

TEST REPORT (RF EXPOSURE)

Applicant : I&C Technology Co., Ltd.

Address : (Sampyeong-dong, I&C Building), 24, Pangyo-ro255beon-gil,
Bundang-gu, Seongnam-si, South Korea

Products : Dual Module

Model No. : WFM60-SFP2501

Serial No. : --

Test Standard : CFR 47 FCC Rules and Regulations Part 2 (§ 2.1093)

FCC ID : 2ADXS-WFM60-SFP2501

Test Results : **Passed**

Date of Receipt : --

Date of Test : --



Kosei Shibata
Deputy Director
Japan Quality Assurance Organization
Kitakansai Testing Center
Saito EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

- The test results in this test report was made by using the measuring instruments which are traceable to national standards of measurement in accordance with ISO/IEC 17025.
- The applicable standard, testing condition and testing method which were used for the tests are based on the request of the applicant.
- The test results presented in this report relate only to the offered test sample.
- The contents for the equipment under test (EUT) such as identification information in clause 2 of this report were provided by the applicant. JQA is not responsible for the test results affected by the incorrect information.
- The contents of this test report cannot be used for the purposes, such as advertisement for consumers.
- This test report shall not be reproduced except in full without the written approval of JQA.
- VLAC does not approve, certify or warrant the product by this test report.

REVISION HISTORY

File No.	Contents	Issue Date
KL80230893	Initial Issue	March 14, 2024
KL80230893R	Change in the tune-up max. power limit	April 15, 2024

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1 Summary of Test Results

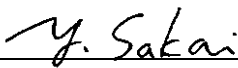
Applied Standard : CFR 47 FCC Rules and Regulations Part 2 – Frequency Allocations and Radio
Treaty Matters; General Rules and Regulations
§ 2.1093 Radiofrequency radiation exposure evaluation: portable devices

The test results are **passed** for exposure limits specified in FCC 47 CFR § 1.1310 and/or ANSI/IEEE Std.
C95.1.

In the approval of test results,

- No deviations were employed from the applied standard.
- No modifications were conducted by JQA to achieve compliance to the limitations.

Reviewed by
Yasuhisa Sakai / Project Manager



Tested by
Yuji Shintaku / Assistant Manager



2 Description of Equipment Under Test (EUT)

2.1 General Information

Manufacturer	I&C Technology Co., Ltd. (Sampyeong-dong, I&C Building), 24, Pangyo-ro255beon-gil, Bundang-gu, Seongnam-si, South Korea
Products	Dual Module
Model No.	WFM60-SFP2501
Serial No.	--
Power Rating	3.3VDC
Modulation Type	DSSS/CCK (802.11b), OFDM (802.11a/g/n)
Transmitting Frequency	WIFI 2.4 GHz (DTS : 2412 MHz – 2462 MHz) WIFI 5 GHz (U-NII 1 : 5150 MHz – 5250 MHz) WIFI 5 GHz (U-NII 2A : 5250 MHz – 5350 MHz) WIFI 5 GHz (U-NII 2C : 5470 MHz – 5725 MHz) WIFI 5 GHz (U-NII 3 : 5725 MHz – 5850 MHz)
Device Category	Portable Device (§ 2.1093)
Exposure Environments	General Population/Uncontrolled Exposure
FCC Rule Part(s)	§15.247, §15.407
Antenna Type	WIFI Dual Band PCB Antenna
Antenna Gain	DTS : 1.98 dBi UNII 1 : 2.90 dBi UNII 2A : 3.50 dBi UNII 2C : 3.34 dBi UNII 3 : 3.01 dBi

2.2 Host Device Information

Manufacturer	Seiko Instruments Inc. 8, Nakase 1-chome, Mihama-ku, Chiba-shi, Chiba 261-8507, Japan
Products	Thermal Printer
Model No.	MP-B21L-W46JK1U
Power Rating	12VDC (AC Adapter WB-18D12R) 7.4VDC (Lithium-ion Battery BP-A0720-B1)
Grounding	None

3 Test Methods and Procedures

All calculations in this report were made in accordance with FCC 47 CFR § 1.1307(b), § 2.1093 and the following FCC Published RF Exposure KDB Procedures..

447498 D01 General RF Exposure Guidance v06

4 Test Location

Japan Quality Assurance Organization (JQA)
Kitakansai Testing Center Saito EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

5 Accreditation of Test Laboratory

JQA Kitakansai Testing Center Saito EMC Branch is accredited under ISO/IEC 17025 by the following accreditation bodies and the test facility is registered by the following bodies. If the accreditation logo does not appear on this cover, it is outside the scope of ISO/IEC 17025.

VLAC Accreditation No. : VLAC-001-2 (Expiry date : April 30, 2024)

A2LA Accreditation No. : 5498.01 (Expiry date : November 30, 2025)

VCCI Registration No. : A-0002 (Expiry date : April 30, 2024)

FCC Registration No. : JP5008 (Expiry date : April 30, 2024)

ISED Registration No. : JP0014 (Expiry date : November 30, 2025)

BSMI Registration No. : SL2-IS-E-6006, SL2-IN-E-6006, SL2-R1/R2-E-6006, SL2-A1-E-6006
(Expiry date : September 14, 2025)

Accredited as conformity assessment body for Japan electrical appliances and material law by METI.
(Expiry date : February 22, 2025)

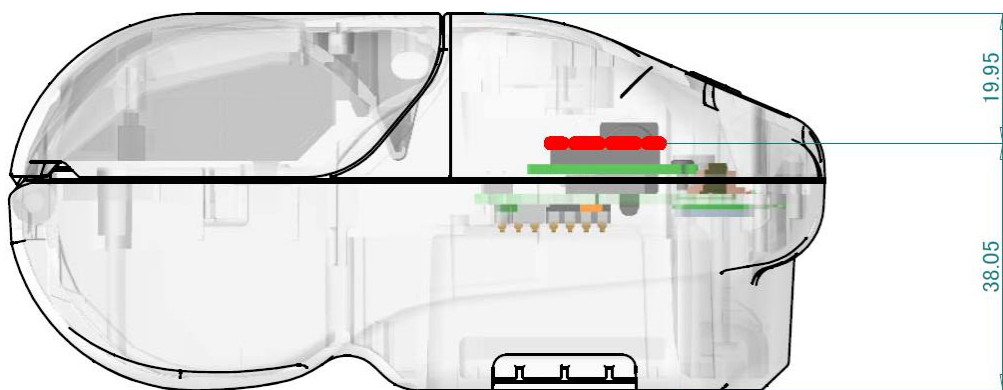
6 Test Requirements

6.1 Standard Applicability

According to § 1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a portable device with its physical nature to be used nearby, the distance between radiating structure and human is less than 20 cm.

6.2 Antenna Location and Separation Distances



Bottom (fixed to the human body)

■ **WiFi antenna (Tx/Rx)**

6.3 Evaluation Results

The 1 g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by;

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0$ for 1 g SAR and ≤ 7.5 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 calculation.
- The result is rounded to one decimal place for comparison.
- When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied.

Band	Freq. (MHz)	Max. Power		Test Position	Distance (mm)	Threshold	Test Exclusion
		(dBm)	(mW)				
WLAN (DTS)	2462	18.5	71	Bottom	38	2.9	YES
WLAN (UNII 1)	5180	14.5	28	Bottom	38	1.7	YES
	5240	14.0	25	Bottom	38	1.5	
WLAN (UNII 2A)	5320	14.5	28	Bottom	38	1.7	YES
WLAN (UNII 2C)	5680	14.0	25	Bottom	38	1.6	YES
	5700	11.0	13	Bottom	38	0.8	
WLAN (UNII 3)	5805	14.0	25	Bottom	38	1.6	YES
	5825	13.5	22	Bottom	38	1.4	

The minimum user separation distance was assumed to be 38 mm for the purpose of the SAR exclusion calculations.

Conclusion:

The device qualifies for the Standalone SAR test exclusion because the computed value is < 3.

--- END OF REPORT ---