

Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e) & RSS-102, 2.5.2

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S**, of 1 mW/cm<sup>2</sup> at a distance, d, of 20 cm from the EUT.

Therefore, for:

Peak Power (dBm) = 17.178 dBm  
Peak Power (Watts) = 0.052216 W  
Maximum Gain of Transmit Antenna = 1.73 dBi = 1.49, numeric  
d = Distance = 20 cm = 0.2 m

$$\begin{aligned} S &= (PG / 4 \pi d^2) = \text{EIRP} / 4\pi = 0.052216(1.49) / 4\pi \cdot 0.2^2 \\ &= 0.0778 / 0.5030 = 0.1547 \text{ W/m}^2 \\ &= (0.1547 \text{ W/m}^2) (1 \text{ m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.0155 \text{ mW/cm}^2 \end{aligned}$$

which is << less than 0.6100 mW/cm<sup>2</sup>

RSS-102, 2.5.2 Compliance for 902 MHz – 928 MHz band:

At or above 300 MHz and below 6 GHz and the source based time averaged maximum e.i.r.p. of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834}$  in Watts (adjusted for tune-up tolerance where applicable), where f = frequency in MHz.

$$1.31 \times 10^{-2} \times 915^{0.6834} = 1.39 \text{ W}$$

EUT max ERP = 17.178 dBm (0.055216W) + 1.73 dBi (0.0015W) = 0.057 Watts  
<< 1.39 Watts

**The MPE limits are below the threshold as stated in KDB447498 D01 V06 in Section 4.3. The calculations above are presented to show that the EUT meets the exclusion requirements.**