Appendix B

Radio Frequency Exposure Compliance

RESULT: **Pass**

Test standard : FCC 1.1310
FCC 2.1091
KDB 447498 D01 General RF Exposure Guidance v06

The Equipment Under Test (EUT) is a IEEE 802.11 b/g/n 2.4GHz 1T1R USB Module, Model: ZDWM2401, operating at 2412-2462MHz assign band. It is powered by DC 5V.

Product Technical Information
Antenna Type: Integral antenna
Antenna Gain: 2dBi
Modulation Type: DSSS, OFDM
Test Mode: 802.11b/g/n-HT20/n-HT40
802.11b/g/n Peak Output Power:

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Antenna gain (dBi)
802.11b	2412	18.1	64.57	18±1	2
	2437	18.5	70.79	18±1	2
	2462	18.4	69.18	18±1	2
802.11g	2412	18.1	64.57	18±1	2
	2437	18.3	67.61	18±1	2
	2462	18.3	67.61	18±1	2
802.11n-HT20	2412	17.0	50.12	17±1	2
	2437	17.3	53.70	17±1	2
	2462	17.2	52.48	17±1	2
802.11n-HT40	2422	16.3	42.66	16±1	2
	2437	16.5	44.67	16±1	2
	2452	16.5	44.67	16±1	2

According to the KDB 447498 and OET 65, the simple calculation as below:

The maximum E.I.R.P (802.11b or 802.11g mode) = 18+1+2 = 21dBm = 125.89mW.
The EUT transmit continuously during the test, the duty cycle is 1.
The source-based time averaged maximum radiated power = 125.89 x Duty Cycle = 125.89mW

From above data, the exposed power density at a distance (R) of 20cm from the center of radiation of the antenna can be calculated according to OET Bulletin 65 as follow:
= 125.89 / 4πR^2 = 0.025 mW/cm^2

The MPE limit is 1.0 mWcm-2 for general population and uncontrolled exposure in the 1,500-100,000MHz frequency range according to FCC Part 1.1310. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structure and body of the user or nearby persons.