Surface Mount

Bandpass Filter

BPF-B199+

50Ω 194 to 204 MHz

CASE STYLE: HZ1198

The Big Deal

- Narrow band filter (BW of 5%)
- Excellent VSWR (1.2:1 typical)
- Wide stopband rejection till 2GHz (70 dB typical)
- Fast roll-off

Product Overview

The BPF-B199+ is a narrow-band bandpass filter in a shielded package (size of 0.472" x 0.826" x .22") fabricated using SMT technology. Covering 199 MHz ± 5 MHz band width, these units offer good matching within the passband and high rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Narrow bandwidth filter (fractional bandwidth of 5%)	Provides sharp rejection which rejects adjacent channel.
Excellent VSWR, 1.2:1 typical in passband	The model has very good return loss for a narrow bandwidth which provides good matching when used with other devices.
More than 50dB rejection up to 2000MHz	This enables the filter to attenuate spurious signals and reject harmonics for broad band of frequency.
Shielded case	Reduced interference with the surrounding components.

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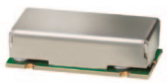


CASE STYLE: HZ1198
PRICE: $15.95 ea. QTY (1-9)

Features

- Excellent VSWR, 1.2:1 typical in passband
- High rejection, 70 dB typical
- Sharp insertion loss roll-off
- Shielded case
- Aqueous washable

Applications

- Harmonic rejection
- Transmitters / receivers
- Radio communications

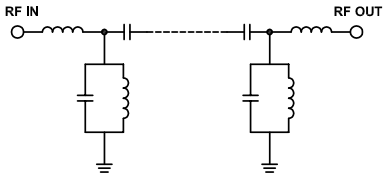
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	199	—	MHz
	Insertion Loss	F1-F2	194-204	—	4.2	5	dB
	VSWR	F1-F2	194-204	—	1.2	1.5	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-179	20	31	—	dB
	VSWR	DC-F3	DC-179	—	24	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	221-2000	20	30	—	dB
	VSWR	F4-F5	221-2000	—	16	—	:1

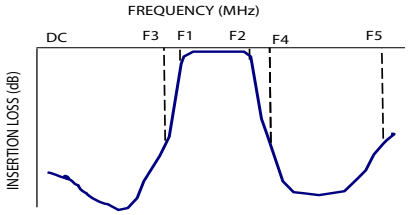
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.25W max.

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

Functional Schematic



Typical Frequency Response

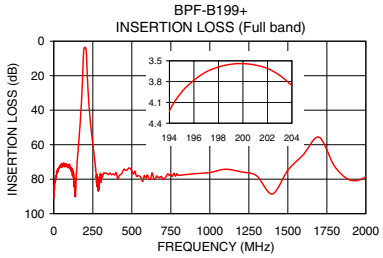


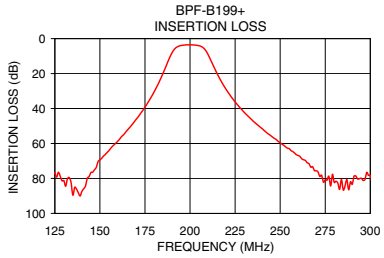
Typical Performance Data at 25°C

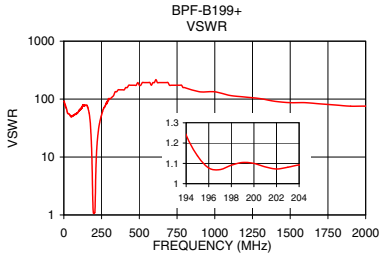
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	91.17	91.43	194.0	55.90
50.0	73.13	51.10	194.5	55.29
100.0	72.40	62.05	195.0	54.50
164.0	53.90	64.35	195.5	53.60
179.0	32.48	27.16	196.0	52.67
186.0	17.49	9.38	196.5	51.78
189.0	10.16	4.09	197.0	50.93
194.0	4.22	1.24	197.5	50.19
199.0	3.55	1.10	198.0	49.54
204.0	3.86	1.09	198.5	49.02
208.0	5.90	1.71	199.0	48.67
212.0	13.43	5.36	199.5	48.40
221.0	30.59	17.93	200.0	48.25
239.0	50.71	41.37	200.5	48.23
500.0	75.12	173.72	201.0	48.34
1000.0	76.18	133.63	201.5	48.57
1300.0	78.02	102.19	202.0	48.92
1500.0	74.83	86.86	202.5	49.40
1700.0	55.64	82.73	203.5	50.67
2000.0	78.44	75.53	204.0	51.37

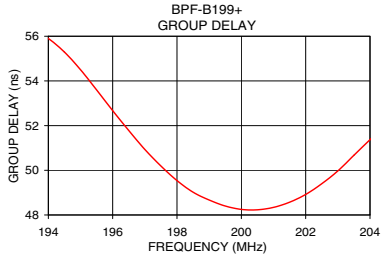
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.









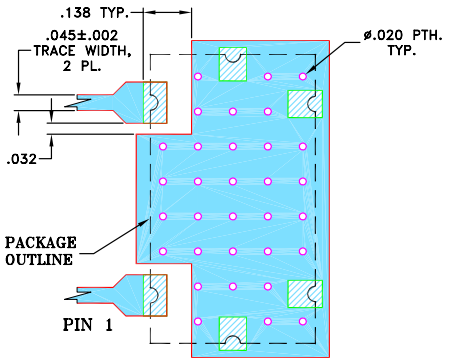
For detailed performance specs & shopping online see web site

REV. OR
M130713
BPF-B199+
EDR-10021
RAV/URJ/NY
110321

Pad Connections

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

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

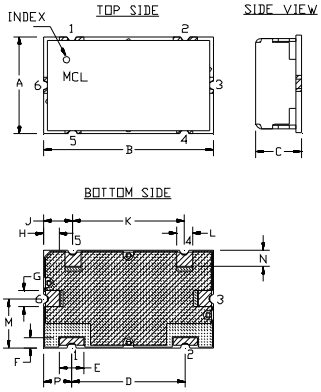


NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

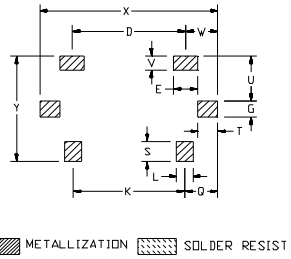
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Outline Drawing



PCB Land Pattern



METALLIZATION SOLDER RESIST

Suggested Layout,
Tolerance to be within ±.002

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	1.93	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