



# 915 MHz Directional Embedded Ceramic Patch ANTENNA

**Part Number: L001119-01  
L001119-80**

## FEATURES & BENEFITS

- Antenna is for LPWA applications including LoRaWAN, Sigfox, remote contros.
- Passive Patch Antenna
- The following data is based on 70 x 70 x 0.8mm ground size
- Through-hole pin and adhesive on bottom assembly
- No matching circuits required

## RF SPECIFICATIONS

Frequency Range (MHz)	900-928
VSWR (center frequency)	< 2:1 @915MHz
Peak Gain at Zenith	Typ. 4.1 dBic @915MHz
Average Gain	-2.7dB @915MHz
Axial Ratio	< 2 at 915MHz
Feed Point Impedance	50 ohms
Polarization	Circular polarization

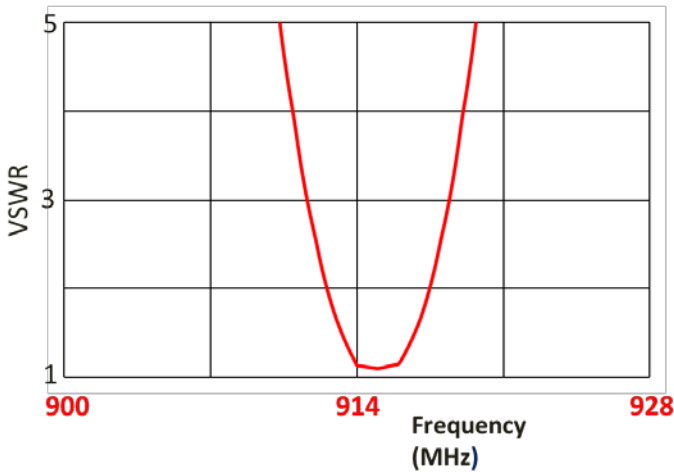
## MECHANICAL SPECIFICATIONS

Size ( L x W x H )	40.0 mm x 40.0 mm x .4.0 mm ( L/W/H ± 0.2)
Weight	< 16 g
Mounting	Adhesive Tape
Mating Connector	N/A
Cable	N/A
Operating Temperature	-40 to +105°C
Storage Temperature	-40 to +105°C
Dielectric Material	Ceramic
Hazardous Materials	A certificate of conformance is available from the product page on TE website.

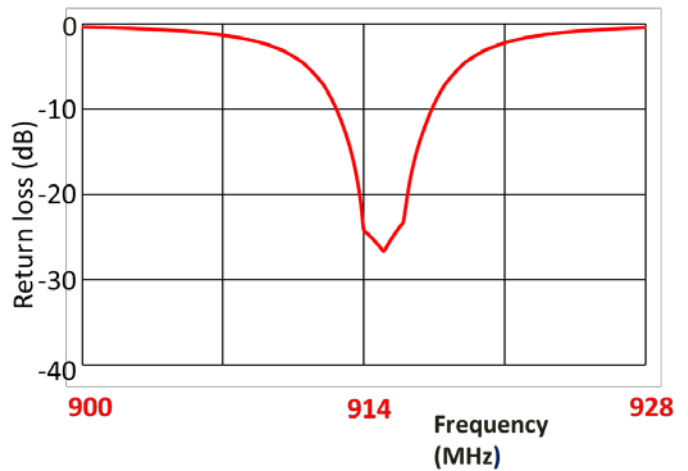
## RF DATA

(shown as L001119-01 : Ground size : 70 x 70 x 0.8 mm.)

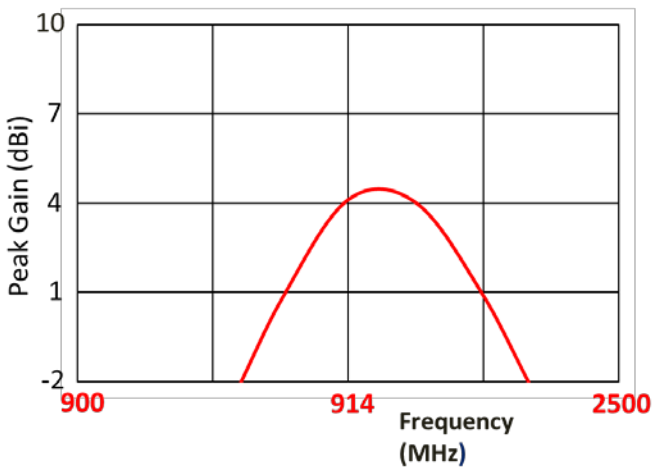
VSWR



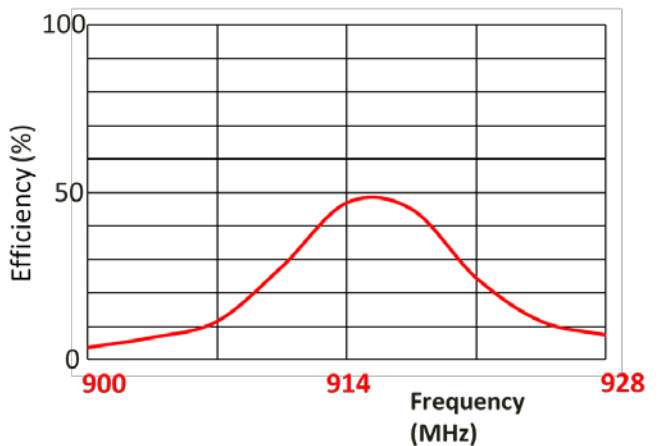
Return Loss



Peak Gain



Efficiency

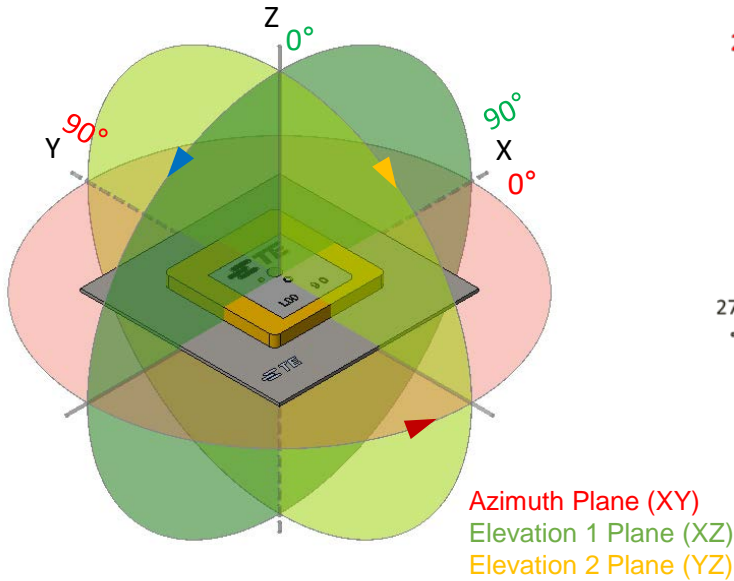


Data measured in free space and on reference ground plane of 70x70x0.8 mm ground plane condition, application data might vary.

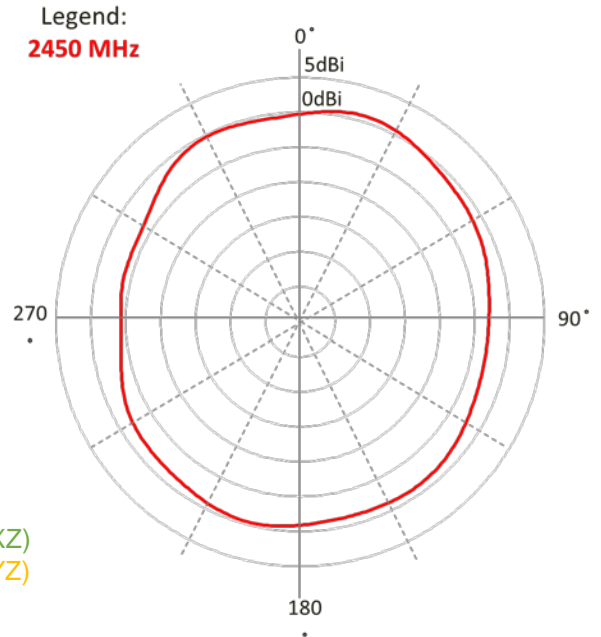
# RADIATION PATTERN

(shown as L001119-01 : Ground size : 70 x 70 x 0.8 mm.)

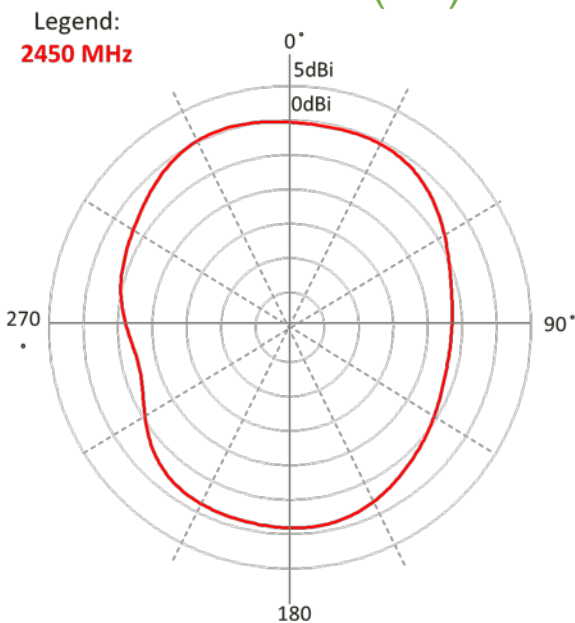
## Test setup



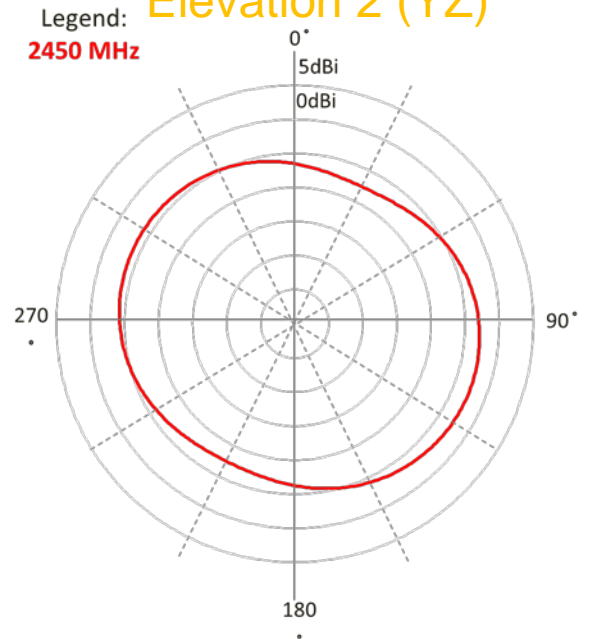
## Azimuth (XY)



## Elevation 1 (XZ)

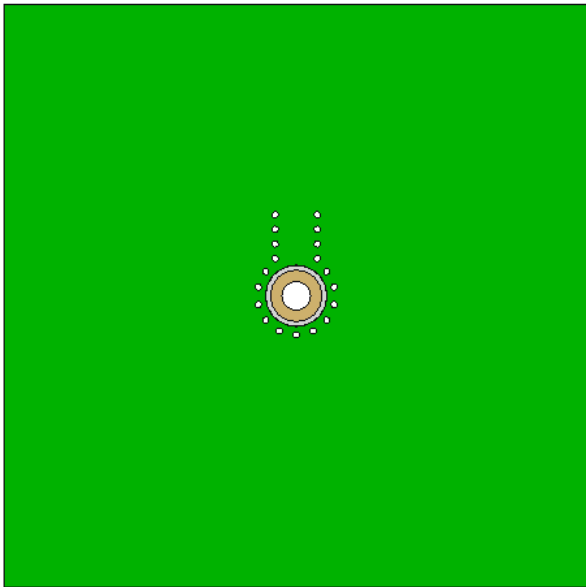


## Elevation 2 (YZ)

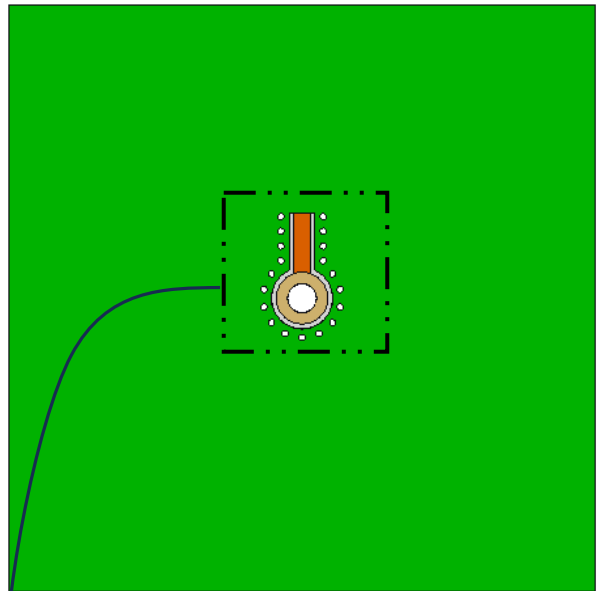


Data measured in free space and on reference ground plane of 70x70x0.8 mm ground plane condition, application data might vary.

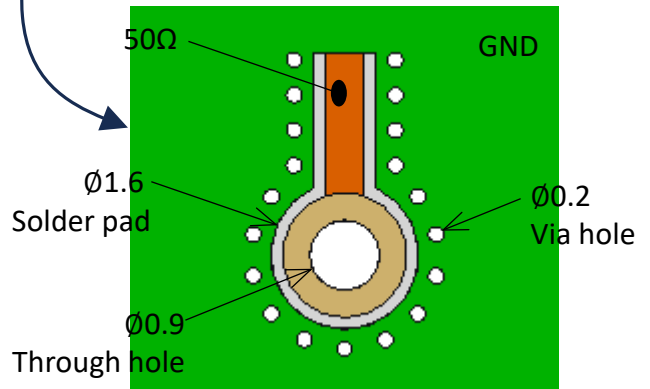
## MOUNTING GUIDE



Top side



Bottom side

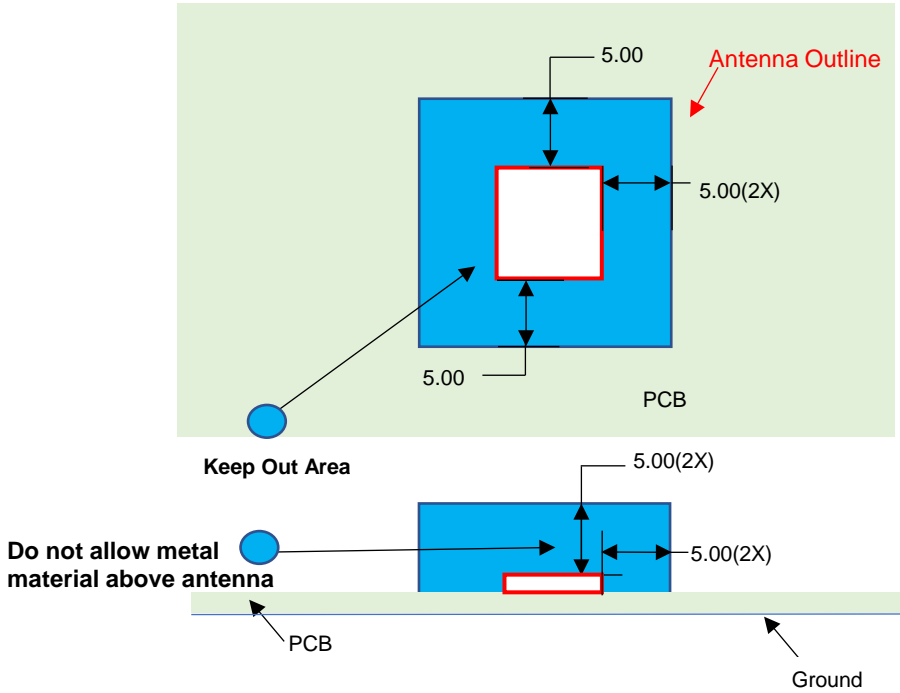


### NOTES:

1. Antenna must be mounted on the edge of PCB.
2. Reference PCB Dimension(mm) - 50.0 x 50.0 x 1.0 ground layer
3. Mounting Instructions:
  - a. Clean PCB surface to remove any oil or grease from surface.
  - b. Remove adhesive liner from PSA on antenna back.
  - c. Align antenna through hole pin into plated through hole and body into desired orientation based on propagation patterns.
  - d. Insert pin and oriented body into housing and press firmly to PCB for five to ten seconds
  - e. Hand or wave solder pin to PCB IAW IPC-A-610

Dimension: mm  
Tolerance :  $\pm 0.2$ mm  
Diagrams is not to scale

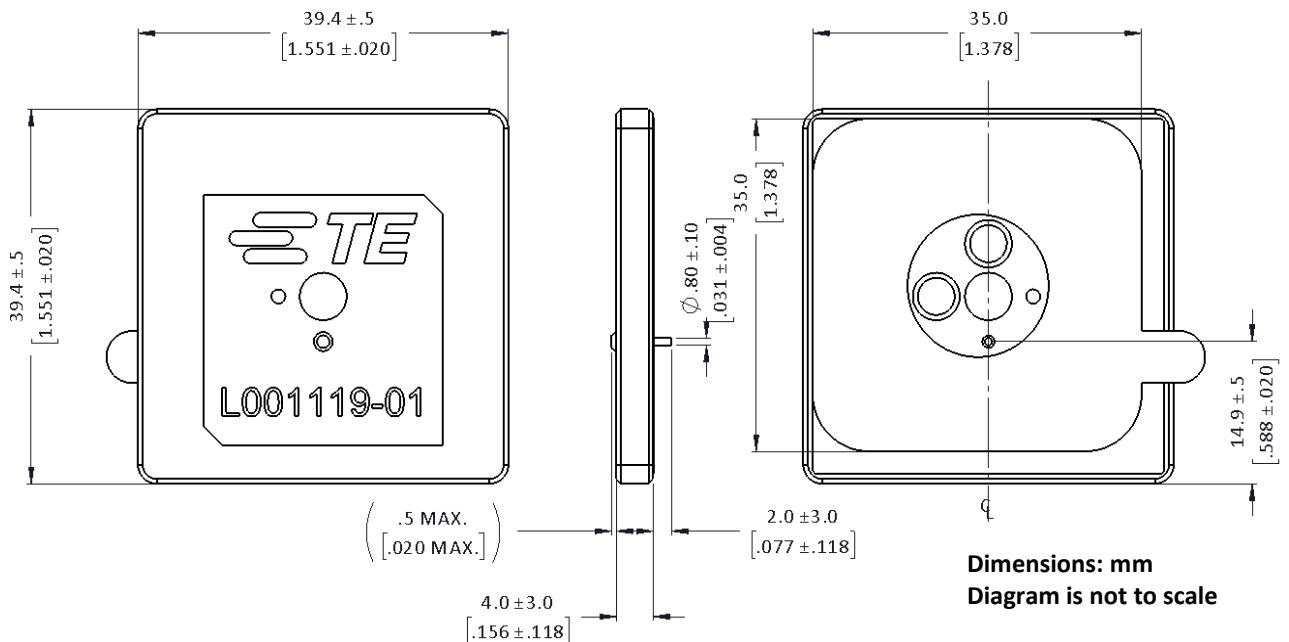
## KEEP OUT AREA



- NOTES:**
1. Antenna designed to be mounted on PCB.
  2. Area in blue above indicates Keep Out Area.
  3. For more information please call TE.

Dimensions: mm  
Diagram is not to scale

## DIMENSIONS

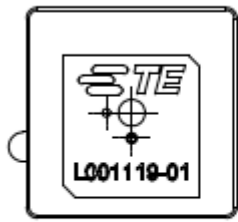


Dimensions: mm  
Diagram is not to scale

# 915 MHz Directional Embedded Ceramic

Standard Antenna Solutions

## PACKAGING

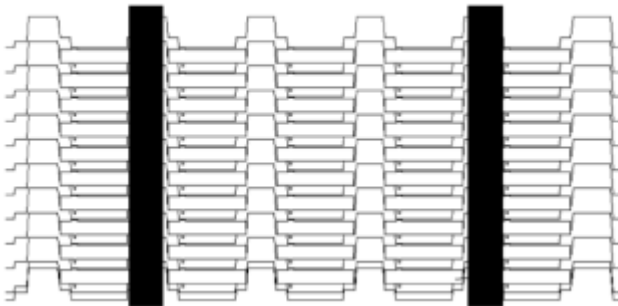


20PC PER INTERLOCKING TRAY

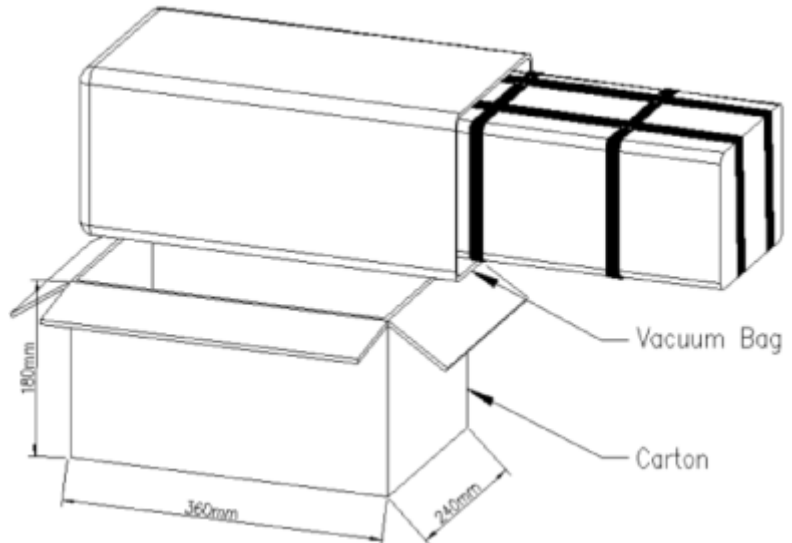


EACH CAVITY OF INTERLOCKING TRAY COVERED WITH 1mm THICK EVA FOAM TO PREVENT SHIFT DURING TRANSIT

200PC PER LOT BAG



- INTERLOCK 10 PRODUCT TRAYS TOGETHER
- PLACE 1 EMPTY TRAY TOP AND INTERLOCK BOTTOM TRAY FRONT TO FRONT TO PROTECT BOTTOM
- PACKING BANDS 2 PER SIDE TOTAL 4 TO KEEP STACK TOGETHER
- PLACE STACK IN VACUUM BAG



## TE TECHNICAL SUPPORT CENTER

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