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## RF Exposure Evaluation Report

<b>APPLICANT</b>	RADIO SOLUTIONS, INC.
	70 ACCORD PARK DRIVE NORWELL, MA. 02061 USA
<b>FCC ID</b>	2AHVPSB800M2A
<b>MODEL NUMBER</b>	SB800M2A
<b>PRODUCT DESCRIPTION</b>	800 MHz CLASS B SIGNAL BOOSTER/BDA
<b>STANDARD APPLIED</b>	CFR 47 Part 2.1091
<b>PREPARED BY</b>	Cory Leverett

We, TIMCO ENGINEERING, INC. would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and meets the requirements.

The attached report shall not be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

## GENERAL REMARKS

### Attestations

This equipment has been evaluated in accordance with the standards identified in this report. To the best of my knowledge and belief, these evaluations were performed using the procedures described in this report.

I attest that the necessary evaluations were made, under my supervision, at:

**Timco Engineering Inc.**  
**849 NW State Road 45**  
**Newberry, FL 32669**



### Authorized Signatory Name:

Cory Leverett

Engineering Project Manager

**Date: 12/ 15/ 2016**

## RF Exposure Requirements

### General information

Device type: 800 MHz CLASS B SIGNAL BOOSTER/ BDA

### Antenna

The manufacturer does not specify an antenna, but a typical antenna has a gain of 6 dBi.

Configuration	Antenna p/n	Type	Max. Gain (dBi)
Fixed mounted	Any	omni	6

### Operating configuration and exposure conditions:

The limit for conducted output power is shown in the table below. Typical use qualifies for a maximum duty cycle factor of 100%.

### MPE Calculation:

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.11310, Table 1.

Insert values in yellow highlighted boxes to determine Minimum Separation Distance					
Max Power	5	W	<i>equals</i>	Max Power	5000 mW
Duty Cycle	100	%	<i>equals</i>	Duty Factor	1 numeric
Antenna Gain	6	dBi	<i>equals</i>	Gain numeric	3.981072 numeric
Coax Loss	0	dB		Gain - Coax Loss	3.981072 numeric
Power Density	0.6	mW/cm <sup>2</sup>			
<b>Enter power Density from the chart to the right</b>				<b>Rule Part 1.1310, Table 1 (B)</b>	
Frequency	860	MHz		Frequency range	Power density <b>Enter this value</b>
				MHz	mW/cm <sup>2</sup> mW/cm <sup>2</sup>
				0.3-1.34	100 <b>100</b>
				1.34-30	180/f <sup>2</sup> <b>0.0</b>
				30-300	0.2 <b>0.2</b>
				300-1,500	f/1500 <b>0.6</b>
				1,500-100,000	1 <b>1</b>
				f = frequency in MHz	
<b>Minimum Separation Distance</b>		<b>51 cm</b>		<b>0.51 m</b>	
Minimum Separation in Inches	20 Inches				