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RF Exposure Evaluation Report

APPLICANT	ONE WORLD TECHNOLOGIES, INC
	1428 PEARMAN DAIRY ROAD ANDERSON SOUTH CAROLINA 29625 USA
FCC ID	VMZES3001
MODEL NUMBER	ES3001
PRODUCT DESCRIPTION	MOISTURE SENSOR WITH BT
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:



A handwritten signature in blue ink is written over a circular purple stamp. The stamp contains the text "TIMCO ENGINEERING, INC." around the perimeter and a signature in the center.

Engineering Project Manager

Date: 7/19/2018

Applicant: ONE WORLD TECHNOLOGIES, INC
FCC ID: VMZES3001
Report: 851AUT18

RF Exposure Requirements

General information

Device type: MOISTURE SENSOR WITH BT

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 1.1310, Table 1.

KDB 447498 D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

100 MHz to 6 GHz at separation distance less than or equal to 50 mm

SAR Test Exclusion Calculator for Portable Devices

Insert values in yellow highlighted boxes to determine SAR Exclusion

Max Power **0.41** mW

Min Separ **5** mm

Frequency **2.442** GHz

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Answer 0.1 Must be less than or equal to 3.0 for SAR Exclusion

KDB 388624 D02 Permit But Ask List v15, Item II. A. 5.

PBA is required if:

General Population: The Answer is equal to or greater than 24 (8x threshold)

Controlled Use: The Answer is equal to or greater than 60 (20x threshold)

and, when published RF exposure KDB procedures are not established for SAR testing or

Please also note the following: *[FCC KDB quote]* These test exclusion conditions are based on source-based time-