FCC ID: 2ALBF5040

1.0 INTRODUCTION

These calculations are based on the Conducted power measurement at maximum power.

The product is NOT handheld, or body worn. The separation distance to personnel will be more than 20 cm.

The highest output power of the EUT is 28.8 mW and the gain of the antenna is 1.0 dBi

2.0 MPE CALCULATION FROM OET 65 & FCC 1.1310

This table is just for the EUT if there was no added RF module

MHz	Max Power dBm	Max Ant Gain dBi	Duty Cycle %	EIRP Watts	(S) GP Limit mW/cm^2	Declared Minimum seperation Distance (cm)	EUT power Density mW/cm2	Result
903	14.6	0.5	100.0	0.0324	0.602	20.000	0.0064	Pass
915	14.6	1.0	100.0	0.0363	0.610	20.000	0.0072	Pass
927	14.4	0.5	100.0	0.0309	0.618	20.000	0.0061	Pass

This is the combination of the 900 MHz and the Radar RF module

				Max				Declared		
		Max	Tune up	Ant	Duty		(S) GP	Min	EUT power	
		Power	Tolerance	Gain	Cycle	EIRP	Limit	Separation	Density	MPE
Band	MHz	dBm	dB	dBi	%	Watts	mW/cm^2	Dist (cm)	mW/cm2	Ratio
900	915	14.60	1.5	1.0	100	0.05129	0.610	20.0	0.0102	0.01673
Radar	60000	-3.70	1.5	0.0	100	0.00060	1.000	20.0	0.0001	0.00012
									Total	0.0168

If total is less than 1.0, it is compliant with FCC 1.1310

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.

Judgement: The total power density from the EUT and the rf module is much less than the limits of FCC 1.1310.

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3.0 EXCERPT FROM RF EXPOSURE REPORT OF MODULE

SAR Test exclusion documentation according to FCC CFR 47 §1.1307

Contains the module with the following certification number:	
FCC ID	2AQ6KA1201

Technologies	Measured time-averaged EIRP	1-mW Test Exemption ²
Module for SRD radar 60 GHz	-3.7 dBm ¹	Yes, available time-averaged matched conducted power is less than 1 mW

¹) Test report no.: 1-5794/23-01-02