

Surface Mount Bandpass Filter

BPF-B140W+

50Ω 135 to 145 MHz

Maximum Ratings

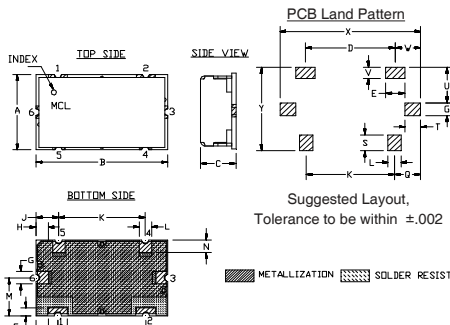
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max.

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

Pin Connections

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

Outline Drawing

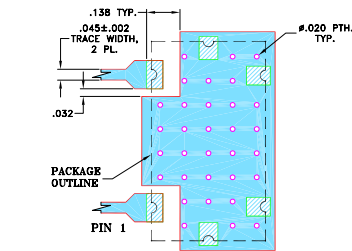


Outline Dimensions (inch/mm)

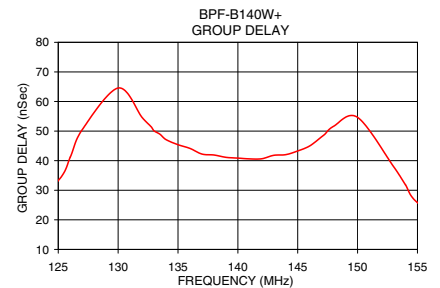
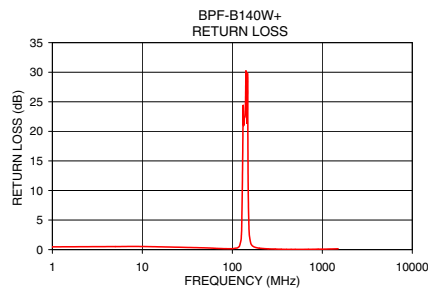
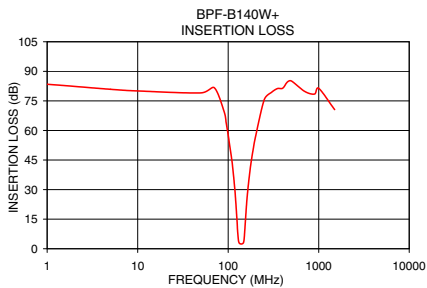
A	B	C	D	E	F	G	H	J	K	L	M
.472"	.826"	.220"	.551"	.118"	.047"	.078"	.076"	.142"	.543"	.078"	.236"
11.99	20.98	5.59	14.00	3.00	1.19	1.98	1.92	3.61	13.79	1.98	5.99
N	P	Q	S	T	U	V	W	X	Y	wt	
.079"	.138"	.162"	.098"	.096"	.217"	.067"	.157"	.866"	.512"	grams	
2.01	3.51	4.11	2.49	2.44	5.51	1.70	3.99	22.00	13.00	6.0	

Note: Please refer to case style drawing for details

Demo Board MCL P/N: TB-400+ Suggested PCB Layout (PL-247)



- NOTES:
- 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 SOLDERMASK



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

Features

- Excellent rejection
- Flat group delay @ passband
- Good VSWR, 1.2:1 typ. @ passband

Applications

- Receivers/transmitters
- Point-to-point communication
- Base station



Generic photo used for illustration purposes only

CASE STYLE: HZ1198

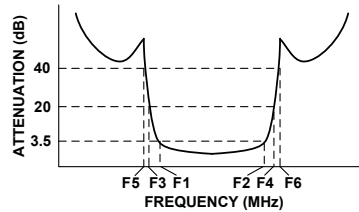
+RoHS Compliant

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

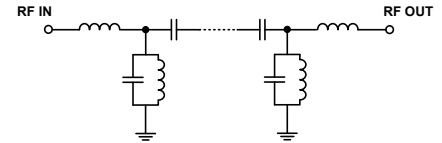
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 3.5dB) F1 - F2	STOPBANDS (MHz)				VSWR (:1)	
		Loss > 20dB		Loss > 40dB		Passband Max.	Stopband Typ.
		F3	F4	F5	F6		
140	135 - 145	117	165	105	190 - 1500	1.4	30

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	83.42	4.30	0.47	125.0	34.69
105.0	51.15	0.27	0.21	127.0	53.10
117.0	32.69	0.19	0.42	130.0	64.24
120.0	26.89	0.21	0.58	132.0	53.65
125.0	14.72	0.27	1.67	133.0	49.73
127.0	9.37	0.26	3.46	135.0	45.27
130.0	3.99	0.12	13.85	136.0	43.58
135.0	2.57	0.02	21.59	138.0	41.67
140.0	2.41	0.01	24.85	139.0	40.68
145.0	2.65	0.03	21.37	140.0	40.37
150.0	4.81	0.12	10.72	142.0	40.77
153.0	10.08	0.22	3.68	144.0	41.90
160.0	23.18	0.19	1.11	145.0	43.19
165.0	30.16	0.16	0.73	147.0	47.86
190.0	51.09	0.28	0.30	148.0	51.21
500.0	85.08	5.75	0.05	150.0	54.51
1000.0	81.36	5.03	0.07	153.0	37.79
1500.0	70.58	2.37	0.15	155.0	26.29