TIMCO ENGINEERING, Inc.
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RF Exposure Evaluation Report

APPLICANT	KODEN ELECTRONICS CO., LTD.
	5278 UENOHARA UENOHARA YAMANASHI-KEN 409-0112 JAPAN
FCC ID	O5VRB807
IC	8477A-RB807
MODEL NUMBER	RB807
PRODUCT DESCRIPTION	X BAND MARINE RADAR
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	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.

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, Engineering Project Manager

Date: 1/27/2017

RF Exposure Requirements

General information

Device type: X BAND MARINE RADAR

Devices that operate under Part 80, 90 of this chapter are subject to RF exposure evaluation prior to equipment authorization or use.

MPE Calculation:

The minimum separation distance is calculated as follows:

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

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

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Minimum Separation Distance for Mobile or Fixed Devices
General Population/Uncontrolled Exposure

Insert values in yellow highlighted boxes to determine Minimum Separation Distance

Max Power	6000	W	*equals*	Max Power	6000000	mW
Duty Cycle	0.084	%	*equals*	Duty Factor	0.00084	numeric
Antenna Gain	28.5	dBi	*equals*	Gain numeric	707.9458	numeric
Coax Loss	0	dB		Gain - Coax Los	707.9458	numeric
Power Density	1	mW/cm^2				

Enter power Density from the chart to the right

Frequency 9440 MHz

Rule Part 1.1310, Table 1 (B)

Frequency rang	Power den	Enter this value
MHz	mW/cm^2	mW/cm^2
0.3-1.34	100	**100**
1.34-30	$180/f^2$	**0.0**
30-300	0.2	**0.2**
300-1,500	f/1500	**6.3**
1,500-100,000	1	**1**

f = frequency in MHz

Minimum Separation Distance	**533 cm**	**5.33 m**

Minimum Seperation in Inches 209.6258 Inches

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Report: V:\K\KODEN_O5V\1248AZUT16\1248AZUT16RF EXP MPE.DOCX