Exhibit: RF Exposure – FCC

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RF Exposure – FCC

The EUT contains a 1920-1930 (Licence-Exempt Personal Communications Services) transmitter and a 2400 – 2483.5 / 5180 – 5825 MHz (FCC ID : TK4WLE900VX) Wi-Fi/DTS transmitter. The Wi-Fi channels are mutually exclusive, however either Wi-Fi band may be operated simultaneously with the 1920-1930 Band.

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 300 MHz to 1.5 GHz is f/1500 mW/cm^2 and in the frequency range of 1.5GHz to 100GHz is 1.0 mW/cm^2. Where f = frequency in MHz.

The power density formula is given by:

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

Where,
P_d = Power density in mW/cm^2
P_{out} = Conducted output power to antenna in mW
G = Numeric Antenna Gain
Pi = 3.1416
R = Separation distance in cm

MPE Calculation: 1920-1930 MHz FHSS transmitter

The FHSS transmitter has a maximum conducted output power of 19.9 dBm or 98 mW and an antenna gain of -0.4 dBi or 0.91 numerically.

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

$$P_d = (98\ mW * 0.91) / (4 * 3.1416 * (20cm)^2)$$
$$P_d = 0.0000\ mW/cm^2$$

The device passes the requirement. The calculated power density of 0.017731 mW/cm^2 is below the 1.0 mW/cm^2 limit, and is 1.8 % of this limit.

MPE Calculation: 2412 – 2462 MHz DTS transmitter

The DTS transmitter has a maximum conducted output power of 24.3 dBm or 269.2 mW and an antenna gain of 5 dBi or 3.16 numerically.
For a distance of 20cm, the power density is:

$$P_d = (\ 269\ mW * 3.16) / (4 * 3.1416 * (20cm)^2)$$

$$P_d = 0.169 \text{ mW/cm}^2$$

The device passes the requirement. The calculated power density of 0.169mW/cm^2 is below the 1.0 mW/cm^2 limit, and is 16.9 % of the limit.

MPE Calculation: 5.180 – 5.820 MHz DTS transmitter

The DTS transmitter has a maximum conducted output power of 20 dBm or 100 mW and an antenna gain of 10 dBi or 10 numerically.
For a distance of 20cm, the power density is:

$$P_d = (100 \text{ mW} * 10) / (4 * 3.1416 * (20\text{cm})^2)$$
$$P_d = 0.198 \text{ mW/cm}^2$$

The device passes the requirement. The calculated power density of 0.169mW/cm^2 is below the 1.0 mW/cm^2 limit, and is 20 % of the limit.

Presuming worst case, no combination exceeds the Maximum permissible exposure requirements at 20 cm.