LTCC

Low Pass Filter

LPGE-252R+

50Ω 2400 to 2500 MHz

CASE STYLE: GE0805C-2

+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

Features

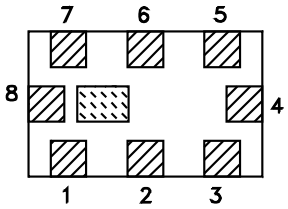
- Miniature size 0805 (0.079"[2.0mm] x 0.049"[1.25mm] x 0.037"[0.95mm])
- Low Insertion Loss, 0.3 dB typ. and High rejection.
- Replaces two inductors and five capacitors
- Low cost
- Aqueous washable

Applications

- ISM Band
- WLAN
- Bluetooth
- Zigbee

Block Diagram

Top View



Pad Connections

Input	8
Output	4
Ground	1,3,5,7
No Connection	2,6

Electrical Specifications at 25°C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss[1]	2400 - 2500	—	0.3	0.6	dB
	VSWR	2400 - 2500	—	1.1	1.8	:1
Stop Band	Rejection Loss	4800-5000	32	44	—	dB
		7200-7500	30	40	—	dB
		9600-10000	30	37	—	dB

1. Tested on Evaluation Board TB-1019+

Maximum Ratings

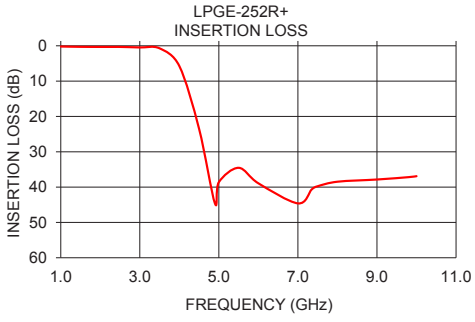
Operating Temperature	-40°C to +85°C
Storage Temperature[2]	-40°C to +85°C
RF Power Input[3]	3W at 25°C

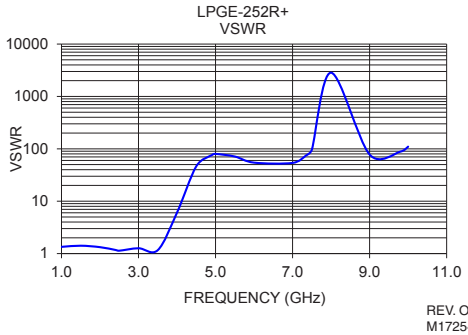
2. Refer to product storage temperature after installation
Suggestion for T&R unused product storage condition:
+5 ~ +35 °C, Humidity 45~75%RH, 12 month Max
3. Derate linearly to 1.5W at 85°C

Typical Performance Data at 25°C[4]

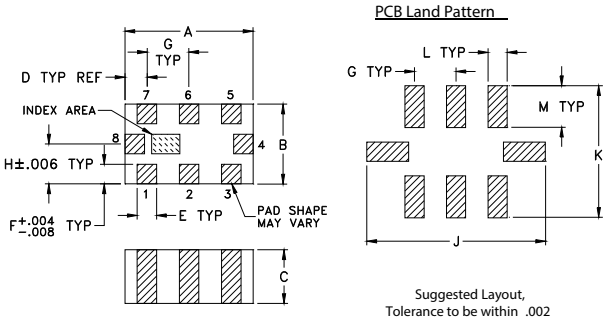
Frequency (GHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.20	1.34
1.50	0.29	1.41
2.00	0.32	1.33
2.40	0.31	1.17
2.50	0.32	1.14
3.00	0.47	1.26
3.50	0.72	1.16
4.00	5.74	6.07
4.80	45.95	76.25
4.90	44.62	75.62
5.00	38.59	79.94
5.50	34.54	71.31
6.00	38.93	54.50
7.20	41.95	62.46
7.35	40.64	74.78
7.50	39.75	96.20
8.00	38.47	2843.65
9.60	37.85	77.75
9.80	37.39	76.84
10.00	36.91	110.04

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





Outline Drawing



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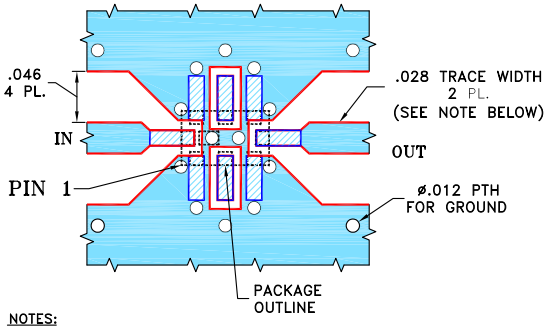
Evaluation Board MCL P/N: TB-1019+
Suggested PCB Layout (PL-555)



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.

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.079	.049	.037	.014	.012	.012	.026
2.01	1.24	0.94	0.36	0.30	0.30	0.66

H	J	K	L	M	wt
.025	.134	.104	0.014	.039	grams
0.64	3.40	2.64	0.36	0.99	.008

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.

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