RF Exposure Evaluation

FCC ID: 2AD55-CM5136

1. Client Information

Applicant : P.S.L. LIMITED

Address : 8/F, Cheung Lung Ind. Bldg, 10 Cheung Yee Street, Cheung Sha Wan, Kowloon, Hong Kong

Manufacturer : P.S.L. LIMITED

Address : 8/F, Cheung Lung Ind. Bldg, 10 Cheung Yee Street, Cheung Sha Wan, Kowloon, Hong Kong

2. General Description of EUT

EUT Name	:	Wireless Speaker	
Models No.	:	CM5136, CM5136-SP, SOUND TUBE	
Model difference	:	All models are identical in the same PCB layout, interior structure and electrical circuits, The only difference is model name for commercial purpose.	
Product Description	:	Operation Frequency: Bluetooth:2402~2480MHz	
		Number of Channel:	Bluetooth:79 Channels
		Max Peak Output Power:	GFSK: 2.226dBm
		Antenna Gain:	0 dBi PCB Antenna
		Modulation Type:	GFSK 1Mbps(1 Mbps) π/4-DQPSK(2 Mbps) 8-DPSK(3 Mbps)
Power Supply	:	DC power by USB cable form Host System DC power by Li-ion battery	
Power Rating	:	DC 5V by USB Cable from PC system. DC 3.7V by 250 mAh Li-ion Battery.	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note:

More test information about the EUT please refer the RF Test Report.

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SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v05r02.

(1) Clause 4.3: General SAR test reduction and exclusion guidance

Sub clause 4.31: Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance≤5 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤3.0 for 1-g SAR

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤7.5.0 for 10-g SAR

2.
Calculation:

Test separation: 5mm					
Bluetooth Mode (GFSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	1.991	±0.5	1.775	0.550	**3.0**
2.441	2.226	±0.5	1.873	0.585	**3.0**
2.480	2.144	±0.5	1.838	0.579	**3.0**
Bluetooth Mode (8-DPSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	1.796	±0.5	1.697	0.526	**3.0**
2.441	2.108	±0.5	1.823	0.570	**3.0**
2.480	2.049	±0.5	1.798	0.566	**3.0**

So standalone SAR measurements are not required.