

RF Exposure evaluation

FCC ID: 2AJEM-HY777

1. Reference

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(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

And;

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:

- 1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$ mW, for 100 MHz to 1500 MHz

2. Test distance

As the plot exhibit below, the nearest distance of body to the Antenna (TALK-to-Antenna) is 100mm.



3. Result

Power allowed at 50mm= $7.5/[\sqrt{f(\text{GHz})}] * 50 = 7.5/[\sqrt{0.4626375}] * 50 = 551.3290183 \text{mW}$

SAR test exclusion thresholds={ [Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·(f(MHz)/150)] } mW= $551.3290183 + (100-50) * (462.6375/150) = 705.5415183 \text{mW} = 28.49 \text{dBm}$

4. Conclusion

The Rate Power with including tune-up tolerance is $0.5 \text{W} (27 \text{dBm}) < 28.49 \text{dBm}$, extremity SAR test is not required.