RF Exposure Evaluation Report

1. Standalone SAR Test Exclusion Considerations

According to KDB 447498 D01 General RF Exposure Guidance v06 and part 2.1093，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 Test Exclusion Threshold condition is satisfied.

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity 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
The result is rounded to one decimal place for comparison

For standalone SAR test exclusion, the result as below:

Transmission Mode	Max Conducted Power (dBm)	Tune-up (dBm)	Max Power (mW)	Frequency (MHz)	Distance (mm)	Result	Limit
2.4GHz WLAN_ANT1	9.87	9(±1)	10	2412	20	0.7765	3.0
2.4GHz WLAN_ANT2	11.21	11(±1)	15.849	2412	20	1.2307	3.0
5.2GHz WLAN_ANT1	6.13	6(±1)	5.012	5180	20	0.5704	3.0
5.2GHz WLAN_ANT2	5.97	5(±1)	3.98	5180	20	0.4529	3.0
5.8GHz WLAN_ANT1	6.45	6(±1)	5.01	5785	20	0.6025	3.0
5.8GHz WLAN_ANT2	6.47	6(±1)	5.01	5785	20	0.6025	3.0

So a SAR test is not required.

2. Simultaneous Transmission SAR Test Exclusion Considerations

According to KDB 447498 D01 General RF Exposure Guidance v06 and part 2.1093, Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration.

When an antenna qualifies for the standalone SAR test exclusion of section 1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to the following to determine the simultaneous transmission SAR test exclusion criteria:
1) [(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]·[√f(GHz)/x] W/kg, for test separation distances ≤ 50 mm;
where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR.

2) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distance is > 50 mm.

For simultaneous transmission analysis, WLAN SAR is estimated as below:

Transmission Mode	Max. Power (mW)	Frequency (MHz)	Distance (mm)	X	SAR(1g) W/kg
2.4GHz WLAN_ANT1	10	2412	20	7.5	0.1035
2.4GHz WLAN_ANT2	15.849	2412	20	7.5	0.1641
5.2GHz WLAN_ANT1	5.012	5180	20	7.5	0.076
5.2GHz WLAN_ANT2	3.98	5180	20	7.5	0.0604
5.8GHz WLAN_ANT1	5.01	5785	20	7.5	0.0803
5.8GHz WLAN_ANT2	5.01	5785	20	7.5	0.0803

The maximum SAR summation is calculated based on the simultaneous transmission configurations.

No.	Configurations	ANT 0 SAR W/kg	ANT 1 SAR W/kg	Sum SAR W/kg
1	2.4GHz WLAN_ANT1+2.4GHz WLAN_ANT2	0.1035	0.1641	0.2676
2	5.2GHz WLAN_ANT1+5.2GHz WLAN_ANT2	0.076	0.0604	0.1364
3	5.8GHz WLAN_ANT1+5.8GHz WLAN_ANT2	0.083	0.083	0.166

The sum of SAR is less than the limit of 0.4W/kg, So a simultaneous transmission SAR test is not required.