

Bluetooth antenna sample  
BT Antenna Product Approval

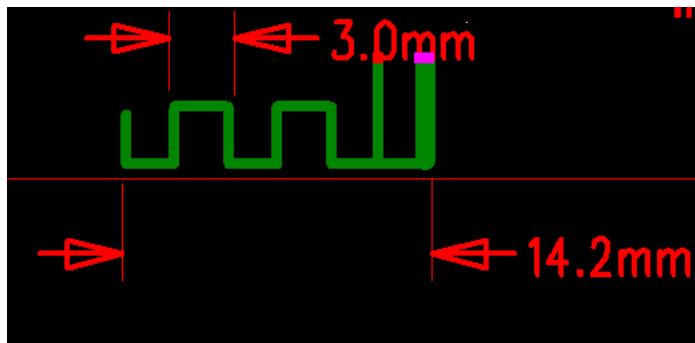
**Time: April 2, 2023**

**I. Introduction of Antenna**

Our Bluetooth antenna is made directly on the PCB. The antenna is made of copper plating and tin spraying technology. The thickness of copper foil is H/H0Z, and the plate is made of FR-4 with a thickness of 1.2 mm..

**二、 Antenna shape**

1. Dimension drawing: 14.2 \* 3 \* 0.5mm.



2. Physical map:

Third, the antenna parameters

The working frequency of Bluetooth antenna is 2402-2480MHz, and resonance occurs in this frequency band. The following table shows the main parameters of the antenna.

Bluetooth built-in antenna	
Frequency(MHz)	2402 ~ 2480 MHz
VSWR	$\leq 1.92$
Impedance	50 Ohm Nominal
Return Loss	-10 dB Max
Radiation	Omni-directional
Gain (Peak)	-0.347 dBi
Polarization	Linear, Vertical
Admitted Power	2W
Connector	Tin

## Fourth, the antenna gain test report

Spectrum Detector: PK Test Date : June 8, 2013

Test By: Andy Temperature : 28°C

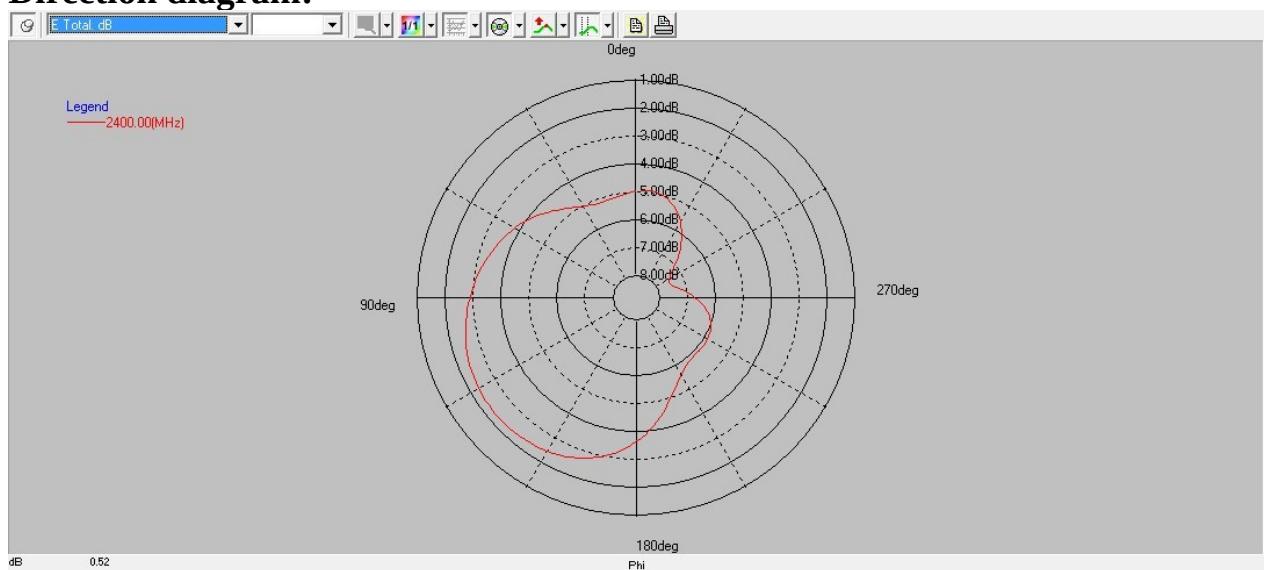
Test Result: PASS Humidity : 55 %

Modulation: GFSK

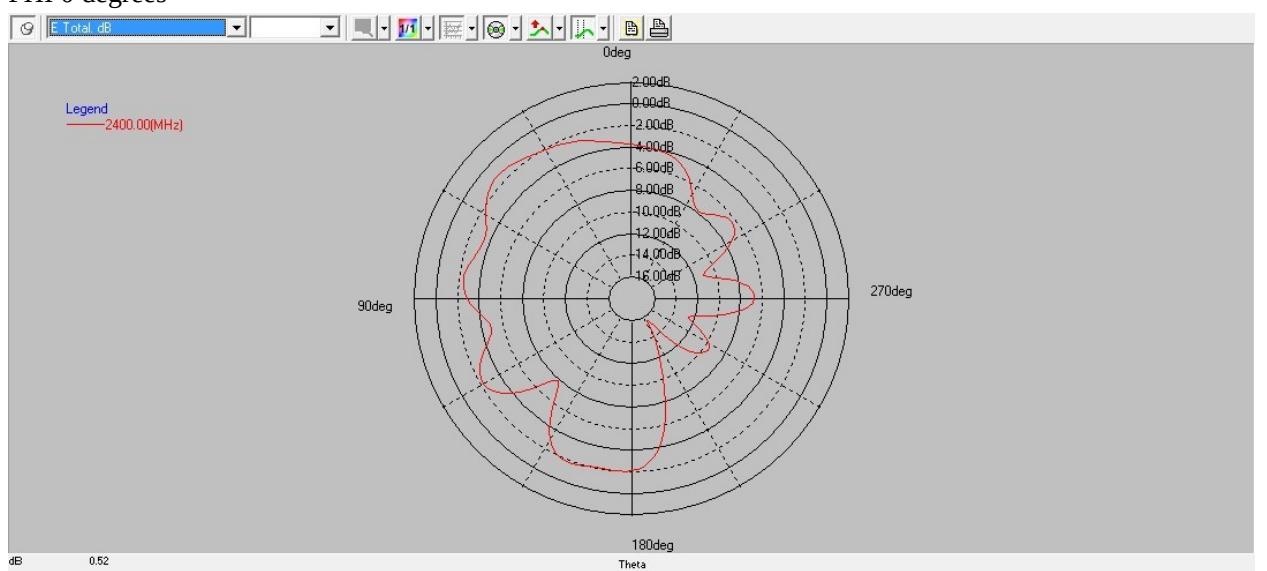
### **Maximum gain value**

Frequency Separation Separation Limit (MHz)	VNA Read	E Total. dB(dB)
2400MHz		-0.347483
2410MHz		-0.502625
2420MHz		-0.772879
2430MHz		-0.955555
2440MHz		-1.23072
2450MHz		-1.94066
2460MHz		-1.90725
2470MHz		-2.01968
2480MHz		-2.30721
2490MHz		-2.28333
2500MHz		-2.8728

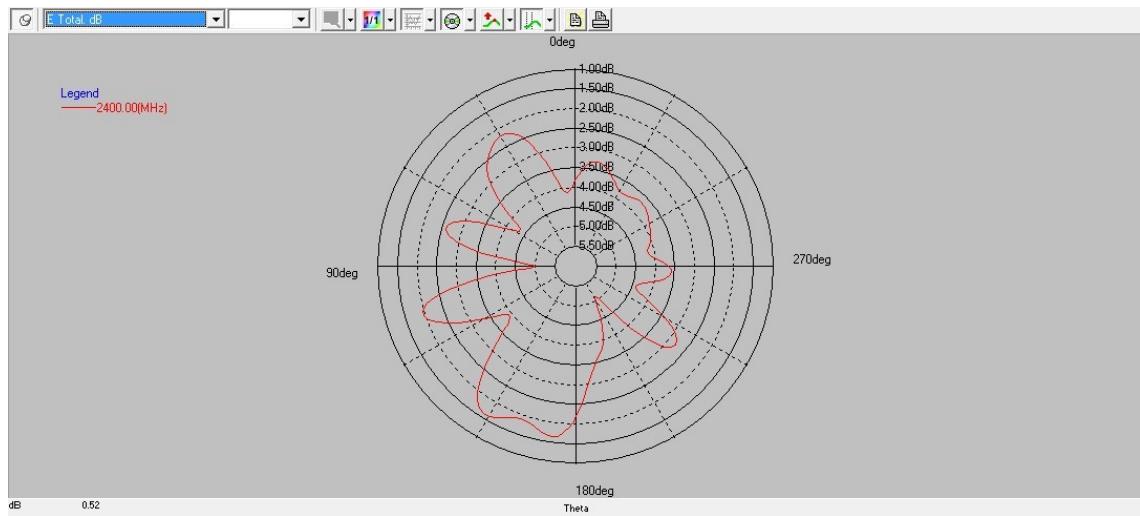
## Direction diagram:



PHI 0 degrees



PHI 90 degrees



THETA 90 degrees

### Standing wave ratio diagram:

