

RF Exposure Evaluation

FCC ID: X2VQTR000X4

The EUT is a wireless device bracket-mounted to any type of valve or actuator.

The maximum conducted power specified in manual is 3dBm; therefore, to comply with RF Exposure Requirement, the SAR evaluation is considered.

The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances ≤ 50 mm is determined by:

$$\begin{aligned} &[(\text{max. power of channel(average), including tune-up tolerance, mW})/(\text{min. test separation distance,mm})]*[\text{SQRT}(f(\text{GHz}))] \\ &= [2/5]*[\text{SQRT}(2.48)] \\ &= 0.63. \end{aligned}$$

Since the above calculation is less than 3.0, the product fulfils the RF exposure requirement without SAR testing.

Remark:

1. When the minimum test separation distance is $< 5\text{mm}$, a distance of 5mm is applied to determine SAR test exclusion.