

Bandpass Filter

BPF-B140N+

50Ω 137 to 143 MHz

Maximum Ratings

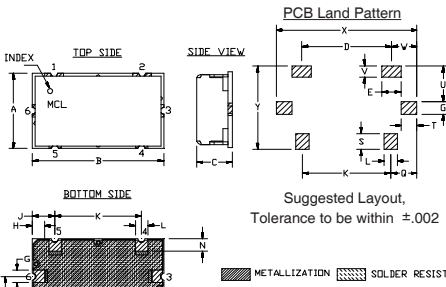
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max.

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

Pin Connections

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

Outline Drawing

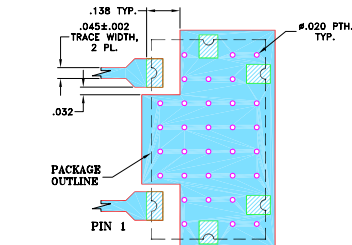


Outline Dimensions (inch/mm)

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

Features

- Excellent rejection
- Flat group delay @ passband
- Good VSWR, 1.3:1 typ. @ passband

Applications

- Receivers/transmitters
- PMR / PAMR
- Base station



Generic photo used for illustration purposes only
CASE STYLE: HZ1198

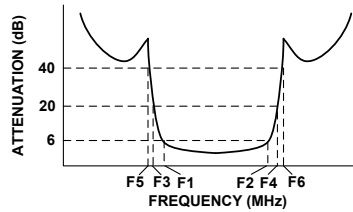
+RoHS Compliant

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

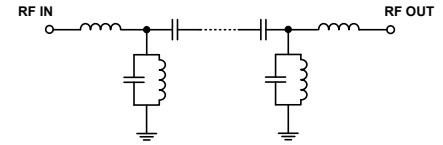
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 6dB) F1 - F2	STOPBANDS (MHz)				VSWR (:1)	
		Loss > 20dB F3	Loss > 40dB F4	F5	F6	Passband Max.	Stopband Typ.
140	137 - 143	126	154	119	165 - 1500	1.6	30

Typical Frequency Response

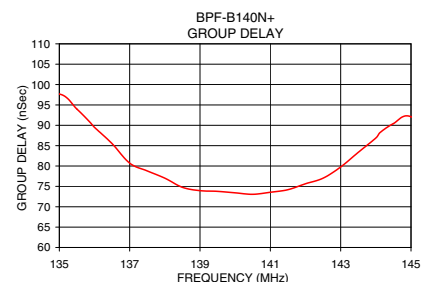
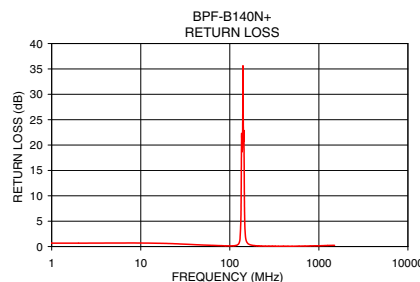
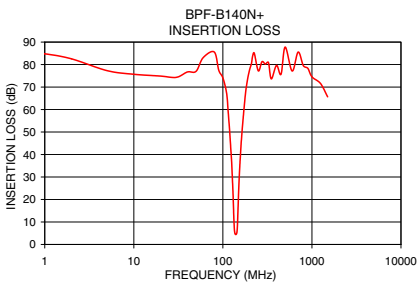


Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	\bar{x}	σ			
1.0	84.10	3.17	0.67	135.0	96.41
119.0	51.15	0.38	0.25	136.0	90.34
126.0	35.29	0.32	0.57	137.0	83.07
130.0	22.83	0.33	1.41	137.5	79.66
133.0	11.59	0.34	4.96	138.0	78.33
134.0	8.44	0.29	8.99	138.5	76.61
137.0	4.71	0.08	19.03	139.0	75.42
140.0	4.32	0.07	27.57	139.5	74.79
143.0	4.83	0.08	20.72	140.0	74.28
146.0	9.03	0.34	8.53	140.5	74.18
148.0	15.72	0.39	3.44	141.0	74.84
154.0	32.74	0.33	1.01	141.5	75.90
165.0	51.19	0.44	0.43	142.0	76.78
200.0	76.29	2.43	0.15	142.5	78.59
400.0	80.32	3.07	0.07	143.0	81.75
800.0	81.57	3.51	0.13	143.5	85.13
1000.0	77.76	4.06	0.16	144.0	88.85
1500.0	66.03	1.78	0.24	145.0	92.31



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.
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