

RF Exposure Evaluation Report

Report Reference No...... : **MTEB26040213-H**

FCC ID..... : **2BVLD-C201T**

Compiled by

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

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Applicant's name.....: **Xiamen Lanxu Intelligent Technology Co., Ltd.**

Address.....: Room 101, No. 65 Hongxi South Road, Torch(Xiang'an) Industrial
Zone. Xiamen, Fujian, China

Test specification/ Standard.....: **47 CFR Part 1.1307;47 CFR Part 1.1310**
KDB447498D01 General RF Exposure Guidance v06

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

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Test item description.....: Automatic Cleaning Robot

Trade Mark.....: N/A

Model/Type reference.....: SLW-C201T

Listed Models: SLW-XXXXX,LIT-C-T4M-P1-N,LIT-X-XXX-XX-X

Modulation Type.....: b: DSSS, g/n: OFDM
GFSK, $\pi/4$ DQPSK, 8DPSK

Operation Frequency.....: From 2412MHz~2462MHz
From 2402MHz to 2480MHz
From 920.3 – 924.8 MHz

Hardware Version.....: V2.0

Software Version.....: V1.33

Rating.....: DC 24V

Result.....: **PASS**

TEST REPORT

Equipment under Test : Automatic Cleaning Robot

Model /Type : SLW-C201T

Listed Models : SLW-XXXXX,LIT-C-T4M-P1-N,LIT-X-XXX-XX-X

Remark : The differences among them are as follows: the series models only vary in model designation and color; all other specifications are identical.

Applicant : Xiamen Lanxu Intelligent Technology Co., Ltd.

Address : Room 101, No. 65 Hongxi South Road, Torch(Xiang'an) Industrial Zone. Xiamen, Fujian, China

Manufacturer : Xiamen Lanxu Intelligent Technology Co., Ltd.

Address : Room 101, No. 65 Hongxi South Road, Torch(Xiang'an) Industrial Zone. Xiamen, Fujian, China

Test Result:	PASS
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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	2026.04.22	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

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: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$ 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**BLE**

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402 MHz)	6.65	6.65 ± 1	7.65
Middle(2440MHz)	5.98	5.98 ± 1	6.98
Highest(2480MHz)	5.67	5.67 ± 1	6.67

BLE

Worst case: GFSK						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Lowest(2402 MHz)	7.65	5.82	3.42	0.0025	1.0	Pass

Note: 1) Refer to report MTEB26040213-R2 for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (5.82 \cdot 2.20) / (4 \cdot 3.1416 \cdot 20^2) = 0.0025$

WIFI 2.4G

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	25.4627	25.4627 ± 1	26.4627
Middle(2437MHz)	25.2632	25.2632 ± 1	26.2632
Highest(2462MHz)	24.7927	24.7927 ± 1	25.7927

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	28.0882	28.0882 ± 1	29.0882
Middle(2437MHz)	27.9410	27.9410 ± 1	28.9410
Highest(2462MHz)	26.7358	26.7358 ± 1	27.7358

802.11n(H20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	26.3314	26.3314 ± 1	27.3314
Middle(2437MHz)	27.3190	27.3190 ± 1	28.3190
Highest(2462MHz)	24.6990	24.6990 ± 1	25.6990

802.11n(H40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2422MHz)	27.0242	27.0242 ± 1	28.0242
Middle(2437MHz)	28.9301	28.9301 ± 1	29.9301
Highest(2452MHz)	28.5741	28.5741 ± 1	29.5741

WIFI 2.4G

Worst case: 802.11n(H40)						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Middle(2437MHz)	29.9301	984.03	3.42	0.4307	1.0	Pass

Note: 1) Refer to report MTEB26040213-R1 for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (984.03 \cdot 2.20) / (4 \cdot 3.1416 \cdot 20^2) = 0.4307$

BT classic

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	7.53	7.53 ± 1	8.53
Middle(2441MHz)	8.87	8.87 ± 1	9.87
Highest(2480MHz)	9.48	9.48 ± 1	10.48

π /4DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	6.88	6.88 ± 1	7.88
Middle(2441MHz)	8.24	8.24 ± 1	9.24
Highest(2480MHz)	9.01	9.01 ± 1	10.01

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	6.88	6.88 ± 1	7.88
Middle(2441MHz)	8.16	8.16 ± 1	9.16
Highest(2480MHz)	8.92	8.92 ± 1	9.92

Worst case: GFSK						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Middle(2441MHz)	10.48	11.17	3.42	0.0049	1.0	Pass

Note: 1) Refer to report MTEB26040213-R3 for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (11.17 \cdot 2.20) / (4 \cdot 3.1416 \cdot 20^2) = 0.0049$

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

920.3-924.8 MHz

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(920.3 MHz)	6.225	6.225 ± 1	7.225
Middle(922.8MHz)	6.239	6.239 ± 1	7.239
Highest(924.8MHz)	6.251	6.251 ± 1	7.251

920.3-924.8 MHz

Worst case: GFSK						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Highest(924.8MHz)	7.251	5.31	8.69	0.0078	0.6	Pass

Note: 1) Refer to report MTEB26040213-R for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (5.31 * 7.40) / (4 * 3.1416 * 20^2) = 0.0078$

Simultaneous TX(BLE+EDR+WIFI 2.4+LORA):

Mode	Power Density((mW/cm ²))		Conclusion
	Result	Limit	
Simultaneous TX	0.4459	1.0	Pass

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Results(BLE+EDR+WIFI 2.4G+LORA): $0.0025/1 + 0.0049/1 + 0.4307/1 + 0.0078/1 = 0.4459$

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