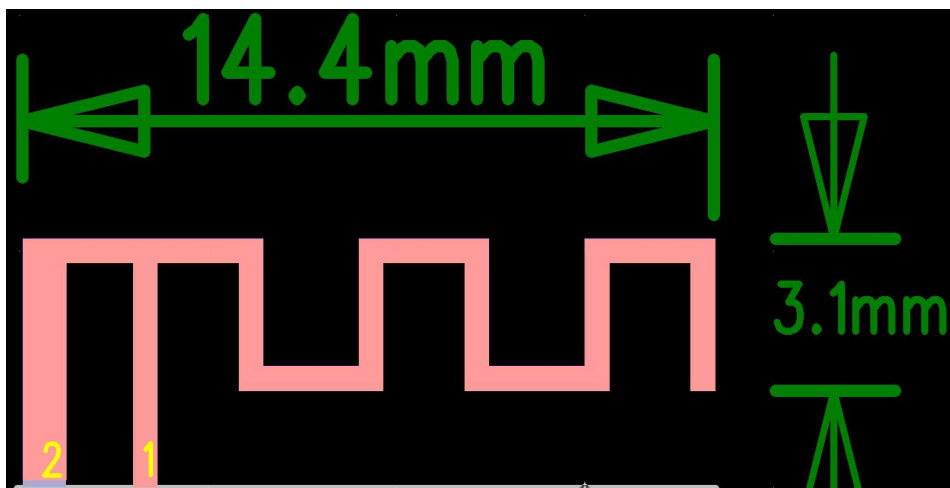


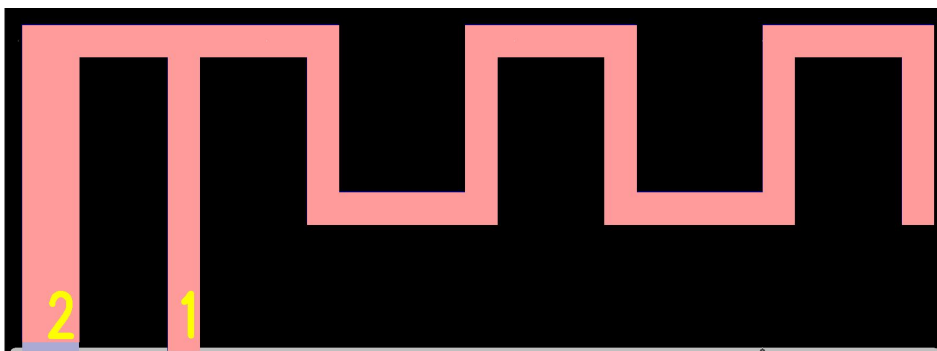
### 1. Antenna Type: PCB Antenna

### 2. mechanical dimension

a, antenna dimension

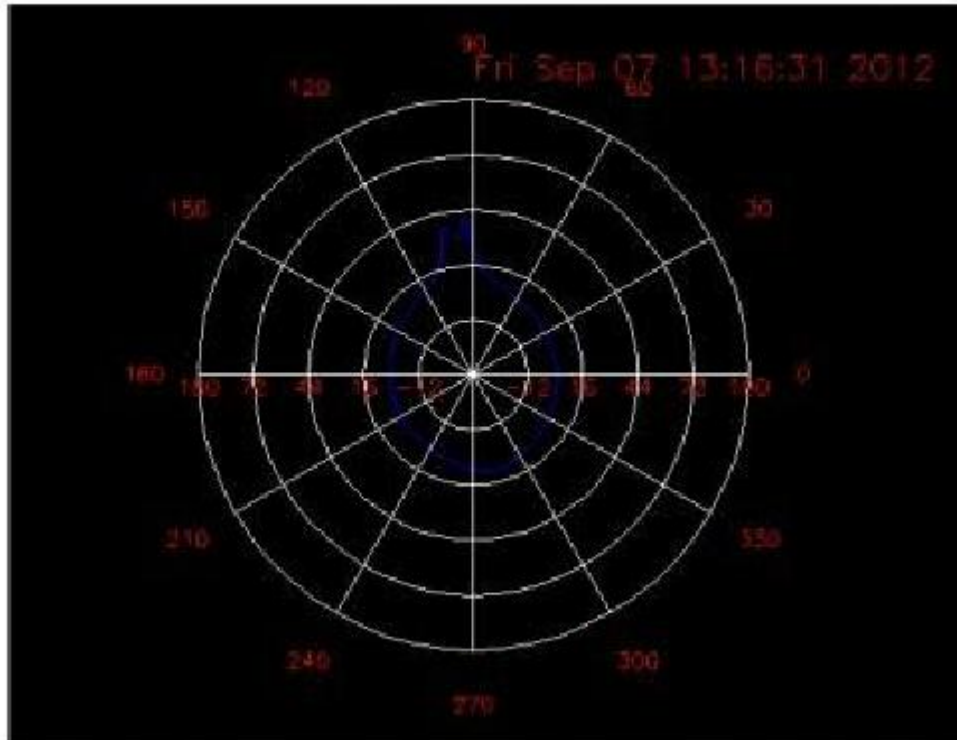


b. antenna final figure



c, antenna direction

## 2.445GHZ radiation pattern



### 3. antenna specification

#### Bluetooth mechanical specifiction

#### 2400-2500MHZ

Electrical specifications	
Frequency range (MHz)	2400-2500
Polarization	Linear
Gain (dBi)	-2.41dBi
Impedance ( $\Omega$ )	50
Directivity	Omn-directional
VSWR	$\leq 2.0$ (Center frequency)

**Mechanical specifications**

<b>Operation Temperature (°C)</b>	<b>-30~60</b>
<b>Humidity (%)</b>	<b>5~95</b>

**4. Gain**

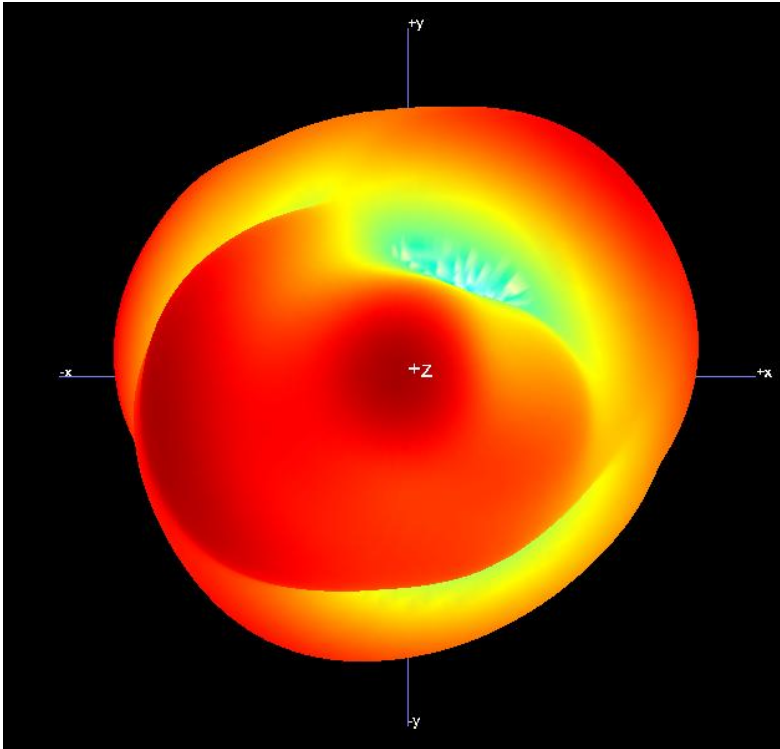
Frequency	E Total. dB(dB)	Efficiency( )
2400MHz	-3.86886	16.23%
2410MHz	-3.80462	17.25%
2420MHz	-3.58124	17.64%
2430MHz	-3.50624	18.48%
2440MHz	-3.41955	17.65%
2450MHz	-3.26336	17.72%
2460MHz	-2.9754	17.49%
2470MHz	-2.67499	17.49%
2480MHz	-2.41254	17.15%

**5. INSERTION LOSS/RETURN LOSS/VSWR**

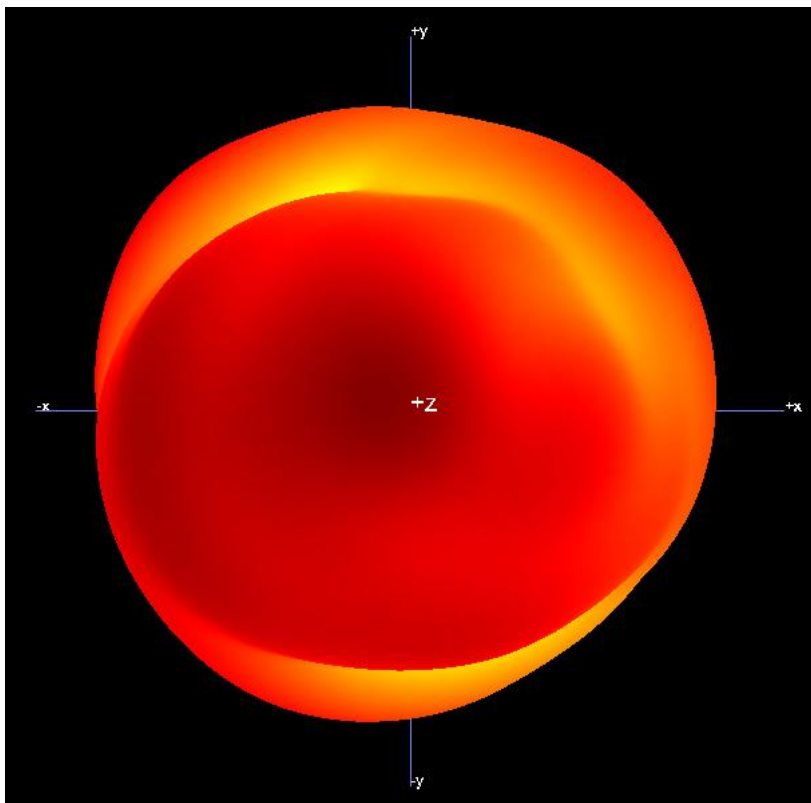
Frequency	Input impedance( $\Omega$ )	Return loss( dB)	VSWR
2400MHz	38.886	-6.354	2.512
2402MHz	37.336	-6.412	2.543
2440MHz	22.254	-6.753	2.501
2480MHz	18.320	-6.613	2.522
2500MHz	18.715	-6.702	2.518

### 6. 3D Pattern

2400MHZ



2440MHZ



2480MHZ

