

6. Measurement Data (continued)

6.8. Public Exposure to Radio Frequency Energy Levels (15.247(i) (1.1307 (b)(1)) RSS-GEN 5.5, RSS 102)

6.8.1. 15.247(i) (1.1307 (b)(1)) Requirements

Requirement: Portable devices are subject to radio frequency radiation exposure requirements.

For a 1-g SAR, the test exclusion result must be ≤ 3.0 .

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)

(1) FCC OET 447498 - Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

The following equation was used to determine the peak output power from the measured field strength:

$$P = \frac{(E \times d)^2}{(30 \times G)}$$

P = the power in Watts.

E = the measured maximum field in V/m.

From section 6.3 of this test report.

G = the numeric gain of the transmitting antenna over an isotropic radiator.

d = the distance in meters of the field strength measurement.

Result: The device under test meets the exclusion requirement detailed in FCC OET 447498.

Input:	P_{MAX}^1 (mW)	0.04
	d_{MIN} (mm)	5.00
	$f_{(\text{GHz})}$	0.434
Test Exclusion:		0.005
Limit Exemption:		3.000

¹ Calculated from the above equation.

6. Measurement Data (continued)**6.8. Public Exposure to Radio Frequency Energy Levels (15.247(i) (1.1307 (b)(1))
RSS-GEN 5.5, RSS 102) (continued)****6.8.2. RSS-102 Issue 5 Requirements**

Requirement: SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1. Portable devices are subject to radio frequency radiation exposure requirements.

Test Notes: The limit was taken from Table 1 of RSS-102 Issue 5.

Frequency (MHz)	Separation Distance (mm)	Maximum Power (mW)	RSS-102 Limit (mW)	Result
433.93	≤5	0.04	54.04	Compliant