6. Measurement Data (continued)

6.11. Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1))

RSS-GEN, ISSUE 5, RSS 102

6.11.1. SAR Test Exclusion Calculation

Requirement: Portable devices as defined in § 2.1093 of this chapter operating under Part 15 are subject to radio frequency radiation exposure requirements as specified in §§ 1.1307(b) and 2.1093 of this chapter.

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:

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

P_{MAX}	mW	Maximum power of channel, including tune-up tolerance
d_{MIN}	mm	Minimum test separation distance, mm (≤ 50 mm)
$f_{(GHz)}$	GHz	$f_{(GHz)}$ 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.

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

Test Channel:		TX4	TX2	TX0
Input:	P_{MAX}[1] (mW)	97.05	100.46	103.04
	d_{MIN} (mm)	5.00	5.00	5.00
	$f_{(GHz)}$	1.922	1.925	1.928
Test Exclusion:		**26.91**	**27.88**	**28.62**
Limit Exemption:		**3.00**	**3.00**	**3.00**

[1] Taken from the table in Section 6.3 of this test report (converted to mW).

The device exceeds the test limit exemption and therefore a routine SAR Evaluation must be performed

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6. Measurement Data (continued)

6.11. Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1)) RSS-GEN, ISSUE 5, RSS 102 cont.

6.11.2. MPE Time Averaged Power Table

Channel	Frequency	DUT Output Power	DUT Antenna Gain	Calculated Output Power	Time Averaged Power	Limit	Result
	(MHz)	(dBm)	(dBi)	(mW)	(mW)	(mW)	
TX4	1921.536	19.87	0.59	111.17	4.41	100.00	Compliant
TX2	1924.992	20.02	0.45	111.43	4.42	100.00	Compliant
TX0	1928.448	20.13	0.62	118.85	4.71	100.00	Compliant

NOTE: Although the peak power is over the general exposure limit for RSS-102, the time averaged power is very small for DECT technology. In this case a nominal frame width of 381.75 µS repeating every 10 mS, and therefore is compliant with the general exposure requirements defined in RSS-102 Section 2.5.1. The reduction in power is calculated by 10 * LOG (0.3965 / 10) or -14.02 dB.

RSS-102 Section 2.5 and 2.5.1 Requirements:

All transmitters are exempt from routine SAR and RF exposure evaluations provided that output power complies with the power levels of sections 2.5.1 or 2.5.2. If the equipment under test (EUT) meets the requirements of sections 2.5.1 or 2.5.2, applicants are only required to submit a properly signed declaration of compliance (see Annex C).

SAR evaluation is required if the separation distance between the user and the radiating element of the device is less than or equal to 20 cm, except when the device operates as follows:

- above 1 GHz and up to 2.2 GHz inclusively, and with output power (i.e. the higher of the conducted or radiated (e.i.r.p.) source-based, time-averaged output power) that is less than or equal to 100 mW for general public use and 500 mW for controlled use

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