CTK Co., Ltd.

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RF EXPOSURE EVALUATION

Applicant	DONGAH ELECOMM
Applicant Address	16, Namgok-ro, Yangji-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea
Kind of Product	Facilities Serial InterFace-Mini 0
Equipment model name	FSIF-M0
RF power	9.88 dBm(9.7 mW) Peak Conducted
Antenna type	Dipole antenna
Antenna Gain	2.882 dBi
Frequency Range	2412 MHz - 2472 MHz
Number of channels	13 CH

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** MPE Calculations **

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.   The MPE calculation for this exposure is shown below.

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

EIRP = P + G EIRP = 9.88 +2.882 $\quad$ = 12.762 dBm $\quad$ => 18.89 mW	Where, P = Power input to the antenna (mW) G = Power gain of the antenna (dBi)

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} (2.882 / 10)

 G = 1.94

Power density at the specific separation:

S = PG/(4R^{2}π) S = (18.89)/(4 * 20^2 * π) S =0.004 mW/cm^2	Where, $\quad$ 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 $\quad$ (20cm = limit for MPE)

The Maximum permissible exposure (MPE) for the general population is 1 mW/cm^2 .
The power density at 20cm does not exceed the 1 mW/cm^2 limit.

Estimated safe separation:

R = √(PG / 4π) R = √(18.89 / 4π) R = 1.23 cm	Where, $\quad$ 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 $\quad$ (20cm = limit for MPE)