



MOBILE DEVICES BUSINESS

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

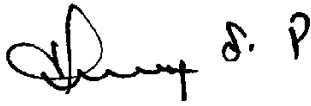
EMC TEST REPORT

Test Report Number – 20700-1 Supplement

Report Date – June 20, 2007

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: June 20, 2007

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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

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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: IC3908-1

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 1900, Bluetooth

FCC ID : IHDT56HS1

Serial Numbers: A000000212FAEA, A000000212FC90,
A000000212FA5B

Testing Complete Date: June 20, 2007

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 22° C and relative humidity of 50%.

Equipment List

Manufacturer	Equipment Type	Model No.	Serial Number	Calibration Due Date
Rohde Schwarz	Receiver	ESI 26	838786/010	3/19/2008
ETS	Horn Antenna	3115	6222	3/21/2008
ETS	Log-Periodic Antenna	3148	1189	9/12/2007
ETS	Biconical Antenna	3110B	3369	9/12/2007
Attenuator	Weinschel	AS-6	7075	6/29/2007
Attenuator	Weinschel	AS-6	7074	6/29/2007
ETS	LISN	3810/2NM	23630	6/26/2007
ETS	LISN	3810/2NM	2179	6/26/2007
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.

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.

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

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.

30 MHz – 1000 MHz

Frequency	Level	Measured	Transd	Cable Loss	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
31.4	33.36	13.07	12.5	7.8	40	6.6	100	163	VERT
35.12	35.75	16.42	11.5	7.8	40	4.2	100	215	VERT
79.92	34.94	16.61	9.5	8.8	40	5.1	100	189	VERT
107.48	32.7	12.52	10.7	9.5	43.5	10.8	350	226	HORI
147.28	38.92	15.81	13	10.1	43.5	4.6	115	173	VERT
163.64	36.03	11.94	13.9	10.2	43.5	7.5	115	169	VERT
233.16	40.29	17.31	12	10.9	46	5.7	150	121	HORI
261.84	36.88	12.55	13	11.3	46	9.1	100	104	HORI
287.68	34.42	9.35	13.5	11.6	46	11.6	249	206	VERT
335.64	36.84	9.44	15.4	12	46	9.2	100	276	HORI
366.44	36.76	9.02	15.5	12.3	46	9.2	150	161	VERT
433.04	36.7	7.2	16.5	13	46	9.3	129	177	VERT

Above 1 GHz

Frequency	Level	Measured	Transd	Gain	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
1512.5	36.99	18.8	25.1	6.9	53.9	16.9	100	39	VERT
1817.3	39.34	18.47	26.9	6	53.9	14.6	281	265	VERT
1860.2	39.8	18.54	27	5.8	53.9	14.1	388	159	VERT
1903.3	40.13	18.49	27.2	5.6	53.9	13.8	367	65	VERT
1937.3	40.12	18.32	27.3	5.5	53.9	13.8	100	67	HORI
1971.7	40.67	18.53	27.6	5.4	53.9	13.2	374	22	HORI
1979	40.87	18.66	27.6	5.4	53.9	13	100	305	HORI
1992.2	41.15	18.81	27.7	5.4	53.9	12.8	100	335	HORI

Notes: Worst Case emissions reported.

Peak Radiated Data for Emissions above 1GHz

Frequency	Level	Angle	Height	Pol.
MHz	dBμV/m	deg	cm	
1513.0261	53.99	38	100	VER
1817.6353	51.77	266	300	VER
1861.7234	52.22	156	400	VER
1903.8076	51.36	158	100	VER
1937.8758	51.01	67	100	VER
1971.9439	52.19	45	100	HOR
1993.988	51.76	169	400	HOR
1995.992	52.58	200	300	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

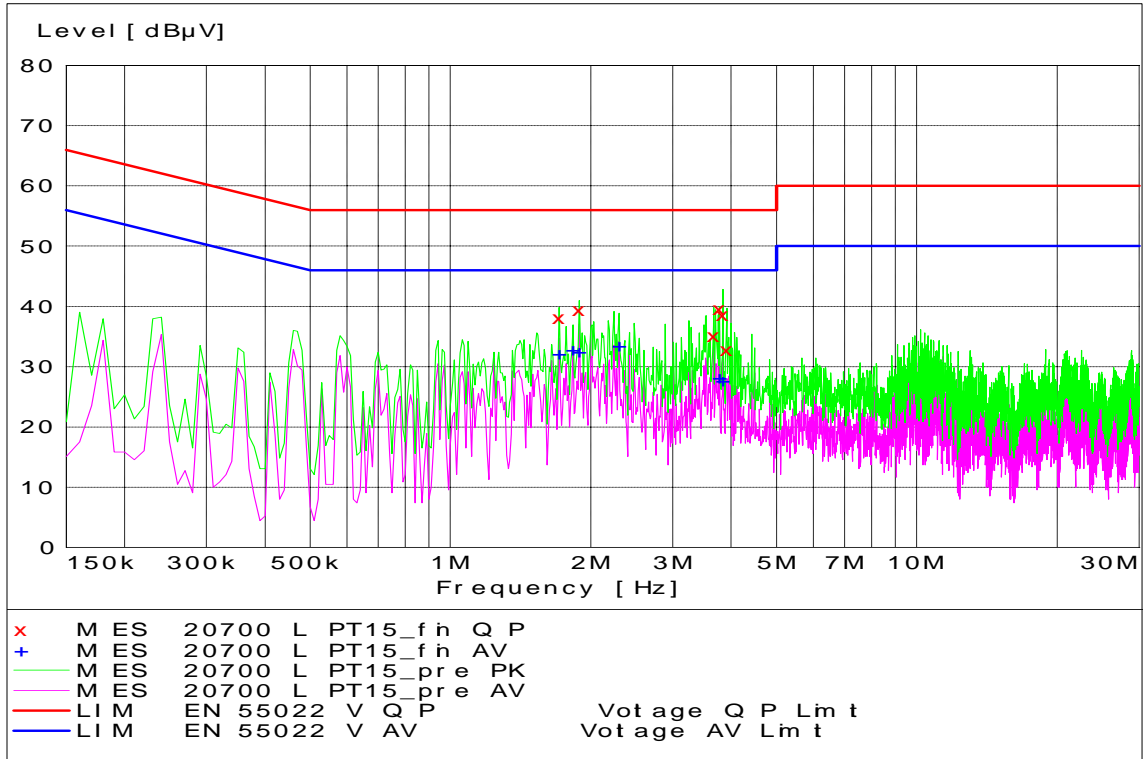
Test Setup

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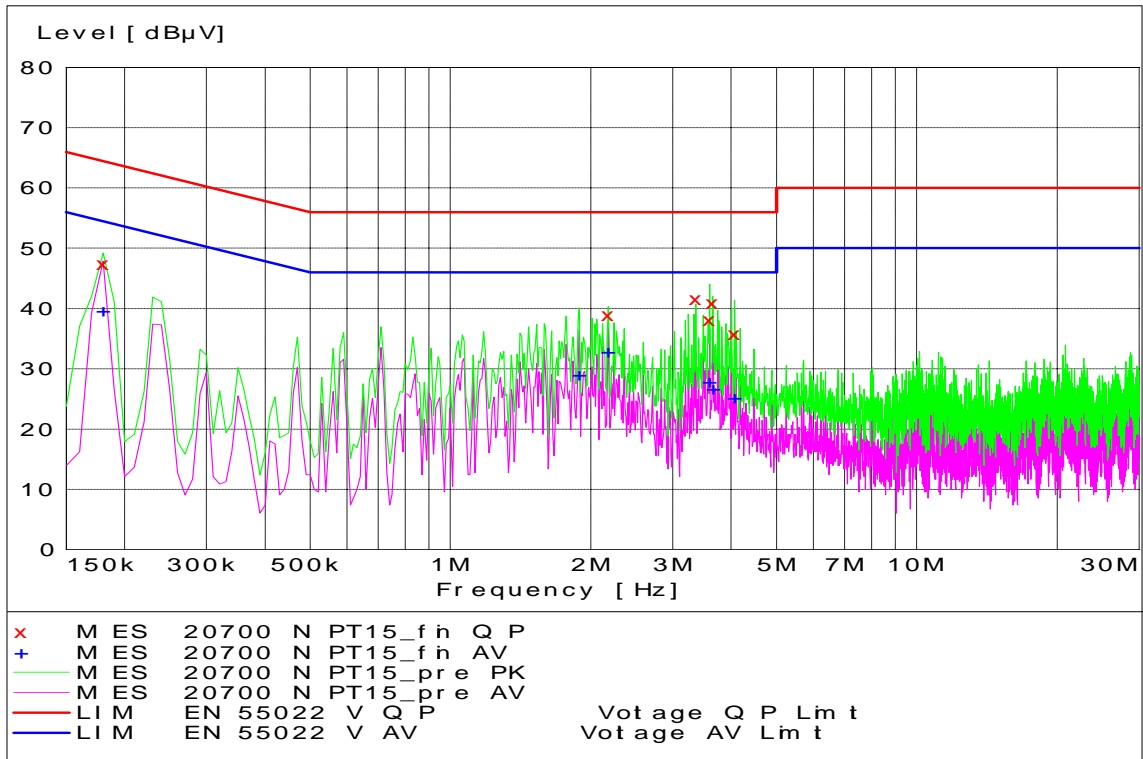
Measurement Results

See attached:

Part15 AC Line -Line



Part15 AC Line - Neutral



End of Test Report