

## FCC 47 CFR PART 27 SUBPART L

Product Type : Smartphone  
Applicant : HTC Corporation  
Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330,  
Taiwan  
Trade name : HTC  
Model No. : PG76240  
Test Specification : FCC 47 CFR PART 27 SUBPART L: Oct. 2010  
ANSI/TIA-603-C-2004  
Issue Date : Jun. 15, 2011

### Issue by

A Test Lab Techno Corp.  
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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	Jun. 15, 2011	Initial Issue	

## Verification of Compliance

Issued Date: 2011/06/15

Product Type : Smartphone  
Applicant : HTC Corporation  
Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330,  
Taiwan  
Trade Name : HTC  
Model No. : PG76240  
FCC ID : NM8PG76240  
EUT Rated Voltage : DC 5.0V, 1.0A  
Test Voltage : 120 Vac / 60 Hz  
Applicable : FCC 47 CFR PART 27 SUBPART L: Oct. 2010  
Standard : ANSI/TIA-603-C-2004  
Test Result : Complied  
Performing Lab. : A Test Lab Techno Corp.

No. 140-1, Changan Street, Bade City,  
Taoyuan County 334, Taiwan R.O.C.

Tel : +886-3-2710188 / Fax : +886-3-2710190


Taiwan Accreditation Foundation accreditation number:  
1330

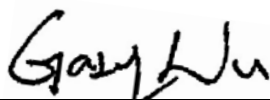


<http://www.atl-lab.com.tw/e-index.htm>

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: 2009 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 27L.

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

Approved By :   
(Manager) (Miller Lee)

Reviewed By :   
(Testing Engineer) (Gary Wu)

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## 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		PG76240			
FCC ID		NM8PG76240			
Mode	WCDMA	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		IV	1712.4 ~ 1752.6	2112.4 ~ 2152.6	QPSK
Type of Antenna		PIFA Antenna			
Antenna Gain (dBi)		0.70 dBi			
Max. RF Output Power		26.57 dBm / 0.454 W			
Max. EIRP		25.65 dBm / 0.367 W			
Emission Designator		4M17F9W			

### 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: WCDMA Band IV 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

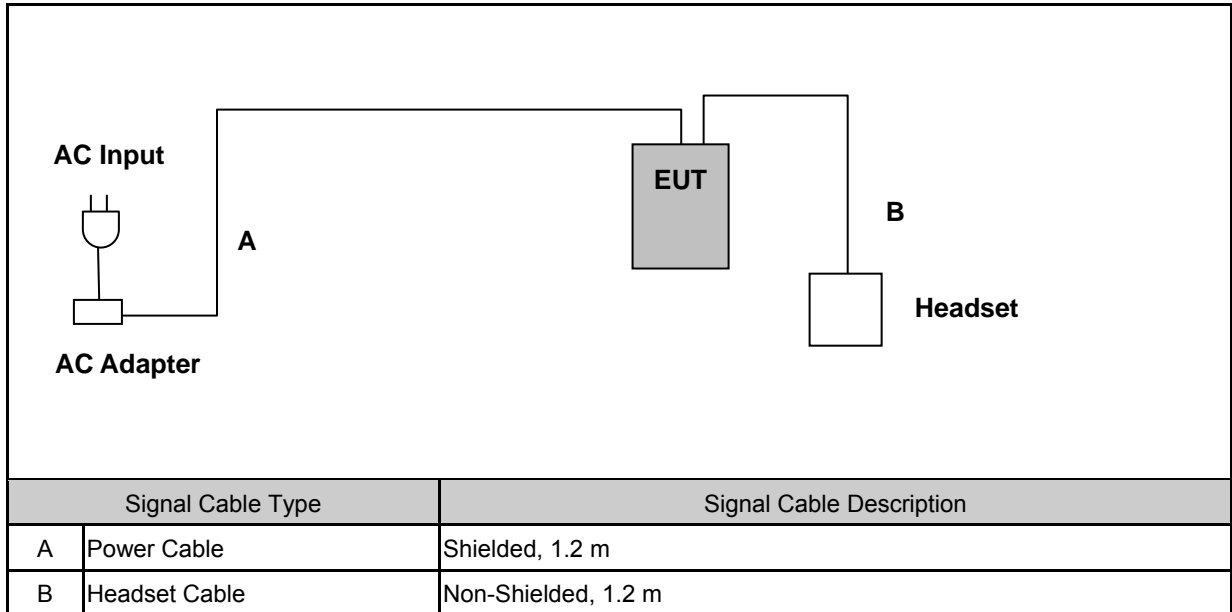
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1.	Universal Radio Communication Tester	R&S	CMU200	109369	N/A

### 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.
3.	EUT run test program HTC SSD Test.

### 1.4. Configuration of Test System Details



### 1.5. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
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
Equivalent Isotropic Radiated Power	§27.50(d)(2)	RSS-139 (6.4) SRSP-513(5.1.2)	< 1 Watts	Pass
Occupied Bandwidth	§2.1049 §27.53(g)	N/A	N/A	Pass
Band Edge Measurement	§2.1051 §27.53(g)	RSS-139 (6.5)	$< 43 + 10 \log_{10}(P[\text{Watts}])$	Pass
Conducted Emission	§2.1051 §27.53(g)	RSS-139 (6.5)	$< 43 + 10 \log_{10}(P[\text{Watts}])$	Pass
Field Strength of Spurious Radiation	§2.1053 §27.53(g)	RSS-139 (6.5)	$< 43 + 10 \log_{10}(P[\text{Watts}])$	Pass
Frequency Stability for Temperature & Voltage	§2.1055 §27.54	RSS-139(6.3)	< 2.5 ppm	Pass



## 2 RF Output Power Test

### 2.1. Limit

N/A

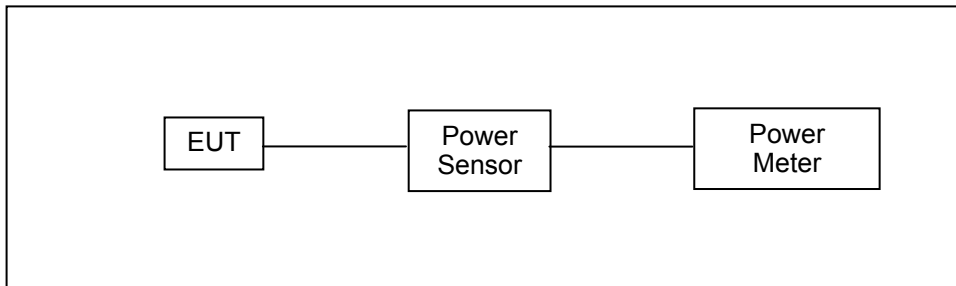
### 2.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	08/10/2010	(2)
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 WCDMA Band IV, power level was set to maximum.
3. Select lowest, middle, and highest channels for each band.

### HSDPA Data Devices setup

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1,2)}$	CM (dB) <sup>(3)</sup>	MRP (dB) <sup>(3)</sup>
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 <sup>(4)</sup>	15/15 <sup>(4)</sup>	64	12/15 <sup>(4)</sup>	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note

1.  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
2. For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A and HSDPA EVM with phase discontinuity in clause 5.13.1AA,  $\Delta_{ACK}$  and  $\Delta_{NACK} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$  and  $\Delta_{CQI} = 24/15$  with  $\beta_{hs} = 24/15 * \beta_c$
3. CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
4. For subtest 2 the  $\beta_c/\beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

**Table 1. Setup for Release 5 HSDPA**

## 2.5. Uncertainty

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

## 2.6. Test Result

Product	Smartphone					
Test Item	RF Output Power					
Date of Test	06/13/2011			Test Site	TE02	
Bands	Sub-Test	Frequency (MHz)	Average Power		Peak Power	
			(dBm)	(W)	(dBm)	(W)
WCDMA IV (RMC 12.2K)	-----	1712.4	23.11	0.205	26.53	0.450
		1740.0	23.12	0.205	<b>26.57</b>	<b>0.454</b>
		1752.6	22.93	0.196	26.35	0.432
HSDPA IV	1	1712.4	23.08	0.203	26.42	0.439
		1740.0	23.24	0.211	26.45	0.442
		1752.6	22.85	0.193	26.25	0.422
	2	1712.4	22.82	0.191	<b>26.56</b>	<b>0.453</b>
		1740.0	22.95	0.197	26.52	0.449
		1752.6	22.59	0.182	26.45	0.442
	3	1712.4	21.35	0.136	25.73	0.374
		1740.0	21.46	0.140	25.55	0.359
		1752.6	21.05	0.127	25.59	0.362
	4	1712.4	20.97	0.125	25.35	0.343
		1740.0	21.03	0.127	25.40	0.347
		1752.6	20.38	0.109	24.98	0.315

Note: The testing result was used peak detector.

### 3 Effective Radiated Power / Equivalent Isotropic Radiated Power Test

#### 3.1. Limit

For FCC Part 27.50(d)(2): The EIRP of mobile transmitters are limited to 1 watt for 1710~1755 MHz.

#### 3.2. Test Instruments

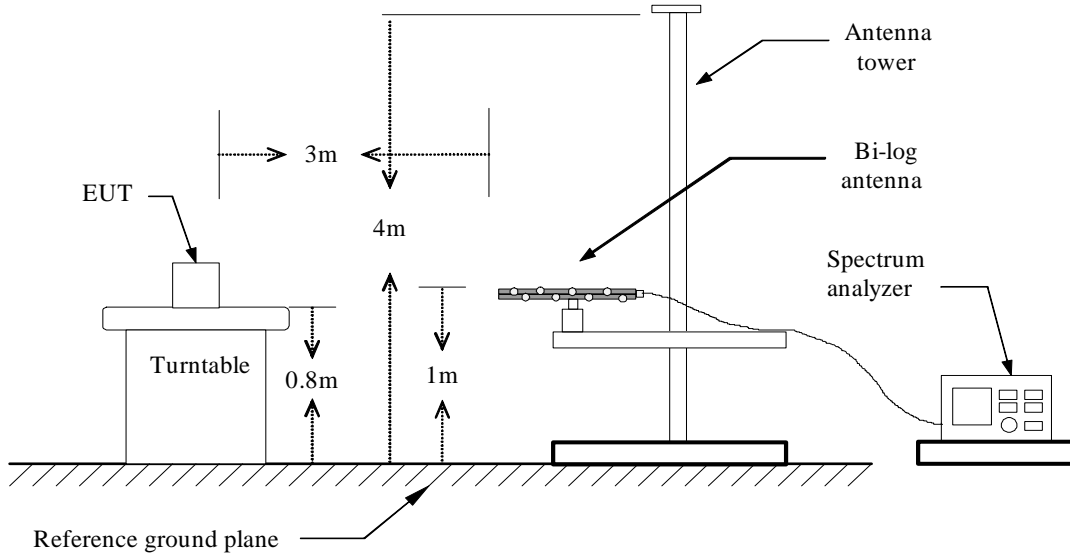
3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/18/2011	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/18/2011	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/23/2011	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/23/2011	(1)
Bi-log Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	08/02/2010	(1)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/29/2010	(1)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/29/2010	(1)
Test Site	ATL	TE01	888001	07/30/2010	(1)

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

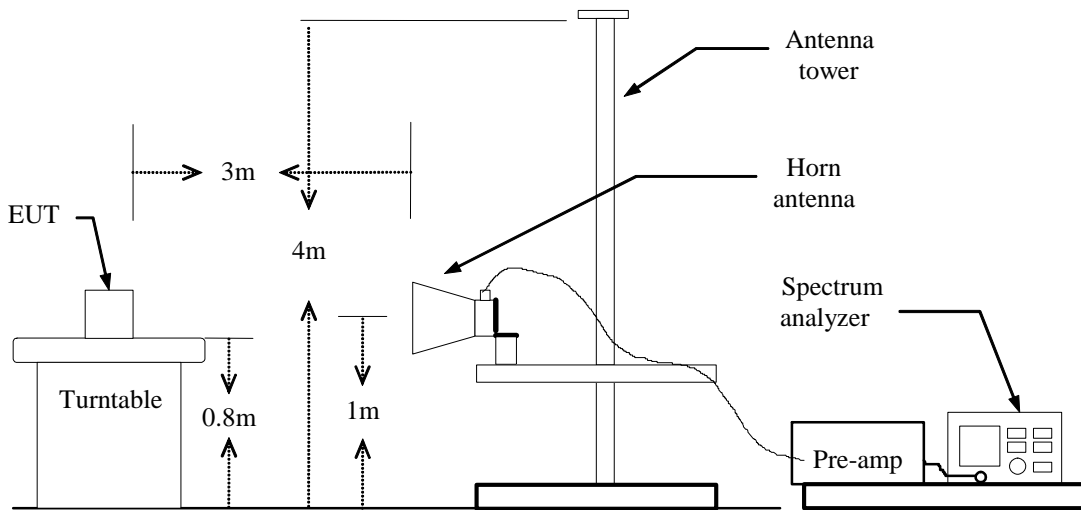
NOTE: N.C.R. = No Calibration Request.

### 3.3. Test Setup

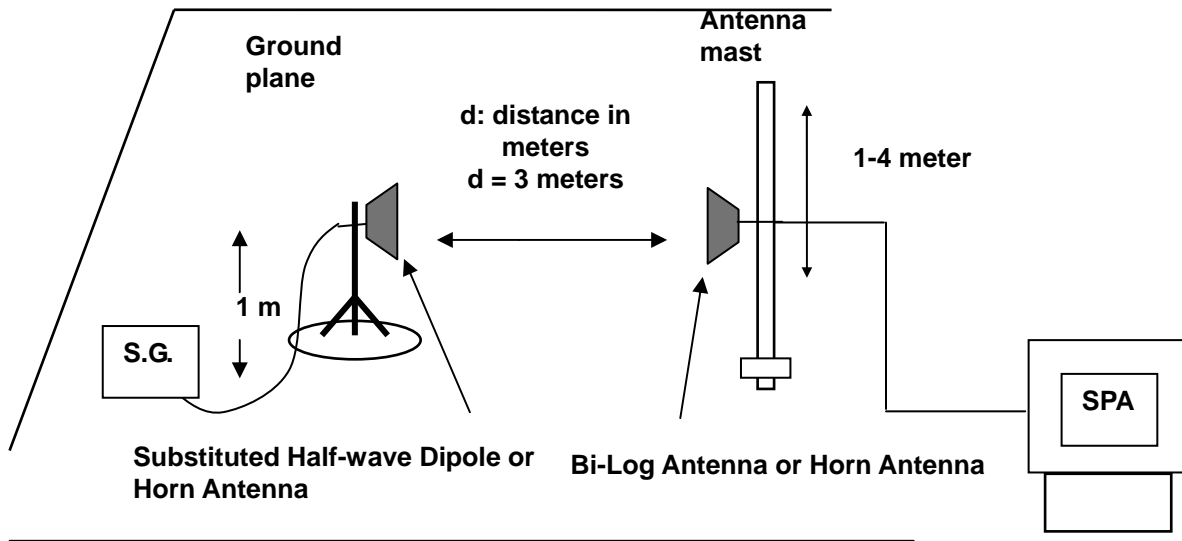
#### Below 1 GHz



#### Above 1 GHz



**For Substituted Method Test Set-UP**



**3.4. Test Procedure**

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

The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement of the EUT, the resolution bandwidth was set to 3MHz and the average bandwidth was set to 3MHz. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824-849MHz, and EIRP in frequency band 1851.25 –1910MHz were measured using a substitution method. The EUT was replaced by half-wave dipole (824-849MHz) or horn antenna (1851.25-1910MHz) connected to a signal generator. The spectrum analyzer reading was recorded and ERP/EIRP was calculated as follows:

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable (dB)}$$

$$\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable (dB)}$$

**3.5. Uncertainty**

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is  $\pm 3.072$  dB.

### 3.6. Test Result

Model Number	PG76240						
Test Item	E.I.R.P.						
Test Mode	Mode 1: WCDMA Band IV Link						
Date of Test	06/08/2011				Test Site	TE01	
Bands	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction factor (dBm)	E.I.R.P.		Limit (W)
					(dBm)	(W)	
WCDMA IV (RMC 12.2K)	1712.4	H	13.23	10.40	23.63	0.231	< 1
		V	18.24	7.19	25.43	0.349	< 1
	1740.0	H	12.93	10.41	23.34	0.216	< 1
		V	18.26	7.39	<b>25.65</b>	<b>0.367</b>	< 1
	1752.6	H	11.06	10.40	21.46	0.140	< 1
		V	17.50	7.50	25.00	0.316	< 1

Note: 1. ERP/EIRP = Read Level + Correction factor.

2. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.

3. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.

## 4 Occupied Bandwidth Test

### 4.1. Limit

**The Occupied Bandwidth Limit:**

N/A.

**The Band Edge Limit:**

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10\log(P)$  dB.

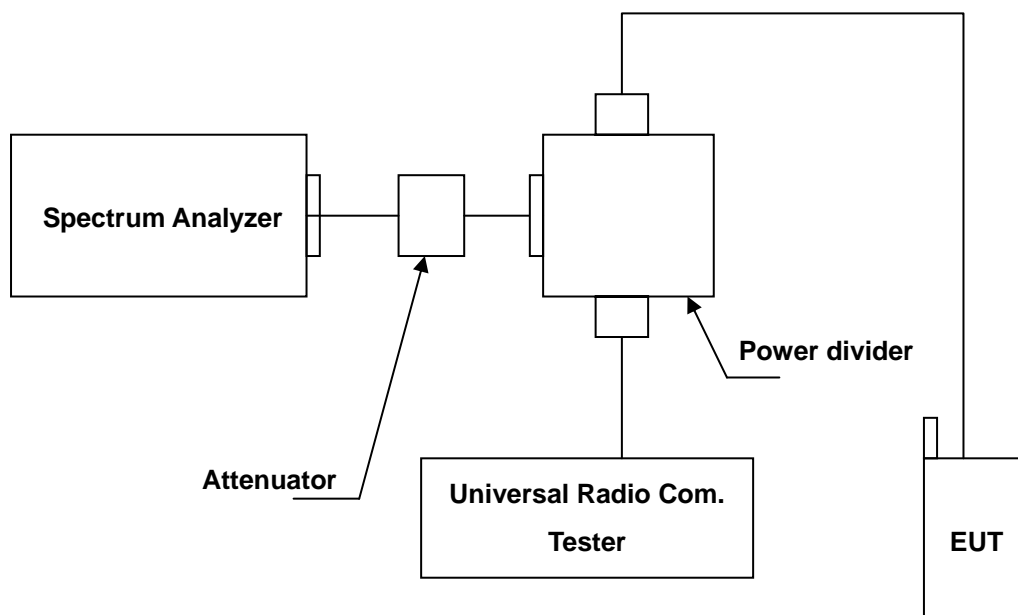
### 4.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/16/2011	(2)
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	08/10/2010	(2)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
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.

### 4.3. Setup





#### 4.4. Test Procedure

The measurement is made according to FCC rules part 27:

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:RB=47 kHz; VB=150 kHz for WCDMA Band IV.

#### 4.5. Uncertainty

The measurement uncertainty is defined as  $\pm 10\text{Hz}$

#### 4.6. Test Result

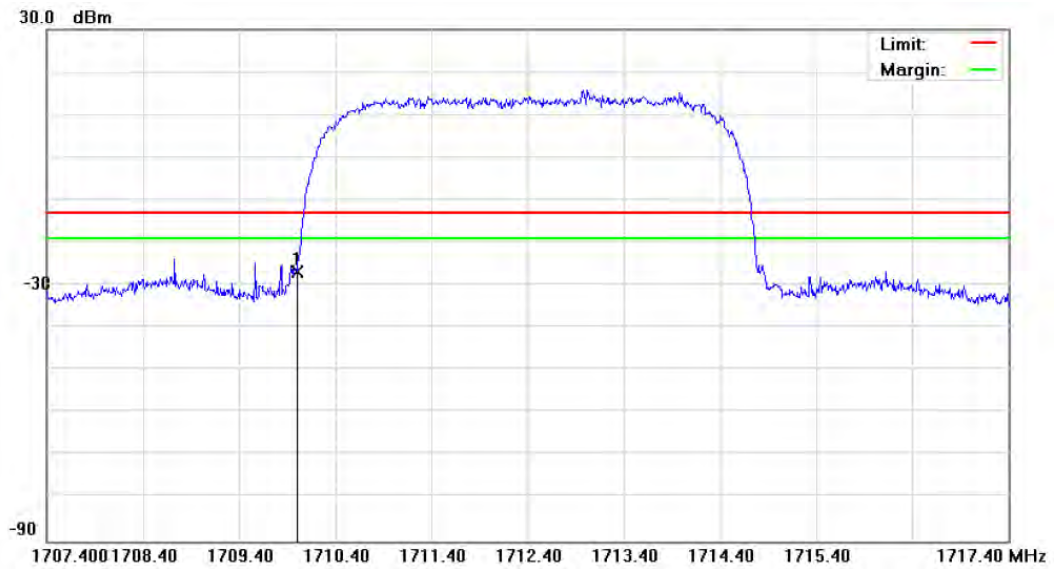
Product	Smartphone			
Test Item	Occupied Bandwidth			
Test Mode	Mode 1: WCDMA Band IV Link			
Date of Test	06/02/2011	Test Site	TE02	
Channel No.	Frequency (MHz)	99 % Bandwidth (MHz)	Limit	Note
1312	1712.4	4.1600	N/A	RBW:51kHz , VBW:150kHz
1450	1740.0	4.1729	N/A	RBW:51kHz , VBW:150kHz
1513	1752.6	4.1716	N/A	RBW:51kHz , VBW:150kHz

Mode 1: WCDMA Band IV Link																	
CH 1312	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent 11:46:49 Jun 2, 2011</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Ch Freq 1.7124 GHz</td> <td style="text-align: center;">Trig Free</td> </tr> <tr> <td colspan="2">Occupied Bandwidth</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Center Freq 1.7124000 GHz</td> <td style="text-align: center;">Span 7.5 MHz</td> </tr> <tr> <td style="text-align: center;">#Res BW 51 kHz</td> <td style="text-align: center;">#VBW 150 kHz</td> </tr> <tr> <td colspan="2" style="text-align: center;">Sweep 2.8 ms (2001 pts)</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><b>Occupied Bandwidth</b> 4.1600 MHz</td> <td style="text-align: center;"><b>Occ BW % Pwr</b> 99.00 %</td> </tr> <tr> <td style="text-align: center;"><b>Transmit Freq Error</b> 6.754 kHz</td> <td style="text-align: center;"><b>x dB</b> -26.00 dB</td> </tr> <tr> <td style="text-align: center;"><b>x dB Bandwidth</b> 4.641 MHz</td> <td></td> </tr> </table> <p style="font-size: small; color: yellow;">Copyright 2000-2005 Agilent Technologies</p> </div>	Ch Freq 1.7124 GHz	Trig Free	Occupied Bandwidth		Center Freq 1.7124000 GHz	Span 7.5 MHz	#Res BW 51 kHz	#VBW 150 kHz	Sweep 2.8 ms (2001 pts)		<b>Occupied Bandwidth</b> 4.1600 MHz	<b>Occ BW % Pwr</b> 99.00 %	<b>Transmit Freq Error</b> 6.754 kHz	<b>x dB</b> -26.00 dB	<b>x dB Bandwidth</b> 4.641 MHz	
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CH1450	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent 11:47:11 Jun 2, 2011</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Ch Freq 1.74 GHz</td> <td style="text-align: center;">Trig Free</td> </tr> <tr> <td colspan="2">Occupied Bandwidth</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Center 1.740 000 GHz</td> <td style="text-align: center;">Span 7.5 MHz</td> </tr> <tr> <td style="text-align: center;">#Res BW 51 kHz</td> <td style="text-align: center;">#VBW 150 kHz</td> </tr> <tr> <td colspan="2" style="text-align: center;">Sweep 2.8 ms (2001 pts)</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><b>Occupied Bandwidth</b> 4.1729 MHz</td> <td style="text-align: center;"><b>Occ BW % Pwr</b> 99.00 %</td> </tr> <tr> <td style="text-align: center;"><b>Transmit Freq Error</b> -13.889 Hz</td> <td style="text-align: center;"><b>x dB</b> -26.00 dB</td> </tr> <tr> <td style="text-align: center;"><b>x dB Bandwidth</b> 4.616 MHz</td> <td></td> </tr> </table> <p style="font-size: small; color: yellow;">Copyright 2000-2005 Agilent Technologies</p> </div>	Ch Freq 1.74 GHz	Trig Free	Occupied Bandwidth		Center 1.740 000 GHz	Span 7.5 MHz	#Res BW 51 kHz	#VBW 150 kHz	Sweep 2.8 ms (2001 pts)		<b>Occupied Bandwidth</b> 4.1729 MHz	<b>Occ BW % Pwr</b> 99.00 %	<b>Transmit Freq Error</b> -13.889 Hz	<b>x dB</b> -26.00 dB	<b>x dB Bandwidth</b> 4.616 MHz	
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<b>Transmit Freq Error</b> -13.889 Hz	<b>x dB</b> -26.00 dB																
<b>x dB Bandwidth</b> 4.616 MHz																	
CH1513	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent 11:47:38 Jun 2, 2011</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Ch Freq 1.7526 GHz</td> <td style="text-align: center;">Trig Free</td> </tr> <tr> <td colspan="2">Occupied Bandwidth</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Center 1.752 600 GHz</td> <td style="text-align: center;">Span 7.5 MHz</td> </tr> <tr> <td style="text-align: center;">#Res BW 51 kHz</td> <td style="text-align: center;">#VBW 150 kHz</td> </tr> <tr> <td colspan="2" style="text-align: center;">Sweep 2.8 ms (2001 pts)</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><b>Occupied Bandwidth</b> 4.1716 MHz</td> <td style="text-align: center;"><b>Occ BW % Pwr</b> 99.00 %</td> </tr> <tr> <td style="text-align: center;"><b>Transmit Freq Error</b> 5.751 kHz</td> <td style="text-align: center;"><b>x dB</b> -26.00 dB</td> </tr> <tr> <td style="text-align: center;"><b>x dB Bandwidth</b> 4.640 MHz</td> <td></td> </tr> </table> <p style="font-size: small; color: yellow;">Copyright 2000-2005 Agilent Technologies</p> </div>	Ch Freq 1.7526 GHz	Trig Free	Occupied Bandwidth		Center 1.752 600 GHz	Span 7.5 MHz	#Res BW 51 kHz	#VBW 150 kHz	Sweep 2.8 ms (2001 pts)		<b>Occupied Bandwidth</b> 4.1716 MHz	<b>Occ BW % Pwr</b> 99.00 %	<b>Transmit Freq Error</b> 5.751 kHz	<b>x dB</b> -26.00 dB	<b>x dB Bandwidth</b> 4.640 MHz	
Ch Freq 1.7526 GHz	Trig Free																
Occupied Bandwidth																	
Center 1.752 600 GHz	Span 7.5 MHz																
#Res BW 51 kHz	#VBW 150 kHz																
Sweep 2.8 ms (2001 pts)																	
<b>Occupied Bandwidth</b> 4.1716 MHz	<b>Occ BW % Pwr</b> 99.00 %																
<b>Transmit Freq Error</b> 5.751 kHz	<b>x dB</b> -26.00 dB																
<b>x dB Bandwidth</b> 4.640 MHz																	

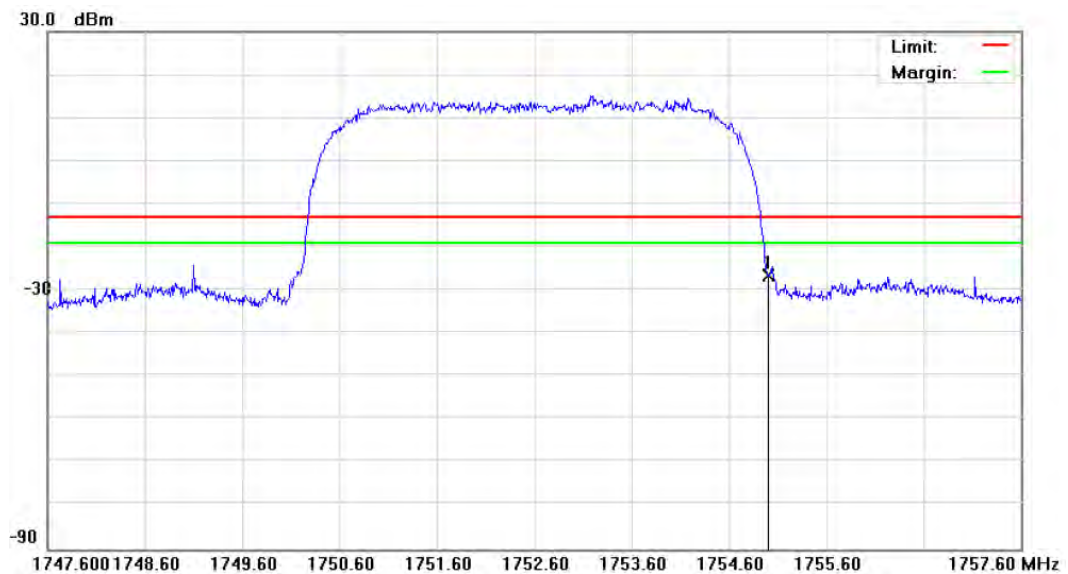
**Band Edge**

Product	Smartphone				
Test Item	Band Edge				
Test Mode	Mode 1: WCDMA Band IV Link				
Date of Test	06/02/2011		Test Site	TE02	
Band	Channel	Frequency (MHz)	Band Edge (dBm)	Limit (dBm)	Result
Lower	1312	1710.00	-26.95	-13	Pass
Higher	1513	1755.00	-26.64	-13	Pass

Lower Band



Higher Band



## 5 Conducted Emission Test

### 5.1. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10\log(P)$  dB.

### 5.2. Test Instruments

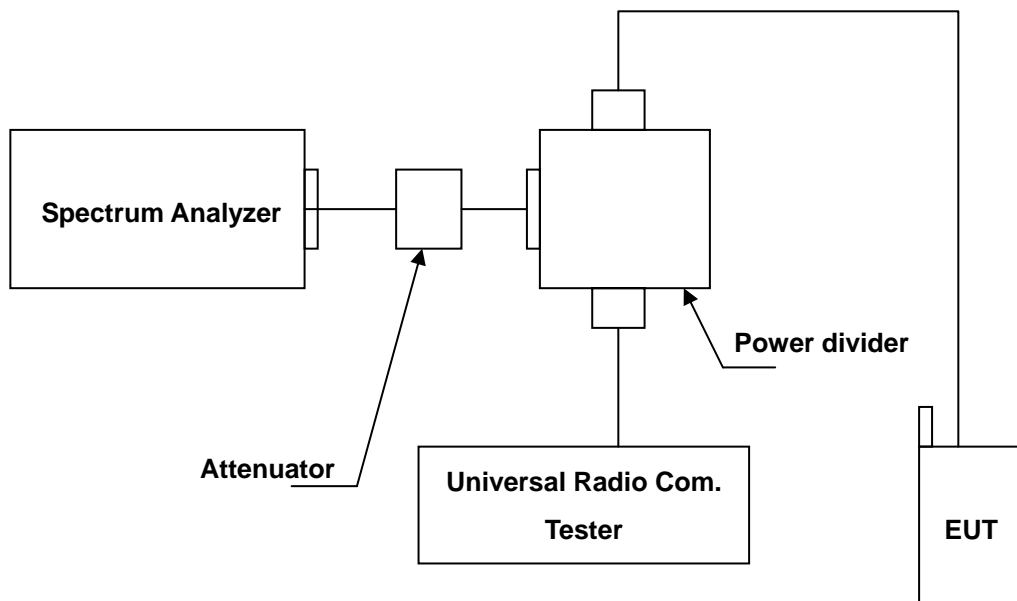
Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/16/2011	( <sup>2</sup> )
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	08/10/2010	( <sup>2</sup> )
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	----
Power divider	Agilent	87302C	3239A00760	N.C.R.	----
Test Site	ATL	TE02	TE02	N.C.R.	----

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

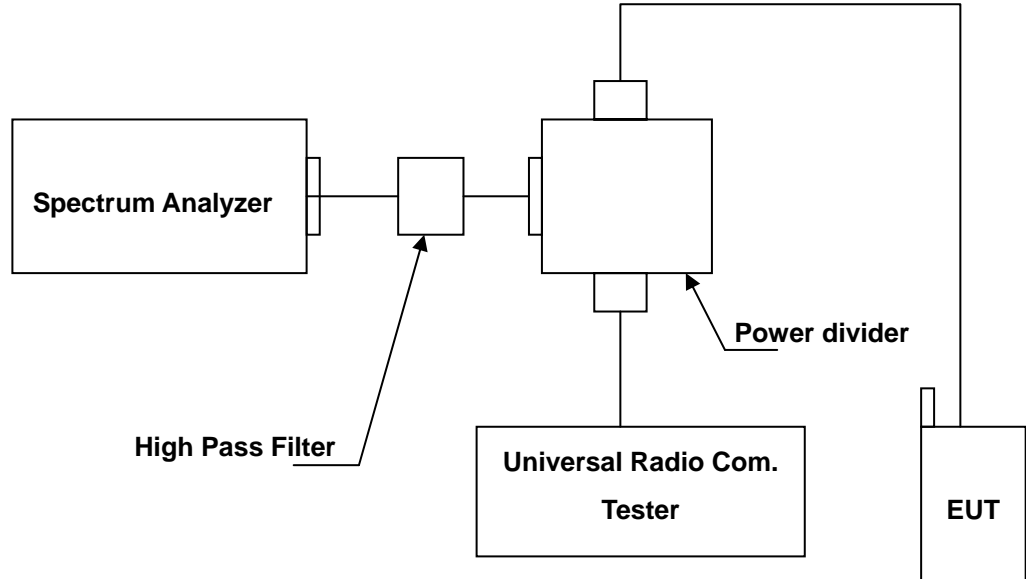
NOTE: N.C.R. = No Calibration Request.

### 5.3. Setup

Below 2.8GHz



**Above 2.8GHz**



**5.4. 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 WCDMA Band IV RB=1MHz, VB=3MHz.

**5.5. Uncertainty**

The measurement uncertainty is evaluated as  $\pm 2.24$  dB.

**5.6. Test Result**

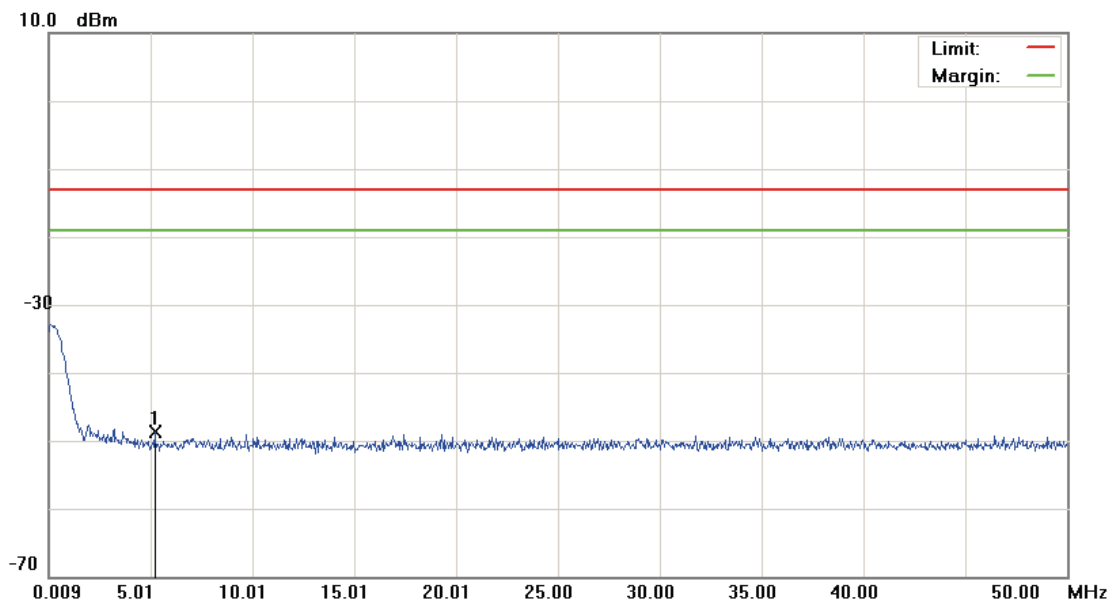
Product	Smartphone		
Test Item	Conducted Emission		
Mode	Mode 1: WCDMA Band IV Link		
Date of Test	06/02/2011	Test Site	TE02
Note: The test results see next page.			

File: PG76240(CH1312)

Data :#1

Date: 2011/6/2

Time: 下午 01:31:15

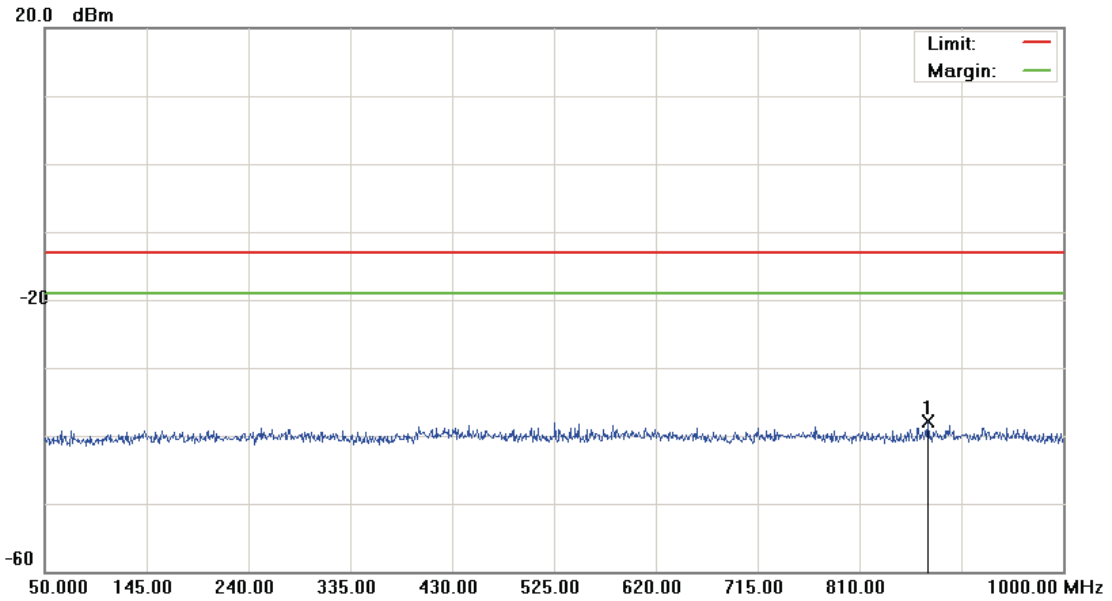


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1312(1712.4MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	5.2331	-61.99	13.26	-48.73	-13.00	-35.73	peak		

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

File: PG76240(CH1312)      Data :#2      Date: 2011/6/2      Time: 下午 01:31:39



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1312(1712.4MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	873.6500	-51.07	13.27	-37.80	-13.00	-24.80	peak		

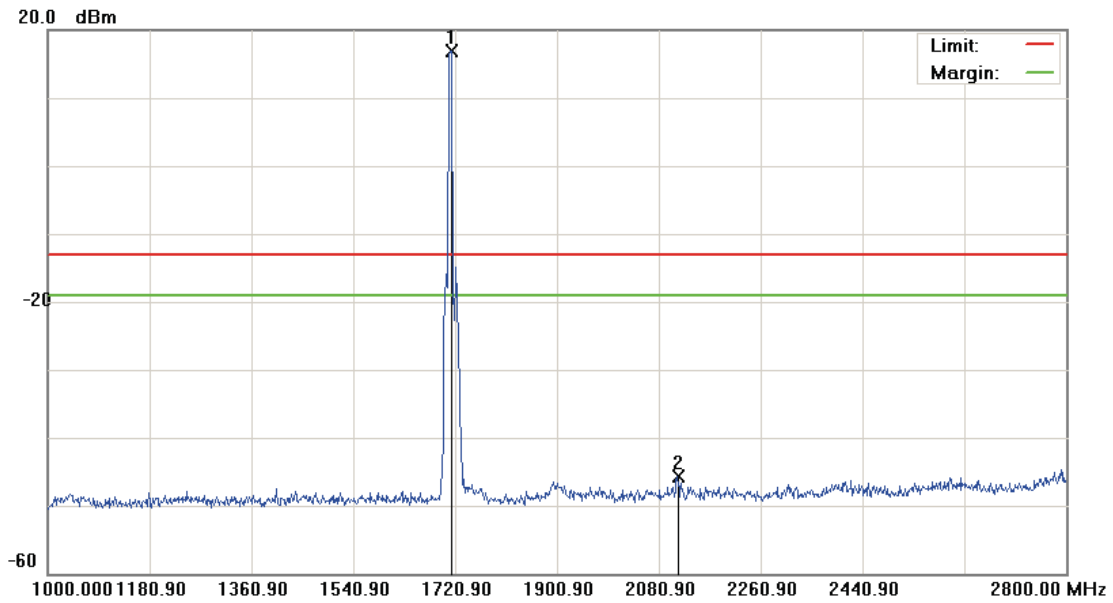
\*:Maximum data    x:Over limit    !:over margin

File: PG76240(CH1312)

Data :#3

Date: 2011/6/2

Time: 下午 01:37:02



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1312(1712.4MHz)		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	1713.700	12.60	4.36	16.96	-13.00	29.96	peak			TX
2		2113.300	-50.48	4.72	-45.76	-13.00	-32.76	peak			

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

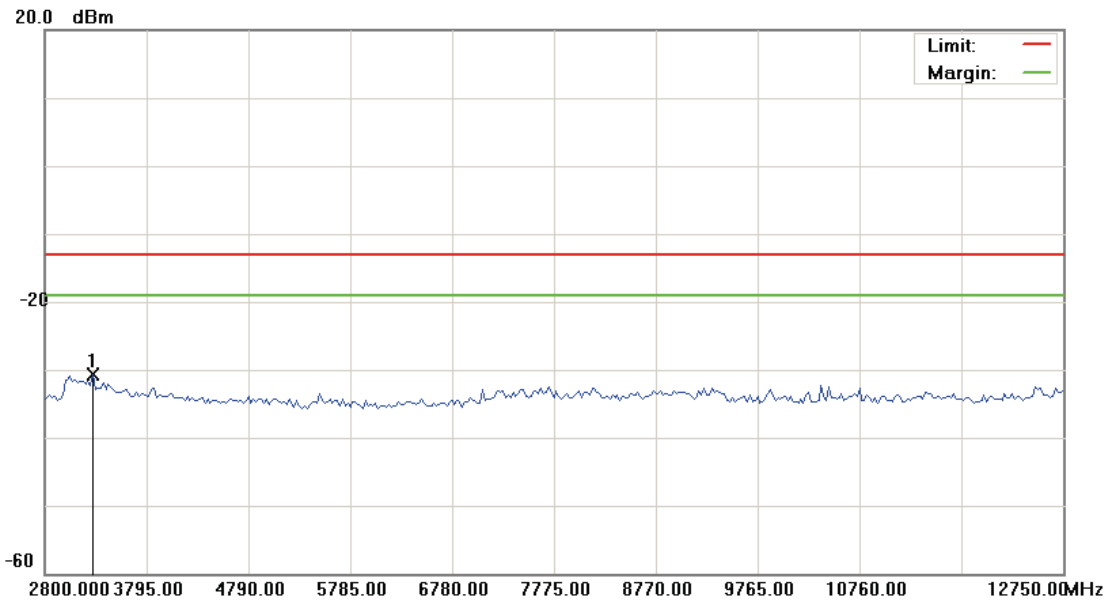


File: PG76240(CH1312)

Data :#4

Date: 2011/6/2

Time: 下午 02:11:41

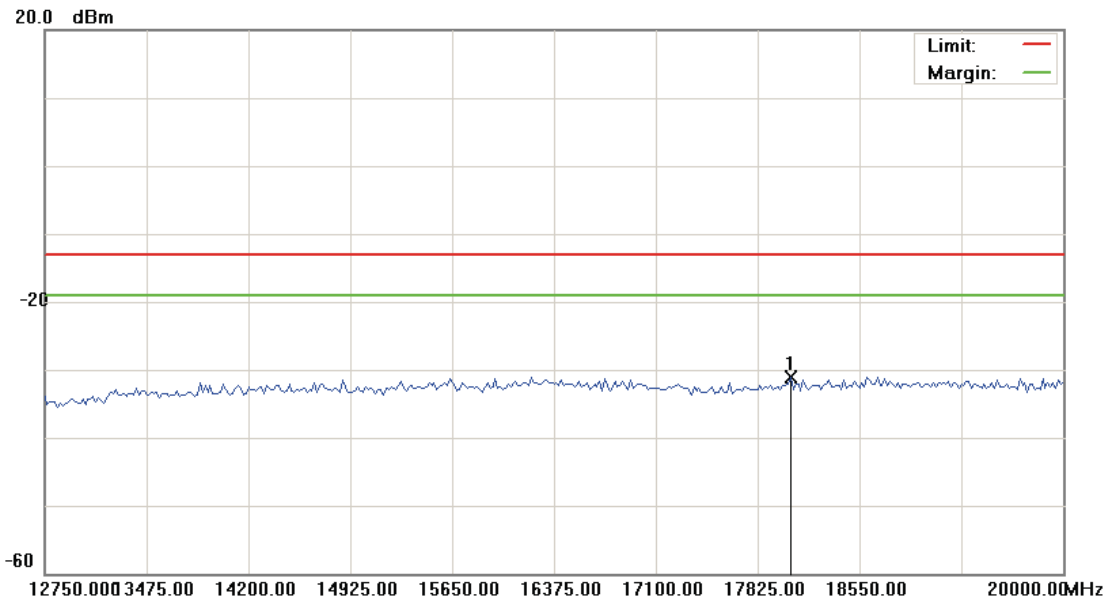


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1312(1712.4MHz)		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	3272.625	-35.87	5.09	-30.78	-13.00	-17.78	peak		

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

File: PG76240(CH1312)      Data :#5      Date: 2011/6/2      Time: 下午 02:12:06

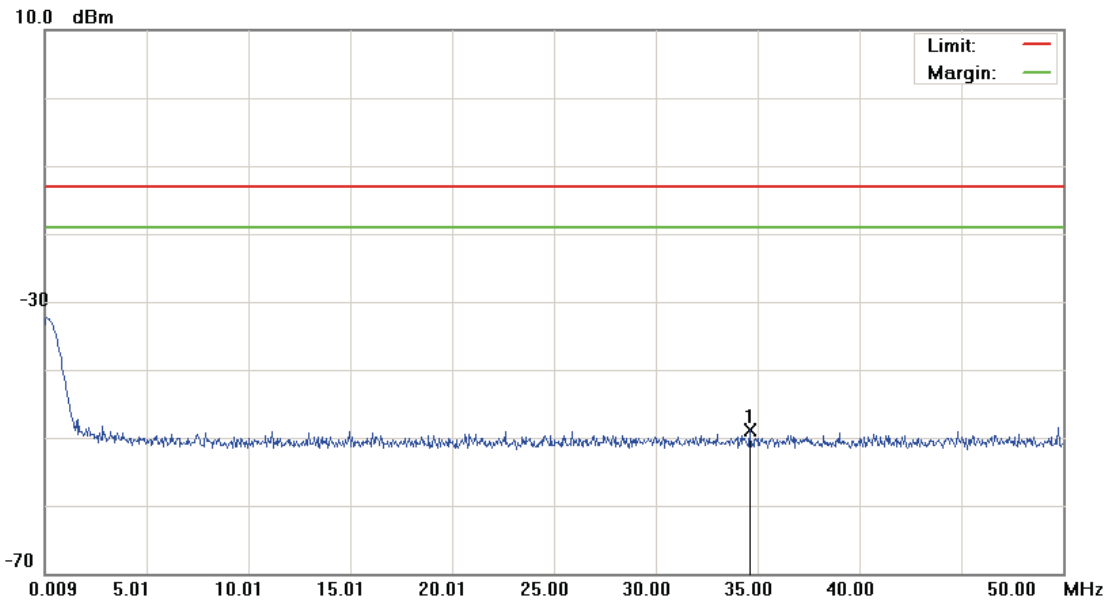


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz    VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1312(1712.4MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	18060.625	-37.92	6.89	-31.03	-13.00	-18.03	peak		

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

File: PG76240(CH1450)      Data: #1      Date: 2011/6/2      Time: 下午 01:32:29

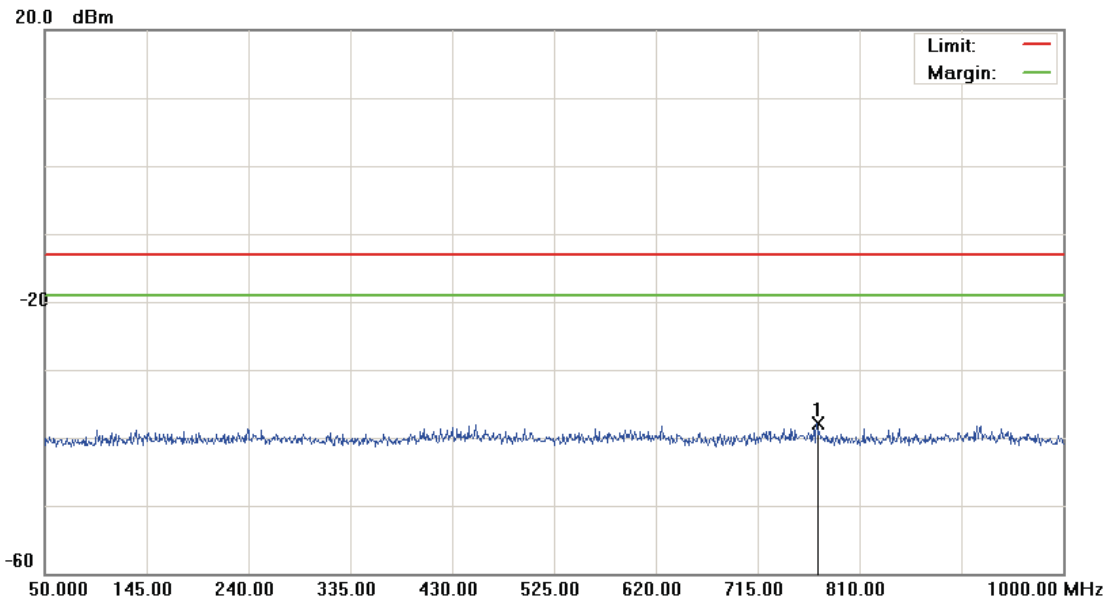


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz    VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1450(1740MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	34.6028	-62.26	13.32	-48.94	-13.00	-35.94	peak		

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

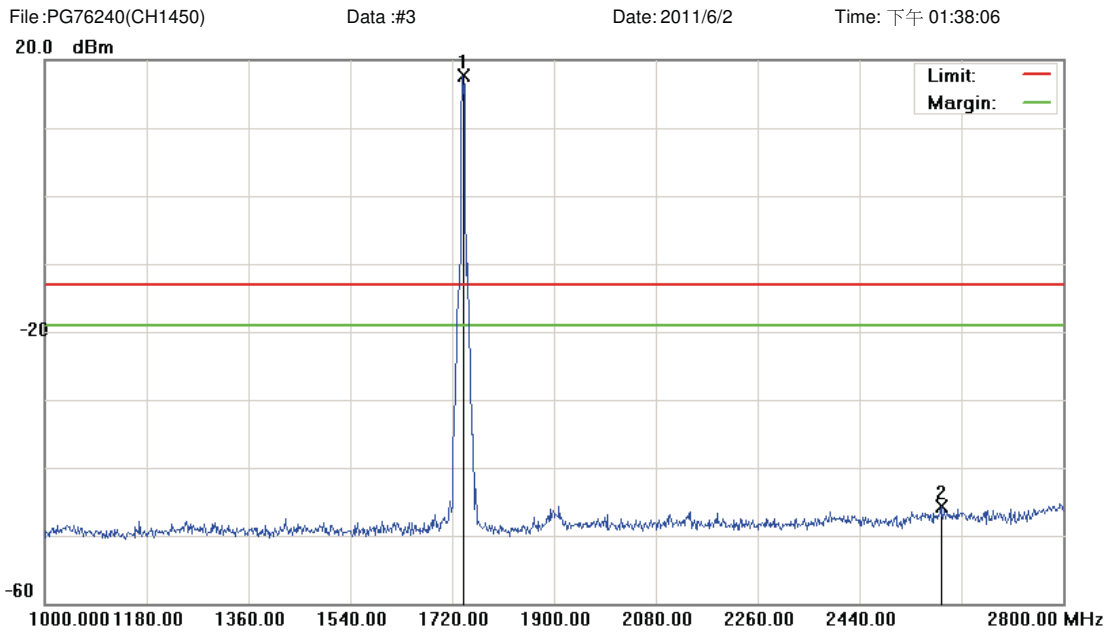
File: PG76240(CH1450)      Data :#2      Date: 2011/6/2      Time: 下午 01:32:54



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1450(1740MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	770.5750	-51.04	13.15	-37.89	-13.00	-24.89	peak		

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

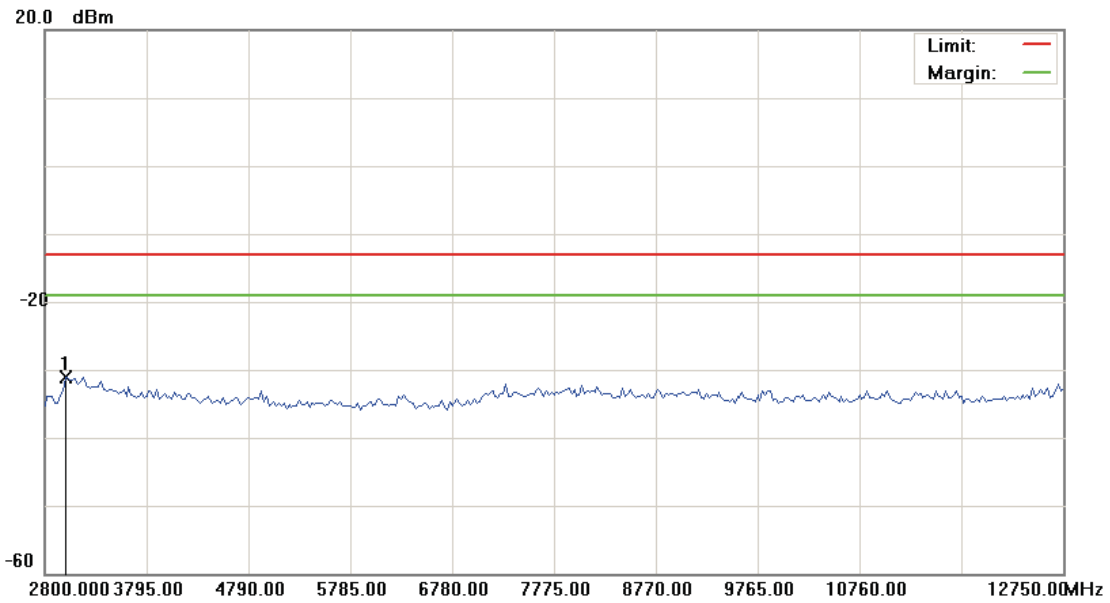


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1450(1740MHz)		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	1738.900	13.00	4.66	17.66	-13.00	30.66	peak			TX
2		2584.000	-51.00	5.37	-45.63	-13.00	-32.63	peak			

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

File: PG76240(CH1450)      Data :#4      Date: 2011/6/2      Time: 下午 02:12:48

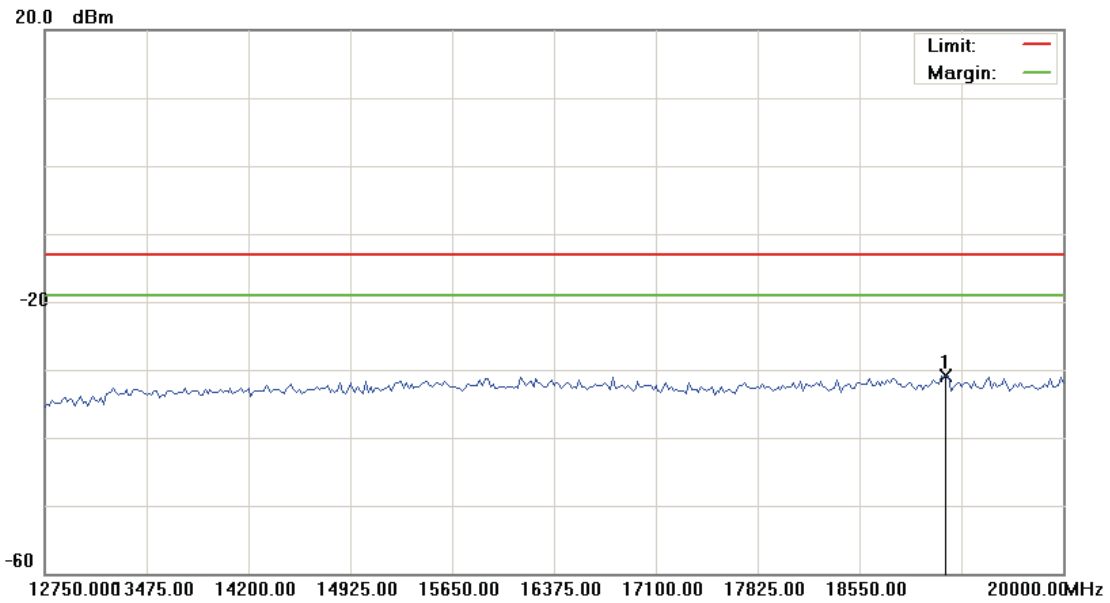


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1450(1740MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	2999.000	-36.56	5.48	-31.08	-13.00	-18.08	peak		

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

File: PG76240(CH1450)      Data :#5      Date: 2011/6/2      Time: 下午 02:13:14

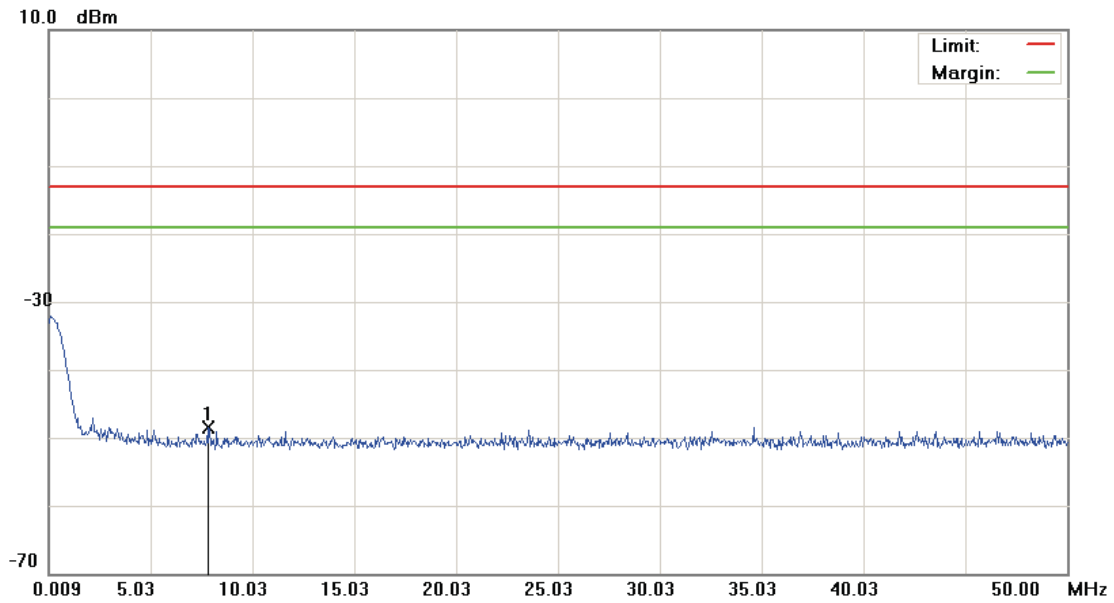


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1450(1740MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	19166.250	-38.09	7.20	-30.89	-13.00	-17.89	peak		

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

File: PG76240(CH1513)      Data: #1      Date: 2011/6/2      Time: 下午 01:34:00



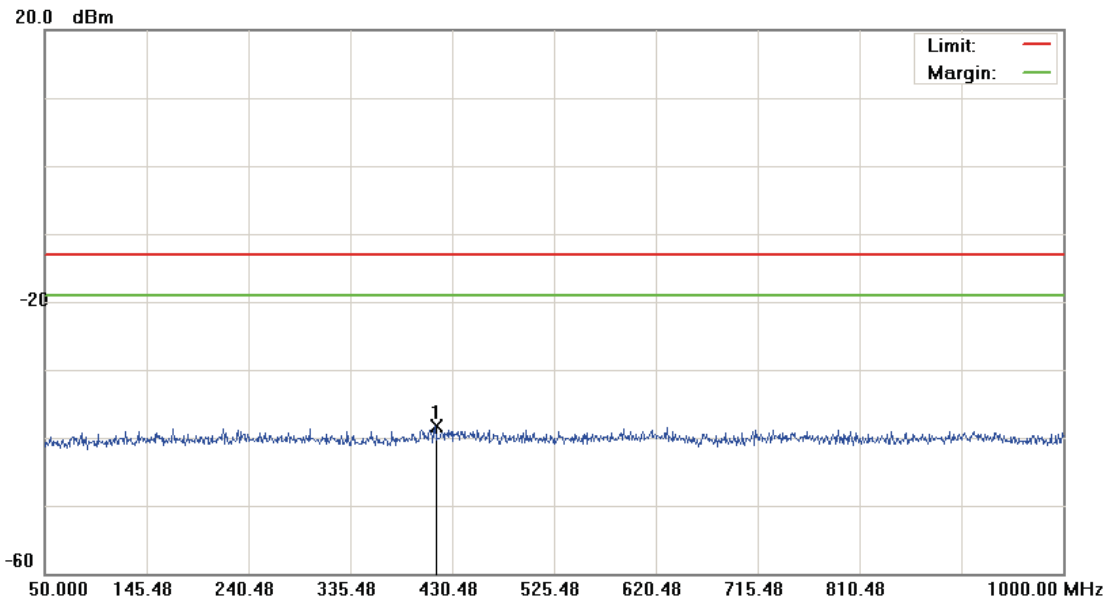
Site: : RF Conducted	Polarization: <b>Conducted po</b>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1513(1752.6MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	7.8076	-61.69	13.28	-48.41	-13.00	-35.41	peak		

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



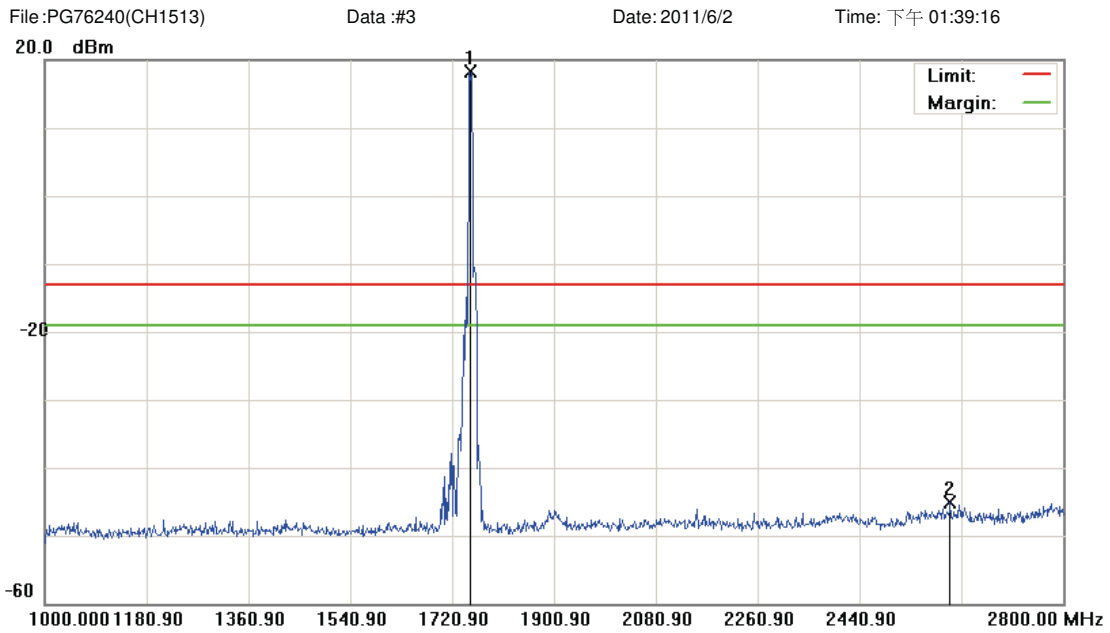
File: PG76240(CH1513)      Data :#2      Date: 2011/6/2      Time: 下午 01:34:24



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz    VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1513(1752.6MHz)		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	
1	*	414.3250	-51.47	13.22	-38.25	-13.00	-25.25	peak		

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



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz    VBW: 100 KHz0
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1513(1752.6MHz)		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	1751.500	13.75	4.63	18.38	-13.00	31.38	peak			TX
2		2600.200	-50.51	5.45	-45.06	-13.00	-32.06	peak			

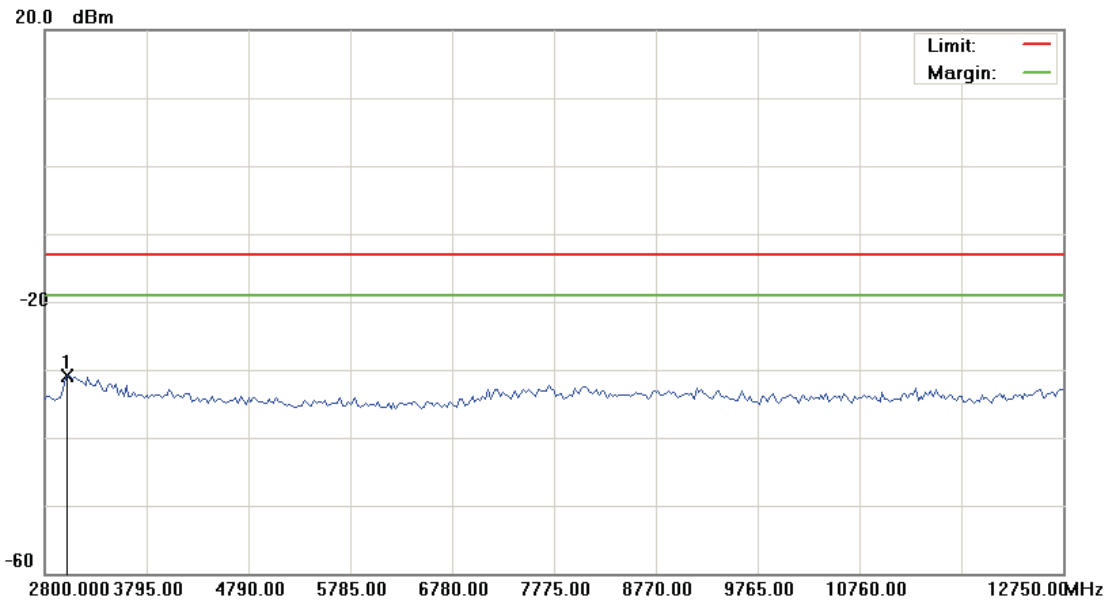
\*:Maximum data    x:Over limit    !:over margin

File: PG76240(CH1513)

Data :#4

Date: 2011/6/2

Time: 下午 02:13:52

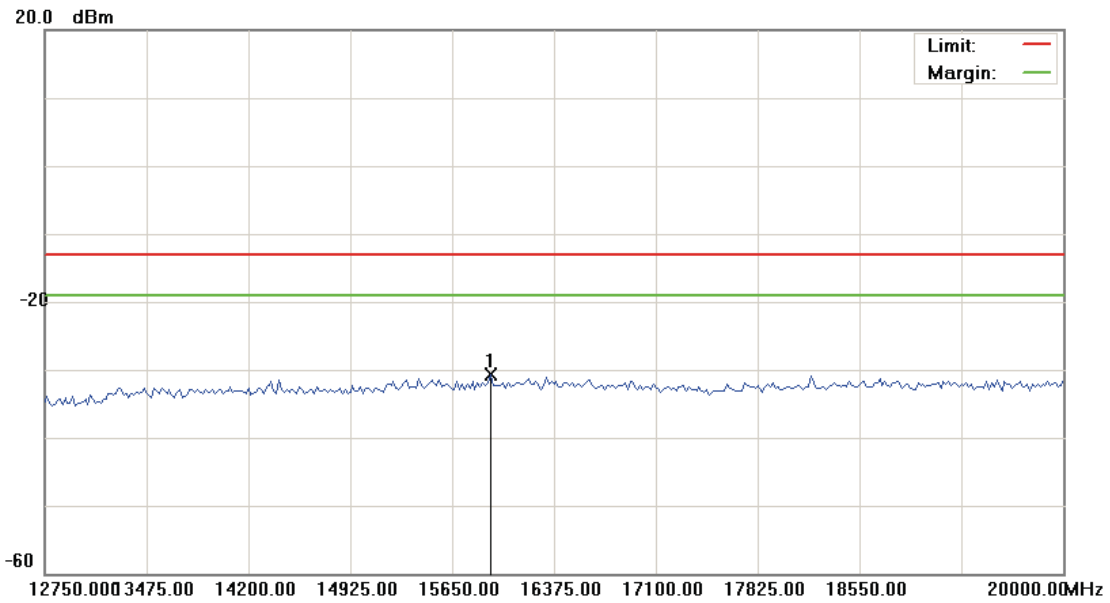


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1513(1752.6MHz)		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	3023.875	-36.40	5.48	-30.92	-13.00	-17.92	peak		

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

File: PG76240(CH1513)      Data :#5      Date: 2011/6/2      Time: 下午 02:14:17



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 27 conducted	Power: AC 120V/60Hz	Humidity: 55 %
EUT: Smartphone	Distance:	RBW: 1000 KHz VBW: 1000 KHz
M/N: PG76240		
Mode: WCDMA BAND IV		
Note: CH1513(1752.6MHz)		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	15921.875	-36.98	6.28	-30.70	-13.00	-17.70	peak		

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

## 6 Field Strength of Spurious Radiation Test

### 6.1. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10\log(P)$  dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

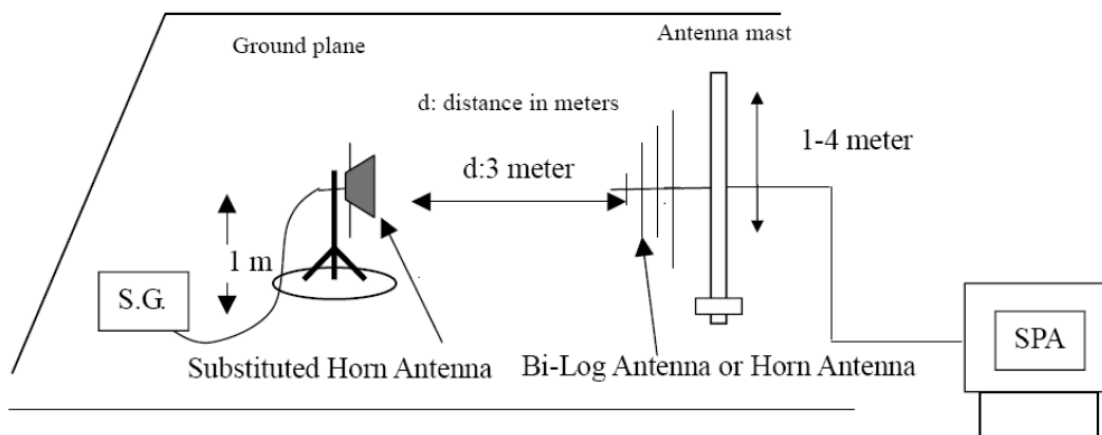
### 6.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/18/2011	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/18/2011	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/23/2011	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/23/2011	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	08/02/2010	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/29/2010	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/29/2010	(1)
Test Site	ATL	TE01	888001	07/30/2010	(1)

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

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

### 6.3. Setup



## 6.4. 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

## 6.5. Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is  $\pm 3.072$  dB.

## 6.6. Test Result

Standard:	FCC Part 27	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model:	PG76240	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	06/08/2011
Frequency:	1712.4 MHz	Test By:	Gary Wu

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
1	36.5000	-78.59	8.59	-70.00	-13.00	-57.00	peak	H
2	53.0000	-79.34	6.91	-72.43	-13.00	-59.43	peak	H
3	200.5000	-82.24	2.83	-79.41	-13.00	-66.41	peak	H
4	538.5000	-80.52	8.20	-72.32	-13.00	-59.32	peak	H
5	617.5000	-78.59	7.73	-70.86	-13.00	-57.86	peak	H
6	928.5000	-81.33	14.79	-66.54	-13.00	-53.54	peak	H
7	3880.000	-68.74	16.18	-52.56	-13.00	-39.56	peak	H
8	7900.000	-71.74	29.67	-42.07	-13.00	-29.07	peak	H
9	11440.000	-73.32	36.79	-36.53	-13.00	-23.53	peak	H
1	131.0000	-82.03	13.83	-68.20	-13.00	-55.20	peak	V
2	161.5000	-82.05	11.27	-70.78	-13.00	-57.78	peak	V
3	203.0000	-80.99	9.79	-71.20	-13.00	-58.20	peak	V
4	619.5000	-77.93	8.85	-69.08	-13.00	-56.08	peak	V
5	773.0000	-80.59	11.17	-69.42	-13.00	-56.42	peak	V
6	990.0000	-81.29	12.87	-68.42	-13.00	-55.42	peak	V
7	3448.000	-68.01	18.99	-49.02	-13.00	-36.02	peak	V
8	8020.000	-71.72	26.53	-45.19	-13.00	-32.19	peak	V
9	12424.000	-73.89	39.10	-34.79	-13.00	-21.79	peak	V

Standard:	FCC Part 27	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model:	PG76240	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	06/08/2011
Frequency:	1740.0 MHz	Test By:	Gary Wu

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
1	130.5000	-82.16	14.10	-68.06	-13.00	-55.06	peak	H
2	160.0000	-83.31	12.68	-70.63	-13.00	-57.63	peak	H
3	203.0000	-81.93	9.79	-72.14	-13.00	-59.14	peak	H
4	619.0000	-79.44	8.83	-70.61	-13.00	-57.61	peak	H
5	690.0000	-79.44	9.87	-69.57	-13.00	-56.57	peak	H
6	854.0000	-80.76	11.54	-69.22	-13.00	-56.22	peak	H
7	6832.000	-71.21	25.30	-45.91	-13.00	-32.91	peak	H
8	10552.000	-72.89	33.76	-39.13	-13.00	-26.13	peak	H
9	12412.000	-73.26	39.10	-34.16	-13.00	-21.16	peak	H
1	36.5000	-78.51	8.59	-69.92	-13.00	-56.92	peak	V
2	54.0000	-78.64	6.59	-72.05	-13.00	-59.05	peak	V
3	199.5000	-82.18	2.50	-79.68	-13.00	-66.68	peak	V
4	536.5000	-79.74	8.17	-71.57	-13.00	-58.57	peak	V
5	625.5000	-78.84	7.45	-71.39	-13.00	-58.39	peak	V
6	913.0000	-81.19	14.50	-66.69	-13.00	-53.69	peak	V
7	7756.000	-70.74	29.46	-41.28	-13.00	-28.28	peak	V
8	10840.000	-73.65	35.73	-37.92	-13.00	-24.92	peak	V
9	11680.000	-73.29	36.90	-36.39	-13.00	-23.39	peak	V



Standard:	FCC Part 27	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model:	PG76240	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	06/08/2011
Frequency:	1752.6 MHz	Test By:	Gary Wu

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
1	131.0000	-81.99	13.83	-68.16	-13.00	-55.16	peak	H
2	157.5000	-81.83	11.49	-70.34	-13.00	-57.34	peak	H
3	206.5000	-82.53	9.37	-73.16	-13.00	-60.16	peak	H
4	624.5000	-78.80	8.83	-69.97	-13.00	-56.97	peak	H
5	792.5000	-80.63	11.64	-68.99	-13.00	-55.99	peak	H
6	938.5000	-82.17	12.67	-69.50	-13.00	-56.50	peak	H
7	4480.000	-69.86	22.01	-47.85	-13.00	-34.85	peak	H
8	7708.000	-71.05	26.45	-44.60	-13.00	-31.60	peak	H
9	11620.000	-74.11	38.36	-35.75	-13.00	-22.75	peak	H
1	36.5000	-79.95	8.59	-71.36	-13.00	-58.36	peak	V
2	54.0000	-78.73	6.59	-72.14	-13.00	-59.14	peak	V
3	201.0000	-82.85	2.73	-80.12	-13.00	-67.12	peak	V
4	542.5000	-80.13	8.21	-71.92	-13.00	-58.92	peak	V
5	847.5000	-81.61	12.44	-69.17	-13.00	-56.17	peak	V
6	933.0000	-81.88	14.82	-67.06	-13.00	-54.06	peak	V
7	4120.000	-69.00	16.58	-52.42	-13.00	-39.42	peak	V
8	7000.000	-70.73	27.68	-43.05	-13.00	-30.05	peak	V
9	10984.000	-74.36	36.37	-37.99	-13.00	-24.99	peak	V

## 7 Frequency Stability (Temperature Variation) Test

### 7.1. Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

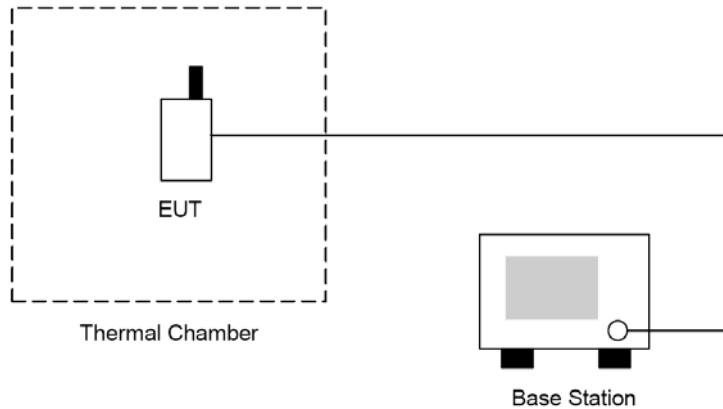
### 7.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	08/10/2010	(2)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/26/2009	(2)
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.

### 7.3. Setup



### 7.4. Test Procedure

The measurement is made according to FCC rules part 27:

1. The EUT and test equipment were set up as shown on the following section.
2. With all power removed, the temperature was decreased to  $-30^{\circ}\text{C}$  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  $10^{\circ}\text{C}$  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.

### 7.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Temperature Variation) measurement is  $\pm 10\text{Hz}$ .

### 7.6. Test Result

Product	Smartphone			
Test Item	Frequency Stability (Temperature Variation)			
Test Mode	Mode 1: WCDMA Band IV Link			
Date of Test	06/02/2011	Test Site		TE02
Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	31.00	0.018	$\pm 2.5$	Pass
-20	21.00	0.012	$\pm 2.5$	Pass
-10	18.00	0.010	$\pm 2.5$	Pass
0	23.00	0.013	$\pm 2.5$	Pass
10	22.00	0.013	$\pm 2.5$	Pass
20	21.00	0.012	$\pm 2.5$	Pass
30	23.00	0.013	$\pm 2.5$	Pass
40	30.00	0.017	$\pm 2.5$	Pass
50	26.00	0.015	$\pm 2.5$	Pass

## 8 Frequency Stability (Voltage Variation) Test

### 8.1. Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

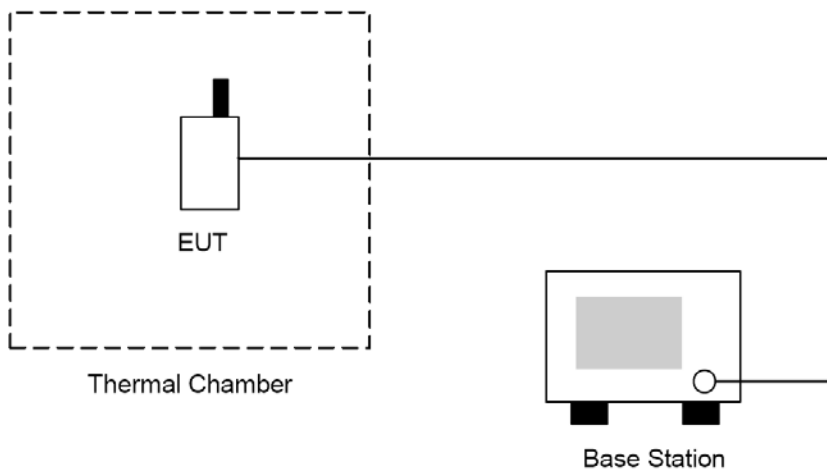
### 8.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	08/10/2010	(2)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/26/2009	(2)
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.

### 8.3. Setup



### 8.4. Test Procedure

1. The EUT was placed in a temperature chamber at  $25 \pm 5^\circ\text{C}$  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.

### 8.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Voltage Variation) measurement is  $\pm 10\text{Hz}$ .

**8.6. Test Result**

Product	Smartphone				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 1: WCDMA Band IV Link				
Date of Test	06/02/2011		Test Site	TE02	
Level	Voltage (V)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Battery full point	4.07	25.00	0.014	±2.5	Pass
Normal	3.70	24.00	0.014	±2.5	Pass
Battery cut-off point	3.33	28.00	0.016	±2.5	Pass

## 9 AC Power Conducted Emissions Test

### 9.1. Limit

Frequency range (MHz)	Limits (dBuV)	
	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

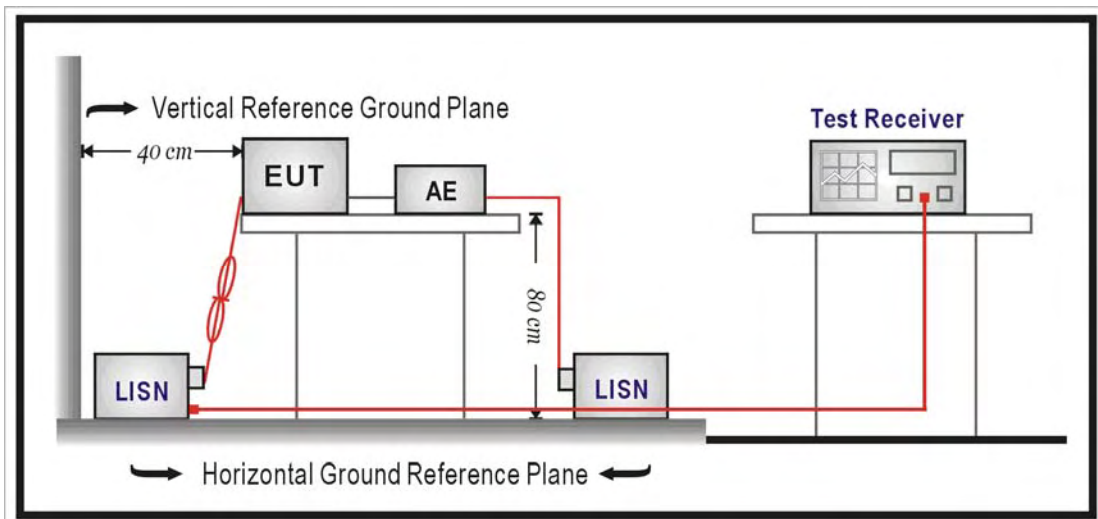
### 9.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	07/01/2010	(1)
LISN	R&S	ENV216	101040	03/04/2011	(1)
LISN	R&S	ENV216	101041	03/04/2011	(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.

### 9.3. Setup



#### **9.4. Test Procedure**

The measurement is made according to FCC rules 15.207:

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.

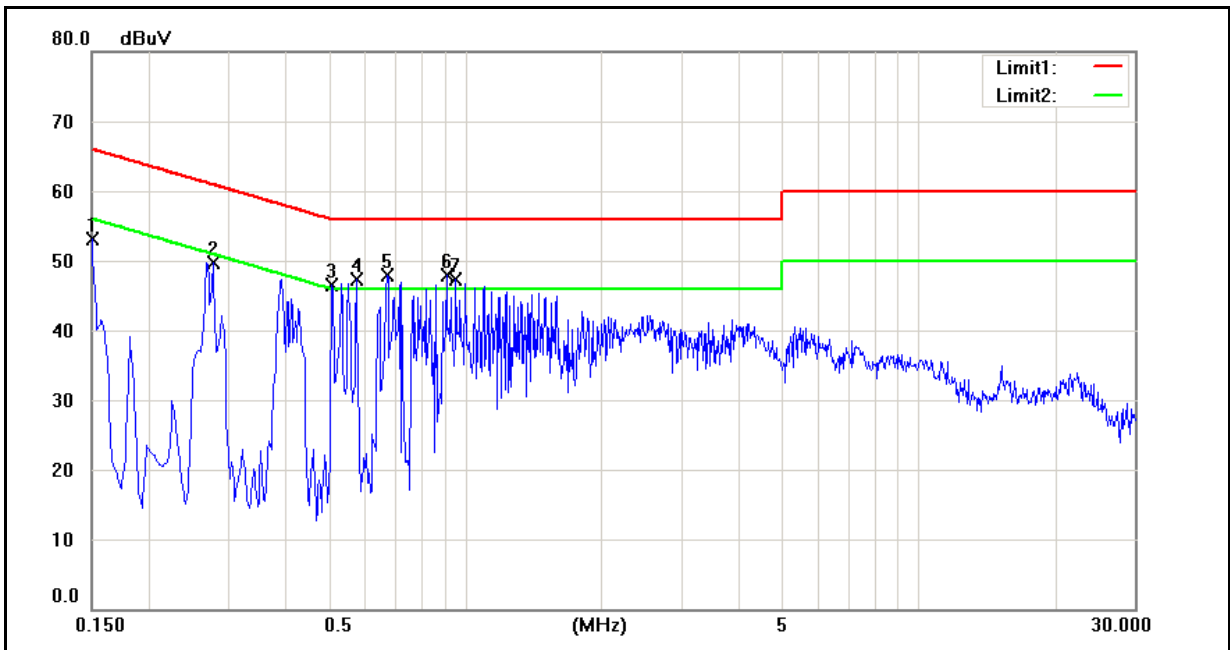
The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in section 10.6.

#### **9.5. Uncertainty**

The measurement uncertainty is defined as for AC power conducted emission measurement is  $\pm 2.24$  dB.

**9.6. Test Result**

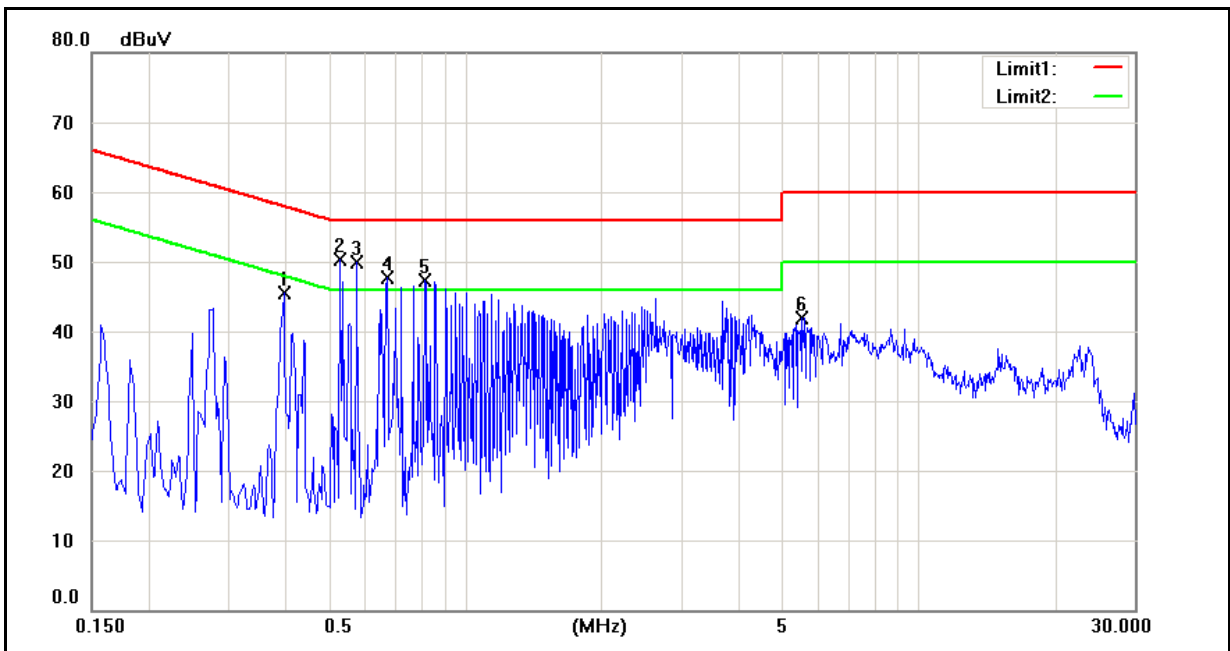
Standard:	FCC Part 27	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model:	PG76240	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	06/07/2011
		Test By:	Gary Wu
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1500	38.76	15.51	10.07	48.83	25.58	66.00	56.00	-17.17	-30.42	Pass
2	0.2780	35.37	19.12	10.02	45.39	29.14	60.88	50.88	-15.49	-21.74	Pass
3	0.5100	31.66	11.21	9.93	41.59	21.14	56.00	46.00	-14.41	-24.86	Pass
4	0.5780	32.73	10.96	9.90	42.63	20.86	56.00	46.00	-13.37	-25.14	Pass
5	0.6740	32.50	13.45	9.86	42.36	23.31	56.00	46.00	-13.64	-22.69	Pass
6	0.9100	31.96	13.38	9.77	41.73	23.15	56.00	46.00	-14.27	-22.85	Pass
7	0.9580	31.14	12.45	9.75	40.89	22.20	56.00	46.00	-15.11	-23.80	Pass



Standard:	FCC Part 27	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model:	PG76240	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	06/07/2011
		Test By:	Gary Wu
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.3980	32.39	11.52	10.05	42.44	21.57	57.90	47.90	-15.46	-26.33	Pass
2	0.5300	33.64	9.26	10.00	43.64	19.26	56.00	46.00	-12.36	-26.74	Pass
3	0.5780	33.90	7.50	9.98	43.88	17.48	56.00	46.00	-12.12	-28.52	Pass
4	0.6740	32.38	9.55	9.94	42.32	19.49	56.00	46.00	-13.68	-26.51	Pass
5	0.8140	32.11	8.10	9.88	41.99	17.98	56.00	46.00	-14.01	-28.02	Pass
6	5.5380	23.89	9.01	9.86	33.75	18.87	60.00	50.00	-26.25	-31.13	Pass