

# Bandpass Filter

## BPF-A580+

50Ω 520 to 640 MHz

### Maximum Ratings

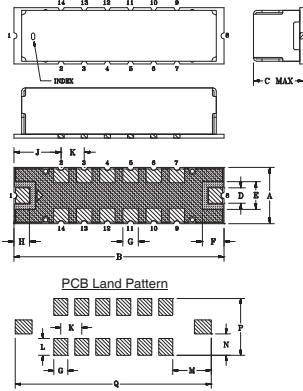
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	0.5W at 25°C

\*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,-7,9-14

### Outline Drawing



Suggested Layout  
Tolerance to be within ±.002

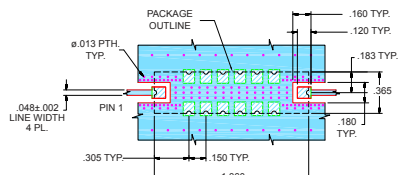
METALLIZATION SOLDER RESIST

### Outline Dimensions (inch)

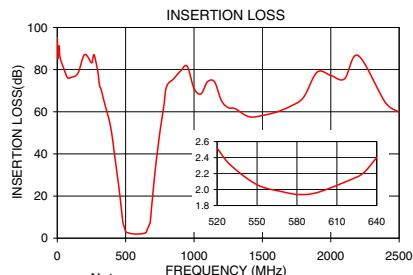
A	B	C	D	E	F	H
.365	1.360	.35	.100	.180	.140	.100
9.27	34.54	8.89	2.54	4.57	3.56	2.54
J	K	L	M	N	P	Wt.
.305	.150	.120	.275	.152	.405	1.400
7.75	3.81	3.05	6.99	3.86	10.29	35.56
						4.0

Note: Please refer to case style drawing for details

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



- NOTES:
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .0027 ± .0002" 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 ±6 deg typ @ Fc ± 60 MHz
- High rejection
- Shielded case
- Aqueous washable

### Applications

- Military radio
- Harmonic rejection
- Transmitters/receivers



Generic photo used for illustration purposes only

CASE STYLE: HQ1157

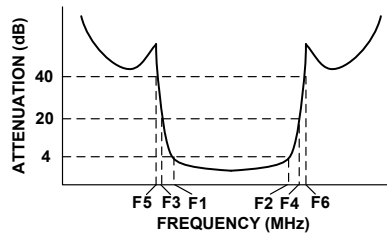
### +RoHS Compliant

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

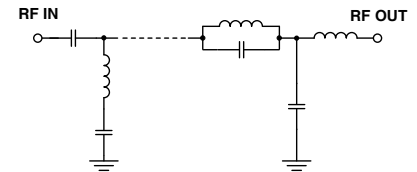
### Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

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 ± 60MHz	Typ.	Max.	Typ.
580	520 - 640	440	720	380	760-2500	±11	1.4	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	95.26	1980.07	520	3.84
100	76.30	2647.93	525	1.52
380	56.02	53.15	530	-0.14
440	29.37	19.85	540	-1.98
465	16.02	7.35	550	-2.34
480	7.55	4.68	560	-1.72
495	4.19	2.23	570	-0.83
520	2.52	1.63	575	-0.48
550	2.06	1.39	580	0.26
580	1.94	1.32	585	1.02
600	1.99	1.27	590	1.75
640	2.40	1.18	595	2.42
670	5.93	2.39	600	2.96
690	14.73	6.25	610	3.45
720	34.40	17.09	620	2.68
760	54.52	17.82	630	0.01
1000	71.03	23.12	635	-2.33
2500	59.76	27.65	640	-5.52

