



SPLATCH 5G/LTE GLOBAL CELLULAR WIDEBAND CHIP ANTENNA 617-5000MHz

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

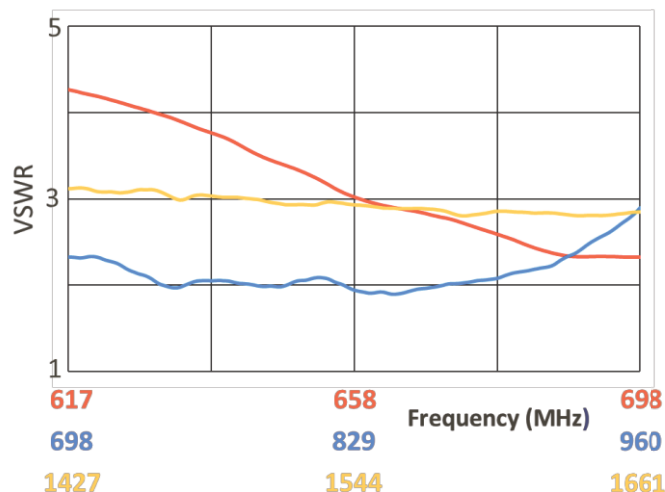
SPECIFICATIONS

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.						

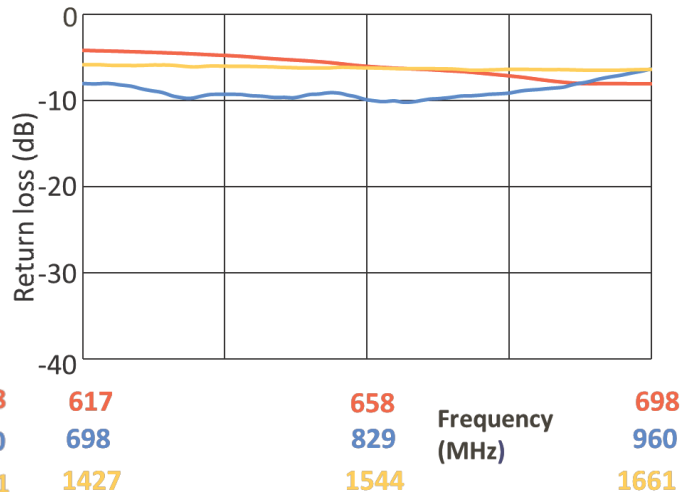
Data measured in free space and on reference ground plane of 150mm ground length and 55mm width, application data might vary.

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

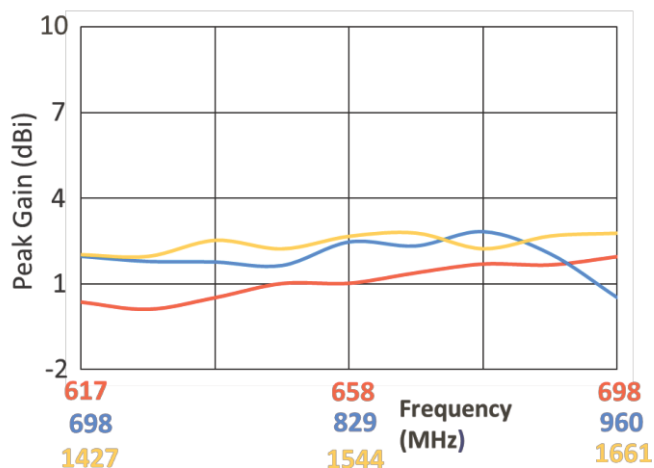
VSWR



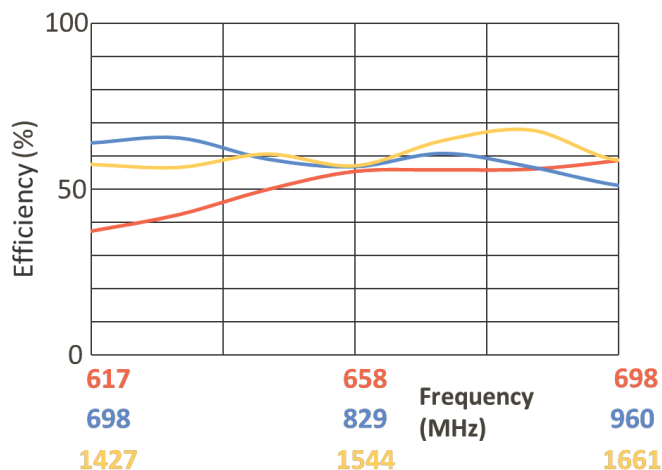
Return Loss



Peak Gain

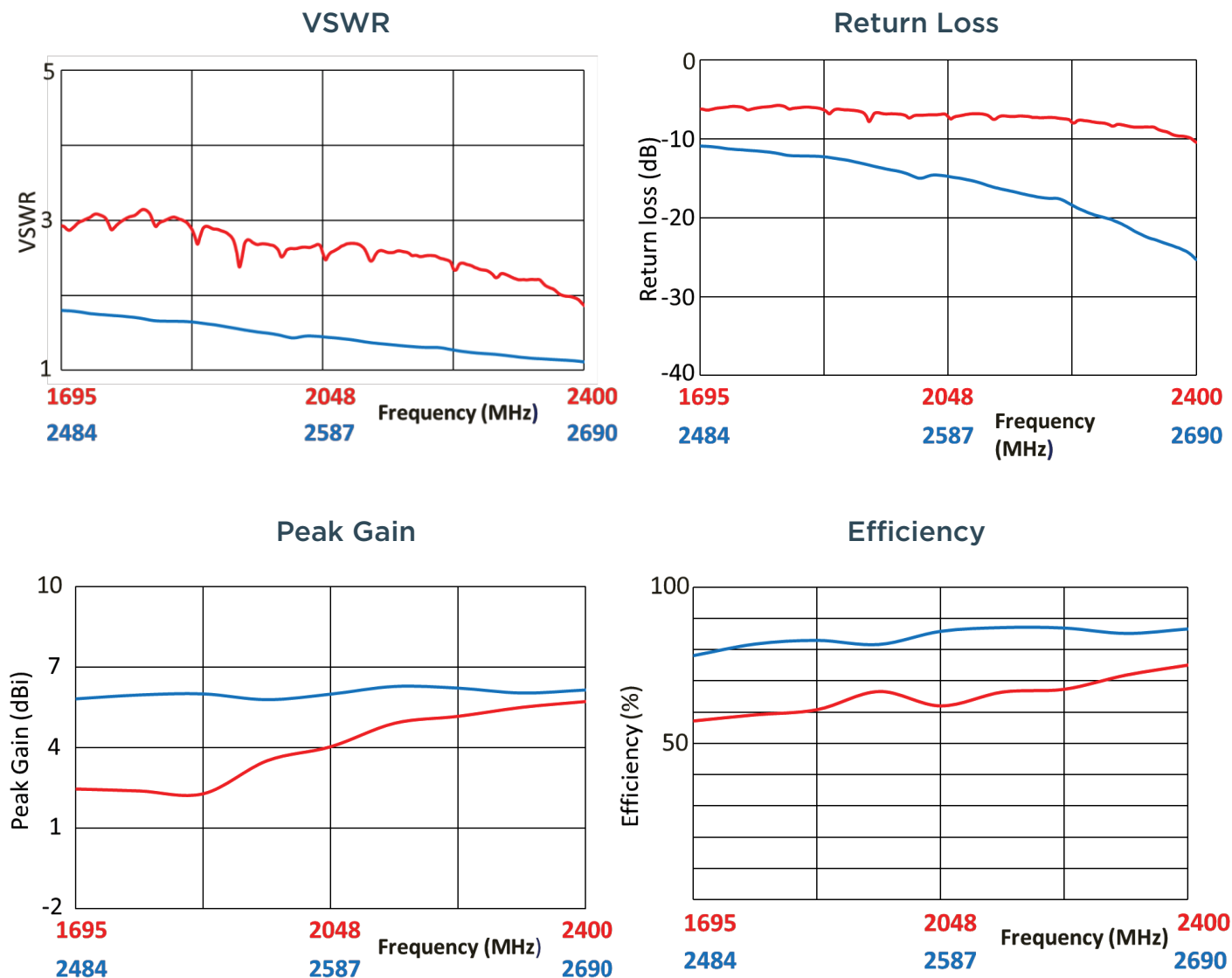


Efficiency



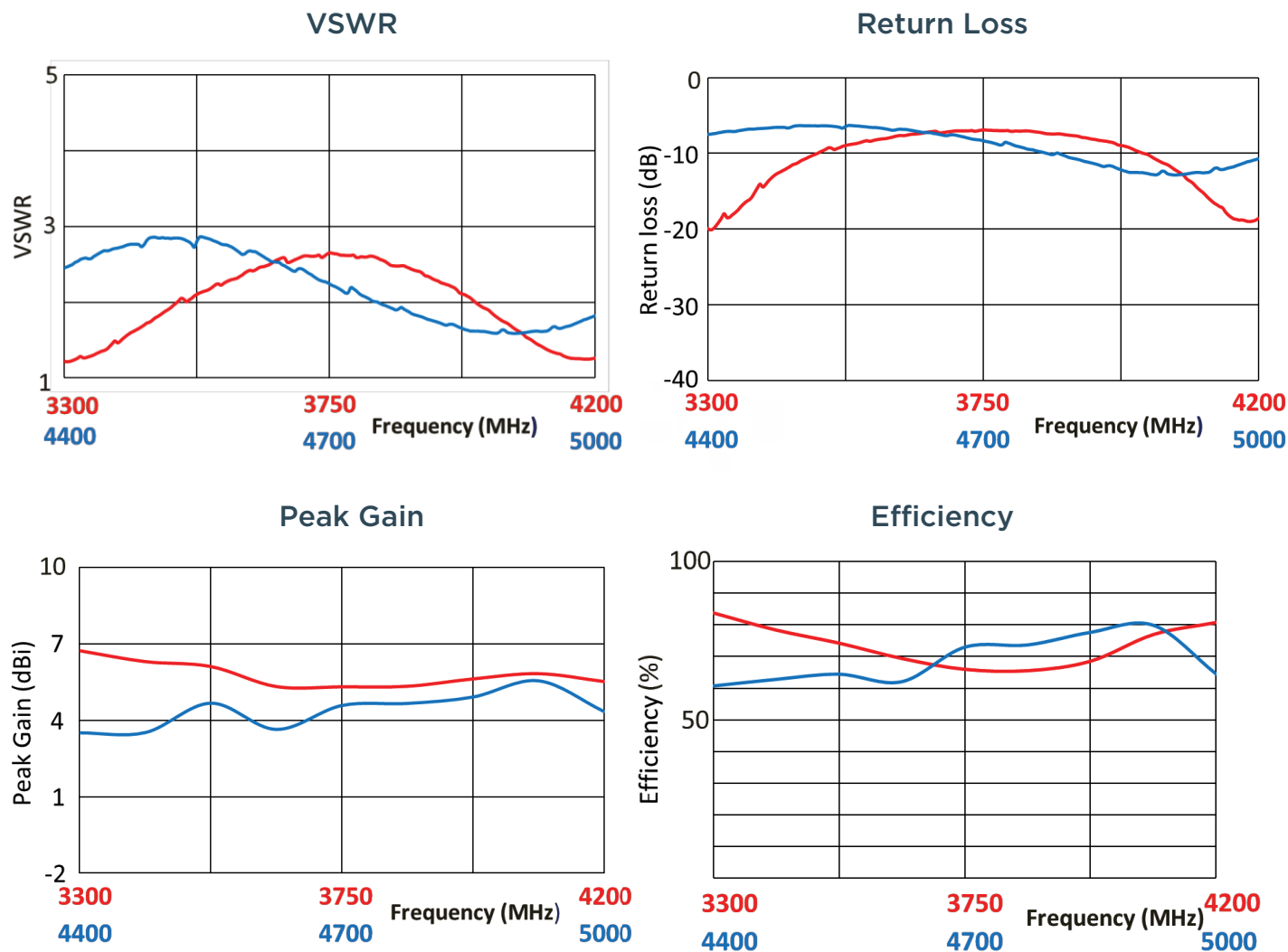
Data measured in free space and on reference ground plane of 150mm ground length and 55mm width, application data might vary.

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



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

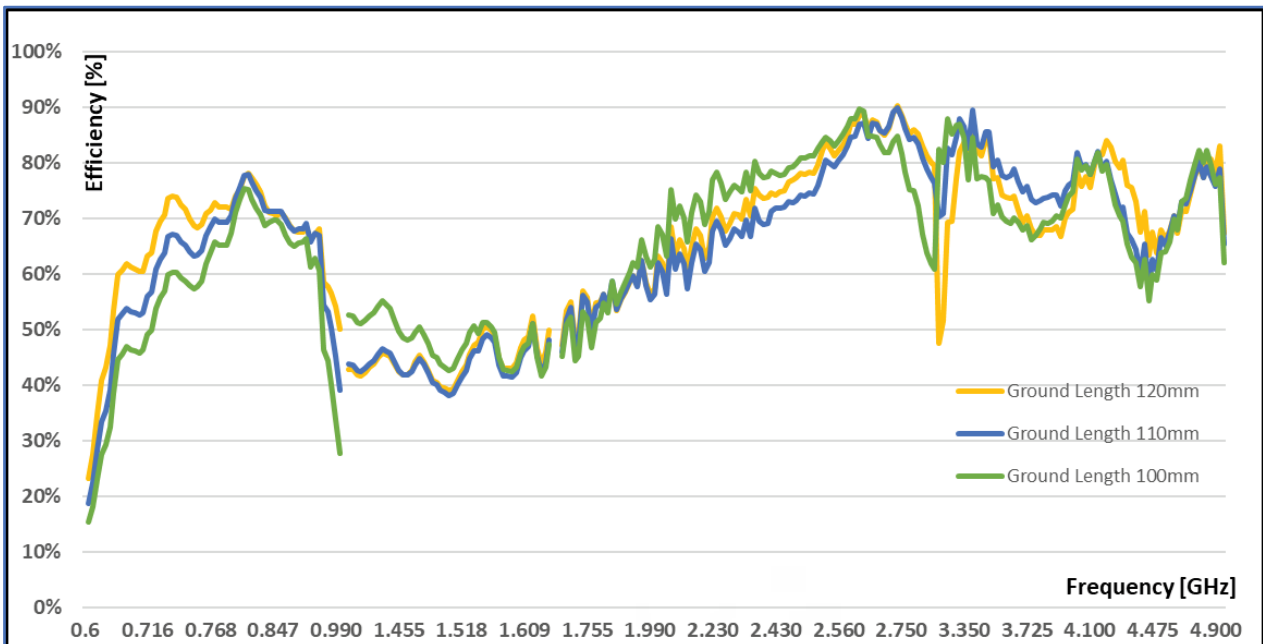
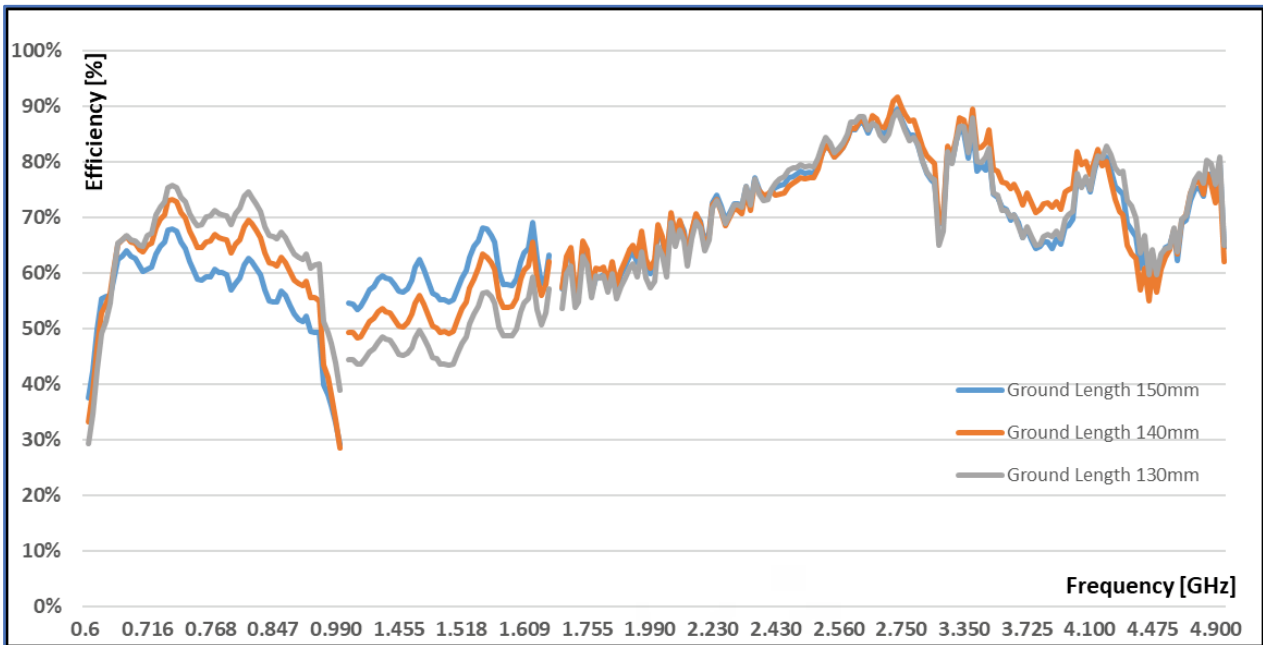
RF DATA (SHOWN AS L000657-1 : OTHERS CAN VARY WITH DIFFERENT GROUND LENGTHS.)



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.)

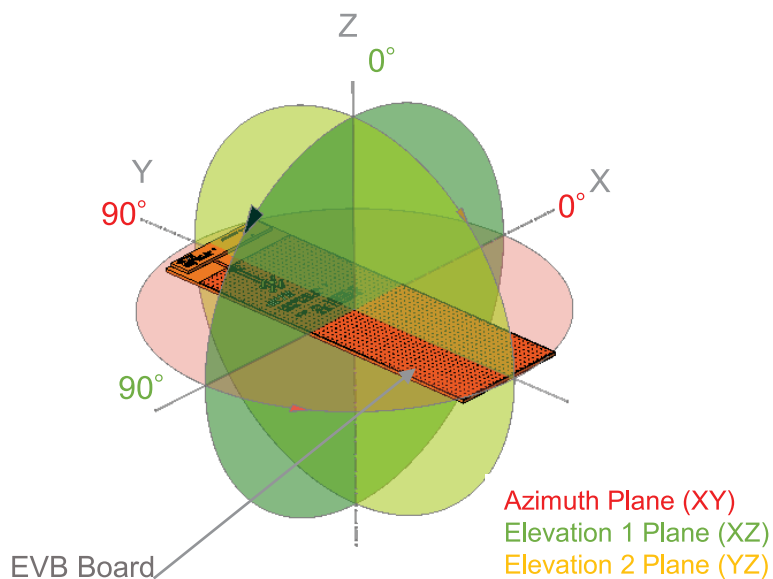
Efficiency vs. Ground Length size



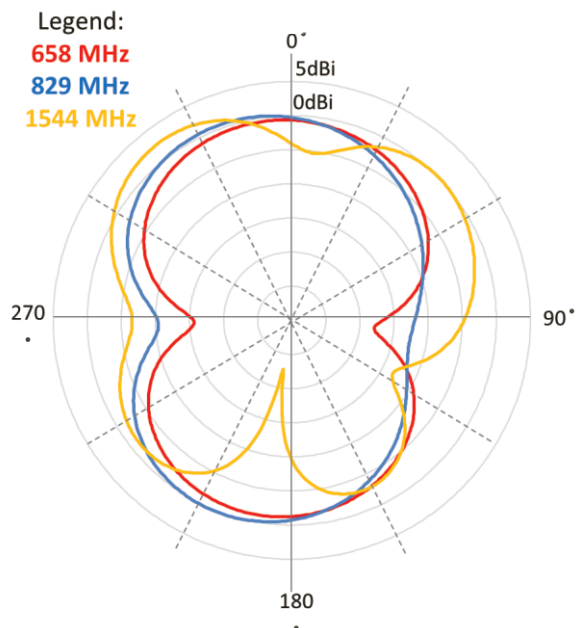
Data measured in free space and on reference ground plane of 150mm ground length and 55mm width, application data might vary.

RADIATION PATTERN

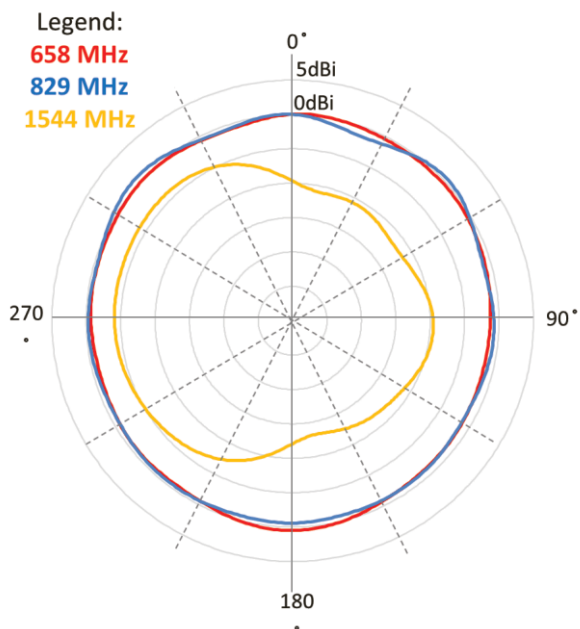
Test setup



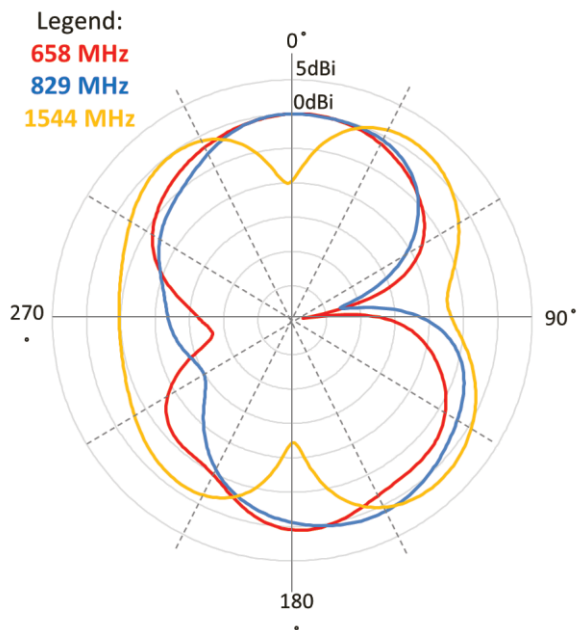
Azimuth(XY)



Elevation 1(XZ)



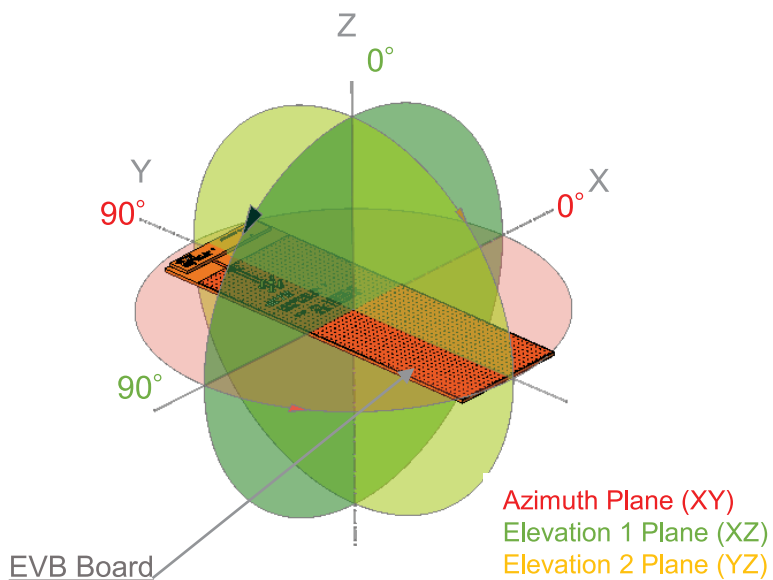
Elevation 2(YZ)



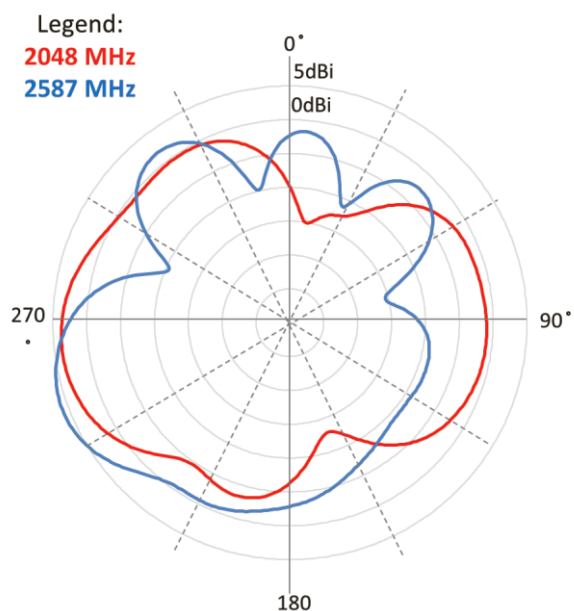
Data measured in free space and on reference ground plane of 150mm ground length and 55mm width, application data might vary.

RADIATION PATTERN

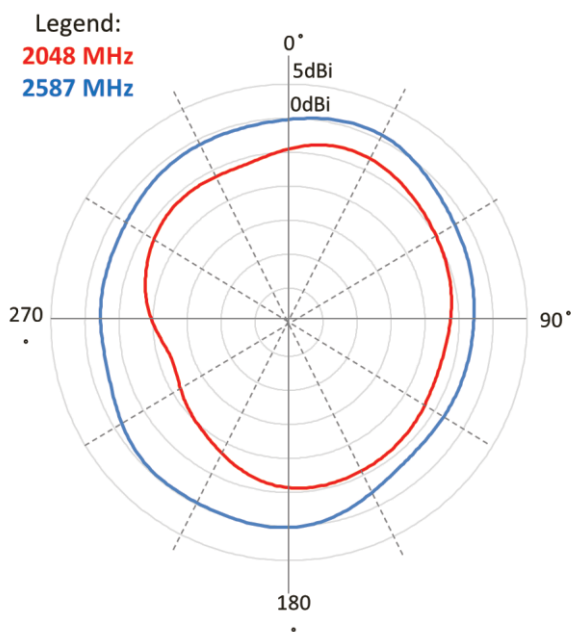
Test setup



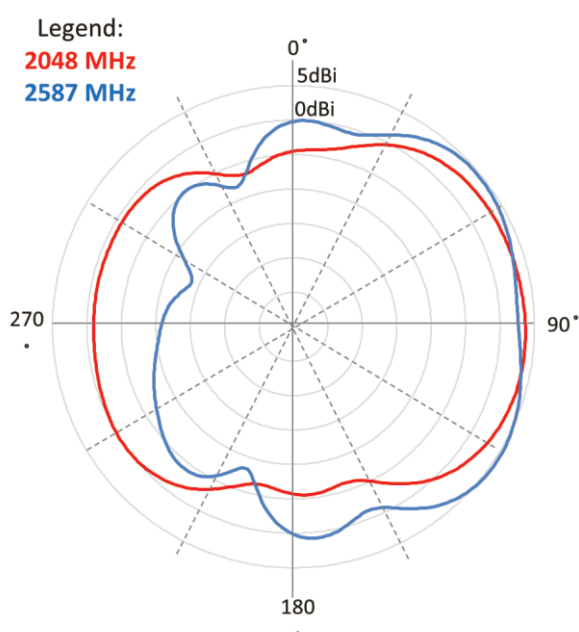
Azimuth(XY)



Elevation 1(XZ)

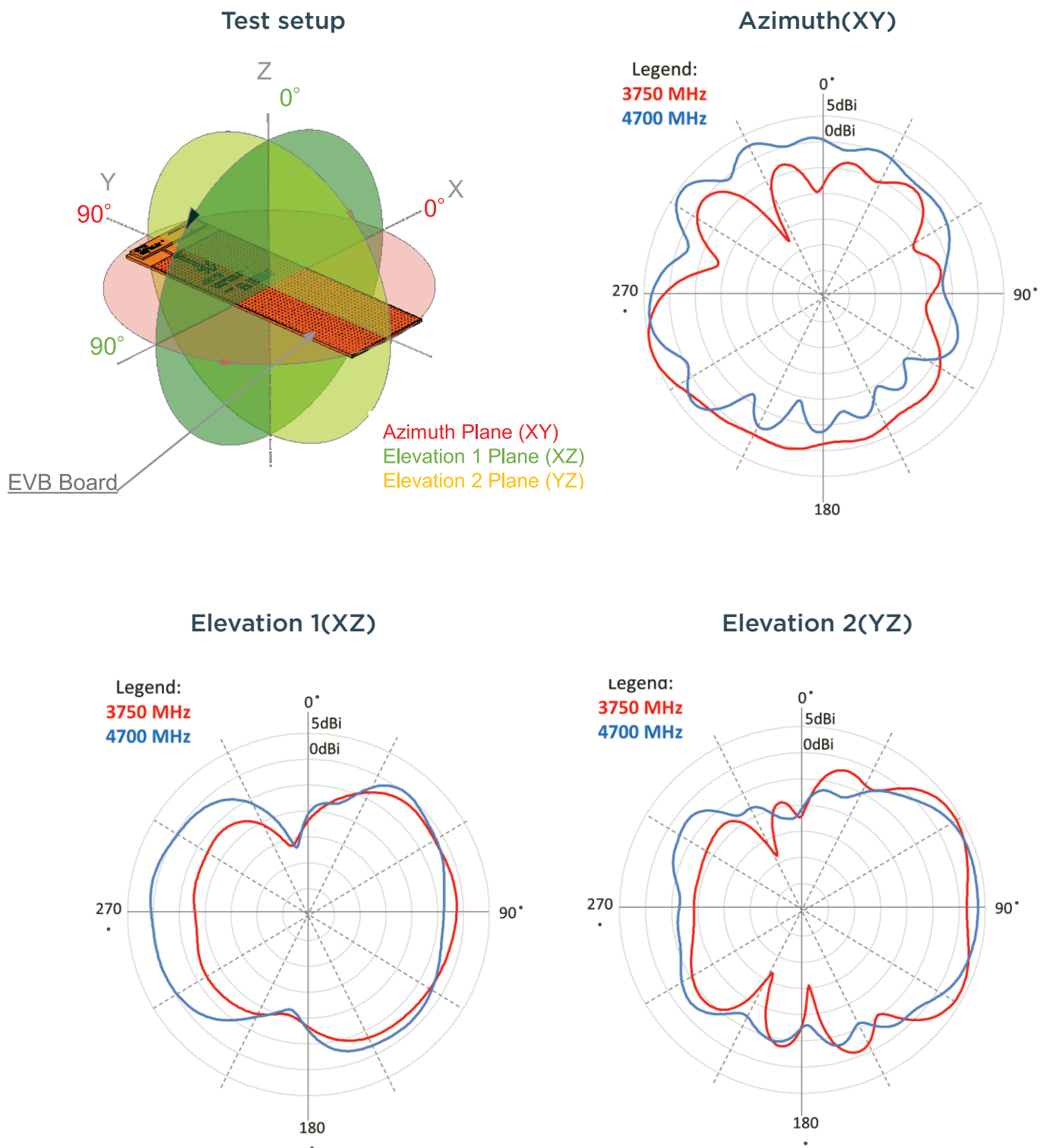


Elevation 2(YZ)



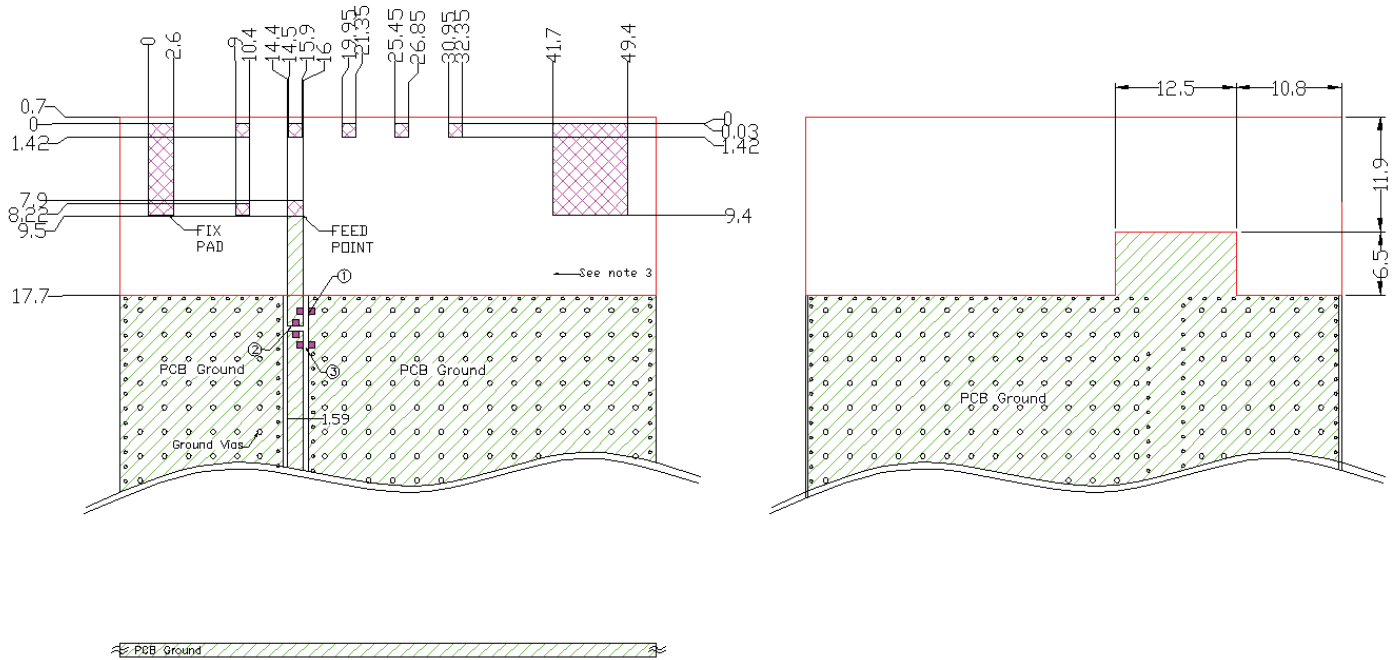
Data measured in free space and on reference ground plane of 150mm ground length and 55mm width, application data might vary.

RADIATION PATTERN



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

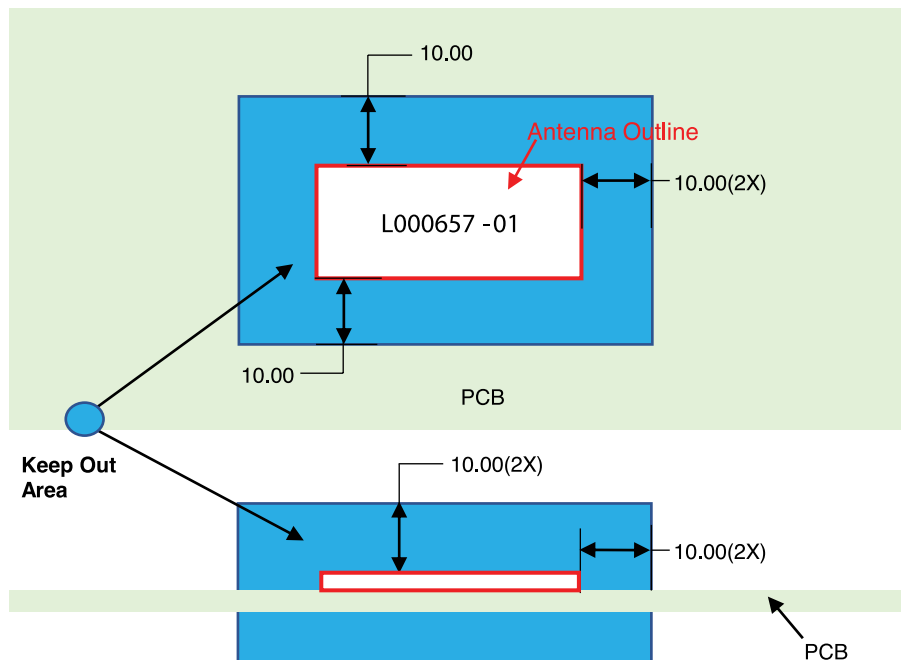
MOUNTING GUIDE



- 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.

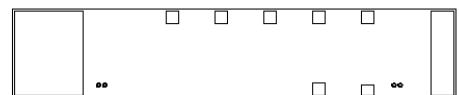
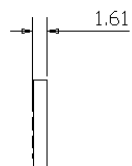
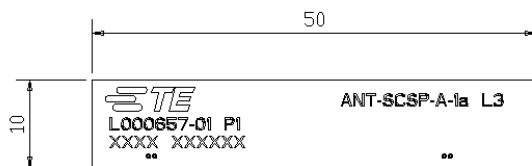
2. Area in blue above indicates Keep Out Area.

3. For more information please call TE.

Dimensions: mm

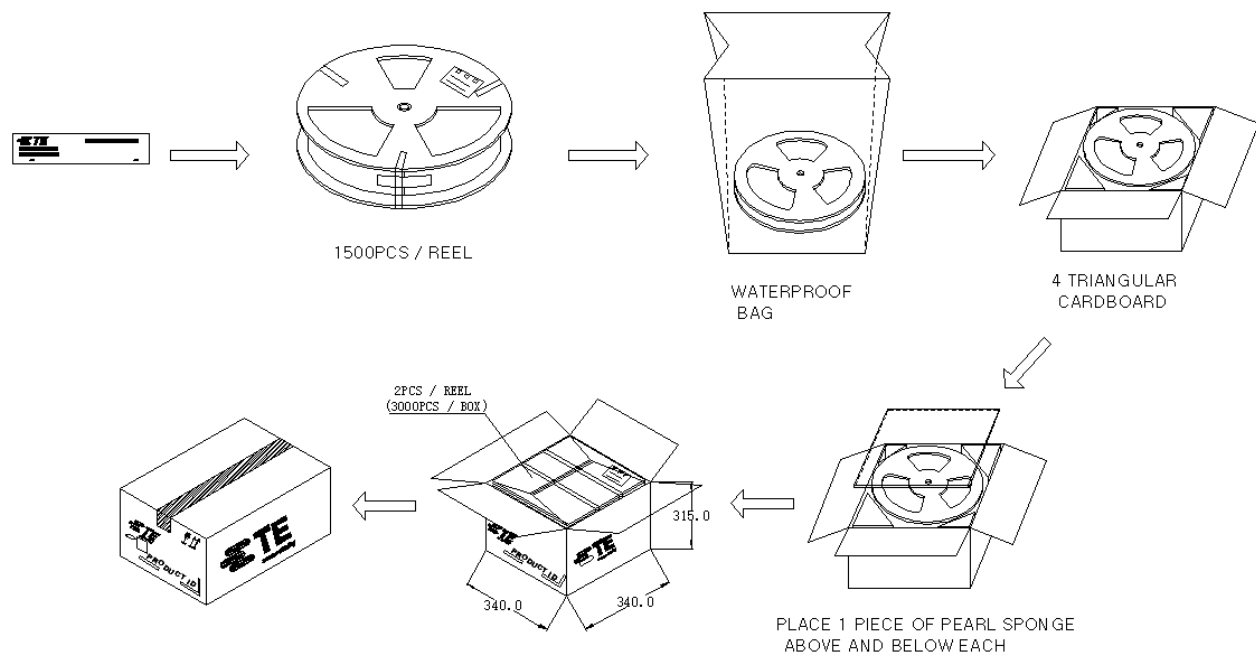
Diagram is not to scale

DIMENSIONS

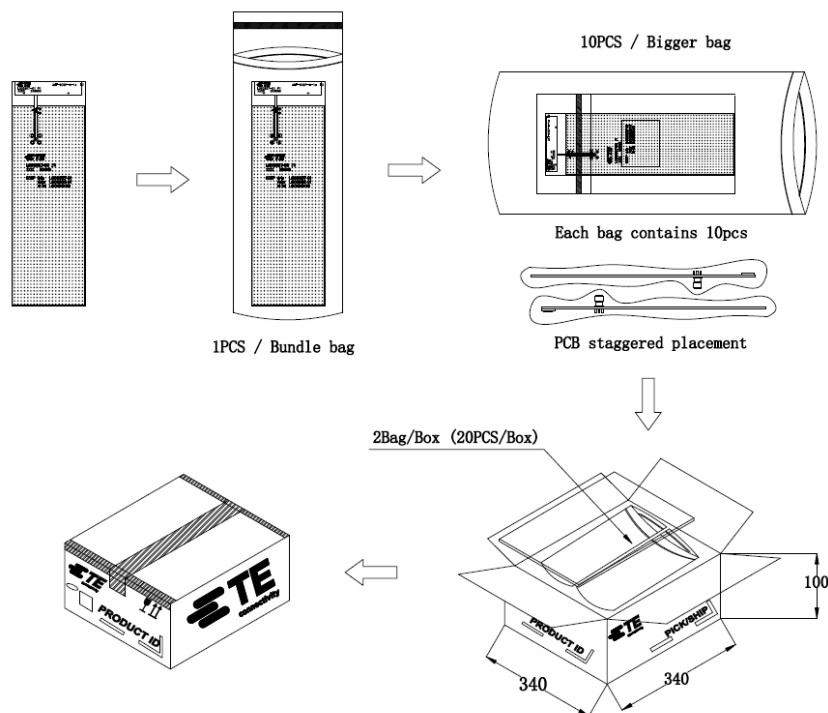


PACKAGING

L000657-01 PCB Antenna (TAPE & REEL)



L000657-80 Evaluation Bord Assembly (BULK)



SPLATCH 5G/LTE GLOBAL CELLULAR WIDEBAND CHIP ANTENNA 617-5000MHZ

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

Netherlands: +31 (0) 73-6246-999

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

For phone numbers in other countries, go to te.com/support-center

te.com

TE, TE Connectivity, TE connectivity (logo), and Splatch are trademarks owned or licensed by the TE Connectivity Ltd. family of companies. Other product names, logos, and company names mentioned herein may be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

©2024 TE Connectivity. All Rights Reserved.

Revised 05-24