



## RF PRODUCT INFORMATION

### Bluetooth Antenna

#### FEATURES

- \* Surface Mounted Devices with a small dimension of 17.3 \* 7.7 \* 3.5 mm
- \* Embedded technology is able to future integrate with the system design.
- \* This antenna fine-tuning doesn't need to change the system PCB layout. The characteristic can save system designer's developing cost and meet project schedule.
- \* High stability in Temperature/ Humidity change

#### ELECTRICAL CHARACTERISTICS

Item	Specification
frequency	2.4 ~2.5 GHz
Bandwidth	100MHz
Peak Gain	-0.94 dBi
Efficiency	50
VSWR	< 2
Polarization	Linear
Impedance	50 Ω

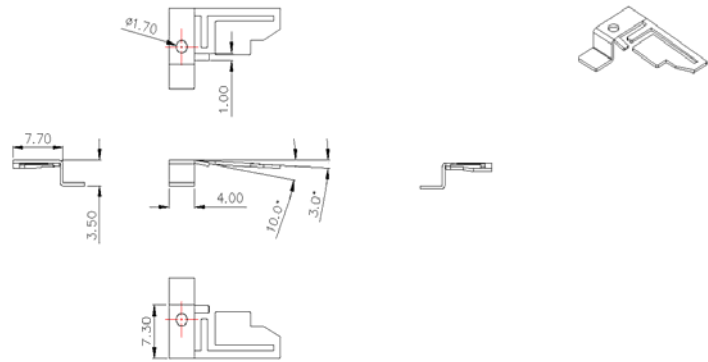
#### APPLICATIONS

- \* Bluetooth Application

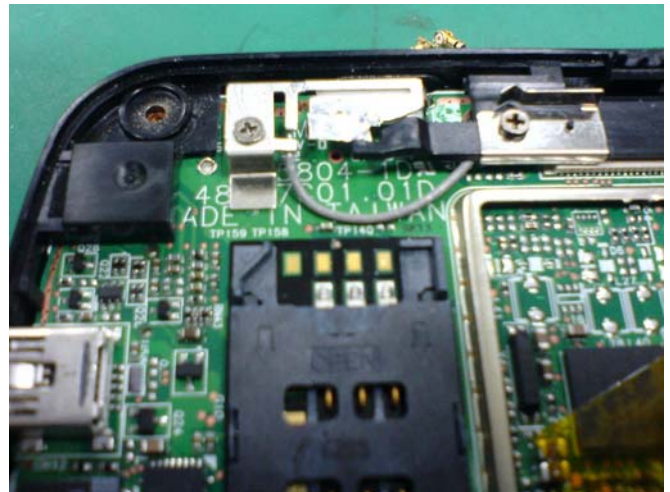
#### Photo



#### DIMENSION



#### BT Antenna Location Footprint in Base



#### CONTACT INFORMATION

For more information, please contact with sales dep..  
 WHA YU INDUSTRIAL CO.,LTD  
 Tel : 886-3-5714225  
 Fax : 886-3-5713853 / 5723600  
 E-mail : www.whayu.com

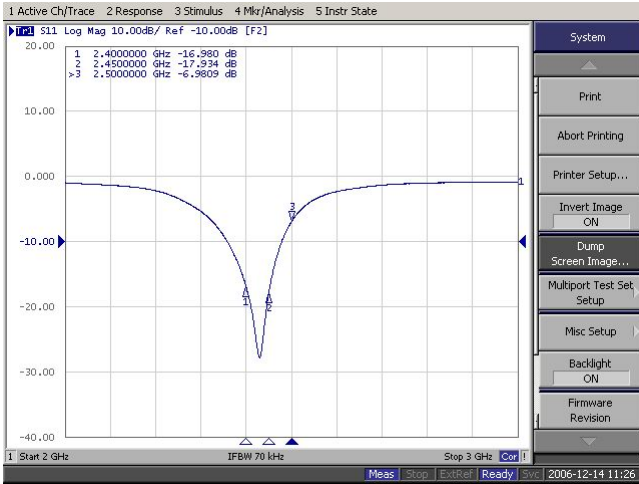


## MEASUREMENT INSTRUMENT

- \* Agilent Technologies E5071A 300K~8.5GHz ENASeries Network Analyzer
- \* Chamber : 5m(W) \* 3.8m(H) \* 4.3m(L)
- \* Gain Horn Antenna : SG-430

## Test Report

### Return loss & Test Environment



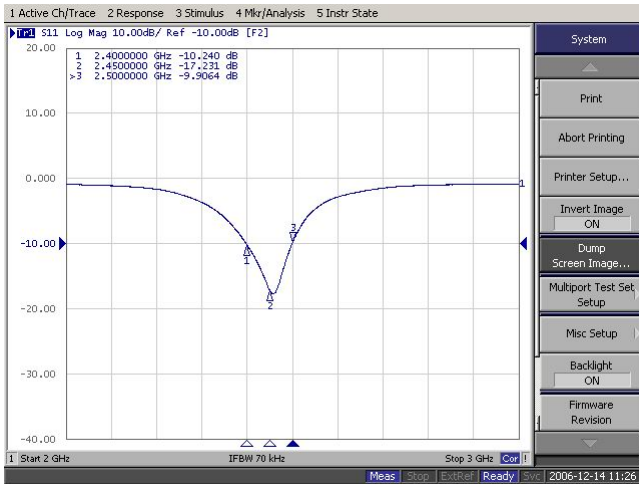
**With Stylus**



Bluetooth Antenna (With Stylus)			
Frequency (GHz)	<b>2.4</b>	<b>2.45</b>	<b>2.5</b>
Return Loss	<b>-16.98</b>	<b>-17.93</b>	<b>-6.98</b>

### Antenna Gain & Pattern (With Stylus)

Frequency (GHz)	Peak gain (dBi)	Efficiency (%)	Average(%)	Specification (%)
<b>2.4</b>	<b>3.12</b>	<b>53.67</b>	<b>48.28</b>	<b>50</b>
<b>2.45</b>	<b>2.80</b>	<b>46.91</b>		
<b>2.5</b>	<b>2.93</b>	<b>44.26</b>		



Without Styles



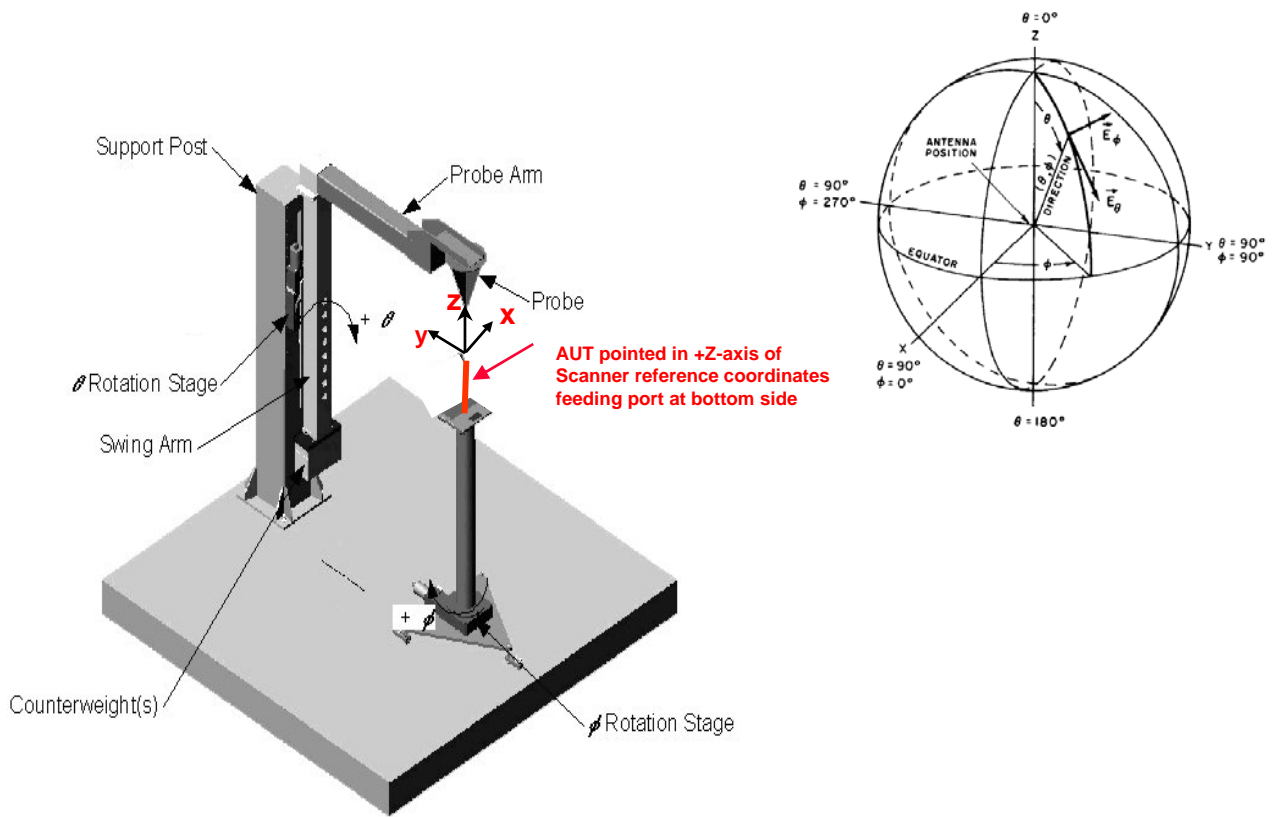
Bluetooth Antenna (Without Stylus)			
Frequency (GHz)	2.4	2.45	2.5
Return Loss	-10.24	-17.23	-9.90

Antenna Gain & Pattern (Without Stylus)

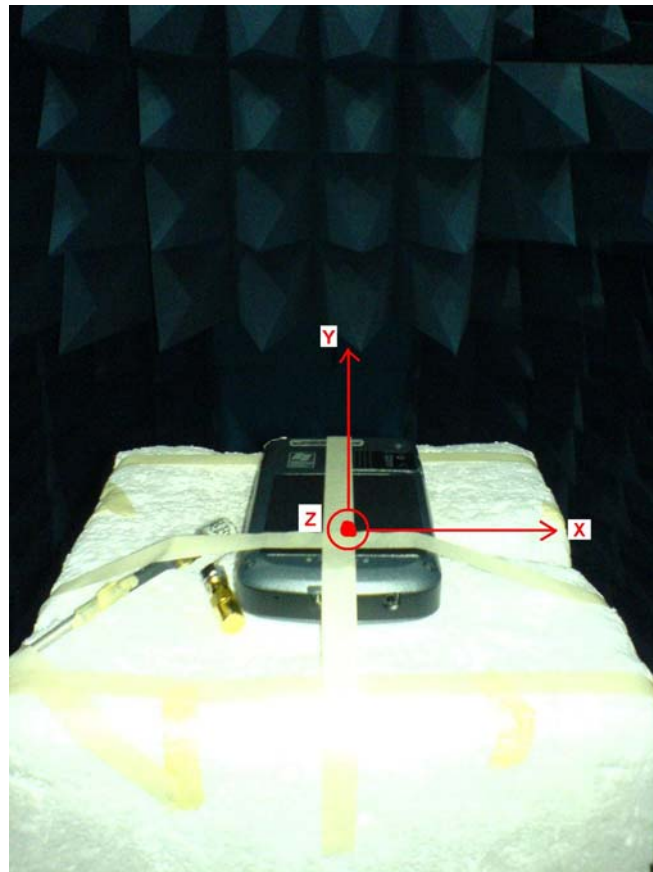
Frequency (GHz)	Peak gain (dBi)	Efficiency (%)	Average(%)	Specification (%)
2.4	2.76	51.70	50.84	50
2.45	2.58	50.68		
2.5	3.01	50.15		



### PATTERN & GAIN TEST ILLUSTRATION



### DUT Photo

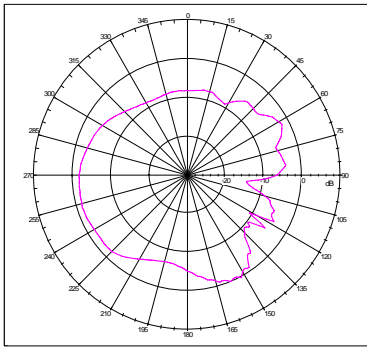




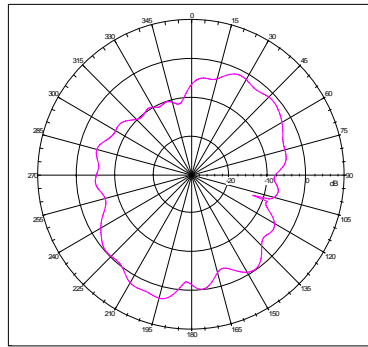
With Stylus

2.4 GHz

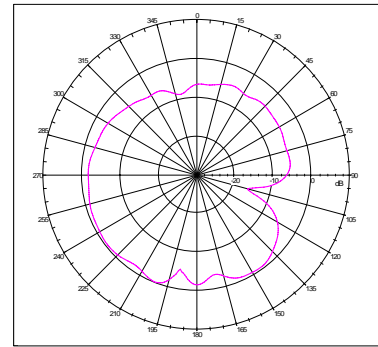
X-Y Plane



X-Z Plane

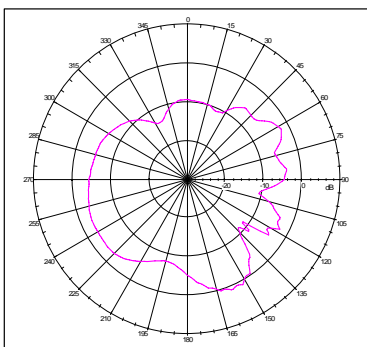


Y-Z Plane

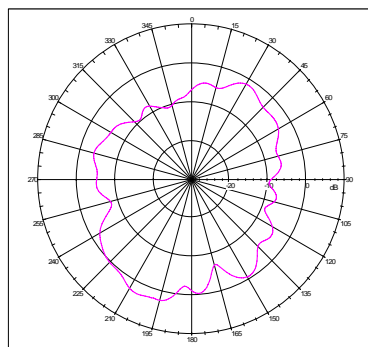


2.45 GHz

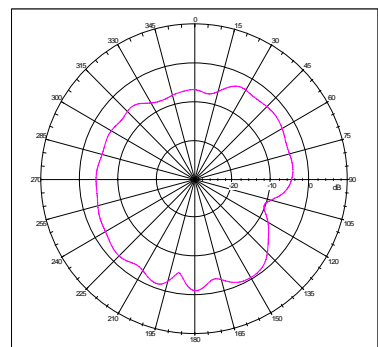
X-Y Plane



X-Z Plane

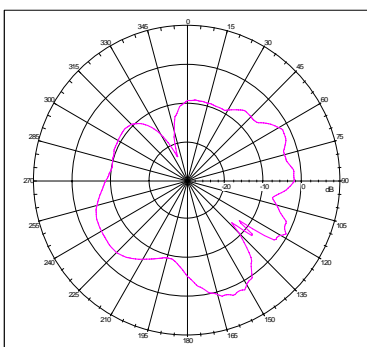


Y-Z Plane

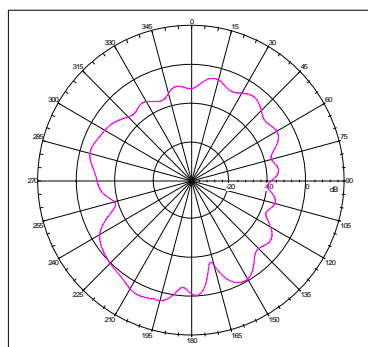


2.5 GHz

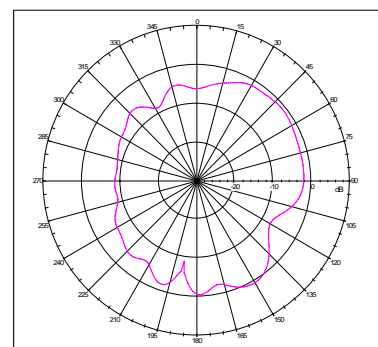
X-Y Plane



X-Z Plane



Y-Z Plane

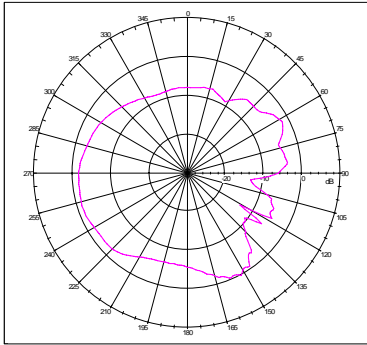




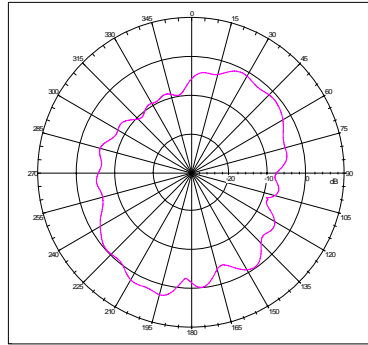
Without Stylus

2.4 GHz

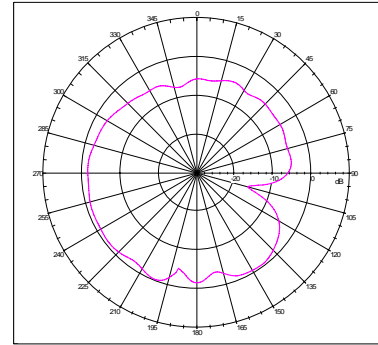
X-Y Plane



X-Z Plane

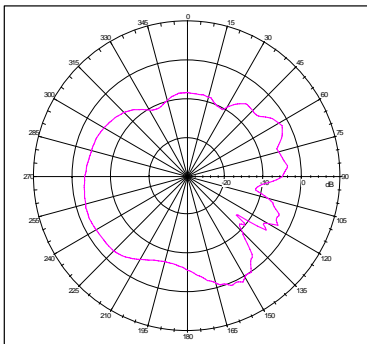


Y-Z Plane

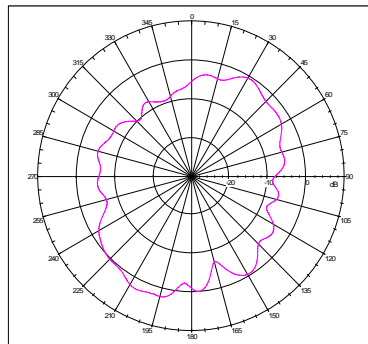


2.45 GHz

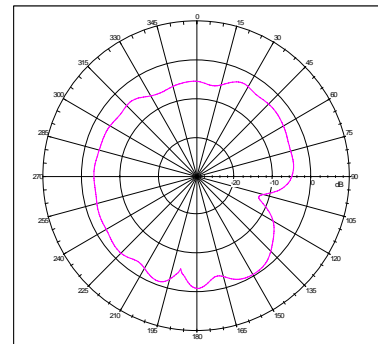
X-Y Plane



X-Z Plane

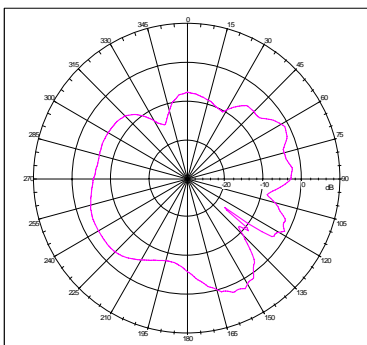


Y-Z Plane

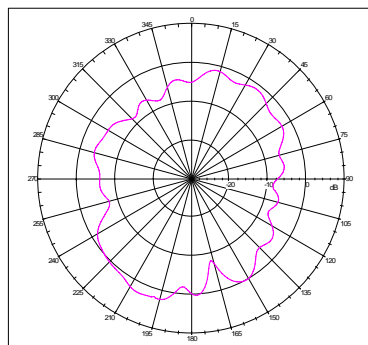


2.5 GHz

X-Y Plane



X-Z Plane



Y-Z Plane

