

年 11 月 22 日

# Antenna Specification

**For official certification**

**Model: P991MV-02**

Version, status: V0.3, Approval  
Date: 2022-11-22  
Creator: Jacky. Liao  
HW DM: Clapton. Lin  
CPM: Yang. TonySH  
Function: Regulatory Certification

## Change History

Version	Status	Date	Handled by	Comments
0.1	Draft	2022-10-06	Jacky Liao	Initial Draft
0.2		2022-11-16	Matt Chuang	Add additional requirements from FCC
0.3		2022-11-22	Matt Chuang	Separate setup photo and add test personnel name

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## 1. Test Setup & Step

### 1.1 Calibrated Equipment

Machine name	Brand	Last Calibration Date
Anechonic chamber	ETS AMS-8500	
Network analyzer	Agilent E5071C	29 – Mar - 2021

### 1.2 Test Software

EMQuest version 1.15

### 1.3 Test Step

1. Remove watch strap
2. Mount watch on FS fixture with watch face toward horn antenna (+z direction) and side key toward +x direction.
3. Avoid coaxial cable contact to watch case and let it away from watch case.
4. Use EMQuest to execute passive performance test.

### 1.4 Test personnel name

Jacky Liao

### 1.5 Test date

2022/10/04

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## **2. Antenna Location & Distance**

EUT Dimension, length= 51.87 mm ; Width= 48.95mm

Antenna location: the metal body of watch

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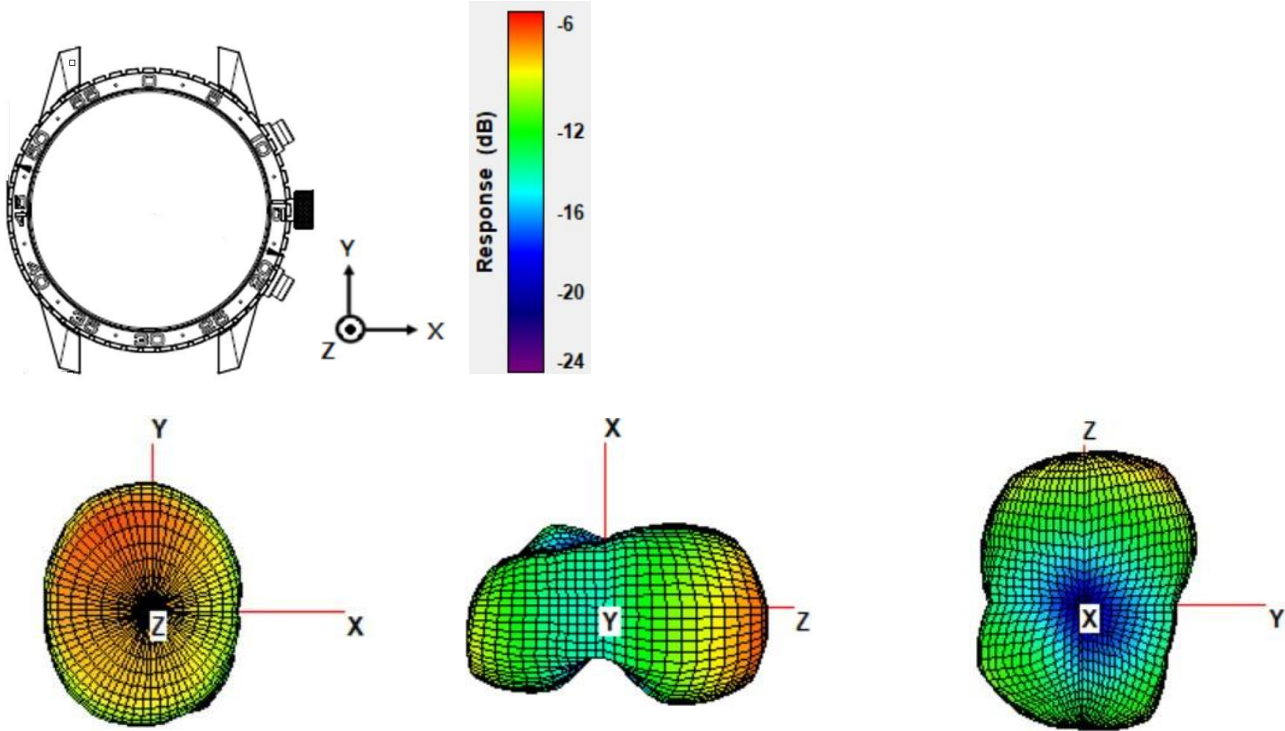
### 3. WLAN/BT Antenna Information

#### WLAN/BT Antenna

#### 3.1. Antenna Peak Gain

Frequency(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain(dBi)	-7.03	-6.91	-6.80	-6.81	-6.86	-6.88	-7	-7.05	-7.15	-7.18	-7.42

#### 3.2. Antenna Radiation Pattern

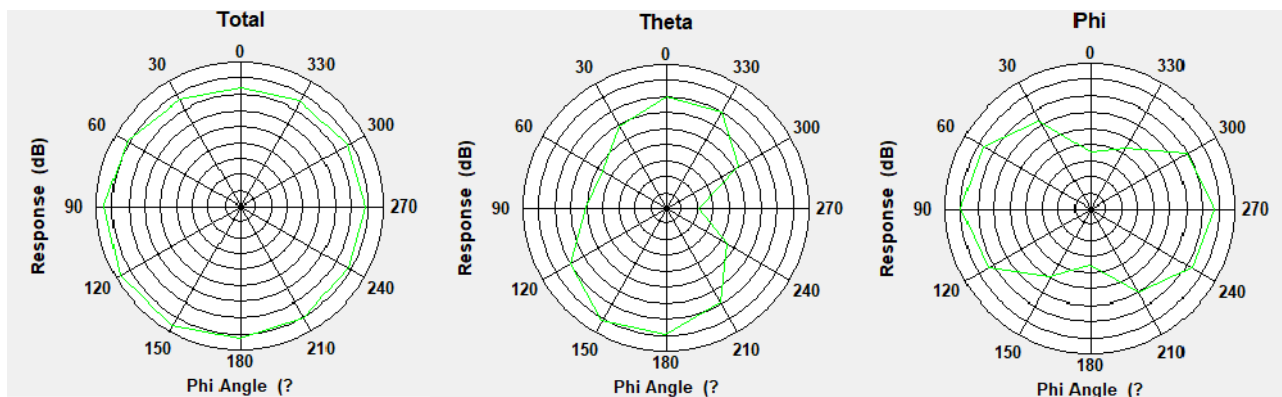


XY plane at 2.45GHz

XZ plane at 2.45GHz

YZ plane at 2.45GHz

#### 3.3. Antenna Radiation Plots for Max Gain Plane (2.42GHz, Phi 120, Theta 30)



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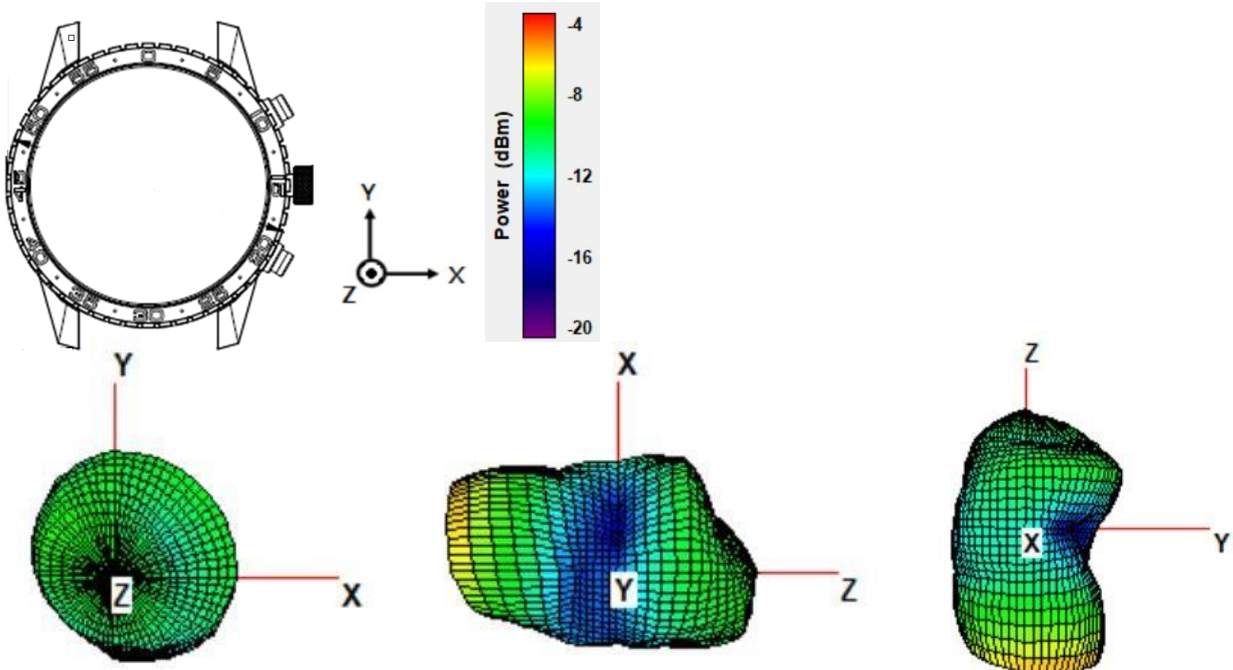
## 4. GPS Antenna Information

### GPS Antenna

#### 4.1. Antenna Peak Gain

Frequency(MHz)	1570	1575	1580	1585	1590	1595	1600	1605	1610	1615	1620
Peak Gain(dBi)	-5.61	-5.60	-5.59	-5.58	-5.64	-5.67	-5.66	-5.66	-5.64	-5.59	-5.53

#### 4.2 Antenna Radiation Pattern



XY plane at 1.575GHz

XZ plane at 1.575GHz

YZ plane at 1.575GHz

#### 4.3. Antenna Radiation Plots for Max Gain Plane (1.585GHz, Phi 30, Theta 150)

