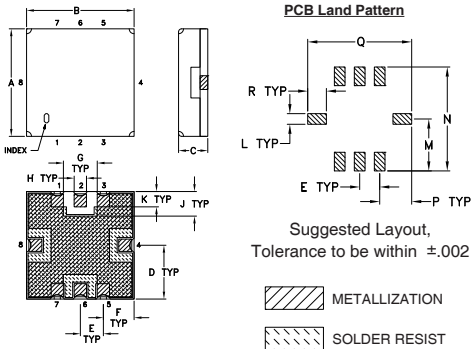
### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.0	88.73	6481.29
10.0	91.41	4268.88
50.0	86.03	1031.74
100.0	65.23	231.93
120.0	55.82	164.17
135.0	49.07	128.61
180.0	29.70	53.26
200.0	21.61	34.93
220.0	13.71	18.83
240.0	6.51	6.87
250.0	3.80	3.78
260.0	2.10	2.20
290.0	0.79	1.11
400.0	0.45	1.11
600.0	0.31	1.04
1000.0	0.29	1.11
2000.0	0.43	1.34
3000.0	0.54	1.35

### Outline Drawing

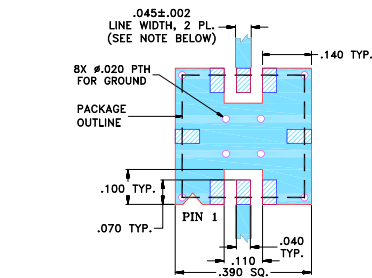


### Outline Dimensions (inch/mm)

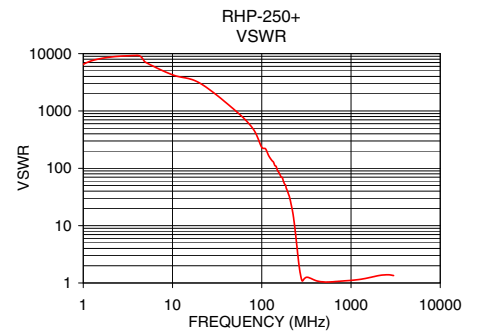
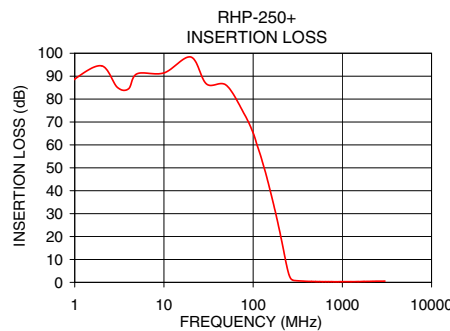
A	B	C	D	E	F	G	H	J
.350	.350	.100	.175	.075	.100	.110	.040	.080
8.89	8.89	2.54	4.45	1.91	2.54	2.79	1.02	2.03
K	L	M	N	P	Q	R	wt.	
.050	.040	.195	.390	.120	.390	.070	grams	
1.27	1.02	4.95	9.91	3.05	9.91	1.78	0.25	

Note: Please refer to case style drawing for details

### Demo Board MCL P/N: TB-332 Suggested PCB Layout (PL-176)



- NOTES:**
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; 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 WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK



**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-Circuits' applicable established test performance criteria and measurement instructions.
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