

# A Test Lab Techno Corp.

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## P22 & P24 Test Report



Test Report No.	: 0906FR14-02
Applicant	: HTC Corporation
Manufacturer	: HTC Corporation
Model Name	: PDA Phone
Trade Mark	: HTC
Model Number	: CLIC100
FCC ID	: NM8CKV
Dates of Test	: Jun. 08 ~ Jun. 24, 2009
Test Specification	: 47 CFR Part 22H & 24E and Part 2
	ANSI/TIA-603-C-2004
Location of Test Lab.	: Chang-an Lab.

- 1. The test operations have to be performed with cautious behavior, the test results are as attached.
- 2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
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Kevin Wang Approve Signer

0000630 John Cheng

John Oneng Testing Engineer

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## 1. <u>General Information</u>

Applicant :

HTC Corporation No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan, R.O.C.

Manufacturer	: HTC Corporation					
	No. 23, Xinghua Rd., Taoyuan City, Taoyuan County					
	330, Taiwan, R.O.C.					
Product Name	: PDA Phone					
Trade Mark	: HTC					
Model Number	: CLIC100					
FCC ID	: NM8CKV					
IMEI No	: 358355020015596					
Hardware Version	: XD					
Software Version	: 13.15.55.03H_1.35.03.06					
Antenna Type	: Planar Inverted-F Antenna (PIFA)					
Antenna Gain	: 0 dBi (GSM/GPRS/EGPRS 850)					
	1 dBi (PCS/GPRS/EGPRS 1900)					
TX Frequency	: 824.2 - 848.8 MHz (GSM/GPRS/EGPRS 850)					
	1850.2 - 1909.8 MHz (PCS/GPRS/EGPRS 1900)					
RX Frequency	: 869.2 - 893.8 MHz (GSM/GPRS/EGPRS 850)					
	1930.2 - 1989.8 MHz (PCS/GPRS/EGPRS 1900)					
Maximum Output Power to Antenna	: 33.50 dBm / 2.239W (GSM/GPRS 850)					
(Conducted)	30.30 dBm / 1.072 W (PCS/GPRS 1900)					
	26.27 dBm / 0.424W (EGPRS 850)					
	25.21 dBm / 0.332 W (EGPRS 1900)					
Max. ERP/EIRP Power	:1.445 W / 31.60 dBm ERP (GSM/GPRS 850)					
	0.345 W / 25.38 dBm ERP (EGPRS 850)					
	1.967 W / 32.94 dBm EIRP (PCS/GPRS 1900)					
	0.452 W / 26.55 dBm EIRP (EGPRS 1900)					



Tune of Emission	· 040KOVM (COM 050)
Type of Emission	:248KGXW (GSM 850)
	248KG7W (EGPRS 850)
	248KGXW (PCS 1900)
	248KG7W (EGPRS 1900)
Power Rating (DC , Voltage and	:3.7 Vdc / 1100 mA (Li-ion Battery)
Current of RF element or P	А)
Digital Modulation Emission	: GMSK / 8PSK
Power Supply Type	: AC Adapter
DC Power Cord	: 1.2 meter, USB Cable
Adapter	: PHIHONG TECHNOLOGY CO., LTD. Model: PSAI05R-050Q Input: 100-240Vac 50/60Hz 0.3A, Output: 5Vdc 1A
DUT Stage	: Production Unit

## Difference Description of EUT

The model (HTC CLIC100) have different components source. The other circuit designed is the same. Sample No.1 & Sample No.2 is use difference components (list below).

Component Name	Component Model No.					
Component Name	Sample 1 <sup>st</sup>	Sample 2 <sup>nd</sup>				
LCD Panel	Samsung / LMS276GF02	Wintek / WD-F2432Z7-6FLWa				
Camera	LiteOn / 08PF05	Foxconn / CMHT-30M00D				
USB Cable	MEC / DC U200	Foxlink / DC U200				



## 2. <u>Test Configuration of Equipment under Test</u>

#### 2.1 Test Manner

- 1. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range.
- 2. During all testing, EUT is in link mode with base station emulator at maximum power level. (PCL=5 for GSM 850 or PCL=0 for PCS 1900)
- 3. Frequency range investigated: radiated emission 30 MHz to 9000 MHz for GSM850; 30MHz to 19000 MHz for PCS 1900.

### 2.2 Test Mode

Preliminary tests were performed in different data mode to find the worst case. The data mode shown in the table below is the **worst-case rate (Blue color)**. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

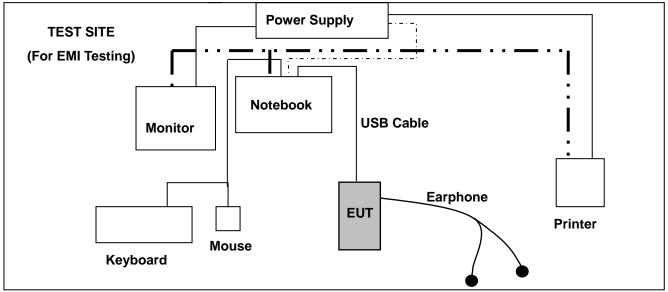
Output power (Peak Power)									
Band	Data Rate	Channel		Frequency	Conducted Power		Worst Case		
Danu				(MHz)	(dBm)	(W)	Worst Case		
		Lowest	128	824.20	33.40	2.188			
GSM 850		Middle	190	836.40	33.50	2.239			
		Highest	251	848.80	33.50	2.239			
GPRS 850	3Down2Up	Lowest	128	824.20	33.30	2.138			
		Middle	190	836.40	33.40	2.188			
		Highest	251	848.80	33.40	2.188			
EGPRS 850	3Down2Up	Lowest	128	824.20	26.25	0.422			
		Middle	190	836.40	26.27	0.424			
		Highest	251	848.80	26.23	0.420			



Output power (Peak Power)									
Band	Data Rate	Channel		Frequency (MHz)	Conduct	Worst Case			
Banu					(dBm)	(W)	WOISt Case		
		Lowest	512	1850.20	30.30	1.072			
PCS 1900		Middle	661	1880.00	30.30	1.072			
		Highest	810	1909.80	30.10	1.023			
GPRS 1900	3Down2Up	Lowest	512	1850.20	30.20	1.047			
		Middle	661	1880.00	29.90	0.977			
		Highest	810	1909.80	30.10	1.023			
		Lowest	512	1850.20	25.15	0.327			
EGPRS 1900	3Down2Up	Middle	661	1880.00	25.21	0.332			
		Highest	810	1909.80	25.08	0.322			

## 2.3 Connection Diagram of Test System

#### Conducted Emission Test Setup

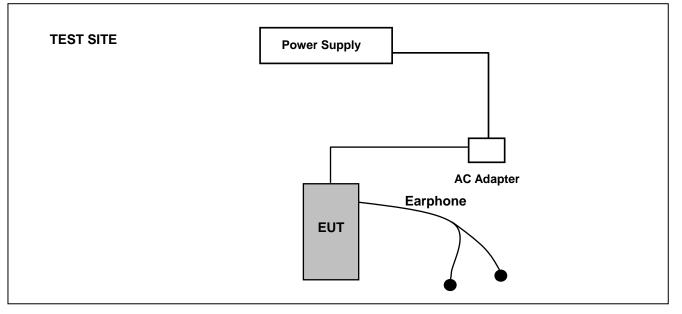




During EMI testing the EUT (PDA Phone)'s USB port connected to the USB port of Notebook & Earphone port connected to earphone. A mouse was connected to the mouse port of Notebook. And a keyboard was connected to the mouse port of Notebook. And a printer was connected to the parallel port.



#### **Radiated Emission Test Setup**



During testing the EUT (PDA Phone)'s Power port was connected to AC Adapter. EUT (PDA Phone)'s Earphone port connected to earphone.

## 2.4 Ancillary Equipment List

- 1. Base Station(R&S) CMU200 106656
- 2. Power Supply (GW) 12P3A H281001



## 3. General Information of Test Site

Test Site Location: No. 140 -1, Changan Street, Bade City, Taoyuan County, Taiwan R.O.C. TEL: 886-3-271-0188 FAX: 886-3-271-0190

Registration Number : 854525 Designation Number : TW1330

The chamber meets the characteristics of ANSI C63.4-2006. This site is on file with the FCC.

#### 3.1 Test Voltage

DC 3.7 Vdc / 1100m A

#### 3.2 Test in Compliance with

47 CFR Part 22H, 24E and Part 2, ANSI/TIA-603-C-2004

## 3.3 Frequency Range Investigated

- 1. Radiation: from 30 MHz to 9000 MHz for GSM/GPRS/EGPRS 850.
- 2. Radiation: from 30 MHz to 19000 MHz for PCS/GPRS/EGPRS 1900.

#### 3.4 Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.



## 4. <u>Test Data and Test Result</u>

## 4.1 List of Measurements and Examinations

FCC Rule	Description Of Test	Resu	Section	
r cc Rule	Description of Test	Sample 1 <sup>st</sup>	Sample 2 <sup>nd</sup>	Section
§ 2.1046	RF Output Power	Passed	N/A	4.2
§ 22.913 § 24.232	ERP / EIRP	Passed	N/A	4.3
§ 2.1049 § 22.917 § 24.238(b)	Occupied Bandwidth & Band Edge Measurement	Passed	N/A	4.4
§ 2.1051	Conducted Emission	Passed	N/A	4.5
§ 2.1053	Field Strength of Spurious Radiation	Passed	Passed	4.6
§ 2.1055 § 22.355 § 24.235	Frequency Stability vs. Temperature	Passed	N/A	4.7
§ 2.1055 § 22.355 § 24.235	Frequency Stability vs. Voltage	Passed	N/A	4.8
§ 15.207	AC Power Conducted Emissions Requirements	Passed	N/A	4.9

\* Tested sample 1<sup>st</sup> and sample 2<sup>nd</sup> by Field Strength of Spurious Radiation request. The sample 1<sup>st</sup> is worst case. The other FCC Rule is tested sample 1<sup>st</sup> and recorded in the report.



#### 4.2 RF Output Power

#### 4.2.1 Measurement Instruments :

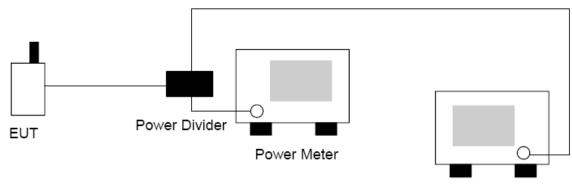
As described in chapter 5 of this test report.

#### 4.2.2 Test Procedure :

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

- 1. The transmitter output was connected to power meter and base station through power divider.
- 2. Set base station for EUT at GSM 850: PCL=5 and PCS 1900: PCL=0.
- 3. Set base station for EUT at WCDMA Band V and WCDMA Band II, power level was set to maximum.
- 4. Select lowest, middle, and highest channels for each band.

#### 4.2.3 Test Setup Layout :



**Base Station** 



## 4.2.4 Test Result :

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM /GPRS/EGPRS 850 (Low CH128 / Middle CH 190 / High CH 251)
Test Date	: 06/09/2009

Bands	Channel	Frequency (MHz)		Conducted Power (dBm)	Conducted Power (Watts)
	128	Low	824.2	33.40	2.188
GSM 850	190	Mid	836.4	33.50	2.239
	251	High	848.8	33.50	2.239
	128	Low	824.2	33.30	2.138
GPRS 850	190	Mid	836.4	33.40	2.188
	251	High	848.8	33.40	2.188
	128	Low	824.2	26.25	0.422
EGPRS 850	190	Mid	836.4	26.27	0.424
	251	High	848.8	26.23	0.420

Note: The testing result was used peak detector.



Applicant	: HTC Corporation									
Model No	: CLIC10	: CLIC100								
EUT	: PDA Ph	: PDA Phone								
Test Mode	: PCS/GF	PRS/EGPI	RS 1900 (Low C	H512 / Middle CH661 / Hig	h CH 810)					
Test Date	: 06/09/2	009								
Bands	Channel		equency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)					
	512	Low	1850.2	30.30	1.072					
GSM 1900	661	Mid	1880.0	30.30	1.072					
	810	High	1909.8	30.10	1.023					
	512	Low	1850.2	30.20	1.047					
GPRS 1900	661	Mid	1880.0	29.90	0.977					
	810	High	1909.8	30.10	1.023					
	512	Low	1850.2	25.15	0.327					
EGPRS 1900	661	Mid	1880.0	25.21	0.332					
	810	High	1909.8	25.08	0.322					

Note: The testing result was used peak detector.



#### 4.3 ERP / EIRP Measurement

Equivalent isotropic radiated power measurements by substitution method according to ANSI/TIA/EIA-603-B-2002.

#### 4.3.1 Measurement Instruments

As described in chapter 5 of this test report.

#### 4.3.2 Test Procedure

The phone was tested in an anechoic chamber with a 3-axis position system that permits taking complete spherical scans of the EUT's 3-axis radiation patterns. For all tests, the phone was supported in a free space type environment, vertically oriented in the chamber. Tests were done for GSM 850 three frequencies (824.2, 836.6 and 848.8 MHz) and GSM 1900 three frequencies (1850.2, 1880.00, and 1909.80 MHz).

GSM measurements were made with the phone placed in a call using the CMU200 mobile station test set. The phone was weakly coupled to the test set and configured to transmit in full data rate mode.

The radiated power was measured using ETS-LINDGREN OTA Chamber in "Peak" mode. From these measurements, the software calculates the angle at which maximum radiated power occurs for each case, and the radiated power at this angle was extracted from the data.

Each individual data point in a radiated power or sensitivity measurement is referred to as the effective isotropic radiated power or effective isotropic sensitivity. That is, the desired information is how the measured quantity relates to the same quantity from an isotropic radiator. Thus, the reference measurement must relate the power received or transmitted at the EUT test equipment (spectrum analyzer or communication tester) back to the power transmitted or received at a theoretical isotropic radiator. The total path loss then, is just the difference in dB between the power transmitted or received at the isotropic radiator and that seen at the test equipment (see follow Figure 1).



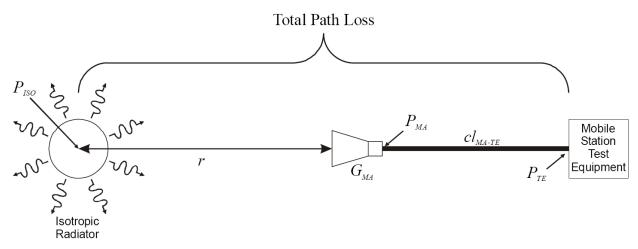


Figure 1. THEORETICAL CASE FOR DETERMINING PATH LOSS

In equation form, this becomes:

Equation 1

$$PL = P_{ISO} - P_{TE},$$

where PL is the total path loss,  $P_{ISO}$  is the power radiated by the theoretical isotropic radiator, and  $P_{TE}$  is the power received at the test equipment port. As can be seen in Figure 1, this quantity includes the range path loss due to the range length r, the gain of the measurement antenna, and any loss terms associated with the cabling, connections, amplifiers, splitters, etc. between the measurement antenna and the test equipment port.

Figure 2 shows a typical real world configuration for measuring the path loss. In this case, a reference antenna with known gain is used in place of the theoretical isotropic source. The path loss may then be determined from the power into the reference antenna by adding the gain of the reference antenna. That is:

Equation 2

$$P_{\rm ISO} = P_{\rm RA} + G_{\rm RA},$$

where  $P_{RA}$  is the power radiated by reference antenna, and  $G_{RA}$  is the gain of the reference antenna, so that:

Equation 3

$$PL = P_{RA} + G_{RA} - P_{TE} ,$$



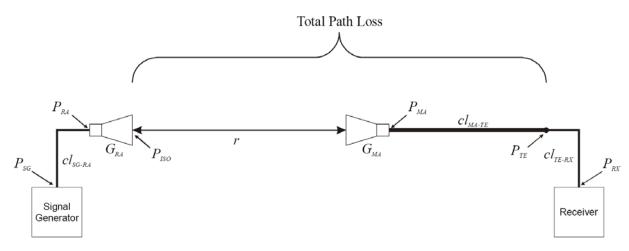
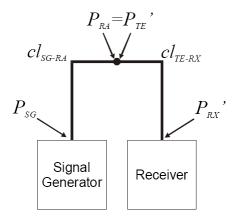


Figure 2. TYPICAL CONFIGURATION FOR MEASURING PATH LOSS

In order to determine  $P_{RA}$ , it is necessary to perform a cable reference measurement to remove the effects of the cable loss between signal generator and reference antenna, and between the test equipment port and the receiver. This establishes a reference point at the input to the reference antenna. Figure 3 illustrates the cable reference measurement configuration. Assuming the power level at the signal generator is fixed, it is easy to show that the difference between  $P_{RA}$  and  $P_{TE}$  in Figure 2 is given by:

Equation 4

$$P_{\rm RA} - P_{\rm TE} = P_{\rm RX}' - P_{\rm RX}$$



#### Figure 3. CABLE REFERENCE CALIBRATION CONFIGURATION



Where  $P_{RX'}$  is the power measured at the receiver during the cable reference test, and  $P_{RX}$  is the power measured at the receiver during the range path loss measurement in Figure 2. Thus, the path loss is then just given by:

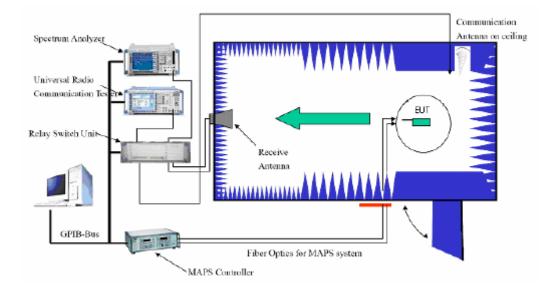
Equation 5

$$PL = G_{RA} + P_{RX}' - P_{RX}$$

$$EIRP = P_t + P_L$$

 $P_t$  = Often referred to as antenna output power

## 4.3.3 Test Setup Layout of ERP/EIRP





### 4.3.4 Test Result

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Low CH128 / Middle CH 190 / High CH 251)
Test Date	: 06/09/2009

GSM 850 Radiated Power ERP				
Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP (dBm)	ERP (W)
824.20	80.83	-49.50	31.33	1.358
836.40	81.30	-49.70	31.60	1.445
848.80	81.17	-49.70	31.47	1.403

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: EGPRS 850 (Low CH128 / Middle CH 190 / High CH 251)
Test Date	: 06/09/2009

EGPRS 850 Radiated Power ERP					
	Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP (dBm)	ERP (W)	
824.20	74.46	-49.50	24.96	0.313	
836.40	74.81	-49.70	25.11	0.324	
848.80	75.08	-49.70	25.38	0.345	

Note:

- 1. ERP/EIRP = Read Level + Correction factor.
- 2. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz.
- 3. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.
- 4. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.



: HTC Corporation	
: CLIC100	
: PDA Phone	
: PCS 1900 (Low CH512 / Middle CH661 / High CH 810)	
: 06/09/2009	

PCS 1900 Radiated Power EIRP					
	Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP (dBm)	EIRP (W)	
1850.20	87.29	-55.40	31.89	1.544	
1880.00	88.02	-55.60	32.42	1.747	
1909.80	88.64	-55.70	32.94	1.967	

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: EGPRS 1900 (Low CH512 / Middle CH661 / High CH 810)
Test Date	: 06/09/2009

EGPRS 1900 Radiated Power EIRP					
	Maximum Output Power				
Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP (dBm)	EIRP (W)	
1850.20	81.82	-55.40	26.42	0.439	
1880.00	82.15	-55.60	26.55	0.452	
1909.80	82.08	-55.70	26.38	0.435	

Note:

- 1. ERP/EIRP = Read Level + Correction factor.
- 2. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz.
- 3. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.
- 4. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.



## 4.4 Occupied Bandwidth and Band Edge Measurement

#### 4.4.1 Measurement Instruments

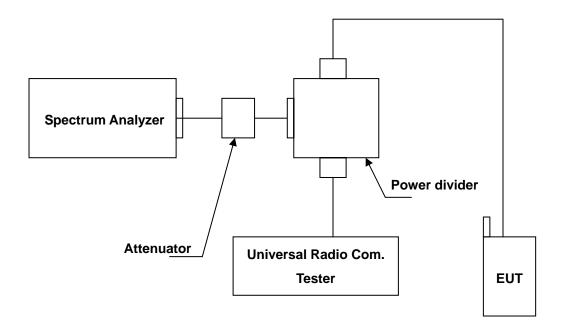
As described in chapter 5 of this test report.

#### 4.4.2 Test Procedure

The measurement is made according to FCC rules part 22 and 24:

- 1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
- 2. The occupied bandwidth of middle channel for the highest and lowest RF powers was measured.
- 3. The band edge of low and high channels for the highest RF powers within the transmitting frequency band were measured. Setting RBW as roughly BW/100.
- 4. The band edge setting:
  - a. RB=3 kHz; VB=3 kHz for GSM 850 and PCS 1900.
  - b. RB=100 kHz; VB=100 kHz for WCDMA Band V and WCDMA Band II.

#### 4.4.3 Test Setup Layout





## 4.4.4 Occupied Bandwidth Test Result

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Low CH128 / Middle CH 190 / High CH 251)
Test Date	: 06/09/2009

GSM 850			
Channel	Frequency (MHz)	Output Power - 26 dBc Bandwidth (kHz)	
128	824.2	245.2115	
190	836.6	248.2065	
251	848.8	243.1903	
RB:3KHz , VBW:10KHz			

Applicant	: HTC Corporation	
Model No	: CLIC100	
EUT	: PDA Phone	
Test Mode	: EGPRS 850 (Low CH128 / Middle CH 190 / High CH 251)	
Test Date	: 06/11/2009	

EGPRS 850 (3Down2Up)				
Channel	Frequency (MHz)	Output Power - 26 dBc Bandwidth (kHz)		
128	824.2	245.6583		
190	836.6	243.4914		
251	848.8	248.0964		
RB:3KHz , VBW:10KHz				



Applicant	: HTC Corporation							
Model No	: CLIC100							
EUT	: PDA Phone	: PCS 1900 (Low CH512 / Middle CH661 / High CH 810) : 06/09/2009						
Test Mode	st Mode : PCS 1900 (Low CH512 / Middle CH661 / High CH 810)							
Test Date								
		PCS 1900						
Channel		Frequency (MHz)	Output Power - 26 dBc Bandwidth (kHz)					
512		1850.2	244.2323					
661		1880.0	246.7343					
810		1909.8	248.2080					

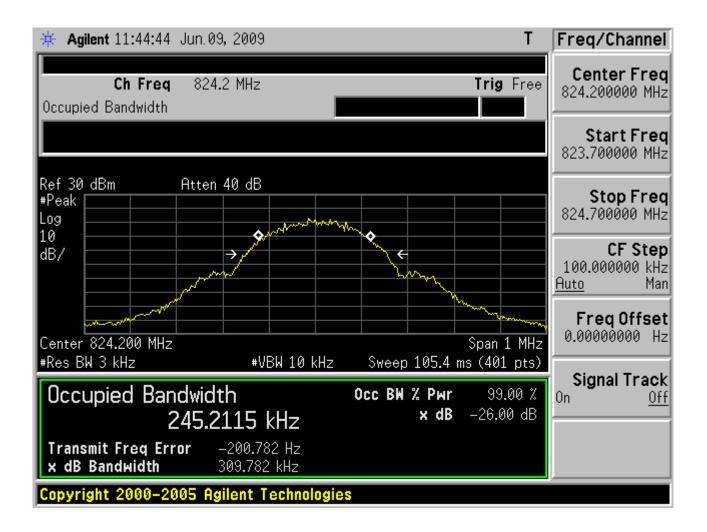
RB:3KHz, VBW:10KHz

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: EGPRS 1900 (Low CH512 / Middle CH661 / High CH 810)
Test Date	: 06/11/2009

EGPRS 1900 (3Down2Up)						
Channel	Frequency (MHz)	Output Power - 26 dBc Bandwidth (kHz)				
512	1850.2	247.2913				
661	1880.0	246.0970				
810	1909.8	248.0480				
	RB:3KHz , VBW:10KHz					

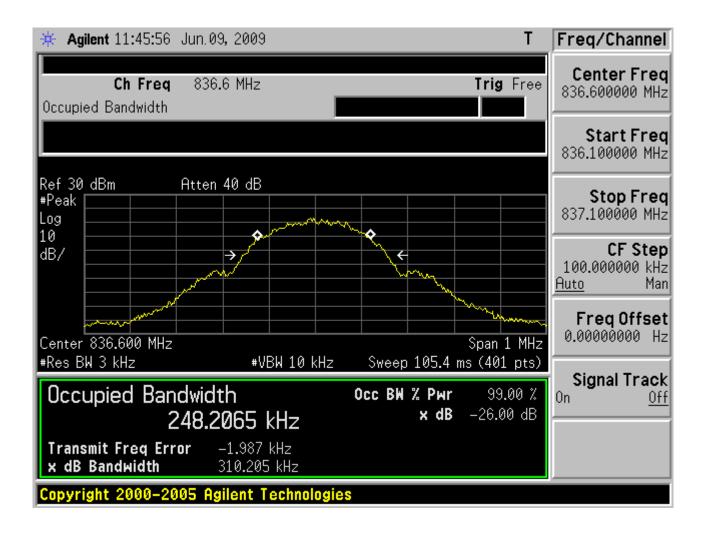


#### Test Mode: GSM 850 CH128 99% Occupied Bandwidth



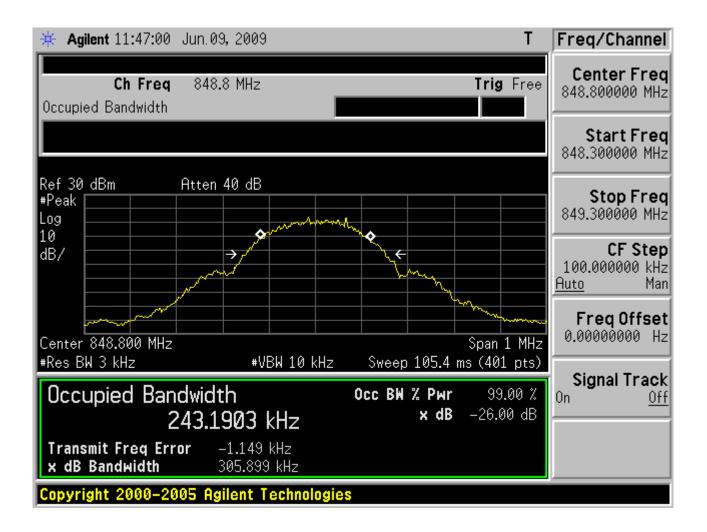


#### Test Mode: GSM 850 CH190 99% Occupied Bandwidth



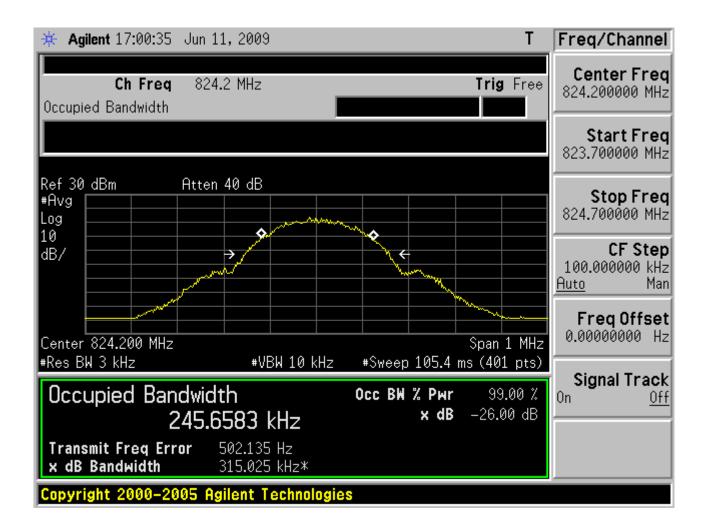


#### Test Mode: GSM 850 CH251 99% Occupied Bandwidth



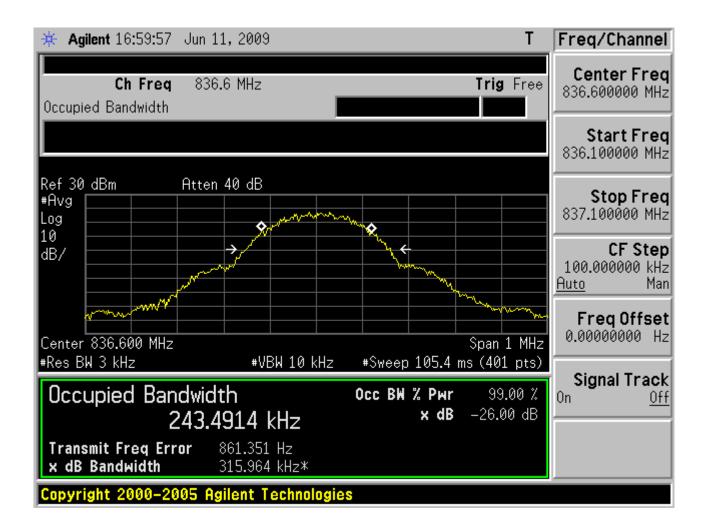


#### Test Mode: EGPRS 850 CH128 99% Occupied Bandwidth



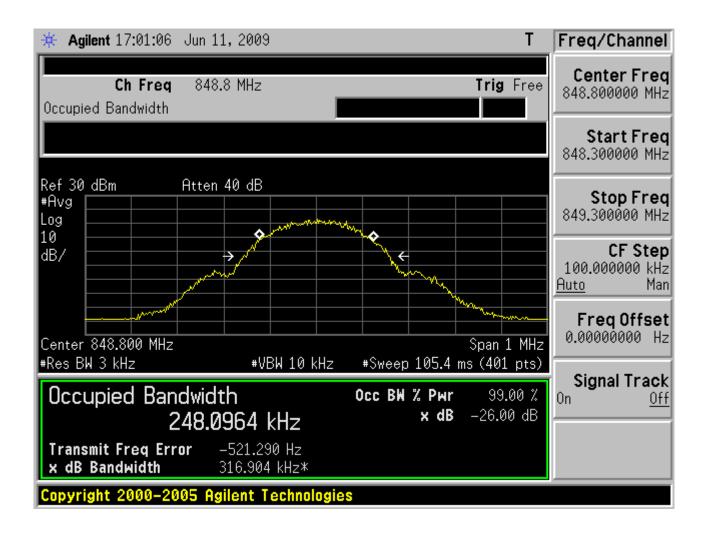


#### Test Mode: EGPRS 850 CH190 99% Occupied Bandwidth



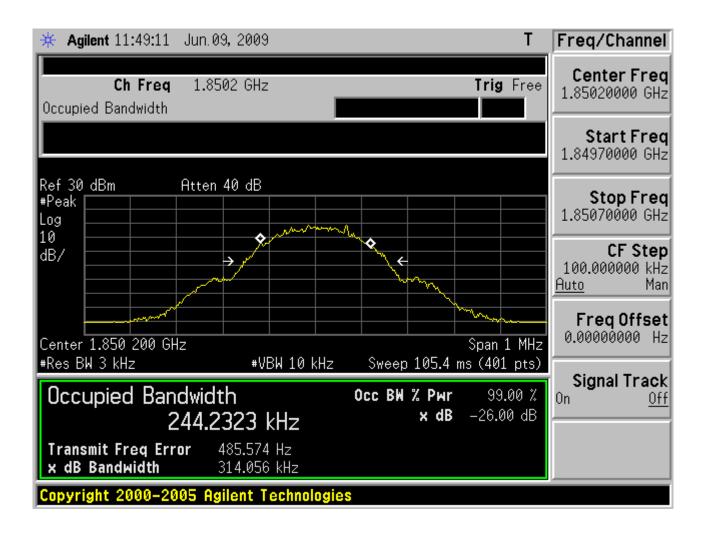


#### Test Mode: EGPRS 850 CH251 99% Occupied Bandwidth



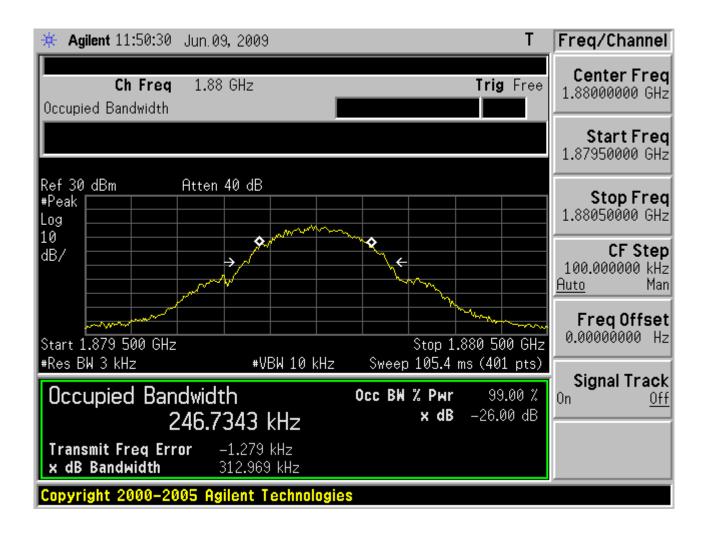


#### Test Mode: PCS 1900 CH512 99% Occupied Bandwidth



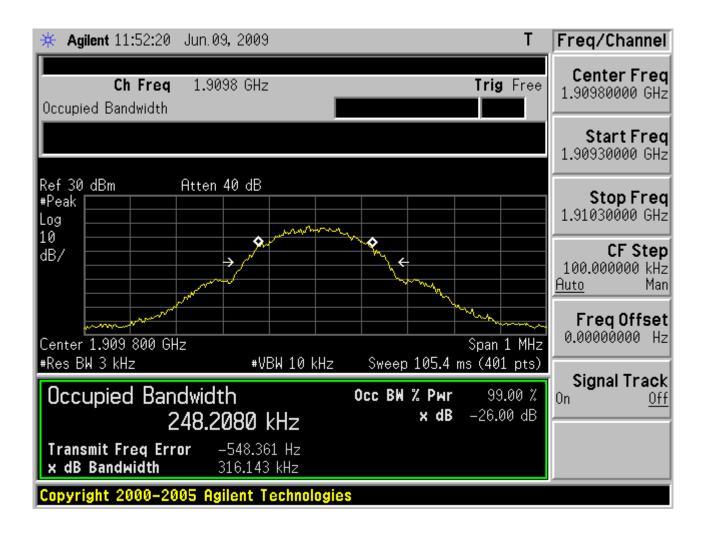


#### Test Mode: PCS 1900 CH661 99% Occupied Bandwidth



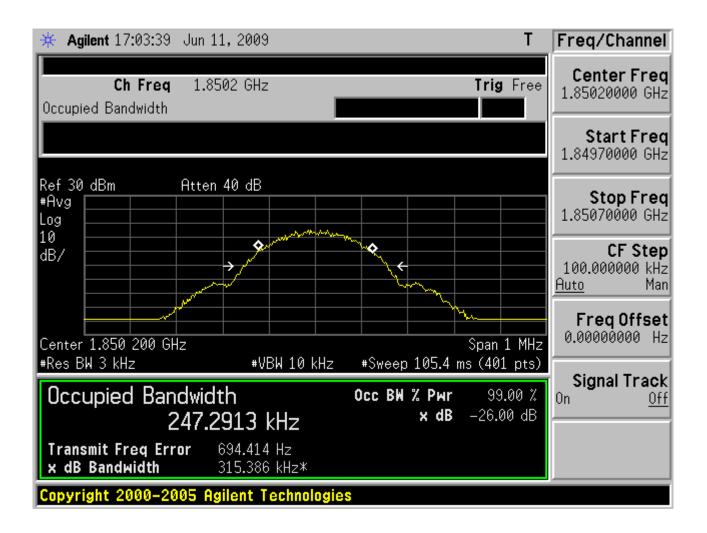


#### Test Mode: PCS 1900 CH810 99% Occupied Bandwidth



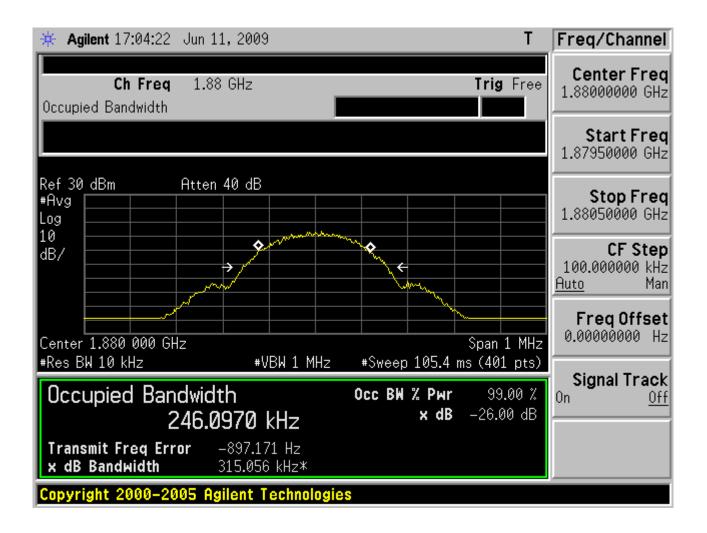


#### Test Mode: EGPRS 1900 CH512 99% Occupied Bandwidth



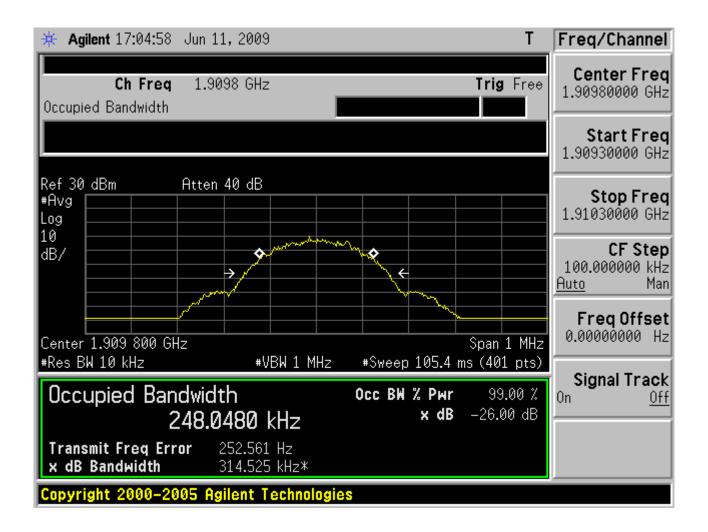


#### Test Mode: EGPRS 1900 CH661 99% Occupied Bandwidth





#### Test Mode: EGPRS 1900 CH810 99% Occupied Bandwidth





## 4.4.5 Band Edge Test Result

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Low CH128 / High CH 251)
Test Date	: 06/09/2009

		GSMS 850					
Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)			
Lower	128	823.9974	-15.38	-13			
Higher	251	849.0225	-15.07	-13			

Please refer to next pager of detail testing data.



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-90											
82	23.701 823	3.80 823.	90 824.0	00 824.10	824.3	20 824	.30	324.40	824.50	824.70	l MHz
					Polari	zation:	Condu	ted po	Tempe	rature: 26 °C	
t: FC	C Part 22	conducted	(9k-12.750	G)	Power	r: AC 1	10V/60Hz		Humidi	ty: 55 %	
:					Distar	nce:	RBW:	3 KHz			
: 09-	0141-SE0	C					VBW:	3 KHz	Sweep	Time: 200 ms	
le: G	SM850										
e: CH	128(824.2	2MHz)									
加 <b>1</b>	<b>0db</b> 衰減者	招									
		Reading	Correct	Measure-				Antenna	Table		
Mk.	Freq.	Level	Factor	ment	Limit	Over		Height	Degree		
wirk.		-0.0.						- 0 -	- 3		

-13.00 -2.38

peak

\*:Maximum data x:Over limit !:over margin

-28.56

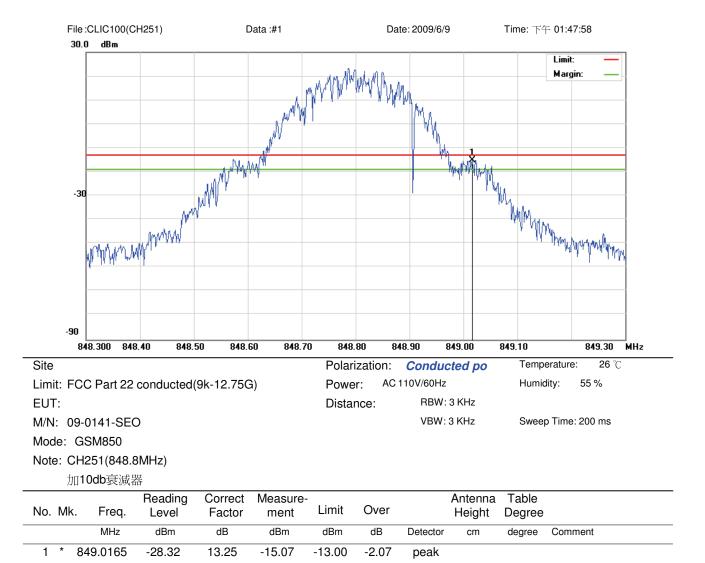
13.18

-15.38

Reference Only

1 \* 823.9895





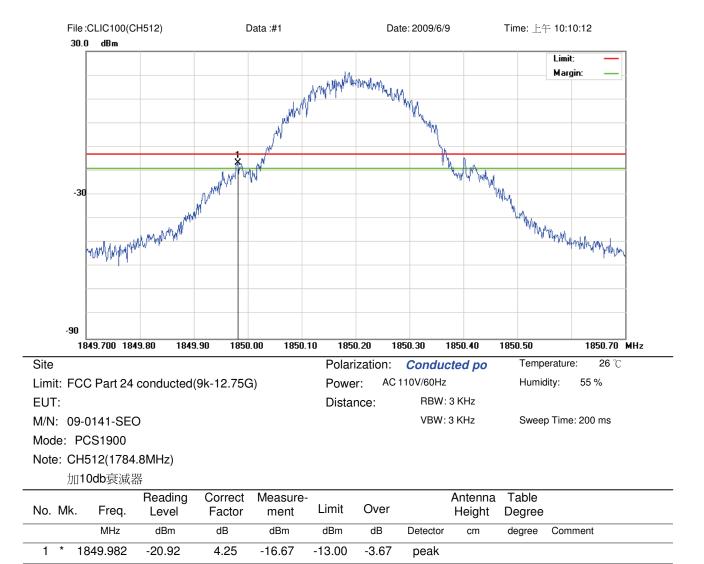


Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: PCS 1900 (Low CH512 / Middle CH661 / High CH 810)
Test Date	: 06/09/2009

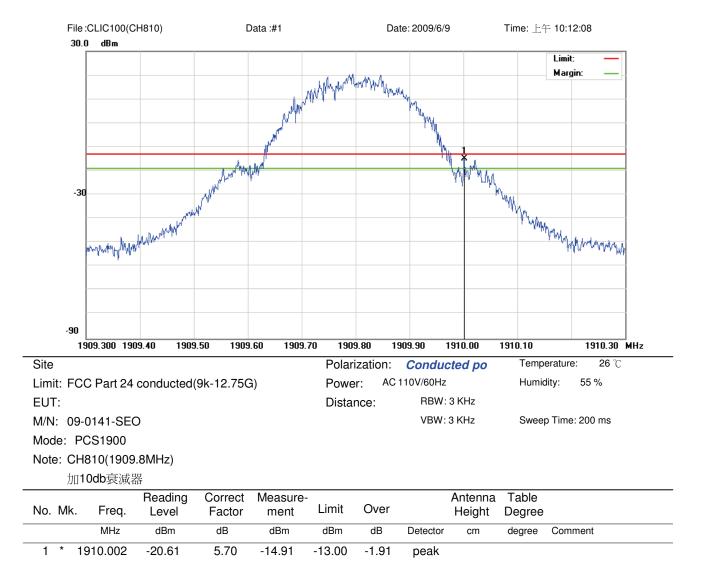
	PCS 1900											
Band	Band Channel Frequency (MHz) Bandwidth (dBm) Limit (dBm)											
Lower	512	1849.980	-16.67	-13								
Higher	810	1910.020	-14.91	-13								

Please refer to next pager of detail testing data.











# 4.5 Conducted Emission

#### 4.5.1 Measurement Instruments

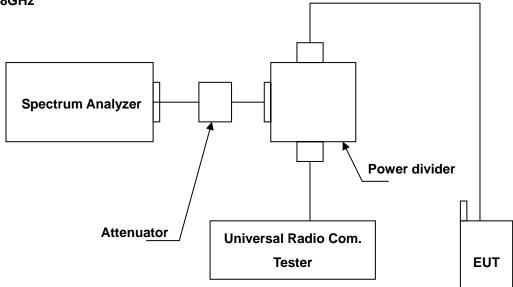
As described in chapter 5 of this test report.

#### 4.5.2 Test Procedure

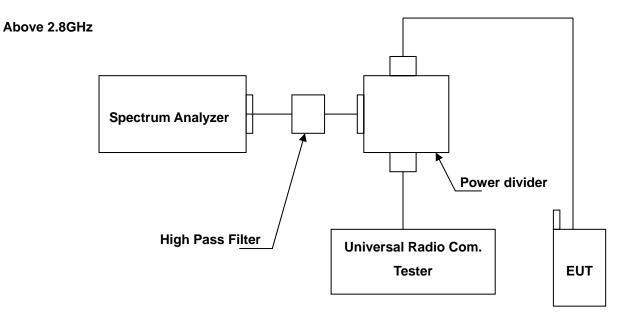
- 1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
- 2. The middle channel for the highest RF power within the transmitting frequency was measured.
- 3. The conducted spurious emission for the whole frequency range was taken.
- 4. Test setting at GSM 850 RB>100 kHz, VB>100 kHz; PCS 1900 RB>1MHz, VB>1MHz.

#### 4.5.3 Test Setup Layout

#### Below 2.8GHz









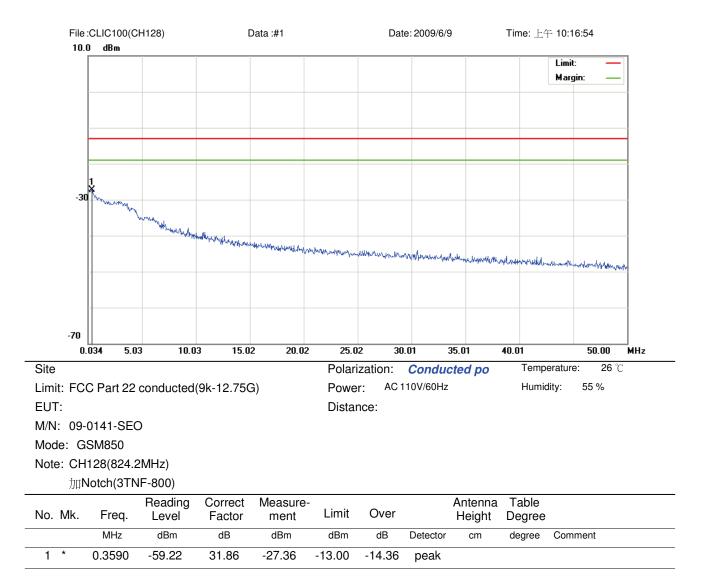
# 4.5.4 Test Result

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Low CH128 / Middle CH190 / High CH 251)
Test Date	: 06/09/2009
Please refer to next	pager of detail testing data.

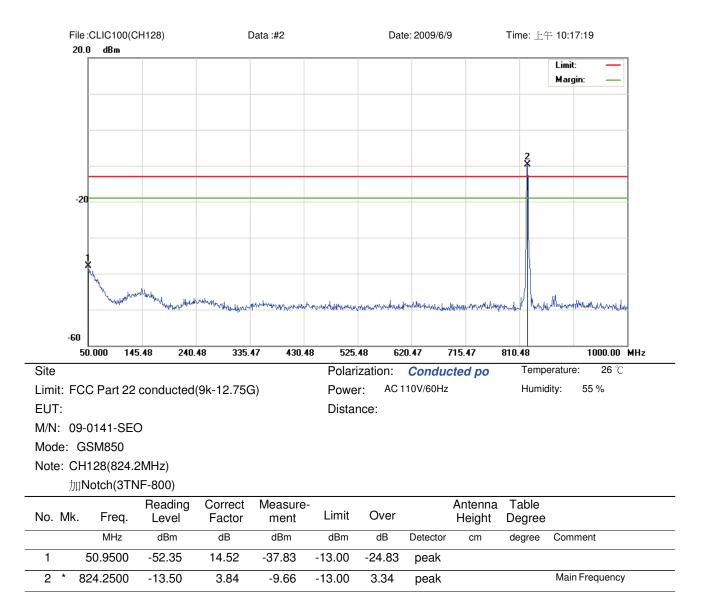
Note: Amplitude= Reading Amplitude + Factor (Cable loss + Filter Amplitude= Insertion loss)

(Auto calculate in spectrum analyzer)

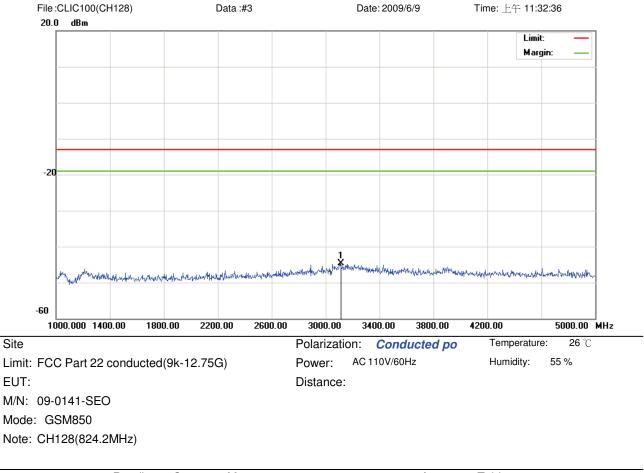






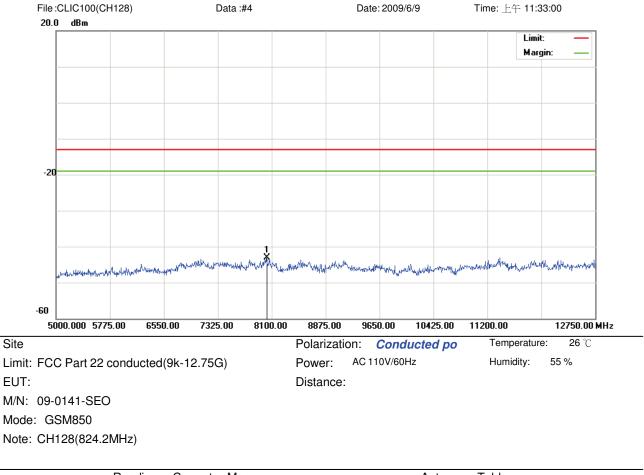






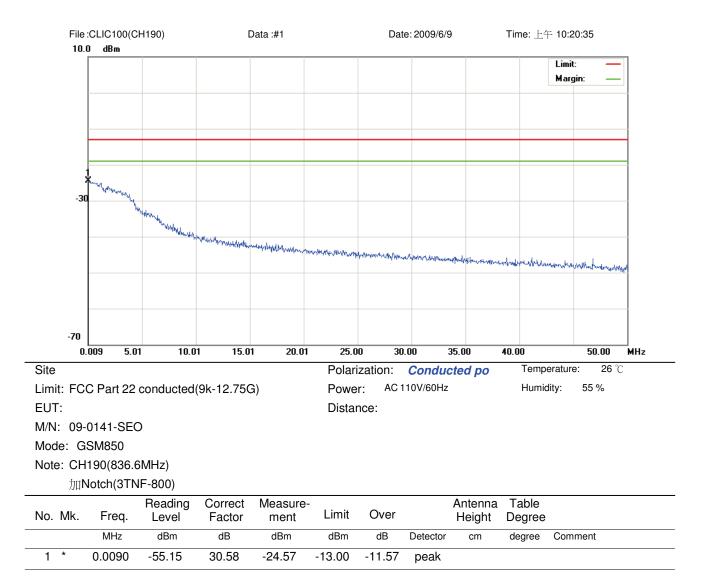
No. Mk	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
	MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1 *	3110.000	-49.31	4.56	-44.75	-13.00	-31.75	peak			



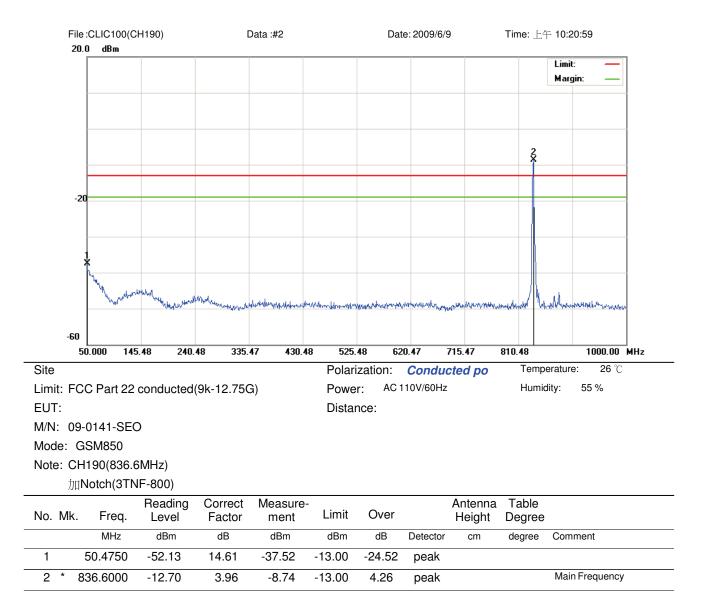


No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
	MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1 *	8026.375	-48.44	5.38	-43.06	-13.00	-30.06	peak			

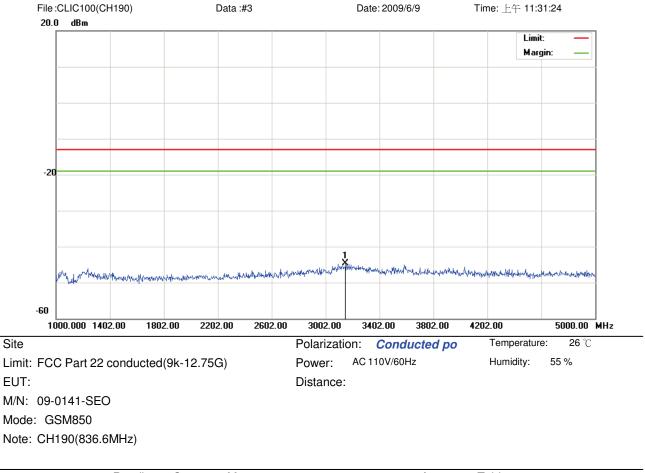






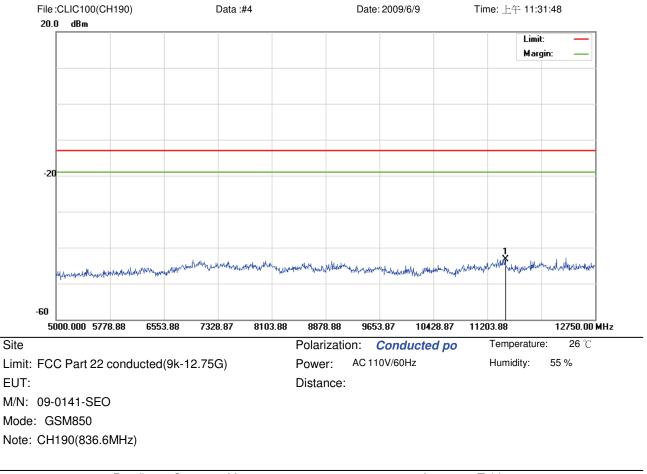






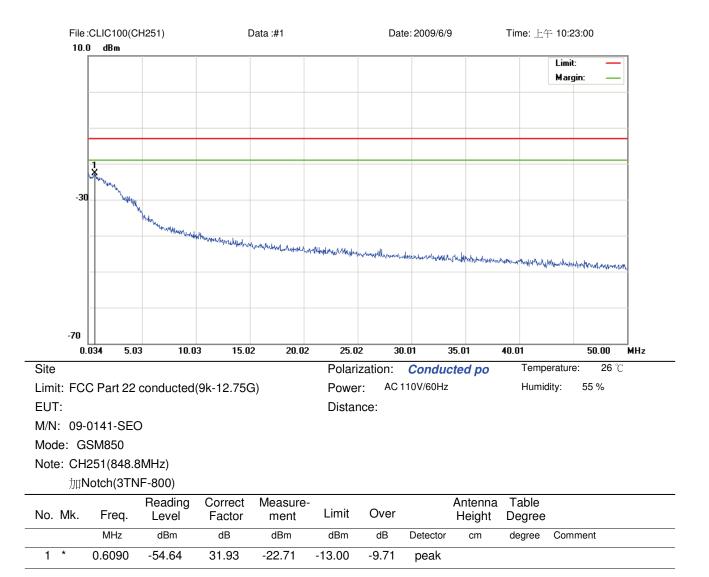
No. Mk	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
	MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1 *	3148.000	-49.24	4.56	-44.68	-13.00	-31.68	peak			



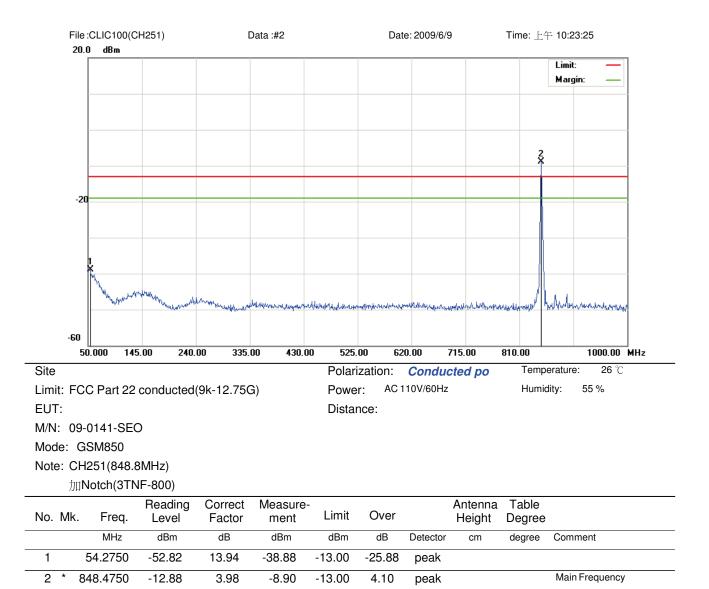


No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
	MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1 *	11459.62	-48.63	5.41	-43.22	-13.00	-30.22	peak			

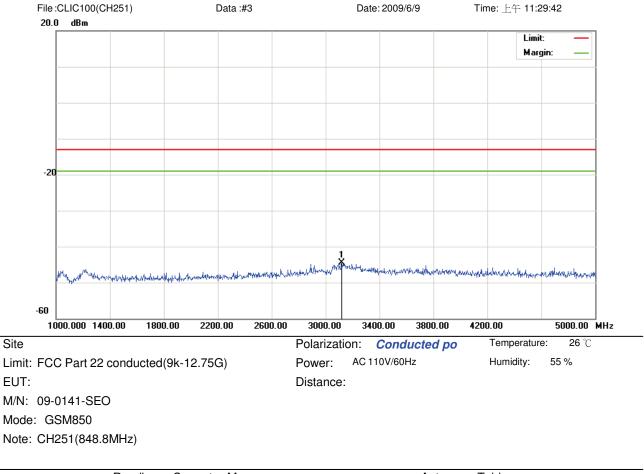






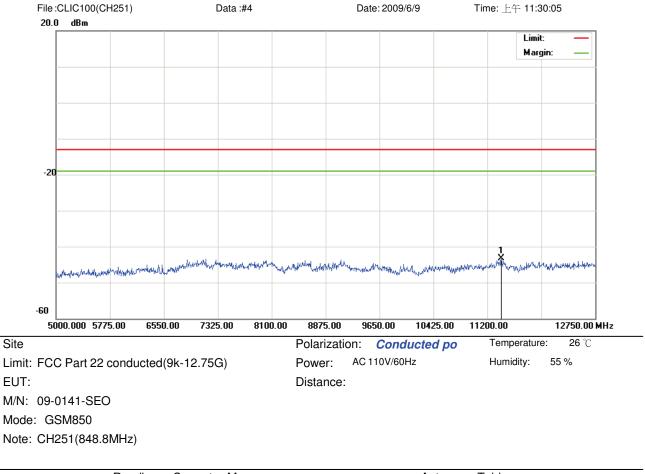






No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
	MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1 *	3118.000	-49.09	4.56	-44.53	-13.00	-31.53	peak			





No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height		
	MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1 *	11401.50	-48.76	5.56	-43.20	-13.00	-30.20	peak			



Applicant: HTC CorporationModel No: CLIC100EUT: PDA PhoneTest Mode: PCS 1900 (Low CH512 / Middle CH661 / High CH 810)

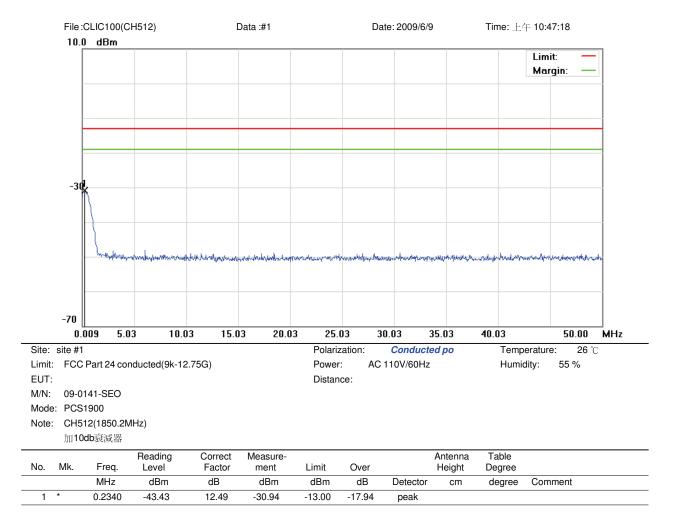
Test Date : 06/09/2009

Please refer to next pager of detail testing data.

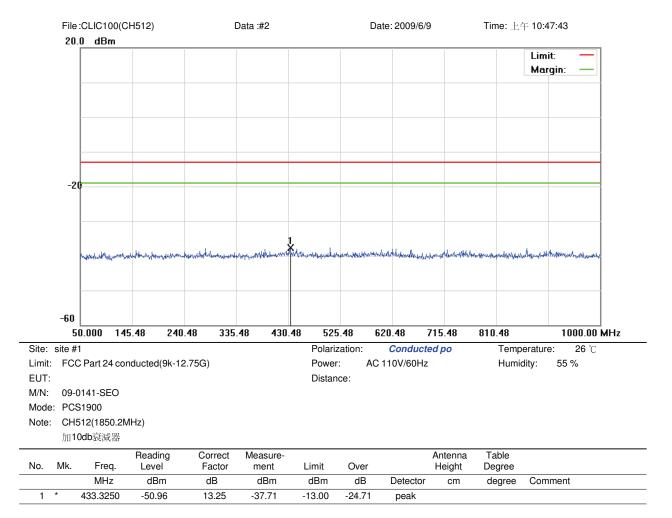
Note: Amplitude= Reading Amplitude + Factor (Cable loss + Filter Amplitude= Insertion loss)

(Auto calculate in spectrum analyzer)

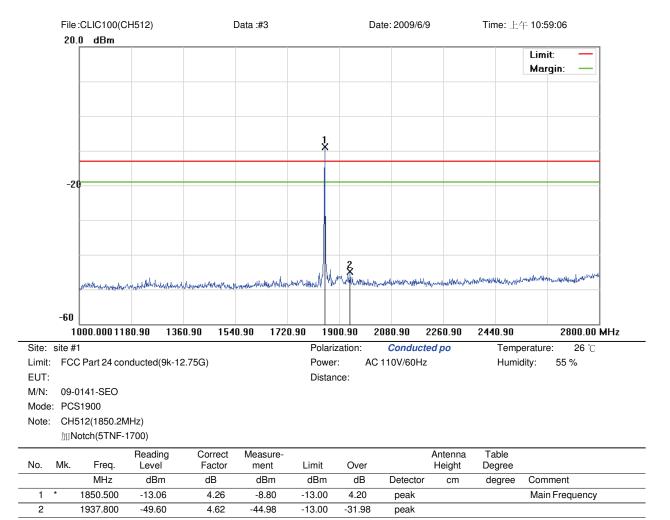




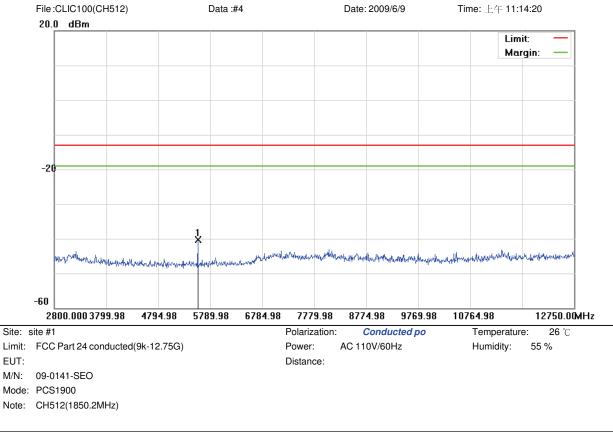






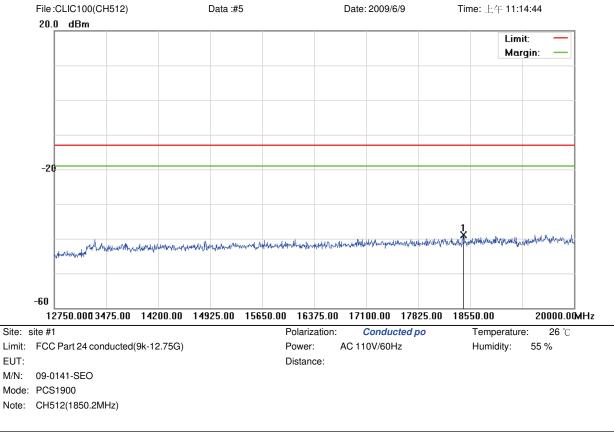






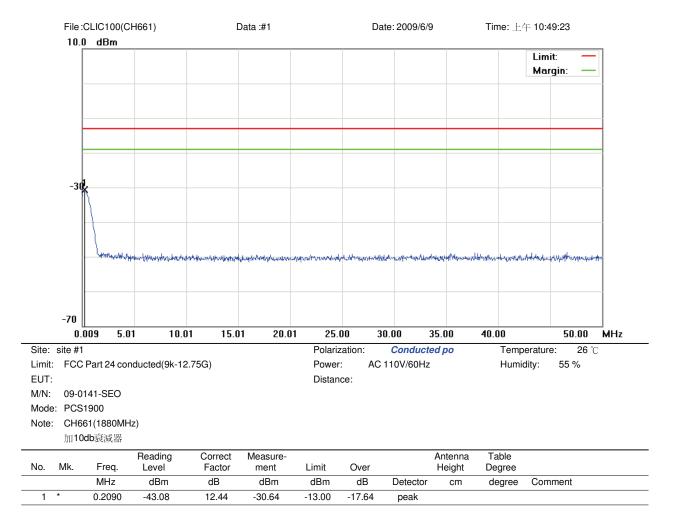
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	5551.175	-45.20	4.87	-40.33	-13.00	-27.33	peak			



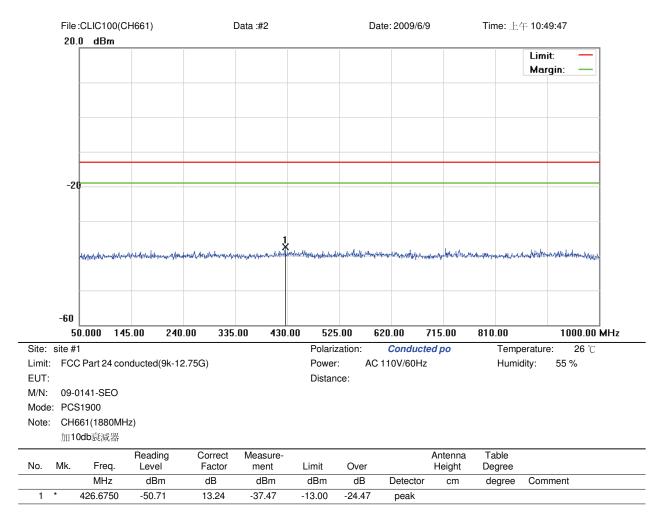


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	18452.125	-45.99	7.00	-38.99	-13.00	-25.99	peak			

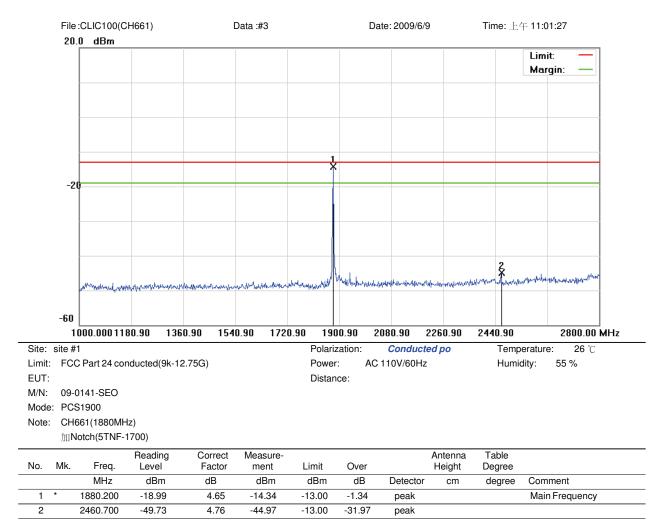




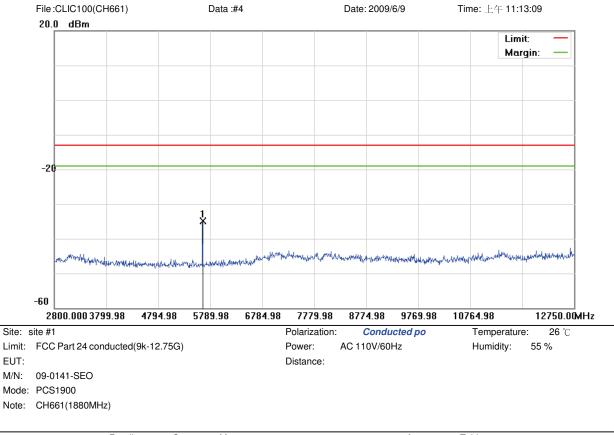






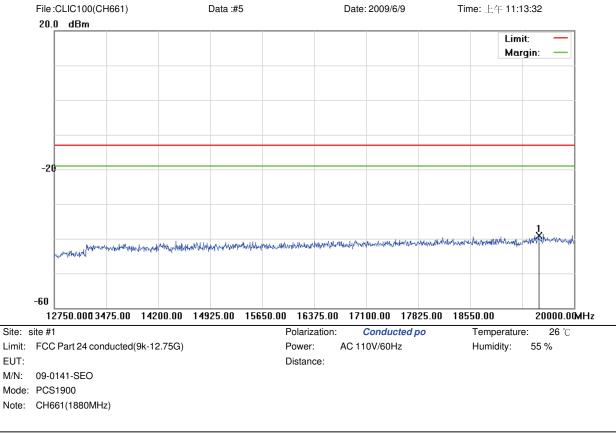






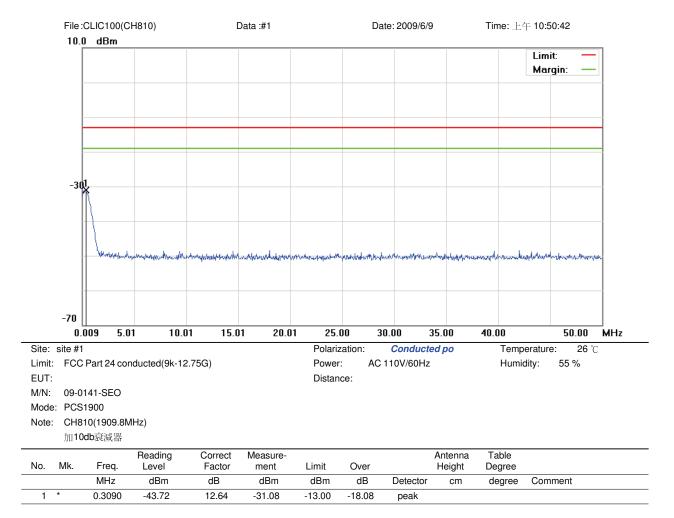
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	5640.725	-39.83	4.85	-34.98	-13.00	-21.98	peak			



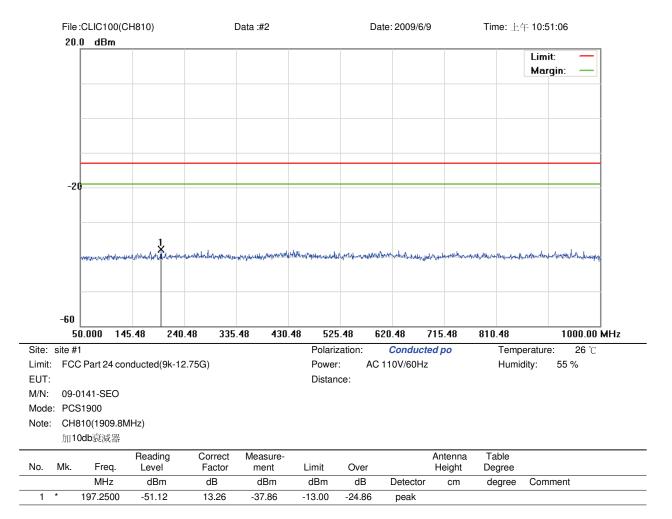


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	19510.625	-46.39	7.30	-39.09	-13.00	-26.09	peak			

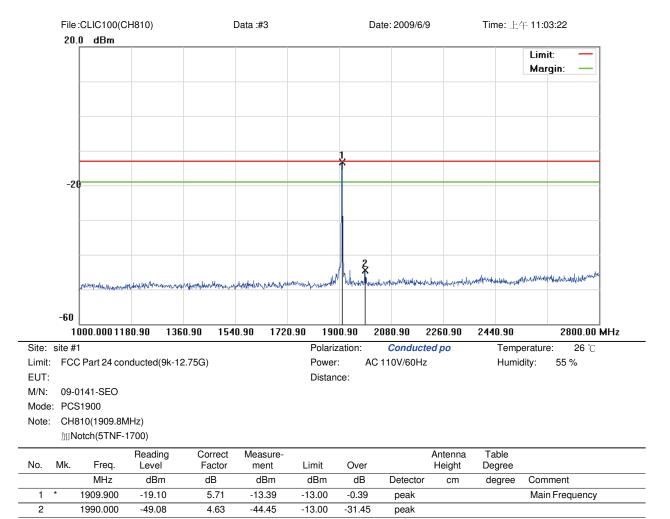




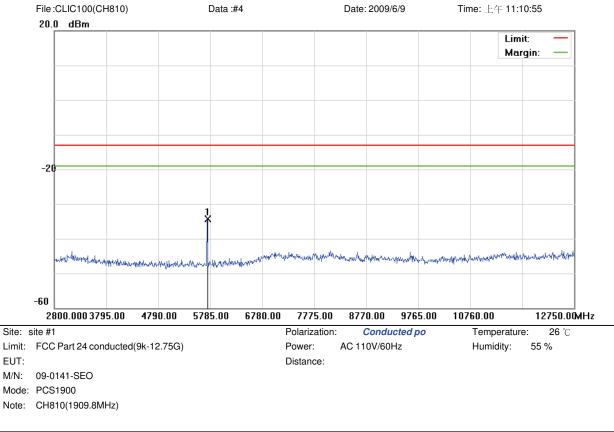






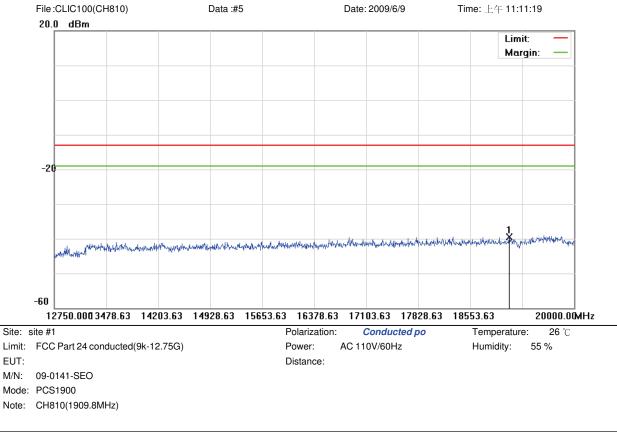






No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	5730.275	-39.16	4.89	-34.27	-13.00	-21.27	peak			





No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	19093.750	-46.65	7.18	-39.47	-13.00	-26.47	peak			



## 4.6 Field Strength of Spurious Radiation

Equivalent isotropic radiated Power Measurements by substitution method according to ANSI/TIA/EIA-603-A.

## 4.6.1 Measurement Instruments

As described in chapter 5 of this test report.

## 4.6.2 Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

The equipment under test is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

The equipment under test is then replaced with a substitution antenna fed by a signal generator. With the signal generator tuned to a particular spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters to obtain a maximum reading at the spectrum analyzer. The output of the signal generator is then adjusted until a reading identical to that obtained with the actual transmitter is achieved.

The power in dBm of each spurious emission is calculated by correcting the signal generator level for cable loss and gain of the substitution antenna referenced to a dipole. A fully charged battery was used for the supply voltage.

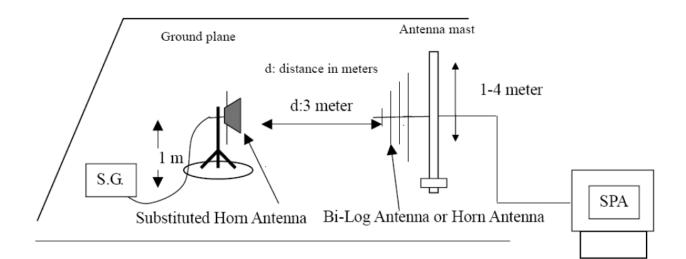
The settings of the receiver were as follows:

Units	dBm
Resolution Bandwidth	1 MHz
Video Bandwidth	Auto
Sweep Time	Auto



# 4.6.3 Test Setup Layout

Substituted Method Test Set-up





## 4.6.4 Test Result (Original test)

#### 4.6.4.1 GSM 850 Test Result

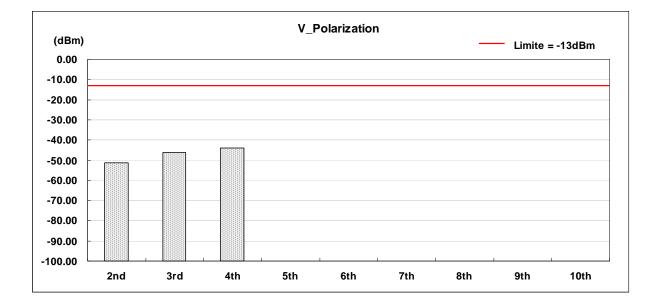
Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Low CH128)
Test Date	: 06/09/2009

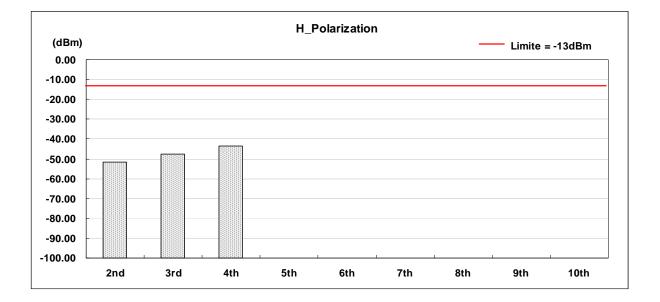
Harmonic	Frequency	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
	(MHz)		(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1648.8	V	-13	-61.31	10.72	0.56	-51.15
3rd	2473.2	V	-13	-56.13	10.66	0.62	-46.09
4th	3297.6	V	-13	-53.95	10.78	0.74	-43.91
5th	4122.0	V	-13	*	*	*	*
6th	4946.4	V	-13	*	*	*	*
7th	5770.8	V	-13	*	*	*	*
8th	6595.2	V	-13	*	*	*	*
9th	7419.6	V	-13	*	*	*	*
10th	8244.0	V	-13	*	*	*	*
2nd	1648.8	Н	-13	-61.74	10.72	0.56	-51.58
3rd	2473.2	Н	-13	-57.61	10.66	0.62	-47.57
4th	3297.6	Н	-13	-53.46	10.78	0.74	-43.42
5th	4122.0	Н	-13	*	*	*	*
6th	4946.4	Н	-13	*	*	*	*
7th	5770.8	Н	-13	*	*	*	*
8th	6595.2	Н	-13	*	*	*	*
9th	7419.6	Н	-13	*	*	*	*
10th	8244.0	Н	-13	*	*	*	*

Notes:

- 1. \* Indicates the spurious emission could not be detected due to noise limitations or ambients.
- 2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
- 3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
- 4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) Cable Loss (dB)







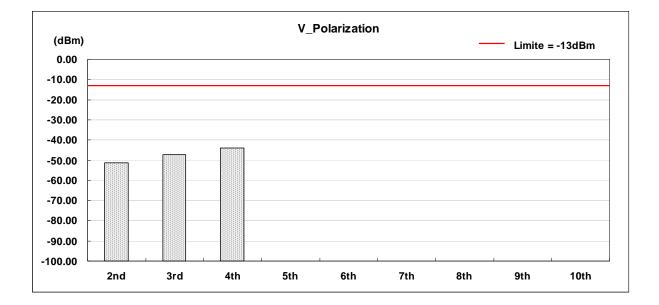


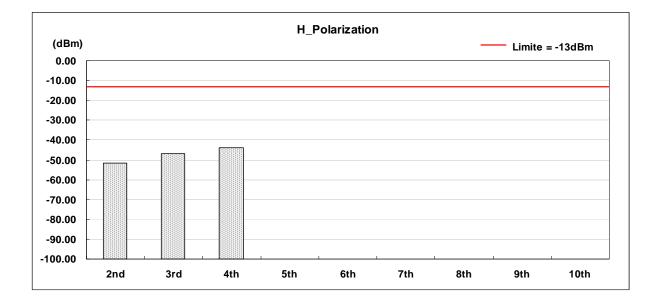
Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Middle CH190)
Test Date	: 06/09/2009

Harmonic	Frequency	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
	(MHz)		(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1673.2	V	-13	-61.49	10.72	0.56	-51.33
3rd	2509.8	V	-13	-57.19	10.66	0.62	-47.15
4th	3346.4	V	-13	-53.91	10.78	0.74	-43.87
5th	4183.0	V	-13	*	*	*	*
6th	5019.6	V	-13	*	*	*	*
7th	5856.2	V	-13	*	*	*	*
8th	6692.8	V	-13	*	*	*	*
9th	7529.4	V	-13	*	*	*	*
10th	8366.0	V	-13	*	*	*	*
2nd	1673.2	Н	-13	-61.71	10.72	0.56	-51.55
3rd	2509.8	Н	-13	-56.96	10.66	0.62	-46.92
4th	3346.4	Н	-13	-54.13	10.78	0.74	-44.09
5th	4183.0	Н	-13	*	*	*	*
6th	5019.6	Н	-13	*	*	*	*
7th	5856.2	Н	-13	*	*	*	*
8th	6692.8	Н	-13	*	*	*	*
9th	7529.4	Н	-13	*	*	*	*
10th	8366.0	Н	-13	*	*	*	*

- 1. \* Indicates the spurious emission could not be detected due to noise limitations or ambients.
- 2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
- 3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
- 4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) Cable Loss (dB)







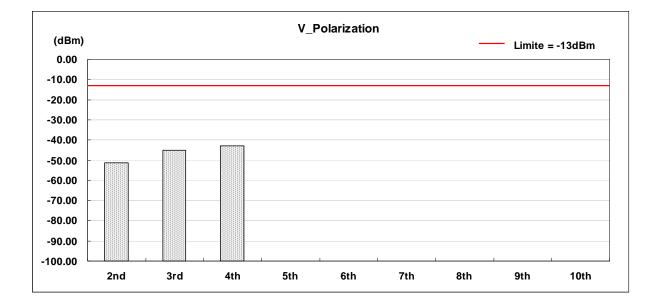


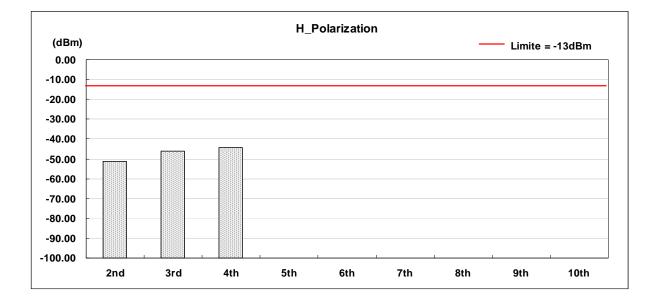
Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (High CH 251)
Test Date	: 06/09/2009

Harmonic	Frequency	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
	(MHz)		(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1697.6	V	-13	-61.52	10.72	0.56	-51.36
3rd	2546.4	V	-13	-55.25	10.66	0.62	-45.21
4th	3395.2	V	-13	-53.04	10.78	0.74	-43.00
5th	4244.0	V	-13	*	*	*	*
6th	5092.8	V	-13	*	*	*	*
7th	5941.6	V	-13	*	*	*	*
8th	6790.4	V	-13	*	*	*	*
9th	7639.2	V	-13	*	*	*	*
10th	8488.0	V	-13	*	*	*	*
2nd	1697.6	Н	-13	-61.40	10.72	0.56	-51.24
3rd	2546.4	Н	-13	-56.23	10.66	0.62	-46.19
4th	3395.2	Н	-13	-54.38	10.78	0.74	-44.34
5th	4244.0	Н	-13	*	*	*	*
6th	5092.8	Н	-13	*	*	*	*
7th	5941.6	Н	-13	*	*	*	*
8th	6790.4	Н	-13	*	*	*	*
9th	7639.2	Н	-13	*	*	*	*
10th	8488.0	Н	-13	*	*	*	*

- 1. \* Indicates the spurious emission could not be detected due to noise limitations or ambients.
- 2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
- 3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
- 4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) Cable Loss (dB)









#### 4.6.4.2 PCS 1900 Test Result

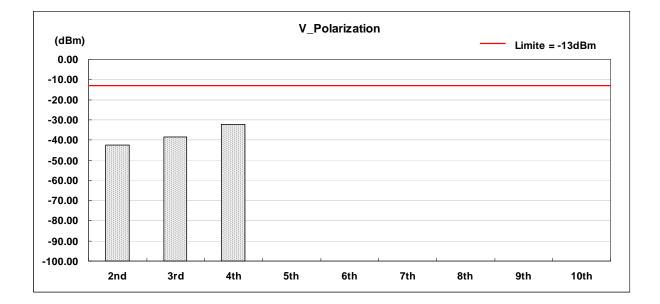
Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: PCS 1900 (Low CH512)
Test Date	: 06/09/2009

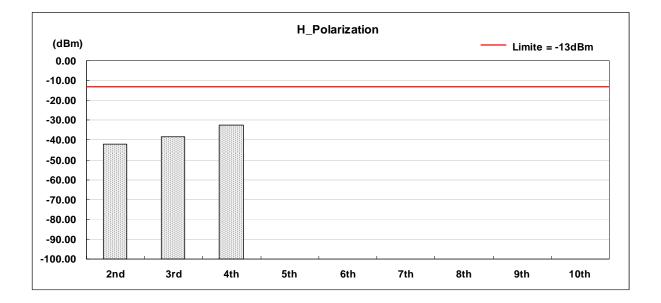
Harmonic	Frequency	Frequency (MHz) Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
	(11172)		(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3700.4	V	-13	-52.53	10.72	0.56	-42.37
3rd	5550.6	V	-13	-48.40	10.66	0.62	-38.36
4th	7400.8	V	-13	-42.34	10.78	0.74	-32.30
5th	9251.0	V	-13	*	*	*	*
6th	11101.2	V	-13	*	*	*	*
7th	12951.4	V	-13	*	*	*	*
8th	14801.6	V	-13	*	*	*	*
9th	16651.8	V	-13	*	*	*	*
10th	18502.0	V	-13	*	*	*	*
2nd	3700.4	Н	-13	-52.39	10.72	0.56	-42.23
3rd	5550.6	Н	-13	-48.41	10.66	0.62	-38.37
4th	7400.8	Н	-13	-42.53	10.78	0.74	-32.49
5th	9251.0	Н	-13	*	*	*	*
6th	11101.2	Н	-13	*	*	*	*
7th	12951.4	Н	-13	*	*	*	*
8th	14801.6	Н	-13	*	*	*	*
9th	16651.8	Н	-13	*	*	*	*
10th	18502.0	Н	-13	*	*	*	*

Notes:

- 1. \* Indicates the spurious emission could not be detected due to noise limitations or ambients.
- 2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
- 3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
- 4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) Cable Loss (dB)







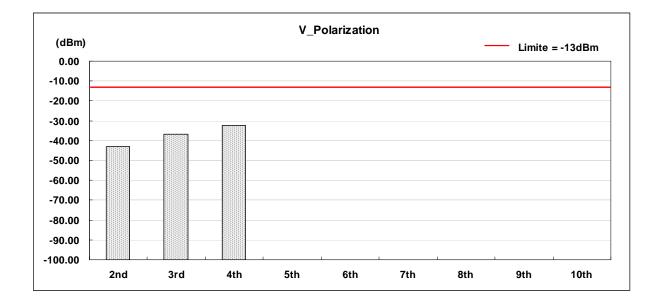


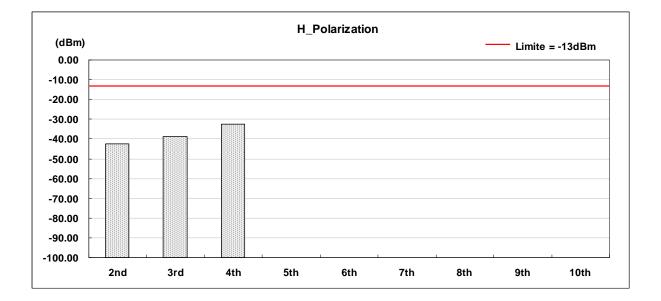
: HTC Corporation
: CLIC100
: PDA Phone
: PCS 1900 (Middle CH661)
: 06/09/2009

Harmonic	Frequency	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
	(MHz)		(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3760.0	V	-13	-53.23	10.72	0.56	-43.07
3rd	5640.0	V	-13	-46.81	10.66	0.62	-36.77
4th	7520.0	V	-13	-42.43	10.78	0.74	-32.39
5th	9400.0	V	-13	*	*	*	*
6th	11280.0	V	-13	*	*	*	*
7th	13160.0	V	-13	*	*	*	*
8th	15040.0	V	-13	*	*	*	*
9th	16920.0	V	-13	*	*	*	*
10th	18800.0	V	-13	*	*	*	*
2nd	3760.0	Н	-13	-52.72	10.72	0.56	-42.56
3rd	5640.0	Н	-13	-48.77	10.66	0.62	-38.73
4th	7520.0	Н	-13	-42.40	10.78	0.74	-32.36
5th	9400.0	Н	-13	*	*	*	*
6th	11280.0	Н	-13	*	*	*	*
7th	13160.0	Н	-13	*	*	*	*
8th	15040.0	Н	-13	*	*	*	*
9th	16920.0	Н	-13	*	*	*	*
10th	18800.0	Н	-13	*	*	*	*

- 1. \* Indicates the spurious emission could not be detected due to noise limitations or ambients.
- 2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
- 3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
- 4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) Cable Loss (dB)







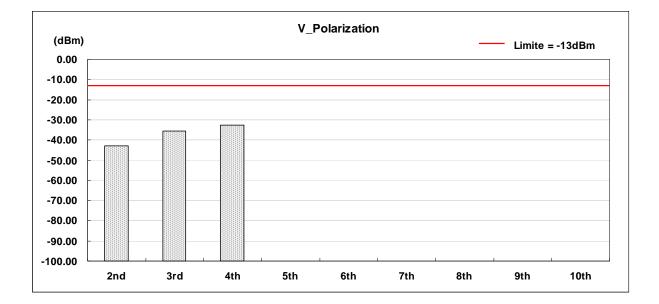


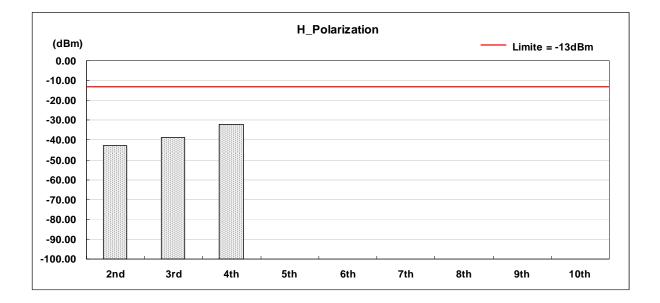
Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: PCS 1900 (High CH 810)
Test Date	: 06/09/2009

Harmonic	Frequency	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
	(MHz)		(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3819.6	V	-13	-53.19	10.72	0.56	-43.03
3rd	5729.4	V	-13	-45.46	10.66	0.62	-35.42
4th	7639.2	V	-13	-42.64	10.78	0.74	-32.60
5th	9549.0	V	-13	*	*	*	*
6th	11458.8	V	-13	*	*	*	*
7th	13368.6	V	-13	*	*	*	*
8th	15278.4	V	-13	*	*	*	*
9th	17188.2	V	-13	*	*	*	*
10th	19098.0	V	-13	*	*	*	*
2nd	3819.6	Н	-13	-52.82	10.72	0.56	-42.66
3rd	5729.4	Н	-13	-48.85	10.66	0.62	-38.81
4th	7639.2	Н	-13	-42.20	10.78	0.74	-32.16
5th	9549.0	Н	-13	*	*	*	*
6th	11458.8	Н	-13	*	*	*	*
7th	13368.6	Н	-13	*	*	*	*
8th	15278.4	Н	-13	*	*	*	*
9th	17188.2	Н	-13	*	*	*	*
10th	19098.0	Н	-13	*	*	*	*

- 1. \* Indicates the spurious emission could not be detected due to noise limitations or ambients.
- 2. Each emission reported reflects the highest absolute level at the specific harmonic for the low, mid, and high channels at maximum power.
- 3. The Spectrum was investigated from 30 MHz to the tenth harmonic of the fundamental.
- 4. ERP = S.G Power (dBm) + Substitution Antenna Gain (dBd) Cable Loss (dB)









# 4.7 Frequency Stability (Temperature Variation)

#### 4.7.1 Measurement Instrument

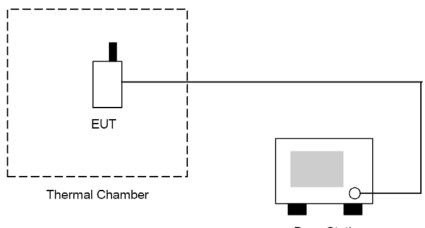
As described in chapter 5 of this test report.

#### 4.7.2 Test Procedure

The measurement is made according to FCC rules part 22 and 24:

- 1. The EUT and test equipment were set up as shown on the following section.
- With all power removed, the temperature was decreased to -30℃ and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute.
- 3. With power OFF, the temperature was raised in 10℃ steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
- 4. The temperature tests were performed for the worst case.
- 5. Test data was recorded.

#### 4.7.3 Test Setup Layout



Base Station



## 4.7.4 Test Result

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Middle CH190)
Test Date	: 06/09/2009

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
-30	22.19	0.027	0.1
-20	23.41	0.028	0.1
-10	22.65	0.027	0.1
0	21.58	0.026	0.1
10	23.23	0.028	0.1
20	21.76	0.026	0.1
30	20.39	0.024	0.1
40	25.47	0.030	0.1
50	19.38	0.023	0.1

Temperature	Deviation (Hz)	D			
Test Date	: 06/09/2009				
Test Mode	: PCS 1900 (Middle CH661)				
EUT	: PDA Phone				
Model No	: CLIC100				
Applicant	: HTC Corporation				

Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
-30	18.45	0.010	1
-20	19.27	0.010	1
-10	21.11	0.011	1
0	20.46	0.011	1
10	18.49	0.010	1
20	18.53	0.010	1
30	15.64	0.008	1
40	18.68	0.010	1
50	17.76	0.009	1



# 4.8 Frequency Stability (Voltage Variation)

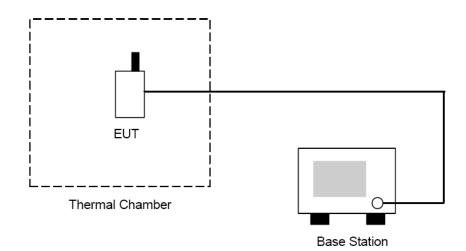
#### 4.8.1 Measurement Instrument

As described in chapter 5 of this test report.

#### 4.8.2 Test Procedure

- 1. The EUT was placed in a temperature chamber at 25  $\pm$  5  $\,^\circ C\,$  and connected as the following section.
- 2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
- 3. The variation in frequency was measured for the worst case.

## 4.8.3 Test Setup Layout





## 4.8.4 Test Result

Applicant	: HTC Corporation
Model No	: CLIC100
EUT	: PDA Phone
Test Mode	: GSM 850 (Middle CH190)
Test Date	: 06/09/2009

Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]
Battery full point	4.25	22.42	0.027	0.1
Normal	3.70	25.96	0.031	0.1
Battery cut-off point	3.20	26.81	0.032	0.1

	Voltage
Test Date	: 06/09/2009
Test Mode	: PCS 1900 (Middle CH661)
EUT	: PDA Phone
Model No	: CLIC100
Applicant	: HTC Corporation

Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]
Battery full point	4.25	24.73	0.013	1
Normal	3.70	26.26	0.014	1
Battery cut-off point	3.20	27.19	0.014	1



## 4.9 AC Power Conducted Emissions Requirements

#### 4.9.1 Measurement Instrument

As described in chapter 5 of this test report.

#### 4.9.2 Test Procedure

The measurement is made according to FCC rules15.207:

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.6.



## 4.9.3 Test condition:

EUT tested in accordance with the specifications given by the Manufacturer, and exercised in the most unfavorable manner.

## 4.9.4 Conducted Emissions Limits:

Frequency range (MHz)	Limits (dBuV)		
r requency range (winz)	Quasi-peak	Average	
0.15 to 0.50	66 to 56	56 to 46	
0.50 to 5.0	56	46	
5.0 to 30	60	50	

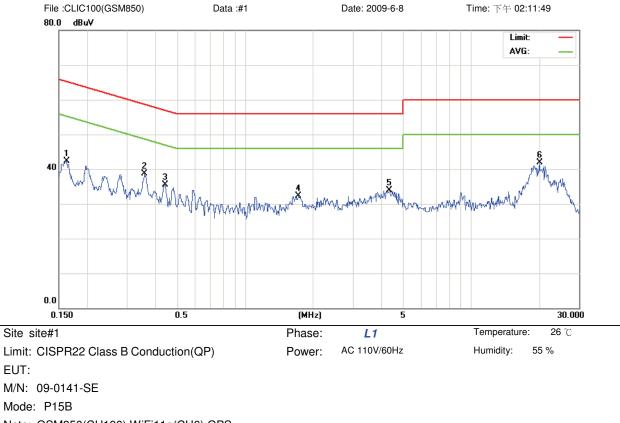


## 4.9.5 Test Result

#### 4.9.5.1 GSM 850 Test Result

Applicant	: HTC Corporation		
Model No	: CLIC100		
EUT	: PDA Phone		
Test Mode	: Link Mode _ GSM 850 (Middle CH190)		
Test Date : 06/08/200			
Please refer to next pager of detail testing data.			



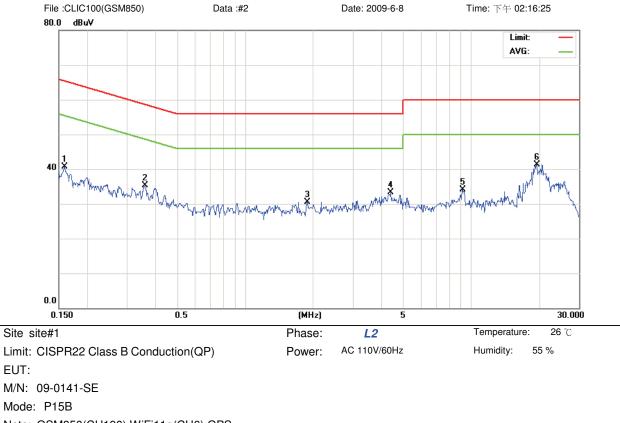


## Note: GSM850(CH190),WiFi11g(CH6),GPS

ADAPTER:PSAI05R-050Q	
----------------------	--

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1619	32.58	9.73	42.31	65.36	-23.05	peak	
2	0.3593	28.89	9.78	38.67	58.74	-20.07	peak	
3	0.4398	25.82	9.78	35.60	57.06	-21.46	peak	
4	1.7240	22.41	9.82	32.23	56.00	-23.77	peak	
5	4.3250	23.82	10.01	33.83	56.00	-22.17	peak	
6 *	20.0500	31.63	10.22	41.85	60.00	-18.15	peak	





## Note: GSM850(CH190),WiFi11g(CH6),GPS

ADAF	PTER:F	PSAI0	5R-0	50Q	
		_		-	

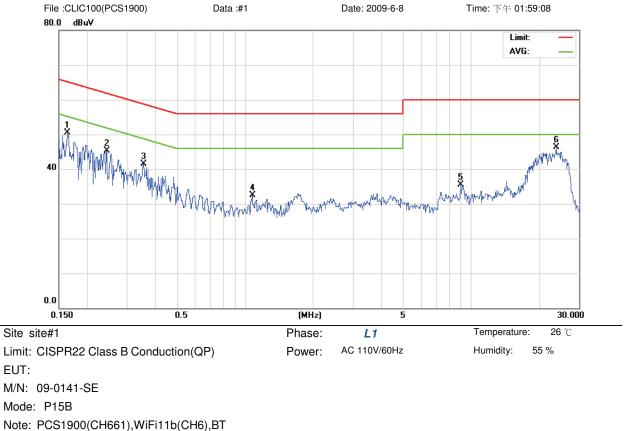
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1584	30.88	9.73	40.61	65.54	-24.93	peak	
2	0.3607	25.49	9.78	35.27	58.71	-23.44	peak	
3	1.8860	20.63	9.83	30.46	56.00	-25.54	peak	
4	4.3970	23.31	10.01	33.32	56.00	-22.68	peak	
5	9.1500	23.94	10.09	34.03	60.00	-25.97	peak	
6 *	19.4500	31.09	10.28	41.37	60.00	-18.63	peak	



### 4.9.5.2 PCS 1900 Test Result

Applicant	: HTC Corporation						
Model No	: CLIC100						
EUT	: PDA Phone						
Test Mode	: Link Mode _ PCS 1900 (Middle CH661)						
Test Date	: 06/08/200						
Please refer to next	Please refer to next pager of detail testing data.						



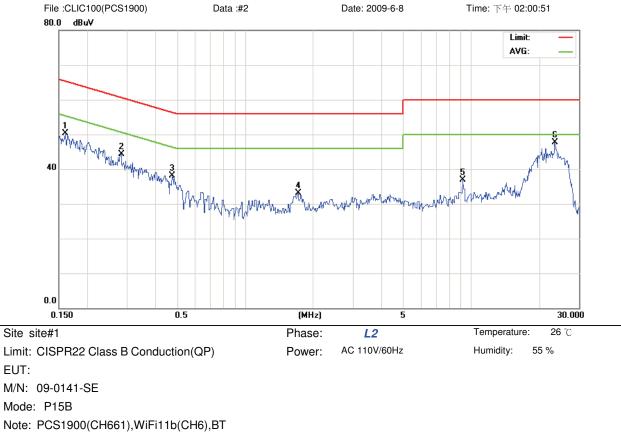


# ADAPTER:PSAI05R-050Q

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1633	40.86	9.73	50.59	65.29	-14.70	peak	
2	0.2431	35.62	9.75	45.37	61.99	-16.62	peak	
3	0.3543	31.77	9.78	41.55	58.86	-17.31	peak	
4	1.0760	22.64	9.80	32.44	56.00	-23.56	peak	
5	9.0000	25.39	10.09	35.48	60.00	-24.52	peak	
6 *	23.7000	35.95	10.32	46.27	60.00	-13.73	peak	

\*:Maximum data x:Over limit !:over margin





ADAPTER:PSAI05R-050Q

Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
0.1598	40.51	9.73	50.24	65.47	-15.23	peak	
0.2823	34.50	9.76	44.26	60.75	-16.49	peak	
0.4748	28.40	9.78	38.18	56.43	-18.25	peak	
1.7150	23.29	9.82	33.11	56.00	-22.89	peak	
9.2000	26.89	10.09	36.98	60.00	-23.02	peak	
23.4000	37.44	10.35	47.79	60.00	-12.21	peak	
	MHz 0.1598 0.2823 0.4748 1.7150 9.2000	Freq. Level   MHz dBuV   0.1598 40.51   0.2823 34.50   0.4748 28.40   1.7150 23.29   9.2000 26.89	Freq. Level Factor   MHz dBuV dB   0.1598 40.51 9.73   0.2823 34.50 9.76   0.4748 28.40 9.78   1.7150 23.29 9.82   9.2000 26.89 10.09	Freq.LevelFactormentMHzdBuVdBdBuV0.159840.519.7350.240.282334.509.7644.260.474828.409.7838.181.715023.299.8233.119.200026.8910.0936.98	Freq.LevelFactormentLimitMHzdBuVdBdBuVdBuV0.159840.519.7350.2465.470.282334.509.7644.2660.750.474828.409.7838.1856.431.715023.299.8233.1156.009.200026.8910.0936.9860.00	Freq.LevelFactormentLimitOverMHzdBuVdBdBuVdBuVdB0.159840.519.7350.2465.47-15.230.282334.509.7644.2660.75-16.490.474828.409.7838.1856.43-18.251.715023.299.8233.1156.00-22.899.200026.8910.0936.9860.00-23.02	Freq.LevelFactormentLimitOverMHzdBuVdBdBuVdBuVdBDetector0.159840.519.7350.2465.47-15.23peak0.282334.509.7644.2660.75-16.49peak0.474828.409.7838.1856.43-18.25peak1.715023.299.8233.1156.00-22.89peak9.200026.8910.0936.9860.00-23.02peak

\*:Maximum data x:Over limit !:over margin



# 5. <u>List of Measurement Equipments</u>

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration			
Wandacturer		Type/woder	Senai Number	Last Cal.	Due Date		
Agilent	Spectrum analyzer	E4408B	MY45107753	Jun. 05, 2009	Jun. 05, 2010		
R&S	Receiver	ESCI	100367	Jun. 05, 2009	Jun. 05, 2010		
SCHWARZBECK	Trilog Broadband Antenna	VULB 9163	9163-270	Jun. 26, 2008	Jun. 26, 2009		
SCHWARZBECK	Broadband Horn Antenna	BBHA 9120D	9120D-550	Jun. 26, 2008	Jun. 26, 2009		
SCHWARZBECK	Broadband Horn Antenna	BBHA 9170	9170-320	Aug. 07, 2008	Aug. 07, 2009		
Agilent	Amplifier	8447D	2944A11119	Jan. 19, 2009	Jan. 19, 2010		
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	112387	Jul. 25, 2008	Jul. 25, 2009		
Spectrum Analyzer	Agilent	E4445A	MY45300744	Dec. 22, 2008	Dec. 22, 2009		
Loop Dipole	ETS-Lindgren	3127-1880	00052640	Jul. 02, 2008	Jul. 02, 2009		
Loop Dipole	ETS-Lindgren	3127-836	00055272	Jun. 29, 2008	Jun. 29, 2009		
Sleeve Dipole	ETS-Lindgren	3126-1845	00056670	Jun. 29, 2008	Jun. 29, 2009		
Sleeve Dipole	ETS-Lindgren	3126-880	00052705	Jun. 29, 2008	Jun. 29, 2009		
Anechoic Chamber	ETS-Lindgren	AMS 8500	S/N 102165	N	A		
High Pass Filter	MICRO-TRONICS	HPM50108	020	N	A		
High Pass Filter	MICRO-TRONICS	HPM50111	021	N	A		
Circularly Polarized Communication Antennas	EMCO	3102	00051714	N	A		
Pattern Measurement Software	ETS-Lindgren	EMQuest™ EMQ-100	NA	N	A		
Desktop Computer with Windows XP		Dell Computers	NA	N	A		
Antenna Positioner Controller	EMCO	2090	00052447	N	A		
MAPS Positioner	EMCO	2010/2015	NA	N	A		
Filter	K&L	5TNF-1700/ 2000-0.1N/N	166	N	A		
Filter	K&L	3TNF-800/ 1000-0.2N/N	274	Ν	IA		
Attenuator	RADIALL	R41572000	0603033073	N	A		
Splitter	Powercom	SGR-GFQ-2-D	41106609	N	A		
Power divider	Agilent	87302C	3239A00760	Ν	A		



# 6. <u>Uncertainty Evaluation</u>

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

	Uncert	ainty of <sup>Xi</sup>	U(Xi)		
Contribution	dB	Probability Distribution			
Receiver reading	0.41	Normal(k=2)	0.21		
Antenna factor calibration	0.83	Normal(k=2)	0.42		
Cable loss calibration	0.25	Normal(k=2)	0.13		
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14		
RCV/SPA specification	2.50	Rectangular	0.72		
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29		
Site imperfection	1.43	Rectangular	0.83		
Mismatch	+0.39/-0.41	U-shaped	0.28		
combined standard uncertainty Uc(y)	1.27				
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)		2.54			

#### Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

	Uncerta	ainty of <sup>Xi</sup>		Ci	Ci * U(Xi)
Contribution	dB	Probability Distributio	U(Xi)		
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\sqrt{1}$ = 0.197 Antenna VSWR $\sqrt{2}$ = 0.194 Uncertainty=20log(1- $\sqrt{1} * \sqrt{2} * \sqrt{3}$ )	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	2.36				
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	4.72				