

For FCC Standalone SAR test exclusion considerations

FCC ID: 2AGV2UMA

Range
F(MHz)
2400-2480

According to **KDB 447498 D01 General RF Exposure Guidance v06**

#### 4.3.1 Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq$  50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$

- $f(\text{GHz})$  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
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is  $\leq$  50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $<$  5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances  $>$  50 mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:

- [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)  $\cdot$  ( $f(\text{MHz})/150$ )] mW, at 100 MHz to 1500 MHz
- [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)  $\cdot$  10] mW at  $>$  1500 MHz and  $\leq$  6 GHz

3) The 1-g and 10-g SAR test exclusion thresholds for below 100 MHz at test separation distances  $\leq$  50 mm are determined by:

- The power threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $>$  50 mm and  $<$  200 mm
- The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq$  50 mm
- SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable. Note: when the minimum test separation distance is  $<$  5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Based on Step1):

Band	Exposure Condition	Pmax	Pmax	Distance	f(GHz)	calculation result	Stand-alone	SAR Test
		(dBm)	(mw)	(mm)			Test exclusion threshold	
BT 3.0	Body	6.467	4.43	5	2.480	1.40	3.00	No
BLE	Body	6.91	4.91	5	2.480	1.55	3.00	No

Note: Pmax is the higher values of the conducted and radiated power.

Conclusion: 2400MHz-2480MHz SAR was not required.