RF Exposure Evaluation

FCC ID: 2AH9K-TT810BT

1. Client Information

Applicant : Shenzhen Tianzhihong Electronic Co.,Ltd

Address : 3-4/F, Bldg 1 Huafeng Logistics Industrial Park, 11th Dayang Road, Fuyong Street, Baoan, Shenzhen, Guangdong, China

Manufacturer : Shenzhen Tianzhihong Electronic Co.,Ltd

Address : 3-4/F, Bldg 1 Huafeng Logistics Industrial Park, 11th Dayang Road, Fuyong Street, Baoan, Shenzhen, Guangdong, China

2. General Description of EUT

EUT Name	:	Portable Bluetooth Speaker	
Models No.	:	TT810BT, TT740BT, TT610BT, TT630BT	
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is color.	
Product Description	:	Operation Frequency: Bluetooth 2.1+EDR:2402~2480MHz	
		Number of Channel:	Bluetooth:79 Channels
		Max Peak Output Power:	Bluetooth: 4.041dBm(π/4-DQPSK)
		Antenna Gain:	2 dBi PCB Antenna
		Modulation Type:	GFSK 1Mbps(1 Mbps) π/4-DQPSK(2 Mbps)
Power Supply	:	DC Voltage supplied from Host System by USB cable. DC power by Li-ion Battery.	
Power Rating	:	DC 5V by USB Cable from PC system. DC 3.7V by 1800mAh 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	1.763	±0.5	1.684	0.522	**3.0**
2.441	2.741	±0.5	2.109	0.659	**3.0**
2.480	3.246	±0.5	2.369	0.746	**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	2.585	±0.5	2.035	0.631	**3.0**
2.441	3.530	±0.5	2.529	0.790	**3.0**
2.480	4.041	±0.5	2.845	0.896	**3.0**

So standalone SAR measurements are not required.