

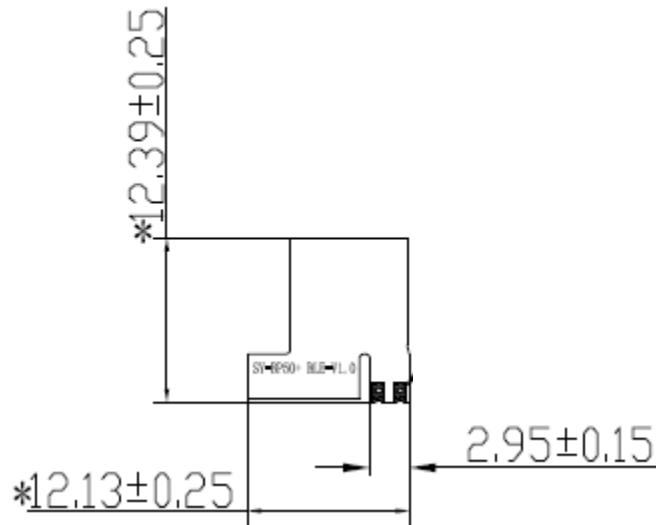
## BluePad-50 Plus MSR Antenna Report

### 1. Bluetooth Antenna

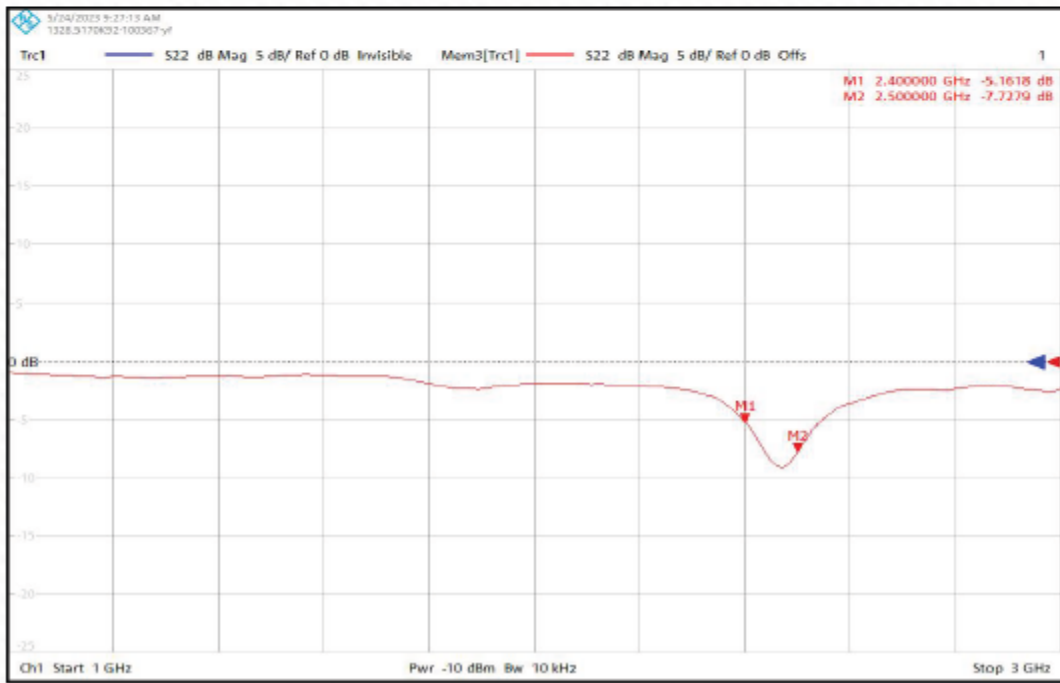
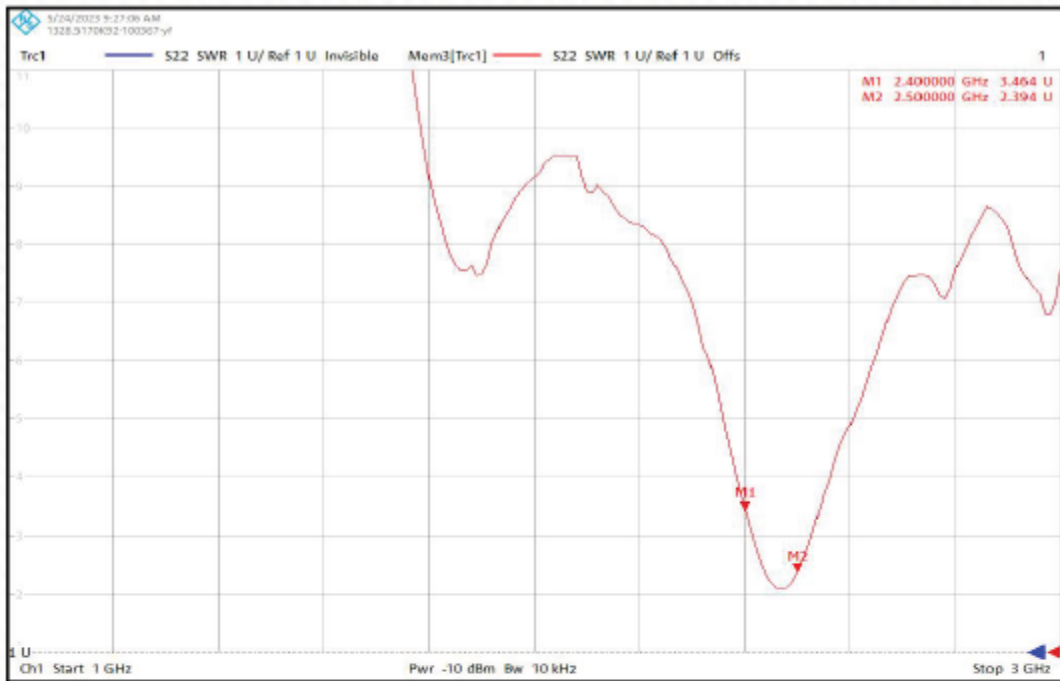
#### 1.1 Specifications

Specifications	
Central Frequency	2450MHz
Transmitting frequency	2400.0MHz-2500.0MHz
Receiver frequency	2400.0MHz-2500.0MHz
Bandwidth	100MHz
Impedance	50 Ohm
Antenna type	FPC
Antenna gain	-5.92 dBi

#### 1.2 Dimensions (Unit: mm)



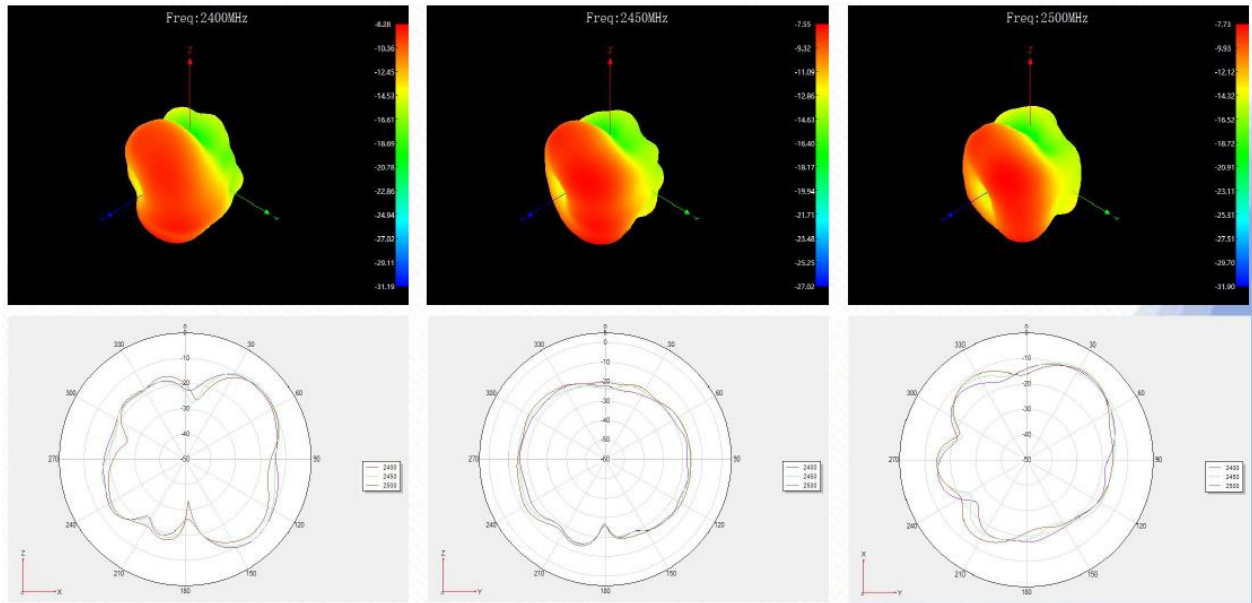
### 1.3 Passive parameters



### 1.4 Efficiency

Frequency (MHz)	2400	2450	2480
Efficiency (%)	8.7	10.11	10.52
Max Gain (dBi)	-8.28	-7.55	-5.92

## 1.5 Directional pattern

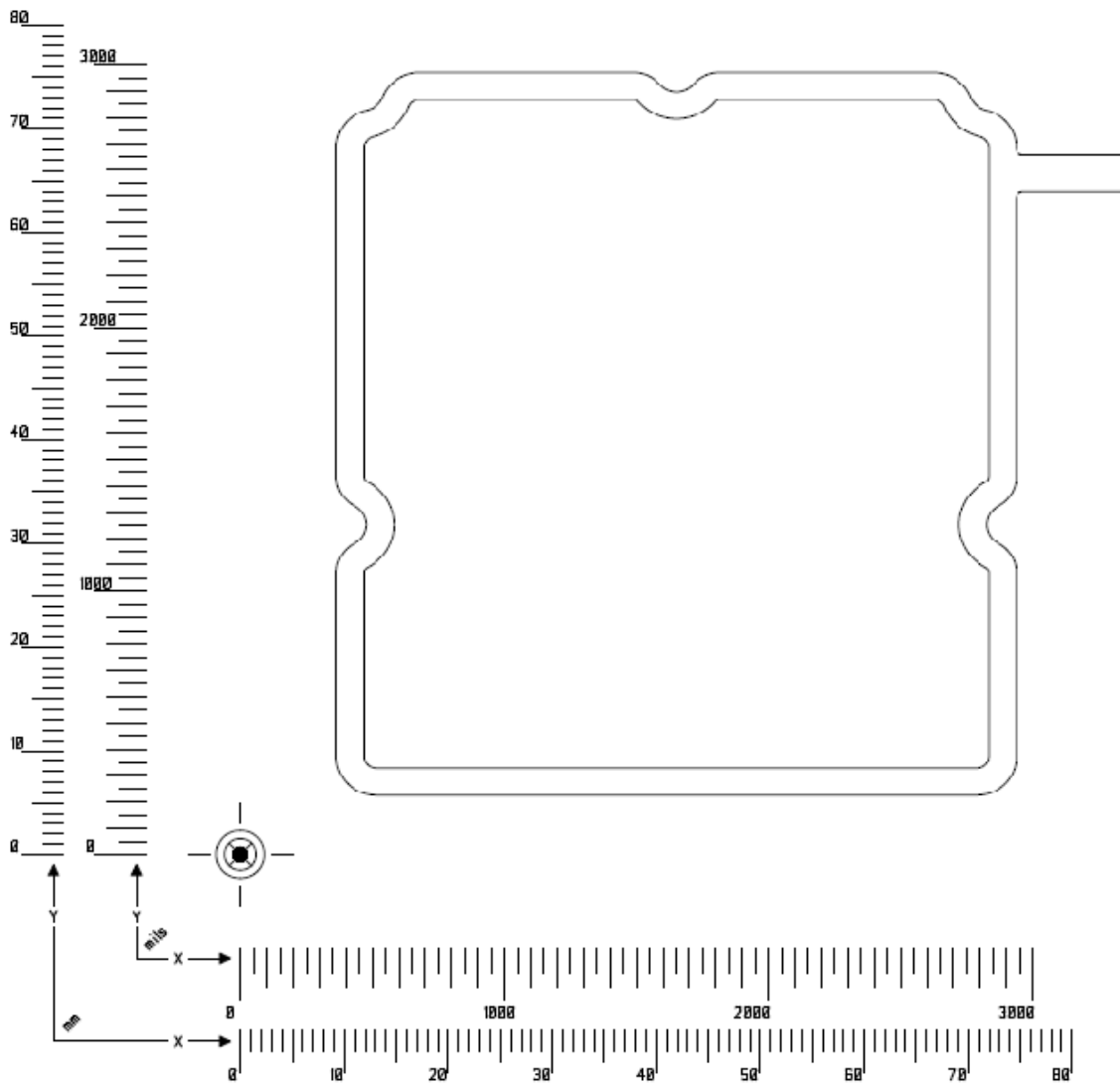


## 2. RFID Antenna

### 2.1 Specifications

Specifications	
Operating frequency (MHz)	<b>13.56</b>
Antenna type	<b>Flex PCB</b>
Antenna gain	<b>0 dBi</b>

### 2.2 Dimensions (Unit: mm)

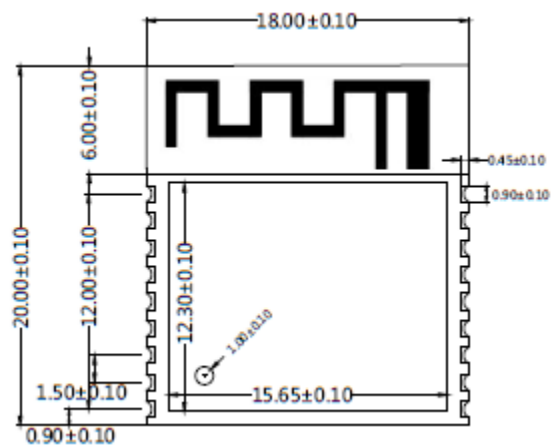


### 3. WiFi Antenna

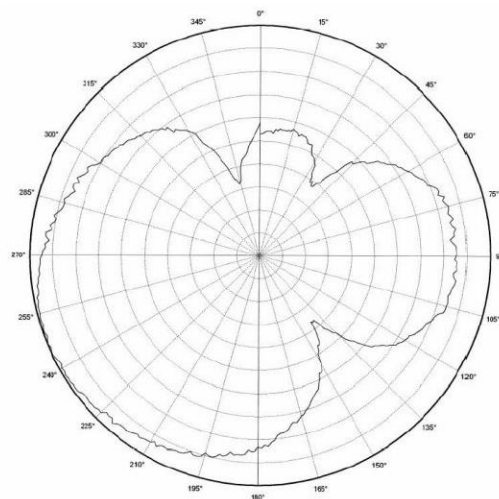
#### 3.1 Specifications

Specifications	
Central Frequency	<b>2450MHz</b>
Transmitting frequency	<b>2400.0MHz-2500.0MHz</b>
Receiver frequency	<b>2400.0MHz-2500.0MHz</b>
Impedance	<b>50 Ohm</b>
Antenna type	<b>PCB</b>
Antenna gain	<b>+2 dBi</b>

#### 3.2 Dimensions (Unit: mm)

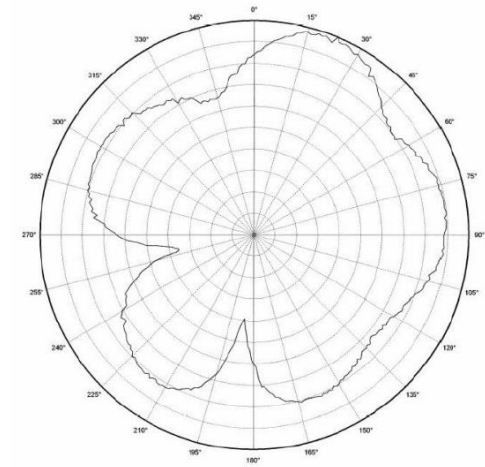


#### 3.3 Directional pattern



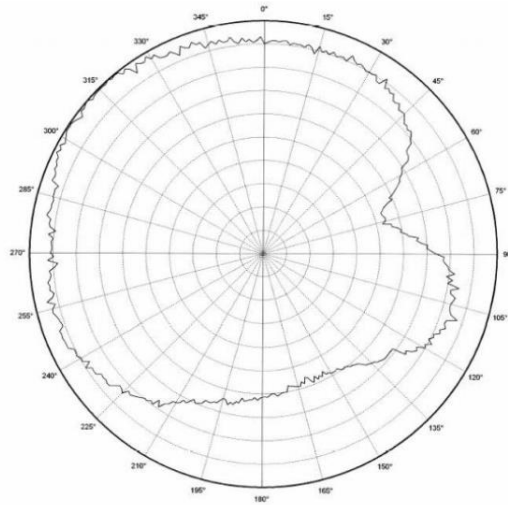
Vertical Polarization  
usb XY

:AN043 XY Plane



Vertical Polarization  
usb XZ

AN043 XZ Plane



Vertical Polarization  
usb YZ

AN043 YZ Plane

### 3.4 Gain

Gain in XY plane	2.0 dBi
Gain in XZ plane	2.0 dBi
Gain in YZ plane	1.8 dBi
LOS range	240m
Antenna size	15.2 x 5.7 mm