

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	RGB Controller
Model Name	RG100, RG101, RG102
FCC ID	WBQRG1XX

2. EVALUATION METHOD

According to 447498 D01 General RF Exposure Guidance v05

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

Where $f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

3. CALCULATION

BLE:

$$P_t = 0.284 \text{ dBm} = 1.07 \text{ mW}$$

The value of the Maximum output power P_t is referred to the test report of the CFR47 §15.247.

The result for RF exposure evaluation $\text{SAR} = (1.07 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.402 \text{ GHz}}] = 0.33 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

4. CONCLUSION

The SAR evaluation is not required.