RF Exposure Evaluation

FCC ID: 2AGGTA602BT4

1. Client Information

Applicant : Austin-Whitman Mfg. Group LLC

Address : 508 Performance Rd. Mooresville, NC 28115, United States

Manufacturer : Tongxiang Welldragon Co., Ltd.

Address : NO.9 East Park Road, Tudian, Tongxiang, Zhejiang, China P.C

2. General Description of EUT

EUT Name	:	Bluetooth Stereo Amplifier	
Models No.	:	CS-A602BT, CS-A602BT-A, CS-A602BT-B, CS-A602BT-C	
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 4.0(BLE): 2402MHz~2480MHz
		Number of Channel:	Bluetooth 4.0(BLE): 40 channels **see note(3)**
		RF Output Power:	6.675 dBm Conducted Power
		Antenna Gain:	0 dBi PCB Antenna
		Modulation Type:	GFSK
		Bit Rate of Transmitter:	1Mbps(GFSK)
Power Supply	:	DC power by battery.	
Power Rating	:	DC 12V battery.	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note:

More test information about the EUT please refer to 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 v06.

(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						
BLE Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	4.445	5.500±1.5	7.000	5.012	1.554	**3.0**
2.442	6.154	5.500±1.5	7.000	5.012	1.566	**3.0**
2.480	6.675	5.500±1.5	7.000	5.012	1.579	**3.0**

So standalone SAR measurements are not required.

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