

# RF REPORT FCC ID: 2AAPKXYW1038

On Behalf of

### Shenzhen Kingsun Enterprises Co., Ltd.

5 in 1 Wireless Charging Station with Alarm Clock and Nightlight

Model No.: OD-XYW1038, V90028, V90028-BLK

Prepared for Address	: Shenzhen Kingsun I 25F,CEC information Guangdong, P.R. Ch	Shenzhen Kingsun Enterprises Co., Ltd. 25F,CEC information Building, Xinwen Road, Futian District, Shenzhen, Guangdong, P.R. China					
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	Report Number:Date of Receipt:Date of Test:Date of Report:Version Number:Test Result:	A2310203-C01-R01 November 13, 2023 November 13, 2023 to November 23, 2023 November 23, 2023 V0 <b>Pass</b>					

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Applicant	:	Shenzhen Kingsun Enterprises Co., Ltd.				
Address	:	25F, CEC information Building ,Xinwen Road, Futian District, Shenzhen, Guangdong, P.R. China				
Manufacturer	:	Shenzhen Kingsun Enterprises Co., Ltd.				
Address	:	25F, CEC information Building ,Xinwen Road, Futian District, Shenzhen, Guangdong, P.R. China				
EUT Description : (A)		5 in 1 Wireless Charging Station with Alarm Clock and Nightlight				
		Model No. : OD-XYW1038, V90028, V90028-BLK				
(	(B)	Trademark : N/A				

## TEST REPORT DECLARATION

Measurement Standard Used:

#### FCC CFR Title 47 Part 15 Subpart C Section 15.209

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with above listed standard(s) requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature) .....: :

Yannis Wen Project Engineer

rannis wen

Approved by (name + signature) ......

Reak Yang Project Manager

Date of issue .....: November 23, 2023

# **Revision History**

Revision	Issue Date	Revisions	Revised By
V0	November 23, 2023	Initial released Issue	Yannis Wen

### **1** General Information

### 1.1 Description of Device (EUT)

Product Name	•••	5 in 1 Wireless Charging Station with Alarm Clock and Nightlight
Model Number	:	OD-XYW1038, V90028, V90028-BLK
DIFF	••	There is no difference except the name of the model. All tests are made with the OD-XYW1038 model.
EUT information	•	Type-C Input : DC 5V 2A / 9V 3A(QC3.0 30W) PHONE Wireless Charger Output: 5W/7.5W/10W/15W AirPods Wireless Charger Output: 5W Apple Watch Wireless Charger Output: 3W
Operation Frequency	:	115k-205kHz and 325kHz
Number of Channels	•••	3
Modulation Type	•••	MSK
Antenna Type	•••	Coil Antenna
Antenna Gain	:	0dBi
Hardware Version	:	V1.0
Software Version	:	V1.0

### 1.2 Ancillary equipment Details

Title	Manufacturer	Model No.	Serial No.
Load	YBZ	N/A	N/A
Load	N/A	N/A	N/A
DC POWER	N/A	N/A	N/A

### 1.3 Test Lab information

Shenzhen Alpha Product Testing Co., Ltd Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

June 21, 2018 File on Federal Communication Commission Registration Number: 293961 Designation Number: CN1236

July 15, 2019 Certificated by IC Registration Number: 12135A

# 2 Summary of test

### 2.1 Test Standard description:

The tests were performed according to following standards:

47 CFR Part 15.209: Radiated emission limits; general requirements

### 2.2 Summary of test

Item	Requirement	Method	Result
Conducted Emission at AC power line	47 CFR 15.207(a)	ANSI C63.10-2013 section 6.2	Pass
20dB Occupied Bandwidth	47 CFR 15.215(c)	ANSI C63.10-2013, section 6.9.2	Pass
Emissions in restricted frequency bands (below 30MHz)	47 CFR 15.209	ANSI C63.10-2013 section 6.6.4	Pass
Emissions in restricted frequency bands (30MHz - 1GHz)	47 CFR 15.209	ANSI C63.10-2013 section 6.6.4	Pass

# 2.3 Test Mode Description

No	Title	Description
TM1	ТХ	127k+148k+325k
TM2	ТХ	127k+148k+325k+5V/1A
TM3	TX(For PHONE)	127kHz
TM4	TX(For Airpods)	148kHz
TM5	TX(For Apple Watch)	325kHz
TM6	TX(For PHONE)+ TX(For Apple Watch)	127kHz+325kHz
TM7	TX(For PHONE)+ TX(For Airpods)	127kHz+148kHz

# 2.4 Test Equipment

Equipment	Manufacture	Model No.	Firmware version	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2022.05.17	3Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2023.08.16	1Year
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2023.08.16	1Year
Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03- 102082-Wa	2023.08.16	1Year
Receiver	R&S	ESCI	4.42 SP1	101165	2023.08.16	1Year
Bilog Antenna	Schwarzbeck	VULB 9168	/	VULB 9168#627	2023.08.28	1Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2023.08.19	1Year
Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2023.08.19	1Year
RF Cable	Resenberger	Cable 1	/	RE1	2023.08.16	1Year
RF Cable	Resenberger	Cable 2	/	RE2	2023.08.16	1Year
RF Cable	Resenberger	Cable 3	/	CE1	2023.08.16	1Year
Pre-amplifier	HP	HP8347A	/	2834A00455	2023.08.16	1Year
Pre-amplifier	Agilent	8449B	/	3008A02664	2023.08.16	1Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	/	8126-466	2023.08.16	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2023.08.16	1Year
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2023.08.19	1Year
Preamplifier	SKET	LNPA_1840 -50	/	SK2018101801	2023.08.16	1 Year
Power Meter	Agilent	E9300A	/	MY41496628	2023.08.16	1 Year
Power Sensor	DARE	RPR3006W	/	15100041SNO91	2023.08.16	1 Year
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205-01	2023.07.25	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2023.08.16	1 Year
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A

# 3 Radio Spectrum Matter Test Results (RF)

### 3.1 Conducted Emission at AC power line

Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN).				
Test Limit:	Frequency of emission (MHz)	Conducted limit (dBµV)			
		Quasi-peak	Average		
	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30	60	50		
	*Decreases with the logarithm of the frequency.				
Test Method:	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices				

### 3.1.1 E.U.T. Operation:

Operating Environment:						
Temperature:	22.6 °C		Humidity:	52 %	Atmospheric Pressure:	102 kPa
Pre test mode: All mo		All mod	des			
Final test mode: TM1						

### 3.1.2 Test Setup Diagram:





*:Maximum data	x:0\	/er limit	!:over	margin	

(Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable



\*:Maximum data x:Over limit !:over margin

(Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

3.2 20dB Occupied Bandwidth						
Test Requirement:	Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.					
Test Limit:	Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.					
Test Method:	Occupied bandwidth—relative measurement procedure					
Procedure:	<ul> <li>a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.</li> <li>b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.</li> <li>c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.</li> <li>d) Steps a) through c) might require iteration to adjust within the specified tolerances.</li> <li>e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "-xx dB down" requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.</li> <li>f) Set detection mode to peak and trace mode to max hold.</li> <li>g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).</li> <li>h) Determine the "-xx dB down amplitude" using [(reference value) - xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.</li> <li>i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).</li> <li>j) Place two markers, one at the lowest frequency and the other at the highest frequency of the enve</li></ul>					
	labeled. Tabular data may be reported in addition to the plot(s).					

### 3.2.1 E.U.T. Operation:

Operating Environment:						
Temperature:	: 24.1 °C		Humidity:	55.9 %	Atmospheric Pressure:	101.6 kPa
Pre test mode:		TM1, TM2, TM3, TM4				
Final test mode		TM1, T	M2, TM3			

### 3.2.2 Test Setup Diagram:



### 3.2.3 Test Result: For PHONE

Frequency(kHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
125	3.958		PASS

Test plots as follows:



#### For Airpods

Frequency(kHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
148	3.895		PASS

#### Test plots as follows:



#### For Apple Watch

Frequency(kHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
325	0.251		PASS

#### Test plots as follows:



Test Requirement:	47 CFR 15.209			
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	
	0.009-0.490	2400/F(kHz)	300	
	0.490-1.705	24000/F(kHz)	30	
	1.705-30.0	30	30	
	30-88	100 **	3	
	88-216	150 **	3	
	216-960	200 **	3	
	Above 960	500	3	
	radiators operating under thi 54-72 MHz, 76-88 MHz, 174 these frequency bands is pe §§ 15.231 and 15.241. As shown in § 15.35(b), for f in paragraphs (a)and (b)of th peak field strength of any en average limits specified abor modulation. For point-to-poin peak field strength shall not antenna azimuth	is section shall not be located in the P-216 MHz or 470-806 MHz. Howe ermitted under other sections of the frequencies above 1000 MHz, the his section are based on average nission shall not exceed the maxin ve by more than 20 dB under any nt operation under paragraph (b)o exceed 2500 millivolts/meter at 3	field strength limits limits. However, the num permitted condition of f this section, the meters along the	
Test Method:	Radiated emissions tests			
Procedure:	ANSI C63.10-2013 section 6	5.6.4		

### 3.3 Emissions in restricted frequency bands (below 30MHz)

### 3.3.1 E.U.T. Operation:

Operating Environment:						
Temperature:	ature: 24.1 °C		Humidity:	55.9 %	Atmospheric Pressure:	101.6 kPa
Pre test mode: All mo			des			
Final test mode	:	TM1, T	М3			

#### 3.3.2 Test Result:



Note:1. \*:Maximum data; x:Over limit; !:over margin.



#### TM1/ Polarization: Coplanar

Note:1. \*:Maximum data; x:Over limit; I:over margin.



112.6

109.1

105.6

-80.66

-70.31

-12.72

peak

peak

peak

### Note:1. \*:Maximum data; x:Over limit; !:over margin.

12.00

18.85

73.10

20.00

19.97

19.87

32.00

38.82

92.97

4

5

6

0.0568

0.0854

0.1270



Note:1. \*:Maximum data; x:Over limit; I:over margin.

Test Requirement:	47 CFR 15.209				
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)		
	0.009-0.490	2400/F(kHz)	300		
	0.490-1.705	24000/F(kHz)	30		
	1.705-30.0	30	30		
	30-88	100 **	3		
	88-216	150 **	3		
	216-960	200 **	3		
	Above 960	500	3		
	radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a)and (b)of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b)of this section, the				
Toot Mothody	antenna azimuth.				
Procedure:	ANSI C63.10-2013 section 6	5.6.4			

# 3.4 Emissions in restricted frequency bands (30MHz - 1GHz)

### 3.4.1 E.U.T. Operation:

Operating Environment:						
Temperature:	emperature: 22.6 °C		Humidity:	52 %	Atmospheric Pressure:	102 kPa
Pre test mode: All mo		All mod	des			
Final test mode	:	TM1				

#### 80.0 dBuV/m 70 60 FCC Part 15 Class B Radiation 50 White the second s 40 1.1 WALLAND NH4 30 Mala J 20 10 0.0 500 600 700 30.000 50 70 80 300 1000.000 40 60 (MHz) 400 Reading Correct Measure-Limit Margin Antenna Table No. Mk. Freq. Level Factor ment Height Degree MHz dBuV dB dBuV/m dBuV/m dB Detector cm degree Comment 1 44.9400 20.50 14.09 34.59 40.00 -5.41 QP 2 53.4349 21.22 13.69 34.91 40.00 -5.09 QP 92.4219 28.39 10.28 38.67 43.50 QP 3 -4.83 4 128.9580 26.94 13.49 40.43 43.50 -3.07 QP \* 5 157.8353 25.35 14.99 40.34 43.50 -3.16 QP 228.9917 26.89 12.21 39.10 46.00 -6.90 6 peak

#### 3.4.2 Test Result:

TM1 / Polarization: Horizontal

Note:1. \*:Maximum data; x:Over limit; !:over margin.



Note:1. \*:Maximum data; x:Over limit; I:over margin. 2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

# 4 Test Setup Photos



Conducted Emission at AC power line

Emissions in restricted frequency bands (below 30MHz)





Emissions in restricted frequency bands (30MHz - 1GHz)

# 5 EUT Constructional Details (EUT Photos)







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30-20 zo 10300ao 80 10 60 20 40 30 50 10 500ao 80 10 60 70 30 50 10 100 ao 80 10 60 20 40 30 50 <u>50 ≡</u>





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