

## HCT CO., LTD.

### CERTIFICATE OF COMPLIANCE FCC Certification

Applicant Name:IPantech Co., Ltd.SAddress:IPantech Bldg, I-2, DMC, Sangam-dong, Mapo-gu,ISeoul, 121-792, KoreaS

Date of Issue: September 29, 2011 Test Site/Location: HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon, Icheonsi, Kyunggi-Do, Korea Report No.: HCTR1108FR06-1

HCT FRN: 0005866421

### FCC ID:

### **JYCP9070**

## APPLICANT: Pantech Co., Ltd.

FCC Model(s): EUT Type:	P9070 GSM/WCDMA/LTE Phone with Bluetooth/WLAN
Max. RF Output Power:	Wi-Fi 802.11b(23.58 dBm) / Wi-Fi 802.11g (23.30 dBm) ) / Wi-Fi 802.11n (22.12 dBm)
Frequency Range:	2412 MHz -2462 MHz
Modulation type	CCK/DSSS/OFDM
FCC Classification:	Digital Transmission System(DTS)
FCC Rule Part(s):	Part 15.247

#### Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

**HCT CO., LTD.** Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

Cee

Report prepared by : Jong Seok Lee Test engineer of RF Part

Approved bý : Sang Jun Lee Manager of RF Part

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# <u>Version</u>

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1108FR06	August 4, 2011	- First Approval Report
HCTR1108FR06-1	September 29, 2011	- Ant. Gain amendment (Page4)

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Applicant:	Pantech Co., Ltd.
Address:	Pantech Bldg, I-2, DMC, Sangam-dong, Mapo-gu, Seoul, 121-792 Korea
FCC ID:	JYCP9070
EUT Type:	GSM/WCDMA/LTE Phone with Bluetooth/WLAN
Model Name:	P9070
Date(s) of Tests:	July 16,2011 ~ August 2, 2011
Contact person:	Name: Hyeok Gyun Park Phone #: +82-2-3774-8438
Place of Tests:	HCT Co., Ltd. 105-1, Jangam-ri , Majang-Myeon, Icheon-si, Kyunggi-Do, 467-811, KOREA. (IC Recognition No. : 5944A-3)

### 2. EUT DESCRIPTION

ЕUT Туре	GSM/WCDMA/LTE Phone with Bluetooth/WLAN
Model Name	P9070
Power Supply	DC 3.7 V
Battery type	Li-ion Battery(Standard)
Frequency Range	TX: 2412 MHz ~ 2462 MHz
	RX: 2412 MHz ~ 2462 MHz
Max. RF Output Power:	Wi-Fi 802.11b(23.58 dBm) / Wi-Fi 802.11g (23.30 dBm) ) / Wi-Fi 802.11n (22.12 dBm)
Modulation Type	DSSS/CCK(802.11b), OFDM(802.11g, 802.11n)
Antenna Specification	Manufacturer: MicroRF Co.,LTD.
	Antenna type: FPCB Type Antenna
	Peak Gain : -4.0 dBi

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### 3. TEST METHODOLOGY

The measurement procedure described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz(ANSI C63.4-2003)

### **3.1 EUT CONFIGURATION**

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

### **3.2 EUT EXERCISE**

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

### **3.3 GENERAL TEST PROCEDURES**

### **Conducted Emissions**

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4. (Version :2003) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

### **Radiated Emissions**

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4. (Version: 2003)

### **3.4 DESCRIPTION OF TEST MODES**

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed. Channel low, mid and high with highest data rate (worst case) is chosen for full testing.

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### 4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

### 5. FACILITIES AND ACCREDITATIONS

### **5.1 FACILITIES**

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 105-1, Jangam-ri, Majang-Myeon, Icheon-si, Kyunggi-Do, 467-811, Korea. The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2003) and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated March 02, 2011 (Registration Number: 90661)

### **5.2 EQUIPMENT**

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

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### According to FCC 47 CFR §15.203:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

\* The antennas of this E.U.T are permanently attached.

\*The E.U.T Complies with the requirement of §15.203

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### 7. TEST RESULT

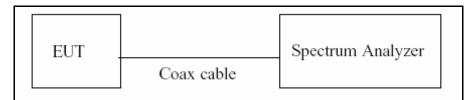
### 7.1 6dB BANDWIDTH MEASUREMENT (802.11b/g/n)

### Test Requirements and limit, §15.247(a)(2)

The bandwidth at 6dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequencies.

The minimum permissible 6dB bandwidth is 500 kHz.

### **TEST CONFIGURATION**



### TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer.

The Spectrum Analyzer is set to

RBW: 100 kHz

VBW: 100 kHz

SPAN: 40 MHz

### TEST RESULTS

### Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
2412	1	8.163	0.5	Pass
2437	6	8.007	0.5	Pass
2462	11	8.031	0.5	Pass

Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
2412	1	15.179	0.5	Pass
2437	6	15.504	0.5	Pass
2462	11	15.160	0.5	Pass

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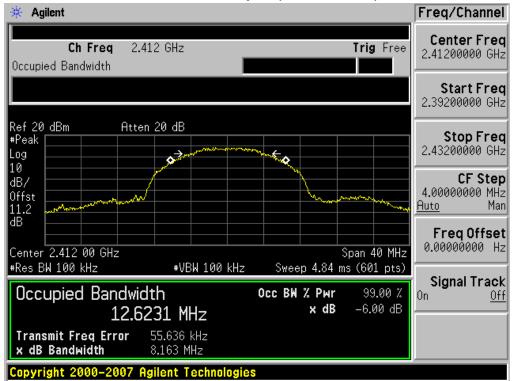
802.11n Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
2412	1	15.168	0.5	Pass
2437	6	15.160	0.5	Pass
2462	11	15.455	0.5	Pass

### Conducted 6dB Bandwidth Measurements for 802.11n

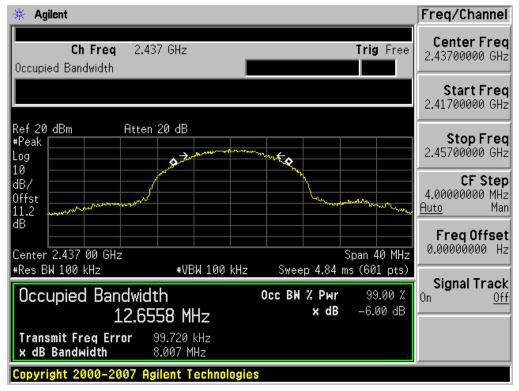
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### 6dB Bandwidth plot (802.11b-CH 1)



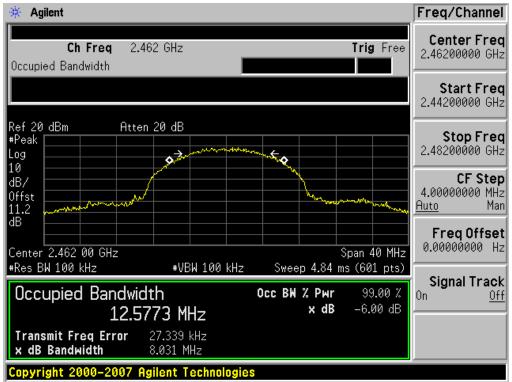
#### 6dB Bandwidth plot (802.11b-CH 6)



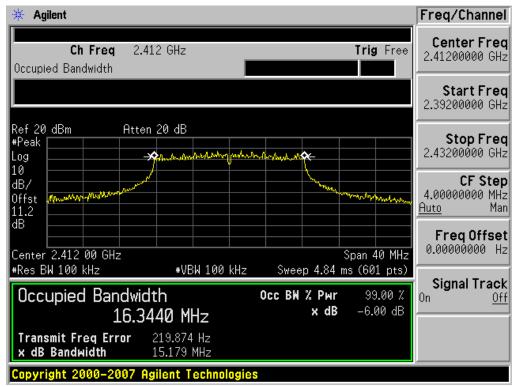
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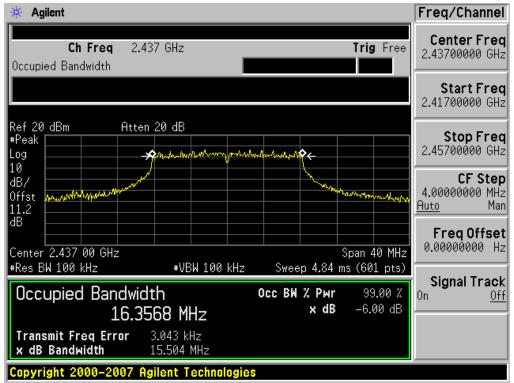
### 6dB Bandwidth plot (802.11g-CH 1)



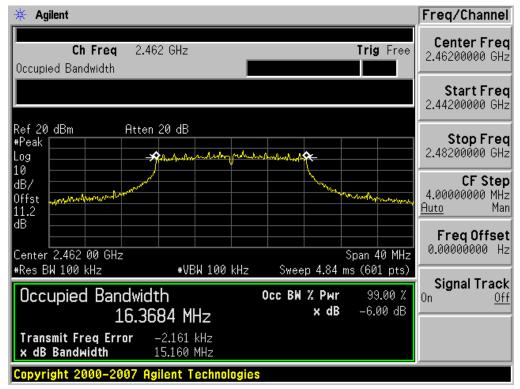
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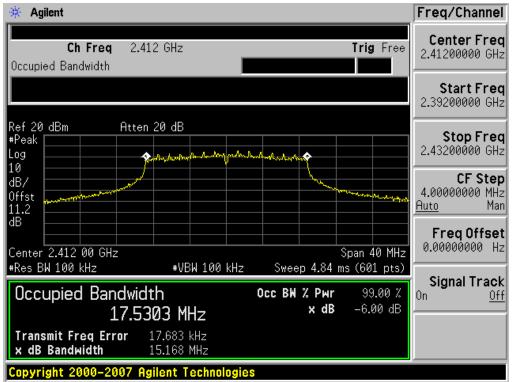
### 6dB Bandwidth plot (802.11g-CH 11)



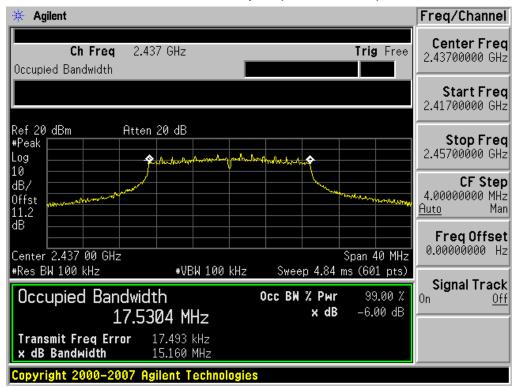
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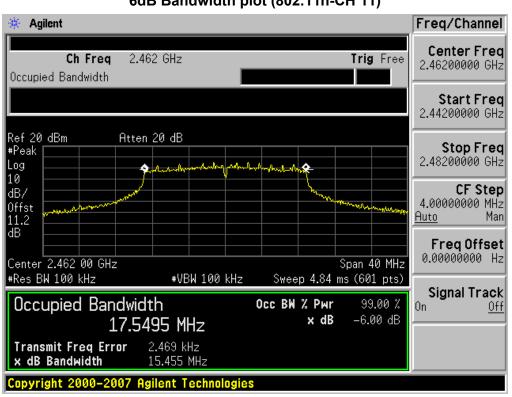


### 6dB Bandwidth plot (802.11n-CH 6)



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#### 6dB Bandwidth plot (802.11n-CH 11)

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### 7.2 OUTPUT POWER MEASUREMENT (802.11b/g/n)

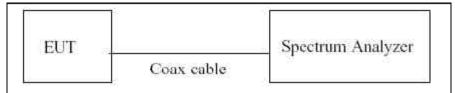
### Test Requirements and limit, §15.247(b)(3)

A transmitter antenna terminal of EUT is connected to the input of a Spectrum Analyzer.

Measurement is made while the EUT is operating in transmission mode at the appropriate frequencies.

### The maximum permissible conducted output power is 1 Watt.

### **TEST CONFIGURATION**



### TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer.

The Spectrum Analyzer is set to RBW: 1 MHz VBW: 1 MHz SPAN: 40 MHz Detector Mode = Peak

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802.11b Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		1 Mbps	19.83	30
2412	1	2 Mbps	20.15	30
2412	I	5.5 Mbps	22.03	30
		11 Mbps	23.53	30
		1 Mbps	19.79	30
2437	6	2 Mbps	20.15	30
2437	O	5.5 Mbps	21.94	30
		11 Mbps	23.58	30
		1 Mbps	19.62	30
2462	11	2 Mbps	20.00	30
	11	5.5 Mbps	21.82	30
		11 Mbps	23.31	30

### Conducted Output Power Measurements (802.11b Mode)

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### Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		6 Mbps	22.81	30
		9 Mbps	22.89	30
		12 Mbps	22.97	30
2412	1	18 Mbps	22.83	30
2412	1	24 Mbps	23.15	30
		36 Mbps	23.13	30
		48 Mbps	23.19	30
		54 Mbps	23.14	30
		6 Mbps	22.75	30
	6	9 Mbps	22.71	30
		12 Mbps	22.70	30
2437		18 Mbps	22.55	30
2437		24 Mbps	23.30	30
		36 Mbps	23.13	30
		48 Mbps	23.15	30
		54 Mbps	23.16	30
		6 Mbps	22.58	30
		9 Mbps	22.43	30
		12 Mbps	22.63	30
2462	11	18 Mbps	22.40	30
2402		24 Mbps	22.81	30
		36 Mbps	22.97	30
		48 Mbps	22.98	30
		54 Mbps	22.96	30

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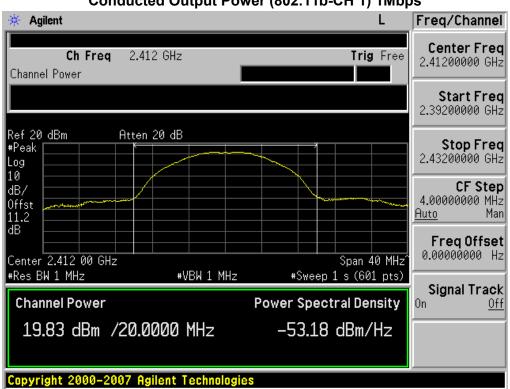


### Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		6.5 Mbps	21.53	30
		13 Mbps	21.94	30
		19.5 Mbps	21.81	30
2412	1	26 Mbps	22.12	30
2412	1	39 Mbps	21.98	30
		52 Mbps	21.87	30
		58.5 Mbps	21.92	30
		65 Mbps	21.89	30
		6.5 Mbps	21.84	30
	6	13 Mbps	21.60	30
		19.5 Mbps	21.73	30
2437		26 Mbps	22.12	30
2437		39 Mbps	21.82	30
		52 Mbps	21.92	30
		58.5 Mbps	21.72	30
		65 Mbps	21.71	30
		6.5 Mbps	21.25	30
		13 Mbps	21.39	30
		19.5 Mbps	21.65	30
2462	44	26 Mbps	21.89	30
	11	39 Mbps	21.60	30
		52 Mbps	21.62	30
		58.5 Mbps	21.58	30
		65 Mbps	21.59	30

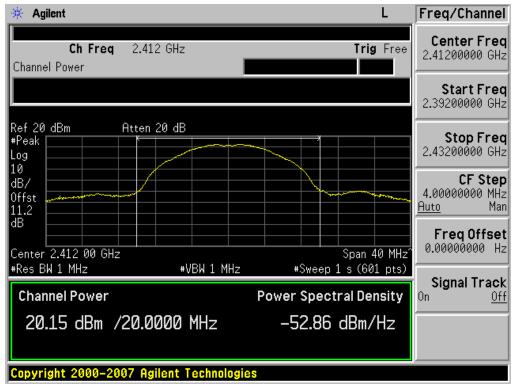
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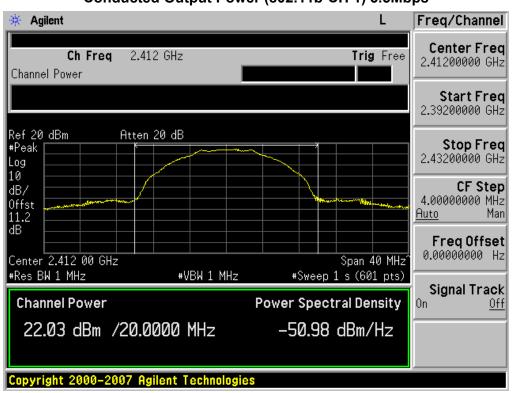
### Conducted Output Power (802.11b-CH 1) 1Mbps





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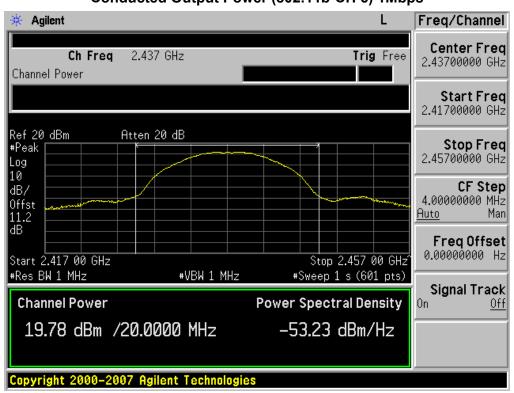
#### Conducted Output Power (802.11b-CH 1) 5.5Mbps

		<b>PO</b>
🔆 Agilent	L	Freq/Channel
Ch Freq 2.412 GHz Channel Power	Trig Free	<b>Center Freq</b> 2.41200000 GHz
		<b>Start Freq</b> 2.39200000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10 Atten 20 dB		<b>Stop Freq</b> 2.43200000 GHz
dB/ 0ffst		<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 2.412 00 GHz	Span 40 MHz <sup>2</sup>	FreqOffset 0.00000000 Hz
#Res BW 1 MHz #VBW :		Signal Track
Channel Power	Power Spectral Density	On <u>Off</u>
23.53 dBm /20.0000 MH;	z -49.48 dBm/Hz	
Copyright 2000–2007 Agilent Tech	nologies	,

Conducted Output Power (802.11b-CH 1) 11Mbps

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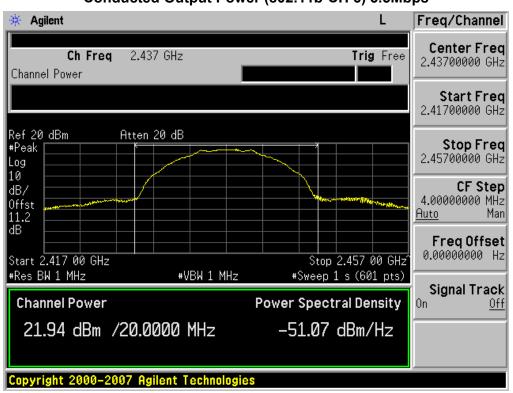
### Conducted Output Power (802.11b-CH 6) 1Mbps

Conducted Output I	
* Agilent	L Freq/Channel
<b>Ch Freq</b> 2.437 GHz Channel Power	Trig Free Center Free 2.43700000 GHz
	Start Freq 2.41700000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10	2.45700000 GHz
dB/ Offst	CF Step 4.00000000 MHz <u>Auto</u> Mar
dB Start 2.417 00 GHz	Stop 2.457 00 GHz 5 00 0000000 Hz
#Res BW 1 MHz #VBW 1 MH	z #Sweep 1 s (601 pts) Power Spectral Density On Off
20.15 dBm /20.0000 MHz	-52.86 dBm/Hz
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Conducted Output Power (802.11b-CH 6) 2Mbps

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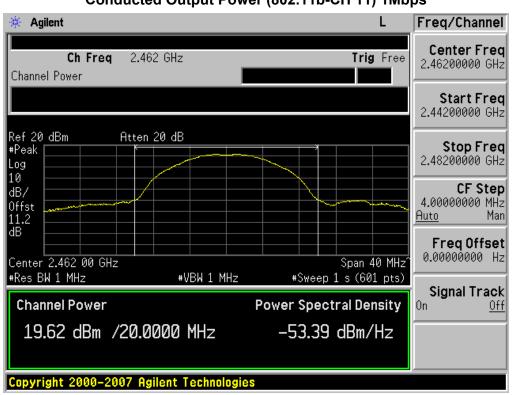
#### Conducted Output Power (802.11b-CH 6) 5.5Mbps

Conduct			<b>P</b> 0
🔆 Agilent		L	Freq/Channel
Ch Freq 2.4 Channel Power	37 GHz	Trig Free	Center Freq 2.43700000 GHz
	00. ID		<b>Start Freq</b> 2.41700000 GHz
Ref 20 dBm Atter #Peak F Log 10	n 20 dB		<b>Stop Freq</b> 2.45700000 GHz
dB/ Offst			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Start 2.417 00 GHz #Res BW 1 MHz	#VBW 1 MHz	Stop 2.457 00 GHz	FreqOffset 0.00000000 Hz
Channel Power	#VDW I MHZ	#Sweep 1 s (601 pts) Power Spectral Density	<b>Signal Track</b> On Off
23.58 dBm /20.1	0000 MHz	-49.43 dBm/Hz	
Copyright 2000-2007 A	gilent Technologie	S.	

Conducted Output Power (802.11b-CH 6) 11Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
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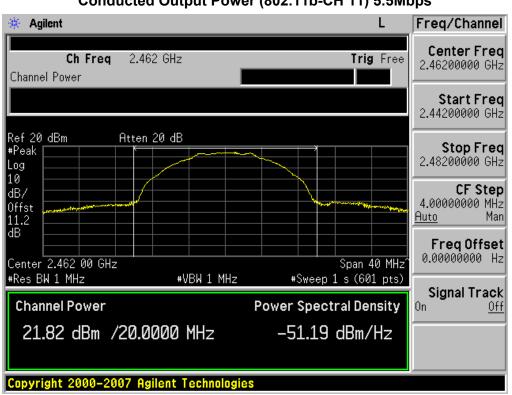
### Conducted Output Power (802.11b-CH 11) 1Mbps

Conducted	output i on		,pe
🔆 Agilent		L	Freq/Channel
Ch Freq 2.462 ( Channel Power	GHz	Trig Free	Center Freq 2.46200000 GHz
			<b>Start Freq</b> 2.44200000 GHz
Ref 20 dBm Atten 20 #Peak Log 10			<b>Stop Freq</b> 2.48200000 GHz
dB/ Offst			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB		Span 40 MHz	Freq Offset 0.00000000 Hz
#Res BW 1 MHz	₩VBW 1 MHz	#Sweep 1 s (601 pts)	Signal Track
Channel Power		Power Spectral Density	On <u>Off</u>
20.00 dBm /20.000	00 MHz	-53.01 dBm/Hz	
Copyright 2000–2007 Agile	nt Technologie	S	

Conducted Output Power (802.11b-CH 11) 2Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT <u>www.hct.cc</u>		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN JYCP9070		JYCP9070	
Page 2.3 of 83				





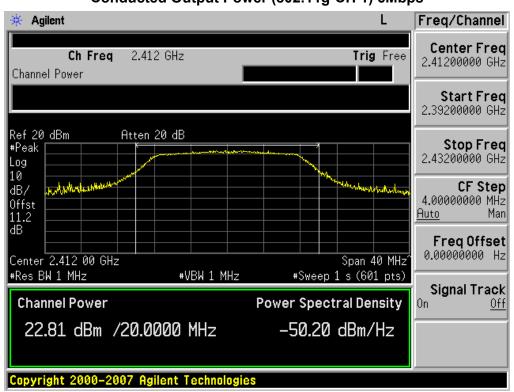
#### Conducted Output Power (802.11b-CH 11) 5.5Mbps

		= (002.11D-01111) 11W	
🔆 Agilent		L	Freq/Channel
Ch Freq 2.4 Channel Power	162 GHz	Trig Free	Center Freq 2.46200000 GHz
			<b>Start Freq</b> 2.44200000 GHz
Ref 20 dBm Atte #Peak F Log 10	n 20 dB		<b>Stop Freq</b> 2.48200000 GHz
dB/ Offst			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB		Span 40 MHz	FreqOffset 0.00000000 Hz
*Res BW 1 MHz     *Sweep 1 s (601 pts)       Channel Power     Power Spectral Density       On     0f			
23.31 dBm /20.	0000 MHz	-49.70 dBm/Hz	
Copyright 2000-2007 A	gilent Technologie	S	

Conducted Output Power (802.11b-CH 11) 11Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN JYCP9070		JYCP9070	
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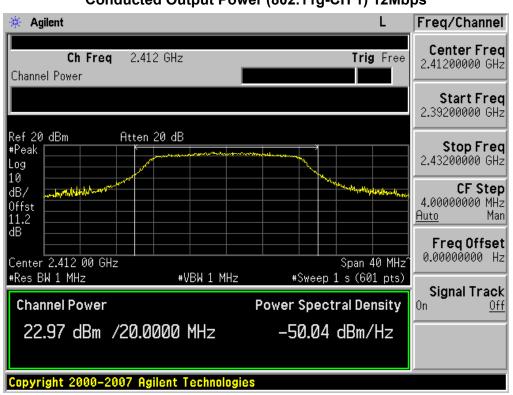
### Conducted Output Power (802.11g-CH 1) 6Mbps

		-
* Agilent	L	Freq/Channel
Ch Freq 2.412 GHz Channel Power	Trig Free	Center Freq 2.41200000 GHz
		<b>Start Freq</b> 2.39200000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10		<b>Stop Freq</b> 2.43200000 GHz
dB/ www.www.www. Offst		<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 2.412 00 GHz	Span 40 MHz	FreqOffset 0.00000000 Hz
#Res BW 1 MHz #VBW 1 MHz	#Sweep 1 s (601 pts)	Signal Track
Channel Power	Power Spectral Density	0n <u>Off</u>
22.89 dBm /20.0000 MHz	-50.12 dBm/Hz	
Copyright 2000-2007 Agilent Technologie		

Conducted Output Power (802.11g-CH 1) 9Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT www.hct.co		www.hct.co.kr
Test Report No. HCTR1108FR06-1	Date of Issue: September 29, 2011	· · · · · · · · · · · · · · · · · · ·	
		Page 2 5 of 83	·





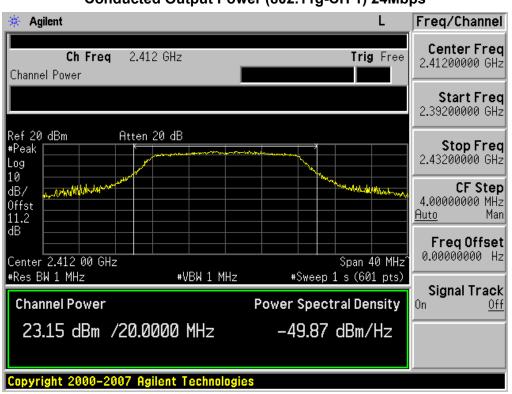
### Conducted Output Power (802.11g-CH 1) 12Mbps

oonducted o	utput i owei	(802.11g-CH I) 18	1000
🔆 Agilent		L	Freq/Channel
Ch Freq 2.412 GH Channel Power	z	Trig Fr	ee Center Freq 2.41200000 GHz
			Start Freq 2.39200000 GHz
Ref 20 dBm Atten 20 d #Peak Log 10	B		Stop Freq 2.43200000 GHz
dB/		March and March and March	CF Step 4.00000000 MHz <u>Auto</u> Man
dB		Span 40 M	
#Res BW 1 MHz	₩VBW 1 MHz	#Sweep 1 s (601 pt	s) Signal Track
Channel Power	Р	ower Spectral Densit	
22.83 dBm /20.0000	) MHz	-50.18 dBm/Hz	
Copyright 2000–2007 Agilent	Technologies		

Conducted Output Power (802.11g-CH 1) 18Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT <u>www.hct.co</u>		www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN JYCP9070		JYCP9070
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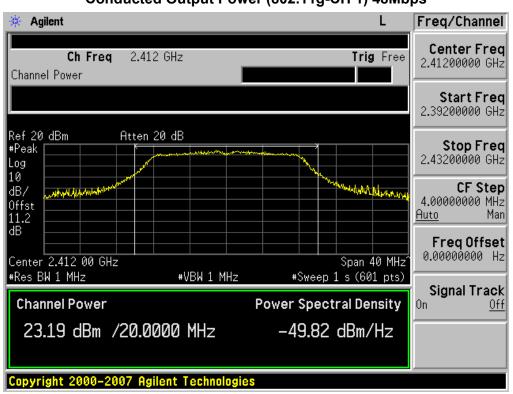
### Conducted Output Power (802.11g-CH 1) 24Mbps

Conducted		1 (002.119-C111) 30Mb	P3
🔆 Agilent		L	Freq/Channel
Ch Freq 2.412 Channel Power	GHz	Trig Free	Center Freq 2.41200000 GHz
	â IB		<b>Start Freq</b> 2.39200000 GHz
Ref 20 dBm Atten 2 #Peak Log 10	0 dB		<b>Stop Freq</b> 2.43200000 GHz
dB/			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 2.412 00 GHz	#VBW 1 MHz	Span 40 MHz	FreqOffset 0.00000000 Hz
#Res BW 1 MHz		#Sweep 1 s (601 pts)	Signal Track
Channel Power		Power Spectral Density	On <u>Off</u>
23.13 dBm /20.00	100 MHz	-49.88 dBm/Hz	
Copyright 2000-2007 Agil	ent Technologies		/

Conducted Output Power (802.11g-CH 1) 36Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT <u>www.hct.co.</u>		www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN JYCP9070		JYCP9070





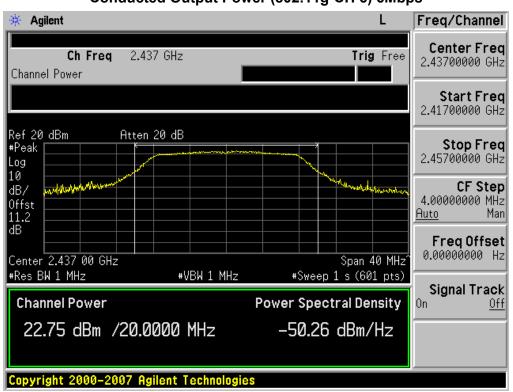
### Conducted Output Power (802.11g-CH 1) 48Mbps

#### L 🔆 Agilent Freq/Channel **Center Freq** Ch Freq 2.412 GHz Trig Free 2.41200000 GHz Channel Power Start Freq 2.39200000 GHz Ref 20 dBm #Peak Atten 20 dB Stop Freq 2.43200000 GHz Log 10 1 Alerton w.h **CF** Step dB/ WLAT IN 4.00000000 MHz 0ffst 11.2 Auto Man dB Freq Offset 0.00000000 Hz Center 2.412 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 1 s (601 pts) Signal Track **Channel Power Power Spectral Density** 0n Off 23.14 dBm /20.0000 MHz -49.87 dBm/Hz Copyright 2000-2007 Agilent Technologies

Conducted Output Power (802.11g-CH 1) 54Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT <u>www.hct.co.</u>		www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN JYCP9070		JYCP9070
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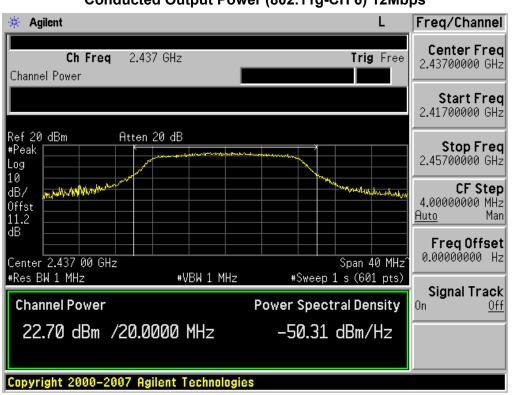
### Conducted Output Power (802.11g-CH 6) 6Mbps

* Agilent	L Freq/Channel
Ch Freq 2.437 GHz Channel Power	Trig Free Center Freq 2.43700000 GHz
	Start Freq 2.41700000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10	Stop Freq 2.45700000 GHz
dB/ white and a second se	CF Step 4.0000000 MHz <u>Auto</u> Man
dB Center 2.437 00 GHz #Res BW 1 MHz #VBW 1 MHz	Span 40 MHz <sup>*</sup> ***********************************
#Res BW 1 MHz #VBW 1 MHz Channel Power	#Sweep 1 s (601 pts) Signal Track On <u>Off</u>
22.71 dBm /20.0000 MHz	-50.30 dBm/Hz
Copyright 2000–2007 Agilent Technolog	ies

Conducted Output Power (802.11g-CH 6) 9Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	
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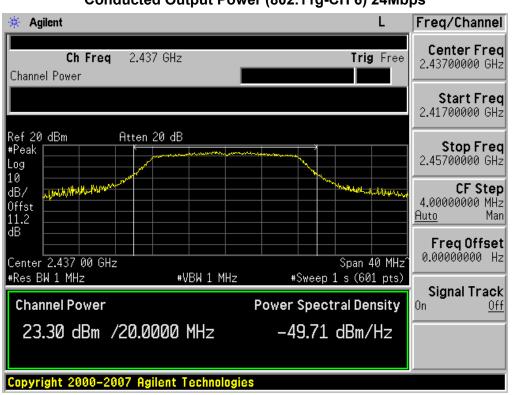
### Conducted Output Power (802.11g-CH 6) 12Mbps

Conducto		ei (002.119-CH 0) 10100	p3
🔆 Agilent		L	Freq/Channel
Ch Freq 2.4 Channel Power	37 GHz	Trig Free	Center Freq 2.43700000 GHz
	66 ID		<b>Start Freq</b> 2.41700000 GHz
Ref 20 dBm Attem #Peak Log 10	20 dB		<b>Stop Freq</b> 2.45700000 GHz
dB/			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB		Span 40 MHz	FreqOffset 0.00000000 Hz
#Res BW 1 MHz	₩VBW 1 MHz	#Sweep 1 s (601 pts)	Signal Track
Channel Power		Power Spectral Density	On <u>Off</u>
22.55 dBm /20.0	1000 MHz	-50.46 dBm/Hz	
Copyright 2000-2007 A	gilent Technologie	S	

Conducted Output Power (802.11g-CH 6) 18Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
Page 3.0 of 83				





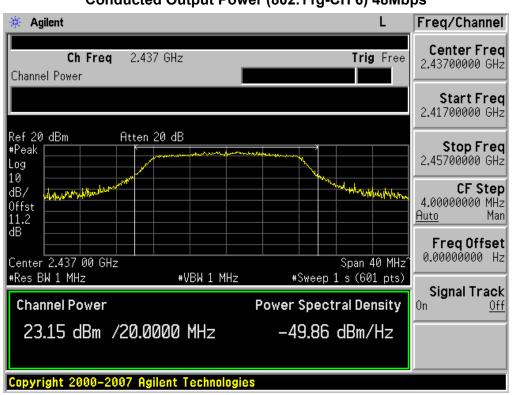
### Conducted Output Power (802.11g-CH 6) 24Mbps

•••••••••••••••••••••••••••••••••••••••	a calpati on		<b>P O</b>
🔆 Agilent		L	Freq/Channel
Ch Freq 2.43 Channel Power	7 GHz	Trig Free	Center Freq 2.43700000 GHz
			<b>Start Freq</b> 2.41700000 GHz
#Peak	20 dB		<b>Stop Freq</b> 2.45700000 GHz
dB/ Waynah Mark Markan Offst 11.2			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB		Span 40 MHz	Freq Offset
*Res BW 1 MHz Channel Power	₩VBW 1 MHz	#Sweep 1 s (601 pts) Power Spectral Density	Signal Track
23.13 dBm /20.0	000 MHz	-49.88 dBm/Hz	
Copyright 2000–2007 Ag	ilent Technologie	8	

Conducted Output Power (802.11g-CH 6) 36Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
Page 3.1 of 83				





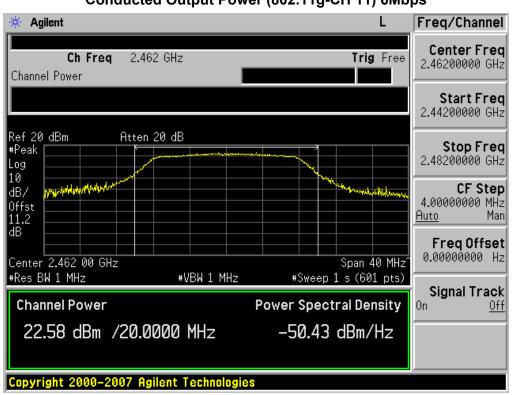
### Conducted Output Power (802.11g-CH 6) 48Mbps

Conductod Calpari	ower (002.11g-011 0) 0+110p3
* Agilent	L Freq/Channel
<b>Ch Freq</b> 2.437 GHz Channel Power	Trig Free Center Freq 2.43700000 GHz
	<b>Start Freq</b> 2.41700000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10	2.45700000 GHz
dB/ m.Mufladilhulhudhu Offst 11.2	CF Step 4.00000000 MHz <u>Auto</u> Man
dB Center 2.437 00 GHz	Span 40 MHz         Freq Offset           0.00000000 Hz         Hz
#Res BW 1 MHz #VBW 1 MH	Signal Track
Channel Power	Power Spectral Density On Off
23.16 dBm /20.0000 MHz	-49.85 dBm/Hz
Copyright 2000–2007 Agilent Technolo	gies

Conducted Output Power (802.11g-CH 6) 54Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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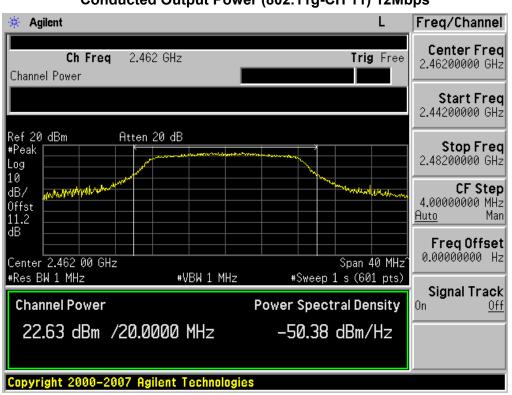
### Conducted Output Power (802.11g-CH 11) 6Mbps

* Agilent	L Fred	/Channel
<b>Ch Freq</b> 2.462 GHz Channel Power		<b>nter Freq</b> 200000 GHz
		S <b>tart Freq</b> 200000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10		<b>Stop Freq</b> 200000 GHz
dB/ vylandina vylandina vylandi vy Nadi vylandi vyland	4.000	<b>CF Step</b> 000000 MHz Man
dB Center 2.462 00 GHz #Res BW 1 MHz #VBW 1 MHz		<b>eq Offset</b> 000000 Hz
*Res dw 1 MH2         *Vdw 1 MH2           Channel Power		nal Track
22.43 dBm /20.0000 MHz	-50.58 dBm/Hz	
Copyright 2000–2007 Agilent Technologie	35	

Conducted Output Power (802.11g-CH 11) 9Mbps

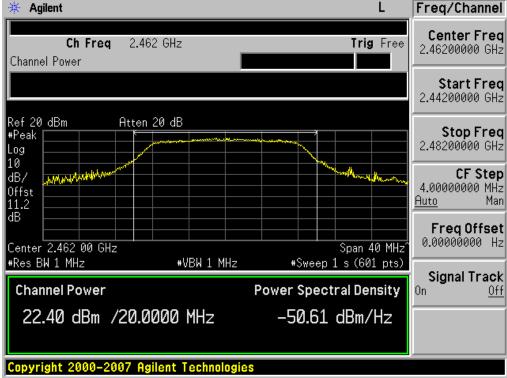
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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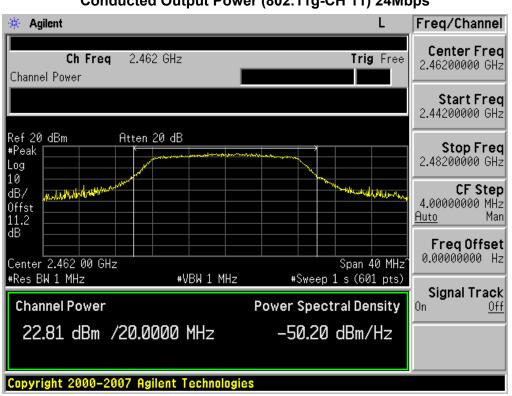
### Conducted Output Power (802.11g-CH 11) 12Mbps

## Conducted Output Power (802.11g-CH 11) 18Mbps L



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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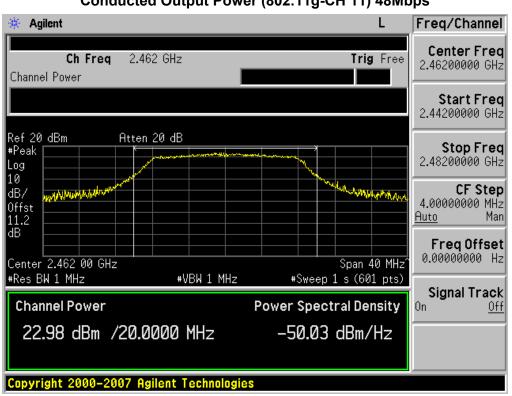
### Conducted Output Power (802.11g-CH 11) 24Mbps

#### L 🔆 Agilent Freq/Channel **Center Freq** Ch Freq 2.462 GHz Trig Free 2.46200000 GHz Channel Power Start Freq 2.44200000 GHz Ref 20 dBm #Peak Atten 20 dB Stop Freq 2.48200000 GHz Log 10 Mahuthanthan **CF** Step white he h. 11... dB/ 4.00000000 MHz 0ffst 11.2 Auto Man dB Freq Offset 0.00000000 Hz Center 2.462 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 1 s (601 pts) Signal Track **Channel Power Power Spectral Density** 0n Off 22.97 dBm /20.0000 MHz -50.04 dBm/Hz Copyright 2000-2007 Agilent Technologies

Conducted Output Power (802.11g-CH 11) 36Mbps

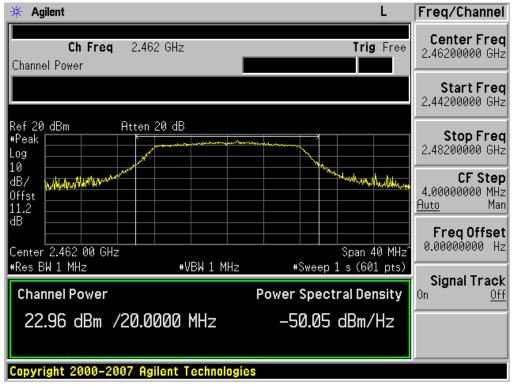
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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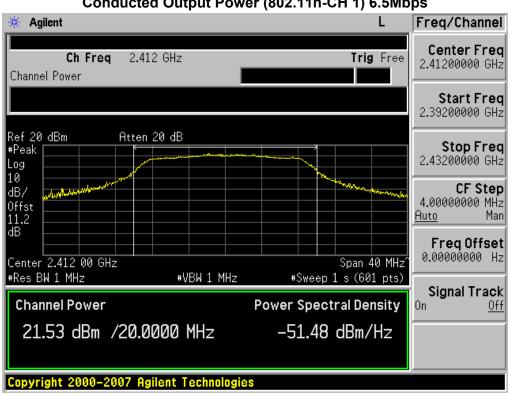
### Conducted Output Power (802.11g-CH 11) 48Mbps

### Conducted Output Power (802.11g-CH 11) 54Mbps



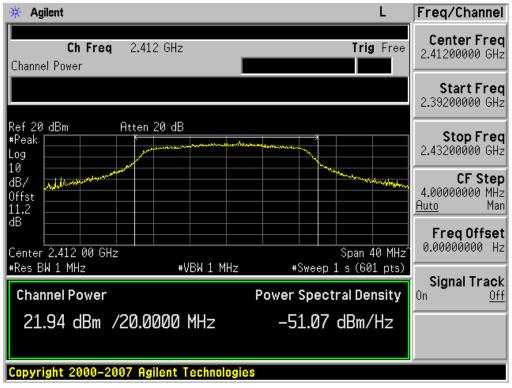
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	
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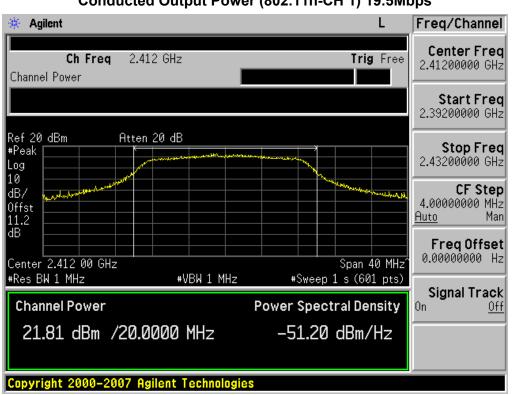
#### Conducted Output Power (802.11n-CH 1) 6.5Mbps





FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	
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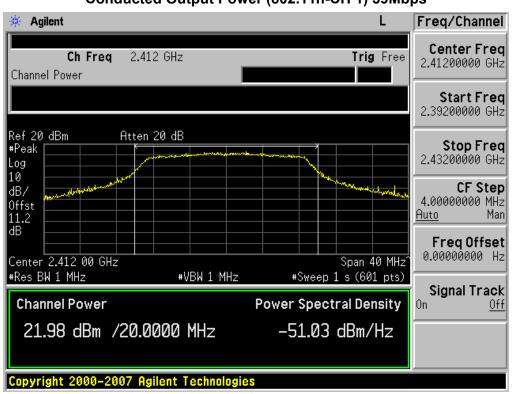
#### Conducted Output Power (802.11n-CH 1) 19.5Mbps

* Agilent	L Freq/Channel
Ch Freq 2.412 GHz Channel Power	Trig Free Center Free 2.41200000 GHz
	Start Fred 2.39200000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10	2.43200000 GHz
dB/ annihumment	CF Step 4.0000000 MHz <u>Auto</u> Mar
dB Center 2.412 00 GHz #Res BW 1 MHz #VBW 1 MHz	Span 40 MHz <sup>2</sup> Freq Offset           *Sweep 1 s (601 pts)         0.00000000 Hz
	Signal Track
Channel Power 22.12 dBm /20.0000 MHz	Power Spectral Density -50.89 dBm/Hz
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Conducted Output Power (802.11n-CH 1) 26Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
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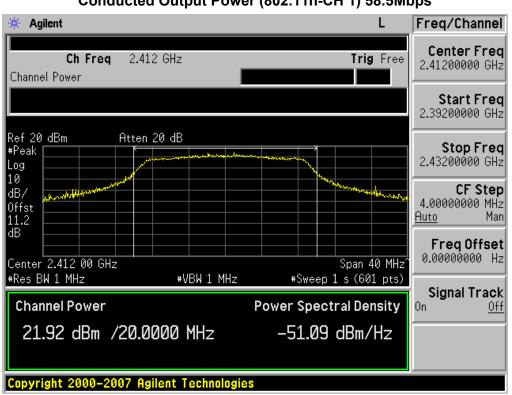
#### Conducted Output Power (802.11n-CH 1) 39Mbps

Conducte	a output i on		<b>PC</b>
🔆 Agilent		L	Freq/Channel
Ch Freq 2.41 Channel Power	2 GHz	Trig Free	Center Freq 2.41200000 GHz
			<b>Start Freq</b> 2.39200000 GHz
Ref 20 dBm Atten #Peak Log 10 Atten	20 dB		<b>Stop Freq</b> 2.43200000 GHz
dB/ Offst 11.2			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 2.412 00 GHz #Res BW 1 MHz	#VBW 1 MHz	Span 40 MHz <sup>^</sup> #Sweep 1 s (601 pts)	FreqOffset 0.00000000 Hz
Channel Power	#VDW 1 MHZ	Power Spectral Density	<b>Signal Track</b> On <u>Off</u>
21.87 dBm /20.0	000 MHz	-51.14 dBm/Hz	
Copyright 2000-2007 Ag	ilent Technologie	S	

Conducted Output Power (802.11n-CH 1) 52Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
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HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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#### Conducted Output Power (802.11n-CH 1) 58.5Mbps

			•
🔆 Agilent		L	Freq/Channel
Ch Freq 2.412 Channel Power	GHz	Trig Free	Center Freq 2.41200000 GHz
			Start Freq 2.39200000 GHz
Ref 20 dBm Atten 2 #Peak Log 10	0 dB		<b>Stop Freq</b> 2.43200000 GHz
dB/ Offst 11.2			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 2.412 00 GHz #Res BW 1 MHz	#VBW 1 MHz	Span 40 MHz <sup>^</sup> *Sweep 1 s (601 pts)	FreqOffset 0.00000000 Hz
Channel Power	#VDW I PINZ	Power Spectral Density	<b>Signal Track</b> On <u>Off</u>
21.89 dBm /20.00	100 MHz	-51.12 dBm/Hz	
Copyright 2000-2007 Agil	ent Technologie	S	

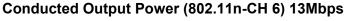
Conducted Output Power (802.11n-CH 1) 65Mbps

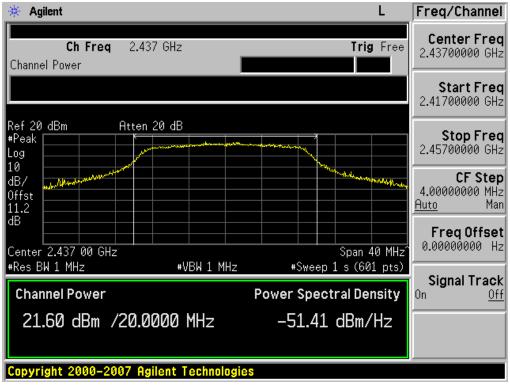
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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#### Freg/Channel Agilent L 瘚 **Center Freq** 2.437 GHz Ch Freq Trig Free 2.43700000 GHz Channel Power Start Freq 2.41700000 GHz Atten 20 dB Ref 20 dBm Stop Freq #Peak 2.45700000 GHz Log 10 **CF** Step dB/ of the life of the wheter 4.00000000 MHz Offst 11.2 Auto Man dB Freq Offset 0.00000000 Hz Center 2.437 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 1 s (601 pts) Signal Track **Channel Power Power Spectral Density** 0n <u> 0ff</u> 21.84 dBm /20.0000 MHz -51.17 dBm/Hz Copyright 2000–2007 Agilent Technologies

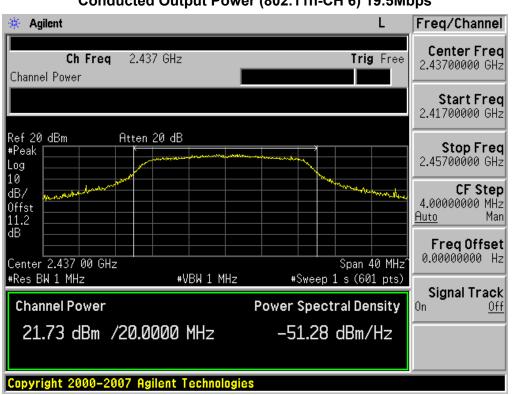
#### Conducted Output Power (802.11n-CH 6) 6.5Mbps





FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	
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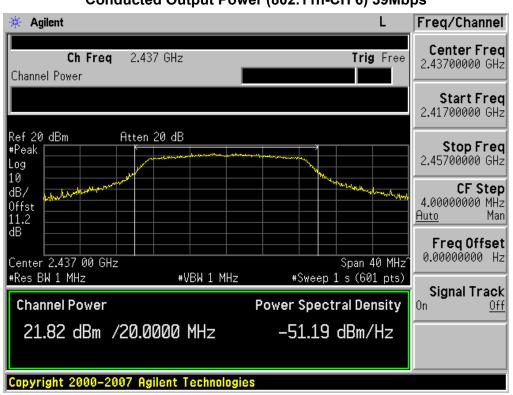
#### Conducted Output Power (802.11n-CH 6) 19.5Mbps

* Agilent	L	Freq/Channel
<b>Ch Freq</b> 2.437 GHz Channel Power	Trig Free	<b>Center Freq</b> 2.43700000 GHz
		<b>Start Freq</b> 2.41700000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10 Atten 20 dB		<b>Stop Freq</b> 2.45700000 GHz
dB/		<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 2.437 00 GHz	Span 40 MHz	FreqOffset 0.00000000 Hz
#Res BW 1 MHz #VBW 1 Channel Power	MHz #Sweep 1 s (601 pts) Power Spectral Density	<b>Signal Track</b> On <u>Off</u>
22.12 dBm /20.0000 MHz	-50.89 dBm/Hz	
Copyright 2000-2007 Agilent Techno	blogies	

Conducted Output Power (802.11n-CH 6) 26Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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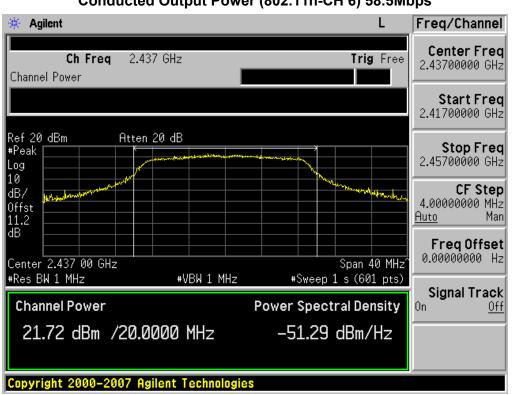
#### Conducted Output Power (802.11n-CH 6) 39Mbps

	wer (602.1111-611.0) 52100p5
🔆 Agilent	L Freq/Channel
Ch Freq 2.437 GHz Channel Power	Trig Free 2.43700000 GHz
	Start Freq 2.41700000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10	2.45700000 GHz
dB/ 0ffst 11.2	CF Step 4.00000000 MHz <u>Auto</u> Man
dB Center 2.437 00 GHz #Res BW 1 MHz #VBW 1 MHz	Span 40 MHz <sup>+</sup> Span 40 MHz <sup>+</sup> Span 1 o (501 pro)
Channel Power	#Sweep 1 s (601 pts) Signal Track On Off
21.92 dBm /20.0000 MHz	-51.09 dBm/Hz
Copyright 2000-2007 Agilent Technolog	ies

Conducted Output Power (802.11n-CH 6) 52Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
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#### Conducted Output Power (802.11n-CH 6) 58.5Mbps

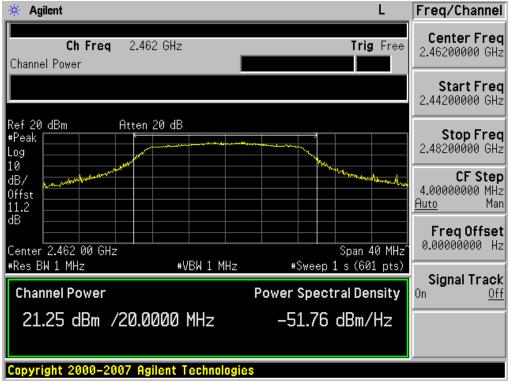
	a output i on	<b>1</b>	•
🔆 Agilent		L	Freq/Channel
Ch Freq 2.43 Channel Power	7 GHz	Trig Free	Center Freq 2.43700000 GHz
			<b>Start Freq</b> 2.41700000 GHz
Ref 20 dBm Atten #Peak Log 10 June Atten	20 dB		<b>Stop Freq</b> 2.45700000 GHz
dB/ 0ffst 11.2			<b>CF Step</b> 4.00000000 MHz <u>Auto</u> Man
dB Center 2.437 00 GHz #Res BW 1 MHz	#VBW 1 MHz	Span 40 MHz <sup>^</sup> *Sweep 1 s (601 pts)	FreqOffset 0.00000000 Hz
Channel Power	#VDW I MHZ	Power Spectral Density	<b>Signal Track</b> On <u>Off</u>
21.71 dBm /20.0	000 MHz	-51.30 dBm/Hz	
Copyright 2000-2007 Ag	lent Technologie	S	

Conducted Output Power (802.11n-CH 6) 65Mbps

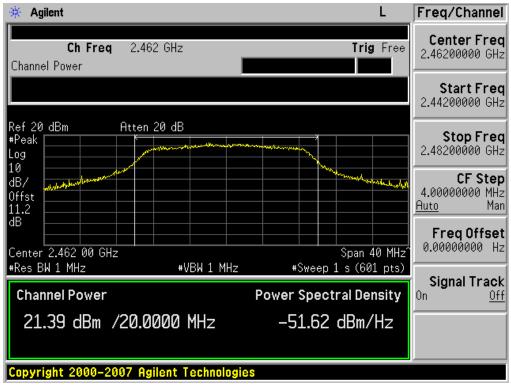
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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#### Conducted Output Power (802.11n-CH 11) 6.5Mbps







FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
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HCTR1108FR06-1	September 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	
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10

dB

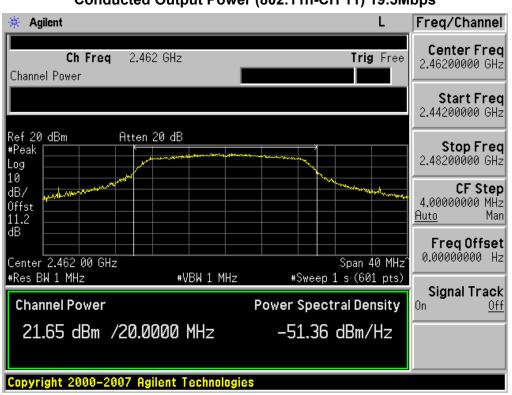
Center 2.462 00 GHz

**Channel Power** 

21.89 dBm /20.0000 MHz

Copyright 2000-2007 Agilent Technologies

#Res BW 1 MHz



#### Conducted Output Power (802.11n-CH 11) 19.5Mbps

#### 🔆 Agilent L Freq/Channel **Center Freq** Ch Freq 2.462 GHz Trig Free 2.46200000 GHz Channel Power Start Freq 2.44200000 GHz Ref 20 dBm #Peak Atten 20 dB Stop Freq 2.48200000 GHz Log **CF** Step dB/ 4.00000000 MHz Offst 11.2 Auto Man

#VBW 1 MHz

Freq Offset 0.00000000 Hz

Signal Track

Off

0n

Span 40 MHz

#Sweep 1 s (601 pts)

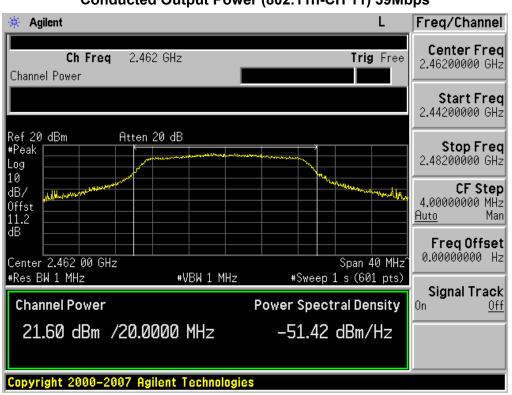
**Power Spectral Density** 

-51.12 dBm/Hz

Conducted Output Power (802.11n-CH 11) 26Mbps

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1108FR06-1	Date of Issue: September 29, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth/WLAN		FCC ID: JYCP9070
		Page 4 6 of 83		





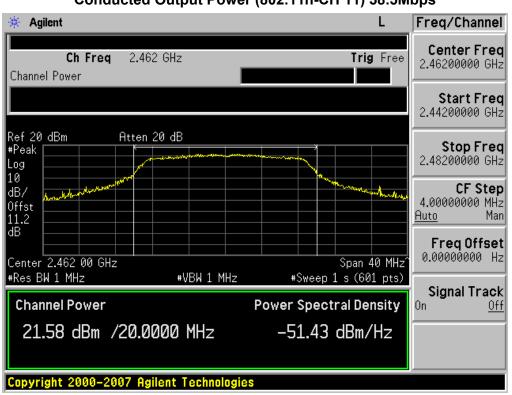
#### Conducted Output Power (802.11n-CH 11) 39Mbps

#### 🔆 Agilent L Freq/Channel **Center Freq** Ch Freq 2.462 GHz Trig Free 2.46200000 GHz Channel Power Start Freq 2.44200000 GHz Ref 20 dBm #Peak Atten 20 dB Stop Freq 2.48200000 GHz Log 10 **CF** Step dB/ 4.00000000 MHz 0ffst 11.2 Auto Man dB Freq Offset 0.00000000 Hz Center 2.462 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 1 MHz #Sweep 1 s (601 pts) Signal Track **Channel Power Power Spectral Density** 0n Off 21.62 dBm /20.0000 MHz -51.39 dBm/Hz Copyright 2000-2007 Agilent Technologies

Conducted Output Power (802.11n-CH 11) 52Mbps

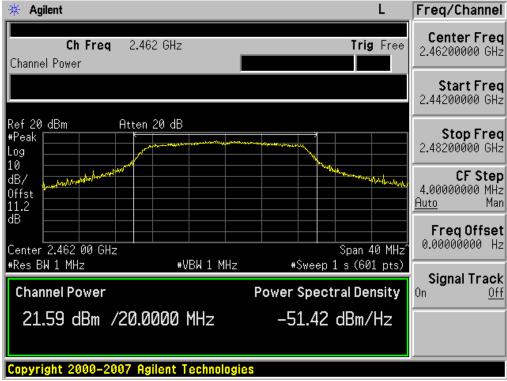
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr		
Test Report No.	Date of Issue:	EUT Type:		FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	
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#### Conducted Output Power (802.11n-CH 11) 58.5Mbps

# Conducted Output Power (802.11n-CH 11) 65Mbps



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Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
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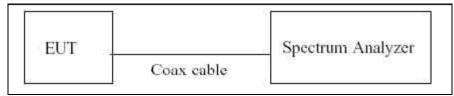
## 7.3 POWER SPECTRAL DENSITY (802.11b/g/n)

#### Test Requirements and limit, §15.247(e)

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

# Minimum Standard – The transmitter power density average over 1-second interval shall not be greater than 8dBm in any 3kHz BW.

#### **TEST CONFIGURATION**



#### TEST PROCEDURE

The spectrum analyzer is set to :

- 1. Span = 300 kHz
- 2. RBW = 3 kHz (7dB/div)
- 3. VBW = 3 kHz
- 4. Sweep = 100 sec
- 5. Detector Mode = Peak

#### TEST RESULTS

#### **Conducted Power Density Measurements**

			Test Result	
Frequency (MHz)	Channel No.	Mode	Power Density (dBm)	Pass/Fail
2412	1		-5.99	Pass
2437	6	802.11b	-6.18	Pass
2462	11		-5.75	Pass
2412	1		-8.97	Pass
2437	6	802.11g	-9.26	Pass
2462	11		-9.55	Pass
2412	1		-11.27	Pass
2437	6	802.11n	-11.20	Pass
2462	11		-11.39	Pass

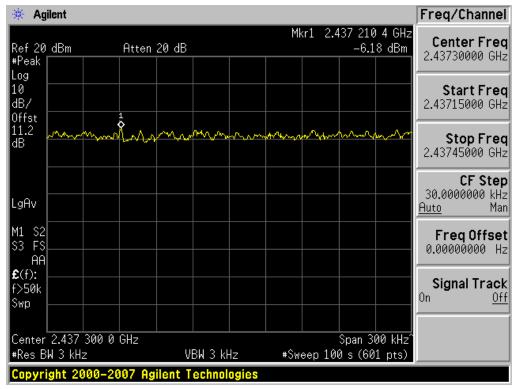
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	



			Freq/Channel
Atten 20 dB	M		E Contor Lrog
			<b>Start Fred</b> 2.41191667 GH:
Mummmnnn	mana	un han han han han han han han han han ha	4 Stop Fred 2.41221667 GH
			<b>CF Ste</b> 30.0000000 kH <u>Auto</u> Ma
			Freq Offse 0.00000000 H
			Signal Tracl
	6 7 GHz	Atten 20 dB         Atten 20 dB	M.         Mail         M

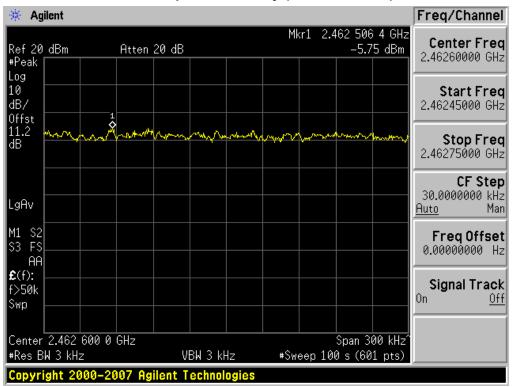
#### Power Spectral Density (802.11b-CH 1)

Power Spectral Density (802.11b-CH 6)



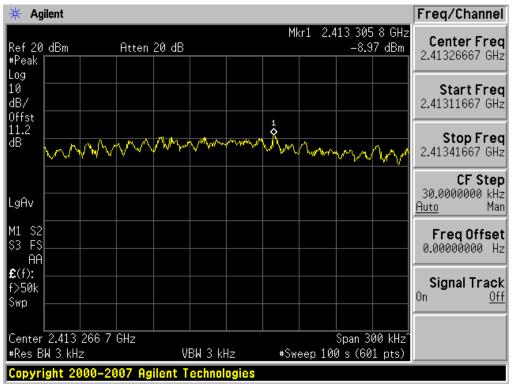
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070
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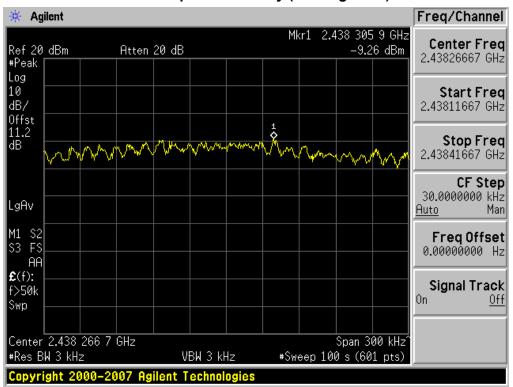
#### Power Spectral Density (802.11b-CH 11)





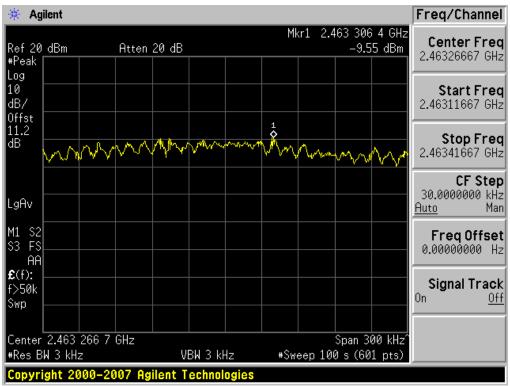
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
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HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
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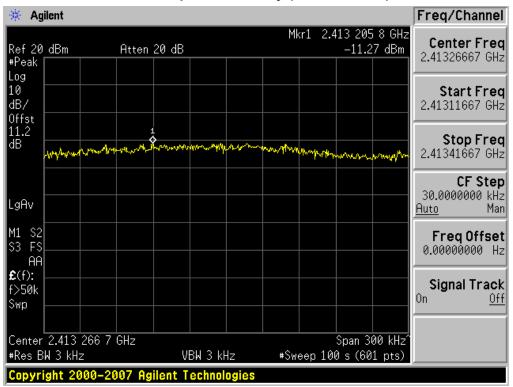
#### Power Spectral Density (802.11g-CH 6)





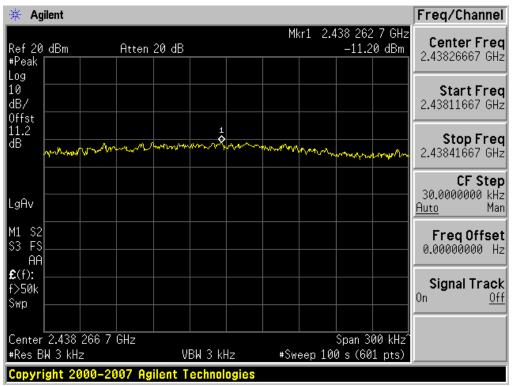
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
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#### Power Spectral Density (802.11n-CH 1)





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HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
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				Freq/Channel
Atten 20 dB		Mkr1 2.4	463 262 1 GHz -11.39 dBm	Center Freq 2.46326667 GHz
				<b>Start Freq</b> 2.46311667 GHz
Maryonanathan	1 ****~^*~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	monton	and all the state of the state	<b>Stop Freq</b> 2.46341667 GHz
				<b>CF Step</b> 30.0000000 kHz <u>Auto</u> Man
				Freq Offset
				<b>Signal Track</b> On <u>Off</u>
	BW 3 kHz	#Sweep 10	Span 300 kHz^ 0 s (601 pts)	
	7 GHz		7 GHz VBW 3 kHz #Sweep 10	1         1           1         1

## Power Spectral Density (802.11n-CH11)

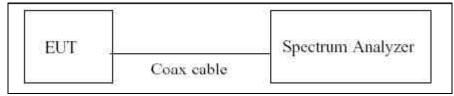
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
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## 7.4 OUT OF BAND EMISSIONS AT THE BAND EDGE/ CONDUCTED SPURIOUS EMISSIONS Test Requirements and limit, §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in§ 15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### **TEST CONFIGURATION**



## TEST PROCEDURE

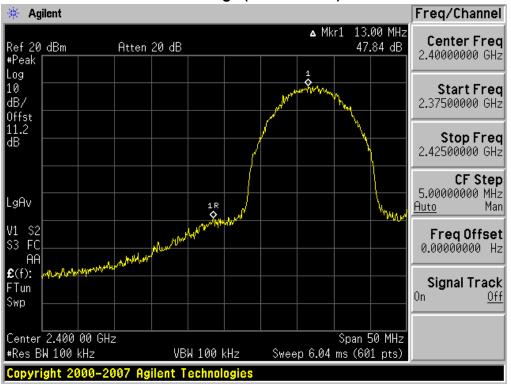
The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

Detector Mode is set to a peak detector Mode.

Measurements are made over the 30 MHz to 26 GHz range with the transmitter set to the lowest, middle, and highest channels.

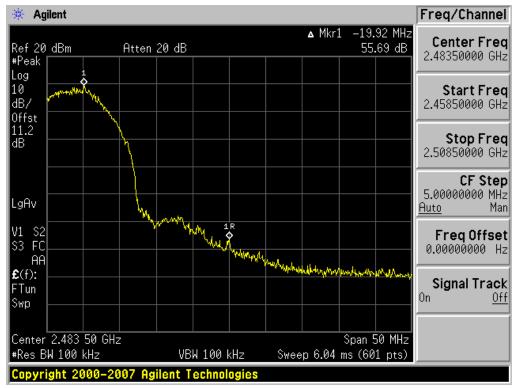
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
Dogo 5 5 of 92				





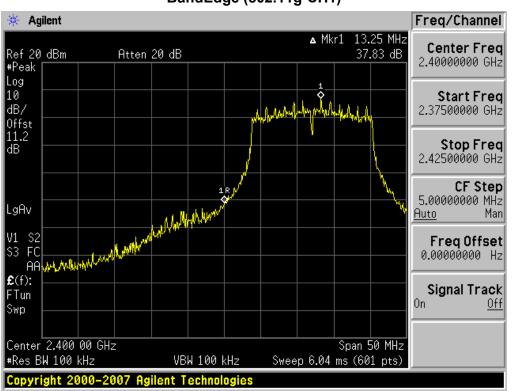
BandEdge (802.11b-CH1)

BandEdge (802.11b-CH11)



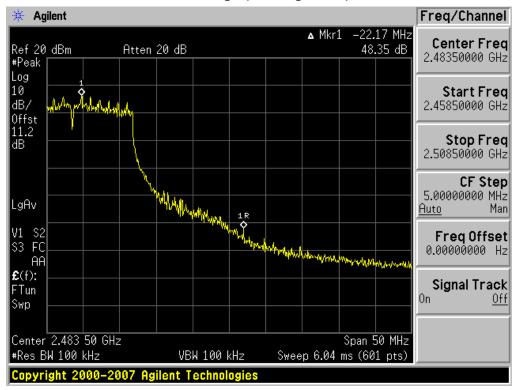
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
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#### BandEdge (802.11g-CH1)

#### BandEdge (802.11g-CH11)

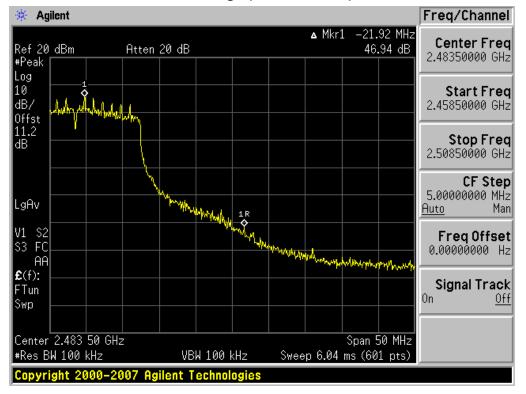


FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
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#### BandEdge (802.11n-CH1) Freg/Channel 瘚 Agilent ▲ Mkr1 11.25 MHz **Center Freq** Ref 20 dBm Atten 20 dB 34.76 dB 2.40000000 GHz #Peak Log In Indertal 10 Start Freq dB/ 2.37500000 GHz Offst 11.2 Stop Freq dB 2.42500000 GHz 1 R **CF** Step 5.00000000 MHz LgAv Auto Man V1 S2 S3 FC Freq Offset 0.0000000 Hz white Anal and the second AA **£**(f): Signal Track FTun 0n <u> 0ff</u> Swp Center 2.400 00 GHz Span 50 MHz #Res BW 100 kHz VBW 100 kHz Sweep 6.04 ms (601 pts) Copyright 2000-2007 Agilent Technologies

BandEdge (802.11n-CH11)



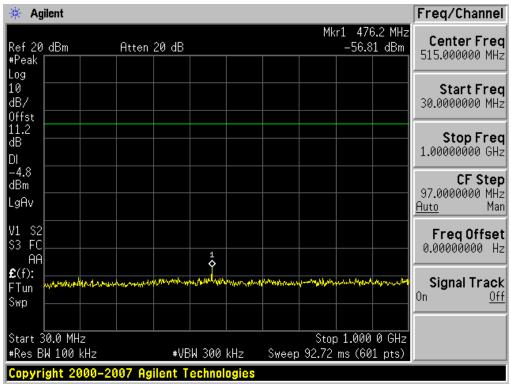
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
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🔆 Agilent					Freq/Channel
Ref 20 dBm Peak	Atten 20 dB		Mkr.	1 452.0 MHz -55.31 dBm	Center Fred 515.000000 MHz
.og LØ JB/ Dffst					Start Fred 30.0000000 MHz
HSC HB HB					Stop Fred 1.00000000 GH:
-4.9 JBm _gAv					<b>CF Ste</b> j 97.0000000 MH <u>Auto</u> Ma
/1 S2 53 FC					<b>Freq Offse</b> 0.00000000 H
E(f): Tun <mark>Maan Mada</mark> Swp	mananananananana	andermanner	unganan	whythmytopytow	<b>Signal Trac</b> l On <u>Of</u>
Start 30.0 MHz •Res BW 100 kHz	#VE	W 300 kHz	Stop Sweep 92.72 m	1.000 0 GHz 1s (601 pts)	

#### Conducted Spurious Emission (802.11b-CH1)





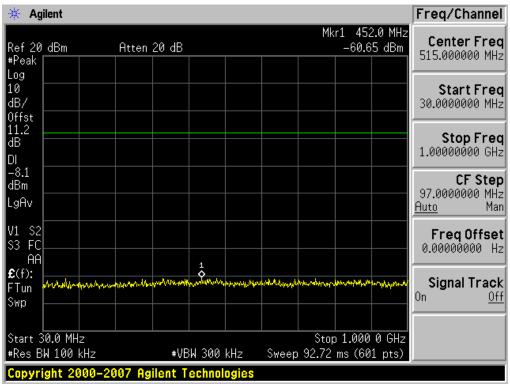
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
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🔆 Agilent						Freq/Channel
Ref 20 dBm +Peak	Atten 20 dB			Mkr1 502 –58.24	.1 MHz 4 dBm	Center Freq 515.000000 MHz
.og LØ JB/ Dffst						<b>Start Freq</b> 30.0000000 MHz
11.2 HB DI						<b>Stop Freq</b> 1.00000000 GHz
-5.5 dBm _gAv						<b>CF Step</b> 97.0000000 MHz <u>Auto</u> Mar
/1 S2 53 FC АА		1				Freq Offse 0.00000000 H:
E(f): Tun Manual Manual Swp	har y galana an an Alban An An Alban A	p.m.M.WindHelmanni	halandan fahala kanala kana	nykywyktykyku	-interarticular the	<b>Signal Track</b> On <u>Of</u>
Start 30.0 MHz +Res BW 100 kHz	#VB	W 300 kHz	Sweep 92.	top 1.000 72 ms (601		

#### Conducted Spurious Emission (802.11b-CH11)





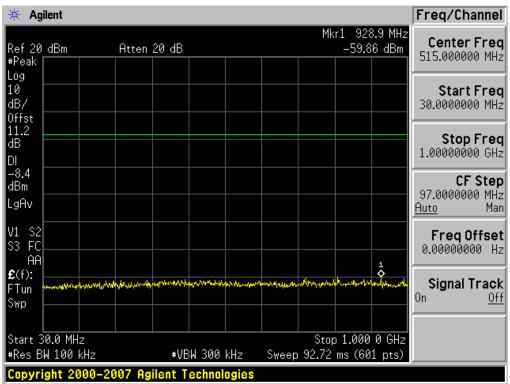
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
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🔆 Agilent							Freq/Channel
Ref 20 dBm •Peak	Atten 2	20 dB				48.7 MHz .75 dBm	Center Freq 515.000000 MHz
.og LØ dB/ Dffst							Start Frec 30.0000000 MHz
11.2 #B DI							Stop Frec 1.00000000 GHz
-8.3 JBm .gAv							<b>CF Step</b> 97.0000000 MHz <u>Auto</u> Mar
/1 \$2 53 FC		1					Freq Offse 0.00000000 H:
E(f): Tun Mwwwhorowow Swp	Arrandetaphanderideri	Warden and a find a second and a	l-hymy'yerddraddwdd	Whater and the second second	หางกระจะสาราง	ndreth <b>ey</b> r, ar the	<b>Signal Tracl</b> On <u>Of</u>
Start 30.0 MHz					Stop 1.00	0 0 GHz	
ŧRes BW 100 kHz		#VBW 301	0 kHz	Sweep 9	2.72 ms (8		

#### Conducted Spurious Emission (802.11g-CH6)





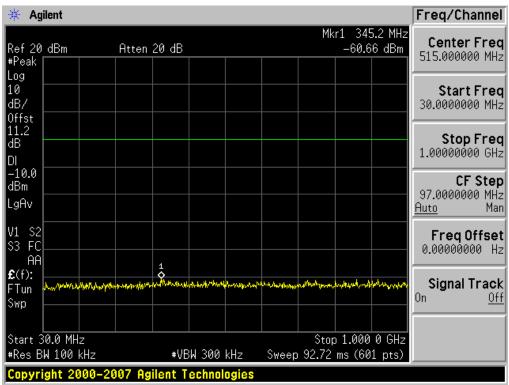
FCC PT.15.247 TEST REPORT		www.hct.co.kr		
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🔆 Agilent					Freq/Channel
Ref 20 dBm Peak	Atten 20 dB		Mki	1 636.2 MHz -60.58 dBm	Center Freq 515.000000 MHz
.og LØ JB/ Dffst					Start Freq 30.0000000 MHz
11.2 #B DI					<b>Stop Freq</b> 1.00000000 GHz
-9.4 JBm .gAv					<b>CF Step</b> 97.0000000 MHz <u>Auto</u> Mar
И \$2 53 FC					Freq Offse 0.00000000 H:
E(f): ⊤Tun <mark>ми∿∿∿∿∿</mark> ≁∕∿∽ Swp	ahan shuninah dhan na thabasan	nationalitation	1 Who are good to part the day and a	manan	<b>Signal Track</b> On <u>Of</u>
Start 30.0 MHz +Res BW 100 kHz	#VB	W 300 kHz S		1.000 0 GHz ms (601 pts)	

#### Conducted Spurious Emission (802.11n-CH1)





FCC PT.15.247 TEST REPORT		www.hct.co.kr	
Test Report No. HCTR1108FR06-1	Date of Issue: September 29, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth/WLAN	FCC ID: JYCP9070
	000100120,2011	Page 6 2 of 83	01013070



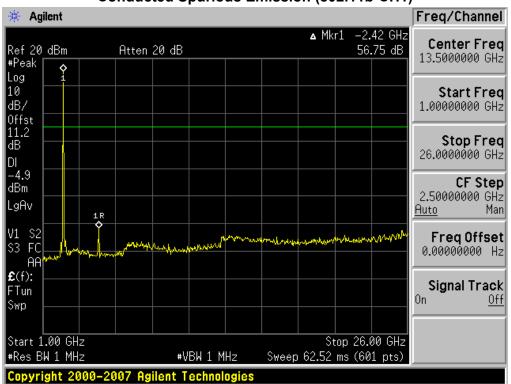
🔆 Agile	nt								Freq/Channel
Ref20 d ≢Peak	Bm	Atten	20 dB				Mk	0.2 MHz 16 dBm	Center Freq 515.000000 MHz
_og L0 dB/ Offst									<b>Start Frec</b> 30.0000000 MHz
11.2 dB – DI –									<b>Stop Freq</b> 1.00000000 GHz
-10.7 dBm _gAv									<b>CF Step</b> 97.0000000 MHz <u>Auto</u> Mar
V1 S2 53 FC AA			1						Freq Offset 0.00000000 Hz
€(f): =Tun ≁* Swp	hand an analyt	waayaanaa ah	whrouth	n hay na hay	ar an	mahd	topmark-morrow	 n-hippenninktag	Signal Track <sup>On <u>Of</u></sup>
Start 30. ≇Res BW			#VB	300 W	kHz	Sweep	Stop 92.72	0 GHz 1 pts)	

## Conducted Spurious Emission (802.11n-CH11)

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	
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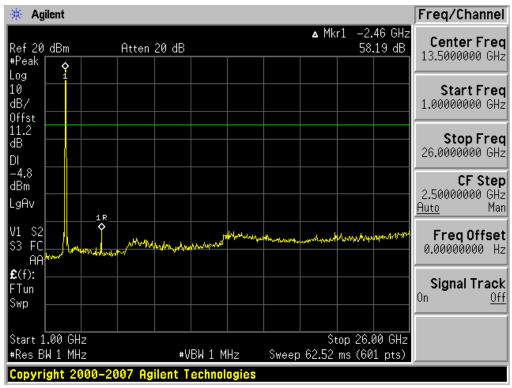


1 GHz ~ 26 GHz



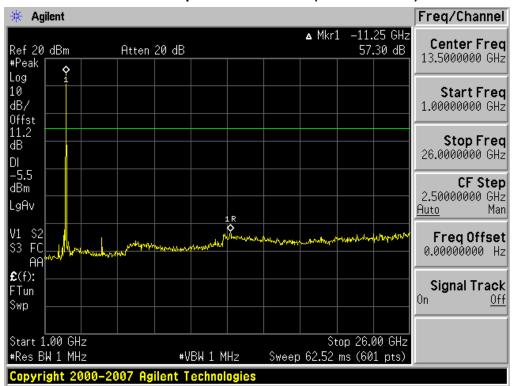
Conducted Spurious Emission (802.11b-CH1)



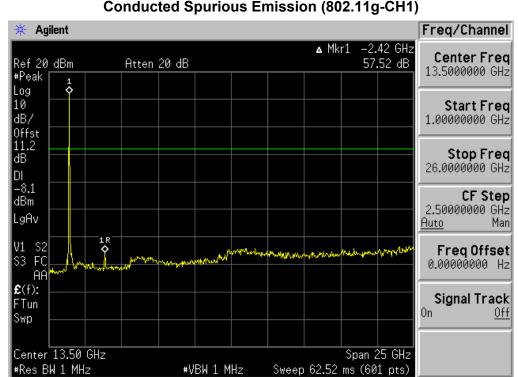


FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
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#### Conducted Spurious Emission (802.11b-CH11)

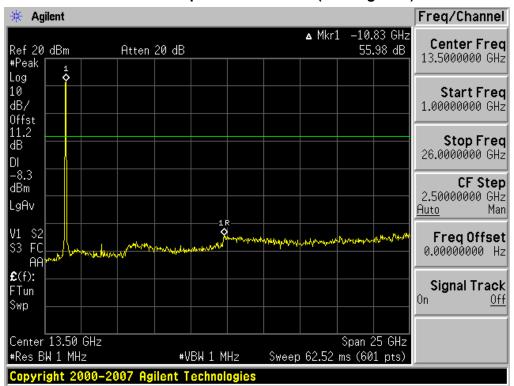


Conducted Spurious Emission (802.11g-CH1)

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
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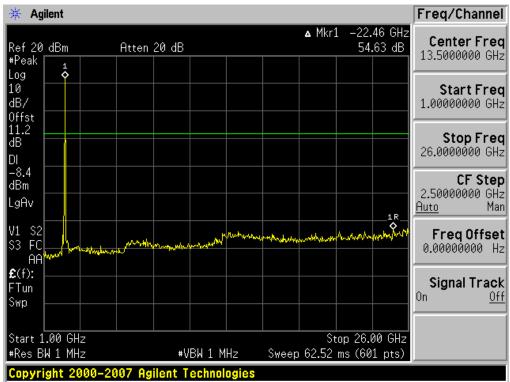
Copyright 2000-2007 Agilent Technologies





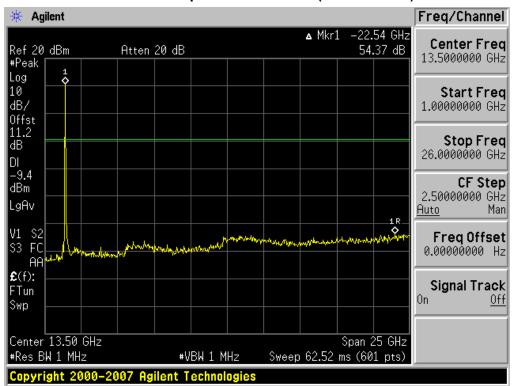
#### Conducted Spurious Emission (802.11g-CH6)





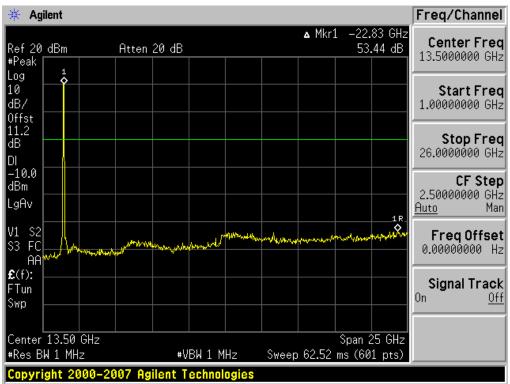
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
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#### Conducted Spurious Emission (802.11n-CH1)





FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:		FCC ID:
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070
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🔆 Agilent		F	'req/Channel
Ref 20 dBm #Peak	∆M Atten 20 dB	lkr1 –21.88 GHz 52.48 dB	Center Freq 13.5000000 GHz
Log 1			<b>Start Freq</b> 1.00000000 GHz
0ffst 11.2 dB DI			<b>Stop Frec</b> 26.0000000 GHz
-10.7 dBm LgAv			<b>CF Step</b> 2.50000000 GHz <u>uto</u> Mar
V1 S2 S3 FC AA	for many and the many and the second	when the way when the way	<b>FreqOffse</b> 0.00000000 H;
E(f): Tun Swp		0	Signal Tracl
Center 13.50 GHz #Res BW 1 MHz	#VBW 1 MHz Sweep 62.	Span 25 GHz 52 ms (601 pts)	
	107 Agilent Technologies		

## Conducted Spurious Emission (802.11n-CH11)

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070	



# 7.5 RADIATED MEASUREMENT. 7.5.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209

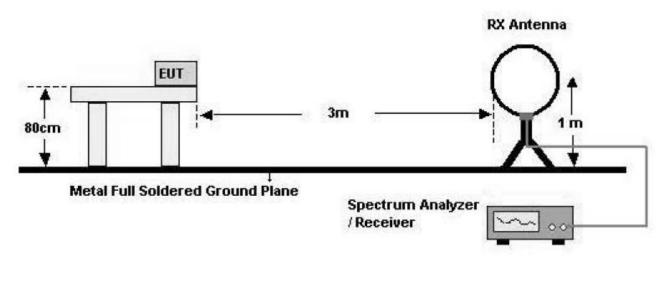
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

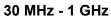
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT			
Test Report No.	Date of Issue:	EUT Type:		FCC ID:	
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070	
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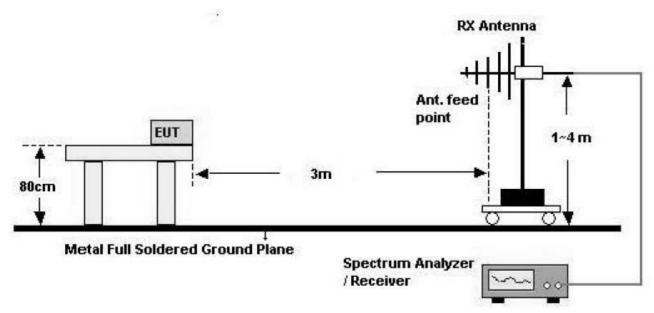


## **Test Configuration**

#### Below 30 MHz

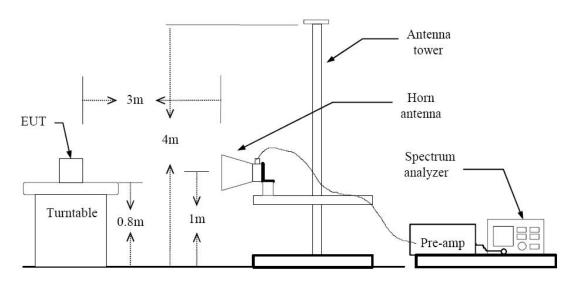






FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT			
Test Report No.	Date of Issue:	EUT Type:	FCC ID:		
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070		
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## **TEST PROCEDURE**

- 1. The EUT is placed on a turntable, which is 0.8 m above ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3 m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until the measurements for all frequencies are complete.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT			
Test Report No.	Date of Issue:	EUT Type:		FCC ID:	
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#### 9 kHz – 30MHz

#### Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin	
MHz	dBμN	dB /m	dB	(H/V)	dBµN/m	dBµN/m	dB	
No Critical peaks found								

- 1. Measuring frequencies from 9 kHz to the 30MHz.
- 2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
- 3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
- 4. Limit line = specific Limits (dBuV) + Distance extrapolation factor

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT			
Test Report No.	Date of Issue:	EUT Type:	FCC ID:		
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## Below 1 GHz

**Operation Mode:** 802.11b Mode (Channel : 6, Data rate : 11 Mbps)

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin	
MHz	dBμN	dB /m	dB	(H/V)	dBµN/m	dBµN/m	dB	
No Critical peaks found								

- 1. Measuring frequencies from 30 MHz to the 1 GHz.
- 2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
- 3. We have done 802.11b Mode, 802.11g and 802.11n mode test. Worst case of EUT is 802.11b Mode.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT				
Test Report No.	Date of Issue:	EUT Type:		FCC ID:		
HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN		JYCP9070		
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Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency	Reading	AN.+CL-AMP G	ANT. POL	Total	Limit	Margin	
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Detect
4824	60.09	-3.81	V	56.28	74	17.72	PK
4824	53.36	-3.81	V	49.55	54	4.45	AV
7236	51.37	5.17	V	56.54	74	17.46	PK
7236	38.62	5.17	V	43.79	54	10.21	AV
4824	57.74	-3.81	Н	53.93	74	20.07	PK
4824	46.84	-3.81	Н	43.03	54	10.97	AV
7236	50.45	5.17	Н	55.62	74	18.38	PK
7236	37.07	5.17	Н	42.24	54	11.76	AV

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Spectrum setting:
  - a. Peak Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
- 5. We have done 802.11b, 802.11g and 802.11n test. Worst case of EUT is 1 Mbps in 802.11b.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT			
Test Report No.	Date of Issue:	EUT Type:	FCC	ID:	
HCTR1108FR06-1	September 29, 2011	r 29, 2011 GSM/WCDMA/LTE Phone with Bluetooth/WLAN		P9070	
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Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency	Reading	AN.+CL-AMP G	ANT. POL	Total	Limit	Margin	
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Detect
4874	57.68	-3.72	V	53.96	74	20.04	PK
4874	49.16	-3.72	V	45.44	54	8.56	AV
7311	50.75	5.53	V	56.28	74	17.72	PK
7311	38.46	5.53	V	43.99	54	10.01	AV
4874	55.18	-3.72	Н	51.46	74	22.54	PK
4874	43.80	-3.72	Н	40.08	54	13.92	AV
7311	50.67	5.53	Н	56.20	74	17.80	PK
7311	36.62	5.53	Н	42.15	54	11.85	AV

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Spectrum setting:
  - a. Peak Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
- 5. We have done 802.11b, 802.11g and 802.11n test. Worst case of EUT is 1 Mbps in 802.11b.

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HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070
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Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency	Reading	AN.+CL-AMP G	ANT. POL	Total	Limit	Margin	
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Detect
4924	55.63	-3.58	V	52.05	74	21.95	PK
4924	45.71	-3.58	V	42.13	54	11.87	AV
7386	52.78	6.15	V	58.93	74	15.07	PK
7386	40.64	6.15	V	46.79	54	7.21	AV
4924	54.40	-3.58	Н	50.82	74	23.18	PK
4924	41.97	-3.58	Н	38.39	54	15.61	AV
7386	50.47	6.15	Н	56.62	74	17.38	PK
7386	36.96	6.15	Н	43.11	54	10.89	AV

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Spectrum setting:
  - a. Peak Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 1 MH.
  - b. AV Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
- 5. We have done 802.11b, 802.11g and 802.11n test. Worst case of EUT is 1 Mbps in 802.11b.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
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## 7.5.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

#### Test Requirements and limit, §15.247(d) §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

Operation Mode:	802.11 n		
Transfer Rate:	6.5 Mbps		
Operating Frequency	2412 MHz, 2462 MHz		
Channel No.	01 Ch, 11 Ch		

Frequency	Reading	AN.+CL	ANT. POL	Total	Limit	Margin	
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Detect
2390.0	33.68	33.25	Н	66.93	74	7.07	PK
2390.0	13.29	33.25	Н	46.54	54	7.46	AV
2390.0	30.57	33.25	V	63.82	74	10.18	PK
2390.0	12.43	33.25	V	45.68	54	8.32	AV
2483.5	36.32	33.73	Н	70.05	74	3.95	PK
2483.5	16.47	33.73	Н	50.20	54	3.80	AV
2483.5	34.70	33.73	V	68.43	74	5.57	PK
2483.5	14.46	33.73	V	48.19	54	5.81	AV

- 1. Spectrum setting:
  - a. Peak Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
- 2. We have done 802.11b, 802.11g and 802.11n test. Worst case of EUT is 6.5 Mbps in 802.11n.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
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# 7.6 POWERLINE CONDUCTED EMISSIONS

## Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

	Limits	(dBµV)
Frequency Range (MHz)	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

#### **Test Configuration**

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

#### **TEST PROCEDURE**

- 1. The EUT is placed on a wooden table 80 cm above the reference groundplane.
- 2. The EUT is connected via LISN to a test power supply.
- 3. The measurement results are obtained as described below:
- 4. Detectors Quasi Peak and Average Detector.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr
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HCTR1108FR06-1	September 29, 2011	GSM/WCDMA/LTE Phone with Bluetooth/WLAN	JYCP9070
		<b>Dece</b> $7^{\circ}$ of 92	

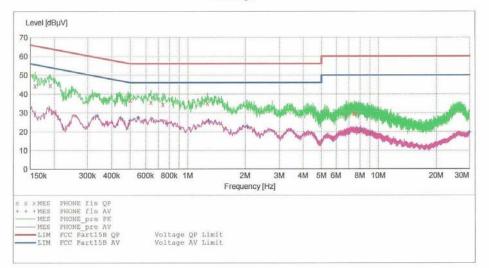


#### HCT EMC

P9070
PANTECH
WLAN MODE
SHIELD ROOM
JS LEE
FCC PART15 CLASS B
Н

#### SCAN TABLE: "FCC PART 15 B(H)"

Short Desc	ription:		FCC PART 15	CLASS B		
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	500.0 kHz	1.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None



#### MEASUREMENT RESULT: "PHONE\_fin QP"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.159010	44.30	10.1	66	21.2		
0.191010	44.50	10.1	64	19.5		
0.500000	36.80	10.1	56	19.2		-
0.640000	35.60	10.1	56	20.4		
0.740000	34.50	10.1	56	21.5		
1.272000	35.10	10.2	56	20.9		
6.780000	28.60	10.8	60	31.4		
7.460000	29.50	10.8	60	30.5		
7,628000	29.50	10.8	60	30.5		

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FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT			
Test Report No.	Date of Issue:	EUT Type:		FCC ID:	
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#### MEASUREMENT RESULT: "PHONE\_fin AV"

8/2/2011	2:47	PM					
Freque	ency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.336	5010	28.40	10.1	49	20.9		
0.446	5010	27.10	10.1	47	19.8		
0.498	010	26.00	10.1	46	20.0		
0.552	2000	27.40	10.1	46	18.6		
1.284	1000	25.70	10.2	46	20.3		
2.052	2000	22.50	10.2	46	23.5		
8.088	000	20.60	10.8	50	29.4		
9.140	0000	19.10	10.9	50	30.9		
29.984	000	19.40	12.3	50	30.6		

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FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
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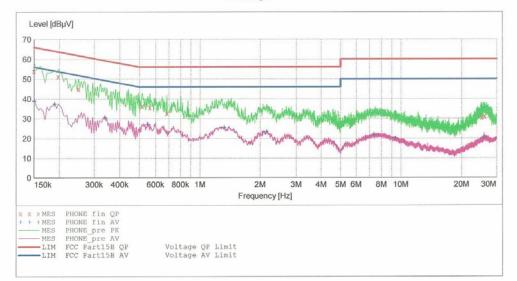
HCT

#### EMC

EUT:	P9070
Manufacturer:	PANTECH
Operating Condition:	
Test Site:	SHIELD ROOM
Operator:	JS LEE
Test Specification:	FCC PART15 CLASS B
Comment:	N

#### SCAN TABLE: "FCC PART 15 B(N)"

Short Desc	ription:		FCC PART 15	CLASS B		
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None



#### MEASUREMENT RESULT: "PHONE\_fin QP"

8	8/2/2011 2:43	3PM					
	Frequency	Level	Transd	Limit	Margin	Line	PE
	MHz	dBµV	dB	dBµV	dB		
	0.150010	53.90	10.3	66	12.1		
	0.198010	51.20	10.3	64	12.5		
	0.250010	44.90	10.3	62	16.9		
	0.516000	36.30	10.3	56	19.7		
	0.564000	35.70	10.3	56	20.3		
	0.684000	32.80	10.4	56	23.2		
	25.264000	30.50	11.8	60	29.5		
	25.300000	30.40	11.8	60	29.6		
	26.092000	31.10	11.8	60	28.9		

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FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT			
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#### MEASUREMENT RESULT: "PHONE\_fin AV"

/2/2011 2:43 Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB	DTHC	11
0.150010	38.80	10.3	56	17.2		
0.190010	37.30	10.3	54	16.8		
0.338010	30.40	10.3	49	18.8		
0.548000	27.10	10.3	46	18.9		
1.328000	25.30	10.4	46	20.7		
2.160000	23.40	10.4	46	22.6		
7.352000	21.70	11.0	50	28.3		
9.372000	19.80	11.0	50	30.2		
25.932000	20.20	11.8	50	29.8		

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# 8. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ESH2-Z5/ LISN	Annual	02/01/2012	861741/013
Schwarzbeck	VULB 9168/ TRILOG Antenna	Biennial	02/09/2013	9168-200
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
Rohde & Schwarz	ESH3-Z2/ PULSE LIMITER	Annual	10/25/2011	375.8810.352
Rohde & Schwarz	SCU-18/ Signal Conditioning Unit	Annual	09/29/2011	10094
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	09/23/2011	296
Rohde & Schwarz	FSP30 / Spectrum Analyzer	Annual	03/23/2012	839117/011
Agilent	E4440A / Spectrum Analyzer	Annual	05/02/2012	US45303008
Agilent	E4416A /Power Meter	Annual	01/04/2012	GB41291412
Agilent	E9327A /POWER SENSOR	Annual	05/02/2012	MY4442009
Wainwright Instrument	WHF3.3/18G-10EF / High Pass Filter	Annual	05/02/2012	1
Wainwright Instrument	WRCJ2400/2483.5-2370/2520- 60/14SS / Band Reject Filter	Annual	05/02/2012	1
Hewlett Packard	11636B/Power Divider	Annual	12/29/2011	11377
Hewlett Packard	11667B / Power Splinter	Annual	11/08/2011	10126
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	01/04/2012	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	12/01/2011	010002156287001199
TESCOM	TC-3000A / BLUETOOTH TESTER	Annual	01/10/2012	3000A490112
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	05/02/2012	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/13/2012	9009-2536

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