FCC ID: 2AU8YREBE-TZ42F **ATTACHMENT**

RF EXPOSURE EVULATION

1.1 Limit

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength	Magnetic field Strength	Power density	Averaging time
1.34 - 30.....	824/f	2.19/f	*(180/ f²)	30
30 - 300.....	27.5	0.073	0.2	30
300 - 1500.....	.....	.....	f/1500	30
1500 - 100.000.....	.....	.....	**1.0**	30

F = frequency in MHz

* = Plane-wave equivalent power density

1.2 MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

Power density at the specific separation:

$S = PG/(4R^2\pi)$ $S = (3.99 * 0.34) / (4 * 20^2 * \pi)$ $S = 0.0003 mW/cm^2$	Where, 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 (20 cm = limit for MPE)

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1.3 MAXIMUM PERMISSIBLE EXPOSURE Prediction

(Measured power 6.01 dBm ± 0.5dB)

3-1. 2.4 GHz Zigbee

Max Peak output Power at antenna input terminal	6.10	dBm
Max Peak output Power at antenna input terminal	3.99	mW
Prediction distance	10	cm
Prediction frequency	2,480	MHz
Antenna Gain(typical)	-4.72	dBi
Antenna Gain(numeric)	0.34	-
Power density at prediction frequency(S)	0.0003	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.05	mW/cm^2

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Simultaneous transmission operations

SAR Test exclusion thresholds for 100MHz to 6GHz at test separation distance ≤ 50 mm = **Used**

[(max.power of channel, including tune-up torelance, mW)/(min. test separation distance, mm)] * [√f(GHz)]

= [9.33 / 5] * [√2.442] = 2.478 ≤ 3, for 1g SAR

Thus, SAR for this device is not required.