



# METASPAN

## 5G/4G/3G/2G, NB-IoT, Cat-M, GNSS, Wi-Fi 6 WORLD BAND COMBINATION ANTENNA

**Part Numbers: 2195852-1**

### FEATURES & BENEFITS

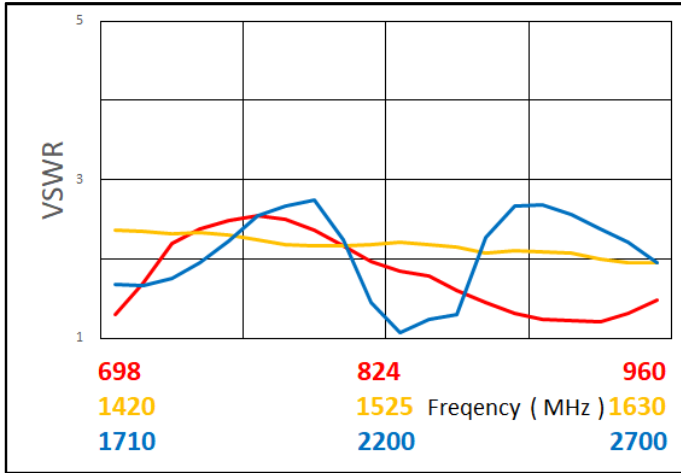
- Omnidirectional coverage
- Tab mount PCB antenna
- Uses MetaSpan technology for World band coverage for 3G, 4G, 5G, NB-IoT and Cat-M
- Wi-Fi 6 dual band and GNSS L1 included
- Best performance with 110mm ground plane length

### SPECIFICATIONS

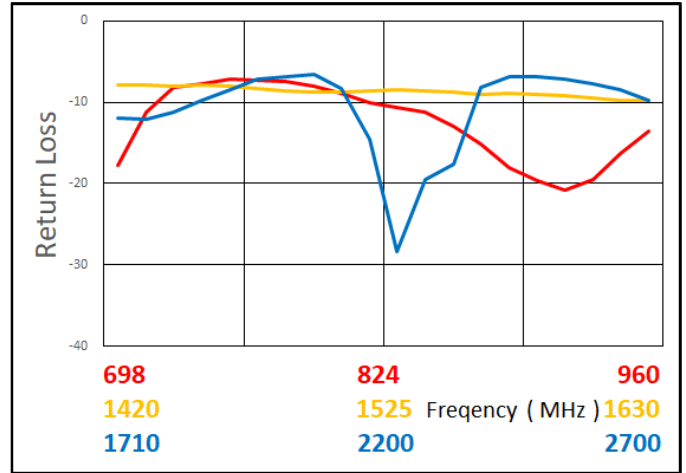
<b>Frequency Range (MHz)</b>	698-960	1420-1630	1710-2700	3200-3800	4400-5000	5150-5875
<b>VSWR</b>	< 2.6 : 1	< 2.4 : 1	< 2.7 : 1	< 2.6 : 1	< 1.5 : 1	< 1.9 : 1
<b>Average Efficiency</b>	60%	69%	64%	73%	67%	74%
<b>Peak Gain</b>	0.2 dBi	2.5 dBi	3.3 dBi	3.1 dBi	3.3 dBi	4.5 dBi
<b>Average Gain</b>	-2.2 dBi	-1.6 dBi	-1.9 dBi	-1.4 dBi	-1.7 dBi	-1.3 dBi
<b>Power Handling</b>	10 Watt cw					
<b>Feed Point Impedance</b>	50 ohms unbalanced					
<b>Polarization</b>	Linear					
<b>Size</b>	55 x 20 mm					
<b>Weight</b>	< 3.5g					
<b>Mounting</b>	Tab mounting with plated through holes					
<b>Mating Connector</b>	Tab type					
<b>Operating Temperature</b>	-40 to +85°C					
<b>Storage Temperature</b>	-40 to +85°C					
<b>Packaging Specification</b>	Bag & Box					
<b>Hazardous Materials</b>	A certificate of conformance is available from the product page on TE website.					
<b>Data measured in free space and on reference ground plane of 110mm length and 80mm width. Application data may vary.</b>						

## RF DATA

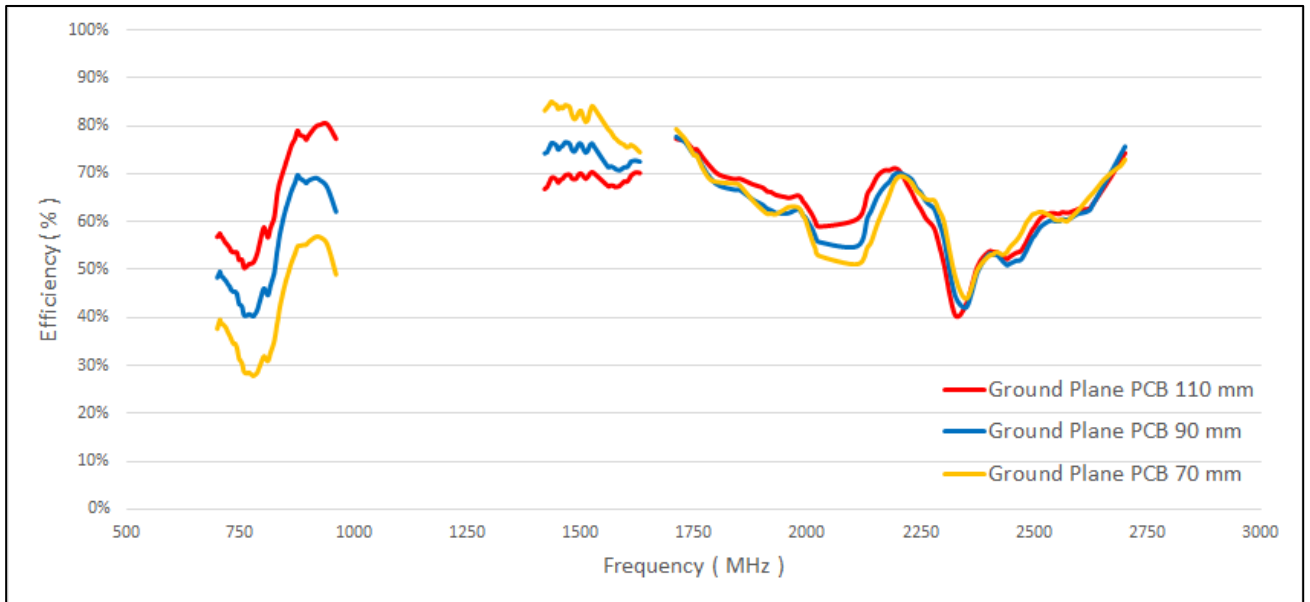
VSWR



Return Loss



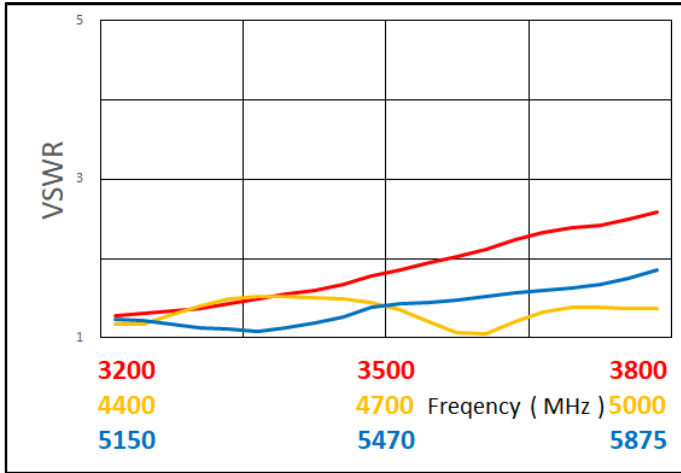
Efficiency vs. Ground Plane Size



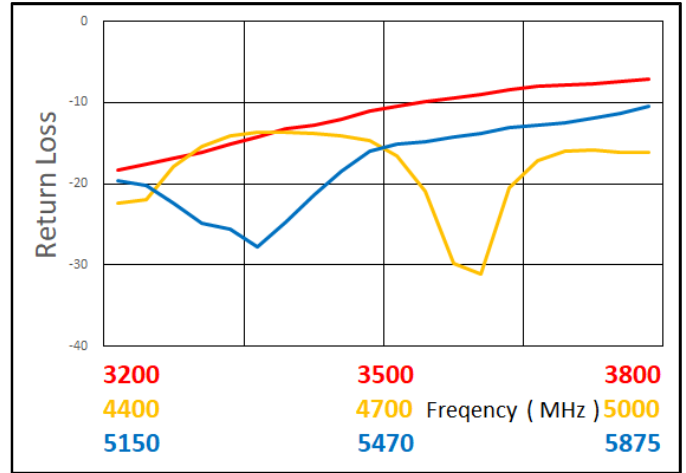
Data measured in free space and on reference ground plane of 110mm length and 80mm width. Application data may vary.

## RF DATA

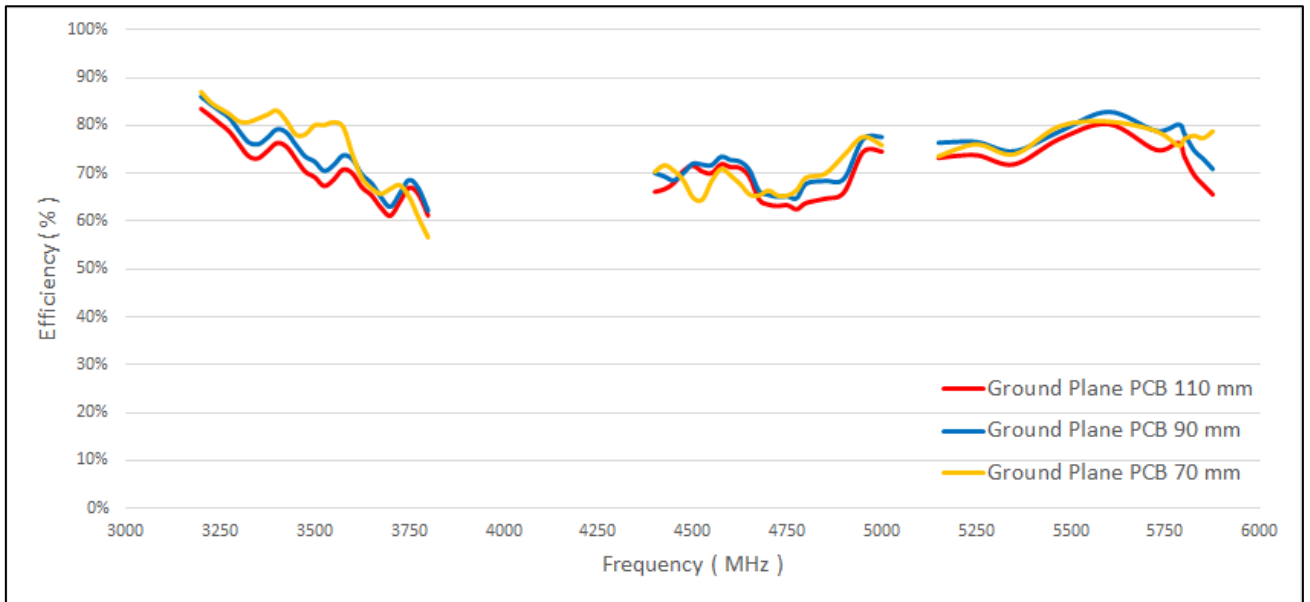
VSWR



Return Loss



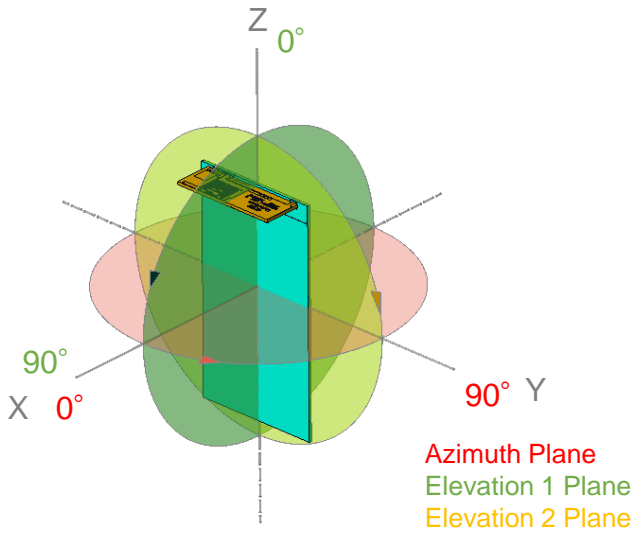
Efficiency vs. Ground Plane Size



Data measured in free space and on reference ground plane of 110mm length and 80mm width. Application data may vary.

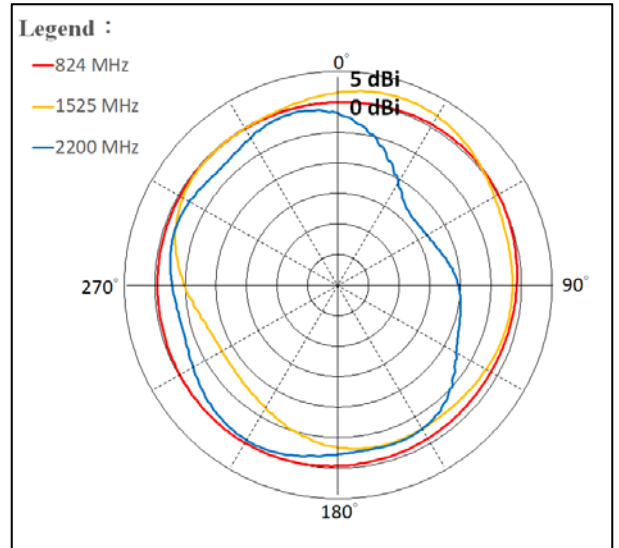
## RADIATION PATTERN

### Test setup

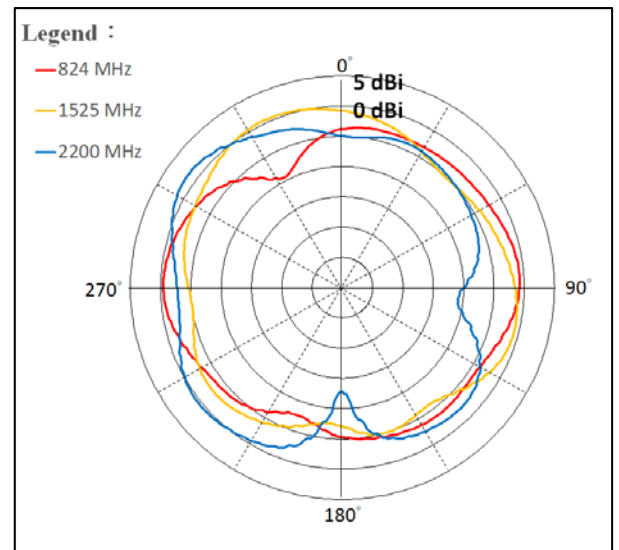
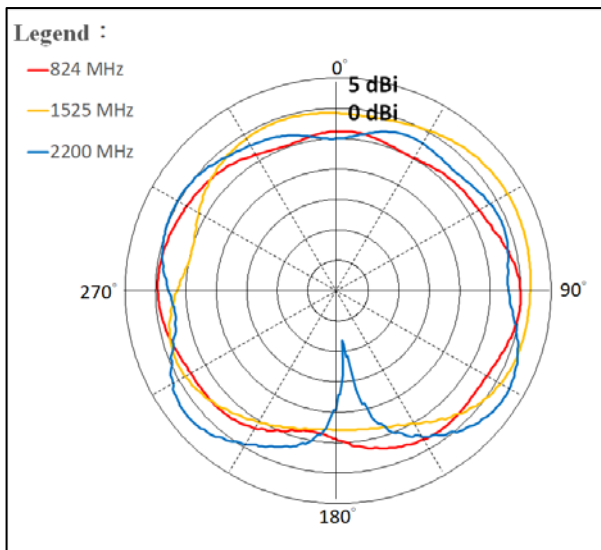


Elevation 1

### Azimuth



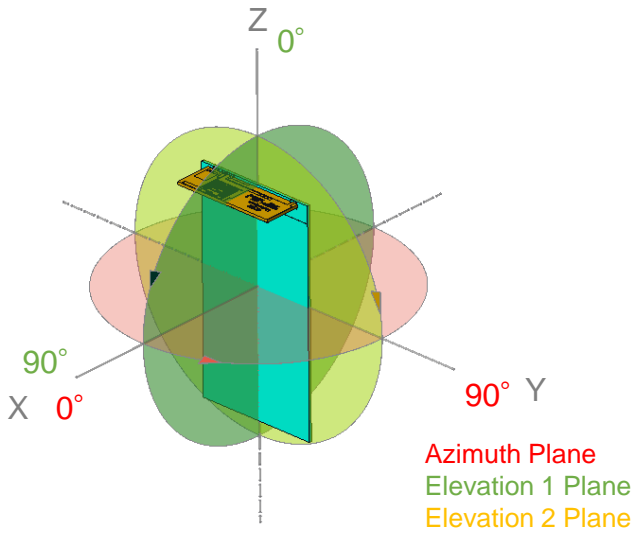
Elevation 2



Data measured in free space and on reference ground plane of 110mm length and 80mm width. Application data may vary.

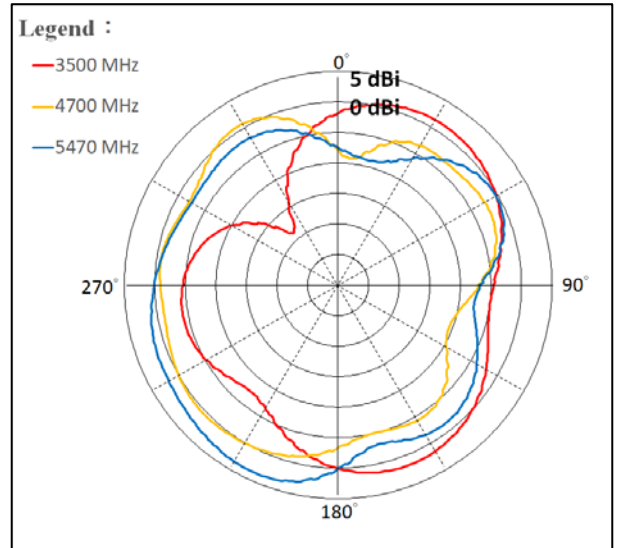
## RADIATION PATTERN

### Test setup

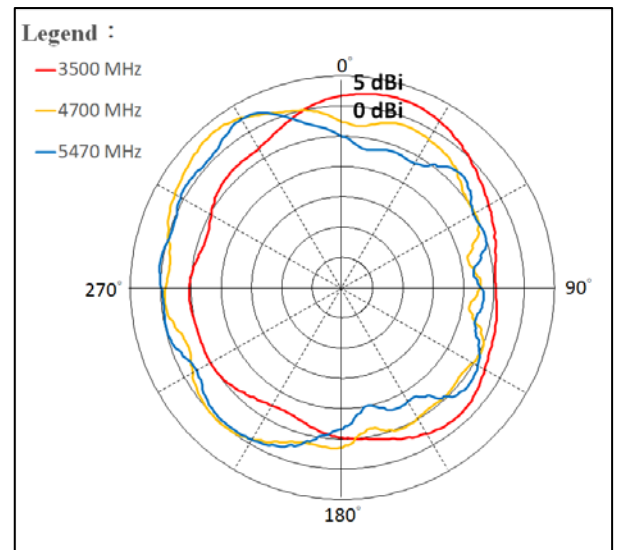
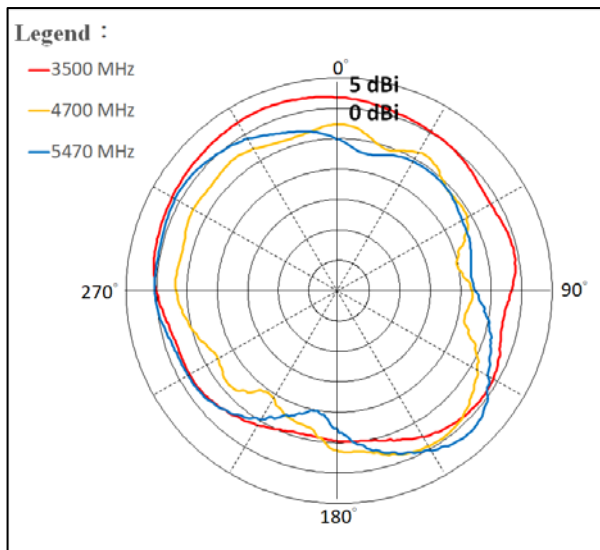


### Elevation 1

### Azimuth

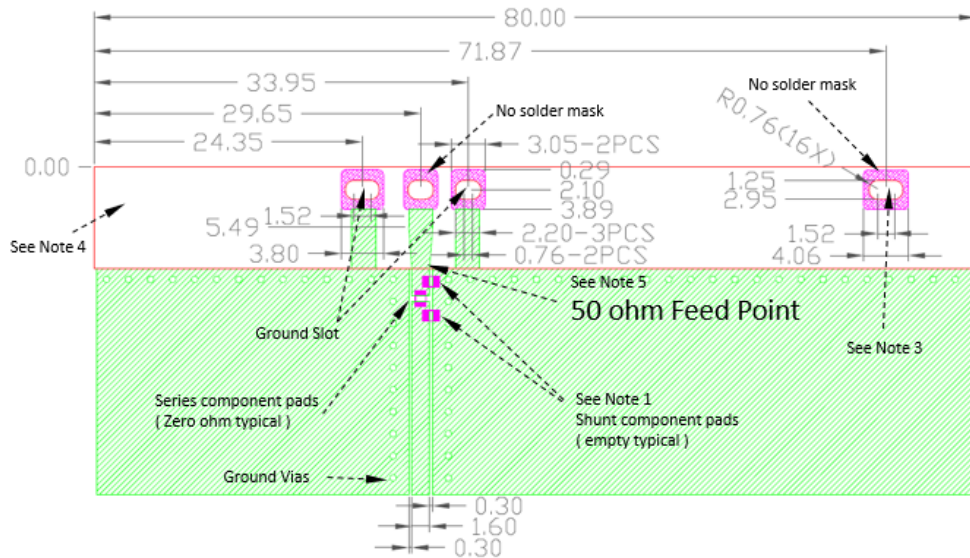


### Elevation 2



Data measured in free space and on reference ground plane of 110mm length and 80mm width.  
Application data may vary.

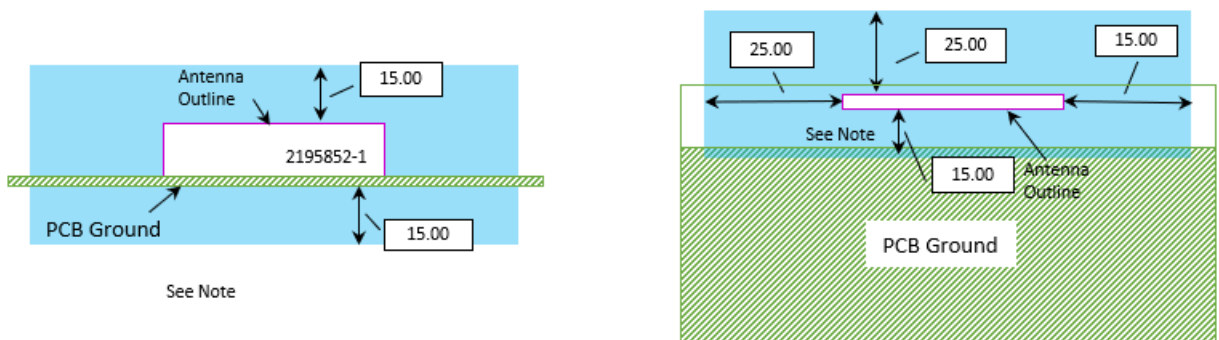
## MOUNTING GUIDE



- NOTES :
1. Suggested matching component pads.
  2. Antenna must be mounted on the edge of PCB.
  3. No connection ( mechanical mounting pads ).
  4. No copper allowed in designated area on all PCB layers -
  5. Thickness is 1.6mm & dielectric is 4.3 for PCB
  6. Reference PCB dimension ( mm ) : 80 x 110
  7. For more information please call TE.

Dimensions : mm  
Diagram is not to scale

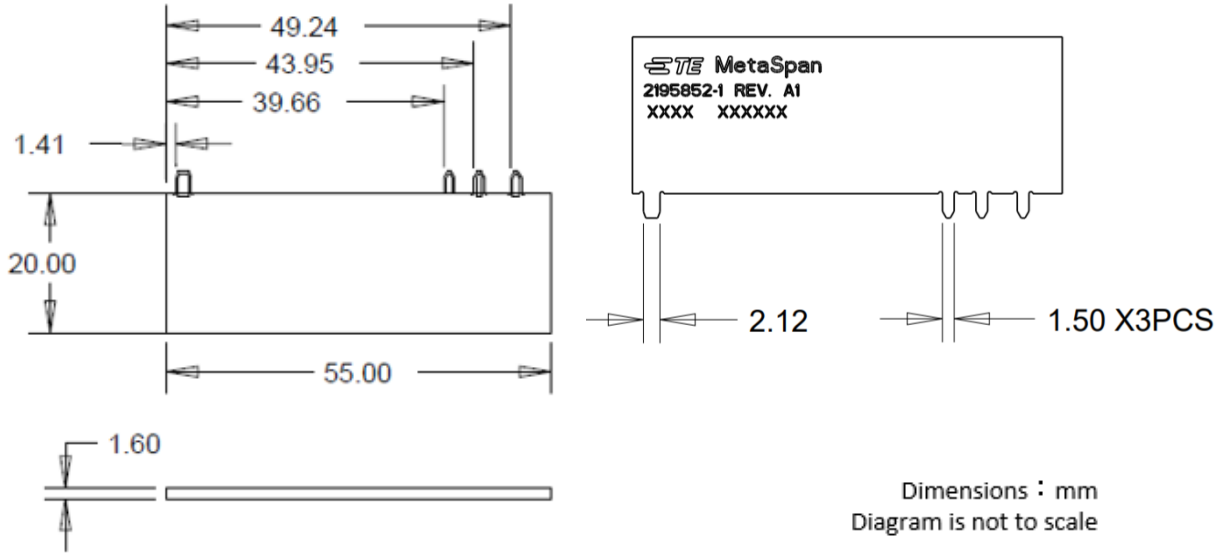
## KEEP OUT AREA



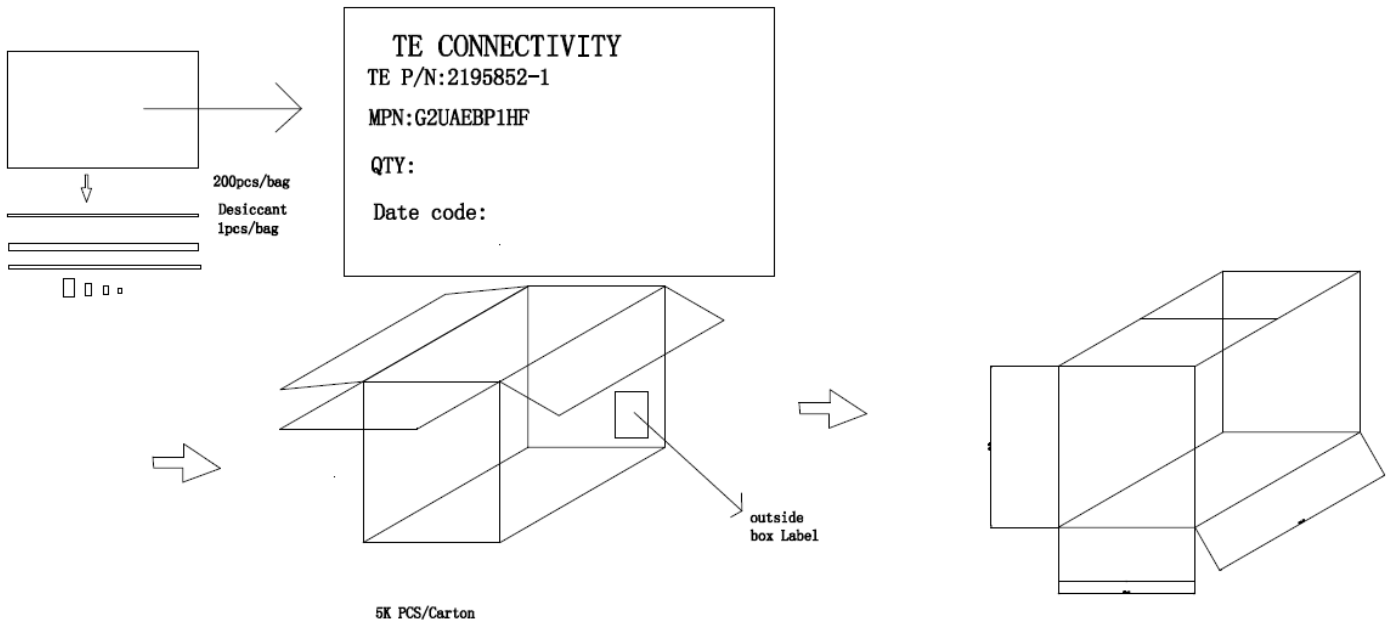
- NOTES :
1. Antenna designed to be mounted on 80x110mm ground plane.
  2. Area in blue above indicates Keep Out Area. This is base on 60x60mm size metal parts.
  3. For more information please call TE.

Dimensions : mm  
Diagram is not to scale

## DIMENSIONS



## PACKAGING



# 5G/4G/3G/2G, NB-IoT, Cat-M, GNSS, Wi-Fi 6 WORLD BAND ANTENNA

Standard Antenna Solutions

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