

# Bandpass Filter

50Ω 260 to 310 MHz

## RBP-280+



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	

### Maximum Ratings

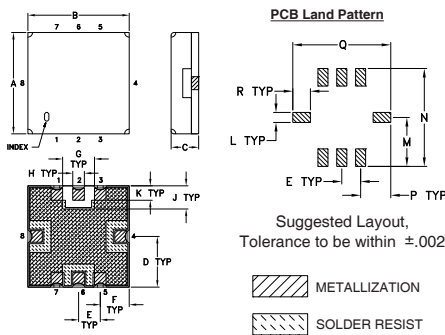
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W at 25°C

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

### Pin Connections

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

### Outline Drawing

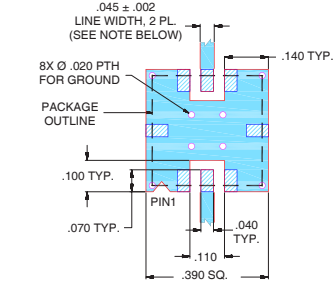


### Outline Dimensions (inch/mm)

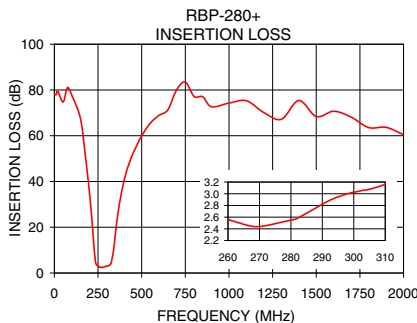
A	B	C	D	E	F	G	H	J
.350	.350	.100	.175	.075	.100	.110	.040	.080
8.89	8.89	2.54	4.45	1.91	2.54	2.79	1.02	2.03
K	L	M	N	P	Q	R	wt	
.050	.040	.195	.390	.120	.390	.070	grams	
1.27	1.02	4.95	9.91	3.05	9.91	1.78	0.25	

Note: Please refer to case style drawing for details

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



- 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



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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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

- linear phase, up to ±6deg typ. @ Fc ±30MHz
- good VSWR, 1.6:1 typ. @ passband
- small size 0.35" x 0.35"
- shielded case
- aqueous washable

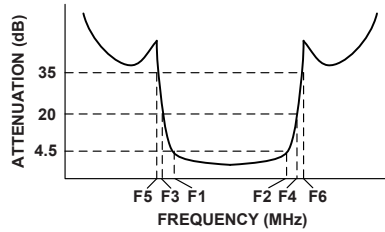
### Applications

- harmonic rejection
- transmitters / receivers
- military radio

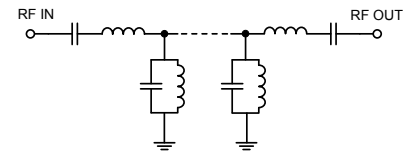
### Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 4.5dB)	STOPBANDS (MHz)				MAXIMUM DEVIATION FROM LINEAR PHASE (deg.)	VSWR (:1)		
		Loss > 20dB	Loss > 35dB	F3	F4		F5	F6	Passband
Fc	F1 - F2	F3	F4	F5	F6	Fc ± 30MHz	Typ.	Max.	Typ.
280	260 - 310	205	375	185	420 - 2000	±12	1.6	2.4	30

### Typical Frequency Response



### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Deviation from Linear Phase (deg.)
0.5	77.98	4076.40	250.0	5.97
185.0	46.30	93.42	254.0	2.66
205.0	31.89	39.49	258.0	0.33
217.0	21.40	17.82	262.0	-1.03
228.0	10.22	4.89	266.0	-1.67
236.0	4.64	1.55	270.0	-1.92
260.0	2.56	1.03	274.0	-1.80
280.0	2.55	1.41	278.0	-1.69
295.0	2.95	1.78	282.0	-1.37
300.0	3.03	1.71	286.0	-0.94
310.0	3.16	1.42	290.0	-0.25
326.0	4.48	1.98	294.0	0.59
339.0	10.05	5.53	298.0	1.20
355.0	20.78	15.92	300.0	1.43
375.0	31.30	29.96	302.0	1.51
420.0	46.22	59.81	306.0	1.22
1000.0	74.26	99.25	308.0	0.77
2000.0	60.49	65.03	310.0	0.04

