RF Exposure

FCC ID: 2AK5B-R2

1.0 INTRODUCTION

These calculations are based on the highest EIRP possible from the EUT considering maximum power output and antenna gain or the highest EIRP possible from the EUT, measured in the radiated mode.

The WiFi is Based on Conducted measurement
The other calculations are EIRP from Radiated emissions at 3 meters; the Antenna gain is set to zero since it is part of the radiated emissions.

2.0 MPE CALCULATION FROM OET 65 & FCC 1.1310

Band	Freq. (MHz)	Max Power (dBm)	Max Power (mW)	Max Ant Gain (dBi)	Max Ant Gain above Isotropic (numeric)	Duty Cycle %	Max EIRP (mW)	Power Density at 20 cm (mW/cm^2)	(S) GP Limit (mW/cm^2)	MPE Ratio
RFID	13.56	-31.3	0.00	0	1.00	100.0	0.00	0.0000	0.200	0.0000
BLE LENS	2402	2.4	1.73	0	1.00	10.0	0.17	0.0000	1.000	0.0000
BLE HS	2402	7.47	5.58	0	1.00	10.0	0.56	0.0001	1.000	0.0001
WiFi	2412	16.9	48.98	1.9	1.55	100.0	75.86	0.0151	1.000	0.0151
									Total	0.0152

Notes on the above table:
The max power of 19 dBm between the two Wi-Fi modules of the 2.4 GHz was applied.
In accordance with OET 65, 97-01, Power Density is calculated by
$S = P*G/(4*\pi*R^2)$
Where
S = power density (mW/cm2)
P = power input to the antenna (mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (cm)

S is the power density General Population Limit from FCC 1.1310 Table 1
EIRP Power is the Peak Effective Radiated Power.
EIRP = (Average Conducted Power + Antenna gain) * Duty Cycle.

Since the calculated power density is less than the limit, this product fully meets the OET 65 requirements for the general population.