

# APPROVAL SHEET

For : 倫飛電腦股份有限公司  
Twinhead International Computer, Inc.

MODEL : R15GN

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wgt P/N : TWR15WIPI01A

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DATE : 11 JUL.,2003

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DESCRIPTION : R15GN Wireless PIFA Antenna

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CUSTOMER P/N :

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Manager	Chief	Engineer

Check	Responser



精乘科技股份有限公司

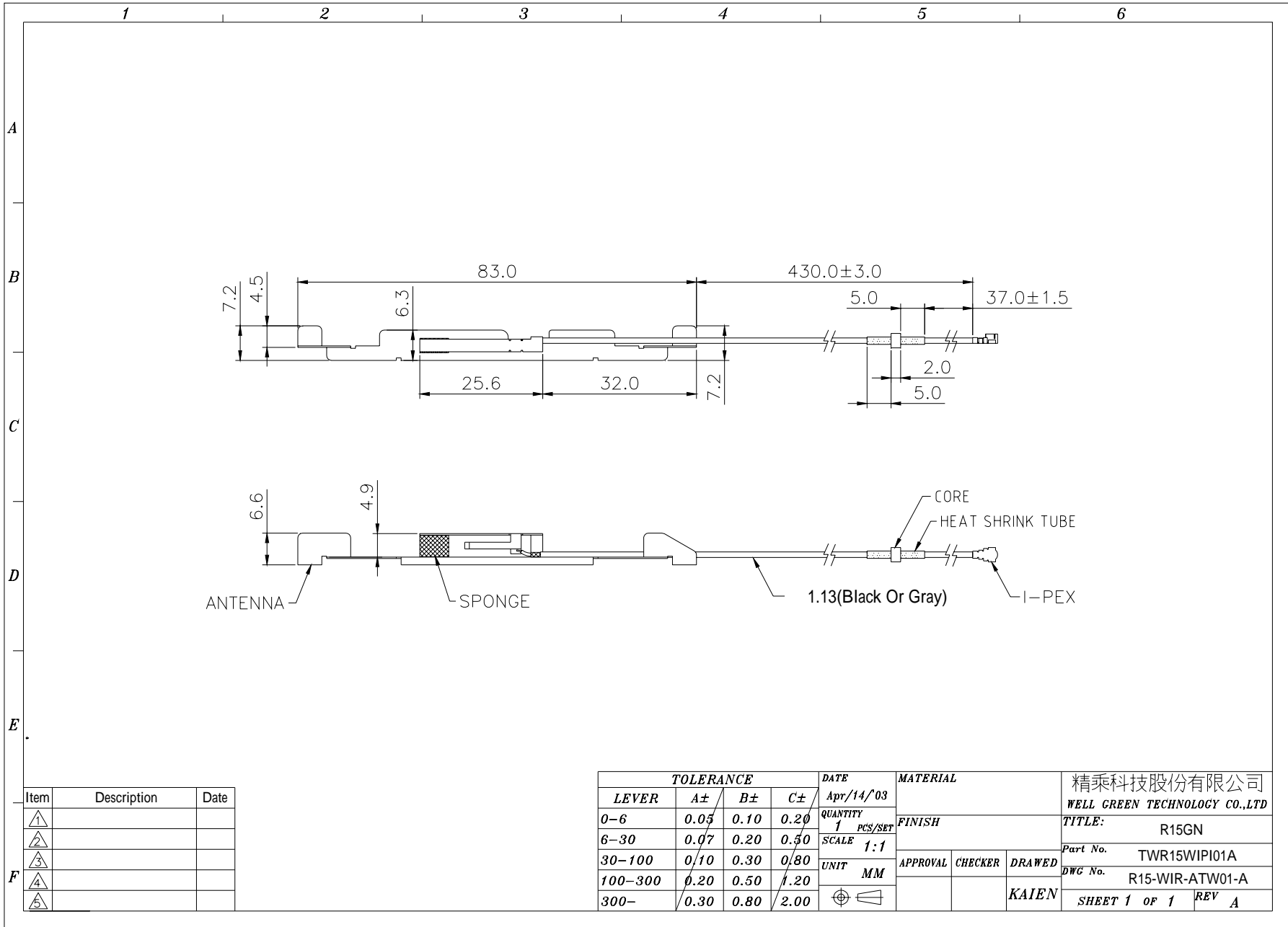
Well Green Technology Co., Ltd.

桃園縣平鎮市民族路雙連二段 118 巷 51 弄 20 號

No. 20, Alley51 ,Lane 118,ShuangLian Sec.2,Mintzu Rd.,  
PingJen City, TaoYuan Hsien, Taiwan, R.O.C

TEL: +886-3-420-6428 ; FAX: +886-3-420-6418

# 一、成品圖



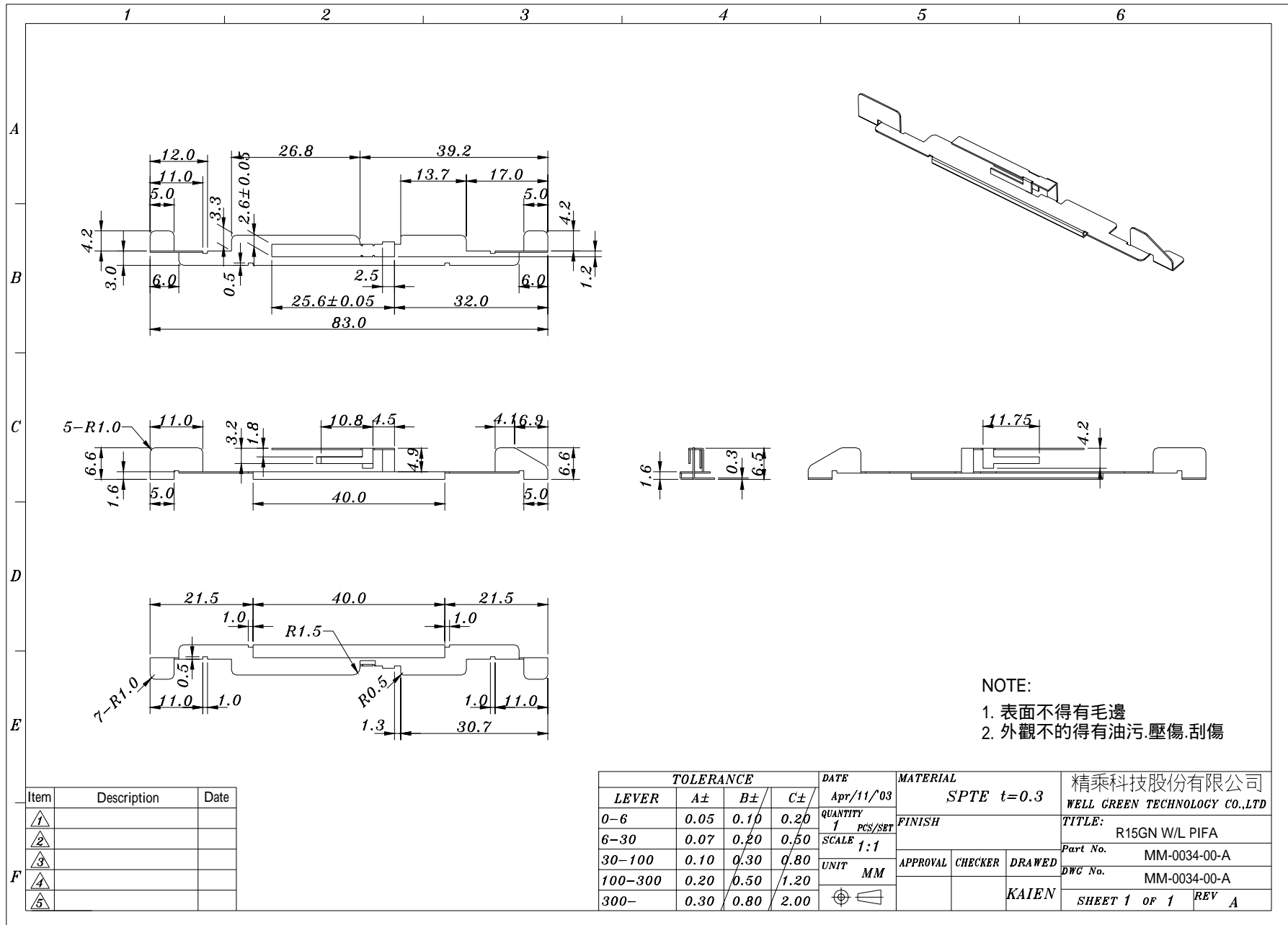
Item	Description	Date
△		
△		
△		
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△		

LEVER	TOLERANCE			DATE Apr/14/03
	A±	B±	C±	
0-6	0.05	0.10	0.20	QUANTITY 1 PCS/SET
6-30	0.07	0.20	0.50	SCALE 1:1
30-100	0.10	0.30	0.80	UNIT
100-300	0.20	0.50	1.20	MM
300-	0.30	0.80	2.00	⊕

MATERIAL		
FINISH		
APPROVAL	CHECKER	DRAWED
		KAIEN

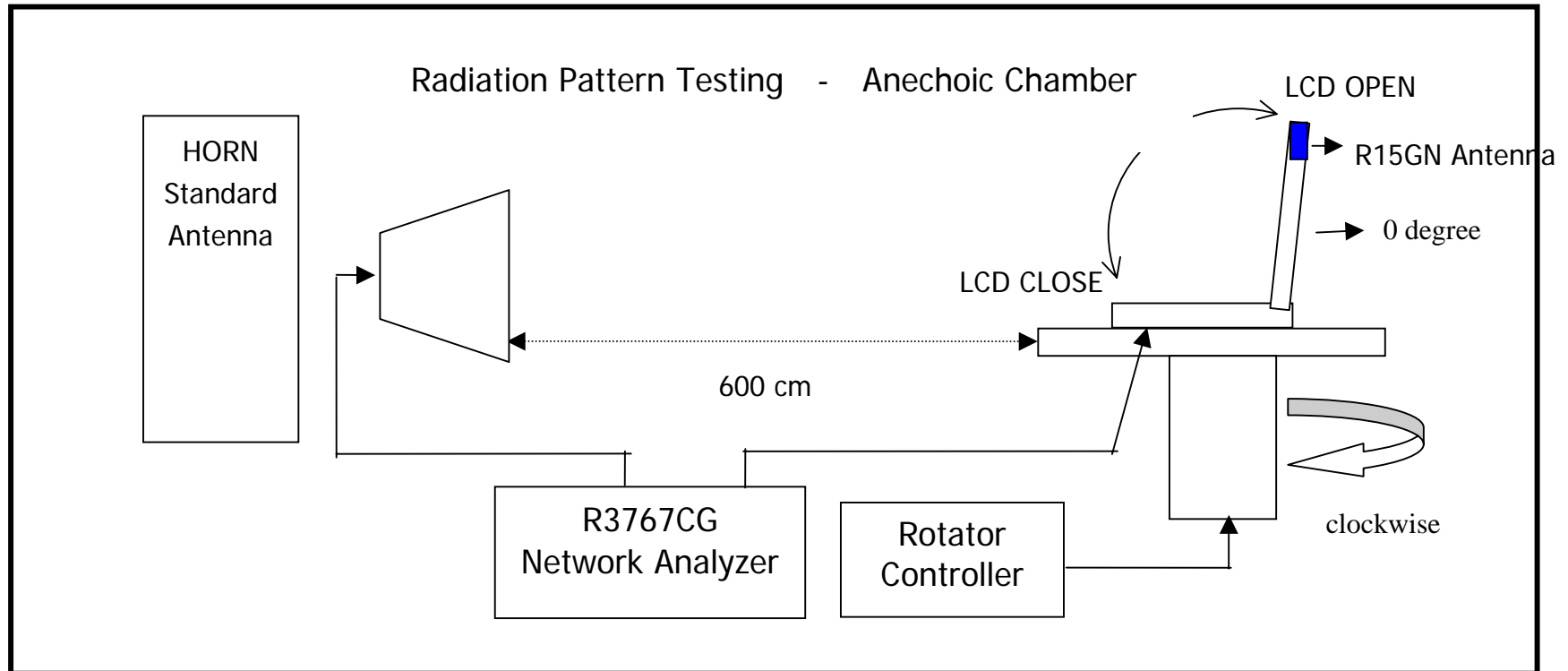
精乘科技股份有限公司 WELL GREEN TECHNOLOGY CO.,LTD	
TITLE: R15GN	
Part No.	TWR15WIPI01A
DWG No.	R15-WIR-ATW01-A
SHEET 1 OF 1	REV A

## 二、零件圖

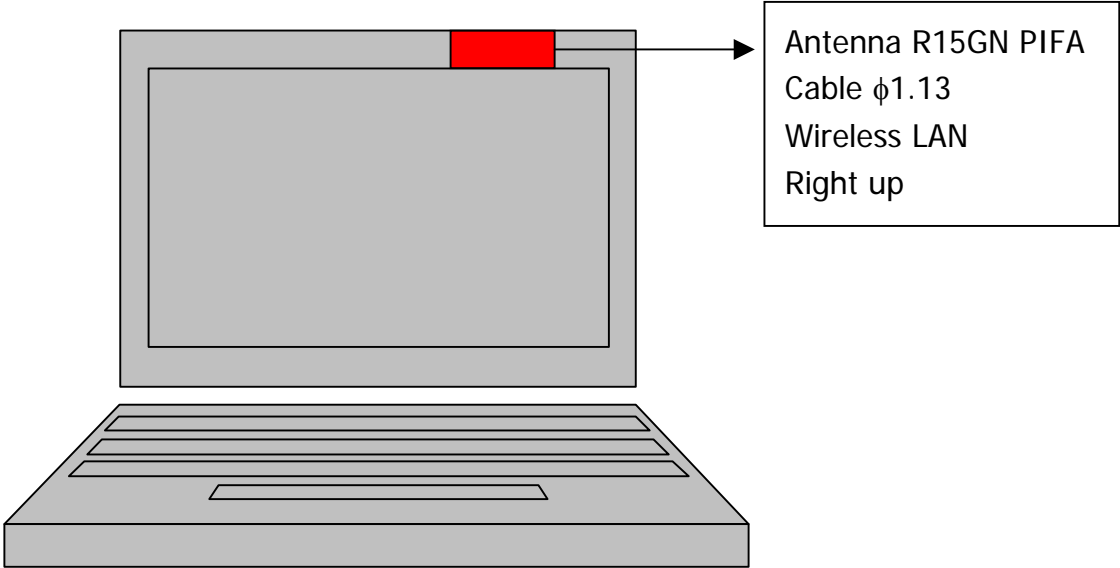


### 三、 802.11b and WIRELESS Antenna Testing Conditions :

#### 1. Testing set up:



2. Mechanical dimensions



#### 四、Free Space 電氣特性 (Antenna Electricity Characteristics) :

##### 1. Return Loss



Antenna	Center freg. @MHz	BW @MHz	Return Loss		
			2.4GHz	2.45GHz	2.5GHz
R15GN	2450	333	-16.80	-22.59	-14.85

精乘科技股份有限公司

Well GreenTechnology  
CO., Ltd

P/N : TWR15WIPI01A

Frequency Band : 2.4~2.5GHz

Date : 04 APR.,2003

## 2. VSWR



Antenna	Center freg. @MHz	BW @MHz	VSWR		
			2.4GHz	2.45GHz	2.5GHz
R15GN	2450	333	1.32	1.15	1.43

精乘科技股份有限公司  
Well GreenTechnology  
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P/N : TWR15WIPI01A

Frequency Band : 2.4~2.5GHz

Date : 04 APR.,2003

### 3. Smith Chart

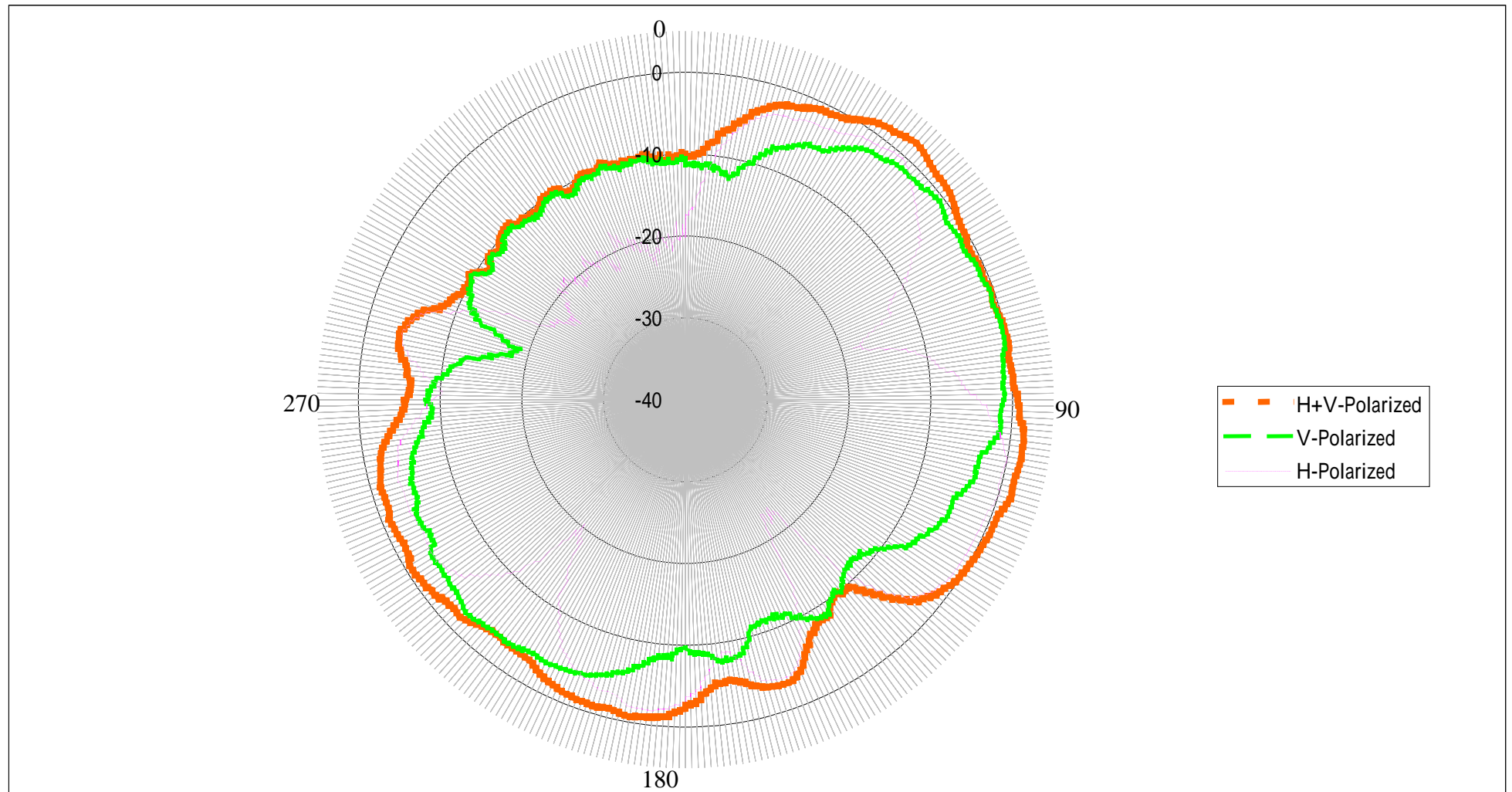


精乘科技股份有限公司 Well GreenTechnology CO., Ltd	P/N : TWR15WIPI01A	Frequency Band : 2.4~2.5GHz	Date : 04 APR.,2003
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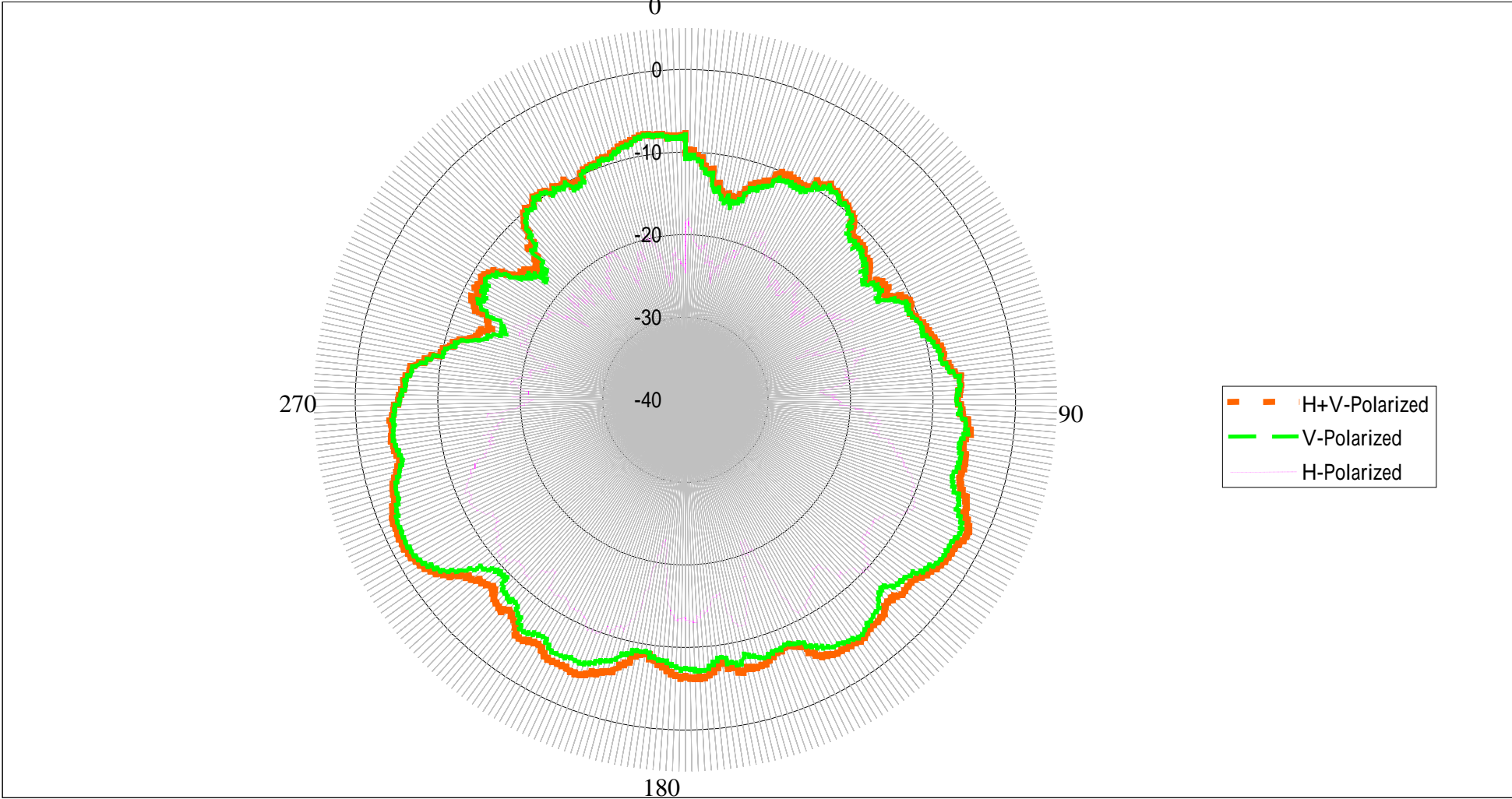


## 五、Free Space 天線輻射場形：

### 1. Radiation Pattern of **XY Plane(Azimuth)**-2.45GHz(open)



## 2. Radiation Pattern of XY Plane(Azimuth)-2.45GHz(close)



### 3. Peak Gain and Average Gain

Antenna	Gain of XY Plane(Azimuth)-open		
	Polarization		2.45GHz
R15GN	V	Peak	-0.25
		Average	-5.20
	H	Peak	0.11
		Average	-5.25
	H+V	Peak	2.17
		Average	-2.21

Antenna	Gain of XY Plane(Azimuth)-close		
	Polarization		2.45GHz
R15GN	V	Peak	-1.88
		Average	-7.23
	H	Peak	-9.27
		Average	-15.13
	H+V	Peak	-1.44
		Average	-6.58

## 六、 SPECIFICATIONS: Electrical Properties

Frequency Range	: 2.4~2.5GHz
Impedance	: 50Ohms nominal
VSWR	: 2.0
Peak Gain	: -5.0dBi    peak gain    3dBi
Standard Connector	: I-PEX Connector



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# **TWINHEAD T8**

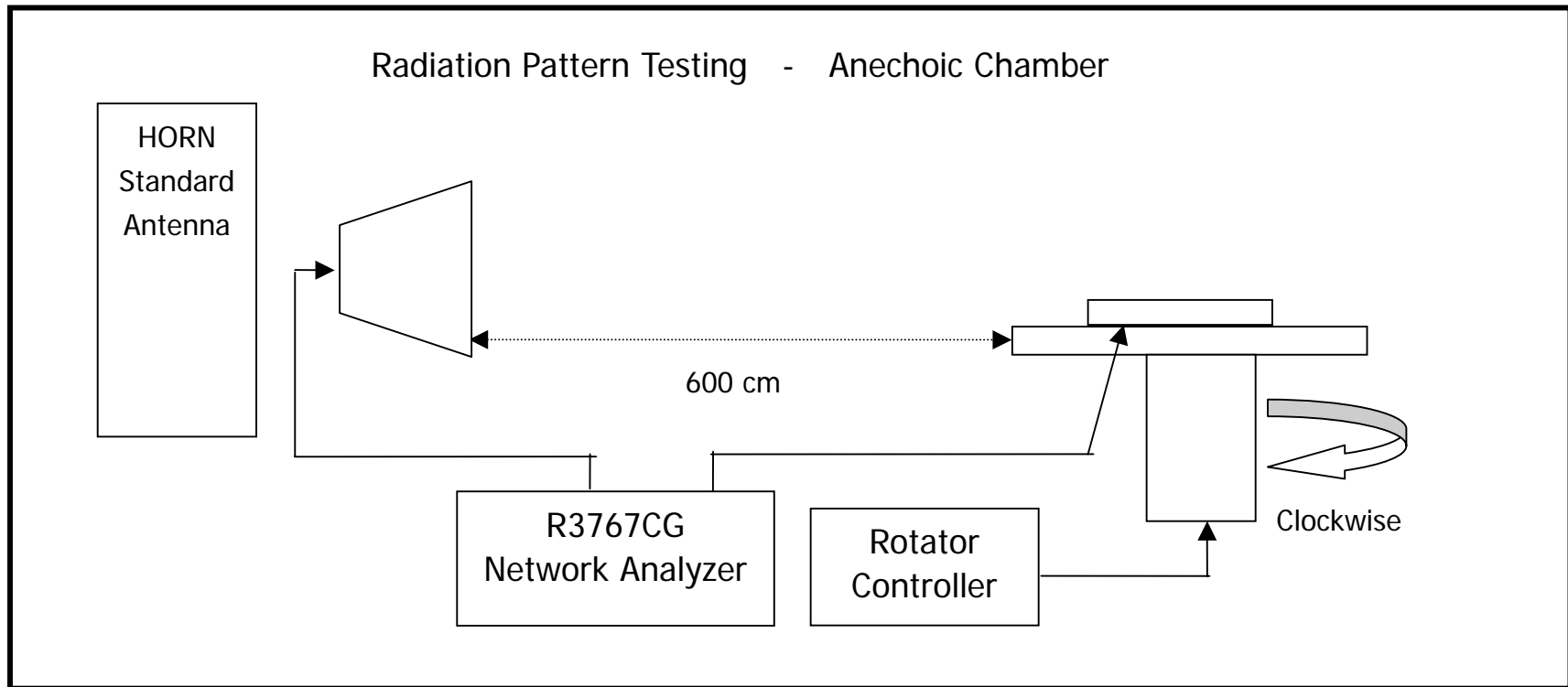
## **Antenna Test Report**

<b>RD Manager</b>	<b>Supervisor</b>	<b>RD engineer</b>	<b>Sales engineer</b>
<b>Jackson</b>	<b>Johnson</b>	<b>Tony</b>	<b>Jerry</b>



802.11b Antenna Testing Conditions:

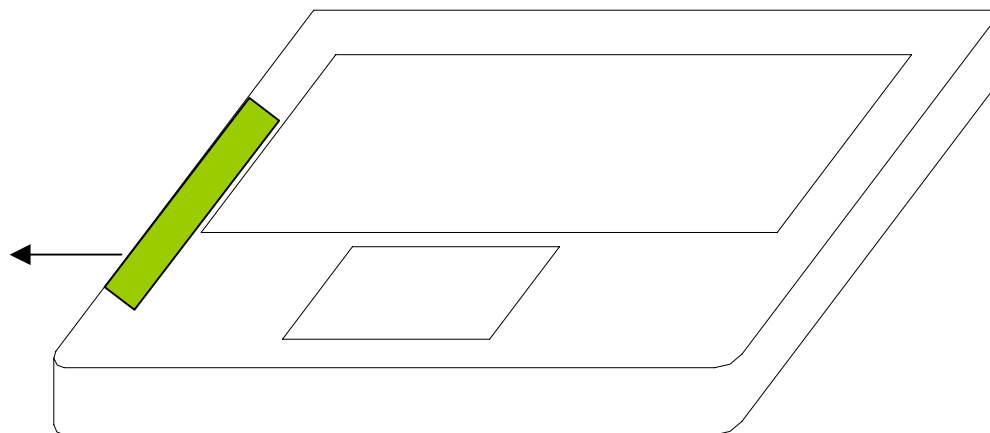
1. Testing set up:





2. Mechanical dimensions

Antenna T8 PIFA  
Cable  $\phi 1.13$   
Bluetooth  
Left





Test results-Left

Antenna	Application	Cable dia. Φ mm
<b>T8</b>	<b>Bluetooth</b>	<b>1.13</b>

1.VSWR

Antenna	Center freg. @MHz	BW @MHz	VSWR		
			2.4GHz	2.45GHz	2.5GHz
T8	2450		1.57	1.34	1.17







2. Return Loss

Antenna	Center freg. @MHz	BW @MHz	Return Loss		
			2.4GHz	2.45GHz	2.5GHz
T8	2450		-12.90	-17.03	-22.24





3. Smith Chart

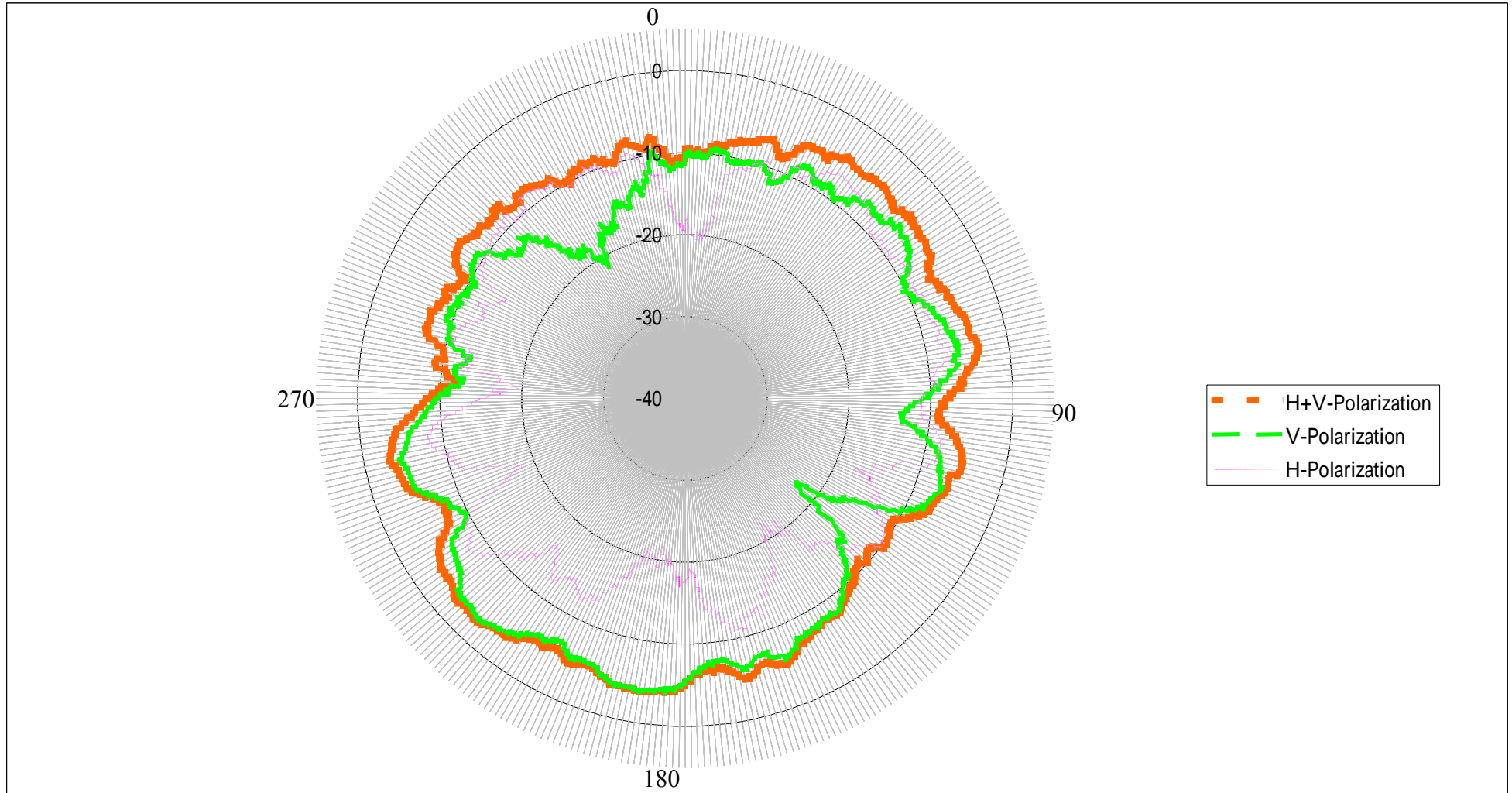




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#### 4. Radiation Pattern of XY Plane(Azimuth)-2.45GHz





5. Peak Gain and Average Gain

Antenna	Gain of XY Plane(Azimuth)		
	Polariztion	2.45GHz	
T8	V	Peak	-3.04
		Average	-8.03
	H	Peak	-6.58
		Average	-11.11
	H+V	Peak	-2.65
		Average	-6.29