


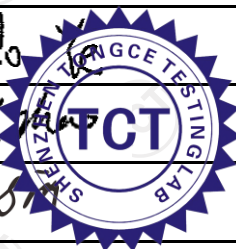


TEST REPORT

FCC ID.	2AV7NTSM7-1000	
Test Report No.	TCT240807E909	
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	



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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 BDR+EDR)
Operation Frequency	2402MHz~2480MHz
Transfer Rate	1/2/3 Mbits/s
Number of Channel	79
Modulation Type	GFSK, $\pi/4$ -DQPSK, 8DPSK
Modulation Technology	FHSS
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	<input checked="" type="checkbox"/>
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	<input type="checkbox"/>

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.

1.3. Operation Frequency

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
...
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
...
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz	-	

Remark: Channel 0, 39 & 78 have been tested for GFSK, $\pi/4$ -DQPSK, 8DPSK modulation mode.

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)(1)	PASS
20dB Occupied Bandwidth	§15.247 (a)(1)	PASS
Carrier Frequencies Separation	§15.247 (a)(1)	PASS
Hopping Channel Number	§15.247 (a)(1)	PASS
Dwell Time	§15.247 (a)(1)	PASS
Radiated Emission	§15.205/§15.209	PASS
Band Edge	§15.247(d)	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.

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:		
Engineering 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. DH1 DH3 DH5 all have been tested, only worse case DH1 is reported.		

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, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, 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 $y \pm U$, where expanded 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

5. Test Results and Measurement Data

5.1. Antenna requirement

Standard requirement:

FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

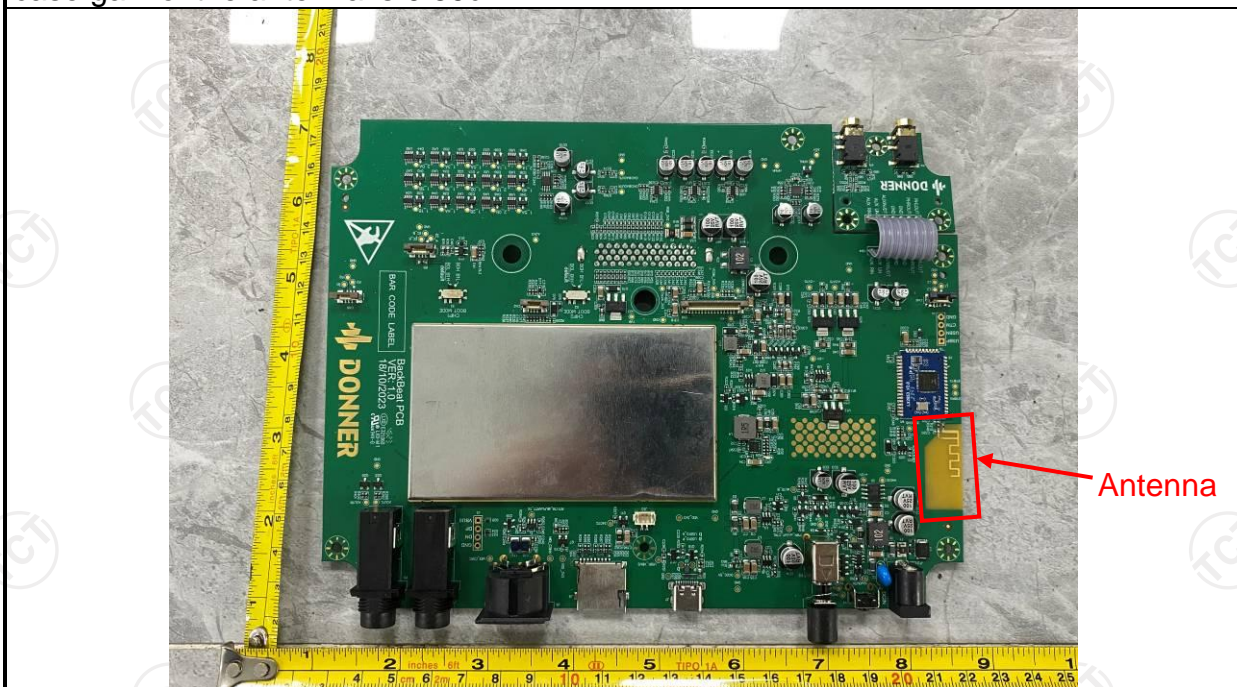
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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

Test Requirement:	FCC Part15 C Section 15.207														
Test Method:	ANSI C63.10:2013														
Frequency Range:	150 kHz to 30 MHz														
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto														
Limits:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBuV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></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>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													
Test Setup:	<div><p>Reference Plane</p><p>40cm</p><p>E.U.T</p><p>AC power</p><p>80cm</p><p>LISN</p><p>Filter</p><p>AC power</p><p>EMI Receiver</p><p>Test table/Insulation plane</p><p>Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.7m</p></div>														
Test Mode:	Transmitting Mode														
Test Procedure:	<div><div>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.</div><div>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).</div><div>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.</div></div>														
Test Result:	PASS														

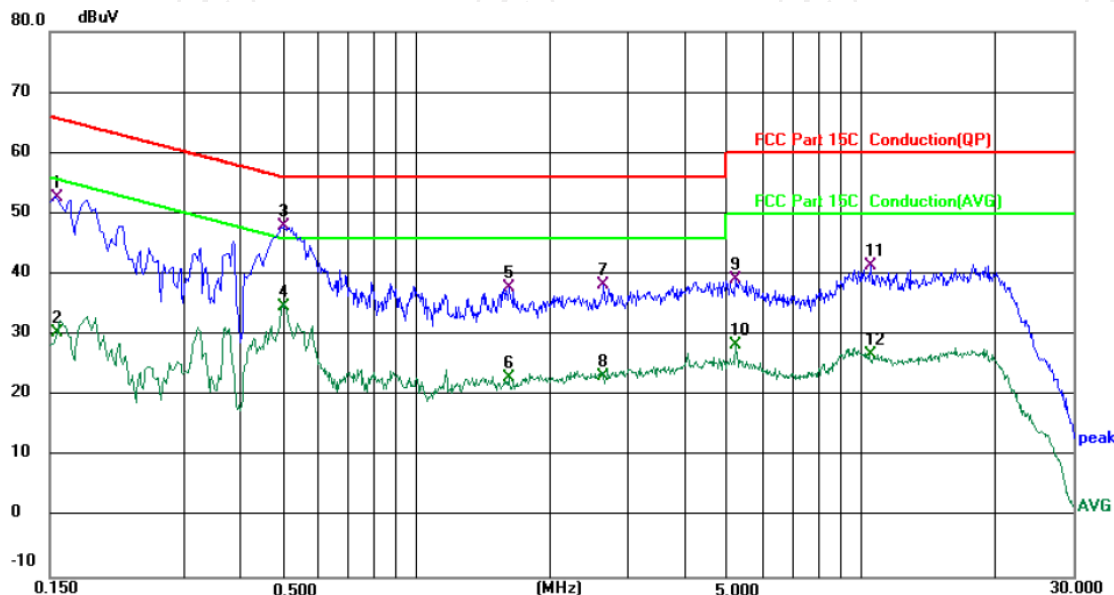
5.2.2. Test Instruments

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	/

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 (°C)

Humidity: 52 %

Limit: FCC Part 15C Conduction(QP)

Power: AC 120 V/60 Hz

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1554	43.01	9.65	52.66	65.71	-13.05	QP	
2		0.1554	20.78	9.65	30.43	55.71	-25.28	AVG	
3	*	0.5060	37.75	10.16	47.91	56.00	-8.09	QP	
4		0.5060	24.60	10.16	34.76	46.00	-11.24	AVG	
5		1.6180	28.03	9.76	37.79	56.00	-18.21	QP	
6		1.6180	13.11	9.76	22.87	46.00	-23.13	AVG	
7		2.6379	28.46	9.86	38.32	56.00	-17.68	QP	
8		2.6379	13.43	9.86	23.29	46.00	-22.71	AVG	
9		5.2419	29.00	10.11	39.11	60.00	-20.89	QP	
10		5.2419	18.18	10.11	28.29	50.00	-21.71	AVG	
11		10.5259	31.11	10.30	41.41	60.00	-18.59	QP	
12		10.5259	16.59	10.30	26.89	50.00	-23.11	AVG	

Note:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

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

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

Limit (dBuV) = Limit stated in standard

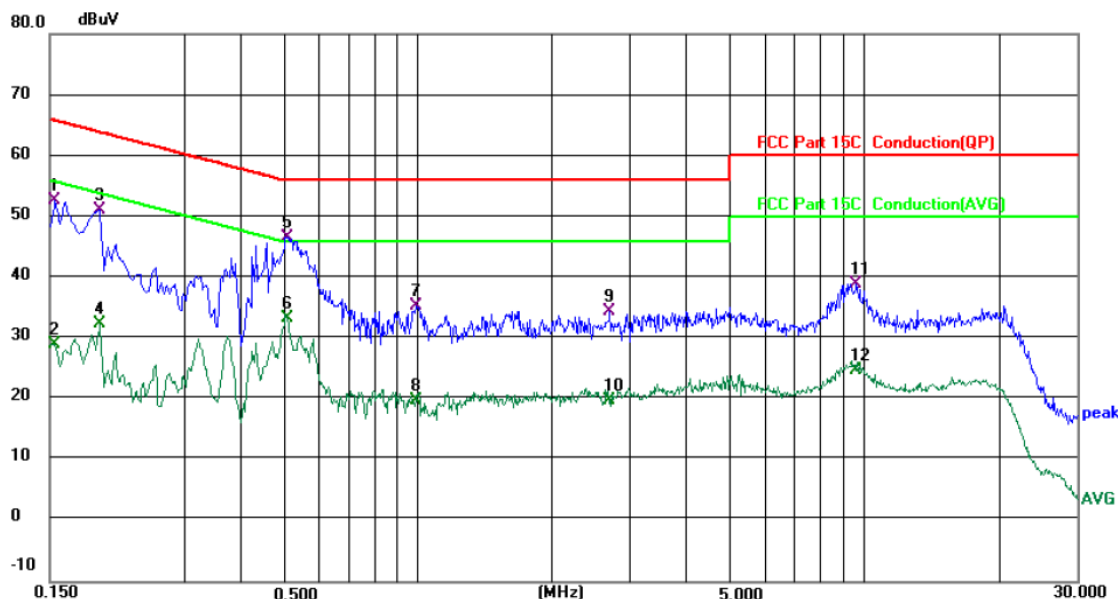
Margin (dB) = Measurement (dBuV) – Limits (dBuV)

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 (°C)

Humidity: 52 %

Limit: FCC Part 15C Conduction(QP)

Power: AC 120 V/60 Hz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1539	43.06	9.65	52.71	65.79	-13.08	QP	
2		0.1539	19.43	9.65	29.08	55.79	-26.71	AVG	
3		0.1940	41.45	9.63	51.08	63.86	-12.78	QP	
4		0.1940	22.71	9.63	32.34	53.86	-21.52	AVG	
5	*	0.5100	36.48	10.16	46.64	56.00	-9.36	QP	
6		0.5100	23.18	10.16	33.34	46.00	-12.66	AVG	
7		0.9939	24.55	10.69	35.24	56.00	-20.76	QP	
8		0.9939	9.02	10.69	19.71	46.00	-26.29	AVG	
9		2.7019	24.50	9.87	34.37	56.00	-21.63	QP	
10		2.7019	9.85	9.87	19.72	46.00	-26.28	AVG	
11		9.6180	28.73	10.30	39.03	60.00	-20.97	QP	
12		9.6180	14.47	10.30	24.77	50.00	-25.23	AVG	

Note1:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

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

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

Limit (dBuV) = Limit stated in standard

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

Q.P. =Quasi-Peak AVG =average

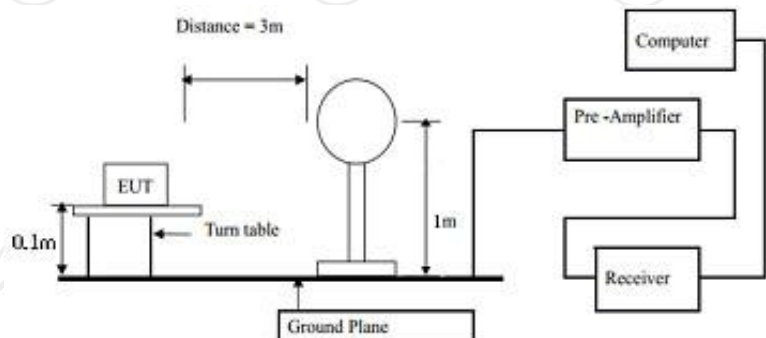
* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

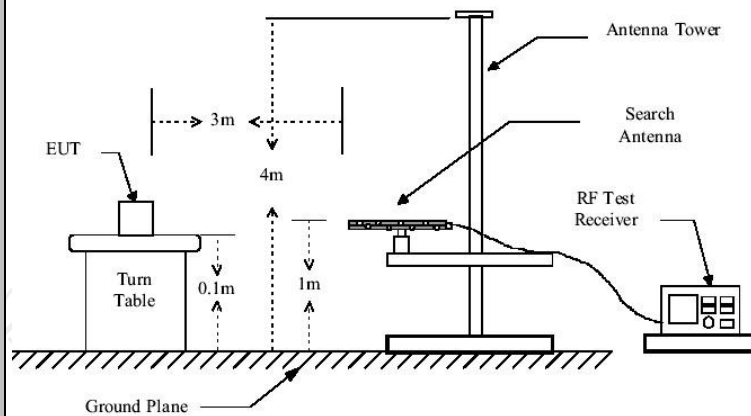
Note2:

Measurements were conducted in all three channels (high, middle, low) and three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (Middle channel and 8DPSK) was submitted only.

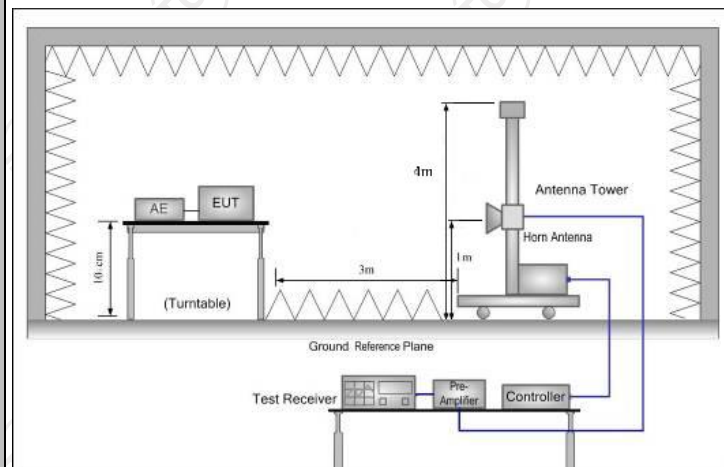
5.3. Radiated Spurious Emission Measurement

5.3.1. Test Specification

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



Above 1GHz



Test Mode:

Transmitting mode with modulation

Test Procedure:

1. The testing follows the guidelines in Spurious Radiated Emissions of ANSI C63.10:2013 Measurement Guidelines.
2. 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

	<p>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 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.</p> <ol style="list-style-type: none"> 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Use the following spectrum analyzer settings: <ol style="list-style-type: none"> (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=120 kHz for $f < 1$ GHz, RBW=1MHz for $f > 1$ GHz ; VBW\geqRBW; Sweep = auto; Detector function = peak; Trace = max hold for peak (3) For average measurement: use duty cycle correction factor method per 15.35(c). Duty cycle = On time/100 milliseconds On time = $N_1 \cdot L_1 + N_2 \cdot L_2 + \dots + N_{n-1} \cdot L_{n-1} + N_n \cdot L_n$ Where N_1 is number of type 1 pulses, L_1 is length of type 1 pulses, etc. Average Emission Level = Peak Emission Level + $20 \cdot \log(\text{Duty cycle})$ Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
Test results:	PASS

5.3.2. Test Instruments

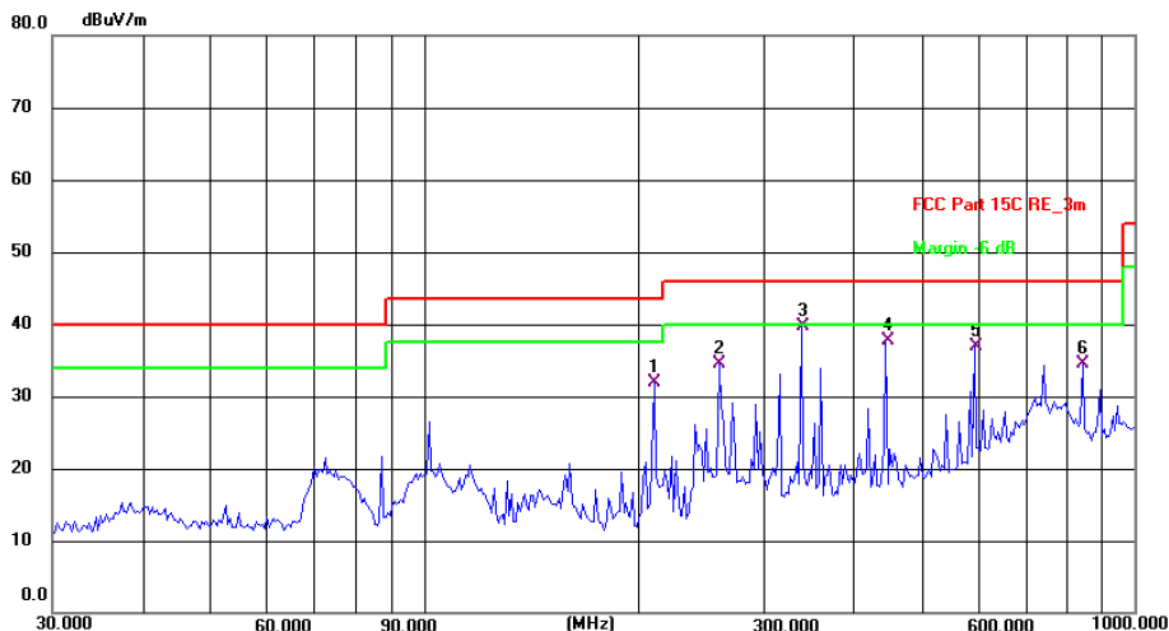
Radiated Emission Test Site (966)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI7	100529	Jan. 31, 2025
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025
Pre-amplifier	HP	8447D	2727A05017	Jun. 26, 2025
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	Jan. 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)

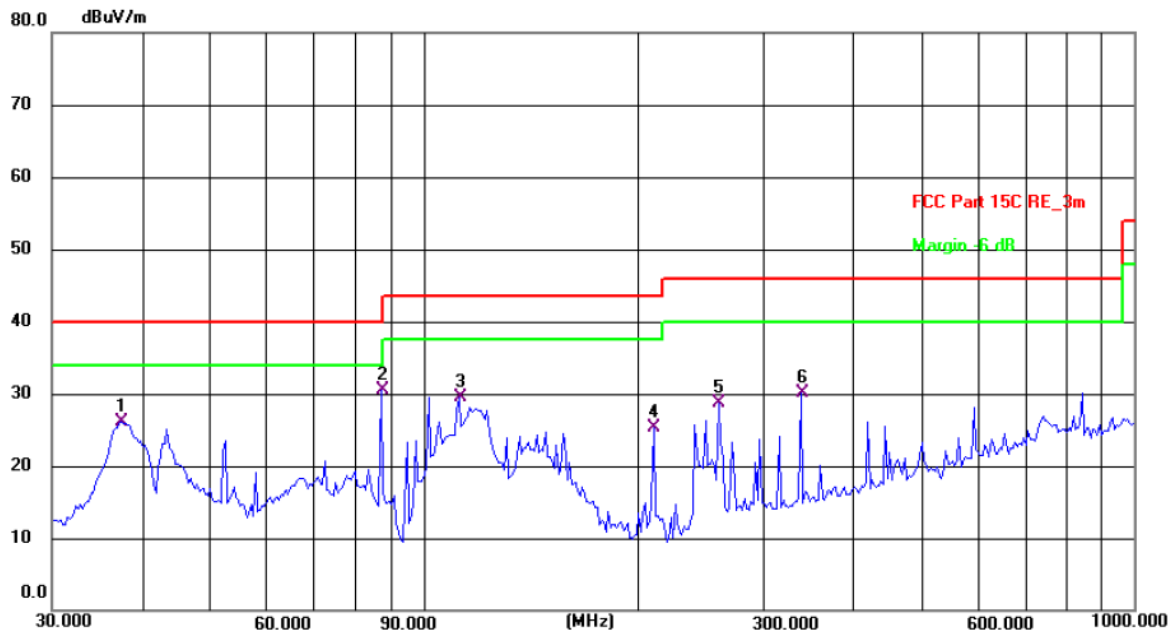
Humidity: 53 %

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	210.7860	46.91	-15.08	31.83	43.50	-11.67	QP	P	
2	260.1444	47.34	-12.79	34.55	46.00	-11.45	QP	P	
3 *	339.5888	49.79	-10.17	39.62	46.00	-6.38	QP	P	
4	446.4141	45.99	-8.24	37.75	46.00	-8.25	QP	P	
5	595.1327	41.96	-5.11	36.85	46.00	-9.15	QP	P	
6	845.0877	36.59	-2.15	34.44	46.00	-11.56	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	37.5478	38.36	-12.20	26.16	40.00	-13.84	QP	P	
2 *	87.1117	47.04	-16.56	30.48	40.00	-9.52	QP	P	
3	112.1305	43.87	-14.41	29.46	43.50	-14.04	QP	P	
4	210.7860	40.42	-15.08	25.34	43.50	-18.16	QP	P	
5	260.1444	41.56	-12.79	28.77	46.00	-17.23	QP	P	
6	339.5888	40.32	-10.17	30.15	46.00	-15.85	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. Measurements were conducted in all three channels (high, middle, low) and three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (Middle channel and 8DPSK) was submitted only.

3. Freq. = Emission frequency in MHz

Measurement (dBuV/m) = Reading level (dBuV) + Corr. Factor (dB)

Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

Limit (dBuV/m) = Limit stated in standard

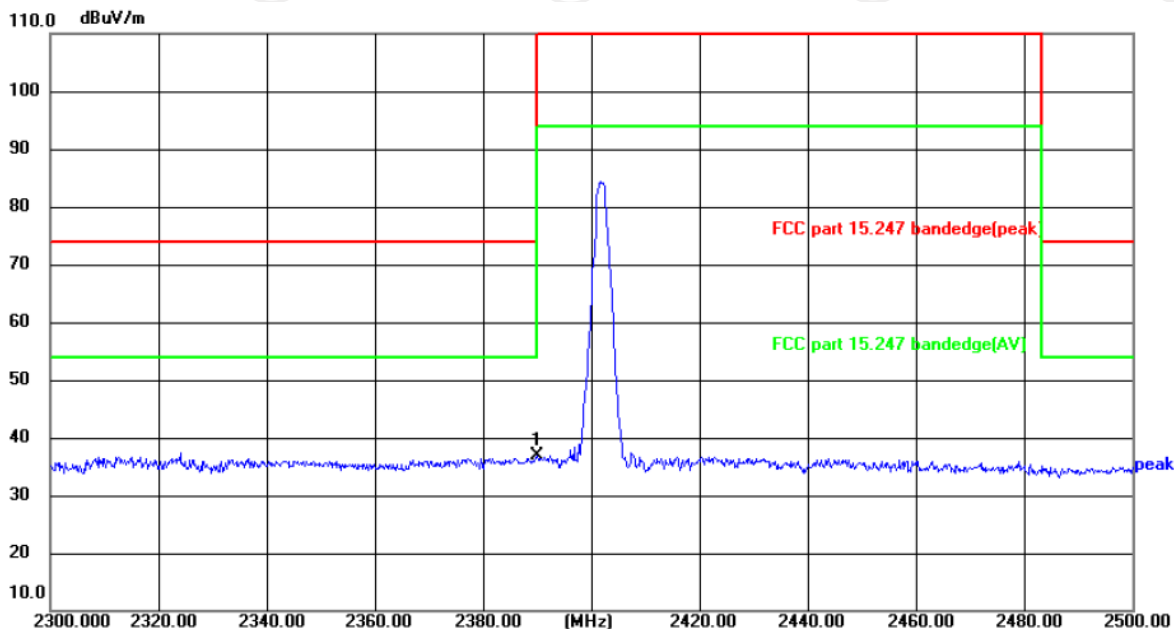
Over (dB) = Measurement (dBuV/m) – Limits (dBuV/m)

* 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: 25.3(°C)

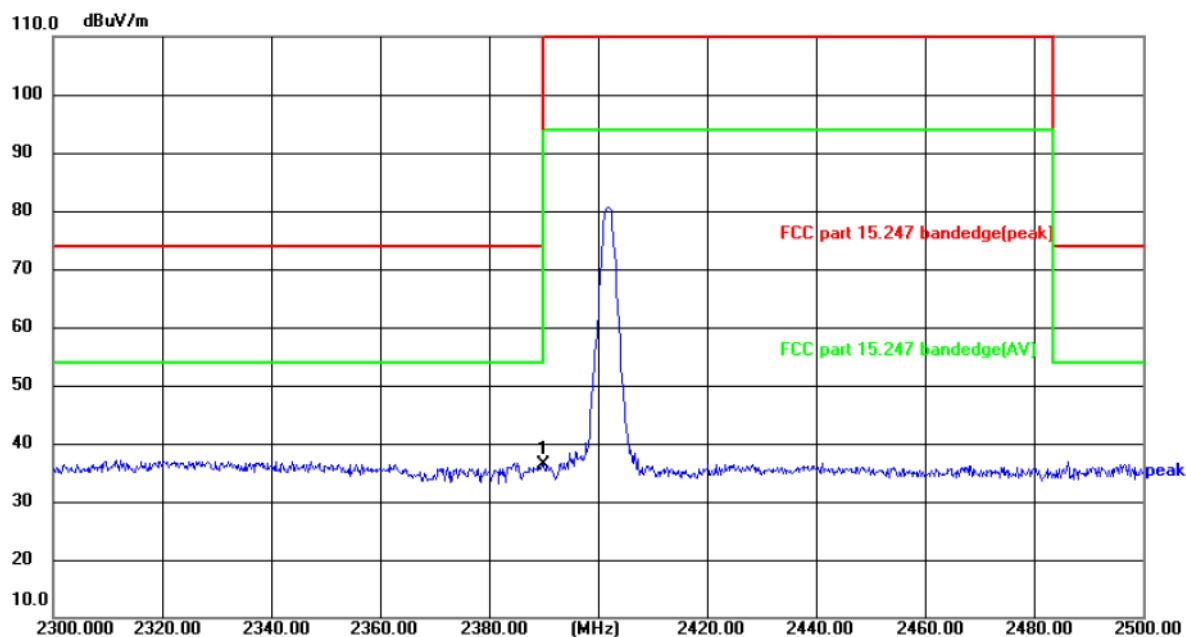
Humidity: 52 %

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	54.00	-17.10	36.90	74.00	-37.10	peak	P	

Vertical:



Site: #3 3m Anechoic Chamber

Polarization: **Vertical**

Temperature: 25.3(°C)

Humidity: 52 %

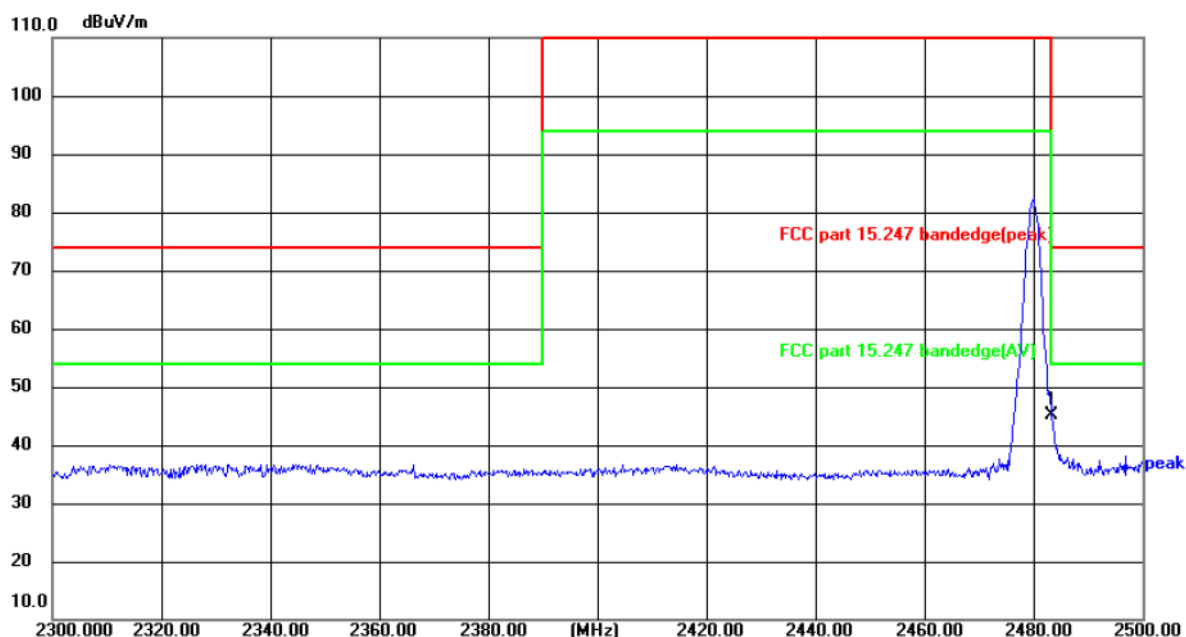
Limit: FCC part 15.247 bandedge(peak)

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	53.46	-17.10	36.36	74.00	-37.64	peak	P	

Highest channel 2480:

Horizontal:



Site: #3 3m Anechoic Chamber

Polarization: **Horizontal**

Temperature: 25.3(°C)

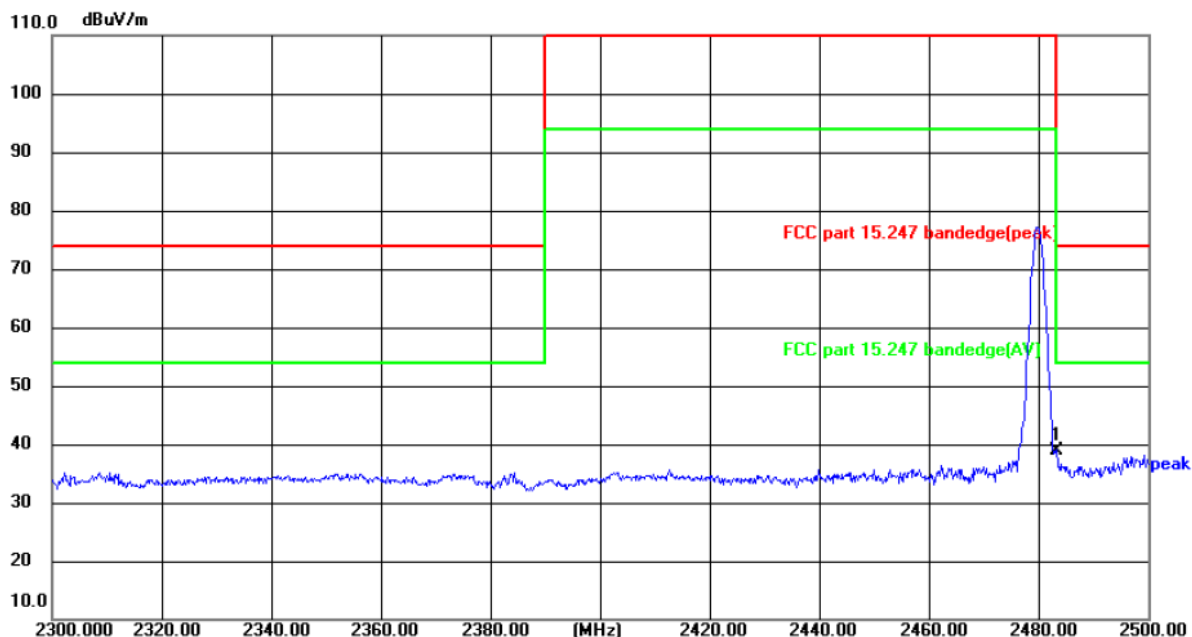
Humidity: 52 %

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	62.11	-16.88	45.23	74.00	-28.77	peak	P	

Vertical:



Site: #3 3m Anechoic Chamber Polarization: **Vertical** Temperature: 25.3(°C) 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	55.72	-16.88	38.84	74.00	-35.16	peak	P	

Note: Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (8DPSK) was submitted only.

Above 1GHz

Modulation Type: 8DPSK									
Low channel: 2402 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)			
4804	H	44.83	---	0.66	45.49	---	74	54	-8.51
7206	H	34.64	---	9.50	44.14	---	74	54	-9.86
---	H	---	---	---	---	---	---	---	---
4804	V	46.19	---	0.66	46.85	---	74	54	-7.15
7206	V	35.31	---	9.50	44.81	---	74	54	-9.19
---	V	---	---	---	---	---	---	---	---

Middle channel: 2441 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)			
4882	H	45.70	---	0.99	46.69	---	74	54	-7.31
7323	H	36.05	---	9.87	45.92	---	74	54	-8.08
---	H	---	---	---	---	---	---	---	---
4882	V	45.42	---	0.99	46.41	---	74	54	-7.59
7323	V	35.36	---	9.87	45.23	---	74	54	-8.77
---	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	43.87	---	1.33	45.20	---	74	54	-8.80
7440	H	34.43	---	10.22	44.65	---	74	54	-9.35
---	H	---	---	---	---	---	---	---	---
4960	V	45.58	---	1.33	46.91	---	74	54	-7.09
7440	V	35.11	---	10.22	45.33	---	74	54	-8.67
---	V	---	---	---	---	---	---	---	---

Note:

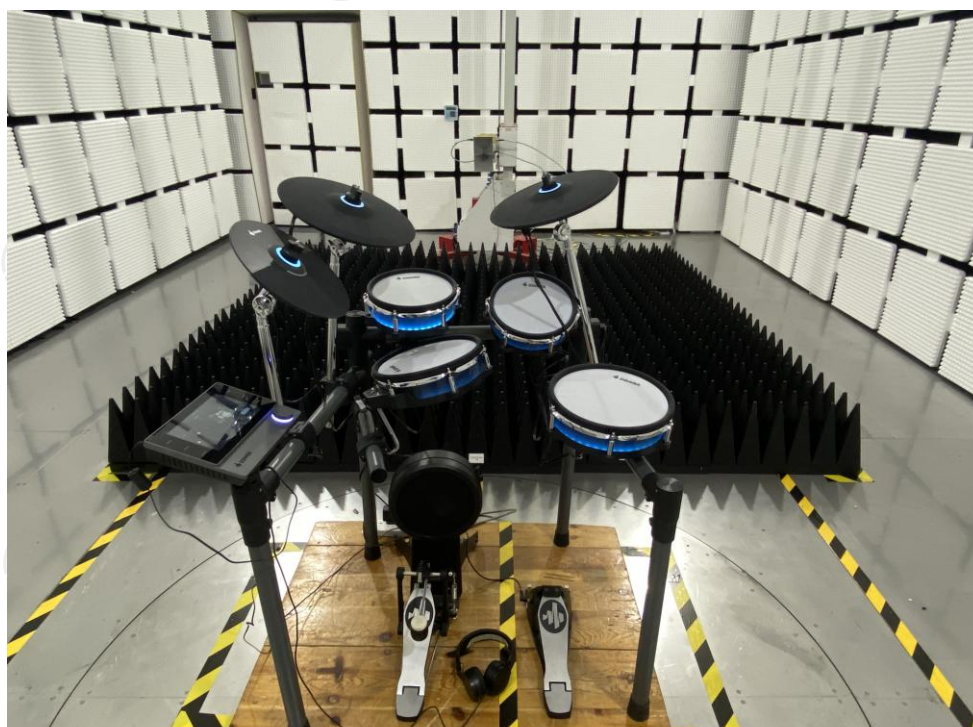
1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
2. Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Measurements 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. Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (8DPSK) was submitted only.
7. All the restriction bands are compliance with the limit of 15.209.

Appendix B: Photographs of Test Setup

Product: Electronic Drum Set

Model: TSM7-1000

Radiated Emission



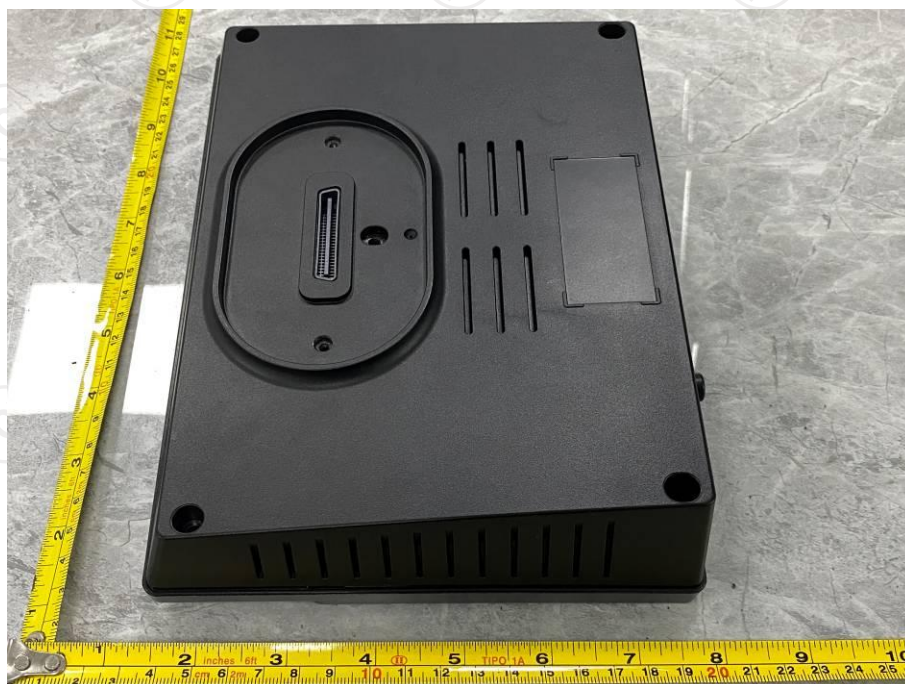
Conducted Emission



Appendix C: Photographs of EUT
Product: Electronic Drum Set
Model: TSM7-1000
External Photos





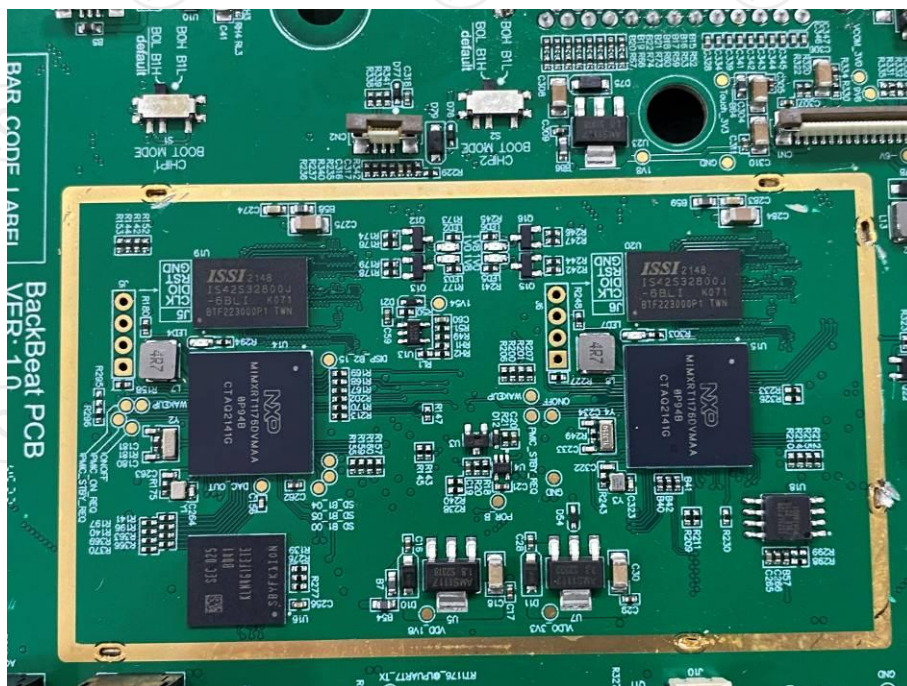
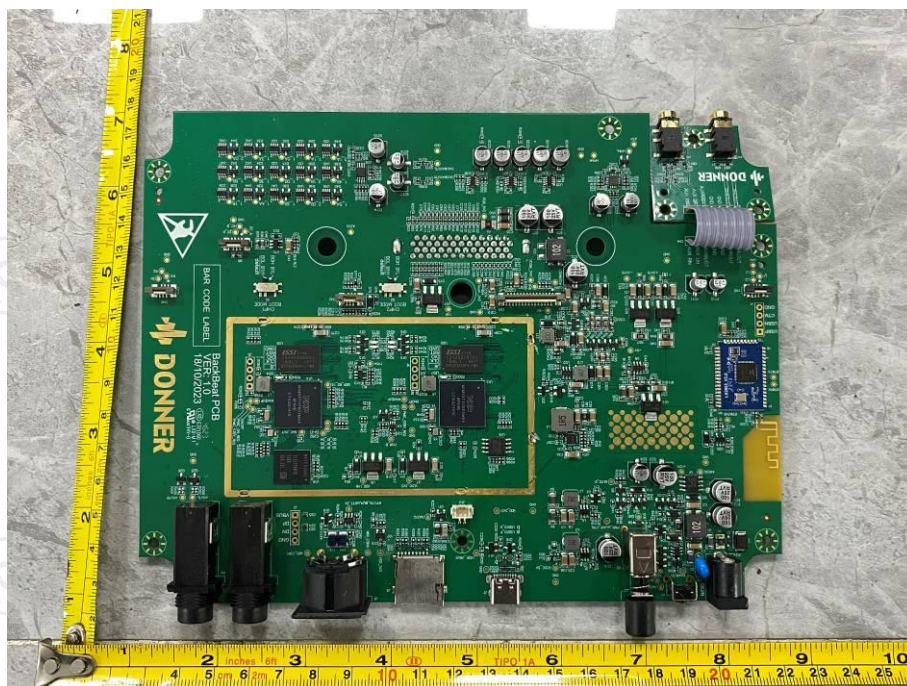


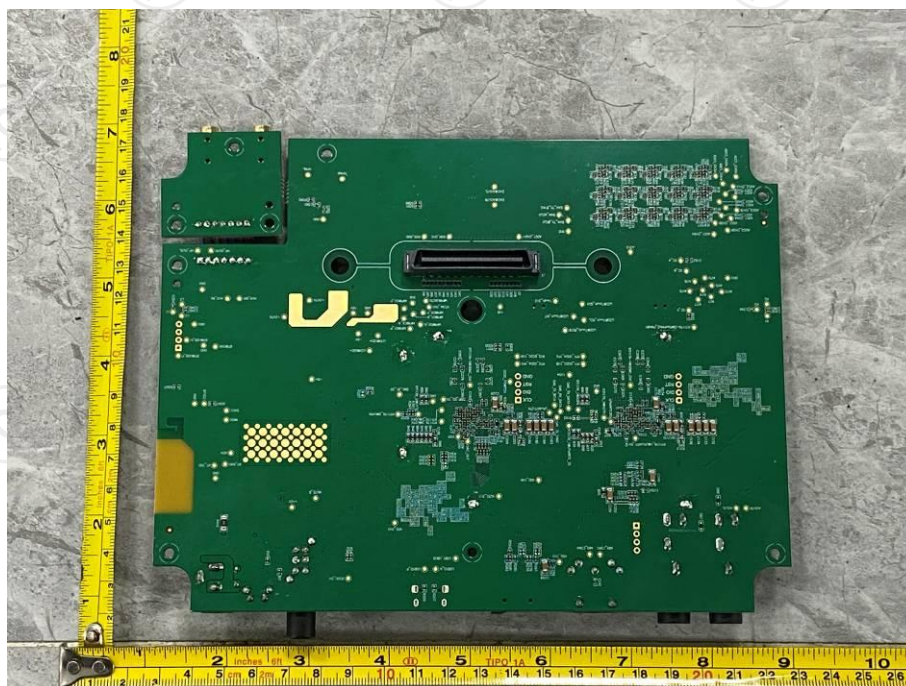
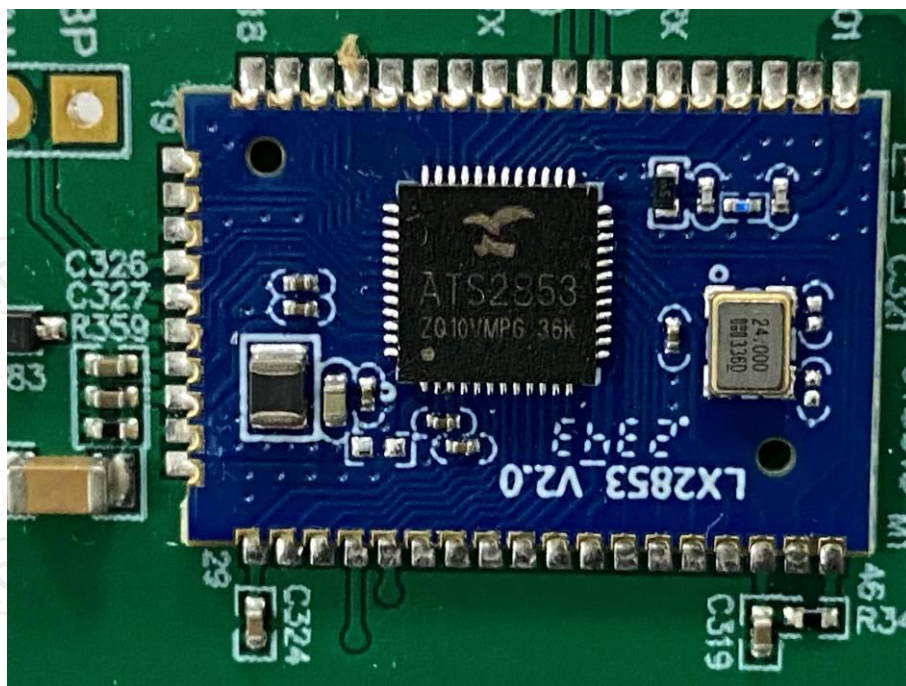


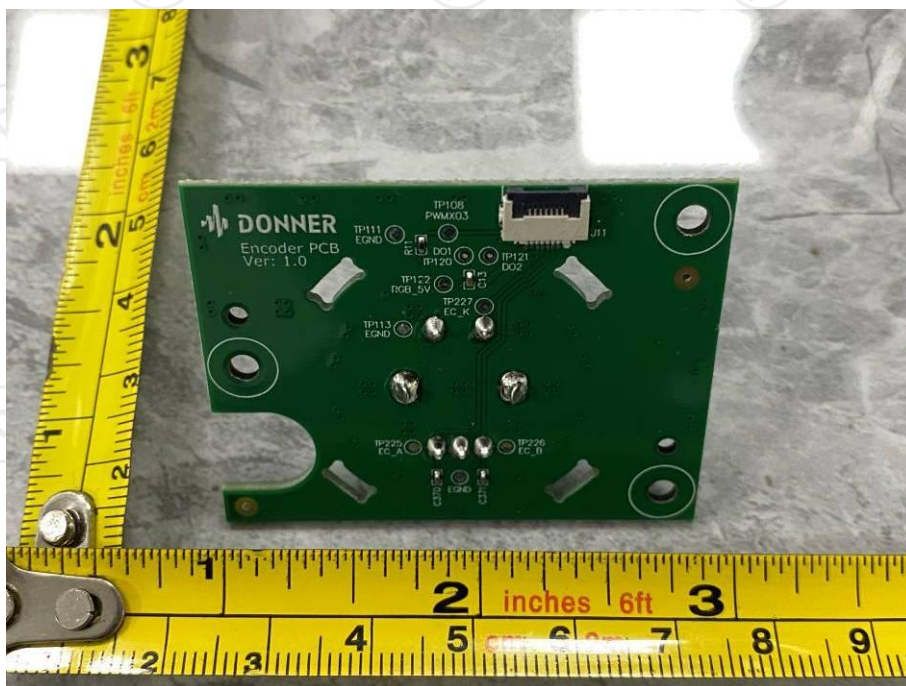
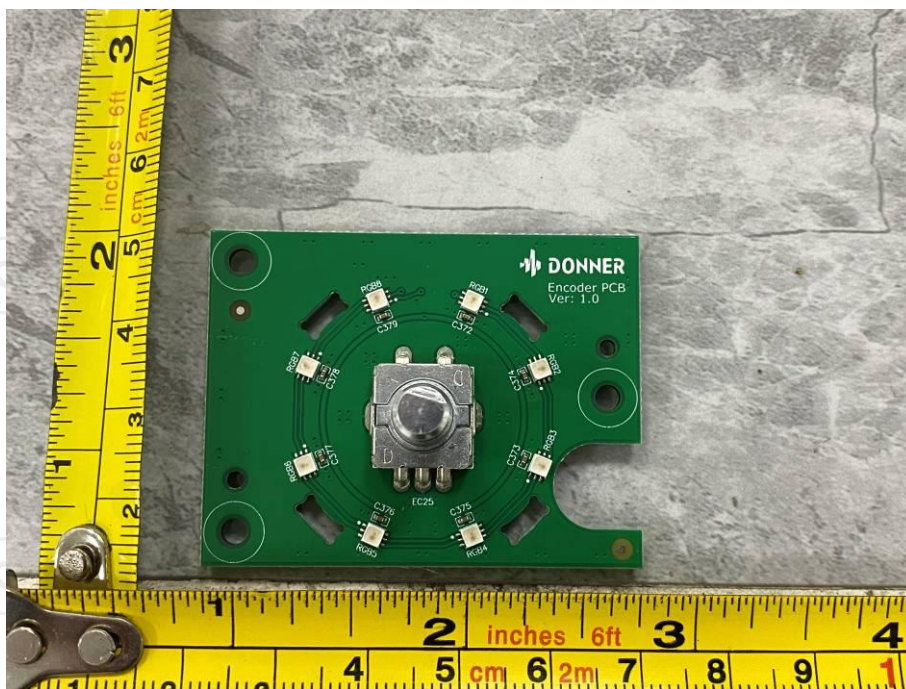


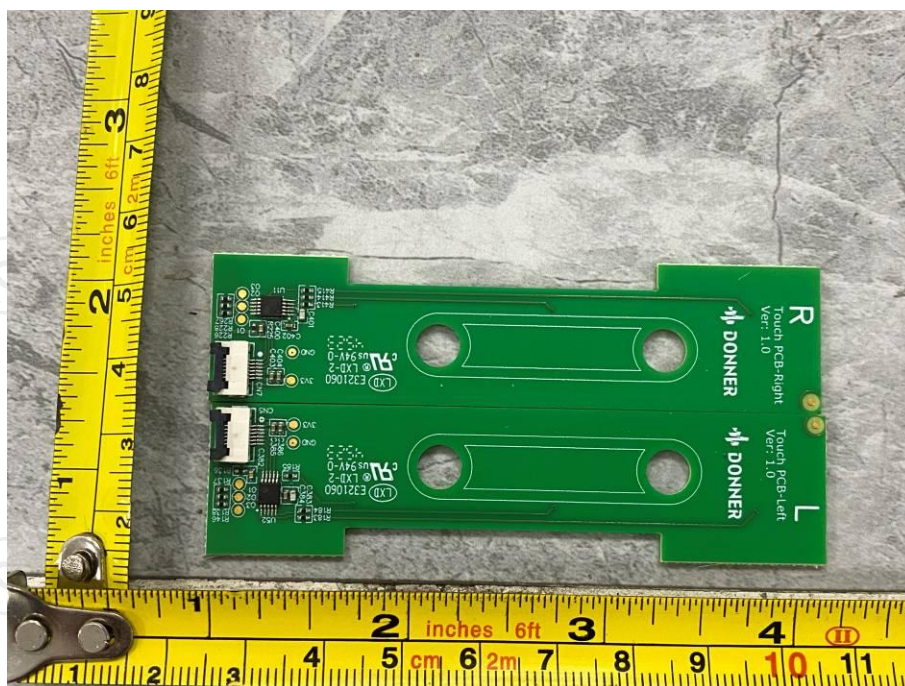
Product: Electronic Drum Set
Model: TSM7-1000
Internal Photos











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