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Supplement to SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56BJ3)

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Summary of FCC request for additional information

There was a request for additional information regarding Motorola's SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56BJ3). The requested information is addressed below in the same numbering sequence received.

EMC
1) Please specify the gain of the antenna in the cellular band. Based on the data provided, the antenna has a loss of 5.7dB in the AMPS band and a loss of 3.4 dB in the cdma 800 band. Please explain.

RESPONSE The actual antenna characteristics in the 800 MHz cellular band do not vary between analog and CDMA modes. However, the analog power control circuit provides different conducted values to the external rf port (if used) and the internal antenna matching circuit. Only the power level applied to the rf port is provided in the SAR report, since disassembly of the unit is required to measure the actual power applied to the antenna in the analog mode. The CDMA power control scheme does not use this feature.

SAR
2) Justification for the reduced number of configurations/frequencies tested. Alternatively, please provide SAR data from additional test configurations. Please also address the number of frequency points and tests with the extended battery, if available.

RESPONSE: The testing was performed in each configuration / frequency band per the FCC OET Bulletin 65 Supplement C 01-01 standard, which states:

"The device should be tested on the left and right side of the head phantom in the "Cheek/Touch" and "Ear/Tilt" positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tile/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s)." (Appendix D: SAR Measurement Procedures – Page 42).

In Configuration / frequency band where measured SAR was below this threshold, additional tests were not required.

3) Please provide a measurement uncertainty budget that meets the IEEE draft 1528 or the FCC/OET Bulletin 65 Supp. C (2001). Please state when these values will be available. In addition, please specify what steps are being taken to reduce the uncertainty.

RESPONSE: Motorola is working on developing an uncertainty budget per the format shown in IEEE P1528. We have received many suggested values for various line items in the budget from SPEAG™. In order to verify that these values were determined per the methods indicated in IEEE P1528, we have requested, from SPEAG™, how these values were determined. Subsequently, there has been a lot of input from various members of the committee suggesting that certain line items be changed. Also, values for the line items under the *Test Sample Related* section of the budget are device specific and must be determined by the test location. Motorola is currently performing various studies to determine what these values should be for our products. We expect to have a complete uncertainty budget per IEEE P1528 available mid to late June 2002.

4) Please confirm the maximum SAR level for the PCS mode body-worn. The Table 6 in the SAR report indicated 0.287 W/kg. While the SAR plot indicated 0.261 W/kg. Please confirm.

RESPONSE: There is a minor error in the data table for PCS body worn. The 0.287 W/kg is simply the 0.261 W/kg indicated on the scan, scaled up by –0.40 dB. The formula used for this is:

Value = Measured * 10^(-drift/10)