MOBILE DEVICES BUSINESS

PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY

EMC TEST REPORT

Test Report Number – 24402-1 Supplement

Report Date – March 24, 2011

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: March 24, 2011

UKAS Certificate Number: 2404

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Test Report Details

Tests Performed By:	ADR Testing Service Location Code: ADR LV Motorola Mobility Inc Product Safety and Compliance Group 600 North US Hwy 45 Libertyville, IL 60048 PH (847) 523-6167 Fax (847) 523-4538 FCC Registration Number: 316588 Industry Canada Number: 109O-1
Tests Requested By:	Motorola Mobility Inc. 600 North US Hwy 45 Libertyville, IL 60048
Product Type:	Cellular Phone
Signaling Capability:	WCDMA 850/1900, GSM 850/900/1800/1900, HSDP, EDGE, Bluetooth, 802.11a/b/g/n
FCC ID:	IHDP56LS2
Serial Numbers:	LOLAAH004Q, 356381040005252
Testing Complete Date:	March 24, 2011

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 8

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

All testing for this report was performed with a fully charged Model SNN5880A 1880mAH 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	ESIB40	100226	04/08/2011
Rohde & Schwarz	Receiver	ESIB26	100001	09/23/2011
ETS	DRG Horn Antenna	SAS 200/571	265	9/09/2011
ETS	Log-Periodic Antenna	3148	1188	2/02/2011
ETS	Log-Periodic Antenna	3148	1189	1/19/2012
ETS	Biconical Antenna	3110B	3369	2/02/2011
ETS	Biconical Antenna	3110B	3370	1/19/2012
Agilent	Microwave Preamplifier	8449B	3008A00535	10/05/2011
Attenuator	Weinschel	AS-6	6675	NCR
Attenuator	Weinschel	AS-6	6677	NCR
ETS	LISN	3810/2	00062907	9/08/2011
ETS	LISN	3810/2	00062912	9/08/2011
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.

Additional EUT information:
Processor Speed – Up to 1GHz
Xtal – 32.768KHz, 26.0MHz, 38.4Mhz
TCXO – 19.2MHz
Memory Size – 1 GB LPDDR2 SDRAM, 16 GB eMMC
Video Resolution – 960x540 (qHD)
Video Clock - 25MHz Display self-generated reference clock
Refresh rate – 60Hz

Testing was conducted up to and including 5GHz.

Measurement Results

Operating Mode – Rx Mode, Data Transfer Mode.
Notes: 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.
38.88	29.04	11.03	10.9	7.1	40	11	119	137	VERT
42.60	28.92	11.34	10.4	7.1	40	11.1	114	56	VERT
67.32	27.49	11.55	8.5	7.4	40	12.5	141	228	VERT
71.68	29.52	13.52	8.5	7.5	40	10.5	100	204	VERT
75.00	31.52	15.29	8.7	7.5	40	8.5	100	178	VERT
79.32	31.02	14.50	8.9	7.6	40	9	100	90	VERT
80.84	30.80	14.03	9.2	7.6	40	9.2	150	126	VERT
147.28	36.99	15.97	12.9	8.1	43.5	6.5	100	157	VERT
192.36	34.77	11.36	15.0	8.4	43.5	8.7	178	236	HORI
233.16	34.53	14.03	11.9	8.6	46	11.5	150	302	HORI
320.64	43.70	19.65	14.9	9.1	46	2.3	100	257	HORI
352.68	38.61	13.96	15.3	9.3	46	7.4	100	248	HORI
366.44	41.98	16.92	15.7	9.4	46	4	168	186	VERT
384.76	38.93	13.55	15.9	9.5	46	7.1	101	178	HORI
513.00	38.40	9.13	19.1	10.2	46	7.6	235	285	HORI
600.00	37.38	6.98	19.9	10.5	46	8.6	209	176	HORI
625.00	37.66	7.08	20.0	10.6	46	8.3	214	316	HORI
914.16	35.27	-0.36	24.2	11.5	46	10.7	150	172	HORI
927.84	34.66	0.01	23.1	11.5	46	11.3	124	0	VERT
946.04	35.39	-0.08	23.9	11.6	46	10.6	137	285	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.
1065.4	31.17	30.68	23.3	22.8	54	22.8	244	104	VERT
1120.0	30.51	29.63	23.5	22.6	54	23.5	169	333	VERT
1125.6	30.30	29.36	23.6	22.6	54	23.7	150	330	VERT
1512.4	31.14	27.84	24.6	21.3	54	22.9	196	242	VERT
1990.8	35.19	26.89	28.0	19.7	54	18.8	145	22	VERT
3216.2	38.92	24.88	31.4	17.3	54	15.1	213	19	VERT
3291.8	38.55	24.64	31.1	17.2	54	15.5	146	134	VERT
3888.5	39.03	23.77	31.3	16.0	54	15.0	150	224	VERT
3917.6	39.08	23.66	31.4	16.0	54	14.9	250	0	VERT
4483.3	40.07	23.04	32.2	15.1	54	13.9	150	25	VERT
4639.5	40.69	22.93	32.7	14.9	54	13.3	150	148	VERT
4810.8	41.05	22.69	33.0	14.7	54	12.9	212	286	VERT
4910.5	41.49	22.73	33.3	14.5	54	12.5	115	299	HORI
4971.1	41.96	23.01	33.4	14.5	54	12.0	151	273	HORI
4988.4	42.42	23.22	33.6	14.4	54	11.6	218	0	VERT
4993.1	42.13	23.11	33.4	14.4	54	11.9	248	344	HORI

Peak Radiated Data for Emissions Above 1GHz

Frequency MHz	Level dBµV/m	Angle deg	Height cm	Pol.
1064.13	49.01	101	200	VER
1066.13	46.15	336	100	VER
1118.24	48.44	325	200	VER
1120.24	46.28	320	200	VER
1122.24	47.61	330	200	VER
1124.25	45.95	325	200	VER
1126.25	49.06	334	200	VER
1511.02	48.14	242	200	VER
1513.03	47.33	278	200	VER
1989.98	47.34	2	100	VER
1991.98	46.20	307	100	VER
3214.43	51.18	295	100	VER
3218.44	51.24	8	200	VER
3290.58	50.55	261	200	VER
3294.59	51.12	142	100	VER
3887.78	50.08	324	100	VER
3891.78	51.35	239	200	VER
3915.83	51.43	0	200	VER
3919.84	49.82	113	200	VER
4482.97	51.43	279	100	HOR
4484.97	53.72	5	200	VER
4635.27	52.40	343	200	VER
4637.27	51.81	139	100	HOR
4809.62	54.02	264	200	VER
4811.62	52.30	222	200	VER
4909.82	52.94	107	200	VER
4911.82	53.86	307	100	HOR
4969.94	52.98	0	200	VER
4971.94	54.25	282	200	HOR
4987.98	55.19	354	200	VER
4989.98	53.64	69	100	VER
4991.98	54.62	357	200	HOR
4993.99	53.30	348	200	HOR

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.

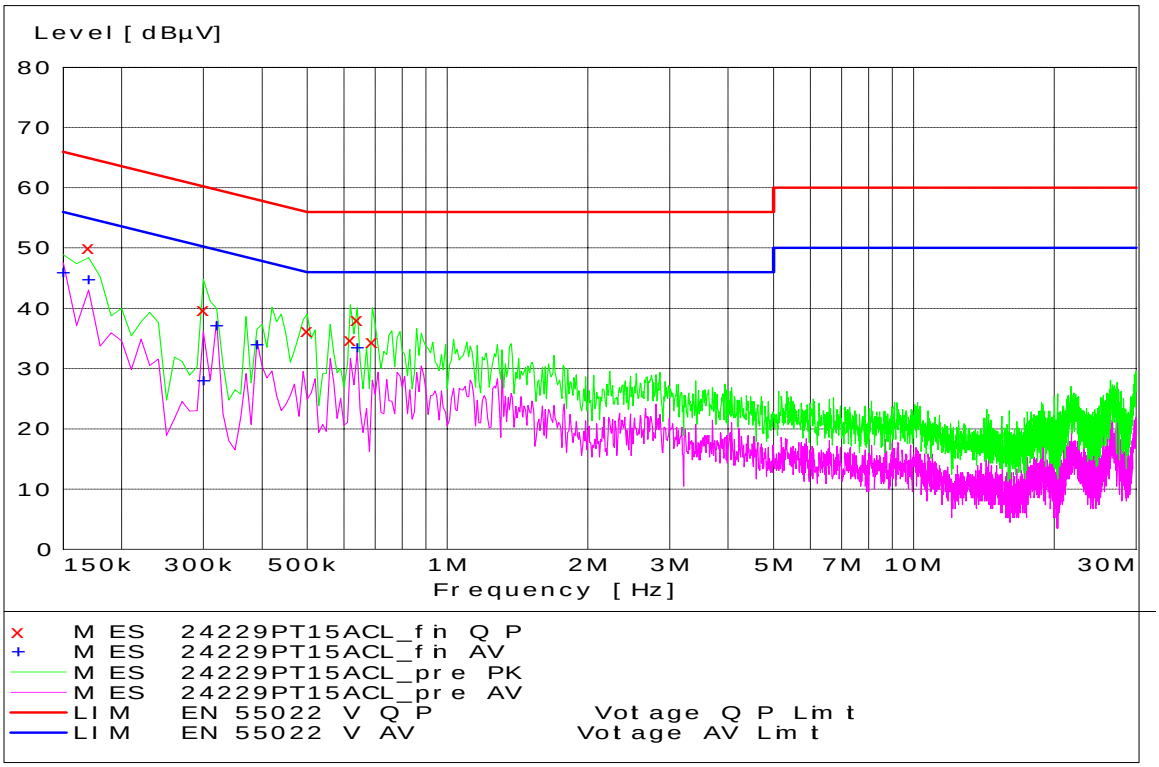
Detectors - Quasi Peak and Average Detector

Test Setup

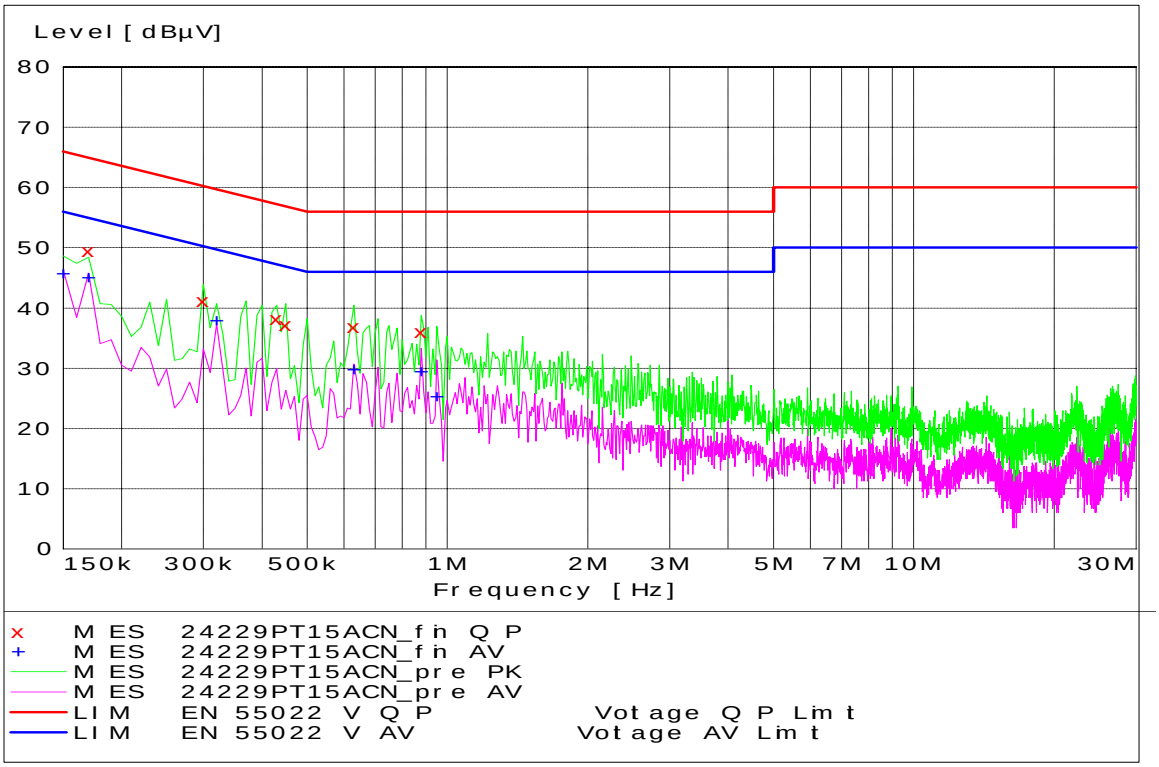
The EUT and the host equipment were setup according to the procedures in ANSI C63.4-2003. The EUT was connected to a laptop computer using a USB data cable. The USB data cable is 1 m in length. The parallel and the serial ports of the computer were populated. The EUT was communicating with the laptop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

Measurement Results

See attached:



Tx Mode - Line Coupling



Tx Mode - Neutral Coupling

End of Test Report