

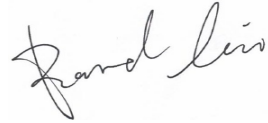
FCC PART 15.247 TEST REPORT

For

UROVO PTE. LIMITED

1 Raffles Place, #21-01 One Raffles Place Tower 1, Singapore 048616

FCC ID: 2BQURRFG91

Report Type: Original Report	Product Name: UHF RFID Sled
Report Number:	RSHA250523001-00C
Report Date:	2025-07-15
Reviewed By:	Bard Liu 
Approved By:	Kyle Xu 
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu province, China Tel: +86-512-86175000 Fax: +86-512-88934268 www.baclcorp.com.cn

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	RSHA250523001-00C	R1V1	2025-07-15	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	UROVO PTE. LIMITED
Product Name:	UHF RFID Sled
Tested Model:	RFG91
Series Model	RFG90, RFG95, RF91, RFP91, RS5, BG5, G5, US91, US95
Model Difference:	Model Name
Power Supply:	DC 5 V from adapter or DC 3.6V by battery
RF Function:	RFID
Operating Band/Frequency:	902.75-927.25 MHz
Maximum Output Power:	28.32 dBm
Modulation Type:	FSK
Antenna Type:	PCB Antenna
★Maximum Antenna Gain:	3.5 dBi

Adapter Information:

Model: YHPCU052000A0A

Input: 100-240Vac, 50/60Hz, 0.5A

Output: 5V, 2A, 10W

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

All measurement and test data in this report was gathered from production sample serial number: RSHA250523001-1 (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2025-05-23.)

Objective

This type approval report is prepared for *UROVO PTE. LIMITED* in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commission rules.

The tests were performed in order to determine compliance 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.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
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

Justification

Channel list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	902.75	26	915.25
2	903.25	27	915.75
3	903.75	28	916.25
4	904.25	29	916.75
5	904.75	30	917.25
6	905.25	31	917.75
7	905.75	32	918.25
8	906.25	33	918.75
9	906.75	34	919.25
10	907.25	35	919.75
11	907.75	36	920.25
12	908.25	37	920.75
13	908.75	38	921.25
14	909.25	39	921.75
15	909.75	40	922.25
16	910.25	41	922.75
17	910.75	42	923.25
18	911.25	43	923.75
19	911.75	44	924.25
20	912.25	45	924.75
21	912.75	46	925.25
22	913.25	47	925.75
23	913.75	48	926.25
24	914.25	49	926.75
25	914.75	50	927.25

EUT was tested with channel 1, 25, 50

EUT Exercise Software

“UHFReader288Demo” was used during the test.

★Power level: 28

Note: The power level is provided by the applicant.

Support Equipment List and Details

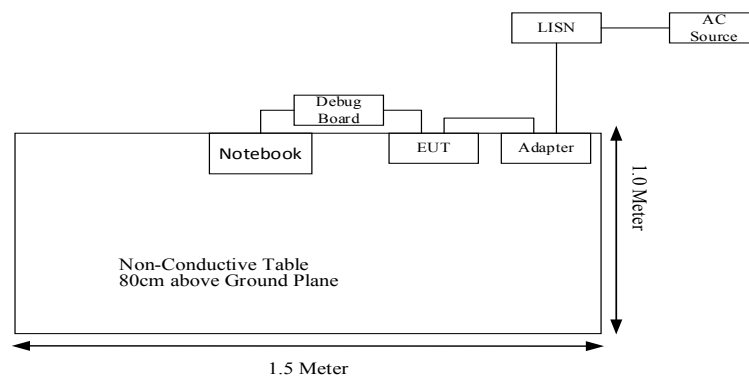
Manufacturer	Description	Model	Serial Number
Lenovo	Notebook	Y700P	PF2B7PL5
/	Debug board	/	/

External I/O Cable

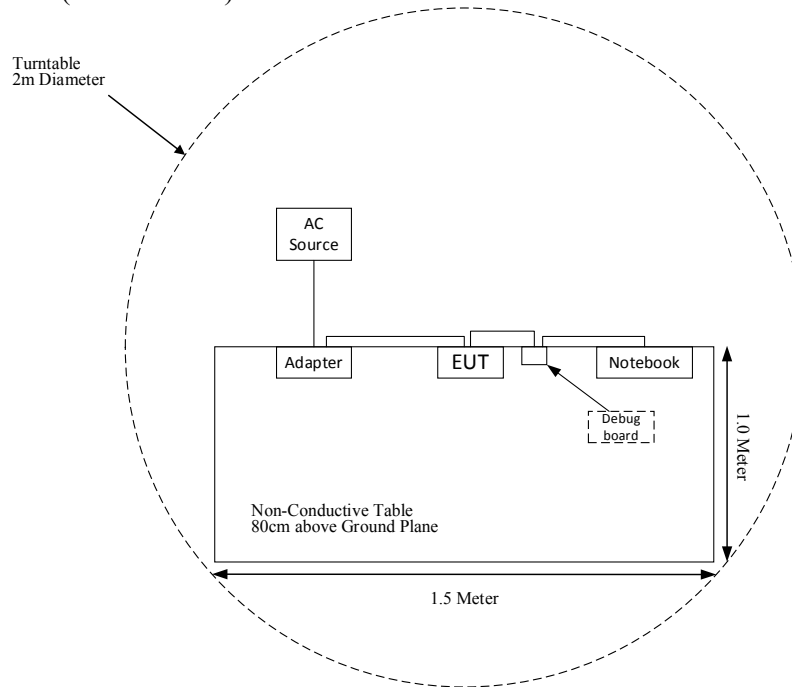
Cable Description	Length (m)	From Port	To Port
Data Cable 1	1.0	Notebook	Debug board
Data Cable 2	0.2	Debug board	EUT
Power Cable 1	1.0	EUT	Adapter
Power Cable 2	1.0	Adapter	AC Source/LISN

Block Diagram of Test Setup

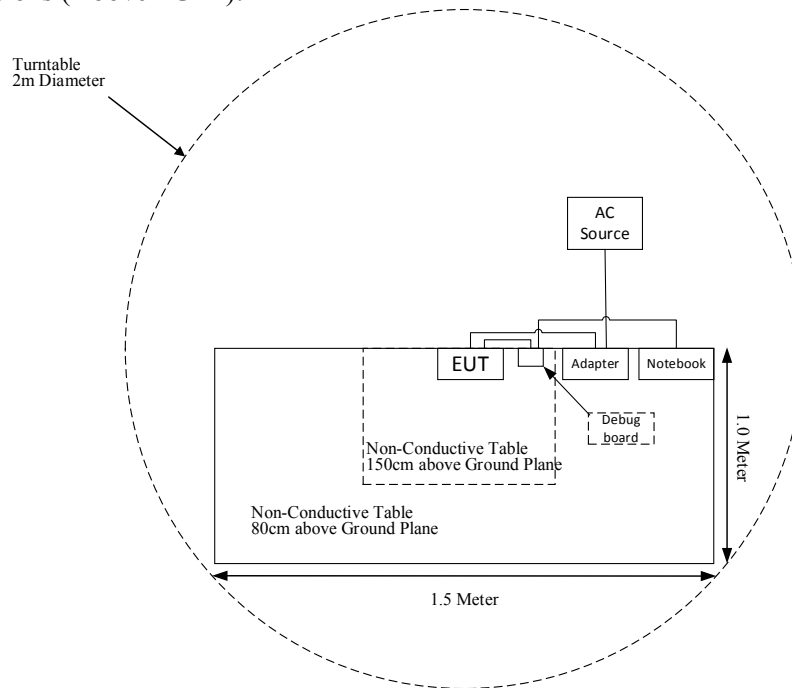
For Conducted Emissions:



For Radiated Emissions (Below 1GHz):



For Radiated Emissions (Above 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307(b)(1)& §2.1093	RF EXPOSURE	Compliant
§15.203	Antenna Requirement	Compliant
§15.207 (a)	AC Line Conducted Emissions	Compliant
§15.209, §15.205 & §15.247(D)	Spurious Emissions	Compliant
§15.247(a)(1)	Channel Separation Test	Compliant
§ 15.247(a) (1) (I)	20 dB Bandwidth	Compliant
§15.247(a) (1) (I)	Time of Occupancy (Dwell Time)	Compliant
§ 15.247(a) (1) (I)	Quantity of hopping channel Test	Compliant
§15.247(b) (2)	Maximum Conducted Output Power	Compliant
§15.247(d)	Band Edge	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	Broadband Antenna	JB3	A090314-1	2024-11-08	2027-11-07
Narda	6dB Attenuator	773-6	10690812-2-1	2024-10-29	2027-10-28
BACL	Active Loop Antenna	1313-1A	4041511	2024-11-22	2027-11-21
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
A.H.Systems,inc	Amplifier	PAM-0118P	512	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
Rohde & Schwarz	Test Software	EMC32	100361	N/A	N/A
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	101746	2025-04-08	2026-04-07
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	0357.8810.54	2025-04-08	2026-04-07
MICRO-COAX	Coaxial Cable	Cable-15	015	2025-04-08	2026-04-07
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSU26	200103	2025-04-09	2026-04-08
Eastsheep	Attenuator	20dB	010	2025-04-09	2026-04-08

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 §1.1307(b) & §2.1093 - RF EXPOSURE

Applicable Standard

FCC§1.1307, §2.1093.

Measurement Result

Result: Please refer to the SAR report: RSHA250523001-20B.

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 have a PCB antenna for RFID, permanently attached to the EUT. fulfill the requirement of this section. Please refer to the EUT photos.

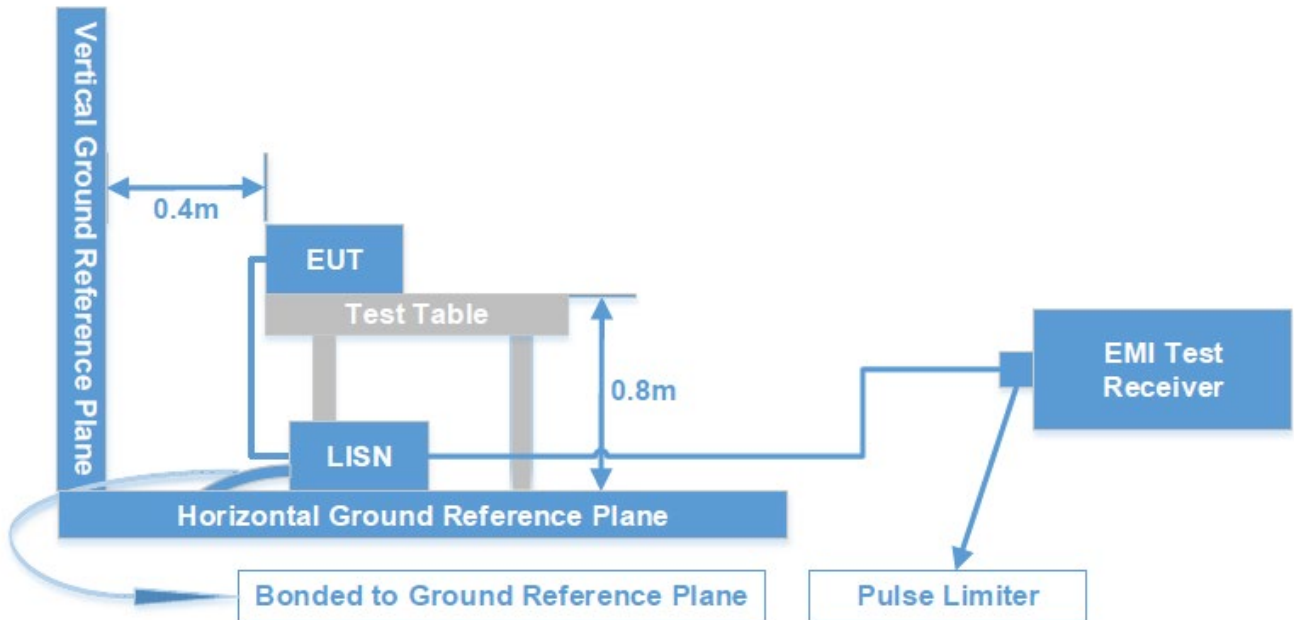
Result: Compliant.

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 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 Title 47, FCC Part 15.207.

Test Data: See Exhibit A

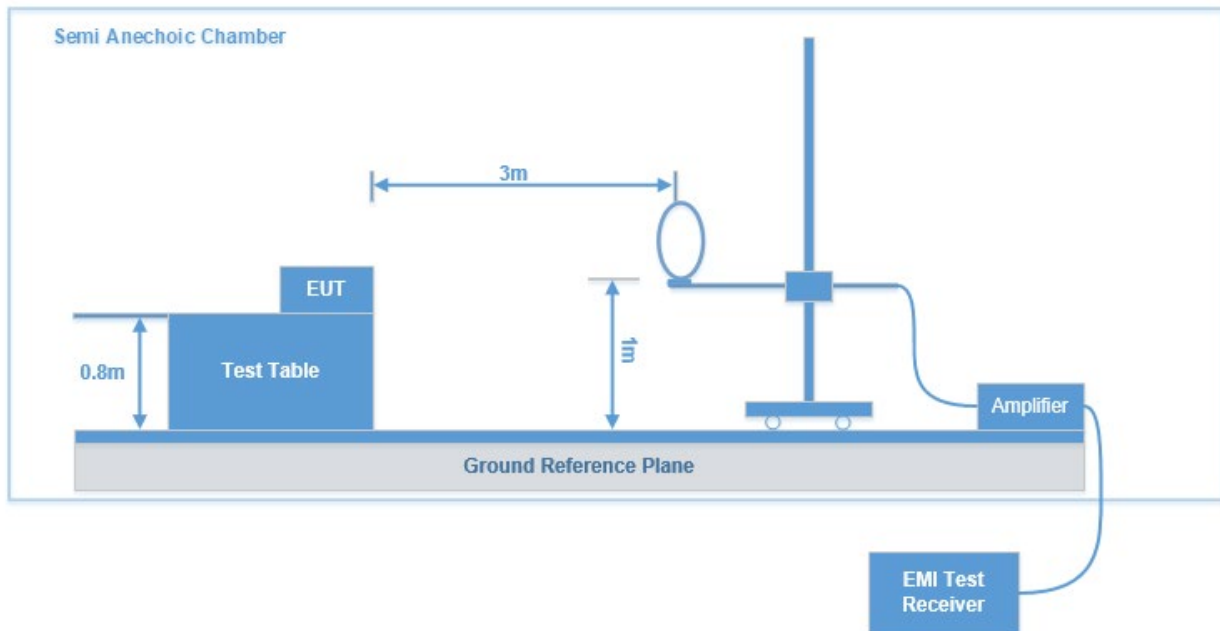
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

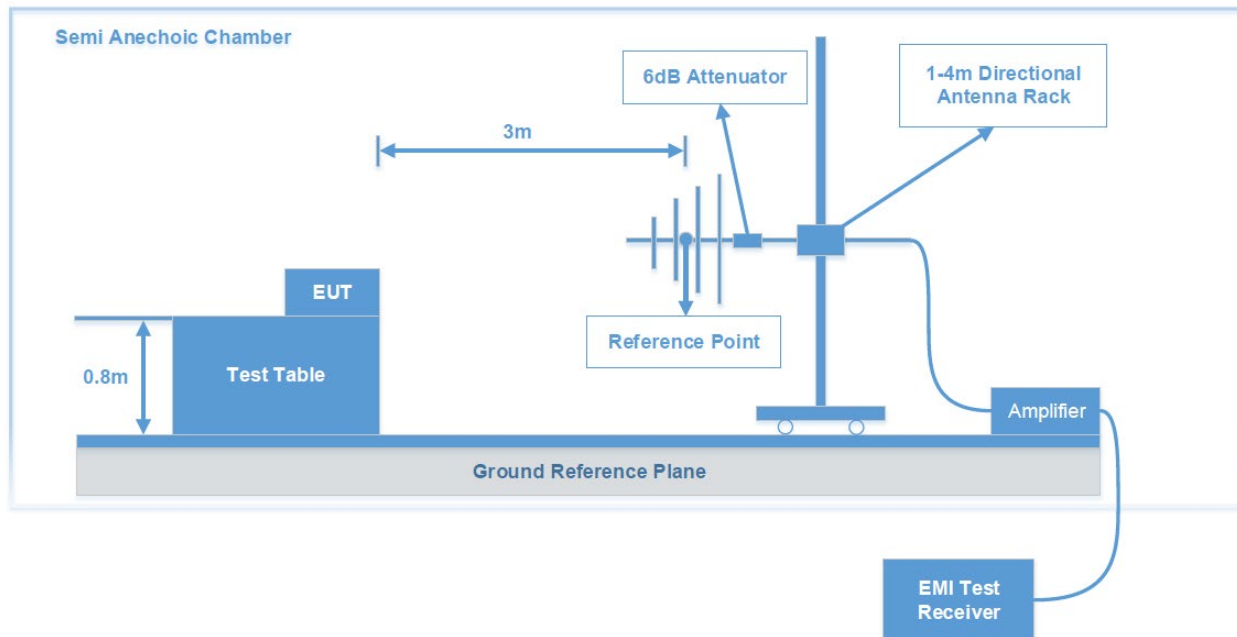
FCC §15.247 (d); §15.209; §15.205;

Test System Setup

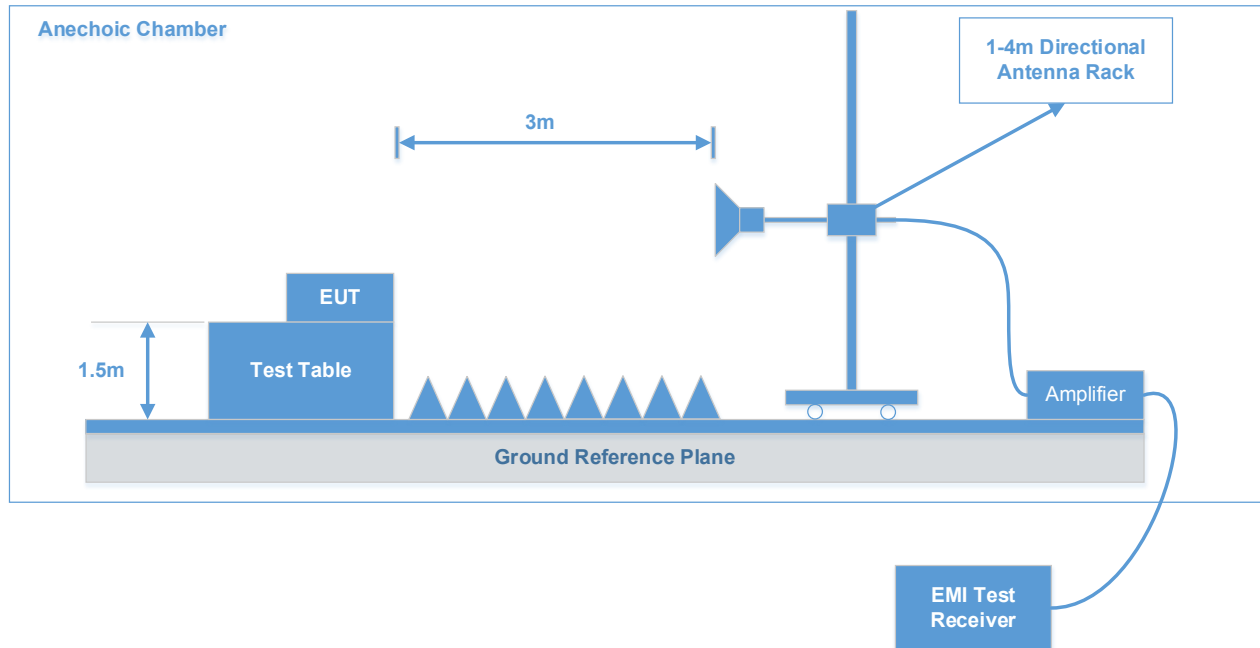
9 kHz-30MHz:



30MHz-1GHz:



Above 1 GHz:



The radiated emission tests were performed in the 3 meters test site, 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

The system was investigated from 9 kHz to 10 GHz.

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

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

Note: If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform a QP/Average measurement.

Test Procedure

According to ANSI C63.10-2020 clause 6.5, 6.6 and 6.7.

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

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz except 9–90 kHz, 110–490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1GHz.

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)

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

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)

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 Exhibit A

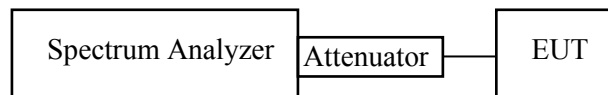
FCC §15.247(a) (1)-CHANNEL SEPARATION TEST

Applicable Standard

(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

Test Procedure

1. Set the EUT in transmitting mode, maxhold the channel.
 2. Set the adjacent channel of the EUT and maxhold another trace.
- Measure the channel separation.



Note: Offset (20.5dB) = Attenuator (20dB)+cable loss (0.5dB)

Test Data: See Exhibit A

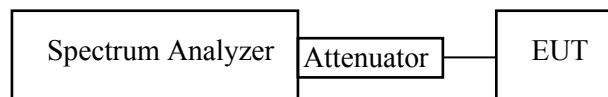
FCC §15.247(a) (1) (i) – 20 dB BANDWIDTH TESTING

Applicable Standard

For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

Test Procedure

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 on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.



Note: Offset (20.5dB) = Attenuator (20dB)+cable loss (0.5dB)

Test Data: See Exhibit A

FCC §15.247(a) (1) (i)-QUANTITY OF HOPPING CHANNEL TEST

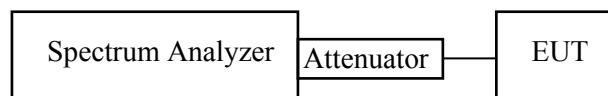
Applicable Standard

(i) For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

Test Procedure

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Set the EUT in hopping mode from first channel to last.

By using the max-hold function record the quantity of the channel.



Note: Offset (20.5dB) = Attenuator (20dB)+cable loss (0.5dB)

Test Data: See Exhibit A

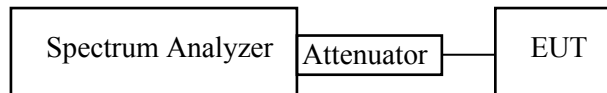
FCC §15.247(a) (1) (i) - TIME OF OCCUPANCY (DWELL TIME)

Applicable Standard

(i) For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

Test Procedure

The EUT was worked in channel hopping; Spectrum SPAN was set as 0. Sweep was set as 20 (s), the quantity of pulse was get from single sweep. In addition, the time of single pulses was tested.



Note: Offset (20.5dB) = Attenuator (20dB)+cable loss (0.5dB)

Test Data: See Exhibit A

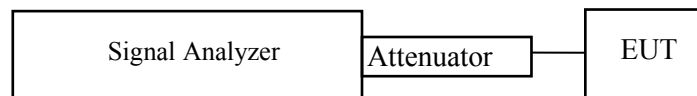
FCC §15.247(b) (2) - MAXIMUM CONDUCTED OUTPUT POWER

Applicable Standard

According to §15.247(b) (2), For frequency hopping systems operating in the 902–928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

Test Procedure

- a. Use the following spectrum analyzer settings:
 - 1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
 - 2) RBW > 20 dB bandwidth of the emission being measured.
 - 3) VBW $\geq$ RBW.
 - 4) Sweep: Auto.
 - 5) Detector function: Peak.
 - 6) Trace: Max hold.
- b. Allow trace to stabilize.
- c. Use the marker-to-peak function to set the marker to the peak of the emission.
- d. The indicated level is the peak output power, after any corrections for external attenuators and cables.
- e. A plot of the test results and setup description shall be included in the test report.



Note: Offset (20.5dB) = Attenuator (20dB)+cable loss (0.5dB)

Test Data: See Exhibit A

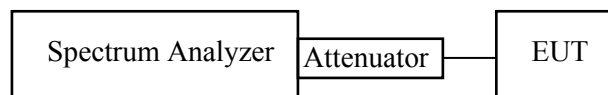
FCC §15.247(d) – BAND EDGE

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 compliance 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

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to a EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 100 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 (20.5dB) = Attenuator (20dB)+cable loss (0.5dB)

Test Data: See Appendix

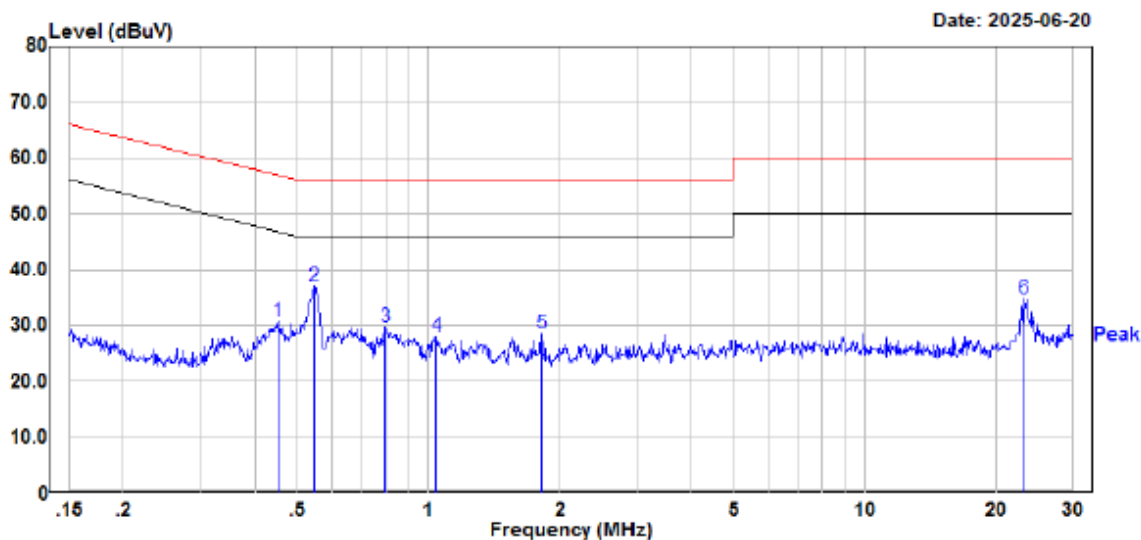
EXHIBIT A - TEST DATA

AC LINE CONDUCTED EMISSIONS

Test Date:	2025-06-20
Temperature:	26.1 °C
Relative Humidity:	65 %
ATM Pressure:	100.7 kPa
Test Result:	Pass
Test Engineer:	Myles Miao

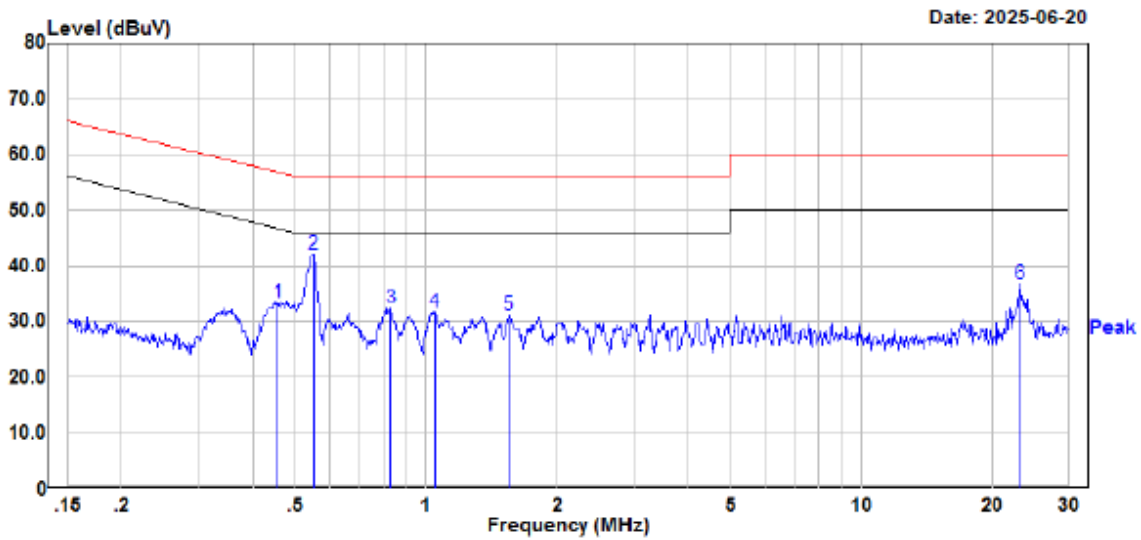
Test mode: Transmitting in maximum output power channel (high channel)

Line:



Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RSHA250523001
Model : RFG91
Phase : L
Voltage : 120V/60Hz
Mode : RFID
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 26.1℃
Humidity : 65%
Atmospheric pressure: 100.7KPa
Test Engineer : Myles Miao

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.451	10.54	20.25	30.79	56.85	-26.06	Peak
2	0.548	16.82	20.21	37.03	56.00	-18.97	Peak
3	0.797	9.47	20.22	29.69	56.00	-26.31	Peak
4	1.043	7.85	20.09	27.94	56.00	-28.06	Peak
5	1.813	8.28	20.15	28.43	56.00	-27.57	Peak
6	23.035	14.19	20.68	34.87	60.00	-25.13	Peak

Neutral:

Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RSHA250523001
Model : RFG91
Phase : N
Voltage : 120V/60Hz
Mode : RFID
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 26.1℃
Humidity : 65%
Atmospheric pressure: 100.7KPa
Test Engineer : Myles Miao

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.456	13.18	20.24	33.42	56.77	-23.35	Peak
2	0.551	21.82	20.21	42.03	56.00	-13.97	Peak
3	0.829	12.31	20.20	32.51	56.00	-23.49	Peak
4	1.048	11.64	20.09	31.73	56.00	-24.27	Peak
5	1.546	11.10	20.12	31.22	56.00	-24.78	Peak
6	23.150	16.19	20.68	36.87	60.00	-23.13	Peak

SPURIOUS EMISSIONS

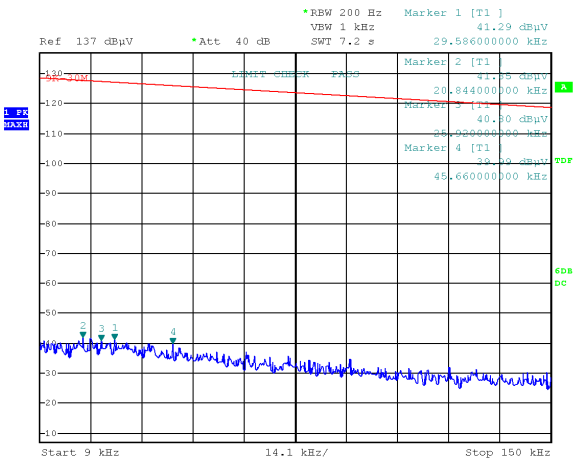
Environmental Conditions & Test Information

Test Item:	SPURIOUS EMISSIONS		
	9 kHz – 30 MHz	30 MHz – 1 GHz	1 GHz - 10 GHz
Test Date:	2025-06-19	2025-06-19	2025-06-24
Temperature:	25.9 °C	25.9 °C	20.3 °C
Relative Humidity:	47 %	47 %	52 %
ATM Pressure:	101.1 kPa	101.1 kPa	102.6 kPa
Test Result:	Pass	Pass	Pass
Test Engineer:	Jonathan	Jonathan	Danny Zhu

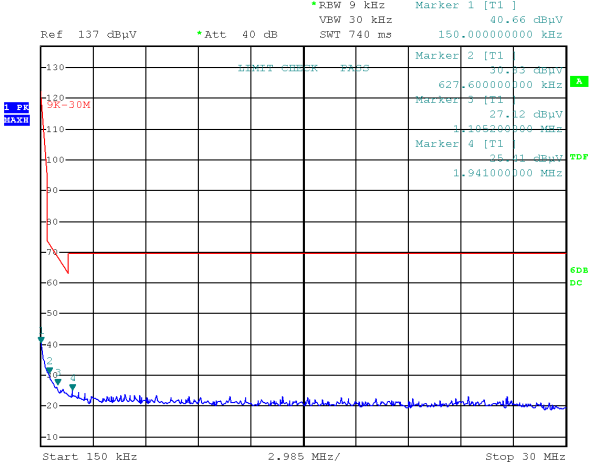
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

9 kHz-30 MHz: Transmitting in maximum output power channel (high channel)
Parallel(worst case)

9kHz-150kHz



150kHz-30MHz



Project No.RSHA250523001 Tester:Jonathan
Date: 19.JUN.2025 18:45:11

Project No.RSHA250523001 Tester:Jonathan
Date: 19.JUN.2025 18:49:02

9 kHz-150 kHz

Frequency (kHz)	Corrected Amplitude (dB μ V/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dB μ V/m) @3m	Margin (dB)
20.84	41.85	PK	-0.56	121.23	79.38
25.92	40.80	PK	-0.59	119.33	78.53
29.59	41.29	PK	-0.61	118.18	76.89
45.66	39.99	PK	-3.12	114.41	74.42

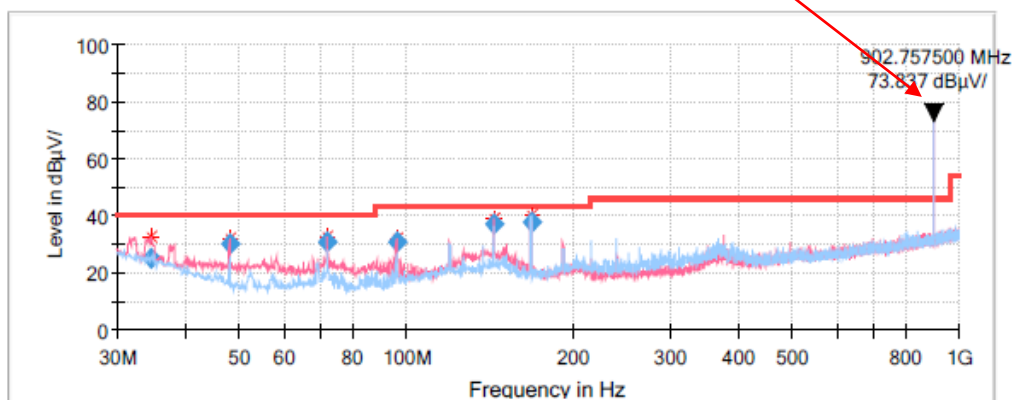
150 kHz-30 MHz

Frequency (MHz)	Corrected Amplitude (dB μ V/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dB μ V/m) @3m	Margin (dB)
0.15	40.66	PK	-11.34	104.08	63.42
0.63	30.83	PK	-24.06	91.62	60.79
1.11	27.12	PK	-27.97	66.70	39.58
1.94	25.41	PK	-30.71	69.54	44.13

30 MHz - 1 GHz:**Low channel: 902.75 MHz****Common Information**

Project No: RSHA250523001
EUT Model: RFG91
Test Mode: Transmitting in RFID 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: 25.9°C
Humidity: 47%
Barometric Pressure: 101.1 kPa
Test Engineer: Jonathan
Test Date: 2025/6/19

Fundamental Test with Band rejection filter

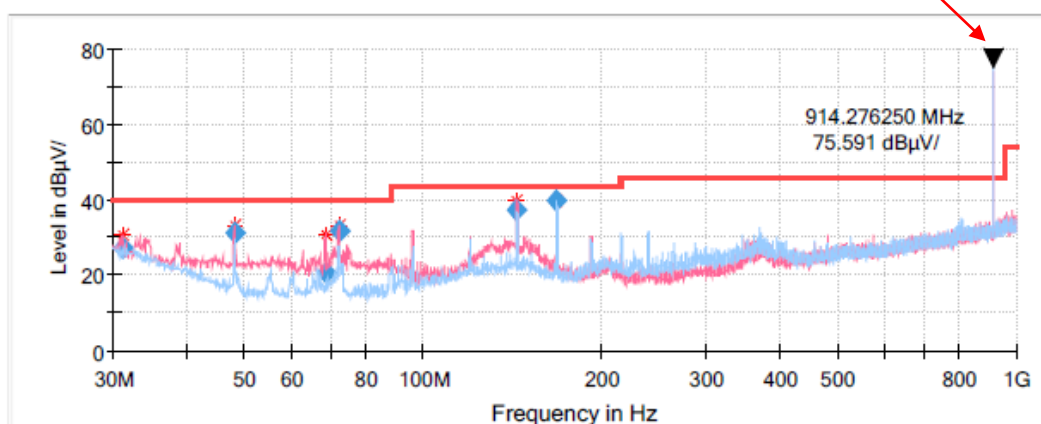
**Final Result**

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
34.607500	24.94	40.00	15.06	V	-8.3
47.945000	30.50	40.00	9.50	V	-15.8
72.073750	30.62	40.00	9.38	V	-16.7
95.960000	30.61	43.50	12.89	V	-15.4
144.460000	37.42	43.50	6.08	V	-11.4
168.346250	37.47	43.50	6.03	H	-12.5

Middle channel: 914.75 MHz**Common Information**

Project No: RSHA250523001
EUT Model: RFG91
Test Mode: Transmitting in RFID mode middle 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: 25.9°C
Humidity: 47%
Barometric Pressure: 101.1 kPa
Test Engineer: Jonathan
Test Date: 2025/6/19

Fundamental Test with Band rejection filter

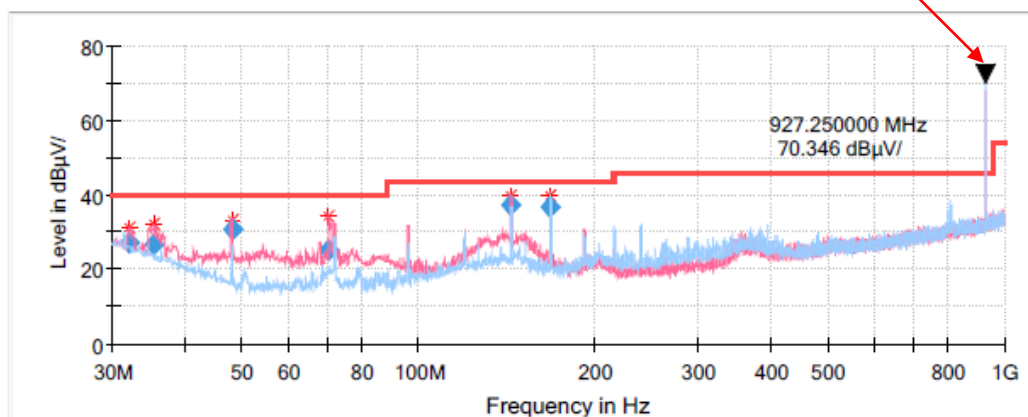
**Final Result**

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
31.091250	27.37	40.00	12.63	V	-5.3
47.945000	31.08	40.00	8.92	V	-15.8
68.557500	20.51	40.00	19.49	V	-16.6
71.952500	31.52	40.00	8.48	V	-16.7
143.975000	37.03	43.50	6.47	V	-11.4
167.982500	39.50	43.50	4.00	H	-12.5

High Channel: 927.25 MHz**Common Information**

Project No: RSHA250523001
EUT Model: RFG91
Test Mode: Transmitting in RFID 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: 25.9°C
Humidity: 47%
Barometric Pressure: 101.1 kPa
Test Engineer: Jonathan
Test Date: 2025/6/19

Fundamental Test with Band rejection filter

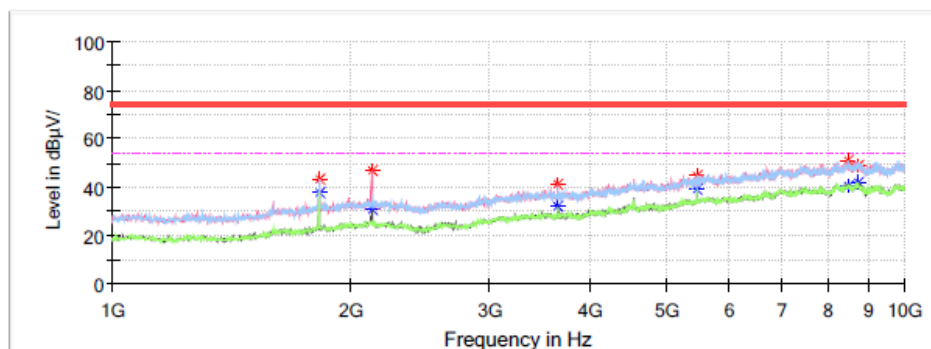
**Final Result**

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
32.061250	27.21	40.00	12.79	V	-6.4
35.335000	26.48	40.00	13.52	V	-8.9
47.945000	30.49	40.00	9.51	V	-15.8
70.255000	25.06	40.00	14.94	V	-16.6
143.975000	37.07	43.50	6.43	V	-11.4
167.982500	36.62	43.50	6.88	H	-12.5

1 GHz - 10 GHz:**Low Channel: 902.75 MHz****Common Information**

Project No.: RSHA250523001
EUT Model: RFG91
Test Mode: RFID Low Channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 20.3°C
Humidity: 52%
Atmospheric Pressure: 102.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/24

Full Spectrum

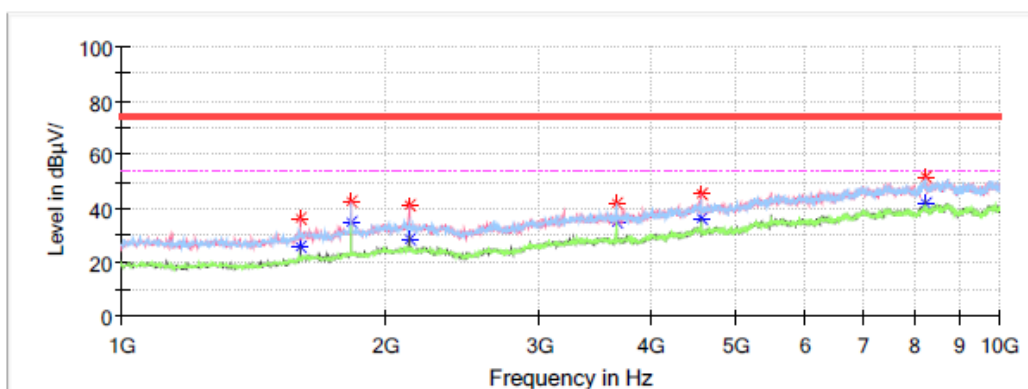
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1824.400000	43.69	---	74.00	30.31	V	-12.0
1824.400000	---	37.64	54.00	16.36	H	-12.0
2125.000000	46.80	---	74.00	27.20	V	-10.4
2125.000000	---	30.50	54.00	23.50	V	-10.4
3651.400000	41.08	---	74.00	32.92	V	-7.0
3651.400000	---	32.33	54.00	21.67	V	-7.0
5476.600000	44.98	---	74.00	29.02	H	-1.6
5476.600000	---	39.49	54.00	14.51	H	-1.6
8491.600000	---	40.44	54.00	13.56	H	4.4
8491.600000	51.15	---	74.00	22.85	H	4.4
8761.600000	---	41.95	54.00	12.05	H	4.4
8761.600000	49.30	---	74.00	24.70	H	4.4

Middle Channel: 914.75 MHz**Common Information**

Project No.: RSHA250523001
 EUT Model: RFG91
 Test Mode: RFID Middle Channel
 Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
 Test Equipment: ESU40,3115,PAM-0118P
 Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
 Temperature: 20.3℃
 Humidity: 52%
 Atmospheric Pressure: 102.6kPa
 Test Engineer: Danny Zhu
 Test Date: 2025/6/24

Full Spectrum

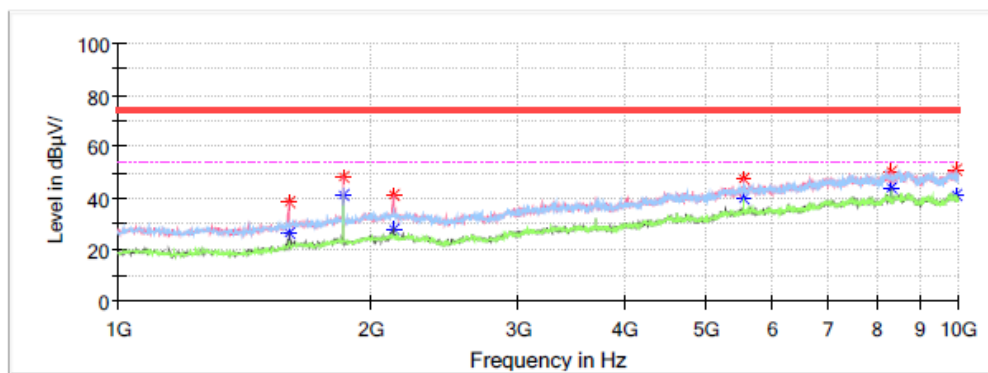
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1597.600000	36.31	---	74.00	37.69	V	-13.9
1597.600000	---	26.19	54.00	27.81	V	-13.9
1828.000000	42.91	---	74.00	31.09	V	-12.0
1828.000000	---	35.21	54.00	18.79	V	-12.0
2130.400000	40.95	---	74.00	33.05	V	-10.4
2130.400000	---	28.63	54.00	25.37	V	-10.4
3658.600000	41.72	---	74.00	32.28	H	-7.0
3658.600000	---	35.21	54.00	18.79	H	-7.0
4573.000000	45.25	---	74.00	28.75	V	-4.7
4573.000000	---	36.10	54.00	17.90	V	-4.7
8232.400000	---	42.02	54.00	11.98	V	3.6
8232.400000	52.08	---	74.00	21.92	V	3.6

High Channel: 927.25 MHz**Common Information**

Project No.: RSHA250523001
EUT Model: RFG91
Test Mode: RFID High Channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 20.3°C
Humidity: 52%
Atmospheric Pressure: 102.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/24

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)
1597.600000	---	26.90	54.00	27.10	V	-13.9
1597.600000	38.39	---	74.00	35.61	V	-13.9
1853.200000	---	41.36	54.00	12.64	V	-11.7
1853.200000	48.18	---	74.00	25.82	V	-11.7
2125.000000	---	27.95	54.00	26.05	V	-10.4
2125.000000	41.61	---	74.00	32.39	V	-10.4
5563.000000	---	39.60	54.00	14.40	H	-1.5
5563.000000	47.28	---	74.00	26.72	V	-1.5
8345.800000	---	43.92	54.00	10.08	V	3.9
8345.800000	50.48	---	74.00	23.52	V	3.9
9938.800000	---	41.23	54.00	12.77	V	5.9
9938.800000	51.16	---	74.00	22.84	H	5.9

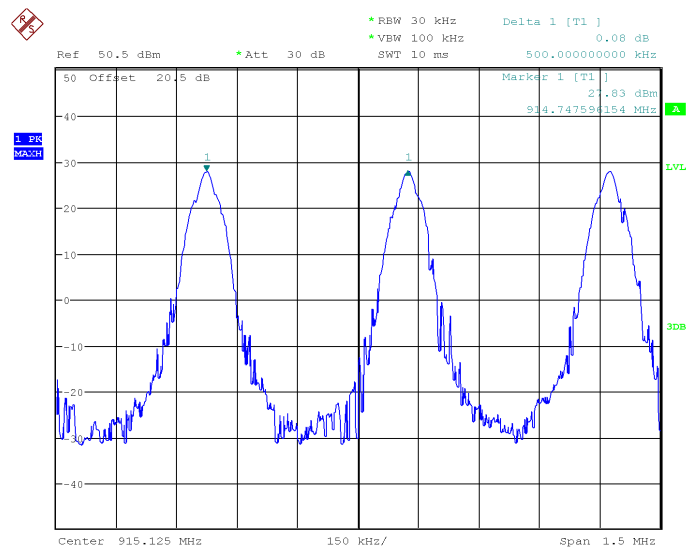
CHANNEL SEPARATION TEST

Environmental Conditions & Test Information

Test Date:	2025-07-02
Temperature:	25.5 °C
Relative Humidity:	55 %
ATM Pressure:	101.3kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Result
Middle	914.75-915.25	0.5	≥0.062	Pass



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 19:15:24

20 dB BANDWIDTH TESTING

Environmental Conditions & Test Information

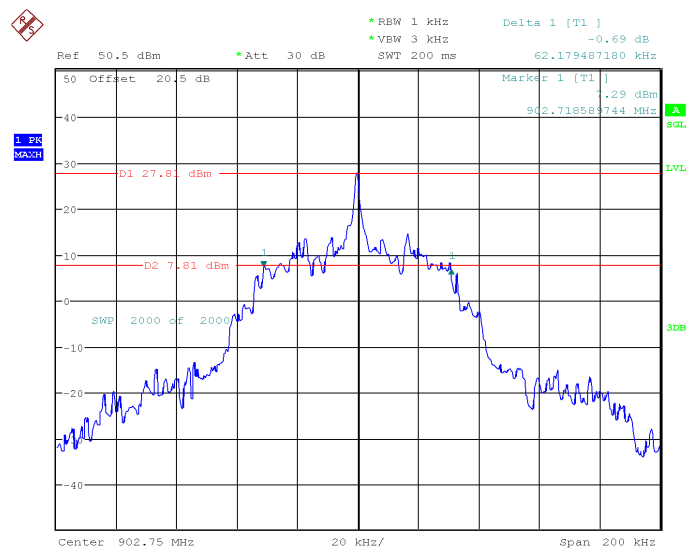
Test Date:	2025-07-02
Temperature:	25.5 °C
Relative Humidity:	55 %
ATM Pressure:	101.3kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Test Result: Compliant.

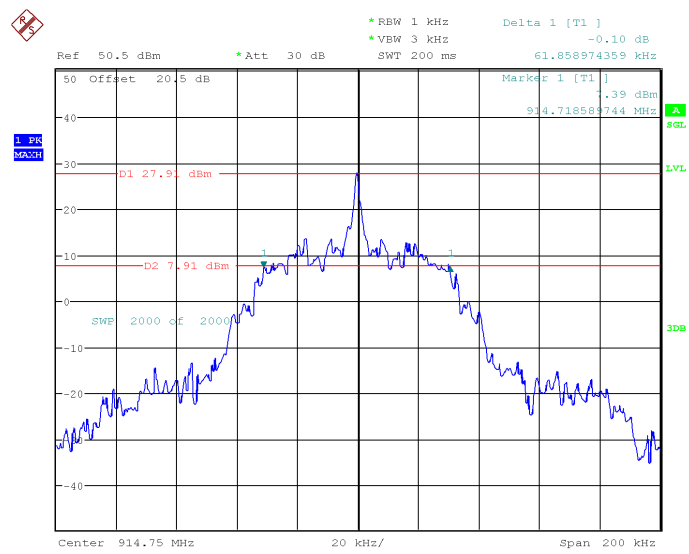
EUT operation mode: Transmitting

Channel	Frequency (MHz)	20 dB Emission Bandwidth (MHz)	Limit (MHz)
Low	902.75	0.062	≤0.5
Middle	914.75	0.062	≤0.5
High	927.25	0.059	≤0.5

Low Channel

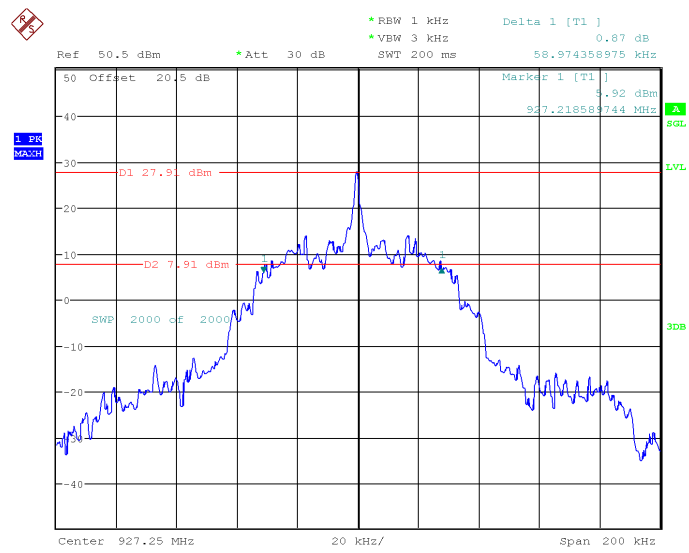


Middle Channel



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 17:26:10

High Channel



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 17:45:38

QUANTITY OF HOPPING CHANNEL TEST

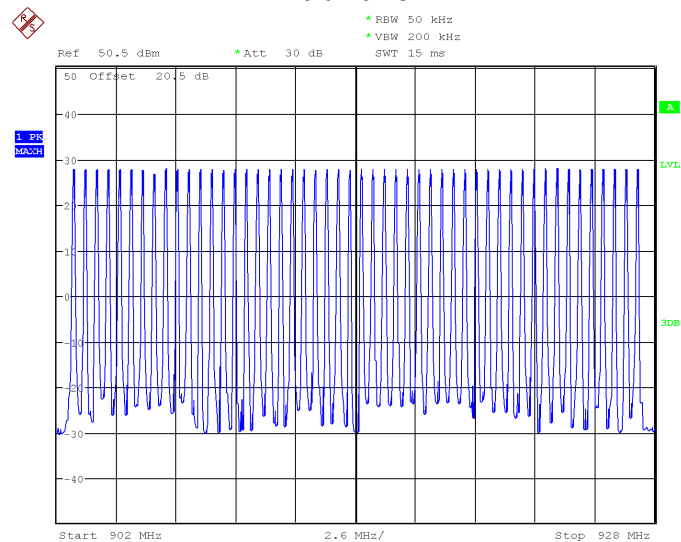
Environmental Conditions & Test Information

Test Date:	2025-07-02
Temperature:	25.5 °C
Relative Humidity:	55 %
ATM Pressure:	101.3kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Hopping

Frequency Range (MHz)	Number of Hopping Channel (CH)	Limit (CH)
902-928 MHz	50	≥50

Number of Hopping Channels 902-928 MHz



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 19:35:43

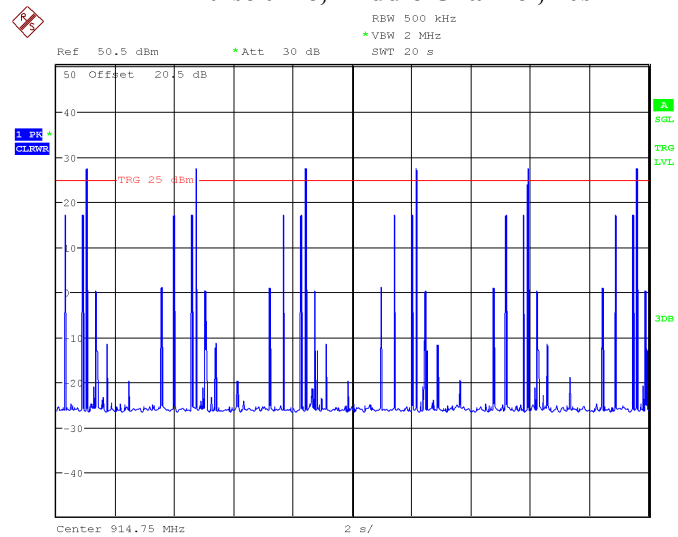
TIME OF OCCUPANCY (DWELL TIME)**Environmental Conditions & Test Information**

Test Date:	2025-07-04
Temperature:	25.4 °C
Relative Humidity:	56 %
ATM Pressure:	101.0kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Hopping

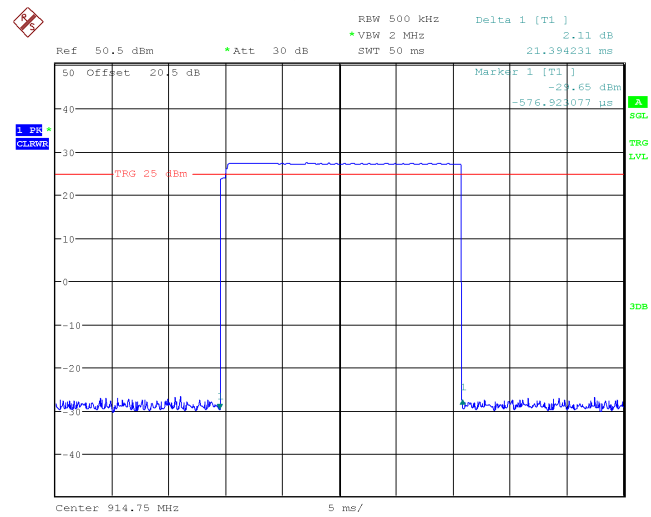
Channel	Frequency (MHz)	Burst Width (ms)	Total Hops (Num)	Dwell time (s)	Limit (s)	Result
Middle	914.75	21.39	6	0.13	≤0.4	Pass

Pulse time, Middle Channel, 20s



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 4.JUL.2025 09:56:48

Pulse time, Middle Channel, 50ms



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 4.JUL.2025 10:01:26

MAXIMUM CONDUCTED OUTPUT POWER

Environmental Conditions & Test Information

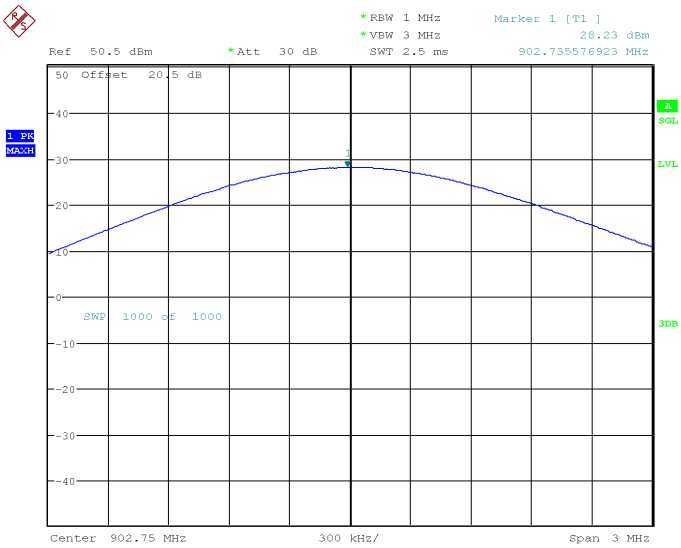
Test Date:	2025-07-02
Temperature:	25.5 °C
Relative Humidity:	55 %
ATM Pressure:	101.3kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Test Result: Compliant.

EUT operation mode: Transmitting

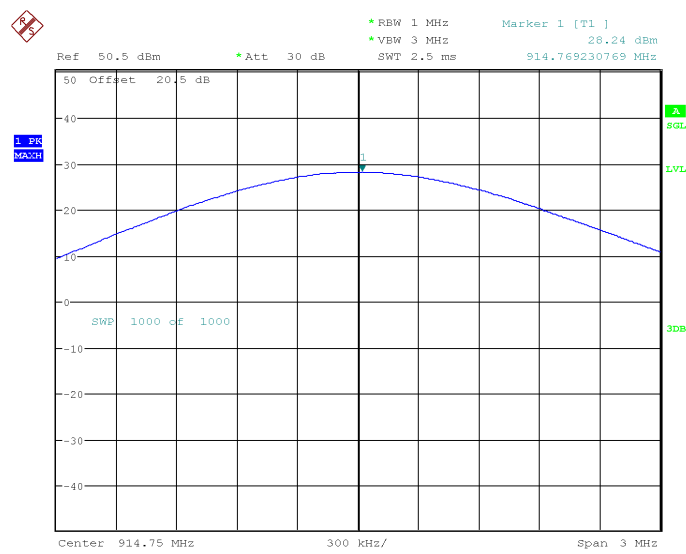
Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Limit (dBm)	Result
Low	902.75	28.23	30	Pass
Middle	914.75	28.24	30	Pass
High	927.25	28.32	30	Pass

Low Channel



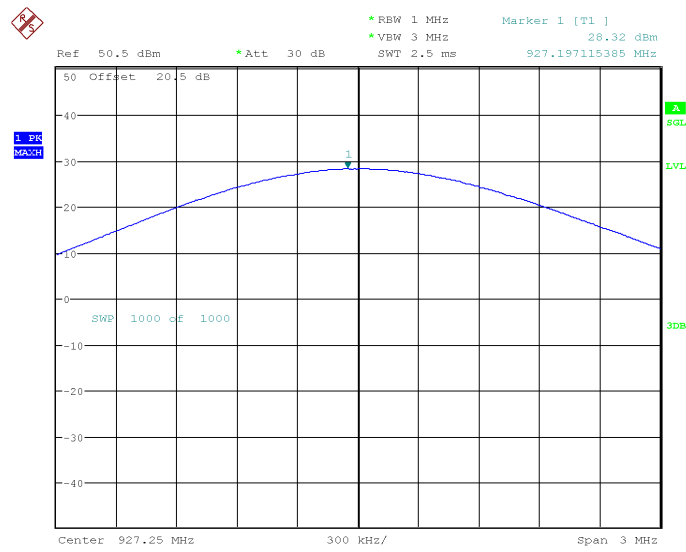
ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 19:52:19

Middle Channel



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 19:53:44

High Channel



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 19:55:05

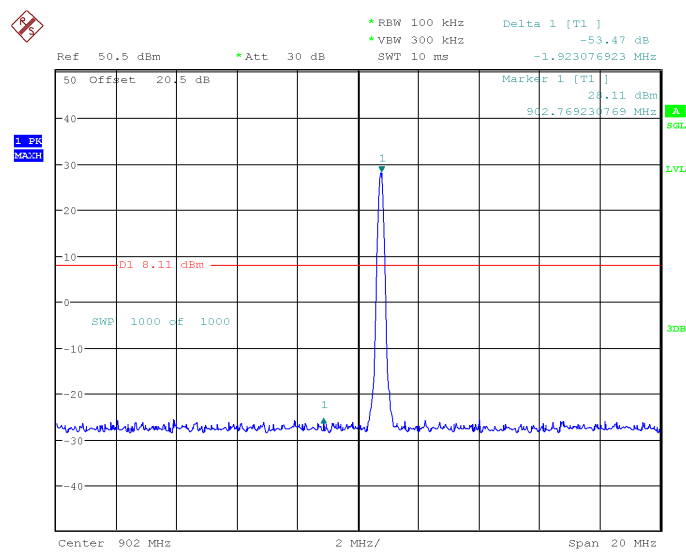
BAND EDGE

Environmental Conditions & Test Information

Test Date:	2025-07-02
Temperature:	25.5 °C
Relative Humidity:	55 %
ATM Pressure:	101.3kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

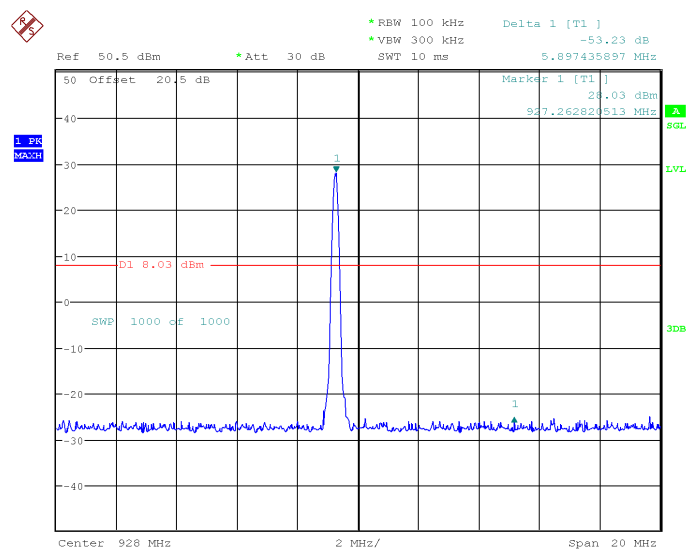
Test Result: Compliant.
EUT operation mode: Transmitting

Left Side



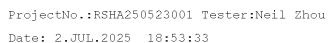
ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 18:07:20

Right Side



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 18:14:14

Left Side



ProjectNo.:RSHA250523001 Tester:Neil Zhou
Date: 2.JUL.2025 18:45:03

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 D - 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*******