



TEST REPORT

Applicant: Qingdao Machenike Technology Co., Ltd.

Address of Applicant: Room 1005, Building 1, No. 169 Binhai Road, Jimo District, Qingdao City, Shandong Province, China

Manufacturer/Factory: Qingdao Machenike Technology Co., Ltd.

Address of Manufacturer/Factory: Room 1005, Building 1, No. 169 Binhai Road, Jimo District, Qingdao City, Shandong Province, China

Product Name: Machenike Keyboard

Model No.: KG87

Trade Mark: MACHENIKE

FCC ID: 2BBT5-KG87

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249

Date of Test: Apr.01, 2025- Apr.29, 2025

Date of report issued: Apr.29, 2025

Remark:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full without prior written permission of the company.

The report would be invalid without specific stamp of test institute and the signatures of compiler and approver

Prepared By

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Report Revision History

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1 Test Summary

Test Item	Section in CFR 47	Result	Test by
Antenna requirement	15.203	Pass	/
AC Power Line Conducted Emission	15.207	Pass	Jason Huang
Field strength of the fundamental signal	15.249 (a)	Pass	Jason Huang
Spurious emissions	15.249 (a) (d)/15.209	Pass	Jason Huang
Band edge	15.249 (d)/15.205	Pass	Yvan Fan
20dB Occupied Bandwidth 99% Occupied Bandwidth	15.215 (c)	Pass	Yvan Fan

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. Test according to ANSI C63.10:2013
3. Note: Compliance determination rules
 - 1).The Compliance determination of test results does not take into account measurement uncertainty. Measurement results are determined based on regulatory limitations or requirements specified by the applicant/manufacturer. If measurement uncertainty is taken into account, the applicant/manufacturer will bear all possible risks of non-compliance.
 - 2).The measurement uncertainty please refer to each test result in the "Measurement Uncertainty"

Measurement Uncertainty

Test Item	Uncertainty Criterion	Measurement Uncertainty	Notes
Occupied Channel Bandwidth	±5%	0.55%	(1)
RF output power, conducted	±1.5dB	±0.57dB	(1)
Power Spectral Density, conducted	±3dB	±0.61dB	(1)
Unwanted Emissions, conducted	±3dB	±0.64dB	(1)
AC Power Line Conducted Emission	±6dB	± 2.55 dB	(1)
Radiated emissions Below 1GHz	±6dB	± 4.24 dB	(1)
Radiated emissions Above 1GHz	±6dB	± 4.26 dB	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.			

2 General Information

2.1 General Description of EUT

Product Name:	Machenike Keyboard
Model No.:	KG87
Model of difference:	N/A
Test model:	KG87
Sample(s) Status:	Engineer sample
Hardware Version:	N/A
Software Version:	N/A
Operation Frequency:	2403MHz~2480MHz
Channel numbers:	16
Channel separation:	3MHz
Modulation type:	GFSK
Antenna Type:	PCB Antenna
Antenna gain:	2.34dBi (Note: Antenna information is provided by applicant, Testing lab is not responsible for the accuracy of the information.)
Battery:	DC 3.7V 4000mA*2
Power supply:	DC 3.7V From Battery or DC 5V From Adapter

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2403 MHz	11	2455 MHz	21	/	31	/
2	2409 MHz	12	2461 MHz	22	/	32	/
3	2414 MHz	13	2465 MHz	23	/	33	/
4	2419 MHz	14	2470 MHz	24	/	34	/
5	2424 MHz	15	2475 MHz	25	/	35	/
6	2429 MHz	16	2480 MHz	26	/	36	/
7	2435 MHz	17	/	27	/	37	/
8	2441 MHz	18	/	28	/	38	/
9	2445 MHz	19	/	29	/	39	/
10	2450 MHz	20	/	30	/	40	/

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2403 MHz
The middle channel	2441 MHz
The Highest channel	2480 MHz

2.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
<i>Remark: For battery operated equipment, the EUT was performed using a new DC 3.7V battery.</i>	

2.3 Description of Support Units

No.	Description	Manufacturer	Model	Serial Number
1	ADAPTER	Xiao mi	5V/2A	/
2	TPYC line	/	/	/
3	Notebook computer	Vostro 3520	/	DELL

2.4 Deviation from Standards

None.

2.5 Abnormalities from Standard Conditions

None.

2.6 Test Facility

Test laboratory:	Shenzhen ETR Standard Technology Co., Ltd.
CNAS Registration Number:	L11864
A2LA Certificate Number:	6640.01
FCC Designation Number:	CN1326
FCC Test Firm Registration:	183064

2.7 Test Location

All tests were performed at:	
Laboratory location:	No.103, No.10, Phase I, Zone 3, Xinxing Industrial Park, Xinhe, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	+86 755 85259392
Fax:	+86 755 27219460

2.8 Additional Instructions

Test Software	Manufacturer's special com command
Power level setup	Default

3 Test Instruments list

Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESC17	100605	2025.3.06	2026.3.05
2	EMI Test Receiver	Rohde&schwarz	ESC13	102696	2025.3.06	2026.3.05
3	Loop Antenna	schwarabeck	FMZB 1519 B	FMZB 1519 B	2024.3.22	2026.3.21
4	Broadband antenna	schwarabeck	VULB9168	1064	2024.3.26	2026.3.25
5	Horn antenna	schwarabeck	BBHA9120D	9120D-1145	2024.3.22	2026.3.21
6	amplifier	EMtrace	RP01A	50117	2025.3.06	2026.3.05
7	Artificial power network	schwarabeck	NSLK8127	8127483	2025.3.06	2026.3.05
8	Artificial power network	ETS	3186/2NM	1132	2025.3.06	2026.3.05
9	10dB attenuator	HUBER+SUHNER	10dB	/	2025.3.06	2026.3.05
10	amplifier	Space-Dtronics	EWLAN0118 G-P40	19113001	2025.3.06	2026.3.05
11	Filter	Xingbo	XBLBQ-GTA19	210410-3-1	2025.3.06	2026.3.05
12	Spectrum analyzer	KEYSIGHT	N9020A	MY55370280	2025.3.06	2026.3.05
13	Power detector box	MWRFtest	MW100-PSB	MW201020JYT	2025.3.06	2026.3.05
14	Power meter	Rohde&Schwarz	NRP-Z11	1138.3004.02-117725-vh	2025.3.06	2026.3.05
15	Horn antenna	schwarabeck	BBHA 9170	946	2024.3.22	2026.3.21
16	Amplifier	SKET	LNPA_1840-50	SK2019040302	2025.3.06	2026.3.05

Note: the calibration interval of the above test instruments is 12 or 24 months and the calibrations are traceable to international system unit (SI).

Software Name	Manufacturer	Model	Version
RF test software	MWRFtest	MTS 8310	V2.0.0.0
Conducted test software	EZ-EMC	Farad	Ver.EMC-CON 3A1.1
Radiated test software	EZ-EMC	Farad	Ver.FA-03A2 RE

4 Test results and Measurement Data

4.1 Antenna requirement

Standard requirement:
FCC part 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.
EUT Antenna:
The antenna is PCB antenna, the best case gain of the antenna is 2.34dBi, reference to the appendix II for details.

4.2 Conducted Emissions

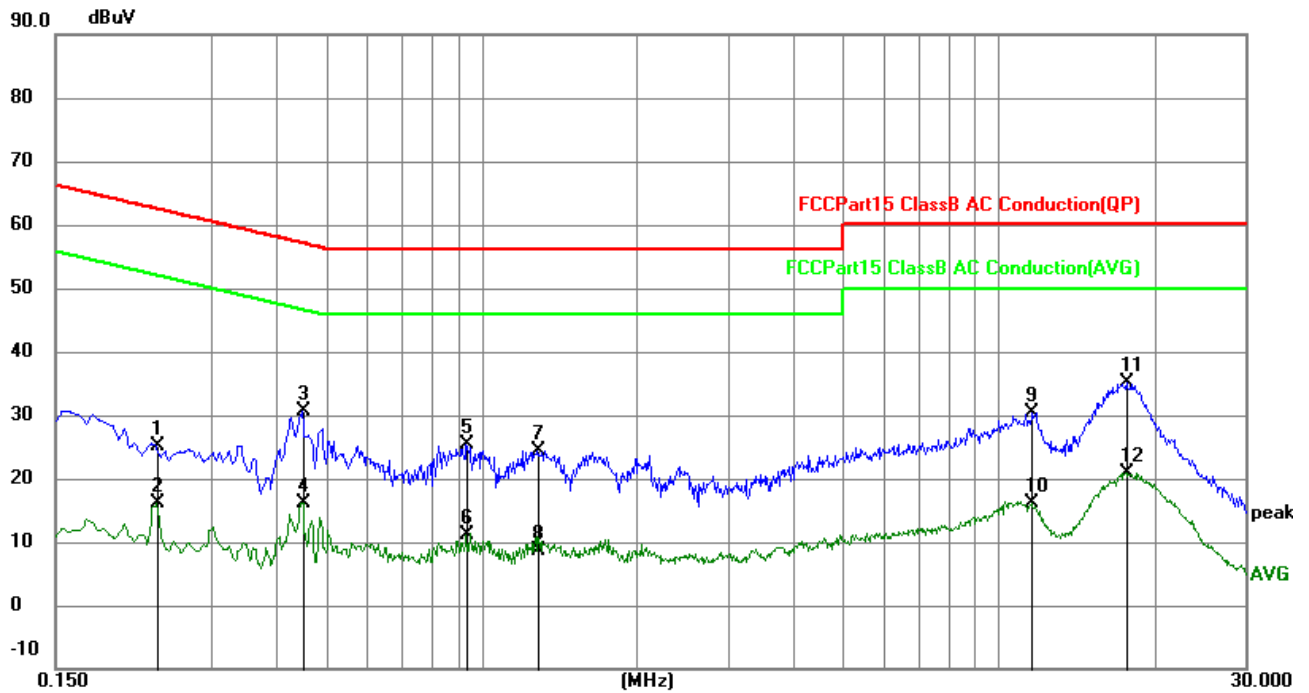
Test Requirement:	FCC Part15 C Section 15.207,					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	150KHz to 30MHz					
Class / Severity:	Class B					
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto					
Limit:	Frequency range (MHz)		Limit (dBuV)			
			Quasi-peak		Average	
	0.15-0.5		66 to 56*		56 to 46*	
	0.5-5		56		46	
	5-30		60		50	
* Decreases with the logarithm of the frequency.						
Test setup:	<div><div><div><div></div><div>Reference Plane</div></div><div><div></div><div>40cm</div></div></div><div><div><div>LISN</div><div>AUX Equipment</div><div>E.U.T</div></div><div>Test table/Insulation plane</div><div><div>80cm</div><div>LISN</div><div>Filter</div><div>AC power</div><div>EMI Receiver</div></div></div></div> <div><div>Remark:</div><div>E.U.T: Equipment Under Test</div><div>LISN: Line Impedance Stabilization Network</div><div>Test table height=0.8m</div></div>					
Test procedure:	<div><div>1. The E.U.T and simulators are connected to the main power 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 Instruments:	Refer to section 3.0 for details					
Test mode:	Refer to section 2.2 for details					
Test environment:	Temp.:	24.1°C	Humid.:	54%	Press.:	1012mbar
Test voltage:	AC120V/60Hz					
Test results:	Pass					

Remark:

1. Both high voltage and low voltage have been tested, and the report only shows the worst case data with AC 120V/60Hz.
2. All mode have been tested, the report only shows the worst mode (2441MHz) data.

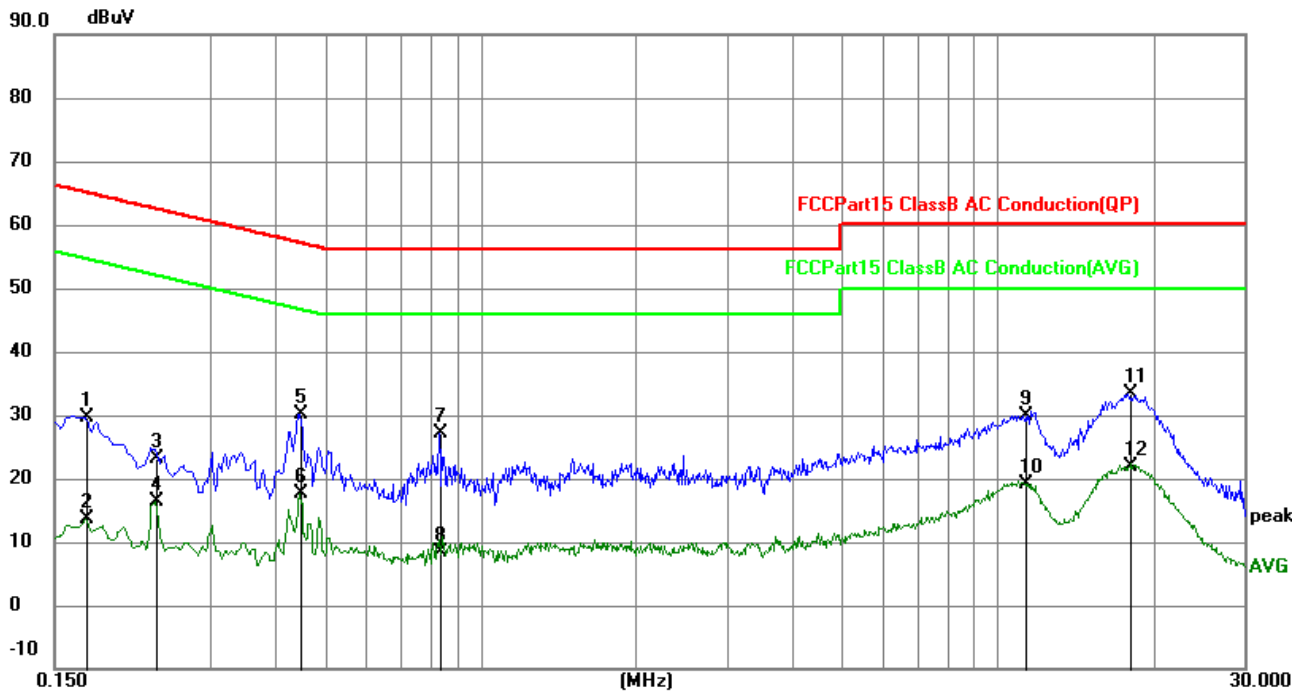
Measurement data

Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2355	15.26	9.82	25.08	62.25	-37.17	QP
2	0.2355	6.34	9.82	16.16	52.25	-36.09	AVG
3	0.4515	20.71	9.92	30.63	56.85	-26.22	QP
4	0.4515	6.27	9.92	16.19	46.85	-30.66	AVG
5	0.9374	15.33	9.96	25.29	56.00	-30.71	QP
6	0.9374	1.11	9.96	11.07	46.00	-34.93	AVG
7	1.2884	14.43	9.92	24.35	56.00	-31.65	QP
8	1.2884	-1.17	9.92	8.75	46.00	-37.25	AVG
9	11.6069	20.55	9.82	30.37	60.00	-29.63	QP
10	11.6069	6.25	9.82	16.07	50.00	-33.93	AVG
11	17.7405	25.39	9.71	35.10	60.00	-24.90	QP
12	17.7405	11.22	9.71	20.93	50.00	-29.07	AVG

Neutral:

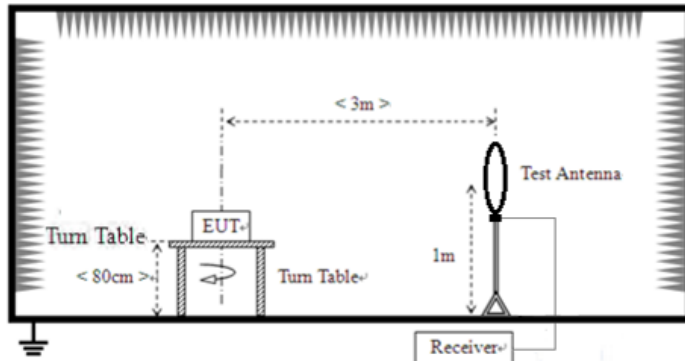


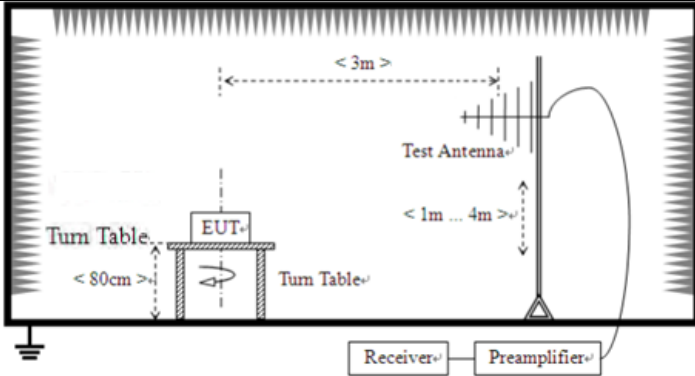
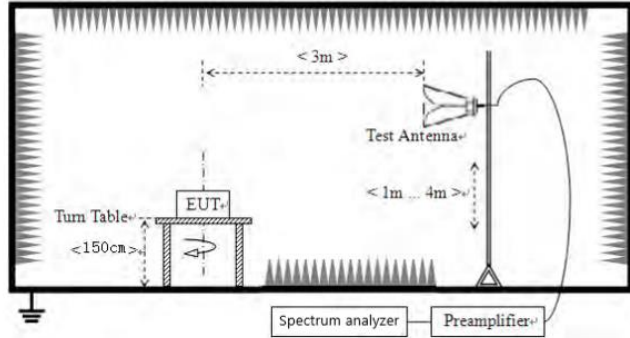
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1725	19.84	9.81	29.65	64.84	-35.19	QP
2	0.1725	3.78	9.81	13.59	54.84	-41.25	AVG
3	0.2355	13.35	9.82	23.17	62.25	-39.08	QP
4	0.2355	6.64	9.82	16.46	52.25	-35.79	AVG
5	0.4470	20.25	9.92	30.17	56.93	-26.76	QP
6	0.4470	7.60	9.92	17.52	46.93	-29.41	AVG
7	0.8384	17.13	9.96	27.09	56.00	-28.91	QP
8	0.8384	-1.65	9.96	8.31	46.00	-37.69	AVG
9	11.3145	20.17	9.82	29.99	60.00	-30.01	QP
10	11.3145	9.29	9.82	19.11	50.00	-30.89	AVG
11	17.9880	23.74	9.70	33.44	60.00	-26.56	QP
12	17.9880	12.13	9.70	21.83	50.00	-28.17	AVG

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Level = Receiver Read level + Factor (Factor = LISN Factor + Cable Loss + Attenuator Factor)
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

4.3 Radiated Emission measurement

Test Requirement:	FCC Part15 C Section 15.209 & 15.249 (a) &(d).				
Test Method:	ANSI C63.10: 2013				
Test Frequency Range:	9kHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	9kHz-150kHz	Quasi-peak	200Hz	300Hz	Quasi-peak Value
	150kHz-30MHz	Quasi-peak	9kHz	10kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		Peak	1MHz	10Hz	Average Value
Limit: (Field strength of the fundamental signal)	Frequency		Limit (dBuV/m @3m)		Remark
	2400MHz-2483.5MHz		94.00		Average Value
			114.00		Peak Value
Limit: (Spurious Emissions)	Frequency		Limit (uV/m)		Remark
	0.009MHz-0.490MHz		2400/F(kHz) @300m		Quasi-peak Value
	0.490MHz-1.705MHz		24000/F(kHz) @30m		Quasi-peak Value
	1.705MHz-30.0MHz		30 @30m		Quasi-peak Value
	30MHz-88MHz		100 @3m		Quasi-peak Value
	88MHz-216MHz		150 @3m		Quasi-peak Value
	216MHz-960MHz		200 @3m		Quasi-peak Value
	960MHz-1GHz		500 @3m		Quasi-peak Value
	Above 1GHz		500 @3m		Average Value
5000 @3m			Peak Value		
Limit: (band edge)	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.				
Test setup:	For radiated emissions from 9kHz to 30MHz				
	<div></div>				
	For radiated emissions from 30MHz to1GHz				

	 <p>For radiated emissions above 1GHz</p> 
Test Procedure:	<ol style="list-style-type: none">1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test environment:	Temp.: 22.3 °C Humid.: 52% Press.: 1012mbar
Test voltage:	DC 3.7V From Battery
Test results:	Pass

4.3.1 Field Strength of The Fundamental Signal

Peak value:

Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2403.00	107.32	-14.43	92.89	114.00	-21.11	Vertical
2403.00	104.99	-14.43	90.56	114.00	-23.44	Horizontal
2441.00	110.40	-14.29	96.11	114.00	-17.89	Vertical
2441.00	108.11	-14.29	93.82	114.00	-20.18	Horizontal
2480.00	106.16	-14.13	92.03	114.00	-21.97	Vertical
2480.00	103.35	-14.13	89.22	114.00	-24.78	Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2403.00	89.71	-14.43	75.28	94.00	-18.72	Vertical
2403.00	86.91	-14.43	72.48	94.00	-21.52	Horizontal
2441.00	88.03	-14.29	73.74	94.00	-20.26	Vertical
2441.00	85.87	-14.29	71.58	94.00	-22.42	Horizontal
2480.00	85.37	-14.13	71.24	94.00	-22.76	Vertical
2480.00	84.18	-14.13	70.05	94.00	-23.95	Horizontal

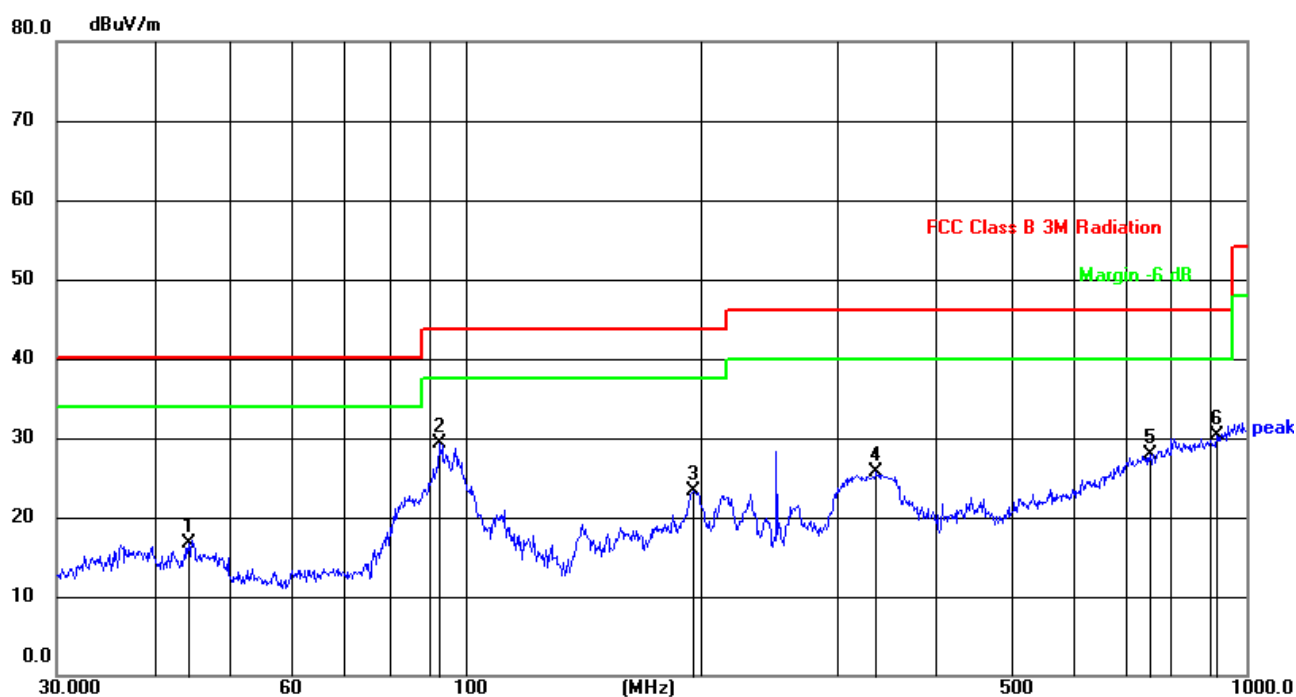
4.3.2 Spurious emissions

■ Below 30MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

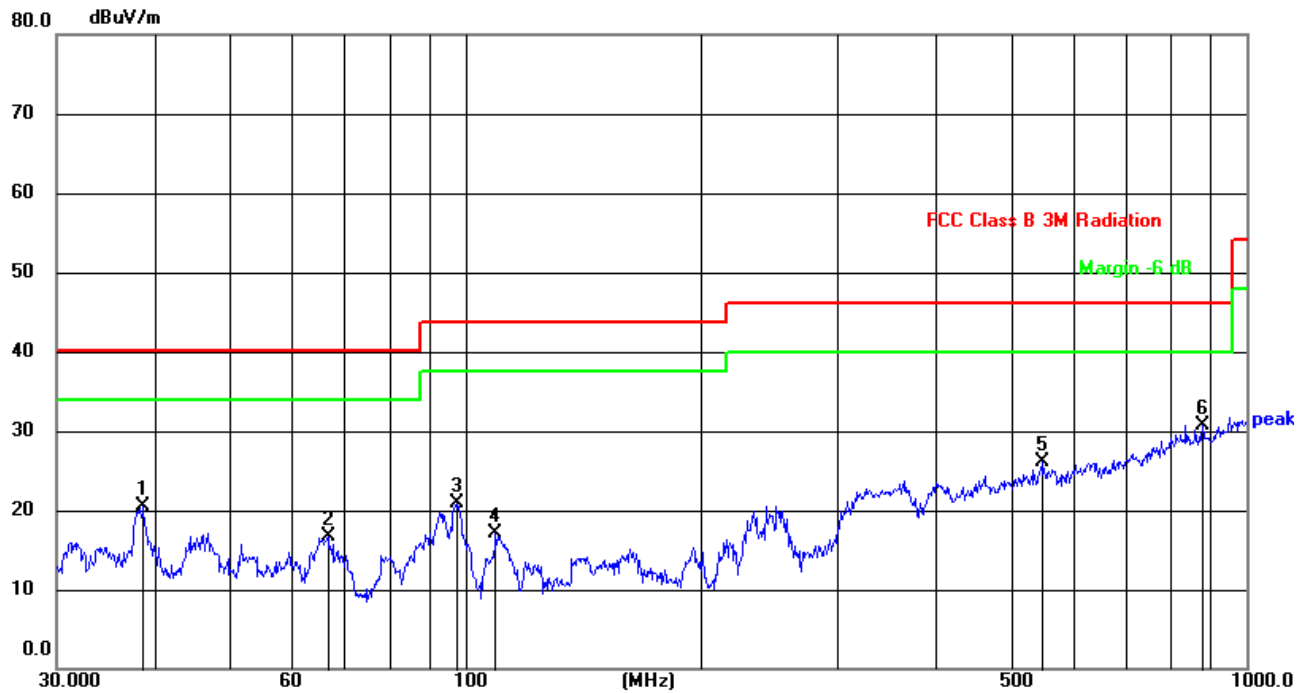
■ Below 1GHz

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	44.2751	37.87	-21.15	16.72	40.00	-23.28	QP
2	92.7870	54.71	-25.35	29.36	43.50	-14.14	QP
3	195.8216	46.53	-23.26	23.27	43.50	-20.23	QP
4	336.0350	44.98	-19.34	25.64	46.00	-20.36	QP
5	752.7431	35.91	-8.02	27.89	46.00	-18.11	QP
6	916.0683	35.28	-4.92	30.36	46.00	-15.64	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	38.7516	41.57	-21.14	20.43	40.00	-19.57	QP
2	66.7325	40.30	-23.63	16.67	40.00	-23.33	QP
3	97.4556	46.18	-25.27	20.91	43.50	-22.59	QP
4	109.4116	41.28	-24.16	17.12	43.50	-26.38	QP
5	547.0976	39.05	-12.91	26.14	46.00	-19.86	QP
6	878.3214	36.52	-5.81	30.71	46.00	-15.29	QP

■ Above 1GHz

Test channel:	Lowest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4806.00	66.48	-9.88	56.60	74.00	-17.40	Horizontal
7209.00	57.24	-4.17	53.07	74.00	-20.93	Horizontal
9612.00	---	---	---	---	---	Horizontal
12015.00	---	---	---	---	---	Horizontal
4806.00	67.97	-9.88	58.09	74.00	-15.91	Vertical
7209.00	58.40	-4.17	54.23	74.00	-19.77	Vertical
9612.00	---	---	---	---	---	Vertical
12015.00	---	---	---	---	---	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4806.00	55.11	-9.88	45.23	54.00	-8.77	Horizontal
7209.00	46.25	-4.17	42.08	54.00	-11.92	Horizontal
9612.00	---	---	---	---	---	Horizontal
12015.00	---	---	---	---	---	Horizontal
4806.00	56.21	-9.88	46.33	54.00	-7.67	Vertical
7209.00	46.13	-4.17	41.96	54.00	-12.04	Vertical
9612.00	---	---	---	---	---	Vertical
12015.00	---	---	---	---	---	Vertical

Remark:

1. Final Level = Receiver Read level + Correction Factor (Antenna Factor + Cable Loss – Preamplifier Factor)
2. The emission levels of other frequencies are more than 20 dB below the limit and not show in test report.
3. “---”, means this data is the too weak instrument of signal is unable to test.

Test channel:	Middle channel
---------------	----------------

Peak value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4882.00	66.89	-9.79	57.10	74.00	-16.90	Horizontal
7323.00	61.67	-3.83	57.84	74.00	-16.16	Horizontal
9764.00	---	---	---	---	---	Horizontal
12205.00	---	---	---	---	---	Horizontal
4882.00	65.63	-9.79	55.84	74.00	-18.16	Vertical
7323.00	61.59	-3.83	57.76	74.00	-16.24	Vertical
9764.00	---	---	---	---	---	Vertical
12205.00	---	---	---	---	---	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4882.00	56.11	-9.79	46.32	54.00	-7.68	Horizontal
7323.00	46.79	-3.83	42.96	54.00	-11.04	Horizontal
9764.00	---	---	---	---	---	Horizontal
12205.00	---	---	---	---	---	Horizontal
4882.00	55.27	-9.79	45.48	54.00	-8.52	Vertical
7323.00	45.84	-3.83	42.01	54.00	-11.99	Vertical
9764.00	---	---	---	---	---	Vertical
12205.00	---	---	---	---	---	Vertical

Remark:

1. *Final Level = Receiver Read level + Correction Factor (Antenna Factor + Cable Loss – Preamplifier Factor)*
2. *The emission levels of other frequencies are more than 20 dB below the limit and not show in test report.*
3. *“---”, means this data is the too weak instrument of signal is unable to test.*

Test channel:	Highest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4960.00	66.23	-9.68	56.55	74.00	-17.45	Horizontal
7440.00	56.45	-3.50	52.95	74.00	-21.05	Horizontal
9920.00	---	---	---	---	---	Horizontal
12400.00	---	---	---	---	---	Horizontal
4960.00	67.73	-9.68	58.05	74.00	-15.95	Vertical
7440.00	55.61	-3.50	52.11	74.00	-21.89	Vertical
9920.00	---	---	---	---	---	Vertical
12400.00	---	---	---	---	---	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4960.00	53.37	-9.68	43.69	54.00	-10.31	Horizontal
7440.00	45.62	-3.50	42.12	54.00	-11.88	Horizontal
9920.00	---	---	---	---	---	Horizontal
12400.00	---	---	---	---	---	Horizontal
4960.00	53.44	-9.68	43.76	54.00	-10.24	Vertical
7440.00	45.94	-3.50	42.44	54.00	-11.56	Vertical
9920.00	---	---	---	---	---	Vertical
12400.00	---	---	---	---	---	Vertical

Remark:

1. *Final Level = Receiver Read level + Correction Factor (Antenna Factor + Cable Loss – Preamplifier Factor)*
2. *The emission levels of other frequencies are more than 20 dB below the limit and not show in test report.*
3. *“---”, means this data is too weak instrument of signal is unable to test.*

4.3.3 Bandedge emissions

All of the restriction bands were tested, and only the data of worst case was exhibited.

Test channel:	Lowest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	57.78	-14.50	43.28	74.00	-30.72	Horizontal
2400.00	67.39	-14.45	52.94	74.00	-21.06	Horizontal
2390.00	59.19	-14.50	44.69	74.00	-29.31	Vertical
2400.00	68.22	-14.45	53.77	74.00	-20.23	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	44.36	-14.50	29.86	54.00	-24.14	Horizontal
2400.00	53.06	-14.45	38.61	54.00	-15.39	Horizontal
2390.00	44.04	-14.50	29.54	54.00	-24.46	Vertical
2400.00	53.89	-14.45	39.44	54.00	-14.56	Vertical

Test channel:	Highest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	67.37	-14.13	53.24	74.00	-20.76	Horizontal
2500.00	58.47	-14.06	44.41	74.00	-29.59	Horizontal
2483.50	67.36	-14.13	53.23	74.00	-20.77	Vertical
2500.00	56.93	-14.06	42.87	74.00	-31.13	Vertical

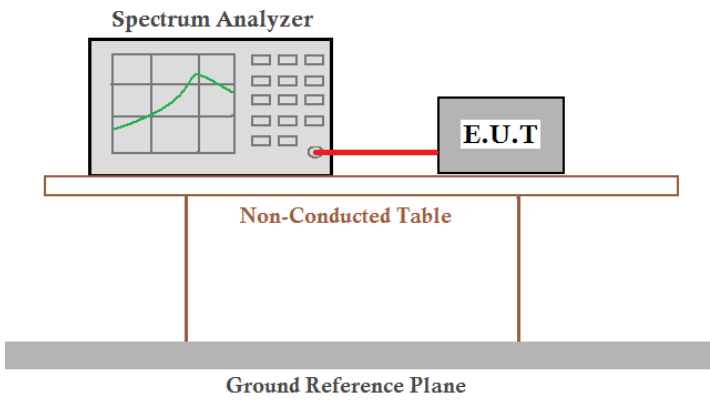
Average value:

Frequency (MHz)	Read Level (dBuV/m)	Correction Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	53.90	-14.13	39.77	54.00	-14.23	Horizontal
2500.00	46.28	-14.06	32.22	54.00	-21.78	Horizontal
2483.50	52.64	-14.13	38.51	54.00	-15.49	Vertical
2500.00	47.66	-14.06	33.60	54.00	-20.40	Vertical

Remark:

1. *Final Level = Receiver Read level + Correction Factor (Antenna Factor + Cable Loss – Preamplifier Factor)*

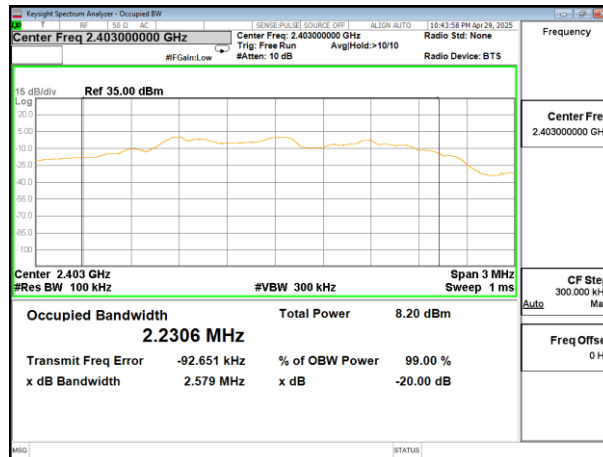
4.4 20dB Bandwidth and 99% bandwidth

Test Requirement :	§ 15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.	
Test Method :	ANSI C63.10:2013	
Limit:	/	
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>	
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.3°C	Humid.: 52%RH
Test voltage:	DC 3.7V From Battery	
Test results:	Pass	

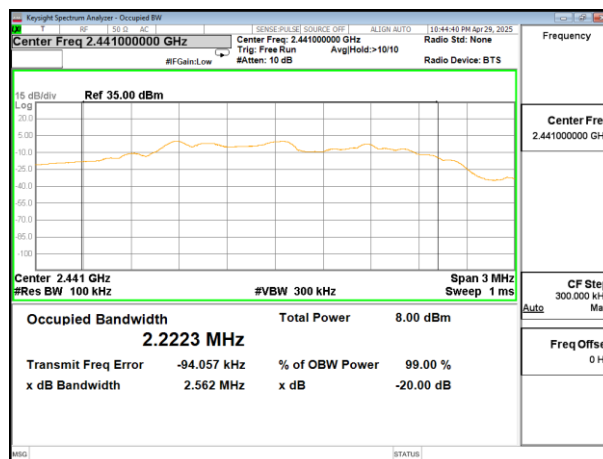
Measurement Data

Test channel	20dB bandwidth(MHz)	Result
Lowest	2.579	Pass
Middle	2.562	
Highest	2.545	

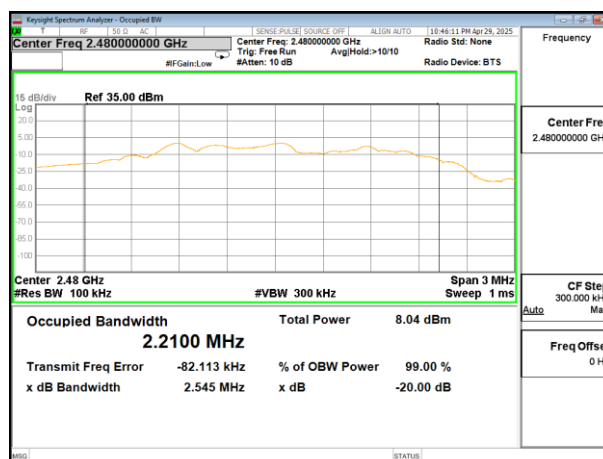
Test plot as follows:
20dB bandwidth



Lowest channel



Middle channel



Highest channel

5 Test Setup Photo

Reference to the **appendix I** for details.

6 EUT Constructional Details

Reference to the **appendix II** for details.

-----End-----