RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

FCC ID: 2ABC5-E0034

EUT Specification

EUT	Android Tablet							
Frequency band (Operating)	⊠ WLAN: 2.412GHz ~ 2.462GHz							
	☐ WLAN: 5150~5250MHz							
	☐ WLAN: 5725~5850MHz							
	☑ Others: BLE: 2402-2480MHz							
Device category	☐ Portable (<20cm separation)							
	⊠ Mobile (>20cm separation)							
	☐ Others							
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm2)							
	⊠ General Population/Uncontrolled exposure (S=1mW/cm2)							
Antenna diversity	⊠ Single antenna							
	☐ Multiple antennas							
	☐ Tx diversity							
	☐ Rx diversity							
	☐ Tx/Rx diversity							
Max. output power	BLE:7.75 dBm (0.0060W)							
	WiFi 2.4G: 17.07 dBm (0.0509W)							
Antenna gain (Max)	2.02dBi							
Evaluation applied	☑ MPE Evaluation							
	SAR Evaluation							

Limits for Maximum Permissible Exposure(MPE)

Frequency	Electric Field	Magnetic Field	Power	Average				
Range(MHz)	Strength(V/m)	Strength(A/m)	Density(mW/cm ²)	Time				
(A) Limits for Occupational/Control Exposures								
300-1500			F/300	6				
1500-100000			5	6				
(B) Limits for General Population/Uncontrol Exposures								
300-1500			F/1500	6				
1500-100000			1	30				

Friis transmission formula: Pd=(Pout*G)\(4*pi*R2)

Where

Pd= Power density in mW/cm²

Pout=output power to antenna in Mw

G= gain of antenna in linear scale

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Max Measurement Result

Operating P	Measured	Tune	up	Max. Tune	Antenna	Power density	Power density
	Power	tolerance		up Power	Gain	at 20cm	Limits
	(dBm)	(dBn	n)	(dBm)	(dBi)	(mW/ cm2)	(mW/cm2)
BLE	7.75	7.75	±1	8.75	2.02	0.0024	1
WiFi 2.4G	17.07	17.07	±1	18.07	2.02	0.0203	1

The WLAN 2.4G and BLE can not transmit simultaneously.