

NX1 SAR threshold level letter

1. Standalone SAR test exclusion threshold

The SAR Exclusion Threshold in KDB 447498 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

Per FCC KDB 447498 D01v05, the SAR exclusion threshold for distances < 50 mm is defined by the following equation:

$$\frac{\text{Max Power of Channel (mW)}}{\text{Test Separation Distance (mm)}} * \sqrt{\text{Frequency(GHz)}} \leq 3.0$$

Per FCC KDB 447498 D01v05, At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following equation:

$$[(\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) * 10] \text{ mW}$$

at > 1500 MHz and ≤ 6 GHz

Antenna	Frequency (MHz)	Output power		Separation distances (mm)						SAR Exemption					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
WiFi - Main Antenna															
802.11b	2462	15.00	32	22	2.3	45	133	31	25	EXMPT	10.04 Measure	EXMPT	EXMPT	EXMPT	EXMPT
802.11a	5260	10.50	11	22	2.3	45	133	31	25	EXMPT	5.05 Measure	EXMPT	EXMPT	EXMPT	EXMPT
802.11a	5320	10.50	11	22	2.3	45	133	31	25	EXMPT	5.07 Measure	EXMPT	EXMPT	EXMPT	EXMPT
802.11a	5700	13.00	20	22	2.3	45	133	31	25	EXMPT	9.55 Measure	EXMPT	EXMPT	EXMPT	EXMPT
802.11a	5825	11.50	14	22	2.3	45	133	31	25	EXMPT	6.76 Measure	EXMPT	EXMPT	EXMPT	EXMPT
Bluetooth - Antenna															
Bluetooth	2437	9.50	9	22	2.3	45	133	31	25	EXMPT	EXMPT	EXMPT	EXMPT	EXMPT	EXMPT

Based on the maximum tune-up tolerance limit of 802.11a/b/g/n the antenna to use separation distance, Table "EXEMPT" SAR was not required and Table "Measure" SAR was required.

2. EUT Antenna Separation Distances

