Surface Mount

High Pass Filter

RHP-700+

50Ω 700 to 3000 MHz

The Big Deal

- Low insertion loss
- High rejection
- Good return loss

Generic photo used for illustration purposes only
CASE STYLE: GP1212

Product Overview

RHP-700+ is a 50Ω high pass filter fabricated using SMT technology. This high pass filter covers from 700-3000 MHz. This filter is built with high Q capacitors and air-coil inductors for superior performance. This filter is developed for square kilometer array telescope systems for radio astronomy. It has repeatable performance across lots and consistent performance across temperature.

Key Features

Feature	Advantages
Low insertion loss	Can be used in high performance applications such as radio astronomy.
Good rejection	This enables the filter to attenuate spurious signals and reject harmonics for broad frequency band.
Small size, 0.35" x 0.35" x 0.15"	The small surface mount package enables the RHP-700+ to be used in compact designs.

Surface Mount

High Pass Filter

RHP-700+

50Ω 700 to 3000 MHz

Generic photo used for illustration purposes only
CASE STYLE: GP1212

Features

- Low insertion loss
- High rejection
- Good return loss

Applications

- Radio telescope applications
- Aeronautical / aviation
- Wireless communications service
- Maritime

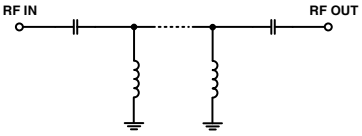
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Stop Band	Rejection Loss	DC-F1	DC-500	20	30	-	dB
	VSWR	DC-F1	DC-500	-	20	-	:1
Pass Band	Insertion Loss	F2-F3	700-3000	-	0.6	2.0	dB
	VSWR	F2-F3	700-3000	-	1.5	1.8	:1

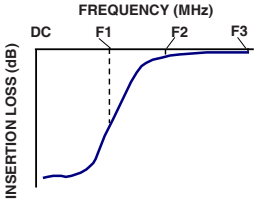
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W max.

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

Functional Schematic



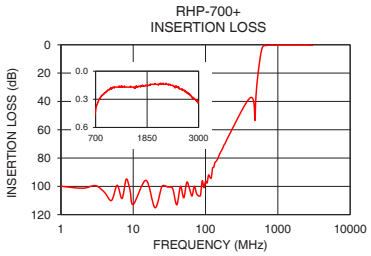
Typical Frequency Response

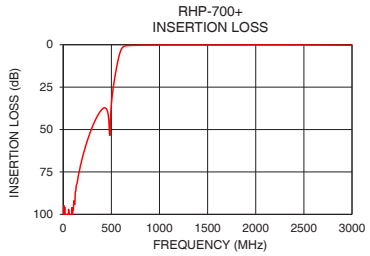


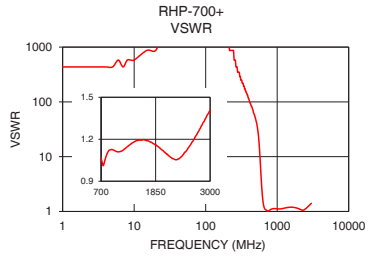
Typical Performance Data at 25°C

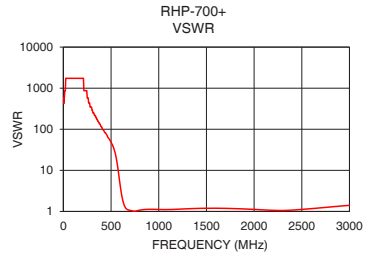
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1	99.92	434.30
280	51.65	347.44
500	35.33	48.26
540	17.82	28.03
575	7.77	9.74
600	3.11	3.65
618	1.49	2.08
638	0.79	1.42
700	0.42	1.06
1000	0.20	1.12
1320	0.17	1.16
1670	0.16	1.19
1870	0.15	1.16
1990	0.14	1.12
2200	0.13	1.06
2380	0.15	1.07
2540	0.17	1.14
2760	0.23	1.26
2900	0.29	1.35
3000	0.33	1.41

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







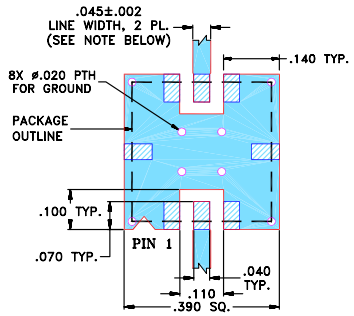


Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document 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

Pad Connections

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

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

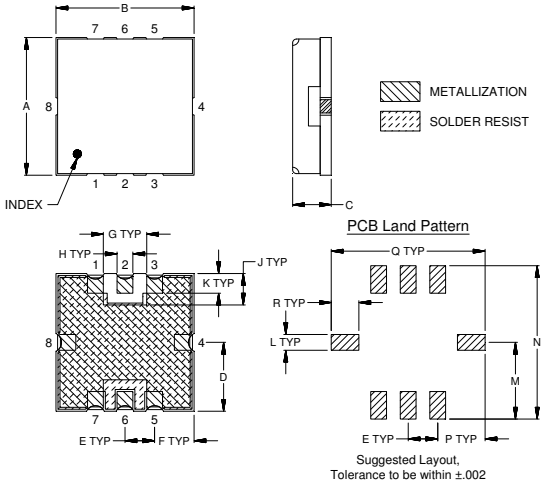


NOTES: 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
.350	**.350**	**.150**	**.175**	**.075**	**.100**	**.110**	**.040**
8.89	8.89	3.81	4.45	1.93	2.54	2.79	1.02

J	K	L	M	N	P	Q	R	Wt.
.080	**.050**	**.040**	**.195**	**.390**	**.120**	**.390**	**.070**	grams
2.03	1.27	1.02	4.95	9.91	3.05	9.91	1.78	.50

Note: Please refer to case style drawing for details

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Mini-Circuits:

RHP-700+