September 21, 2006
Supplement to HAC Test Report for Motorola portable cellular phone (IHDT56GQ1)

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There was a request for additional information regarding Motorola's HAC Test Reports for Motorola portable cellular phone (FCC ID IHDT56GQ1). The requested information is addressed below in the same numbering sequence received.

1.

It appears that the T-coil is offset from the speaker. The RF scan should be made centered on the T-coil in the RF emissions. Please readdress the RF T-coil emission category. Please provide test data with the scan centered over the T-coil center.

RESPONSE:

The speaker is the T-coil Source.

All T-coil scans in “HAC Test Report for T-coil IHDT56GQ1” from August 21, 2006 are targeted to be positioned on the center of the speaker.

All RF Environment scans in “HAC Test Report for Near Field Emissions IHDT56GQ1” from June 23, 2006 are targeted to be positioned on the center of the speaker.

2.

Please submit lab-specific uncertainty budget, and include in future HAC submissions.

RESPONSE:

Noise Contribution: The specific noise levels measured in our lab at the time of these tests are significantly lower than the "typical worst case noise levels" that were used by SPEAG to establish the 0.7% uncertainty component. Our reported 1kHz noise levels are below -67 dB A/m, compared to SPEAG's stated -55 dB A/m. And our reported 300-3000Hz noise levels are below -57 dB A/m, compared to SPEAG's stated -48 dB A/m. Therefore, the uncertainty component of 0.7% adequately covers our current and foreseeable noise contributions.
RF Interference: The SPEAG HAC T-Coil Extension uses a fully RF shielded probe. Contribution to the uncertainty budget is negligible.
DUT Positioning: The attached table has been updated to account for lab repeat measurements of a reference unit.

HAC T-Coil Uncertainty Budget

Error Description	Uncertainty value (%)	Prob. Dist.	Div.	c ABM1	c ABM2	St.Unc ABM1 (%)	St.Unc ABM2 (%)
PROBE SENSITIVITY							
Reference level	3.0	N	1	1	1	3.0	3.0
AMCC geometry	0.4	R	1.7	1	1	0.2	0.2
AMCC current	0.6	R	1.7	1	1	0.4	0.4
Probe positioning during calibration	0.1	R	1.7	1	1	0.1	0.1
Noise contribution	0.7	R	1.7	0.0143	1	0.0	0.4
Frequency slope	5.9	R	1.7	0.1	1	0.3	3.5
PROBE SYSTEM							
Repeatability / Drift	1.0	R	1.7	1	1	0.6	0.6
Linearity / Dynamic range	0.6	R	1.7	1	1	0.4	0.4
Acoustic noise	1.0	R	1.7	0.1	1	0.1	0.6
Probe angle	2.3	R	1.7	1	1	1.4	1.4
Spectral processing	0.9	R	1.7	1	1	0.5	0.5
Integration time	0.6	N	1	1	5	0.6	3.0
Field disturbation	0.2	R	1.7	1	1	0.1	0.1
TEST SIGNAL							
Reference signal spectral response	0.6	R	1.7	0	1	0.0	0.4
POSITIONING							
Probe positioning	1.9	R	1.7	1	1	1.1	1.1
Phantom thickness	0.9	R	1.7	1	1	0.5	0.5
DUT positioning **	4.0	R	1.7	1	1	2.4	2.4
EXTERNAL CONTRIBUTIONS							
RF interference	0.0	R	1.7	1	1	0.0	0.0
Test signal variation	2.0	R	1.7	1	1	1.2	1.2
COMBINED UNCERTAINTY							
Combined Std.Uncert. (ABM field)						4.6	6.5
Expanded Std. Uncertainty, k=2 (%)						9.1	12.9

** based on repeat measurements of reference unit

3.
Please fully address the FCC 3G policy recently issued in June 2006. In particular, please provide details of device capability, RF modes and vocoder modes/options investigated for ABM2.

RESPONSE:

Conducted power (dBm) for SO55			
	Channel	RC1	RC3
CDMA 800	Ch 1013	25.02	24.94
	Ch 384	24.91	24.87
	Ch 777	24.87	24.86
CDMA 1900	Ch 25	25.05	24.87
	Ch 600	25.10	24.94
	Ch 1175	24.73	24.64

Conducted power (dBm) for SO2			
	Channel	RC1	RC3
CDMA 800	Ch 1013	25.10	25.00
	Ch 384	24.86	24.89
	Ch 777	24.84	24.86
CDMA 1900	Ch 25	24.99	24.82
	Ch 600	25.09	24.93
	Ch 1175	24.81	24.64

4.
Please indicate whether backlight was on or off during test conditions in Table 6. If off, then HAC compliance operation should be advised to users within the Users Manual.

RESPONSE:
Backlight was off during testing. HAC compliance will be explained in the manual.

5.
Please provide details of the measurement from device reference plane to probe for the Clause 6 tests.

RESPONSE:
The distance is established by positioning the device beneath the test arch phantom so that it is touching the frame. The location and thickness of the arch, and the location/orientation of the coil within the probe housing, are precisely known values in the DASY software. The height of the measurement plane is further fine-tuned by performing a Surface Detection job at the beginning of each test. The end result is that the probe sensor is very precisely located 10mm above the device reference plane.