

7. Measurement Data (continued)

7.12. Public Exposure to Radio Frequency Energy Levels (15.247(i) (1.1307 (b)(1)) RSS-GEN, ISSUE 4 5.5, RSS 102)

7.12.1. 15.247(i) (1.1307 (b)(1)) Requirements

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

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

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

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.

Results: Passed - The device under test meets the exclusion requirement detailed in FCC OET 447498.

Channel:	37	17	39	
Input ¹ :				
P_{MAX}	4.864	3.811	3.899	mW
d_{MIN} ²	5.00	5.00	5.00	mm
$f_{(\text{GHz})}$	2.402	2.440	2.480	GHz
Test Exclusion:	1.51	1.19	1.23	
Limit Exemption:	3.0	3.0	3.0	
Measurement Result:	Compliant	Compliant	Compliant	

¹ Taken from column 3 of the table in Section 7.3 of this test report.

² When the minimum test separation distance is < 5 mm, a distance of 5 mm according to KDB 447498, 4.1 f) is applied to determine SAR test exclusion.

Worst Case UWB and BLE Radios Combined

UWB Test Exclusion:	0.094	Channel 3
BLE Test Exclusion:	1.510	Channel 37
TOTAL:	1.604	
Limit Exemption:	3.0	

7. Measurement Data (continued)

7.12. Public Exposure to Radio Frequency Energy Levels (15.247(i) (1.1307 (b)(1)) RSS-GEN, ISSUE 4 5.5, RSS 102) (continued)

7.12.2. 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. For limb-worn devices where the 10 gram value applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 2.5.

Results: Compliant

Bluetooth Radio

Frequency	Separation Distance	Maximum Power	RSS-102 Limit	Result
MHz	mm	mW	mW	
2402	≤5	4.86	10.65	Compliant
2440	≤5	3.81	10.14	Compliant
2480	≤5	3.90	9.86	Compliant

UWB Radio

Frequency	Separation Distance	Maximum Power	RSS-102 Limit	Result
MHz	mm	mW	mW	
3498	≤5	0.186	5.01	Compliant
4000	≤5	0.185	4.46	Compliant
4492	≤5	0.221	3.92	Compliant