Surface Mount

Bandpass Filter

BPF-B190+

50Ω 185 to 195 MHz



CASE STYLE: HZ1198

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

Features

- Excellent rejection
- Flat Group Delay @ Passband
- Good VSWR, 1.15:1 typ. @ Passband

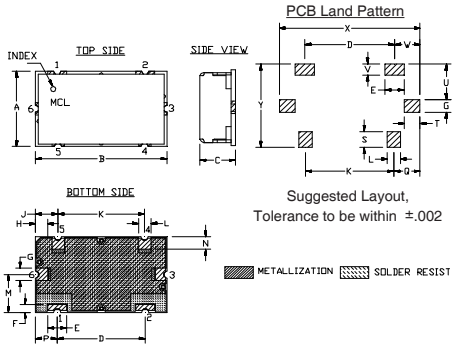
Applications

- Receivers / Transmitters
- Radio microphones
- Military communication

+RoHS Compliant

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

Outline Drawing

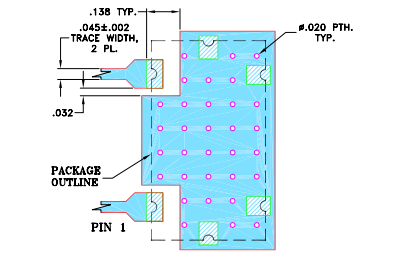


Outline Dimensions (inch / mm)

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	
.079"	.138"	.162"	.098"	.096"	.217"	.067"	.157"	.866"	.512"	wt
2.01	3.51	4.11	2.49	2.44	5.51	1.70	3.99	22.00	13.00	grams
										6.0

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



NOTES:
1. 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.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

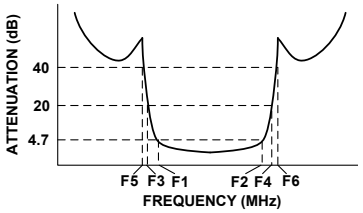
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

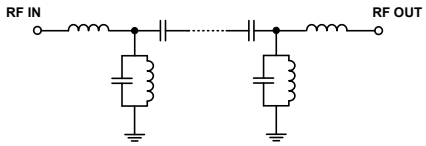
Bandpass Filter Electrical Specifications (T_{AMB}= 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 4.7dB) F1 - F2	STOPBANDS (MHz) Loss > 20dB F3	F4	Loss > 40dB F5	F6	VSWR (:1) Passband Max.	Stopband Typ.
190	185 - 195	170	212	155	230 - 2000	1.5	30

Typical Frequency Response



Functional Schematic



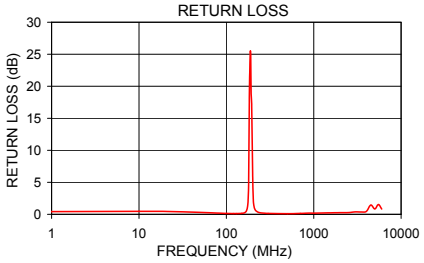
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB) x̄	σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
1.0	83.66	0.86	0.42	183.0	66.14
155.0	54.14	0.72	0.18	184.0	60.77
170.0	32.66	0.88	0.55	185.0	56.86
175.0	22.01	1.08	1.21	186.0	52.82
179.0	11.55	1.21	3.47	187.0	50.61
182.0	5.48	0.57	11.84	188.0	49.31
185.0	3.75	0.09	21.84	188.5	48.83
190.0	3.37	0.03	24.85	189.0	48.56
195.0	3.85	0.13	17.06	189.5	48.12
198.0	5.70	0.73	14.31	190.0	47.85
201.0	11.44	1.32	4.25	190.5	47.87
205.0	20.72	1.15	1.71	191.0	47.74
212.0	33.12	0.82	0.80	192.0	47.53
230.0	52.25	0.54	0.34	193.0	49.08
500.0	81.70	0.63	0.10	194.0	50.24
700.0	78.33	0.57	0.14	195.0	53.06
1000.0	72.87	0.33	0.18	196.0	56.55
2000.0	57.07	0.29	0.26	197.0	60.98

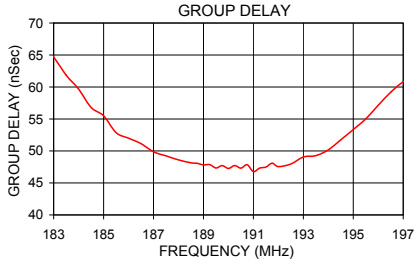
BPF-B190+
INSERTION LOSS



BPF-B190+
RETURN LOSS



BPF-B190+
GROUP DELAY



Notes

A. 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.
B. 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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