

TEST REPORT

Product Name : Bluetooth Sing-Along Microphone
Model Number : TR-B12, M1 – B12 M2M3M4M5M6M7M8M9M10
(M1 – M10, please refer to model no. table)
FCC ID : EMOB12A

Prepared for : SDI Technologies Inc.
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1. TEST RESULT CERTIFICATION

Applicant : SDI Technologies Inc.
Address : 1299, Main Street, Rahway, NJ 07065, U.S.A.
Manufacturer : eKids, LLC. / KIDDESIGNS INC.
Address : 1299, Main Street, Rahway, NJ 07065, U.S.A.
Factory : Dongguan Richbo Plastic Manufacturing Limited
Address : Building 2, No. 2 Lan-Gi Yuan Road, Xie-Gang Town, Dongguan, Guangdong, China
EUT : Bluetooth Sing-Along Microphone
Model Name : TR-B12, M1-B12 M2M3M4M5M6M7M8M9M10 (M1-M10, please refer to model no. table)
Trademark : eKids

Measurement Procedure Used:

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

The above equipment was tested by EMTEK(SHENZHEN) 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 : May 29, 2023 to July 31, 2023

Prepared by : 
Una Yu /Editor

Reviewer : 
Joe Xia/Supervisor

Approve & Authorized Signer : 
Lisa Wang/Manager



Modified History

Version	Report No.	Revision Date	Summary
V1.0	ENS2305290220W00402R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	Bluetooth Sing-Along Microphone
Model Number:	TR-B12, M1-B12 M2M3M4M5M6M7M8M9M10 (M1-M10, please refer to model no. table) All products are the same, only the model number and color of appearance are different Here we selected TR-B12.EMv23M for all the test
Sample:	2#
Device Type:	Bluetooth V5.1
Data Rate:	1Mbps for GFSK modulation 2Mbps for $\pi/4$ -DQPSK modulation 3Mbps for 8DPSK modulation
Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Operating Frequency Range(s) :	2402-2480MHz
Number of Channels:	-8.15 dBm(0.000153 W)
Transmit Power Max:	Wire Antenna
Antenna Gain:	0.58 dBi
Power supply:	DC 4.5V from battery
Evaluation applied:	☐ MPE Evaluation ☒ SAR Evaluation

Model: M_1 – B12 $M_2M_3M_4M_5M_6M_7M_8M_9M_{10}$ ($M_1 - M_{10}$, please refer to model no. table)

Model no. table

Part of model #	M_1	M_2	M_3	M_4	M_5	M_6	M_7	M_8	M_9	M_{10}
Number of digit(s)	2 to 3	2	1	1	1 to 2	1	1 to 3	1 to 4	2	1
Description	2 to 3 digits alphabets combination by "a" – "z" for brand	1 to 2 digits alphabets combination by "a" – "z" special character version Or blank	"." Or blank	"U" for Europe version Or blank	"E" for English content Or "F" for English & French Or "3" for 3 language version Or "5" for 5 languages version Or "11" for Europe version with 11 languages	"X" for having no sound effect Or "E" for having speech or sound effect Or "M" for having Music effect	"0"–"9" for year version Or "V0" – "V99" for year version	"M" for Movie version brand Or blank	"AK" for Walmart exclusive Or "AP" for Apple exclusive Or "KS" for Kohl's exclusive Or "TG" for Target exclusive blank	"I" for inner carton required Or "z" for direct to consumer on-line packaging Or "OL" for Amazon packaging Or blank

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:

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

- $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²⁵
- 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 qualify 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:

BT

Transmit Frequency (MHz)	Mode	Measured Power (dBm)	E.I.R.P (dBm)	Tune up Power (dBm)	Max tune up power (dBm)	Calculation Result	1-g SAR
2402	GFSK	-9.33	-8.75	-9±1	-8	0.0491266	3
2441	GFSK	-9.15	-8.57	-9±1	-8	0.0495238	3
2480	GFSK	-9.32	-8.74	-9±1	-8	0.0499178	3
2402	Π/4-DQPSK	-8.54	-7.96	-8±1	-7	0.0618467	3
2441	Π/4-DQPSK	-8.59	-8.01	-9±1	-8	0.0495238	3
2480	Π/4-DQPSK	-8.80	-8.22	-9±1	-8	0.0499178	3
2402	8DPSK	-8.15	-7.57	-8±1	-7	0.0618467	3
2441	8DPSK	-8.28	-7.70	-8±1	-7	0.0623468	3
2480	8DPSK	-8.47	-7.89	-8±1	-7	0.0628428	3

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

*** End of Report ***