

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.

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:

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

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

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.