

50Ω

130 to 150 MHz

The Big Deal

- Good VSWR, 1.35:1 typical
- High rejection, 40 dB typical
- Linear phase
- Symmetrical band pass response
- Small size 0.35" x 0.35" x 0.10"



Generic photo used for illustration purposes only
CASE STYLE: GP731

Product Overview

The RBP-140+ is a narrow-band bandpass filter in a small shielded package (size of 0.35" x 0.35" x .10") fabricated using SMT technology. The RBP-140+ offers a symmetrical bandpass and linear phase characteristics. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Small size, 0.35" x 0.35" x 0.10"	The unique surface mount package enables the RBP-140+ to be used in compact designs.
More than 40 dB rejection up to 3000MHz	This enables the filter to attenuate spurious signals and reject harmonics for broad band of frequency.
Symmetrical band pass response	Uniform passband insertion loss.
Minimal phase deviation over attenuation range, $\pm 7^\circ$ typical at $F_c \pm 15$ MHz	Can provide low signal distortion over the attenuation range
Good VSWR, 1.35:1 typical in Passband	The RBP-140+ has very good return loss for a narrow bandwidth which provides good matching when used with other devices.

Notes

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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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Surface Mount Bandpass Filter

50Ω 130 to 150 MHz

RBP-140+



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CASE STYLE: GP731

Features

- High rejection, 40dB typical
- Linear phase, up to $\pm 7^\circ$ typical over $F_c \pm 15\text{MHz}$
- Good VSWR, 1.35:1 typical in passband
- Small size 0.35" x 0.35" x 0.1"
- Shielded case
- Aqueous washable

Applications

- Mobile application
- Space research
- Defence system
- Satellite

Electrical Specifications at 25°C

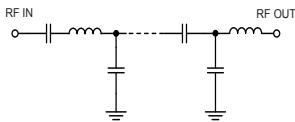
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	F_c		140		MHz
	Insertion Loss	F1-F2		2.6	3.5	dB
	VSWR	F1-F2		1.35	1.7	:1
Stop Band, Lower	Insertion Loss	DC-F3	20	29		dB
	VSWR	DC-F3		25		:1
Stop Band, Upper	Insertion Loss	F4-F5	20	27		dB
	VSWR	F4-F5		13		:1
Maximum Deviation from Linear Phase		$F_c \pm 15\text{MHz}$		± 9	± 14	deg

Maximum Ratings

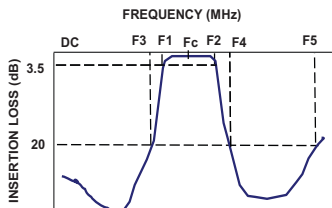
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.3W max.

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

Functional Schematic



Typical Frequency Response

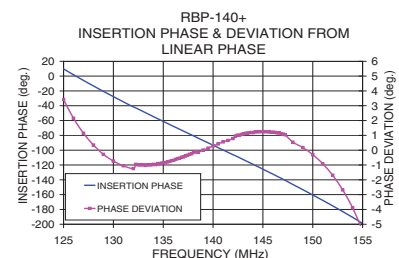
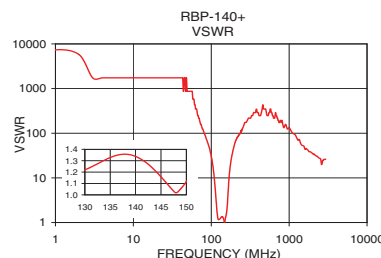
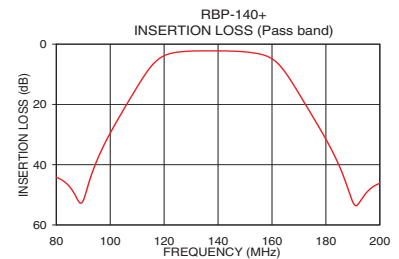
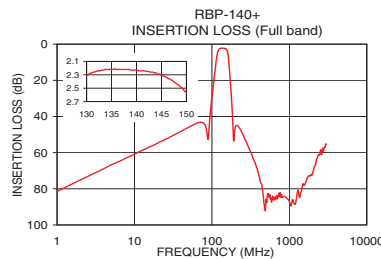


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Deviation from Linear Phase (deg)
1	81.53	7360.92	125.00	3.42
60	44.27	579.06	126.00	2.16
100	29.51	31.03	128.00	0.35
109	15.66	10.56	130.00	-0.73
114	8.73	4.20	132.00	-1.24
120	3.83	1.44	134.24	-0.97
125	2.66	1.16	134.44	-0.93
130	2.31	1.22	136.24	-0.62
140	2.23	1.34	138.24	-0.12
150	2.57	1.11	140.00	0.29
161	5.47	2.56	142.24	0.96
166	10.71	6.05	144.24	1.24
178	28.39	22.29	146.04	1.21
180	31.55	25.19	146.84	1.11
182	34.88	28.03	147.04	1.08
190	52.41	40.41	148.00	0.54
200	46.17	57.91	150.00	-0.30
600	85.00	289.53	151.00	-0.91
2200	65.48	31.60	153.00	-2.68
3000	55.39	26.33	155.00	-5.42

+RoHS Compliant

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



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REV. A
M174392
RBP-140+
EDR-9829AU
RAV/URJ/NY
200916
Page 2 of 3

INPUT	2
OUTPUT	6
GROUND	1.3.4.5.7.8

$.045 \pm .002$
 LINE WIDTH, 2 PL.
 (SEE NOTE BELOW)

8X $\phi .020$ PTH
 FOR GROUND

PACKAGE
 OUTLINE

$.140$ TYP.

$.100$ TYP.

$.070$ TYP.

PIN 1

$.110$

$.040$ TYP.

$.390$ SQ.

-

Outline Dimensions ($\frac{\text{inch}}{\text{mm}}$)

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

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