

RF Exposure Evaluation Declaration

Product Name : Partial Discharge Handheld Surveyor

Brand Name : 
Power Diagnostic Service

Model No. : PDH-P31

FCC ID : 2A9OJPDH-P31

Applicant : POWER DIAGNOSTIC SERVICE CO., LTD.

Address : 1 F., No. 10, Ln. 482, Sec. 4, Zhonghua Rd., Niupu Vil.,
Xiangshan Dist., Hsinchu City 300075, Taiwan (R.O.C.)

Date of Receipt : Oct. 26, 2022

Issued Date : Mar. 20, 2023

Report No. : 22A0691R-RFUSV17S-A

Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd.



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Applicant : POWER DIAGNOSTIC SERVICE CO., LTD.
Address : 1 F., No. 10, Ln. 482, Sec. 4, Zhonghua Rd., Niupu Vil., Xiangshan
Dist., Hsinchu City 300075, Taiwan (R.O.C.)
Manufacturer : POWER DIAGNOSTIC SERVICE CO., LTD.
Address : 1 F., No. 10, Ln. 482, Sec. 4, Zhonghua Rd., Niupu Vil., Xiangshan
Dist., Hsinchu City 300075, Taiwan (R.O.C.)
Brand Name : 
Model No. : PDH-P31
FCC ID : 2A9OJPDH-P31
EUT Voltage : DC 5V (host equipment)
DC 3.7V for battery
Applicable Standard : FCC 47 CFR Part 2.1091 Radiofrequency radiation exposure
evaluation: mobile devices.
Laboratory Name : DEKRA Testing and Certification Co., Ltd.
Hsin Chu Laboratory
Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu
County 310, Taiwan, R.O.C.
Test Result : Complied

Documented By :



(Amelia Wu / Project Specialist)

Approved By :



(Rueyyan Lin / Supervisor)

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Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Mar. 20, 2023

1. General Information

1.1. EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
NFC	13.553 ~ 13.567	13.56	ASK

Note: The above EUT information is declared by the manufacturer.

1.2. Test Facility

Laboratory Information

USA : **FCC Registration Number: TW3024**
Canada : **CAB identifier : TW3024**

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: <http://www.dekra.com.tw>

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
E mail address	info.tw@dekra.com
Website	http://www.dekra.com.tw
Note: Test site number for address 1 includes HC-SR02. Test site number for address 2 includes HC-CB02, HC-CB03, HC-CB04, HC-SR10 and HC-SR12.	

2. RF Exposure Evaluation

2.1. Test Limit

(A) Test Limit for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
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) Test Limit for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
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

Note: f = frequency in MHz; *Plane-wave equivalent power density

Power Density (S) is calculated by the following formula:

$$S = (P \cdot G) / 4\pi R^2$$

where:

S = power density (in appropriate units, e.g. mW/ cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

π = 3.1416

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

2.2. Test Result of RF Exposure Evaluation

Exposure Environment: General Population / Uncontrolled Exposure

Evaluation Mode	Field Strength (dBuV/m@30m)	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Test Result (PASS/FAIL)
NFC	14.99	-40.210	0.0001	0.00000002	0.9789	PASS

Distance (cm): 20 for Maximum Permissible Exposure.

For NFC: E.I.R.P (dBm) = Field Strength (dBuV/m@30m) + (40*log (30/3)) - 95.2 + 6

Note:

1. The above EUT information is declared by the manufacturer.
2. The results are evaluated using the maximum power.