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TIMCO ENGINEERING, Inc.

An IIA Company

RF Exposure Evaluation Report

APPLICANT	Radio Solutions, Inc.
ADDRESS	55 Accord Park Drive Norwell MA 2061
FCC ID	2AHVPSB7800M3A, 2AHVPSB7800M3B
MODEL NUMBER	SB7800M3A, SB7800M3B
PRODUCT DESCRIPTION	700/800 MHz Industrial Booster
DATE SAMPLE RECEIVED	07/21/2020
FINAL TEST DATE	08/03/2020
PREPARED BY	Franklin Rose
TEST RESULTS	☒ PASS ☐ FAIL

Report Number	Report Version	Description	Issue Date
2543-20 MPE_TestReport_	Rev1	Initial Issue	08/03/2020
2543-20 MPE_TestReport_	Rev2	Updated Address & Issue Date	08/24/2020

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GENERAL REMARKS

Summary

The device under test does:

☒ Fulfill the general approval requirements as identified in this test report and was selected by the customer.

☐ Not fulfill the general approval requirements as identified in this test report

Attestations

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

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

I attest that the necessary measurements were made at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669
Designation #: US1070

Prepared by:

Name and Title	Franklin Rose, Project Manager / EMC Specialist
Date	08/18/2020

EUT INFORMATION

EUT Description	700/800 MHz Industrial Booster		
Model Number	SB7800M3A, SB7800M3B		
Modified for Testing	☐		
Modification			
Antenna Connector	☐ UHF	☐ BNC	☒ N
	☐ TNC	☐ SMA	☐ Other
EUT Power Source	☐ AC Power (110-120 V)	☒ DC Power (28 V)	☐ DC Battery (7.4 V)
Test Item	☐ Engineering Prototype	☒ Pre-Production	☐ Post-Production
Type of Equipment	☒ Fixed	☐ Mobile	☐ Portable

ANTENNA INFORMATION

Manufacturer Provides Antenna	Type	Max Gain (dBi)
No	Unspecified	**0 dBi**

FCC MPE SEPARATION

EUT Parameters		
Parameter	**Value**	**Unit**
EUT Form Factor	Fixed	
Lowest Frequency	763.000	MHz
Highest Frequency	862.000	MHz
Maximum Power	5.000	W
Tune Up Tolerance	0.000	+/- W
Duty Cycle	100%	%
Antenna Gain	0.000	dBi EIRP
Coax Loss	0.000	dB
EIRP	5.000	W

Uncontrolled Public RF Exposure/MPE Guideline	
Separation Distance (cm)	27.97 cm
Power Density (mW/cm^2)	0.509 mW/cm2

Controlled Occupational RF Exposure/MPE Guideline	
Separation Distance (cm)	20 cm
Power Density (mW/cm^2)	0.995 mW/cm2

FCC MPE CALCULATION

Calculations

RF Exposure Field Strength Limits

Public Persons may be exposed up to:

Worst-Case RF Field Strength Limit for the General Public (Uncontrolled Environment)	**0.509 mW/cm2**

Occupational Persons may be exposed up to:

Worst-Case RF Field Strength Limit for Controlled Use (Controlled Environment)	**2.543 mW/cm2**

Separation Distance

Mandatory distance from radiating element:

Calculation Method	**Distance from Radiating Element (cm) = SQRT (P(mW) / 4π S(mW/cm^2))**
Uncontrolled Sep. Distance @ 0.509 mW/cm2	**27.97 cm**
Controlled Sep. Distance @ 2.543 mW/cm2	**12.51 cm**

EUT Power Density at 20 cm

Calculation Method	**Power Density (mW/cm^2) = P(mW) / 4π R(cm)^2**
EUT Power Density @ 20 cm	**0.995 mW/cm2**

END OF REPORT