

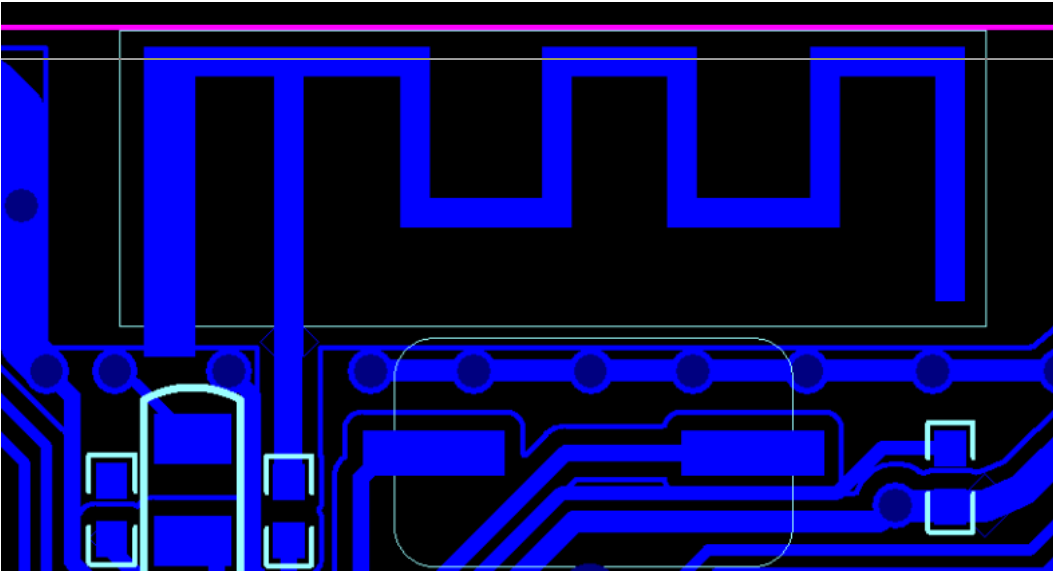
---

## HL-043 Bluetooth antenna specification

### 一、Antenna introduction

The Bluetooth antenna is directly used on the PCB board.

### 二、Antenna configuration



---

### 三、Antenna parameter

The Bluetooth antenna operates at 2402-2480 MHz,  
and resonates in this band. The following table shows  
the main parameters of the antenna.

|                |                  |
|----------------|------------------|
|                |                  |
| Frequency(MHz) | 2402 ~ 2480 MHz  |
| VSWR           | $\leq 1.92$      |
| Impedance      | 50 Ohm Nominal   |
| Return Loss    | -10 dB Max       |
| Radiation      | Omni-directional |
| Gain (Peak)    | 0.64dBi          |
| Polarization   | Linear, Vertical |
| Admitted Power | 2W               |
| Connector      | Tin              |
|                |                  |
|                |                  |

---

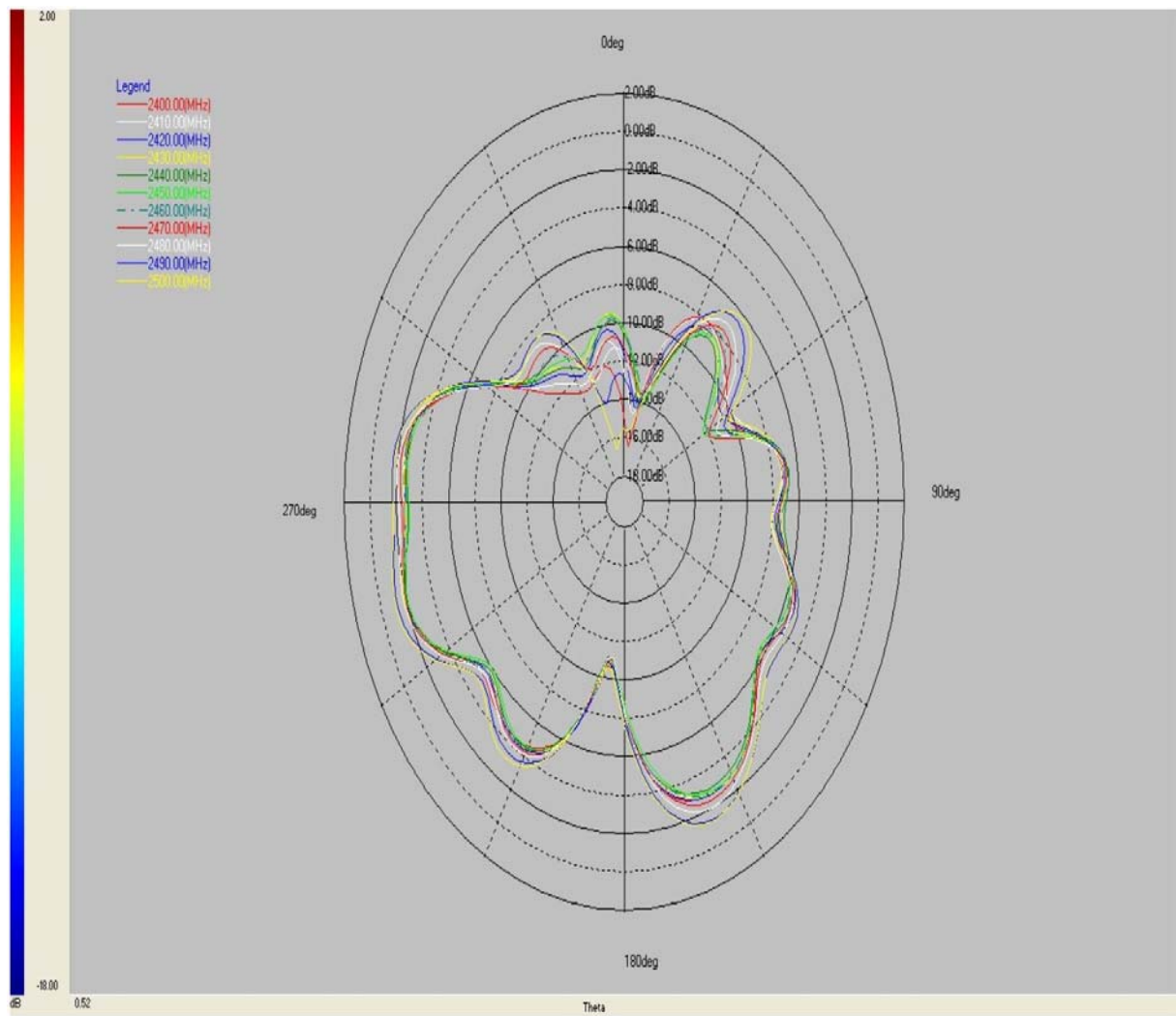
#### 四、 Antenna gain detection report

Spectrum Detector: PK  
Test By: Andy  
Test Result: PASS  
Modulation: GFSK

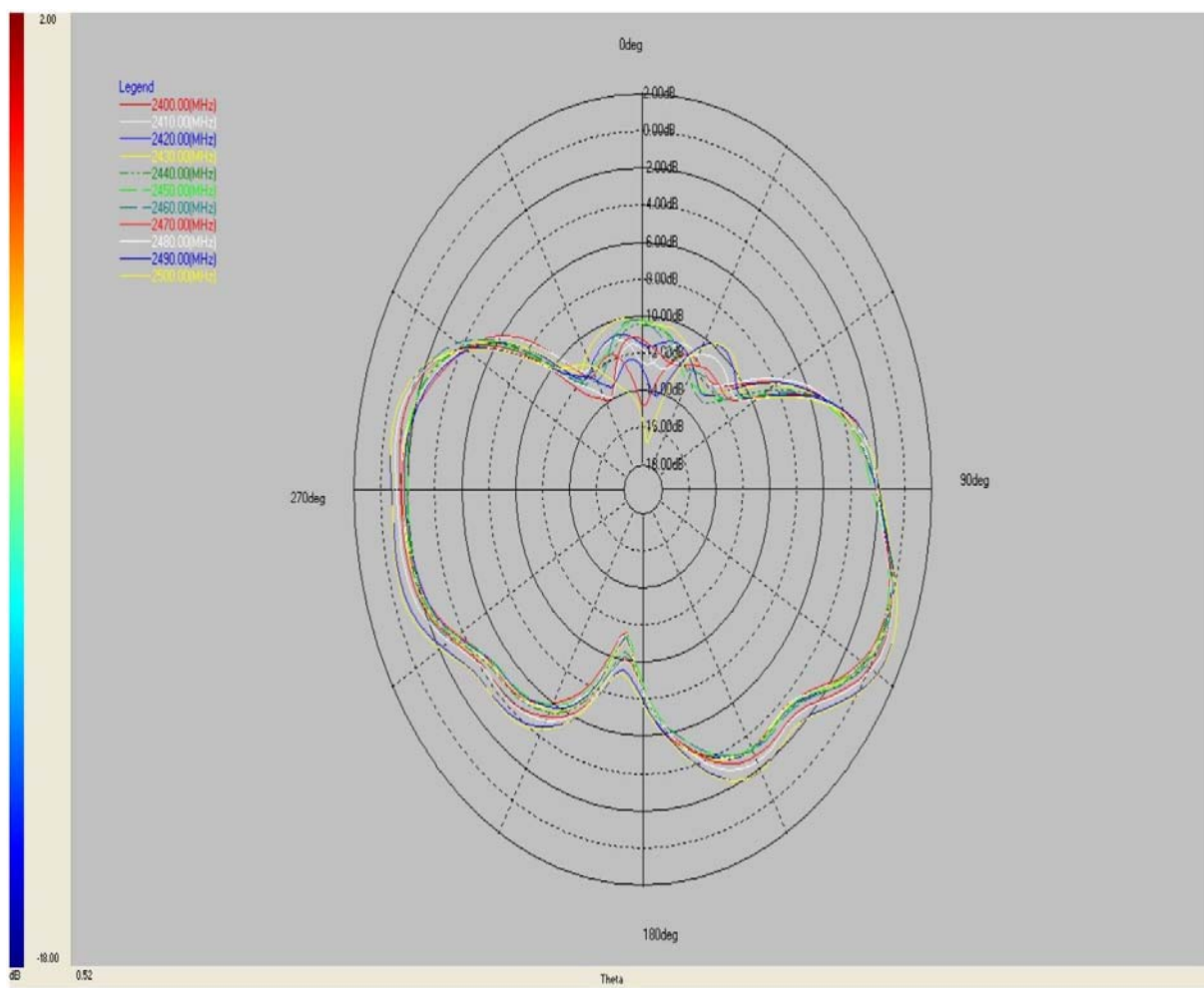
Test Date : May 28, 2017  
Temperature : 28℃  
Humidity : 55 %

| Frequency VNA<br>(MHz) | E Total. dB(dB) |
|------------------------|-----------------|
| 2400MHz                | 0.0403503       |
| 2410MHz                | 0.0886264       |
| 2420MHz                | 0.267381        |
| 2430MHz                | 0.193012        |
| 2440MHz                | 0.26366         |
| 2450MHz                | 0.0723139       |
| 2460MHz                | 0.36895         |
| 2470MHz                | 0.551525        |
| 2480MHz                | 0.640702        |
| 2490MHz                | 1.05232         |
| 2500MHz                | 1.08443         |
|                        |                 |
|                        |                 |

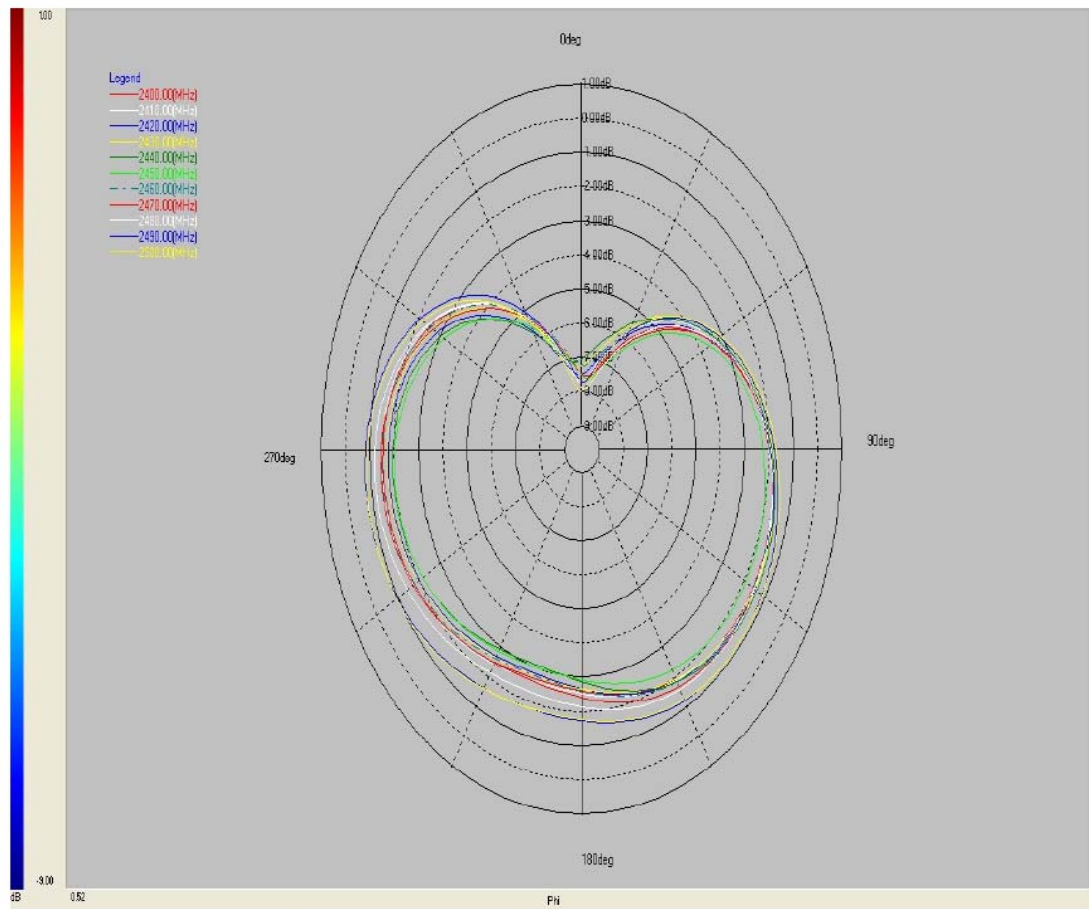
方向图:



PHI 0 度

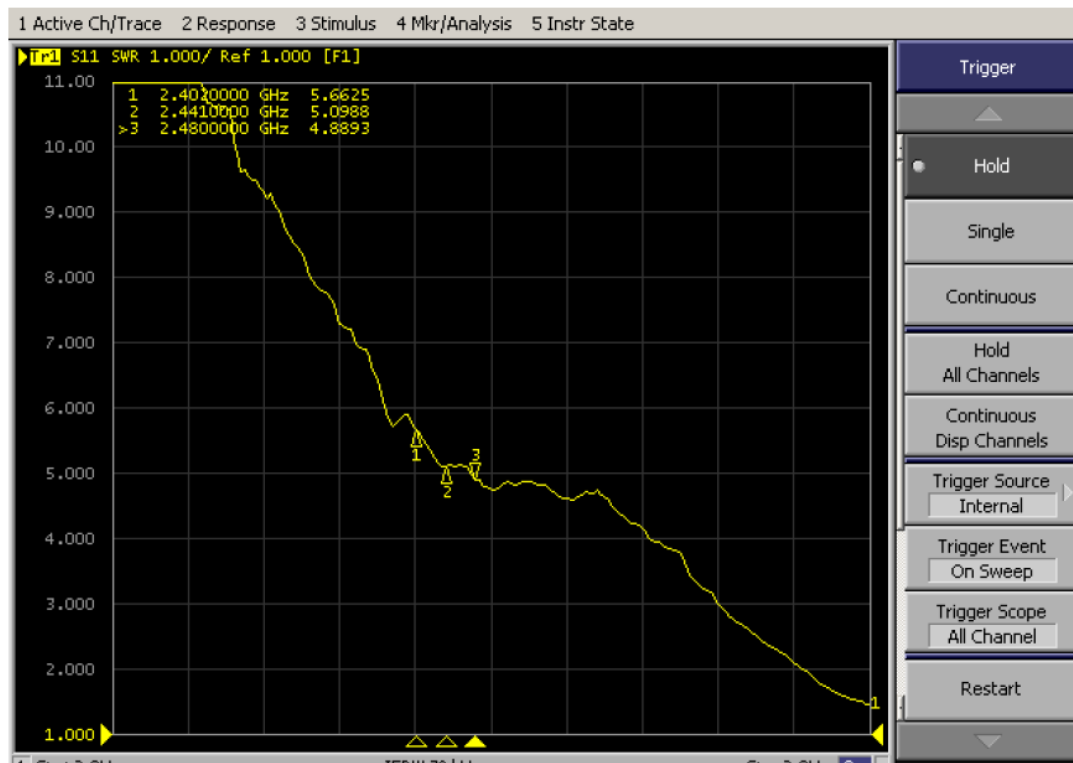


PHI 90 度



THETA 90 度

驻波比图:



### Product Description

Huilan TECHNOLOGY (SHENZHEN) Co., LTD.

The EUT is a short range, lower power, Splash designed as a Device. It is designed by way of utilizing the GFSK modulation achieves the system operating. A major technical descriptions of EUT is described as following:

- A). Operation Frequency: 2402-2480MHz
- B). Modulation: GFSK
- C). Number of Channel: 40
- D). Channel space: 2MHz
- E). RF Output power: 0.44dbm
- F). BIT Rate of Transmission: 1Mbps, 2Mbps, 3Mbps
- G). Antenna Type: PCB antenna
- H). Antenna GAIN: 0dBi