

# Surface Mount Bandpass Filter

## BPHI-370+

50Ω 350 to 390 MHz



Generic photo used for illustration purposes only  
CASE STYLE: HQ1157

### Features

- High rejection 70 dB typ.
- Wide stopband up to 4 GHz.
- Shielded package

### Applications

- Public safety communications
- Mobile satellite communication
- Air traffic control

### Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	—	—	370	—	MHz	
	Insertion Loss	F1-F2	350 - 390	—	2.0	3.5	dB
	VSWR	F1-F2	350 - 390	—	1.3	1.9	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 200	53	68	—	dB
		F3-F4	200 - 305	18	28	—	dB
Stop Band, Upper	Insertion Loss	F5-F6	430 - 550	18	28	—	dB
		F6-F7	550 - 2500	53	68	—	dB
		F7-F8	2500 - 4000	—	38	—	dB

### Maximum Ratings

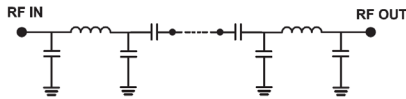
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	2 W

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

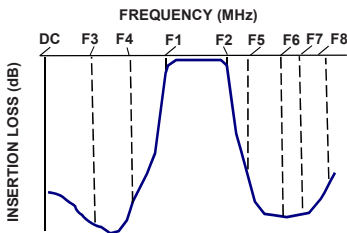
### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
10	98.83	455.24	350	20.91
200	66.29	206.66	352	20.32
305	31.53	56.90	354	19.86
318	21.17	29.26	356	19.51
325	13.95	14.51	358	19.29
335	3.78	2.51	360	19.18
350	1.43	1.27	362	19.17
360	1.41	1.30	364	19.23
370	1.42	1.15	366	19.33
380	1.66	1.37	368	19.42
390	2.07	1.23	370	19.54
396	3.44	1.72	372	19.67
413	24.66	28.50	374	19.86
421	32.83	42.74	376	20.14
430	40.27	56.21	378	20.55
550	74.41	115.57	380	21.09
2000	71.40	43.83	382	21.78
2500	83.30	28.85	384	22.66
3000	84.83	30.25	386	23.80
4000	49.28	44.77	390	27.32

### Functional Schematic

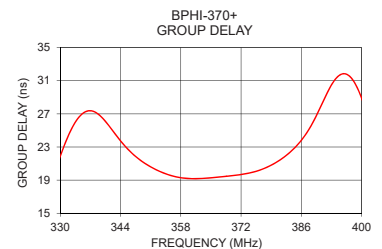
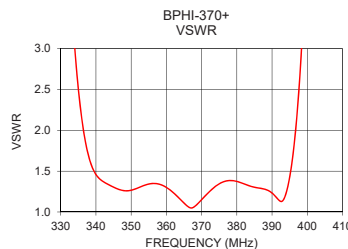
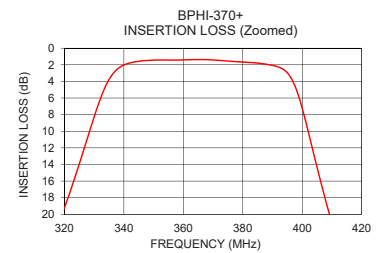
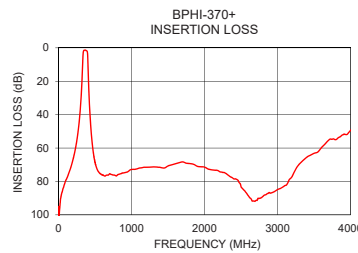


### Typical Frequency Response



### +RoHS Compliant

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



### Notes

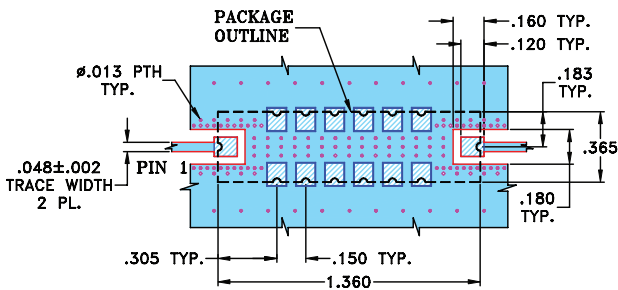
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## Pad Connections

INPUT	1
OUTPUT	8
GROUND	2-7,9-14

**Demo Board MCL P/N: TB-BPHI-370+**  
**Suggested PCB Layout (PL-227)**

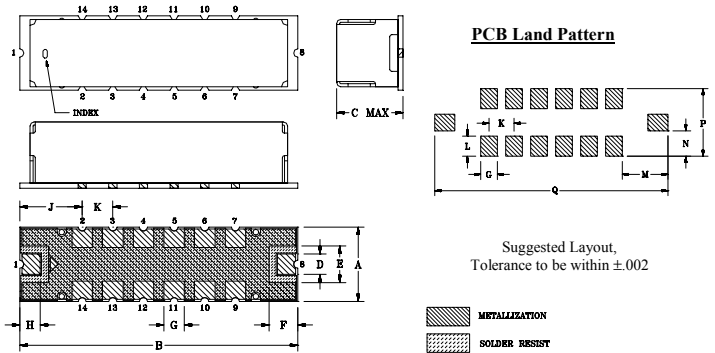


**NOTE:**

- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS  $.025 \pm .002$ ". 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 SOLDERMASK

## 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	3.56	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	3.86	10.29	35.56	4.0

*Note: Please refer to case style drawing for details*

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