

10 Appendix A – General Product Information

Radiofrequency radiation exposure evaluation

This exposure evaluation is intended for FCC ID: 2AA2X-15000345

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

Step a)

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

Step b)

{[Power allowed at numeric threshold for 50mm in step a)] + [(test separation distance – 50mm) \cdot (f(MHz)/150)]} mW

Step c) 1)

For test separation distances > 50mm and < 200mm, the power threshold at the corresponding test separation distance at 100MHz in step b) is multiplied by $[1 + \log(100/f(MHz))]$

Step c) 2)

For test separation distances \leq 50mm, the power threshold determined by the equation in c) 1) for 50mm and 100MHz is multiplied by $\frac{1}{2}$.

>> The fundamental frequency of the EUT is 125kHz, the test separation distance is ≤ 50mm. (Manufacturer specified the separation distance is: 20mm)

Step a)

>> Numeric threshold, mW / 50mm * $\sqrt{0.1GHz} \le 3.0$ Numeric threshold ≤ 474.3 mW

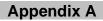
Step b)

>> Numeric threshold ≤ 474.3mW + (50mm-50mm) * 100MHz/150) Numeric threshold ≤ 474.3mW

Step c) 1) & c) 2)

>> Numeric threshold ≤ 474.3mW * [1 + log 100/100MHz] * ½ Numeric threshold ≤ 237.15mW

>> The power (calculated power + tune up tolerance) of EUT at 125kHz is: 0.00001mW 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)

	Value	Unit
Field Strength Measured (E)	45.76	dBµV/m
Measurement Distance (D)	3	m
Equivalent Isotropically Radiated Power (E.I.R.P in dBm)	-49.4	dBm
Equivalent Isotropically Radiated Power (E.I.R.P in mW)	0.00001	mW

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

(EIRP is in dBm, E is in $dB\mu V/m$, D is in meters)

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