



## KSIGN Testing Co., Ltd.

Building 5, No. 316, Jianghong South Road Binjiang District, Hangzhou 310052, China  
Tel.: +(86) 0571-8836 6861 Fax: +(86) 0571-8836 6821 E-mail: server@ksign.cn  
Web: www.ksign.cn

## RF EXPOSURE EVALUATION

### 1. PRODUCT INFORMATION

Product Description	Smart Thermostat
Model Name	GB, GA, GC
FCC ID	2A344BAB20164938688

### 2. EVALUATION METHOD AND LIMIT

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

#### LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE

Frequency Range (MHz)	E-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

\*Note:

1. f= Frequency in MHz \* Plane-wave Equivalent Power Density
2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

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

Where:

S=power density

P=power input to 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



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### 3. CALCULATION

A minimum test separation distance  $\geq 20$  cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits. The distance must be at least 20 cm and fully supported by the operating and installation configurations of the transmitter and its antenna(s), according to the source-based time-averaged maximum power requirements of § 2.1091(d)(2). In cases where cable losses or other attenuations are applied to determine compliance, the most conservative operating configurations and exposure conditions must be evaluated.

WIFI PART(Can not transmit at different band simultaneously )

Antenna Gain=1.5dBi (Numeric 1.41),  $\pi=3.14$

Mode	Frequency (MHz)	Output Power (dBm)	Tune-up power (dBm)	Output Power (mW)	Power Density (mW/cm <sup>2</sup> )	Power Density Limit (mW/cm <sup>2</sup> )	Results
802.11b	2412	10.62	10±1	12.589	0.00354	1	Pass
	2437	10.93	10±1	12.589	0.00354	1	Pass
	2462	10.07	10±1	12.589	0.00354	1	Pass
802.11g	2412	10.24	10±1	12.589	0.00354	1	Pass
	2437	10.84	10±1	12.589	0.00354	1	Pass
	2462	10.05	10±1	12.589	0.00354	1	Pass
802.11n (HT20)	2412	9.87	10±1	12.589	0.00354	1	Pass
	2437	10.87	10±1	12.589	0.00354	1	Pass
	2462	9.56	10±1	12.589	0.00354	1	Pass
802.11n (HT40)	2422	10.90	10±1	12.589	0.00354	1	Pass
	2437	10.45	10±1	12.589	0.00354	1	Pass
	2452	10.69	10±1	12.589	0.00354	1	Pass
GFSK	2402	4.63	4±1	3.162	0.0009	1	Pass
	2440	3.66	4±1	3.162	0.0009	1	Pass
	2480	3.43	4±1	3.162	0.0009	1	Pass

Conclusion:

For the max result: 0.00354  $\leq 1$  for FCC SAR, No RF exposure evaluation is required.

Note:

1.The WIFI and BT can not be transmit simultaneously

--THE END--