



시험 성적서

TEST REPORT

페이지(page) : (1) / (총(Total) 7)

성적서 번호 Report No.		ICRT-TR-E223162-0A	
신청자 Client	기관명 Name	HANMI MICRONICS INC.	
	주 소 Address	72, Samdo-ro 48beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea.	
시험대상품목 Sample description		WIRELESS KEYBOARD	
모델명 Type designation		W85 TKL	
정 격 Ratings		DC 3.7 V	
시험장소 Place of test		☒ 고정시험(Inside test) ☐ 현장시험(Field test) 주소지(Address): 112, Hwanggeum 3-ro 7beon-gil, Hagun-ri, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea	
시험기간 Date of test		8. Nov. 2022 ~ 1. Dec. 2022	
시험방법/항목 Test Method/Item		FCC rule §2.1093	
시험결과 Test Results		Refer to 3. Maximum Permissible Exposure	
확 인 Affirmation	작성자 Tested by	기술책임자 Technical Manager	
	성 명 Name Seong-Hun, Jeong (서명) (Signature)	성 명 Name Tae-Yang, Yoon (서명) (Signature)	
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Revision History

Issued Report No.	Issued Date	Revisions	Effect Section
ICRT-TR-E223162-0A	2022.12.13	Initial Issue	All



1. Applicant & Manufacturer & Test Laboratory Information

1.1 Applicant information

Applicant	HANMI MICRONICS INC.
Address	72, Samdo-ro 48beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea.
Contact Person	Jay Maeng
Telephone No.	82-01-3301-8347
Fax No.	82-07-3273-2420
E-mail	mjh@micronics.co.kr

1.2 Manufacturer Information

Manufacturer	HANMI MICRONICS INC.
Address	72, Samdo-ro 48beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea.

1.3 Test Laboratory Information

Conducted tests were performed at	
Laboratory	ICR Co., Ltd.
Address	112, Hwanggeum 3-ro 7beon-gil, Hagun-ri, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea
Telephone No.	+82-2-6351-9002
Fax No.	+82-2-6351-9007
RRA No.	KR0165
KOLAS No.	KT652



2. Equipment under Test(EUT) Information

2.1 General Information

Product Name	WIRELESS KEYBOARD
Brand Name	-
Model Name	W85 TKL
Additional Model Name	-
FCC ID	2A3QW-W85TKL
Hardware Version	1.0

2.2 Additional Information

Equipment Class	DSS - Frequency Hopping Spread Spectrum system	
	DTS - Digital Transmission System	
Device Type	Stand-alone	
Operating Frequency	FHSS	2 402 MHz ~ 2 479 MHz
	Bluetooth BDR, LE	2 402 MHz ~ 2 480 MHz
RF Output Power	FHSS	0.49 dBm
	Bluetooth BDR	-2.9 dBm
	Bluetooth LE	-2.43 dBm
Number of Channel	FHSS	78
	Bluetooth BDR	79
	Bluetooth LE	40
Modulation Type	FHSS, Bluetooth BDR, Bluetooth LE : GFSK	
Antenna Type	PCB Antenna	
Antenna Gain	1.58 dBi	
Antenna Operating Mode	Single antenna exists for each mode	

2.3 Mode of operation during the test

- The EUT is continuous transmission mode during the test with set at Low Channel, Middle Channel, and High Channel. To get a maximum radiated emission levels from the EUT, the EUT was moved throughout the XY, YZ, XZ planes.

2.4 Modifications of EUT

- None



3. RF Exposure

3.1 RF Exposure calculation.

Kind of EUT	RECEIVER	
Operating Frequency Band	☐ WLAN(802.11b/g/n(HT20)): 2 412 MHz ~ 2 462 MHz ☐ WLAN(802.11n(HT40)): 2 422 MHz ~ 2 452 MHz ☐ WLAN: 5 180 MHz ~ 5 320 MHz / 5 500 MHz ~ 5 700 MHz ☐ WLAN: 5 745 MHz ~ 5 825 MHz ☒ Bluetooth: 2 402 MHz ~ 2 480 MHz ☒ FHSS: 2 402 MHz ~ 2 479 MHz	
Max. Output Power	FHSS	0.49 dBm
	Bluetooth BDR	-2.9 dBm
	Bluetooth LE	-2.43 dBm
Exposure Evaluation Applied	☐ MPE ☐ SAR ☒ N/A	



3.2 Result

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW}) / (\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 7.5$$

Conclusion: The SAR test exclusion threshold is less than 7.5, so the device meets the RF Exposure Requirement and excluded SAR Test.

Operating Mode	Frequency (MHz)	Target Power W / tolerance	Max tune up power		Separation distance (mm)	RF exposure	Limit
		(dBm)	(dBm)	(mW)			
FHSS	2 479	0.49 ± 0.5	0.99	1.26	5.00	0.40	7.5
Bluetooth BDR	2 480	-2.9± 0.5	-2.4	0.58	5.00	0.18	7.5
Bluetooth LE	2 480	-2.43± 0.5	-1.93	0.64	5.00	0.20	7.5

- END -