

HCT CO., LTD.

CERTIFICATE OF COMPLIANCE

FCC Certification

Applicant Name: LG Electronics MobileComm U.S.A., Inc.	Date of Issue: June 15, 2012 Test Site/Location:		
Address: 1000 Sylvan Avenue, Englewood Cliffs NJ 07632	HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon, Icheon-si, Kyunggi-Do, Korea		
	Report No.: HCTR1206FR08		
	HCT FRN: 0005866421		

FCC ID : ZNFL06D

APPLICANT : LG Electronics MobileComm U.S.A., Inc.

FCC Model(s):	L-06D
EUT Type:	PCS GSM/GPRS Phone with Bluetooth, WLAN and NFC(Felica)
Max. RF Output Power:	Wi-Fi 802.11b (21.51 dBm) / Wi-Fi 802.11g (20.72 dBm) / Wi-Fi 802.11n (2.4 GHz) (19.40 dBm) / Wi-Fi 802.11a (5.8 GHz) (20.13 dBm)/ Wi-Fi 802.11n (5.8 GHz) (19.60 dBm)
Frequency Range:	2412 MHz - 2462 MHz (2.4 GHz Band)
	5745 MHz - 5825 MHz (5.8 GHz Band)
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)

Jong Seok (

Report prepared by : Jong Seok Lee

Test engineer of RF Team

Approved by

: Chang Seok Choi Manager of RF Team

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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1206FR08	June 15, 2012	- First Approval Report

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EUT Type: Model name(s):	PCS GSM/GPRS Phone with Bluetooth, WLAN and NFC(Felica) L-06D
Date(s) of Tests:	May 08, 2012 ~ June 14, 2012
Contact person:	Name: Youn Jin Cho Phone #: +82-2-2033-1328
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 GSM/GPRS Phone with Bluetooth, WLAN and NFC(Felica)			
FCC Model Name	L-06D	L-06D		
Power Supply	DC 3.7 V	DC 3.7 V		
Battery type	Li-ion Battery(Standard)			
Frequency Range	TX: 2412 MHz ~ 2462 MHz, 5745 MHz – 5825 MHz			
	RX: 2412 MHz ~ 2462 MHz, 5745 MHz – 5825 MHz			
Max. RF Output Power:	Peak	Wi-Fi 802.11b (21.51 dBm) / Wi-Fi 802.11g (20.72 dBm) Wi-Fi 802.11n (2.4 GHz) (19.40 dBm) / Wi-Fi 802.11a (5.8 GHz) (20.13 dBm)/ Wi-Fi 802.11n (5.8 GHz) (19.60 dBm)		
	Average	Wi-Fi 802.11b (14.88 dBm) / Wi-Fi 802.11g (11.63 dBm) / Wi-Fi 802.11n (2.4 GHz) (10.32 dBm) / Wi-Fi 802.11a (5.8 GHz) (11.00 dBm)/ Wi-Fi 802.11n (5.8 GHz) (9.96 dBm)		
Modulation Type	DSSS/CCK(802.11b), OFDM(802.11a, 802.11g, 802.11n)			
Antenna Specification	Manufacturer: Mobitech			
	Antenna type: Built-in Antenna			
	Peak Gai	n : -0.85 dBi (2.4 GHz Band), -2.04 dBi (5.8 GHz Band)		

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3. TEST METHODOLOGY

The measurement procedure described in the American National Standard for Testing Unlicensed Wireless Devices(ANSI C63.10-2009) and FCC KDB 558074 D01 DTS Meas Guidance V01 dated January 18, 2012 entitled "Guidance for Performing Compliance Measurements on Digital Transmission Systems(DTS) Operating Under §15.247" were used in the measurement.

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 6.2 of ANSI C63.10. (Version :2009) 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 6.3 of ANSI C63.10. (Version: 2009).

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. SUMMARY TEST OF RESULTS

Test Description	FCC Part Section(s)	Test Limit	Test Condition	Test Result
6 dB Bandwidth	§15.247(a)(2)	> 500 kHz		PASS
Conducted Maximum Peak Output Power	§15.247(b)(3)	< 1 Watt		PASS
Power Spectral Density	§15.247(e)	< 8 dBm / 3 kHz Band	CONDUCTED	PASS
Band Edge(Out of Band Emissions)	§15.247(d)	Conducted < 20 dBc		PASS
AC Power line Conducted Emissions	§15.207	cf. Section 8.6		PASS
Radiated Spurious Emissions	§15.205, 15.209	cf. Section 8.5.1	RADIATED	PASS
Radiated Restricted Band Edge	§15.247(d), 15.205, 15.209	cf. Section 8.5.2	RADIATED	PASS

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8. TEST RESULT

8.1 6 dB BANDWIDTH MEASUREMENT (802.11a/b/g/n)

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

The bandwidth at 6 dB 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 6 dB bandwidth is 500 kHz.

TEST CONFIGURATION

TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer. The Spectrum Analyzer is set to RBW = 1 – 5 % of the EBW VBW = 3 * RBW SPAN = 40 MHz Detector = Peak Trace mode = max hold Sweep = auto couple

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802.11b Mo	ode	Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
2412	1	7.889	0.500	Pass
2437	6	7.638	0.500	Pass
2462	11	7.807	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11b

Conducted 6 dB Bandwidth Measurements for 802.11g

802.11g Mo	ode	Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
2412	1	15.920	0.500	Pass
2437	6	16.140	0.500	Pass
2462	11	15.920	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n(2.4 GHz Band)

802.11n Mo	ode	Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
2412	1	17.340	0.500	Pass
2437	6	17.370	0.500	Pass
2462	11	17.400	0.500	Pass

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802.11a Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Frequency [MHz]	[MHz]	[MHz]	Pass / Fail
5745	149	16.078	0.5	Pass
5785	157	16.221	0.5	Pass
5825	165	16.016	0.5	Pass

Conducted 6 dB Bandwidth Measurements for 802.11a

Conducted 6 dB Bandwidth Measurements for 802.11n(5.8 GHz Band)

802.11n Mc	ode	Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.368	0.5	Pass
5785	157	17.361	0.5	Pass
5825	165	17.475	0.5	Pass

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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 (802.11b-CH 11)



6dB Bandwidth plot (802.11g-CH 1)



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m Analyzer - Occupied BW 08:34:31 PM May 31, 2012 Radio Std: None Center Freq: 2.437000000 GHz Trig: Free Run Avg[Held>1/1 #IFGaincLow #Atten: 20 dB Sweep/Control Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto 0 dB/di 00 Sweep Setup > Pause Si Charles Span 40 MHz Sweep 1 ms Center 2.437 GHz #Res BW 430 kHz #VBW 1.3 MHz Occupied Bandwidth **Total Power** 19.8 dBm Gate, [Off, LO] 16.614 MHz 29.257 kHz **OBW Power** Transmit Freq Error 99.00 % Points x dB Bandwidth 16.14 MHz x dB -6.00 dB 1001 Co STATUS

6dB Bandwidth plot (802.11g-CH 6)





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NF 50.9 AC	Cen	ter Freq: 2.412000000 GH	ALIGNAUTO Z ald>1/1	Radio Std: None	Sweep/Control
	riFGain:Low SAtt	en: 20 dB	122.00	Radio Device: BTS	Sweep Time
Ref Offset 10.5 dB					Auto Mar
0.00 0.00	maninerration	monum			Sweep Setup
22.0					Paus
200 400			2404	Vorlandunghan	
mo					
Center 2.412 GHz Res BW 430 kHz		#VBW 1.3 MHz		Span 40 MHz Sweep 1 ms	
Occupied Bandwidth 17	635 MHz	Total Power	18,	5 dBm	Gate [Off, LO]
Transmit Freq Error x dB Bandwidth	8.043 kHz 17.34 MHz	OBW Power x dB		9.00 % .00 dB	Point 100
50			Enstatu		

6dB Bandwidth plot (802.11n-CH 1)





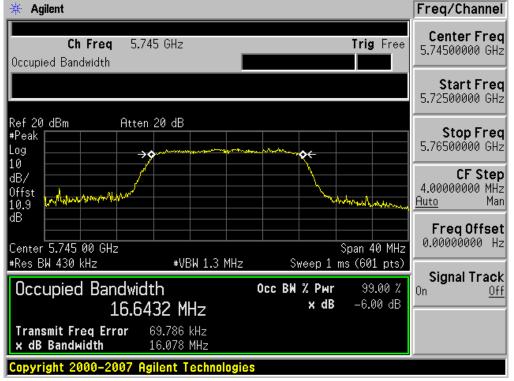
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6dB Bandwidth plot (802.11n-CH 11) m Analyzer - Occupie DE 39:11 PM May 31, 2012 Radio Std: None Center Freq: 2.462000000 GHz Trig: Free Run Avg|Hold #IFGain:Low #Atten: 20 dB Sweep/Control Avg|Hold: 1/1 Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto 0 dB/di 00 Sweep Setup > Pause 100 Center 2.462 GHz #Res BW 430 kHz Span 40 MHz Sweep 1 ms #VBW 1.3 MHz Occupied Bandwidth Total Power 18.5 dBm Gate [Off, LO] 17.618 MHz 21.889 kHz Transmit Freq Error **OBW Power** 99.00 % Points x dB Bandwidth 17.40 MHz x dB -6.00 dB 1001



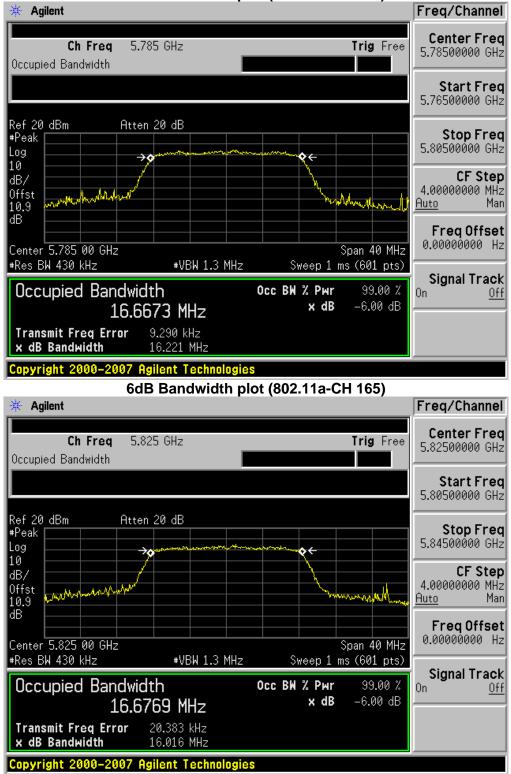
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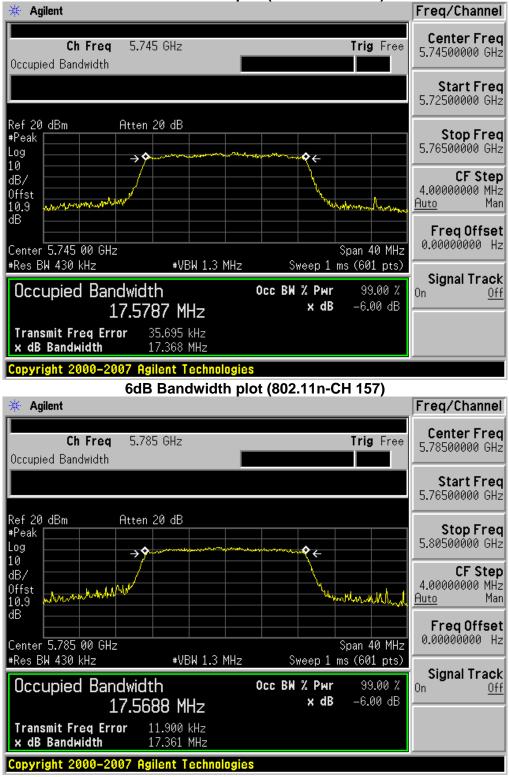




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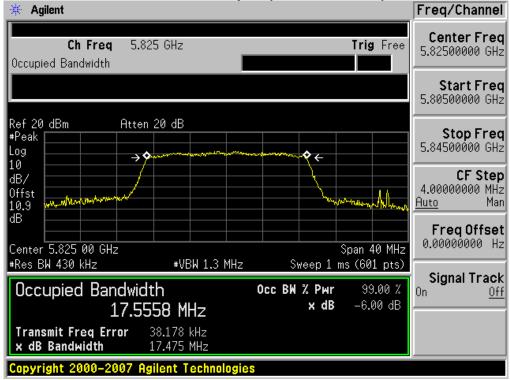
6dB Bandwidth plot (802.11n-CH 149)



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8.2 OUTPUT POWER MEASUREMENT (802.11a/b/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

N I I I

The transmitter output is connected to the Spectrum Analyzer. We use the spectrum analyzer's integrated band power measurement function. We tested according to KDB 558074(issued 1/18/2012).

This EUT TX condition is actual operating mode(not near 100 % duty cycle) by WLAN test program.

The Spectrum Analyzer is set to

Peak Power(Measurement Procedure PK2 in KDB 558074)

RBW = 1 MHz

VBW = 3 MHz

SPAN = 5 - 30 % greater than the EBW

Detector Mode = Peak

Integrated bandwidth = EBW

Sweep = auto couple

Trace Mode = max hold

• Average Power(Measurement Procedure AVG2 in KDB 558074)

RBW = 1 MHz

VBW = 3 MHz

SPAN = 5 - 30 % greater than the EBW

Detector Mode = power averaging(RMS) or sample

Integrated bandwidth = EBW

Sweep = auto couple

Sweep Point = 1001 (2.4 GHz) /601 (5.8 GHz)

Trace average at least 100 traces in power averaging(RMS) mode

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Sample Calculation

Output Power = Reading Value + ATT loss + Cable loss(1 ea)

= 10 dBm + 10 dB + 0.8 dB = 20.8 dBm

Note :

- 1. Spectrum reading values are not plot data. The power results in plot is already including the actual values of loss for the attenuator and cable combination.
- 2. Spectrum offset = Attenuator loss + Cable loss
- 3. We apply to the offset in the 2.4 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is 10.49 dB at 2412 MHz and is 10.52 dB at 2462 MHz. So, the offset is 10.5 dB. And the offset gap in the 2.4 GHz range do not affect the conducted output power final result.
- We apply to the offset in the 5.8 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is 10.91 dB at 5745 MHz, 10.94 dB at 5785 MHz and 5825 MHz.

TEST RESULTS-Peak

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		1 Mbps	17.80	30
2412	1	2 Mbps	18.03	30
2412	I	5.5 Mbps	19.75	30
		11 Mbps	21.36	30
		1 Mbps	17.73	30
0407	C	2 Mbps	18.13	30
2437	6	5.5 Mbps	19.84	30
		11 Mbps	21.51	30
		1 Mbps	17.64	30
2462	44	2 Mbps	18.01	30
2462	11	5.5 Mbps	19.61	30
		11 Mbps	21.42	30

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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	19.84	30
		9 Mbps	19.83	30
		12 Mbps	20.22	30
0440	4	18 Mbps	20.02	30
2412	1	24 Mbps	20.44	30
		36 Mbps	20.48	30
		48 Mbps	20.42	30
		54 Mbps	20.49	30
		6 Mbps	19.82	30
		9 Mbps	19.85	30
		12 Mbps	20.14	30
0.407		18 Mbps	20.17	30
2437	0	6 24 Mbps	20.47	30
		36 Mbps	20.54	30
		48 Mbps	20.61	30
		54 Mbps	20.72	30
		6 Mbps	19.80	30
		9 Mbps	19.73	30
		12 Mbps	20.11	30
2462		18 Mbps	20.18	30
2402	11	24 Mbps	20.44	30
		36 Mbps	20.43	30
		48 Mbps	20.37	30
		54 Mbps	20.50	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	18.61	30
		13 Mbps	19.15	30
		19.5 Mbps	18.81	30
0440		26 Mbps	19.25	30
2412	1	39 Mbps	19.24	30
		52 Mbps	19.14	30
		58.5 Mbps	19.40	30
		65 Mbps	19.39	30
		6.5 Mbps	18.62	30
	6	13 Mbps	18.98	30
		19.5 Mbps	18.92	30
0.407		26 Mbps	19.33	30
2437		39 Mbps	19.40	30
		52 Mbps	19.39	30
		58.5 Mbps	19.39	30
		65 Mbps	19.31	30
		6.5 Mbps	18.52	30
		13 Mbps	18.84	30
		19.5 Mbps	18.92	30
2462	44	26 Mbps	19.21	30
2462	11	39 Mbps	19.19	30
		52 Mbps	19.24	30
		58.5 Mbps	19.31	30
		65 Mbps	19.18	30

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Conducted Output Power Measurements (802.11a Mode: 5745~5825)

802.11a Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		6 Mbps	19.15	30
		9 Mbps	19.21	30
		12 Mbps	19.55	30
6746	149	18 Mbps	19.38	30
5745	149	24 Mbps	19.81	30
		36 Mbps	19.87	30
		48 Mbps	19.96	30
		54 Mbps	19.91	30
		6 Mbps	19.18	30
	157	9 Mbps	19.26	30
		12 Mbps	19.70	30
5785		18 Mbps	19.65	30
5765		24 Mbps	19.91	30
		36 Mbps	20.05	30
		48 Mbps	19.94	30
		54 Mbps	20.13	30
		6 Mbps	19.28	30
		9 Mbps	19.25	30
		12 Mbps	19.74	30
5825	165	18 Mbps	19.60	30
J072	105	24 Mbps	19.98	30
		36 Mbps	19.93	30
		48 Mbps	19.93	30
		54 Mbps	19.92	30

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Conducted Output Power Measurements (802.11n Mode: 5745~5825)

802.11n Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		6.5 Mbps	18.44	30
		13 Mbps	18.84	30
		19.5 Mbps	18.67	30
5745	110	26 Mbps	18.98	30
5745	149	39 Mbps	19.08	30
		52 Mbps	19.11	30
		58.5 Mbps	19.11	30
		65 Mbps	19.19	30
		6.5 Mbps	18.28	30
	157	13 Mbps	18.74	30
		19.5 Mbps	18.64	30
5785		26 Mbps	18.90	30
5765		39 Mbps	19.00	30
		52 Mbps	18.96	30
		58.5 Mbps	19.21	30
		65 Mbps	19.04	30
		6.5 Mbps	18.18	30
		13 Mbps	18.64	30
		19.5 Mbps	18.55	30
5825	165	26 Mbps	19.32	30
3023	105	39 Mbps	19.46	30
		52 Mbps	19.42	30
		58.5 Mbps	19.55	30
		65 Mbps	19.60	30

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802.11b Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		1 Mbps	14.66	30
2412	4	2 Mbps	14.68	30
2412	1	5.5 Mbps	14.85	30
		11 Mbps	14.52	30
	6	1 Mbps	14.73	30
0407		2 Mbps	14.76	30
2437		5.5 Mbps	14.88	30
		11 Mbps	14.64	30
		1 Mbps	14.65	30
2462		2 Mbps	14.61	30
	11	5.5 Mbps	14.72	30
		11 Mbps	14.53	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	11.58	30
		9 Mbps	11.44	30
		12 Mbps	11.37	30
0.440		18 Mbps	11.19	30
2412	1	24 Mbps	10.97	30
		36 Mbps	10.68	30
		48 Mbps	10.43	30
		54 Mbps	10.25	30
		6 Mbps	11.63	30
	6	9 Mbps	11.50	30
		12 Mbps	11.38	30
0.407		18 Mbps	11.26	30
2437		24 Mbps	11.01	30
		36 Mbps	10.66	30
		48 Mbps	10.36	30
		54 Mbps	10.24	30
		6 Mbps	11.55	30
		9 Mbps	11.45	30
		12 Mbps	11.32	30
2462	11	18 Mbps	11.18	30
2462	11	24 Mbps	10.84	30
		36 Mbps	10.56	30
		48 Mbps	10.27	30
		54 Mbps	10.15	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	10.32	30
		13 Mbps	10.01	30
		19.5 Mbps	9.70	30
0440		26 Mbps	9.54	30
2412	1	39 Mbps	9.26	30
		52 Mbps	9.00	30
		58.5 Mbps	8.83	30
		65 Mbps	8.72	30
		6.5 Mbps	10.22	30
	6	13 Mbps	10.02	30
		19.5 Mbps	9.92	30
0.407		26 Mbps	9.66	30
2437		39 Mbps	9.40	30
		52 Mbps	9.10	30
		58.5 Mbps	9.02	30
		65 Mbps	8.82	30
		6.5 Mbps	10.25	30
		13 Mbps	10.00	30
		19.5 Mbps	9.76	30
2462	44	26 Mbps	9.72	30
2462	11	39 Mbps	9.27	30
		52 Mbps	9.12	30
		58.5 Mbps	8.92	30
		65 Mbps	9.26	30

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Conducted Output Power Measurements (802.11a Mode: 5745~5825)

802.11a	Mode	Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
		6 Mbps	11.00	30
5745		9 Mbps	10.88	30
		12 Mbps	10.85	30
	110	18 Mbps	10.65	30
5745	149	24 Mbps	10.50	30
		36 Mbps	10.19	30
		48 Mbps	9.88	30
		54 Mbps	9.76	30
		6 Mbps	10.94	30
	157	9 Mbps	10.90	30
		12 Mbps	10.77	30
5785		18 Mbps	10.56	30
5765		24 Mbps	10.34	30
		36 Mbps	10.12	30
		48 Mbps	9.82	30
		54 Mbps	9.72	30
		6 Mbps	10.90	30
		9 Mbps	10.90	30
		12 Mbps	10.79	30
5825	165	18 Mbps	10.60	30
JOZJ	105	24 Mbps	10.51	30
		36 Mbps	10.20	30
		48 Mbps	9.95	30
		54 Mbps	9.83	30

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Conducted Output Power Measurements (802.11n Mode: 5745~5825)

802.11n	Mode	Rate	Measured	Limit			
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)			
		6.5 Mbps	9.96	30			
		13 Mbps	9.76	30			
		19.5 Mbps	9.53	30			
	110	26 Mbps 9.32	9.32	30			
5745	149	39 Mbps	9.04	30			
		52 Mbps	8.82	30			
		58.5 Mbps	8.67	30 30 30 30 30 30			
		65 Mbps	8.61	30			
		6.5 Mbps	9.78	30			
	157	13 Mbps	9.63	30			
		19.5 Mbps	9.42	30			
5785		26 Mbps	9.26	30			
5765		39 Mbps	9.06	30			
		52 Mbps	8.78	30			
		58.5 Mbps	8.67	30			
		65 Mbps	8.59	30			
		6.5 Mbps	9.89	30			
		13 Mbps	9.78	30			
		19.5 Mbps	9.55	30			
5825	165	26 Mbps	9.29	30			
J02J	COI	39 Mbps	8.99	30			
		52 Mbps	8.74	30			
		58.5 Mbps	8.60	30			
		65 Mbps	8.51	30			

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RESULT PLOTS-Peak





Conducted Output Power (802.11b-CH 1) 2Mbps



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	8 50.9 AC	Cente Trig: F	r Freq: 2.412000000 GH	ALIGNAUTO 2 24: 101	Radio Std: None	Sweep/Control
	#IF	Gain:Low SAtten	: 20 dB		Radio Device: BTS	Sweep Time
0 dB/div	Ref Offset 10.5 dB Ref 20.00 dBm					1.00 mi Auto Mar
10.0 10.0				-		Sweep Setup
00						
0.0						Paus
6.0						
8.6 8.0						
n.o						
Center 2.412 Res BW 11		#	VBW 3 MHz		Span 17.04 MHz Sweep 1 ms	
Channel			Power Spec			Gate [Off, LO]
19	.75 dBm /1	3.11 MHZ	-51.4	3 dBm	/Hz	Point 100
10				Lostatu	5	

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

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



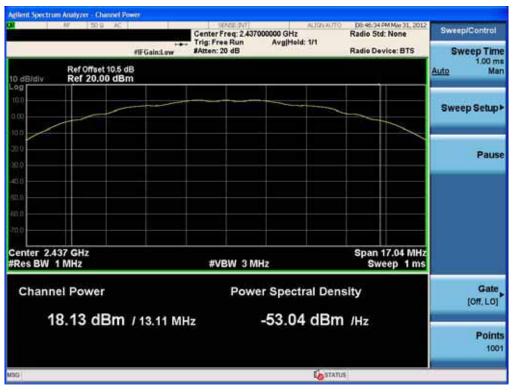
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Spectrum Analyzer - Channel Power 08:46:06 PM May 31, 2012 Radio Std: None Center Freq: 2.437000000 GHz Trig: Free Run Avg|Hold: 1/1 Sweep/Control Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto 0 dB/di 00 Sweep Setup> Pause Span 17.04 MHz Sweep 1 ms Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] -53.44 dBm /Hz 17.73 dBm / 13.11 MHz Points 1001 Co STATUS

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

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



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l If	50.9 AC		Freq: 2.437000000 GH	ALIONAUTO tz Iold: 1/1	Radio Std: None	Sweep/Control
	eIF	iain:Low #Atten	20 dB	010:1/1	Radio Device: BTS	Sweep Time
0 dB/div Re	f 20.00 dBm					1.00 mi Auto Mar
10.0						Sweep Setup
0.0						
20						Pause
2.0						
0.0						
8.0						
enter 2.437 G Res BW 1 MH		#	VBW 3 MHz	1	Span 17.04 MHz Sweep 1 ms	
Channel P			Power Spe			Gate [Off, LO]
19.8	4 dBm / 1	3.11 MHz	-51.3	34 dBm	/Hz	Point: 100
6				Lo statu	5	20

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

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



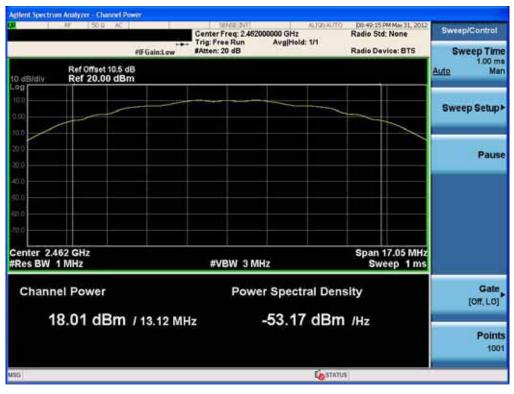
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0	NF 509 K	_	Center Freq: 2.462000	ALIGNAUTO 000 GHz Avg[Hold: 1/1	DE-49-40 PM May 31, 2012 Radio Std: None	Sweep/Control
		#IFGain:Low	#Atten: 20 dB		Radio Device: BTS	Sweep Time 1.00 mi
0 dB/div	Ref Offset 10.5 d Ref 20.00 dBr	B n				Auto Man
10.0						Sweep Setup
0.00					\sim	
0.0						Paus
100 100						
0.0						
10.0						
Center 2.46 Res BW 1			#VBW 3 MHz		Span 17.05 MHz Sweep 1 ms	
	Power			Spectral Dens		Gate [Off, LO]
1/	7.64 dBm	7 13.12 M	Hz -	53.54 dBm	/H2	Point 100
56				(ostatu	ę –	

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

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



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N	50.9 AC		Center Freq: 2.452000000 GHz Trig: Free Run Avg Hold		ALIGNAUTO	DE-49-48 PM May 31, 2012 Radio Std: None		Sweep/Control	
		rig: Free Run Avg Hold: 1/1 Atten: 20 dB			Radio Device: BTS		Sweep Time		
dBldiv R	Ref Offset 10.5 dB Ref 20.00 dBm							1.00 mi Auto Mar	
2.0								Sweep S	etup
10									Paus
10									
10									
10									
enter 2.462 (tes BW 1 M			#VBW 3 M	łz		Span 1 Swe	7.05 MHz ep 1 ms		
Channel Power 19.61 dBm / 13.12 MHz			Power Spectral Density -51.56 dBm /Hz					Gate 1, LO]	
19.0		13.12 MHz		-51.56	авт	/HZ		1	Point 100
5					Costatus	1		2	

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

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



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ectrum Analyzer - Channel Pow 09-01-18 PM May 31, 2012 Radio Std: None Center Freq: 2.412000000 GHz Trig: Free Run Avg|Hold: 1/1 Sweep/Control Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Center 2.412 GHz #Res BW 1 MHz Span 21.58 MHz Sweep 1 ms #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] -52.36 dBm /Hz 19.84 dBm / 16.6 MHz Points 1001 Co STATUS

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



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Conducted Output Power (802.11g-CH 1) 24Mbps

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



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Spectrum Analyzer - Channel Po 09:04:36 PM May 31, 2012 Radio Std: None Center Freq: 2.412000000 GHz Trig: Free Run Avg|Hold #IFGain:Low #Atten: 20 dB Sweep/Control Avg|Hold: 1/1 Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Center 2.412 GHz #Res BW 1 MHz Span 21.58 MHz Sweep 1 ms #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] 20.42 dBm / 16.6 MHz -51.78 dBm /Hz Points 1001 Lo STATUS

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

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



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ectrum Analyzer - Channel Por 09:05:36 PM May 31, 2012 Radio Std: None Center Freq: 2.437000000 GHz Trig: Free Run Avg|Hold #IFGain:Low #Atten: 20 dB Sweep/Control Avg|Hold: 1/1 Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Span 21.6 MHz Sweep 1 ms Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] 19.82 dBm / 16.61 MHz -52.38 dBm /Hz Points 1001 Co STATUS

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

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



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Conducted Output Power (802.11g-CH 6) 12Mbps

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



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

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



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Spectrum Analyzer - Channel Po 09-10-25 PM May 31, 2012 Radio Std: None Center Freq: 2.437000000 GHz Trig: Free Run Avg|Hold #IFGain:Low #Atten: 20 dB Sweep/Control Avg|Hold>1/1 Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Span 21.6 MHz Sweep 1 ms Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] 20.61 dBm / 16.61 MHz -51.60 dBm /Hz Points 1001 Lo STATUS

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

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



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Spectrum Analyzer - Channel Po 09:11:59 PM May 31, 2012 Radio Std: None Center Freq: 2.462000000 GHz Trig: Free Run Avg|Hold #IFGain:Low #Atten: 20 dB Sweep/Control Avg|Hold: 1/1 Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Span 21.59 MHz Sweep 1 ms Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] 19.80 dBm / 16.61 MHz -52.40 dBm /Hz Points 1001 Lo STATUS

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

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



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Spectrum Analyzer - Channel Pow 09-13-03 PM May 31, 2012 Radio Std: None Center Freq: 2.462000000 GHz Trig: Free Run Avg[Held: 1/1 #Atten: 20 dB Sweep/Control Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Span 21.59 MHz Sweep 1 ms Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] 20.11 dBm / 16.61 MHz -52.09 dBm /Hz Points 1001 Co STATUS

Conducted Output Power (802.11g-CH 11) 12Mbps

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



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Spectrum Analyzer - Channel Por 09:14:13 PM May 31, 2012 Radio Std: None Center Freq: 2.462000000 GHz Trig: Free Run Avg[Held: 1/1 #Atten: 20 dB Sweep/Control Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Span 21.59 MHz Sweep 1 ms Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] 20.44 dBm / 16.61 MHz -51.76 dBm /Hz Points 1001 Co STATUS

Conducted Output Power (802.11g-CH 11) 24Mbps

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



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Spectrum Analyzer - Channel Por 09:15:16 PM May 31, 2012 Radio Std: None Center Freq: 2.462000000 GHz Trig: Free Run Avg[Held: 1/1 #Atten: 20 dB Sweep/Control Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Span 21.59 MHz Sweep 1 ms Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] -51.84 dBm /Hz 20.37 dBm / 16.61 MHz Points 1001 Co STATUS

Conducted Output Power (802.11g-CH 11) 48Mbps

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



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Conducted Output Power (802.11n-CH 1) 6.5Mbps

Conducted Output Power (802.11n-CH 1) 13Mbps



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Conducted Output Power (802.11n-CH 1) 19.5Mbps

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



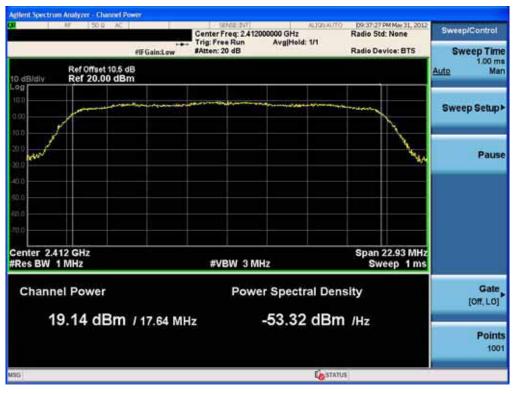
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Conducted Output Power (802.11n-CH 1) 39Mbps

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



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Conducted Output Power (802.11n-CH 1) 58.5Mbps

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



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

Conducted Output Power (802.11n-CH 6) 13Mbps



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

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



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Conducted Output Power (802.11n-CH 6) 39Mbps

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



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Conducted Output Power (802.11n-CH 6) 58.5Mbps

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



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Conducted Output Power (802.11n-CH 11) 6.5Mbps

Conducted Output Power (802.11n-CH 11) 13Mbps



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Spectrum Analyzer - Channel Po 09:51:51 PM May 31, 2012 Radio Std: None Center Freq: 2.462000000 GHz Trig: Free Run Avg|Hold #IFGain:Low #Atten: 20 dB Sweep/Control Avg|Hold: 1/1 Radio Device: BTS Sweep Time 1.00 ms Man Ref Offset 10.5 dB Ref 20.00 dBm Auto Sweep Setup> Pause Span 22.9 MHz Sweep 1 ms Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Gate, **Channel Power Power Spectral Density** [Off, LO] -53.54 dBm /Hz 18.92 dBm / 17.62 MHz Points 1001 Co STATUS

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

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



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

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



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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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