

MPE EVALUATION REPORT

Product Name: onn Pro X-Large Boombox
Trade Mark: onn
Model No.: 100151005
Report Number: 25040317102RFC-3
Test Standards: FCC 47 CFR Part 1 Subpart I
FCC ID: 2AO5X-BM3601
Test Result: PASS
Date of Issue: June 13, 2025

Prepared for:

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UTTR-RF-FCCPART1-V1.1

Version

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1. GENERAL INFORMATION

1.1 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

1.2 EUT INFORMATION

Product Name:	onn Pro X-Large Boombox
Model No.:	100151005
Trade Mark:	onn
DUT Stage:	Identical Prototype
Sample Received Date:	April 2, 2025
Remark: The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.	

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

For Bluetooth	
Frequency Band:	2400 MHz to 2483.5 MHz
Frequency Range:	2402 MHz to 2480 MHz
Bluetooth Mode:	BR + EDR + LE+ 2LE
Type of Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channels:	79 / 40
Channel Separation:	1MHz / 2 MHz
Antenna Type: (Provided by the customer)	PCB Antenna
Antenna Gain: (Provided by the customer)	-0.35 dBi

1.4 OTHER INFORMATION

None.

1.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

FCC 47 CFR Part 1 Subpart I

All test items have been performed and recorded as per the above standards

1.6 DEVIATION FROM STANDARDS

None.

1.7 ABNORMALITIES FROM STANDARD CONDITIONS

None.

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1.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

2. EQUIPMENT LIST

Please refer to the RF test report.



3. MPE EVALUATION

3.1 REFERENCE DOCUMENTS FOR EVALUATION

No.	Identity	Document Title
1	FCC 47 CFR Part 1 Subpart I	PROCEDURES IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969
2	KDB 447498 D04 Interim General RF Exposure Guidance v01	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices

3.2 MPE COMPLIANCE REQUIREMENT

3.2.1 Limits

According to KDB 447498 D04, SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)									
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

3.2.2 Test Procedure

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

3.3 MPE CALCULATION RESULTS

Operating Mode	Freq.	Declared maximum conducted Average output power	Max. positive tolerance according manufacturer	Max. Antenna Gain	Calculated maximum EIRP	Declared maximum EIRP	Applicable Separation distance	Example Power Threshold	Result
	(MHz)	(dBm)		(dBi)	(dBm)	(mW)	(cm)	(mW)	
Bluetooth BR+EDR	2402-2480	8.0	1	-0.35	8.65	7.3282	20	38	PASS
Bluetooth LE	2402-2480	8.0	1	-0.35	8.65	7.3282	20	38	PASS

3.4 SIMULTANEOUS MULTI-BAND TRANSMISSION MPE ANALYSIS

Not Applicable

APPENDIX 1 PHOTOS OF TEST SETUP

N/A

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal Photos.

*** End of Report ***

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