FCC RF Exposure

FCC ID: NCIVTS8787X

Applicant: VIA Technologies, Inc.

Exposure category: General population/uncontrolled environment

EUT Type: VIA Pixetto Smart Camera

Refer Standard: FCC Part 2.1091: Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)

FCC MPE Limited:

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Test Data

Predication of MPE limit at a given distance

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

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, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

2.4G WLAN Antenna Gain information

Antenna Gain: 0dBi

Maximum Conduct Power & Manufacturing tolerance

Test mode	Channel	Frequency (MHz)	Max. RF Power(dBm)	Tolerance ±(dB)
802.11b	1	2412	11.82	11±1
	6	2437	10.18	11±1
	11	2462	10.77	11±1
802.11g	1	2412	9.64	9±1
	6	2437	8.17	9±1
	11	2462	8.70	9±1
802.11n20	1	2412	8.75	8±1
	6	2437	8.35	8±1
	11	2462	8.01	8±1

Calculation results (for 2.4G WIFI): pass

Mode	Frequency (MHz)	Maximum tune up power(dBm)	ANT Gain(dBi)	RF distance(cm)	Result (mW/cm2)	Limit (mW/cm2)
802.11b	2412	12	0	20	0.003	1.0
	2437	12	0	20	0.003	
	2462	12	0	20	0.003	
802.11g	2412	10	0	20	0.002	
	2437	10	0	20	0.002	
	2462	10	0	20	0.002	
802.11n20	2412	9	0	20	0.002	
	2437	9	0	20	0.002	
	2462	9	0	20	0.002	