

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20240400594E-02	Rev.01	Initial report	2024-05-10

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3 General Information

3.1 Client Information

Applicant:	ARTISTE TECHNOLOGY LTD.
Address of Applicant:	Room 1601, Building C1, Lingnan V-Valley, No.9, Guanhai Road, Liwan District, Guangzhou, Guangdong, China.
Manufacturer:	ARKON ELECTRONICS (HUIZHOU) CO., LIMITED
Address of Manufacturer:	NO.4 Taihao Road, High-tech Industrial Park, Sandong Town, Huicheng District, Huizhou, Guangdong, China
Factory:	ARKON ELECTRONICS (HUIZHOU) CO., LIMITED
Address of Factory:	NO.4 Taihao Road, High-tech Industrial Park, Sandong Town, Huicheng District, Huizhou, Guangdong, China

3.2 General Description of EUT

Product Name:	Digital Wireless Headphone System
Model No.:	DH900J, DH900, APH100, DH901, DH901J
Test Model No.:	DH901J
Trade Mark:	ARTISTE, ARKON
Software Version:	V1.0
Hardware Version:	V1.0
EUT Power Supply:	Power by adaptor DC5V -0.55A for Transmitter The adaptor input: AC100-240V 50/60Hz 0.5A Max. The adaptor output: DC5.0V 0.55A 2.75W

3.3 General Description of 2.4G custom

Operation Frequency:	2402MHz~2480MHz
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Sample Type:	<input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable
Antenna Type:	PIFA Antenna
Antenna Gain:	-2.2dBi
Cable loss:	1.0 dB

Note:

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

4 MPE Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 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 ERP_{20cm} in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

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

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.

4.1.2 Test Procedure

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

4.1.3 EUT RF Exposure

1) For 2.4G CUSTOM

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)	-1.44	-3.59	-3.5±1	-2.5	0.56
Middle(2441MHz)	-2.13	-4.28	-4.5±1	-3.5	0.45
Highest(2480MHz)	-2.06	-4.21	-4.5±1	-3.5	0.45

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. CQASZ20240400594E-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 ***