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RF Exposure Evaluation Report

Report No.:	CQASZ20230500718E-02
Applicant:	Dongguan Shunlang Electronics Co., Ltd
Address of Applicant:	Floor5, Building2, Shenxiang Industrial Park, Dabandi Cuntou Community, Humen town, Dongguan China

Equipment Under Test (EUT):

EUT Name:	Bluetooth Speaker Alarm Clock with Fm Radio, Wireless Charging Station
Model No.:	W192, AC190BT
Test Model No.:	AC190BT
Brand Name:	ANJANK
FCC ID:	2AVMZ-AC190BT
Standards:	47 CFR Part 1.1307 47 CFR Part 1.1310 447498 D04 Interim General RF Exposure Guidance v01
Date of Receipt:	2023-05-06
Date of Test:	2023-05-06 to 2023-05-16
Date of Issue:	2023-6-2
Test Result:	**PASS***

***In the configuration tested, the EUT complied with the standards specified above**

Tested By: lewis zhou
(Lewis Zhou)

Reviewed By: Timo Lei
(Timo Lei)

Approved By: Jack Ai
(Jack Ai)

Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20230500718E-02	Rev.01	Initial report	2023-6-2

1 Contents

2 General Information

2.1 Client Information

Applicant:	Dongguan Shunlang Electronics Co., Ltd
Address of Applicant:	Floor5, Building2, Shenxiang Industrial Park, Dabandi Cuntou Community, Humen town, Dongguan China
Manufacturer:	Dongguan Shunlang Electronics Co., Ltd
Address of Manufacturer:	Floor5, Building2, Shenxiang Industrial Park, Dabandi Cuntou Community, Humen town, Dongguan China
Factory:	Dongguan Shunlang Electronics Co., Ltd
Address of Factory:	Floor5, Building2, Shenxiang Industrial Park, Dabandi Cuntou Community, Humen town, Dongguan China

2.2 General Description of EUT

Product Name:	Bluetooth Speaker Alarm Clock with Fm Radio, Wireless Charging Station
Model No.:	W192, AC190BT
Test Model No.:	AC190BT
Trade Mark:	ANJANK
Software Version:	V1.0
Hardware Version:	V1.0
EUT Power Supply:	Power supply DC 9V form adaptor
	Model No.:HX18H-0902000-AU Input:100-240V~50/60Hz 0.5A MAX Output:9V 2A 18W

2.3 General Description of BT Classic

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	Bluetooth Spec 5.3
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, π/4DQPSK
Number of Channel:	79
Transfer Rate:	1Mbps/2Mbps
Hopping Channel Type:	Adaptive Frequency Hopping systems
Sample Type:	☒ Mobile ☐ Portable
Antenna Type:	PCB antenna
Antenna Gain:	0dBi

Note：

The above parameters will directly affect the test results. The information is provided by the applicant.

3 MPE Evaluation

3.1 RF Exposure Compliance Requirement

3.1.1 Limits

The table applies to any RF source (i.e., single fixed, mobile, and portable transmitters) and specifies power and distance criteria for each of the five frequency ranges used for the MPE limits. These criteria apply at separation distances from any part of the radiating structure of at least $\lambda/2\pi$. The thresholds are based on the general population MPE limits with a single perfect reflection, outside of the reactive near-field, and in the main beam of the radiator.For mobile devices that are not exempt per Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP20cm inFormula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave Dipole.
SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

3.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3.1.3 EUT RF Exposure

1) For BT Classic

Output Power Into Antenna & RF Exposure Evaluation Distance:

Measurement Data

GFSK mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2402MHz)	-1.86	-4.01	-4.0±1	-3.0	0.50
Middle(2441MHz)	-0.39	-2.54	-2.5±1	-1.5	0.71
Highest(2480MHz)	-1.34	-3.49	-3.5±1	-2.5	0.56
π/4DQPSK mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2402MHz)	-1.42	-3.57	-3.5±1	-2.5	0.56
Middle(2441MHz)	0.15	-2	-2.0±1	-1.0	0.79
Highest(2480MHz)	-0.82	-2.97	-3.0±1	-2.0	0.63

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. CQASZ20230500718E-01 for EUT test Max Conducted Peak Output Power value.
2) EUT's module is more than 20cm away from the human body.

*** END OF REPORT ***