

| Document    | Datasheet         |
|-------------|-------------------|
| Туре        | PCB Trace Antenna |
| Application | 2.4GHz            |
| Model       | HAMT2002 (LF)     |

# **DATASHEET**

Oct , 2014



### Contents

| 1. Applications   | 3 |
|---|---|
| 2. Features   | 3 |
| 3. Specifications   | 4 |
| 3.1 Electrical Specifications                                 | 4 |
| 3.2 Mechanical Specification                                  | 4 |
| 4. Matching Component   | 4 |
| 4.1 Ant Circuit   | 4 |
| 4.2 Matching value  | 4 |
| 5. Measurement Result   | 5 |
| 5.1 Typical Measurement Result (Smith Chart & Return Loss)    | 5 |
| 5.2 Typical Measurement Result (Gain)                         | 5 |
| 5.3 Typical Measurement Result ( Radiation pattern, 2.44GHz ) | 6 |
| 6 Revision History  | 7 |



## 1. Applications

Bluetooth

ZigBee

ISM 2.4GHz Wireless Devices

### 2. Features

Monopole type PCB trace antenna

Size( 18.5 x 1.2mm )



18.5mm





## 3. Specifications

### 3.1 Electrical Specifications

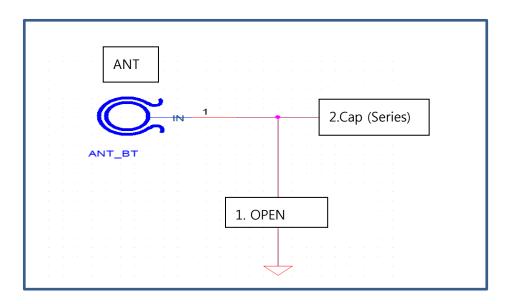
| No | Item                  | Spec       | Remark      |
|----|-----------------------|------------|-------------|
| 1  | Frequency Range[GHz]  | 2.4~2.485  |             |
| 2  | Peak Gain [dBi]       | Typ 3.77   | 2.440 [GHz] |
| 3  | Total Avg. Gain [dBi] | Typ -1.71  | 2.440 [GHz] |
| 4  | Impedance $[\Omega]$  | Nominal 50 |             |

### 3.2 Mechanical Specification

| No Item |                       | Spec          | Remark |
|---------|-----------------------|---------------|--------|
| 1       | Dimensions (L x W)    | 18.5 x 1.2 mm |        |
| 2       | Operating temperature | - 40 ~ +85 ℃  |        |

# 4. Matching Component

### 4.1 Ant Circuit.



### 4.2 Matching value

| 1.OPEN         | OPEN |
|----------------|------|
| 2.Cap (Series) | 1pF  |



#### 5. Measurement Result

- 5.1 Typical Measurement Result (Smith Chart & Return Loss)
  - Smith Chart : Yellow line, Return Loss : Blue line



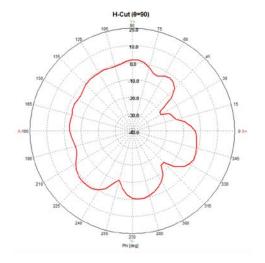
### 5.2 Typical Measurement Result (Gain)

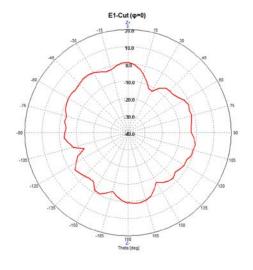
| Frequency [GHz] | Avg.[dBi] | Peak[dBi] |
|-----------------|-----------|-----------|
| 2.400           | -1.53     | 3.91      |
| 2.440           | -1.71     | 3.77      |
| 2.480           | -2.13     | 3.19      |

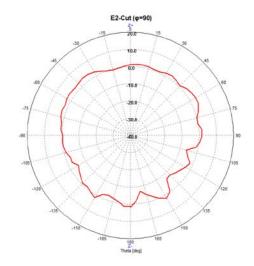


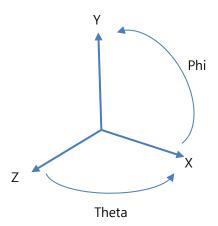
### 5.3 Typical Measurement Result ( Radiation pattern, 2.44GHz )

|         | Peak Gain | Avg. Gain | Total Avg. Gain |
|---------|-----------|-----------|-----------------|
|         | [dBi]     | [dBi]     | [dBi]           |
| Phi     | 1.67      | -2.33     |                 |
| Theta 1 | 1.30      | -2.09     | -1.71           |
| Theta 2 | 3.77      | 0.44      |                 |











## **6 Revision History**

| Revision No | Date     | Change           | page |
|-------------|----------|------------------|------|
| 1           | 14.10.07 | Initial revision |      |
|             |          |                  |      |
|             |          |                  |      |

