

Ceramic Low Pass Filter

LFCV-1450+

50Ω DC to 1450 MHz

Product Features

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



CASE STYLE: JV1210C

+RoHS Compliant

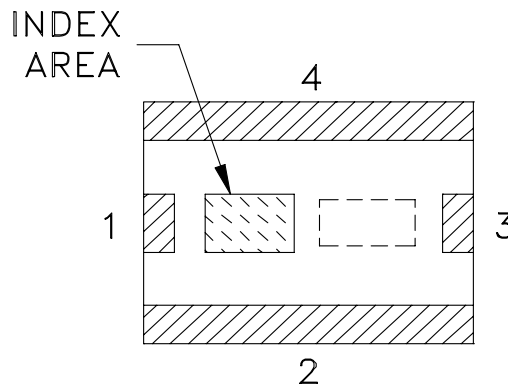
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

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 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

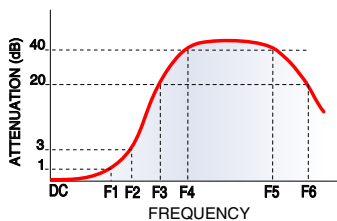


Electrical Specifications¹ at 25°C, 50Ω

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

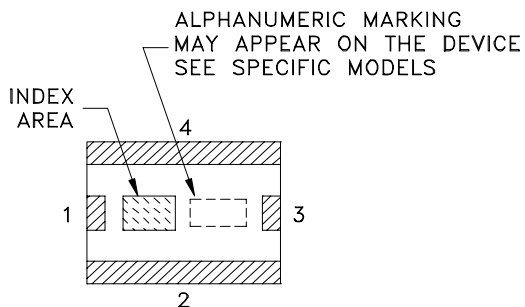


Absolute Maximum Ratings

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

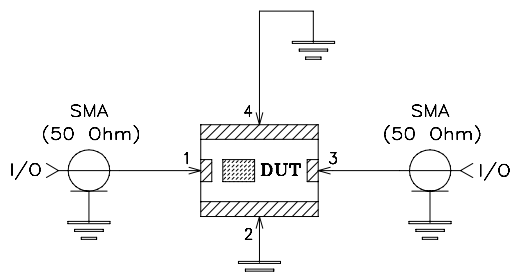
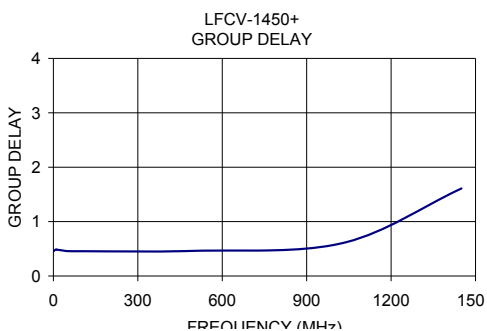
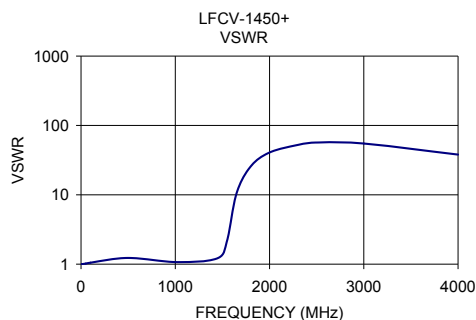
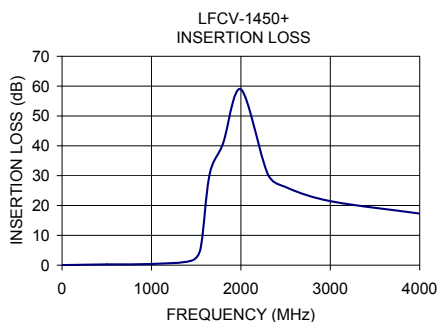


Fig 1. Block diagram of Test Circuit used for characterization, Test board TB-526+
 Conditions:
 Insertion loss, VSWR: Pin= 0 dBm

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	

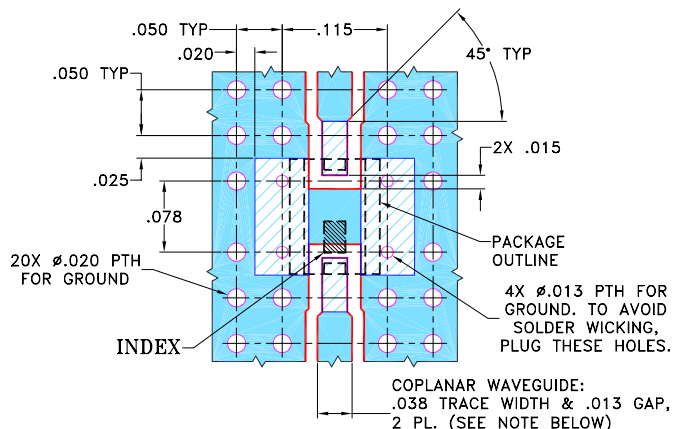


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Suggested PCB Layout (PL-307)



NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 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](#)

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

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