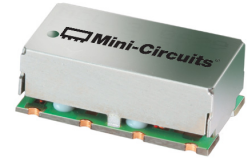


Surface Mount Bandpass Filter

50Ω 460 to 560 MHz

SXBP-507+



Generic photo used for illustration purposes only
CASE STYLE: HF1139

Maximum Ratings

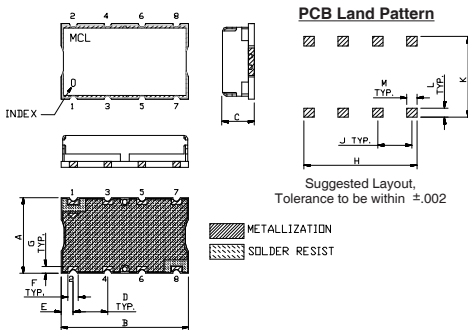
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max.

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

Pin Connections

INPUT	1
OUTPUT	8
GROUND	2, 3, 4, 5, 6, 7

Outline Drawing

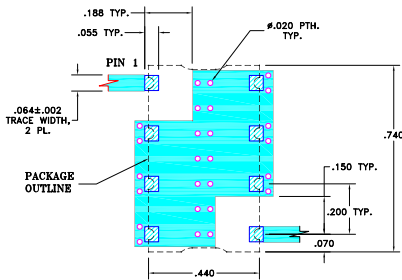


Outline Dimensions (inch/mm)

A	B	C	D	E	F	
.44	.74	.27	.200	.07	.060	
11.18	18.80	6.86	5.08	1.78	1.52	
G	H	J	K	L	M	wt.
.040	.660	.200	.470	.055	.060	grams
1.02	16.76	5.08	11.94	1.40	1.52	3.0

Note: Please refer to case style drawing for details

Demo Board MCL P/N: TB-368 Suggested PCB Layout (PL-230)



- NOTE:
- 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.
 - 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

- high rejection
- flat group delay @ passband
- shielded case
- aqueous washable

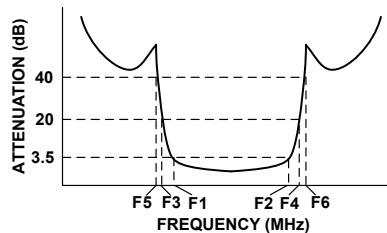
Applications

- mobile TV
- receivers / transmitters
- harmonic rejection

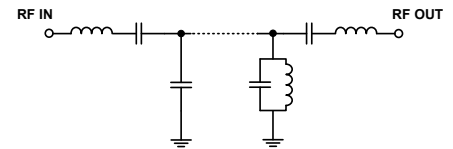
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 3.5dB)	STOPBANDS (MHz)				VSWR (:1)		
		Loss > 20dB		Loss > 40dB		Passband		Stopband
F _c	F ₁ - F ₂	F ₃	F ₄	F ₅	F ₆	Typ.	Max.	Typ.
507	460 - 560	300	615	220	635 - 2250	1.6	2.0	20

Typical Frequency Response

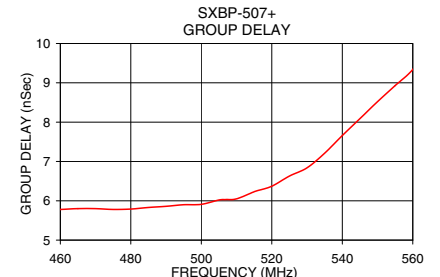
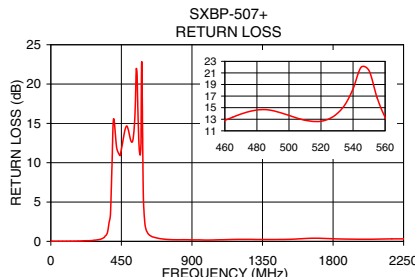
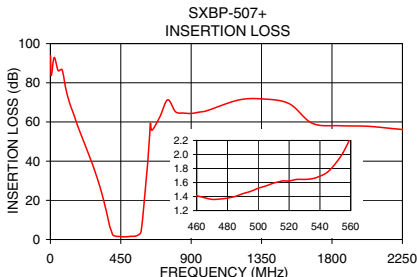


Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	\bar{x}	σ			
1.0	93.82	5.84	0.00	460.0	5.78
220.0	48.63	0.24	0.07	465.0	5.80
300.0	31.19	0.27	0.20	470.0	5.80
345.0	18.59	0.38	0.64	475.0	5.78
372.0	9.38	0.47	2.44	480.0	5.79
390.0	4.39	0.30	9.47	485.0	5.83
400.0	2.24	0.13	15.57	495.0	5.90
460.0	1.41	0.06	12.80	500.0	5.91
485.0	1.40	0.03	14.67	505.0	6.02
507.0	1.57	0.05	13.05	510.0	6.05
545.0	1.75	0.03	21.96	515.0	6.23
560.0	2.24	0.04	13.37	520.0	6.37
580.0	4.33	0.77	22.73	530.0	6.84
590.0	10.81	1.85	5.86	535.0	7.21
600.0	19.67	1.84	2.25	540.0	7.66
615.0	32.88	1.92	1.17	550.0	8.52
635.0	53.72	1.69	0.72	555.0	8.93
2250.0	56.17	0.13	0.32	560.0	9.34



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.
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