

TEST REPORT

Product Name : Bluetooth Karaoke
Model Number : FR-555, M1 - 555 M2M3M4M5M6M7M8M9M10
(M1 - M10, please refer to model no. table)
FCC ID : EMO555A

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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 : Guangzhou Phimax Electronic Technology Co.,Ltd
 Address : ROOM 2806, Qiaolin Street 43, TIANHE DISTRICT, GUANGZHOU , CHINA
 EUT : Bluetooth Karaoke
 Model Name : FR-555, M1-555 M2M3M4M5M6M7M8M9M10 (M1-M10, please refer to model no. table)
 Trademark : eKids / iHome

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 : October 12, 2022 to November 15, 2022

Prepared by : 

Xia Yang /Editor

Reviewer : 

Tim Dong/ Supervisor

Approve & Authorized Signer :  

Sam Lv / Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2210120188E00402R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	Bluetooth Karaoke
Model Number:	FR-555, M1-555 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 FR-555.EEv23 for all the test
Sample:	1#
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:	79 channels
Transmit Power Max:	2.14 dBm(0.001637W)
Antenna Gain:	-0.58 dBi
Power supply:	DC 5V from USB, DC 3.7V from battery
Evaluation applied:	<input type="checkbox"/> MPE Evaluation <input checked="" type="checkbox"/> SAR Evaluation

Model: $M_1 - 555 M_2 M_3 M_4 M_5 M_6 M_7 M_8 M_9 M_{10}$ ($M_1 - M_{10}$, 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 <i>Or</i> <i>blank</i>	"." <i>Or</i> <i>blank</i>	"U" for Europe version <i>Or</i> <i>blank</i>	"E" for English content <i>Or</i> "F" for English & French <i>Or</i> "3" for 3 language version <i>Or</i> "5" for 5 languages version <i>Or</i> "11" for Europe version with 11 languages	"X" for no sound chip <i>Or</i> "E" for Sound chip with speech or sound effect <i>Or</i> "M" for sound chip with Music	"0" - "9" for year version <i>Or</i> "V0" - "V99" for year version	"M" for Movie version brand <i>Or</i> <i>blank</i>	"AK" for Walmart exclusive <i>Or</i> "AP" for Apple exclusive <i>Or</i> "KS" for Kohl's exclusive <i>Or</i> "TG" for Target exclusive <i>blank</i>	"I" for inner carton required <i>Or</i> "Z" for direct to consumer on-line packaging <i>Or</i> "OL" for Amazon packaging <i>Or</i> <i>blank</i>

3. Test Requirement

SAR 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

Transmit Frequency(MHz)	Mode	Measured Power (dBm)	Tune upPower (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
2402	GFSK	0.93	0±1	1	0.3902263	3
2441	GFSK	1.00	1±1	2	0.4952379	3
2480	GFSK	0.84	0±1	1	0.3965115	3
2402	Π/4-DQPSK	1.67	1±1	2	0.4912658	3
2441	Π/4-DQPSK	1.75	1±1	2	0.4952379	3
2480	Π/4-DQPSK	1.49	1±1	2	0.4991785	3
2402	8DPSK	2.03	2±1	3	0.6184670	3
2441	8DPSK	2.14	2±1	3	0.6234676	3
2480	8DPSK	1.99	1±1	2	0.4991785	3

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

*** End of Report ***