

A letter of recognition

DESCRIBE: Anker Innovations Co., LTD (T8425)

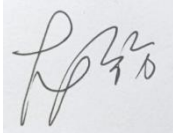
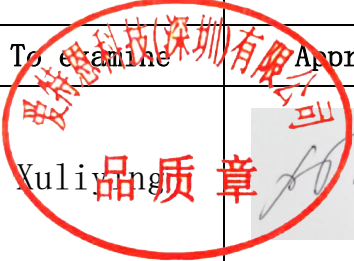
Customer NO: 290000-019518

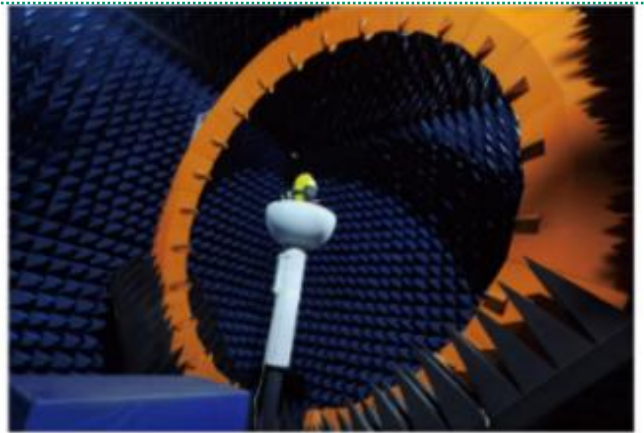
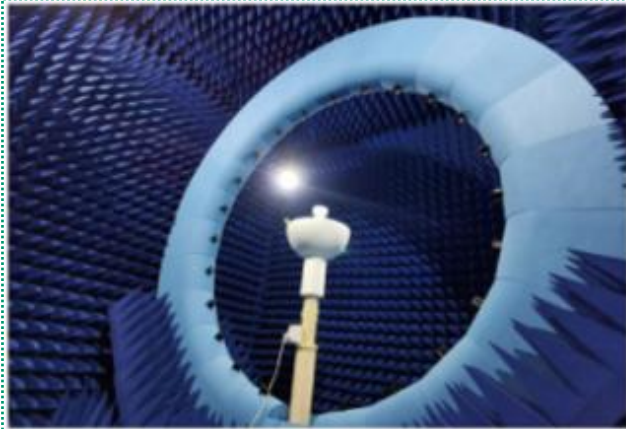
PART NO: ATC1357-HY049B70RA

Antenna type: 2.4G&5.8 ANT FPC+CABLE

DATE: 2023. 07. 04

PROVIDER: AT&C TECHNOLOGIES(SHENZHEN) CO. LTD

Customer Admit	confirm	ID Department	Test department	Structure section	Quality department
Supplier Admit	confirm	confirm	Proofreading	To examine	Approval
			Zhangwanzhe	 Xuliyang	



We have RF equipments as below

Anechoic Chamber

- Satimo 1ea
- SY24 1ea
- SAR 1ea
- KSS 2ea

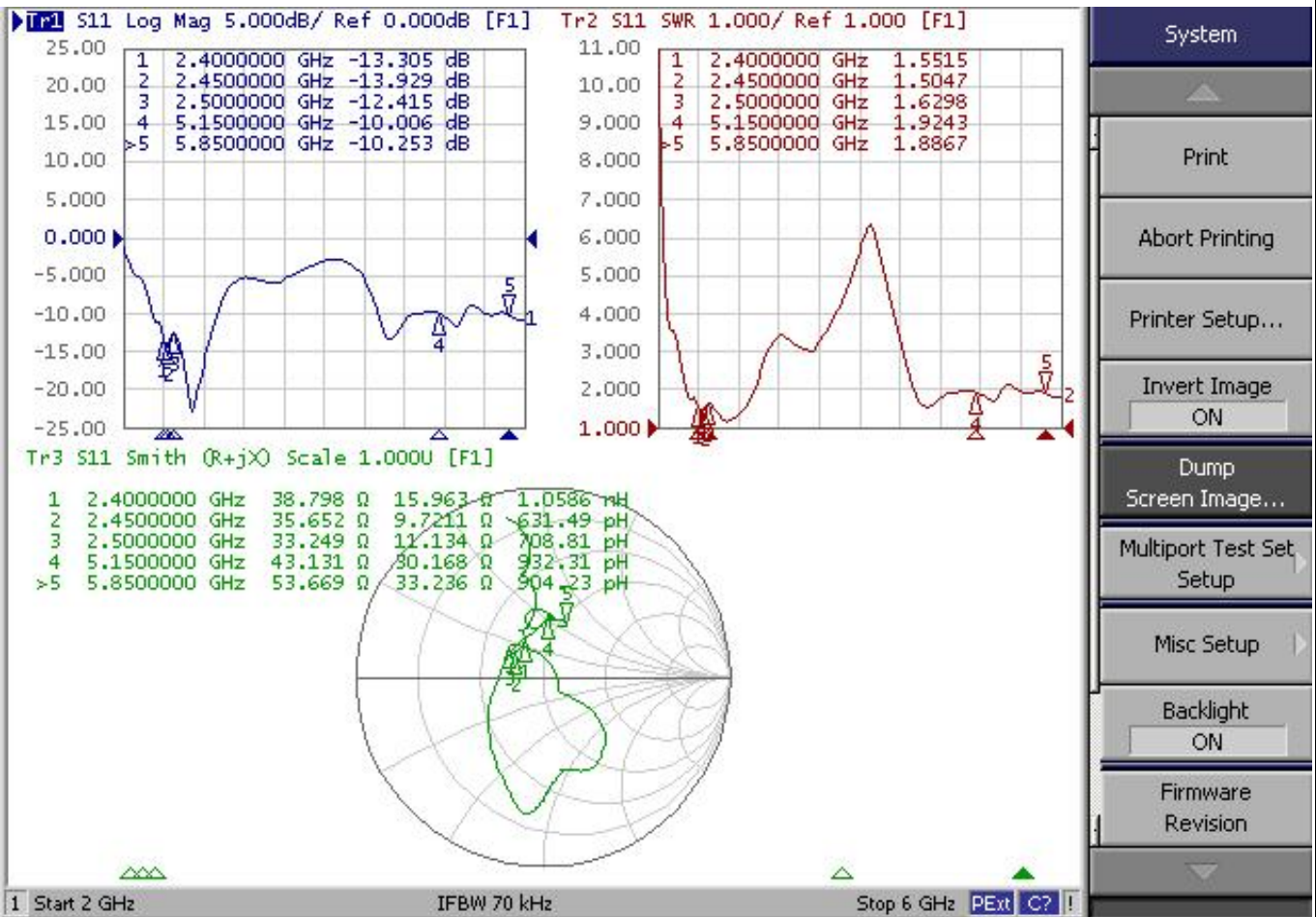
Measurement

- 2G, 3G, 4G
- GPS
- Wifi
- Bluetooth(3.0) OTA
- NFC & WPC



ANT

Antenna S11



Antenna *Efficiency

Frequency/MHz	Efficiency	Gain . dbi
2400	57%	2.8
2410	57%	2.9
2420	57%	2.7
2430	56%	2.6
2440	57%	2.4
2450	54%	2.3
2460	57%	2.2
2470	57%	2.2
2480	55%	2.6
2490	56%	2.8
2500	53%	2.7

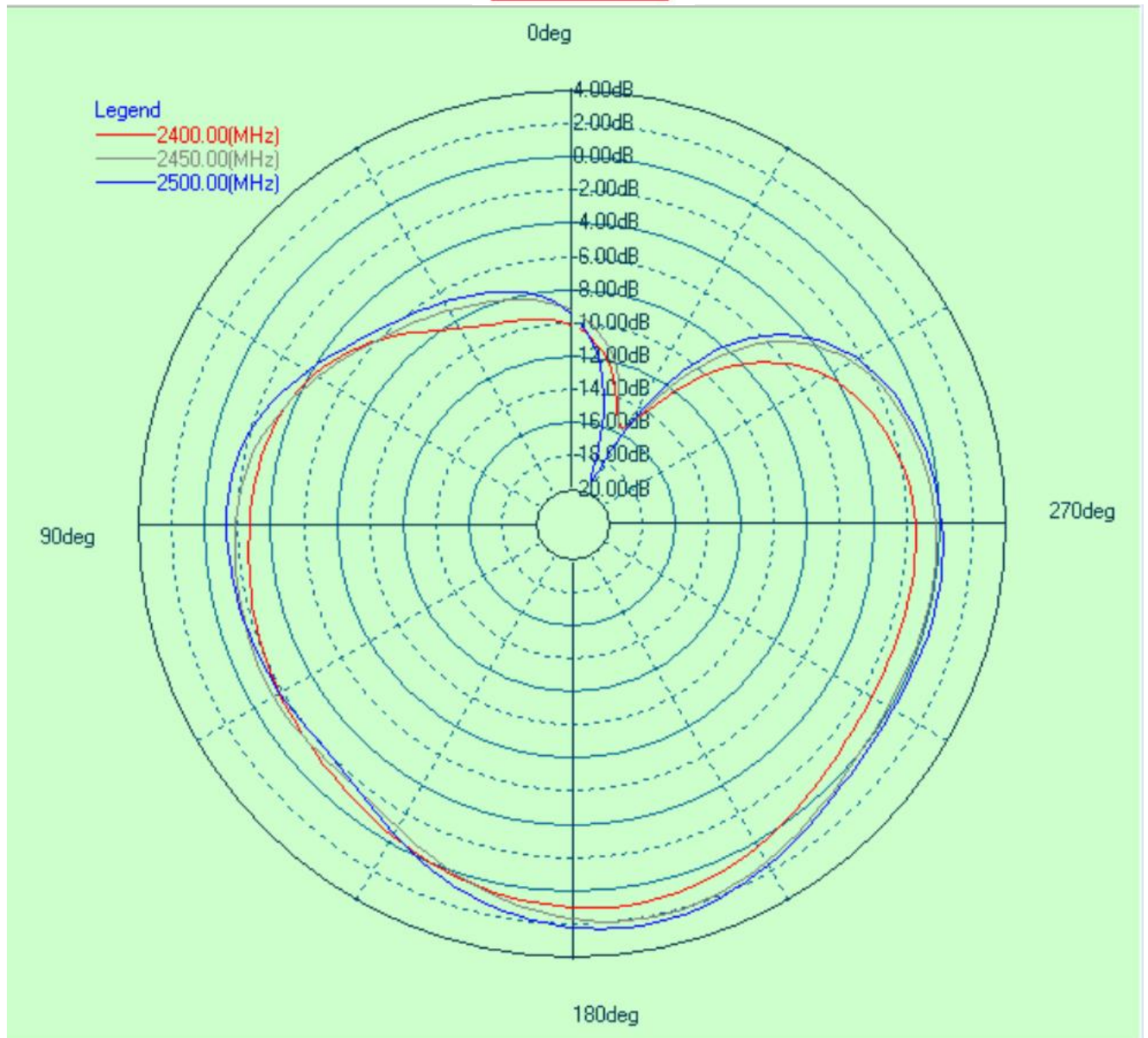
Antenna *Efficiency

Frequency/MHz	Efficiency	Gain . dbi
5000	54%	4.4
5100	55%	4.5
5200	67%	4.6
5300	52%	4.7
5400	55%	4.7
5500	59%	4.8
5600	56%	3.2
5700	52%	2.9
5800	55%	3.8
5900	51%	4.7
6000	50%	4.6

Directional pattern TEST

2.4G

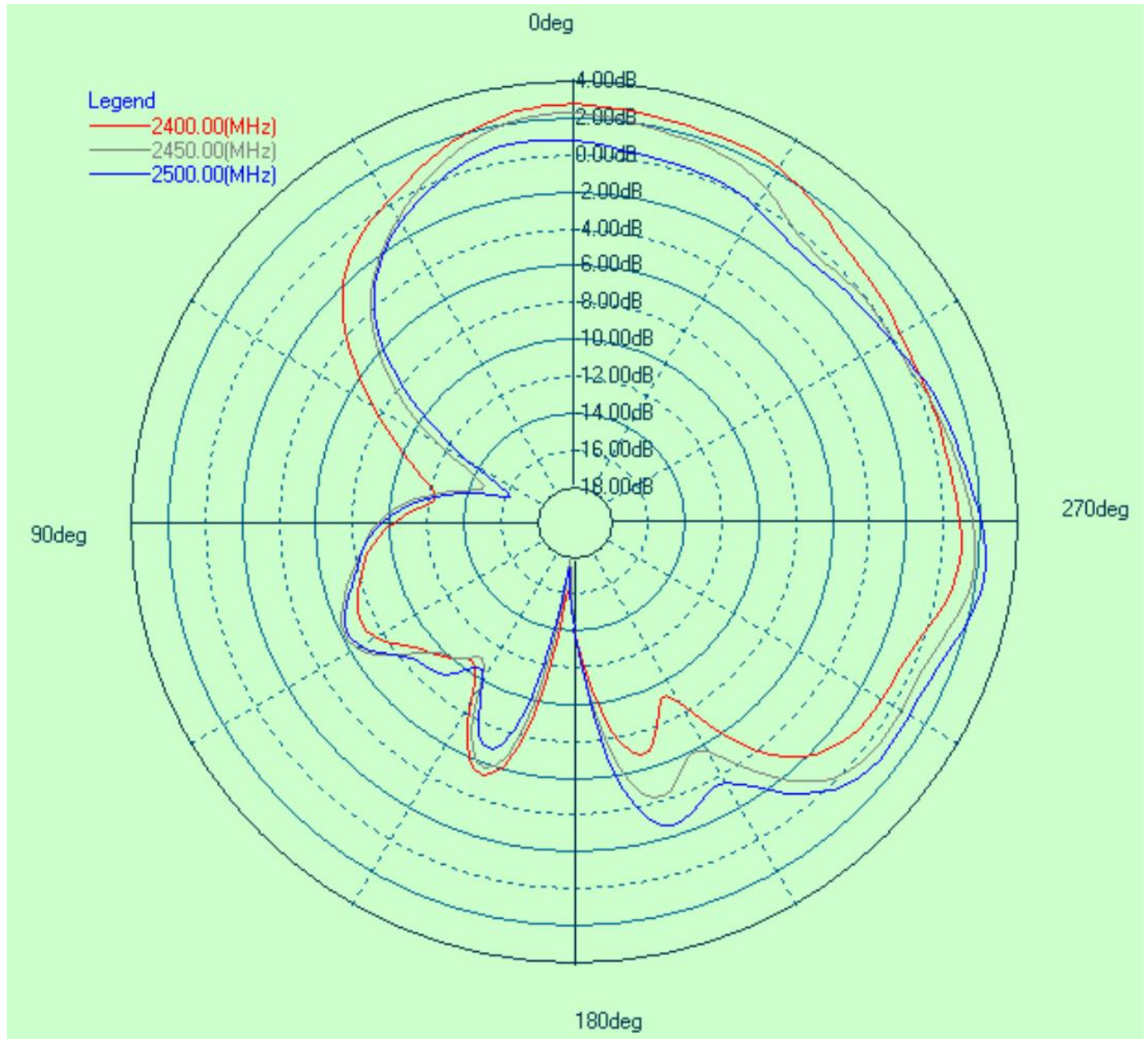
Theta 90deg



Directional pattern TEST

2.4G

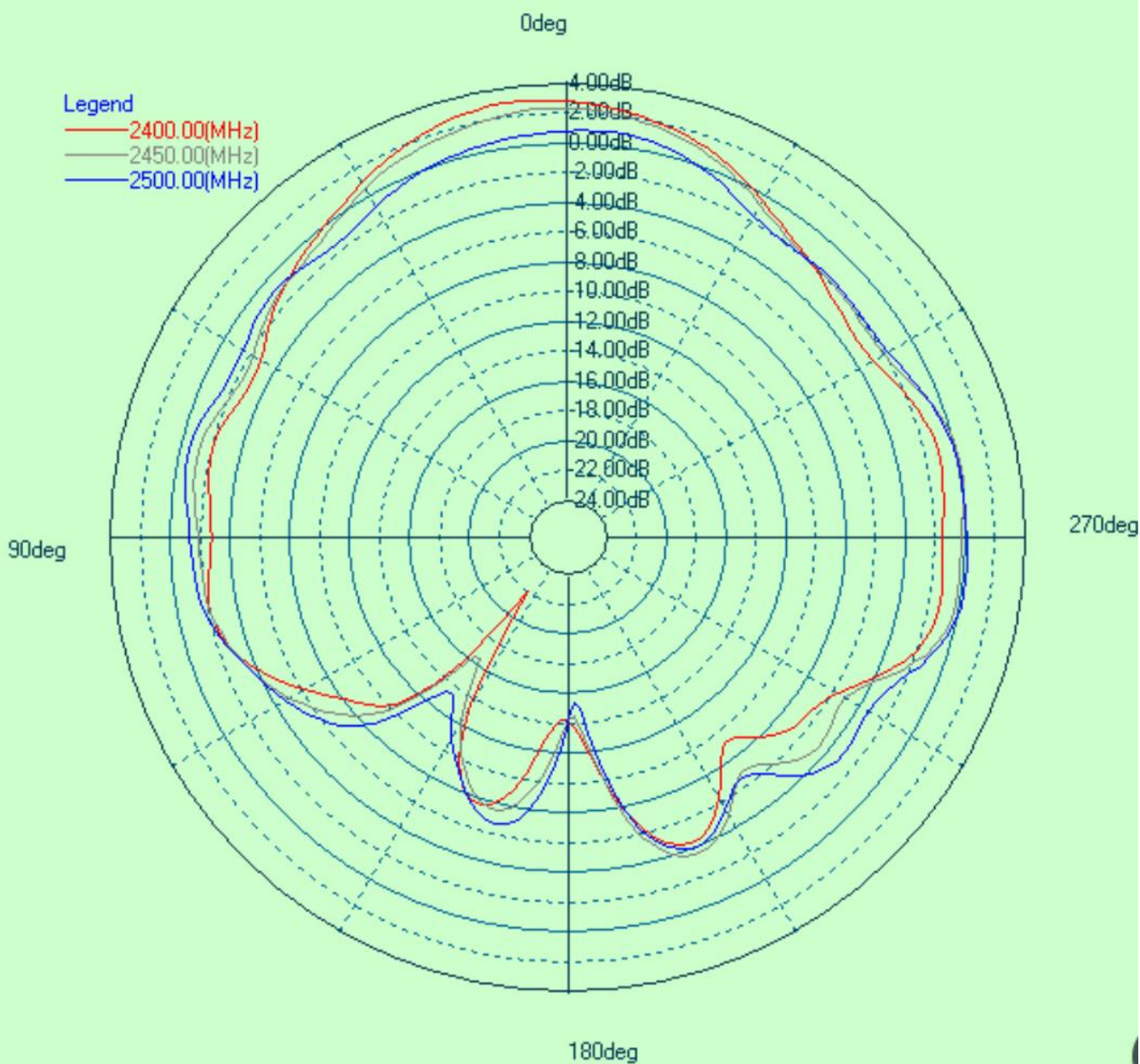
Phi 0deg



Directional pattern TEST

2.4G

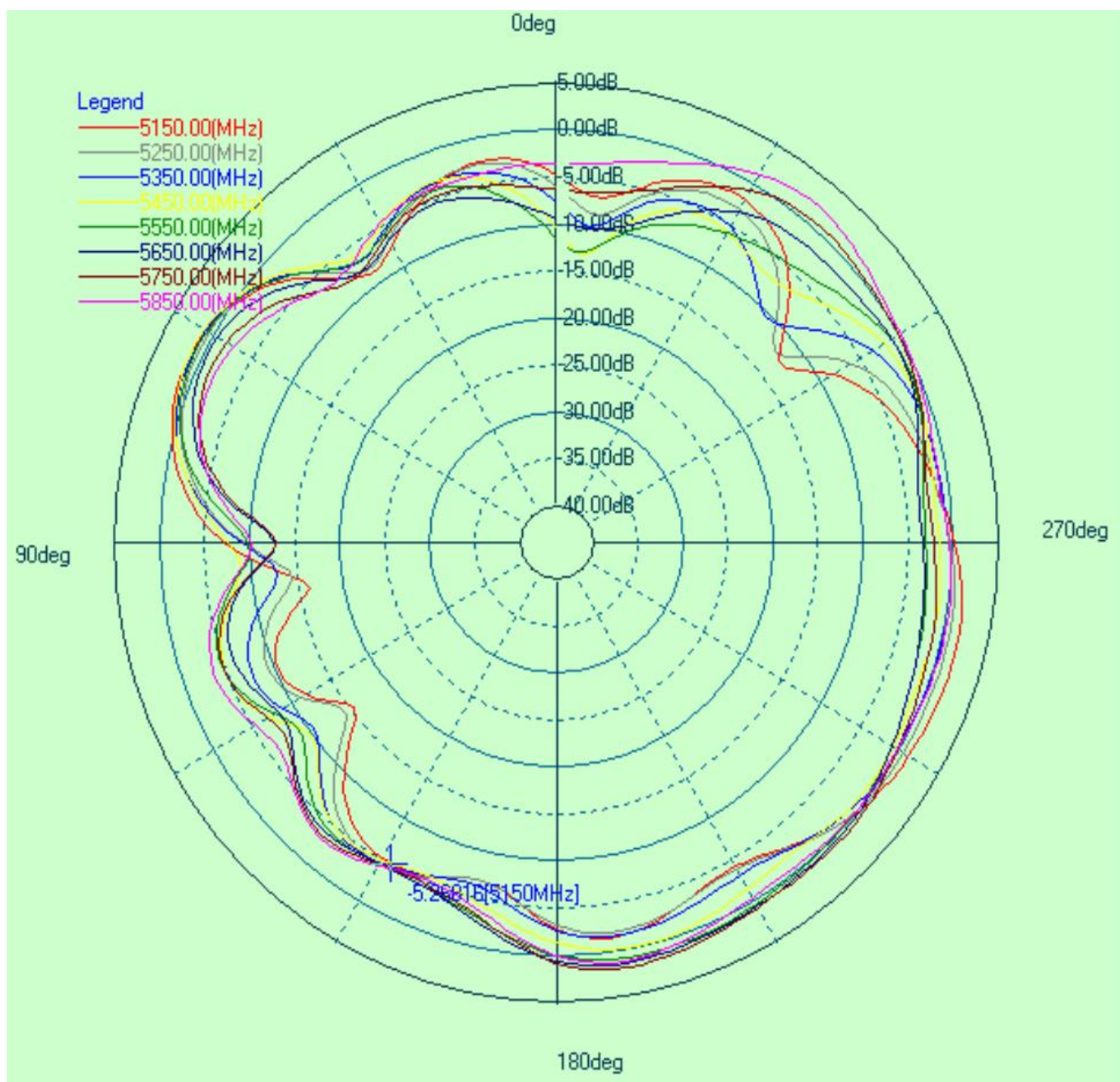
Phi 90deg



Directional pattern TEST

5.8G

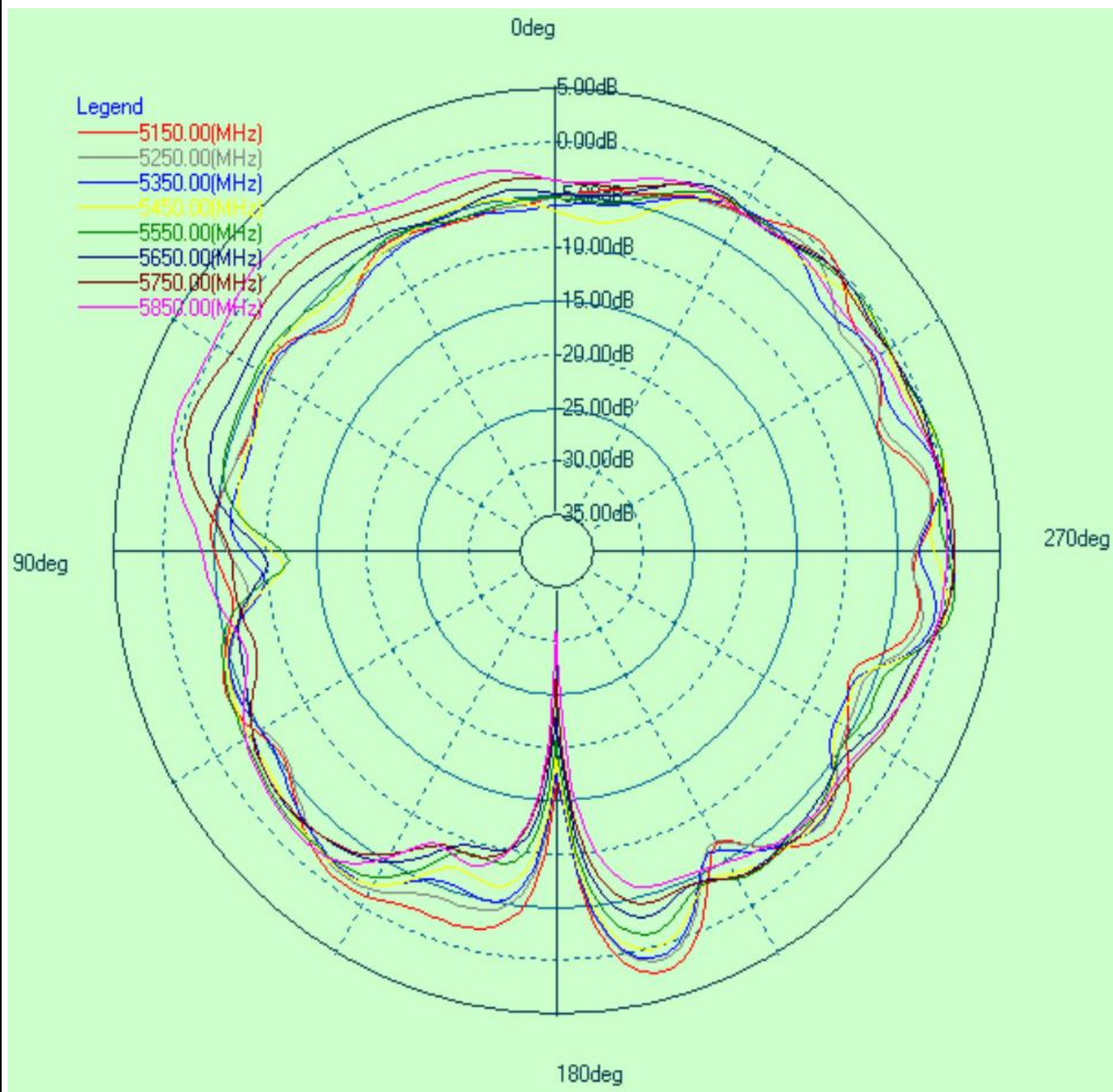
Theta 90deg



Directional pattern TEST

5.8G

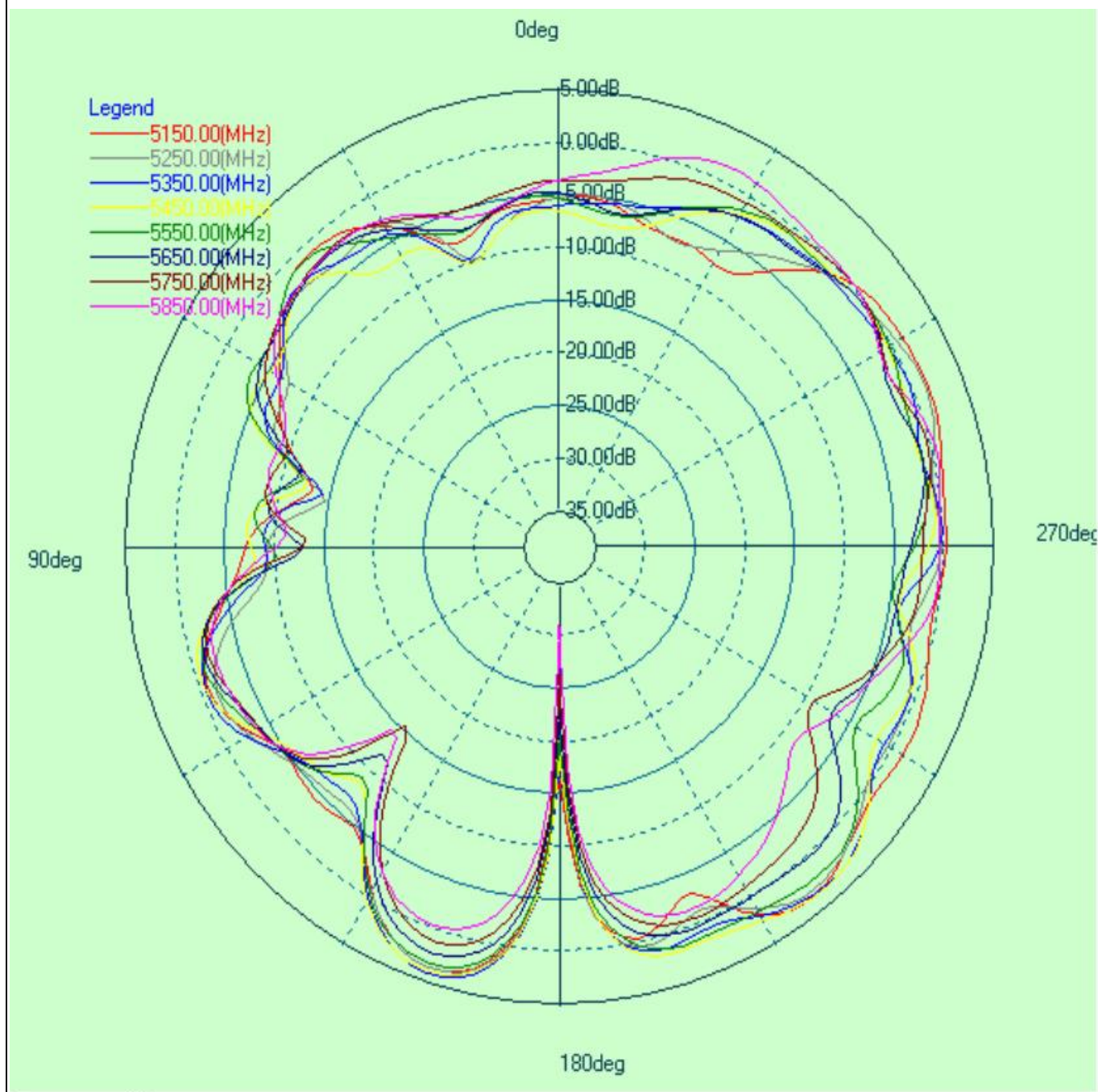
Phi 0deg



Directional pattern TEST

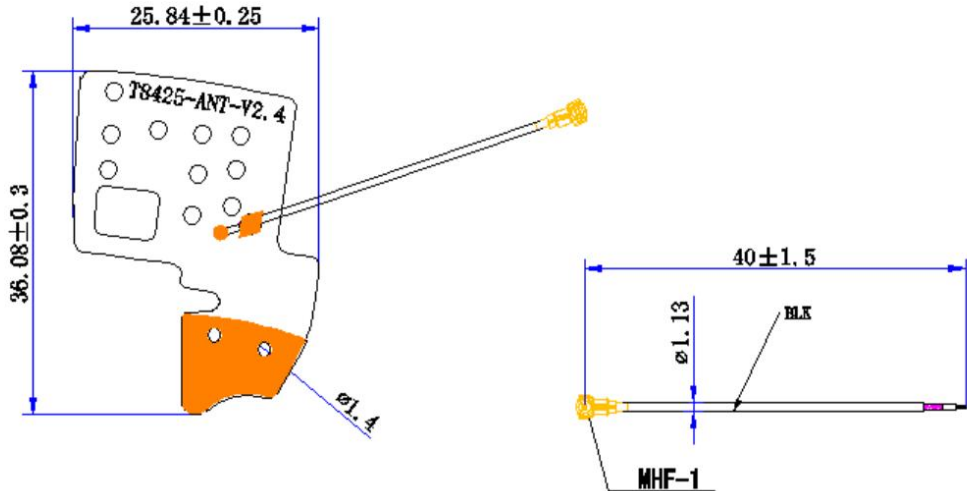
5.8G

Phi 90deg



Antenna Draw

REV	REV	DATE	DESCRIPTION OF CHANGE	DRAWN	CHECKED	APPROVED
1						



NOTE

- General Tolerance: ± 0.15 FPC Antenna Welded Cable Wire Component, MHF3 Terminal, Mouth Down
- Product Surface: Antenna Surface Black matte ink surface silk printing as shown in the figure position, PE bag packaging shipment
- SMD471 LSE for antenna backing glue. Material material: PI, substrate thickness $T = 1/2\text{mm}$, electrolytic copper foil thickness 0.50oz
- Coarsening () labeling is managed according to key dimensions
- Measure the size after removing the attachment plane of the stripping paper.
- Gold plating Type and Spec, thickness: electrolytic method / A0 (gold plating $0.025-0.050$ Nickel thickness is $2-8\mu\text{m}$)
- Front, back, no bubbles or foreign bodies in appearance. Salt fog 48H OK
- Raw materials should meet ROHS requirements

X	± 0.5	3rd ANGLE		AT&C	AT&C Co., LTD. (Shenzhen)
.X	± 0.25	PROJECTION			
.XX	± 0.10				
.XXX	± 0.05				
COPYRIGHT: AT&C 2009. 04. 05					
WITH NOTICE DEER NOT SUPPLY FOR SALE					
CHECKED BY		SIZE	SI	A4	
DRAWN BY	LNF	UNITS	MM		
APPROVED BY	JACK	SCALE	1:1		
				PART NAME	T8425-ANT-ASM
				MODEL NAME	WIFI Ant
				DRAWING NUMBER	ATC1357-HN049B70RA
				DRAWING DATE	2023. 04. 13

Size information					Measuring sample			% Tolerance		Handling opinions			Measuring tool
num ber	Dime nsion prop erty	Dimen sion	Lower to lerance	Upper t oleranc e	1	2	3	Upper	Lower	determi ne	Supplier r eview co mments	Custo mer re view co mments	
1	key p oint	25.84	-0.25	0.25	25.87	25.79	25.82			PASS			PJ
2	key p oint	36.08	-0.30	0.30	36.06	36.12	36.07			PASS			PJ
3	key p oint	1.4	-0.1	0.1	1.36	1.36	1.43			PASS			PJ
4	key p oint	40	-1.5	1.5	40.8	39.5	40.3			PASS			PJ

Production process

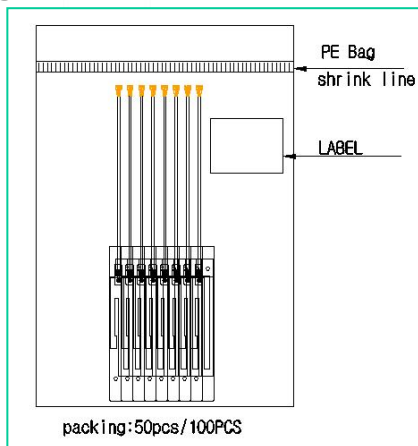
T8600 Production process flow chart

Product Name: T8600 antenna assembly

No	Process name	Use of equipment, fixture and tooling	Inspection items	Control factor	Reference standard	Inspection frequency
1	FPC incoming	Quadratic element or caliper	Key dimensions		Reference drawings	1
			Common appearance defects of FPC components		Refer to relevant inspection specifications	AQL0.65
			Black oil stripping		≥ 5Kg/f	2
			Material type, ROHS compliance		Reference drawings	Once
2	Cable incoming	Quadratic element or caliper	Key dimensions		Reference drawings	1
			Common appearance defects of coaxial line components		Refer to relevant inspection specifications	AQL0.65
			Wire end welding		Easy to weld, no oxidation, poor welding	2
			Material type, ROHS compliance		Reference drawings	Once
3	Cable welding	Soldering iron and tin wire	Soldering with iron	welding temperature	320±10℃	1
			Welding appearance		Do not short circuit, connect tin, wire skin scald	100%Self inspection
					False welding and false welding are not allowed	100%Self inspection
					Solder joint should not be less tin, more tin (large solder joint)	100%Self inspection
4	Network test	network analyzer	Test waveform compliance	Network parameters	The test waveform parameters of the product are consistent with the set waveform parameters, and the display of	100%
5	100% Appearance inspection And packaging	Cartons, pallets, labels, finished products to be packed	appearance		Refer to t8010 antenna inspection specification	100%
			Number of packages		Refer to relevant inspection specifications	100%
			Correct marking		Correct product name, quantity and related information	Once
6	OQC Delivery inspection	Quadratic element / caliper 3M glue	Key size and position of antenna		Reference drawings	Once
			Thickness and drawing adhesion		Refer to product drawing and PCB welding antenna inspection specification	Once
			Pull out force test of coaxial line		Refer to product drawing force test standard	Once
			Salt spray test		Refer to product salt spray test standard	Monthly / time
			Antenna appearance, packaging and labeling		Refer to T8600 antenna inspection specification	AQL0.65

Packaging method

PE bag packaging, product emission neat, uniform quantity



Picture: Outer box "I" seal, QC PASS seal on the left side of the outer box, sealed without exposure.



PART LIST

The packing drawing is schematic diagram, which does not mean that the picture is the actual product and the actual shipment is the standard.

NO	DESCRIPTION	Q'TY	MATERIAL	REMARKS	REV.
1	ANTENNA	1/1000		N/A	A
2	PAD OUT	1/4	SW A골 5T	N/A	A
4	CARTOON BOX	-	SW A골 5T	N/A	A
5	PACKING TAPE	-	PP	N/A	A