

SPECIFICATION FOR PRELIMINARY

APPROVAL SIGNATURE
DATE :

CUSTOMER : DIGI **PART NO :** A24-HABUF-P5I **REV.**

DESCRIPTION : Antenna

PLEASE SIGN AND RETURN ONE COPY.

ALL PRODUCTION UNITS WILL BE BUILT ACCORDING
TO THIS SPECIFICATIONS.

MODEL NO: AN2400-37A19BX

AGENCY APPROVAL:

PRESENTED BY: NO.

CHECKED BY: Johnson Lin

APPROVED BY: Johnson Lin

DATE : 03/10/2014

19F, NO.102, HSIN TAI WU ROAD SEC.1, HSIH-JR CITY, TAIPEI HSIEN, TAIWAN

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1. Specification

Sample Photo



A. Electrical Characteristics

Frequency	2400 ~ 2500 MHz
S.W.R.	≤ 2.0
Antenna Gain	2 dBi
Polarization	Linear
Impedance	50 Ohm

B. Material & Mechanical Characteristics

Material of Radiator	Cu
Material of Plastic	Body: TPE Hinge: PC+ABS Holder: PC+ABS
Cable Type	O.D. 1.13 mm
Connector Type	I-PEX
Connector Pull Test	≥ 1 Kg
Connector Torque Test	/

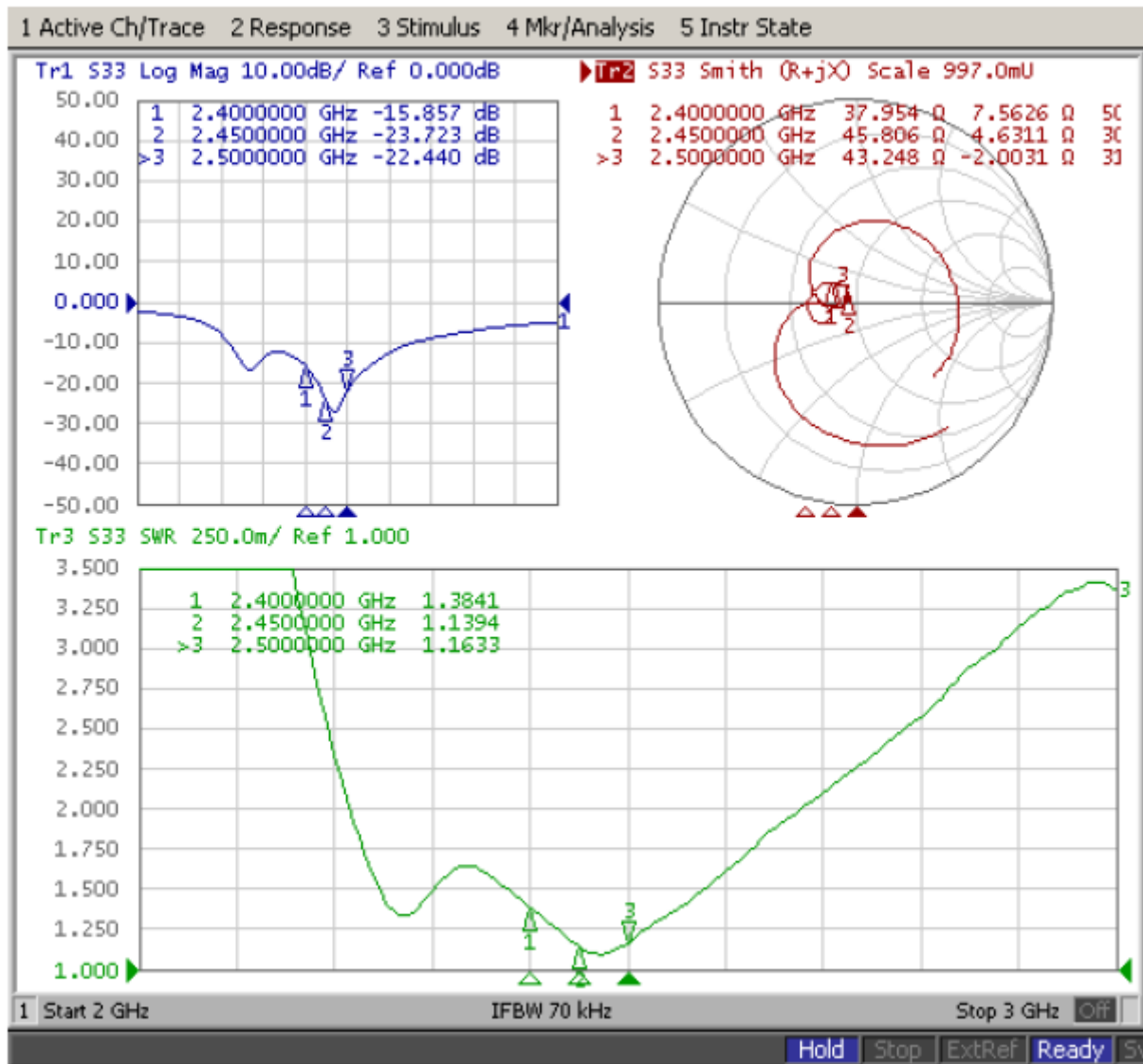
C. Environmental

Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	MIL-STD-202G, 201A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: 350±10°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	MIL-STD-202G, 211A, cond. E Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	MIL-STD-202G, 101E, cond. B Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	MIL-STD-202G, 103B, cond. B Temp: 40°C; RH: >= 95%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	MIL-STD-202G, 108A, cond. A Temp: 85°C; Time: 96 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2002/95/EC
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

3. Antenna - S Parameter Test Data



4. Antenna - Radiation Pattern Test Data

Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m

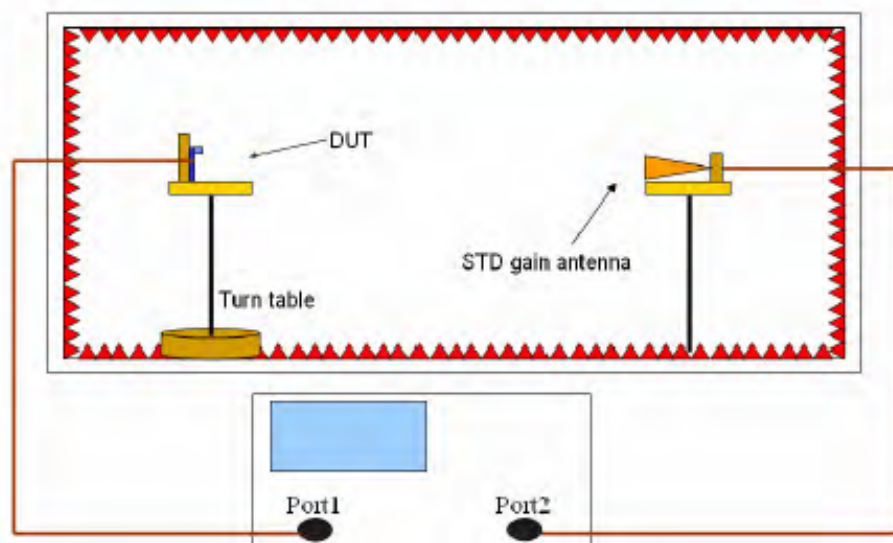
Quiet Zone: 600mm @1 GHz

Isolation: >100dB @ 1 MHz ~ 10 GHz

Testing Equipment: Agilent 5071B

Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration

Double Ridged Horn Antenna



5. Mechanical Drawing

See attached files

6. Material Description and RoHS Test Report

See attached files

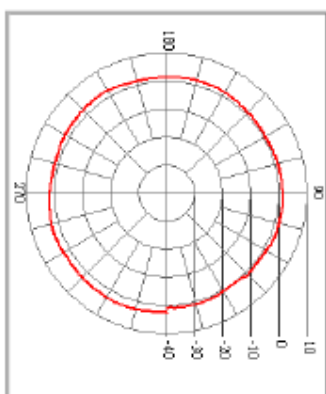
Model: 2.4GHz Antenna
Remsek J-H Plane // Vertical Polarization
Tested by: Antenna 3D Lab // Zhao Yao Rong

Location: Chamber
Temperature (°C): 22.00

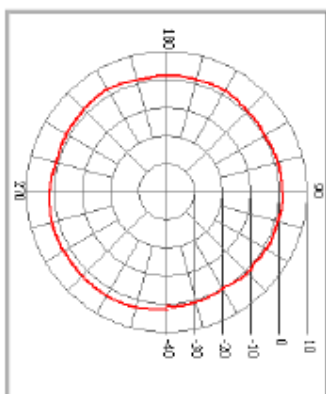
Date: 2009/4/3
Humidity (%): 55.00

Time: 17:47:02.13:25
Approved by:

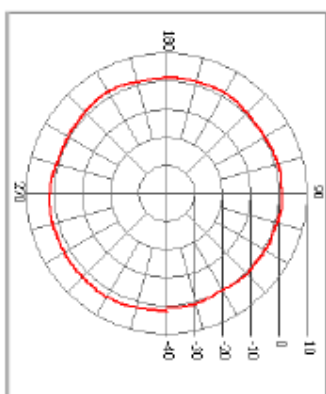
Freq (MHz)	2380	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	3.07	2.97	2.92	2.92	2.92	2.8	2.68	2.23	2.93	3.27	2.17	1.83
Peak Angle	338	332	332	321	320	320	314	305	305	302	295	289
AV Gain (dBi)	1.84	1.82	1.85	1.82	1.85	1.85	1.84	1.81	0.83	0.83	0.7	0.13



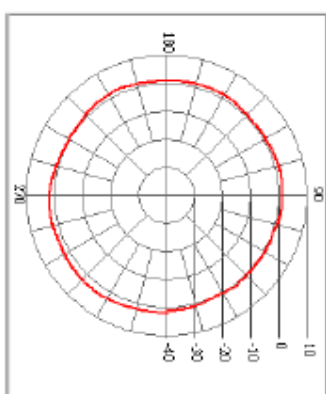
2380



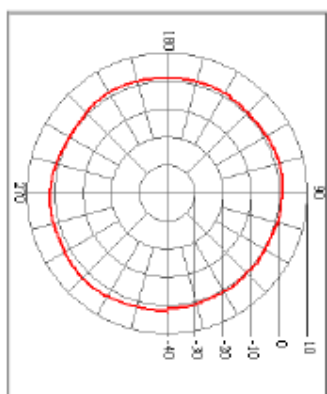
2400



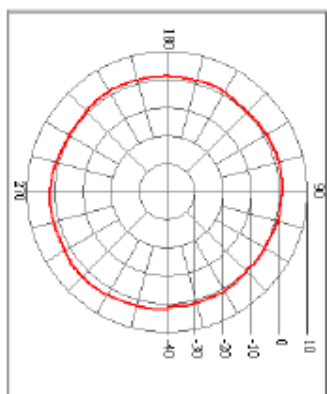
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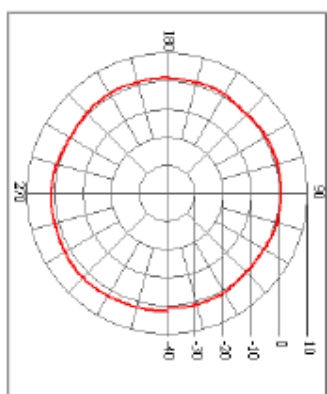
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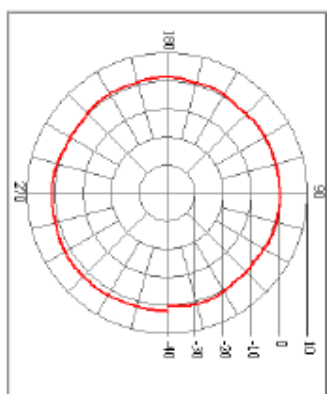
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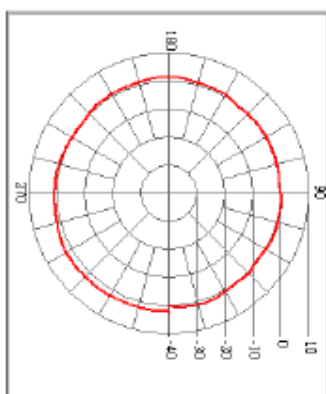
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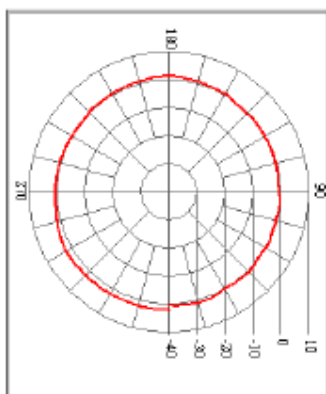
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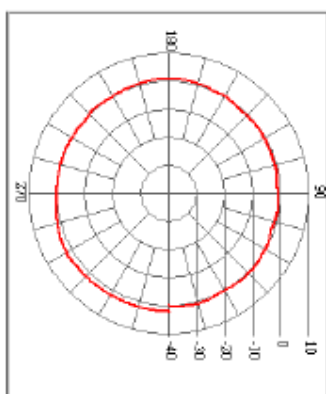
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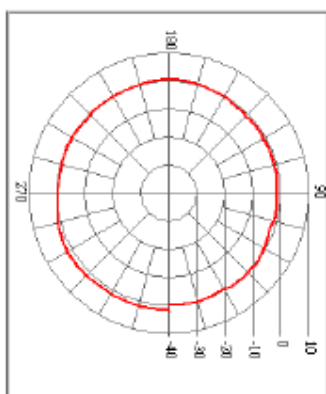
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2480



2490

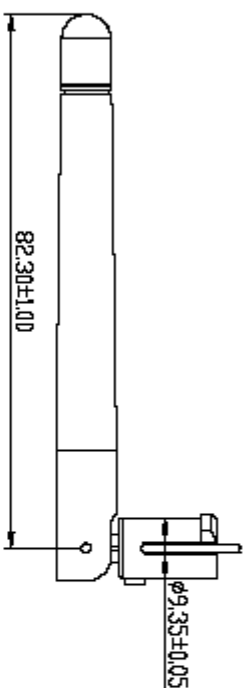
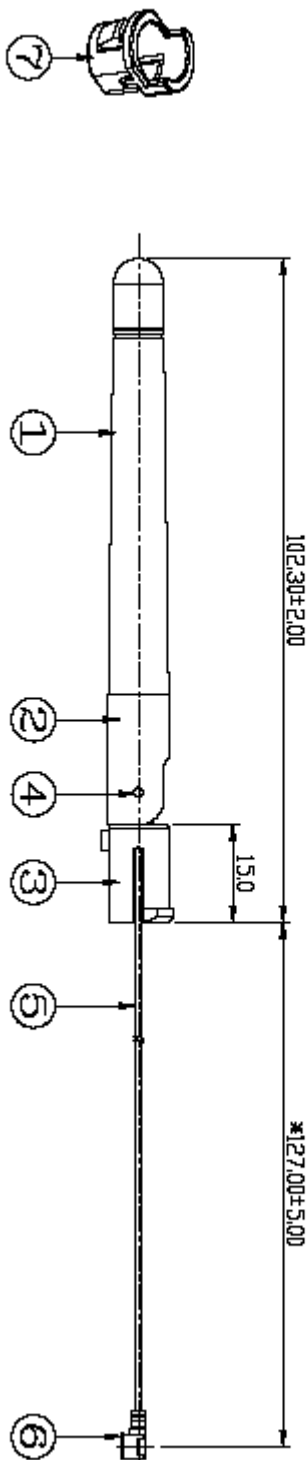


2500

RoHS

Compatible

REV	DATE	DESCRIPTION	APPROVER
A	08.10.29	Add packing criterion	Roger
A	09.04.13	Change packing from 20" CASE bag to 110" CASE bag	Roger
A			



Note:

1. Dimension: Take * is the important dimension
2. Tolerance: Unmarked tolerance refer to the standard tolerance please
3. CONN orientation is as shown

No	Part Number	Description	Material	Finish	Qty
7	R-AN07-05-POM	Holder	POM	Black 180°	1
6	CH-113	Conn		Mini Conn	1
5	R-CB-113B	Cable		1.13mm Black	1
4	R-AN01-1213Z	Hinge Pin	Cu	Black Zn Plated	2
3	R-AN3701-01A	Base	PC+ABS	Black	1
2	R-AN57-05	Body-2	PC+ABS	Black	1
1	R-AN57-03	Body-1	TPE	Black	1

PART NAME: ANTENNA-2.4GHz-2B1			
PART NO.: AN2400-37A19BX		DWG NAME: AN2400-37A19BX.dwg	
APPROVED BY	CHECKED BY	DESIGNED BY	UNITS: mm
Grant	Jack	Roger	SCALE: 1/1
2009/04/13	2009/04/13	2009/04/13	REV/SOK: C
		Tolerance	
		XX: ±0.10	
		XXX: ±0.05	
		XV: ±1°	

Part Number : AN2400-37A19BX	Revision : C
Name: AP ANTENNA	Customer : ALL

一、 WITH THE ANT AND HOLDER INTO BAG

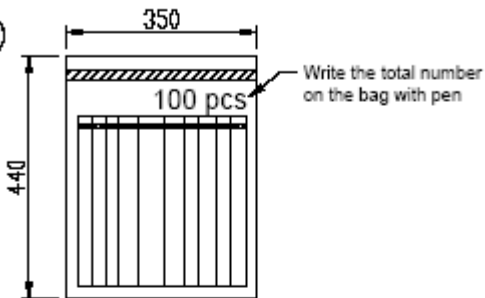
①



BAR CODE LABEL

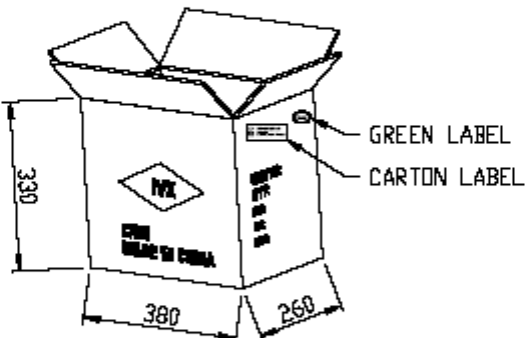
1PCS / SELF-ADHESIVE BAG

②



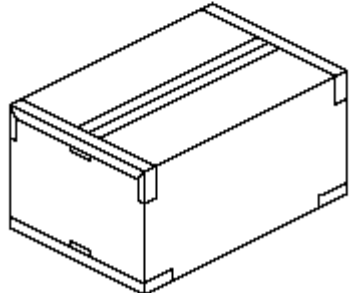
100PCS/PE BAG

二、 PACKING

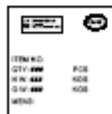


1500PCS ANTENNA AND HOLDER / CARTON

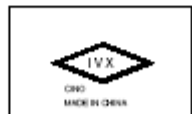
三、 SEALING



SIDE



FRONT



UNITS: mm