



Maximum Permissible Exposure Evaluation

FCC ID: 2A8TU-S16

1. Client Information

| | | |
|---------------------|---|---|
| Applicant | : | Shenzhen Forever Young Technology Co., Ltd |
| Address | : | 2/F, No B2 Bldg, Fuyuan Industrial Park, Fu yong Town, Bao'an District, Shenzhen, China |
| Manufacturer | : | Shenzhen Forever Young Technology Co., Ltd |
| Address | : | 2/F, No B2 Bldg, Fuyuan Industrial Park, Fu yong Town, Bao'an District, Shenzhen, China |

2. General Description of EUT

| | | |
|-------------------------------|---|---|
| EUT Name | : | Smart IR Remote with Temp & Humidity Sensor |
| Models No. | : | S16, S15Pro, S19, S19RTC, S20, S25 |
| Model Difference | : | All PCB boards and circuit diagrams are the same, the only difference is that appearance and Models. |
| Product Description | : | Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz Buletooth LE 4.2: 2402-2480MHz |
| | : | Number of Channel: 802.11b/g/n(HT20):11 channels 802.11n(HT40):7 channels 40 channels for Buletooth LE |
| | : | Antenna Gain: 1.5 dBi PCB Antenna |
| Power Rating | : | Input: DC 5V/1A |
| Software Version | : | V3.35.5 |
| Hardware Version | : | V1.1.80 |
| Connecting I/O Port(S) | : | Please refer to the User's Manual |
| Remark | : | the evaluation report used the EUT(202203-0097-4-2#). |

MPE Calculations for WIFI

1. Antenna Gain:

PCB Antenna:1.5dBi.

2. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

4. Test Result:

2.4G WiFi

| Mode | Conducted Power(max) (dBm) | Turn-up Power (dB) | Max tune up power (dBm) [P] | ANT Gain (dBi) [G] | Distance (cm) [R] | Power Density (mW/ cm ²) [S] | Limit of Power Density (mW/ cm ²) (S) |
|---------------|----------------------------|--------------------|-----------------------------|--------------------|-------------------|--|---|
| 802.11B | 17.19 | 17±1 | 18 | 1.5 | 20 | 0.01773 | 1 |
| 802.11G | 17.53 | 17±1 | 18 | 1.5 | 20 | 0.01773 | 1 |
| 802.11N(HT20) | 17.14 | 17±1 | 18 | 1.5 | 20 | 0.01773 | 1 |
| 802.11N(HT40) | 17.14 | 17±1 | 18 | 1.5 | 20 | 0.01773 | 1 |
| Mode | Conducted Power(max) (dBm) | Turn-up Power (dB) | Max tune up power (dBm) [P] | ANT Gain (dBi) [G] | Distance (cm) [R] | Power Density (mW/ cm ²) [S] | Limit of Power Density (mW/ cm ²) (S) |
| BLE | -0.54 | 0±1 | 1 | 1.5 | 20 | 0.00035 | 1 |

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

| Frequency Range (MHz) | Power density (mW/ cm ²) |
|-----------------------|--------------------------------------|
| 300-1,500 | F/1500 |
| 1,500-100,000 | 1.0 |

For 2.4WIFI:2412~2462 MHz and Bluetooth LE 2402-2480MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as **0.01773mW / cm²** < **limit 1mW / cm²**. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

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