Appendix 5

RF Exposure Information

Maximum transmitter power:

BLE		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2402	5.14	3.27
2440	5.60	3.63
2480	5.24	3.34
802.11b		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	15.6	36.31
2437	15.3	33.88
2462	15.1	32.36
802.11g		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	17.5	56.23
2437	17.6	57.54
2462	17.3	53.70
802.11n-HT20		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	17.6	57.54
2437	17.5	56.23
2462	17.3	53.70

According to the manufacturer's installation instruction, the EUT operating in standalone mobile exposure conditions which minimum test separation distance is 20cm between the antenna and radiating structures of the device and nearby persons.

For FCC:

For Maximum Permissible Exposure (MPE) evaluation, the maximum power density at 20 cm from this mobile transmitter shall be less than the General Population / Uncontrolled MPE limit in OET Bulletin 65 and meet the requirement listed in KDB447498.

Evaluation:

The maximum conducted output power of is 57.54mW,

The power density at 20cm = (57.54mW x 3.16)/$4\pi R^2$

= 0.036 $mWcm^{-2}$

Conclusion:
In the frequency range of 1,500 - 100,000MHz, the MPE limit is 1.0 $mWcm^{-2}$ for general population and uncontrolled exposure. 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 structures and body of the user or nearby persons.

For ISED:

According to section 2.5.2 of RSS-102 Issue 5, RF exposure evaluation is not required if the following condition meet:

"at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;"

Therefore, the threshold is $1.31 \times 10^{-2}\ 2412^{0.6834}$ W = 2.68 W

Conclusion:
The maximum e.i.r.p of the transmitter is less than the SAR evaluation exemption threshold and hence it complies with the RSS-102 RF exposure requirement without SAR evaluation..