



# RF Exposure Evaluation

## FCC ID: 2A4PI-ASYORENA2

### 1. Client Information

|                     |   |                                                                                                                          |
|---------------------|---|--------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>    | : | Shen Zhen You Ren Ke Ji You Xian Gong Si                                                                                 |
| <b>Address</b>      | : | Room 904, Liutang Building, Baomin 2nd Road, Xixiang Street, Bao'an District, Shenzhen, Guangdong Province, China 518000 |
| <b>Manufacturer</b> | : | Shen Zhen You Ren Ke Ji You Xian Gong Si                                                                                 |
| <b>Address</b>      | : | Room 904, Liutang Building, Baomin 2nd Road, Xixiang Street, Bao'an District, Shenzhen, Guangdong Province, China 518000 |

### 2. General Description of EUT

|                                                                                                                                                |   |                                                               |                                |
|------------------------------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------|--------------------------------|
| EUT Name                                                                                                                                       | : | Asyoren A2                                                    |                                |
| Model(s) No.                                                                                                                                   | : | Asyoren A2                                                    |                                |
| Model Different                                                                                                                                | : | ----                                                          |                                |
| Product Description                                                                                                                            | : | Operation Frequency:                                          | Bluetooth 5.0: 2402MHz~2480MHz |
|                                                                                                                                                |   | Number of Channel:                                            | Bluetooth 5.0: 79 channels     |
|                                                                                                                                                |   | Antenna Gain:                                                 | 2 dBi PCB Antenna              |
|                                                                                                                                                |   | Modulation Type:                                              | GFSK, Pi/4-DQPSK, 8-DPSK       |
|                                                                                                                                                |   | Bit Rate of Transmitter:                                      | Bluetooth :1/2/3Mbps           |
| Power Supply                                                                                                                                   | : | Input: DC 5V<br>DC 7.4V by 550mAh Rechargeable Li-ion battery |                                |
| Software Version                                                                                                                               | : | S6X_62B_S1086_MT02_2021_1115_1100[bin]                        |                                |
| Hardware Version                                                                                                                               | : | MT02_65B_V1.4                                                 |                                |
| Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab. |   |                                                               |                                |

**Note:** More test information about the EUT please refer the RF Test Report.

## SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

- (1) Clause 4.3: General SAR test reduction and exclusion guidance

- Sub clause 4.31: Standalone SAR test exclusion considerations

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance  $\leq 5$  mm are determined by:

- [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)] \*  $\sqrt{f_{\text{GHz}}}$  ]  $\leq 3.0$  for 1-g SAR

- [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)] \*  $\sqrt{f_{\text{GHz}}}$  ]  $\leq 7.5.0$  for 10-g SAR

**2. Calculation:**

| Test separation: 5mm        |                       |                              |                                      |                                     |                   |                 |
|-----------------------------|-----------------------|------------------------------|--------------------------------------|-------------------------------------|-------------------|-----------------|
| Bluetooth Mode (GFSK)       |                       |                              |                                      |                                     |                   |                 |
| Frequency (GHz)             | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mw) | Calculation Value | Threshold Value |
| 2.402                       | -3.429                | $-3 \pm 1$                   | -2                                   | 0.631                               | 0.196             | 3.0             |
| 2.441                       | -4.035                | $-4 \pm 1$                   | -3                                   | 0.501                               | 0.157             | 3.0             |
| 2.480                       | -4.452                | $-4 \pm 1$                   | -3                                   | 0.501                               | 0.158             | 3.0             |
| Bluetooth Mode (Pi/4-DQPSK) |                       |                              |                                      |                                     |                   |                 |
| Frequency (GHz)             | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mw) | Calculation Value | Threshold Value |
| 2.402                       | -1.157                | $-1 \pm 1$                   | 0                                    | 1.000                               | 0.310             | 3.0             |
| 2.441                       | -1.763                | $-1 \pm 1$                   | 0                                    | 1.000                               | 0.312             | 3.0             |
| 2.480                       | -2.197                | $-2 \pm 1$                   | -1                                   | 0.794                               | 0.250             | 3.0             |
| Bluetooth Mode (8-DPSK)     |                       |                              |                                      |                                     |                   |                 |
| Frequency (GHz)             | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mw) | Calculation Value | Threshold Value |
| 2.402                       | -0.562                | $0 \pm 1$                    | 1                                    | 1.259                               | 0.390             | 3.0             |
| 2.441                       | -1.191                | $-1 \pm 1$                   | 0                                    | 1.000                               | 0.312             | 3.0             |
| 2.480                       | -1.648                | $-1 \pm 1$                   | 0                                    | 1.000                               | 0.315             | 3.0             |

**Conclusion:**

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

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