

# **FCC PART 15 TEST REPORT**

*For*

**GSM MOBILE PHONE**

**Model Name: MD110**

**Brand Name: DYNAMICS**

**FCC ID: YH2-MD110**

**Report No.: AGC11111004SZ09E5**

**Date of Issue: Jun.06, 2010**

*Prepared For*

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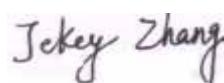
## 1. VERIFICATION OF COMPLIANCE

Equipment Under Test:	GSM MOBILE PHONE
Model Name:	MD110
Brand Name:	DYNAMICS
FCC ID	YH2-MD110
Applicant:	C-Mobi Techology Limited RM9A, 9/F., JCG Building, 10-16 Mongkok Road, Mongkok, Kin., HongKong
Manufacturer:	C-Mobi Techology Limited RM9A, 9/F., JCG Building, 10-16 Mongkok Road, Mongkok, Kin., HongKong
Type of Test:	FCC Class B
Measurement Procedure:	ANSI C63.4: 2009
File Number:	AGC11111004SZ09E5
Date of test:	Jun. 01, 2010 to Jun.06, 2010
Deviation:	None
Condition of Test Sample:	Normal

The above equipment was tested by Attestation Of Global Compliance Co., Ltd. For compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2009 This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

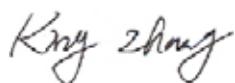
The test results of this report relate only to the tested sample identified in this report.

Checked By :



Jekey Zhang Jun.06, 2010

Authorized By :



King Zhang Jun.06, 2010

## 2. PRODUCT INFORMATION

**Housing Type:** Plastic

**Rating Voltage:** DC3.7V by battery

### I/O Port Information (Applicable Not Applicable)

I/O Port of EUT			
I/O Port Type	Q'TY	Cable	Tested with
USB PORT	1	1	1

### **3. TEST FACILITY**

The test site used to collect the radiated data is located on the address of Shenzhen EMTEK Technology Co., Ltd. The test site is 3m anechoic chamber and calibrated to meet the FCC requirements in documents ANSI C63.4: 2009.

#### 4. SUPPORT EQUIPMENT LIST

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
PC	SAMSUNG	301	N/A	--	--
LCD	SAMSUNG	2494LW	N/A	--	--
MOUSE	TCL	HE72114A	N/A	--	--
Keyboard	gothink	HA5423	N/A	--	--

\*\*Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

#### 5. SYSTEM DESCRIPTION

##### PC MODE:

1. Connect EUT to PC and to peripheral devices.
2. Set the EUT to USB mode, the EUT begins to work.
3. Make sure the EUT operates normally during the test.

##### CHARGER MODE:

1. Set the EUT to charger mode, the EUT begins to work.
2. Make sure the EUT operates normally during the test.

## 6. FCC LINE CONDUCTED EMISSION TEST

### 6.1. TEST EQUIPMENT OF LINE CONDUCTED EMISSION TEST

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	Agilent	E4440A	N/A	06/29/2009	06/28/2010
EMI Test Receiver	H.P.	8546A	N/A	06/29/2009	06/28/2010
LISN	EMCO	3825/2	N/A	06/29/2009	06/28/2010

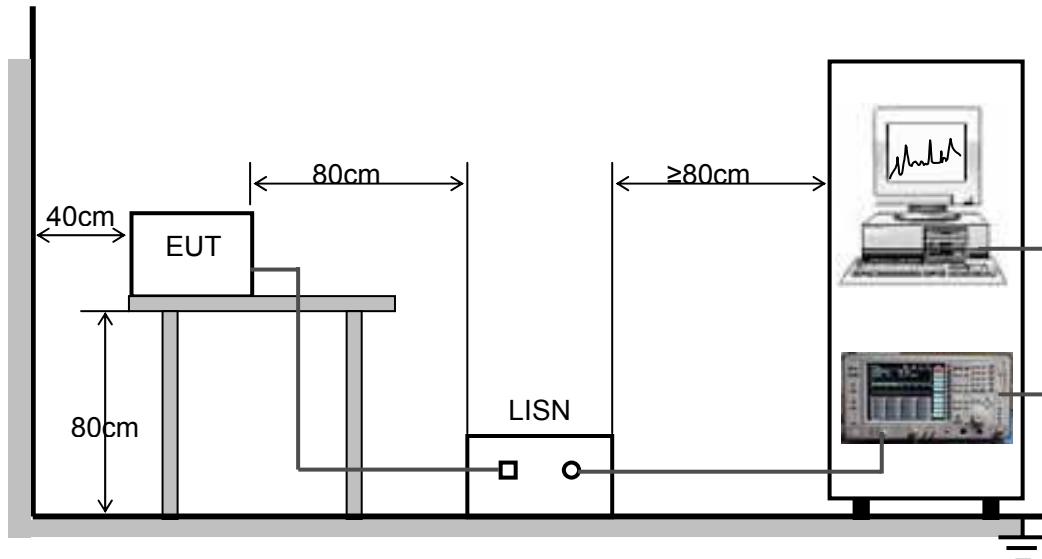
### 6.2 .LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P. ( dBuV)	Average( dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

\*\*Note: 1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

### 6.3. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



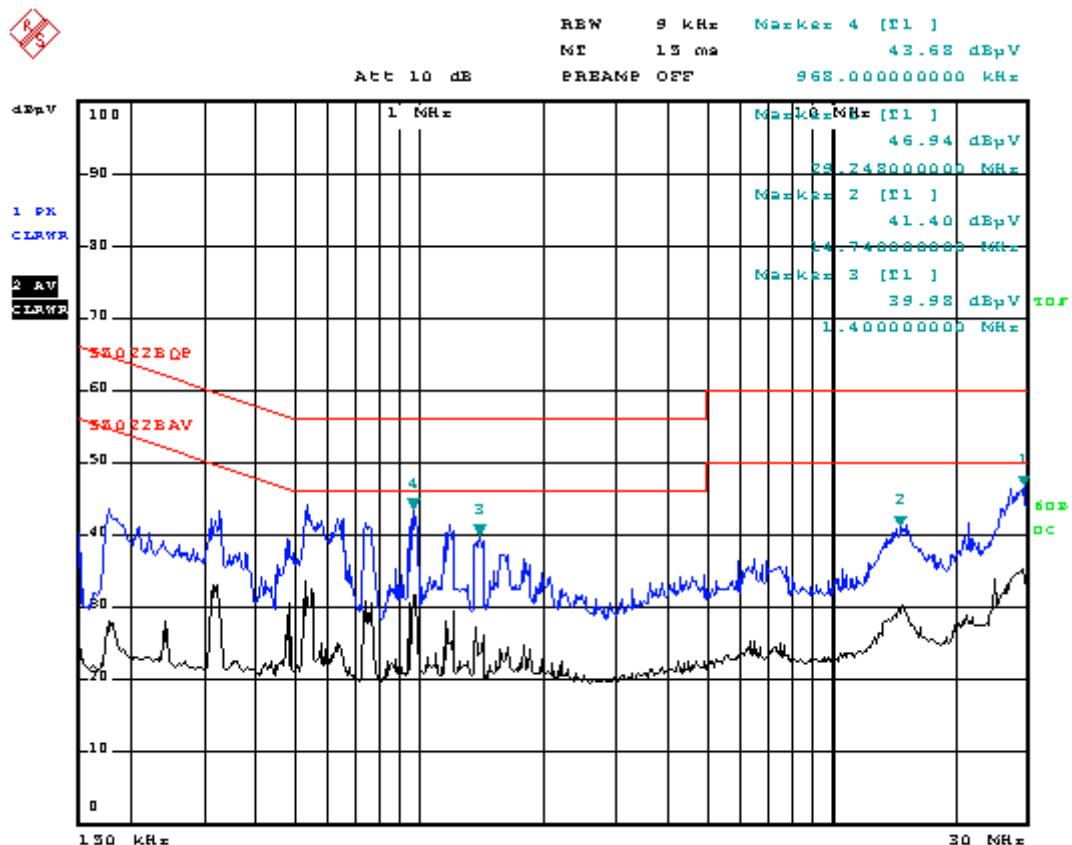
#### 6.4. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received power through a Line Impedance Stabilization Network (LISN) that was grounded to the protect earth.
- 5) All support equipments received AC120V power from a second LISN, if any.
- 6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- 10) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 11) The test data of the worst case condition(s) was reported on the Summary Data page.

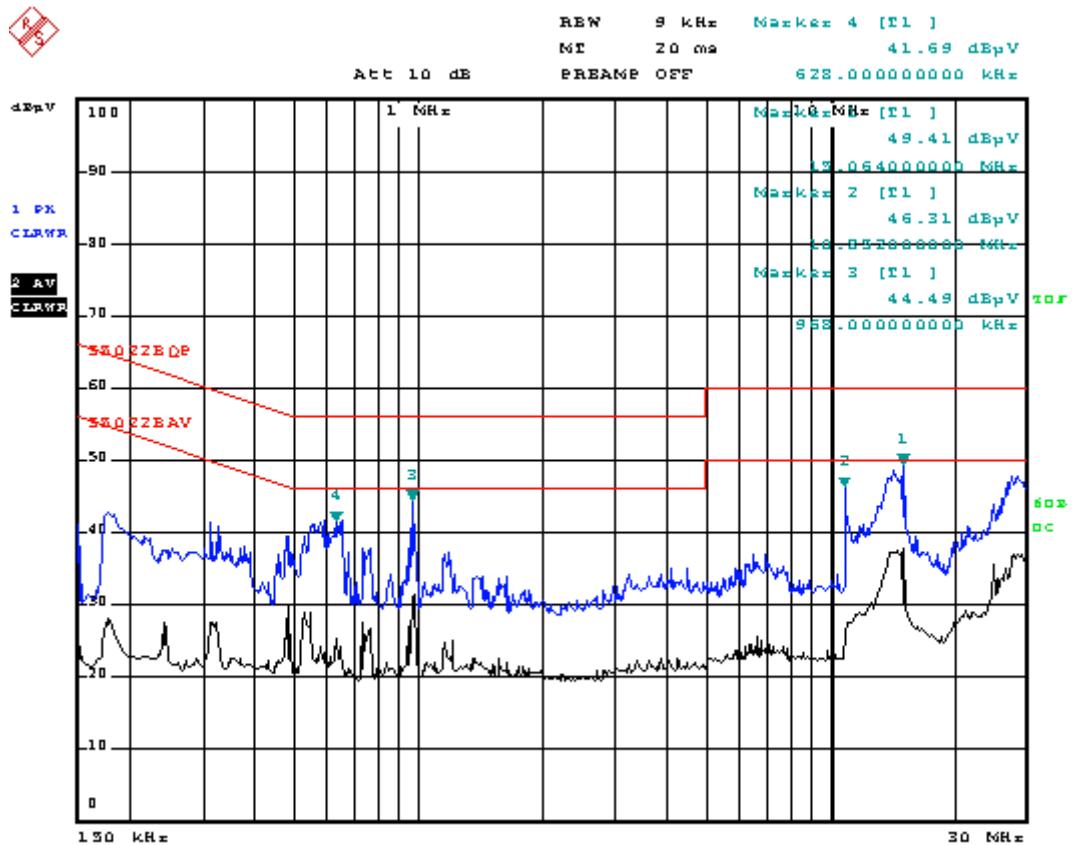
#### 6.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST

## CHARGER MODE:

## LINE CONCUTED EMISSION TEST LINE 1-L



## LINE CONCUTED EMISSION TEST LINE 1-N



## TEST RESULT: PASS

## 7. FCC RADIATED EMISSION TEST

### 7.1. TEST EQUIPMENT OF RADIATED EMISSION

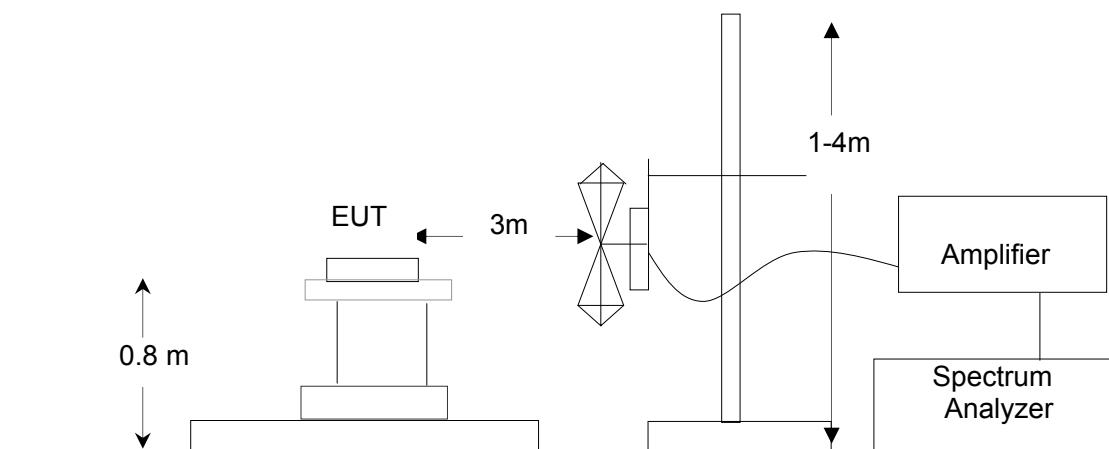
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI test receiver	H.P.	8546A	N/A	06/29/2009	06/28/2010
Amplifier	H.P.	8447D	N/A	06/29/2009	06/28/2010
Antenna	EMCO	85650A	N/A	06/29/2009	06/28/2010
CABLE	TIME MICROWAVE	LMR-400	N/A	06/29/2009	06/28/2010

### 7.2. LIMITS OF RADIATED EMISSION TEST

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m Q.P.)
30~88	3	40.0
88~216	3	43.5
216~960	3	46.0
Above 960	3	54.0

\*\*Note: The lower limit shall apply at the transition frequency.

### 7.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST



#### 7.4 PROCEDURE OF RADIATED EMISSION TEST

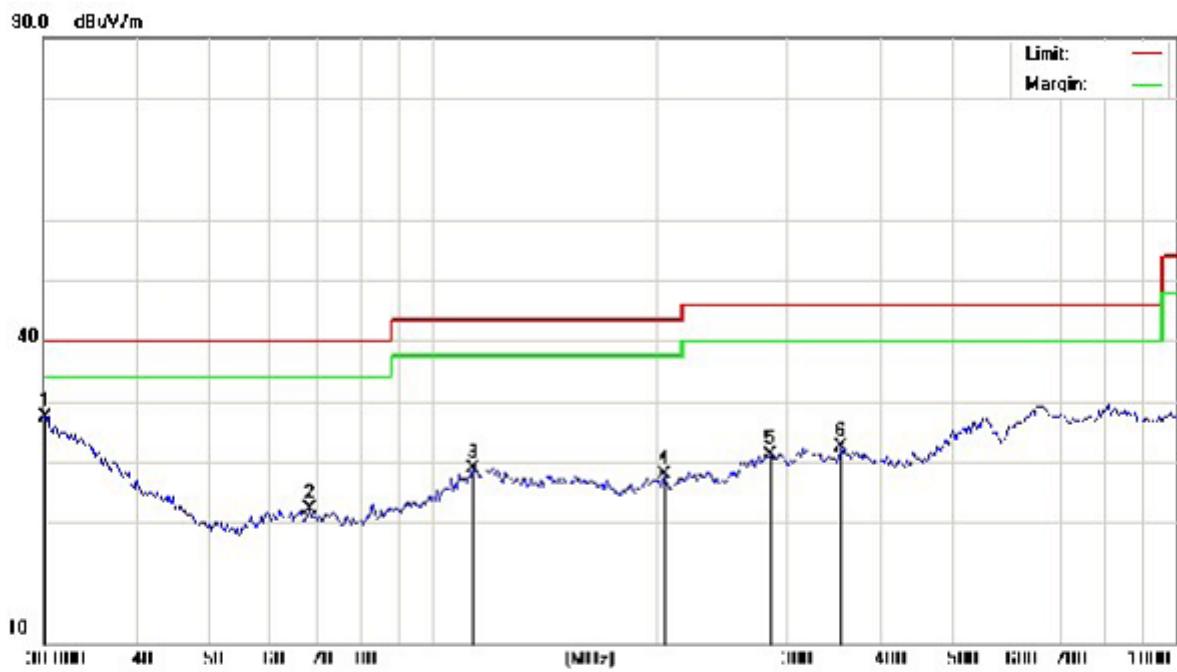
- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received DC 3.7V from USB or battery. All support equipments received AC 120V/60Hz power from socket under the turntable, if any.
- 5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- 6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- 7) The test mode(s) were scanned during the test:
- 8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.

The test data of the worst case condition(s) was reported on the Summary Data page.

## 7.5 TEST RESULT OF RADIATED EMISSION TEST

PC MODE :

### TEST RESULT OF RADIATED EMISSION TEST - HORIZONTAL Radiated Emission Measurement



Site 966 Chamber #1

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Part15 RE-Class B\_30-1000MHz

Power:

Humidity: 60 %

EUT:

Distance: 3m

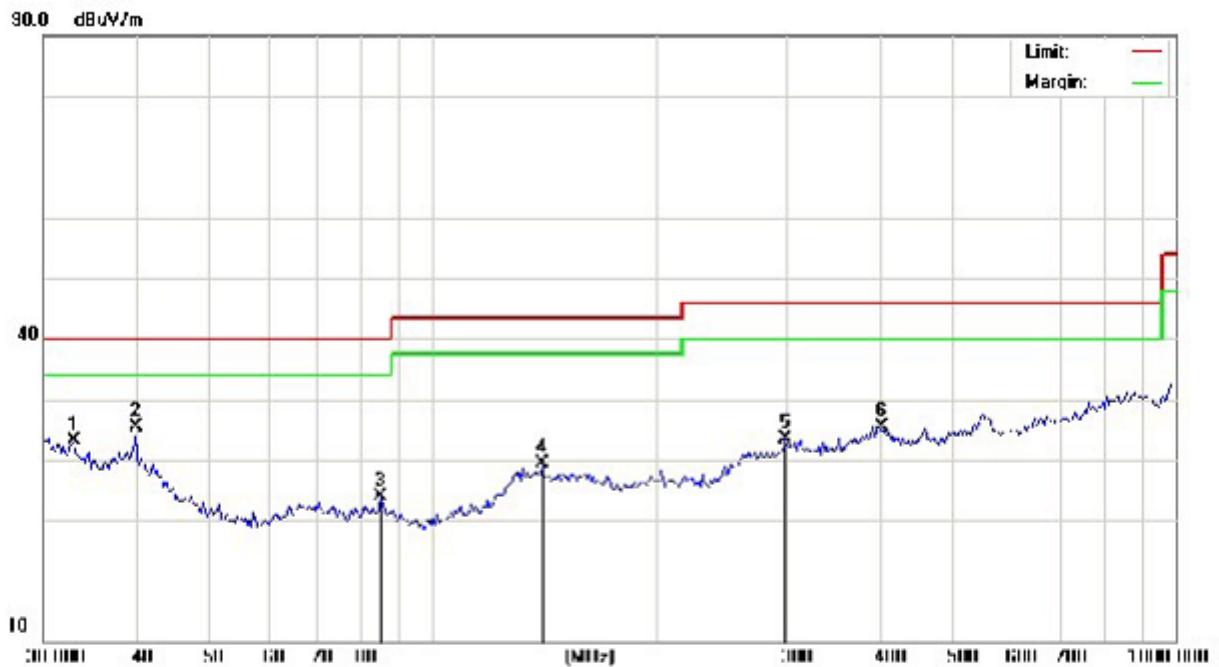
M/N:

Mode:

Note:

No.	Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
			dBuV	dB	dBuV/m					
1	*	30.1691	22.63	4.78	27.41	40.00	-12.59	peak		
2		68.5293	23.45	-11.32	12.13	40.00	-27.87	peak		
3		113.6377	24.02	-5.02	19.00	43.50	-24.50	peak		
4		205.0104	24.60	-6.62	17.98	43.50	-25.52	peak		
5		285.6051	24.08	-2.87	21.21	46.00	-24.79	peak		
6		355.5871	25.05	-2.73	22.32	46.00	-23.68	peak		

## TEST RESULT OF RADIATED EMISSION TEST -VERTICAL **Radiated Emission Measurement**



Site 966 Chamber #1

Polarization: **Vertical**

Temperature: 26

Limit: FCC Part15 RE-Class B\_30-1000MHz

## Power

Humidity: 60 %

EUT:

Distance: 3m

M/N:

Mode:

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table		
			Level	Factor	ment						
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		33.0073	24.33	-1.15	23.18	40.00	-16.82	peak			
2	*	39.9565	27.08	-1.74	25.34	40.00	-14.66	peak			
3		85.3210	24.46	-10.66	13.80	40.00	-26.20	peak			
4		140.6895	24.86	-5.51	19.35	43.50	-24.15	peak			
5		298.7378	24.67	-1.39	23.28	46.00	-22.72	peak			
6		402.3808	24.22	1.14	25.36	46.00	-20.64	peak			

## CHARGER MODE

### TEST RESULT OF RADIATED EMISSION TEST - HORIZONTAL Radiated Emission Measurement



Site 966 Chamber #1

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Part15 RE-Class B\_30-1000MHz

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N:

Mode:

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		181.1693	39.12	-7.95	31.17	43.50	-12.33	peak		
2		239.9442	36.54	-6.30	30.24	46.00	-15.76	peak		
3		319.5776	35.70	-2.37	33.33	46.00	-12.67	peak		
4		336.1560	34.05	-3.01	31.04	46.00	-14.96	peak		
5		367.7808	36.63	-2.66	33.97	46.00	-12.03	peak		
6		367.7808	36.63	-2.66	33.97	46.00	-12.03	peak		
7	*	701.8557	31.16	3.80	34.96	46.00	-11.04	peak		

TEST RESULT OF RADIATED EMISSION TEST --VERTICAL  
Radiated Emission Measurement



Site 966 Chamber #1

Polarization: **Vertical**

Temperature: 26

Limit: FCC Part15 RE-Class B\_30-1000MHz

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N:

Mode:

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
			Level	Factor	ment					
		MHz	dBuV	dB	dBuV/m			cm	degree	Comment
1		39.9565	27.05	-1.74	25.31	40.00	-14.69	peak		
2		160.1008	29.32	-5.62	23.70	43.50	-19.80	peak		
3		215.6456	27.13	-6.96	20.17	43.50	-23.33	peak		
4		246.7816	26.47	-5.92	20.55	46.00	-25.45	peak		
5	*	293.7438	37.35	-2.16	35.19	46.00	-10.81	peak		

**APPENDIX 1**  
**PHOTOGRAPHS OF TEST SETUP**

**FCC CONDUCTED EMISSION TEST**



**FCC RADIATED EMISSION TEST SETUP FOR PC MODE**



FCC RADIATED EMISSION TEST SETUP FOR CHARGER MODE



**APPENDIX 2**  
**PHOTOGRAPHS OF EUT**

TOP VIEW OF SAMPLE



BOTTOM VIEW OF SAMPLE



LEFT VIEW OF SAMPLE



RIGHT VIEW OF SAMPLE



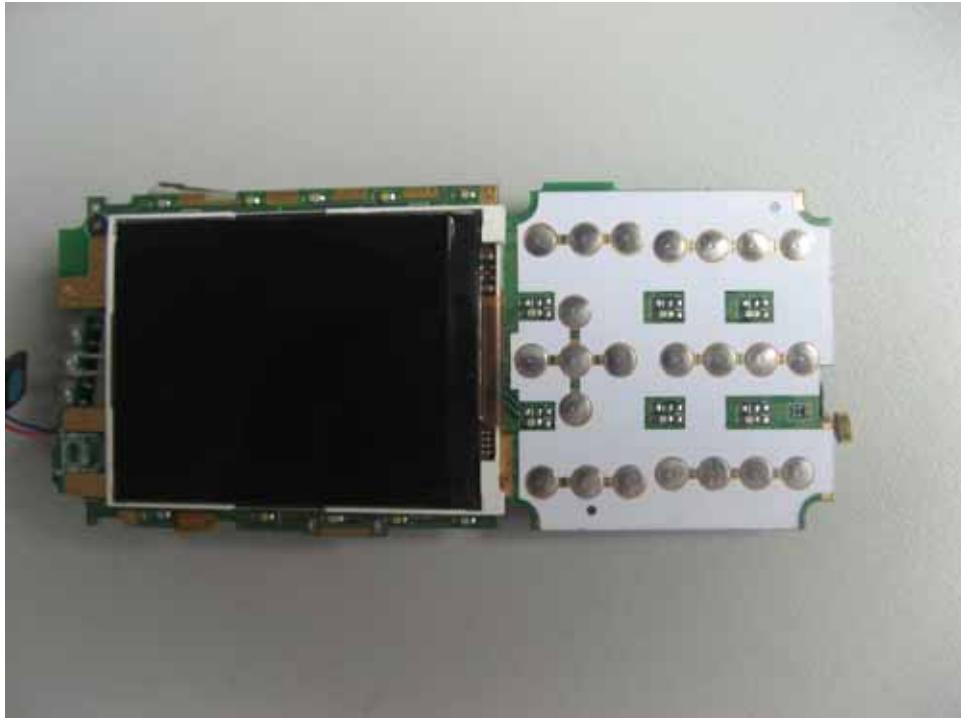
FRONT VIEW OF SAMPLE



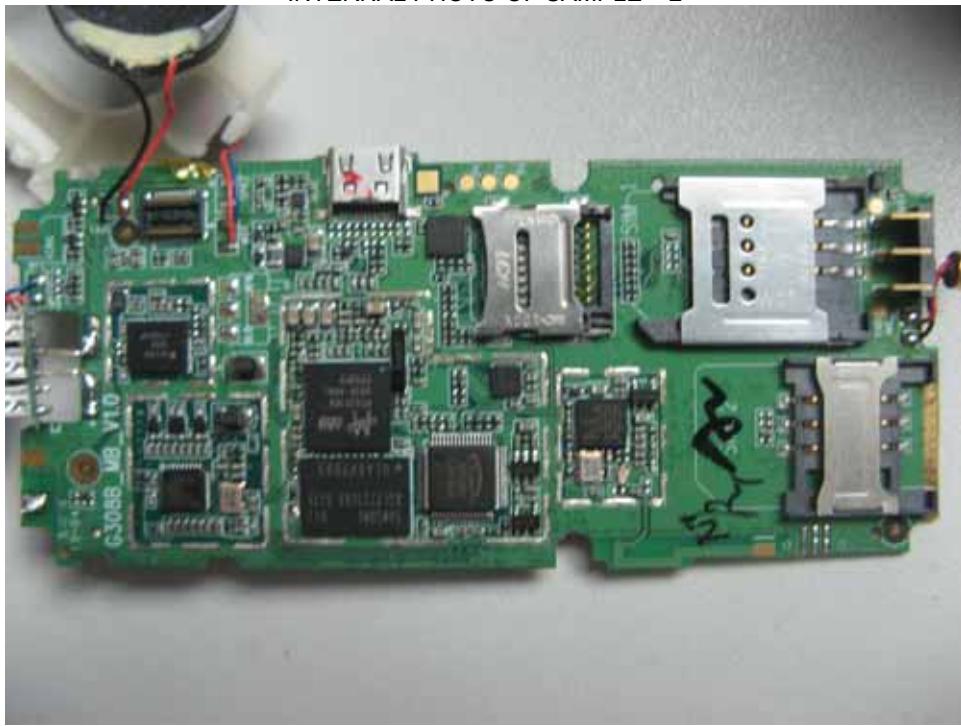
BACK VIEW OF SAMPLE



INTERNAL PHOTO OF SAMPLE – 1



INTERNAL PHOTO OF SAMPLE – 2



---END OF REPORT---