# RF TEST REPORT

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|---|---|
| **Report Reference No.....:** | **MAX25061110P01-R01RF** |
| **FCC ID..... :** | **2BQGF-LTWS** |
| Compiled by ( position+printed name+signature)..: | Engineer/ Cindy Zheng |
| Supervised by ( position+printed name+signature)..: | Manager/Haley Wen |
| Approved by ( position+printed name+signature)..: | RF Manager/ Vivian Jiang |
| Date of issue.....: | June 19, 2025 |
| **Testing Laboratory Name.....:** | **MAXLAB Testing Co.,Ltd.** |
| Address..... : | 1/F, Building B, Xinshidai GR Park,Shiyan Street, Bao'an District, Shenzhen,Guangdong, 518052, People's Republic of China |
| **Applicant's name.....:** | **Shenzhen Langtong Digital Technology Co., Ltd** |
| Address..... : | Room205,Building A, No.210 Wanfeng Middle Road,Wanfeng Community,Xinqiao Street,Baoan district,Shenzhen |
| **Test specification..... :** | |
| Standard.....: | KDB 447498 D01 General RF Exposure Guidance v06 |

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|---|---|
| **Test item description.....:** | **RADIO** |
| Trade Mark.....: | N/A |
| Manufacturer.....: | Shenzhen Langtong Digital Technology Co., Ltd |
| Model/Type reference..... : | WS2 |
| Listed Models ..... : | WS1, WS3 |
| Modulation ..... : | GFSK, Π/4DQPSK, 8DPSK |
| Frequency..... | From 2402MHz to 2480MHz |
| Rating.....: | DC 3.7V From Battery and DC 5V From External circuit |
| Result.....: | **PASS** |

## RF EXPOSURE EVALUATION METHOD

According to KDB 447498 D01 General RF Exposure Guidance v06, 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 Test Exclusion Threshold* condition(s), listed below, is (are) satisfied.

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)] · [$\sqrt{f_{(GHz)}}$] ≤ 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

**According to FCC 1.1310: 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 §1.1307(b)**

| | |
|---|---|
| **Frequency band (Operating)** | ☐ WLAN: 2.412GHz ~ 2.462GHz<br>☐ WLAN: 5.150GHz ~ 5.250GHz<br>☐ WLAN: 5.725GHz ~ 5.850GHz<br>☒ Others BT:2402-2480MHz |
| **Device category** | ☒ Portable (<20cm separation)<br>☐ Mobile (>20cm separation)<br>☐ Others |
| **Exposure classification** | ☐ Occupational/Controlled exposure (S = 5mW/cm2)<br>☒ General Population/Uncontrolled exposure (S=1mW/cm$^2$) |
| **Antenna diversity** | ☒ Single antenna<br>☐ Multiple antennas<br>☐ Tx diversity<br>☐ Rx diversity<br>☐ Tx/Rx diversity |
| **Max. output power** | 0.761dBm (0.00119W) |
| **Antenna gain (Max)** | -0.68 dBi |
| **Evaluation applied** | ☐ MPE Evaluation<br>☒ SAR Evaluation |

**RF EXPOSURE EVALUATION METHOD**
**SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm**

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

| MHz | 5 | 10 | 15 | 20 | 25 | mm |
|---|---|---|---|---|---|---|
| 150 | 39 | 77 | 116 | 155 | 194 | SAR Test Exclusion Threshold (mW) |
| 300 | 27 | 55 | 82 | 110 | 137 | |
| 450 | 22 | 45 | 67 | 89 | 112 | |
| 835 | 16 | 33 | 49 | 66 | 82 | |
| 900 | 16 | 32 | 47 | 63 | 79 | |
| 1500 | 12 | 24 | 37 | 49 | 61 | |
| 1900 | 11 | 22 | 33 | 44 | 54 | |
| 2450 | 10 | 19 | 29 | 38 | 48 | |
| 3600 | 8 | 16 | 24 | 32 | 40 | |
| 5200 | 7 | 13 | 20 | 26 | 33 | |
| 5400 | 6 | 13 | 19 | 26 | 32 | |
| 5800 | 6 | 12 | 19 | 25 | 31 | |

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:
[(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 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 is applied to determine SAR test exclusion.

Maximum measured transmitter power.

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| Operating Mode | Frequency | Measured Power | max. power | Antenna Gain | min. test separation distance | [ √ f(GHz)] | Result | Limit |
|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBm) | (mW) | (dBi) | (mm) | | | |
| GFSK | 2402 | 0.328 | 1.08 | -0.68 | 5 | 1.550 | 0.3343 | 3 |
| | 2441 | -0.266 | 0.94 | -0.68 | 5 | 1.562 | 0.2939 | 3 |
| | 2480 | -0.695 | 0.85 | -0.68 | 5 | 1.575 | 0.2684 | 3 |
| π/4DQPSK | 2402 | 0.592 | 1.15 | -0.68 | 5 | 1.550 | 0.3552 | 3 |
| | 2441 | 0.035 | 1.01 | -0.68 | 5 | 1.562 | 0.3150 | 3 |
| | 2480 | -0.437 | 0.90 | -0.68 | 5 | 1.575 | 0.2848 | 3 |
| 8-DPSK | 2402 | 0.761 | 1.19 | -0.68 | 5 | 1.550 | 0.3693 | 3 |
| | 2441 | 0.233 | 1.06 | -0.68 | 5 | 1.562 | 0.3297 | 3 |
| | 2480 | -0.189 | 0.96 | -0.68 | 5 | 1.575 | 0.3015 | 3 |

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:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [√f(GHz)]

The test Result is less than 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

**Conclusion: No SAR is required.**