

6. Measurement Data (continued)

6.7. Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1)), KDB 447498 D01 v06, RSS-GEN 5.5, RSS 102

6.7.1. SAR Test Exclusion

Requirement: Portable devices are subject to radio frequency radiation exposure requirements as explained in FCC KDB 447498 D01 General RF Exposure Guidance v06, dated October 23, 2015.

For a 1-g SAR, the test exclusion result must be ≤ 3.0 and ≤ 7.5 for 10-g extremity SAR.

Test Notes: 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 the following formula:

$$\text{SAR Test Exclusion} = \frac{P_{\text{MAX}}}{d_{\text{MIN}}} \times \sqrt{f_{(\text{GHz})}} \quad (1)$$

P_{MAX} mW Maximum power of channel, including tune-up tolerance

d_{MIN} mm Minimum test separation distance, mm (≤ 50 mm)

$f_{(\text{GHz})}$ GHz $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz (>100 MHz and <6 GHz)

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

The values 3.0 and 7.5 are referred to as numeric thresholds below

Per KDB 447498 Appendix A SAR Exclusion Threshold at 50 mm is 274 mW at 300 MHz. Extremity SAR is 2.5 times this value or 685 mW at 300 MHz.

The manufacturer's mechanical drawing shows the distance of the EUT's antenna to the handle is 160 mm (see attached page).

Per KDB 447498 Appendix B the approximate power exclusion is 494 mW at 160 mm and 300 MHz.

$$\text{SAR Test Exclusion} = P((\text{numeric threshold}) + (160 - 50 \text{ mm})) \times (f(\text{MHz}) / 150)$$

Per IC RSS-102, Section 2.5.1 Table 1 devices operating ≤ 300 MHz and at a separation distance ≥ 50 mm shall be at or below 345 mW.

The power of the EUT is -0.22 dBm or 0.95 mW and therefore meets the SAR Test exclusion requirements of KDB 447498 D01 and IC RSS-102.