Test Result of RF Exposure Evaluation

. Product: ZigBee Wireless-N Broadband Router
. Test Item: RF Exposure Evaluation Data
. Test site: OATSI-SD

Antenna Gain

Frequency Range: 2.4 GHz
Antenna 1
-Antenna type: Dipole Antenna
-Antenna Gain: 2.0 dBi

EUT Operation condition

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

Output Power into Antenna & RF Exposure Evaluation Distance

Test Date: Aug. 16, 2011 Temperature: 25℃
Atmospheric pressure: 1020 hPa Humidity: 46%

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)		Power Density (S) (mW/Cm2)	
			ANT R	ANT L	ANT R	ANT L
802.11b (11Mbps)	01	2412	17.52	17.88	0.018	0.019
	06	2437	17.66	17.91	0.018	0.019
	11	2462	17.78	17.74	0.019	0.019
802.11g (54Mbps)	01	2412	14.73	14.68	0.009	0.009
	06	2437	14.69	14.66	0.009	0.009
	11	2462	14.56	14.88	0.009	0.010

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)	Power Density (S) (mW/Cm2)
			R + L	R + L
802.11n HT20 (130Mbps)	01	2412	14.89	0.010
	06	2437	14.51	0.009
	11	2462	14.58	0.009
802.11n HT40 (270Mbps)	03	2422	14.75	0.009
	06	2437	14.16	0.008
	09	2452	14.34	0.009

ANT	Modulation Type	Channel	Frequency (MHz)	Output Power to Antenna (dBm)	WIFI+Zigbee Power Density (S) (mW/Cm2)	WIFI+Zigbee (Boost mode) Power Density (S) (mW/Cm2)
R	802.11b	01	2412	17.52		
		06	2437	17.66		
		11	2462	17.78		
	O-QPSK	01	2405	3.90	0.020	
		09	2445	3.03	0.020	
		16	2480	2.36	0.021	
	O-QPSK (boost mode)	01	2405	6.76		0.021
		09	2445	6.20		0.021
		16	2480	2.86		0.021
	802.11g	01	2412	14.73		
		06	2437	14.69		
		11	2462	14.56		
	O-QPSK	01	2405	3.90	0.011	
		09	2445	3.03	0.011	
		16	2480	2.36	0.010	
	O-QPSK (boost mode)	01	2405	6.76		0.012
		09	2445	6.20		0.012
		16	2480	2.86		0.010
	802.11n HT20	01	2412	11.55		
		06	2437	11.12		
		11	2462	11.59		
	O-QPSK	01	2405	3.90	0.006	
		09	2445	3.03	0.005	
		16	2480	2.36	0.006	
	O-QPSK	01	2405	6.76		0.007
		09	2445	6.20		0.006
		16	2480	2.86		0.006
	802.11n HT40	03	2422	11.69		
		06	2437	11.22		
		09	2452	11.30		
	O-QPSK	01	2405	3.90	0.006	
		09	2445	3.03	0.005	

		16	2480	2.36	0.005	
	O-QPSK (boost mode)	01	2405	6.76		0.007
		09	2445	6.20		0.006
		16	2480	2.86		0.005
L	802.11b	01	2412	17.88		
		06	2437	17.91		
		11	2462	17.74		
	O-QPSK	01	2405	3.90	0.022	
		09	2445	3.03	0.022	
		16	2480	2.36	0.021	
	O-QPSK (boost mode)	01	2405	6.76		0.023
		09	2445	6.20		0.023
		16	2480	2.86		0.021
	802.11g	01	2412	14.68		
		06	2437	14.66		
		11	2462	14.88		
	O-QPSK	01	2405	3.90	0.011	
		09	2445	3.03	0.011	
		16	2480	2.36	0.011	
	O-QPSK (boost mode)	01	2405	6.76		0.012
		09	2445	6.20		0.012
		16	2480	2.86		0.011
	802.11n HT20	01	2412	12.18		
		06	2437	11.85		
		11	2462	11.54		
	O-QPSK	01	2405	3.90	0.007	
		09	2445	3.03	0.006	
		16	2480	2.36	0.006	
	O-QPSK (boost mode)	01	2405	6.76		0.008
		09	2445	6.20		0.007
		16	2480	2.86		0.006
	802.11n HT40	03	2422	11.79		
		06	2437	11.08		
		09	2452	11.35		
	O-QPSK	01	2405	3.90	0.006	
		09	2445	3.03	0.005	

		16	2480	2.36	0.005	
	O-QPSK (boost mode)	01	2405	6.76		0.007
		09	2445	6.20		0.006
		16	2480	2.86		0.005

The MPE is calculated as 0.023 mW / cm^2 < limit 1 mW / cm^2. So, RF exposure limit warning or SAR test are not required.