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## RF Exposure Evaluation Report

|                            |                                                |
|----------------------------|------------------------------------------------|
| <b>APPLICANT</b>           | RADIO SOLUTIONS, INC.                          |
|                            | 70 ACCORD PARK DRIVE<br>NORWELL, MA. 02061 USA |
| <b>FCC ID</b>              | 2AHVPSB150M2A                                  |
| <b>MODEL NUMBER</b>        | SB150M2A                                       |
| <b>PRODUCT DESCRIPTION</b> | VHF PART 90 INDUSTRIAL BOOSTER                 |
| <b>STANDARD APPLIED</b>    | CFR 47 Part 2.1091                             |
| <b>PREPARED BY</b>         | Christian Pawlak                               |

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:**

Christian Pawlak, Assistant Lab Manager

**Date:** 8/14/2017

## RF Exposure Requirements

### General information

Device type: VHF PART 90 INDUSTRIAL BOOSTER

### Antenna

The manufacturer does not provide an antenna, but a 2.15 dBi dipole will be assumed as FCC Rule Part 90.219(e)(1) limits output power to 5 Watts ERP.

### MPE Calculation:

The limit for general uncontrolled exposure environment for this band is shown in FCC rule Part 1.1310, Table 1. At 150 MHz the limit is  $150 / 1500 = 0.1 \text{ mW/cm}^2$ .

Power density in  $\text{mW/cm}^2$  can be determined as  $PD = \frac{P * G}{4 * \pi * D^2}$  with P in mW, G of 1.64 for a 2.15 dBi dipole, and D in cm. This can be rearranged as  $D = \sqrt{\frac{P * G}{4 * \pi * PD}}$  and calculated as  $\sqrt{\frac{5000 \text{ mW} * 1.64}{4 * \pi * 0.1 \frac{\text{mW}}{\text{cm}^2}}} = 80.78 \text{ cm}$ .