

RF Exposure Evaluation

FCC ID: 2A4IC-CP80

1. Client Information

| | | |
|---------------------|---|---|
| Applicant | : | SHENZHEN ZHENYI INTELLIGENT TECH CO., LTD |
| Address | : | 701 Building A, Haohe Zhichuang, No.,10, Fuyuan, 2nd road Zhancheng Community, Fuhai Street, BaoAn District, Shenzhen, Guangdong, China |
| Manufacturer | : | SHENZHEN ZHENYI INTELLIGENT TECH CO., LTD |
| Address | : | 701 Building A, Haohe Zhichuang, No.,10, Fuyuan, 2nd road Zhancheng Community, Fuhai Street, BaoAn District, Shenzhen, Guangdong, China |

2. General Description of EUT

| | | |
|---|---|--|
| EUT Name | : | Tablet |
| Model(s) No. | : | CP80, CP80S, CP80K, CP81, CP81K, Q2, Q2S, Q2K |
| Model Difference | : | All PCB boards and circuit diagrams are the same, the only difference is that model name. |
| Product Description | : | RF Output Power: BT: 2.842dBm 802.11b: 2.123dBm 802.11g: 2.034dBm 802.11n (HT20): 2.019dBm 802.11n (HT40): 1.868dBm |
| | : | Antenna Gain: 1.64dBi PIFA Antenna |
| Power Supply | : | For adapter: Input: AC 100V-240V Output: DC 5V, 2A DC 3.8V by 4300mAh Rechargeable Li-ion battery |
| Software Version | : | CP80_20220805 |
| Hardware Version | : | R862T-RK3326S-V1.0 |
| 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.

TB-RF-074-1.0

The RF Exposure Evaluation for FCC:

SAR Test Exclusion Calculations

FCC: According to 447498 D04 Interim General RF Exposure Guidance v01.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

| Frequency (MHz) | Distance (mm) | | | | | | | | | |
|-----------------|---------------|----|----|-----|-----|-----|-----|-----|-----|-----|
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 300 | 39 | 65 | 88 | 110 | 129 | 148 | 166 | 184 | 201 | 217 |
| 450 | 22 | 44 | 67 | 89 | 112 | 135 | 158 | 180 | 203 | 226 |
| 835 | 9 | 25 | 44 | 66 | 90 | 116 | 145 | 175 | 207 | 240 |
| 1900 | 3 | 12 | 26 | 44 | 66 | 92 | 122 | 157 | 195 | 236 |
| 2450 | 3 | 10 | 22 | 38 | 59 | 83 | 111 | 143 | 179 | 219 |
| 3600 | 2 | 8 | 18 | 32 | 49 | 71 | 96 | 125 | 158 | 195 |
| 5800 | 1 | 6 | 14 | 25 | 40 | 58 | 80 | 106 | 136 | 169 |

Calculation:

| Test separation: 5mm | | | | | |
|-----------------------------|-----------------------|------------------------------|--------------------------------------|-------------------------------------|--------------------|
| Bluetooth (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) | Limit $P_{th}(mW)$ |
| 2.402 | 2.842 | 3 ± 1 | 4 | 2.512 | 3 |
| 2.441 | 2.213 | 2 ± 1 | 3 | 1.995 | 3 |
| 2.480 | 1.386 | 1 ± 1 | 2 | 1.585 | 3 |
| Bluetooth ($\pi/4$ -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) | Limit $P_{th}(mW)$ |
| 2.402 | 2.039 | 2 ± 1 | 3 | 1.995 | 3 |
| 2.441 | 1.425 | 1 ± 1 | 2 | 1.585 | 3 |
| 2.480 | 2.618 | 3 ± 1 | 4 | 2.512 | 3 |
| Bluetooth (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) | Limit $P_{th}(mW)$ |
| 2.402 | 2.554 | 3 ± 1 | 4 | 2.512 | 3 |
| 2.441 | 1.932 | 2 ± 1 | 3 | 1.995 | 3 |
| 2.480 | 1.108 | 1 ± 1 | 2 | 1.585 | 3 |

| 802.11b | | | | | |
|--|-----------------------|------------------------------|--------------------------------------|-------------------------------------|----------------------------|
| Frequency (GHz) | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mw) | Limit P _{th} (mW) |
| 2.412 | 1.859 | 2±1 | 3 | 1.995 | 3 |
| 2.437 | 1.757 | 2±1 | 3 | 1.995 | 3 |
| 2.462 | 2.123 | 2±1 | 3 | 1.995 | 3 |
| 802.11g | | | | | |
| Frequency (GHz) | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mw) | Limit P _{th} (mW) |
| 2.412 | 1.939 | 2±1 | 3 | 1.995 | 3 |
| 2.437 | 1.745 | 2±1 | 3 | 1.995 | 3 |
| 2.462 | 2.034 | 2±1 | 3 | 1.995 | 3 |
| 802.11n(HT20) | | | | | |
| Frequency (GHz) | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mw) | Limit P _{th} (mW) |
| 2.412 | 1.952 | 2±1 | 3 | 1.995 | 3 |
| 2.437 | 1.845 | 2±1 | 3 | 1.995 | 3 |
| 2.462 | 2.019 | 2±1 | 3 | 1.995 | 3 |
| 802.11n(HT40) | | | | | |
| Frequency (GHz) | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mw) | Limit P _{th} (mW) |
| 2.422 | 1.738 | 2±1 | 3 | 1.995 | 3 |
| 2.437 | 1.735 | 2±1 | 3 | 1.995 | 3 |
| 2.452 | 1.868 | 2±1 | 3 | 1.995 | 3 |
| 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 D04, No SAR is required. | | | | | |

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, No SAR is required.

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