1. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

1.1 General Information

Client Information				
Applicant:	Shenzhen Simolio Electronic Co., Ltd			
Address of applicant:	7B/F, 3 Block, Qiyu Industrial Park, Gongle Tiezai Road,			
	Xixiang, Baoan District, Shenzhen, Guangdong, China			
Manufacturer:	Shenzhen Simolio Electronic Co., Ltd			
Address of manufacturer:	7B/F, 3 Block, Qiyu Industrial Park, Gongle Tiezai Road,			
	Xixiang, Baoan District, Shenzhen, Guangdong, China			
General Description of EUT:				
Product Name:	Wireless headphones			
Trade Name:	SIMOLIO			
Model No.:	SM-825D Pro			
	SM-825RX Pro, SM-825D, SM-825RX, SM-826D, SM-826RX,			
Adding Model(s):	SM-826D Pro, SM-826RX Pro, SM-8245, SM-8245D, TA5D, TAR5,			
	TAR6, TA6D, TA6D Pro, TAR6 Pro, TA45			
Rated Voltage:	Power in:DC5V			
	Battery:DC3.7V			
Power Adapter	MODEL:PS06C050K1000UU			
	INPUT:AC100-240V, 50/60Hz, 0.25A			
	OUTPUT:DC5.0V,1000mA			
FCC ID:	2AYV2-SM-825DPRO			
Equipment Type:	portable device			

Technical Characteristics of EUT:

Frequency Range:	2406-2472MHz
RF Output Power:	9.715dBm (Conducted)
Modulation:	GFSK
Quantity of Channels:	31
Channel Separation:	2MHz
Type of Antenna:	PIFA Antenna
Antenna Gain:	-2dBi

1.2 Standard Applicable

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.

Frequency range (MHz)	Electric Field	Magnetic Field Strength (H)	Power Density (S) (mW/cm ²)	Averaging Times $ \mathbf{E} ^2 \mathbf{H} ^2$ or
	(V/m)	(A/m)		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

(a) Limits for Occupational / Controlled Exposure

(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

1.3 MPE Calculation Method

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

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)

1.4 MPE Calculation Result

For 2.4G

Maximum Tune-Up output power: <u>10(dBm)</u> Maximum peak output power at antenna input terminal: <u>10.00(mW)</u> Prediction distance: <u>>20(cm)</u> Prediction frequency: <u>2440(MHz)</u> Antenna gain: <u>-2 (dBi)</u> Directional gain (numeric gain): <u>0.63</u> The worst case is power density at prediction frequency at 20cm: <u>0.0013w/cm²)</u> MPE limit for general population exposure at prediction frequency: <u>1 (mw/cm²)</u>

Result: Pass