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RF Exposure Evaluation Report

Report No. : CQASZ20190700036EX-02
Applicant: VTIN TECHNOLOGY Co.,Limited
Address of Applicant: Unit D, 16/F, One Capital Place, 21 Luard Road, Wan Chai, Hong Kong
Manufacturer: VTIN TECHNOLOGY Co.,Limited
Address of Manufacturer: Unit D, 16/F, One Capital Place, 21 Luard Road, Wan Chai, Hong Kong
Equipment Under Test (EUT):
Product: wireless mouse
All Model No.: PC176B-1, PC071A, PC071B, PC238A-1, PC252A-1
Test Model No.: PC176B-1
Brand Name: VICTSING
FCC ID: 2AIL4-PC176B-1
Standards: 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Test: 2019-07-08 to 2019-07-17
Test Result : PASS*

Tested By:

(Tom Chen)

Reviewed By:

(Aaron Ma)

Approved By:

(Jack Ai)



* In the configuration tested, the EUT complied with the standards specified above.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190700036EX-02	Rev.01	Initial report	2019-07-17

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3 General Information

3.1 Client Information

Applicant:	VTIN TECHNOLOGY Co.,Limited
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Manufacturer:	VTIN TECHNOLOGY Co.,Limited
Address of Manufacturer:	Unit D,16/F, One Capital Place, 21 Luard Road, Wan Chai, Hong Kong

3.2 General Description of EUT

Product Name:	wireless mouse
All Model No.:	PC176B-1, PC071A, PC071B, PC238A-1, PC252A-1
Test Model No.:	PC176B-1
Trade Mark:	VICTSING
Hardware Version:	V3.0
Software Version:	V1.0
Operation Frequency:	2403.8-2479.8MHz
Modulation Type:	GFSK
Transfer Rate:	1Mbps
Number of Channel:	16
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Antenna Type:	PCB antenna
Antenna Gain:	0dBi
EUT Power Supply:	battery: 1.5V

Note:

There are many products, Only PC176B-1 the model was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference in appearance size and color, and the naming is different, but these do not affect EMC and RF performance.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2403.8MHz)	-5.619	-5.0	-5.0	0.316	0.041	3.0
Middle (2441.8MHz)	-6.261	-6.0	-6.0	0.251	0.032	
Highest (2479.8MHz)	-6.092	-6.0	-6.0	0.251	0.032	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190700036EX-01