

FCC ID: 2AIWVN101
IC: 21649-N101

The product has Bluetooth Low Energy (BLE) and 802.11abgn capabilities. The product is not capable of simultaneous transmission of different signals as they all have to be transmitted over the same antenna. Transmissions from different modes can only occur one at a time.

BLE

$$S = \frac{PG}{4\pi R^2}$$

where:	S = power density						
	P = power input to the antenna						
	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						
	Maximum peak output power at the antenna terminal:	9.81	(dBm)				
	Maximum peak output power at the antenna terminal:	9.571940713	(mW)				
	Antenna gain(typical):	4	(dBi)				
	Maximum antenna gain:	2.511886432	(numeric)				
	Prediction distance:	20	(cm)				
	Prediction frequency:	2402	(MHz)				
	MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)				
	Power density at prediction frequency:	0.004783	(mW/cm^2)				

2.4GHz WiFi

$$S = \frac{PG}{4\pi R^2}$$

where:	S = power density						
	P = power input to the antenna						
	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						
	Maximum peak output power at the antenna terminal:	23.04	(dBm)				
	Maximum peak output power at the antenna terminal:	201.372425	(mW)				
	Antenna gain(typical):	4	(dBi)				
	Maximum antenna gain:	2.511886432	(numeric)				
	Prediction distance:	20	(cm)				
	Prediction frequency:	2437	(MHz)				
	MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)				
	Power density at prediction frequency:	0.100631	(mW/cm^2)				

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5GHz WiFi

$$S = \frac{PG}{4\pi R^2}$$

where:	S = power density								
	P = power input to the antenna								
	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								
Maximum average output power at the antenna terminal:	14.36	(dBm)							
Maximum average output power at the antenna terminal:	27.28977783	(mW)							
Antenna gain(typical):	4	(dBi)							
Maximum antenna gain:	2.511886432	(numeric)							
Prediction distance:	20	(cm)							
Prediction frequency:	5500	(MHz)							
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)							
Power density at prediction frequency:	0.013637	(mW/cm^2)							

Conclusion:

Device complies with FCC's RF radiation exposure limits for general population in mobile exposure category (distance > 20cm)