TIMCO ENGINEERING, Inc.
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RF Exposure Evaluation Report

APPLICANT	KODEN ELECTRONICS CO., LTD.
	5278 UENOHARA UENOHARA-SHI YAMANASHI JAPAN 409-0112
FCC ID	O5VRB806
IC	8477A-RB806
MODEL NUMBER	RB806
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: 01/26/2017

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	4000	W	*equals*	Max Power	4000000	mW
Duty Cycle	0.05	%	*equals*	Duty Factor	0.0005	numeric
Antenna Gain	28.5	dBi	*equals*	Gain numeric	707.9457844	numeric
Coax Loss	0	dB		Gain - Coax Loss	707.9457844	numeric
Power Density	1	mW/cm^2				

Enter power Density from the chart to the right

Frequency	9440	MHz

RSS-102 (i5) § 4 Table 3 General Public Use Limits

Frequency Range	Power density	Enter this value
MHz	**W/M^2**	**mW/cm^2**
10 -20	2	0.2
20-48	$8.944/f^{0.5}$	0.009205466
48-300	1.291	0.1291
300-6000	$0.02619 f^{0.6834}$	1.363
6000-15000	10	1
15000-150000	10	1
150000-300000	$6.67 \times 10^{-5} f$	0.0629648

f = Frequency in MHz

Minimum Separation Distance	**336 cm**	**3.36 m**

Minimum Seperation in Inches 132.0518 Inches