

FCC PART 15.247

TEST REPORT

For

Jingheng Tengwei (Huizhou) Electronic Technology Co., Ltd.

No. 8 Minying 1 Road, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China

FCC ID: 2A4MQ-RKHG101

Report Type: Original Report	Product Name: Headphone
Report Number: RSZA251021002-00B	
Report Date: 2025-12-19	
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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.

TABLE OF CONTENTS

REPORT REVISION HISTORY.....	4
GENERAL INFORMATION	5
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	5
OBJECTIVE	5
TEST METHODOLOGY	5
MEASUREMENT UNCERTAINTY	6
TEST FACILITY	6
SYSTEM TEST CONFIGURATION	7
DESCRIPTION OF TEST CONFIGURATION	7
EUT EXERCISE SOFTWARE	7
SPECIAL ACCESSORIES	7
EQUIPMENT MODIFICATIONS	7
SUPPORT EQUIPMENT LIST AND DETAILS	9
EXTERNAL I/O CABLE.....	9
BLOCK DIAGRAM OF TEST SETUP	9
TEST EQUIPMENT LIST	11
SUMMARY OF TEST RESULTS	12
FCC §1.1307(b) & §2.1093 - RF EXPOSURE.....	13
APPLICABLE STANDARD	13
MEASUREMENT RESULT	13
CONCLUSION: THE DEVICE MEETS THE EXEMPTION REQUIREMENT	13
FCC §15.203 – ANTENNA REQUIREMENT	14
APPLICABLE STANDARD	14
ANTENNA CONNECTOR CONSTRUCTION	14
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS.....	15
APPLICABLE STANDARD	15
TEST SYSTEM SETUP.....	15
EMI TEST RECEIVER SETUP.....	16
TEST PROCEDURE	16
TEST RESULTS SUMMARY	17
TEST DATA: SEE APPENDIX	17
FCC §15.247(a) (2) – 6 dB EMISSION BANDWIDTH.....	18
APPLICABLE STANDARD	18
TEST PROCEDURE	18
TEST DATA: SEE APPENDIX	18
FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER.....	19
APPLICABLE STANDARD	19
TEST PROCEDURE	19
TEST DATA: SEE APPENDIX	19
FCC §15.247(d) –BAND EDGE & CONDUCTED SPURIOUS EMISSION	20
APPLICABLE STANDARD	20
TEST PROCEDURE	20
TEST DATA: SEE APPENDIX	21
FCC §15.247(e) - POWER SPECTRAL DENSITY	22
APPLICABLE STANDARD	22
TEST PROCEDURE	22
TEST DATA: SEE APPENDIX	22
EUT PHOTOGRAPHS	23

TEST SETUP PHOTOGRAPHS.....24

APPENDIX - TEST DATA.....25

 SPURIOUS EMISSIONS.....25

 6 dB EMISSION BANDWIDTH37

 MAXIMUM CONDUCTED OUTPUT POWER.....39

 BAND EDGE41

 POWER SPECTRAL DENSITY43

 CONDUCTED SPURIOUS EMISSION.....45

REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RSZA251021002-00B	R1V1	2025-12-19	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Jingheng Tengwei (Huizhou) Electronic Technology Co., Ltd.
Tested Model:	RK HG101
Series Model:	1002
Model Difference:	Model name
Product Name:	Headphone
Power Supply:	DC 5V from USB port or DC 3.7V from battery
RF Function:	2.4G SRD
Operating Band/Frequency:	2402-2480 MHz
Maximum Output Power:	0.19 dBm
Channel Number:	40
Channel Separation:	2 MHz
Modulation Type	GFSK
Antenna Type:	Chip Antenna
★Maximum Antenna Gain:	2.58 dBi
Sample/EUT Status	Good condition

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: RSZA251021002-1 (Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2025-10-21.)

Objective

This report is prepared for *Jingheng Tengwei (Huizhou) Electronic Technology Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communications Commission 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+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024[▲], American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and FCC KDB 558074 D01 15.247 Meas Guidance v05r02.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
RF conducted test with spectrum		0.9 dB
RF Output Power with Power meter		0.5 dB
Radiated emissions	9 kHz~150 kHz	3.8 dB
	150 kHz~30 MHz	3.4 dB
	30MHz~1GHz	6.11 dB
	1GHz~6GHz	4.45 dB
	6GHz~18GHz	5.23 dB
	18GHz~40GHz	5.65 dB
Occupied Bandwidth		0.5 kHz
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)
0	2402	14	2430	28	2458
1	2404	15	2432	29	2460
2	2406	16	2434	30	2462
3	2408	17	2436	31	2464
4	2410	18	2438	32	2466
5	2412	19	2440	33	2468
6	2414	20	2442	34	2470
7	2416	21	2444	35	2472
8	2418	22	2446	36	2474
9	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454	/	/
13	2428	27	2456	/	/

EUT was tested with channel 0, 19 and 39.

EUT Exercise Software

The system was configured for testing in an engineering mode, which was provided by manufacturer

RF Test Tool: FCC Assist 1.0.2.2

★Power level: 7

Note: The power level was declared by the applicant.

Special Accessories

No special accessory.

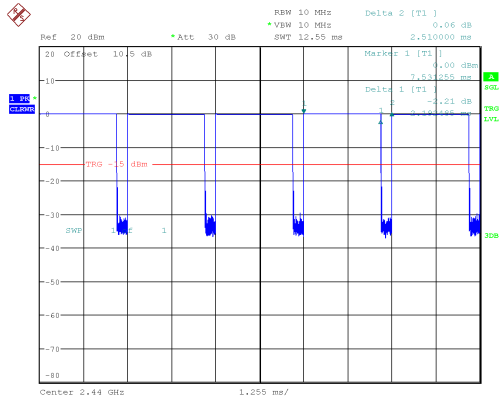
Equipment Modifications

No modification was made to the EUT tested.

Environmental Conditions & Test Information

Test Date:	2025-11-07
Temperature:	21.6 °C
Relative Humidity:	53 %
ATM Pressure:	102.5kPa
Test Engineer:	Neil Zhou

Duty Cycle:



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:49:24

Mode	Duty Cycle (%)	T _{on} (ms)	Ton+off(ms)	Duty Cycle Factor(dB)
Middle	87.33	2.192	2.510	0.59

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

Support Equipment List and Details

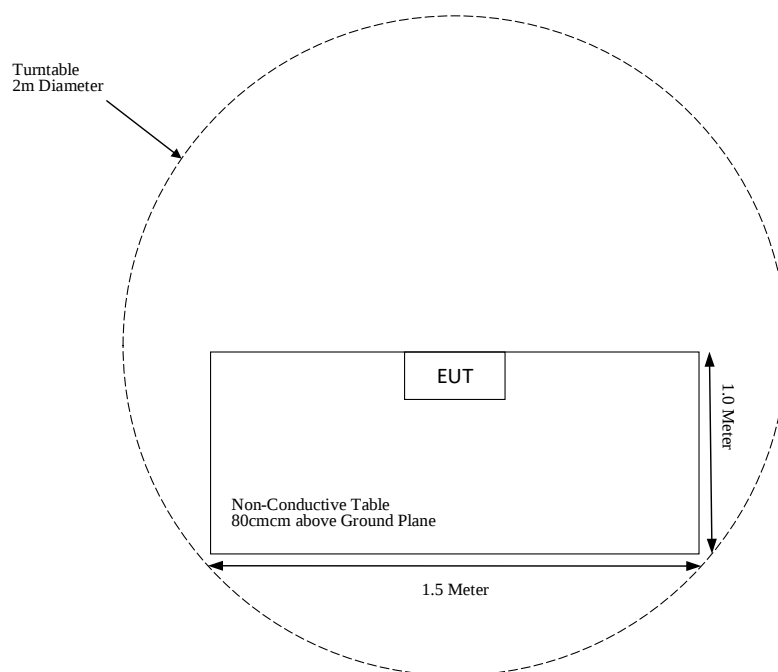
Manufacturer	Description	Model	Serial Number
/	/	/	/

External I/O Cable

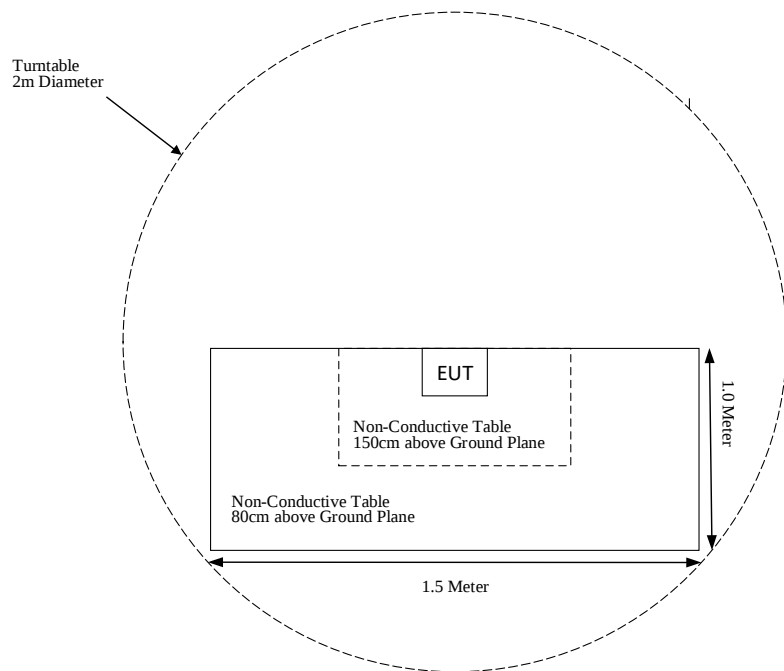
Cable Description	Length (m)	From Port	To Port
/	/	/	/

Block Diagram of Test Setup

For Radiated Emissions(Below 1GHz):



For Radiated Emissions(Above 1GHz):



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	2025-04-08	2026-04-07
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

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).

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307(b) & §2.1093	RF exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.207 (a)	AC Line Conducted Emissions	Not Applicable (See Note)
§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)	Band Edge	Compliant
§15.247(d)	Conducted Spurious Emission	Compliant
§15.247(e)	Power Spectral Density	Compliant

Note: The EUT was de-active while charging.

FCC §1.1307(b) & §2.1093 - RF EXPOSURE

Applicable Standard

According to §2.1093 and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D01 General RF Exposure Guidance

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f} \text{ (GHz)}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

1. f (GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

Measurement Result

Mode	Frequency Range (MHz)	Max Tune-up Conducted Power★		Calculated Distance (mm)	Calculated Value	Threshold (1-g SAR)	SAR Test Exclusion
		(dBm)	(mW)				
SRD	2402-2480	0.50	1.12	5	0.4	3.0	Yes
BT	2402-2480	1.50	1.41	5	0.4	3.0	Yes

Note:

1. For the above tune up power were declared by the manufacturer.
2. BT and SRD cannot transmit simultaneously.

Conclusion: The device meets the exemption requirement.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 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 use of a standard antenna jack or electrical connector is prohibited.

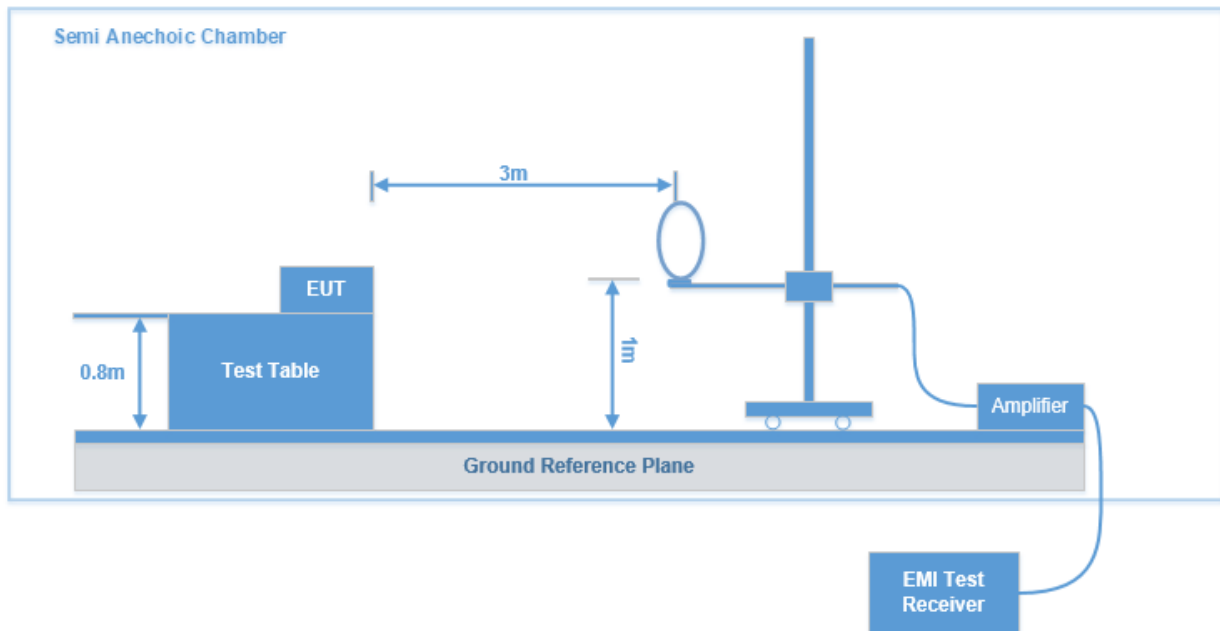
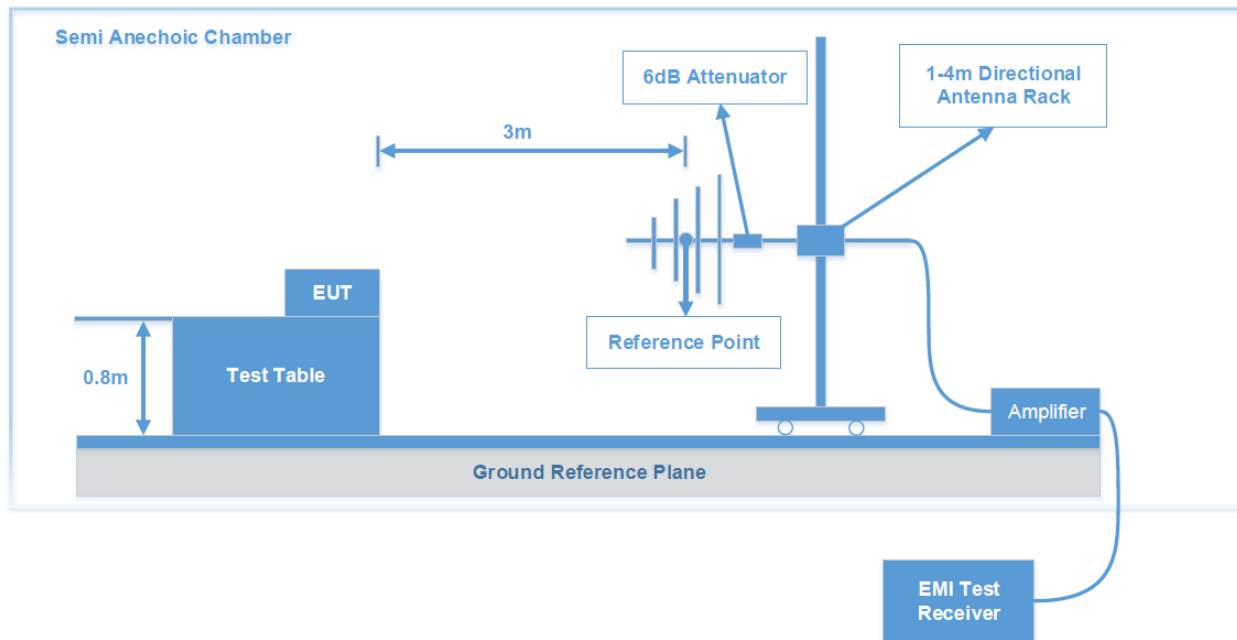
Antenna Connector Construction

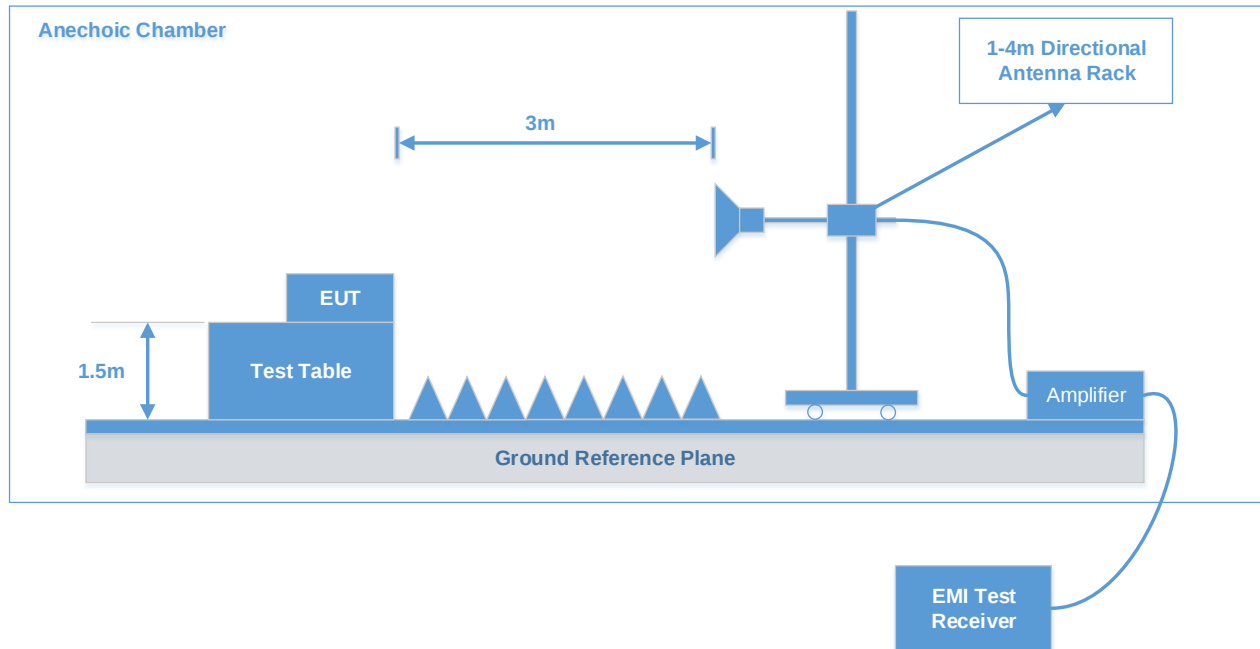
The EUT has a chip antenna, which was permanently attached to the EUT, antenna gain is 2.58 dBi, fulfill the requirement of this section, please refer to the EUT photos

Result: Compliant.

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 - 30 MHz:****30 MHz - 1 GHz:**

Above 1 GHz:

Note: The EUT Antenna 1.5m above Ground Plane

The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2020 + Cor.1-2023. 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	Peak/QP/Average	Peak/QP/Average
150 kHz - 30 MHz	9 kHz	30 kHz	9 kHz	Peak/QP/Average	Peak/QP/Average
30 MHz - 1000 MHz	100 kHz	300 kHz	/	Peak	Peak
	/	/	120 kHz	QP	QP
Above 1GHz	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:

$$\text{Corrected Amplitude (dB}\mu\text{V/m)} = \text{Meter Reading (dB}\mu\text{V)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)}$$

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:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Corrected Amplitude (dB}\mu\text{V/m)}$$

Note: The QuasiPeak (dB μ V/m), MaxPeak (dB μ V/m), Average (dB μ V/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

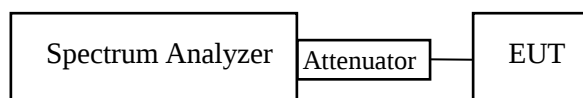
Applicable Standard

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 + Cor.1-2023 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: the offset=Attenuator (10dB) + Cable loss (0.5dB) has been added in Spectrum Analyzer.

Test Data: See Appendix

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

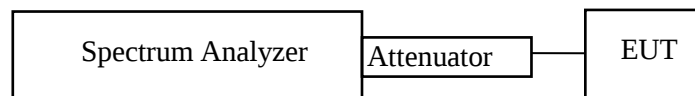
Applicable Standard

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, compliance 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: the offset=Attenuator (10dB) + Cable loss (0.5dB) has been added in Spectrum Analyzer.

Test Data: See Appendix

FCC §15.247(d) –BAND EDGE & CONDUCTED SPURIOUS EMISSION

BAND EDGES

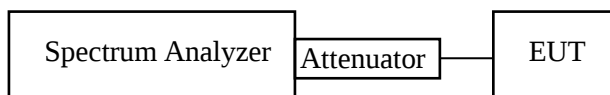
Applicable Standard

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

According to ANSI C63.10-2020 + Cor.1-2023 Section 11.11

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: the offset=Attenuator (10dB) + Cable loss (0.5dB) has been added in Spectrum Analyzer.

CONDUCTED SPURIOUS EMISSION

Applicable Standard

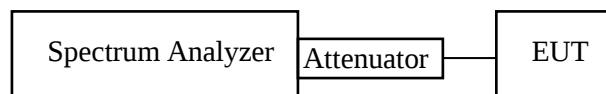
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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

According to ANSIC63.10-2020 + Cor.1-2023 Section 11.11

- a) Set the center frequency and span to encompass frequency range to be measured
- b) Set the RBW = 100 kHz.
- c) Set the VBW $\geq [3 \times \text{RBW}]$.
- d) Detector = peak.
- e) Sweep time = No faster than coupled (auto) time.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.



Note: the offset=Attenuator (10dB) + Cable loss (1dB) has been added in Spectrum Analyzer.

Test Data: See Appendix

FCC §15.247(e) - POWER SPECTRAL DENSITY

Applicable Standard

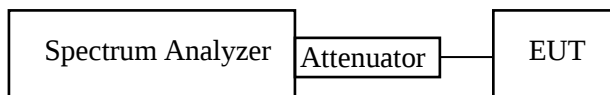
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of 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 ANSIC63.10-2020 + Cor.1-2023 sub-clause 11.10.2

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

- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span >1.5 times the DTS bandwidth.
- c) Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d) Set the VBW $\geq [3 \times \text{RBW}]$.
- e) Detector = peak.
- f) Sweep time = No faster than coupled (auto) time.
- g) Trace mode = max-hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.
- j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.



Note: the offset=Attenuator (10dB) + Cable loss (0.5dB) has been added in Spectrum Analyzer.

Test Data: See Appendix

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.

APPENDIX - TEST DATA

SPURIOUS EMISSIONS

Environmental Conditions & Test Information

Test Item:	SPURIOUS EMISSIONS			
	9kHz – 30MHz	30 MHz - 1 GHz	1 GHz - 18 GHz	18 GHz - 25 GHz
Test Date:	2025-11-06	2025-11-06	2025-11-06	2025-11-07
Temperature:	19.7 °C	19.7 °C	21.2 °C	21.6 °C
Relative Humidity:	64 %	64 %	50 %	53 %
ATM Pressure:	102.5 kPa	102.5 kPa	102.5kPa	102.5kPa
Test Result:	Pass	Pass	Pass	Pass
Test Engineer:	Scarf Yang	Scarf Yang	Destine Hu	Hugh Wu

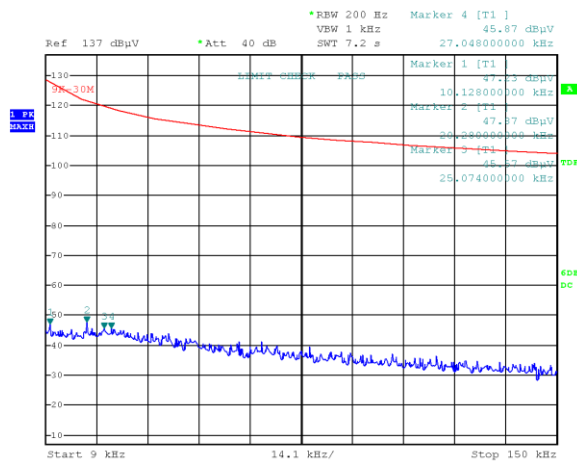
Test Result: Compliant.

EUT operation mode: Transmitting

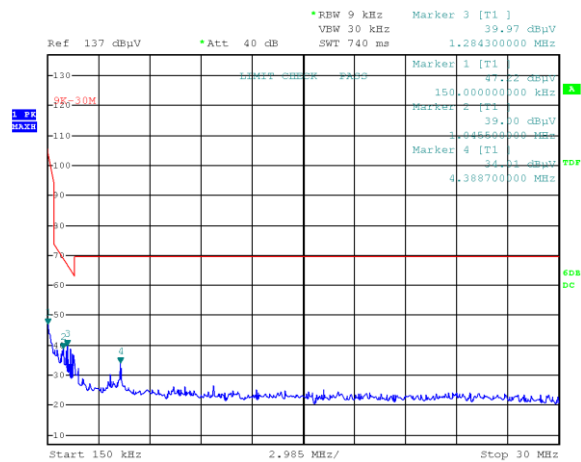
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

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

9kHz-150kHz



150kHz-30MHz



Project No.RSZA251021002
 Date: 6.NOV.2025 19:02:44

Tester:Scarf Yang

Project No.RSZA251021002
 Date: 6.NOV.2025 19:08:23

Tester:Scarf Yang

9 kHz-150 kHz

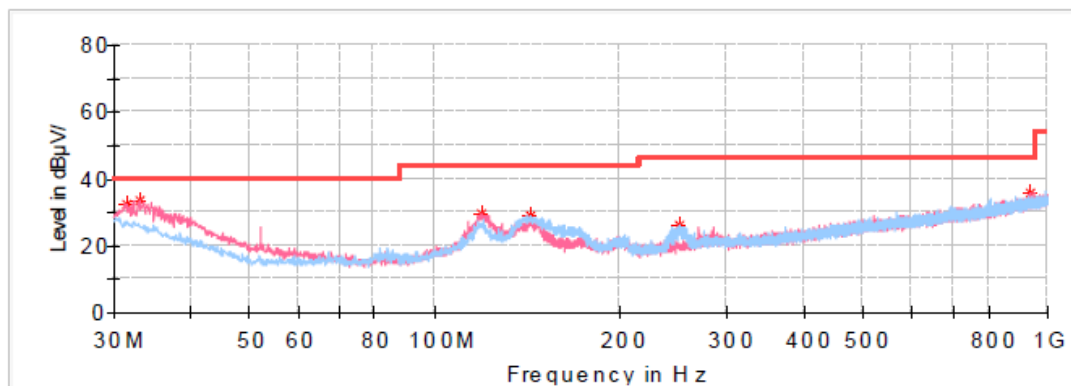
Frequency (kHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.010128	47.23	PK	-0.51	127.49	80.26
0.020280	47.87	PK	-0.56	121.46	73.59
0.025074	45.57	PK	-0.59	119.62	74.05
0.027048	45.87	PK	-0.60	118.96	73.09

150 kHz-30 MHz

Frequency (kHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.150000	47.22	PK	-11.34	104.08	56.86
1.045500	39.00	PK	-27.76	67.22	28.22
1.284300	39.97	PK	-28.55	65.43	25.46
4.388700	34.01	PK	-31.97	69.54	35.53

30 MHz - 1 GHz:**Transmitting in maximum output power middle channel****Middle Channel: 2440 MHz****Common Information**

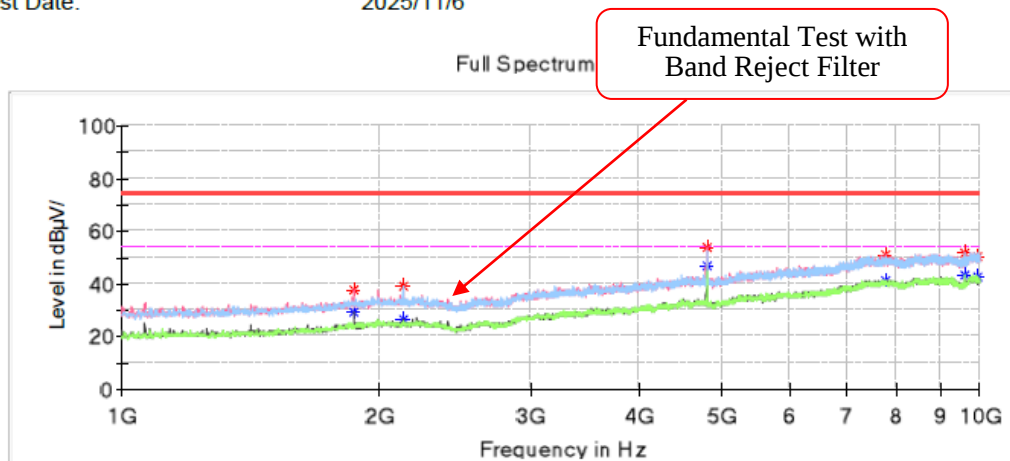
Project No: RSZA251021002
EUT Model: RK HG101
Test Mode: SRD
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, Sweep Time: Auto
Temperature: 19.7°C
Humidity: 64%
Barometric Pressure: 102.5kPa
Test Engineer: Scarf Yang
Test Date: 2025/11/06

**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
31.455000	32.59	40.00	7.41	V	-5.7
33.031250	33.46	40.00	6.54	V	-6.7
119.482500	29.32	43.50	14.18	V	-10.9
143.247500	28.93	43.50	14.57	H	-11.4
251.766250	25.95	46.00	20.05	H	-12.1
935.131250	35.77	46.00	10.23	V	1.6

1 GHz-10 GHz:**Low Channel: 2402 MHz****Common Information**

Project No.:	RSZA251021002
EUT Model:	RK HG101
Test Mode:	Transmitting in 2.4G SRD 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:	21.2°C
Humidity:	50%
Atmospheric Pressure:	102.5kPa
Test Engineer:	Destine Hu
Test Date:	2025/11/6

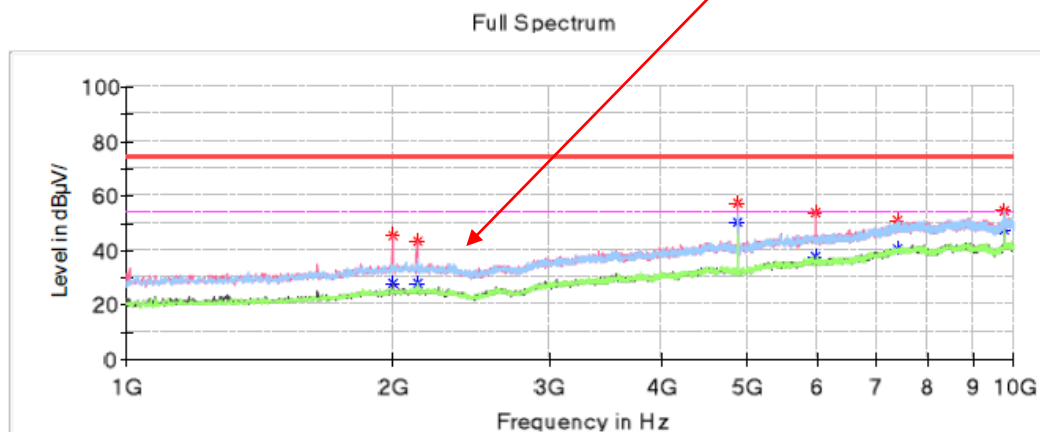
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1865.800000	---	29.50	54.00	24.50	V	-10.9
1865.800000	37.46	---	74.00	36.54	V	-10.9
2125.000000	---	26.59	54.00	27.41	V	-9.9
2125.000000	39.00	---	74.00	35.00	V	-9.9
4803.400000	53.69	---	74.00	20.31	V	-3.4
4803.400000	---	46.61	54.00	7.39	V	-3.4
7759.000000	---	41.31	54.00	12.69	V	3.1
7759.000000	50.83	---	74.00	23.17	V	3.1
9602.200000	---	43.22	54.00	10.78	H	5.1
9604.000000	51.83	---	74.00	22.17	H	5.1
9946.000000	50.10	---	74.00	23.90	H	6.2
9946.000000	---	42.92	54.00	11.08	H	6.2

Middle Channel: 2440 MHz**Common Information**

Project No.: RSZA251021002
 EUT Model: RK HG101
 Test Mode: Transmitting in 2.4G SRD 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: 21.2℃
 Humidity: 50%
 Atmospheric Pressure: 102.5kPa
 Test Engineer: Destine Hu
 Test Date: 2025/11/6

Fundamental Test with
Band Reject Filter

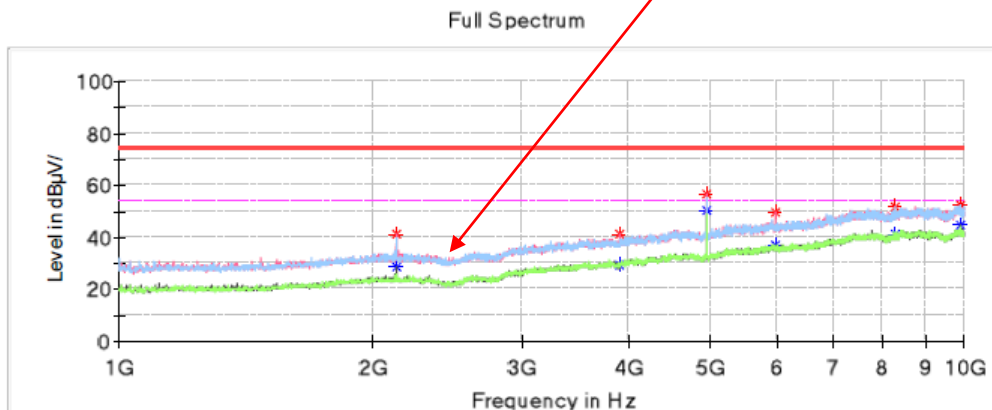
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1993.600000	---	27.81	54.00	26.19	V	-10.1
1993.600000	45.14	---	74.00	28.86	V	-10.1
2125.000000	43.70	---	74.00	30.30	V	-9.9
2125.000000	---	28.16	54.00	25.84	V	-9.9
4880.000000	---	50.10	54.00	3.90	V	-3.2
4880.000000	57.02	---	74.00	16.98	V	-3.2
5987.800000	53.99	---	74.00	20.01	V	-0.6
5987.800000	---	38.07	54.00	15.93	V	-0.6
7408.000000	---	40.29	54.00	13.71	V	2.7
7408.000000	51.19	---	74.00	22.81	V	2.7
9755.200000	---	47.75	54.00	6.25	H	5.6
9755.200000	54.27	---	74.00	19.73	H	5.6

High Channel: 2480 MHz**Common Information**

Project No.: RSZA251021002
EUT Model: RK HG101
Test Mode: Transmitting in 2.4G SRD 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: 21.2°C
Humidity: 50%
Atmospheric Pressure: 102.5kPa
Test Engineer: Destine Hu
Test Date: 2025/11/6

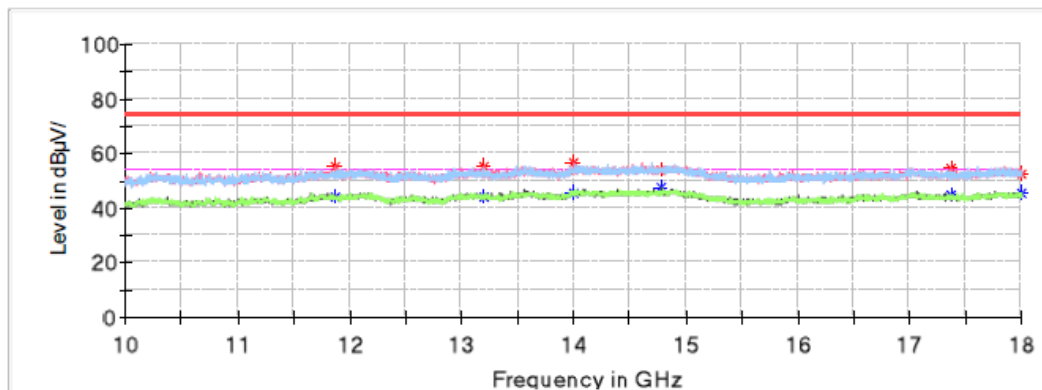
Fundamental Test with
Band Reject Filter

**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)
2126.800000	---	28.41	54.00	25.59	V	-9.9
2126.800000	41.42	---	74.00	32.58	V	-9.9
3919.600000	---	29.57	54.00	24.43	V	-5.2
3919.600000	41.42	---	74.00	32.58	V	-5.2
4960.000000	---	50.47	54.00	3.53	V	-3.0
4960.000000	56.45	---	74.00	17.55	V	-3.0
5982.400000	---	36.77	54.00	17.23	V	-0.7
5982.400000	49.92	---	74.00	24.08	V	-0.7
8290.000000	---	41.01	54.00	12.99	H	4.1
8290.000000	51.43	---	74.00	22.57	H	4.1
9915.400000	52.65	---	74.00	21.35	V	6.1
9915.400000	---	44.89	54.00	9.11	V	6.1

10 GHz-18 GHz:**Low Channel: 2402 MHz****Common Information**

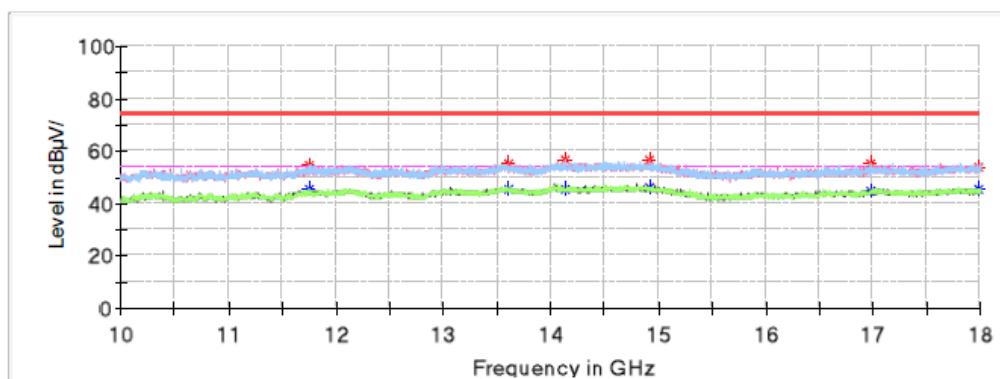
Project No.:	RSZA251021002
EUT Model:	RK HG101
Test Mode:	Transmitting in 2.4G SRD Low Channel
Standard:	FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature:	21.2°C
Humidity:	50%
Atmospheric Pressure:	102.5kPa
Test Engineer:	Destine Hu
Test Date:	2025/11/6

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)
11878.400000	---	43.91	54.00	10.09	V	8.8
11878.400000	55.08	---	74.00	18.92	V	8.8
13195.200000	---	44.33	54.00	9.67	V	9.5
13195.200000	55.01	---	74.00	18.99	V	9.5
13996.800000	---	45.58	54.00	8.42	H	11.1
13996.800000	56.58	---	74.00	17.42	H	11.1
14788.800000	---	47.75	54.00	6.25	V	11.0
14788.800000	53.81	---	74.00	20.19	V	11.0
17374.400000	---	44.77	54.00	9.23	V	10.6
17374.400000	54.59	---	74.00	19.41	V	10.6
17992.000000	52.69	---	74.00	21.31	H	11.7
17992.000000	---	45.62	54.00	8.38	H	11.7

Middle Channel: 2440 MHz**Common Information**

Project No.: RSZA251021002
EUT Model: RK HG101
Test Mode: Transmitting in 2.4G SRD 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: 21.2°C
Humidity: 50%
Atmospheric Pressure: 102.5kPa
Test Engineer: Destine Hu
Test Date: 2025/11/6

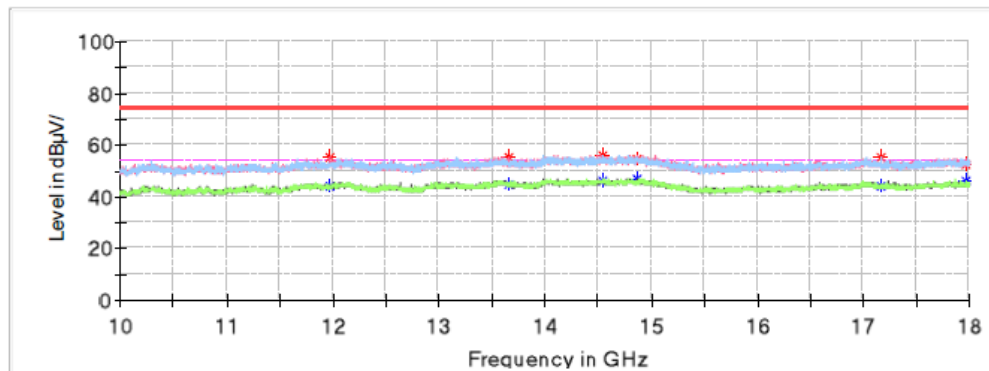
Full Spectrum**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
11748.800000	---	45.28	54.00	8.72	H	8.6
11748.800000	54.75	---	74.00	19.25	H	8.6
13603.200000	---	45.12	54.00	8.88	H	10.2
13603.200000	55.11	---	74.00	18.89	H	10.2
14134.400000	---	45.27	54.00	8.73	H	11.3
14134.400000	56.67	---	74.00	17.33	H	11.3
14915.200000	56.73	---	74.00	17.27	V	10.6
14915.200000	---	46.25	54.00	7.75	V	10.6
16971.200000	---	44.68	54.00	9.32	V	10.8
16971.200000	55.04	---	74.00	18.96	V	10.8
17977.600000	54.17	---	74.00	19.83	V	11.7
17977.600000	---	45.62	54.00	8.38	V	11.7

High Channel: 2480 MHz**Common Information**

Project No.: RSZA251021002
 EUT Model: RK HG101
 Test Mode: Transmitting in 2.4G SRD 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: 21.2°C
 Humidity: 50%
 Atmospheric Pressure: 102.5kPa
 Test Engineer: Destine Hu
 Test Date: 2025/11/6

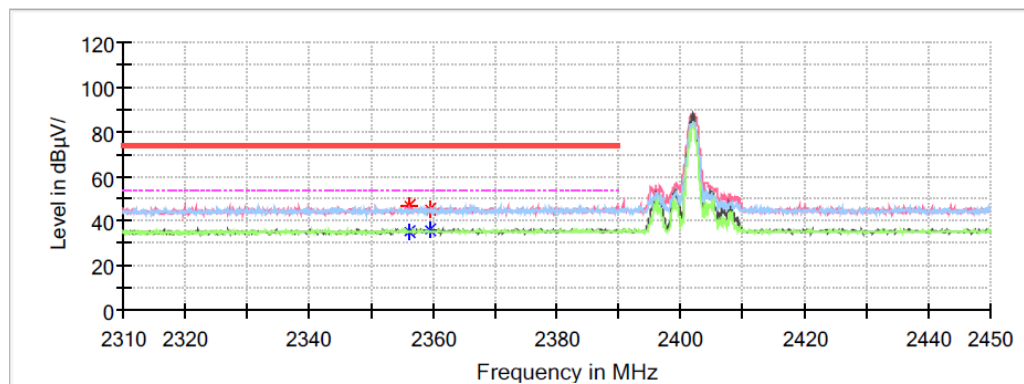
Full Spectrum

**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)
11977.600000	54.98	---	74.00	19.02	V	9.0
11977.600000	---	43.76	54.00	10.24	V	9.0
13665.600000	---	44.93	54.00	9.07	V	10.3
13665.600000	55.56	---	74.00	18.44	V	10.3
14542.400000	56.27	---	74.00	17.73	V	11.8
14542.400000	---	46.00	54.00	8.00	V	11.8
14875.200000	54.26	---	74.00	19.74	V	10.7
14875.200000	---	47.08	54.00	6.92	V	10.7
17160.000000	---	44.07	54.00	9.93	H	10.8
17160.000000	55.47	---	74.00	18.53	H	10.8
17969.600000	52.65	---	74.00	21.35	H	11.7
17969.600000	---	46.04	54.00	7.96	H	11.7

Restricted Bands Emission:**Left Side****Common Information**

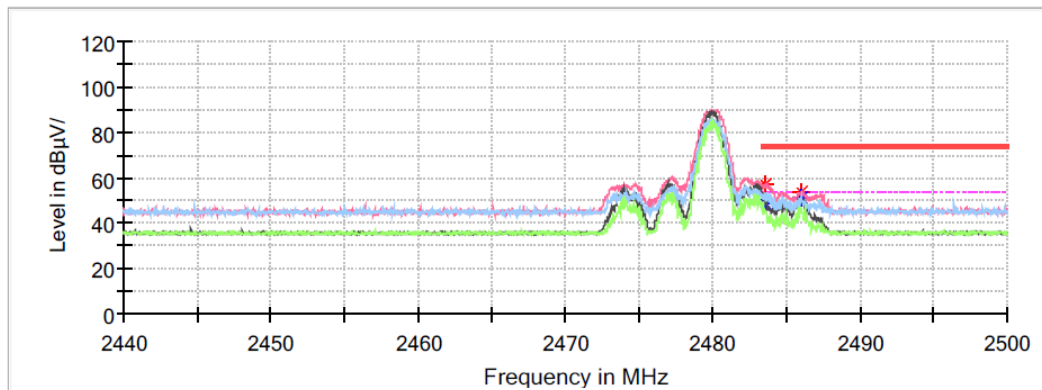
Project No.: RSZA251021002
EUT Model: RK HG101
Test Mode: Transmitting in 2.4G SRD Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 21.2℃
Humidity: 50%
Atmospheric Pressure: 102.5kPa
Test Engineer: Destine Hu
Test Date: 2025/11/6

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)
2356.144000	---	35.21	54.00	18.79	V	0.2
2356.144000	47.35	---	74.00	26.65	V	0.2
2359.336000	---	36.39	54.00	17.61	V	0.2
2359.336000	45.09	---	74.00	28.91	V	0.2

Right Side**Common Information**

Project No.: RSZA251021002
EUT Model: RK HG101
Test Mode: Transmitting in 2.4G SRD 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: 21.2℃
Humidity: 50%
Atmospheric Pressure: 102.5kPa
Test Engineer: Destine Hu
Test Date: 2025/11/6

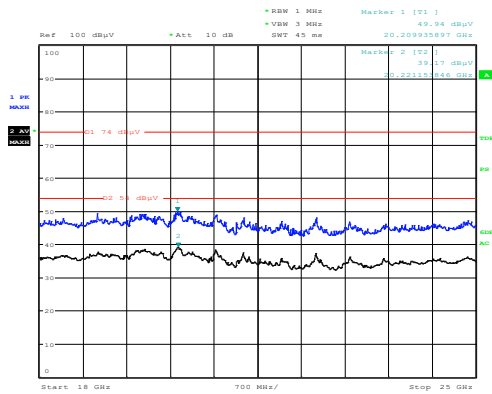
Full Spectrum**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2483.608000	57.16	---	74.00	16.84	V	0.4
2483.608000	---	49.02	54.00	4.98	V	0.4
2485.984000	53.80	---	74.00	20.20	V	0.4
2485.984000	---	51.40	54.00	2.60	V	0.4

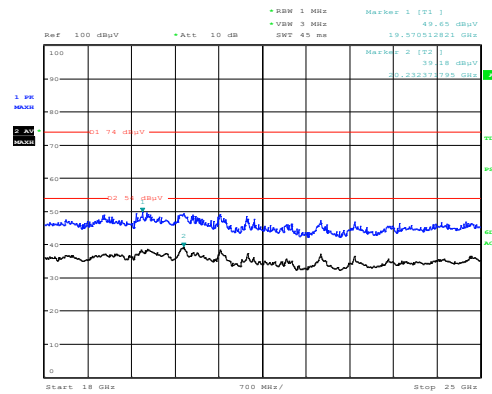
18 GHz - 25 GHz :

Transmitting in maximum output power middle channel:

Horizontal



Vertical



Project No : RSZA251021002 Tester :Rugh Wu
Date: 7.NOV.2025 20:12:40

Project No : RSZA251021002 Tester :Rugh Wu
Date: 7.NOV.2025 20:44:33

Frequency (GHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
20.23	---	39.18	54	14.82	V	12.49
19.57	49.65	---	74	24.35	V	11.04
20.22	---	39.17	54	14.83	H	12.48
20.21	49.94	---	74	24.06	H	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**

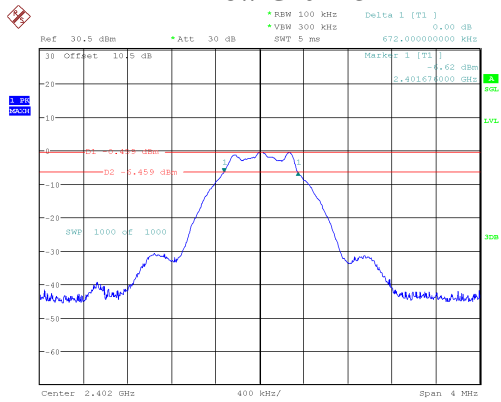
Test Date:	2025-11-07
Temperature:	21.6 °C
Relative Humidity:	53 %
ATM Pressure:	102.5kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Test Result: Compliant.

EUT operation mode: Transmitting

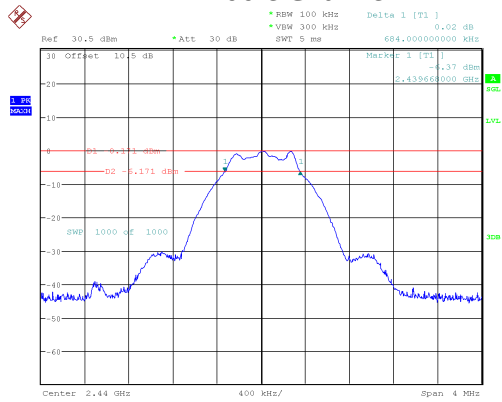
Mode	Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limit (MHz)
SRD	Low	2402	0.672	≥0.5
	Middle	2440	0.684	≥0.5
	High	2480	0.672	≥0.5

Low Channel



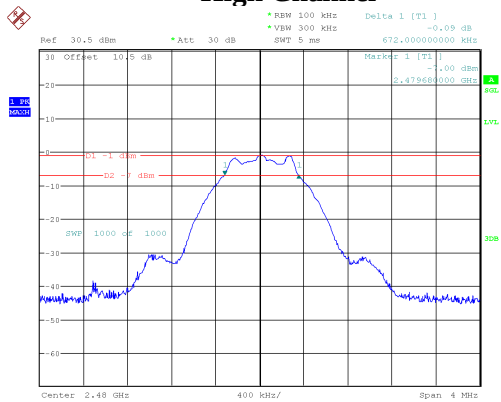
ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:31:47

Middle Channel



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:50:01

High Channel



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 15:00:23

MAXIMUM CONDUCTED OUTPUT POWER**Environmental Conditions & Test Information**

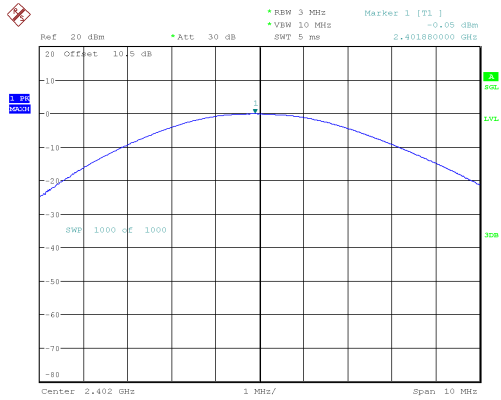
Test Date:	2025-11-07
Temperature:	21.6 °C
Relative Humidity:	53 %
ATM Pressure:	102.5kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Test Result: Compliant.

EUT operation mode: Transmitting

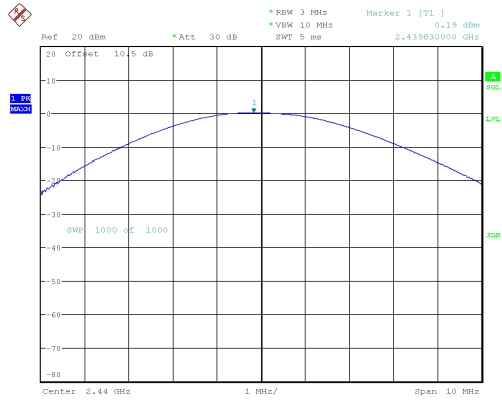
Mode	Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Limit (dBm)	Result
SRD	Low	2402	-0.05	30	Pass
	Middle	2440	0.19	30	Pass
	High	2480	-0.58	30	Pass

Low Channel



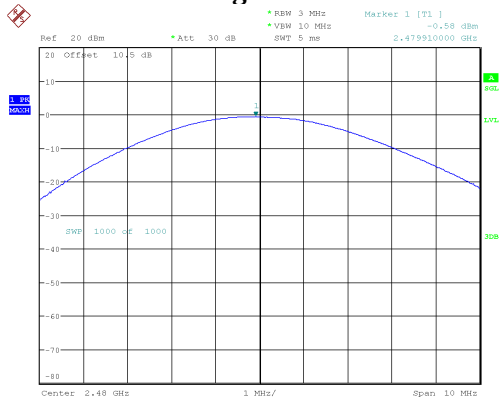
ProjectNo.:RSZA251021002 Tester:Nail Zhou
Date: 7.NOV.2025 14:34:28

Middle Channel



ProjectNo.:RSZA251021002 Tester:Nail Zhou
Date: 7.NOV.2025 14:51:41

High Channel



ProjectNo.:RSZA251021002 Tester:Nail Zhou
Date: 7.NOV.2025 15:01:08

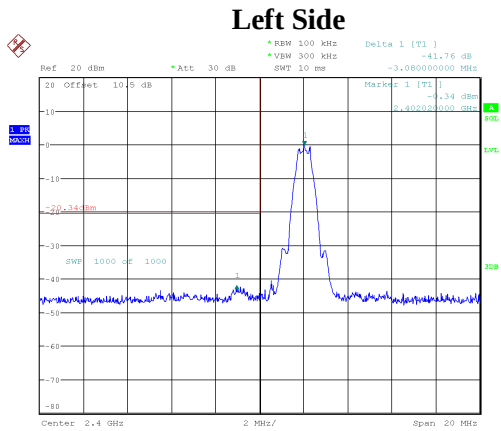
BAND EDGE**Environmental Conditions & Test Information**

Test Date:	2025-11-07
Temperature:	21.6 °C
Relative Humidity:	53 %
ATM Pressure:	102.5kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

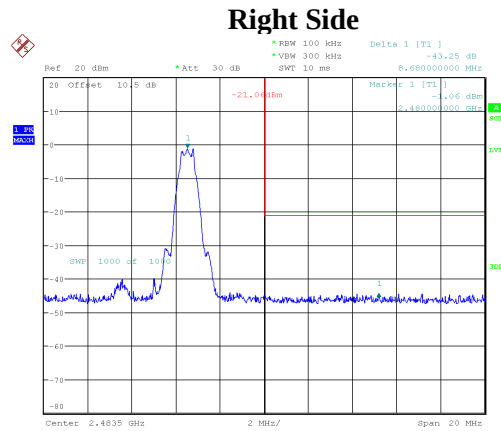
Test Result: Compliant.

EUT operation mode: Transmitting

Mode	Channel	Frequency (MHz)	Result (dBc)	Limit (dBc)
SRD	Low	2402	41.76	20
	High	2480	43.25	



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:41:12



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 15:02:08

POWER SPECTRAL DENSITY**Environmental Conditions & Test Information**

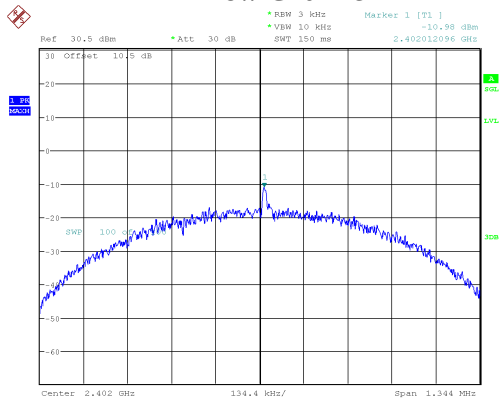
Test Date:	2025-11-07
Temperature:	21.6 °C
Relative Humidity:	53 %
ATM Pressure:	102.5kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Test Result: Compliant.

EUT operation mode: Transmitting

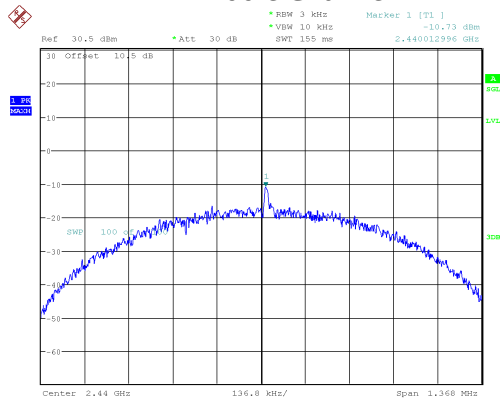
Mode	Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)
SRD	Low	2402	-10.98	≤8
	Middle	2440	-10.73	≤8
	High	2480	-11.67	≤8

Low Channel



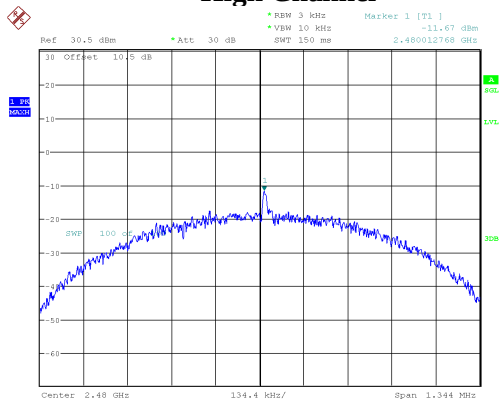
ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:41:36

Middle Channel



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:52:07

High Channel



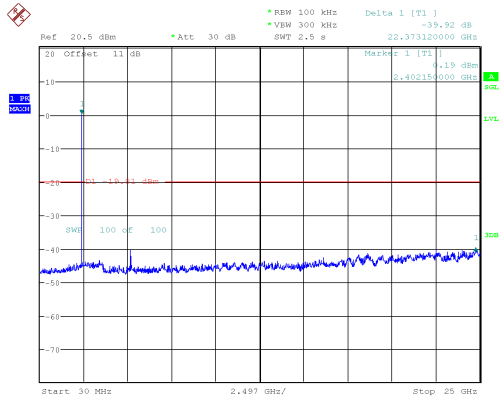
ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 15:02:32

CONDUCTED SPURIOUS EMISSION**Environmental Conditions & Test Information**

Test Date:	2025-11-07
Temperature:	21.6 °C
Relative Humidity:	53 %
ATM Pressure:	102.5kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

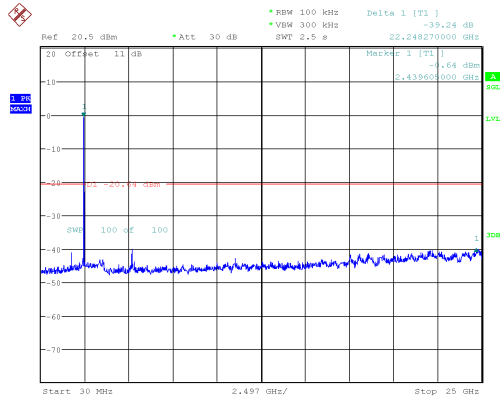
Mode	Channel	Frequency (MHz)	Result (dB)	Limit (dB)	Verdict
SRD	Low	2402	39.92	20	Pass
	Middle	2440	39.24	20	Pass
	High	2480	38.35	20	Pass

Low Channel



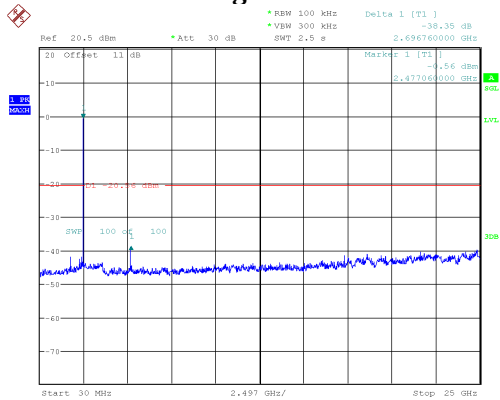
ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:48:21

Middle Channel



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 14:58:37

High Channel



ProjectNo.:RSZA251021002 Tester:Neil Zhou
Date: 7.NOV.2025 15:07:46

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.
6. This report may contain standards and test items that are not covered by the accreditation scope and shall be marked with an asterisk “▲”.

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