

# Ceramic Bandpass Filter

50Ω 2400 to 2500 MHz

## BPGE-252R+



Generic photo used for illustration purposes only

CASE STYLE: GE0805C-3

### Features

- Miniature size 0805 (0.079" [2.0mm] x 0.049" [1.25mm] x 0.037" [0.95mm])
- High rejection
- Low cost
- Aqueous washable

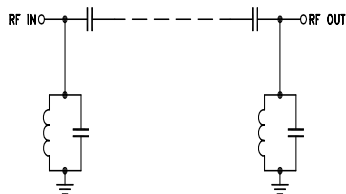
**+RoHS Compliant**

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

### Applications

- ISM Band
- WLAN
- Bluetooth
- Zigbee

### Functional Schematic



### Electrical Specifications<sup>1</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	—	—	2450	—	dB	
	Insertion Loss	F2 - F4	2400 - 2500	—	1.3	1.8	dB
	VSWR	F2 - F4	2400 - 2500	—	—	2	:1
Stop Band, Lower	Rejection	DC - F1	1200 - 1300	25	42	—	dB
		F3	2000	10	14	—	dB
Stop Band, Upper	Rejection	F4	3000	12	18	—	dB
		F5 - F6	3600 - 3800	30	43	—	dB
		F7 - F8	4800 - 5000	32	37	—	dB

1. Tested on Evaluation Board TB-1022+.

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature <sup>2</sup>	-40°C to 100°C
RF Power Input <sup>3</sup>	2W at 25°C

2. Refer to product storage temperature after installation

Suggestion for T&R unused product storage condition:

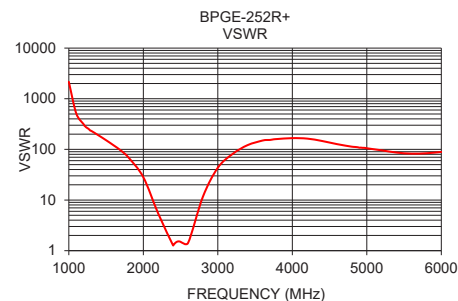
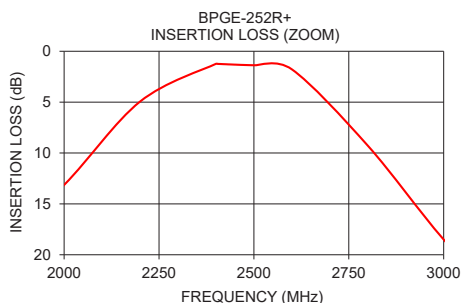
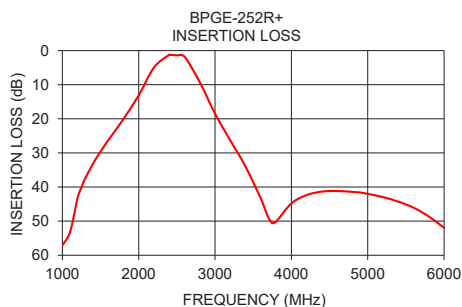
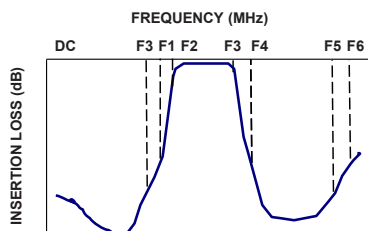
+5 ~ +35 °C, Humidity 45-75%RH, 12 month Max

3. Derate linearly to 1W at 85°C

### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1000	57.13	2151.27
1250	40.02	261.73
1500	29.61	151.83
2000	13.14	28.24
2400	1.23	1.27
2500	1.37	1.49
3000	18.50	43.41
3200	26.35	81.54
3200	26.35	81.54
3750	50.56	158.11
4000	44.80	166.76
4800	41.42	113.00
5000	41.99	105.25
5600	46.06	82.39
5800	48.64	83.85
6000	51.95	88.95

### Typical Frequency Response



### 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.

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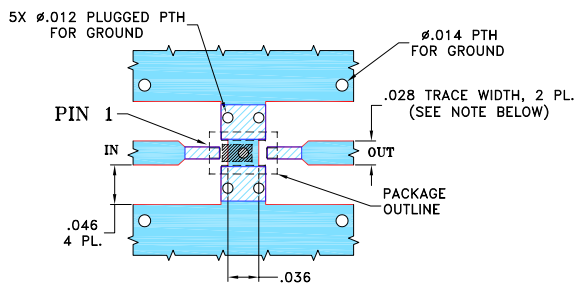
REV. A  
M151107  
ED-15034  
BPGE-252R+  
SL/CP  
200611  
Page 1 of 2

## Pad Connections

INPUT	1
OUTPUT	3
GROUND	2,4

## Product Marking: N/A

**Evaluation Board MCL P/N: TB-1022+**  
**Suggested PCB Layout (PL-547)**



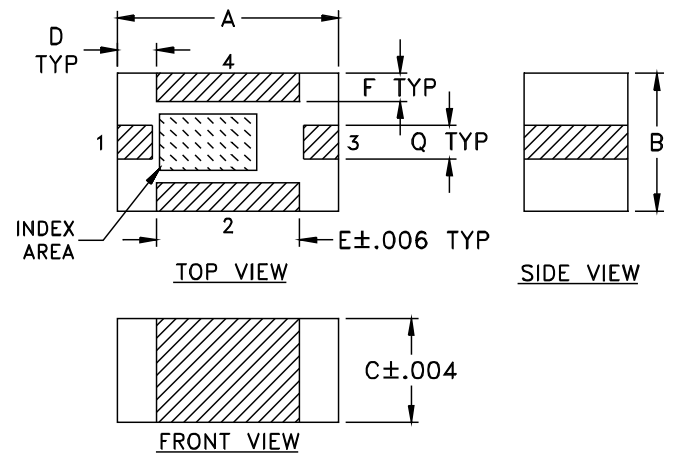
### NOTES:

- TRACE WIDTH IS SHOWN FOR FR4, GRADE IT-180TC (ITEQ CORP.) WITH DIELECTRIC THICKNESS  $.016 \pm .0015$ . COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP 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.

## Outline Drawing



### Outline Dimensions ( $\frac{\text{inch}}{\text{mm}}$ )

A	B	C	D	E	F	Q	wt
.079	.049	.037	.014	.051	.010	.012	grams
2.01	1.24	0.94	0.36	1.30	0.25	0.30	.020

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