

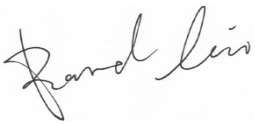
FCC PART 15.247 TEST REPORT

For

Lotwork Inc.

2009 Oxbow Ave. Ottawa ON K1H 5P1 Canada

FCC ID: 2BOZY-L102

Report Type: Original Report	Product Name: Wireless Light Tag
Report Number:	RSA250529006-00B
Report Date:	2025-09-29
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Approved By:	Kyle Xu 
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S. Government.

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RSHA250529006-00B	R1V1	2025-09-29	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Lotwork Inc.
Product Name:	Wireless Light Tag
Tested Model:	L102
Power Supply:	DC 3.7 V from battery or DC 5V from USB port
Maximum Output Power:	4.25 dBm
RF Function:	2.4G SRD
Operating Band/Frequency:	2405-2480 MHz
Channel Number:	76
Channel Separation:	1 MHz
Modulation Type:	GFSK
★Maximum Antenna Gain:	0.9 dBi

Note: The maximum antenna gain was provided by the applicant.

All measurement and tested data in this report was gathered from production sample serial number: RSHA250529006-1 (Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2025-05-29.)

Objective

This test report is prepared for *Lotwork Inc.* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions rules.

The tests were performed in order to determine Compliant with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and 558074 D01 15.247 Meas Guidance v05r02.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19dB
RF conducted test with spectrum		0.9dB
RF Output Power with Power meter		0.5dB
Radiated emission	9 kHz~150 kHz	3.8dB
	150 kHz~30 MHz	3.4dB
	30MHz~1GHz	6.11dB
	1GHz~6GHz	4.45dB
	6GHz~18GHz	5.23dB
	18GHz~40GHz	5.65dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No.: CN5055.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

Channel list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2405	29	2433	57	2461
2	2406	30	2434	58	2462
3	2407	31	2435	59	2463
4	2408	32	2436	60	2464
5	2409	33	2437	61	2465
6	2410	34	2438	62	2466
7	2411	35	2439	63	2467
8	2412	36	2440	64	2468
9	2413	37	2441	65	2469
10	2414	38	2442	66	2470
11	2415	39	2443	67	2471
12	2416	40	2444	68	2472
13	2417	41	2445	69	2473
14	2418	42	2446	70	2474
15	2419	43	2447	71	2475
16	2420	44	2448	72	2476
17	2421	45	2449	73	2477
18	2422	46	2450	74	2478
19	2423	47	2451	75	2479
20	2424	48	2452	76	2480
21	2425	49	2453		
22	2426	50	2454		
23	2427	51	2455		
24	2428	52	2456		
25	2429	53	2457		
26	2430	54	2458		
27	2431	55	2459		
28	2432	56	2460		

EUT was tested with Channel 1, 36 and 76.

EUT Exercise Software

RF Test Tool: N/A

★Power level: N/A

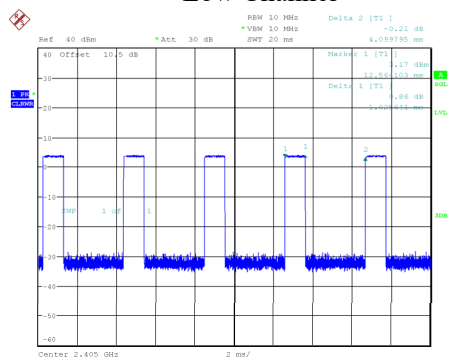
Note: The power level was declared by the applicant.

Environmental Conditions & Test Information

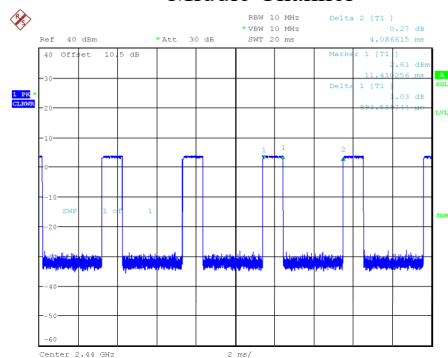
Test Date:	2025-07-19
Temperature:	25.9 °C
Relative Humidity:	62 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Duty Cycle:

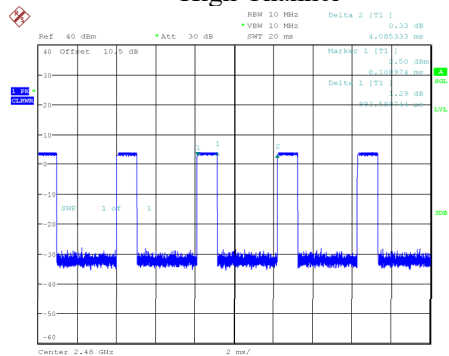
Low Channel



Middle Channel



High Channel



Channel	Duty Cycle (%)	Ton (ms)	Ton+off (ms)	10*log (1/x) (dB)
Low	25.02	1.026	4.100	6.02
Middle	24.32	0.994	4.087	6.14
High	24.33	0.994	4.085	6.14

Note:

1. "x" means the Duty Cycle.
2. Note: Offset (10.5dB) = Attenuator (10dB)+cable loss(0.5dB)

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

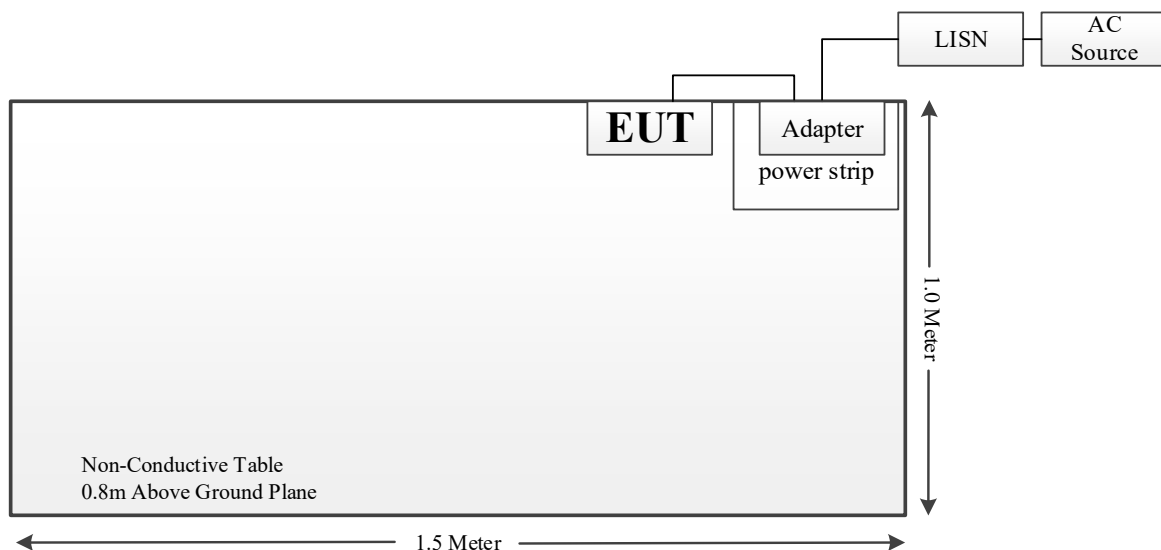
Manufacturer	Description	Model	Serial Number
Chongqing lianmao Electronics Co.,Ltd.	Adapter	LM-603U-050200U02UL	/
/	power strip	/	/

External I/O Cable

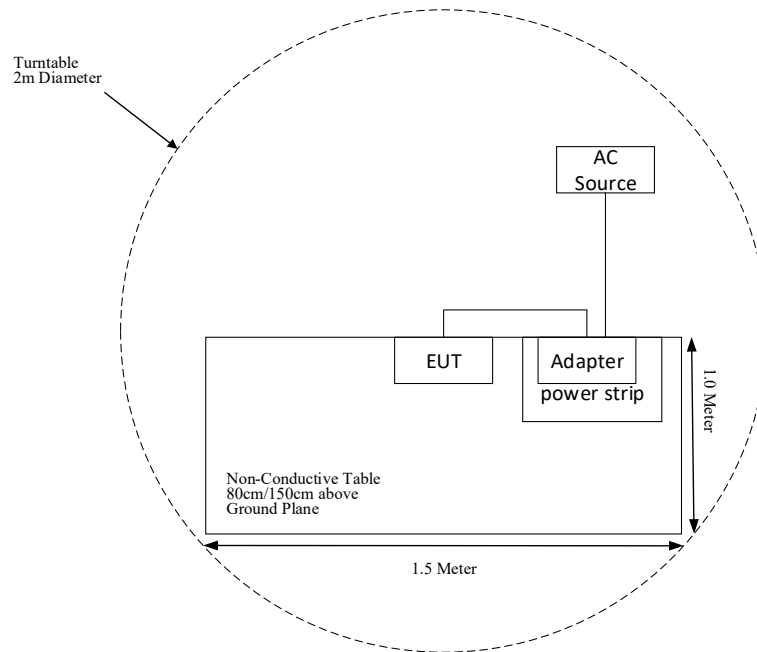
Cable Description	Length (m)	From Port	To Port
Power Cable 1	0.2	EUT	Adapter
Power Cable 2	1.5	Adapter	AC Source

Block Diagram of Test Setup

For Conducted Emissions:



For Radiated Emissions (Below 1GHz & Above 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 & §2.1091	MAXIMUM PERMISSIBLE EXPOSURE (MPE)	Compliant
§15.203	Antenna Requirement	Compliant
§15.207 (a)	AC Line Conducted Emissions	Compliant
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliant
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliant
§15.247(b)(3)	Maximum Conducted Output Power	Compliant
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
§15.247(d)	Conducted Spurious Emission	Compliant
§15.247(e)	Power Spectral Density	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber #1)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2025-04-09	2026-04-08
Sunol Sciences	Hybrid Antenna	JB3	A090314-2	2024-10-29	2027-10-28
BACL	Active Loop Antenna	1313-1A	4041511	2024-11-22	2027-11-21
Narda	6 dB Attenuator	771-6	10690812-2-1	2024-10-29	2027-10-28
Sonoma Instrument	Pre-amplifier	310N	171205	2025-04-09	2026-04-08
Rohde & Schwarz	Auto Test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-8	008	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-9	009	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-10	010	2025-04-09	2026-04-08
Radiated Emission Test (Chamber #2)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2025-04-09	2026-04-08
ETS-LINDGREN	Horn Antenna	3115	9207-3900	2024-11-03	2027-11-02
ETS-LINDGREN	Horn Antenna	3116	2516	2024-12-12	2027-12-11
A.H.Systems,inc	Amplifier	PAM-0118P	512	2025-04-09	2026-04-08
MICRO-TRONICS	Band Reject Filter	BRM50702	G024	2024-08-05	2025-08-04
Narda	Attenuator	10dB	010	2025-04-08	2026-04-07
SELECTOR	Amplifier	EM18G40G	60726	2025-04-09	2026-04-08
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-6	006	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-11	011	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-12	012	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-13	013	2025-04-09	2026-04-08
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSU26	200103	2025-04-09	2026-04-08
Narda	Attenuator	10dB	010	2025-04-08	2026-04-07
XHFDZ	RG316 Coaxial Cable	SMA-316	XHF-1175	Each time	N/A
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2024-07-28	2025-07-27
Rohde & Schwarz	LISN	ENV216	101115	2025-04-08	2026-04-07
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse limiter	ESH3-Z2	100552	2025-04-08	2026-04-07
MICRO-COAX	Coaxial Cable	Cable-15	015	2025-04-08	2026-04-07

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1310 & §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart §2.1091 and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Calculated Formulary

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Calculated Data:

Mode	Frequency Range (MHz)	Antenna Gain		★Tune-up Output Power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
SRD	2405-2480	0.9	1.23	4.5	2.82	20	0.0007	1.0

Note: For the above tune up power were declared by the manufacturer.

Result: The device meet FCC MPE at 20 cm distance.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine Compliant with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has a PCB antenna for SRD, and the antenna gain is 0.9 dBi, which is permanently attached to the unit, fulfill the requirement of this section. Please refer to the EUT photos.

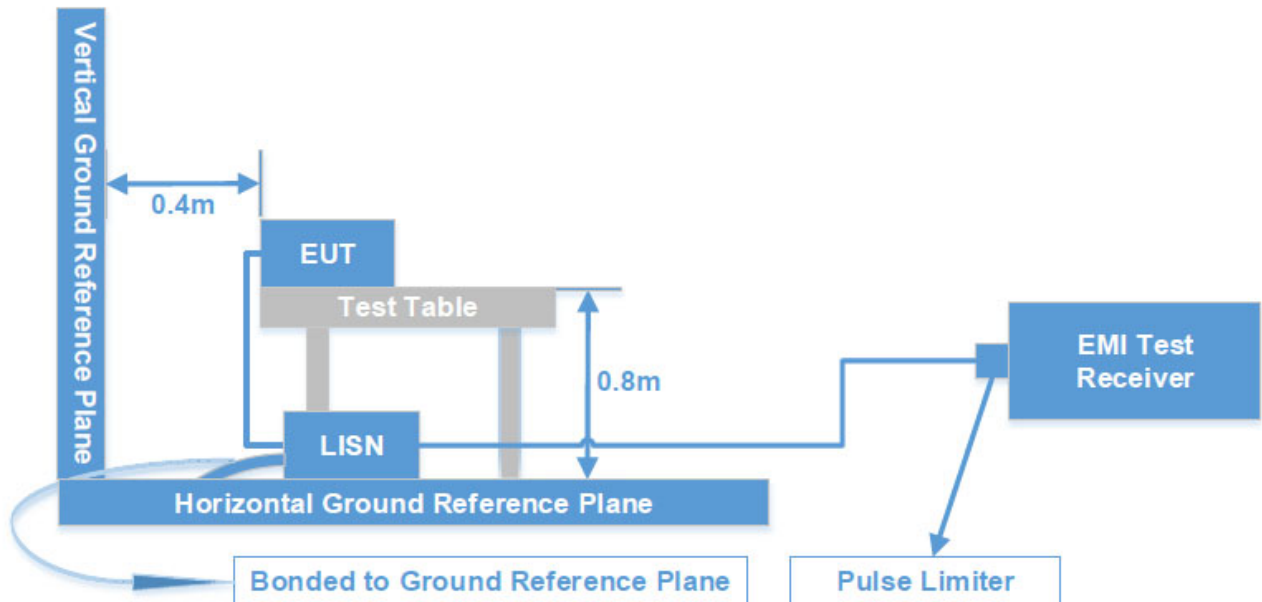
Result: Compliant.

FCC §15.207 (a) - AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10:2020. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW
150 kHz - 30 MHz	9 kHz	30 kHz

Test Procedure

ANSI C63.10:2020 clause 6.2

During the conducted emission test, the EUT or adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Level & Over Limit Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + Factor (dB)

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

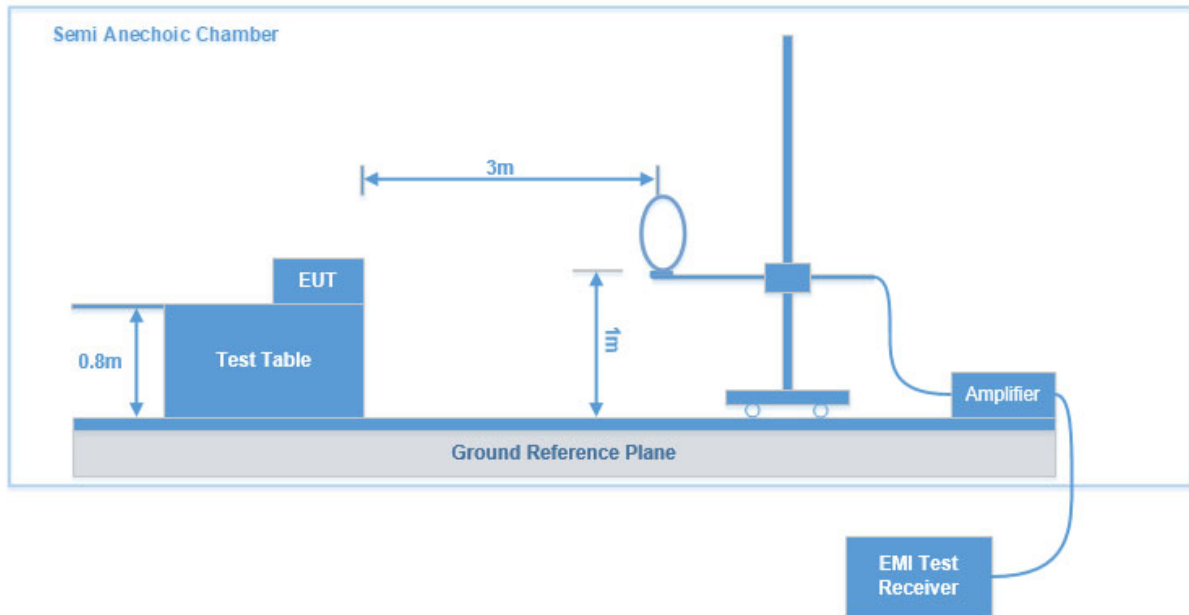
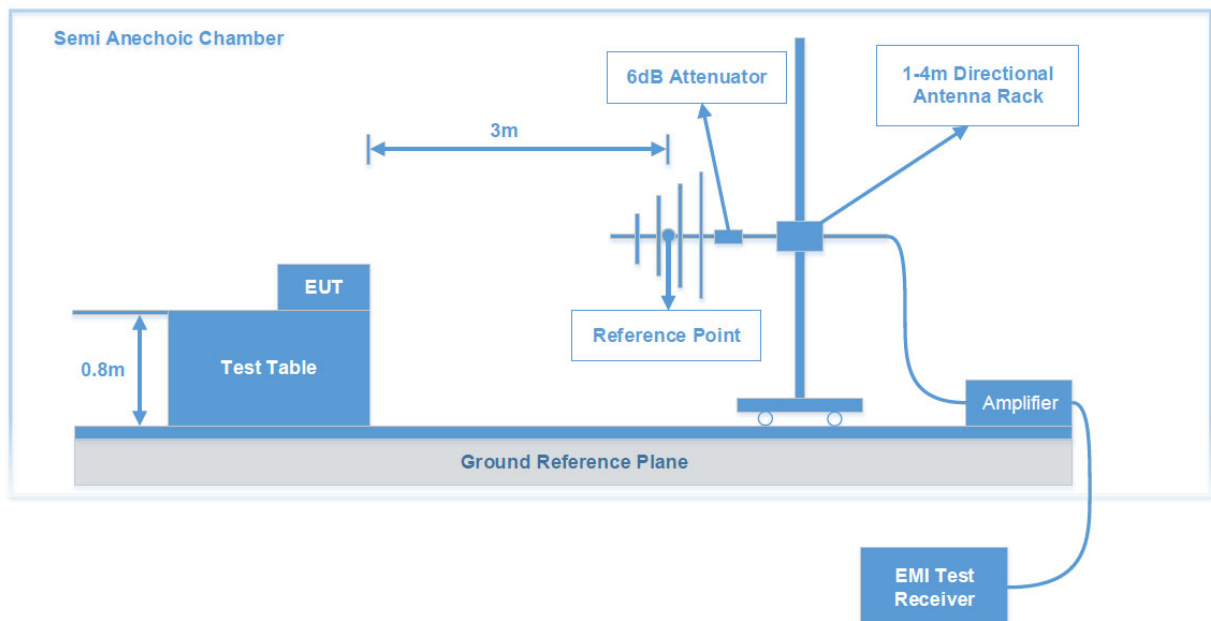
Test Results Summary

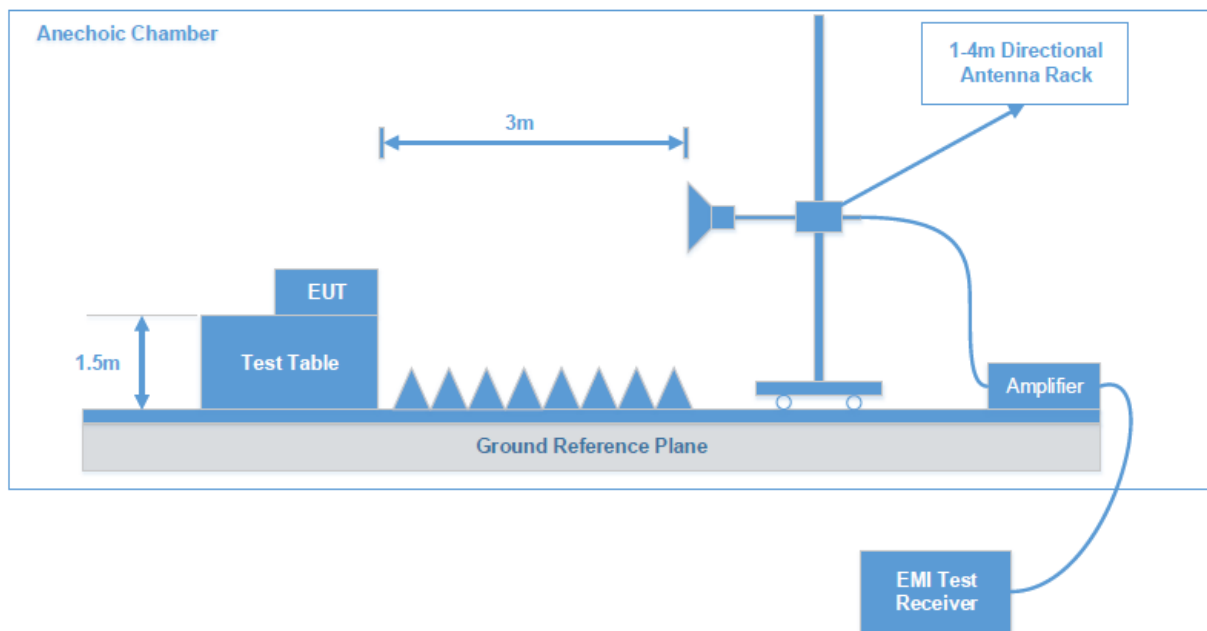
According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data: See Appendix

FCC §15.205, §15.209 & §15.247(d) – RADIATED EMISSIONS**Applicable Standard**

FCC §15.205; §15.209; §15.247(d)

Test System Setup**9 kHz – 30 MHz:****30 MHz - 1 GHz:**

Above 1 GHz:

The radiated emission tests were performed in the 3 meters, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209 and FCC 15.247 limits.

EMI Test Receiver Setup

During the radiated emission test, the EMI test receiver Setup was set with the following configurations:

Frequency Range	RBW	VBW	IF B/W	Measurement	Detector
9 kHz - 150 kHz	200 Hz	1 kHz	200 Hz	QP/Average	QP/Average
150 kHz - 30 MHz	9 kHz	30 kHz	9 kHz	QP/ Average	QP/ Average
30 MHz - 1000 MHz	100 kHz	300 kHz	/	Peak	Peak
	/	/	120 kHz	QP	QP
Above 1 GHz	1MHz	3 MHz	/	Peak	Peak
	1MHz	3 MHz	/	Average	Average

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

For 9 kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude (dBμV/m) = Meter Reading (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV/m) – Corrected Amplitude (dBμV/m)

Note: The QuasiPeak (dBμV/m), MaxPeak (dBμV/m), Average (dBμV/m) which shown in the data table are all Corrected Amplitude.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247.

Test Data: See Appendix

FCC §15.247(A) (2) - 6 DB EMISSION BANDWIDTH

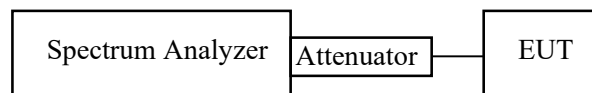
Applicable Standard

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Procedure

According to ANSI C63.10:2020 sub-clause 11.8.1

- a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- b) Set the VBW $\geq [3 \times \text{RBW}]$.
- c) Detector = peak.
- d) Trace mode = max-hold.
- e) Sweep = No faster than coupled (auto) time.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “–6 dB down amplitude”. If a marker is below this “–6 dB down amplitude” value, then it shall be as close as possible to this value.



Note: Offset (10.5dB) = Attenuator(10dB) + Cable loss(0.5dB)

Test Data: See Appendix

FCC §15.247(B) (3) - MAXIMUM CONDUCTED OUTPUT POWER

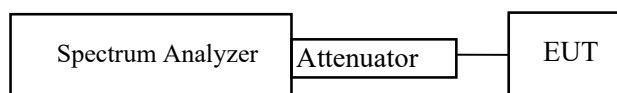
Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, Compliant with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Procedure

According to ANSI C63.10:2020 sub-clause 11.9.1.1

- a) Set the RBW $\geq$ DTS bandwidth.
- b) Set VBW $\geq [3 \times \text{RBW}]$.
- c) Set span $\geq [3 \times \text{RBW}]$.
- d) Sweep time = No faster than coupled (auto) time.
- e) Detector = peak.
- f) Trace mode = max-hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.



Note: Offset (10.5dB) = Attenuator (10dB) + cable loss (0.5dB)

Test Data: See Appendix

FCC §15.247(D) - 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

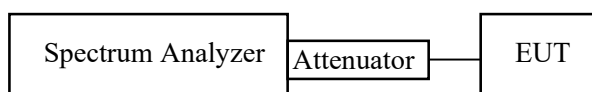
Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates Compliant with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

According to ANSI C63.10:2020 sub-clause 6.10.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.



Note: Offset (10.5dB) = Attenuator(10dB)+Cable loss(0.5dB)

Test Data: See Appendix

FCC §15.247(E) - POWER SPECTRAL DENSITY

Applicable Standard

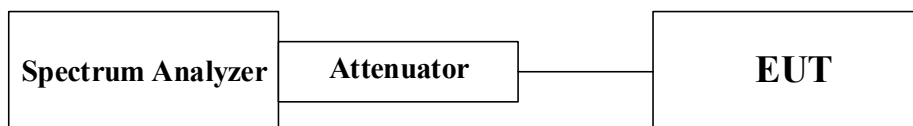
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Procedure

According to ANSI C63.10:2020 sub-clause 11.10.2

The following procedure shall be used if maximum peak conducted output power was used to determine Compliant, and it is optional if the maximum conducted (average) output power was used to determine Compliant:

1. Set the RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$.
2. Set the VBW $\geq 3 * \text{RBW}$.
3. Set the span > 1.5 times the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level within the RBW.
9. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.



Note: Offset (10.5dB) = Attenuator (10dB) + cable loss (0.5dB)

Test Data: See Appendix

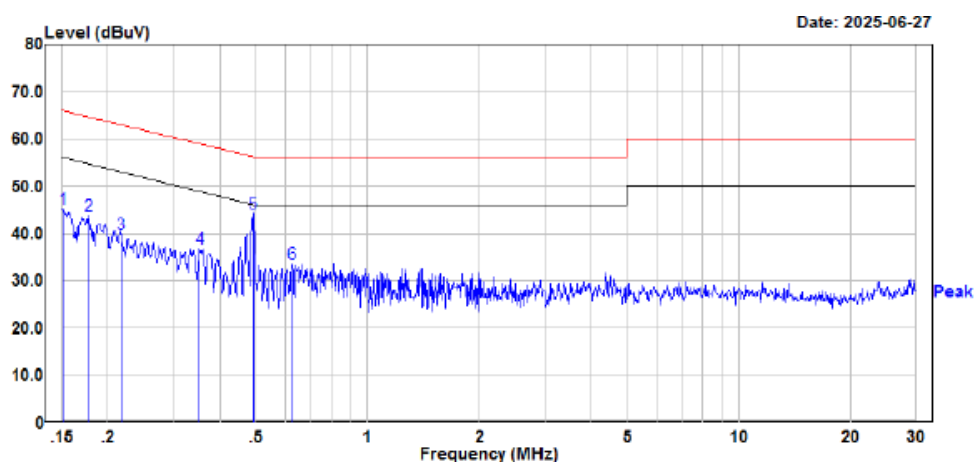
APPENDIX - TEST DATA

AC LINE CONDUCTED EMISSIONS

Environmental Conditions & Test Information

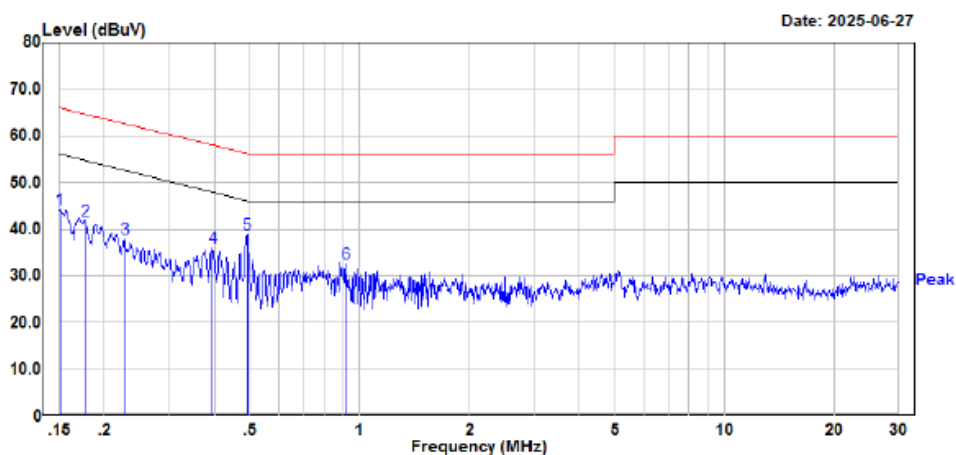
Test Date:	2025-06-27
Temperature:	25.9 °C
Relative Humidity:	62 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Myles Miao

AC 120V/60 Hz, Line(Transmitting maximum output power SRD Mode low channel)



Site : CE
 Condition : limit\FCC PART 15.207
 : DET:Peak
 Project No. : RSHA250529006
 Model : L102
 Phase : L
 Voltage : 120V/60Hz
 Mode : SRD
 Test Equipment : ENV216,ESR3
 Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
 Temperature : 25.9°C
 Humidity : 62%
 Atmospheric pressure: 100.9kPa
 Test Engineer : Myles Miao

		Read		Limit	Over	
	Freq	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV	dBuV	dB
1	0.152	24.91	20.23	45.14	65.92	-20.78 Peak
2	0.177	23.47	20.22	43.69	64.63	-20.94 Peak
3	0.217	19.61	20.21	39.82	62.94	-23.12 Peak
4	0.354	16.47	20.24	36.71	58.88	-22.17 Peak
5	0.491	23.93	20.19	44.12	56.15	-12.03 Peak
6	0.624	13.30	20.25	33.55	56.00	-22.45 Peak

AC 120V/60 Hz, Neutral

Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RSHA250529006
Model : L102
Phase : N
Voltage : 120V/60Hz
Mode : SRD
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 25.9℃
Humidity : 62%
Atmospheric pressure: 100.9kPa
Test Engineer : Myles Miao

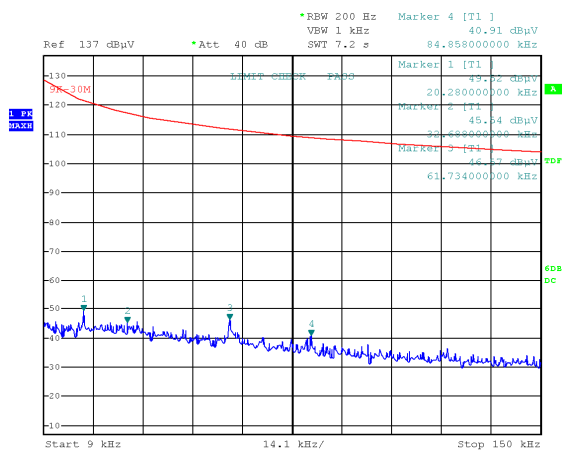
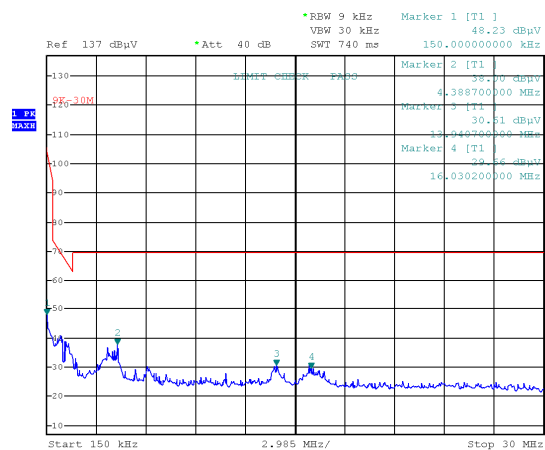
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV		dB	dBuV	dB	
1	0.151	24.13	20.23	44.36	65.96	-21.60	Peak
2	0.178	21.61	20.22	41.83	64.59	-22.76	Peak
3	0.227	17.73	20.21	37.94	62.56	-24.62	Peak
4	0.396	15.75	20.23	35.98	57.93	-21.95	Peak
5	0.491	18.84	20.19	39.03	56.15	-17.12	Peak
6	0.921	12.38	20.14	32.52	56.00	-23.48	Peak

SPURIOUS EMISSIONS & RESTRICTED BANDS EMISSIONS**Environmental Conditions & Test Information**

Frequency Range:	9 kHz - 1 GHz	1 GHz - 18 GHz	18 GHz - 25 GHz
Test Date:	2025-06-26 to 2025-07-30	2025-06-28	2025-06-28
Temperature:	22.3-25 °C	28.3 °C	28.3 °C
Relative Humidity:	57-60 %	56 %	56 %
ATM Pressure:	100.2-101.1 kPa	100.7 kPa	100.7 kPa
Test Result:	Pass	Pass	Pass
Test Engineer:	Link Xia	Destine Hu	Hugh Wu

EUT operation mode: Transmitting

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

9 kHz-30 MHz: (Transmitting maximum output power SRD Mode low channel)**Parallel(worst case)****9kHz-150kHz****150kHz-30MHz**

Project No.RSHA250529006
 Date: 30.JUL.2025 15:51:53

Tester:Link Xia

Project No.RSHA250529006
 Date: 30.JUL.2025 15:55:11

Tester:Link Xia

9 kHz - 150 kHz:

Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.020280	49.52	PK	-0.56	121.46	71.94
0.032688	45.54	PK	-1.04	117.32	71.78
0.061734	46.57	PK	-5.18	111.79	65.22
0.084858	40.91	PK	-7.77	109.03	68.12

150 kHz - 30 MHz:

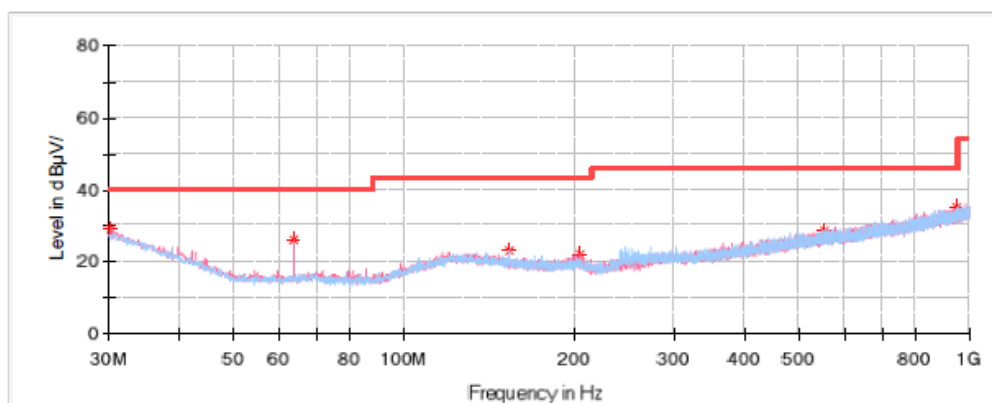
Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.1500	48.23	PK	-11.36	104.08	55.85
4.3887	38.00	PK	-31.97	69.54	31.54
13.9407	30.61	PK	-33.11	69.54	38.93
16.0302	29.66	PK	-33.21	69.54	39.88

30 MHz - 1 GHz

Low Channel: 2405 MHz

Common Information

Project No: RSHA250529006
EUT Model: L102
Test Mode: Transmitting in SRD mode low channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature: 22.3°C
Humidity: 57%
Barometric Pressure: 101.1kPa
Test Engineer: Link Xia
Test Date: 2025/6/26

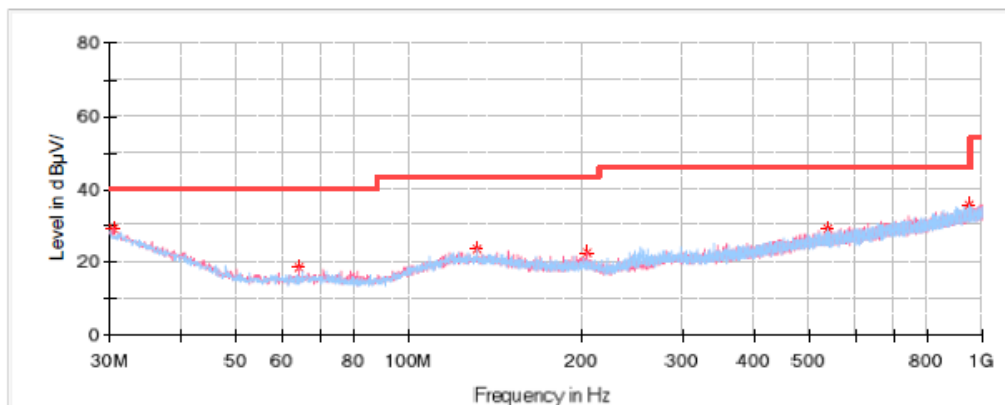


Critical_Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
153.675000	23.07	43.50	20.43	H	-11.9
555.497500	28.88	46.00	17.12	H	-4.6
947.135000	35.20	46.00	10.80	V	1.8
204.357500	22.27	43.50	21.23	V	-12.4
30.242500	29.12	40.00	10.88	V	-4.9
63.707500	26.40	40.00	13.60	V	-16.9

Middle Channel: 2440 MHz**Common Information**

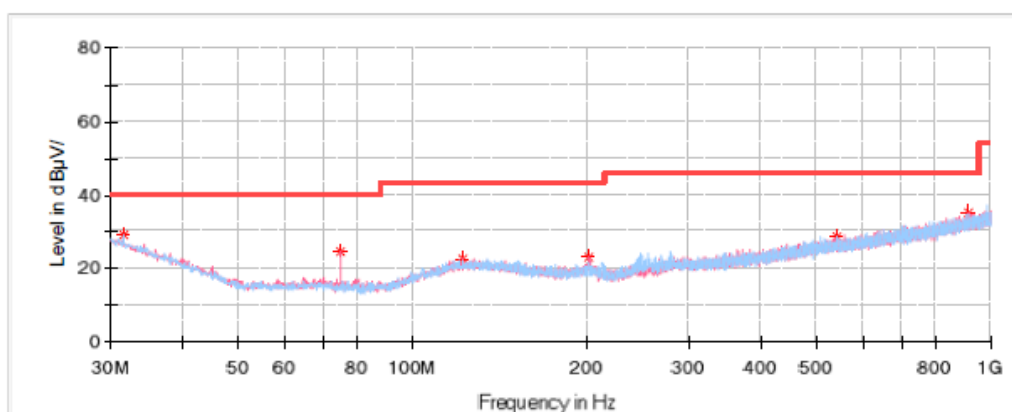
Project No: RSHA250529006
EUT Model: L102
Test Mode: Transmitting in SRD mode mid channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature: 22.3°C
Humidity: 57%
Barometric Pressure: 101.1kPa
Test Engineer: Link Xia
Test Date: 2025/6/26

**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.363750	29.28	40.00	10.72	V	-5.0
64.192500	18.85	40.00	21.15	V	-16.9
131.243750	23.41	43.50	20.09	H	-11.1
204.478750	22.56	43.50	20.94	V	-12.4
537.431250	28.94	46.00	17.06	H	-4.9
952.348750	35.71	46.00	10.29	H	1.9

High Channel: 2480 MHz**Common Information**

Project No: RSHA250529006
EUT Model: L102
Test Mode: Transmitting in SRD mode high channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature: 22.3°C
Humidity: 57%
Barometric Pressure: 101.1kPa
Test Engineer: Link Xia
Test Date: 2025/6/26

**Critical_Freqs**

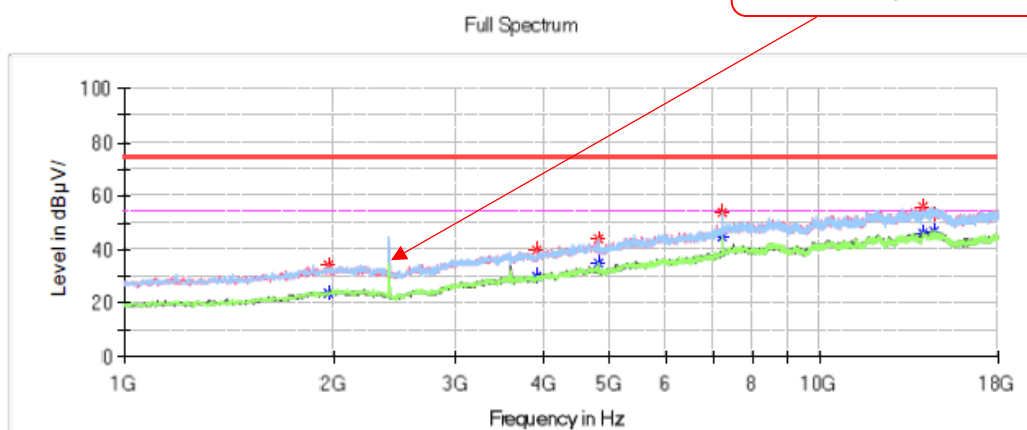
Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
31.576250	29.20	40.00	10.80	H	-5.8
540.705000	28.64	46.00	17.36	H	-4.8
202.175000	23.26	43.50	20.24	V	-12.3
74.983750	24.67	40.00	15.33	V	-16.9
915.367500	35.41	46.00	10.59	V	1.3
122.271250	22.84	43.50	20.66	V	-10.9

1 GHz - 18 GHz:

Low Channel: 2405 MHz

Common Information

Project No.: RSHA250529006
EUT Model: L102
Test Mode: Transmitting in Low channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 28.3°C
Humidity: 56%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/28

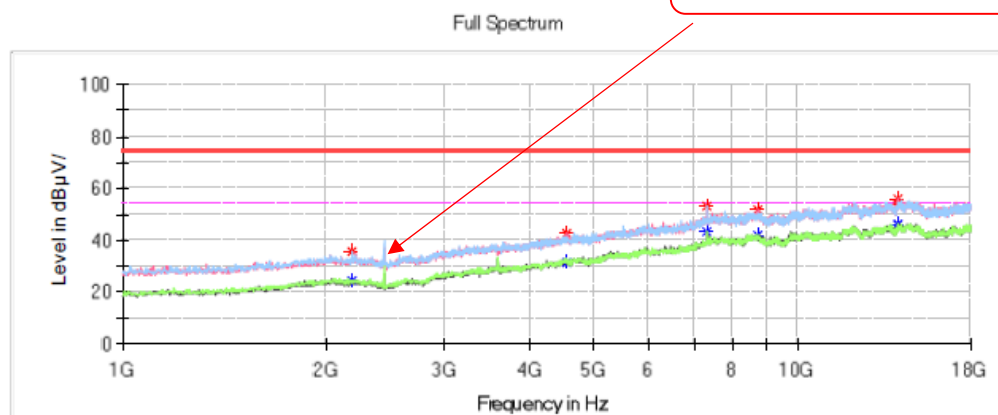
Fundamental Test with
Band Reject Filter**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1965.600000	---	23.74	54.00	30.26	V	-10.2
1965.600000	34.27	---	74.00	39.73	V	-10.2
3910.400000	---	30.05	54.00	23.95	V	-5.2
3910.400000	40.13	---	74.00	33.87	V	-5.2
4808.000000	---	35.22	54.00	18.78	V	-3.4
4808.000000	44.00	---	74.00	30.00	V	-3.4
7215.200000	---	44.69	54.00	9.31	H	2.1
7215.200000	53.84	---	74.00	20.16	H	2.1
14083.200000	---	45.80	54.00	8.20	V	11.2
14083.200000	56.02	---	74.00	17.98	V	11.2
14549.000000	---	46.94	54.00	7.06	H	11.8
14549.000000	53.29	---	74.00	20.71	H	11.8

Middle Channel: 2440 MHz**Common Information**

Project No.:	RSHA250529006
EUT Model:	L102
Test Mode:	Transmitting in Middle channel
Standard:	FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature:	28.3℃
Humidity:	56%
Atmospheric Pressure:	100.7kPa
Test Engineer:	Destine Hu
Test Date:	2025/6/28

Fundamental Test with
Band Reject Filter

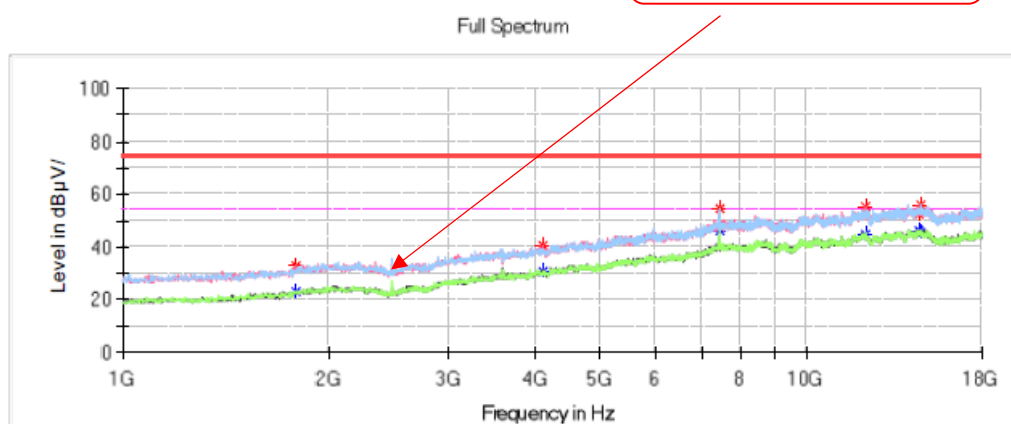
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
2190.000000	---	24.22	54.00	29.78	H	-9.8
2190.000000	35.66	---	74.00	38.34	H	-9.8
4536.000000	---	31.19	54.00	22.81	V	-4.1
4536.000000	42.85	---	74.00	31.15	V	-4.1
7320.600000	---	43.57	54.00	10.43	H	2.4
7320.600000	53.22	---	74.00	20.78	H	2.4
8738.400000	---	42.10	54.00	11.90	V	4.7
8738.400000	51.60	---	74.00	22.40	V	4.7
14062.800000	---	46.33	54.00	7.67	V	11.2
14062.800000	53.74	---	74.00	20.26	V	11.2
14086.600000	---	45.92	54.00	8.08	V	11.2
14086.600000	55.60	---	74.00	18.40	V	11.2

High Channel: 2480 MHz**Common Information**

Project No.:	RSHA250529006
EUT Model:	L102
Test Mode:	Transmitting in High channel
Standard:	FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature:	28.3℃
Humidity:	56%
Atmospheric Pressure:	100.7kPa
Test Engineer:	Destine Hu
Test Date:	2025/6/28

Fundamental Test with
Band Reject Filter

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1788.800000	---	22.84	54.00	31.16	V	-11.5
1788.800000	33.12	---	74.00	40.88	V	-11.5
4117.800000	---	30.96	54.00	23.04	V	-4.8
4117.800000	40.38	---	74.00	33.62	V	-4.8
7439.600000	---	45.94	54.00	8.06	H	2.8
7439.600000	54.61	---	74.00	19.39	H	2.8
12189.400000	---	44.59	54.00	9.41	H	9.0
12189.400000	55.23	---	74.00	18.77	H	9.0
14552.400000	---	46.47	54.00	7.53	V	11.8
14552.400000	52.41	---	74.00	21.59	V	11.8
14685.000000	---	45.33	54.00	8.67	H	11.3
14685.000000	55.77	---	74.00	18.23	H	11.3

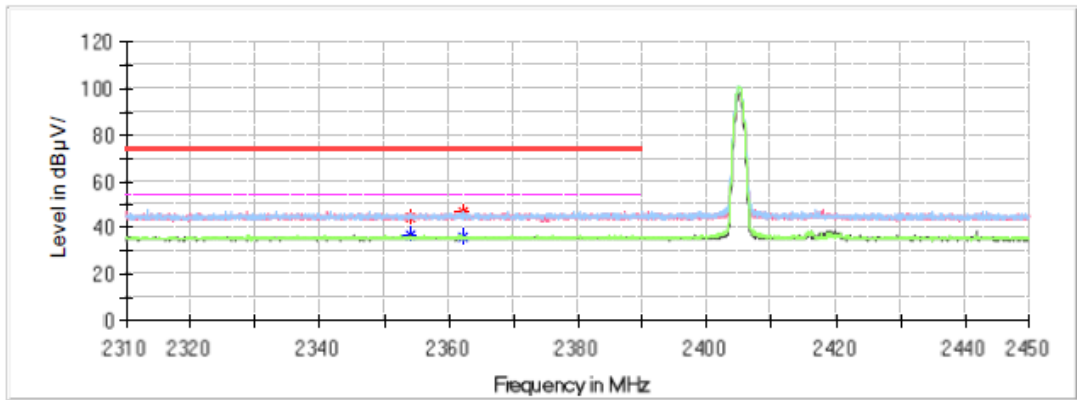
Band Edge:

Left Side

Common Information

Project No.:	RSHA250529006
EUT Model:	L102
Test Mode:	Transmitting in Low channel
Standard:	FCC Part 15.249& FCC Part 15.205& FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature:	28.3℃
Humidity:	56%
Atmospheric Pressure:	100.7kPa
Test Engineer:	Destine Hu
Test Date:	2025/6/28

Full Spectrum



Critical_Freqs

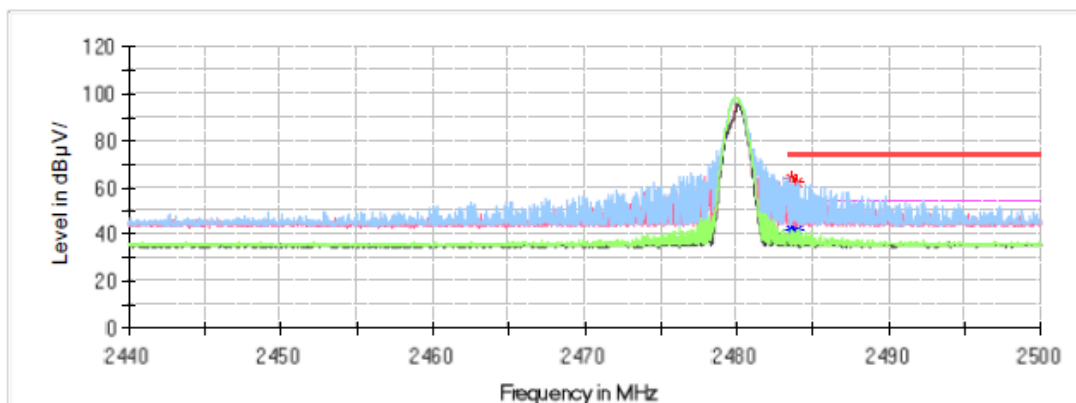
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2353.904000	---	36.92	54.00	17.08	V	0.2
2353.904000	44.85	---	74.00	29.15	V	0.2
2362.136000	---	36.11	54.00	17.89	H	0.2
2362.136000	47.31	---	74.00	26.69	H	0.2

Right Side

Common Information

Project No.: RSHA250529006
EUT Model: L102
Test Mode: Transmitting in High channel
Standard: FCC Part 15.249& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 28.3℃
Humidity: 56%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/28

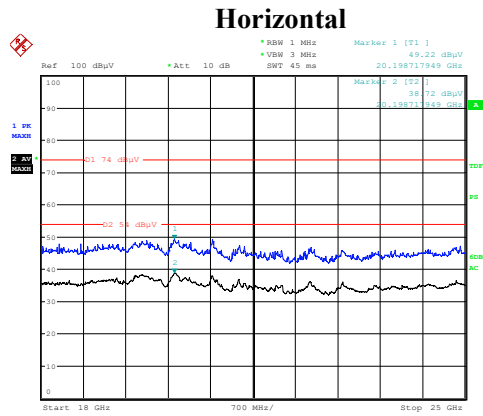
Full Spectrum



Critical_Freqs

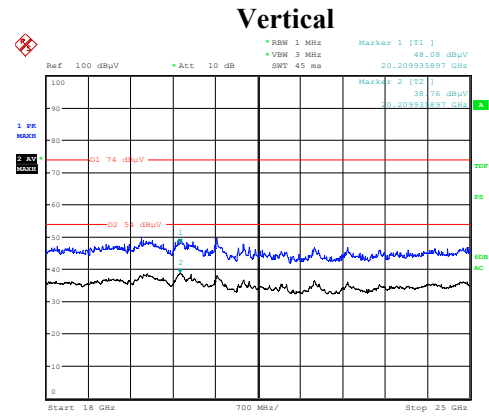
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2483.632000	63.84	---	74.00	10.16	H	0.4
2483.632000	---	41.96	54.00	12.04	H	0.4
2483.944000	61.87	---	74.00	12.13	H	0.4
2483.944000	---	42.03	54.00	11.97	H	0.4

18 GHz - 25 GHz (Transmitting maximum output power SRD Mode low channel):



Project No.: RSHA250529006
Date: 28.JUN.2025 11:47:33

Tester: Rugh Wu



Project No.: RSHA250529006
Date: 28.JUN.2025 12:22:44

Tester: Rugh Wu

Frequency (GHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
20.20	---	38.72	54	15.28	H	12.46
20.20	49.22	---	74	24.78	H	12.46
20.21	---	38.76	54	15.24	V	12.47
20.21	48.08	---	74	25.92	V	12.47

Note: The test distance is 3m. The limit is 74dBμV/m(Peak) and 54dBμV/m(Average).

6 dB EMISSION BANDWIDTH

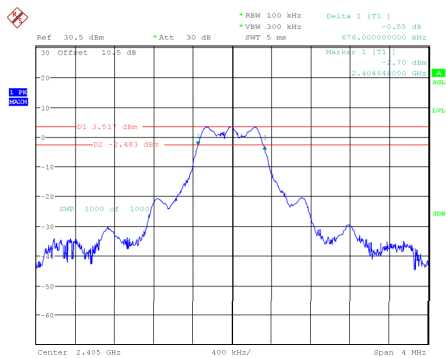
Environmental Conditions & Test Information

Test Date:	2025-07-19
Temperature:	25.9 °C
Relative Humidity:	62 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting
Test Result: Compliant.

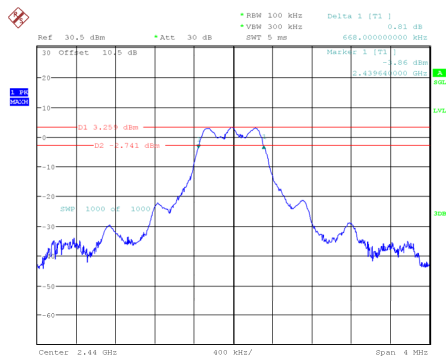
Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limit (MHz)
Low	2405	0.676	≥ 0.5
Middle	2440	0.668	≥ 0.5
High	2480	0.664	≥ 0.5

Low Channel



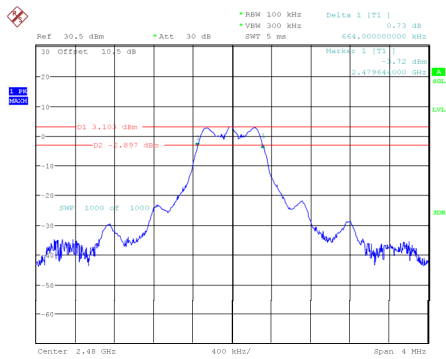
ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19.JUL.2025 15:59:52

Middle Channel



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19.JUL.2025 15:37:16

High Channel



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19.JUL.2025 15:45:29

MAXIMUM CONDUCTED OUTPUT POWER

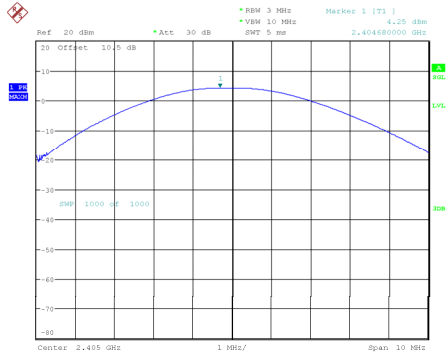
Environmental Conditions & Test Information

Test Date:	2025-07-19
Temperature:	25.9 °C
Relative Humidity:	62 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting
Test Result: Compliant.

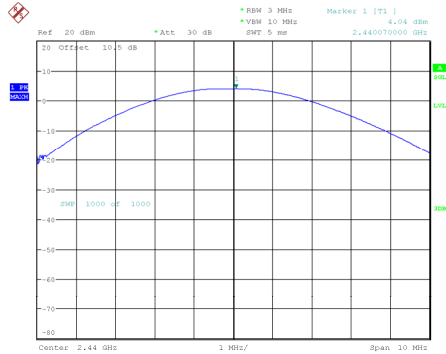
Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Limit (dBm)	Result
Low	2405	4.25	30	Pass
Middle	2440	4.04	30	Pass
High	2480	3.91	30	Pass

Low Channel



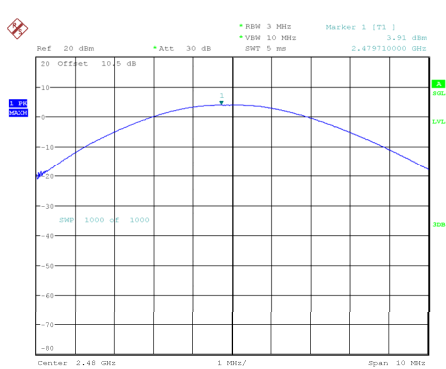
ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 16:01:31

Middle Channel



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 15:38:04

High Channel



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 15:47:23

100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

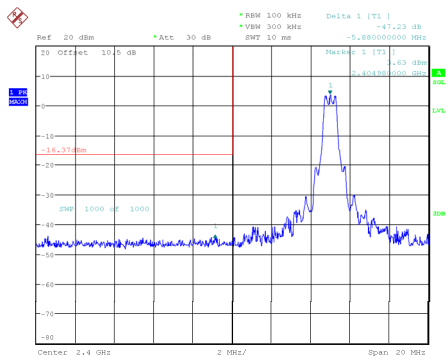
Environmental Conditions & Test Information

Test Date:	2025-07-19
Temperature:	25.9 °C
Relative Humidity:	62 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Channel	Result (dB)	Limit (dB)
Low	47.23	20
High	44.61	20

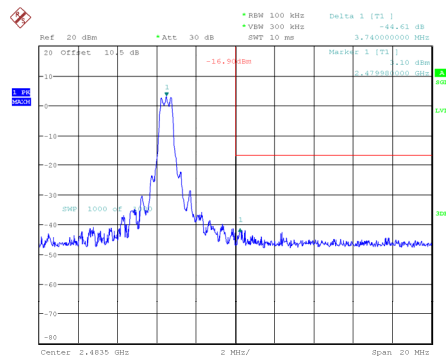
EUT operation mode: Transmitting
Test Result: Compliant.

Left Side



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 16:02:36

Right Side



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 15:48:28

POWER SPECTRAL DENSITY

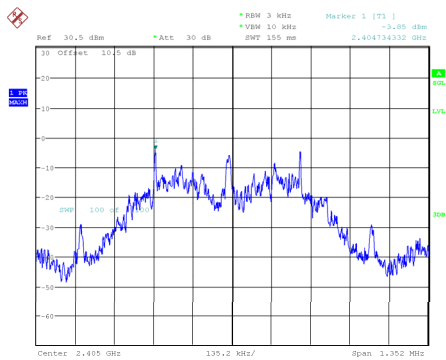
Environmental Conditions & Test Information

Test Date:	2025-07-19
Temperature:	25.9 °C
Relative Humidity:	62 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting
Test Result: Compliant.

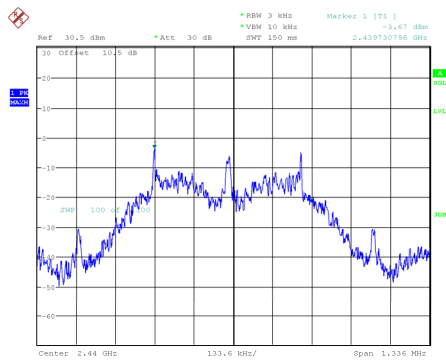
Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2405	-3.85	≤ 8
Middle	2440	-3.67	≤ 8
High	2480	-4.64	≤ 8

Low Channel



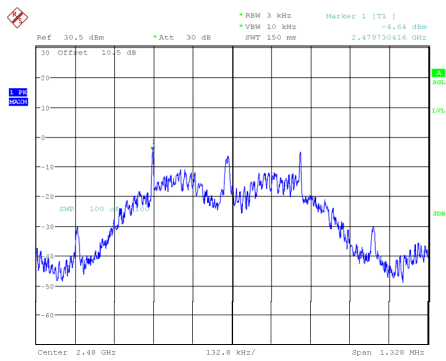
ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 16:03:15

Middle Channel



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 15:38:28

High Channel



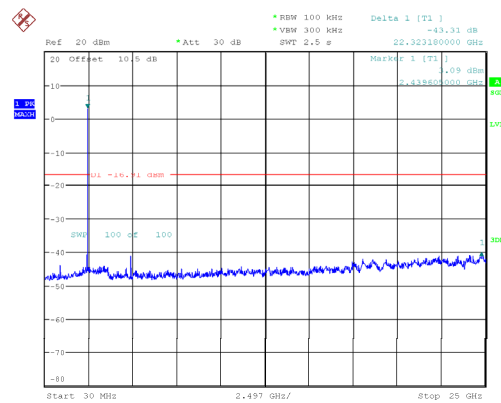
ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19-JUL-2025 15:48:51

Environmental Conditions & Test Information

Test Date:	2025-07-19
Temperature:	25.9 °C
Relative Humidity:	62 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Channel	Result (dB)	Limit (dB)	Verdict
Low	42.88	20	Pass
Middle	43.31	20	Pass
High	42.10	20	Pass

Middle Channel



ProjectNo.:RSHA250529006 Tester:Neil Zhou
Date: 19.JUL.2025 15:43:07

Ref 20 dBm *Att 30 dB SMT 2.5 e 2.484515000 GHz

Delta 1 [171] -42.10 dB 2.477064000 GHz

dBm

Start 30 MHz 2.497 GHz/ Stop 25 GHz

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EUT PHOTOGRAPHS

Please refer to the attachment EXHIBIT A - EUT EXTERNAL PHOTOGRAPHS and EXHIBIT B - EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment EXHIBIT C - TEST SETUP PHOTOGRAPHS.

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95.45% confidence interval.

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