FCC RADIO TEST REPORT

Applicant	:	SUNYEER TECHNOLOGY CO., LTD.
Address	:	No.1 Wenming 3rd St.,Guishan Dist., Taoyuan City,33383,Taiwan
Equipment	:	LIGHTSONG Portable Lighting with Bluetooth Speaker
Model No.	:	ML-05G, ML-05F, ML-05G-XX (XX= 0~9, A~Z or any character)
Trade Name	:	JMLED
FCC ID.	:	2AY6DML-05G-01

I HEREBY CERTIFY THAT :

The sample was received on Feb. 05, 2021 and the testing was completed on Feb. 22, 2021 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory

CONTENTS

History of this test report

Report No.	Issue Date	Description
21020052-TRFCC01	Feb. 22, 2021	Original

1. Summary of Test Procedure and Test Results

1.1 Applicable Standards

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart C §15.247

FCC Rule	. Description of Test	Result
15.203	. Antenna Requirement	PASS

*The lab has reduced the uncertainty risk factor from test equipment, environment and staff technicians which according to the standard on contract. Therefore, the test result will only be determined by standard requirement.

*The power table can refer to report number: BTL-FCCP-1-2012T129A.

2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Modulation Type	GFSK
Data Rate	GFSK: 1Mbps
Frequency Range	2402-2480MHz
Modulation Technology	DTS
Antenna Type	PCB Antenna
Antenna Gain	1.9dBi

Note: For more details, please refer to the User's manual of the EUT.

Difference description:

Model No.	Remark
ML-05G	Difference in exterior only.
ML-05F	
ML-05G-XX (XX= 0~9, A~Z or any character)	

2.2 Carrier Frequency of Channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	19	2440	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454	--	--
13	2428	27	2456	--	--

2.3 Test Mode and Test Software

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.10.
b. The complete test system included Notebook and EUT for RF test.
c. An executive program, ”BT_Tool ver.1.09” under Windows OS system was executed to transmit and receive data via Bluetooth.
d. The following test modes were performed for the test:

Test Mode	Operating Description
1	GFSK (1Mbps)

Modulation Type	TX CONFIGURATION
GFSK	1TX

3. Antenna Requirements

3.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

3.2 Antenna Construction and Directional Gain

Antenna Type	PCB Antenna
Antenna Gain	1.9 dBi

4. Radio Frequency Exposure

4.1 Applicable Standards

The measurements shown in this test report were made in accordance with the procedures given in FCC Part 2 (Section 2.1093)

LIMIT

KDB 447498 D01 § 4.3(a)
For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

*f(GHz) is the RF channel transmit frequency in GHz
* Power and distance are rounded to the nearest mW and mm before calculation
*The result is rounded to one decimal place for comparison
*The values 3.0 and 7.5 are referred to as numeric thresholds in step b) 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 4.1 f) is applied to determine SAR test exclusion

4.2 EUT Specification

Frequency band (Operating)	☐ WLAN: 2412MHz ~ 2462MHz ☒ Bluetooth: 2402MHz ~ 2480MHz
Device category	☒ Portable (<20cm separation) ☐ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure ☒ General Population/Uncontrolled exposure
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Evaluation applied	☐ MPE Evaluation* ☒ SAR Evaluation ☐ N/A
Remark: *1. The maximum output power is 3.12 dBm at 2402MHz (with 1.9 dBi antenna gain.)* *2. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.* *3. For mobile or fixed location transmitters, no SAR consideration applied.*	

4.3 Test Results

According to the KDB447498:

The SAR test exclusion thresholds Level:

[(max. power of channel, including tune-up tolerance, mW) /(min. test separation distance, mm)] * sqrt (freq. in GHz) < 3

Calculation

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Max. Tune up power (mW)	Distance (mm)	SAR test exclusion thresholds (mW)
2402-2480	3.12	5.12	3.25	5	10.00

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing

----------THE END OF REPORT----------