



47 CFR PART15, SUBPART C (15.236) ANSI C63.10-2020

TEST REPORT

For

Shanghai LvDong Technology Co., LTD.

1st Floor, Building 2, No. 18 Fangsi Road, Songjiang District, Shanghai, China

FCC ID: 2BNRW-T1MIC

Report Type: Original Report	Product Name: Wireless Microphone
Report Number: <u>RSHA250310001-00B</u>	
Report Date: <u>2025-09-09</u>	
Reviewed By: Bard Liu	
Approved By: Kyle Xu	
Prepared By: 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.

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	8
EXTERNAL I/O CABLE.....	8
BLOCK DIAGRAM OF TEST SETUP	8
TEST EQUIPMENT LIST	10
SUMMARY OF TEST RESULTS.....	11
FCC §1.1310 & §2.1093 - RF EXPOSURE.....	12
APPLICABLE STANDARD	12
MEASUREMENT RESULT	12
FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS	13
APPLICABLE STANDARD	13
TEST SYSTEM SETUP.....	13
EMI TEST RECEIVER SETUP.....	13
TEST PROCEDURE	14
TEST RESULTS SUMMARY.....	14
TEST DATA: SEE APPENDIX	14
FCC §15.236(d) –RF OUTPUT POWER	15
APPLICABLE STANDARD	15
TEST PROCEDURE	15
TEST DATD: SEE APPENDIX	15
FCC §15.236(f)(1)(ii) – OPERATING BANDWIDTH	16
APPLICABLE STANDARD	16
TEST PROCEDURE	16
TEST DATA: SEE APPENDIX	17
FCC §15.236(g)- EMISSION MASK	18
APPLICABLE STANDARD	18
TEST PROCEDURE	18
TEST DATA: SEE APPENDIX	18
FCC §15.236(f)(1)(iii) - FREQUENCY TOLERANCE.....	19
APPLICABLE STANDARD	19
TEST PROCEDURE	19
TEST DATA: SEE APPENDIX	20

FCC §15.236(g) - SPURIOUS EMISSION	21
APPLICABLE STANDARD	21
TEST PROCEDURE	21
LIMIT	21
TEST DATA: SEE APPENDIX	21
EUT PHOTOGRAPHS	22
TEST SETUP PHOTOGRAPHS	23
APPENDIX - TEST DATA	24
AC LINE CONDUCTED EMISSIONS	24
RF OUTPUT POWER	26
OPERATING BANDWIDTH	27
EMISSION MASK	28
FREQUENCY TOLERANCE.....	30
SPURIOUS EMISSION.....	31

REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RSHA250310001-00B	R1V1	2025-09-09	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Shanghai LvDong Technology Co., LTD.
Product Name:	Wireless Microphone
Tested Model:	T1
Series Model:	T1-D, T1-S
Model Difference:	just the packaging is divided into single and double
Power Supply:	DC 3.7V from battery or DC 5V from USB port
RF Function:	SRD
Operating Band/Frequency:	657.5-662 MHz
Maximum EIRP:	4.29 dBm
Channel Number:	10
Modulation Type:	FM
Antenna Type:	PCB
★Maximum Antenna Gain:	-1.38 dBi

Note: The maximum antenna gain was declared by the manufacturer.

All measurement and test data in this report was gathered from production sample serial number: RSHA250310001-1 (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2025-03-10

Objective

This test report is prepared for *Shanghai LvDong Technology Co., LTD.* 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 Compliance with FCC Part 15, Subpart C, section 15.207, 15.209, 15.205 and 15.236 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020 & ETSI EN 300 422-1 V2.2.1 (2021-11), Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

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)
1	657.5	6	660
2	658	7	660.5
3	658.5	6	661
4	659	9	661.5
5	659.5	10	662

EUT was tested with Channel 1 and 11.

EUT Exercise Software

RF Test Tool: Engineering mode

Mode	Channel	★Power level:
SRD	657.5	7
	662	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.

Support Equipment List and Details

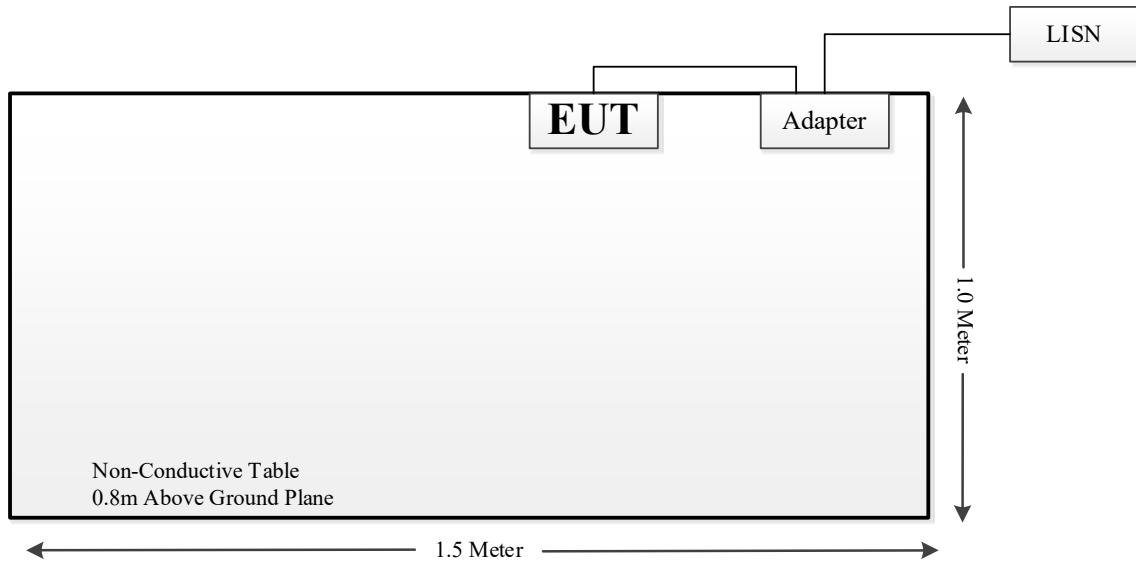
Manufacturer	Description	Model	Serial Number
Shenzhen Tianyin Electronics Co., LTD	Adapter	TPA-10120150UU	/

External I/O Cable

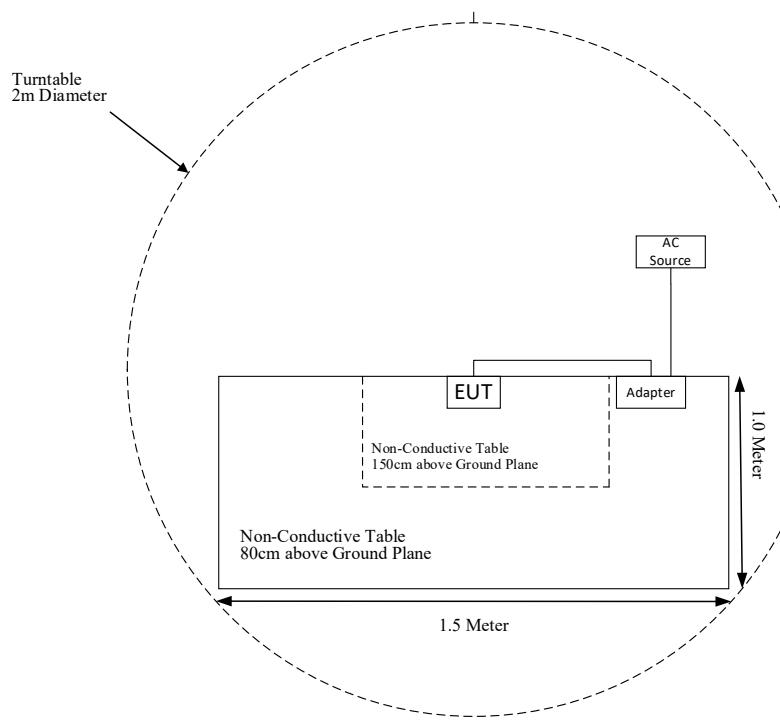
Cable Description	Length (m)	From Port	To Port
Power Cable 1	1.0	LISN/AC Source	Adapter
Power Cable 2	1.0	Adapter	EUT

Block Diagram of Test Setup

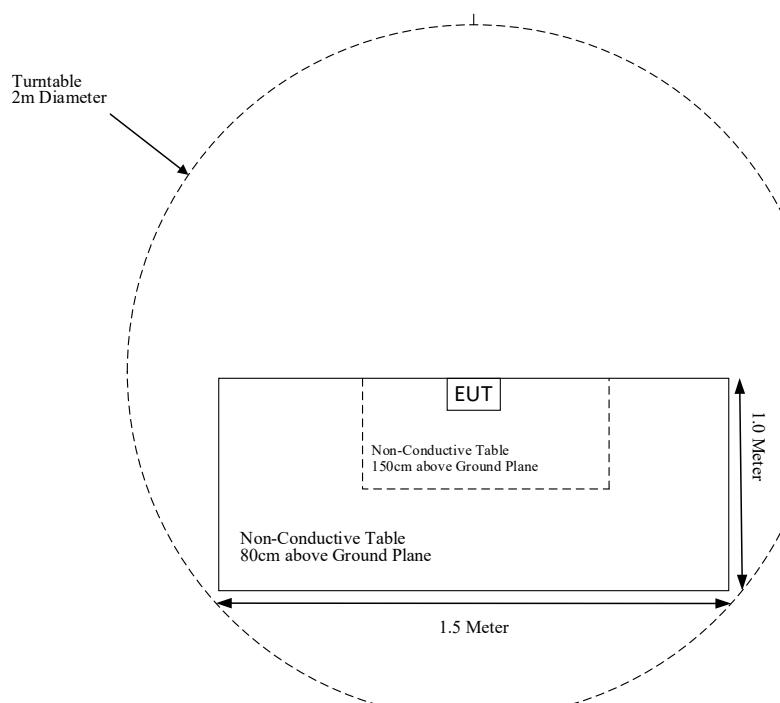
For Conducted Emissions:



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	Broadband Antenna	JB3	A090314-1	2024-11-08	2027-11-07
Sunol Sciences	Hybrid Antenna	JB3	A090314-2	2024-10-29	2027-10-28
Narda	6dB Attenuator	773-6	10690812-2-1	2024-11-08	2027-11-07
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
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	3115	6229	2024-01-06	2027-01-05
A.H.Systems, inc	Amplifier	PAM-0118P	512	2025-04-09	2026-04-08
Narda	Attenuator	10dB	010	2025-04-08	2026-04-07
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					
R&S	Spectrum Analyzer	FSU26	100147	2025-04-09	2026-04-08
Rohde & Schwarz	Signal Analyzer	FSV40	101116	2025-04-09	2026-04-08
Narda	Attenuator	10dB	010	2025-04-08	2026-04-07
Rohde & Schwarz	Audio Analyzer	UPV	100150	2025-04-08	2026-04-07
Anritsu	Power Sensor	MA24418A	12621	2025-04-09	2026-04-08
BACL	Temperature and humidity oven	BTH-150	30023	2025-04-09	2026-04-08
Shenzhen Zhaoxin Electronic Instrument Equipment Co., Ltd.	DC Source	PS-6005D	18P6005D10724	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	100552	N/A	N/A
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).

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 & §2.1093	RF EXPOSURE	Compliant
§15.207(a)	AC Line Conducted Emissions	Compliant
FCC §15.236(d)	RF Output Power	Compliant
FCC §15.236(f)(1)(ii)	Operating Bandwidth	Compliant
FCC §15.236(g)	Emission Mask	Compliant
FCC §15.236(f)(1)(iii)	Frequency Tolerance	Compliant
FCC §15.236(g)	Spurious Emission	Compliant

FCC §1.1310 & §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:

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

1. $f(\text{GHz})$ 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)	Tune-up Conducted Power		Minimum Distance (mm)	Calculated Value	Threshold (1-g SAR)	SAR Test Exclusion
		(dBm)	(mW)				
SRD	657.5-662	6.0	3.98	5	0.6	3	Yes

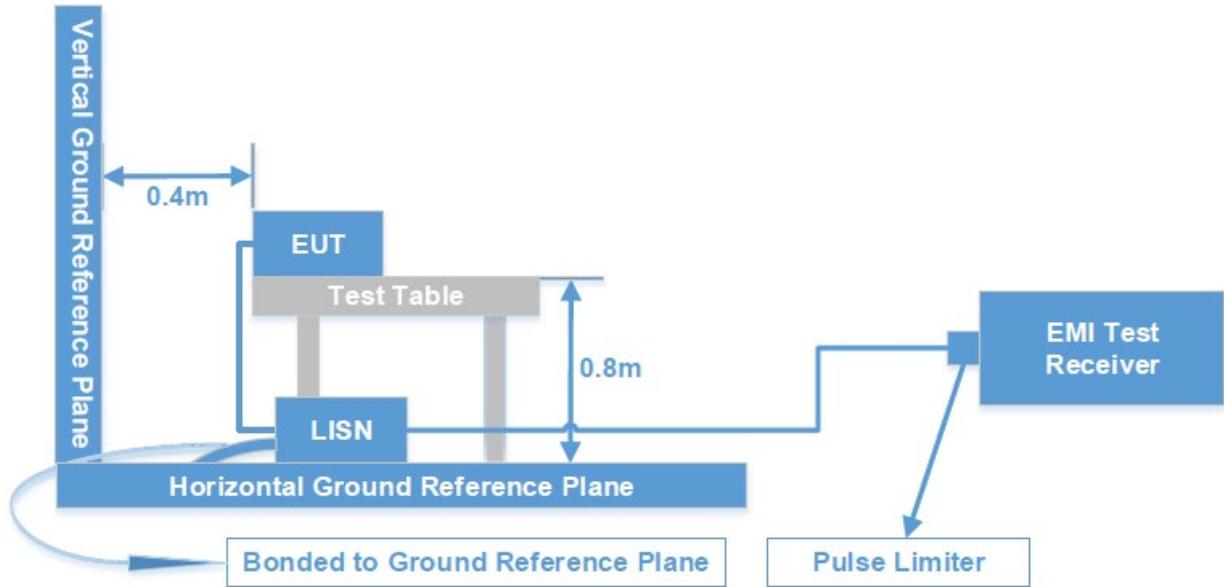
Result: No SAR test is required.

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.

EMI Test Receiver Setup

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 (dB μ V) = Read level (dB μ V) + 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 (dB μ V) - Limit (dB μ V)

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 Appendix

FCC §15.236(d) –RF OUTPUT POWER

Applicable Standard

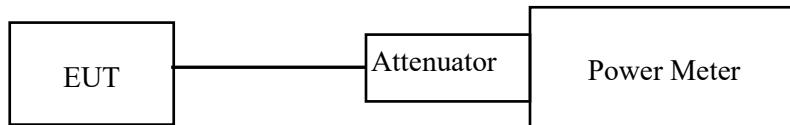
FCC§15.236(d)

The maximum radiated power shall not exceed the following values:

- (1) In the bands allocated and assigned for broadcast television:
 - (i) Wireless microphones: 50 mW EIRP.
 - (ii) Wireless multichannel audio systems with a bandwidth up to 1 MHz: 50 mW EIRP.
 - (iii) Wireless multichannel audio systems with a bandwidth greater than 1 MHz: 100 mW EIRP.
- (2) In the 600 MHz guard band and the 600 MHz duplex gap: 20 mW EIRP.

Test Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.
3. Add a correction factor to the display.



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

Test Data: See Appendix

FCC §15.236(f)(1)(ii) – OPERATING BANDWIDTH

Applicable Standard

FCC§15.236(f)(1)(ii)

One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz. The operating bandwidth shall not exceed 200 kHz.

Test Procedure

According to ANSI C63.10-2020 Section 6.9.2

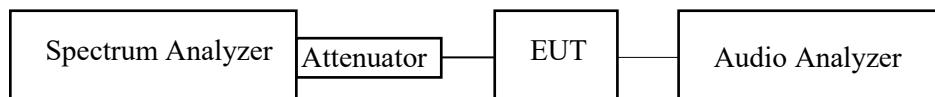
- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (\text{OBW}/\text{RBW})]$ below the reference level. Specific guidance is given in 4.1.5.2
- d) Steps a) through c) might require iteration to adjust within the specified tolerances.
- e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- f) Set detection mode to peak and trace mode to max hold.
- g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- h) Determine the “-xx dB down amplitude” using $[(\text{reference value}) - \text{xx}]$. Alternatively, this calculation may be made by using the marker-delta function of the instrument.
- i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).
- j) Place 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 “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h).
- h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

According to ANSI C63.10-2020 Section 6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (\text{OBW}/\text{RBW})]$ below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



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

Test Data: See Appendix

FCC §15.236(g)- EMISSION MASK

Applicable Standard

FCC§15.236(g) (1)

Emissions within the band from $2.5 \times B$ below to $2.5 \times B$ above the carrier frequency, where B is the channel bandwidth, shall comply with the emission mask in Figure 1 of section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11) (incorporated by reference, see § 15.38).

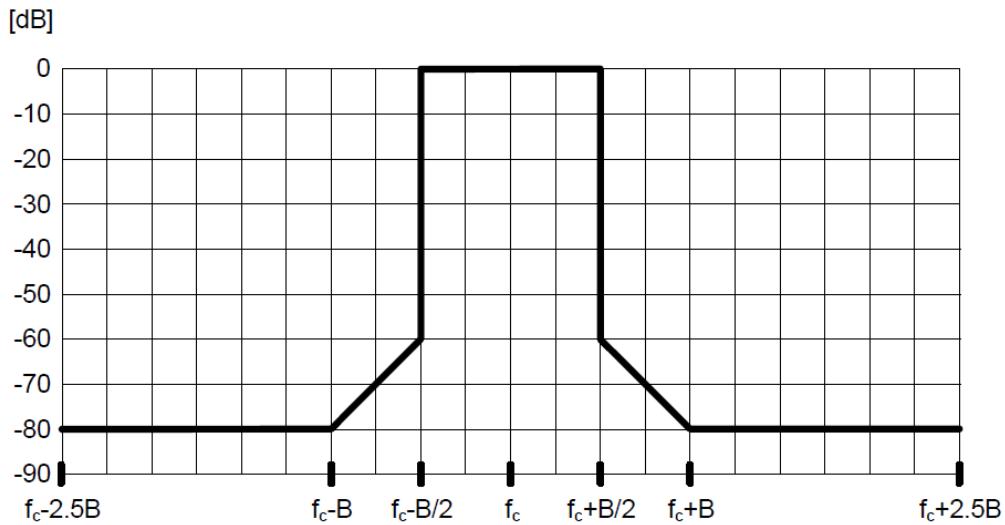
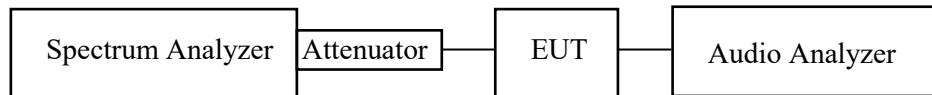


Figure 1: Transmit spectral power mask for equipment employing analogue modulation, RBW = 1 kHz

Test Procedure

According to section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11)



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

Test Data: See Appendix

FCC §15.236(f)(1)(iii) - FREQUENCY TOLERANCE

Applicable Standard

FCC§15.236(f) (3)

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.005\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. Battery operated equipment shall be tested using a new battery.

Test Procedure

According to ANSI C63.10-2020 Section 6.8

Frequency stability with respect to ambient temperature

a)Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b)Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

c)Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d)Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e)Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f)While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g)Measure the frequency at each of frequencies specified in 5.6.

h)Switch OFF the EUT but do not switch OFF the oscillator heater.

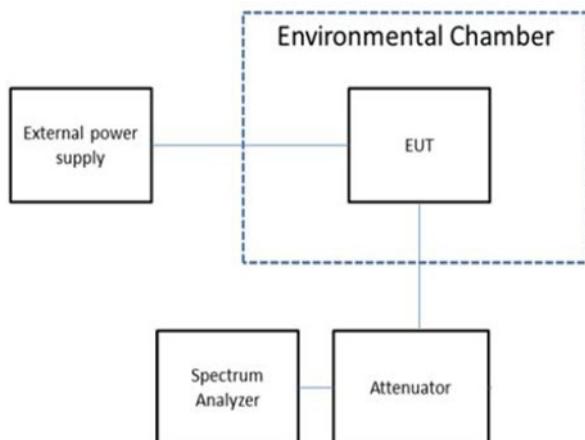
i)Lower the chamber temperature by not more than 10 °C, and allow the temperature inside the chamber to stabilize.

j)Repeat step f) through step i) down to the lowest specified temperature.

Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature ($+15^{\circ}\text{C}$ to $+25^{\circ}\text{C}$). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

- a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.
NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.
- b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- c) Measure the frequency at each of the frequencies specified in 5.6.
- d) Repeat the above procedure at 85% and 115% of the nominal supply voltage as described in 5.13.



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

Test Data: See Appendix

FCC §15.236(g) - SPURIOUS EMISSION

Applicable Standard

FCC§15.236(g) (4)

Emissions outside of the emission masks listed in paragraphs (g)(1) through (g)(3) shall comply with the limits specified in section 4.2.4.1.2 of ETSI EN 300 422-1 V2.2.1 (2021-11), (incorporated by reference, see § 15.38).

Test Procedure

Radiated measurement

Radiated measurements shall only be used for a DUT with integral antenna(s) and without a temporary antenna connector(s) / test fixture.

The test set up as described in annex D shall be used with a spectrum analyser attached to the test antenna. The test procedure is as described under clause 5.4.4.2.2.

Limit

The level of transmitter unwanted emissions in the spurious domain shall not exceed the limits given in table 4.

Table 4: Transmitter unwanted emission limits
(from ERC Recommendation 74-01 [2])

Frequency range	Maximum power	RBW
9 kHz - 150 kHz	-36 dBm	1 kHz
150 kHz - 30 MHz	-36 dBm	10 kHz
30 MHz - 1 GHz	-36 dBm	$f_c + 2,5 B \leq f \leq f_c + 4 B$: 1 kHz $f_c + 4 B < f \leq f_c + 10 B$: 10 kHz $f > f_c + 10 B$: 100 kHz $f < f_c - 10 B$: 100 kHz $f_c - 10 B \leq f < f_c - 4 B$: 10 kHz $f_c - 4 B \leq f \leq f_c - 2,5 B$: 1 kHz
except:		
47 MHz - 74 MHz 87,5 MHz - 118 MHz	-54 dBm	100 kHz
174 MHz - 230 MHz 470 MHz - 862 MHz	-54 dBm	$f_c + 2,5 B \leq f \leq f_c + 4 B$: 1 kHz $f_c + 4 B < f \leq f_c + 10 B$: 10 kHz $f > f_c + 10 B$: 100 kHz $f < f_c - 10 B$: 100 kHz $f_c - 10 B \leq f < f_c - 4 B$: 10 kHz $f_c - 4 B \leq f \leq f_c - 2,5 B$: 1 kHz
$1 \text{ GHz} < f \leq F_{\text{upper}}$	-30 dBm	$f_c + 2,5 B \leq f \leq f_c + 10 B$: 30 kHz $f_c + 10 B < f \leq f_c + 12 B$: 300 kHz $f > f_c + 12 B$: 1 MHz $f < f_c - 12 B$: 1 MHz $f_c - 12 B \leq f < f_c - 10 B$: 300 kHz $f_c - 10 B \leq f \leq f_c - 2,5 B$: 30 kHz

with B being the Declared Channel Bandwidth.

F_{upper} is defined in table 5.

Table 5: Frequency range for measurement of unwanted emissions
(from ERC Recommendation 74-01 [2])

Applicable fundamental frequency range	Frequency range for measurements	
	Lower frequency	Upper frequency
9 kHz - 100 MHz	9 kHz	1 GHz
100 MHz - 300 MHz	9 kHz	10 th harmonic of the operating frequency
300 MHz - 600 MHz	30 MHz	3 GHz
600 MHz - 3 GHz	30 MHz	5 th harmonic of the operating frequency

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

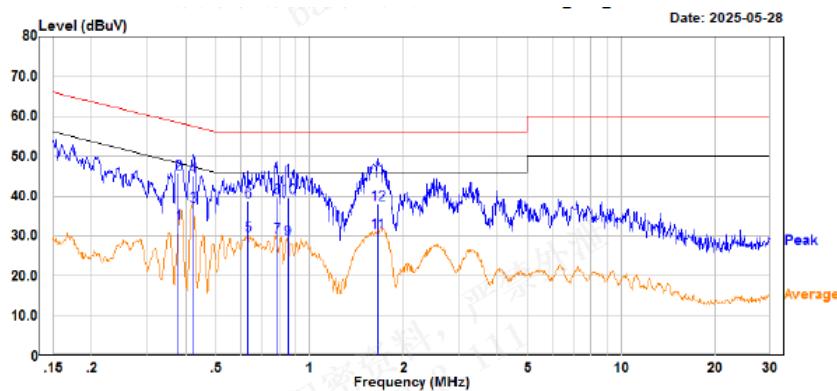
AC LINE CONDUCTED EMISSIONS

Environmental Conditions & Test Information

Test Date:	2025-05-28
Temperature:	23.3 °C
Relative Humidity:	47 %
ATM Pressure:	101.7 kPa
Test Result:	Pass
Test Engineer:	Myles Miao

EUT operation mode: Transmitting in high channel (maximum output power mode)

AC 120V/60 Hz, Line

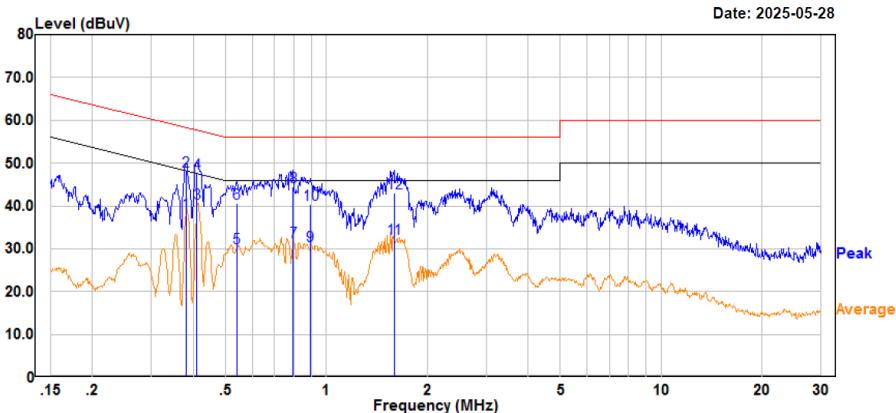


Trace: 1

Site : CE
 Condition : limit\FCC PART 15.207
 : DET:Peak
 Project No. : RSHA250310001
 Model : T1
 Phase : L
 Voltage : 120V/60Hz
 Mode : SRD
 Test Equipment : ENV216,ESR3
 Receiver Setting : RBW: 9 kHz, Sweep Time: Auto
 Temperature : 23.3°C
 Humidity : 47%
 Atmospheric pressure: 101.7kPa
 Test Engineer : Myles Miao

Freq	Read		Limit		Over	Remark
	Level	Factor	Level	Line		
1	0.379	12.91	20.23	33.14	48.30	-15.16 Average
2	0.379	25.41	20.23	45.64	58.30	-12.66 QP
3	0.423	17.38	20.24	37.54	47.39	-9.85 Average
4	0.423	24.70	20.24	44.94	57.39	-12.45 QP
5	0.633	9.90	20.26	30.16	46.00	-15.84 Average
6	0.633	18.30	20.26	38.56	56.00	-17.44 QP
7	0.785	9.40	20.23	29.63	46.00	-16.37 Average
8	0.785	19.50	20.23	39.73	56.00	-16.27 QP
9	0.850	9.10	20.19	29.29	46.00	-16.71 Average
10	0.850	19.40	20.19	39.59	56.00	-16.41 QP
11	1.649	10.80	20.13	30.93	46.00	-15.07 Average
12	1.649	17.90	20.13	38.03	56.00	-17.97 QP

AC 120V/60 Hz, Neutral



Trace: 1

Site : CE
 Condition : limit\FCC PART 15.207
 : DFT:Peak
 Project No. : RSHA250310001
 Model : T1
 Phase : N
 Voltage : 120V/60Hz
 Mode : SRD
 Test Equipment : ENV216,ESR3
 Receiver Setting : RBW: 9 kHz, VBW: 30 kHz, Sweep Time: Auto
 Temperature : 23.3°C
 Humidity : 47%
 Atmospheric pressure: 101.7kPa
 Test Engineer : Myles Miao

	Read	Limit	Over				
Freq	Level	Factor	Level	Line			
1	0.381	18.21	20.23	38.44	48.26	-9.82	Average
2	0.381	27.91	20.23	48.14	58.26	-10.12	QP
3	0.411	20.30	20.24	40.54	47.64	-7.10	Average
4	0.411	27.50	20.24	47.74	57.64	-9.90	QP
5	0.540	10.10	20.20	30.30	46.00	-15.70	Average
6	0.540	20.50	20.20	40.70	56.00	-15.30	QP
7	0.797	11.50	20.22	31.72	46.00	-14.28	Average
8	0.797	24.20	20.22	44.42	56.00	-11.58	QP
9	0.893	10.50	20.16	30.66	46.00	-15.34	Average
10	0.893	20.30	20.16	40.46	56.00	-15.54	QP
11	1.593	12.30	20.13	32.43	46.00	-13.57	Average
12	1.593	23.00	20.13	43.13	56.00	-12.87	QP

RF Output Power

Environmental Conditions & Test Information

Test Date:	2025-09-08
Temperature:	27.8 °C
Relative Humidity:	47 %
ATM Pressure:	101.1 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

Frequency (MHz)	Conducted Peak Power (dBm)	Gain (dBi)	EIRP (dBm)	Limit (dBm)
657.5	5.67	-1.38	4.29	13
662	5.61	-1.38	4.23	

Note 1: EIRP (dBm) = Conducted Power (dBm) + Antenna Gain (dBi)

Operating Bandwidth

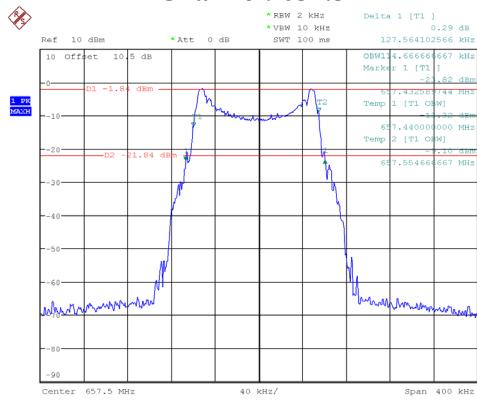
Environmental Conditions & Test Information

Test Date:	2025-09-08
Temperature:	27.8 °C
Relative Humidity:	47 %
ATM Pressure:	101.1 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

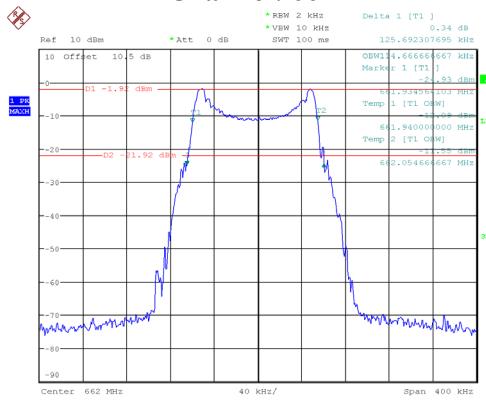
EUT operation mode: Transmitting

Frequency (MHz)	99% Occupied Bandwidth (kHz)	20 dB Bandwidth (kHz)	Limit (kHz)
657.5	114.667	127.564	200
662	114.667	125.692	

Channel: 657.5 MHz



Channel: 662 MHz



ProjectNo.:RSHA250310001 Tester:Neil Zhou
Date: 8.SEP.2025 13:42:43

ProjectNo.:RSHA250310001 Tester:Neil Zhou
Date: 8.SEP.2025 13:46:49

Note: The declared channel bandwidth (B) is 200 kHz.

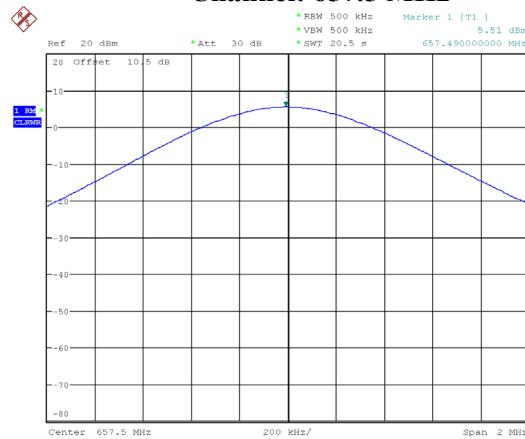
Emission Mask

Environmental Conditions

Test Date:	2025-08-21 - 2025-09-08
Temperature:	25.8 - 27.8 °C
Relative Humidity:	42 - 53 %
ATM Pressure:	100.4 - 101.2 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

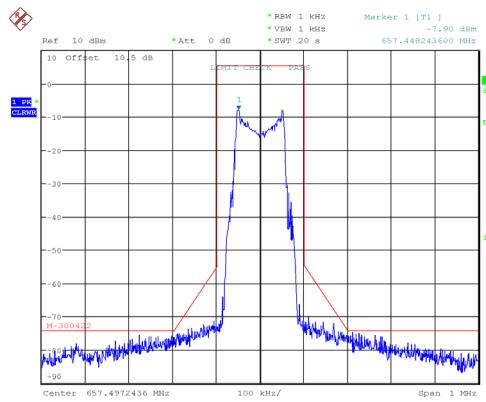
Channel: 657.5 MHz



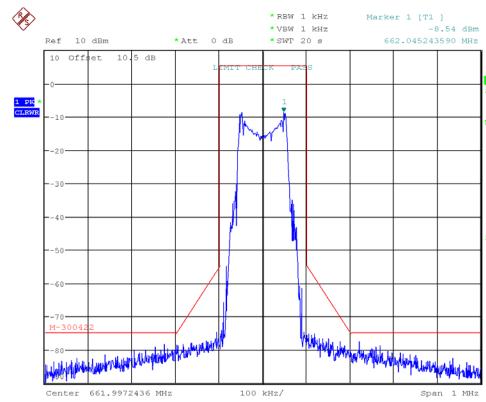
Channel: 662 MHz



ProjectNo.:RSHA250310001 Tester:Neil Zhou
Date: 8.SEP.2025 10:27:10

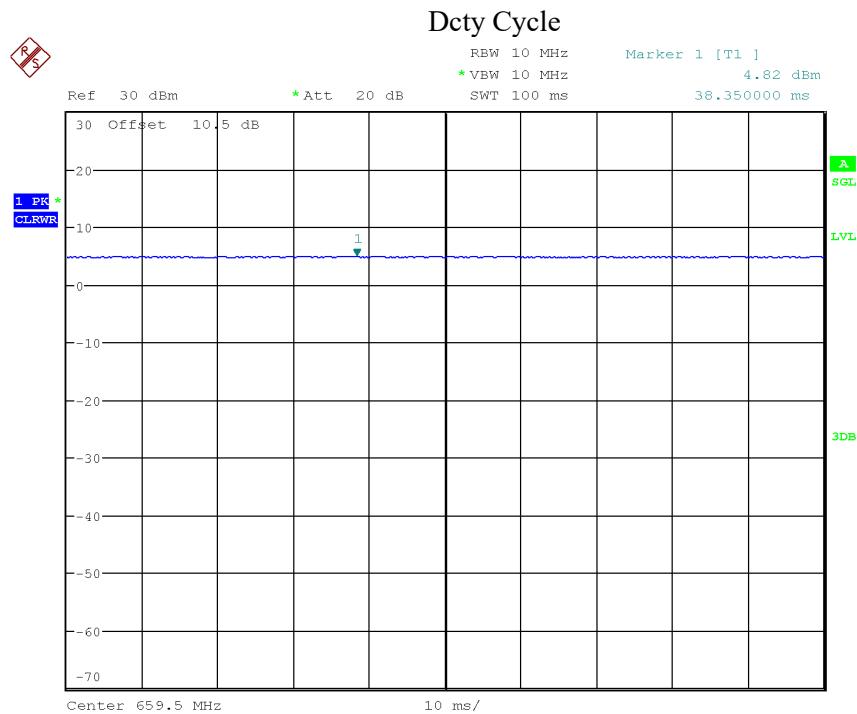


ProjectNo.:RSHA250310001 Tester:Neil Zhou
Date: 8.SEP.2025 10:28:13



ProjectNo.:RSHA250310001 Tester:Neil Zhou
Date: 8.SEP.2025 13:38:42

ProjectNo.:RSHA250310001 Tester:Neil Zhou
Date: 8.SEP.2025 11:58:20



ProjectNo.:RSHA250310001 Tester:Neil Zhou
Date: 21.AUG.2025 16:08:13

Frequency Tolerance

Environmental Conditions & Test Information

Test Date:	2025-05-22
Temperature:	23.7 °C
Relative Humidity:	48 %
ATM Pressure:	101.5 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

Frequency		657.5 MHz		
Temperature (°C)	Voltage (Vdc)	fc (MHz)	Frequency Error (%)	Limit (%)
-20	3.7	657.4972411	-0.0004	±0.005
-10		657.4972422	-0.0004	
0		657.4972429	-0.0004	
10		657.4972467	-0.0004	
20		657.4972436	-0.0004	
30		657.4972418	-0.0004	
40		657.4972425	-0.0004	
50		657.4972484	-0.0004	
20	3.5	657.4972433	-0.0004	
20	4.3	657.4972416	-0.0004	

Frequency		662 MHz		
Temperature (°C)	Voltage (Vdc)	fc (MHz)	Frequency Error (%)	Limit (%)
-20	3.7	661.9972430	-0.0004	±0.005
-10		661.9972413	-0.0004	
0		661.9972438	-0.0004	
10		661.9972445	-0.0004	
20		661.9972436	-0.0004	
30		661.9972415	-0.0004	
40		661.9972432	-0.0004	
50		661.9972419	-0.0004	
20	3.5	661.9972437	-0.0004	
20	4.3	661.9972431	-0.0004	

SPURIOUS EMISSION

Environmental Conditions & Test Information

Test Date:	2025-05-15
Temperature:	22.3 °C
Relative Humidity:	49 %
ATM Pressure:	101.4 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

Frequency (MHz)	Receiver Reading (dB μ V)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
657.5 MHz										
575.99	46.05	304	100	H	-57.63	0.59	-0.96	-59.18	-54	5.18
575.99	42.62	208	150	V	-57.06	0.59	-0.96	-58.61	-54	4.61
656.69	29.07	24	150	H	-66.91	0.60	-1.27	-68.78	-54	14.78
656.69	35.05	259	100	V	-65.58	0.60	-1.27	-67.45	-54	13.45
656.99	34.70	357	100	H	-61.31	0.60	-1.28	-63.19	-54	9.19
656.99	38.48	106	200	V	-62.14	0.60	-1.28	-64.02	-54	10.02
658.03	34.84	256	100	H	-61.30	0.60	-1.29	-63.19	-54	9.19
658.03	38.93	232	200	V	-61.66	0.60	-1.29	-63.55	-54	9.55
658.31	30.58	331	200	H	-65.56	0.60	-1.29	-67.45	-54	13.45
658.31	34.61	4	200	V	-65.98	0.60	-1.29	-67.87	-54	13.87
1315.00	43.52	334	200	H	-70.48	0.81	7.68	-63.61	-30	33.61
1315.00	43.07	312	150	V	-70.93	0.81	7.68	-64.06	-30	34.06
662 MHz										
518.15	39.56	185	150	H	-64.25	0.58	-1.71	-66.54	-54	12.54
518.15	36.88	177	150	V	-64.63	0.58	-1.71	-66.92	-54	12.92
661.18	31.88	293	150	H	-64.56	0.60	-1.32	-66.48	-54	12.48

661.18	36.57	1	100	V	-63.94	0.60	-1.32	-65.86	-54	11.86
661.49	39.38	75	200	H	-57.09	0.60	-1.33	-59.02	-54	5.02
661.49	42.97	153	150	V	-57.53	0.60	-1.33	-59.46	-54	5.46
662.67	38.51	189	200	H	-58.08	0.61	-1.34	-60.03	-54	6.03
662.67	41.71	298	200	V	-58.76	0.61	-1.34	-60.71	-54	6.71
663.55	34.53	277	200	H	-62.15	0.61	-1.35	-64.11	-54	10.11
663.55	37.49	272	100	V	-62.96	0.61	-1.35	-64.92	-54	10.92
1324.00	43.30	105	200	H	-70.72	0.81	7.71	-63.82	-30	33.82
1324.00	42.95	317	200	V	-71.07	0.81	7.71	-64.17	-30	34.17

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 *******