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TEST REPORT

47 CFR Part 15, Subpart C

Report Reference No..... : CTL2506052011-WF05

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Test Firm..... : Shenzhen CTL Testing Technology Co., Ltd.

Address..... : Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road,
Nanshan District, Shenzhen, China 518055

Applicant's name..... : THINKCAR TECH CO., LTD.

Address..... : 2606, building 4, phase II, TiananYungu, Gangtou community,
Bantian, Longgang District, Shenzhen, China

Test specification:

Standard..... : 47 CFR Part 15, Subpart C

Master TRF..... : Dated 2011-01

Test item description..... : Remote Service Terminal for Tyre Maintenance

FCC ID..... : 2AUARVENU701

Trade Mark..... : THINKCAR, MUCAR

Model/Type reference..... : VENU 701

Antenna type..... : loop coil Antenna

Date of receipt of test item..... : Jun 24, 2025

Date of Test Date..... : Jun 24, 2025-Jul 15, 2025

Data of Issue..... : Jul 15, 2025

Result..... : Pass

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TEST REPORT

Test Report No. :	CTL2506052011-WF05	Jul 15, 2025
		Date of issue

Equipment under Test : Remote Service Terminal for Tyre Maintenance

Type / Model(s) : VENU 701

Applicant : **THINKCAR TECH CO., LTD.**

Address : 2606, building 4, phase II, TiananYungu, Gangtou community, Bantian, Longgang District, Shenzhen, China

Manufacturer : **THINKCAR TECH CO., LTD.**

Address : 2606, building 4, phase II, TiananYungu, Gangtou community, Bantian, Longgang District, Shenzhen, China

Test result	Pass *
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The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.

**** Modified History ****

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1. TEST STANDARDS

The tests were performed according to following standards:

[47 CFR Part 15, Subpart C 15.207,15.209, 15.215\(c\)](#)

[ANSI C63.10-2013](#)

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Jun 24, 2025
Testing commenced on	:	Jun 24, 2025
Testing concluded on	:	Jul 15, 2025

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage	:	Input: 5V \equiv 2.5A Battery: 3.8V, 3150mAh
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2.3. Short description of the Equipment under Test (EUT)

A Remote Service Terminal for Tyre Maintenance work frequency range 125kHz.

Insert: Usage of Machine, Place it will be used, Functions For more details, refer to the user' s manual of the EUT.

Serial number: VENU 701

EUT operation mode

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting mode for testing.

2.4. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2AUARVENU701** filing to comply with FCC Part 15, Subpart C Rules.

2.5. Modifications

No modifications were implemented to meet testing criteria.

2.6. Summary of Test Results

The EUT is night light with wireless charger, The test summary of the EUT listed as below:

	Test Standards	Test Result
Electric Field Radiated Emissions	FCC Part 15 C (Section15.209)	PASS
20dB Bandwidth/99% Bandwidth	FCC Part 15 C (Section15.215(c))	PASS
Conducted Emissions	FCC Part 15 C (Section15.207)	PASS

Remark: The measurement uncertainty is not included in the test result.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen CTL Testing Technology Co., Ltd.

Floor 1-A, Baisha Technology Park, No. 3011, Shahexi Road, Nanshan, Shenzhen 518055 China

There is one 3m semi-anechoic chamber and two line conducted labs for final test. The Test Sites meet the requirements in documents ANSI C63.4 and CISPR 32/EN 55032 requirements.

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L7497

Shenzhen CTL Testing Technology Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No. 4343.01

Shenzhen CTL Testing Technology Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

IC Registration No.: 9518B

CAB identifier: CN0041

The 3m alternate test site of Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements with Registration No.: 9518B.

FCC-Registration No.: 399832

Designation No.: CN1216

Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 399832.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	<u>15-35 ° C</u>
Humidity:	<u>30-60 %</u>
Atmospheric pressure:	<u>950-1050mbar</u>

3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen CTL Testing Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CTL laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz~30MH	4.10dB	(1)
Radiated Emission	30~1000MHz	4.08dB	(1)
Radiated Emission	Above 1GHz	4.32dB	(1)
Conducted Disturbance	0.15~30MHz	3.20dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

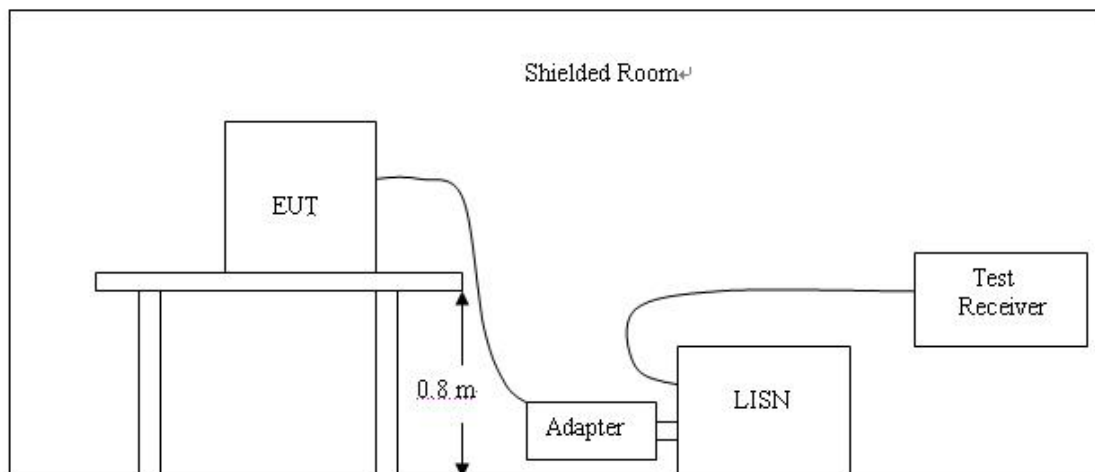
3.5. Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
LISN	R&S	ESH2-Z5	860014/010	2025/04/29	2026/04/28
Double cone logarithmic antenna	Schwarzbeck	VULB 9168	824	2023/02/13	2026/02/12
EMI Test Receiver	R&S	ESCI	1166.5950.03	2025/04/29	2026/04/28
Spectrum Analyzer	Keysight	N9020A	MY53420874	2025/04/29	2026/04/28
Active Loop Antenna	Da Ze	ZN30900A	/	2024/04/30	2027/04/29
Spectrum Analyzer	RS	FSP	1164.4391.38	2024/04/30	2027/04/29
9kHz-40GHz coaxial line chamber 2	/	Z108-NJ-NJ-9.5M	21121049	2024/12/01	2025/11/30
Software:					
Name of Software:			Version:		
ES-K1			V1.71		

4. TEST CONDITIONS AND RESULTS

4.1. AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

- 1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2013.
- 2 Support equipment, if needed, was placed as per ANSI C63.10-2013
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013
- 4 The EUT received DC5V power from the adapter, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5 All support equipments received AC power from a second LISN, if any.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

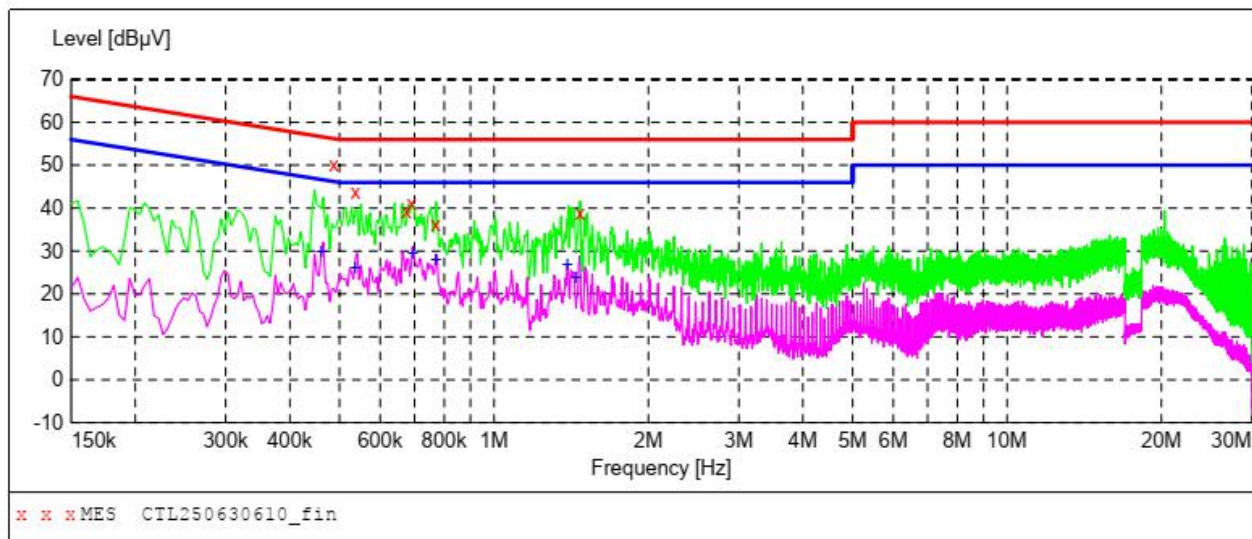
TEST RESULTS

Test Mode 1

L

SCAN TABLE: "Voltage (9K-30M) FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT: "CTL250630610_fin"**

6/30/2025 6:05PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.487500	50.00	10.0	56	6.2	QP	L1	GND
0.537000	43.80	10.0	56	12.2	QP	L1	GND
0.676500	39.10	10.0	56	16.9	QP	L1	GND
0.690000	41.00	10.0	56	15.0	QP	L1	GND
0.771000	36.30	10.0	56	19.7	QP	L1	GND
1.473000	38.70	10.1	56	17.3	QP	L1	GND

MEASUREMENT RESULT: "CTL250630610_fin2"

6/30/2025 6:05PM

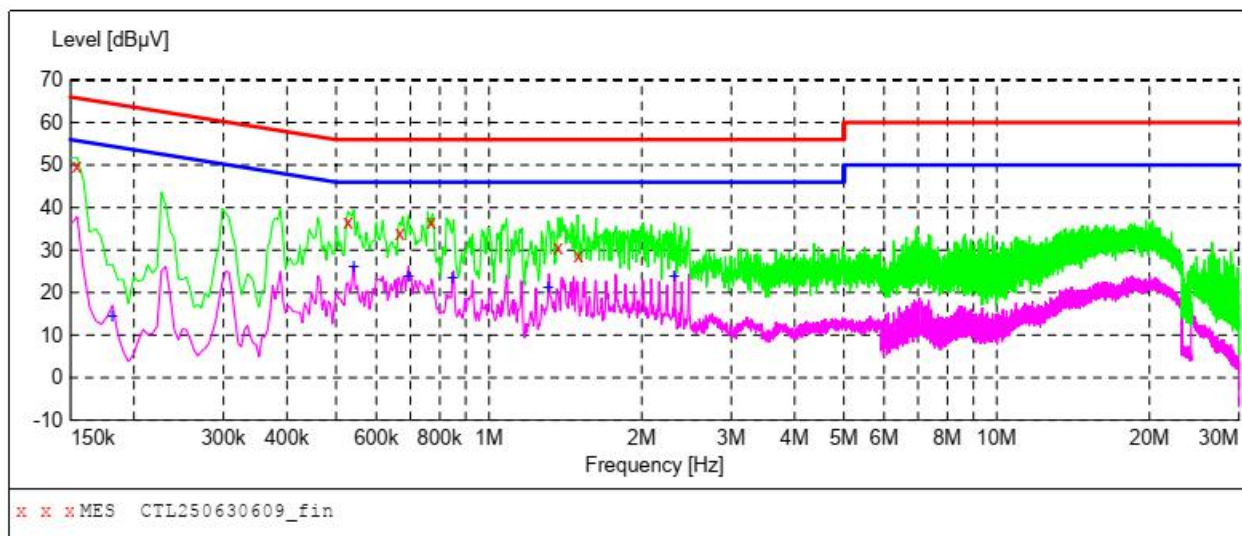
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.460500	29.90	10.0	47	16.8	AV	L1	GND
0.537000	26.10	10.0	46	19.9	AV	L1	GND
0.694500	29.50	10.0	46	16.5	AV	L1	GND
0.771000	27.80	10.0	46	18.2	AV	L1	GND
1.392000	26.90	10.1	46	19.1	AV	L1	GND
1.446000	23.90	10.1	46	22.1	AV	L1	GND

Test Mode 1

N

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT: "CTL250630609_fin"**

6/30/2025 6:02PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.154500	49.80	10.0	66	16.0	QP	N	GND
0.528000	36.80	10.0	56	19.2	QP	N	GND
0.667500	33.80	10.0	56	22.2	QP	N	GND
0.771000	36.70	10.0	56	19.3	QP	N	GND
1.369500	30.70	10.1	56	25.3	QP	N	GND
1.500000	28.60	10.1	56	27.4	QP	N	GND

MEASUREMENT RESULT: "CTL250630609_fin2"

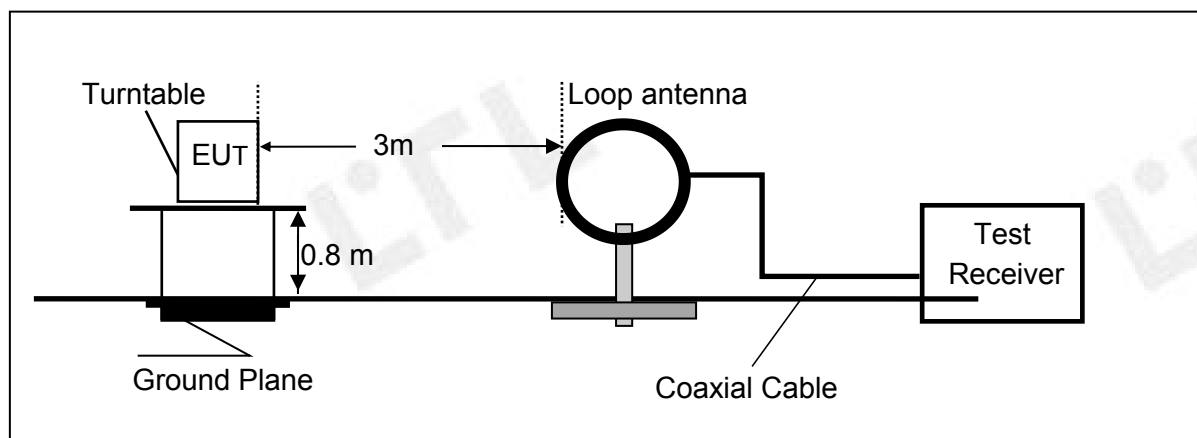
6/30/2025 6:02PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.181500	14.40	10.0	54	40.0	AV	N	GND
0.541500	26.10	10.0	46	19.9	AV	N	GND
0.694500	23.70	10.0	46	22.3	AV	N	GND
0.847500	23.50	10.1	46	22.5	AV	N	GND
1.311000	21.30	10.1	46	24.7	AV	N	GND
2.319000	24.00	10.1	46	22.0	AV	N	GND

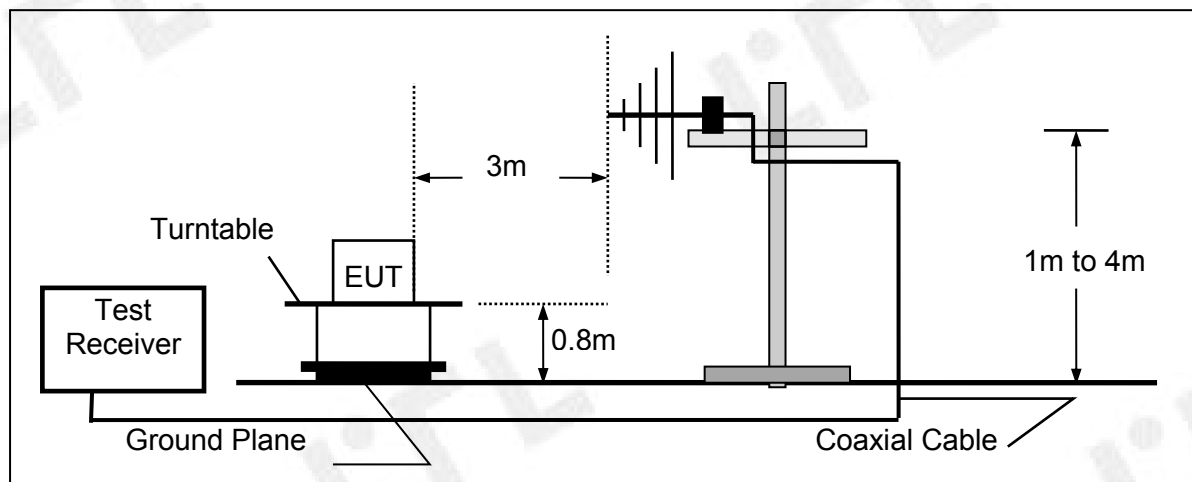
4.2. Radiated Emission

TEST CONFIGURATION

Radiated Emission Test Set-Up
Frequency range 9kHz – 30MHz



Frequency range 30MHz – 1000MHz



TEST PROCEDURE

- 1 The EUT was placed on a turn table which is 0.8m above ground plane.
- 2 Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT
- 3 And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 4 Repeat above procedures until all frequency measurements have been completed.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

For example

Frequency (MHz)	FS (dBμV/m)	RA (dBμV/m)	AF (dB)	CL (dB)	AG (dB)	Transd (dB)
300.00	36.8	58.1	12.4	1.5	31.90	-18.0

$$\text{Transd} = AF + CL - AG$$

RADIATION LIMIT

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

9k~30MHz:

Frequency Range (MHz)	E-field Strength Limit @ 30m (mV/m)	E-field Strength Limit @ 3m (dBμV/m)
0.009-0.490	2400/F(kHz)	129-94
0.490-1.705	24000/F(kHz)	74-63
1.705-30	30	70
Note: Where the limits have been defined at one distance, and a signal level measured at another, the limits have been extrapolated using the following formula: $\text{Extrapolation(dB)} = 40\log_{10}(\text{Measurement Distance/Specification Distance})$		

Note:

- (1) The tighter limit shall apply at the edge between two frequency bands.
- (2) dBuV/m = 20*log(uV/m)

30M~1GHz:

Frequency (MHz)	Distance (Meters)	Radiated (dB μ V/m)	Radiated (μ V/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

Note:

- (1) The tighter limit shall apply at the edge between two frequency bands.
- (2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

TEST RESULTS**WORST-CASE RADIATED EMISSION BELOW 30 MHz**

Test Mode 1

X



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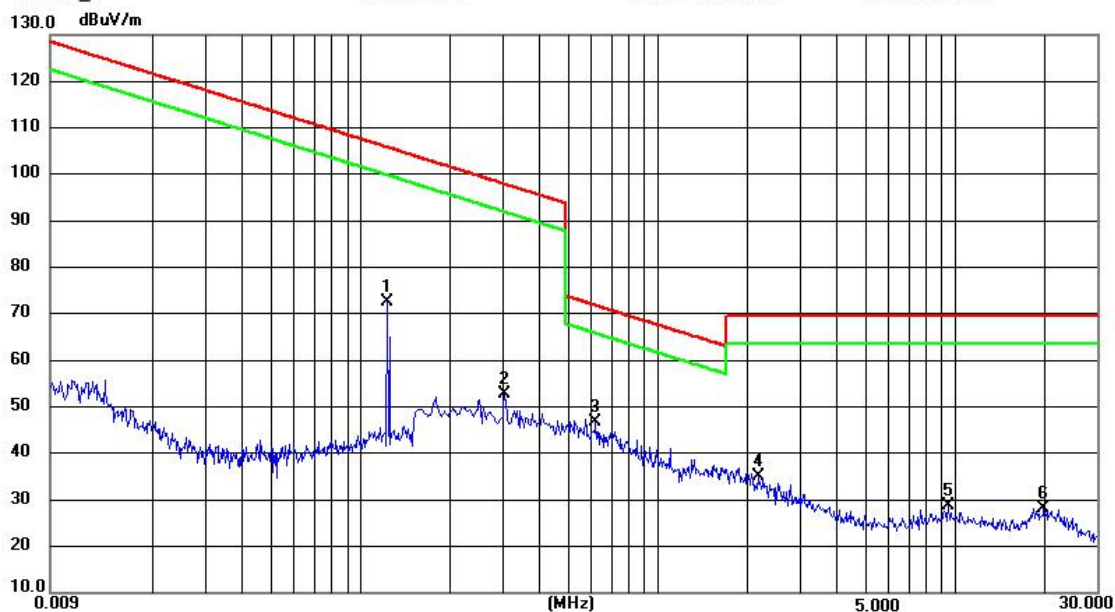
Radiated Emission Measurement

File :RF_6

Data :#1471

Date: 2025/06/30

Time: 22:27:36



Site LAB Chamber 2

Limit: FCC Part 15 9K-30MHZ-2

EUT:

M/N:

Mode: 125KHz

Note: CTL2506052011-WF

Polarization: **Horizontal**

Power:

Distance: 3m

Temperature: 25(C)

Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	0.1226	50.84	21.73	72.57	105.83	33.26	peak			P	
2	0.3042	29.42	23.47	52.89	97.94	45.05	peak			P	
3	0.6161	25.96	20.71	46.67	71.81	25.14	peak			P	
4	2.1662	17.83	17.32	35.15	69.54	34.39	peak			P	
5	9.4814	9.19	19.55	28.74	69.54	40.80	peak			P	
6	19.8360	6.84	21.21	28.05	69.54	41.49	peak			P	

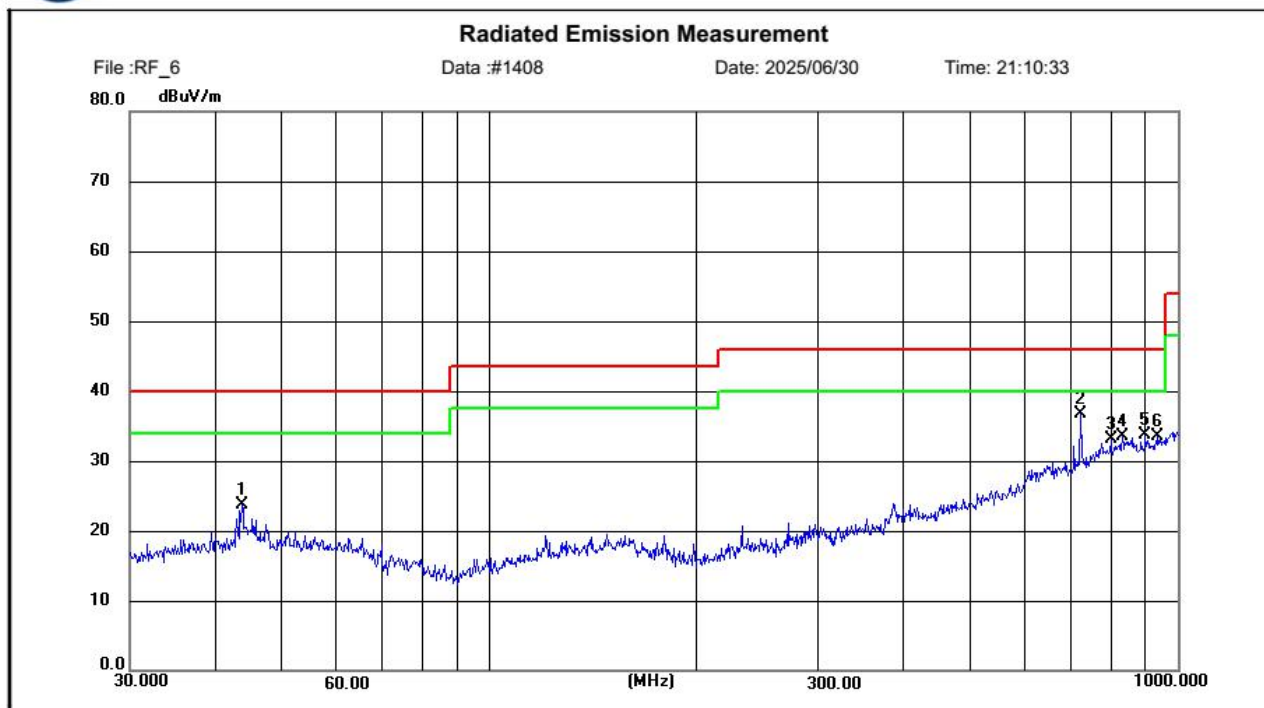
Radiated Emission Test Data 30-1000MHz:

Test Mode 1

Horizontal



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Site LAB Chamber 2

Polarization: **Horizontal**

Temperature: 25(C)

Limit: FCC Part15 RE-Class C_30-1000MHz

Power:

Humidity: 50 %

EUT:

Distance: 3m

M/N:

Mode: 125KHz

Note: CTL2506052011-WF

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	43.7735	9.21	14.40	23.61	40.00	16.39	peak	100	205	P	
2	722.3588	13.27	23.39	36.66	46.00	9.34	peak	100	234	P	
3	798.9797	7.49	25.62	33.11	46.00	12.89	peak	100	32	P	
4	831.1284	7.59	25.90	33.49	46.00	12.51	peak	100	249	P	
5	899.3586	7.10	26.59	33.69	46.00	12.31	peak	100	293	P	
6	937.1880	6.32	27.09	33.41	46.00	12.59	peak	100	293	P	

Test Mode 1

Vertical



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Radiated Emission Measurement

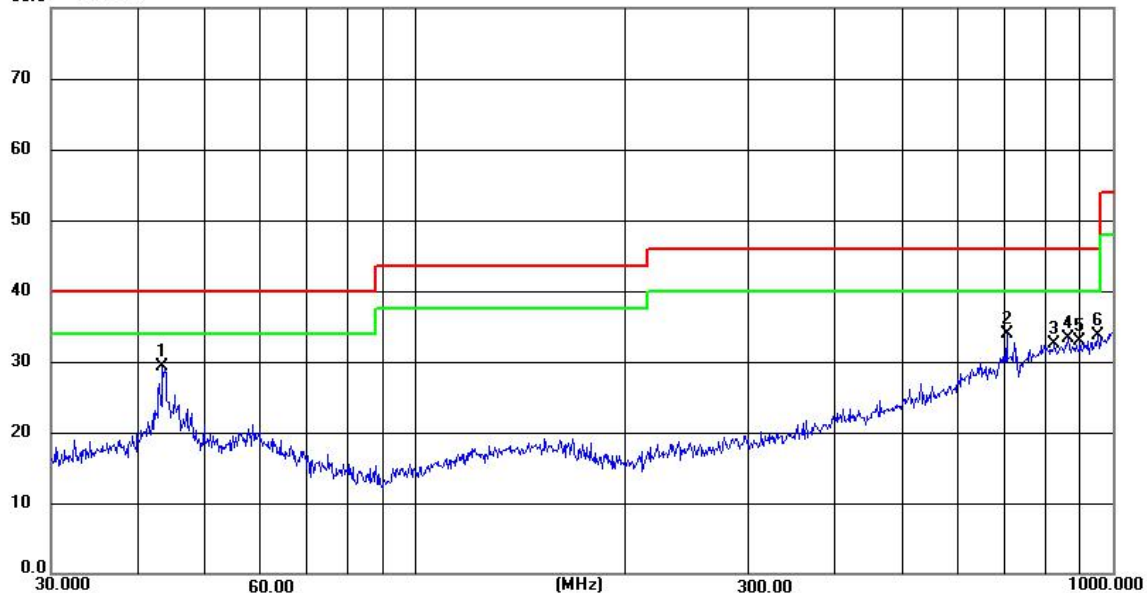
File :RF_6

Data :#1409

Date: 2025/06/30

Time: 21:11:24

80.0 dBuV/m



Site LAB Chamber 2

Limit: FCC Part15 RE-Class C_30-1000MHz

EUT:

M/N:

Mode: 125KHz

Note: CTL2506052011-WF

Polarization: **Vertical**

Power:

Distance: 3m

Temperature: 25(C)

Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	43.4867	14.95	14.35	29.30	40.00	10.70	peak	100	168	P	
2	705.4619	11.18	22.70	33.88	46.00	12.12	peak	100	10	P	
3	826.0439	6.65	25.89	32.54	46.00	13.46	peak	100	139	P	
4	864.5707	6.78	26.45	33.23	46.00	12.77	peak	100	341	P	
5	898.5706	6.39	26.56	32.95	46.00	13.05	peak	100	154	P	
6	953.3465	6.56	27.12	33.68	46.00	12.32	peak	100	312	P	

4.3. 20dB Bandwidth/99% Bandwidth

TEST CONFIGURATION



TEST PROCEDURE

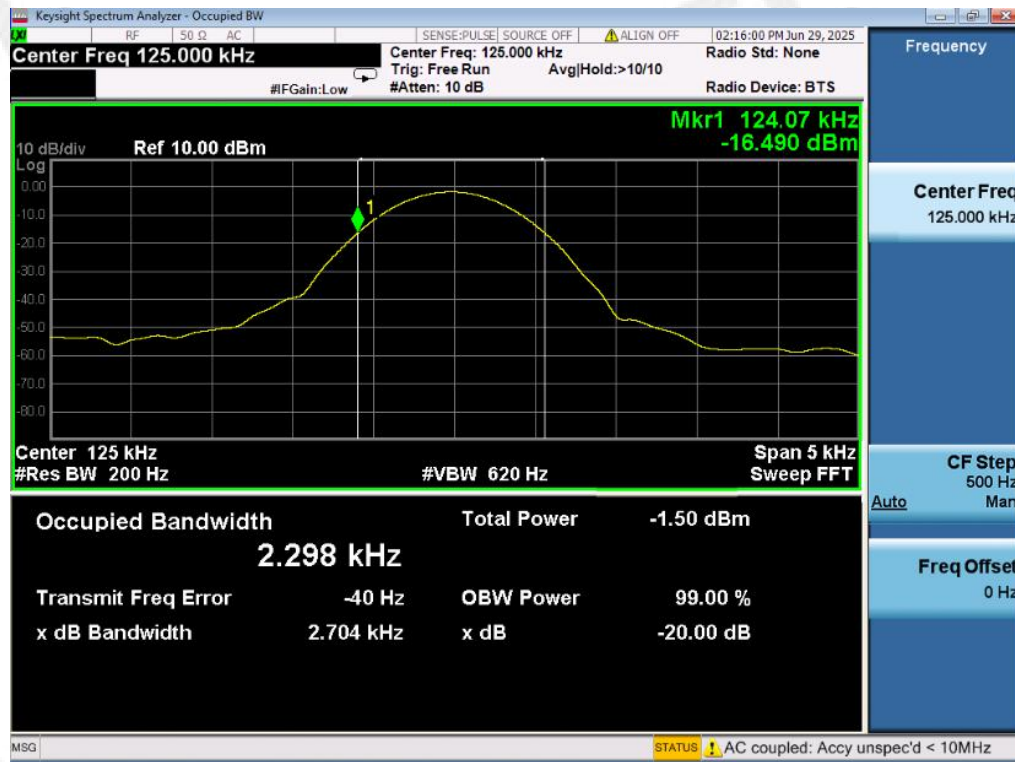
The 20dB bandwidth is measured with a spectrum analyzer connected via a receive antenna placed near the EUT while the EUT is operating in transmission mode.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

LIMIT

N/A

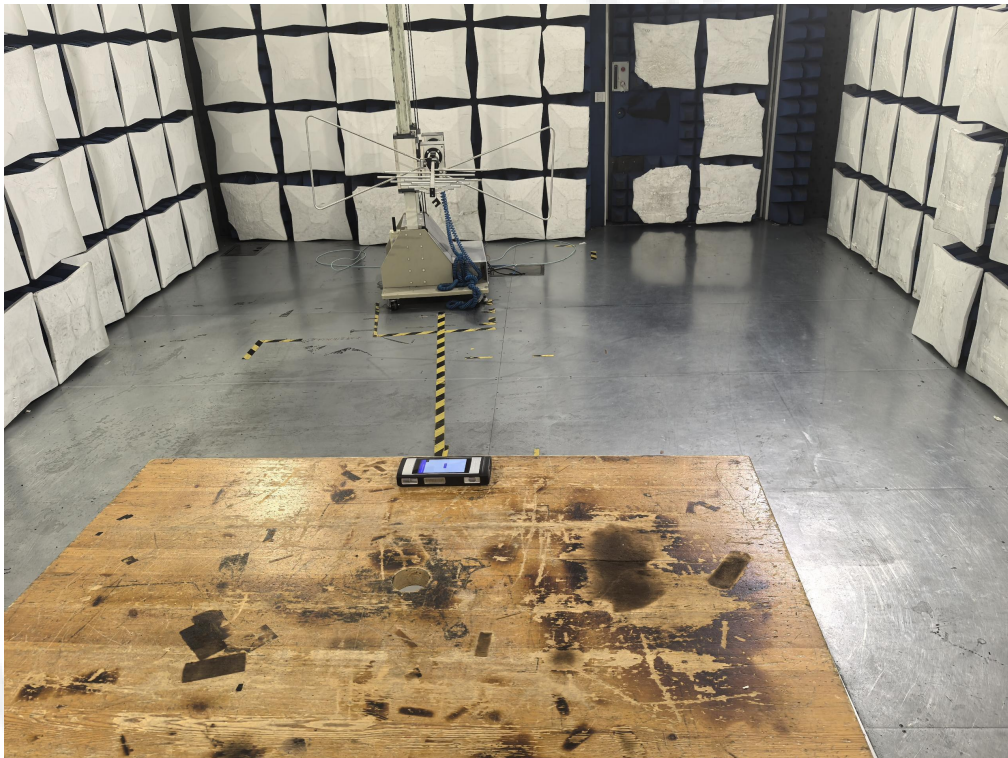
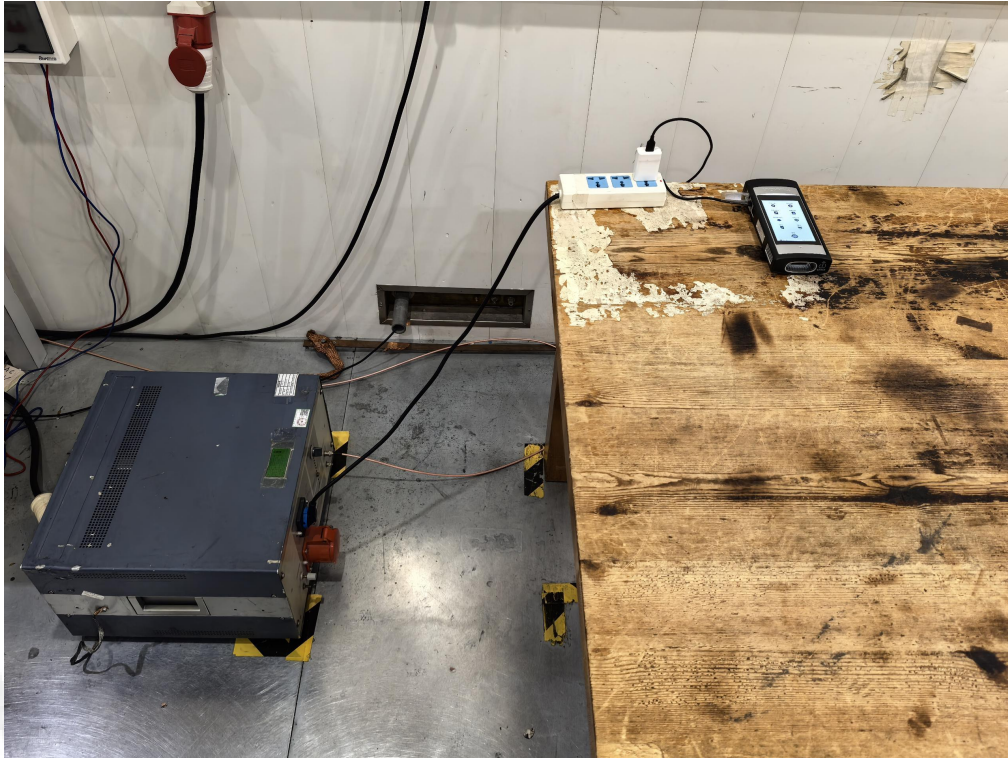
TEST RESULTS

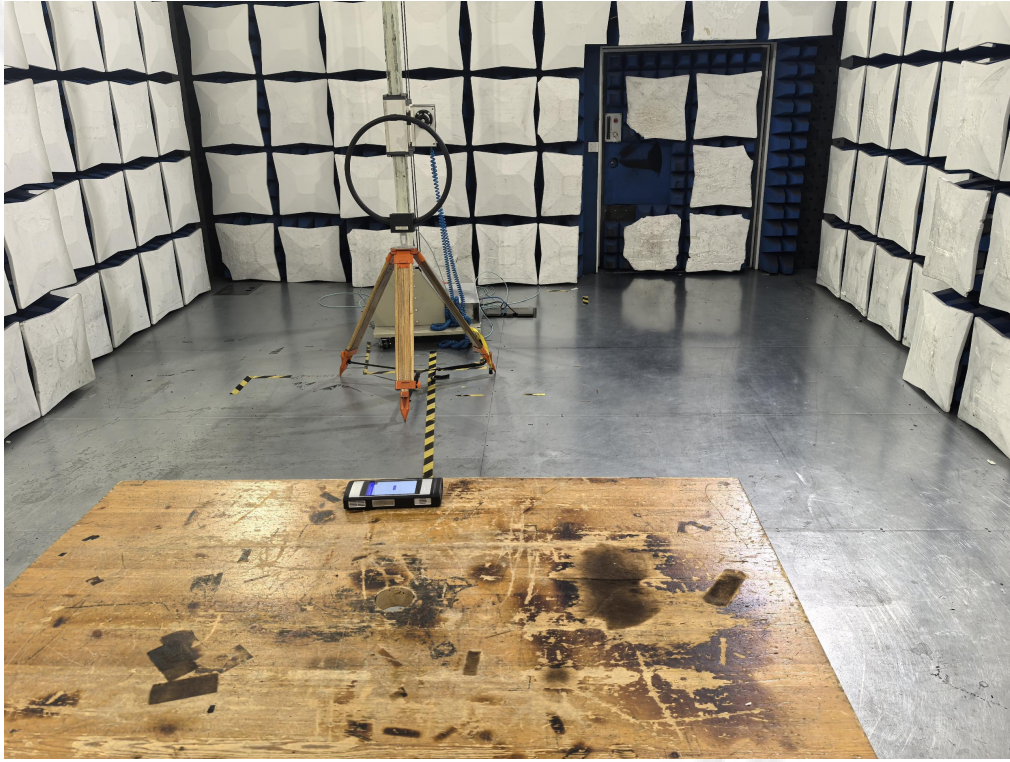


Frequency (kHz)	20dB Bandwidth (kHz)	Limit(kHz)	Verdict
125	2.704	/	PASS

Note: Because the measured signal is CW-like, adjusting the RBW per C63.10 would not be practical since measurement bandwidth will always follow the RBW. The RBW is set to 200 Hz to perform the occupied bandwidth test.

5. Test Setup Photos of the EUT





6. External and Internal Photos of the EUT

Reference to the test report No. CTL2506052011-WF01.

.....**End of Report**.....