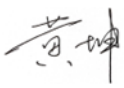
RF Exposure Test Report

Applicant:	Micro-Star INT'L Co., LTD.
EUT Description:	Wireless Charging Dock
Model:	MDWC
Brand:	msi
FCC ID:	I4L-MDWC
Standards:	FCC Part 1(1.1310), FCC Part 2(2.1091)
Date of Receipt:	2024/11/21
Date of Test:	2024/12/18 to 2024/12/19
Date of Issue:	2024/12/20

TOWE. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

the results documented in this report apply only the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. without written approval of TOWE, the test report shall not be reproduced except in full.



Huang Kun
Approved By:

Li Wei
Reviewed By:

Revision History

Rev.	Issue Date	Description	Revised by
01	2024/12/20	Original	Li Wei

Table of Contents

1 Summary of Test Results

Description of Test Item	Standard & Limits	Result
MPE	FCC Part 1(1.1310) and Part 2(2.1091) KDB 680106 D01 Wireless Power Transfer v04	PASS

2 Guidance Applied

FCC Part 1(1.1310) and Part 2(2.1091)
KDB 680106 D01 Wireless Power Transfer v04

3 Lab Information

3.1 Testing Location

These measurements tests were conducted at the Sushi TOWE Wireless Testing (Shenzhen) Co., Ltd. facility located at F401 and F101, Building E, Hongwei Industrial Zone, Liuxian 3rd Road, Bao'an District, Shenzhen, China. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014
Tel.: +86-755-27212361
Contact Email: info@towewireless.com

3.2 Test Facility / Accreditations

A2LA (Certificate Number: 7088.01)
This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

FCC Designation No.: CN1353
Sushi TOWE Wireless Testing (Shenzhen) Co., Ltd. has been recognized as an accredited testing laboratory.
Designation Number: CN1353.

ISED CAB identifier: CN0152
Sushi TOWE Wireless Testing (Shenzhen) Co., Ltd. has been recognized by ISED as an accredited testing laboratory.
CAB identifier: CN0152
Company Number: 31000

3.3 Ambient Condition

Temperature: 18°C~25°C
Relative Humidity: 30%~75%

4 Client Information

4.1 Applicant

Applicant:	Micro-Star INT'L Co., LTD.
Address:	No.69, Lide St., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

4.2 Manufacturer

Applicant:	Micro-Star INT'L Co., LTD.
Address:	No.69, Lide St., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

5 Product Information

EUT Description	Wireless Charging Dock
Model	MDWC
Brand	msi
Hardware Version	V1.0
Software Version	N/A
SN.	TCEA241100331M01
Modulation Type:	ASK
Frequency Range:	105~205KHz
Power supply:	DC 5V, 1A Wireless charging: 5W
Remark: The above EUT's information was declared by applicant, please refer to the specifications or user manual for more detailed description.	

5.1 Description of EUT Test Mode

Test Mode	Description	Remark
1	Wireless output: 5W Load 1%	Keep the EUT Wireless output: 5W
2	Wireless output: 5W Load 50%	Keep the EUT Wireless output: 5W
3	Wireless output: 5W Load 99%	Keep the EUT Wireless output: 5W

Note: 1%, 50%, and 99% load cases were pre-tested for all modes, but we only recorded the worst case in this report.

5.2 Description of Support Units

Description	Manufacturer	Model	Serial Number
Mouse*	MSI	MS-8ZB7	-
Adapter	Xiaomi	AD652	30770/00235750
Remark *: all above the information of table are provided by client.			

6 Test Requirement and Limits

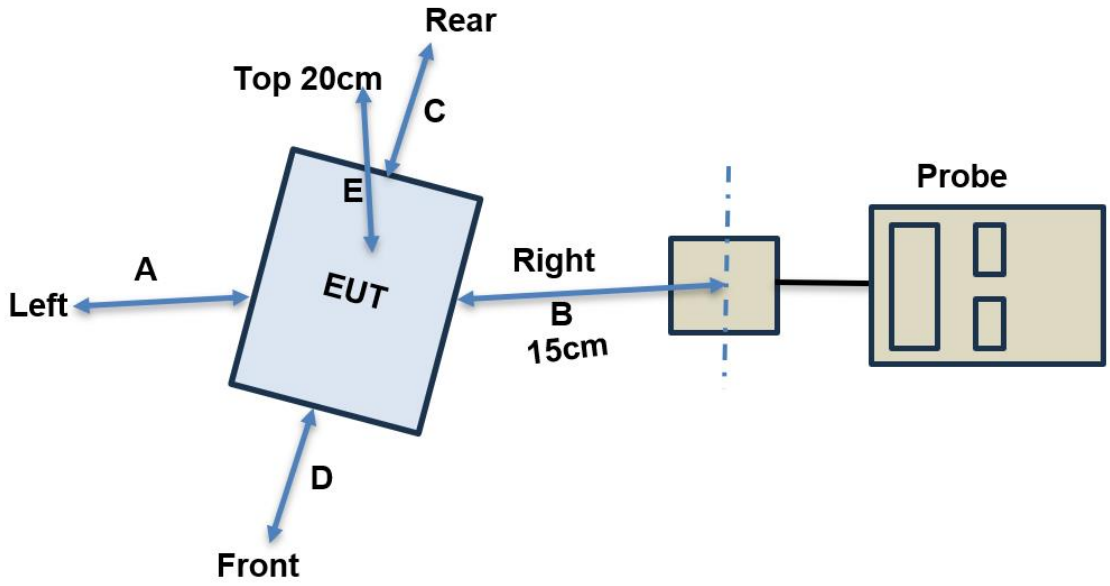
According to the item 5 of KDB 680106 v03r01:
Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.
(1) Power transfer frequency is less than 1MHz.
(2) Output power from each primary coil is less than or equal to 15 watts.
(3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
(4) Client device is placed directly in contact with the transmitter.
(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.
Remark: Meet all the above requirements.

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)
Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*($900/f^2$)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

7 Test Setup



8 Test Procedure

1) The RF exposure test was performed in an anechoic chamber.

2) The measurement probe was placed at test distance (15 cm from all sides and 20 cm from the top) which is between the edge of the charger and the geometric center of probe.

3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.

4) The EUT was measured according to the dictates of KDB 680106 v04.

Remark：The EUT test position A, B, C, D and E is valid for the E and H field measurements.

9 Test Equipment list

Manufacturer	Equipment Name	Model	Serial Number	Calibration Date	Due Date of calibration
Narda	Electric and Magnetic Field Analyzer	EHP 200A	180ZX30120	2024/11/07	2025/11/06

10 Test Result

H-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm from the top surface of the EUT:

Frequency Range (MHz)	Test Position	Test Distance (cm)	Measure Value (A/m)	50% Limits (A/m)	Limits (A/m)
0.105~0.205	Left	15	0.0503	0.815	1.63
	Right	15	0.0559		
	Rear	15	0.0618		
	Front	15	0.0744		
	Top	20	0.0693		

E-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm from the top surface of the EUT:

Frequency Range (MHz)	Test Position	Test Distance (cm)	Measure Value (V/m)	50% Limits (V/m)	Limits (V/m)
0.105~0.205	Left	15	0.4113	307	614
	Right	15	0.4220		
	Rear	15	0.4523		
	Front	15	0.3542		
	Top	20	1.4344		

11 Measurement Uncertainty

Parameter	Uncertainty
E-Filed Strength	±0.08V/m
H-Filed Strength	±0.02A/m
uT	±0.01

12 Test Setup Photos

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