



## **Exhibit: RF Exposure – FCC**

FCC ID: 2AW7V-93004022  
IC: 26602-93004022

Report File #:7169007900RB-000

Client	<b>Taco Comfort Solutions, Inc</b>	
Product	<b>Next-Generation Electronic Controller Model: SR506-5 &amp; ZVC406-5</b>	
Standard(s)	RSS 247 Issue 2:2017 FCC Part 15 Subpart 15.247	

## ***RF Exposure – FCC***

The device is a mobile device intended to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure and the body of the user or nearby persons.

The EUT contains a 6. MHz FHSS transmitter and a 2400 – 2483.5 MHz DTS transmitter.

## **Radiofrequency Radiation Exposure Evaluation: Mobile Devices**

Mobile devices shall be evaluated for RF radiation exposure according to the provisions of FCC §2.1091 and the MPE guidelines identified in FCC §1.1310.

As per FCC §1.1310 Table 1(B), the limit for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields for General Population/Uncontrolled Exposure in the frequency range of 1.5GHz to 100GHz is 1.0 mW/cm<sup>2</sup>.

The power density formula is given by:

$$P_d = (P_{out} * G) / (4 * \pi * R^2)$$

Where,

$P_d$  = Power density in mW/cm<sup>2</sup>

$P_{out}$  = Conducted output power to antenna in mW

G = Numeric Antenna Gain

$\pi$  = 3.1416

R = Separation distance in cm

The term ( $P_{out} * G$ ) is the E.I.R.P of the transmitter.

## **MPE Calculation: 2.4 GHz DTS Transmitter**

The maximum peak conducted power of the transmitter is 4.97 dBm and the nominal antenna gain is 5.3 dBi.

For a separations distance of 20 cm, the power density is:

$$P_d = (3.14 \text{ mW} * 3.39) / (4 * 3.1416 * (20\text{cm})^2)$$

$$P_d = 0.0021 \text{ mW/cm}^2$$

The device passes the requirement. The calculated power density of 0.0021 mW/cm<sup>2</sup> is below the 1 mW/cm<sup>2</sup> limit.

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