

# METASPAN

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

Part Numbers: 2195851-1

### FEATURES & BENEFITS

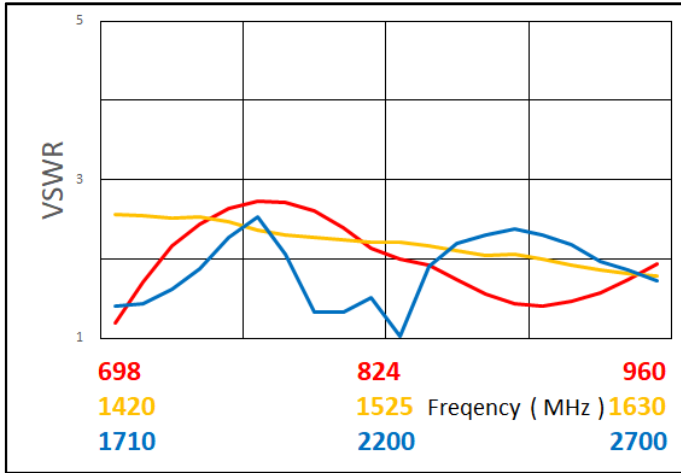
- Omnidirectional coverage
- Tab mount PCB antenna
- Uses MetaSpan technology for World band coverage for 3G, 4G, 5G, NB-IoT and Cat-M
- Wi-Fi 6E triple band, Bluetooth, Zigbee and GNSS L1 included
- Best performance with 110mm ground plane length

### SPECIFICATIONS

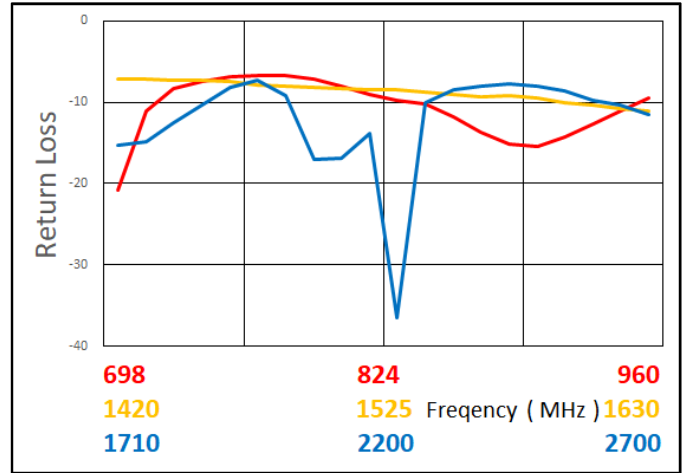
Frequency Range (MHz)	698-960	1420-1630	1710-2700	3200-3800	4400-5000	5150-5875	5925-7125
VSWR	< 2.7 : 1	< 2.6 : 1	< 2.5 : 1	< 1.7 : 1	< 2.0 : 1	< 1.9 : 1	< 2.0 : 1
Average Efficiency	60%	69%	64%	73%	67%	74%	62%
Peak Gain	0.1 dBi	2.2 dBi	1.3 dBi	3.0 dBi	2.6 dBi	4.0 dBi	4.6 dBi
Average Gain	-2.2 dBi	-1.6 dBi	-1.9 dBi	-1.4 dBi	-1.7 dBi	-1.3 dBi	-2.1 dBi
Power Handling	10 Watt cw						
Feed Point Impedance	50 ohms unbalanced						
Polarization	Linear						
Size	60 x 20 mm						
Weight	< 4g						
Mounting	Tab mount with plated through holes						
Operating Temperature	-40 to +85°C						
Storage Temperature	-40 to +85°C						
Packaging Specification	Bag & Box						
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 110mm length and 80mm width. Application data may vary.							

## RF DATA

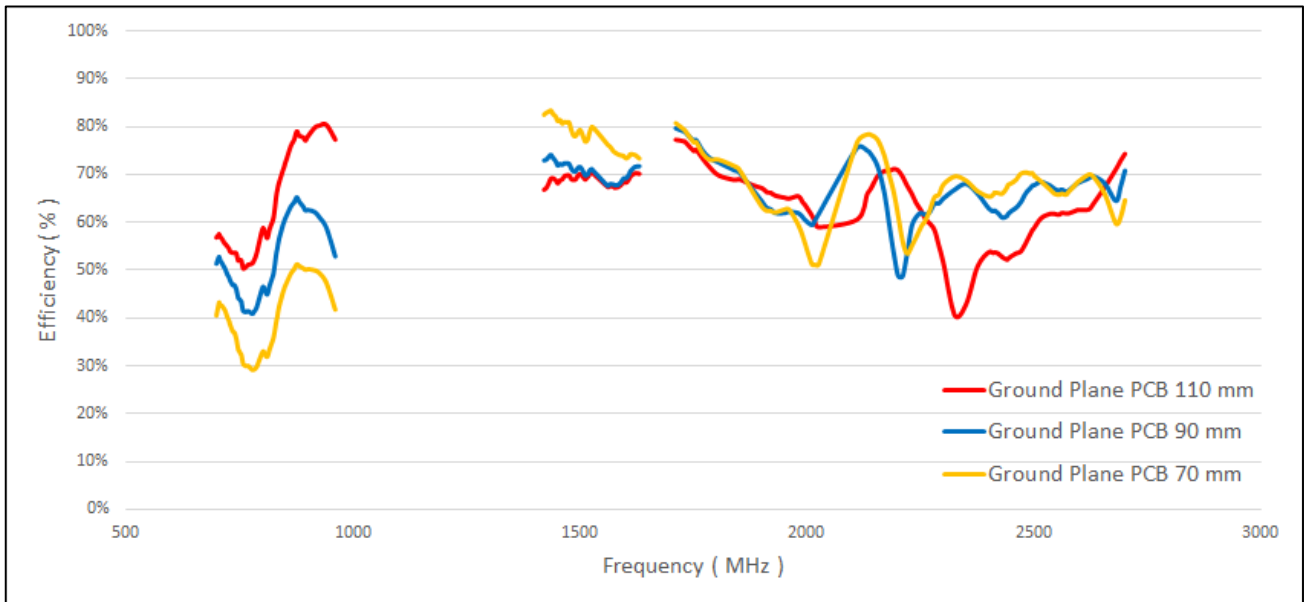
VSWR



Return Loss



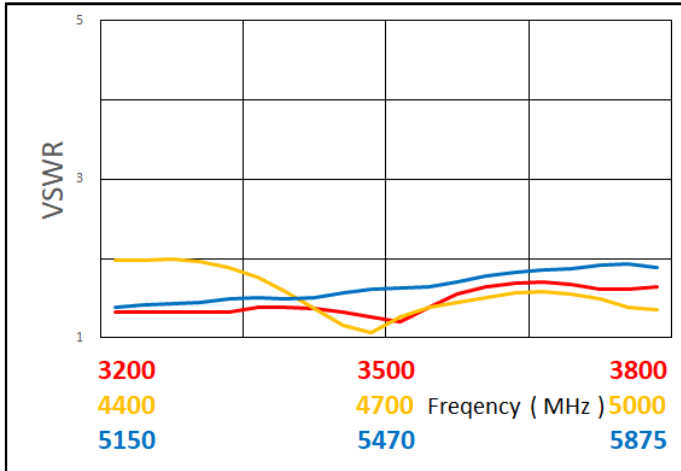
Efficiency vs. Ground Plane Size



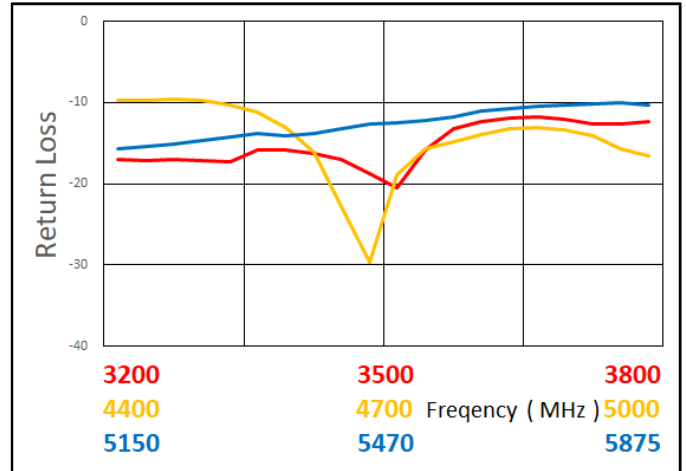
Data measured in free space and on reference GND plane of 110mm length and 80mm width. Application data may vary.

## RF DATA

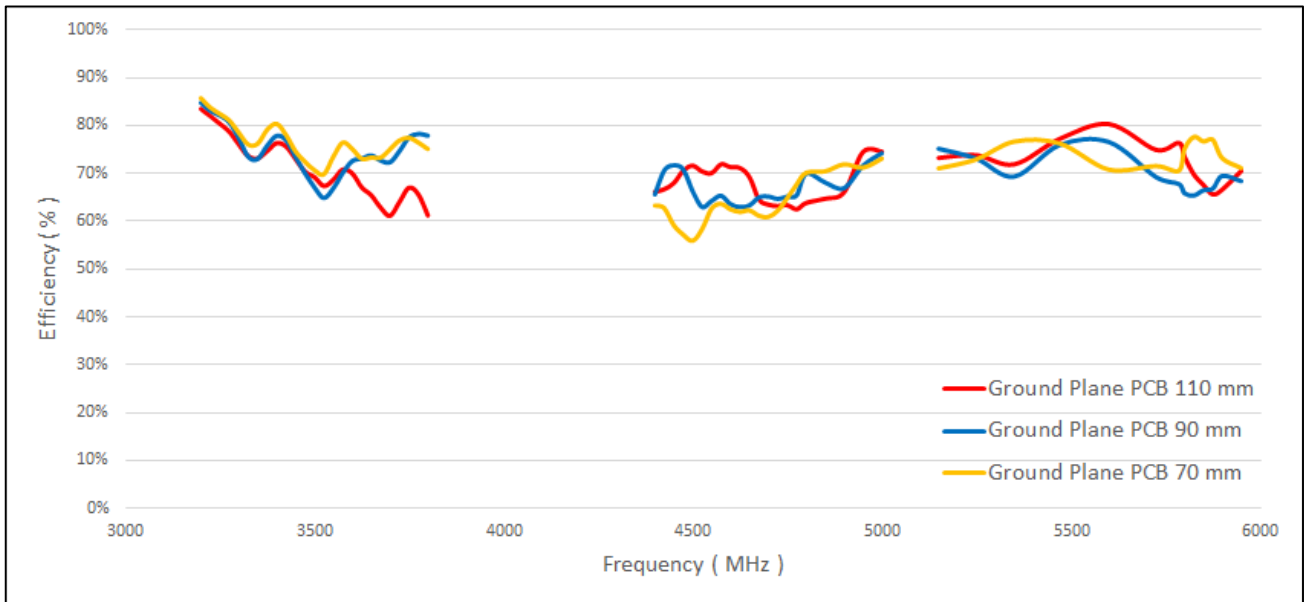
VSWR



Return Loss



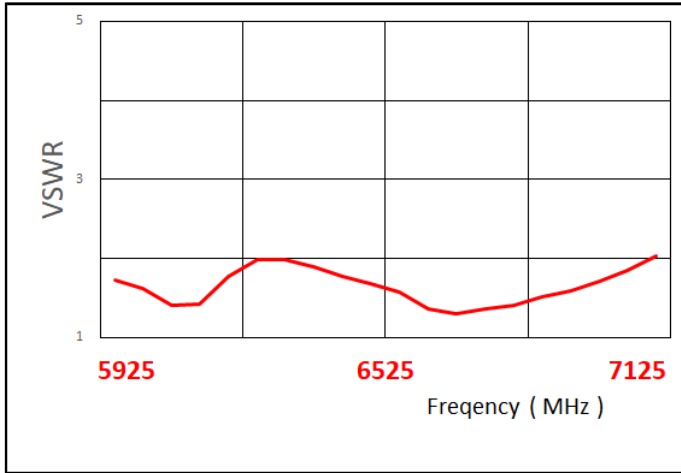
Efficiency vs. Ground Plane Size



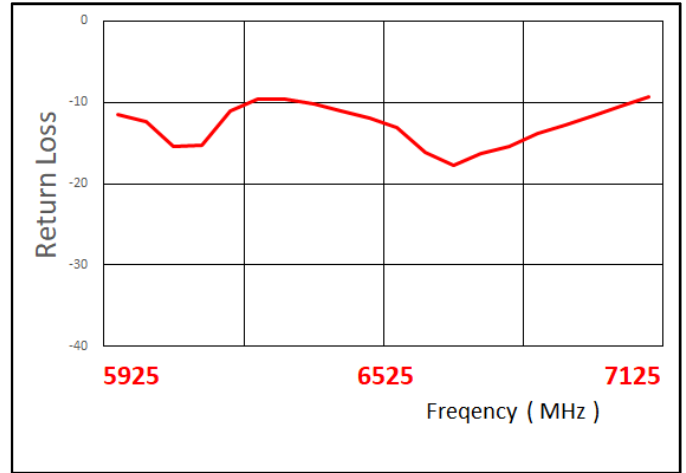
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## RF DATA

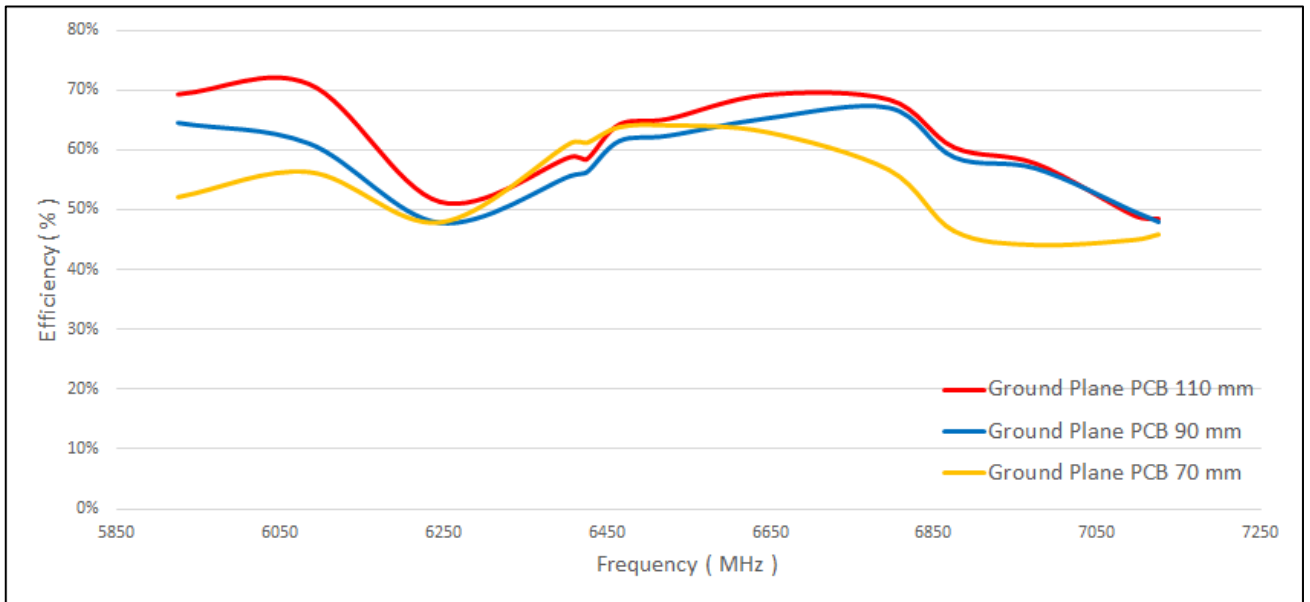
### VSWR



### Return Loss



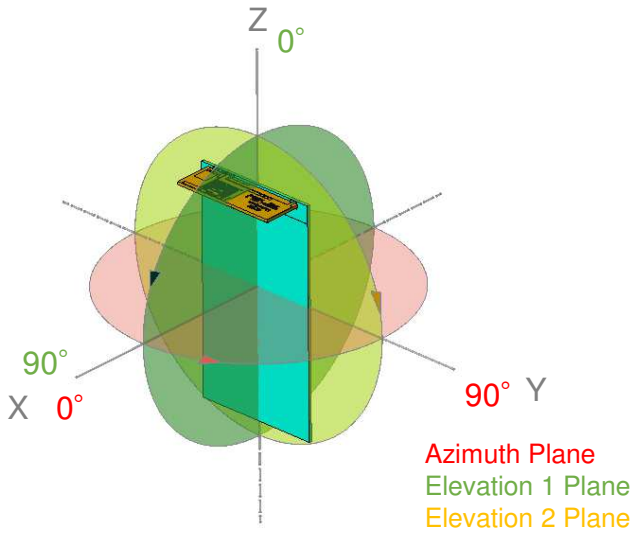
### Efficiency vs. Ground Plane Size



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

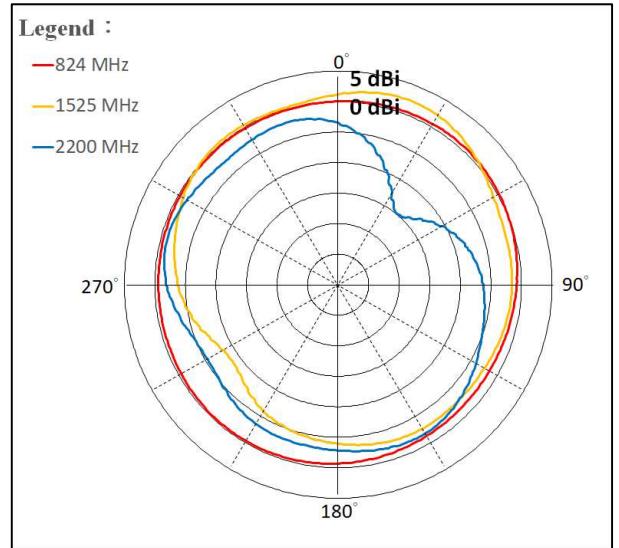
# RADIATION PATTERN

## Test setup

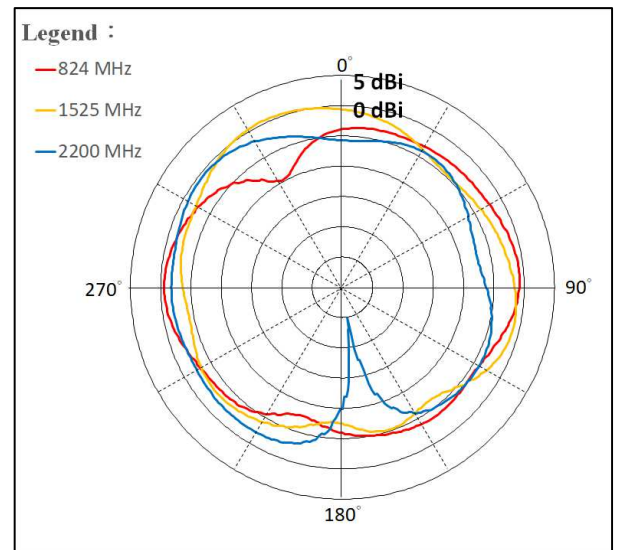
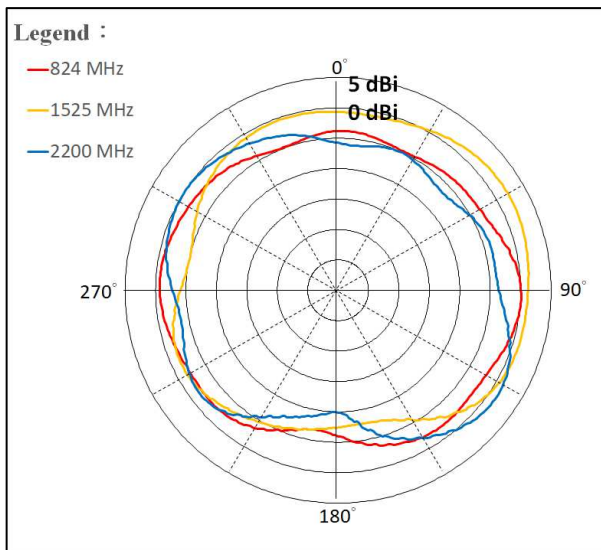


Elevation 1

## Azimuth



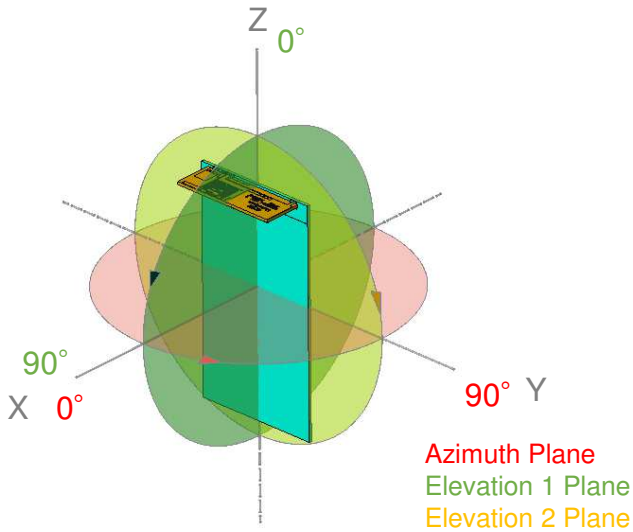
Elevation 2



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

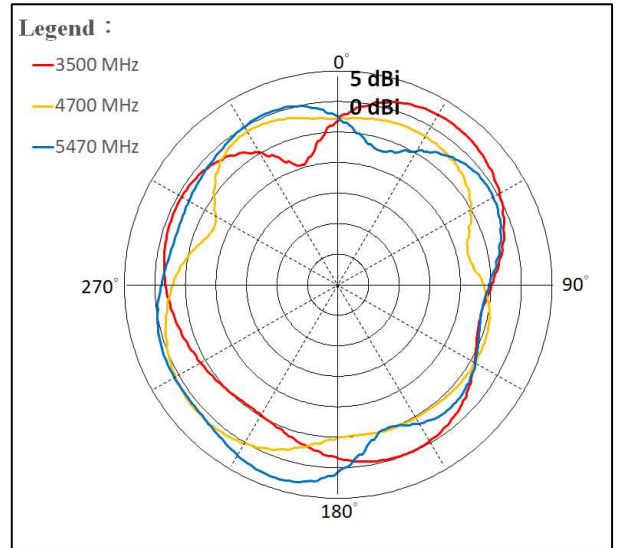
## RADIATION PATTERN

Test setup

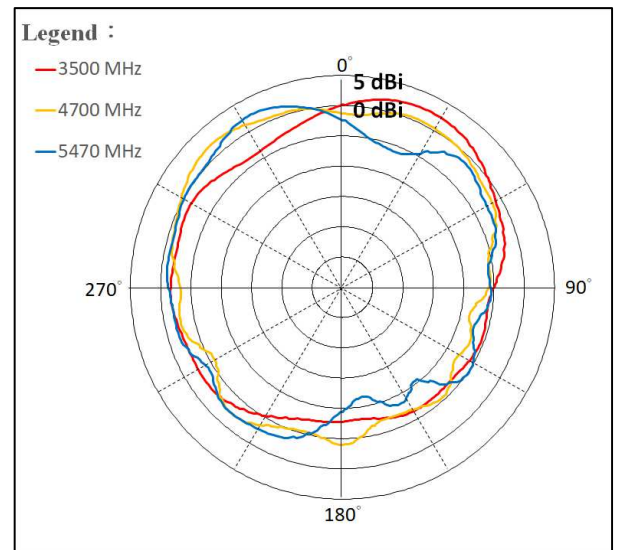
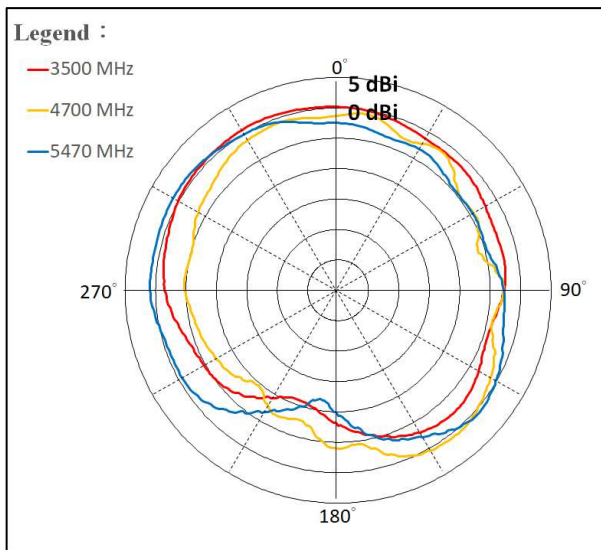


Elevation 1

Azimuth



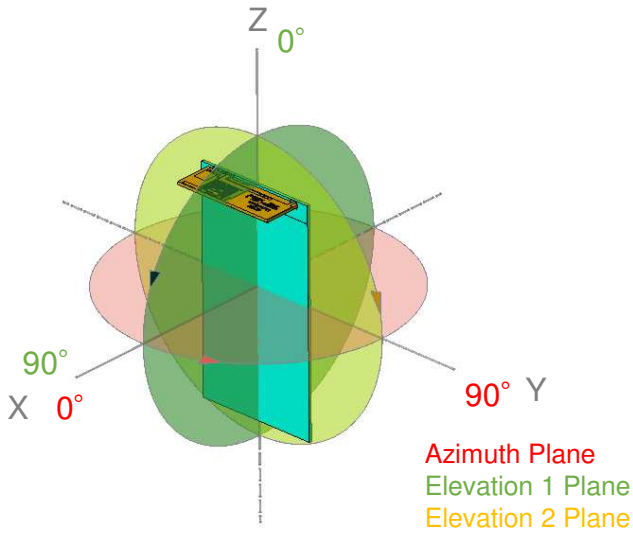
Elevation 2



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

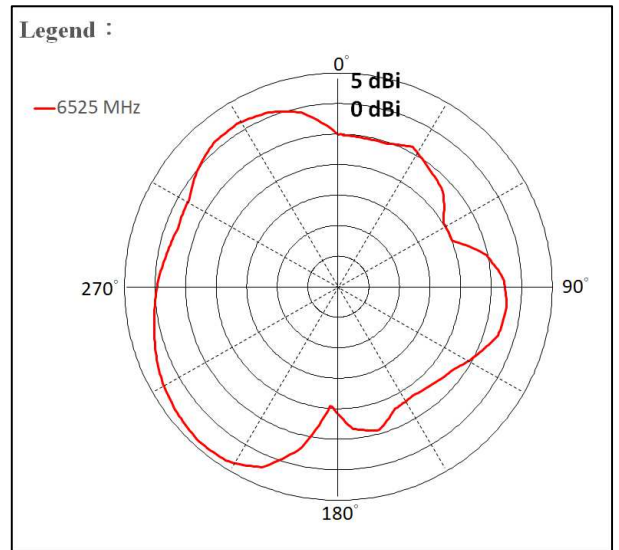
## RADIATION PATTERN

Test setup

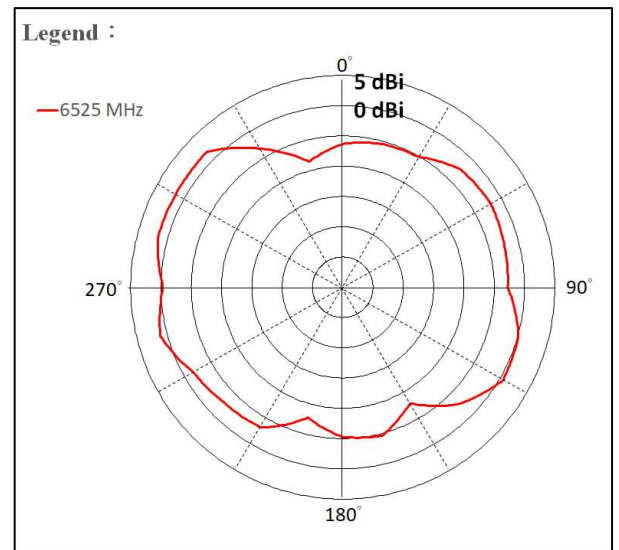
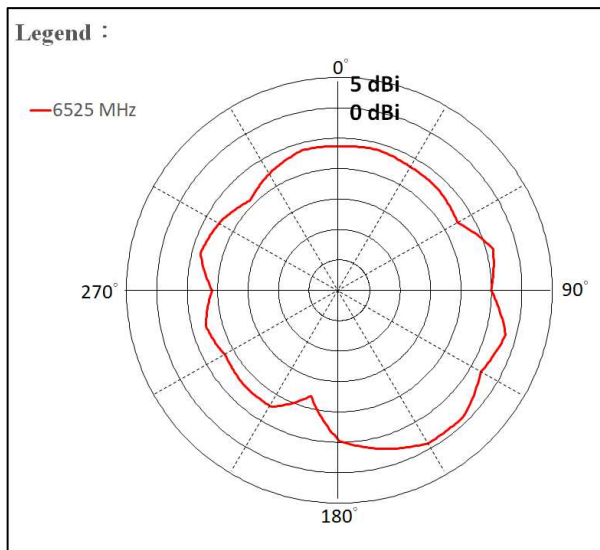


Elevation 1

Azimuth

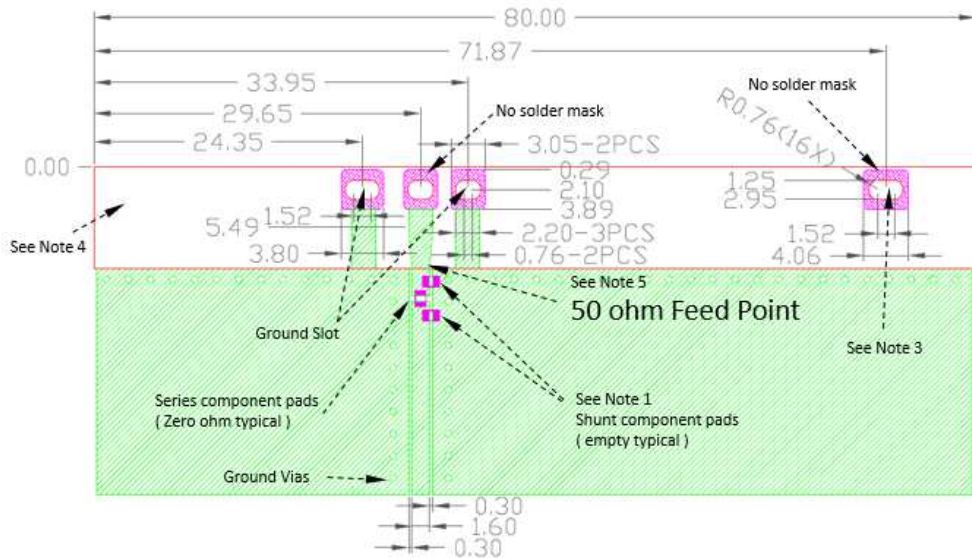


Elevation 2



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

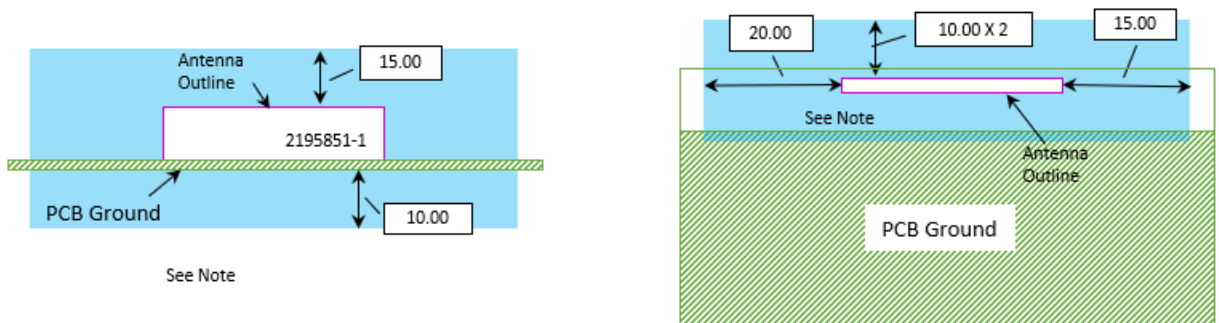
## MOUNTING GUIDE



- 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

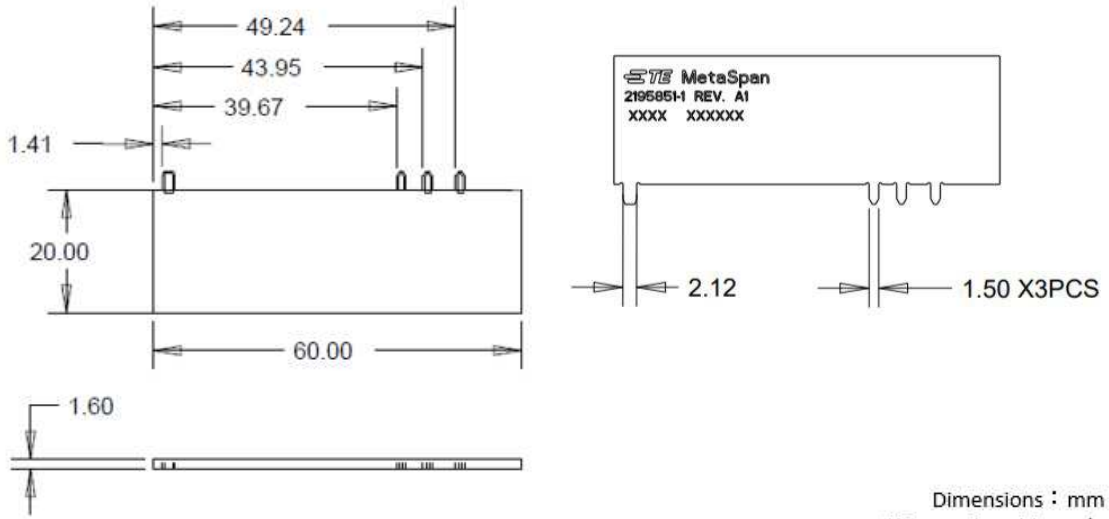


- NOTES :
1. Antenna designed to be mounted on 80x110mm ground plane.
  2. Area in blue above indicates Keep Out Area. This is base on 60x60mm size metal parts.
  3. For more information please call TE.

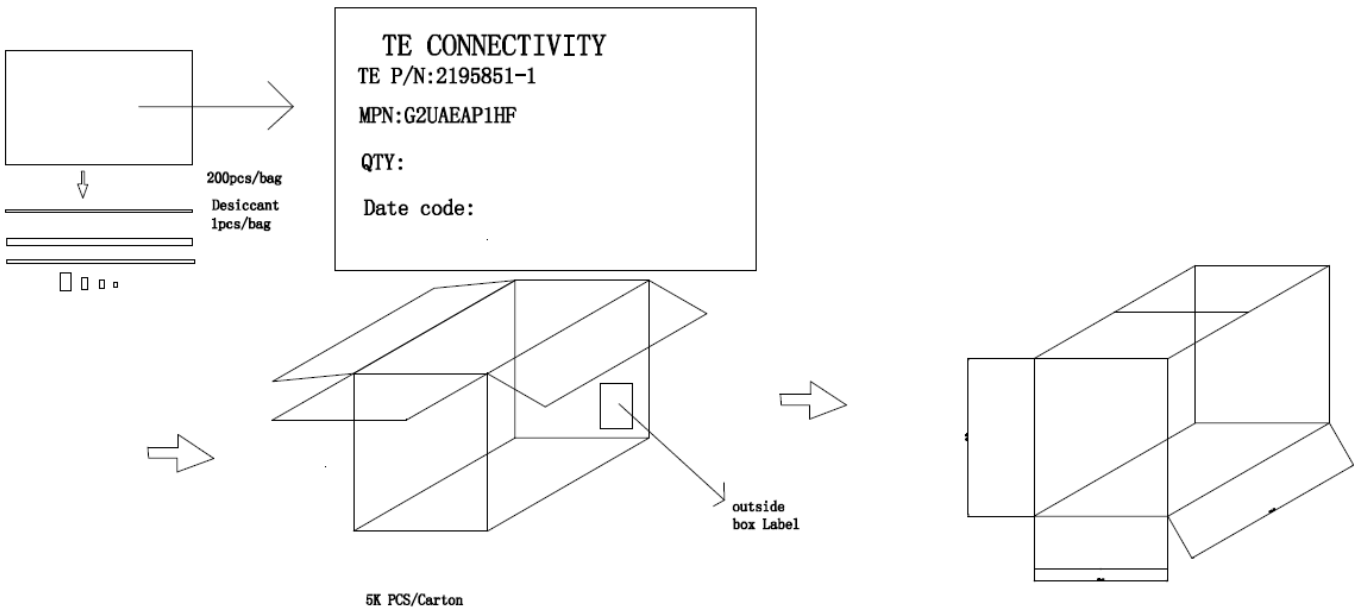
Dimensions : mm  
Diagram is not to scale



## DIMENSIONS



## PACKAGING



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

Standard Antenna Solutions

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