



RF Exposure Requirements

1 General Information

Client Information

Applicant : Foshan Shunde QINGZHOU Electric Appliances Co.,Ltd

Address of applicant : Room 2901, Building 18, Vanke Jinyu Binjiang Plaza, No. 13
Desheng Middle Road, Dehe Community, Daliang Street, Shunde
District, Foshan, China

Manufacturer : Foshan Alpicool Holding Group Co., Ltd.

Address of manufacturer : No.3, ZhenZhu Road, Yang'e, Lunjiao , Shunde, Foshan,
Guangdong, China

General Description of E.U.T

FCC ID : 2A7MY-T36

Product Name : Refrigerator

Model No. : K18, AL42, BCD80, BD60, C15, C22W, C25W, CF15, CF8, CL30,
CL40, CL50, CLS35, CLS45, CLS55, CR65, CR85X, D31A,
DC30, DC40, DD40, DT25, DT35, K25, P15, P8, SU-PG36,
QZW38, QZW48, QZW58, R50, RTW20, RTW25, T15A, T20A,
T25A, T36, T50, T60, TAW35, TAW45, TAW55, TW35, TW45,
TW55, TW75, TW95, TWW115, TWW35, TWW45, TWW55,
TWW75, TWW95, U45, U55, U65, U75, WD35, WD45, WD55,
X15, X18, X25, X30, X30K, X40, X40K, X50, X50K, X9, XS35,
XS45, XS55, YCD15A, J42, J57, CR65, CR85X, T36-T, T50-T,
T60-T, BCD100, BCD125, CT60K, BD45

Model Description : All models have same electric circuit and RF module, only
different in the appearance and volume.

Rated Voltage : DC 12V/24V

Battery Capacity : ---

Power Adapter : GRT60-145410
Input: 100-240V~, 1.5A Max. ,50/60Hz
Output: DC 14.5V, 4.1A

Technical Characteristics of EUT (WiFi)

Support Standards : 802.11b, 802.11g, 802.11n

Frequency Range : 2412-2462MHz for 802.11b/g/n(HT20)

RF Output Power : 16.39dBm (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



Technical Characteristics of EUT (BLE)

Bluetooth Version	V4.2 (BLE mode)
Frequency Range	2402-2480MHz
RF Output Power	6.68dBm (Conducted)
Modulation	GFSK
Data Rate	1Mbps
Quantity of Channels	40
Channel Separation.....	2MHz
Type of Antenna	PCB Antenna
Antenna Gain	2.54dBi

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)		
2462 (WiFi)	2.54	1.79	16.39	17.00	50.12	0.01789	1
2480 (BLE)	2.54	1.79	6.68	7.00	5.01	0.00179	1

Result: Pass

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