



RF MEASUREMENT REPORT

FCC ID: HD5-CK62X00

Applicant: Honeywell International Inc
Honeywell Safety and Productivity Solutions

Product: Mobile Computer

Model No.: CK62X00

Brand Name: Honeywell

FCC Classification: Unlicensed National Information Infrastructure (NII)

FCC Rule Part(s): Part 15 Subpart E (Section 15.407)

Result: Complies

Received Date: 2025-01-16

Test Date: 2025-01-23 ~ 2025-01-24

Reviewed By:

Ada Zhang

Ada Zhang

Approved By:

Robin Wu

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB789033. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
R25S1035018-U202	V01	Initial Report	2025-02-17	Valid

Note: This report is based on the original MRT report (Report No.: 2406RSU006-U4) to add a new keypad, the others are identical. Radiated Spurious Emission under the worst-case modes are verified.

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1. General Information

1.1. Applicant

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Bailes Rd. Fort Mill, SC 29707 United States

1.2. Manufacturer

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Bailes Rd. Fort Mill, SC 29707 United States

1.3. Testing Facility

☒	Test Site – MRT Suzhou Laboratory Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China Laboratory Location (Suzhou - Wujiang) Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China Laboratory Accreditations A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
☐	Test Site – MRT Shenzhen Laboratory Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China Laboratory Accreditations A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	Test Site – MRT Taiwan Laboratory Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Laboratory Accreditations TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	Mobile Computer
Model No.	CK62X00
Serial No.	25013B312A & 25013B1BEB
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	V5.3 dual mode
Antenna Information	Refer to section 1.7
Operating Temperature	-20 ~ 50 °C
Power Type	By Battery
Accessory	
Rechargeable Li-ion Battery	Model No.: CK65-BTSC Nominal Voltage: 3.6V Rated Capacity: 6800mAh Nominal Capacity: 7000mAh/25.2Wh
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	802.11a/n-HT20/ac-VHT20/ax-HE20: 5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5720MHz, 5745 ~ 5825MHz 802.11n-HT40/ac-VHT40/ax-HE40: 5190 ~ 5230MHz, 5270 ~ 5310MHz, 5510 ~ 5710MHz, 5755 ~ 5795MHz 802.11ac-VHT80/ax-HE80: 5210MHz, 5290MHz, 5530MHz, 5610 MHz, 5690MHz, 5775MHz	
Channel Number	802.11a/n/ac-VHT20/ax-HE20: 25 802.11n-HT40/ac-VHT40/ax-HE40: 12 802.11ac-VHT80/ax-HE80: 6	
Type of Modulation	802.11a/n/ac: OFDM 802.11ax: OFDMA	
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps 802.11ax: up to 1201Mbps	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☒ Partial RU

1.6. Working Frequencies

802.11a/n-HT20/ac-VHT20/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	144	5720 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	--	--	--	--

802.11n-HT40/ac-VHT40/ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	151	5755 MHz	159	5795 MHz

802.11ac-VHT80/ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz
122	5610 MHz	138	5690 MHz	155	5775 MHz

1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	Antenna Gain (dBi)	
		Ant 2	Ant 3
Wi-Fi Antennas			
PIFA	2400 ~ 2500	3.13	1.92
	5150 ~ 5350	3.76	3.97
	5470 ~ 5725	4.37	4.54
	5725 ~ 5850	4.21	3.76
	5925 ~ 6425	7.22	4.89
	6425 ~ 6525	4.72	4.93
	6525 ~ 6875	5.49	4.93
	6875 ~ 7125	4.95	3.40
Note: The EUT supports Cyclic Delay Diversity (CDD) mode.			

2. Test Configuration

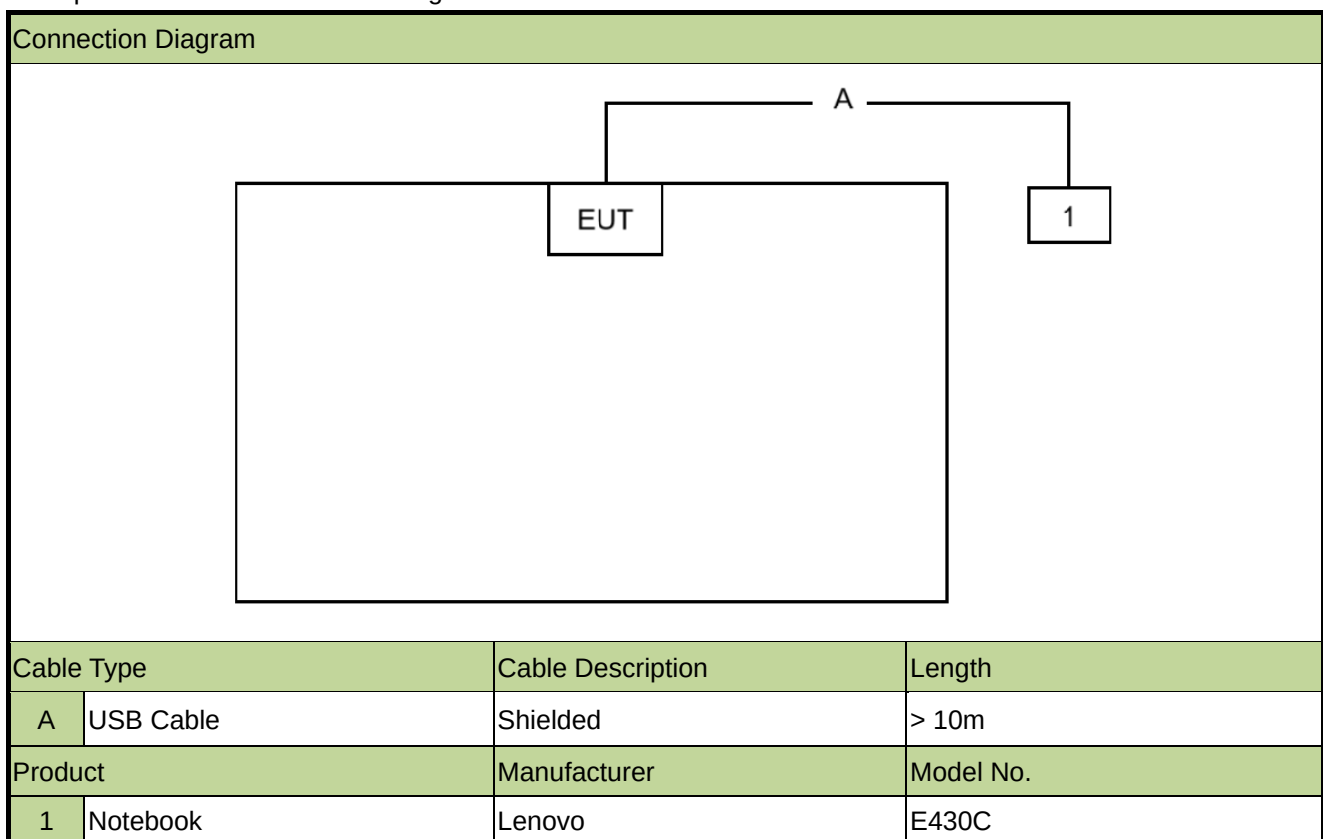
2.1. Test Mode

Mode 1: Transmit by 802.11ac-VHT20 at 5720MHz

Note: The above test mode is the worst-case mode from the original report.

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing.



2.3. Test Software

The test utility software used during testing was “QRCT”, and the version was 4.0.00204.0.

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.407
- KDB 789033 D02v02r01
- KDB 662911 D01v02r01
- ANSI C63.10-2013

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE07111	1 year	2025-04-18	WJ-AC2
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2025-04-28	WJ-AC2
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2025-11-19	WJ-AC2
TRILOG Broad Band Antenna	Schwarzbeck	VULB 9163	MRTSUE07097	1 year	2025-04-24	WJ-AC2
Horn Antenna	EMCI	DRH18-E	MRTSUE07105	1 year	2025-05-12	WJ-AC2
Broadband Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE07100	1 year	2025-04-24	WJ-AC2
Preamplifier	EMCI	EMC118A45SE	MRTSUE07102	1 year	2025-04-11	WJ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE07103	1 year	2025-04-14	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11315	1 year	2025-06-24	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11332	1 year	2025-06-24	WJ-AC2
Anechoic Chamber	TDK	WJ-AC2	MRTSUE07117	1 year	2025-05-14	WJ-AC2

Software	Version	Function
e3	230711	EMI Test Software
CONTROLLER CO3000	v 1.03.02	RE Antenna & Turntable

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.
(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Emission Measurement

The maximum measurement uncertainty is evaluated as:

Coaxial: 9kHz~30MHz: 2.35dB

Coplanar: 9kHz~30MHz: 2.37dB

Horizontal: 30MHz~200MHz: 3.46dB

200MHz~1GHz: 3.78dB

1GHz~40GHz: 4.97dB

Vertical: 30MHz~200MHz: 4.07dB

200MHz~1GHz: 5.28dB

1GHz~40GHz: 4.78dB

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(b)(1), (2), (3), (4)(i)	Undesirable Emissions	Radiated	Pass
15.205, 15.209	General Field Strength Limits		Pass
15.407(b)(8), (9), (10)	(Restricted Bands and Radiated Emission Limits)		

6.2. Radiated Spurious Emission Measurement

6.2.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V/m}$]	Measured 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

6.2.2. Test Procedure

KDB 789033 D02v02r01- Section II)G)

6.2.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1 MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

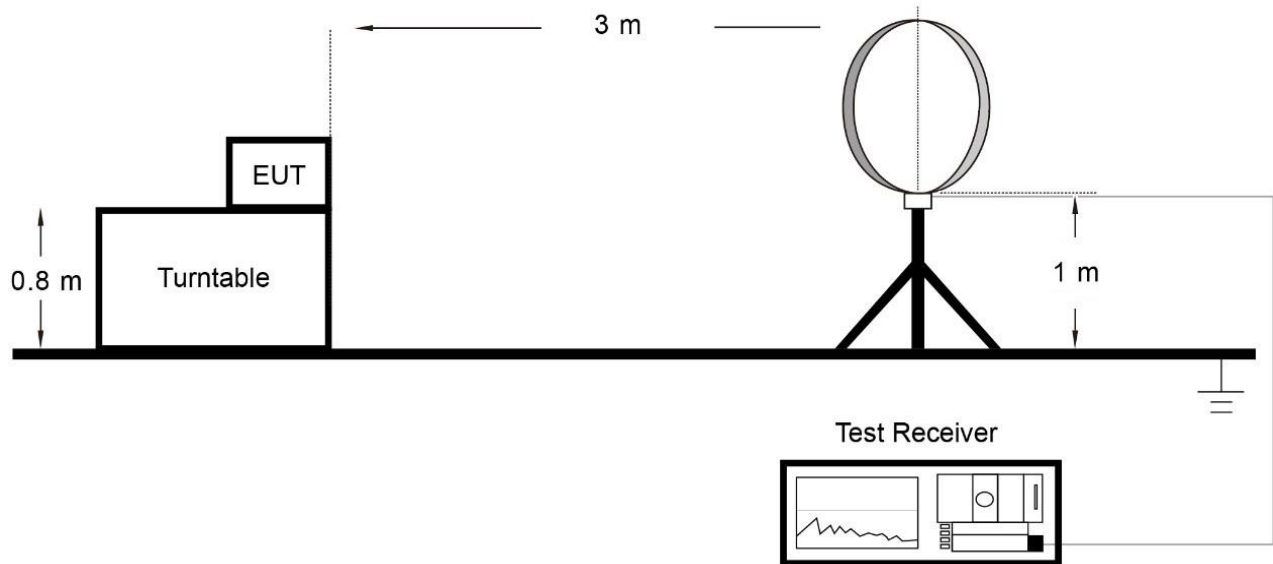
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

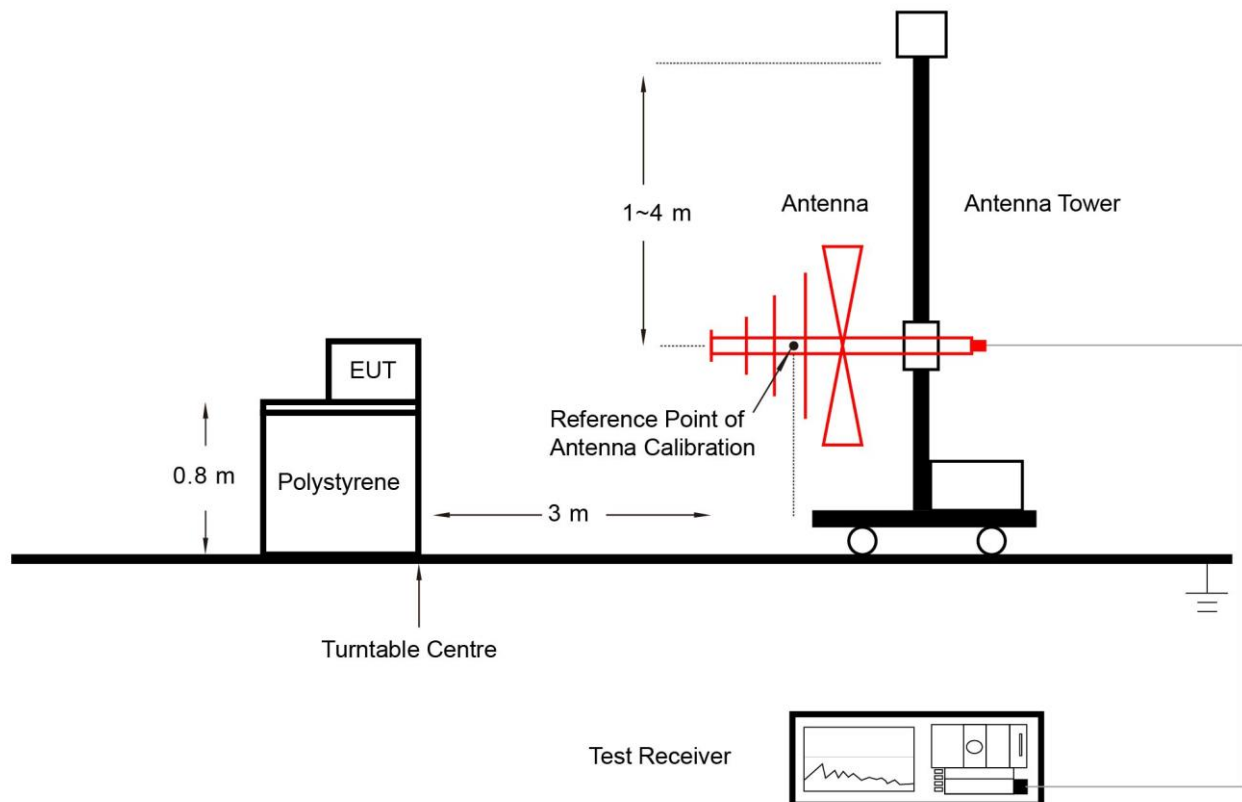
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10Hz
If the EUT duty cycle is $< 98\%$, set $\text{VBW} \geq 1/T$. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.2.4. Test Setup

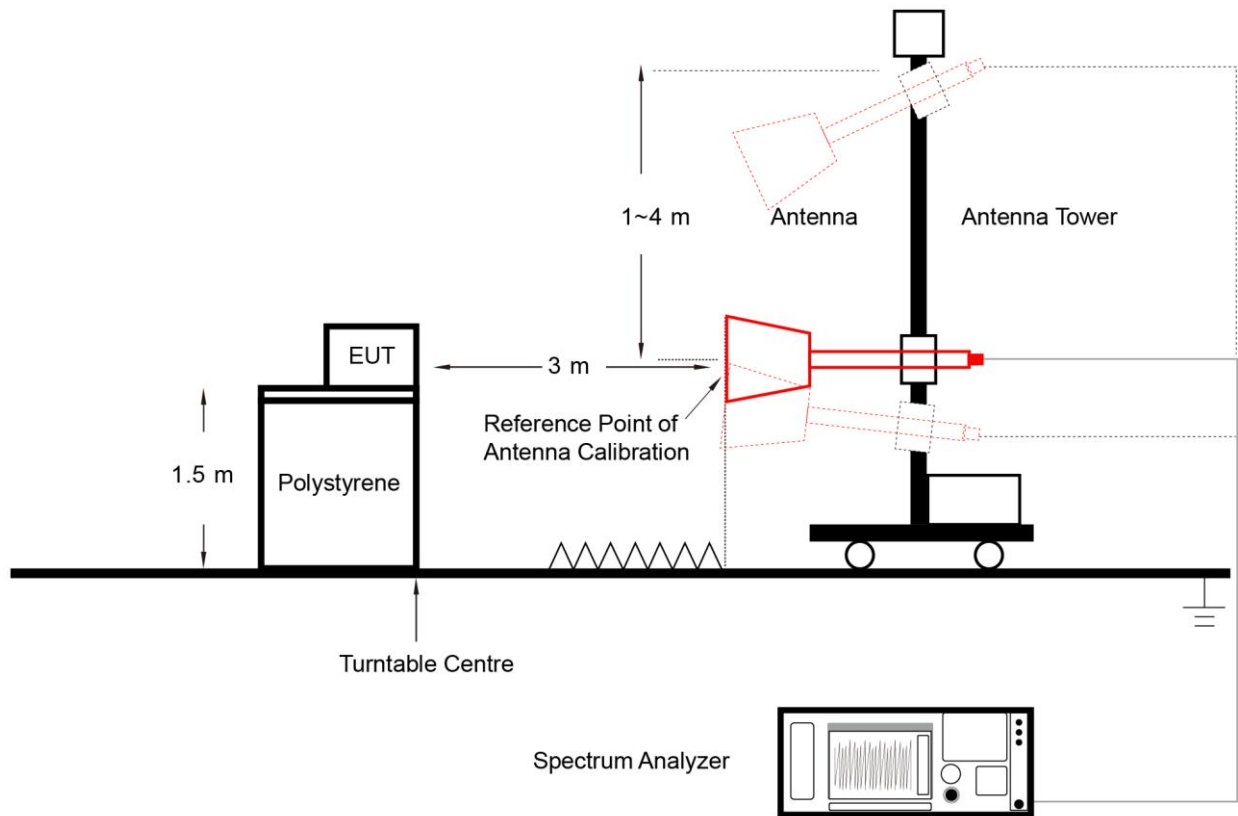
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.2.5. Test Result

Refer to Appendix A.1.

Appendix A – Test Result

A.1 Radiated Spurious Emission Test Result

Test Site	WJ-AC2	Test Engineer	Bob Zhang
Test Date	2025-01-23	Test Mode	802.11ac-VHT20 – Channel 144
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	9970.9	41.1	6.0	47.1	68.2	-21.1	Peak	Horizontal
	11404.0	43.1	5.6	48.7	74.0	-25.3	Peak	Horizontal
	12286.3	44.5	5.0	49.5	74.0	-24.5	Peak	Horizontal
*	14016.9	45.1	5.4	50.5	68.2	-17.7	Peak	Horizontal
*	10054.2	40.9	5.9	46.8	68.2	-21.4	Peak	Vertical
	11466.9	42.7	5.4	48.1	74.0	-25.9	Peak	Vertical
	12121.4	43.7	5.0	48.7	74.0	-25.3	Peak	Vertical
*	13901.3	45.1	5.0	50.1	68.2	-18.1	Peak	Vertical

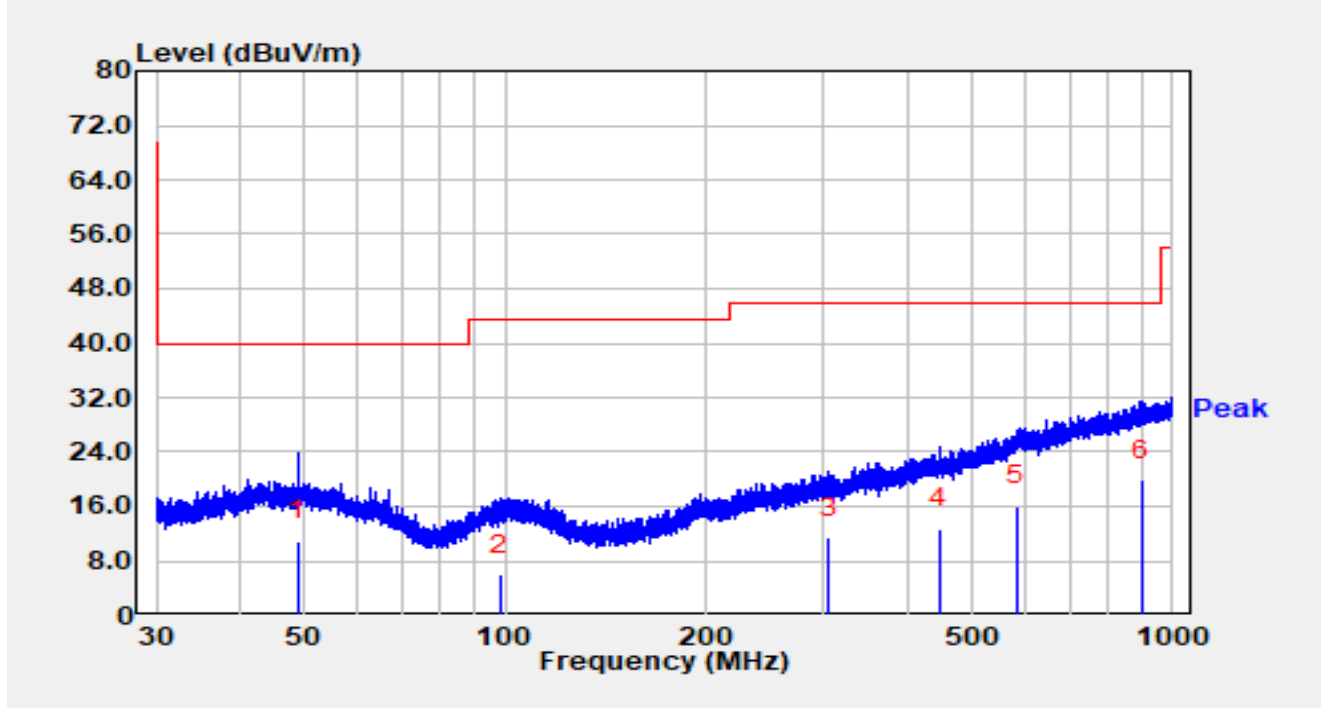
Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission below 1GHz:

Site	WJ-AC2	Test Date	2025-01-24
Temperature	22.7 °C	Humidity	23.8 %
Limit	FCC_Part 15.209_RSE(3m)	Test Engineer	Bob Zhang
Factor	VULB 9163_07097	Polarity	Horizontal
EUT	Mobile Computer	Test Voltage	By Battery
Test Mode	Transmit by 802.11ac-VHT20 at 5720MHz		

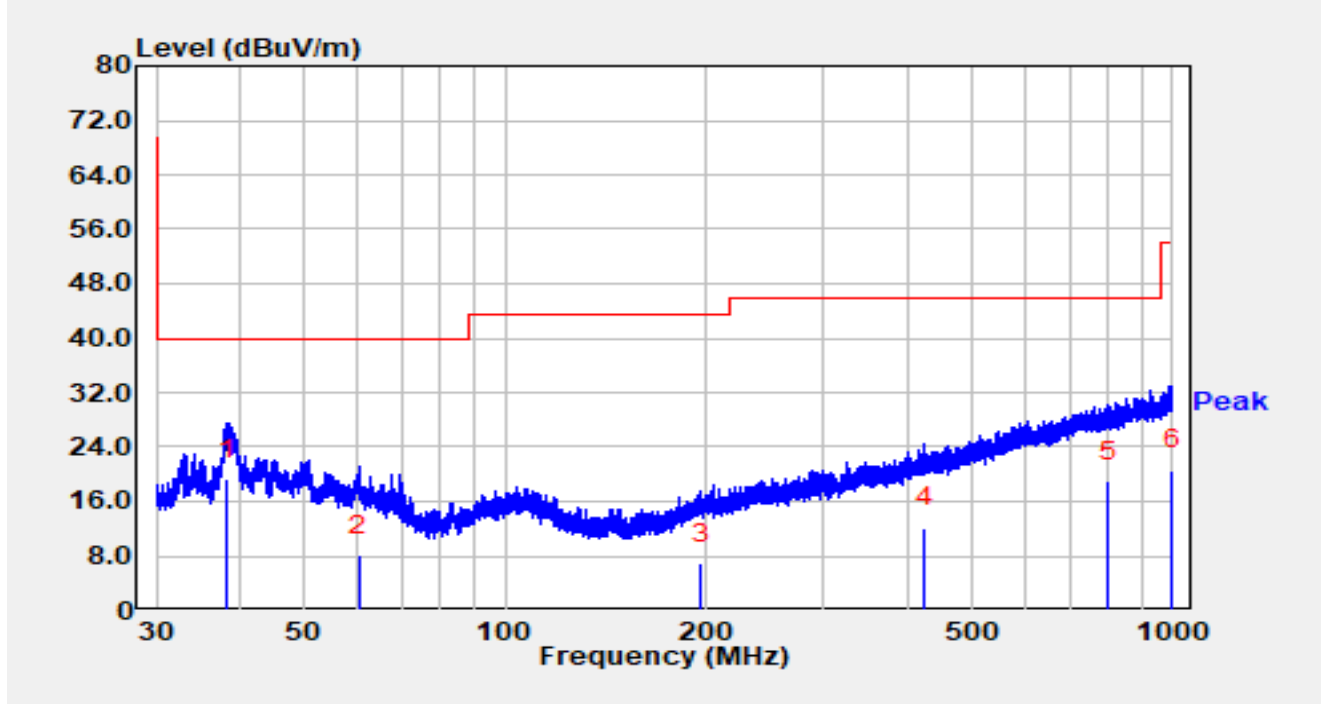


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		48.894	-8.50	19.51	11.01	-28.99	40.00	QP
2		98.004	-11.20	17.12	5.92	-37.58	43.50	QP
3		305.573	-8.70	20.13	11.43	-34.57	46.00	QP
4		448.139	-10.40	23.14	12.74	-33.26	46.00	QP
5		584.585	-9.70	25.84	16.14	-29.86	46.00	QP
6	*	900.463	-9.80	29.64	19.84	-26.16	46.00	QP

Notes:

- " * ", means this data is the worst emission level.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
- The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WJ-AC2	Test Date	2025-01-24
Temperature	22.7 °C	Humidity	23.8 %
Limit	FCC_Part 15.209_RSE(3m)	Test Engineer	Bob Zhang
Factor	VULB 9163_07097	Polarity	Vertical
EUT	Mobile Computer	Test Voltage	By Battery
Test Mode	Transmit by 802.11ac-VHT20 at 5720MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	38.373	1.20	17.99	19.19	-20.81	40.00	QP
2		60.238	-9.80	17.83	8.03	-31.97	40.00	QP
3		196.166	-10.40	17.27	6.87	-36.63	43.50	QP
4		424.730	-10.80	22.97	12.17	-33.83	46.00	QP
5		802.349	-9.50	28.42	18.92	-27.08	46.00	QP
6		999.299	-9.70	30.38	20.68	-33.32	54.00	QP

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Appendix B – Test Setup Photograph

Refer to “R25S1035018-UT” file.

Appendix C – EUT Photograph

Refer to “R25S1035018-UE” file.

_____ The End _____