

Prüfbericht-Nr.: Test report no.:	CN23QD8F 003	Auftrags-Nr.: Order no.:	168425406	Seite 1 von 13 Page 1 of 13
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2023-05-05	
Auftraggeber: Client:	SRP Companies 85 Rio Grande Drive, Second Floor, Castle Rock, CO 80104, USA			
Prüfgegenstand: Test item:	3-in-1 Wireless Charger			
Bezeichnung / Typ-Nr.: Identification / Type no.:	EWL-23125-A-230421 (Trademark:  ,  , )			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	CFR47 FCC Part 2.1091			
Wareneingangsdatum: Date of sample receipt:	2023-05-15	Please refer to Photo Document		
Prüfmuster-Nr.: Test sample no.:	A003475304-002			
Prüfzeitraum: Testing period:	2023-06-15			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	 Jonathan Li		genehmigt von: authorized by:	 Winnie Hou
Datum: Date:	2023-06-20		Ausstellungsdatum: Issue date:	2023-06-20
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	FCC ID: 2ATF5-50638			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

N/A.

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No.362, Huanguan Middle Road, Songyuansha Community, Guanhu Subdistrict, Longhua District, Shenzhen 518110, Guangdong, China

FCC Accreditation Designation No.: CN1260

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

EMF					
Equip. No.	Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
9050046	Electric and Magnetic Field Analyzer	Narda	EHP200A	180ZX20517	28.09.2023

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Magnetic Field Emissions (A/m)	$\pm 1.2 \mu\text{T}$
Electric Field Emissions (V/m)	$\pm 18\%$

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2.6 Location of Original Data

N/A

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No.362, Huanguan Middle Road, Songyuansha Community, Guanhu Subdistrict, Longhua District, Shenzhen 518110, Guangdong, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a 3-in-1 Wireless Charger, which supports wireless charging (WPT) function.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	3-in-1 Wireless Charger
Type Designation:	EWL-23125-A-230421
Trademark:	  
FCC ID:	2ATF5-50638
Operating Voltage:	Type C operated (9Vdc, 3A)
Testing Voltage:	AC 120V, 60Hz
Technical Specification of WPT	
Frequency Range:	Mobile phone output: 115-205KHz Earbuds output: 115-205KHz Watch output: 320KHz
Type of Modulation:	FSK
Antenna Type:	Coil antenna
Antenna number:	3
Wireless output power:	Mobile phone output: 5W/7.5W/10W/15W Earbuds output: 5W Watch output: 2.5W

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Wireless charging
- B. ON, Standby

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

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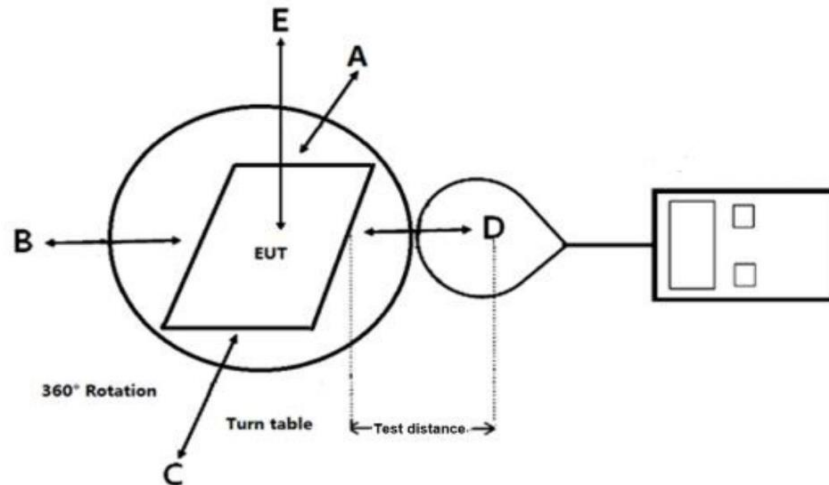
3.5 Submitted Documents

- Application Form

- ID Label and Location Info

3.6 Test Setup Diagram

Diagram of Measurement Configuration



4 RF exposure information

1. Test procedures according to the technical standards:

FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB680106 D01v03	Electric Field Strength (E) (V/m)	PASS	
	Magnetic Field Strength (H) (A/m)	PASS	

2. Limit of Maximum Permissible Exposure

Limit of Maximum Permissible Exposure

Limits 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)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

Limits 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)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1	30

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density

Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

Note 4: The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

3. Test result

For single output:

RF Exposure Evaluation - Electric Field Emissions- Earbuds output (5W)

Test Mode	Test Position	Test Distance (cm)	Measure Value (V/m)	Limit (V/m)	50%Limit (V/m)	Result
Charging mode	Front	15	1.943	614	307	PASS
	Rear	15	1.938	614	307	PASS
	Left	15	1.928	614	307	PASS
	Right	15	1.951	614	307	PASS
	Top	20	1.931	614	307	

RF Exposure Evaluation - Magnetic Field Emissions- Earbuds output (5W)

Test Mode	Test Position	Test Distance (cm)	Measure Value (A/m)	Limit (A/m)	50%Limit (A/m)	Result
Charging mode	Front	15	0.271	1.63	0.815	PASS
	Rear	15	0.237	1.63	0.815	PASS
	Left	15	0.253	1.63	0.815	PASS
	Right	15	0.251	1.63	0.815	PASS
	Top	20	0.235	1.63	0.815	PASS

RF Exposure Evaluation - Electric Field Emissions-Watch output (2.5W)

Test Mode	Test Position	Test Distance (cm)	Measure Value (V/m)	Limit (V/m)	50%Limit (V/m)	Result
Charging mode	Front	15	1.831	614	307	PASS
	Rear	15	1.829	614	307	PASS
	Left	15	1.832	614	307	PASS
	Right	15	1.844	614	307	PASS
	Top	20	1.825	614	307	PASS

RF Exposure Evaluation - Magnetic Field Emissions- Watch output (2.5W)

Test Mode	Test Position	Test Distance (cm)	Measure Value (A/m)	Limit (A/m)	50%Limit (A/m)	Result
Charging mode	Front	15	0.205	1.63	0.815	PASS
	Rear	15	0.196	1.63	0.815	PASS
	Left	15	0.210	1.63	0.815	PASS
	Right	15	0.207	1.63	0.815	PASS
	Top	20	0.217	1.63	0.815	PASS

RF Exposure Evaluation - Electric Field Emissions-Mobile phone output (15W)

Test Mode	Test Position	Test Distance (cm)	Measure Value (V/m)	Limit (V/m)	50%Limit (V/m)	Result
Charging mode	Front	15	2.183	614	307	PASS
	Rear	15	2.189	614	307	PASS
	Left	15	2.176	614	307	PASS
	Right	15	2.201	614	307	PASS
	Top	20	2.185	614	307	PASS

RF Exposure Evaluation - Magnetic Field Emissions- Mobile phone output (15W)

Test Mode	Test Position	Test Distance (cm)	Measure Value (A/m)	Limit (A/m)	50%Limit (A/m)	Result
Charging mode	Front	15	0.313	1.63	0.815	PASS
	Rear	15	0.305	1.63	0.815	PASS
	Left	15	0.321	1.63	0.815	PASS
	Right	15	0.301	1.63	0.815	PASS
	Top	20	0.318	1.63	0.815	PASS

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For multiple output:

RF Exposure Evaluation - Electric Field Emissions- Earbuds + Watch + Mobile phone output

Test Mode	Test Position	Test Distance (cm)	Sum Max Ratio Value	Sum Max Ratio Value (50%)	Limit	Result
Charging mode	Front	15	0.0097	0.0194	1	PASS
	Rear	15	0.0097	0.0194	1	PASS
	Left	15	0.0097	0.0193	1	PASS
	Right	15	0.0098	0.0195	1	PASS
	Top	20	0.0097	0.0193	1	

RF Exposure Evaluation - Magnetic Field Emissions- Earbuds + Watch + Mobile phone output

Test Mode	Test Position	Test Distance (cm)	Sum Max Ratio Value	Sum Max Ratio Value (50%)	Limit	Result
Charging mode	Front	15	0.4840	0.9680	1	PASS
	Rear	15	0.4527	0.9055	1	PASS
	Left	15	0.4809	0.9619	1	PASS
	Right	15	0.4656	0.9312	1	PASS
	Top	20	0.4723	0.9447	1	PASS

5 Photographs of the Test Set-Up

Refer to CN23QD8F 001 Appendix B.

-----END OF REPORT-----