

**DATE: 11 May 2008**

**I.T.L. (PRODUCT TESTING) LTD.**

**FCC Radio Test Report**

**for**

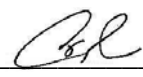
**Mobile Access Networks**

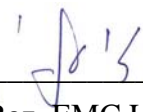
**Equipment under test:**

**Mobile Telephone In-Building  
Distribution System**

**1200-G-PCS-AO**

Written by:   
D. Shidlow, Documentation

Approved by:   
A. Sharabi, Test Engineer

Approved by:   
I. Raz, EMC Laboratory Manager

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This report relates only to items tested.

**Measurement/Technical Report for**  
**Mobile Access Networks**  
**Mobile Telephone In-Building Distribution System**

**1200-G-PCS-AO**

**FCC ID:OJFMA1200G**

**11 May 2008**

This report concerns:                      Original Grant   X        Class II change:

Class B verification             Class A verification                Class I change

Equipment type:                              PCS Licensed Transmitter

Request Issue of Grant:  
  x   Immediately upon completion of review

Limits used:  
CISPR 22                                             Part 24   x  

Measurement procedure used is ANSI C63.4-2003.

Substitution Method used as in ANSI/TIA-603-B: 2002

Application for Certification	Applicant for this device:
prepared by:	(different from "prepared by")
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# TABLE OF CONTENTS

<b>1.</b>	<b>GENERAL INFORMATION-----</b>	<b>4</b>
1.1	Administrative Information .....	4
1.2	List of Accreditations .....	5
1.3	Product Description .....	6
1.4	Test Methodology .....	6
1.5	Test Facility .....	6
1.6	Measurement Uncertainty .....	6
<b>2.</b>	<b>SYSTEM TEST CONFIGURATION-----</b>	<b>7</b>
2.1	Justification .....	7
2.2	EUT Exercise Software .....	7
2.3	Special Accessories .....	7
2.4	Equipment Modifications .....	7
2.5	Configuration of Tested System .....	7
<b>3.</b>	<b>PEAK OUTPUT POWER-----</b>	<b>8</b>
3.1	Test Specification .....	8
3.2	Test procedure .....	8
3.3	Results table .....	10
3.4	Test Equipment Used .....	11
<b>4.</b>	<b>OCCUPIED BANDWIDTH-----</b>	<b>12</b>
4.1	Test Specification .....	12
4.2	Test Procedure .....	12
4.3	Results Table .....	16
4.4	Test Equipment Used .....	17
<b>5.</b>	<b>OUT OF BAND EMISSIONS AT ANTENNA TERMINALS-----</b>	<b>18</b>
5.1	Test Specification .....	18
5.2	Test procedure .....	18
5.3	Results table .....	24
5.4	Test Equipment Used .....	25
<b>6.</b>	<b>BAND EDGE SPECTRUM-----</b>	<b>26</b>
6.1	Test Specification .....	26
6.2	Test procedure .....	26
6.3	Results table .....	27
6.4	Test Equipment Used .....	28
<b>7.</b>	<b>OUT OF BAND EMISSIONS (RADIATED)-----</b>	<b>29</b>
7.1	Test Specification .....	29
7.2	Test Procedure .....	29
7.3	Test Data .....	30
7.4	Test Instrumentation Used, Radiated Measurements .....	31
<b>8.</b>	<b>APPENDIX A - CORRECTION FACTORS-----</b>	<b>32</b>
8.1	Correction factors for CABLE .....	32
8.2	Correction factors for CABLE .....	33
8.3	Correction factors for CABLE .....	34
12.6	Correction factors for LOG PERIODIC ANTENNA .....	35
8.4	Correction factors for LOG PERIODIC ANTENNA .....	36
8.5	Correction factors for BICONICAL ANTENNA .....	37
8.6	Correction factors for Double-Ridged Waveguide Horn .....	38
8.7	Correction factors for ACTIVE LOOP ANTENNA .....	39

# 1. General Information

## 1.1 Administrative Information

Manufacturer:	Mobile Access Networks
Manufacturer's Address:	8391 Old Courthouse Rd. Suite #300 Vienna, VA 22182 U.S.A. Tel: +1-541-758-2880 Fax: +1-703-848-0260
Manufacturer's Representative:	Steve Blum
Equipment Under Test (E.U.T):	Mobile Telephone In-Building Distribution System
Equipment Model No.:	1200-G-PCS-AO
Equipment Serial No.:	Not Designated
Date of Receipt of E.U.T:	13.04.08
Start of Test:	13.04.08
End of Test:	16.04.08
Test Laboratory Location:	I.T.L (Product Testing) Ltd. Kfar Bin Nun, ISRAEL 99780
Test Specifications:	FCC Part 24, Sub-part E

## **1.2 List of Accreditations**

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), Registration No. 90715.
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) (Japan), Registration Numbers: C-1350, R-1285.
5. Industry Canada (Canada), File No. IC 4025.
6. TUV Product Services, England, ASLLAS No. 97201.
7. Nemko (Norway), Authorization No. ELA 207.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

### **1.3     *Product Description***

The MobileAccess 1200 Add-on module is a high power module, supporting a single frequency band (low or high). It is designed to be integrated with a host RHU 1000 module. The RHU 1000 module provides the following functionality for both units:

- Optical interface (to the BU) and conversion
- RF interface (to antennas) and conversion
- Control signals

In addition, WLAN services can also be combined with MA 1200 add-on and RHU 1000 services. (However, in this type of configuration the combined services interface to the coax infrastructure through the MA 850/860 ports.)

### **1.4     *Test Methodology***

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at an antenna to EUT distance of 3 meters.

### **1.5     *Test Facility***

The radiated emissions tests were performed at I.T.L.'s testing facility at Kfar Bin-Nun, Israel. This site is a FCC listed test laboratory (FCC Registration No. 90715, date of listing August 22, 2006).

I.T.L.'s EMC Laboratory is also accredited by A2LA, certificate No. 1152.01.

### **1.6     *Measurement Uncertainty***

#### **Radiated Emission**

The Open Site complies with the  $\pm 4$  dB Normalized Site Attenuation requirements of ANSI C63.4-2003. In accordance with Paragraph 5.4.6.1 of this standard, this tolerance includes instrumentation calibration errors, measurement technique errors, and errors due to site anomalies.

## 2. System Test Configuration

### 2.1 Justification

The test setup was configured to closely resemble a standard installation

### 2.2 EUT Exercise Software

The Unit is operated by the embedded SW version 3.4 b00 and managed by the NMS SW version 22.03.18. The SW is used by the professional installers to operate, calibrate and maintain the unit. The main features are enabling and disabling transmission, and adjusting unit output power per a given input signal.

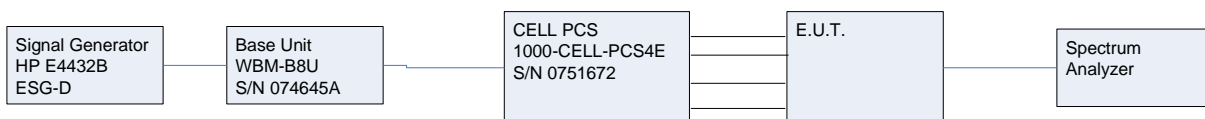
### 2.3 Special Accessories

No special accessories were needed in order to achieve compliance.

### 2.4 Equipment Modifications

No modifications were needed in order to achieve compliance.

### 2.5 Configuration of Tested System



**Figure 1. Tests Set-up**

Note: The antenna ports were terminated with 50 Ohm termination.

### 3. Peak Output Power

#### 3.1 Test Specification

FCC Part 24, Sub-part E

#### 3.2 Test procedure

Peak Power Output must not exceed 100 Watts (50dBm).

The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator (20 dB) and an appropriate coaxial cable (1 dB). The E.U.T. RF output was WCDMA modulated. Special attention was taken to prevent Spectrum Analyzer RF input overload. The Spectrum Analyzer was set to 2.0 MHz RBW. The output power level was measured at 1932.50, 1960.00, and 1992.50 MHz.

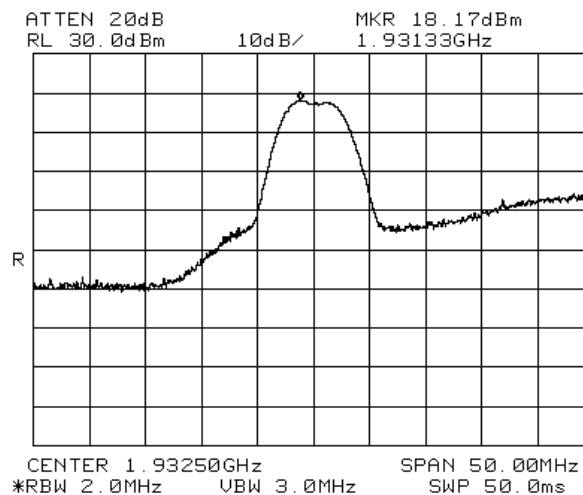
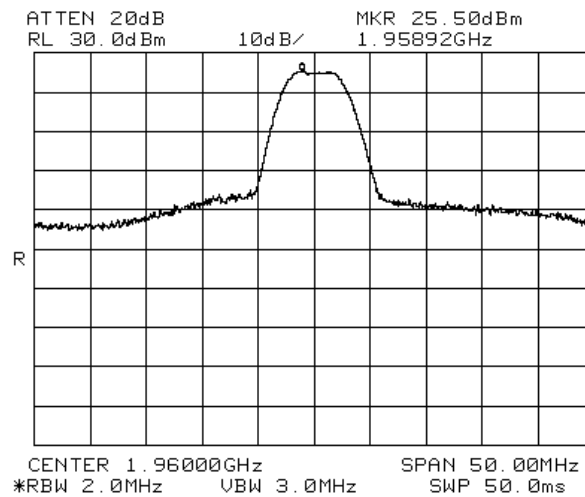
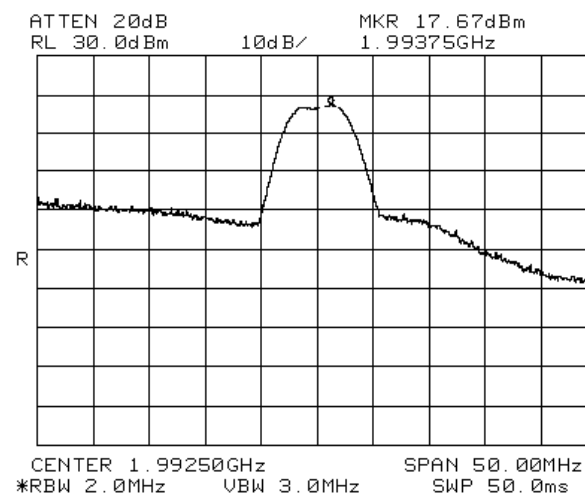


Figure 2.— 1932.50 MHz





**Figure 3.— 1960.00 MHz**



**Figure 4.— 1992.50 MHz**

### 3.3 Results table

E.U.T. Description: Mobile Telephone In-Building Distribution System

Model No.: 1200-G-PCS-AO

Serial Number: Not Designated

Specification: FCC Part 24, Sub-part E, Section 232, FCC Part 2, Section 1046

Operation Frequency (MHz)	Reading (dBm)	Specification (dBm)	Margin (dB)
1932.50	18.17	50.0	-31.83
1960.00	25.50	50.0	-24.50
1992.50	17.67	50.0	-32.33

**Figure 5 Peak Output Power**

JUDGEMENT: Passed by 24.50 dB

TEST PERSONNEL:

Tester Signature: 

Date: 11.05.08

Typed/Printed Name: A. Sharabi

### 3.4 Test Equipment Used.

Peak Output Power

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibr.	Period
Spectrum Analyzer	HP	8564E	3442A00275	November 14, 2007	1 year
Signal Generator	HP	E4432B ESG-D	GB38450502	April 26, 2007	1 year
Power Supply	Horizon Electronics	DHR 3653D-1.0	TE1232	N/A	1 year
Attenuator	Jyebao	-	FAT-AM5AF5G6G 2W20	May 9, 2007	1 year
Cable	Rhophase	KPS-5000-KPS	A1674	February 8, 2008	1 year

**Figure 6 Test Equipment Used**

## 4. Occupied Bandwidth

### 4.1 Test Specification

FCC Part 2, Section 1049

### 4.2 Test Procedure

The E.U.T. was set to the applicable test frequency with WCDMA modulation. The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator (at the output test) and an appropriate coaxial cable. The spectrum analyzer was set to 100 kHz resolution B.W.

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limit, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission.

The occupied bandwidth of the E.U.T. at the points of 20 dB below maximum peak power was measured and recorded.

Occupied bandwidth measured was repeated in the input terminal of the E.U.T.

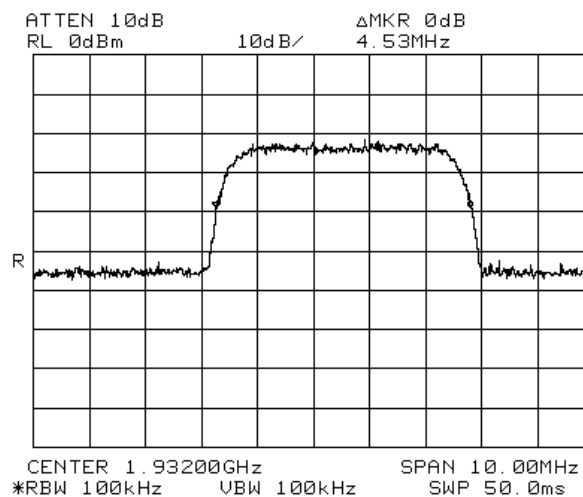
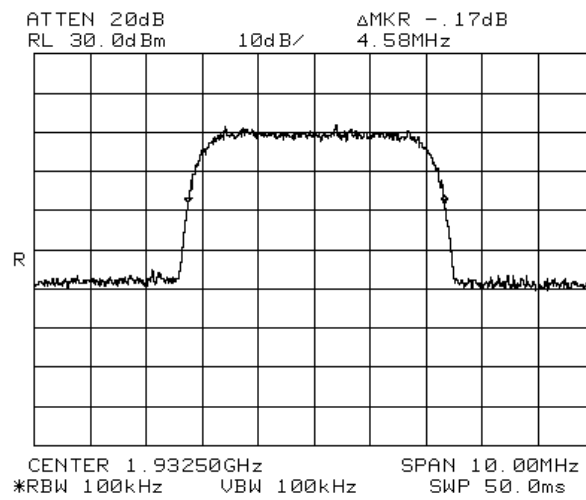
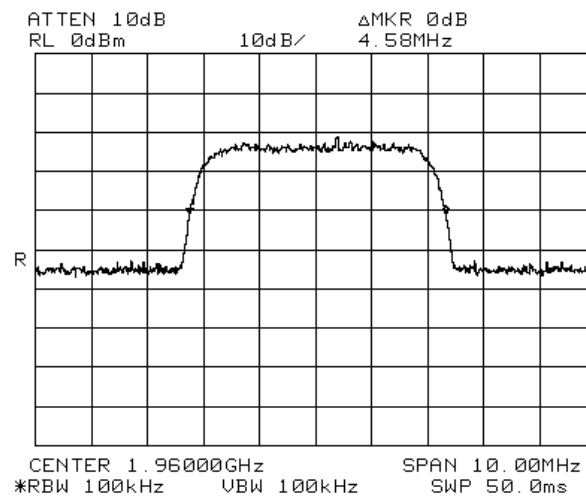


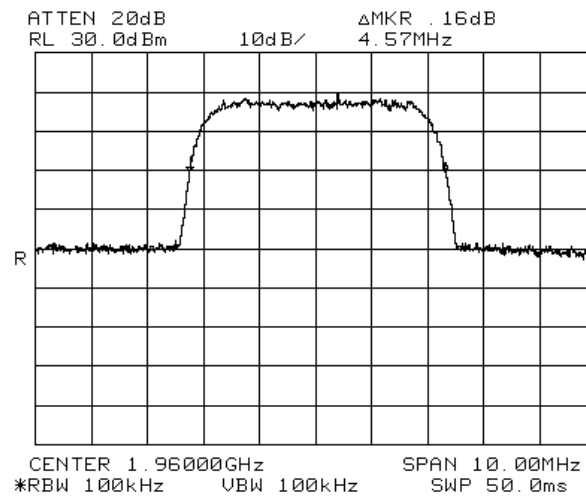
Figure 7.— Input 1932.50 MHz



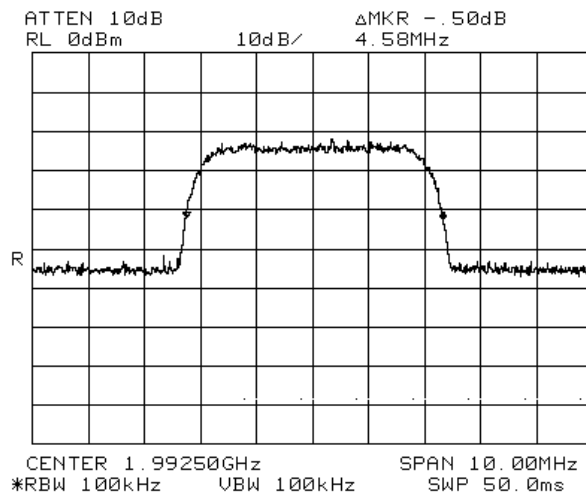
**Figure 8.— Output 1932.50 MHz**



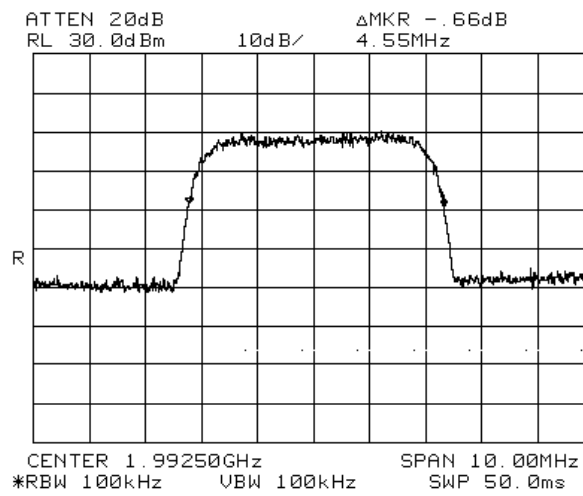
**Figure 9.— Input 1960.00 MHz**



**Figure 10.— Output 1960.00 MHz**



**Figure 11.— Input 1992.50 MHz**



**Figure 12.— Output 1992.50 MHz**

### 4.3 Results Table

E.U.T. Description: Mobile Telephone In-Building Distribution System

Model No.: 1200-G-PCS-AO

Serial Number: Not Designated

Specification: FCC Part 2, Section 1049

	Operating Frequency	Reading (MHz)
Input	1932.50	4.53
Output	1932.50	4.58
Input	1960.00	4.58
Output	1960.00	4.57
Input	1992.50	4.58
Output	1992.50	4.55

**Figure 13 Occupied Bandwidth**

TEST PERSONNEL:

Tester Signature: \_\_\_\_\_

Date: 11.05.08

Typed/Printed Name: A. Sharabi



#### 4.4 Test Equipment Used.

##### Occupied Bandwidth

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibr.	Period
Spectrum Analyzer	HP	8564E	3442A00275	November 14, 2007	1 year
Signal Generator	HP	E4432B ESG-D	GB38450502	April 26, 2007	1 year
Power Supply	Horizon Electronics	DHR 3653D-1.0	TE1232	N/A	1 year
Attenuator	Jyebao	-	FAT-AM5AF5G6G 2W20	May 9, 2007	1 year
Cable	Rhophase	KPS-5000-KPS	A1674	February 8, 2008	1 year

**Figure 14 Test Equipment Used**

## 5. Out of Band Emissions at Antenna Terminals

### 5.1 Test Specification

FCC Part 24, Sub-part E, Section 238; FCC Part 2.1051

### 5.2 Test procedure

The power of any emission outside of the authorized operating frequency ranges (1930-1995 MHz) must be attenuated below the transmitting power (P) by a factor of at least  $43 + \log(P)$  dB, yielding  $-13\text{dBm}$ .

The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator and an appropriate coaxial cable (21.0 dB).

The spectrum analyzer was set to 100 kHz R.B.W.

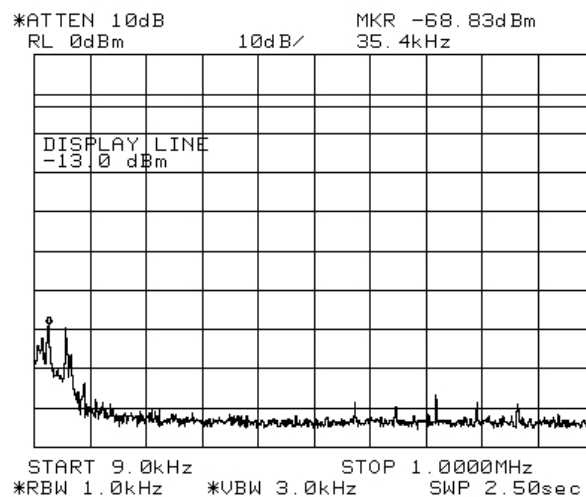


Figure 15.— 1932.50 MHz

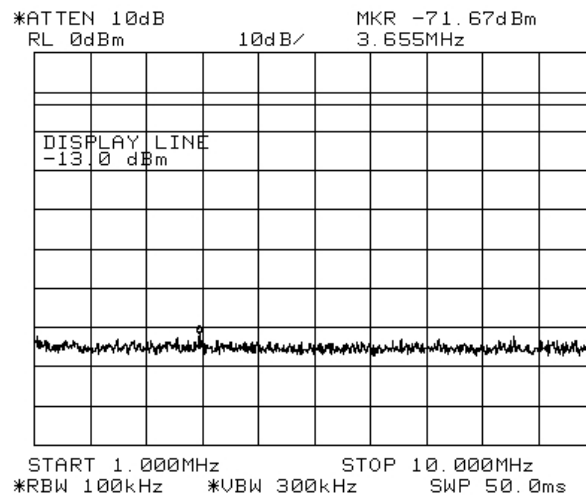


Figure 16.— 1932.50 MHz

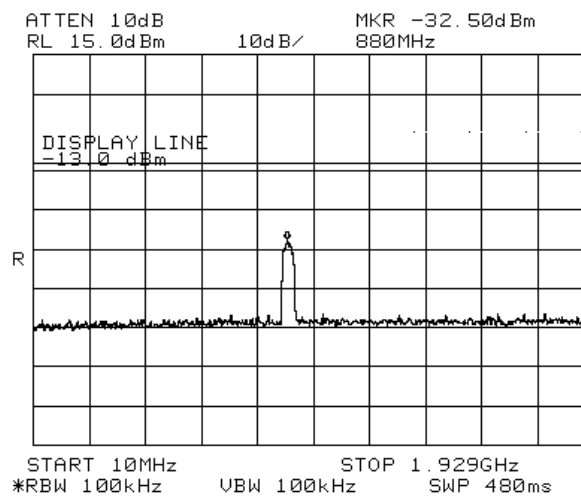


Figure 17.— 1932.50 MHz

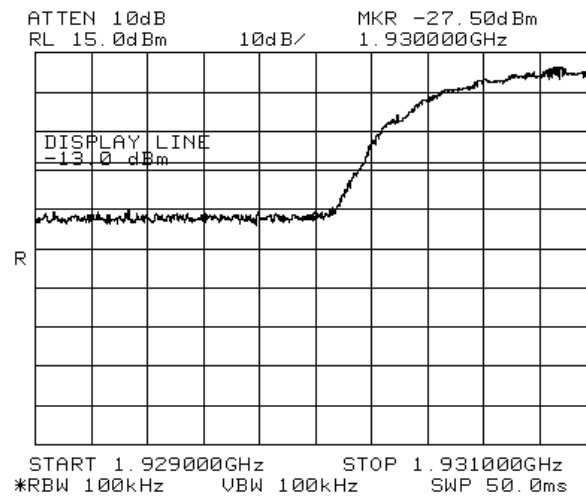


Figure 18.— 1932.50 MHz

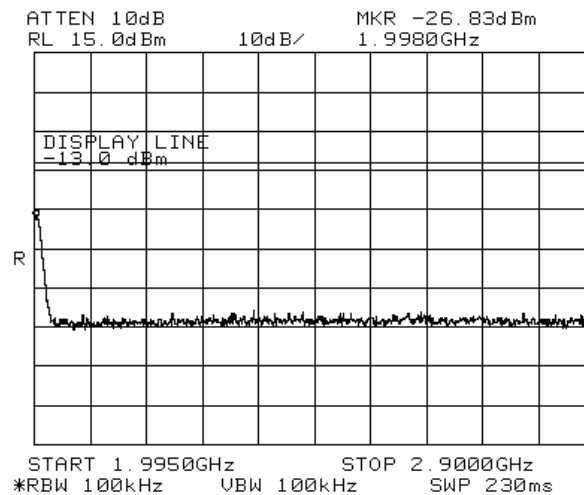


Figure 19.— 1932.50 MHz

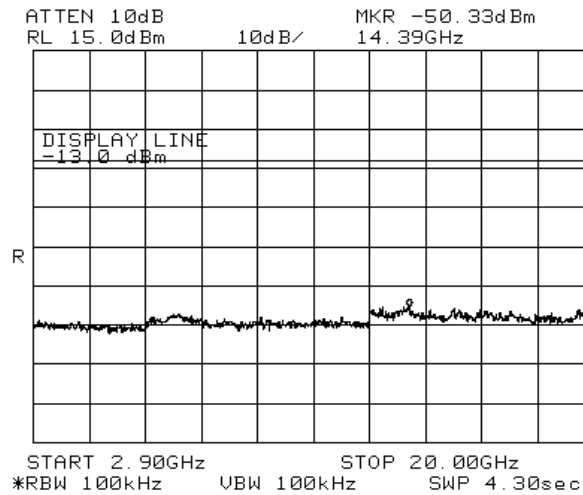


Figure 20.— 1932.50 MHz

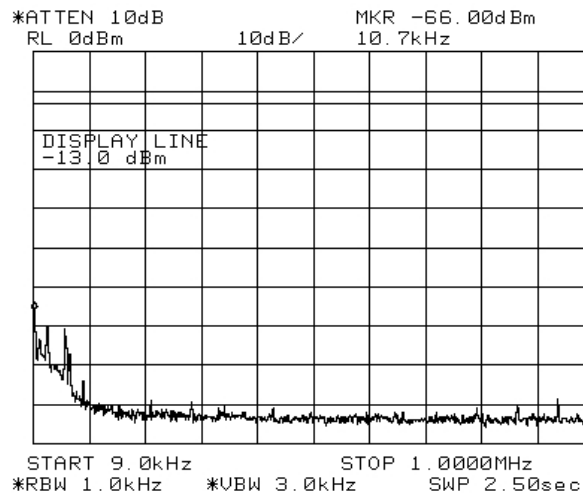


Figure 21.— 1992.50 MHz

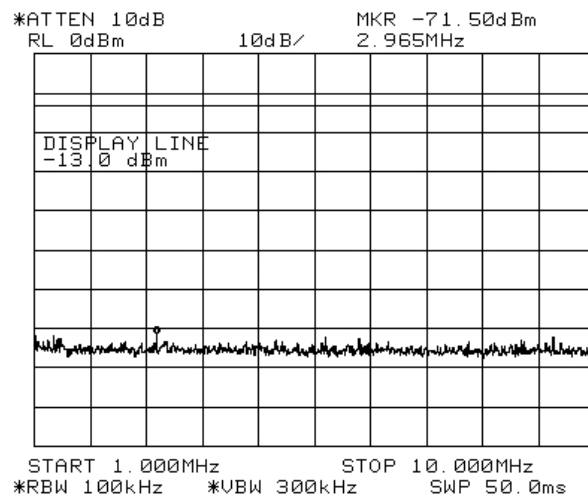


Figure 22.— 1992.50 MHz

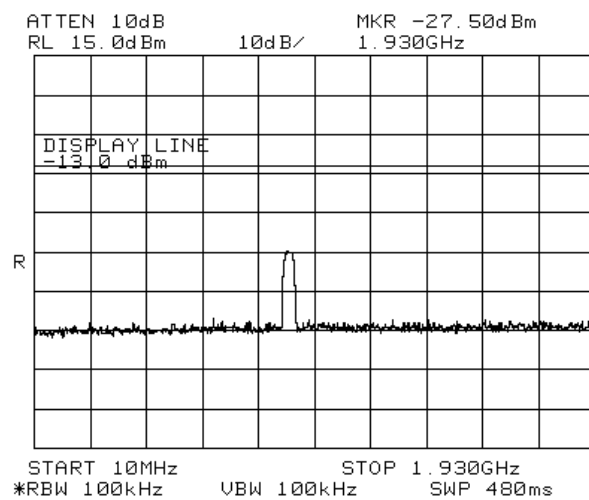
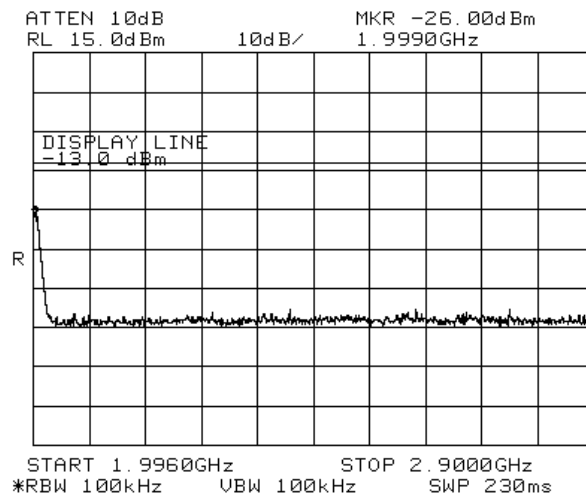
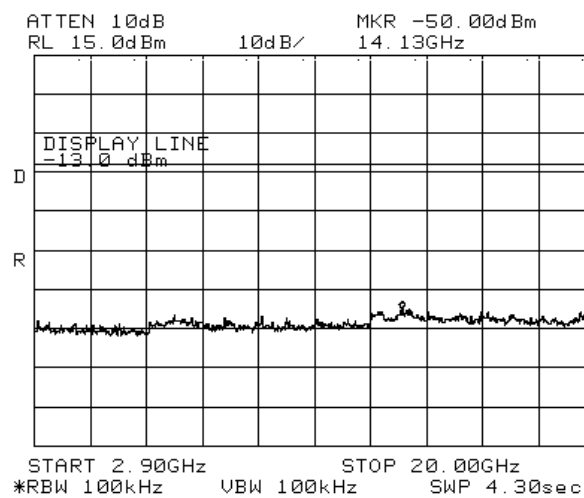


Figure 23.— 1992.50 MHz



**Figure 24.— 1992.50 MHz**



**Figure 25.— 1992.50 MHz**

### 5.3 Results table

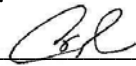
E.U.T. Description: Mobile Telephone In-Building Distribution System  
 Model No.: 1200-G-PCS-AO  
 Serial Number: Not Designated  
 Specification: FCC Part 24, Sub-part E, Section 238; Part 2 Section 1051

Operation Frequency (MHz)	Frequency (MHz)	Reading (dBm)	Specification (dBm)	Margin (dB)
1932.50	1998.00	-26.8	-13.0	-13.8
1992.50	1999.00	-26.0	-13.0	-13.0

**Figure 26 Out of Band Emission Results**

JUDGEMENT: Passed by 13.0 dB

TEST PERSONNEL:

Tester Signature: 

Date: 11.05.08

Typed/Printed Name: A. Sharabi



#### 5.4 Test Equipment Used.

##### Out of Band Emission at Antenna Terminals

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibr.	Period
Spectrum Analyzer	HP	8564E	3442A00275	November 14, 2007	1 year
Signal Generator	HP	E4432B ESG-D	GB38450502	April 26, 2007	1 year
Power Supply	Horizon Electronics	DHR 3653D-1.0	TE1232	N/A	1 year
Attenuator	Jyebao	-	FAT-AM5AF5G6G 2W20	May 9, 2007	1 year
Cable	Rhophase	KPS-5000-KPS	A1674	February 8, 2008	1 year

**Figure 27 Test Equipment Used**

## 6. Band Edge Spectrum

### 6.1 Test Specification

FCC Part 24, Sub-part E, Section 238; FCC Part 2.1051

### 6.2 Test procedure

Enclosed are spectrum analyzer plots for the lowest operation frequency (1932.5 MHz) and the highest operation frequency (1992.5 MHz) in which the E.U.T. is planned to be used.

The power of any emission outside of the authorized operating frequency ranges (1932.50-1992.50 MHz) must be attenuated below the transmitting power (P) by a factor of at least  $43 + \log(P)$  dB, yielding  $-13\text{dBm}$ .

The E.U.T. antenna terminal was connected to the spectrum analyzer through an external attenuator and an appropriate coaxial cable (21.0 dB).

The spectrum analyzer was set to 100 kHz R.B.W.

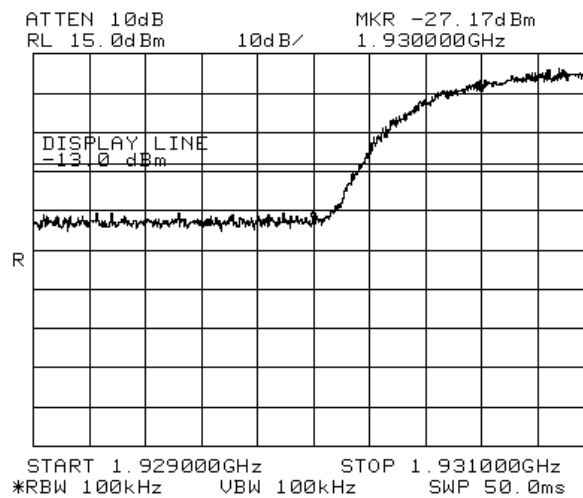
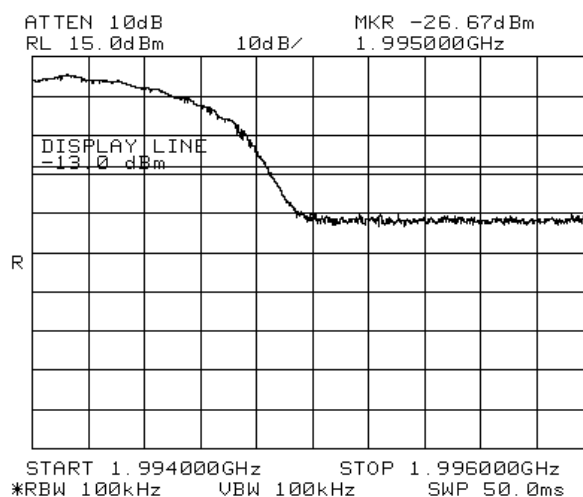


Figure 28.— 1932.50 MHz



**Figure 29.— 1992.50 MHz**

### 6.3 Results table

E.U.T. Description: Mobile Telephone In-Building Distribution System  
 Model No.: 1200-G-PCS-AO  
 Serial Number: Not Designated  
 Specification: FCC Part 24, Sub-part E, Section 238; Part 2 Section 1051

Operation Frequency (MHz)	Band Edge Frequency (MHz)	Reading (dBm)	Specification (dBm)	Margin (dB)
1932.50	1930.00	-27.17	-13.0	-14.17
1960.00	1995.00	-26.67	-13.0	-13.67

**Figure 30 Band Edge Spectrum Results**

JUDGEMENT: Passed by 13.67 dB

TEST PERSONNEL:

Tester Signature: 

Date: 11.05.08

Typed/Printed Name: A. Sharabi

#### 6.4 Test Equipment Used.

##### Band Edge Spectrum

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibr.	Period
Spectrum Analyzer	HP	8564E	3442A00275	November 14, 2007	1 year
Signal Generator	HP	E4432B ESG-D	GB38450502	April 26, 2007	1 year
Power Supply	Horizon Electronics	DHR 3653D-1.0	TE1232	N/A	1 year
Attenuator	Jyebao	-	FAT-AM5AF5G6G 2W20	May 9, 2007	1 year
Cable	Rhophase	KPS-5000-KPS	A1674	February 8, 2008	1 year

**Figure 31 Test Equipment Used**

## 7. Out of Band Emissions (Radiated)

### 7.1 Test Specification

FCC, Part 24, Sub-part E Section 238, FCC Part 2.1053

### 7.2 Test Procedure

The test method was based on ANSI/TIA-603-B: 2002, Section 2.2.12

Unwanted Emissions: Radiated Spurious.

The power of any emission outside of the authorized operating frequency ranges (1930-1995 MHz) must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB, yielding  $-13\text{dBm}$ .

- (a) The E.U.T. operation mode and test set-up are as described in Section 3. A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 1.5 meters above the ground. The configuration tested is shown in Figure 3.1.

The frequency range 9 kHz-20 GHz was scanned, and the list of the highest emissions was verified and updated accordingly.

The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization. The emissions were measured at a distance of 3 meters.

- (b) The E.U.T. was replaced by a substitution antenna (dipole 30MHz-1GHz, Horn Antenna above 1GHz) driven by a signal generator. The height was readjusted for maximum reading. The signal generator level was adjusted to obtain the same reading on the EMI receiver as in step (a).

The signals observed in step (a) were converted to radiated power using:

$$P_d(\text{dBm}) = P_g(\text{dBm}) - \text{Cable Loss (dB)} + \text{Substitution Antenna Gain (dB)}$$

$P_d$  = Dipole equivalent power (result).

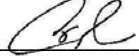
$P_g$  = Signal generator output level.

### 7.3 Test Data

The E.U.T met the requirements of the FCC, Part 24, Sub-part E, Section 238; FCC Part 2.1053 specifications.

The signals in the band 9.0 kHz – 20.0 GHz were below the spectrum analyzer noise level.

TEST PERSONNEL:

Tester Signature: 

Date: 11.05.08

Typed/Printed Name: A. Sharabi

#### 7.4 Test Instrumentation Used, Radiated Measurements

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 12, 2007	1 year
RF Section	HP	85420E	3705A00248	November 12, 2007	1 year
Antenna Bioconical	ARA	BCD 235/B	1041	March 23, 2008	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	November 22, 2007	1 year
Active Loop Antenna	EMCO	6502	9506-2950	October 15, 2007	1 year
Antenna Log Periodic	A.H. Systems	SAS-200/511	253	February 4, 2007	2 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	ThinkJet 2225	2738508357.0	N/A	N/A
Spectrum Analyzer	HP	8564E	3442A00275	November 14, 2007	1 year
Low Noise Amplifier	DBS MICROWAVE	LNA-DBS-0411N313	013	November 2, 2007	1 Year
Low Noise Amplifier	Sophia Wireless	LNA 28-B	232	January 9, 2008	1 Year
Signal Generator	HP	E4432B ESG-D	GB38450502	April 26, 2007	1 year
Double Ridged Waveguide Horn Antenna	EMCO	3115	29845	March 16, 2008	2 year

## 8. APPENDIX A - CORRECTION FACTORS

### 8.1 Correction factors for CABLE from EMI receiver to test antenna at 3 meter range.

FREQUENCY (MHz)	CORRECTION FACTOR (dB)	FREQUENCY (MHz)	CORRECTION FACTOR (dB)
10.0	0.3	1200.0	7.3
20.0	0.6	1400.0	7.8
30.0	0.8	1600.0	8.4
40.0	0.9	1800.0	9.1
50.0	1.1	2000.0	9.9
60.0	1.2	2300.0	11.2
70.0	1.3	2600.0	12.2
80.0	1.4	2900.0	13.0
90.0	1.6		
100.0	1.7		
150.0	2.0		
200.0	2.3		
250.0	2.7		
300.0	3.1		
350.0	3.4		
400.0	3.7		
450.0	4.0		
500.0	4.3		
600.0	4.7		
700.0	5.3		
800.0	5.9		
900.0	6.3		
1000.0	6.7		

#### NOTES:

1. The cable type is RG-214.
2. The overall length of the cable is 27 meters.
3. The above data is located in file 27MO3MO.CBL on the disk marked "Radiated Emission Tests EMI Receiver".



**8.2      Correction factors for      CABLE**  
**from EMI receiver**  
**to test antenna**  
**at 3 meter range.**

FREQUENCY	CORRECTION
(GHz)	FACTOR
1.0	1.2
2.0	1.6
3.0	2.0
4.0	2.4
5.0	3.0
6.0	3.4
7.0	3.8
8.0	4.2
9.0	4.6
10.0	5.0
12.0	5.8

*NOTES:*

- 1. The cable type is RG-8.*
- 2. The overall length of the cable is 10 meters.*

**8.3 Correction factors for CABLE**  
**from spectrum analyzer**  
**to test antenna above 2.9 GHz**

FREQUENCY (GHz)	CORRECTION FACTOR (dB)	FREQUENCY (GHz)	CORRECTION FACTOR (dB)
1.0	1.9	14.0	9.1
2.0	2.7	15.0	9.5
3.0	3.5	16.0	9.9
4.0	4.2	17.0	10.2
5.0	4.9	18.0	10.4
6.0	5.5	19.0	10.7
7.0	6.0	20.0	10.9
8.0	6.5	21.0	11.2
9.0	7.0	22.0	11.6
10.0	7.5	23.0	11.9
11.0	7.9	24.0	12.3
12.0	8.3	25.0	12.6
13.0	8.7	26.0	13.0

**NOTES:**

1. The cable type is *SUCOFLEX 104 E* manufactured by *SUHNER*.
2. The cable is used for measurements above 2.9 GHz.
3. The overall length of the cable is 10 meters.

## 12.6 Correction factors for LOG PERIODIC ANTENNA

**Type LPD 2010/A  
at 3 and 10 meter ranges.**

**Distance of 3 meters**

<b>FREQUENCY</b> (MHz)	<b>AFE</b> (dB/m)
200.0	9.1
250.0	10.2
300.0	12.5
400.0	15.4
500.0	16.1
600.0	19.2
700.0	19.4
800.0	19.9
900.0	21.2
1000.0	23.5

**Distance of 10 meters**

<b>FREQUENCY</b> (MHz)	<b>AFE</b> (dB/m)
200.0	9.0
250.0	10.1
300.0	11.8
400.0	15.3
500.0	15.6
600.0	18.7
700.0	19.1
800.0	20.2
900.0	21.1
1000.0	23.2

### *NOTES:*

- 1. Antenna serial number is 1038.*
- 2. The above lists are located in file number 38M30.ANT for a 3 meter range,  
and file number 38M100.ANT for a 10 meter range.*
- 3. The files mentioned above are located on the disk marked "Radiated Emission  
Test EMI Receiver".*

#### 8.4 Correction factors for

#### LOG PERIODIC ANTENNA

**Type SAS-200/511  
at 3 meter range.**

FREQUENCY (GHz)	ANTENNA FACTOR (dB)
1.0	24.9
1.5	27.8
2.0	29.9
2.5	31.2
3.0	32.8
3.5	33.6
4.0	34.3
4.5	35.2
5.0	36.2
5.5	36.7
6.0	37.2
6.5	38.1

FREQUENCY (GHz)	ANTENNA FACTOR (dB)
7.0	38.6
7.5	39.2
8.0	39.9
8.5	40.4
9.0	40.8
9.5	41.1
10.0	41.7
10.5	42.4
11.0	42.5
11.5	43.1
12.0	43.4
12.5	44.4
13.0	44.6

#### NOTES:

1. Antenna serial number is 253.
2. The above lists are located in file number SAS3M0.ANT for a 3 meter range.
3. The files mentioned above are located on the disk marked "Antenna Factors".

**8.5 Correction factors for BICONICAL ANTENNA  
Type BCD-235/B,  
at 3 meter range**

<b>FREQUENCY</b> (MHz)	<b>AFE</b> (dB/m)
20.0	19.4
30.0	14.8
40.0	11.9
50.0	10.2
60.0	9.1
70.0	8.5
80.0	8.9
90.0	9.6
100.0	10.3
110.0	11.0
120.0	11.5
130.0	11.7
140.0	12.1
150.0	12.6
160.0	12.8
170.0	13.0
180.0	13.5
190.0	14.0
200.0	14.8
210.0	15.3
220.0	15.8
230.0	16.2
240.0	16.6
250.0	17.6
260.0	18.2
270.0	18.4
280.0	18.7
290.0	19.2
300.0	19.9
310	20.7
320	21.9
330	23.4
340	25.1
350	27.0

**NOTES:**

1. Antenna serial number is 1041.
2. The above list is located in file 19BC10M1.ANT on the disk marked "Radiated Emissions Tests EMI Receiver".

## 8.6 Correction factors for Double-Ridged Waveguide Horn

**Model: 3115, S/N 29845  
at 3 meter range.**

FREQUENCY (GHz)	ANTENNA FACTOR (dB 1/m)	ANTENN A Gain (dBi)	FREQUENCY (GHz)	ANTENNA FACTOR (dB 1/m)	ANTENNA Gain (dBi)
1.0	24.8	5.4	10.0	38.8	11.4
1.5	26.1	7.6	10.5	38.9	11.8
2.0	28.6	7.7	11.0	39.0	12.1
2.5	29.8	8.4	11.5	39.6	11.8
3.0	31.4	8.4	12.0	39.8	12.0
3.5	32.4	8.7	12.5	39.6	12.5
4.0	33.7	8.6	13.0	40.0	12.5
4.5	33.4	9.9	13.5	39.8	13.0
5.0	34.5	9.7	14.0	40.2	13.0
5.5	35.1	9.9	14.5	40.6	12.9
6.0	35.4	10.4	15.0	41.3	12.4
6.5	35.6	10.8	15.5	39.5	14.6
7.0	36.2	10.9	16.0	38.8	15.5
7.5	37.3	10.4	16.5	40.0	14.6
8.0	37.7	10.6	17.0	41.4	13.4
8.5	38.3	10.5	17.5	44.8	10.3
9.0	38.5	10.8	18.0	47.2	8.1
9.5	38.7	11.1			

**8.7 Correction factors for ACTIVE LOOP ANTENNA**  
**Model 6502**  
**S/N 9506-2950**

<b>FREQUENCY</b>	<b>Magnetic Antenna Factor</b>	<b>Electric Antenna Factor</b>
(MHz)	(dB)	(dB)
.009	-35.1	16.4
.010	-35.7	15.8
.020	-38.5	13.0
.050	-39.6	11.9
.075	-39.8	11.8
.100	-40.0	11.6
.150	-40.0	11.5
.250	-40.0	11.6
.500	-40.0	11.5
.750	-40.1	11.5
1.000	-39.9	11.7
2.000	-39.5	12.0
3.000	-39.4	12.1
4.000	-39.7	11.9
5.000	-39.7	11.8
10.000	40.2	11.3
15.000	-40.7	10.8
20.000	-40.5	11.0
25.000	-41.3	10.2
30.000	42.3	9.2