

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	DS-Beacon-06
Model Name	DS-Beacon-06
FCC ID	2AV9TDS-BEACON-06

2. EVALUATION METHOD

According to 447498 D01 General RF Exposure Guidance v06

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:

GFSK 1Mbps:

$$P_t = -2.109\text{dBm} = 0.62\text{mW}$$

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 $\text{SAR} = (0.62\text{mW} / 5\text{mm}) \cdot [\sqrt{2.480\text{GHz}}] = 0.20 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

GFSK 2Mbps:

$$P_t = -2.118\text{dBm} = 0.61\text{mW}$$

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 $\text{SAR} = (0.61\text{mW} / 5\text{mm}) \cdot [\sqrt{2.402\text{GHz}}] = 0.19 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

4. CONCLUSION

The SAR evaluation is not required.