Appendix A: FCC Part 1.1307, 1.1310, 2.1091, 2.1093; IC RSS-102: RF Exposure

According to KDB 447498 D01 General RF Exposure Guidance v05 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.

Limits

The 1-g and 10-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 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 the calculation
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 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 is applied to determine SAR test exclusion.

EUT RF Exposure

The max conducted peak output power is 9.0 mW at 912 MHz.

The best case gain of the antenna is 0.24 numeric

EIRP= 9.0 mW x 0.24 = 2.2 mW (rounding to the nearest mW = 2 mW)

General RF Exposure = (2 mW / 5 mm) x √0.912 GHz = 0.4

Therefore, SAR test is not required since the result is below the ≤ 3.0 1-g SAR limit.

IC RSS-102 Issue 5 Technical Brief

Per section 2.5.1 Table 1, this device is exempt from SAR as the output power is less than the Exemption Limits at a separation distance of less than or equal to 5 mm.