

RF TEST REPORT

Report No. : SSP26060359-1R

Applicant : Shenzhen shi yehuo huwai yong pin you xian gong si

Product Name : ALC-01 Wireless remote control

Model Name : ALC-01

Test Standard : Article 2 Paragraph 1 of Item 8

Date of Issue : 2026-07-27

Shenzhen CCUT Quality Technology Co., Ltd.

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This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen CCUT Quality Technology Co., Ltd.

Test Report Basic Information

Applicant	Shenzhen shi yehuo huwai yong pin you xian gong si Hangcheng jiedao Sanwei shequ Gushuhongwangufenyouxiangongsi, Adong
Address of Applicant	403, Shenzhen shi, Guangdong sheng, China
Manufacturer	Shenzhen shi yehuo huwai yong pin you xian gong si Hangcheng jiedao Sanwei shequ Gushuhongwangufenyouxiangongsi, Adong
Address of Manufacturer	403, Shenzhen shi, Guangdong sheng, China
Product Name	ALC-01 Wireless remote control
Brand Name	TOWILD
Main Model	ALC-01
Series Models	-
Test Standard	Article 2 Paragraph 1 of Item 8 MIC notification No.88 of 2004, Annex 22-1
Date of Test	2026-07-13 to 2026-07-14
Test Result	PASS
Tested By	<u>Tate Chen</u> (Tate Chen)
Reviewed By	<u>Lorzix Luo</u> (Lorzix Luo)
Authorized Signatory	<u>Lahm Peng</u> (Lahm Peng)
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Revision History

Revision	Issue Date	Description	Revised By
V1.0	2026-07-27	Initial Release	Lahm Peng

1. General Information

1.1 Product Information

Product Name:	ALC-01 Wireless remote control
Trade Name:	TOWILD
Test Model:	ALC-01
Series Models:	-
Rated Voltage:	DC 3V
Power Adapter:	--
Battery:	DC 3V by CR2032 Battery
Hardware Version:	V1.0
Software Version:	V1.0
Note 1: The test data is gathered from a production sample, provided by the manufacturer.	

Wireless Specification	
Operating Frequency:	315MHz
Number of Channel:	1
Modulation:	ASK
Antenna Gain:	0dBi
Type of Antenna:	PCB Antenna

1.2 Test Setup Information

List of Test Modes			
Test Mode	Description	Remark	
TM1	Transmitting	315MHz	
-	-	-	
List and Details of Auxiliary Cable			
Description	Length (cm)	Shielded/Unshielded	With/Without Ferrite
-	-	-	-
-	-	-	-
List and Details of Auxiliary Equipment			
Description	Manufacturer	Model	Serial Number
-	-	-	-
-	-	-	-

1.3 Test Conditions

Supply Voltage			
	DC Input Voltage V	DC Voltage V	Percent
Normal(NV)	3	3.3	
+10%(HV)	3.3	3.3	0%
-10%(LV)	2.7	3.3	0%
Note 1: When the input voltage is reduced or increased by 10%, the regulator voltage changes of less than 1%. So the following test items are conducted in the normal voltage.			
Note 2: The regulator voltage is integral within U1(WL117SE).			
Note 3: 3.3VDC from the RF IC, for extreme voltage test, we have tested the relationship between the external power supply and RF IC power supply. Base on the test results, only the normal voltage was selected to perform all items.			

Test Environment					
Temperature	21℃	Humidity	52%	Atmospheric Pressure	1013.0mbar

1.4 Compliance Standards

Compliance Standards	
Article 2 Paragraph 1 of Item 8	Low Power Specific equipment in the 315MHz band
All measurements contained in this report were conducted with all above standards	
According to standards for test methodology	
MIC notification No.88 of 2004, Annex 22-1	Item 8 of Article 2 Paragraph 1 of the MIC rules for 315MHz-Band Telemeter, telecontrol and data transmission radio equipment for specified low-power radio station.
Maintenance of compliance is the responsibility of the manufacturer or applicant. Any modification of the product, which result is lowering the emission, should be checked to ensure compliance has been maintained.	

1.5 Test Facilities

Laboratory Name:	Shenzhen CCUT Quality Technology Co., Ltd. 1F, Building 35, Changxing Technology Industrial Park, Yutang Street, Guangming District, Shenzhen, Guangdong, China
CNAS Laboratory No.:	L18863
A2LA Certificate No.:	6983.01
FCC Registration No.:	583813
ISED Registration No.:	CN0164

1.6 List of Measurement Instruments

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Conducted RF Testing					
RF Test System	MWRFTTest	MW100-RFCB	220418SQS-37	2025-07-16	2026-07-15
Spectrum Analyzer	KEYSIGHT	N9020A	ATO-90521	2025-07-16	2026-07-15
Signal Generator	Agilent	N5182A	MY47071192	2025-07-15	2026-07-14
Power Meter	MRT	MW100-RFCB	MW220418SQS-37	2025-07-15	2026-07-14
Calibration agency: Guangzhou LiSai Metrology & Test Co., Ltd.					
Address: No.8 South Street, Shiji Institute, Guangzhou, Guangdong, China					
Calibration method: Through the standard signal source calibration, the results meet the requirements.					
Calibration method is based on: Radio law article 24-2, Paragraph 4, Item 2 section c.					
Calibration agency comply with designated calibration agency under Article 102-18 paragraph (1).					

1.7 Measurement Uncertainty

Test Item	Conditions	Uncertainty
Dwell Time	9kHz ~ 6GHz	±1.0 %
Frequency Tolerance	9kHz ~ 6GHz	±1 E-7
Conducted Output Power	9kHz ~ 6GHz	±0.50 dB
Occupied Bandwidth	9kHz ~ 6GHz	±4.0 %
Conducted Spurious Emission	9kHz ~ 26GHz	±1.32 dB

2. Summary of Test Results

MIC Rule	Description of Test Item	Result
Article 2 Paragraph 1 of Item 8	RF Output Power	Passed
	Frequency Tolerance	Passed
	Occupied Bandwidth	Passed
	Transmitter Spurious Emissions	Passed
	Receiver Spurious Emissions	N/A
	Interference Prevention Function	Passed
	Transmission Time	Passed
Passed: The EUT complies with the essential requirements in the standard Failed: The EUT does not comply with the essential requirements in the standard N/A: Not applicable		
The Appendix A is a part of the test report, including EUT external photos, internal photos, test photos and label information;		

3. RF Output Power

3.1 Standard and Limit

According to Item 8 of Article 2 Paragraph 1, the maximum permit antenna power is 25uW (e.i.r.p), and the maximum permit tolerance is +20%..

3.2 Test Procedure

- (1) Connect high frequency power meter to the RF output of the EUT, measure the total electric power.
- (2) Record the reading on power meter as antenna output power.



Test Setup Block Diagram

3.3 Test Data and Results

Frequency (MHz)	Measure Value (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (uW)	EIRP Limit (uW)
315	-6.97	0	-6.97	200	250

RF Output Power Tolerance:

Frequency (MHz)	Output Power (uW)	Rated Output Power (uW)	Tolerance (%)	Limit (%)
315	200	250	-20	+20%

Note: Tolerance = (Output Power – Rated Output Power) / Rated Output Power * 100%

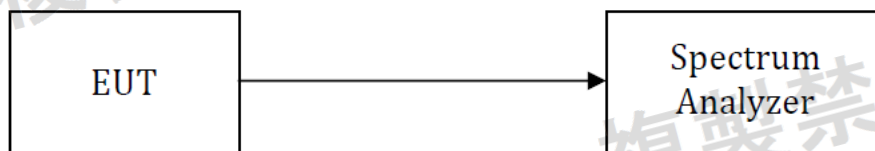
4. Frequency Tolerance

4.1 Standard and Limit

According to Item 8 of Article 2 Paragraph 1, Frequency tolerance shall be within the assigned frequency band (more than 312MHz and 315.25MHz or less).

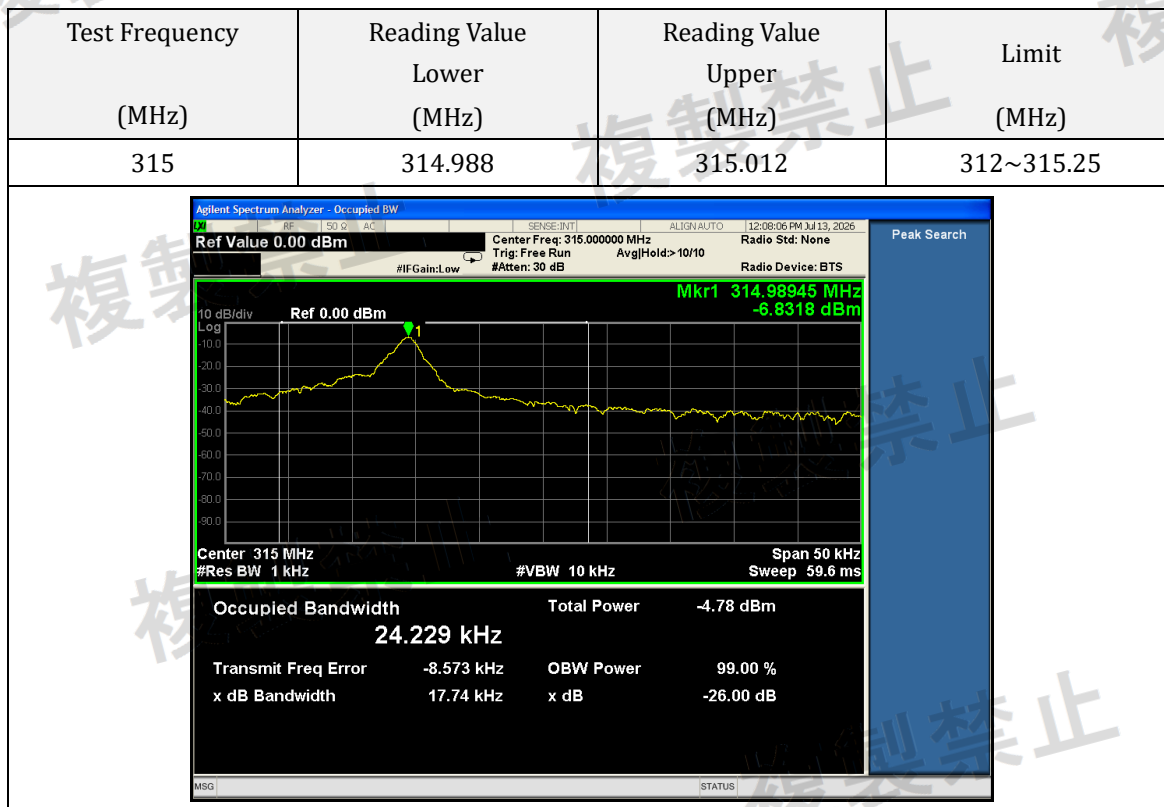
4.2 Test Procedure

- (1) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- (2) Set center frequency of spectrum analyzer = operating frequency.
- (3) Set the spectrum analyzer as RBW, VBW=10KHz, Span = 1MHz.
- (4) 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided emission is repetitive in nature.
- (5) Repeat above procedures until all frequency measured was complete.



Test Setup Block Diagram

4.3 Test Data and Results



Note: Reading Value= Test Frequency $\pm$ OBW/2

5. Occupied Bandwidth

5.1 Standard and Limit

According to Item 8 of Article 2 Paragraph 1. The occupied bandwidth shall not exceed 1MHz.

5.2 Test Procedure

(1) Set up the spectrum analyzer as the follows:

Center frequency: Test frequency

Sweep bandwidth: 2 to 3.5 times of allowance

Resoluble bandwidth: less than 3% of allowance

Video bandwidth: Equivalent to resolvable bandwidth

Sweep time: Minimum time by which measuring accuracy is assured (In case of burst wave, 1 burst shall be contained per 1 sample)

Sampling points: More than 400 points

Sweep mode : Continuous sweeping

Detection mode: Positive peak

Display mode: Maximum holding

(2) Repeat the sweeping till no change was observed on the display and enter all values of data point to the computer as array variable.

(3) About all data, convert dB value to antilogarithm of electric power dimension.

(4) Add up the electric power of all data and record it as "Sum total of electric power".

(5) Adding up data in order from the lowest frequency to upper frequencies, look for a limit point where the value reaches to 0.5% (5% in case of diffusion bandwidth) of "Sum total of electric power". Convert the limit point to frequency and record as "Lowest limit frequency".

(6) Adding up data in order from the highest frequency to lower frequencies, look for a limit point where the value reaches to 0.5% (5% in case of diffusion bandwidth) of "Sum total of electric power". Convert the limit point to frequency and record as "Highest limit frequency".

(7) Repeat above procedures until all frequency measured was complete.



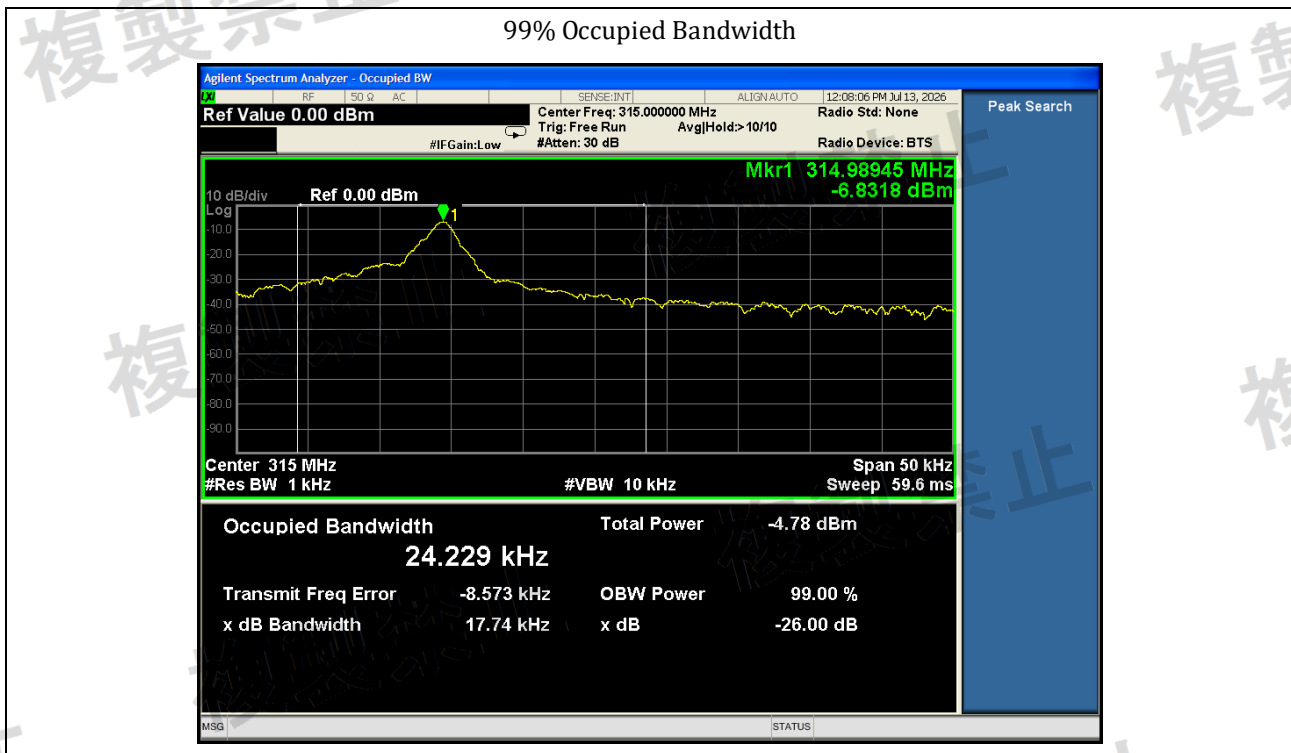
Test Setup Block Diagram

5.3 Test Data and Results

Occupied Bandwidth (99% Emission Bandwidth)

Modulation	Test Frequency (MHz)	Reading Value	Limit
ASK	315	24.229kHz	1MHz

Please refer to the following test plots



6. Transmitter Spurious Emissions

6.1 Standard and Limit

According to Item 8 of Article 2 Paragraph 1. The transmitter spurious emissions shall not exceeded the following limit:

- (1) Below 1GHz : 250nW/100kHz;
- (2) Over 1GHz : 1 μ W/MHz

6.2 Test Procedure

- (1) A spectrum in case of conducted measurements, the radio device shall be connected to the measuring equipment via a suitable attenuator.
- (2) The measurement equipment shall be set for peak hold mode of operation.
- (3) the transmitter shall be operated at the highest output power, or, in the case of equipment able to operate at more than one power level, at the lowest and highest output powers;
- (4) The resolution bandwidth shall be set to 100kHz from 10MHz to 1GHz, the resolution bandwidth shall be set to 1MHz above 1GHz , and the sweep time shall be set to auto mode, to ensure all major modulation products are captured.
- (5) When the searched result is less than the specified limit, the maximum one shall be recorded, when the result is more than the specified limit, all measured values shall be recorded.
- (6) This measurement shall be repeated with the transmitter in standby mode where applicable.
- (7) Repeat above procedures until all frequency measured was complete.



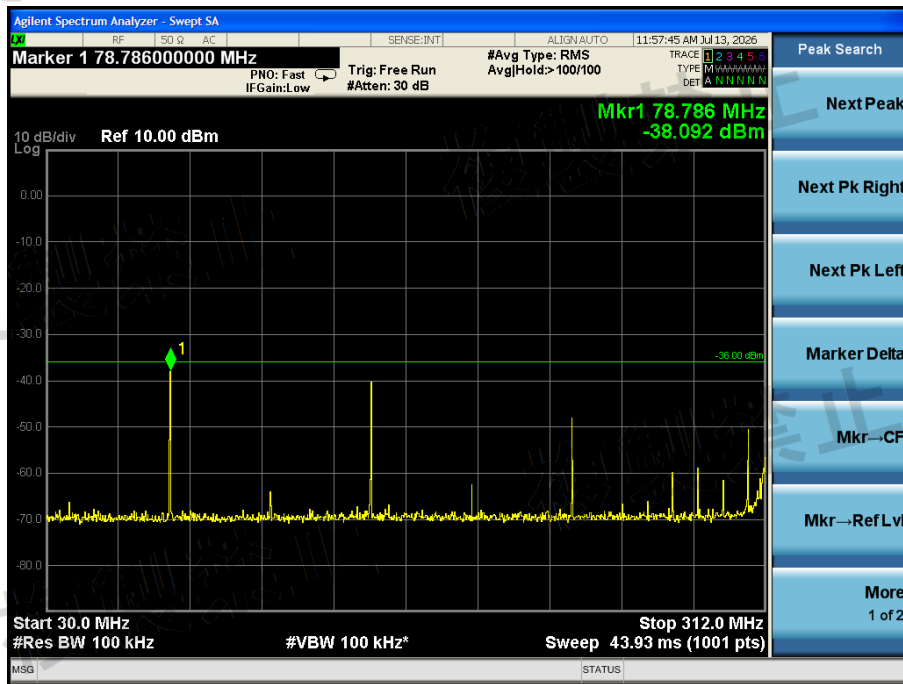
Test Setup Block Diagram

6.3 Test Data and Results

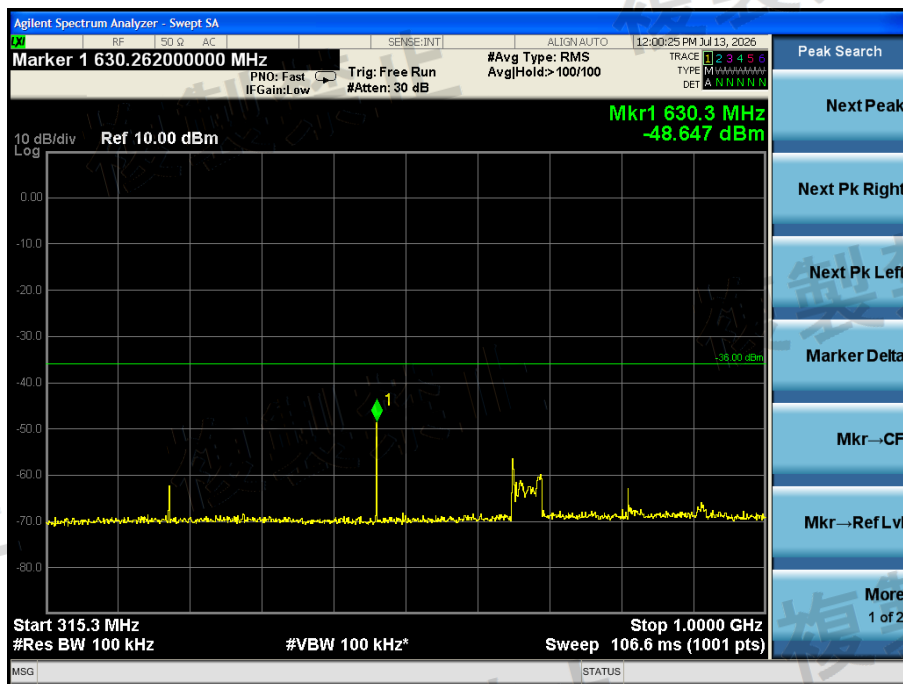
Frequency Range (MHz)	Maximum Spurious Emission Value (dBm)	Maximum Spurious Emission Value (nW)	Limit (nW)	Test Result
30-312	-38.092	155.17	250	Good
315-1000	-48.647	13.66	250	Good
1000-4000	-51.479	7.11	1	Good

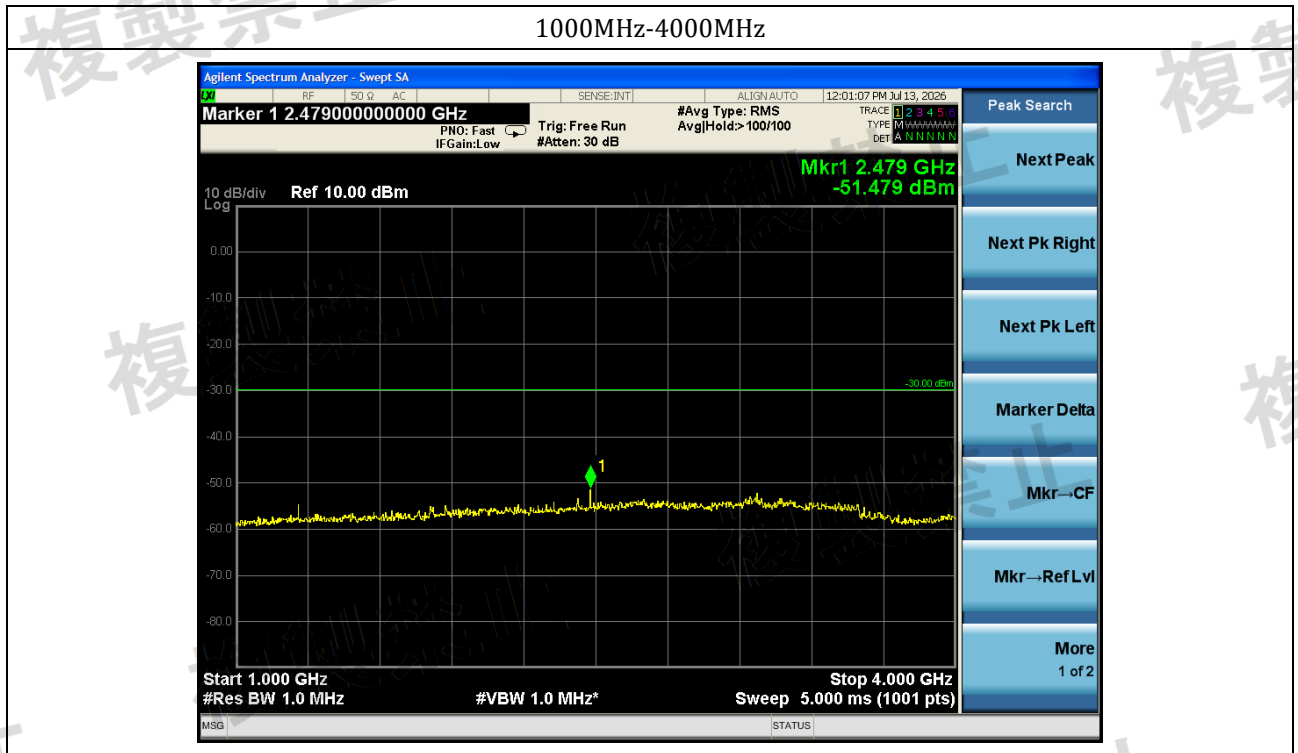
Please refer to the following test plots

30MHz-312MHz



315.25MHz-1000MHz





7. Receiver Spurious Emissions

7.1 Standard and Limit

According to Item 8 of Article 2 Paragraph 1. The receiver spurious emissions shall not exceed the following limit:

- (1) Below 1GHz : 4nW/100kHz
- (2) 1GHz or higher : 4nW/MHz

7.2 Test Procedure

- (1) A spectrum in case of conducted measurements, the radio device shall be connected to the measuring equipment via a suitable attenuator.
- (2) The measurement equipment shall be set for peak hold mode of operation.
- (3) the transmitter shall be operated at the highest output power, or, in the case of equipment able to operate at more than one power level, at the lowest and highest output powers;
- (4) The resolution bandwidth shall be set to 100kHz from 10MHz to 1GHz, the resolution bandwidth shall be set to 1MHz above 1GHz, and the sweep time shall be set to auto mode, to ensure all major modulation products are captured.
- (5) When the searched result is less than the specified limit, the maximum one shall be recorded, when the result is more than the specified limit, all measured values shall be recorded.
- (6) This measurement shall be repeated with the transmitter in standby mode where applicable.
- (7) Repeat above procedures until all frequency measured was complete.



Test Setup Block Diagram

7.3 Test Data and Results

Because this device is only supported transmitting, so it is not applicable.

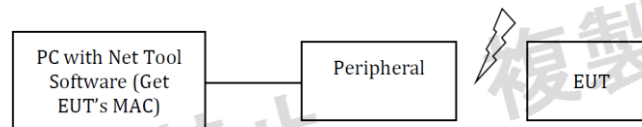
8. Interference Prevention Function

8.1 Standard and Limit

According to Item 8 of Article 2 Paragraph 1, the device shall have the function of automatic transmission or reception of identification code.

8.2 Test Procedure

- (1) Set the EUT in the usual operation condition.
- (2) The radio equipment with automatic transmitting function of identification code.
 - a. Transmit the assigned identification code from the radio equipment.
 - b. Confirm the identification code received by the demodulator.
- (3) The radio equipment with automatic receiving function of identification code.
 - a. Transmit the assigned identification code from the opposite equipment.
 - b. Confirm that the usual communication is available.
 - c. Transmit the identification code distinct from the assigned one from the opposite equipment.
 - d. Confirm that the radio equipment is stopped or an indication is displayed as the identification code is different.
- (4) The identification function shall be recorded.



Test Setup Block Diagram

8.3 Test Data and Results

Test Items	Test Result
Transmitting Function of Identification Code	Good
Receiving Function of Identification Code	Good

9. Transmission Time

9.1 Standard and Limit

According to Item 8 of Article 2 Paragraph 1, The transmission time restricting device is a device having functions that stop radio wave emission within the next specified transmission time after the radio wave emission and resume the subsequent transmission only after the transmission halt time has elapsed, or restrict the transmission time automatically within the next specified transmission time, and does not resume communication unless the transmission halt time has elapsed after the end of the communication. The transmission time and the transmission halt time shall have either of the following functions:

(a)The radio equipment that does not transmit periodically shall have the function to limit one transmission time within 5 seconds, although manually operated transmission allows one transmission time to be within 90 seconds.

(b)The radio equipment that transmit periodically shall have the function to automatically limit the transmission time for one transmission time within 1 second, with one transmission halt time being more than 10 seconds and no less than 30 times for the transmission time. It is noted that if the radio equipment is used for safety operation of an auto vehicle or any other vehicles and in the unavoidable reason, the transmission halt time of the radio equipment does not require 10 seconds or more.

9.2 Test Procedure

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set center frequency of spectrum analyzer = operating frequency.
3. Set the spectrum analyzer as RBW, VBW=100kHz, Span = 0Hz, Sweep time = 100s
4. Recode the quantity of pulse in a test period.



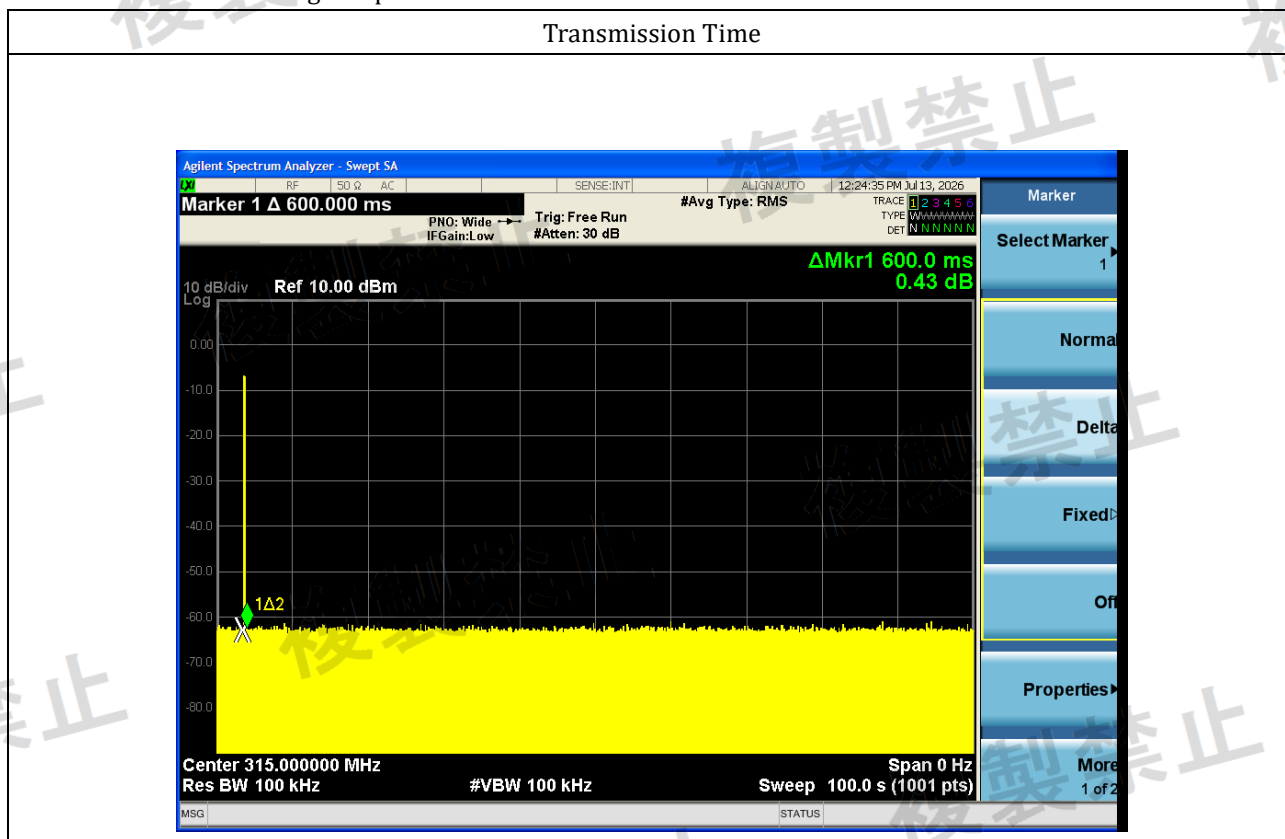
Test Setup Block Diagram

9.3 Test Data and Results

The device is manually triggered. When the trigger button is continuously pressed, the device transmits for approximately 0.6 seconds and then automatically stops transmission. The single transmission ON time is therefore less than 90 seconds.

Test Frequency	Test Value	Limit	Test Result
315MHz	0.6s	90s	Good

Please refer to the following test plots



***** END OF REPORT *****