

# Ceramic Low Pass Filter

## LFCV-1450+

50Ω DC to 1450 MHz

### Product Features

- Small size (.126" x .098" x .059")
- Temperature stable
- Hermetically sealed



Generic photo used for illustration purposes only  
CASE STYLE: JV1210C

### +RoHS Compliant

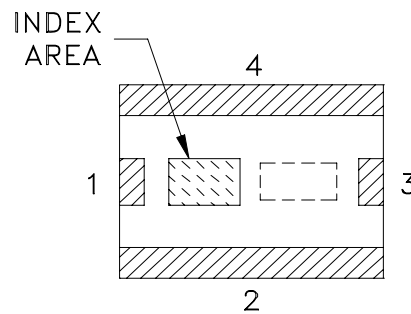
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Typical Applications

- Harmonic rejection
- VHF/UHF transmitters / receivers
- Lab use
- DECT/PACS/PHS/GSM/DCS/WLAN

### General Description

The LFCV-1450+ (RoHS compliant) is constructed with new Ferrite material LTCC multi layer. The existing LFCN-1450+ is cut off at frequency 1825 MHz. But LFCV-1450+ is cut off at frequency 1500 MHz with same pass band frequency, DC-1450 MHz. The rejection frequency is much improved.



### Pad Description

Function	Pad Number	Description
RF IN	1	RF input
RF-OUT	3	RF output
GND	2,4	Connected to ground

#### 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)

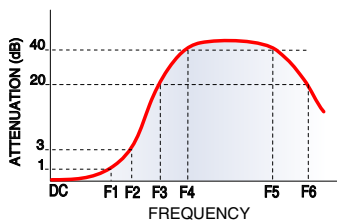


Electrical Specifications<sup>1</sup> at 25°C, 50Ω

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-1450	—	—	2.2	dB
	Freq. Cut-Off	F2	1500	—	3.0	—	dB
	VSWR	DC - F1	DC-1450	—	1.3	—	:1
Stop Band	Rejection Loss	F3	1650	20	—	—	dB
		F4 - F5	1800 - 2300	—	40	—	dB
	VSWR	F6	3000	—	20	—	dB
		F3 - F6	1650-3000	—	20	—	:1

1. Coupling capacitors at input and output are recommended for use in applications that require DC isolation of input to output port or other port to ground.

Typical Frequency Response

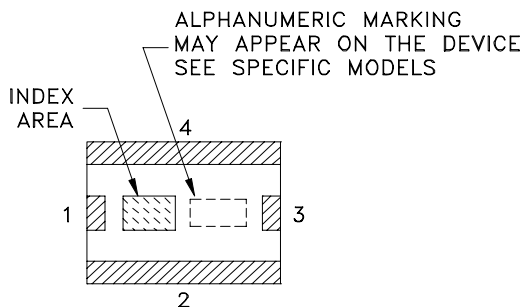


Absolute Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature*	-55°C to 100°C
RF Input Power**	0.5W at 25°C

\*12 months in vacuum sealed bag and 1 week after opened.  
 \*\*Passband rating, derate linearly to 0.125W at 85°C ambient  
 Permanent damage may occur if any of these limits are exceeded.

Product Marking



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Characterization Test Circuit

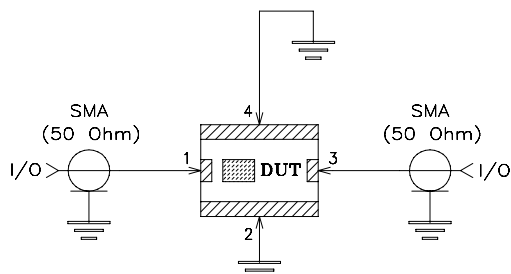
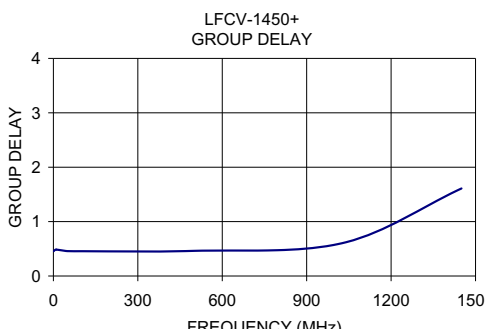
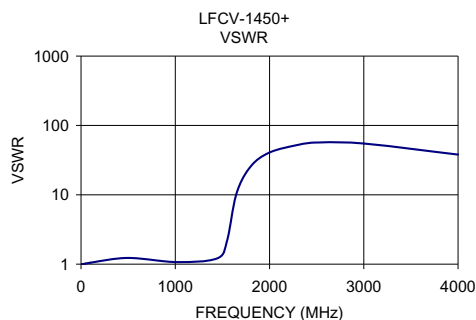
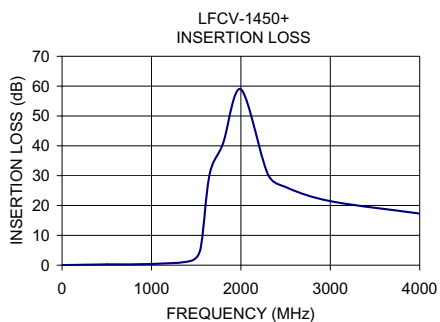


Fig 1. Block diagram of Test Circuit used for characterization, Test board TB-526+  
 Conditions:  
 Insertion loss, VSWR: Pin= 0 dBm

Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Group Delay (ns)
1.00	0.04	1.00	0.46
10.00	0.03	1.00	0.49
50.00	0.06	1.02	0.46
100.00	0.08	1.05	0.46
500.00	0.26	1.23	0.46
1025.00	0.42	1.07	0.60
1450.00	1.54	1.22	1.61
1550.00	5.66	2.19	
1650.00	30.39	10.50	
1800.00	40.74	25.62	
2000.00	58.94	40.77	
2300.00	30.57	52.42	
2500.00	26.20	56.69	
3000.00	21.46	54.87	
4000.00	17.29	38.02	

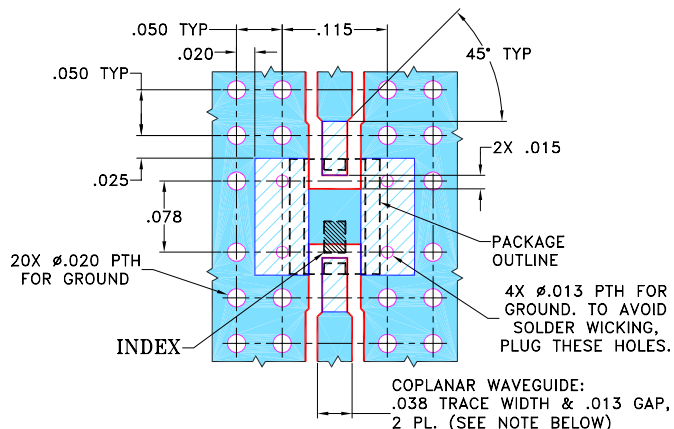


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Suggested PCB Layout (PL-307)



NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS  $0.020'' \pm 0.0015''$ ; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND 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 Detailed Technical Information**

additional information is available on our dash board. To access this information [click here](#)

<b>Performance Data</b>	Data Table
	Swept Graphs
<b>Case Style</b>	JV1210C Ceramic package, Terminal finish: Tin plate over Nickel plate
<b>Tape &amp; Reel Packaging</b> Standard quantities available on reel	F74 7" reels with 20, 50, 100, 200, 500, 1K or 2K devices.
<b>Suggested Layout for PCB Design</b>	PL-307
<b>Evaluation Board</b>	TB-526+
<b>Environmental Ratings</b>	ENV06T2

**ESD Rating**

Human Body Model (HBM):

Machine Model (MM):

**MSL Rating**

Moisture Sensitivity: MSL1 in accordance with IPC/JEDEC J-STD-020D

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