



849 NW STATE ROAD 45  
NEWBERRY, FL 32669 USA  
PH: 888.472.2424 OR  
352.472.5500  
FAX: 352.472.2030  
EMAIL: [INFO@TIMCOENGR.COM](mailto:INFO@TIMCOENGR.COM)  
[HTTP://WWW.TIMCOENGR.COM](http://WWW.TIMCOENGR.COM)

---

## RF Exposure Evaluation Report

<b>APPLICANT</b>	ONE WORLD TECHNOLOGIES, INC
	1428 PEARMAN DAIRY ROAD ANDERSON SOUTH CAROLINA 29625 USA
<b>FCC ID</b>	VMZES3001
<b>MODEL NUMBER</b>	ES3001
<b>PRODUCT DESCRIPTION</b>	MOISTURE SENSOR WITH BT
<b>STANDARD APPLIED</b>	CFR 47 Part 2.1091
<b>PREPARED BY</b>	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:**



---

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-**