MPE CALCULATION

FCC ID: 2AK29-DS0001 / 2AK29-DS0002

IC ID: 22393-DS0001/ 22393-DS0002

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
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 LE- Smart Switch): Power = 9.33dBm, Antenna Gain = 5.8dBi,Apparent Gain = 5.8dBi, Power density =0.00648 mW/cm^2

(Bluetooth LE- Smart Dimmer): Power = 8.44dBm, Antenna Gain = 5.8dBi,Apparent Gain = 5.8dBi, Power density =0.00528 mW/cm^2

Type	CH Freq (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
Bluetooth LE- Smart Switch	2480	9.33	5.8	5.8	20	0.00648	1	Pass
Bluetooth LE- Smart Dimmer	2480	8.44	5.8	5.8	20	0.00528	1	Pass

If both Bluetooth LE transmit simultaneously.

Total MPE=0.00648+ 0.00528 = 0.01176 mW/cm^2

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

Completed By: Rachana Khanduri

SIEMIC, Inc

775 Montague Expressway, Milpitas, CA 95035

Phone: (408) 526-1188

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