RF Exposure Evaluation

FCC ID: 2AE5P-SP1

1. Client Information

Applicant : SW Technology Limited

Address : Unit 1202, 12/F Mirror Tower 61 Mody RD TST East KL, Hong Kong

Manufacturer : SW Technology Limited

Address : Unit 1202, 12/F Mirror Tower 61 Mody RD TST East KL, Hong Kong

2. General Description of EUT

EUT Name	:	Bluetooth stereo headphone	
Models No.	:	SP1, HZ2654	
Model difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name for commercial.	
Product Description	:	Operation Frequency: Bluetooth(BLE):2402~2480MHz	
		Number of Channel:	Bluetooth:79 Channels BLE: 40 channels
		Max Peak Output Power:	Bluetooth: 5.01 dBm(GFSK) BLE: 4.50 dBm
		Antenna Gain:	1 dBi Integral Antenna
		Modulation Type:	GFSK 1Mbps(1 Mbps) π/4-DQPSK(2 Mbps) 8-DPSK(3 Mbps)
Power Supply	:	DC Voltage supplied from Host System by USB cable DC power by Li-ion Battery	
Power Rating	:	DC 5.0V by USB cable. DC 3.7V 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	3.70	±0.5	2.63	0.815	**3.0**
2.441	5.01	±0.5	3.56	1.111	**3.0**
2.480	4.50	±0.5	3.16	0.996	**3.0**
Bluetooth Mode (π /4-DQPSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	3.21	±0.5	2.35	0.728	**3.0**
2.441	4.60	±0.5	3.24	1.011	**3.0**
2.480	3.73	±0.5	2.65	0.834	**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	3.34	±0.5	2.42	0.750	**3.0**
2.441	4.70	±0.5	3.31	1.035	**3.0**
2.480	3.97	±0.5	2.80	0.882	**3.0**
BLE(GFSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	3.86	±0.5	2.729	0.846	**3.0**
2.442	4.50	±0.5	3.162	0.988	**3.0**
2.480	3.68	±0.5	2.618	0.825	**3.0**

So standalone SAR measurements are not required.