Metal Shield

Bandpass Filter

RBP-173+

50Ω 160 to 185 MHz



Generic photo used for illustration purposes only

CASE STYLE: GP731

+RoHS Compliant

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500,1000

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W at 25ºC

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

Pin Connections

RF IN	2
RF OUT	6
GROUND	1,3,4,5,7,8

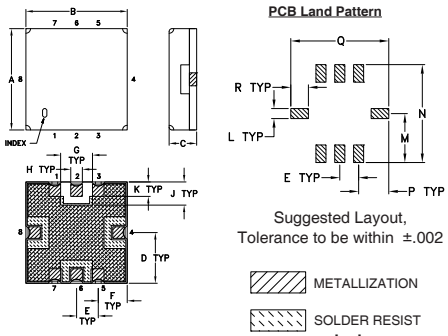
Features

- linear phase, up to ±4 deg typ. @ Fc ±15MHz
- good VSWR,1.2:1 typ. @ passband
- small size 0.35" x 0.35"
- shielded case
- aqueous washable

Applications

- harmonic rejection
- transmitters / receivers
- WiMAX

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J
.350	.350	.100	.175	.075	.100	.110	.040	.080
8.89	8.89	2.54	4.45	1.91	2.54	2.79	1.02	2.03

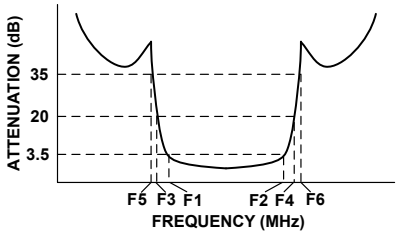
K	L	M	N	P	Q	R	wt
.050	.040	.195	.390	.120	.390	.070	grams
1.27	1.02	4.95	9.91	3.05	9.91	1.78	0.25

Note: Please refer to case style drawing for details

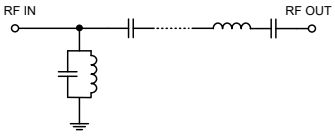
Bandpass Filter Electrical Specifications (T_{AMB}= 25ºC)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 3.5dB)	STOPBANDS (MHz) Loss > 20dB		Loss > 35dB		MAXIMUM DEVIATION FROM LINEAR PHASE (deg.)	VSWR (:1) Passband	Stopband
Fc	F1 - F2	F3	F4	F5	F6	Fc ± 15MHz	Max.	Typ.
172.5	160 - 185	129	230	80	245-1500	±10	1.8	18

Typical Frequency Response



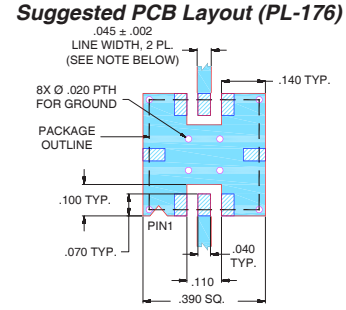
Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Deviation from Linear Phase (deg)
0.3	102.77	579.06	157.5	3.47
20.0	70.70	217.15	159.0	1.84
80.0	45.56	78.97	160.0	1.01
129.0	33.58	24.14	162.0	-0.18
135.0	22.36	16.89	164.0	-0.88
142.0	11.22	7.63	166.0	-1.19
147.0	5.37	3.21	168.0	-1.25
160.0	2.37	1.40	170.0	-1.06
172.5	1.93	1.21	172.5	-0.60
185.0	2.24	1.14	175.0	-0.03
198.0	5.23	2.77	177.0	0.39
207.0	11.55	7.80	179.0	0.67
220.0	22.78	19.32	181.0	0.80
230.0	31.33	28.96	183.0	0.71
245.0	45.94	42.38	185.0	0.28
700.0	56.26	78.97	186.0	-0.11
1500.0	51.03	29.46	187.5	-0.95

Demo Board MCL P/N: TB-332
Suggested PCB Layout (PL-176)

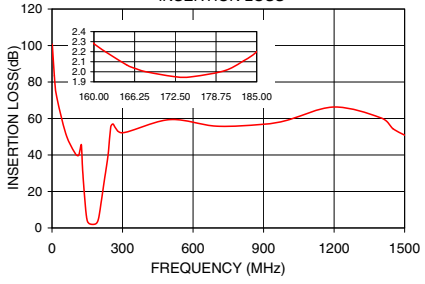


NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

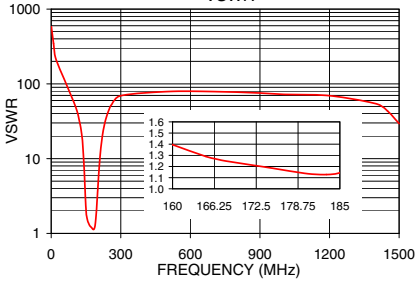
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

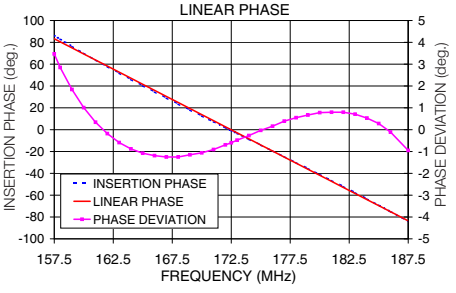
RBP-173+
INSERTION LOSS



RBP-173+
VSWR



RBP-173+
INSERTION PHASE & DEVIATION FROM LINEAR PHASE



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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www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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