

TEST REPORT

Of

JAPAN MIC

Product : KEYLESS Remote Controller

Brand: WellySun

Model: J71.KEYL003.1

Model Difference: N/A

Applicant: WellySun Inc.

Address: 11F-8, No. 12, Taiyuan 2nd St., Zhubei
City, Hsinchu County 30288 , Taiwan (R.
O. C.)

Test Performed by:
International Standards Laboratory

<LT Lab.>

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Report No.: ISL-25LR0134JAP

Issue Date : 2025/09/30

Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein.

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VERIFICATION OF COMPLIANCE

Applicant: WellySun Inc.
Product Name: KEYLESS Remote Controller
Brand Name: WellySun
Model No.: J71.KEYL003.1
Model Difference: N/A
Date of Test: 2025/08/29 ~ 2025/09/30
Date of EUT Received: 2025/08/29

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
ARIB STD-T93	Complied

The above equipment was tested by ISL Taiwan Ltd. for compliance with the requirements in the Radio equipment stipulated in the certification ordinance Article 2, Clause 1, Item 8. The results of testing in this report apply to the product system that was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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Approved By:

Jerry Liu

Jerry Liu / Manager

Version

Version No.	Date	Description
00	2025/09/30	Initial creation of document

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1. Description of Equipment under Test (EUT)

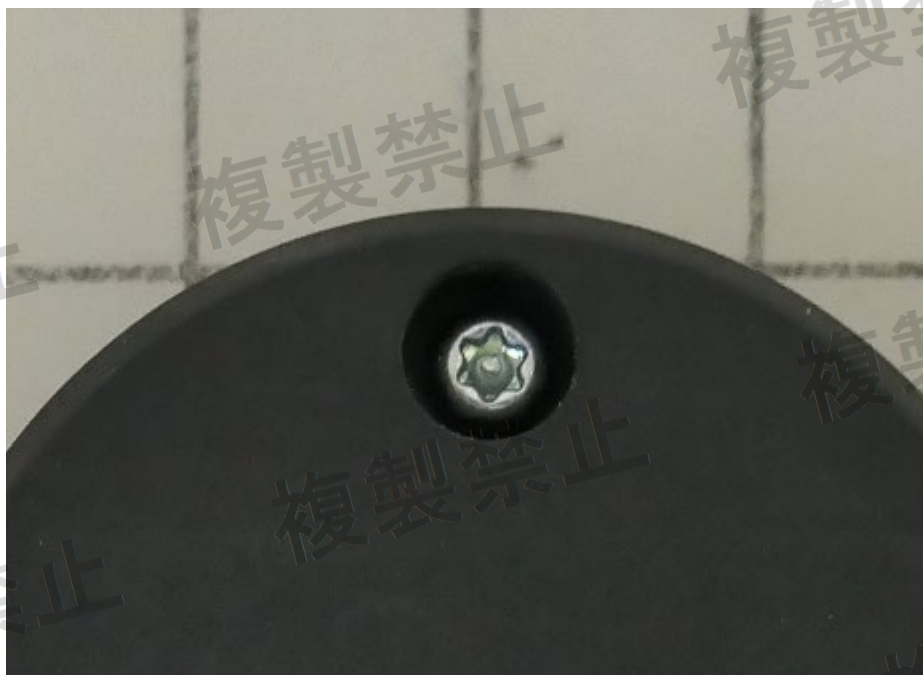
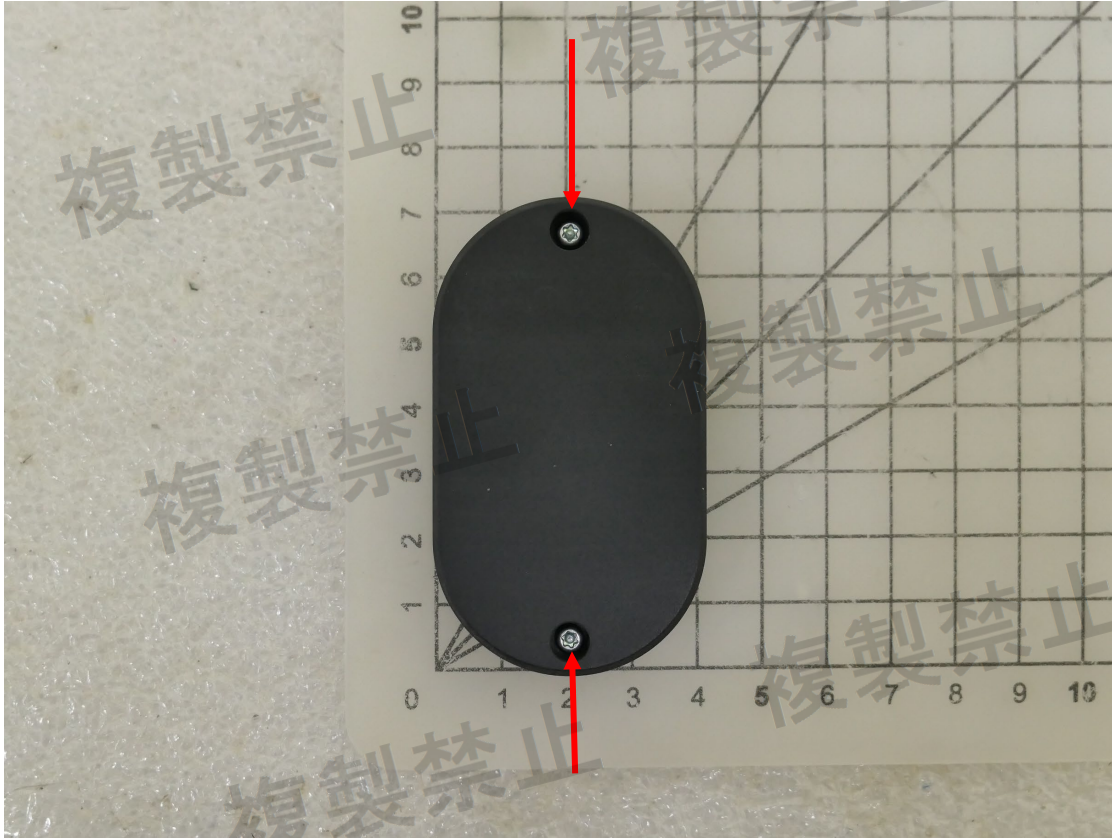
1.1 General information

Product Name:	KEYLESS Remote Controller
Brand Name:	WellySun
Model Name:	J71.KEYL003.1
Model Difference:	N/A
Operation Frequency:	Tx: 315 MHz Rx: 125 kHz
Channel number:	1 channels
Rated Transmit Power	0.0000036 mW
Modulation Type:	FSK
Power Supply:	3.0V dc form button cell battery

	Antenna Type	Brand	Model	Peak Gain	Frequency Range	Connector Type
1	PCB antenna	WellySun	J71KEYL0031	-	315MHz $\pm$ 250kHz	N/A
2	Loop antenna	EROCORE	ATN3D1103N3-722J	-	125kHz $\pm$ 3.75kHz	N/A

1.2 Assemble

Two housings are combined inaccessible by one special screw as below. Please refer to the internal photo for the location.



2. Description of Test Modes

The EUT has been tested under at TX modes. And software was used to control the EUT for staying in above description test modes.

Test conditions

Temperature & humidity	Normal
Normal voltage	3.3 Vdc
Lower extreme voltage	2.97 Vdc
Higher extreme voltage	3.63 Vdc

3. General Description of Applied Standards

The EUT According to the Specifications, it must comply with the requirements of the following standards:

Radio equipment stipulated in the certification ordinance Article 2, Clause 1, Item8, and MIC Notification No. 88 of 2004, Annex 22-1

4. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of **International Standards Laboratory Corp.** <LT Lab.> No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2014. FCC Registration Number is: TW0997, Canada Registration Number: 4067B-4.

5. MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Parameters	Uncertainty
Field Strength of Spurious Radiation	≤ 30MHz: ± 2.96dB 30-1GHz: ± 4.22 dB 1-40 GHz: ± 4.08 dB
Frequency Error	± 727.3 Hz
Conducted Power	± 1.55 dB
Power Density	± 1.67 dB
Conducted Spurious Emission	± 1.55 dB
Adjacent Channel Power	± 1.55 dB
Time	± 0.01 %
DC Voltage	± 1 %

6. Support Equipment

Fig. 5-1 Configuration of Tested System



Table 5-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1	N/A					

7. Summary of Tests

Parameter	Status
Output Power (EIRP) and Output Power Tolerance	Pass
Frequency Tolerance	Pass
Occupied Bandwidth	Pass
Transmitter spurious emission	Pass
Receiver spurious emission	N/A
Restriction function of transmission time	Pass

6.1. Output Power (EIRP) and Power tolerance

6.1.1. Limit:

Output power (EIRP):

312MHz - 315.05MHz <0.25mW

315.05MHz - 315.25MHz <0.025mW

Power tolerance:

< +20% of rated power

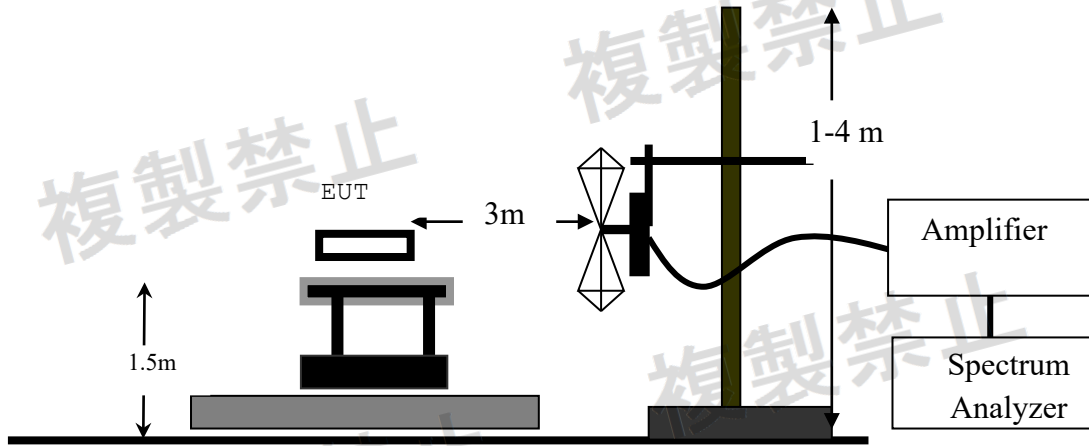
6.1.2. Measurement Equipment Used:

Location Conducted	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date	Calibration Body	Calibration Method
Chamber 19	Signal analyzer	R&S	FSV40	101919	07/22/2025	07/22/2026	ETC	c
Chamber 19	EMI Receiver	R&S	ESR3	102461	05/12/2025	05/12/2026	ETC	c
Chamber 19	Loop Antenna	EM	EM-6879	271	09/25/2025	09/25/2026	ETC	c
Chamber 19	Bilog Antenna (30MHz-1GHz)	Schwarzbeck	VULB9168 w 6dB Att.	9168-736	04/21/2025	04/21/2026	ETC	c
Chamber 19	Horn antenna (1GHz-18GHz)	ETS	3117	00218718	10/03/2025	10/03/2026	ETC	c
Chamber 19	Horn antenna (18GHz-26GHz)	Com-power	AH-826	081001	11/28/2024	11/28/2025	ETC	c
Chamber 19	Horn antenna (26GHz-40GHz)	Com-power	AH-640	100A	03/27/2025	03/27/2026	ETC	c
Chamber 19	Preamplifier (9kHz-1GHz)	HP	8447F	3113A04621	04/22/2025	04/22/2026	ETC	c
Chamber 19	Preamplifier (1GHz - 26GHz)	HP	8449B	3008A02471	10/23/2024	10/23/2025	ETC	c
Chamber 19	Preamplifier (26GHz-40GHz)	MITEQ	JS4-26004000-27-5A	818471	05/06/2025	05/06/2026	ETC	c
Chamber 19	RF Cable (100kHz-26.5GHz)	Huber Suhner	Sucoflex 104A	MY1394/4A & 50886/4A	07/17/2025	07/17/2026	ETC	c
Chamber 19	RF Cable (18GHz-40GHz)	HUBER SUHNER	Sucoflex 102	27963/2&37421/2	11/22/2024	11/22/2025	ETC	c
Chamber 19	Signal Generator	Anritsu	MG3692A	20311	12/26/2023	12/26/2025	ETC	c
Chamber 19	Test Software	Audix	E3 Ver:6.120203b	N/A	N/A	N/A	N/A	N/A

Calibration Method:

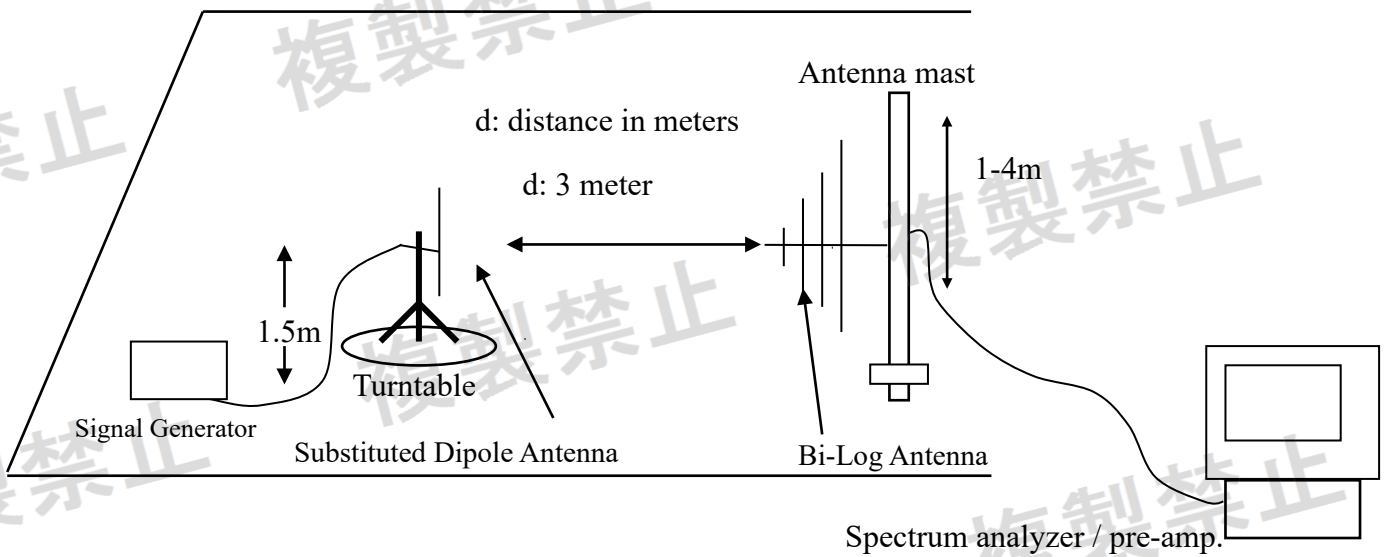
- Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1)
- Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)
- Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)
- Calibration conducted by using measuring instruments and other equipment listed in the right column of Table No. 3 attached hereto, which shall have been given any of calibration, etc. listed above from a) to c)

6.1.3. Test Setup:

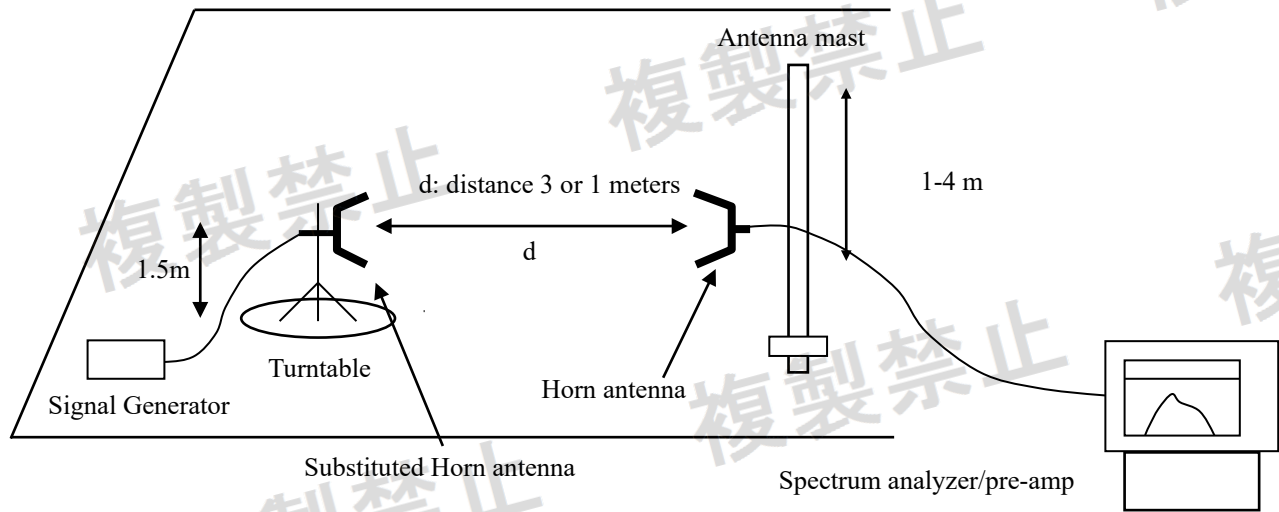


Substitution Method: (Radiated Emissions)

Radiated Below 1GHz



Radiated Above 1 GHz



6.1.4. Test Procedure:

EUT was placed on an 1.5m wooden table. The search antenna is placed at 3m distance from the EUT and search antenna height is from 1 -4m. With the transmitter operating at continuously mode, the turntable was slowly rotated to locate the direction of maximum emission. Once maximum direction is determined, the search antenna was raised and lowered in both vertical and horizontal polarizations.

The EUT was removed from the turntable and replaced with a linearly polarized antenna connected to a calibrated RF signal generator. The RF generator was set to a measured emission frequency and the search antenna was raised and lowered to produce a maximum received reading. The generator output was increased to match the radiated emission reading measured previously, and the result expressed in dB EIRP or ERP, correcting for substitution antenna gain at each frequency.

6.1.5. Test results:

Ambient temperature: 25 °C

Relative humidity: 65 %

Test Date: 2025/09/19

EIRP Rated Power

0.0000036 mW

		Reading	Limit
Normal Voltage 3.3 V	EIRP Ver (dBm)	-54.400	NA
	EIRP Hor (dBm)	-63.900	NA
	EIRP Ver (mW)	0.0000036	0.25mW
	EIRP Hor (mW)	0.0000004	0.25mW
	Power Tolerance Ver	0.855	< 20%
	Power Tolerance Hor	-88.684	< 20%
Upper Voltage 3.63 V	EIRP Ver (dBm)	-55.480	NA
	EIRP Hor (dBm)	-62.970	NA
	EIRP Ver (mW)	0.0000028	0.25mW
	EIRP Hor (mW)	0.0000005	0.25mW
	Power Tolerance Ver	-21.350	< 20%
	Power Tolerance Hor	-85.982	< 20%
Lower Voltage 2.97 V	EIRP Ver (dBm)	-55.460	NA
	EIRP Hor (dBm)	-62.840	NA
	EIRP Ver (mW)	0.0000028	0.25mW
	EIRP Hor (mW)	0.0000005	0.25mW
	Power Tolerance Ver	-20.987	< 20%
	Power Tolerance Hor	-85.556	< 20%

6.2. Frequency tolerance

6.2.1. Limit:

Within 312MHz - 315.25MHz

6.2.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.2.3. Test Setup:

Refer to section 6.1.3 for detail.

6.2.4. Test Procedure:

1. Set the EUT modulation off.
2. Set the ETU operates at channel low, mid and high and normal voltage.
3. Set the spectrum analyzer RBW = 10kHz, VBW=10kHz and Span = 3MHz
4. Max hold, View, Peak High, Mark and snap the screen and record the mark.
5. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 4 again.

6.2.5. Test results:

Ambient temperature: 25 °C

Relative humidity: 65 %

Test Date: 2025/09/19

		Reading MHz	Limit
Normal Voltage 3.3 V	Measured Frequency (MHz)	315.00	within 312-315.25MHz
Upper Voltage 3.63 V	Measured Frequency (MHz)	314.99	within 312-315.26MHz
Lower Voltage 2.97 V	Measured Frequency (MHz)	315.00	within 312-315.27MHz

6.3. Occupied bandwidth

6.3.1. Limit:

< 1MHz

6.3.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.3.3. Test Setup:

Refer to section 6.1.3 for detail.

6.3.4. Test Procedure:

1. Set the EUT modulation on.
2. Set the ETU operate at channel low, mid and high and normal voltage.
3. Set the spectrum analyzer RBW = 10kHz, VBW=30kHz, and Span = 200kHz
4. Turn on 99% spectrum OBW function on, Max hold, View, and snap the screen and record the mark.
5. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 4 again.

6.3.5. Test results:

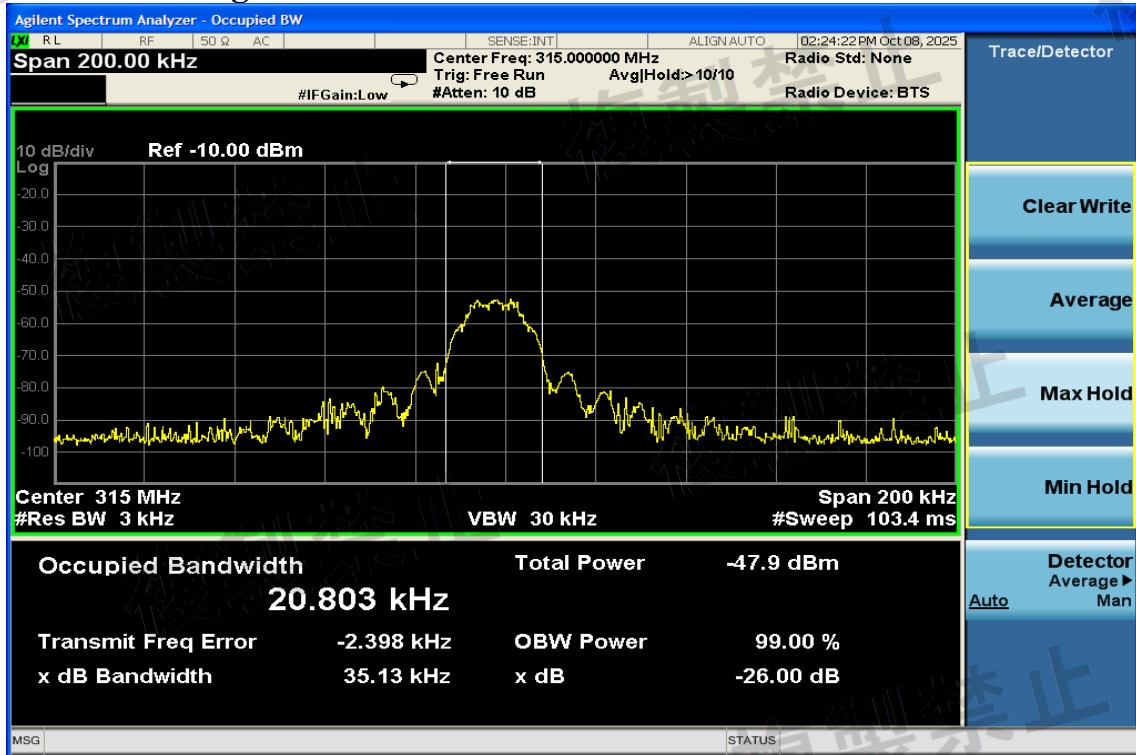
Ambient temperature: 25 °C

Relative humidity: 65 %

Test Date: 2025/09/19

ASK Mode	Reading(kHz)	Limit
Normal Voltage 3.3 V	20.803	<1MHz
Upper Voltage 3.63 V	20.329	<1MHz
Lower Voltage 2.97 V	20.765	<1MHz

Normal Voltage: Channel Low



6.4. Transmitter Spurious Emissions

6.4.1. Limit:

Below 1GHz < 250nW/100kHz (-36dBm/kHz)

Above 1GHz < 1uW/MHz (-30dBm/MHz)

6.4.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.4.3. Test Setup:

Refer to section 6.1.3 for detail.

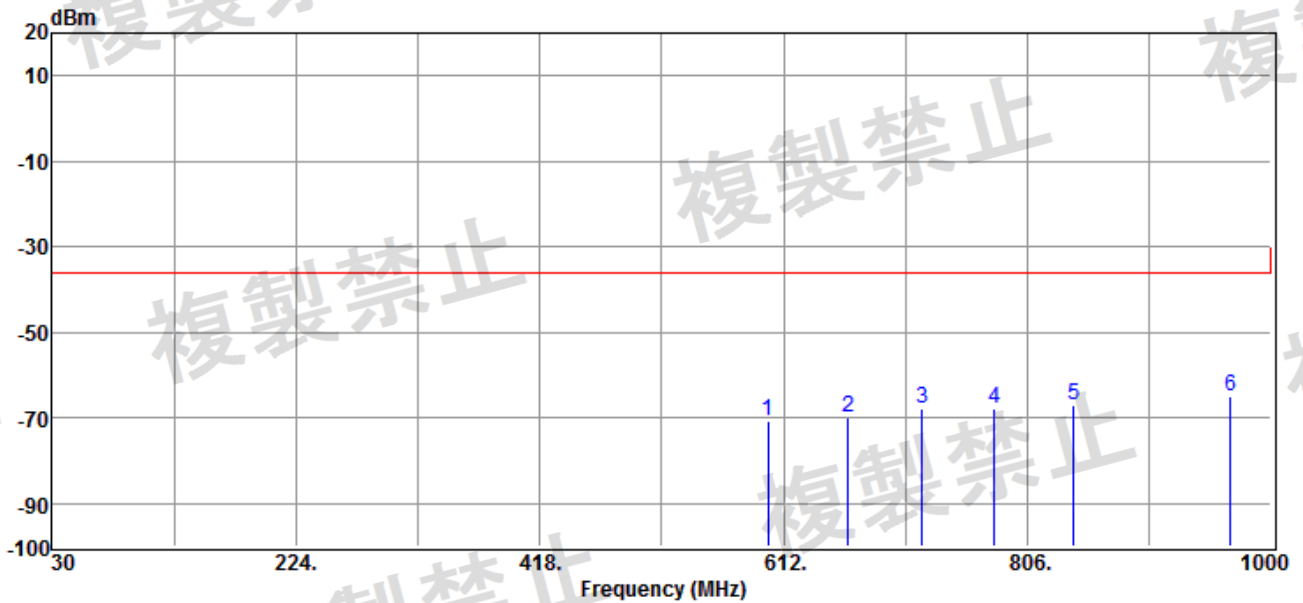
6.4.4. Test Procedure:

Refer to 6.1.4 and RBW setting 100kHz for below 1GHz, 1MHz for above 1GHz

6.4.5. Test Results:

Date: 2025-09-19

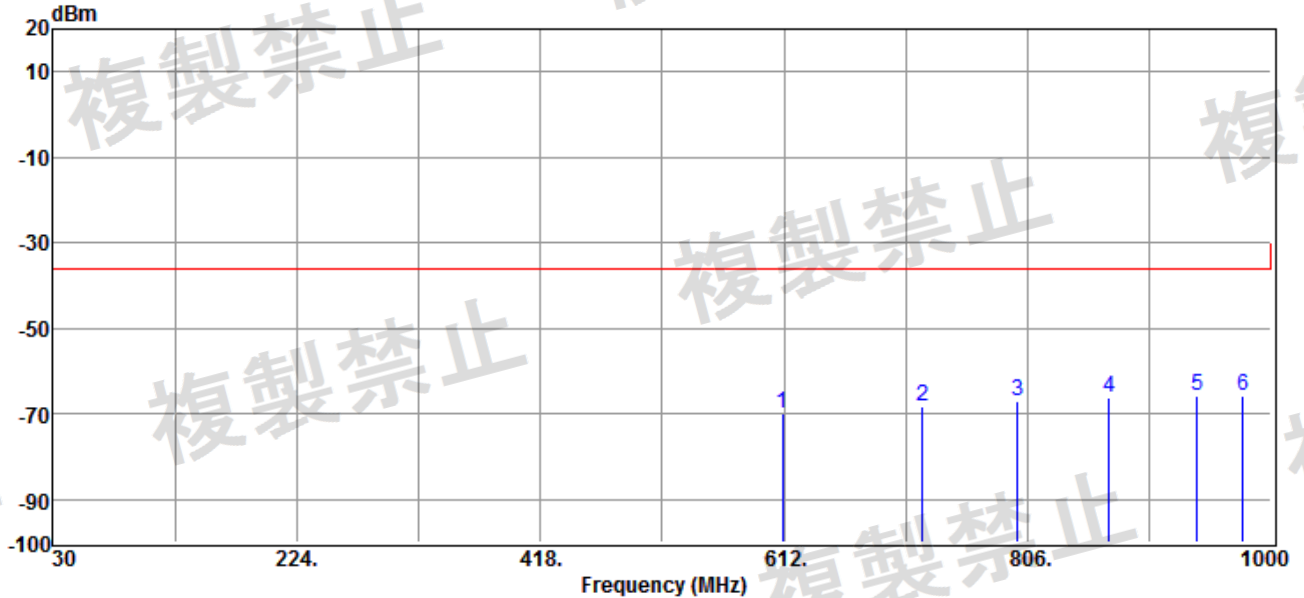
Project Number. : 25LR0134 Temp.(°C)/RH(%) : 25/54
Test Mode : 315MHz TX, normal volt Tested by : Jason Chao



No	Freq MHz	Reading dBm	Aux dB	Level dBm	Limit dBm	Margin dB	Pol V/H
1	599.39	-78.68	8.05	-70.63	-36.00	-34.63	VERTICAL
2	663.41	-78.53	8.81	-69.72	-36.00	-33.72	VERTICAL
3	722.58	-77.89	9.98	-67.91	-36.00	-31.91	VERTICAL
4	779.81	-78.65	10.94	-67.71	-36.00	-31.71	VERTICAL
5	842.86	-78.58	11.72	-66.86	-36.00	-30.86	VERTICAL
6	967.99	-78.51	13.50	-65.01	-36.00	-29.01	VERTICAL

Date: 2025-09-19

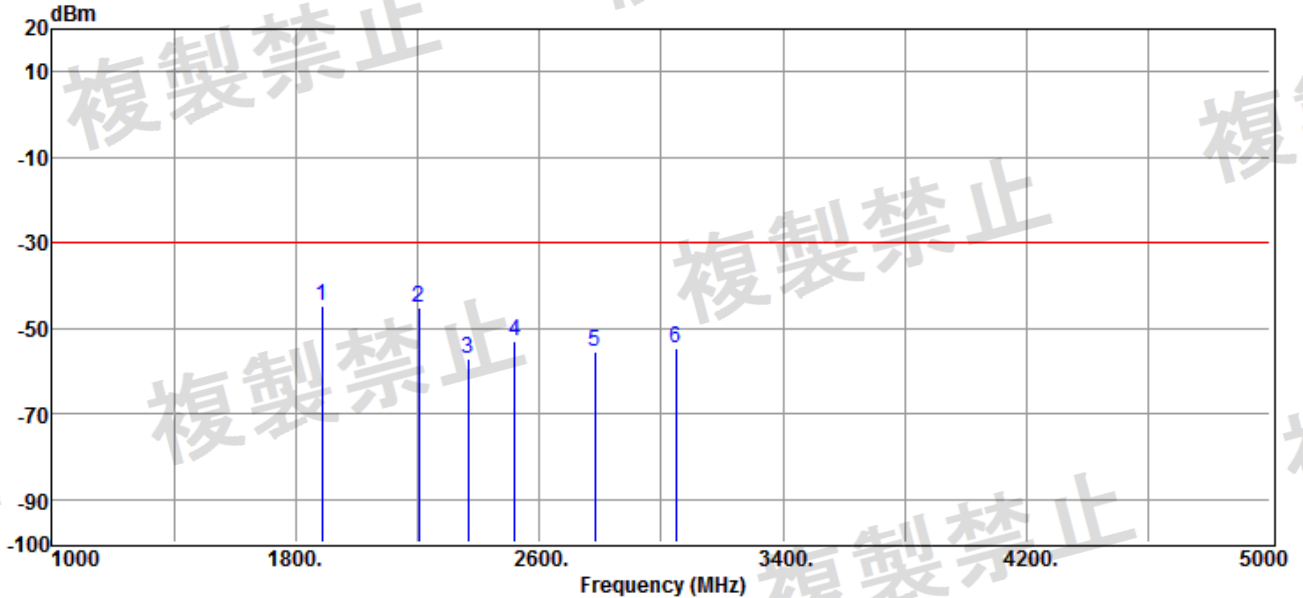
Project Number. : 25LR0134 Temp.(°C)/RH(%) : 25/54
Test Mode : 315MHz TX, normal volt Tested by : Jason Chao



No	Freq MHz	Reading dBm	Aux dB	Level dBm	Limit dBm	Margin dB	Pol V/H
1	611.03	-78.19	8.19	-70.00	-36.00	-34.00	HORIZONTAL
2	722.58	-78.38	9.98	-68.40	-36.00	-32.40	HORIZONTAL
3	798.24	-78.15	11.11	-67.04	-36.00	-31.04	HORIZONTAL
4	870.99	-78.23	12.17	-66.06	-36.00	-30.06	HORIZONTAL
5	940.83	-79.22	13.31	-65.91	-36.00	-29.91	HORIZONTAL
6	977.69	-79.15	13.53	-65.62	-36.00	-29.62	HORIZONTAL

Date: 2025-09-19

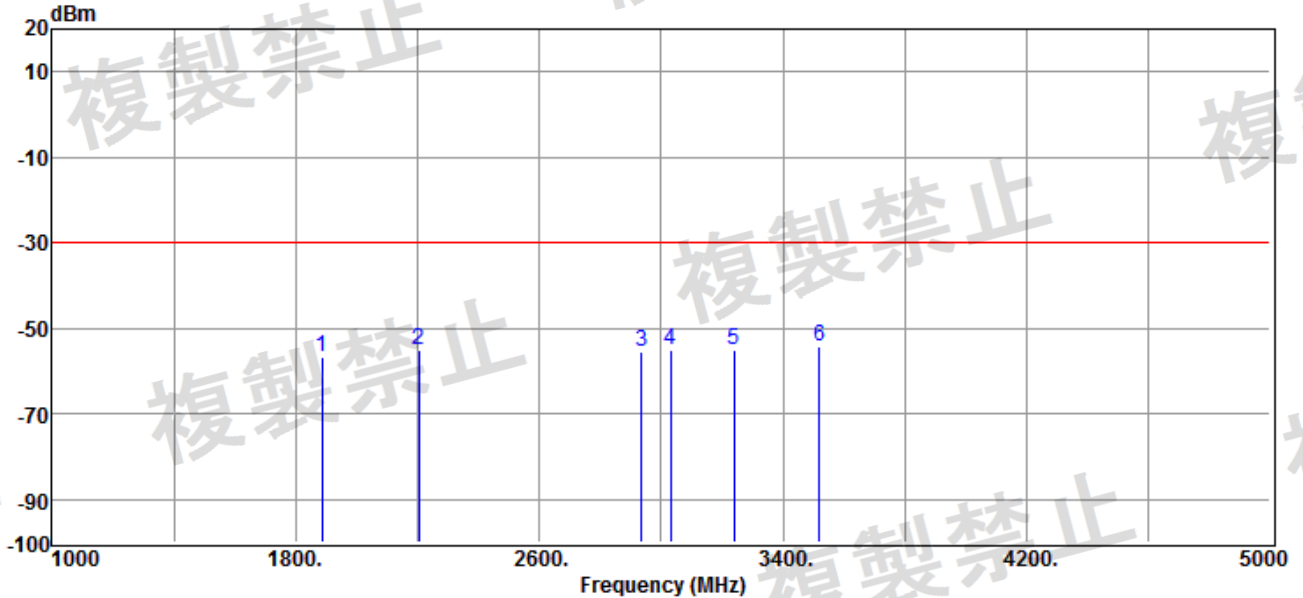
Project Number. : 25LR0134 Temp.(°C)/RH(%) : 25/54
Test Mode : 315MHz TX, normal volt Tested by : Jason Chao



No	Freq MHz	Reading dBm	Aux dB	Level dBm	Limit dBm	Margin dB	Pol V/H
1	1888.00	-52.36	7.68	-44.68	-30.00	-14.68	VERTICAL
2	2204.00	-54.85	9.51	-45.34	-30.00	-15.34	VERTICAL
3	2368.00	-67.76	10.44	-57.32	-30.00	-27.32	VERTICAL
4	2520.00	-64.18	11.20	-52.98	-30.00	-22.98	VERTICAL
5	2784.00	-67.66	12.02	-55.64	-30.00	-25.64	VERTICAL
6	3048.00	-67.44	12.77	-54.67	-30.00	-24.67	VERTICAL

Date: 2025-09-19

Project Number. : 25LR0134 Temp.(°C)/RH(%) : 25/54
Test Mode : 315MHz TX, normal volt Tested by : Jason Chao



No	Freq MHz	Reading dBm	Aux dB	Level dBm	Limit dBm	Margin dB	Pol V/H
1	1888.00	-64.43	7.68	-56.75	-30.00	-26.75	HORIZONTAL
2	2204.00	-64.38	9.51	-54.87	-30.00	-24.87	HORIZONTAL
3	2936.00	-67.76	12.46	-55.30	-30.00	-25.30	HORIZONTAL
4	3032.00	-67.77	12.72	-55.05	-30.00	-25.05	HORIZONTAL
5	3240.00	-68.33	13.25	-55.08	-30.00	-25.08	HORIZONTAL
6	3520.00	-68.27	13.92	-54.35	-30.00	-24.35	HORIZONTAL

6.5. Receiver Spurious Emission

6.5.1. Limit:

Above 1GHz < 4nW/MHz
Below 1GHz < 4nW/100kHz

6.5.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.5.3. Test Setup:

Refer to section 6.1.3 for detail.

6.5.4. Test Procedure:

Refer to 6.1.4 and RBW setting 100kHz for below 1GHz, 1MHz for above 1GHz

6.5.5. Test Results:

N/A, EUT is not Receiver device

6.6. Period Restriction Function of Transmitter Time

6.6.1. Limit:

Transmission time limit < 5 sec

The case of manual transmission, the device must be capable of limiting each transmission interval to within 90 seconds."

6.6.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.6.3. Test Setup:

Refer to section 6.1.3 for detail.

6.6.4. Test Procedure:

Refer to 6.1.4 and RBW setting RBW=10kHz and VBW =1Hz Span 0Hz

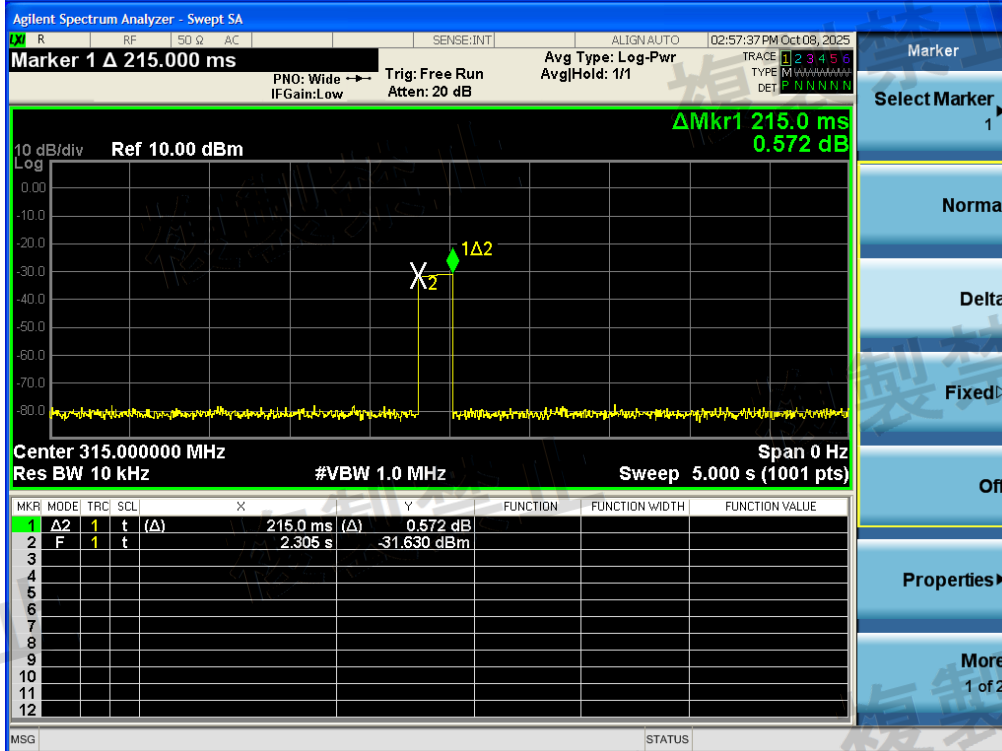
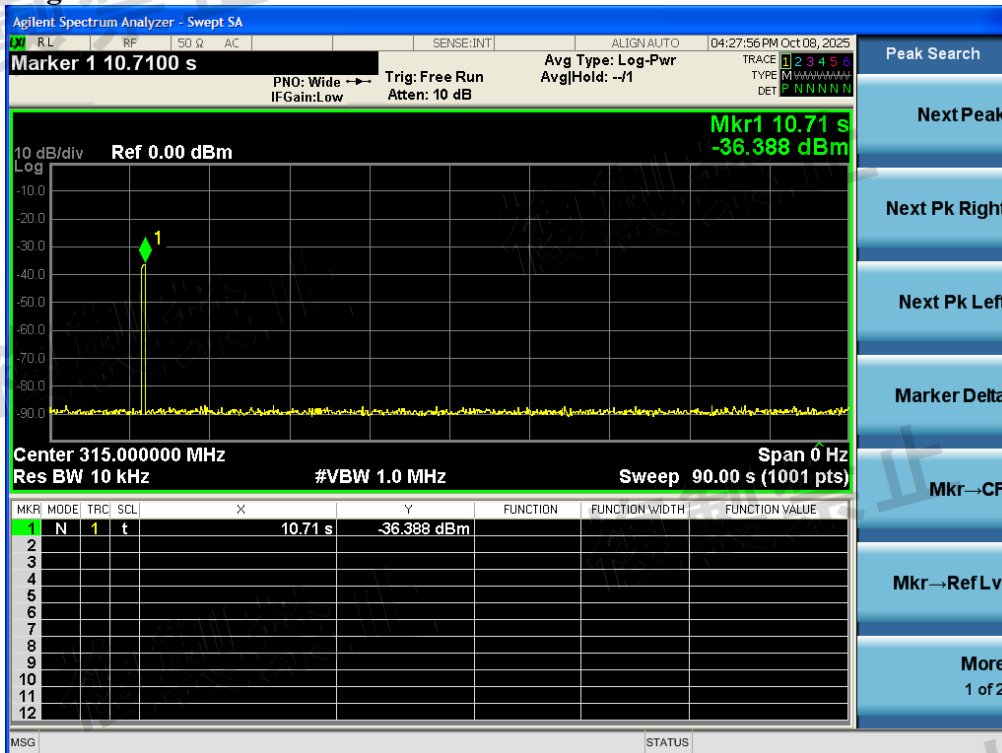
6.6.5. Test Results:

	transmission time	transmission time limit
Normal Voltage 3.3 V	215ms	<1 sec
Upper Voltage 3.63 V	215ms	<1 sec
Lower Voltage 2.97 V	215ms	<1 sec

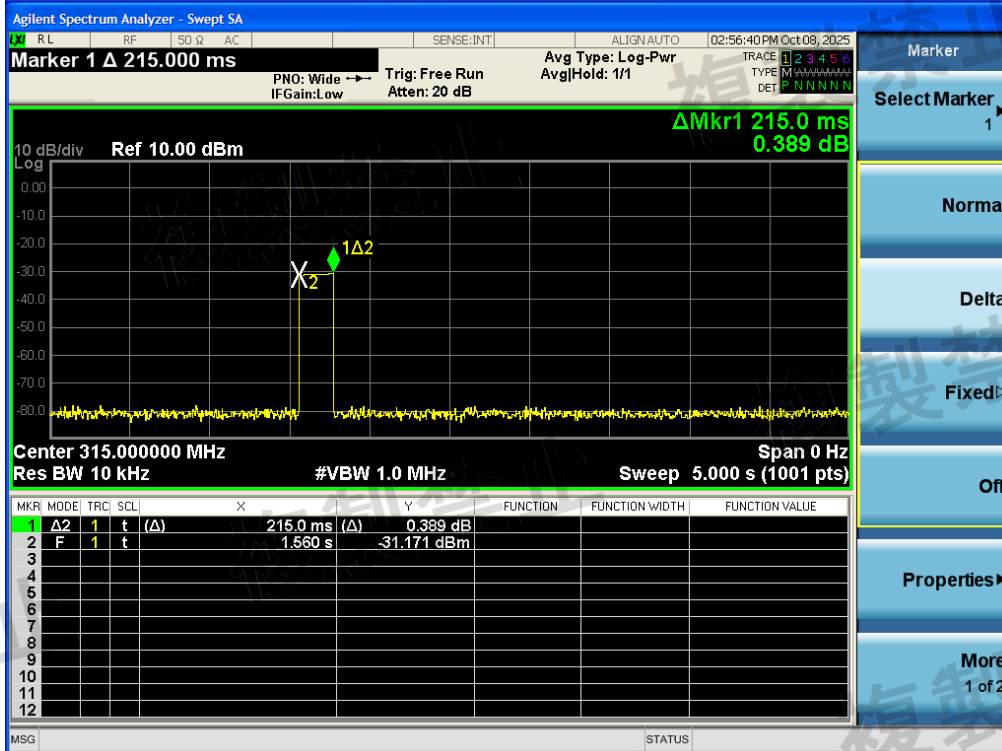
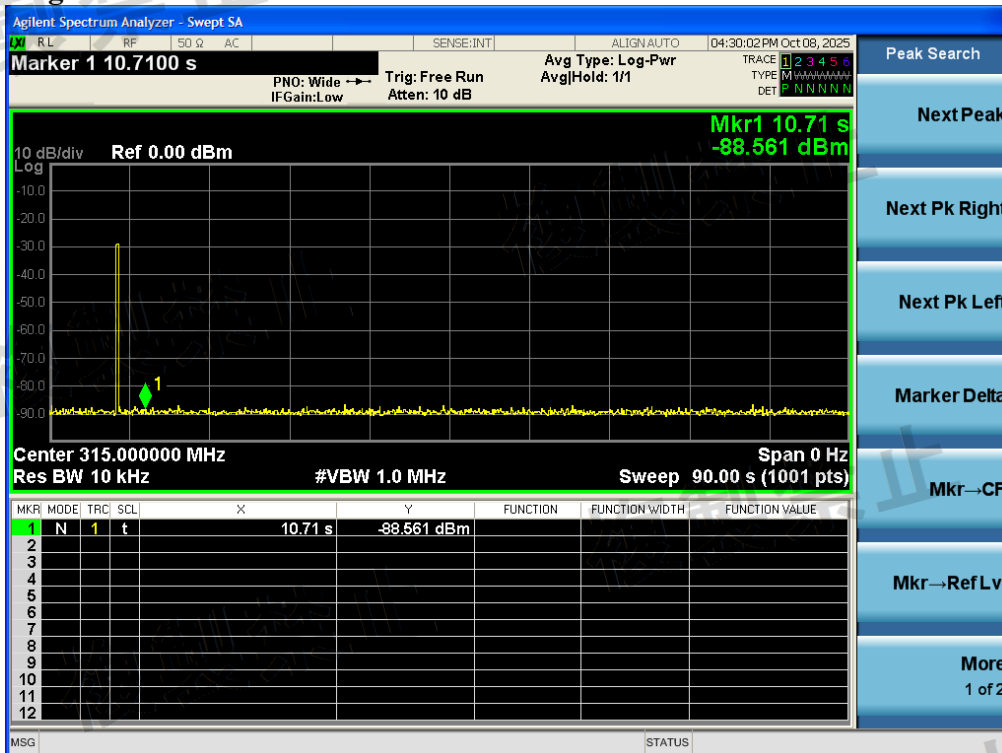
Normal Voltage 3.3 V



Upper Voltage 3.63 V



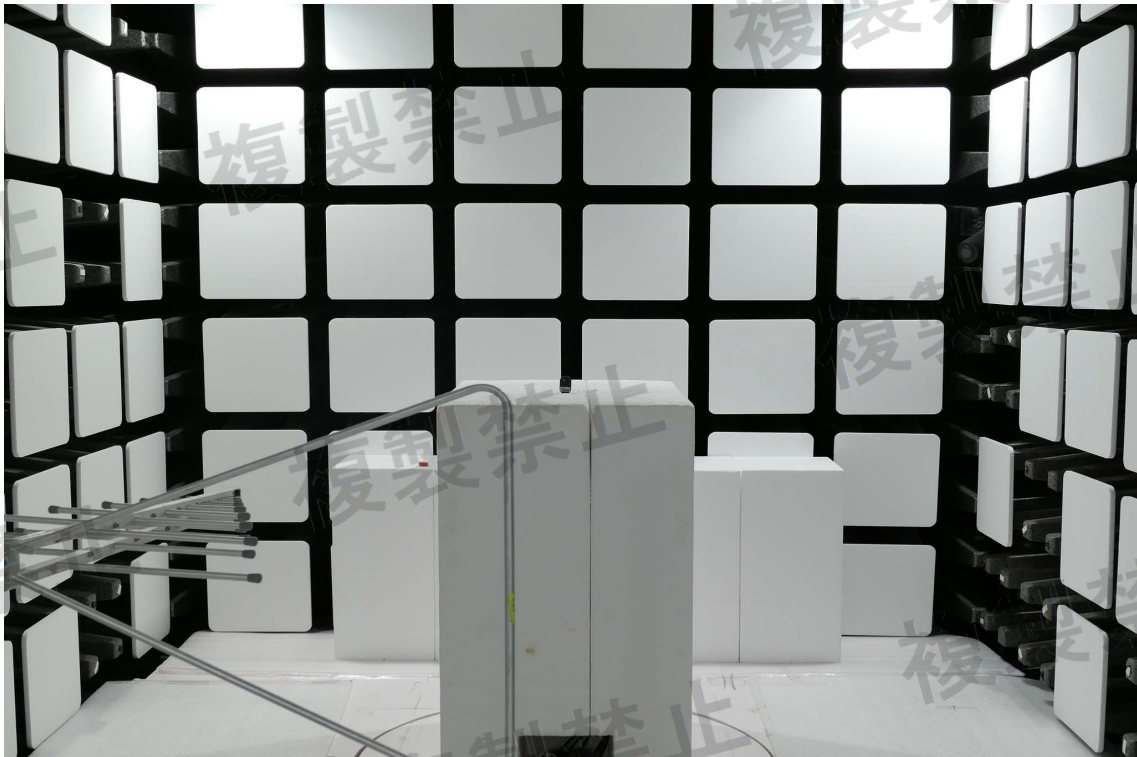
Lower Voltage 2.97 V

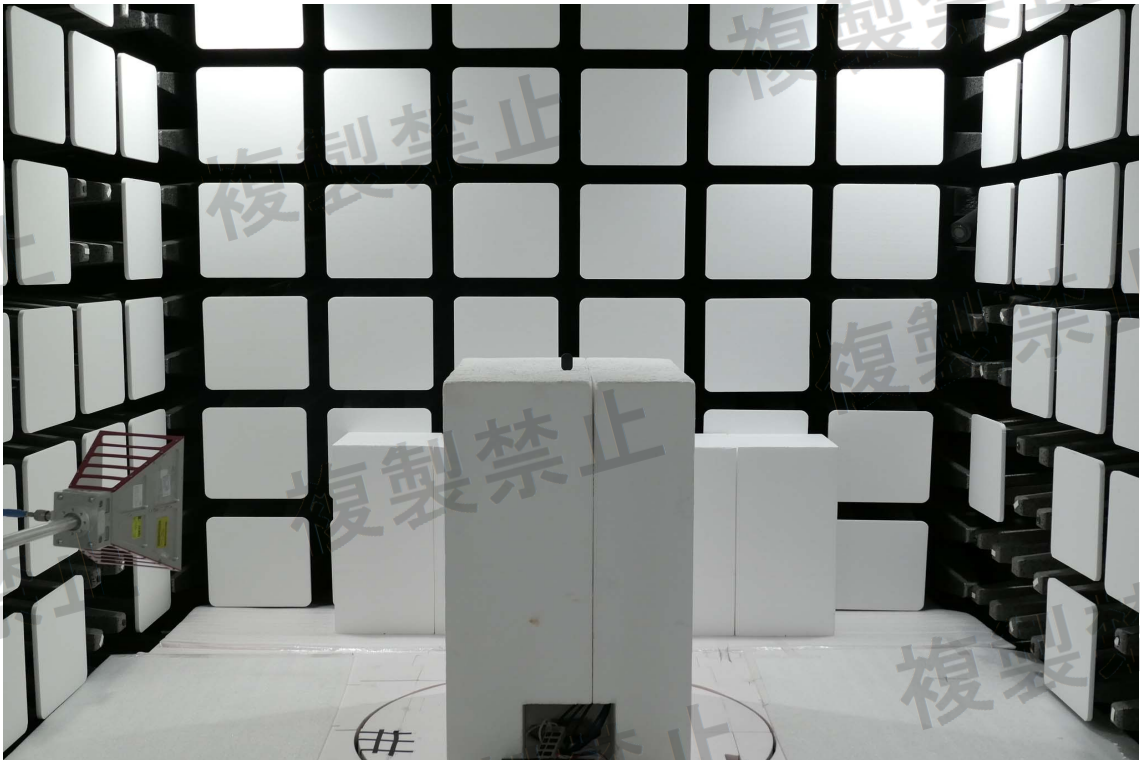


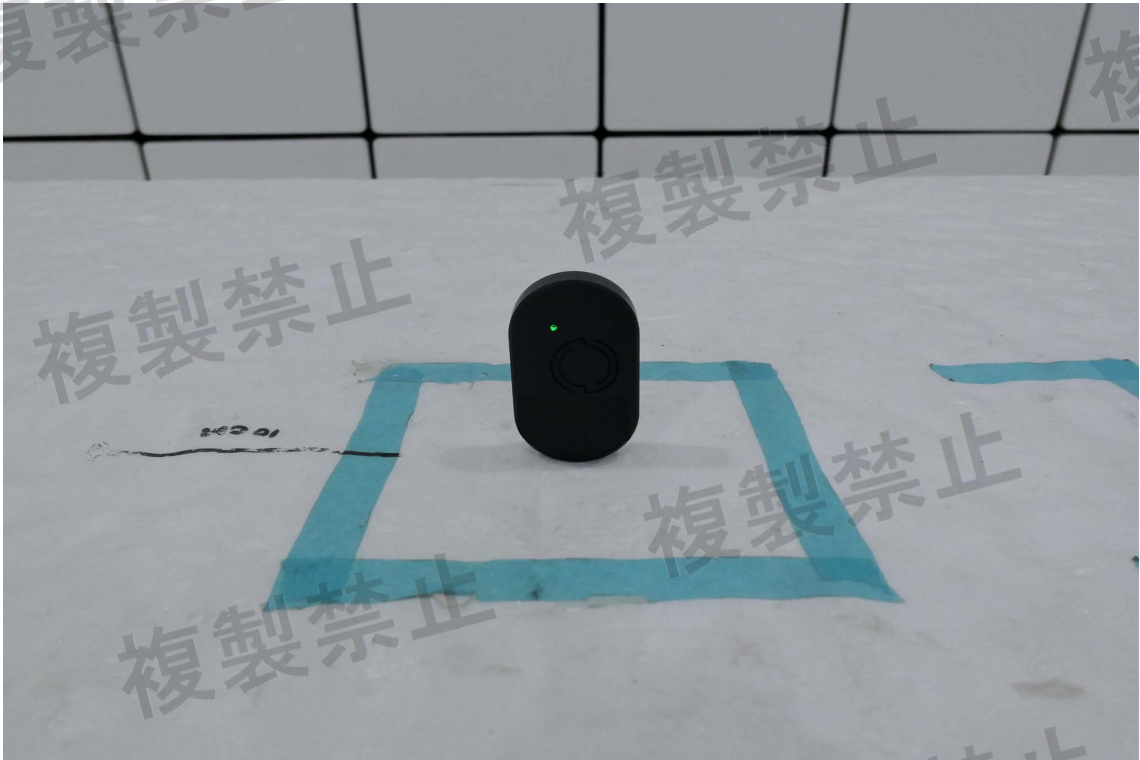
Appendix 1

Photographs of Setup

Test Setup



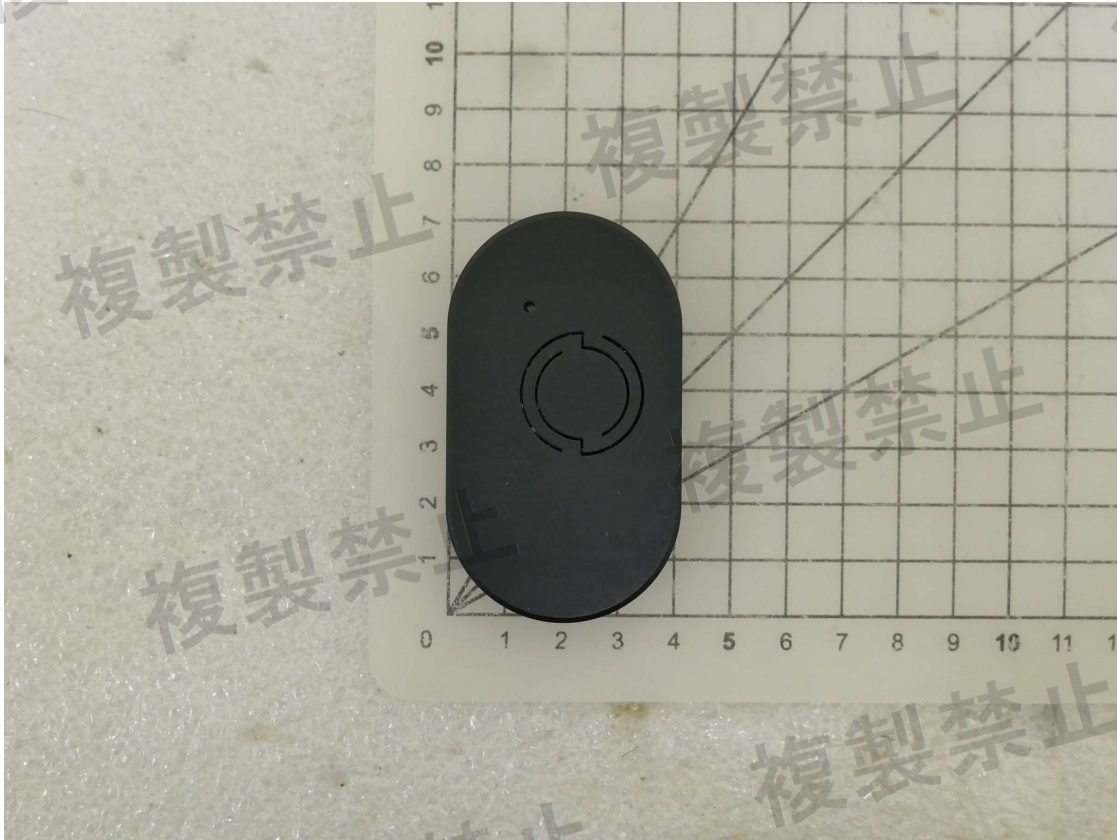




Appendix 2

Photographs of EUT

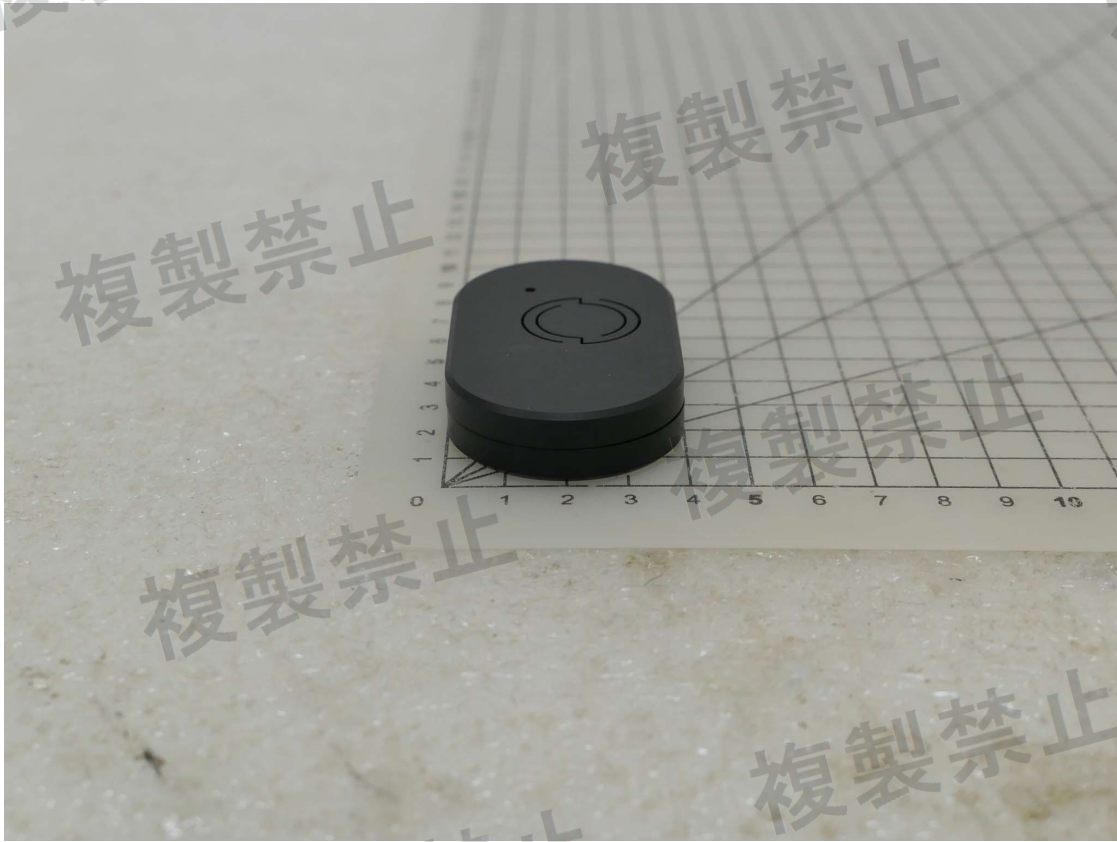
EUT-1.



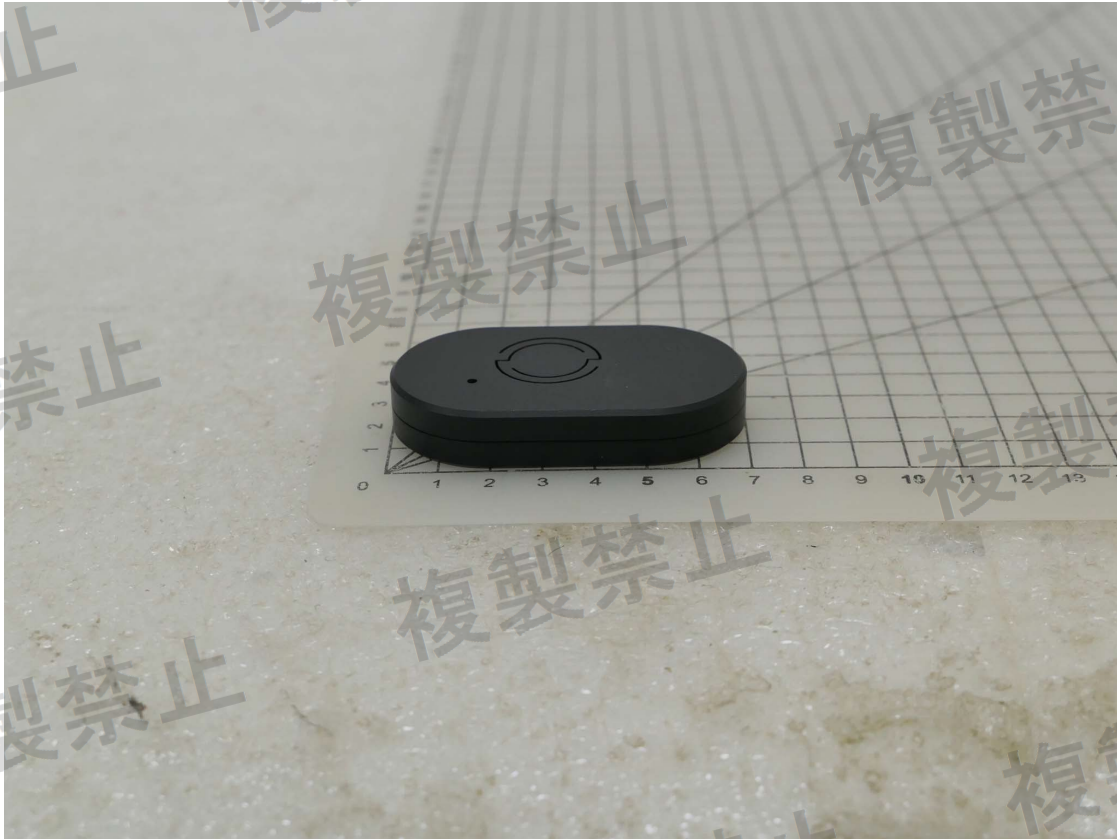
EUT-2.



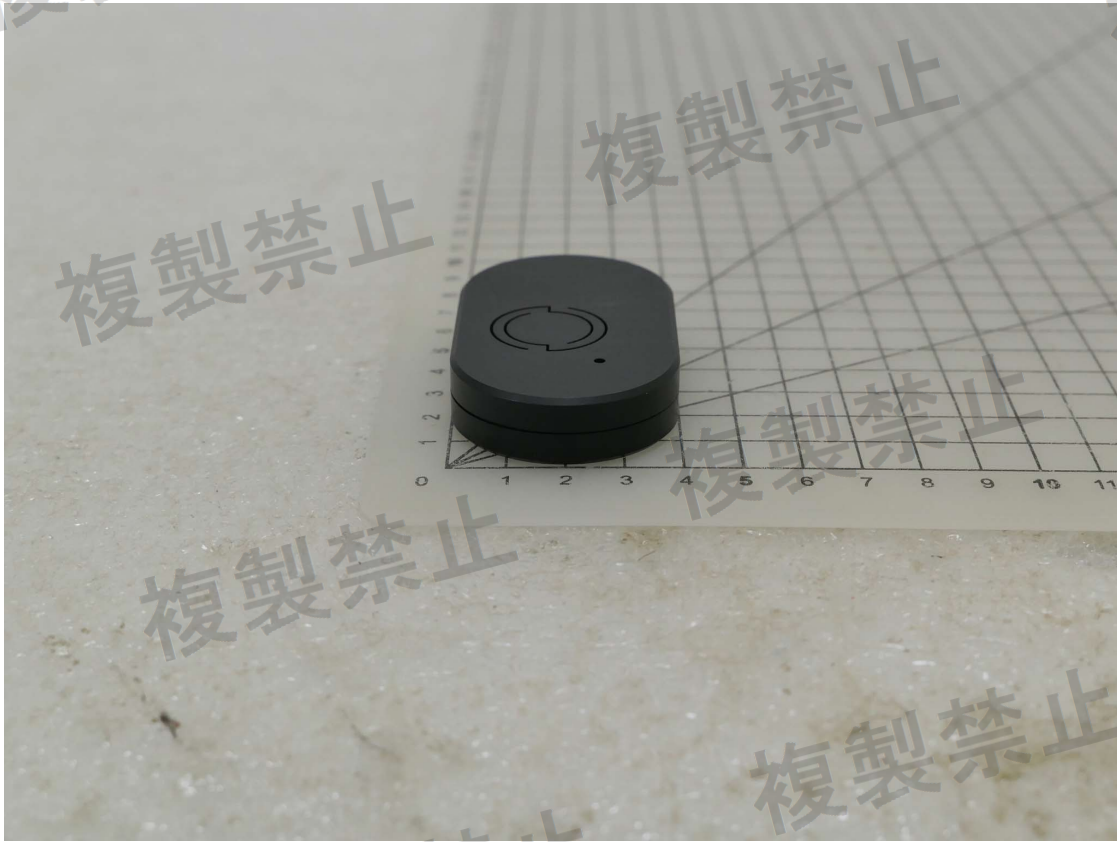
EUT-3.



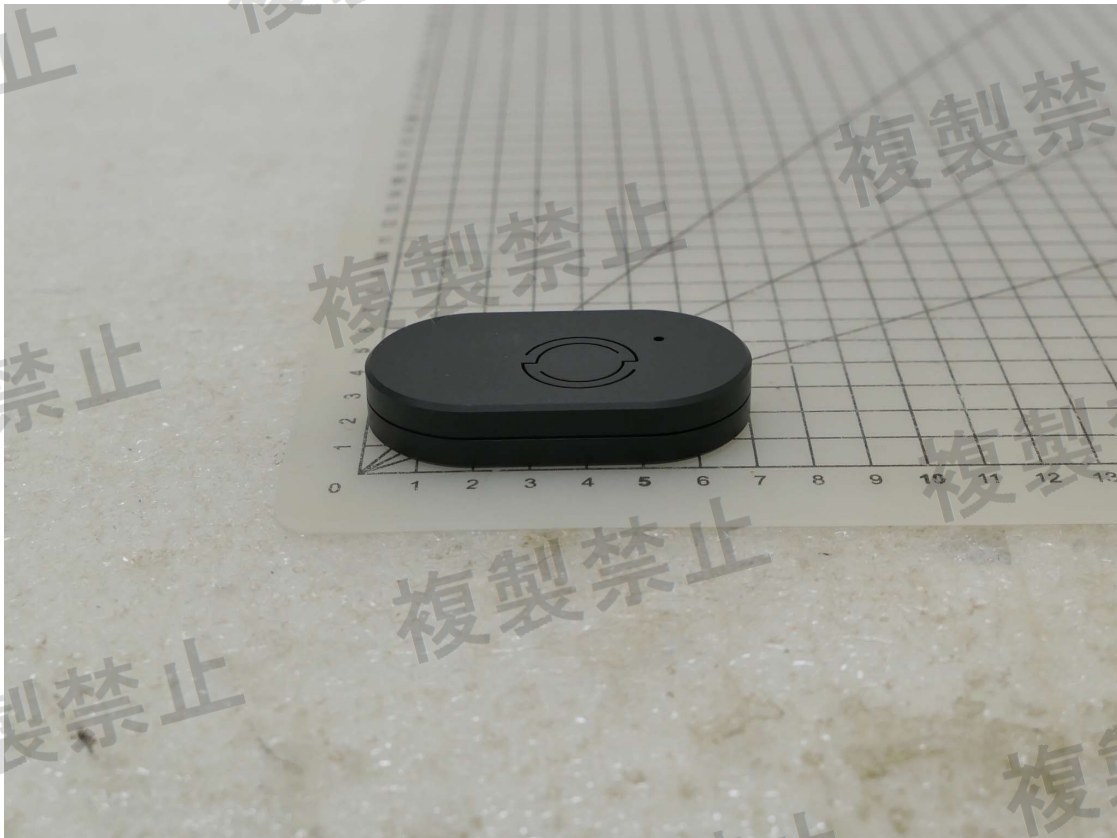
EUT-4.



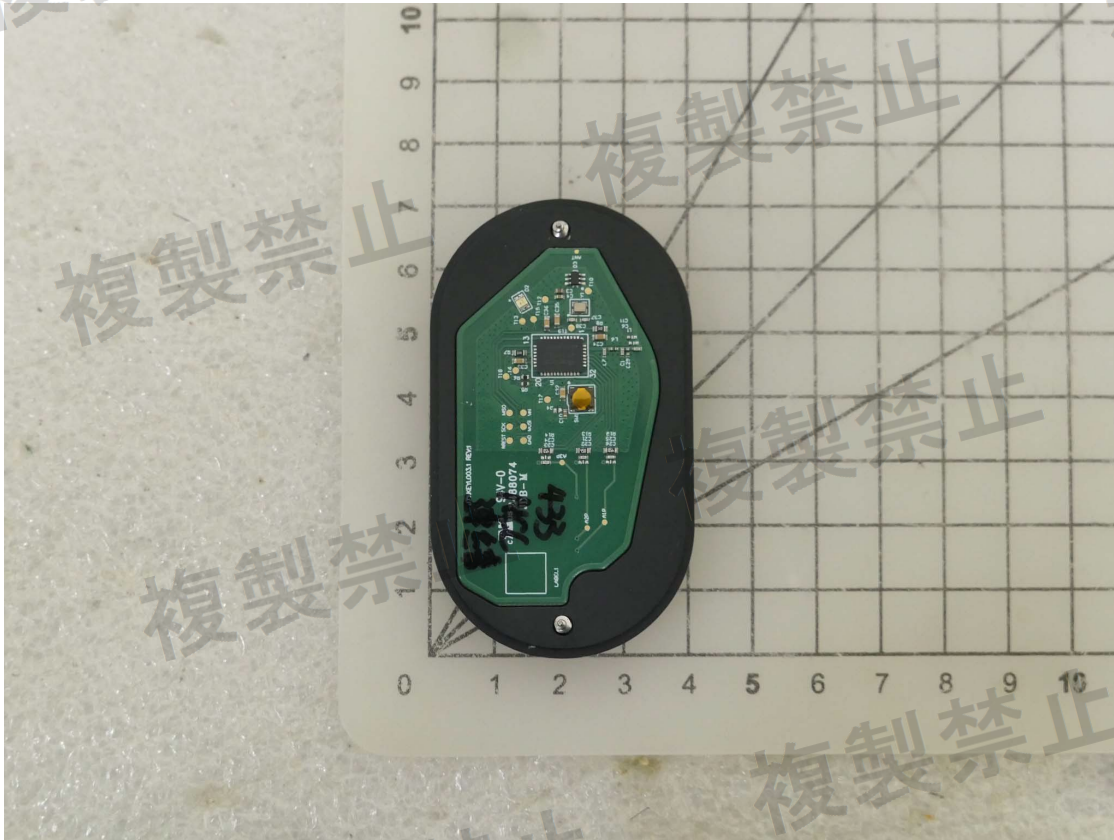
EUT-5.



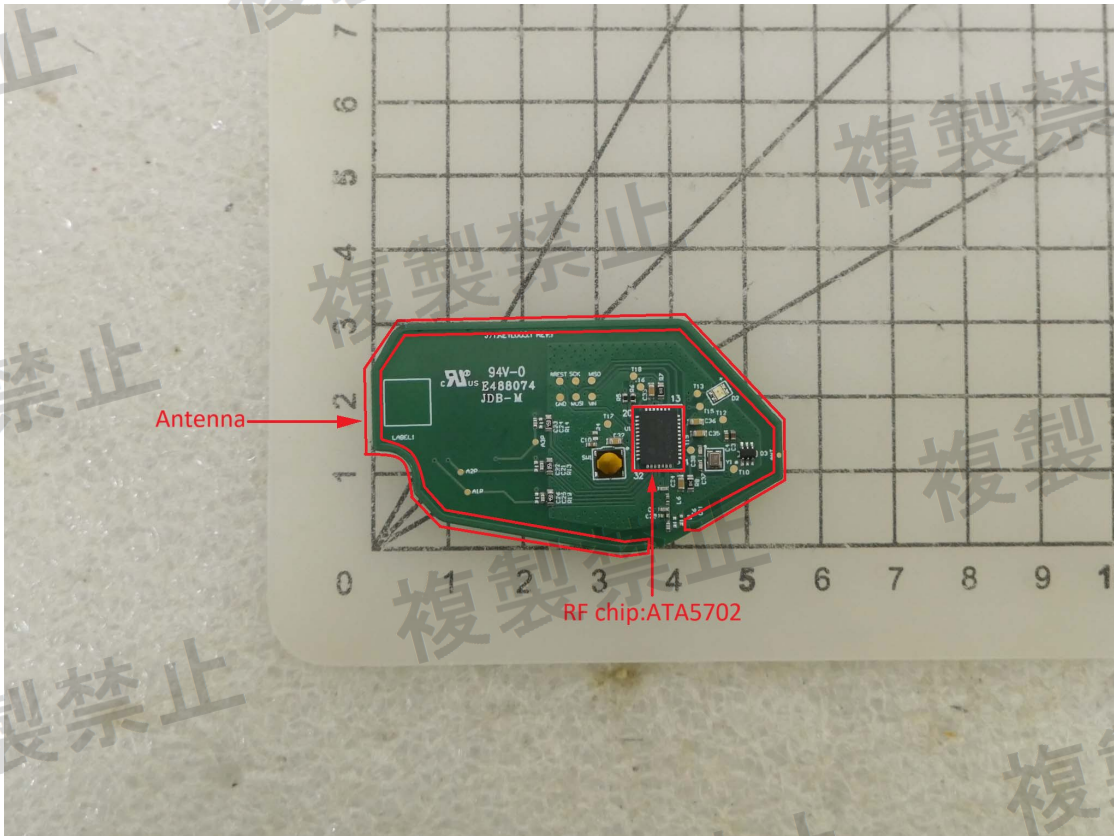
EUT-6.



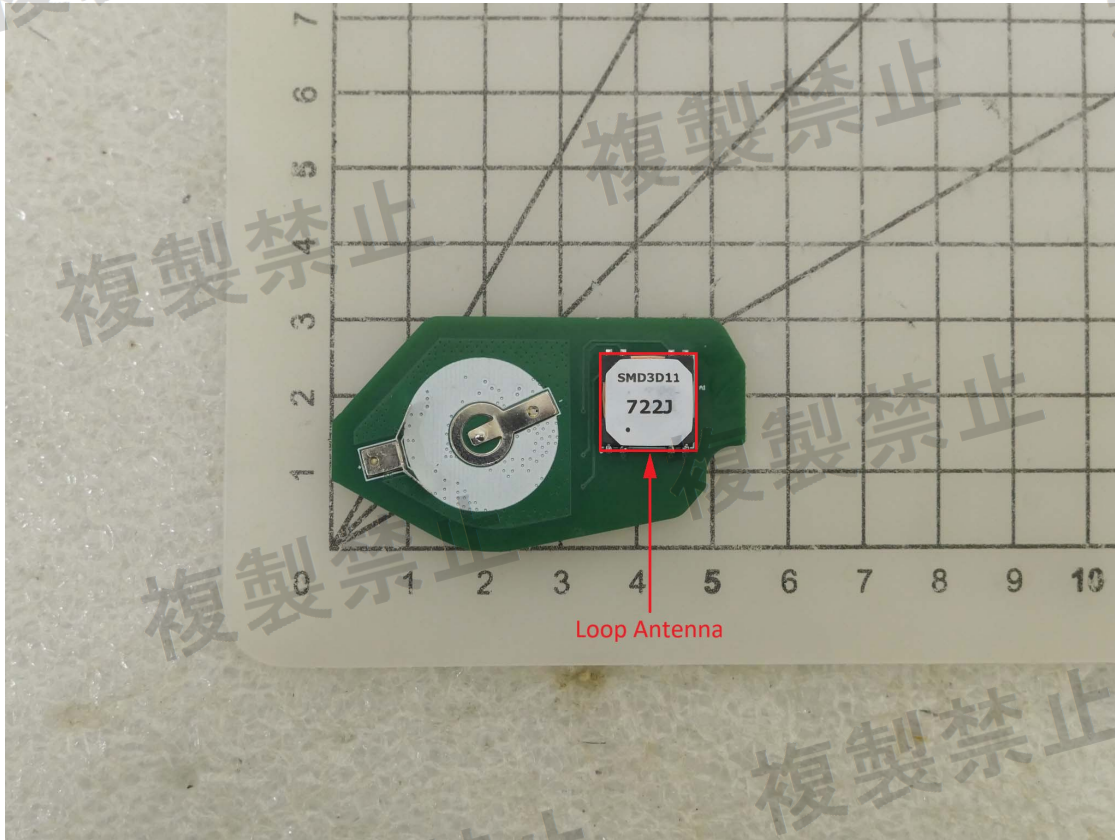
EUT-7.



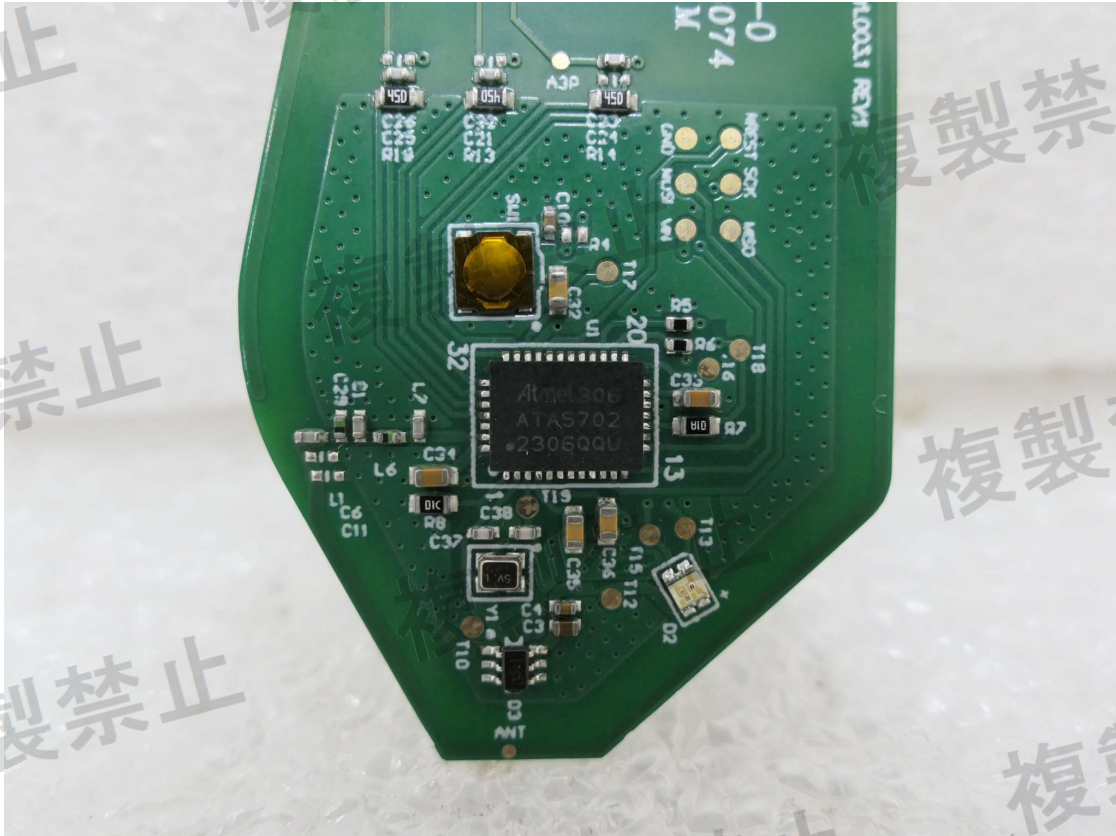
EUT-8.



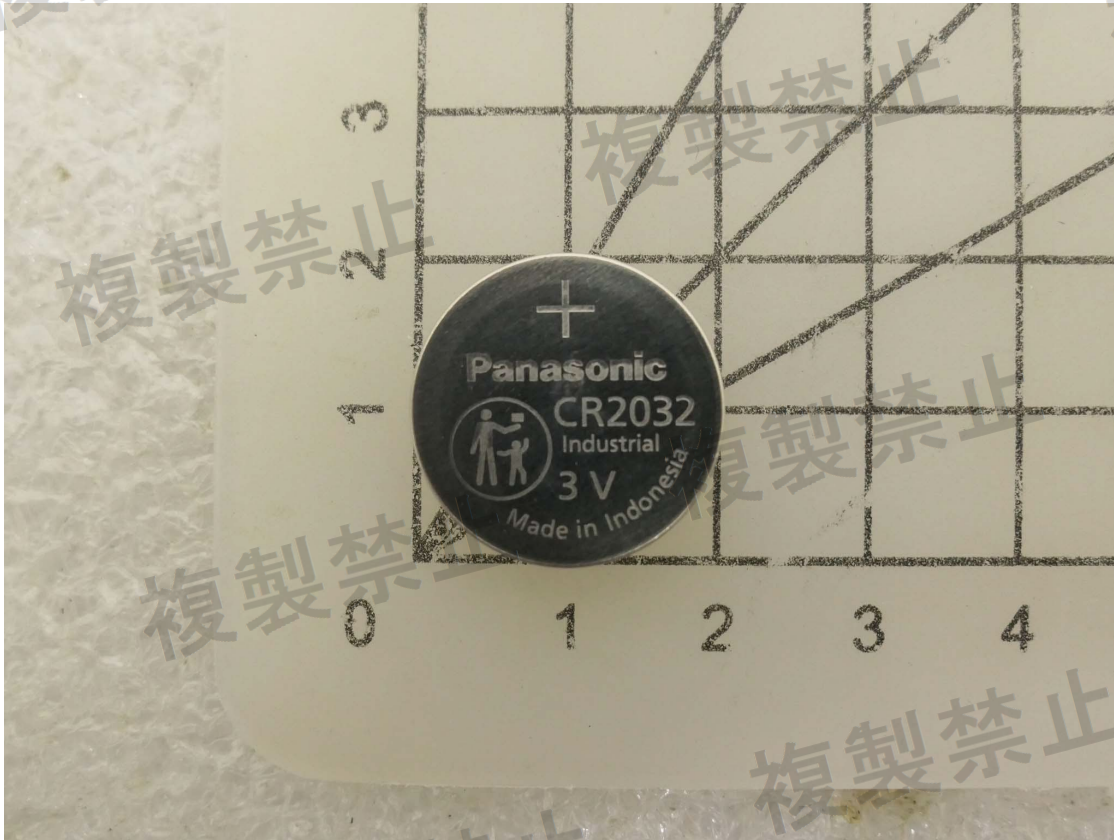
EUT-9.



EUT-10. ATA5702



EUT-11.



~ End of Report ~