

RF Exposure Evaluation

FCC ID: 2ASCK-2

1. Client Information

Applicant	:	Dongguan Green Power One Co.,Ltd
Address	:	No.26, Hongyun Street, Qingxi Town, Dongguan City, Guangdong province, China
Manufacturer	:	Dongguan Green Power One Co.,Ltd
Address	:	No.26, Hongyun Street, Qingxi Town, Dongguan City, Guangdong province, China

2. General Description of EUT

EUT Name	:	True Wireless Earbuds with Charging Case	
Models No.	:	ARBT10,PTBT16,GBH02	
Model Difference	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is the difference in packing and model.	
Product Description	:	Operation Frequency:	Bluetooth: 2402~2480 MHz
		RF Output Power:	Bluetooth: 1.073 dBm(Max) BLE: -0.813 dBm(Max)
		Antenna Gain:	-0.58dBi PCB Antenna
Power Rating	:	DC 5.0V by USB. DC 3.7V by 65mAh Li-ion battery.	
Software Version	:	N/A	
Hardware Version	:	N/A	
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 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:

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

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

2. Calculation:

Test separation: 5mm						
Bluetooth Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	0.968	1±1	2	1.585	0.491	3.0
2.441	1.073	1±1	2	1.585	0.495	3.0
2.480	0.678	1±1	2	1.585	0.499	3.0
Bluetooth Mode (Pi/4-DQPSK)						
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	0.454	0±1	1	1.259	0.390	3.0
2.441	0.730	0±1	1	1.259	0.393	3.0
2.480	0.334	0±1	1	1.259	0.397	3.0

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	-1.282	-1±1	0	1.000	0.310	3.0
2.442	-0.813	-1±1	0	1.000	0.313	3.0
2.480	-1.281	-1±1	0	1.000	0.315	3.0

Test separation: 5mm	
The worst RF Exposure Evaluation	
Worst Calculation Value	Threshold Value
0.499	3.0

The worst RF Exposure Evaluation is $0.499 / cm^2 < limit 3.0$, So standalone SAR measurements are not required.

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