



GNSS L1/L5 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

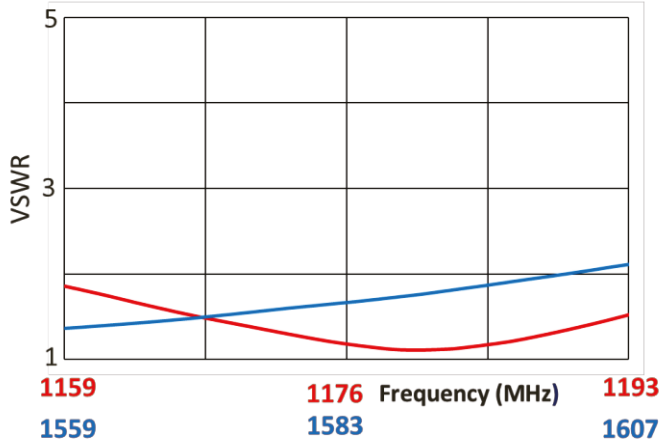
Frequency Range (MHz)	1176	1562/ 1575 /1602
Bandwidth (MHz)	±1.023	± 2 / ± 2 / ± 5
VSWR (center frequency)	< 2.0 :1	< 2.3:1
Average Efficiency	56%	66%
Peak Gain	1.2 dBi	2.7 dBi
Average Gain	-2.6 dB	-1.9 dB
Feed Point Impedance	50 ohms	
Polarization	Linear polarization	

MECHANICAL SPECIFICATIONS

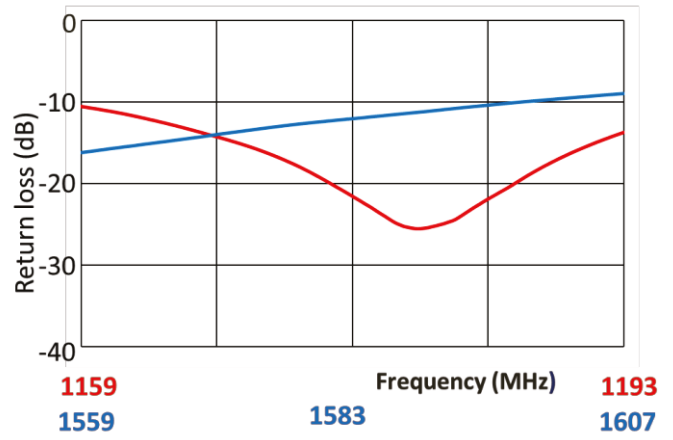
Size (L x W x H)	14.0 mm x 10.75 mm x 1.0 mm (L/W ± 0.15, H ± 0.1)
Weight	< 0.3 g
Mounting	Surface mount
Mating Connector	SMA PCB VERT JACK
Cable	N/A
Operating Temperature	-40 to +105°C
Storage Temperature	-40 to +105°C
Dielectric Material	PCB
Hazardous Materials	A certificate of conformance is available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

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

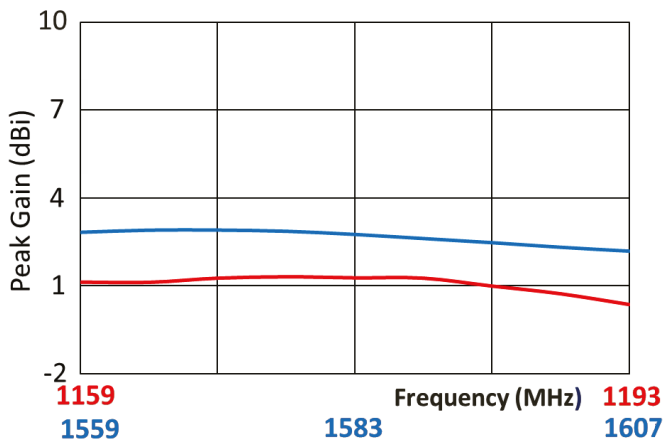
VSWR



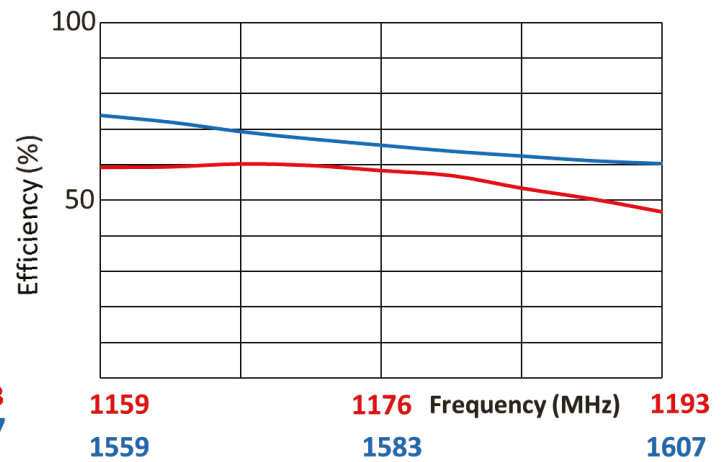
Return Loss



Peak Gain



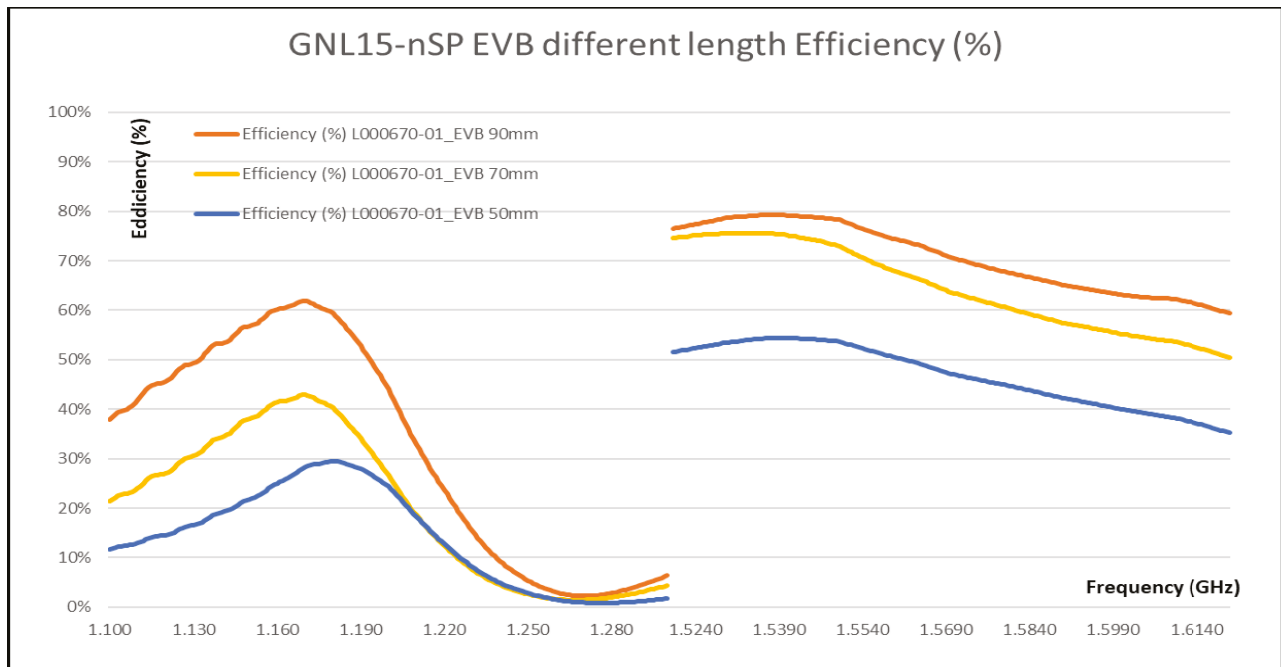
Efficiency



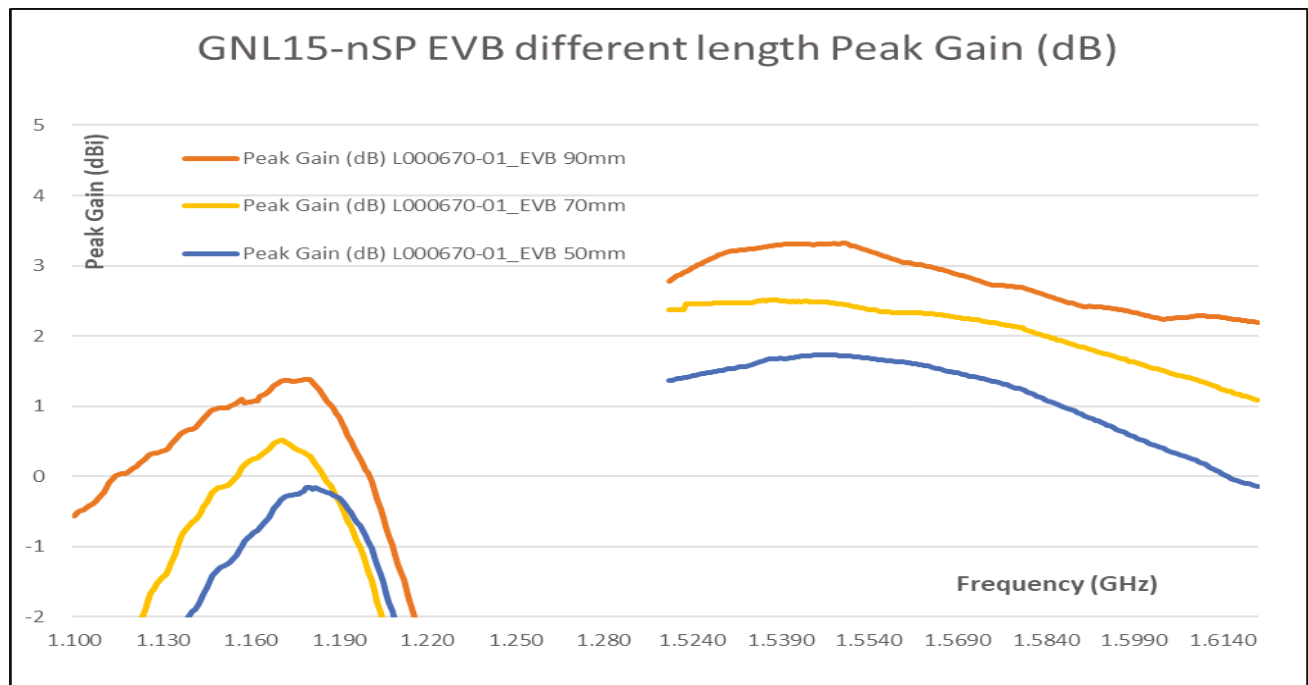
Data measured in free space and on reference ground plane of 90mm ground length and 41mm width, application data might vary.

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

Efficiency vs. Ground Length size



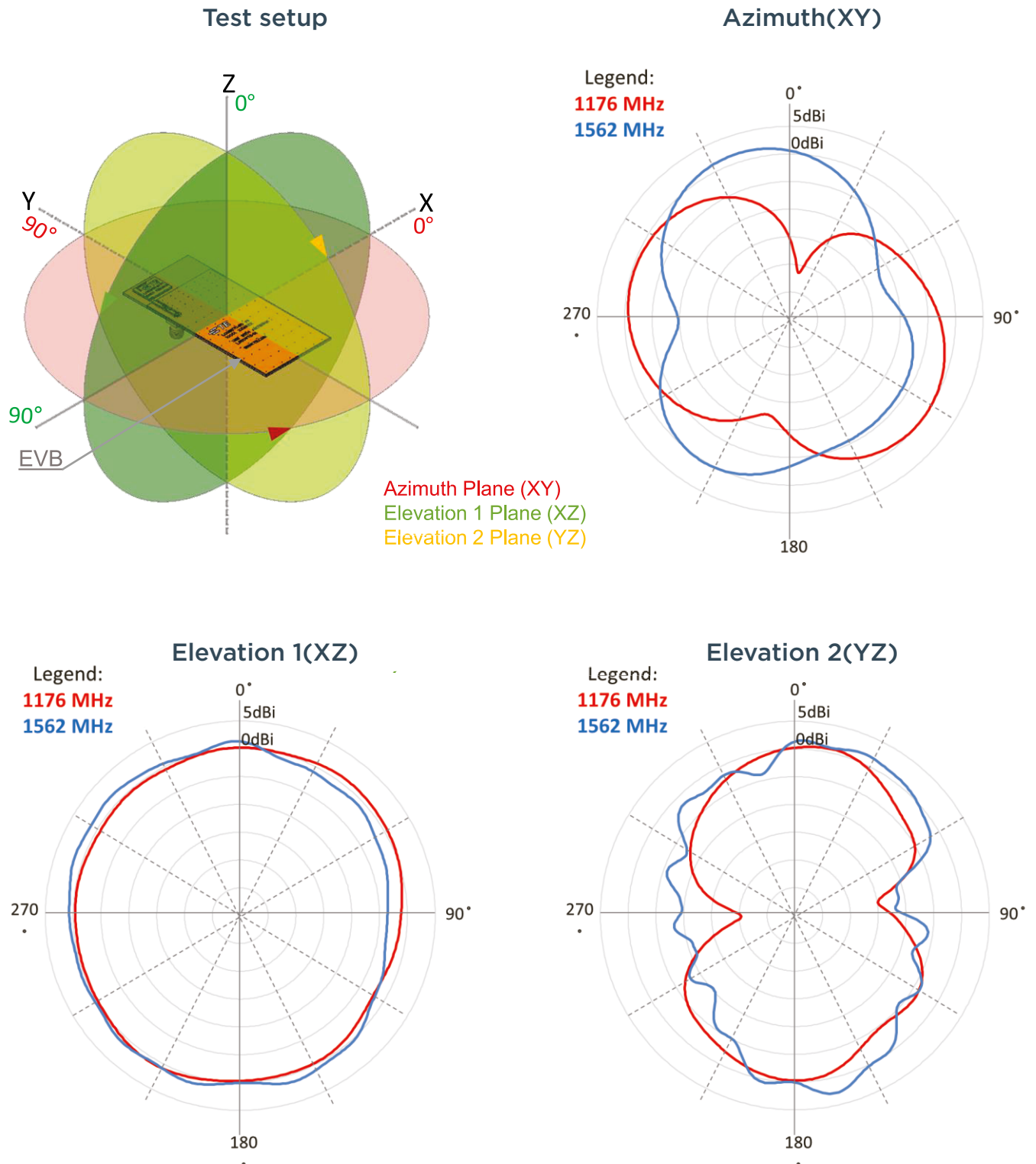
Peak Gain vs. Ground Length size



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

RADIATION PATTERN

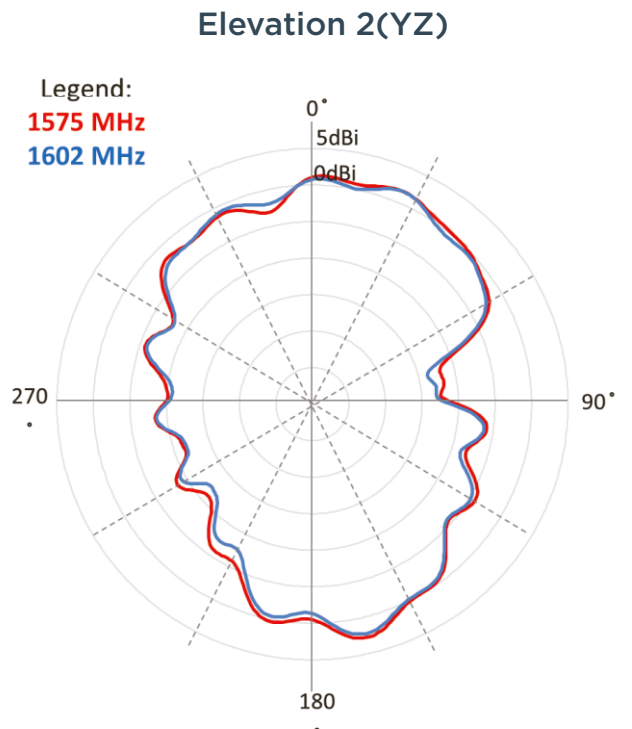
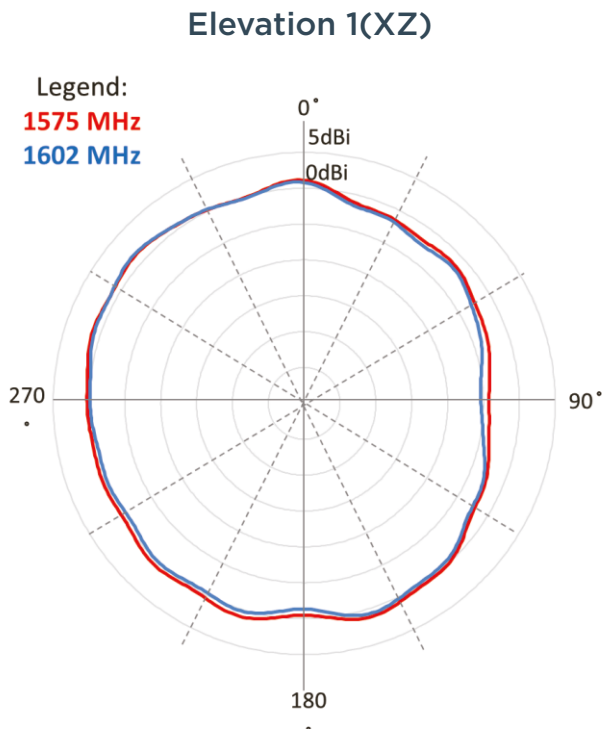
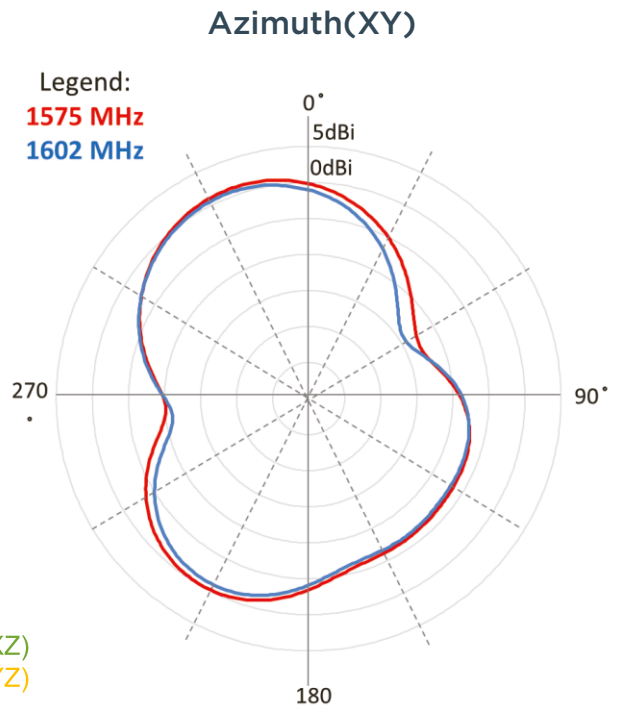
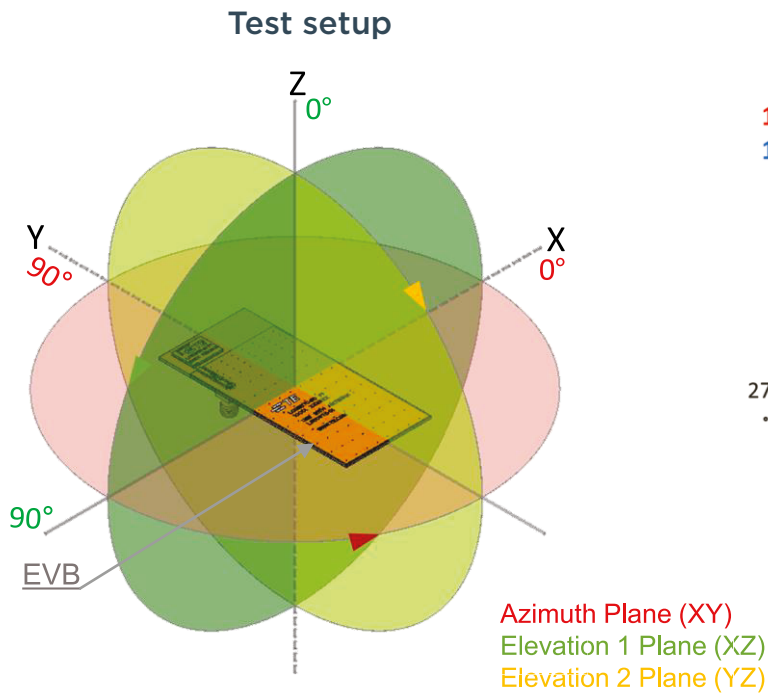
(SHOWN AS L000670-01 : GROUND SIZE : 90 X 41 X 1.0 MM.)



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

RADIATION PATTERN

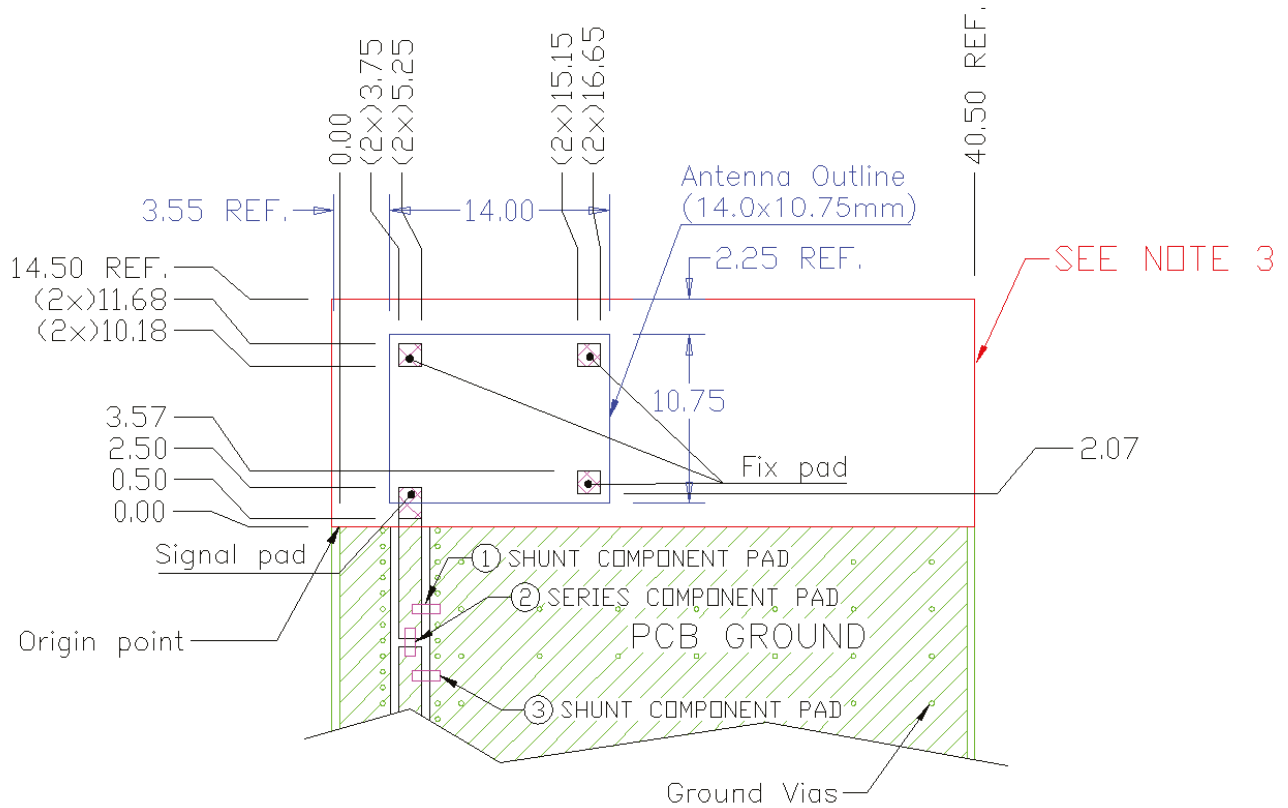
(SHOWN AS L000670-01 : GROUND SIZE : 90 X 41 X 1.0 MM.)



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.

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.

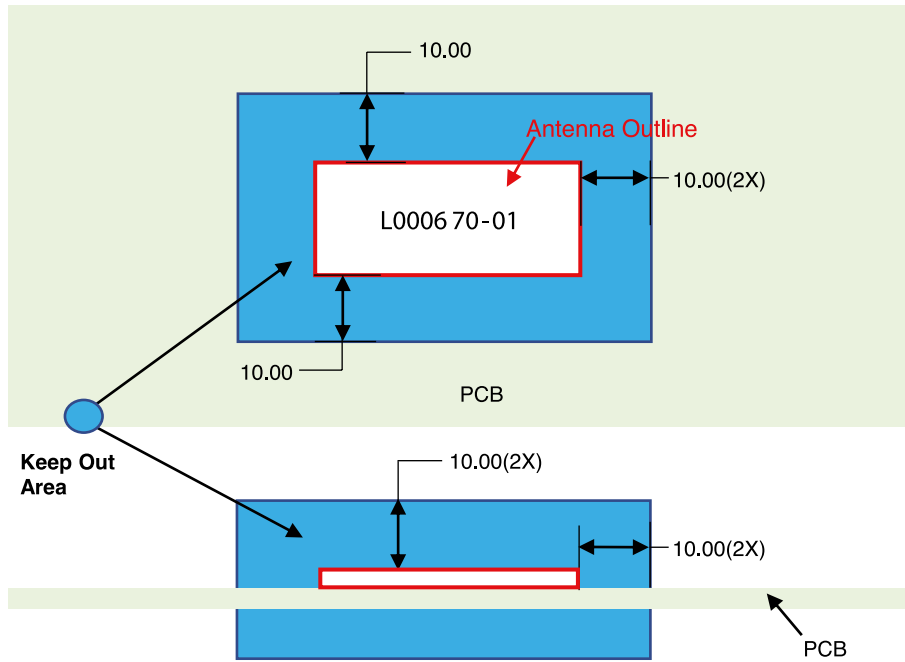
5. Measured with below matching circuit condition.

① NC , ② 0 ohm, ③ NC

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

Dimensions: mm
Diagram is not to scale

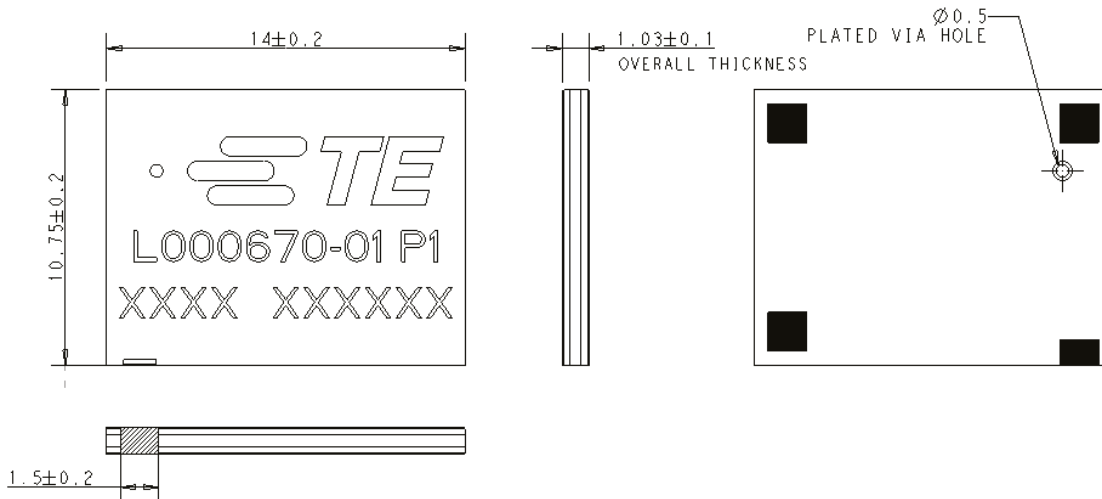
KEEP OUT AREA



- 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

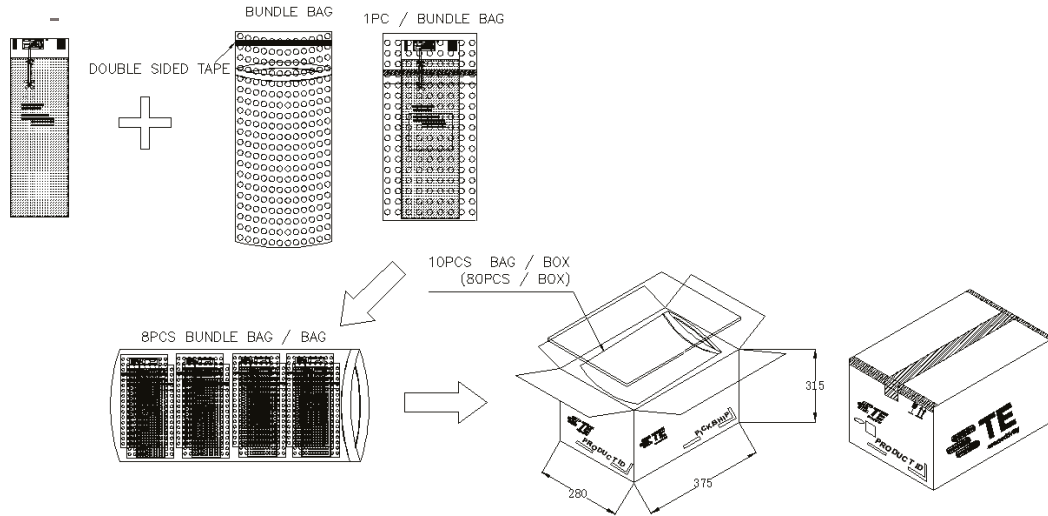
DIMENSIONS



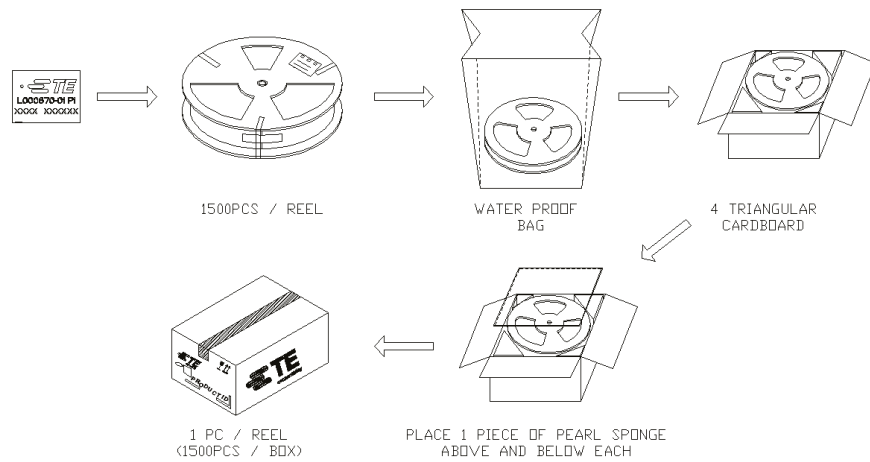
Dimensions: mm
Diagram is not to scale

PACKAGING

L000670-80 (BULK)



L000670-01 (TAPE & REEL)



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Standard Antenna Solutions

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