



MOBILE DEVICES BUSINESS

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

EMC TEST REPORT

Test Report Number – 21202-1 Supplement

Report Date – September 28, 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:

A handwritten signature in black ink, reading 'Albert J. Patapack'.

Name: Albert J. Patapack

Title: EMC Engineer

Date: September 28, 2007

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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: GSM 850, GSM 1900, EDGE, Bluetooth

FCC ID : IHDT56HZ2

Serial Numbers: LLIOT60026, LLIOT60028, LLIOT60047,
LLIOT60042

Testing Complete Date: May 2, 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	ESI26	838786/010	3/19/08
Rohde Schwarz	Receiver	ESI40	100226	6/05/07
A.H. Systems Inc.	DRG Horn Antenna	SAS 200/571	365	5/12/07
ETS	Log-Periodic Antenna	3148	1188	6/05/07
ETS	Biconical Antenna	3110B	3369	6/02/07
Attenuator	Weinschel	AS-6	7075	6/29/07
Attenuator	Weinschel	AS-6	7074	06/29/07
ETS	LISN	3810/2NM	00062907	5/10/07
ETS	LISN	3810/2NM	00062912	5/10/07
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	Cables Loss	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
87.52	33.99	14.72	10.3	9	40	6	99	228	VERT
108.12	37.28	16.63	11.2	9.5	43.5	6.2	100	214	VERT
112.16	37.27	16.01	11.7	9.6	43.5	6.2	100	219	VERT
116.88	38.27	16.55	12.1	9.6	43.5	5.2	101	217	VERT
120.68	37.66	15.79	12.2	9.7	43.5	5.8	99	235	VERT
873.84	38.38	-0.75	23.4	15.8	46	7.6	150	144	HORI
908.36	39.2	-0.7	24	15.9	46	6.8	187	57	HORI
925	39.51	-0.7	24.2	16	46	6.5	321	355	HORI

Above 1 GHz

Frequency	Level	Measured	Transd	Gain	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
1120.1	35.86	20.82	23.8	8.8	53.9	18	261	90	VERT
1125.7	35.98	20.84	23.9	8.7	53.9	17.9	271	74	VERT
1131.8	36.04	20.8	23.9	8.7	53.9	17.9	368	70	VERT
1896.4	40.6	19.51	27.4	6.3	53.9	13.3	290	328	HORI
1910.4	40.84	19.53	27.6	6.2	53.9	13.1	114	154	HORI
1943.8	41.74	19.94	28.1	6.3	53.9	12.2	190	213	HORI
1952.7	41.66	19.92	27.9	6.1	53.9	12.2	229	190	VERT
1952.8	41.67	19.93	27.9	6.1	53.9	12.2	267	126	VERT
1960.8	42.18	19.99	28.3	6.1	53.9	11.7	250	7	HORI
1963.3	42	20.06	28	6.1	53.9	11.9	309	46	VERT
1965.3	42.19	19.86	28.4	6	53.9	11.7	164	255	HORI
1972.9	41.98	19.8	28.1	6	53.9	11.9	144	222	VERT
1975.9	42.37	19.8	28.5	6	53.9	11.5	264	252	HORI
1976.1	42.03	19.81	28.2	6	53.9	11.9	291	359	VERT

Notes: Worst Case emissions reported.

Peak Radiated Data for Emissions Above 1GHz

Frequency	Level	Angle	Height	Pol.
MHz	dBμV/m	deg	cm	
1118.2365	52.98	69	300	VER
1126.2525	54.56	64	300	VER
1130.2605	53.43	92	400	VER
1895.7916	53.37	337	300	HOR
1909.8196	53.71	176	100	HOR
1941.8838	53.1	294	400	HOR
1943.8878	52.27	98	200	HOR
1951.9038	54.55	189	200	VER
1953.9078	53.64	104	300	VER
1961.9238	53.52	55	300	VER
1963.9279	54.3	253	200	HOR
1973.9479	53.64	213	100	VER
1977.9559	54.26	274	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

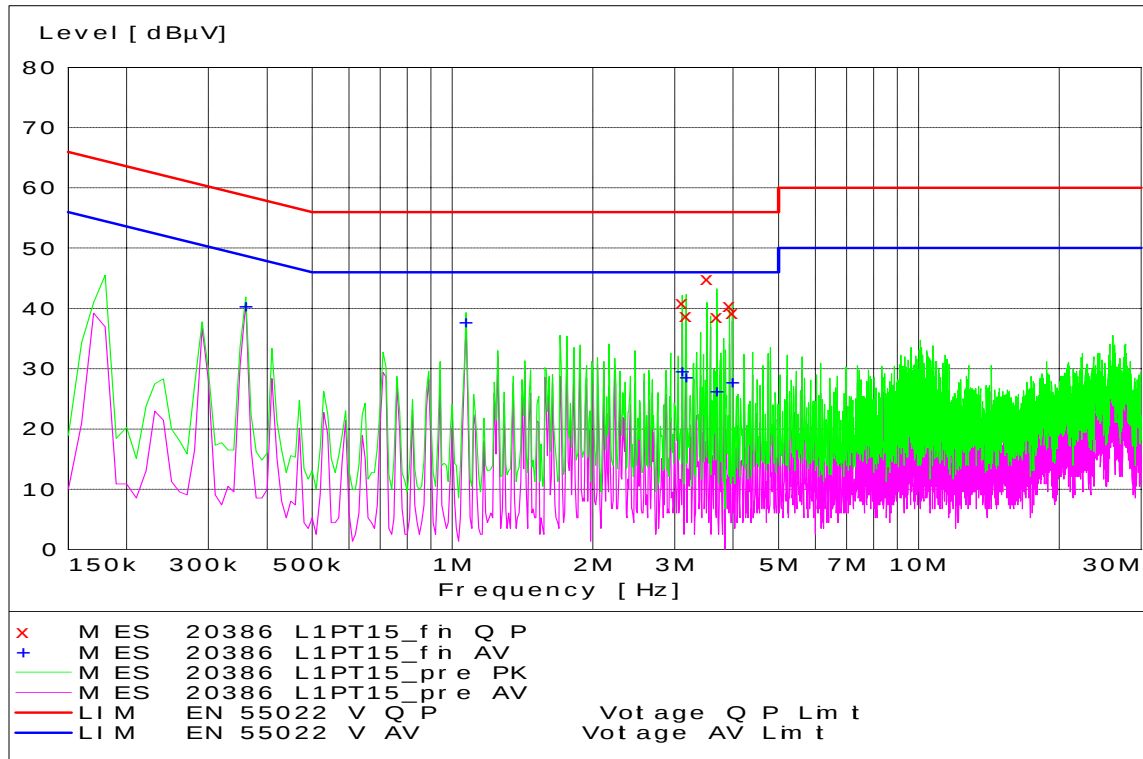
Test Setup

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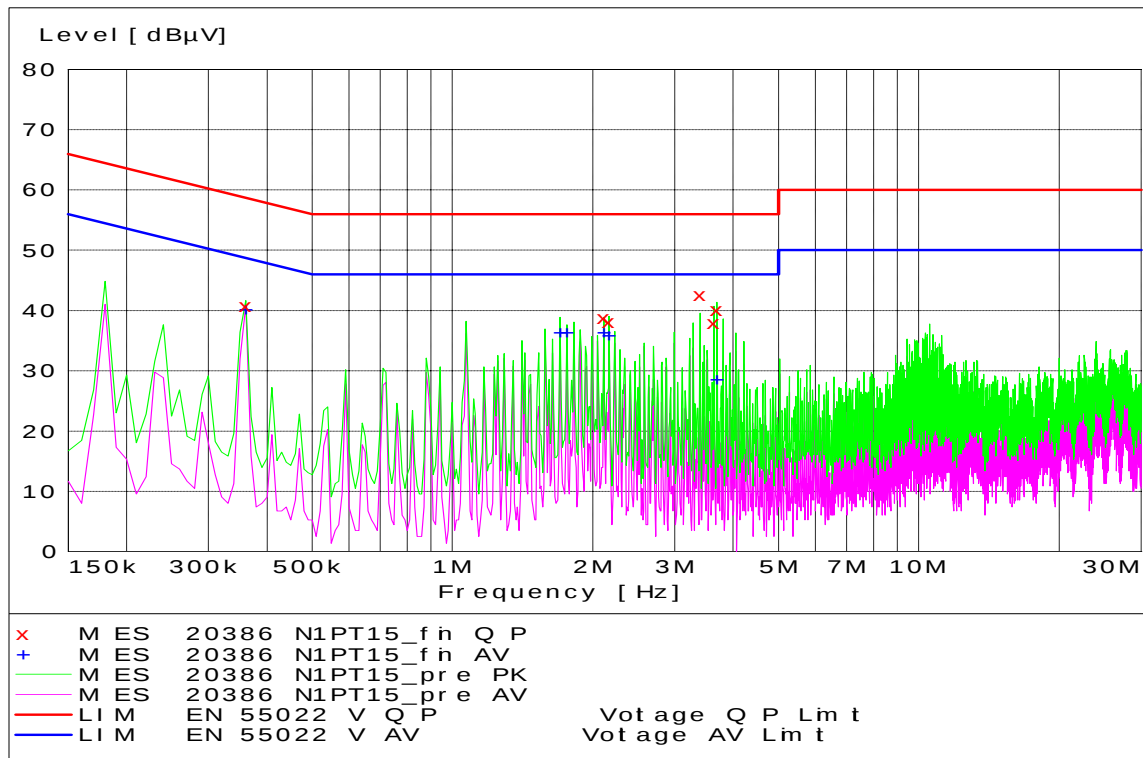
Measurement Results

See attached:

Part15 AC Line –Line



Part15 AC Line - Neutral



End of Test Report