



MOTOROLA MOBILITY

MOBILE DEVICES BUSINESS

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

EMC TEST REPORT

Test Report Number – 24345-1 Supplement

Report Date – February 11, 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: February 11, 2011

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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:	CDMA 800/1900, CDMA 1X/EV-DO Release A, Bluetooth, 802.11b/802.11g/802.11n
FCC ID:	IHDT56MJ1
Serial Numbers:	A0000022B360AE
Testing Complete Date:	February 4, 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 SNN5865A 1500mAH 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	4/08/2011
Rohde & Schwarz	Receiver	ES126	100001	9/23/2011
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 (EUT) 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 MHz	Level dBμV/m	Measured dBμV	Transd dB	Cables dB	Limit dBμV/m	Margin dB	Height cm	Angle deg	Pol.
39.04	36.39	17.7	11.6	7.1	40	3.6	100	156	VERT
42.92	34.39	16.43	10.8	7.1	40	5.6	115	156	VERT
55.68	31.28	14.48	9.5	7.3	40	8.7	123	274	VERT
67.24	37.38	20.64	9.3	7.4	40	2.6	100	200	VERT
71.56	37.99	21.20	9.3	7.5	40	2.0	100	216	VERT
71.60	37.19	20.39	9.3	7.5	40	2.8	100	163	VERT
75.24	36.46	19.64	9.3	7.5	40	3.5	99	160	VERT
115.48	31.16	12.23	11.0	7.9	43.5	12.3	100	213	VERT
147.28	38.30	18.29	11.9	8.1	43.5	5.2	100	189	VERT
192.4	34.64	11.67	14.6	8.4	43.5	8.9	100	263	VERT
320.64	42.98	20.40	13.5	9.1	46	3.0	100	262	HORI
352.72	38.72	15.14	14.3	9.3	46	7.3	100	231	HORI
384.76	38.20	13.92	14.8	9.5	46	7.8	100	188	HORI
448.92	37.16	10.93	16.4	9.9	46	8.8	150	178	VERT
798.36	33.53	1.67	20.7	11.1	46	12.5	100	23	VERT
912.64	34.81	-0.13	23.5	11.5	46	11.2	222	165	HORI
915.56	34.46	-0.13	23.1	11.5	46	11.5	202	185	VERT
956.48	33.69	-0.13	22.2	11.6	46	12.3	218	83	VERT

Above 1 GHz

Frequency MHz	Level dBμV/m	Measured dBμV	Transd dB	Gain dB	Limit dBμV/m	Margin dB	Height cm	Angle deg	Pol.
1063.9	29.72	32.68	24	27	54	24.3	231	339	VERT
1128.2	27.6	29.55	24.5	26.5	54	26.4	150	337	VERT
1503.0	29.66	27.89	25.3	23.6	54	24.3	124	276	VERT
1728.6	33.05	28.32	26.5	21.8	54	20.9	208	264	VERT
1906.4	34.34	27.45	27.3	20.4	54	19.7	178	96	VERT
1963.8	35.56	28.04	27.5	20.0	54	18.4	217	281	VERT

Peak Radiated Data for Emissions Above 1GHz

Frequency MHz	Level dB μ V/m	Angle deg	Height cm	Pol.
1062.12	44.21	342	200	VER
1064.13	45.32	337	200	VER
1126.25	47.28	338	200	VER
1128.26	45.54	334	200	VER
1130.26	46.60	335	200	VER
1501.00	43.11	280	100	VER
1503.01	41.70	52	200	VER
1505.01	47.09	272	100	VER
1727.45	43.52	193	100	VER
1729.46	47.08	252	200	VER
1905.81	46.60	111	200	VER
1907.82	45.31	257	100	VER
1961.92	46.12	344	100	HOR
1963.93	47.05	268	200	VER
1965.93	45.56	158	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 .

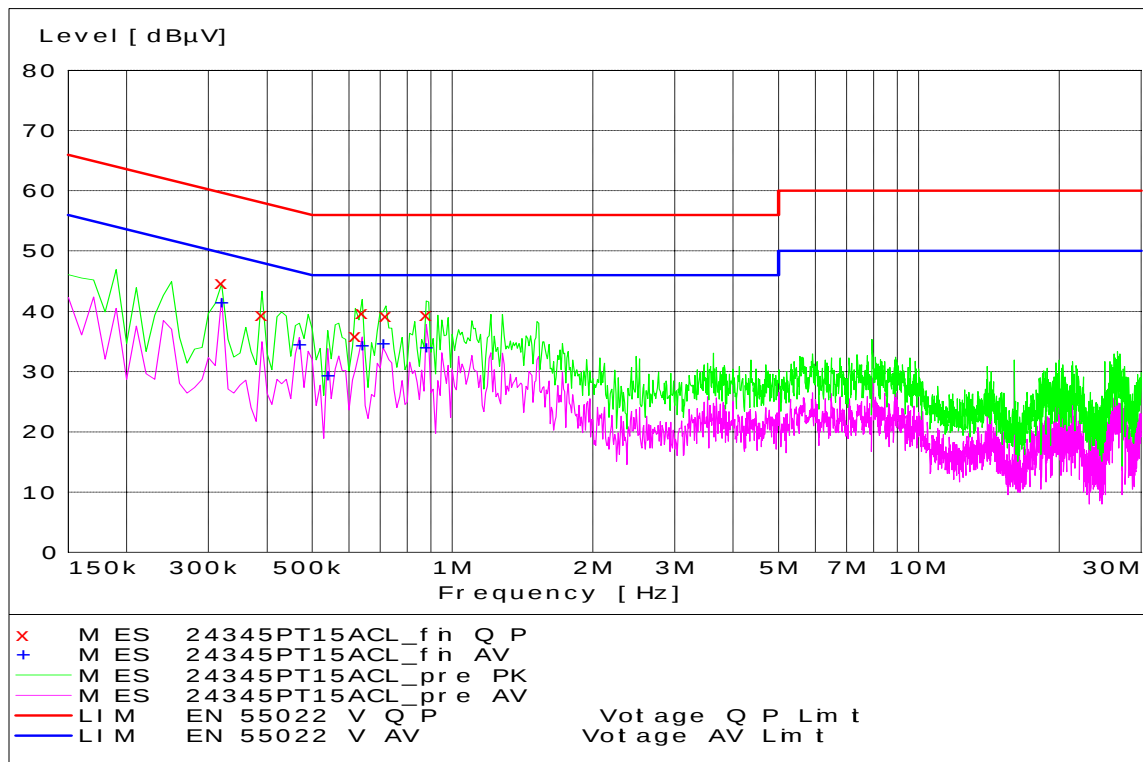
Detectors - Quasi Peak and Average Detector

Test Setup

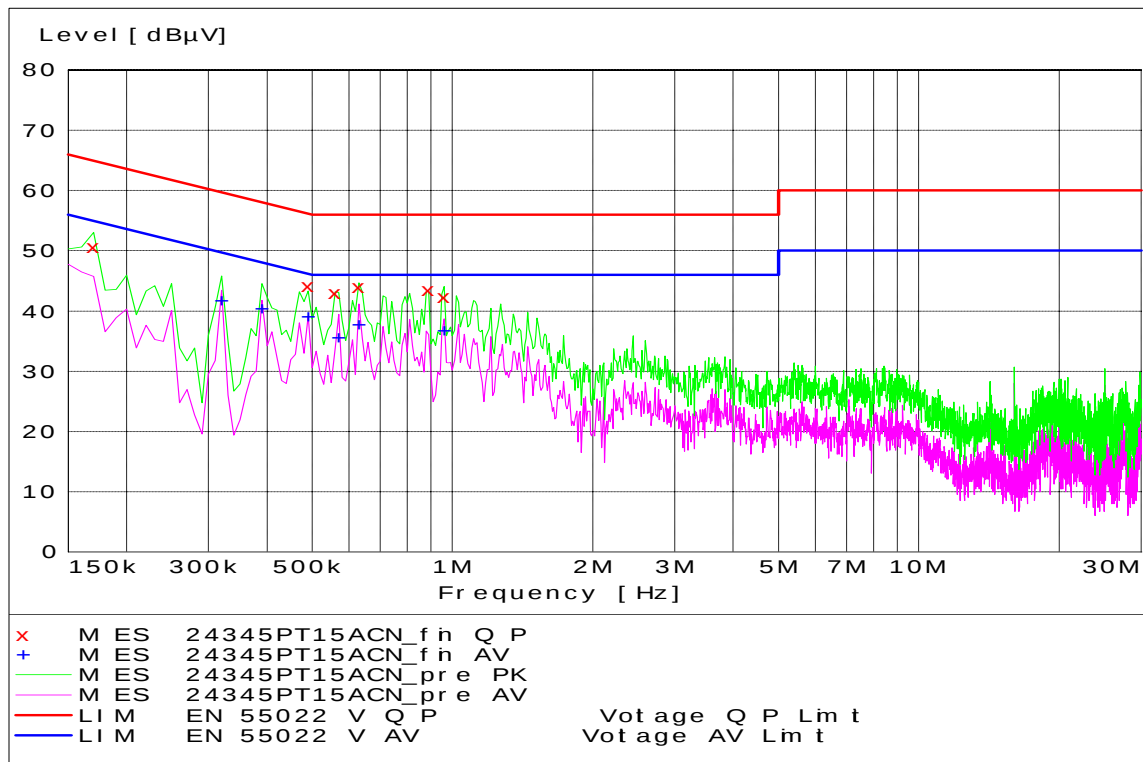
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Measurement Results

See attached:



Tx Mode - Line Coupling



Tx Mode - Neutral Coupling

End of Test Report