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# RF Exposure Evaluation Report

**Report No.:** CQASZ20211001748E -02  
**Applicant:** MOSWS INTERNATIONAL LIMITED  
**Address of Applicant:** FLAT/RM 07 BLKB 5/F KING YIP FACTORY BUILDING 59 KING YIP STREET  
KWUN TONG KL  
**Equipment Under Test (EUT)**  
**EUT Name:** Wireless bluetooth headset  
**Test Model No.:** EW9  
**Model No.:** EW9  
**Brand Name:** N/A  
**FCC ID:** 2AZ43-EW9  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2021-10-12  
**Date of Test:** 2021-10-12 to 2021-10-28  
**Date of Issue:** 2021-11-17  
**Test Result:** PASS\*

\*In the configuration tested, the EUT complied with the standards specified above

**Tested By:** Lewis Zhou

( Lewis Zhou )

**Reviewed By:** Rock Huang

( Rock Huang )

**Approved By:** Jack ai

( Jack ai )



## 1 Version

### Revision History Of Report

| Report No.            | Version | Description    | Issue Date |
|-----------------------|---------|----------------|------------|
| CQASZ20211001748E -02 | Rev.01  | Initial report | 2021-11-17 |

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### 3 General Information

#### 3.1 Client Information

|                          |                                                                                                                                                |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant:               | MOSWS INTERNATIONAL LIMITED                                                                                                                    |
| Address of Applicant:    | FLAT/RM 07 BLKB 5/F KING YIP FACTORY BUILDING 59 KING YIP STREET KWUN TONG KL                                                                  |
| Manufacturer:            | MOSWS INTERNATIONAL LIMITED                                                                                                                    |
| Address of Manufacturer: | FLAT/RM 07 BLKB 5/F KING YIP FACTORY BUILDING 59 KING YIP STREET KWUN TONG KL                                                                  |
| Factory:                 | SHENZHEN CITY ENKOR ELECTRONICS LTD                                                                                                            |
| Address of Factory:      | the 2nd&3rd floor, Building P and building Q, Shengguang Ind.park, 152#Donghuan Road, Huangpu Xinqiao street, Bao'an District, Shenzhen, China |

#### 3.2 General Description of EUT

|                                  |                                                                                                                    |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Product Name:                    | Wireless bluetooth headset                                                                                         |
| Model No.:                       | EW9                                                                                                                |
| Test Model No                    | EW9                                                                                                                |
| Trade Mark:                      | N/A                                                                                                                |
| EUT Supports Radios application: | Bluetooth mode<br>2402-2480MHz                                                                                     |
| Hardware Version:                | V1.0                                                                                                               |
| Software Version:                | V1.0                                                                                                               |
| Sample Type:                     | <input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location |
| EUT Power Supply:                | Li-ion battery: DC 3.7V, 300mAh 1.11Wh, Charge by DC 5.0V                                                          |

#### 3.3 General Description of BT

|                       |                                         |         |
|-----------------------|-----------------------------------------|---------|
| Operation Frequency:  | 2402MHz~2480MHz                         |         |
| Bluetooth Version:    | V5.1                                    |         |
| Modulation Technique: | Frequency Hopping Spread Spectrum(FHSS) |         |
| Modulation Type:      | GFSK, $\pi/4$ DQPSK                     |         |
| Number of Channel:    | 79                                      |         |
| Transfer Rate:        | 1Mbps/2Mbps                             |         |
| Hopping Channel Type: | Adaptive Frequency Hopping systems      |         |
| Test Software of EUT: | FCC Assist 1.0.2.2                      |         |
| Antenna Type:         | chip antenna                            |         |
| Antenna Gain:         | BT                                      | 2.25dBi |

## 4 SAR Evaluation

### 4.1 RF Exposure Compliance Requirement

#### 4.1.1 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.

#### 4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$\left[ \frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  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

#### 4.1.3 EUT RF Exposure

##### 1) For BT

##### Measurement Data

| GFSK mode          |                            |                            |                       |       |
|--------------------|----------------------------|----------------------------|-----------------------|-------|
| Test channel       | Peak Output Power<br>(dBm) | Tune up tolerance<br>(dBm) | Maximum tune-up Power |       |
|                    |                            |                            | (dBm)                 | (mW)  |
| Lowest(2402MHz)    | -1.960                     | -2.0±1                     | -1.0                  | 0.794 |
| Middle(2441MHz)    | -1.170                     | -1.0±1                     | 0                     | 1.000 |
| Highest(2480MHz)   | -0.150                     | 0±1                        | 1.0                   | 1.259 |
| $\pi/4$ DQPSK mode |                            |                            |                       |       |
| Test channel       | Peak Output Power<br>(dBm) | Tune up tolerance<br>(dBm) | Maximum tune-up Power |       |
|                    |                            |                            | (dBm)                 | (mW)  |
| Lowest(2402MHz)    | -1.370                     | -1.0±1                     | 0                     | 1.000 |
| Middle(2441MHz)    | -0.560                     | -0.5±1                     | 0.5                   | 1.122 |
| Highest(2480MHz)   | 0.440                      | 0.5±1                      | 1.5                   | 1.413 |

| Worst case: 8DPSK mode                                  |                                                    |                               |                           |       |                     |                        |
|---------------------------------------------------------|----------------------------------------------------|-------------------------------|---------------------------|-------|---------------------|------------------------|
| Channel                                                 | Maximum Peak<br>Conducted<br>Output Power<br>(dBm) | Tune up<br>tolerance<br>(dBm) | Maximum tune-<br>up Power |       | Calculated<br>value | Exclusion<br>threshold |
|                                                         |                                                    |                               | (dBm)                     | (mW)  |                     |                        |
| Lowest<br>(2402MHz)                                     | -1.370                                             | -1.0±1                        | 0                         | 1.000 | 0.310               | 3.0                    |
| Middle<br>(2441MHz)                                     | -0.560                                             | -0.5±1                        | 0.5                       | 1.122 | 0.351               |                        |
| Highest<br>(2480MHz)                                    | 0.440                                              | 0.5±1                         | 1.5                       | 1.413 | 0.445               |                        |
| Conclusion: the calculated value ≤3.0, SAR is exempted. |                                                    |                               |                           |       |                     |                        |

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20211001748E-01