PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY

EMC TEST REPORT

<u>Test Report Number</u> – 23962-1 Supplement

<u>Report Date</u> – September 16, 2010

The test results contained herein relate only to the model(s) identified. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics.

As the responsible EMC Engineer, I hereby declare that the equipment tested as specified in this report conforms to the requirements indicated.

Signature: Name: Thanigaiselvan Palaniswami

Title: EMC Engineer Date: September 16, 2010

UKAS Certificate Number: 2404

Table of Contents

Test Report Details

Tests Performed By:	ADR Test Service Location Code: ADR LV Motorola Mobility Inc Product Safety and Compliance Group 600 North US Hwy 45 Libertyville, IL 60048 Motorola MDb FRN: 0004321311 FCC Registration Number: 316588 Industry Canada Number: IC109O-1
Tests Requested By:	Motorola Mobility Inc. 600 North US Hwy 45 Libertyville, IL 60048
Product Type:	Cellular Phone
Signaling Capability:	GSM 850 & 1900, EDGE 850 & 1900, WCDMA 800 & 1900, Bluetooth, WLAN
FCC ID:	IHDP56LQ2
Serial Numbers:	352795040015710, 352795040014713
Testing Complete Date:	September 16, 2010

Applicable Standards

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47:

__X__ Part 15 Subpart B – Unintentional Radiators

Applicable Standards: ANSI 63.4 2003, RSS-210 Issue 7

Summary of Testing

Test #	Test Name	Pass/Fail
1	Field Strength of Spurious Emissions from Unintentional Radiators	Pass
2	AC Line Conducted Emissions	Pass

Test #	Test Name	Margin with respect to the Limit
1	Field Strength of Spurious Emissions from Unintentional Radiators	see results
2	AC Line Conducted Emissions	see results

The margin with respect to the limit is the minimum margin for all modes and bands.

General and Special Conditions

The EUT was tested using a fully charged battery.

All testing was done in an indoor controlled environment. The temperature and the relative humidity were maintained within the ANSI C63.4 2003 Standard requirements during the entire duration of testing.

Equipment List

Manufacturer	Equipment Type	Model No.	Serial Number	Calibration Due Date
Rohde & Schwarz	Receiver	ESIB26	100001	12/02/10
Rohde & Schwarz	Receiver	ESIB40	100226	4/08/11
ETS	DRG Horn Antenna	3115	6222	10/02/10
ETS	Log-Periodic Antenna	3148	1188	2/02/11
ETS	Biconical Antenna	3110B	3370	10/02/10
Agilent	Microwave Preamplifier	8449B	3008A00535	10/05/11
Attenuator	Weinschel	AS-6	6675	NCR
Attenuator	Weinschel	AS-6	6677	NCR
ETS	LISN	3810/2NM	0023630	10/5/10
ETS	LISN	3810/2NM	2179	10/6/10
Dell	Laptop Computer	M20	NA	NA
Iomega	Zip Drive	Z250S	P9HM1992CK	NA
Olympus	Camera	D-600L	4020727	NA

All equipment is on a one-year calibration cycle.

All test equipment was within their calibration date during the time of testing. When equipment went out of calibration during testing it was replaced using a similar piece of calibrated equipment. All these equipments are listed in the equipment list.

The Dell M20 Laptop Computer, Iomega Z250S Zip Drive and the Olympus D-600L Camera are labeled as DoC.

Measurement Procedures and Data

FIELD STRENGTH OF EMISSIONS FROM UNINTENTIONAL RADIATORS

Measurement Procedure

The equipment under test is placed inside the semi-anechoic chamber on a wooden table on the turntable center. For each radiated emission, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum peak reading on the spectrum analyzer. The final radiated emissions are then measured using an EMI receiver employing a CISPR quasi-peak detector function below 1000 MHz and an average detector function above 1000 MHz. This is repeated for both horizontal and vertical polarizations of the receive antenna.

The field strength of each radiated emission is calculated by correcting the EMI receiver level for cable loss, amplifier gain and antenna correction factors.

Field Strength (dBuV/m) = EMI Receiver Level (dBuV) + Cable Loss (dB) - Amplifier Gain (dB) + Antenna Correction Factor (1/m)

Test Setup

The EUT and the host equipment were setup according to the procedures in ANSI C63.4-2003. The EUT was connected to a laptop computer using a USB data cable. The USB data cable is 1 m in length. The parallel and the serial ports of the computer were populated. The EUT was communicating with the laptop computer continuously.

Measurement Results

Operating Mode – Rx Mode, Data Transfer Mode.
Notes: Worst Case emissions reported.

30 MHz – 1000 MHz

Frequency	Level	Measured	Transd	Cables	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
39.68	29.67	11.8	10.8	7.1	40	10.3	103	105	VERT
67.92	30.95	15	8.5	7.5	40	9.1	99	226	VERT
71.2	27.39	11.4	8.5	7.5	40	12.6	101	197	VERT
75.12	30.06	13.82	8.7	7.5	40	9.9	99	215	VERT
99.56	32.06	14.17	10.1	7.8	43.5	11.4	223	161	HORI
147.24	35.07	14.06	12.9	8.1	43.5	8.4	150	4	VERT
309.92	36.9	13.35	14.5	9.1	46	9.1	100	254	HORI
320.6	43.57	19.52	14.9	9.1	46	2.4	100	260	HORI
352.68	38.59	13.94	15.3	9.3	46	7.4	100	248	HORI
366.44	38.55	13.49	15.7	9.4	46	7.5	187	184	VERT
384.72	39.23	13.85	15.9	9.5	46	6.8	99	182	HORI

Above 1 GHz

Frequency	Level	Measured	Transd	Gain	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
1063.1	28.08	30.61	24.4	27	54	25.9	182	148	HORI
1125	29.47	31.48	24.5	26.5	54	24.5	173	326	VERT
1130.3	27.01	28.91	24.6	26.5	54	27	195	343	VERT
1595.3	32.11	29.27	25.7	22.8	54	21.9	100	213	HORI
1971.2	34.45	27.03	27.3	19.9	54	19.6	127	138	HORI

Peak Radiated Data for Emissions Above 1GHz

Frequency	Level	Angle	Height	Pol.
MHz	dBμV/m	deg	cm	
1064.1283	44.36	170	200	HOR
1124.2485	42.59	304	200	VER
1130.2605	47.36	337	200	VER
1595.1904	46.81	217	100	HOR
1971.9439	45.36	209	200	VER

AC LINE CONDUCTED EMISSIONS

Measurement Procedure

Measured levels of ac power line conducted emission shall be the radio-noise voltage from the line probe or across the 50 Ω LISN port, where permitted, terminated into a 50 Ω noise meter, or where permitted or required, the radio-noise current on the power line sensed by a current probe.

All radio-noise voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord or calibrated extension cord by the use of mating plugs and receptacles on the EUT and LISN. Equipment shall be tested with power cords that are normally supplied using an LISN, the 50 Ω measuring port is terminated by a 50 Ω radio-noise meter or a 50 Ω resistive load. All other ports are terminated in 50 Ω.

Detectors - Quasi Peak and Average Detector

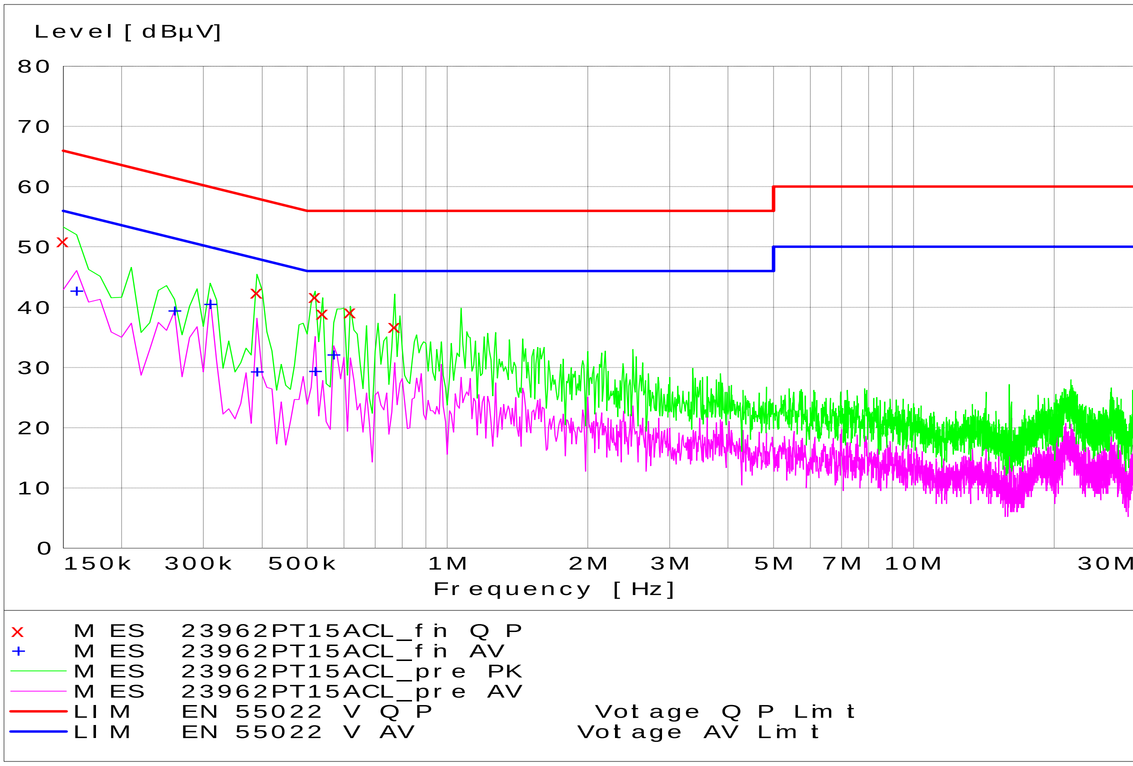
Test Setup

The EUT and the host equipment were setup according to the procedures in ANSI C63.4-2003. The EUT was connected to a laptop computer using a USB data cable. The USB data cable is 1 m in length. The parallel and the serial ports of the computer were populated. The EUT was communicating with the laptop computer continuously.

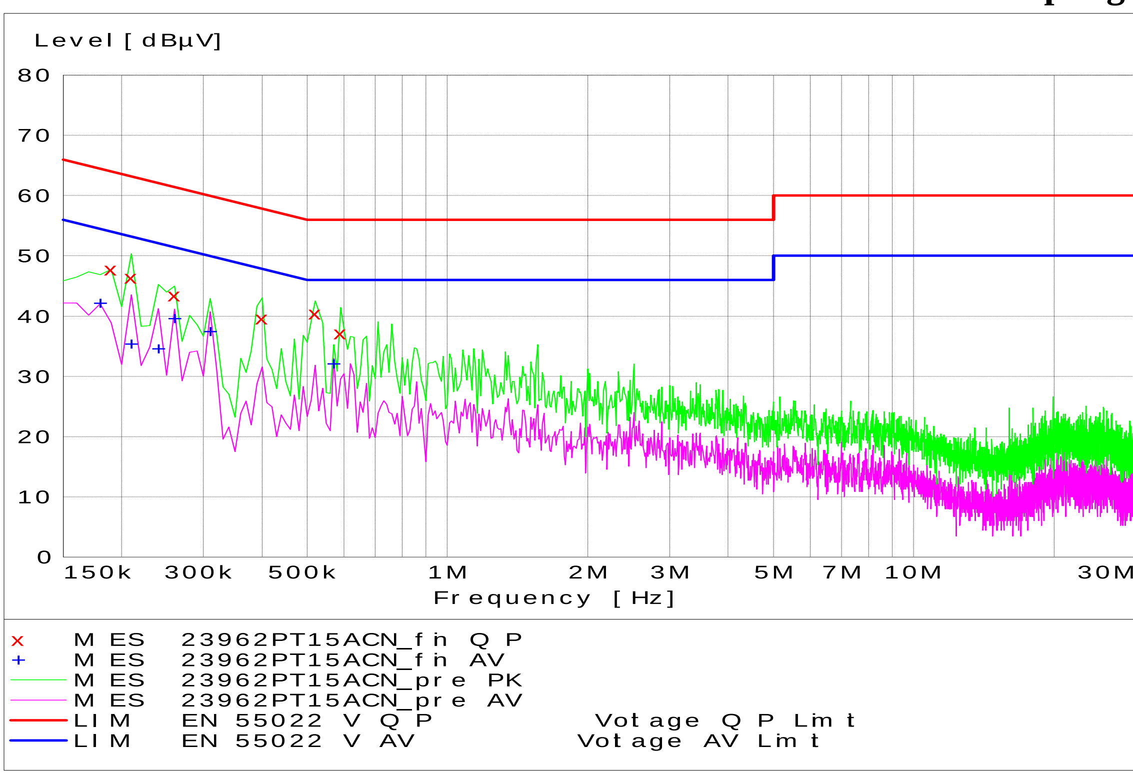
Measurement Results

See attached:

AC LINE COMPUTER PERIPHERAL - Tx Mode - Line Coupling



AC LINE COMPUTER PERIPHERAL - Tx Mode - Neutral Coupling



End of Test Report