

TECHNICAL DATA SHEET

Description: 2xLTE, WiFi, GNSS Multiband

Vehicular Antenna

PART NUMBER: GPSLPMB401



Features:

- 2xMiMo 698-960/1710-2690MHz
- WiFi 2400-2500/4900-5900MHz
- Active GNSS:
 - · GPS, Galileo, Glonass, Beidou
 - LNA Gain 30dB
- Size 145x135x25mm
- Adhesive mount on plastic and glass fiber surfaces
- · Mounting accessory for metallic surfaces

Applications:

- Vehicle mount multiband antenna
- · High Speed LTE data and WiFi
- · Tracking, Navigation
- Fleet management
- Utility Vans (Gas, Water, Electricity)

All dimensions are in mm / inches

Issue: 1720

In the effort to improve our products, we reserve the right to make changes judged to be necessary. CONFIDENTIAL AND PROPRIETARY INFORMATION

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ELECTRICAL SPECIFICATIONS

LTE		
Frequency	698-960/1710-2690	
Nominal Impedance	Impedance 50	
VSWR	2.2	
Average Efficiency(698-960MHz)	2) 72	
Average Efficiency(1710-2690MHz)	68	%
Peak Gain (698-960MHz)	4.4	dBi
Peak Gain (1710-2690MHz)	5.4	dBi
WIFI		
Fraguenay	0.400 0500/4000 5000	
Frequency	2400-2500/4900-5900	MHz
Nominal Impedance	2400-2500/4900-5900 50	MHz Ω
Nominal Impedance	50	Ω
Nominal Impedance VSWR @2400-2500MHz	50 4	Ω Max
Nominal Impedance VSWR @2400-2500MHz VSWR @4900-5900MHz	50 4 3	Ω Max Max
Nominal Impedance VSWR @2400-2500MHz VSWR @4900-5900MHz Average Efficiency(2400-2500MHz)	50 4 3 46	Ω Max Max %

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ELECTRICAL SPECIFICATIONS

GPS

Frequency 1561.098±2.046/1575.42±1.023/1602.5625±4 MHz

Nominal Impedance 50 Ω

VSWR 2:1

Gain (Radiating element) 1 dBic +/- 1 dB

Gain (LNA gain) 30 dB +/- 2 dB

Polarization RHCP

Out of Band Rejection

698 MHz >70 dB

960MHz >65 dB

1710MHz >60 dB

2170MHz >65 dB

2400MHz >65 dB

Noise Figure <2.4 dB

Operating Voltage 3.3-5 Vdc±0.5V

Current Consumption <11 mA



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ELECTRICAL SPECIFICATIONS

Cable and Connector type

Item	GPSLPMB403 RF Cables	Cable Type	Cable Length	Connector
1	LTE-1	LMR195	3 meters [118.11"]	SMA Male
2	WiFi	LMR195		RP-SMA Male
3	GPS	LMR100		SMA Male
4	LTE-2	LMR195		SMA Male





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Plastic radome SABIC PC943

Color Black

Ingress Protection IP67

Weight 400 g

Cable retention: Pull off 30N mini

Fixing system 3M VHB4959 (T=3mm)

ENVIRONMENTAL SPECIFICATIONS

Operating temperature

-40 ~ +85 ° C





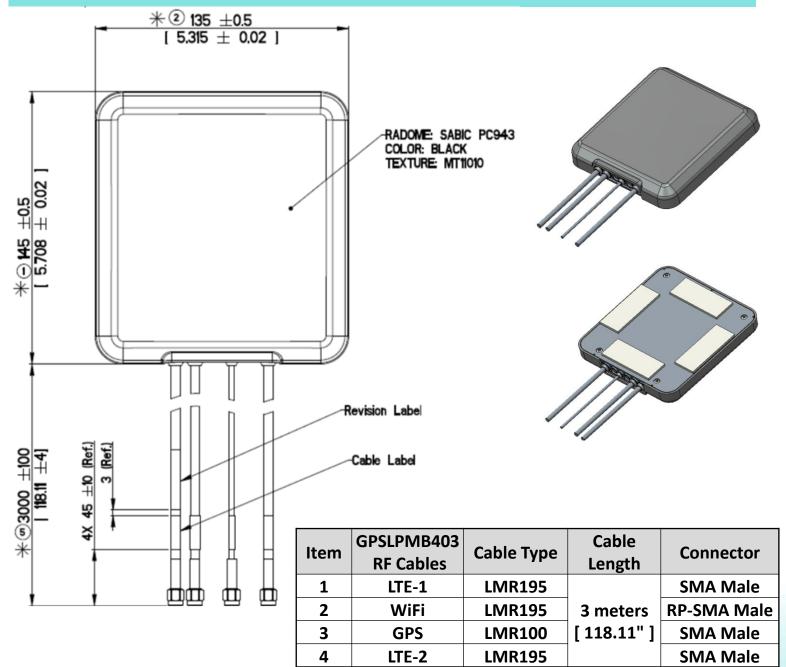
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MECHANICAL DRAWING







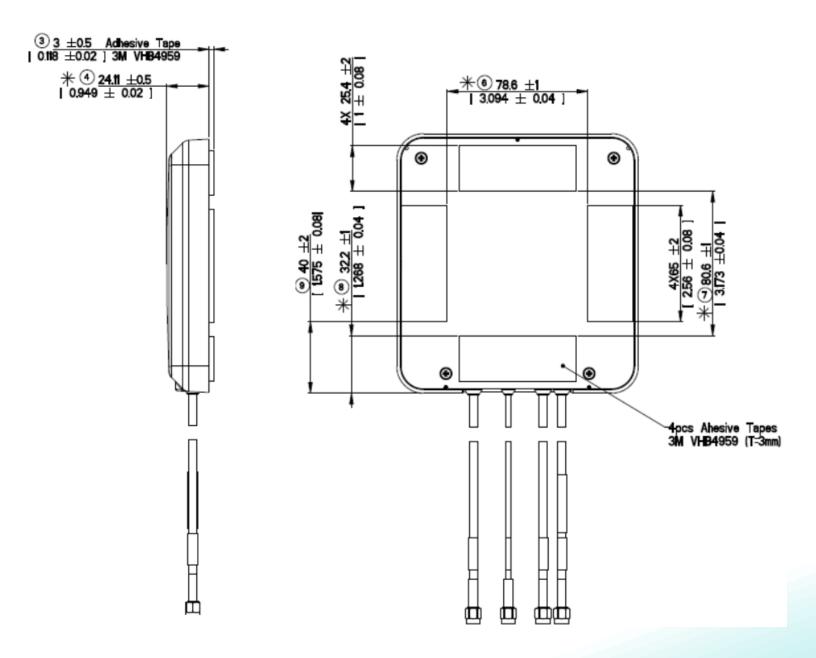
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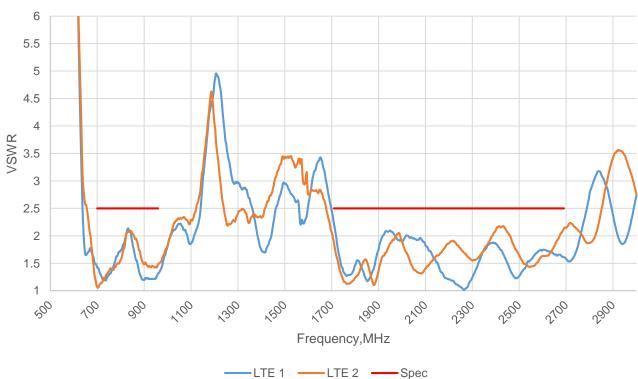
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CHARTS

LTE 1 and LTE2 VSWR

VSWR VS Frequency measured in free space





TECHNICAL DATA SHEET

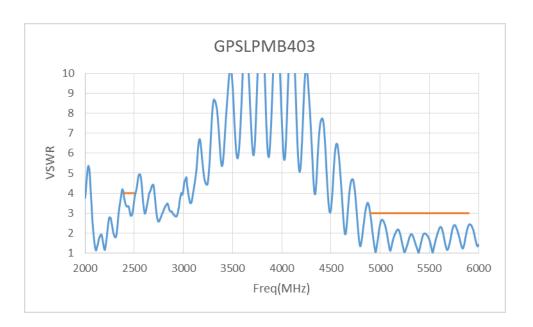
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CHARTS

WiFi VSWR*





^{*} Test on bracket and diameter is 500mm ground plane



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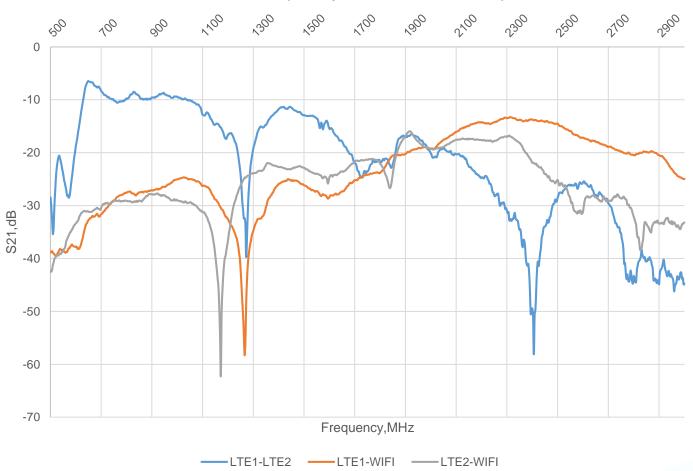
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CHARTS

Isolation

Isolation vs Frequency measured in free space







TECHNICAL DATA SHEET

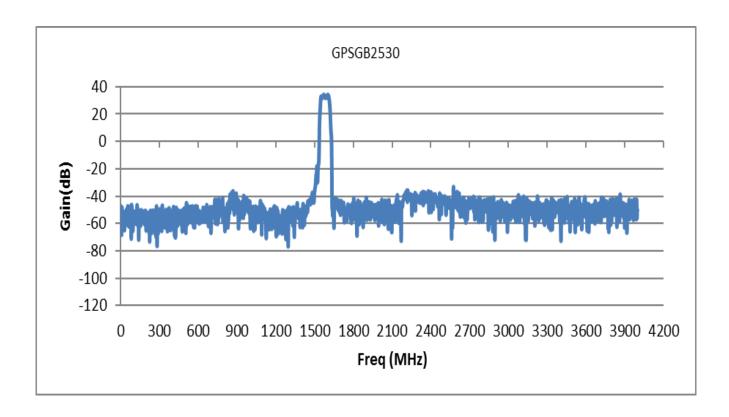
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CHARTS

GPS LNA Gain and out-of-band rejection





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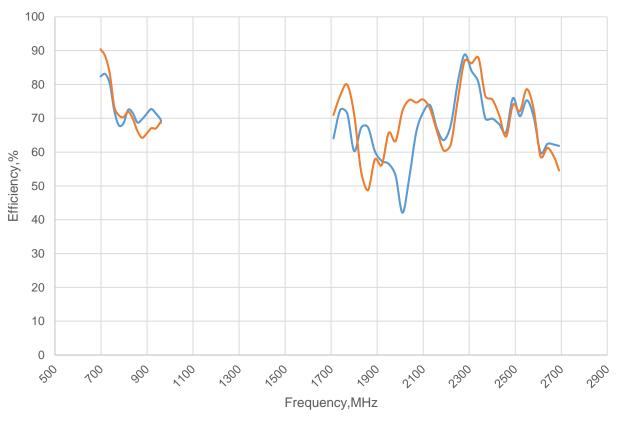
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LTE 1 and LTE2 Efficiency

Efficiency vs Frequency measured in free space



—_LTE 1 ——LTE 2





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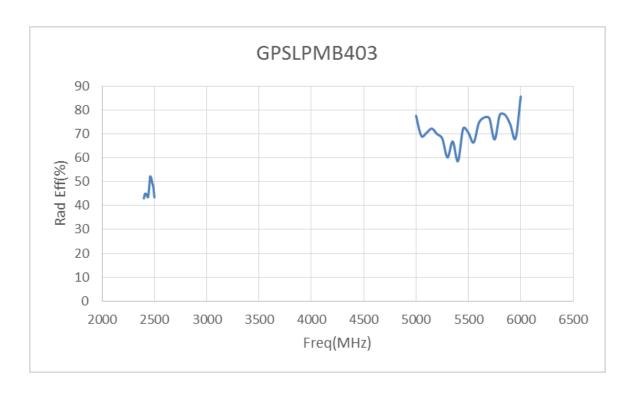
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WiFi Efficiency*





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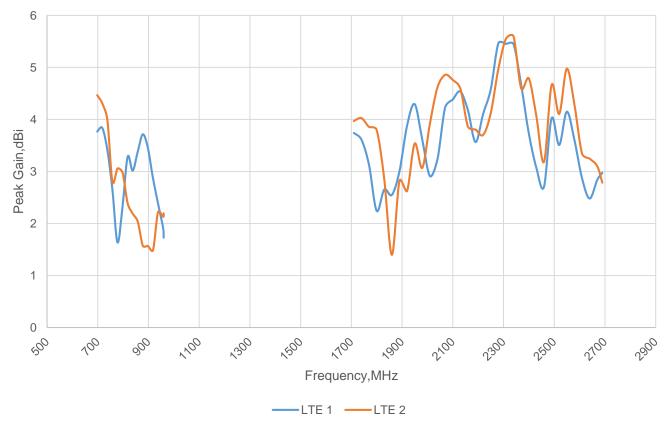
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LTE1 and LTE2 Peak Gain

Peak Gain vs Frequency measured in free space







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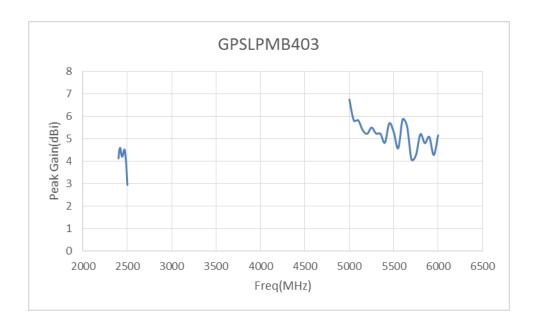
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WiFi Peak Gain*





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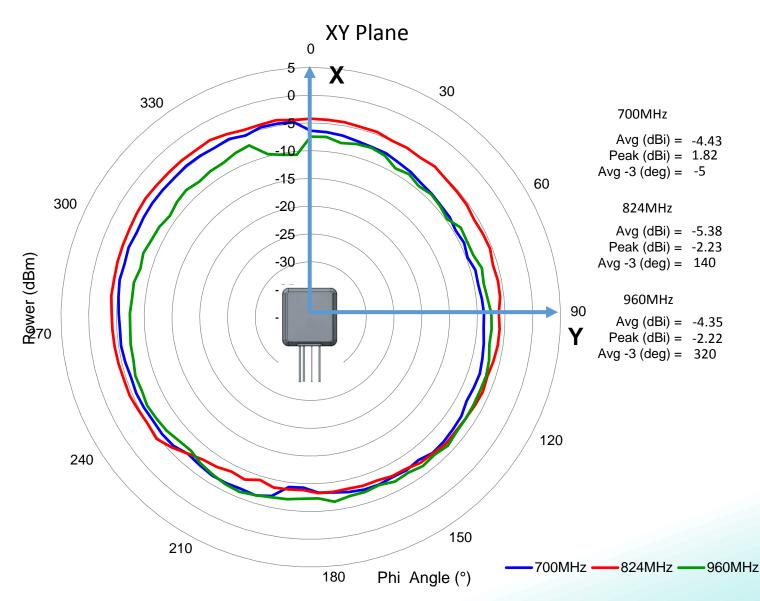
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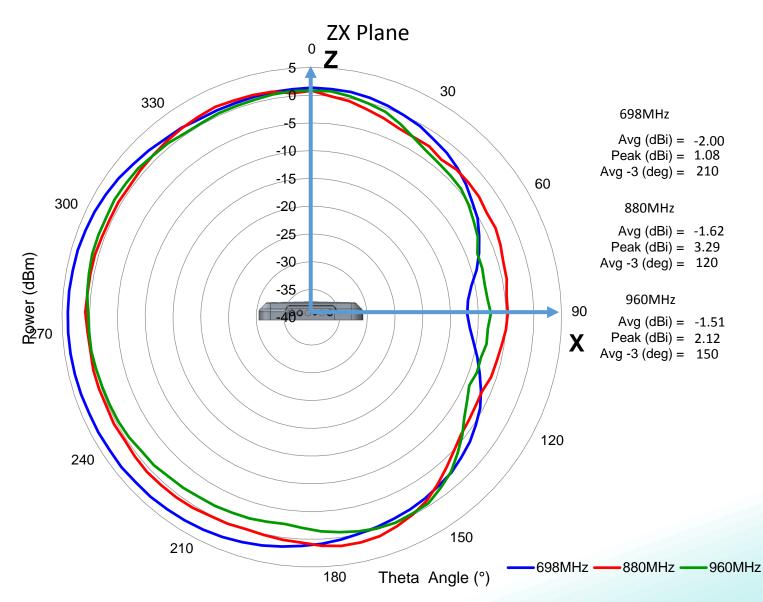
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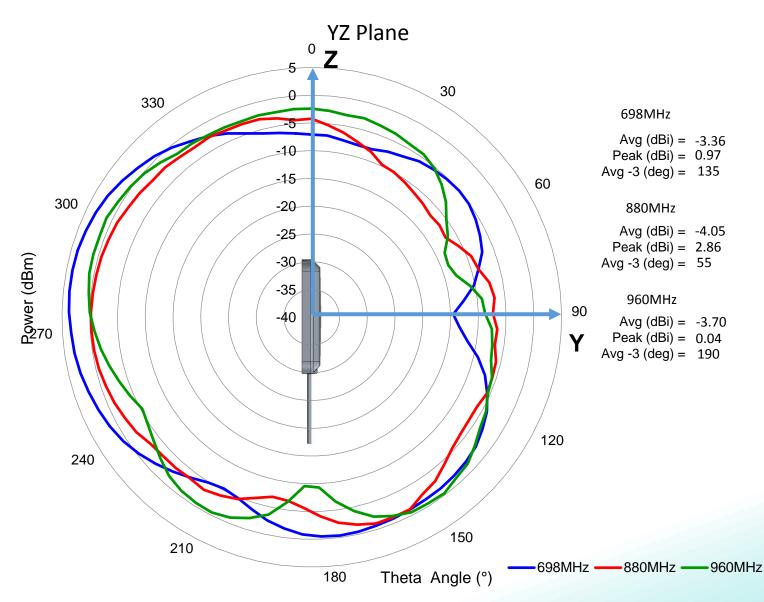
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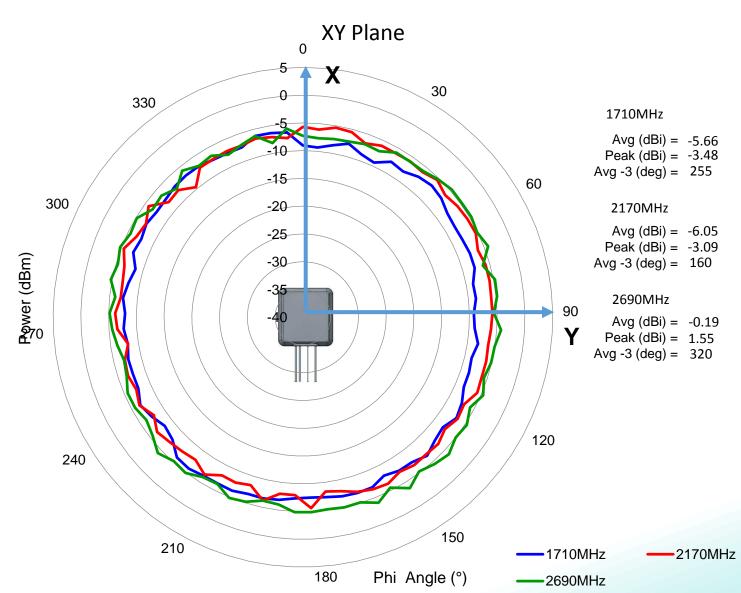
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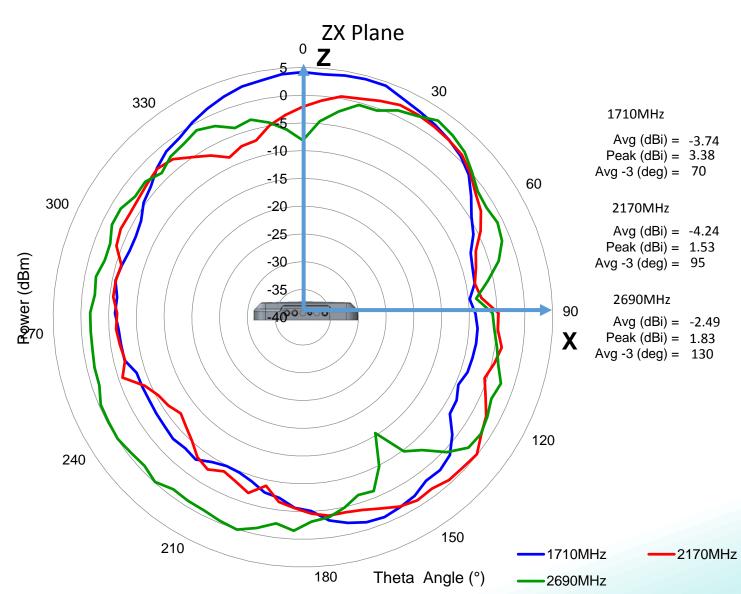
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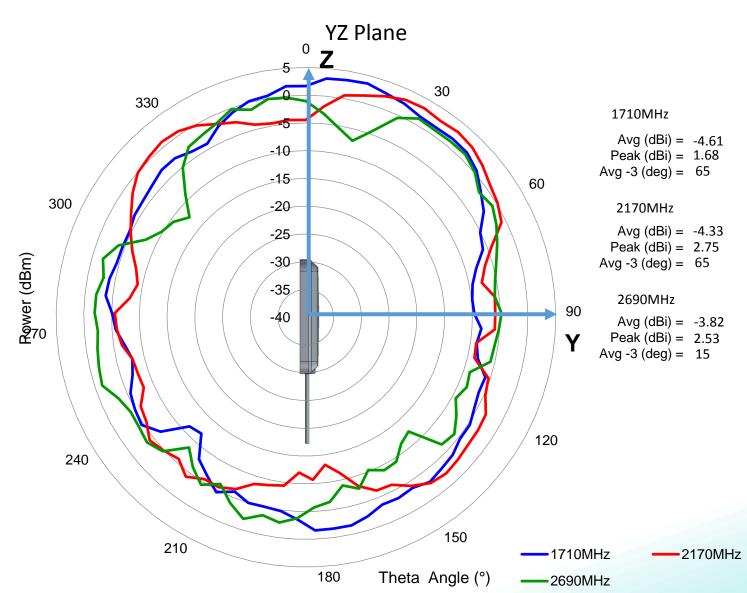
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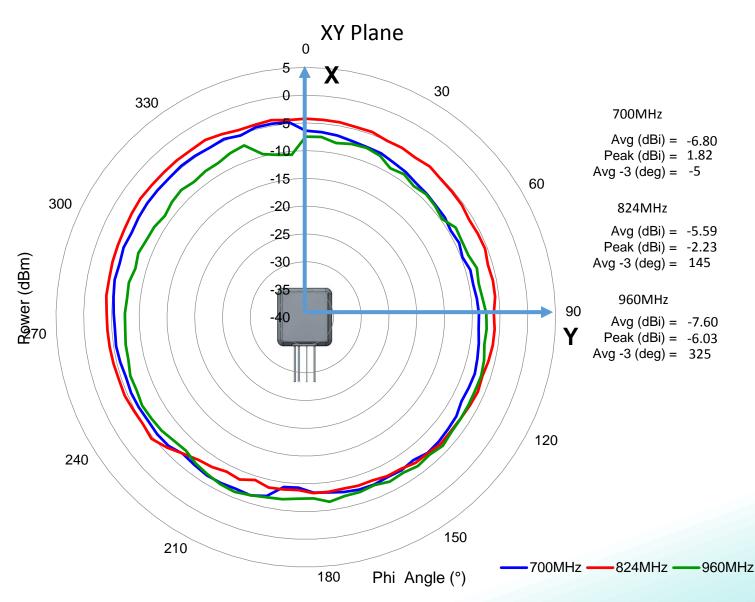
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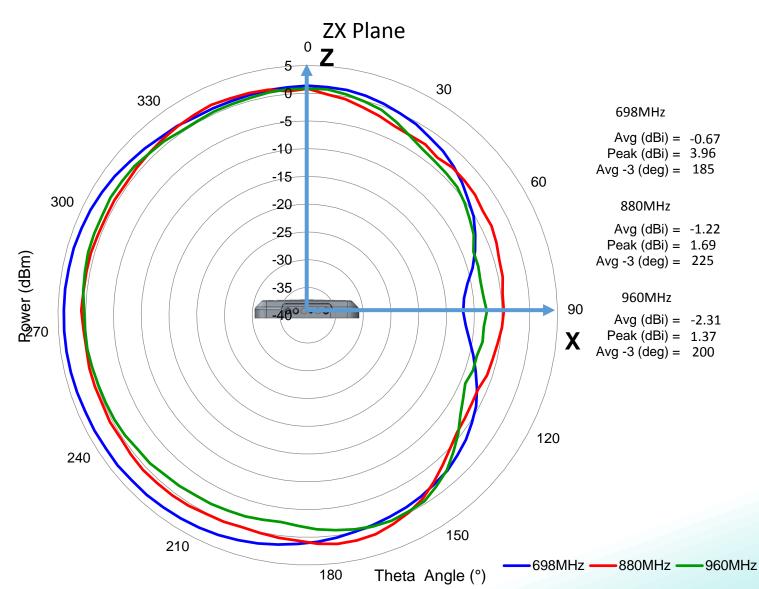
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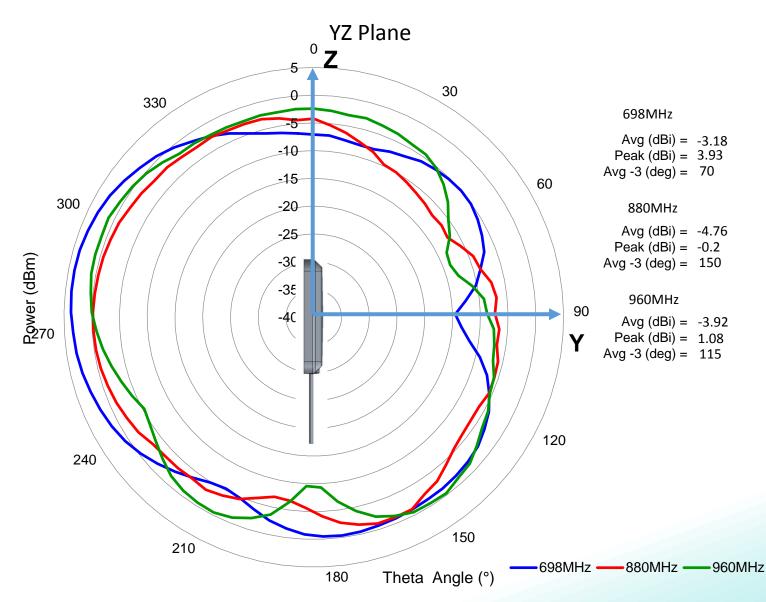
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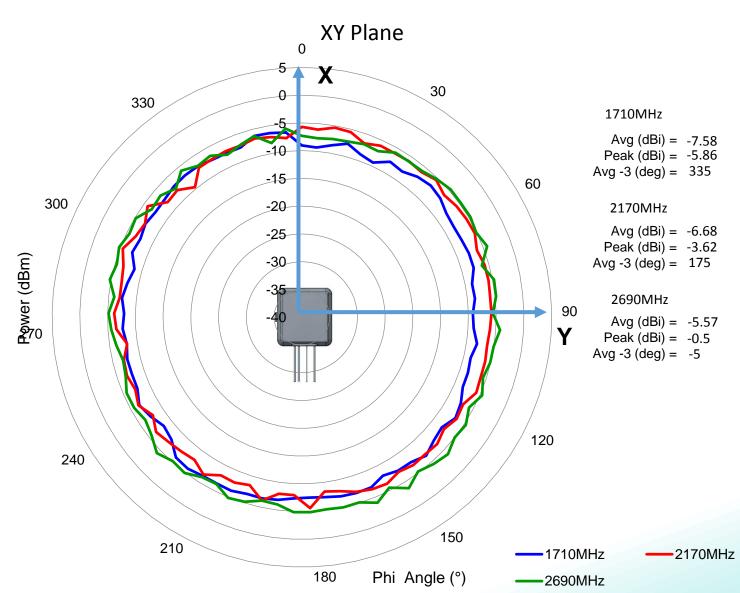
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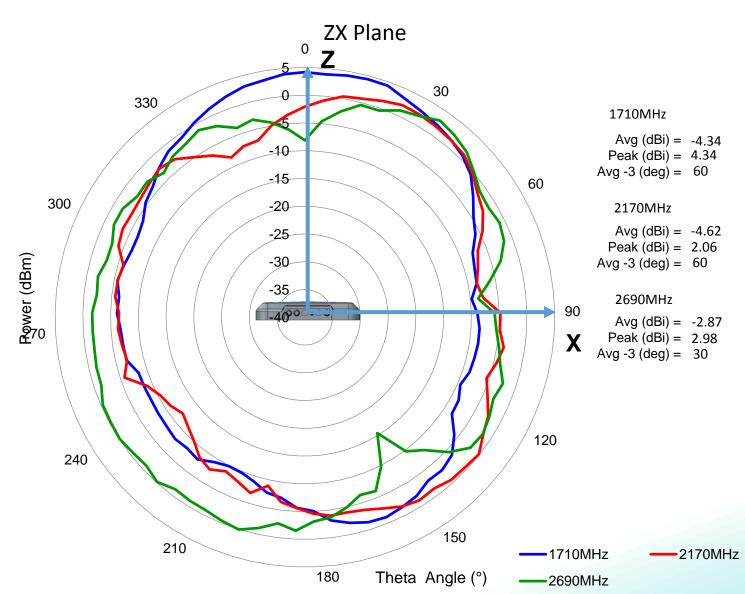
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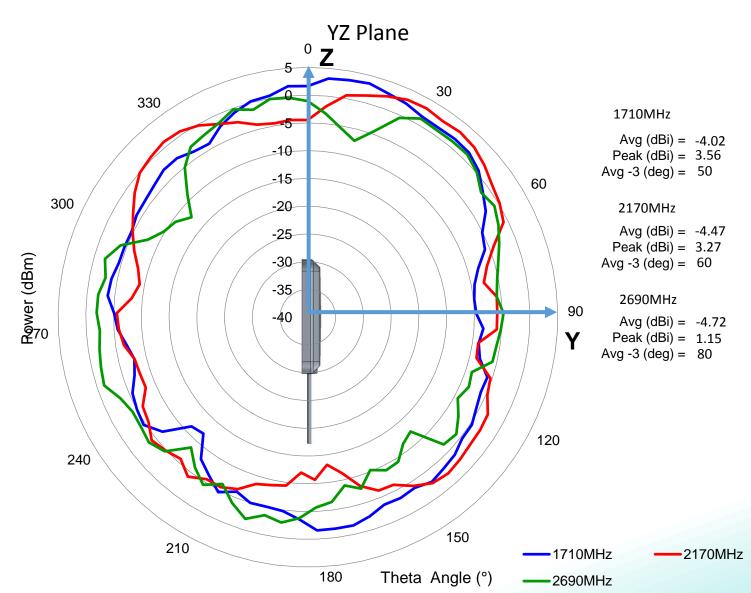
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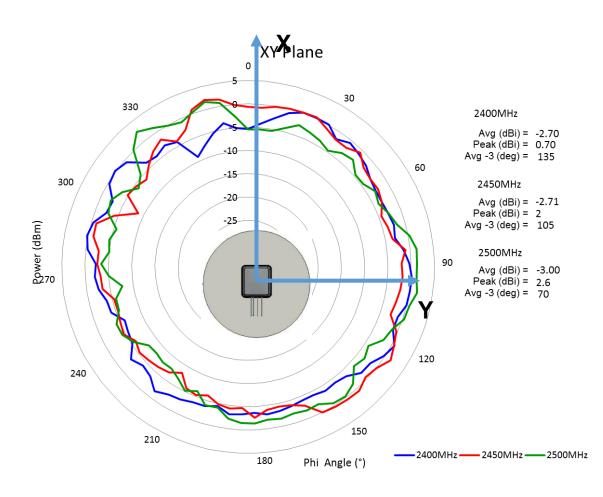
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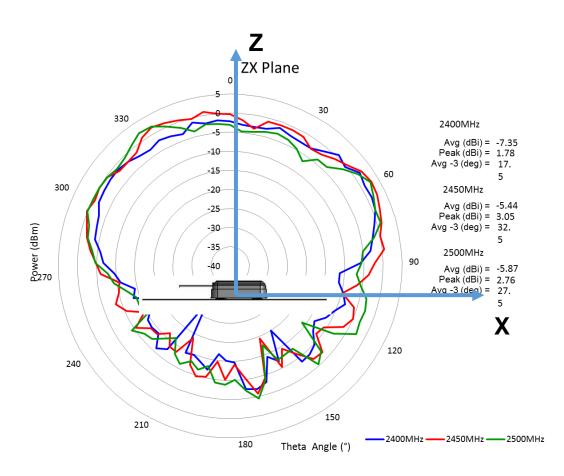
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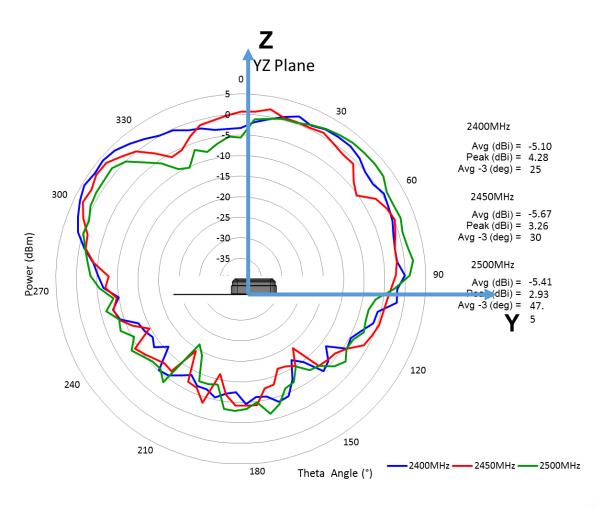
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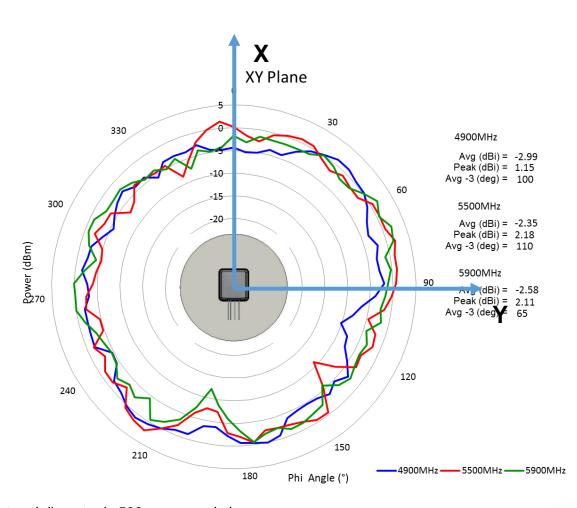
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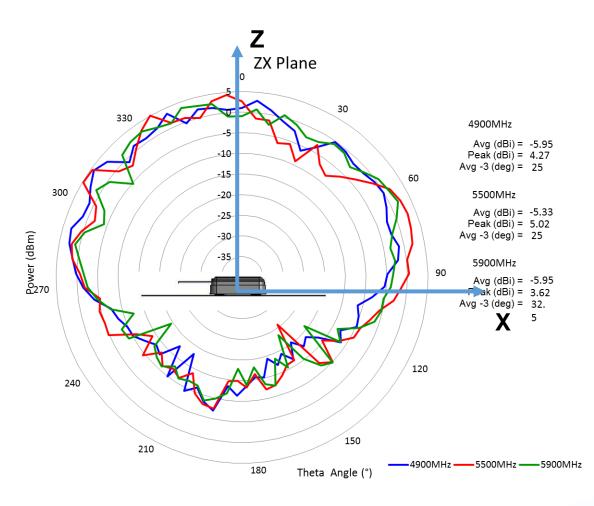
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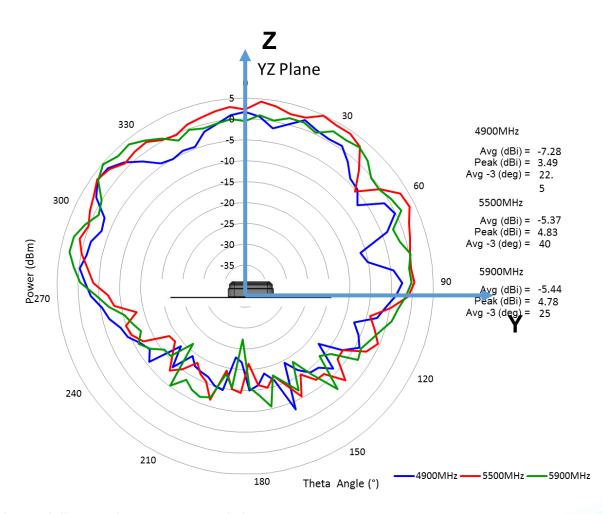
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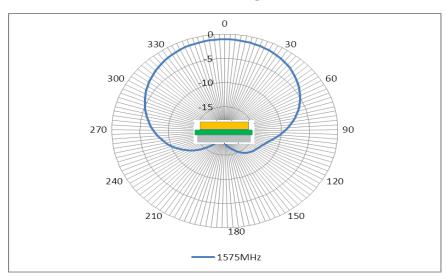
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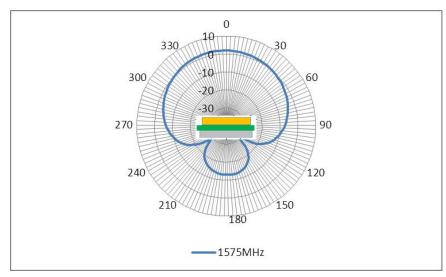
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CHARTS

Radiation Pattern (70mm x 70mm ground plane) GPS & Galileo



25 X 25 X 4mm Ceramic Antenna



25 X 25 X 4mm Ceramic Antenna





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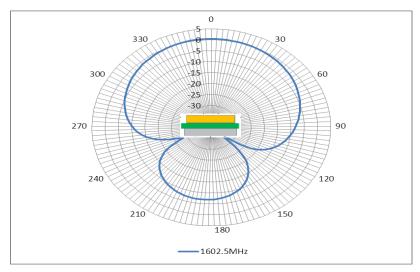
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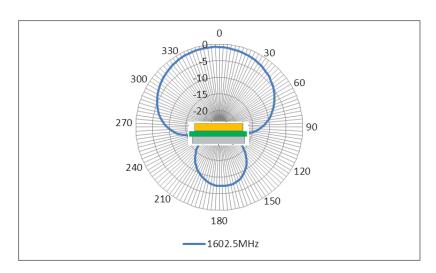
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CHARTS

Radiation Pattern (70mm x 70mm ground plane) GLONASS



25 X 25 X 4mm Ceramic Antenna



25 X 25 X 4mm Ceramic Antenna





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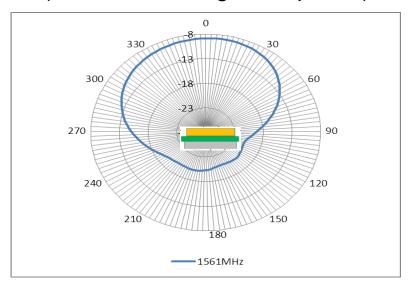
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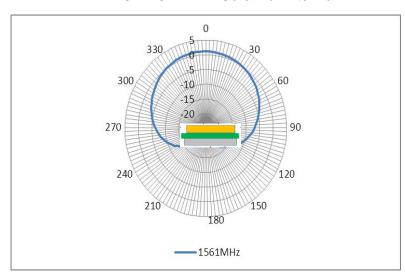
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CHARTS

Radiation Pattern (70mm x 70mm ground plane) BD2



25 X 25 X 4mm Ceramic Antenna



25 X 25 X 4mm Ceramic Antenna





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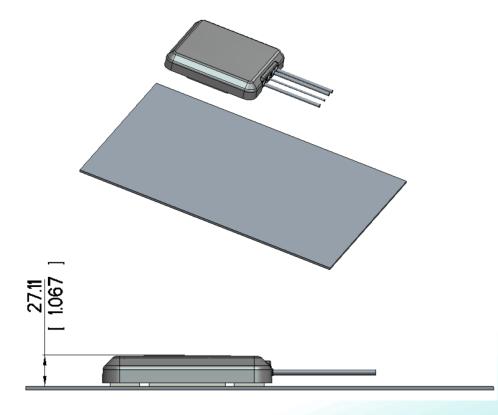
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PACKAGING

- Each antenna packed in a plastic bag
- 12 bags of antennas packed in a cardboard box.
- 1 label on each box with qty, part number, date code.

ASSEMBLY

When this antenna is applied to a non-metallic surface, like glass fiber or plastic material, it could be adhered on the surface directly.





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ASSEMBLY

Mounting with a plastic bracket: When this antenna applied to the metal surface, a plastic bracket is needed to elevate the antenna 1" for the optimum RF performance.

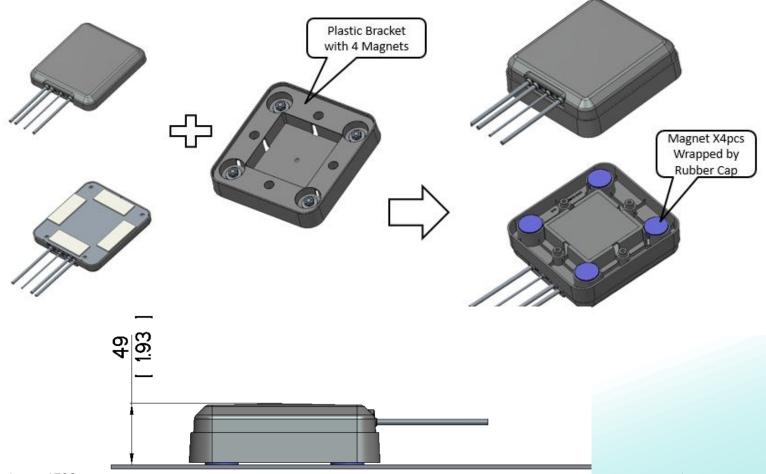
Option 1, LPMB4BRACKETMM Magnetic Mount

----Removable Mounting (No Surface damage)

The mounting surface is made of steel or iron.

Firstly, The antenna adhered on the plastic bracket with magnets by the adhesive tape.

Then the whole assemble could be attached on the iron metals by magnets, and also could be removed from the metal surface easily without surface damage.



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ROHS



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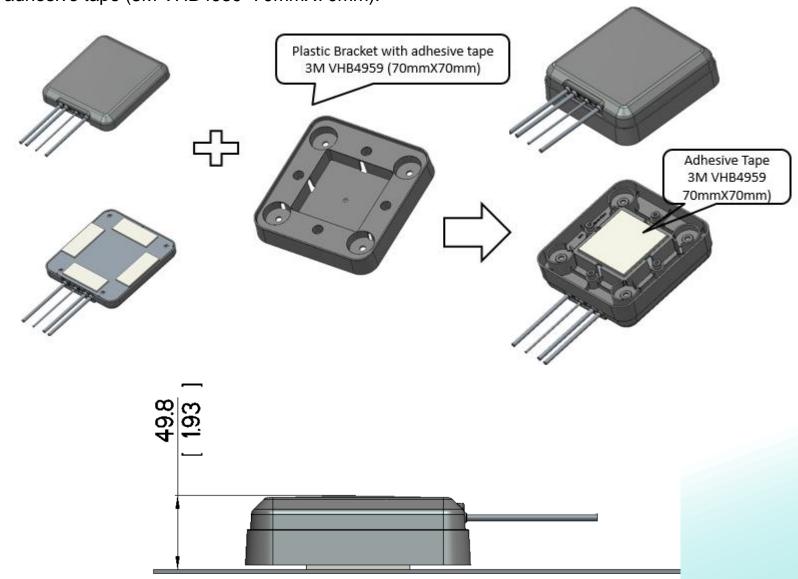
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ASSEMBLY

Option 2, LPMB4BRACKETAM Adhesive Mount -- Permanent Mount

Especially when the mounting surface is made of non-ferrum metals, like aluminum, Firstly, the antenna adhered on the plastic bracket by the adhesive tape,

Then the whole assemble could adhere on the mounting surface by the 3MVHB adhesive tape (3M VHB4959 70mmX70mm).



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