

LTCC

# Low Pass Filter

50Ω

4900 to 5950 MHz

LPJC-592R+



Generic photo used for illustration purposes only

CASE STYLE: JC0603C-1

## Features

- Miniature size 0603
- Low Insertion Loss, 0.4 dB typ. and High rejection 49 dB typ.
- Low cost
- Aqueous washable

## Applications

- ISM Band
- WLAN
- Bluetooth
- Zigbee

**+RoHS Compliant**

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



Available Tape and Reel  
at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 4000

## Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss <sup>1</sup>	F1-F2	4900 - 5950	—	0.4	1.0	dB
	VSWR	F1-F2	4900 - 5950	—	1.1	1.9	:1
Stop Band	Rejection Loss	F3-F4	8800- 12600	34	49	—	dB

1. Tested on Evaluation Board TB-1026+

### Maximum Ratings

Operating Temperature	-40°C to +85°C
Storage Temperature <sup>2</sup>	-40°C to +85°C
RF Power Input <sup>3</sup>	3W at 25°C

2. Refer to product storage temperature after installation

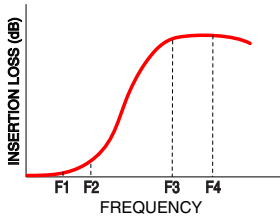
Suggestion for T&R unused product storage condition: +5 ~ +35 °C, Humidity 45~75%RH, 12 month Max

3. Derate linearly to 1.5W at 85°C.

## Typical Performance Data at 25°C

Frequency (GHz)	Insertion Loss (dB)	VSWR (:1)
3.50	0.30	1.64
4.00	0.25	1.52
4.50	0.19	1.29
4.90	0.17	1.11
5.00	0.18	1.08
5.50	0.27	1.22
5.95	0.40	1.32
6.00	0.42	1.32
6.50	0.59	1.14
7.00	2.77	3.24
7.50	10.64	15.60
8.00	21.00	52.08
8.50	33.56	1202.45
9.00	45.39	227.59
9.50	45.32	123.59
10.00	45.71	80.92
11.00	74.33	134.25
12.60	36.39	451.51

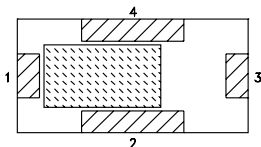
## Specification Definition



## Block Diagram

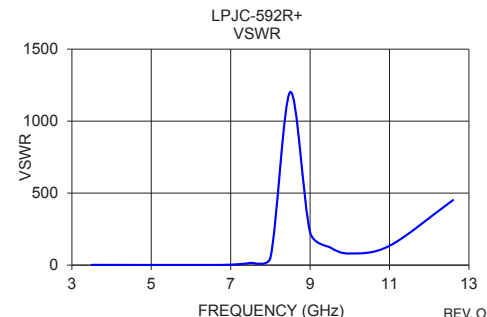
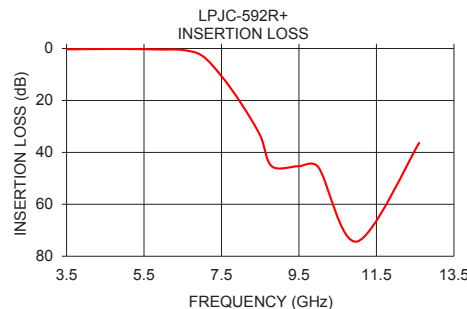


## Top View



## Pad Connections

Input	1
Output	3
Ground	2, 4

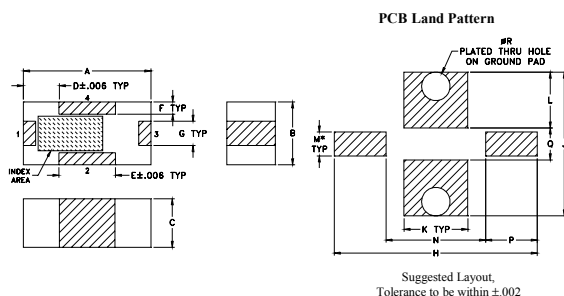


www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

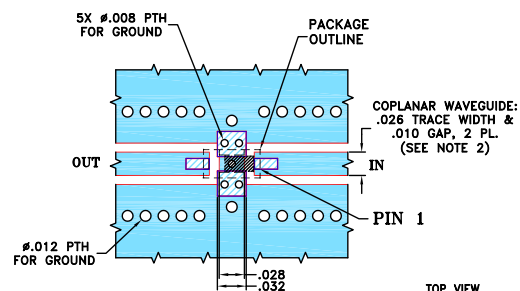
REV. OR  
M172548  
LPJC-592R+  
RS/CP/AM  
190717

Page 1 of 2



## Outline Drawing



## Evaluation Board MCL P/N: TB-1026+ Suggested PCB Layout (PL-564)



### NOTES:

1. PCB IS MULTILAYER PCB, SEE STACK-UP DIAGRAM.
  2. TRACE WIDTH & GAP PARAMETERS ARE SHOWN FOR FR4 WITH DIELECTRIC THICKNESS  $.003 \pm .0005$ ; COPPER: 1/2 OZ. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
  3. LAYER 3 AND LAYER 4 OF THE PCB ARE CONTINUOUS GROUND PLANES.
-  DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).  
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

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

A	B	C	D	E	F	G	H	J
.063	.031	.024	.018	.028	.006	.012	.100	.071
1.60	0.79	0.61	0.46	0.71	0.15	0.30	2.54	1.80
K	L	M	N	P	Q	R	wt	
.032	.028	.012	.049	.026	.016	.014	grams	
0.81	0.71	0.30	1.24	0.66	0.41	0.36	0.005	

## Additional 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](http://www.minicircuits.com/MCLStore/terms.jsp)

