EUROFINS ELECTRICAL TESTING SERVICE (SHENZHEN) CO., LTD.

RADIO TEST - REPORT

FCC& Compliance Test Report for

Product name: 2.4G Wireless Mouse

Model name: JWLKBM2

FCC ID: VIXJWLKBM2
IC: 21578-JWLKBM2

Test Report Number: EFGX22080247-IE-01-E03

1	**General Information**	**3**
1.1	Notes	3
1.2	Testing laboratory	4
1.3	Details of applicant	4
1.4	Details of manufacturer	4
1.5	Application details	5
1.6	Test item	5
1.7	Test standards	5
2	**Technical test**	**6**
2.1	Summary of test results	6
2.2	Test environment	6
2.3	Measurement uncertainty	6
2.4	Test mode	7
2.5	Test equipment utilized	8
2.6	Auxiliary Equipment Used during Test:	8
2.7	Test software information:	8
2.8	Test setup	9
2.9	Test results	11
3	**Technical requirement and result**	**12**
3.1	20 dB bandwidth	12
3.2	99% Occupied Bandwidth	15
3.3	Radiated emission	18

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1 General Information

1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter “Description of test item” and are not transferable to any other test items.

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd. is not responsible for any generalisations and conclusions drawn from this report. Any modification of the test item can lead to invalidity of test results and this test report may therefore be not applicable to the modified test item.

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Operator:

2022-09-19		Bruce Zheng / Project Engineer	
Date	Eurofins-Lab.	Name / Title	Signature

Technical responsibility for area of testing:

2022-09-19		Albert Xu / Lab Manager	
Date	Eurofins	Name / Title	Signature

1.2 Testing laboratory

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd.
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Telephone : +86-755-82911867
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The Laboratory has passed the Accreditation by the American Association for Laboratory Accrediation (A2LA). The Accreditation number is 5376.01
The Laboratory has been listed by industry Canada to perform electromagnetic emission measurements, The CAB identifier is CN0088

1.3 Details of applicant

Name	:	Voxx Accessories Corp.
Address	:	3502 Woodview Trace, Suite 220, Indianapolis, Indiana United States
Telephone	:	./.
Fax	:	./.

1.4 Details of manufacturer

Name	:	Voxx Accessories Corp.
Address	:	3502 Woodview Trace, Suite 220, Indianapolis, Indiana United States
Telephone	:	./.
Fax	:	./.

1.5 Application details

Date of receipt of application	:	2022-08-18
Date of receipt of test item	:	2022-08-18
Date of test	:	2022-08-18 to 2022-09-02
Date of issue	:	2022-09-19

1.6 Test item

Product type	:	2.4G Wireless Mouse
Model name	:	JWLKBM2
Brand	:	Jensen
Serial number	:	./.
Ratings	:	3Vdc supplied by 2*1.5Vdc type ”AAA” batteries
Test voltage	:	3Vdc
FCC ID	:	VIXJWLKBM2
IC	:	21578-JWLKBM2
Hardware Version	:	V3
Software / Firmware Version	:	V1.2
PMN	:	2.4G Wireless Mouse
HVIN	:	JWLKBM2
Additional information	:	./.

RadioTechnical data

Frequency range	:	2402MHz – 2480MHz
Radio Tech.	:	2.4G SRD
Frequency channel	:	40
Modulation	:	GFSK
Antenna type	:	PCB antenna
Antenna gain	:	-4.62 dBi

Note：
The above sample(s) and sample information was/were submitted and identified on behalf of the applicant. Eurofins assures objectivity and impartiality of the test, and fulfills the obligation of confidentiality for applicant’s commercial information and technical documents.

1.7 Test standards

Test Standards	
FCC Part 15 Subpart C	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-210 Issue 10 December 2019	RSS-210 — Licence-Exempt Radio Apparatus: Category I Equipment

Test Method
1: ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
2: ANSI C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices.

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

or

The deviations as specified were ascertained in the course of the tests performed. ☐

2.2 Test environment

RF Conducted

Enviroment Parameter	Temperature	Relative Humidity
101.2Kpa	24.6	62.6%

Radiated

Enviroment Parameter	Temperature	Relative Humidity
101.2Kpa	23.7	51.7%

2.3 Measurement uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty in conducted measurements	1.96dB
Uncertainty for Conducted RF test	RF Power Conducted: 1.16dB Frequency test involved: 1.05×10-7 or 1%
Uncertainty for Radiated Spurious Emission 25MHz-3000MHz	Horizontal: 4.46dB; Vertical: 4.54dB;
Uncertainty for Radiated Spurious Emission 3000MHz-18000MHz	Horizontal: 4.42dB; Vertical: 4.41dB;
Uncertainty for Radiated Spurious Emission 18000MHz-40000MHz	Horizontal: 4.63dB; Vertical: 4.62dB;

2.4 Test mode

The EUT was set at continuously transmitting mode (CH1, CH20, CH40) during the test.

Channel List

1CH	2402 MHz	**21CH**	2442 MHz
2CH	2404 MHz	**22CH**	2444 MHz
3CH	2406 MHz	**23CH**	2446 MHz
4CH	2408 MHz	**24CH**	2448 MHz
5CH	2410 MHz	**25CH**	2450 MHz
6CH	2412 MHz	**26CH**	2452 MHz
7CH	2414 MHz	**27CH**	2454 MHz
8CH	2416 MHz	**28CH**	2456 MHz
9CH	2418 MHz	**29CH**	2458 MHz
10CH	2420 MHz	**30CH**	2460 MHz
11CH	2422 MHz	**31CH**	2462 MHz
12CH	2424 MHz	**32CH**	2464 MHz
13CH	2426 MHz	**33CH**	2466 MHz
14CH	2428 MHz	**34CH**	2468 MHz
15CH	2430 MHz	**35CH**	2470 MHz
16CH	2432 MHz	**36CH**	2472 MHz
17CH	2434 MHz	**37CH**	2474 MHz
18CH	2436 MHz	**38CH**	2476 MHz
19CH	2438 MHz	**39CH**	2478 MHz
20CH	2440 MHz	**40CH**	2480 MHz

2.5 Test equipment utilized

EQUIPMENT ID	EQUIPMENT NAME	MODEL NO.	CAL. DUE DATE
23-2-13-05	EMI Test Receiver	ESR3	2023-04-24
23-2-13-06	LISN	NNLK 8127 RC	2023-04-23
23-2-10-16	Attenuator	VTSD 9561-F	2023-04-24
23-2-13-12	Signal Analyzer	N9010B-544	2023-04-24
23-2-13-13	BT/WLAN Tester	CMW270	2023-04-23
23-2-13-14	Signal Generator	N5183B-520	2023-04-23
23-2-13-15	Vector Signal Generator	N5182B-506	2023-04-23
23-2-10-43	Switch and Control Unit	ERIT-E-JS0806-2	2023-06-17
23-2-10-44	DC power supply	E3642A	2023-06-03
23-2-10-45	Temperature test chamber	SG-80-CC-2	2023-04-23
23-2-13-01	EMI Test Receiver	ESR7	2023-04-24
23-2-13-02	Signal Analyzer	N9020B-544	2023-04-24
23-2-12-01	Active Loop Antenna	FMZB 1519B	2024-05-05
23-2-12-02	TRILOG Broadband Antenna	VULB9168	2024-05-05
23-2-12-03	Horn Antenna	3117	2024-05-05
23-2-12-04	Horn Antenna	BBHA 9170	2024-05-05
23-2-10-01	Preamplifier	BBV9745	2023-04-23
23-2-10-02	Preamplifier	TAP01018048	2023-04-24
23-2-10-03	Preamplifier	TAP18040048	2023-04-24
23-2-10-14	Switch and Control Unit	ERIT-E-JS0806-SF1	N/A

2.6 Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.	S/N
Laptop	LENOVO	TP00096A	PF-1QH0LV

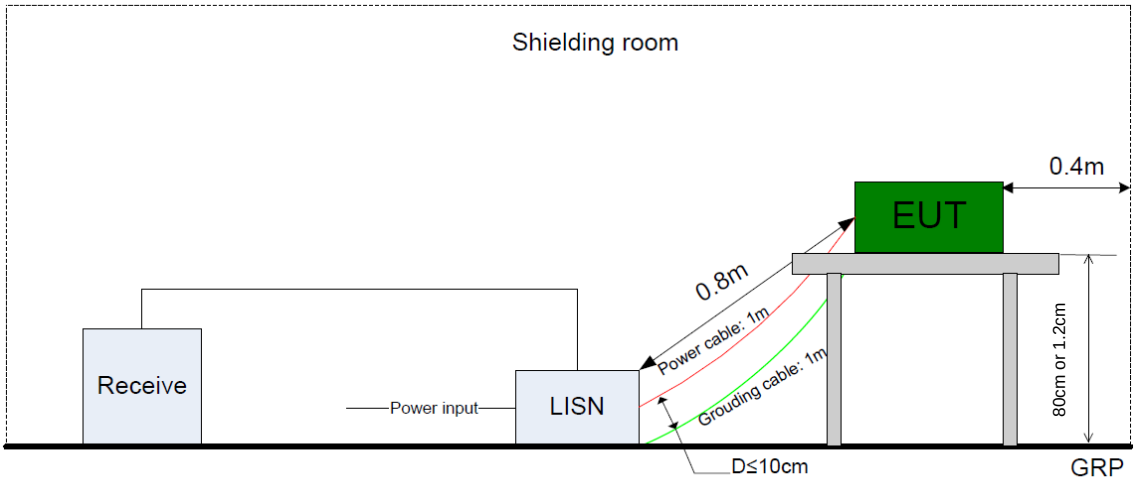
2.7 Test software information:

Test Software Version	N/A		
Modulation	Setting TX Power	TX Pattern	Packet Type
N/A	N/A	TX Packet	N/A

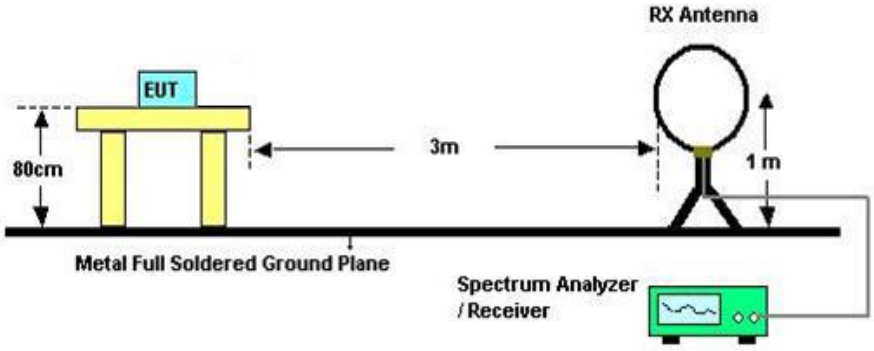
The EUT enter the test mode by pressing the key and it was setted to continue transimitting by debug software, therefore we pressed one button to transmitting fundamental frequency during Testing.

2.8 Test setup

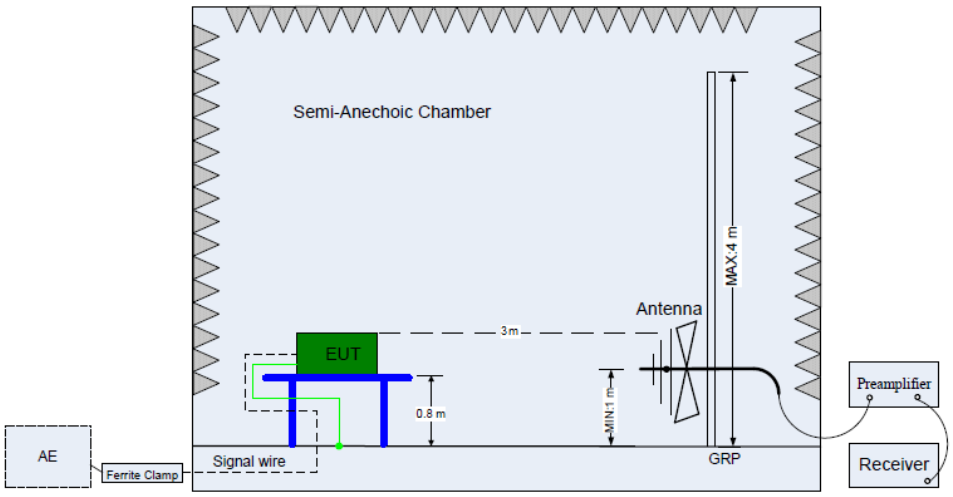
Ac line conducted



Setup diagram for radiated tests below 30MHz

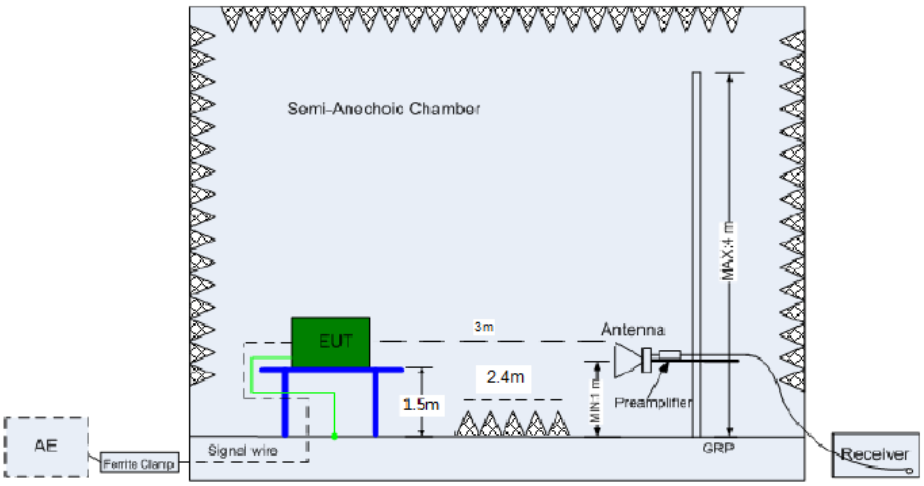


Setup diagram for radiated tests below 1GHz



(Below 1 GHz)

Setup diagram for radiated tests above 1GHz



(Above 1 GHz)

2.9 Test results

☒ 1st test ☐ test after modification ☐ production test

Technical Requirements					
FCC Part 15 Subpart C/RSS-210 Issue 10/RSS-Gen Issue 5					
Test Condition			Test Result	Verdict	Test Site
§15.215(c)(1)	--	20dB bandwidth	See page 13	Pass	Site 1
--	RSS-GEN 6.7	99% Occupied Band-width	Appendix 16	Pass	Site 1
§15.249(a)&(d)&§15.209 &§15.205	RSS-210 B.10	Radiated emission	See page 21	Pass	Site 1
§15.203	RSS-GEN 6.8	Antenna requirement	See note 1	Pass	--

Remark 1: N/A – Not Applicable.
Note 1: The EUT uses a PCB antenna, the gain: -4.62 dBi. According to §15.203, it is considered sufficiently to comply with the provisions of this section.

3 Technical requirement and result

3.1 20 dB bandwidth

Test Method:
The test method was refered to the subclause 6.9.2 of ANSI C63.10-2013.

The occupied bandwidth is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). Typical ratios, expressed in dB, are −6 dB, −20 dB, and −26 dB, corresponding to 6 dB BW, 20 dB BW, and 26 dB BW, respectively. In this subclause, the ratio is designated by "−xx dB." The reference value is either the level of the unmodulated carrier or the highest level of the spectral envelope of the modulated signal, as stated by the applicable requirement. Some requirements might specify a specific maximum or minimum value for the "−xx dB" bandwidth; other requirements might specify that the "−xx dB" bandwidth be entirely contained within the authorized or designated frequency band.

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Steps a) through c) might require iteration to adjust within the specified tolerances.

e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "−xx dB down" requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.

f) Set detection mode to peak and trace mode to max hold.

g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

h) Determine the "−xx dB down amplitude" using [(reference value) − xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.

i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).

j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "íxx dB down amplitude" determined in step h). If a marker is below this "−xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "íxx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Limit:

None; for reporting purposes only.

Test Result:

Channel	20db EBW[MHz]	Verdict
2402	2.136	PASS
2440	2.154	PASS
2480	2.154	PASS

Test Graphs

2402

2440

2480


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
Atten: 10 dB
Preamp: Off
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold:>100/100
Trig: Free Run
1 Spectrum
ΔMkr2 2.154 MHz
-0.09 dB
Scale/Div 10 dB
Ref Level 0.00 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Span 6.000 MHz
Sweep 1.00 ms (1001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.480 030 GHz -2.218 dBm
2 Δ3 1 f (Δ) 2.154 MHz (Δ) -0.09290 dB
3 F 1 f 2.478 938 GHz -21.99 dBm
Sep 02, 2022
7:41:31 AM
Frequency
Center Frequency
2.480000000 GHz
Span
6.00000000 MHz
Swept Span
Zero Span
Full Span
Start Freq
2.477000000 GHz
Stop Freq
2.483000000 GHz
AUTO TUNE
CF Step
600.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
Settings

3.2 99% Occupied Bandwidth

Test Method:
The test method was refered to the subclause 6.9.3 of ANSI C63.10-2013.

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Limit:

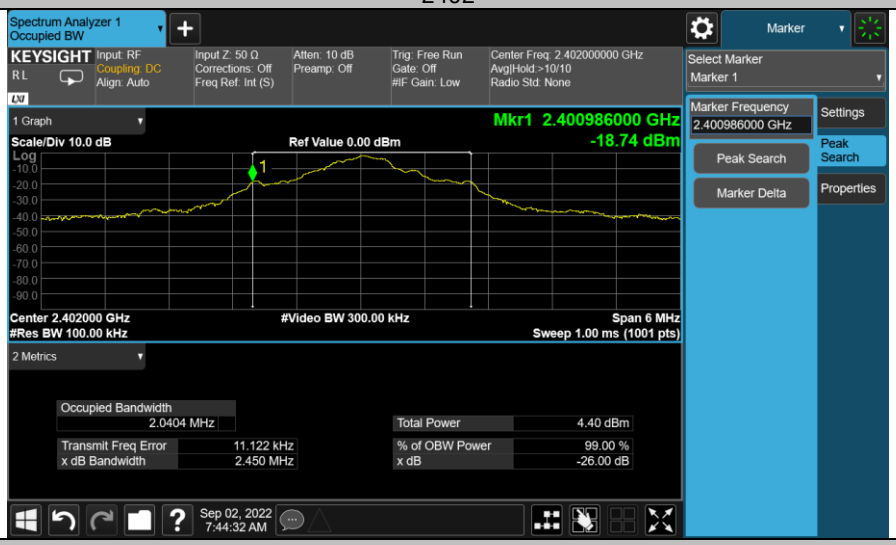
None; for reporting purposes only.

Test Result:

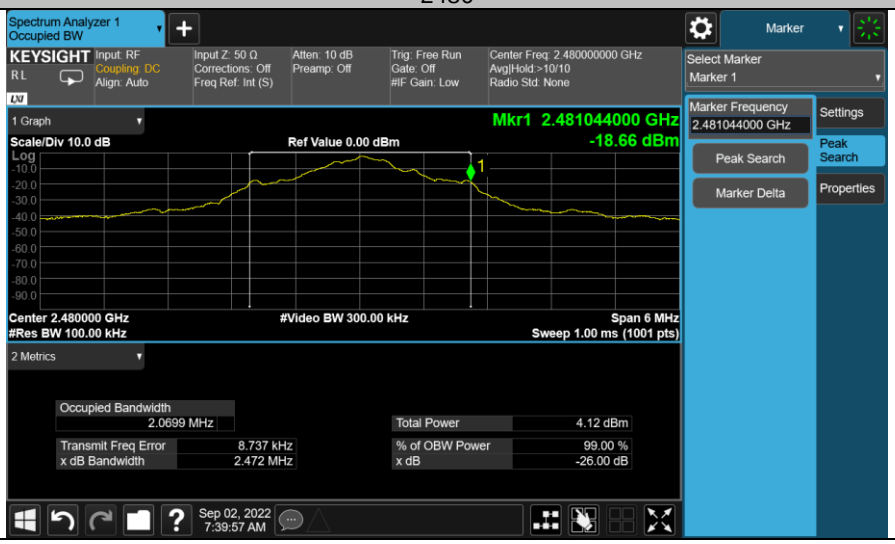
Channel	99% EBW[MHz]	Verdict
2402	2.0404	PASS
2440	2.0555	PASS
2480	2.0699	PASS

Test Graphs

2402



2440

2480


Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
Atten: 10 dB
Preamp: Off
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold:>10/10
Radio Std: None
Marker
Select Marker
Marker 1
1 Graph
Mkr1 2.481044000 GHz
-18.66 dBm
Scale/Div 10.0 dB
Ref Value 0.00 dBm
Log
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Center 2.480000 GHz
#Res BW 100.00 kHz
#Video BW 300.00 kHz
Span 6 MHz
Sweep 1.00 ms (1001 pts)
Marker Frequency
2.481044000 GHz
Settings
Peak Search
Peak Search
Marker Delta
Properties
2 Metrics
Occupied Bandwidth
2.0699 MHz
Total Power
4.12 dBm
Transmit Freq Error
8.737 kHz
% of OBW Power
99.00 %
x dB Bandwidth
2.472 MHz
x dB
-26.00 dB
Sep 02, 2022
7:39:57 AM

3.3 Radiated emission

Test Method:

The test method was refered to the subclause 11.11/11.12 of ANSI C63.10-2013.

1: The EUT was place on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. 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 height of antenna 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

5: Use the following spectrum analyzer settings According to C63.10:

For Above 1GHz

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW≥RBW for peak measurement and VBW = 10Hz for average measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 1GHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 KHz, VBW≥RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 30MHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 200 Hz, VBW≥RBW from 9KHz to 0.15MHz, RBW 9KHz VBW≥RBW from 0.15MHz to 30MHz for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

Note:

1: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Quasi-peak detection (QP) at frequency below 1GHz.

2: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for peak detection (PK) at frequency above 1GHz.

3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (20log(1/duty cycle)).

4: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.

5: When duty cycle <98%, The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is VBW ≥ 1 / T, the T is transmission duration (T).

Limit:

FCC §15.209

RSS-GEN, Section 8.9

Frequency Range (MHz)	Field Strength Limit (μV/m) at 3 m	Field Strength Limit (dBμV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

§15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	
13.36-13.41			

RSS-GEN 8.10

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	1660 - 1710	9.0 - 9.2
0.495 - 0.505	16.69475 - 16.69525	1718.8 - 1722.2	9.3 - 9.5
2.1735 - 2.1905	25.5 - 25.67	2200 - 2300	10.6 - 12.7
3.020 - 3.026	37.5 - 38.25	2310 - 2390	13.25 - 13.4
4.125 - 4.128	73 - 74.6	2483.5 - 2500	14.47 - 14.5
4.17725 - 4.17775	74.8 - 75.2	2655 - 2900	15.35 - 16.2
4.20725 - 4.20775	108 – 138	3260 – 3267	17.7 - 21.4
5.677 - 5.683	149.9 - 150.05	3332 - 3339	22.01 - 23.12
6.215 - 6.218	156.52475 - 156.52525	3345.8 - 3358	23.6 - 24.0
6.26775 - 6.26825	156.7 - 156.9	3500 - 4400	31.2 - 31.8
6.31175 - 6.31225	162.0125 - 167.17	4500 - 5150	36.43 - 36.5
8.291 - 8.294	167.72 - 173.2	5350 - 5460	Above 38.6
8.362 - 8.366	240 – 285	7250 - 7750	
8.37625 - 8.38675	322 - 335.4	8025 – 8500	
8.41425 - 8.41475	399.9 - 410		
12.29 - 12.293	608 - 614		
12.51975 - 12.52025	960 - 1427		
12.57675 - 12.57725	1435 - 1626.5		
13.36 - 13.41	1645.5 - 1646.5		

FCC §15.249(a)

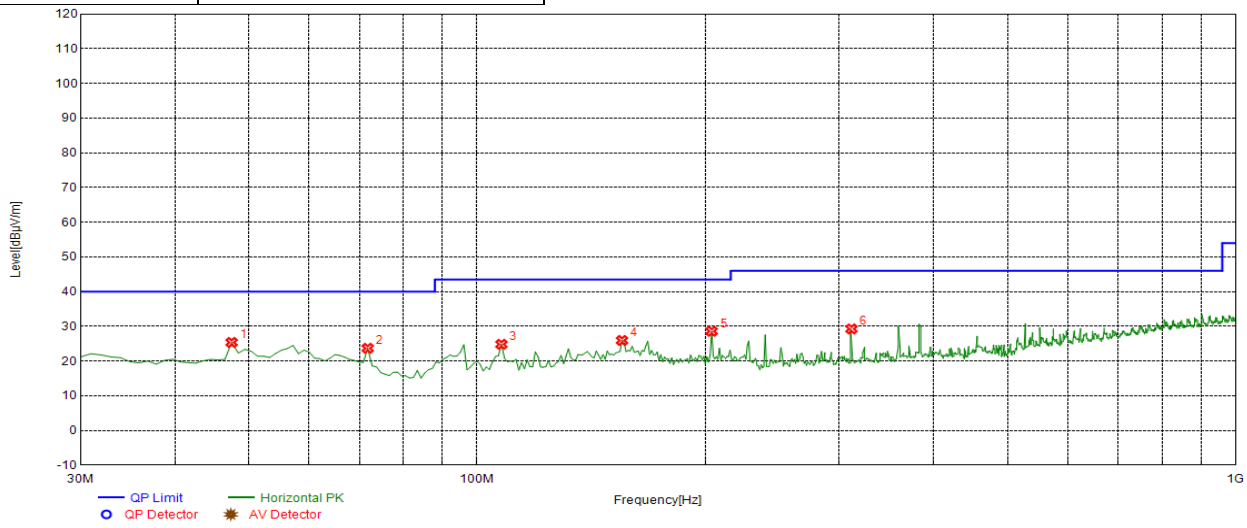
RSS-210 B.10

Fundamental frequency	Field strength of fundamental (mV/m)	Field strength of fundamental (dBµV/m)	Field strength of harmonics (µV/m)	Field strength of harmonics (dBµV/m)
902-928 MHz	50	94	500	54
2400-2483.5 MHz	50	94	500	54
5725-5875 MHz	50	94	500	54
24.0-24.25 GHz	250	128	2500	68

Test Result:

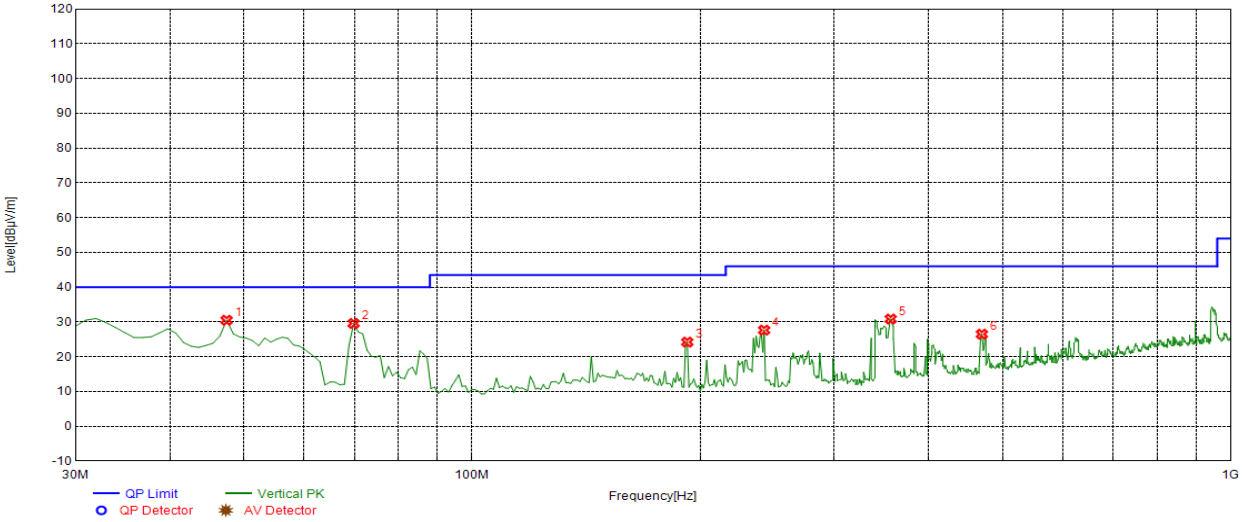
Below 1GHz
The worst case was recorded.

Mode:	2402



NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	47.4775	41.23	25.38	-15.85	40.00	14.62	Horizon-	PASS
2	71.7518	42.00	23.69	-18.31	40.00	16.31	Horizon-	PASS
3	107.677	44.27	24.85	-19.42	43.50	18.65	Horizon-	PASS
4	155.255	41.61	25.95	-15.66	43.50	17.55	Horizon-	PASS
5	203.803	47.61	28.60	-19.01	43.50	14.90	Horizon-	PASS
6	311.581	44.57	29.27	-15.30	46.00	16.73	Horizon-	PASS

Mode:	2402



NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	47.4775	46.35	30.50	-15.85	40.00	9.50	Vertical	PASS
2	69.8098	47.37	29.59	-17.78	40.00	10.41	Vertical	PASS
3	192.152	42.54	24.22	-18.32	43.50	19.28	Vertical	PASS
4	242.642	44.86	27.66	-17.20	46.00	18.34	Vertical	PASS
5	356.246	45.21	30.85	-14.36	46.00	15.15	Vertical	PASS
6	469.849	38.33	26.50	-11.83	46.00	19.50	Vertical	PASS

Above 1GHz
2402MHz Test Result

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2058.21	66.39	46.05	-20.34	74.00	27.95	Horizon-	PASS
2	4240.62	63.18	45.93	-17.25	74.00	28.07	Horizon-	PASS
3	4800.18	67.27	50.79	-16.48	74.00	23.21	Horizon-	PASS
4	6657.36	62.53	50.01	-12.52	74.00	23.99	Horizon-	PASS
5	8078.00	62.21	50.57	-11.64	74.00	23.43	Horizon-	PASS
6	10791.7	60.47	52.86	-7.61	74.00	21.14	Horizon-	PASS

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2075.81	66.64	46.32	-20.32	74.00	27.68	Vertical	PASS
2	3843.08	63.71	45.47	-18.24	74.00	28.53	Vertical	PASS
3	4803.18	63.73	47.26	-16.47	74.00	26.74	Vertical	PASS
4	6934.89	62.41	49.47	-12.94	74.00	24.53	Vertical	PASS
5	8010.50	62.91	50.93	-11.98	74.00	23.07	Vertical	PASS
6	10203.7	60.78	52.15	-8.63	74.00	21.85	Vertical	PASS

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

2440MHz Test Result

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2050.21	65.95	45.61	-20.34	74.00	28.39	Horizon-	PASS
2	4206.12	62.93	45.61	-17.32	74.00	28.39	Horizon-	PASS
3	4876.68	68.66	52.34	-16.32	74.00	21.66	Horizon-	PASS
4	6295.82	62.48	49.14	-13.34	74.00	24.86	Horizon-	PASS
5	7741.97	63.11	51.21	-11.90	74.00	22.79	Horizon-	PASS
6	10485.7	61.02	52.60	-8.42	74.00	21.40	Horizon-	PASS

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2278.25	66.11	46.28	-19.83	74.00	27.72	Vertical	PASS
2	3828.08	63.67	45.47	-18.20	74.00	28.53	Vertical	PASS
3	4876.68	64.34	48.02	-16.32	74.00	25.98	Vertical	PASS
4	6339.33	63.03	49.21	-13.82	74.00	24.79	Vertical	PASS
5	7905.49	62.89	51.19	-11.70	74.00	22.81	Vertical	PASS
6	10649.2	60.32	52.28	-8.04	74.00	21.72	Vertical	PASS

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

2480MHz Test Result

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2151.83	66.18	46.09	-20.09	74.00	27.91	Horizon-	PASS
2	4245.12	63.96	46.72	-17.24	74.00	27.28	Horizon-	PASS
3	4956.19	69.83	53.44	-16.39	74.00	20.56	Horizon-	PASS
4	6807.38	62.19	49.73	-12.46	74.00	24.27	Horizon-	PASS
5	7899.48	62.16	50.46	-11.70	74.00	23.54	Horizon-	PASS
6	10599.7	60.85	52.91	-7.94	74.00	21.09	Horizon-	PASS

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2029.80	65.70	45.30	-20.40	74.00	28.70	Vertical	PASS
2	4288.62	64.13	46.95	-17.18	74.00	27.05	Vertical	PASS
3	4960.69	64.75	48.41	-16.34	74.00	25.59	Vertical	PASS
4	6661.86	62.27	49.71	-12.56	74.00	24.29	Vertical	PASS
5	8115.51	61.87	50.42	-11.45	74.00	23.58	Vertical	PASS
6	10137.7	61.03	52.35	-8.68	74.00	21.65	Vertical	PASS

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Band-edge (Radiated)

2402MHz Test Result

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Factor [dB/m]	PK Value [dBµV/m]	PK Limit [dBµV/m]	PK Margin [dB]	Polarity	Verdict
1	2310.0000	62.12	-21.12	41.00	74.00	33.00	Horizontal	PASS
2	2386.1200	68.62	-20.98	47.64	74.00	26.36	Horizontal	PASS
3	2390.0000	67.22	-20.97	46.25	74.00	27.75	Horizontal	PASS
4	2400.00	87.78	-20.96	66.82	74.00	7.18	Horizontal	PASS

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Factor [dB/m]	PK Value [dBµV/m]	PK Limit [dBµV/m]	PK Margin [dB]	Polarity	Verdict
1	2310.0000	61.39	-21.12	40.27	74.00	33.73	Vertical	PASS
2	2388.5400	63.73	-20.98	42.75	74.00	31.25	Vertical	PASS
3	2390.0000	62.48	-20.97	41.51	74.00	32.49	Vertical	PASS
4	2400.00	76.62	-20.96	55.66	74.00	18.34	Vertical	PASS

AV Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	AV Value [dBµV/m]	AV Limit [dBµV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2400.00	-20.96	53.60	54.00	0.40	100	107	Horizontal
2	2400.00	-20.96	47.55	54.00	6.45	150	196	Vertical

2480MHz Test Result

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Factor [dB/m]	PK Value [dBµV/m]	PK Limit [dBµV/m]	PK Margin [dB]	Polarity	Verdict
1	2483.5000	85.26	-20.80	64.46	74.00	9.54	Horizontal	PASS
2	2485.5000	78.18	-20.80	57.38	74.00	16.62	Horizontal	PASS
3	2500.0000	65.23	-20.77	44.46	74.00	29.54	Horizontal	PASS

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Factor [dB/m]	PK Value [dBµV/m]	PK Limit [dBµV/m]	PK Margin [dB]	Polarity	Verdict
1	2483.5000	72.18	-20.80	51.38	74.00	22.62	Vertical	PASS
2	2484.1000	72.18	-20.80	51.38	74.00	22.62	Vertical	PASS

AV Final Data List								
NO.	Freq. [MHz]	AV Reading [dBµV/m]	Factor [dB/m]	AV Value [dBµV/m]	AV Limit [dBµV/m]	AV Margin [dB]	Polarity	Verdict
1	2483.5000	52.27	-20.80	31.47	54.00	22.53	Horizontal	PASS
2	2485.5000	73.14	-20.80	52.34	54.00	1.66	Horizontal	PASS

Level = Read level + Factor
Factor= Antenna Factor + Cable loss – Preamp Factor

Field strength of fundamental

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2402	86.48	85.96	-0.52	113.98	28.02	Horizon-	PASS
2	2402	76.31	75.79	-0.52	113.98	38.19	Vertical	PASS
3	2440	86.80	86.31	-0.49	113.98	27.67	Horizon-	PASS
4	2440	78.17	77.68	-0.49	113.98	36.30	Vertical	PASS
5	2480	87.73	87.27	-0.46	113.98	26.71	Horizon-	PASS
6	2480	78.78	78.32	-0.46	113.98	35.66	Vertical	PASS

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

-END OF REPORT-