




SPECIFICATION FOR APPROVAL

Customer	MKL
Customer Project Name	TF-ANTENNA;PIFA,OMNI,
Customer Part Number	313002000359
MITAC/MPT Project Name	ANTENNA:BT.WIFI 802.11b/a.
MITAC/MPT Part Number	931300200104
Updated Date	August 30, 2007
Revision	R00

Customer Confirmation						
Please kindly sign this document and feed back a paper copy to us	Sign Date	Y		M		D

Prepared by **Avril.Li** 
R.D.I.M.E. Engineer of Module Product Division

Checked by **Dijon.Liu** 
Section Supervisor of Module Product Division

Approved by **Hank.yu** 
B.U.I/Section Manager of Module Product Division

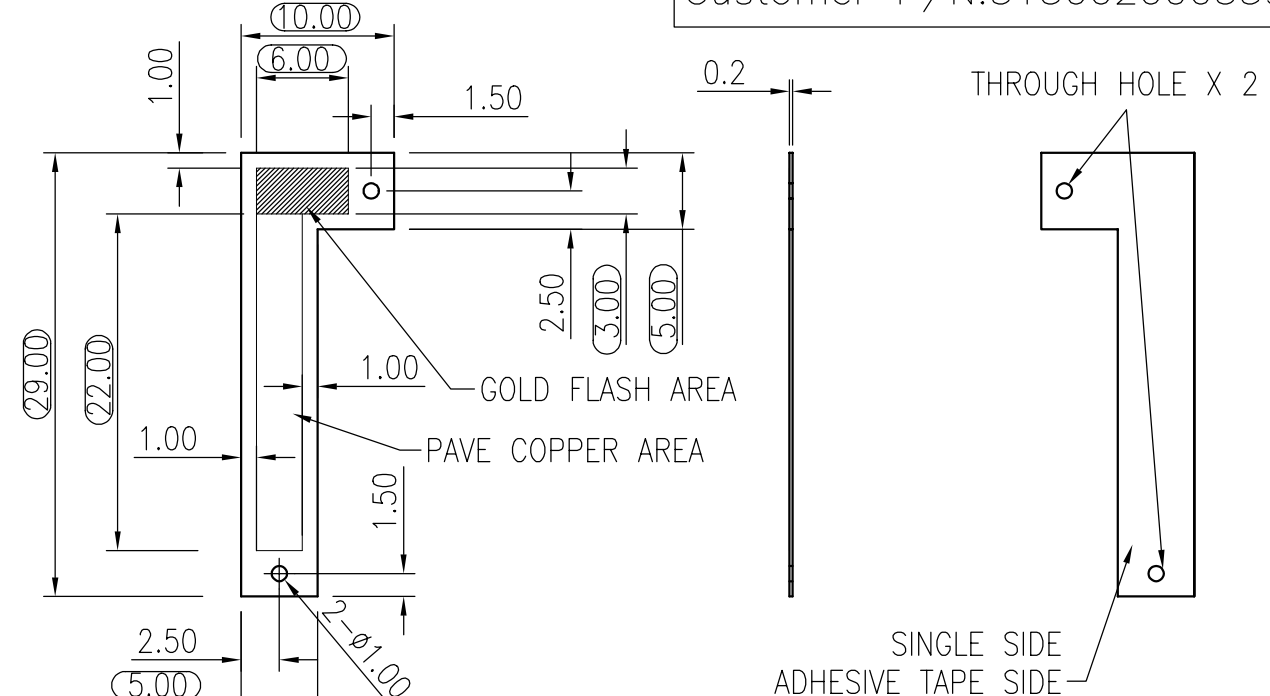
漢達精密科技股份有限公司 佛山市順德區漢達精密電子科技有限公司 漢達精密電子(昆山)有限公司

MITAC PRECISION TECHNOLOGY CORPORATION
 MITAC PRECISION TECHNOLOGY (SHUNDE) LTD.CORP.
 MITAC PRECISION TECHNOLOGY (KUNSHAN) LTD.CORP.

TOL ±			✓							△			/ /
	RANGE	Pla	Met	Ins	Por	Cab	Pac	Gas	DIS	△			/ /
0~6	0.1	0.1	0.1	0.2	0.5	1	0.5	0.2		△			/ /
6~30	0.1	0.1	.15	.25	1	1	0.5	.25		△			/ /
30~80	0.1	.15	0.2	0.3	2	1.5	1	0.3		△			/ /
80~180	.15	.15	.25	0.3	2	2	1	.45		△			/ /
180~315	.15	0.2	0.3	0.4	2.5	2	1	0.6		△			/ /
315~800	0.2	0.3	0.4	0.5	3	3	2	1.1	ITEM	CONTENTS OF CHANGE	ECR No.	YY/MM/DD	

ITEM	CONTENTS	SPECIFICATION
1	Adhesive force test	Electroplate layer is not torn after testing
2	Chemical resistance	Not divide layer after soaked 10s in the acetone
		Not divide layer after soaked 10s in the anhydrous ethanol
		Not divide layer after soaked 10s in the 5% NaOH
3	Thermal stress test	No bubbles and white dots
4	Solderability test	The moist area is no less than 95%

Customer P/N:313002000359




NOTES:

- 1.THE TOTAL THICKNESS OF THE PRODUCT IS LESS THAN 0.29MM;
- 2.ITEMS MARKED WITH \varnothing ARE CRITICAL DIMENSIONS AND SHOULD BE CHECKED FOR CONFORMITY DURING FAI,IPQA,AND OQA OF SUPPLIER AND IQC OF CUSTOMER;
- 3.ANY MATERIALS TO BE USED FOR THIS PART COMPLY WITH MPT GREEN PROCUREMENT STANDARD BASED ON EHS-3-019.

2	-----	3M 467	1	PART	-----
1	-----	FPC	1	PART	-----
ITEM	PART NO	DISCRIPTION	Q'TY	TYPE	REMARK

DATE	2007/08/21	MATERIAL	SEE NOTES	PROJECTION	\varnothing \leftarrow THIRD ANGLE	REMARK	A4
UNIT	MM	SCALE	2.00	DRAWING NAME	ANTENNA;BT,FPC,CHUB 360,MPTK		
DRAWN	DESIGNED	CHECKED	APPROVED	MATERIAL NO.	AD	931300200104	R00
Avril.Li	Yeal.Xin	Dijon.Liu	Hank.Yu	漢達精密科技股份有限公司 MITAC PRECISION TECHNOLOGY CORP.			

2. The following pictures show the rough feature of this product.

<p>Top View</p>	
<p>Bottom View</p>	

Antenna Estimate Report

PROJECT: *CHUB 360*

PRODUCT: *Bluetooth & WiFi Antenna*

REVISION: *A01*

REPORT DATE: *2007/08/02*

Prepared by : Leeting

Checked by : J.M.

Approved by : J.M.

CHUB 360 Bluetooth&WiFi Antenna

Antenna Estimate Report

Summary:

This report was the measurement results for **Bluetooth Antenna & WiFi** model and all performance was based on **Bluetooth Antenna & WiFi** handset (Revision **A01**).

The report will include this information below for **Bluetooth & WiFi** (2400~2500MHz) bands:

R 3D Radiation Pattern


I. 3D Radiation Pattern

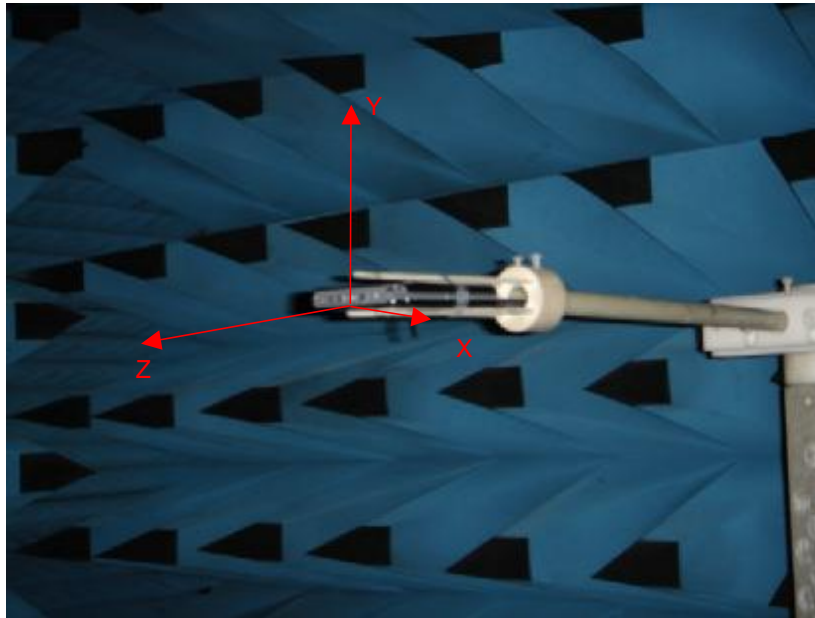
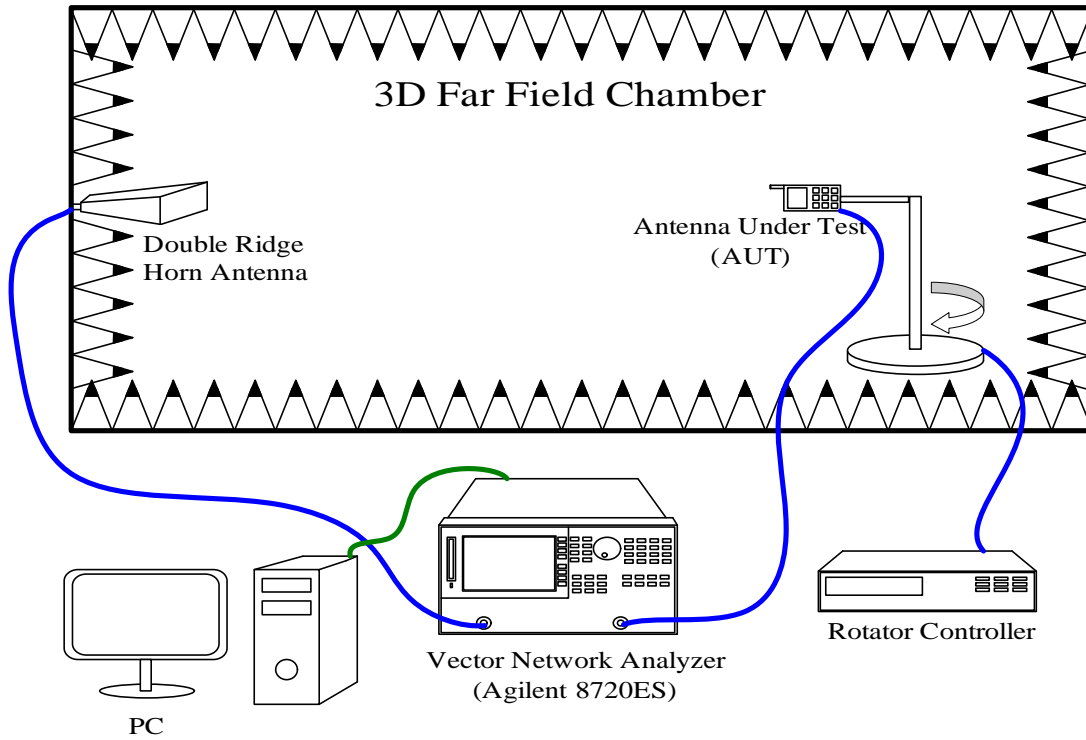
a. System Set up


- i. Using a low loss coaxial cable to link a standard handset jig
- ii. Fixed this handset jig on chamber's rotator plane
- iii. Linking coaxial cable into network analyzer port and using a probing horn antenna to collect data.
- iv. Data collecting for each 15 degree.
- v. Using another standard gain horn antenna to calibrated those data

b. Chamber definition

- i. An anechoic chamber (10mx5mx5m) which satisfied far-field condition was applied to avoid multi-path effect
- ii. The quite room region is 40cmx40cmx40cm at the center of rotator (DUT size should small than this space)
- iii. The Probing antenna is Double Ridge Horn Antenna which is placed in the one side of chamber room. And the antenna under testing(AUT) is placed in the other side of the chamber.
- iv. The gain is calibrated by the standard gain horn antenna, and we do the gain calibration in each measurement.
- v. We use the Agilent 8720ES for the pattern measure.

DESIGNED BY : Leeting	APPROVED BY : J.m	 INPAQ TECHNOLOGY CO., Ltd
TITLE : CHUB 360	DOCUMENT NO.	REV.
	Date : 2007/08/02	A01

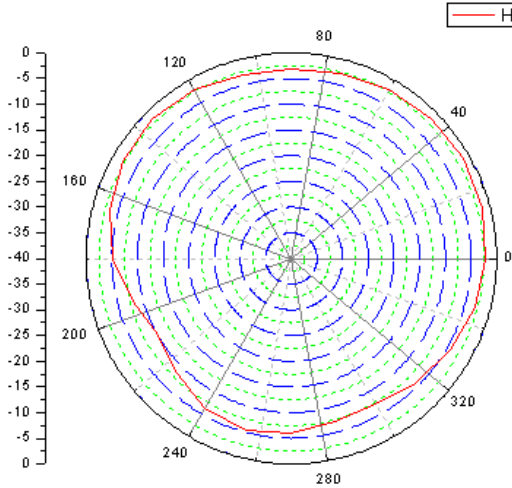


DESIGNED BY : Leeting	APPROVED BY : <i>J.m</i>	 INPAQ TECHNOLOGY CO., Ltd
TITLE : CHUB 360		DOCUMENT NO.
		Date : 2007/08/02
		REV. A01

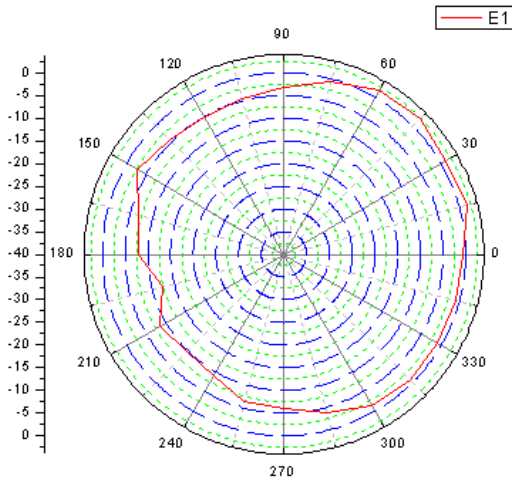
c. 3D Gain Measurement Pattern


Frequency (Unit:MHz)	Bluetooth & WiFi 3D Gain Data (Unit : dBi)			
	Max.	Min.	Average	Efficiency(%)
2400	1.59	-3.3	-3.54	44.27
2438	2.41	-2.66	-2.85	51.82
2445	2.57	-2.58	-2.75	53.08

H

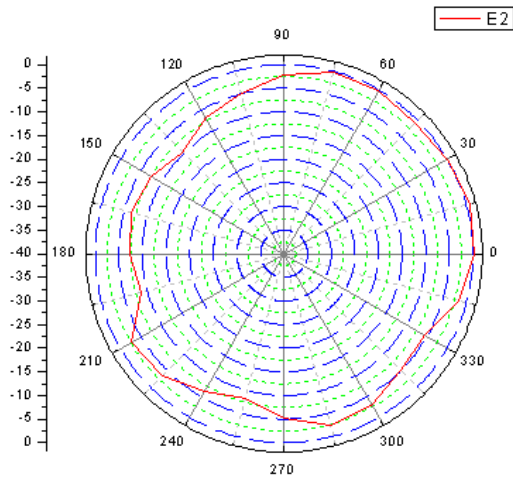



E1



DESIGNED BY : Leeting	APPROVED BY : J.m	 INPAQ TECHNOLOGY CO., Ltd
TITLE : CHUB 360		
		REV. A01

E2



DESIGNED BY : Leeting	APPROVED BY : <i>J.m</i>	 INPAQ TECHNOLOGY CO., Ltd	
TITLE : CHUB 360		DOCUMENT NO.	REV.
		Date : 2007/08/02	A01