



## 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

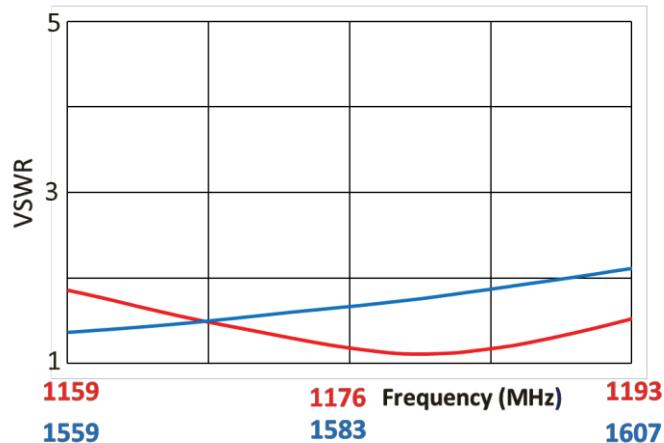
Frequency Range (MHz)	1176	1562/ 1575 /1602
Bandwidth (MHz)	±1.023	± 2 / ± 2 / ± 5
VSWR (center frequency)	< 2.0 :1	< 2.3:1
Average Efficiency	56%	66%
Peak Gain	1.2 dBi	2.7 dBi
Average Gain	-2.6 dB	-1.9 dB
Feed Point Impedance	50 ohms	
Polarization	Linear polarization	

### MECHANICAL SPECIFICATIONS

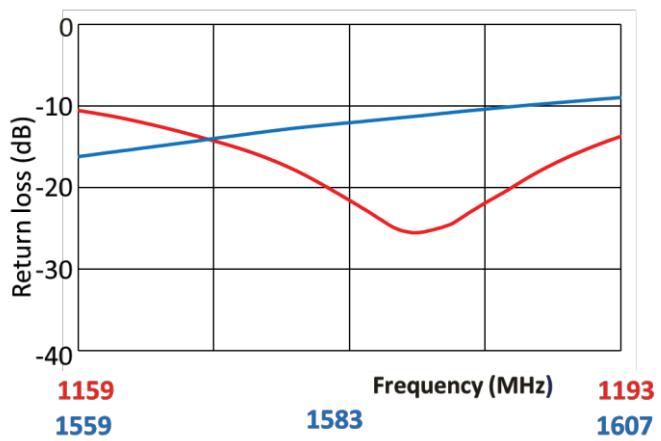
Size ( L x W x H )	14.0 mm x 10.75 mm x 1.0 mm ( L/W ± 0.15, H ± 0.1)
Weight	< 0.3 g
Mounting	Surface mount
Mating Connector	SMA PCB VERT JACK
Cable	N/A
Operating Temperature	-40 to +105°C
Storage Temperature	-40 to +105°C
Dielectric Material	PCB
Hazardous Materials	A certificate of conformance is available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

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

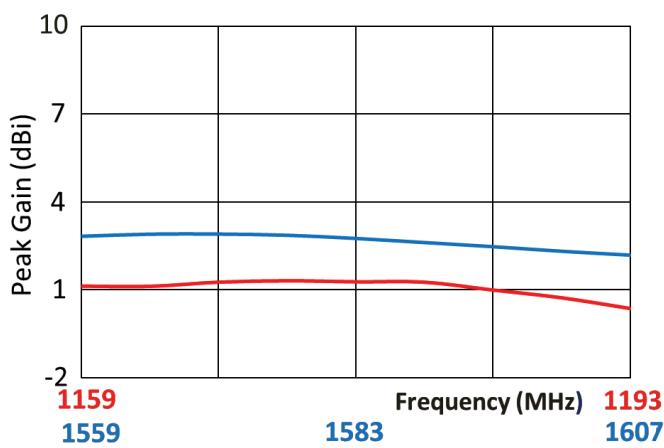
VSWR



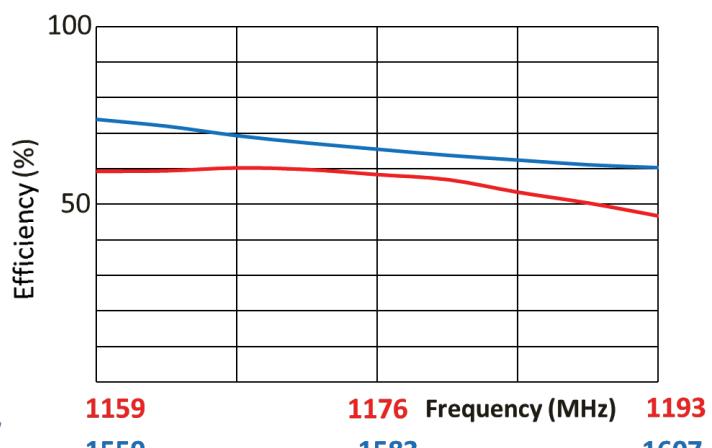
Return Loss



Peak Gain



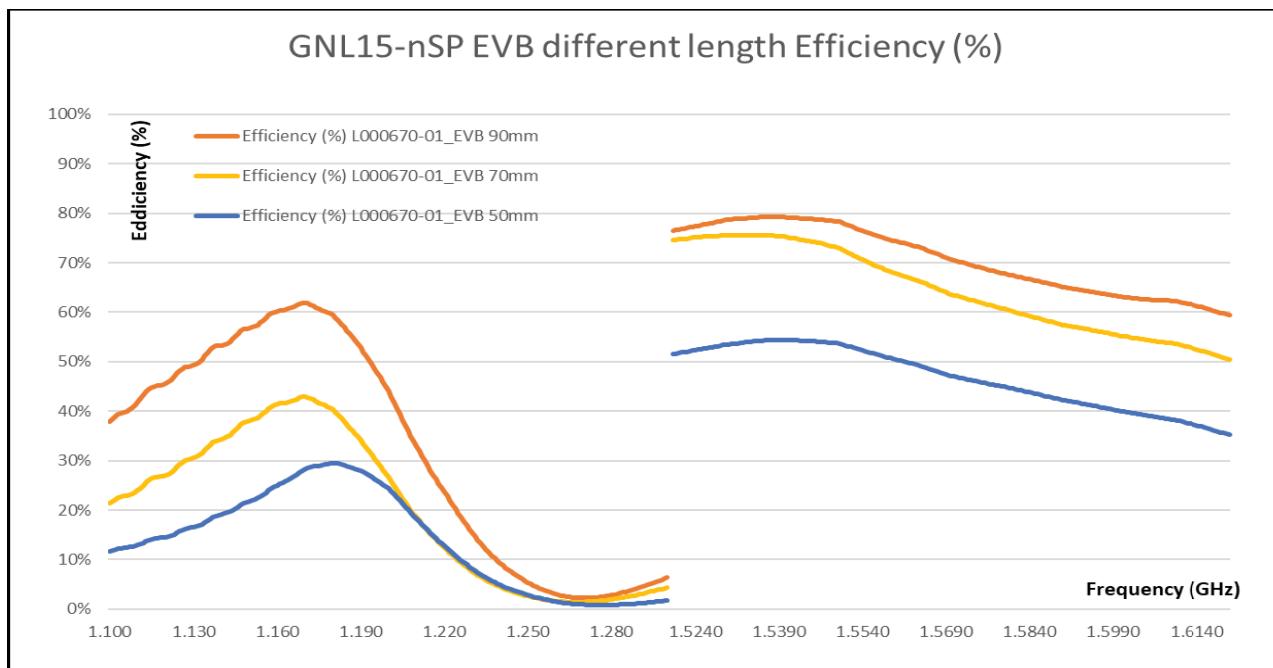
Efficiency



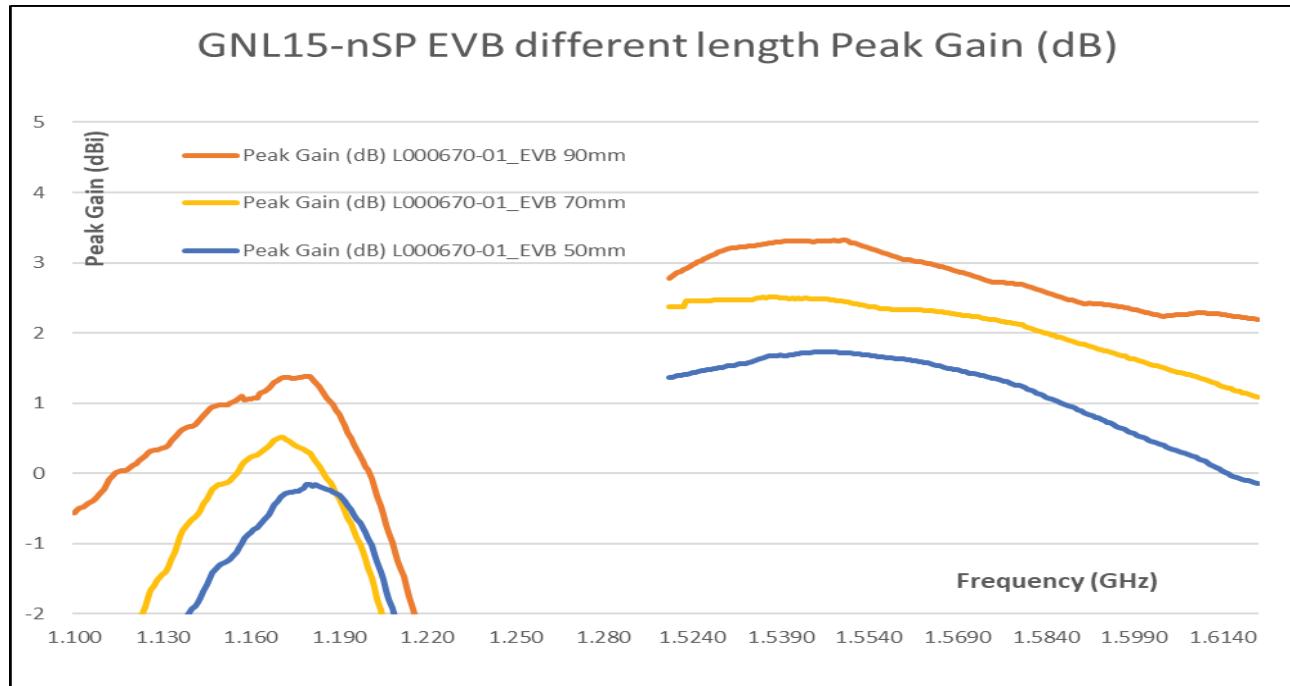
Data measured in free space and on reference ground plane of 90mm ground length and 41mm width, application data might vary.

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

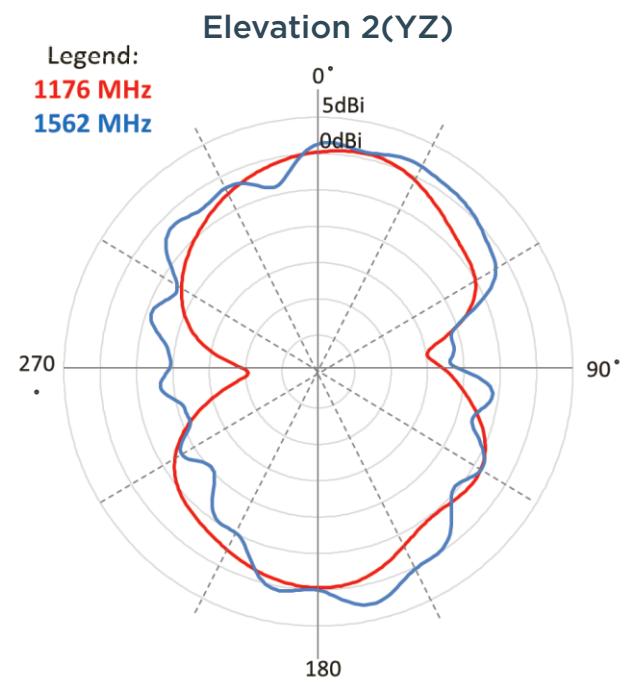
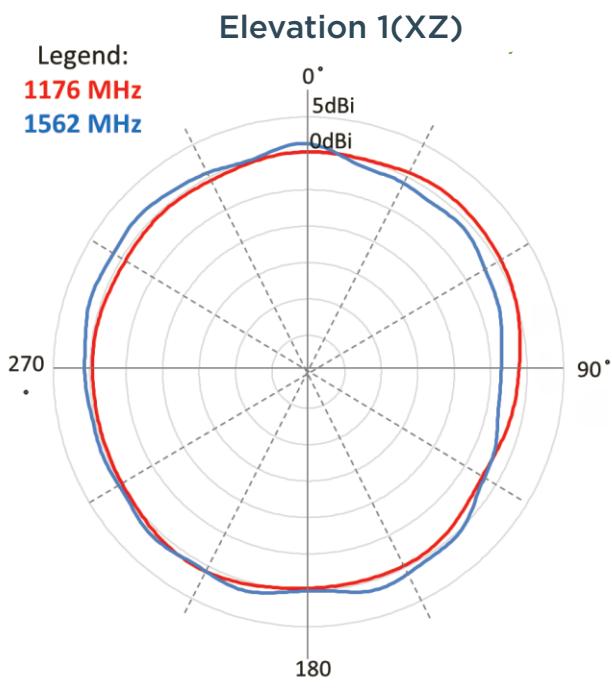
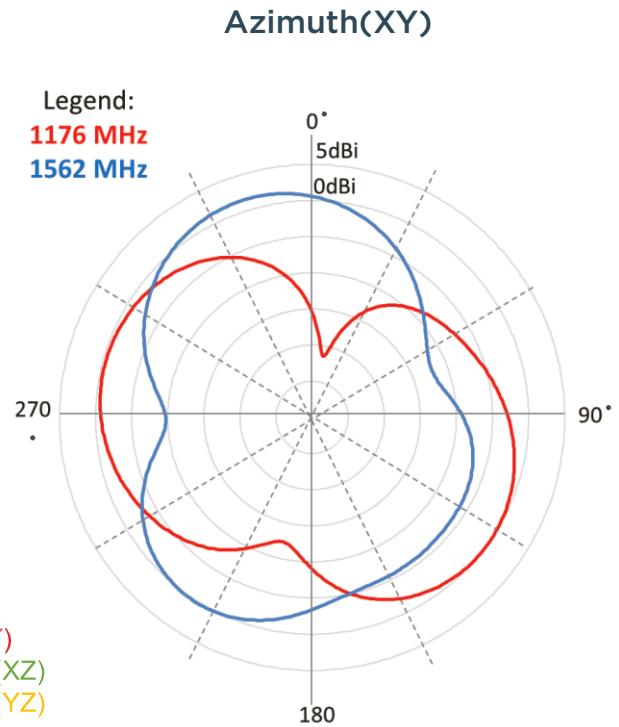
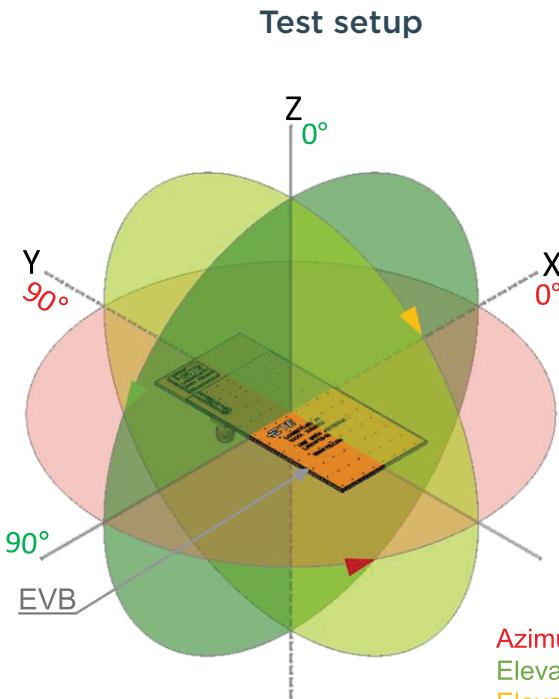
**Efficiency vs. Ground Length size**



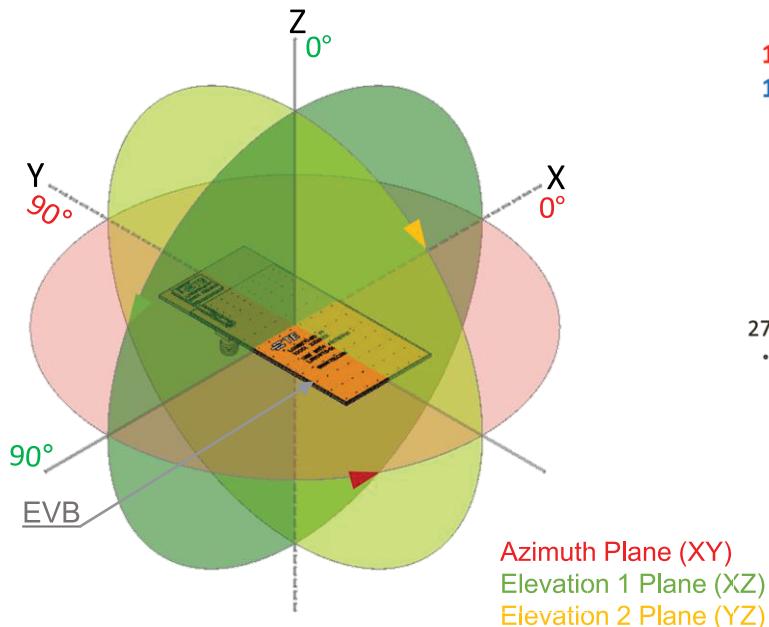
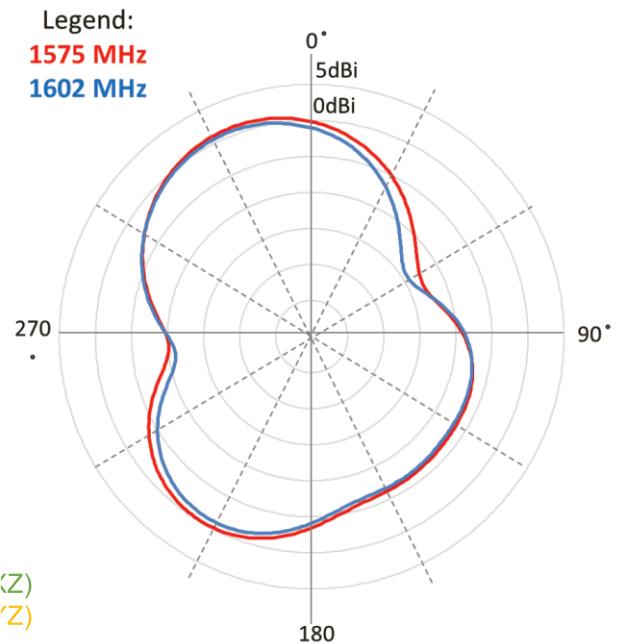
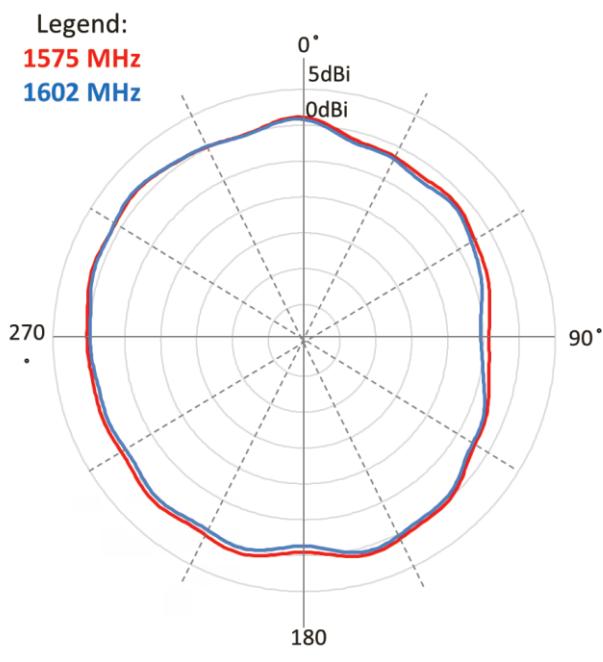
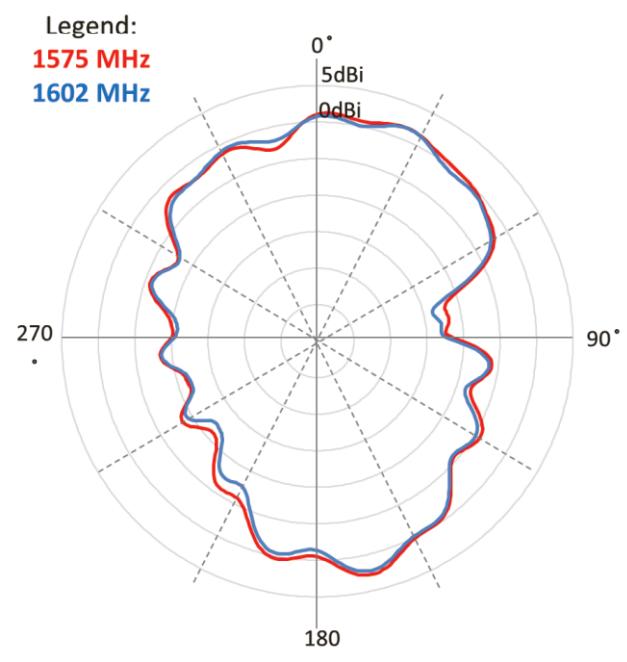
**Peak Gain vs. Ground Length size**



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

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

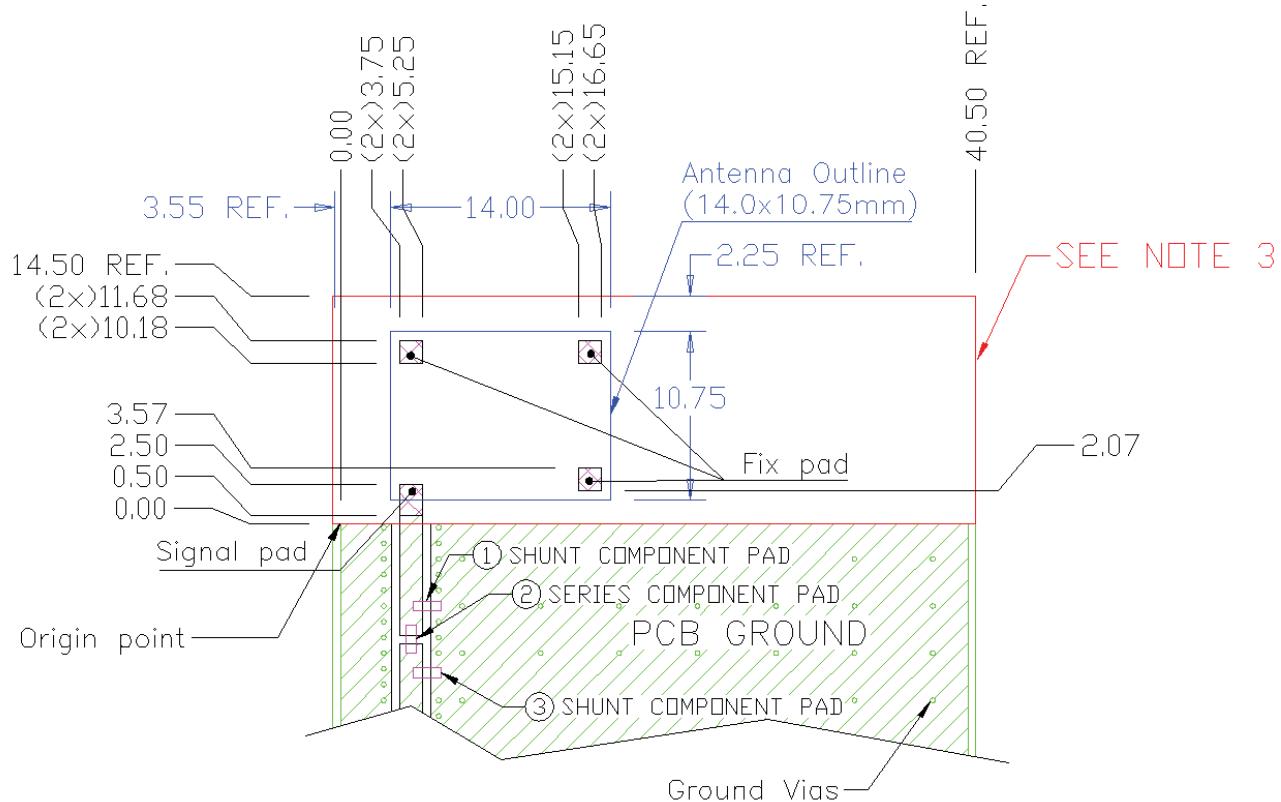
Data measured in free space and on reference ground plane of 90mm ground length and 41mm width, application data might vary.

**RADIATION PATTERN****(SHOWN AS L000670-01 : GROUND SIZE : 90 X 41 X 1.0 MM.)****Test setup****Azimuth(XY)****Elevation 1(XZ)****Elevation 2(YZ)**

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

## MOUNTING GUIDE

### Top View



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

Dimensions: mm

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

Diagram is not to scale

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

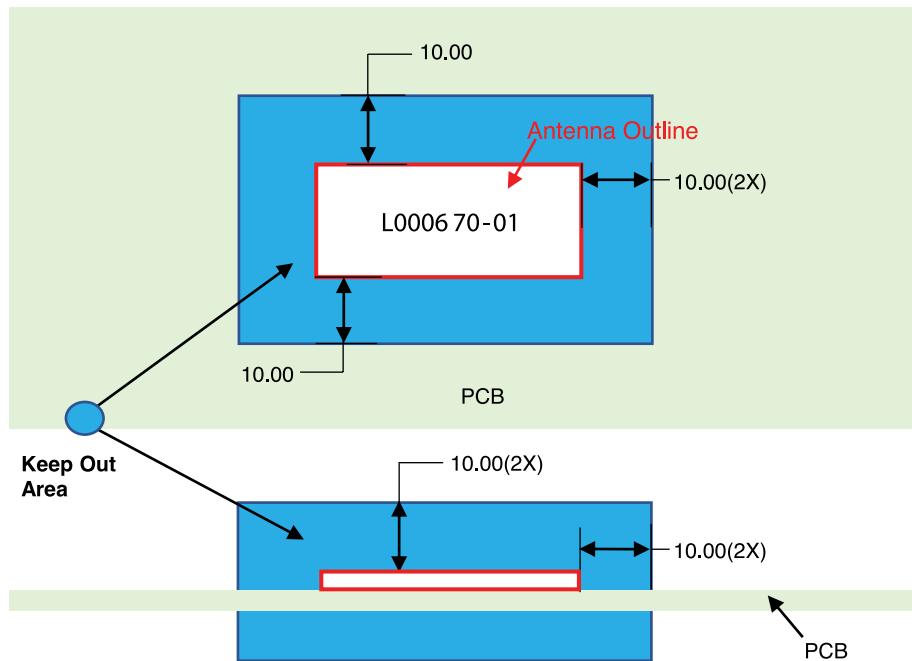
4. For more information please call TE.

5. Measured with below matching circuit condition.

① NC, ② 0 ohm, ③ NC

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

## KEEP OUT AREA



NOTES: 1. Antenna designed to be mounted on PCB.

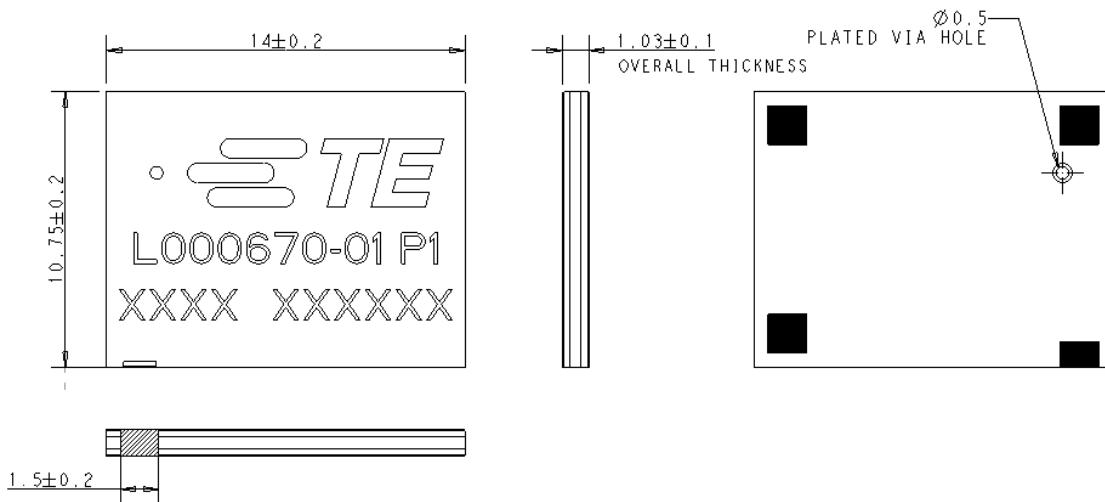
Dimensions: mm

2. Area in blue above indicates Keep Out Area.

Diagram is not to scale

3. For more information please call TE.

## DIMENSIONS

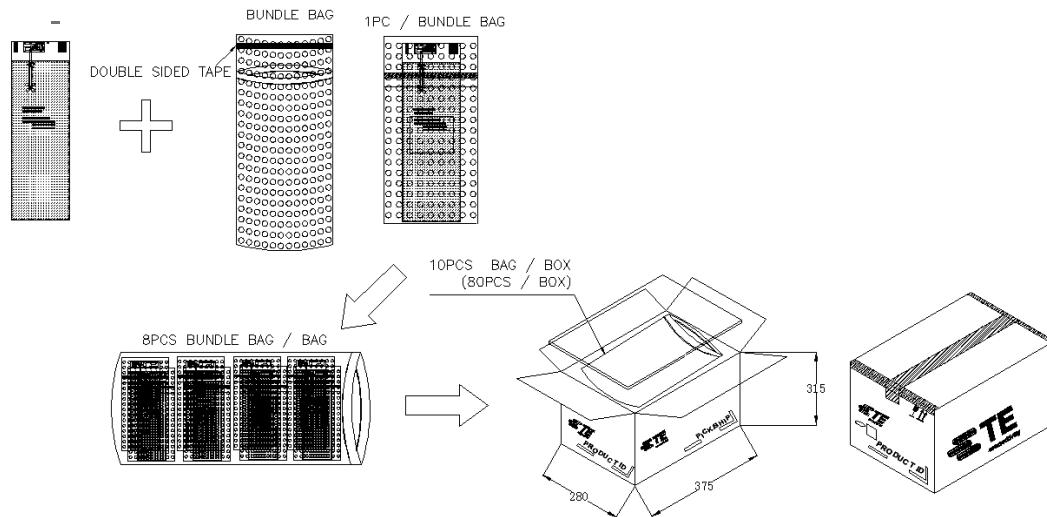


Dimensions: mm

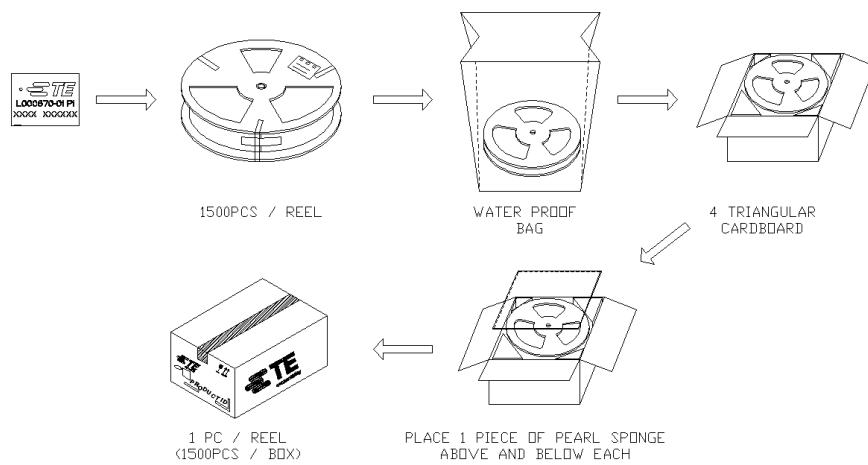
Diagram is not to scale

## PACKAGING

### L000670-80 (BULK)



### L000670-01 (TAPE & REEL)



### TE TECHNICAL SUPPORT CENTER

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Canada:	+1 (905) 475-6222
Mexico:	+52 (0) 55-1106-0800
Latin/S. America:	+54 (0) 11-4733-2200
Germany:	+49 (0) 6251-133-1999
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