



Well Green Technology Co., Ltd

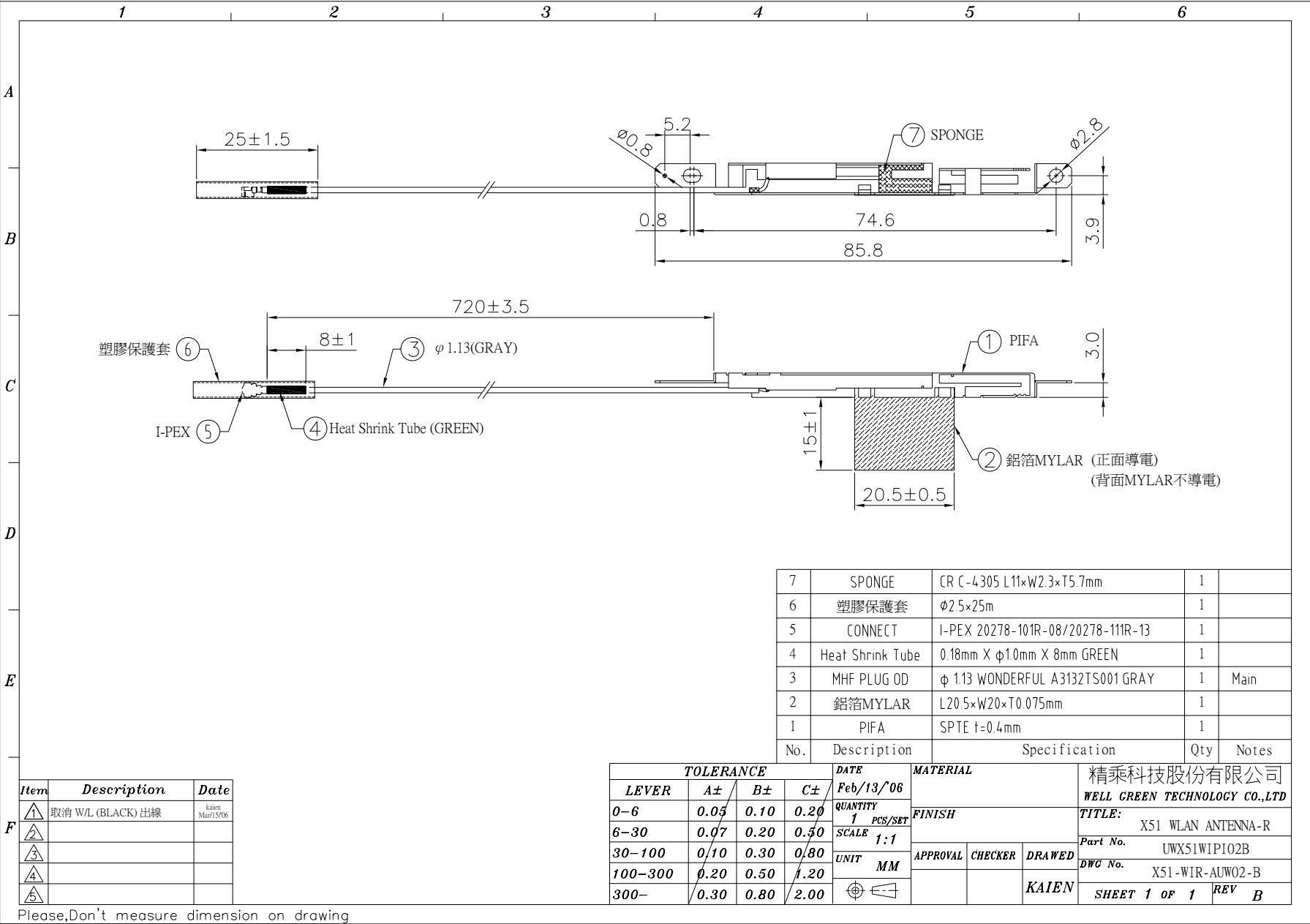
No. 20, Alley51 ,Lane 118,ShuangLian Sec.2,Mintzu Rd.,
PingJen City, TaoYuan Hsien, Taiwan, R.O.C
TEL: (03)420-6428 FAX: (03) 420-6418

X51

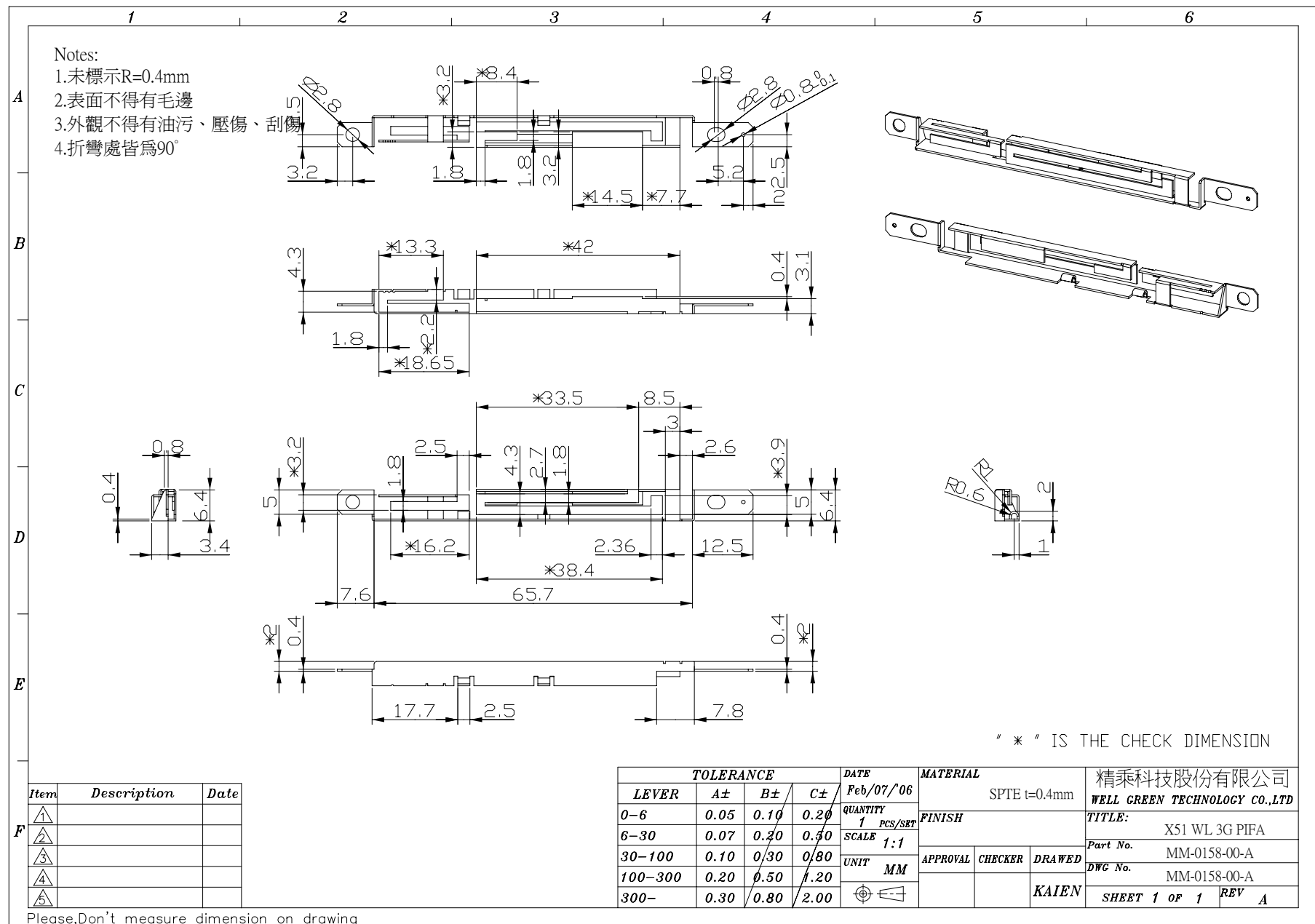
Antenna Test Report

RD Manager	Supervisor	RD engineer	Sales engineer
David	Johnson	Jason	Jerry

一、成品圖



二、零件圖

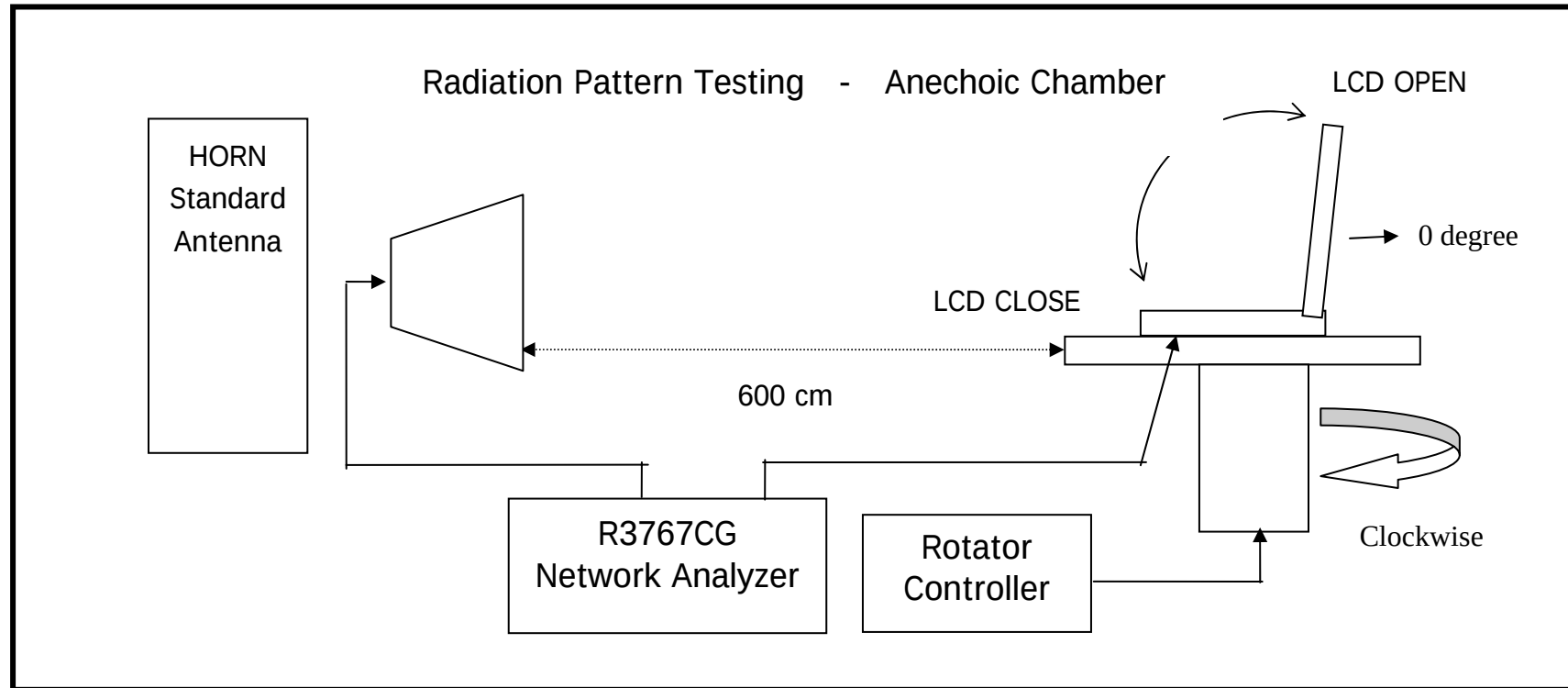


	1	2	3	4	5	6
A	B O M					
	ITEM	DESCRIPTION	SPECIFICATION	Q'TY	VENDER	P/N
	1	PIFA ANTENNA	X51(WLAN+WWAN)PIFA R邊	1		MM-0158-00-A
	2	WWAN COAXIAL CABLE	Wonderful A3132TS001 素材 ?1.13 *737mm Gray	1		CA-0059-28-A
B	3	CONNECTOR	I-PEX Connector	1		CN-0032-00-A
	4	WWAN SPONGE	L11*W2.3*T5.7mm	1		SP-0071-00-A
	5	塑膠保護套	?2.5*25mm	1		TB-2503-03-A
	6	鋁箔MYLAR	L20.5*W20*T0.075mm	1		GT-0159-00-A
C	7	WWAN 熱縮套管	?1*8mm(GREEN)	1		TB-1006-02-A
	8					
	9					
	10					
D	11					
	12					
	13					
	14					
E	15					
F	Item Description Date					
		取消 W/L (BLACK) 出線	kaien			
			Muzi S006			

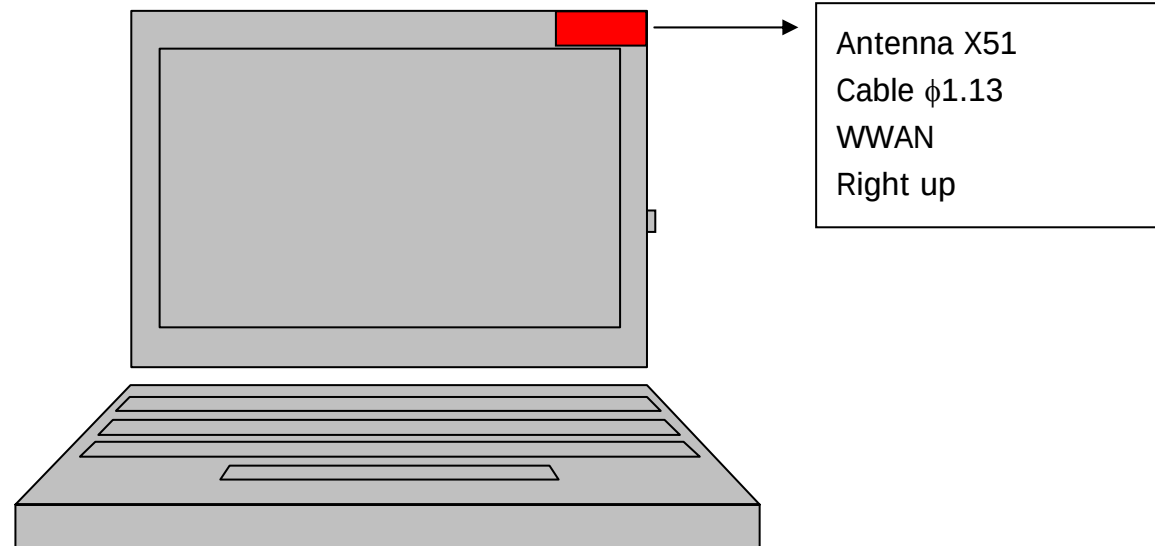
TOLERANCE				DATE	MATERIAL			精乘科技股份有限公司	
LEVER	A±	B±	C±	FEB/13/06				WELL GREEN TECHNOLOGY CO.,LTD	
0-6	0.05	0.10	0.20	QUANTITY	FINISH			TITLE:	
6-30	0.07	0.20	0.50	1 PCS/SET				X51 WLAN+WWAN Antenna-R	
30-100	0.10	0.30	0.80	SCALE	APPROVAL CHECKER MAKER			Part No.	
100-300	0.20	0.50	1.20	1:1				UWX51WIPI02B	
300-	0.30	0.80	2.00	UNIT	JASON			DWG No.	
				MM				X51-WIR-BUW02-B	
								SHEET 1 OF 1 REV B	

三、Antenna Testing Conditions:

1. Testing set up

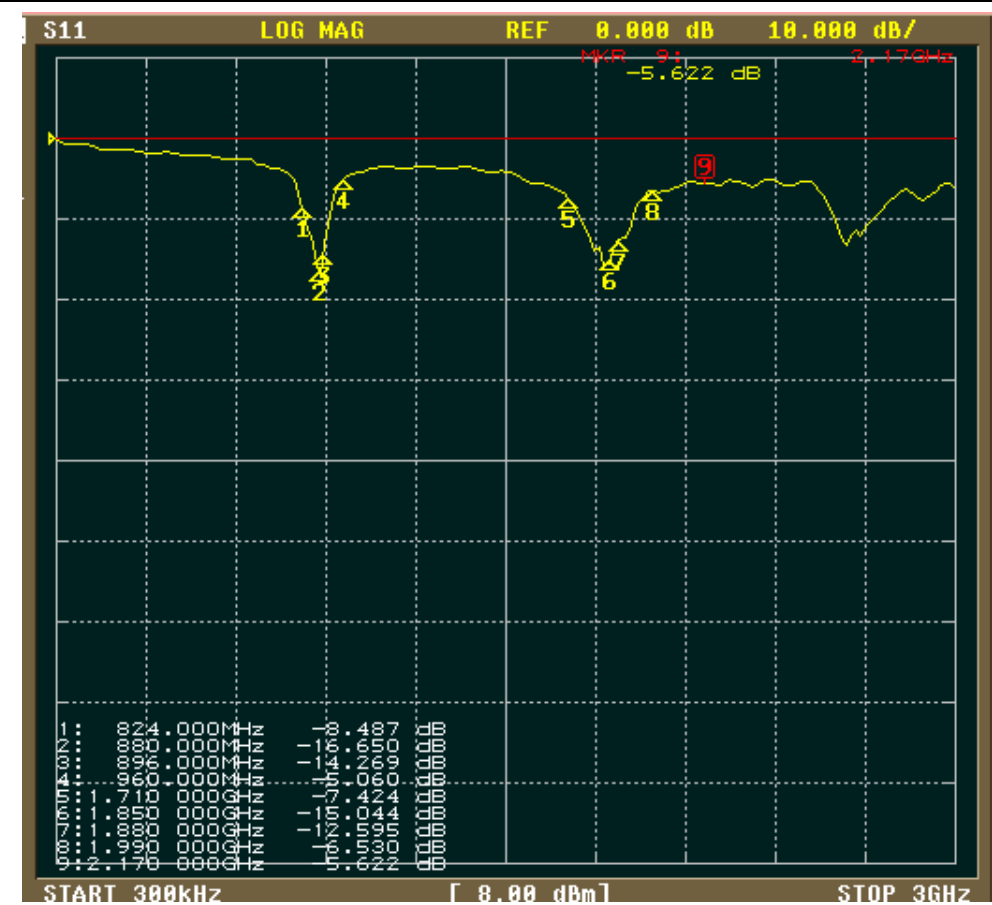


2. Mechanical dimensions



四、電氣特性 (Antenna Electricity Characteristics)

1. Return Loss

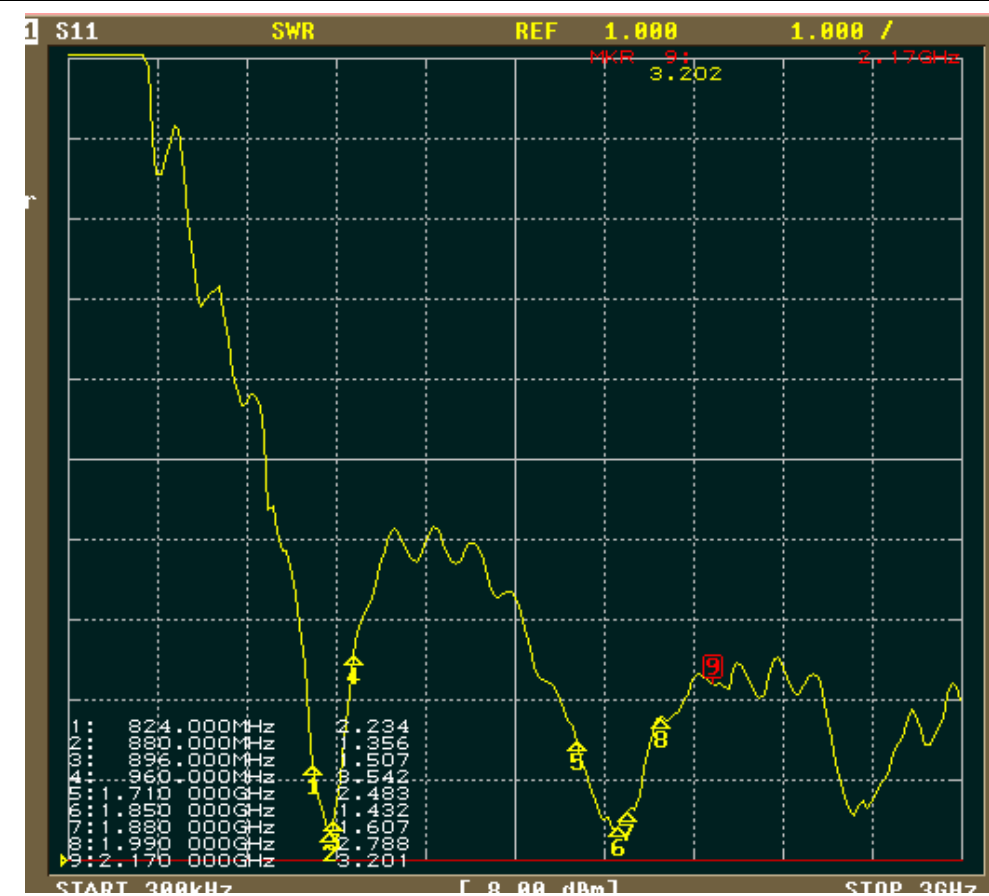


Antenna	Center freq. @MHz	BW @MHz	Return Loss		
			824MHz	896MHz	
X51-R	860		-8.48	-14.26	

Antenna	Center freq. @MHz	BW @MHz	Return Loss		
			1710MHz	1880MHz	1990MHz
X51-R	1860		-7.42	-12.59	-6.53

精乘科技股份有限公司 Well Green Technology CO., Ltd	P/N : UWX51WIPI02B	Frequency Band : 824~960MHz 1710-2170MHz	Date : 23 MAR.,2006
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2. VSWR

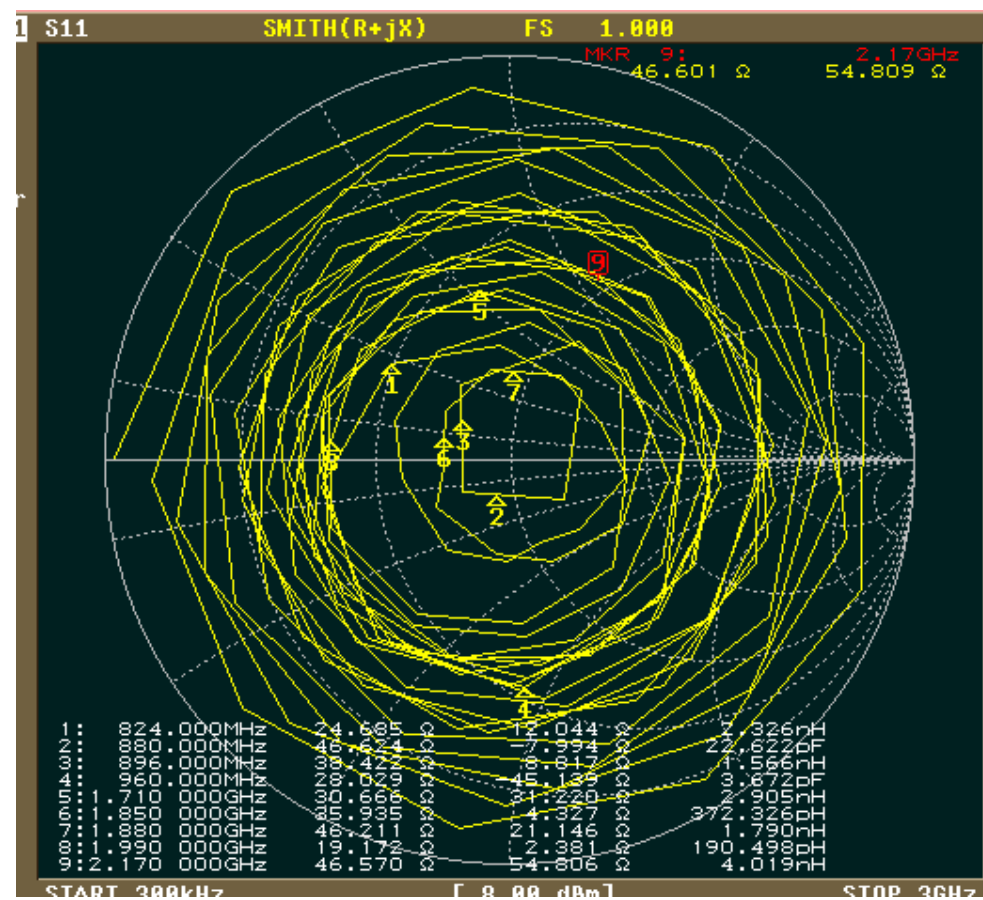


Antenna	Center freq. @MHz	BW @MHz	VSWR	
			824MHz	896MHz
X51-R	860		2.23	1.50

Antenna	Center freq. @MHz	BW @MHz	VSWR		
			1710MHz	1880MHz	1990MHz
X51-R	1860		2.48	1.60	2.78

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3. Smith Chart



精乘科技股份有限公司
Well Green Technology
CO., Ltd

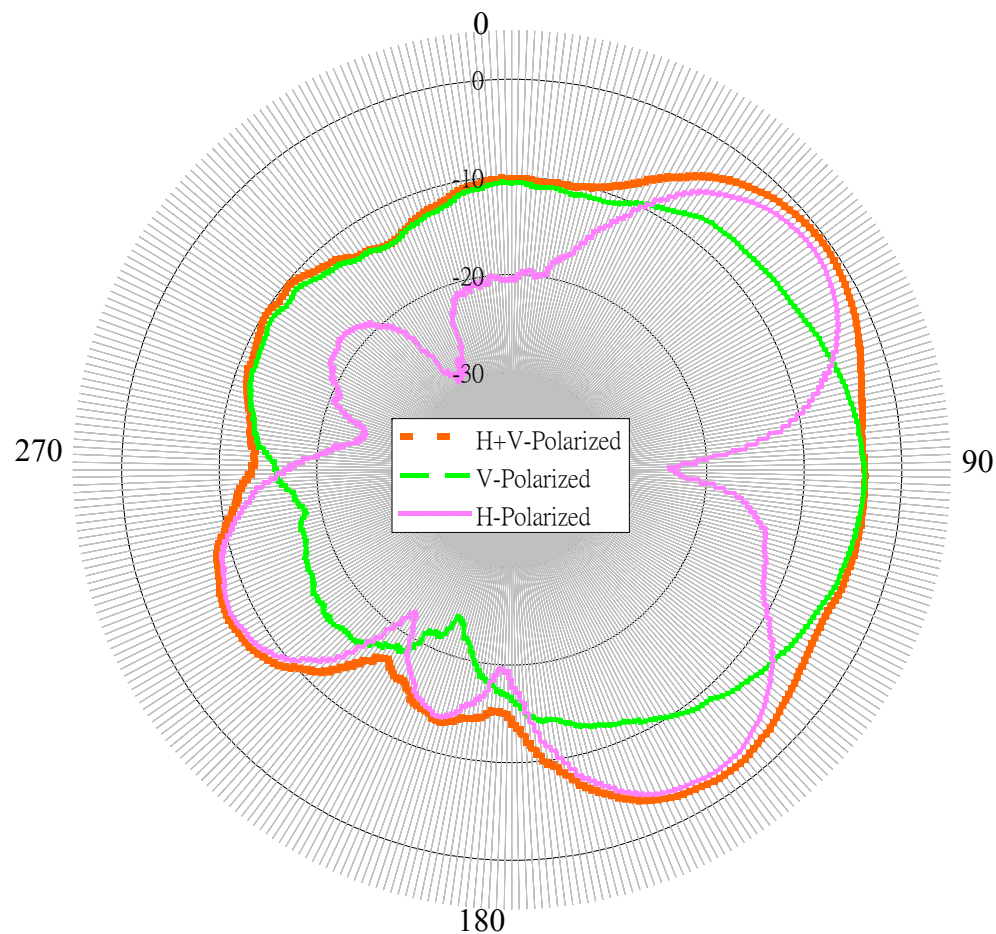
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Frequency Band : 824~960MHz
1710-2170MHz

Date : 23 MAR.,2006



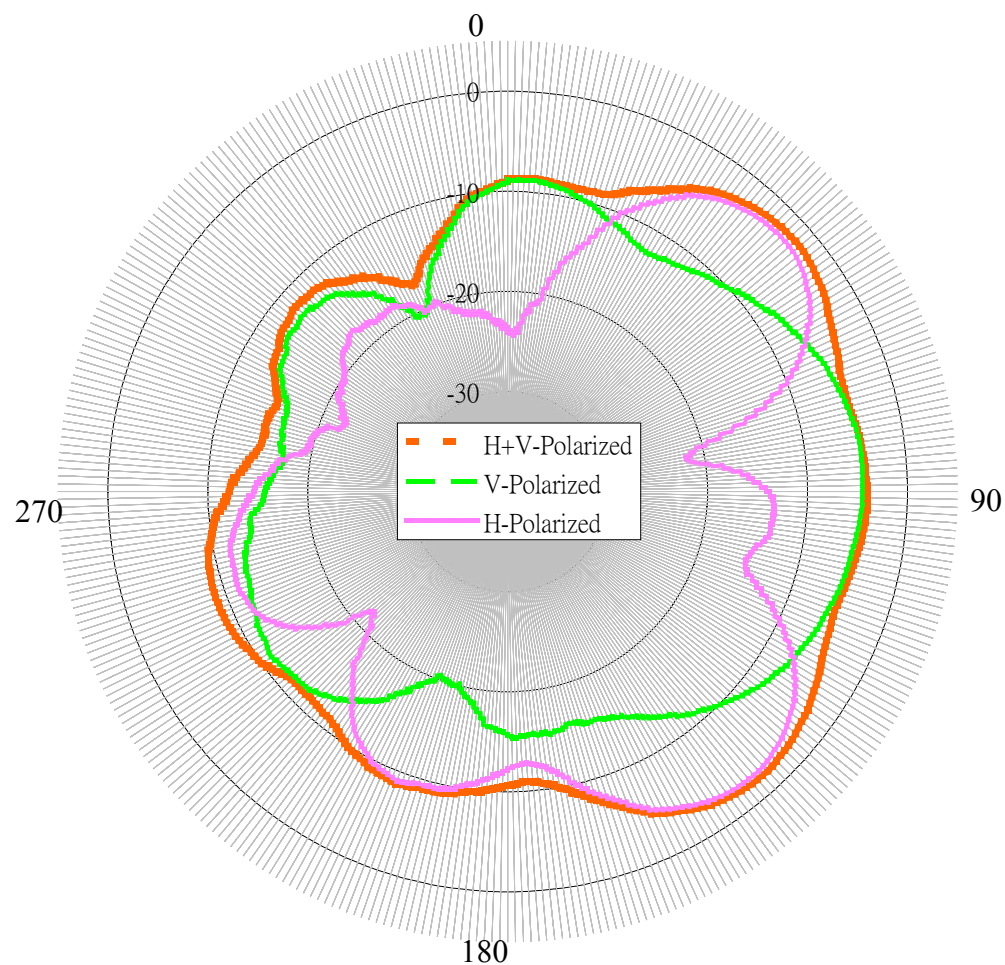
4. Radiation Pattern of XY Plane(Azimuth)-(Open)



Center Frequency	850 MHz
Vertical peak Gain (dBi)	-3.80
Vertical Average Gain (dBi)	-9.37
Vertical Min	-24.06
Horizontal peak Gain (dBi)	-1.70
Horizontal Average Gain (dBi)	-8.63
Horizontal Min	-29.53
Hor _i +Vert peak Gain (dBi)	-0.54
Hor _i +Vert Average Gain (dBi)	-5.97
Hor _i +Vert Min	-16.87



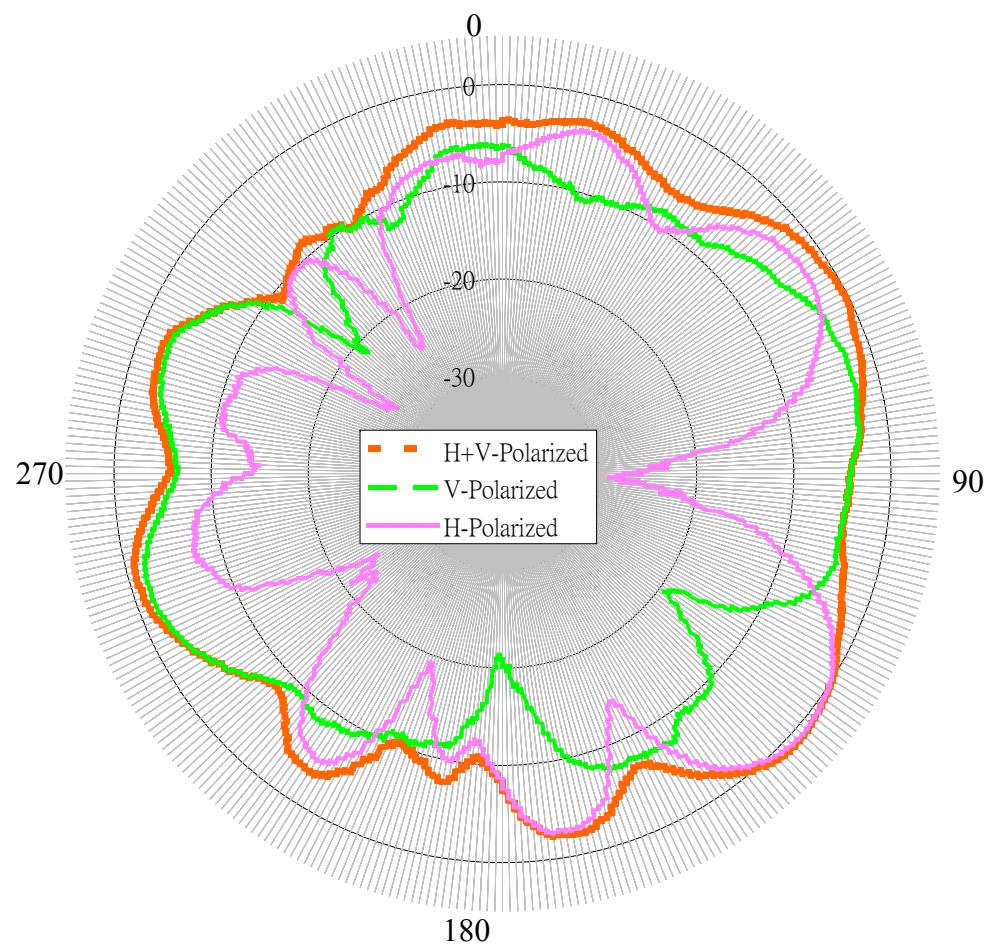
5. Radiation Pattern of XY Plane(Azimuth)-(Open)



Center Frequency	900 MHz
Vertical peak Gain (dBi)	-4.42
Vertical Average Gain (dBi)	-10.16
Vertical Min	-20.58
Horizontal peak Gain (dBi)	-2.45
Horizontal Average Gain (dBi)	-9.08
Horizontal Min	-24.45
Hori+Vert peak Gain (dBi)	-1.83
Hori+Vert Average Gain (dBi)	-6.58
Hori+Vert Min	-17.38



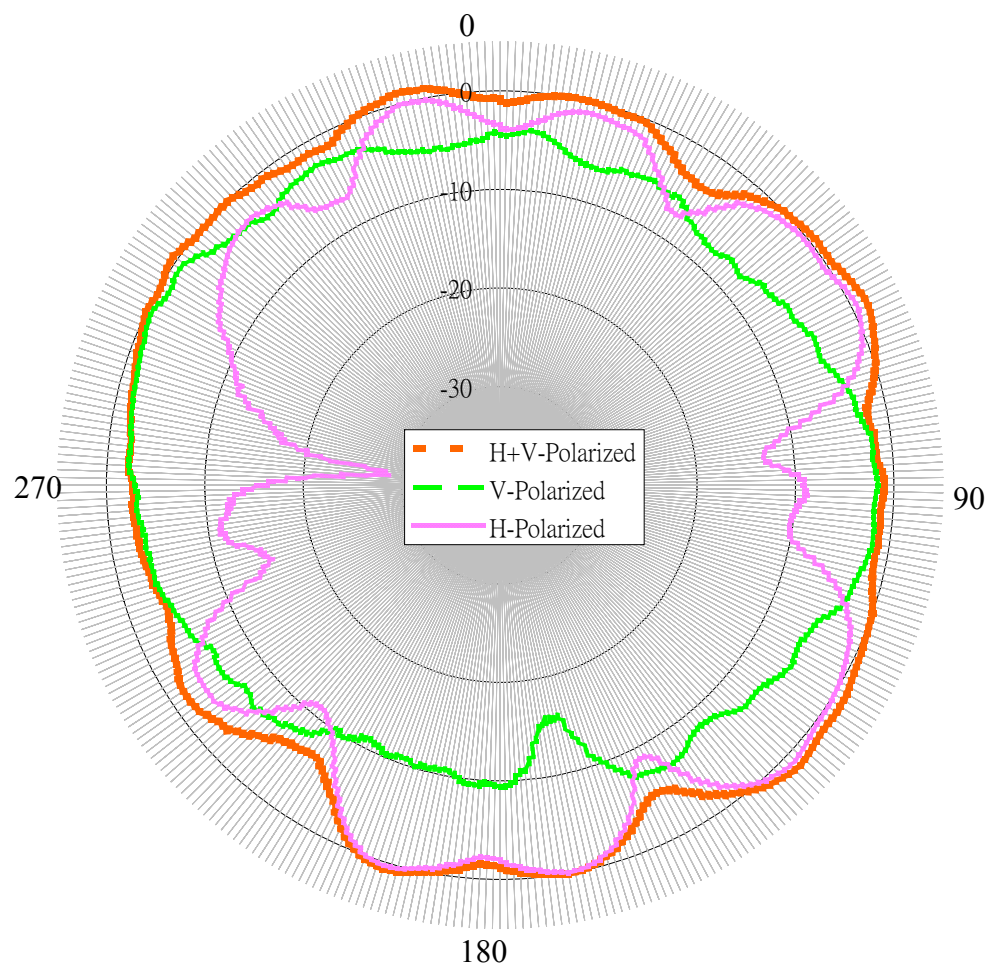
6. Radiation Pattern of XY Plane(Azimuth)-(Open)



Center Frequency	1700 MHz
Vertical peak Gain (dBi)	-1.67
Vertical Average Gain (dBi)	-6.59
Vertical Min	-21.40
Horizontal peak Gain (dBi)	0.92
Horizontal Average Gain (dBi)	-6.42
Horizontal Min	-28.96
Hor _i +Vert peak Gain (dBi)	1.09
Hor _i +Vert Average Gain (dBi)	-3.49
Hor _i +Vert Min	-11.23



7. Radiation Pattern of XY Plane(Azimuth)-(Open)



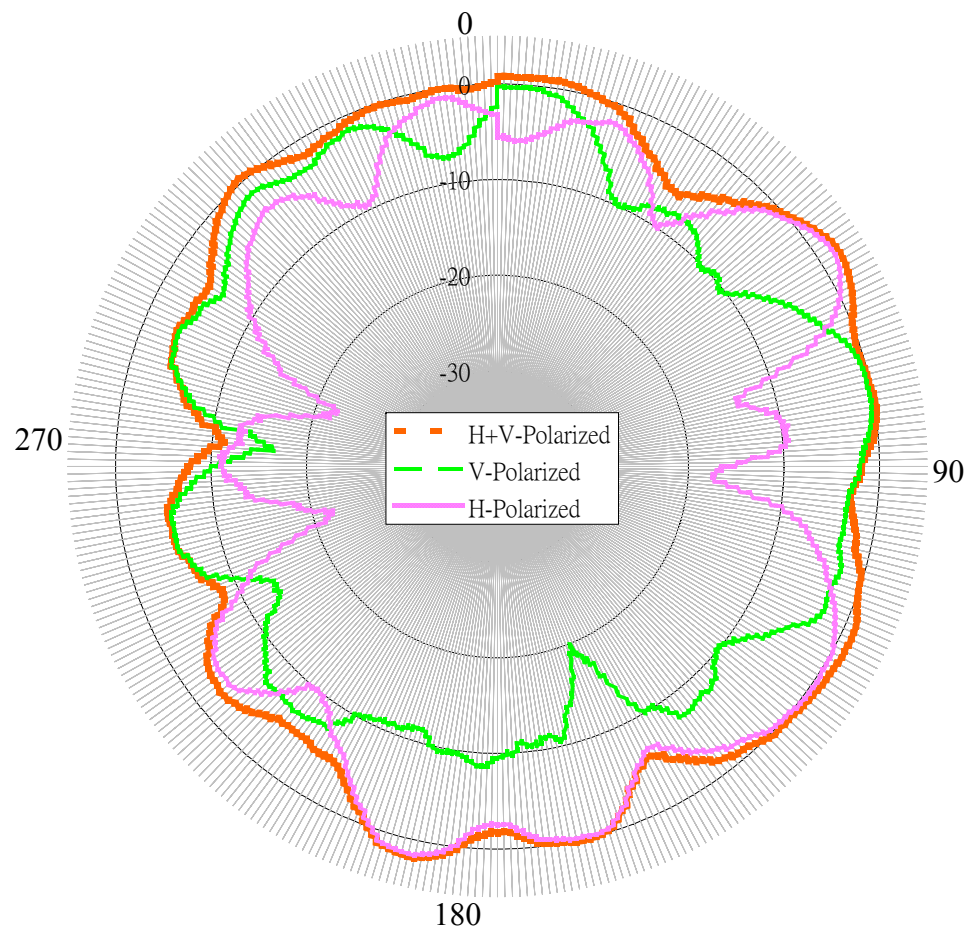
Center Frequency	1800 MHz
Vertical peak Gain (dBi)	-0.45
Vertical Average Gain (dBi)	-4.65
Vertical Min	-15.99
Horizontal peak Gain (dBi)	0.96
Horizontal Average Gain (dBi)	-3.18
Horizontal Min	-28.68
Hor _i +Vert peak Gain (dBi)	1.66
Hor _i +Vert Average Gain (dBi)	-0.84
Hor _i +Vert Min	-6.76



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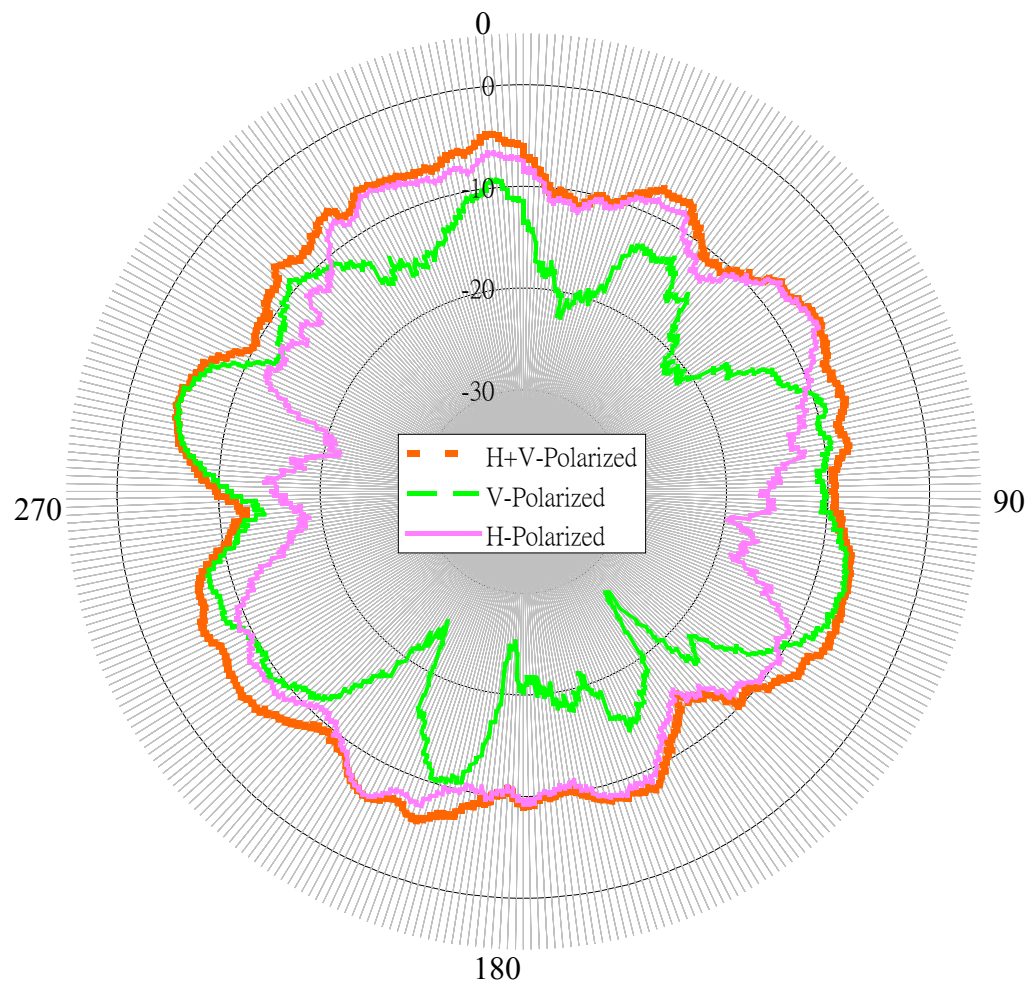
8. Radiation Pattern of XY Plane(Azimuth)-(Open)



Center Frequency	1900 MHz
Vertical peak Gain (dBi)	-0.25
Vertical Average Gain (dBi)	-5.18
Vertical Min	-19.95
Horizontal peak Gain (dBi)	1.75
Horizontal Average Gain (dBi)	-3.65
Horizontal Min	-22.34
Hor _i +Vert peak Gain (dBi)	2.31
Hor _i +Vert Average Gain (dBi)	-1.34
Hor _i +Vert Min	-11.31



9. Radiation Pattern of XY Plane(Azimuth)-(Open)



Center Frequency	2170 MHz
Vertical peak Gain (dBi)	-4.91
Vertical Average Gain (dBi)	-11.45
Vertical Min	-27.18
Horizontal peak Gain (dBi)	-6.27
Horizontal Average Gain (dBi)	-10.30
Horizontal Min	-21.57
Hori+Vert peak Gain (dBi)	-4.72
Hori+Vert Average Gain (dBi)	-7.83
Hori+Vert Min	-15.05

五、SPECIFICATIONS:

● Electrical Properties

Frequency Range	: 824~960MHz
Impedance	: 50Ohms nominal
VSWR	: ≤ 2.0
Peak Gain	: -5.0dBi $\leq$ peak gain $\leq$ 3dBi
Standard Connector	: I-PEX Connector

Frequency Range	: 1710~2170MHz
Impedance	: 50Ohms nominal
VSWR	: ≤ 2.0
Peak Gain	: -5.0dBi $\leq$ peak gain $\leq$ 3dBi
Standard Connector	: I-PEX Connector