

# Bandpass Filter

## BPF-A410+

50Ω 365 to 455 MHz

### Maximum Ratings

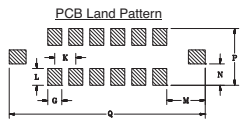
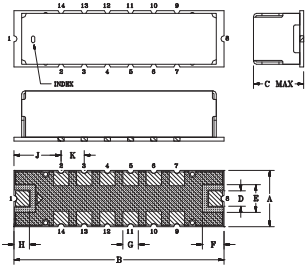
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	0.5W at 25°C

\*Passband rating, derate linearly to 0.25W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

RF IN	1
RF OUT	8
GROUND	2,3,4,5,6,7,9,10,11,12,13,14

### Outline Drawing



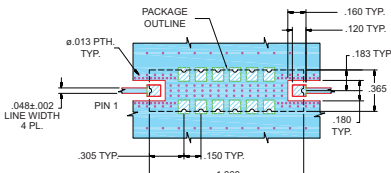
Suggested Layout  
Tolerance to be within ±.002

METALLIZATION SOLDER RESIST

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
.365	1.360	.35	.100	.180	.140	.100	.100
9.27	34.54	8.89	2.54	4.57	3.58	2.54	2.54
J	K	L	M	N	P	Q	wt.
.305	.150	.120	.275	.152	.405	1.400	grams
7.75	3.81	3.05	6.99	3.87	10.29	35.65	4.0

Demo Board MCL P/N: TB-363+  
Suggested PCB Layout (PL-227)



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

### Features

- Linear phase, up to ±8 deg typ @ Fc ± 45 MHz
- High rejection
- Shielded case
- Aqueous washable

### Applications

- Military communications
- Harmonic rejection
- Transmitters/receivers



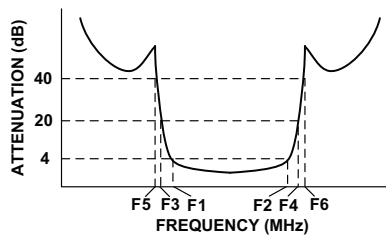
CASE STYLE: HQ1157  
PRICE: \$29.95 ea. QTY (1-9)

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

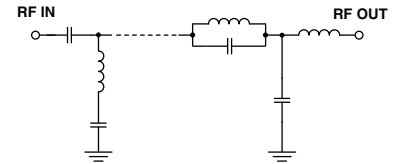
### Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 4dB)	STOPBANDS (MHz)				MAXIMUM DEVIATION FROM LINEAR PHASE (deg.)	VSWR (:1)		
		Loss > 20dB		Loss > 40dB			Passband		Stopband
Fc	F1 - F2	F3	F4	F5	F6	Fc ± 45MHz	Typ.	Max.	Typ.
410	365 - 455	300	515	275	535-2200	±15	1.5	1.9	20

### Typical Frequency Response

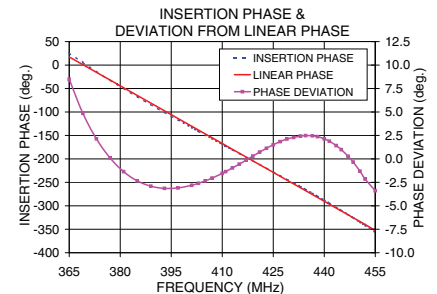
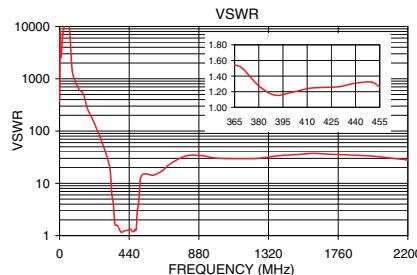
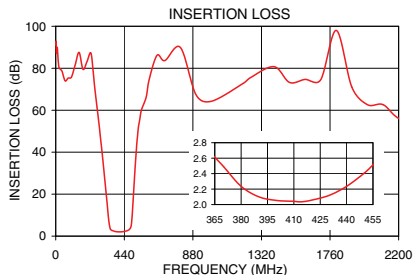


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Deviation from Linear Phase (deg.)
0.5	91.09	366.11	365.0	8.48
275	55.04	52.96	370.0	4.11
300	37.87	32.29	375.0	1.57
320	23.09	17.31	380.0	-0.69
330	15.36	6.44	390.0	-2.91
340	7.64	4.00	395.0	-3.16
365	2.61	1.54	400.0	-2.97
380	2.24	1.28	405.0	-2.41
410	2.04	1.24	410.0	-1.63
430	2.12	1.26	415.0	-0.66
455	2.51	1.26	419.0	0.19
485	5.28	1.36	425.0	1.41
490	9.11	2.80	430.0	2.18
495	15.26	3.43	435.0	2.48
515	38.52	13.23	440.0	2.14
535	53.84	15.14	445.0	0.99
1000	64.28	30.17	450.0	-1.06
2200	56.09	27.88	455.0	-4.08



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits 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-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

For detailed performance specs & shopping online see web site

REV. OR  
M117937  
EDR-8842AUF1  
BPF-A410+  
URJ/RAV  
121011  
Page 1 of 1