FCC ID: S7A-SP03 **ATTACHMENT**

** MPE Calculations **

The MPE calculation for this exposure is shown below.

The peak radiated output power (EIRP) is calculated as follows:

EIRP = P + G EIRP = 11.85dBm + 0.5dBi EIRP = 12.35 dBm	Where, P = Power input to the antenna (mW) G = Power gain of the antenna (dBi)

Power density at the specific separation:

$S = PG/(4R^2\pi)$ $S = (15.31 * 1.12) / (4 * 20^2 * \pi)$ $S = 0.0034\ mW/cm^2$	Where, S = Maximum power density (mW/cm^2) P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20cm = limit for MPE)

The Maximum permissible exposure (MPE) for the general population is 1 mW/cm^2 .

The power density does not exceed the 1 mW/cm^2 limit.

Therefore, the exposure condition is compliant with FCC rules.

Estimated safe separation:

$R = \sqrt{(PG / 4\pi)}$ $R = \sqrt{(15.31 * 1.12 / 4\pi)}$ R = 1.17Cm	Where, P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20cm = limit for MPE)

The numeric gain(G) of the antenna with a gain specified in dB is determined by:

$G = Log^{-1}$ (dB antenna gain / 10)

$G = Log^{-1}$ (0.5 / 10)

G = 1.12