



RF Exposure Requirements

1 General Information

Client Information

Applicant : Foshan Alpicool Holding Group Co., Ltd.

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

Manufacturer : The same as above

Address of manufacturer : The same as above

General Description of E.U.T

FCC ID : 2A908-C9

Product Name : Car Refrigerator

Model No. : C9, CF8, CF15, NL30, NL40, NL50, NLD35, NLD45, NLD55, NLS35, NLS45, NLS55, C15, C20, C75, CX30, CX40, CX50, CF35, CF45, CF55

Model Description : All models are identical except appearance and capacity.

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, 59.45W

Technical Characteristics of EUT

Bluetooth Version : Bluetooth LE

Frequency Range : 2402-2480MHz

RF Output Power : -1.880dBm (Conducted)

Modulation : GFSK

Data Rate : 1Mbps

Quantity of Channels : 40

Channel Separation : 2MHz

Type of Antenna : PCB Antenna

Antenna Gain : -2.41dBi



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)		
2402-2480	-2.41	0.57	-1.88	-1.00	0.79	0.00009	1.0

Result: Pass

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