

Maximum Permissible Exposure Evaluation

FCC ID: 2AOJSHQAG02

1. Client Information

| | | |
|---------------------|---|---|
| Applicant | : | Alcidae Inc. |
| Address | : | Room 809, Building A4, Science park, No. 15, Keyuan Road, Nanshan District, Shenzhen, China |
| Manufacturer | : | Alcidae Inc. |
| Address | : | Room 809, Building A4, Science park, No. 15, Keyuan Road, Nanshan District, Shenzhen, China |

2. General Description of EUT

| | | | |
|-------------------------------|---|---|--|
| EUT Name | : | Garager | |
| Models No. | : | AG02, AG-02, HQE002, HQ-E002 | |
| Model Different | : | All models are in the same PCB layout interior structure and electrical circuits, The only difference is color. | |
| Product Description | : | Operation Frequency: | 802.11b/g/n(HT20): 2412MHz~2462MHz |
| | | RF Output Power: | 802.11b: 18.16dBm 802.11g: 19.80dBm 802.11n (HT20): 18.96dBm 802.11n (HT40): 18.72dBm |
| | | Antenna Gain: | 1.79dBi PIFA Antenna |
| | | Modulation Type: | 802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM, 64QAM) |
| Power Supply | : | DC Voltage supplied by AC/DC Adapter(TEKA006-0501000UK) | |
| Power Rating | : | Input: DC 5V/1A | |
| Software Version | : | 1.0.0.10 | |
| Hardware Version | : | V1.0 | |
| Connecting I/O Port(S) | : | Please refer to the User's Manual | |

TB-RF-075-1.0

MPE Calculations for WIFI

1. Antenna Gain:

PIFA Antenna: 1.79dBi.

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:

| 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] |
|----------------|----------------------------|--------------------|-----------------------------|--------------------|-------------------|--|
| 802.11b | 18.16 | 18±1 | 19 | 1.79 | 20 | 0.02386 |
| 802.11g | 19.80 | 19±1 | 20 | 1.79 | 20 | 0.03004 |
| 802.11n (HT20) | 18.96 | 18±1 | 19 | 1.79 | 20 | 0.02386 |
| 802.11n (HT40) | 18.72 | 18±1 | 19 | 1.79 | 20 | 0.02386 |

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 802.11b/g/n(HT20):2412~2462 MHz

802.11n(HT40):2422~2452 MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as $0.03004 / \text{cm}^2 < \text{limit } 1\text{mW} / \text{cm}^2$. 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.

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