MOBILE DEVICES BUSINESS

PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY

EMC TEST REPORT

Test Report Number – 22282-1 Supplement

Report Date – October 8, 2008

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: Albert J. Patapack

Title: EMC Engineer Date: October 8, 2008

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THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY A2LA OR ANY AGENCY OF THE U.S. GOVERNMENT.

A2LA Certificate Number: 2518-02

Table of Contents

Test Report Details

Tests Performed By:	Motorola Mobile Devices business (MDb) Product Safety and Compliance Group 600 North US Hwy 45 Libertyville, IL 60048 PH (847) 523-6167 Fax (847) 523-4538 Motorola MDb FRN: 0004321311 FCC Registration Number: 316588 Industry Canada Number: 109O-1
Tests Requested By:	Motorola Inc. Mobile Devices business 600 North US Hwy 45 Libertyville, IL 60048
Product Type:	Cellular Phone
Signaling Capability:	CDMA 800, CDMA 1700, CDMA 1900, Bluetooth
FCC ID :	IHDP56JM2
Serial Numbers:	A0000002C66037
Testing Complete Date:	October 3, 2008

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

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 with an average temperature of 22º C and relative humidity of 50%.

Equipment List

Manufacturer	Equipment Type	Model No.	Serial Number	Calibration Due Date
Rohde Schwarz	Receiver	ESI26	838786/010	2/28/2009
Rohde Schwarz	Receiver	ESI26	100001	6/03/2009
ETS	DRG Horn Antenna	3115	6222	5/02/2009
ETS	Log-Periodic Antenna	3148	1188	7/30/2009
ETS	Biconical Antenna	3110B	3370	7/29/2009
Attenuator	Weinschel	AS-6	6675	6/13/2009
Attenuator	Weinschel	AS-6	6677	6/17/2009
ETS	LISN	3810/2NM	2179	1/23/2009
ETS	LISN	3810/2NM	00023630	1/23/2009
Dell	Laptop Computer	M20	NA	NA
Iomega	Zip Drive	Z250S	P9HM1992CK	NA
Olympus	Camera	D-600L	4020727	NA

All testing was performed using equipment that was within calibration at the time that the test was performed. No equipment listed in the table above was used after the specified calibration due date. If, during the course of product testing, a piece of equipment went out of calibration and that piece of equipment was needed to complete product testing, a similar piece of calibrated equipment was substituted. If a substitution was made, that new piece of equipment would be listed in the above table along with the piece that was removed from service. All equipment is on a one-year calibration cycle.

The Dell M20 Laptop Computer, the 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.

Note: Worst Case emissions reported.

30 MHz – 1000 MHz

Frequency MHz	Level dBµV/m	Measured dBµV	Transd dB	Cables dB	Limit dBµV/m	Margin dB	Height cm	Angle deg	Pol.
112.04	35.58	15.01	11.4	9.2	43.5	7.9	142	228	VERT
115.84	37.33	16.52	11.6	9.2	43.5	6.2	100	208	VERT
116.16	36.22	15.38	11.6	9.2	43.5	7.3	150	232	VERT
116.24	36.32	15.47	11.6	9.2	43.5	7.2	145	233	VERT
116.68	37.11	16.23	11.7	9.2	43.5	6.4	100	206	VERT
119.96	38.94	17.86	11.8	9.2	43.5	4.6	100	204	VERT
120.16	38.27	17.17	11.9	9.3	43.5	5.2	114	203	VERT
120.24	37.71	16.6	11.9	9.3	43.5	5.8	100	199	VERT
120.72	37.40	16.24	11.9	9.3	43.5	6.1	118	206	VERT
120.76	38.13	16.96	11.9	9.3	43.5	5.4	100	215	VERT
121.20	36.61	15.47	11.9	9.3	43.5	6.9	100	196	VERT
124.64	35.41	14.2	11.9	9.3	43.5	8.1	136	228	VERT
139.28	36.63	14.78	12.4	9.5	43.5	6.9	318	253	HORI
147.28	39.27	16.39	13.3	9.6	43.5	4.2	100	203	VERT
320.64	42.85	16.54	15.1	11.2	46	3.1	132	267	HORI
896.76	37.19	-1.22	23.8	14.6	46	8.8	296	72	HORI
915.44	37.88	-1.11	24.4	14.6	46	8.1	380	212	HORI
918.28	36.87	-1.11	23.4	14.6	46	9.1	142	119	VERT
919.24	37.86	-1.16	24.4	14.6	46	8.1	314	72	HORI
923.40	37.89	-1.16	24.4	14.7	46	8.1	218	314	HORI
928.40	37.91	-1.11	24.3	14.7	46	8.1	217	110	HORI
931.88	37.87	-1.11	24.3	14.7	46	8.1	150	12	HORI
934.48	37.84	-1.11	24.2	14.7	46	8.2	370	177	HORI
935.24	37.83	-1.11	24.2	14.7	46	8.2	309	35	HORI
938.36	37.68	-1.16	24.1	14.8	46	8.3	218	193	HORI
943.72	37.63	-1.16	24.0	14.8	46	8.4	123	185	HORI
947.20	37.60	-1.16	24.0	14.8	46	8.4	356	112	HORI
950.60	37.56	-1.16	23.9	14.8	46	8.4	227	125	HORI
954.20	37.69	-1.11	24.0	14.8	46	8.3	150	257	HORI

Above 1 GHz

Frequency MHz	Level dBµV/m	Measured dBµV	Transd dB	Gain dB	Limit dBµV/m	Margin dB	Height cm	Angle deg	Pol.
1064.1	38.7	32.28	23.6	17.2	54	15.3	209	326	VERT
1118.1	42.32	35.66	23.9	17.3	54	11.7	400	352	VERT
1118.9	43.02	36.35	23.9	17.3	54	11.0	400	349	VERT
1121.7	42.91	36.22	24	17.3	54	11.1	379	345	VERT
1122.1	42.08	35.39	24	17.3	54	11.9	360	346	VERT
1122.5	43.66	36.97	24	17.3	54	10.3	384	349	VERT
1126.9	43.85	37.11	24	17.3	54	10.2	384	349	VERT
1130.2	39.34	32.57	24	17.2	54	14.7	245	329	VERT
1130.3	43.35	36.58	24	17.2	54	10.7	400	350	VERT
1221.5	39.27	31.88	24.5	17.1	54	14.7	115	102	VERT
1221.7	39.07	31.68	24.5	17.1	54	14.9	114	103	VERT
1232.9	38.46	31.08	24.5	17.1	54	15.5	115	98	VERT
1235.7	38.31	30.94	24.5	17.1	54	15.7	129	102	VERT
1493.9	37.83	30.14	24.6	16.9	54	16.2	380	326	VERT
1512.5	37.36	29.61	24.6	16.9	54	16.6	169	42	VERT

Peak Radiated Data for Emissions Above 1GHz

Frequency MHz	Level dBµV/m	Angle deg	Height cm	Pol.
1062.12	54.13	326	200	VER
1064.19	51.30	45	200	VER
1066.13	51.61	107	300	VER
1116.23	54.10	16	400	VER
1118.24	56.79	340	400	VER
1120.24	53.79	336	400	VER
1122.24	55.56	345	400	VER
1124.29	52.82	2	400	VER
1126.25	55.83	352	400	VER
1128.26	53.05	333	200	VER
1130.26	54.69	352	400	VER
1132.26	49.93	112	300	VER
1220.44	54.75	102	100	VER
1222.44	55.57	104	100	VER
1232.46	49.50	110	300	HOR
1234.49	54.69	112	100	VER
1236.47	52.58	96	100	VER
1492.98	53.52	328	400	VER
1494.99	50.10	145	300	VER
1511.02	51.91	165	100	VER
1513.03	55.25	41	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.

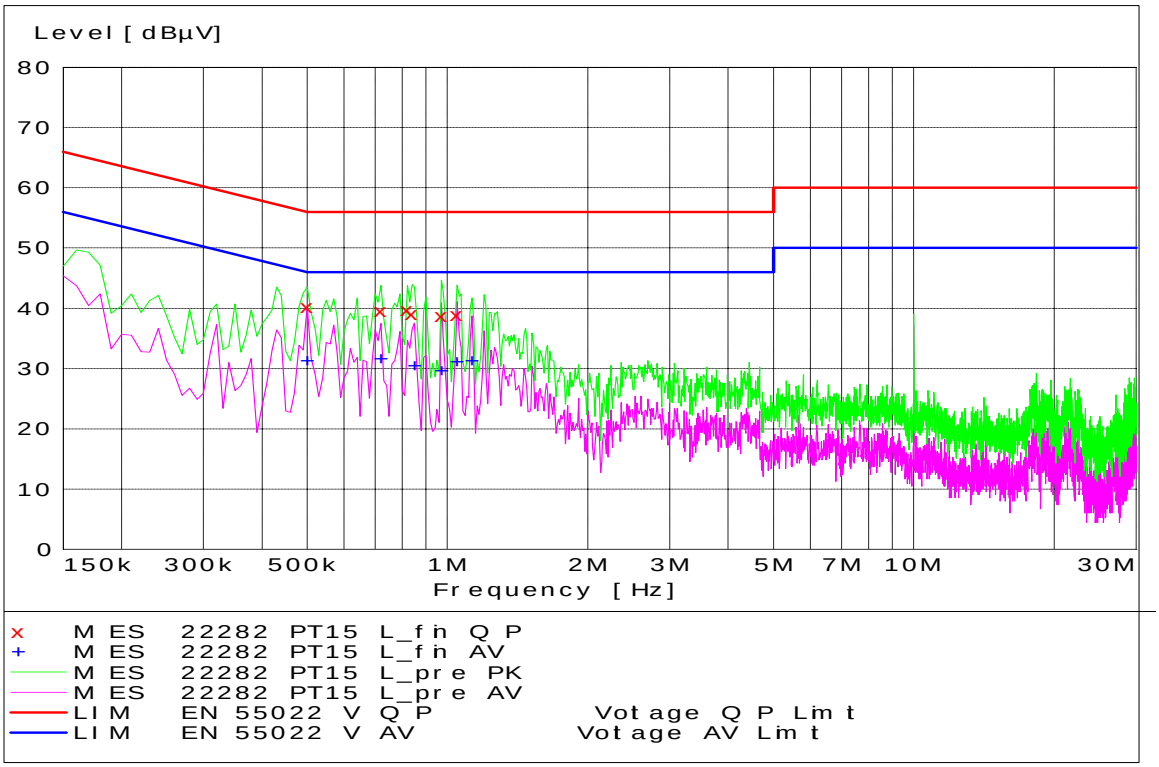
Detectors - Quasi Peak and Average Detector

Test Setup

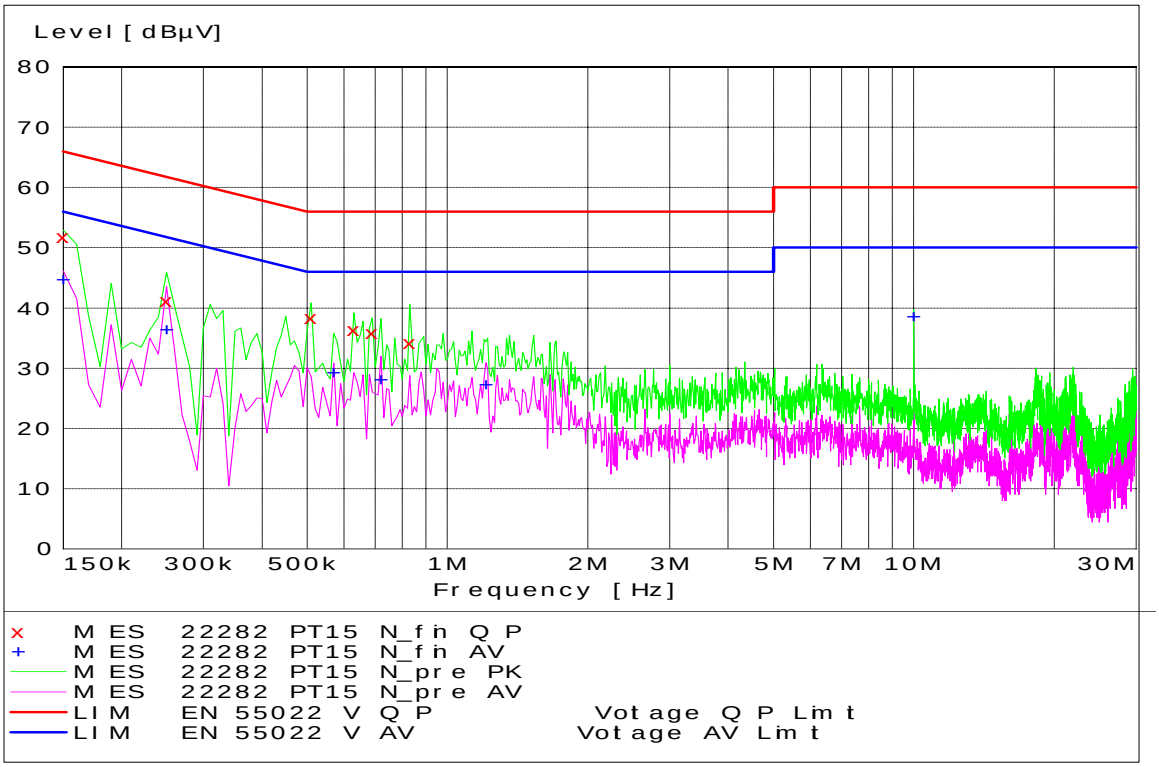
The EUT and the host equipment were setup according to the procedures in ANSI C63.4-2003. The EUT was connected to a laptop computer using a USB data cable. The USB data cable is 1 m in length. The parallel and the serial ports of the computer were populated. The EUT was communicating with the laptop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

Measurement Results

See attached:



Pt 15 - Tx Mode - Line Coupling



Pt 15 - Tx Mode - Neutral Coupling

End of Test Report