

**Climax Technology Co Ltd**  
**No. 258, Sinhu 2nd Rd., Neihu District Taipei City 114 Taiwan**

Federal Communications Commission  
Authorization and Evaluation Division  
Equipment Authorization Branch  
7435 Oakland Mills Road  
Columbia, MD 21046

**Applicant's declaration concerning RF Radiation Exposure**

We hereby indicate that the product  
Product description: Smart Home Alarm System  
Model No: HPGWx-xxxxx-xxxxx Series (x=0~9, A~Z or blank)

The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The integral antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter within the host device.

A safety statement concerning minimum separation distances from enclosure of the  
Product: Smart Home Alarm System  
will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RF exposure compliance.

The appropriate information can be drawn from the test report no: W6R21610-16279-C-7, W6R21610-16279-P-2244 and the accompanying calculations.

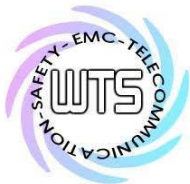
Company: Climax Technology Co Ltd

Address: No. 258, Sinhu 2nd Rd., Neihu District Taipei City 114 Taiwan

Date: 2016-10-13

Signature

George Lin



Registration number: W6R21610-16279-C-7

FCC ID: GX9HPGWG5DT16

## **3.2 Equivalent isotropic radiated power**

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power

EIRP = 16.82 dBm

Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

## **3.3 RF Exposure Compliance Requirements**

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

$$S = \frac{PG}{4\pi R^2}$$

S – Power Density

P – Output power ERP

R – Distance

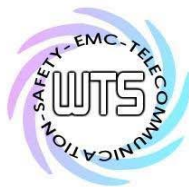
D – Cable Loss

AG – Antenna Gain

Item	Unit	Value	Remarks
P	mW	48.0839	Peak value
D	dB		
AG	dBi	2.91	
G		1.9543	Calculated Value
R	cm	20	Assumed value
S	mW/cm <sup>2</sup>	0.0187	Calculated value

Limits:

Limit for General Population / Uncontrolled Exposure	
Frequency (MHz)	Power Density (mW/cm <sup>2</sup> )
1500 – 100.000	1.0



Report Number: W6R21610-16279-P-2224

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## 9 Maximum Permissible Exposure

### 9.1 Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

### 9.2 MPE Calculation Method

#### (A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

#### (B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

\*Plane-wave equivalent power density

$$E \text{ (V/m)} \cdot \frac{\sqrt{30 \times P \times G}}{d}$$

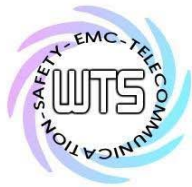
$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} \cdot \frac{E^2}{377}$$

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd \cdot \frac{30 \times P \times G}{377 \times d^2}$$



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Frequency	Max output power (dBm) / (W)		Antenna Gain	Power Density(S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
GSM 850	32.54	1.795	1.41	0.49	1.0	Complies
PCS 1900	28.75	0.750	1.94	0.23	1.0	Complies
Band II	22.73	0.187	1.94	0.058	1.0	Complies
Band V	23.00	0.2	1.41	0.055	1.0	Complies

From the peak EUT RF output power, the minimum mobile separation distance,  $d = 0.2$  m, as well as the gain of the used antenna, the RF power density can be obtained.