

SPECIFICATION FOR APPROVAL

CUSTOMER NAME:

PRODUCT NAME: 2.4G PCB Ceramic antenna  
(21B00174A)

CUSTOMER P/N:

YR P/N: 21B00174A REV: A

|              |                           |                       |
|--------------|---------------------------|-----------------------|
|              | MANUFACTURER<br>SIGNATURE | CUSTOMER<br>SIGNATURE |
| CHECKED BY:  | LIU                       |                       |
| APPROVED BY: | EVINE                     |                       |
| DATE:        | 2023/10/23                |                       |

Factory address ;

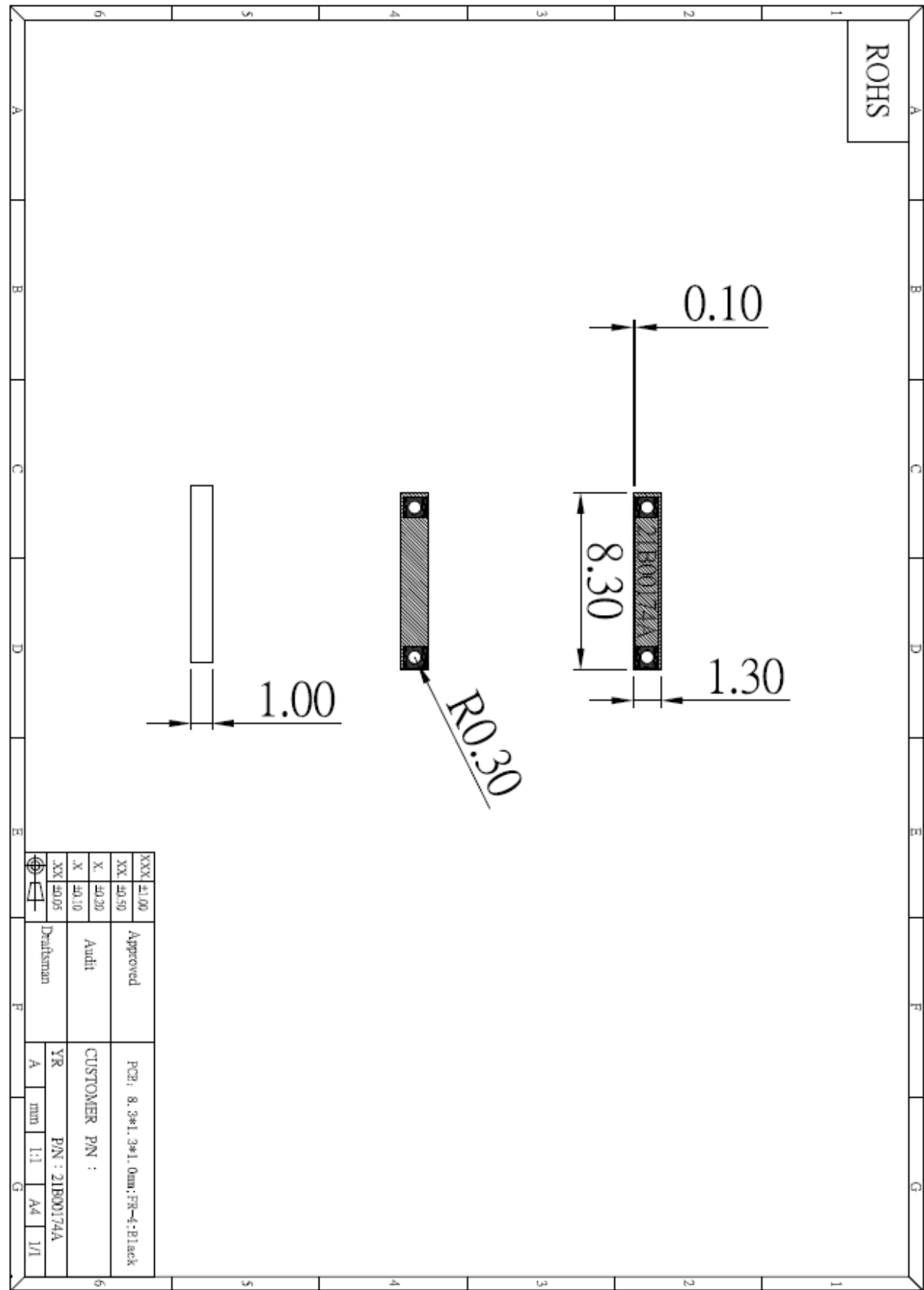
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1. Main technical parameters of products

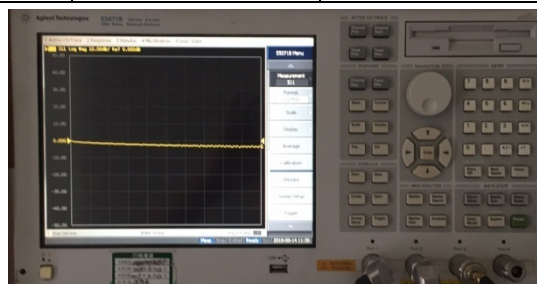
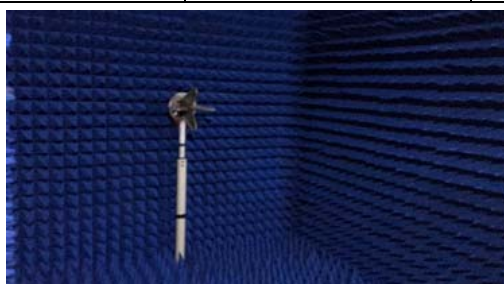
| Main technical specifications |               |
|-------------------------------|---------------|
| Frequency Range<br>(MHZ)      | 2400~2500     |
| Impedance( $\Omega$ )         | 50±10         |
| Peak Gain(dBi)                | 3.8           |
| VSWR                          | ≤1.92         |
| Admitted Power                | 1W            |
| Polarization                  | Line,Vertical |
| Connector Type                | SMT           |
| Physical Properties           |               |
| Antenna Base                  | PCB+ Ceramics |
| Operating Temp                | -20℃~+70℃     |
| Storage Temp                  | -20℃~+70℃     |

2. Structure diagram:

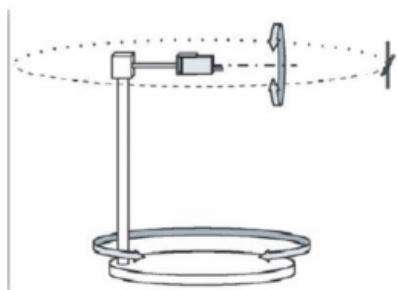


### 3. Test environment

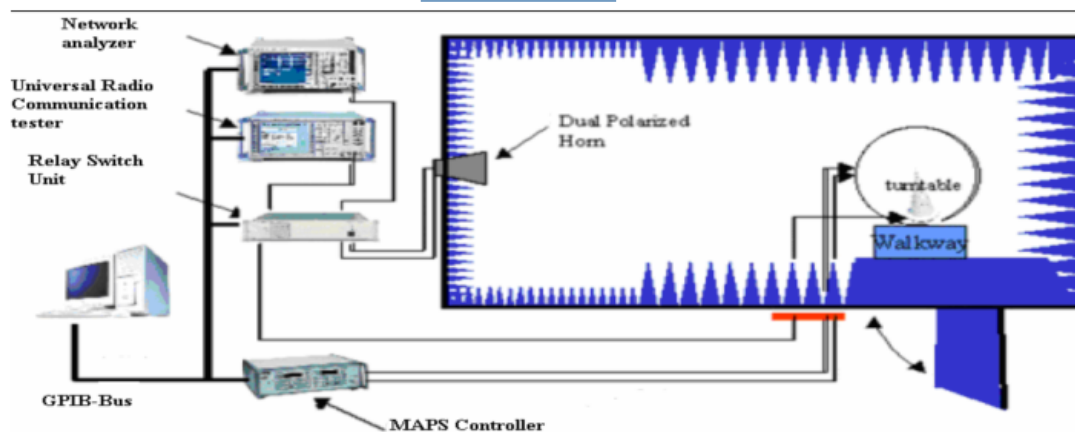
| /       | Test items                 | Equipment     |                     |               |
|---------|----------------------------|---------------|---------------------|---------------|
|         |                            | Equipment     | Model No            | Manufacturers |
| S11     | 1. Return loss<br>2.VSWR   | Analyzers     | E5071B              | Agilent       |
|         |                            | Coaxial Cable | RG316               | YiRui         |
| Testing | 1. 2D、3DRaditation Pattern | OTA           | ETS 5*3*3(3D)       | Guang Ping    |
|         |                            | Analyzers     | E5071B              | Agilent       |
|         | 2. Antenna gain            | PC Console    | Win 7               | ASUS          |
|         | 3. Antenna efficiency      | OTA           | ETS;Far Field probe | Guang Ping    |
|         |                            | 3D turntable  | $\phi 1*1*1.5(3D)$  | Guang Ping    |



ETS OTA Test principle

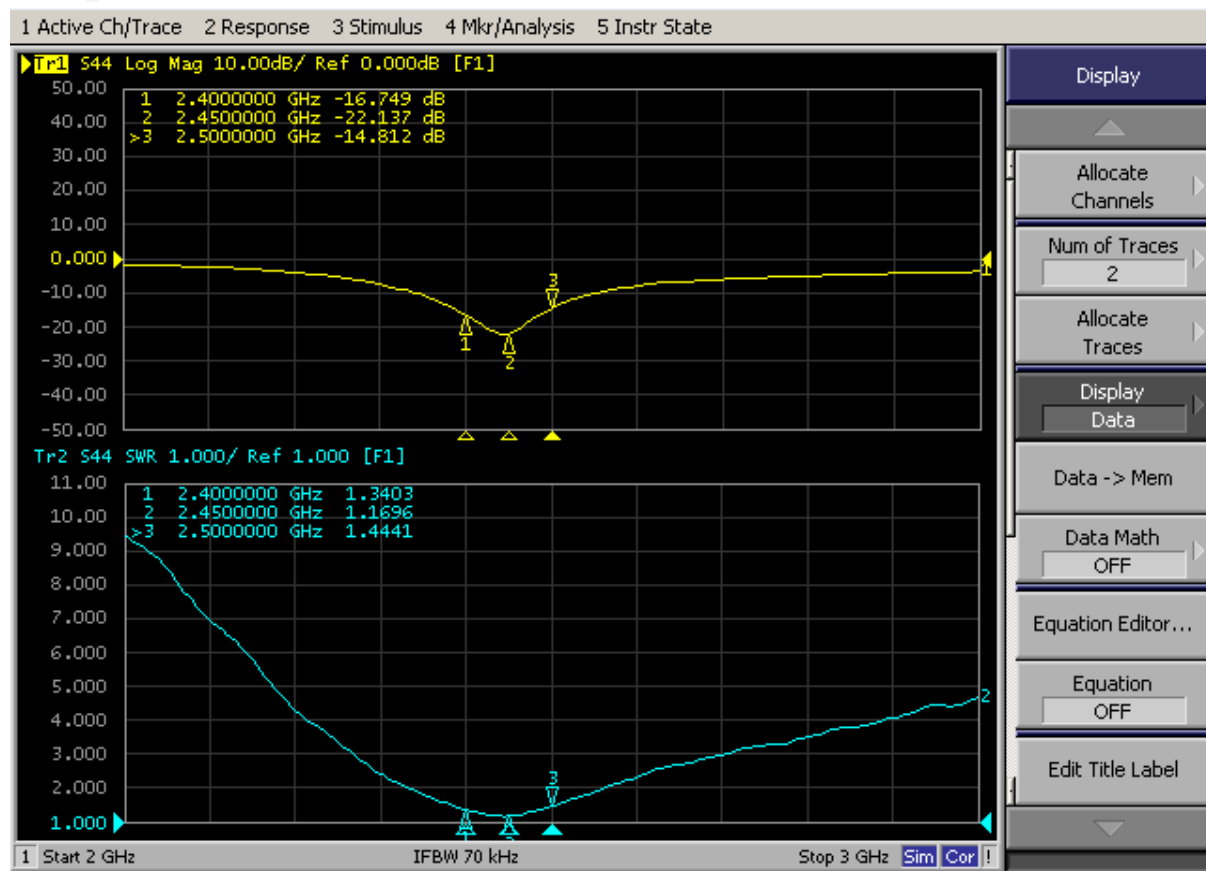


3D turntable



## 4. Test report

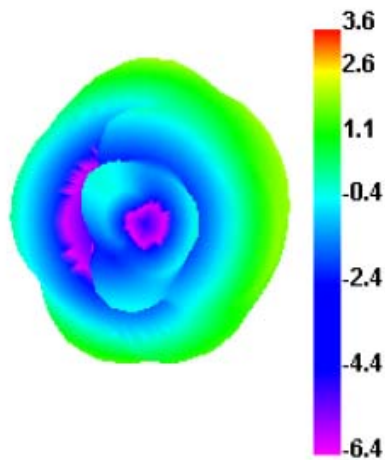
### 3.1. Return loss/VSWR



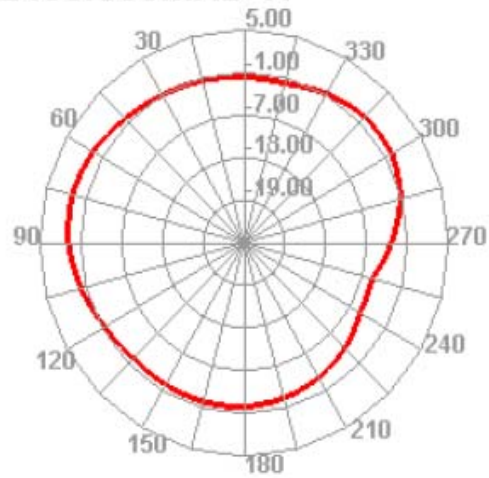
### 3.2. Gain. Efficiency. 2D、3DRaditation Pattern

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 2400          | 63.9        | -1.95        | 3.62          |
| 2410          | 59.35       | -2.27        | 3.37          |
| 2420          | 59.22       | -2.28        | 3.5           |
| 2430          | 55.96       | -2.52        | 3.27          |
| 2440          | 60.05       | -2.21        | 3.5           |
| 2450          | 63.4        | -1.98        | 3.65          |
| 2460          | 65.44       | -1.84        | 3.7           |
| 2470          | 67.18       | -1.73        | 3.73          |
| 2480          | 70.11       | -1.54        | 3.8           |
| 2490          | 67.68       | -1.7         | 3.56          |
| 2500          | 59.99       | -2.22        | 2.94          |

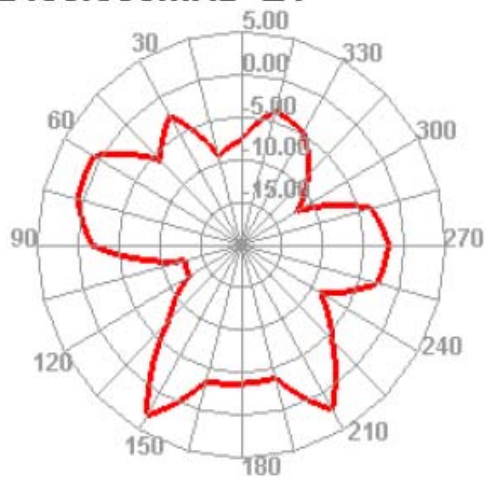
2400.000MHz



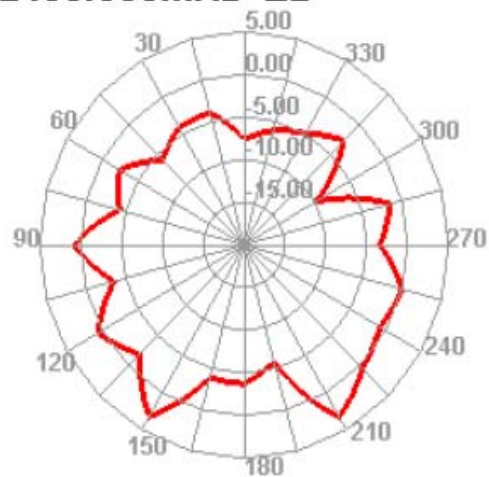
2400.000MHz H



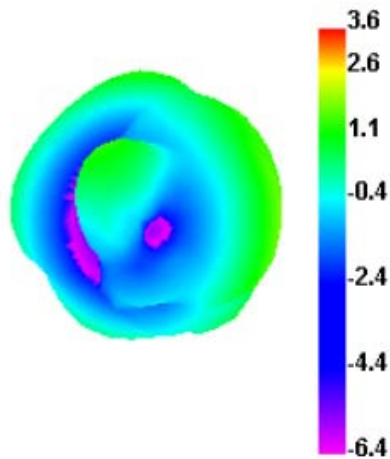
2400.000MHz E1



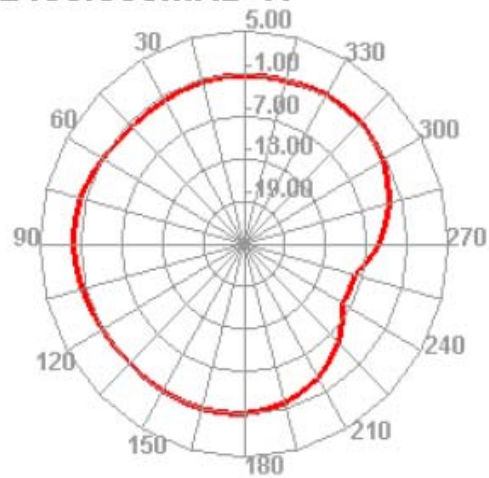
2400.000MHz E2



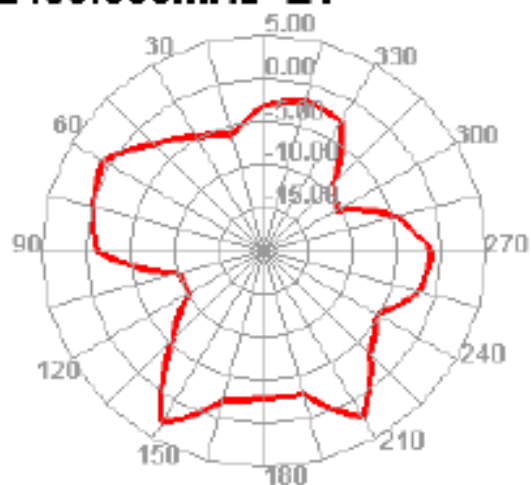
2450.000MHz



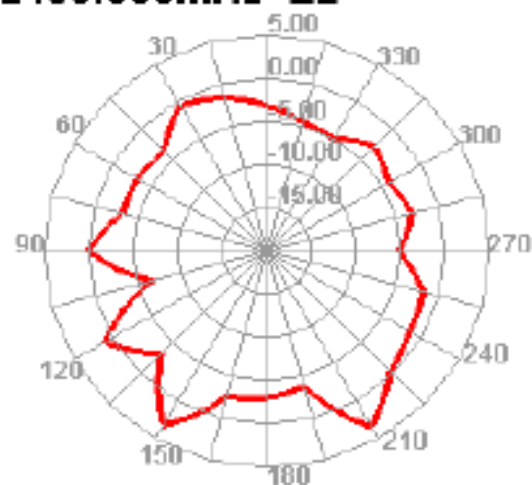
2450.000MHz H



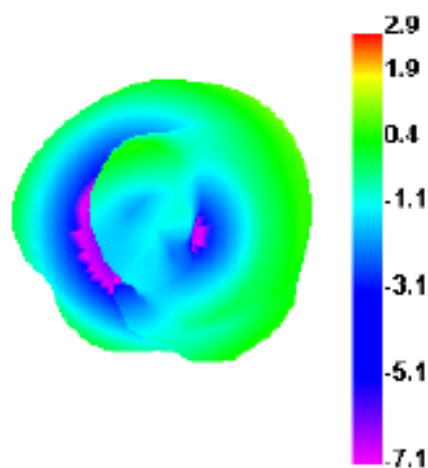
**2450.000MHz E1**



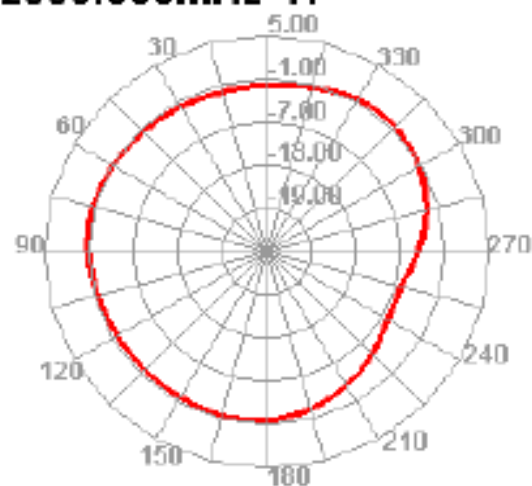
**2450.000MHz E2**



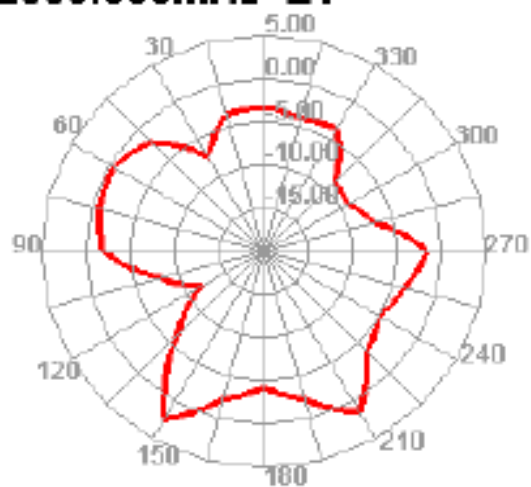
**2500.000MHz**



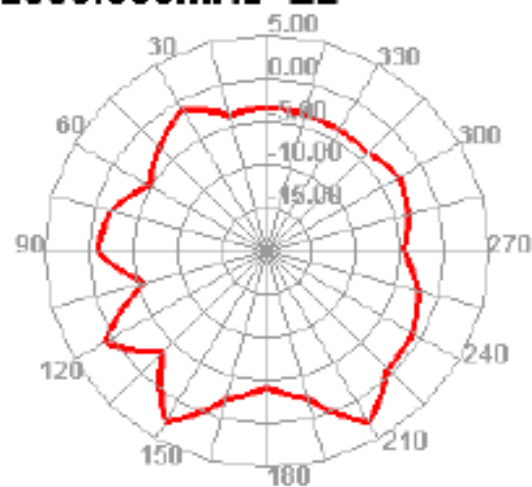
**2500.000MHz H**



**2500.000MHz E1**



**2500.000MHz E2**





## 5. Packaging

