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	:	PC49120
Test Specification	:	FCC 47 CFR PART 22H: Oct, 2009 FCC 47 CFR PART 24E: Oct, 2009 ANSI/TIA-603-2007
Issue Date	:	Jul. 06, 2010

Issue by

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

Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jul. 06, 2010	Initial Issue	

Verification of Compliance

Issued Date: 2010/07/06

Product Type	:	Smartphone
Applicant	:	HTC Corporation
Address	:	No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan
Trade Name	:	HTC
Model Number	:	PC49120
FCC ID	:	NM8PC49120
EUT Rated Voltage	:	DC 5.0V, 1.0A
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 22H: Oct, 2009 FCC 47 CFR PART 24E: Oct, 2009 ANSI/TIA-603-2007
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: 2003 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 22H, Part 24E.
The test results of this report relate only to the tested sample identified in this report.

Approved By	:		Reviewed By	:	
(Manager)		(Miller Lee)	(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		PC49120			
FCC ID		NM8PC49120			
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
	WCDMA/ HSDPA/ HSUPA	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		II	1852.4 ~ 1907.6	1932.4 ~ 1987.6	QPSK
		V	826.4 ~ 846.6	871.4 ~ 891.6	QPSK
Channel Control		Auto			
Type of Antenna		PIFA Antenan			
Antenna Gain (dBi)		GSM/GPRS/EGPRS 850: -2.0 dBi GSM/GPRS/EGPRS 1900: 0.7 dBi WCDMA/ HSDPA/ HSUPA Band II: 0.7 dBi WCDMA/ HSDPA/ HSUPA Band V: -2.0 dBi			
Max. RF Output power		GSM/GPRS 850: 33.37 dBm / 2.173 W, EGPRS 850: 26.31 dBm / 0.427 W GSM/GPRS 1900: 30.14 dBm / 1.032 W, EGPRS 1900: 25.68 dBm / 0.370 W WCDMA/ HSDPA/ HSUPA Band II: 23.65 dBm / 0.232 W WCDMA/ HSDPA/ HSUPA Band V: 26.93 dBm / 0.493 W			
Max. ERP/EIRP		GSM/GPRS 850: 28.03 dBm / 0.635 W, EGPRS 850: 25.85 dBm / 0.385 W GSM/GPRS 1900: 31.86 dBm / 1.535 W, EGPRS 1900: 31.36 dBm / 1.368 W WCDMA/ HSDPA/ HSUPA Band II: 26.37 dBm / 0.434 W WCDMA/ HSDPA/ HSUPA Band V: 21.15 dBm / 0.130 W			
Emission Designator		GSM/GPRS 850: 246KGXW, EGPRS 850: 247KG7W GSM/GPRS 1900: 244KGXW, EGPRS 1900: 246KG7W WCDMA/ HSDPA/ HSUPA Band II: 4M17F9W WCDMA/ HSDPA/ HSUPA Band V: 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: GSM 850 Link
Mode 2: GSM 1900 Link
Mode 3: WCDMA Band II Link
Mode 4: WCDMA Band V Link
Mode 5: EGPRS 850 Link
Mode 6: 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

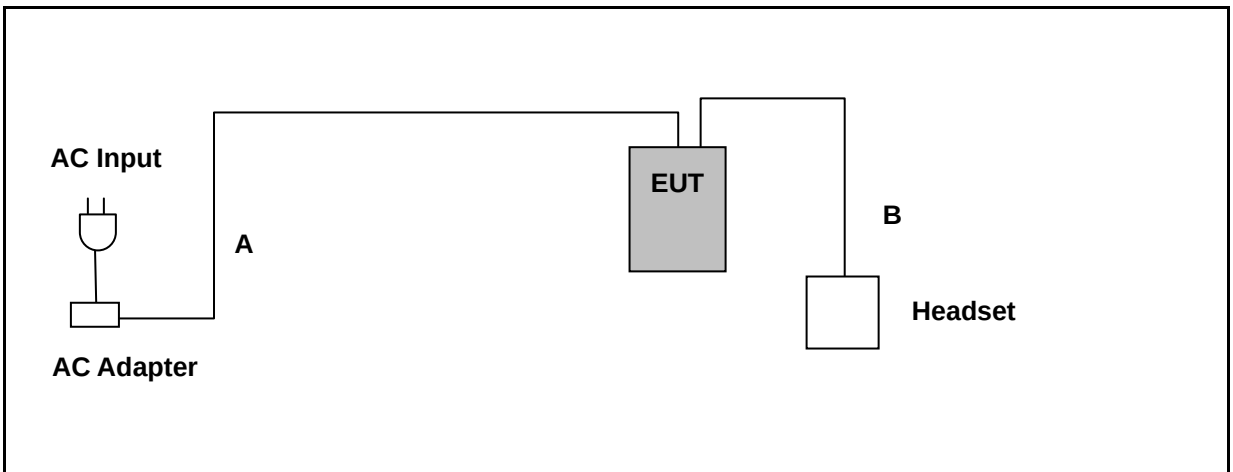
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

	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



	Signal Cable Type	Signal Cable Description
A	Power Cable	Shielded, 1.2 m
B	Headset Cable	Non-Shielded, 1.2 m

1.5. Test Site Environment

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

1.6. Summary of Test Result

Description	FCC Rule	IC Rule	Limit	Result
Conducted Output Power	§2.1046	N/A	N/A	Pass
Effective Radiated Power	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	< 7 Watts for FCC (<6.3 Watts for IC)	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)	< $43+10\log_{10}$(P[Watts])	Pass
Conducted Emission	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	< $43+10\log_{10}$(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)	< $43+10\log_{10}$(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

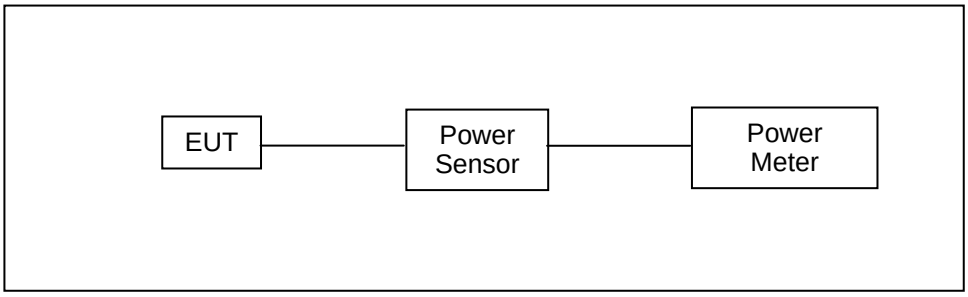
2.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Single Channel PK Power Sensor	Agilent	N1911A	MY15101619	07/14/2009	(1)
Wideband Power Meter	Agilent	N1921A	MY45241957	07/25/2009	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) 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					
Date of Test	06/22/2010			**Test Site**	TE02	
Bands	**Data Rate**	**Frequency (MHz)**	**Average Power**		**Peak Power**	
			(dBm)	**(W)**	**(dBm)**	**(W)**
GSM 850	-----	824.2	24.12	0.258	**33.37**	**2.173**
		836.4	23.93	0.247	33.14	2.061
		848.8	23.65	0.232	32.86	1.932
GRRS 850	4Down1Up	824.2	24.11	0.258	33.35	2.163
		836.4	23.91	0.246	33.14	2.061
		848.8	23.62	0.230	32.88	1.941
	3Down2Up	824.2	25.52	0.356	31.80	1.514
		836.4	25.31	0.340	31.56	1.432
		848.8	25.01	0.317	31.29	1.346
EGPRS 850	4Down1Up	824.2	17.07	0.051	26.31	0.428
		836.4	16.85	0.048	26.09	0.406
		848.8	16.60	0.046	25.83	0.383
	3Down2Up	824.2	20.02	0.100	26.28	0.425
		836.4	19.83	0.096	26.08	0.406
		848.8	19.54	0.090	25.81	0.381
GSM 1900	-----	1850.20	20.92	0.124	30.14	1.033
		1880.00	20.58	0.114	29.78	0.951
		1909.80	20.37	0.109	29.57	0.906
GRRS 1900	4Down1Up	1850.20	20.90	0.123	30.11	1.026
		1880.00	20.59	0.115	29.84	0.964
		1909.80	20.38	0.109	29.60	0.912
	3Down2Up	1850.20	23.36	0.217	29.65	0.923
		1880.00	23.06	0.202	29.32	0.855
		1909.80	22.79	0.190	29.07	0.807
EGPRS 1900	4Down1Up	1850.20	16.43	0.044	25.68	0.370
		1880.00	16.11	0.041	25.31	0.340
		1909.80	15.89	0.039	25.14	0.327
	3Down2Up	1850.20	18.90	0.078	25.14	0.327
		1880.00	18.56	0.072	24.82	0.303
		1909.80	18.34	0.068	24.62	0.290

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

Product	Smartphone					
Test Item	RF Output Power					
Date of Test	06/22/2010			Test Site	TE02	
Bands	Sub-Test	Frequency (MHz)	Average Power		Peak Power	
			(dBm)	(W)	(dBm)	(W)
WCDMA Band II	-----	1852.4	23.30	0.214	**23.65**	**0.232**
		1880.0	22.89	0.195	23.24	0.211
		1907.6	23.03	0.201	23.38	0.218
HSDPA Band II	1	1852.4	23.04	0.201	23.39	0.218
		1880.0	22.72	0.187	23.07	0.203
		1907.6	22.82	0.191	23.17	0.207
	2	1852.4	23.09	0.204	23.44	0.221
		1880.0	22.69	0.186	23.04	0.201
		1907.6	22.84	0.192	23.19	0.208
	3	1852.4	22.54	0.179	22.89	0.195
		1880.0	22.24	0.167	22.59	0.182
		1907.6	22.38	0.173	22.73	0.187
	4	1852.4	22.51	0.178	22.86	0.193
		1880.0	22.25	0.168	22.60	0.182
		1907.6	22.40	0.174	22.75	0.188
WCDMA Band V	-----	826.4	23.43	0.220	**26.93**	**0.493**
		836.4	23.31	0.214	26.81	0.480
		846.4	23.40	0.219	26.90	0.490
HSDPA Band V	1	826.4	23.17	0.207	26.67	0.465
		836.4	23.01	0.200	26.51	0.448
		846.4	23.12	0.205	26.62	0.459
	2	826.4	23.15	0.207	26.65	0.462
		836.4	22.96	0.198	26.46	0.443
		846.4	23.17	0.207	26.67	0.465
	3	826.4	22.62	0.183	26.12	0.409
		836.4	22.60	0.182	26.10	0.407
		846.4	22.68	0.185	26.18	0.415
	4	826.4	22.63	0.183	26.13	0.410
		836.4	22.55	0.180	26.05	0.403
		846.4	22.68	0.185	26.18	0.415

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.

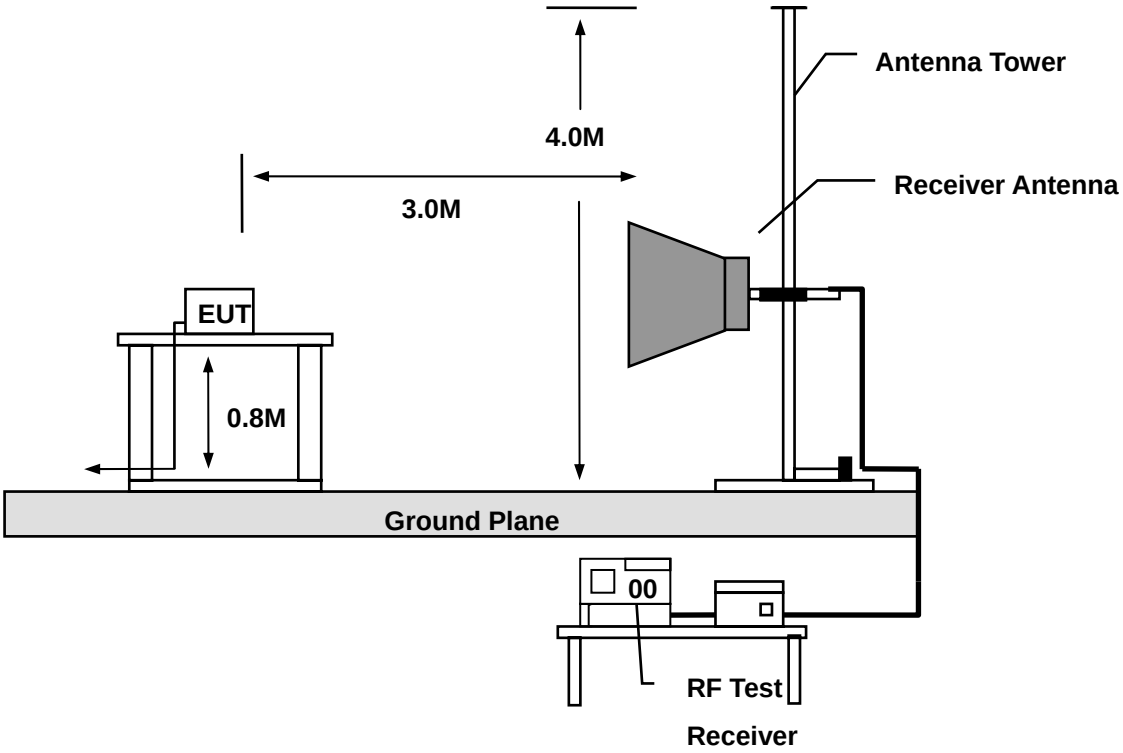
3.2. Test Instruments

3 Meter Chamber					
Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**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)
Bi-log Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	07/02/2009	(2)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	888001	08/06/2009	(1)

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

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

3.3. Setup



3.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)
FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.
P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)
The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:
(a) For fundamental frequency : Transmitter Output < +30dBm
(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

3.5. Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is ± 3.072 dB.

3.6. Test Result

Product	Smartphone						
Test Item	ERP/EIRP						
Test Mode	Mode 1: GSM 850 Link						
Date of Test	07/05/2010				Test Site	TE01	
Bands	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction factor (dBm)	ERP		Limit
					(dBm)	(W)	
GSM 850	824.2	H	19.36	8.67	**28.03**	**0.635**	< 7W
		V	17.01	7.84	24.85	0.305	< 7W
	836.4	H	16.83	10.27	27.10	0.513	< 7W
		V	15.52	7.96	23.48	0.223	< 7W
	848.8	H	14.55	11.63	26.18	0.415	< 7W
		V	15.25	7.86	23.11	0.205	< 7W
EGPRS 850	824.2	H	17.20	8.65	**25.85**	**0.385**	< 7W
		V	14.44	7.84	22.28	0.169	< 7W
	836.4	H	14.60	10.25	24.85	0.305	< 7W
		V	13.20	7.96	21.16	0.131	< 7W
	848.8	H	13.09	11.63	24.72	0.296	< 7W
		V	12.68	7.87	20.55	0.114	< 7W

Product	Smartphone						
Test Item	ERP/EIRP						
Test Mode	Mode 2: GSM 1900 Link						
Date of Test	07/05/2010				Test Site	TE01	
Bands	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction factor (dBm)	EIRP		Limit
					(dBm)	(W)	
GSM 1900	1850.20	H	17.40	10.42	27.82	0.605	< 2W
		V	23.60	8.26	**31.86**	**1.535**	< 2W
	1880.00	H	16.90	10.44	27.34	0.542	< 2W
		V	22.23	8.50	30.73	1.183	< 2W
	1909.80	H	17.72	10.43	28.15	0.653	< 2W
		V	20.70	8.73	29.43	0.877	< 2W
EGPRS 1900	1850.20	H	16.85	10.42	27.27	0.533	< 2W
		V	23.10	8.26	**31.36**	**1.368**	< 2W
	1880.00	H	16.33	10.44	26.77	0.475	< 2W
		V	21.88	8.50	30.38	1.091	< 2W
	1909.80	H	17.10	10.44	27.54	0.568	< 2W
		V	19.96	8.73	28.69	0.740	< 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.

Product	Smartphone						
Test Item	ERP/EIRP						
Test Mode	Mode 3: WCDMA Band II Link						
Date of Test	07/05/2010			Test Site	TE01		
Bands	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction factor (dBm)	EIRP		Limit
					(dBm)	(W)	
WCDMA Band II	1852.4	H	11.93	10.42	22.35	0.172	< 2W
		V	18.10	8.27	**26.37**	**0.434**	< 2W
	1880.0	H	11.06	10.43	21.49	0.141	< 2W
		V	17.66	8.49	26.15	0.412	< 2W
	1907.6	H	11.06	10.44	21.50	0.141	< 2W
		V	15.74	8.69	24.43	0.277	< 2W

Product	Smartphone						
Test Item	ERP/EIRP						
Test Mode	Mode 4: WCDMA Band V Link						
Date of Test	07/05/2010			Test Site	TE01		
Bands	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction factor (dBm)	ERP		Limit
					(dBm)	(W)	
WCDMA Band V	826.4	H	11.96	9.07	21.03	0.127	< 7W
		V	10.84	7.88	18.72	0.074	< 7W
	836.4	H	9.89	10.11	20.00	0.100	< 7W
		V	8.47	7.94	16.41	0.044	< 7W
	846.4	H	9.87	11.28	**21.15**	**0.130**	< 7W
		V	9.94	7.92	17.86	0.061	< 7W

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 + 10log(P) dB.

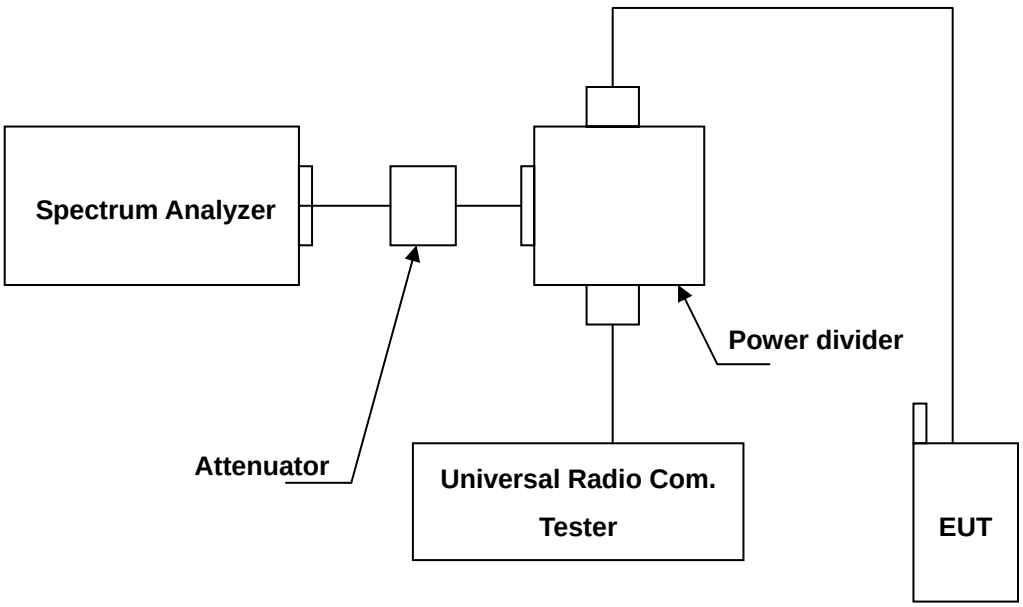
4.2. Test Instruments

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: (1) Calibration period 1 year. (2) 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 ± 10Hz

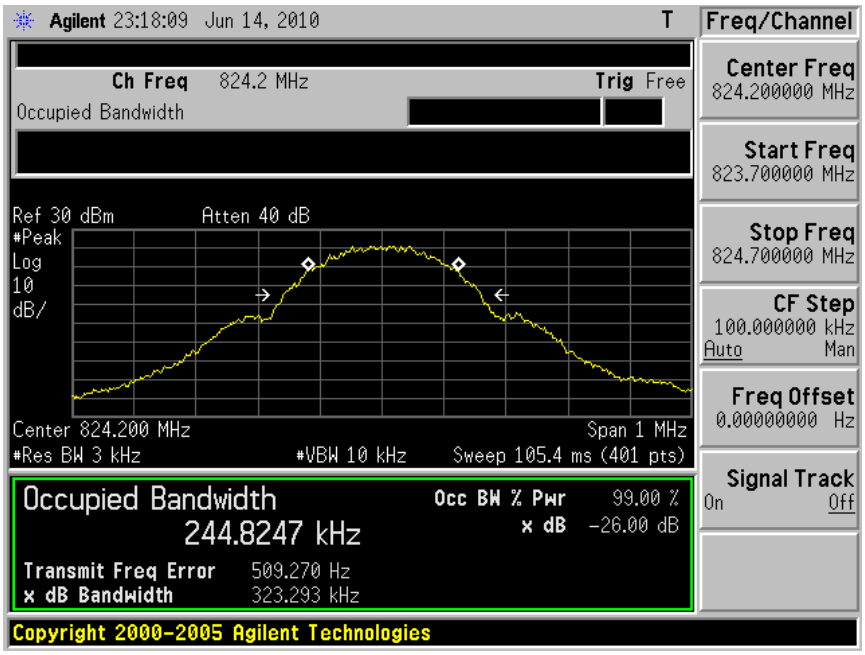
4.6. Test Result

99% Occupied Bandwidth

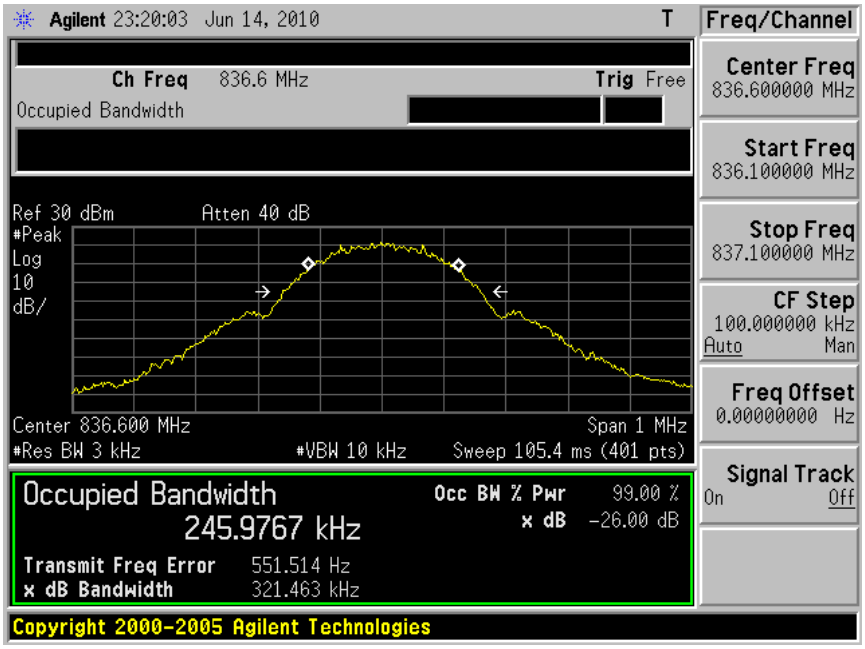
Product	Smartphone		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: GSM 850 Link		
Date of Test	06/14/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
128	824.2	244.8247	RBW:3KHz , VBW:10KHz
190	836.4	245.9767	RBW:3KHz , VBW:10KHz
251	848.8	242.4466	RBW:3KHz , VBW:10KHz

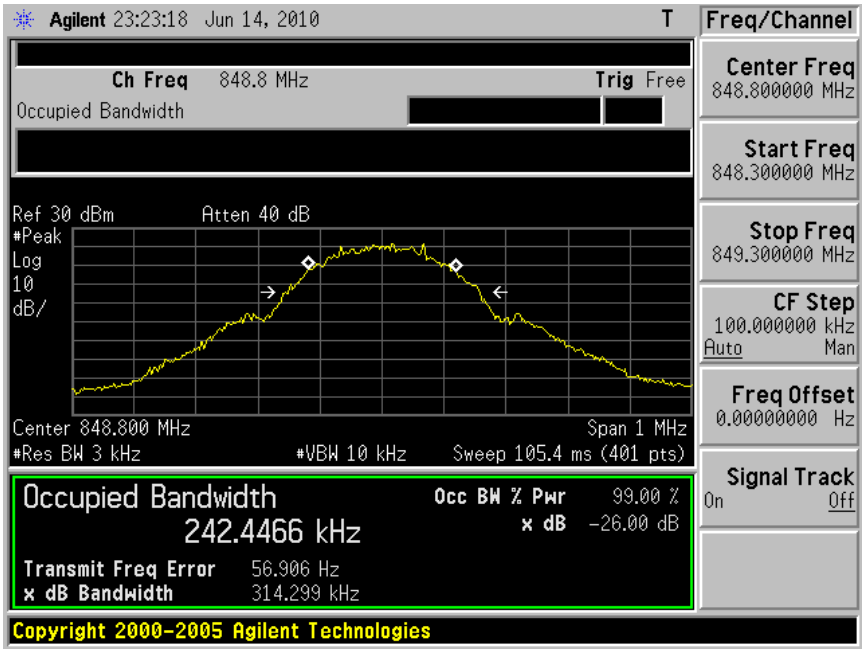
Channel 128



Channel 190



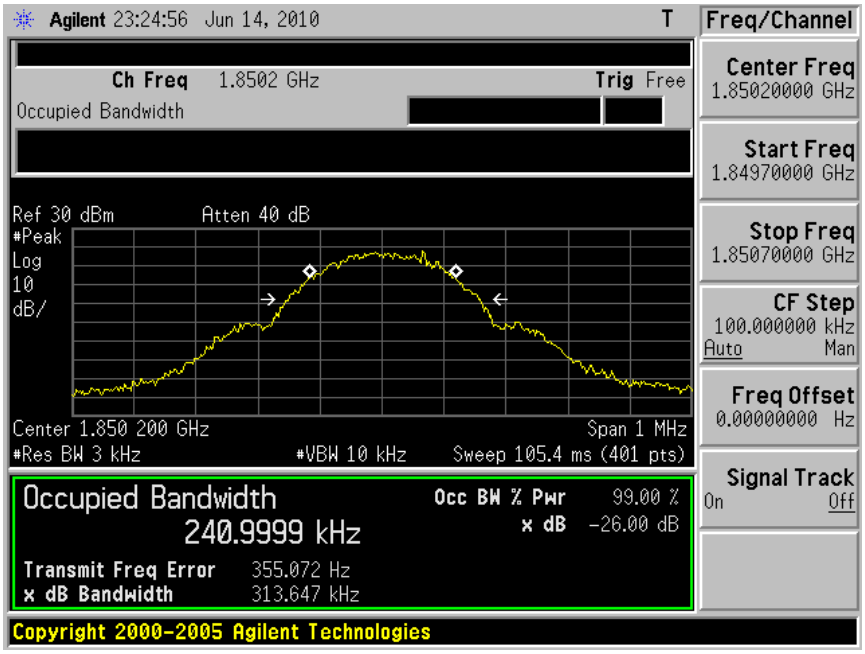
Channel 251



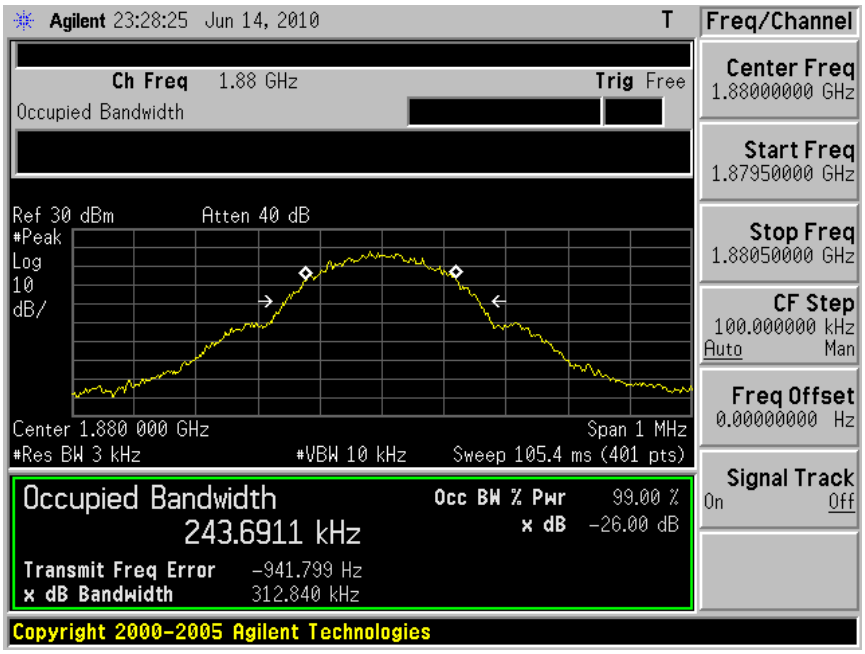
Product	Smartphone		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: GSM 1900 Link		
Date of Test	06/14/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
512	1850.20	240.9999	RBW:3KHz , VBW:10KHz
661	1880.00	243.6911	RBW:3KHz , VBW:10KHz
810	1909.80	244.0408	RBW:3KHz , VBW:10KHz

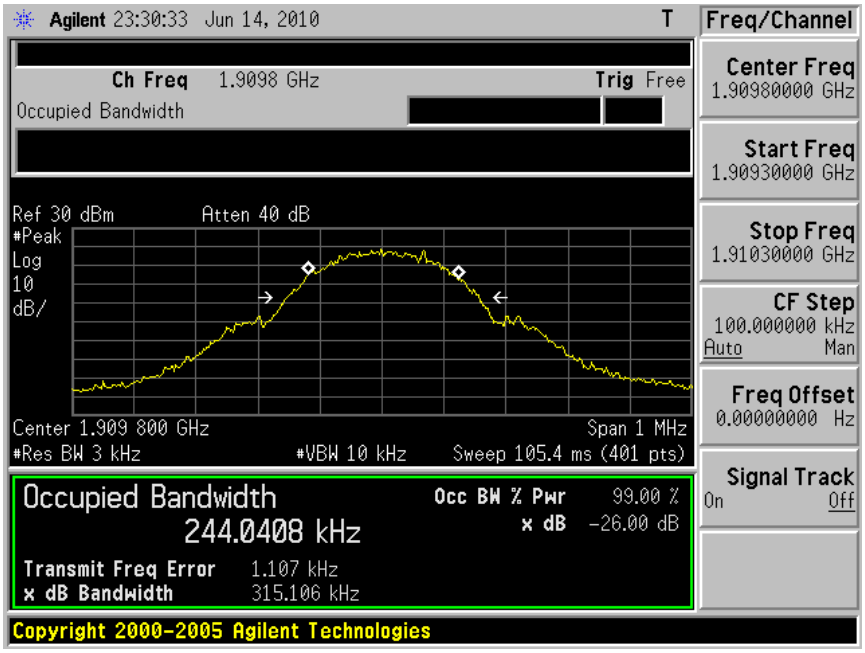
Channel 512



Channel 661



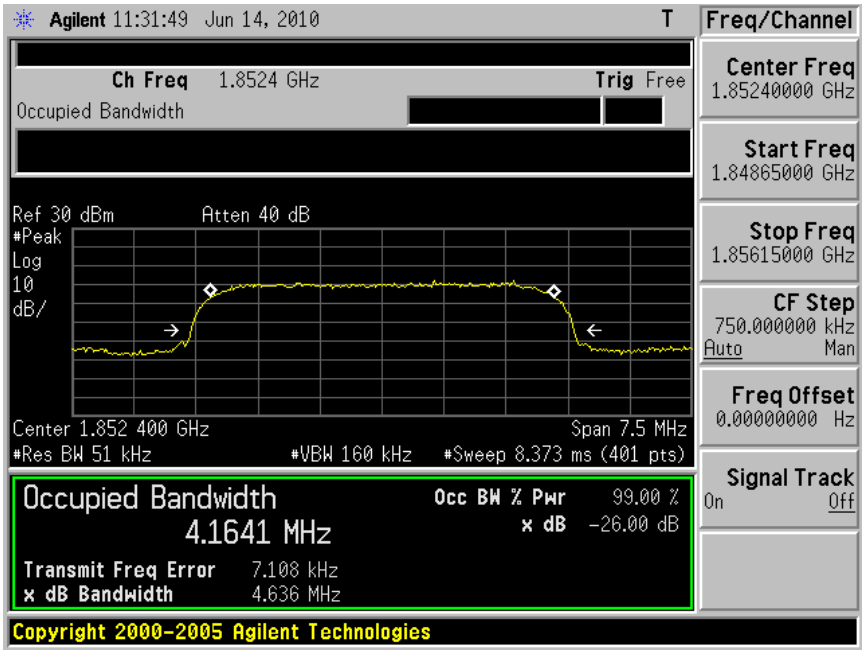
Channel 810



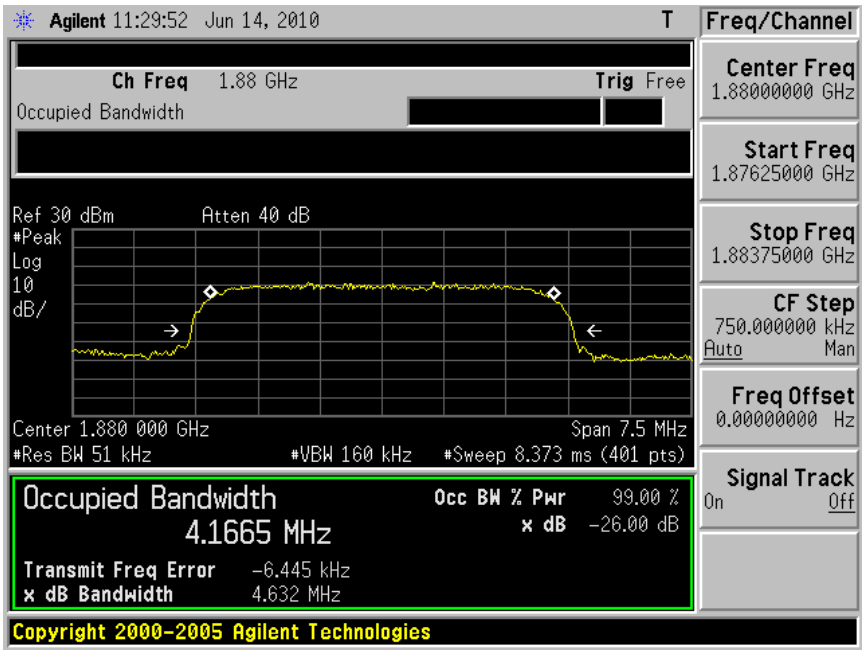
Product	Smartphone		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: WCDMA Band II Link		
Date of Test	06/14/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Note
9262	1852.4	4.1641	RBW:51KHz , VBW:160KHz
9400	1880.0	4.1665	RBW:51KHz , VBW:160KHz
9538	1907.6	4.1679	RBW:51KHz , VBW:160KHz

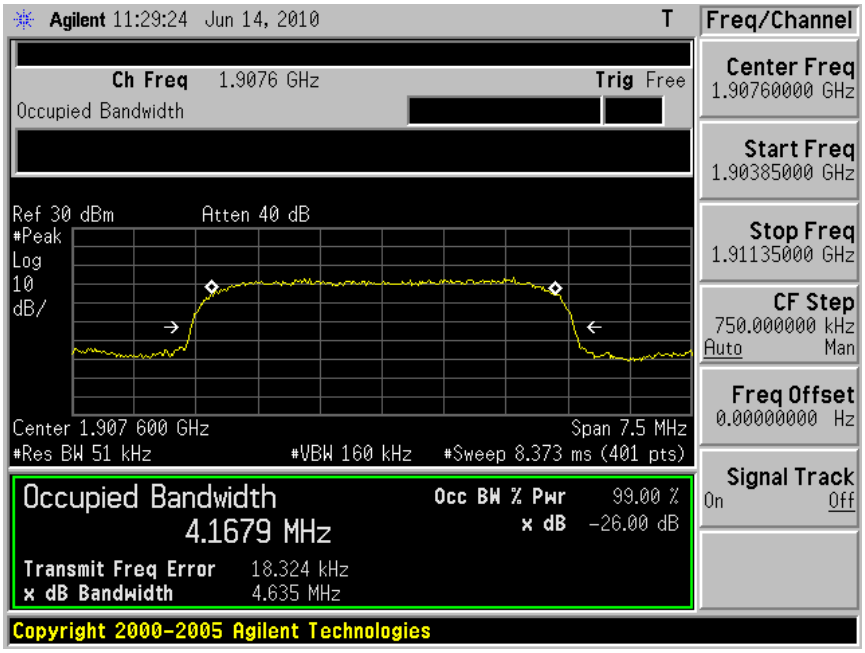
Channel 9262



Channel 9400



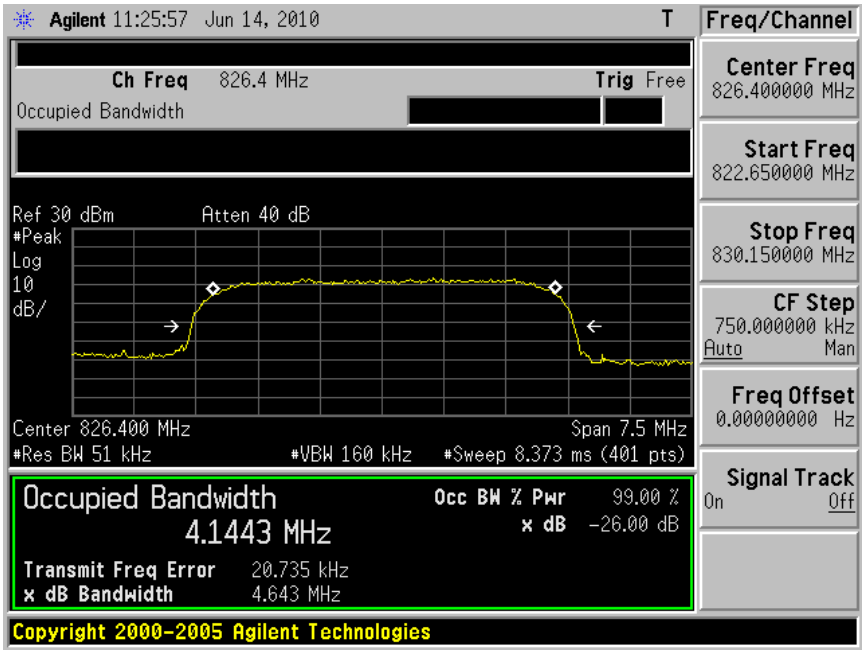
Channel 9538



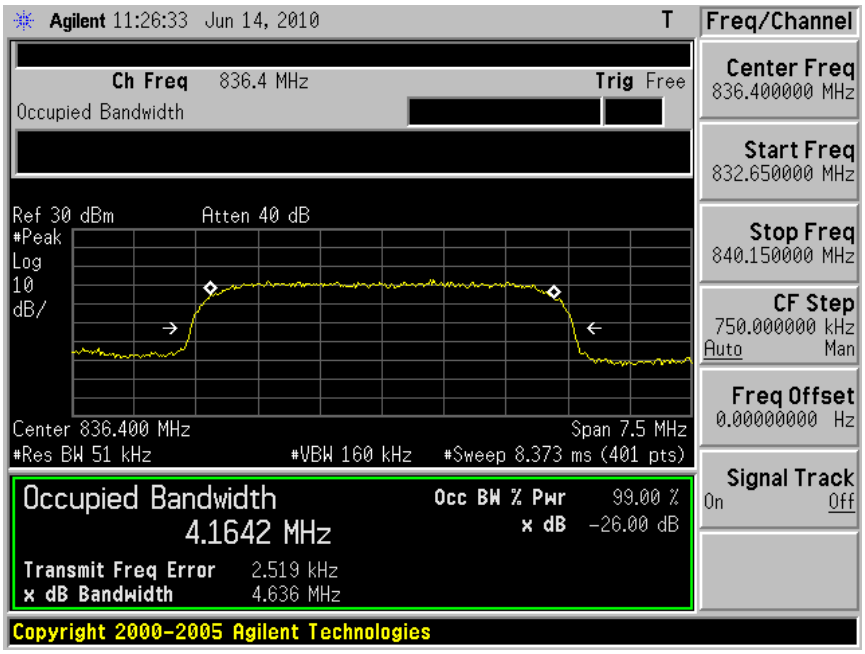
Product	Smartphone		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: WCDMA Band V Link		
Date of Test	06/14/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
4132	826.4	4.1443	RBW:51KHz , VBW:160KHz
4182	836.4	4.1642	RBW:51KHz , VBW:160KHz
4233	846.4	4.1467	RBW:51KHz , VBW:160KHz

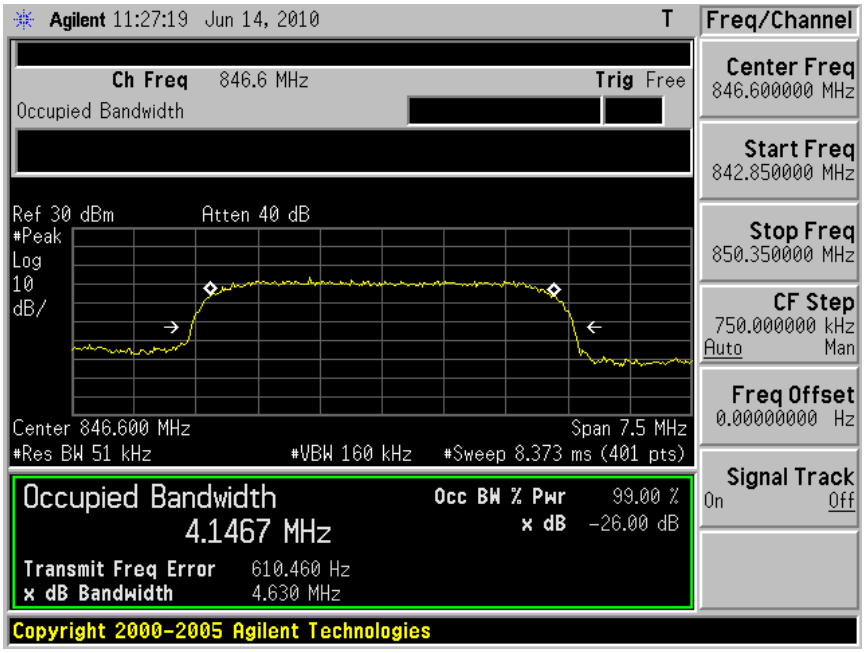
Channel 4132



Channel 4182

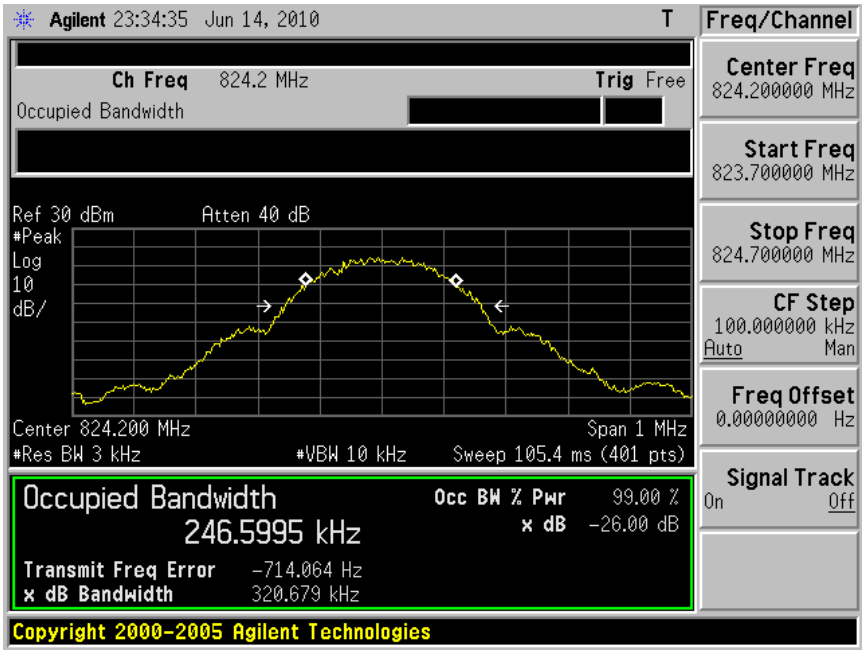


Channel 4233

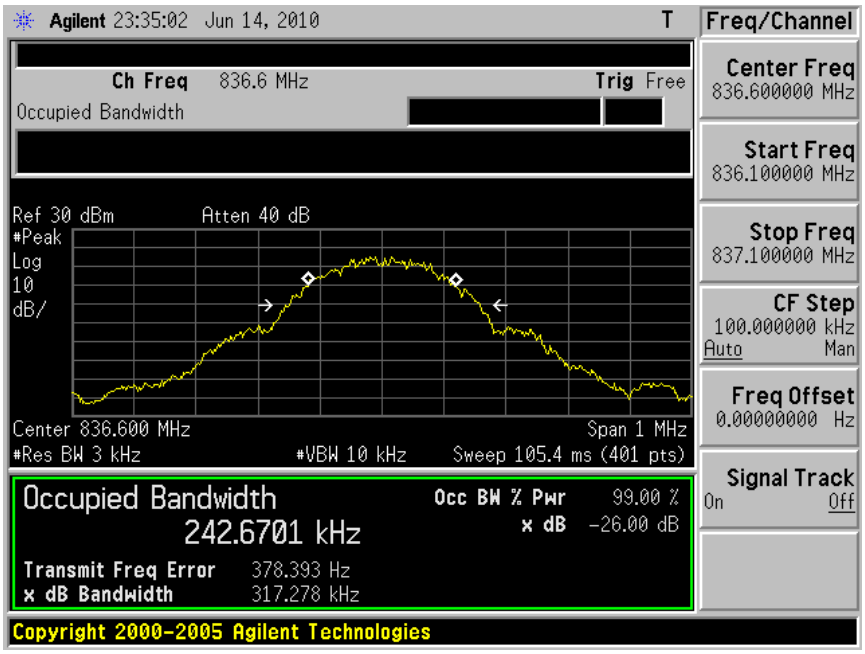


Product	Smartphone		
Test Item	Occupied Bandwidth		
Test Mode	Mode 5: EGPRS 850 Link		
Date of Test	06/14/2010	Test Site	TE02
Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
128	824.2	246.5995	RBW:3KHz , VBW:10KHz
190	836.4	242.6701	RBW:3KHz , VBW:10KHz
251	848.8	243.4393	RBW:3KHz , VBW:10KHz

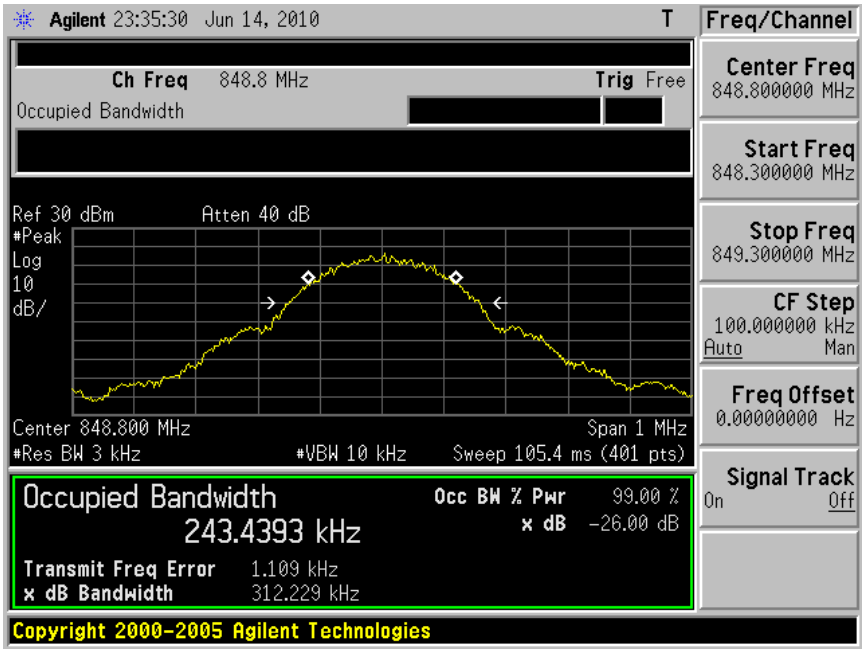
Channel 128



Channel 190



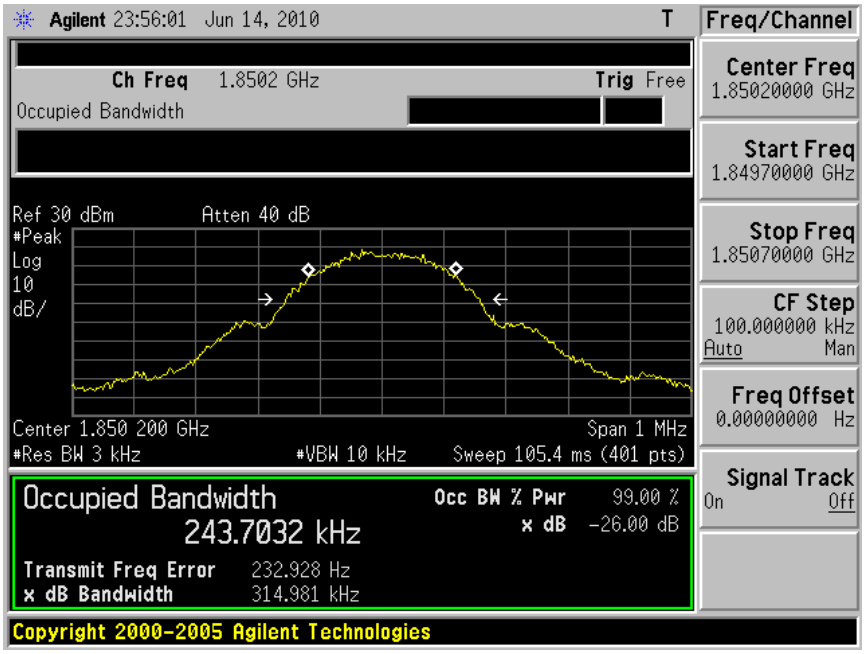
Channel 251



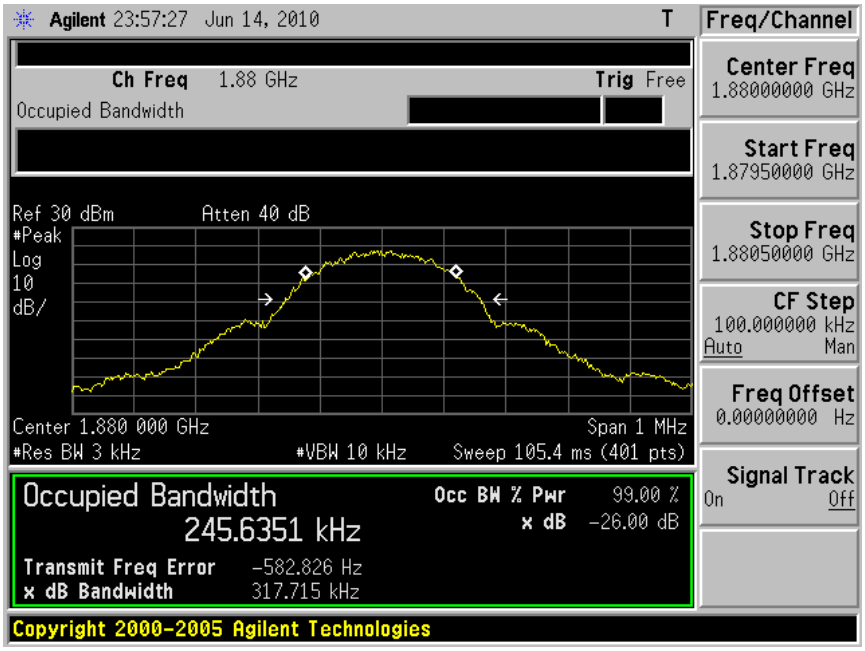
Product	Smartphone		
Test Item	Occupied Bandwidth		
Test Mode	Mode 6: EGPRS 1900 Link		
Date of Test	06/14/2010	Test Site	TE02

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)	Note
512	1850.20	243.7032	RBW:3KHz , VBW:10KHz
661	1880.00	245.6351	RBW:3KHz , VBW:10KHz
810	1909.80	243.3051	RBW:3KHz , VBW:10KHz

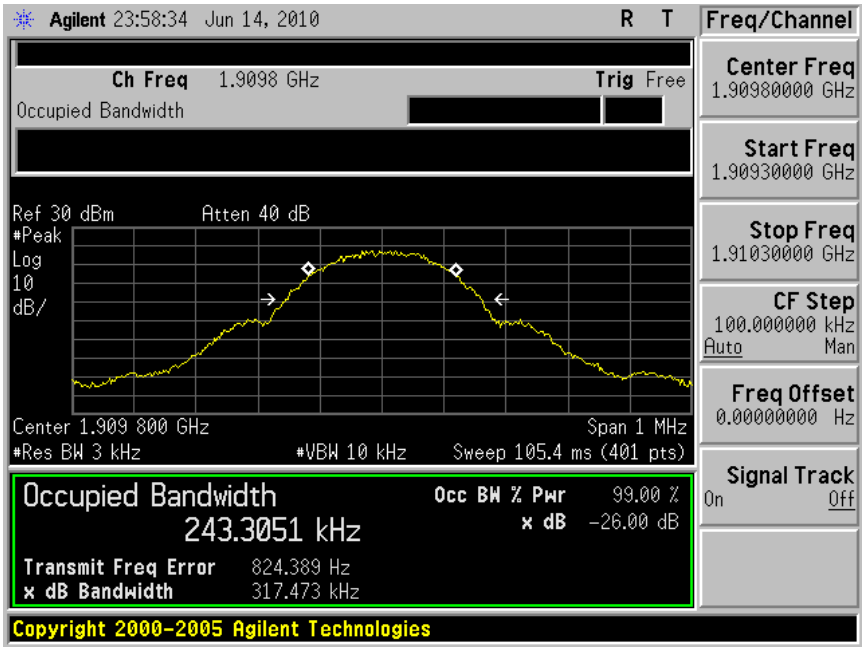
Channel 512



Channel 661



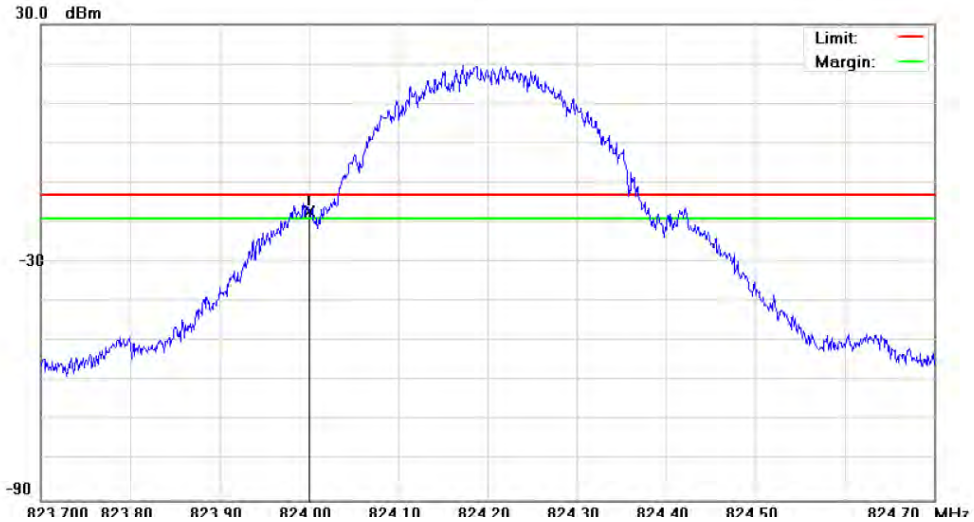
Channel 810



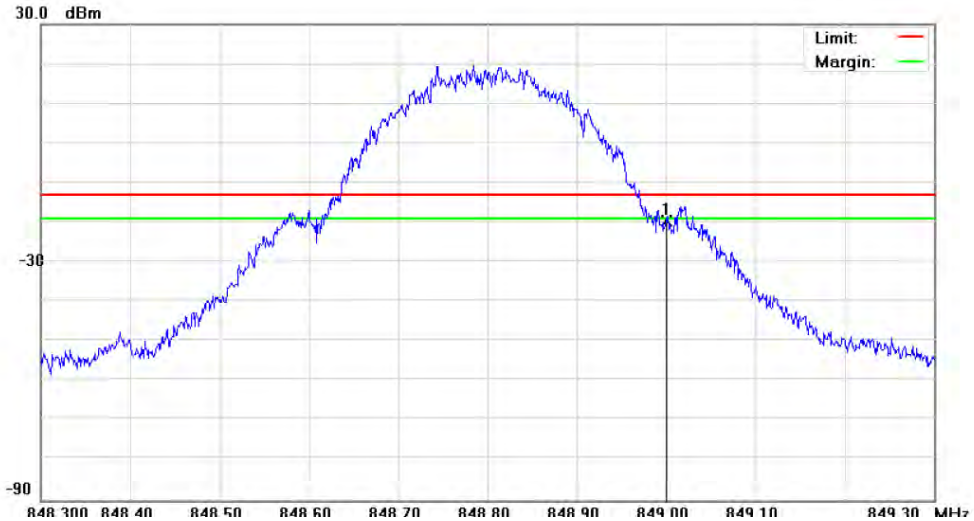
Band Edge

Product	Smartphone				
Test Item	Band Edge				
Test Mode	Mode 1: GSM 850 Link				
Date of Test	06/14/2010		Test Site	TE02	
Band	**Channel**	**Frequency (MHz)**	**Bandwidth (dBm)**	**Limit (dBm)**	**Result**
Lower	128	824.0000	-17.14	-13	Pass
Higher	251	849.0000	-19.64	-13	Pass

Lower Band

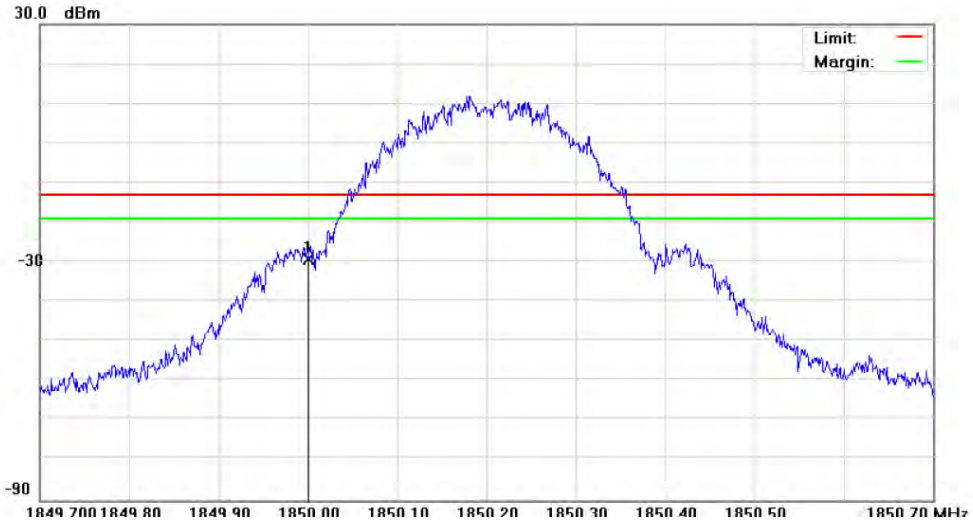


Higher Band

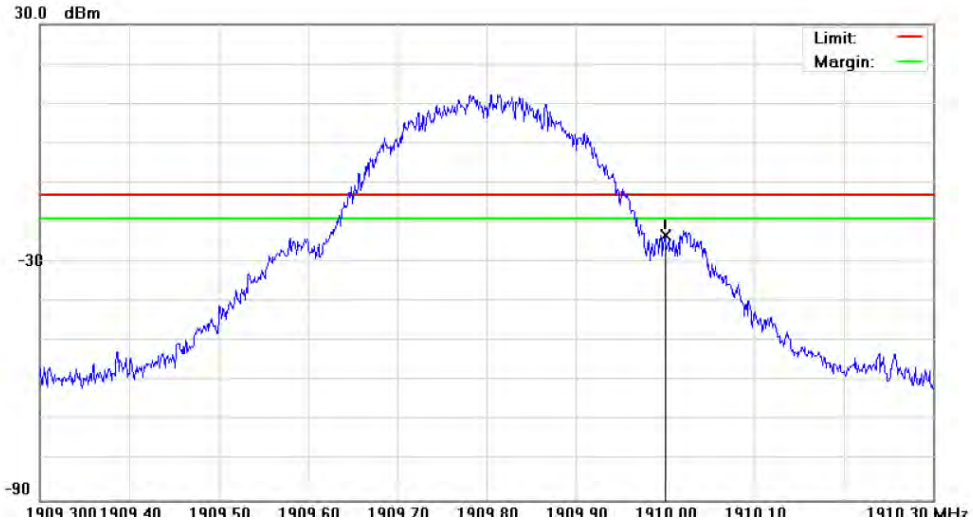


Product	Smartphone				
Test Item	Band Edge				
Test Mode	Mode 2: GSM 1900 Link				
Date of Test	06/14/2010		Test Site	TE02	
Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
Lower	512	1850.000	-29.10	-13	Pass
Higher	810	1910.000	-23.17	-13	Pass

Lower Band

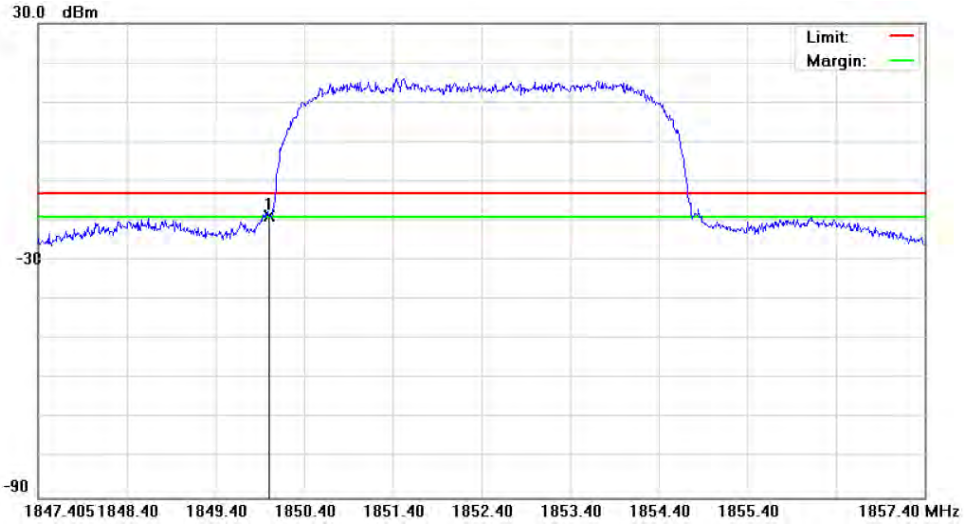


Higher Band

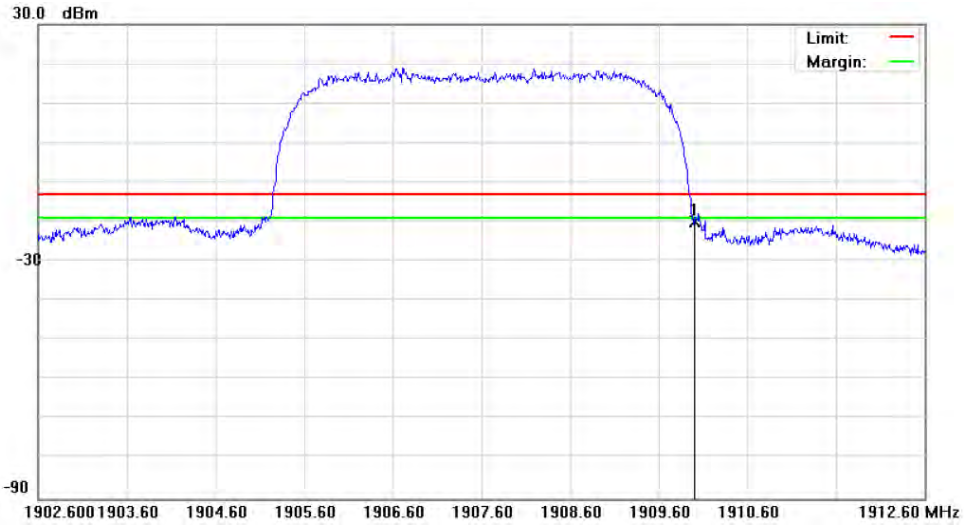


Product	Smartphone				
Test Item	Band Edge				
Test Mode	Mode 3: WCDMA Band II Link				
Date of Test	06/14/2010		Test Site	TE02	
Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
Lower	9262	1850.000	-18.74	-13	Pass
Higher	9538	1910.000	-20.08	-13	Pass

Lower Band

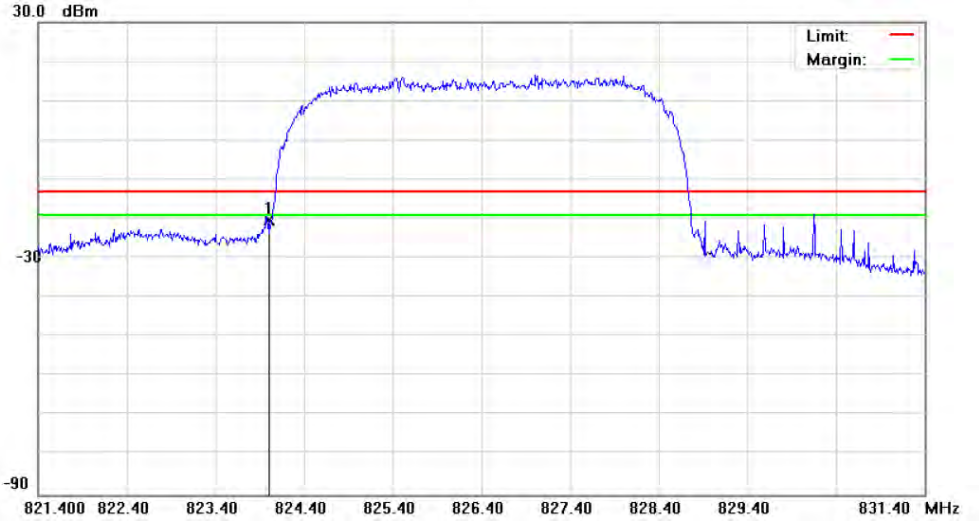


Higher Band

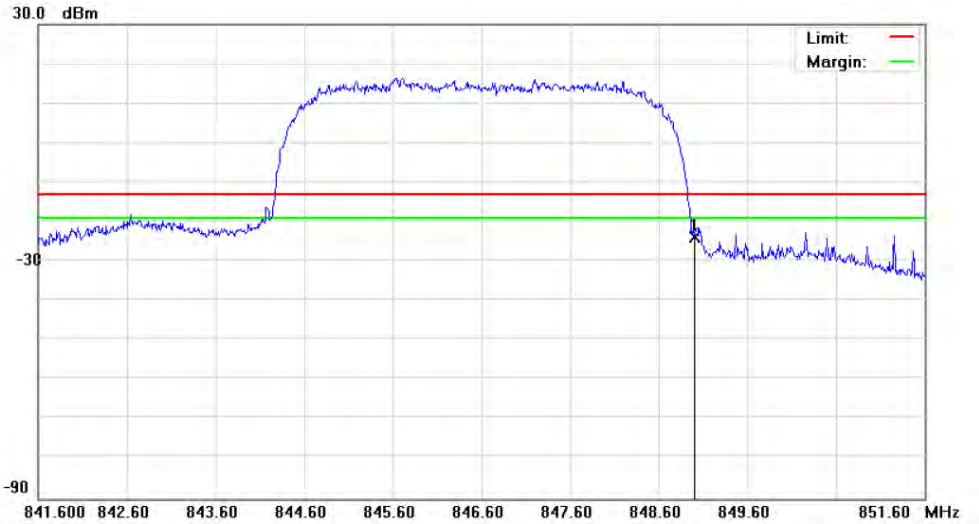


Product	Smartphone				
Test Item	Band Edge				
Test Mode	Mode 4: WCDMA Band V Link				
Date of Test	06/14/2010		Test Site	TE02	
Band	Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
Lower	4132	824.0000	-20.34	-13	Pass
Higher	4233	849.0000	-23.92	-13	Pass

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 + 10log(P) dB.

5.2. Test Instruments

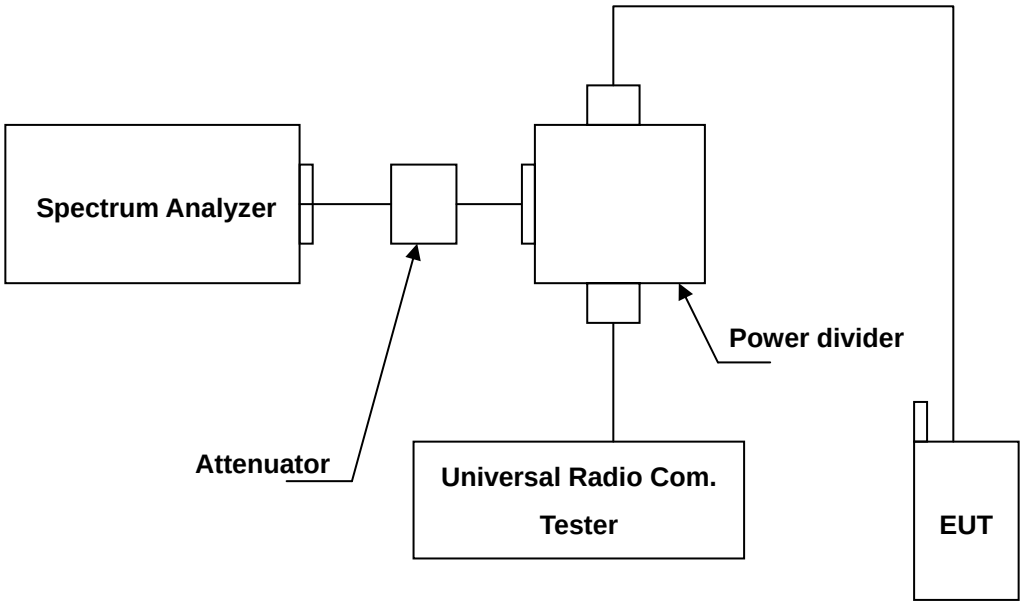
Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2009	(2)
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.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

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

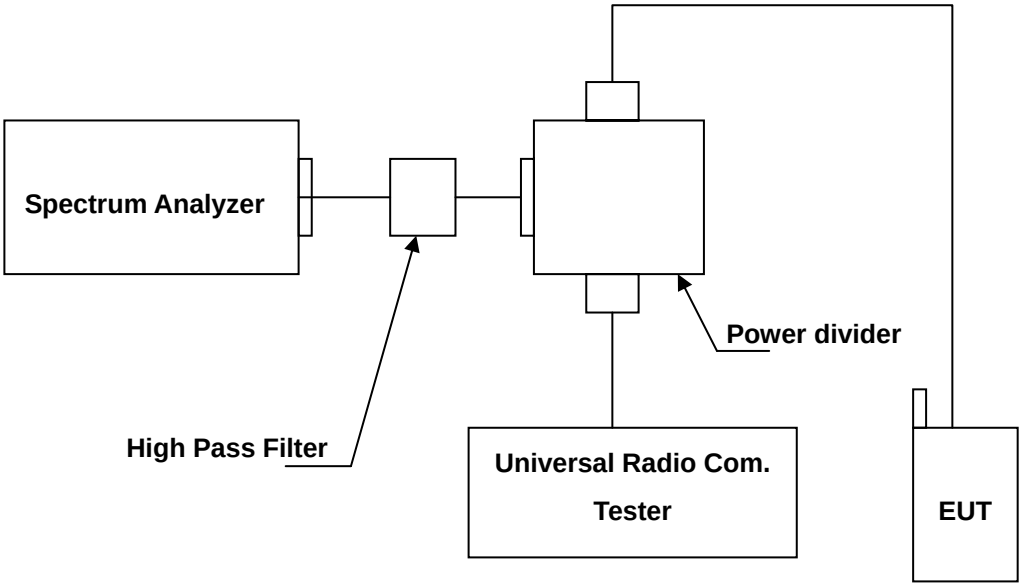
NOTE: N.C.R. = No Calibration Request.

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.

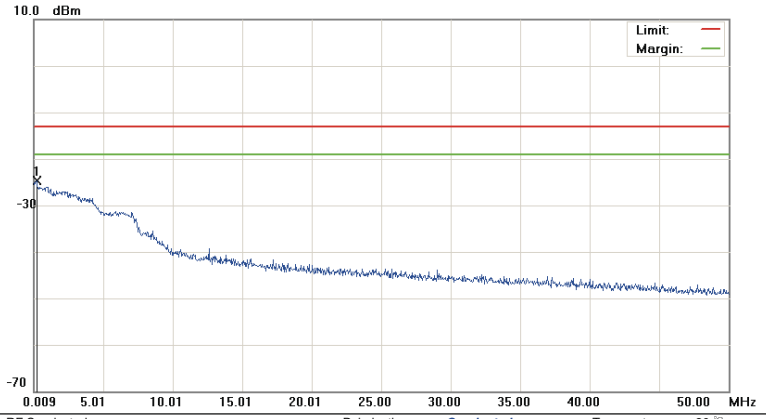
5.5. Uncertainty

The measurement uncertainty is evaluated as ± 2.24 dB.

5.6. Test Result

Product	Smartphone		
Test Item	Conducted Emission		
Mode	Mode 1: GSM 850 Link Mode 2: GSM 1900 Link Mode 3: WCDMA Band II Link Mode 4: WCDMA Band V Link		
Date of Test	06/14/2010	**Test Site**	TE02

File :PC49120(CH128) Data :#1 Date: 2010/06/14 Time: PM 05:43:35



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH128(824.2MHz)

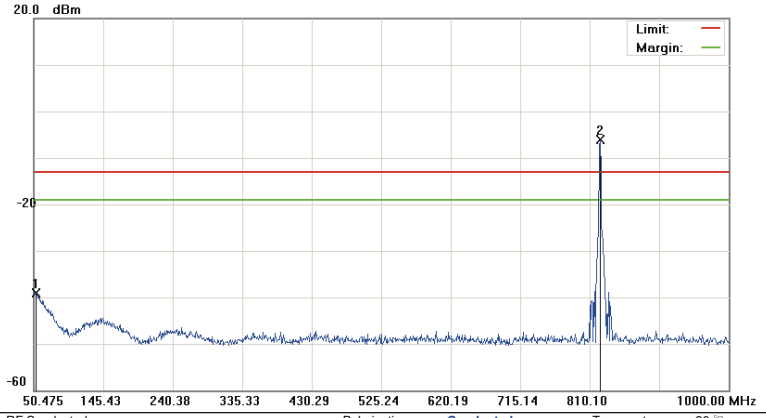
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.2090	-55.67	30.99	-24.68	-13.00	-11.68	peak			

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

File :PC49120(CH128) Data :#2 Date: 2010/06/14 Time: PM 05:44:00



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH128(824.2MHz)

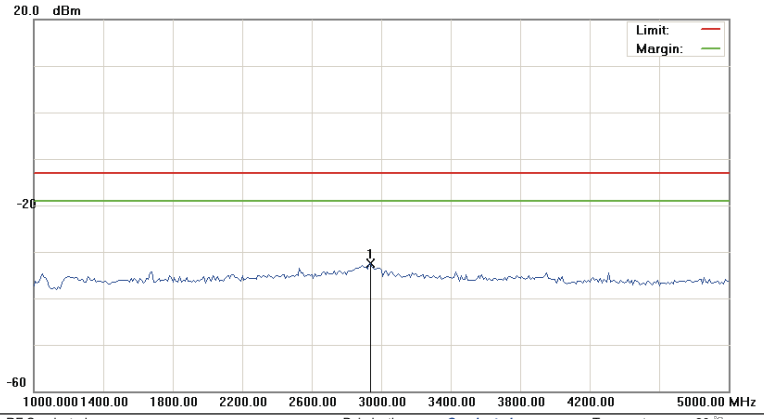
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		52.8500	-53.31	14.19	-39.12	-13.00	-26.12	peak			
2	*	824.2500	-9.93	3.84	-6.09	-13.00	6.91	peak			TX

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

File :PC49120(CH128) Data :#3 Date: 2010/06/14 Time: PM 07:42:33



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH128(824.2MHz)

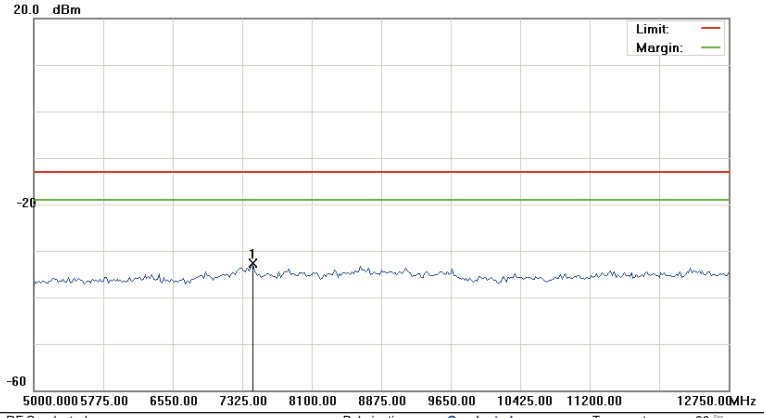
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2940.000	-37.18	4.62	-32.56	-13.00	-19.56	peak			

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

File :PC49120(CH128) Data :#4 Date: 2010/06/14 Time: PM 07:42:55



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH128(824.2MHz)

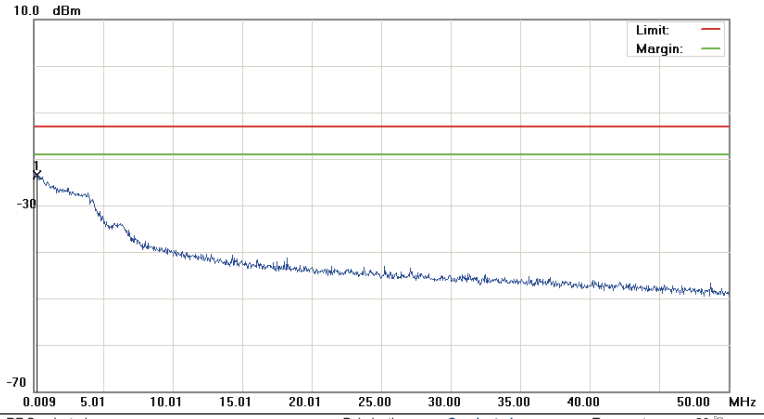
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7441.250	-37.91	5.22	-32.69	-13.00	-19.69	peak			

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

File :PC49120(CH190) Data :#1 Date: 2010/06/14 Time: PM 05:45:35



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH190(836.6MHz)

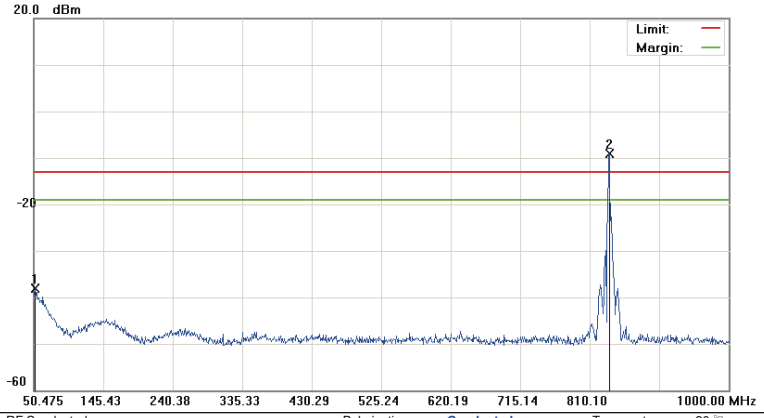
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.2590	-54.91	31.40	-23.51	-13.00	-10.51	peak			

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

File :PC49120(CH190) Data :#2 Date: 2010/06/14 Time: PM 05:46:00



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH190(836.6MHz)

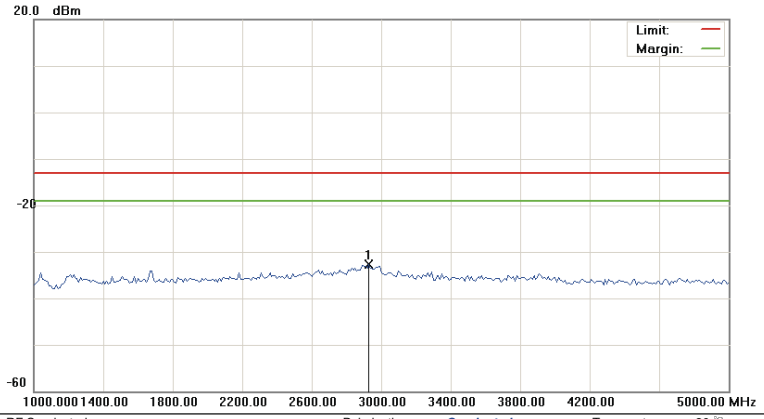
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		51.9000	-52.46	14.36	-38.10	-13.00	-25.10	peak			
2	*	836.6000	-12.97	3.96	-9.01	-13.00	3.99	peak			TX

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

File :PC49120(CH190) Data :#3 Date: 2010/06/14 Time: PM 07:43:56



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH190(836.6MHz)

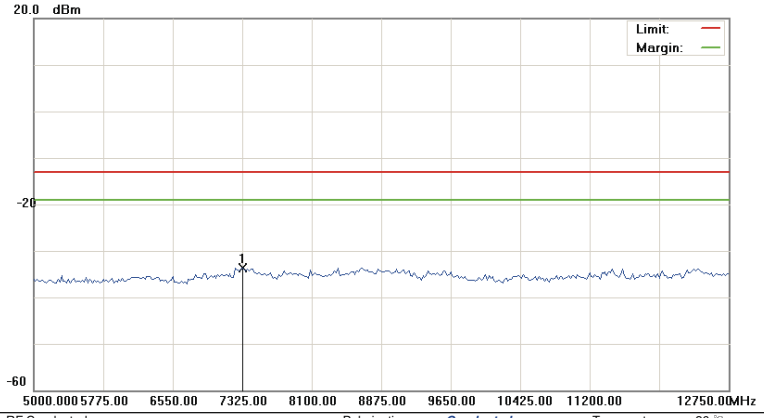
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2930.000	-37.43	4.65	-32.78	-13.00	-19.78	peak			

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

File :PC49120(CH190) Data :#4 Date: 2010/06/14 Time: PM 07:44:18



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH190(836.6MHz)

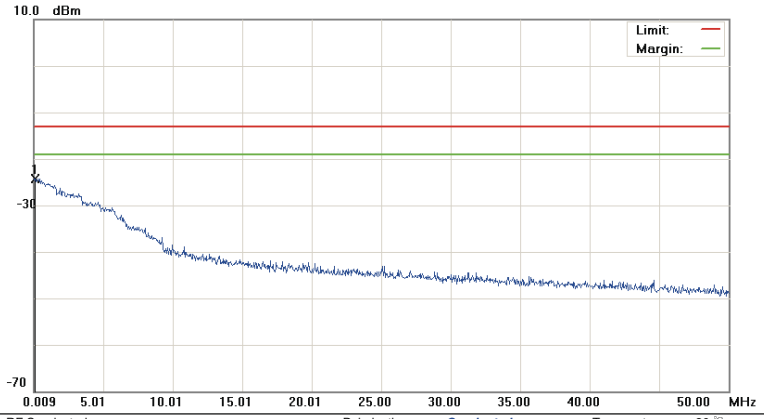
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7325.000	-38.74	5.10	-33.64	-13.00	-20.64	peak			

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

File :PC49120(CH251) Data :#1 Date: 2010/06/14 Time: PM 05:47:22



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH251(848.8MHz)

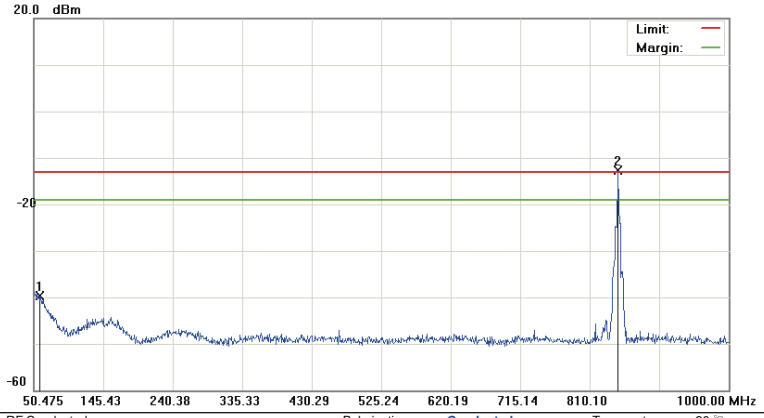
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-54.43	30.17	-24.26	-13.00	-11.26	peak			

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

File :PC49120(CH251) Data :#2 Date: 2010/06/14 Time: PM 05:47:47



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH251(848.8MHz)

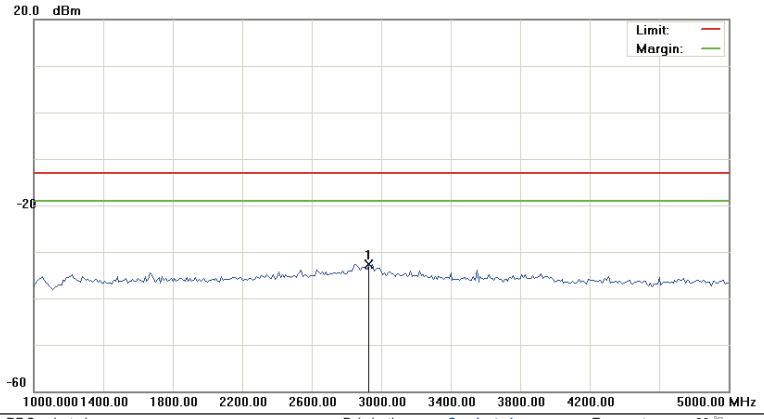
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		58.0750	-52.99	13.24	-39.75	-13.00	-26.75	peak			
2	*	848.9500	-16.77	3.98	-12.79	-13.00	0.21	peak			TX

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

File :PC49120(CH251) Data :#3 Date: 2010/06/14 Time: PM 07:45:10



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH251(848.8MHz)

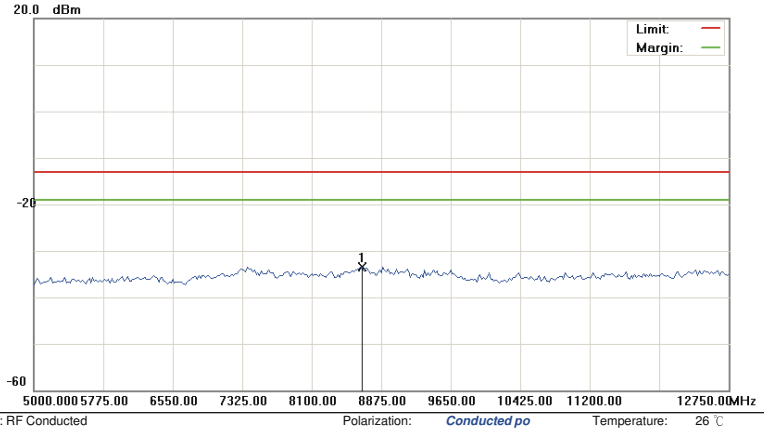
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2930.000	-37.32	4.65	-32.67	-13.00	-19.67	peak			

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

File :PC49120(CH251) Data :#4 Date: 2010/06/14 Time: PM 07:45:32



Site: : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 1
Note: CH251(848.8MHz)

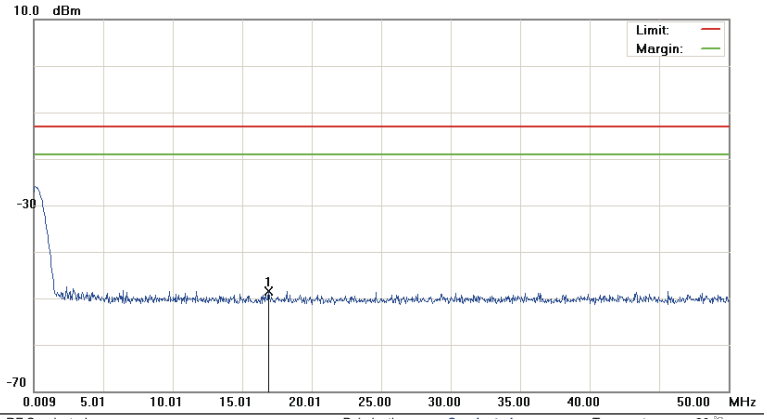
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8661.875	-39.25	5.80	-33.45	-13.00	-20.45	peak			

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

File :PC49120(CH512) Data :#1 Date: 2010/06/14 Time: PM 05:50:06



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH512(1850.2MHz)

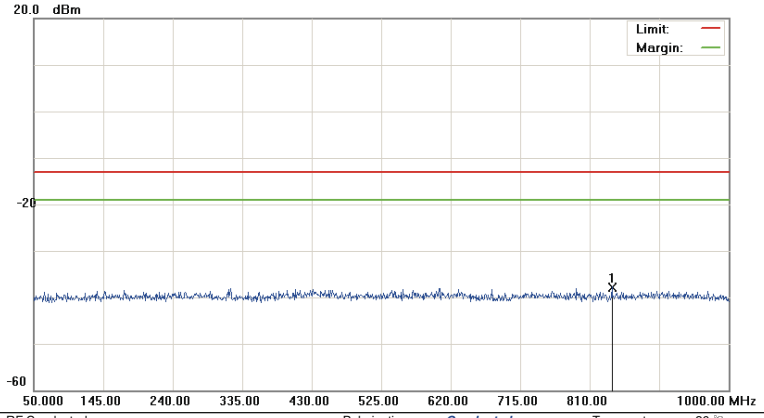
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	16.9060	-61.75	13.28	-48.47	-13.00	-35.47	peak			

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

File :PC49120(CH512) Data :#2 Date: 2010/06/14 Time: PM 05:50:31



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH512(1850.2MHz)

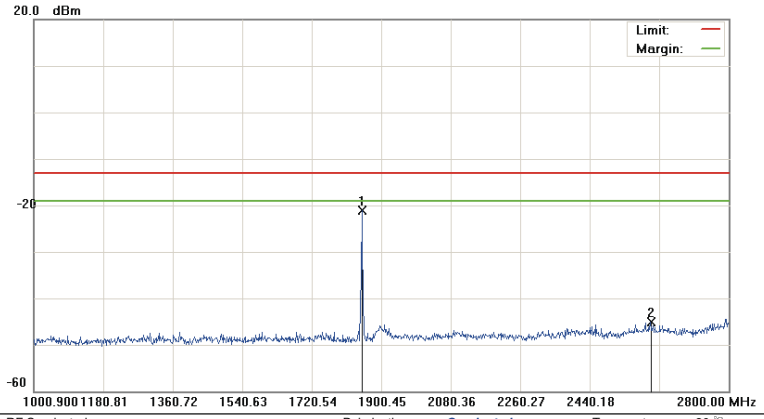
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	840.4000	-51.02	13.22	-37.80	-13.00	-24.80	peak			

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

File :PC49120(CH512) Data :#3 Date: 2010/06/14 Time: PM 06:00:14



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH512(1850.2MHz)

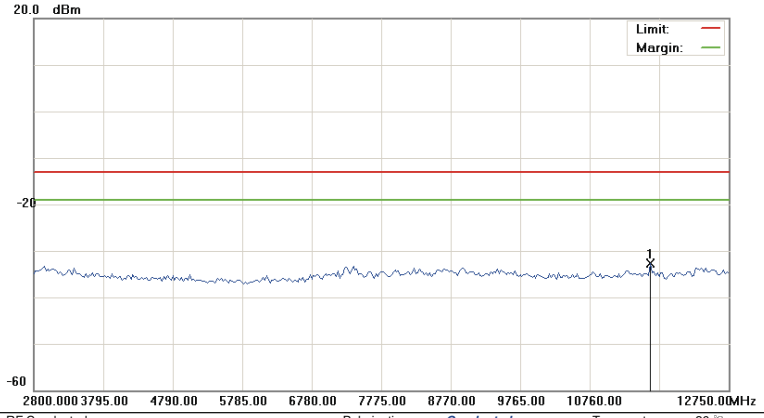
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1850.500	-25.34	4.26	-21.08	-13.00	-8.08	peak			TX
2		2597.500	-50.47	5.44	-45.03	-13.00	-32.03	peak			

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

File :PC49120(CH512) Data :#4 Date: 2010/06/14 Time: PM 07:26:13



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH512(1850.2MHz)

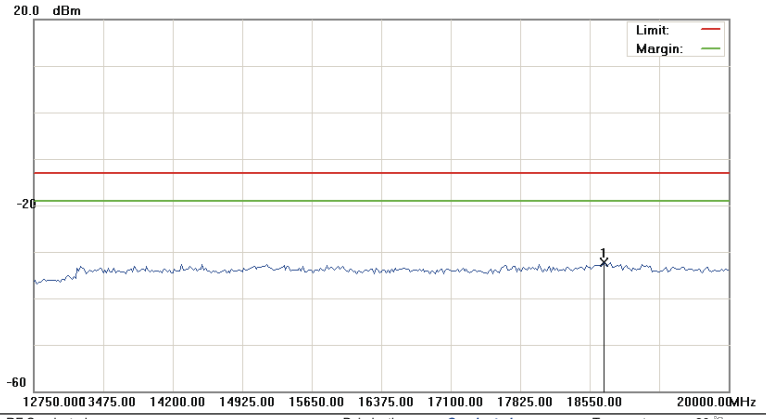
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	11630.625	-38.13	5.35	-32.78	-13.00	-19.78	peak			

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

File :PC49120(CH512) Data :#5 Date: 2010/06/14 Time: PM 07:26:35



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH512(1850.2MHz)

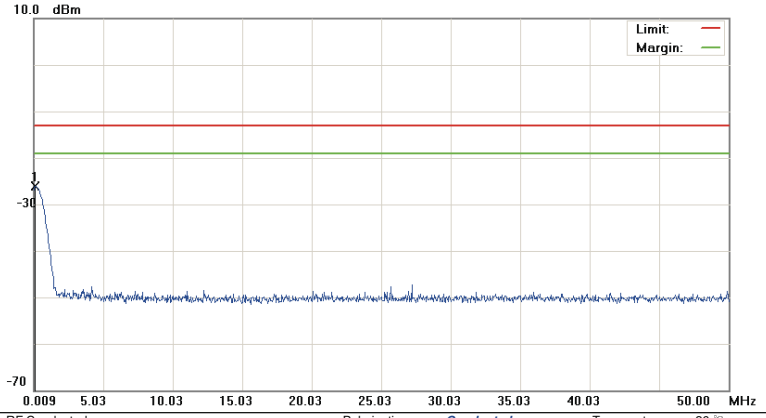
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	18695.000	-39.30	7.07	-32.23	-13.00	-19.23	peak			

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

File :PC49120(CH661) Data :#1 Date: 2010/06/14 Time: PM 05:51:53



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH661(1880MHz)

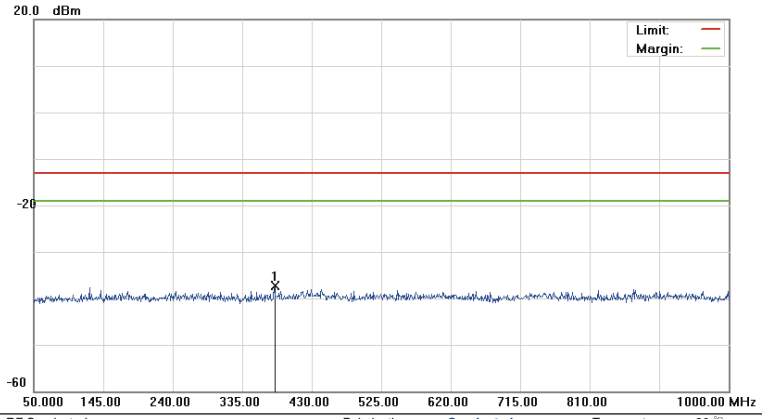
Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.59	12.49	-26.10	-13.00	-13.10	peak			

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

File :PC49120(CH661) Data :#2 Date: 2010/06/14 Time: PM 05:52:18



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH661(1880MHz)

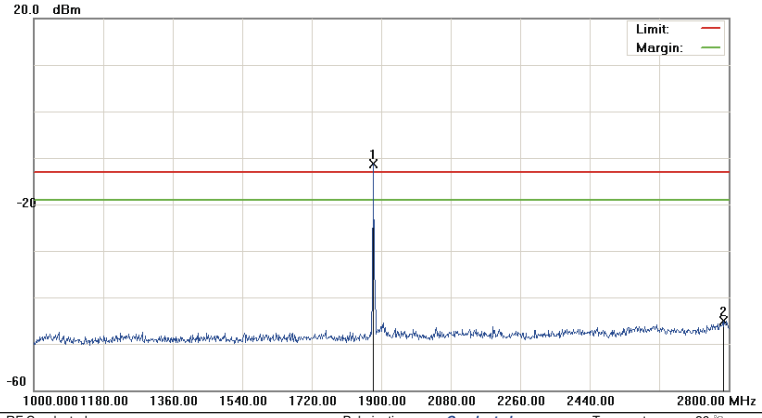
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	379.1750	-50.59	13.23	-37.36	-13.00	-24.36	peak			

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

File :PC49120(CH661) Data :#3 Date: 2010/06/14 Time: PM 06:01:29



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH661(1880MHz)

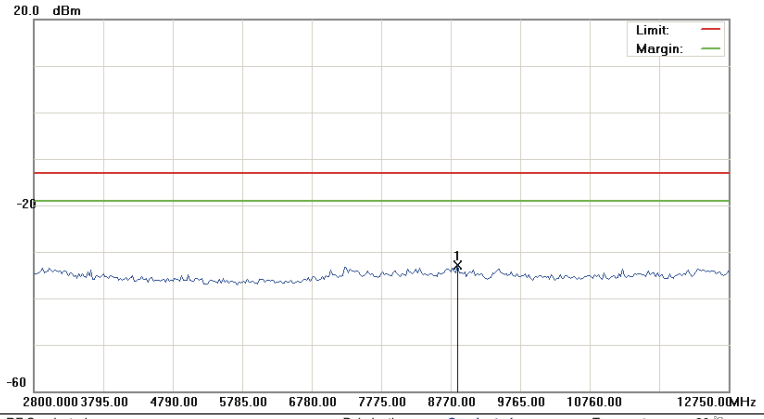
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1880.200	-15.99	4.65	-11.34	-13.00	1.66	peak			TX
2		2785.600	-51.00	5.89	-45.11	-13.00	-32.11	peak			

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

File :PC49120(CH661) Data :#4 Date: 2010/06/14 Time: PM 07:28:16



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH661(1880MHz)

Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8869.500	-38.30	5.35	-32.95	-13.00	-19.95	peak			

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

File :PC49120(CH661) Data :#5 Date: 2010/06/14 Time: PM 07:28:38

Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH661(1880MHz)

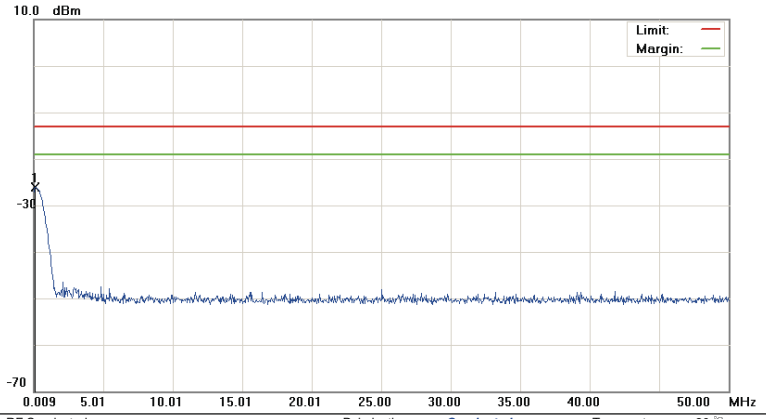
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	16665.000	-38.44	6.49	-31.95	-13.00	-18.95	peak			

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

File :PC49120(CH810) Data :#1 Date: 2010/06/14 Time: PM 05:53:15



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH810(1909.8MHz)

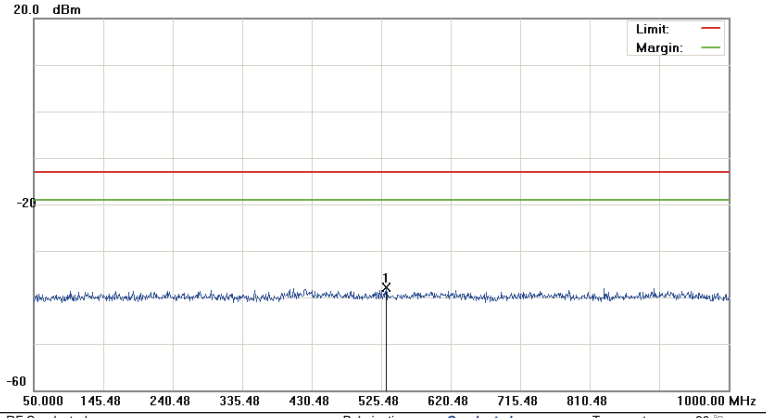
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.52	12.49	-26.03	-13.00	-13.03	peak			

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

File :PC49120(CH810) Data :#2 Date: 2010/06/14 Time: PM 05:53:39



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH810(1909.8MHz)

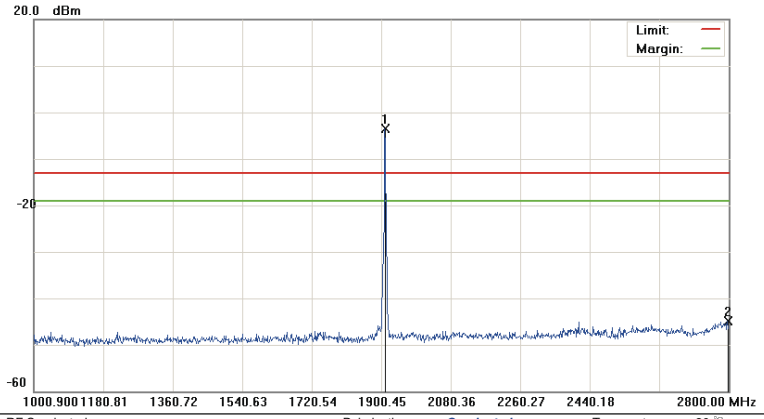
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	531.6500	-51.01	13.14	-37.87	-13.00	-24.87	peak			

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

File :PC49120(CH810) Data :#3 Date: 2010/06/14 Time: PM 05:55:41



Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH810(1909.8MHz)

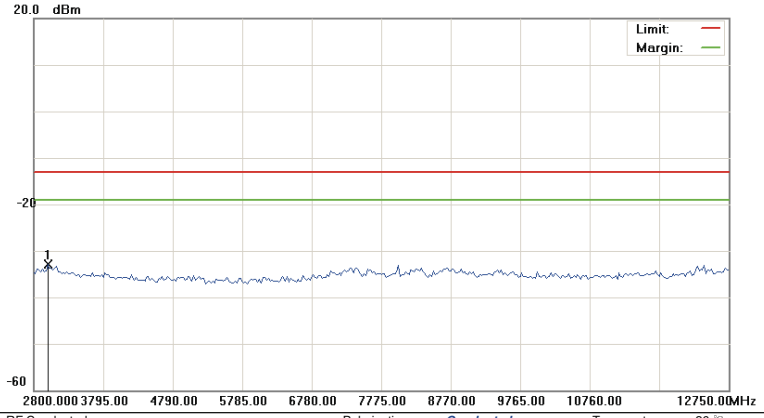
Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1909.900	-9.30	5.71	-3.59	-13.00	9.41	peak			TX
2		2797.300	-50.80	5.91	-44.89	-13.00	-31.89	peak			

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

File :PC49120(CH810) Data :#4 Date: 2010/06/14 Time: PM 07:30:45



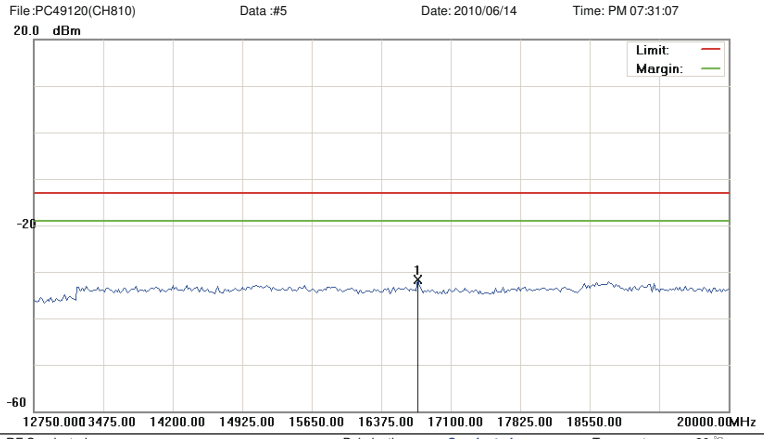
Site: : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH810(1909.8MHz)

Polarization: *Conducted po*
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2999.000	-38.28	5.48	-32.80	-13.00	-19.80	peak			

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



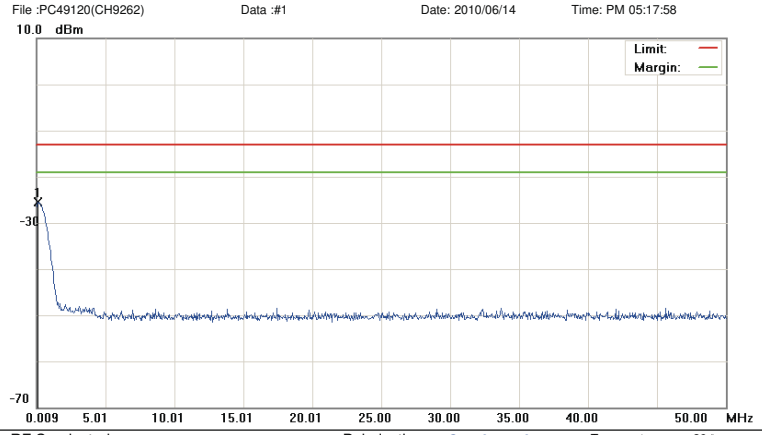
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-20G)
EUT: Smartphone
M/N: PC49120
Mode: 2
Note: CH810(1909.8MHz)

Polarization: Conducted po
Power:
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	16755.625	-38.18	6.51	-31.67	-13.00	-18.67	peak			

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



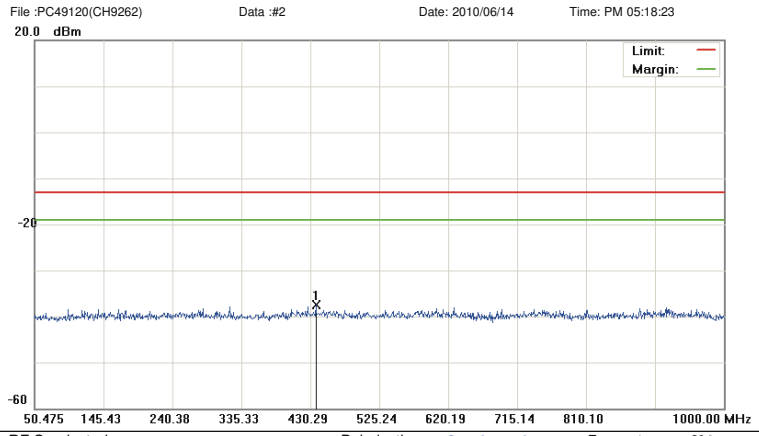
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9262

Polarization: Conducted po
Power: AC 110V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.02	12.49	-25.53	-13.00	-12.53	peak			

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



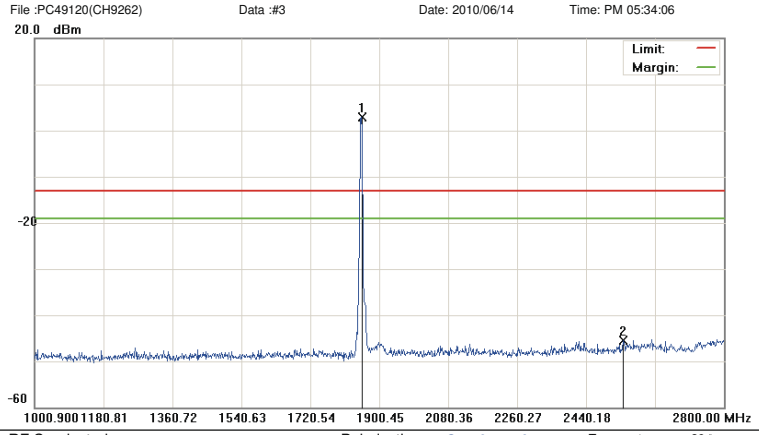
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9262

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	438.0750	-50.70	13.22	-37.48	-13.00	-24.48	peak			

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



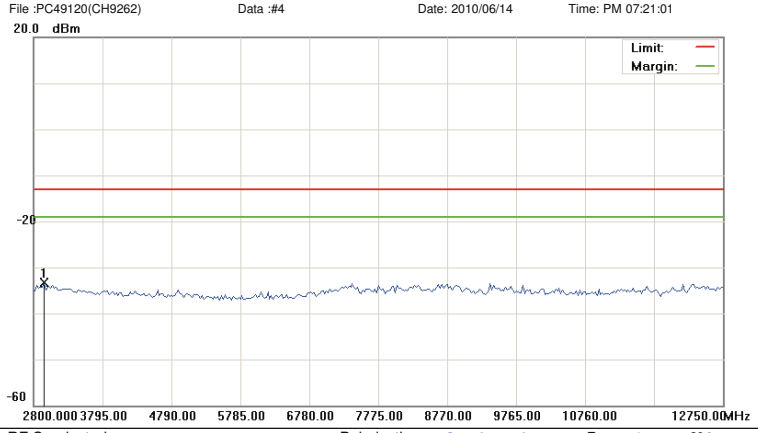
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9262

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1854.100	-1.33	4.28	2.95	-13.00	15.95	peak			Tx
2		2537.200	-50.35	4.94	-45.41	-13.00	-32.41	peak			

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



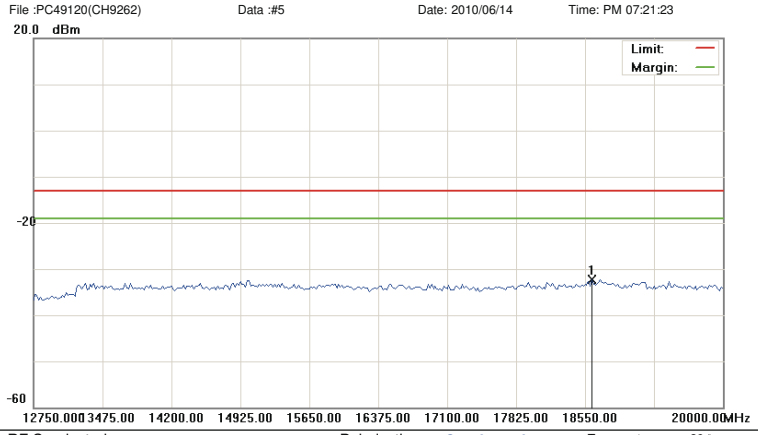
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9262

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2949.250	-38.91	5.64	-33.27	-13.00	-20.27	peak			

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



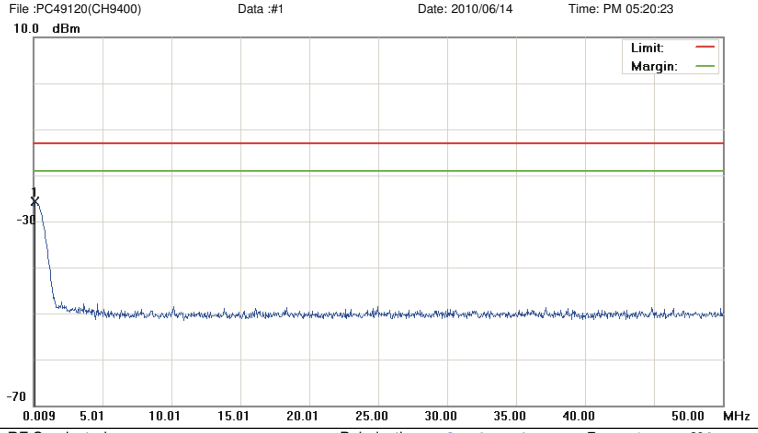
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9262

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	18622.50	-39.26	7.05	-32.21	-13.00	-19.21	peak			

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



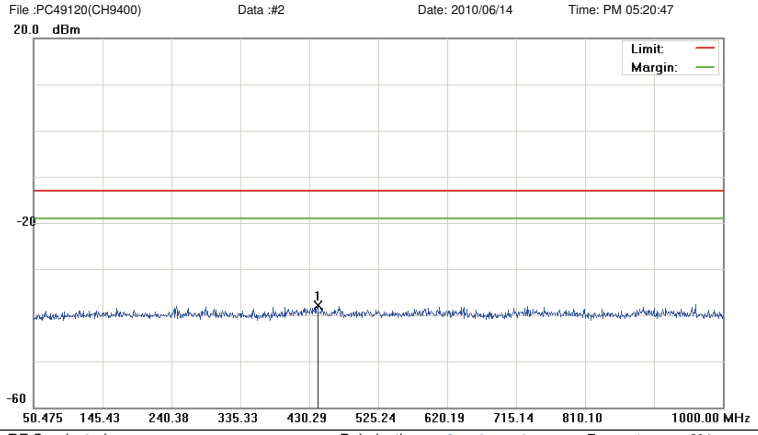
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9400

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.17	12.49	-25.68	-13.00	-12.68	peak			

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



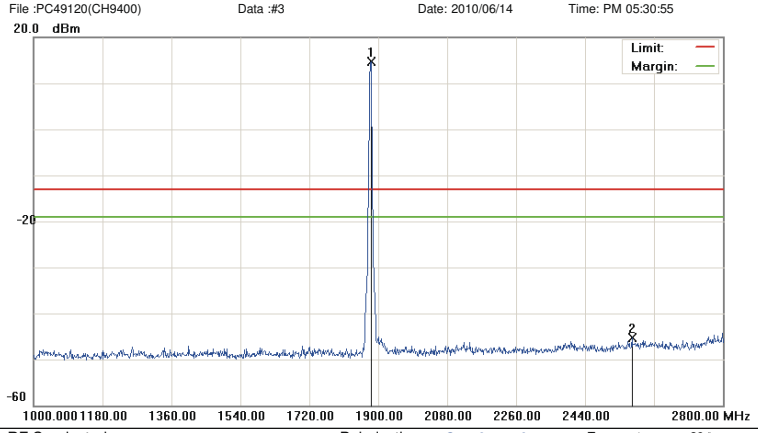
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: Band II
Note: CH9400

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	440.9250	-51.06	13.20	-37.86	-13.00	-24.86	peak			

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



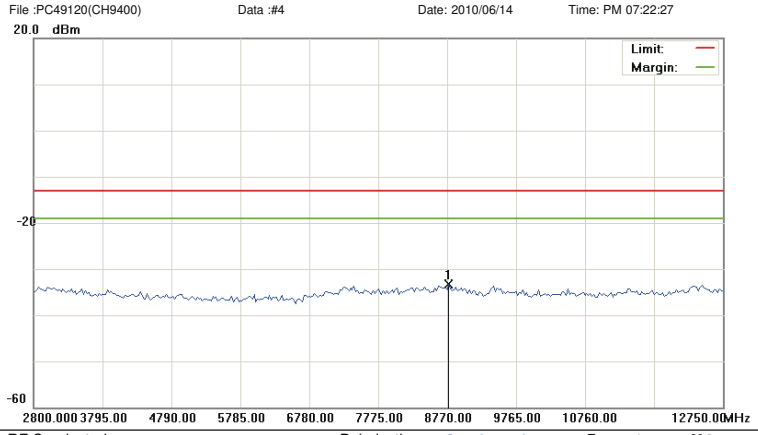
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9400

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1882.000	9.81	4.83	14.64	-13.00	27.64	peak			Tx
2		2562.400	-50.52	5.31	-45.21	-13.00	-32.21	peak			

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



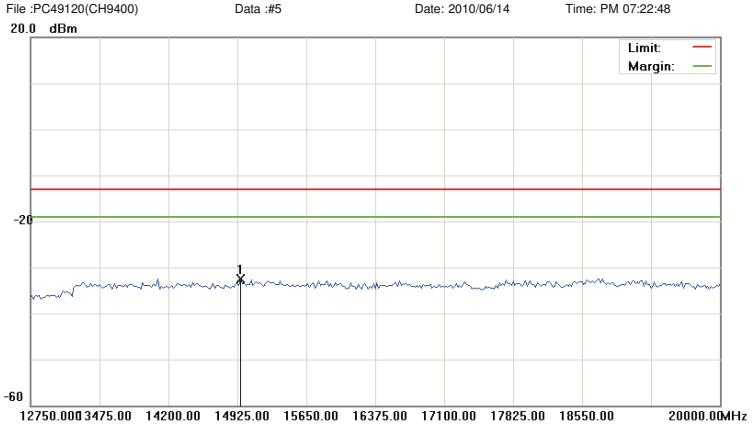
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9400

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8794.875	-39.06	5.74	-33.32	-13.00	-20.32	peak			

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



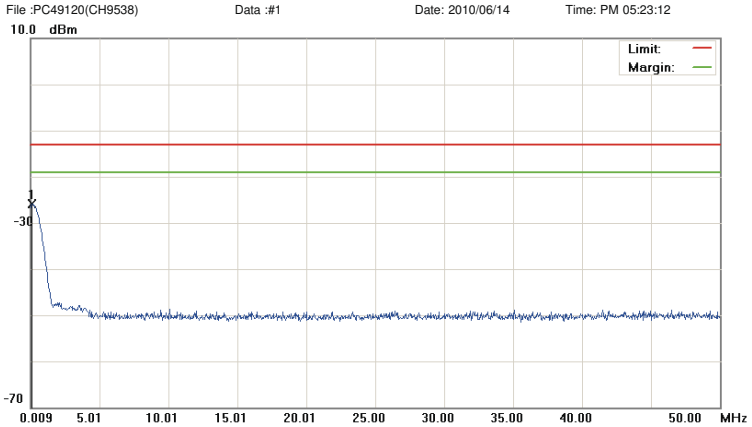
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9400

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	14961.25	-38.45	6.00	-32.45	-13.00	-19.45	peak			

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



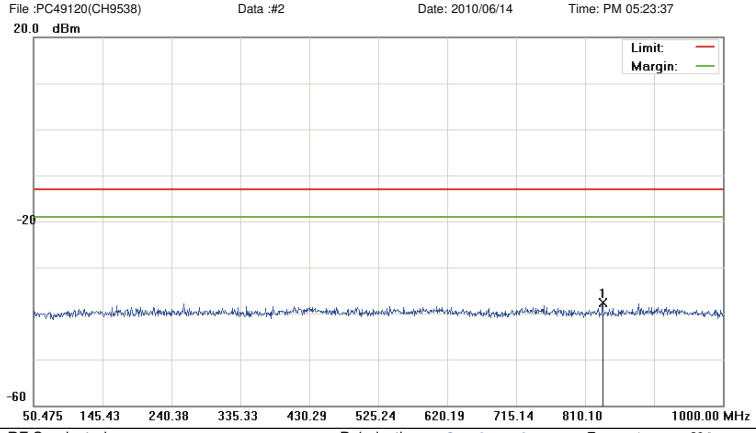
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9538

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1090	-38.38	12.49	-25.89	-13.00	-12.89	peak			

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



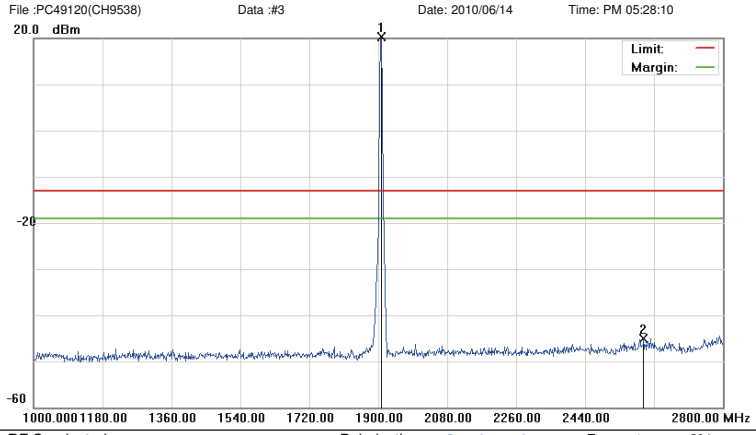
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9538

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	834.2250	-50.96	13.17	-37.79	-13.00	-24.79	peak			

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



Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9538

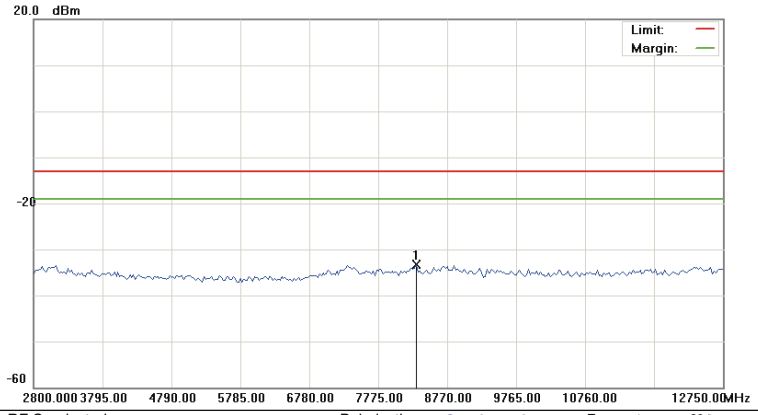
Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1909.000	14.41	5.80	20.21	-13.00	33.21	peak			Tx
2		2593.000	-50.52	5.41	-45.11	-13.00	-32.11	peak			

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

File :PC49120(CH9538) Data :#4 Date: 2010/06/14 Time: PM 07:23:26



Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9538

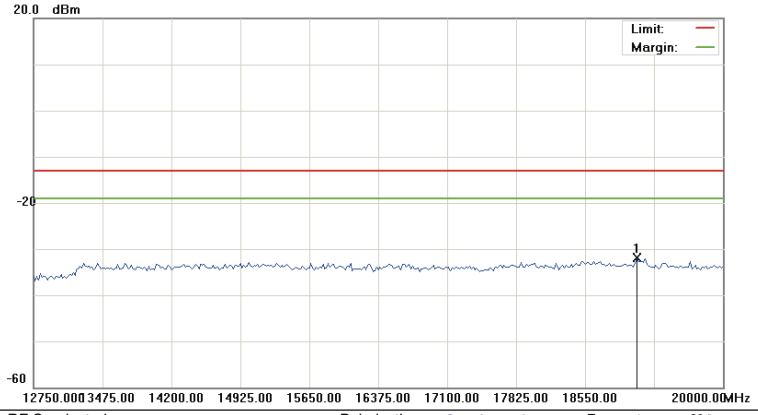
Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8322.250	-39.17	5.80	-33.37	-13.00	-20.37	peak			

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

File :PC49120(CH9538) Data :#5 Date: 2010/06/14 Time: PM 07:23:47



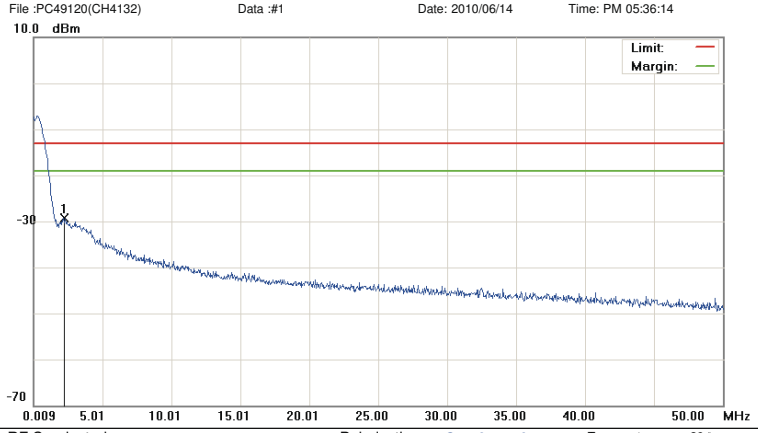
Site : RF Conducted
Limit: FCC Part 24 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 3
Note: CH9538

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	19093.75	-39.11	7.18	-31.93	-13.00	-18.93	peak			

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



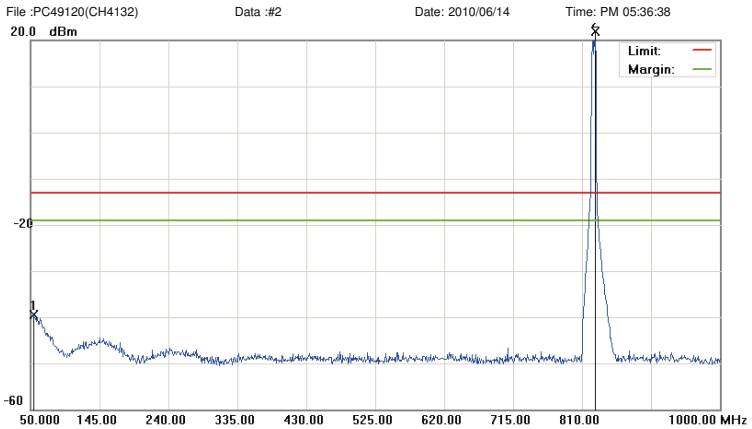
Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4132

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2.1836	-60.66	31.34	-29.32	-13.00	-16.32	peak			

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



Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4132

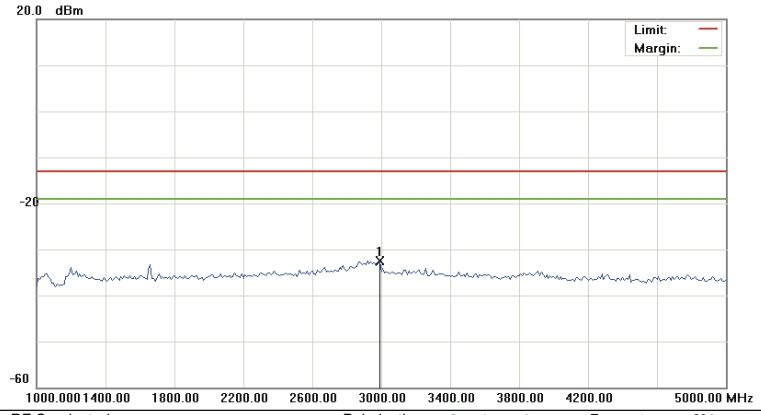
Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		54.2749	-53.46	13.94	-39.52	-13.00	-26.52	peak			
2	*	827.5750	18.04	3.87	21.91	-13.00	34.91	peak			

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

File :PC49120(CH4132) Data :#3 Date: 2010/06/14 Time: PM 07:38:27



Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4132

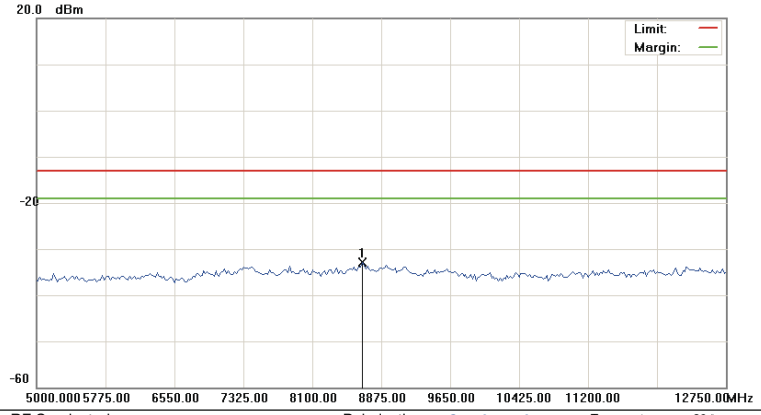
Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2990.000	-36.96	4.53	-32.43	-13.00	-19.43	peak			

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

File :PC49120(CH4132) Data :#4 Date: 2010/06/14 Time: PM 07:38:50



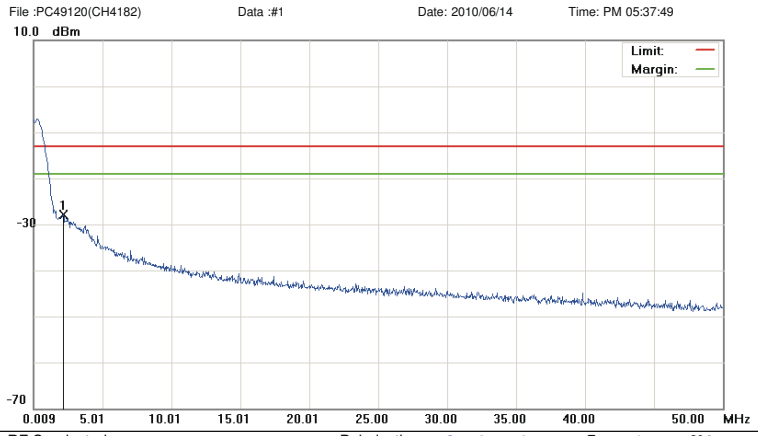
Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4132

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8661.875	-38.72	5.80	-32.92	-13.00	-19.92	peak			

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



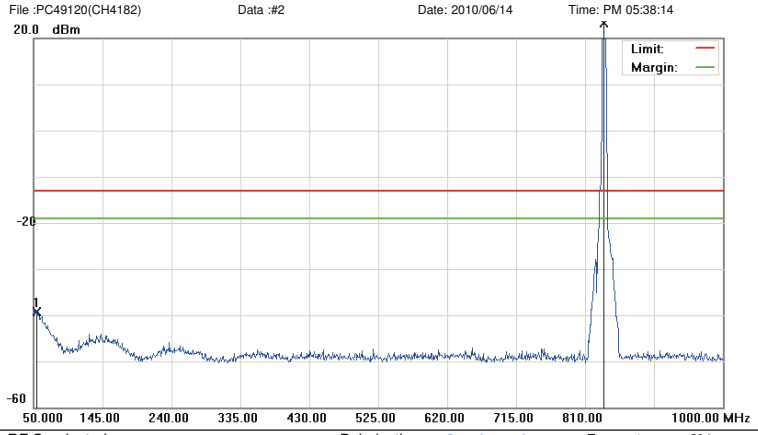
Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4182

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2.1585	-59.39	31.41	-27.98	-13.00	-14.98	peak			

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



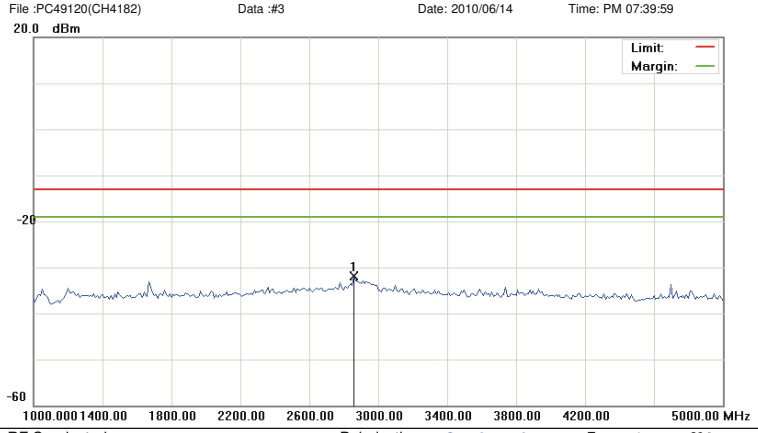
Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4182

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		53.8000	-53.22	14.02	-39.20	-13.00	-26.20	peak			
2	*	835.1750	19.59	3.95	23.54	-13.00	36.54	peak			Tx

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



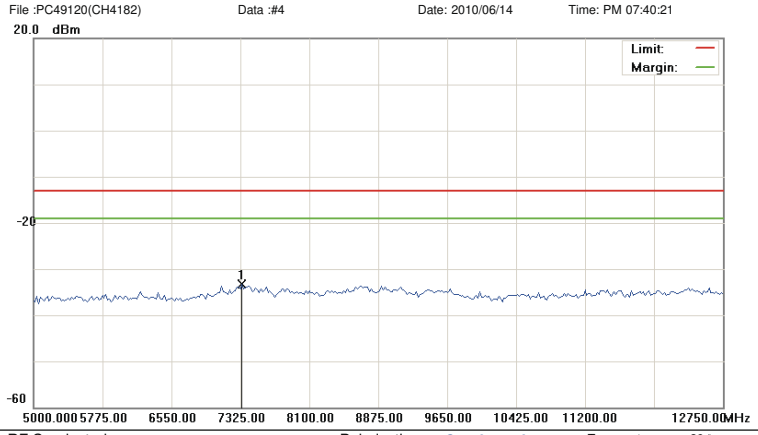
Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4182

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2860.000	-36.42	4.55	-31.87	-13.00	-18.87	peak			

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



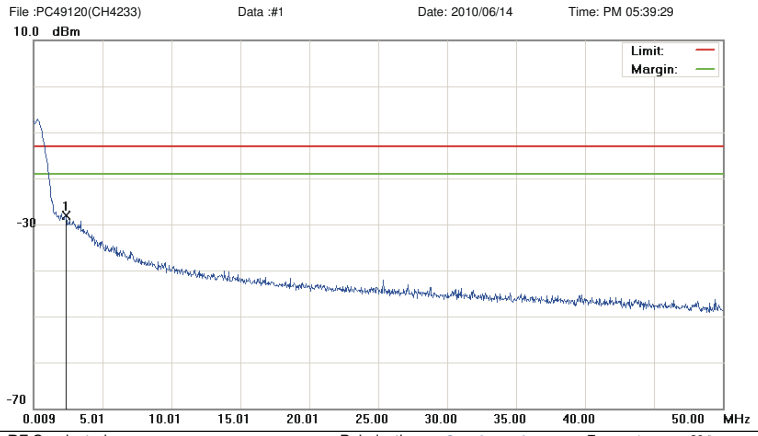
Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4182

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7344.375	-38.25	5.04	-33.21	-13.00	-20.21	peak			

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



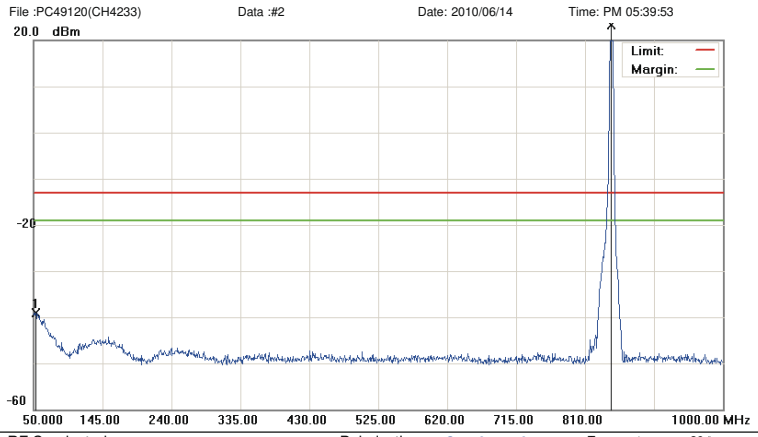
Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4233

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2.3336	-59.05	30.96	-28.09	-13.00	-15.09	peak			

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



Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4233

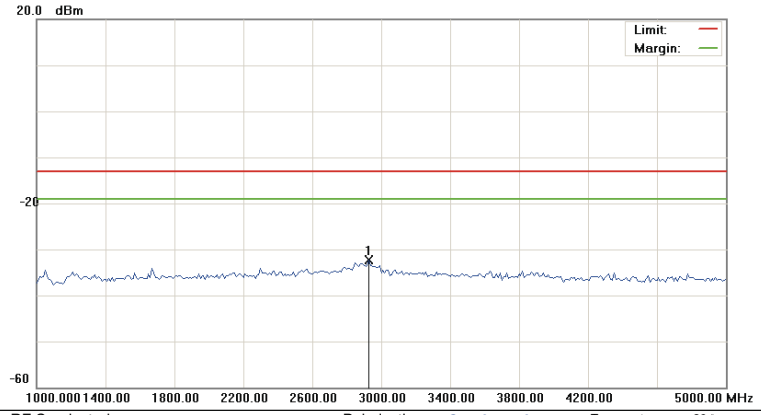
Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		52.8500	-53.34	14.19	-39.15	-13.00	-26.15	peak			
2	*	845.6250	19.57	3.99	23.56	-13.00	36.56	peak			Tx

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

File :PC49120(CH4233) Data :#3 Date: 2010/06/14 Time: PM 07:41:12



Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4233

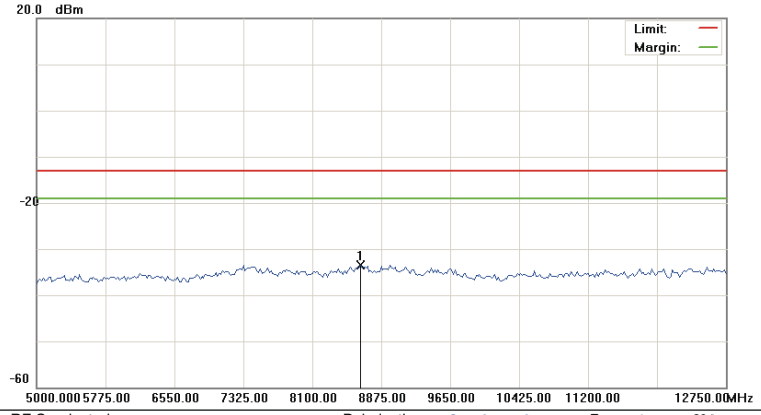
Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	2930.000	-37.03	4.65	-32.38	-13.00	-19.38	peak			

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

File :PC49120(CH4233) Data :#4 Date: 2010/06/14 Time: PM 07:41:33



Site : RF Conducted
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Smartphone
M/N: PC49120
Mode: 4
Note: CH4233

Polarization: Conducted po
Power: AC 120V/60Hz
Distance:

Temperature: 26 ℃
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	8642.500	-39.42	5.94	-33.48	-13.00	-20.48	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 + 10log(P) dB.

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

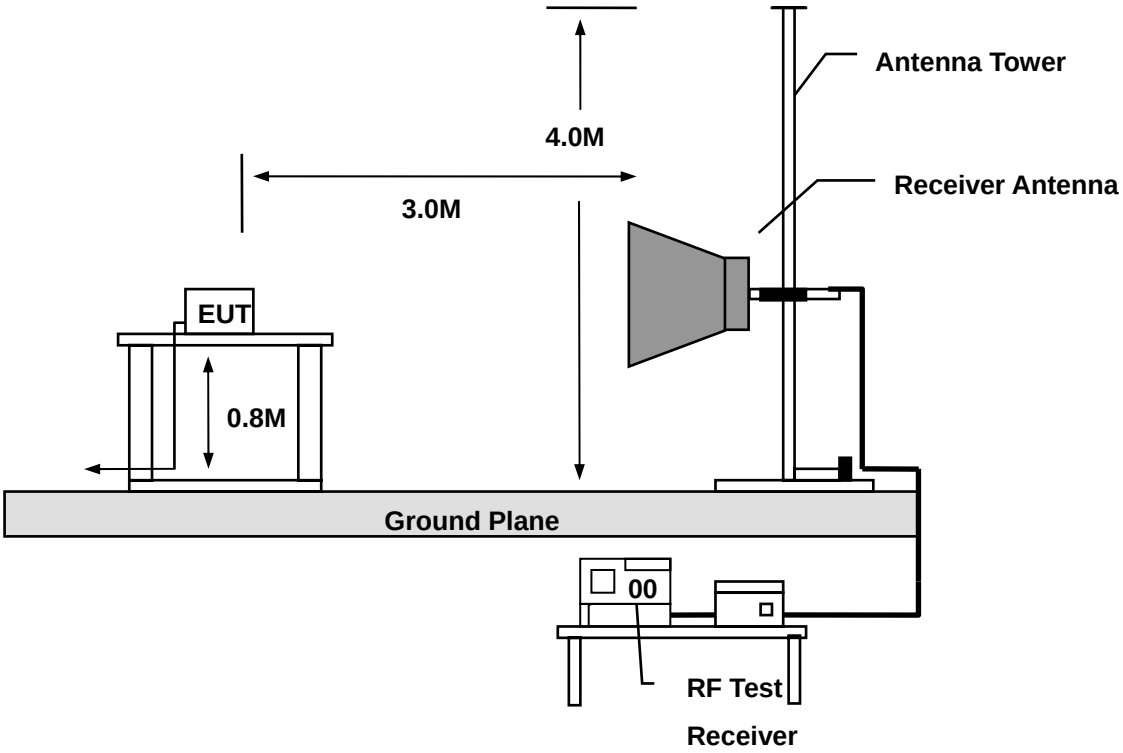
6.2. Test Instruments

3 Meter Chamber					
Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**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)
Bi-log Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	07/02/2009	(2)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	888001	08/06/2009	(1)

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

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

6.3. Setup



6.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)
FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.
P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)
The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:
(c) For fundamental frequency : Transmitter Output < +30dBm
(d) For spurious frequency : Spurious emission limits = fundamental emission limit /10

6.5. Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is ± 3.072 dB.

6.6. Test Result

Standard:	**FCC Part 22**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 1**	**Date:**	**2010/06/23**
Frequency:	**824.2 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	33.395	-109.02	36.19	-72.83	-13.00	-59.83	QP	H
2	92.565	-89.52	13.42	-76.10	-13.00	-63.10	QP	H
3	191.990	-74.01	-1.08	-75.09	-13.00	-62.09	QP	H
4	720.640	-85.39	15.89	-69.50	-13.00	-56.50	QP	H
5	869.050	-87.79	28.44	-59.35	-13.00	-46.35	QP	H
6	980.600	-95.42	28.50	-66.92	-13.00	-53.92	QP	H
7	1626.000	-41.72	6.52	-35.20	-13.00	-22.20	peak	H
8	2508.000	-40.00	12.19	-27.81	-13.00	-14.81	peak	H
1	32.910	-74.72	16.01	-58.71	-13.00	-45.71	QP	V
2	92.565	-79.32	7.02	-72.30	-13.00	-59.30	QP	V
3	226.425	-83.50	7.14	-76.36	-13.00	-63.36	QP	V
4	739.070	-91.55	22.88	-68.67	-13.00	-55.67	QP	V
5	873.900	-76.62	22.87	-53.75	-13.00	-40.75	QP	V
6	975.265	-93.38	25.77	-67.61	-13.00	-54.61	QP	V
7	1459.000	-42.27	5.29	-36.98	-13.00	-23.98	peak	V
8	2159.000	-39.18	10.28	-28.90	-13.00	-15.90	peak	V

Standard:	**FCC Part 22**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 1**	**Date:**	**2010/06/23**
Frequency:	**836.4 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	32.910	-109.43	36.12	-73.31	-13.00	-60.31	QP	H
2	92.565	-88.25	13.42	-74.83	-13.00	-61.83	QP	H
3	191.990	-74.26	-1.08	-75.34	-13.00	-62.34	QP	H
4	722.095	-86.30	16.04	-70.26	-13.00	-57.26	QP	H
5	873.415	-90.97	28.88	-62.09	-13.00	-49.09	QP	H
6	881.660	-94.63	29.74	-64.89	-13.00	-51.89	QP	H
7	1690.000	-42.46	7.02	-35.44	-13.00	-22.44	peak	H
8	2499.000	-40.51	12.13	-28.38	-13.00	-15.38	peak	H
1	32.910	-75.43	16.01	-59.42	-13.00	-46.42	QP	V
2	94.020	-82.81	7.87	-74.94	-13.00	-61.94	QP	V
3	230.305	-83.25	7.25	-76.00	-13.00	-63.00	QP	V
4	663.895	-91.51	21.11	-70.40	-13.00	-57.40	QP	V
5	873.900	-77.35	22.87	-54.48	-13.00	-41.48	QP	V
6	881.660	-77.37	23.13	-54.24	-13.00	-41.24	QP	V
7	1758.000	-42.64	7.54	-35.10	-13.00	-22.10	peak	V
8	2399.000	-41.22	11.59	-29.63	-13.00	-16.63	peak	V

Standard:	**FCC Part 22**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 1**	**Date:**	**2010/06/23**
Frequency:	**848.8 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	33.395	-109.02	36.19	-72.83	-13.00	-59.83	QP	H
2	92.565	-87.66	13.42	-74.24	-13.00	-61.24	QP	H
3	191.505	-75.44	-1.09	-76.53	-13.00	-63.53	QP	H
4	735.675	-86.17	17.35	-68.82	-13.00	-55.82	QP	H
5	873.415	-91.55	28.88	-62.67	-13.00	-49.67	QP	H
6	893.785	-93.56	31.15	-62.41	-13.00	-49.41	QP	H
7	1922.000	-42.17	8.82	-33.35	-13.00	-20.35	peak	H
8	2535.000	-40.27	12.42	-27.85	-13.00	-14.85	peak	H
1	32.910	-74.78	16.01	-58.77	-13.00	-45.77	QP	V
2	94.020	-81.35	7.87	-73.48	-13.00	-60.48	QP	V
3	225.940	-83.44	7.11	-76.33	-13.00	-63.33	QP	V
4	628.975	-90.21	19.67	-70.54	-13.00	-57.54	QP	V
5	873.415	-77.19	22.86	-54.33	-13.00	-41.33	QP	V
6	893.785	-78.69	23.52	-55.17	-13.00	-42.17	QP	V
7	1776.000	-41.28	7.69	-33.59	-13.00	-20.59	peak	V
8	2731.000	-40.51	14.01	-26.50	-13.00	-13.50	peak	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 2**	**Date:**	**2010/06/23**
Frequency:	**1850.2 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	32.910	-111.98	36.12	-75.86	-13.00	-62.86	QP	H
2	92.565	-88.06	13.42	-74.64	-13.00	-61.64	QP	H
3	280.260	-78.32	2.72	-75.60	-13.00	-62.60	QP	H
4	626.550	-88.06	15.66	-72.40	-13.00	-59.40	QP	H
5	740.040	-87.00	17.78	-69.22	-13.00	-56.22	QP	H
6	967.990	-96.50	28.91	-67.59	-13.00	-54.59	QP	H
7	1930.000	-53.25	10.44	-42.81	-13.00	-29.81	peak	H
8	1938.000	-55.30	10.44	-44.86	-13.00	-31.86	peak	H
1	32.910	-78.41	16.01	-62.40	-13.00	-49.40	QP	V
2	92.565	-82.59	7.02	-75.57	-13.00	-62.57	QP	V
3	235.155	-84.44	7.17	-77.27	-13.00	-64.27	QP	V
4	648.860	-92.56	20.47	-72.09	-13.00	-59.09	QP	V
5	747.800	-92.55	22.87	-69.68	-13.00	-56.68	QP	V
6	976.235	-93.57	25.81	-67.76	-13.00	-54.76	QP	V
7	1930.000	-45.82	8.88	-36.94	-13.00	-23.94	peak	V
8	1938.000	-48.87	8.94	-39.93	-13.00	-26.93	peak	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 2**	**Date:**	**2010/06/23**
Frequency:	**1880.0 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	42.610	-112.31	36.41	-75.90	-13.00	-62.90	QP	H
2	92.565	-87.33	13.42	-73.91	-13.00	-60.91	QP	H
3	191.990	-77.00	-1.08	-78.08	-13.00	-65.08	QP	H
4	288.990	-79.42	3.06	-76.36	-13.00	-63.36	QP	H
5	649.345	-86.54	15.40	-71.14	-13.00	-58.14	QP	H
6	743.920	-87.04	17.93	-69.11	-13.00	-56.11	QP	H
7	1938.000	-57.23	10.44	-46.79	-13.00	-33.79	peak	H
8	1960.000	-46.59	10.44	-36.15	-13.00	-23.15	peak	H
9	42.610	-112.31	36.41	-75.90	-13.00	-62.90	QP	H
1	33.395	-79.12	15.94	-63.18	-13.00	-50.18	QP	V
2	94.020	-82.00	7.87	-74.13	-13.00	-61.13	QP	V
3	235.155	-84.56	7.17	-77.39	-13.00	-64.39	QP	V
4	341.370	-91.67	12.65	-79.02	-13.00	-66.02	QP	V
5	661.955	-91.64	21.01	-70.63	-13.00	-57.63	QP	V
6	961.200	-93.32	25.26	-68.06	-13.00	-55.06	QP	V
7	1938.000	-50.25	8.94	-41.31	-13.00	-28.31	peak	V
8	1960.000	-40.45	9.11	-31.34	-13.00	-18.34	peak	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 2**	**Date:**	**2010/06/23**
Frequency:	**1909.8 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	42.610	-112.99	36.41	-76.58	-13.00	-63.58	QP	H
2	92.565	-87.53	13.42	-74.11	-13.00	-61.11	QP	H
3	191.990	-75.82	-1.08	-76.90	-13.00	-63.90	QP	H
4	279.775	-78.43	2.69	-75.74	-13.00	-62.74	QP	H
5	679.900	-86.25	15.34	-70.91	-13.00	-57.91	QP	H
6	749.740	-87.52	18.14	-69.38	-13.00	-56.38	QP	H
7	1938.000	-58.75	10.44	-48.31	-13.00	-35.31	peak	H
8	1990.000	-51.27	10.45	-40.82	-13.00	-27.82	peak	H
1	32.910	-79.14	16.01	-63.13	-13.00	-50.13	QP	V
2	92.565	-80.15	7.02	-73.13	-13.00	-60.13	QP	V
3	222.060	-84.71	6.97	-77.74	-13.00	-64.74	QP	V
4	346.220	-91.23	12.48	-78.75	-13.00	-65.75	QP	V
5	681.355	-92.43	21.83	-70.60	-13.00	-57.60	QP	V
6	755.075	-92.31	22.83	-69.48	-13.00	-56.48	QP	V
7	1938.000	-49.27	8.94	-40.33	-13.00	-27.33	peak	V
8	1990.000	-43.31	9.34	-33.97	-13.00	-20.97	peak	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 3**	**Date:**	**2010/06/23**
Frequency:	**1852.4 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	36.790	-109.50	36.62	-72.88	-13.00	-59.88	QP	H
2	92.565	-87.79	13.42	-74.37	-13.00	-61.37	QP	H
3	193.445	-77.57	-1.02	-78.59	-13.00	-65.59	QP	H
4	272.015	-78.80	2.18	-76.62	-13.00	-63.62	QP	H
5	754.590	-87.66	18.32	-69.34	-13.00	-56.34	QP	H
6	977.690	-96.05	28.60	-67.45	-13.00	-54.45	QP	H
1	32.910	-78.09	16.01	-62.08	-13.00	-49.08	QP	V
2	92.565	-82.89	7.02	-75.87	-13.00	-62.87	QP	V
3	222.060	-83.90	6.97	-76.93	-13.00	-63.93	QP	V
4	681.355	-91.47	21.83	-69.64	-13.00	-56.64	QP	V
5	751.680	-91.93	22.85	-69.08	-13.00	-56.08	QP	V
6	953.440	-92.73	25.03	-67.70	-13.00	-54.70	QP	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 3**	**Date:**	**2010/06/23**
Frequency:	**1880.0 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	33.395	-112.20	36.19	-76.01	-13.00	-63.01	QP	H
2	92.565	-89.12	13.42	-75.70	-13.00	-62.70	QP	H
3	192.960	-77.75	-1.03	-78.78	-13.00	-65.78	QP	H
4	280.260	-80.19	2.72	-77.47	-13.00	-64.47	QP	H
5	687.660	-85.59	15.28	-70.31	-13.00	-57.31	QP	H
6	984.480	-94.61	28.33	-66.28	-13.00	-53.28	QP	H
1	32.910	-78.68	16.01	-62.67	-13.00	-49.67	QP	V
2	92.565	-82.01	7.02	-74.99	-13.00	-61.99	QP	V
3	227.395	-84.34	7.16	-77.18	-13.00	-64.18	QP	V
4	349.130	-90.91	12.38	-78.53	-13.00	-65.53	QP	V
5	752.650	-92.90	22.85	-70.05	-13.00	-57.05	QP	V
6	983.510	-93.58	26.09	-67.49	-13.00	-54.49	QP	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 3**	**Date:**	**2010/06/23**
Frequency:	**1907.6 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	32.910	-111.24	36.12	-75.12	-13.00	-62.12	QP	H
2	92.565	-88.90	13.42	-75.48	-13.00	-62.48	QP	H
3	191.990	-77.80	-1.08	-78.88	-13.00	-65.88	QP	H
4	269.590	-79.09	2.01	-77.08	-13.00	-64.08	QP	H
5	680.385	-85.74	15.34	-70.40	-13.00	-57.40	QP	H
6	956.350	-97.80	29.40	-68.40	-13.00	-55.40	QP	H
1	32.910	-78.65	16.01	-62.64	-13.00	-49.64	QP	V
2	94.020	-83.69	7.87	-75.82	-13.00	-62.82	QP	V
3	226.425	-84.53	7.14	-77.39	-13.00	-64.39	QP	V
4	342.340	-91.42	12.61	-78.81	-13.00	-65.81	QP	V
5	688.145	-91.89	21.51	-70.38	-13.00	-57.38	QP	V
6	982.540	-93.85	26.05	-67.80	-13.00	-54.80	QP	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 4**	**Date:**	**2010/06/23**
Frequency:	**826.4 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	40.670	-112.36	36.86	-75.50	-13.00	-62.50	QP	H
2	92.565	-88.04	13.42	-74.62	-13.00	-61.62	QP	H
3	192.475	-76.55	-1.06	-77.61	-13.00	-64.61	QP	H
4	612.000	-87.92	15.90	-72.02	-13.00	-59.02	QP	H
5	735.675	-85.48	17.35	-68.13	-13.00	-55.13	QP	H
6	966.535	-95.72	28.95	-66.77	-13.00	-53.77	QP	H
7	1781.000	-42.17	7.73	-34.44	-13.00	-21.44	peak	H
8	2387.000	-40.68	11.52	-29.16	-13.00	-16.16	peak	H
1	33.395	-78.65	15.94	-62.71	-13.00	-49.71	QP	V
2	94.020	-84.16	7.87	-76.29	-13.00	-63.29	QP	V
3	225.940	-84.19	7.11	-77.08	-13.00	-64.08	QP	V
4	636.250	-90.19	19.96	-70.23	-13.00	-57.23	QP	V
5	736.645	-92.34	22.76	-69.58	-13.00	-56.58	QP	V
6	871.475	-89.06	22.80	-66.26	-13.00	-53.26	QP	V
7	1520.000	-41.41	5.70	-35.71	-13.00	-22.71	peak	V
8	2250.000	-40.25	10.78	-29.47	-13.00	-16.47	peak	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 4**	**Date:**	**2010/06/23**
Frequency:	**836.4 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	32.910	-110.60	36.12	-74.48	-13.00	-61.48	QP	H
2	92.565	-88.41	13.42	-74.99	-13.00	-61.99	QP	H
3	288.990	-79.92	3.06	-76.86	-13.00	-63.86	QP	H
4	647.405	-86.72	15.40	-71.32	-13.00	-58.32	QP	H
5	736.645	-86.27	17.45	-68.82	-13.00	-55.82	QP	H
6	924.340	-99.50	31.19	-68.31	-13.00	-55.31	QP	H
7	1900.000	-41.31	8.65	-32.66	-13.00	-19.66	peak	H
8	2455.000	-40.82	11.88	-28.94	-13.00	-15.94	peak	H
1	32.910	-78.90	16.01	-62.89	-13.00	-49.89	QP	V
2	92.565	-82.24	7.02	-75.22	-13.00	-62.22	QP	V
3	222.060	-84.30	6.97	-77.33	-13.00	-64.33	QP	V
4	353.980	-91.45	12.21	-79.24	-13.00	-66.24	QP	V
5	737.130	-91.88	22.78	-69.10	-13.00	-56.10	QP	V
6	881.660	-88.14	23.13	-65.01	-13.00	-52.01	QP	V
7	1827.000	-41.40	8.08	-33.32	-13.00	-20.32	peak	V
8	2493.000	-40.60	12.10	-28.50	-13.00	-15.50	peak	V

Standard:	**FCC Part 24**	**Test Distance:**	**3m**
Test item:	**Radiated Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 4**	**Date:**	**2010/06/23**
Frequency:	**846.4 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	43.580	-111.14	36.17	-74.97	-13.00	-61.97	QP	H
2	92.565	-87.44	13.42	-74.02	-13.00	-61.02	QP	H
3	191.505	-76.76	-1.09	-77.85	-13.00	-64.85	QP	H
4	299.175	-79.61	3.47	-76.14	-13.00	-63.14	QP	H
5	747.315	-87.96	18.04	-69.92	-13.00	-56.92	QP	H
6	945.680	-98.79	30.10	-68.69	-13.00	-55.69	QP	H
7	1849.000	-42.08	8.25	-33.83	-13.00	-20.83	peak	H
8	2272.000	-40.80	10.89	-29.91	-13.00	-16.91	peak	H
1	32.910	-79.12	16.01	-63.11	-13.00	-50.11	QP	V
2	92.565	-80.88	7.02	-73.86	-13.00	-60.86	QP	V
3	230.305	-84.42	7.25	-77.17	-13.00	-64.17	QP	V
4	345.735	-92.07	12.50	-79.57	-13.00	-66.57	QP	V
5	753.135	-91.80	22.84	-68.96	-13.00	-55.96	QP	V
6	937.435	-91.97	24.58	-67.39	-13.00	-54.39	QP	V
7	1669.000	-41.66	6.86	-34.80	-13.00	-21.80	peak	V
8	2293.000	-41.04	11.01	-30.03	-13.00	-17.03	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 ±0.00025% (±2.5ppm) of the center frequency.

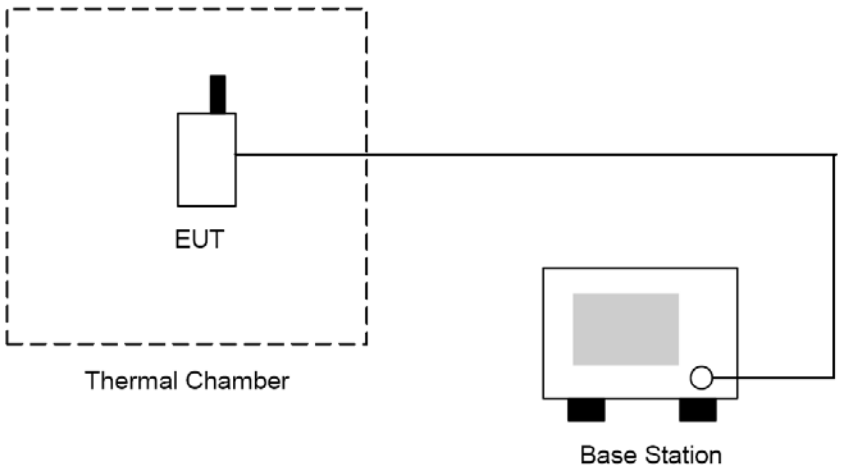
7.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/26/2009	(2)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) 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℃ and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute.
3. With power OFF, the temperature was raised in 10℃ steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The temperature tests were performed for the worst case.
5. Test data was recorded.

7.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Temperature Variation) measurement is ± 10Hz.

7.6. Test Result

Product	Smartphone			
Test Item	Frequency Stability (Temperature Variation)			
Test Mode	Mode 1: GSM 850 Link			
Date of Test	06/14/2010		Test Site	TE02
Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	23.56	0.028	±2.5	Pass
-20	24.63	0.029	±2.5	Pass
-10	28.41	0.034	±2.5	Pass
0	23.54	0.028	±2.5	Pass
10	22.14	0.026	±2.5	Pass
20	23.35	0.028	±2.5	Pass
30	27.13	0.032	±2.5	Pass
40	25.33	0.030	±2.5	Pass
50	21.32	0.025	±2.5	Pass

Product	Smartphone			
Test Item	Frequency Stability (Temperature Variation)			
Test Mode	Mode 2: GSM 1900 Link			
Date of Test	06/14/2010		Test Site	TE02
Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	21.48	0.011	±2.5	Pass
-20	33.41	0.018	±2.5	Pass
-10	32.10	0.017	±2.5	Pass
0	29.47	0.016	±2.5	Pass
10	27.34	0.015	±2.5	Pass
20	22.42	0.012	±2.5	Pass
30	21.52	0.011	±2.5	Pass
40	23.64	0.013	±2.5	Pass
50	27.38	0.015	±2.5	Pass

Product	Smartphone			
Test Item	Frequency Stability (Temperature Variation)			
Test Mode	Mode 3: WCDMA Band II Link			
Date of Test	06/14/2010		Test Site	TE02
Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	35.10	0.019	±2.5	Pass
-20	32.33	0.017	±2.5	Pass
-10	32.17	0.017	±2.5	Pass
0	33.24	0.018	±2.5	Pass
10	37.98	0.020	±2.5	Pass
20	33.65	0.018	±2.5	Pass
30	32.09	0.017	±2.5	Pass
40	29.34	0.016	±2.5	Pass
50	27.31	0.015	±2.5	Pass

Product	Smartphone			
Test Item	Frequency Stability (Temperature Variation)			
Test Mode	Mode 4: WCDMA Band V Link			
Date of Test	06/14/2010		Test Site	TE02
Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
-30	35.12	0.042	±2.5	Pass
-20	32.41	0.039	±2.5	Pass
-10	31.24	0.037	±2.5	Pass
0	33.14	0.040	±2.5	Pass
10	37.32	0.045	±2.5	Pass
20	30.24	0.036	±2.5	Pass
30	29.58	0.035	±2.5	Pass
40	27.56	0.033	±2.5	Pass
50	28.31	0.034	±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 ±0.00025% (±2.5ppm) of the center frequency.

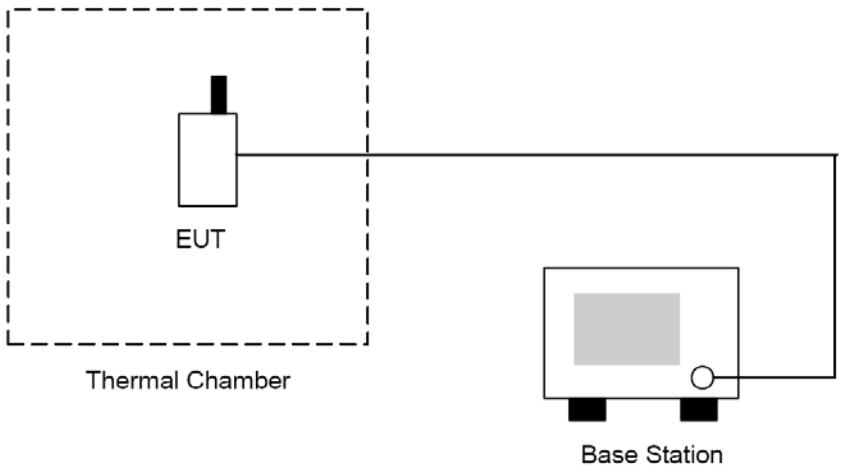
8.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	07/29/2009	(2)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/26/2009	(2)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) 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±5℃ 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 ± 10Hz.

8.6. Test Result

Product	Smartphone				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 1: GSM 850 Link				
Date of Test	06/14/2010		Test Site	TE02	
Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	31.58	0.038	±2.5	Pass
Normal	3.70	32.48	0.039	±2.5	Pass
Battery cut-off point	3.40	31.56	0.038	±2.5	Pass

Product	Smartphone				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 2: GSM 1900 Link				
Date of Test	06/14/2010		Test Site	TE02	
Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	30.48	0.016	±2.5	Pass
Normal	3.70	33.24	0.018	±2.5	Pass
Battery cut-off point	3.40	31.96	0.017	±2.5	Pass

Product	Smartphone				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 3: WCDMA Band II Link				
Date of Test	06/14/2010		Test Site	TE02	
Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	31.25	0.037	±2.5	Pass
Normal	3.70	33.47	0.040	±2.5	Pass
Battery cut-off point	3.40	35.68	0.043	±2.5	Pass

Product	Smartphone				
Test Item	Frequency Stability (Voltage Variation)				
Test Mode	Mode 4: WCDMA Band V Link				
Date of Test	06/14/2010		Test Site	TE02	

Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Result
Battery full point	4.20	32.57	0.017	±2.5	Pass
Normal	3.70	35.12	0.019	±2.5	Pass
Battery cut-off point	3.40	33.24	0.018	±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

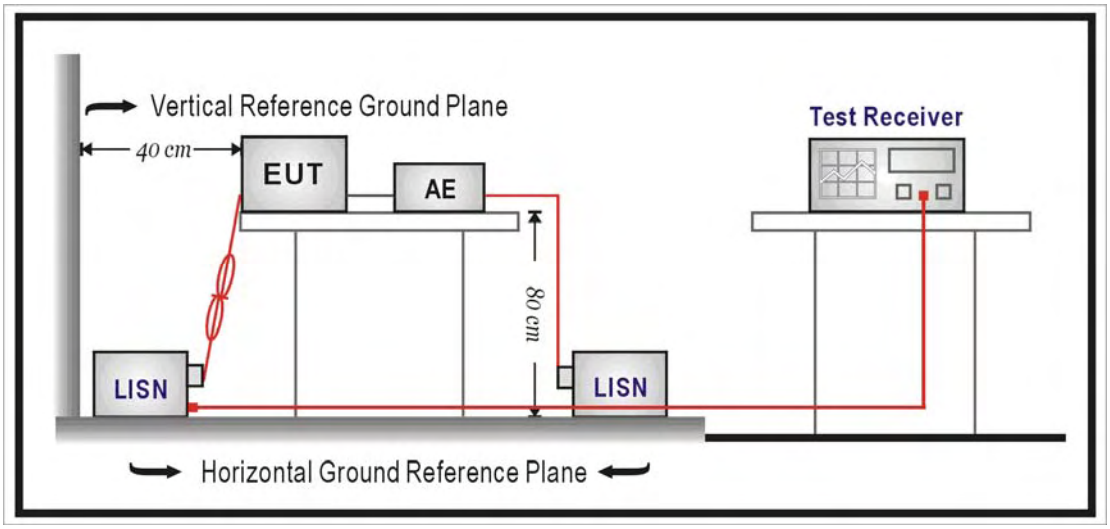
9.2. Test Instruments

Describe	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	07/01/2009	(1)
LISN	R&S	ENV216	101040	03/02/2010	(1)
LISN	R&S	ENV216	101041	03/02/2010	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) 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 rules15.207:

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

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

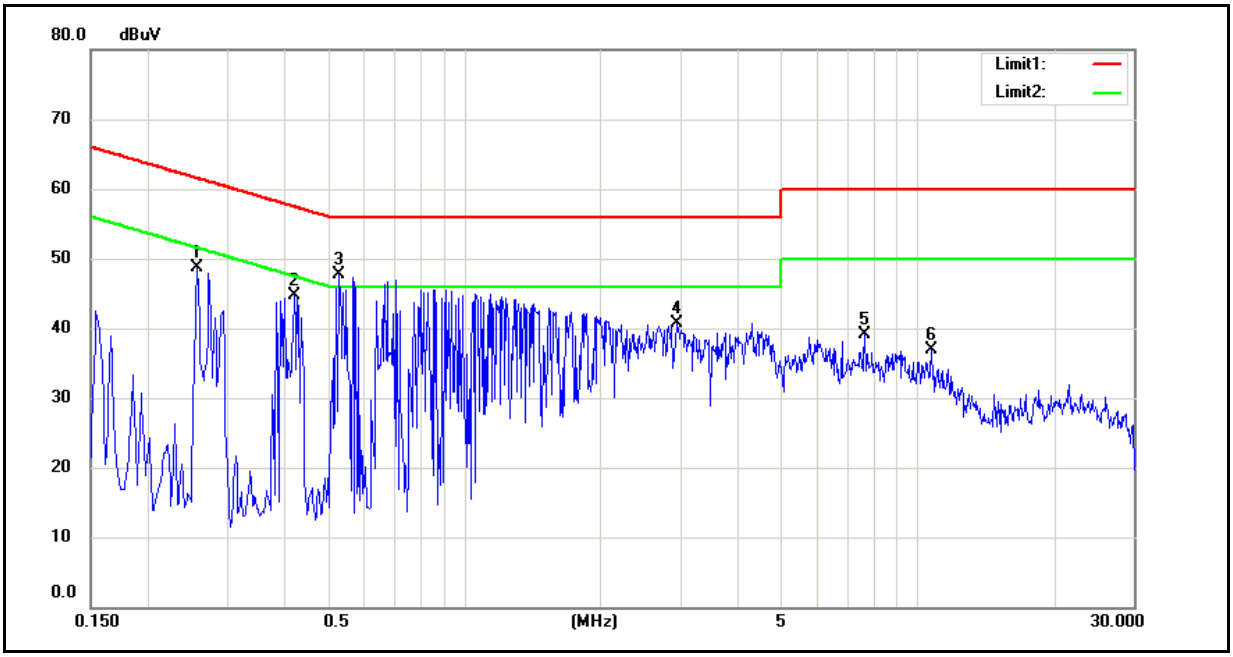
The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies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

9.5. Uncertainty

The measurement uncertainty is defined as for AC power conducted emission measurement is ± 2.24 dB.

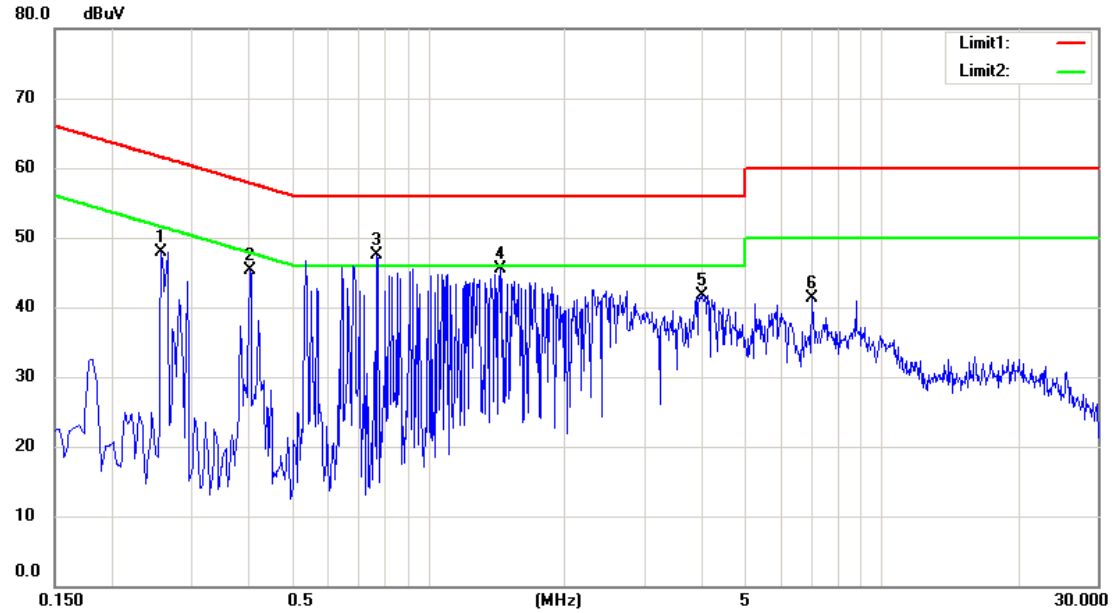
9.6. Test Result

Standard:	**FCC Part 22H**	**Line:**	**L1**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 1**	**Date:**	**2010/06/14**
		Test By:	**Gary Wu**
Description:			



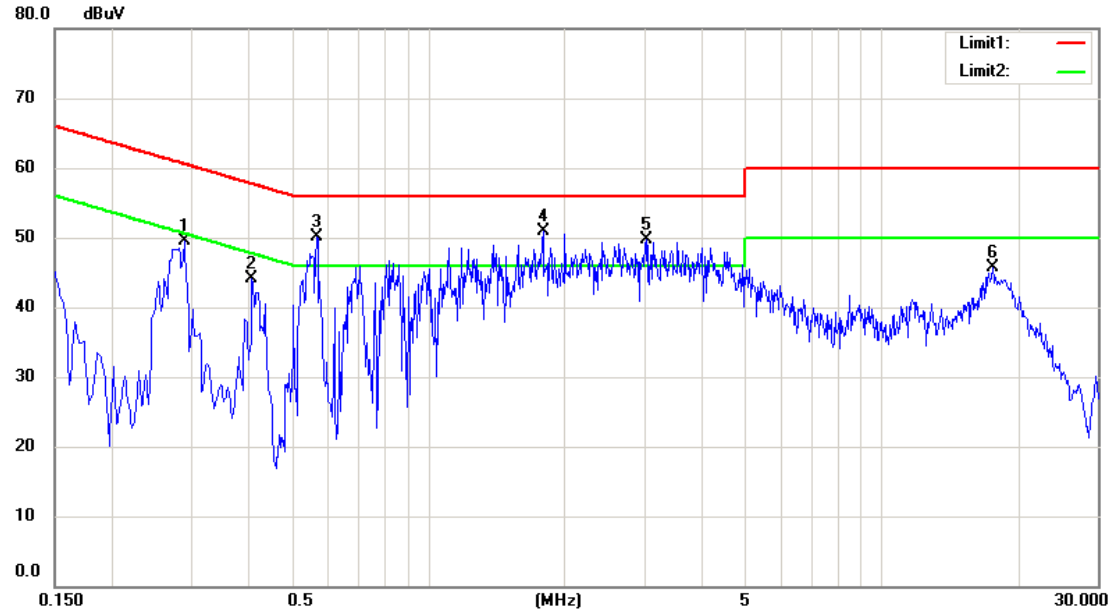
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2580	34.99	14.52	10.06	45.05	24.58	61.50	51.50	-16.45	-26.92	Pass
2	0.4220	32.04	13.60	9.99	42.03	23.59	57.41	47.41	-15.38	-23.82	Pass
3	0.5300	33.39	12.14	9.94	43.33	22.08	56.00	46.00	-12.67	-23.92	Pass
4	2.9580	24.62	9.38	9.84	34.46	19.22	56.00	46.00	-21.54	-26.78	Pass
5	7.6740	20.25	7.87	9.93	30.18	17.80	60.00	50.00	-29.82	-32.20	Pass
6	10.7340	17.31	7.52	10.30	27.61	17.82	60.00	50.00	-32.39	-32.18	Pass

Standard:	**FCC Part 22H**	**Line:**	**N**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 1**	**Date:**	**2010/06/14**
		Test By:	**Gary Wu**
Description:			



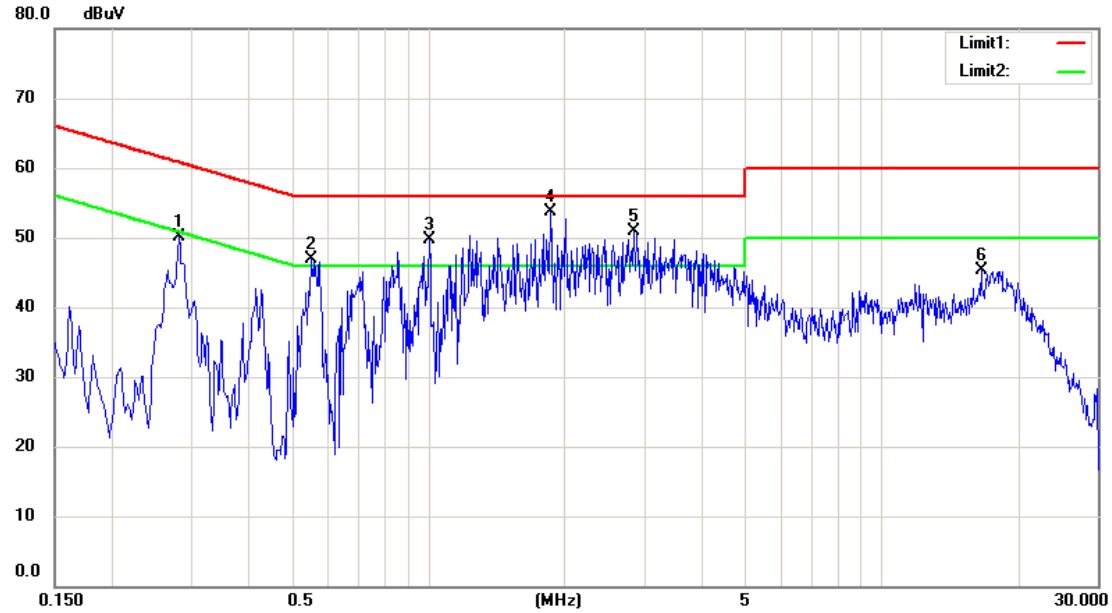
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2580	32.65	11.38	10.05	42.70	21.43	61.50	51.50	-18.80	-30.07	Pass
2	0.4060	32.20	10.87	10.00	42.20	20.87	57.73	47.73	-15.53	-26.86	Pass
3	0.7700	31.02	6.83	9.84	40.86	16.67	56.00	46.00	-15.14	-29.33	Pass
4	1.4460	30.10	10.67	9.69	39.79	20.36	56.00	46.00	-16.21	-25.64	Pass
5	4.0420	26.71	6.26	9.84	36.55	16.10	56.00	46.00	-19.45	-29.90	Pass
6	7.0540	21.02	4.75	9.87	30.89	14.62	60.00	50.00	-29.11	-35.38	Pass

Standard:	**FCC Part 24E**	**Line:**	**L1**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 2**	**Date:**	**2010/06/14**
		Test By:	**Gary Wu**
Description:			



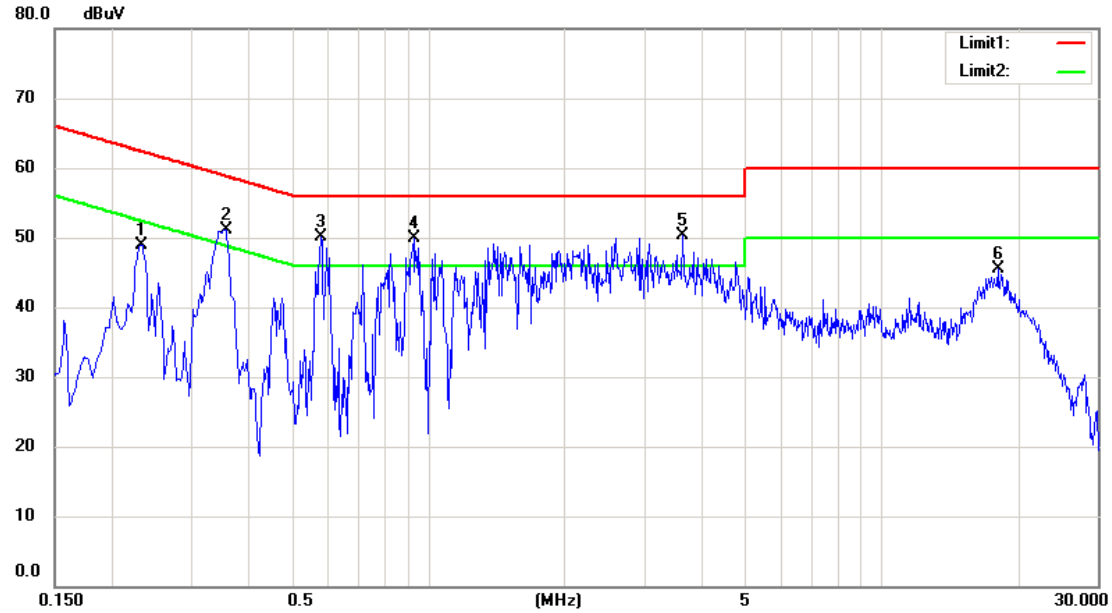
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2900	34.01	25.34	10.04	44.05	35.38	60.52	50.52	-16.47	-15.14	Pass
2	0.4100	29.64	20.62	10.00	39.64	30.62	57.65	47.65	-18.01	-17.03	Pass
3	0.5700	34.03	26.56	9.93	43.96	36.49	56.00	46.00	-12.04	-9.51	Pass
4	1.7940	33.90	25.21	9.68	43.58	34.89	56.00	46.00	-12.42	-11.11	Pass
5	3.0380	33.62	24.98	9.84	43.46	34.82	56.00	46.00	-12.54	-11.18	Pass
6	17.6540	28.45	20.36	10.34	38.79	30.70	60.00	50.00	-21.21	-19.30	Pass

Standard:	**FCC Part 24E**	**Line:**	**N**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 2**	**Date:**	**2010/06/14**
		Test By:	**Gary Wu**
Description:			



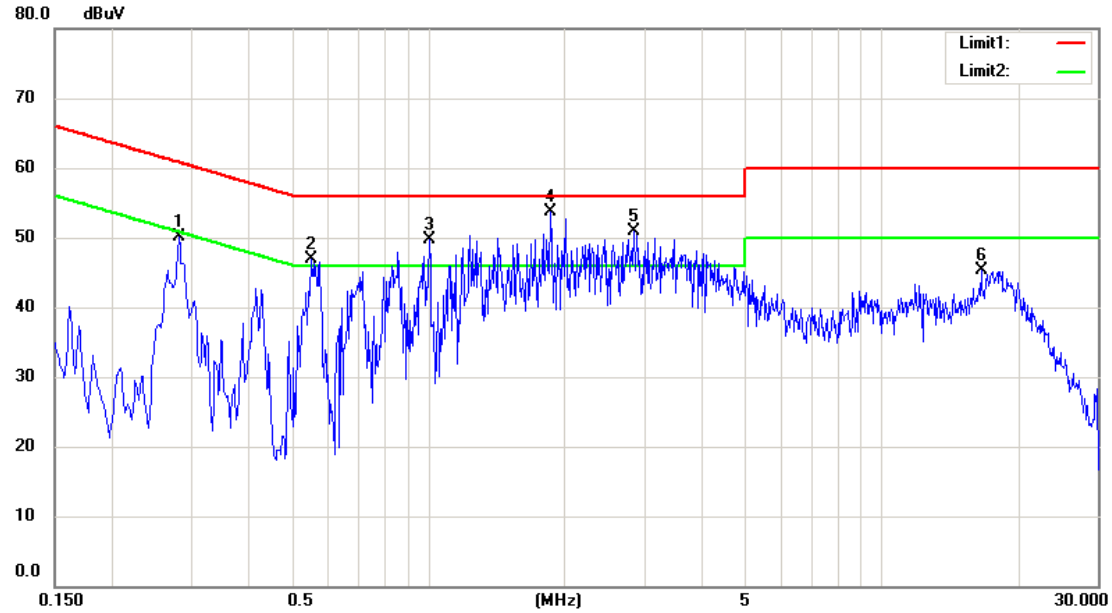
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2820	38.64	31.14	10.04	48.68	41.18	60.76	50.76	-12.08	-9.58	Pass
2	0.5540	32.71	26.29	9.93	42.64	36.22	56.00	46.00	-13.36	-9.78	Pass
3	1.0060	35.11	24.89	9.75	44.86	34.64	56.00	46.00	-11.14	-11.36	Pass
4	1.8620	36.22	26.03	9.68	45.90	35.71	56.00	46.00	-10.10	-10.29	Pass
5	2.8540	33.63	24.25	9.82	43.45	34.07	56.00	46.00	-12.55	-11.93	Pass
6	16.5940	27.34	18.42	10.32	37.66	28.74	60.00	50.00	-22.34	-21.26	Pass

Standard:	**FCC Part 24E**	**Line:**	**L1**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 3**	**Date:**	**2010/06/14**
		Test By:	**Gary Wu**
Description:			



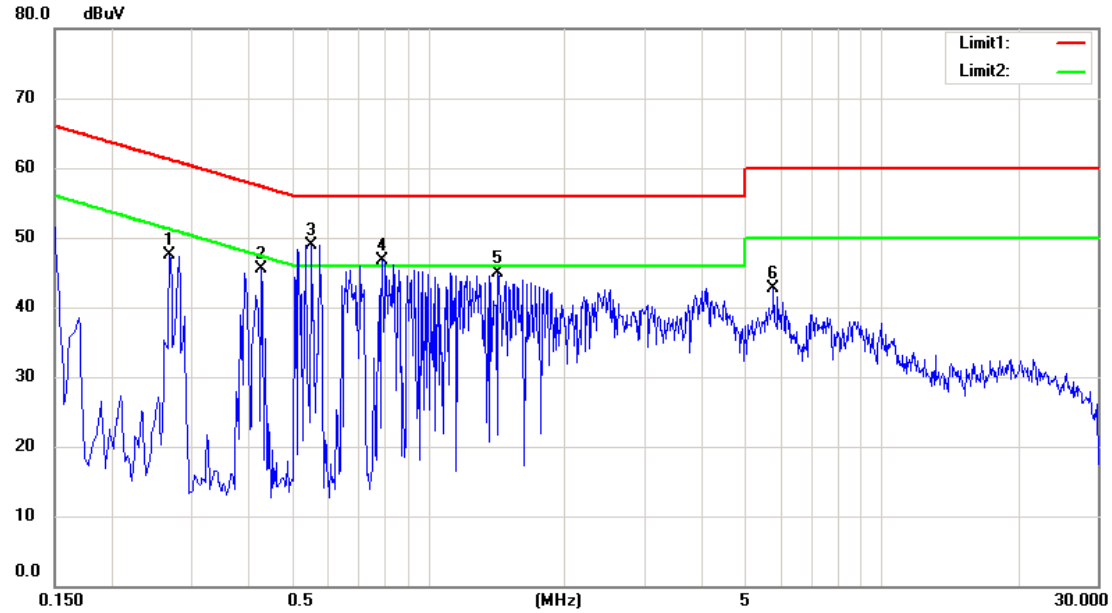
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2340	37.18	30.57	10.07	47.25	40.64	62.31	52.31	-15.06	-11.67	Pass
2	0.3580	40.42	34.38	10.02	50.44	44.40	58.77	48.77	-8.33	-4.37	Pass
3	0.5820	36.00	24.86	9.92	45.92	34.78	56.00	46.00	-10.08	-11.22	Pass
4	0.9300	34.35	21.60	9.79	44.14	31.39	56.00	46.00	-11.86	-14.61	Pass
5	3.6420	34.03	23.28	9.84	43.87	33.12	56.00	46.00	-12.13	-12.88	Pass
6	18.0900	27.84	19.40	10.39	38.23	29.79	60.00	50.00	-21.77	-20.21	Pass

Standard:	**FCC Part 24E**	**Line:**	**N**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 3**	**Date:**	**2010/06/14**
		Test By:	**Gary Wu**
Description:			



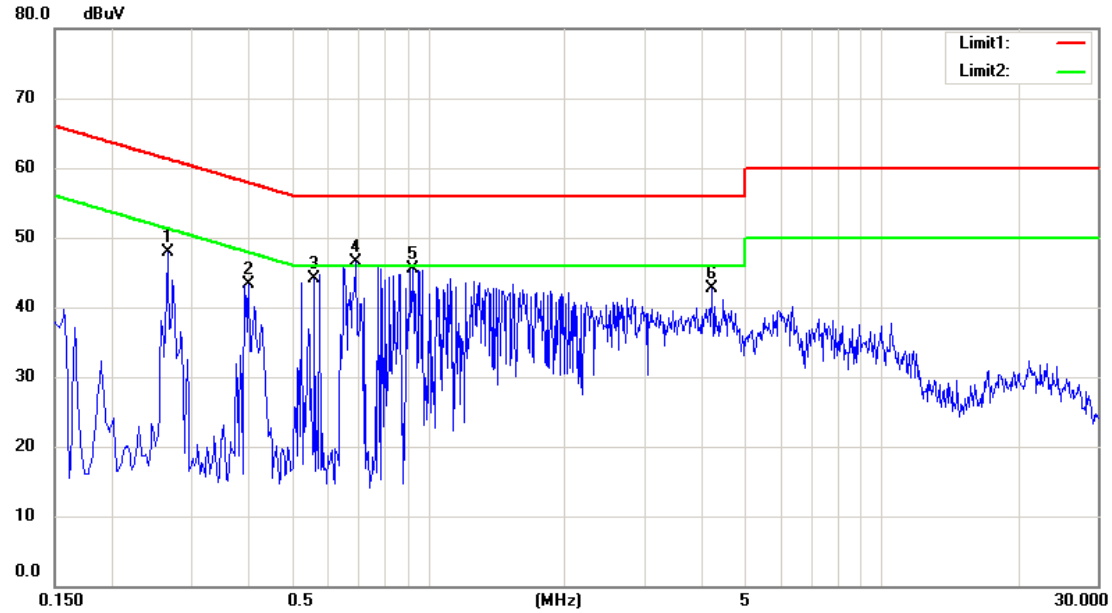
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2820	38.64	31.14	10.04	48.68	41.18	60.76	50.76	-12.08	-9.58	Pass
2	0.5540	32.71	26.29	9.93	42.64	36.22	56.00	46.00	-13.36	-9.78	Pass
3	1.0060	35.11	24.89	9.75	44.86	34.64	56.00	46.00	-11.14	-11.36	Pass
4	1.8620	36.22	26.03	9.68	45.90	35.71	56.00	46.00	-10.10	-10.29	Pass
5	2.8540	33.63	24.25	9.82	43.45	34.07	56.00	46.00	-12.55	-11.93	Pass
6	16.5940	27.34	18.42	10.32	37.66	28.74	60.00	50.00	-22.34	-21.26	Pass

Standard:	**FCC Part 22H**	**Line:**	**L1**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 4**	**Date:**	**2010/06/14**
		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	0.2700	34.28	14.32	10.05	44.33	24.37	61.12	51.12	-16.79	-26.75	Pass
2	0.4300	31.71	11.17	9.99	41.70	21.16	57.25	47.25	-15.55	-26.09	Pass
3	0.5540	34.54	11.07	9.93	44.47	21.00	56.00	46.00	-11.53	-25.00	Pass
4	0.7940	31.98	9.14	9.84	41.82	18.98	56.00	46.00	-14.18	-27.02	Pass
5	1.4300	29.96	9.11	9.70	39.66	18.81	56.00	46.00	-16.34	-27.19	Pass
6	5.7820	24.33	7.16	9.84	34.17	17.00	60.00	50.00	-25.83	-33.00	Pass

Standard:	**FCC Part 22H**	**Line:**	**N**
Test item:	**Conducted Emission**	**Power:**	**AC 120V/60Hz**
Model:	**PC49120**	**Temp.(℃)/Hum.(%RH):**	**26(℃)/60%RH**
Mode:	**Mode 4**	**Date:**	**2010/06/14**
		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	0.2660	34.34	16.39	10.04	44.38	26.43	61.24	51.24	-16.86	-24.81	Pass
2	0.4020	31.29	14.62	10.00	41.29	24.62	57.81	47.81	-16.52	-23.19	Pass
3	0.5620	32.93	9.07	9.93	42.86	19.00	56.00	46.00	-13.14	-27.00	Pass
4	0.6900	31.87	13.35	9.87	41.74	23.22	56.00	46.00	-14.26	-22.78	Pass
5	0.9260	30.73	10.31	9.78	40.51	20.09	56.00	46.00	-15.49	-25.91	Pass
6	4.2380	24.60	8.36	9.84	34.44	18.20	56.00	46.00	-21.56	-27.80	Pass