Surface Mount

High Pass Filter

THP-1050+

50Ω 1050 to 4000 MHz

The Big Deal

- Small size (0.25" x 0.25" x 0.10")
- Good matching
- Low insertion loss

Generic photo used for illustration purposes only
CASE STYLE: GQ1018

Product Overview

THP-1050+ is a 50Ω high pass filter fabricated using SMT technology. This high pass filter covers from 1050-4000 MHz. This series of filters are constructed in a tiny package offering dual advantage of superior lumped element filter performance in a space saving SMT package. These models are suitable for mass production without losing flexibility of small volume requirements. 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.
Good rejection	This enables the filter to attenuate spurious signals and reject harmonics for broad frequency band.
Small size, 0.25" x 0.25" x 0.10"	The small surface mount package enables the THP-1050+ to be used in compact designs.

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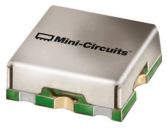


Generic photo used for illustration purposes only
CASE STYLE: GQ1018

Features

- Low insertion loss
- Good matching
- Small size (0.25" x 0.25" x 0.10")

Applications

- Radio navigation satellite
- Space research

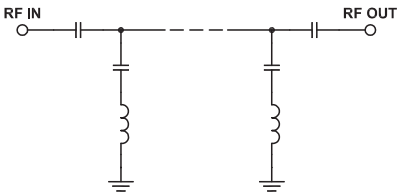
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Stop Band	Rejection Loss	DC-F1	DC-620	20	30	-	dB
	VSWR	DC-F1	DC-620	-	20	-	:1
Pass Band	Insertion Loss	F2-F3	1050-4000	-	0.6	2.0	dB
	VSWR	F2-F3	1050-4000	-	1.2	1.67	:1

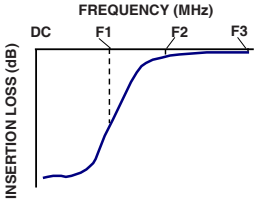
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W max.

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

Functional Schematic



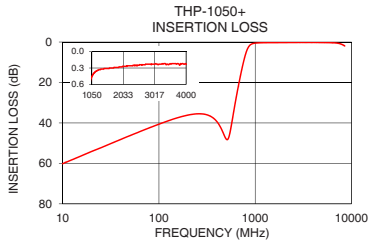
Typical Frequency Response

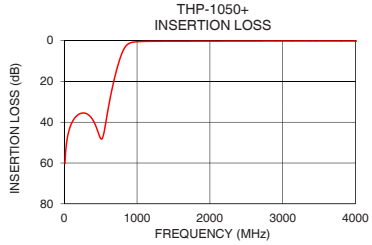


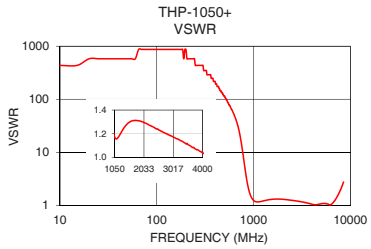
Typical Performance Data at 25°C

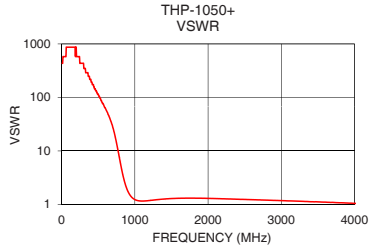
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	60.15	434.30
620	30.10	51.10
710	15.63	23.81
770	8.31	10.19
810	4.75	5.30
840	2.97	3.40
915	1.02	1.66
1050	0.46	1.17
1150	0.37	1.16
1300	0.33	1.22
1550	0.31	1.30
1620	0.30	1.31
1830	0.29	1.31
2000	0.28	1.30
2220	0.26	1.27
2500	0.25	1.24
2860	0.23	1.19
3100	0.23	1.16
3600	0.22	1.10
4000	0.23	1.04

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







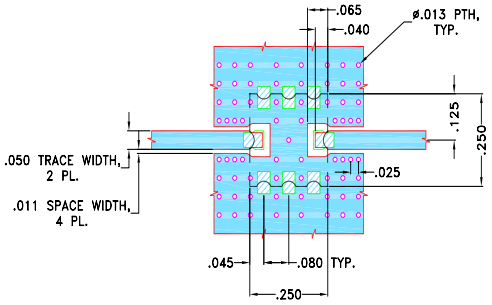


Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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	8
OUTPUT	4
GROUND	1, 2, 3, 5, 6, 7

Demo Board MCL P/N: TB-680
Suggested PCB Layout (PL-372)



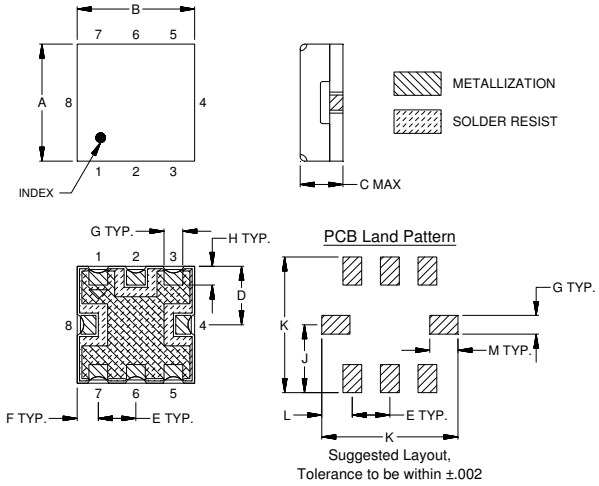
NOTES:

1. TRACE WIDTH IS SHOWN FOR OAK (OAK-602) WITH DIELECTRIC THICKNESS .022"±.0015". 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 SOLDERMASK

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.25	**.25**	**.10**	**.125**	**.080**	**.045**	**.040**
6.35	6.35	2.54	3.18	2.03	1.14	1.02

H	J	K	L	M	Wt.
.040	**.145**	**.290**	**.065**	**.060**	grams
1.02	3.68	7.37	1.65	1.52	.25

Note: Please refer to case style drawing for details