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RF Exposure Evaluation Report

Report No.: CQASZ20220500738E-02
Applicant: GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Applicant: Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Equipment Under Test (EUT):
EUT Name: ONN. MEDIUM RUGGED SPEAKER
Test Model No.: AALAV100081916, AAGRY100081916
Model No.: AAGRY100081916
Brand Name: ONN.
FCC ID: 2AO5X-BM2021
Standards: 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2022-05-05
Date of Test: 2022-05-05 to 2022-05-17
Date of Issue: 2022-05-19
Test Result: **PASS***

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

Tested By: Lewis Zhou

(Lewis Zhou)

Reviewed By: Rock Huang

(Rock Huang)

Approved By: Jack Ai

(Jack Ai)



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20220500738E-02	Rev.01	Initial report	2022-05-19

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3 General Information

3.1 Client Information

Applicant:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Applicant:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Manufacturer:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Manufacturer:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Factory 1:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Factory 1:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Factory 2:	DEHUIDA VIET NAM TECHNOLOGY COMPANY LIMITED
Address of Factory 2:	Factory No.1, Lot 13 Noi Hoang industrial cluster (Rent factory of Viet Australia Steel Joint Stock Company), Noi Hoang Commune, Yen Dung District, Bac Giang Province, Vietnam

3.2 General Description of EUT

Product Name:	ONN. MEDIUM RUGGED SPEAKER
Model No.:	AALAV100081916, AAGRY100081916
Test Model No	AAGRY100081916
Trade Mark:	ONN.
EUT Supports Radios application:	Bluetooth mode 2402-2480MHz
Software Version:	V1.3
Hardware Version:	V2.0
Sample Type:	☐ Mobile ☒ Portable ☐ Fix Location
EUT Power Supply:	Li-ion battery: DC 3.7V 2600mAh, Charge by DC 5V for adapter

3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.3
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel:	79
Transfer Rate:	1Mbps/2Mbps/3Mbps
Test Software of EUT:	PCB antenna
Antenna Type:	0 dBi
Antenna Gain:	Li-ion battery: DC 3.7V 2600mAh, Charge by DC 5V for adapter

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

4.1.2 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.3 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.4 EUT RF Exposure

Measurement Data

The maximum output power is in the test results of 2DH5.

Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	7.68	7.5±0.5	8.0	6.310	1.956	3.0
Middle (2441MHz)	8.68	8.5±0.5	9.0	7.943	2.482	
Highest (2480MHz)	9.25	9.0±0.5	9.5	8.913	2.807	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20220500738E-01.

*** END OF REPORT ***