Hengxin Technology Inc.

# Specifications

customer:

name: 2.4G spring antenna

model: HX-B75

customer type:

sample date: 2017.06.11

Addr: No. 201, Hudong Road, Yanggongzhou, Shatian Town, Dongguan, Guangdong, China
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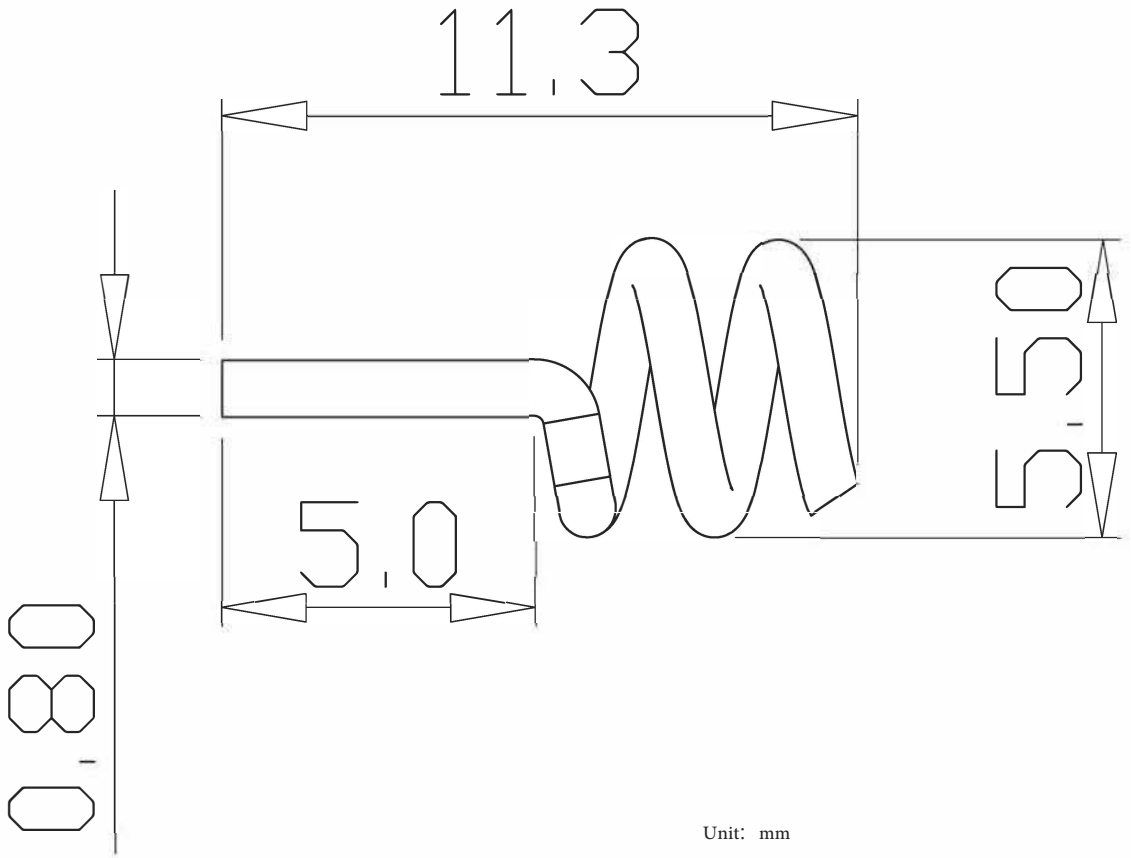
RoHS
Compatible




Unit: mm

## Spring technical requirements

| | |
|---|---|
| material | Phosphorus copper |
| diameter | 0.6mm |
| | |
| | |
| | |
| | |

**Index:**



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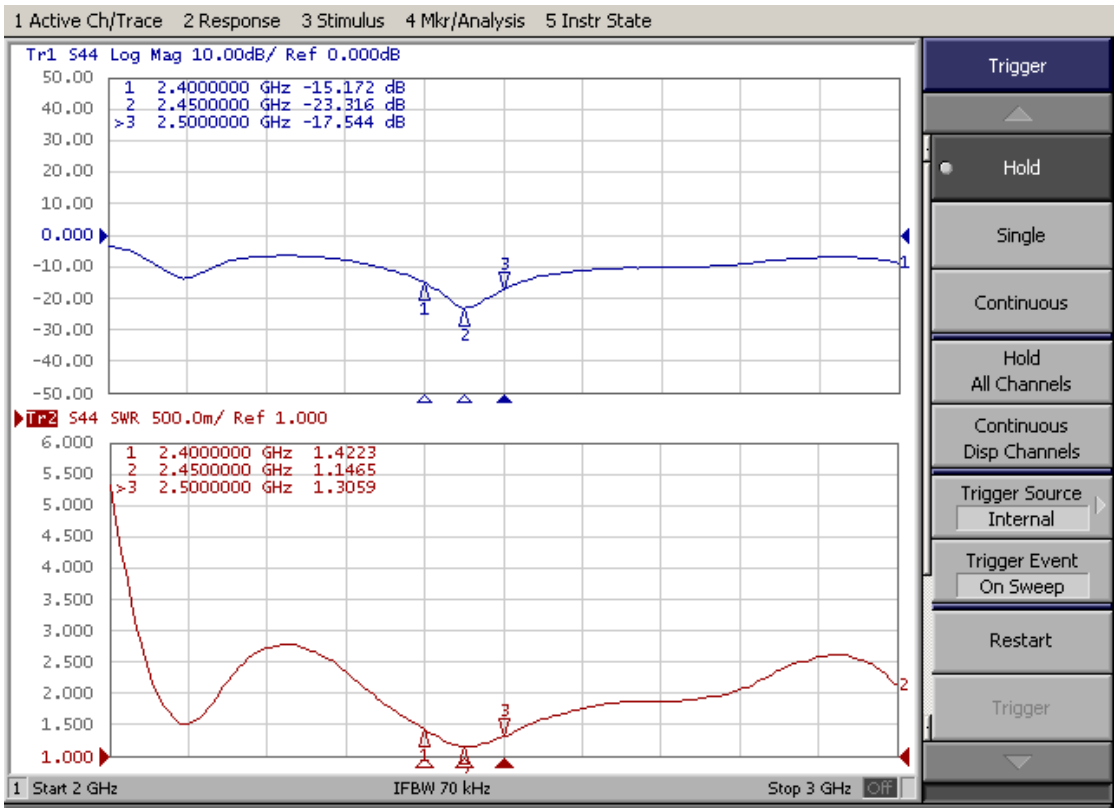
## 1. Reliability Testing

| Test Item | Procedure | Requirement |
|---|---|---|
| **1. Visual inspection and Dimension Check** | Applicable methods using x5 magnification | follow specification |
| **2. Rapid Changing of Temperature** | -40˚C (30minutes) to 80˚C (30minutes); 24 cycles | After 2 hours recovery:<br>1. no visible damage<br>2. bandwidth tolerance < ±5% |
| **3. Damp Heat** | 24 hours at 60˚C; 90 ~ 95% RH | After 2 hours recovery:<br>1. no visible damage<br>2. bandwidth tolerance < ±5% |
| **4. Endurance** | 24 hours at 80˚C | After 2 hours recovery:<br>1. no visible damage<br>2. bandwidth tolerance < ±5% |
| **5. Connector Pull Strength Test** | >= 1.0 Kg | Hold 2~3S:<br>1. no visible damage<br>2. bandwidth tolerance < ±5% |

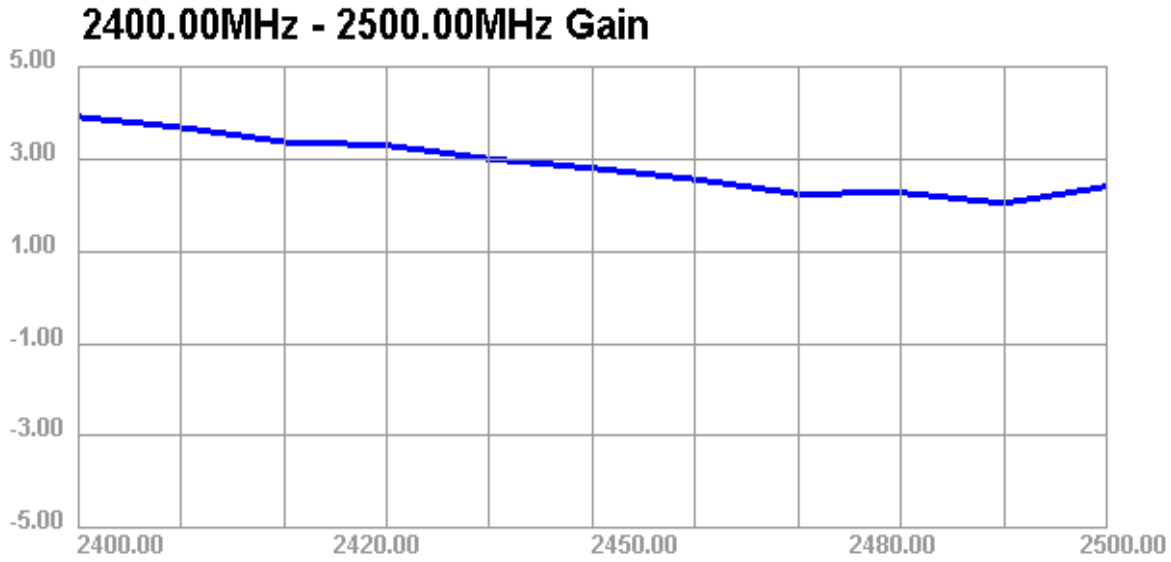
## 2. Specification

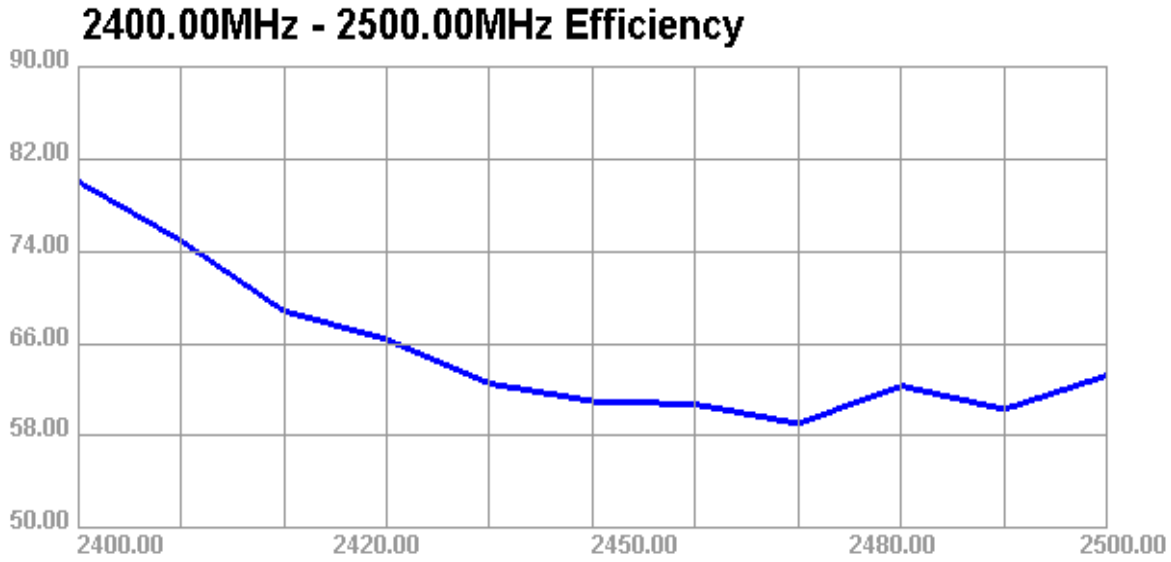
| A. Electrical Characteristics | |
|---|---|
| S.W.R.( Tested in PC ) | <= 2.0 @ 2400~2500 MHz |
| Typical Antenna Gain | 3.91dBi |
| Impedance | 50 Ohm |
| **B. Material** | |
| Material of Radiator | CU |
| Connector Type | NA |
| **C. Environmental** | |
| Operation Temperature | - 30 ˚C ~ + 85 ˚C |
| Storage Temperature | - 30 ˚C ~ + 85 ˚C |

## 3. S.W.R. Testing Result

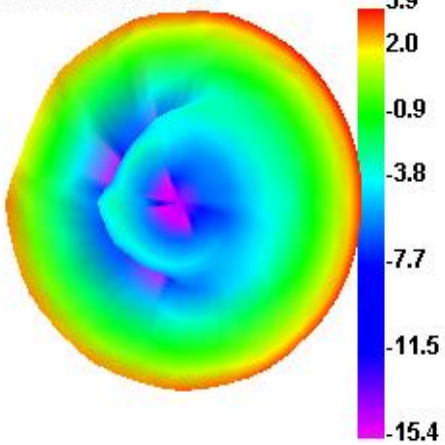


| Passive Test For WiFi2.4 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Freq (MHz) | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dBd) | UHIS (%) | DHIS (%) | Max (dB) | Min (dB) |
| 2400 | 80.05 | -0.97 | 3.91 | 1.76 | 35.329 | 44.721 | 3.91 | -15.39 |
| 2410 | 74.92 | -1.25 | 3.68 | 1.53 | 31.773 | 43.146 | 3.68 | -13.45 |
| 2420 | 68.83 | -1.62 | 3.37 | 1.22 | 28.149 | 40.684 | 3.37 | -13.62 |
| 2430 | 66.37 | -1.78 | 3.29 | 1.14 | 26.486 | 39.888 | 3.29 | -13.73 |
| 2440 | 62.54 | -2.04 | 3 | 0.85 | 24.823 | 37.717 | 3 | -18.18 |
| 2450 | 61.03 | -2.14 | 2.8 | 0.65 | 24.558 | 36.474 | 2.8 | -21.68 |
| 2460 | 60.75 | -2.16 | 2.56 | 0.41 | 25.169 | 35.583 | 2.56 | -18.14 |
| 2470 | 59.08 | -2.29 | 2.24 | 0.09 | 25.355 | 33.727 | 2.24 | -16.42 |
| 2480 | 62.34 | -2.05 | 2.27 | 0.12 | 27.644 | 34.7 | 2.27 | -16.05 |
| 2490 | 60.32 | -2.2 | 2.04 | -0.11 | 27.434 | 32.885 | 2.04 | -16.21 |
| 2500 | 63.24 | -1.99 | 2.4 | 0.25 | 29.243 | 33.997 | 2.4 | -16.04 |

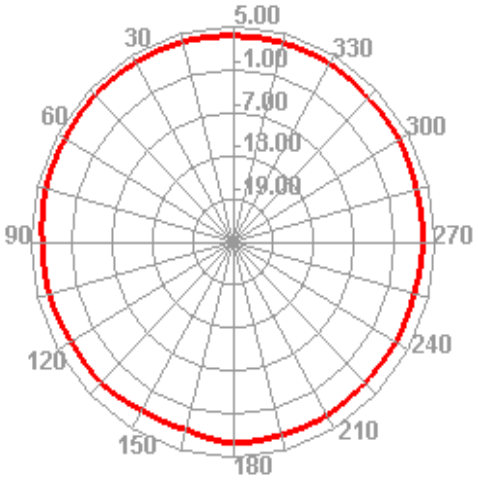


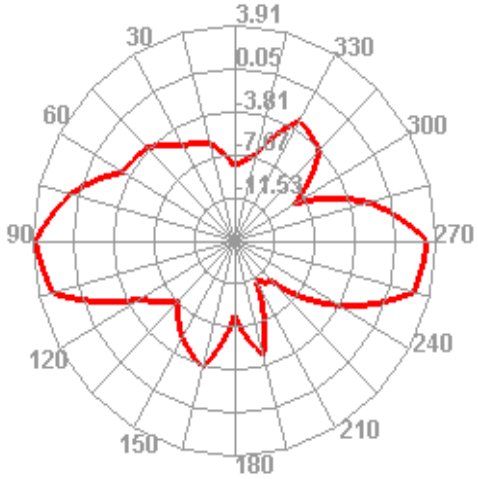
2400.000MHz



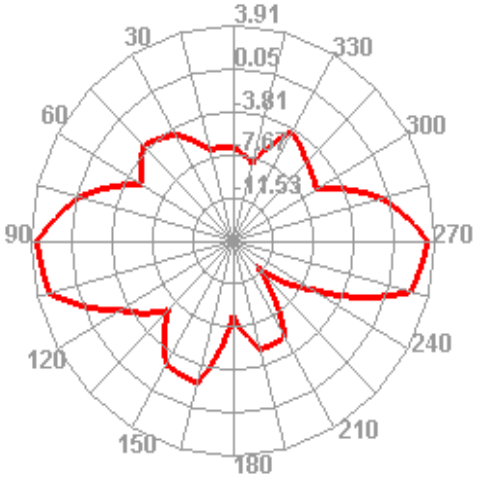

2400.000MHz H



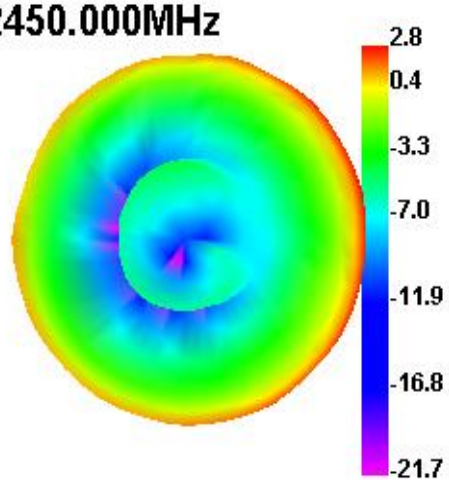

2400.000MHz E1



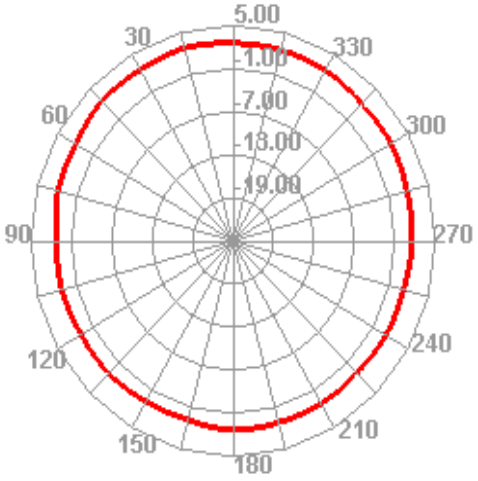

2400.000MHz E2



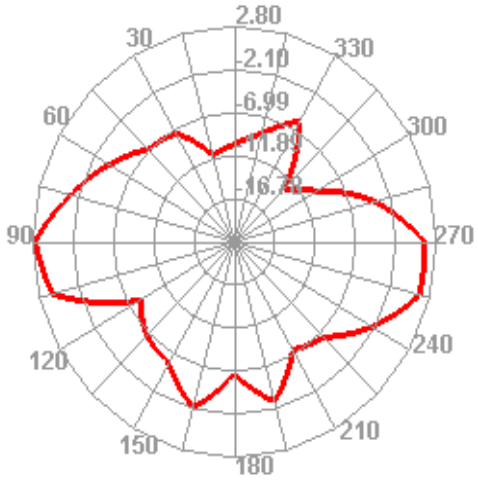

2450.000MHz



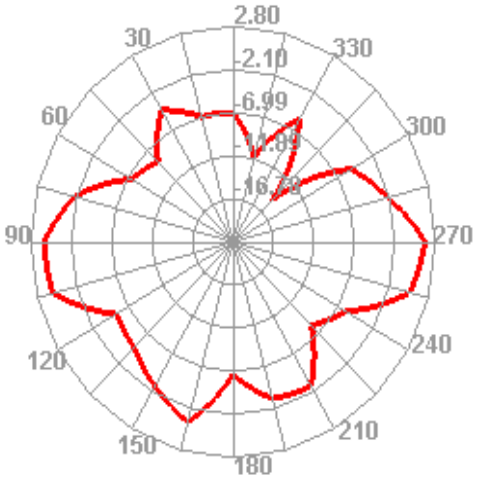

2450.000MHz H



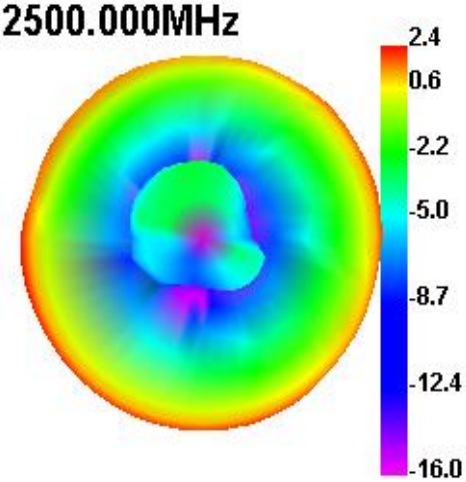
2450.000MHz E1



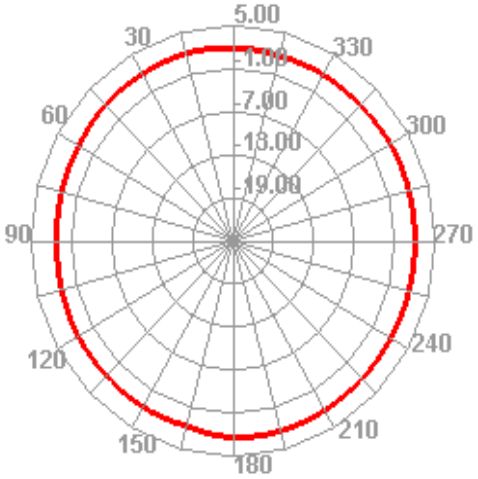

2450.000MHz E2



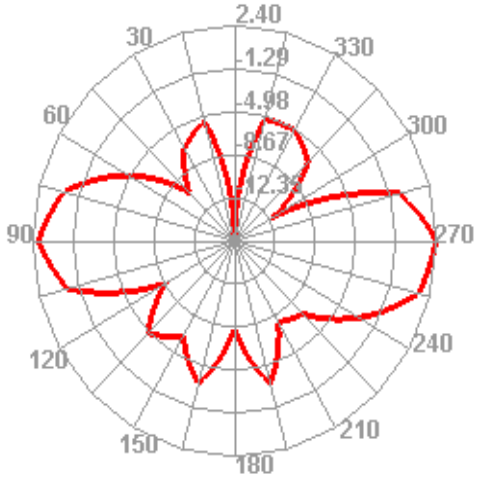

2500.000MHz



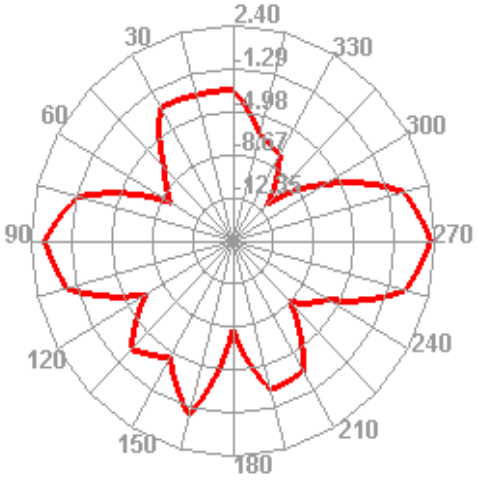

2500.000MHz H




2500.000MHz E1




2500.000MHz E2



| Attenut Hor | Attenut Ver |
|---|---|
| 50 | 49.8 |
| 49.04 | 48.95 |
| 49.52 | 49.32 |
| 49.72 | 49.54 |
| 49.05 | 48.93 |
| 49.23 | 49.02 |
| 49.42 | 49.35 |
| 49.16 | 49.2 |
| 49.63 | 49.52 |
| 49.82 | 49.81 |
| 49.29 | 49.31 |

## 4. Antenna Radiation Pattern

**Testing Equipment Specification:**

**Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m**
**Quite Zone: 600mm @1 GHz**
**Isolation: >100dB @ 1 MHz ~ 10 GHz**
**Testing Equipment: Agilent 5071B**
**Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration**
**Double Ridged Horn Antenna**