

EMF TEST REPORT

Test Report No. : OT-24O-RWD-028

Reception No. : 2408002643

Applicant : NTT Sonority Inc.

Address : 3-20-2, Nishishinjuku, Shinjuku-ku, Tokyo, 163-1432, Japan

Manufacturer : KH Electron Phils. Corp.

Address : 5416 Claro M. Recto Highway, Clark Freeport Zone, Pampanga, Philippine

Type of Equipment : wireless on-ear speakers

FCC ID. : 2A58O-MBN002

Model Name : MBN002

Multiple Model Name : N/A

Serial number : N/A

Total page of Report : 8 pages (including this page)

Date of Incoming : August 20, 2024

Date of issue : October 15, 2024

SUMMARY

The equipment complies with the regulation; **FCC CFR 47 PART 2.1093**

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.



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Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-24O-RWD-028	October 15, 2024	Initial Release	All

1. VERIFICATION OF COMPLIANCE

Applicant : NTT Sonority Inc.

Address : 3-20-2, Nishishinjuku, Shinjuku-ku, Tokyo, 163-1432, Japan

Contact Person : Akira Nakagawa / General Manager

Telephone No. : +81-80-8231-5126

FCC ID : 2A58O-MBN002

Model Name : MBN002

Brand Name : N/A

Serial Number : N/A

Date : October 15, 2024

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	wireless on-ear speakers
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	KDB 447498 D01 General RF Exposure Guidance v06
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
Modifications on the Equipment to Achieve Compliance	None

- . The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The NTT Sonority Inc., Model MBN002 (referred to as the EUT in this report) is a wireless on-ear speakers. The product specification described herein was obtained from product data sheet or user's manual.

Device Type	wireless on-ear speakers		
Temperature Range	0 °C ~ 45 °C		
OPERATING FREQUENCY	Bluetooth LE	2 402 MHz ~ 2 480 MHz	
	Bluetooth	2 402 MHz ~ 2 480 MHz	
MODULATION TYPE	Bluetooth LE	GFSK for 1 Mbps, 2 Mbps	
	Bluetooth	GFSK for 1Mbps, $\pi/4$ -DQPSK for 2Mbps, 8-DPSK for 3Mbps	
RF OUTPUT POWER	Bluetooth LE	1 Mbps	4.19 dBm
		2 Mbps	4.69 dBm
	Bluetooth	1 Mbps	4.41 dBm
		2 Mbps	7.37 dBm
		3 Mbps	7.89 dBm
ANTENNA TYPE	Chip Antenna		
ANTENNA GAIN	1.77 dBi		
List of each Osc. or crystal Freq.(Freq. $\geq$ 1 MHz)	40 MHz		

2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

3. EUT MODIFICATIONS

-. None

4. MAXIMUM PERMISSIBLE EXPOSURE

4.1 RF Exposure Calculation

According to the FCC rule §4.3. General SAR test exclusion guidance, the limit for 1-g and 10-g SAR test exclusion thresholds are ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR by the device operating 100 MHz to 6 GHz and test separation distances ≤ 50 mm

4.2 EUT Description

Kind of EUT	wireless on-ear speakers
Device Category	☒ Portable (< 20 cm separation) ☐ Mobile (> 20 cm separation) ☐ Others
Exposure Evaluation Applied	☐ MPE ☒ SAR Exclusion ☐ N/A

4.3 Test Result

4.3.1 Test data for Bluetooth_1 Mbps

Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
2 480	4.41	5.41	3.48	5	1.09

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3.0=$$

$$[(3.48/5)] \times \sqrt{2.480} = 1.09$$

4.3.2 Test data for Bluetooth_2 Mbps

Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
2 480	7.37	8.37	6.87	5	2.16

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3.0=$$

$$[(6.87/5)] \times \sqrt{2.480} = 2.16$$

4.3.3 Test data for Bluetooth_3 Mbps

Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
2 480	7.89	8.89	7.74	5	2.44

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3.0=$$

$$[(7.74/5)] \times \sqrt{2.480} = 2.44$$

4.3.4 Test data for Bluetooth LE_1 Mbps

Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
2 480	4.19	5.19	3.30	5	1.04

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3.0 = [(3.30/5)] \times \sqrt{2.480} = 1.04$$

4.3.5 Test data for Bluetooth LE_2 Mbps

Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
2 480	4.69	5.69	3.71	5	1.17

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3.0 = [(3.71/5)] \times \sqrt{2.480} = 1.17$$