

RF Exposure Requirements

Product Description: Full Color LCD Digital Marine Receiver

Model No.: EMR-7BT

FCC ID: 2A7R5-EMR7BT

According to the KDB 447498 D01 v06 section 4.3.1, for 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

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

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

- The result is rounded to one decimal place for comparison

Calculation Result:

Tx frequency range: 2402-2480MHz

Min. test separation distance: 5mm

Maximum Conducted Output Power: 4.65dBm

Tune-Up output power: 5.0dBm

RF channel transmit frequency: 2480MHz

Result: 0.98

Limit: 3.0

The exclusion thresholds is $0.98 < 3$, so the transmitter complies with the RF exposure requirements and the SAR is not required.