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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 FLECTRICAL 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.

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:** 



Name and Title Tim Royer, Project Manager/Testing Engineer

**Date** 04/02/2019

Applicant: KP ELECTRONIC SYSTEMS LTD.

FCC ID: H78KPWERII

Report: 690AUT19RF EXP MPE RPT



# **RF Exposure Requirements**

## **General information**

#### <u>Antenna</u>

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

Configuration	Antenna p/n	Туре	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:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d}$$
 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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								_		VV	ww.iimco	engr.cor	1
	FCC I	Vinimum	Separation Dis	tance for Mobile o	r Fixed Devices								
		Gene	eral Population,	/Uncontrolled Expo	osure			J					
Insert	values in y	ellow hig	hlighted boxes	to determine Mini	imum Separatio	n 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 <sup>2</sup>	←				$\vdash$						
Enter power Density from the chart to the right		Rule F	Rule Part 1.1310, Table 1 (B)										
Frequency	450	MHz		Frequency range	Power density	Enter this value							
				MHz	mW/cm <sup>2</sup>	mW/cm²							
EIRP (if > 1000 MHz)	EIRP (if > 1000 MHz) 1.140 W	w		0.3-1.34	100	100							
				1.34-30	180/f <sup>2</sup>	0.0							
				30-300	0.2	0.2	$\vdash$						
				300-1,500	f/1500	0.3							
				1,500-100,000	1	1							
			f = frequency in MHz										
Minimum Se	narat	ion D	ictanco	20	cm	0.20	m						
William 30	epai ai	ם ווטוו	istance	Note: If the calcu	9000			20	- +b - 14DF				
						1	tnan iist it	as 20 cm o	n the MPE	report			
$S = PG/4\pi R^2$			Calculated Pov			mW/cm²							
R = square root (PG/4πS				Note: If the calcu	lated distance is	less then 20 cm,	then this i	s the powe	r density 1	that shoul	d be listed o	n the MPE	report
S = Power Density (mW/cm²)		Note: If the calcu	lated distance is	20 cm or more, tl	hen the po	wer densi	ty listed in	B10 shoul	d be listed	on the MP	report		
P = Output power at An													
G = Gain of Transmit An	tenna (line	ear gain)											
R = Distance from Trans	mitting An	itenna (cm	1)										

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