Maximum Permissible Exposure Evaluation

FCC ID: 2ANK8-D06

1. Client Information

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

2. General Description of EUT

EUT Name	:	Door Window Sensor	
Models No.	:	D06	
Model Different	:	----	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz
		RF Output Power:	802.11b: 15.96dBm 802.11g: 14.96dBm 802.11n (HT20): 13.82dBm
		Antenna Gain:	2.69dBi PCB Antenna
		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM, 64QAM)
Power Rating	:	DC 3V By AAA battery	
Software Version	:	3.12.6	
Hardware Version	:	V1.0	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	

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MPE Calculations for WIFI

1. **Antenna Gain:**

   PCB Antenna: 2.69dBi.

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	15.96	16±1	17	2.69	20	0.01852
802.11g	14.96	15±1	16	2.69	20	0.01471
802.11n (HT20)	13.82	14±1	15	2.69	20	0.01169

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:2412~2462 MHz
MPE limit S: 1mW/ cm^2
The MPE is calculated as ***0.01852mW / cm^2 < limit 1mW / cm^2***. So, the device compliance the RF Exposure requirement.

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-----