

# Ceramic Low Pass Filter

50Ω DC<sup>1</sup> to 2690 MHz

## LFCW-272+



Generic photo used for illustration purposes only

CASE STYLE: JC0603C

**+RoHS Compliant**

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

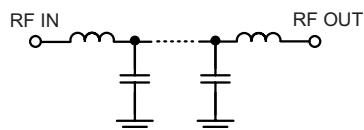
### Features

- Low loss, 0.8 dB typ.
- Small size 0603 (1.6 x 0.8 mm)
- Temperature stable
- LTCC construction

### Applications

- Wireless communication
- Harmonic Rejection
- VHF/UHF transmitters / receivers
- Lab use

### Functional Schematic



### Electrical Specifications<sup>1,2</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
<b>Pass Band</b>	Insertion Loss	DC - F0	DC - 2300	—	0.8	1.2	dB
		F0 - F1	2300 - 2690	—	0.5	0.8	dB
	Freq. Cut-Off	F2	3200	—	3.0	—	dB
	VSWR	F0 - F1	2300 - 2690	—	1.6	—	:1
<b>Stop Band</b>	Rejection Loss	F3	4400	—	20	—	dB
		F4 - F5	4800 - 5400	25	30	—	dB
		F6	10000	—	20	—	dB

1. In Application where DC voltage is present at either input or output port, coupling capacitors are required.

2. Measured on Mini-Circuits Characterization Test Board TB-797+

### Maximum Ratings

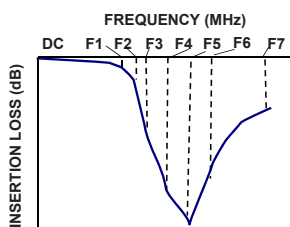
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input <sup>3</sup>	3W at 25°C

3. Passband rating, derate linearly to 1.5W at 100°C ambient

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

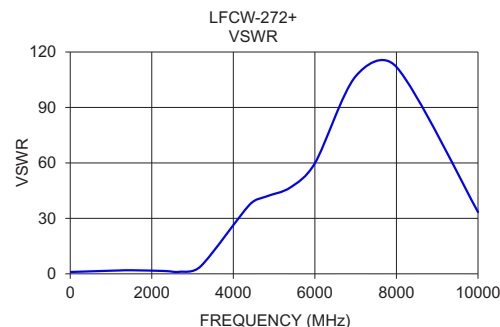
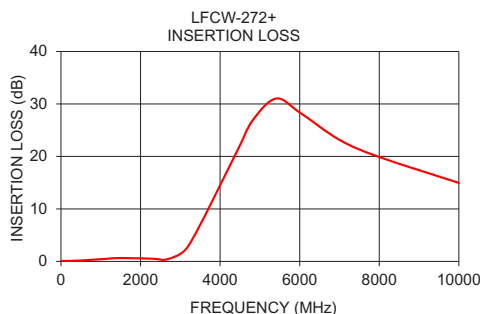
### Typical Performance Data<sup>4</sup> at 25°C

### Typical Frequency Response



Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.11	1.01
100	0.07	1.06
500	0.18	1.33
800	0.32	1.55
1200	0.53	1.81
1500	0.64	1.93
2300	0.51	1.54
2690	0.46	1.11
3200	2.93	4.08
4400	20.61	37.43
4800	26.69	41.77
5400	31.02	46.74
6000	28.38	59.83
7000	23.15	106.88
8000	19.89	111.91
10000	14.96	33.43

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



### 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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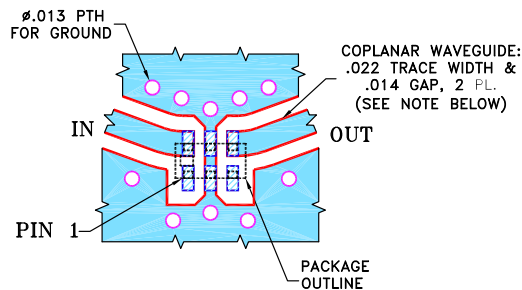
REV. A  
M151107  
ED-16419/25  
LFCW-272+  
MY/CP/AM  
200513

## Pad Connections

INPUT	6
OUTPUT	4
GROUND	2,5
NC	1,3

Product Marking: N/A

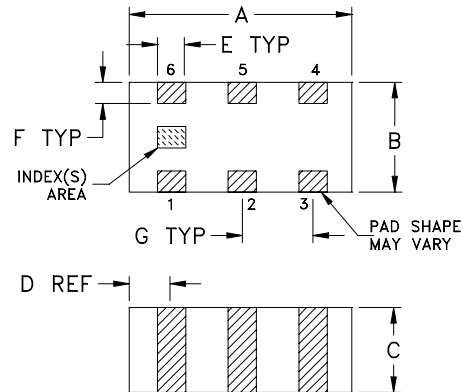
Evaluation Board MCL P/N: TB-797+  
Suggested PCB Layout (PL-426)



### NOTES:

- COPLANAR WAVEGUIDE IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS  $.010" \pm .001"$ . COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
  - 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	wt
.063	.031	.024	.012	.008	.006	.020	grams
1.60	0.79	0.61	0.30	0.20	0.15	0.51	0.005

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