Maximum Permissible Exposure Evaluation

FCC ID: 2AGED-GISC2411

1. Client Information

Applicant	:	GIS Corp.
Address	:	6139 168th Street Unit 1 Fresh Meadows, NY 11365 USA
Manufacturer	:	Suzhou GIS Electronic Technology Co., Ltd.
Address	:	Room 38, No. 21 Madun Road, Xuguan District, New & Hi-tech Industrial Development Zone(SND), Suzhou, China

2. General Description of EUT

EUT Name	:	Wireless smart control switch	
Models No.	:	GIS-C-2411	
Model Difference	:	N/A	
Product Description	:	Operation Frequency: 2410MHz~2470MHz	
		Number of Channel:	61 Channels
		RF Output Power:	17.23 dBm (1Mbps)
		Antenna Gain:	1.5 dBi PCB Antenna
		Modulation Type:	GFSK
		Bit Rate of Transmitter:	1Mbps, 2Mbps, 250Kbps
Power Supply	:	AC power by Power Supply.	
Power Rating	:	Input: AC 90~240V 50/60Hz Output: AC 90~240V	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Note: More detail information about Equipment, please refer to User's manual, more information about the RF， please refer to test report.			

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, China
Tel: +86 75526509301 Fax: +86 75526509195

MPE Calculations for WIFI

1. Antenna Gain:

Ant.	Brand	Model Name	Antenna Type	Gain (dBi)
1	N/A	N/A	PCB Ant.	1.5

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:

Worst Maximum MPE Result						
Mode	**N_{TX}**	**Power(max) (dBm) [P]**	**ANT Gain (dBi) [G]**	**Turn-up Power Tolerance (dB)**	**Distance (cm) [R]**	**Power Density (mW/ cm^2) [S]**
1Mbps	**1**	17.23	**1.5**	**±1**	**20**	0.018696
2Mbps	**1**	17.22	**1.5**	**±1**	**20**	0.018653
250Kbps	**1**	16.96	**1.5**	**±1**	**20**	0.017569

Note:

(1) N_{TX}= Number of Transmit Antennas

(2) RF Output power specifies that Maximum Conducted Peak Output Power.

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 : 2.4G: 2410MHz~2470MHz

MPE limit S: 1 mW/ cm^2

The MPE is calculated as 0.018696mW / cm^2 < limit 1 mW / 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.