

RF Exposure Evaluation

FCC ID: 2AA5V-F4056591

1. Client Information

Applicant : Krischerco World-Wide Co.
Address : 13/F-8, 155 Keelung Rd. Sec.1, Taipei, Taiwan
Manufacturer : SHENZHEN Moccer Industrial Co., Ltd
Address : 3F, 1st Building CaiFa Industrial Park, RenMing Rd., Guan Lan, Shenzhen, China

2. General Description of EUT

EUT Name	:	WIRELESS SHOWER SPEAKER	
Models No.	:	F4056591, PP#5268143	
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 3.0: 2402~2480MHz	
		Number of Channel:	Bluetooth:79 Channels
		Max Peak Output Power:	Bluetooth: 4.543 dBm(8-DPSK)
		Antenna Gain:	1.2 dBi PCB 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 by 800mAh 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:

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

- [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)] * $[\sqrt{f_{\text{GHz}}}] \leq 7.5.0$ 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	3.003	±0.5	2.240	0.694	3.0
2.441	3.281	±0.5	2.388	0.746	3.0
2.480	3.519	±0.5	2.523	0.795	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	3.553	±0.5	2.543	0.788	3.0
2.441	3.844	±0.5	2.719	0.850	3.0
2.480	4.083	±0.5	2.873	0.905	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	4.024	±0.5	2.834	0.878	3.0
2.441	4.340	±0.5	3.048	0.952	3.0
2.480	4.543	±0.5	3.194	1.006	3.0

So standalone SAR measurements are not required.