

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 (2457MHz), mW / 5mm * $\sqrt{2.457\text{GHz}}$ \leq 3.0

Numeric threshold (2457MHz) \leq 9.569mW

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

Numeric threshold (2480MHz) \leq 9.525mW

>> The maximum power (calculated power + tune up tolerance) of EUT at 2402-2480MHz is:
0.008mW

Which is smaller than the Numeric threshold.

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

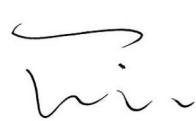
Power calculation (According to C63.10 chapter 9.5)

	2402	2440	2457	2480	MHz
Field Strength Measured (E)	74.78	72.70	72.93	72.17	dB μ V/m
Measurement Distance (D)	3	3	3	3	m
Equivalent Isotropically Radiated Power (E.I.R.P in dBm)	-20.38	-22.46	-22.23	-22.99	dBm
Equivalent Isotropically Radiated Power (E.I.R.P in mW)	0.009	0.006	0.006	0.005	mW

Remark: EIRP = E + 20log(D) -104.7

(EIRP is in dBm, E is in dB μ V/m, D is in metres)

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