
FCC Test Report

Report No.: AGC00688190604FE02

FCC ID : 2AMSUWTB129
APPLICATION PURPOSE : Original Equipment
PRODUCT DESIGNATION : 2.4G WIRELESS MOUSE
BRAND NAME : SANWA
MODEL NAME : GMAWTB129
APPLICANT : SANWA LIMITED
DATE OF ISSUE : Jul 20, 2019
STANDARD(S) : FCC Part 15.247
REPORT VERSION : V1.0

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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul. 20, 2019	Valid	Initial Release



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1. VERIFICATION OF COMPLIANCE

Applicant	SANWA LIMITED
Address	Room 1005, 10/F., Tower 2, Silvercord, 30 Canton Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer	Dongguan Togran Electronics Co., Ltd.
Address	No.262, Shidan Road, The 3rd Industrial Zone, Juzhou, Shijie Town, Dongguan City, Guangdong Province, P.R.China.
Factory	Dongguan Togran Electronics Co., Ltd.
Address	No.262, Shidan Road, The 3rd Industrial Zone, Juzhou, Shijie Town, Dongguan City, Guangdong Province, P.R.China.
Product Designation	2.4G WIRELESS MOUSE
Brand Name	SANWA
Test Model	GMAWTB129
Date of test	Jul. 12, 2019 to Jul. 19, 2019
Deviation	None
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-BLE/RF

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC part 15.247.

Tested By Erik Yang
Erik Yang(Yang Jianmin) Jul. 19, 2019

Reviewed By Max Zhang
Max Zhang(Zhang Yi) Jul. 20, 2019

Approved By Forrest Lei
Forrest Lei(Lei Yonggang)
Authorized Officer Jul. 20, 2019



2.GENERAL INFORMATION

2.1PRODUCT DESCRIPTION

The EUT is designed as a “2.4G WIRELESS MOUSE”. It is designed by way of utilizing the FSK technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.408 GHz to 2.474GHz
RF Output Power	1.701dBm(Max)
Modulation	FSK
Number of channels	34 Channels
Antenna Designation	PCB Antenna(Comply with requirements of the FCC part 15.203)
Antenna Gain	-3.1dBi
Hardware Version	A1
Software Version	A1
Power Supply	DC 3.0V by Battery



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2.2. TABLE OF CARRIER FREQUENCIES

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



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2.3 RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for **FCC ID: 2AMSUWTB129** filing to comply with the FCC Part 15.247 requirements.

2.4 TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

2.5 SPECIAL ACCESSORIES

Refer to section 2.2.

2.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.



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3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in measurement” (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission, $U_c = \pm 3.2$ dB
- Uncertainty of Radiated Emission below 1GHz, $U_c = \pm 3.9$ dB
- Uncertainty of Radiated Emission above 1GHz, $U_c = \pm 4.8$ dB



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4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX

Note:

1. Only the result of the worst case was recorded in the report, if no other cases.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.



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5. SYSTEM TEST CONFIGURATION

5.1 CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure :



5.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	2.4G WIRELESS MOUSE	GMAWTB129	2AMSUWTB129	EUT

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
15.247 (b)(3)	Peak Output Power	Compliant
15.247 (a)(2)	6 dB Bandwidth	Compliant
15.247 (d)	Conducted Spurious Emission	Compliant
15.247 (e)	Maximum Conducted Output Power Density	Compliant
15.209	Radiated Emission	Compliant
15.207	Conducted Emission	N/A

Note: N/A stands for not applicable. The 2.4G WIRELESS MOUSE does not work while charging.



6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Jun. 12, 2019	Jun. 11, 2020
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 20, 2018	Dec. 19, 2019
2.4GHz Fliter	Micro-tronics	087	N/A	Jun. 12, 2019	Jun. 11, 2020
Attenuator	Weinachel Corp	58-30-33	N/A	Jun. 12, 2019	Jun. 11, 2020
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep. 21, 2017	Sep. 20, 2020
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Jun. 12, 2019	Jun. 11, 2020
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May. 26, 2018	May. 25, 2020
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Oct. 25, 2018	Oct. 24, 2019
ANTENNA	SCHWARZBECK	VULB9168	D69250	Sep. 28, 2017	Sep. 27, 2019



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7. PEAK OUTPUT POWER

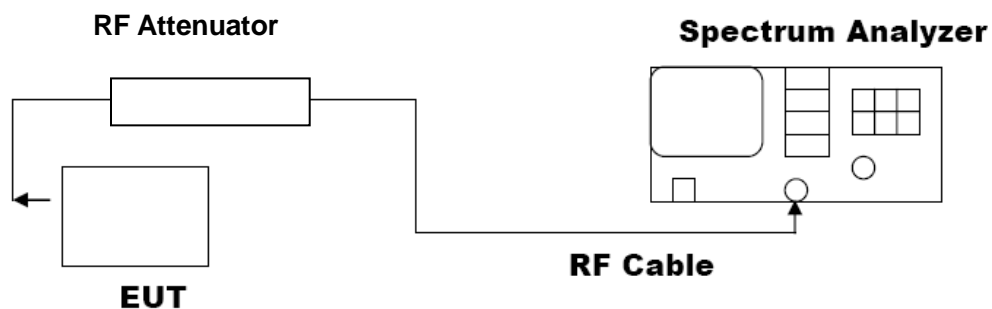
7.1. MEASUREMENT PROCEDURE

For peak power test:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. $RBW \geq DTS$ bandwidth
3. $VBW \geq 3 * RBW$.
4. $SPAN \geq VBW$.
5. Sweep: Auto.
6. Detector function: Peak.
7. Trace: Max hold.

Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) PEAK POWER TEST SETUP



7.3. LIMITS AND MEASUREMENT RESULT

PEAK OUTPUT POWER MEASUREMENT RESULT FOR GFSK MOUDULATION			
Frequency (GHz)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.408	1.643	30	Pass
2.440	1.701	30	Pass
2.474	1.689	30	Pass

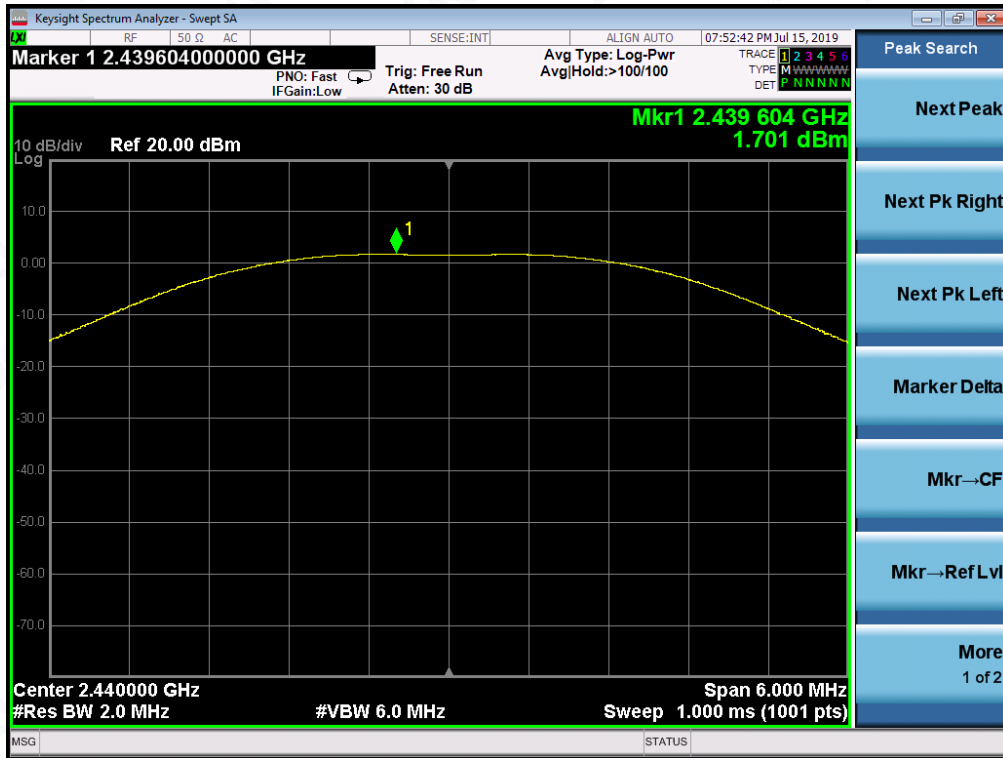
CH1



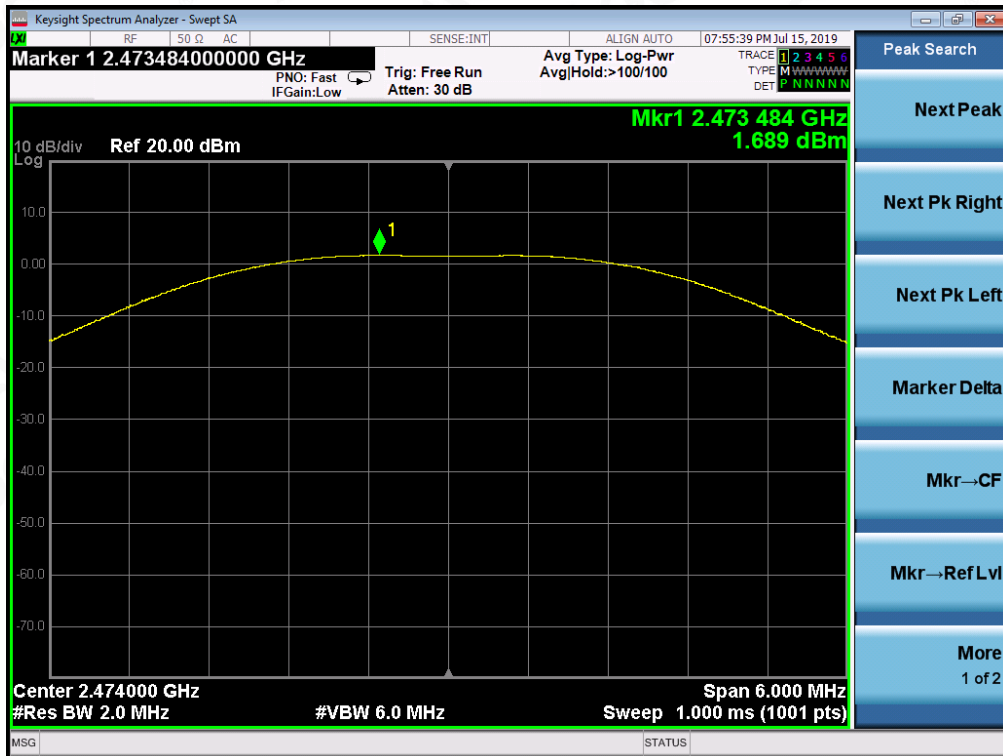
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CH17



CH34



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8. 6 DB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW \geq 3 \times RBW.
4. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

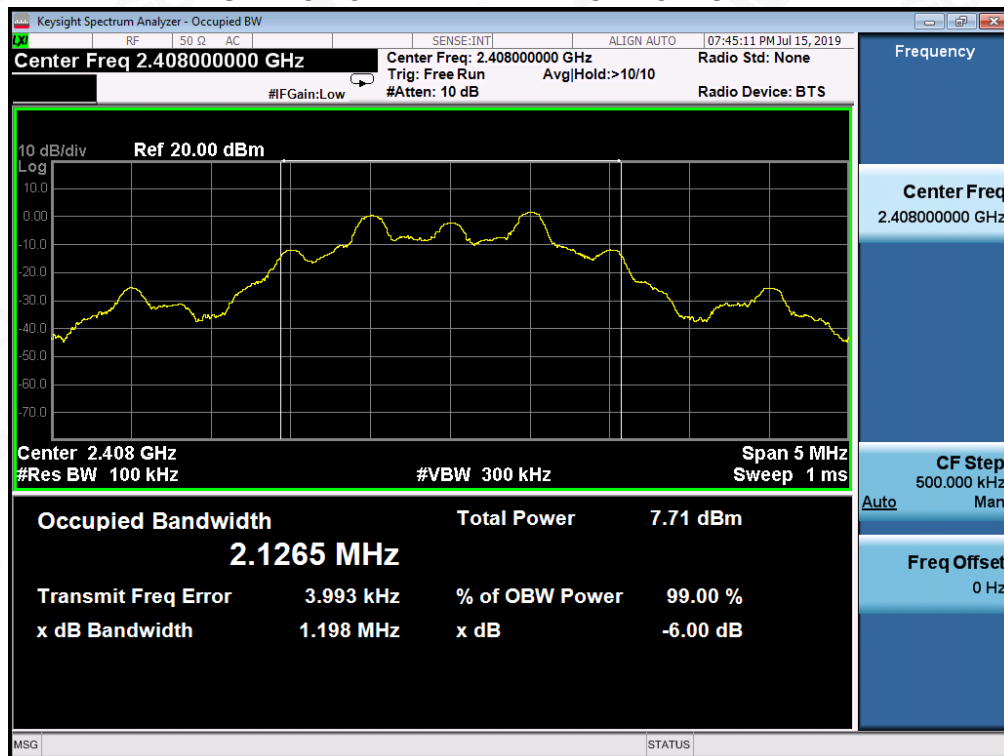
8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

8.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Applicable Limits		
	Test Data (kHz)		Criteria
>500KHZ	Low Channel	1198	PASS
	Middle Channel	1201	PASS
	High Channel	1187	PASS

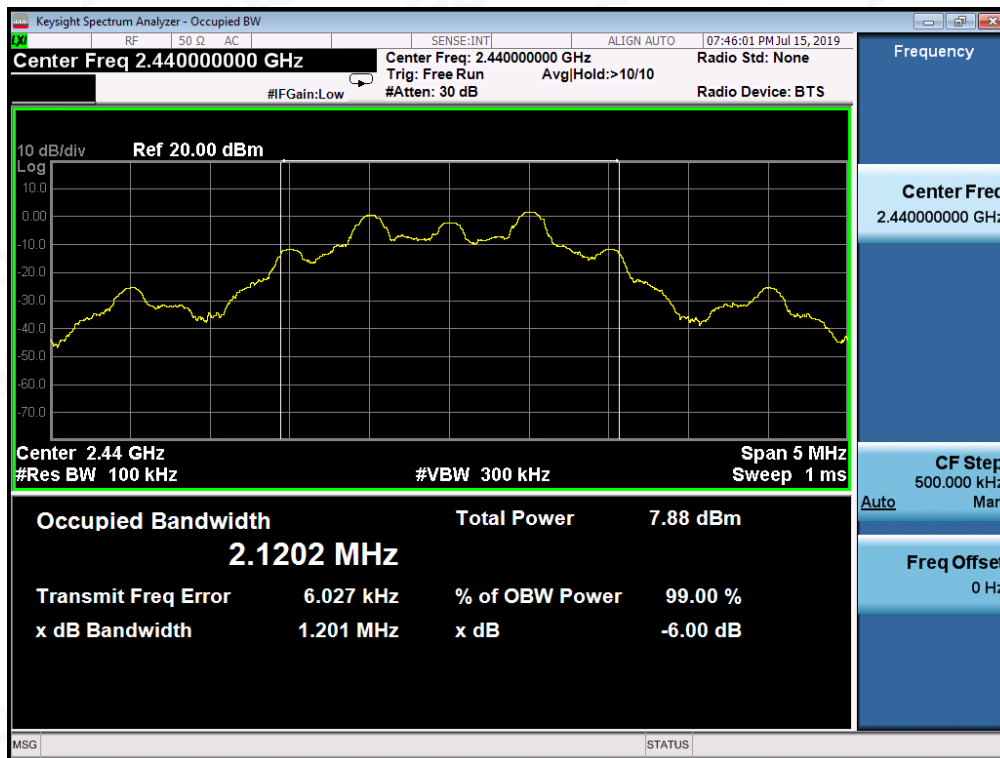
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



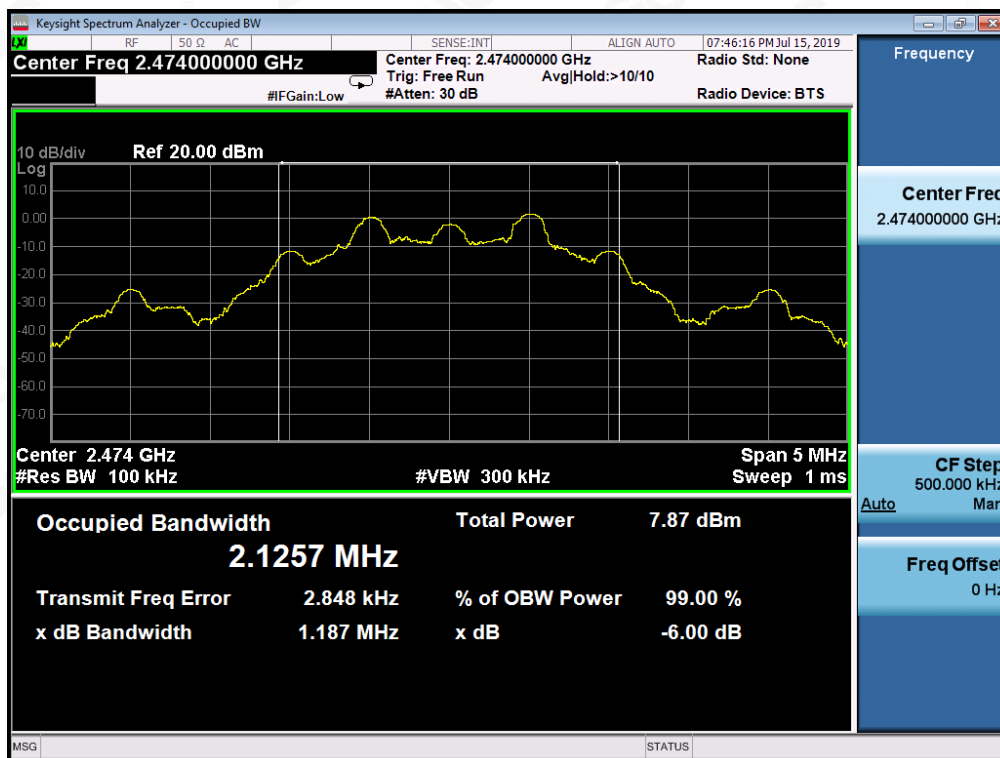
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TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



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9. CONDUCTED SPURIOUS EMISSION

9.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

9.3. MEASUREMENT EQUIPMENT USED

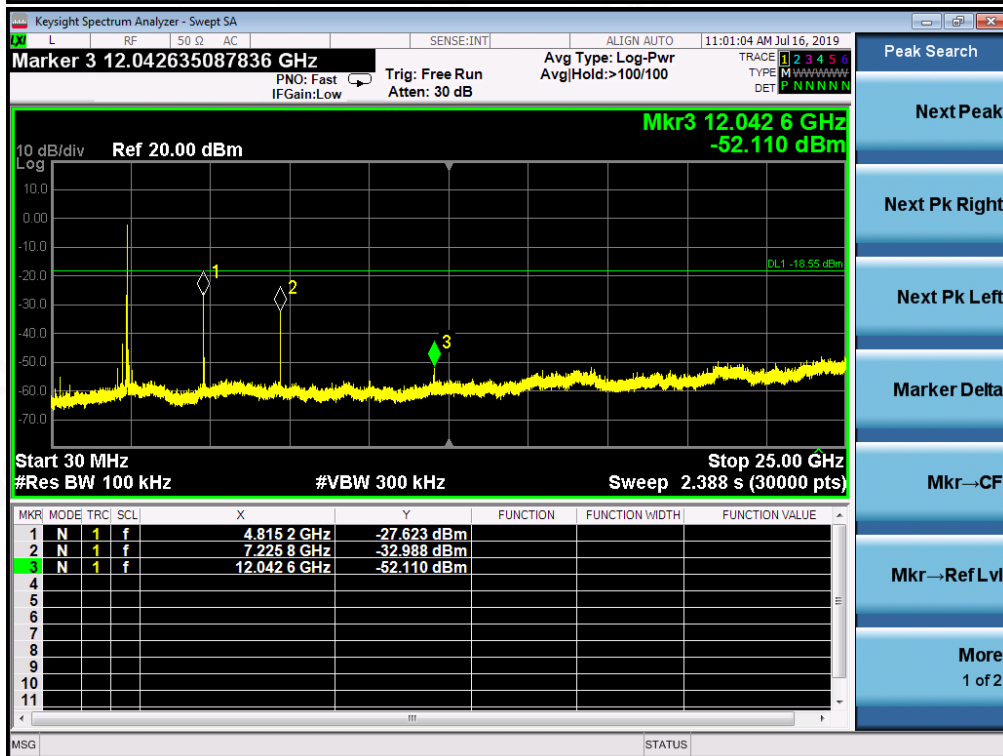
The same as described in section 6.

9.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test Data	Criteria
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.	At least -20dBc than the reference level	PASS PASS



**TEST RESULT FOR ENTIRE FREQUENCY RANGE
FSK MODULATION IN LOW CHANNEL**



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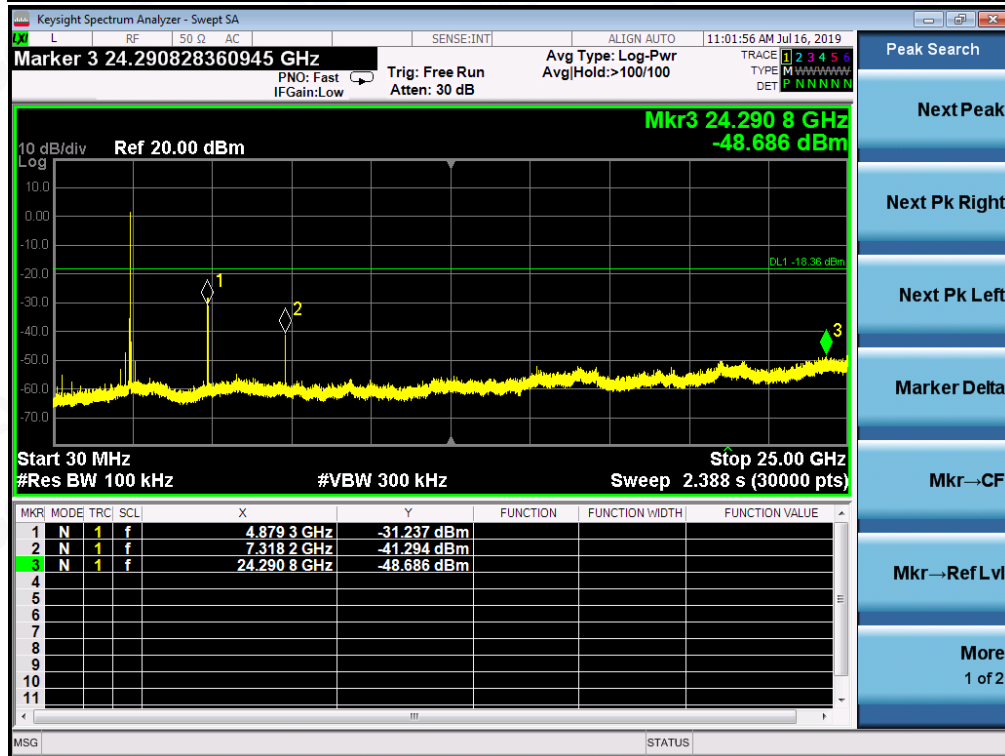
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FSK MODULATION IN MIDDLE CHANNEL



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FSK MODULATION IN HIGH CHANNEL



Note: The peak emissions without marker on the above plots are fundamental wave and need not to compare with the limit.



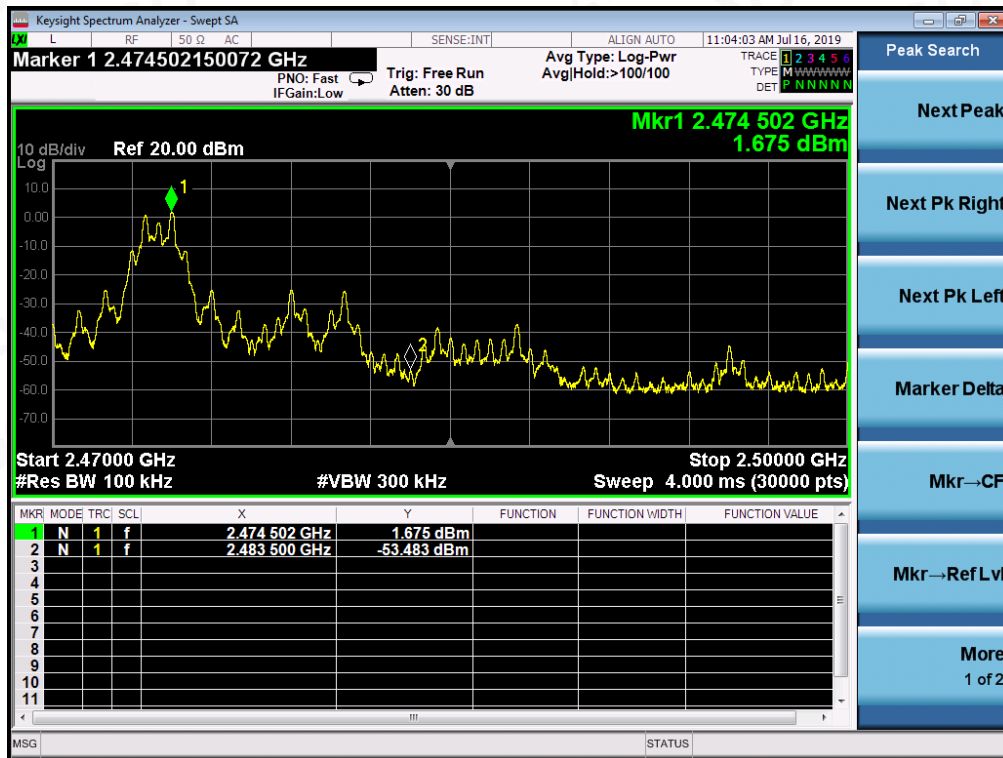
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TEST RESULT FOR BAND EDGE FSK MODULATION IN LOW CHANNEL



FSK MODULATION IN HIGH CHANNEL



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10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

10.1 MEASUREMENT PROCEDURE

- (1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (3). Set SPA Trace 1 Max hold, then View.

Note: The method of PKPSD in the KDB 558074 item 10.2 was used in this testing.

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 7.2.

10.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

10.4 LIMITS AND MEASUREMENT RESULT

Channel No.	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	-3.663	8	Pass
Middle Channel	-3.449	8	Pass
High Channel	-3.545	8	Pass

TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL



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TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL



TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



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11. RADIATED EMISSION

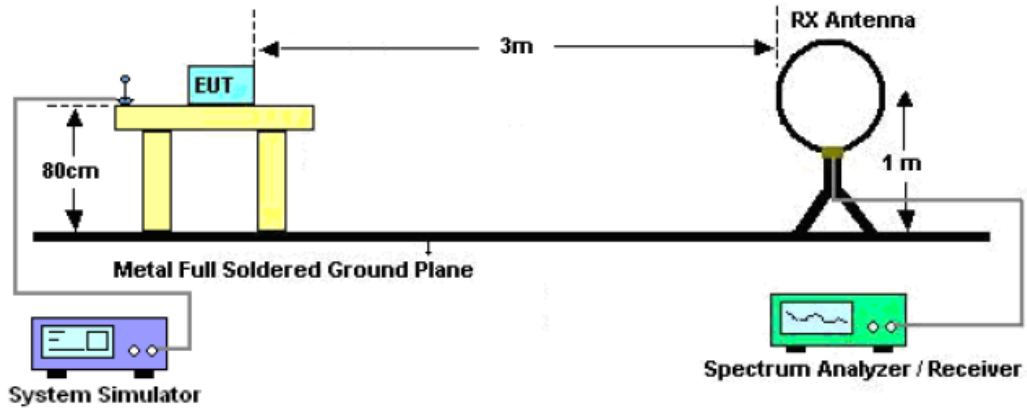
11.1. MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum 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.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

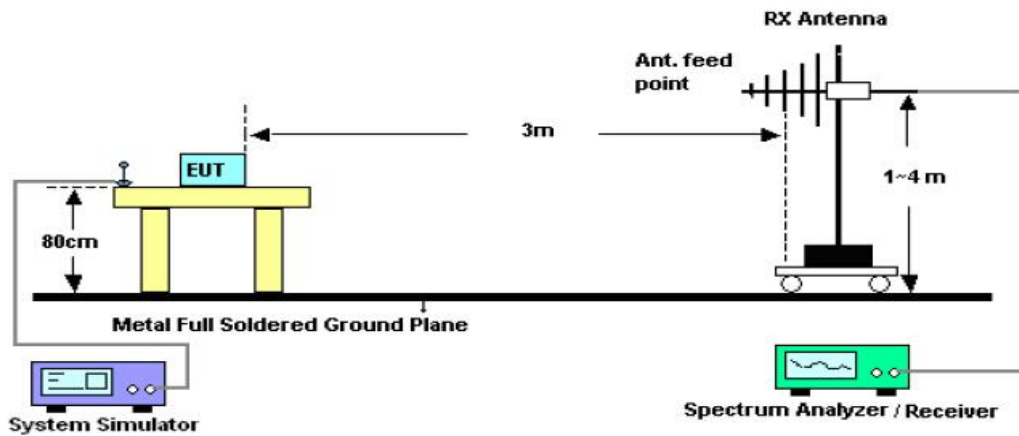


11.2. TEST SETUP

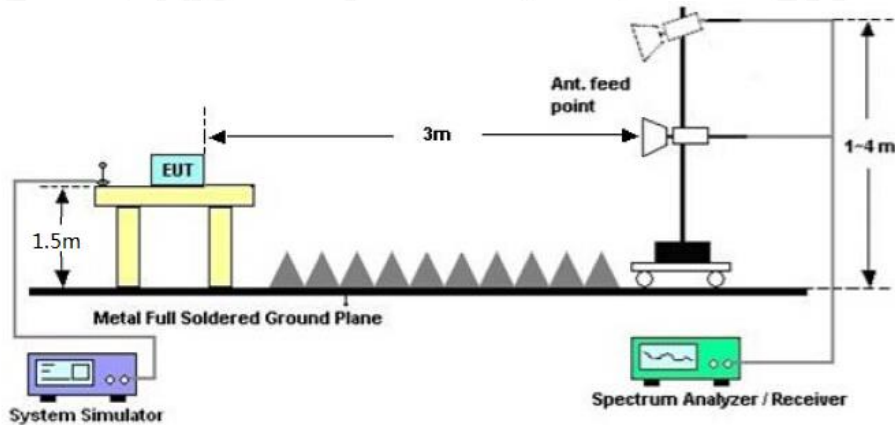
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



11.3. LIMITS AND MEASUREMENT RESULT

15.209 Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested For restricted band radiated emission, the test records reported below are the worst result compared to other modes.

11.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.



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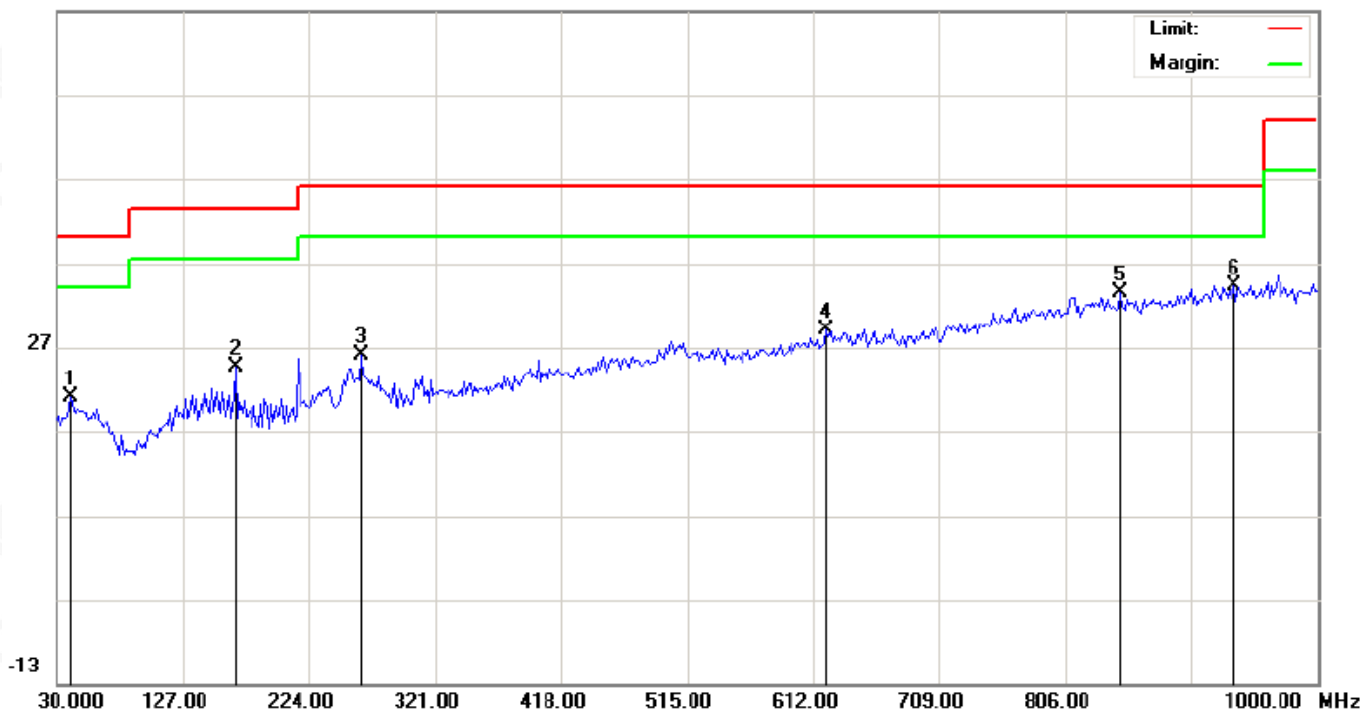
E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

RADIATED EMISSION BELOW 1GHZ

EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

66.9 dBuV/m



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		41.3167	0.95	20.04	20.99	40.00	-19.01	peak			
2		167.4167	6.14	18.43	24.57	43.50	-18.93	peak			
3		264.4166	7.33	18.67	26.00	46.00	-20.00	peak			
4		621.7000	1.83	27.21	29.04	46.00	-16.96	peak			
5		848.0333	2.43	31.03	33.46	46.00	-12.54	peak			
6	*	935.3333	2.25	32.00	34.25	46.00	-11.75	peak			

RESULT: PASS



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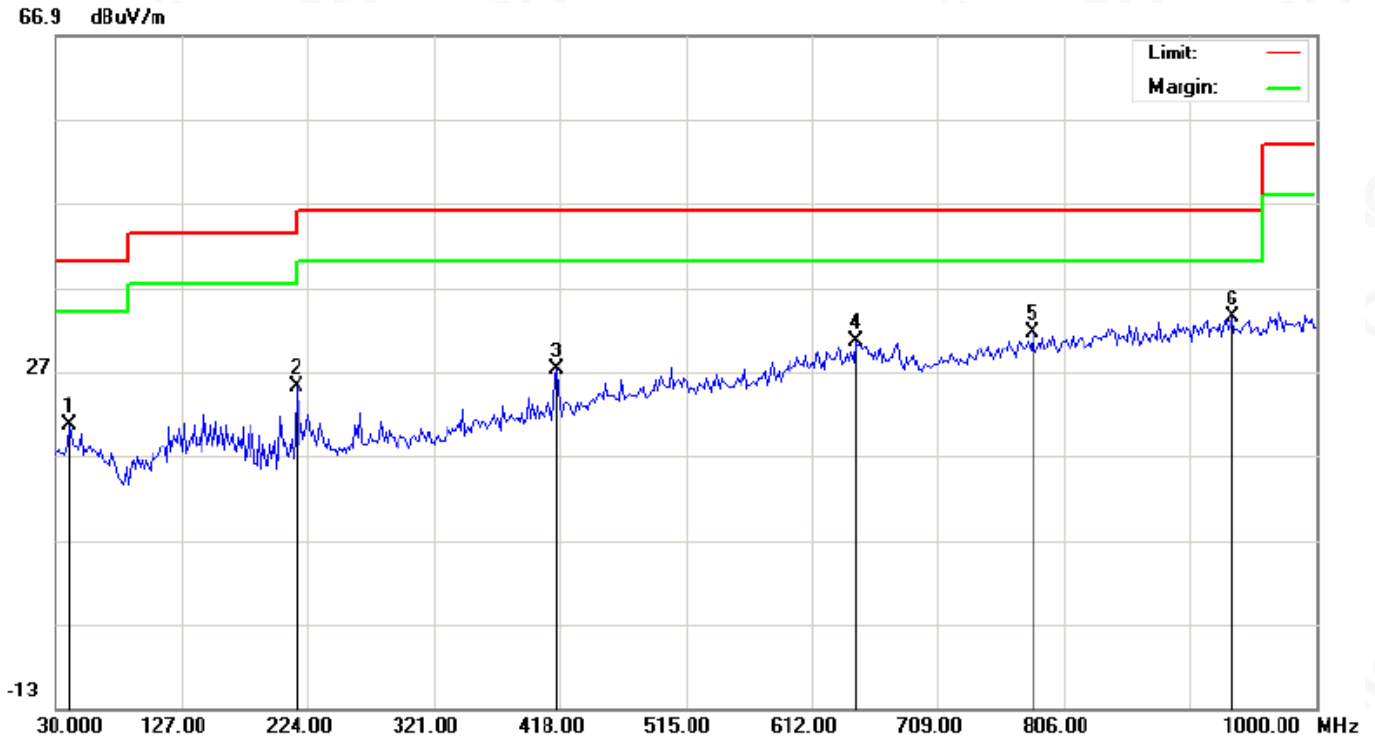
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EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		41.3167	0.52	20.04	20.56	40.00	-19.44	peak			
2		215.9167	8.14	17.00	25.14	43.50	-18.36	peak			
3		416.3833	3.92	23.31	27.23	46.00	-18.77	peak			
4		645.9500	3.18	27.50	30.68	46.00	-15.32	peak			
5		781.7500	1.67	30.00	31.67	46.00	-14.33	peak			
6	*	935.3333	1.37	32.00	33.37	46.00	-12.63	peak			

RESULT: PASS

Note:

1. Factor=Antenna Factor + Cable loss, Margin= Limit-Level.
2. All test modes had been tested. The mode 1 is the worst case and recorded in the report.



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RADIATED EMISSION ABOVE 1GHZ

EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4816.256	57.52	7.12	64.64	74	-9.36	peak
4816.256	41.35	7.12	48.47	54	-5.53	AVG
7224.429	58.25	9.84	68.09	74	-5.91	peak
7224.429	38.29	9.84	48.13	54	-5.87	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4816.256	58.43	7.12	65.55	74	-8.45	peak
4816.256	40.35	7.12	47.47	54	-6.53	AVG
7224.384	56.73	9.84	66.57	74	-7.43	peak
7224.384	35.78	9.84	45.62	54	-8.38	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4948.206	57.65	7.12	64.77	74	-9.23	peak
4948.206	41.27	7.12	48.39	54	-5.61	AVG
7422.309	55.75	9.84	65.59	74	-8.41	peak
7422.309	37.48	9.84	47.32	54	-6.68	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4948.206	55.74	7.12	62.86	74	-11.14	peak
4948.206	42.56	7.12	49.68	54	-4.32	AVG
7422.309	51.47	9.84	61.31	74	-12.69	peak
7422.309	35.72	9.84	45.56	54	-8.44	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4939.228	57.25	7.12	64.37	74	-9.63	peak
4939.228	39.32	7.12	46.44	54	-7.56	AVG
7408.842	48.43	9.84	58.27	74	-15.73	peak
7408.842	35.22	9.84	45.06	54	-8.93	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4939.228	56.16	7.12	63.28	74	-10.72	peak
4939.228	40.23	7.12	47.35	54	-6.65	AVG
7408.842	45.52	9.84	55.36	74	-18.64	peak
7408.842	32.68	9.84	42.52	54	-11.48	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

RESULT: PASS

Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.



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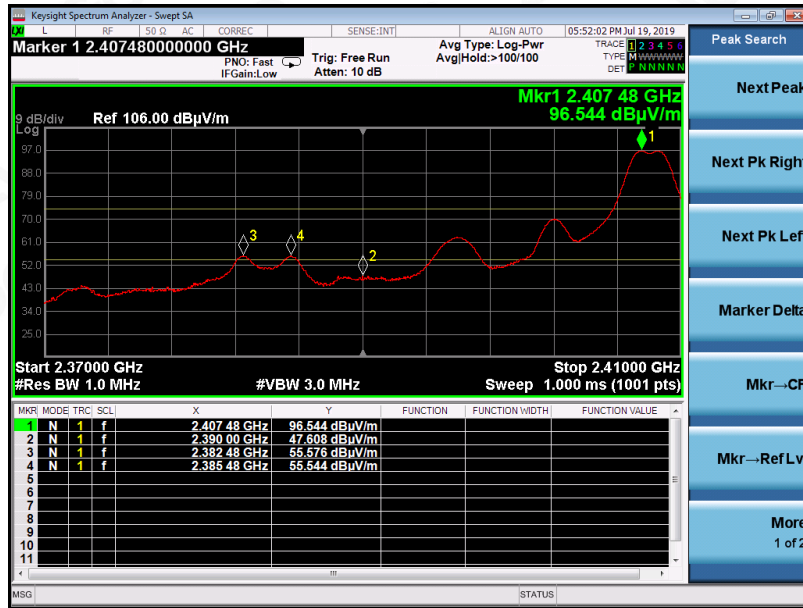
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TEST RESULT FOR RESTRICTED BANDS REQUIREMENTS

EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

PK



AV



RESULT: PASS



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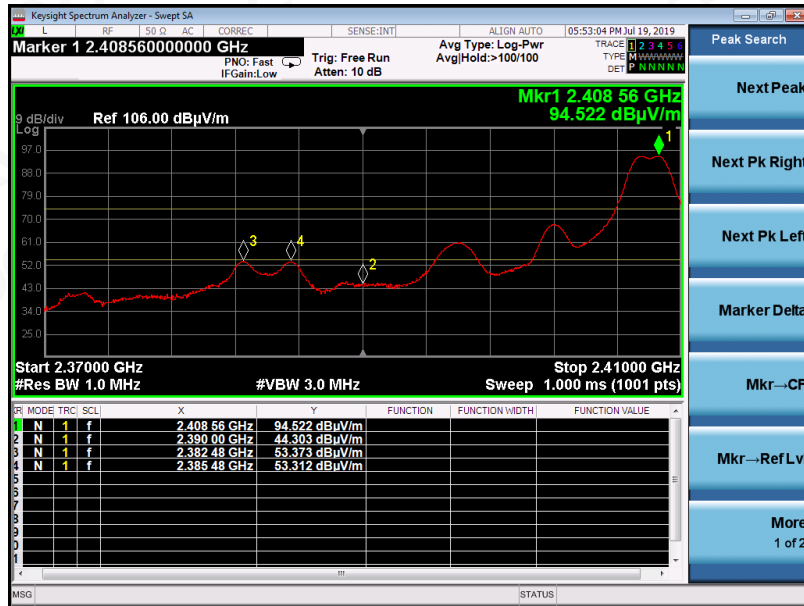
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E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical

PK



AV



RESULT: PASS

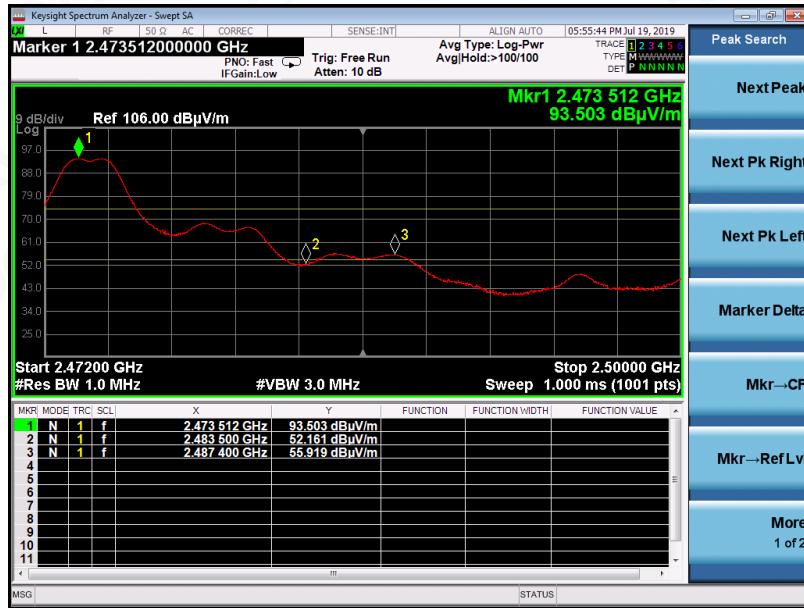


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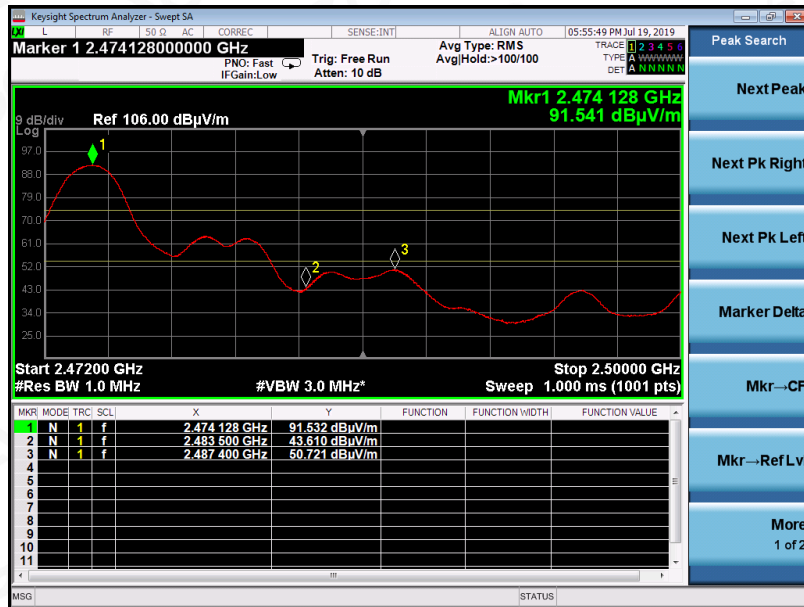
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EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Horizontal

PK



AV



RESULT: PASS

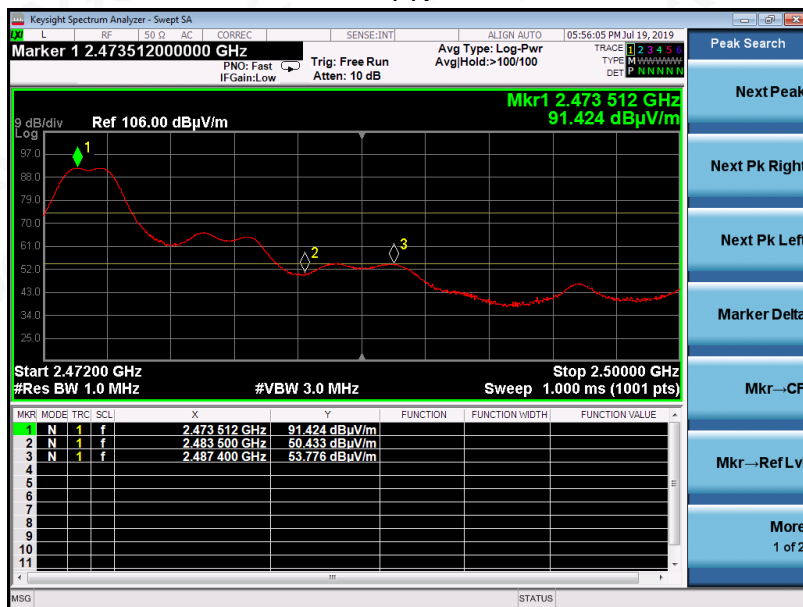


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EUT	2.4G WIRELESS MOUSE	Model Name	GMAWTB129
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Vertical

PK



AV



RESULT: PASS

Note: The factor had been edited in the “Input Correction” of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(µV) to represent the Amplitude. Use the F dB(µV/m) to represent the Field Strength. So A=F.



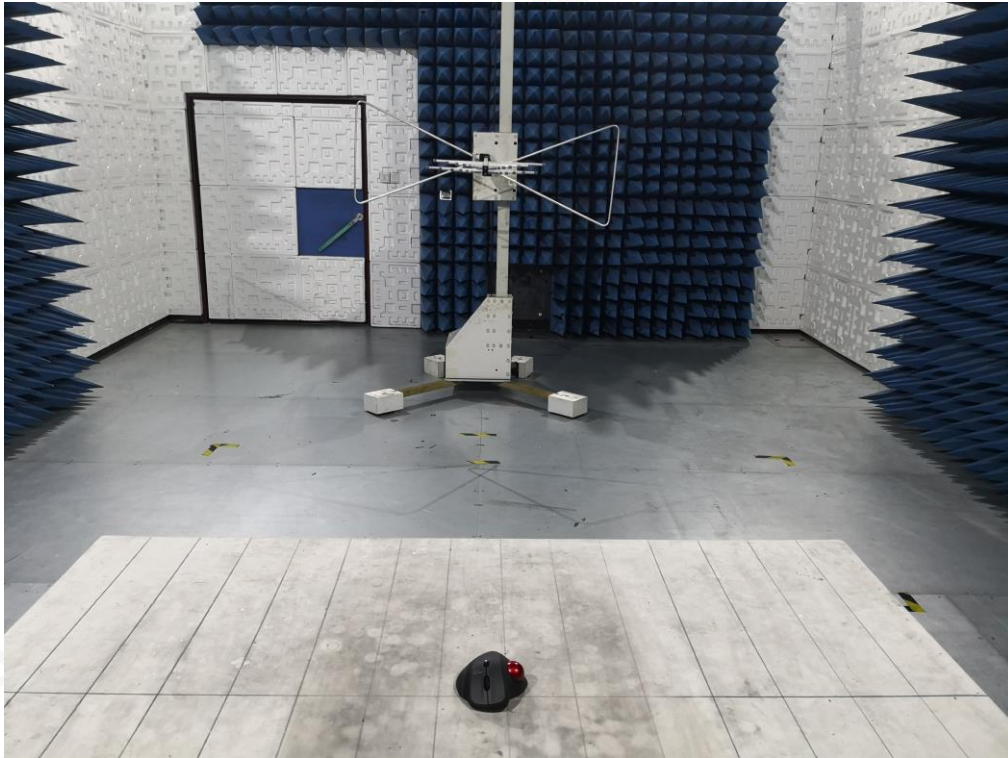
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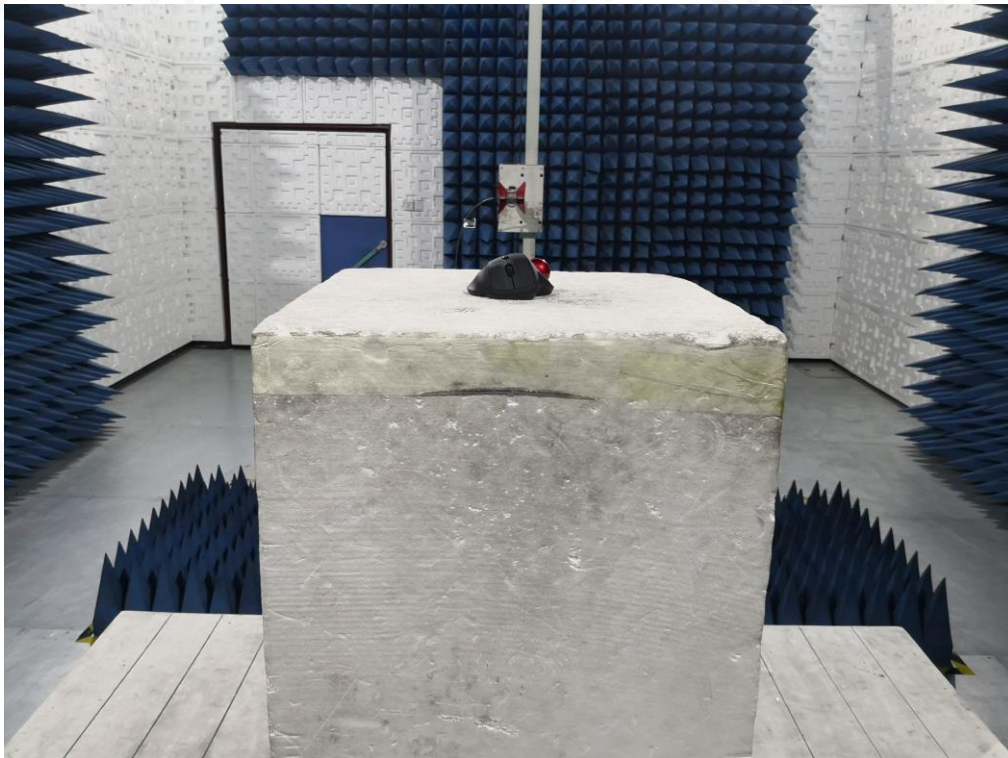
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APPENDIX A: PHOTOGRAPHS OF TEST SETUP

RADIATED EMISSION TEST SETUP BELOW 1GHZ



RADIATED EMISSION TEST SETUP ABOVE 1GHZ



APPENDIX B: PHOTOGRAPHS OF EUT

ALL VIEW OF EUT



TOP VIEW OF EUT



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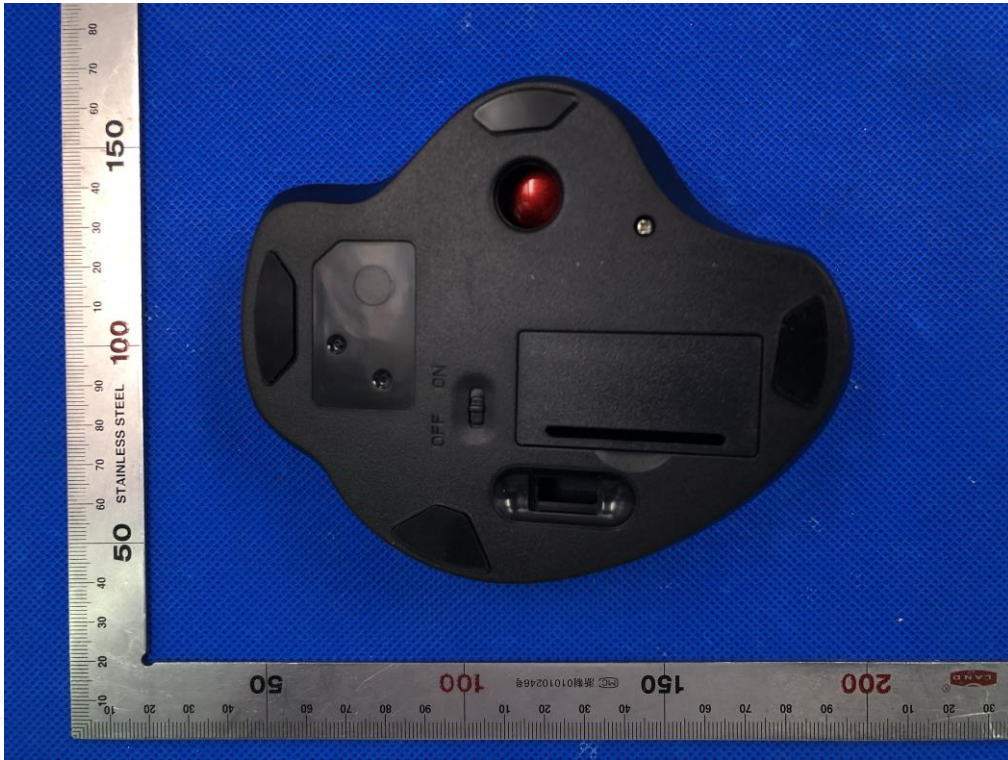
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BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



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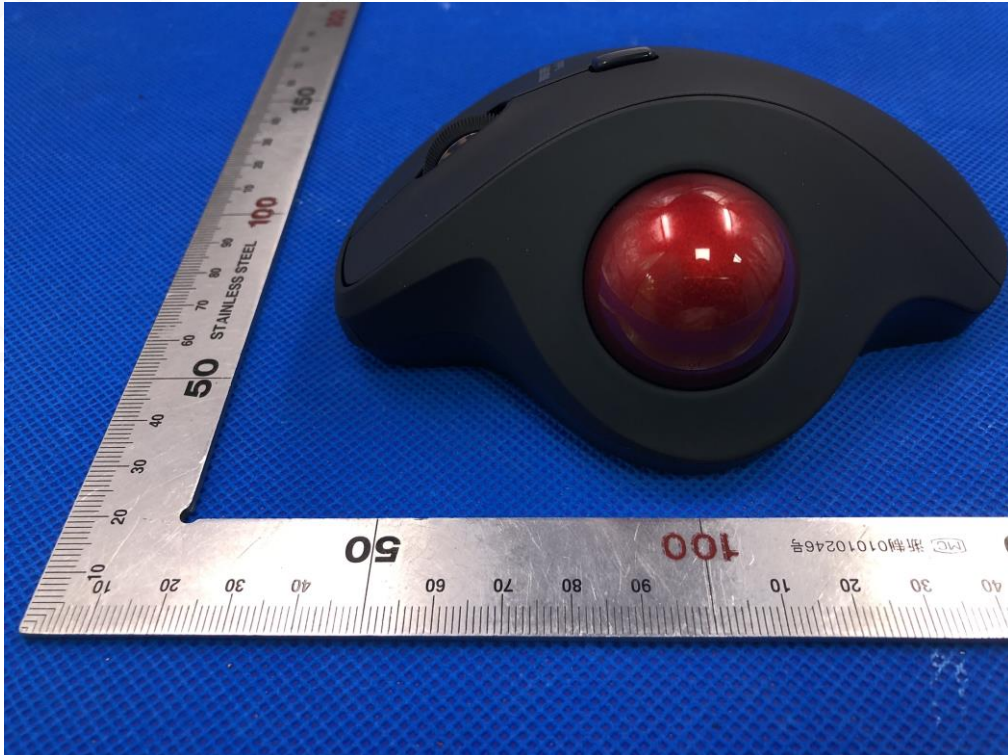
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BACK VIEW OF EUT



LEFT VIEW OF EUT



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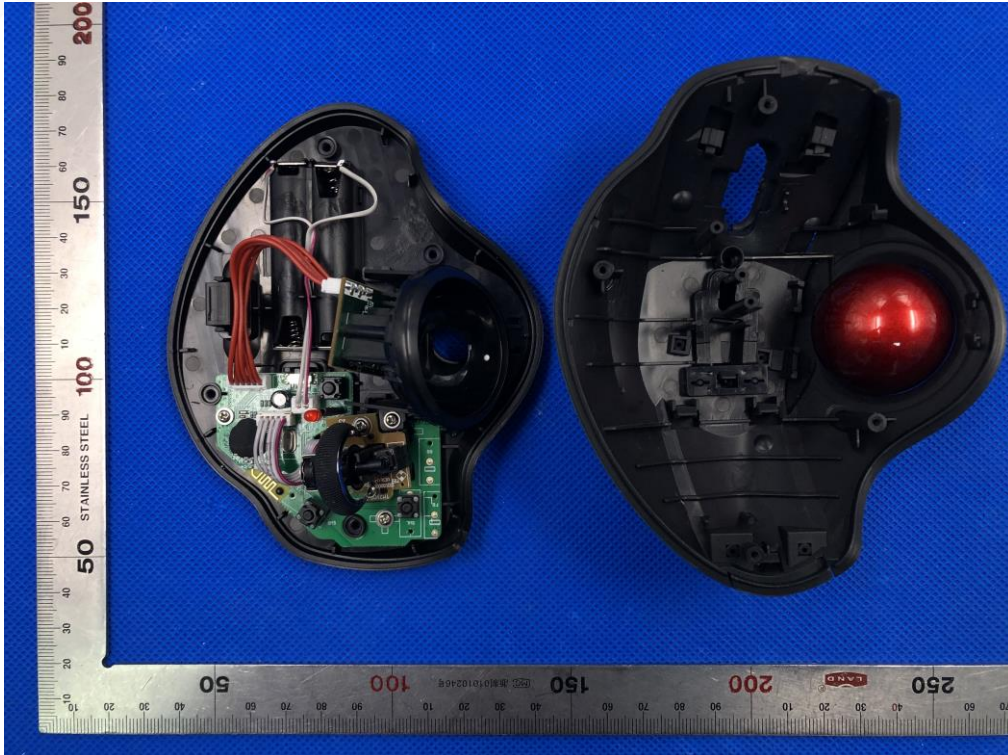
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RIGHT VIEW OF EUT



OPEN VIEW OF EUT



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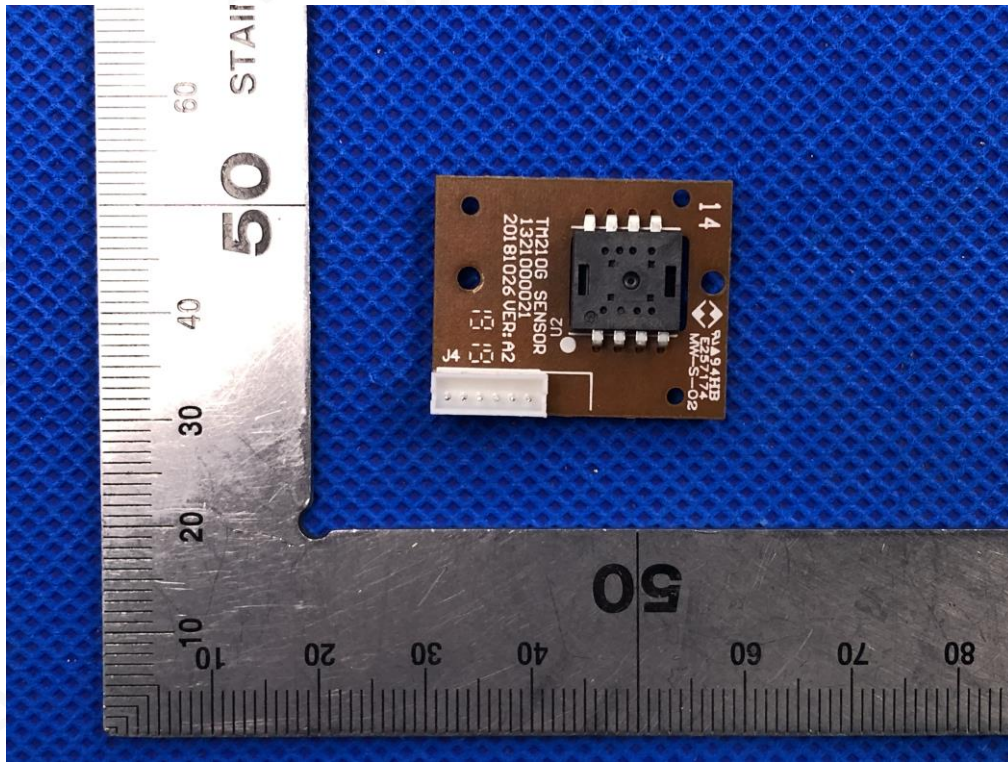
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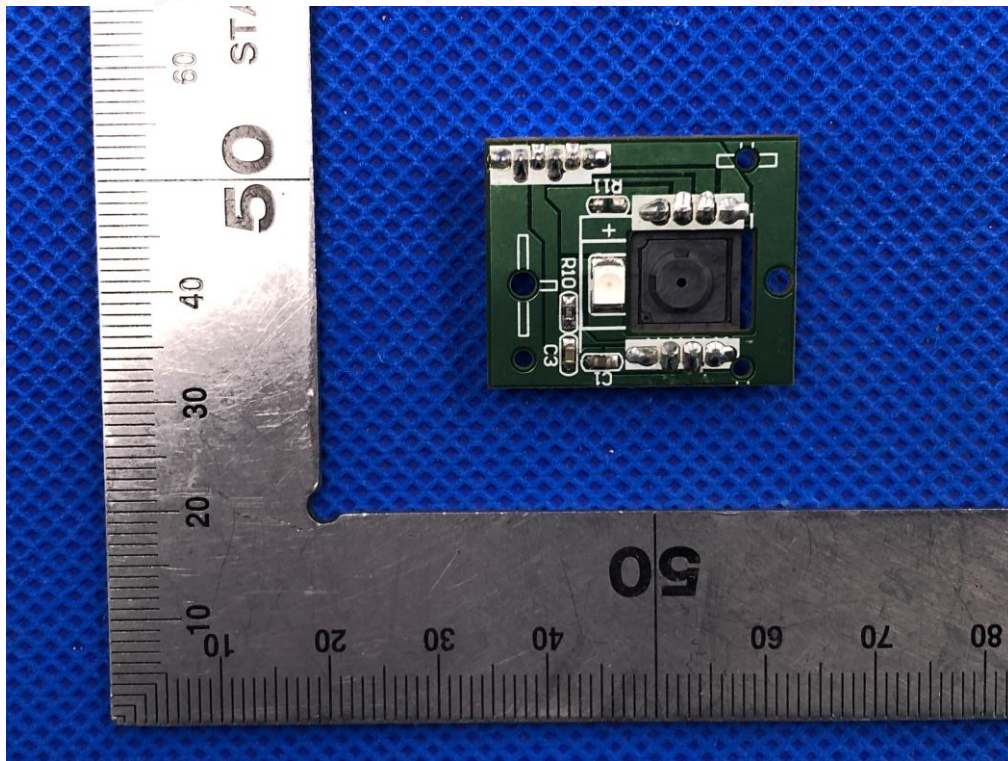
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INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



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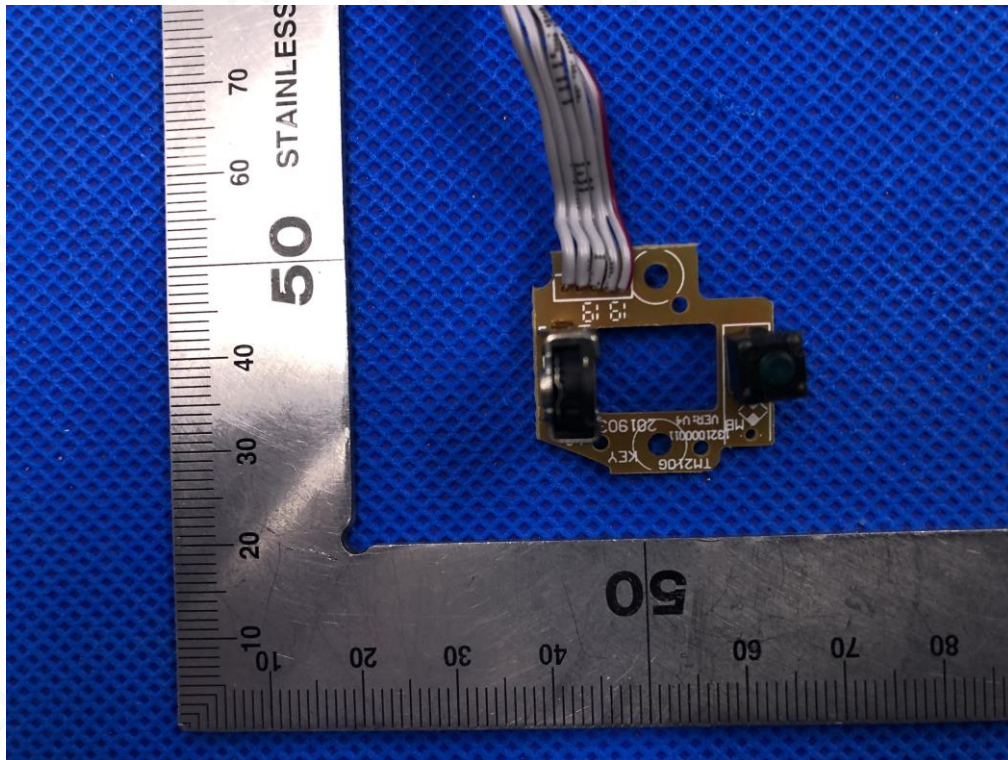
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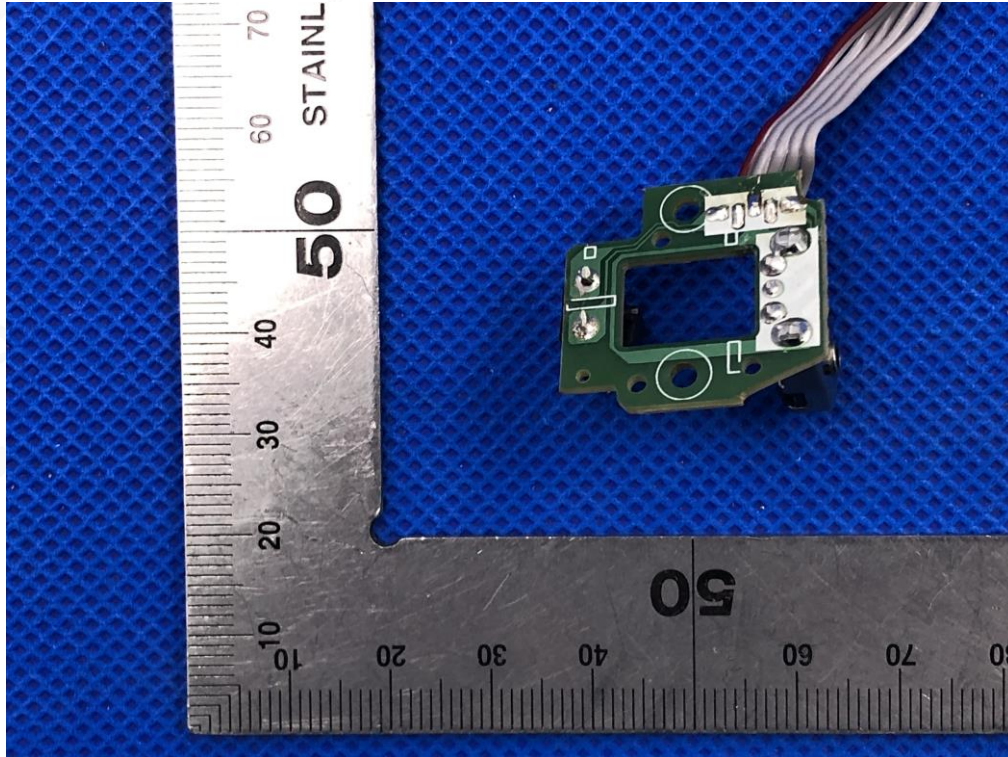
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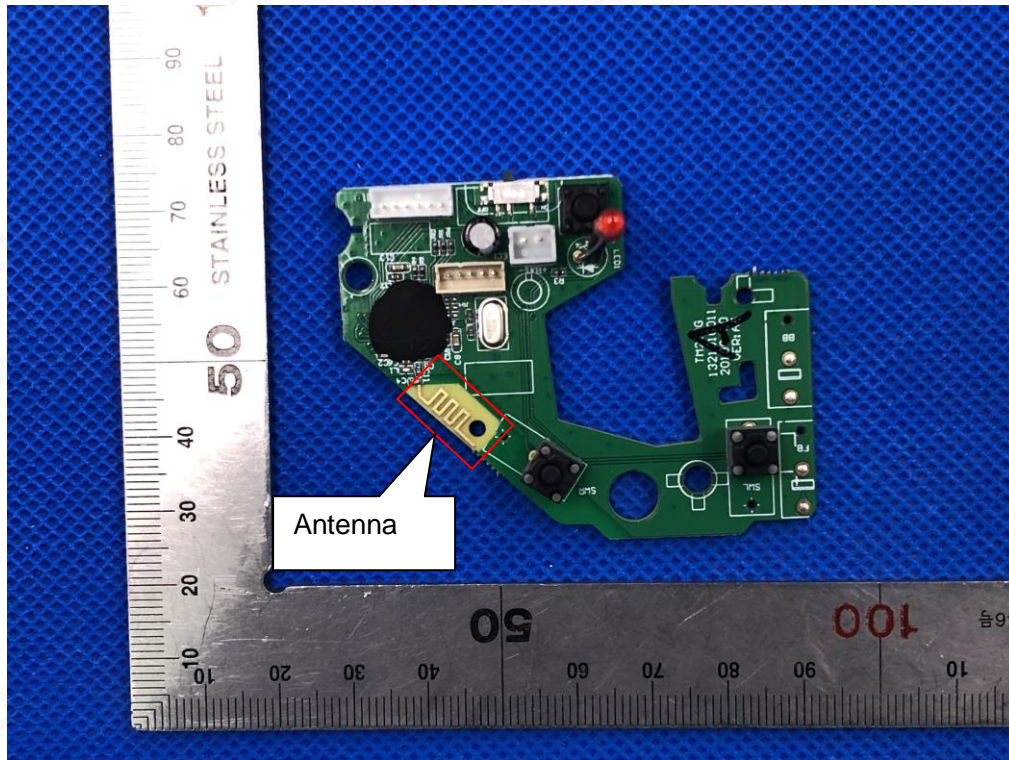
INTERNAL VIEW OF EUT-3



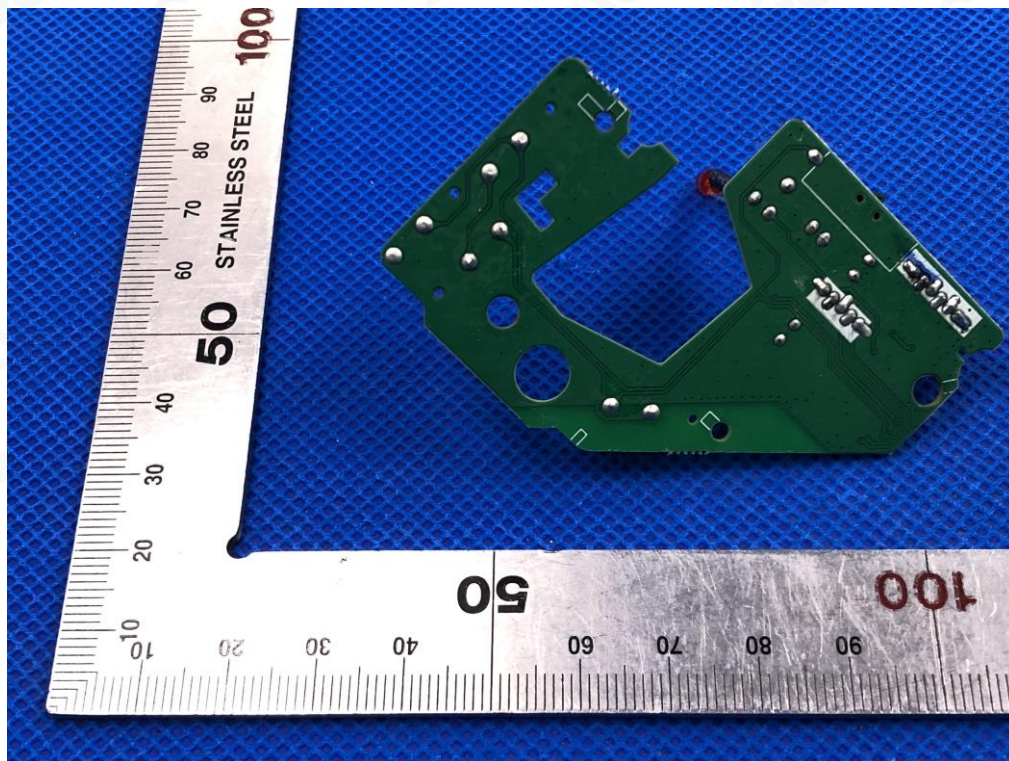
INTERNAL VIEW OF EUT-4



INTERNAL VIEW OF EUT-5



INTERNAL VIEW OF EUT-6



----END OF REPORT----



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