

## 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 : PC49100  
Test Specification : FCC 47 CFR PART 22H: Oct, 2009  
FCC 47 CFR PART 24E: Oct, 2009  
ANSI/TIA-603-2007  
Issue Date : Apr. 29, 2010

### 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	Apr. 29, 2010	Initial Issue	

## Verification

Issued Date: 2010/04/29

Product Type : Smartphone  
Applicant : HTC Corporation  
Address : No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330,  
Taiwan  
Trade Name : HTC  
Model Number : PC49100  
FCC ID : NM8PC49100  
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  
ANSI/TIA-603-2007

Test Result : Complied  
Performed Lab. : A Test Lab Techno Corp.

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

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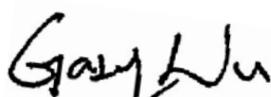
Taiwan Accreditation Foundation accreditation number:  
1330



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

The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the Electromagnetic Compatibility Directive 2004/108/EC and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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		PC49100			
FCC ID		NM8PC49100			
Mode	GSM/GPRS/EGPRS	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		850	824.2 ~ 848.8	869.2 ~ 893.8	GMSK/8PSK
		1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8	GMSK/8PSK
Channel Control		Auto			
Type of Antenna		PIFA Antenan			
Antenna Gain (dBi)		GSM/GPRS/EGPRS 850: -1.5 dBi GSM/GPRS/EGPRS 1900: 2.0 dBi			
Max. RF Output power		GSM/GPRS 850: 33.52 dBm / 2.249 W, EGPRS 850: 26.60 dBm / 0.457 W GSM/GPRS 1900: 30.12 dBm / 1.028 W, EGPRS 1900: 25.70 dBm / 0.372 W			
Max. ERP/EIRP		GSM/GPRS 850: 29.60 dBm / 0.913 W, EGPRS 850: 23.04 dBm / 0.201 W GSM/GPRS 1900: 31.51 dBm / 1.416 W, EGPRS 1900: 27.05 dBm / 0.507 W			
Emission Designator		GSM/GPRS 850: 244KGXW, EGPRS 850: 244KG7W GSM/GPRS 1900: 247KGXW, EGPRS 1900: 246KG7W			

### 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: GSM 850 Link
Mode 2: GSM 1900 Link
Mode 3: EGPRS 850 Link
Mode 4: EGPRS 1900 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

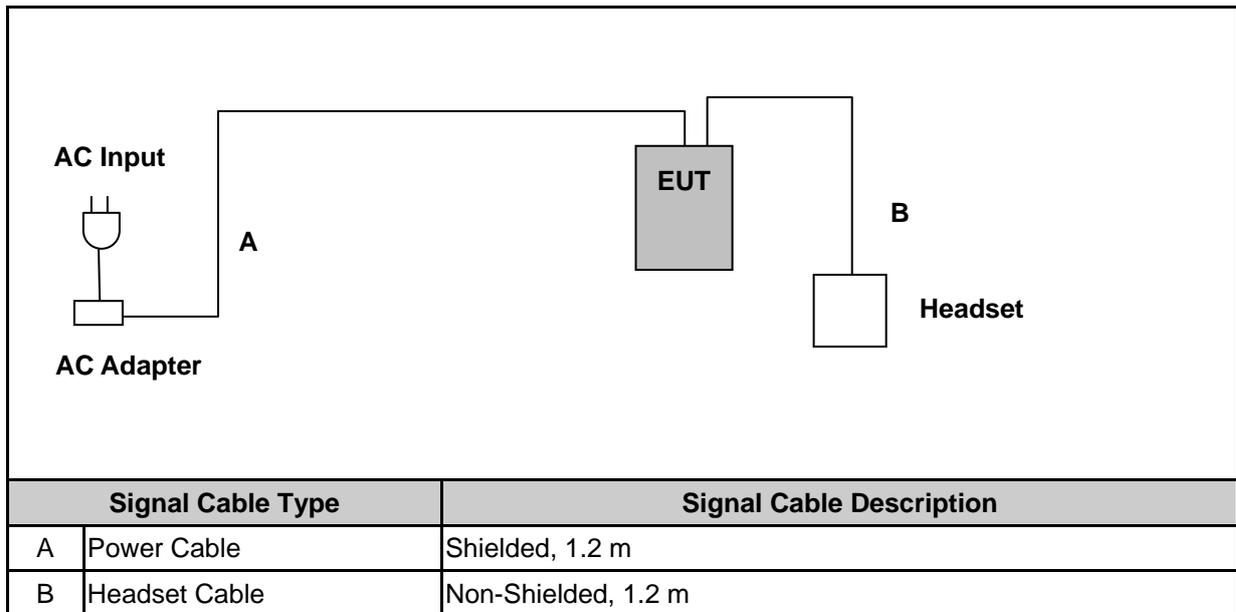
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

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

### 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	950-1000

**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)	Pass
Equivalent Isotropic Radiated Power	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	< 2 Watts	Pass
Occupied Bandwidth	§2.1049 §22.917(a) §24.238(a)	N/A	N/A	Pass
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])	Pass
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])	Pass
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])	Pass
Frequency Stability for Temperature & Voltage	§2.1055 §22.355 §24.235	RSS-132(4.3) RSS-133(6.3)	< 2.5 ppm	Pass

## 2 RF Output Power Test

### 2.1. Limit

N/A

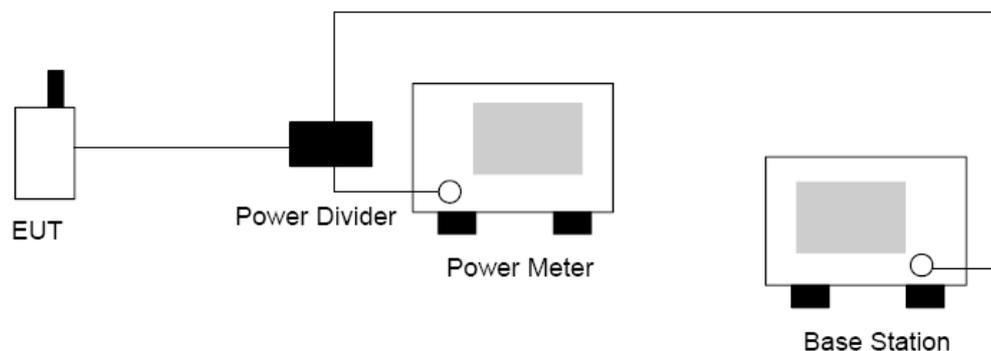
### 2.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
WIDE BAND SENSOR	ROHDE & SCHWARZ	NRP-Z81	100017	05/17/2009	(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

Product	Smartphone					
Test Item	RF Output Power					
Test Mode	Mode 1: GSM 850 Link					
Date of Test	04/09/2010			Test Site	TE02	
Bands	Data Rate	Frequency (MHz)	Average Power		Peak Power	
			(dBm)	(W)	(dBm)	(W)
GSM 850	-----	824.2	24.31	0.270	<b>33.52</b>	<b>2.249</b>
		836.4	24.21	0.264	33.41	2.193
		848.8	24.01	0.252	33.22	2.099
GRRS 850	4Down1Up	824.2	24.31	0.270	33.50	2.239
		836.4	24.21	0.264	33.40	2.188
		848.8	24.01	0.252	33.20	2.089
	3Down2Up	824.2	25.67	0.369	31.90	1.549
		836.4	25.47	0.352	31.70	1.479
		848.8	25.27	0.337	31.50	1.413
	2Down3Up	824.2	28.73	0.746	33.20	2.089
		836.4	28.63	0.729	33.10	2.042
		848.8	28.43	0.697	32.90	1.950
	1Down4Up	824.2	27.48	0.560	30.70	1.175
		836.4	27.28	0.535	30.50	1.122
		848.8	27.08	0.511	30.30	1.072
EGPRS 850	4Down1Up	824.2	17.41	0.055	26.60	0.457
		836.4	17.21	0.053	26.40	0.437
		848.8	17.11	0.051	26.30	0.427
	3Down2Up	824.2	20.27	0.106	26.50	0.447
		836.4	20.17	0.104	26.40	0.437
		848.8	19.97	0.099	26.20	0.417
	2Down3Up	824.2	22.03	0.160	26.50	0.447
		836.4	21.83	0.152	26.30	0.427
		848.8	21.63	0.146	26.10	0.407
	1Down4Up	824.2	23.18	0.208	26.40	0.437
		836.4	23.08	0.203	26.30	0.427
		848.8	22.88	0.194	26.10	0.407

Product	Smartphone					
Test Item	RF Output Power					
Test Mode	Mode 2: GSM 1900 Link					
Date of Test	04/09/2010			Test Site	TE02	
Bands	Data Rate	Frequency (MHz)	Average Power		Peak Power	
			(dBm)	(W)	(dBm)	(W)
GSM 1900	-----	1850.20	20.71	0.118	<b>30.12</b>	<b>1.028</b>
		1880.00	20.51	0.112	29.80	0.955
		1909.80	20.31	0.107	29.70	0.933
GRRS 1900	4Down1Up	1850.20	20.81	0.121	30.00	1.000
		1880.00	20.51	0.112	29.70	0.933
		1909.80	20.41	0.110	29.60	0.912
	3Down2Up	1850.20	23.27	0.212	29.50	0.891
		1880.00	22.97	0.198	29.20	0.832
		1909.80	22.77	0.189	29.00	0.794
	2Down3Up	1850.20	25.53	0.357	30.00	1.000
		1880.00	25.23	0.333	29.70	0.933
		1909.80	25.03	0.318	29.50	0.891
	1Down4Up	1850.20	25.28	0.337	28.50	0.708
		1880.00	24.98	0.315	28.20	0.661
		1909.80	24.78	0.301	28.00	0.631
EGPRS 1900	4Down1Up	1850.20	16.51	0.045	25.70	0.372
		1880.00	16.21	0.042	25.40	0.347
		1909.80	16.01	0.040	25.20	0.331
	3Down2Up	1850.20	18.87	0.077	25.10	0.324
		1880.00	18.67	0.074	24.90	0.309
		1909.80	18.47	0.070	24.70	0.295
	2Down3Up	1850.20	20.63	0.116	25.10	0.324
		1880.00	20.43	0.110	24.90	0.309
		1909.80	20.23	0.105	24.70	0.295
	1Down4Up	1850.20	21.88	0.154	25.10	0.324
		1880.00	21.68	0.147	24.90	0.309
		1909.80	21.48	0.141	24.70	0.295

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

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

#### 3.1. Limit

For FCC Part 22.913(a)(2): The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(b): The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

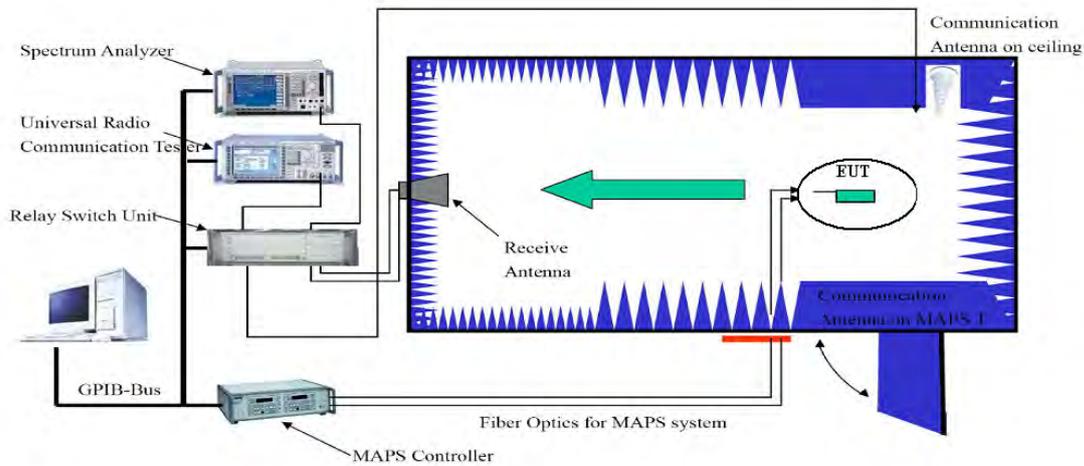
#### 3.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/22/2008	(2)
Loop Dipole	ETS-Lindgren	3127-1880	00064239	02/05/2009	(2)
Loop Dipole	ETS-Lindgren	3127-836	00064352	02/19/2009	(2)
Sleeve Dipole	ETS-Lindgren	3126-1845	00083335	03/18/2009	(2)
Sleeve Dipole	ETS-Lindgren	3126-880	00052705	11/05/2009	(2)
Circularly Polarized Communication Antennas	EMCO	3102	00051714	NCR	-----
Antenna Positioner Controller	EMCO	2090	00052447	NCR	-----
MAPS Positioner	EMCO	2010/2015	NA	NCR	-----
Pattern Measurement Software	ETS-Lindgren	EMQuest™ EMQ-100	NA	NCR	-----
Desktop Computer with Windows XP	DELL	Dell Computers	NA	NCR	-----
Anechoic Chamber	ETS-Lindgren	AMS 8500	102165	NCR	-----

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



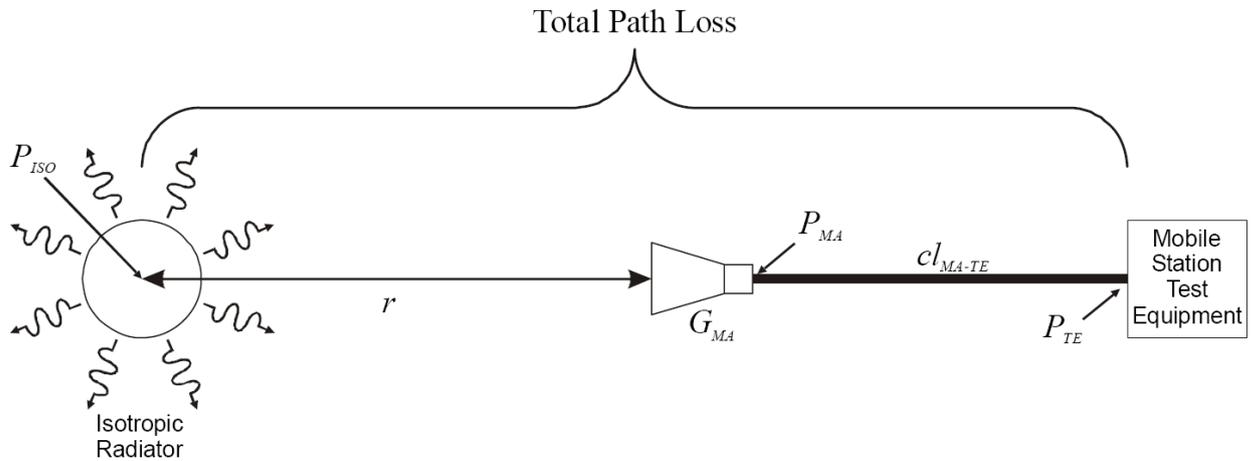
### 3.4. Test Procedure

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:

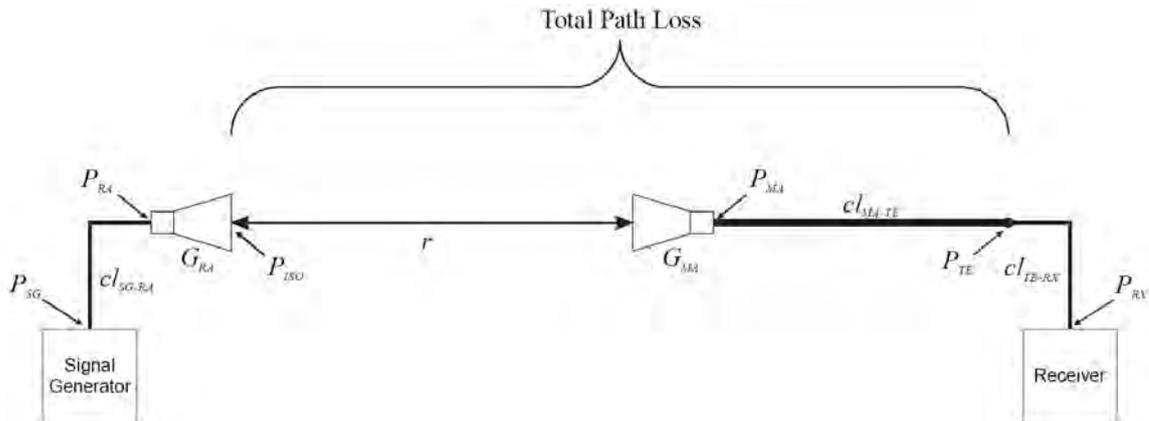
Equation 2

$$P_{ISO} = P_{RA} + G_{RA}$$

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

Equation 3

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

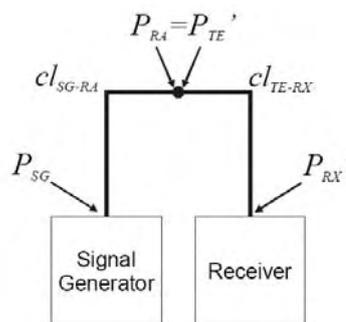


**Figure 2. TYPICAL CONFIGURATION FOR MEASURING PATH LOSS**

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

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



**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

### 3.5. Uncertainty

The measurement uncertainty is defined as for Radiated Power measurement list below:

Band	Uncertainty
Cell	1.08 dB
PCS	1.42 dB
GPRS	1.44 dB

### 3.6. Test Result

Product	Smartphone					
Test Item	ERP/EIRP					
Test Mode	Mode 1: GSM 850 Link					
Date of Test	04/02/2010			Test Site	TC03	
Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	ERP		Limit
				(dBm)	(W)	
GSM 850	824.2	78.40	-48.80	29.60	<b>0.913</b>	< 7W
	836.4	78.05	-48.80	29.25	0.842	< 7W
	848.8	78.01	-48.80	29.21	0.834	< 7W
EGPRS 850	824.2	71.53	-48.80	22.73	0.187	< 7W
	836.4	71.55	-48.80	22.75	0.188	< 7W
	848.8	71.84	-48.80	23.04	0.201	< 7W

Product	Smartphone					
Test Item	ERP/EIRP					
Test Mode	Mode 2: GSM 1900 Link					
Date of Test	04/02/2010			Test Site	TC03	
Bands	Frequency (MHz)	Read Level (dBm)	Correction factor (dBm)	EIRP		Limit
				(dBm)	(W)	
GSM 1900	1850.20	85.17	-54.00	31.17	1.309	< 2W
	1880.00	86.82	-55.60	31.22	1.324	< 2W
	1909.80	88.41	-56.90	31.51	<b>1.416</b>	< 2W
EGPRS 1900	1850.20	80.61	-54.00	26.61	0.458	< 2W
	1880.00	82.48	-55.60	26.88	0.488	< 2W
	1909.80	83.95	-56.90	27.05	0.507	< 2W

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.

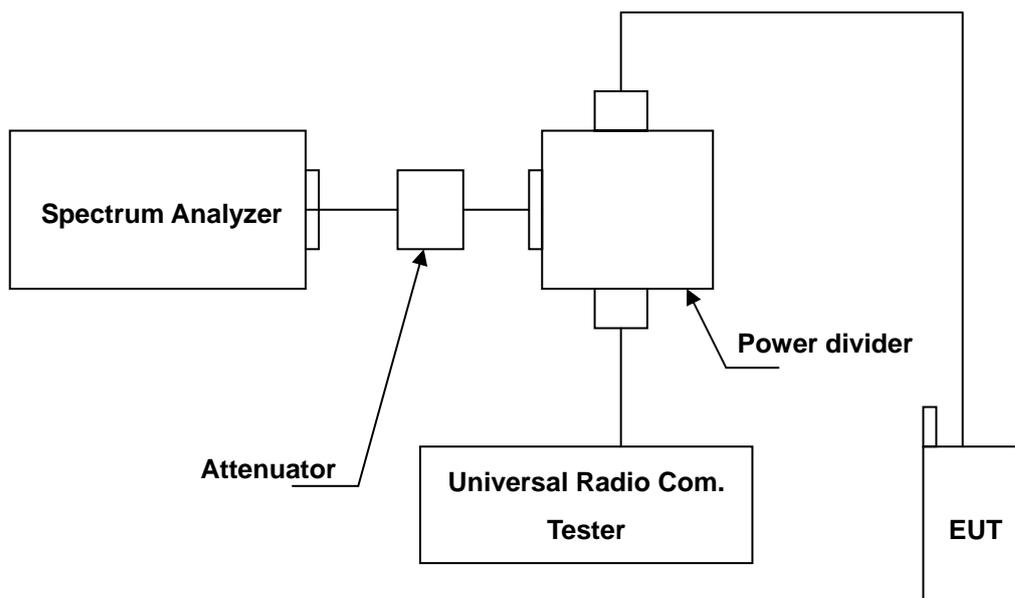
### 4.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(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 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.

#### 4.5. Uncertainty

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

**4.6. Test Result**
**99% Occupied Bandwidth**

<b>Product</b>	Smartphone		
<b>Test Item</b>	Occupied Bandwidth		
<b>Test Mode</b>	Mode 1: GSM 850 Link		
<b>Date of Test</b>	04/21/2010	<b>Test Site</b>	TE02
<b>Channel No.</b>	<b>Frequency (MHz)</b>	<b>99% Bandwidth (kHz)</b>	<b>Note</b>
128	824.2	244.5210	RBW:3KHz , VBW:10KHz
190	836.4	244.7051	RBW:3KHz , VBW:10KHz
251	848.8	243.9991	RBW:3KHz , VBW:10KHz

Figure Channel 128

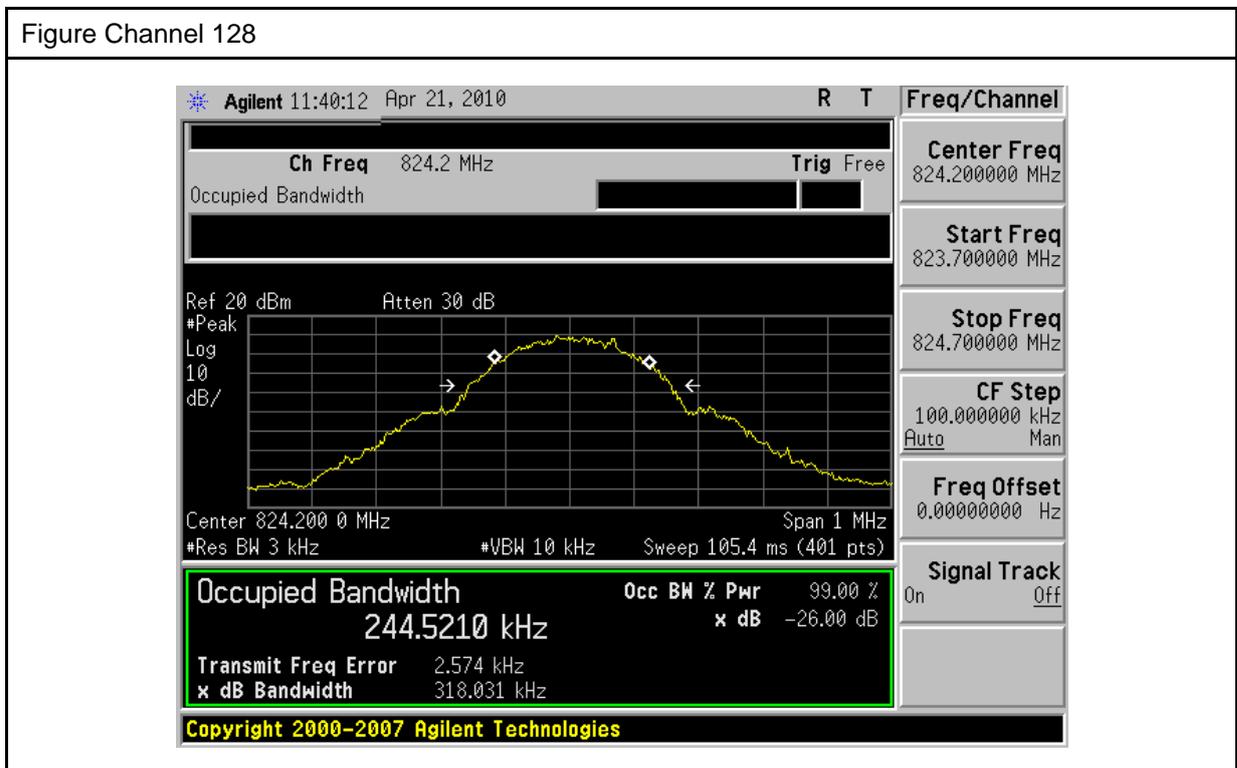


Figure Channel 190

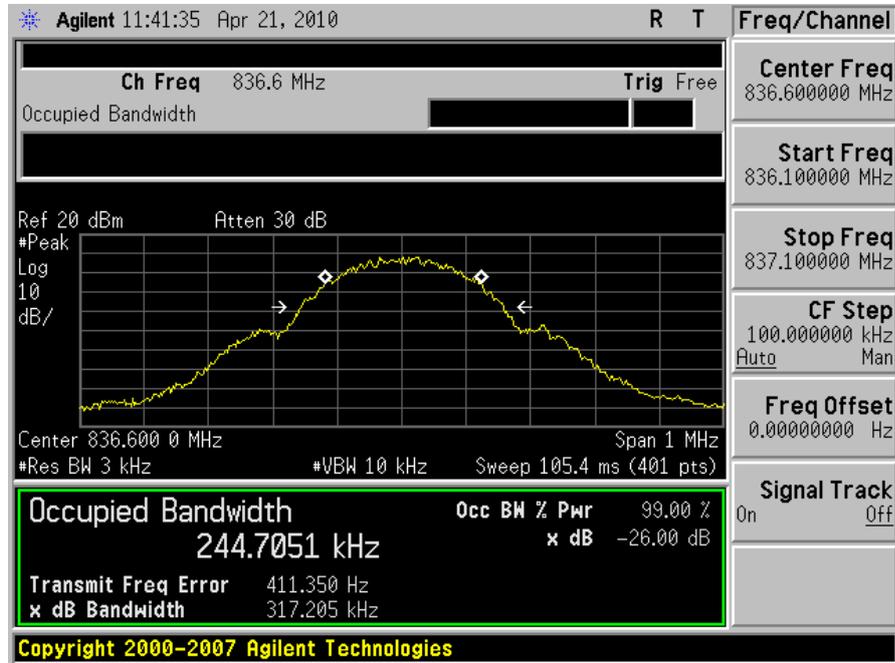
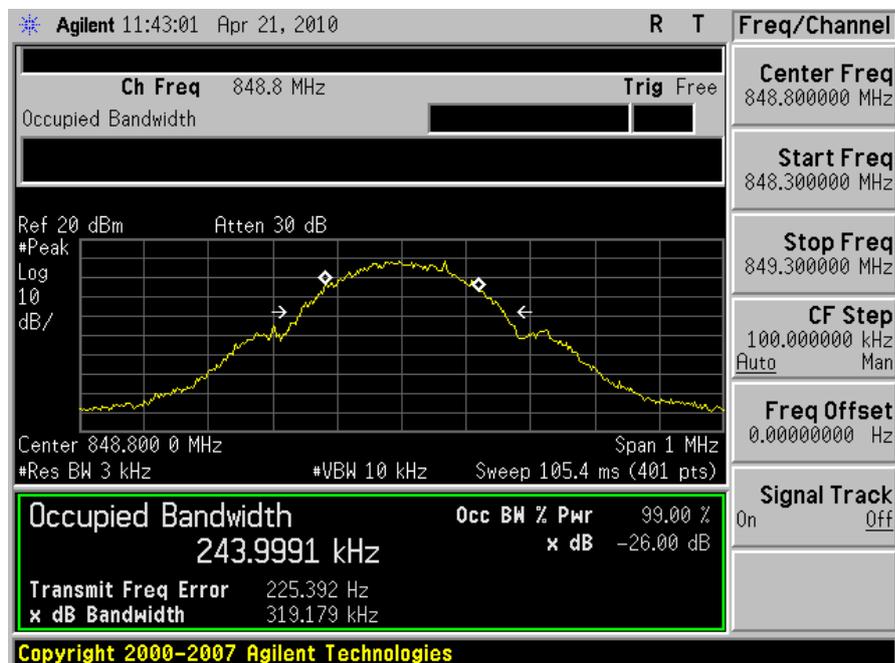


Figure Channel 251



<b>Product</b>	Smartphone		
<b>Test Item</b>	Occupied Bandwidth		
<b>Test Mode</b>	Mode 2: GSM 1900 Link		
<b>Date of Test</b>	04/21/2010	<b>Test Site</b>	TE02
<b>Channel No.</b>	<b>Frequency (MHz)</b>	<b>99% Bandwidth (kHz)</b>	<b>Note</b>
512	1850.20	246.5175	RBW:3KHz , VBW:10KHz
661	1880.00	247.6120	RBW:3KHz , VBW:10KHz
810	1909.80	246.8452	RBW:3KHz , VBW:10KHz

Figure Channel 512

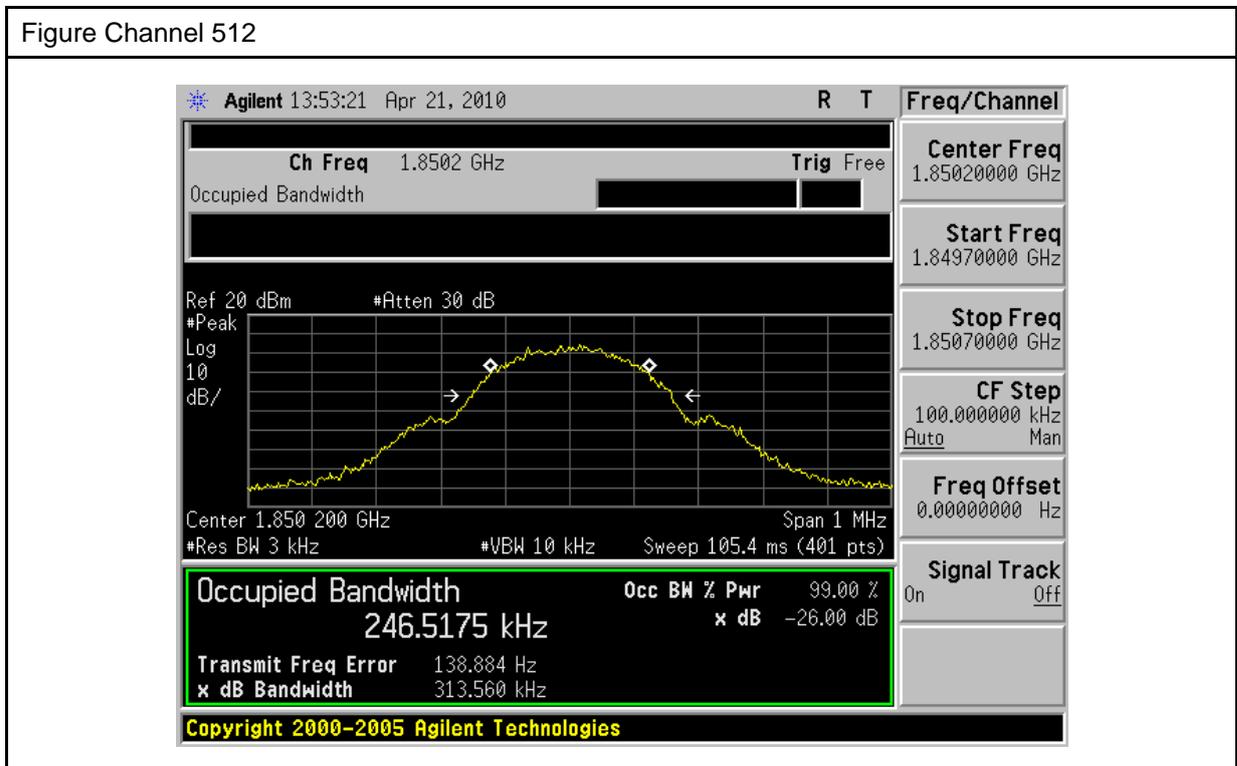


Figure Channel 661

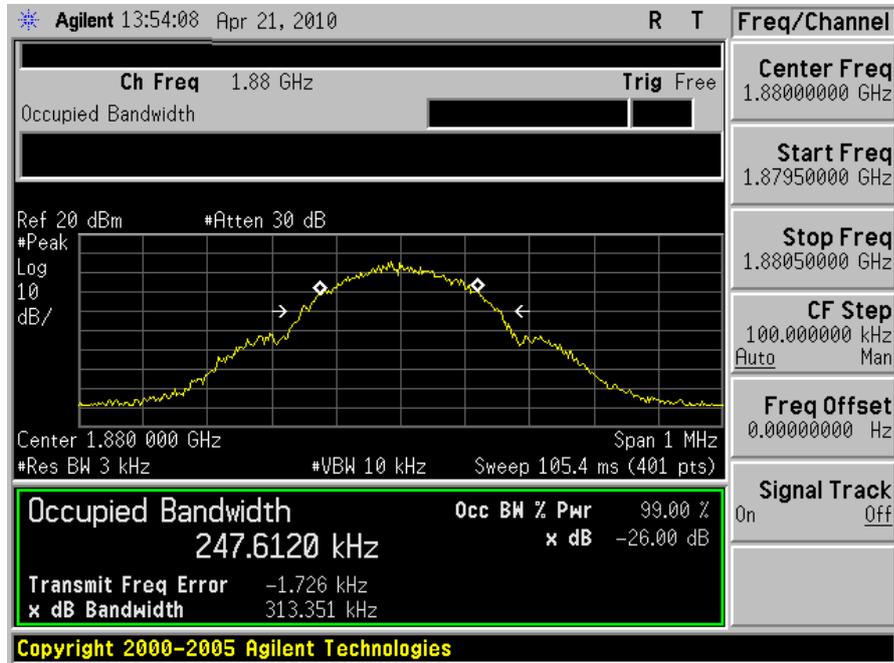
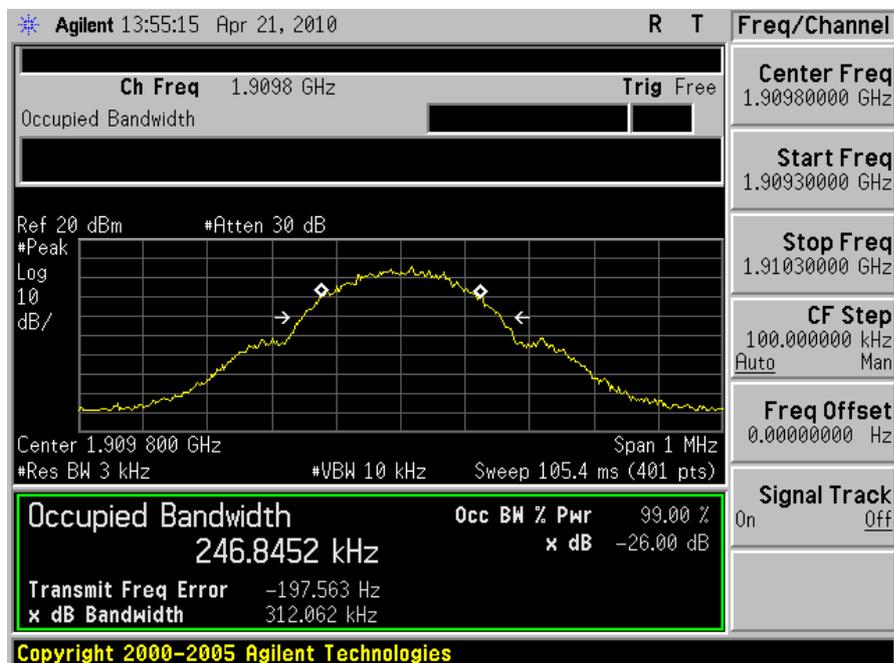


Figure Channel 810



<b>Product</b>	Smartphone		
<b>Test Item</b>	Occupied Bandwidth		
<b>Test Mode</b>	Mode 3: EGPRS 850 Link		
<b>Date of Test</b>	04/21/2010	<b>Test Site</b>	TE02
<b>Channel No.</b>	<b>Frequency (MHz)</b>	<b>99% Bandwidth (kHz)</b>	<b>Note</b>
128	824.2	244.0596	RBW:3KHz , VBW:10KHz
190	836.4	241.7057	RBW:3KHz , VBW:10KHz
251	848.8	240.5196	RBW:3KHz , VBW:10KHz

Figure Channel 128

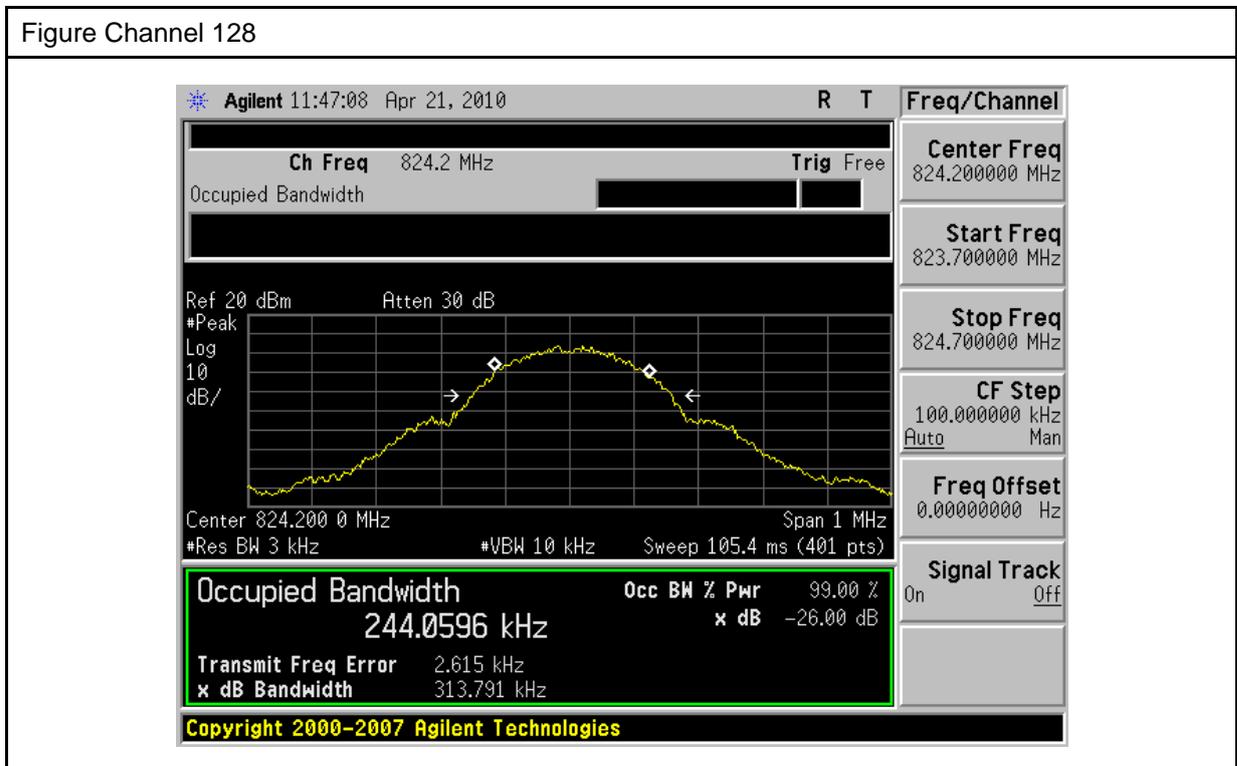


Figure Channel 190

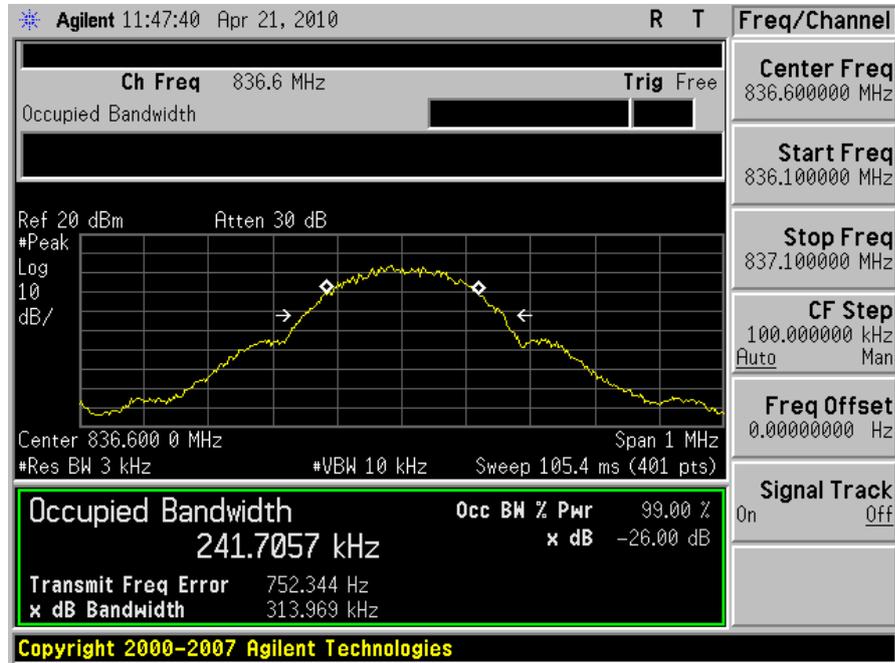
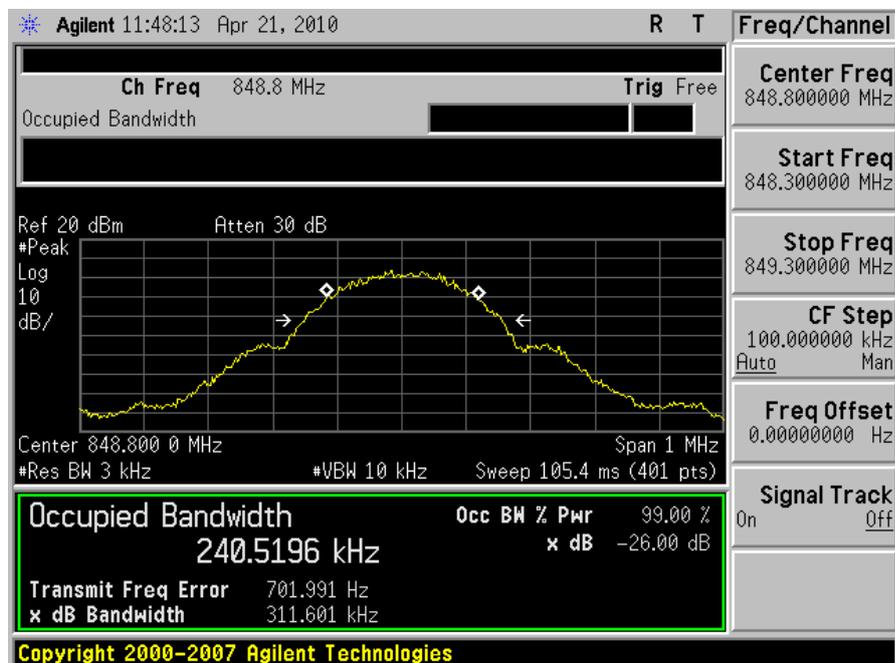


Figure Channel 251



<b>Product</b>	Smartphone		
<b>Test Item</b>	Occupied Bandwidth		
<b>Test Mode</b>	Mode 4: EGPRS 1900 Link		
<b>Date of Test</b>	04/21/2010	<b>Test Site</b>	TE02
<b>Channel No.</b>	<b>Frequency (MHz)</b>	<b>99% Bandwidth (kHz)</b>	<b>Note</b>
512	1850.20	243.1009	RBW:3KHz , VBW:10KHz
661	1880.00	246.7277	RBW:3KHz , VBW:10KHz
810	1909.80	239.7951	RBW:3KHz , VBW:10KHz

Figure Channel 512

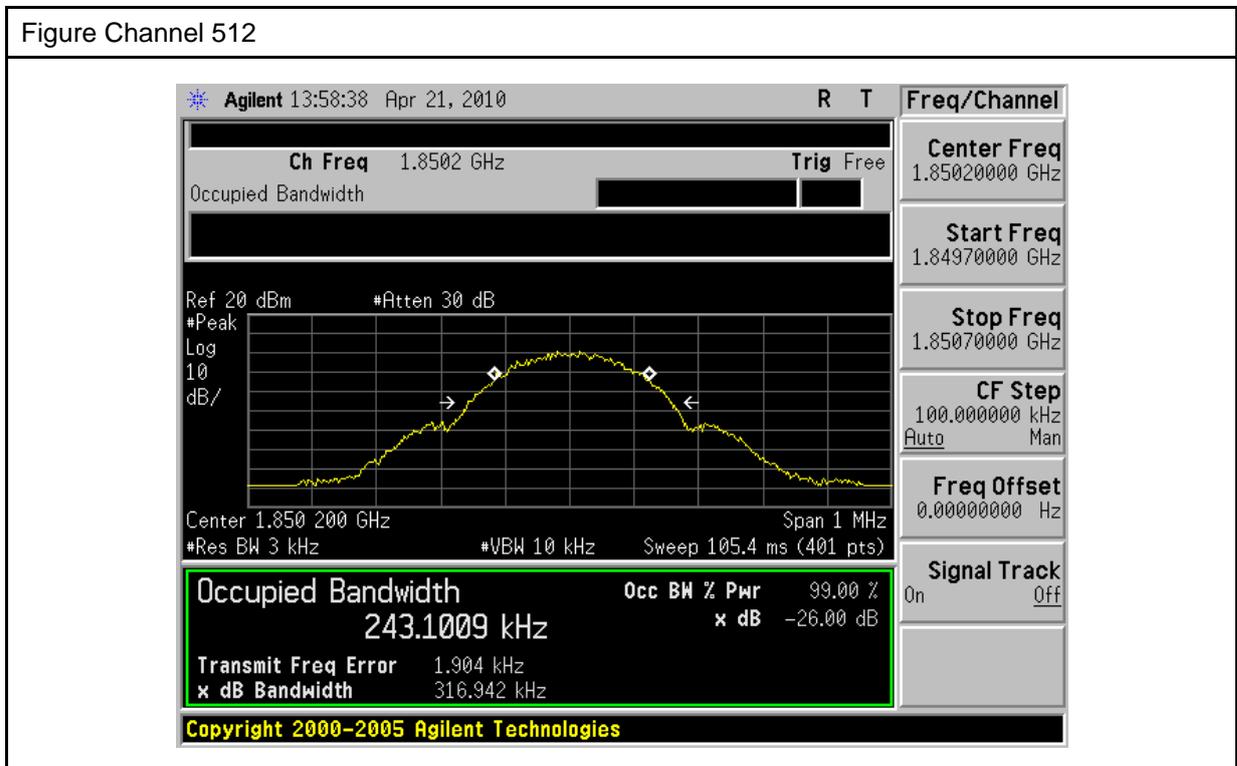


Figure Channel 661

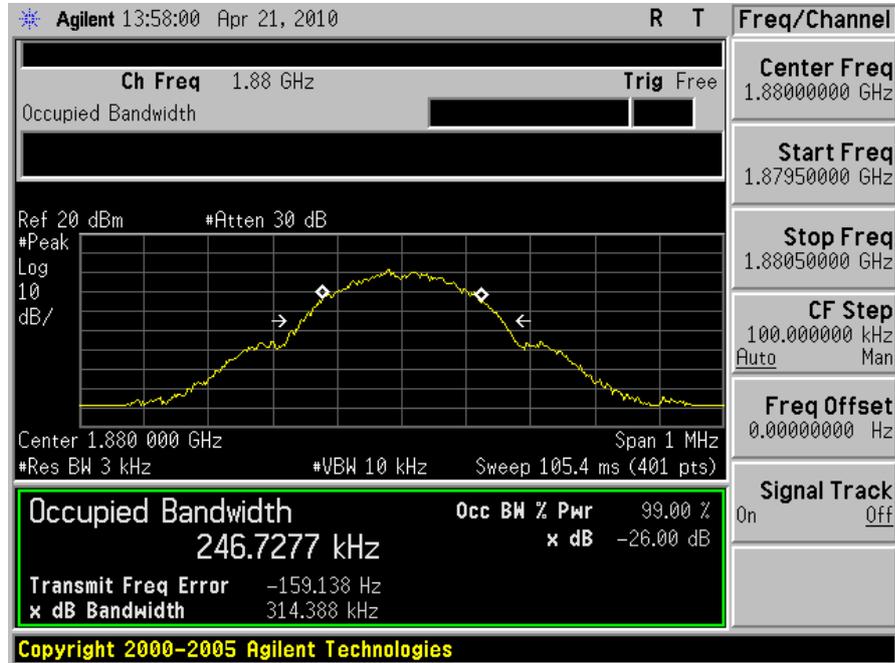
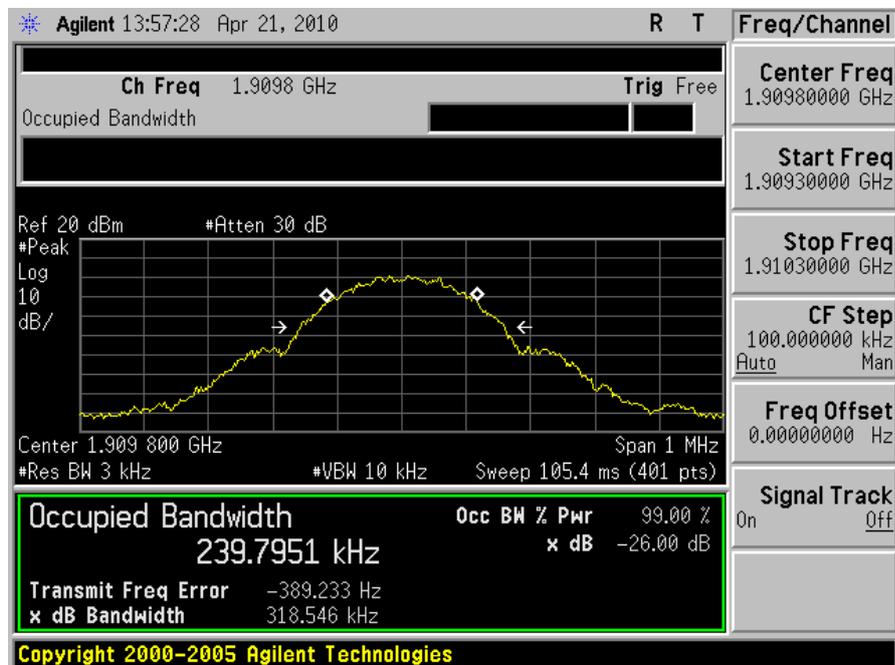


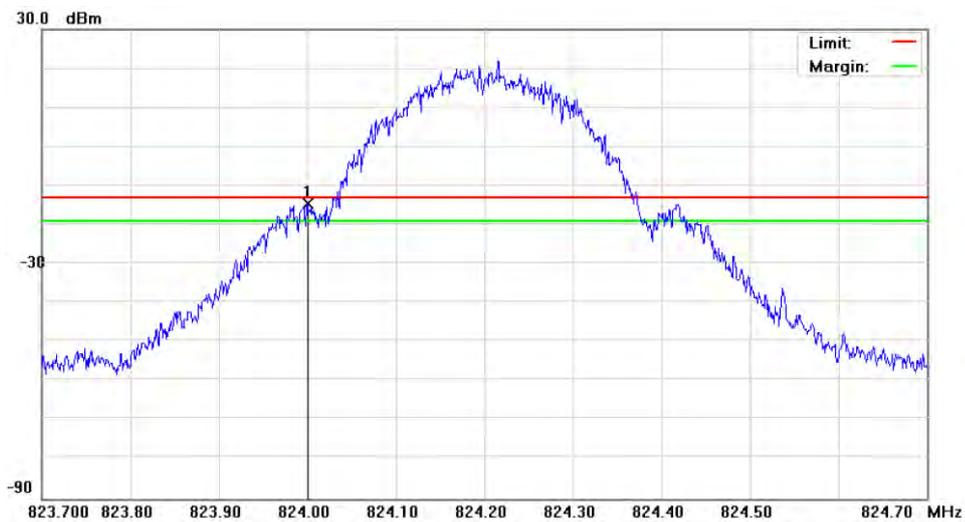
Figure Channel 810



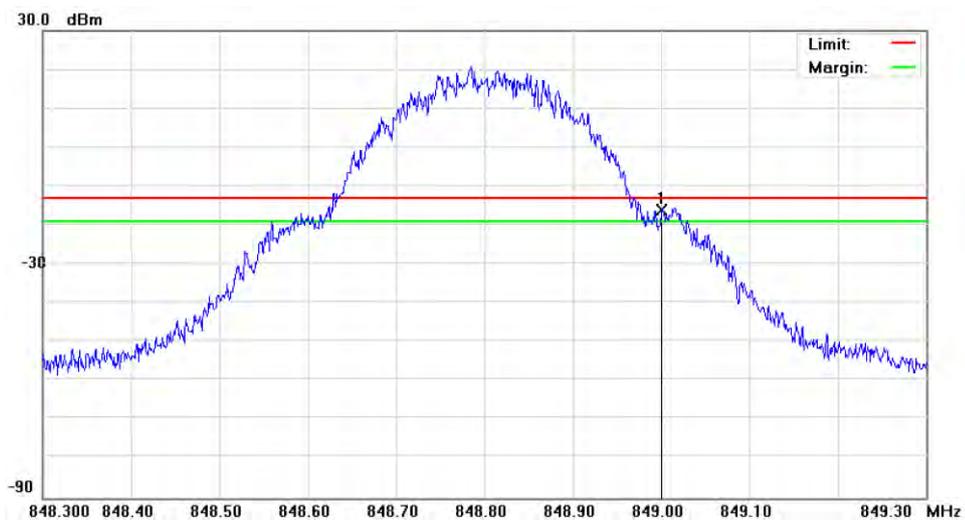
**Band Edge**

<b>Product</b>	Smartphone				
<b>Test Item</b>	Band Edge				
<b>Test Mode</b>	Mode 1: GSM 850 Link				
<b>Date of Test</b>	04/22/2010		<b>Test Site</b>	TE02	
<b>Band</b>	<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Bandwidth (dBm)</b>	<b>Limit (dBm)</b>	<b>Result</b>
Lower	128	824.0000	-14.60	-13	Pass
Higher	251	849.0000	-16.04	-13	Pass

Lower Band

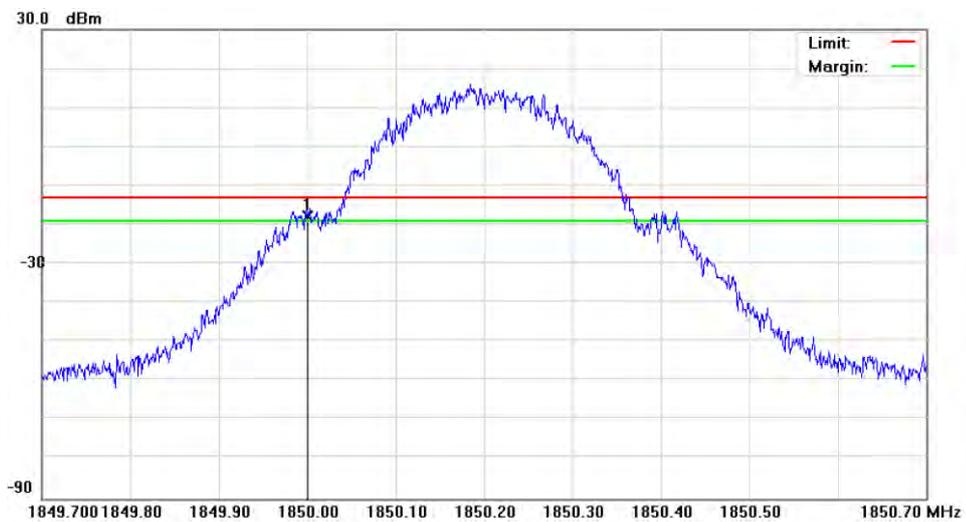


Higher Band

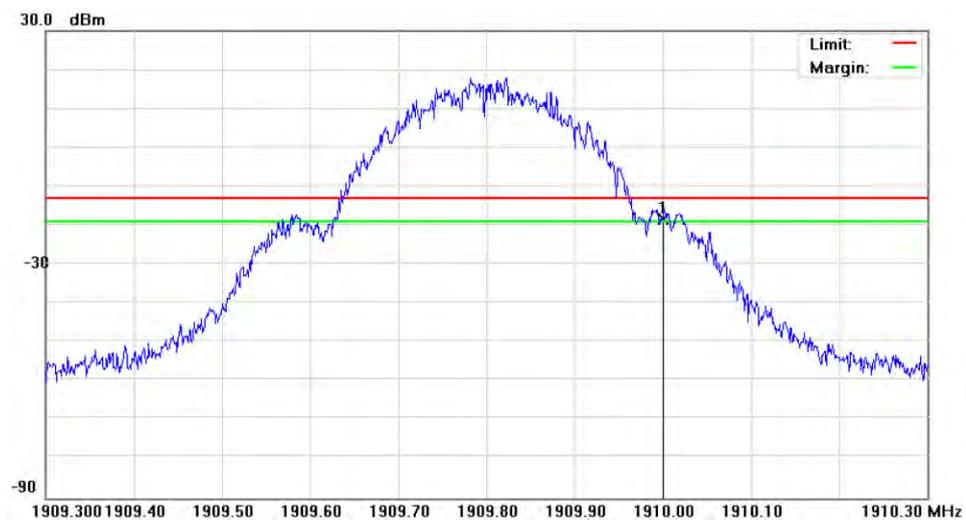


<b>Product</b>	Smartphone				
<b>Test Item</b>	Band Edge				
<b>Test Mode</b>	Mode 2: GSM 1900 Link				
<b>Date of Test</b>	04/22/2010		<b>Test Site</b>	TE02	
<b>Band</b>	<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Bandwidth (dBm)</b>	<b>Limit (dBm)</b>	<b>Result</b>
Lower	512	1850.000	-17.71	-13	Pass
Higher	810	1910.000	-18.48	-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

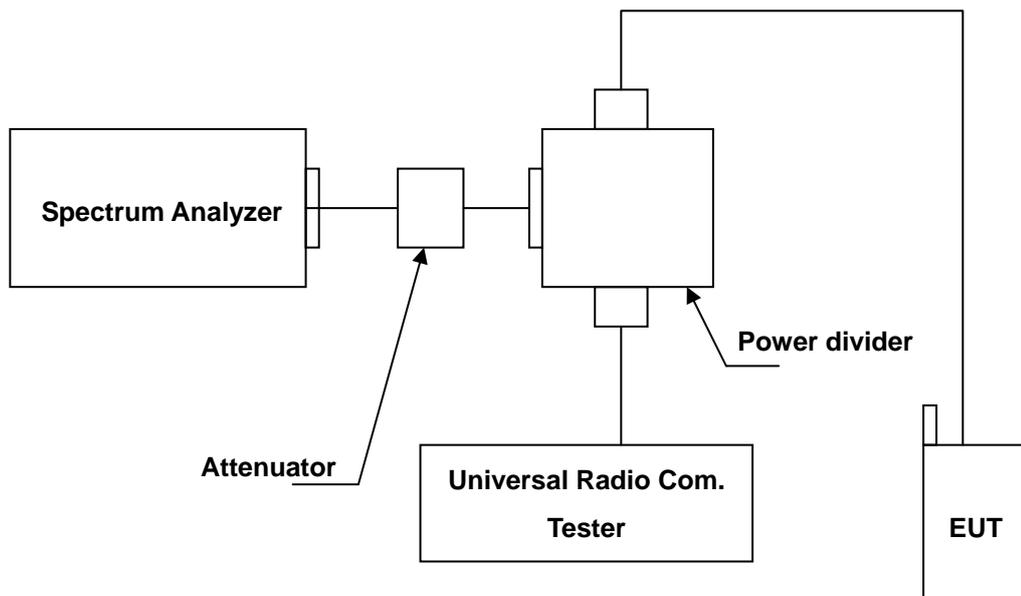
Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE02	TE02	N.C.R.	-----

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

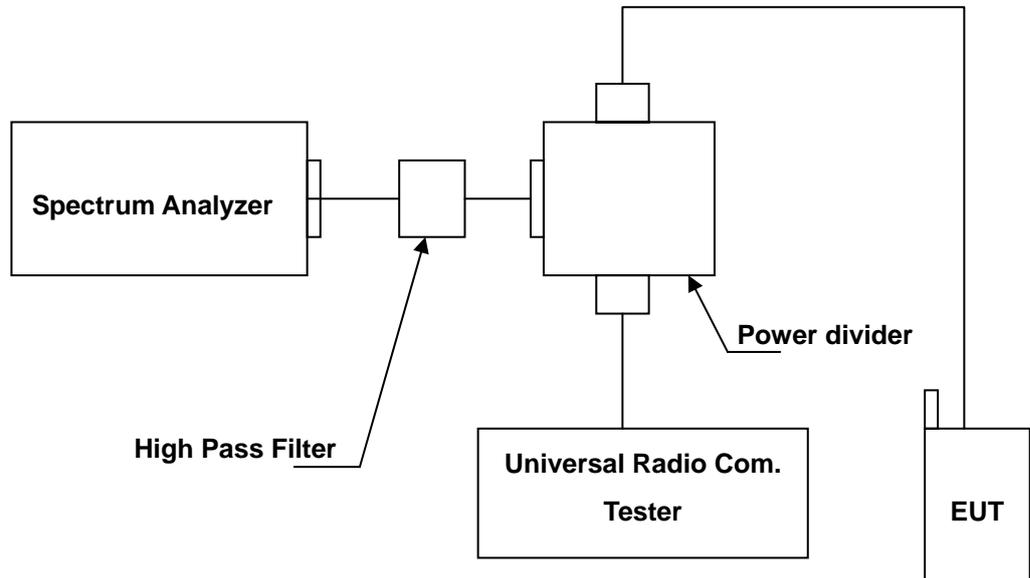
NOTE: N.C.R. = No Calibration Request.

### 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 GSM 850 RB>100 kHz, VB>100 kHz; PCS 1900 RB>1MHz, VB>1MHz.

#### 5.5. Uncertainty

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

#### 5.6. Test Result

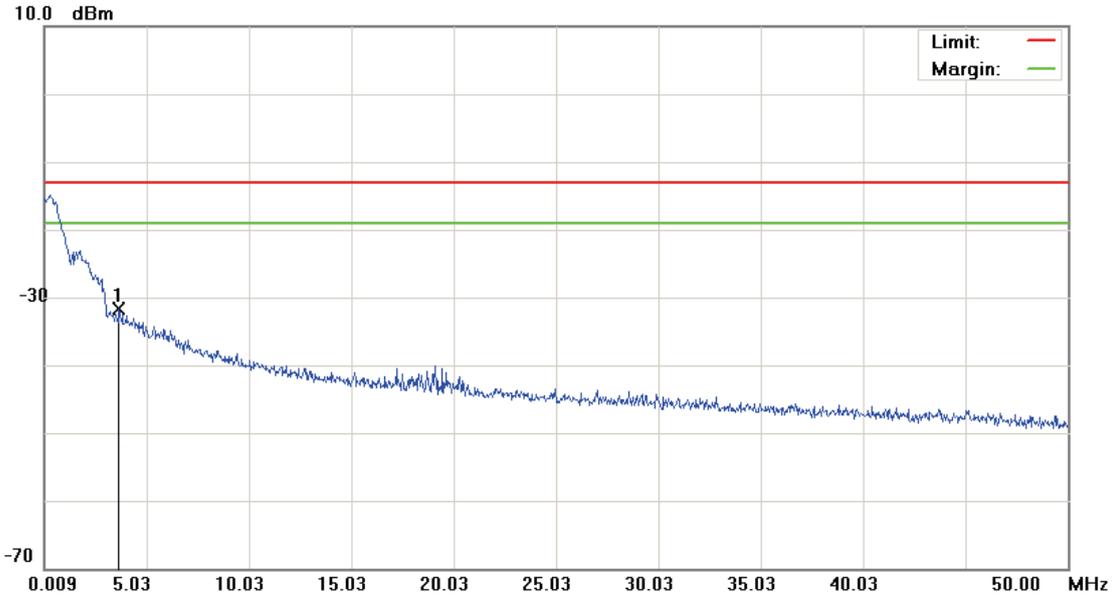
<b>Product</b>	Smartphone		
<b>Test Item</b>	Conducted Emission		
<b>Mode</b>	Mode 1: GSM 850 Link Mode 2: GSM 1900 Link		
<b>Date of Test</b>	04/22/2010	<b>Test Site</b>	TE02

File :PC49100(CH128)

Data :#1

Date: 2010/4/22

Time: PM 01:06:51



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH128		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	3.6583	-61.66	29.88	-31.78	-13.00	-18.78	peak		

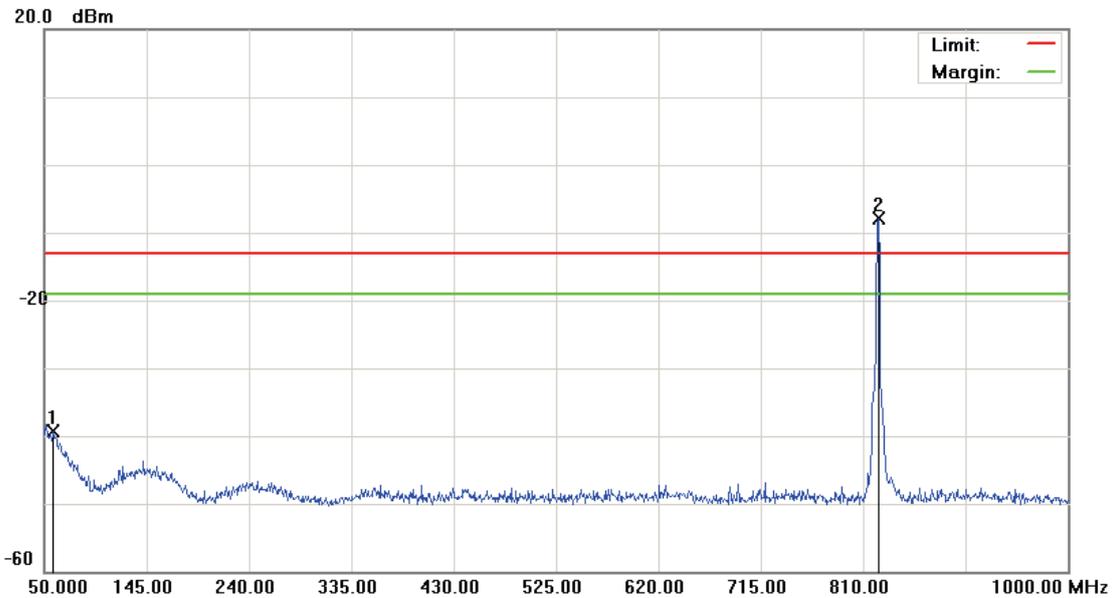
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH128)

Data :#2

Date: 2010/4/22

Time: PM 03:07:16



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH128		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1		58.5500	-52.53	13.15	-39.38	-13.00	-26.38	peak		
2	*	824.2500	-11.65	3.84	-7.81	-13.00	5.19	peak		TX

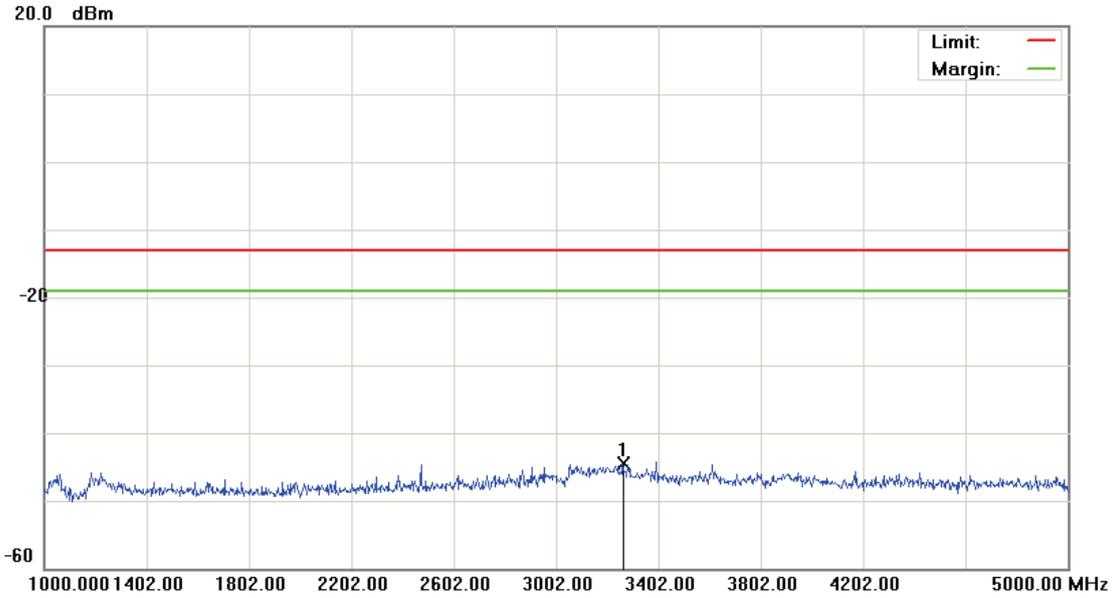
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File :PC49100(CH128)

Data :#3

Date: 2010/4/22

Time: PM 02:02:51



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH128		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	3262.000	-49.07	4.63	-44.44	-13.00	-31.44	peak		

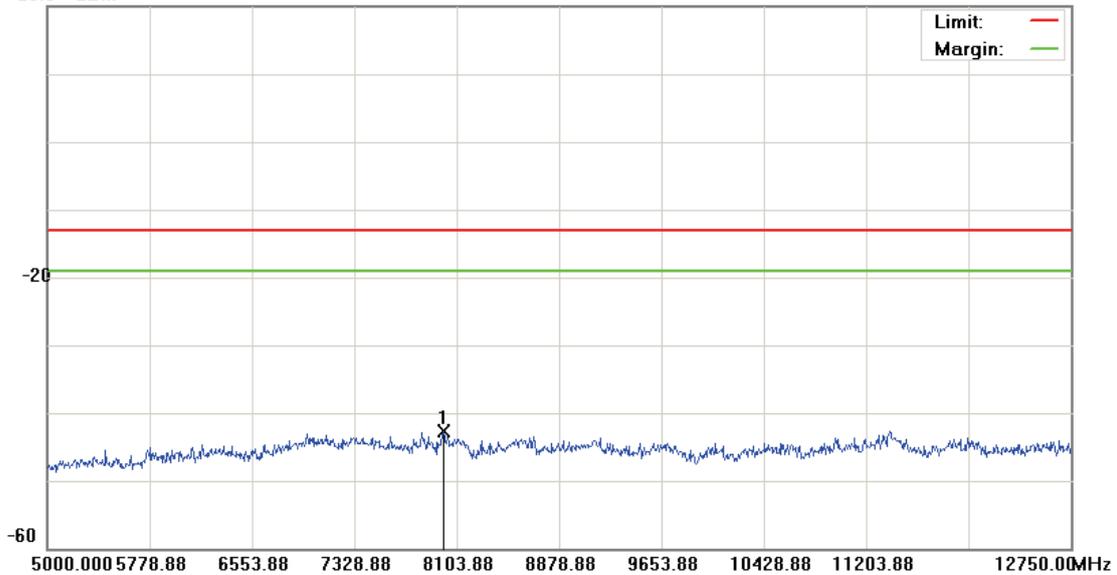
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH128)

Data :#4

Date: 2010/4/22

Time: PM 02:03:15

**20.0 dBm**


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH128		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	7999.250	-48.19	5.57	-42.62	-13.00	-29.62	peak		

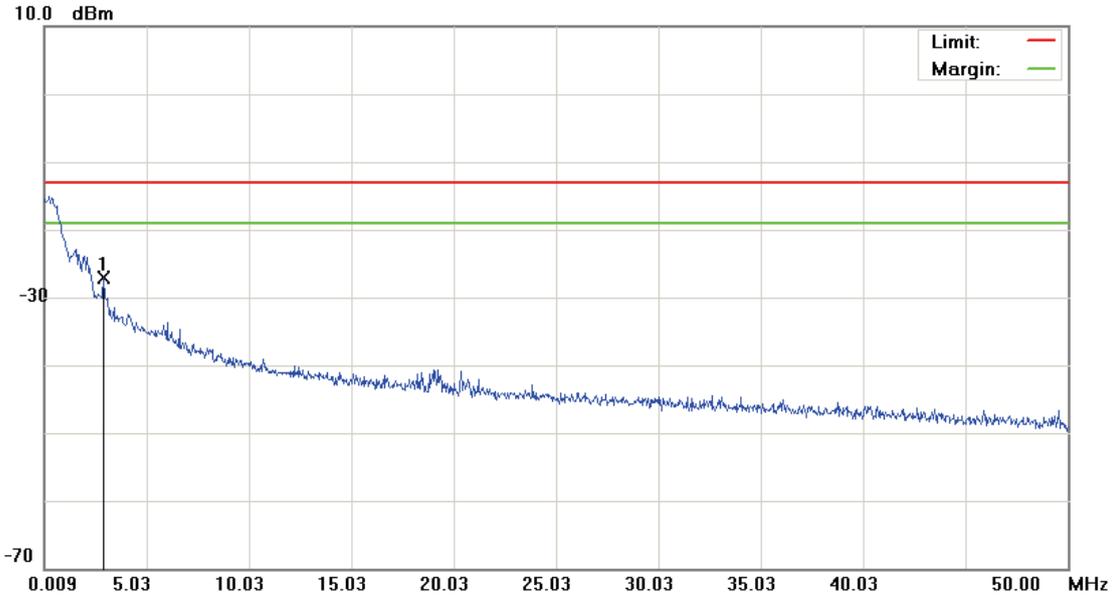
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File :PC49100(CH190)

Data :#1

Date: 2010/4/22

Time: PM 03:08:41



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH190		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	2.9085	-57.89	30.72	-27.17	-13.00	-14.17	peak		

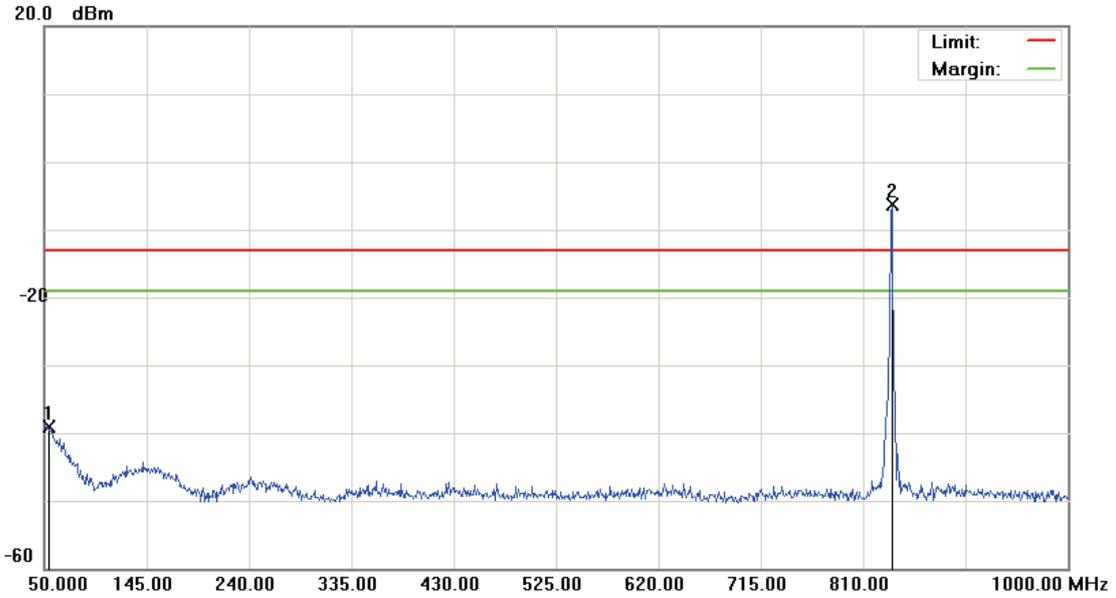
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File :PC49100(CH190)

Data :#2

Date: 2010/4/22

Time: PM 03:09:05



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH190		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1		53.3250	-53.11	14.10	-39.01	-13.00	-26.01	peak			
2	*	836.6000	-10.28	3.96	-6.32	-13.00	6.68	peak			TX

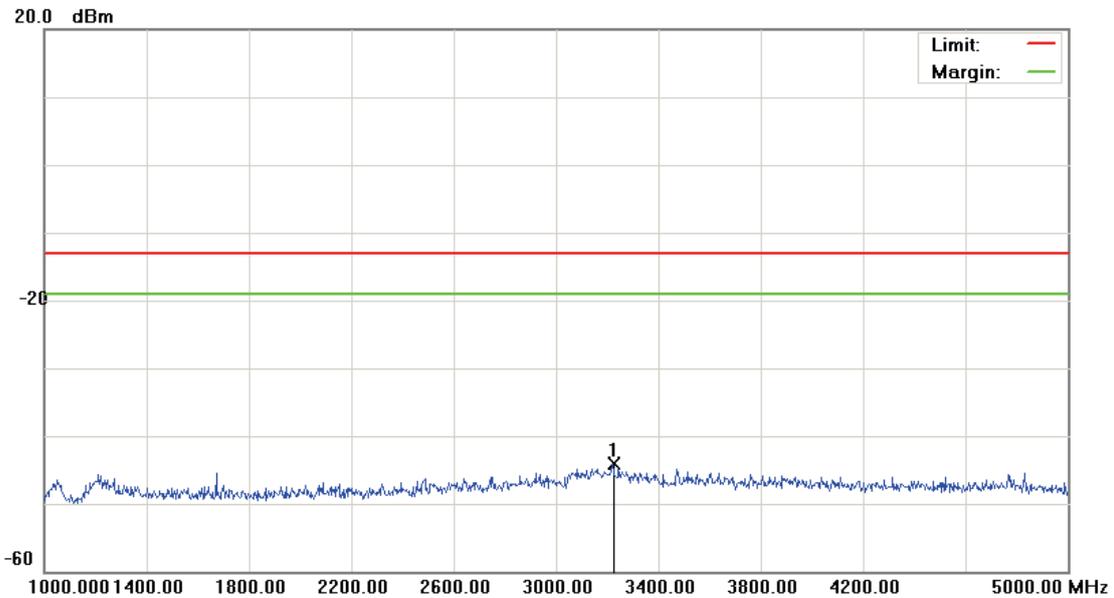
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File :PC49100(CH190)

Data :#3

Date: 2010/4/22

Time: PM 02:03:58



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH190		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	3222.000	-48.85	4.68	-44.17	-13.00	-31.17	peak		

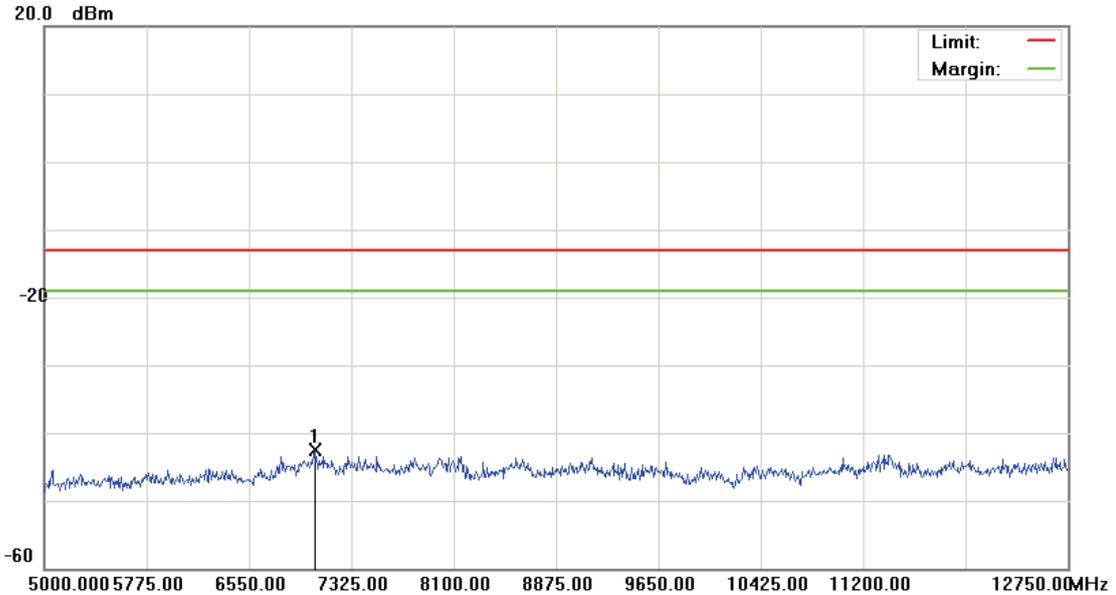
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File :PC49100(CH190)

Data :#4

Date: 2010/4/22

Time: PM 02:04:21



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH190		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	7046.000	-47.35	4.82	-42.53	-13.00	-29.53	peak		

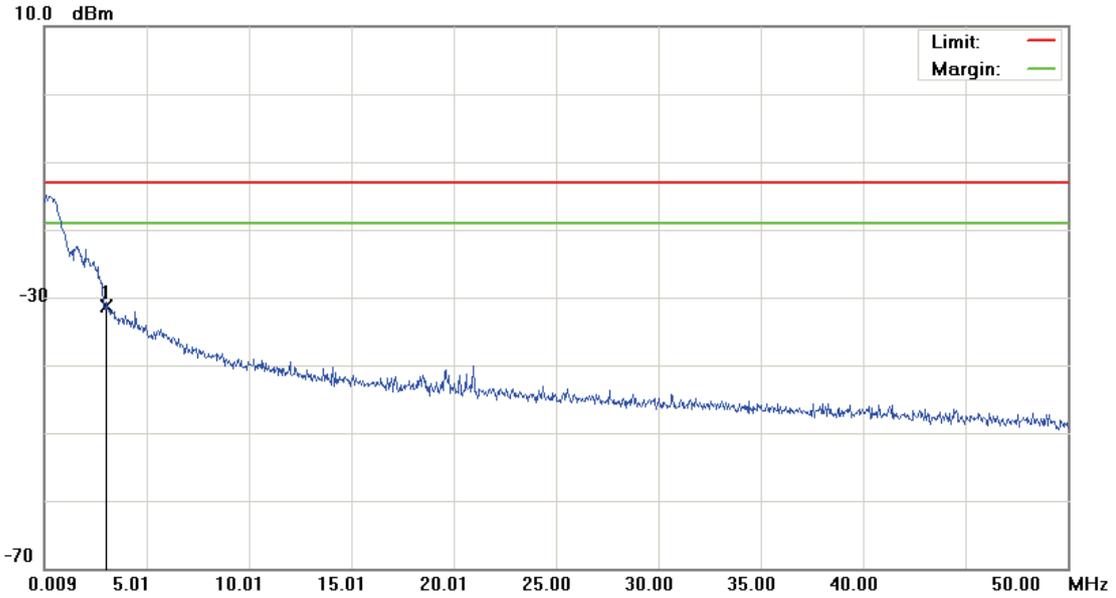
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File :PC49100(CH251)

Data :#1

Date: 2010/4/22

Time: PM 03:10:29



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH251		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	3.0584	-61.64	30.42	-31.22	-13.00	-18.22	peak		

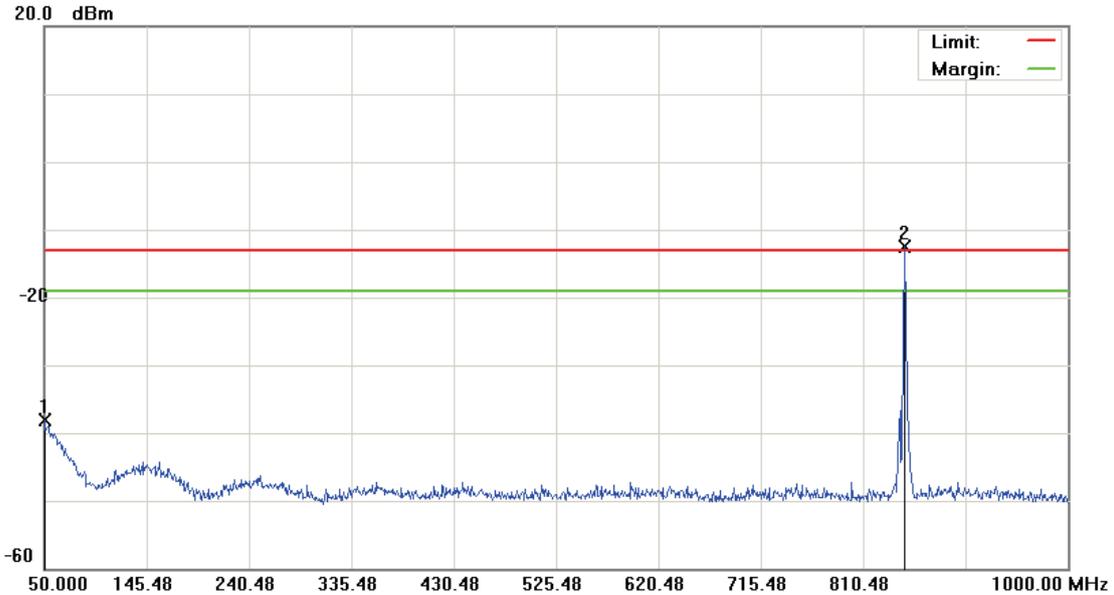
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File :PC49100(CH251)

Data :#2

Date: 2010/4/22

Time: PM 03:10:53



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH251		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1		50.4750	-52.78	14.61	-38.17	-13.00	-25.17	peak		
2	*	848.4750	-16.42	3.98	-12.44	-13.00	0.56	peak		TX

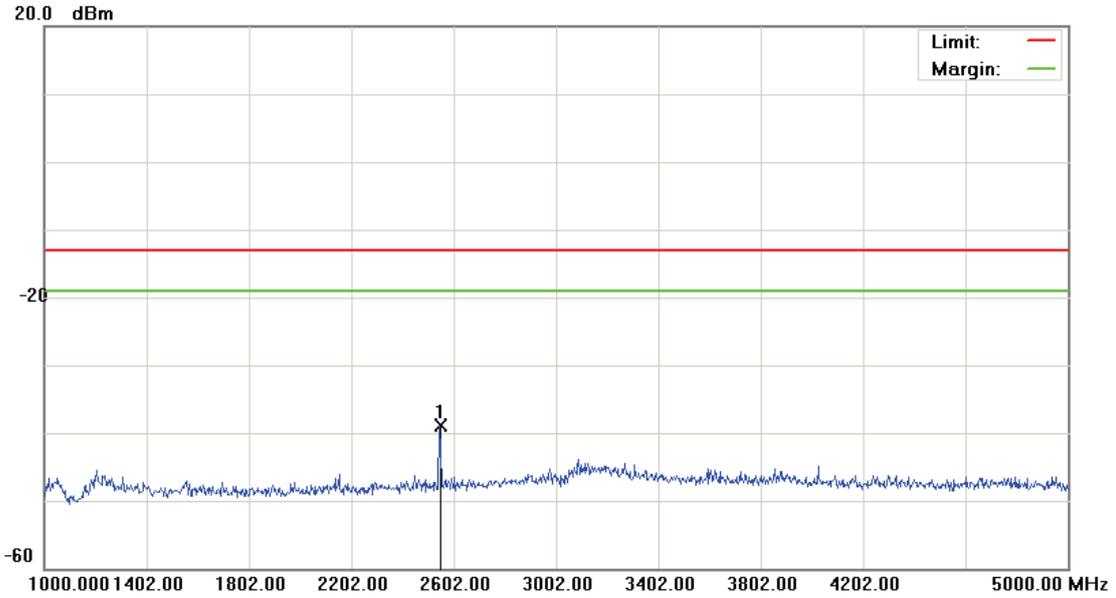
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH251)

Data :#3

Date: 2010/4/22

Time: PM 02:05:03



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH251		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	2546.000	-43.40	4.45	-38.95	-13.00	-25.95	peak		

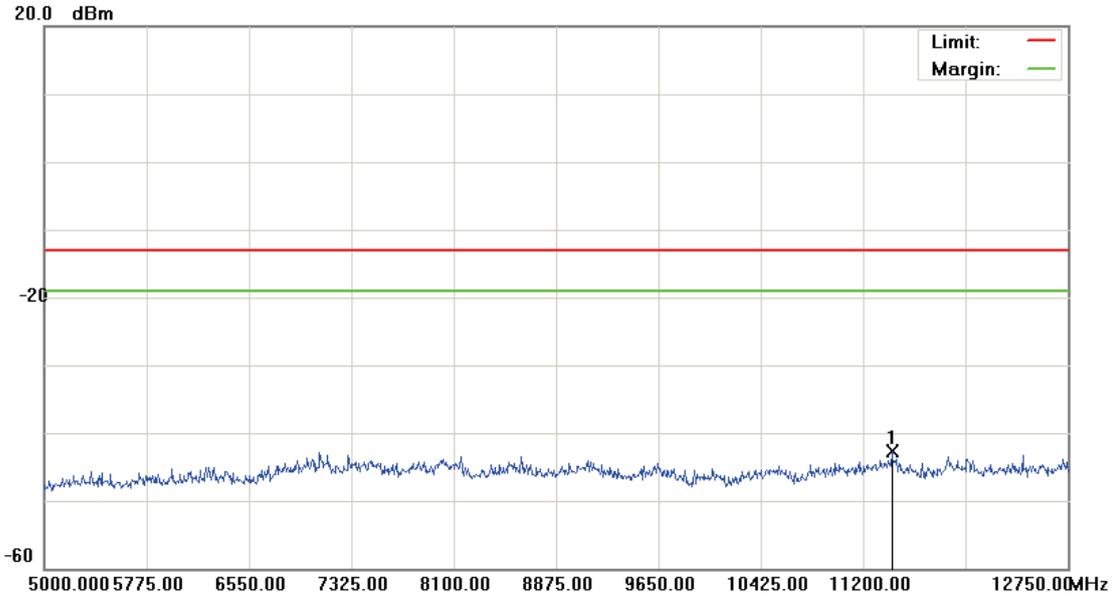
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File :PC49100(CH251)

Data :#4

Date: 2010/4/22

Time: PM 02:05:26



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 22 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 1		
Note: CH251		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	11420.875	-48.33	5.57	-42.76	-13.00	-29.76	peak		

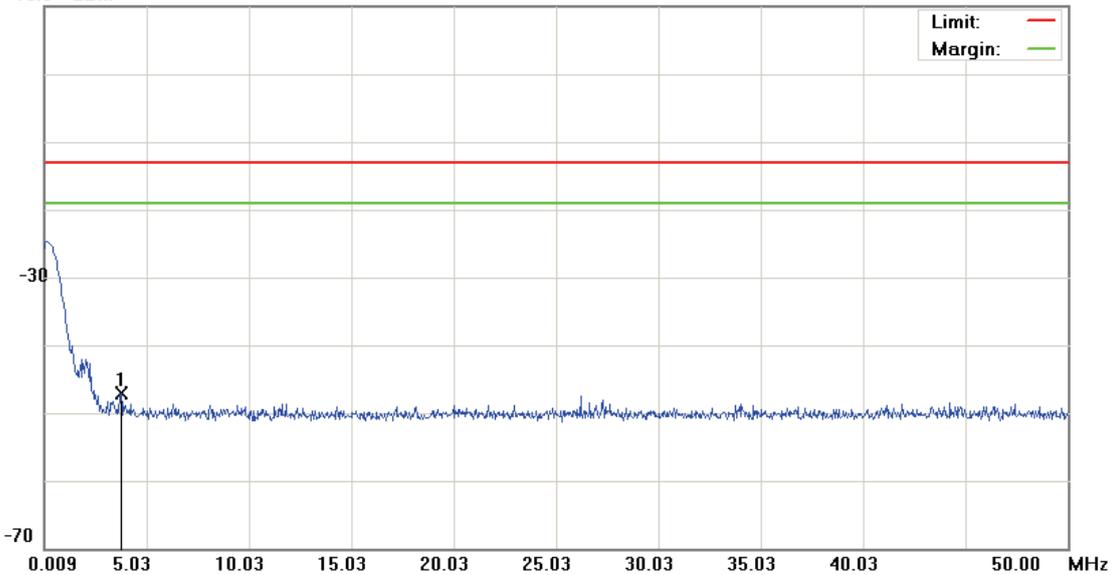
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH512)

Data :#1

Date: 2010/4/22

Time: PM 01:01:17

**10.0 dBm**


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH512		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	3.7583	-60.20	13.19	-47.01	-13.00	-34.01	peak		

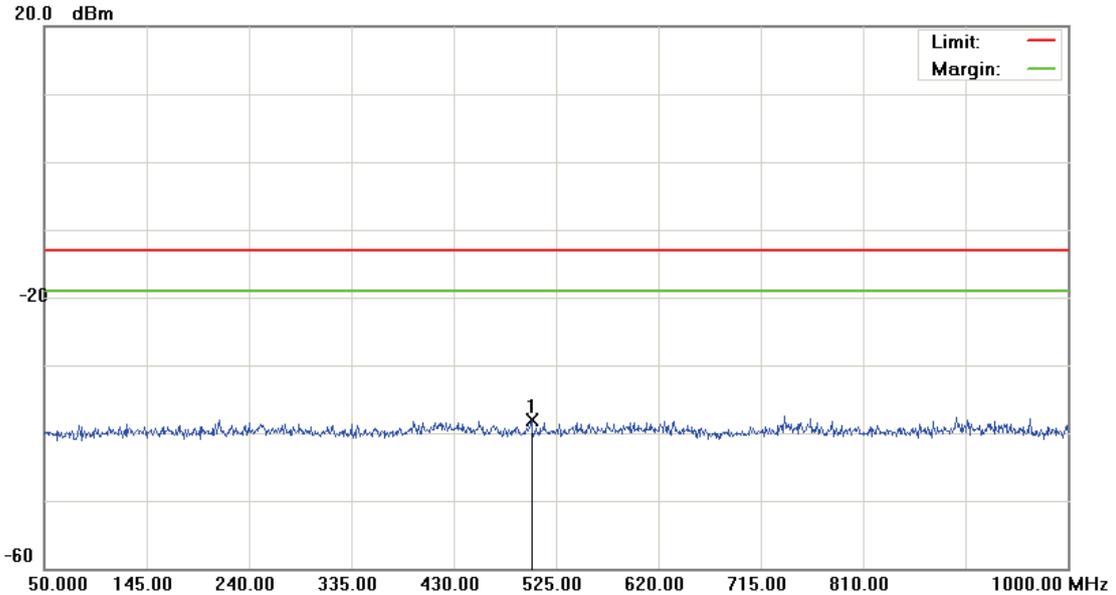
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH512)

Data :#2

Date: 2010/4/22

Time: PM 01:01:41



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH512		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	502.6750	-51.24	13.15	-38.09	-13.00	-25.09	peak		

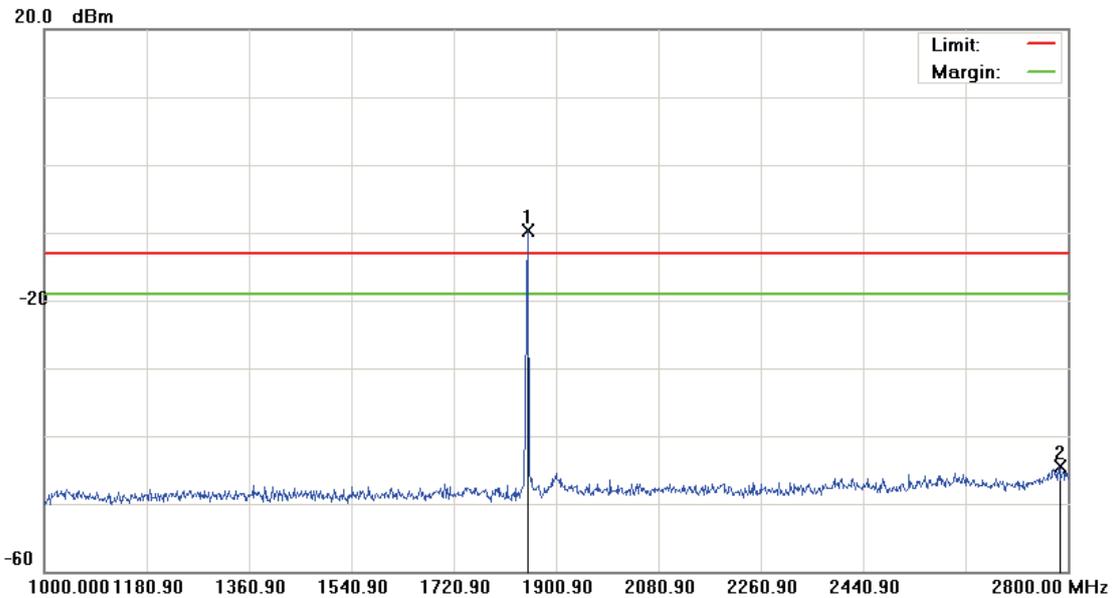
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH512)

Data :#3

Date: 2010/4/22

Time: PM 01:30:23



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH512		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	*	1850.500	-13.88	4.26	-9.62	-13.00	3.38	peak			
2		2784.700	-50.34	5.89	-44.45	-13.00	-31.45	peak			TX

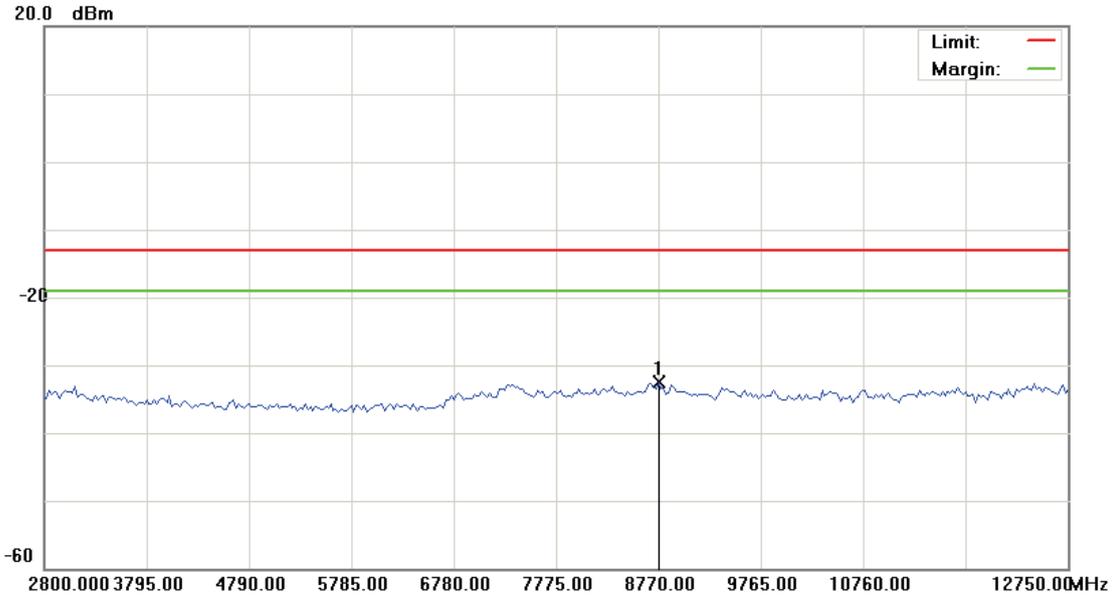
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH512)

Data :#4

Date: 2010/4/22

Time: PM 01:40:23



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH512		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	8770.000	-38.23	5.68	-32.55	-13.00	-19.55	peak		

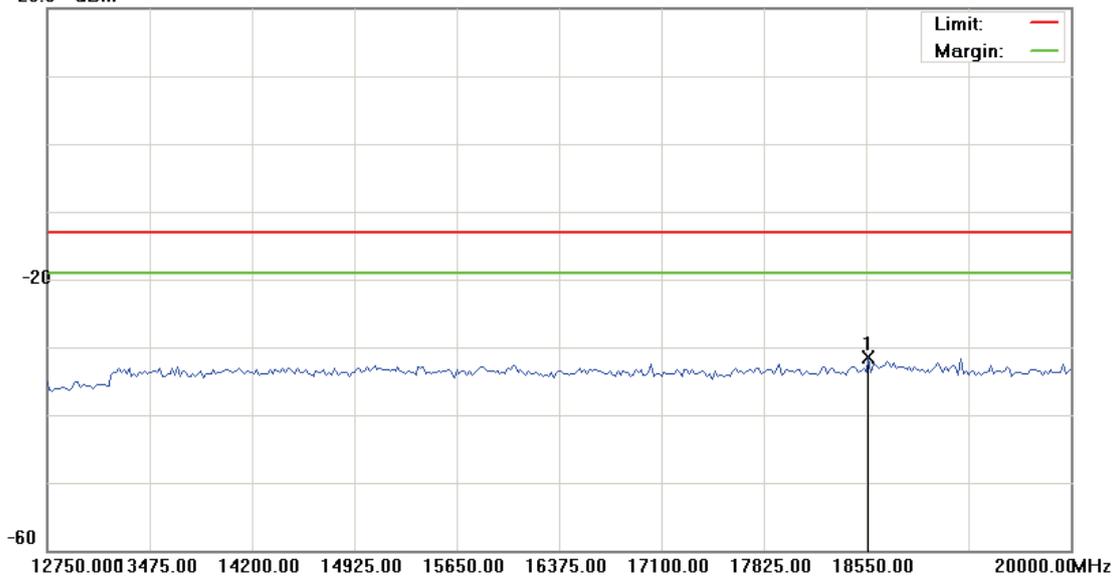
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH512)

Data :#5

Date: 2010/4/22

Time: PM 01:41:23

**20.0 dBm**


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH512		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	18568.125	-38.54	7.03	-31.51	-13.00	-18.51	peak		

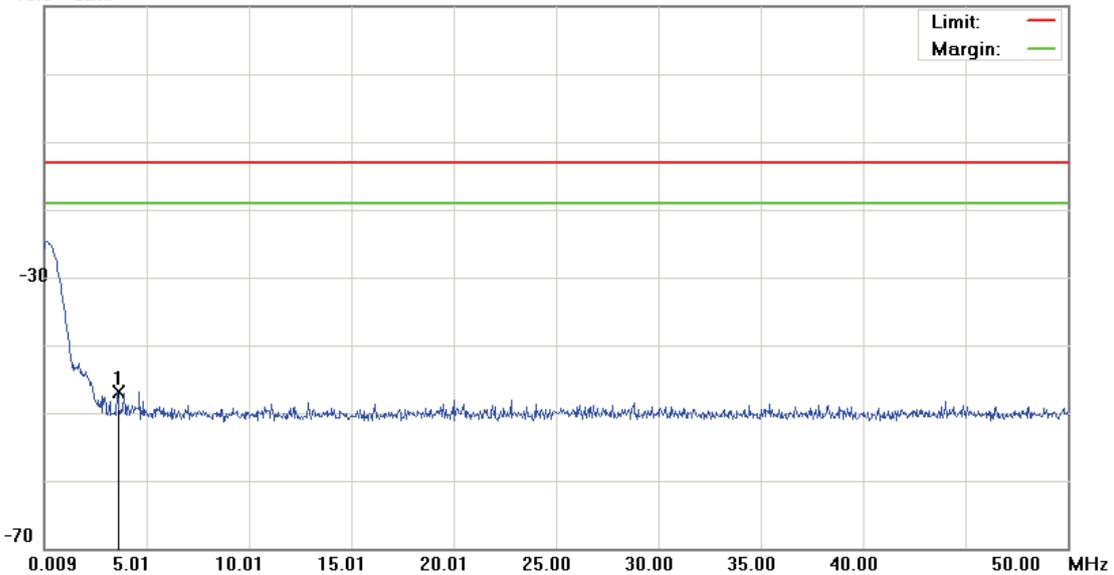
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH661)

Data :#1

Date: 2010/4/22

Time: PM 01:02:48

**10.0 dBm**


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH661		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	3.5834	-60.01	13.15	-46.86	-13.00	-33.86	peak		

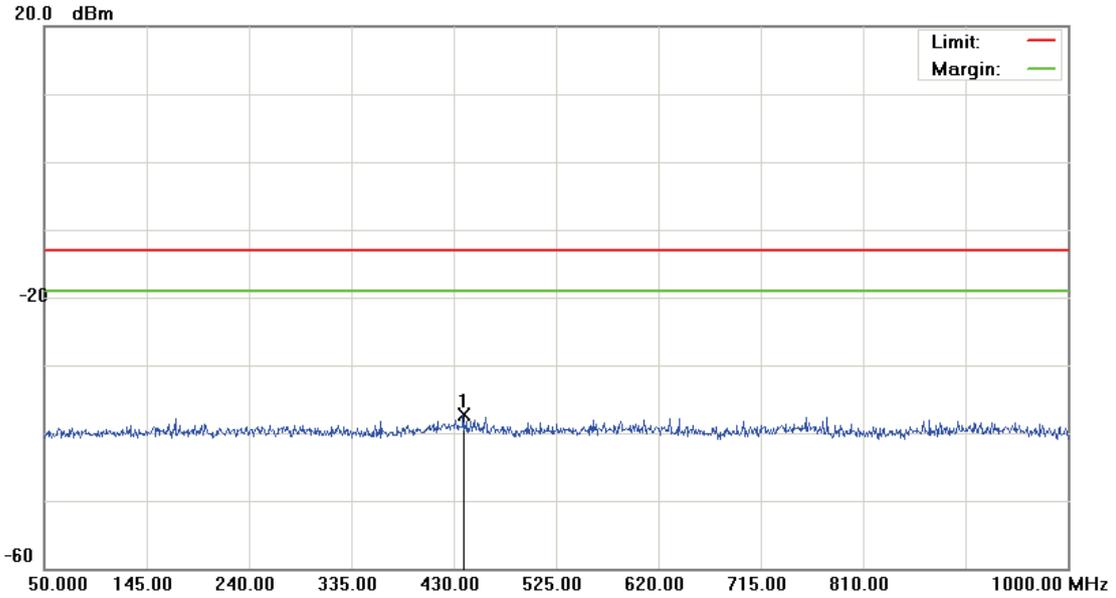
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH661)

Data :#2

Date: 2010/4/22

Time: PM 01:03:12



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH661		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	439.0250	-50.52	13.21	-37.31	-13.00	-24.31	peak		

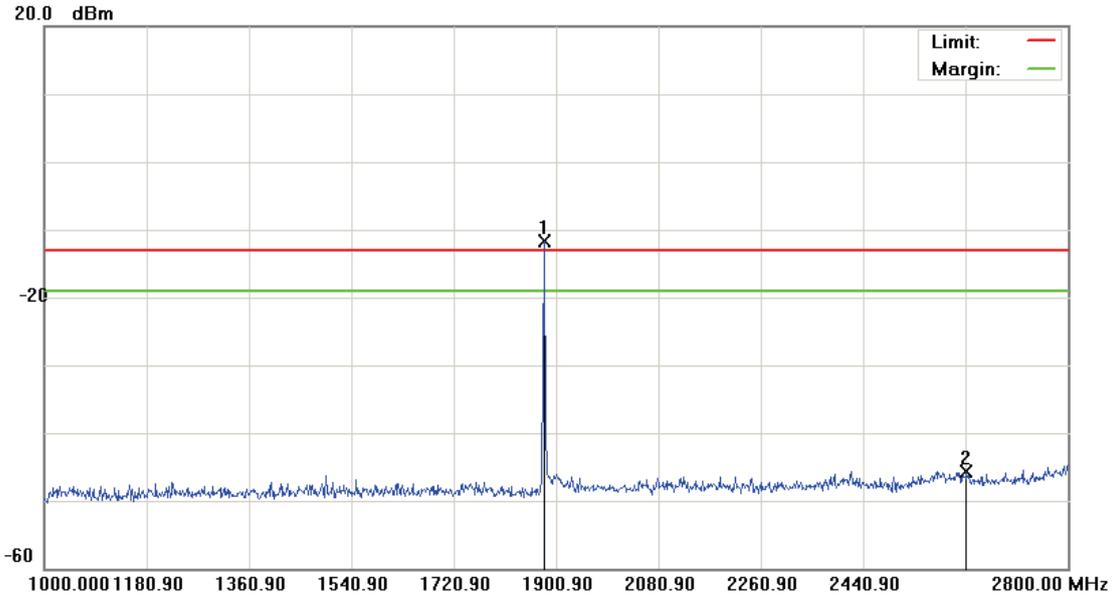
\*:Maximum data    x:Over limit    !:over margin

File :PC49100(CH661)

Data :#3

Date: 2010/4/22

Time: PM 01:32:46



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH661		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	*	1880.200	-16.35	4.65	-11.70	-13.00	1.30	peak			TX
2		2621.800	-51.18	5.40	-45.78	-13.00	-32.78	peak			

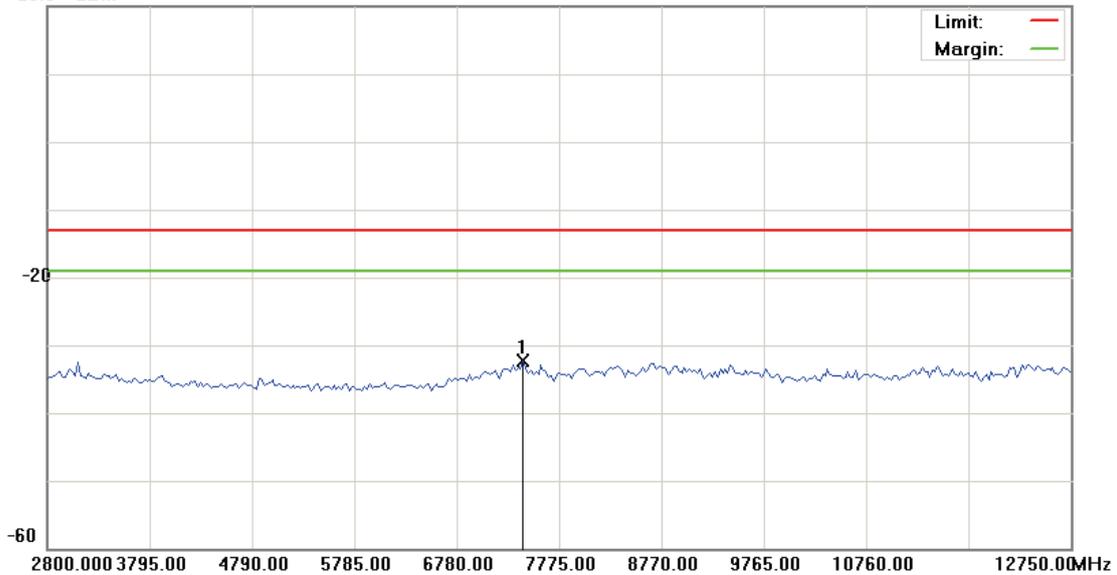
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File :PC49100(CH661)

Data :#4

Date: 2010/4/22

Time: PM 01:42:46

**20.0 dBm**


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH661		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	7426.750	-37.45	5.15	-32.30	-13.00	-19.30	peak		

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

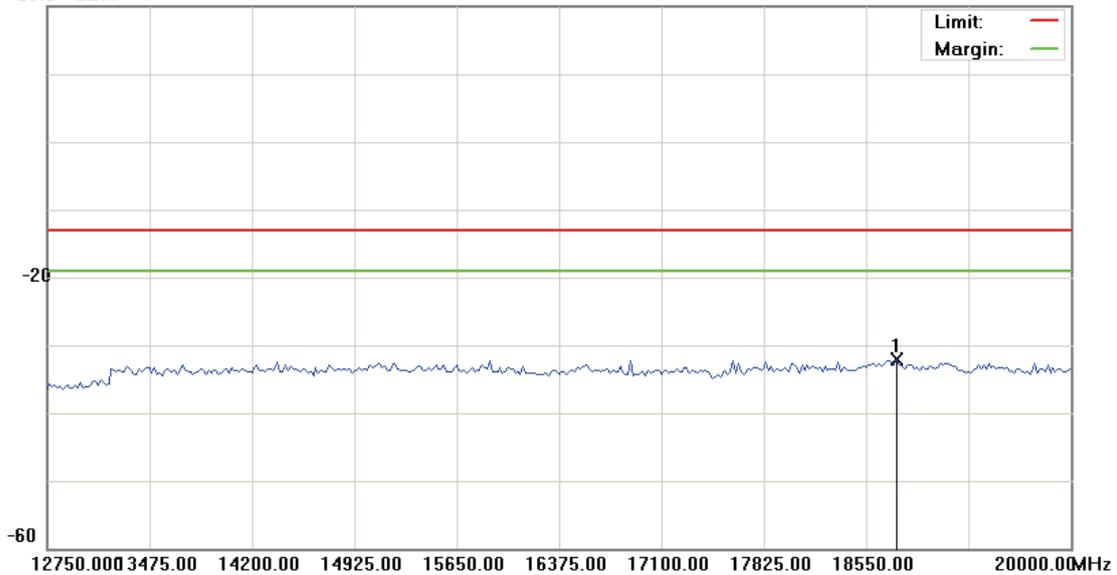
File :PC49100(CH661)

Data :#5

Date: 2010/4/22

Time: PM 01:43:46

20.0 dBm



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH661		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	18767.500	-39.24	7.09	-32.15	-13.00	-19.15	peak		

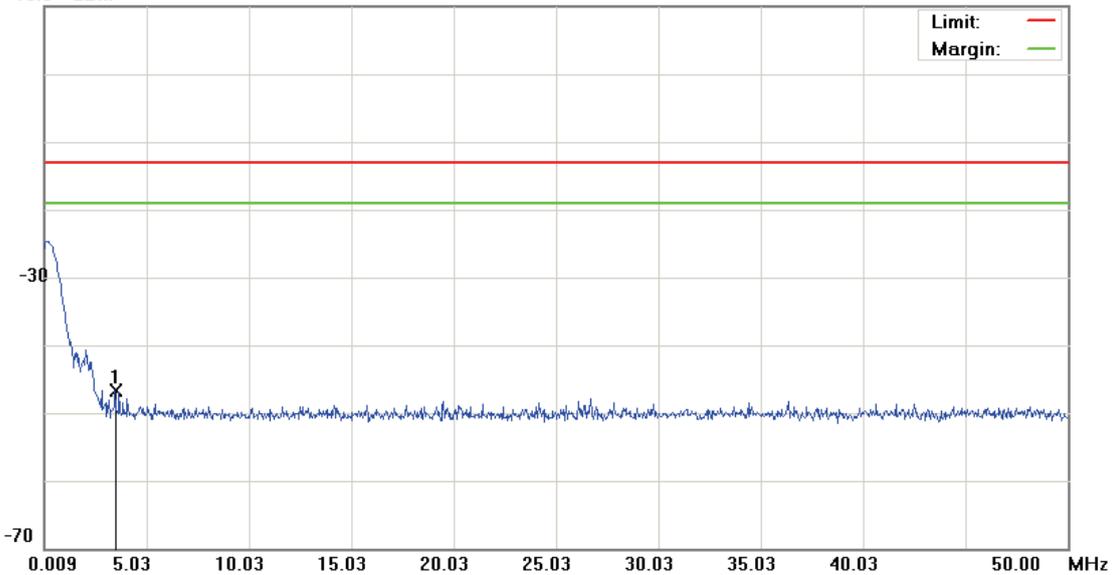
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File :PC49100(CH810)

Data :#1

Date: 2010/4/22

Time: PM 01:07:13

**10.0 dBm**


Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH810		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	3.4834	-59.88	13.13	-46.75	-13.00	-33.75	peak		

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

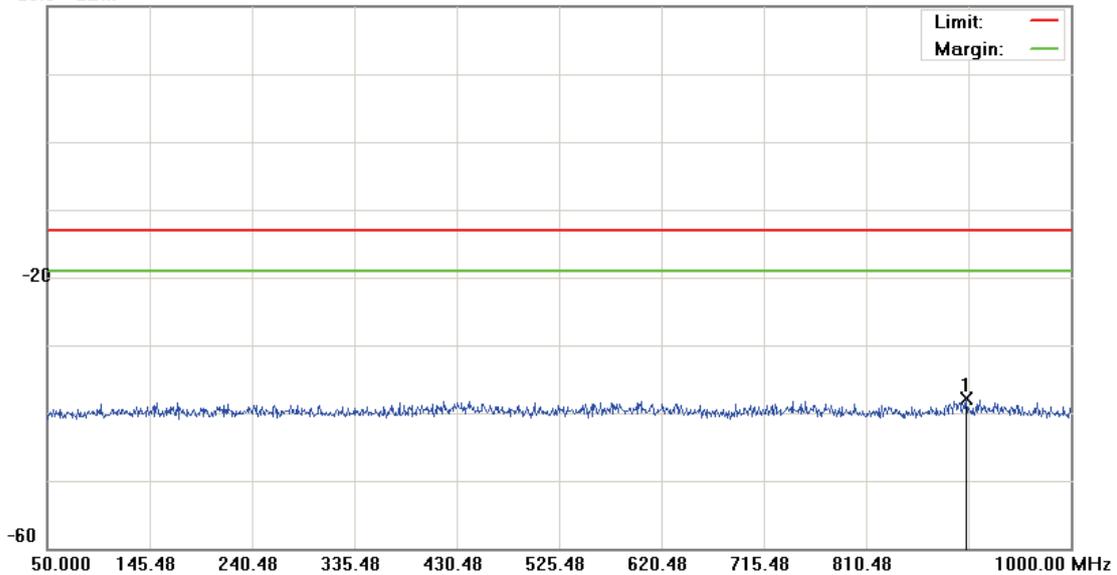
File :PC49100(CH810)

Data :#2

Date: 2010/4/22

Time: PM 01:07:37

20.0 dBm



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH810		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	903.1000	-51.22	13.24	-37.98	-13.00	-24.98	peak		

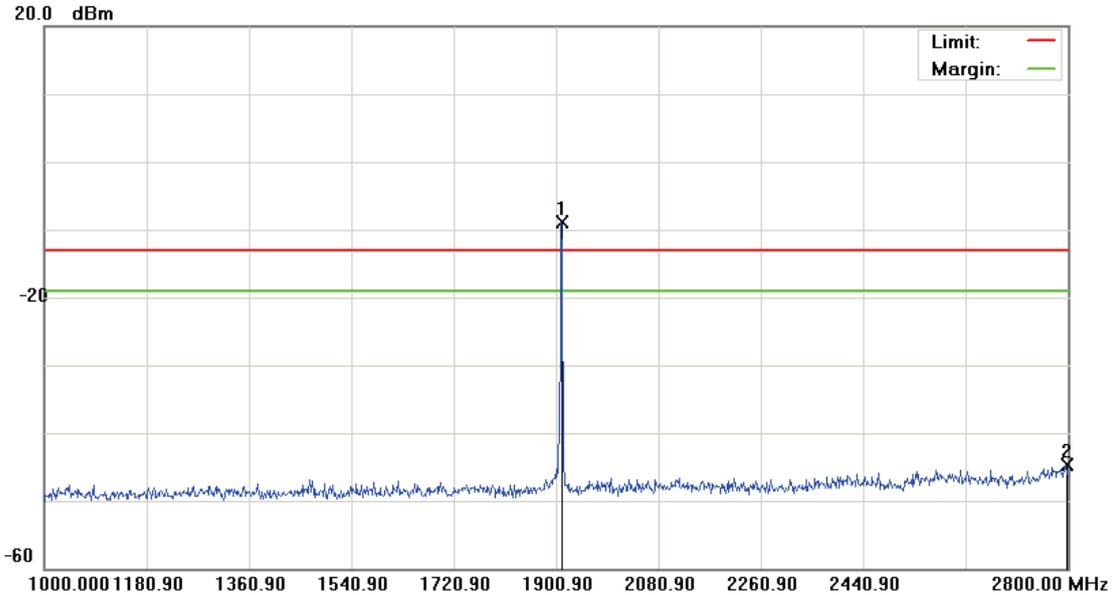
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File :PC49100(CH810)

Data :#3

Date: 2010/4/22

Time: PM 01:34:29



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH810		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	*	1909.900	-14.66	5.71	-8.95	-13.00	4.05	peak			TX
2		2797.300	-50.68	5.91	-44.77	-13.00	-31.77	peak			

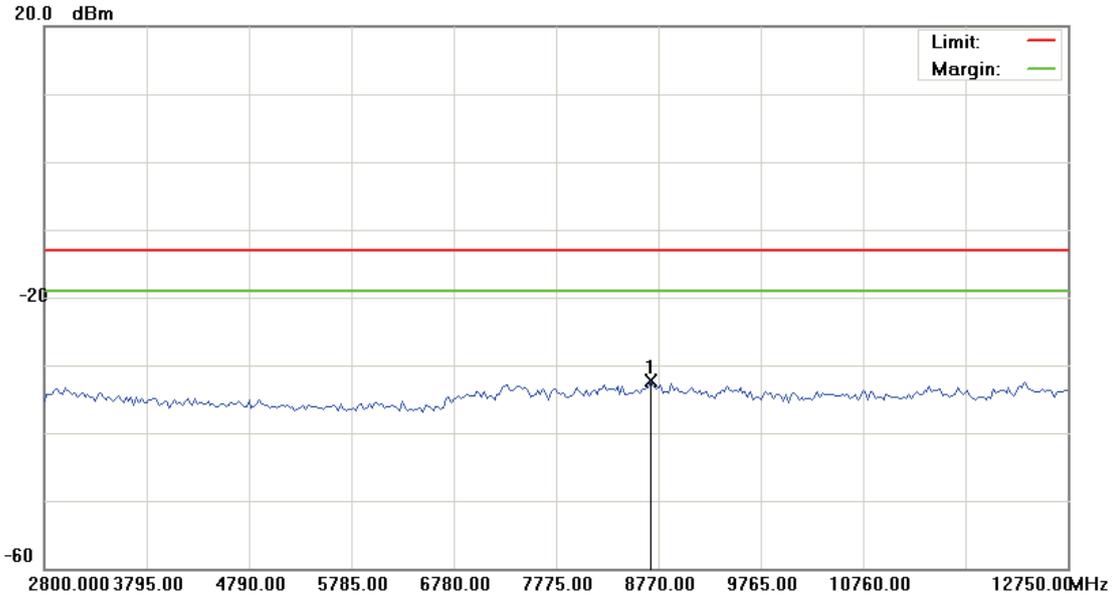
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File :PC49100(CH810)

Data :#4

Date: 2010/4/22

Time: PM 01:44:29



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH810		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	8695.375	-37.72	5.37	-32.35	-13.00	-19.35	peak		

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

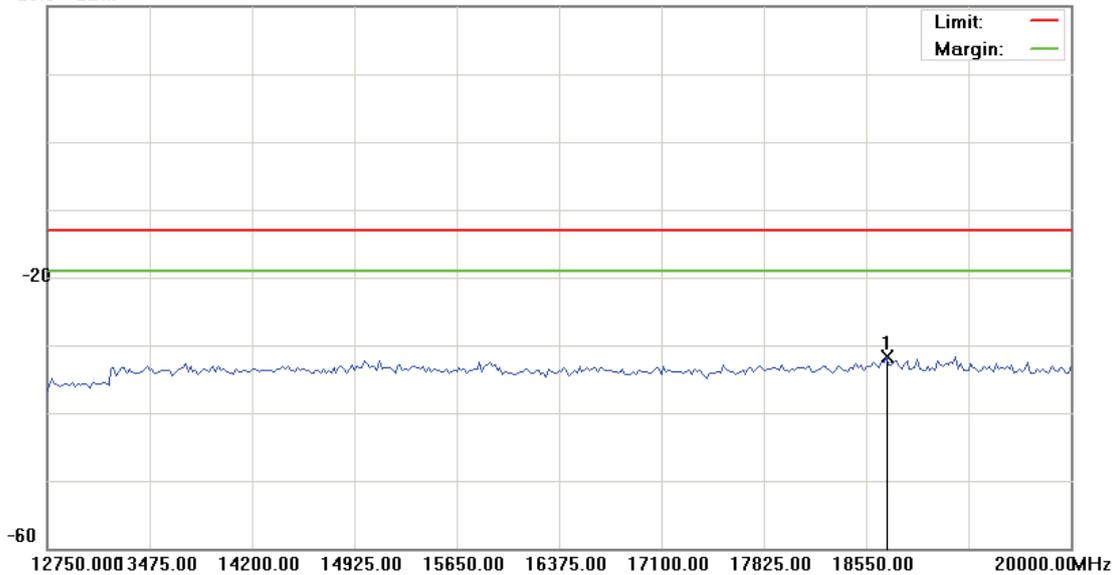
File :PC49100(CH810)

Data :#5

Date: 2010/4/22

Time: PM 01:45:29

20.0 dBm



Site: : RF Conducted	Polarization: <i>Conducted po</i>	Temperature: 26 °C
Limit: FCC Part 24 conducted(9k-12.75G)	Power:	Humidity: 55 %
EUT: Smartphone	Distance:	
M/N: PC49100		
Mode: 2		
Note: CH810		

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	18695.000	-38.74	7.07	-31.67	-13.00	-18.67	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.

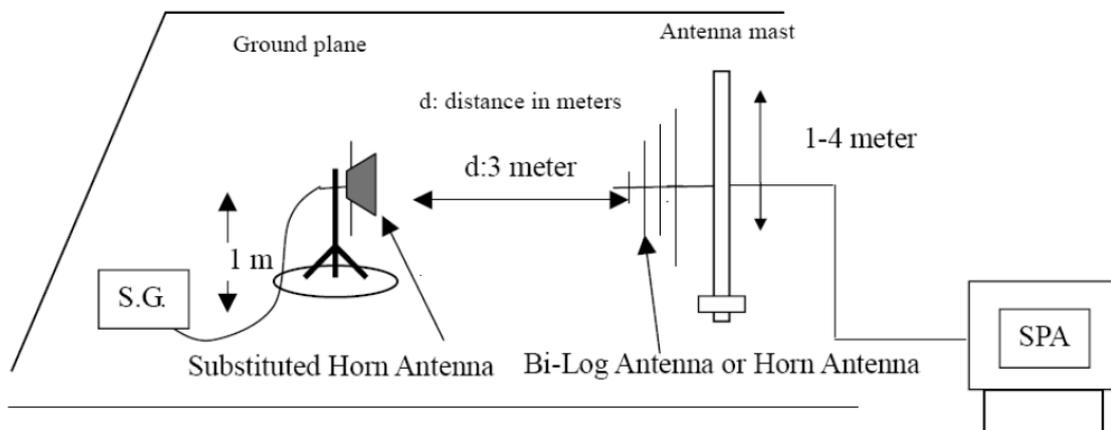
### 6.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/27/2009	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/20/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	07/01/2009	(1)
Pre Amplifier	Agilent	8447D	2944A10961	06/30/2009	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	06/23/2009	(2)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	TE01	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.

### 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

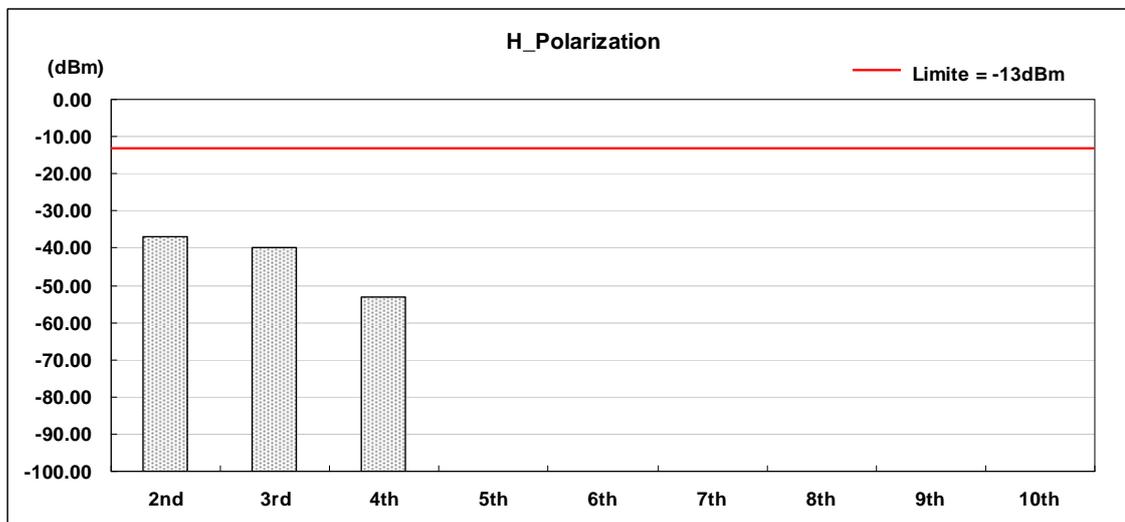
The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in **lie-down position (X axis)** and the worst case was recorded.

## 6.5. Uncertainty

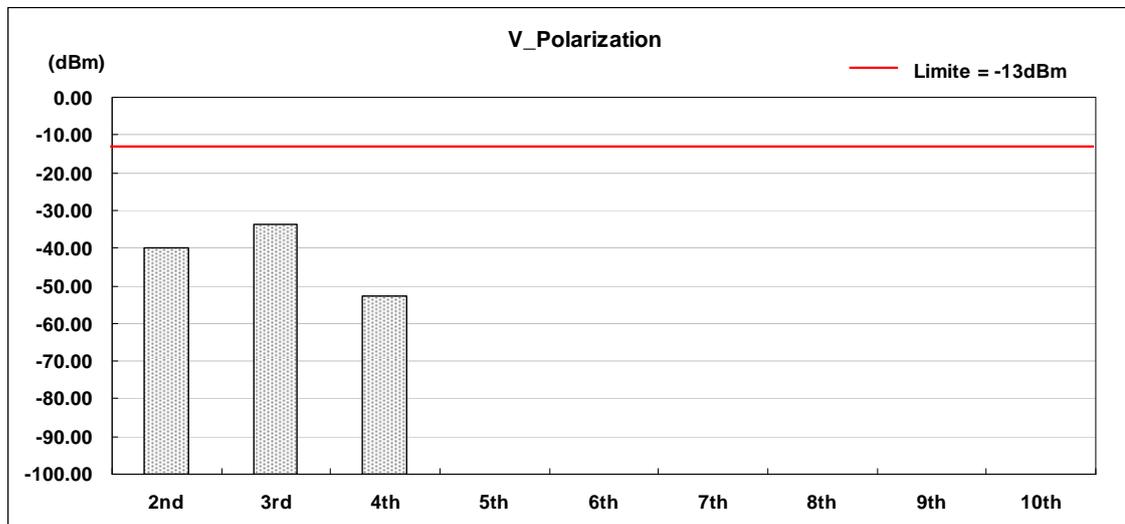
The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is  $\pm 3.072$  dB.

**6.6. Test Result**

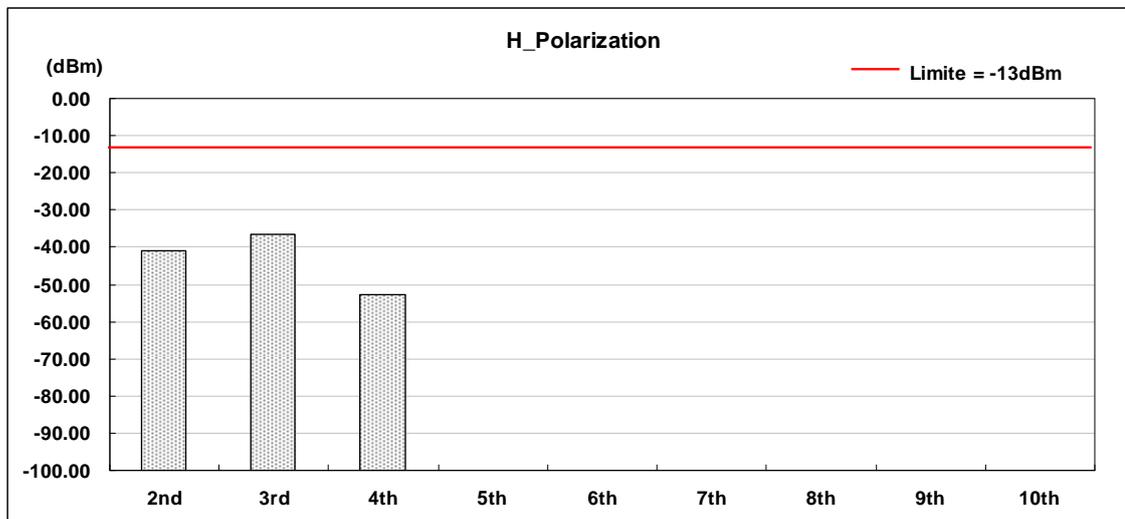
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 1: GSM 850 Link / CH128				<b>Polarization</b>	Horizontal	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit (dBm)	S.G Power (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dBm)	Peak Output Power (dBm)
2nd	1648.8	H	-13	-47.00	10.72	0.56	-36.84
3rd	2473.2	H	-13	-49.74	10.66	0.62	-39.70
4th	3297.6	H	-13	-63.14	10.78	0.74	-53.10
5th	4122.0	H	-13	*	*	*	*
6th	4946.4	H	-13	*	*	*	*
7th	5770.8	H	-13	*	*	*	*
8th	6595.2	H	-13	*	*	*	*
9th	7419.6	H	-13	*	*	*	*
10th	8244.0	H	-13	*	*	*	*



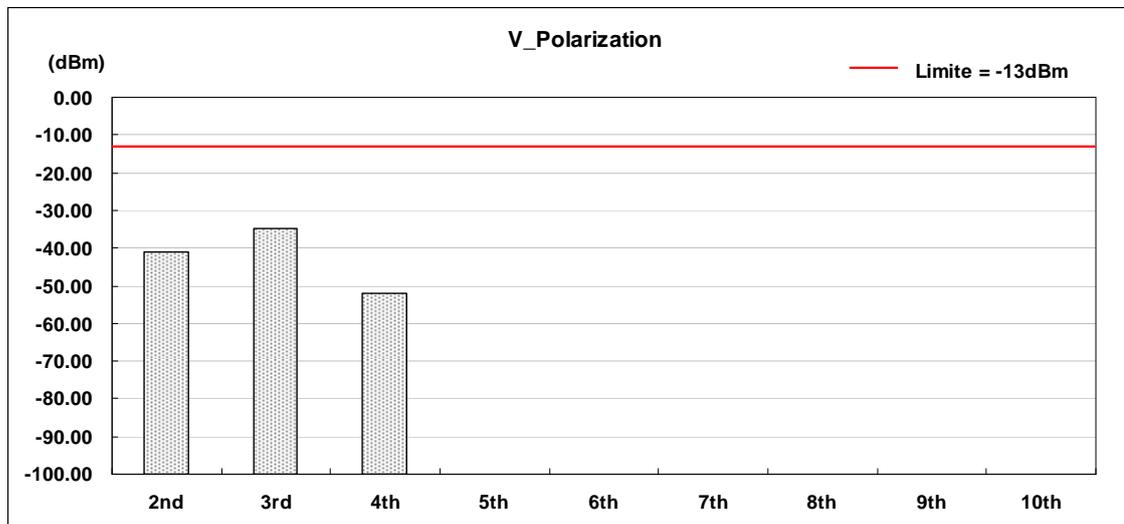
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 1: GSM 850 Link / CH128				<b>Polarization</b>	Vertical	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1648.8	V	-13	-50.01	10.72	0.56	-39.85
3rd	2473.2	V	-13	-43.83	10.66	0.62	-33.79
4th	3297.6	V	-13	-62.85	10.78	0.74	-52.81
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	*	*	*	*



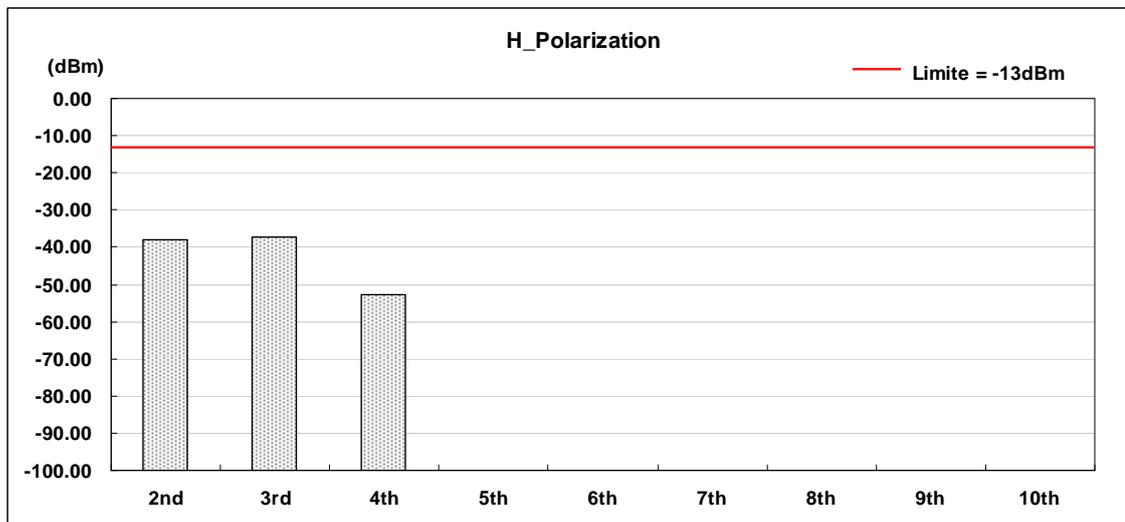
Product	Smartphone						
Test Item	Field Strength of Spurious Radiation						
Test Mode	Mode 1: GSM 850 Link / CH190				Polarization	Horizontal	
Date of Test	04/16/2010				Test Site	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1673.2	H	-13	-51.12	10.72	0.56	-40.96
3rd	2509.8	H	-13	-46.72	10.66	0.62	-36.68
4th	3346.4	H	-13	-62.71	10.78	0.74	-52.67
5th	4183.0	H	-13	*	*	*	*
6th	5019.6	H	-13	*	*	*	*
7th	5856.2	H	-13	*	*	*	*
8th	6692.8	H	-13	*	*	*	*
9th	7529.4	H	-13	*	*	*	*
10th	8366.0	H	-13	*	*	*	*



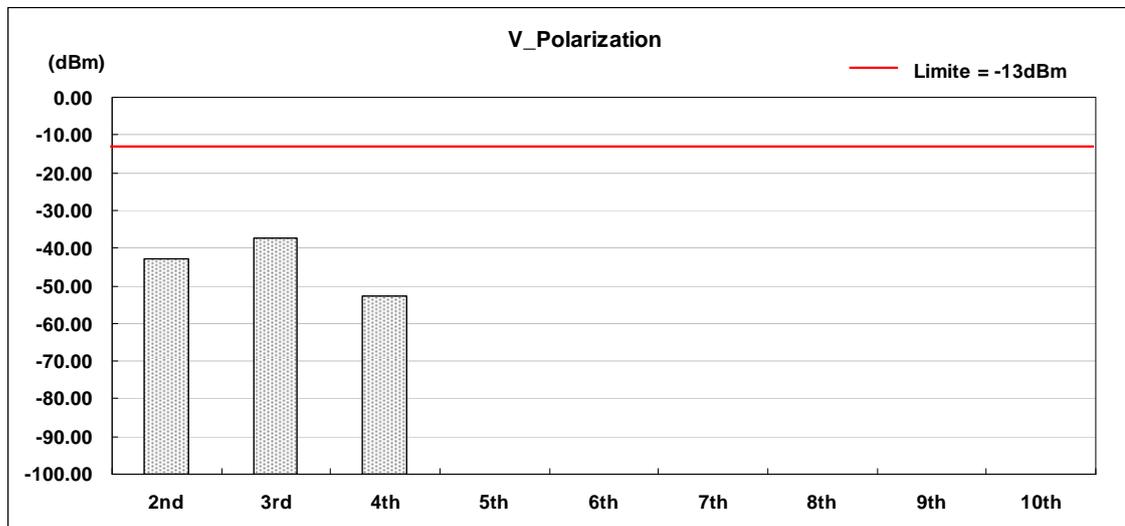
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 1: GSM 850 Link / CH190				<b>Polarization</b>	Vertical	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1673.2	V	-13	-51.34	10.72	0.56	-41.18
3rd	2509.8	V	-13	-44.73	10.66	0.62	-34.69
4th	3346.4	V	-13	-62.03	10.78	0.74	-51.99
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	*	*	*	*



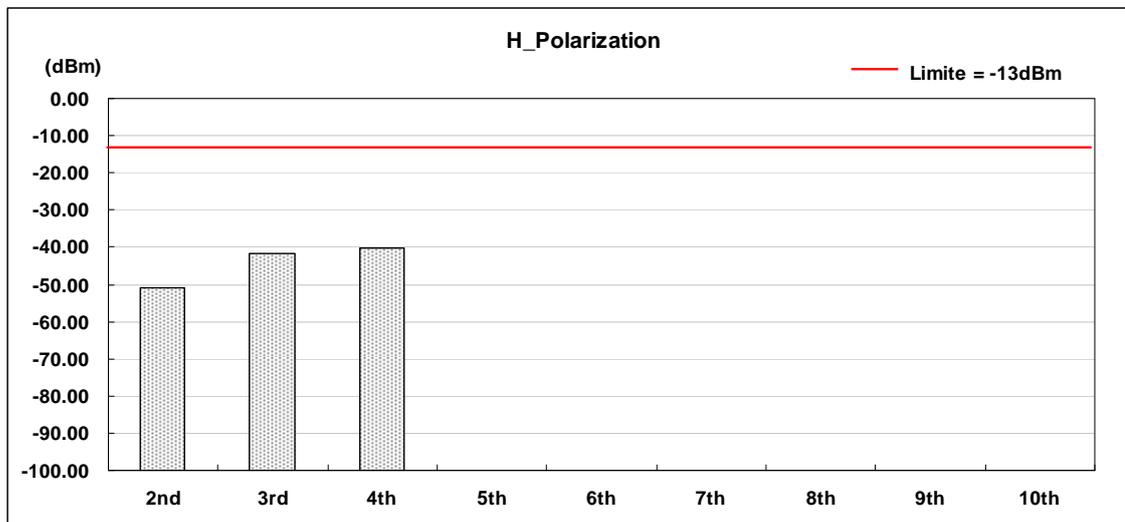
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 1: GSM 850 Link / CH251				<b>Polarization</b>	Horizontal	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1697.6	H	-13	-48.16	10.72	0.56	-38.00
3rd	2546.4	H	-13	-47.18	10.66	0.62	-37.14
4th	3395.2	H	-13	-62.69	10.78	0.74	-52.65
5th	4244.0	H	-13	*	*	*	*
6th	5092.8	H	-13	*	*	*	*
7th	5941.6	H	-13	*	*	*	*
8th	6790.4	H	-13	*	*	*	*
9th	7639.2	H	-13	*	*	*	*
10th	8488.0	H	-13	*	*	*	*



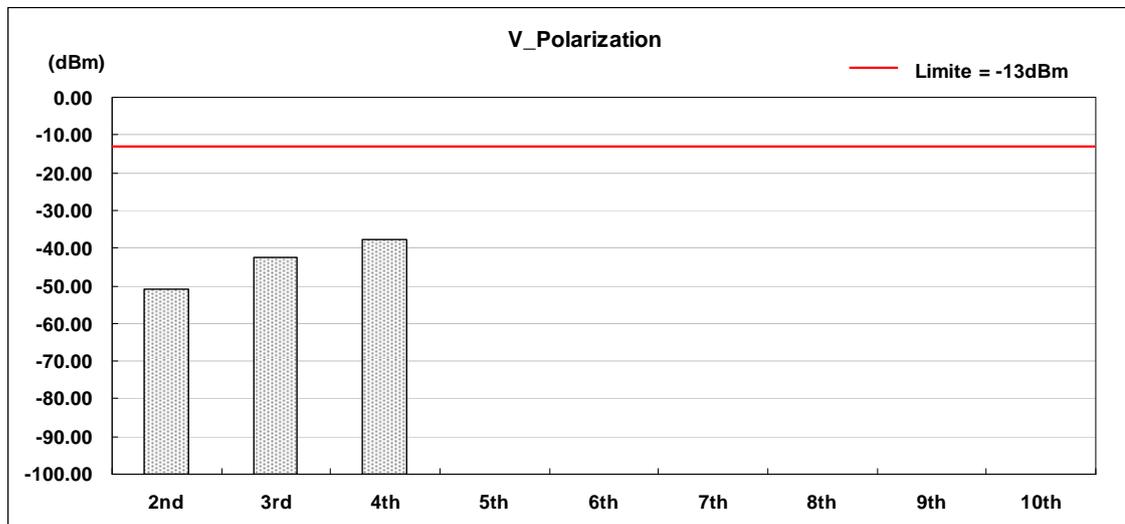
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 1: GSM 850 Link / CH251				<b>Polarization</b>	Vertical	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	1697.6	V	-13	-52.98	10.72	0.56	-42.82
3rd	2546.4	V	-13	-47.40	10.66	0.62	-37.36
4th	3395.2	V	-13	-62.88	10.78	0.74	-52.84
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	*	*	*	*



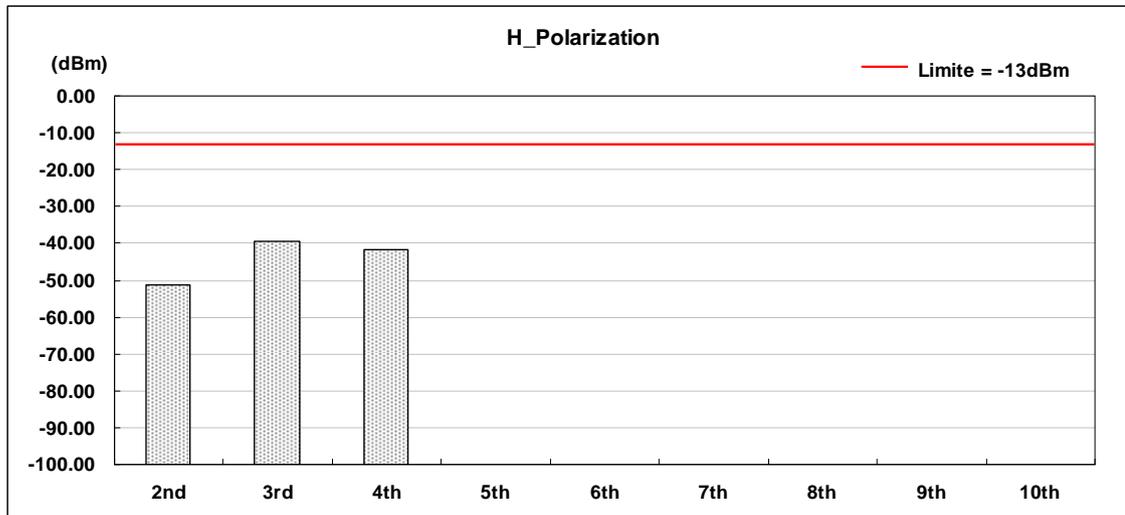
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 2: GSM 1900 Link / CH512				<b>Polarization</b>	Horizontal	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3700.4	H	-13	-60.93	10.72	0.56	-50.77
3rd	5550.6	H	-13	-51.62	10.66	0.62	-41.58
4th	7400.8	H	-13	-50.41	10.78	0.74	-40.37
5th	9251.0	H	-13	*	*	*	*
6th	11101.2	H	-13	*	*	*	*
7th	12951.4	H	-13	*	*	*	*
8th	14801.6	H	-13	*	*	*	*
9th	16651.8	H	-13	*	*	*	*
10th	18502.0	H	-13	*	*	*	*



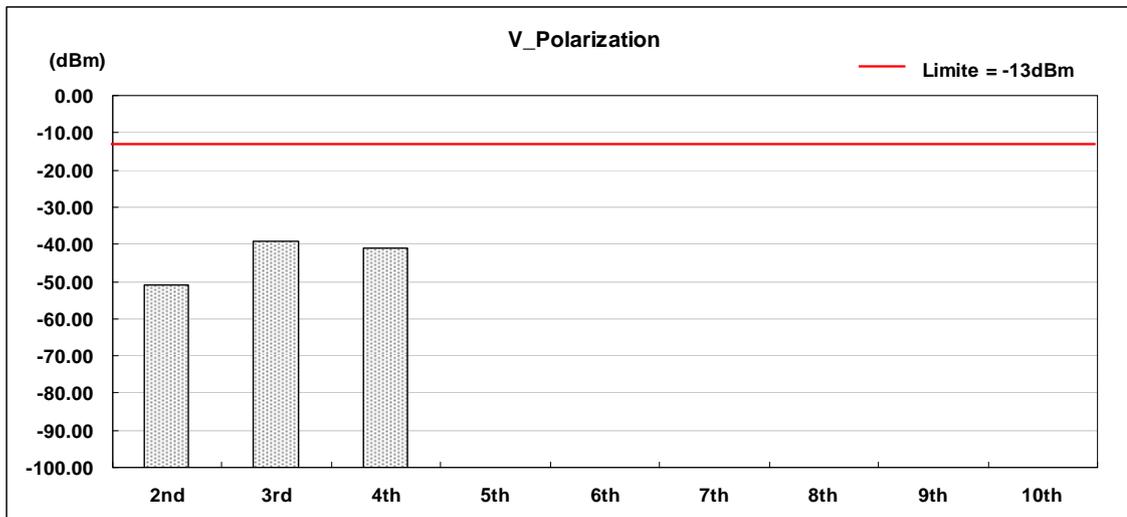
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 2: GSM 1900 Link / CH512				<b>Polarization</b>	Vertical	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3700.4	V	-13	-60.98	10.72	0.56	-50.82
3rd	5550.6	V	-13	-52.43	10.66	0.62	-42.39
4th	7400.8	V	-13	-47.70	10.78	0.74	-37.66
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	*	*	*	*



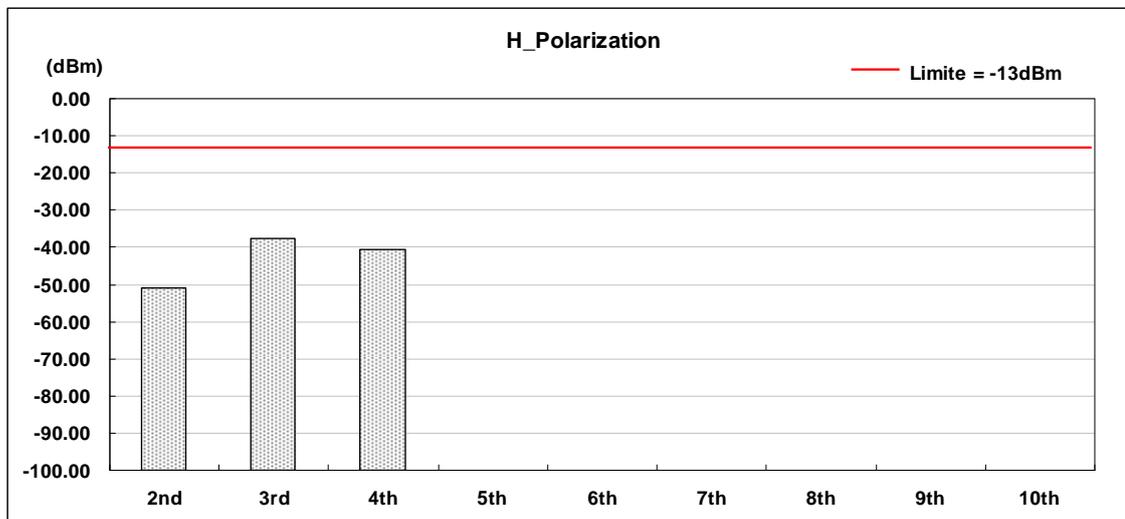
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 2: GSM 1900 Link / CH661				<b>Polarization</b>	Horizontal	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3760.0	H	-13	-61.44	10.72	0.56	-51.28
3rd	5640.0	H	-13	-49.38	10.66	0.62	-39.34
4th	7520.0	H	-13	-51.74	10.78	0.74	-41.70
5th	9400.0	H	-13	*	*	*	*
6th	11280.0	H	-13	*	*	*	*
7th	13160.0	H	-13	*	*	*	*
8th	15040.0	H	-13	*	*	*	*
9th	16920.0	H	-13	*	*	*	*
10th	18800.0	H	-13	*	*	*	*



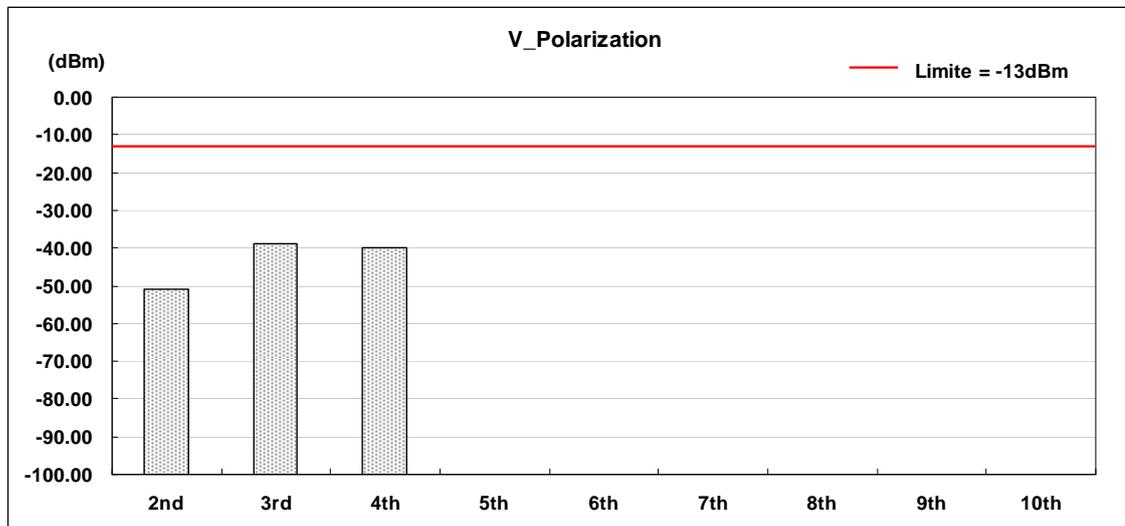
<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 2: GSM 1900 Link / CH661				<b>Polarization</b>	Vertical	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3760.0	V	-13	-61.26	10.72	0.56	-51.10
3rd	5640.0	V	-13	-49.08	10.66	0.62	-39.04
4th	7520.0	V	-13	-50.95	10.78	0.74	-40.91
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	*	*	*	*



<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 2: GSM 1900 Link / CH810				<b>Polarization</b>	Horizontal	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3819.6	H	-13	-61.10	10.72	0.56	-50.94
3rd	5729.4	H	-13	-47.64	10.66	0.62	-37.60
4th	7639.2	H	-13	-50.48	10.78	0.74	-40.44
5th	9549.0	H	-13	*	*	*	*
6th	11458.8	H	-13	*	*	*	*
7th	13368.6	H	-13	*	*	*	*
8th	15278.4	H	-13	*	*	*	*
9th	17188.2	H	-13	*	*	*	*
10th	19098.0	H	-13	*	*	*	*



<b>Product</b>	Smartphone						
<b>Test Item</b>	Field Strength of Spurious Radiation						
<b>Test Mode</b>	Mode 2: GSM 1900 Link / CH810				<b>Polarization</b>	Vertical	
<b>Date of Test</b>	04/16/2010				<b>Test Site</b>	TE01	
Harmonic	Frequency (MHz)	Polarization	FCC Max. Limit	S.G Power	Substitution Antenna Gain	Cable Loss	Peak Output Power
			(dBm)	(dBm)	(dBi)	(dBm)	(dBm)
2nd	3819.6	V	-13	-61.14	10.72	0.56	-50.98
3rd	5729.4	V	-13	-48.76	10.66	0.62	-38.72
4th	7639.2	V	-13	-50.14	10.78	0.74	-40.10
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	*	*	*	*



## 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.

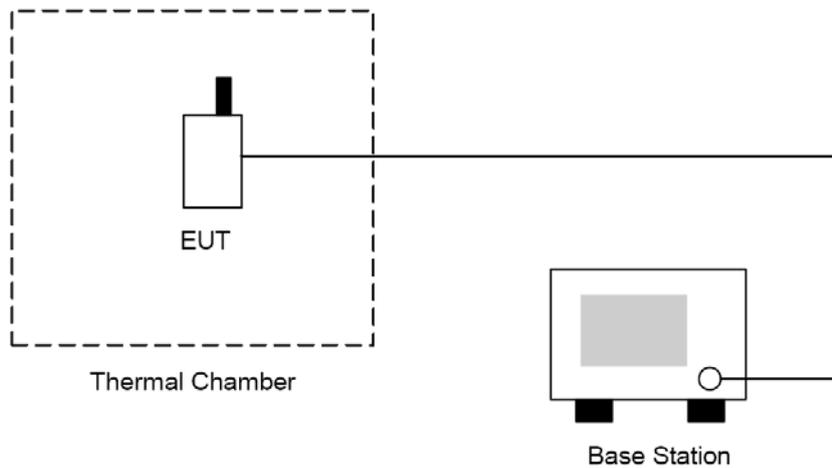
### 7.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Temperature & Humidity Chamber	GIANT FORCE	GHT-225-70-1	GF-94454-1	07/24/2009	(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 22 and 24:

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**

<b>Product</b>	Smartphone			
<b>Test Item</b>	Frequency Stability (Temperature Variation)			
<b>Test Mode</b>	Mode 1: GSM 850 Link			
<b>Date of Test</b>	04/22/2010		<b>Test Site</b>	TE02
<b>Temperature (°C)</b>	<b>Deviation (Hz)</b>	<b>Deviation (ppm)</b>	<b>Limit (ppm)</b>	<b>Result</b>
-30	23.54	0.028	±2.5	Pass
-20	24.39	0.029	±2.5	Pass
-10	19.47	0.023	±2.5	Pass
0	20.14	0.024	±2.5	Pass
10	20.46	0.024	±2.5	Pass
20	23.11	0.028	±2.5	Pass
30	19.68	0.024	±2.5	Pass
40	22.18	0.027	±2.5	Pass
50	20.98	0.025	±2.5	Pass

<b>Product</b>	Smartphone			
<b>Test Item</b>	Frequency Stability (Temperature Variation)			
<b>Test Mode</b>	Mode 2: GSM 1900 Link			
<b>Date of Test</b>	04/22/2010		<b>Test Site</b>	TE02
<b>Temperature (°C)</b>	<b>Deviation (Hz)</b>	<b>Deviation (ppm)</b>	<b>Limit (ppm)</b>	<b>Result</b>
-30	17.45	0.009	±2.5	Pass
-20	18.32	0.010	±2.5	Pass
-10	19.37	0.010	±2.5	Pass
0	19.47	0.010	±2.5	Pass
10	16.33	0.009	±2.5	Pass
20	18.94	0.010	±2.5	Pass
30	18.23	0.010	±2.5	Pass
40	19.69	0.010	±2.5	Pass
50	18.17	0.010	±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.

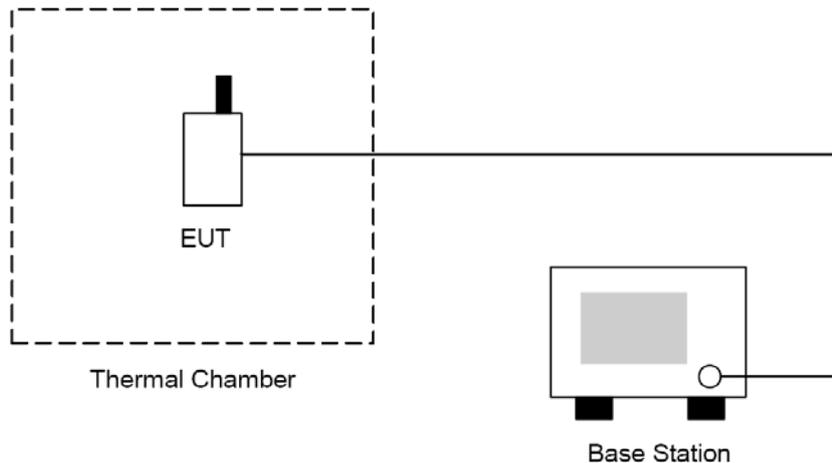
### 8.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Temperature & Humidity Chamber	GIANT FORCE	GHT-225-70-1	GF-94454-1	07/24/2009	(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  $25 \pm 5 \text{ }^\circ\text{C}$  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

<b>Product</b>	Smartphone				
<b>Test Item</b>	Frequency Stability (Voltage Variation)				
<b>Test Mode</b>	Mode 1: GSM 850 Link				
<b>Date of Test</b>	04/22/2010		<b>Test Site</b>	TE02	
<b>Level</b>	<b>Voltage [V]</b>	<b>Deviation [Hz]</b>	<b>Deviation [ppm]</b>	<b>Limit [ppm]</b>	<b>Result</b>
Battery full point	4.20	35.14	0.042	$\pm 2.5$	Pass
Normal	3.70	36.42	0.044	$\pm 2.5$	Pass
Battery cut-off point	3.40	35.17	0.042	$\pm 2.5$	Pass

<b>Product</b>	Smartphone				
<b>Test Item</b>	Frequency Stability (Voltage Variation)				
<b>Test Mode</b>	Mode 2: GSM 1900 Link				
<b>Date of Test</b>	04/22/2010		<b>Test Site</b>	TE02	
<b>Level</b>	<b>Voltage [V]</b>	<b>Deviation [Hz]</b>	<b>Deviation [ppm]</b>	<b>Limit [ppm]</b>	<b>Result</b>
Battery full point	4.20	29.45	0.016	$\pm 2.5$	Pass
Normal	3.70	29.39	0.016	$\pm 2.5$	Pass
Battery cut-off point	3.40	28.51	0.015	$\pm 2.5$	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

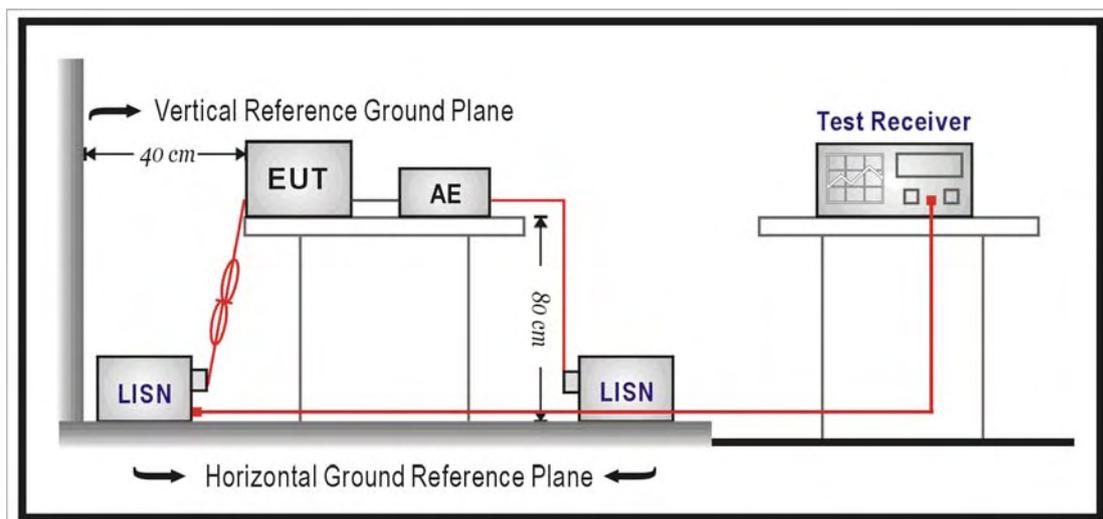
### 9.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Test Receiver	R&S	ESCI	100722	10/08/2009	(1)
LISN	EMCO	3816/2 SH	00060110	06/05/2009	(1)
LISN	EMCO	3816/2 SH	00060111	06/29/2009	(1)
Transient Limiter	ELECTRO-METRICS	EM-7600	777	09/22/2009	(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

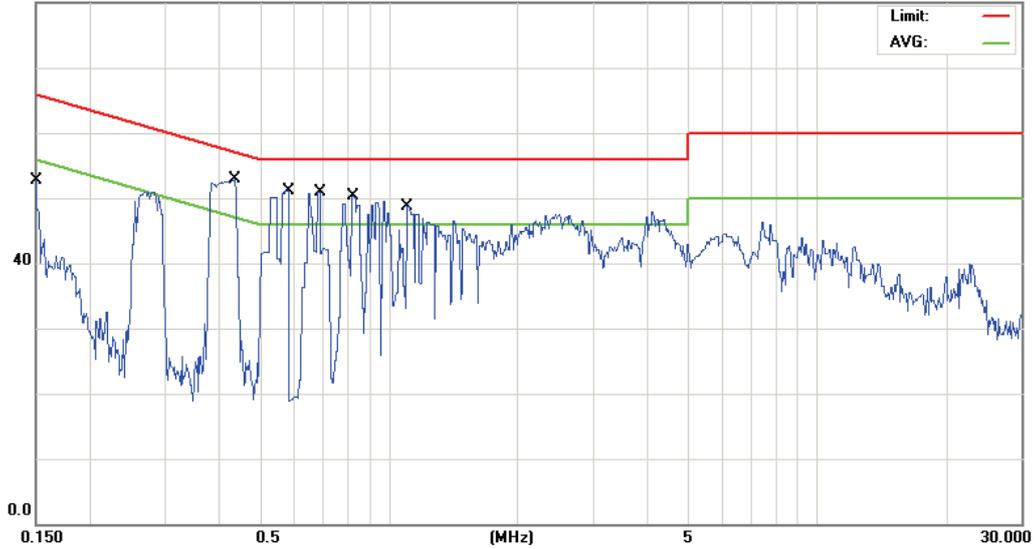
Product	Smartphone		
Test Item	AC Power Conducted Emissions		
Test Mode	Mode 1: GSM 850 Link Mode 2: GSM 1900 Link		
Date of Test	04/22/2010	Test Site	TE02

File :10-0108-SEO(GSM850+BT+WI Data :#1

Date: 2010/4/22

Time: 下午 03:07:06

80.0 dBuV



Site : Conduction

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PC49100

Mode: 1

Note: AC Adapter #1

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1500	39.50	10.11	49.61	65.99	-16.38	QP	
2	0.1500	17.80	10.11	27.91	55.99	-28.08	AVG	
3	0.4363	37.00	9.99	46.99	57.13	-10.14	QP	
4	0.4363	12.30	9.99	22.29	47.13	-24.84	AVG	
5	0.5810	35.20	9.92	45.12	56.00	-10.88	QP	
6	0.5810	11.30	9.92	21.22	46.00	-24.78	AVG	
7 *	0.6889	36.10	9.87	45.97	56.00	-10.03	QP	
8	0.6889	13.70	9.87	23.57	46.00	-22.43	AVG	
9	0.8240	34.20	9.83	44.03	56.00	-11.97	QP	
10	0.8240	11.50	9.83	21.33	46.00	-24.67	AVG	
11	1.1119	32.20	9.71	41.91	56.00	-14.09	QP	
12	1.1119	9.70	9.71	19.41	46.00	-26.59	AVG	

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

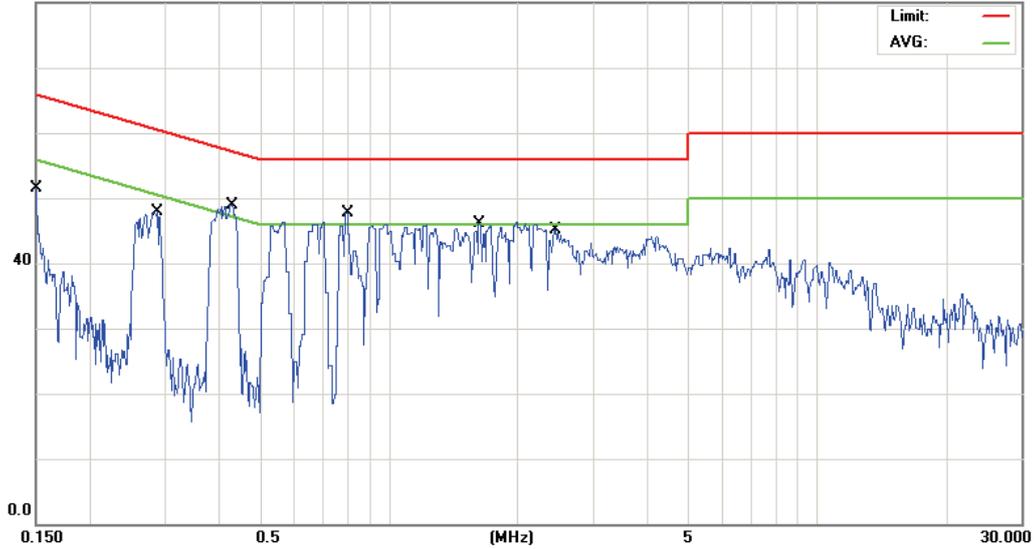
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File :10-0108-SEO(GSM850+BT+WI Data :#2

Date: 2010/4/22

Time: 下午 03:11:08

80.0 dBuV



Site : Conduction

 Phase: **N**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PC49100

Mode: 1

Note: AC Adapter #1

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1500	38.30	10.10	48.40	65.99	-17.59	QP	
2	0.1500	17.50	10.10	27.60	55.99	-28.39	AVG	
3	0.2872	33.20	10.04	43.24	60.60	-17.36	QP	
4	0.2872	17.50	10.04	27.54	50.60	-23.06	AVG	
5 *	0.4300	35.00	9.99	44.99	57.25	-12.26	QP	
6	0.4300	14.90	9.99	24.89	47.25	-22.36	AVG	
7	0.7970	32.70	9.83	42.53	56.00	-13.47	QP	
8	0.7970	14.40	9.83	24.23	46.00	-21.77	AVG	
9	1.6250	29.10	9.66	38.76	56.00	-17.24	QP	
10	1.6250	9.30	9.66	18.96	46.00	-27.04	AVG	
11	2.4350	28.30	9.76	38.06	56.00	-17.94	QP	
12	2.4350	11.60	9.76	21.36	46.00	-24.64	AVG	

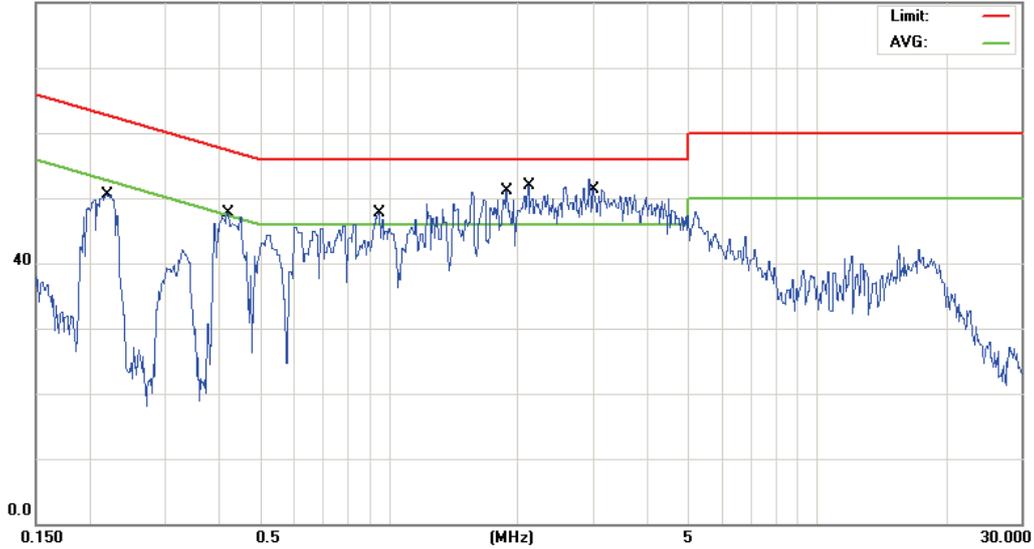
\*:Maximum data x:Over limit !:over margin

●Reference Only

File :10-0108-SEO(PCS1900+BT+W) Data :#1

Date: 2010/4/22

Time: 下午 03:46:36

**80.0 dBuV**


Site : Conduction

 Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 55 %

EUT: Smartphone

M/N: PC49100

Mode: 2

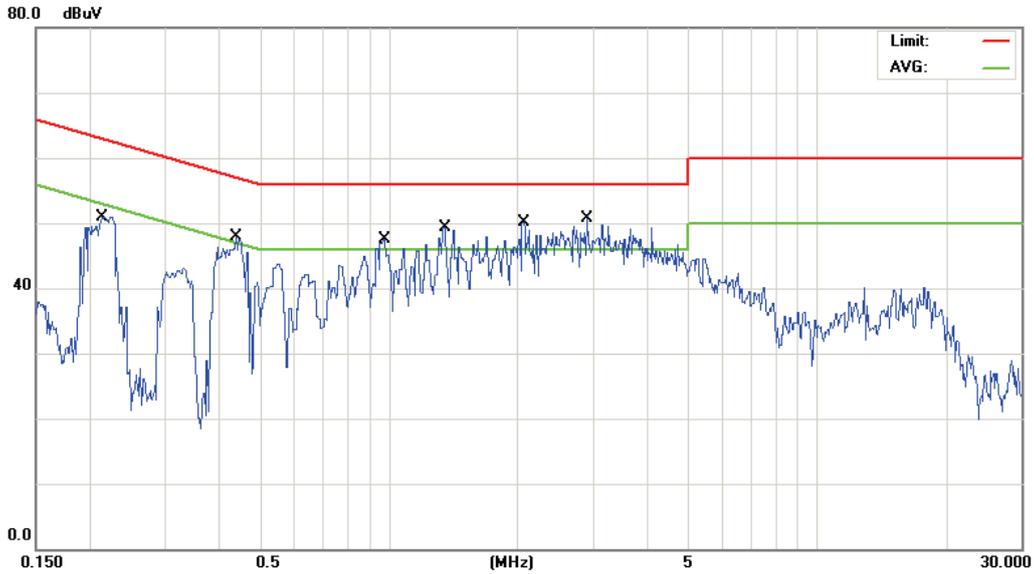
Note: AC Adapter #1

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.2186	37.80	10.07	47.87	62.87	-15.00	QP	
2	0.2186	26.70	10.07	36.77	52.87	-16.10	AVG	
3	0.4195	34.00	9.99	43.99	57.46	-13.47	QP	
4	0.4195	23.20	9.99	33.19	47.46	-14.27	AVG	
5	0.9500	32.00	9.78	41.78	56.00	-14.22	QP	
6	0.9500	20.50	9.78	30.28	46.00	-15.72	AVG	
7 *	1.8860	35.50	9.70	45.20	56.00	-10.80	QP	
8	1.8860	23.90	9.70	33.60	46.00	-12.40	AVG	
9	2.1110	34.90	9.72	44.62	56.00	-11.38	QP	
10	2.1110	24.00	9.72	33.72	46.00	-12.28	AVG	
11	3.0020	34.00	9.84	43.84	56.00	-12.16	QP	
12	3.0020	24.50	9.84	34.34	46.00	-11.66	AVG	

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

●Reference Only

File :10-0108-SEO(PCS1900+BT+W) Data :#2 Date: 2010/4/22 Time: 下午 03:49:59



Site : Conduction Phase: **N** Temperature: 26 °C  
 Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55 %  
 EUT: Smartphone  
 M/N: PC49100  
 Mode: 2  
 Note: AC Adapter #1

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.2144	37.10	10.06	47.16	63.03	-15.87	QP	
2	0.2144	26.70	10.06	36.76	53.03	-16.27	AVG	
3	0.4391	32.40	9.98	42.38	57.08	-14.70	QP	
4	0.4391	21.60	9.98	31.58	47.08	-15.50	AVG	
5	0.9770	32.20	9.76	41.96	56.00	-14.04	QP	
6	0.9770	21.00	9.76	30.76	46.00	-15.24	AVG	
7	1.3460	31.80	9.65	41.45	56.00	-14.55	QP	
8	1.3460	19.30	9.65	28.95	46.00	-17.05	AVG	
9 *	2.0570	33.80	9.71	43.51	56.00	-12.49	QP	
10	2.0570	22.30	9.71	32.01	46.00	-13.99	AVG	
11	2.8940	32.50	9.83	42.33	56.00	-13.67	QP	
12	2.8940	22.50	9.83	32.33	46.00	-13.67	AVG	

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

●Reference Only