

Project No: TM-2211000658P
Report No.: TMWK2212005344KS

FCC ID: 2AO4C-WLCD03BW

Page: 1 / 10

Rev.: 01

KDB 680106 D01
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

WIRELESS CHARGER UNIT

Model: GN819-00980

Trade Name: UNIMAX

Issued to

UniMax Electronics Inc.
15, Li-Te Rd., Beitou Dist., 112 Taipei City Taiwan

Issued by

Compliance Certification Services Inc.
Wugu Laboratory
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City, Taiwan.
Issued Date: January 4, 2023

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	December 28, 2022	Initial Issue	ALL	Doris Chu
01	January 4, 2023	See the following Note Rev. (01)	P.1, P.5	Doris Chu

Rev. (01)

1. Modify applicant's address.
2. Added H=1.63 A/m in section 2.

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION	4
2. EUT SPECIFICATION	5
3. MEASUREMENT EQUIPMENT USED	6
4. LIMIT	9
5. TEST RESULTS	10
6. PHOTOGRAPHS OF TEST SETUP	A-1

1. TEST RESULT CERTIFICATION

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
KDB 680106 D01 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	Compliance
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

Approved by:



Sky Zhou
Asst. Section Manager
Compliance Certification Services Inc.

2. EUT SPECIFICATION

EUT	WIRELESS CHARGER UNIT
Model	GN819-00980
Trade Name	UNIMAX
Model Discrepancy	N/A
Frequency band (Operating)	<input checked="" type="checkbox"/> 127.77KHz <input type="checkbox"/> Others
Device category	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (E=614 V/m and H=1.63 A/m)
Antenna Specification	Coil Antenna
Evaluation applied	<input type="checkbox"/> MPE Evaluation* <input checked="" type="checkbox"/> Nerve Stimulation Evaluation <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A
Received Date	December 1, 2022
Date of Test	December 13, 2022

Remark:

- For more details, please refer to the User's manual of the EUT.
- Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

3. MEASUREMENT EQUIPMENT USED

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: TW1309

Equipment Used for Emissions Measurement

RF Conducted Test Site					
Equipment	Manufacturer	Model	S/N	Cal Date	Cal Due
Field Meter	Wavecontrol	SMP2	19SN1198	2021-12-14	2023-12-13
Probe (1Hz~400kHz)	Wavecontrol	WP400	19WP100597	2021-12-13	2023-12-12
Probe (300kHz~60MHz)	Wavecontrol	WPH60	19WP110051	2022-01-11	2024-01-10
Probe (100kHz~8GHz)	Wavecontrol	WPF3	19WP030369	2021-12-14	2023-12-13
Software	N/A				

Remark: Field Meter and Probe (1Hz ~ 400kHz) are scheduled for calibration once two years, other equipment are scheduled for calibration once one year.

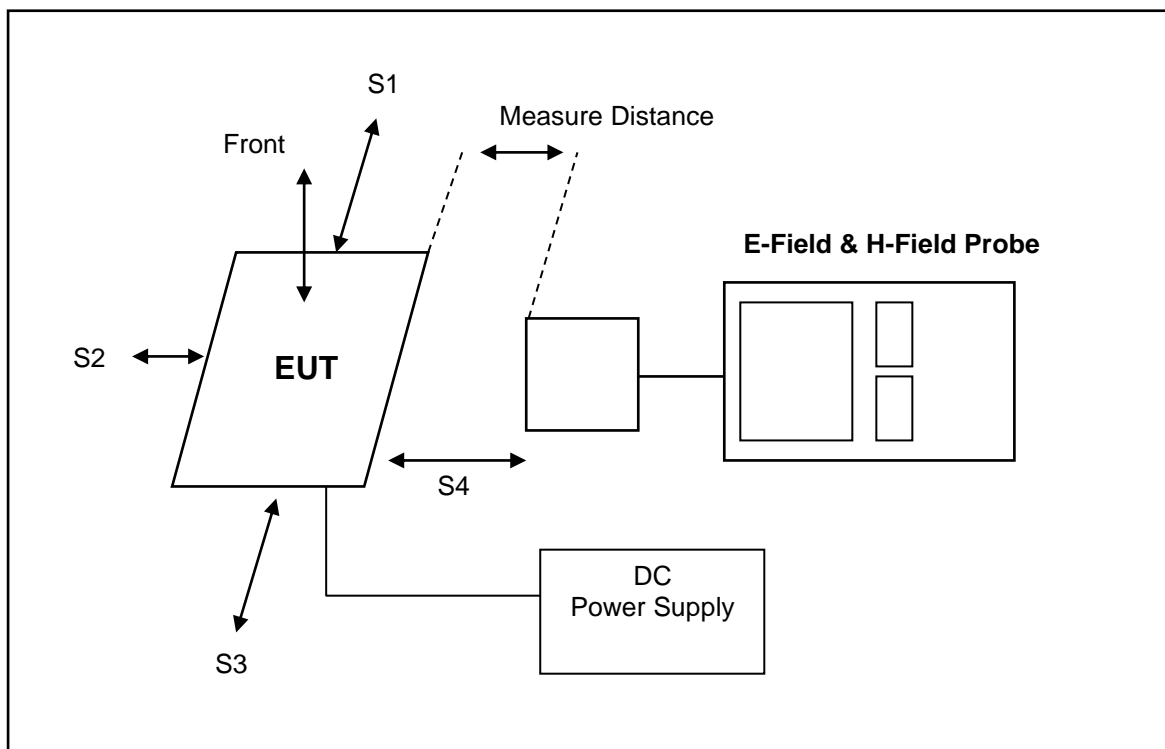
Note: Probe Technical Spec.

Model	WP400	WPH60	WPF3
Frequency Range	1 Hz – 400 kHz	300 kHz ~ 60 MHz	100 kHz - 3 GHz
Response	Flat / Shaped	Flat	Flat
Measurement Range	E-Field: 1 V/m – 100 kV/m H-Field: 50 nT – 10mT	H-Field: 0.018 – 1 A/m (RMS) 0.018 – 20 A/m (CW)	E-Field: 0.2 – 20 V/m (RMS) 0.2 – 130 V/m (CW)
Sensor type	Isotropic RMS diode technology		
Accuracy	-	95%	-
Linearity	± 1 % (typ.) ± 2 % (max.)	± 1 dB (0.04 to 4 A/m)	± 0.5 dB (0.5 V/m - 100 V/m)
Dynamic range	E-Field: 0.67 dB H-Field: 0.60 dB	60 dB	52 dB
Sensitivity	E-Field: < 1 V/m H-Field: 50 nT	0.018 A/m	0.2 V/m
Frequency response (*)	-	± 1.5 dB (500 kHz – 30 MHz) - 3 / +0.5 dB (300 kHz – 60 MHz)	± 1.5 dB (250 kHz – 3 GHz) - 3 dB (100 kHz)
Isotropic deviation	E-Field: ± 5 % H-Field: ± 4 %	± 1 dB	± 1.2 dB (@ 2 GHz)
Dimensions	280 mm x 128 mm Ø	270 mm x 90 mm Ø	28.4 cm x 6 cm Ø

Remark: All of the probes above are 3-axis probe.

SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.
1	Mobile	SONY	XPERIA	N/A
2	LED Board	UNIMAX	W1_IO	N/A
3	Power Cable	GreatLink	GEPD-AUTX-00033W	N/A
4	IO Cable	GreatLink	GEPD-AUTX-00154W	N/A



4. LIMIT

Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310.

§1.1310: 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), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of the chapter.

TABLE 1 - 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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Note 1 to Table 1: Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Note 2 to Table 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

5. TEST RESULTS

Temperature: 19.8°C

Humidity: 62% RH

Tested by: Jerry Chang

Test Date: December 13, 2022

Operating Frequency (kHz)

127.77 kHz

E-Field								
Distance (cm)	Measure Frequency Range	Probe position Front (V/m)	Probe position Back (V/m)	Probe position Left Side (V/m)	Probe position Right Side (V/m)	Probe position Top (V/m)	Probe position Bottom (V/m)	Limit (V/m)
2	9kHz to 300kHz	5.84	3.68	3.44	4.69	10.22	3.66	614
	300kHz to 10MHz	0.84	0.43	0.32	0.49	1.53	0.26	
	Multiple Frequency Summation	0.019136808	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
4	9kHz to 300kHz	3.83	2.85	2.82	4.32	6.26	2.88	614
	300kHz to 10MHz	0.52	0.28	0.22	0.32	0.89	0.17	
	Multiple Frequency Summation	0.011644951	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
6	9kHz to 300kHz	3.11	2.58	2.7	3.73	4.46	2.64	614
	300kHz to 10MHz	0.38	0.23	0.2	0.31	0.6	0.16	
	Multiple Frequency Summation	0.008241042	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
8	9kHz to 300kHz	2.62	2.47	2.37	3.15	3.74	2.46	614
	300kHz to 10MHz	0.31	0.2	0.18	0.28	0.41	0.14	
	Multiple Frequency Summation	0.006758958	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
10	9kHz to 300kHz	2.67	2.34	2.26	2.85	3.19	2.34	614
	300kHz to 10MHz	0.23	0.19	0.16	0.27	0.34	0.13	
	Multiple Frequency Summation	0.005749186	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					

H-Field								
Distance (cm)	Measure Frequency Range	Probe position Front (A/m)	Probe position Back (A/m)	Probe position Left Side (A/m)	Probe position Right Side (A/m)	Probe position Top (A/m)	Probe position Bottom (A/m)	Limit (A/m)
2	9kHz to 300kHz	0.36	0.24	0.44	0.29	1.01	0.82	1.63
	300kHz to 10MHz	0.05	0.03	0.1	0.13	0.31	0.14	
	Multiple Frequency Summation	0.002149837	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
4	9kHz to 300kHz	0.27	0.2	0.26	0.21	0.63	0.43	1.63
	300kHz to 10MHz	0.03	0.04	0.07	0.08	0.17	0.09	
	Multiple Frequency Summation	0.001302932	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
6	9kHz to 300kHz	0.22	0.18	0.2	0.17	0.43	0.28	1.63
	300kHz to 10MHz	0.02	0.02	0.04	0.05	0.1	0.06	
	Multiple Frequency Summation	0.000863192	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
8	9kHz to 300kHz	0.19	0.17	0.16	0.14	0.32	0.2	1.63
	300kHz to 10MHz	0.01	0.02	0.03	0.04	0.06	0.04	
	Multiple Frequency Summation	0.000618893	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					
10	9kHz to 300kHz	0.17	0.14	0.14	0.13	0.25	0.15	1.63
	300kHz to 10MHz	0.009	0.01	0.02	0.03	0.04	0.03	
	Multiple Frequency Summation	0.000472313	(9kHz to 300kHz worst result/614)+(300kHz to 10MHz worst result/614) <1					

Remark: The measured distance is from the edge of the device to the edge of the measurement probe.

- End of Test Report -