

Surface Mount

Low Pass Filter

RLP-1094+

50Ω

DC to 1094 MHz

The Big Deal

- Passband (DC to 1094 MHz)
- Low Insertion Loss (0.7 dB typical)
- Good VSWR (1.4:1 typical)
- High Rejection
- Very small size (0.35" x 0.35" x 0.10")
- High power handling (3.5 W)



CASE STYLE: GP731

Product Overview

The RLP-1094+ is a Lowpass filter fabricated using SMT technology. Covering up to 1094 MHz, this model offers very low passband insertion loss of 0.7 dB typical, good matching within the passband and high rejection. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Good VSWR, 1.4:1 typical in passband	This provides well matched input and output ports.
Flat group delay characteristics	The model has a group delay flatness of 0.5 nsec which helps in reducing the signal distortion.
More than 40 dB rejection up to 3400 MHz	This enables the filter to attenuate spurious signals and reject harmonics over a broad frequency band.
Small size, 0.35" x 0.35" x 0.10"	The surface mount package enables the RLP-1094+ to be used in compact designs.
Shielded case	Reduced interference with and from the surrounding components.



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IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

For detailed performance specs
& shopping online see web site

Low Pass Filter

50Ω

DC to 1094 MHz

RLP-1094+



CASE STYLE: GP731

PRICE: \$7.95 ea. QTY (10-24)

Features

- High rejection
- Good VSWR, 1.4:1 typical in passband
- Aqueous washable

Applications

- TV Broad casting
- Wireless communications
- VHF/UHF receivers / transmitters
- Military

Electrical Specifications at 25°C

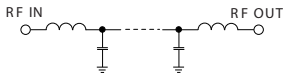
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 1094	—	0.7	1.0 dB
	Freq. Cut-Off	F2	1380	—	3.0	dB
	VSWR	DC-F1	DC - 1094	—	1.4	:1
Stop Band	Rejection Loss	F3-F4	1700 - 3650	20	28	dB
	VSWR	F3-F4	1700 - 3650	—	37	:1

Maximum Ratings

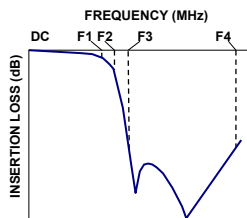
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	3.5W max.

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

Functional Schematic



Typical Frequency Response

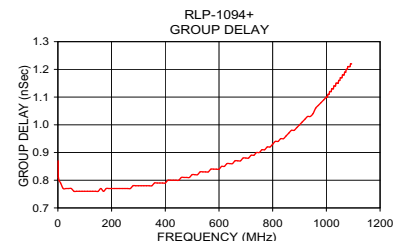
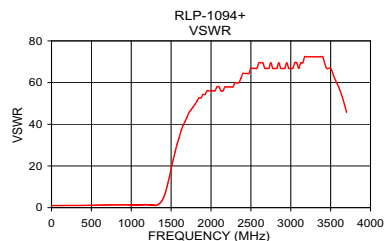
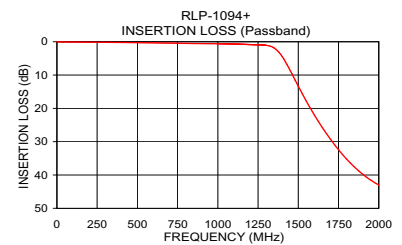
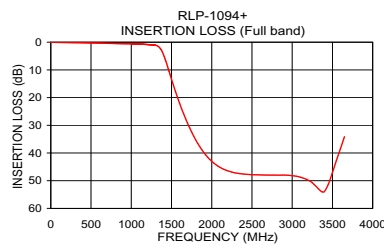


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	0.02	1.00	1.0	0.87
20.0	0.04	1.01	2.0	0.81
80.0	0.09	1.03	10.0	0.79
300.0	0.18	1.04	20.0	0.77
640.0	0.37	1.24	70.0	0.76
1000.0	0.61	1.34	100.0	0.76
1050.0	0.66	1.35	150.0	0.76
1094.0	0.72	1.39	200.0	0.77
1130.0	0.79	1.43	300.0	0.78
1250.0	0.95	1.34	400.0	0.79
1350.0	1.85	1.84	450.0	0.80
1380.0	3.18	3.05	500.0	0.82
1430.0	6.98	7.47	600.0	0.84
1500.0	13.50	18.50	650.0	0.86
1650.0	25.90	39.49	700.0	0.88
1700.0	29.36	43.44	800.0	0.93
1900.0	39.84	54.29	900.0	1.00
2300.0	47.40	59.91	1000.0	1.10
3400.0	53.85	72.39	1050.0	1.16
3650.0	35.73	52.65	1094.0	1.22

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

The +Suffix has been added in order to identify RoHS Compliance.
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REV. OR
M130746
RLP-1094+
EDR-9915UF
RAV/URJ/NY
110728
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.

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Figure 1 shows the dimensions and nomenclature of the test specimen. The top view is a square with side length A and B. The thickness is C. The specimen is divided into regions 1 through 8. Region 1 is the center, and regions 2 through 8 are the edges and corners. A legend indicates that hatched areas represent METALLIZATION and cross-hatched areas represent SOLDER RESIST. A dimension line labeled 'INDEX' points to the center of the specimen.

Suggested Layout,
Tolerance to be within $\pm .002$

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