Prüfbericht-Nr.: *Test report no.:*	CN23UHCQ (FCC-WPTRFEXP) 001	**Auftrags-Nr.:** *Order no.:*	48215983	Seite 1 von 11 *Page 1 of 11*
Kunden-Referenz-Nr.: *Client reference no.:*	N/A	**Auftragsdatum:** *Order date:*	2023-02-18	
Auftraggeber: *Client:*	Annex Products Pty Ltd Level 3, Suite 6A, 299 Toorak Road, South Yarra, Victoria 3141, Australia			
Prüfgegenstand: *Test item:*	OEM Wireless Charger 12V 1.8A Input(QL-5289), OEM Wireless Charger 12V 1.0A Input(QL-5290)			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	QL-5289, QL-5290			
Auftrags-Inhalt: *Order content*:	Test Report for WPT RF Exposure			
Prüfgrundlage: *Test specification:*	CFR47 FCC §1.1307(c) and (d), §1.1310 KDB680106 D01			

Wareneingangsdatum: *Date of sample receipt:*	2023-03-16
Prüfmuster-Nr.: *Test sample no:*	A003435707-001 A003435707-011
Prüfzeitraum: *Testing period:*	2023-03-23 - 2023-03-25
Ort der Prüfung: *Place of testing:*	EMC/RF Taipei Testing Site
Prüflaboratorium: *Testing laboratory:*	Taipei Testing Laboratories
Prüfergebnis*: *Test result*:*	Pass

zusammengestellt von: *compiled by:*		**genehmigt von:** authorized by:	
Datum: *Date:* 2023-04-06	Ethan Shao	**Ausstellungsdatum:** *Issue date:* 2023-04-06	Brenda Chen
Stellung / *Position:*	Assisatant Project Engineer	**Stellung** / *Position:*	Senior Project Manager

Sonstiges / *Other:*

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Contents

HISTORY OF THIS TEST REPORT

Report No.	Description	Date Issued
CN23UHCQ (FCC-WPTRFEXP) 001	Original Release	2023-04-06

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:
Appendix EP - Photographs of EUT

1.2 Decision Rule of Conformity

The decision rule of conformity of this test report is following the requirements of the requested standard in the quotation, and agreed among testing laboratory and manufacturer (applicant) to exclude the consideration of Measurement Uncertainty, unless it is required by the specific standard.

2 Test Sites

2.1 Test Facilities

TUV Rheinland Taiwan Ltd.
Taipei Testing Laboratories

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Chinese Taipei

2.2 Test Facility

TUV Rheinland Taiwan Ltd.
Taipei Testing Laboratories

No.458-18, Sec. 2, Fenliao Rd., Linkou Dist.,
New Taipei City 244
Chinese Taipei
FCC Registration No.: 180491
ISED Registration No.: 25563

2.3 List of Test and Measurement Instruments

Kind of Equipment	Manufacture	Type	S/N	Last Calibration	Next Calibration
Electric and Magnetic Field Probe-Analyzer	Narda S.T.S /PMM	EHP 200AC 3K-10MHz	180ZX10206	2021-02-24	2024-02-23

3 General Product Information

3.1 Product Function and Intended Use

The EUT is OEM Wireless Charger 12V 1.8A Input(QL-5289), OEM Wireless Charger 12V 1.0A Input(QL-5290). It contains WPC compatible modules enabling the user to charge the battery through a wireless interface.
For details refer to the User Guide, Data Sheet and Circuit Diagram.

3.2 Ratings and System Details

Basic Information of EUT

Item	EUT Information
Kind of Equipment/Test Item	OEM Wireless Charger 12V 1.8A Input(QL-5289), OEM Wireless Charger 12V 1.0A Input(QL-5290)
Type Identification	QL-5289, QL-5290
FCC ID	2AOU9-QLO

Technical Specification of EUT

Item	EUT Information
Operating Frequency	111kHz – 205kHz
Modulation	FSK
Operation Voltage	12 Vdc
Antenna Type	Coil Antenna

Note:
1. All models are listed as below.

Model Type	Type Identification	Input Current	FW Version	Difference
Main	QL-5289	1.8A	A.1.0	The hardware is the same. The difference is the firmware and the model names are for marketing purpose.
Series	QL-5290	1A	B.1.0	

4 RF EXPOSURE ASSESSMENT

4.1 EUT Operating Condition

Measures taken to maximize magnetic Flux: Power on the EUT and put Load device on it. EUT will start providing wireless power. Power transmission and load status detection is done simultaneously using the fundamental frequency in the range of 105-205 kHz.

4.2 Reference Limits

CFR47 FCC §1.1307(c) and (d), §1.1310
According to §1.1310, the criteria listed in the following table shall be used to evaluate the environment impact of a human exposure to RF radiation.

FCC 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
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34–30	842/f	2.19/f	*($180/f^2$)	30

* = Plane-wave equivalent power density

Measurement is done in a distance of 15 cm. The power transfer is achieved by inductive coupling. Therefore, in the table below only the magnetic field is measured. The electric field component would have to be measured at a distance of more than Lambda/2 and will therefore be far below the limits shown in above table.
.
.

Measurement Uncertainty

Parameter	Uncertainty
Electric Field	± 1.49 dB
Magnetic Field	± 1.49 dB

5 Test Results

5.1 Measurement Results

Maximum E-Field Strength at 15 cm from the Edges Surrounding the EUT:

Position	Max. E-field (V/m)	Limit (V/m)
Left	0.7656	614
Right	1.3751	
Top	1.3797	
Bottom	0.8825	
Front	1.0283	

Maximum H-Field Strength at 15 cm from the edges Surrounding the EUT:

Position	Max. H-field	Limit (A/m)
Left	0.1953	1.63
Right	0.1851	
Top	0.1842	
Bottom	0.1901	
Front	0.3242	

5.2 Photographs of the Test Set-Up

Photograph: Set-Up for E-Field and H-Field Strength

Photo 1: Left Side_15cm	Photo 2: Right Side_15cm

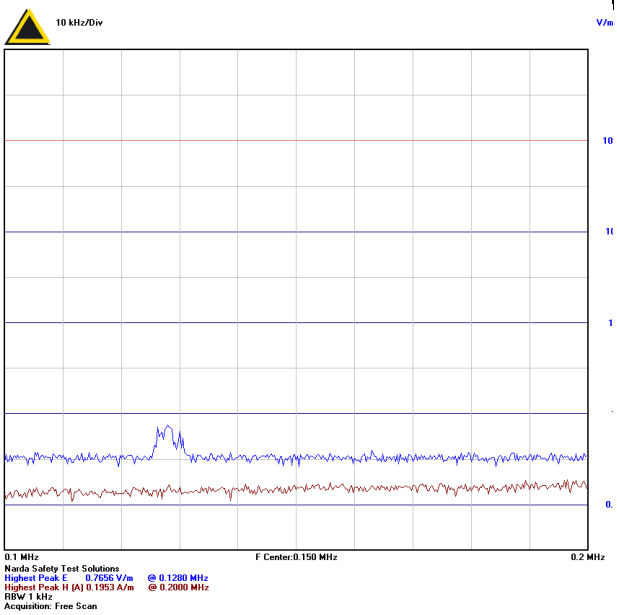
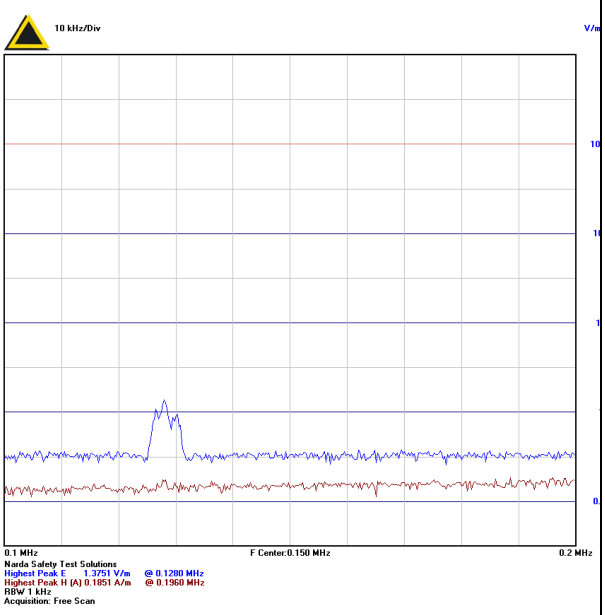

	

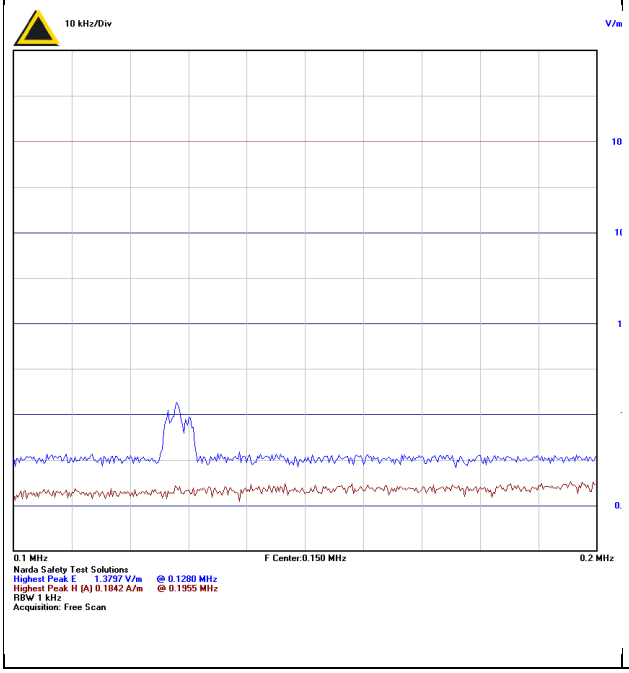
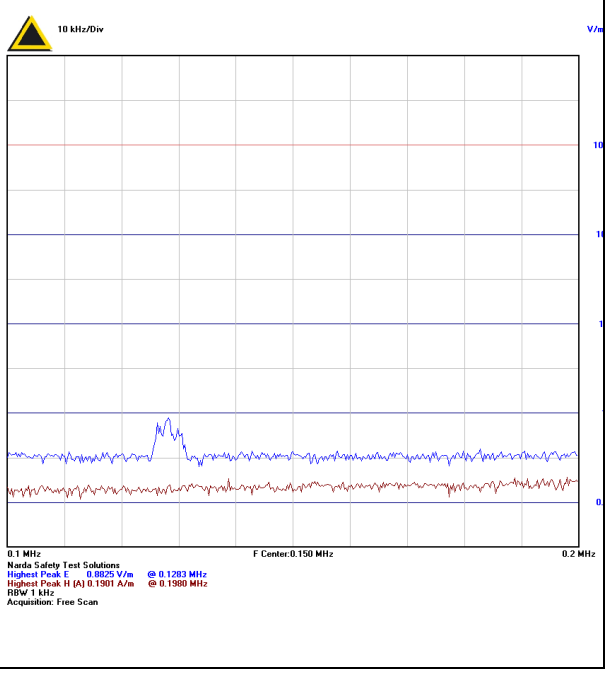
Photo 3: Top Side_15cm	Photo 4: Bottom Side_15cm
	

Photo 5: Front Side_15cm