



MOTOROLA

MOBILE DEVICES BUSINESS

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

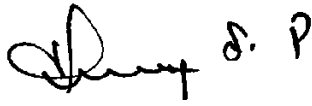
EMC TEST REPORT

Test Report Number – 18002-1 Supplement

Report Date – May 31, 2006

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: May 31, 2006

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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 1900, Bluetooth

FCC ID: IHDT6GG1

Testing Complete Date: May 31, 2006

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
Test #	Test Name	Margin with respect to the Limit
1	Field Strength of Spurious Emissions from Unintentional Radiators	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	6/17/06
A.H. Systems Inc.	DRG Horn Antenna	SAS 200/571	365	5/12/07
ETS	Log-Periodic Antenna	3148	1189	8/22/06
ETS	Biconical Antenna	3110B	3369	8/15/06
Attenuator	Weinschel	AS-6	6675	1/10/07
Attenuator	Weinschel	AS-6	6677	11/14/06
Miteq	Preamplifier	NSP2650-NFG	1084144	7/11/06
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.

Measurement Procedures and Data

FIELD STRENGTH OF EMISSIONS FROM UNINTENTIONAL RADIATORS

CFR Part 15.109

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	Antenna Factor	Cable Loss	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
30.8	29.55	8.59	13.2	7.8	40	10.4	100	60	VERT
34.24	31.71	11.99	11.9	7.8	40	8.3	133	108	VERT
39	34.31	15.94	10.5	7.9	40	5.7	100	223	VERT
86.88	34.07	15.64	9.5	9	40	5.9	137	208	VERT
98.68	32.39	12.56	10.6	9.2	43.5	11.1	150	212	VERT
128.12	31.16	8.97	12.4	9.8	43.5	12.3	120	197	VERT
132.76	33.42	11.16	12.4	9.9	43.5	10.1	100	219	VERT
133.84	38.47	16.2	12.4	9.9	43.5	5	100	224	VERT
191.4	38.64	13.49	14.6	10.5	43.5	4.9	100	228	HORI
319	38.04	11.12	15	11.9	46	8	100	264	HORI
365.08	41.39	13.75	15.4	12.2	46	4.6	166	178	VERT
944.84	38.6	-0.8	23.4	16	46	7.4	177	177	HORI

Above 1 GHz

Frequency	Level	Measured	Antenna Factor	Gain	Limit	Margin	Height	Angle	Pol.
MHz	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
1944.5	39.21	17.68	27.8	6.25	3.9	14.73	50	359	VERT
1963.5	39.92	17.65	28.4	6.1	53.9	14	351	259	HORI
1944.5	39.21	17.68	27.8	6.2	53.9	14.7	350	359	VERT
1963.5	39.92	17.65	28.4	6.1	53.9	14	351	259	HORI
1978.5	40.61	18	28.6	6	53.9	13.3	250	10	HORI
1983	40.41	18.09	28.3	6	53.9	13.5	350	0	VERT
1985.5	40.6	18.24	28.3	6	53.9	13.3	150	359	VERT
1990.5	40.73	18.3	28.4	5.9	53.9	13.2	100	288	VERT
1991	41.14	18.32	28.8	6	53.9	12.8	400	134	HORI
1992	41.2	18.39	28.8	6	53.9	12.7	352	48	HORI
1996	41.4	18.58	28.8	6	53.9	12.5	274	295	HORI
1997	41.02	18.59	28.5	6	53.9	12.9	124	217	VERT
2000	41.18	18.75	28.5	6.1	53.9	12.7	370	34	VERT

Notes: Worst Case emissions reported.

Appendix A – Radiated Emissions Test Setup Photos



Radiated Emissions Measurement Setup

End of Test Report