RF Exposure evaluation

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

The 1-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] • [√f(GHz)] ≤ 3.0 for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- When the minimum test separation distance is < 5 mm, a distance of 5 mm according is applied to determine SAR test exclusion.

The worst case (refer to report ST9320 FCC18030080A) is below:

Operational Mode: π/4-DQPSK								
Channel	Max. Power (dBm)	Max. Power (mW)	Tune Up Power (dBm)	Max. Tune Up Power (dBm)	Max. Tune Up Power (mW)	Test Distance (mm)	Result	Standalone SAR test exclusion Threshold
Lowest	2.51	1.78	3.0±1.0	4.0	2.51	<5.00	0.36	3.00
Middle	2.30	0.67	3.0±1.0	4.0	2.51	<5.00	0.37	
highest	2.20	0.50	3.0±1.0	4.0	2.51	<5.00	0.37	
Conclusion: the calculated value ≤3.0, SAR is exempted.								