
# L1/L5 MICRO SPLATCH GNSS CHIP ANTENNA

Part Numbers:
L000670-01
L000670-80

## FEATURES & BENEFITS

- Supporting GPS, Galileo, Beidou, NavIC and QZSS systems in the L1/E1/B1 and L5/E5/B2A bands
- Compact passive patch antenna; linear polarization
- On board SMD PCB antenna assembly and no matching circuits required
- Available in tape & reel packaging for automatic mounting
- RoHS 2.0 Compliant, Road vehicle compliant, REACH compliant
- The data in this document is based on 90mm x 41mm ground size

## SPECIFICATIONS

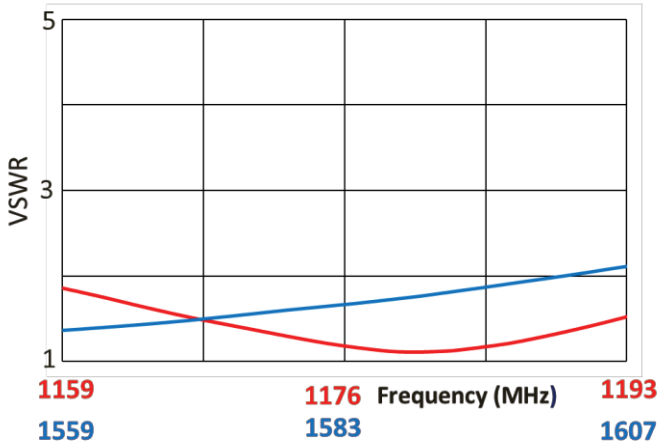
| | | |
|---|---|---|
| **Frequency Range (MHz)** | 1176 | 1562/ 1575 /1602 |
| **Bandwidth (MHz)** | ±1.023 | ± 2 / ± 2 / ± 5 |
| **VSWR (center frequency)** | < 2.0 :1 | < 2.3:1 |
| **Average Efficiency** | 56% | 66% |
| **Peak Gain** | 1.2 dBi | 2.7 dBi |
| **Average Gain** | -2.6 dB | -1.9 dB |
| **Feed Point Impedance** | 50 ohms | |
| **Polarization** | Linear polarization | |

## MECHANICAL SPECIFICATIONS

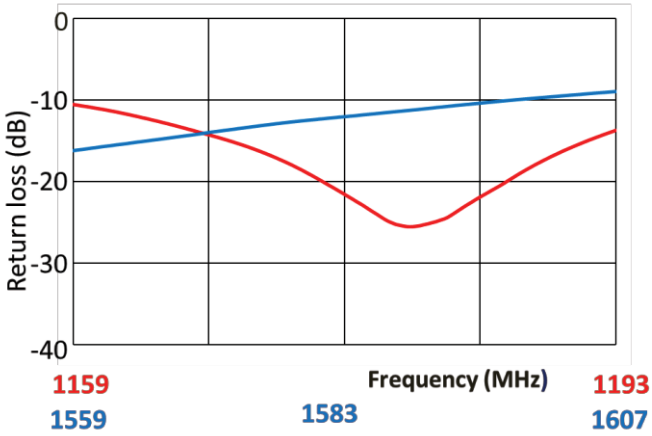
| | |
|---|---|
| **Size ( L x W x H )** | 14.0 mm x 10.75 mm x 1.0 mm ( L/W ± 0.15, H ± 0.1) |
| **Weight** | < 0.3 g |
| **Mounting** | Surface mount |
| **Mating Connector** | SMA PCB VERT JACK |
| **Cable** | N/A |
| **Operating Temperature** | -40 to +105°C |
| **Storage Temperature** | -40 to +105°C |
| **Dielectric Material** | PCB |
| **Hazardous Materials** | A certificate of conformance is available from the product page on TE website. |

## RF DATA (SHOWN AS L000670-01 : GROUND SIZE : 90 X 41 X 1.0 MM.)

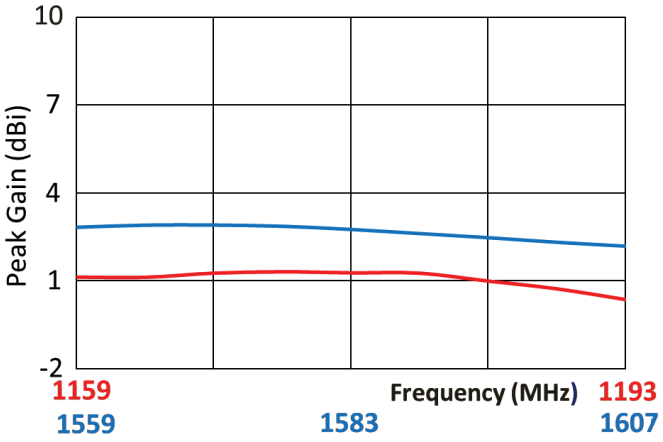
### VSWR



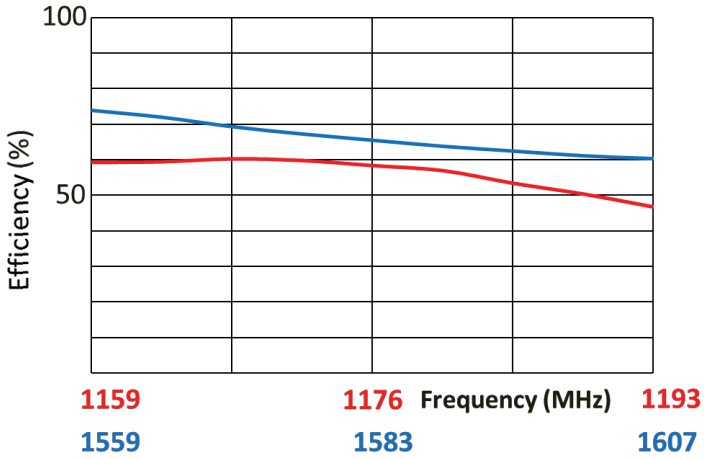

### Return Loss




### Peak Gain



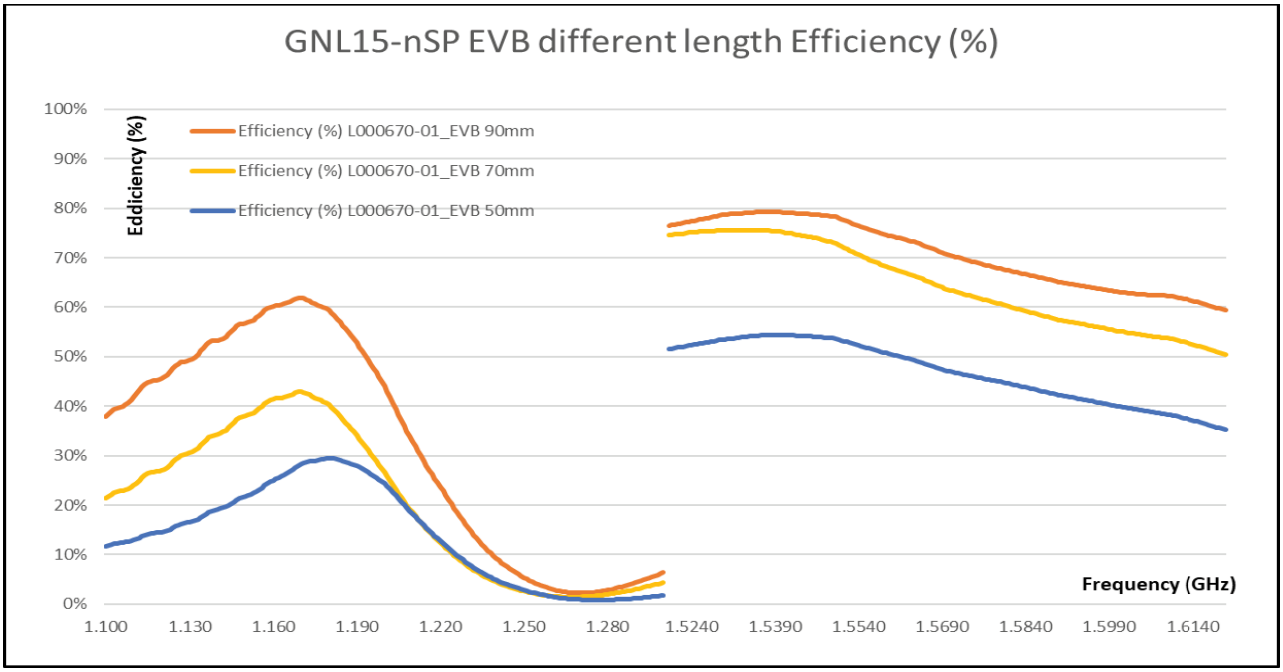

### Efficiency



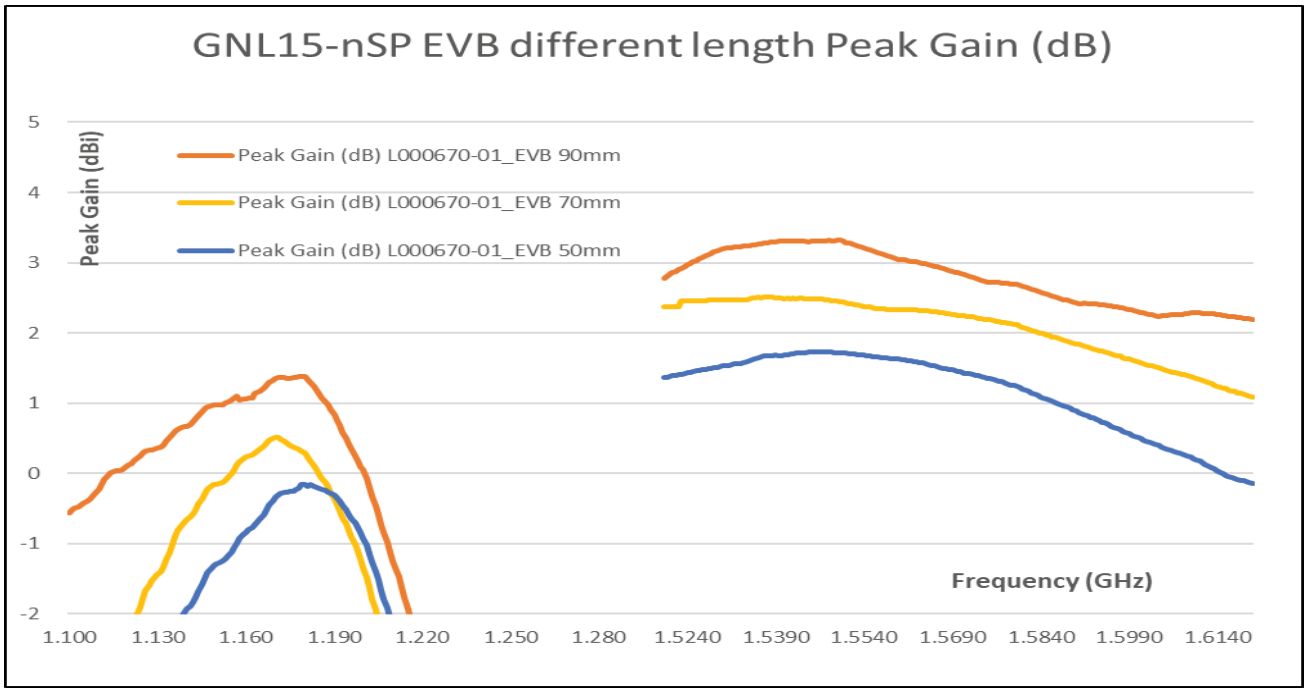

Data measured in free space and on reference ground plane of 90mm ground length and 41mm width, application data might vary.

## RF DATA (SHOWN AS L000670-1 : OTHERS CAN VARY WITH DIFFERENT GROUND LENGTHS.)

### Efficiency vs. Ground Length size




### Peak Gain vs. Ground Length size

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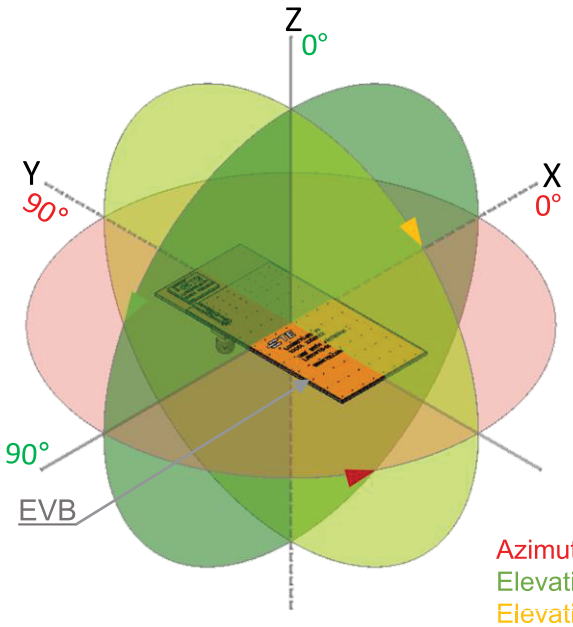
## RADIATION PATTERN

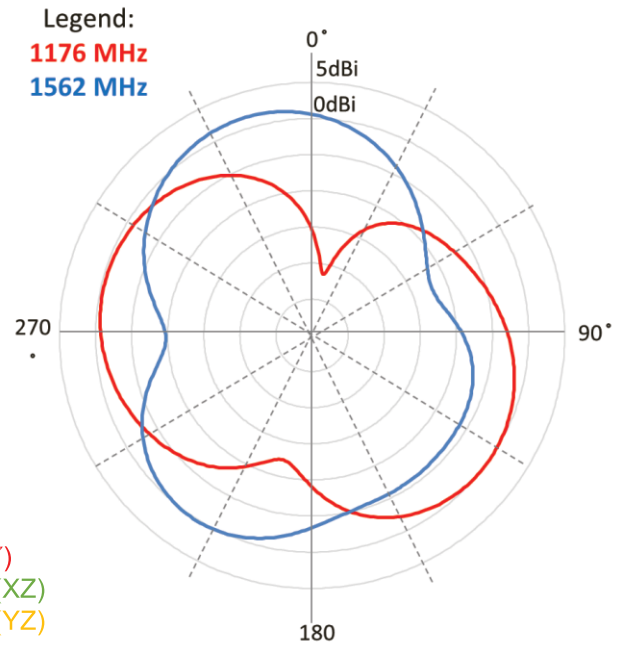
## (SHOWN AS L000670-01 : GROUND SIZE : 90 X 41 X 1.0 MM.)

### Test setup

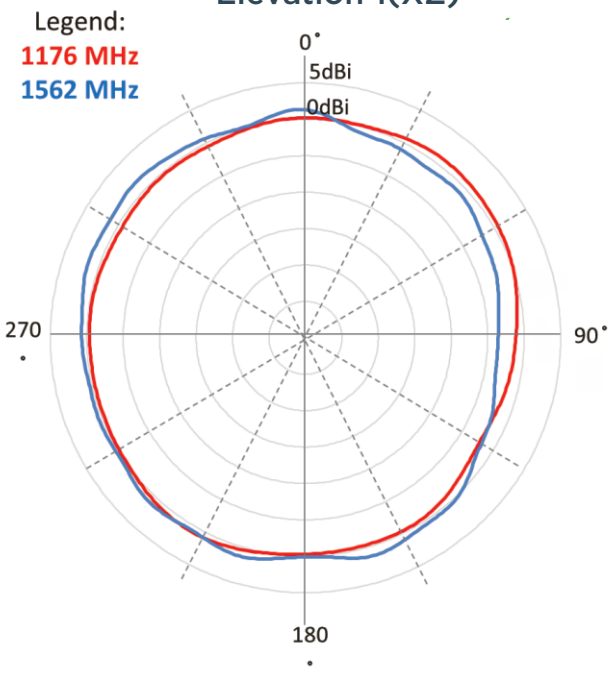



Azimuth Plane (XY)
Elevation 1 Plane (XZ)
Elevation 2 Plane (YZ)

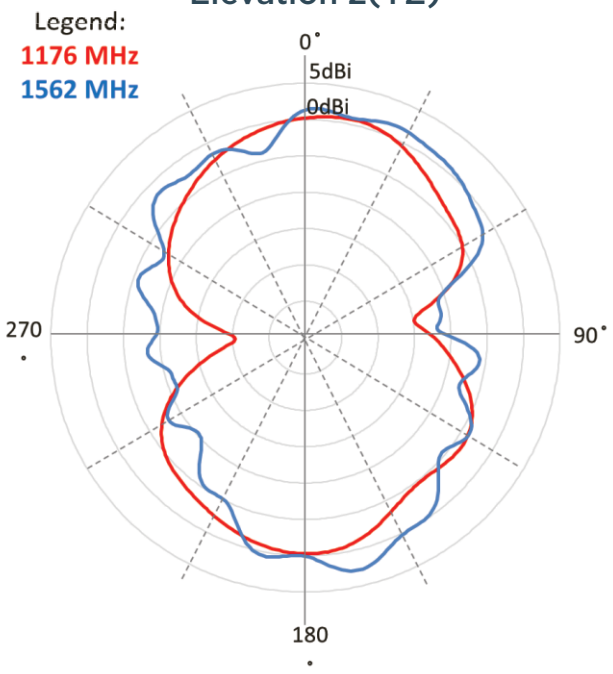
### Azimuth(XY)




### Elevation 1(XZ)




### Elevation 2(YZ)

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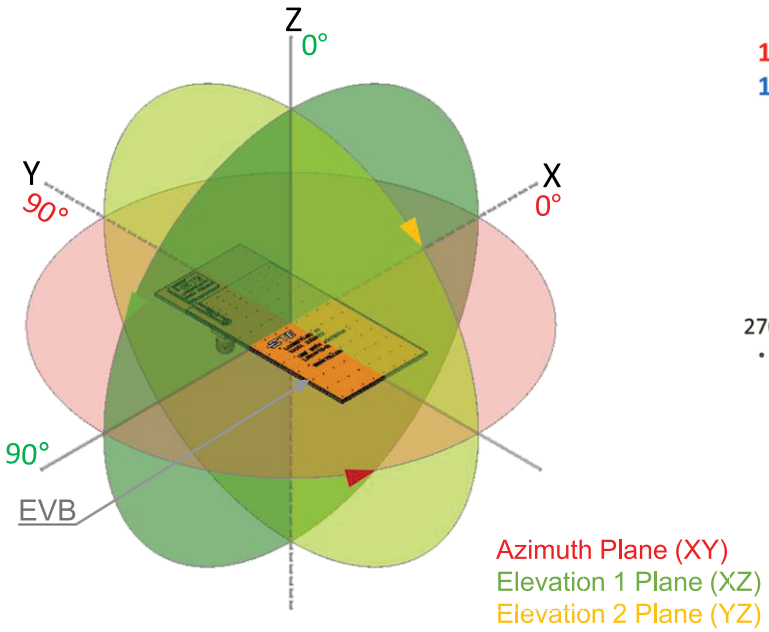
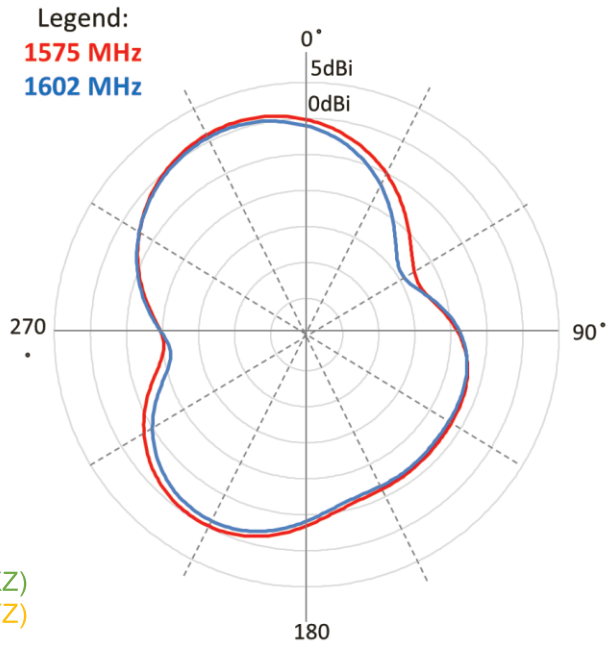
### Test setup

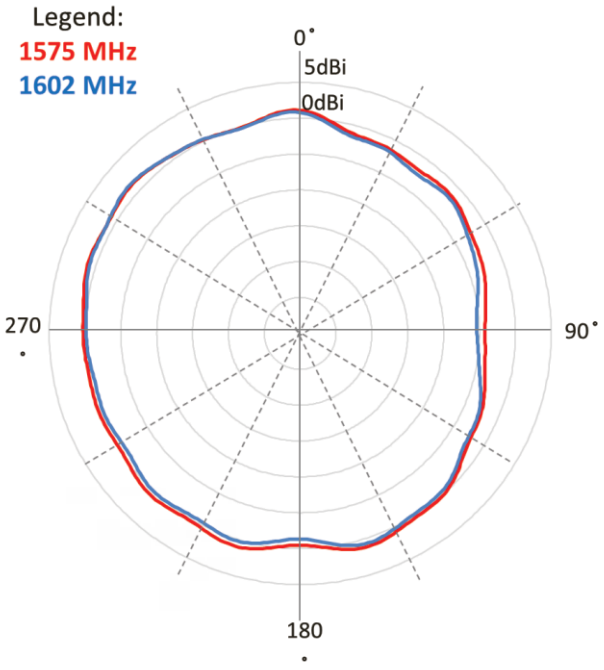



Azimuth Plane (XY)
Elevation 1 Plane (XZ)
Elevation 2 Plane (YZ)

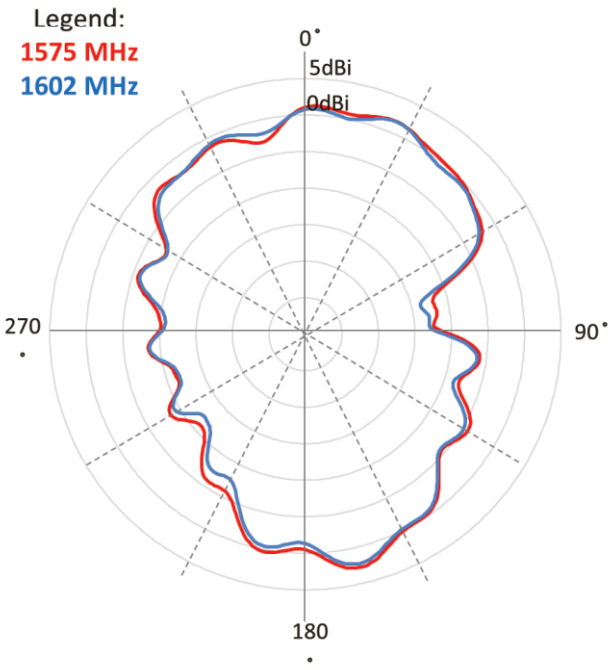
### Azimuth(XY)




### Elevation 1(XZ)




### Elevation 2(YZ)

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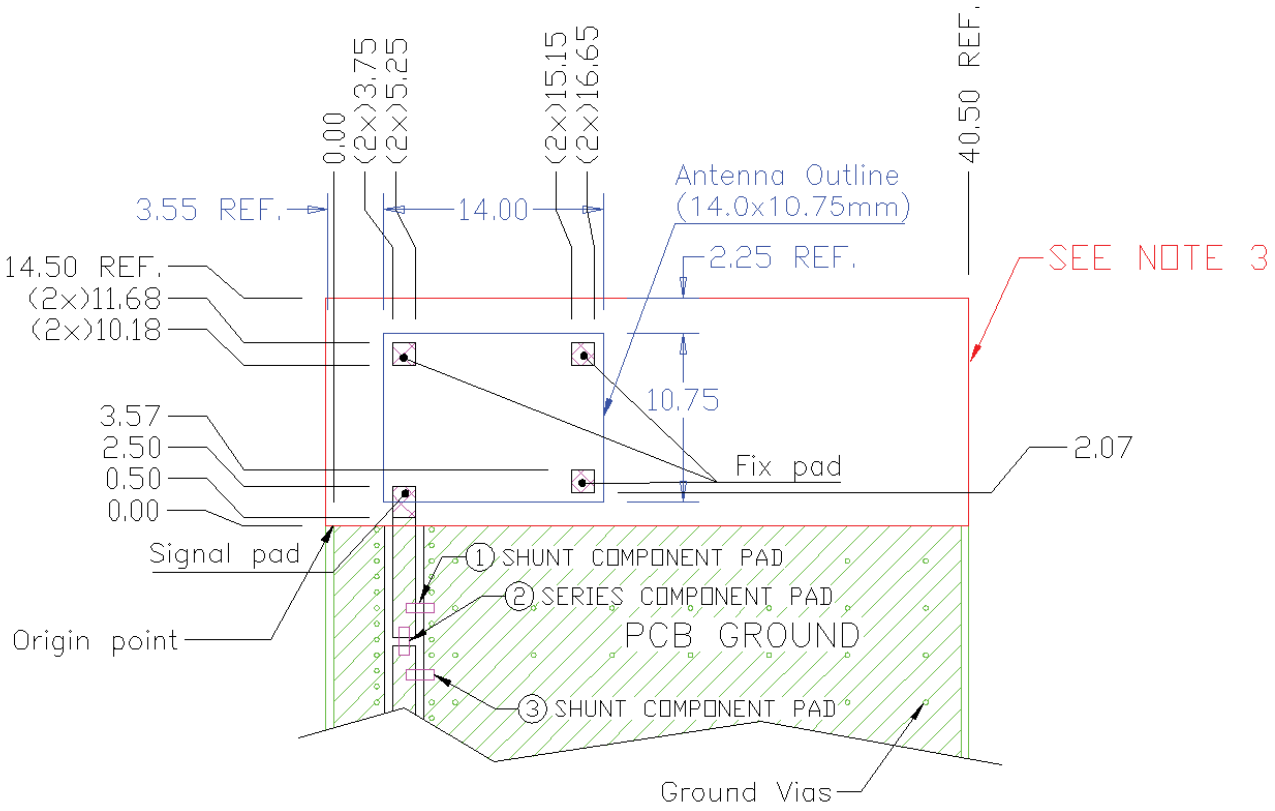
## MOUNTING GUIDE

### Top View




**NOTES: 1. Antenna must be mounted on the edge of PCB.**

**2. NC = Non connection (mechanical mounting pads).**

**3. No copper allowed in designated area on all PCB layers –**

**4. For more information please call TE.**

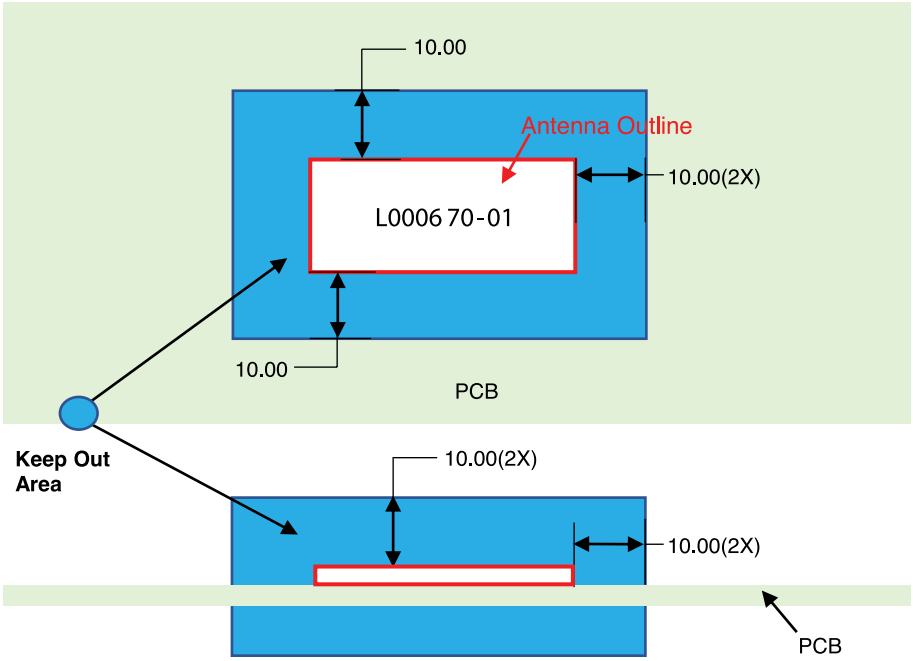
**5. Measured with below matching circuit condition.**

**① NC ,② 0 ohm,③NC**

**6. Reference PCB Dimension(mm) - 90.0 x 41.0 x 1.0**

Dimensions: mm
Diagram is not to scale

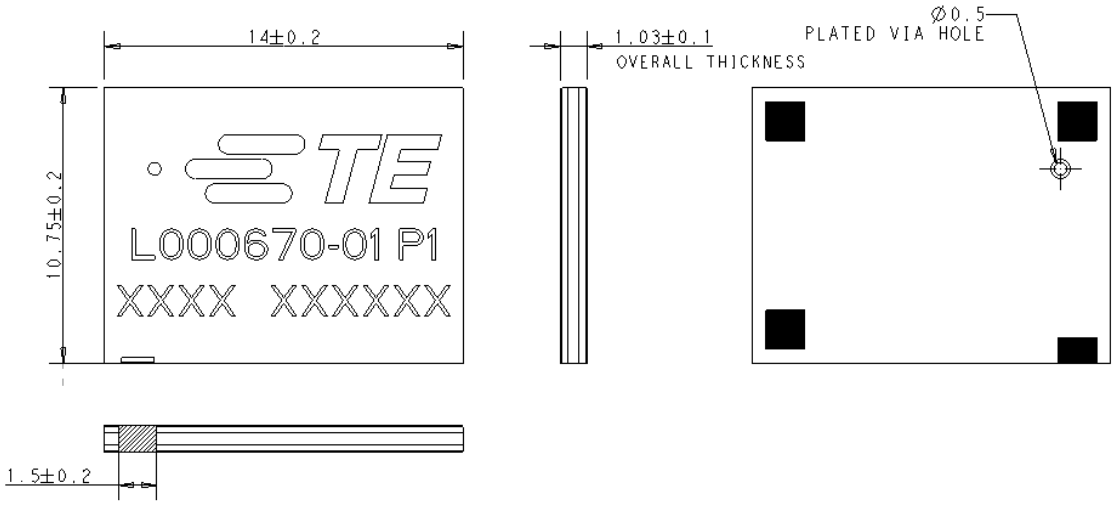
## KEEP OUT AREA




**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

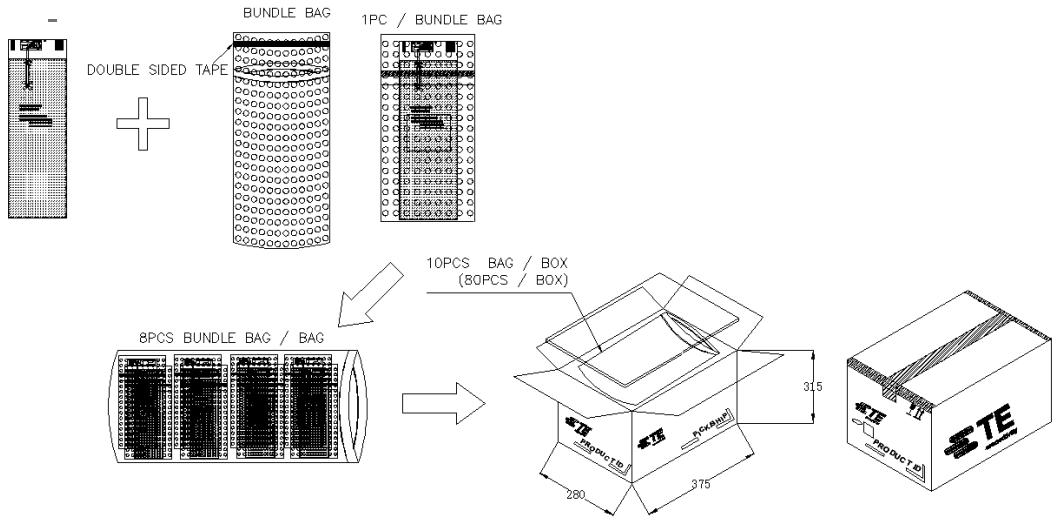
## DIMENSIONS



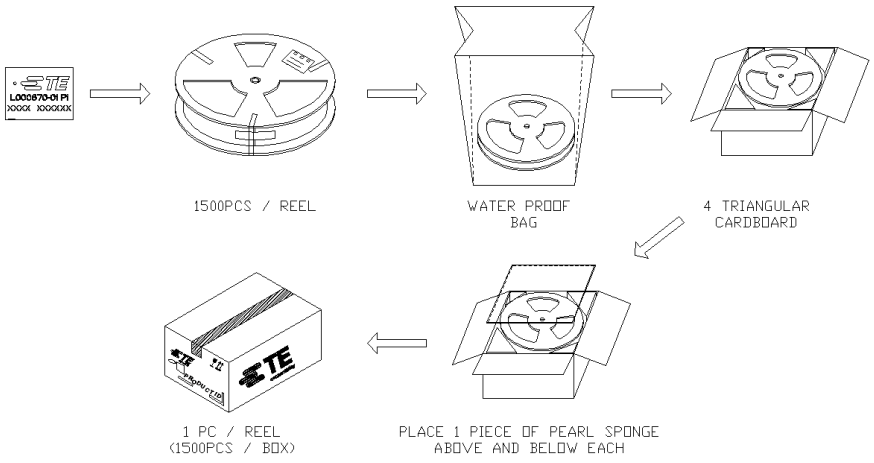

Dimensions: mm
Diagram is not to scale

# PACKAGING

## L000670-80 (BULK)




## L000670-01 (TAPE & REEL)



## TE TECHNICAL SUPPORT CENTER

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Revised 05-24