

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

For detailed performance specs
& shopping online see web site

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.

Low Pass Filter

50Ω

DC to 1094 MHz

RLP-1094+



CASE STYLE: GP731

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

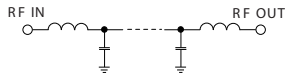
Features

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

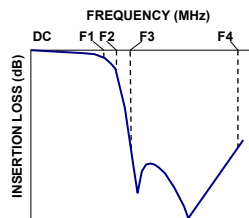
Applications

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

Functional Schematic



Typical Frequency Response



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	1.9 :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.

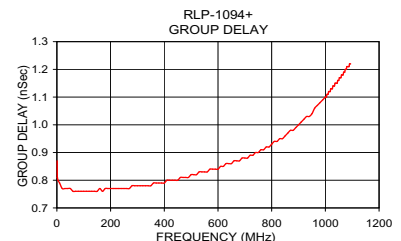
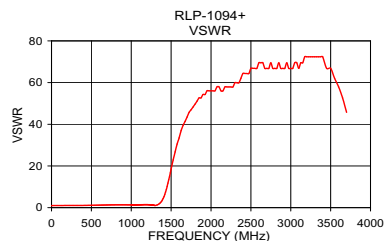
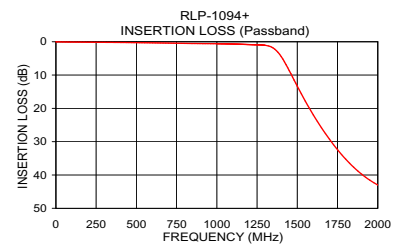
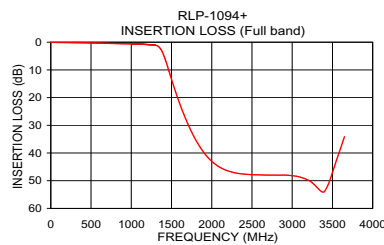
Permanent damage may occur if any of these limits are exceeded.

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. See our web site for RoHS Compliance methodologies and qualifications.



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INPUT	2
OUTPUT	6
GROUND	1,3,4,5,7,8

Figure 1: Dimensions of the package outline. The diagram shows a square package with a central square cutout. Key dimensions include: overall width and height of .390 SQ.; central cutout width of .140 TYP.; distance from the left edge to the cutout center of .110; distance from the bottom edge to the cutout center of .110; distance from the left edge to the first pin of .100 TYP.; distance from the bottom edge to the first pin of .070 TYP.; and a central pin labeled 'PIN 1'. A note specifies 'LINE WIDTH, 2 PL (SEE NOTE BELOW)' and another note indicates '8X .0020 PTH FOR GROUND'.

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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