



**Well Green Technology Co., Ltd**

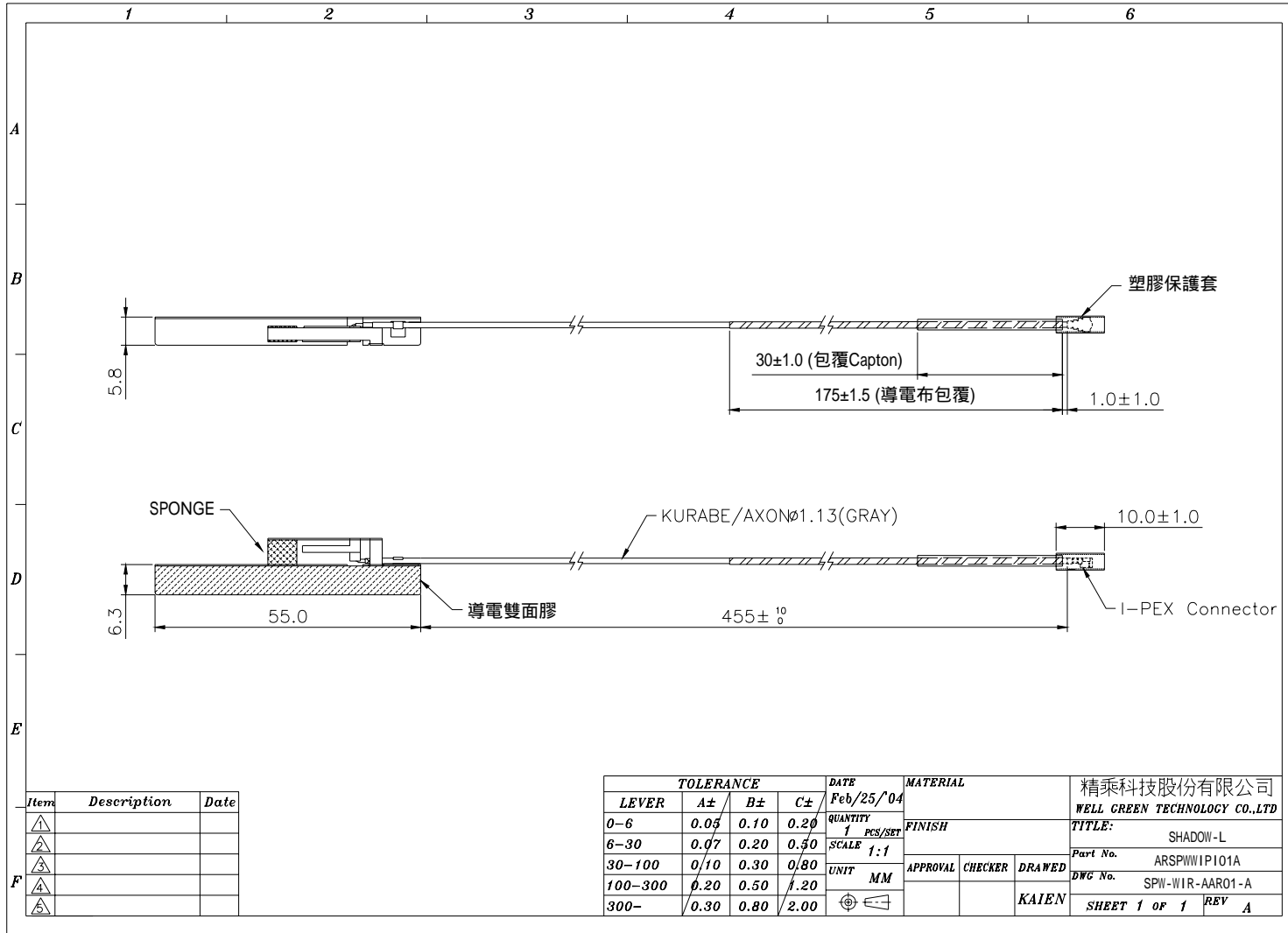
**No. 20, Alley51 ,Lane 118,ShuangLian Sec.2,Mintzu Rd.,  
PingJen City, TaoYuan Hsien, Taiwan, R.O.C  
TEL: (03)420-6428 FAX: (03) 420-6418**

# **Arima SHADOW-15.1 Antenna Test Report**

<b>RD Manager</b>	<b>Supervisor</b>	<b>RD engineer</b>	<b>Sales engineer</b>
<b>David</b>	<b>Johnson</b>	<b>Tim</b>	<b>Johnson</b>

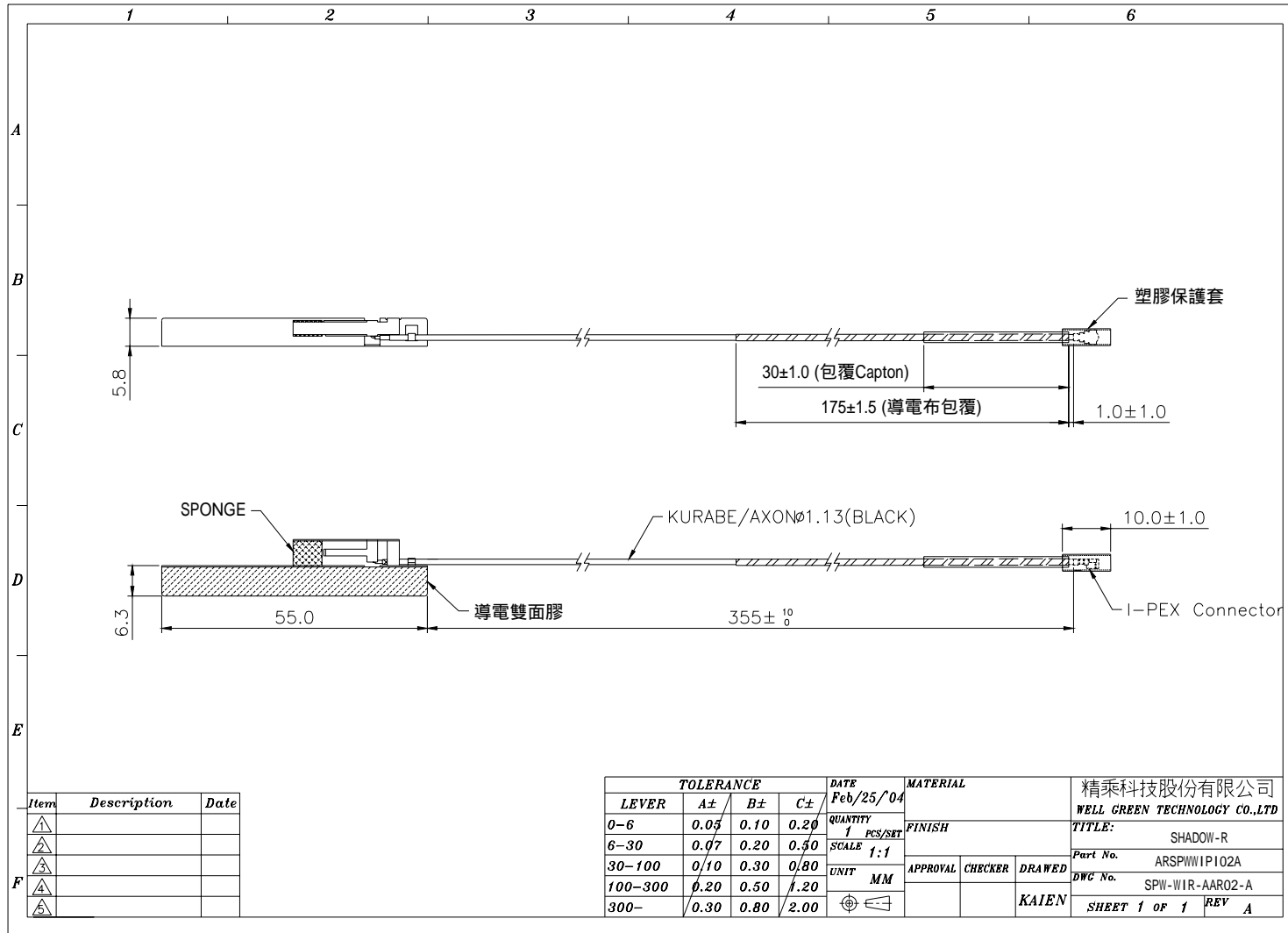


成品圖 L 邊





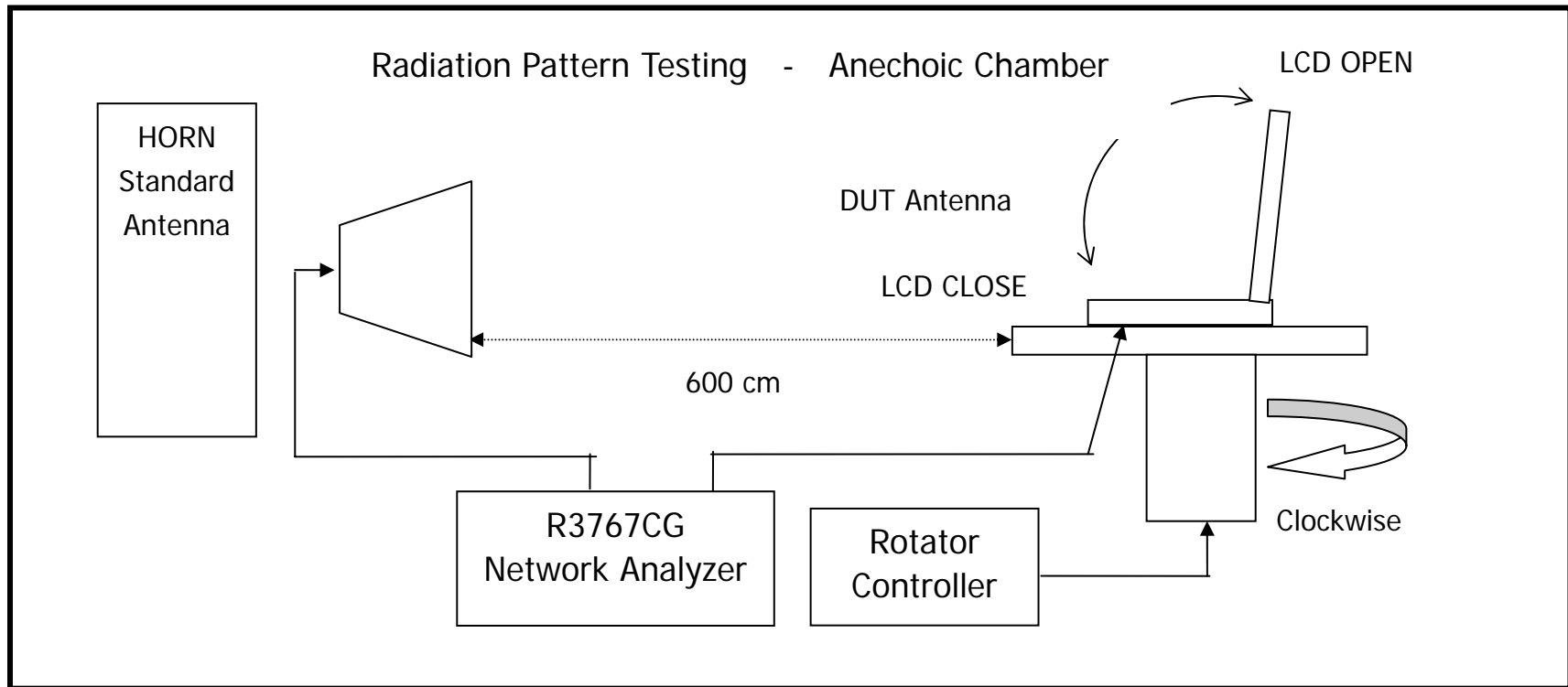
成品圖 R 邊





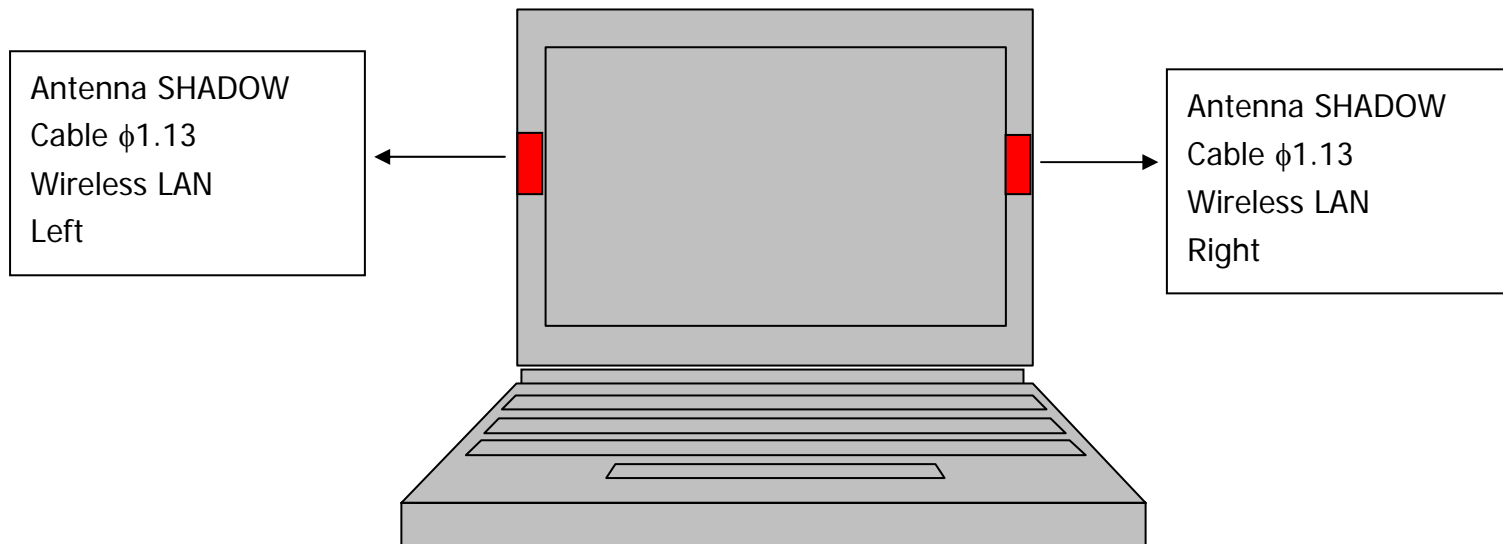
Antenna Testing Conditions:

1. Testing set up:





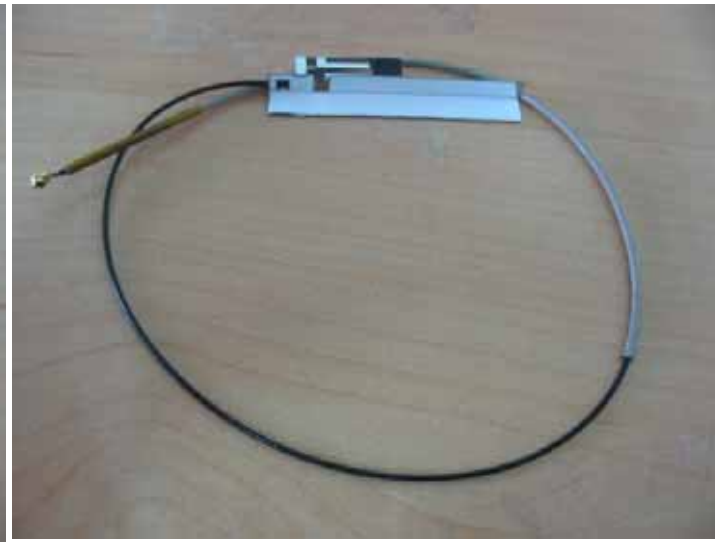
2. Mechanical dimensions





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Test results-L 邊

Antenna	Application	Cable dia. Φ mm
SHADOW	Wireless	1.13

1.VSWR-L

Antenna	Center freg. @MHz	BW @MHz	VSWR		
			2.4GHz	2.45GHz	2.5GHz
SHADOW	2450		1.15	1.14	1.20





2. Return Loss-L

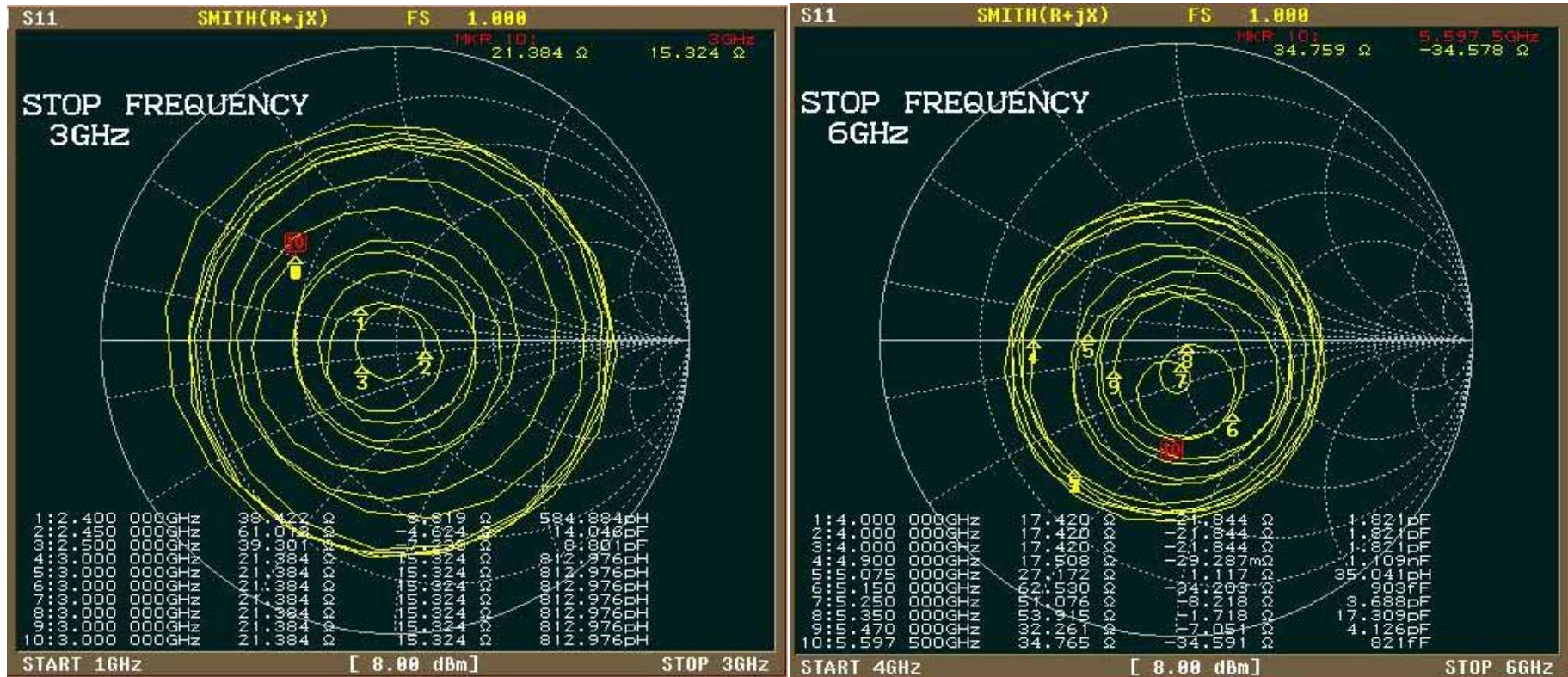
Antenna	Center freg. @MHz	BW @MHz	Return Loss		
			2.4GHz	2.45GHz	2.5GHz
SHADOW	2450		-18.71	-19.30	-18.17







3. Smith chart-L

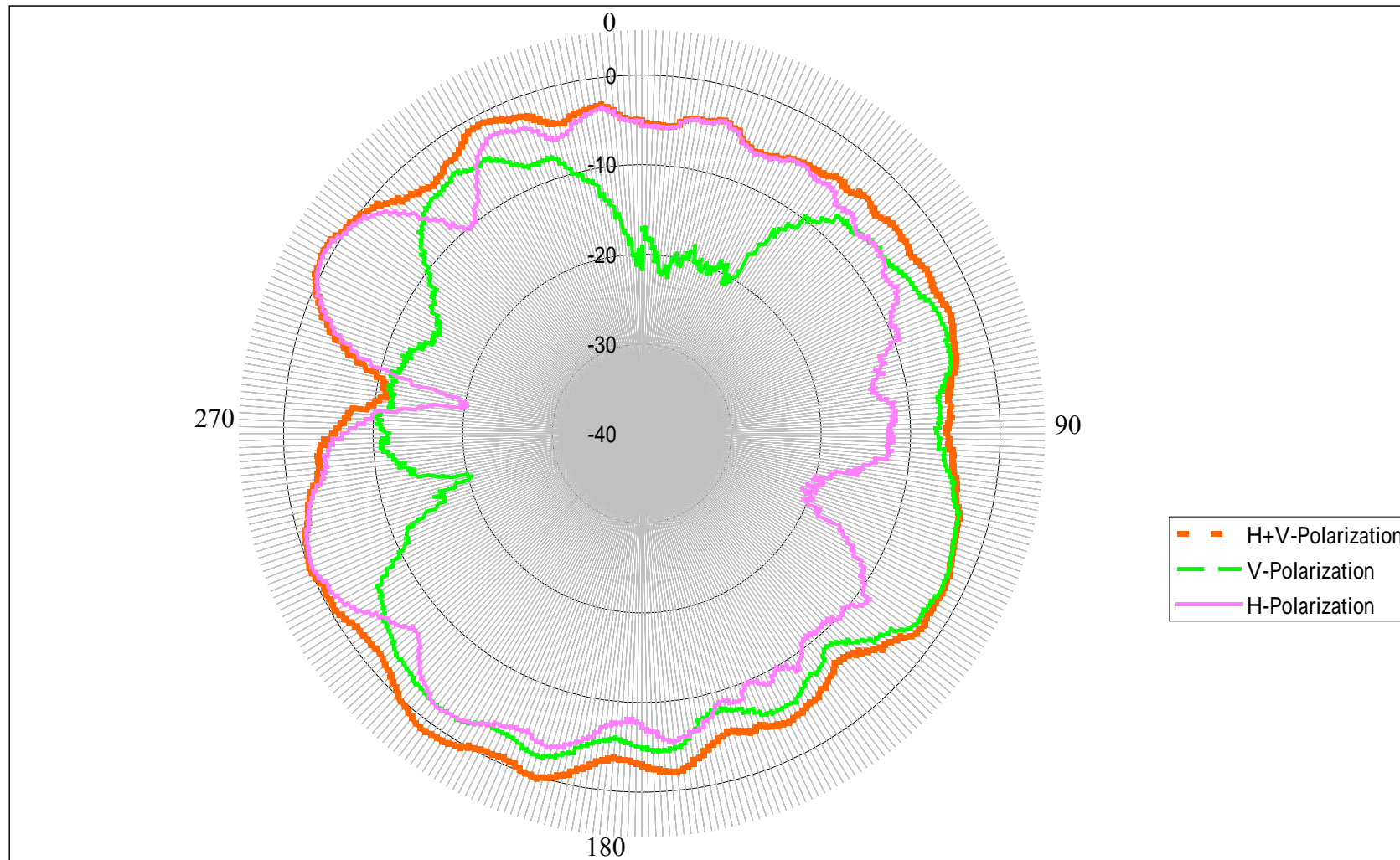




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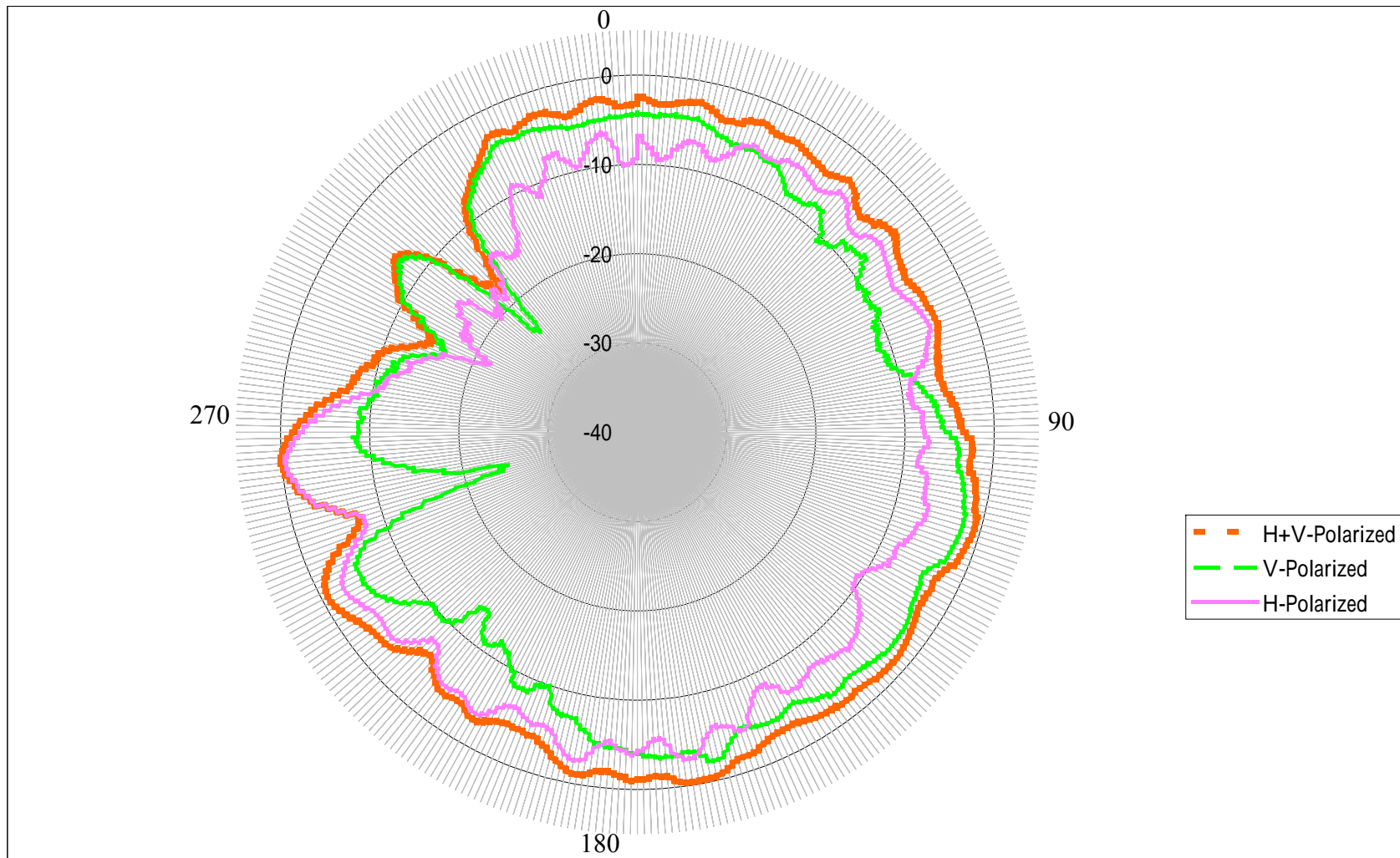
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#### 4. Radiation Pattern of XY Plane (Azimuth)-2.45GHz-L 邊(open)





5. Radiation Pattern of XY Plane (Azimuth)-5.25GHz-L 邊(open)





### 6. Peak Gain and Average Gain

Antenna	Gain Of XY Plane (Azimuth)-open		
	Polarization		2.45GHz
SHADOW	V	Peak	-1.90
		Average	-6.28
	H	Peak	0.80
		Average	-5.18
	H+V	Peak	1.14
		Average	-2.68

Antenna	Gain Of XY Plane (Azimuth)- open		
	Polarization		5.25GHz
SHADOW	V	Peak	-1.96
		Average	-6.13
	H	Peak	-0.32
		Average	-6.31
	H+V	Peak	0.16
		Average	-3.21



Test results- R 邊

1. VSWR-R

Antenna	Center freg. @MHz	BW @MHz	VSWR		
			2.4GHz	2.45GHz	2.5GHz
SHADOW	2450		1.12	1.11	1.21





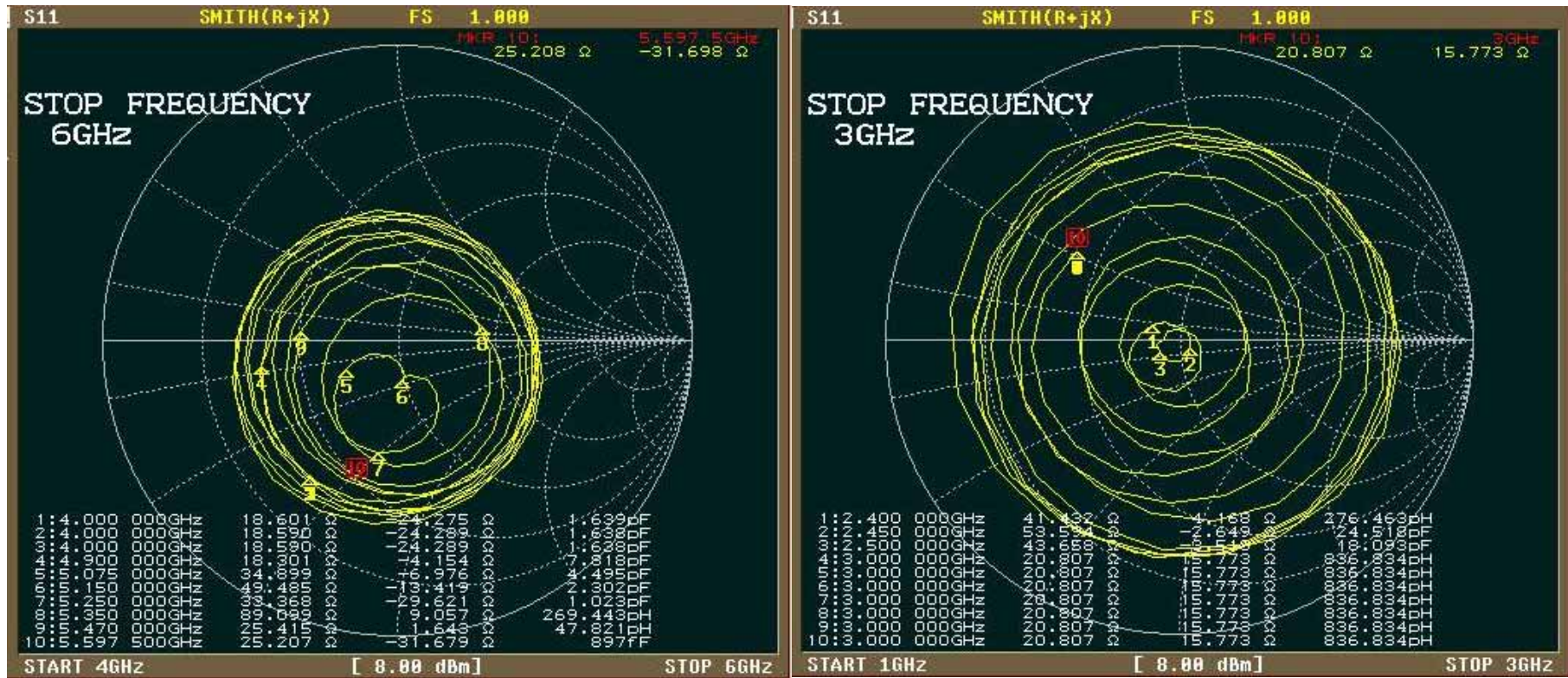
2. Return Loss-R

Antenna	Center freg. @MHz	BW @MHz	Return Loss		
			2.4GHz	2.45GHz	2.5GHz
SHADOW	2450		-23.71	-25.63	-20.15



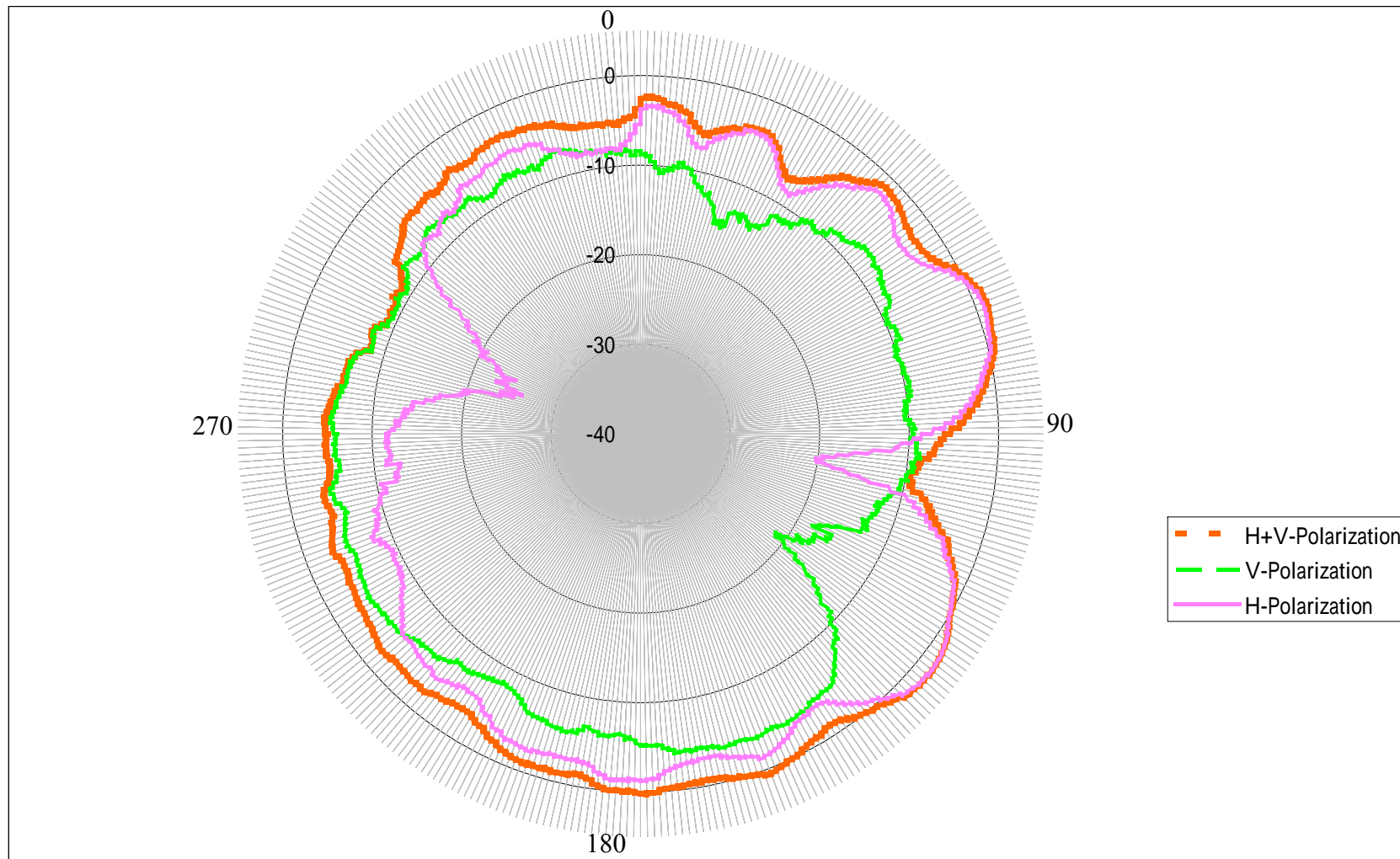


3. Smith chart-R





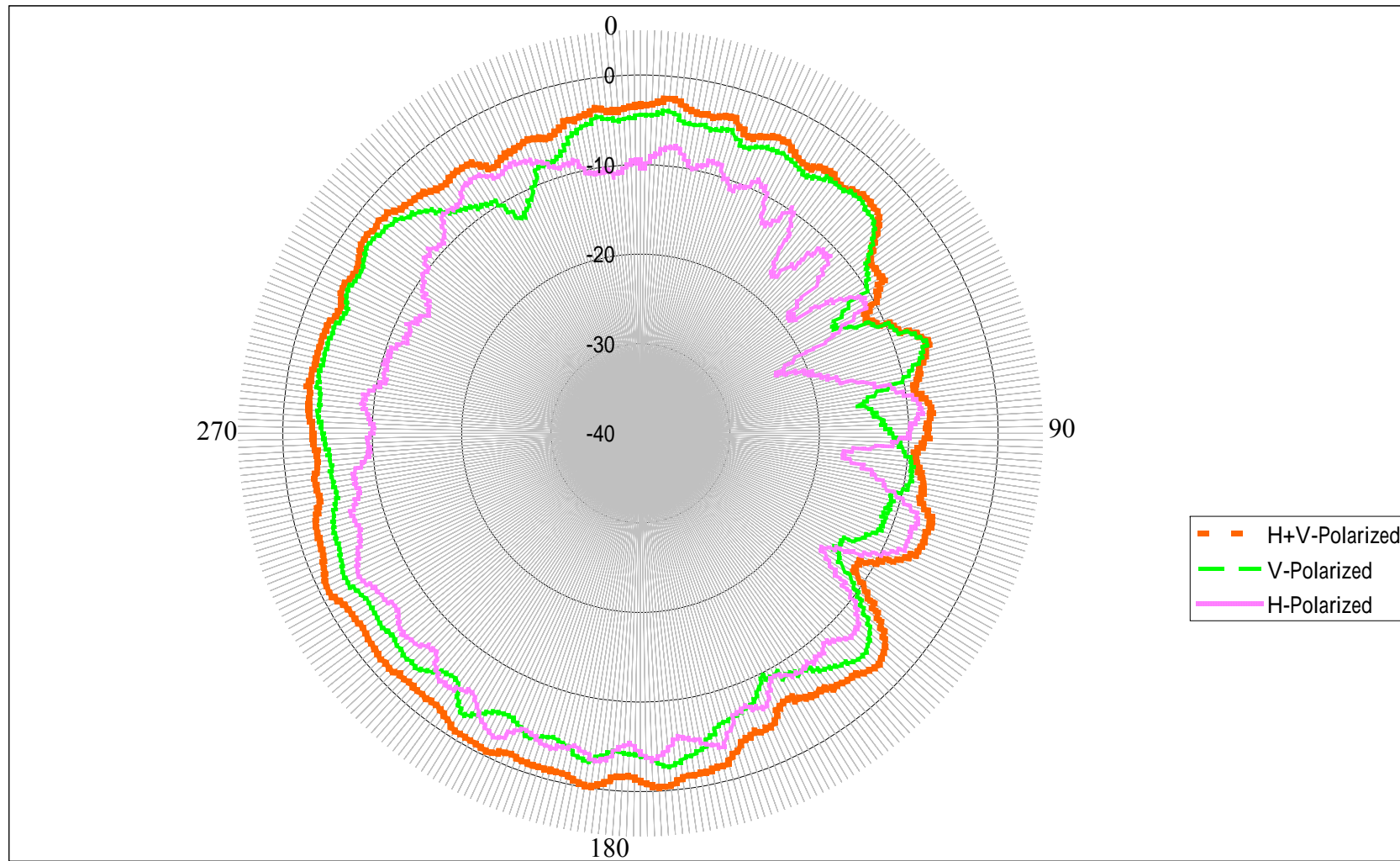
4. Radiation Pattern of XY Plane (Azimuth)-2.45GHz-R 邊(open)







5. Radiation Pattern of XY Plane (Azimuth)-5.25GHz-R 邊(open)





6. Peak Gain and Average Gain

Antenna	Gain Of XY Plane (Azimuth)-open		
	Polarization		2.45GHz
SHADOW	V	Peak	-3.60
		Average	-7.36
	H	Peak	1.94
		Average	-3.96
	H+V	Peak	2.02
		Average	-2.32

Antenna	Gain Of XY Plane (Azimuth)- open		
	Polarization		5.25GHz
SHADOW	V	Peak	-2.56
		Average	-5.59
	H	Peak	-2.25
		Average	-7.73
	H+V	Peak	-0.09
		Average	-3.52



Antenna Type

<b>Position</b>	<b>Main Antenna</b>	<b>Aux Antenna</b>
<b>Antenna Type</b>	<b>PIFA</b>	<b>PIFA</b>
<b>Material</b>	<b>Metal sheet</b>	<b>Metal sheet</b>

VSWR

<u>VSWR</u>	<u>2G4 ISM</u> (2.400GHz-2.4500GHz)			JAPAN (4.90GHz-5.25GHz)			U-NII (5.150GHz-5.350GHz)			HyperLAN (5.470GHz-5.725GHz)		
	2.40	2.45	2.50	4.90	5.075	5.25	5.15	5.25	5.35	5.47	5.5975	5.725
<b>L</b>	1.15	1.14	1.20	2.19	1.50	1.32	1.47	1.32	1.29	1.46	2.21	1.82
<b>R</b>	1.12	12.11	1.21	2.43	1.44	1.74	1.17	1.74	1.83	1.96	2.46	1.78



**Peak Gain**

<u>Antenna Gain</u>		<u>2G4 ISM</u>			JAPAN			U-NII			HyperLAN		
		(2.400GHz-2.4500GHz)			(4.90GHz-5.25GHz)			(5.150GHz-5.350GHz)			(5.470GHz-5.725GHz)		
		2.40	2.45	2.50	4.90	5.075	5.25	5.15	5.25	5.35	5.47	5.5975	5.725
<b>L</b>	Peak dBi	1.58	1.14	1.63	-1.53	-1.62	0.16	0.15	0.16	-0.41	0.12	-0.48	-0.23
	Avg dBi	-2.73	-2.68	-2.89	-3.57	-3.28	-3.21	-3.27	-3.21	-3.54	-3.88	-3.62	-3.79
<b>R</b>	Peak dBi	1.85	2.02	1.54	0.28	0.13	-0.09	0.23	-0.09	-0.05	0.57	-0.21	0.15
	Avg dBi	-2.51	-2.32	-3.03	-3.16	-3.05	-3.52	-3.43	-3.52	-3.56	-3.17	-3.70	-3.56