RF Exposure Requirements

Product Description: SEGA Genesis BIG6 Wireless Arcade Pad 8 Button - 2.4GH
Model No.: RB-SGA-054, RB-SGA-091, RB-SGA-092, RB-SGA-093, RB-SGA-094, RB-SGA-095, RB-SGA-096, RB-SGA-097, RB-SGA-098, RB-SGA-099
FCC ID: 2ARPVRB-SGA-054

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:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
- f(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: 2410-2470MHz
Min. test separation distance: 5mm
Max. Field Strength: 101.65dBuV/m
Antenna gain: 1.5 (dBi)
EIRP=E-104.8+20logD=101.65-104.8+20log3=6.39dBm
Maximum Conducted Output Power=EIRP- Antenna Gain=6.39-1.5=4.89 dBm
Tune-Up output power: 5.0dBm
RF channel transmit frequency: 2410MHz
Result: 1.0
Limit: 3.0

The exclusion thresholds is 1.0 < 3.0, so the transmitter complies with the RF exposure requirements and the SAR is not required.