



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

**Part Numbers: 2108783-1, 2108783-2**

## FEATURES & BENEFITS

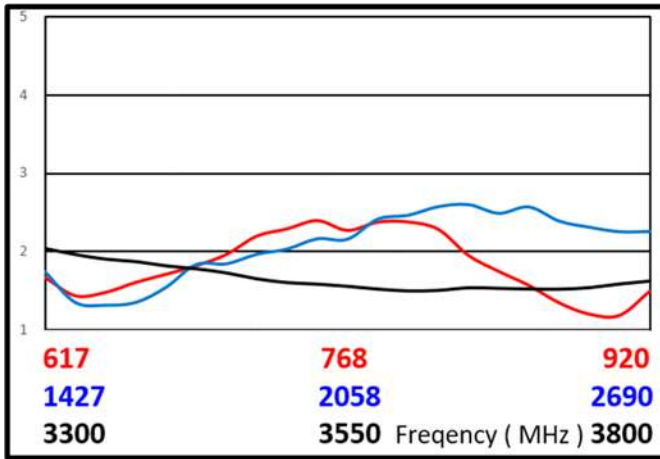
- Omnidirectional coverage
- On board SMD PCB antenna
- Wide Band coverage for 3G, 4G and 5G with GNSS
- Bandwidth and performance dependent on ground plane size/ design suggested minimum ground plane length from antenna feed is 150mm
- Available in Tape & Reel packaging for automatic mounting

## SPECIFICATIONS

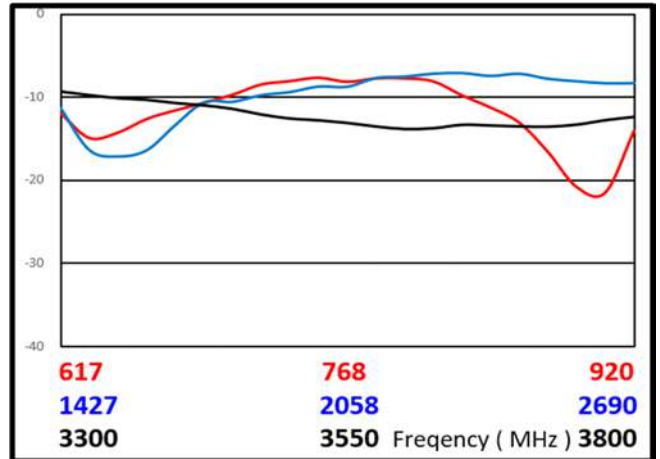
<b>Frequency Range (MHz)</b>	617-920	1427-1608	1710-2900	3300-3800
<b>VSWR</b>	< 2.5:1	< 2.0:1	< 2.7:1	< 2.1:1
<b>Average Efficiency</b>	61.2%	70.0%	53.0%	53.8%
<b>Peak Gain</b>	2.0dBi	3.3dBi	2.7dBi	4.9dBi
<b>Average Gain</b>	-2.1dBi	-1.5dBi	-2.8dBi	-2.7dBi
<b>Power Handling</b>	5 Watt cw			
<b>Feed Point Impedance</b>	50 ohms unbalanced			
<b>Polarization</b>	Linear			
<b>Size</b>	38.0 mm x 7.5 mm x 3.2 mm			
<b>Weight</b>	< 1.5 g			
<b>Mounting</b>	Surface mount			
<b>Operating Temperature</b>	-40 to +85°C			
<b>Storage Temperature</b>	-40 to +85°C			
<b>Packaging Specification</b>	Bag & Box / Tape & Reel			
<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 150 mm length and 45.0 mm width, application data might vary</b>				

RF DATA

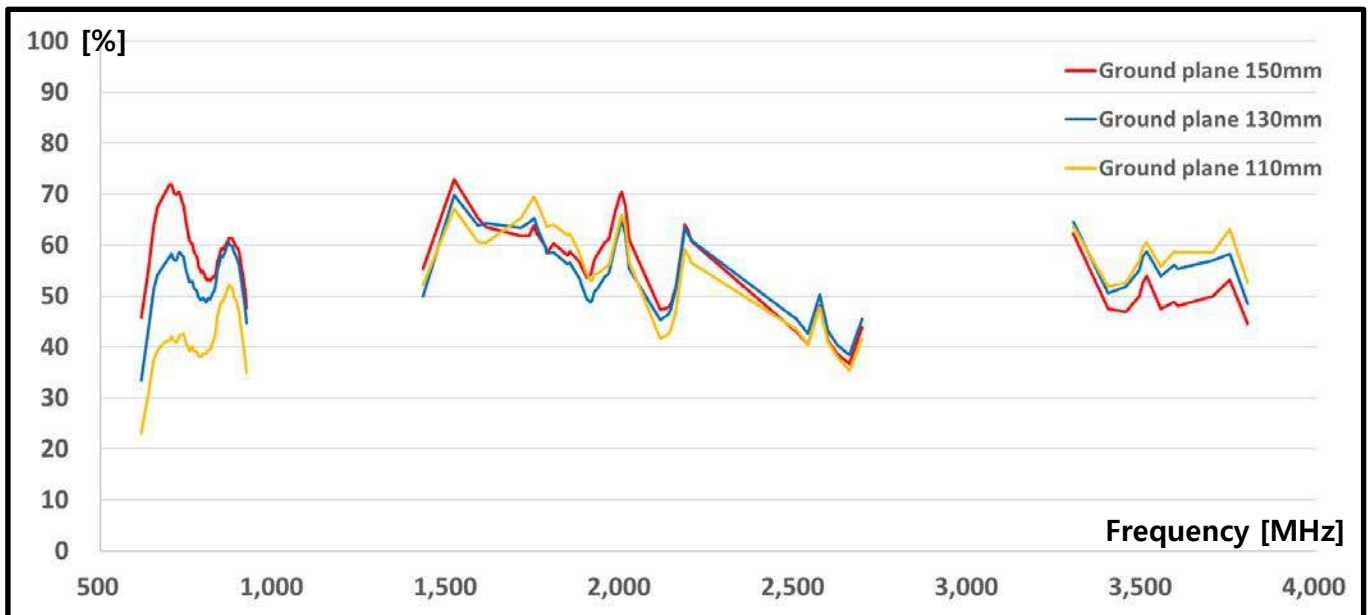
VSWR



Return Loss



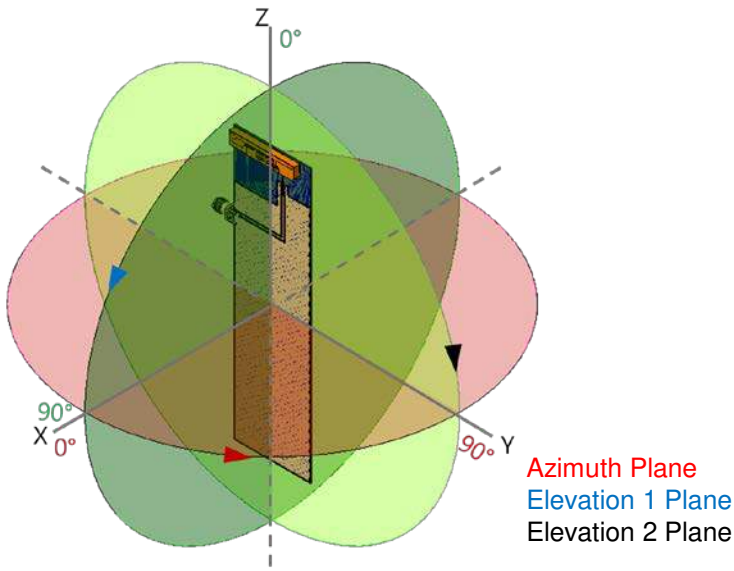
Efficiency vs. Ground plane size



Data measured in free space and on reference ground plane of 150mm length and 45mm width, application data might vary

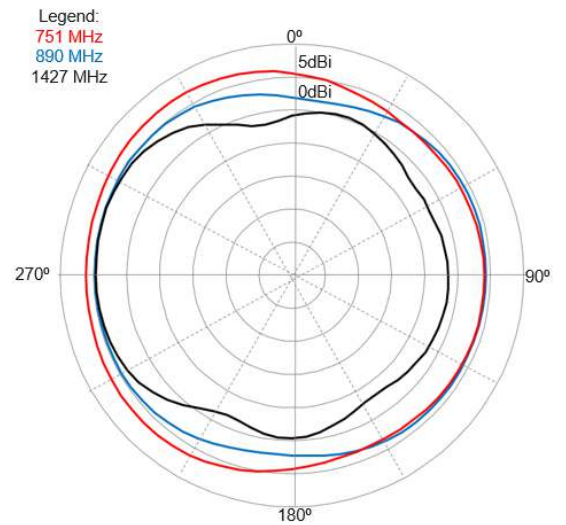
## RADIATION PATTERN

### Test setup

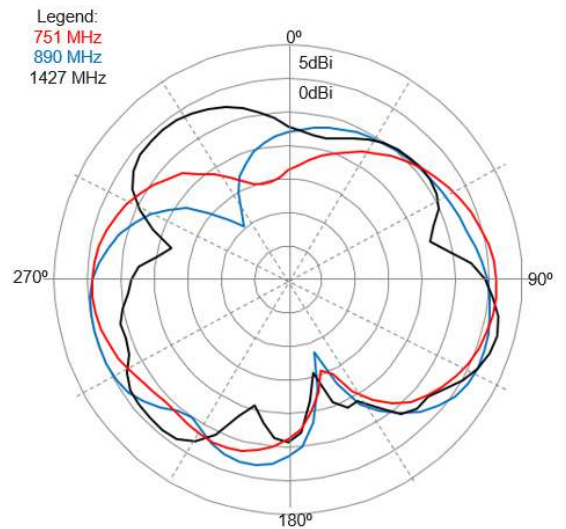
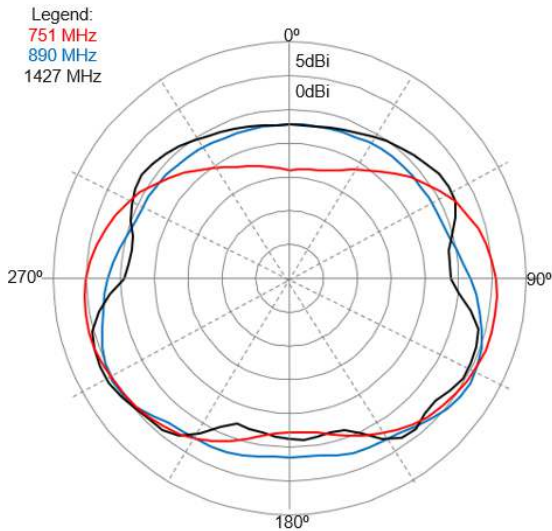


Elevation 1

### Azimuth



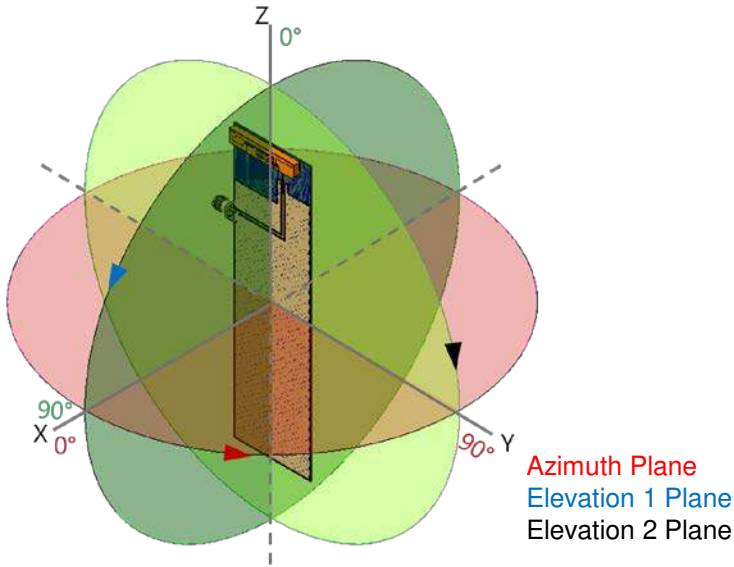
Elevation 2



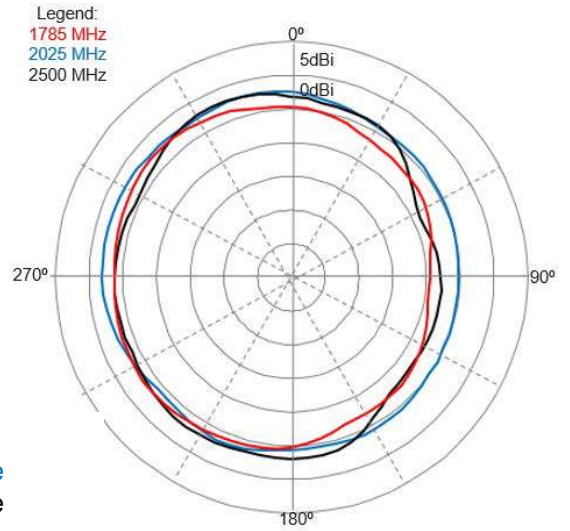
Data measured in free space and on reference ground plane of 150mm length and 45mm width, application data might vary

## RADIATION PATTERN

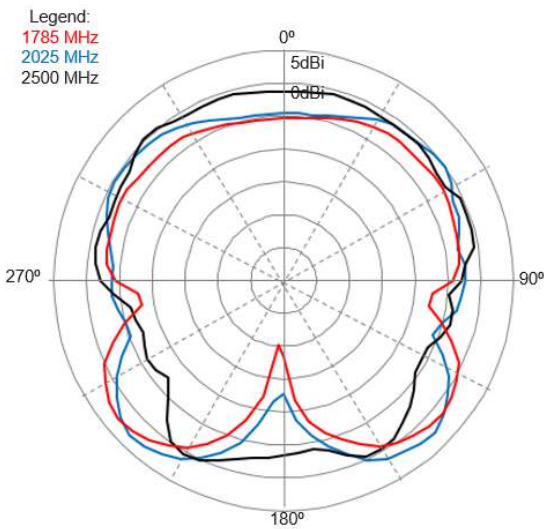
Test setup



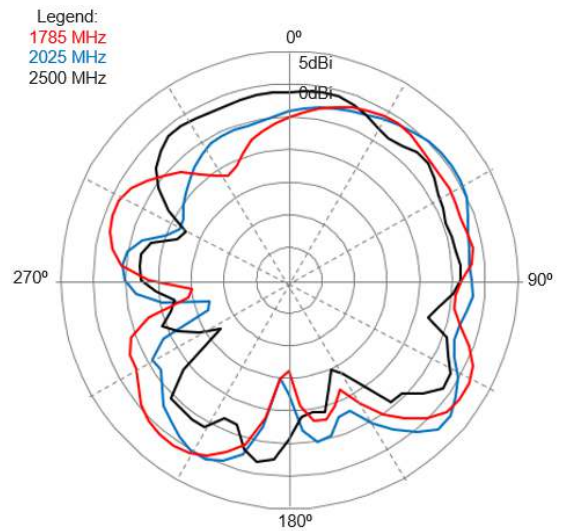
Azimuth



Elevation 1



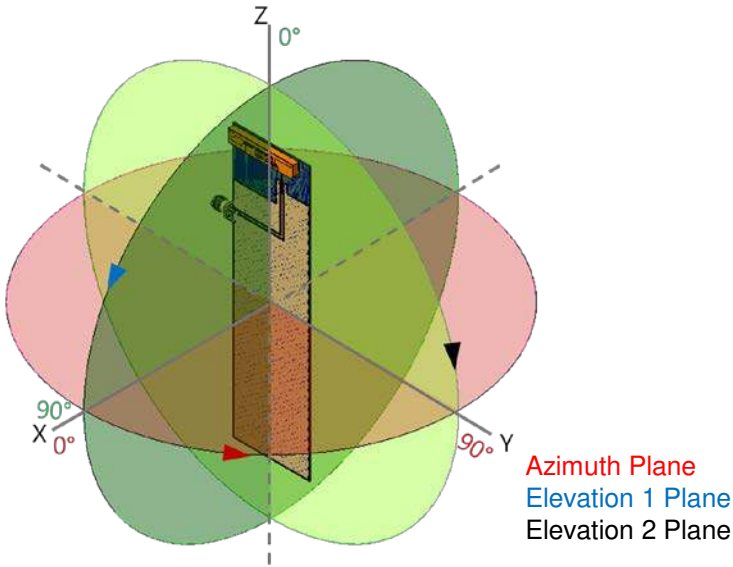
Elevation 2



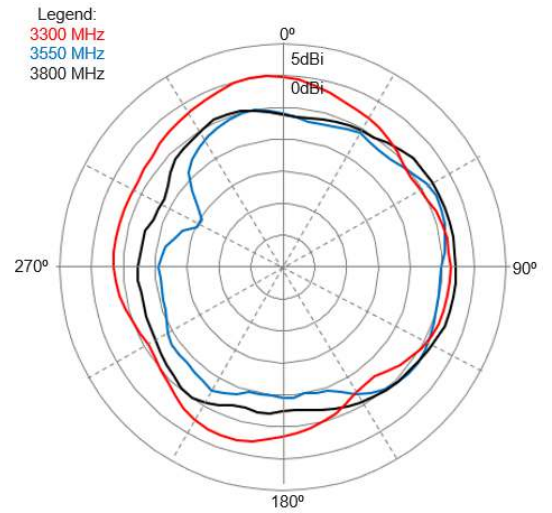
Data measured in free space and on reference ground plane of 150mm length and 45mm width, application data might vary

## RADIATION PATTERN

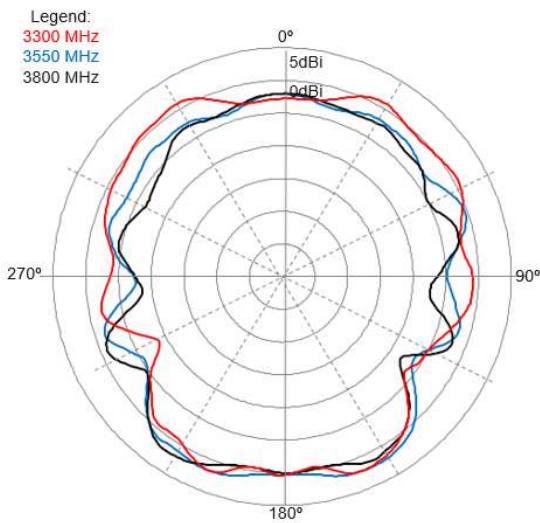
### Test setup



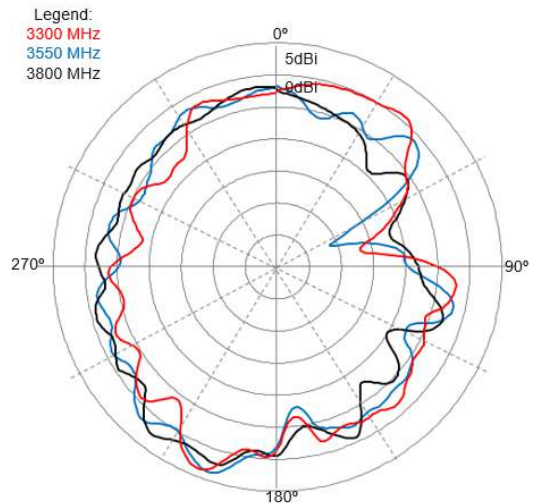
### Azimuth



### Elevation 1

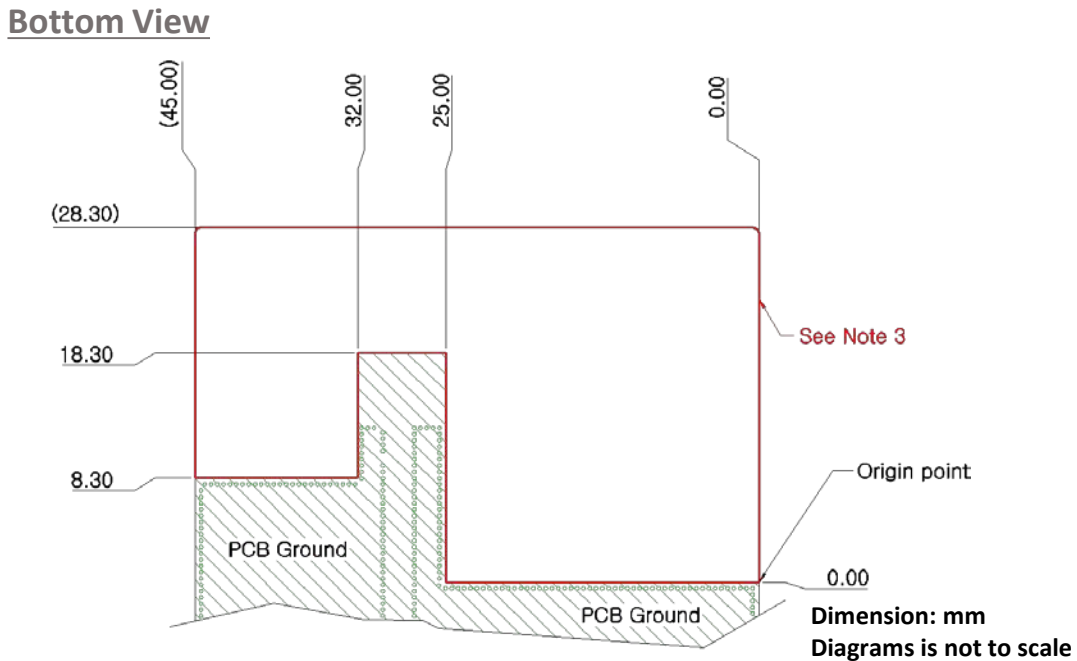
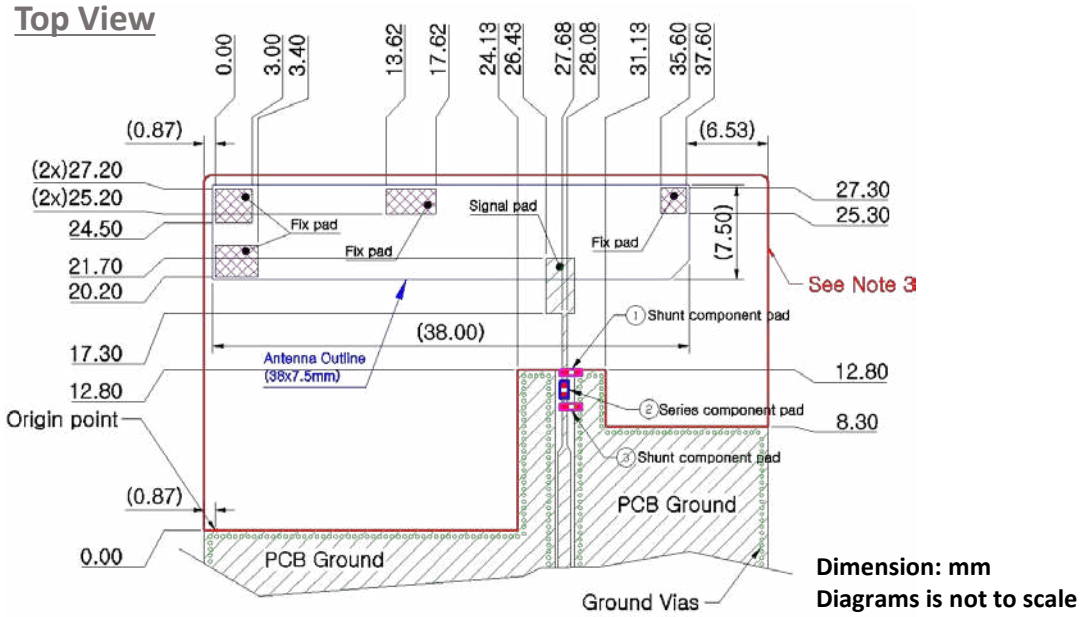


### Elevation 2



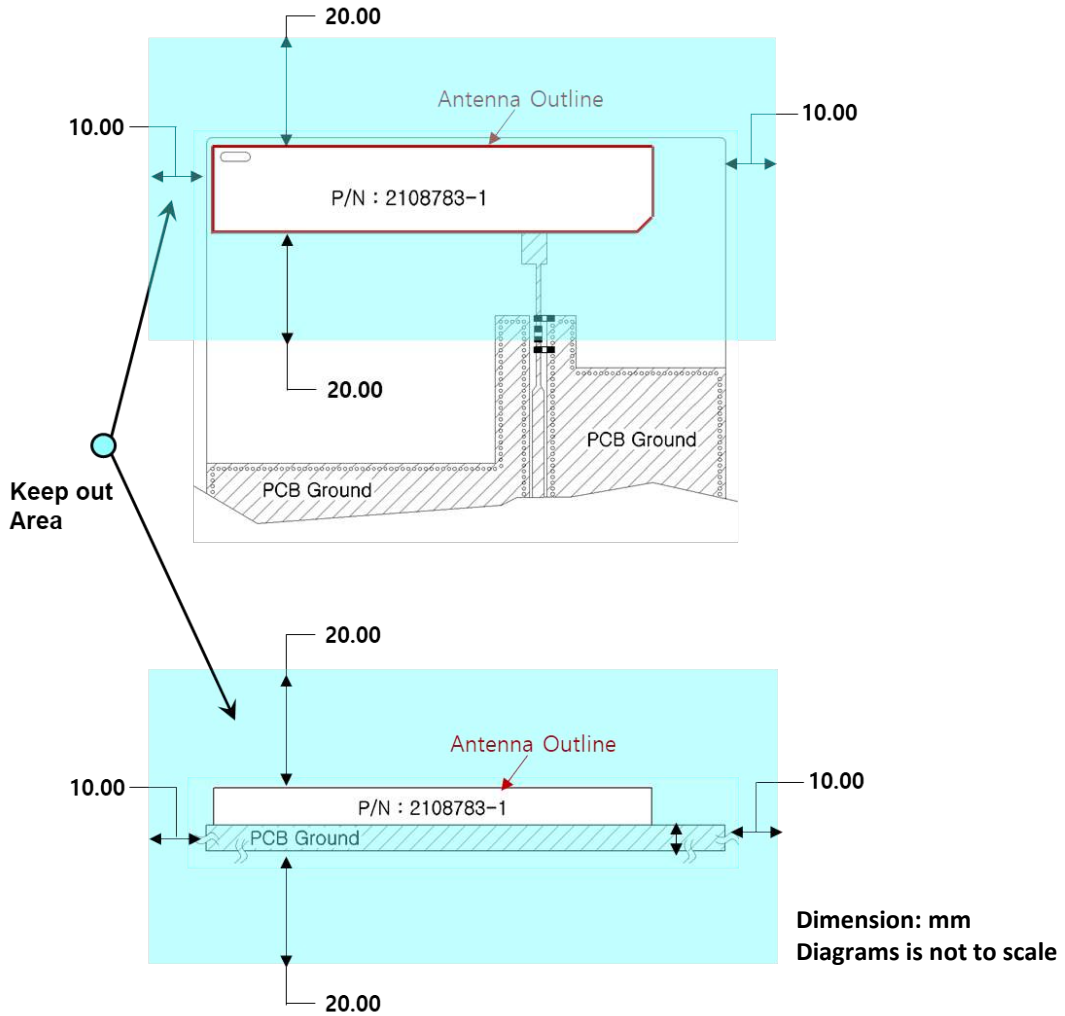
Data measured in free space and on reference ground plane of 150mm length and 45mm width, application data might vary

## MOUNTING GUIDE

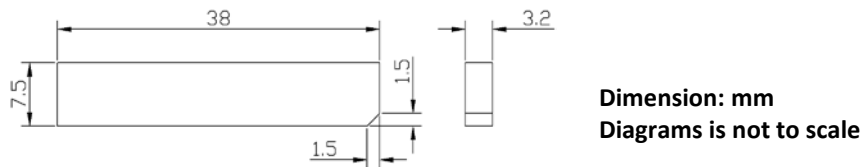


- NOTES:**
1. Antenna must be mounted on the edge of PCB.
  2. NC = Non connection (mechanical mounting pads).
  3. No copper allowed in designated area on all PCB layers –
  4. For more information please call TE.
  5. Measured with below matching circuit condition.
    - ① 12nH, ② 2.7pF, ③ NC
  6. Reference PCB Dimension(mm) - 45.0 x 160.0 x 1.0

### KEEP OUT AREA

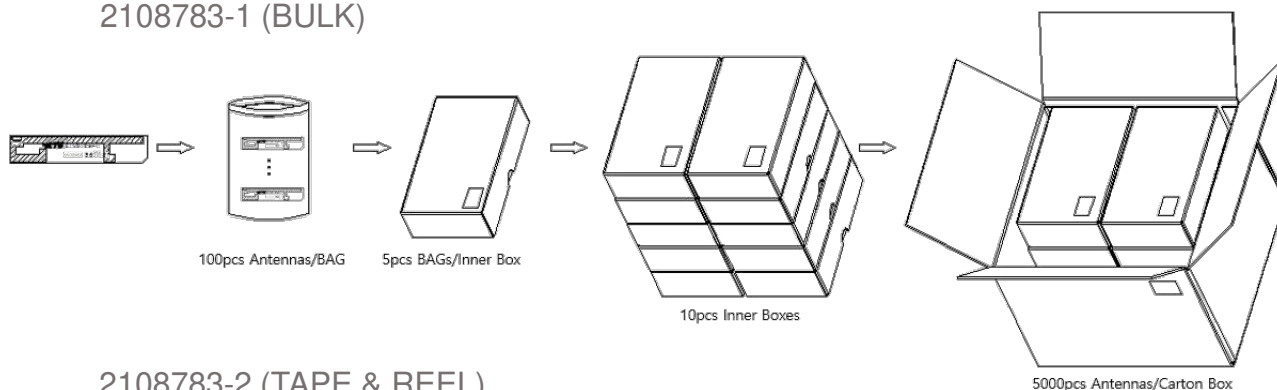


### DIMENSIONS

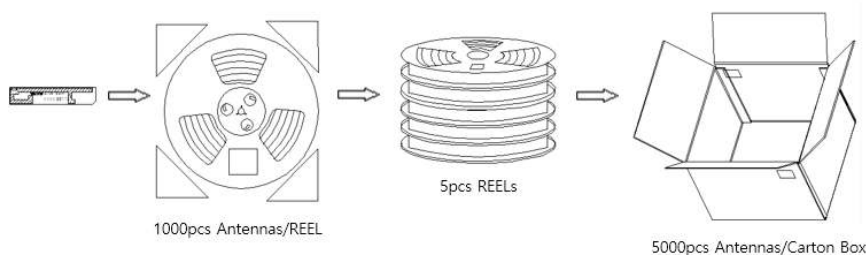


### PACKAGING

#### 2108783-1 (BULK)



#### 2108783-2 (TAPE & REEL)



### TE TECHNICAL SUPPORT CENTER

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