FCC 47 CFR Part 15 Subpart B

TEST REPORT

For

ATK-CLT113IS

MODEL NUMBER: ATK-CLT113IS(NAND)

REPORT NUMBER: E04A25010254F00501

ISSUE DATE: January 9, 2025

Prepared for

Guangzhou Xingyi Electronic Technology Co., Ltd
Room 805-808, Room 801, Building 4, No. 1, 3, and 5, Kesheng Road, Guangzhou Private Science and Technology Park, No. 1633 Beitai Road, Baiyun District, Guangzhou City

Prepared by

Guangdong Global Testing Technology Co., Ltd.

Room 101-105, 203-210, Building 1, No.2, Keji 8 Road, Songshan Lake Park, Dongguan city, Guangdong, People's Republic of China, 523808

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	January 9, 2025	Initial Issue	

Summary of Test Results

Emission			
Standard	**Test Item**	**Limit**	**Result**
FCC 47 CFR Part 15 Subpart B	Conducted emissions	FCC Part 15.107	Pass
	Radiated emissions below 1GHz	FCC Part 15.109	Pass
	Radiated emissions above 1GHz	FCC Part 15.109	N/A (NOTE 1, 2)

Note:
1. N/A: In this whole report not applicable.
2. If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less.

*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
*The measurement result for the sample received is <Pass> according to <FCC 47 CFR Part 15 Subpart B> when <Accuracy Method> decision rule is applied.

CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Guangzhou Xingyi Electronic Technology Co., Ltd
Address:	Room 805-808, Room 801, Building 4, No. 1, 3, and 5, Kesheng Road, Guangzhou Private Science and Technology Park, No. 1633 Beitai Road, Baiyun District, Guangzhou City

Manufacturer Information

Company Name:	Guangzhou Xingyi Electronic Technology Co., Ltd
Address:	Room 805-808, Room 801, Building 4, No. 1, 3, and 5, Kesheng Road, Guangzhou Private Science and Technology Park, No. 1633 Beitai Road, Baiyun District, Guangzhou City

Factory Information

Company Name:	Dongguan Zhichen Electronic Technology Co., Ltd
Address:	301, Building 1, No. 16 Xingui Road, Lincun, Tangxia Town, Dongguan City, Guangdong Province

EUT Information

Product Description:	ATK-CLT113IS
Model:	ATK-CLT113IS(NAND)
Brand:	ALIENTEK
Sample Received Date:	7 January 2025
Sample ID:	A25010254 002
Date of Tested:	January 7, 2025 to January 9, 2025

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC 47 CFR Part 15 Subpart B	**Pass**

Prepared By:

Jansen Lin

Project Engineer

Checked By:

Alan He

Laboratory Leader

Approved By:

Shawn Wen

Laboratory Manager

Guangdong Global Testing Technology Co., Ltd. * CERTIFICATE * GTG

2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC 47 CFR Part 15 Subpart B

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 6947.01)** Guangdong Global Testing Technology Co., Ltd. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1343)** Guangdong Global Testing Technology Co., Ltd. has been recognized to perform compliance testing on equipment subject to Supplier's Declaration of Conformity (SDoC) and Certification rules **ISED (Company No.: 30714)** Guangdong Global Testing Technology Co., Ltd. has been registered and fully described in a report filed with ISED. The Company Number is 30714 and the test lab Conformity Assessment Body Identifier (CABID) is CN0148.

Note: All tests measurement facilities use to collect the measurement data are located at Room 101-105, 203-210, Building 1, No.2, Keji 8 Road, Songshan Lake Park, Dongguan city, Guangdong, People's Republic of China, 523808

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Measurement Frequency Range	K	U(dB)
Conducted emissions	0.009 MHz - 30 MHz	2	3.37
Radiated emissions below 1GHz	30 MHz -1 GHz	2	3.79
Note1: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.			
Note 2: According to the standard CISPR 16-4-2, the MU for the Conducted emissions from the AC mains power ports using AMN should not exceed 3.8 in range of 9kHz to 150kHz and 3.4 in range of 150kHz to 30MHz. We have considered the test results containing the value of Ulab (in dB) for the measurement instrumentation actually used for the measurements.			

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name		ATK-CLT113IS
Model		ATK-CLT113IS(NAND)
EUT Classification		Class B
Internal Frequency		below 108MHz
Ratings		INPUT:DC12V 1A
Power Supply	DC	DC12V from adapter input AC120V/60Hz

5.2. TEST MODE

Test Mode	Description
M01	Normal Working: Operate according to the user manual

5.3. EUT ACCESSORY

Adapter	
Model No.:	GQ12-120100-CC
Input:	100-240 V~50/60 Hz, 0.4 A Max
Output:	12VDC 1A
DC Cable:	1.2 Meter, Shielded without ferrite

5.4. SUPPORT UNITS FOR SYSTEM TEST

The EUT has been tested as an independent unit

6. MEASURING EQUIPMENT AND SOFTWARE USED

Test Equipment of Conducted emissions					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Shielding Room 1	CHENG YU	8*5*4	N/A	10/29/2022	10/28/2025
LISN	R&S	ENV216	102843	9/13/2024	9/12/2025
EMI Test Receiver	R&S	ESR3	102647	9/14/2024	9/13/2025
LISN	Schwarzbeck	NNLK 8129 RC	5046	9/13/2024	9/12/2025
8-Wire ISN CAT6	Schwarzbeck	NTFM 8158	#237	9/14/2024	9/13/2025
CURRENT PROBE	R&S	EZ-17	101602	9/14/2024	9/13/2025
Test Software for CE	Farad	EZ-EMC	V1.1.4.2	N/A	N/A

Test Equipment of Radiated emissions below 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Chamber	ETS	9*6*6	Q2146	8/30/2022	8/29/2025
Receiver	R&S	ESCI3	101409	9/14/2024	9/13/2025
Loop Antenna	ETS	6502	243668	3/30/2022	3/30/2025
Pre-Amplifier	HzEMC	HPA-9K0130	HYPA21001	9/14/2024	9/13/2025
Biconilog Antenna	Schwarzbeck	VULB 9168	1315	10/10/2022	10/9/2025
Biconilog Antenna	ETS	3142E	243646	3/23/2022	3/22/2025
Test Software for RE	Farad	EZ-EMC	V1.1.4.2	N/A	N/A

7. EMISSION TEST

7.1. CONDUCTED EMISSIONS

LIMITS

CFR 47 FCC Part15 Subpart B				
FREQUENCY (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46*
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

TEST PROCEDURE

1. The testing follows the guidelines in ANSI C63.4-2014.

2. The EUT was placed on the top of a rotating table 0.8 meters above the horizontal ground plane and being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

3. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

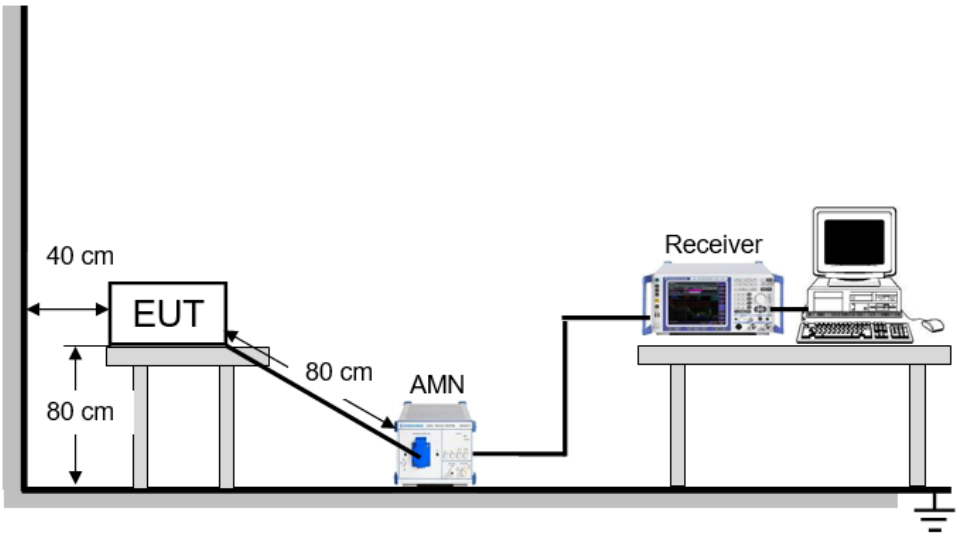
4. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

5. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.

6. LISN at least 80 cm from nearest part of EUT chassis.

7. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

TEST SETUP



TEST ENVIRONMENT

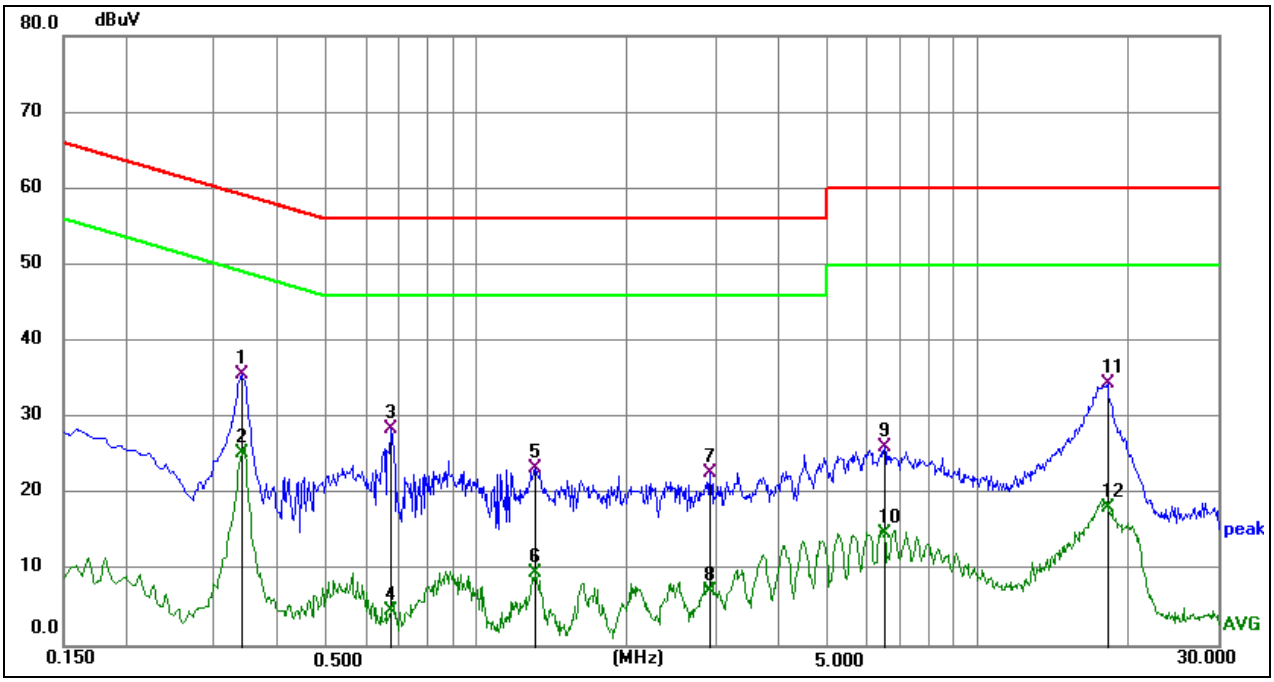
Temperature	23.2℃	Relative Humidity	52%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M01
Final Test Mode:	M01

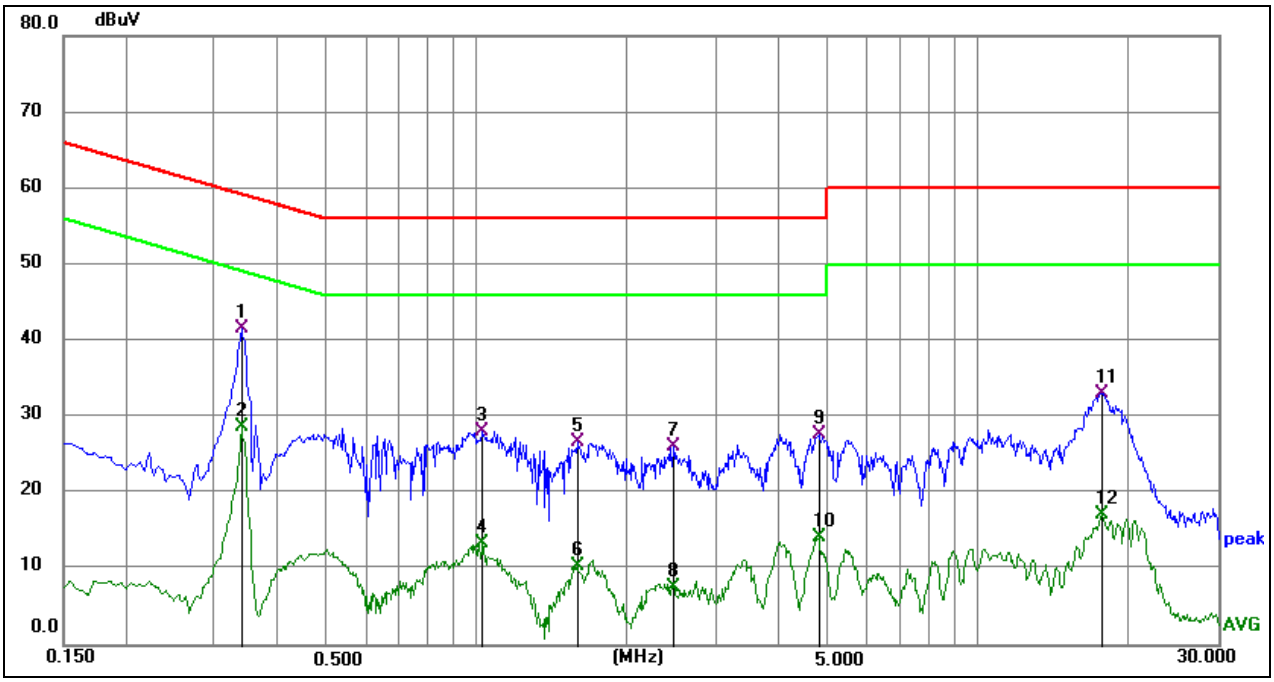
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



Phase: N	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3390	25.99	9.68	35.67	59.23	-23.56	QP
2	0.3390	15.69	9.68	25.37	49.23	-23.86	AVG
3	0.6764	18.88	9.70	28.58	56.00	-27.42	QP
4	0.6764	-4.99	9.70	4.71	46.00	-41.29	AVG
5	1.3064	13.63	9.71	23.34	56.00	-32.66	QP
6	1.3064	-0.15	9.71	9.56	46.00	-36.44	AVG
7	2.9264	13.00	9.74	22.74	56.00	-33.26	QP
8	2.9264	-2.47	9.74	7.27	46.00	-38.73	AVG
9	6.4904	16.21	9.91	26.12	60.00	-33.88	QP
10	6.4904	4.87	9.91	14.78	50.00	-35.22	AVG
11	18.1140	24.19	10.20	34.39	60.00	-25.61	QP
12	18.1140	8.01	10.20	18.21	50.00	-31.79	AVG



Phase: L1	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3390	31.81	9.78	41.59	59.23	-17.64	QP
2	0.3390	18.81	9.78	28.59	49.23	-20.64	AVG
3	1.0275	18.22	9.81	28.03	56.00	-27.97	QP
4	1.0275	3.51	9.81	13.32	46.00	-32.68	AVG
5	1.5900	16.86	9.82	26.68	56.00	-29.32	QP
6	1.5900	0.52	9.82	10.34	46.00	-35.66	AVG
7	2.4674	16.30	9.83	26.13	56.00	-29.87	QP
8	2.4674	-2.14	9.83	7.69	46.00	-38.31	AVG
9	4.8075	17.82	9.87	27.69	56.00	-28.31	QP
10	4.8075	4.26	9.87	14.13	46.00	-31.87	AVG
11	17.6505	22.99	10.14	33.13	60.00	-26.87	QP
12	17.6505	6.95	10.14	17.09	50.00	-32.91	AVG

Remark: Result = Reading +Correct (Insertion Loss + Cable Loss + Attenuator Factor)
Margin = Result - Limit

7.2. RADIATED EMISSIONS BELOW 1GHZ

LIMITS

Below 1 GHz

CFR 47 FCC Part 15 Subpart B		
Frequency (MHz)	Class A	Class B
	Field strength (dBuV/m) (at 3 m)	Field strength (dBuV/m) (at 3 m)
30 - 88	49.5	40
88 - 216	53.9	43.5
216 - 960	56.9	46
Above 960	60	54

Test Frequency Range of Radiated Disturbance Measurement

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5^{th} harmonic of the highest frequency or 40 GHz, whichever is lower

NOTE:

(1) The limit for radiated test was performed according to FCC Part 15, Subpart B;
(2) The tighter limit applies at the band edges;
(3) Emission level (dBuV/m) = 20log Emission level (uV/m),
3m Emission level = 10 m Emission level + 20log(10 m/3 m);

TEST PROCEDURE

Below 1 GHz and above 30 MHz

The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak and QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.4-2014.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp was used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

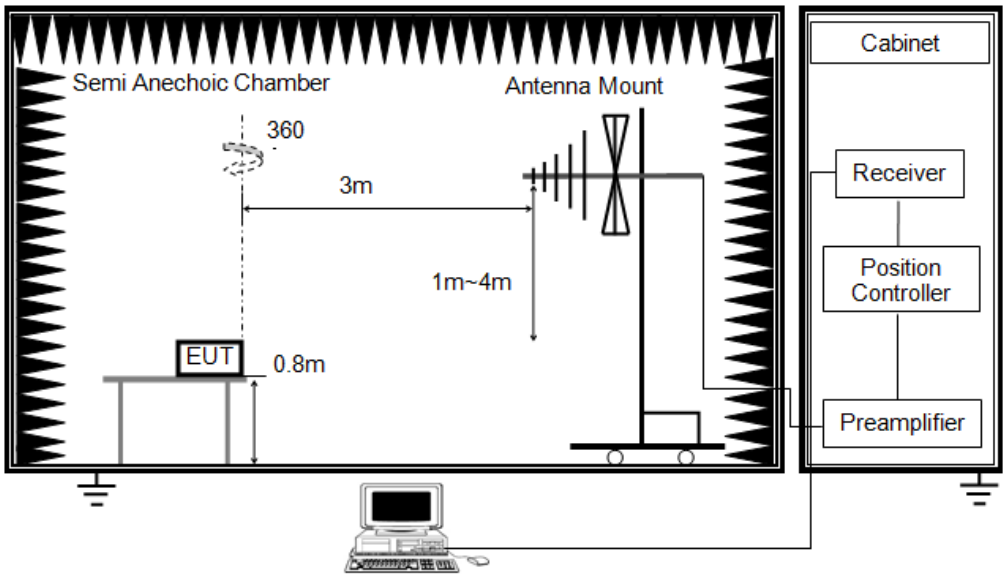
5. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

6. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.

7. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

8. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

TEST SETUP



TEST ENVIRONMENT

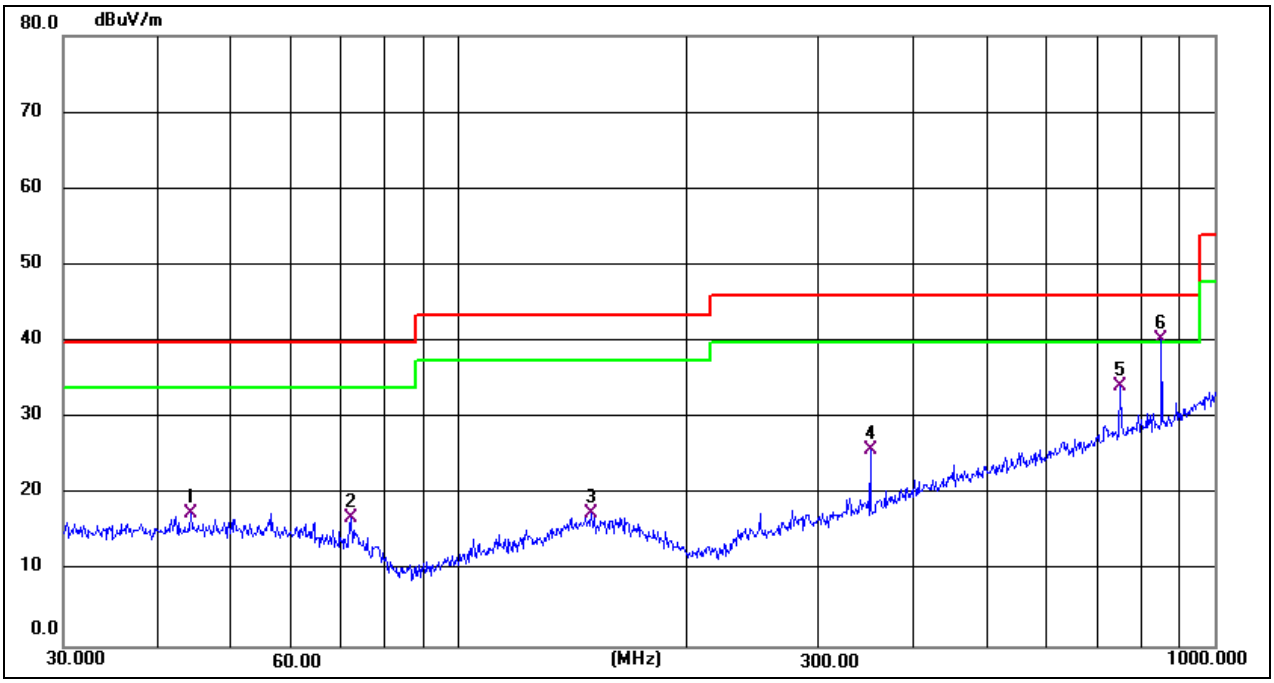
Temperature	20.8℃	Relative Humidity	51%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M01
Final Test Mode:	M01

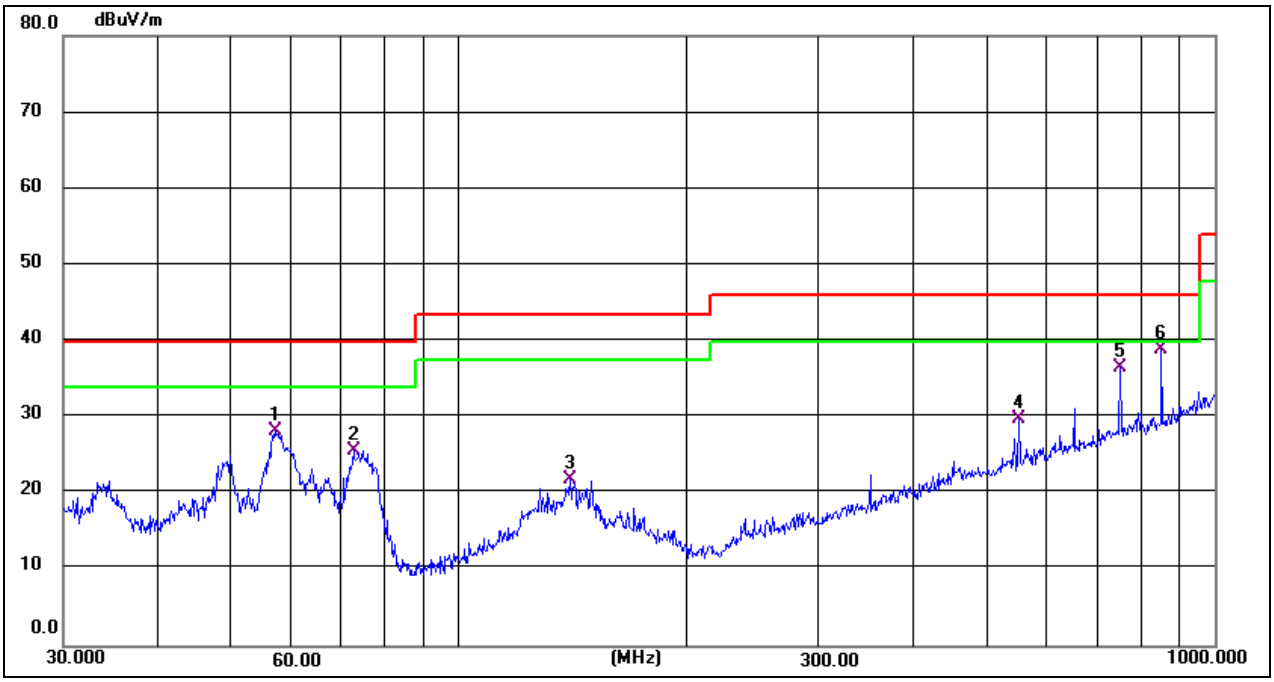
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



Antenna::Horizontal	Mode: M01

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	44.2752	29.86	-12.42	17.44	40.00	-22.56	QP	
2	72.0843	32.00	-15.03	16.97	40.00	-23.03	QP	
3	150.0108	29.71	-12.23	17.48	43.50	-26.02	QP	
4	350.4768	36.76	-10.84	25.92	46.00	-20.08	QP	
5	750.1083	35.28	-1.06	34.22	46.00	-11.78	QP	
6 *	851.0353	40.07	0.31	40.38	46.00	-5.62	QP	



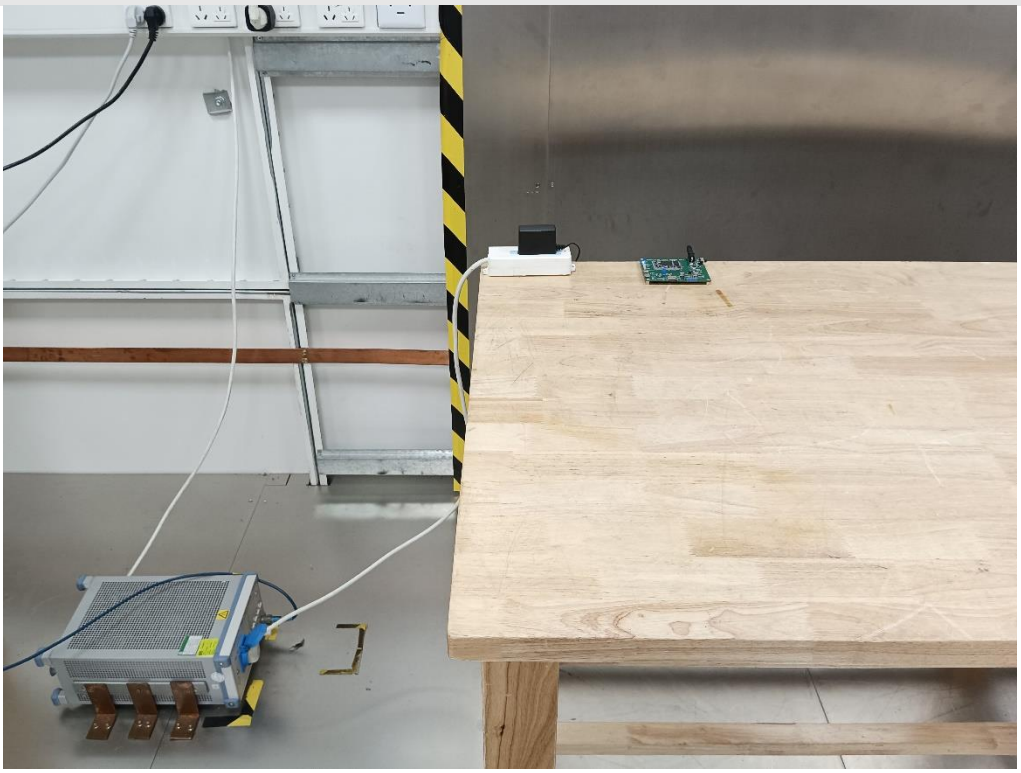
Antenna::Vertical	Mode: M01

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	57.1914	41.14	-12.91	28.23	40.00	-11.77	QP	
2	72.5916	40.82	-15.11	25.71	40.00	-14.29	QP	
3	140.3421	34.56	-12.60	21.96	43.50	-21.54	QP	
4	550.9480	35.05	-5.32	29.73	46.00	-16.27	QP	
5	750.1083	37.53	-1.06	36.47	46.00	-9.53	QP	
6 *	851.0353	38.61	0.31	38.92	46.00	-7.08	QP	

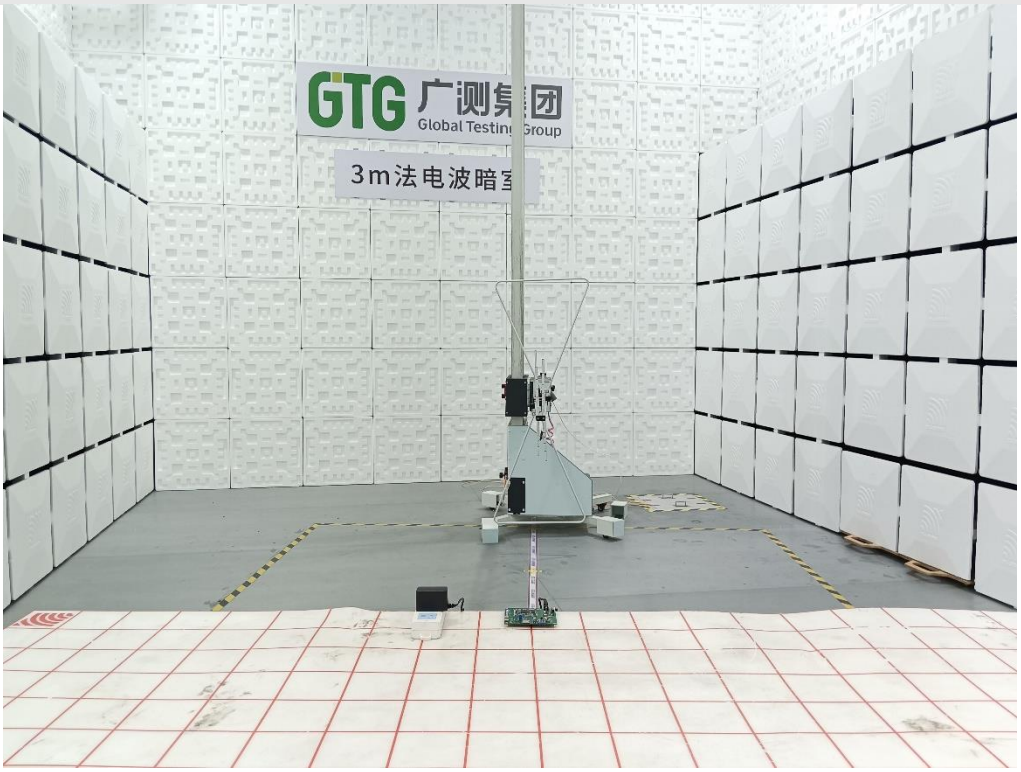
Remark: 1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

APPENDIX: PHOTOGRAPHS OF TEST CONFIGURATION

Conducted emissions

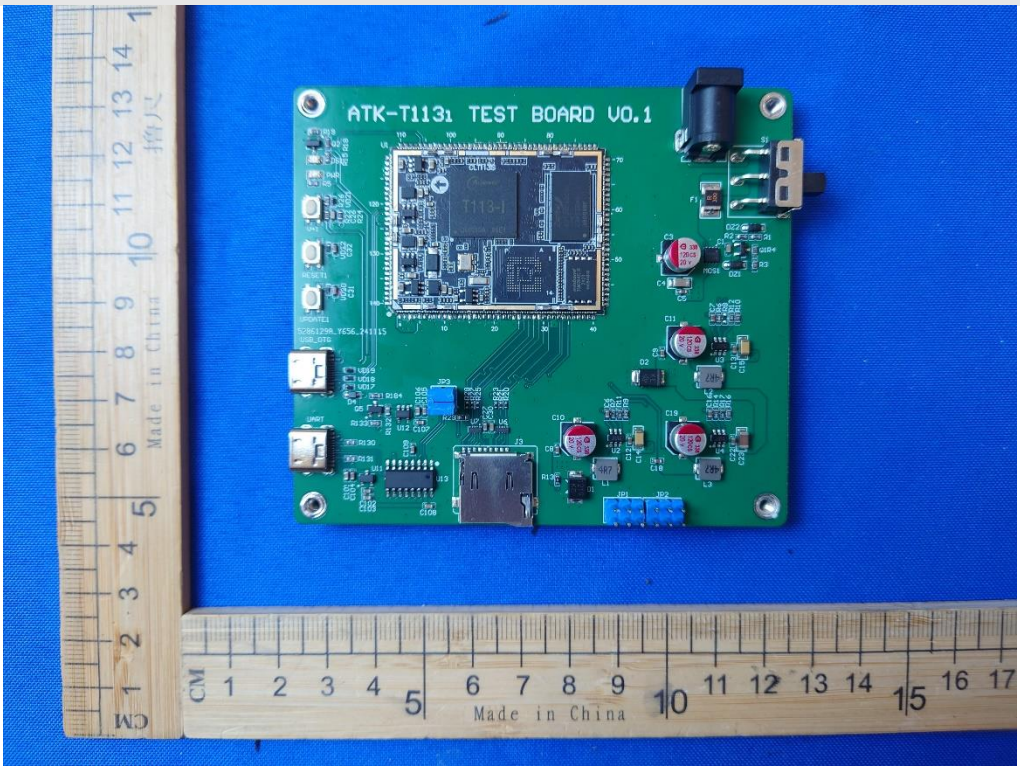


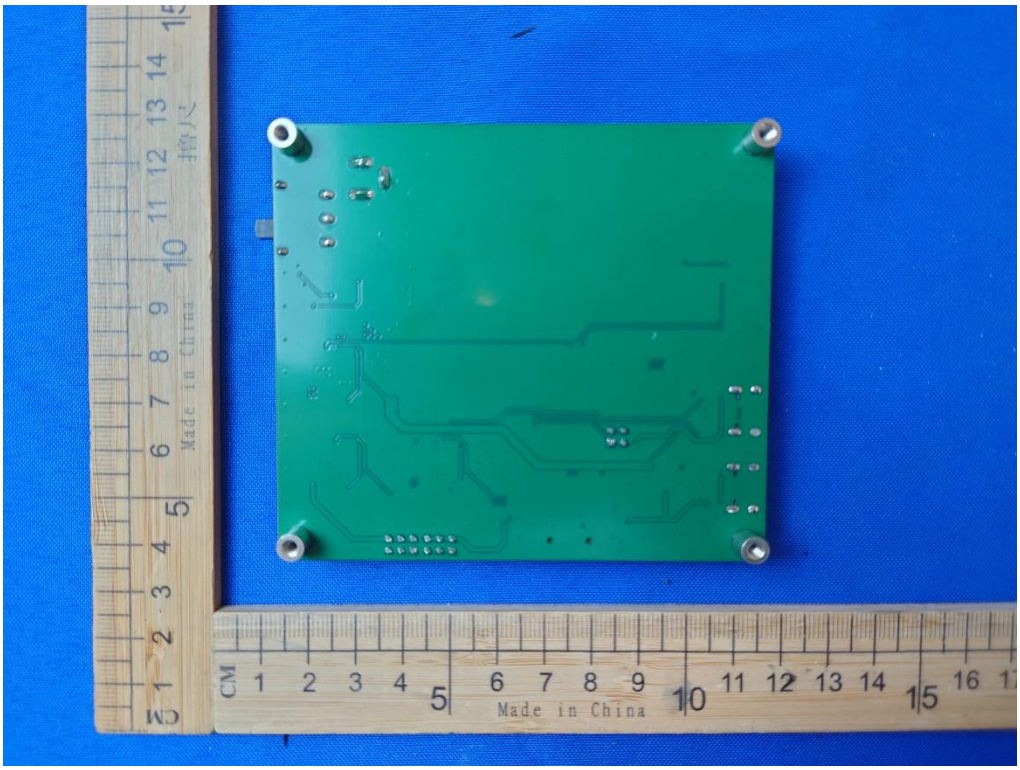
Radiated emissions below 1GHz

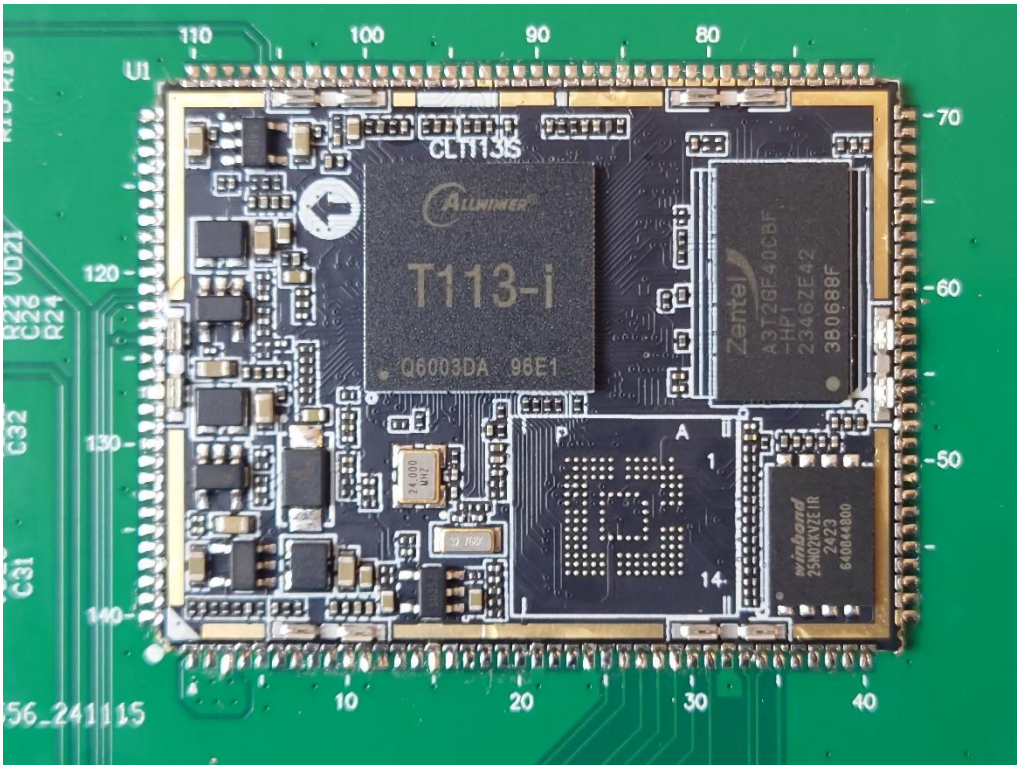


APPENDIX: PHOTOGRAPHS OF THE EUT

External







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