

# RF Exposure Evaluation

## FCC ID: 2AGGR-B10

### 1. Client Information

<b>Applicant</b>	:	Shenzhen Rivers Technology Co.,Ltd
<b>Address</b>	:	Block B,1St, 6 floor,Taiming Industrial Park, Youlian Road, Minzhi Street, Longhua District, Shenzhen China Code:518131
<b>Manufacturer</b>	:	Shenzhen Rivers Technology Co.,Ltd
<b>Address</b>	:	Block B,1St, 6 floor,Taiming Industrial Park, Youlian Road, Minzhi Street, Longhua District, Shenzhen China Code:518131

### 2. General Description of EUT

<b>EUT Name</b>	:	Wireless Touch Keyboard	
<b>Models No.</b>	:	B10 Pro, B11 Pro, B12 Pro, B13 Pro, B14 Pro, B15 Pro, B16 Pro, B17 Pro, B18 Pro, B19 Pro, B20 Pro	
<b>Model Different</b>	:	All these models are the same PCB, layout and electrical circuit, the only difference is Silk screen layout	
<b>Product Description</b>	:	Operation Frequency:	Bluetooth V4.0: 2402MHz~2480MHz
		RF Output Power:	BLE:-2.375dBm (Max)
		Antenna Gain:	2 dBi PCB Antenna
<b>Power Rating</b>	:	Input:DC 5V 1.5A DC 3.7V 4000mAh by Li-ion battery	
<b>Software Version</b>	:	V10	
<b>Hardware Version</b>	:	V02	
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual	
<b>Remark</b>	:	The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	

**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  $\leq 5$  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						
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	-2.375	$-2 \pm 1$	-1	0.794	0.246	3.0
2.442	-3.475	$-3 \pm 1$	-2	0.631	0.197	3.0
2.480	-4.861	$-4 \pm 1$	-3	0.501	0.158	3.0

So standalone SAR measurements are not required.

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