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FCC ID: LDK102039
EA97047
Correspondence #14076

In response to your inquiry on SAR issues.

- 1) Both the PCMCIA platform and the Micro ISA platform employ the exact same circuitry except for the elimination of the PCI controller chip and a Micro ISA connector instead of PCMCIA. This radio platform is designed for OEM and most likely be used in a portable. The demonstration for SAR was done on the PCMCIA cards for the following reasons
 - A) Shielding effectiveness for each module is the same
 - B) Both radios have the same power output (Same circuitry and software)
 - C) The actual test fixture used for the MI version was shipped to Europe for the European testing of the radio
 - D) The second SAR test of the system was done on the 100mW EIRP version of the PCMCIA radio.

As far as the antennas – at less the 5cm the signal strength of the 0dBi antenna with the radio operating at 100mW EIRP is more of a worse case scenario for exposure then a system operating at 50mW EIRP. Based on the data provided by University of Utah, one can conclude that if the 100mW system meets the SAR limits by a factor of 4.5 and the 30mW system meets by a factor of 10.

This radio is an OEM module, as part of the development kit, we plan to include regulatory information including instructions that depending on the type of device the radio is used in or what antenna is used, the OEM will be required to do either a SAR test or a MPE evaluation. We also state that non approved antennas require the system to be retested for FCC approval. This support is provided through my office.

- 2) Power variations . The first test data was done radiated using a spectrum analyzer at a 3 meter test site. The second measurement was done conducted using are ATE systems which uses a power meter. Variations include the radio temperature compensation which can vary by ½ dB or so, measurement uncertainty from the radiated test site, equipment calibration factors, cable losses. The production radios will vary by as much as +-1.5dB across the band between radio units.

3) We have forwarded a copy of the 100mW test results (LDK102040 Regulatory testing still in progress) to demonstrate compliance of 100mW spread spectrum systems. We understand and our OEM's will be made aware that our SAR testing is only for demonstrating that the system is capable of meeting the SAR limits as spelled out by the FCC. There actual compliance to their particular installation will depend on their review of the system and they are responsible for overall compliance to the FCC requirements.

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