



5G FR1, LTE GLOBAL WORLD BAND COMBINATION ANTENNA

Part Numbers:

L000657-01

L000657-80

FEATURES & BENEFITS

- Omnidirectional coverage
- High efficiency, low profile, on board SMD PCB antenna
- Wideband coverage for 3G, 4G and 5G FR1
- Evaluation board available for testing (L000657-80)
- Bandwidth and performance dependent on ground plane size/ design
- Suggested minimum ground plane length from antenna feed is 150mm
- Available in tape & reel packaging for automatic mounting
- RoHS 2.0 compliant, Road vehicle compliant, REACH compliant

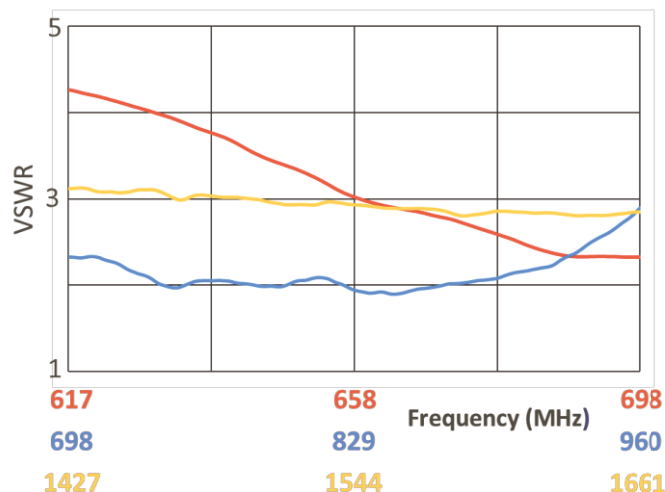
SPECIFICATIONS

Frequency Range (MHz)	617-698	698-960	1427-1661	1695-2400	2484-2690	3300-4200	4400-5000
VSWR	< 4.3:1	< 2.9:1	< 3.2:1	< 3.2:1	< 1.8:1	< 2.7:1	< 2.9:1
Average Efficiency	53.50%	56.00%	61.00%	65.10%	83.50%	73.60%	68.80%
Peak Gain	1.0dBi	2.4dBi	2.6dBi	4.0dBi	5.9dBi	5.3dBi	4.5dBi
Average Gain	-2.77dBi	-2.56dBi	-2.15dBi	-1.87dBi	-0.76dBi	-1.33dBi	-1.64dBi
Power Handling	5 Watt cw						
Feed Point Impedance	50 ohms unbalanced						
Polarization	Linear						
Size	50.0 mm x 10.0 mm x 1.61 mm						
Weight	< 1.5 g						
Mounting	Surface mount						
Operating Temperature	-40 to +85°C						
Storage Temperature	-40 to +85°C						
Packaging Specification	Bag & Box / Tape & Reel						
Hazardous Materials	A certificate of conformance is available from the product page on TE website.						

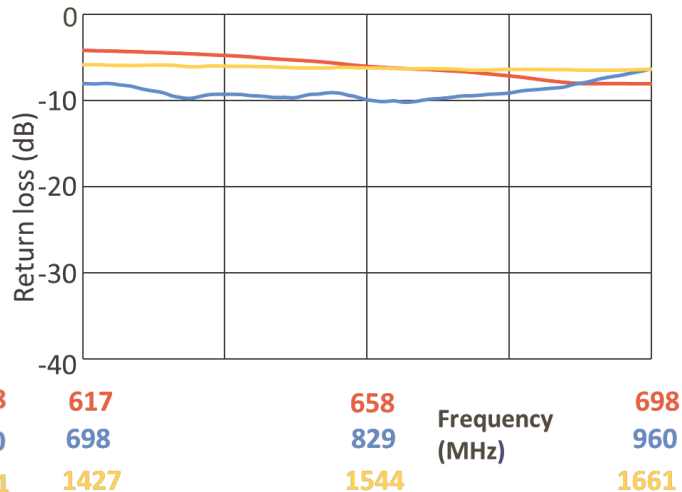
Data measured in free space and on reference ground plane of 150mm ground length and 55mm width, application data might vary.

RF DATA (SHOWN AS L000657-1 : OTHERS CAN VARY WITH DIFFERENT GROUND LENGTHS.)

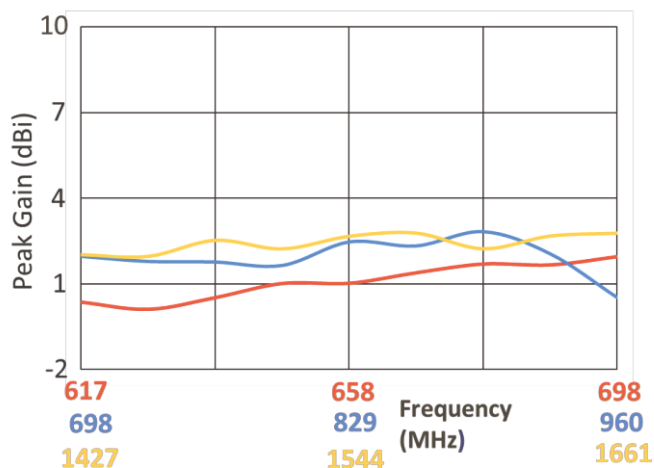
VSWR



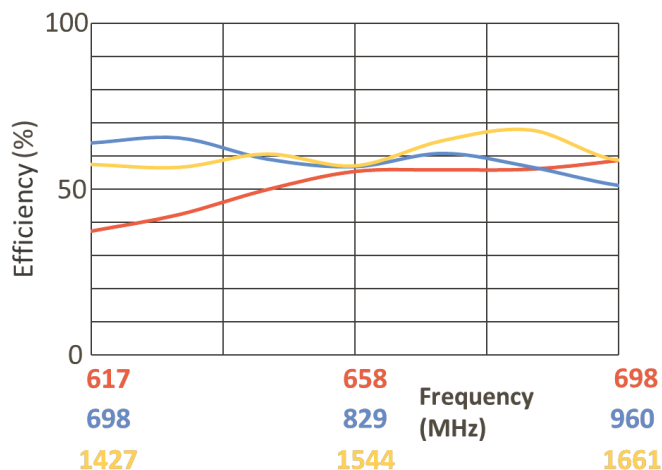
Return Loss



Peak Gain

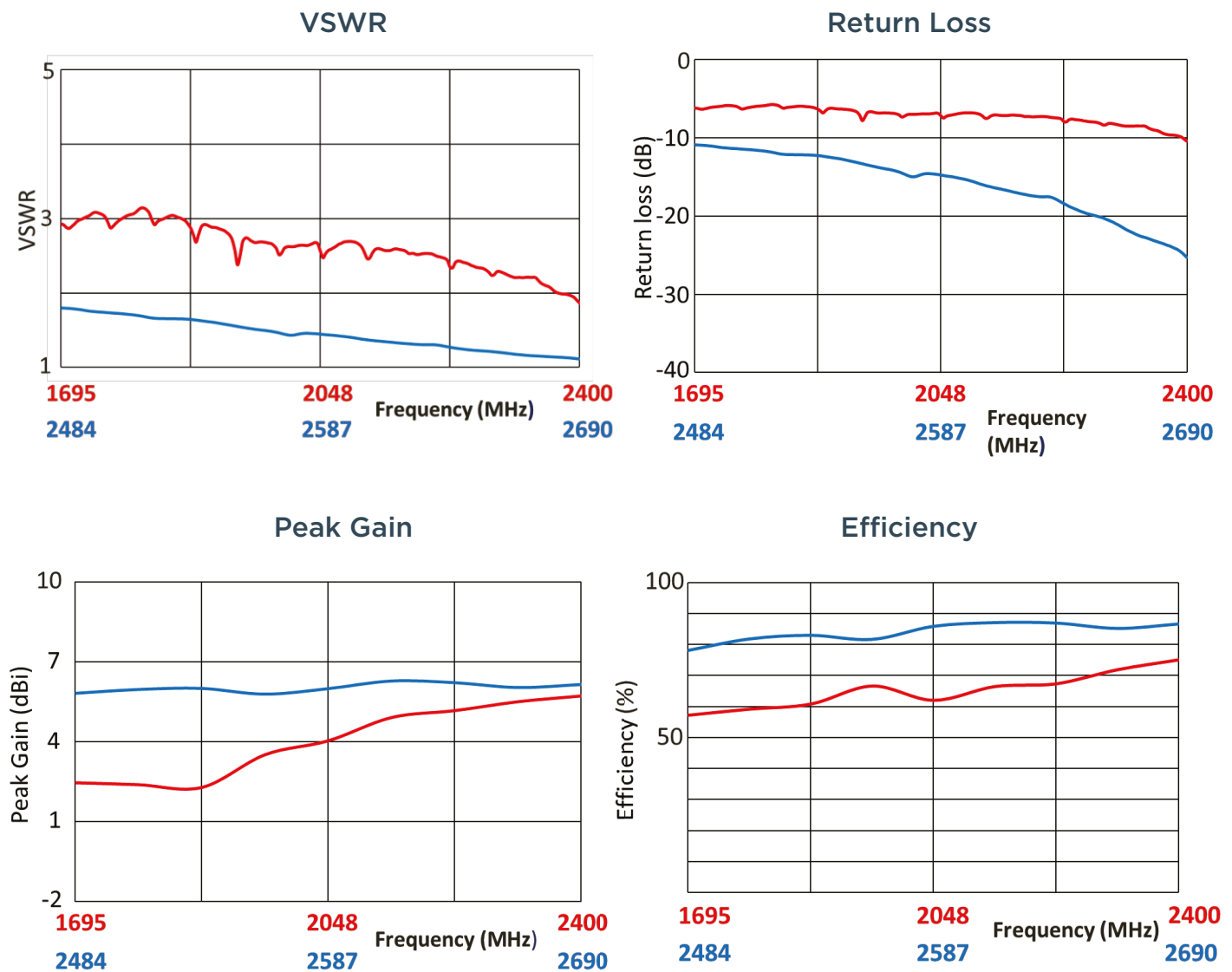


Efficiency

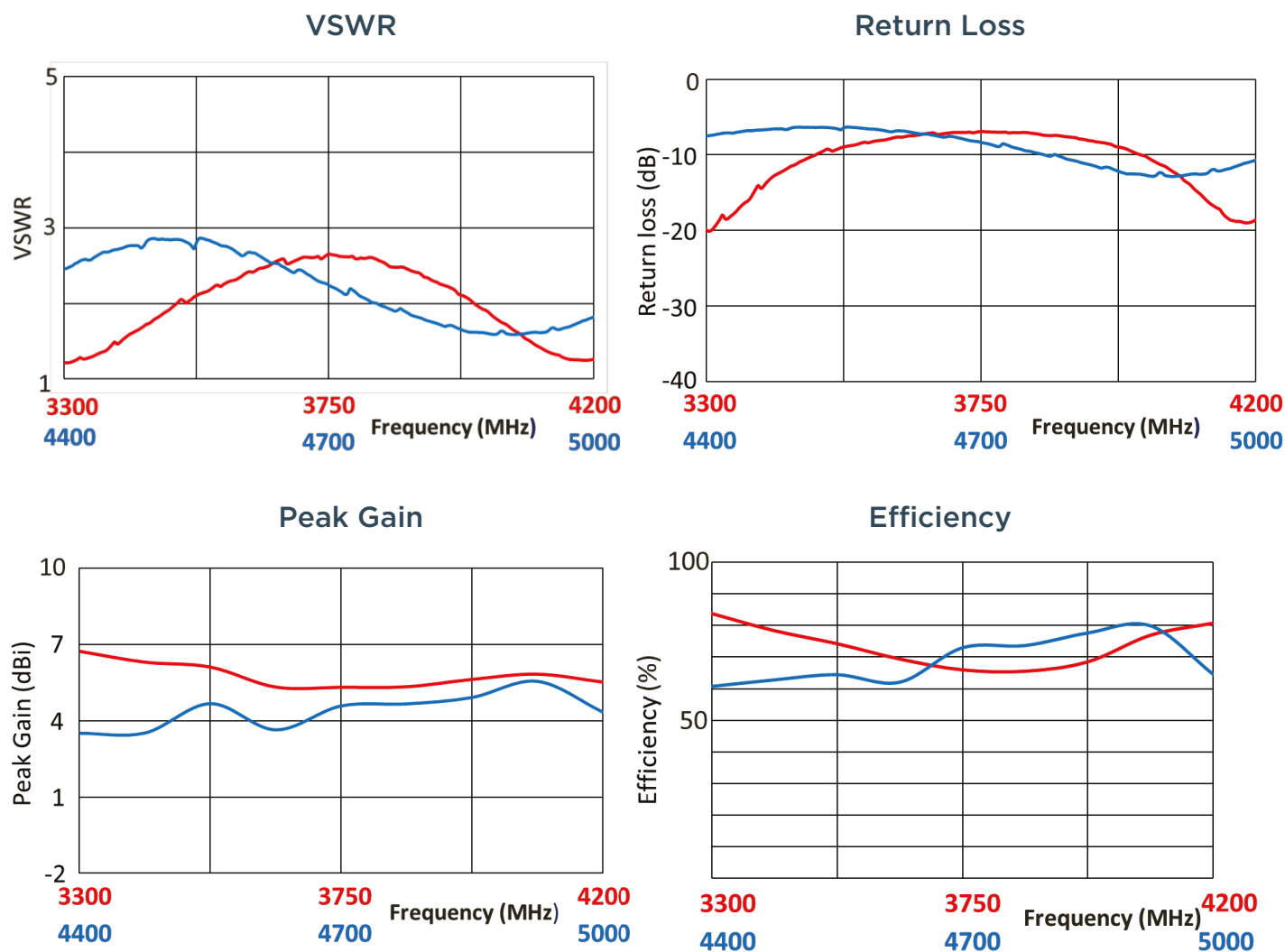


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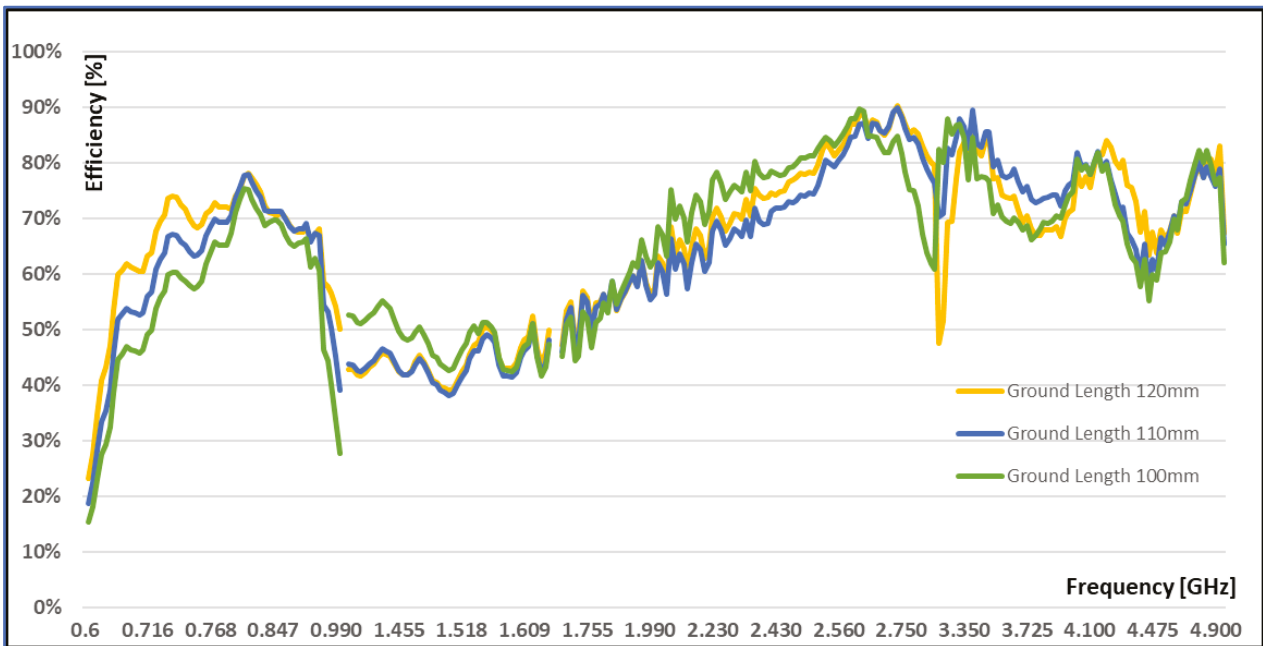
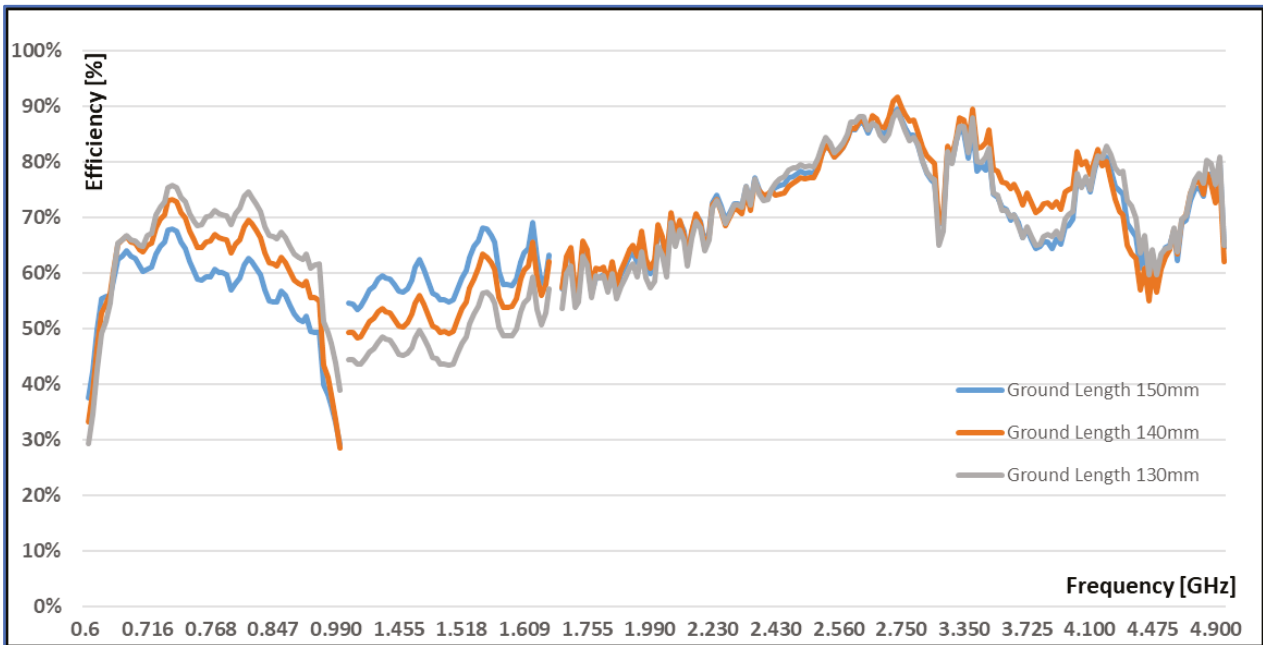
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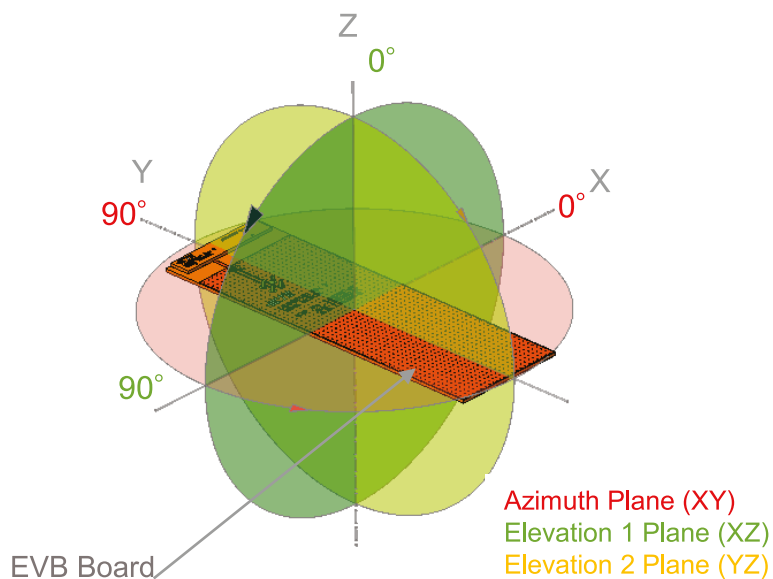
Efficiency vs. Ground Length size



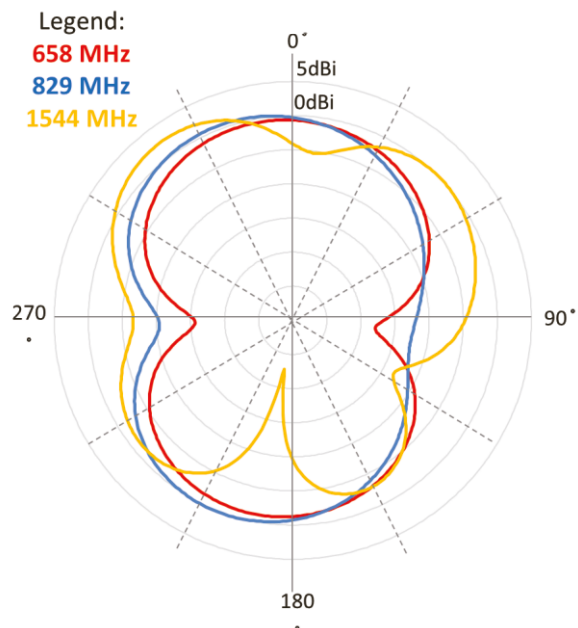
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RADIATION PATTERN

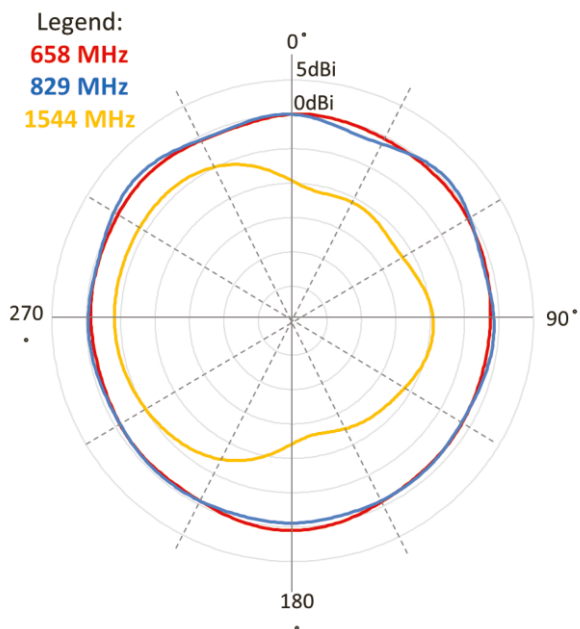
Test setup



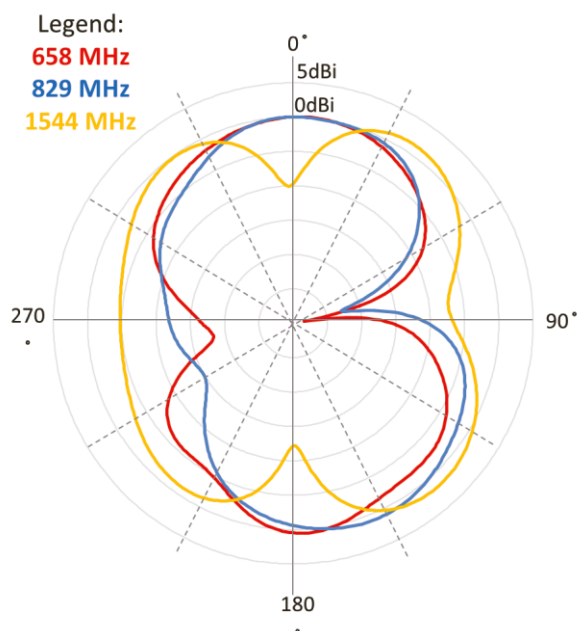
Azimuth(XY)



Elevation 1(XZ)



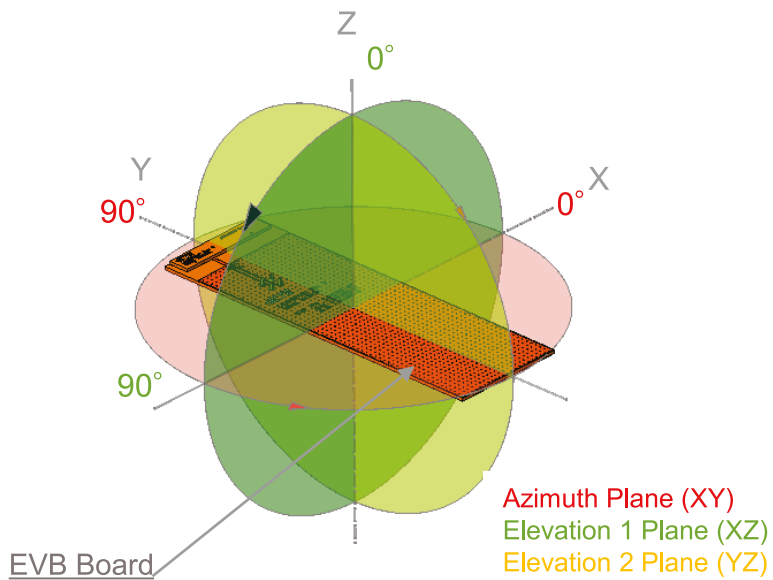
Elevation 2(YZ)



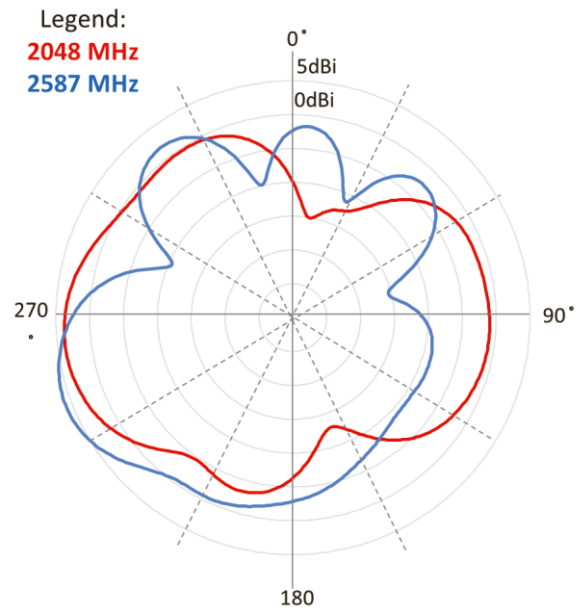
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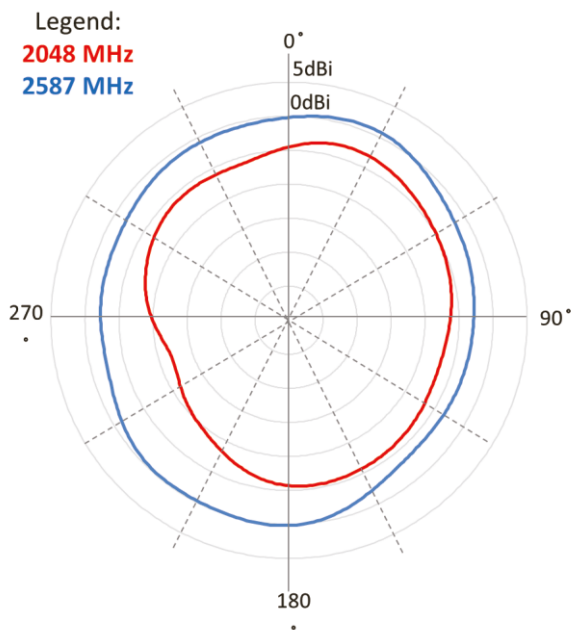
Test setup



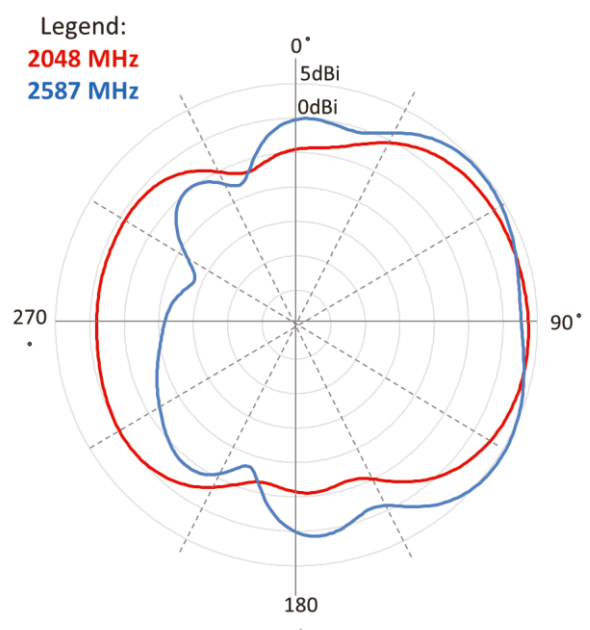
Azimuth(XY)



Elevation 1(XZ)

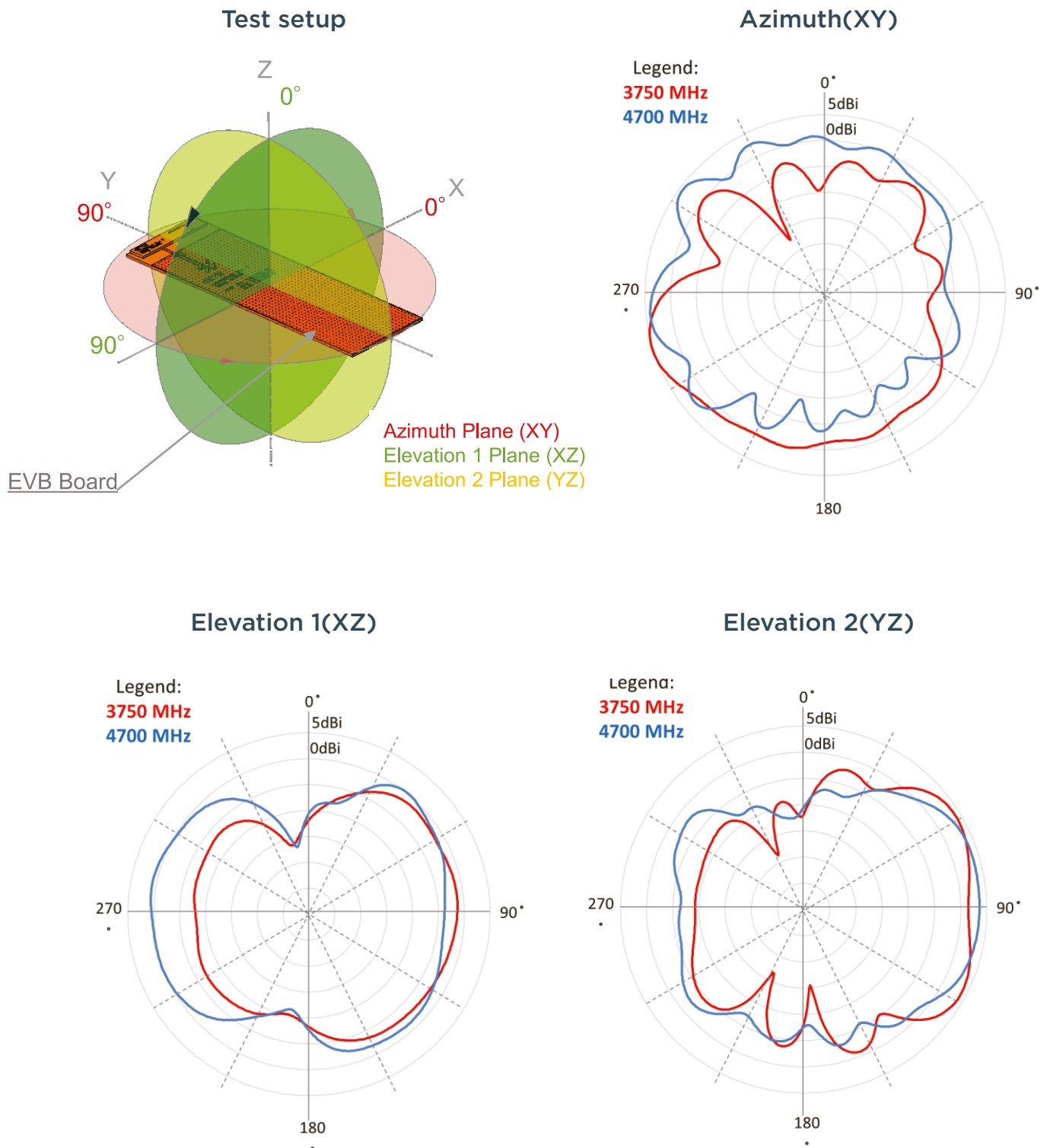


Elevation 2(YZ)



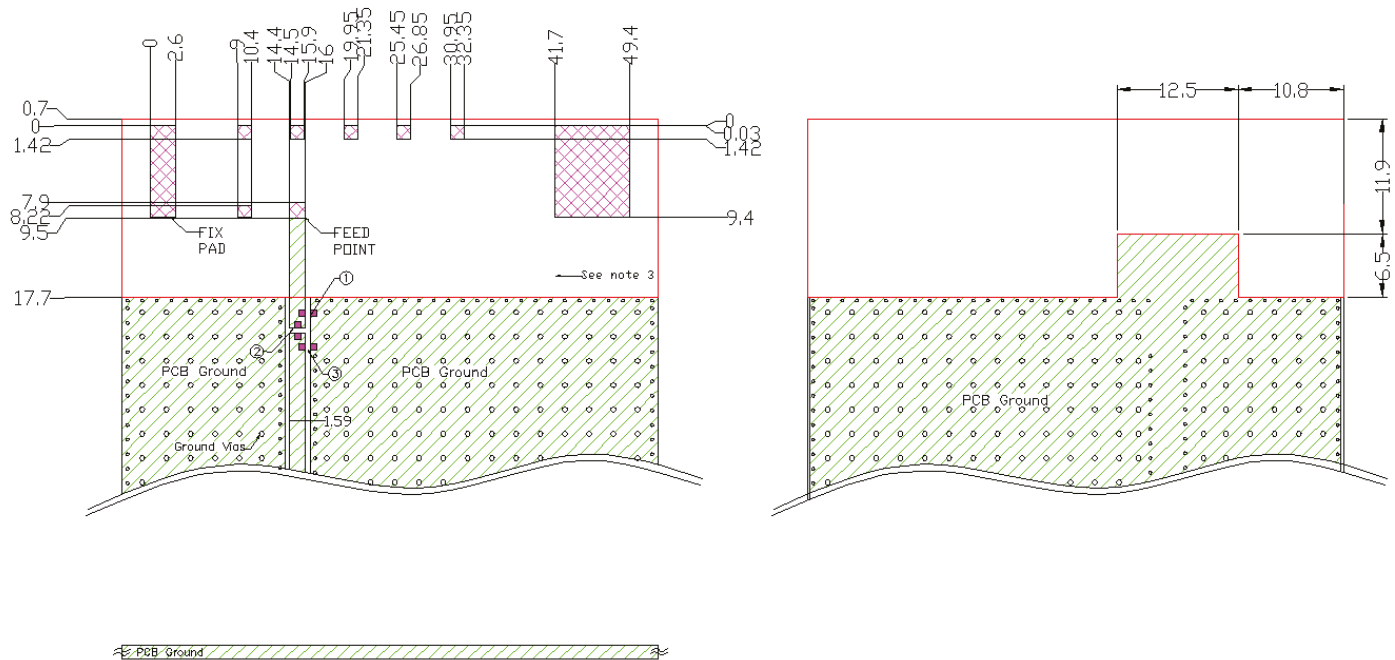
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RADIATION PATTERN



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MOUNTING GUIDE



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.

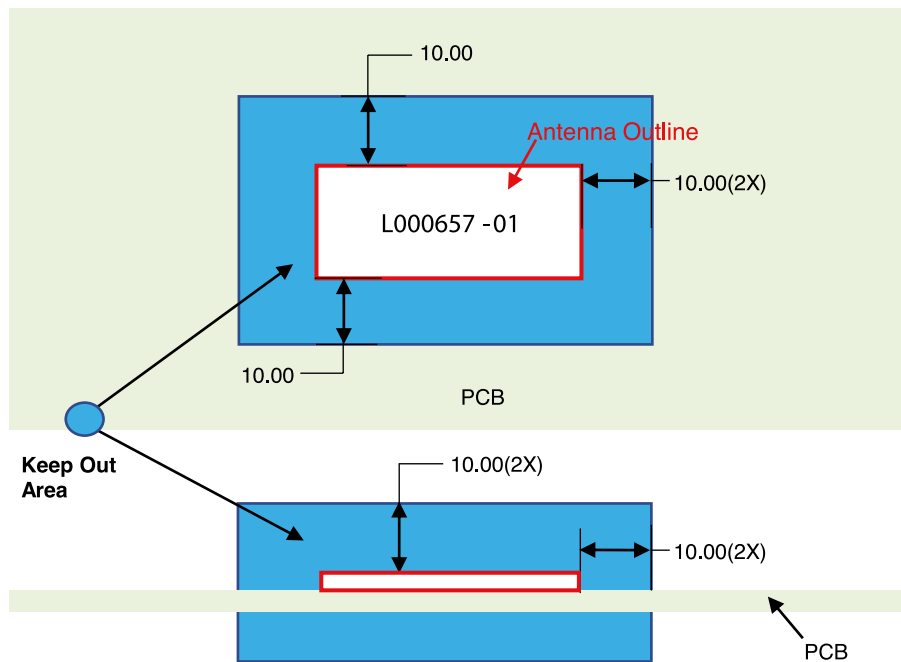
① NC , ② 0 ohm, ③ 15nH

6. Reference PCB Dimension(mm) - 55.2 x 168.6 x 1.6

Dimensions: mm

Diagram is not to scale

KEEP OUT AREA



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

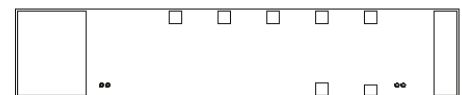
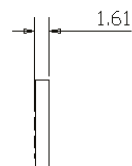
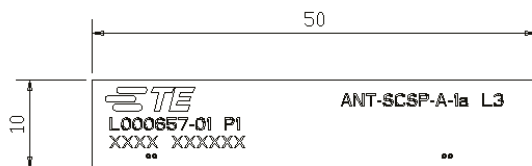
2. Area in blue above indicates Keep Out Area.

3. For more information please call TE.

Dimensions: mm

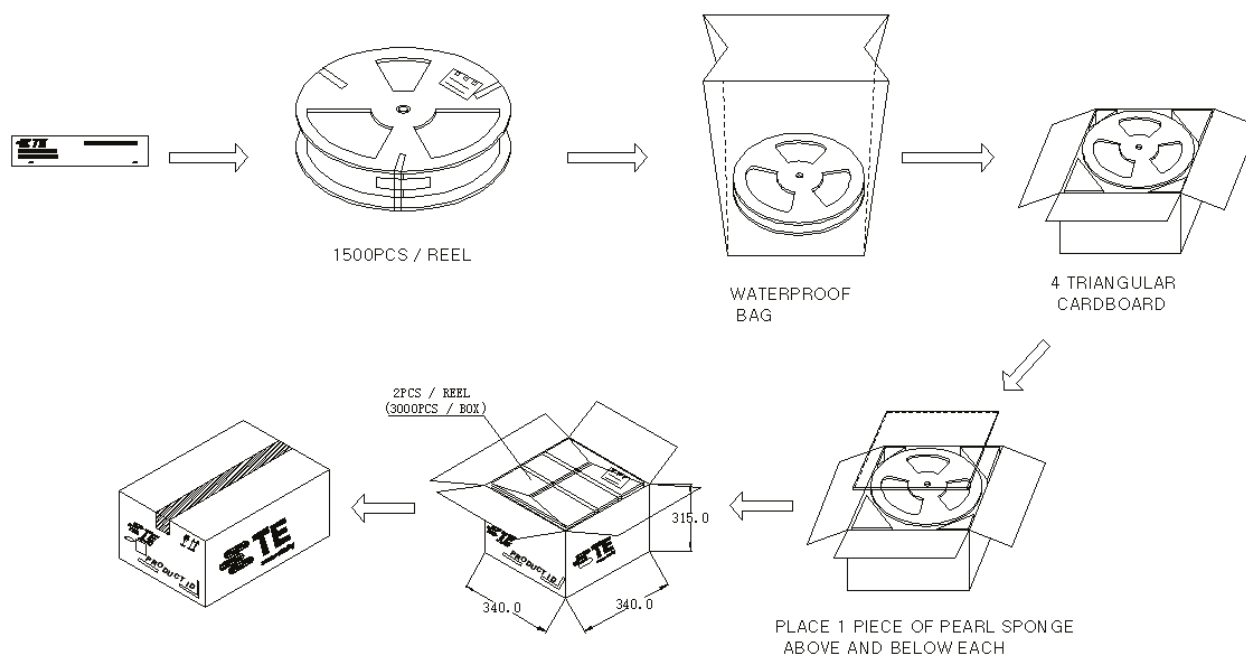
Diagram is not to scale

DIMENSIONS

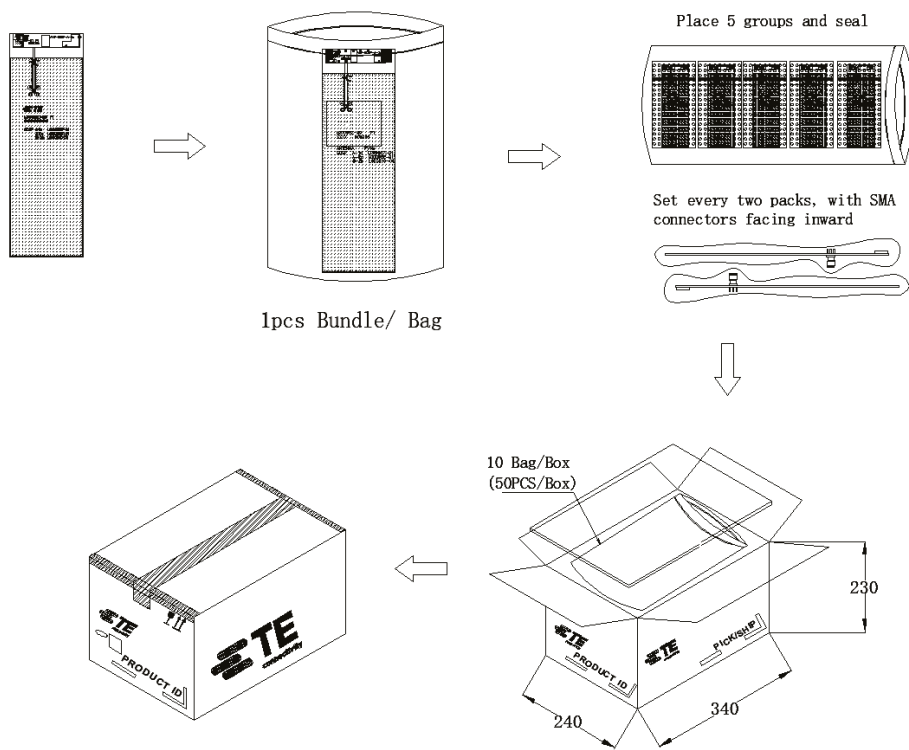


PACKAGING

L000657-01 (TAPE & REEL)



L000657-80 (BULK)



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Standard Antenna Solutions

TE TECHNICAL SUPPORT CENTER

USA: +1 (800) 522-6752

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

UK: +44 (0) 800-267666

France: +33 (0) 1-3420-8686

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China: +86 (0) 400-820-6015

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