MPE CALCULATION

FCC ID: 2AKA9-SXPCEAN2 **IC ID:** 22112- SXPCEAN2

RF Exposure Requirements:	47 CFR §1. 1307(b)
RF Radiation Exposure Limits:	47 CFR §1. 1310
RF Radiation Exposure Guidelines:	FCC OST/OET Bulletin Number 65
EUT Frequency Band:	2412-2462 MHz, 5180-5825MHz
Limits for General Population/Uncontrolled Exposure in the band of:	1500 - 100,000 MHz
Power Density Limit:	1 mW / cm^2

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$

Where, S = Power Density

P = Power Input to Antenna

G = Antenna Gain

R = distance to the center of radiated antenna

External Omni Antenna

Prediction distance 20cm

(WLan 2.4GHz): Power = 27.66dBm, Antenna Gain = 5 dBi,Apparent Gain = 5dBi, Power density =0.367mW/cm^2

(WLan 5GHz): Power = 16.86dBm, Antenna Gain = 8dBi, Apparent Gain = 8dBi, Power density = 0.0609 mW/cm^2

Type	CH Freq Range (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Apparent Gain (dBi)	Measurement Distance (cm)	Calculated MPE (mW/cm^2)	MPE Limit (mW/cm^2)	Pass/Fail
2.4 GHz WLAN	2412 - 2462	27.66	5	5	20	0.367	1	Pass
5 GHz WLAN	5180 - 5320	16.86	8	8	20	0.0609	1	Pass

If 2.4GHz & 5GHz transmit simultaneously.

Total MPE=0.0609+ 0.367 =0.4279 mW/cm^2

The Above Result had shown that the Device complied with MPE requirement.

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Date: Dec 19, 2016