RF Exposure Requirements

1.1 General Information

Client Information

Applicant	:	Guangdong Chiyang Scent Technology Co.,Ltd.
Address of applicant	:	Floor 1-9, Building 10, CIMC Center, Chanxing Road No. 1, Shunde District, Foshan City, Guangdong Province, China, 528313
Manufacturer	:	The same as above
Address of manufacturer	:	The same as above

General Description of E.U.T

FCC ID	:	2A3DS-A320
Product Name	:	Aroma Diffuser
Model No.	:	A320
Model Description	:	---
Rating	:	Input: DC 12V, 1A, 5W
Battery Capacity	:	---
Power Adapter	:	RXW-0698-12V1A-E Input: 100-240V~, 0.5A, 50/60Hz; Output: DC 12V, 1000mA

Technical Characteristics of EUT

Bluetooth Version	:	V5.2 (BLE mode)
Frequency Range	:	2402-2480MHz
Max. RF Output Power	:	-3.296dBm (Conducted) @2Mbps
Modulation	:	GFSK
Data Rate	:	1Mbps, 2Mbps
Quantity of Channels	:	40
Channel Separation	:	2MHz
Type of Antenna	:	PCB Antenna
Antenna Gain	:	3.08dBi

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

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

S = power density (in appropriate units, e.g., mw/cm^2)

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/cm2)	Limit (mW/cm2)
				(dBm)	(mW)		
2402	3.08	2.03	-3.296	-3.00	0.50	0.00020	1.0

Result: Pass

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