TEST REPORT

Product	:	RollerMouse mobile
Trade mark	:	CONTOUR
Model/Type reference	:	RM-Mobile
Series Model Number	:	RM-Mobile2, RM-Mobile-Mini, RM-Mobile-CN
Report Number	:	EED32M80145501
FCC ID	:	2AG6O-RMOB
Date of Issue	:	Jan. 26, 2021
Test Standards	:	47 CFR Part 15 Subpart C
Test result	:	PASS

Prepared for:

CONTOUR (GUANGZHOU) DESIGN, INC.
Building B21-2F, Huachuang Animation Park, Panyu, GZ, China

Prepared by:

Centre Testing International Group Co., Ltd.
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Reviewed by: Aaron Ma — Aaron Ma

Approved by: David Wang — David Wang

Date: Jan. 26, 2021

Check No.:7025241220

2 Content

3 Version

Version No.	Date	Description
00	Jan. 26, 2021	Original

4 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	N/A
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	ANSI C63.10-2013	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013	PASS
Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2013	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
Radiated Spurious Emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Remark:
Test according to ANSI C63.4-2014 & ANSI C63.10-2013.
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
N/A: The wireless function does not work in charging(connect to a computer/an adapter) state performed on the EUT.

5 General Information

5.1 Client Information

Applicant:	CONTOUR (GUANGZHOU) DESIGN, INC.
Address of Applicant:	Building B21-2F, Huachuang Animation Park, Panyu, GZ, China
Manufacturer:	CONTOUR (GUANGZHOU) DESIGN, INC.
Address of Manufacturer:	Building B21-2F, Huachuang Animation Park, Panyu, GZ, China
Factory:	CONTOUR (GUANGZHOU) DESIGN, INC.
Address of Factory:	Building B21-2F, Huachuang Animation Park, Panyu, GZ, China

5.2 General Description of EUT

Product Name:	RollerMouse mobile
Model No.:	RM-Mobile
Series Model Number:	RM-Mobile2, RM-Mobile-Mini, RM-Mobile-CN
Trade mark:	CONTOUR
Hardware Version:	PCB212.RM01.001
Software Version:	V1.0
Bluetooth Version:	5.1
Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Number of Channel:	40
Test Power Grade:	Default
Test Software of EUT:	nRFgo Studio
Antenna Type:	PCB antenna
Antenna Gain:	0dBi
Test voltage:	DC 3.7V
Sample Received Date:	Dec. 25, 2020
Sample tested Date:	Dec. 25, 2020 to Jan. 07, 2021

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

5.3 Test Environment

Operating Environment:	
Temperature:	24.0 °C
Humidity:	55 % RH
Atmospheric Pressure:	1010mbar

5.4 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
BLE_1M	2402MHz ~2480 MHz	Channel 0	Channel 19	Channel 39
		2402MHz	2440MHz	2480MHz
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.			

5.5 Description of Support Units

The EUT has been tested with associated equipment below.

Support equipment

Associated equipment name		Manufacture	model	S/N serial number	Supplied by	Certification
AE	Notebook	DELL	DELL 3490	D245DX2	DELL	CE&FCC

5.6 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

5.7 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

6 Equipment List

Conducted disturbance Test					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Receiver	R&S	ESCI	100435	04-28-2020	04-27-2021
Temperature/ Humidity Indicator	Defu	TH128	/	---	---
LISN	R&S	ENV216	100098	03-05-2020	03-04-2021
Barometer	changchun	DYM3	1188	---	---

RF test system					
Equipment	**Manufacturer**	**Mode No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Spectrum Analyzer	Keysight	N9010A	MY54510339	02-17-2020	02-16-2021
Signal Generator	Keysight	N5182B	MY53051549	02-17-2020	02-16-2021
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	06-29-2020	06-28-2021
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	---	---
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	---	---
DC Power	Keysight	E3642A	MY56376072	02-17-2020	02-16-2021
PC-1	Lenovo	R4960d	---	---	---
Power unit	R&S	OSP120	101374	02-17-2020	02-16-2021
RF control unit	JS Tonscend	JS0806-2	158060006	02-17-2020	02-16-2021
BT&WI-FI Automatic test software	JS Tonscend	JS1120-3	---	---	---

3M Semi/full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05-24-2019	05-23-2022
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	05-16-2020	05-15-2021
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-25-2018	04-24-2021
Receiver	R&S	ESCI7	100938-003	10-16-2020	10-15-2021
Multi device Controller	maturo	NCD/070/10711112	---	---	---
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	06-29-2020	06-28-2021
Cable line	Fulai(7M)	SF106	5219/6A	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---

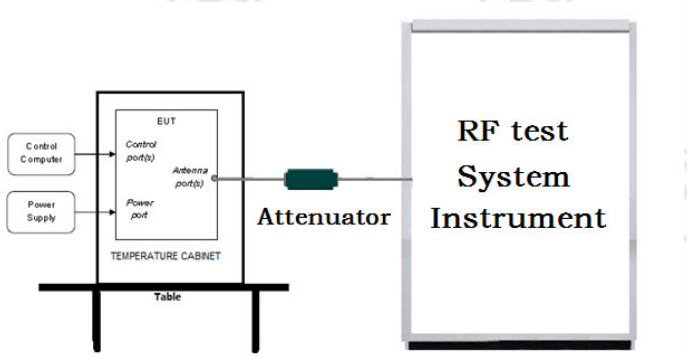
3M full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
RSE Automatic test software	JS Tonscend	JS36-RSE	10166	---	---
Receiver	Keysight	N9038A	MY57290136	03-05-2020	03-04-2021
Spectrum Analyzer	Keysight	N9020B	MY57111112	03-05-2020	03-04-2021
Spectrum Analyzer	Keysight	N9030B	MY57140871	03-05-2020	03-04-2021
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-25-2018	04-24-2021
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-25-2018	04-24-2021
Horn Antenna	ETS-LINDGREN	3117	00057407	07-10-2018	07-09-2021
Preamplifier	EMCI	EMC184055SE	980596	05-20-2020	05-19-2021
Preamplifier	EMCI	EMC001330	980563	04-22-2020	04-21-2021
Preamplifier	JS Tonscend	980380	EMC051845 SE	01-09-2020	01-08-2021
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-27-2020	04-26-2021
Fully Anechoic Chamber	TDK	FAC-3	---	01-17-2018	01-16-2021
Filter bank	JS Tonscend	JS0806-F	188060094	04-10-2018	04-09-2021
Cable line	Times	SFT205-NMSM-2.50M	394812-0001	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

7 Test results and Measurement Data

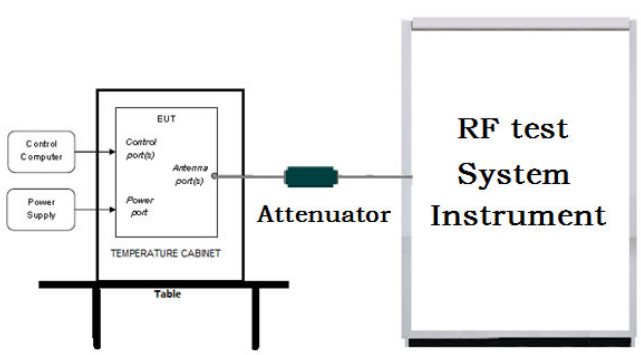
7.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
EUT Antenna:	Please see Internal photos
The antenna is integral antenna. The best case gain of the antenna is 0dBi.	

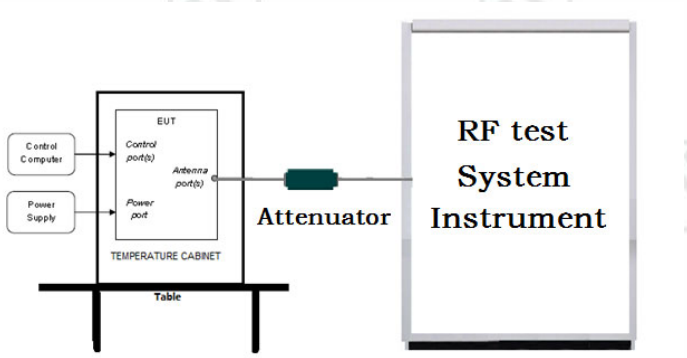
7.2 Conducted Peak Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set the RBW ⩾ DTS bandwidth. b) Set VBW ⩾ 3 × RBW. c) Set span ⩾ 3 x RBW d) Sweep time = auto couple. e) Detector = peak. f) Trace mode = max hold. g) Allow trace to fully stabilize. h) Use peak marker function to determine the peak amplitude level.
Limit:	30dBm
Test Mode:	Refer to clause 5.4
Test Results:	Refer to Appendix A

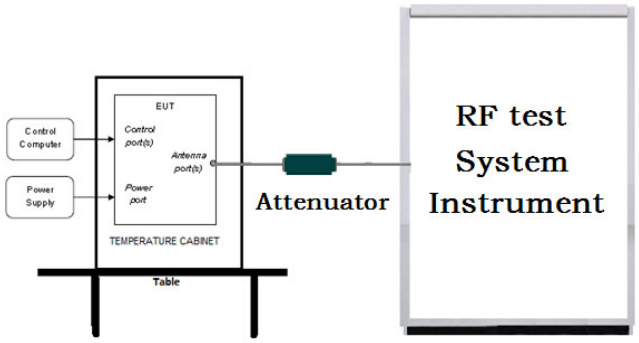
7.3 6dB Occupy Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set RBW = 100 kHz. b) Set the VBW ⩾[3 × RBW]. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Limit:	≥ 500 kHz
Test Mode:	Refer to clause 5.4
Test Results:	Refer to Appendix A

7.4 Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set analyzer center frequency to DTS channel center frequency. b) Set the span to 1.5 times the DTS bandwidth. c) Set the RBW to 3 kHz ＜ RBW ＜ 100 kHz. d) Set the VBW ＞ [3 × RBW]. e) Detector = peak. f) Sweep time = auto couple. g) Trace mode = max hold. h) Allow trace to fully stabilize. i) Use the peak marker function to determine the maximum amplitude level within the RBW. j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.
Limit:	≤8.00dBm/3kHz
Test Mode:	Refer to clause 5.4
Test Results:	Refer to Appendix A

7.5 Conducted Band Edge and Spurious Emission

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set RBW =100KHz. b) Set VBW = 300KHz. c) Sweep time = auto couple. d) Detector = peak. e) Trace mode = max hold. f) Allow trace to fully stabilize. g) Use peak marker function to determine the peak amplitude level.
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test Mode:	Refer to clause 5.4
Test Results:	Refer to Appendix A

7.6 Radiated Spurious Emission & Restricted bands

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205
Test Method:	ANSI C63.10 2013
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)
Receiver Setup:	

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10kHz	Average

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test Setup:	

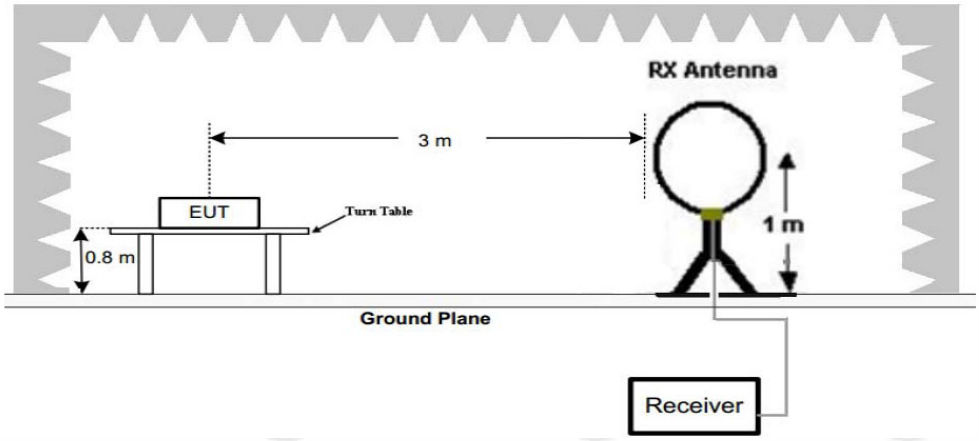


Figure 1. Below 30MHz

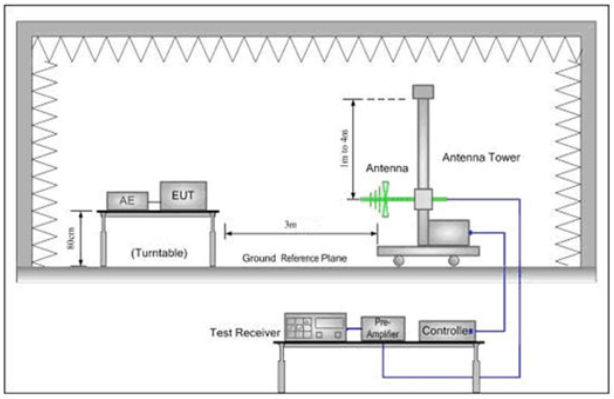


Figure 2. 30MHz to 1GHz

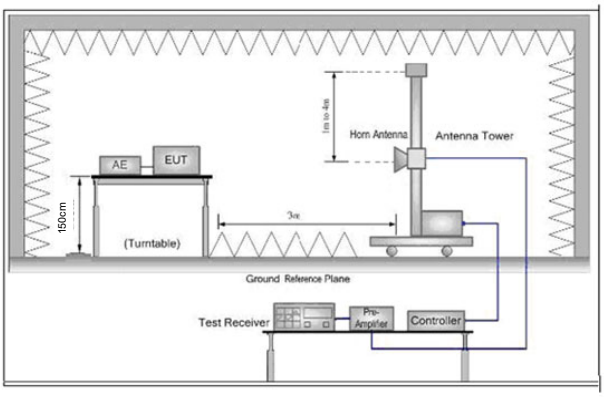


Figure 3. Above 1 GHz

Test Procedure:	a. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. Note: For the radiated emission test above 1GHz: 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. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both

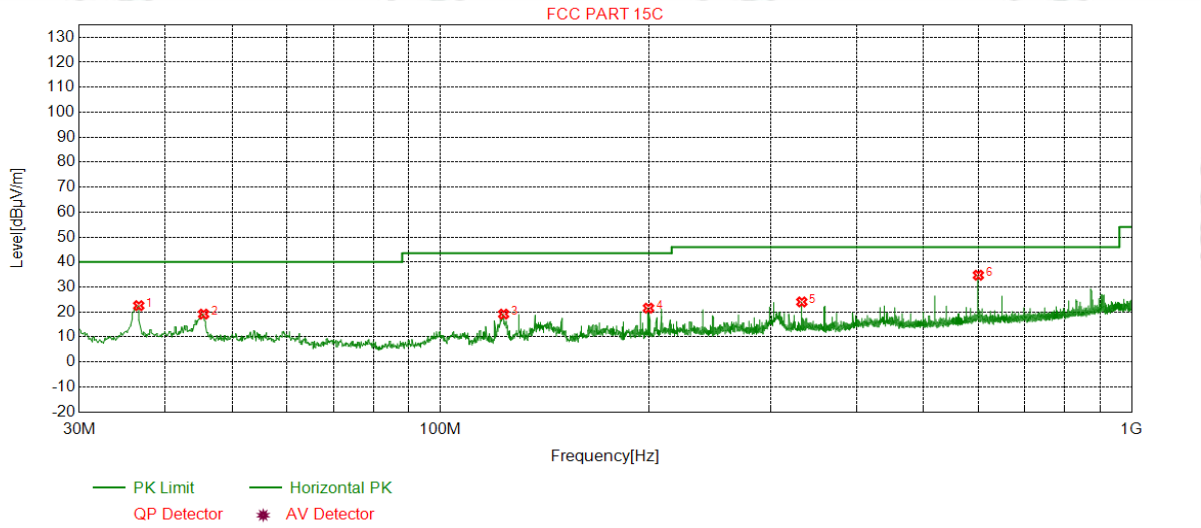
	horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. 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. g. Test the EUT in the lowest channel (2402MHz),the middle channel (2440MHz),the Highest channel (2480MHz) h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.
Test Mode:	Refer to clause 5.4
Test Results:	Pass

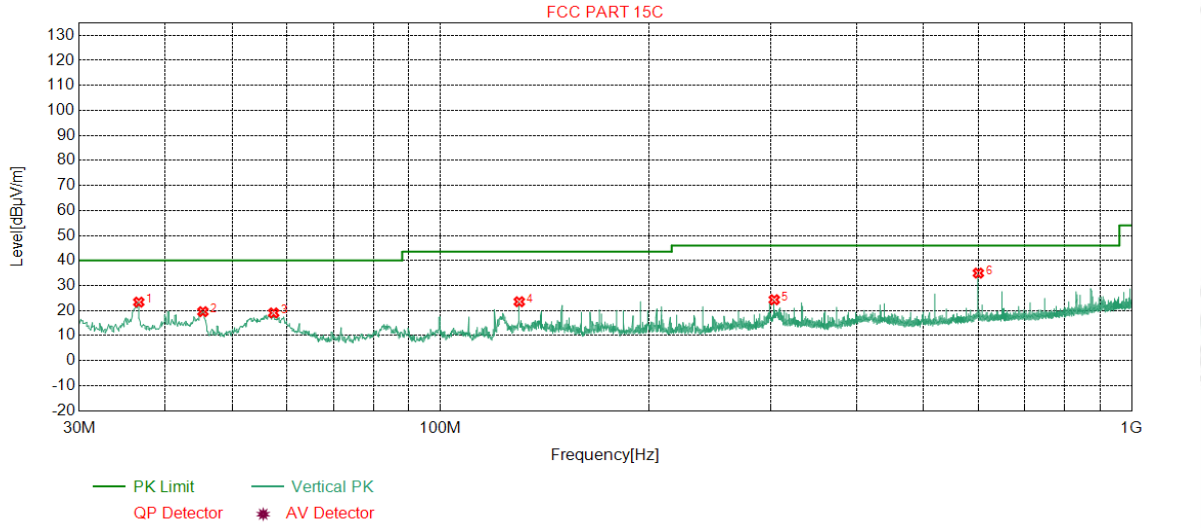
Radiated Spurious Emission below 1GHz:

During the test, the Radiated Spurious Emissions from 30MHz to 1GHz was performed in all modes with all channels, GFSK, Channel 2402MHz was selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Mode:			BLE GFSK Transmitting					Channel:		2402MHz	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Preamp gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	36.5967	11.21	0.67	-31.38	42.04	22.54	40.00	17.46	Pass	H	PK
2	45.4245	13.20	0.75	-31.74	36.94	19.15	40.00	20.85	Pass	H	PK
3	123.4203	8.69	1.31	-32.06	41.21	19.15	43.50	24.35	Pass	H	PK
4	199.9610	10.90	1.67	-31.90	40.88	21.55	43.50	21.95	Pass	H	PK
5	333.2523	13.93	2.17	-31.78	39.71	24.03	46.00	21.97	Pass	H	PK
6	600.0290	19.00	2.96	-31.50	44.27	34.73	46.00	11.27	Pass	H	PK
7	36.5967	11.21	0.67	-31.38	42.87	23.37	40.00	16.63	Pass	V	PK
8	45.3275	13.20	0.75	-31.73	37.35	19.57	40.00	20.43	Pass	V	PK
9	57.3567	12.02	0.87	-31.88	38.05	19.06	40.00	20.94	Pass	V	PK
10	130.0170	7.70	1.33	-32.02	46.52	23.53	43.50	19.97	Pass	V	PK
11	304.0524	13.29	2.07	-31.60	40.57	24.33	46.00	21.67	Pass	V	PK
12	600.0290	19.00	2.96	-31.50	44.50	34.96	46.00	11.04	Pass	V	PK

Test Graph


FCC PART 15C
Level[dBμV/m]
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
30M
100M
1G
Frequency[Hz]
PK Limit
Horizontal PK
QP Detector
AV Detector


FCC PART 15C
Level[dBμV/m]
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
30M
100M
1G
Frequency[Hz]
PK Limit
Vertical PK
QP Detector
AV Detector

Radiated Spurious Emission above 1GHz:

Mode:			BLE GFSK Transmitting					Channel:		2402MHz	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2126.5127	31.88	3.62	-43.18	49.66	41.98	74.00	32.02	Pass	H	PK
2	3088.0059	33.24	4.75	-43.11	48.98	43.86	74.00	30.14	Pass	H	PK
3	3807.0538	33.65	4.37	-43.04	49.93	44.91	74.00	29.09	Pass	H	PK
4	5002.1335	34.50	4.82	-42.79	50.97	47.50	74.00	26.50	Pass	H	PK
5	6315.2210	35.86	5.46	-42.53	48.97	47.76	74.00	26.24	Pass	H	PK
6	8850.3900	37.37	6.42	-42.00	48.82	50.61	74.00	23.39	Pass	H	PK
7	2430.3430	32.30	3.95	-43.11	50.78	43.92	74.00	30.08	Pass	V	PK
8	3820.0547	33.66	4.37	-43.04	50.38	45.37	74.00	28.63	Pass	V	PK
9	5010.1340	34.51	4.83	-42.79	51.21	47.76	74.00	26.24	Pass	V	PK
10	6322.2215	35.86	5.46	-42.53	49.14	47.93	74.00	26.07	Pass	V	PK
11	7727.3152	36.51	6.25	-42.15	49.02	49.63	74.00	24.37	Pass	V	PK
12	9647.4432	37.66	6.71	-42.10	49.58	51.85	74.00	22.15	Pass	V	PK

Mode:			BLE GFSK Transmitting					Channel:		2440MHz	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2107.7108	31.85	3.59	-43.18	49.29	41.55	74.00	32.45	Pass	H	PK
2	3831.0554	33.66	4.36	-43.03	50.34	45.33	74.00	28.67	Pass	H	PK
3	5024.1349	34.52	4.85	-42.79	50.62	47.20	74.00	26.80	Pass	H	PK
4	7502.3002	36.60	5.95	-42.10	49.13	49.58	74.00	24.42	Pass	H	PK
5	9770.4514	37.71	6.68	-42.10	49.57	51.86	74.00	22.14	Pass	H	PK
6	11255.5504	38.75	7.25	-42.00	49.20	53.20	74.00	20.80	Pass	H	PK
7	2564.7565	32.50	4.09	-43.09	50.34	43.84	74.00	30.16	Pass	V	PK
8	3844.0563	33.68	4.36	-43.03	50.93	45.94	74.00	28.06	Pass	V	PK
9	5011.1341	34.51	4.83	-42.79	50.30	46.85	74.00	27.15	Pass	V	PK
10	6453.2302	35.89	5.52	-42.51	48.41	47.31	74.00	26.69	Pass	V	PK
11	7754.3170	36.50	6.23	-42.15	49.14	49.72	74.00	24.28	Pass	V	PK
12	10223.4816	38.11	6.84	-42.05	49.57	52.47	74.00	21.53	Pass	V	PK

Mode:			BLE GFSK Transmitting					Channel:		2480MHz	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2563.3563	32.50	4.09	-43.10	50.21	43.70	74.00	30.30	Pass	H	PK
2	3412.0275	33.36	4.53	-43.10	48.80	43.59	74.00	30.41	Pass	H	PK
3	5026.1351	34.53	4.85	-42.79	50.32	46.91	74.00	27.09	Pass	H	PK
4	7028.2686	36.13	5.69	-42.19	48.91	48.54	74.00	25.46	Pass	H	PK
5	9811.4541	37.72	6.61	-42.10	49.54	51.77	74.00	22.23	Pass	H	PK
6	11187.5458	38.71	7.20	-41.99	49.06	52.98	74.00	21.02	Pass	H	PK
7	2444.3444	32.32	3.97	-43.11	50.81	43.99	74.00	30.01	Pass	V	PK
8	3491.0327	33.40	4.48	-43.10	49.33	44.11	74.00	29.89	Pass	V	PK
9	4985.1323	34.50	4.82	-42.80	50.87	47.39	74.00	26.61	Pass	V	PK
10	7511.3008	36.60	5.94	-42.11	49.43	49.86	74.00	24.14	Pass	V	PK
11	9735.4490	37.69	6.72	-42.09	49.71	52.03	74.00	21.97	Pass	V	PK
12	11220.5480	38.73	7.22	-42.00	49.15	53.10	74.00	20.90	Pass	V	PK

NOTE:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading -Correct Factor

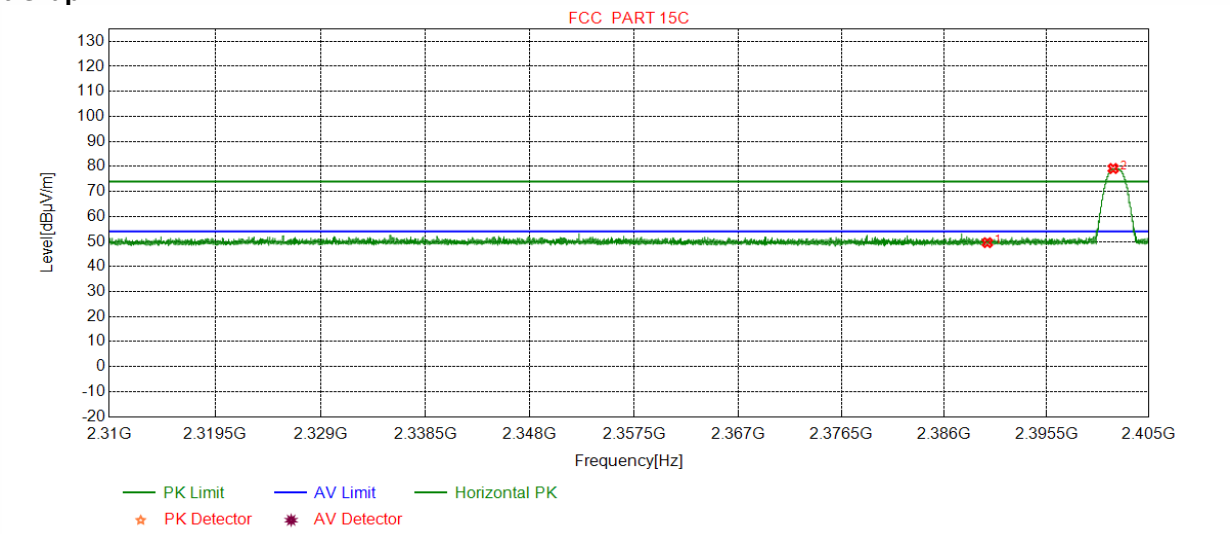
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

2) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

Restricted bands:

Mode:	BLE GFSK Transmitting	Channel:	2402 MHz
Remark:	PK		

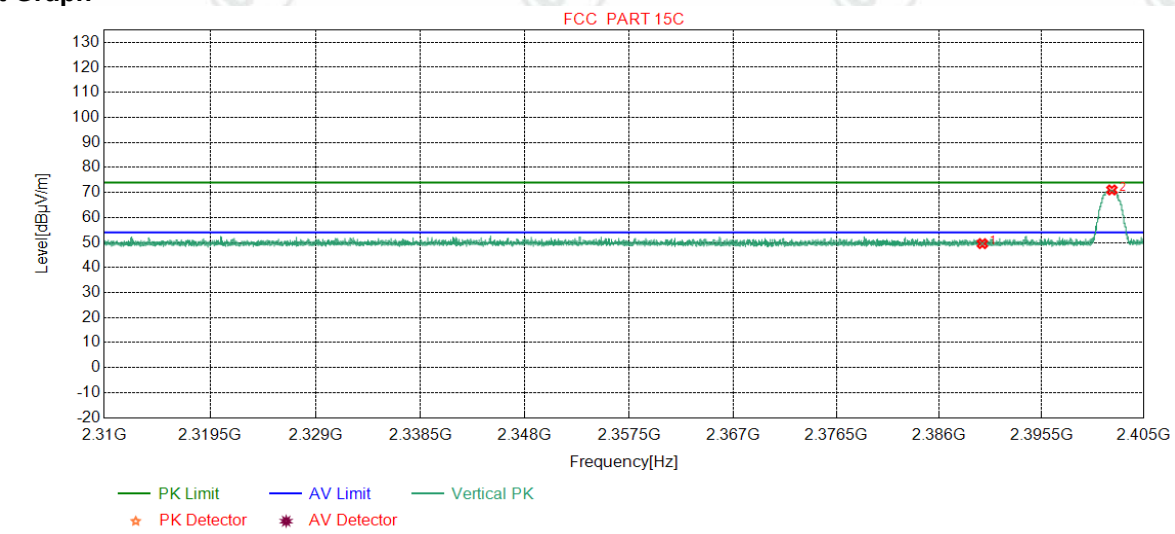
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-43.12	47.03	49.53	74.00	24.47	Pass	Horizontal
2	2401.6874	32.26	13.31	-43.12	76.74	79.19	--	--	--	Horizontal

Mode:	BLE GFSK Transmitting	Channel:	2402 MHz
Remark:	PK		

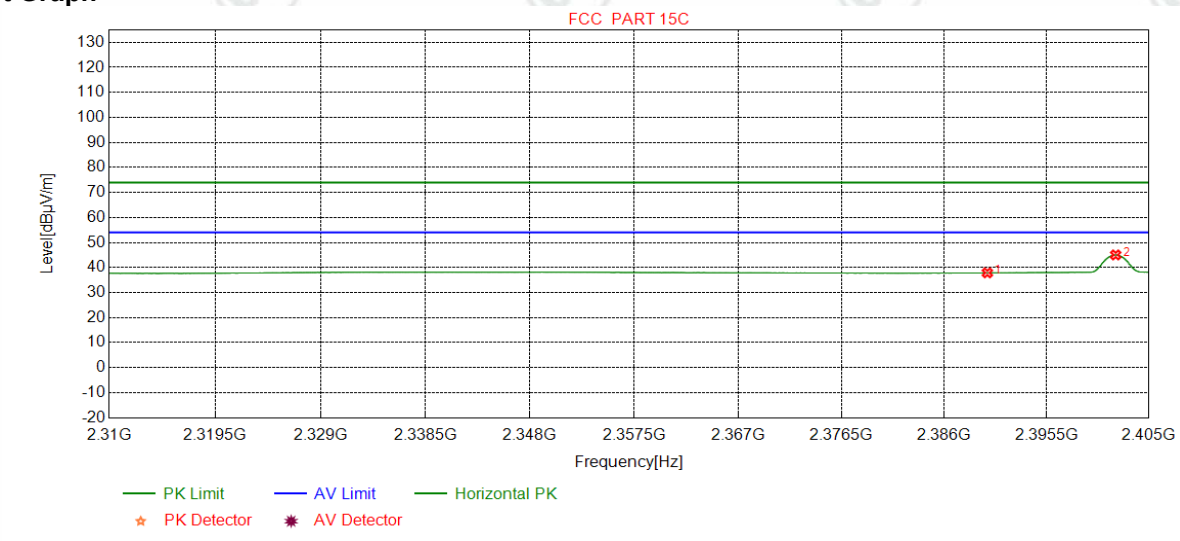
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Preamp gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-43.12	47.04	49.54	74.00	24.46	Pass	Vertical
2	2402.0295	32.26	13.31	-43.12	68.56	71.01	--	--	--	Vertical

Mode:	BLE GFSK Transmitting	Channel:	2402 MHz
Remark:	AV		

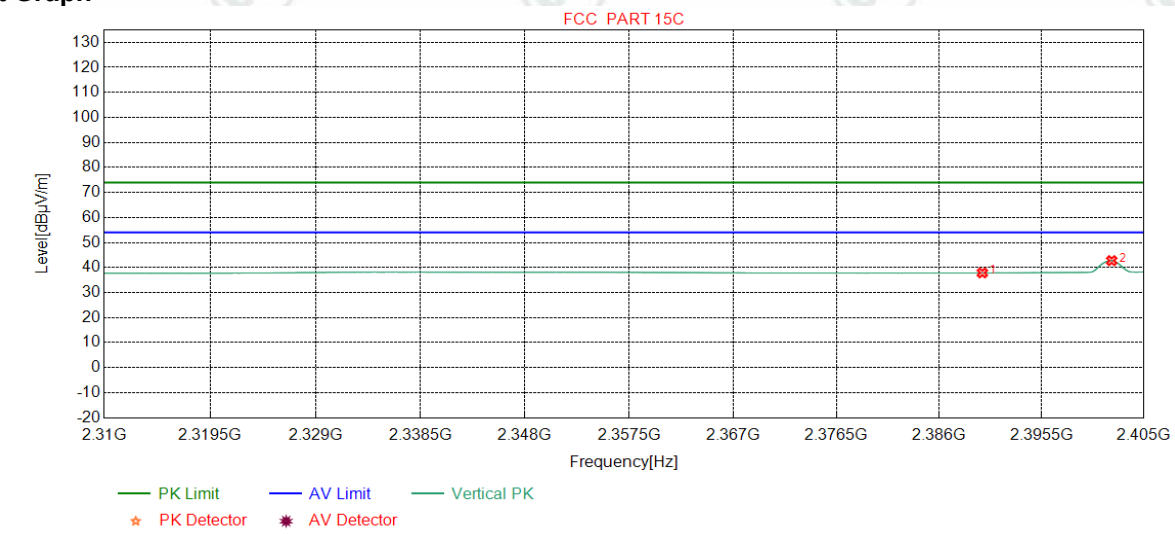
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Readi ng [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-43.12	35.37	37.87	54.00	16.13	Pass	Horizontal
2	2401.9218	32.26	13.31	-43.12	42.58	45.03	--	--	--	Horizontal

Mode:	BLE GFSK Transmitting	Channel:	2402 MHz
Remark:	AV		

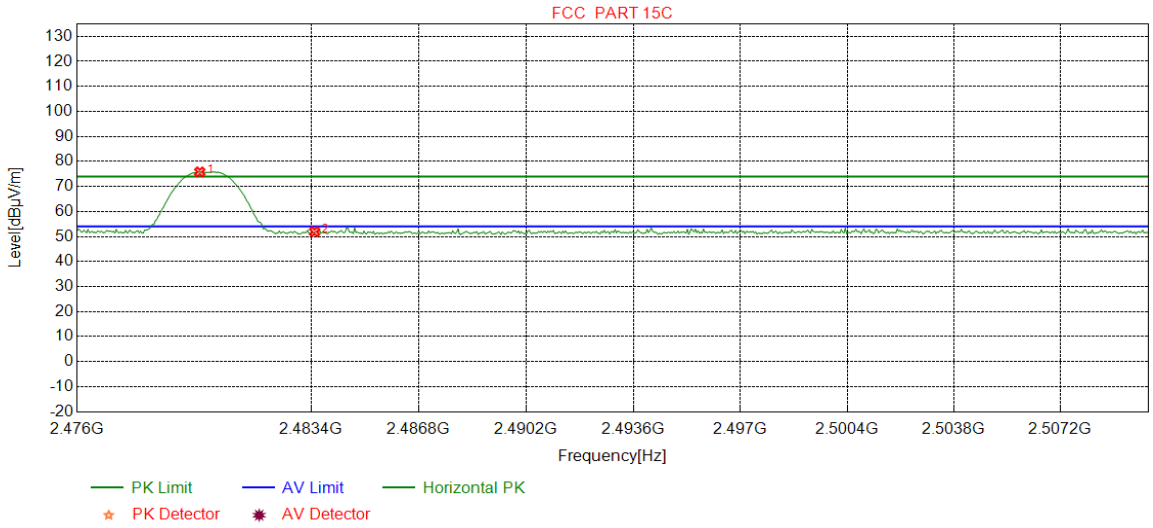
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Preamp gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-43.12	35.36	37.86	54.00	16.14	Pass	Vertical
2	2402.0105	32.26	13.31	-43.12	40.30	42.75	--	--	--	Vertical

Mode:	BLE GFSK Transmitting	Channel:	2480 MHz
Remark:	PK		

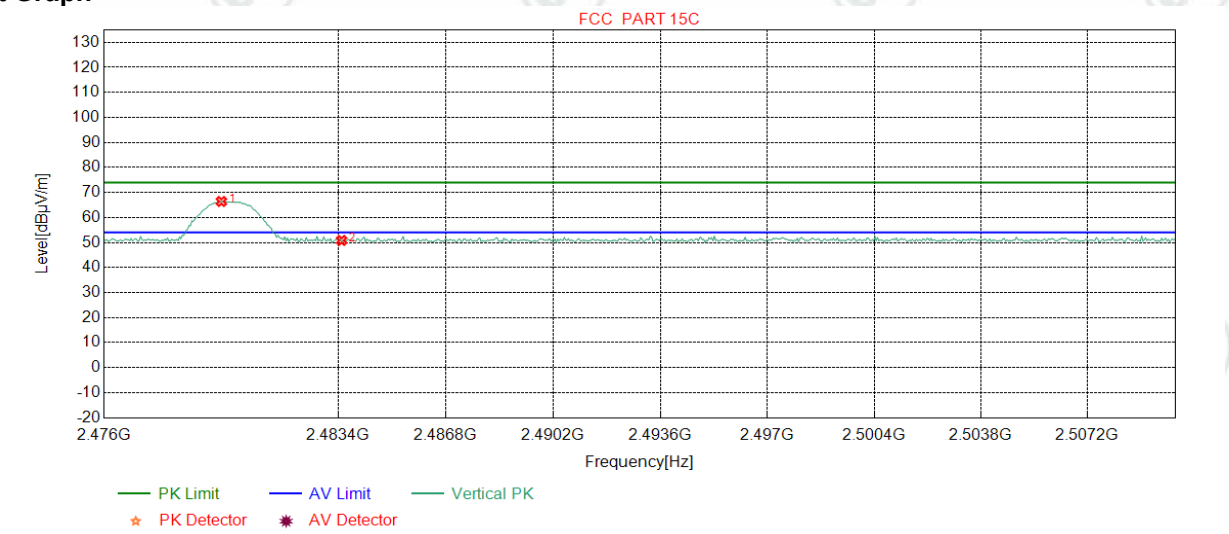
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Preamp gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2479.7447	32.37	13.39	-43.10	74.71	77.37	--	--	--	Horizontal
2	2483.5000	32.38	13.38	-43.11	48.29	50.94	74.00	23.06	Pass	Horizontal

Mode:	BLE GFSK Transmitting	Channel:	2480 MHz
Remark:	PK		

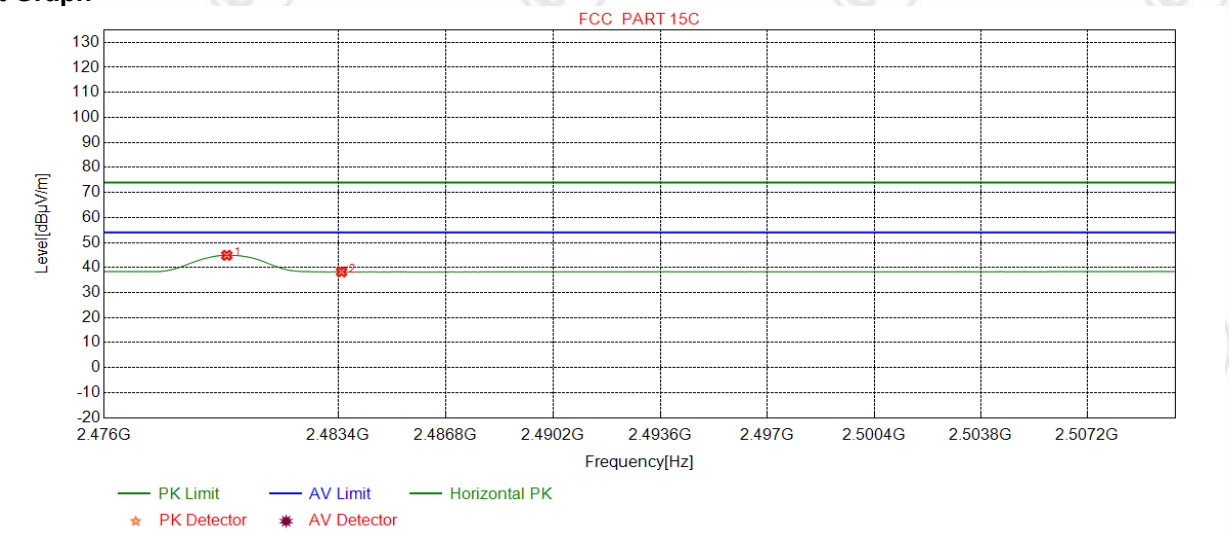
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2479.7021	32.37	13.39	-43.10	63.74	66.40	--	--	--	Vertical
2	2483.5000	32.38	13.38	-43.11	48.18	50.83	74.00	23.17	Pass	Vertical

Mode:	BLE GFSK Transmitting	Channel:	2480 MHz
Remark:	AV		

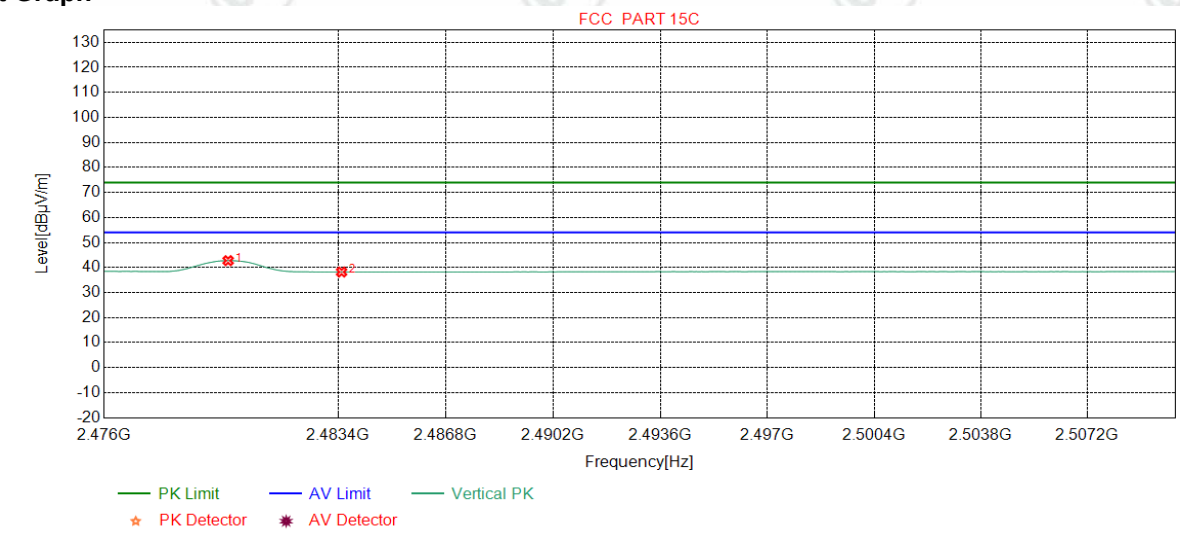
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2479.8723	32.37	13.39	-43.10	42.24	44.90	--	--	--	Horizontal
2	2483.5000	32.38	13.38	-43.11	35.60	38.25	54.00	15.75	Pass	Horizontal

Mode:	BLE GFSK Transmitting	Channel:	2480 MHz
Remark:	AV		

Test Graph



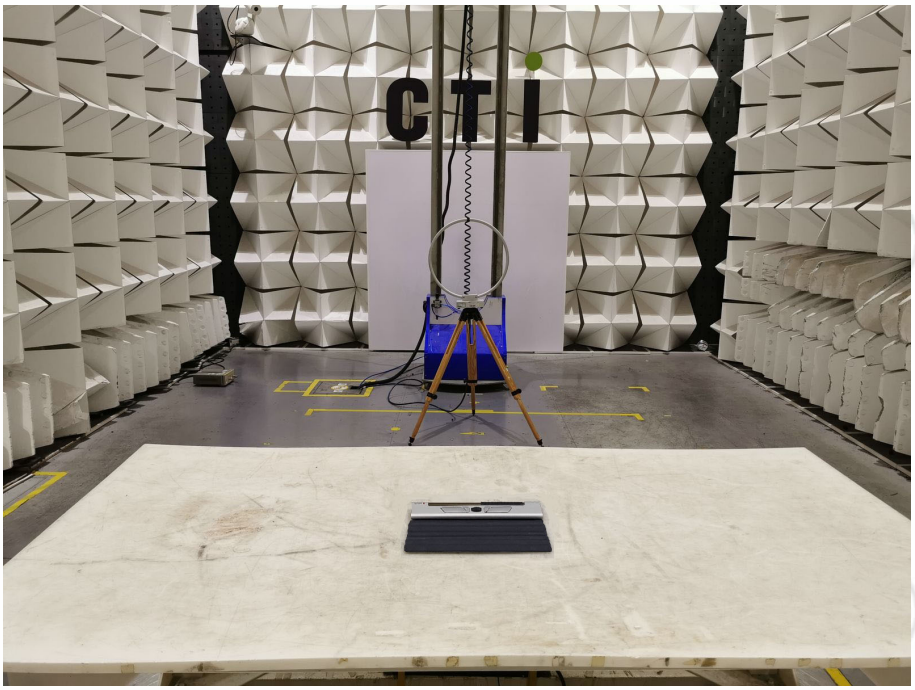
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2479.9149	32.37	13.39	-43.10	40.09	42.75	--	--	--	Vertical
2	2483.5000	32.38	13.38	-43.11	35.56	38.21	54.00	15.79	Pass	Vertical

8 Appendix A

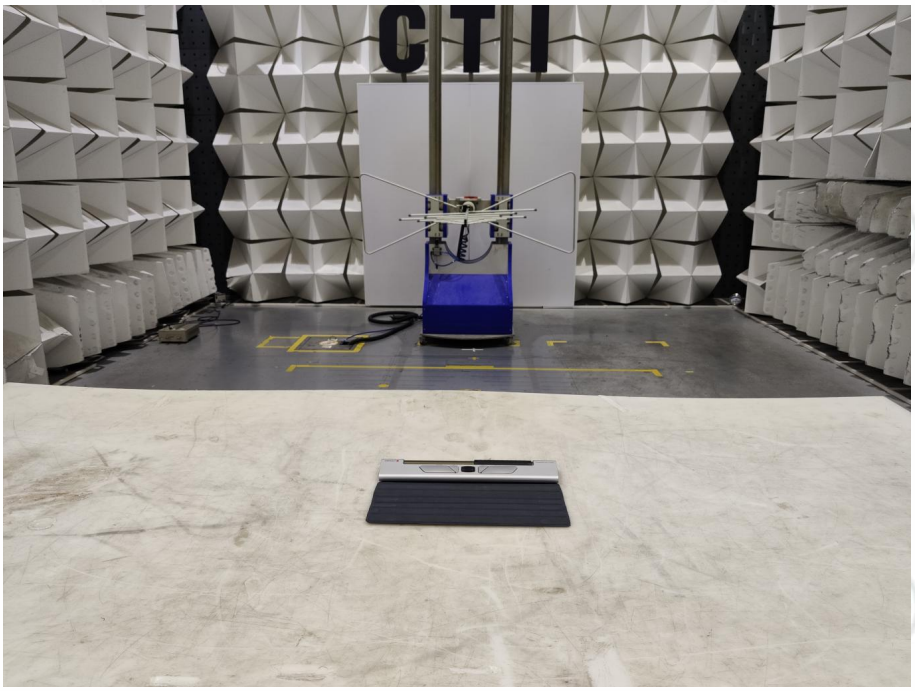
Refer to Appendix: Bluetooth LE of EED32M80145501

PHOTOGRAPHS OF TEST SETUP

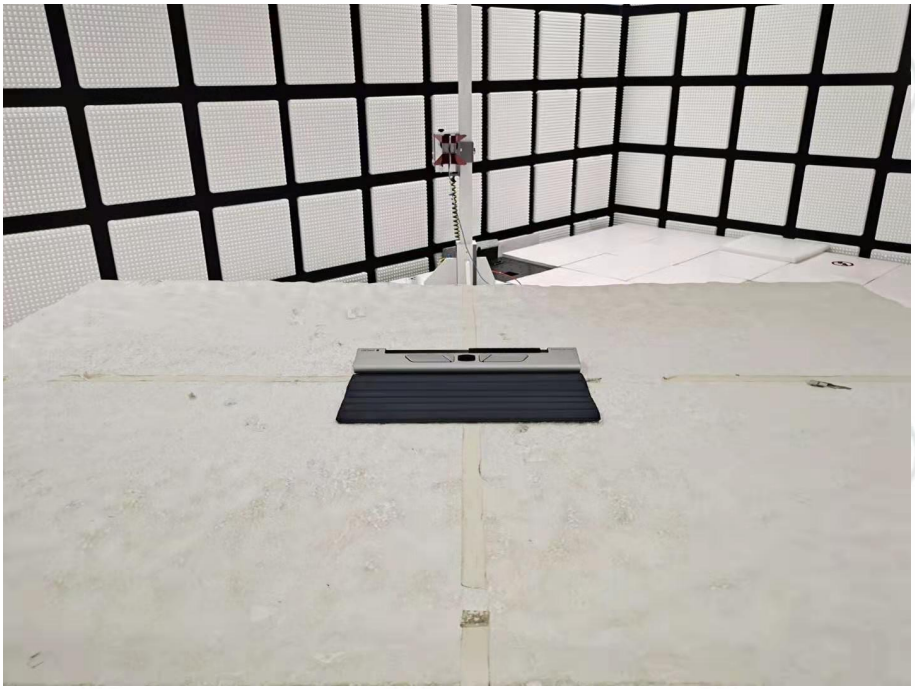
Test model No.:RM-Mobile



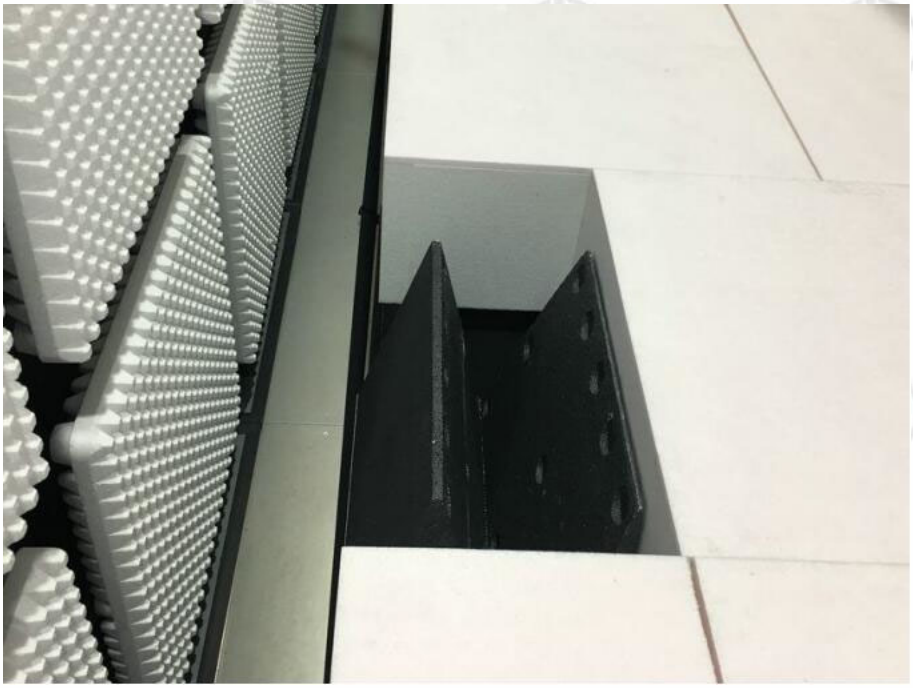
Radiated spurious emission Test Setup-1(Below 30MHz)



Radiated spurious emission Test Setup-2(Below 1GHz)



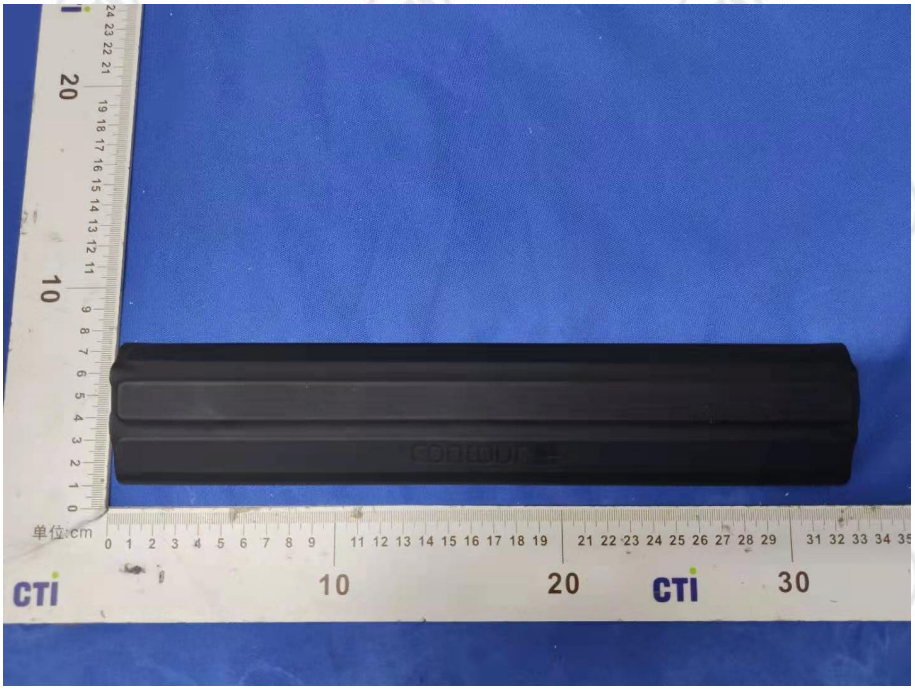
Radiated spurious emission Test Setup-2(Above 1GHz)



Radiated spurious emission Test Setup-3(Above 1GHz)
There are absorbing materials under the ground.

PHOTOGRAPHS OF EUT Constructional Details

Test mode No.RM-Mobile



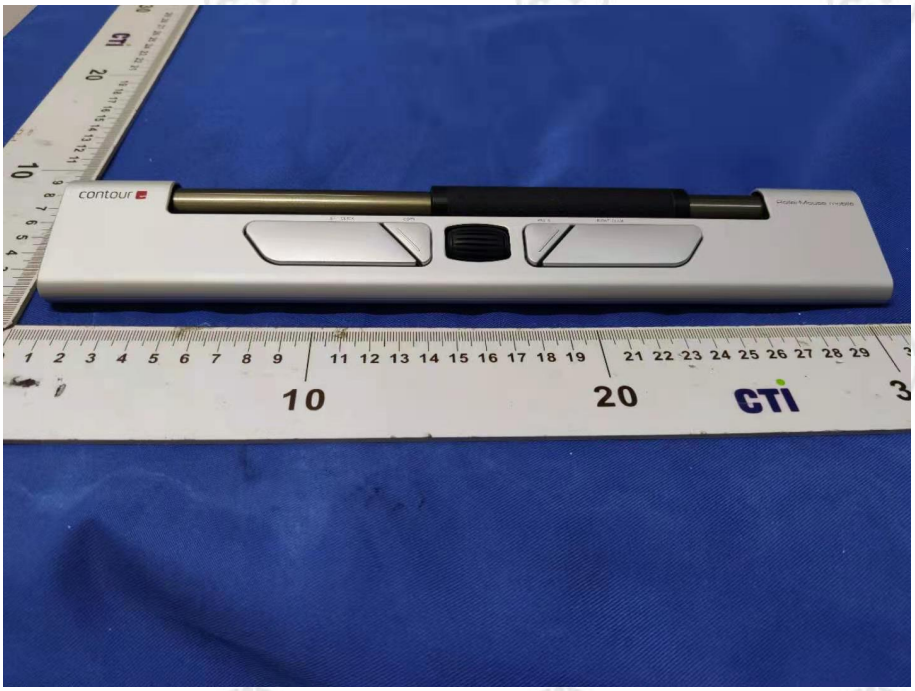
View of Product-1

View of Product-2

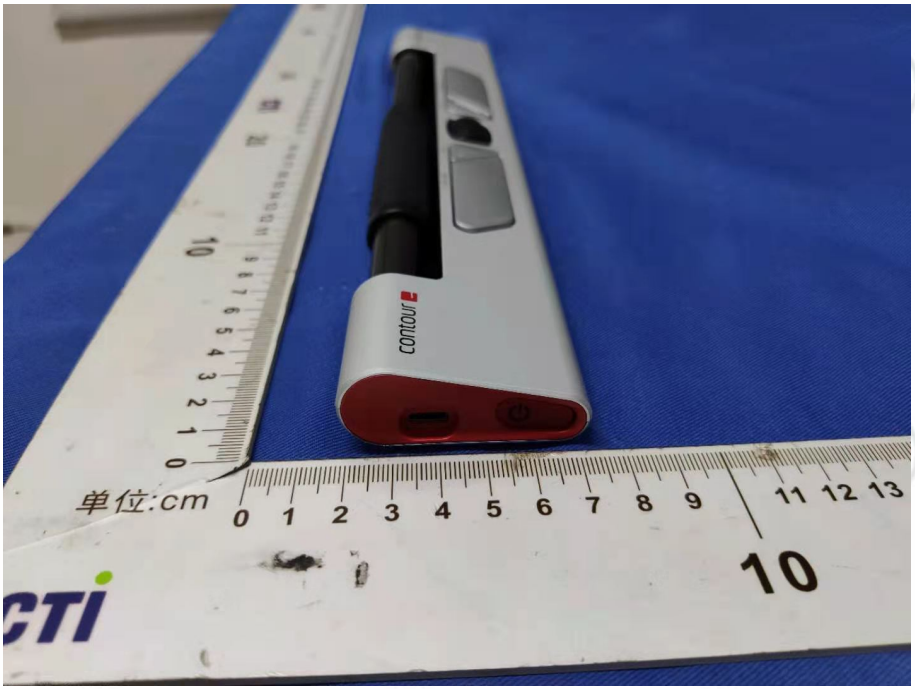
View of Product-3

View of Product-4

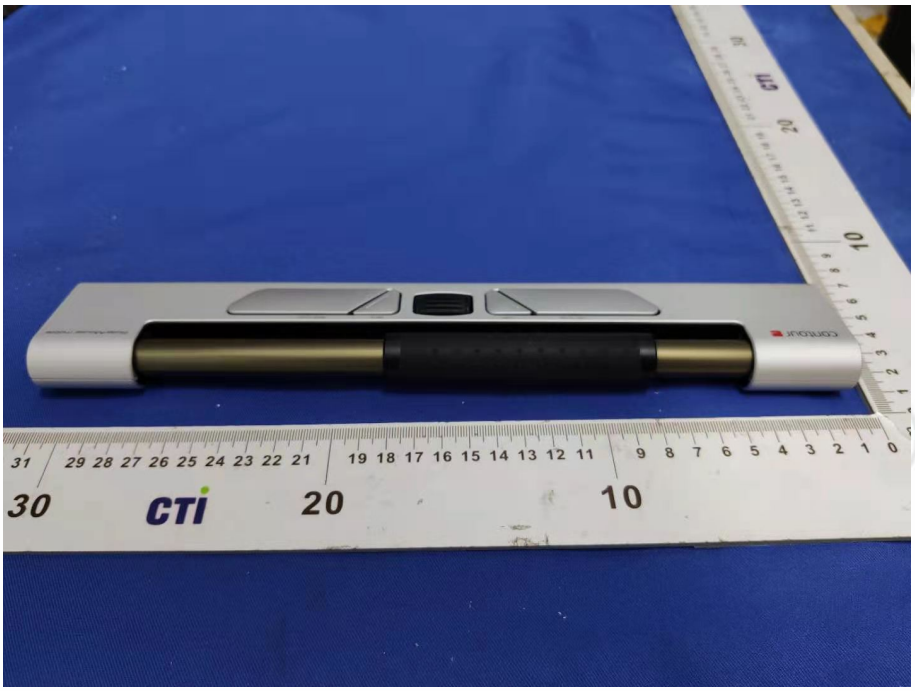
View of Product-5



View of Product-6



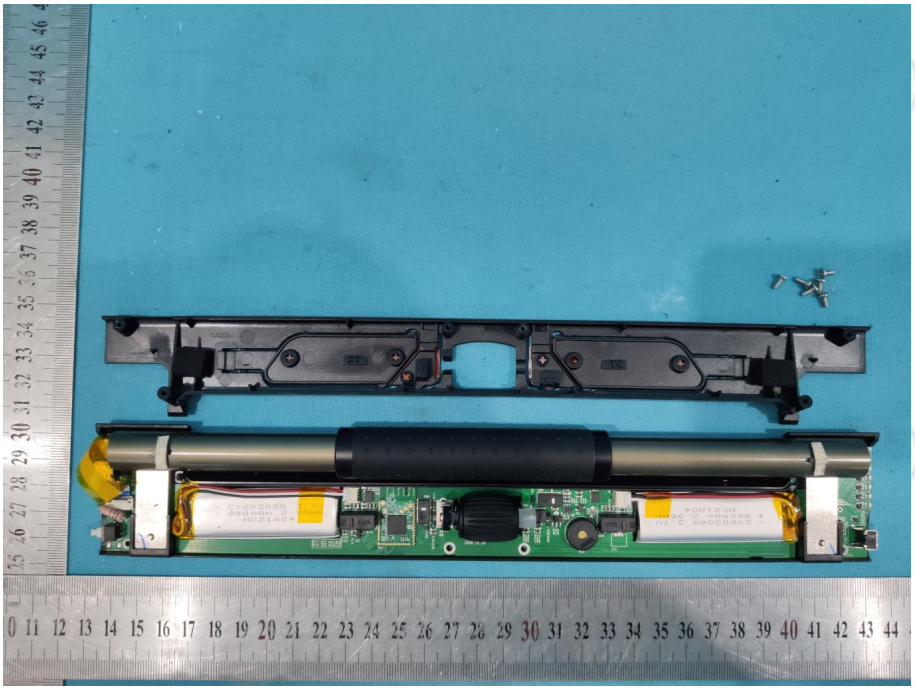
View of Product-7



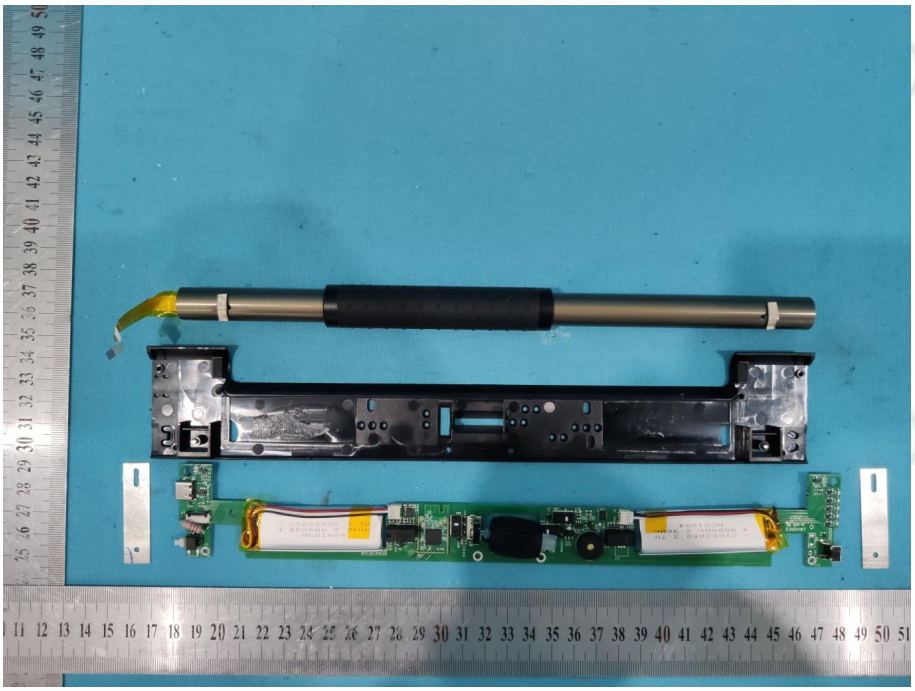
View of Product-8

View of Product-9

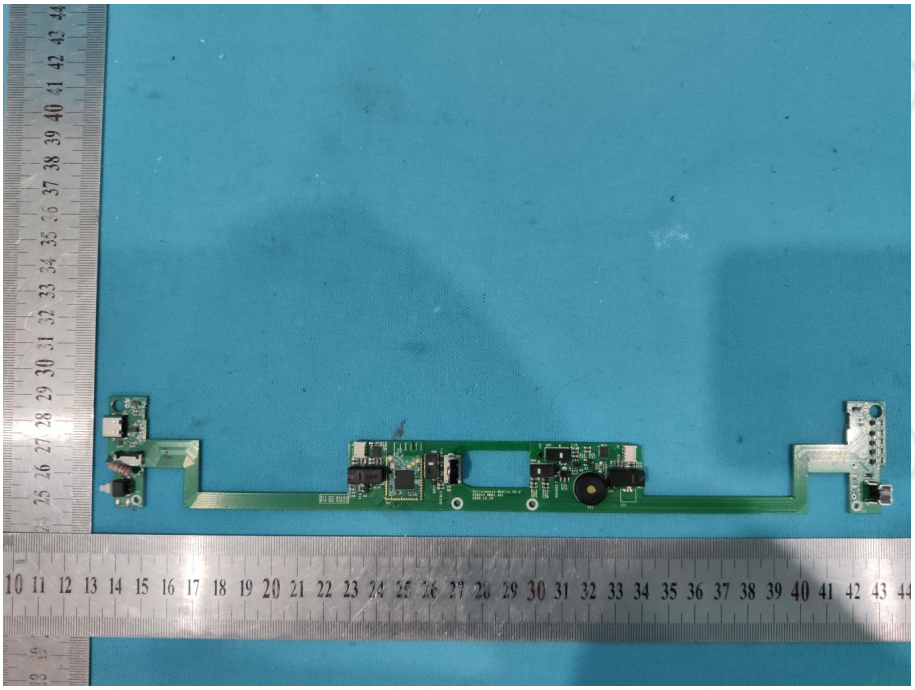
View of Product-10



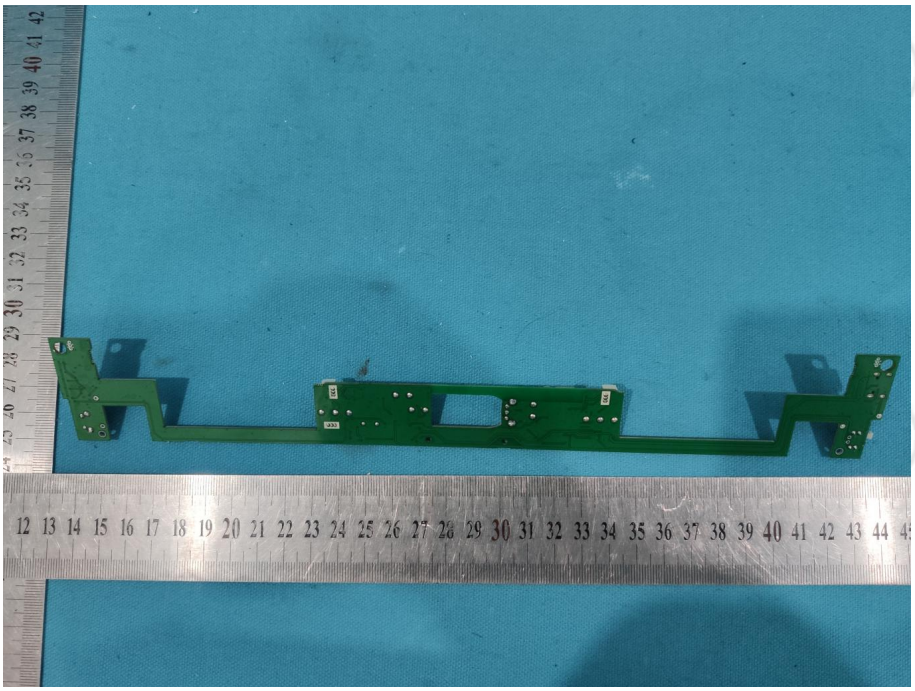
View of Product-11



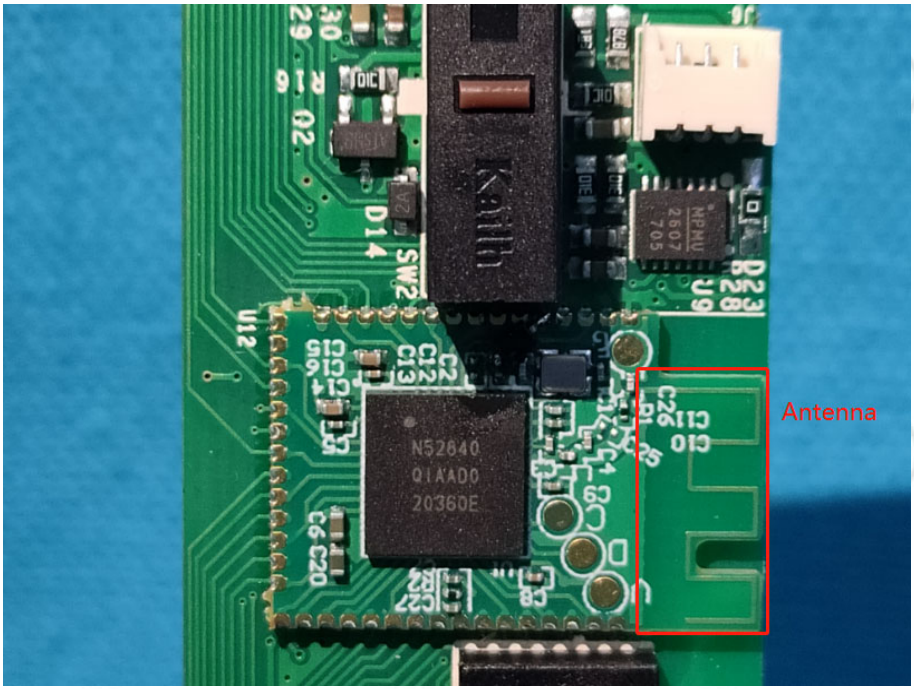
View of Product-12



View of Product-13



View of Product-14



View of Product-15

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*** End of Report ***