

HCT CO., LTD.

CERTIFICATE OF COMPLIANCE FCC Certification

Applicant Name: TCT Mobile Limited Address:

5F, E building, No.232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, P.R. China

Date of Issue: September 19, 2011 **Test Site/Location:** HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon, Icheonsi, Kyunggi-Do, Korea Report No.: HCTR1109FR14 HCT FRN: 0005866421

FCC ID:

RAD209

APPLICANT:	TCT Mobile Limited
FCC Model(s): EUT Type:	JukeB PCS CDMA Phone with Bluetooth/ WLAN
Max. RF Output Power:	Wi-Fi 802.11b(21.66 dBm) / Wi-Fi 802.11g (21.17 dBm)) / Wi-Fi 802.11n (19.96 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)

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

Approved by : Sang Jun Lee Manager of RF Team

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<u>Version</u>

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1109FR14	September 19, 2011	- First Approval Report

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FCC ID:	RAD209
EUT Type:	PCS CDMA Phone with Bluetooth/ WLAN
Model Name:	JukeB
Date(s) of Tests:	September 05, 2011 ~ September 10, 2011
Contact person:	Name: Zhizhou Gong Phone #: +86 (0) 21 6146 0890
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

EUT Type	PCS CDMA Phone with Bluetooth/ WLAN
Model Name	JukeB
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(21.66 dBm) / Wi-Fi 802.11g (21.17 dBm)) / Wi-Fi 802.11n (19.96 dBm)
Modulation Type	DSSS/CCK(802.11b), OFDM(802.11g, 802.11n)
Antenna Specification	Manufacturer: E.M.W Co., Ltd.
	Antenna type: Internal Antenna
	Peak Gain : -6.32 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

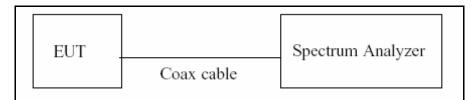
7.1 6dB BANDWIDTH MEASUREMENT (802.11b/g/n)

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	8.595	0.5	Pass
2437	6	8.290	0.5	Pass
2462	11	8.497	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	15.182	0.5	Pass
2437	6	15.165	0.5	Pass
2462	11	14.818	0.5	Pass

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802.11n Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
2412	1	16.066	0.5	Pass
2437	6	16.620	0.5	Pass
2462	11	15.753	0.5	Pass

Conducted 6dB Bandwidth Measurements for 802.11n

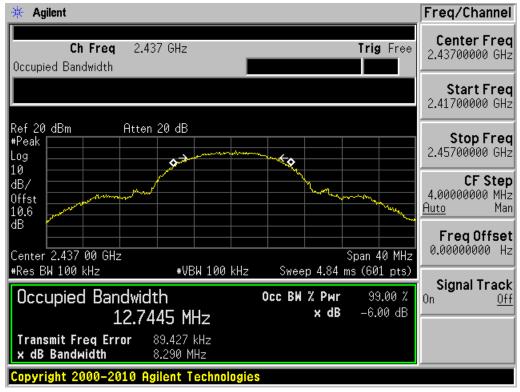
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6dB Bandwidth plot (802.11b-CH 1)



6dB Bandwidth plot (802.11b-CH 6)



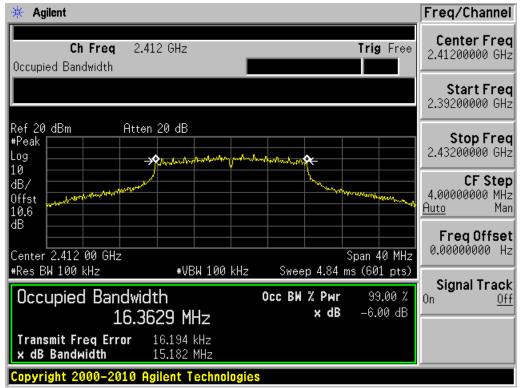
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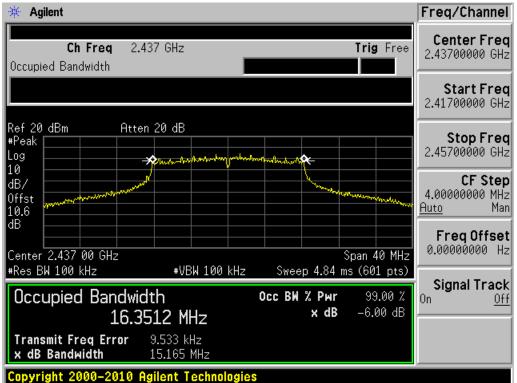
6dB Bandwidth plot (802.11g-CH 1)



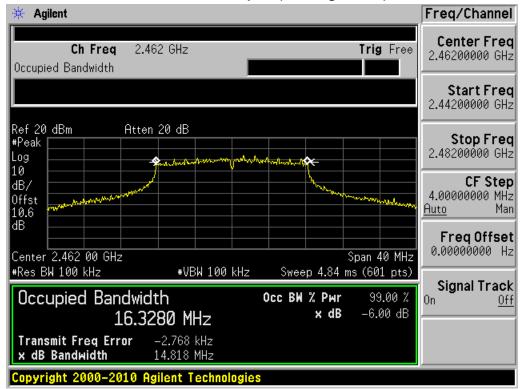
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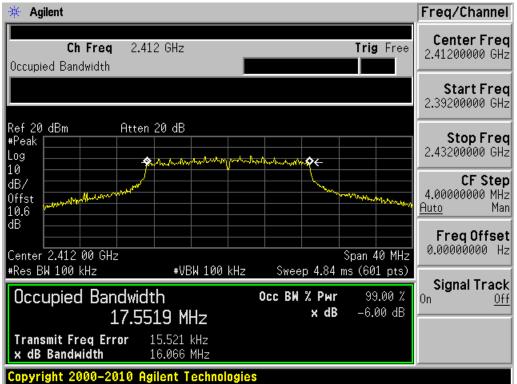
6dB Bandwidth plot (802.11g-CH 11)



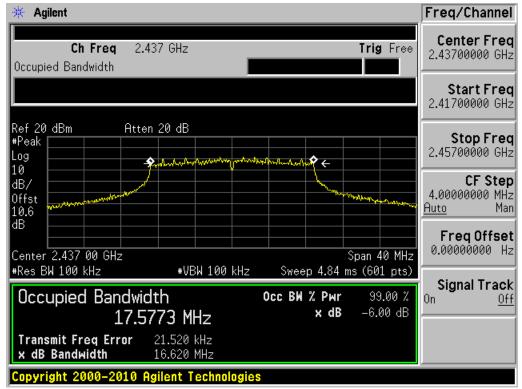
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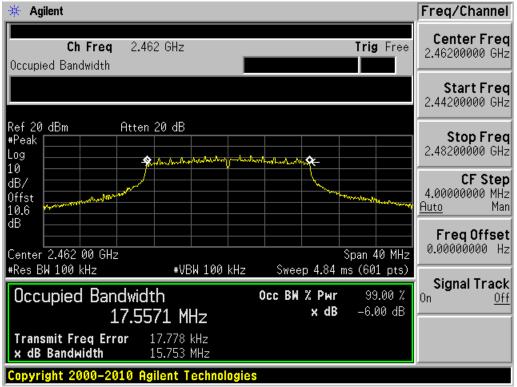
6dB Bandwidth plot (802.11n-CH 6)



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

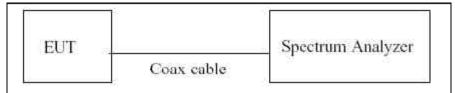
Test Requirements and limit, §15.247(b)(3)

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	17.85	30
2412	1	2 Mbps	18.04	30
2412	I	5.5 Mbps	20.28	30
		11 Mbps	21.66	30
		1 Mbps	17.19	30
2427		2 Mbps	17.74	30
2437	6	5.5 Mbps	20.26	30
		11 Mbps	21.51	30
		1 Mbps	16.92	30
2462	44	2 Mbps	17.50	30
2462	11	5.5 Mbps	19.67	30
		11 Mbps	21.13	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	20.42	30
		9 Mbps	20.43	30
		12 Mbps	20.68	30
2412		18 Mbps	20.34	30
2412	1	24 Mbps	20.88	30
		36 Mbps	21.01	30
		48 Mbps	21.12	30
		54 Mbps	21.17	30
		6 Mbps	20.40	30
	6	9 Mbps	20.44	30
		12 Mbps	20.77	30
2437		18 Mbps	20.57	30
2437		24 Mbps	21.08	30
		36 Mbps	20.83	30
		48 Mbps	21.02	30
		54 Mbps	21.05	30
		6 Mbps	20.36	30
		9 Mbps	20.31	30
		12 Mbps	20.44	30
2462	11	18 Mbps	20.43	30
	11	24 Mbps	20.99	30
		36 Mbps	20.82	30
		48 Mbps	20.71	30
		54 Mbps	20.75	30

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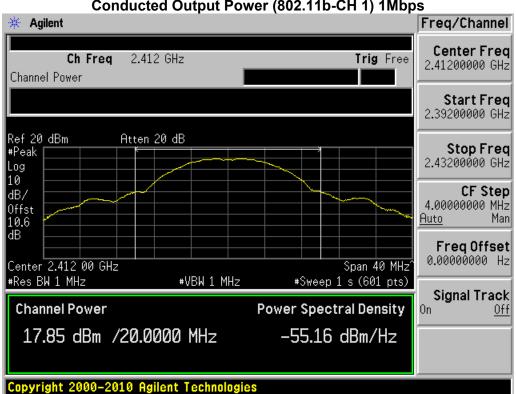


Conducted Output Power Measurements (802.11n Mode)

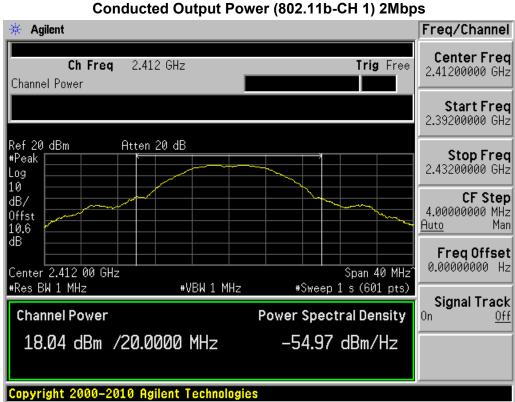
802.11n Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		6.5 Mbps	19.32	30
		13 Mbps	19.45	30
		19.5 Mbps	19.42	30
2412		26 Mbps	19.83	30
2412	1	39 Mbps	19.86	30
		52 Mbps	19.70	30
		58.5 Mbps	19.72	30
		65 Mbps	19.84	30
		6.5 Mbps	19.33	30
	6	13 Mbps	19.50	30
		19.5 Mbps	19.60	30
2437		26 Mbps	19.96	30
2437		39 Mbps	19.68	30
		52 Mbps	19.78	30
		58.5 Mbps	19.77	30
		65 Mbps	19.63	30
		6.5 Mbps	18.98	30
		13 Mbps	19.45	30
		19.5 Mbps	18.89	30
2462	44	26 Mbps	19.65	30
	11	39 Mbps	19.63	30
		52 Mbps	19.53	30
		58.5 Mbps	19.46	30
		65 Mbps	19.49	30

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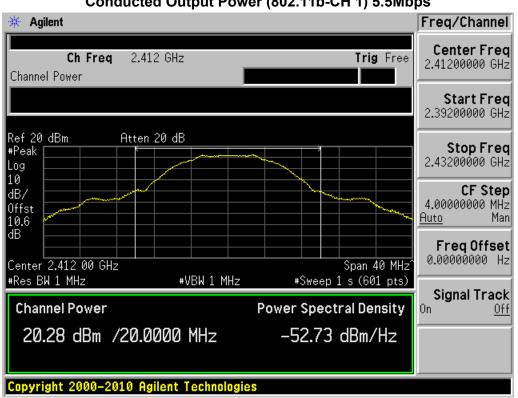


Conducted Output Power (802.11b-CH 1) 1Mbps

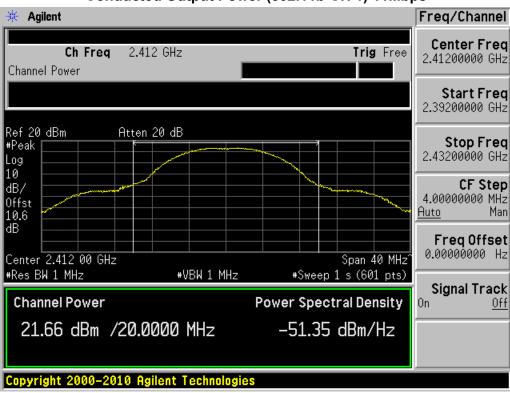


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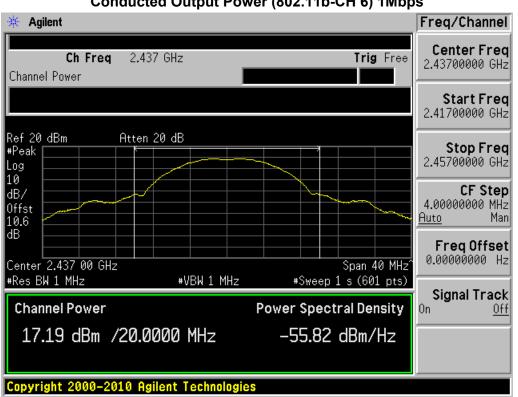
Conducted Output Power (802.11b-CH 1) 5.5Mbps



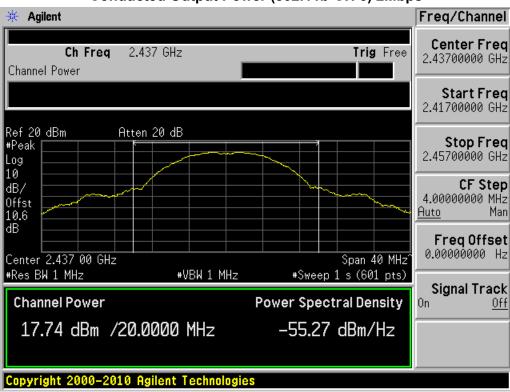
Conducted Output Power (802.11b-CH 1) 11Mbps

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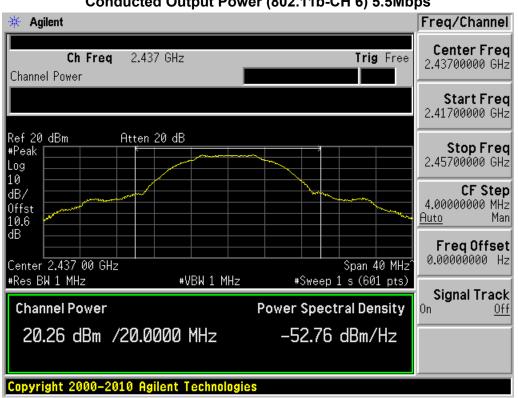
Conducted Output Power (802.11b-CH 6) 1Mbps



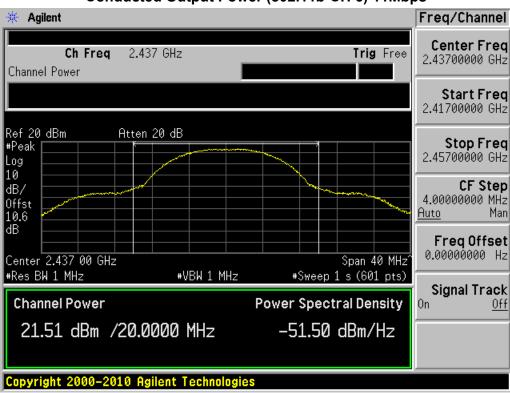
Conducted Output Power (802.11b-CH 6) 2Mbps

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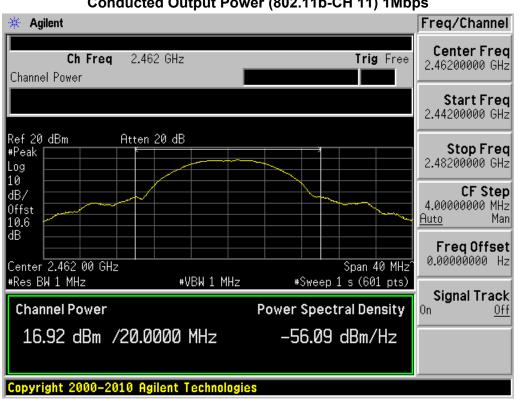
Conducted Output Power (802.11b-CH 6) 5.5Mbps



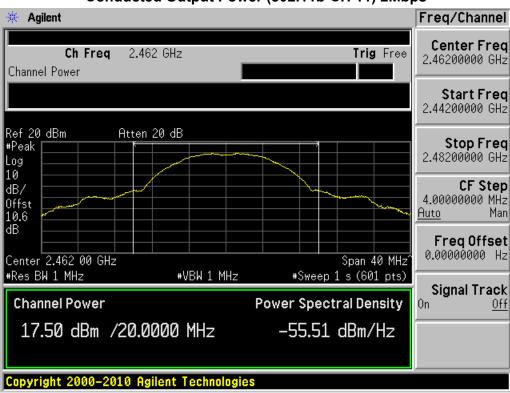
Conducted Output Power (802.11b-CH 6) 11Mbps

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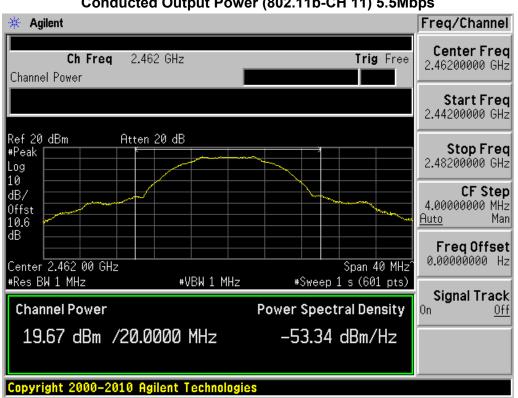
Conducted Output Power (802.11b-CH 11) 1Mbps



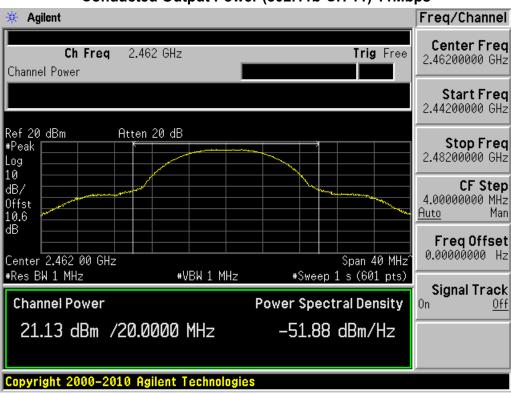
Conducted Output Power (802.11b-CH 11) 2Mbps

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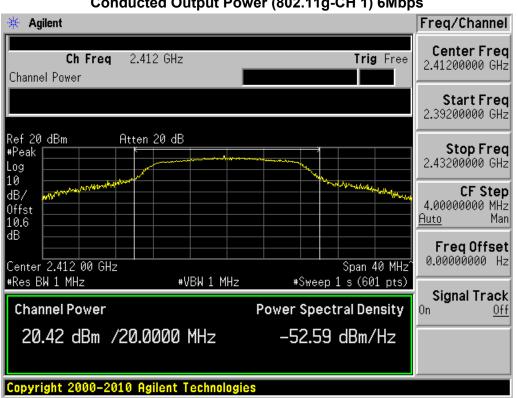
Conducted Output Power (802.11b-CH 11) 5.5Mbps



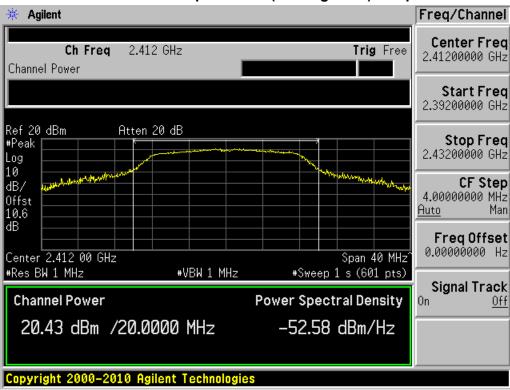
Conducted Output Power (802.11b-CH 11) 11Mbps

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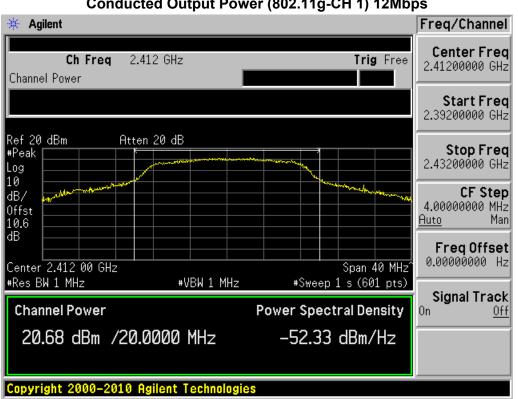
Conducted Output Power (802.11g-CH 1) 6Mbps



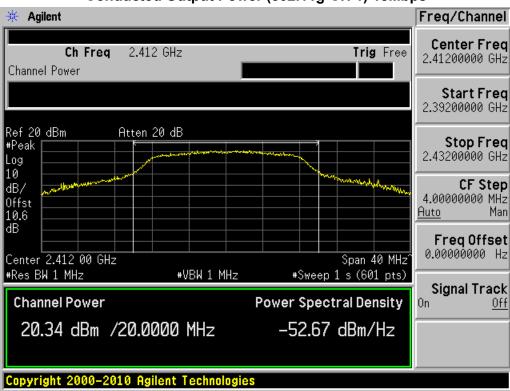
Conducted Output Power (802.11g-CH 1) 9Mbps

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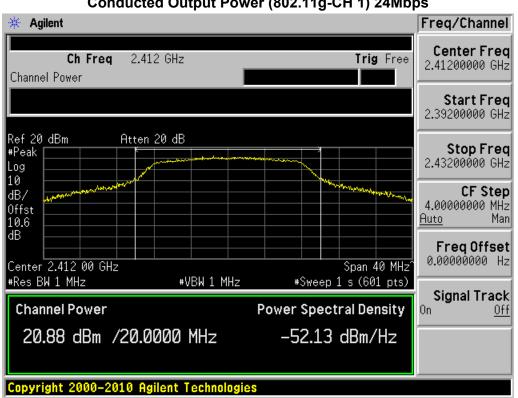
Conducted Output Power (802.11g-CH 1) 12Mbps



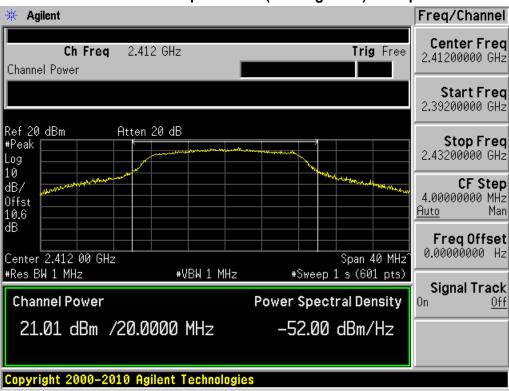
Conducted Output Power (802.11g-CH 1) 18Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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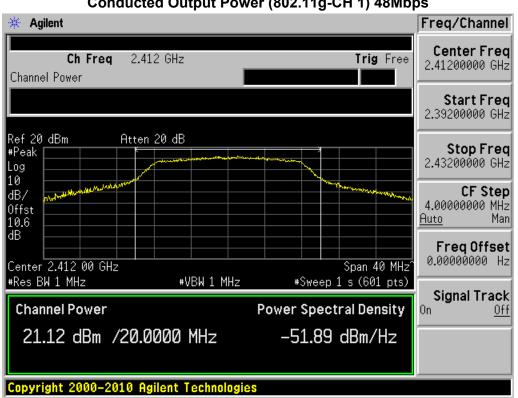
Conducted Output Power (802.11g-CH 1) 24Mbps



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

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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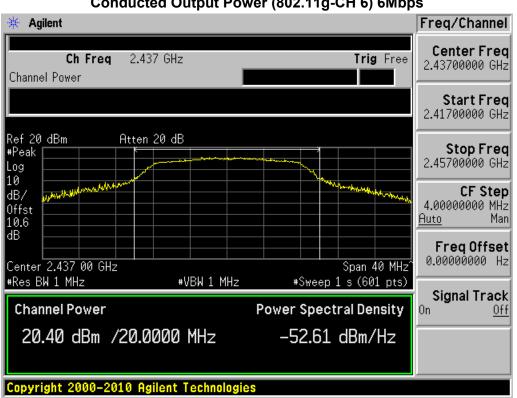
Conducted Output Power (802.11g-CH 1) 48Mbps



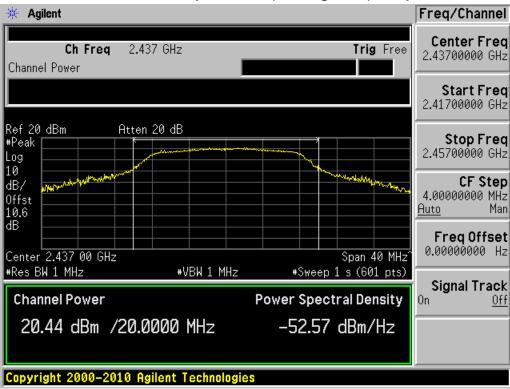
Conducted Output Power (802.11g-CH 1) 54Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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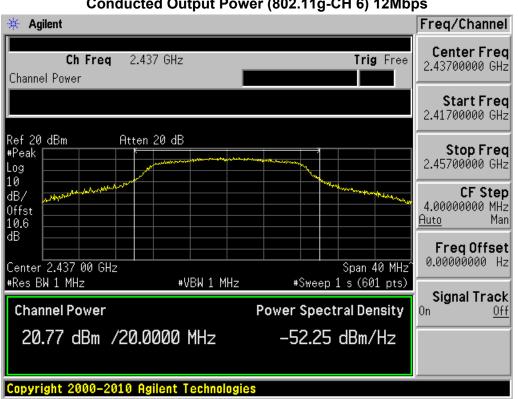
Conducted Output Power (802.11g-CH 6) 6Mbps



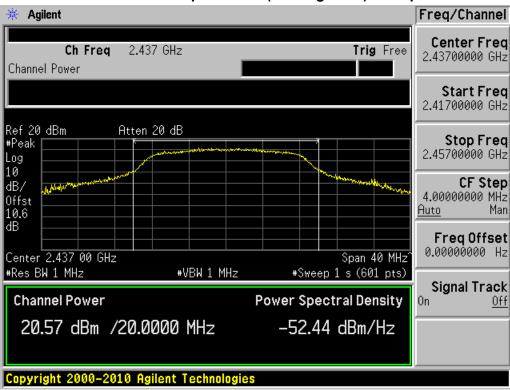
Conducted Output Power (802.11g-CH 6) 9Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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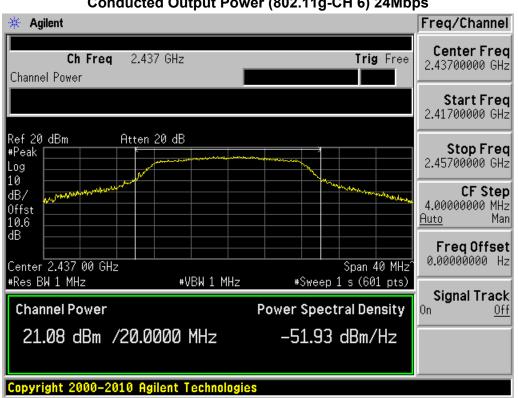
Conducted Output Power (802.11g-CH 6) 12Mbps



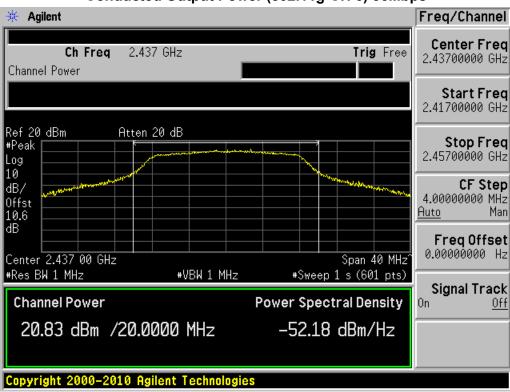
Conducted Output Power (802.11g-CH 6) 18Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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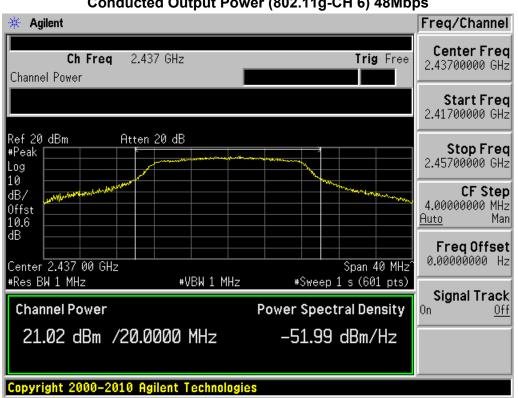
Conducted Output Power (802.11g-CH 6) 24Mbps



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:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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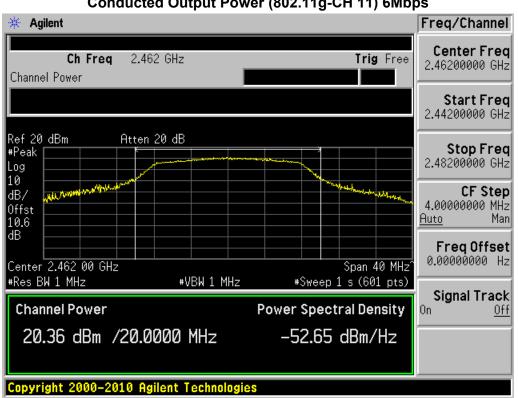
Conducted Output Power (802.11g-CH 6) 48Mbps

Conduct	sa Output i Ow	er (802.119-CH 8) 54100	03
🔆 Agilent			Freq/Channel
Ch Freq 2.43 Channel Power	37 GHz	Trig Free	Center Freq 2.43700000 GHz
			Start Freq 2.41700000 GHz
Ref 20 dBm Atten #Peak Log 10	20 dB		Stop Freq 2.45700000 GHz
dB/ Offst 10.6			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	FreqOffset 0.00000000 Hz
Channel Power	₩VDW I MHZ	#Sweep 1 s (601 pts) Power Spectral Density	Signal Track On <u>Off</u>
21.05 dBm /20.0	1000 MHz	-51.96 dBm/Hz	
Copyright 2000-2010 As	ilent Technologie	8	

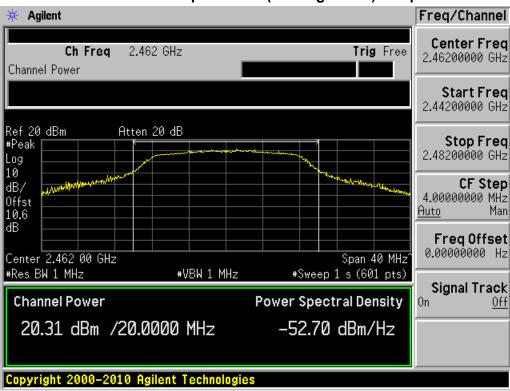
Conducted Output Power (802.11a-CH 6) 54Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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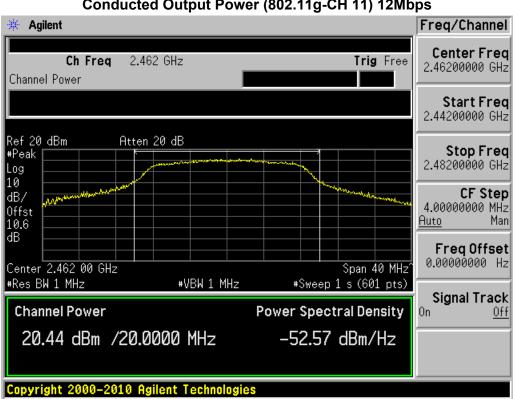
Conducted Output Power (802.11g-CH 11) 6Mbps



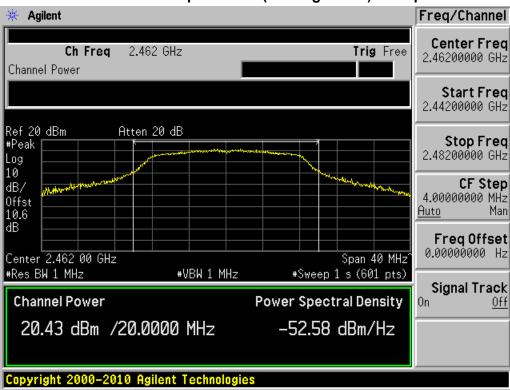
Conducted Output Power (802.11g-CH 11) 9Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	11 PCS CDMA Phone with Bluetooth/ WLAN		
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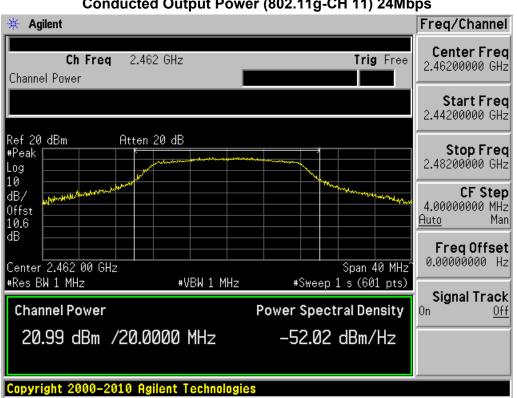
Conducted Output Power (802.11g-CH 11) 12Mbps



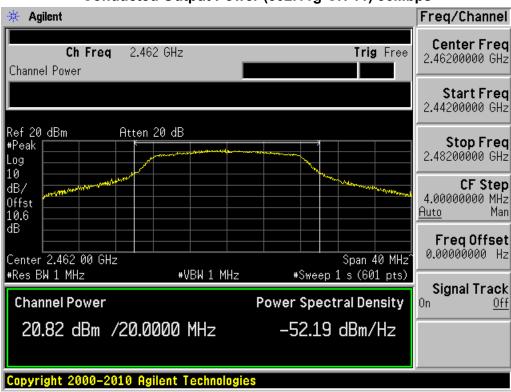
Conducted Output Power (802.11g-CH 11) 18Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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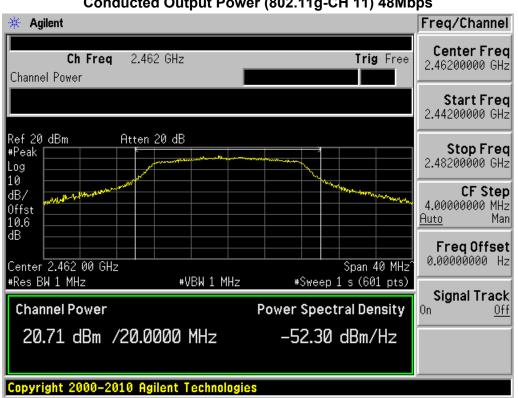
Conducted Output Power (802.11g-CH 11) 24Mbps



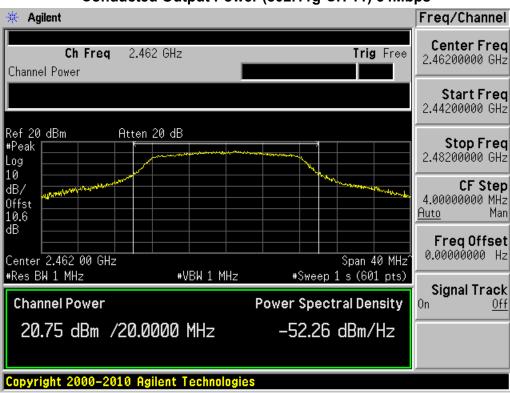
Conducted Output Power (802.11g-CH 11) 36Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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Conducted Output Power (802.11g-CH 11) 48Mbps



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

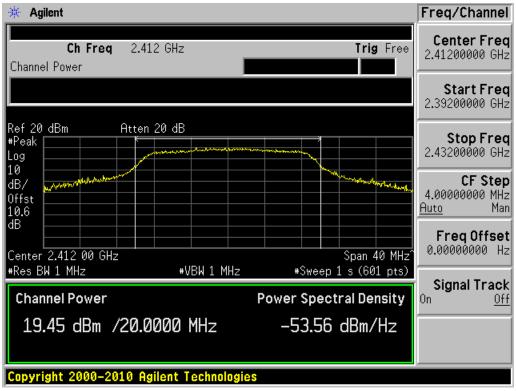
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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Freq/Channel 🔆 Agilent Center Freq Ch Freq 2.412 GHz Trig Free 2.41200000 GHz Channel Power Start Freq 2.39200000 GHz Ref 20 dBm Atten 20 dB Stop Freq #Peak 2.43200000 GHz Log 10 CF Step dB/ 4.00000000 MHz Offst Man Auto 10.6 dB Freq Offset 0.00000000 Hz Center 2.412 00 GHz Span 40 MHz #Res BW 1 MHz #Sweep 1 s (601 pts) #VBW 1 MHz Signal Track **Channel Power Power Spectral Density** 0n Off 19.32 dBm /20.0000 MHz -53.69 dBm/Hz Copyright 2000-2010 Agilent Technologies

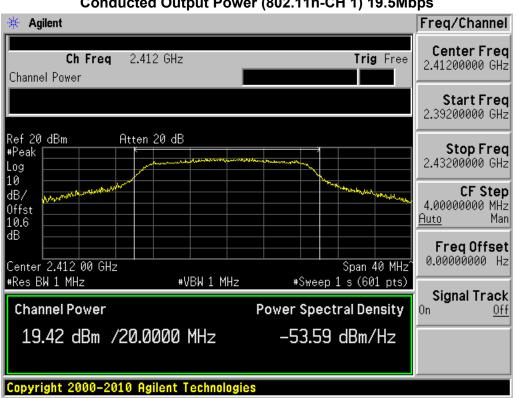




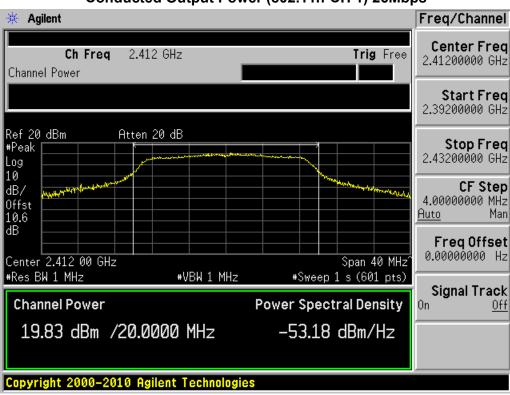


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr		
Test Report No.	Date of Issue:	EUT Type:	FCC ID:		
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209		
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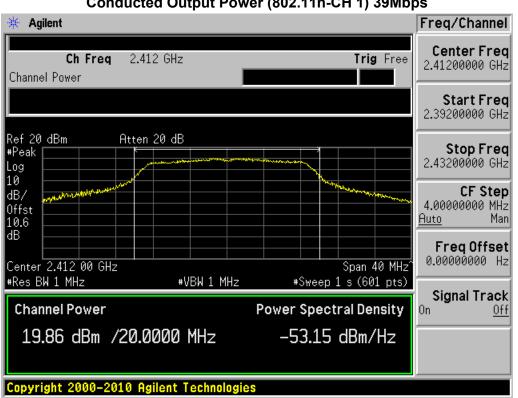
Conducted Output Power (802.11n-CH 1) 19.5Mbps



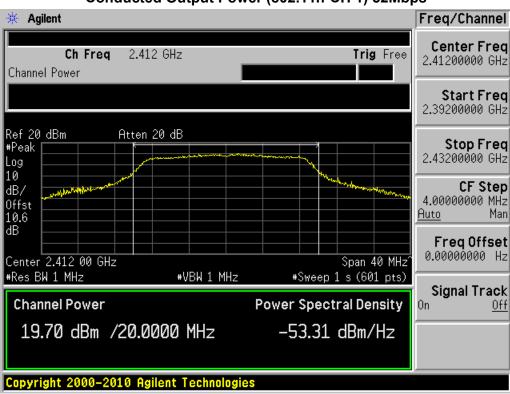
Conducted Output Power (802.11n-CH 1) 26Mbps

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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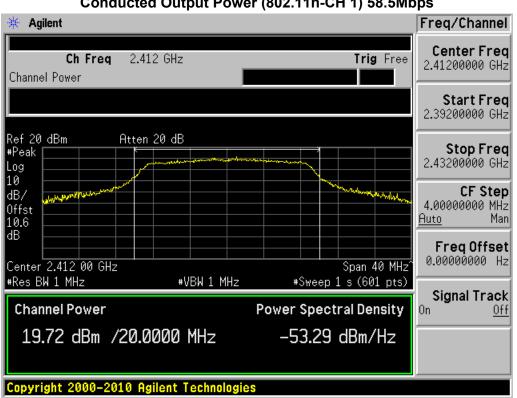
Conducted Output Power (802.11n-CH 1) 39Mbps



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

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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Conducted Output Power (802.11n-CH 1) 58.5Mbps

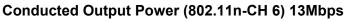
* Agilent	Freq/Channel
Ch Freq 2.412 GHz Channel Power	Trig Free Center Freq 2.41200000 GHz
	Start Freq 2.39200000 GHz
Ref 20 dBm Atten 20 dB #Peak Log 10	Stop Freq 2.43200000 GHz
dB/ mmhrumhuuhuu Offst	CF Step 4.00000000 MHz <u>Auto</u> Man
dB Center 2.412 00 GHz	Span 40 MHz ² Span 40 MHz ²
#Res BW 1 MHz #VBW 1 MHz	#Sweep 1 s (601 pts)
Channel Power 19.84 dBm /20.0000 MHz	Power Spectral Density On <u>Off</u> -53.17 dBm/Hz
Copyright 2000–2010 Agilent Technologie	es esta esta esta esta esta esta esta es

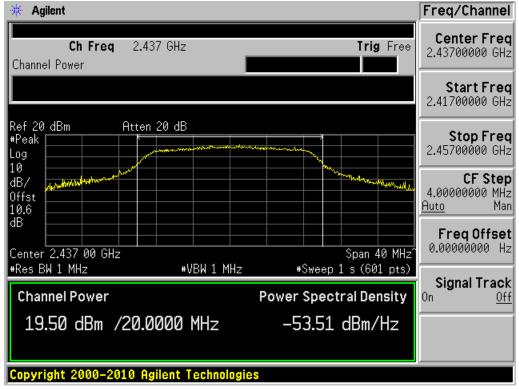
Conducted Output Power (802.11n-CH 1) 65Mbps

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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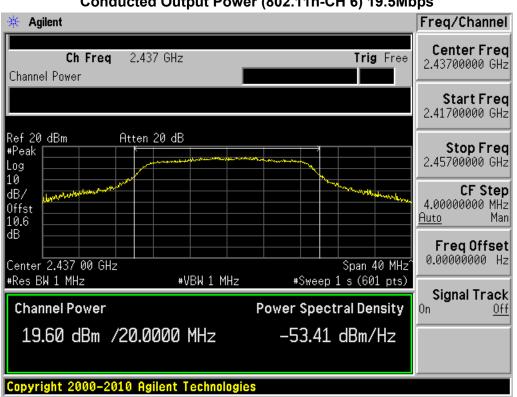
Conducted Output Power (802.11n-CH 6) 6.5Mbps Freq/Channel 🔆 Agilent Center Freq 2.437 GHz Ch Freq Trig Free 2.43700000 GHz Channel Power Start Freq 2.41700000 GHz Ref 20 dBm Atten 20 dB Stop Freq #Peak 2.45700000 GHz Log 10 CF Step dB/ hell the 4.00000000 MHz Offst Man Auto 10.6 dB Freq Offset 0.00000000 Hz Span 40 MHz Center 2.437 00 GHz #Res BW 1 MHz #Sweep 1 s (601 pts) #VBW 1 MHz Signal Track **Channel Power Power Spectral Density** 0n Off 19.33 dBm /20.0000 MHz -53.68 dBm/Hz Copyright 2000-2010 Agilent Technologies



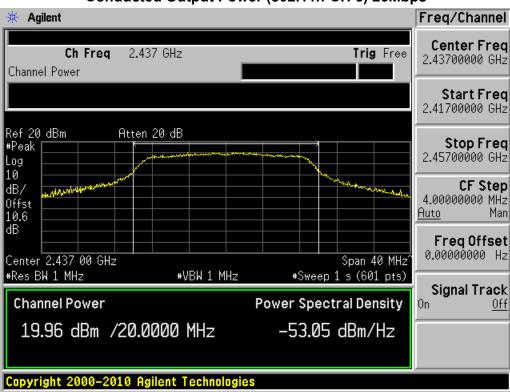


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209
		Page 4 1 of 83	





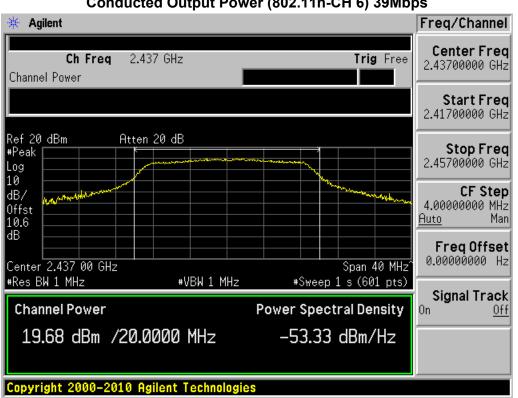
Conducted Output Power (802.11n-CH 6) 19.5Mbps



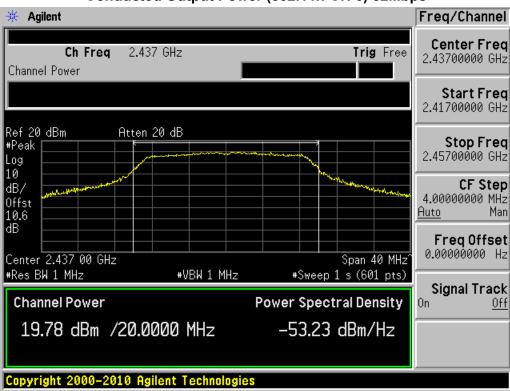
Conducted Output Power (802.11n-CH 6) 26Mbps

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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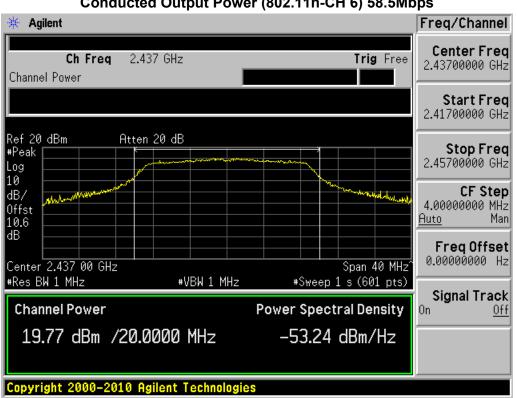
Conducted Output Power (802.11n-CH 6) 39Mbps



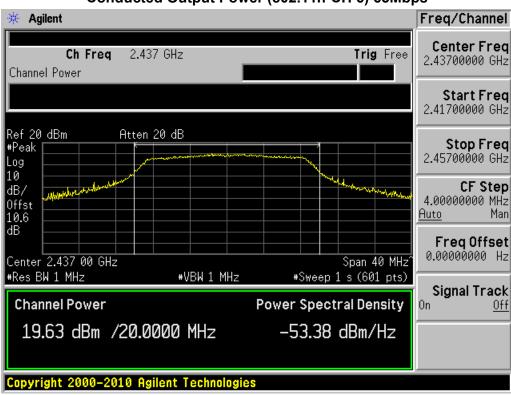
Conducted Output Power (802.11n-CH 6) 52Mbps

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209
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Conducted Output Power (802.11n-CH 6) 58.5Mbps

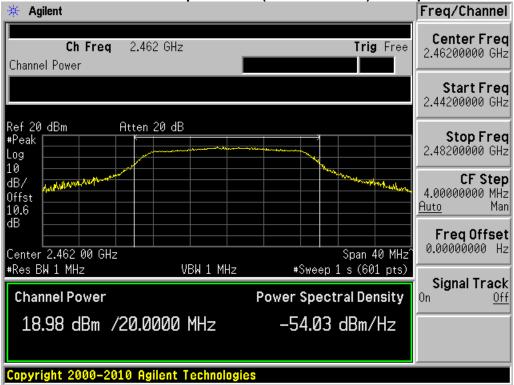


Conducted Output Power (802.11n-CH 6) 65Mbps

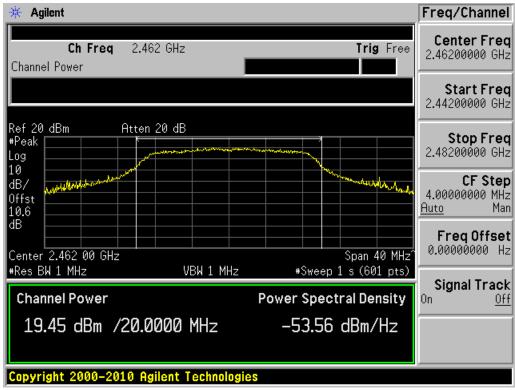
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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Conducted Output Power (802.11n-CH 11) 6.5Mbps

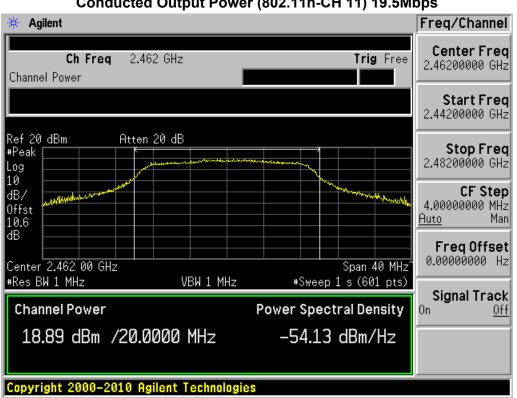






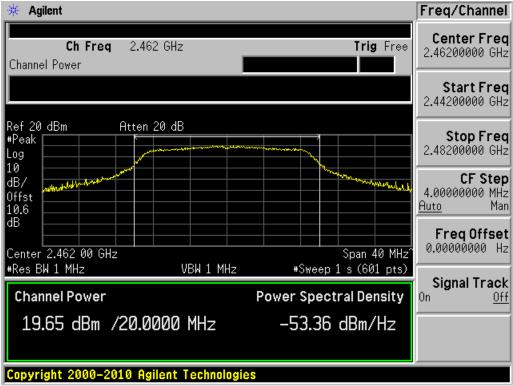
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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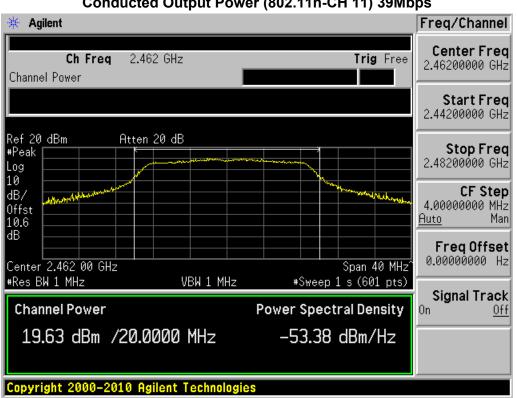
Conducted Output Power (802.11n-CH 11) 19.5Mbps

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

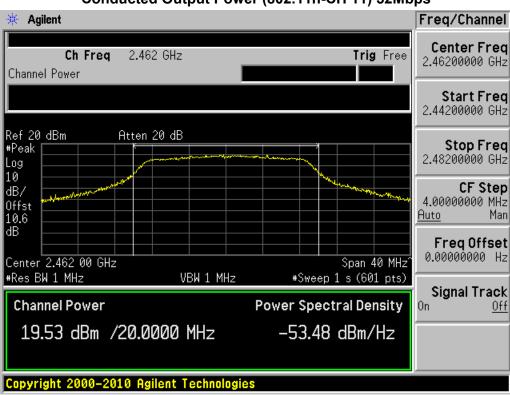


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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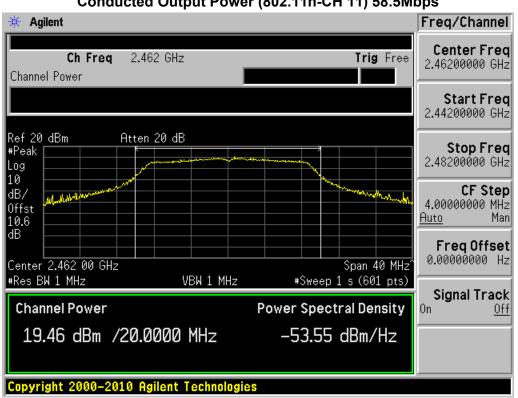
Conducted Output Power (802.11n-CH 11) 39Mbps



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

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
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Conducted Output Power (802.11n-CH 11) 58.5Mbps

Freg/Channel ¥. Agilent Center Freq Ch Freq 2.462 GHz Trig Free 2.46200000 GHz Channel Power Start Freq 2.44200000 GHz Ref 20 dBm Atten 20 dB Stop Freq #Peak 2.48200000 GHz Log 10 Mudden brank CF Step dB/ 4.00000000 MHz Offst Auto Man 10.6dB Freq Offset 0.00000000 Hz Center 2.462 00 GHz Span 40 MHz #Res BW 1 MHz #Sweep 1 s (601 pts) VBW 1 MHz Signal Track **Channel Power** Power Spectral Density 0n <u>0ff</u> 19.46 dBm /20.0000 MHz -53.55 dBm/Hz Copyright 2000–2010 Agilent Technologies

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

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr	
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HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209	
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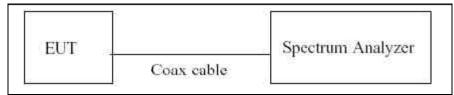
7.3 POWER SPECTRAL DENSITY (802.11b/g/n)

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
- 3. VBW = 3 kHz
- 4. Sweep = 100 sec
- 5. Detector Mode = Peak

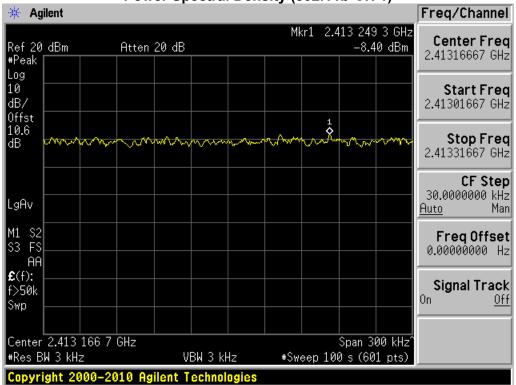
TEST RESULTS

Conducted Power Density Measurements

			Test Result	
Frequency (MHz)	Channel No.	Mode	Power Density (dBm)	Pass/Fail
2412	1		-8.40	Pass
2437	6	802.11b	-8.59	Pass
2462	11		-8.78	Pass
2412	1		-10.58	Pass
2437	6	802.11g	-10.69	Pass
2462	11		-10.68	Pass
2412	1		-13.53	Pass
2437	6	802.11n	-13.46	Pass
2462	11		-13.73	Pass

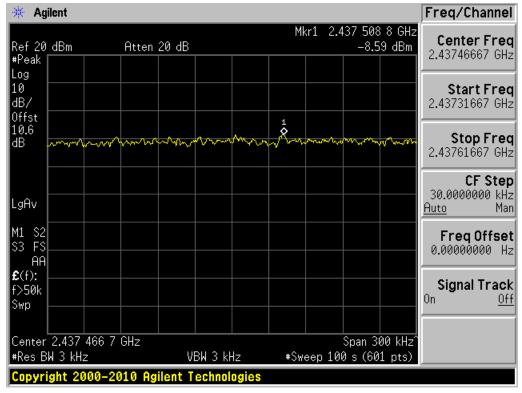
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209
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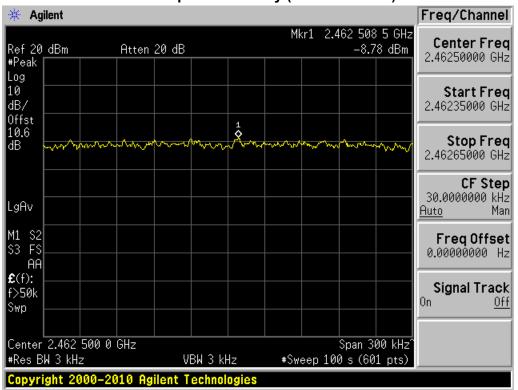
Power Spectral Density (802.11b-CH 1)

Power Spectral Density (802.11b-CH 6)



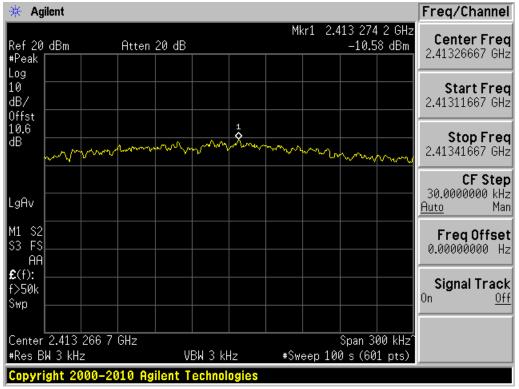
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr		
Test Report No.	Date of Issue:	EUT Type:	FCC ID:		
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209		
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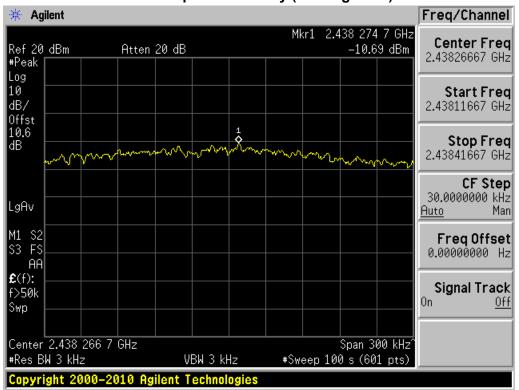
Power Spectral Density (802.11b-CH 11)





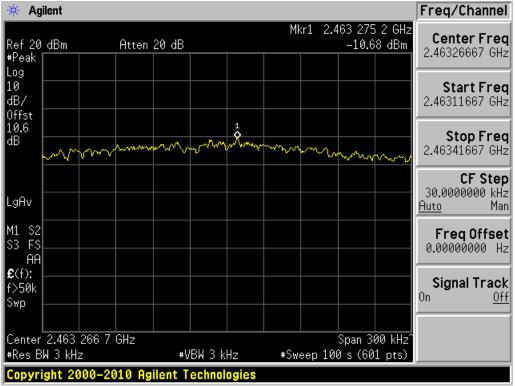
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr		
Test Report No.	Date of Issue:	EUT Type:	FCC ID:		
HCTR1109FR14	September 19, 2011	PCS CDMA Phone with Bluetooth/ WLAN	RAD209		
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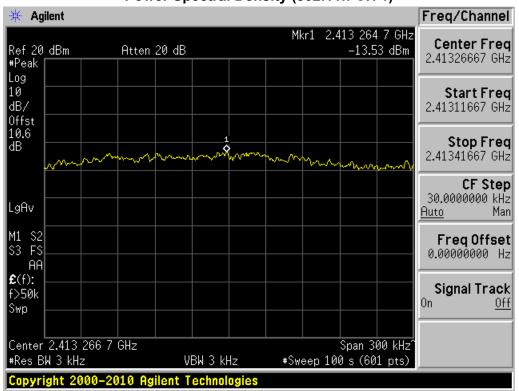
Power Spectral Density (802.11g-CH 6)





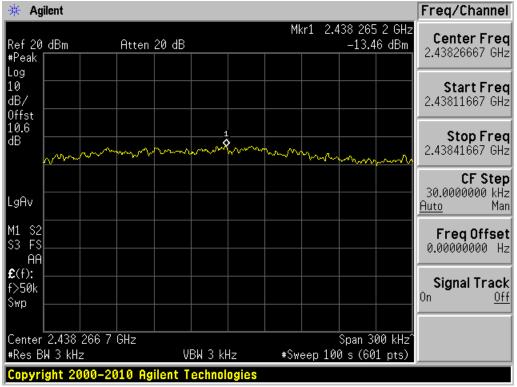
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr		
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Power Spectral Density (802.11n-CH 1)





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🔆 Agilent				Freq/Channel
Ref 20 dBm +Peak	Atten 20 dB	MI	kr1 2.463 265 2 –13.73	
.og LØ JB/ Dffst				Start Fred 2.46311667 GHz
10.6 JB	man	1 Marine	manno	2.46341667 GHz
_gAv				CF Step 30.0000000 kHz <u>Auto</u> Mai
11 S2 53 FS AA				Freq Offse 0.00000000 Hz
€(f): >50k Swp				Signal Track
Center 2.463 266 #Res BW 3 kHz		3 kHz #Sw	Span 300 eep 100 s (601	

Power Spectral Density (802.11n-CH11)

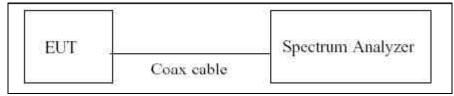
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
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7.4 OUT OF BAND EMISSIONS AT THE BAND EDGE/ CONDUCTED SPURIOUS EMISSIONS Test Requirements and limit, §15.247(d)

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

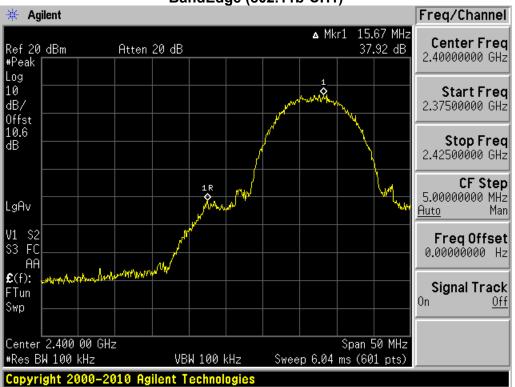
The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

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.

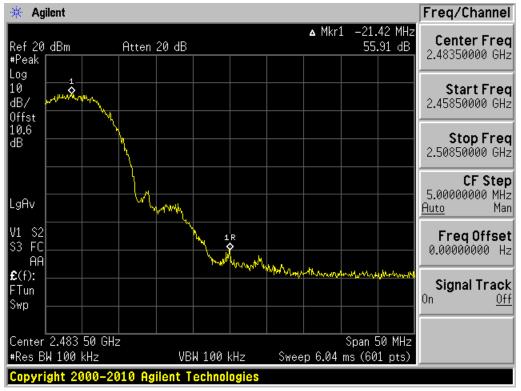
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
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BandEdge (802.11b-CH1)

BandEdge (802.11b-CH11)



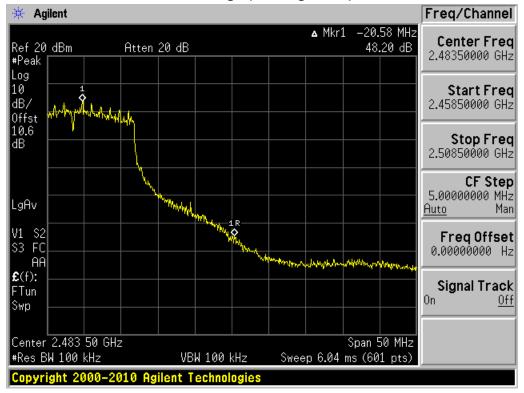
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr		
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Agilent Freq/Channel ** ▲ Mkr1 13.75 MHz **Center Freq** Atten 20 dB 32.23 dB Ref 20 dBm 2.40000000 GHz #Peak Log 10 \$ Start Freq dB/ 2.37500000 GHz In Inderth Offst 10.6 Stop Freq dB 2.42500000 GHz 1 R **CF** Step Υ. 5.00000000 MHz LgAv <u>Auto</u> Man V1 S2 S3 FC Freq Offset 0.0000000 Hz wert downwhite a forth AA **£**(f): Signal Track FTun 0n Off Swp Center 2.400 00 GHz Span 50 MHz #Res BW 100 kHz VBW 100 kHz Sweep 6.04 ms (601 pts) Copyright 2000-2010 Agilent Technologies

BandEdge (802.11g-CH1)

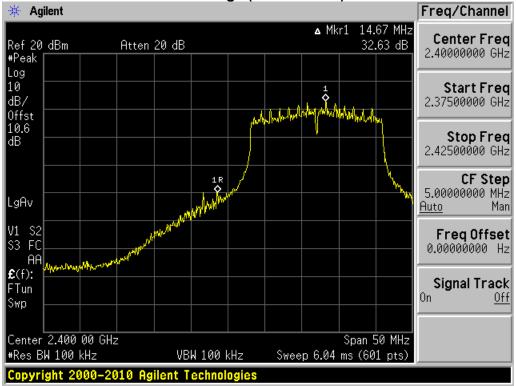
BandEdge (802.11g-CH11)



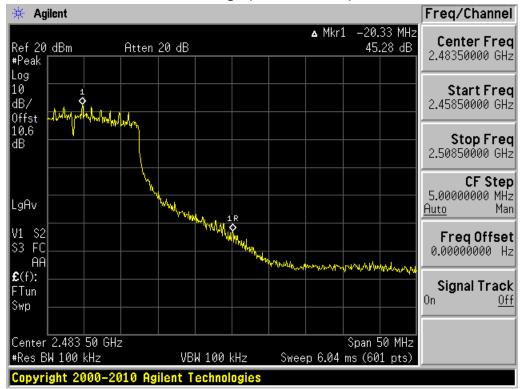
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr		
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BandEdge (802.11n-CH1)



BandEdge (802.11n-CH11)



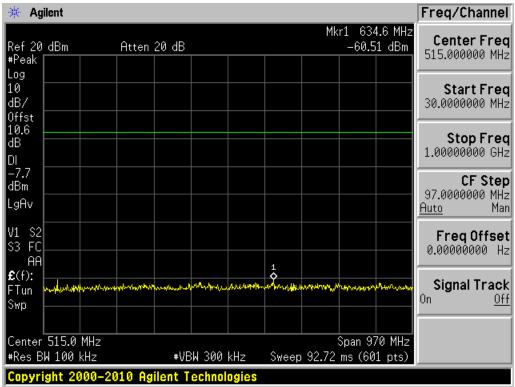
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
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🔆 Agilent			ION (802.11D-CH	Freq/Channel
Ref 20 dBm +Peak	Atten 20 dB		Mkr1 563.5 MH –61.11 dBr	
.og LØ JB/ Dffst				Start Frec 30.0000000 MHz
10.6 HB DI				Stop Fred 1.00000000 GH
-7.1 JBm _gAv				CF Stej 97.0000000 MH <u>Auto</u> Ma
/1 S2 53 FC				Freq Offse 0.00000000 H
C(f): Tun www.www. Swp	atus, Nationaga Aldituska, Ita Nyara Mita	the second se	waarman waaraan ahaa maa	Signal Trac On <u>Of</u>
Center 515.0 MH: #Res BW 100 kHz		W 300 kHz Swee	Span 970 MH 99 92.72 ms (601 pts	

Conducted Spurious Emission (802.11b-CH1)





FCC PT.15.247 TEST REPORT		www.hct.co.kr	
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🖗 Agilent				Freq/Channel
Ref 20 dBm Peak	Atten 20 dB		Mkr1 502.1 -60.69	Contor Eroo
.og .0 IB/)ffst				Start Fred 30.0000000 MH
.0.6 IB)I				Stop Fred 1.00000000 GH
-8.2 JBm .gAv				CF Step 97.0000000 MH <u>Auto</u> Ma
/1 S2 S3 FC				Freq Offse 0.00000000 H
E(f): Tun <mark>nuturinghadadadadadadadadadadadadadadadadadadad</mark>	pergeta per per prise and a list of the person of the Mi	in Superior manage	barretrerondrived and the second mark	On <u>Of</u>
Center 515.0 MHz Res BW 100 kHz		300 kHz Swe	Span 970 92.72 ms (601	

Conducted Spurious Emission (802.11b-CH11)

	Conducted Spurie		502.11g-0111)	
🔆 Agilent				Freq/Channel
Ref 20 dBm #Peak	Atten 20 dB		Mkr1 624.9 MHz -61.29 dBm	Center Freq 515.000000 MHz
Log 10 dB/ Offst				Start Freq 30.0000000 MHz
10.6 dB DI				Stop Freq 1.00000000 GHz
-10.7 dBm LgAv				CF Step 97.0000000 MHz <u>Auto</u> Mar
V1 S2 S3 FC AA				Freq Offset 0.00000000 Hz
Ը (f): FTun <mark>ուՔուխուտերուտ</mark> Տար	Antal State Marian Stranger and American Stranger	h), anni shitiri daraa ka k	Manadalan Katha	Signal Track On <u>Off</u>
Center 515.0 MHz #Res BW 100 kHz	#VBW 300	•	Span 970 MHz 72 ms (601 pts)	

Conducted Spurious Emission (802.11g-CH1)

FCC PT.15.247 TEST REPORT		www.hct.co.kr			
Test Report No.	Date of Issue:	EUT Type:	FCC ID:		
HCTR1109FR14	September 19, 2011	eptember 19, 2011 PCS CDMA Phone with Bluetooth/ WLAN			



🗧 Agilent						Freq/Channel
ef 20 dBm Peak	Atter	1 20 dB		M	kr1 741.3 MHz -61.57 dBm	Center Freq 515.000000 MHz
og Ø IB/ Iffst						Start Frec 30.0000000 MHz
.0.6 IB)I						Stop Fred 1.00000000 GHz
-9.0 IBm gAv						CF Step 97.0000000 MH; <u>Auto</u> Mar
/1 S2 3 FC						Freq Offse 0.00000000 H
(f):	white the state of	nnanananan	hallanga ga da harafa ji	hand the second	nenettana anternetarita p	Signal Tracl
Center 515.0 M Res BW 100 kH		#VBW 30	00 kHz	Sweep 92.72	Span 970 MHz ms (601 pts)	

Conducted Spurious Emission (802.11g-CH6)

	Soliducted Spull			1
🔆 Agilent				Freq/Channel
Ref 20 dBm #Peak	Atten 20 dB		Mkr1 461.6 MHz -61.24 dBm	Center Freq 515.000000 MHz
Log 10 dB/ Offst				Start Freq 30.0000000 MHz
10.6 dB DI				Stop Freq 1.00000000 GHz
-10.8 dBm LgAv				CF Step 97.0000000 MHz <u>Auto</u> Man
V1 S2 S3 FC AA				FreqOffset 0.00000000 Hz
£ (f): FTun <mark>ለለሥታምምምምምምምምምምምምምምምምምምምምምምምምምምምምምምምምምምም</mark>	an handan dan dan dan dan dan dan dan dan da	hander and the second of the s	Mar Mary Carl and Car	Signal Track On <u>Off</u>
Center 515.0 MHz #Res BW 100 kHz	#VBW 30	0 kHz Sweep	Span 970 MHz 92.72 ms (601 pts)	
Copyright 2000-	2010 Agilent Techn	ologies		

Conducted Spurious Emission (802.11g-CH11)

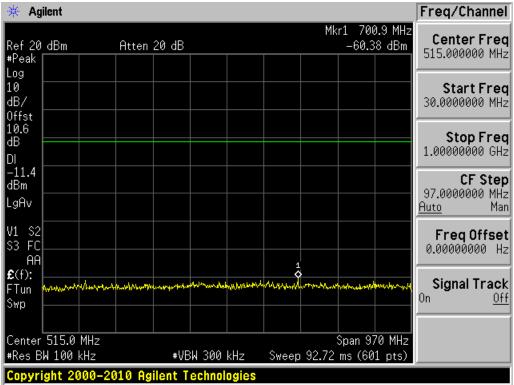
FCC PT.15.247 TEST REPORT		www.hct.co.kr			
Test Report No.	Date of Issue:	EUT Type:	FCC ID:		
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🖗 Agilent				Freq/Channel
Ref 20 dBm Peak	Atten 20 dB		Mkr1 453.6 MHz -61.01 dBm	Center Frec 515.000000 MHz
.og .0 1B/)ffst				Start Frec 30.0000000 MHz
.0.6 HB DI				Stop Fred 1.00000000 GHz
-9.2 JBm .gAv				CF Ster 97.0000000 MH: <u>Auto</u> Ma
/1 S2 53 FC				Freq Offse 0.00000000 H
S(f): Tun Allaharthan Swp	parries we share and the states	haansen filler van de staar de	eymernendhanantyhninannan	Signal Tracl On <u>Of</u>
Center 515.0 MHz Res BW 100 kHz	#VBW 30	00 kHz Sweep	Span 970 MHz 92.72 ms (601 pts)	

Conducted Spurious Emission (802.11n-CH1)

Conducted Spurious Emissio	on (802.11n-CH6)
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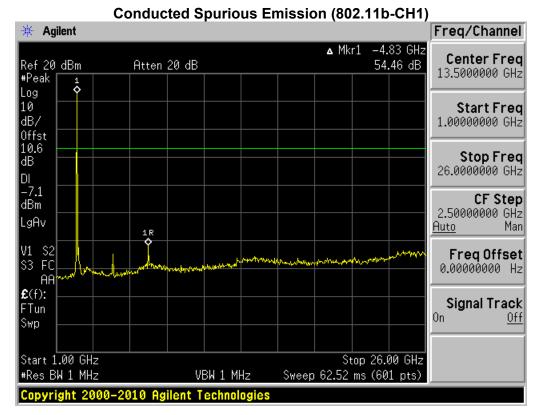
🔆 Agilent				Freq/Channel
Ref 20 dBm #Peak	Atten 20 dB		Mkr1 631.4 MHz -60.65 dBm	Center Freq 515.000000 MHz
Log 10 dB/ Offst				Start Freq 30.0000000 MHz
10.6 dB DI				Stop Freq 1.00000000 GHz
-10.5 dBm LgAv				CF Step 97.0000000 MHz <u>Auto</u> Man
V1 S2 S3 FC AA				FreqOffset 0.00000000 Hz
€(f): FTun Swp	on man of the second		and a second	Signal Track On <u>Off</u>
Center 515.0 MH #Res BW 100 kH		300 kHz Swee	Span 970 MHz 92.72 ms (601 pts)	
Copyright 200	0–2010 Agilent Te	chnologies		

Conducted Spurious Emission (802.11n-CH11)

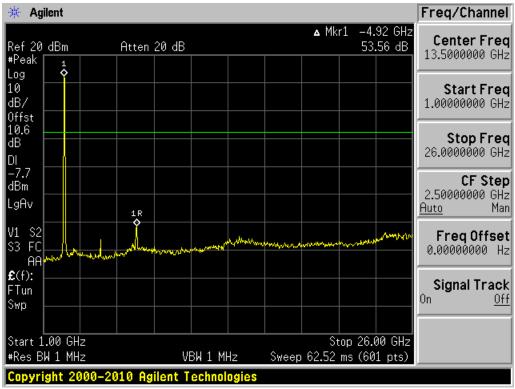
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT	www.hct.co.kr	
Test Report No.	Date of Issue:	EUT Type:	FCC ID:	
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1 GHz ~ 26 GHz

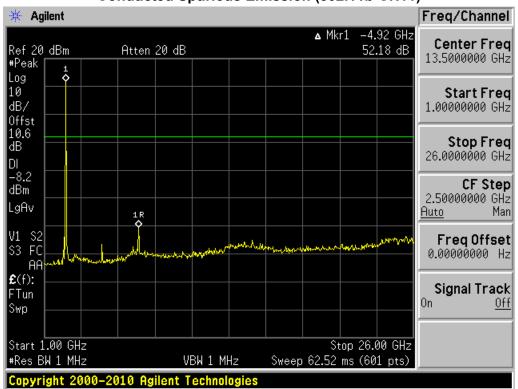




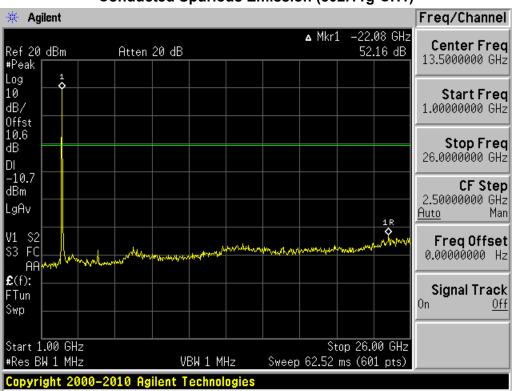


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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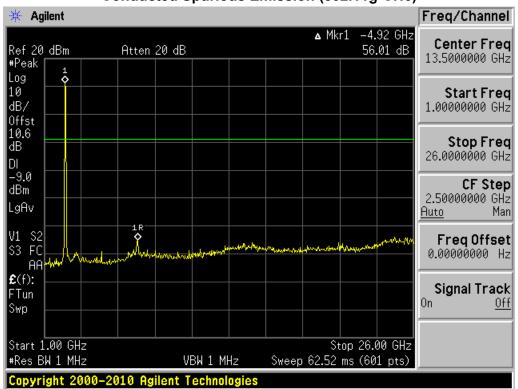
Conducted Spurious Emission (802.11b-CH11)



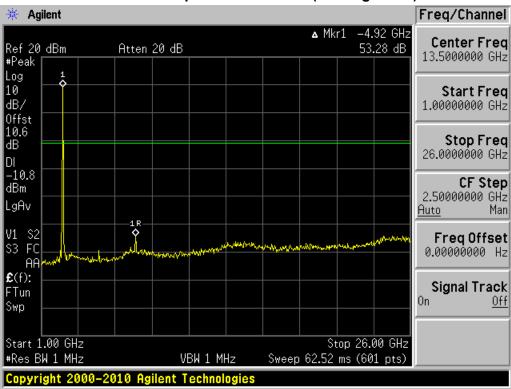
Conducted Spurious Emission (802.11g-CH1)

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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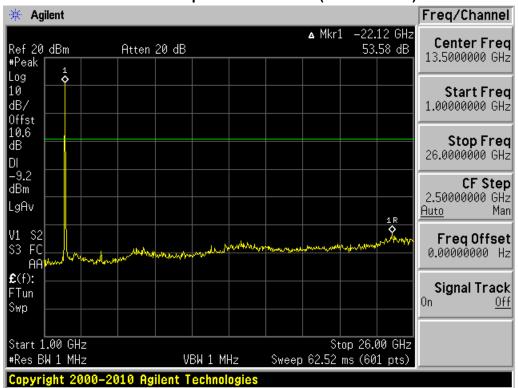
Conducted Spurious Emission (802.11g-CH6)



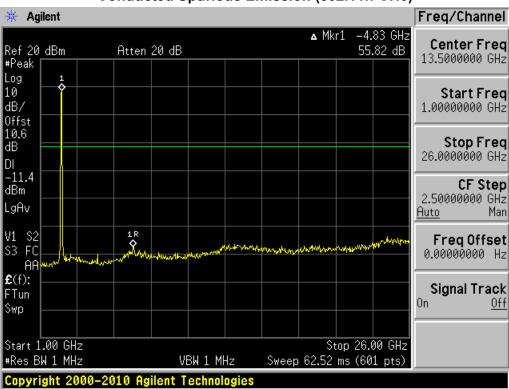
Conducted Spurious Emission (802.11g-CH11)

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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Conducted Spurious Emission (802.11n-CH1)



Conducted Spurious Emission (802.11n-CH6)

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🔆 Agilent				Freq/Channel
Ref 20 dBm #Peak	Atten 20 dB		Mkr1 7.38 GHz -47.32 dBm	Center Frec 13.5000000 GHz
.og LØ JB/ Dffst				Start Fred 1.00000000 GHz
LØ.6 18 DI				Stop Fred 26.0000000 GH2
-10.5 dBm _gAv				CF Step 2.50000000 GH: <u>Auto</u> Ma
V1 S2 S3 FC AAwww	All the second s	Harrington and the second	mmunumunut	Freq Offse 0.00000000 H
E(f): =Tun Swp				Signal Trac l On <u>Of</u>
Start 1.00 GHz +Res BW 1 MHz	VBW 1 N	Hz Sweep 62	Stop 26.00 GHz 2.52 ms (601 pts)	

Conducted Spurious Emission (802.11n-CH11)

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7.5 RADIATED MEASUREMENT. 7.5.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209

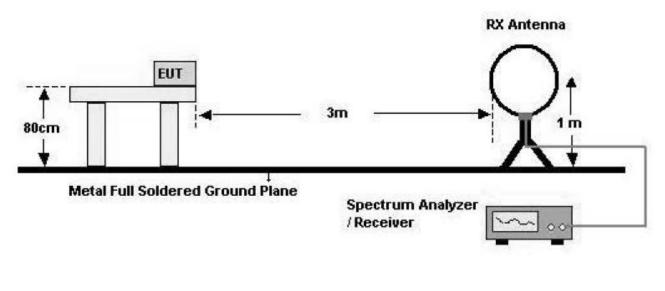
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

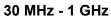
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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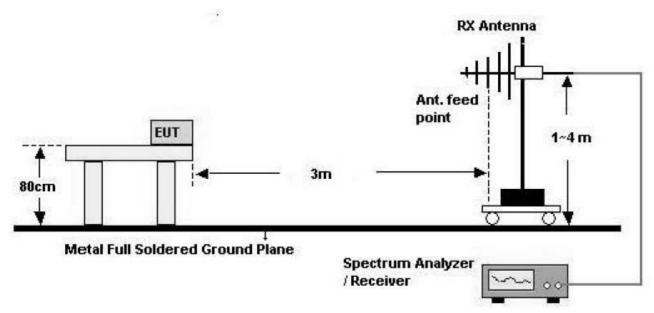


Test Configuration

Below 30 MHz

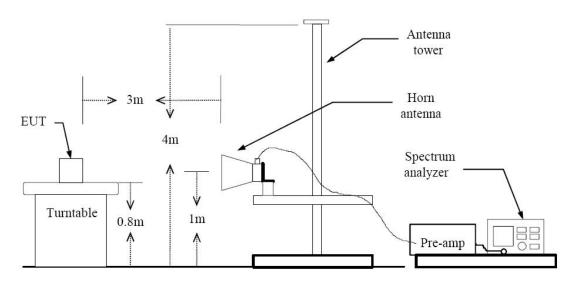






FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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TEST PROCEDURE

- 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.

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$Pore \ 71 \ ef 92$				



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

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Below 1 GHz

Operation Mode: 802.11b Mode (Channel : 1, Data rate : 11 Mbps)

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dΒμN	dB /m	dB	(H/V)	dBµN/m	dBµN/m	dB
40.60	13.1	13.1	0.6	V	26.8	40.0	13.2
77.30	13.8	10.1	0.9	Н	24.8	40.0	15.2
116.70	16.5	10.6	1.1	Н	28.2	43.5	15.3
171.40	13.4	12.5	1.4	V	27.3	43.5	16.2
281.30	15.6	12.7	1.8	Н	30.1	46.0	15.9
436.10	12.5	16.4	2.3	V	31.2	46.0	14.8

- 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.

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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	56.33	-3.81	V	52.52	74	21.48	PK
4824	44.47	-3.81	V	40.66	54	13.34	AV
7236	54.22	5.17	V	59.39	74	14.61	PK
7236	43.18	5.17	V	48.35	54	5.65	AV
4824	55.85	-3.81	Н	52.04	74	21.96	PK
4824	42.95	-3.81	Н	39.14	54	14.86	AV
7236	53.86	5.17	Н	59.03	74	14.97	PK
7236	42.99	5.17	Н	48.16	54	5.84	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.

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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	55.03	-3.72	V	51.31	74	22.69	PK
4874	42.41	-3.72	V	38.69	54	15.31	AV
7311	51.81	5.53	V	57.34	74	16.66	PK
7311	39.08	5.53	V	44.61	54	9.39	AV
4874	54.51	-3.72	Н	50.79	74	23.21	PK
4874	41.92	-3.72	Н	38.20	54	15.80	AV
7311	51.87	5.53	Н	57.40	74	16.60	PK
7311	38.62	5.53	Н	44.15	54	9.85	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.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT				
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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	52.34	-3.58	V	48.76	74	25.24	PK
4924	39.49	-3.58	V	35.91	54	18.09	AV
7386	52.12	6.15	V	58.27	74	15.73	PK
7386	39.05	6.15	V	45.20	54	8.80	AV
4924	53.03	-3.58	Н	49.45	74	24.55	PK
4924	39.12	-3.58	Н	35.54	54	18.46	AV
7386	51.35	6.15	Н	57.50	74	16.50	PK
7386	37.85	6.15	Н	44.00	54	10.00	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.

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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 g
Transfer Rate:	6 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	35.94	33.25	Н	69.19	74	4.81	PK
2390.0	13.81	33.25	Н	47.06	54	6.94	AV
2390.0	34.84	33.25	V	68.09	74	5.91	PK
2390.0	13.48	33.25	V	46.73	54	7.27	AV
2483.5	33.35	33.73	Н	67.08	74	6.92	PK
2483.5	16.29	33.73	Н	50.02	54	3.98	AV
2483.5	31.17	33.73	V	64.90	74	9.10	PK
2483.5	14.66	33.73	V	48.39	54	5.61	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 Mbps in 802.11g.

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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.

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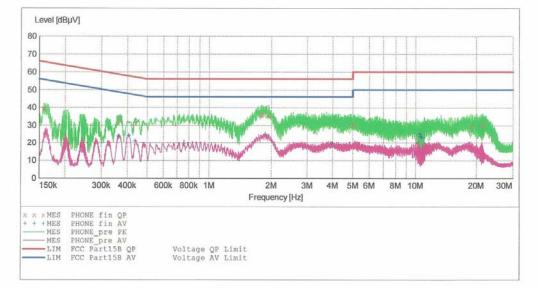


HCT EMC

EUT:	JukeB
Manufacturer:	TCT MOBILE LIMITED
Operating Condition:	WLAN MODE
Test Site:	SHIELD ROOM
Operator:	JS LEE
Test Specification:	FCC PART15 CLASS B
Comment:	H

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

Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency			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"

9/10/2011 3	:33AM					
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.158010	39.30	10.1	66	26.3		
0.369010	32.80	10.1	59	25.7		
0.439010	31.20	10.1	57	25.9		
1.792000	35.70	10.2	56	20.3		
1.816000	36.20	10.2	56	19.8		
1.936000	35.80	10.2	56	20.2		
5.000000	30.40	10.5	56	25.6		
18.828000	29.50	11.8	60	30.5		
21.504000	30.80	11.9	60	29.2		

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MEASUREMENT RESULT: "PHONE_fin AV"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.362010	23.90	10.1	49	24.8		
0.407010	24.30	10.1	48	23.4		
0.437010	21.20	10.1	47	25.9		
0.756000	19.20	10.1	46	26.8		
1.868000	24.80	10.2	46	21.2		
3.988000	19.30	10.4	46	26.7		
10.548000	25.20	11.0	50	24.8		
10.588000	23.70	11.0	50	26.3		
10.752000	23.20	11.0	50	26.8		

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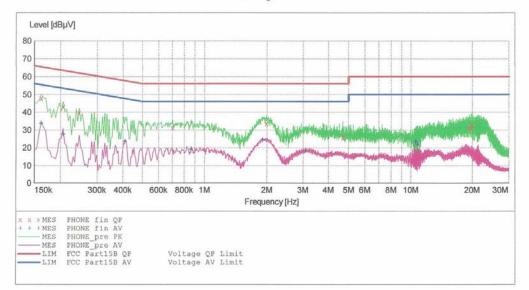


HCT

EMC EUT: JukeB Manufacturer: TCT MOBILE LIMITED Operating Condition: WLAN MODE Test Site: SHIELD ROOM Operator: JS Lee Test Specification: FCC PART15 CLASS B Comment: N

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

Short Desc			FCC PART 15			
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"

9/10/2011	3:22	AM					
Frequen M	cy Hz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.1620	10	47.90	10.3	65	17.5		
0.2060	10	43.30	10.3	63	20.0		
0.2460	10	39.60	10.3	62	22.3		
0.7040	00	31.30	10.4	56	24.7		
1.9920	00	33.60	10.4	56	22.4		
4.6920	00	25.80	10.7	56	30.2		
19.3200	00	31.20	11.7	60	28.8		
19.7360	00	31.10	11.7	60	28.9		
19.9440	00	32.80	11.7	60	27.2		

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MEASUREMENT RESULT: "PHONE_fin AV"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.162010	33.70	10.3	55	21.7		
0.206010	27.60	10.3	53	25.8		
0.410010	23.80	10.3	48	23.9		
0.864000	19.10	10.4	46	26.9		
1.908000	24.30	10.4	46	21.7		
3.084000	18.20	10.5	46	27.8		
10.556000	23.10	11.1	50	26.9		
10.596000	23.80	11.1	50	26.2		
10.760000	21.80	11.1	50	28.2		

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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	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	FSP / 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 Spliter	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-3000C / BLUETOOTH TESTER	Annual	04/01/2012	3000C000276
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	05/02/2012	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/13/2012	9009-2536

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