

HCT CO., LTD.

CERTIFICATE OF COMPLIANCE

FCC Certification

Applicant Name:

SAMSUNG Electronics Co., Ltd.

Date of Issue:

January 02, 2013

Test Site/Location:

HCT CO., LTD., 74, Seoicheon-ro 578beon-gil, Majang-myeo, Icheon-si, Gyeonggi-do, Korea

Address:

129, Samsung-ro, Yeongtong-gu Suwon-si,
Gyeonggi-do, 443-742 Rep. of Korea

Report No.: HCTR1312FR20-1

HCT FRN: 0005866421

FCC ID : A3LWEA303I

APPLICANT : SAMSUNG Electronics Co., Ltd.

FCC Model(s):

WEA303e

EUT Type:

WLAN Access Point

Max. RF Output Power:

Port	Antenna	Mode	Peak (dBm)	Average (dBm)
Monitoring	Ant.1	802.11b	8.45	5.82
		802.11g	17.88	6.63
		802.11n(2.4 GHz)	16.97	5.99
		802.11a	15.60	5.57
		802.11n(5.8 GHz) HT20	15.77	5.54
		802.11n(5.8 GHz) HT40	13.60	2.23
	Ant.2	802.11b	8.67	5.97
		802.11g	17.89	6.92
		802.11n(2.4 GHz)	17.41	6.34
		802.11a	15.92	5.70
		802.11n(5.8 GHz) HT20	16.49	5.57
Service	Ant.1	802.11b	11.02	8.05
		802.11g	16.50	4.71
		802.11n(2.4 GHz)	16.93	5.21
		802.11a	13.81	2.08
		802.11n(5.8 GHz) HT20	13.33	1.98
		802.11n(5.8 GHz) HT40	13.28	0.60
	Ant.2	802.11b	11.48	8.46
		802.11g	17.16	5.17
		802.11n(2.4 GHz)	17.49	5.52
		802.11a	15.23	3.77
		802.11n(5.8 GHz) HT20	14.79	3.45
		802.11n(5.8 GHz) HT40	13.82	1.74
	Ant.3	802.11b	11.51	8.60
		802.11g	16.74	5.29
		802.11n(2.4 GHz)	17.00	5.53
		802.11a	17.07	5.31
		802.11n(5.8 GHz) HT20	16.90	5.27
		802.11n(5.8 GHz) HT40	17.29	4.99



Frequency Range: 2412 MHz - 2462 MHz (2.4 GHz Band)
5745 MHz - 5825 MHz (5.8 GHz Band)_20 MHz BW, 5755 MHz - 5795 MHz (5.8 GHz Band)_40 MHz BW

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
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Test engineer of RF Team

Approved by
: Chang Seok Choi
Manager of RF Team

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FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA3031

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1312FR20	December 23, 2013	- First Approval Report
HCTR1312FR20-1	January 02, 2014	- Revised the Conducted Power for MIMO Calculation

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1. GENERAL INFORMATION

Applicant: SAMSUNG Electronics Co., Ltd.
Address: 129, Samsung-ro, Yeongtong-gu Suwon-si, Gyeonggi-do, 443-742 Rep. of Korea
FCC ID: A3LWEA303I
EUT Type: WLAN Access Point
Model name(s): WEA303e
Date(s) of Tests: November 18, 2013 ~ December 09, 2013
Place of Tests: HCT Co., Ltd.
 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea
 (IC Recognition No. : 5944A-3)

2. EUT DESCRIPTION

EUT Type	WLAN Access Point	
FCC Model Name	WEA303e	
Power Supply	Adaptor : 100 V ~ 250 V, POE : 100 V ~ 240 V	
Frequency Range	TX	: 2412 MHz~2462 MHz, 5745 MHz~5825 MHz_20 MHz, 5755 MHz~5795 MHz_40 MHz
	RX	: 2412 MHz~2462 MHz, 5745 MHz~5825 MHz_20 MHz, 5755 MHz~5795 MHz_40 MHz
Monitoring Port Ant.1 Max. RF Output Power	Peak	Wi-Fi 802.11b (8.45 dBm) / Wi-Fi 802.11g (17.88 dBm)/ Wi-Fi 802.11n (2.4 GHz) (16.97 dBm) / Wi-Fi 802.11a (5.8 GHz) (15.60 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (15.77 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (13.60 dBm)
	Average	Wi-Fi 802.11b (5.82 dBm) / Wi-Fi 802.11g (6.63 dBm)/ Wi-Fi 802.11n (2.4 GHz) (5.99 dBm) / Wi-Fi 802.11a (5.8 GHz) (5.57 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (5.54 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (2.23 dBm)
Monitoring Port Ant.2 Max. RF Output Power	Peak	Wi-Fi 802.11b (8.67 dBm) / Wi-Fi 802.11g (17.89 dBm)/ Wi-Fi 802.11n (2.4 GHz) (17.41 dBm) / Wi-Fi 802.11a (5.8 GHz) (15.92 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (16.49 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (14.97 dBm)
	Average	Wi-Fi 802.11b (5.97 dBm) / Wi-Fi 802.11g (6.92 dBm)/ Wi-Fi 802.11n (2.4 GHz) (6.34 dBm) / Wi-Fi 802.11a (5.8 GHz) (5.70 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (5.57 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (3.76 dBm)
Service Port Ant.1 Max. RF Output Power	Peak	Wi-Fi 802.11b (11.02 dBm) / Wi-Fi 802.11g (16.50 dBm)/ Wi-Fi 802.11n (2.4 GHz) (16.93 dBm) / Wi-Fi 802.11a (5.8 GHz) (13.81 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (13.33 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (13.28 dBm)
	Average	Wi-Fi 802.11b (8.05 dBm) / Wi-Fi 802.11g (4.71 dBm)/ Wi-Fi 802.11n (2.4 GHz) (5.21 dBm) / Wi-Fi 802.11a (5.8 GHz) (2.08 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (1.98 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (0.60 dBm)
Service Port Ant.2 Max. RF Output Power	Peak	Wi-Fi 802.11b (11.48 dBm) / Wi-Fi 802.11g (17.16 dBm)/ Wi-Fi 802.11n (2.4 GHz) (17.49 dBm) / Wi-Fi 802.11a (5.8 GHz) (15.23 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (14.79 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (13.82 dBm)
	Average	Wi-Fi 802.11b (8.46 dBm) / Wi-Fi 802.11g (5.17 dBm)/ Wi-Fi 802.11n (2.4 GHz) (5.52 dBm) / Wi-Fi 802.11a (5.8 GHz) (3.77 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (3.45 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (1.74 dBm)
Service Port Ant.3 Max. RF Output Power	Peak	Wi-Fi 802.11b (11.51 dBm) / Wi-Fi 802.11g (16.74 dBm)/ Wi-Fi 802.11n (2.4 GHz) (17.00 dBm) / Wi-Fi 802.11a (5.8 GHz) (17.07 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (16.90 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (17.29 dBm)
	Average	Wi-Fi 802.11b (8.60 dBm) / Wi-Fi 802.11g (5.29 dBm)/ Wi-Fi 802.11n (2.4 GHz) (5.53 dBm) / Wi-Fi 802.11a (5.8 GHz) (5.31 dBm)/ Wi-Fi 802.11n_20 MHz BW (5.8 GHz) (5.27 dBm) / Wi-Fi 802.11n_40 MHz BW (5.8 GHz) (4.99 dBm)
Modulation Type	DSSS/CCK(802.11b), OFDM(802.11a, 802.11g, 802.11n)	
Antenna Specification	Manufacturer: ACE Technology Antenna type: Internal Antenna Peak Gain : cf. Section 6	

Note : Max. RF output power is a high value between the adaptor results and POE results.

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3. TEST METHODOLOGY

FCC KDB 558074 D01 DTS Meas Guidance v03r01 dated April 09, 2013 entitled "Guidance for Performing Compliance Measurements on Digital Transmission Systems(DTS) and the measurement procedure described in the American National Standard for Testing Unlicensed Wireless Devices(ANSI C63.4-2003) 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 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)

Conducted Antenna Terminal

See Section from 9.1 to 9.2.(KDB 558074)

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 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 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 June 21, 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."

6. ANTENNA REQUIREMENTS

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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▣ Directional Gain Calculations

- If any transmit signals are correlated with each other(802.11b/a/g),

$$\text{Directional gain} = 10 \cdot \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})^2 / N] \text{ dBi}$$

- If all transmit signals are completely uncorrelated with each other(802.11n)

$$\text{Directional gain} = 10 \cdot \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10}) / N] \text{ dBi}$$

▣ Antenna Gain

2.4 GHz Band

Service	Antenna Gain	Ant 1	7.5 dBi
		Ant 2	7.5 dBi
		Ant 3	7.5 dBi
	Directional Antenna Gain	Ant 1 & 2	10.51 dBi(802.11b/g), 7.5 dBi(802.11n)
		Ant 1 & 2 & 3	12.27 dBi(802.11b/g), 7.5 dBi(802.11n)
Monitor	Antenna Gain	Ant 1	7.5 dBi
		Ant 2	7.5 dBi
	Directional Antenna Gain	Ant 1 & 2	10.51 dBi(802.11b/g), 7.5 dBi(802.11n)

5.8 GHz Band

Service	Antenna Gain	Ant 1	8 dBi
		Ant 2	8 dBi
		Ant 3	8 dBi
	Directional Antenna Gain	Ant 1 & 2	11.01 dBi(802.11a), 8 dBi(802.11n)
		Ant 1 & 2 & 3	12.77 dBi(802.11a), 8 dBi(802.11n)
Monitor	Antenna Gain	Ant 1	8 dBi
		Ant 2	8 dBi
	Directional Antenna Gain	Ant 1 & 2	11.01 dBi(802.11a), 8 dBi(802.11n)

7. SUMMARY TEST OF RESULTS

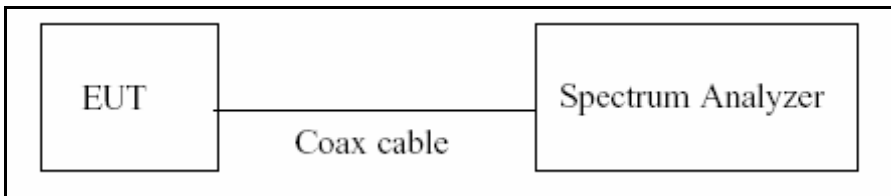
Test Description	FCC Part Section(s)	Test Limit	Test Condition	Test Result
6 dB Bandwidth	§15.247(a)(2)	> 500 kHz	CONDUCTED	PASS
Conducted Maximum Peak Output Power	§15.247(b)(3)	< 1 Watt		PASS
Power Spectral Density	§15.247(e)	< 8 dBm / 3 kHz Band		PASS
Band Edge(Out of Band Emissions)	§15.247(d)	Conducted < 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		PASS

8. TEST RESULT(Adaptor)

8.1 DUTY CYCLE(802.11a/b/g/n)

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set RBW $\geq$ OBW if possible; otherwise, set RBW to the largest available value. Set VBW $\geq$ RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer. We tested according to the zero-span measurement method, 6.0)b) in KDB 558074(issued 04/09/2013)

The largest available value of RBW is 8 MHz and VBW is 50 MHz. The zero-span method of measuring duty cycle shall not be used if $T \leq 6.25$ microseconds. ($50/6.25 = 8$)

The zero-span method was used because all measured T data are > 6.25 microseconds and both RBW and VBW are $> 50/T$.

1. RBW = 8 MHz (the largest available value)
2. VBW = 8 MHz ($\geq$ RBW)
3. SPAN = 0 Hz
4. Detector = Peak
5. Number of points in sweep > 100
6. Trace mode = Clear write
7. Measure T_{total} and T_{on}
8. Calculate Duty Cycle = T_{on} / T_{total} and Duty Cycle Factor = $10 \cdot \log(1/\text{Duty Cycle})$

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Monitoring Port

▣ Duty Cycle Factor

Mode	Data Rate	T _{on} (ms)	T _{total} (ms)	Duty Cycle	Duty Cycle Factor (dB)
2.4 GHz Band 802.11b	1	12.160	12.240	0.99346405	0.028
	2	6.165	6.225	0.99036145	0.042
	5.5	2.365	2.418	0.97808106	0.096
	11	1.278	1.326	0.96380090	0.160
2.4 GHz Band 802.11g and 5.8 GHz Band 802.11a	6	2.020	2.070	0.97584541	0.106
	9	1.353	1.401	0.96573876	0.151
	12	1.020	1.068	0.95505618	0.200
	18	0.686	0.732	0.93715847	0.282
	24	0.523	0.569	0.91915641	0.366
	36	0.354	0.400	0.88500000	0.531
	48	0.271	0.316	0.85759494	0.667
	54	0.243	0.288	0.84375000	0.738
2.4 GHz Band 802.11n_20 MHz BW and 5.8 GHz Band 802.11n_20 MHz BW	6.5	1.885	1.930	0.97668394	0.102
	13	0.962	1.008	0.95436508	0.203
	19.5	0.654	0.700	0.93428571	0.295
	26	0.498	0.544	0.91544118	0.384
	39	0.347	0.392	0.88520408	0.530
	52	0.267	0.312	0.85576923	0.676
	58.5	0.243	0.289	0.84083045	0.753
	65	0.224	0.268	0.83582090	0.779
2.4 GHz & 5.8 GHz Band 802.11n_40 MHz BW	13.5	0.926	0.960	0.96458333	0.157
	27	0.482	0.516	0.93410853	0.296
	40.5	0.335	0.368	0.91032609	0.408
	54	0.260	0.292	0.89041096	0.504
	81	0.187	0.220	0.85000000	0.706
	108	0.147	0.180	0.81666667	0.880
	121.5	0.136	0.168	0.80952381	0.918
	135	0.128	0.160	0.80000000	0.969

Service Port

▣ Duty Cycle Factor

Mode	Data Rate	T _{on} (ms)	T _{total} (ms)	Duty Cycle	Duty Cycle Factor (dB)
2.4 GHz Band 802.11b	1	8.180	8.240	0.99271845	0.032
	2	4.180	4.240	0.98584906	0.062
	5.5	1.645	1.690	0.97337278	0.117
	11	0.918	0.964	0.95228216	0.212
2.4 GHz Band 802.11g and 5.8 GHz Band 802.11a	6	1.335	1.405	0.95017794	0.222
	9	0.909	0.957	0.94984326	0.223
	12	0.690	0.735	0.93877551	0.274
	18	0.466	0.512	0.91015625	0.409
	24	0.354	0.400	0.88500000	0.531
	36	0.243	0.288	0.84375000	0.738
	48	0.187	0.232	0.80603448	0.936
	54	0.171	0.216	0.79166667	1.015
2.4 GHz Band 802.11n_20 MHz BW and 5.8 GHz Band 802.11n_20 MHz BW	6.5	1.269	1.317	0.96355353	0.161
	13	0.655	0.701	0.93437946	0.295
	19.5	0.446	0.492	0.90650407	0.426
	26	0.348	0.393	0.88549618	0.528
	39	0.244	0.289	0.84429066	0.735
	52	0.192	0.236	0.81355932	0.896
	58.5	0.176	0.220	0.80000000	0.969
	65	0.159	0.204	0.77941176	1.082
5.8 GHz Band 802.11n_40 MHz BW	13.5	0.630	0.664	0.94879518	0.228
	27	0.334	0.368	0.90760870	0.421
	40.5	0.236	0.268	0.88059701	0.552
	54	0.188	0.220	0.85454545	0.683
	81	0.135	0.168	0.80357143	0.950
	108	0.112	0.144	0.77777778	1.091
	121.5	0.104	0.136	0.76470588	1.165
	135	0.096	0.128	0.75000000	1.249

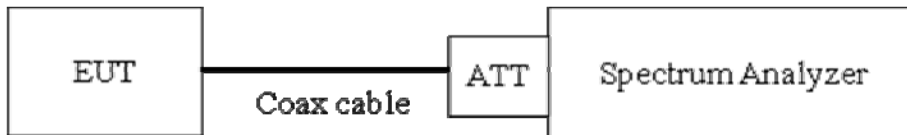
8.2 6dB BANDWIDTH (802.11a/b/g/n)

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 (Page 5 in KDB 558074, issued 04/09/2013)

RBW = 100 kHz

VBW $\geq 3 \times$ RBW

Detector = Peak

Trace mode = max hold

Sweep = auto couple

Allow the trace to stabilize

Note : We tested 6 dB bandwidth using the automatic bandwidth measurement capability of a spectrum analyzer. X dB is set 6 dB.

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Monitoring Port Ant.1

TEST RESULTS

2.4 GHz Band

Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	10.12	0.500	Pass
2437	6	10.15	0.500	Pass
2462	11	10.13	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	16.39	0.500	Pass
2437	6	16.37	0.500	Pass
2462	11	16.40	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	17.59	0.500	Pass
2437	6	17.60	0.500	Pass
2462	11	17.60	0.500	Pass

5.8 GHz Band

Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Frequency [MHz]			
5745	149	16.36	0.500	Pass
5785	157	16.34	0.500	Pass
5825	165	16.35	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	17.60	0.500	Pass
5785	157	17.60	0.500	Pass
5825	165	17.18	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_40 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	36.35	0.500	Pass
5795	159	36.34	0.500	Pass

Note : In order to simplify the report, attached plots were only the most wide 6 dB BW channel.

Monitoring Port Ant.2

TEST RESULTS

2.4 GHz Band

Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	10.12	0.500	Pass
2437	6	10.11	0.500	Pass
2462	11	10.13	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	16.40	0.500	Pass
2437	6	16.40	0.500	Pass
2462	11	16.40	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	17.60	0.500	Pass
2437	6	17.60	0.500	Pass
2462	11	17.60	0.500	Pass

5.8 GHz Band

Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Frequency [MHz]			
5745	149	16.38	0.500	Pass
5785	157	16.41	0.500	Pass
5825	165	16.40	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	17.32	0.500	Pass
5785	157	17.59	0.500	Pass
5825	165	17.61	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_40 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	36.38	0.500	Pass
5795	159	36.37	0.500	Pass

Note : In order to simplify the report, attached plots were only the most wide 6 dB BW channel.

Service Port Ant.1

▣ TEST RESULTS

2.4 GHz Band

Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	10.12	0.500	Pass
2437	6	10.12	0.500	Pass
2462	11	10.12	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	16.41	0.500	Pass
2437	6	16.40	0.500	Pass
2462	11	16.43	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	17.62	0.500	Pass
2437	6	17.61	0.500	Pass
2462	11	17.62	0.500	Pass

5.8 GHz Band

Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Frequency [MHz]			
5745	149	16.35	0.500	Pass
5785	157	16.35	0.500	Pass
5825	165	16.41	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	17.31	0.500	Pass
5785	157	16.91	0.500	Pass
5825	165	17.54	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_40 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	36.35	0.500	Pass
5795	159	35.99	0.500	Pass

Note : In order to simplify the report, attached plots were only the most wide 6 dB BW channel.

Service Port Ant.2

▣ TEST RESULTS

2.4 GHz Band

Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	10.11	0.500	Pass
2437	6	10.13	0.500	Pass
2462	11	10.13	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	16.41	0.500	Pass
2437	6	16.43	0.500	Pass
2462	11	16.39	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	17.61	0.500	Pass
2437	6	17.61	0.500	Pass
2462	11	17.61	0.500	Pass

5.8 GHz Band

Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Frequency [MHz]			
5745	149	16.38	0.500	Pass
5785	157	16.37	0.500	Pass
5825	165	16.37	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	17.53	0.500	Pass
5785	157	17.58	0.500	Pass
5825	165	17.58	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_40 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	35.97	0.500	Pass
5795	159	35.53	0.500	Pass

Note : In order to simplify the report, attached plots were only the most wide 6 dB BW channel.

Service Port Ant.3

▣ TEST RESULTS

2.4 GHz Band

Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	10.12	0.500	Pass
2437	6	10.11	0.500	Pass
2462	11	10.13	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	16.39	0.500	Pass
2437	6	16.40	0.500	Pass
2462	11	16.40	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	17.62	0.500	Pass
2437	6	17.62	0.500	Pass
2462	11	17.60	0.500	Pass

5.8 GHz Band

Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Frequency [MHz]			
5745	149	16.37	0.500	Pass
5785	157	16.35	0.500	Pass
5825	165	16.40	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	17.31	0.500	Pass
5785	157	17.34	0.500	Pass
5825	165	17.23	0.500	Pass

Conducted 6 dB Bandwidth Measurements for 802.11n_40 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	35.86	0.500	Pass
5795	159	35.76	0.500	Pass

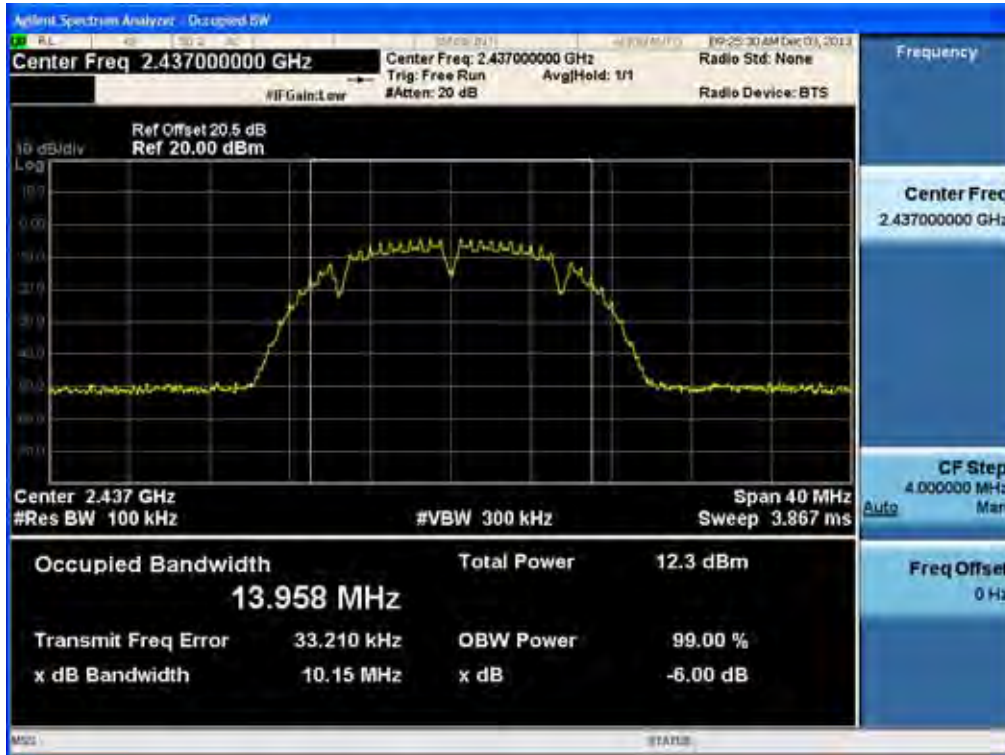
Note : In order to simplify the report, attached plots were only the most wide 6 dB BW channel.

Monitoring Port Ant.1

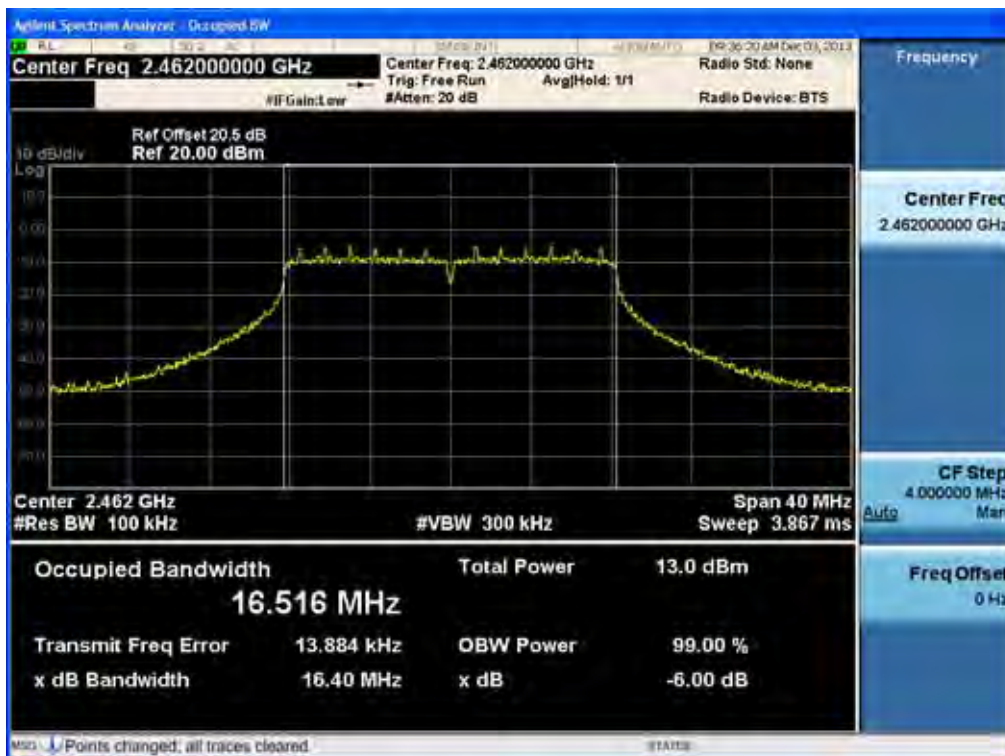
RESULT PLOTS

2.4 GHz Band

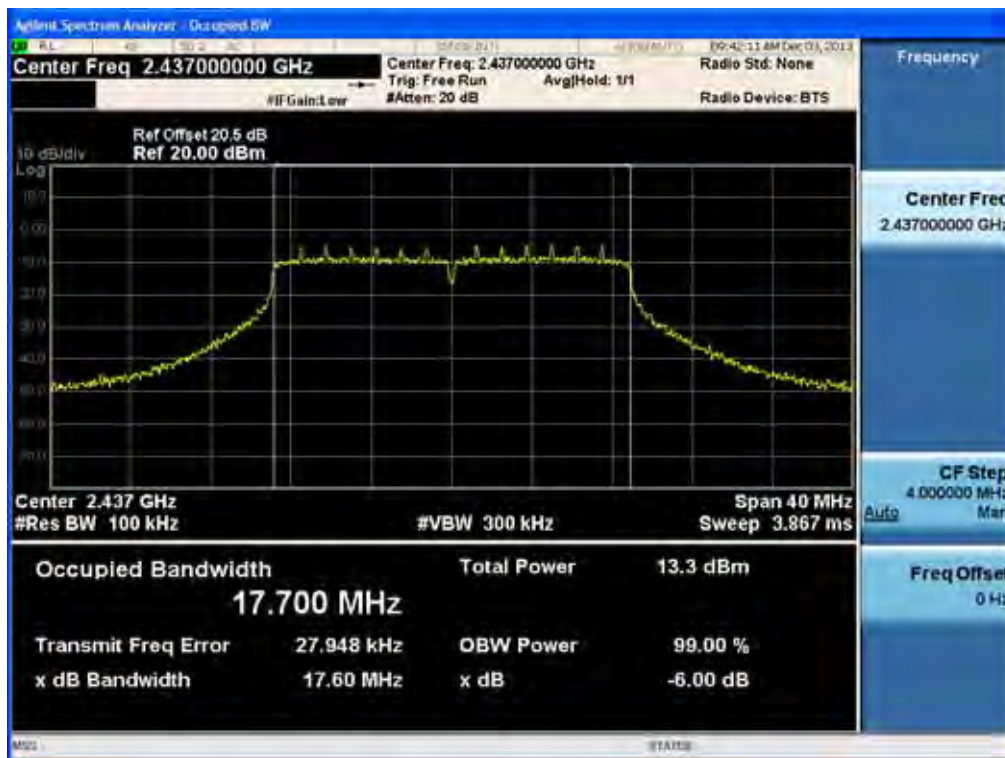
6dB Bandwidth plot (802.11b-CH 6)



6dB Bandwidth plot (802.11g-CH 11)

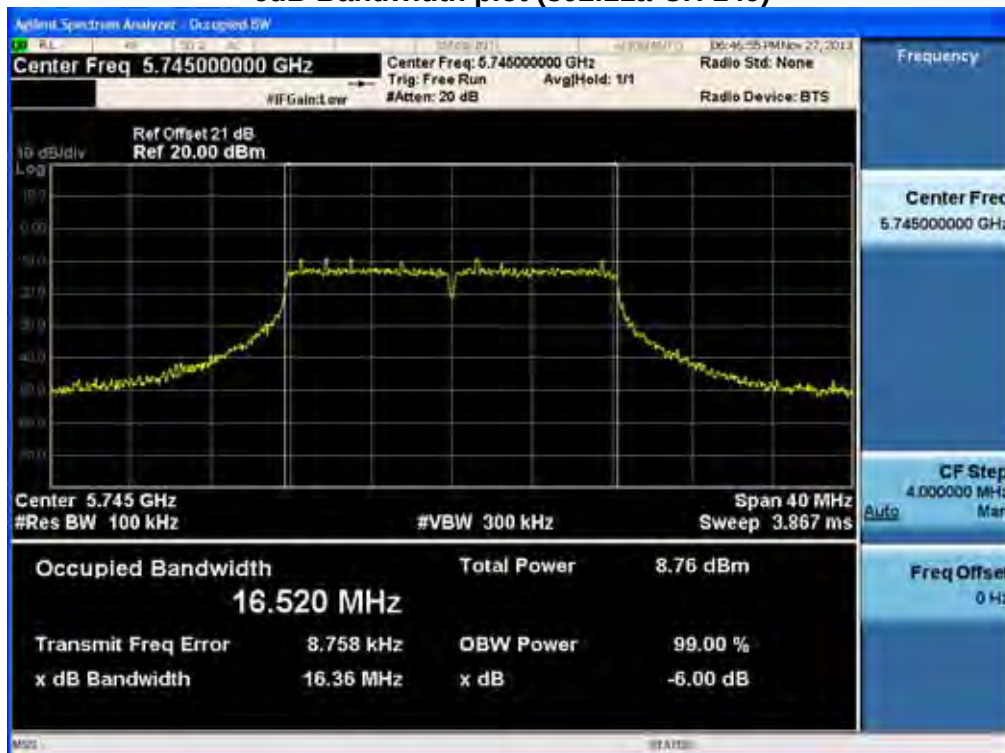


6dB Bandwidth plot (802.11n-CH 6)

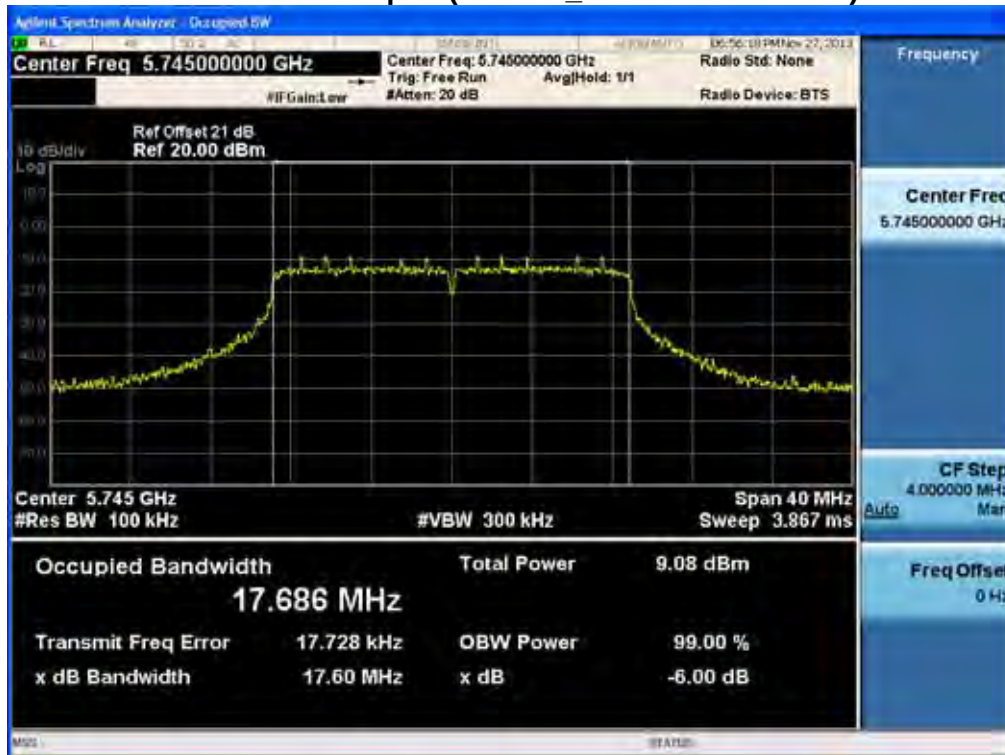


5.8 GHz Band

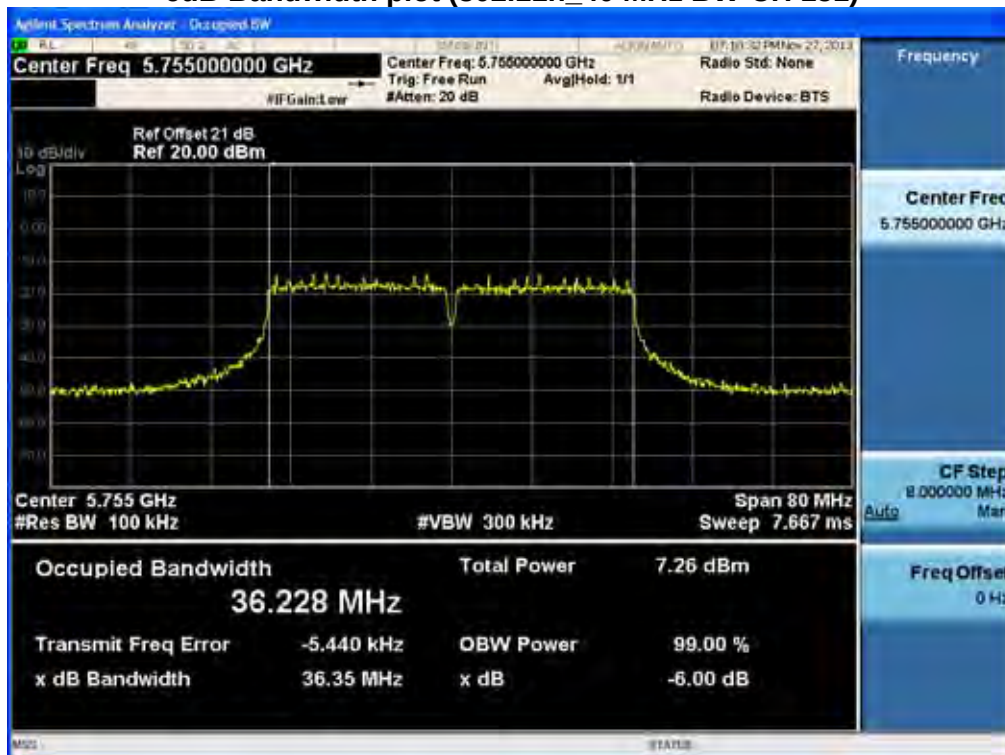
6dB Bandwidth plot (802.11a-CH 149)



6dB Bandwidth plot (802.11n_20 MHz BW-CH 149)



6dB Bandwidth plot (802.11n_40 MHz BW-CH 151)

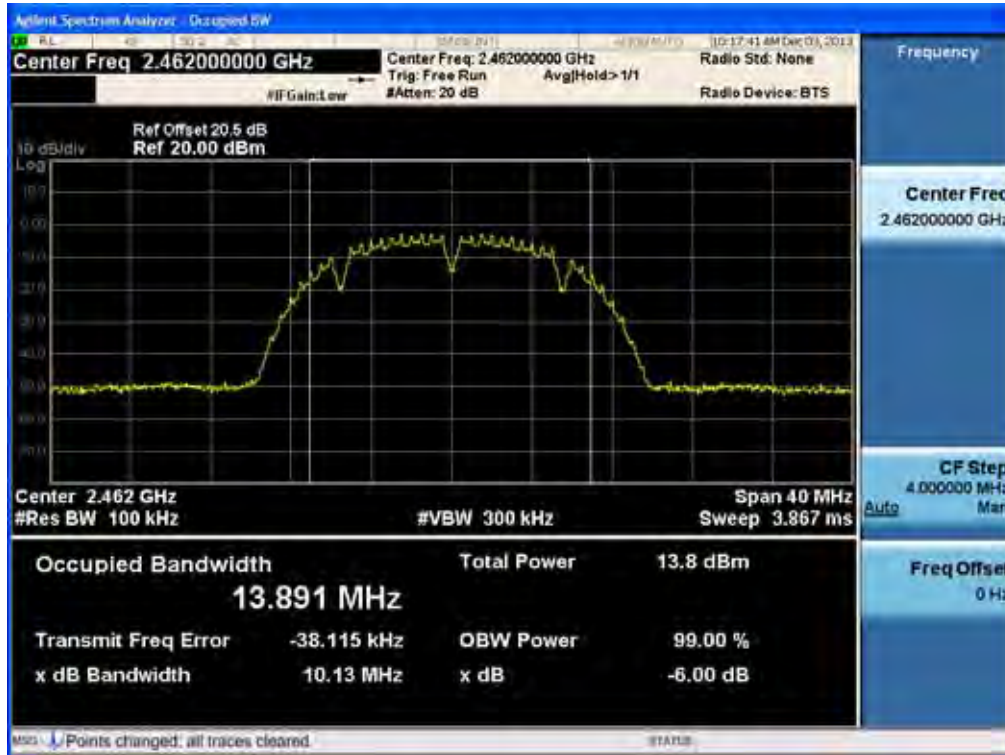


Monitoring Port Ant.2

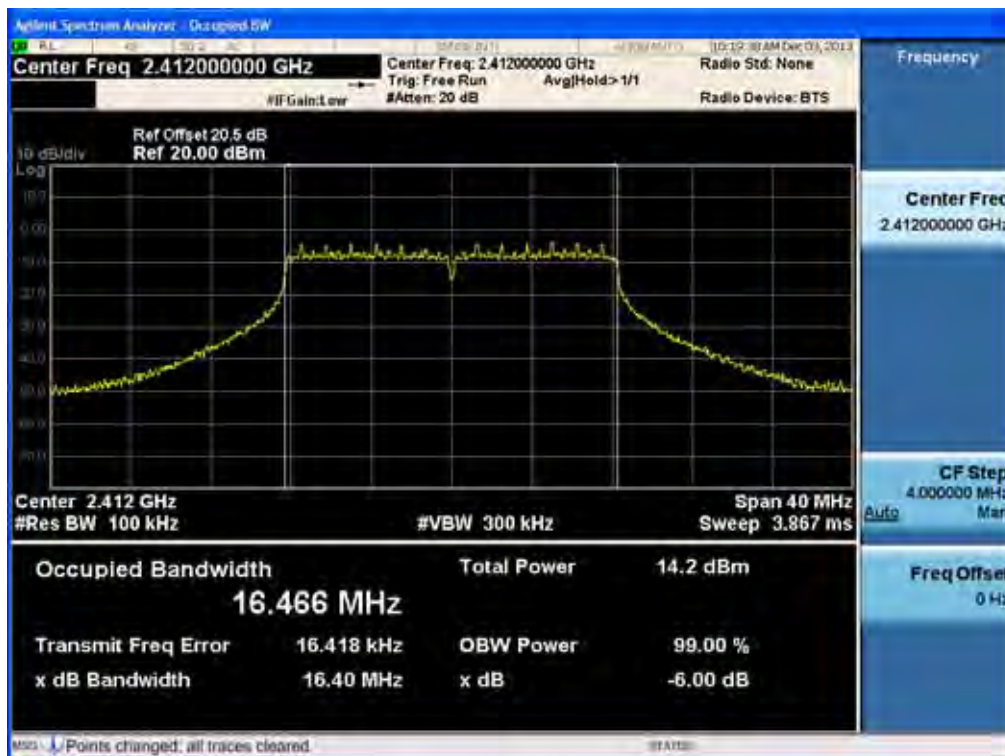
RESULT PLOTS

2.4 GHz Band

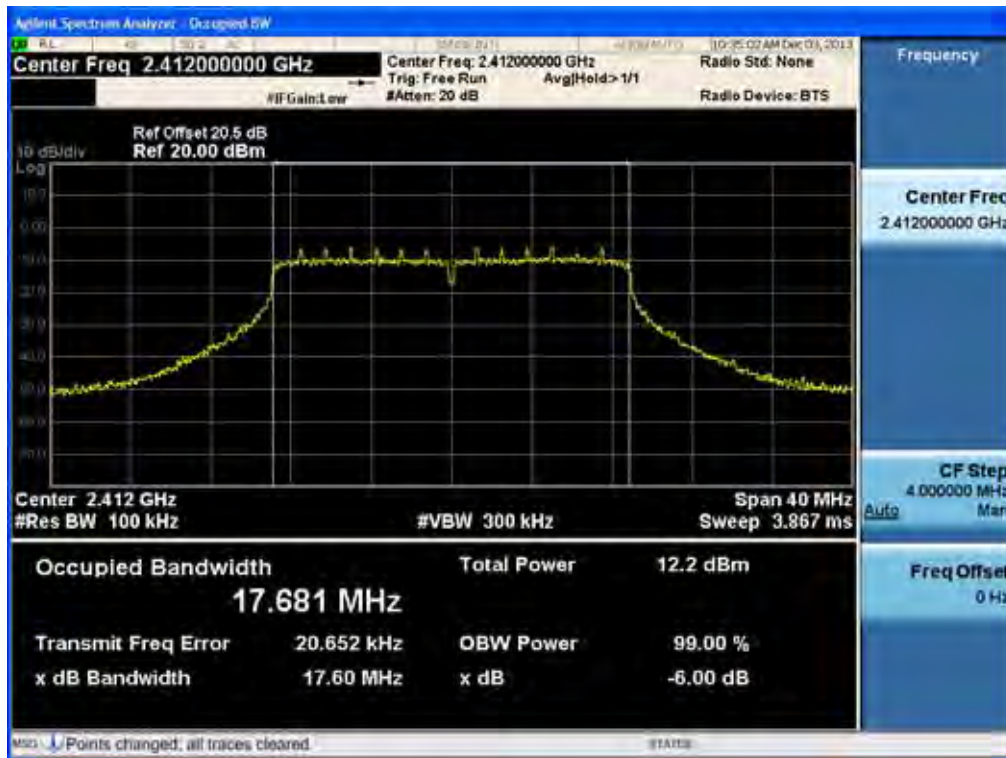
6dB Bandwidth plot (802.11b-CH 11)



6dB Bandwidth plot (802.11g-CH 1)

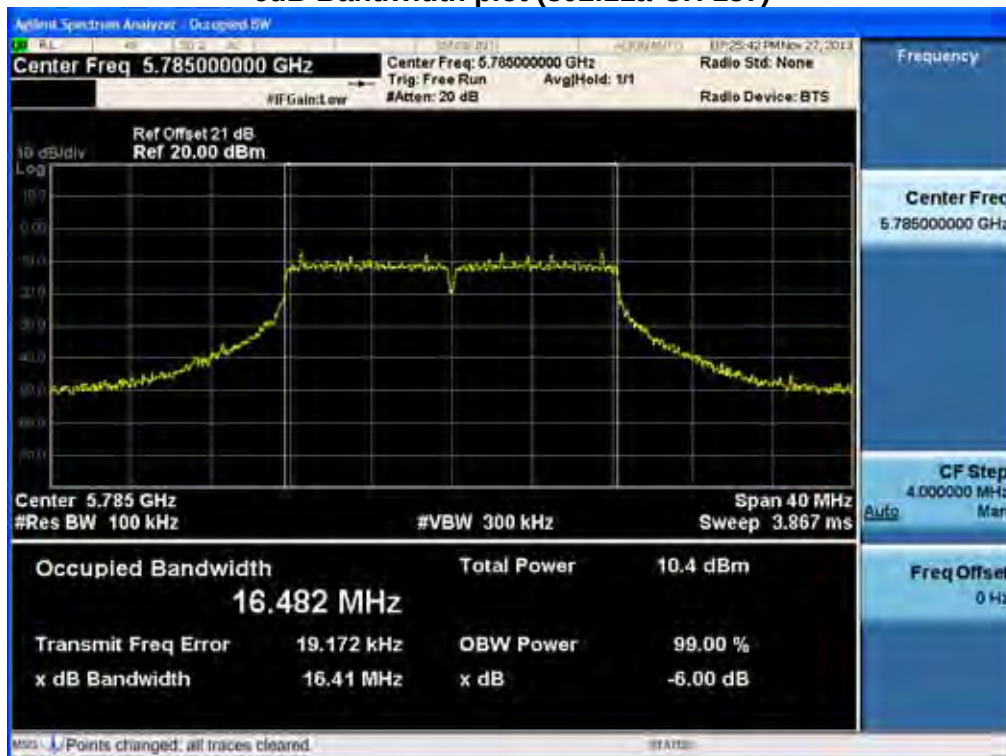


6dB Bandwidth plot (802.11n-CH 1)



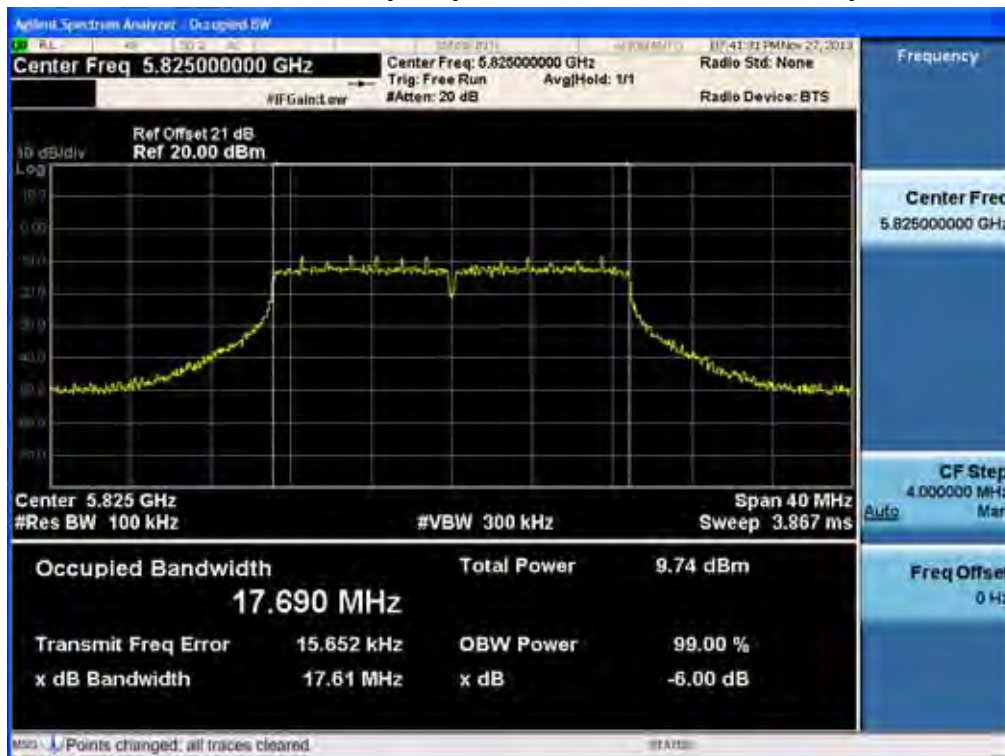
5.8 GHz Band

6dB Bandwidth plot (802.11a-CH 157)

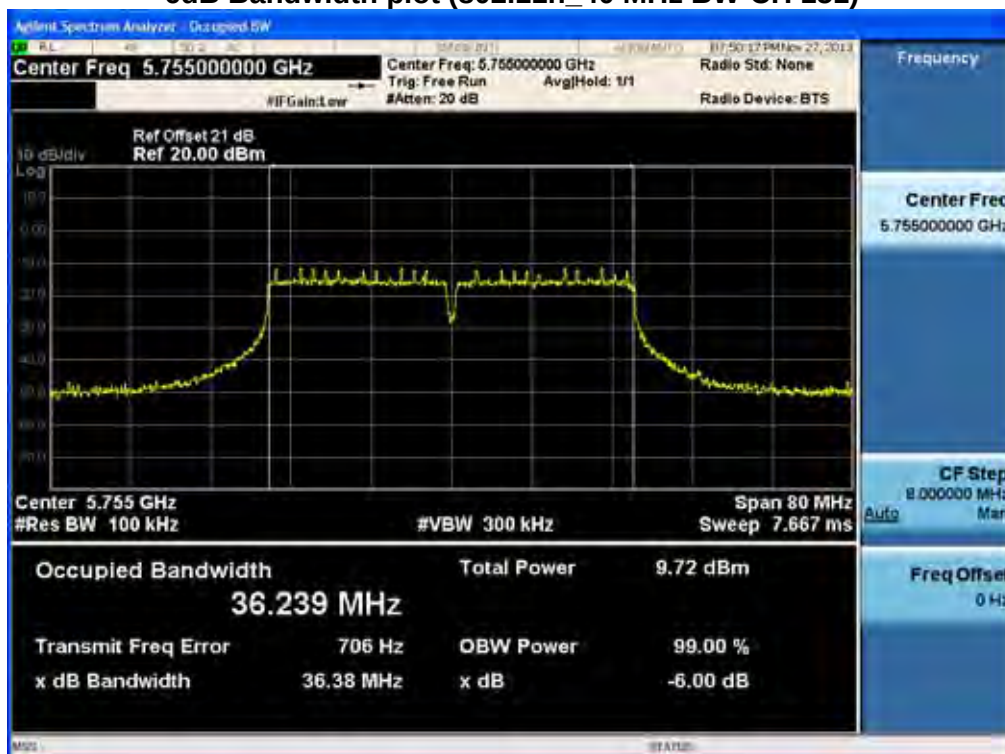


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6dB Bandwidth plot (802.11n_20 MHz BW-CH 165)



6dB Bandwidth plot (802.11n_40 MHz BW-CH 151)



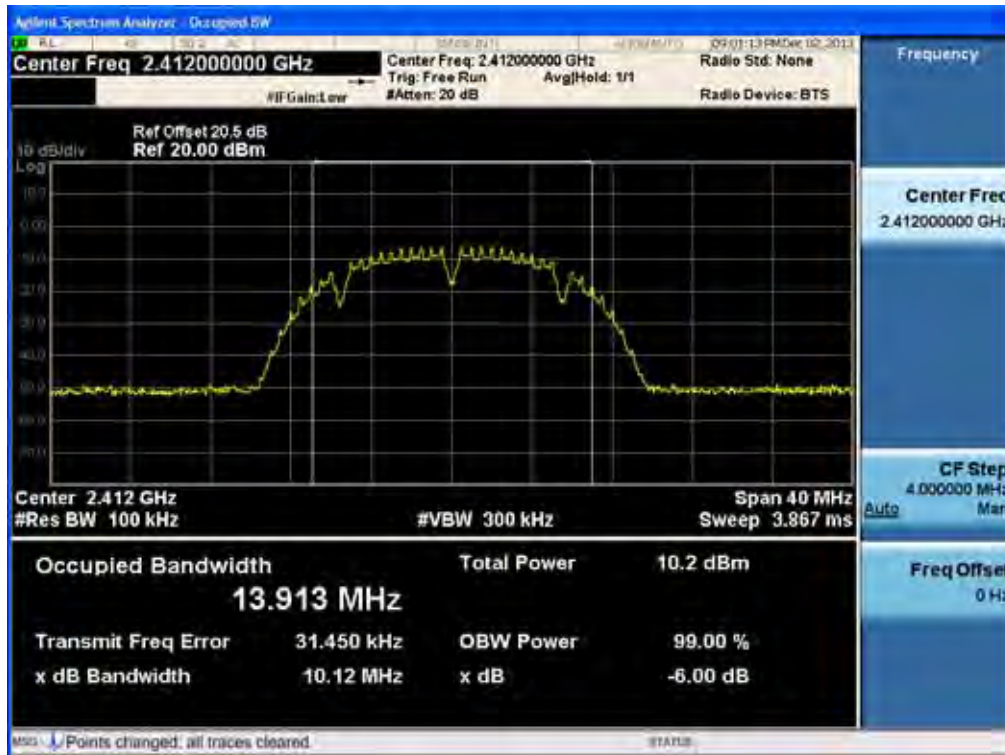


Service Port Ant.1

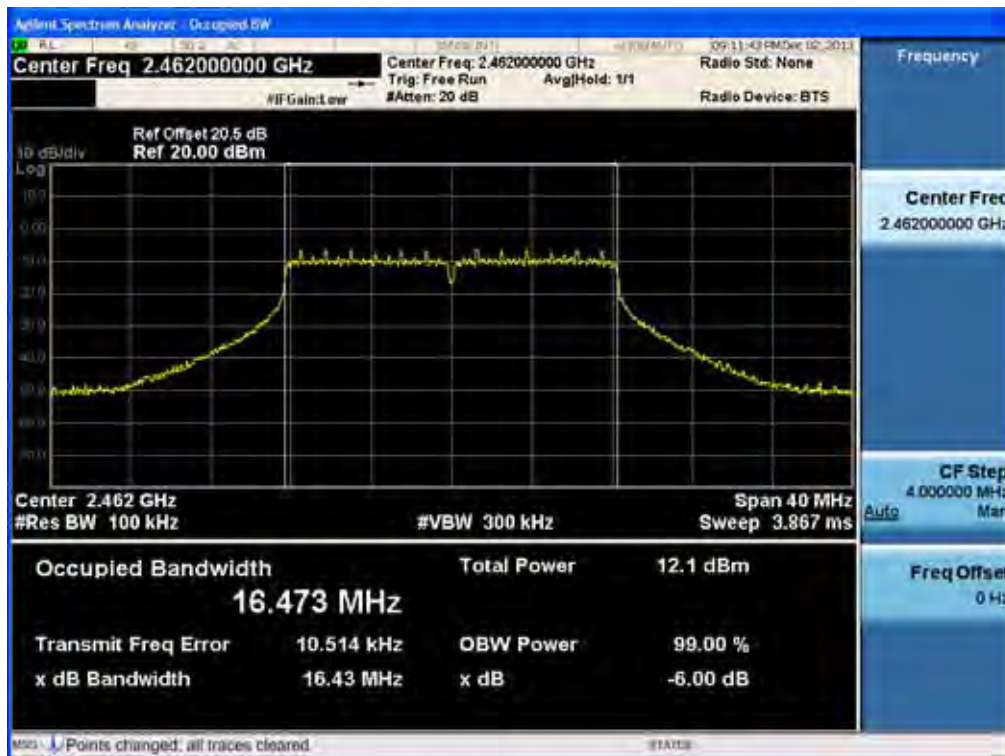
▣ RESULT PLOTS

2.4 GHz Band

6dB Bandwidth plot (802.11b-CH 1)

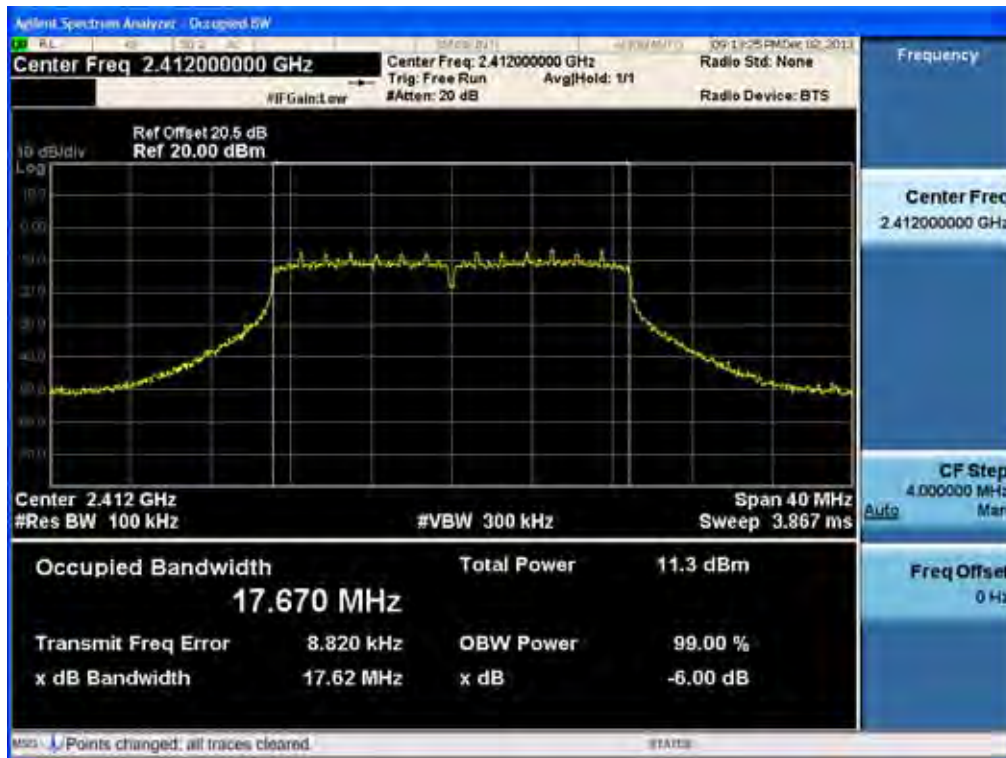


6dB Bandwidth plot (802.11g-CH 11)



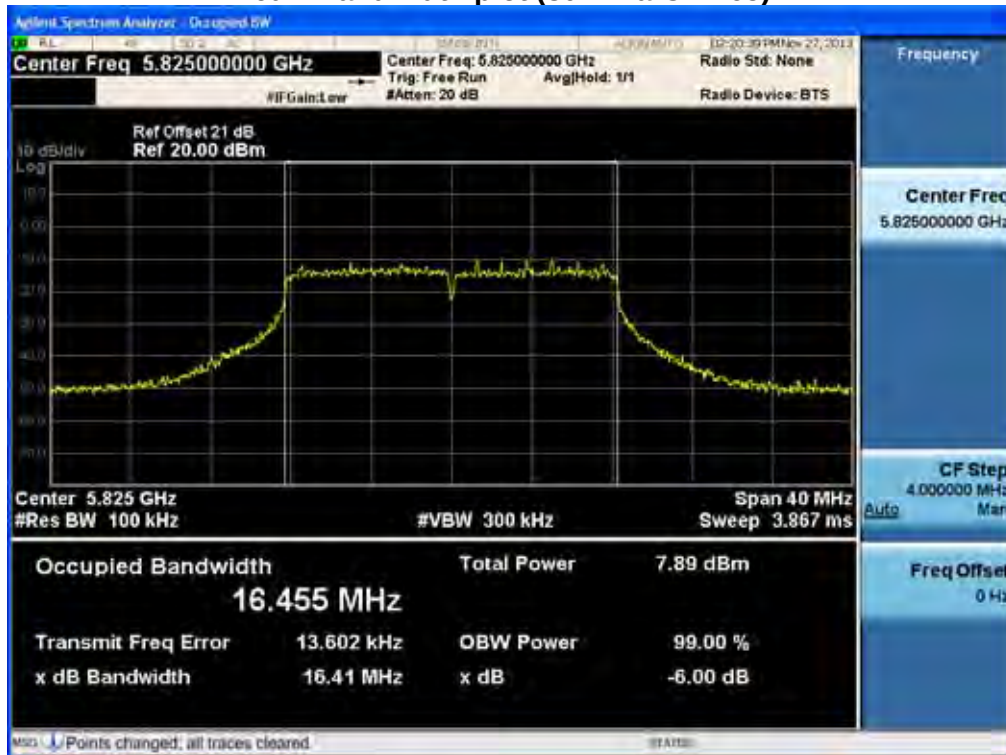
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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6dB Bandwidth plot (802.11n-CH 1)

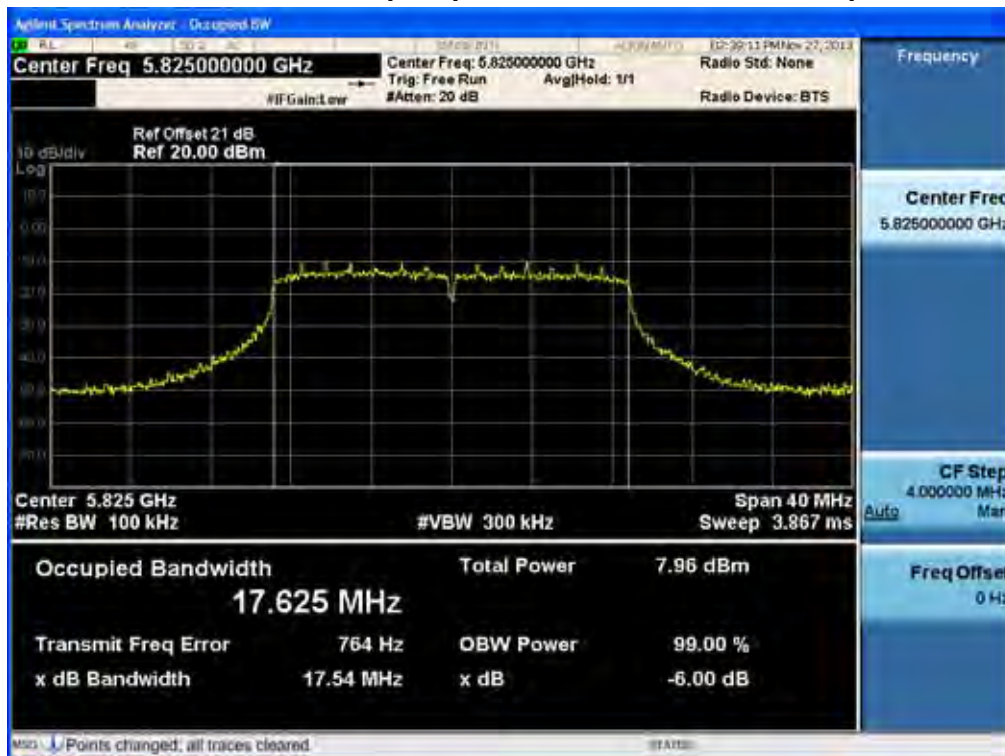


5.8 GHz Band

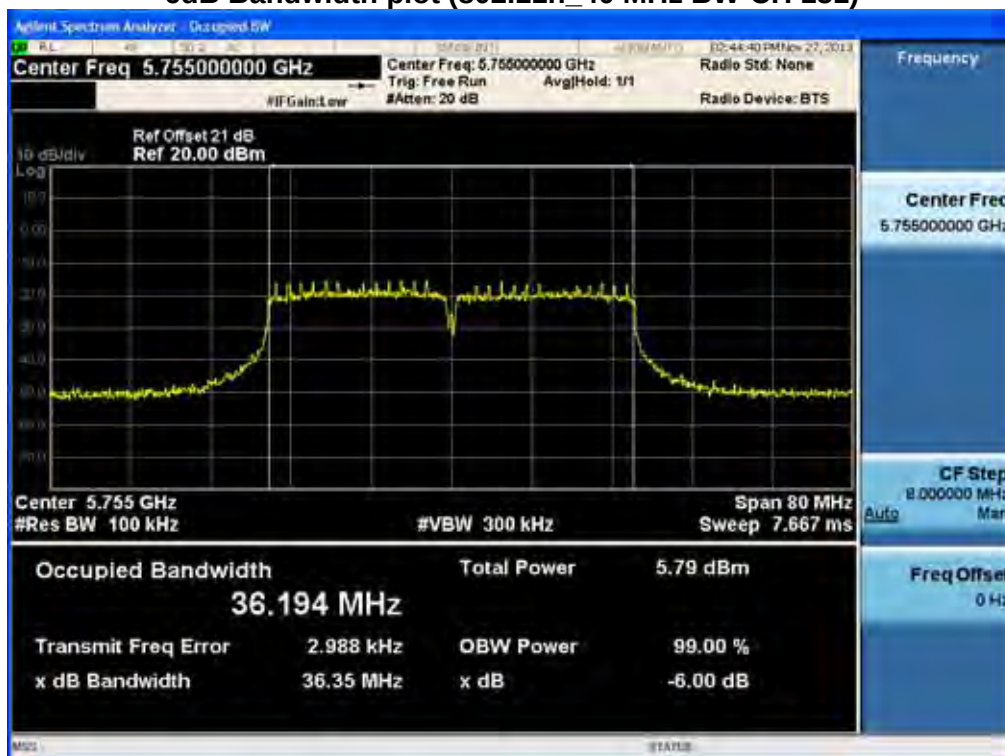
6dB Bandwidth plot (802.11a-CH 165)



6dB Bandwidth plot (802.11n_20 MHz BW-CH 165)



6dB Bandwidth plot (802.11n_40 MHz BW-CH 151)



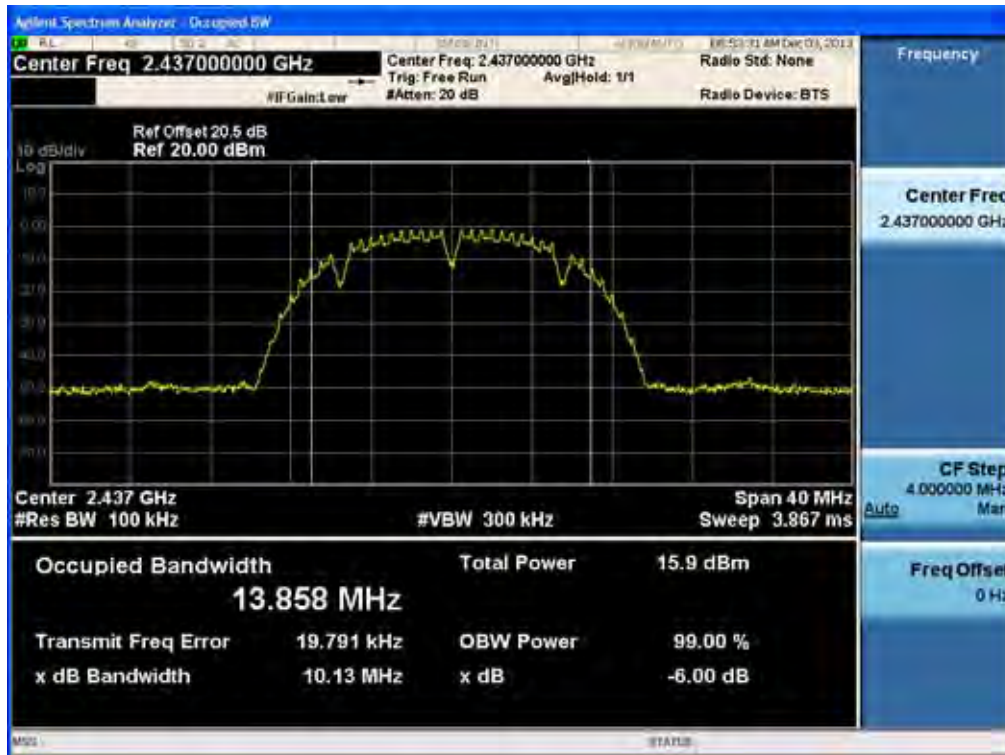


Service Port Ant.2

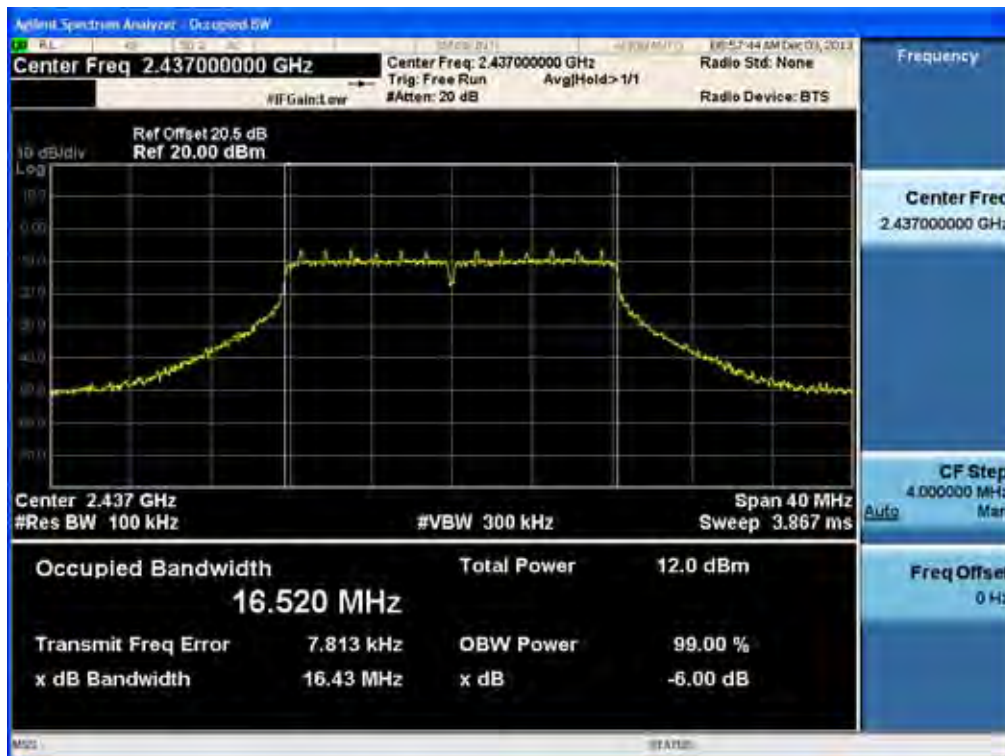
RESULT PLOTS

2.4 GHz Band

6dB Bandwidth plot (802.11b-CH 6)

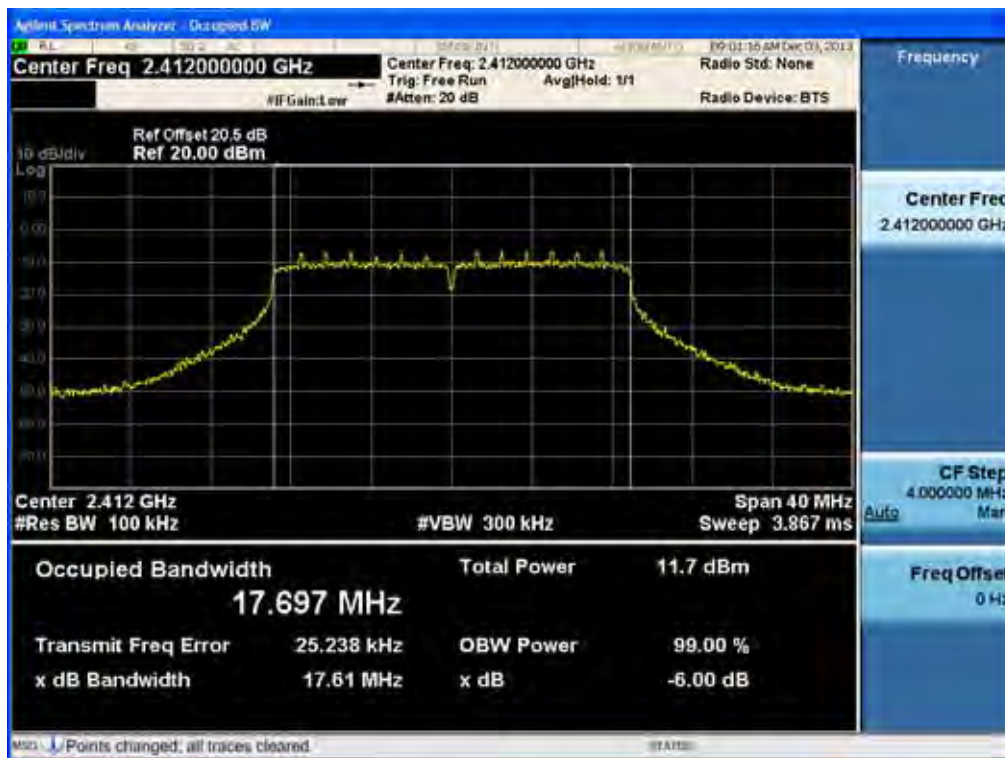


6dB Bandwidth plot (802.11g-CH 6)



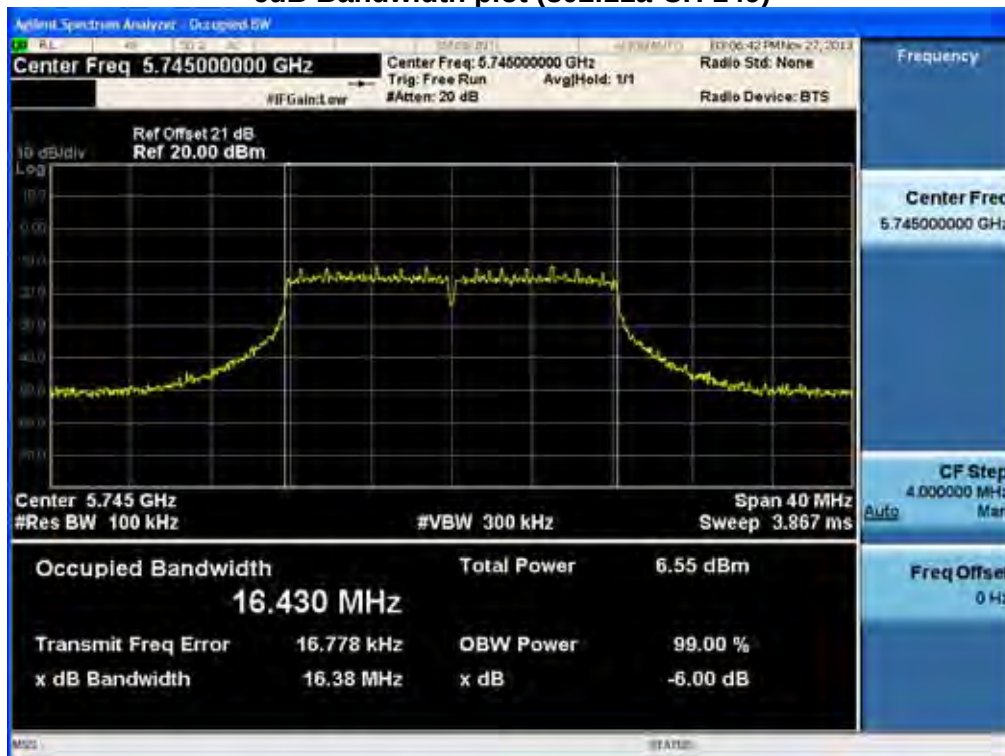
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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6dB Bandwidth plot (802.11n-CH 1)

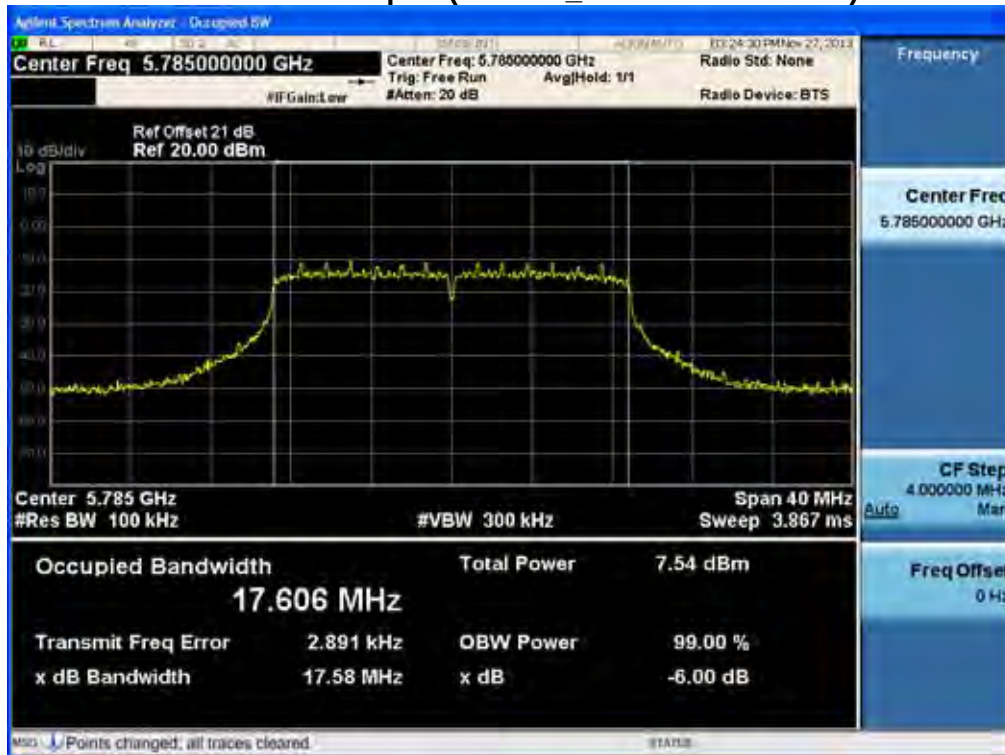


5.8 GHz Band

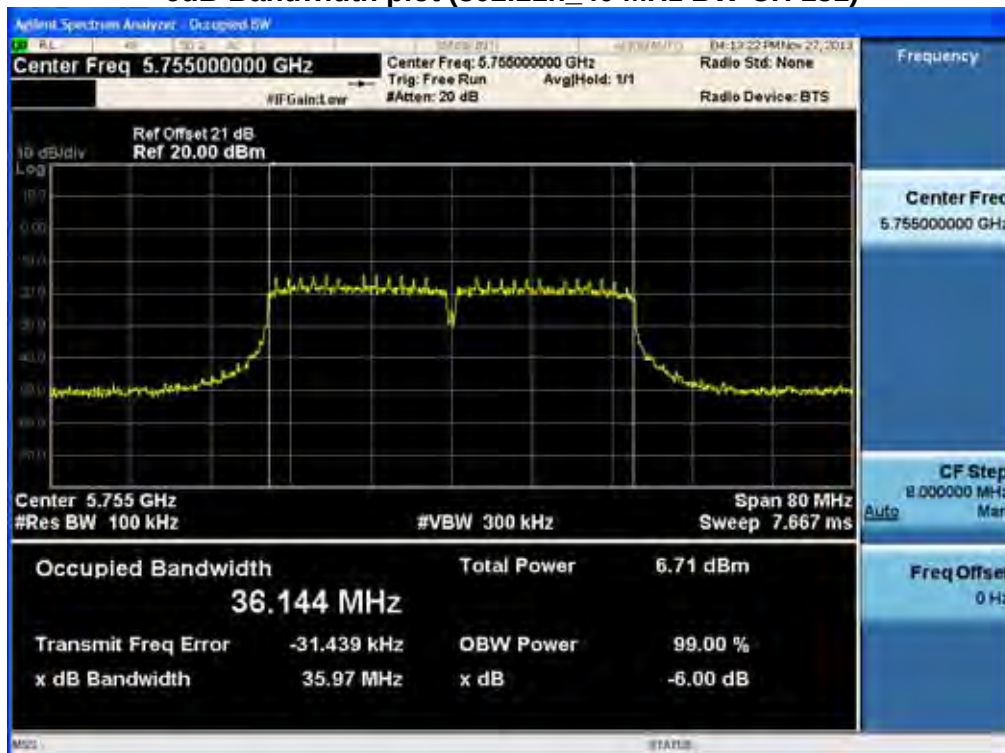
6dB Bandwidth plot (802.11a-CH 149)



6dB Bandwidth plot (802.11n_20 MHz BW-CH 157)



6dB Bandwidth plot (802.11n_40 MHz BW-CH 151)

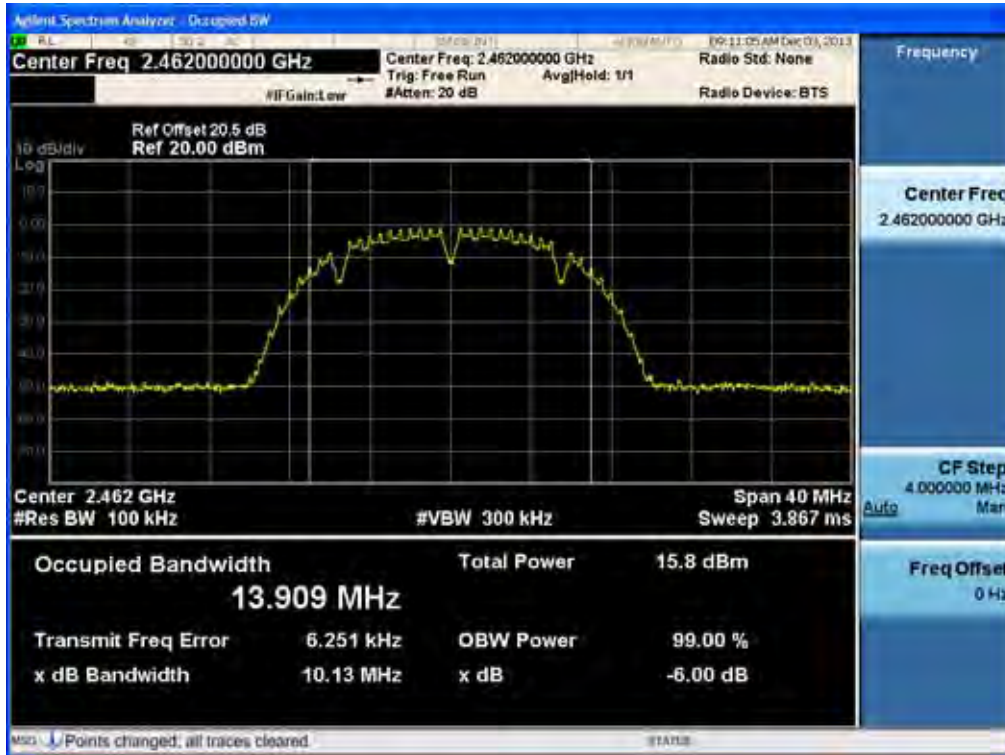


Service Port Ant.3

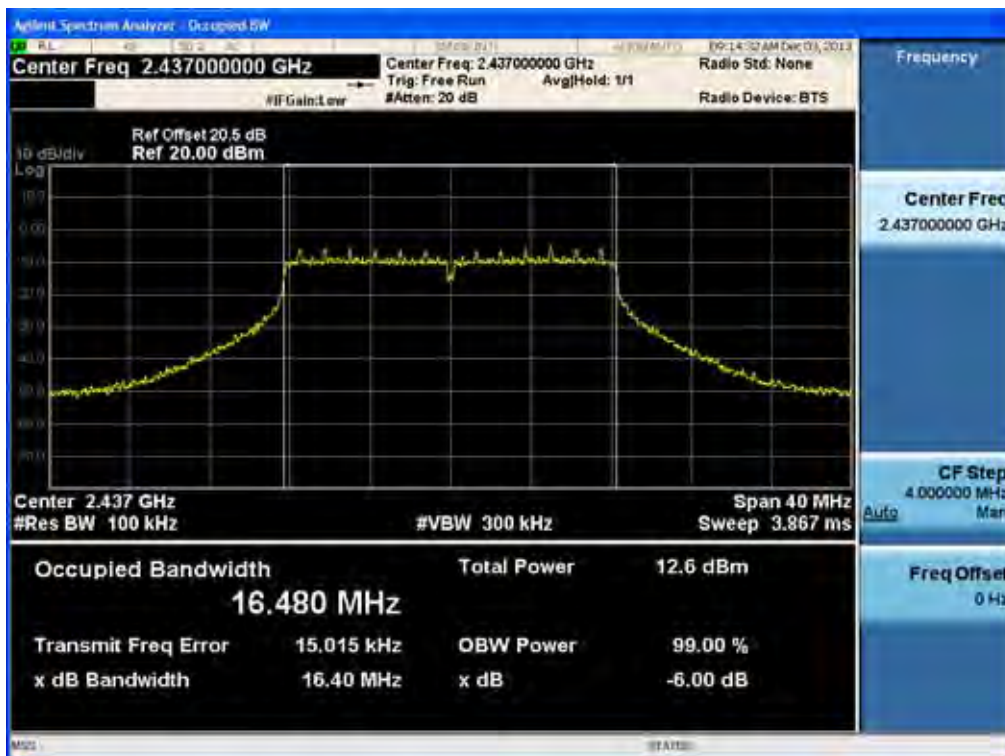
RESULT PLOTS

2.4 GHz Band

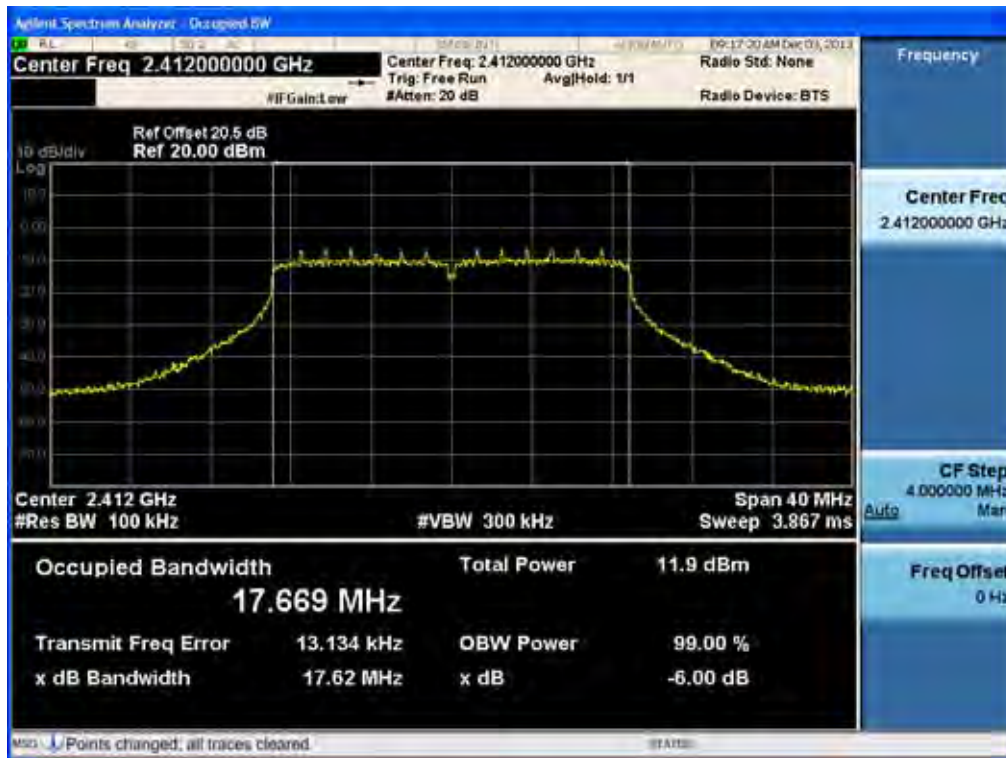
6dB Bandwidth plot (802.11b-CH 11)



6dB Bandwidth plot (802.11g-CH 6)

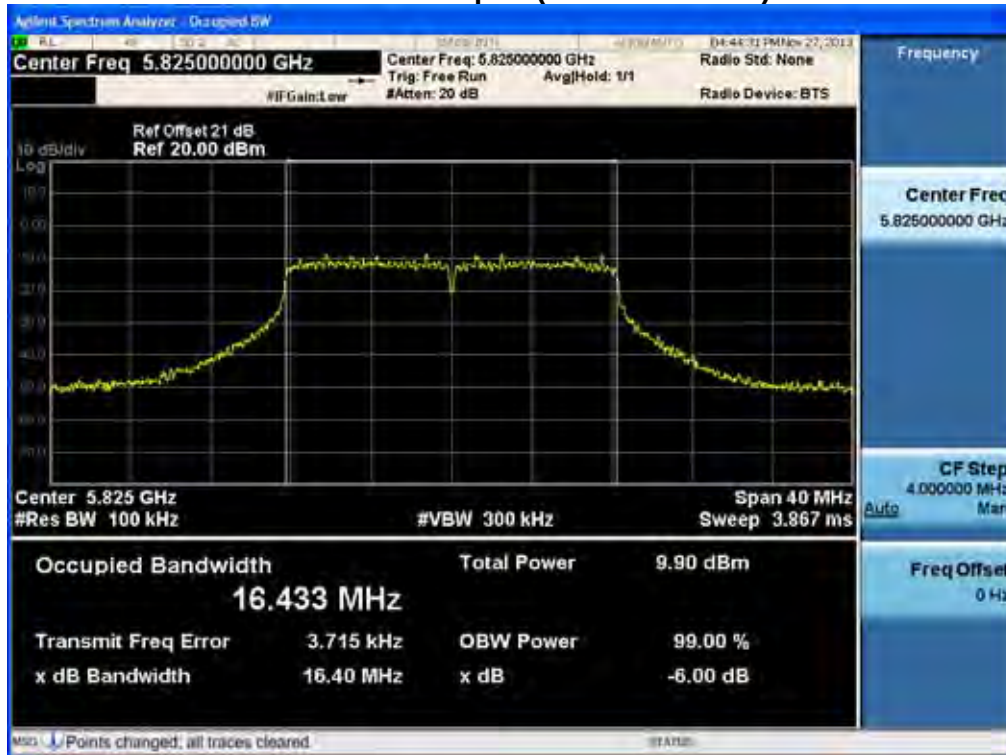


6dB Bandwidth plot (802.11n-CH 1)

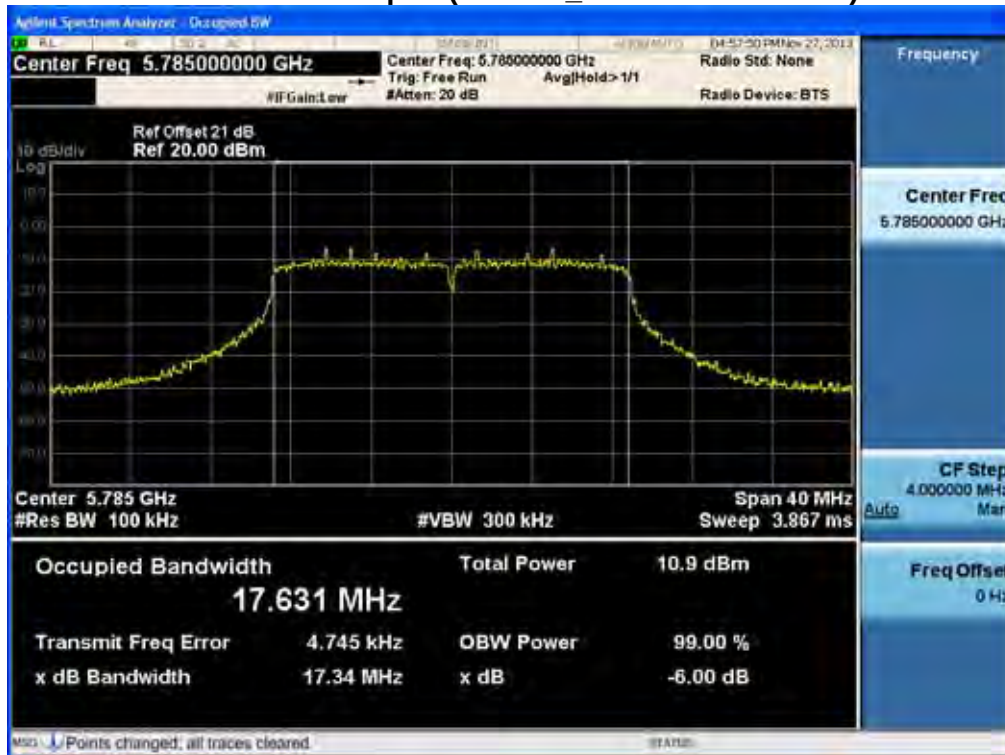


5.8 GHz Band

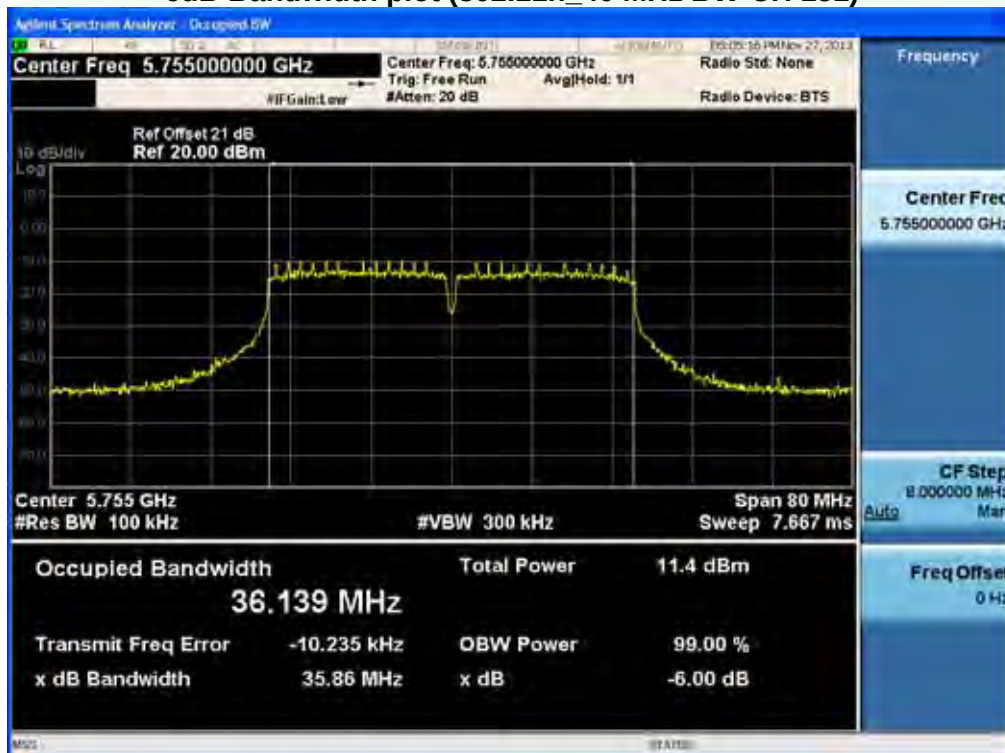
6dB Bandwidth plot (802.11a-CH 165)



6dB Bandwidth plot (802.11n_20 MHz BW-CH 157)



6dB Bandwidth plot (802.11n_40 MHz BW-CH 151)



8.3 OUTPUT POWER (802.11a/b/g/n)

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

The transmitter output is connected to the input of an RF power sensor. Measurement is made using a broadband power meter capable of making peak and average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Limit :

2.4 GHz Band

Operating Mode	Mode	Ant. Gain(dBi)	Limt(dBm)
SISO : Monitoring	802.11b	7.5	28.5
	802.11g		
	802.11n		
SISO : Service	802.11b	7.5	28.5
	802.11g		
	802.11n		
MIMO(2 TX) : Monitoring	802.11b	10.51	25.49
	802.11g	7.5	28.5
	802.11n		
MIMO(2 TX) : Service	802.11b	10.51	25.49
	802.11g	7.5	28.5
	802.11n		
MIMO(3 TX) : Service	802.11b	12.27	23.73
	802.11g	7.5	28.5
	802.11n		

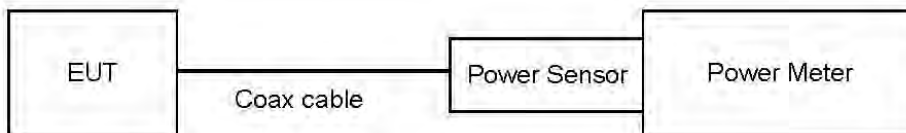
Note : Above the limits is calculated according to antenna gain. Because antenna gain is higher than 6 dBi.

5.8 GHz Band

Operating Mode	Mode	Ant. Gain(dBi)	Limt(dBm)
SISO : Monitoring	802.11a	8	28
	802.11n_20 MHz BW		
	802.11n_40 MHz BW		
SISO : Service	802.11a	8	28
	802.11n_20 MHz BW		
	802.11n_40 MHz BW		
MIMO(2 TX) : Monitoring	802.11a	11.01	24.99
	802.11n_20 MHz BW	8	28
	802.11n_40 MHz BW		
MIMO(2 TX) : Service	802.11a	11.01	24.99
	802.11n_20 MHz BW	8	28
	802.11n_40 MHz BW		
MIMO(3 TX) : Service	802.11a	12.77	23.23
	802.11n_20 MHz BW	8	28
	802.11n_40 MHz BW		

Note : Above the limits is calculated according to antenna gain. Because antenna gain is higher than 6 dBi.

■ TEST CONFIGURATION



■ TEST PROCEDURE

- Peak Power (Procedure 9.1.3 in KDB 558074, issued 04/09/2013)
 1. Measure the peak power of the transmitter.
- Average Power (Procedure 9.2.3.1 in KDB 558074, issued 04/09/2013)
 1. Measure the duty cycle.
 2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
 3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Note :

1. We apply to the offset in the 2.4 GHz and 5.8 GHz range that was rounded off to the closest tenth dB. So, 20.5 dB is offset for 2.4 GHz Band and 21.0 dB is offset for 5.8 GHz Band.

Actual value of loss for the attenuator and cable combination is below table. We used the particular cable

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type that is supported by manufacture.

Band	Loss(dB)
2.4 GHz	20.5
5.8 GHz	21.0

(Actual value of loss for the attenuator and cable combination)

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Monitoring Port

TEST RESULTS-Peak

2.4 GHz Band

Ant.1

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	8.24	28.5
		2 Mbps	8.21	28.5
		5.5 Mbps	8.21	28.5
		11 Mbps	8.30	28.5
2437	6	1 Mbps	7.70	28.5
		2 Mbps	7.74	28.5
		5.5 Mbps	7.67	28.5
		11 Mbps	7.77	28.5
2462	11	1 Mbps	7.60	28.5
		2 Mbps	7.61	28.5
		5.5 Mbps	7.62	28.5
		11 Mbps	7.66	28.5

Ant.2

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	8.63	28.5
		2 Mbps	8.62	28.5
		5.5 Mbps	8.58	28.5
		11 Mbps	8.63	28.5
2437	6	1 Mbps	8.45	28.5
		2 Mbps	8.41	28.5
		5.5 Mbps	8.40	28.5
		11 Mbps	8.48	28.5
2462	11	1 Mbps	8.63	28.5
		2 Mbps	8.61	28.5
		5.5 Mbps	8.60	28.5
		11 Mbps	8.67	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	11.45	25.49
		2 Mbps	11.43	25.49
		5.5 Mbps	11.41	25.49
		11 Mbps	11.48	25.49
2437	6	1 Mbps	11.10	25.49
		2 Mbps	11.10	25.49
		5.5 Mbps	11.06	25.49
		11 Mbps	11.15	25.49
2462	11	1 Mbps	11.16	25.49
		2 Mbps	11.15	25.49
		5.5 Mbps	11.15	25.49
		11 Mbps	11.21	25.49

■ Ant 1

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	16.37	28.5
		9 Mbps	16.60	28.5
		12 Mbps	17.07	28.5
		18 Mbps	17.15	28.5
		24 Mbps	17.30	28.5
		36 Mbps	17.39	28.5
		48 Mbps	16.97	28.5
		54 Mbps	17.72	28.5
2437	6	6 Mbps	15.93	28.5
		9 Mbps	16.14	28.5
		12 Mbps	16.40	28.5
		18 Mbps	16.45	28.5
		24 Mbps	16.60	28.5
		36 Mbps	15.41	28.5
		48 Mbps	15.31	28.5
		54 Mbps	14.23	28.5
2462	11	6 Mbps	15.60	28.5
		9 Mbps	15.91	28.5
		12 Mbps	16.17	28.5
		18 Mbps	16.15	28.5
		24 Mbps	16.10	28.5
		36 Mbps	15.89	28.5
		48 Mbps	15.80	28.5
		54 Mbps	16.18	28.5

■ Ant 2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	17.32	28.5
		9 Mbps	17.35	28.5
		12 Mbps	17.56	28.5
		18 Mbps	17.89	28.5
		24 Mbps	17.83	28.5
		36 Mbps	17.51	28.5
		48 Mbps	17.30	28.5
		54 Mbps	17.67	28.5
2437	6	6 Mbps	16.60	28.5
		9 Mbps	16.79	28.5
		12 Mbps	16.99	28.5
		18 Mbps	17.21	28.5
		24 Mbps	17.13	28.5
		36 Mbps	15.16	28.5
		48 Mbps	14.64	28.5
		54 Mbps	14.67	28.5
2462	11	6 Mbps	16.11	28.5
		9 Mbps	16.41	28.5
		12 Mbps	16.55	28.5
		18 Mbps	16.55	28.5
		24 Mbps	16.81	28.5
		36 Mbps	16.85	28.5
		48 Mbps	16.19	28.5
		54 Mbps	16.74	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	19.88	25.49
		9 Mbps	20.00	25.49
		12 Mbps	20.33	25.49
		18 Mbps	20.55	25.49
		24 Mbps	20.58	25.49
		36 Mbps	20.46	25.49
		48 Mbps	20.15	25.49
		54 Mbps	20.70	25.49
2437	6	6 Mbps	19.29	25.49
		9 Mbps	19.49	25.49
		12 Mbps	19.71	25.49
		18 Mbps	19.86	25.49
		24 Mbps	19.88	25.49
		36 Mbps	18.30	25.49
		48 Mbps	18.00	25.49
		54 Mbps	17.47	25.49
2462	11	6 Mbps	18.87	25.49
		9 Mbps	19.18	25.49
		12 Mbps	19.37	25.49
		18 Mbps	19.36	25.49
		24 Mbps	19.48	25.49
		36 Mbps	19.40	25.49
		48 Mbps	19.01	25.49
		54 Mbps	19.48	25.49

Ant 1

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	15.35	28.5
		13 Mbps	15.51	28.5
		19.5 Mbps	15.24	28.5
		26 Mbps	15.58	28.5
		39 Mbps	16.02	28.5
		52 Mbps	16.00	28.5
		58.5 Mbps	16.02	28.5
		65 Mbps	15.94	28.5
2437	6	6.5 Mbps	16.04	28.5
		13 Mbps	15.99	28.5
		19.5 Mbps	16.58	28.5
		26 Mbps	16.24	28.5
		39 Mbps	16.97	28.5
		52 Mbps	15.76	28.5
		58.5 Mbps	14.30	28.5
		65 Mbps	14.24	28.5
2462	11	6.5 Mbps	13.33	28.5
		13 Mbps	13.39	28.5
		19.5 Mbps	13.78	28.5
		26 Mbps	13.61	28.5
		39 Mbps	13.77	28.5
		52 Mbps	14.01	28.5
		58.5 Mbps	13.61	28.5
		65 Mbps	13.83	28.5

Ant 2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	15.45	28.5
		13 Mbps	15.34	28.5
		19.5 Mbps	16.18	28.5
		26 Mbps	15.79	28.5
		39 Mbps	15.77	28.5
		52 Mbps	14.06	28.5
		58.5 Mbps	13.10	28.5
		65 Mbps	14.61	28.5
2437	6	6.5 Mbps	16.68	28.5
		13 Mbps	16.61	28.5
		19.5 Mbps	16.99	28.5
		26 Mbps	16.75	28.5
		39 Mbps	17.09	28.5
		52 Mbps	15.04	28.5
		58.5 Mbps	14.06	28.5
		65 Mbps	13.67	28.5
2462	11	6.5 Mbps	14.19	28.5
		13 Mbps	14.01	28.5
		19.5 Mbps	14.30	28.5
		26 Mbps	14.26	28.5
		39 Mbps	14.99	28.5
		52 Mbps	12.16	28.5
		58.5 Mbps	12.64	28.5
		65 Mbps	12.11	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	18.41	28.5
		13 Mbps	18.43	28.5
		19.5 Mbps	18.75	28.5
		26 Mbps	18.70	28.5
		39 Mbps	18.91	28.5
		52 Mbps	18.15	28.5
		58.5 Mbps	17.81	28.5
		65 Mbps	18.34	28.5
2437	6	6.5 Mbps	19.38	28.5
		13 Mbps	19.32	28.5
		19.5 Mbps	19.80	28.5
		26 Mbps	19.51	28.5
		39 Mbps	20.04	28.5
		52 Mbps	18.43	28.5
		58.5 Mbps	17.19	28.5
		65 Mbps	16.97	28.5
2462	11	6.5 Mbps	16.79	28.5
		13 Mbps	16.72	28.5
		19.5 Mbps	17.06	28.5
		26 Mbps	16.96	28.5
		39 Mbps	17.43	28.5
		52 Mbps	16.19	28.5
		58.5 Mbps	16.16	28.5
		65 Mbps	16.07	28.5

5.8 GHz Band

Ant.1

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	13.42	28
		9 Mbps	13.67	28
		12 Mbps	13.87	28
		18 Mbps	14.12	28
		24 Mbps	14.14	28
		36 Mbps	14.17	28
		48 Mbps	13.20	28
		54 Mbps	12.99	28
5785	157	6 Mbps	14.24	28
		9 Mbps	14.84	28
		12 Mbps	14.91	28
		18 Mbps	14.92	28
		24 Mbps	15.16	28
		36 Mbps	14.45	28
		48 Mbps	13.95	28
		54 Mbps	13.62	28
5825	165	6 Mbps	15.10	28
		9 Mbps	15.26	28
		12 Mbps	15.60	28
		18 Mbps	15.58	28
		24 Mbps	15.59	28
		36 Mbps	15.54	28
		48 Mbps	15.46	28
		54 Mbps	14.91	28

■ Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	15.54	28
		9 Mbps	15.64	28
		12 Mbps	15.57	28
		18 Mbps	15.92	28
		24 Mbps	15.64	28
		36 Mbps	15.64	28
		48 Mbps	15.19	28
		54 Mbps	14.26	28
5785	157	6 Mbps	14.72	28
		9 Mbps	14.97	28
		12 Mbps	15.33	28
		18 Mbps	15.65	28
		24 Mbps	15.59	28
		36 Mbps	15.71	28
		48 Mbps	15.17	28
		54 Mbps	15.63	28
5825	165	6 Mbps	14.12	28
		9 Mbps	14.38	28
		12 Mbps	14.51	28
		18 Mbps	14.78	28
		24 Mbps	14.81	28
		36 Mbps	14.63	28
		48 Mbps	13.79	28
		54 Mbps	13.27	28

■ Sum Data of Ant.1 and Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	17.62	24.99
		9 Mbps	17.77	24.99
		12 Mbps	17.81	24.99
		18 Mbps	18.12	24.99
		24 Mbps	17.96	24.99
		36 Mbps	17.98	24.99
		48 Mbps	17.32	24.99
		54 Mbps	16.68	24.99
5785	157	6 Mbps	17.50	24.99
		9 Mbps	17.92	24.99
		12 Mbps	18.14	24.99
		18 Mbps	18.31	24.99
		24 Mbps	18.39	24.99
		36 Mbps	18.13	24.99
		48 Mbps	17.61	24.99
		54 Mbps	17.75	24.99
5825	165	6 Mbps	17.64	24.99
		9 Mbps	17.85	24.99
		12 Mbps	18.10	24.99
		18 Mbps	18.21	24.99
		24 Mbps	18.23	24.99
		36 Mbps	18.12	24.99
		48 Mbps	17.71	24.99
		54 Mbps	17.18	24.99

■ Ant.1

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	13.42	28
		13 Mbps	13.63	28
		19.5 Mbps	13.68	28
		26 Mbps	13.72	28
		39 Mbps	14.35	28
		52 Mbps	12.97	28
		58.5 Mbps	11.63	28
		65 Mbps	12.38	28
5785	157	6.5 Mbps	14.55	28
		13 Mbps	14.49	28
		19.5 Mbps	15.21	28
		26 Mbps	14.59	28
		39 Mbps	15.44	28
		52 Mbps	14.35	28
		58.5 Mbps	12.83	28
		65 Mbps	13.25	28
5825	165	6.5 Mbps	15.38	28
		13 Mbps	15.09	28
		19.5 Mbps	15.38	28
		26 Mbps	15.34	28
		39 Mbps	15.68	28
		52 Mbps	15.14	28
		58.5 Mbps	14.47	28
		65 Mbps	15.02	28

Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	15.31	28
		13 Mbps	15.36	28
		19.5 Mbps	15.79	28
		26 Mbps	15.44	28
		39 Mbps	15.25	28
		52 Mbps	15.78	28
		58.5 Mbps	13.21	28
		65 Mbps	13.11	28
5785	157	6.5 Mbps	15.16	28
		13 Mbps	14.94	28
		19.5 Mbps	14.95	28
		26 Mbps	14.81	28
		39 Mbps	15.63	28
		52 Mbps	14.63	28
		58.5 Mbps	12.13	28
		65 Mbps	12.11	28
5825	165	6.5 Mbps	14.42	28
		13 Mbps	14.85	28
		19.5 Mbps	15.24	28
		26 Mbps	14.54	28
		39 Mbps	14.62	28
		52 Mbps	12.91	28
		58.5 Mbps	12.28	28
		65 Mbps	12.81	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	17.48	28
		13 Mbps	17.59	28
		19.5 Mbps	17.87	28
		26 Mbps	17.68	28
		39 Mbps	17.83	28
		52 Mbps	17.61	28
		58.5 Mbps	15.50	28
		65 Mbps	15.77	28
5785	157	6.5 Mbps	17.88	28
		13 Mbps	17.73	28
		19.5 Mbps	18.09	28
		26 Mbps	17.71	28
		39 Mbps	18.55	28
		52 Mbps	17.50	28
		58.5 Mbps	15.51	28
		65 Mbps	15.73	28
5825	165	6.5 Mbps	17.94	28
		13 Mbps	17.99	28
		19.5 Mbps	18.32	28
		26 Mbps	17.97	28
		39 Mbps	18.19	28
		52 Mbps	17.18	28
		58.5 Mbps	16.52	28
		65 Mbps	17.07	28

■ Ant.1

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	12.00	28
		27 Mbps	11.86	28
		40.5 Mbps	12.08	28
		54 Mbps	11.96	28
		81 Mbps	12.04	28
		108 Mbps	12.25	28
		121.5 Mbps	10.95	28
		135 Mbps	10.10	28
5795	159	13.5 Mbps	12.62	28
		27 Mbps	12.64	28
		40.5 Mbps	13.60	28
		54 Mbps	13.06	28
		81 Mbps	13.12	28
		108 Mbps	13.26	28
		121.5 Mbps	12.04	28
		135 Mbps	11.17	28

■ Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	14.73	28
		27 Mbps	14.25	28
		40.5 Mbps	14.83	28
		54 Mbps	14.43	28
		81 Mbps	14.75	28
		108 Mbps	14.97	28
		121.5 Mbps	13.74	28
		135 Mbps	11.34	28
5795	159	13.5 Mbps	11.99	28
		27 Mbps	12.07	28
		40.5 Mbps	12.41	28
		54 Mbps	12.03	28
		81 Mbps	12.11	28
		108 Mbps	12.36	28
		121.5 Mbps	11.97	28
		135 Mbps	10.88	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	16.59	28
		27 Mbps	16.23	28
		40.5 Mbps	16.68	28
		54 Mbps	16.38	28
		81 Mbps	16.61	28
		108 Mbps	16.83	28
		121.5 Mbps	15.58	28
		135 Mbps	13.77	28
5795	159	13.5 Mbps	15.33	28
		27 Mbps	15.37	28
		40.5 Mbps	16.06	28
		54 Mbps	15.58	28
		81 Mbps	15.66	28
		108 Mbps	15.84	28
		121.5 Mbps	15.02	28
		135 Mbps	14.04	28

Service Port

2.4 GHz Band

Ant.1

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	5.64	28.5
		2 Mbps	5.57	28.5
		5.5 Mbps	5.44	28.5
		11 Mbps	5.50	28.5
2437	6	1 Mbps	11.00	28.5
		2 Mbps	10.97	28.5
		5.5 Mbps	10.93	28.5
		11 Mbps	11.02	28.5
2462	11	1 Mbps	10.24	28.5
		2 Mbps	10.21	28.5
		5.5 Mbps	10.21	28.5
		11 Mbps	10.29	28.5

Ant.2

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	6.10	28.5
		2 Mbps	6.81	28.5
		5.5 Mbps	6.79	28.5
		11 Mbps	6.87	28.5
2437	6	1 Mbps	11.38	28.5
		2 Mbps	11.32	28.5
		5.5 Mbps	11.32	28.5
		11 Mbps	11.34	28.5
2462	11	1 Mbps	10.77	28.5
		2 Mbps	10.72	28.5
		5.5 Mbps	10.67	28.5
		11 Mbps	10.70	28.5

■ Ant.3

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	6.29	28.5
		2 Mbps	6.26	28.5
		5.5 Mbps	6.19	28.5
		11 Mbps	6.32	28.5
2437	6	1 Mbps	11.42	28.5
		2 Mbps	11.38	28.5
		5.5 Mbps	11.34	28.5
		11 Mbps	11.38	28.5
2462	11	1 Mbps	10.76	28.5
		2 Mbps	10.78	28.5
		5.5 Mbps	10.74	28.5
		11 Mbps	10.85	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	8.88	25.49
		2 Mbps	9.24	25.49
		5.5 Mbps	9.18	25.49
		11 Mbps	9.25	25.49
2437	6	1 Mbps	14.21	25.49
		2 Mbps	14.16	25.49
		5.5 Mbps	14.14	25.49
		11 Mbps	14.19	25.49
2462	11	1 Mbps	13.53	25.49
		2 Mbps	13.49	25.49
		5.5 Mbps	13.46	25.49
		11 Mbps	13.51	25.49

■ Sum Data of Ant.1, Ant.2 and Ant.3

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	10.79	23.73
		2 Mbps	11.01	23.73
		5.5 Mbps	10.94	23.73
		11 Mbps	11.04	23.73
2437	6	1 Mbps	16.04	23.73
		2 Mbps	16.00	23.73
		5.5 Mbps	15.98	23.73
		11 Mbps	16.02	23.73
2462	11	1 Mbps	15.37	23.73
		2 Mbps	15.35	23.73
		5.5 Mbps	15.32	23.73
		11 Mbps	15.39	23.73

■ TEST RESULTS Ant 1

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	14.66	28.5
		9 Mbps	14.81	28.5
		12 Mbps	14.80	28.5
		18 Mbps	15.25	28.5
		24 Mbps	15.16	28.5
		36 Mbps	14.69	28.5
		48 Mbps	14.42	28.5
		54 Mbps	14.92	28.5
2437	6	6 Mbps	15.40	28.5
		9 Mbps	15.83	28.5
		12 Mbps	15.68	28.5
		18 Mbps	16.10	28.5
		24 Mbps	16.50	28.5
		36 Mbps	15.53	28.5
		48 Mbps	15.13	28.5
		54 Mbps	15.94	28.5
2462	11	6 Mbps	15.21	28.5
		9 Mbps	15.63	28.5
		12 Mbps	15.83	28.5
		18 Mbps	16.12	28.5
		24 Mbps	15.95	28.5
		36 Mbps	15.63	28.5
		48 Mbps	15.38	28.5
		54 Mbps	15.61	28.5

■ TEST RESULTS Ant 2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	15.62	28.5
		9 Mbps	15.55	28.5
		12 Mbps	16.23	28.5
		18 Mbps	16.24	28.5
		24 Mbps	16.67	28.5
		36 Mbps	15.77	28.5
		48 Mbps	15.45	28.5
		54 Mbps	15.82	28.5
2437	6	6 Mbps	16.10	28.5
		9 Mbps	16.19	28.5
		12 Mbps	16.92	28.5
		18 Mbps	16.93	28.5
		24 Mbps	16.82	28.5
		36 Mbps	16.36	28.5
		48 Mbps	16.32	28.5
		54 Mbps	16.14	28.5
2462	11	6 Mbps	15.73	28.5
		9 Mbps	15.86	28.5
		12 Mbps	16.75	28.5
		18 Mbps	16.57	28.5
		24 Mbps	16.53	28.5
		36 Mbps	16.26	28.5
		48 Mbps	16.09	28.5
		54 Mbps	16.17	28.5

■ TEST RESULTS Ant 3

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	14.99	28.5
		9 Mbps	15.29	28.5
		12 Mbps	15.99	28.5
		18 Mbps	16.05	28.5
		24 Mbps	16.16	28.5
		36 Mbps	15.02	28.5
		48 Mbps	15.11	28.5
		54 Mbps	15.38	28.5
2437	6	6 Mbps	15.84	28.5
		9 Mbps	16.22	28.5
		12 Mbps	16.58	28.5
		18 Mbps	16.51	28.5
		24 Mbps	16.74	28.5
		36 Mbps	16.58	28.5
		48 Mbps	15.99	28.5
		54 Mbps	16.21	28.5
2462	11	6 Mbps	15.69	28.5
		9 Mbps	16.10	28.5
		12 Mbps	16.37	28.5
		18 Mbps	16.49	28.5
		24 Mbps	16.60	28.5
		36 Mbps	16.34	28.5
		48 Mbps	15.82	28.5
		54 Mbps	15.90	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	18.17	25.49
		9 Mbps	18.21	25.49
		12 Mbps	18.59	25.49
		18 Mbps	18.78	25.49
		24 Mbps	18.99	25.49
		36 Mbps	18.27	25.49
		48 Mbps	17.97	25.49
		54 Mbps	18.40	25.49
2437	6	6 Mbps	18.78	25.49
		9 Mbps	19.03	25.49
		12 Mbps	19.36	25.49
		18 Mbps	19.55	25.49
		24 Mbps	19.67	25.49
		36 Mbps	18.98	25.49
		48 Mbps	18.77	25.49
		54 Mbps	19.05	25.49
2462	11	6 Mbps	18.49	25.49
		9 Mbps	18.76	25.49
		12 Mbps	19.33	25.49
		18 Mbps	19.36	25.49
		24 Mbps	19.26	25.49
		36 Mbps	18.97	25.49
		48 Mbps	18.76	25.49
		54 Mbps	18.91	25.49

▣ Sum Data of Ant.1, Ant.2 and Ant.3

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	19.88	23.73
		9 Mbps	20.00	23.73
		12 Mbps	20.49	23.73
		18 Mbps	20.64	23.73
		24 Mbps	20.81	23.73
		36 Mbps	19.96	23.73
		48 Mbps	19.79	23.73
		54 Mbps	20.16	23.73
2437	6	6 Mbps	20.56	23.73
		9 Mbps	20.86	23.73
		12 Mbps	21.20	23.73
		18 Mbps	21.30	23.73
		24 Mbps	21.46	23.73
		36 Mbps	20.95	23.73
		48 Mbps	20.61	23.73
		54 Mbps	20.87	23.73
2462	11	6 Mbps	20.32	23.73
		9 Mbps	20.64	23.73
		12 Mbps	21.10	23.73
		18 Mbps	21.17	23.73
		24 Mbps	21.14	23.73
		36 Mbps	20.86	23.73
		48 Mbps	20.55	23.73
		54 Mbps	20.67	23.73

■ TEST RESULTS Ant 1

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	14.68	28.5
		13 Mbps	14.51	28.5
		19.5 Mbps	15.33	28.5
		26 Mbps	14.85	28.5
		39 Mbps	14.84	28.5
		52 Mbps	15.15	28.5
		58.5 Mbps	14.90	28.5
		65 Mbps	15.13	28.5
2437	6	6.5 Mbps	15.95	28.5
		13 Mbps	16.19	28.5
		19.5 Mbps	16.93	28.5
		26 Mbps	16.14	28.5
		39 Mbps	16.43	28.5
		52 Mbps	16.71	28.5
		58.5 Mbps	16.13	28.5
		65 Mbps	16.48	28.5
2462	11	6.5 Mbps	15.88	28.5
		13 Mbps	15.94	28.5
		19.5 Mbps	15.98	28.5
		26 Mbps	15.86	28.5
		39 Mbps	16.16	28.5
		52 Mbps	16.40	28.5
		58.5 Mbps	16.20	28.5
		65 Mbps	16.43	28.5

■ TEST RESULTS Ant 2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	15.66	28.5
		13 Mbps	15.82	28.5
		19.5 Mbps	16.35	28.5
		26 Mbps	15.53	28.5
		39 Mbps	15.81	28.5
		52 Mbps	16.36	28.5
		58.5 Mbps	15.64	28.5
		65 Mbps	15.87	28.5
2437	6	6.5 Mbps	16.72	28.5
		13 Mbps	16.56	28.5
		19.5 Mbps	17.49	28.5
		26 Mbps	16.39	28.5
		39 Mbps	16.86	28.5
		52 Mbps	16.97	28.5
		58.5 Mbps	16.79	28.5
		65 Mbps	16.80	28.5
2462	11	6.5 Mbps	16.53	28.5
		13 Mbps	16.62	28.5
		19.5 Mbps	16.81	28.5
		26 Mbps	17.02	28.5
		39 Mbps	17.18	28.5
		52 Mbps	17.10	28.5
		58.5 Mbps	17.46	28.5
		65 Mbps	17.21	28.5

■ TEST RESULTS Ant 3

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	15.11	28.5
		13 Mbps	15.31	28.5
		19.5 Mbps	15.70	28.5
		26 Mbps	15.31	28.5
		39 Mbps	15.45	28.5
		52 Mbps	15.93	28.5
		58.5 Mbps	15.85	28.5
		65 Mbps	15.61	28.5
2437	6	6.5 Mbps	16.33	28.5
		13 Mbps	16.54	28.5
		19.5 Mbps	16.53	28.5
		26 Mbps	16.38	28.5
		39 Mbps	16.82	28.5
		52 Mbps	16.77	28.5
		58.5 Mbps	16.74	28.5
		65 Mbps	17.00	28.5
2462	11	6.5 Mbps	16.38	28.5
		13 Mbps	15.98	28.5
		19.5 Mbps	16.77	28.5
		26 Mbps	16.11	28.5
		39 Mbps	16.08	28.5
		52 Mbps	16.63	28.5
		58.5 Mbps	16.76	28.5
		65 Mbps	16.48	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	18.21	28.5
		13 Mbps	18.23	28.5
		19.5 Mbps	18.88	28.5
		26 Mbps	18.22	28.5
		39 Mbps	18.36	28.5
		52 Mbps	18.81	28.5
		58.5 Mbps	18.30	28.5
		65 Mbps	18.53	28.5
2437	6	6.5 Mbps	19.36	28.5
		13 Mbps	19.39	28.5
		19.5 Mbps	20.23	28.5
		26 Mbps	19.28	28.5
		39 Mbps	19.66	28.5
		52 Mbps	19.85	28.5
		58.5 Mbps	19.48	28.5
		65 Mbps	19.66	28.5
2462	11	6.5 Mbps	19.23	28.5
		13 Mbps	19.30	28.5
		19.5 Mbps	19.42	28.5
		26 Mbps	19.49	28.5
		39 Mbps	19.71	28.5
		52 Mbps	19.77	28.5
		58.5 Mbps	19.88	28.5
		65 Mbps	19.85	28.5

■ Sum Data of Ant.1, Ant.2 and Ant 3

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	19.94	28.5
		13 Mbps	20.02	28.5
		19.5 Mbps	20.58	28.5
		26 Mbps	20.01	28.5
		39 Mbps	20.16	28.5
		52 Mbps	20.61	28.5
		58.5 Mbps	20.25	28.5
		65 Mbps	20.32	28.5
2437	6	6.5 Mbps	21.12	28.5
		13 Mbps	21.20	28.5
		19.5 Mbps	21.77	28.5
		26 Mbps	21.08	28.5
		39 Mbps	21.48	28.5
		52 Mbps	21.59	28.5
		58.5 Mbps	21.33	28.5
		65 Mbps	21.54	28.5
2462	11	6.5 Mbps	21.04	28.5
		13 Mbps	20.96	28.5
		19.5 Mbps	21.31	28.5
		26 Mbps	21.13	28.5
		39 Mbps	21.28	28.5
		52 Mbps	21.49	28.5
		58.5 Mbps	21.61	28.5
		65 Mbps	21.49	28.5

5.8 GHz Band

Ant.1

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	10.28	28
		9 Mbps	10.49	28
		12 Mbps	10.67	28
		18 Mbps	10.57	28
		24 Mbps	11.06	28
		36 Mbps	10.42	28
		48 Mbps	9.55	28
		54 Mbps	10.88	28
5785	157	6 Mbps	11.47	28
		9 Mbps	11.49	28
		12 Mbps	11.98	28
		18 Mbps	12.58	28
		24 Mbps	11.97	28
		36 Mbps	11.79	28
		48 Mbps	11.54	28
		54 Mbps	11.80	28
5825	165	6 Mbps	12.79	28
		9 Mbps	13.19	28
		12 Mbps	13.33	28
		18 Mbps	13.81	28
		24 Mbps	13.19	28
		36 Mbps	12.94	28
		48 Mbps	13.04	28
		54 Mbps	12.76	28

Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	11.62	28
		9 Mbps	11.90	28
		12 Mbps	12.27	28
		18 Mbps	12.44	28
		24 Mbps	12.33	28
		36 Mbps	12.04	28
		48 Mbps	11.90	28
		54 Mbps	12.30	28
5785	157	6 Mbps	12.74	28
		9 Mbps	13.08	28
		12 Mbps	13.19	28
		18 Mbps	13.60	28
		24 Mbps	13.21	28
		36 Mbps	13.04	28
		48 Mbps	12.94	28
		54 Mbps	13.42	28
5825	165	6 Mbps	14.29	28
		9 Mbps	14.44	28
		12 Mbps	14.84	28
		18 Mbps	15.23	28
		24 Mbps	14.97	28
		36 Mbps	14.36	28
		48 Mbps	14.59	28
		54 Mbps	14.80	28

■ Ant.3

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	16.16	28
		9 Mbps	16.18	28
		12 Mbps	16.92	28
		18 Mbps	17.07	28
		24 Mbps	16.94	28
		36 Mbps	16.91	28
		48 Mbps	16.15	28
		54 Mbps	16.49	28
5785	157	6 Mbps	15.77	28
		9 Mbps	16.21	28
		12 Mbps	16.75	28
		18 Mbps	16.92	28
		24 Mbps	16.71	28
		36 Mbps	16.70	28
		48 Mbps	16.20	28
		54 Mbps	16.36	28
5825	165	6 Mbps	14.74	28
		9 Mbps	14.79	28
		12 Mbps	15.34	28
		18 Mbps	15.33	28
		24 Mbps	15.43	28
		36 Mbps	14.72	28
		48 Mbps	14.89	28
		54 Mbps	15.18	28

■ Sum Data of Ant.1 and Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	14.01	24.99
		9 Mbps	14.26	24.99
		12 Mbps	14.55	24.99
		18 Mbps	14.62	24.99
		24 Mbps	14.75	24.99
		36 Mbps	14.32	24.99
		48 Mbps	13.89	24.99
		54 Mbps	14.66	24.99
5785	157	6 Mbps	15.16	24.99
		9 Mbps	15.37	24.99
		12 Mbps	15.64	24.99
		18 Mbps	16.13	24.99
		24 Mbps	15.64	24.99
		36 Mbps	15.47	24.99
		48 Mbps	15.31	24.99
		54 Mbps	15.70	24.99
5825	165	6 Mbps	16.61	24.99
		9 Mbps	16.87	24.99
		12 Mbps	17.16	24.99
		18 Mbps	17.59	24.99
		24 Mbps	17.18	24.99
		36 Mbps	16.72	24.99
		48 Mbps	16.89	24.99
		54 Mbps	16.91	24.99

■ Sum Data of Ant.1, Ant.2 and Ant 3

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	18.23	23.23
		9 Mbps	18.34	23.23
		12 Mbps	18.91	23.23
		18 Mbps	19.02	23.23
		24 Mbps	18.99	23.23
		36 Mbps	18.81	23.23
		48 Mbps	18.18	23.23
		54 Mbps	18.68	23.23
5785	157	6 Mbps	18.49	23.23
		9 Mbps	18.82	23.23
		12 Mbps	19.24	23.23
		18 Mbps	19.55	23.23
		24 Mbps	19.22	23.23
		36 Mbps	19.14	23.23
		48 Mbps	18.79	23.23
		54 Mbps	19.05	23.23
5825	165	6 Mbps	18.79	23.23
		9 Mbps	18.96	23.23
		12 Mbps	19.36	23.23
		18 Mbps	19.61	23.23
		24 Mbps	19.40	23.23
		36 Mbps	18.84	23.23
		48 Mbps	19.02	23.23
		54 Mbps	19.14	23.23

■ Ant.1

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	10.43	28
		13 Mbps	10.41	28
		19.5 Mbps	10.89	28
		26 Mbps	10.37	28
		39 Mbps	10.26	28
		52 Mbps	10.65	28
		58.5 Mbps	10.30	28
		65 Mbps	10.13	28
5785	157	6.5 Mbps	11.50	28
		13 Mbps	11.46	28
		19.5 Mbps	11.74	28
		26 Mbps	11.62	28
		39 Mbps	11.83	28
		52 Mbps	12.03	28
		58.5 Mbps	12.06	28
		65 Mbps	11.74	28
5825	165	6.5 Mbps	12.91	28
		13 Mbps	12.71	28
		19.5 Mbps	12.90	28
		26 Mbps	12.98	28
		39 Mbps	13.13	28
		52 Mbps	13.26	28
		58.5 Mbps	12.93	28
		65 Mbps	13.33	28

■ Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	11.17	28
		13 Mbps	10.97	28
		19.5 Mbps	12.04	28
		26 Mbps	11.28	28
		39 Mbps	11.43	28
		52 Mbps	11.72	28
		58.5 Mbps	11.67	28
		65 Mbps	11.71	28
5785	157	6.5 Mbps	12.60	28
		13 Mbps	12.70	28
		19.5 Mbps	12.81	28
		26 Mbps	12.79	28
		39 Mbps	12.72	28
		52 Mbps	13.14	28
		58.5 Mbps	13.54	28
		65 Mbps	13.20	28
5825	165	6.5 Mbps	14.27	28
		13 Mbps	14.54	28
		19.5 Mbps	14.70	28
		26 Mbps	14.73	28
		39 Mbps	14.79	28
		52 Mbps	14.45	28
		58.5 Mbps	14.64	28
		65 Mbps	14.72	28

■ Ant.3

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	16.02	28
		13 Mbps	15.89	28
		19.5 Mbps	16.51	28
		26 Mbps	16.17	28
		39 Mbps	16.31	28
		52 Mbps	16.53	28
		58.5 Mbps	16.85	28
		65 Mbps	16.39	28
5785	157	6.5 Mbps	15.58	28
		13 Mbps	15.80	28
		19.5 Mbps	16.76	28
		26 Mbps	15.82	28
		39 Mbps	15.98	28
		52 Mbps	16.28	28
		58.5 Mbps	16.90	28
		65 Mbps	16.14	28
5825	165	6.5 Mbps	14.75	28
		13 Mbps	15.23	28
		19.5 Mbps	15.53	28
		26 Mbps	14.79	28
		39 Mbps	14.81	28
		52 Mbps	15.05	28
		58.5 Mbps	15.52	28
		65 Mbps	15.43	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	13.83	28
		13 Mbps	13.71	28
		19.5 Mbps	14.51	28
		26 Mbps	13.86	28
		39 Mbps	13.89	28
		52 Mbps	14.23	28
		58.5 Mbps	14.05	28
		65 Mbps	14.00	28
5785	157	6.5 Mbps	15.10	28
		13 Mbps	15.13	28
		19.5 Mbps	15.32	28
		26 Mbps	15.25	28
		39 Mbps	15.31	28
		52 Mbps	15.63	28
		58.5 Mbps	15.87	28
		65 Mbps	15.54	28
5825	165	6.5 Mbps	16.65	28
		13 Mbps	16.73	28
		19.5 Mbps	16.90	28
		26 Mbps	16.95	28
		39 Mbps	17.05	28
		52 Mbps	16.91	28
		58.5 Mbps	16.88	28
		65 Mbps	17.09	28

■ Sum Data of Ant.1, Ant.2 and Ant 3

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	18.07	28
		13 Mbps	17.95	28
		19.5 Mbps	18.64	28
		26 Mbps	18.18	28
		39 Mbps	18.28	28
		52 Mbps	18.54	28
		58.5 Mbps	18.68	28
		65 Mbps	18.37	28
5785	157	6.5 Mbps	18.35	28
		13 Mbps	18.49	28
		19.5 Mbps	19.11	28
		26 Mbps	18.56	28
		39 Mbps	18.67	28
		52 Mbps	18.98	28
		58.5 Mbps	19.43	28
		65 Mbps	18.86	28
5825	165	6.5 Mbps	18.82	28
		13 Mbps	19.06	28
		19.5 Mbps	19.28	28
		26 Mbps	19.02	28
		39 Mbps	19.08	28
		52 Mbps	19.09	28
		58.5 Mbps	19.26	28
		65 Mbps	19.35	28

■ Ant.1

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	11.65	28
		27 Mbps	10.46	28
		40.5 Mbps	10.29	28
		54 Mbps	10.27	28
		81 Mbps	9.90	28
		108 Mbps	10.33	28
		121.5 Mbps	10.64	28
		135 Mbps	10.02	28
5795	159	13.5 Mbps	13.02	28
		27 Mbps	12.47	28
		40.5 Mbps	12.21	28
		54 Mbps	11.87	28
		81 Mbps	11.67	28
		108 Mbps	11.68	28
		121.5 Mbps	11.61	28
		135 Mbps	12.09	28

■ Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	11.89	28
		27 Mbps	12.41	28
		40.5 Mbps	12.37	28
		54 Mbps	12.08	28
		81 Mbps	11.54	28
		108 Mbps	12.22	28
		121.5 Mbps	11.58	28
		135 Mbps	12.16	28
5795	159	13.5 Mbps	13.03	28
		27 Mbps	13.39	28
		40.5 Mbps	13.45	28
		54 Mbps	12.86	28
		81 Mbps	12.78	28
		108 Mbps	12.93	28
		121.5 Mbps	12.74	28
		135 Mbps	13.18	28

■ Ant.3

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	16.71	28
		27 Mbps	17.29	28
		40.5 Mbps	17.12	28
		54 Mbps	16.67	28
		81 Mbps	16.22	28
		108 Mbps	16.15	28
		121.5 Mbps	16.51	28
		135 Mbps	16.26	28
5795	159	13.5 Mbps	15.68	28
		27 Mbps	16.41	28
		40.5 Mbps	16.86	28
		54 Mbps	15.98	28
		81 Mbps	15.83	28
		108 Mbps	15.84	28
		121.5 Mbps	15.66	28
		135 Mbps	16.28	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	14.78	28
		27 Mbps	14.55	28
		40.5 Mbps	14.46	28
		54 Mbps	14.28	28
		81 Mbps	13.81	28
		108 Mbps	14.39	28
		121.5 Mbps	14.15	28
		135 Mbps	14.23	28
5795	159	13.5 Mbps	16.04	28
		27 Mbps	15.96	28
		40.5 Mbps	15.88	28
		54 Mbps	15.40	28
		81 Mbps	15.27	28
		108 Mbps	15.36	28
		121.5 Mbps	15.22	28
		135 Mbps	15.68	28

■ Sum Data of Ant.1, Ant.2 and Ant 3

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	18.86	28
		27 Mbps	19.14	28
		40.5 Mbps	19.00	28
		54 Mbps	18.65	28
		81 Mbps	18.19	28
		108 Mbps	18.37	28
		121.5 Mbps	18.50	28
		135 Mbps	18.37	28
5795	159	13.5 Mbps	18.87	28
		27 Mbps	19.20	28
		40.5 Mbps	19.41	28
		54 Mbps	18.71	28
		81 Mbps	18.57	28
		108 Mbps	18.62	28
		121.5 Mbps	18.46	28
		135 Mbps	19.00	28

Monitoring Port

■ TEST RESULTS-Average

2.4 GHz Band

■ Ant.1

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	1 Mbps	5.53	0.028	5.56	28.5
		2 Mbps	5.48	0.042	5.52	28.5
		5.5 Mbps	5.44	0.096	5.53	28.5
		11 Mbps	5.37	0.160	5.53	28.5
2437	6	1 Mbps	5.04	0.028	5.07	28.5
		2 Mbps	5.03	0.042	5.07	28.5
		5.5 Mbps	4.99	0.096	5.08	28.5
		11 Mbps	4.92	0.160	5.08	28.5
2462	11	1 Mbps	4.92	0.028	4.94	28.5
		2 Mbps	4.80	0.042	4.84	28.5
		5.5 Mbps	4.76	0.096	4.85	28.5
		11 Mbps	4.71	0.160	4.87	28.5

■ Ant.2

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	1 Mbps	5.95	0.028	5.97	28.5
		2 Mbps	5.90	0.042	5.94	28.5
		5.5 Mbps	5.82	0.096	5.92	28.5
		11 Mbps	5.75	0.160	5.91	28.5
2437	6	1 Mbps	5.75	0.028	5.78	28.5
		2 Mbps	5.72	0.042	5.77	28.5
		5.5 Mbps	5.66	0.096	5.76	28.5
		11 Mbps	5.60	0.160	5.76	28.5
2462	11	1 Mbps	5.92	0.028	5.95	28.5
		2 Mbps	5.90	0.042	5.94	28.5
		5.5 Mbps	5.85	0.096	5.95	28.5
		11 Mbps	5.79	0.160	5.95	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	8.78	25.49
		2 Mbps	8.74	25.49
		5.5 Mbps	8.74	25.49
		11 Mbps	8.74	25.49
2437	6	1 Mbps	8.45	25.49
		2 Mbps	8.44	25.49
		5.5 Mbps	8.44	25.49
		11 Mbps	8.45	25.49
2462	11	1 Mbps	8.49	25.49
		2 Mbps	8.44	25.49
		5.5 Mbps	8.44	25.49
		11 Mbps	8.45	25.49

Ant.1

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6 Mbps	6.49	0.106	6.60	28.5
		9 Mbps	6.46	0.151	6.61	28.5
		12 Mbps	6.42	0.200	6.62	28.5
		18 Mbps	6.34	0.282	6.62	28.5
		24 Mbps	6.27	0.366	6.63	28.5
		36 Mbps	6.05	0.531	6.58	28.5
		48 Mbps	5.92	0.667	6.59	28.5
		54 Mbps	5.86	0.738	6.59	28.5
2437	6	6 Mbps	5.79	0.106	5.90	28.5
		9 Mbps	5.76	0.151	5.91	28.5
		12 Mbps	5.71	0.200	5.91	28.5
		18 Mbps	5.65	0.282	5.93	28.5
		24 Mbps	5.57	0.366	5.94	28.5
		36 Mbps	4.48	0.531	5.01	28.5
		48 Mbps	4.35	0.667	5.01	28.5
		54 Mbps	2.69	0.738	3.43	28.5
2462	11	6 Mbps	5.45	0.106	5.56	28.5
		9 Mbps	5.40	0.151	5.55	28.5
		12 Mbps	5.37	0.200	5.56	28.5
		18 Mbps	5.29	0.282	5.57	28.5
		24 Mbps	5.22	0.366	5.59	28.5
		36 Mbps	4.96	0.531	5.49	28.5
		48 Mbps	4.82	0.667	5.49	28.5
		54 Mbps	4.76	0.738	5.50	28.5

■ Ant.2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6 Mbps	6.77	0.106	6.88	28.5
		9 Mbps	6.73	0.151	6.88	28.5
		12 Mbps	6.70	0.200	6.90	28.5
		18 Mbps	6.63	0.282	6.91	28.5
		24 Mbps	6.55	0.366	6.92	28.5
		36 Mbps	6.36	0.531	6.89	28.5
		48 Mbps	6.23	0.667	6.89	28.5
		54 Mbps	6.17	0.738	6.91	28.5
2437	6	6 Mbps	6.21	0.106	6.32	28.5
		9 Mbps	6.12	0.151	6.28	28.5
		12 Mbps	6.07	0.200	6.27	28.5
		18 Mbps	5.99	0.282	6.27	28.5
		24 Mbps	5.91	0.366	6.28	28.5
		36 Mbps	4.31	0.531	4.84	28.5
		48 Mbps	4.21	0.667	4.88	28.5
		54 Mbps	2.98	0.738	3.72	28.5
2462	11	6 Mbps	5.94	0.106	6.05	28.5
		9 Mbps	5.89	0.151	6.04	28.5
		12 Mbps	5.86	0.200	6.06	28.5
		18 Mbps	5.79	0.282	6.07	28.5
		24 Mbps	5.72	0.366	6.08	28.5
		36 Mbps	5.59	0.531	6.12	28.5
		48 Mbps	5.47	0.667	6.14	28.5
		54 Mbps	5.41	0.738	6.15	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	9.75	25.49
		9 Mbps	9.76	25.49
		12 Mbps	9.77	25.49
		18 Mbps	9.78	25.49
		24 Mbps	9.79	25.49
		36 Mbps	9.75	25.49
		48 Mbps	9.76	25.49
		54 Mbps	9.76	25.49
2437	6	6 Mbps	9.12	25.49
		9 Mbps	9.11	25.49
		12 Mbps	9.11	25.49
		18 Mbps	9.12	25.49
		24 Mbps	9.12	25.49
		36 Mbps	7.94	25.49
		48 Mbps	7.96	25.49
		54 Mbps	6.59	25.49
2462	11	6 Mbps	8.82	25.49
		9 Mbps	8.81	25.49
		12 Mbps	8.83	25.49
		18 Mbps	8.84	25.49
		24 Mbps	8.85	25.49
		36 Mbps	8.82	25.49
		48 Mbps	8.83	25.49
		54 Mbps	8.85	25.49

■ Ant.1

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6.5 Mbps	4.97	0.102	5.08	28.5
		13 Mbps	4.87	0.203	5.07	28.5
		19.5 Mbps	4.78	0.295	5.07	28.5
		26 Mbps	4.71	0.384	5.09	28.5
		39 Mbps	4.57	0.530	5.10	28.5
		52 Mbps	4.33	0.676	5.01	28.5
		58.5 Mbps	4.27	0.753	5.02	28.5
		65 Mbps	4.22	0.779	5.00	28.5
2437	6	6.5 Mbps	5.88	0.102	5.98	28.5
		13 Mbps	5.75	0.203	5.95	28.5
		19.5 Mbps	5.66	0.295	5.95	28.5
		26 Mbps	5.60	0.384	5.98	28.5
		39 Mbps	5.46	0.530	5.99	28.5
		52 Mbps	4.35	0.676	5.02	28.5
		58.5 Mbps	2.66	0.753	3.41	28.5
		65 Mbps	2.61	0.779	3.39	28.5
2462	11	6.5 Mbps	2.75	0.102	2.85	28.5
		13 Mbps	2.67	0.203	2.87	28.5
		19.5 Mbps	2.59	0.295	2.89	28.5
		26 Mbps	2.53	0.384	2.92	28.5
		39 Mbps	2.40	0.530	2.93	28.5
		52 Mbps	2.10	0.676	2.78	28.5
		58.5 Mbps	2.04	0.753	2.79	28.5
		65 Mbps	1.99	0.779	2.77	28.5

Ant.2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6.5 Mbps	4.84	0.102	4.94	28.5
		13 Mbps	4.73	0.203	4.93	28.5
		19.5 Mbps	4.64	0.295	4.94	28.5
		26 Mbps	4.58	0.384	4.97	28.5
		39 Mbps	4.45	0.530	4.98	28.5
		52 Mbps	4.11	0.676	4.79	28.5
		58.5 Mbps	4.03	0.753	4.78	28.5
		65 Mbps	3.94	0.779	4.72	28.5
2437	6	6.5 Mbps	6.15	0.102	6.26	28.5
		13 Mbps	6.05	0.203	6.26	28.5
		19.5 Mbps	5.97	0.295	6.26	28.5
		26 Mbps	5.88	0.384	6.26	28.5
		39 Mbps	5.75	0.530	6.28	28.5
		52 Mbps	4.12	0.676	4.80	28.5
		58.5 Mbps	2.97	0.753	3.72	28.5
		65 Mbps	2.89	0.779	3.67	28.5
2462	11	6.5 Mbps	3.60	0.102	3.70	28.5
		13 Mbps	3.46	0.203	3.67	28.5
		19.5 Mbps	3.39	0.295	3.69	28.5
		26 Mbps	3.32	0.384	3.70	28.5
		39 Mbps	3.20	0.530	3.73	28.5
		52 Mbps	2.98	0.676	3.66	28.5
		58.5 Mbps	2.54	0.753	3.29	28.5
		65 Mbps	2.10	0.779	2.88	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	8.02	28.5
		13 Mbps	8.01	28.5
		19.5 Mbps	8.02	28.5
		26 Mbps	8.04	28.5
		39 Mbps	8.05	28.5
		52 Mbps	7.91	28.5
		58.5 Mbps	7.91	28.5
		65 Mbps	7.87	28.5
2437	6	6.5 Mbps	9.13	28.5
		13 Mbps	9.12	28.5
		19.5 Mbps	9.12	28.5
		26 Mbps	9.14	28.5
		39 Mbps	9.15	28.5
		52 Mbps	7.92	28.5
		58.5 Mbps	6.58	28.5
		65 Mbps	6.54	28.5
2462	11	6.5 Mbps	6.31	28.5
		13 Mbps	6.30	28.5
		19.5 Mbps	6.32	28.5
		26 Mbps	6.34	28.5
		39 Mbps	6.36	28.5
		52 Mbps	6.25	28.5
		58.5 Mbps	6.06	28.5
		65 Mbps	5.83	28.5

5.8 GHz Band

Ant.1

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6 Mbps	3.23	0.106	3.34	28
		9 Mbps	3.19	0.151	3.35	28
		12 Mbps	3.17	0.200	3.37	28
		18 Mbps	3.09	0.282	3.38	28
		24 Mbps	2.93	0.366	3.29	28
		36 Mbps	1.66	0.531	2.20	28
		48 Mbps	1.57	0.667	2.23	28
		54 Mbps	0.57	0.738	1.31	28
5785	157	6 Mbps	4.57	0.106	4.67	28
		9 Mbps	4.52	0.151	4.67	28
		12 Mbps	4.47	0.200	4.67	28
		18 Mbps	4.44	0.282	4.72	28
		24 Mbps	4.39	0.366	4.76	28
		36 Mbps	2.86	0.531	3.39	28
		48 Mbps	2.54	0.667	3.20	28
		54 Mbps	1.49	0.738	2.23	28
5825	165	6 Mbps	5.37	0.106	5.48	28
		9 Mbps	5.32	0.151	5.47	28
		12 Mbps	5.28	0.200	5.48	28
		18 Mbps	5.26	0.282	5.54	28
		24 Mbps	5.21	0.366	5.57	28
		36 Mbps	4.44	0.531	4.98	28
		48 Mbps	4.26	0.667	4.93	28
		54 Mbps	2.98	0.738	3.72	28

■ Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6 Mbps	5.51	0.106	5.61	28
		9 Mbps	5.49	0.151	5.64	28
		12 Mbps	5.41	0.200	5.61	28
		18 Mbps	5.38	0.282	5.67	28
		24 Mbps	5.34	0.366	5.70	28
		36 Mbps	4.13	0.531	4.66	28
		48 Mbps	3.88	0.667	4.54	28
		54 Mbps	3.27	0.738	4.01	28
5785	157	6 Mbps	4.68	0.106	4.79	28
		9 Mbps	4.66	0.151	4.81	28
		12 Mbps	4.64	0.200	4.84	28
		18 Mbps	4.62	0.282	4.90	28
		24 Mbps	4.59	0.366	4.96	28
		36 Mbps	3.52	0.531	4.05	28
		48 Mbps	3.28	0.667	3.95	28
		54 Mbps	2.53	0.738	3.27	28
5825	165	6 Mbps	3.85	0.106	3.96	28
		9 Mbps	3.82	0.151	3.97	28
		12 Mbps	3.81	0.200	4.01	28
		18 Mbps	3.79	0.282	4.07	28
		24 Mbps	3.75	0.366	4.12	28
		36 Mbps	2.72	0.531	3.26	28
		48 Mbps	2.56	0.667	3.23	28
		54 Mbps	1.73	0.738	2.47	28

■ Sum Data of Ant.1 and Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	7.63	24.49
		9 Mbps	7.65	24.49
		12 Mbps	7.64	24.49
		18 Mbps	7.68	24.49
		24 Mbps	7.67	24.49
		36 Mbps	6.61	24.49
		48 Mbps	6.55	24.49
		54 Mbps	5.88	24.49
5785	157	6 Mbps	7.74	24.49
		9 Mbps	7.75	24.49
		12 Mbps	7.77	24.49
		18 Mbps	7.82	24.49
		24 Mbps	7.87	24.49
		36 Mbps	6.74	24.49
		48 Mbps	6.60	24.49
		54 Mbps	5.79	24.49
5825	165	6 Mbps	7.79	24.49
		9 Mbps	7.80	24.49
		12 Mbps	7.82	24.49
		18 Mbps	7.88	24.49
		24 Mbps	7.92	24.49
		36 Mbps	7.21	24.49
		48 Mbps	7.17	24.49
		54 Mbps	6.15	24.49

■ Ant.1

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6.5 Mbps	3.02	0.102	3.12	28
		13 Mbps	2.93	0.203	3.13	28
		19.5 Mbps	2.88	0.295	3.18	28
		26 Mbps	2.85	0.384	3.23	28
		39 Mbps	2.77	0.530	3.30	28
		52 Mbps	1.63	0.676	2.31	28
		58.5 Mbps	0.35	0.753	1.11	28
		65 Mbps	0.25	0.779	1.03	28
5785	157	6.5 Mbps	4.39	0.102	4.49	28
		13 Mbps	4.31	0.203	4.51	28
		19.5 Mbps	4.26	0.295	4.56	28
		26 Mbps	4.23	0.384	4.61	28
		39 Mbps	4.16	0.530	4.69	28
		52 Mbps	2.70	0.676	3.38	28
		58.5 Mbps	1.47	0.753	2.23	28
		65 Mbps	1.34	0.779	2.12	28
5825	165	6.5 Mbps	5.28	0.102	5.38	28
		13 Mbps	5.16	0.203	5.36	28
		19.5 Mbps	5.11	0.295	5.41	28
		26 Mbps	5.08	0.384	5.46	28
		39 Mbps	5.01	0.530	5.54	28
		52 Mbps	4.23	0.676	4.91	28
		58.5 Mbps	3.22	0.753	3.98	28
		65 Mbps	2.96	0.779	3.74	28

■ Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6.5 Mbps	5.32	0.102	5.42	28
		13 Mbps	5.20	0.203	5.40	28
		19.5 Mbps	5.16	0.295	5.45	28
		26 Mbps	5.09	0.384	5.48	28
		39 Mbps	5.04	0.530	5.57	28
		52 Mbps	3.98	0.676	4.66	28
		58.5 Mbps	2.11	0.753	2.86	28
		65 Mbps	1.13	0.779	1.91	28
5785	157	6.5 Mbps	4.57	0.102	4.67	28
		13 Mbps	4.39	0.203	4.59	28
		19.5 Mbps	4.30	0.295	4.59	28
		26 Mbps	4.26	0.384	4.64	28
		39 Mbps	4.20	0.530	4.73	28
		52 Mbps	3.16	0.676	3.84	28
		58.5 Mbps	2.31	0.753	3.06	28
		65 Mbps	2.20	0.779	2.98	28
5825	165	6.5 Mbps	3.80	0.102	3.91	28
		13 Mbps	3.85	0.203	4.05	28
		19.5 Mbps	3.76	0.295	4.05	28
		26 Mbps	3.71	0.384	4.09	28
		39 Mbps	3.41	0.530	3.94	28
		52 Mbps	2.71	0.676	3.39	28
		58.5 Mbps	1.23	0.753	1.98	28
		65 Mbps	1.14	0.779	1.92	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	7.43	28
		13 Mbps	7.42	28
		19.5 Mbps	7.47	28
		26 Mbps	7.51	28
		39 Mbps	7.59	28
		52 Mbps	6.65	28
		58.5 Mbps	5.08	28
		65 Mbps	4.50	28
5785	157	6.5 Mbps	7.59	28
		13 Mbps	7.56	28
		19.5 Mbps	7.58	28
		26 Mbps	7.64	28
		39 Mbps	7.72	28
		52 Mbps	6.62	28
		58.5 Mbps	5.68	28
		65 Mbps	5.58	28
5825	165	6.5 Mbps	7.72	28
		13 Mbps	7.76	28
		19.5 Mbps	7.79	28
		26 Mbps	7.84	28
		39 Mbps	7.83	28
		52 Mbps	7.22	28
		58.5 Mbps	6.10	28
		65 Mbps	5.93	28

■ Ant.1

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5755	151	13.5 Mbps	0.70	0.157	0.85	28
		27 Mbps	0.64	0.296	0.93	28
		40.5 Mbps	0.57	0.408	0.97	28
		54 Mbps	0.53	0.504	1.03	28
		81 Mbps	0.45	0.706	1.15	28
		108 Mbps	0.33	0.880	1.21	28
		121.5 Mbps	-0.87	0.918	0.04	28
		135 Mbps	-1.96	0.969	-0.99	28
5795	159	13.5 Mbps	1.72	0.157	1.87	28
		27 Mbps	1.63	0.296	1.93	28
		40.5 Mbps	1.57	0.408	1.97	28
		54 Mbps	1.53	0.504	2.04	28
		81 Mbps	1.45	0.706	2.15	28
		108 Mbps	1.35	0.880	2.23	28
		121.5 Mbps	0.21	0.918	1.13	28
		135 Mbps	-0.96	0.969	0.01	28

■ Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5755	151	13.5 Mbps	3.27	0.157	3.42	28
		27 Mbps	3.15	0.296	3.45	28
		40.5 Mbps	3.07	0.408	3.48	28
		54 Mbps	3.02	0.504	3.53	28
		81 Mbps	2.94	0.706	3.64	28
		108 Mbps	2.89	0.880	3.76	28
		121.5 Mbps	1.85	0.918	2.76	28
		135 Mbps	-1.12	0.969	-0.15	28
5795	159	13.5 Mbps	2.30	0.157	2.45	28
		27 Mbps	2.22	0.296	2.52	28
		40.5 Mbps	2.15	0.408	2.56	28
		54 Mbps	2.13	0.504	2.63	28
		81 Mbps	2.06	0.706	2.76	28
		108 Mbps	2.02	0.880	2.90	28
		121.5 Mbps	1.02	0.918	1.93	28
		135 Mbps	-2.80	0.969	-1.83	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	5.34	28
		27 Mbps	5.38	28
		40.5 Mbps	5.42	28
		54 Mbps	5.47	28
		81 Mbps	5.58	28
		108 Mbps	5.68	28
		121.5 Mbps	4.62	28
		135 Mbps	2.46	28
5795	159	13.5 Mbps	5.18	28
		27 Mbps	5.24	28
		40.5 Mbps	5.28	28
		54 Mbps	5.36	28
		81 Mbps	5.48	28
		108 Mbps	5.59	28
		121.5 Mbps	4.56	28
		135 Mbps	2.19	28

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	1 Mbps	2.72	0.032	2.75	28.5
		2 Mbps	2.61	0.062	2.67	28.5
		5.5 Mbps	2.53	0.117	2.64	28.5
		11 Mbps	2.42	0.212	2.63	28.5
2437	6	1 Mbps	7.76	0.032	7.79	28.5
		2 Mbps	7.76	0.062	7.82	28.5
		5.5 Mbps	7.66	0.117	7.78	28.5
		11 Mbps	7.57	0.212	7.78	28.5
2462	11	1 Mbps	7.47	0.032	7.50	28.5
		2 Mbps	7.43	0.062	7.49	28.5
		5.5 Mbps	7.34	0.117	7.46	28.5
		11 Mbps	7.24	0.212	7.45	28.5

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	1 Mbps	3.26	0.032	3.29	28.5
		2 Mbps	3.06	0.062	3.13	28.5
		5.5 Mbps	3.02	0.117	3.13	28.5
		11 Mbps	2.97	0.212	3.18	28.5
2437	6	1 Mbps	8.11	0.032	8.14	28.5
		2 Mbps	8.00	0.062	8.06	28.5
		5.5 Mbps	7.95	0.117	8.07	28.5
		11 Mbps	7.87	0.212	8.08	28.5
2462	11	1 Mbps	7.90	0.032	7.93	28.5
		2 Mbps	7.75	0.062	7.81	28.5
		5.5 Mbps	7.65	0.117	7.77	28.5
		11 Mbps	7.57	0.212	7.79	28.5

■ Ant.3

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	1 Mbps	3.39	0.032	3.42	28.5
		2 Mbps	3.34	0.062	3.40	28.5
		5.5 Mbps	3.25	0.117	3.37	28.5
		11 Mbps	3.16	0.212	3.38	28.5
2437	6	1 Mbps	8.57	0.032	8.60	28.5
		2 Mbps	8.48	0.062	8.54	28.5
		5.5 Mbps	8.39	0.117	8.51	28.5
		11 Mbps	8.30	0.212	8.51	28.5
2462	11	1 Mbps	8.01	0.032	8.05	28.5
		2 Mbps	7.91	0.062	7.97	28.5
		5.5 Mbps	7.83	0.117	7.95	28.5
		11 Mbps	7.75	0.212	7.96	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	6.04	25.49
		2 Mbps	5.91	25.49
		5.5 Mbps	5.91	25.49
		11 Mbps	5.92	25.49
2437	6	1 Mbps	10.98	25.49
		2 Mbps	10.95	25.49
		5.5 Mbps	10.94	25.49
		11 Mbps	10.94	25.49
2462	11	1 Mbps	10.73	25.49
		2 Mbps	10.66	25.49
		5.5 Mbps	10.63	25.49
		11 Mbps	10.63	25.49

■ Sum Data of Ant.1, Ant.2 and Ant.3

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	7.94	23.73
		2 Mbps	7.85	23.73
		5.5 Mbps	7.83	23.73
		11 Mbps	7.84	23.73
2437	6	1 Mbps	12.96	23.73
		2 Mbps	12.92	23.73
		5.5 Mbps	12.90	23.73
		11 Mbps	12.90	23.73
2462	11	1 Mbps	12.60	23.73
		2 Mbps	12.53	23.73
		5.5 Mbps	12.50	23.73
		11 Mbps	12.51	23.73

■ Ant.1

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6 Mbps	3.62	0.222	3.84	28.5
		9 Mbps	3.55	0.223	3.78	28.5
		12 Mbps	3.48	0.274	3.75	28.5
		18 Mbps	3.35	0.409	3.76	28.5
		24 Mbps	3.20	0.531	3.73	28.5
		36 Mbps	2.87	0.738	3.61	28.5
		48 Mbps	2.60	0.936	3.54	28.5
		54 Mbps	2.47	1.015	3.48	28.5
2437	6	6 Mbps	4.49	0.222	4.71	28.5
		9 Mbps	4.43	0.223	4.65	28.5
		12 Mbps	4.32	0.274	4.60	28.5
		18 Mbps	4.19	0.409	4.60	28.5
		24 Mbps	4.06	0.531	4.59	28.5
		36 Mbps	3.74	0.738	4.48	28.5
		48 Mbps	3.50	0.936	4.43	28.5
		54 Mbps	3.36	1.015	4.38	28.5
2462	11	6 Mbps	4.44	0.222	4.66	28.5
		9 Mbps	4.36	0.223	4.59	28.5
		12 Mbps	4.29	0.274	4.57	28.5
		18 Mbps	4.16	0.409	4.57	28.5
		24 Mbps	4.03	0.531	4.56	28.5
		36 Mbps	3.80	0.738	4.54	28.5
		48 Mbps	3.58	0.936	4.52	28.5
		54 Mbps	3.48	1.015	4.50	28.5

■ Ant.2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6 Mbps	4.25	0.222	4.47	28.5
		9 Mbps	4.18	0.223	4.41	28.5
		12 Mbps	4.11	0.274	4.38	28.5
		18 Mbps	3.98	0.409	4.39	28.5
		24 Mbps	3.85	0.531	4.38	28.5
		36 Mbps	3.61	0.738	4.35	28.5
		48 Mbps	3.41	0.936	4.34	28.5
		54 Mbps	3.31	1.015	4.33	28.5
2437	6	6 Mbps	4.80	0.222	5.02	28.5
		9 Mbps	4.73	0.223	4.95	28.5
		12 Mbps	4.65	0.274	4.93	28.5
		18 Mbps	4.52	0.409	4.93	28.5
		24 Mbps	4.38	0.531	4.91	28.5
		36 Mbps	4.12	0.738	4.86	28.5
		48 Mbps	3.89	0.936	4.83	28.5
		54 Mbps	3.78	1.015	4.79	28.5
2462	11	6 Mbps	4.74	0.222	4.96	28.5
		9 Mbps	4.66	0.223	4.89	28.5
		12 Mbps	4.58	0.274	4.86	28.5
		18 Mbps	4.45	0.409	4.86	28.5
		24 Mbps	4.32	0.531	4.85	28.5
		36 Mbps	4.10	0.738	4.84	28.5
		48 Mbps	3.90	0.936	4.83	28.5
		54 Mbps	3.82	1.015	4.83	28.5

■ Ant.3

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6 Mbps	4.21	0.222	4.43	28.5
		9 Mbps	4.13	0.223	4.35	28.5
		12 Mbps	4.07	0.274	4.34	28.5
		18 Mbps	3.95	0.409	4.36	28.5
		24 Mbps	3.81	0.531	4.34	28.5
		36 Mbps	3.42	0.738	4.16	28.5
		48 Mbps	3.17	0.936	4.11	28.5
		54 Mbps	3.08	1.015	4.09	28.5
2437	6	6 Mbps	5.07	0.222	5.29	28.5
		9 Mbps	4.99	0.223	5.21	28.5
		12 Mbps	4.91	0.274	5.18	28.5
		18 Mbps	4.78	0.409	5.19	28.5
		24 Mbps	4.65	0.531	5.18	28.5
		36 Mbps	4.42	0.738	5.16	28.5
		48 Mbps	4.21	0.936	5.15	28.5
		54 Mbps	4.12	1.015	5.13	28.5
2462	11	6 Mbps	5.01	0.222	5.23	28.5
		9 Mbps	4.93	0.223	5.15	28.5
		12 Mbps	4.85	0.274	5.13	28.5
		18 Mbps	4.72	0.409	5.13	28.5
		24 Mbps	4.60	0.531	5.13	28.5
		36 Mbps	4.37	0.738	5.11	28.5
		48 Mbps	4.17	0.936	5.10	28.5
		54 Mbps	4.09	1.015	5.10	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	7.18	25.49
		9 Mbps	7.11	25.49
		12 Mbps	7.09	25.49
		18 Mbps	7.09	25.49
		24 Mbps	7.08	25.49
		36 Mbps	7.01	25.49
		48 Mbps	6.97	25.49
		54 Mbps	6.94	25.49
2437	6	6 Mbps	7.88	25.49
		9 Mbps	7.81	25.49
		12 Mbps	7.77	25.49
		18 Mbps	7.78	25.49
		24 Mbps	7.76	25.49
		36 Mbps	7.68	25.49
		48 Mbps	7.65	25.49
		54 Mbps	7.60	25.49
2462	11	6 Mbps	7.82	25.49
		9 Mbps	7.75	25.49
		12 Mbps	7.72	25.49
		18 Mbps	7.73	25.49
		24 Mbps	7.72	25.49
		36 Mbps	7.70	25.49
		48 Mbps	7.69	25.49
		54 Mbps	7.68	25.49

■ Sum Data of Ant.1, Ant.2 and Ant 3

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	9.03	23.73
		9 Mbps	8.96	23.73
		12 Mbps	8.94	23.73
		18 Mbps	8.95	23.73
		24 Mbps	8.93	23.73
		36 Mbps	8.82	23.73
		48 Mbps	8.78	23.73
		54 Mbps	8.75	23.73
2437	6	6 Mbps	9.79	23.73
		9 Mbps	9.72	23.73
		12 Mbps	9.68	23.73
		18 Mbps	9.68	23.73
		24 Mbps	9.67	23.73
		36 Mbps	9.61	23.73
		48 Mbps	9.58	23.73
		54 Mbps	9.55	23.73
2462	11	6 Mbps	9.73	23.73
		9 Mbps	9.65	23.73
		12 Mbps	9.63	23.73
		18 Mbps	9.63	23.73
		24 Mbps	9.62	23.73
		36 Mbps	9.61	23.73
		48 Mbps	9.60	23.73
		54 Mbps	9.59	23.73

■ Ant.1

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6.5 Mbps	3.54	0.161	3.70	28.5
		13 Mbps	3.39	0.295	3.68	28.5
		19.5 Mbps	3.25	0.426	3.68	28.5
		26 Mbps	3.15	0.528	3.68	28.5
		39 Mbps	2.92	0.735	3.66	28.5
		52 Mbps	2.74	0.896	3.63	28.5
		58.5 Mbps	2.66	0.969	3.63	28.5
		65 Mbps	2.56	1.082	3.64	28.5
2437	6	6.5 Mbps	5.04	0.161	5.21	28.5
		13 Mbps	4.89	0.295	5.18	28.5
		19.5 Mbps	4.76	0.426	5.18	28.5
		26 Mbps	4.65	0.528	5.18	28.5
		39 Mbps	4.40	0.735	5.14	28.5
		52 Mbps	4.17	0.896	5.07	28.5
		58.5 Mbps	4.06	0.969	5.03	28.5
		65 Mbps	3.95	1.082	5.03	28.5
2462	11	6.5 Mbps	4.80	0.161	4.96	28.5
		13 Mbps	4.65	0.295	4.94	28.5
		19.5 Mbps	4.53	0.426	4.95	28.5
		26 Mbps	4.41	0.528	4.94	28.5
		39 Mbps	4.21	0.735	4.95	28.5
		52 Mbps	4.01	0.896	4.90	28.5
		58.5 Mbps	3.94	0.969	4.91	28.5
		65 Mbps	3.86	1.082	4.94	28.5

■ Ant.2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6.5 Mbps	4.11	0.161	4.27	28.5
		13 Mbps	3.95	0.295	4.25	28.5
		19.5 Mbps	3.82	0.426	4.24	28.5
		26 Mbps	3.71	0.528	4.24	28.5
		39 Mbps	3.50	0.735	4.23	28.5
		52 Mbps	3.30	0.896	4.20	28.5
		58.5 Mbps	3.23	0.969	4.20	28.5
		65 Mbps	3.14	1.082	4.22	28.5
2437	6	6.5 Mbps	5.21	0.161	5.37	28.5
		13 Mbps	5.05	0.295	5.34	28.5
		19.5 Mbps	4.91	0.426	5.34	28.5
		26 Mbps	4.72	0.528	5.25	28.5
		39 Mbps	4.46	0.735	5.20	28.5
		52 Mbps	4.26	0.896	5.15	28.5
		58.5 Mbps	4.16	0.969	5.13	28.5
		65 Mbps	4.07	1.082	5.15	28.5
2462	11	6.5 Mbps	5.18	0.161	5.34	28.5
		13 Mbps	5.09	0.295	5.39	28.5
		19.5 Mbps	4.98	0.426	5.41	28.5
		26 Mbps	4.92	0.528	5.45	28.5
		39 Mbps	4.64	0.735	5.38	28.5
		52 Mbps	4.37	0.896	5.26	28.5
		58.5 Mbps	4.27	0.969	5.24	28.5
		65 Mbps	4.15	1.082	5.24	28.5

Ant.3

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6.5 Mbps	4.16	0.161	4.32	28.5
		13 Mbps	3.98	0.295	4.27	28.5
		19.5 Mbps	3.85	0.426	4.28	28.5
		26 Mbps	3.74	0.528	4.26	28.5
		39 Mbps	3.52	0.735	4.26	28.5
		52 Mbps	3.33	0.896	4.23	28.5
		58.5 Mbps	3.26	0.969	4.23	28.5
		65 Mbps	3.17	1.082	4.25	28.5
2437	6	6.5 Mbps	5.37	0.161	5.53	28.5
		13 Mbps	5.23	0.295	5.53	28.5
		19.5 Mbps	5.10	0.426	5.52	28.5
		26 Mbps	4.99	0.528	5.52	28.5
		39 Mbps	4.79	0.735	5.52	28.5
		52 Mbps	4.60	0.896	5.49	28.5
		58.5 Mbps	4.53	0.969	5.50	28.5
		65 Mbps	4.44	1.082	5.52	28.5
2462	11	6.5 Mbps	5.15	0.161	5.31	28.5
		13 Mbps	4.97	0.295	5.27	28.5
		19.5 Mbps	4.83	0.426	5.26	28.5
		26 Mbps	4.72	0.528	5.24	28.5
		39 Mbps	4.50	0.735	5.23	28.5
		52 Mbps	4.30	0.896	5.20	28.5
		58.5 Mbps	4.25	0.969	5.22	28.5
		65 Mbps	4.16	1.082	5.24	28.5

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	7.00	28.5
		13 Mbps	6.98	28.5
		19.5 Mbps	6.98	28.5
		26 Mbps	6.98	28.5
		39 Mbps	6.97	28.5
		52 Mbps	6.93	28.5
		58.5 Mbps	6.93	28.5
		65 Mbps	6.95	28.5
2437	6	6.5 Mbps	8.30	28.5
		13 Mbps	8.27	28.5
		19.5 Mbps	8.27	28.5
		26 Mbps	8.22	28.5
		39 Mbps	8.18	28.5
		52 Mbps	8.12	28.5
		58.5 Mbps	8.09	28.5
		65 Mbps	8.10	28.5
2462	11	6.5 Mbps	8.16	28.5
		13 Mbps	8.18	28.5
		19.5 Mbps	8.20	28.5
		26 Mbps	8.21	28.5
		39 Mbps	8.18	28.5
		52 Mbps	8.10	28.5
		58.5 Mbps	8.09	28.5
		65 Mbps	8.10	28.5

■ Sum Data of Ant.1, Ant.2 and Ant 3

Conducted Output Power Measurements (802.11n Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6.5 Mbps	8.88	28.5
		13 Mbps	8.85	28.5
		19.5 Mbps	8.85	28.5
		26 Mbps	8.84	28.5
		39 Mbps	8.83	28.5
		52 Mbps	8.80	28.5
		58.5 Mbps	8.80	28.5
		65 Mbps	8.82	28.5
2437	6	6.5 Mbps	10.14	28.5
		13 Mbps	10.12	28.5
		19.5 Mbps	10.12	28.5
		26 Mbps	10.09	28.5
		39 Mbps	10.06	28.5
		52 Mbps	10.01	28.5
		58.5 Mbps	10.00	28.5
		65 Mbps	10.01	28.5
2462	11	6.5 Mbps	9.98	28.5
		13 Mbps	9.97	28.5
		19.5 Mbps	9.98	28.5
		26 Mbps	9.99	28.5
		39 Mbps	9.96	28.5
		52 Mbps	9.90	28.5
		58.5 Mbps	9.90	28.5
		65 Mbps	9.91	28.5

5.8 GHz Band

Ant.1

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6 Mbps	-0.82	0.222	-0.60	28
		9 Mbps	-1.00	0.223	-0.78	28
		12 Mbps	-1.13	0.274	-0.86	28
		18 Mbps	-1.29	0.409	-0.88	28
		24 Mbps	-1.47	0.531	-0.94	28
		36 Mbps	-1.84	0.738	-1.10	28
		48 Mbps	-2.03	0.936	-1.09	28
		54 Mbps	-2.10	1.015	-1.09	28
5785	157	6 Mbps	0.62	0.222	0.85	28
		9 Mbps	0.57	0.223	0.79	28
		12 Mbps	0.51	0.274	0.79	28
		18 Mbps	0.42	0.409	0.83	28
		24 Mbps	0.29	0.531	0.82	28
		36 Mbps	0.06	0.738	0.79	28
		48 Mbps	-0.24	0.936	0.69	28
		54 Mbps	-0.35	1.015	0.66	28
5825	165	6 Mbps	1.86	0.222	2.08	28
		9 Mbps	1.80	0.223	2.03	28
		12 Mbps	1.73	0.274	2.01	28
		18 Mbps	1.63	0.409	2.04	28
		24 Mbps	1.51	0.531	2.04	28
		36 Mbps	1.25	0.738	1.99	28
		48 Mbps	0.87	0.936	1.80	28
		54 Mbps	0.75	1.015	1.76	28

■ Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6 Mbps	0.84	0.222	1.06	28
		9 Mbps	0.79	0.223	1.01	28
		12 Mbps	0.73	0.274	1.00	28
		18 Mbps	0.59	0.409	1.00	28
		24 Mbps	0.50	0.531	1.03	28
		36 Mbps	0.32	0.738	1.06	28
		48 Mbps	0.18	0.936	1.12	28
		54 Mbps	0.10	1.015	1.12	28
5785	157	6 Mbps	1.80	0.222	2.02	28
		9 Mbps	1.74	0.223	1.96	28
		12 Mbps	1.69	0.274	1.97	28
		18 Mbps	1.62	0.409	2.03	28
		24 Mbps	1.54	0.531	2.07	28
		36 Mbps	1.39	0.738	2.12	28
		48 Mbps	1.23	0.936	2.17	28
		54 Mbps	1.17	1.015	2.18	28
5825	165	6 Mbps	3.39	0.222	3.61	28
		9 Mbps	3.31	0.223	3.54	28
		12 Mbps	3.27	0.274	3.55	28
		18 Mbps	3.16	0.409	3.57	28
		24 Mbps	3.07	0.531	3.60	28
		36 Mbps	2.92	0.738	3.66	28
		48 Mbps	2.79	0.936	3.73	28
		54 Mbps	2.76	1.015	3.77	28

■ Ant.3

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6 Mbps	5.09	0.222	5.31	28
		9 Mbps	5.06	0.223	5.28	28
		12 Mbps	4.98	0.274	5.25	28
		18 Mbps	4.84	0.409	5.25	28
		24 Mbps	4.72	0.531	5.25	28
		36 Mbps	4.51	0.738	5.24	28
		48 Mbps	4.14	0.936	5.08	28
		54 Mbps	4.05	1.015	5.07	28
5785	157	6 Mbps	5.00	0.222	5.22	28
		9 Mbps	4.92	0.223	5.14	28
		12 Mbps	4.87	0.274	5.14	28
		18 Mbps	4.75	0.409	5.16	28
		24 Mbps	4.65	0.531	5.18	28
		36 Mbps	4.45	0.738	5.19	28
		48 Mbps	4.26	0.936	5.19	28
		54 Mbps	4.13	1.015	5.15	28
5825	165	6 Mbps	3.74	0.222	3.97	28
		9 Mbps	3.68	0.223	3.90	28
		12 Mbps	3.62	0.274	3.90	28
		18 Mbps	3.53	0.409	3.94	28
		24 Mbps	3.43	0.531	3.96	28
		36 Mbps	3.25	0.738	3.99	28
		48 Mbps	3.11	0.936	4.05	28
		54 Mbps	3.06	1.015	4.07	28

■ Sum Data of Ant.1 and Ant.2

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	3.32	24.99
		9 Mbps	3.22	24.99
		12 Mbps	3.18	24.99
		18 Mbps	3.17	24.99
		24 Mbps	3.17	24.99
		36 Mbps	3.12	24.99
		48 Mbps	3.16	24.99
		54 Mbps	3.16	24.99
5785	157	6 Mbps	4.48	24.99
		9 Mbps	4.43	24.99
		12 Mbps	4.43	24.99
		18 Mbps	4.48	24.99
		24 Mbps	4.50	24.99
		36 Mbps	4.52	24.99
		48 Mbps	4.50	24.99
		54 Mbps	4.50	24.99
5825	165	6 Mbps	5.93	24.99
		9 Mbps	5.86	24.99
		12 Mbps	5.85	24.99
		18 Mbps	5.88	24.99
		24 Mbps	5.90	24.99
		36 Mbps	5.92	24.99
		48 Mbps	5.88	24.99
		54 Mbps	5.89	24.99

■ Sum Data of Ant.1, Ant.2 and Ant 3

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

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6 Mbps	7.44	23.23
		9 Mbps	7.38	23.23
		12 Mbps	7.35	23.23
		18 Mbps	7.34	23.23
		24 Mbps	7.34	23.23
		36 Mbps	7.32	23.23
		48 Mbps	7.24	23.23
		54 Mbps	7.23	23.23
5785	157	6 Mbps	7.88	23.23
		9 Mbps	7.81	23.23
		12 Mbps	7.81	23.23
		18 Mbps	7.84	23.23
		24 Mbps	7.87	23.23
		36 Mbps	7.88	23.23
		48 Mbps	7.87	23.23
		54 Mbps	7.85	23.23
5825	165	6 Mbps	8.07	23.23
		9 Mbps	8.00	23.23
		12 Mbps	8.00	23.23
		18 Mbps	8.03	23.23
		24 Mbps	8.05	23.23
		36 Mbps	8.07	23.23
		48 Mbps	8.07	23.23
		54 Mbps	8.09	23.23

■ Ant.1

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6.5 Mbps	-0.69	0.161	-0.53	28
		13 Mbps	-0.83	0.295	-0.53	28
		19.5 Mbps	-1.00	0.426	-0.57	28
		26 Mbps	-1.18	0.528	-0.65	28
		39 Mbps	-1.57	0.735	-0.84	28
		52 Mbps	-1.96	0.896	-1.06	28
		58.5 Mbps	-2.02	0.969	-1.05	28
		65 Mbps	-2.14	1.082	-1.06	28
5785	157	6.5 Mbps	0.48	0.161	0.64	28
		13 Mbps	0.41	0.295	0.71	28
		19.5 Mbps	0.27	0.426	0.69	28
		26 Mbps	0.19	0.528	0.72	28
		39 Mbps	-0.09	0.735	0.64	28
		52 Mbps	-0.22	0.896	0.67	28
		58.5 Mbps	-0.38	0.969	0.59	28
		65 Mbps	-0.43	1.082	0.65	28
5825	165	6.5 Mbps	1.76	0.161	1.92	28
		13 Mbps	1.63	0.295	1.92	28
		19.5 Mbps	1.51	0.426	1.94	28
		26 Mbps	1.41	0.528	1.94	28
		39 Mbps	1.24	0.735	1.98	28
		52 Mbps	1.00	0.896	1.90	28
		58.5 Mbps	0.80	0.969	1.77	28
		65 Mbps	0.65	1.082	1.73	28

■ Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6.5 Mbps	0.07	0.161	0.23	28
		13 Mbps	-0.05	0.295	0.25	28
		19.5 Mbps	-0.14	0.426	0.29	28
		26 Mbps	-0.19	0.528	0.33	28
		39 Mbps	-0.36	0.735	0.38	28
		52 Mbps	-0.49	0.896	0.41	28
		58.5 Mbps	-0.52	0.969	0.44	28
		65 Mbps	-0.59	1.082	0.49	28
5785	157	6.5 Mbps	1.58	0.161	1.75	28
		13 Mbps	1.46	0.295	1.76	28
		19.5 Mbps	1.35	0.426	1.77	28
		26 Mbps	1.26	0.528	1.79	28
		39 Mbps	1.09	0.735	1.83	28
		52 Mbps	0.95	0.896	1.85	28
		58.5 Mbps	0.91	0.969	1.88	28
		65 Mbps	0.85	1.082	1.93	28
5825	165	6.5 Mbps	3.25	0.161	3.41	28
		13 Mbps	3.14	0.295	3.43	28
		19.5 Mbps	3.01	0.426	3.44	28
		26 Mbps	2.93	0.528	3.45	28
		39 Mbps	2.64	0.735	3.37	28
		52 Mbps	2.39	0.896	3.29	28
		58.5 Mbps	2.35	0.969	3.32	28
		65 Mbps	2.28	1.082	3.36	28

■ Ant.3

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5745	149	6.5 Mbps	4.93	0.161	5.09	28
		13 Mbps	4.78	0.295	5.07	28
		19.5 Mbps	4.68	0.426	5.10	28
		26 Mbps	4.60	0.528	5.13	28
		39 Mbps	4.45	0.735	5.19	28
		52 Mbps	4.30	0.896	5.19	28
		58.5 Mbps	4.26	0.969	5.23	28
		65 Mbps	4.19	1.082	5.27	28
5785	157	6.5 Mbps	4.61	0.161	4.77	28
		13 Mbps	4.50	0.295	4.80	28
		19.5 Mbps	4.43	0.426	4.86	28
		26 Mbps	4.37	0.528	4.89	28
		39 Mbps	4.22	0.735	4.96	28
		52 Mbps	4.08	0.896	4.98	28
		58.5 Mbps	4.05	0.969	5.01	28
		65 Mbps	3.99	1.082	5.07	28
5825	165	6.5 Mbps	3.54	0.161	3.70	28
		13 Mbps	3.41	0.295	3.70	28
		19.5 Mbps	3.29	0.426	3.72	28
		26 Mbps	3.20	0.528	3.73	28
		39 Mbps	3.04	0.735	3.77	28
		52 Mbps	2.89	0.896	3.79	28
		58.5 Mbps	2.86	0.969	3.83	28
		65 Mbps	2.80	1.082	3.89	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	2.88	28
		13 Mbps	2.89	28
		19.5 Mbps	2.89	28
		26 Mbps	2.88	28
		39 Mbps	2.82	28
		52 Mbps	2.75	28
		58.5 Mbps	2.77	28
		65 Mbps	2.80	28
5785	157	6.5 Mbps	4.24	28
		13 Mbps	4.27	28
		19.5 Mbps	4.28	28
		26 Mbps	4.30	28
		39 Mbps	4.29	28
		52 Mbps	4.31	28
		58.5 Mbps	4.29	28
		65 Mbps	4.35	28
5825	165	6.5 Mbps	5.74	28
		13 Mbps	5.75	28
		19.5 Mbps	5.76	28
		26 Mbps	5.77	28
		39 Mbps	5.74	28
		52 Mbps	5.66	28
		58.5 Mbps	5.62	28
		65 Mbps	5.63	28

■ Sum Data of Ant.1, Ant.2 and Ant 3

Conducted Output Power Measurements (802.11n_20 MHz BW Mode: 5745~5825)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5745	149	6.5 Mbps	7.13	28
		13 Mbps	7.12	28
		19.5 Mbps	7.15	28
		26 Mbps	7.16	28
		39 Mbps	7.17	28
		52 Mbps	7.15	28
		58.5 Mbps	7.18	28
		65 Mbps	7.22	28
5785	157	6.5 Mbps	7.52	28
		13 Mbps	7.55	28
		19.5 Mbps	7.59	28
		26 Mbps	7.62	28
		39 Mbps	7.65	28
		52 Mbps	7.67	28
		58.5 Mbps	7.68	28
		65 Mbps	7.74	28
5825	165	6.5 Mbps	7.85	28
		13 Mbps	7.86	28
		19.5 Mbps	7.87	28
		26 Mbps	7.88	28
		39 Mbps	7.88	28
		52 Mbps	7.83	28
		58.5 Mbps	7.83	28
		65 Mbps	7.86	28

■ Ant.1

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5755	151	13.5 Mbps	-1.22	0.228	-0.99	28
		27 Mbps	-1.39	0.421	-0.96	28
		40.5 Mbps	-1.55	0.552	-1.00	28
		54 Mbps	-1.68	0.683	-0.99	28
		81 Mbps	-1.90	0.950	-0.95	28
		108 Mbps	-2.05	1.091	-0.96	28
		121.5 Mbps	-2.12	1.165	-0.96	28
		135 Mbps	-2.25	1.249	-1.00	28
5795	159	13.5 Mbps	0.32	0.228	0.54	28
		27 Mbps	0.15	0.421	0.57	28
		40.5 Mbps	-0.01	0.552	0.54	28
		54 Mbps	-0.15	0.683	0.53	28
		81 Mbps	-0.35	0.950	0.60	28
		108 Mbps	-0.50	1.091	0.59	28
		121.5 Mbps	-0.57	1.165	0.60	28
		135 Mbps	-0.66	1.249	0.59	28

■ Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5755	151	13.5 Mbps	0.38	0.228	0.61	28
		27 Mbps	0.23	0.421	0.65	28
		40.5 Mbps	0.09	0.552	0.64	28
		54 Mbps	-0.03	0.683	0.65	28
		81 Mbps	-0.19	0.950	0.76	28
		108 Mbps	-0.36	1.091	0.73	28
		121.5 Mbps	-0.44	1.165	0.73	28
		135 Mbps	-0.65	1.249	0.60	28
5795	159	13.5 Mbps	1.34	0.228	1.57	28
		27 Mbps	1.17	0.421	1.59	28
		40.5 Mbps	1.04	0.552	1.59	28
		54 Mbps	0.92	0.683	1.60	28
		81 Mbps	0.77	0.950	1.72	28
		108 Mbps	0.63	1.091	1.72	28
		121.5 Mbps	0.58	1.165	1.74	28
		135 Mbps	0.49	1.249	1.74	28

■ Ant.3

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor	Measured Power(dBm) + Duty Cycle Factor	Limit (dBm)
Frequency [MHz]	Channel No.					
5755	151	13.5 Mbps	4.70	0.228	4.92	28
		27 Mbps	4.51	0.421	4.93	28
		40.5 Mbps	4.33	0.552	4.89	28
		54 Mbps	4.22	0.683	4.90	28
		81 Mbps	4.01	0.950	4.96	28
		108 Mbps	3.87	1.091	4.96	28
		121.5 Mbps	3.82	1.165	4.98	28
		135 Mbps	3.74	1.249	4.99	28
5795	159	13.5 Mbps	4.41	0.228	4.63	28
		27 Mbps	4.24	0.421	4.66	28
		40.5 Mbps	4.09	0.552	4.64	28
		54 Mbps	3.98	0.683	4.66	28
		81 Mbps	3.81	0.950	4.76	28
		108 Mbps	3.64	1.091	4.74	28
		121.5 Mbps	3.60	1.165	4.76	28
		135 Mbps	3.51	1.249	4.76	28

■ Sum Data of Ant.1 and Ant.2

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	2.89	28
		27 Mbps	2.93	28
		40.5 Mbps	2.91	28
		54 Mbps	2.92	28
		81 Mbps	3.00	28
		108 Mbps	2.98	28
		121.5 Mbps	2.98	28
		135 Mbps	2.88	28
5795	159	13.5 Mbps	4.10	28
		27 Mbps	4.12	28
		40.5 Mbps	4.11	28
		54 Mbps	4.11	28
		81 Mbps	4.21	28
		108 Mbps	4.20	28
		121.5 Mbps	4.22	28
		135 Mbps	4.21	28

■ Sum Data of Ant.1, Ant.2 and Ant 3

Conducted Output Power Measurements (802.11n_40 MHz BW Mode: 5755~5795)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5755	151	13.5 Mbps	7.04	28
		27 Mbps	7.05	28
		40.5 Mbps	7.02	28
		54 Mbps	7.03	28
		81 Mbps	7.10	28
		108 Mbps	7.09	28
		121.5 Mbps	7.10	28
		135 Mbps	7.07	28
5795	159	13.5 Mbps	7.38	28
		27 Mbps	7.41	28
		40.5 Mbps	7.39	28
		54 Mbps	7.40	28
		81 Mbps	7.50	28
		108 Mbps	7.49	28
		121.5 Mbps	7.51	28
		135 Mbps	7.50	28

8.4 POWER SPECTRAL DENSITY (802.11a/b/g/n)

Test Requirements and limit, §15.247(e)

The peak power spectral 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 power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Limit :

2.4 GHz Band

Operating Mode	Mode	Ant. Gain(dBi)	Limt(dBm)
SISO : Monitoring	802.11b	7.5	6.5
	802.11g		
	802.11n		
SISO : Service	802.11b	7.5	6.5
	802.11g		
	802.11n		
MIMO(2 TX) : Monitoring	802.11b	10.51	3.49
	802.11g		
	802.11n	7.5	6.5
MIMO(2 TX) : Service	802.11b	10.51	3.49
	802.11g		
	802.11n	7.5	6.5
MIMO(3 TX) : Service	802.11b	12.27	1.73
	802.11g		
	802.11n	7.5	6.5

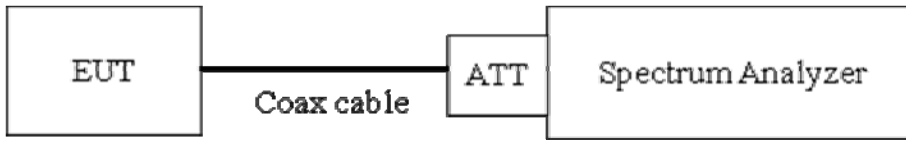
Note : Above the limits is calculated according to antenna gain. Because antenna gain is higher than 6 dBi.

5.8 GHz Band

Operating Mode	Mode	Ant. Gain(dBi)	Limt(dBm)
SISO : Monitoring	802.11a	8	6
	802.11n_20 MHz BW		
	802.11n_40 MHz BW		
SISO : Service	802.11a	8	6
	802.11n_20 MHz BW		
	802.11n_40 MHz BW		
MIMO(2 TX) : Monitoring	802.11a	11.01	2.99
	802.11n_20 MHz BW	8	6
	802.11n_40 MHz BW		
MIMO(2 TX) : Service	802.11a	11.01	2.99
	802.11n_20 MHz BW	8	6
	802.11n_40 MHz BW		
MIMO(3 TX) : Service	802.11a	12.77	1.23
	802.11n_20 MHz BW	8	6
	802.11n_40 MHz BW		

Note : Above the limits is calculated according to antenna gain. Because antenna gain is higher than 6 dBi.

■ TEST CONFIGURATION



■ TEST PROCEDURE

We tested according to Procedure 10.2 in KDB 558074, issued 04/09/2013

The spectrum analyzer is set to :

Set analyzer center frequency to DTS channel center frequency.

Span = 1.5 times the DTS channel bandwidth.

RBW = 3 kHz ≤ RBW ≤ 100 kHz.

VBW ≥ 3 × RBW.

Sweep = auto couple

Detector = peak

Trace Mode = max hold

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

■ Sample Calculation

$$\begin{aligned} \text{PSD} &= \text{Reading Value} + \text{ATT loss} + \text{Cable loss}(1 \text{ ea}) \\ &= -5 \text{ dBm} + 10 \text{ dB} + 0.8 \text{ dB} = 5.8 \text{ dBm} \end{aligned}$$

Note :

1. Spectrum reading values are not plot data. The PSD 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 and 5.8 GHz range that was rounded off to the closest tenth dB. So, 20.5 dB is offset for 2.4 GHz Band and 21.0 dB is offset for 5.8 GHz Band.

Actual value of loss for the attenuator and cable combination is below table. We used the particular cable type that is supported by manufacture.

Band	Loss(dB)
2.4 GHz	20.5
5.8 GHz	21.0

(Actual value of loss for the attenuator and cable combination)

Monitoring Port

■ TEST RESULTS_Ant.1

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-17.898	6.5	Pass
2437	6		-18.858		Pass
2462	11		-18.966		Pass
2412	1	802.11g	-18.971		Pass
2437	6		-19.303		Pass
2462	11		-20.193		Pass
2412	1	802.11n 2.4 GHz Band	-20.823		Pass
2437	6		-19.542		Pass
2462	11		-22.923		Pass
5745	149	802.11a	-24.495	6	Pass
5785	157		-22.009		Pass
5825	165		-20.929		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-23.342		Pass
5785	157		-21.978		Pass
5825	165		-20.252		Pass
5755	151	802.11n_40 MHz BW 5.8 GHz Band	-28.450		Pass
5795	159		-28.182		Pass

Note : In order to simplify the report, attached plots were only the highest PSD channel.

■ TEST RESULTS_Ant.2

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-18.152	6.5	Pass
2437	6		-18.125		Pass
2462	11		-17.735		Pass
2412	1	802.11g	-17.560		Pass
2437	6		-18.320		Pass
2462	11		-19.315		Pass
2412	1	802.11n 2.4 GHz Band	-20.783		Pass
2437	6		-19.242		Pass
2462	11		-21.552		Pass
5745	149	802.11a	-20.102	6	Pass
5785	157		-22.824		Pass
5825	165		-22.515		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-20.155		Pass
5785	157		-21.611		Pass
5825	165		-22.690		Pass
5755	151	802.11n_40 MHz BW 5.8 GHz Band	-25.481		Pass
5795	159		-26.832		Pass

Note : In order to simplify the report, attached plots were only the highest PSD channel.

■ TEST RESULTS_Sum Data of Ant.1 and Ant.2

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-15.01	3.49	Pass
2437	6		-18.86		Pass
2462	11		-18.97		Pass
2412	1	802.11g	-18.97		Pass
2437	6		-19.30		Pass
2462	11		-20.19		Pass
2412	1	802.11n(20M) 2.4 GHz Band	-20.82	6.5	Pass
2437	6		-19.54		Pass
2462	11		-22.92		Pass
5745	149	802.11a	-18.75	3.49	Pass
5785	157		-19.39		Pass
5825	165		-18.64		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-18.45	6.5	Pass
5785	157		-18.78		Pass
5825	165		-18.29		Pass
5755	151	802.11n_40 MHz BW	-23.71		Pass
5795	159	5.8 GHz Band	-24.44		Pass

Service Port

■ TEST RESULTS_Ant.1

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-20.130	6.5	Pass
2437	6		-16.209		Pass
2462	11		-16.735		Pass
2412	1	802.11g	-20.991		Pass
2437	6		-20.499		Pass
2462	11		-20.744		Pass
2412	1	802.11n 2.4 GHz Band	-21.335		Pass
2437	6		-11.781		Pass
2462	11		-20.256		Pass
5745	149	802.11a	-27.206	6	Pass
5785	157		-25.192		Pass
5825	165		-23.641		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-27.761		Pass
5785	157		-25.485		Pass
5825	165		-23.854		Pass
5755	151	802.11n_40 MHz BW 5.8 GHz Band	-26.879		Pass
5795	159		-29.146		Pass

Note : In order to simplify the report, attached plots were only the highest PSD channel.

■ TEST RESULTS_Ant.2

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-20.849	6.5	Pass
2437	6		-15.796		Pass
2462	11		-15.720		Pass
2412	1	802.11g	-21.614		Pass
2437	6		-19.361		Pass
2462	11		-20.437		Pass
2412	1	802.11n 2.4 GHz Band	-20.585		Pass
2437	6		-19.999		Pass
2462	11		-20.341		Pass
5745	149	802.11a	-25.772	6	Pass
5785	157		-24.011		Pass
5825	165		-23.162		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-27.030		Pass
5785	157		-25.777		Pass
5825	165		-22.710		Pass
5755	151	802.11n_40 MHz BW 5.8 GHz Band	-28.906		Pass
5795	159		-27.491		Pass

Note : In order to simplify the report, attached plots were only the highest PSD channel.

■ TEST RESULTS_Ant.3

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-20.827	6.5	Pass
2437	6		-14.711		Pass
2462	11		-16.126		Pass
2412	1	802.11g	-21.219		Pass
2437	6		-20.291		Pass
2462	11		-19.477		Pass
2412	1	802.11n 2.4 GHz Band	-20.997		Pass
2437	6		-20.304		Pass
2462	11		-19.034		Pass
5745	149	802.11a	-20.870	6	Pass
5785	157		-20.900		Pass
5825	165		-22.393		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-21.645		Pass
5785	157		-21.397		Pass
5825	165		-22.811		Pass
5755	151	802.11n_40 MHz BW 5.8 GHz Band	-23.839		Pass
5795	159		-24.539		Pass

Note : In order to simplify the report, attached plots were only the highest PSD channel.

■ TEST RESULTS_Sum Data of Ant.1 and Ant.2

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-17.46	3.49	Pass
2437	6		-12.99		Pass
2462	11		-13.19		Pass
2412	1	802.11g	-18.28	3.49	Pass
2437	6		-16.88		Pass
2462	11		-17.58		Pass
2412	1	802.11n(20M) 2.4 GHz Band	-17.93	6.5	Pass
2437	6		-11.17		Pass
2462	11		-17.29		Pass
5745	149	802.11a	-23.42	2.99	Pass
5785	157		-21.55		Pass
5825	165		-20.38		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-24.37	6	Pass
5785	157		-22.62		Pass
5825	165		-20.23		Pass
5755	151	802.11n_40 MHz BW 5.8 GHz Band	-24.76	6	Pass
5795	159		-25.23		Pass

■ TEST RESULTS_Sum Data of Ant.1, Ant.2 and Ant 3

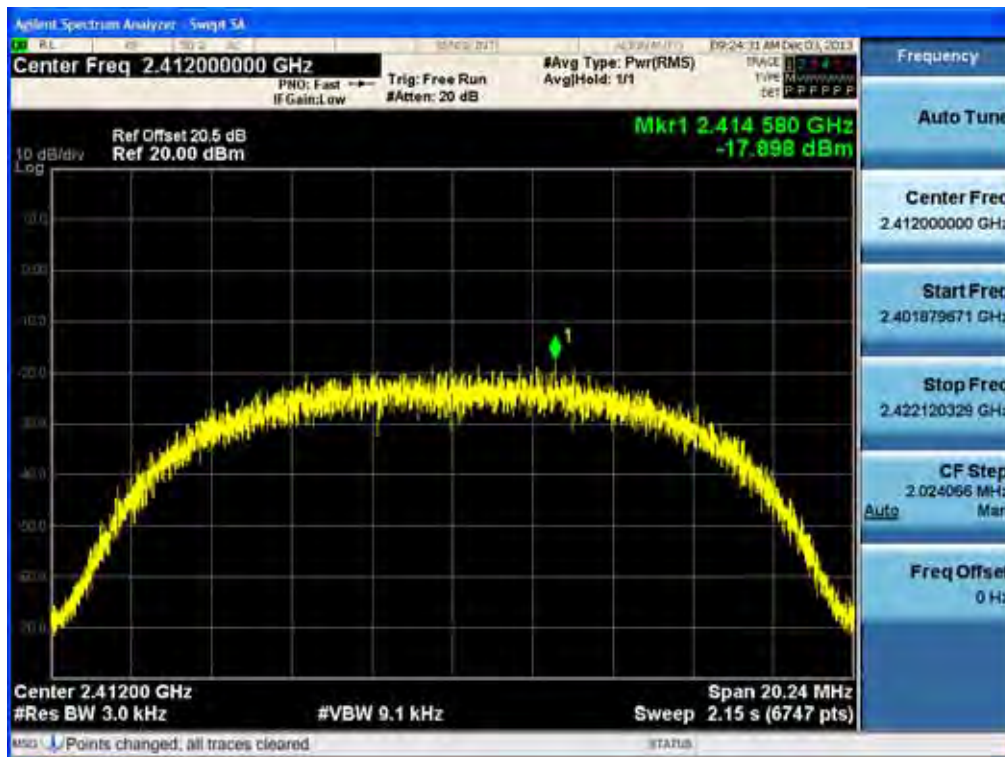
Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-15.82	1.73	Pass
2437	6		-10.75		Pass
2462	11		-11.40		Pass
2412	1	802.11g	-16.50	1.73	Pass
2437	6		-15.25		Pass
2462	11		-15.41		Pass
2412	1	802.11n(20M) 2.4 GHz Band	-16.19	6.5	Pass
2437	6		-10.67		Pass
2462	11		-15.06		Pass
5745	149	802.11a	-18.95	1.23	Pass
5785	157		-18.20		Pass
5825	165		-18.26		Pass
5745	149	802.11n_20 MHz BW 5.8 GHz Band	-19.79	6	Pass
5785	157		-18.95		Pass
5825	165		-18.32		Pass
5755	151	802.11n_40 MHz BW 5.8 GHz Band	-21.27	6	Pass
5795	159		-21.86		Pass

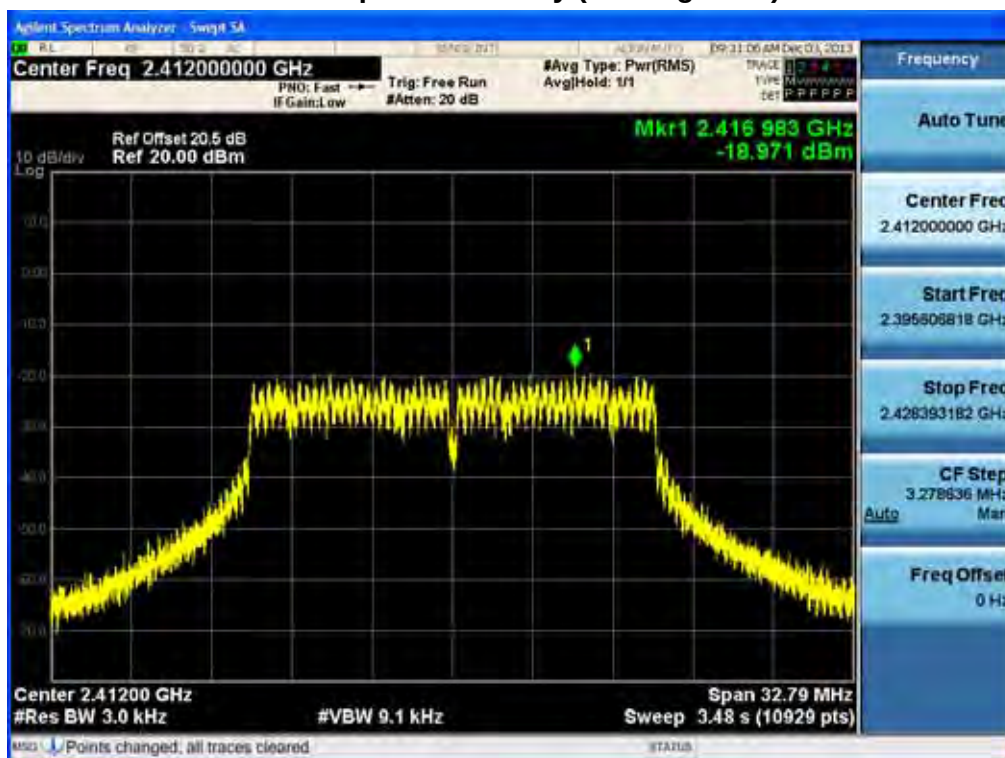
Monitoring Port Ant.1

RESULT PLOTS

Power Spectral Density (802.11b-CH 1)

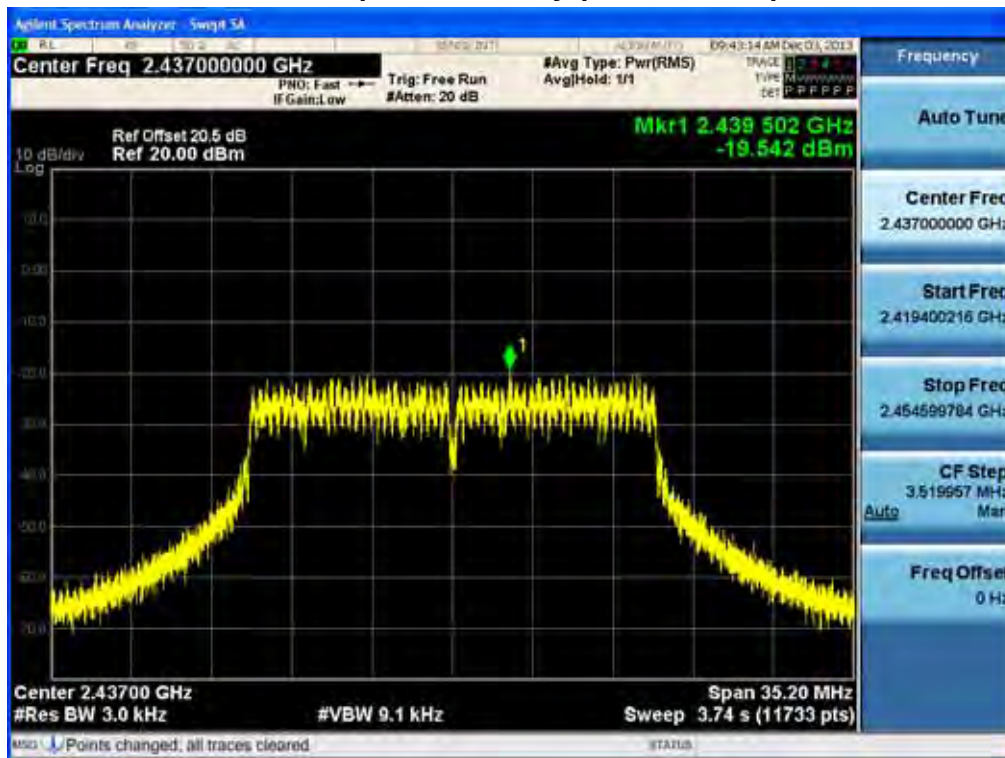


Power Spectral Density (802.11g-CH 1)



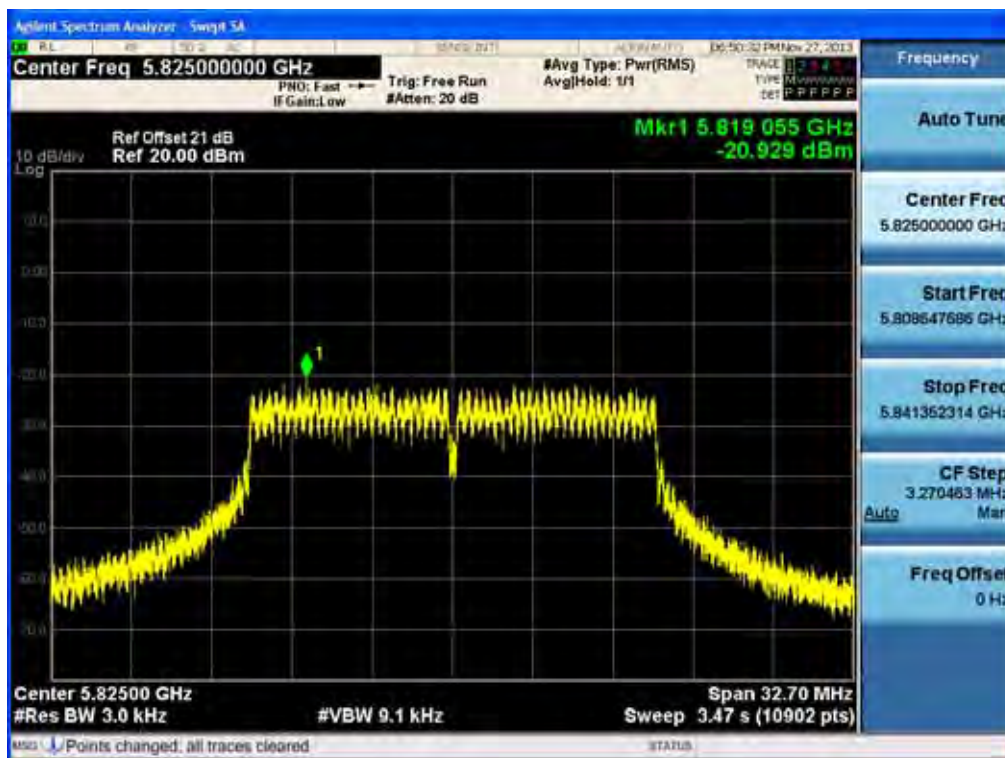
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Power Spectral Density (802.11n-CH 6)



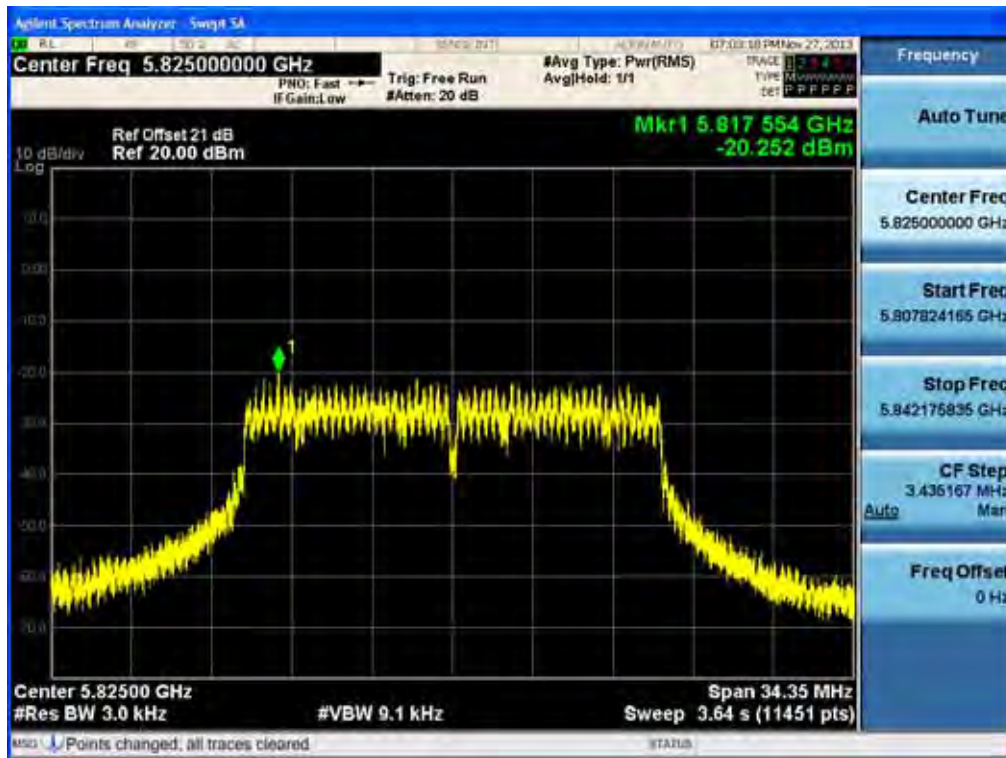
20 MHz BW

Power Spectral Density (802.11a-CH 165)



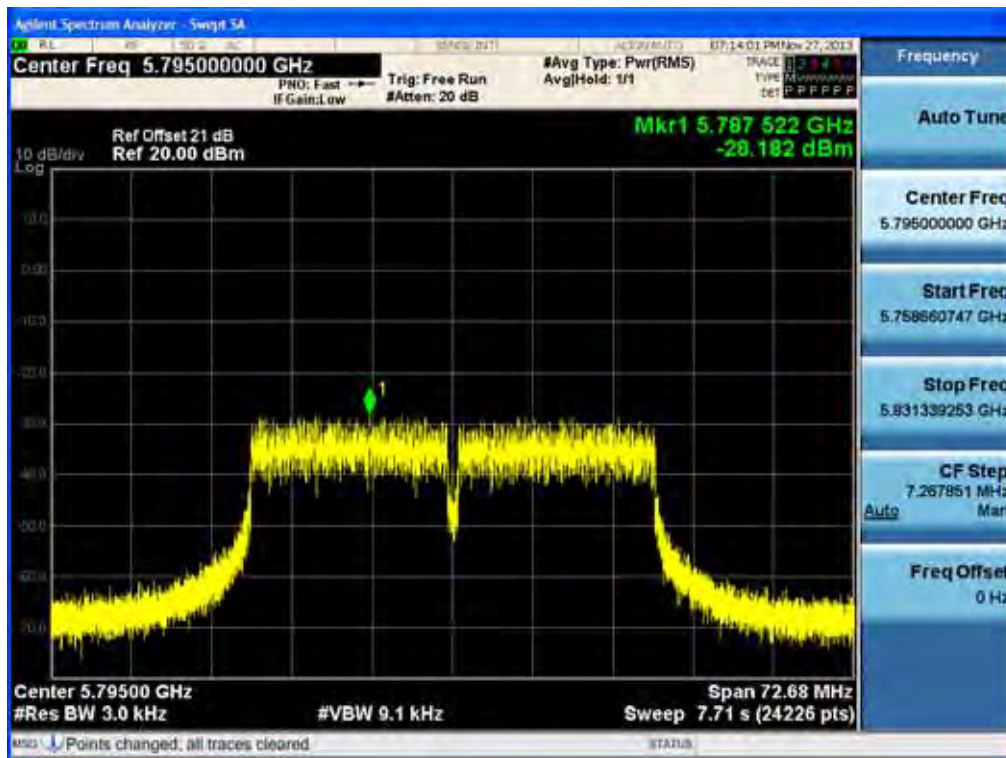
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Power Spectral Density (802.11n-CH 165)



40 MHz BW

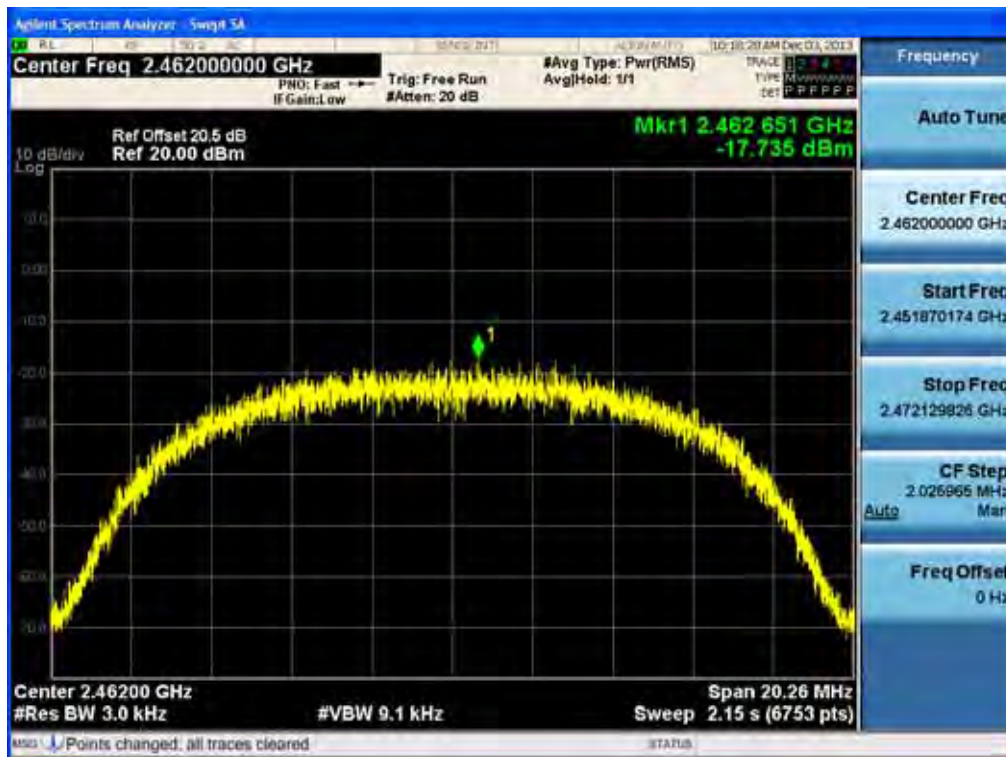
Power Spectral Density (802.11n-CH 159)



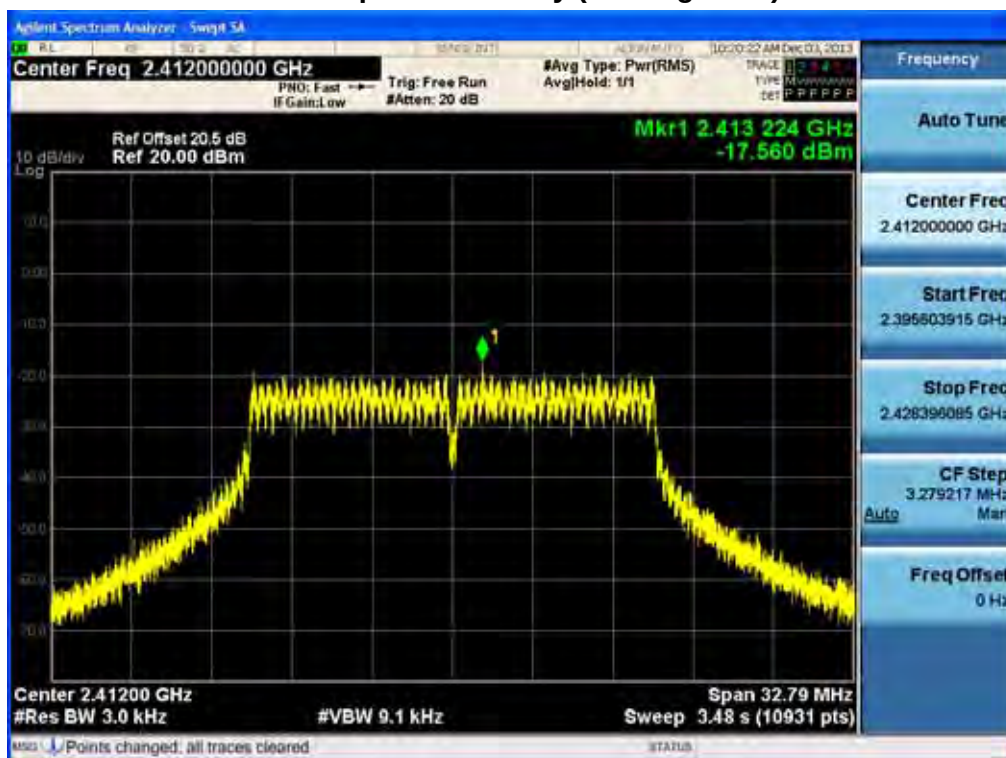
Monitoring Port Ant.2

RESULT PLOTS

Power Spectral Density (802.11b-CH 11)

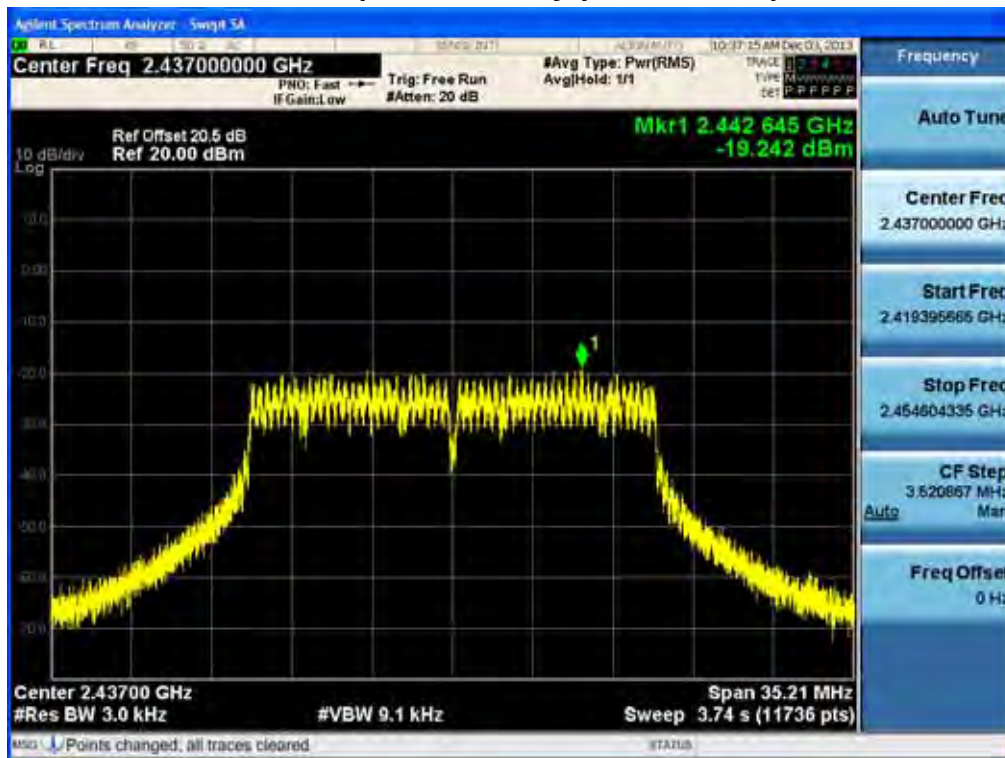


Power Spectral Density (802.11g-CH 1)



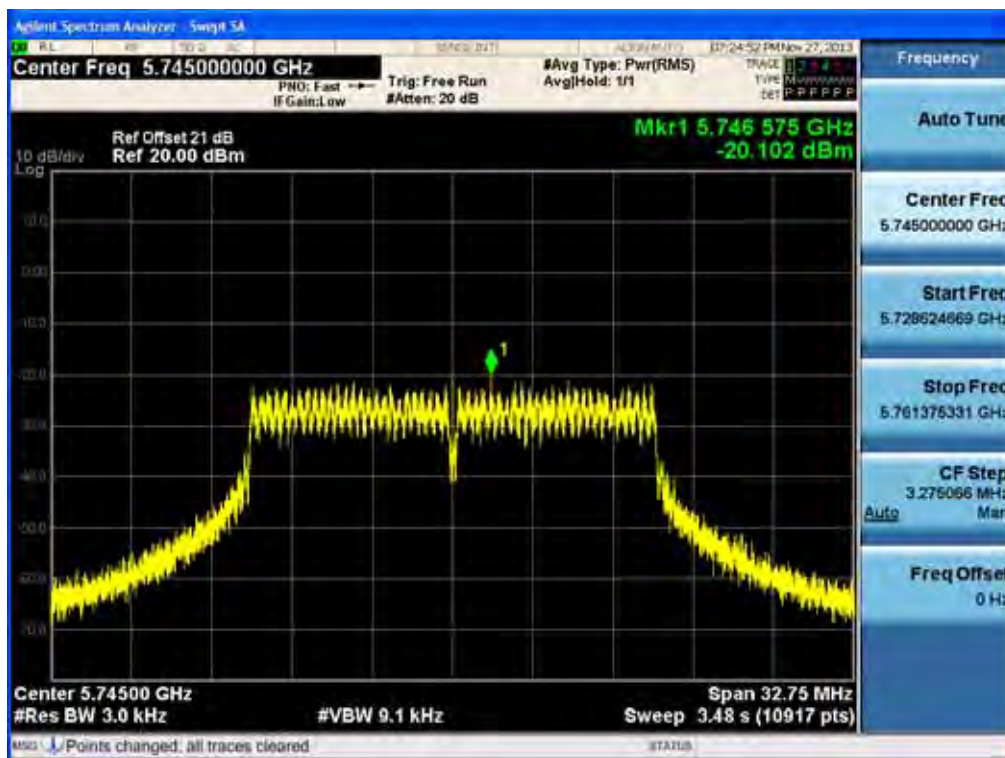
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Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Power Spectral Density (802.11n-CH 6)



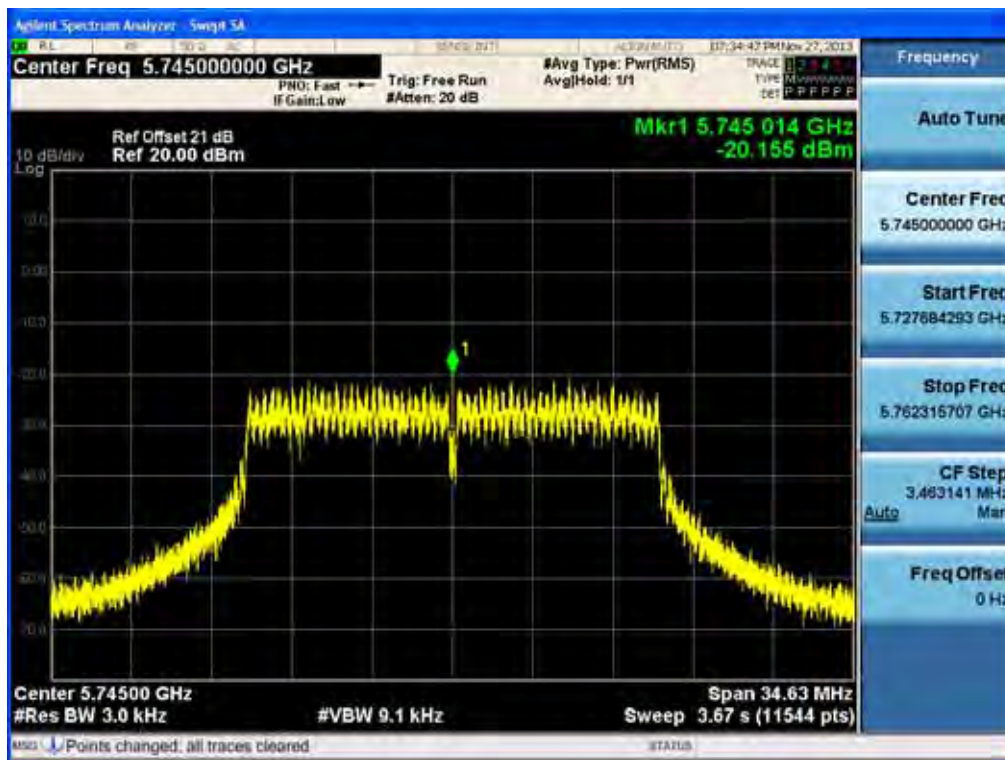
20 MHz BW

Power Spectral Density (802.11a-CH 149)



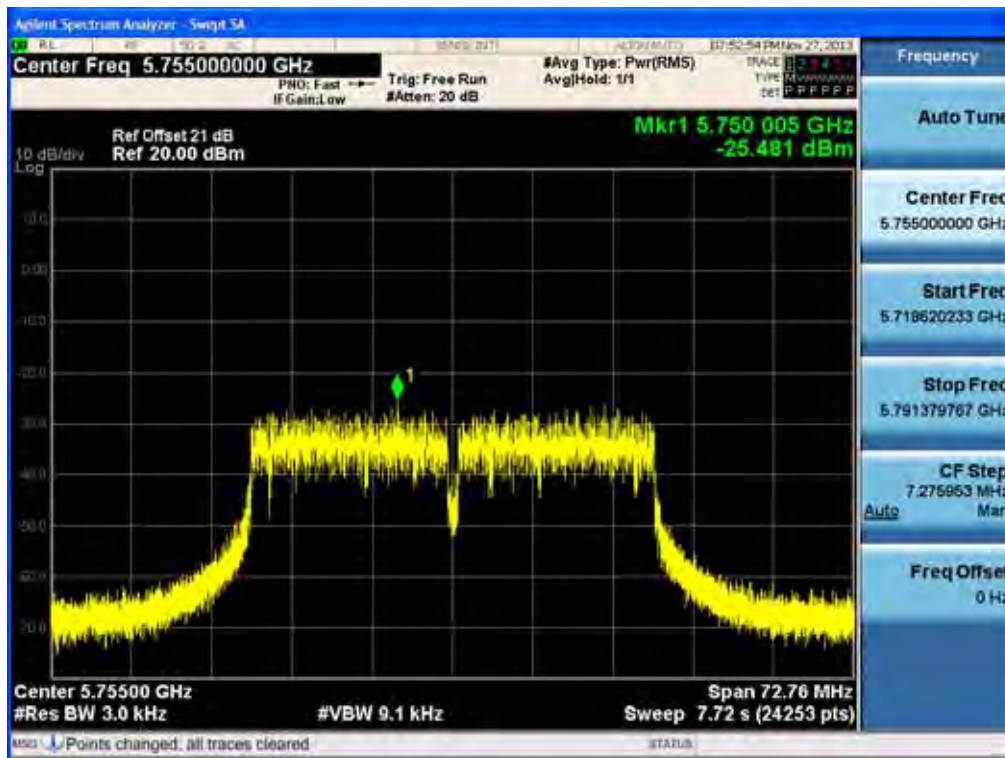
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Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Power Spectral Density (802.11n-CH 149)



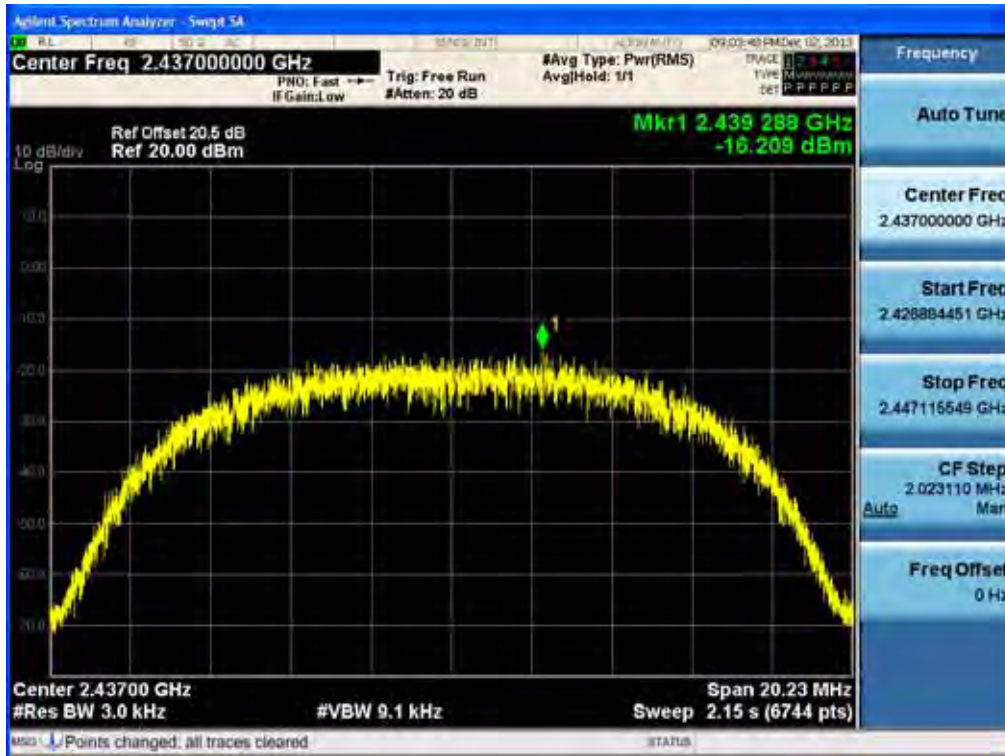
40 MHz BW

Power Spectral Density (802.11n-CH 151)

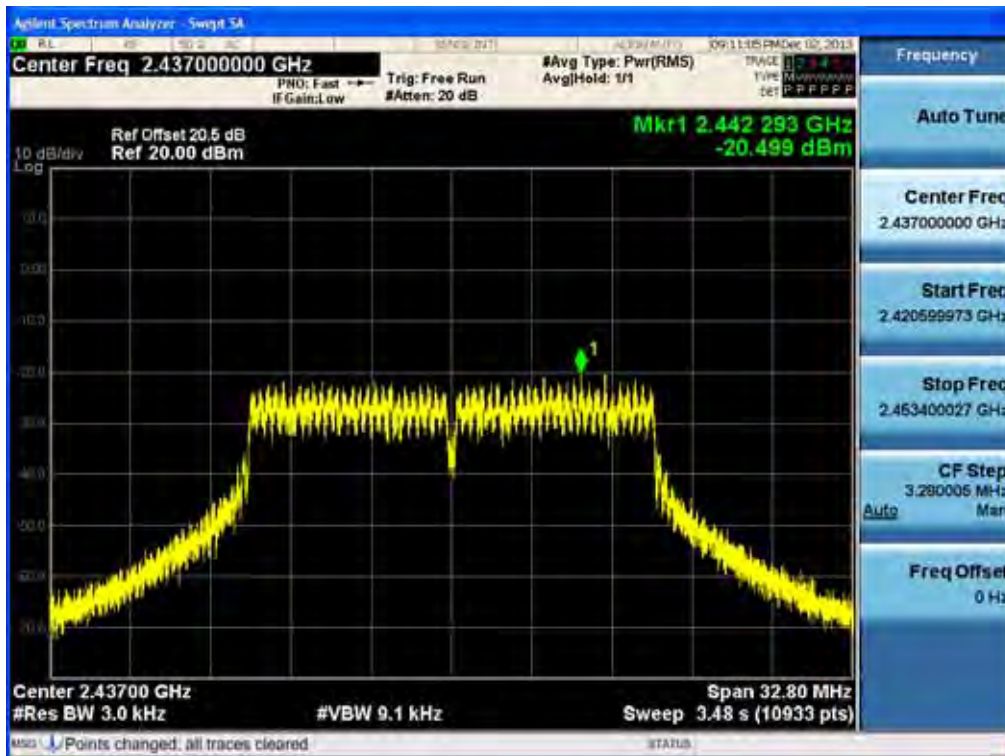


RESULT PLOTS

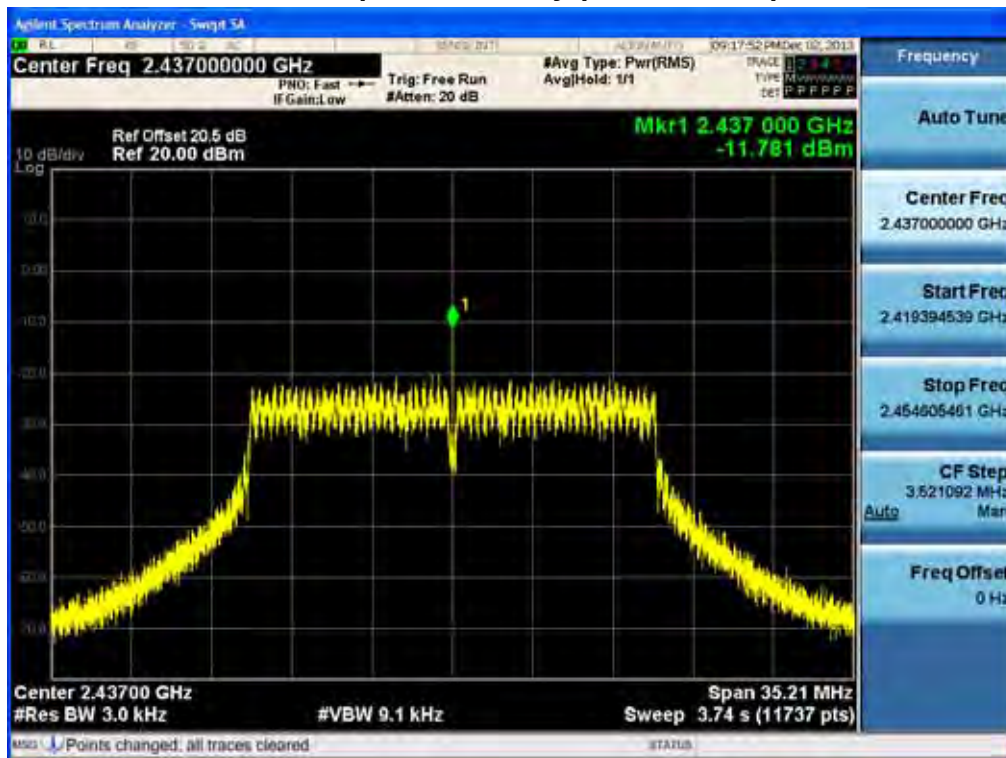
Power Spectral Density (802.11b-CH 6)



Power Spectral Density (802.11g-CH 6)

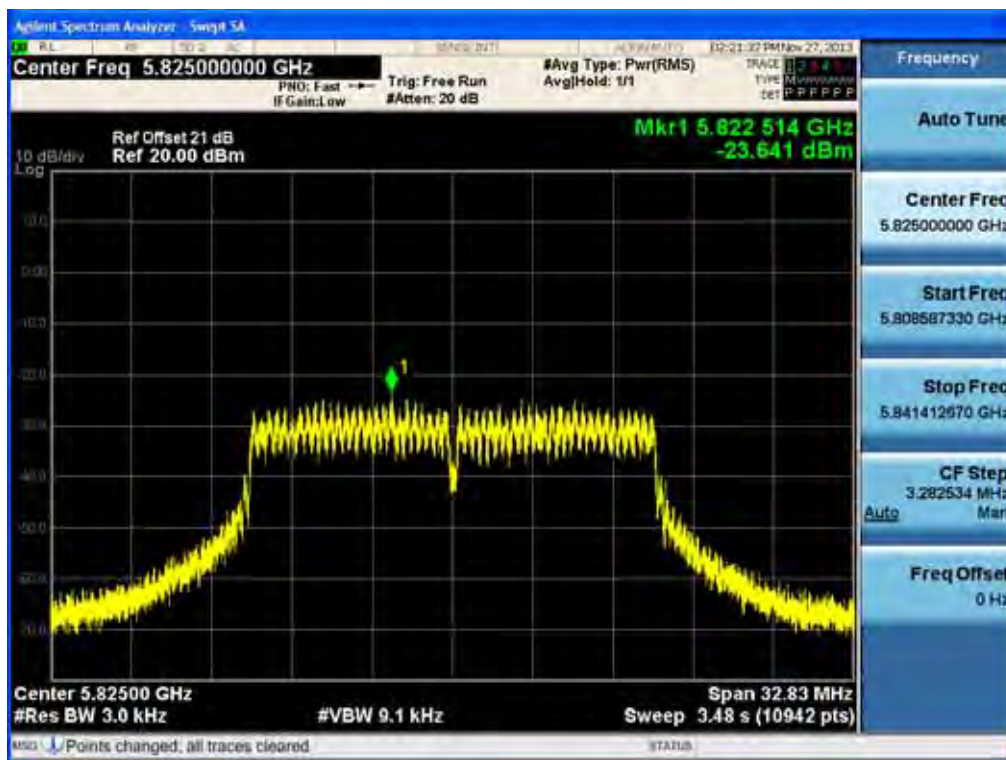


Power Spectral Density (802.11n-CH 6)



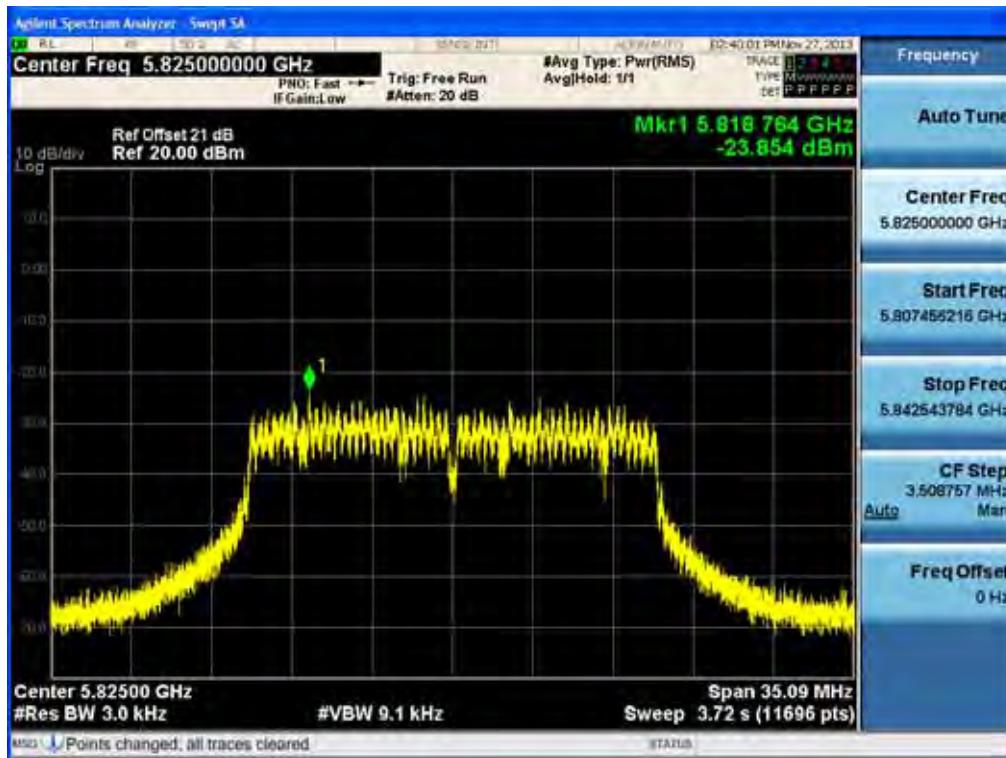
20 MHz BW

Power Spectral Density (802.11a-CH 165)



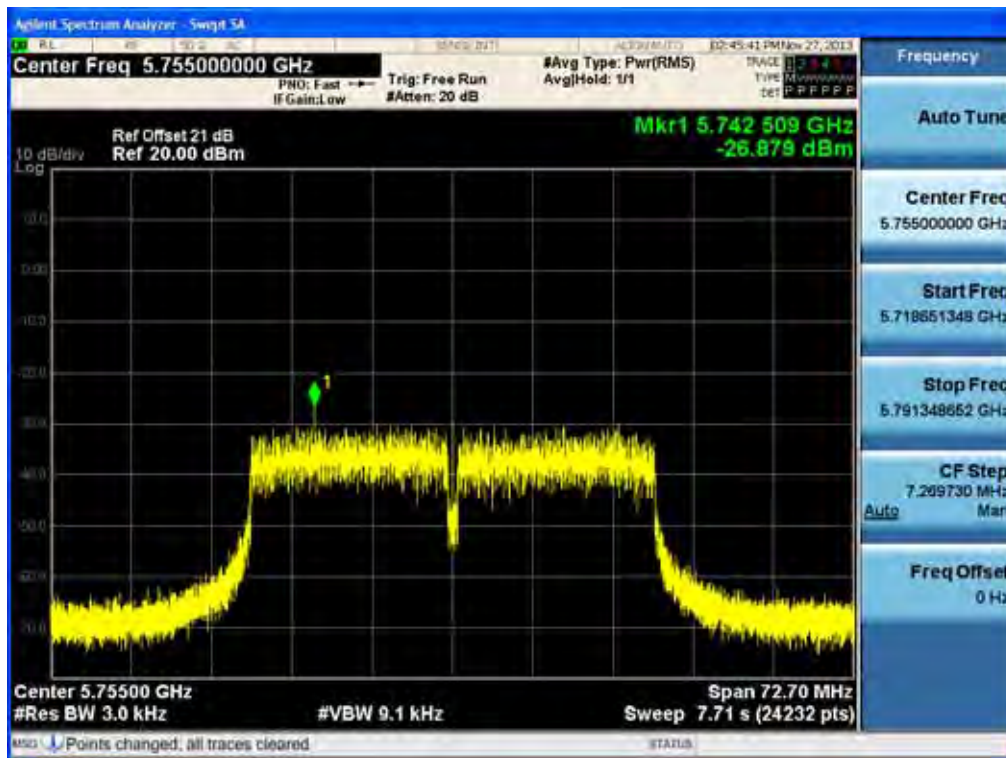
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Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Power Spectral Density (802.11n-CH 165)



40 MHz BW

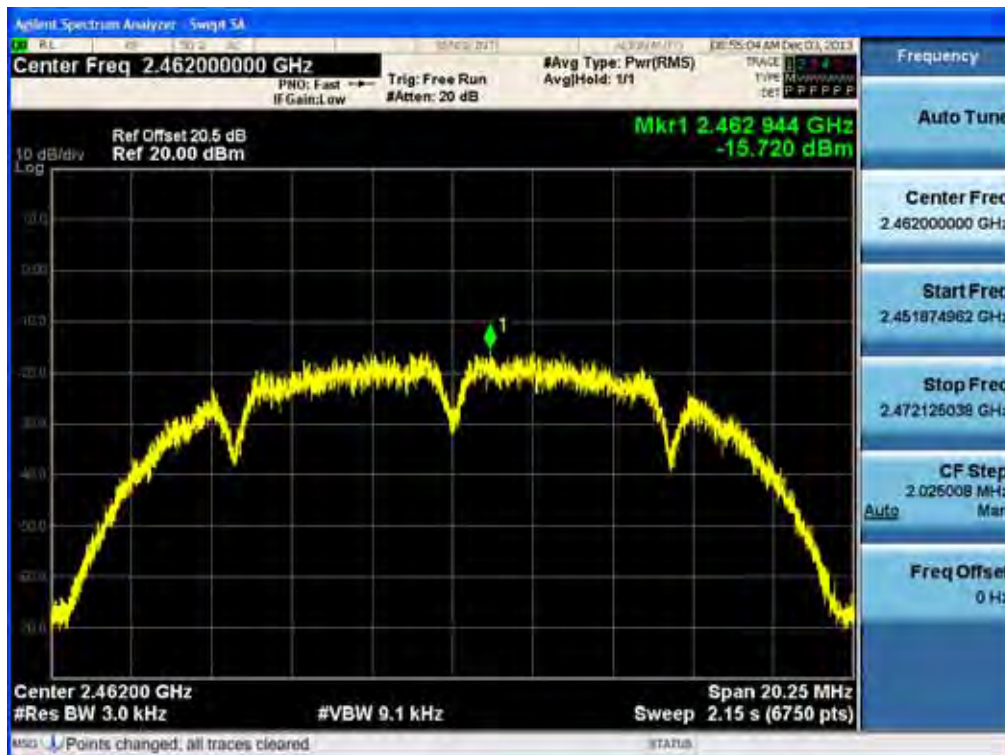
Power Spectral Density (802.11n-CH 151)



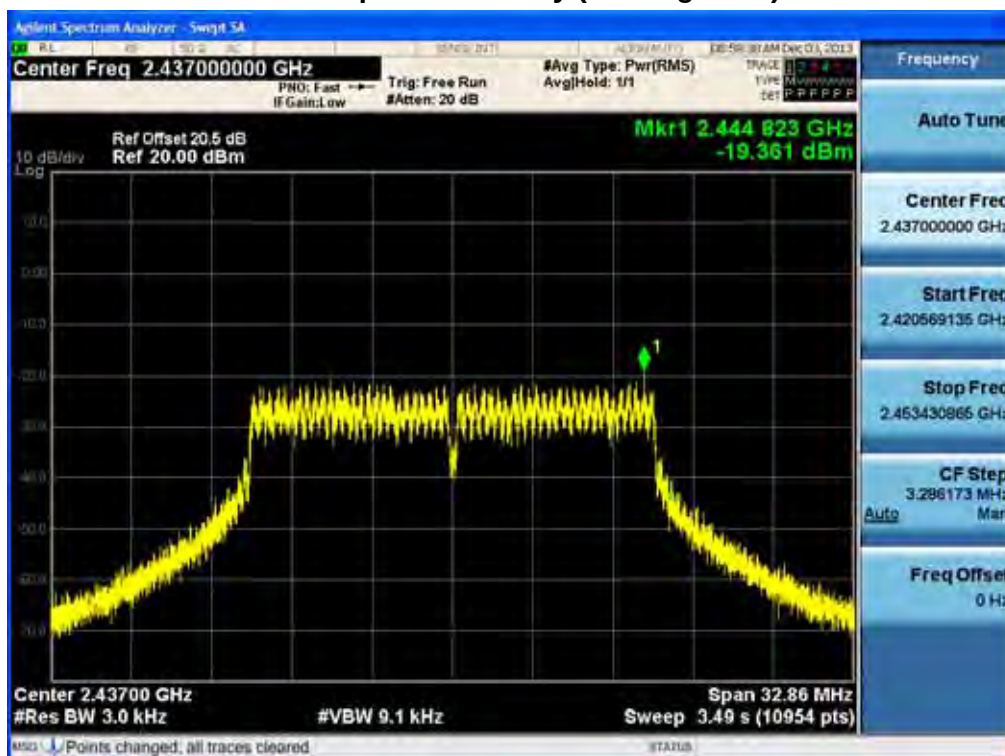
Service Port Ant.2

RESULT PLOTS

Power Spectral Density (802.11b-CH 11)

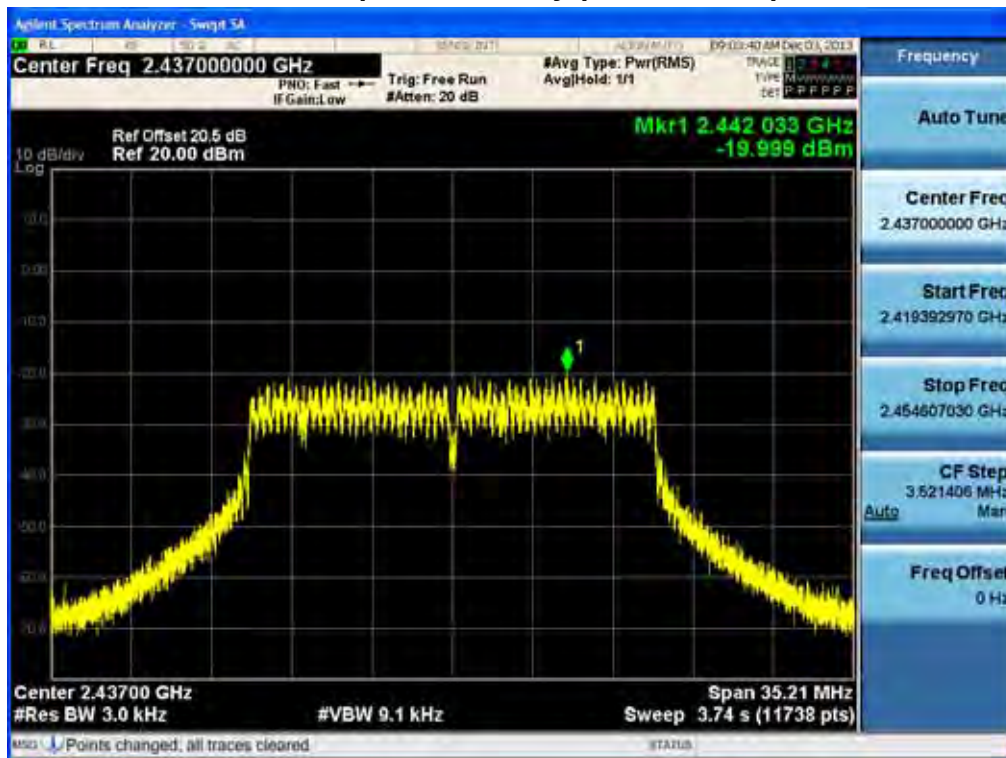


Power Spectral Density (802.11g-CH 6)



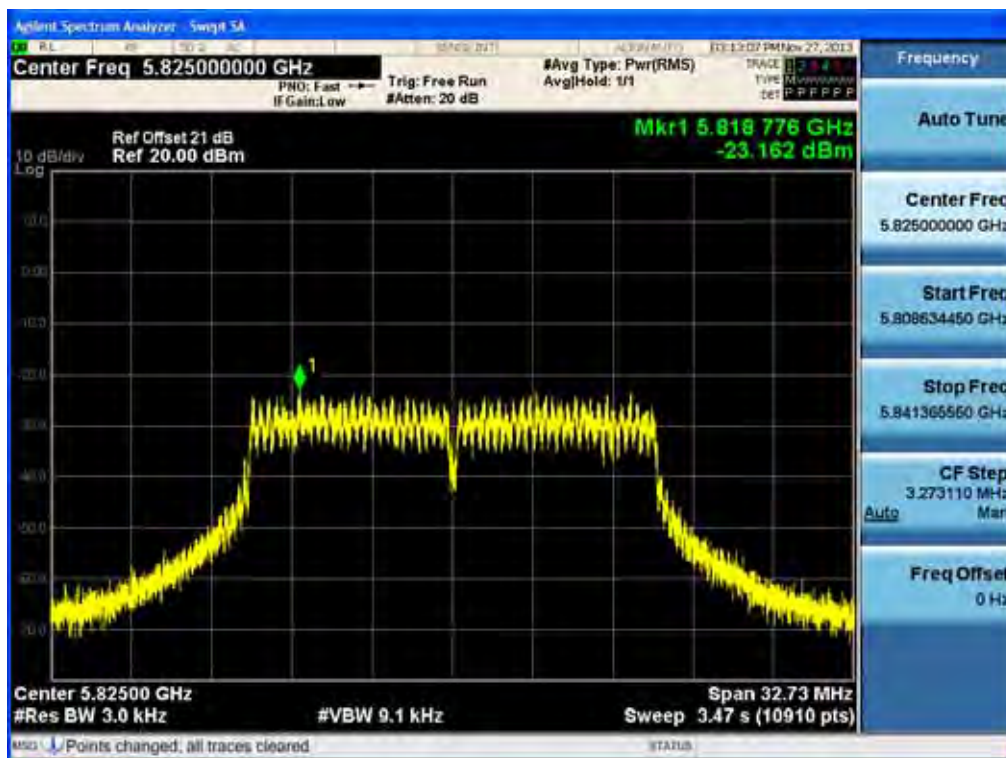
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Power Spectral Density (802.11n-CH 6)



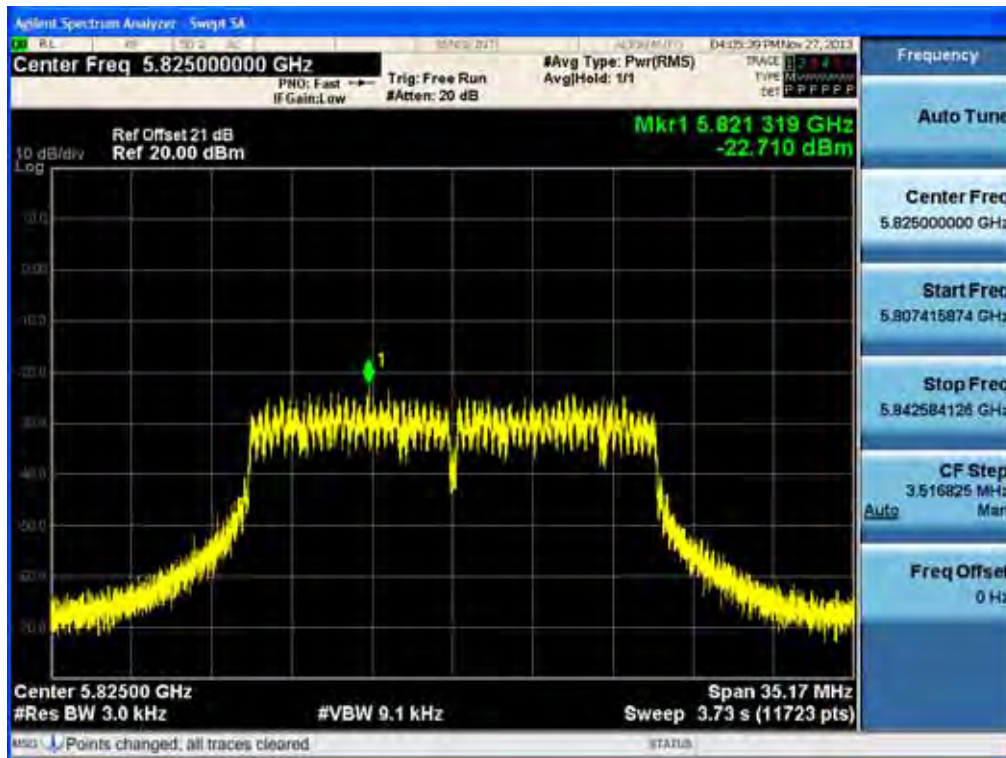
20 MHz BW

Power Spectral Density (802.11a-CH 165)



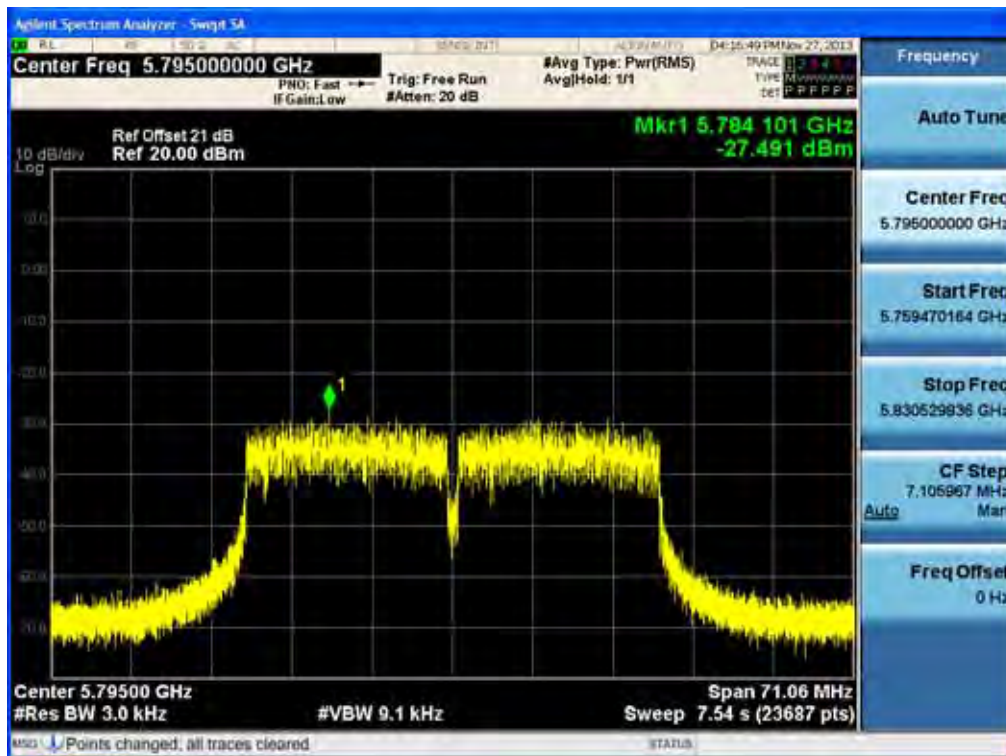
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Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Power Spectral Density (802.11n-CH 165)



40 MHz BW

Power Spectral Density (802.11n-CH 159)

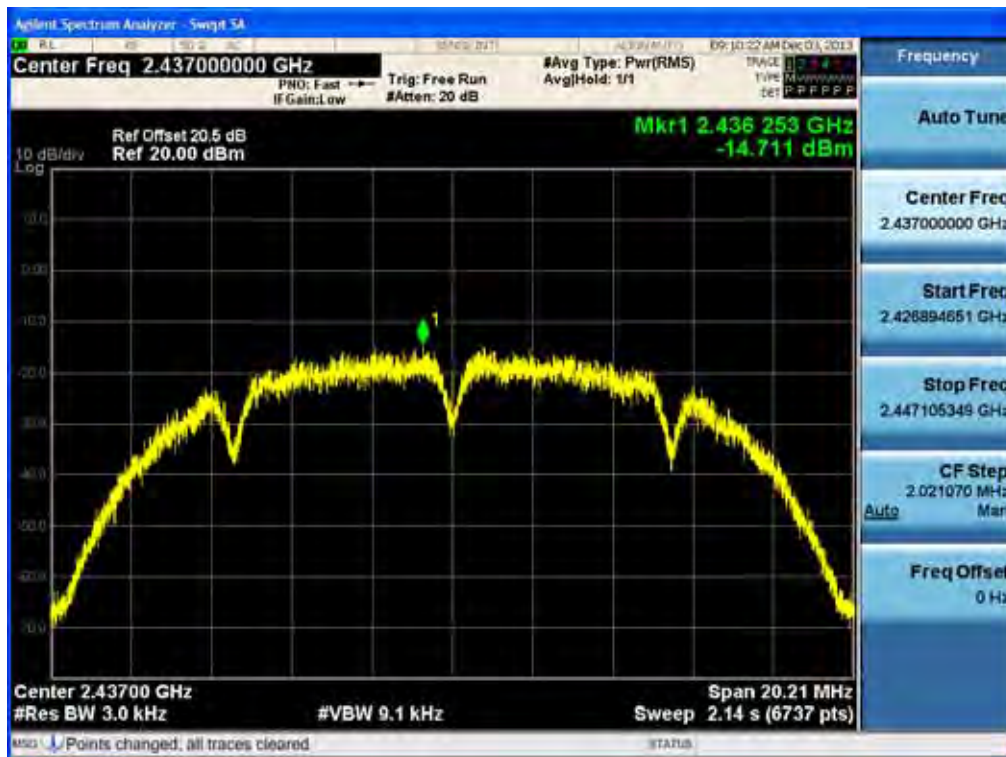


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1312FR20-1	Date of Issue: January 02, 2014	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

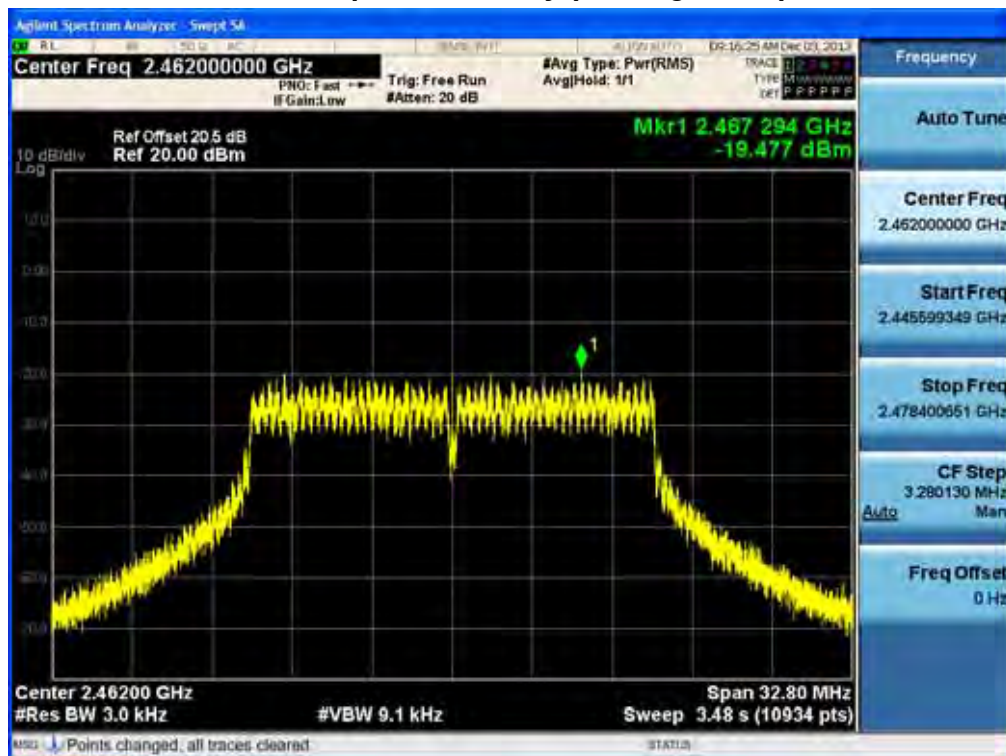
Service Port Ant.3

RESULT PLOTS

Power Spectral Density (802.11b-CH 6)

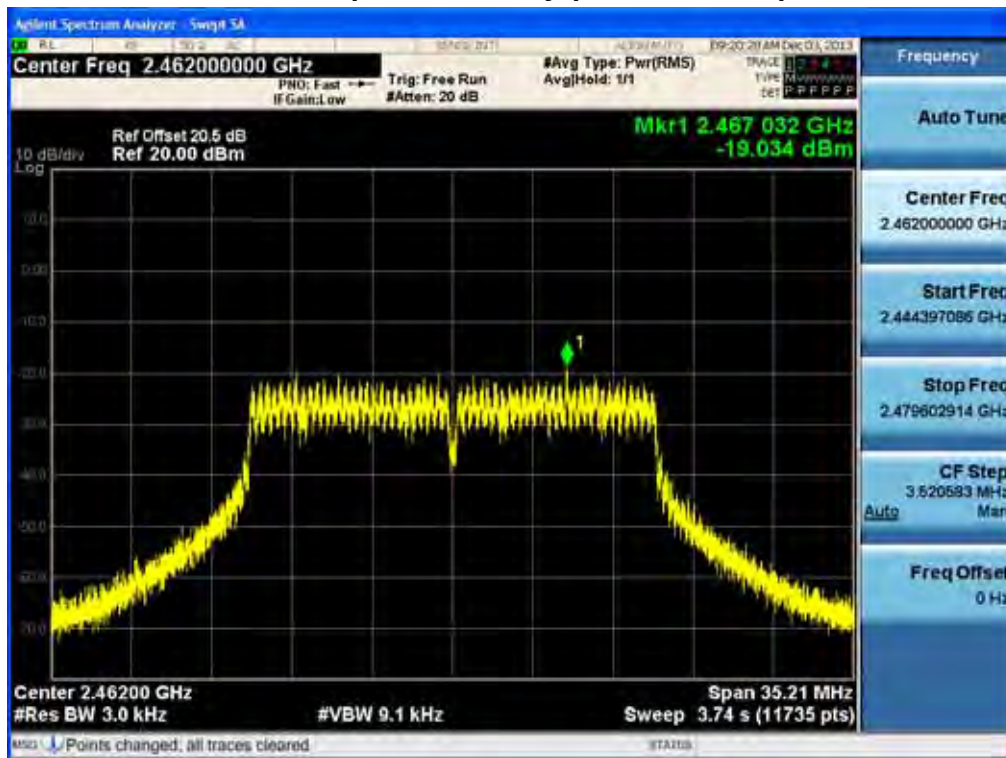


Power Spectral Density (802.11g-CH 11)



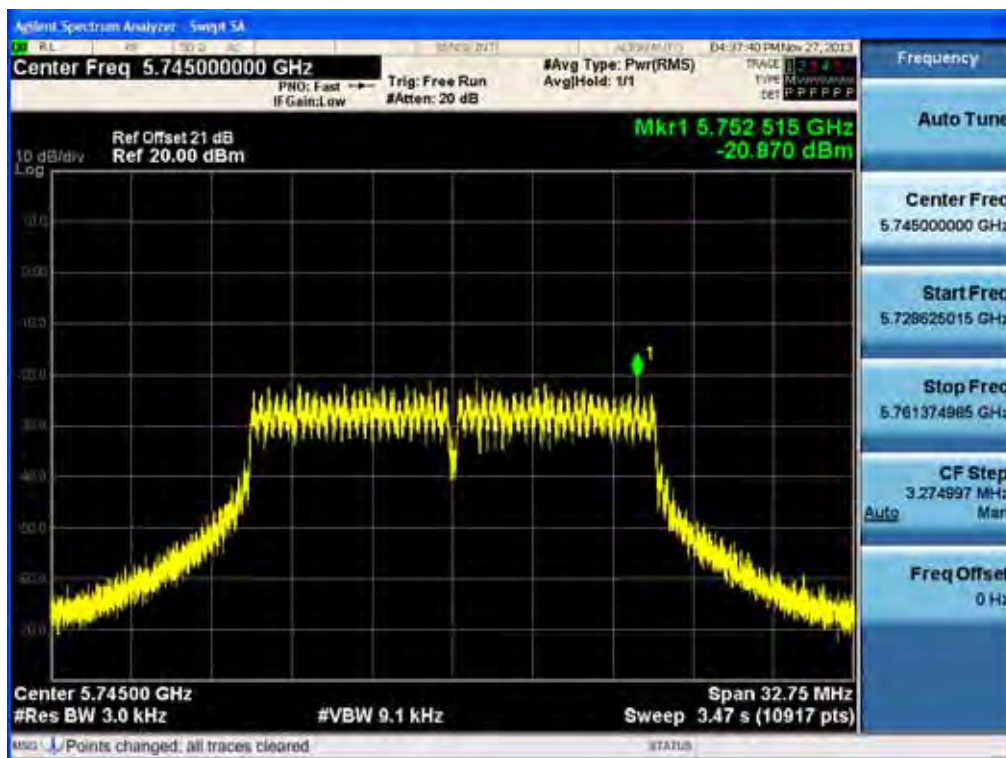
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Power Spectral Density (802.11n-CH 11)



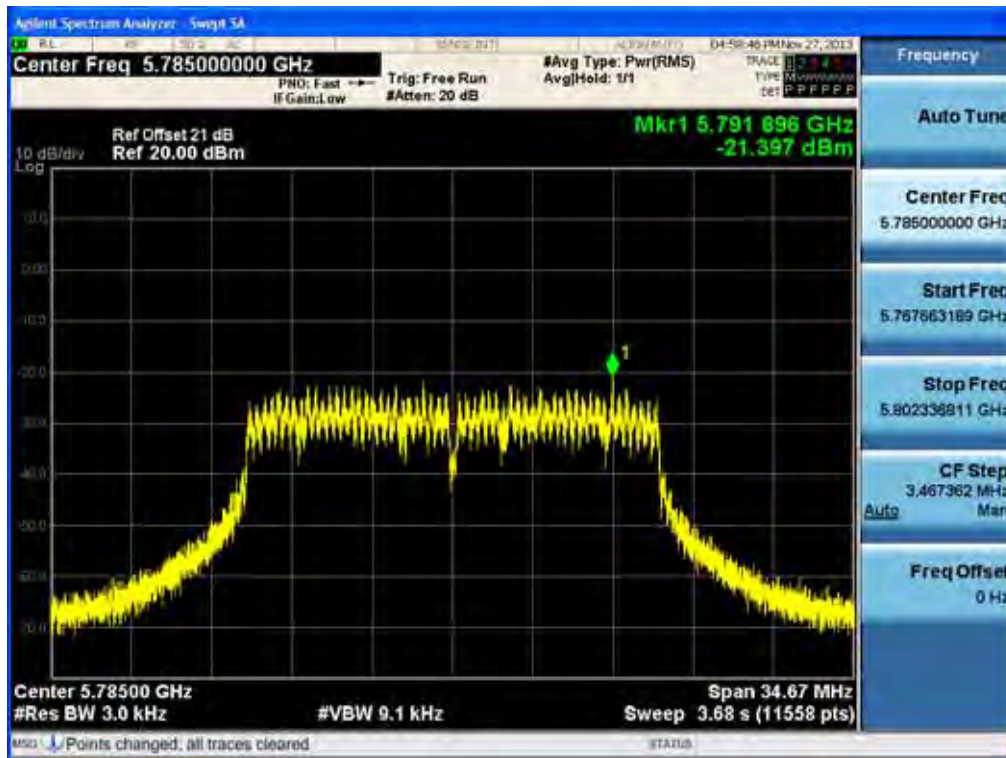
20 MHz BW

Power Spectral Density (802.11a-CH 149)



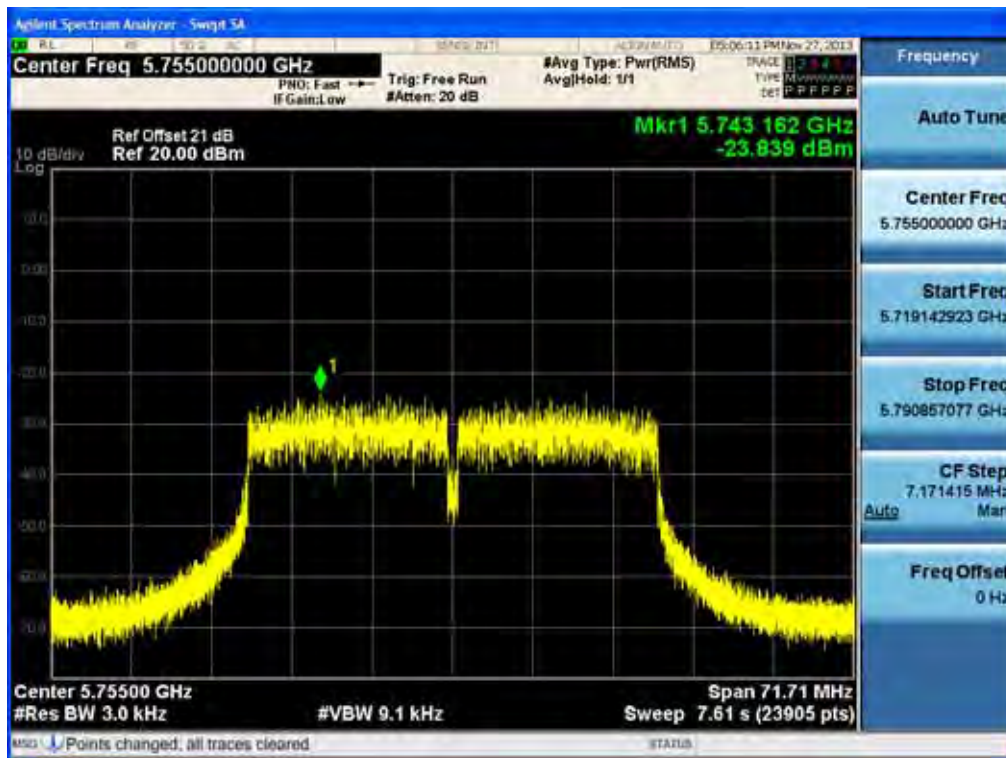
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Power Spectral Density (802.11n-CH 157)



40 MHz BW

Power Spectral Density (802.11n-CH 151)



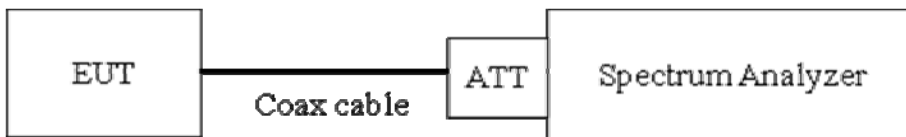
8.5 OUT OF BAND EMISSIONS AT THE BAND EDGE/ CONDUCTED SPURIOUS EMISSIONS

Test Requirements and limit, §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. 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)).

Limit : 20 dBc

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. (Procedure 11.0 in KDB 558074, issued 04/09/2013)

RBW = 100 kHz

VBW $\geq 3 \times$ RBW

Set span to encompass the spectrum to be examined

Detector = Peak

Trace Mode = max hold

Sweep time = auto couple

Ensure that the number of measurement points $\geq$ Span/RBW

Allow trace to fully stabilize.

Use peak marker function to determine the maximum amplitude level.

Measurements are made over the 30 MHz to 10th harmonic range with the transmitter set to the lowest, middle, and highest channels.

Note :

1. The band edge 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 and 5.8 GHz range that was rounded off to the closest tenth dB. So,

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20.5 dB is offset for 2.4 GHz Band and 21.0 dB is offset for 5.8 GHz Band.

Actual value of loss for the attenuator and cable combination is below table. We used the particular cable type that is supported by manufacture.

Band	Loss(dB)
2.4 GHz	20.5
5.8 GHz	21.0

(Actual value of loss for the attenuator and cable combination)

4. In order to simplify the report, attached plots were only the worst case channel and data rate.

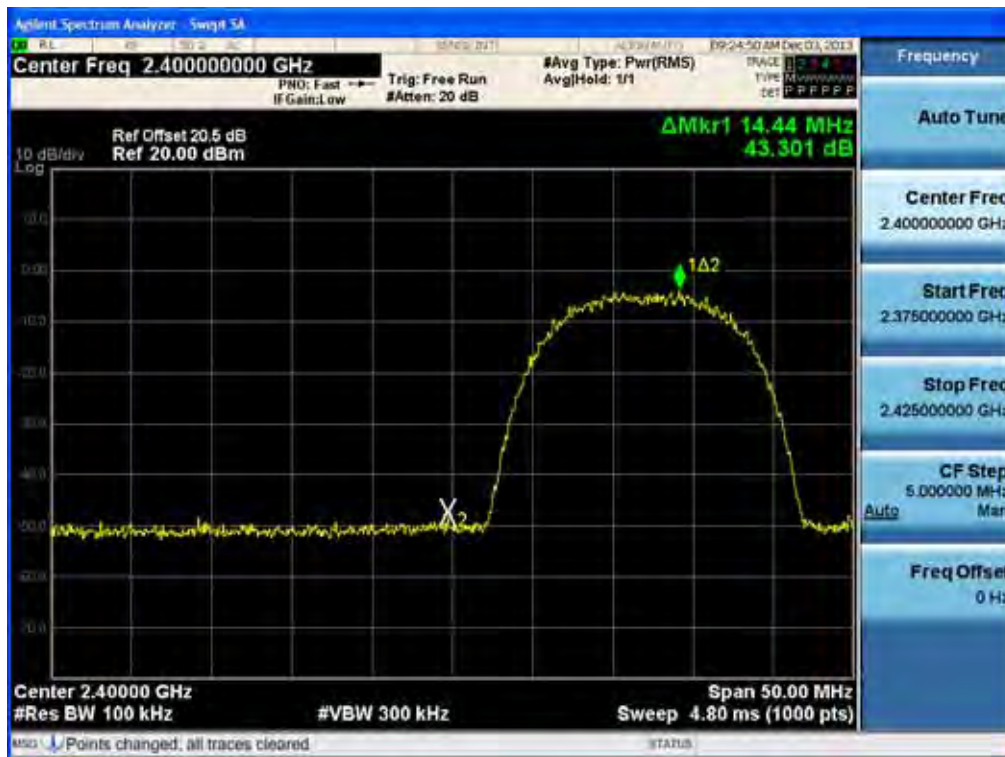
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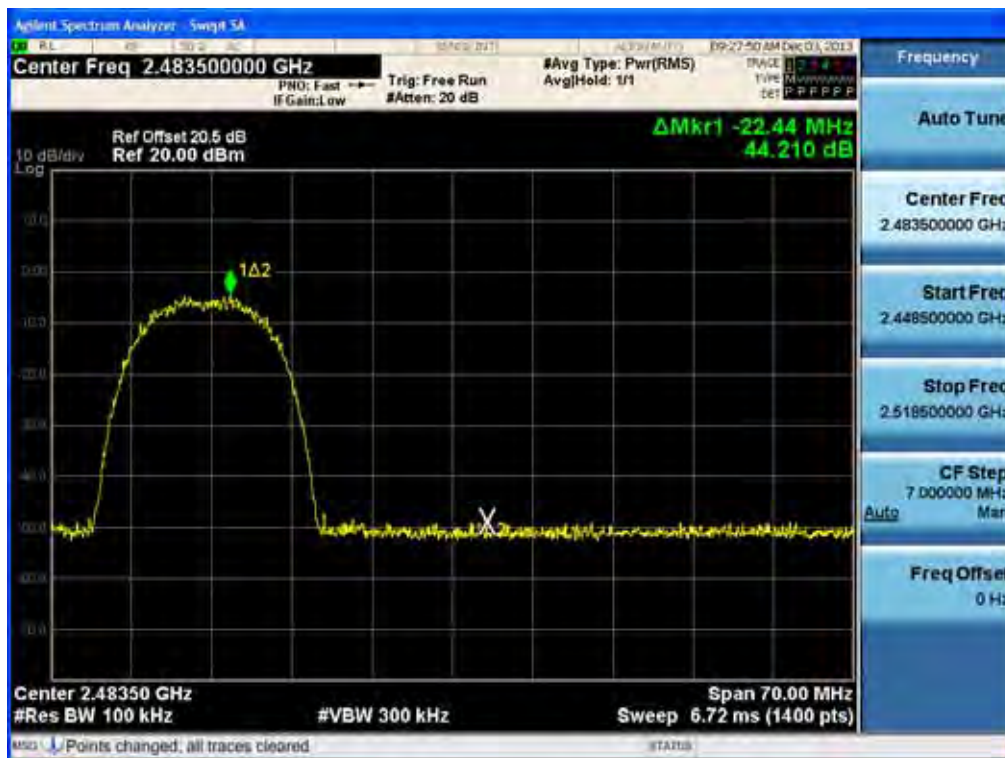
Monitoring Port Ant.1

RESULT PLOTS

BandEdge (802.11b-CH1)



BandEdge (802.11b-CH11)

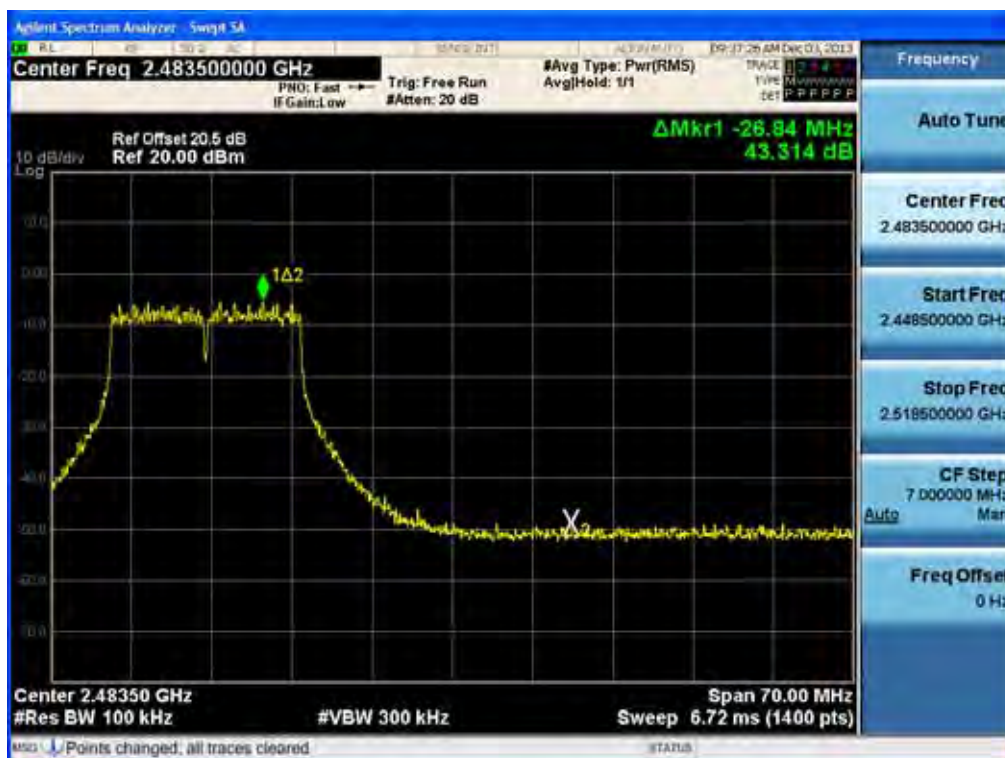


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BandEdge (802.11g-CH1)



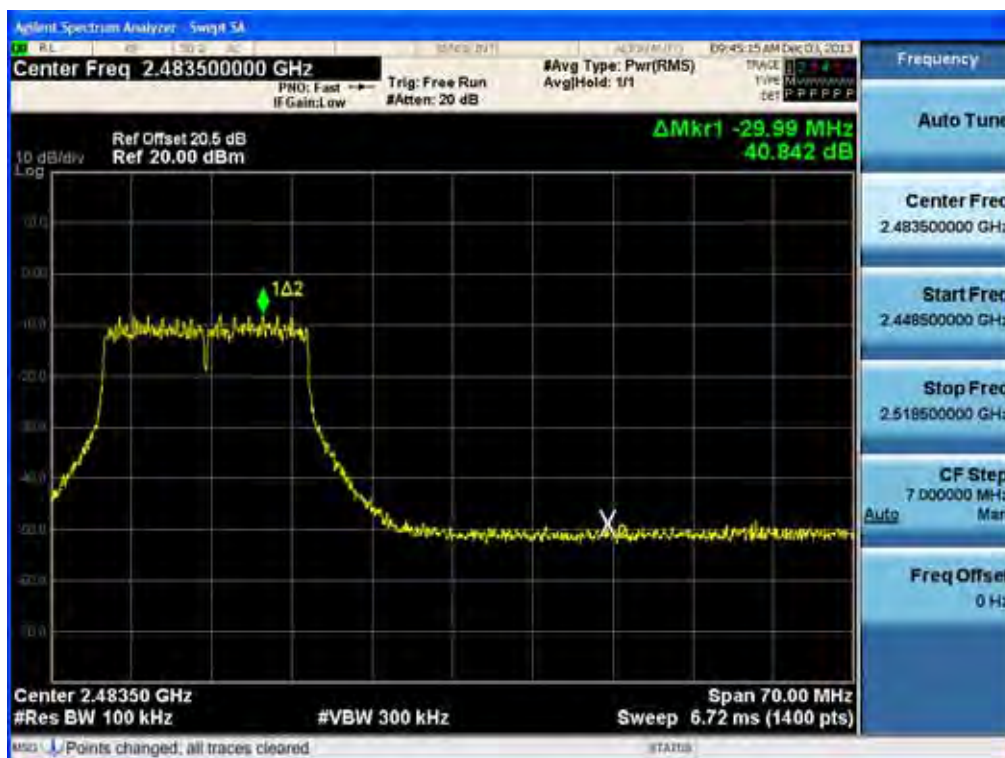
BandEdge (802.11g-CH11)



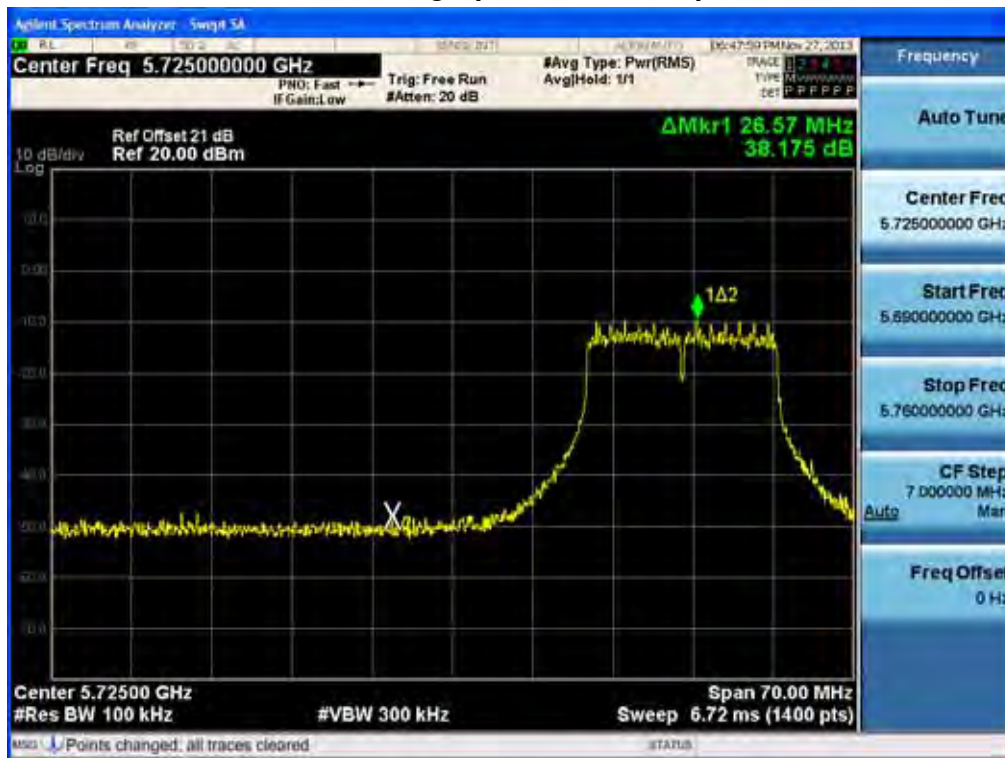
BandEdge (802.11n-CH1)



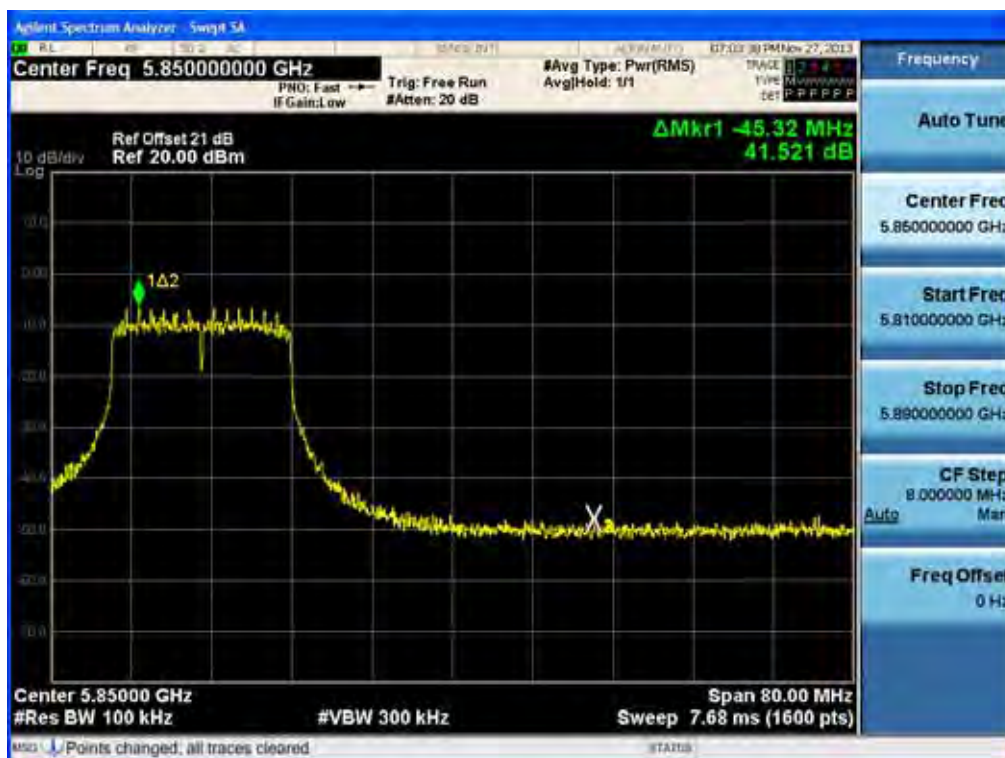
BandEdge (802.11n-CH11)



BandEdge (802.11a-CH 149)



BandEdge (802.11a-CH 165)

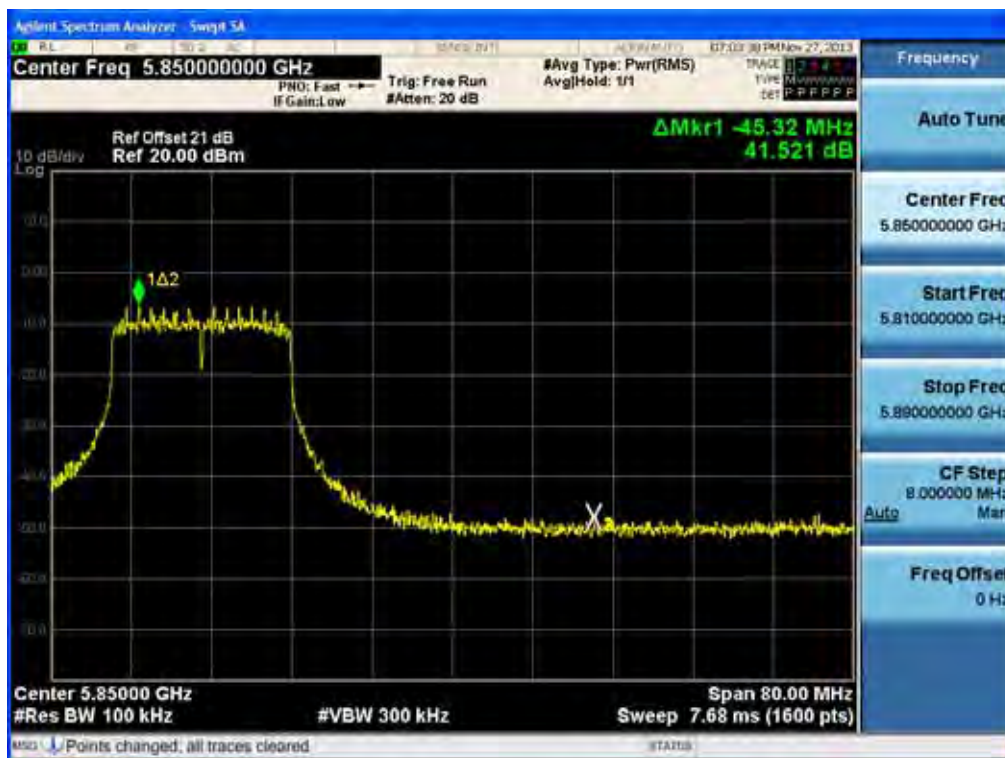


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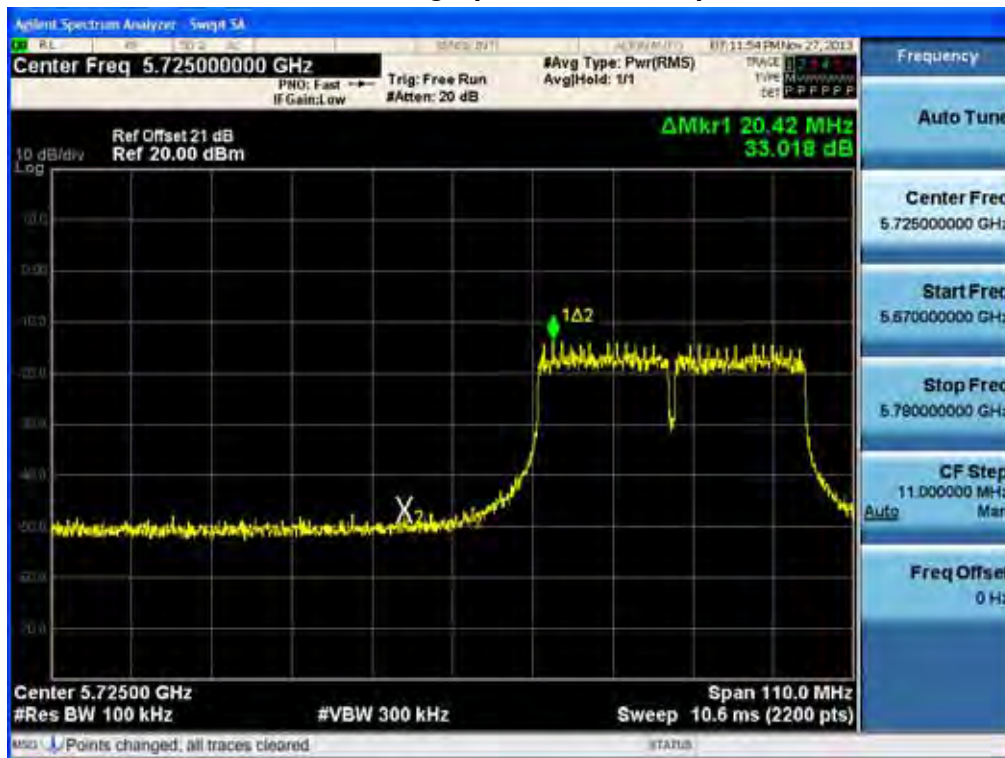
BandEdge (802.11n-CH 149)



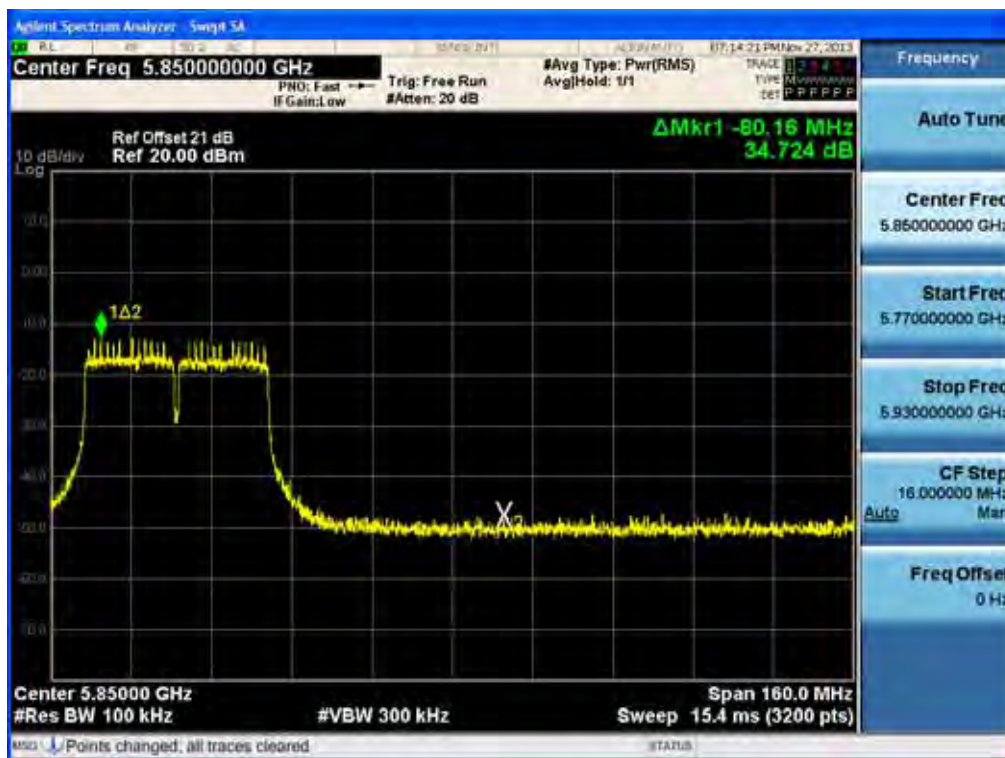
BandEdge (802.11n-CH 165)



BandEdge (802.11n-CH 151)



BandEdge (802.11n-CH 159)

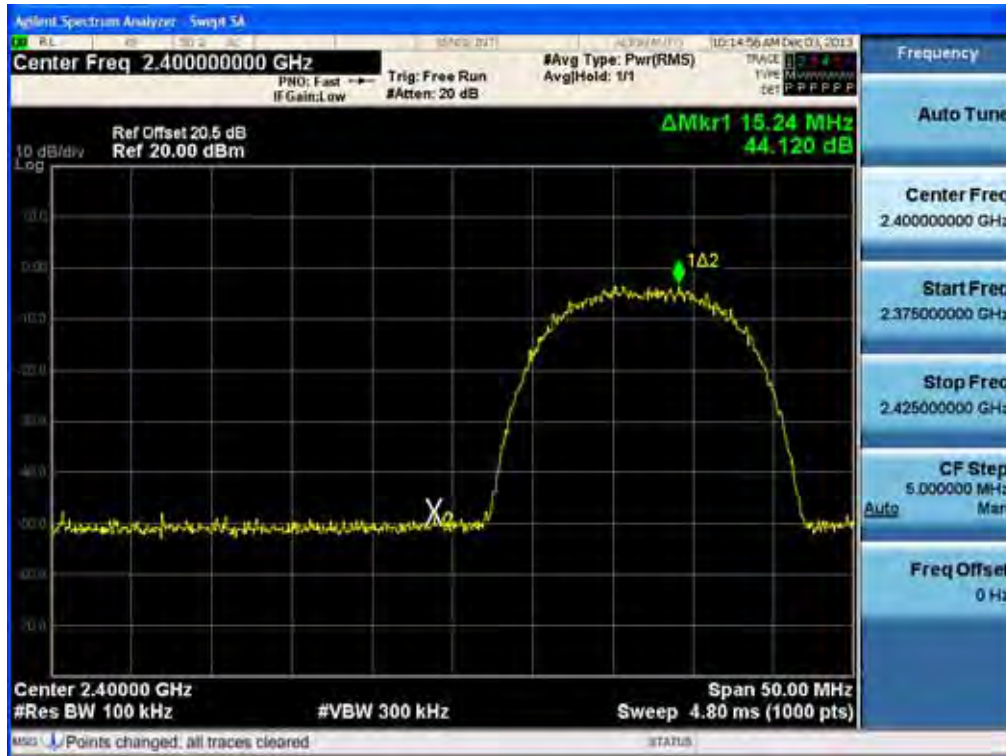




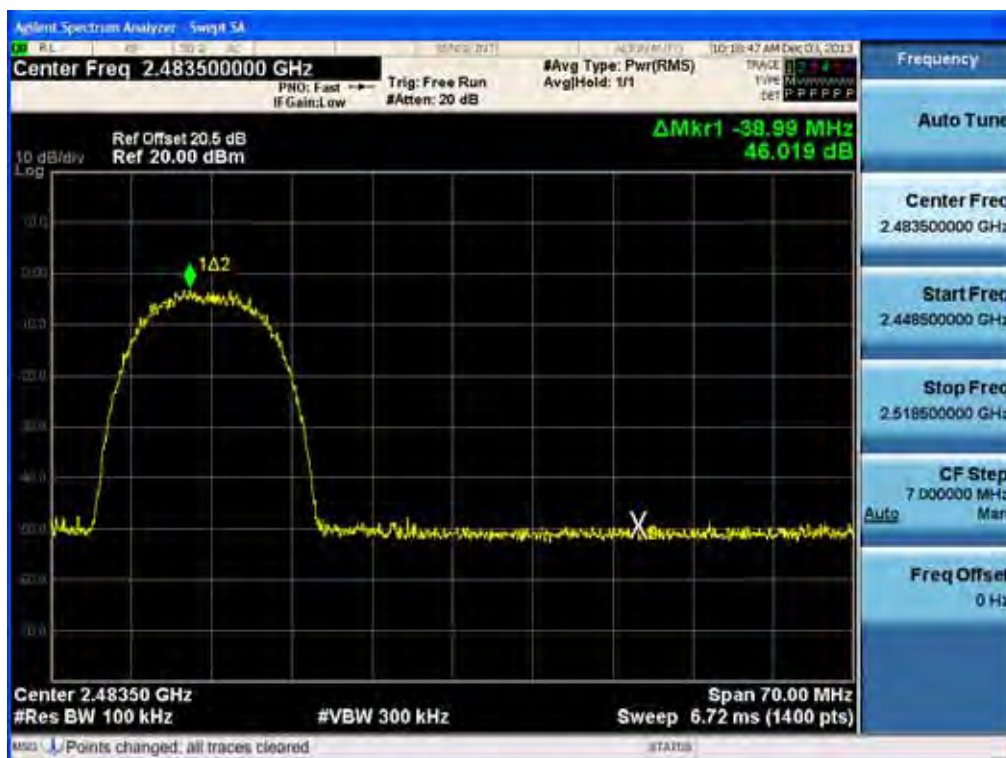
Monitoring Port Ant.2

RESULT PLOTS

BandEdge (802.11b-CH1)



BandEdge (802.11b-CH11)

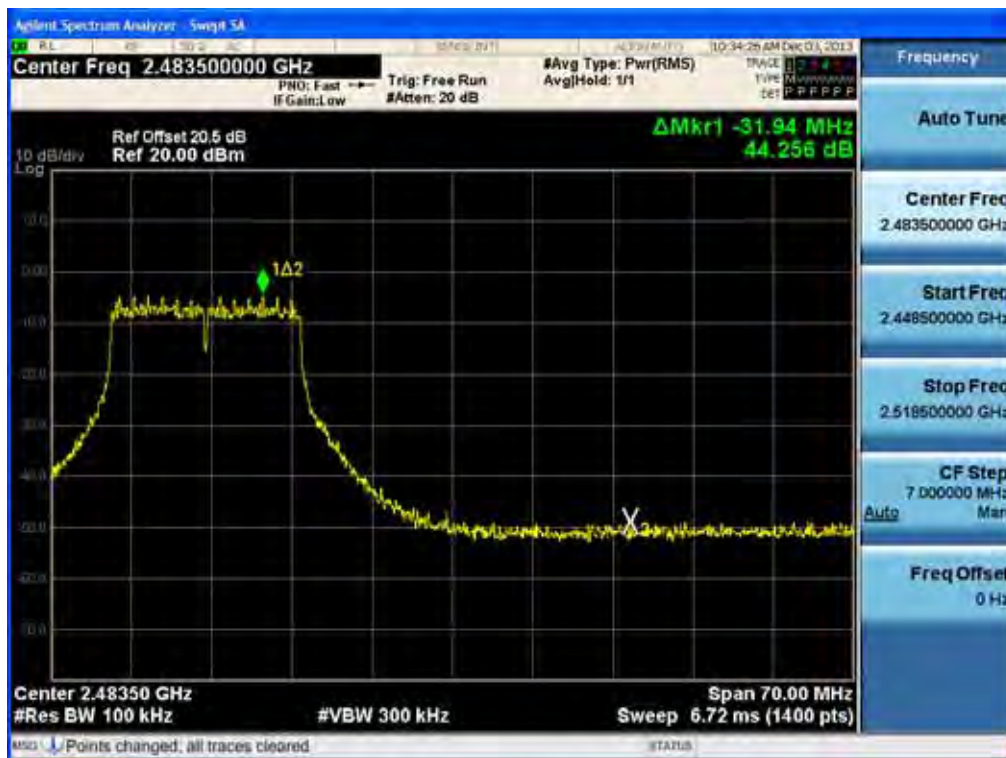


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BandEdge (802.11g-CH1)



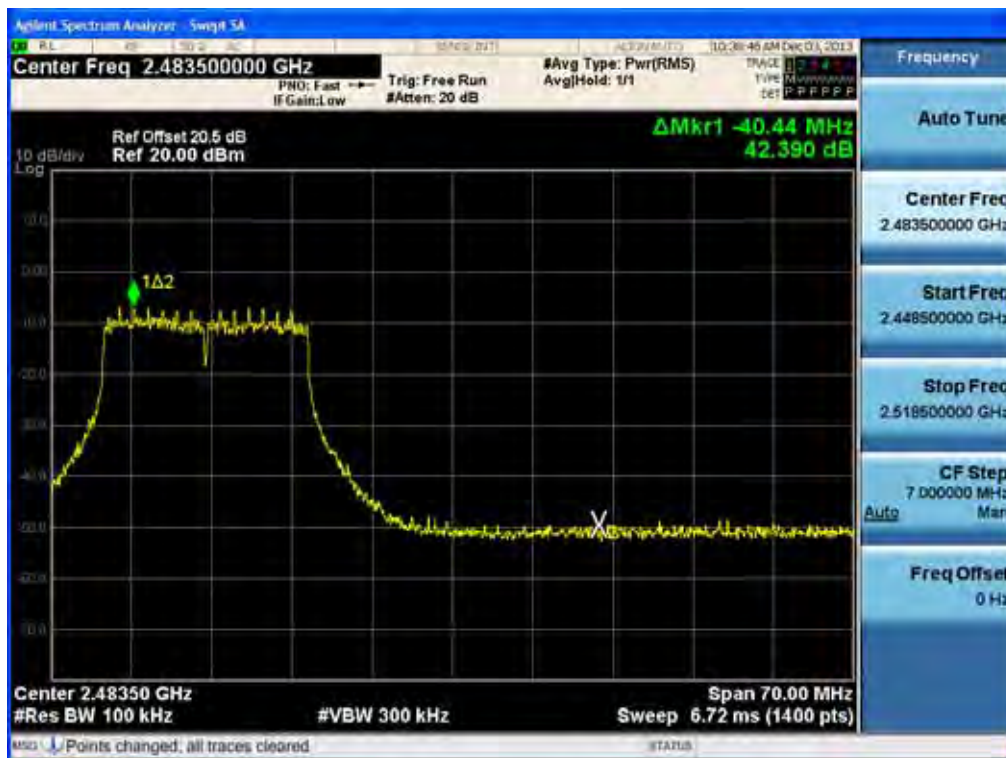
BandEdge (802.11g-CH11)



BandEdge (802.11n-CH1)



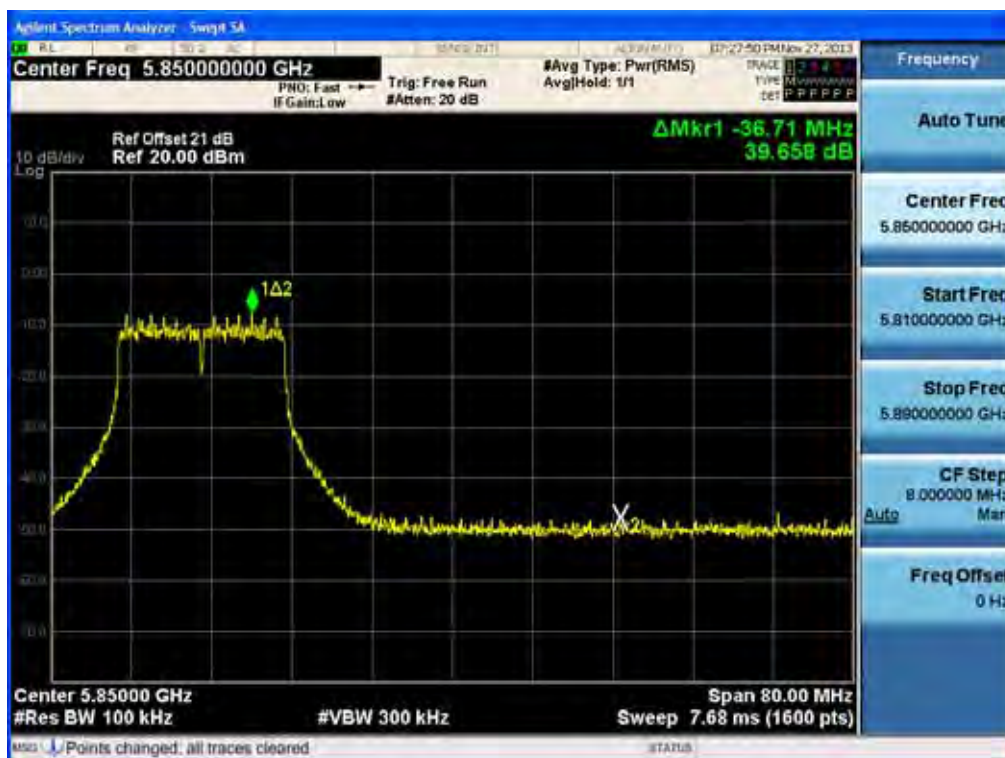
BandEdge (802.11n-CH11)



BandEdge (802.11a-CH 149)



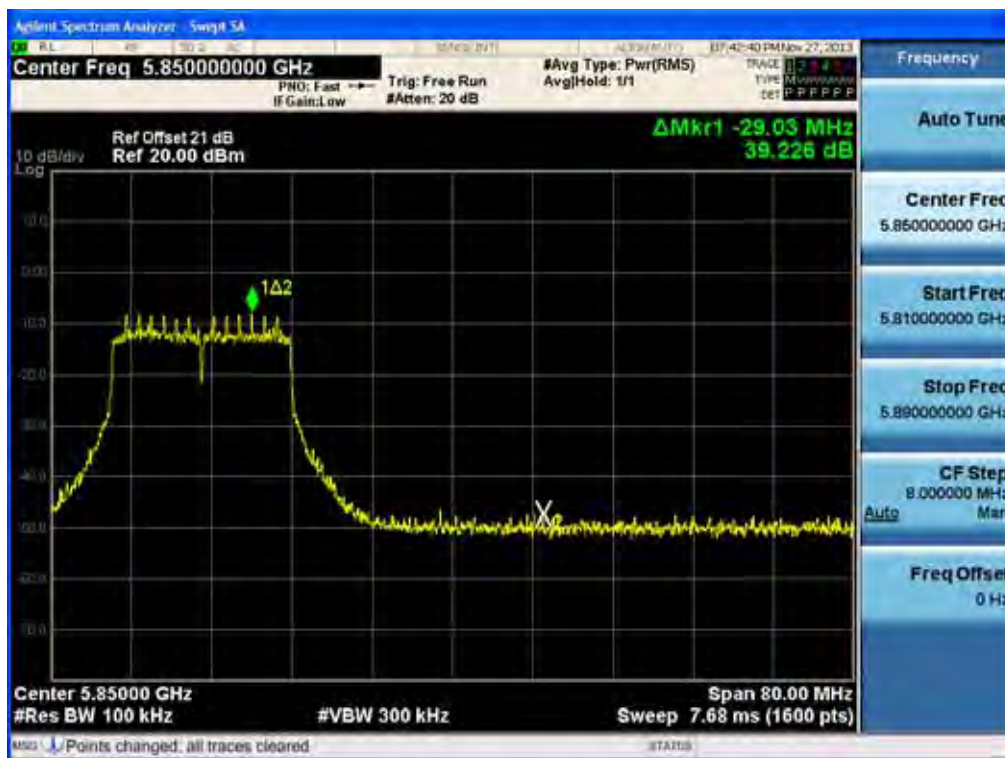
BandEdge (802.11a-CH 165)



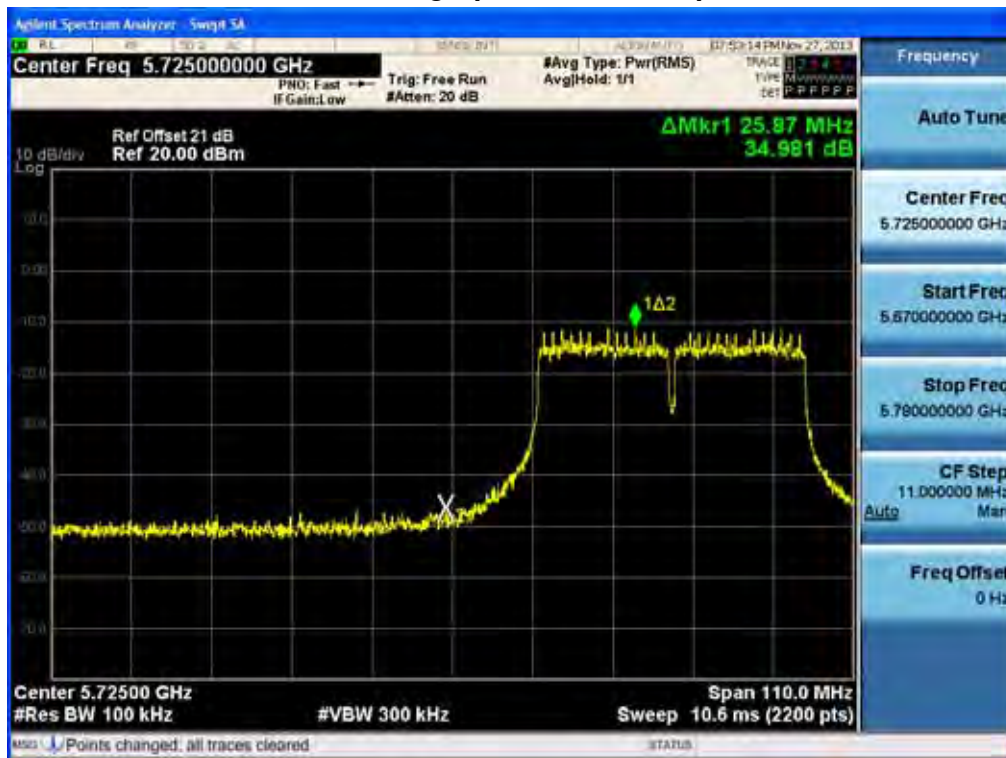
BandEdge (802.11n-CH 149)



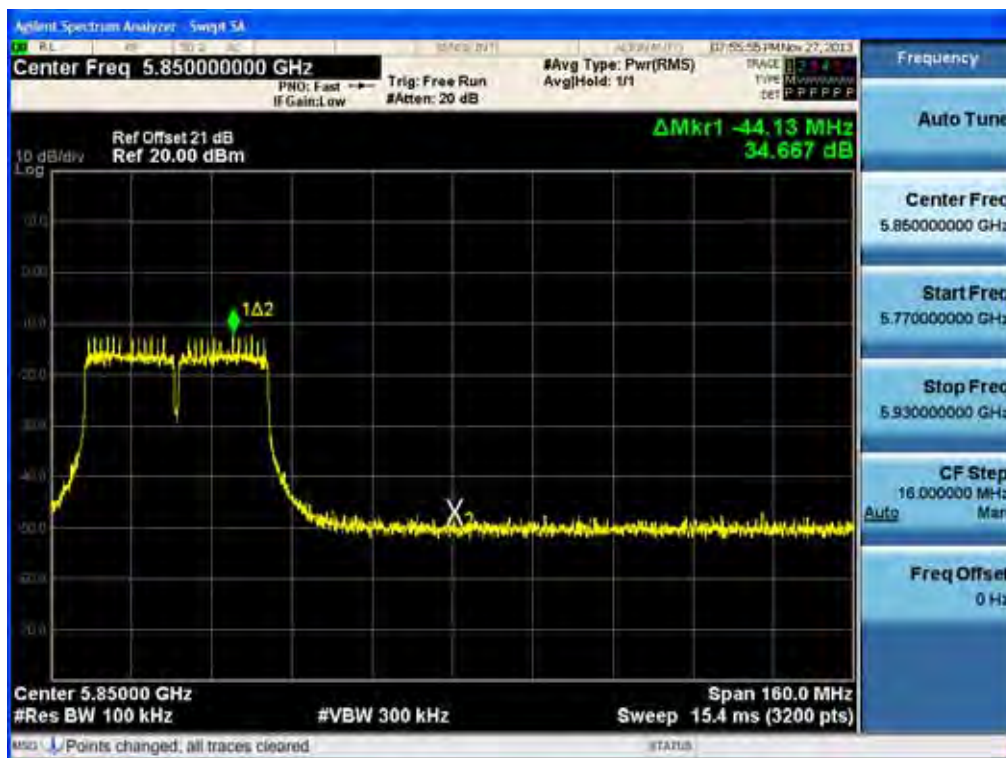
BandEdge (802.11n-CH 165)



BandEdge (802.11n-CH 151)



BandEdge (802.11n-CH 159)



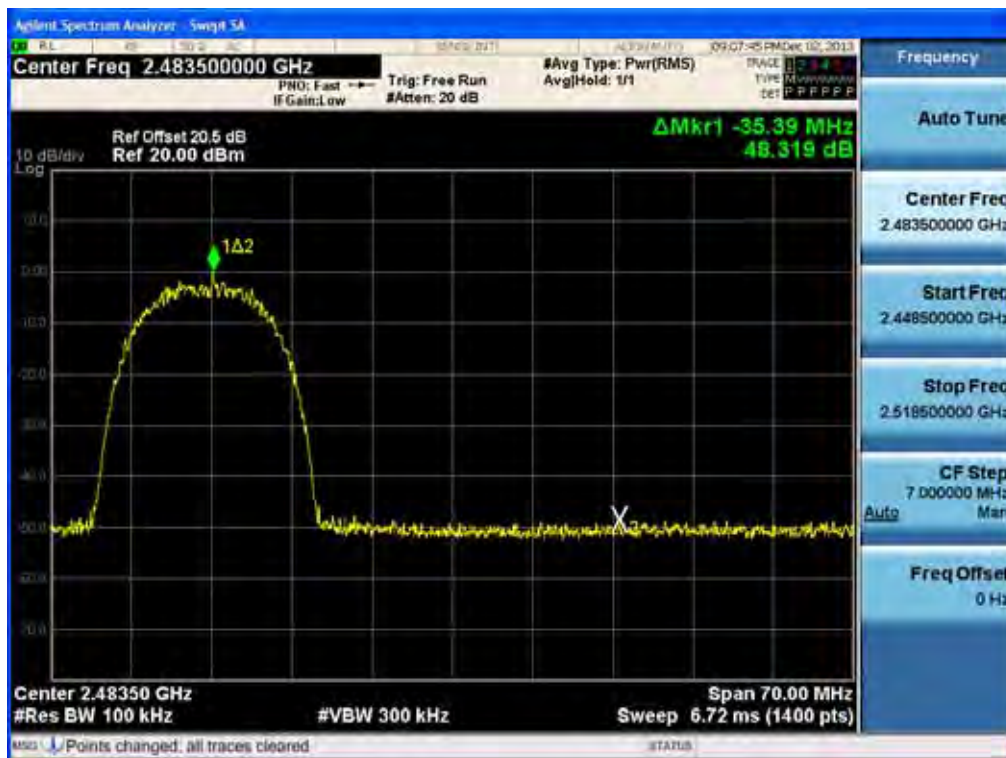
Service Port Ant.1

RESULT PLOTS

BandEdge (802.11b-CH1)



BandEdge (802.11b-CH11)

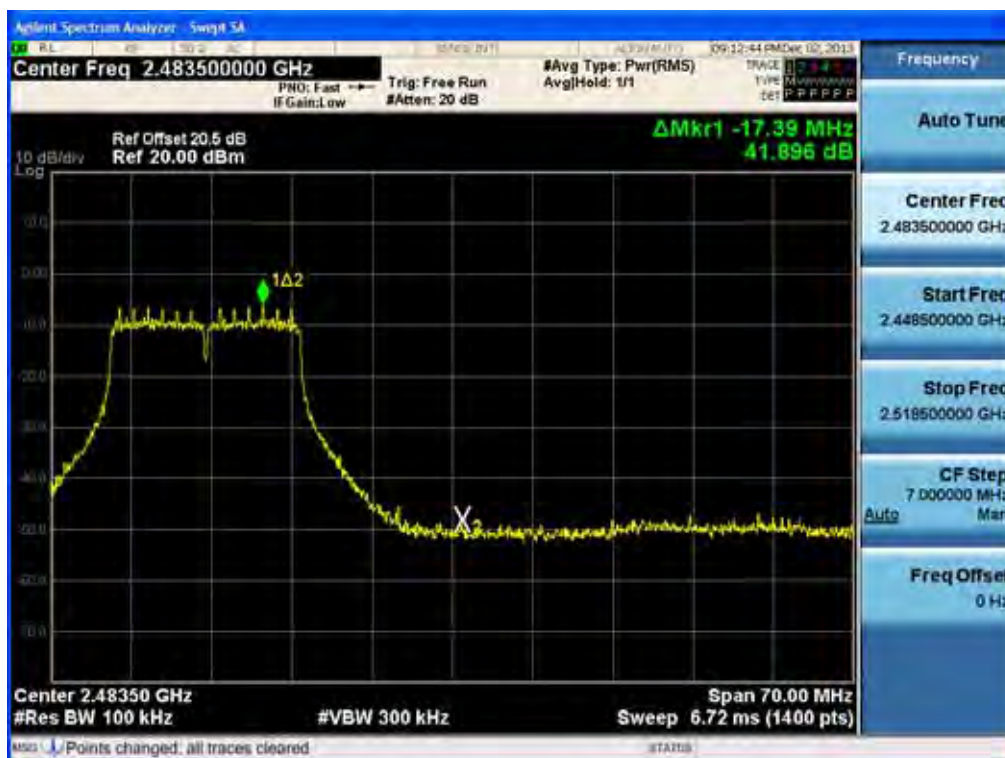


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BandEdge (802.11g-CH1)



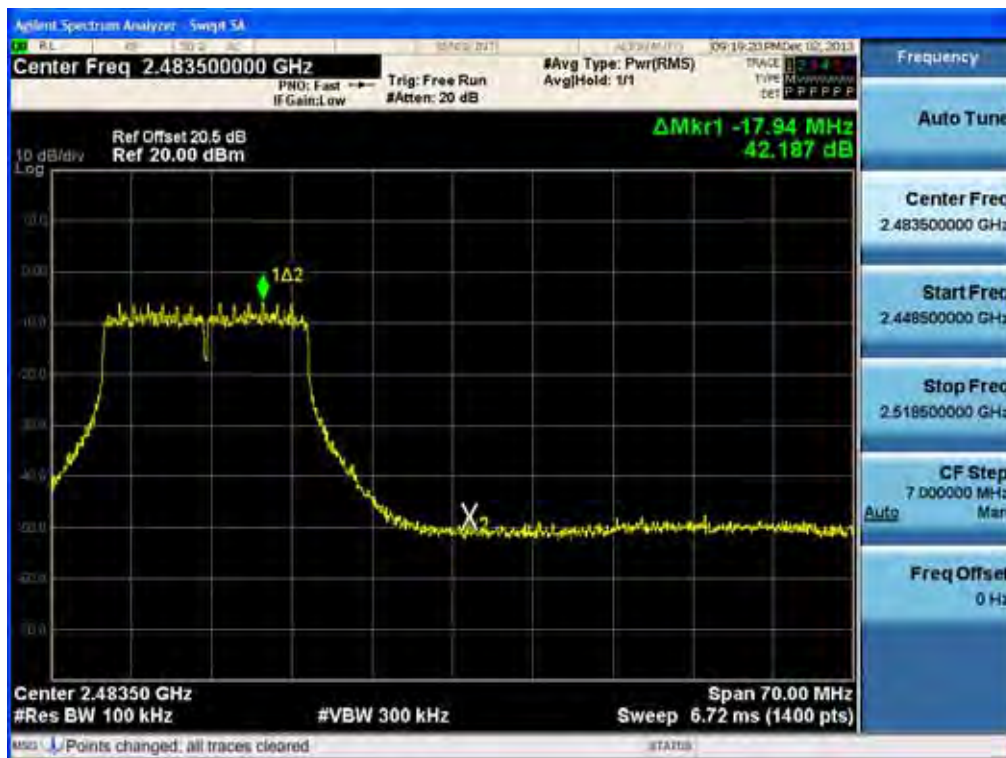
BandEdge (802.11g-CH11)



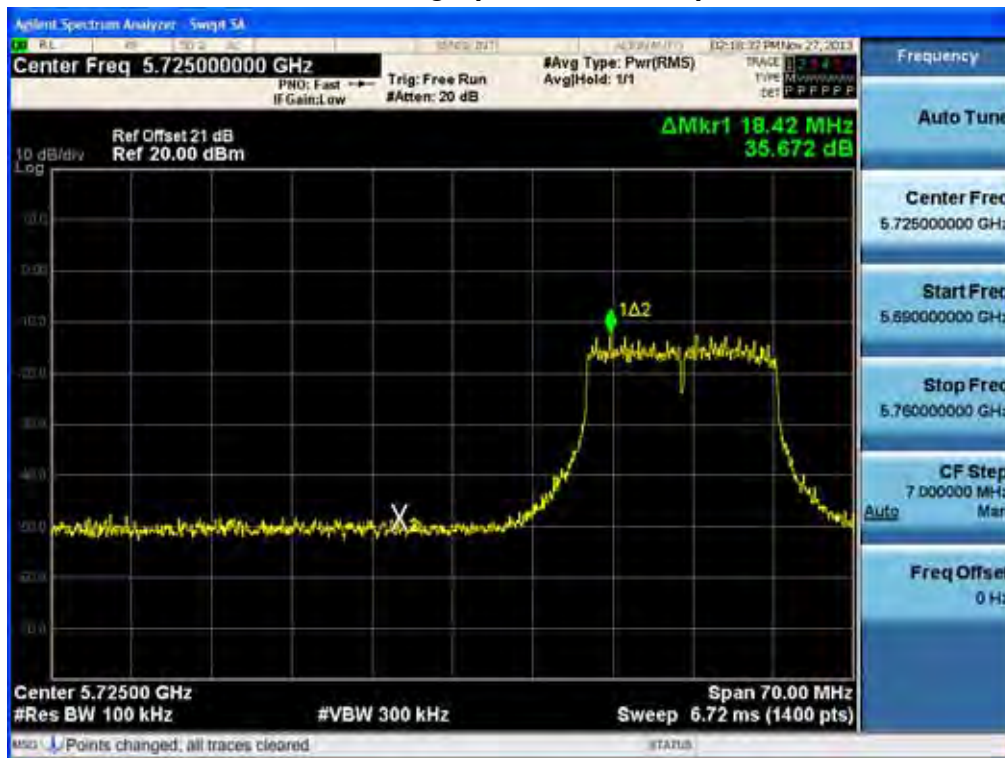
BandEdge (802.11n-CH1)



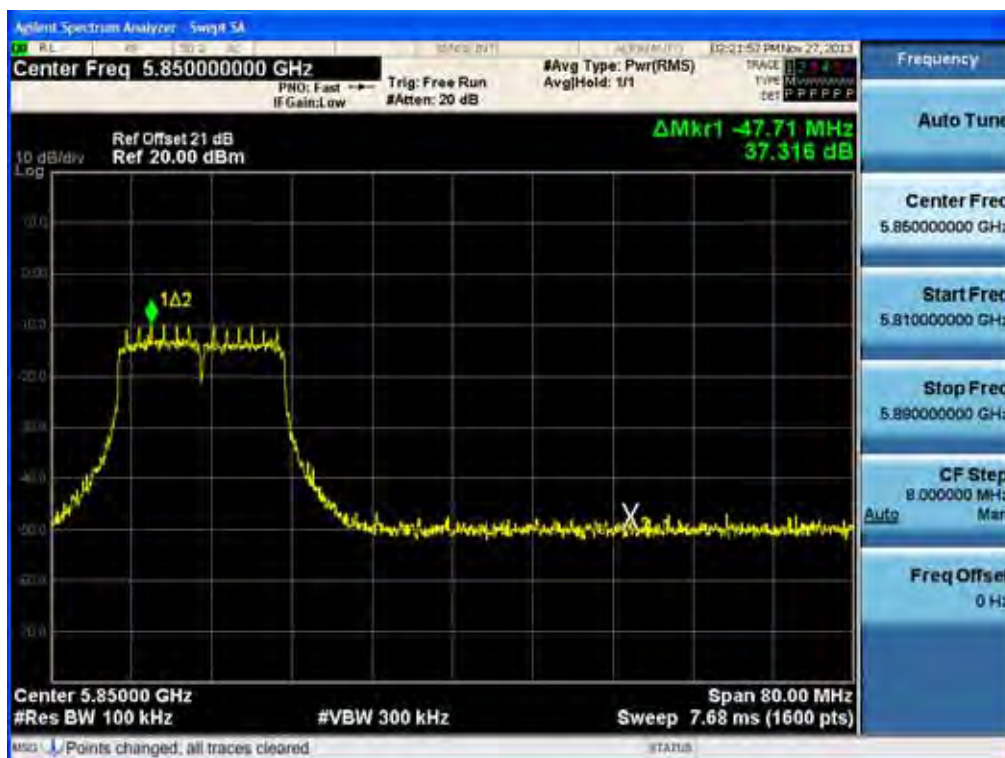
BandEdge (802.11n-CH11)



BandEdge (802.11a-CH 149)

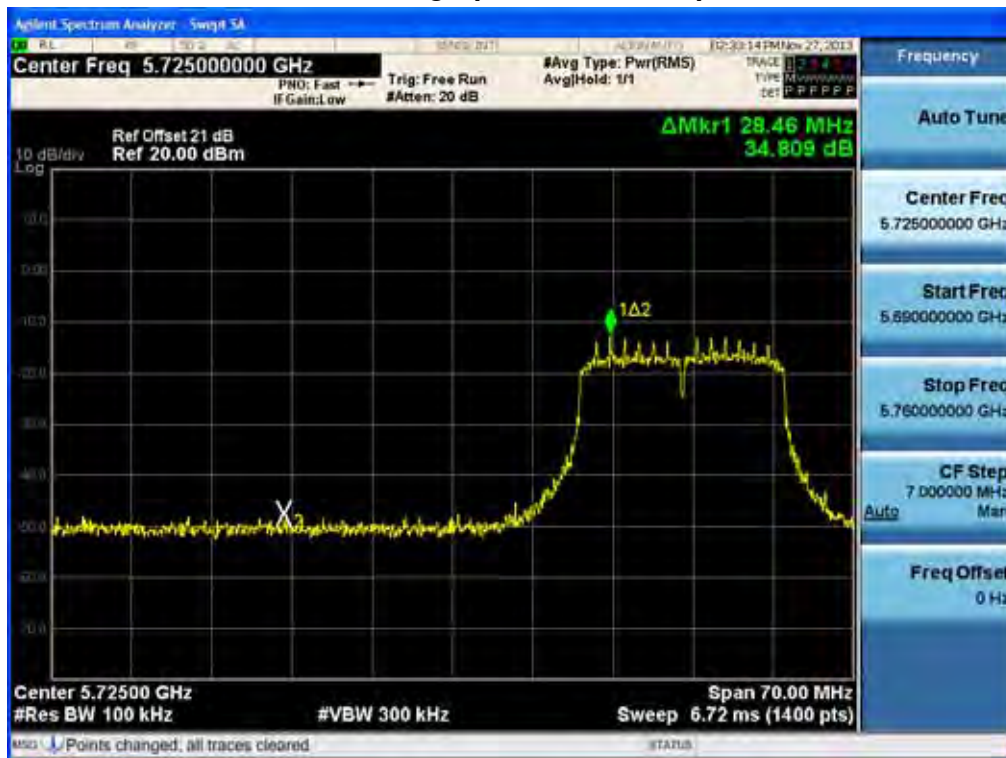


BandEdge (802.11a-CH 165)

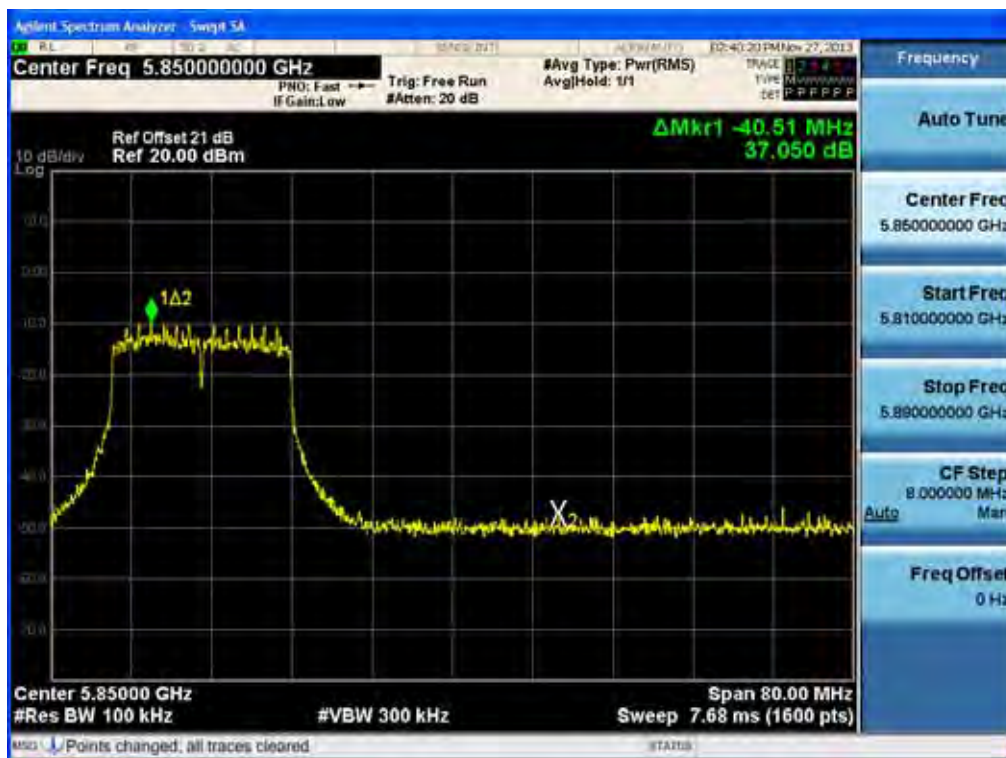


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BandEdge (802.11n-CH 149)



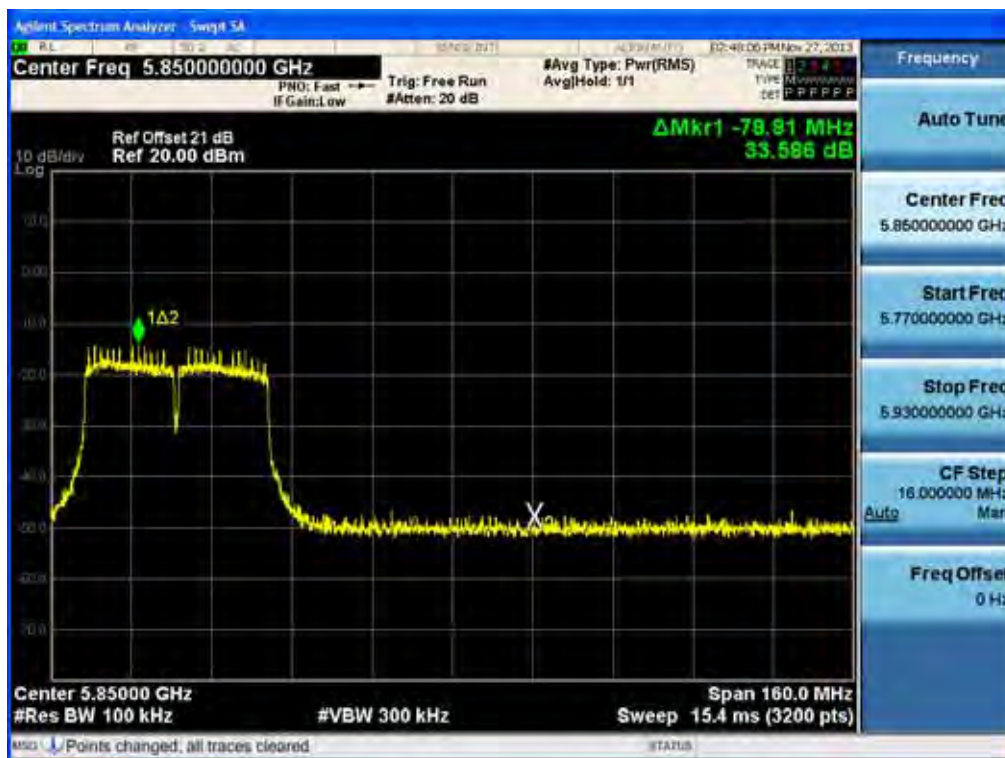
BandEdge (802.11n-CH 165)



BandEdge (802.11n-CH 151)



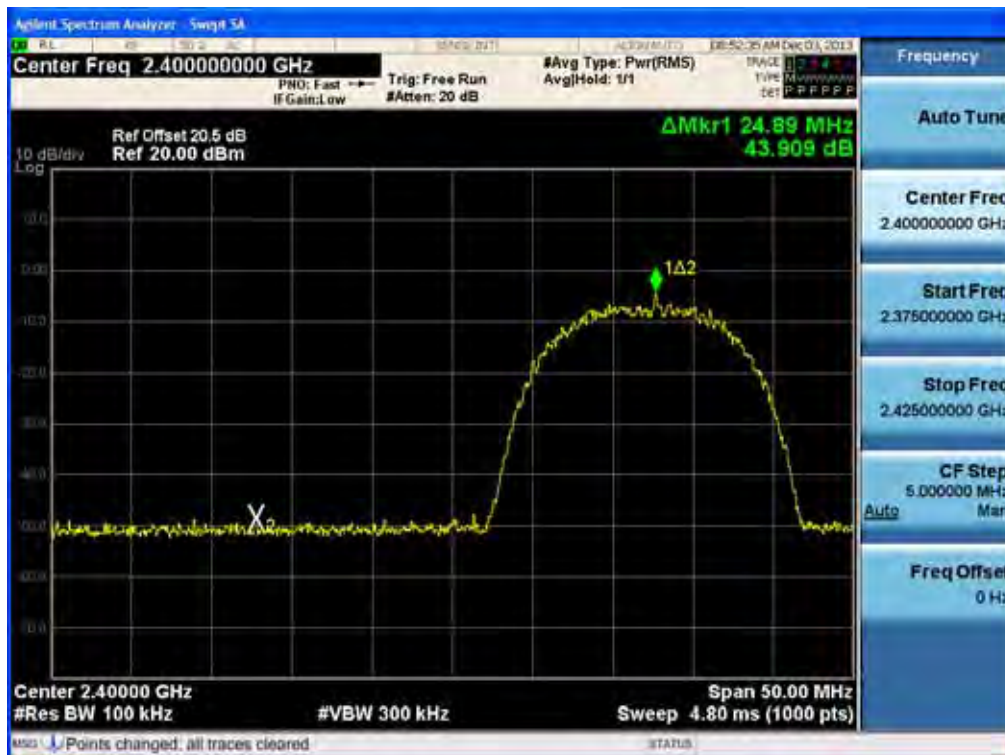
BandEdge (802.11n-CH 159)



Service Port Ant.2

RESULT PLOTS

BandEdge (802.11b-CH1)



BandEdge (802.11b-CH11)

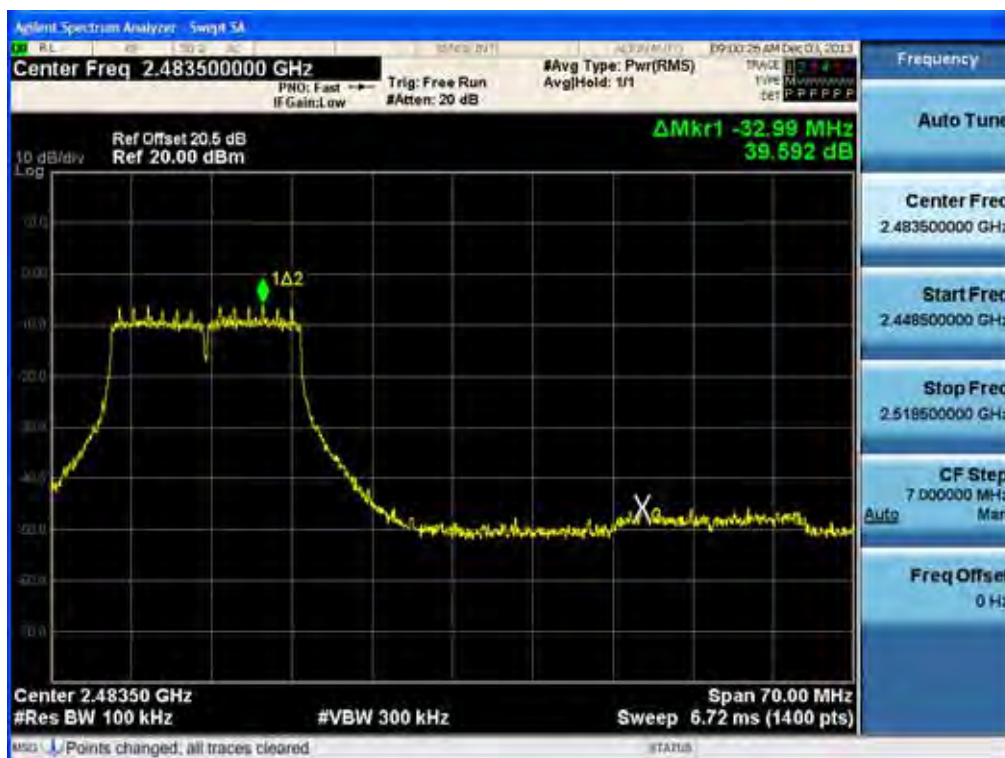


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BandEdge (802.11g-CH1)



BandEdge (802.11g-CH11)

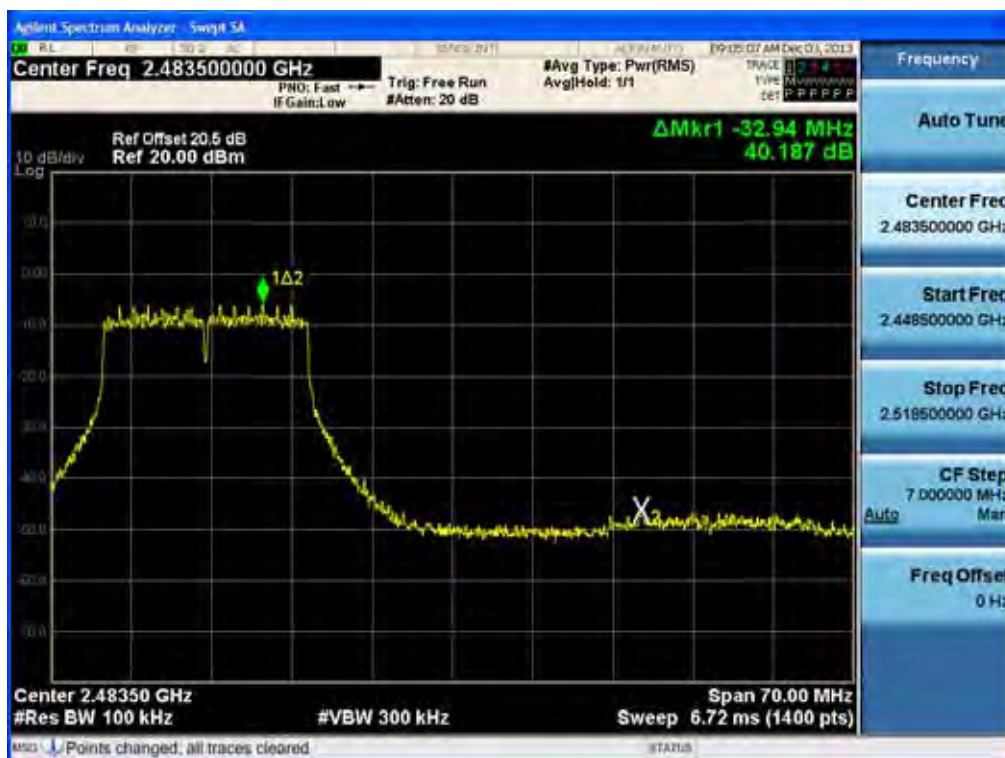


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BandEdge (802.11n-CH1)



BandEdge (802.11n-CH11)

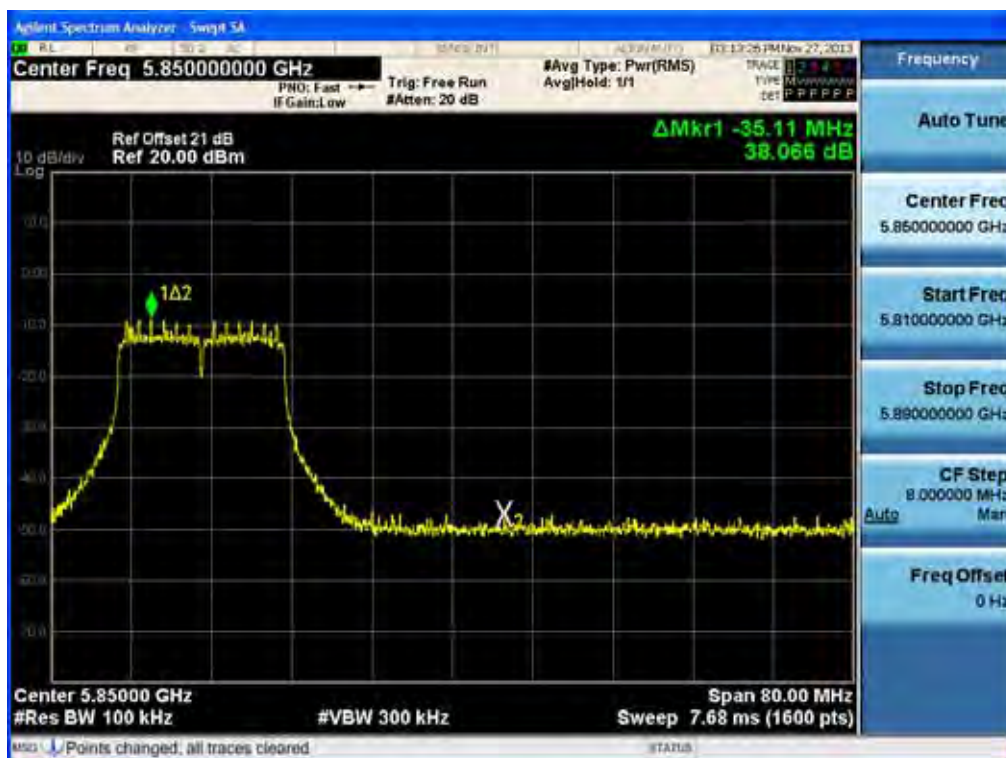


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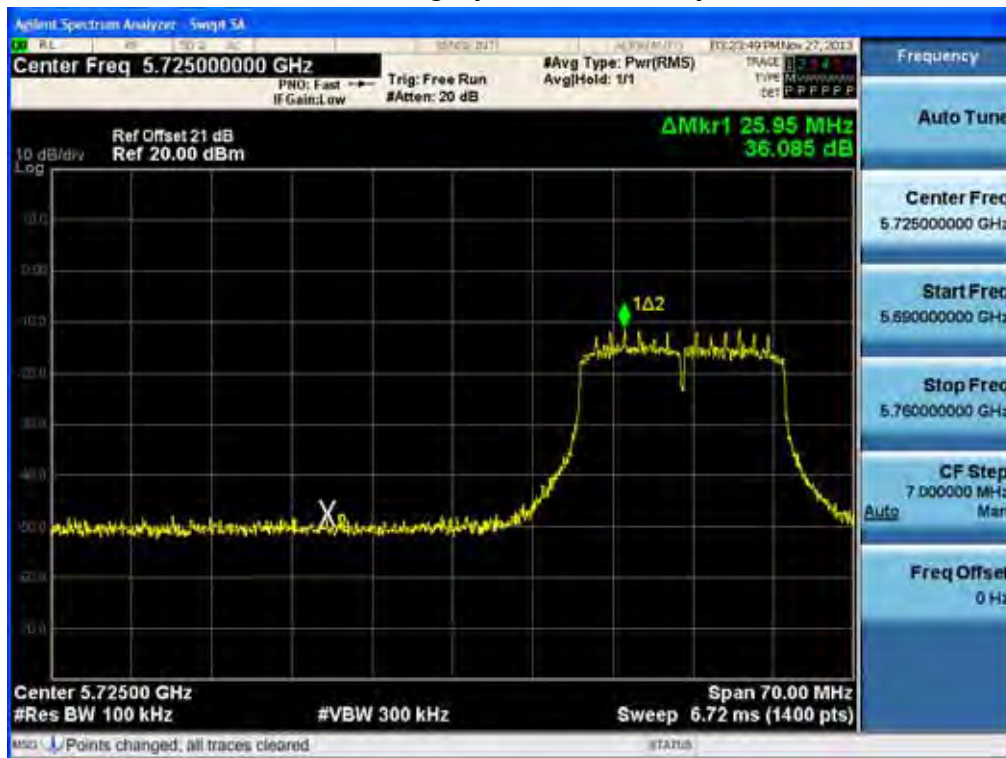
BandEdge (802.11a-CH 149)



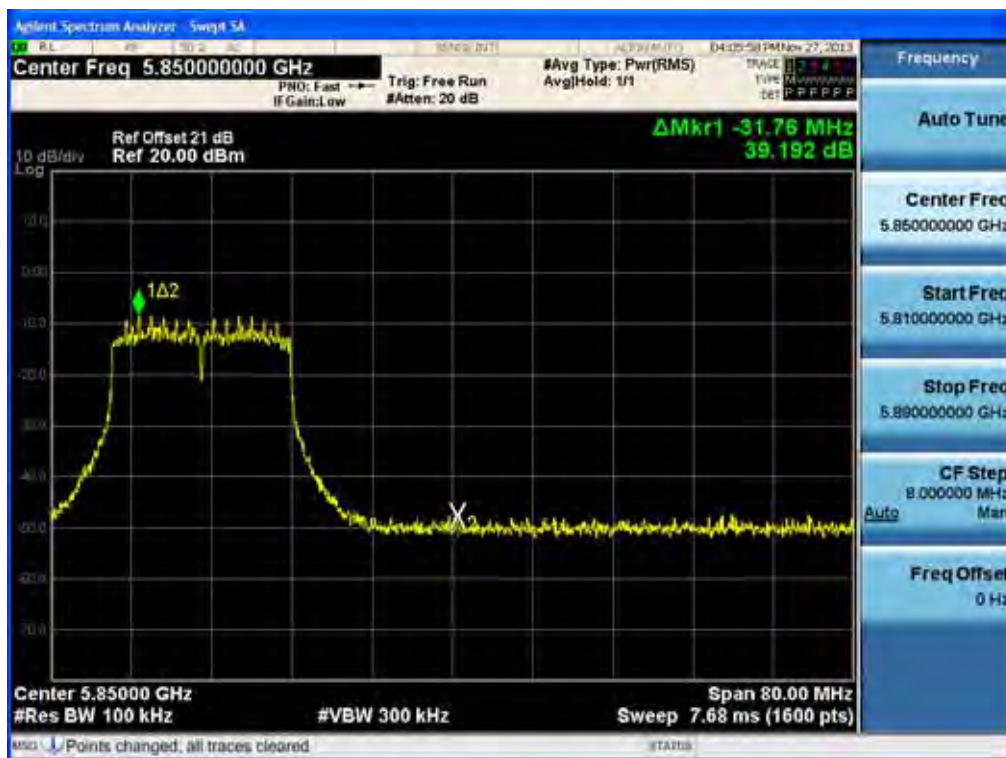
BandEdge (802.11a-CH 165)



BandEdge (802.11n-CH 149)



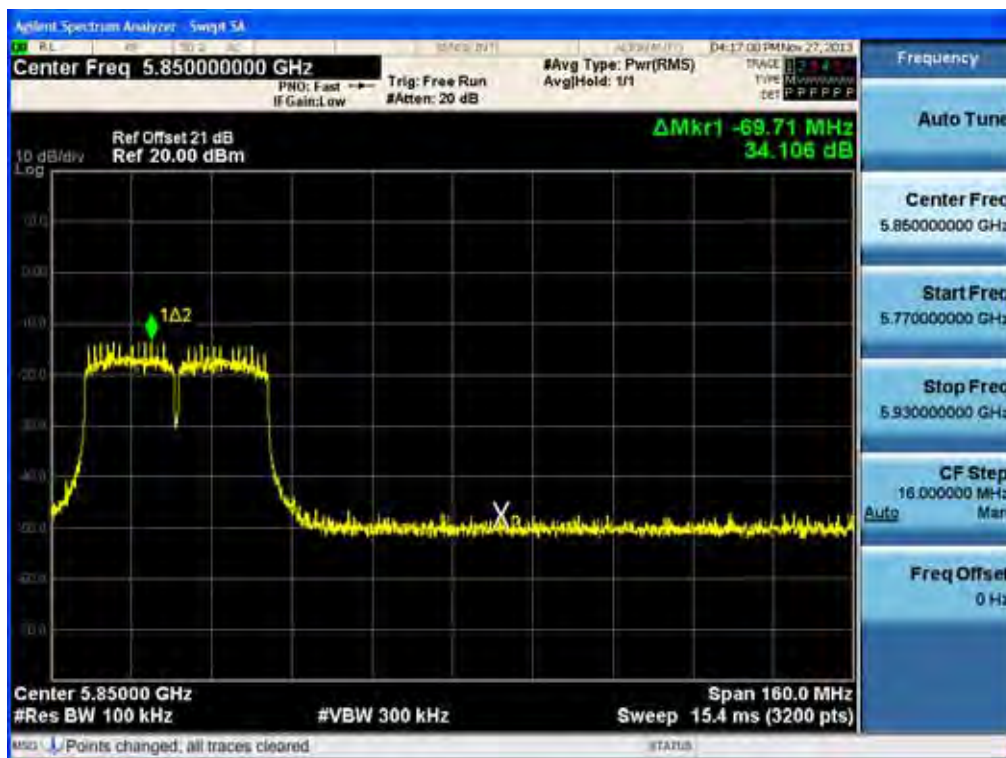
BandEdge (802.11n-CH 165)



BandEdge (802.11n-CH 151)



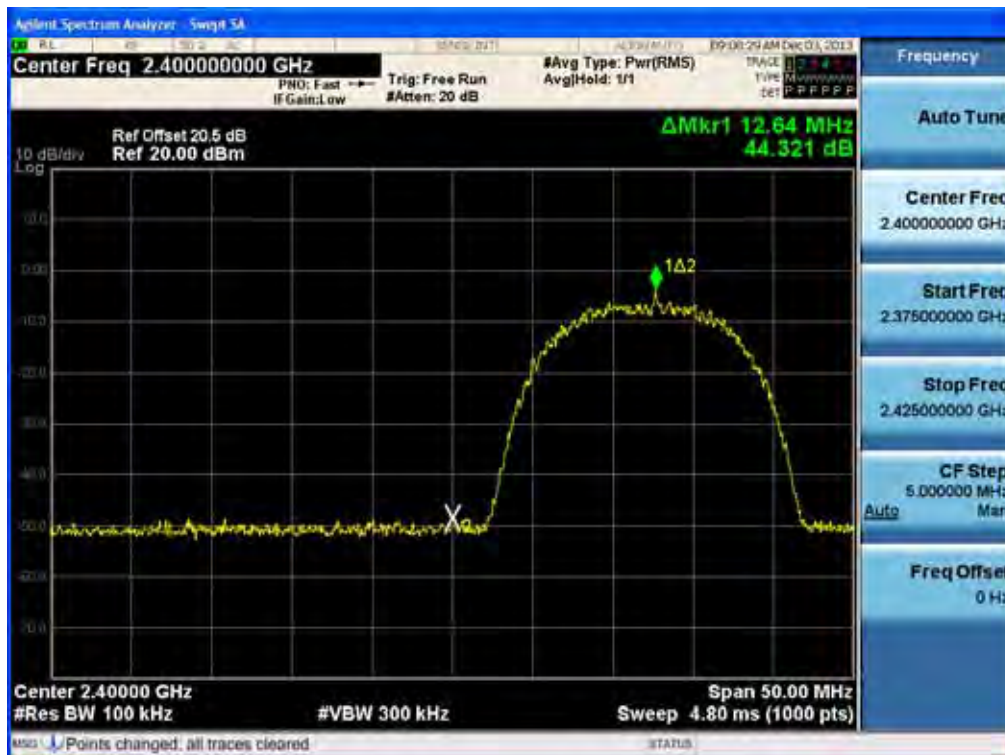
BandEdge (802.11n-CH 159)



Service Port Ant.3

RESULT PLOTS

BandEdge (802.11b-CH1)

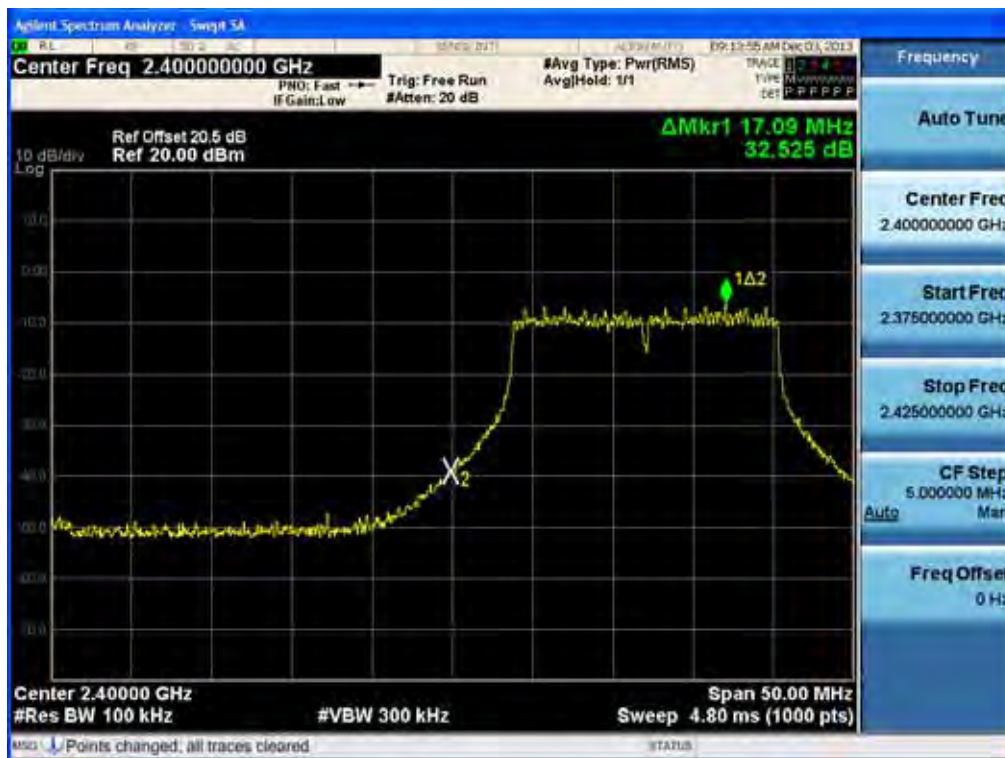


BandEdge (802.11b-CH11)

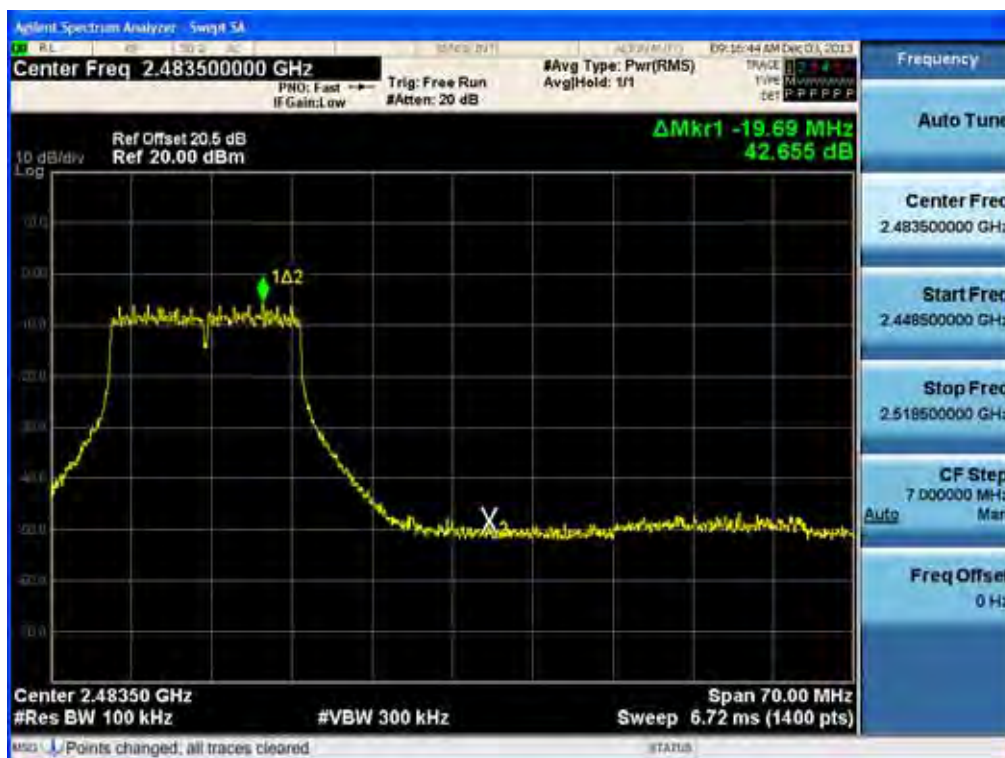


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BandEdge (802.11g-CH1)



BandEdge (802.11g-CH11)

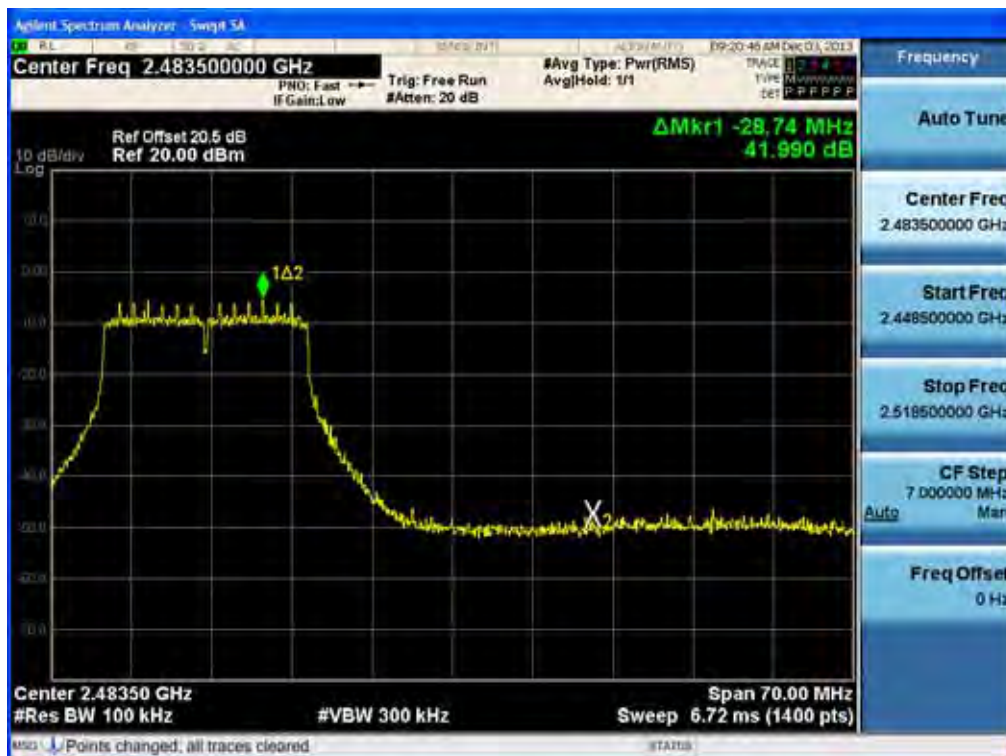


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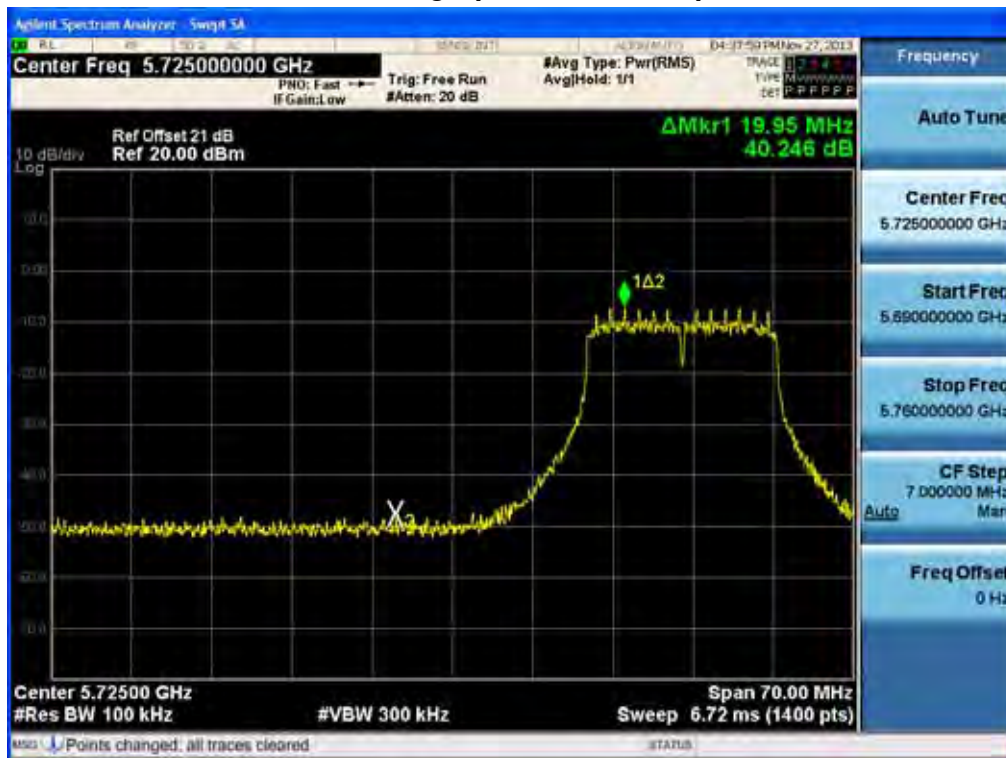
BandEdge (802.11n-CH1)



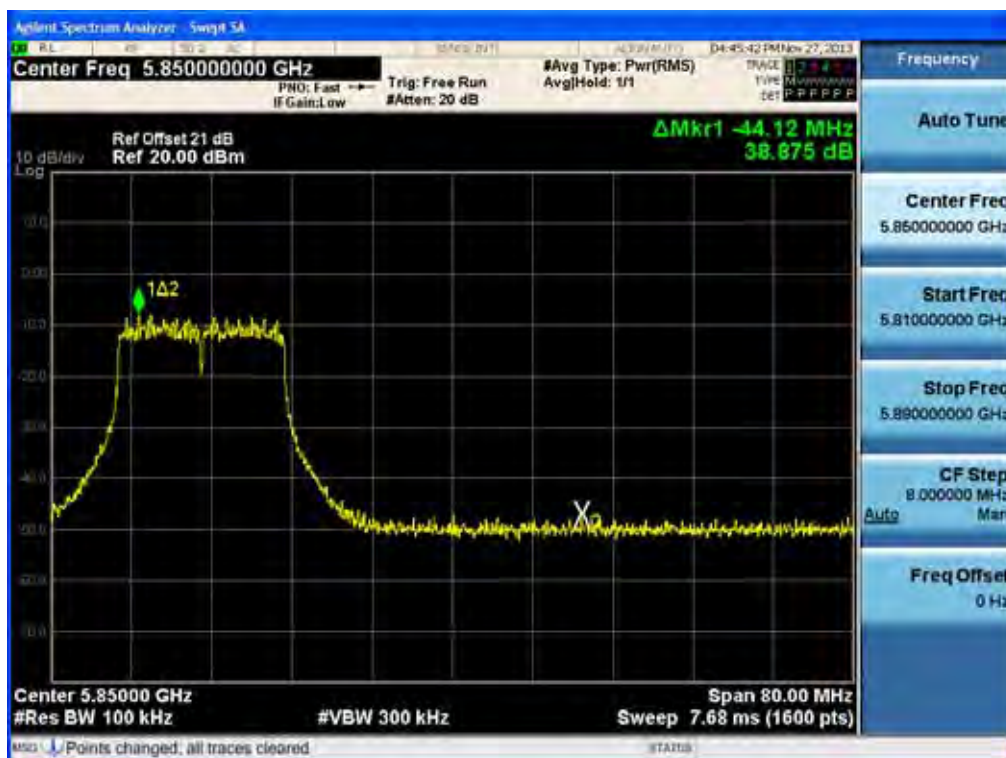
BandEdge (802.11n-CH11)



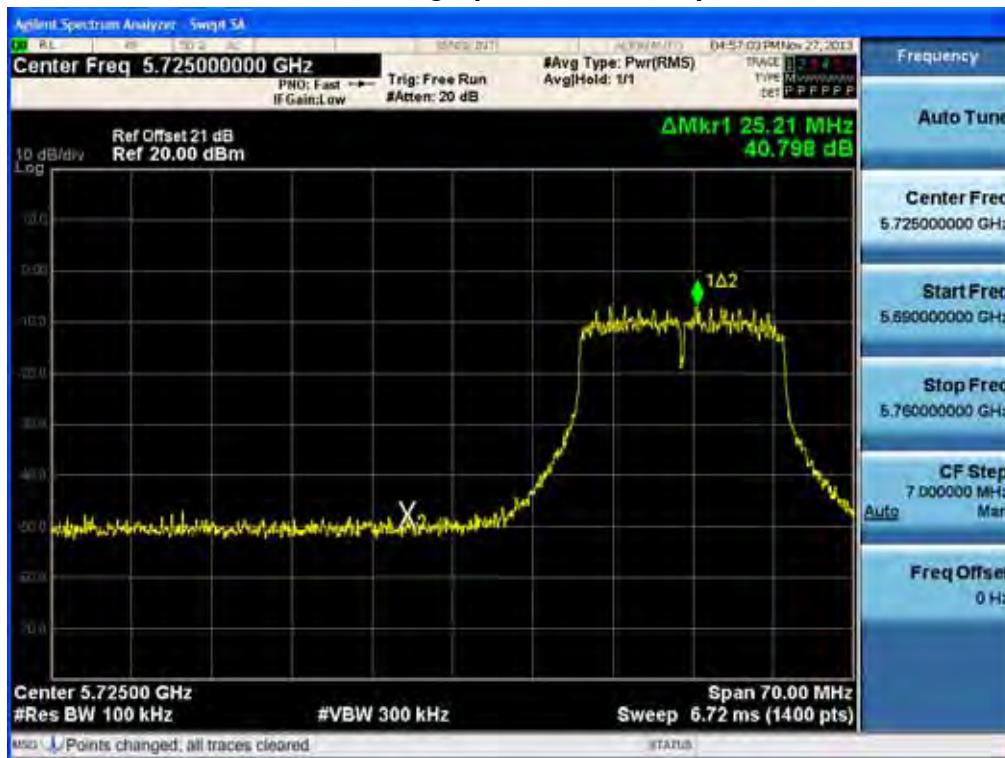
BandEdge (802.11a-CH 149)



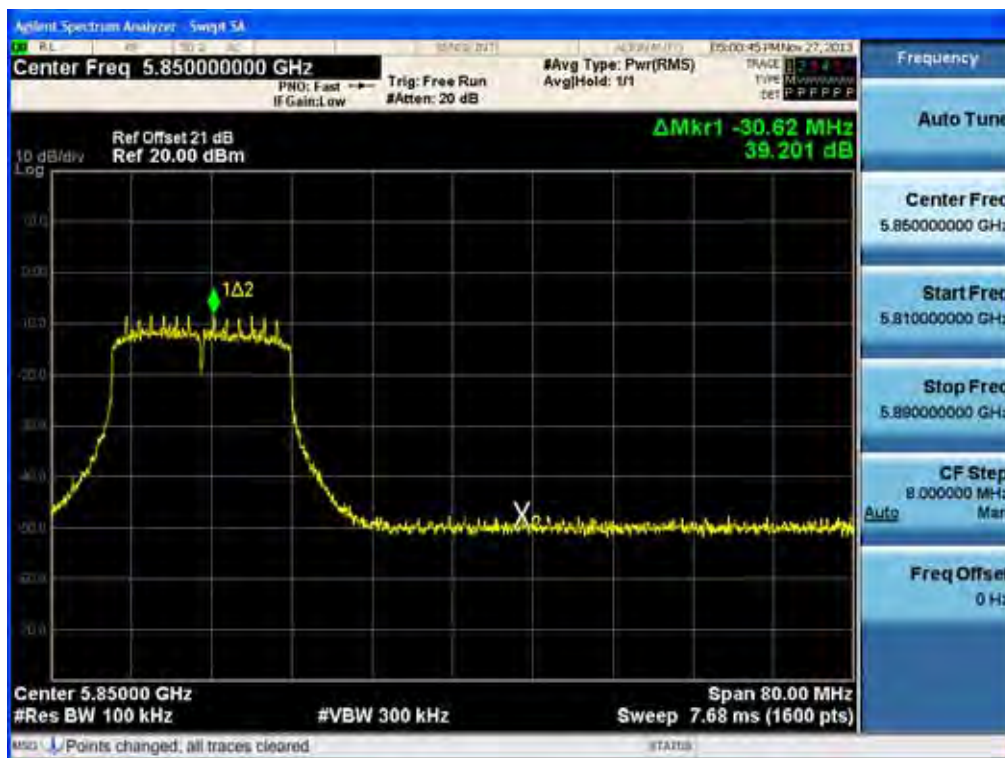
BandEdge (802.11a-CH 165)



BandEdge (802.11n-CH 149)



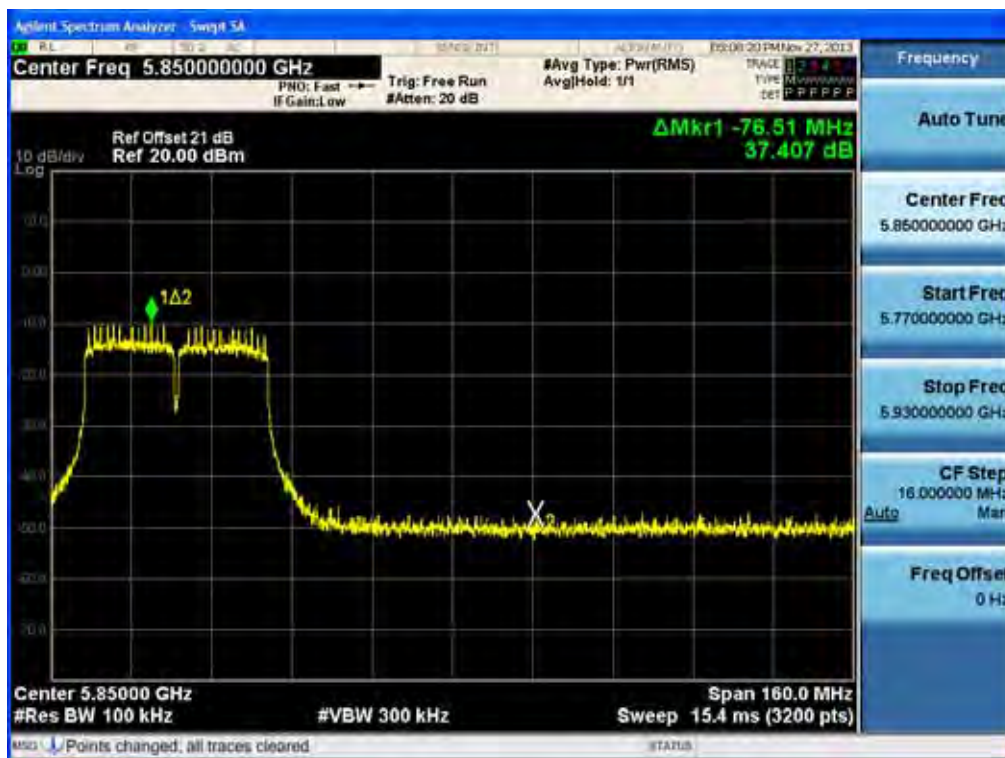
BandEdge (802.11n-CH 165)



BandEdge (802.11n-CH 151)

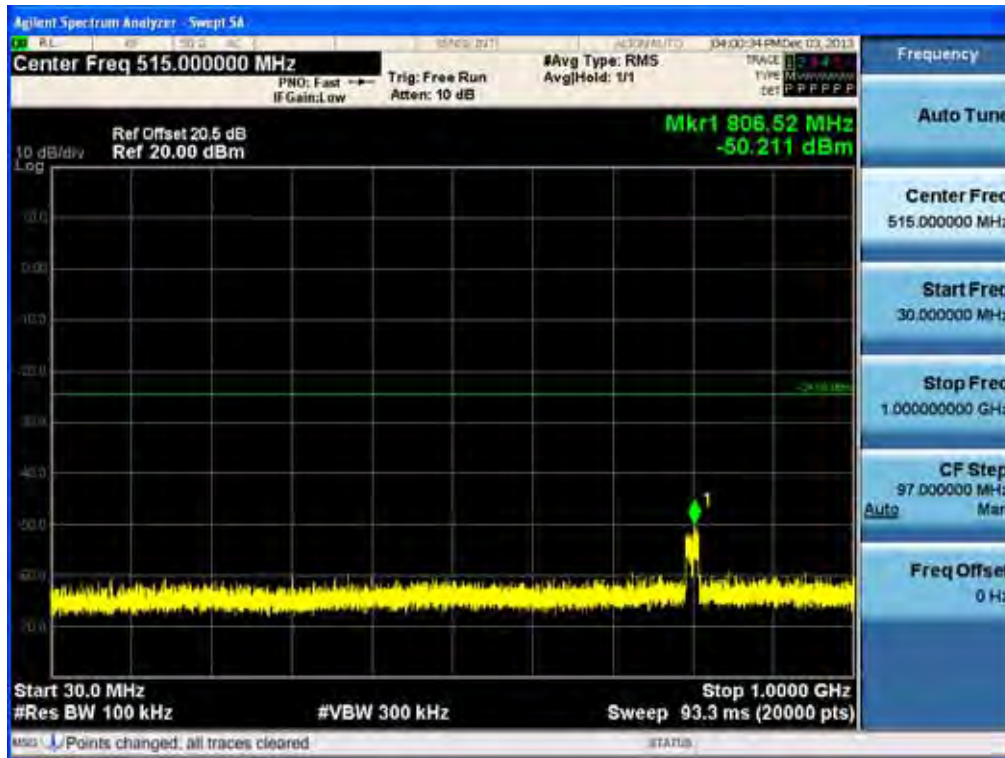


BandEdge (802.11n-CH 159)



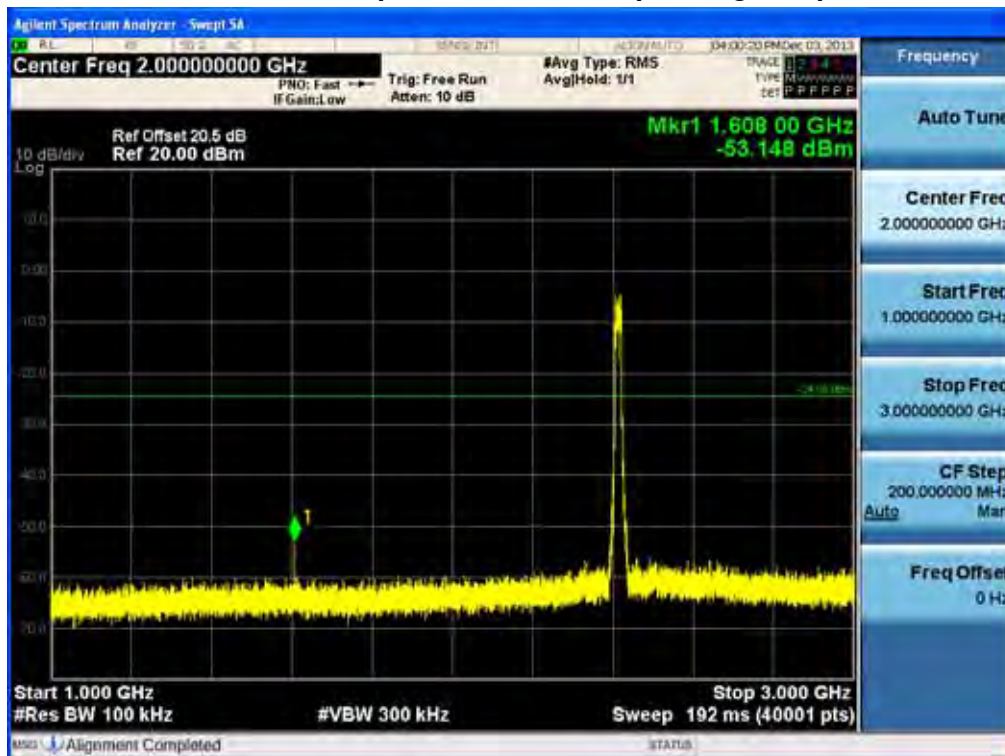
Monitoring Port Ant.1
30 MHz ~ 1 GHz

Conducted Spurious Emission (802.11g-CH1)



1 GHz ~ 3 GHz

Conducted Spurious Emission (802.11g-CH1)



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3 GHz ~ 5 GHz

Conducted Spurious Emission (802.11g-CH1)



5 GHz ~ 7 GHz

Conducted Spurious Emission (802.11g-CH1)



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7 GHz ~ 9 GHz

Conducted Spurious Emission (802.11g-CH1)



9 GHz ~ 11 GHz

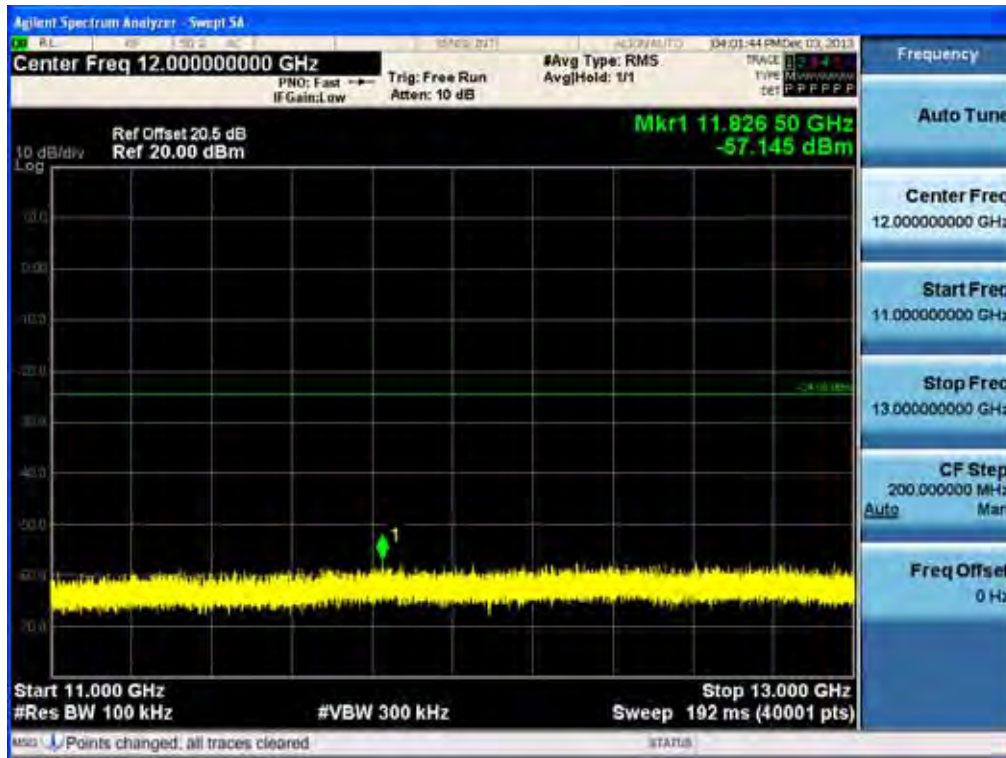
Conducted Spurious Emission (802.11g-CH1)



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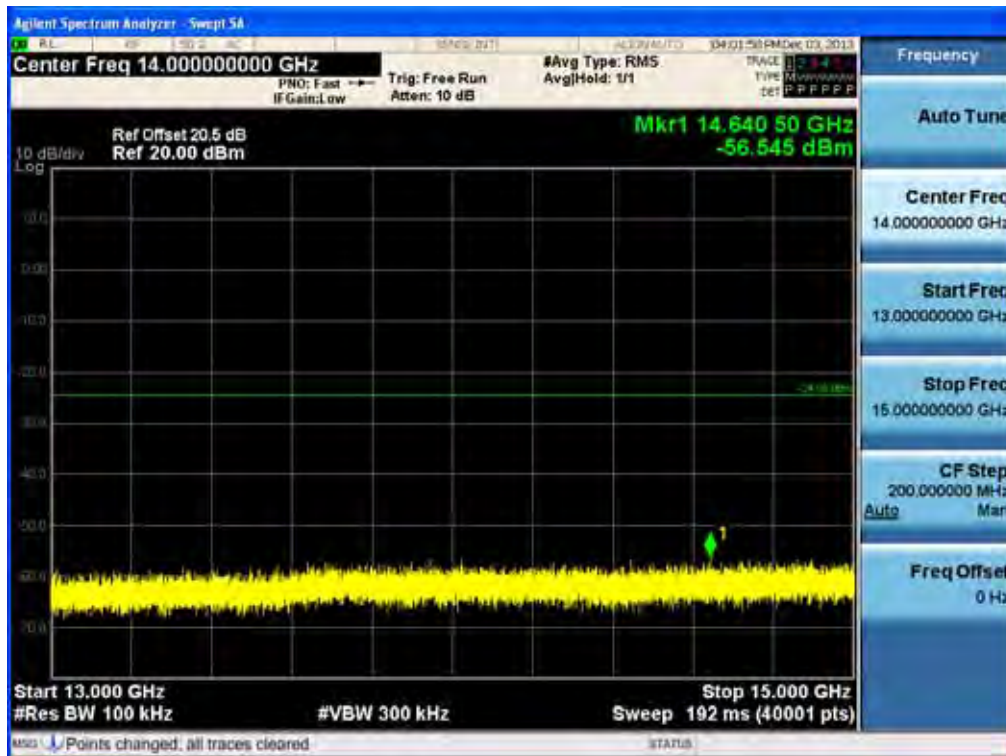
11 GHz ~ 13 GHz

Conducted Spurious Emission (802.11g-CH1)



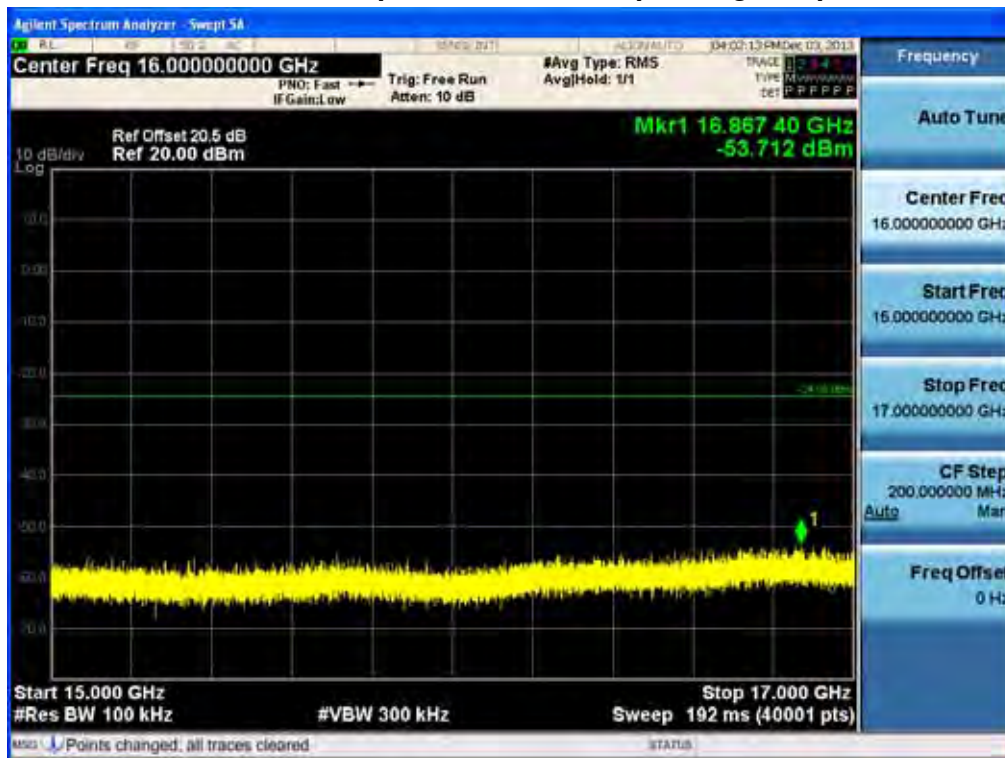
13 GHz ~ 15 GHz

Conducted Spurious Emission (802.11g-CH1)



15 GHz ~ 17 GHz

Conducted Spurious Emission (802.11g-CH1)



17 GHz ~ 19 GHz

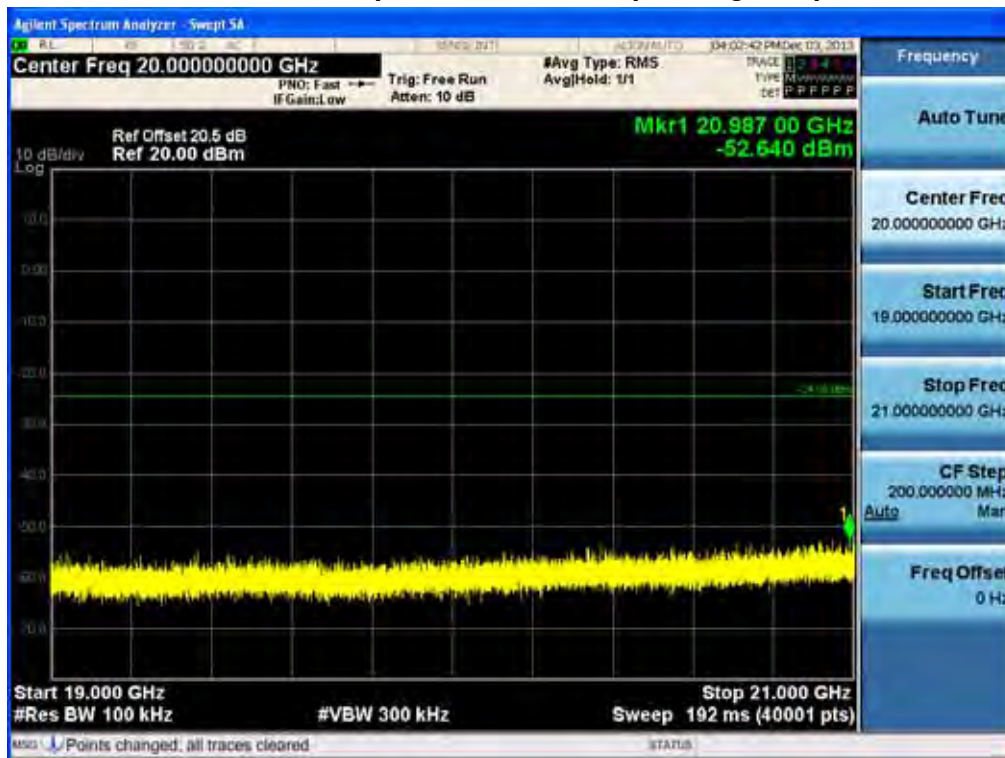
Conducted Spurious Emission (802.11g-CH1)



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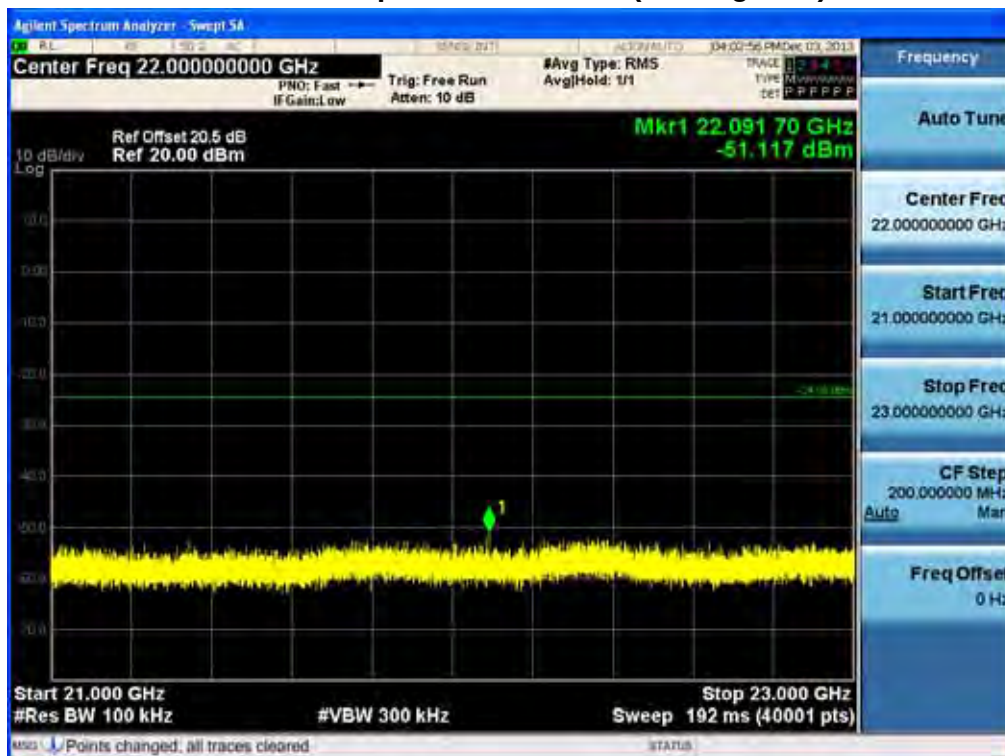
19 GHz ~ 21 GHz

19nducted Spurious Emission (802.11g-CH1)



21 GHz ~ 23 GHz

Conducted Spurious Emission (802.11g-CH1)



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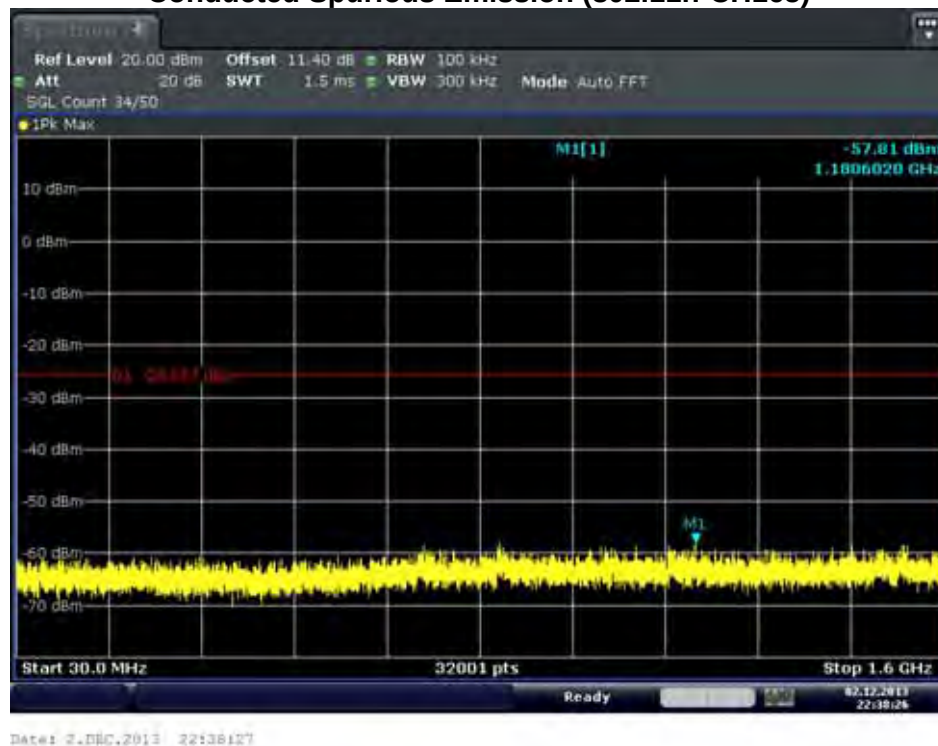
23 GHz ~ 25 GHz

Conducted Spurious Emission (802.11g-CH1)



30 MHz ~ 1.6 GHz

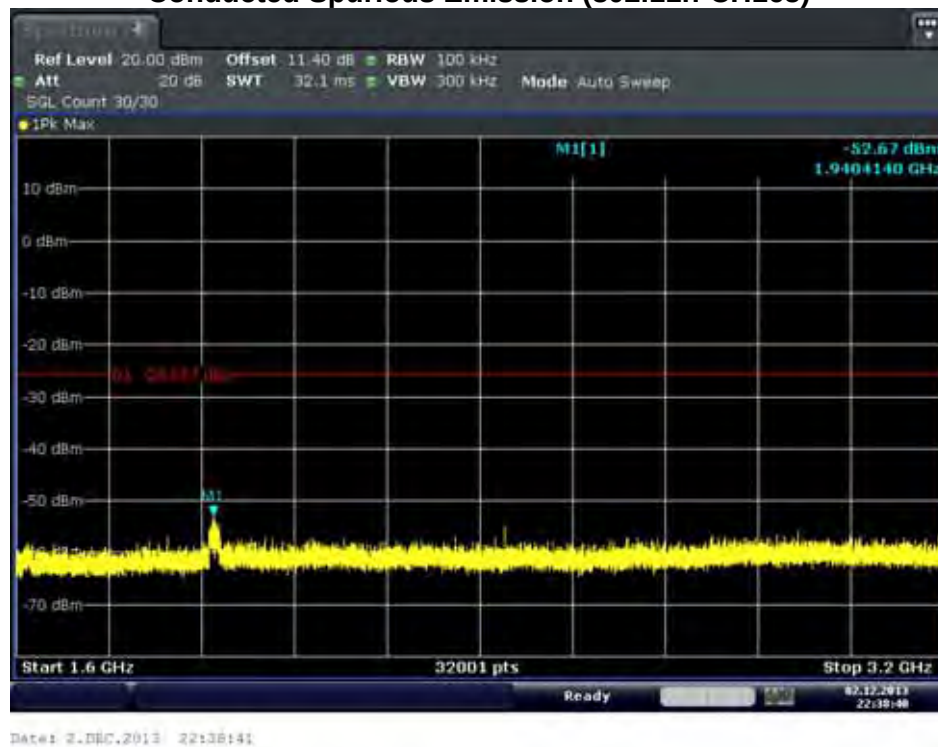
Conducted Spurious Emission (802.11n-CH165)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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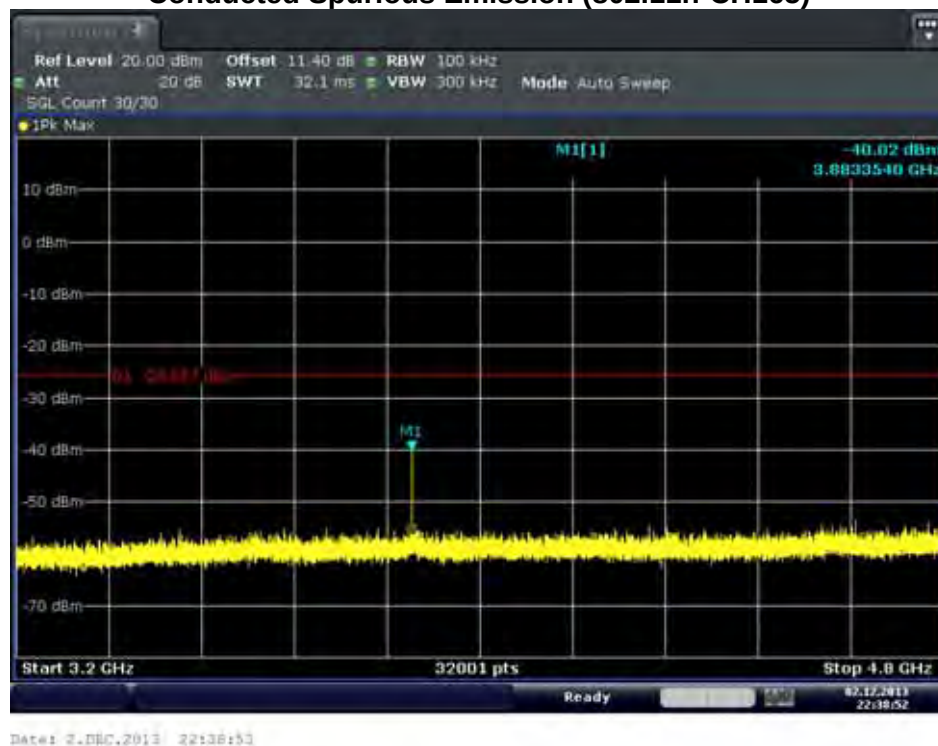
1.6 GHz ~ 3.2 GHz

Conducted Spurious Emission (802.11n-CH165)



3.2 GHz ~ 4.8 GHz

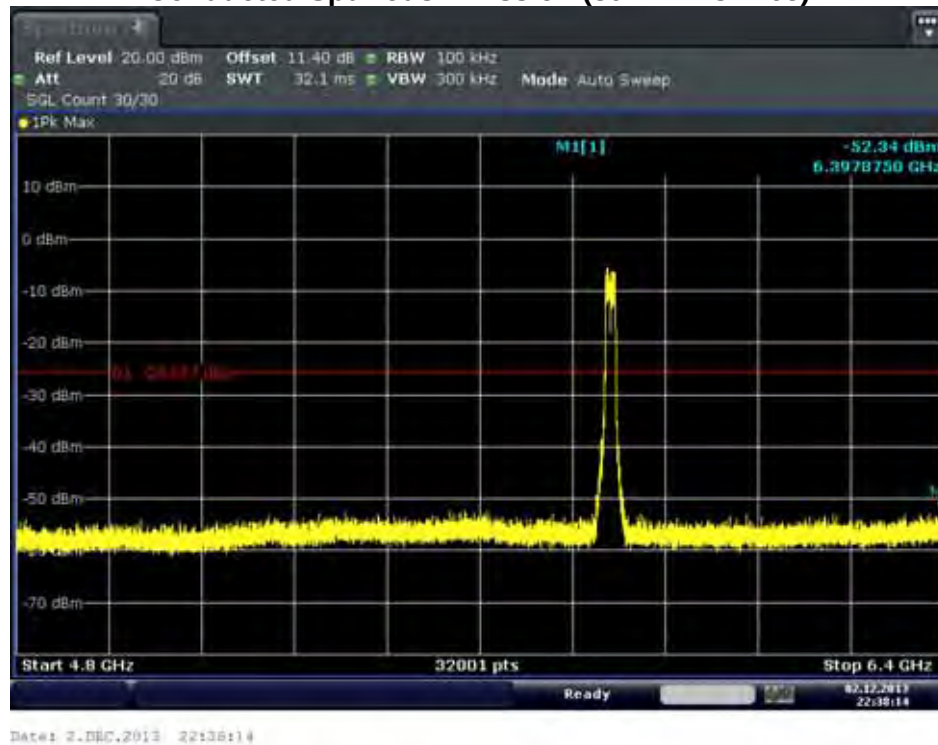
Conducted Spurious Emission (802.11n-CH165)



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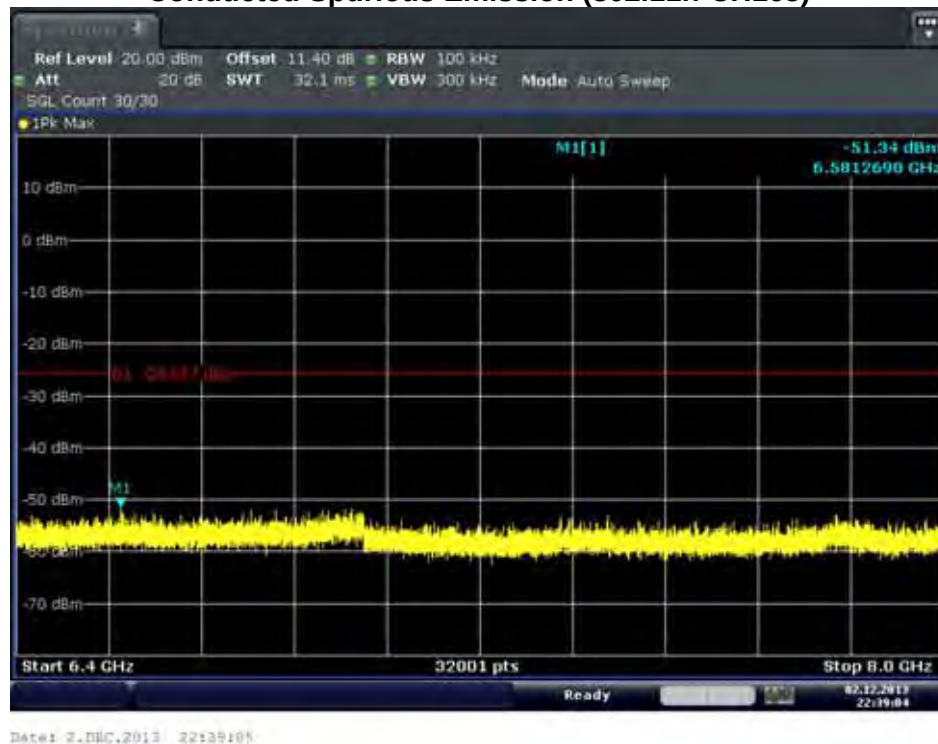
4.8 GHz ~ 6.4 GHz

Conducted Spurious Emission (802.11n-CH165)



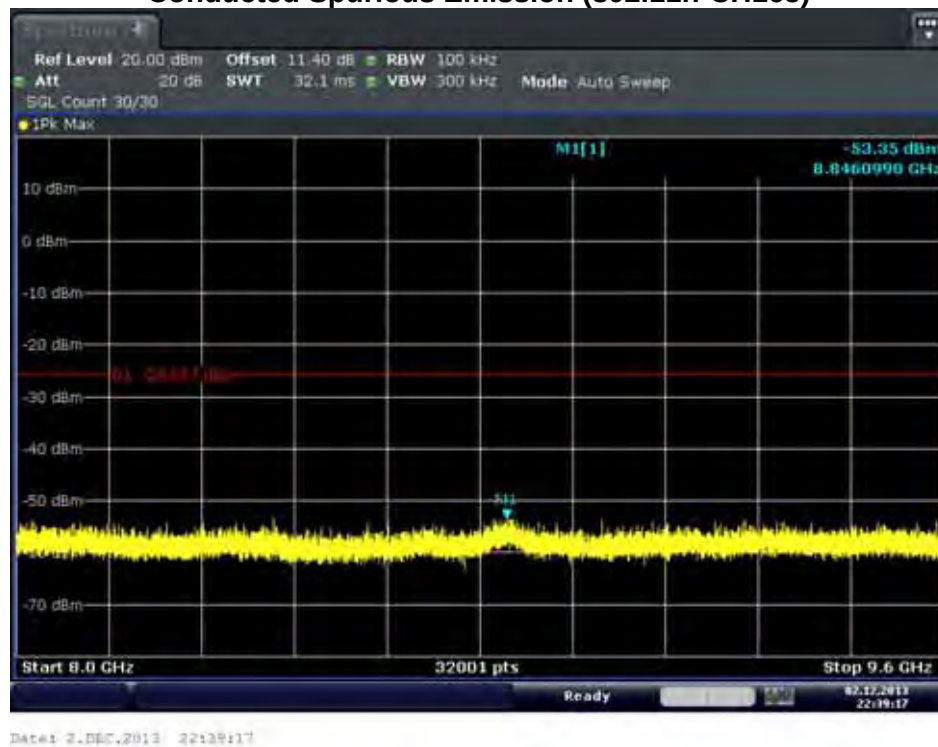
6.4 GHz ~ 8 GHz

Conducted Spurious Emission (802.11n-CH165)



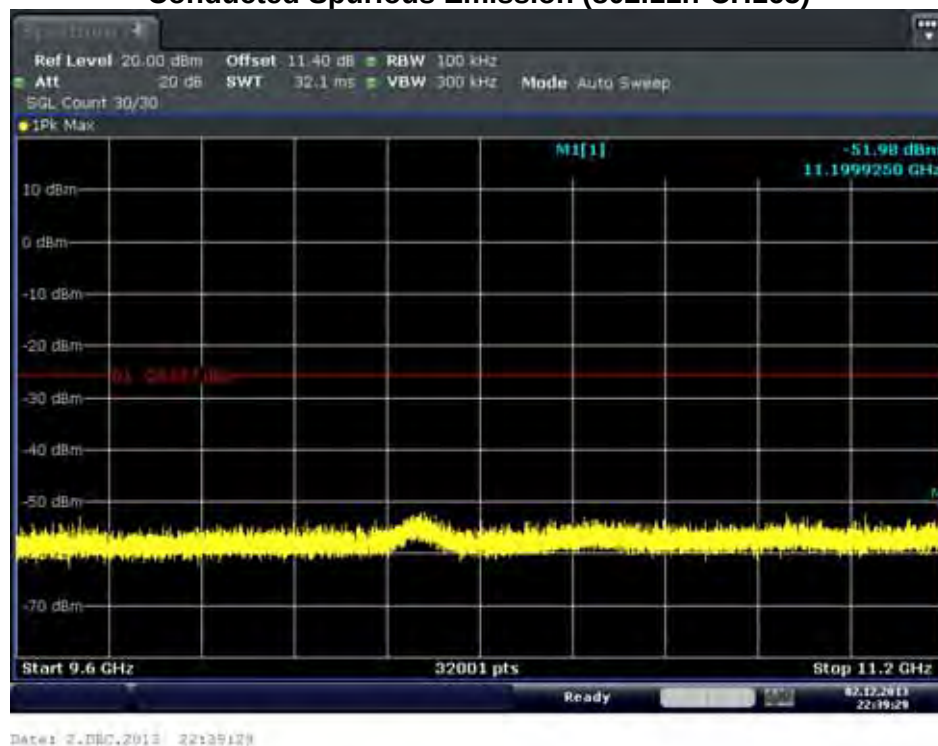
8 GHz ~ 9.6 GHz

Conducted Spurious Emission (802.11n-CH165)



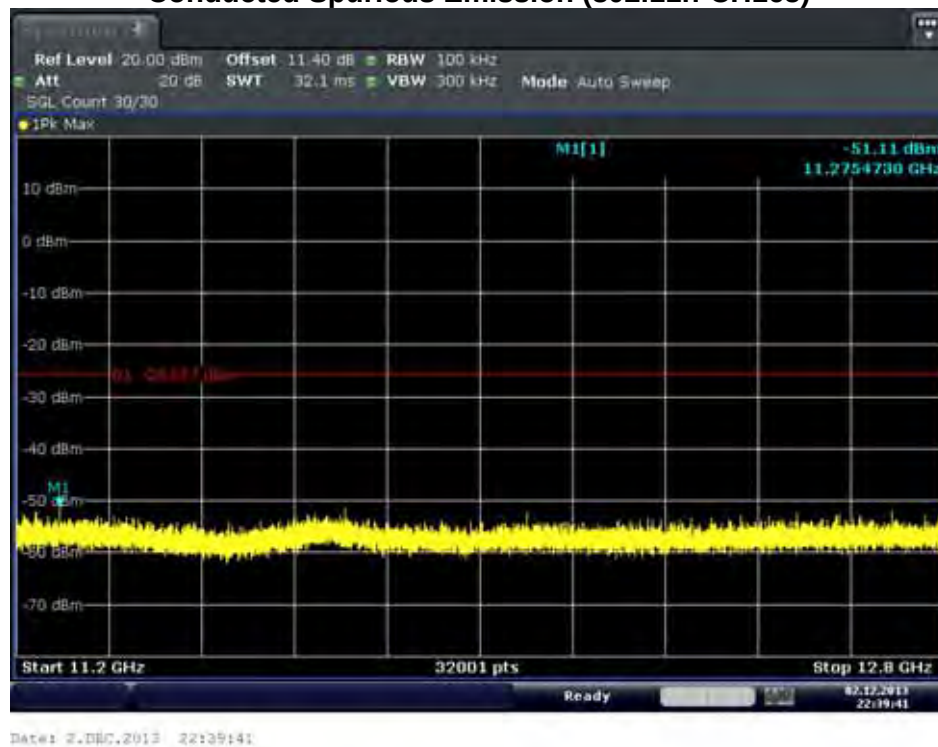
9.6 GHz ~ 11.2 GHz

Conducted Spurious Emission (802.11n-CH165)



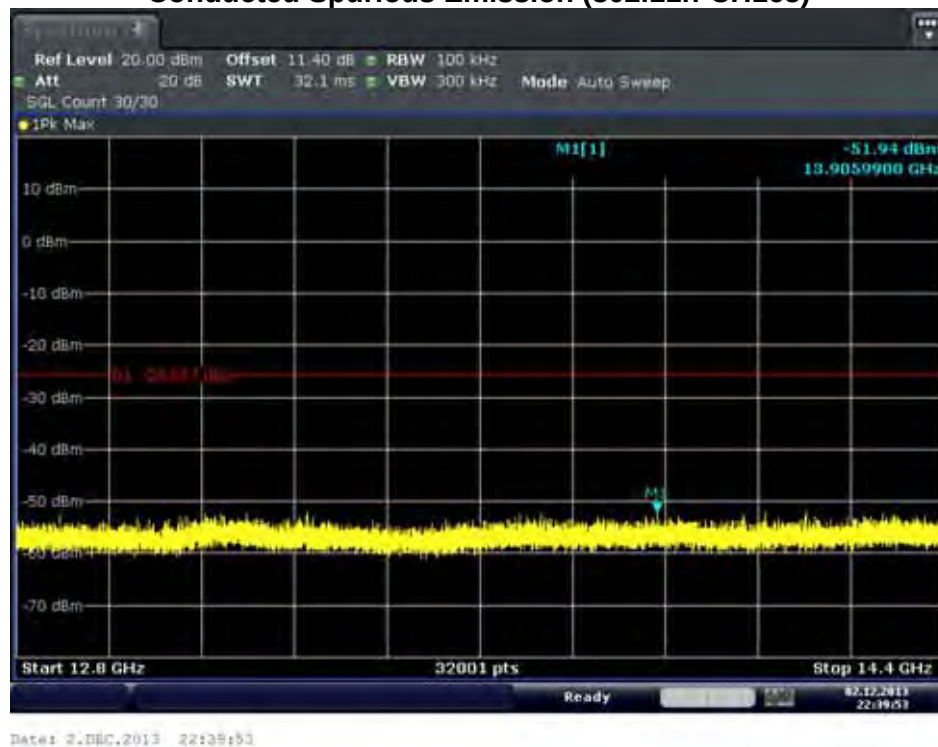
11.2 GHz ~ 12.8 GHz

Conducted Spurious Emission (802.11n-CH165)



12.8 GHz ~ 12.8 GHz

Conducted Spurious Emission (802.11n-CH165)



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14.4 GHz ~ 16 GHz

Conducted Spurious Emission (802.11n-CH165)



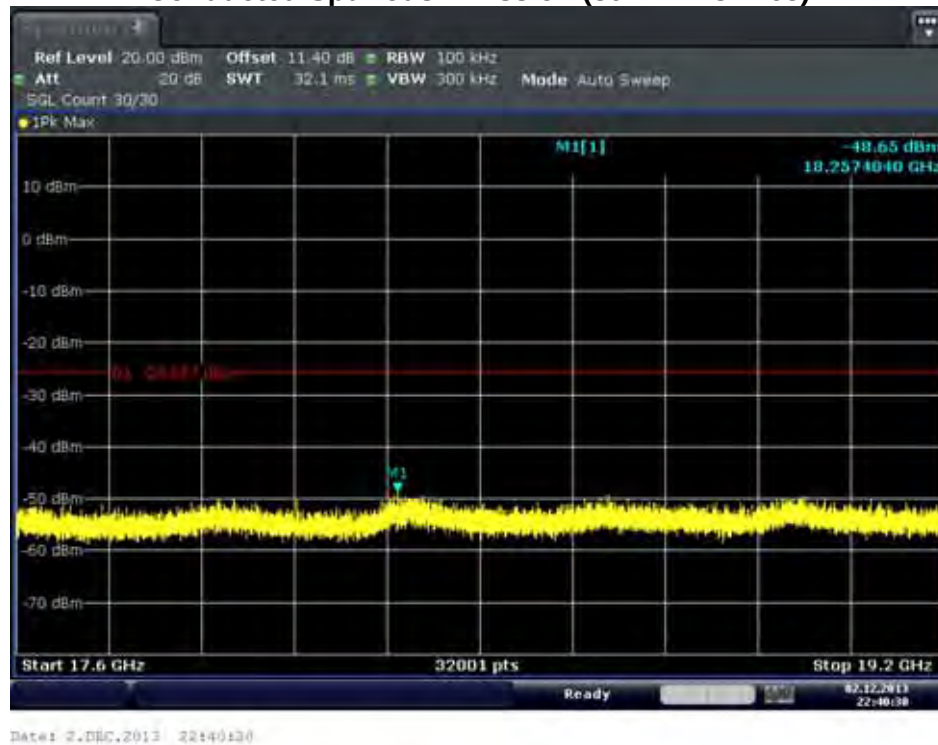
16 GHz ~ 17.6 GHz

Conducted Spurious Emission (802.11n-CH165)



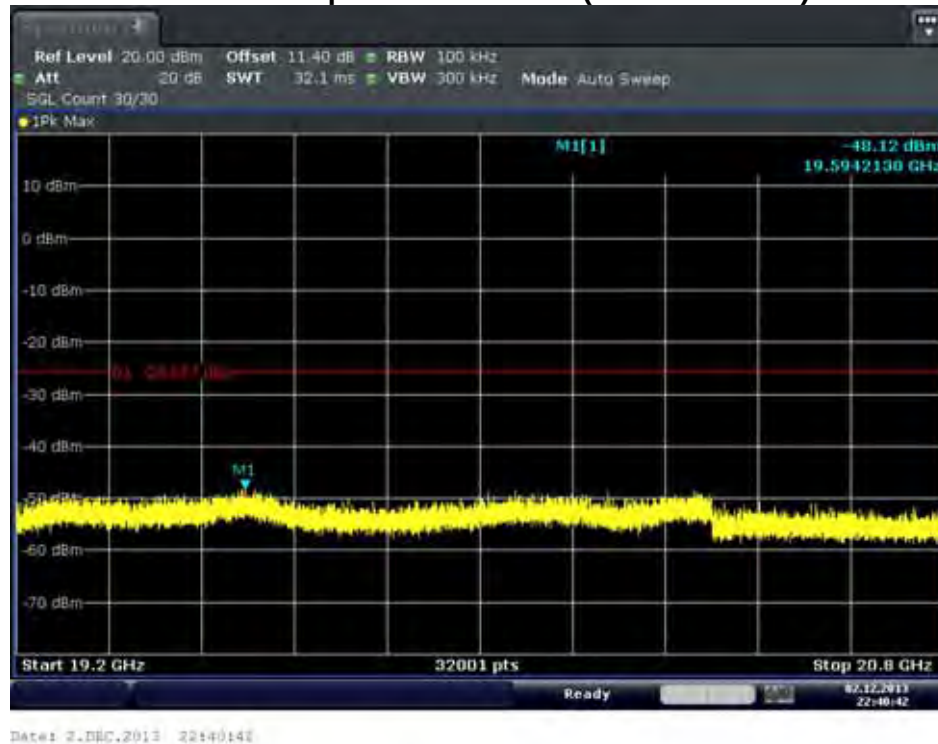
17.6 GHz ~ 19.2 GHz

Conducted Spurious Emission (802.11n-CH165)



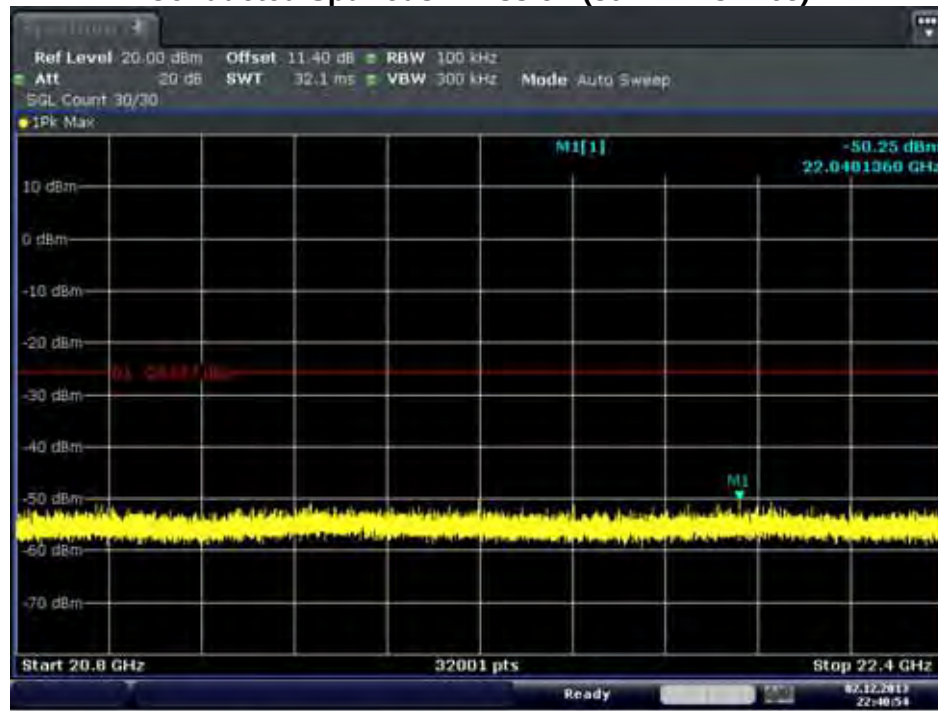
19.2 GHz ~ 20.8 GHz

Conducted Spurious Emission (802.11n-CH165)



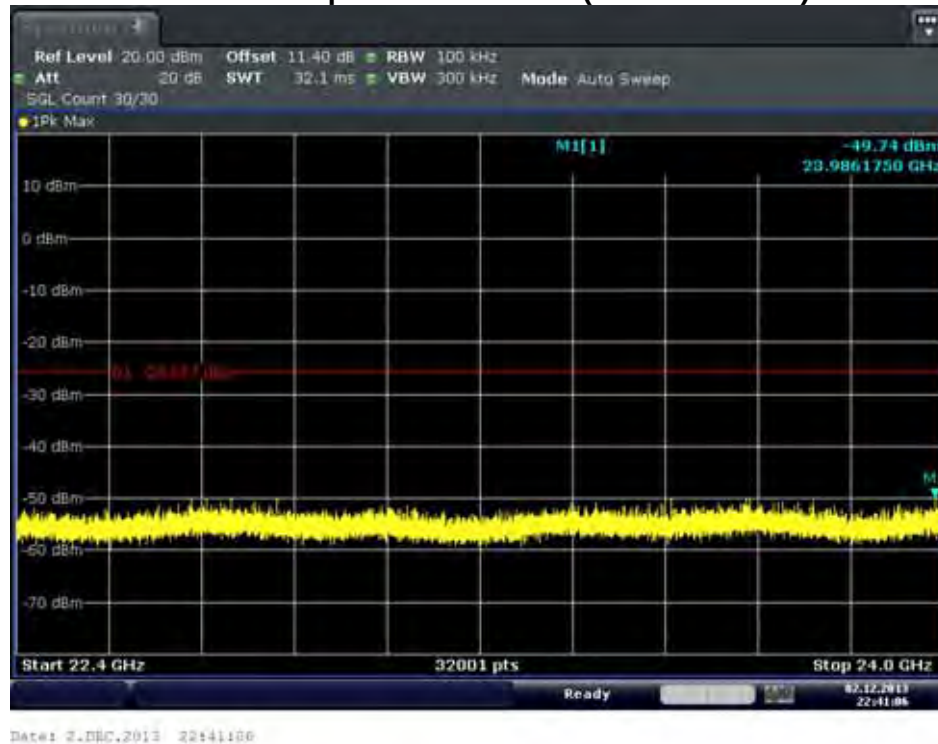
20.8 GHz ~ 22.4 GHz

Conducted Spurious Emission (802.11n-CH165)



22.4 GHz ~ 24 GHz

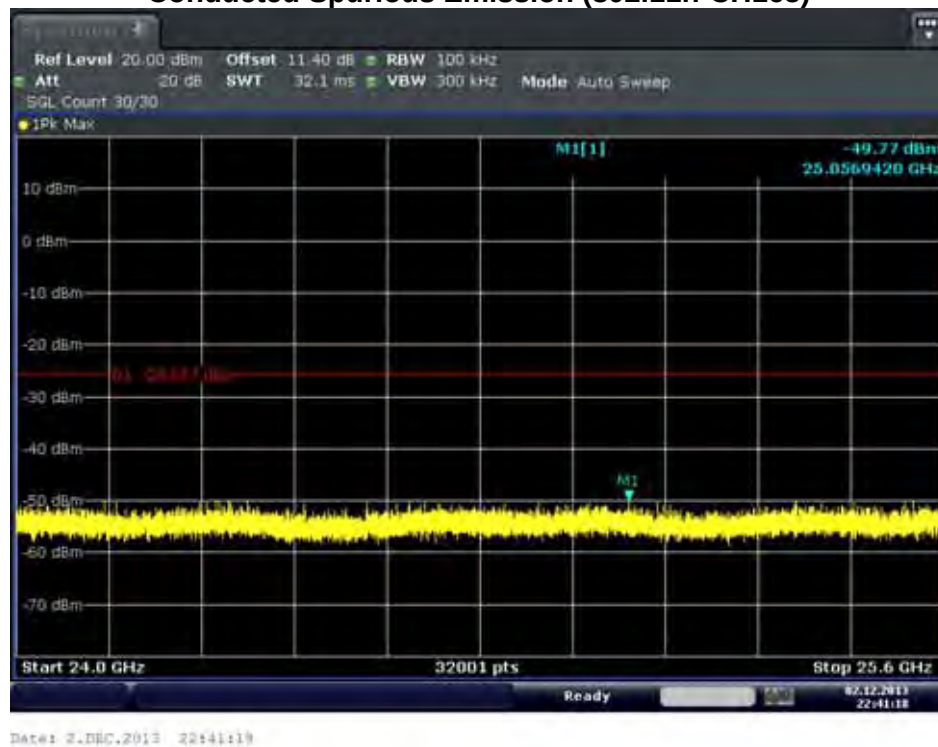
Conducted Spurious Emission (802.11n-CH165)



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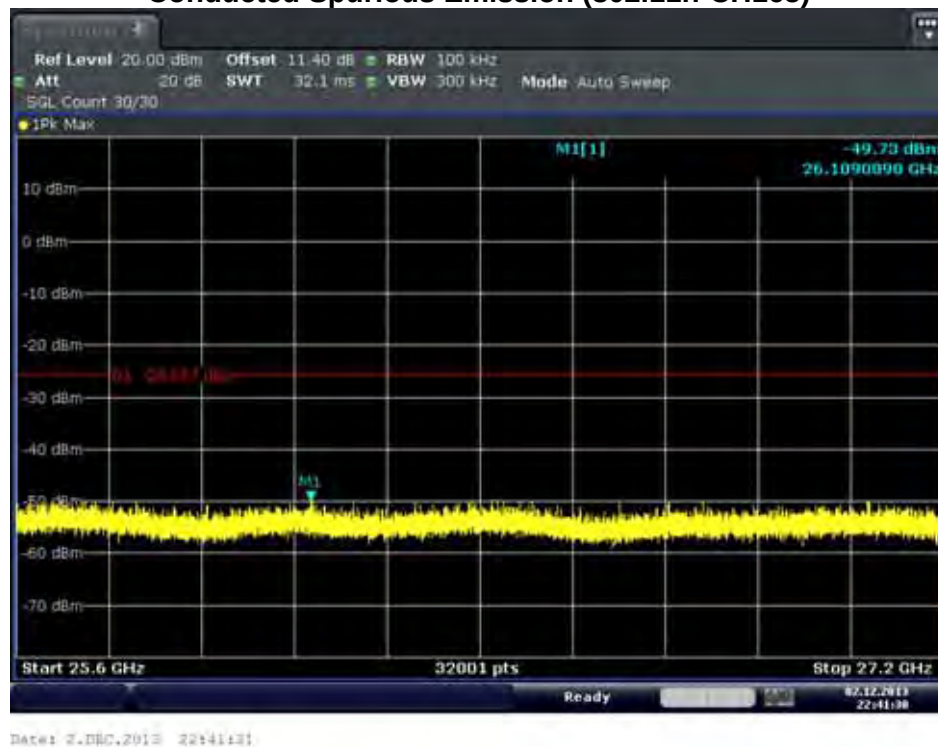
24 GHz ~ 25.6 GHz

Conducted Spurious Emission (802.11n-CH165)



25.6 GHz ~ 27.2 GHz

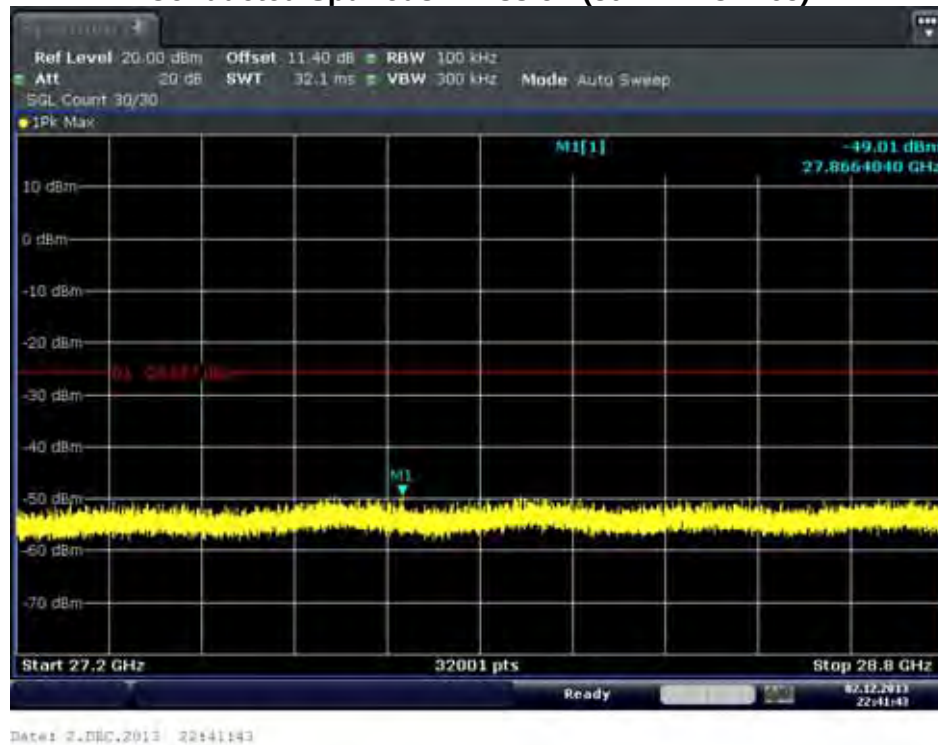
Conducted Spurious Emission (802.11n-CH165)



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27.2 GHz ~ 28.8 GHz

Conducted Spurious Emission (802.11n-CH165)



28.8 GHz ~ 30.4 GHz

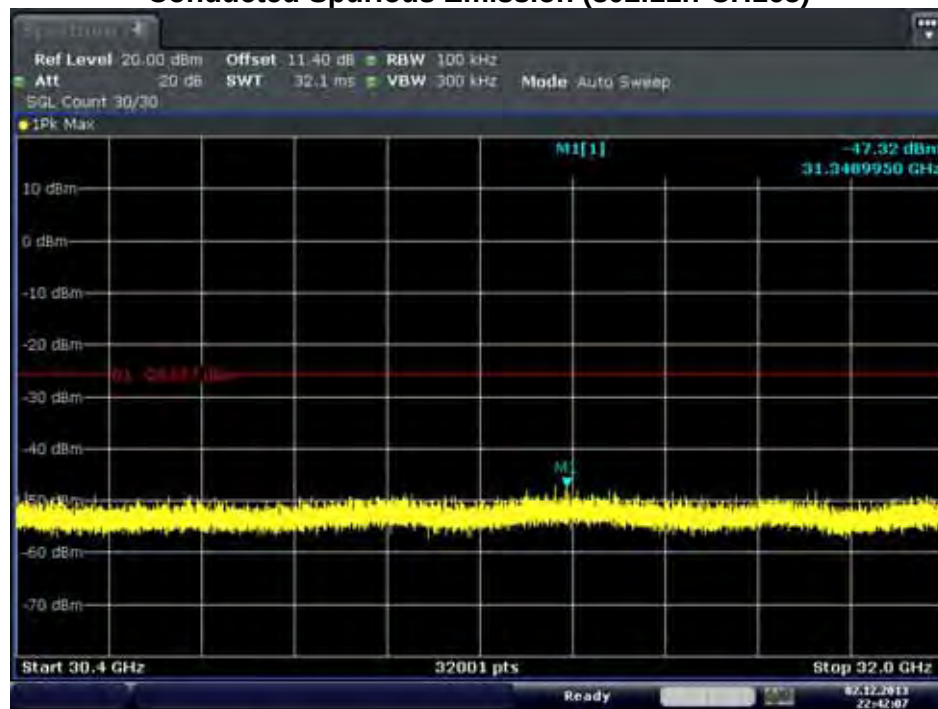
Conducted Spurious Emission (802.11n-CH165)



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30.4 GHz ~ 32 GHz

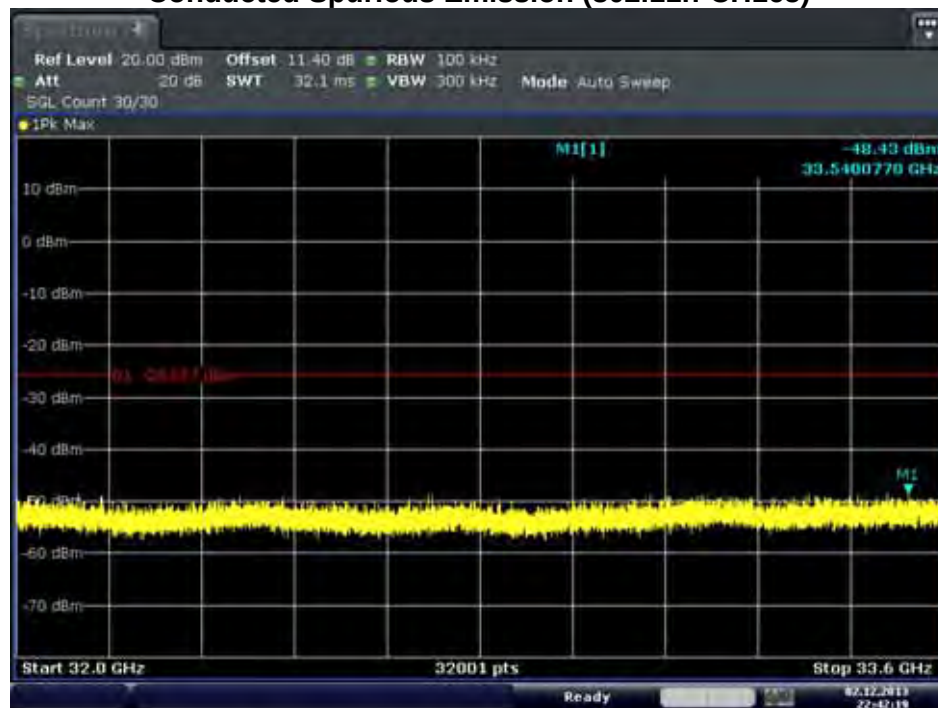
Conducted Spurious Emission (802.11n-CH165)



Date: 2.DEC.2013 22:42:07

32 GHz ~ 33.6 GHz

Conducted Spurious Emission (802.11n-CH165)

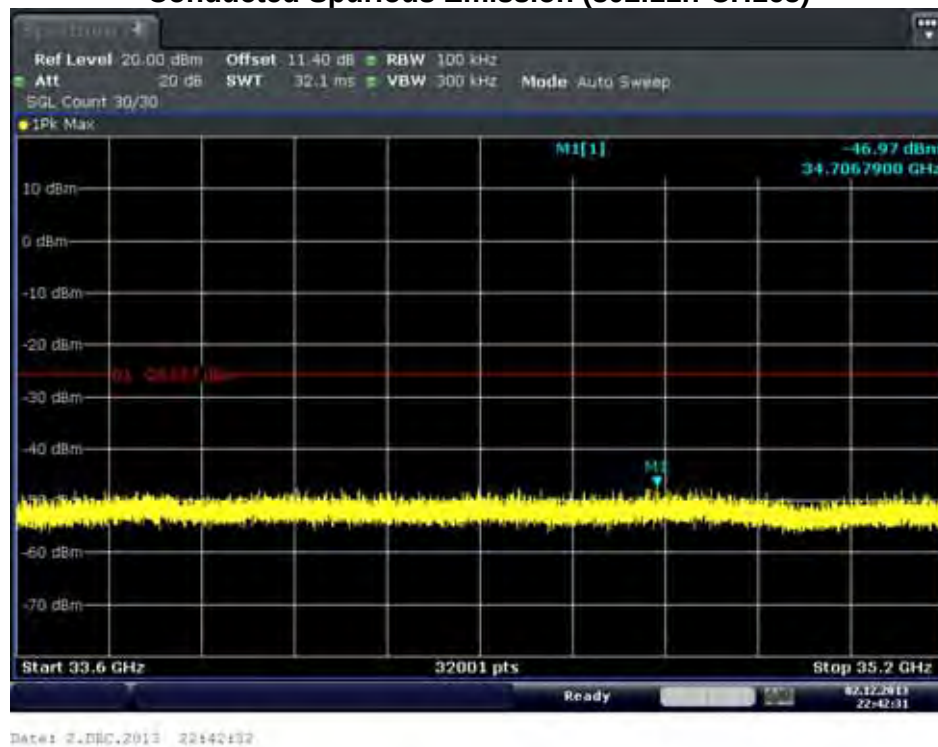


Date: 2.DEC.2013 22:42:10

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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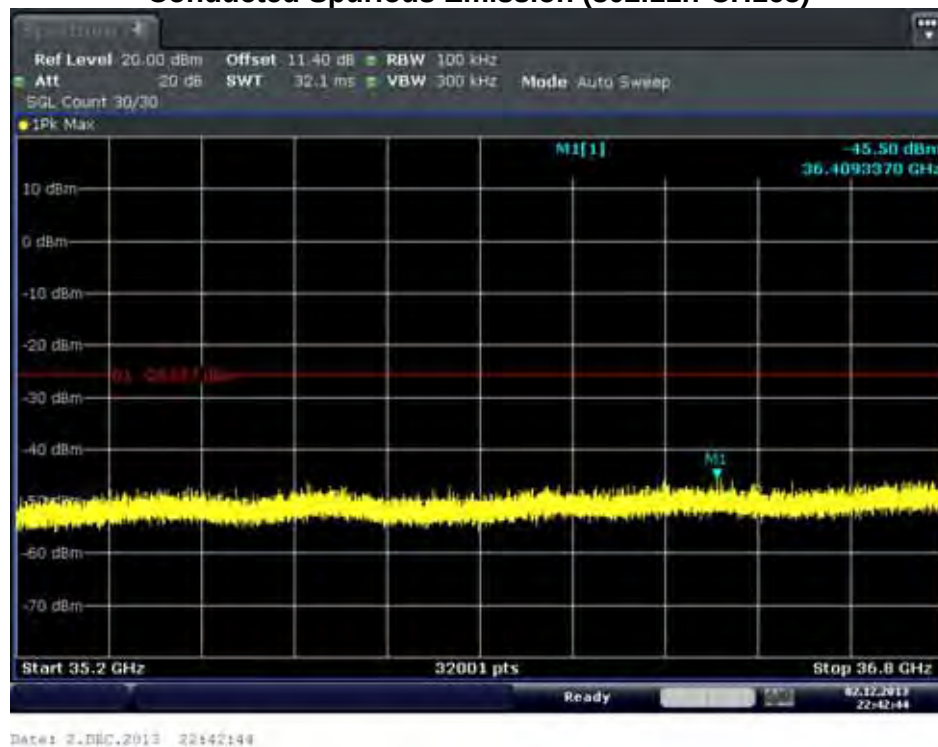
33.6 GHz ~ 35.2 GHz

Conducted Spurious Emission (802.11n-CH165)



35.2 GHz ~ 36.8 GHz

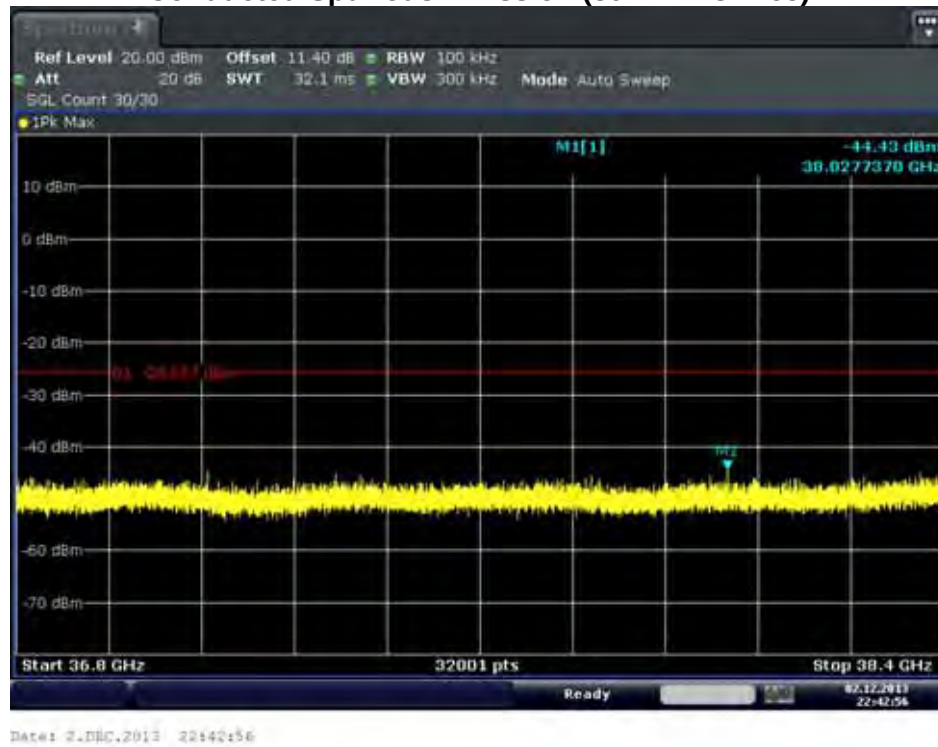
Conducted Spurious Emission (802.11n-CH165)



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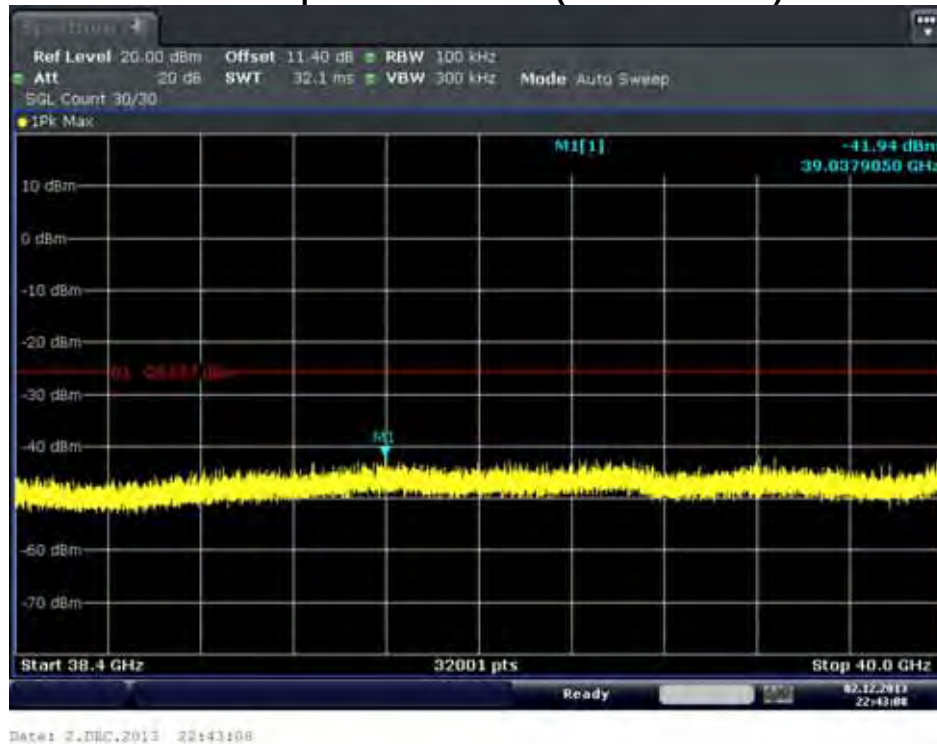
36.8 GHz ~ 38.4 GHz

Conducted Spurious Emission (802.11n-CH165)



38.4 GHz ~ 40 GHz

Conducted Spurious Emission (802.11n-CH165)



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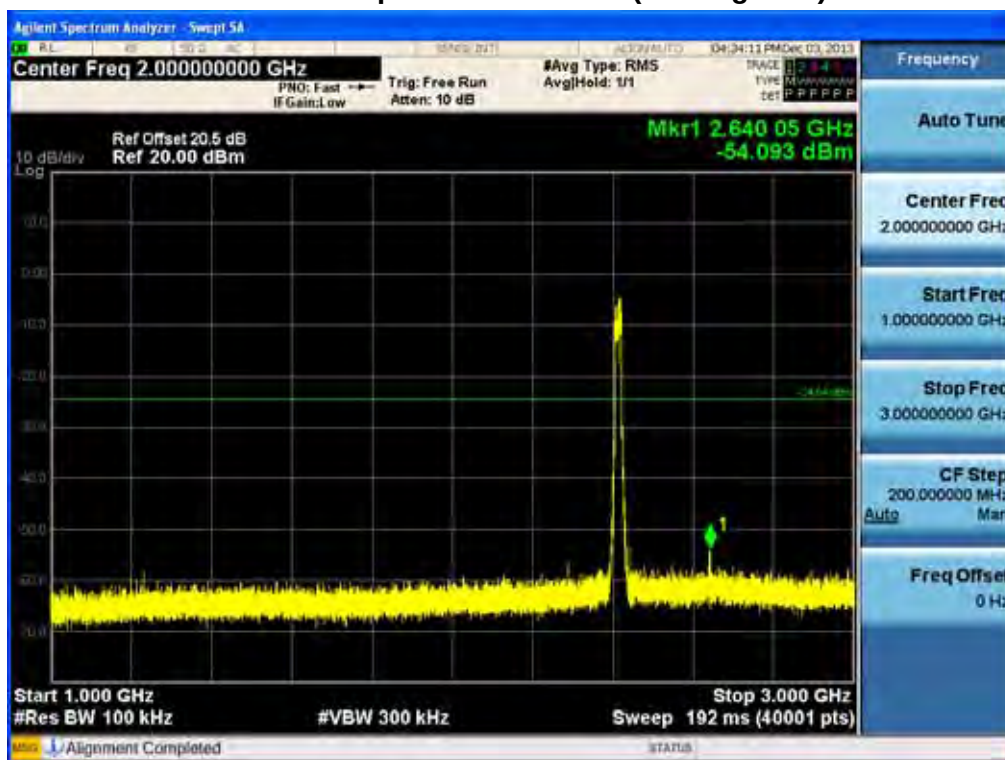
Monitoring Port Ant.2 30 MHz ~ 1 GHz

Conducted Spurious Emission (802.11g-CH1)



1 GHz ~ 3 GHz

Conducted Spurious Emission (802.11g-CH1)



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3 GHz ~ 5 GHz

Conducted Spurious Emission (802.11g-CH1)



5 GHz ~ 7 GHz

Conducted Spurious Emission (802.11g-CH1)



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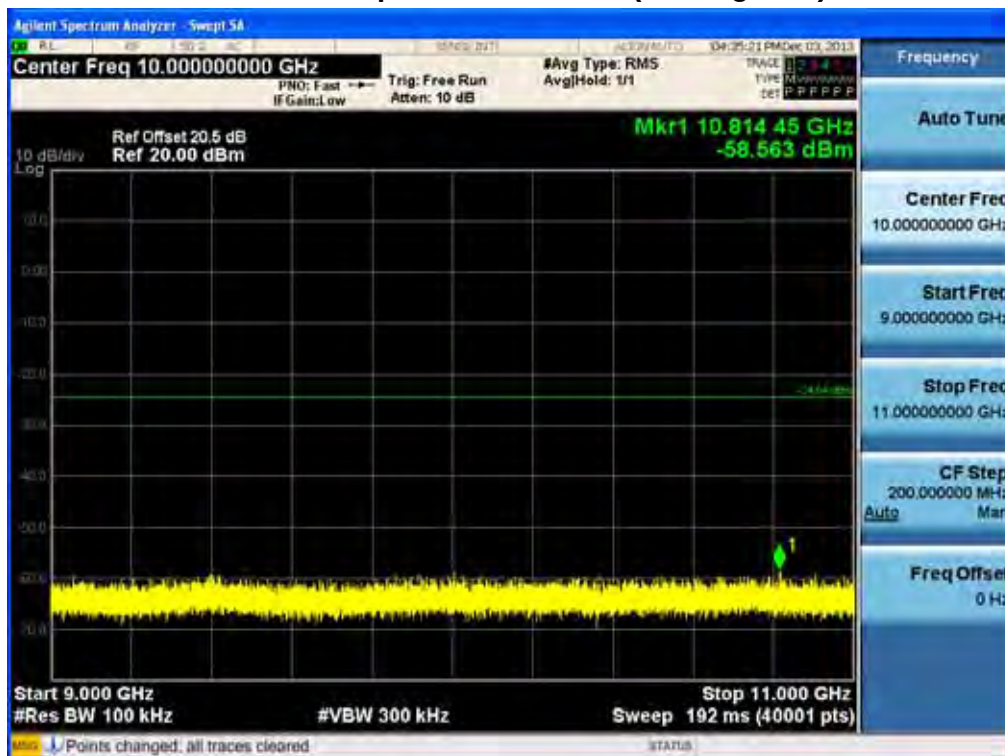
7 GHz ~ 9 GHz

Conducted Spurious Emission (802.11g-CH1)



9 GHz ~ 11 GHz

Conducted Spurious Emission (802.11g-CH1)



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