



CERAMIC

# Low Pass Filter

## LFCV-1552+

50Ω DC to 15500 MHz

### THE BIG DEAL

- Low loss, 0.9 dB typical
- Return loss, 15 dB typical
- Stop Band Rejection 36 dB typical
- Small size 1210 (0.126" x 0.098" x 0.037")



Generic photo used for illustration purposes only

CASE STYLE: JV1210C-7

#### +RoHS Compliant

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

### APPLICATIONS

- 5G MIMO and Back Haul Radio Systems
- Test and Measurement Equipment
- Radar, EW, and ECM Defense Systems

### PRODUCT OVERVIEW

Mini-Circuits' LFCV-1552+ is an LTCC low pass filter with a passband from DC to 15500 MHz, supporting a variety of applications. This model provides 0.9 dB typical passband insertion loss and provides a very good stopband rejection due to strategically constructed layout with minimal interaction between components. It handles up to 6.5W RF input power and provides a wide operating temperature range from -55 to +125°C. Housed in a small 1210 ceramic form factor, the filter is ideal for dense PCB layouts and with minimal performance variation due to parasitics.

### KEY FEATURES

| Feature                               | Advantages  |
|---------------------------------------|---|
| Ultra-wide stopband                   | The LTCC lowpass filter provides a very good stopband rejection until 40 GHz suitable for high end applications.                                |
| LTCC Construction                     | Provides repeatable performance in a rugged, ceramic package well suited for tough environments such as high humidity and temperature extremes. |
| Small size (0.126" x 0.098" x 0.037") | Saves space in dense circuit board layouts and minimizes the effects of parasitics.   |
| Good power handling, 6.5W             | Supports a wide range of system power requirements.   |

REV. A  
ECO-015160  
LFCV-1552+  
EDU4123  
URJ  
220924





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# Low Pass Filter

## LFCV-1552+

### ELECTRICAL SPECIFICATIONS<sup>1,2</sup> AT 25°C

| Parameter | F#             | Frequency (MHz) | Min.          | Typ. | Max. | Units |    |
|-----------|----------------|-----------------|---------------|------|------|-------|----|
| Passband  | Insertion Loss | DC-F1           | DC - 15500    | —    | 0.9  | 1.9   | dB |
|           | Freq. Cut-Off  | F2*             | 16900         | —    | 3    | —     | dB |
|           | Return Loss    | DC-F1           | DC - 15500    | —    | 15   | —     | dB |
| Stop Band | Rejection Loss | F3-F4           | 21200 - 23000 | 20   | 36   | —     | dB |
|           |                | F4-F5           | 23000 - 26500 | 25   | 33   | —     |    |
|           |                | F5-F6           | 26500 - 40000 | —    | 30   | —     |    |

1 DC de-coupling capacitors are required in Applications where DC voltage and/or current is present at either input or output ports. Please contact Mini-Circuits for alternatives if DC pass from IN-OUT is required.

2 Measured on Mini-Circuits Characterization Test Board TB-LFCV-1552+

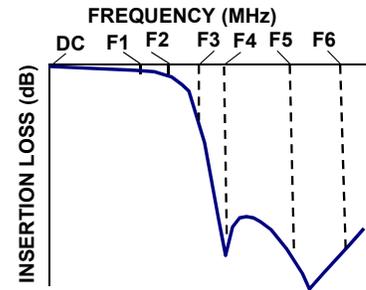
\* Typically, a ±5% frequency deviation from the stated value may occur on a unit-to-unit basis.

### MAXIMUM RATINGS

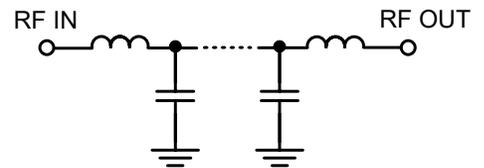
| Parameter             | Ratings        |
|-----------------------|----------------|
| Operating temperature | -55°C to 125°C |
| Storage temperature   | -55°C to 125°C |
| RF Power Input*       | 6.5 W @25°C    |

\*Passband rating, derate linearly to 1.4W at 125°C ambient  
Permanent damage may occur if any of these limits are exceeded.

### TYPICAL FREQUENCY RESPONSE



### FUNCTIONAL SCHEMATIC



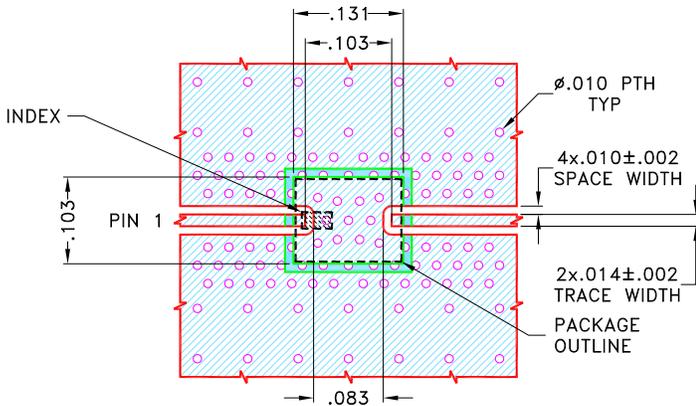


### PAD CONNECTIONS

|        |   |
|--------|---|
| INPUT  | 1 |
| OUTPUT | 2 |
| GROUND | 3 |

PRODUCT MARKING: UH

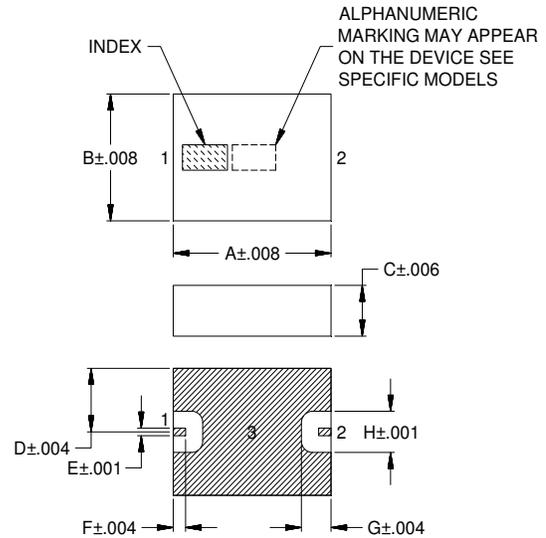
DEMO BOARD MCL P/N: TB-LFCV-1552+  
SUGGESTED PCB LAYOUT (PL-679)



NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS (R04835 Lo Pro) WITH DIELECTRIC THICKNESS .0073±.0007. 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 PATTERN WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
 DENOTES PCB COPPER PATTERN FREE OF SOLDERMASK

### OUTLINE DRAWING



### OUTLINE DIMENSIONS (Inches/mm)

|      |      |      |       |      |
|------|------|------|-------|------|
| A    | B    | C    | D     | E    |
| .126 | .098 | .037 | .049  | .006 |
| 3.20 | 2.50 | 0.95 | 1.25  | 0.15 |
| F    | G    | H    | Wt.   |      |
| .010 | .024 | .032 | grams |      |
| 0.25 | 0.60 | 0.81 | 0.03  |      |

Note: Please refer to case style drawing for details



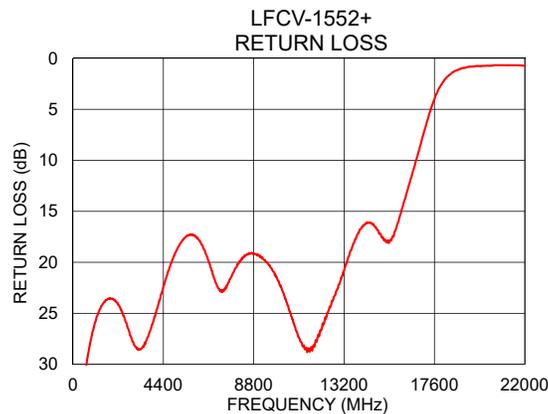
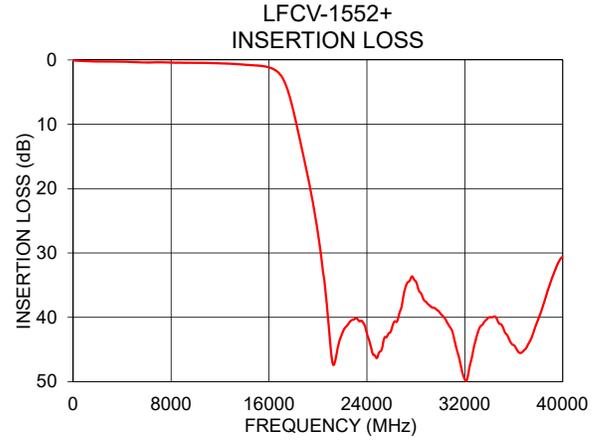
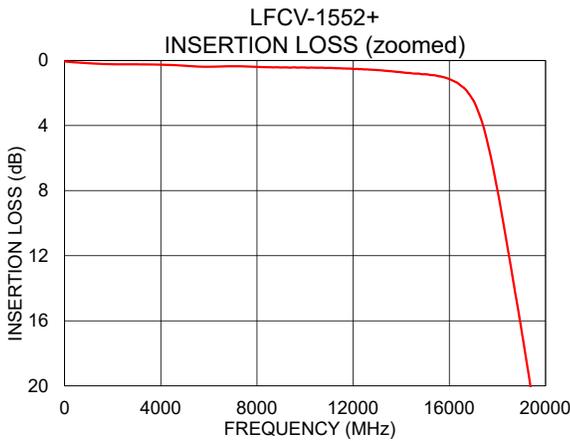
CERAMIC

# Low Pass Filter

## LFCV-1552+

### TYPICAL PERFORMANCE DATA AT 25°C

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) |
|-----------------|---------------------|------------------|
| 10              | 0.07                | 38.27            |
| 100             | 0.08                | 45.73            |
| 2000            | 0.24                | 23.71            |
| 5000            | 0.33                | 19.01            |
| 10000           | 0.44                | 21.86            |
| 15500           | 0.95                | 17.85            |
| 16900           | 2.24                | 8.60             |
| 17200           | 3.14                | 6.48             |
| 19400           | 20.30               | 0.81             |
| 20250           | 30.36               | 0.73             |
| 21200           | 47.16               | 0.68             |
| 23000           | 40.26               | 1.15             |
| 26500           | 40.49               | 2.92             |
| 32000           | 49.66               | 0.73             |
| 40000           | 30.66               | 1.45             |



- 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)



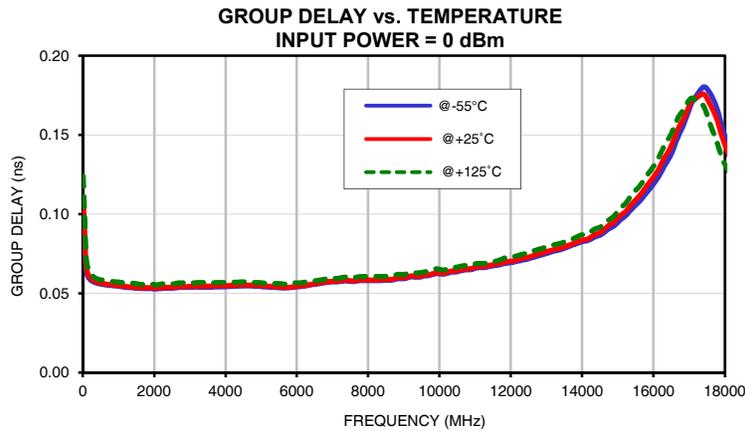
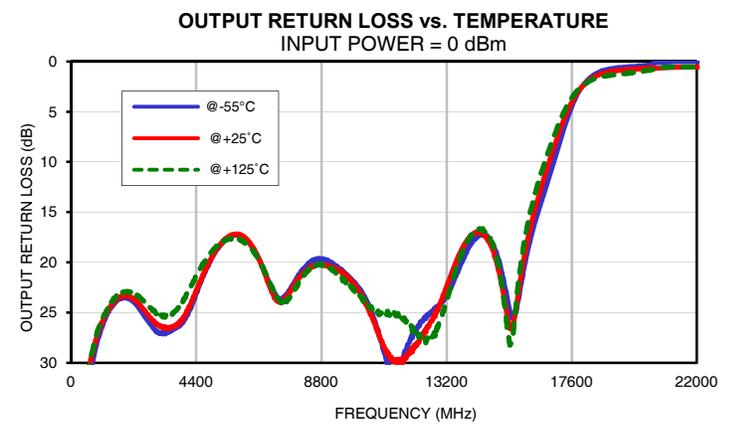
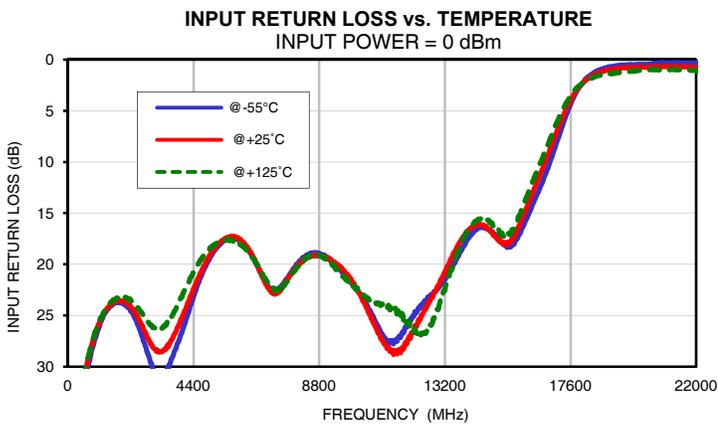
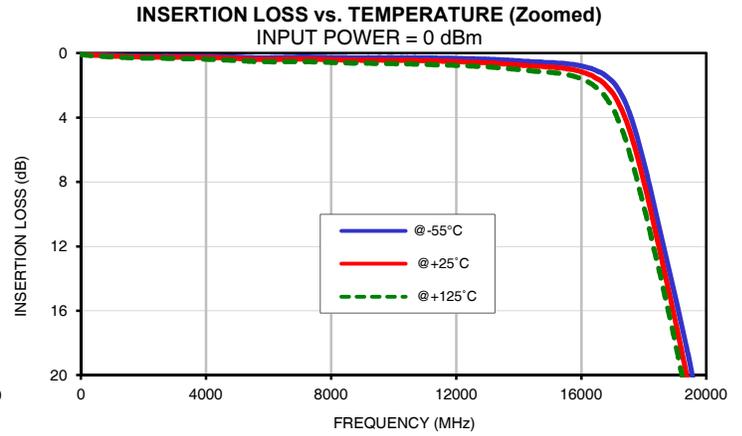
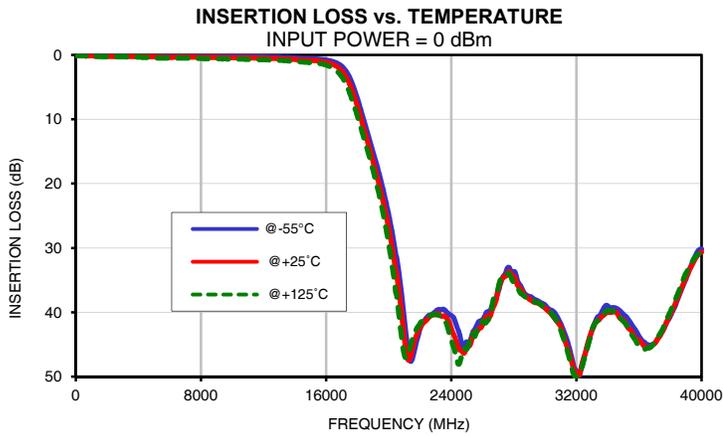
Typical Performance Data

| FREQ.<br><br>(MHz) | INSERTION LOSS |        |         | INPUT RETURN LOSS |        |         | OUTPUT RETURN LOSS |        |         |
|--------------------|----------------|--------|---------|-------------------|--------|---------|--------------------|--------|---------|
|                    | (dB)           |        |         | (dB)              |        |         | (dB)               |        |         |
|                    | @-55°C         | @+25°C | @+125°C | @-55°C            | @+25°C | @+125°C | @-55°C             | @+25°C | @+125°C |
| 10                 | 0.06           | 0.07   | 0.09    | 41.23             | 38.27  | 36.04   | 42.37              | 39.61  | 37.88   |
| 50                 | 0.06           | 0.08   | 0.10    | 49.76             | 47.22  | 44.04   | 49.08              | 46.98  | 44.17   |
| 100                | 0.07           | 0.08   | 0.11    | 46.77             | 45.73  | 43.04   | 45.54              | 45.10  | 43.04   |
| 500                | 0.10           | 0.13   | 0.18    | 33.02             | 32.33  | 31.88   | 33.36              | 32.40  | 31.86   |
| 1000               | 0.13           | 0.18   | 0.23    | 26.95             | 26.50  | 26.36   | 27.18              | 26.59  | 26.32   |
| 2000               | 0.18           | 0.24   | 0.31    | 23.97             | 23.71  | 23.28   | 23.57              | 23.37  | 22.94   |
| 2500               | 0.18           | 0.24   | 0.32    | 26.20             | 25.40  | 24.40   | 24.96              | 24.46  | 23.70   |
| 3000               | 0.18           | 0.24   | 0.33    | 30.33             | 28.16  | 26.16   | 26.91              | 26.19  | 25.11   |
| 3500               | 0.18           | 0.25   | 0.35    | 30.07             | 27.89  | 25.56   | 26.79              | 26.46  | 25.16   |
| 4000               | 0.19           | 0.27   | 0.38    | 26.65             | 25.30  | 23.20   | 25.62              | 25.27  | 23.51   |
| 4500               | 0.21           | 0.29   | 0.41    | 22.37             | 21.76  | 20.27   | 22.40              | 22.19  | 20.82   |
| 5000               | 0.24           | 0.33   | 0.46    | 19.25             | 19.01  | 18.36   | 19.29              | 19.23  | 18.73   |
| 5500               | 0.28           | 0.38   | 0.51    | 17.65             | 17.51  | 17.64   | 17.58              | 17.50  | 17.71   |
| 6000               | 0.28           | 0.39   | 0.53    | 17.64             | 17.49  | 17.97   | 17.46              | 17.37  | 17.88   |
| 6500               | 0.26           | 0.38   | 0.53    | 19.43             | 19.32  | 19.46   | 19.08              | 19.03  | 19.24   |
| 7000               | 0.24           | 0.36   | 0.53    | 22.11             | 22.25  | 21.80   | 22.28              | 22.53  | 22.10   |
| 7500               | 0.24           | 0.38   | 0.54    | 22.03             | 22.24  | 22.21   | 23.38              | 23.65  | 23.90   |
| 8000               | 0.26           | 0.40   | 0.58    | 20.01             | 20.19  | 20.29   | 21.23              | 21.55  | 21.96   |
| 8500               | 0.28           | 0.42   | 0.61    | 18.97             | 19.25  | 19.16   | 19.78              | 20.32  | 20.38   |
| 9000               | 0.29           | 0.44   | 0.63    | 19.13             | 19.24  | 19.30   | 19.80              | 20.33  | 20.40   |
| 9500               | 0.28           | 0.43   | 0.63    | 20.45             | 20.14  | 20.75   | 20.72              | 20.90  | 21.47   |
| 10000              | 0.28           | 0.44   | 0.65    | 22.03             | 21.86  | 22.15   | 22.07              | 22.30  | 22.81   |
| 11000              | 0.28           | 0.47   | 0.70    | 26.79             | 27.36  | 23.87   | 28.85              | 28.34  | 24.98   |
| 12000              | 0.33           | 0.52   | 0.76    | 25.54             | 27.15  | 26.25   | 27.51              | 28.92  | 26.89   |
| 13000              | 0.38           | 0.60   | 0.85    | 22.19             | 21.93  | 23.96   | 24.10              | 23.97  | 25.67   |
| 14000              | 0.47           | 0.73   | 1.02    | 17.54             | 16.75  | 16.70   | 18.39              | 17.51  | 17.53   |
| 15000              | 0.58           | 0.85   | 1.18    | 17.29             | 17.41  | 16.58   | 19.51              | 20.38  | 20.01   |
| 15500              | 0.65           | 0.95   | 1.31    | 18.32             | 17.85  | 17.05   | 25.44              | 26.47  | 27.61   |
| 16000              | 0.80           | 1.15   | 1.59    | 15.85             | 14.85  | 13.83   | 19.51              | 18.47  | 16.94   |
| 16500              | 1.11           | 1.58   | 2.17    | 12.71             | 11.46  | 10.38   | 14.25              | 12.82  | 11.39   |
| 16900              | 1.59           | 2.24   | 3.08    | 9.82              | 8.60   | 7.61    | 10.60              | 9.17   | 8.03    |
| 17200              | 2.29           | 3.14   | 4.24    | 7.41              | 6.48   | 5.63    | 7.85               | 6.75   | 5.83    |
| 18250              | 8.80           | 10.04  | 11.55   | 1.59              | 1.76   | 1.91    | 1.61               | 1.79   | 1.90    |
| 19400              | 18.59          | 20.30  | 21.89   | 0.52              | 0.81   | 1.23    | 0.58               | 0.84   | 1.22    |
| 20200              | 27.33          | 29.67  | 32.41   | 0.44              | 0.73   | 0.99    | 0.40               | 0.67   | 0.93    |
| 21200              | 45.40          | 47.16  | 46.77   | 0.28              | 0.68   | 0.96    | 0.02               | 0.58   | 0.54    |
| 22000              | 42.62          | 42.41  | 41.75   | 0.33              | 0.72   | 1.10    | 0.01               | 0.53   | 0.56    |
| 23000              | 39.83          | 40.26  | 40.36   | 0.64              | 1.15   | 1.83    | 0.11               | 0.66   | 0.80    |
| 24000              | 40.50          | 42.50  | 44.26   | 1.74              | 2.54   | 3.38    | 0.36               | 0.99   | 1.22    |
| 24500              | 43.17          | 45.75  | 48.03   | 2.37              | 3.15   | 3.81    | 0.49               | 1.17   | 1.38    |
| 25000              | 44.59          | 45.46  | 45.67   | 2.69              | 3.33   | 3.94    | 0.58               | 1.27   | 1.40    |
| 25500              | 42.69          | 43.07  | 43.75   | 2.86              | 3.47   | 4.13    | 0.65               | 1.32   | 1.44    |
| 26000              | 41.18          | 41.91  | 41.35   | 3.14              | 3.59   | 4.00    | 0.72               | 1.44   | 1.66    |
| 26500              | 39.65          | 40.49  | 40.35   | 2.65              | 2.92   | 3.01    | 1.01               | 1.84   | 2.35    |
| 27000              | 36.75          | 36.51  | 36.11   | 1.51              | 1.85   | 1.97    | 1.80               | 2.97   | 4.15    |
| 27500              | 33.65          | 34.31  | 34.16   | 0.71              | 1.09   | 1.35    | 3.71               | 5.21   | 6.61    |
| 28000              | 33.67          | 34.44  | 35.41   | 0.33              | 0.71   | 0.99    | 4.92               | 5.56   | 4.93    |
| 28500              | 36.21          | 36.60  | 37.18   | 0.21              | 0.56   | 0.85    | 3.06               | 3.33   | 2.78    |
| 29000              | 37.52          | 37.98  | 38.04   | 0.20              | 0.56   | 0.87    | 1.65               | 2.05   | 1.85    |
| 29500              | 38.16          | 38.53  | 38.51   | 0.27              | 0.63   | 1.02    | 1.05               | 1.50   | 1.54    |
| 30000              | 38.87          | 39.39  | 39.22   | 0.33              | 0.72   | 1.17    | 0.76               | 1.27   | 1.45    |
| 31000              | 41.80          | 42.33  | 42.85   | 0.27              | 0.77   | 1.30    | 0.40               | 1.09   | 1.28    |
| 32000              | 49.28          | 49.66  | 50.01   | 0.19              | 0.73   | 1.02    | 0.40               | 1.07   | 1.15    |
| 33000              | 42.74          | 42.73  | 42.66   | 0.34              | 0.80   | 1.14    | 0.55               | 1.17   | 1.27    |
| 34000              | 39.01          | 39.98  | 39.64   | 0.43              | 0.92   | 1.53    | 0.51               | 1.20   | 1.47    |
| 35000              | 40.30          | 41.16  | 41.42   | 0.49              | 1.08   | 1.68    | 0.45               | 1.18   | 1.47    |
| 36000              | 43.71          | 44.33  | 45.30   | 1.03              | 1.55   | 2.09    | 0.54               | 1.17   | 1.27    |
| 37000              | 44.74          | 44.83  | 44.70   | 1.55              | 2.10   | 2.69    | 0.45               | 1.15   | 1.22    |
| 39000              | 34.76          | 34.59  | 33.91   | 1.09              | 1.65   | 2.38    | 1.11               | 2.08   | 2.98    |
| 40000              | 30.16          | 30.66  | 30.80   | 0.74              | 1.45   | 2.46    | 1.77               | 2.68   | 2.77    |

## Typical Performance Data

| FREQ.<br><br>(MHz) | GROUP DELAY |        |         |
|--------------------|-------------|--------|---------|
|                    | (nsec)      |        |         |
|                    | @-55°C      | @+25°C | @+125°C |
| 10                 | 0.10        | 0.11   | 0.12    |
| 50                 | 0.08        | 0.09   | 0.10    |
| 100                | 0.06        | 0.07   | 0.07    |
| 300                | 0.06        | 0.06   | 0.06    |
| 500                | 0.06        | 0.06   | 0.06    |
| 700                | 0.06        | 0.06   | 0.06    |
| 900                | 0.05        | 0.06   | 0.06    |
| 1000               | 0.05        | 0.05   | 0.06    |
| 1200               | 0.05        | 0.05   | 0.06    |
| 1400               | 0.05        | 0.05   | 0.06    |
| 1600               | 0.05        | 0.05   | 0.06    |
| 1800               | 0.05        | 0.05   | 0.06    |
| 2000               | 0.05        | 0.05   | 0.06    |
| 2500               | 0.05        | 0.05   | 0.06    |
| 3000               | 0.05        | 0.05   | 0.06    |
| 3500               | 0.05        | 0.05   | 0.06    |
| 4000               | 0.05        | 0.05   | 0.06    |
| 4500               | 0.05        | 0.06   | 0.06    |
| 5000               | 0.05        | 0.05   | 0.06    |
| 5500               | 0.05        | 0.05   | 0.06    |
| 6000               | 0.05        | 0.05   | 0.06    |
| 6500               | 0.06        | 0.06   | 0.06    |
| 7000               | 0.06        | 0.06   | 0.06    |
| 7500               | 0.06        | 0.06   | 0.06    |
| 8000               | 0.06        | 0.06   | 0.06    |
| 8500               | 0.06        | 0.06   | 0.06    |
| 9000               | 0.06        | 0.06   | 0.06    |
| 9500               | 0.06        | 0.06   | 0.06    |
| 10000              | 0.06        | 0.06   | 0.07    |
| 10500              | 0.06        | 0.06   | 0.07    |
| 11000              | 0.07        | 0.07   | 0.07    |
| 11500              | 0.07        | 0.07   | 0.07    |
| 12000              | 0.07        | 0.07   | 0.07    |
| 12500              | 0.07        | 0.07   | 0.08    |
| 13000              | 0.08        | 0.08   | 0.08    |
| 13500              | 0.08        | 0.08   | 0.08    |
| 14000              | 0.08        | 0.08   | 0.09    |
| 14500              | 0.09        | 0.09   | 0.09    |
| 15000              | 0.09        | 0.10   | 0.10    |
| 15500              | 0.11        | 0.11   | 0.12    |

## Typical Performance Curves

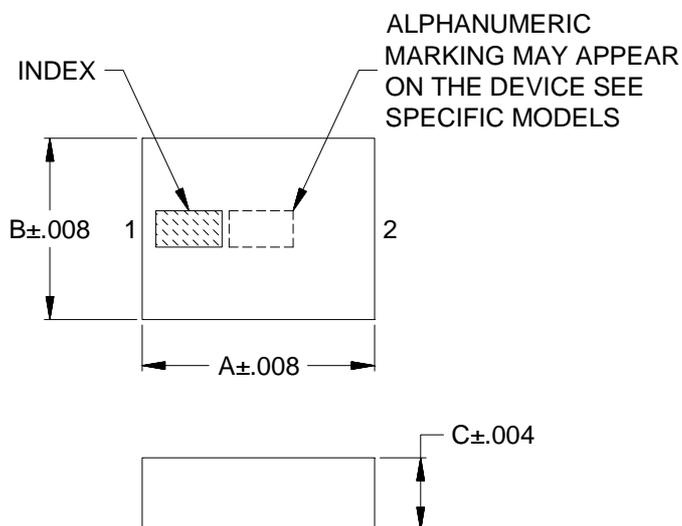


# Case Style

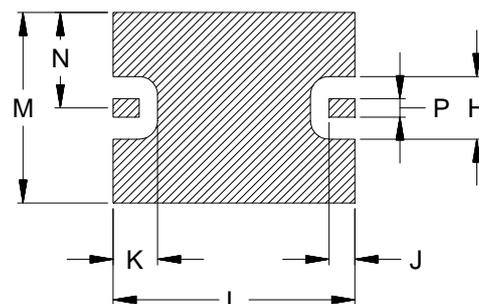
# JV

## Outline Dimensions

## JV1210C-7

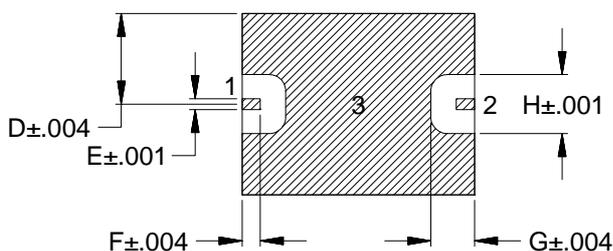


## PCB LAND PATTERN



SUGGESTED LAYOUT

TOLERANCE TO BE WITHIN ±.002



 METALLIZATION

| CASE#     | A              | B              | C              | D              | E              | F              | G              | H              | J              | K              | L              | M              | N              | P              | WT.GRAM |
|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|
| JV1210C-7 | .126<br>(3.20) | .098<br>(2.50) | .039<br>(1.00) | .049<br>(1.25) | .006<br>(0.15) | .010<br>(0.25) | .024<br>(0.60) | .032<br>(0.81) | .014<br>(0.36) | .024<br>(0.61) | .131<br>(3.33) | .103<br>(2.63) | .052<br>(1.31) | .010<br>(0.25) | 0.03    |

Dimensions are in inches (mm). Tolerances: 2Pl. ± .01; 3Pl. ± .005

### Notes:

1. Open style, Ceramic base.
2. Termination finish: **as shown below or indicated on Data Sheet.**  
For RoHS Case Styles: Gold plate over Nickel plate. All models, (+) suffix.
3. Pad tolerance is non-cumulative. Minimum spacing between each pad is .004.

 **Mini-Circuits**<sup>®</sup>  
ISO 9001 ISO 14001 CERTIFIED

ALL NEW  


P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

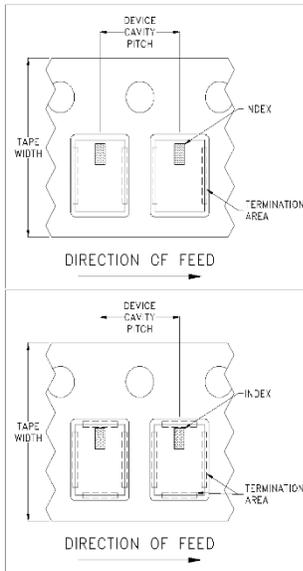


The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

RF/IF MICROWAVE COMPONENTS

# Tape & Reel Packaging TR-F74

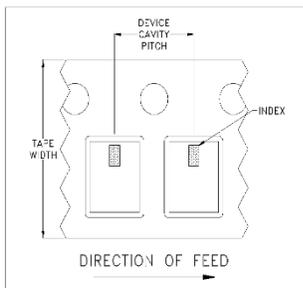
## **DEVICE ORIENTATION IN T&R**



**ILLUSTRATION 1**

### Applicable Case Styles

GE0805C-1  
GE0805C-1AP  
JV1210C-1  
GU2939



**ILLUSTRATION 2**

### Applicable Case Styles

JV1210C  
JV1210C-2  
JV1210C-3  
JV1210C-4  
JV1210C-5  
JV1210C-6  
JV1210C-11

**ILLUSTRATION 3**

### Applicable Case Styles

JC0603C-8  
JC0603C-9  
JV1210C-7  
JV1210C-8  
JV1210C-9  
JV1210C-10  
JV1210C-13  
GE0805C-13  
GE0805C-19  
GE0805C-20

| Tape Width,<br>mm | Device Cavity Pitch,<br>mm | Real Size,<br>inches | Devices per Reel                             |      |
|-------------------|----------------------------|----------------------|--|------|
| 8                 | 4                          | 7                    | Small<br>quantity<br>standards<br>(see note) | 20   |
|                   |                            |                      |  | 50   |
|                   |                            |                      |  | 100  |
|                   |                            |                      |  | 200  |
|                   |                            |                      |  | 500  |
|                   |                            |                      |  | 1000 |
|                   |                            |                      | Standard                                     | 2000 |
|                   |                            |                      |  | 4000 |

Note: Small reel availability varies by model. Refer to pricing and availability on individual model dashboard.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: [www.minicircuits.com/pages/pdfs/tape.pdf](http://www.minicircuits.com/pages/pdfs/tape.pdf)



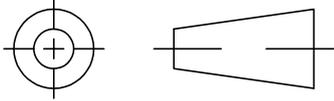
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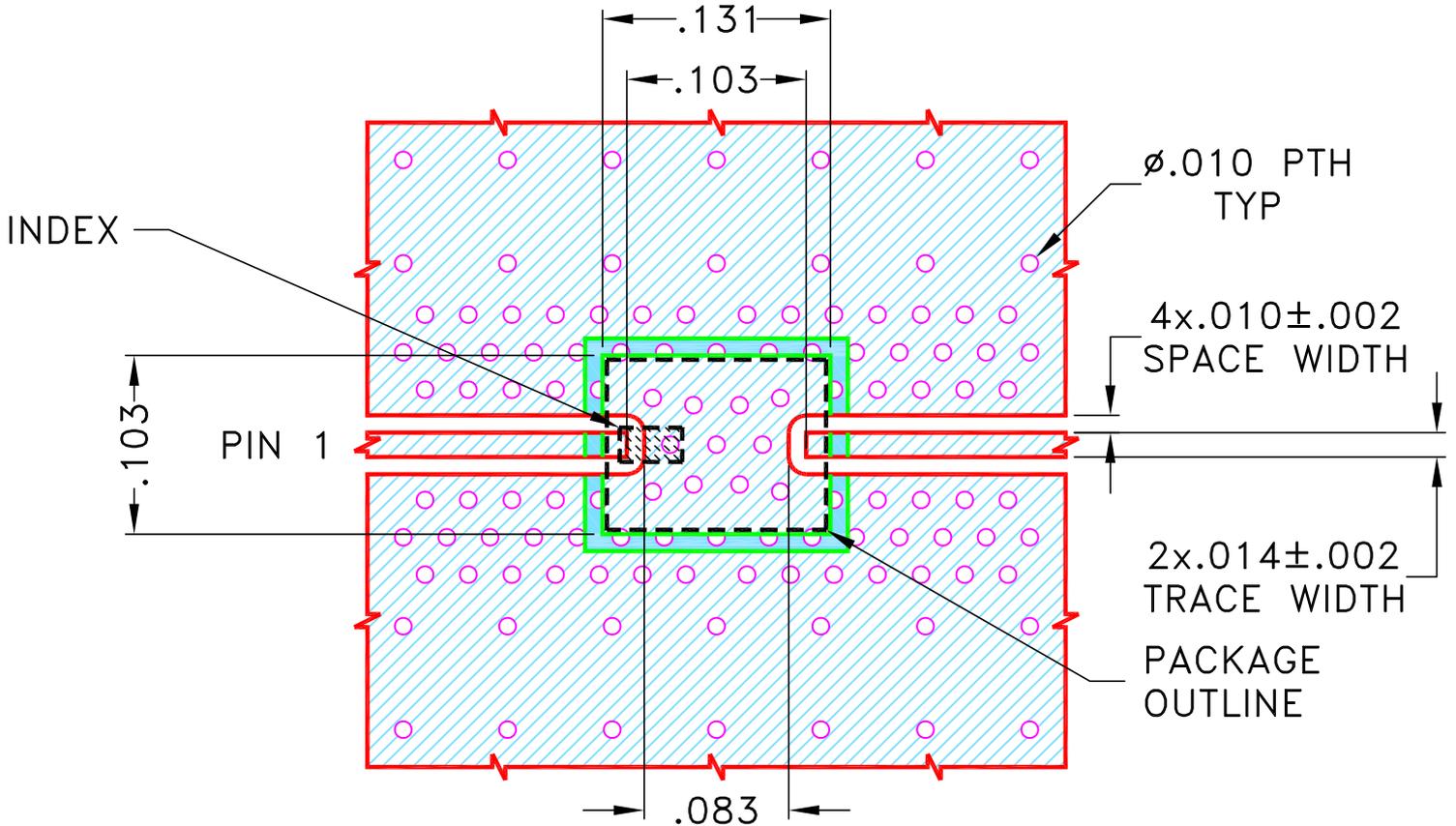
THIRD ANGLE PROJECTION



REVISIONS

| REV | ECN No.    | DESCRIPTION      | DATE   | DR  | AUTH |
|-----|------------|------------------|--------|-----|------|
| OR  | ECO-003129 | NEW RELEASE      | JUL 20 | DDR | VC   |
| OR1 | ECO-019409 | JV1210C-13 ADDED | OCT 23 | AGS | VC   |
|     |            |                  |        |     |      |

SUGGESTED MOUNTING CONFIGURATION FOR JV1210C-7, JV1210C-13 CASE STYLE



NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS (R04835 Lo Pro) WITH DIELECTRIC THICKNESS  $.0073 \pm .0007$ . 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 PATTERN WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES PCB COPPER PATTERN FREE OF SOLDERMASK

| UNLESS OTHERWISE SPECIFIED | INITIALS | DATE          |
|----------------------------|----------|---------------|
| DIMENSIONS ARE IN INCHES   | DRAWN    | DDR 02 JUL 20 |
| TOLERANCES ON:             | CHECKED  | RV 02 JUL 20  |
| 2 PL DECIMALS ±            | APPROVED | RKS 02 JUL 20 |
| 3 PL DECIMALS ± .005"      |          |               |
| ANGLES ±                   |          |               |
| FRACTIONS ±                |          |               |

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PL, JV1210C-7, JV1210C-13, TB-LFCV-X+

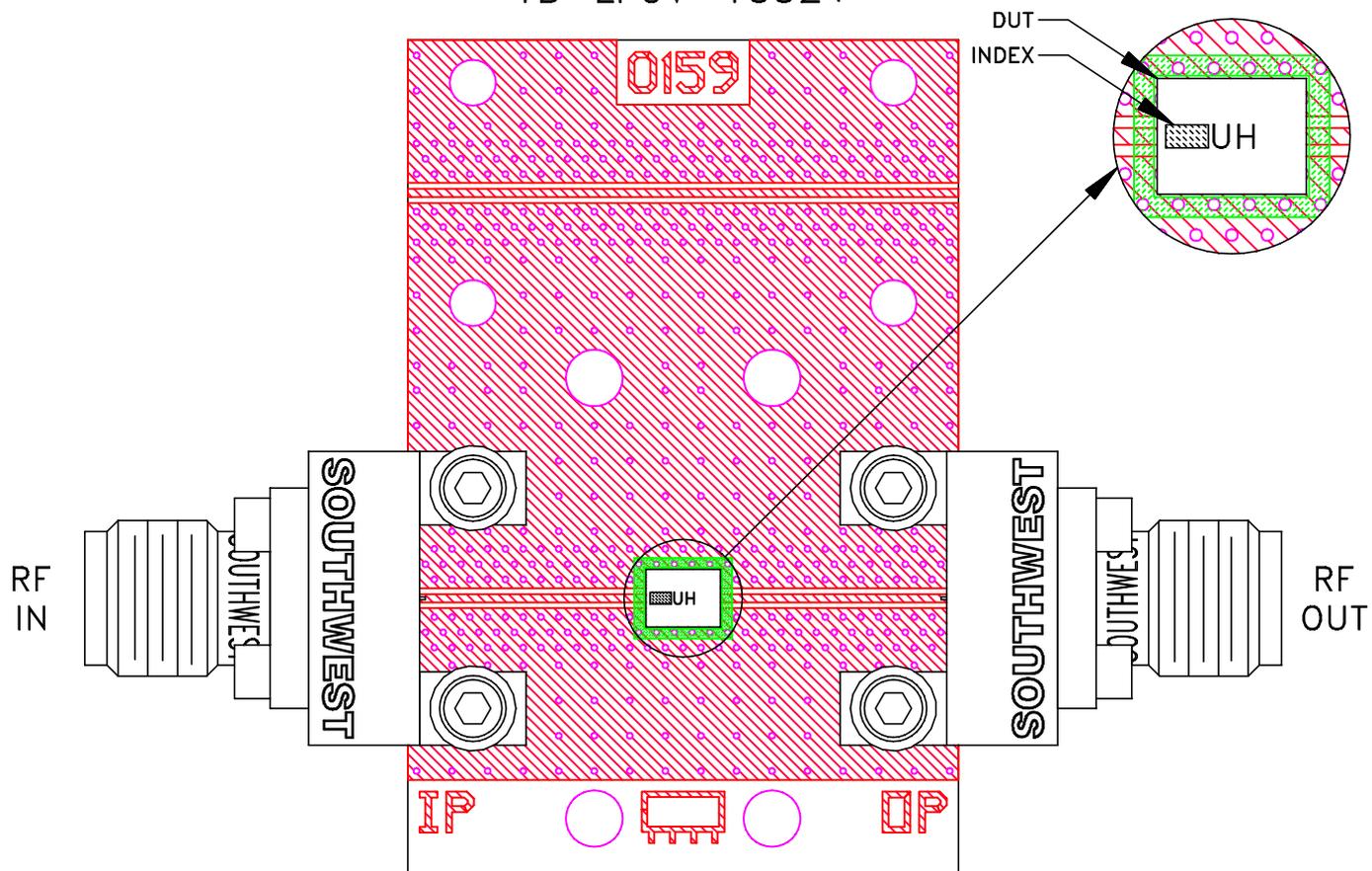
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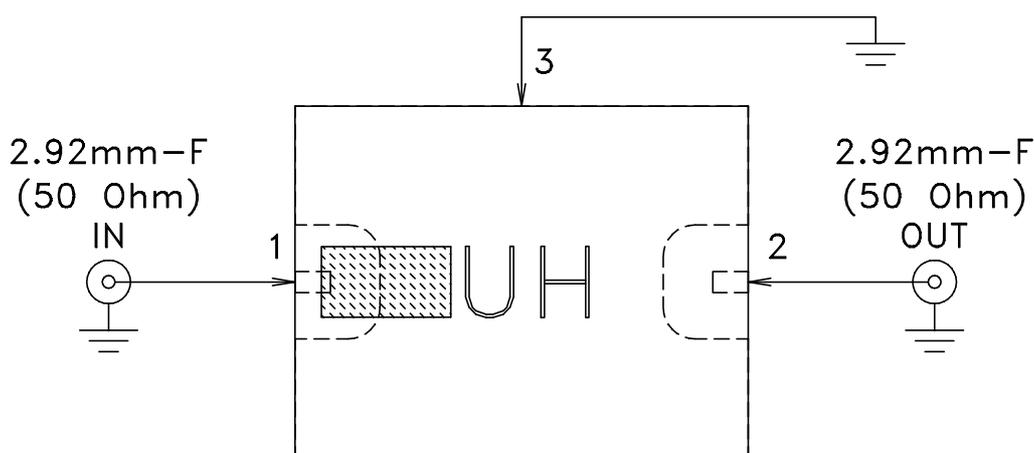
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# Evaluation Board and Circuit

TB-LFCV-1552+



Schematic diagram

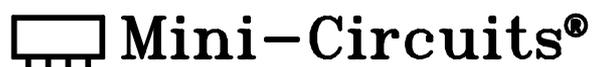


Notes:

1. PCB Material: ROGERS (R04835 Lo Pro) OR Equivalent, Dielectric Constant= $3.48 \pm .05$   
Dielectric Thickness: .0073

2. 50 Ohm 2.92mm Female Connectors.

3. Connectors on the test board shall not be subjected to temperature greater than 200°C to avoid permanent damage to the connectors.



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| <b>Specification</b>       | <b>Test/Inspection Condition</b>  | <b>Reference/Spec</b>  |
|----------------------------|---|--|
| Operating Temperature      | -55° to 125° C<br>Ambient Environment   | Individual Model Data Sheet  |
| Storage Temperature        | -55° to 125° C<br>Ambient Environment   | Individual Model Data Sheet  |
| Humidity                   | 90 to 95% RH, 240 hours, 50°C   | MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours |
| Solder Reflow Heat         | Sn-Pb Eutectic Process 225°C peak<br>Pb-Free Process 245° - 250°C peak              | J-STD-020C, Table 4-1, 4-2 and 5-2, Figure 5-1   |
| Solderability              | 10X Magnification   | J-STD-002, Para 4.2.5, Test S, 95% Coverage  |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D   |
| Mechanical Shock           | 50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes                   | MIL-STD-202, Method 213, Condition A   |