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RF Exposure Evaluation Report

APPLI CANT	KP ELECTRONIC SYSTEMS LTD.
	P.O. BOX 42 TEFEN INDUSTRIAL PARK 24959 ISRAEL
FCC I D	H78KPMTPIT
MODEL NUMBER	MTPIT
PRODUCT DESCRIPTION	TRANSMITTER FOR WATER METER
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Franklin Rose

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:

Franklin Rose

Engineering Project Manager

Date: 5/ 19/ 2017

Applicant: KP ELECTRONIC SYSTEMS LTD.

FCC ID: H78KPMTPIT

Report: V:\K\KP H78\764UT17\764UT17RF EXP MPE RPT REV.DOCX

RF Exposure Requirements

General information

Device type: TRANSMITTER FOR WATER METER

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:

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

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

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Insert values in yellow highlighted boxes to determine Minimum Separation Distance

Max Power	2	W	<i>equals</i>	Max Power	2000	mW
Duty Cycle	50	%	<i>equals</i>	Duty Factor	0.5	numeric
Antenna Gain	0	dBi	<i>equals</i>	Gain numeric	1	numeric
Coax Loss	0	dB		Gain - Coax Los	1	numeric
Power Density	0.2	mW/cm ²				
Frequency	156	MHz				

Enter power Density from the chart to the right

Rule Part 1.1310, Table 1 (B)

Frequency range	Power der	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	0.1
1,500-100,000	1	1

f = frequency in MHz

Minimum Separation Distance	20 cm	0.20 m
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Minimum Separation in Inches 7.847195 Inches

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