TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2AV7NTSM7-1000	
Test Report No..... :	TCT240807E910	
Date of issue..... :	Aug. 13, 2024	
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	GUANGZHOU RANTION TECHNOLOGY CO., LTD.	
Address..... :	Room 7002 and 7003, 7th Floor, Digital Entertainment, Industrial Park, Greater Bay Area, No.28, Huangpu Park West Road, Huangpu District, Guangzhou, China	
Manufacturer's name ... :	GUANGZHOU RANTION TECHNOLOGY CO., LTD.	
Address..... :	Room 7002 and 7003, 7th Floor, Digital Entertainment, Industrial Park, Greater Bay Area, No.28, Huangpu Park West Road, Huangpu District, Guangzhou, China	
Factory's name 1 ..... :	Quanzhou Moyin Musical Instrument Co., Ltd.	
Address 1..... :	No.2 Ningmei Road, Food Park, Jinjiang Economic Development Zone, Quanzhou City, Fujian Province, China 362200	
Factory's name 2 ..... :	Jiangmen Duole Technology Co., Ltd.	
Address 2..... :	Building9, No.52, BaotangRoad, TangxiaTown, PengjiangDistrict, JiangmenCity	
Standard(s) ..... :	FCC CFR Title 47 Part 15 Subpart C Section 15.247 FCC KDB 558074 D01 15.247 Meas Guidance v05r02 ANSI C63.10:2013	
Product Name..... :	Electronic Drum Set	
Trade Mark ..... :	DONNER	
Model/Type reference..... :	Refer to model list of page 3	
Rating(s)..... :	Refer to EUT description of page 3	
Date of receipt of test item ..... :	Aug. 07, 2024	
Date (s) of performance of test..... :	Aug. 07, 2024 ~ Aug. 13, 2024	
Tested by (+signature) ... :	Onnado YE	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	

General disclaimer:

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1. General Product Information

1.1. EUT description

Product Name.....:	Electronic Drum Set
Model/Type reference.....:	TSM7-1000
Sample Number.....:	TCT240807E909-0101
Bluetooth Version .....:	V5.3 (This report is for BLE)
Operation Frequency.....:	2402MHz~2480MHz
Channel Separation.....:	2MHz
Data Rate.....:	LE 1M PHY, LE 2M PHY
Number of Channel.....:	40
Modulation Type.....:	GFSK
Antenna Type.....:	PCB Antenna
Antenna Gain.....:	0.59dBi
Rating(s).....:	Adapter 1 Information: Model: MS-V2000R120-024Q0-US Input: AC 100-240V, 50/60Hz, 0.7A max Output: DC 12.0V, 2.0A Adapter 2 Information: Model: HCX2401-1202000U Input: AC 100-240V, 50/60Hz, 0.8A Output: DC 12V, 2A

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

No.	Model No.	Tested with
1	TSM7-1000	☒
Other models	TSM7-1000K, TSM7-1000KC, TSM7-1000KD, TSM7-1000KCD, TSM7-1000KL, TSM7-1000KLC, TSM7-1000KLD, TSM7-1000KLCD, TSM7-1000KSE, TSM7-1000KSEC, TSM7-1000KSED, TSM7-1000KSECD, TSM7-1000KX, TSM7-1000KXC, TSM7-1000KXD, TSM7-1000KXCD, TSM7-1000KM, TSM7-1000KMC, TSM7-1000KMD, TSM7-1000KMCD, TSM7-1000KP, TSM7-1000KPC, TSM7-1000KPD, TSM7-1000KPCD	☐
Note: TSM7-1000 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model name. So the test data of TSM7-1000 can represent the remaining models.		

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1.3. Operation Frequency

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
…	…	…	…	…	…	…	…
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz
Remark: Channel 0, 19 & 39 have been tested.							

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2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203/§15.247 (c)	PASS
AC Power Line Conducted Emission	§15.207	PASS
Conducted Peak Output Power	§15.247 (b)(3)	PASS
6dB Emission Bandwidth	§15.247 (a)(2)	PASS
Power Spectral Density	§15.247 (e)	PASS
Band Edge	§15.247(d)	PASS
Spurious Emission	§15.205/§15.209	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

5. This report is issued as a supplemental report to original FCC ID: 2AV7NTSM7-1000, the difference is changing trade mark, product name and add adapter in this report, conducted emission and radiated emission had been re-tested and only its data was presented in this report.

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3. General Information

3.1. Test environment and mode

Operating Environment:		
Condition	Conducted Emission	Radiated Emission
Temperature:	22.7 °C	25.1 °C
Humidity:	52 % RH	53 % RH
Atmospheric Pressure:	1010 mbar	1010 mbar
Test Software:		
Software Information:	BT FCC Tool V2.24	
Power Level:	Default	
Test Mode:		
Engineer mode:	Keep the EUT in continuous transmitting by select channel and modulations with 120V/60Hz	
Remark:	The both adapters (adapter 1 and adapter 2) were tested, and the worst result (adapter 1) is recorded.	
The sample was placed 0.1m for the measurement below & above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case (Z axis) are shown in Test Results of the following pages.		

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

4. Facilities and Accreditations

4.1. Facilities

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

- FCC - Registration No.: 645098

  SHENZHEN TONGCE TESTING LAB

  Designation Number: CN1205

  The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

  SHENZHEN TONGCE TESTING LAB

  CAB identifier: CN0031

  The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4.3. Measurement Uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB

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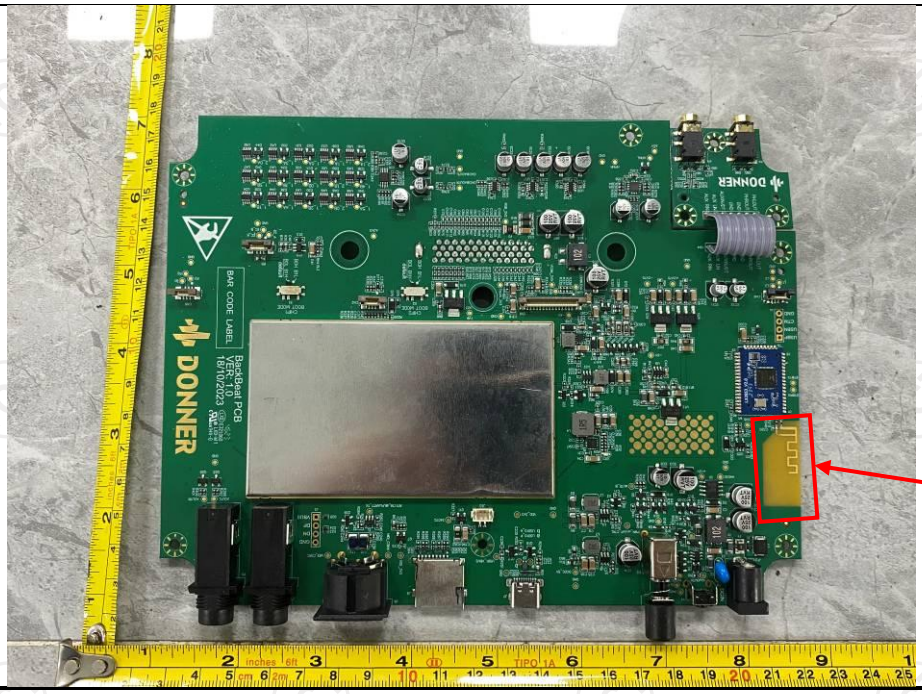
5. Test Results and Measurement Data

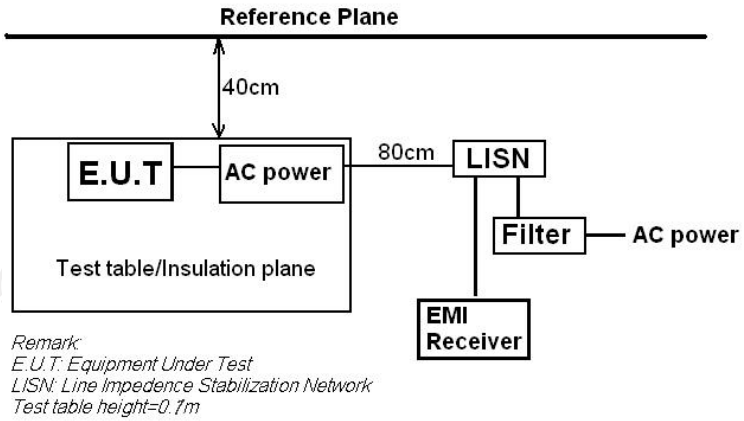
5.1. Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: 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, 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. 15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
E.U.T Antenna:	
The Bluetooth antenna is PCB antenna which permanently attached, and the best case gain of the antenna is 0.59dBi.	



5.2. Conducted Emission

5.2.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Frequency Range:</td><td>150 kHz to 30 MHz</td></tr>
<tr><td>Receiver setup:</td><td>RBW=9 kHz, VBW=30 kHz, Sweep time=auto</td></tr>
<tr><td>Limits:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
</td></tr>
<tr><td>Test Setup:</td><td> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.7m</td></tr>
<tr><td>Test Mode:</td><td>Transmitting Mode</td></tr>
<tr><td>Test Procedure:</td><td>1. The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.</td></tr>
<tr><td>Test Result:</td><td>PASS</td></tr>
</table>

5.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCI3	100898	Jun. 26, 2025
LISN	Schwarzbeck	NSLK 8126	8126453	Jan. 31, 2025
Attenuator	N/A	10dB	164080	Jun. 26, 2025
Line-5	TCT	CE-05	/	Jun. 26, 2025
EMI Test Software	EZ_EMC	EMEC-3A1	1.1.4.2	/

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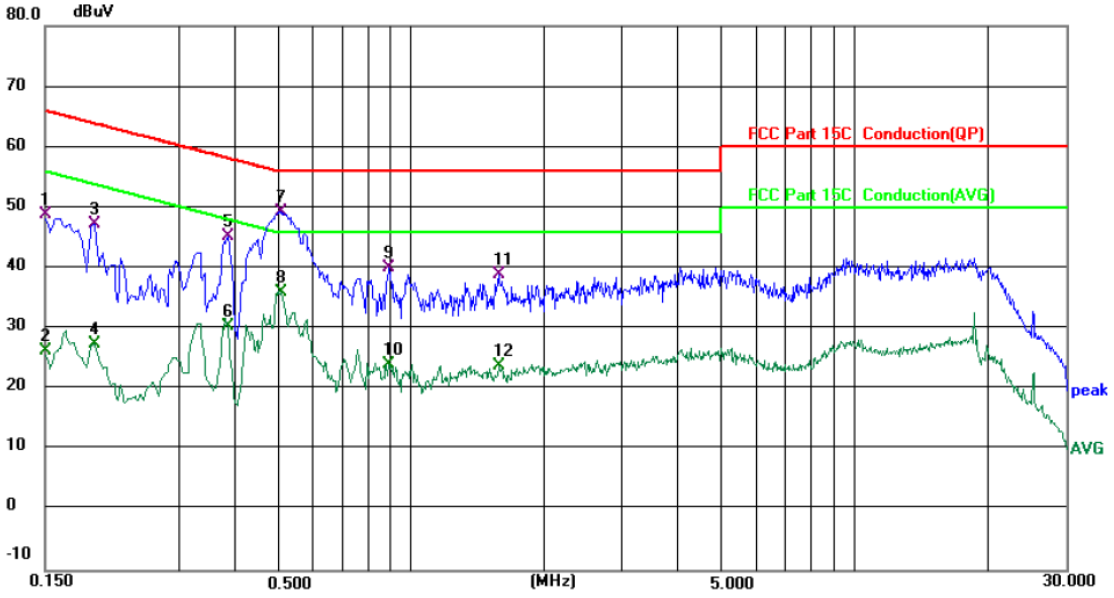
5.2.3. Test data

Please refer to following diagram for individual

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room | Phase: *L1* | Temperature: 22.7 (℃) | Humidity: 52 %

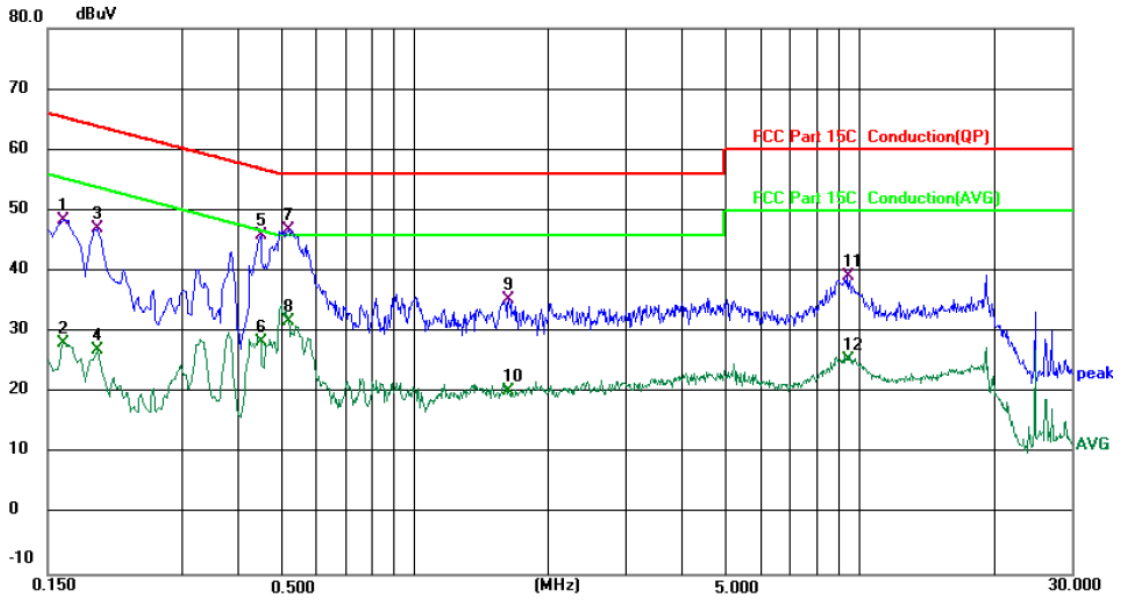
Limit: FCC Part 15C Conduction(QP) | Power: AC 120 V/60 Hz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	39.11	9.67	48.78	66.00	-17.22	QP	
2		0.1500	16.63	9.67	26.30	56.00	-29.70	AVG	
3		0.1940	37.69	9.65	47.34	63.86	-16.52	QP	
4		0.1940	17.78	9.65	27.43	53.86	-26.43	AVG	
5		0.3860	35.15	10.04	45.19	58.15	-12.96	QP	
6		0.3860	20.28	10.04	30.32	48.15	-17.83	AVG	
7	*	0.5100	39.18	10.18	49.36	56.00	-6.64	QP	
8		0.5100	25.86	10.18	36.04	46.00	-9.96	AVG	
9		0.8940	29.54	10.62	40.16	56.00	-15.84	QP	
10		0.8940	13.36	10.62	23.98	46.00	-22.02	AVG	
11		1.5820	29.09	9.80	38.89	56.00	-17.11	QP	
12		1.5820	14.01	9.80	23.81	46.00	-22.19	AVG	

Note:

Freq. = Emission frequency in MHz
Reading level (dBµV) = Receiver reading
Corr. Factor (dB) = LISN factor + Cable loss
Measurement (dBµV) = Reading level (dBµV) + Corr. Factor (dB)
Limit (dBµV) = Limit stated in standard
Margin (dB) = Measurement (dBµV) – Limits (dBµV)
Q.P. =Quasi-Peak
AVG =average
** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz*

Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room | Phase: N | Temperature: 22.7 (℃) | Humidity: 52 %

Limit: FCC Part 15C Conduction(QP) | Power: AC 120 V/60 Hz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1620	38.67	9.65	48.32	65.36	-17.04	QP	
2		0.1620	18.53	9.65	28.18	55.36	-27.18	AVG	
3		0.1940	37.44	9.63	47.07	63.86	-16.79	QP	
4		0.1940	17.46	9.63	27.09	53.86	-26.77	AVG	
5		0.4500	35.76	10.09	45.85	56.88	-11.03	QP	
6		0.4500	18.35	10.09	28.44	46.88	-18.44	AVG	
7	*	0.5220	36.71	10.17	46.88	56.00	-9.12	QP	
8		0.5220	21.48	10.17	31.65	46.00	-14.35	AVG	
9		1.6300	25.66	9.76	35.42	56.00	-20.58	QP	
10		1.6300	10.53	9.76	20.29	46.00	-25.71	AVG	
11		9.4459	28.83	10.30	39.13	60.00	-20.87	QP	
12		9.4459	15.20	10.30	25.50	50.00	-24.50	AVG	

Note1:

Freq. = Emission frequency in MHz

Reading level (dBμV) = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)

Limit (dBμV) = Limit stated in standard

Margin (dB) = Measurement (dBμV) – Limits (dBμV)

Q.P. =Quasi-Peak

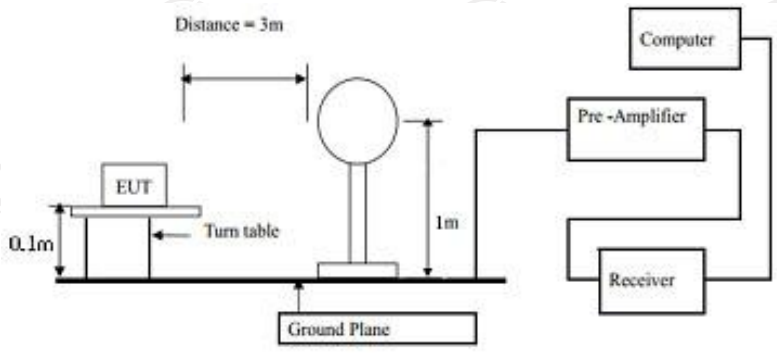
AVG =average

** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.*

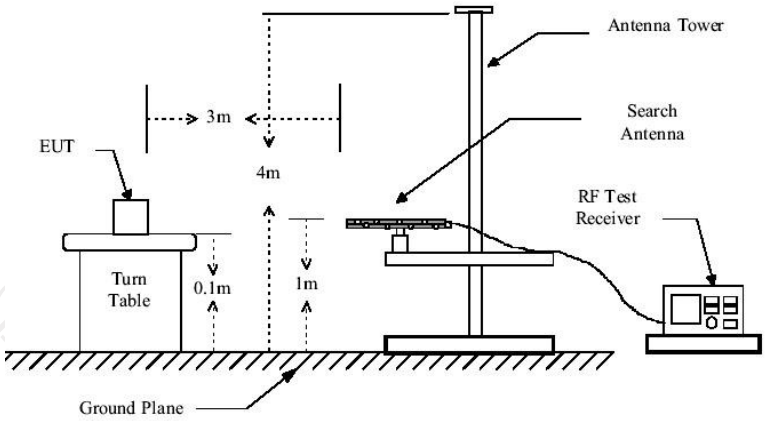
Note2: *Speed for 1M and 2M modulations of EUT have been tested, but the test data only show the worst case in this report, and we found the worst case is 1M speed modulation. Measurements were conducted in all three channels (high, middle, low), and the worst case Mode (Middle channel) was submitted only.*

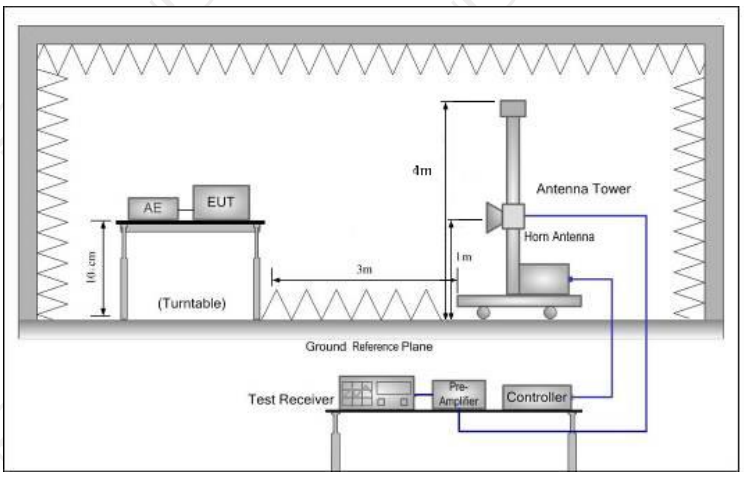
5.3. Radiated Spurious Emission Measurement

5.3.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Frequency Range:</td><td>9 kHz to 25 GHz</td></tr>
<tr><td>Measurement Distance:</td><td>3 m</td></tr>
<tr><td>Antenna Polarization:</td><td>Horizontal & Vertical</td></tr>
<tr><td>Operation mode:</td><td>Refer to item 3.1</td></tr>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>9kHz- 150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>1kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>30kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Frequency</td><td>Field Strength (microvolts/meter)</td><td>Measurement Distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(KHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(KHz)</td><td>30</td></tr>
<tr><td>1.705-30</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100</td><td>3</td></tr>
<tr><td>88-216</td><td>150</td><td>3</td></tr>
<tr><td>216-960</td><td>200</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
<table>
<tr><td>Frequency</td><td>Field Strength (microvolts/meter)</td><td>Measurement Distance (meters)</td><td>Detector</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>500</td><td>3</td><td>Average</td></tr>
<tr><td>5000</td><td>3</td><td>Peak</td></tr>
</table>
</td></tr>
<tr><td>Test setup:</td><td>For radiated emissions below 30MHz
 

30MHz to 1GHz</td></tr>
</table>

<table>
<tr>
<td></td>
<td>


Above 1GHz


</td>
</tr>
<tr>
<td>Test Procedure:</td>
<td>1. For the radiated emission test below 1GHz:
Place the EUT on a nonconductive surface at 0.1 m above the ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.
For the radiated emission test above 1GHz:
Place the EUT on a nonconductive surface at 0.1 m above the ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum</td>
</tr>
</table>

	signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. 2. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 3. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 4. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=120 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for f >1 GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test mode:	Refer to section 3.1 for details
Test results:	PASS

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5.3.2. Test Instruments

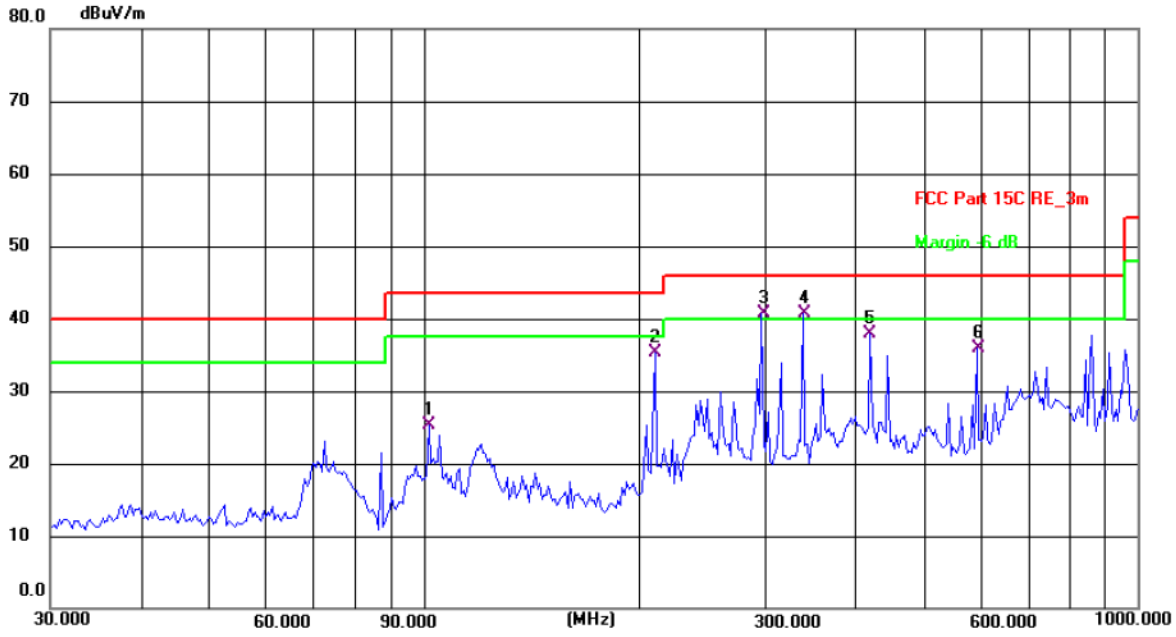
Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCI7	100529	Jan. 31, 2025
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025
Pre-amplifier	HP	8447D	2727A05017	Jun. 26, 2025
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	Jan. 31, 2025
Pre-amplifier	SKET	LNPA_1840G-50	SK202109203500	Jan. 31, 2025
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 26, 2025
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Feb. 02, 2025
Coaxial cable	SKET	RE-03-D	/	Jun. 26, 2025
Coaxial cable	SKET	RE-03-M	/	Jun. 26, 2025
Coaxial cable	SKET	RE-03-L	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-D	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-M	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-L	/	Jun. 26, 2025
Antenna Mast	Keleto	RE-AM	/	/
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	/

5.3.3. Test Data

Please refer to following diagram for individual

Below 1GHz

Horizontal:

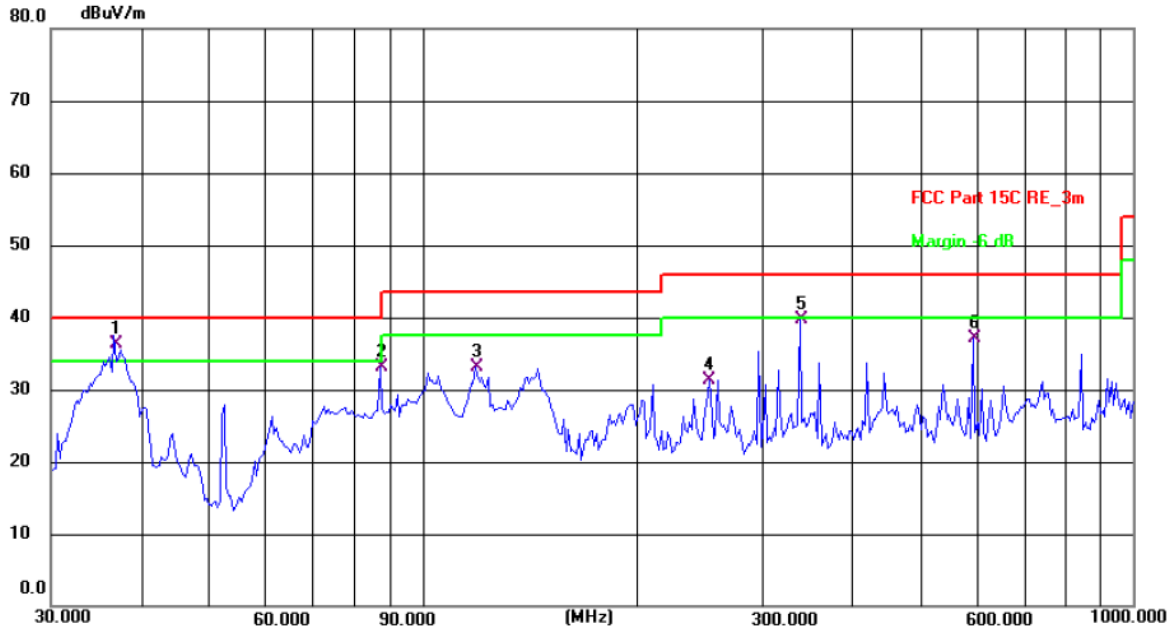


Site: 3m Anechoic Chamber1 Polarization: *Horizontal* Temperature: 25.1(C) Humidity: 53 %

Limit: FCC Part 15C RE_3m Power: AC 120 V/60 Hz

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	101.6443	40.48	-15.17	25.31	43.50	-18.19	QP	P	
2	210.7860	50.29	-15.08	35.21	43.50	-8.29	QP	P	
3 !	297.2241	51.52	-10.90	40.62	46.00	-5.38	QP	P	
4 *	339.5888	50.89	-10.17	40.72	46.00	-5.28	QP	P	
5	422.0577	46.46	-8.61	37.85	46.00	-8.15	QP	P	
6	595.1327	41.10	-5.11	35.99	46.00	-10.01	QP	P	

Vertical:



Site: 3m Anechoic Chamber1 Polarization: *Vertical* Temperature: 25.1(C) Humidity: 53 %

Limit: FCC Part 15C RE_3m Power: AC 120 V/60 Hz

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	36.7662	48.53	-12.30	36.23	40.00	-3.77	QP	P	
2	87.1117	49.67	-16.56	33.11	40.00	-6.89	QP	P	
3	118.6013	46.73	-13.58	33.15	43.50	-10.35	QP	P	
4	252.9481	44.26	-13.01	31.25	46.00	-14.75	QP	P	
5	339.5888	49.87	-10.17	39.70	46.00	-6.30	QP	P	
6	595.1329	42.13	-5.11	37.02	46.00	-8.98	QP	P	

Note: *1. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported*

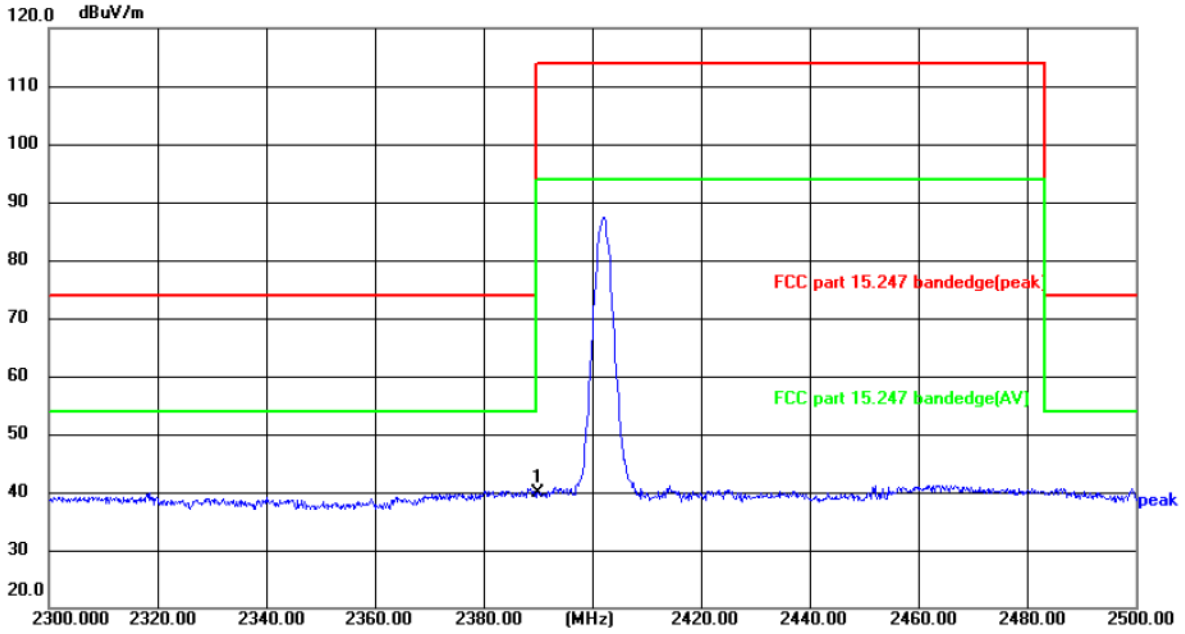
2. Speed for 1M and 2M modulations of EUT have been tested, but the test data only show the worst case in this report, and we found the worst case is 1M speed modulation. Measurements were conducted in all three channels (high, middle, low), and the worst case Mode (Middle channel) was submitted only.

3. Freq. = Emission frequency in MHz
Measurement (dBμV/m) = Reading level (dBμV) + Corr. Factor (dB)
Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
Limit (dBμV/m) = Limit stated in standard
Margin (dB) = Measurement (dBμV/m) – Limits (dBμV/m)
** is meaning the worst frequency has been tested in the test frequency range*

Test Result of Radiated Spurious at Band edges

Lowest channel 2402:

Horizontal:

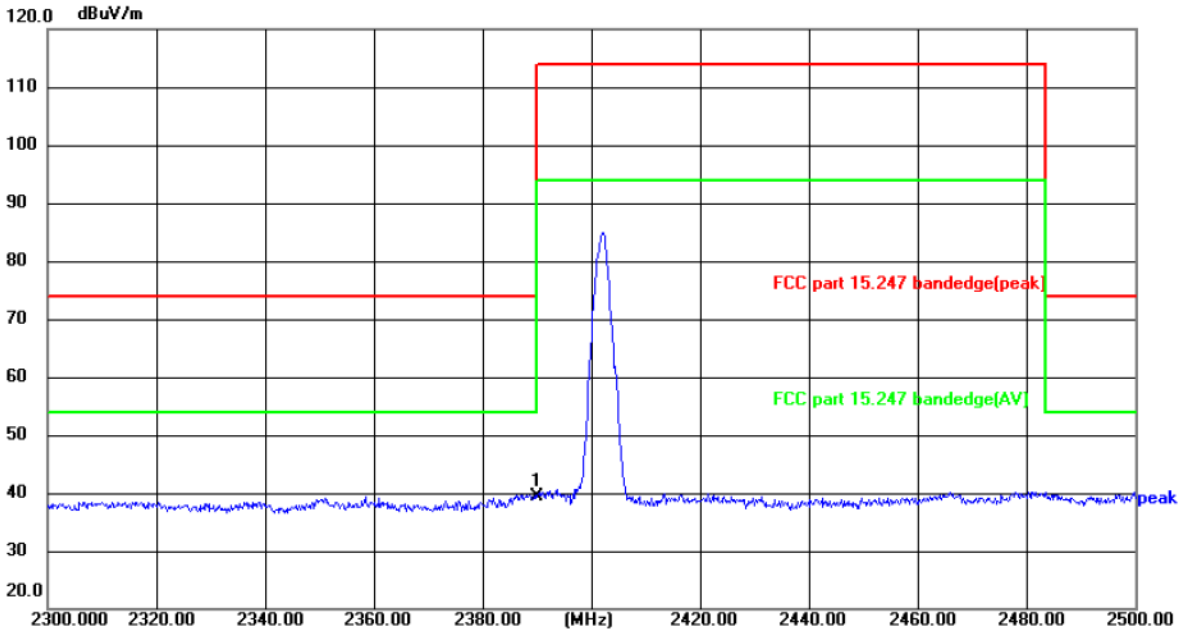


Site: #3 3m Anechoic Chamber Polarization: *Horizontal* Temperature: 23.3(℃) Humidity: 52 %

Limit: FCC part 15.247 bandedge(peak) Power:DC 5 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2390.000	56.37	-16.53	39.84	74.00	-34.16	peak	P	

Vertical:



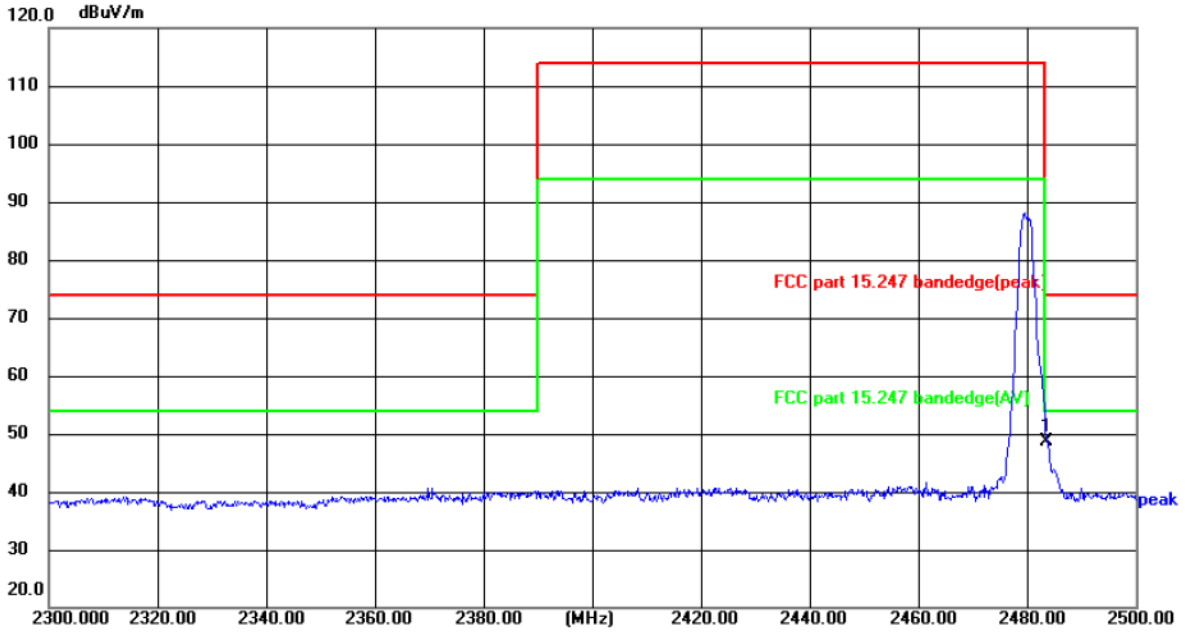
Site: #3 3m Anechoic Chamber Polarization: *Vertical* Temperature: 23.3(℃) Humidity: 52 %

Limit: FCC part 15.247 bandedge(peak) Power:DC 5 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2390.000	56.01	-16.53	39.48	74.00	-34.52	peak	P	

Highest channel 2480:

Horizontal:

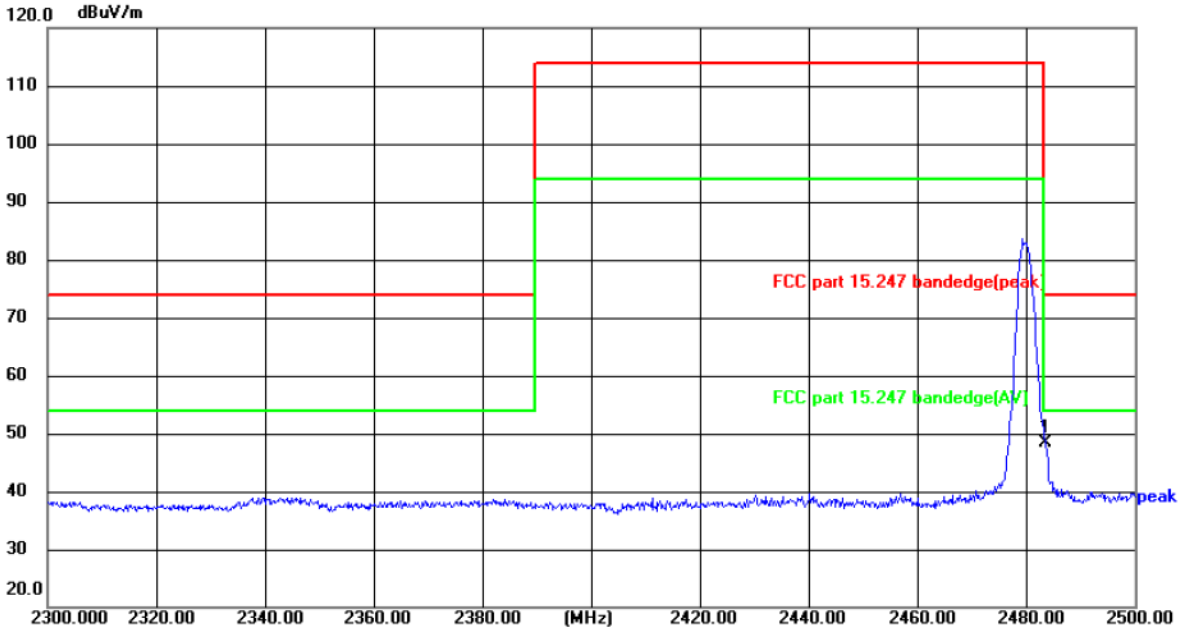


Site: #3 3m Anechoic Chamber Polarization: *Horizontal* Temperature: 23.3(℃) Humidity: 52 %

Limit: FCC part 15.247 bandedge(peak) Power:DC 5 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2483.500	65.17	-16.43	48.74	74.00	-25.26	peak	P	

Vertical:



Site: #3 3m Anechoic Chamber Polarization: *Vertical* Temperature: 23.3(℃) Humidity: 52 %

Limit: FCC part 15.247 bandedge(peak) Power:DC 5 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2483.500	64.87	-16.43	48.44	74.00	-25.56	peak	P	

Note: *Speed for 1M and 2M modulations of EUT have been tested, but the test data only show the worst case in this report, and we found the worst case is 1M speed modulation.*

Above 1GHz

Low channel: 2402 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4804	H	44.66	---	0.66	45.32	---	74	54	-8.68
7206	H	34.75	---	9.50	44.25	---	74	54	-9.75
---	H	---	---	---	---	---	---	---	---
4804	V	45.29	---	0.66	45.95	---	74	54	-8.05
7206	V	34.87	---	9.50	44.37	---	74	54	-9.63
---	V	---	---	---	---	---	---	---	---

Middle channel: 2440 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4880	H	43.32	---	0.99	44.31	---	74	54	-9.69
7320	H	34.23	---	9.87	44.10	---	74	54	-9.90
---	H	---	---	---	---	---	---	---	---
4880	V	45.91	---	0.99	46.90	---	74	54	-7.10
7320	V	36.04	---	9.87	45.91	---	74	54	-8.09
---	V	---	---	---	---	----	---	---	---

High channel: 2480 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4960	H	44.55	---	1.33	45.88	---	74	54	-8.12
7440	H	35.02	---	10.22	45.24	---	74	54	-8.76
---	H	---	---	---	---	----	---	---	---
4960	V	44.71	---	1.33	46.04	---	74	54	-7.96
7440	V	35.50	---	10.22	45.72	---	74	54	-8.28
---	V	---	---	---	---	---	---	---	---

Note:

1. *Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier*
2. *Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.*
5. *Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.*
6. *Speed for 1M and 2M modulations of EUT have been tested, but the test data only show the worst case in this report, and we found the worst case is 1M speed modulation.*
7. *All the restriction bands are compliance with the limit of 15.209.*

Appendix B: Photographs of Test Setup

Refer to the test report No. TCT240807E909

Appendix C: Photographs of EUT

Refer to the test report No. TCT240807E909

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