MPE CALCULATION

FCC ID: 2ALIS–A1 **/ IC ID:** 22555-A1

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:	2402MHz-2480MHz, 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

Prediction distance 20cm

(Bluetooth BDR/EDR): Power = 11.05 dBm, Array Gain + Antenna Gain = 3.9dBi, Power density =0.0062 mW/cm^2

(Bluetooth LE): Power = 1.69 dBm, Array Gain + Antenna Gain = 3.9dBi, Power density =0.0007 mW/cm^2

(WLan 2.4GHz): Power = 14.54 dBm, Array Gain + Antenna Gain = 3.9dBi, Power density = 0.0139 mW/cm^2

(WLan 5GHz): Power = 15.48 dBm, Array Gain + Antenna Gain = 5.8dBi, Power density = 0.0267 mW/cm^2

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Directional Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm^2)	MPE Limit (mW/cm^2)	Pass/Fail
Bluetooth BDR/EDR	2441	11.05	3.9	3.9	±1dB	12.05	20	0.0062	1	Pass
Bluetooth LE	2402	1.69	3.9	3.9	±1dB	2.69	20	0.0007	1	Pass
2.4 GHz WLAN	2462	14.54	3.9	3.9	±1dB	15.54	20	0.0139	1	Pass
5 GHz WLAN	5745	15.48	5.8	5.8	±1dB	16.48	20	0.0267	1	Pass

Bluetooth, 2.4GHz and 5GHz radio do not transmit simultaneously.

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

Completed By: Cipher

SIEMIC, Inc

775 Montague Expressway, Milpitas, CA 95035

Phone: (408) 526-1188

Date: February 28, 2018