FCC ID: TQ8-ADC30C6AN

MPE Calculation : WLAN(2.4GHz)

RF function or Mode	Frequency range (MHz)			Max Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm^2)	Requriment (mW/cm^2)
802.11b	2412.00	~	2462.00	17.50	-0.50	17.00	50.1188	**0.0100**	**1.0000**
802.11g	2412.00	~	2462.00	14.00	-0.50	13.50	22.3873	0.0045	**1.0000**
802.11n(HT20)	2412.00	~	2462.00	14.00	-0.50	13.50	22.3873	0.0045	**1.0000**
		~							
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		~							

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

▪ **S =** EIRP / (4 R^2 π)

= 50.1188 / (4 X 20^2 X π)

= 0.01 mW/cm^2

- Note

S= Maximum power density(mW/cm^2)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(20cm)

▪ **Limits for General Population/Uncontrolled Exposure**

Frequency range (MHz)			Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm^2)	Averageing time (minutes)
0.3	~	1.34	614	1.63	*100	30
1.34	~	30	824/f	2.19 / f	*180 / f^2	30
30	~	300	27.5	0.073	0.2	30
300	~	1,500			f / 1500	30
1,500	~	100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Conclusion : The exposure condition of this device is compliant with FCC

FCC ID: TQ8-ADC30C6AN

MPE Calculation : WLAN(5GHz)

RF function or Mode	Frequency range (MHz)			Max Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm^2)	Requriment (mW/cm^2)
802.11a/n(HT20)/ac(VHT20)	5180.00	~	5240.00	14.50	2.89	17.39	54.8277	0.0110	1.0000
802.11n(HT40)/ac(VHT40)	5190.00	~	5230.00	10.50	2.89	13.39	21.8273	0.0044	1.0000
802.11ac(80)	5210.00	~	5210.00	10.00	2.89	12.89	19.4537	0.0039	1.0000
802.11a/n(HT20)/ac(VHT20)	5260.00	~	5320.00	14.50	2.51	17.01	50.2343	0.0100	1.0000
802.11n(HT40)/ac(VHT40)	5270.00	~	5310.00	10.50	2.51	13.01	19.9987	0.0040	1.0000
802.11ac(80)	5290.00	~	5290.00	10.00	2.51	12.51	17.8238	0.0036	1.0000
802.11a/n(HT20)/ac(VHT20)	5500.00	~	5720.00	14.00	2.51	16.51	44.7714	0.0090	1.0000
802.11n(HT40)/ac(VHT40)	5510.00	~	5710.00	9.50	2.51	12.01	15.8855	0.0032	1.0000
802.11ac(80)	5530.00	~	5690.00	9.00	2.51	11.51	14.1580	0.0029	1.0000
802.11a/n(HT20)/ac(VHT20)	5745.00	~	5825.00	14.00	5.78	19.78	95.0605	0.0190	1.0000
802.11n(HT40)/ac(VHT40)	5755.00	~	5795.00	9.50	5.78	15.28	33.7288	0.0068	1.0000
802.11ac(80)	5775.00	~	5775.00	9.00	5.78	14.78	30.0608	0.0060	1.0000
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The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

▪ **S =** EIRP / (4 R^2 π)

= 95.0605 / (4 X 20^2 X π)

= 0.019 mW/cm^2

- Note

S= Maximum power density(mW/cm^2)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(20cm)

▪ **Limits for General Population/Uncontrolled Exposure**

FALSE			Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm^2)	Averageing time (minutes)
0.3	~	1.34	614	1.63	*100	30
1.34	~	30	824/f	2.19 / f	*180 / f^2	30
30	~	300	27.5	0.073	0.2	30
300	~	1,500			f / 1500	30
1,500	~	100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Conclusion : The exposure condition of this device is compliant with FCC

FCC ID: TQ8-ADC30C6AN

MPE Calculation : Bluetooth

RF function or Mode	Frequency range (MHz)			Max Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm^2)	Requriment (mW/cm^2)
Bluetooth(1Mbps)	2402.00	~	2480.00	1.50	-0.10	1.40	1.3804	**0.0003**	**1.0000**
Bluetooth(2/3Mbps)	2402.00	~	2480.00	0.50	-0.10	0.40	1.0965	0.0003	**1.0000**
		~							
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The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

▪ **S =** EIRP / (4 R^2 π)

= 1.3804 / (4 X 20^2 X π)

= 0.0003 mW/cm^2

- Note

S= Maximum power density(mW/cm^2)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(20cm)

▪ **Limits for General Population/Uncontrolled Exposure**

Frequency range (MHz)			Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm^2)	Averageing time (minutes)
0.3	~	1.34	614	1.63	*100	30
1.34	~	30	824/f	2.19 / f	*180 / f^2	30
30	~	300	27.5	0.073	0.2	30
300	~	1,500			f / 1500	30
1,500	~	100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Conclusion : The exposure condition of this device is compliant with FCC

RF Exposure Compliance for simultaneous operations

- **Configurations for simultaneous**
  - **Configuration 1:** 2.4GHz WLAN + Bluetooth
  - **Configuration 2:** 5GHz WLAN + Bluetooth

  Note: Above configuration was declared from applicant.

- **Configurations for simultaneous**

RF function or mode	2.4GHz WLAN	5GHz WLAN	Bluetooth	Σ of MPE ratios
Power Density (mW/cm2)	0.0100	0.0190	0.0003	
Requirement (mW/cm2)	1.0000	1.0000	1.0000	
MPE ratio (Power Density/Requirement)	0.0100	0.0190	0.0003	
Configuration 1 (MPE ratio)	0.0100		0.0003	0.0103
Configuration 2 (MPE ratio)		0.0190	0.0003	0.0193

Note: The maximum power density in each RF function was used for above table.

- **Requirment = Σ of MPE ratios ≤ 1**

Conclusion : The exposure condition of this device is compliant with FCC.