






# APPROVAL SHEET

RoHS  
compliance

**CUSTOMER** : 無敵科技股份有限公司  
**ISSUE DATE** : 2011.11.23

## APPROVED


| COMPANY   | APPROVED BY   | CHECK BY   | PREPARED BY  |
|---|---|--|--|
|  |  |  | <br> |
| <b>APPROVAL NO : H2B2BC1H1B0100</b>   |   |  |  |
| <b>MODEL : WiFi/Bluetooth Metal Stamping Antenna(AA113)</b>                         |   |  |  |
| <b>Customer NO :</b>  |   |  |  |

## 1. Explanation of Part Number



01: serial number



|   |                             |  |                       |                         |
|---|-----------------------------|--|-----------------------|-------------------------|
| <b>Tolerances (Unless otherwise specified)</b><br><b>X : ± 1            X.X : ± 0.1            X.XX : ± 0.01</b><br><b>Angle : ±                      Hole Dia. : ±</b> |                             |  <b>Unictron Technologies Corporation</b><br>Website: <a href="http://www.unictron.com">www.unictron.com</a> |                       |                         |
| <b>Scale :</b>  | <b>Unit : mm</b>            | THIS SPECIFICATION IS THE PROPERTY OF UNICTRON TECHNOLOGIES CORPORATION AND SHALL NOT BE REPRODUCED OR USED IN ALL CIRCUMSTANCES WITHOUT WRITTEN PERMISSION                                      |                       |                         |
| <b>Drawn By : Gilespi</b>   | <b>Checked By : Jason</b>   |  |                       |                         |
| <b>Designed By : Wilson</b>   | <b>Approved By :Jaixing</b> |  |                       |                         |
| <b>TITLE : WiFi/BT Metal Stamping Antenna (AA113)</b>   |                             | <b>DOCUMENT NO.</b>  | <b>H2B2BC1H1B0100</b> | <b>REV.</b><br><b>A</b> |

## 2. Features

- \*Stable and reliable in performances
- \*Low temperature coefficient of frequency
- \*RoHS compliance

## 3. Applications

- \*2.4G Systems

## 4. Description

\*Unictron's 2.4G antenna is specially designed for 2.4G applications. It has excellent stability and sensitivity to consistently provide high signal reception efficiency.


## 5. Electrical Specifications

| Characteristics                      |            | Specifications                               | Unit     |
|--------------------------------------|------------|--|----------|
| Outline Dimensions                   |            | 29 x 2.6 x 8.6                               | mm       |
| Frequency Range                      |            | 2400 ~ 2500                                  | MHz      |
| VSWR                                 |            | 2 max  |          |
| Impedance                            |            | 50   | $\Omega$ |
| Polarization                         |            | Linear Polarization                          |          |
| Gain                                 | Peak       | Type A: 2.5 @2450MHz<br>Type B: 2.5 @2450MHz | dBi      |
|                                      | Efficiency | Type A: 50 @2450MHz<br>Type B: 50 @2450MHz   | %        |
| Temperature Coefficient of Frequency |            | 0 $\pm$ 20 max<br>(@ -20°C ~ 80°C)           | ppm/°C   |

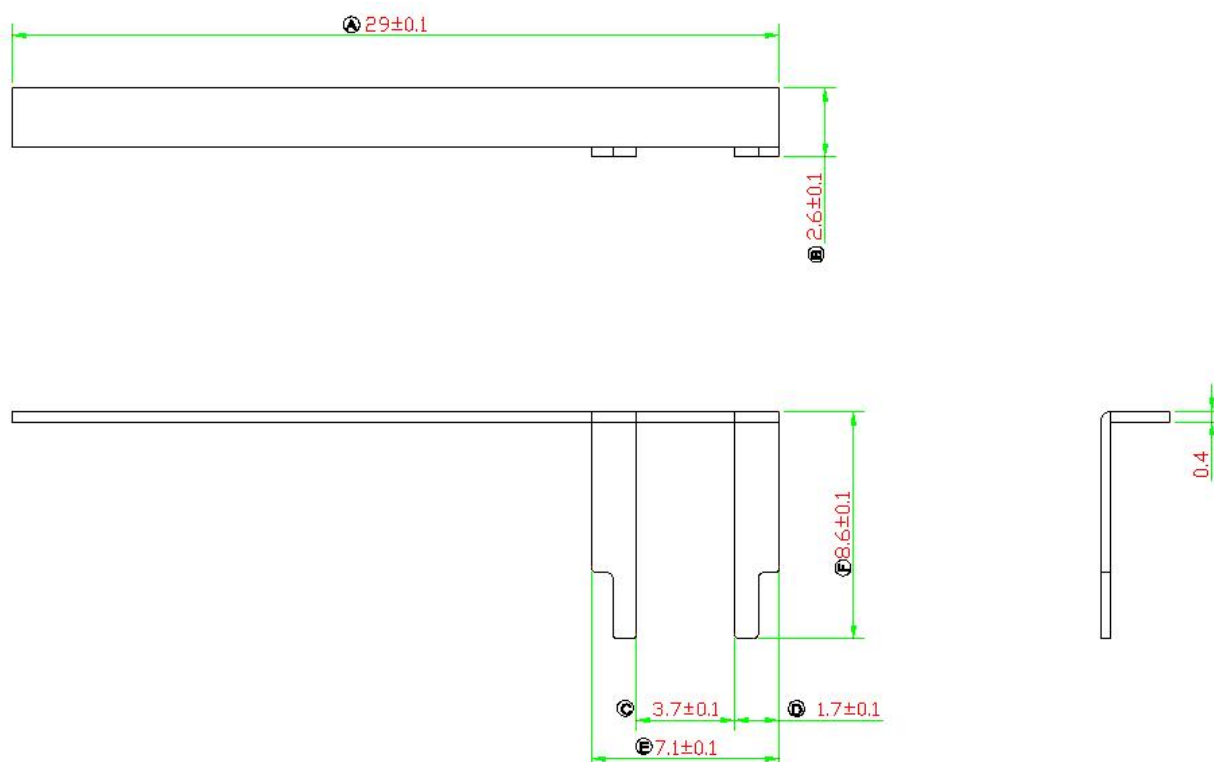
Note :

1. These test results are based on customer's housing and ground plane (please refer to No.7).



|  |  |   |                       |
|--|--|---|-----------------------|
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|  |  |   | <b>REV. A</b>         |

## 6. Antenna Dimensions (unit: mm)



## 7. Antenna Assembly Location Diagram & Layout Guide:

### (1) Test Board



Type A



Type B



**Tolerances (Unless otherwise specified)**  
 X :  $\pm 1$       X.X :  $\pm 0.1$       X.XX :  $\pm 0.01$   
 Angle :  $\pm$       Hole Dia. :  $\pm$



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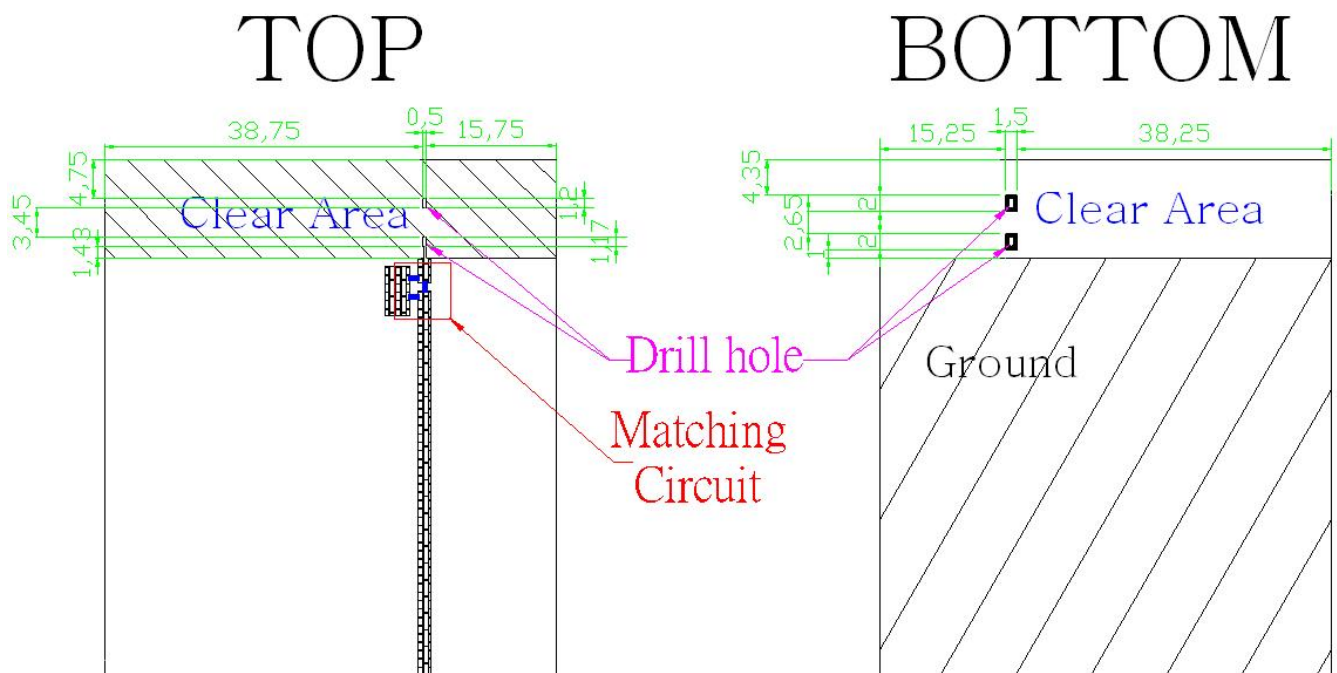
**DOCUMENT NO.**

**H2B2BC1H1B0100**

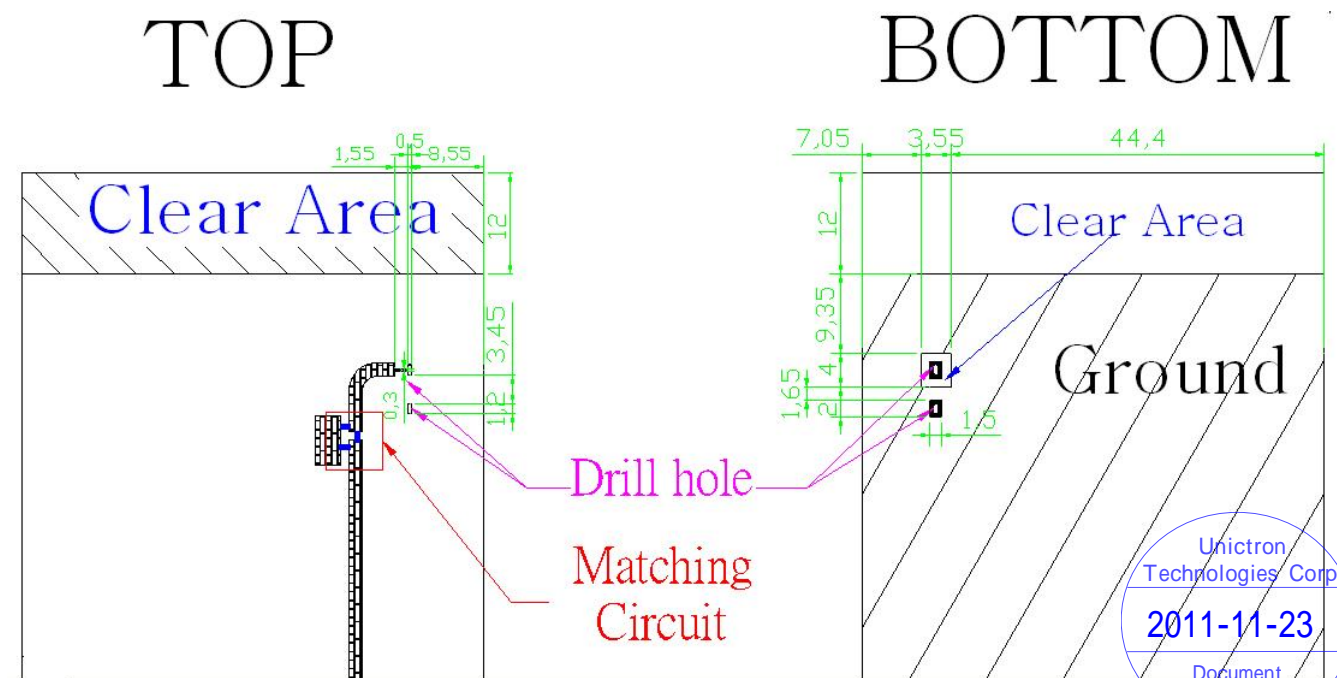
**REV. A**

## (2)Layout Guide

Type A:



Type B:



**Tolerances (Unless otherwise specified)**  
X :  $\pm 1$       X.X :  $\pm 0.1$       X.XX :  $\pm 0.01$   
Angle :  $\pm$       Hole Dia. :  $\pm$

Scale :      Unit : mm  
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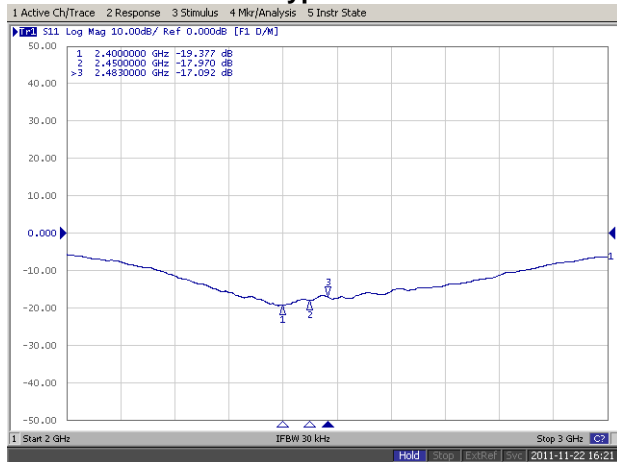
**H2B2BC1H1B0100**

**REV. A**

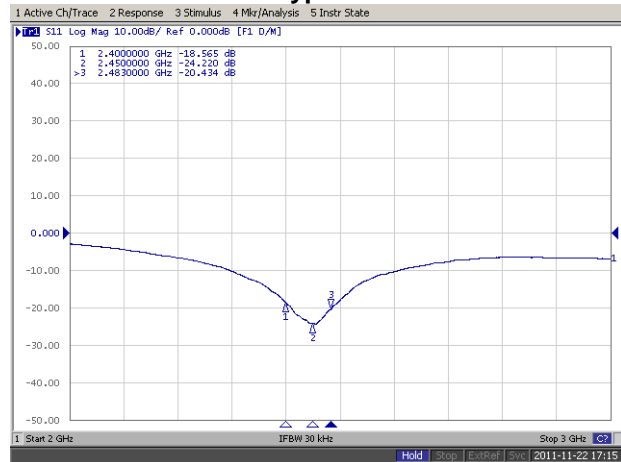
## 8. Electrical Characteristics

### (1) Return Loss

Type A

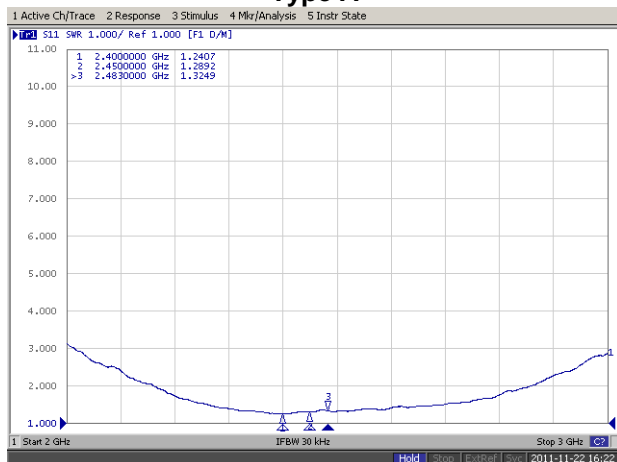


Type B

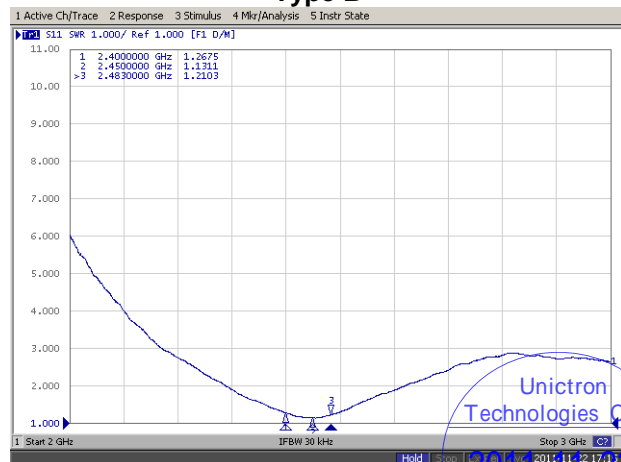


### (2) VSWR

Type A



Type B



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#### Tolerances (Unless otherwise specified)

X :  $\pm 1$       X.X :  $\pm 0.1$       X.XX :  $\pm 0.01$

Angle :  $\pm$       Hole Dia. :  $\pm$

Scale :      Unit : mm

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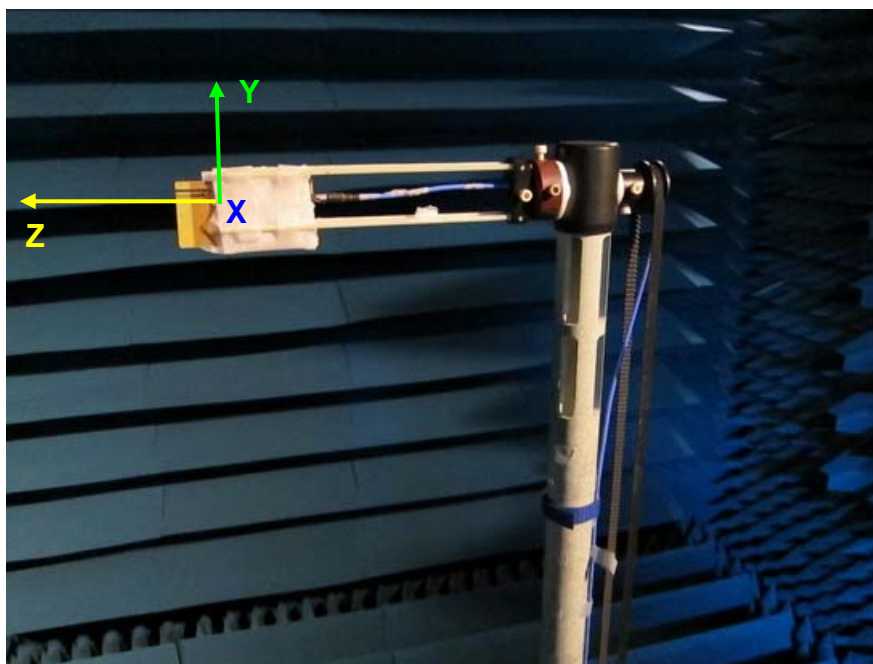
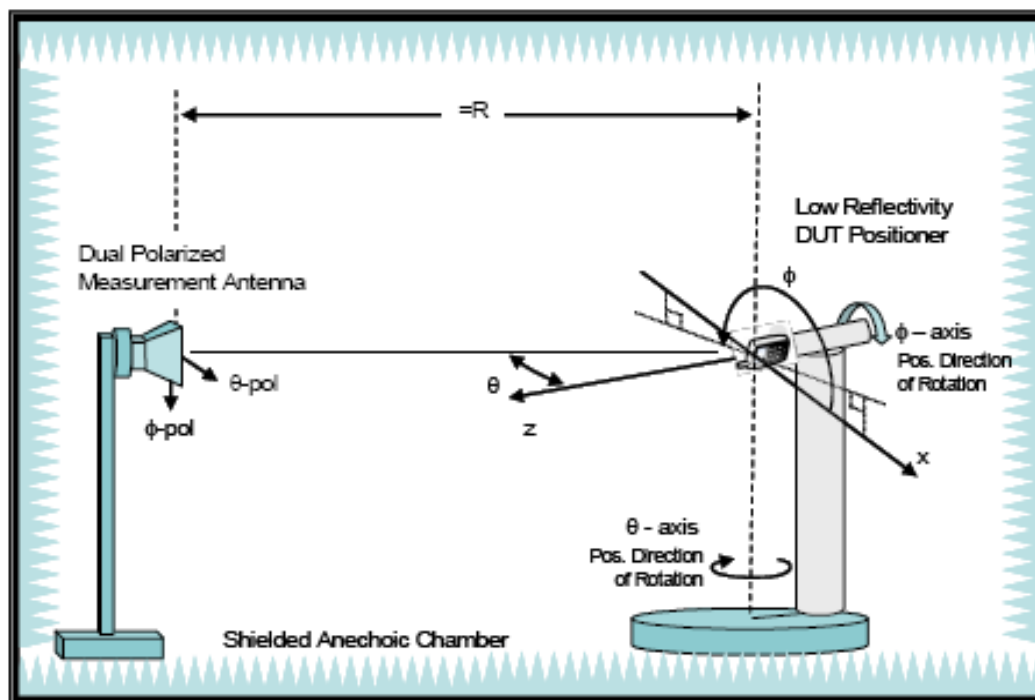
**DOCUMENT NO.**

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**REV.**


**A**

### (3)Three D Radiation Pattern measurements



The definition of the measurement face



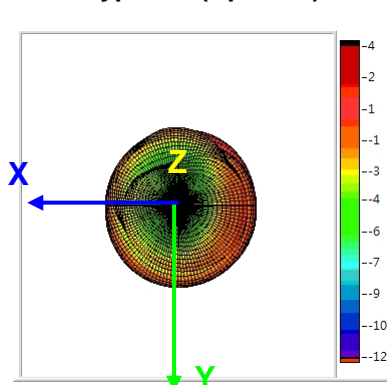
|  |                              |   |                         |
|--|------------------------------|---|-------------------------|
| <b>Tolerances (Unless otherwise specified)</b><br>$X : \pm 1$ $X.X : \pm 0.1$ $X.XX : \pm 0.01$<br><b>Angle : <math>\pm</math></b> <b>Hole Dia. : <math>\pm</math></b> |                              |  <b>Unictron Technologies Corporation</b><br>Website: www.unictron.com  |                         |
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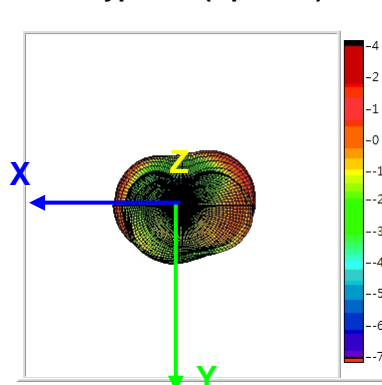
#### (4)WiFi/BT Antenna Three D Radiation Pattern (unit : dBi)

##### a. 2400MHz

Type A (Up View)

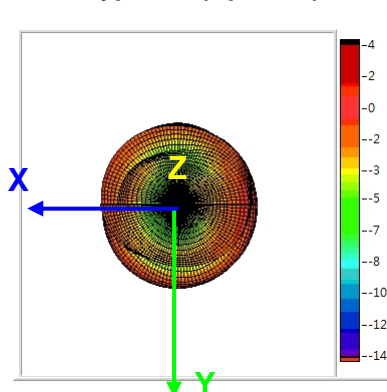


Type B (Up View)

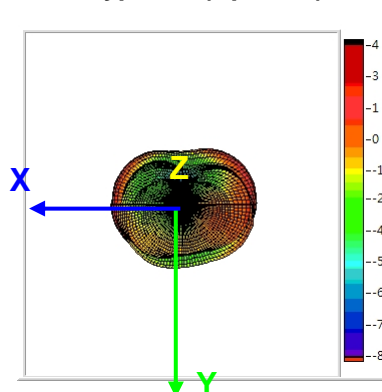


##### b. 2450MHz

Type A (Up View)

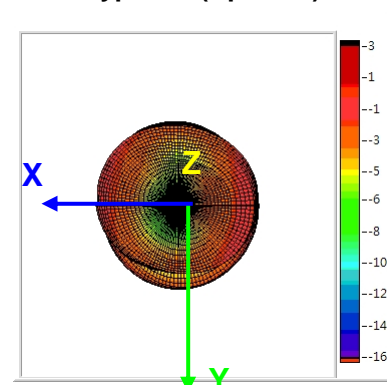


Type B (Up View)

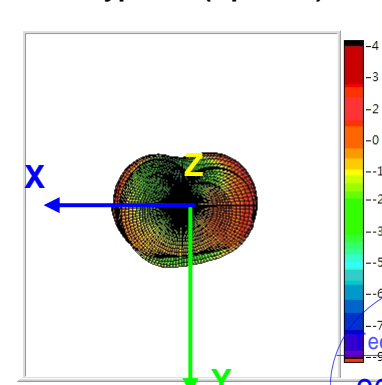


##### c. 2483MHz

Type A (Up View)



Type B (Up View)



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Angle :  $\pm$       Hole Dia. :  $\pm$

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**REV.**

**A**



## (5)Three D Gain Table

Type A:

| Frequency(MHz)        | 2400  | 2450  | 2483  |
|-----------------------|-------|-------|-------|
| Total Rad. Pow. (dBi) | -1.66 | -1.58 | -1.78 |
| Peak Gain(dBi)        | 3.8   | 3.67  | 3.45  |
| Efficiency(%)         | 63.23 | 64.5  | 61.37 |

Type B:

| Frequency(MHz)        | 2400  | 2450  | 2483  |
|-----------------------|-------|-------|-------|
| Total Rad. Pow. (dBi) | -1.57 | -1.36 | -1.14 |
| Peak Gain(dBi)        | 3.54  | 3.79  | 4.14  |
| Efficiency(%)         | 64.66 | 68.11 | 71.91 |



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Angle :  $\pm$       Hole Dia. :  $\pm$



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