



RF Exposure Requirements

1 General Information

Client Information

Applicant : Guangdong BIG Climatic Manufacture Co., LTD

Address of applicant : No. 20-3, Nantou Avenue East, Nantou Town, Zhongshan City, Guangdong, China

Manufacturer : Guangdong BIG Climatic Manufacture Co., LTD Nantou Branch

Address of manufacturer : No. 20, Nantou Avenue East, Nantou Town, Zhongshan City, Guangdong, China

General Description of E.U.T

FCC ID : 2BCMJ-NCA46

Product Name : Electric Heater

Model No. : NCA1-4.6-PRO FABRIC WHITE, NCA1-4.6-PRO BLACK, NCA1-4.6-PRO WHITE, NCA1-4.6-PRO FABRIC BLACK, NCL-4.6-PRO BLACK, NCL-4.6-PRO WHITE, NCL-4.6-PRO FABRIC BLACK, NCL-4.6-PRO FABRIC WHITE, NCL-4.6-PRO FABRIC GREY, NCK-4.6-PRO BLACK, NCK-4.6-PRO WHITE, NCE-4.6-PRO BLACK, NCE-4.6-PRO WHITE, NCD-4.6-PRO BLACK, NCD-4.6-PRO WHITE, NCE-S-4.6-PRO WHITE, NCE-S-4.6-PRO BLACK, NCK-S-4.6-PRO WHITE, NCK-S-4.6-PRO BLACK, NCF-4.6-PRO WHITE, NCF-4.6-PRO BLACK, NCF2-4.6-PRO WHITE, NCF2-4.6-PRO BLACK, NCF3-4.6-PRO WHITE, NCF3-4.6-PRO BLACK, NCC-4.6-PRO WHITE, NCC-4.6-PRO BLACK, NCC3-4.6-PRO WHITE, NCC3-4.6-PRO BLACK, NCA5-4.6-PRO WHITE, NCA5-4.6-PRO BLACK, NCE4-4.6-PRO BLACK, NCE4-4.6-PRO WHITE, NCA2-4.6-PRO BLACK

Model Description : All models have same RF module except appearance and marketing purposes. Therefore the full tests were performed on model NCA2-4.6-PRO WHITE.

Rated Voltage : 120V~, 60Hz, 1500W

Battery Capacity : ---

Power Adapter : ---



Technical Characteristics of EUT

Support Standards	: 802.11b, 802.11g, 802.11n
Frequency Range	: 2412-2462MHz for 802.11b/g/n(HT20)
RF Output Power	: 16.87dBm (Conducted)
Modulation	: 802.11b: DSSS(DBPSK/DQPSK/CCK) 802.11g/n: OFDM (BPSK/QPSK/16QAM/64QAM)
Data Rate	: 1Mbps for 802.11b; 54Mbps for 802.11g; MCS7 for 802.11n
Quantity of Channels	: 11 for 802.11b/g/n(HT20)
Channel Separation	: 5MHz
Type of Antenna	: PCB Antenna
Antenna Gain	: 2.54dBi (Declared by the manufacturer)

WALTEK



2 Applicable Standard

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

(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 ²)	Averaging Times E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	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 ²)	Averaging Times E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density

3 Calculation Method

$$S = (30 \cdot P \cdot G) / (377 \cdot R^2)$$

S = power density (in appropriate units, e.g., mw/cm²)

P = power input to the antenna (in appropriate units, e.g., mw)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm), R=20cm.

4 MPE Calculation Result

Frequency (MHz)	Antenna Gain (dBi)	Numeric gain	Conducted Power (dBm)	Maximum Tune-up output power		PD (mW/cm ²)	Limit (mW/cm ²)
				(dBm)	(mW)		
2412	2.54	1.79	16.87	17.00	50.12	0.01789	1.0

Result: Pass

=====End of Report=====