MPE and SAR Threshold Requirements

Maximum Public Exposure to RF (MPE) CFR 1.1310(e)

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^2 at a distance, d, of 20 cm from the EUT.

Therefore, for:
2.4 GHz WIFI:

Highest Antenna = 3.8 dBi

Peak Power (Watts) = 0.035 (from UST Test Report 16-0020)
Gain of Transmit Antenna = 3.8 dBi = 2.39, numeric (from UST Test Report 16-0020)
d = Distance = 20 cm = 0.2 m

S = (PG/ $4\pi d^2$) = EIRP/4A = 0.035(2.39)/4*π*0.2*0.2
= 0.08365/0.503 = 0.1663 W/m^2
= (W/m^2) (1m^2/W) (0.1 mW/cm^2)
= 0.01663 mW/cm^2

which is << less than 1.0 mW/cm^2

SAR Threshold Requirements

Based on limits from KDB 447498 D01 General 26 RF Exposure Guidance v05r01, Appendix A

Highest Gain Antenna (Trace Antenna) = 3.81 dBi

Peak Power (dBm) = 15.46 (highest measured output power level)
Gain of Transmit Antenna = 3.81 dBi
Distance = > 50 mm
time based average = Duty Cycle = 22% (see test report)

Total source based time average = (Pwr dBm) + (Ant gain dBi) * time based average

15.46 dBm + 3.81 dBi = 19.27 dBm (84.53 mW) * 0.22 = 18.5 mW

which is << less than 96 mW for FCC
which is << less than 309 mW for IC

All calculations performed by:

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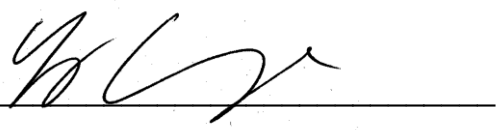
Date: 2/19/2016
Signature: 

Note: validation of output power levels and antenna gain information please see the referenced test reports for this submittal.