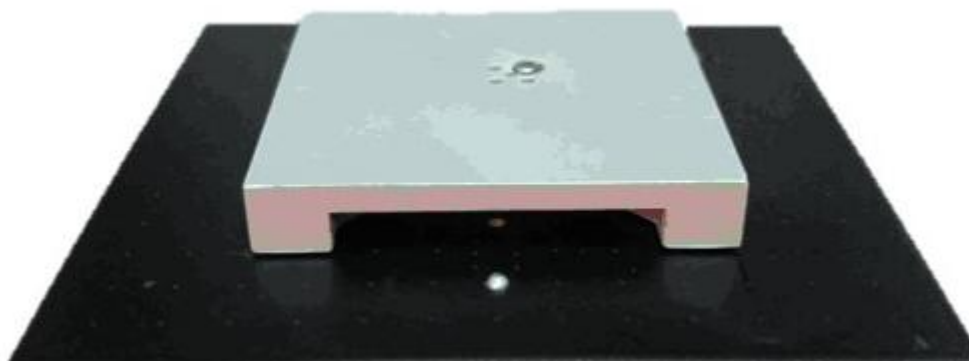


# GPS L1+L5 Dual Band PCB Substrate Antenna (EVB+PB40D9) Engineering Specification

## 1. Product Number

H 2 P 1 3 6 2 A 1 A 0 1 0 0



## 2. Features

- \*High Accuracy
- \*Covering GPS L1 & L5 band.
- \*RoHS2.0 compliant.

## 3. Applications

- \* Automotive telematics
- \* Safety of life transportation
- \* Marine
- \* Navigation

## 4. Description

The PB40D9 antenna is a high performance solution for high accuracy centimeter level tracking in telematics applications, especially designed for precision dual frequency positioning GPS L1 & L5 providing superior axial ratio and radiation gain.



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Prepared by : Wen

Designed by : George

Checked by : Mike

Approved by : Herbert

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Antenna (EVB+PB40D9) Engineering  
Specification

DOCUMENT  
NO.

H2B1AF1A2T0100

REV.  
Pre.

## 5. Electrical Specifications

### GNSS NAVIGATION ANTENNA

Navigation	GPS L5	GPS L1
Center Frequency(MHz)	1176.45	1575.42
Peak Gain(dBi)	3.0 Typ.	5.4 Typ.
Efficiency(%)	66.5	80
Axial Ratio at Zenith	< 2.0	
VSWR	< 2.0	
Impedance( $\Omega$ )	50	
Polarization	RHCP	

### MECHANICAL

Ceramic Dimension	40 * 40 * 6 mm
Ground plane	70 * 70 mm

### ENVIRONMENTAL

Operation Temperature	-40~+85 °C
Storage Temperature	-40~+85 °C



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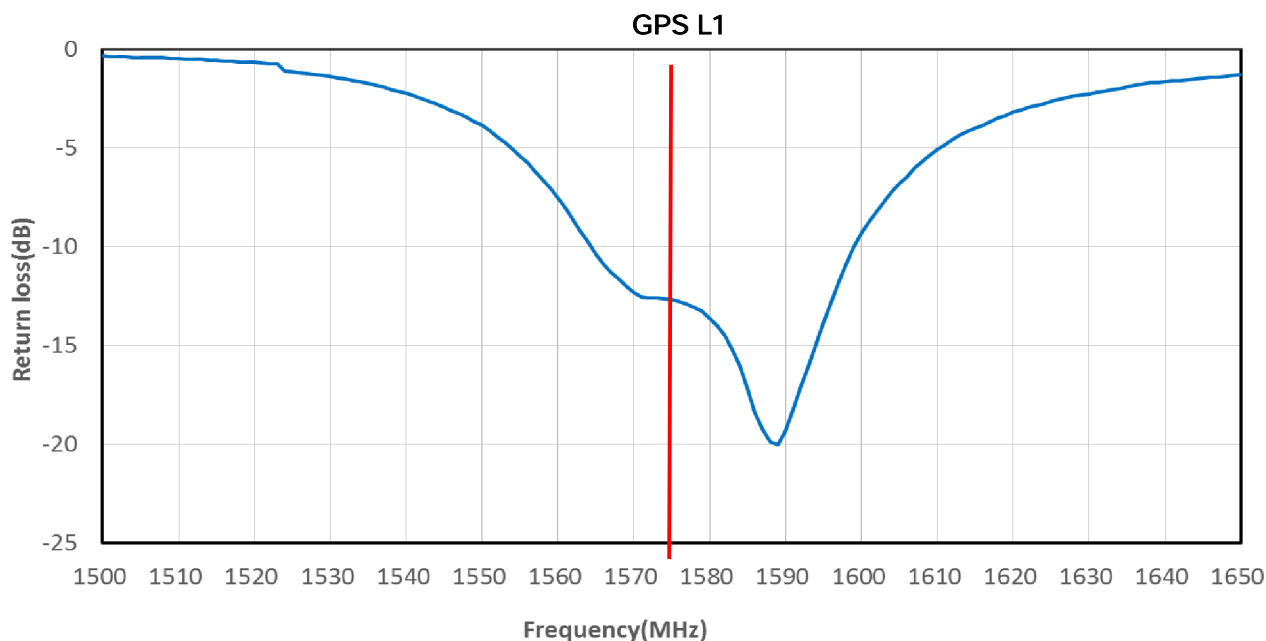
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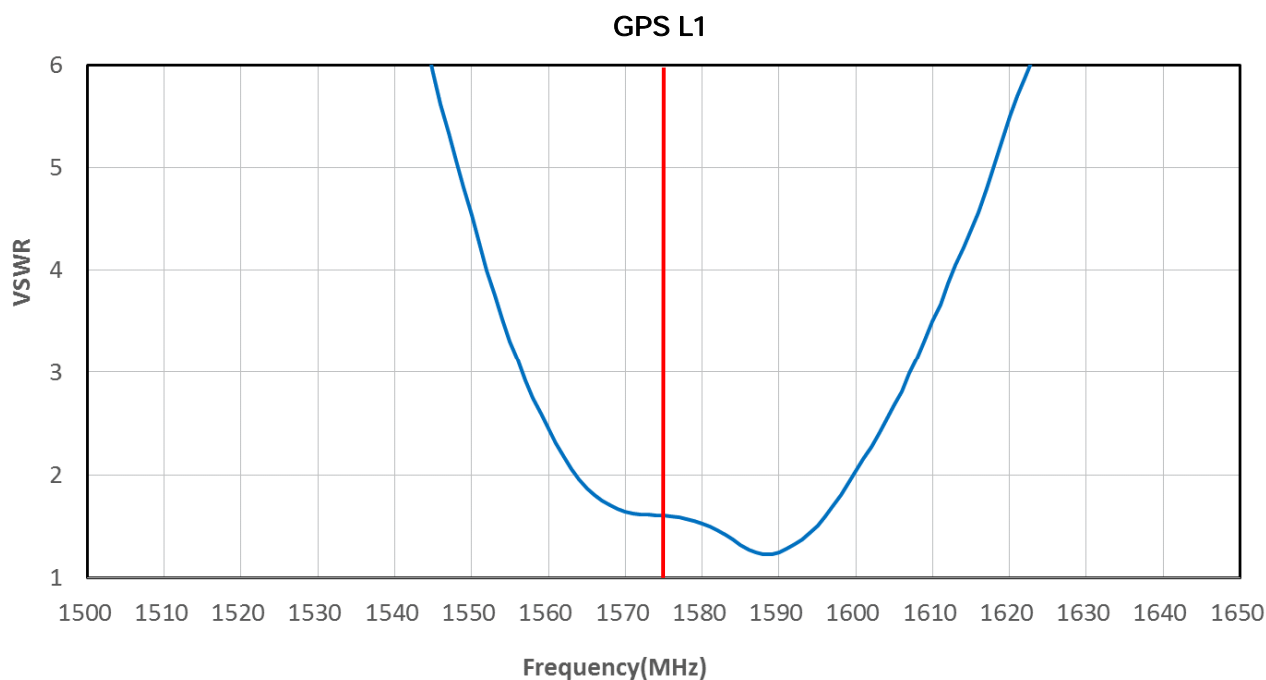
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## 6. GPS L1 Band Characteristics.

### 6.1 Return Loss



### 6.2 VSWR



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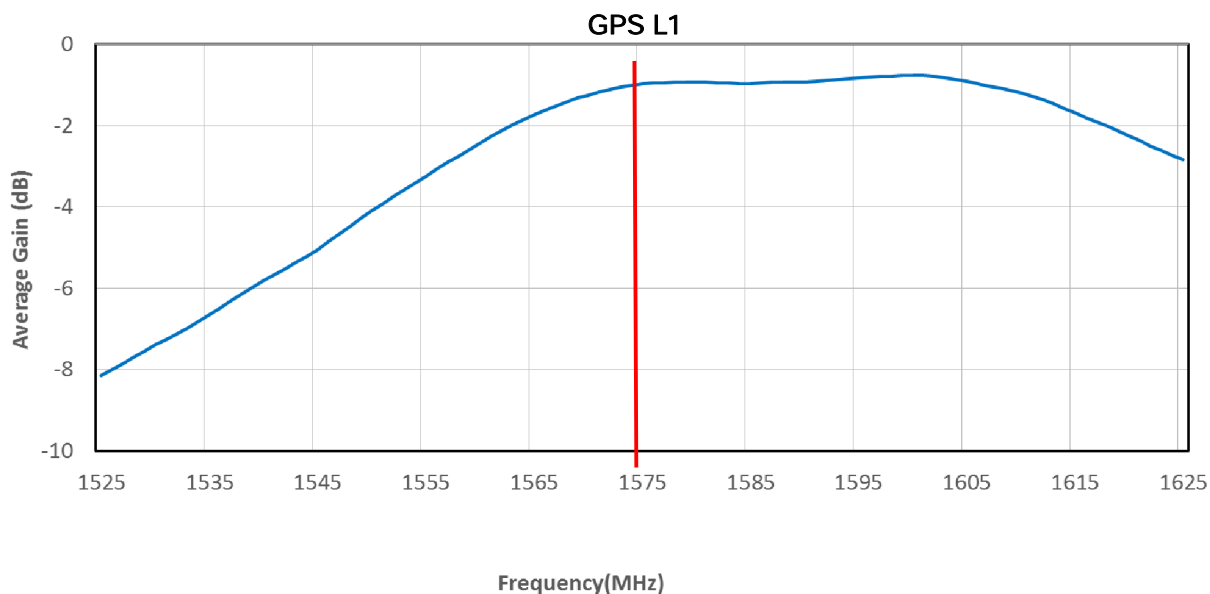
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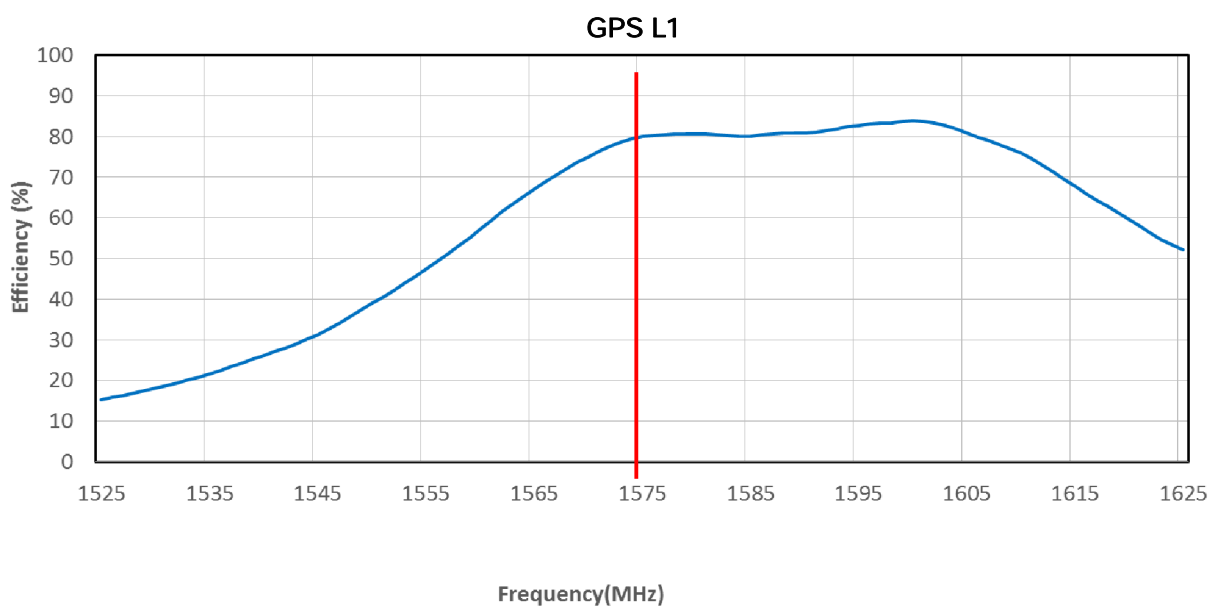
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### 6.3 Average Gain (Unit: dB)



### 6.4 Efficiency(%)



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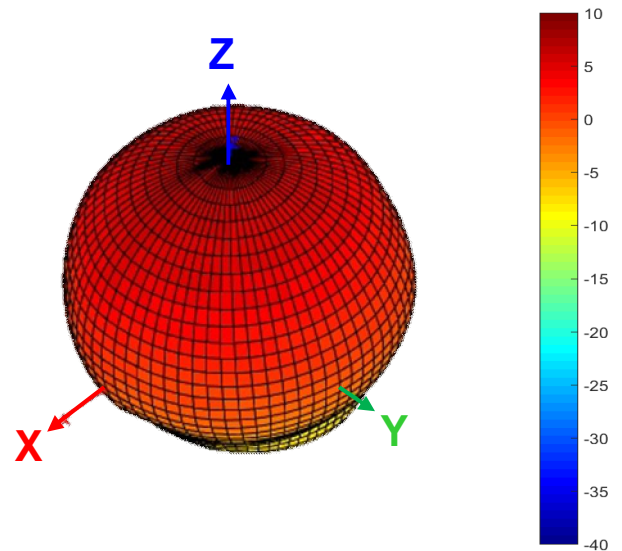
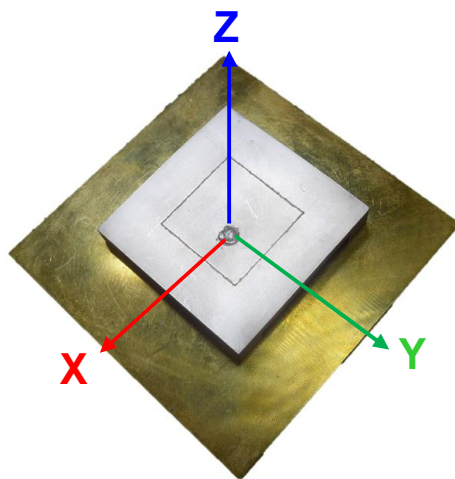
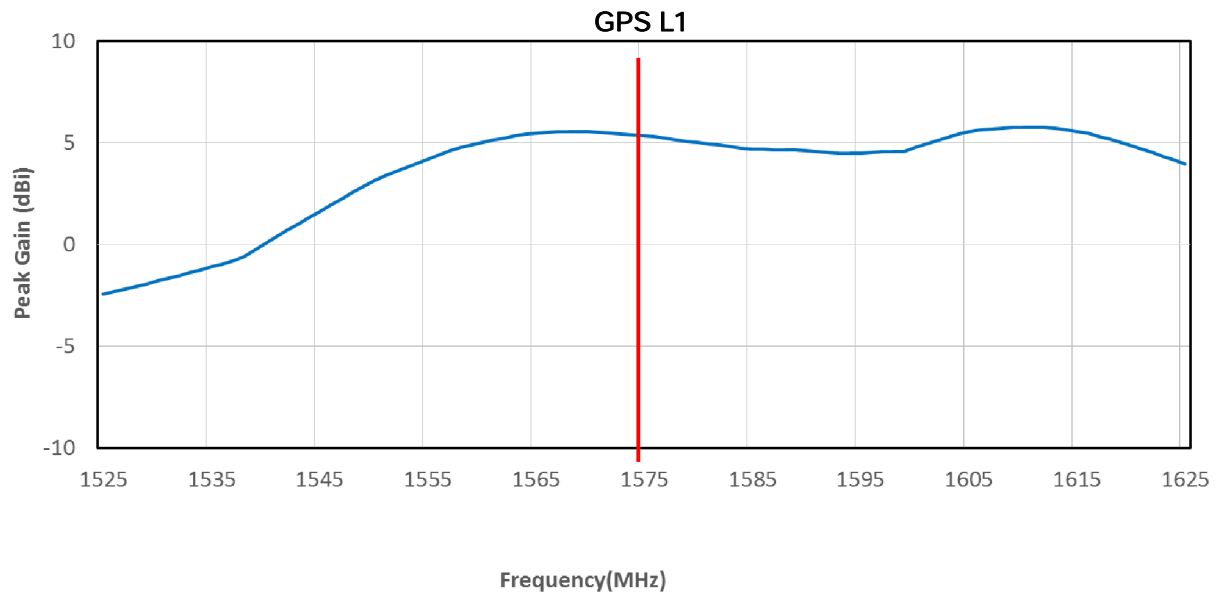
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## 6.5 Peak Gain (dBi)



1575 MHz



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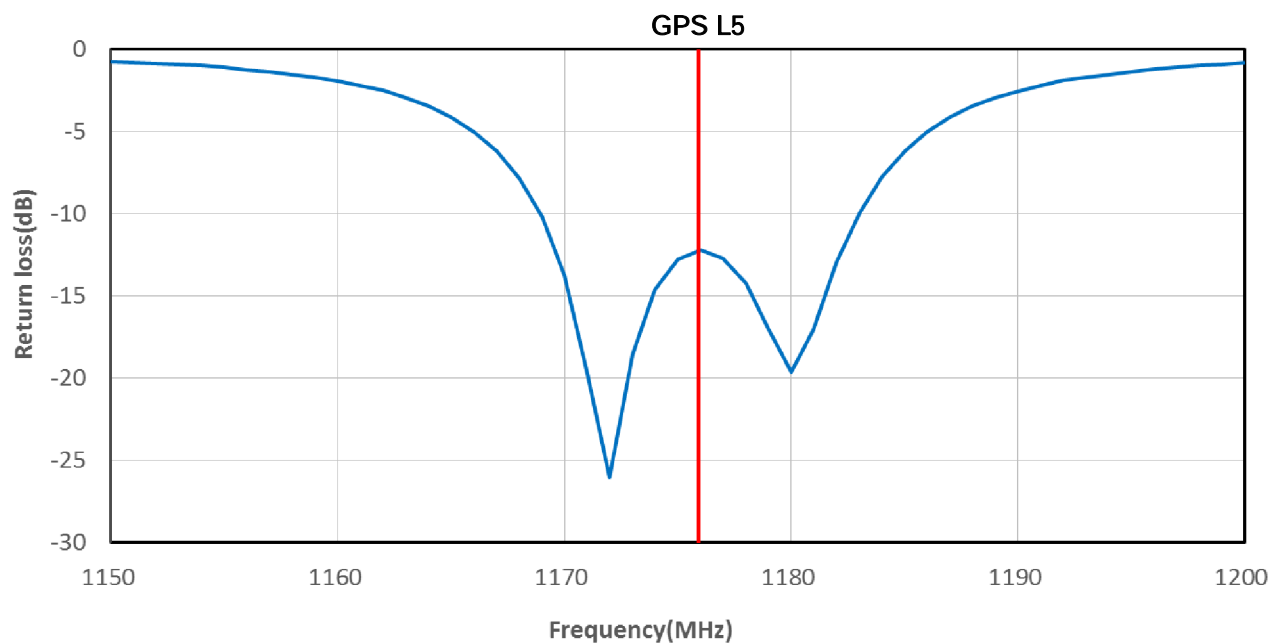
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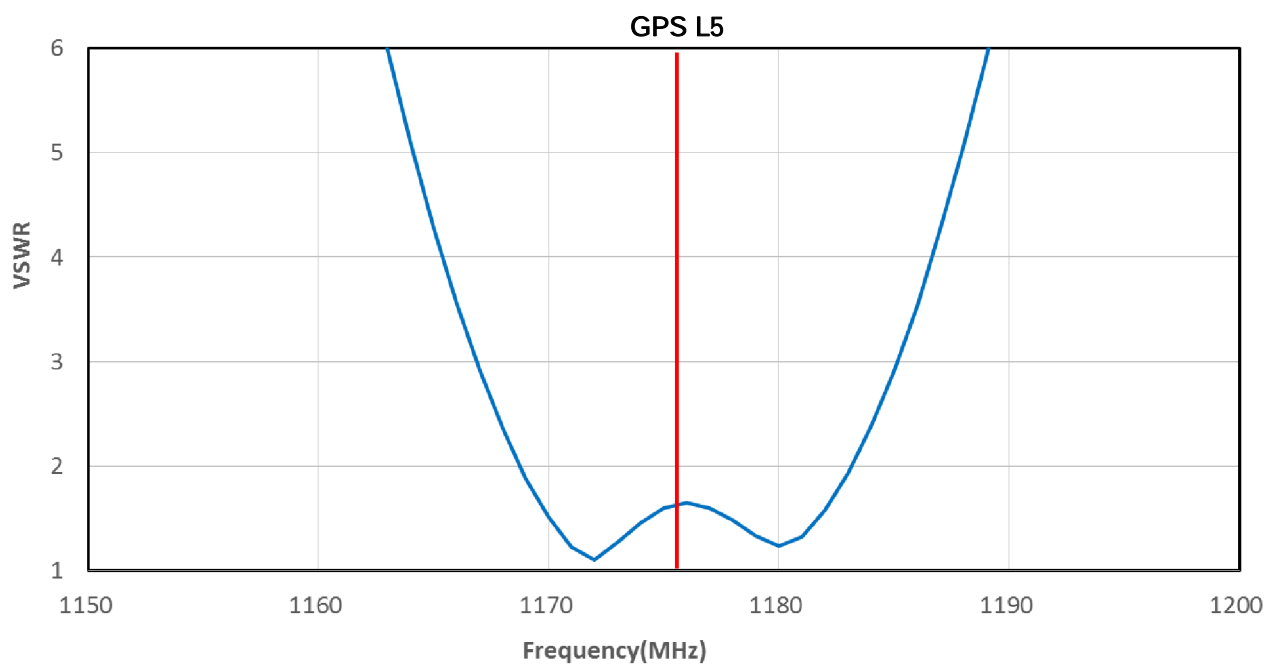
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## 7. GPS L5 Band Characteristics.

### 7.1 Return Loss



### 7.2 VSWR



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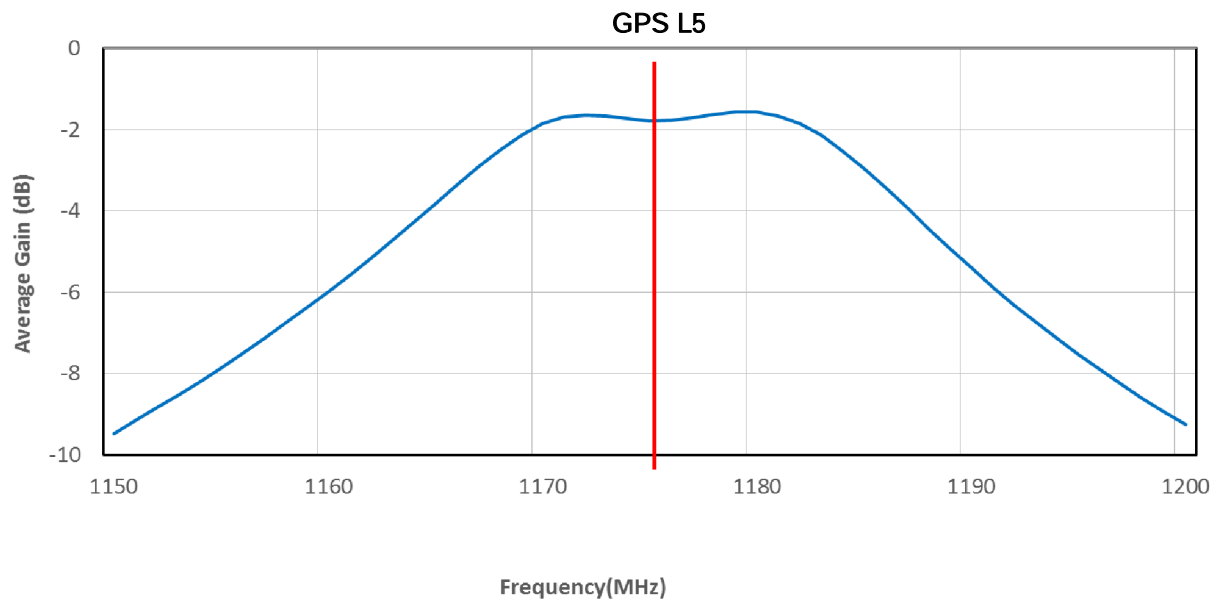
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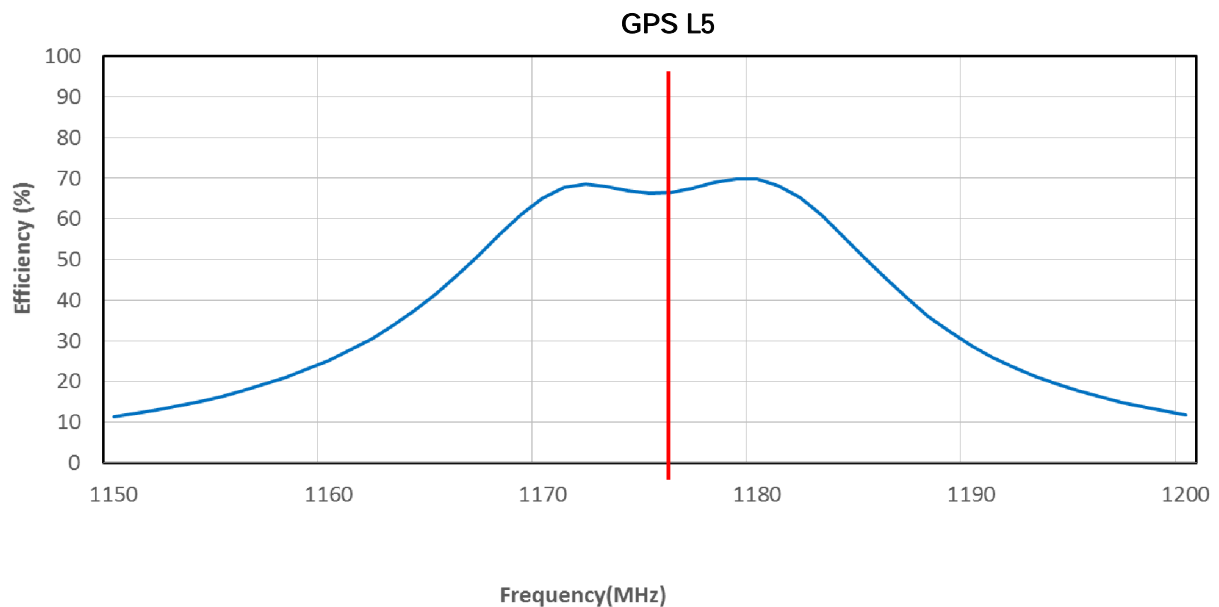
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### 7.3 Average Gain (Unit: dB)



### 7.4 Efficiency (%)



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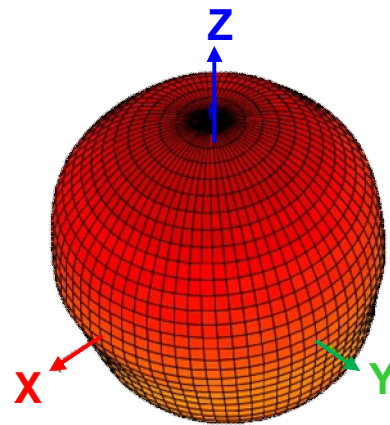
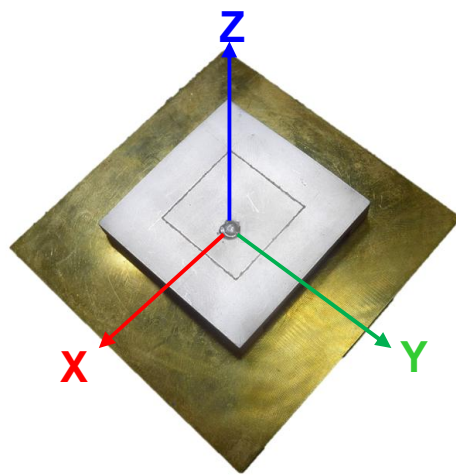
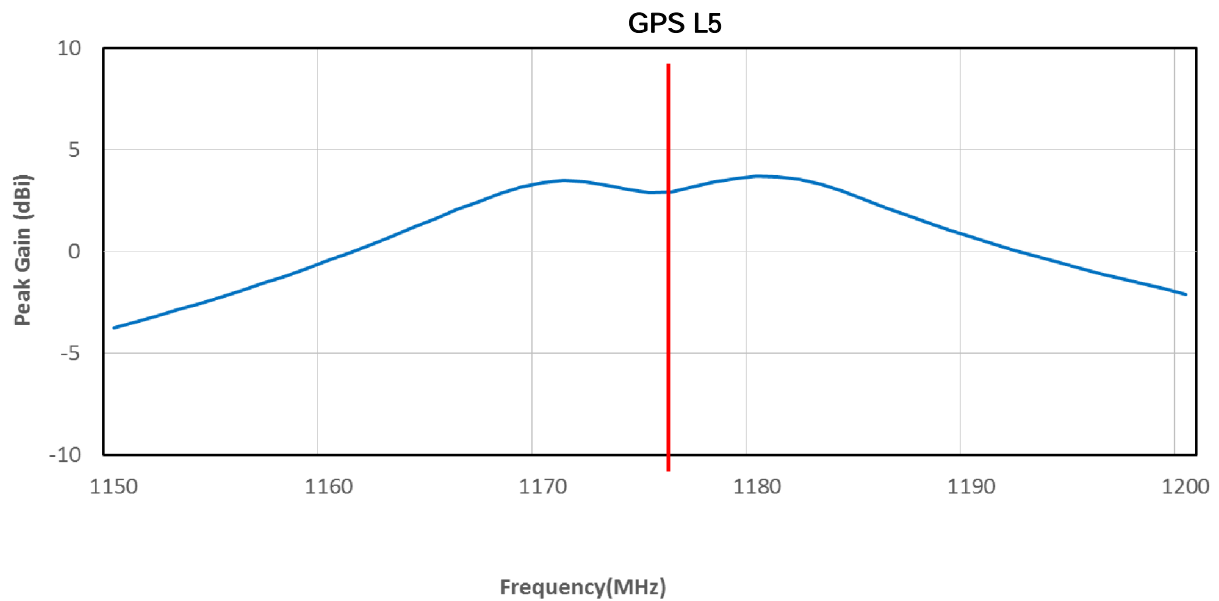
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## 7.5 Peak Gain (dBi)



**1176 MHz**



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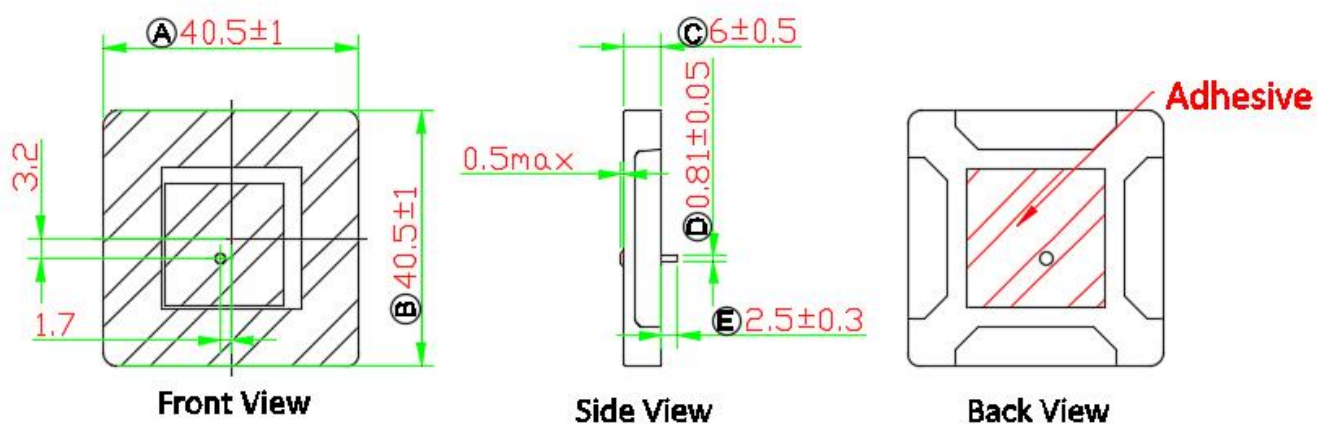
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## 8. Antenna Dimensions (Unit: mm)



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