

## FCC 47 CFR PART 22H and 24E

Product Type : Smartphone

Applicant : HTC Corporation

Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330,  
Taiwan

Trade Name : HTC

Model Number : PD98120

Test Specification : FCC 47 CFR PART 22H: Oct, 2009  
FCC 47 CFR PART 24E: Oct, 2009  
CANADA RSS-132 Issue 2: Sep. 2005  
CANADA RSS-133 Issue 4: Sep. 2008  
ANSI/TIA-603-C 2004  
ANSI C63.4: 2003

Application Purpose : Class II Permissive Change

Issue Date : Mar. 07, 2011

### Issue by

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Taiwan Accreditation Foundation accreditation number: 1330

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**Revision History**

<b>Rev.</b>	<b>Issue Date</b>	<b>Revisions</b>	<b>Revised By</b>
00	Mar. 07, 2011	Initial Issue	

## Verification of Compliance

Issued Date: 2011/03/07

Product Type : Smartphone  
Applicant : HTC Corporation  
Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330,  
Taiwan  
Trade Name : HTC  
Model Number : PD98120  
FCC ID : NM8PD98120  
EUT Rated Voltage : DC 5.0V, 1.0A  
Test Voltage : 120 Vac / 60 Hz  
Applicable : FCC 47 CFR PART 22H: Oct, 2009  
Standard : FCC 47 CFR PART 24E: Oct, 2009  
CANADA RSS-132 Issue 2: Sep. 2005  
CANADA RSS-133 Issue 4: Sep. 2008  
ANSI/TIA-603-C 2004  
ANSI C63.4: 2003  
Test Result : Complied  
Performing Lab. : A Test Lab Techno Corp.  
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<http://www.atl-lab.com.tw/e-index.htm>

The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4: 2003 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 22H, Part 24E. The test results of this report relate only to the tested sample identified in this report.

Approved By : Miller Lee Reviewed By : Gary Wu  
(Manager) (Miller Lee) (Testing Engineer) (Gary Wu)

## TABLE OF CONTENTS

<b>1</b>	<b>General Information .....</b>	<b>5</b>
1.1.	EUT Description.....	5
1.2.	Mode of Operation.....	6
1.3.	EUT Exercise Software.....	6
1.4.	Configuration of Test System Details.....	7
1.5.	Test Site Environment.....	7
1.6.	Summary of Test Result .....	8
<b>2</b>	<b>RF Output Power Test.....</b>	<b>9</b>
2.1.	Limit .....	9
2.2.	Test Instruments .....	9
2.3.	Test Setup.....	9
2.4.	Test Procedure.....	9
2.5.	Uncertainty.....	9
2.6.	Test Result.....	10

# 1 General Information

## 1.1. EUT Description

Applicant		HTC Corporation			
Applicant Address		No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan			
Manufacturer		HTC Corporation			
Manufacturer Address		No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan			
Product Type		Smartphone			
Trade Name		HTC			
Model Number		PD98120			
FCC ID		NM8PD98120			
IMEI No.		Sample 1 <sup>st</sup> : 354455040013706, Sample 2 <sup>nd</sup> : 354455040014936			
Mode	HSUPA, HSUPA+	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		II	1852.4 ~ 1907.6	1932.4 ~ 1987.6	QPSK
		V	826.4 ~ 846.6	871.4 ~ 891.6	QPSK
Channel Control		Auto			
Type of Antenna		PIFA Antenna			
Antenna Gain (dBi)		HSUPA/HSUPA+ Band II: 0.10 dBi HSUPA/HSUPA+ Band V: -1.50 dBi			
Max. RF Output power		HSUPA/HSUPA+ Band II: 25.84 dBm / 0.384 W HSUPA/HSUPA+ Band V: 25.82 dBm / 0.382 W			

## 1.2. Mode of Operation

ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: HSUPA Link
Mode 2: HSUPA+ Link

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

### Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model Number	Serial Number	Power Cord
1.	Universal Radio Communication Tester	R&S	CMU200	109369	N/A

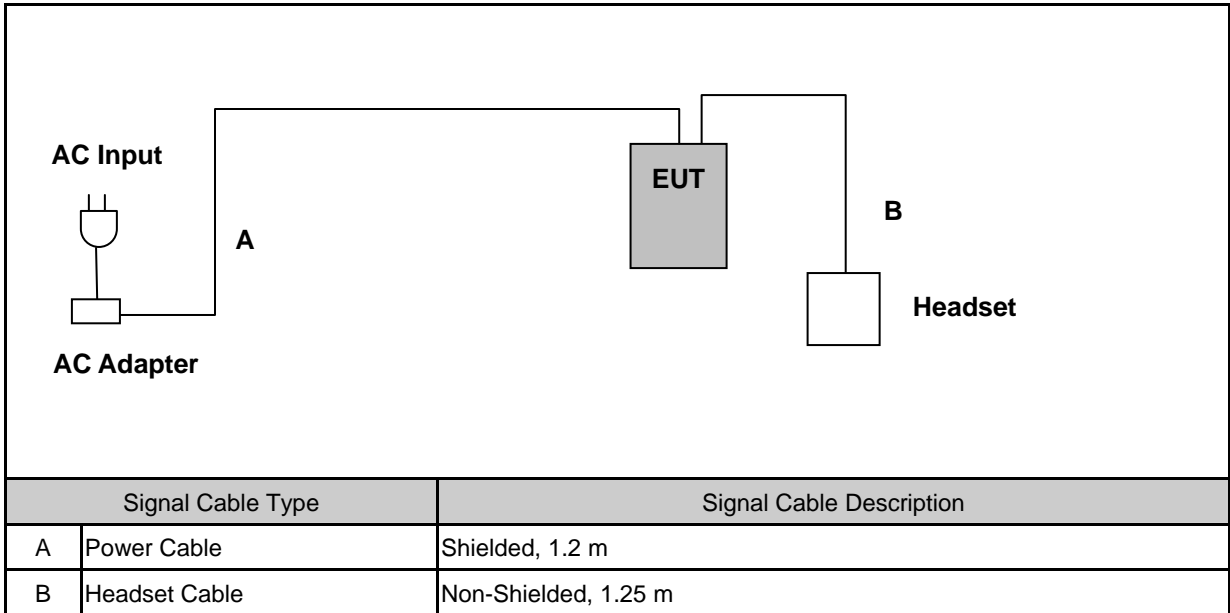
Component	Component Source	Different Description	
		Sample 1 <sup>st</sup>	Sample 2 <sup>nd</sup>
GSM Power Amplifier	#1	V	
	#2		V

Note: The GSM power amplifier influenced mode 1 and mode 2, which different samples should be tested.

## 1.3. EUT Exercise Software

1.	Setup the EUT and Base Station (CMU200) as shown on 1.4.
2.	Turn on the power of all equipment.

#### 1.4. Configuration of Test System Details



#### 1.5. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	25
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950

## 1.6. Summary of Test Result

Description	FCC Rule	IC Rule	Limit	Result
Conducted Output Power	§2.1046	N/A	N/A	Pass
Effective Radiated Power	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	< 7 Watts for FCC (<6.3 Watts for IC)	NP
Equivalent Isotropic Radiated Power	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	< 2 Watts	NP
Occupied Bandwidth	§2.1049 §22.917(a) §24.238(a)	N/A	N/A	NP
Band Edge Measurement	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1)RSS-133 (6.5.1)	< 43+10log <sub>10</sub> (P[Watts])	NP
Conducted Emission	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	< 43+10log <sub>10</sub> (P[Watts])	NP
Field Strength of Spurious Radiation	§2.1053 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	< 43+10log <sub>10</sub> (P[Watts])	NP
Frequency Stability for Temperature & Voltage	§2.1055 §22.355 §24.235	RSS-132(4.3) RSS-133(6.3)	< 2.5 ppm	NP

NP: The test was not performed.

Because HSUPA and HSUPA+ function's RF output power less than WCDMA.

The test results of original application are re-used for certification of the class II permissive change application. The table above indicates the results, which will be re-used.



## 2 RF Output Power Test

### 2.1. Limit

N/A

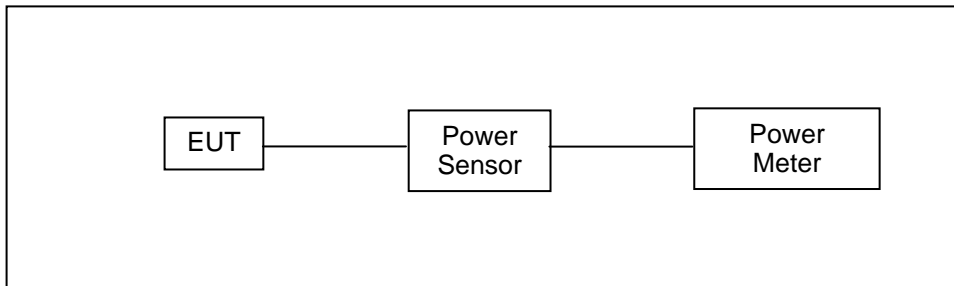
### 2.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	08/10/2010	(1)
Single Channel PK Power Sensor	Agilent	N1911A	MY45101619	07/19/2010	(1)
Wideband Power Meter	Agilent	N1921A	MY45241957	07/19/2010	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: <sup>(1)</sup> Calibration period 1 year. <sup>(2)</sup> Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

### 2.3. Test Setup



### 2.4. 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.

### 2.5. Uncertainty

The measurement uncertainty is defined as for RF output power measurement is 1.2 dB.

**2.6. Test Result**

Model Number	PD98120					
Test Item	RF Output Power					
Date of Test	09/09/2010			Test Site	TE02	
Bands	Sub-Test	Frequency (MHz)	Average Burst Conducted Power		Peak Conducted Power	
			(dBm)	(W)	(dBm)	(W)
HSUPA Band II	1	1852.4	22.05	0.160	25.30	0.339
		1880.0	22.63	0.183	<b>25.84</b>	<b>0.384</b>
		1907.6	22.10	0.162	24.74	0.298
	2	1852.4	20.03	0.101	23.28	0.213
		1880.0	20.62	0.115	23.82	0.241
		1907.6	20.07	0.102	22.69	0.186
	3	1852.4	21.03	0.127	24.27	0.267
		1880.0	21.62	0.145	24.82	0.303
		1907.6	21.07	0.128	23.71	0.235
	4	1852.4	20.04	0.101	23.28	0.213
		1880.0	20.61	0.115	23.84	0.242
		1907.6	20.07	0.102	22.70	0.186
	5	1852.4	22.04	0.160	25.27	0.337
		1880.0	22.61	0.182	25.81	0.381
		1907.6	22.09	0.162	24.73	0.297
HSUPA + Band II	1	1852.4	22.01	0.159	25.26	0.336
		1880.0	22.61	0.182	25.80	0.380
		1907.6	22.09	0.162	24.72	0.296
	2	1852.4	20.02	0.100	23.28	0.213
		1880.0	20.58	0.114	23.78	0.239
		1907.6	20.02	0.100	22.66	0.185
	3	1852.4	21.02	0.126	24.23	0.265
		1880.0	21.58	0.144	24.81	0.303
		1907.6	21.06	0.128	23.71	0.235
	4	1852.4	20.03	0.101	23.25	0.211
		1880.0	20.60	0.115	23.82	0.241
		1907.6	20.02	0.100	22.65	0.184
	5	1852.4	22.01	0.159	25.27	0.337
		1880.0	22.58	0.181	25.77	0.378
		1907.6	22.04	0.160	24.69	0.294

Note: The peak power testing result was used peak detector.

Model Number	PD98120					
Test Item	RF Output Power					
Date of Test	09/02/2010			Test Site	TE02	
Bands	Sub-Test	Frequency (MHz)	Average Burst Conducted Power		Peak Conducted Power	
			(dBm)	(W)	(dBm)	(W)
HSUPA Band V	1	826.4	21.33	0.136	25.31	0.340
		836.4	22.40	0.174	<b>25.82</b>	<b>0.382</b>
		846.4	21.43	0.139	24.61	0.289
	2	826.4	19.33	0.086	23.32	0.215
		836.4	20.38	0.109	23.79	0.239
		846.4	19.43	0.088	22.62	0.183
	3	826.4	20.32	0.108	24.30	0.269
		836.4	21.40	0.138	24.81	0.303
		846.4	20.42	0.110	23.60	0.229
	4	826.4	19.31	0.085	23.30	0.214
		836.4	20.38	0.109	23.81	0.240
		846.4	19.41	0.087	22.59	0.182
	5	826.4	21.33	0.136	25.33	0.341
		836.4	22.37	0.173	25.80	0.380
		846.4	21.41	0.138	24.58	0.287
HSUPA + Band V	1	826.4	21.31	0.135	25.24	0.334
		836.4	22.33	0.171	25.79	0.379
		846.4	21.36	0.137	24.55	0.285
	2	826.4	19.28	0.085	23.30	0.214
		836.4	20.30	0.107	23.78	0.239
		846.4	19.36	0.086	22.62	0.183
	3	826.4	20.29	0.107	24.29	0.269
		836.4	21.36	0.137	24.79	0.301
		846.4	20.37	0.109	23.58	0.228
	4	826.4	19.29	0.085	23.23	0.210
		836.4	20.36	0.109	23.80	0.240
		846.4	19.37	0.086	22.59	0.182
	5	826.4	21.27	0.134	25.30	0.339
		836.4	22.30	0.170	25.78	0.378
		846.4	21.37	0.137	24.51	0.282

Note: The peak power testing result was used peak detector.