

# High Pass Filter

## RHP-139+

50Ω 225 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

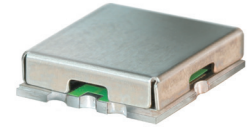
INPUT	2
OUTPUT	6
GROUND	1, 3, 4, 5, 7, 8

### Features

- low insertion loss, 0.5dB typ. @ passband
- high rejection
- shielded case
- aqueous washable

### Applications

- transmitters / receivers
- sub-harmonic rejection



CASE STYLE: GP731

#### +RoHS Compliant

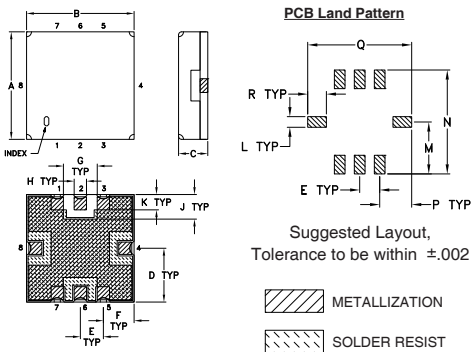
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost	
Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500, 1000

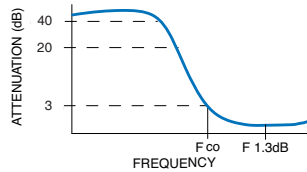
### High Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

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 - 75	DC - 100	139	225 - 3000	18	1.2

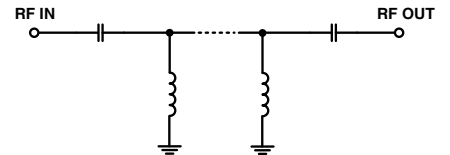
### Outline Drawing



### Typical Frequency Response



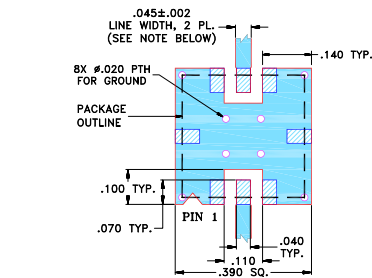
### Functional Schematic



### 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	1.93	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	

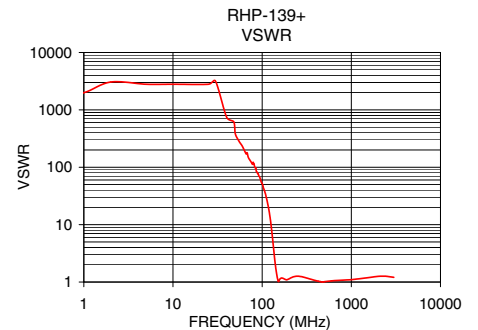
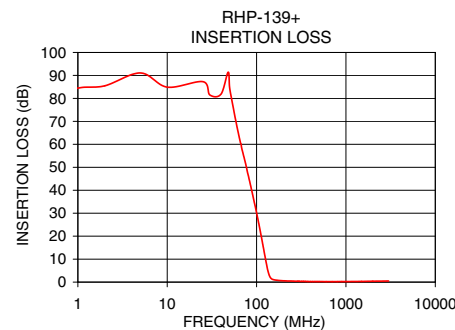
### Demo Board MCL P/N: TB-332 Suggested PCB Layout (PL-176)



- NOTES:**
- 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.
  - 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

### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.0	84.43	1997.13
10.0	84.90	2799.39
50.0	84.46	383.36
75.0	51.95	124.78
100.0	30.12	51.87
112.0	20.63	28.59
125.0	10.62	10.82
133.0	5.39	4.48
139.0	2.86	2.33
145.0	1.64	1.42
170.0	0.80	1.17
225.0	0.49	1.24
500.0	0.24	1.01
1000.0	0.24	1.10
1500.0	0.31	1.19
2000.0	0.39	1.26
2500.0	0.42	1.26
3000.0	0.47	1.21



### Notes

- 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.
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