

10 Appendix A - General Product Information

Radiofrequency radiation exposure evaluation

This exposure evaluation is intended for **FCC ID: ZZN-FB100**

According to KDB 447498 D01v06 section 4.3.1, For frequencies between 100 MHz to 6GHz and test separation distances \leq 50 mm, the Numeric threshold is determined as:

Step a)

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

>> The fundamental frequency of the EUT is 2402-2480MHz,
the test separation distance is \leq 50mm.

(Here calculated it as the worst-case, define the distance is 5mm)

Step b)

>> Numeric threshold (2402MHz), mW / 5mm * $\sqrt{2.402\text{GHz}}$ \leq 3.0
Numeric threshold (2402MHz) \leq 9.678mW

>> Numeric threshold (2440MHz), mW / 5mm * $\sqrt{2.440\text{GHz}}$ \leq 3.0
Numeric threshold (2440MHz) \leq 9.602mW

>> Numeric threshold (2480MHz), mW / 5mm * $\sqrt{2.480\text{GHz}}$ \leq 3.0
Numeric threshold (2480MHz) \leq 9.525mW

>> The power (measured + tune up tolerance) of EUT at 2402MHz is: -1.86dBm = 0.652mW
The power (measured + tune up tolerance) of EUT at 2440MHz is: -2.11dBm = 0.615mW
The power (measured + tune up tolerance) of EUT at 2480MHz is: -1.77dBm = 0.665mW

Which is smaller than the Numeric threshold.

Therefore, the device is exempt from stand-alone SAR test requirements.

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