

# Bandpass Filter

## Features

- linear phase, up to  $\pm 6\text{deg typ. @ } F_c \pm 30\text{MHz}$
- good VSWR, 1.6:1 typ. @ passband
- small size 8.89" x 8.89"
- shielded case
- aqueous washable

## Applications

- harmonic rejection
- transmitters / receivers
- navigation

## HT-RBP-280+



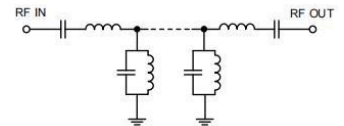
50Ω 260 to 310 MHz

### Maximum Ratings

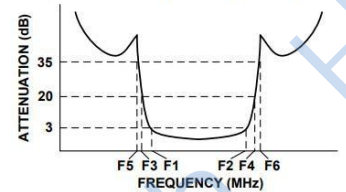
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	0.5 W at 25°C

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

### Functional Schematic



### Typical Frequency Response

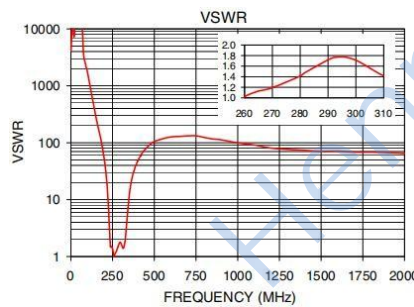
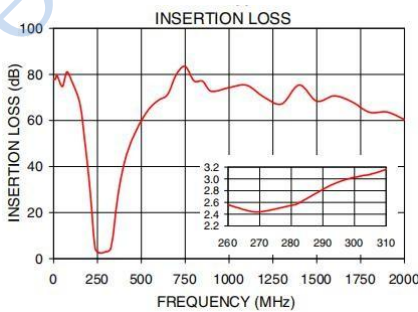


### Bandpass Filter Electrical Specifications (T<sub>AMB</sub>= 25°C)

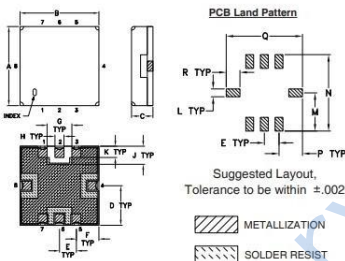
CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 4dB)	STOPBAND (MHz)				VSWR		
		(Loss > 20dB)		(Loss > 35dB)		Passband		Stopband
F <sub>c</sub>	F <sub>1</sub> - F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>	F <sub>6</sub>	Typ.	Max.	Typ.
280	260-310	205	375	185	420-2000	1.6	2.4	30

### Typical Performance Data at 25° C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
0.5	77.98	4076.40
185	46.30	93.42
205	31.89	39.49
217	21.4	17.82
228	10.22	4.89
236	4.64	1.55
260	2.56	1.03
280	2.55	1.41
295	2.95	1.78
300	3.03	1.71
310	3.16	1.42
326	4.48	1.98
339	10.05	5.53
355	20.78	15.92
375	31.30	29.96
420	46.22	59.81
1000	74.26	99.25
2000	60.49	65.03



### Outline Drawing



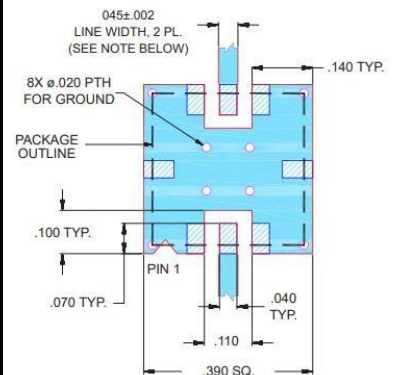
### Outline Dimensions: Unit (mm)

A	8.89	B	8.89	C	2.54
D	4.45	E	1.91	F	2.54
G	2.79	H	1.02	J	2.03
K	1.27	L	1.02	M	4.95
N	9.91	P	3.05	Q	9.91
R	1.78	wt	0.25		

### Pad Connections

RF IN	2
RF OUT	6
GROUND	1, 3, 4, 5, 7, 8

### 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