TEST REPORT

Product Name : Bluetooth speaker
Model Number : 24462, SP66, IT201, 122413
FCC ID : 2BCGV0007

Prepared for	:	NINGBO CSTAR IMPRINT E-COMMERCE CO.,LTD
Address	:	B46, BUILDING B, INDUSTRIAL BLOCK, QIAOTOUHU STREET, NINGHAI COUNTY, NINGBO CITY, ZHEJIANG PROVINCE
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1. TEST RESULT CERTIFICATION

Applicant	:	NINGBO CSTAR IMPRINT E-COMMERCE CO.,LTD
Address	:	B46, BUILDING B, INDUSTRIAL BLOCK, QIAOTOUHU STREET, NINGHAI COUNTY, NINGBO CITY, ZHEJIANG PROVINCE
Manufacturer	:	NINGBO CSTAR IMPRINT E-COMMERCE CO.,LTD
Address	:	B46, BUILDING B, INDUSTRIAL BLOCK, QIAOTOUHU STREET, NINGHAI COUNTY, NINGBO CITY, ZHEJIANG PROVINCE
EUT	:	Bluetooth speaker
Model Name	:	24462, SP66, IT201, 122413
Trademark	:	N/A

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
§ 15.247(i), § 2.1093	**PASS**

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : Mar 25, 2024 to Apr 09, 2024

Prepared by : Warren Deng /Editor

Reviewer : Tim Dong /Supervisor

Approve & Authorized Signer : Sam Lv /Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2403250201E00102R	/	Original Report

2. EUT Specification

Characteristics	Description
Product:	Bluetooth speaker
Model Number:	24462, SP66, IT201, 122413 These models are the same except the model name and appearance, Here select 24462 for test.
Sample:	1#
Data Rate:	1Mbps for GFSK modulation 2Mbps for π/4-DQPSK modulation 3Mbps for 8DPSK modulation
Modulation:	GFSK, π/4-DQPSK, 8DPSK
Operating Frequency Range(s) :	2402-2480MHz
Number of Channels:	79 channels for BT
Transmit Power Max:	1.28 dBm(0.001343 W)
Antenna Gain:	-0.58 dBi
Power supply:	DC5V from USB DC 3.7V from battery
Evaluation applied:	☐ MPE Evaluation ☒ SAR Evaluation

3. Test Requirement

RF EXPOSURE EVALUATION

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[24] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[25]
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

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 according to 5) in section 4.1 is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to quality for TCB approval.
One antenna is available for the EUT. The minimum separation distance is 5mm.

4. Measurement Result

Antenna gain:-0.58 dBi
When a single module works, the measurement results are as follows:

Transmit Frequency (MHz)	Mode	Measured Power (dBm)	Tune upPower (dBm)	Max tune up power (dBm)	Calculation Result	1-g SAR
2402	GFSK	0.00	0±1	1	0.3902	3
2441	GFSK	0.07	0±1	1	0.3933	3
2480	GFSK	0.36	0±1	1	0.3965	3
2402	Π/4-DQPSK	0.67	0±1	1	0.3902	3
2441	Π/4-DQPSK	0.72	0±1	1	0.3933	3
2480	Π/4-DQPSK	1.03	1±1	2	0.4992	3
2402	8DPSK	0.98	1±1	2	0.4913	3
2441	8DPSK	1.06	1±1	2	0.4952	3
2480	8DPSK	1.28	1±1	2	0.4992	3

According to KDB 447498, no stand-alone required for BT & BLE antenna, and no simultaneous SAR measurement is required.

*** End of Report ***