Surface Mount

Bandpass Filter

BPF-A400+

50Ω 390 to 410 MHz



CASE STYLE: HQ1157

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

Features

- Linear phase, up to ±6 deg typ @ Fc ± 15 MHz
- High rejection
- Shielded case
- Aqueous washable

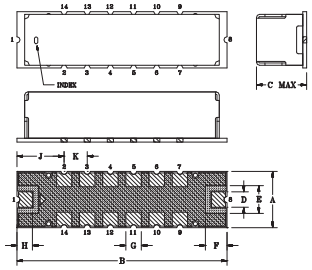
Applications

- Military communications
- Harmonic rejection
- Transmitters/receivers

+RoHS Compliant

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

Outline Drawing

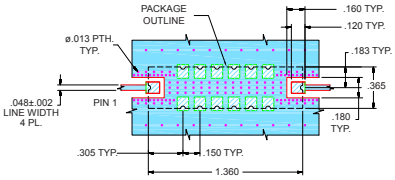


Outline Dimensions (inch / mm)

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.

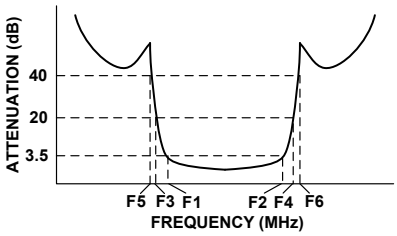
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

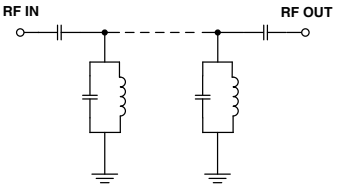
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz)	STOPBANDS (MHz)				MAXIMUM DEVIATION FROM LINEAR PHASE (deg.)	VSWR (:1)		
	(Loss < 3.5dB)	Loss > 20dB		Loss > 40dB			Passband		Stopband
Fc	F1 - F2	F3	F4	F5	F6	Fc ± 15MHz	Typ.	Max.	Typ.
400	390 - 410	350	490	320	600-2000	±13	1.5	1.9	20

Typical Frequency Response

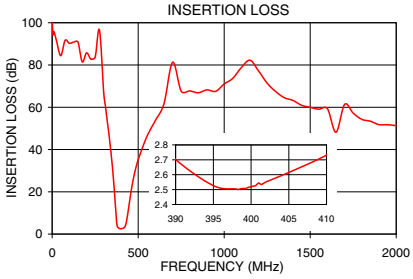


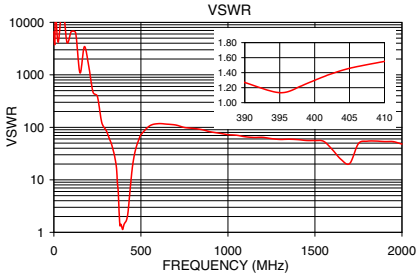
Functional Schematic

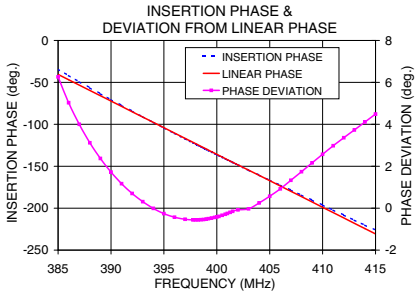


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Deviation from Linear Phase (deg.)
0.5	100.93	6634.72	385.0	6.26
320	53.72	59.78	386.0	5.03
350	31.89	27.00	388.0	3.12
360	22.26	16.63	390.0	1.72
370	10.66	5.88	392.0	0.70
375	5.46	2.34	394.0	-0.01
390	2.70	1.27	396.0	-0.43
395	2.53	1.13	398.0	-0.56
400	2.52	1.30	400.0	-0.42
405	2.62	1.46	401.0	-0.25
410	2.73	1.55	402.0	-0.08
430	5.17	3.22	404.0	0.25
440	9.94	7.75	406.0	0.92
460	20.71	26.92	408.0	1.74
490	32.37	60.49	410.0	2.57
600	53.76	117.41	412.0	3.36
1000	71.03	72.46	414.0	4.11
2000	51.29	47.99	415.0	4.49







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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