TIMCO ENGINEERING, Inc.
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RF Exposure Evaluation Report

APPLICANT	KP ELECTRONIC SYSTEMS LTD.
	P.O. BOX 42 TEFEN INDUSTRIAL PARK 24959 ISRAEL
FCC ID	H78KPWERII
MODEL NUMBER	WERII
PRODUCT DESCRIPTION	WIRELESS ELECTRICAL REGISTER
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Tim Royer

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:

Sr. EMC Engineer
EMC-003838-NE

Name and Title	Tim Royer, Project Manager/Testing Engineer
Date	04/02/2019

RF Exposure Requirements

General information

Antenna

The manufacturer does not specify an antenna, but a typical antenna has a gain of 0 dBi.

Configuration	Antenna p/n	Type	Max. Gain (dBi)
Fixed mounted	Any	omni	0

Operating configuration and exposure conditions:

The 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:

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

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.1310, Table 1.

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FCC 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	1.14	W	*equals*	Max Power	1140	mW
Duty Cycle	100	%	*equals*	Duty Factor	1	numeric
Antenna Gain	0	dBi	*equals*	Gain numeric	1	numeric
Coax Loss	0	dB		Gain - Coax Loss	1	numeric
Power Density	0.3	mW/cm^2				

Enter power Density from the chart to the right

Frequency	450	MHz
EIRP (if > 1000 MHz)	1.140	W

Rule Part 1.1310, Table 1 (B)

Frequency range MHz	Power density mW/cm^2	Enter this value 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	**0.3**
1,500-100,000	1	**1**

f = frequency in MHz

Minimum Separation Distance	**20 cm**	**0.20 m**

Note: If the calculated distance is less than 20 cm, than list it as 20 cm on the MPE report

$S = PG/4\pi R^2$ **Calculated Power Density** 0.22680 mW/cm^2

R = square root (PG/4πS)

S = Power Density (mW/cm^2)

P = Output power at Antenna Terminals (W)

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna (cm)

Note: If the calculated distance is less then 20 cm, then this is the power density that should be listed on the MPE report

Note: If the calculated distance is 20 cm or more, then the power density listed in B10 should be listed on the MPE report