

**COMPLIANCE WORLDWIDE INC.
TEST REPORT 197-11A**

In Accordance with the Requirements of

**MPE Calculation for
FCC Part 15.247, Subpart C,
FCC Part 15 Subpart D
IC RSS-210, Issue 8,
IC RSS-213, Issue 2**

Issued to

**Revolabs, Inc.
144 North Road, Suite 3250
Sudbury, MA 01776**

For the

**flx Base Station
Model Number: 10-FLXBASE-POTS**

**FCC ID: T5V10FLX
IC: 6455A-10FLX**

Report Issued on August 3, 2011

Tested by



Brian F. Breault

Reviewed by



Larry K. Stillings

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RF Exposure Requirements: 1.1307(b)(1) and 1.1307(b)(2): Systems operating under the provision of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission’s guidelines.

RF Radiation Exposure Limit: 1.1310: As specified in this section, the Maximum Permissible Exposure (MPE) limit shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in Section 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of Sec 2.1093 of this chapter.

Test Results: Compliant. A summation of the power densities of each of the individual radios shows that the combination of the two radios are in compliance with the limit.

Channel	MPE Distance (cm)	DUT Output Power (dBm)	DUT Antenna Gain (dBi)	Power Density (mW/cm ²)	Power Density (W/m ²)	Limit (mW/cm ²)	Result
	(1)	(2)	(3)	(4)	(4)	(5)	
Bluetooth	20	3.512	2.00	0.0007111	0.0071110	1.00	Compliant
DECT	20	16.24	2.50	0.015	0.149	1.00	Compliant
SUM	20	N/A	N/A	0.0157111	0.1581110	1.00	Compliant

6. Measurement Data (continued) from Test Report #179-11R3

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

Channel Frequency	MPE Distance (cm)	DUT Output Power (dBm)	DUT Antenna Gain (dBi)	Power Density		Limit (mW/cm ²)	Result
				(mW/cm ²)	(W/m ²)		
	(1)	(2)	(3)	(4)		(5)	
2402	20.0	3.512	2.0	0.0007111	0.0071110	1	Compliant
2441	20.0	3.296	2.0	0.0006766	0.0067660	1	Compliant
2480	20.0	3.257	2.0	0.0006705	0.0067055	1	Compliant

$$PD = \frac{OP + AG}{(4 \times \pi \times d^2)}$$

- PD = Power Density (mW/cm²)
- OP = DUT Output Power (dBm)
- AG = DUT Antenna Gain (dBi)
- d = MPE Distance (cm)

- Reference CFR 2.1093(b): For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.
1. Reference CFR 2.1093(b): For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.
 2. Section 6.6 of this test report.
 3. Antenna gain is calculated from the measured field strength and maximum peak conducted output power.
 4. Power density is calculated from power measurement and antenna gain.
 5. Reference CFR 1.1310, Table 1: Limits for Maximum Permissible Exposure (MPE), Section (B): Limits for General Population/Uncontrolled Exposure.

6. Measurement Data (continued)**6.13. Public Exposure to Radio Frequency Energy Levels (15.247(i) (1.1307 (b)(1)) RSS-GEN 5.5, RSS 102**

Channel	Channel Frequency (MHz)	Measured Power (dBm)	Measured Output Power (mW)
Low	2402	3.51	2.2449
Middle	2441	3.30	2.1360
High	2480	3.26	2.1169

RSS-102 Section 2.5, 2.5.1 & 2.5.2 Requirements:

2.5 - 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).

2.5.1 - 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 2.2 GHz and up to 3 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 20 mW for general public use and 100 mW for controlled use

2.5.2 - RF exposure evaluation is required if the separation distance between the user and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- at or above 1.5 GHz and the maximum e.i.r.p. of the device is equal to or less than 5 W.

6. Measurement Data (continued) from Test Report #197-11

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

RSS-GEN 5.5, RSS 102

6.11.1. MPE Power Density Table

Channel	MPE Distance (cm)	DUT Output Power (dBm)	DUT Antenna Gain (dBi)	Power Density		Limit (mW/cm2)	Result
				(mW/cm2)	(W/m2)		
	(1)	(2)	(3)	(4)		(5)	
TX4	20	16.13	2.50	0.015	0.145	1	Compliant
TX2	20	16.23	2.50	0.015	0.149	1	Compliant
TX0	20	16.24	2.50	0.015	0.149	1	Compliant

$$PD = \frac{OP + AG}{(4 \times \pi \times d^2)}$$

PD = Power Density
 OP = DUT Output Power (dBm)
 AG = Antenna Gain (dBi)
 D = MPE Distance

- Reference CFR 2.1093(b): For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.
- Section 6.3 of this test report.
- Data supplied by the client.
- Power density is calculated from conducted power output measurement and antenna gain.
- Reference CFR 1.1310, Table 1: Limits for Maximum Permissible Exposure (MPE), Section (B): Limits for General Population/Uncontrolled Exposure.

RSS-102 Section 2.5, 2.5.1 & 2.5.2 Requirements:

2.5 - 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).

2.5.1 - 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 2.2 GHz and up to 3 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 20 mW for general public use and 100 mW for controlled use

2.5.2 - RF exposure evaluation is required if the separation distance between the user and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- at or above 1.5 GHz and the maximum e.i.r.p. of the device is equal to or less than 5 W.