MOBILE DEVICES BUSINESS

PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY

EMC TEST REPORT

Test Report Number – 24365-1 Supplement

Report Date – January 26, 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: January 26, 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:	Hand Held Device
Signaling Capability:	Bluetooth, 802.11a/802.11b/802.11g/802.11n
FCC ID:	IHDT56MT1
Serial Numbers:	99000052000881
Testing Complete Date:	November 30, 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

This product utilizes an internal battery that is not removable. When applicable, EMC testing was performed with the internal battery fully charged.

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	ESI26	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	Biconical Antenna	3110B	3369	2/02/2011
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.
38.84	33.43	15.42	10.9	7.1	40	6.6	101	160	VERT
64.00	33.56	17.46	8.7	7.4	40	6.4	100	203	VERT
67.12	34.42	18.48	8.5	7.4	40	5.6	100	197	VERT
99.72	31.47	13.16	10.5	7.8	43.5	12	100	234	VERT
147.24	37.47	16.46	12.9	8.1	43.5	6.0	97	160	VERT
163.60	33.93	11.67	14.1	8.2	43.5	9.6	100	196	VERT
192.36	33.30	9.90	15.0	8.4	43.5	10.2	100	217	HORI
304.60	35.91	12.60	14.3	9.0	46	10.1	101	261	HORI
309.92	36.93	13.38	14.5	9.1	46	9.1	100	255	HORI
320.64	43.52	19.47	14.9	9.1	46	2.5	100	267	HORI
336.64	38.13	13.49	15.4	9.2	46	7.9	99	254	HORI
352.68	38.60	13.95	15.3	9.3	46	7.4	100	243	HORI
366.44	41.11	16.05	15.7	9.4	46	4.9	183	184	VERT
384.76	39.49	14.11	15.9	9.5	46	6.5	100	187	HORI
625.00	37.80	7.22	20.0	10.6	46	8.2	218	4	HORI
812.16	32.62	-0.91	22.4	11.2	46	13.4	123	193	HORI
906.96	34.67	-0.66	23.9	11.4	46	11.3	222	60	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.
1065.9	26.83	29.76	24.0	27.0	54	27.2	150	341	VERT
1097.0	27.47	30.01	24.2	26.7	54	26.5	213	345	VERT
1123.5	27.17	29.21	24.5	26.5	54	26.8	226	338	VERT
1164.1	28.11	29.46	24.8	26.2	54	25.9	244	251	VERT
1225.0	28.14	28.81	25.0	25.7	54	25.9	100	249	VERT
1489.0	29.54	27.93	25.3	23.7	54	24.5	100	276	VERT
1502.5	29.26	27.49	25.3	23.6	54	24.7	150	283	VERT
1512.8	29.48	27.63	25.3	23.5	54	24.5	221	43	VERT
1897.7	34.20	27.23	27.4	20.5	54	19.8	99	36	HORI
1906.2	34.00	27.11	27.3	20.4	54	20	100	124	VERT
1918.4	34.04	26.98	27.4	20.3	54	20	100	254	VERT
1982.6	34.37	26.84	27.3	19.8	54	19.6	213	25	VERT

Peak Radiated Data for Emissions Above 1GHz

Frequency MHz	Level dBµV/m	Angle deg	Height cm	Pol.
1064.19	45.71	327	200	VER
1066.13	40.28	168	200	HOR
1096.19	45.44	343	200	VER
1098.19	45.40	343	200	VER
1122.24	46.66	335	200	VER
1124.25	43.48	78	200	VER
1162.32	42.99	257	200	VER
1164.39	40.41	257	200	VER
1224.49	42.80	262	100	VER
1226.45	39.18	57	100	HOR
1224.49	42.80	262	100	VER
1226.45	39.18	57	100	HOR
1488.98	41.48	238	200	VER
1490.98	46.03	274	100	VER
1501.00	43.85	283	200	VER
1503.01	46.19	283	200	VER
1513.03	45.54	256	100	VER
1515.03	40.98	141	100	VER
1895.79	45.19	0	100	HOR
1897.79	46.59	14	100	HOR
1899.80	45.28	33	200	VER
1905.81	46.65	103	100	VER
1907.82	45.58	252	200	VER
1917.84	46.41	233	100	VER
1919.84	45.62	227	100	HOR
1981.96	47.04	47	200	VER
1983.97	45.62	338	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.

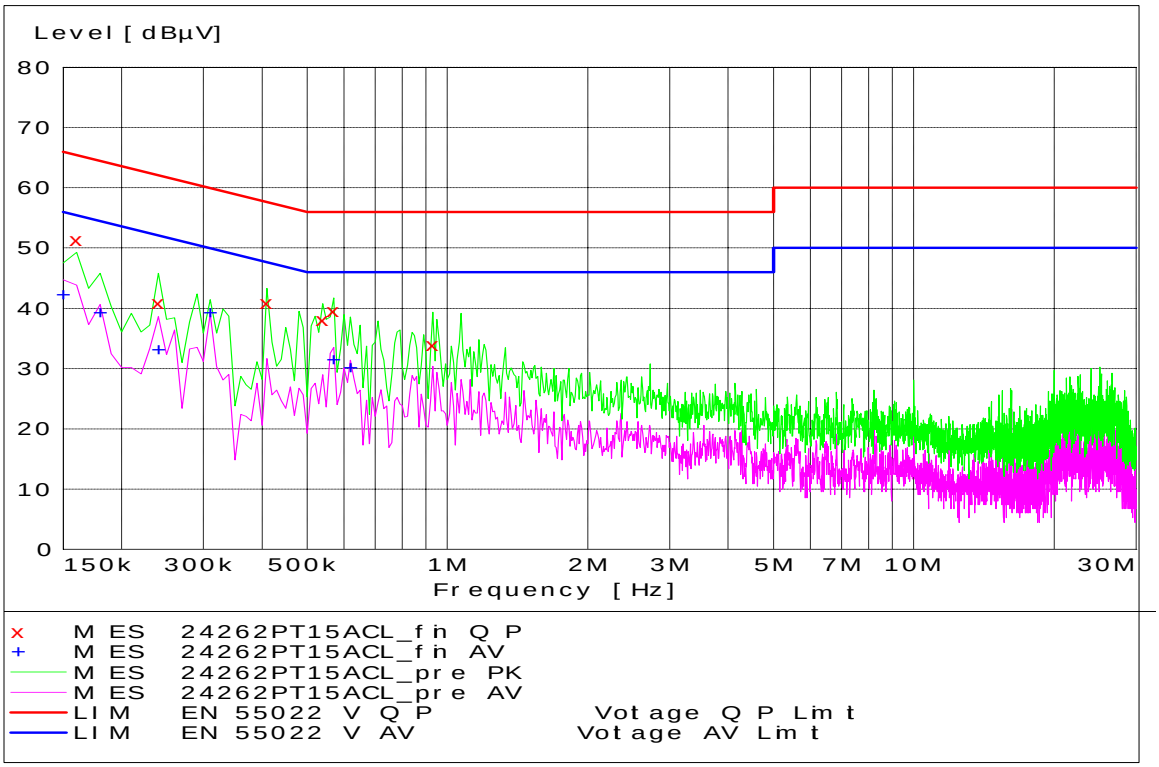
Detectors - Quasi Peak and Average Detector

Test Setup

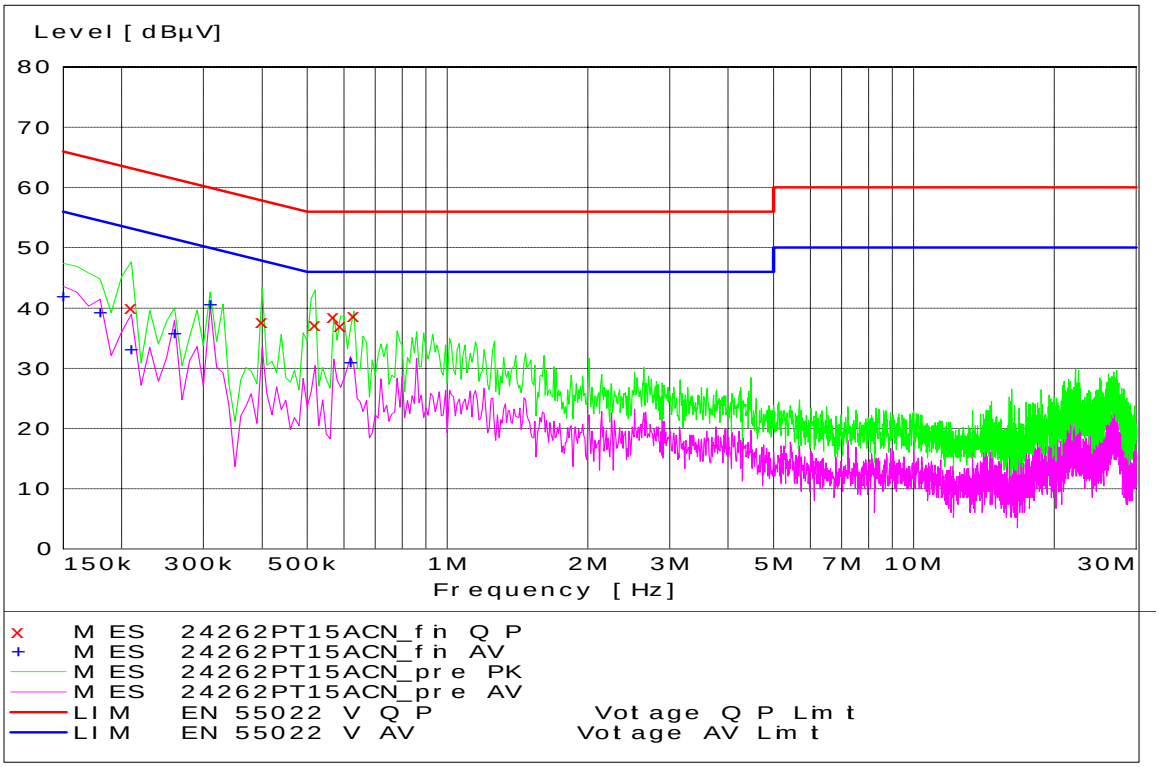
The EUT and the host equipment were setup according to the procedures in ANSI C63.4-2003. The EUT was connected to a laptop computer using a USB data cable. The USB data cable is 1 m in length. The parallel and the serial ports of the computer were populated. The EUT was communicating with the laptop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

Measurement Results

See attached:



Tx Mode - Line Coupling



Tx Mode - Neutral Coupling

End of Test Report