



American Telecommunications Certification Body Inc.  
6731 Whittier Ave, McLean, VA 22101

November 22, 2006

RE: ZTE Corporation

FCC ID: Q87-ZXMBW-TP251

I have a few comments on this Application. Depending on your responses, kindly understand there may be additional comments.

SAR Report:

- 1.) FCC requirements are for all SAR calibration data associated with probes and validation dipoles be included in all SAR reports. Please provide.
- 2.) SAR validation data must be performed on the same day as the testing. No validation data is presented in this report.
- 3.) The SAR report states that all testing was done at 2450 MHz. This is not allowed since this device operates between 2540 and 2552 MHz.
- 4.) Please note that validation data must be performed with calibrated dipoles tuned to a mid-band frequency of the EUT. This validation frequency must be within less than 100MHz of the EUT center frequency
- 5.) Conducted power in SAR report must be equal or higher than that shown in EMC report. There must also be agreement with power in Tune Up information. Since no tune-up information is presented this parameter cannot be checked.
- 6.) Conducted power drift appears to be inconsistent – sometimes up, sometimes down. Please review and confirm.
- 7.) Page 11 does not provide any indication of test results for tissue dielectric properties at 2550 MHz. Test results on tissue parameters the same day as testing are required.
- 8.) The chart on page 13 appears to apply for only a phone held to the ear. This device is a PCMCIA form factor card device. Therefore, this chart could not apply.
- 9.) No z-axis plots are presented for the highest SAR values obtained. Z-axis plots are also necessary for validation dipoles. Please review the applicable standards.
- 10.) In addition to the positioning shown, it is often recommended that SAR testing also be performed on the nose of any PCMCIA card in touch position, with the notebook PC rotated 90 degrees to vertical.
- 11.) Please describe in detail how the EUT test signals are derived. Include any description of specialized settings. Was this device tested with a base station simulator or with command test software from the PC? Was this device tested in true CW mode? Or was it pulsed during testing? If this device is a MIMO WiMax device, then a description as to which specific antennas were active during testing is required.
- 12.) FYI: Please note that all finalized and tested SAR values should be in the user's manual.

Test Report

- 13.) Since a SAR report is provided for this RF category "Portable" device, the RF Exposure (MPE) information on pages 7 and 8 is redundant and irrelevant.
- 14.) The effective radiated power test on page 8 is confused. You state that you are giving radiated RF power but your data appears to be conducted channel power. We recommend that all conducted RF power readings be presented for devices with SAR results in addition to radiated power data. Conducted power should be done on three channels – low, medium and high. Radiated power should be done on a test range using the substitution method described in TIA/EIA 603. Please be aware that radiated power tests where a simple field strength

- reading from a spectrum analyzer is converted to radiated power readings is not suitable. Be sure to show your work and calculations in your Test Report.
- 15.) Likewise with the radiated spurious emissions, only the substitution method is allowed for Licensed devices. Your radiated emissions test beginning on page 10 are not suitable. Your test equipment list includes only one antenna and no signal generators or amplifiers.
  - 16.) Who is Donald Duck and why is he doing a fast method of compliance testing?
  - 17.) Kindly refer to your Spurious Emissions at Antenna Terminals test. The limit for this test is  $43+10\log P(\text{watts})$ , or an absolute value of  $-13\text{dBm}$ . There is no indication as to how you performed the test or what attenuator values are used. A simple block diagram would be sufficient. We recommend the use of a notch filter to also attenuate the fundamental and allow viewing of only the spurious emissions. How was the displayed limit line of  $-50\text{dBm}$  derived? To what does it refer?
  - 18.) Observe your plot of page 23. It appears that you have chosen settings which are causing the spectrum analyzer to overload (see displayed warning message). Use of a notch filter would eliminate this problem.
  - 19.) Your frequency stability references on page 26 are not applicable to Part 27. Remove all references to Part 22. See 27.54. Prove that for all instances of expected environmental conditions this broadband device will stay within the permitted band. Also, in the opinion of this Reviewer, 20 minutes is far too short a time to allow for device stabilization. No less than 1 hour in a power off state is likely necessary for this device.

#### Manual

- 20.) Part 68 is not applicable to this device. Only telephone terminal equipment with a direct metallic connection to the switched public network would use Part 68. See page 8.
- 21.) SAR values and distances (if needed) should apply in the Manual.
- 22.) RF exposure prohibitions from co-location should apply in the Manual.
- 23.) Part 15.19(a)(3) statements should appear in the Manual.
- 24.) Part 15.21 "Information To User" statements should appear in Manual.



William H. Graff  
President and Director of Engineering

[mailto: whgraff@AmericanTCB.com](mailto:whgraff@AmericanTCB.com)

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.