

Sample Acknowledgment Letter

Document Version Number: A3

	client	Contract manufacturer	Material Supplier
Partner Name:	Anker	Xiechuang	Youbi
project name:	T8180	T8180	T8180
Material Number:	32002000291	400105530	UB01C55P1D5789A
Material Description:	2.4/5.8 PCB built-in antenna (L = 73 mm); 1.13 mm black wire + terminal (ANT1)		
Acknowledgement Date:	2026-08-18	Acknowledgement Letter Version:	V2

Supplier Confirmation

research and development	Quality

Ankerapproval

Zhixin R&D Zhixin MD/HW/ID Certification	Zhixin SQE

Approval Note: 1. This Acknowledgment Letter shall be prepared in at least five copies; one copy shall be retained by AnkER R&D and SQE, one copy by the material manufacturer, and one copy by the contract manufacturer.

Keep two copies at the factory;

2. For Anker products, the owner's signature must bear the full English name of the company.

3. First, distribute the electronic version to the relevant Anker R&D and SQE teams for confirmation; once approved, send the hard-copy version for signature and approval.

acknowledgement

APPROVAL SHEET

CUSTOMER NAME:

Anker

CUSTOMER NAME:

Anker

Product Name:

2.4/5.8 GHz PCB Built-in Antenna (L=73 mm) – 1.13 mm Black Wire +

Terminal (ANT1)

CUSTOMER P/N:

32002000291

Youbi

P/N:

UB01C55P1D5789A

REV: C

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Lina 	
APPROVED BY:	Zhijun.zhu	
DATE:	2026/8/18	



Dongguan Youbi Electronics Co.,LTD

catalogue

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1. Revision History

Version	Content Revision	Issued by	Date
A	Original version	lina	2026-4-29
B	Version update	lina	2026-6-29
C	Data update	lina	2026-8-18

2.Product 2D Drawings

The technical drawing shows a side view of a terminal cup assembly. Key dimensions include a width of $25.9^{+0}_{-0.2}$, a height of 30 ± 0.3 , and a length of 73 ± 3 . A cross-section view (3) shows the internal components: a terminal cup (1) with a central pin (2), a terminal cup opening (3), and a terminal cup opening (4). The terminal cup opening shall conform to the illustration.

Apply UV-curing adhesive here.

Specification:
 Frequency Rang: 2.4~2.5/5.15~5.85GHz
 Return Loss: -10dB Max
 VSWR: 1.92:1 Max
 Gain (peak): 2.0 dBi @ 2.4-2.5/5.15-5.85 GHz -
 Based on test results from the physical sample

Rev.	Date	Changes
A	2025-03-23	New Issue
B	2025-04-29	Version Update
C	2025-06-29	Version Update
D	2025-08-17	Version Update

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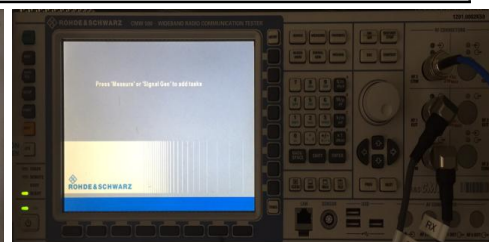
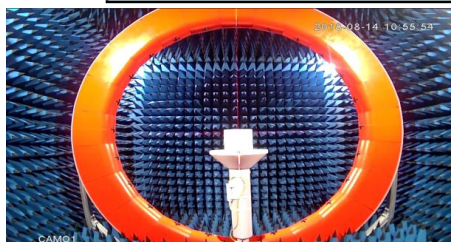
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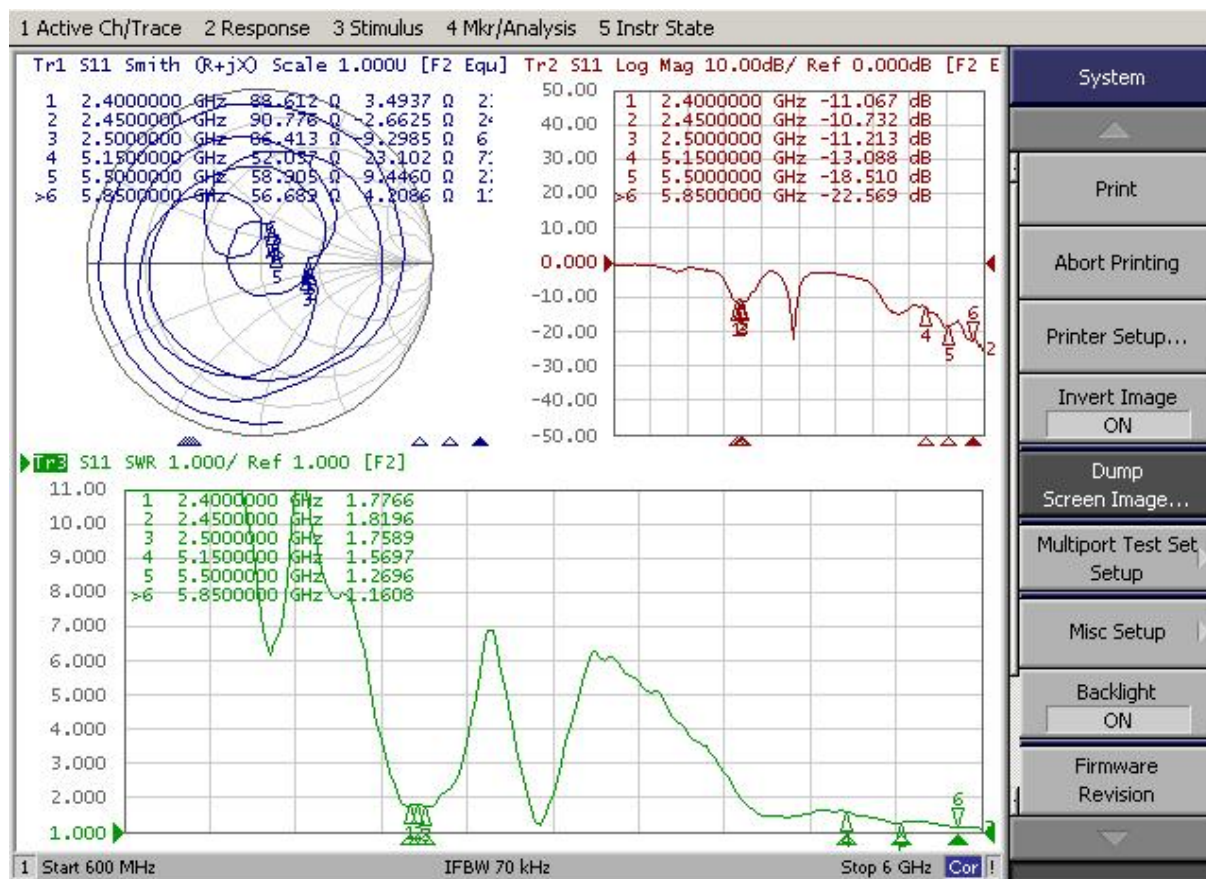
3.Test equipment

	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*4m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave darkroom (5m*5m*5m) 2.Comprehensive test instrument (CMW500)



4. Antenna Network Sub-figure (Antenna S11)

Frequency(MHz)	Return Loss(dB)	VSWR
2400	-11.06	1.77
2450	-10.73	1.81
2500	-11.21	1.75
5150	-13.08	1.56
5550	-18.51	1.26
5850	-22.56	1.16



* Voltage Standing Wave Ratio(VSWR)

Return Loss(RL)

$$RL=20*\log_{10}[(VSWR+1)/(VSWR-1)]$$

5. Antenna Efficiency & Gain

2.4G

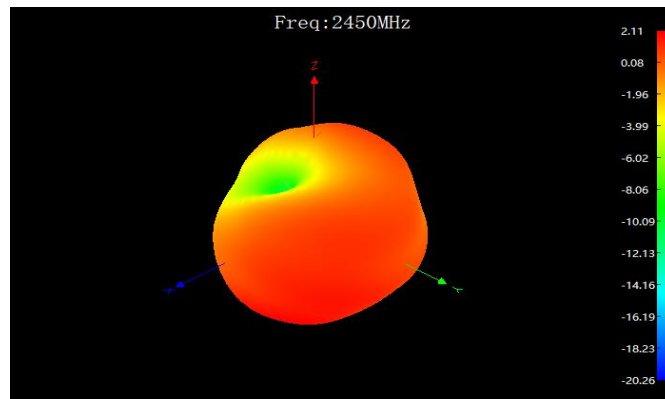
Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
2400	-1.75	66.83	2.11
2410	-1.74	66.99	2.01
2420	-1.58	69.5	2.20
2430	-1.65	68.39	2.12
2440	-1.68	67.92	2.07
2450	-1.64	68.55	2.20
2460	-1.68	67.92	2.13
2470	-1.84	65.46	2.02
2480	-1.72	67.3	2.14
2490	-1.93	64.12	2.11
2500	-1.98	63.39	2.03

5.8G

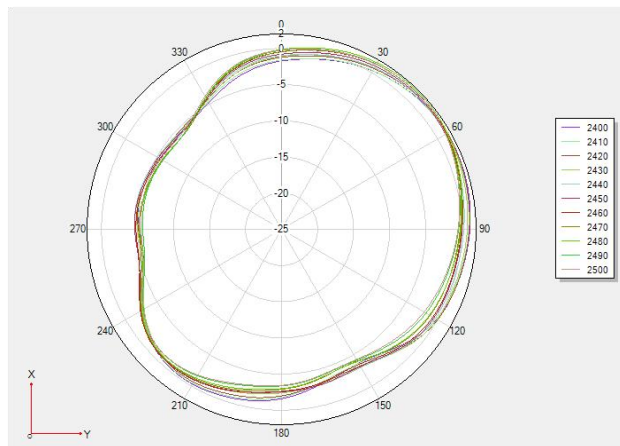
Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
5150	-1.73	67.14	2.7
5200	-1.5	70.79	3.0
5250	-1.51	70.63	2.1
5300	-1.74	66.99	3.2
5350	-1.58	69.5	2.14
5400	-1.51	70.63	3.12
5450	-1.5	70.79	3.30
5500	-1.7	67.61	3.75
5550	-1.55	69.98	3.22
5600	-1.42	72.11	3.14
5650	-1.34	73.45	3.3
5700	-1.72	67.3	2.81
5750	-1.31	73.96	2.92
5800	-1.37	72.95	2.74
5850	-1.57	61.66	2.80

6. Antenna 2D/3D Radiation Pattern

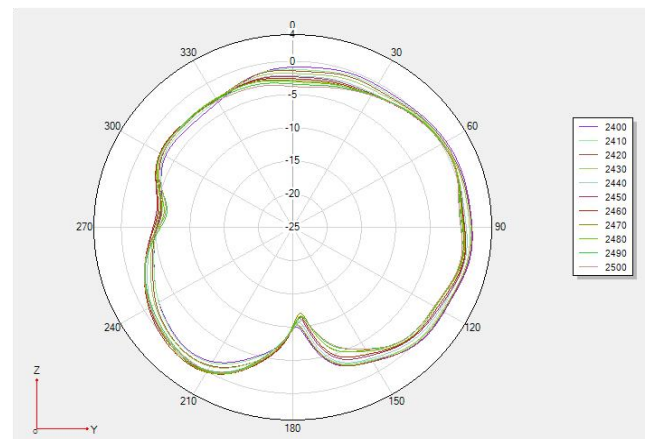
2.4G



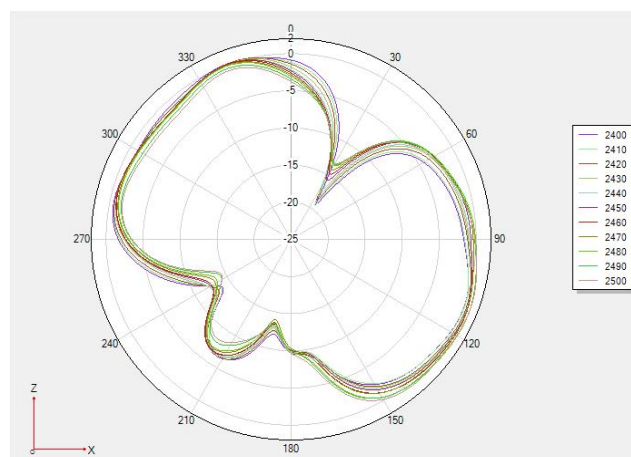
2450MHZ



Phi 0 2D

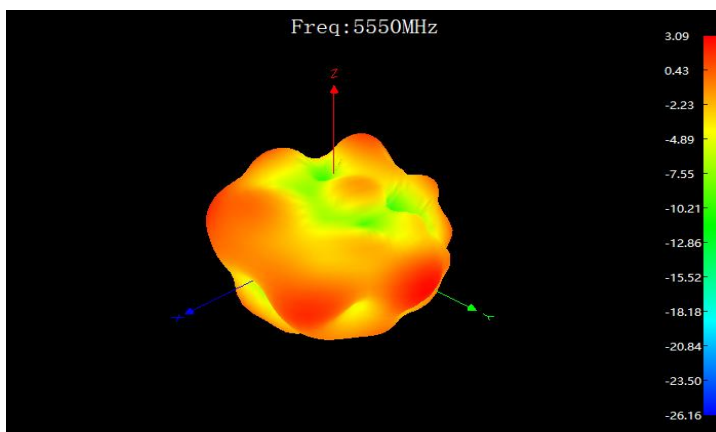


Phi 90 2D

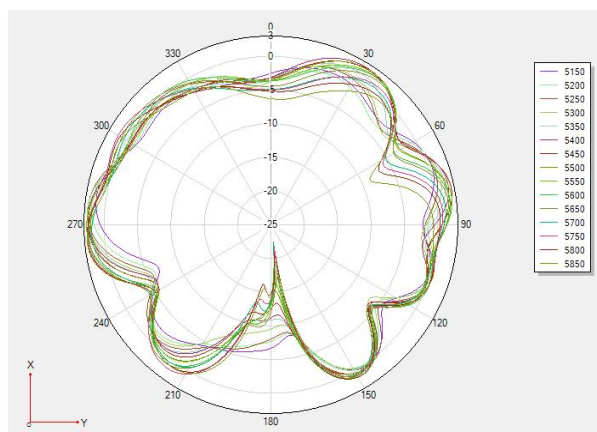


Theta 90 2D

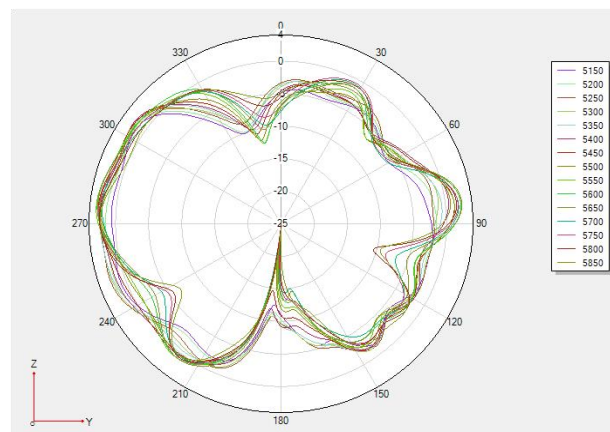
5.8G



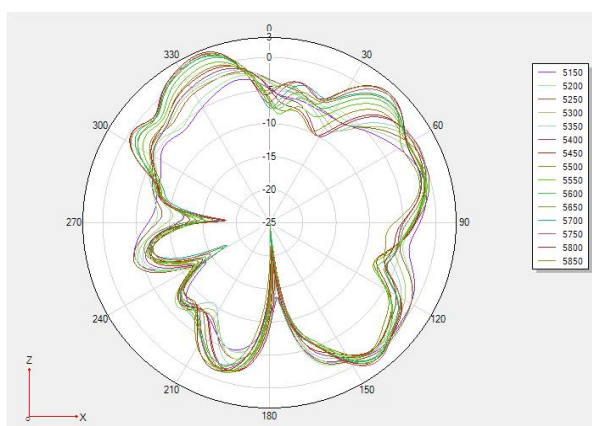
5500MHZ



Phi 0 2D

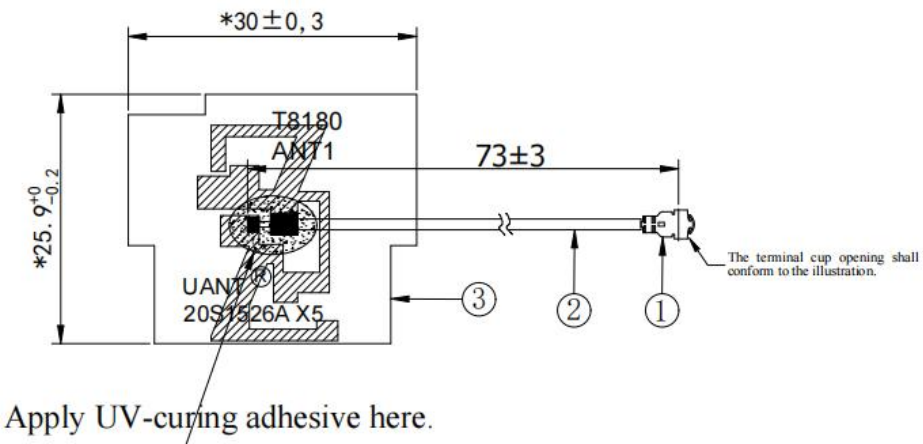


Phi 90 2D



Theta 90 2D

7. Full Size Test Report

Full Dimensional Inspection Report									
customer name	Anker	drawing number	A1						
project name	Built-in antenna	data unit	mm						
Part Code/Material Number	UB01C55P1D5789A	examination date	2026.08.05						
									
order number	dimensional requirement	survey tools	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	judge	Customer Review Opinion
1	30±0.3	callipers	30.05	30.03	30.04	30.03	30.04	OK	
2	73±3	steel rule	73.30	73.25	73.55	73.50	73.50	OK	
3	25.9 +0 -0.2	callipers	25.9	25.9	25.87	25.89	25.89	OK	
Approved by: Li Shufei; Reviewed by: Li Yongxiang; Inspector: Zhou Jianming Approved by: Li Shufei; Reviewed by: Li Yongxiang; Inspector: Zhou Jianming Approved by: Li Shufei; Reviewed by: Li Yongxiang; Inspector: Zhou Jianming									

8. CPK Test Report

CPKreport															
Process Capability Index Report															
Customer name	Anker		Project stage	Mass production		Report number	2026080502		Auditor	Li Shuxun					
Project name	T8180		Drawing number	A1		Inspection Personnel	Zhou Jianming		Date	2026.08.05					
Component Name/Process Section	UB01C55P1D5789A		Data unit	mm		Testing Date	2026.08.05		Page number	1					
Dimensional Code	1	2													
Dimensional Standards	73	30													
Upper deviation	3	0.3													
Lower deviation	-3	-0.3													
USL	76	30.3													
LSL	70	29.7													
Survey tools	OMM	OMM													
1	73.3	30.03													
2	73.25	30.05													
3	73.35	30.03													
4	73.25	30.02													
5	72.86	30.04													
6	73.25	30.03													
7	73.30	29.93													
8	73.35	30.03													
9	73.40	30.05													
10	72.83	30.04													
MAX.	73.400	30.050													
MIN.	72.830	29.930													
AVG	73.214	30.025													
STDEV	0.201	0.035													
Range	0.570	0.120													
Ca	7.13%	8.33%													
Cp	4.98	2.88													
Cpk	4.62	2.64													
Result (Grade)	A+	A+													
Product percent of pass	0.00%	0.00%													
A+	Cpk>1.67		Process capability is sufficiently adequate; maintain as is.												
A	1.33< Cpk ≤ 1.67		The process capability is fully optimized and can be upgraded to Level A+.												
B	1.0 < Cpk ≤ 1.33		The process capability is acceptable; therefore, process improvements should be implemented to reduce output variability and enhance quality.												
C	0.67< Cpk ≤ 1.0		Insufficient process capability requires a comprehensive review and the implementation of corrective measures; if necessary, production may be halted.												
D	Cpk ≤ 0.67		Due to severe process capability deficiencies, production was immediately halted; the root causes were investigated, appropriate measures were implemented, and comprehensive improvements were carried out.												

9.RoHS Report

Environmental report checklist
Environmental Impact Assessment Checklist

Client:	Anker	Fabrication	ZZJ	Production Date	2026.08.05
P / N	UB01C55P1D5789A	Proofreading	HTF	Proofreading Date	2026.08.05
Part name	2.4/5.8 PCB built-in antenna (L = 55 mm) 1	Affirm	QXH	Confirmation Date	2026.08.05
Material Name	Component Name	Test Report Number	Test Date	Testing Institution	Test Report Attachment
PCB	Base material	SHAEC26020074017	2026-7-9	SGS	
Wire stock	FEP	A2260280297401001E	2026.04.13	CTI	
Terminal	Base material	CANEC24029407215	2025.11.13	SGS	
	Cladding material	A2250940194401002E	2025.12.24	CTI	

10. Reliability Report

Saline Spray Test Report

Supplier/Client Name	Anker	duration of test	2026.8/5 08: 00/8/7 08: 00
Product Name & Specifications	PCB built-in antenna	Comprehensive Assessment	OK
Part Code/Material Number	UB01C55P1D5789A	edition	A

Experimental Objective: ☐ New Product Development Testing ☐ Design Change Testing ☐ Mass Production Tracking Test ☒ Other Special Requirements Tests ☐ Feedstock/Process/Finished Product Inspection	盐水喷雾试验图 ● 表示第 0 小时与试验结束时间, 试验人员需确认之时间。 ▲ 表示待试验品与试验结束, 并放置 1 小时。
Equipment Name: Saltwater Spray Machine Test specification: Temperature - 10-35 °C Average salt solution volume: 500 ml/hr Saline solution concentration: 5±1 % Test duration: 48 hours Number of units: 3 PCS	盐水喷雾试验图 ● 表示第 0 小时与试验结束时间, 试验人员需确认之时间。 ▲ 表示待试验品与试验结束, 并放置 1 小时。

Sample	Appearance Inspection	Electrical Testing	judge
1	No rusting or oxidation	2400-2500/5150-5850MHz PASS	OK
2	No rusting or oxidation	2400-2500/5150-5850MHz PASS	OK
3	No rusting or oxidation	2400-2500/5150-5850MHz PASS	OK