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	H78KPMTWEN1HL
MODEL NUMBER	MT150W
PRODUCT DESCRIPTION	TRANSMITTER FOR WATER METER
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Sid Sanders

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:

Sid Sanders

Engineering Project Manager

Date: 2/24/2015

RF Exposure Requirements

General information

Device type: TRANSMITTER FOR WATER METER

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

Antenna

The EUT uses a integral antenna, there are no other antenna configurations made available from the manufacturer.

Configuration	Antenna p/n	Type	Max. Gain (dBi)
Integrated	N/A	PCB Trace	NA (1)

Notes: 1. The antenna used is integrated into the device, the output power was measured as ERP, therefore the antenna gain is not applicable.

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 50%.

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	2	W	*equals*	Max Power	2000	mW
Duty Cycle	50	%	*equals*	Duty Factor	0.5	numeric
Antenna Gain	0	dBi	*equals*	Gain numeric	1	numeric
Coax Loss	0	dB		Gain - Coax Los	1	numeric
Power Density	0.2	mW/cm²				

Enter power Density from the chart to the right

Frequency 173.5 MHz

Rule Part 1.1310, Table 1

Frequency rang	Power den	Enter this value
MHz	**mW/cm²**	**mW/cm²**
0.3-1.34	100	**100**
1.34-30	180/f²	**0.0**
30-300	0.2	**0.2**
300-1,500	f/1500	**0.1**
1,500-100,000	1	**1**

f = frequency in MHz

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

Minimum Seperation in Inches 7.847195 Inches