

RF Exposure Evaluation Report

Report Reference No......: **MTEB23100221-H**

FCC ID.....: **2A438-U8**

Compiled by

(position+printed name+signature)..: File administrators Alisa Luo



Supervised by

(position+printed name+signature)..: Test Engineer Sunny Deng



Approved by

(position+printed name+signature)..: Manager Yvette Zhou



Date of issue.....: Oct.26,2023

Representative Laboratory Name .: **Shenzhen Most Technology Service Co., Ltd.**

Address: No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,
Nanshan, Shenzhen, Guangdong, China.

Applicant's name.....: **Shenzhen Lineng Technology Co., Ltd**

Address: 601/6th floor, NO.B Dawei Business Shikong Building, West
Jianshe Road, Minzhi Street, Longhua District,
Shenzhen City, China.

Test specification/ Standard: **47 CFR Part 1.1307**

47 CFR Part 2.1091

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

Shenzhen Most Technology Service Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Most Technology Service Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Most Technology Service Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description: COB Photographic Video Light

Trade Mark: LituFoto

Manufacturer: Shenzhen Lineng Technology Co., Ltd

Model/Type reference.....: U8

Listed Models: U8r,KSLC10,LD-C60

Modulation Type: GFSK

Operation Frequency.....: From 2402MHz to 2480MHz

Hardware Version.....: V1.0

Software Version: V1.0

Rating: DC 12V-24V

Result.....: PASS

TEST REPORT

Equipment under Test : COB Photographic Video Light

Model /Type : U8

Listed Models U8r,KSLC10,LD-C60

Remark Different packaging only.

Applicant : **Shenzhen Lineng Technology Co., Ltd**

Address : 601/6th floor, NO.B Dawei Business Shikong Building, West Jianshe Road, Minzhi Street,Longhua District, Shenzhen City,China.

Manufacturer : **Shenzhen Lineng Technology Co., Ltd**

Address : 601/6th floor, NO.B Dawei Business Shikong Building, West Jianshe Road, Minzhi Street,Longhua District, Shenzhen City,China.

Test Result:	PASS
---------------------	-------------

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2023.10.26	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to §1.1307(e)(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.

According to §1.1310 and §2.1091 RF exposure is calculated.

KDB447498 D01: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

2.1.2 Limits

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

F= Frequency in

MHz Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where P_d = power density in mW/cm²

P_{out} = output power to antenna in

mW G = gain of antenna in linear

scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

Measurement Data

BLE

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	0.495	0.495 ± 1	1.495
Middle(2441MHz)	1.140	1.140 ± 1	2.140
Highest(2480MHz)	0.287	0.287 ± 1	1.287

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Highest(2441 MHz)	1.140	1.3	5	0.00082	1.0	Pass

Note: 1) Refer to report **MTEB23100221-R** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (1.3 * 3.16) / (4 * 3.1416 * 20^2) = 0.00082$

Note: 3) EUT's Bluetooth module is more than 20cm away from the human body.

.....THE END OF REPORT.....