

LTCC

Low Pass Filter

50 2400 to 2500 MHz

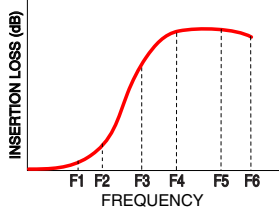
Features

- Miniature size 0603 (0.063"[1.6mm] x 0.031"[0.8mm] x 0.024"[0.6mm])
- Low Insertion Loss, 0.5 dB typ. and High rejection.
- Replaces one inductors and three capacitors
- Low cost
- Aqueous washable

Applications

- ISM Band
- WLAN
- Bluetooth
- Zigbee

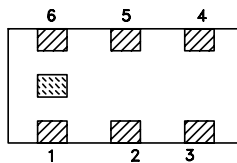
Specification Definition



Block Diagram



Top View



Pad Connections

Input	2
Output	5
Ground	1, 3, 4, 6

LPJC-252R+



CASE STYLE: JC0603C

+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 Specifications¹ at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	F1-F2	2400 - 2500	—	0.5	0.7	dB
Stop Band	F3-F4	4800-5000	35	52	—	dB
Stop Band	F5-F6	7200-7500	25	34	—	dB

1. Tested on Evaluation Board TB-1020+

Maximum Ratings

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

2. Refer to product storage temperature after installation

Suggestion for T&R unused product storage condition:

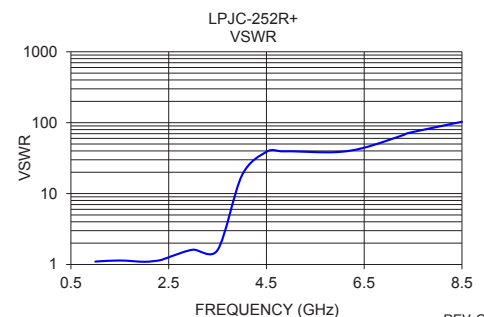
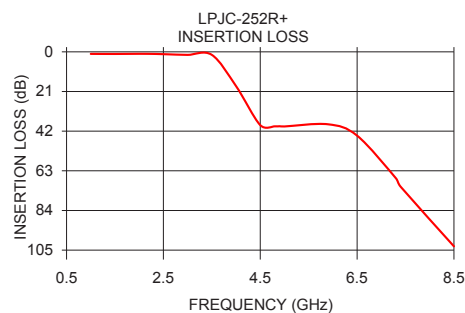
+5 ~ +35 °C, Humidity 45~75%RH, 12 month Max

3. Derate linearly to 1W at 85°C

Typical Performance Data at 25°C⁴

Frequency (GHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.17	1.10
1.50	0.25	1.14
2.00	0.33	1.09
2.30	0.40	1.14
2.40	0.44	1.20
2.44	0.46	1.22
2.50	0.49	1.26
2.60	0.55	1.34
3.00	0.88	1.62
3.50	1.65	1.60
4.00	14.94	18.13
4.50	38.16	38.81
4.80	53.32	39.45
4.90	51.41	39.40
5.00	48.51	39.52
5.90	32.69	38.36
6.50	31.90	44.37
7.20	33.72	63.63
7.50	35.09	76.83
8.50	34.70	103.00

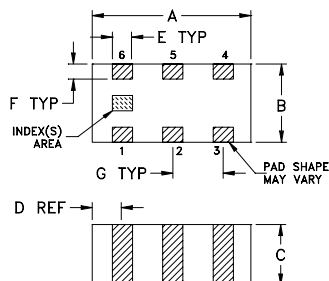
4. Measured with Agilent E5071B network analyzer using port extension.



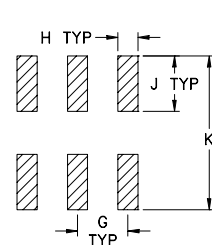
Low Pass Filter

LPJC-252R+

Outline Drawing



PCB Land Pattern



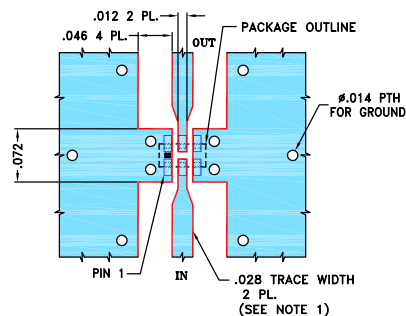
Pad Connections

Input	2
Output	5
Ground	1, 3, 4, 6

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

A	B	C	D	E	F
.063	.031	.024	.012	.008	.006
1.60	0.79	0.61	0.30	0.20	0.15
G	H	J	K	wt	
.020	.010	.022	.053	grams	
0.51	0.25	0.56	1.35	0.005	

Evaluation Board MCL P/N: TB-1020+ Suggested PCB Layout (PL-554)



NOTES:

1. TRACE WIDTH IS SHOWN FOR FR4, GRADE IT-180TC (ITEQ CORP.) WITH DIELECTRIC THICKNESS .016±.0015. COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP 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.

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

