Test Report No. 7191126467-EEC15/02
dated 01 Dec 2015

PSB Singapore

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TEST REPORT COVER PAGE

Product Information			
Product Name / Description:	PORTABLE TWO-WAY RADIO (2.4GHz WiFi)	Applicant Company Number:	109U
Model Number(s):	AAH81WCN9TB2AN	UPN Number:	89FT7075
All Used IC Test Site(s) Reg. #:	2932I-1	SAR Test Lab Company Number:	--

Emissions Information								
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Band 8
RSS # & Issue #	RSS-247 & Issue 1							
Frequency Min (MHz)	2402							
Frequency Max (MHz)	2480							
RF Power Min (W) Conducted / EIRP / ERP	--							
RF Power Max (W) Conducted	0.020							
Field Strength Units @ distance	108.7 dBµV/m @ 3m							
Measured BW (kHz) (99%, 26dB, 6dB, etc.)	17776 (99%)							
Calculated BW (kHz) As per TRC-43	17900							
Emission Classification (FID, GID, DID, etc.)	17M9D1 D							
Transmitter Spurious Units @ distance	15.2GHz 47.9 dBµV/m (Peak) @ 3m							
	B	B	B	B	B	B	B	B
RSS # & Issue #								
Frequency Min (MHz)								
Frequency Max (MHz)								
RF Power Min (W) Conducted / EIRP / ERP								
RF Power Max (W) Conducted / EIRP / ERP								
Field Strength Units @ distance								
Measured BW (kHz) (99%, 26dB, 6dB, etc.)								
Calculated BW (kHz) As per TRC-43								
Emission Classification (FID, GID, DID, etc.)								
Transmitter Spurious Units @ distance								

Agreement Signature			
ATTESTATION: The test measurements were made in accordance with the above-mentioned departmental standard(s), and that the radio equipment identified in this application has been subject to all the applicable test conditions specified in the departmental standards and all of the requirements of the standards have been met.			
Applicant / Agent Name:	Lim Cher Hwee	Applicant / Agent Title:	Assistant Vice President
Applicant / Agent Signature:		Signature Date:	01 Dec 2015

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FORMAL REPORT ON TESTING IN ACCORDANCE WITH
47 CFR FCC Parts 15B & C
OF A
PORTABLE TWO-WAY RADIO (2.4GHz WiFi)
[Model : AAH81WCN9TB2AN]
[FCC ID : AZ489FT7075 & IC : 109U-89FT7075]

TEST FACILITY	TÜV SÜD PSB Pte Ltd Electrical & Electronics Centre (EEC), Product Services, No. 1 Science Park Drive, Singapore 118221
FCC REG. NO.	99142 (3m and 10m Semi-Anechoic Chamber, Science Park)
IND. CANADA REG. NO.	2932I-1 (3m and 10m Semi-Anechoic Chamber, Science Park)
PREPARED FOR	Motorola Solutions Malaysia Sdn Bhd Plot 2, Technoplex Industrial Park Mukim 12 Swd, Medan Bayan Lepas, Bayan Lepas Industrial Park, 11900 Bayan Lepas, Pulau Penang, Malaysia Tel : +604 2528543 Fax : +604 8503099
QUOTATION NUMBER	2191030269
JOB NUMBER	7191126467
TEST PERIOD	26 Jun 2015 – 23 Nov 2015

PREPARED BY	**APPROVED BY**
Quek Keng Huat Higher Associate Engineer	Lim Cher Hwee Assistant Vice President

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TEST SUMMARY

The product was tested in accordance with the customer's specifications.

Test Results Summary

Test Standard	Description	Pass / Fail
47 CFR FCC Part 15 and RSS-GEN Issue 4: 2014 and RSS-247 Issue 1: 2015		
15.207 RSS-GEN 8.8	Conducted Emissions	Not Applicable *See Note 6
15.205, 15.209 RSS-GEN 8.9, 8.10	Radiated Emissions (Spurious Emissions inclusive Restricted Bands Requirement)	Pass
15.247(a)(2) RSS-247 5.2(1)	Spectrum Bandwidth (6dB Bandwidth Measurement)	Pass
15.247(b)(3) RSS-247 5.4(4)	Maximum Peak Power	Pass
15.247(d) RSS-247 5.5	RF Conducted Spurious Emissions (Non-Restricted Bands)	Pass
15.247(d) RSS-247 5.5	RF Conducted Spurious Emissions (Restricted Bands)	Pass
15.247(d) RSS-247 5.5	Band Edge Compliance (Conducted)	Pass
15.247(d) RSS-247 5.5	Band Edge Compliance (Radiated)	Pass
15.247(e) RSS-247 5.2(2)	Peak Power Spectral Density	Pass

Notes

1. The channels as listed below, under the different configurations were tested for 802.11b WLAN.

Transmit Channel	Frequency (GHz)	Modulation	Data Rate
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	DBPSK DBPSK DBPSK	1Mbps 1Mbps 1Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	DQPSK DQPSK DQPSK	2Mbps 2Mbps 2Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	CCK CCK CCK	11Mbps 11Mbps 11Mbps

2. The channels as listed below, under the different configurations were tested for 802.11g WLAN.

Transmit Channel	Frequency (GHz)	Modulation	Data Rate
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	BPSK BPSK BPSK	9Mbps 9Mbps 9Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	QPSK QPSK QPSK	18Mbps 18Mbps 18Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	16QAM 16QAM 16QAM	36Mbps 36Mbps 36Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	64QAM 64QAM 64QAM	54Mbps 54Mbps 54Mbps

3. The channels as listed below, under the different configurations were tested for 802.11n WLAN.

Transmit Channel	Frequency (GHz)	Modulation	Data Rate
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	BPSK BPSK BPSK	6.5Mbps 6.5Mbps 6.5Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	QPSK QPSK QPSK	19.5Mbps 19.5Mbps 19.5Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	16QAM 16QAM 16QAM	39Mbps 39Mbps 39Mbps
Channel 1 (Lower Channel) Channel 6 (Middle Channel) Channel 11 (Upper Channel)	2.412 2.437 2.462	64QAM 64QAM 64QAM	65Mbps 65Mbps 65Mbps

Notes (continued)

4. The EUT is a Class B device when in non-transmitting state and meets the 47 CFR FCC Part15B Class B requirements.

5. All test measurement procedures are according to ANSI C63.4: 2014, ANSI C63.10: 2013 and KDB 558074 D01 DTS Measurement Guidance V03R03.

6. The Equipment Under Test (EUT) is a battery operated device / DC operated device and contains no provision for public utility connections. The EUT will be powered off and not operational during the charging mode.

7. The EUT was tested using fully charged batteries with DC voltage of 3.78V.

8. The unit was also investigated for inter-modulation products between the co-located WiFi and the land mobile radios. All inter-modulation products between the co-located radios were found to be compliant to the FCC limits of 15.209 and Industry Canada RSS-GEN.

9. The EUT uses a 0.5dBi internal PIFA which connects to the RF port via a spring contact. The EUT meets the requirement of FCC 15.203.

10. The maximum measured RF power of the Equipment Under Test is 13.01dBm.

11. All tests except Maximum Peak Power and Band Edge Compliance (Radiated) were tested at the maximum power of the RF module which is higher than the supported maximum EUT RF power. The Maximum Peak Power and Band Edge Compliance (Radiated) tests were tested at the maximum RF power of the EUT.

Modifications

No modifications were made.

PRODUCT DESCRIPTION

Description	:	The Equipment Under Test (EUT) is a **SL 7000 SERIES PORTABLE TWO-WAY RADIO.**
Manufacturer	:	Motorola Solutions Malaysia Sdn Bhd Plot 2, Technoplex Industrial Park Mukim 12 Swd, Medan Bayan Lepas, Bayan Lepas Industrial Park, 11900 Bayan Lepas, Pulau Penang, Malaysia
Model Number	:	AAH81WCN9TB2AN
FCC ID	:	AZ489FT7075
IC	:	109U-89FT7075
Serial Number	:	806TRR0476
Microprocessor	:	Ti OMAPL138BZCEA3R
Operating / Transmitting Frequency	:	<u>Bluetooth / Bluetooth LE</u> 2.402GHz (lower channel) to 2.480GHz (upper channel) 79 channels (Bluetooth), 40 channels (Bluetooth LE) <u>WiFi</u> 2.412GHz (lower channel) to 2.462GHz (upper channel) 11 channels <u>Land Mobile</u> 896-941MHz
Clock / Oscillator Frequency	:	Reference Clock: 19.2MHz LO: 1792-1882MHz
Modulation	:	<u>Bluetooth</u> Gaussian Frequency Shift Keying (GFSK) (π/4) DQPSK 8DPSK <u>WiFi</u> Differential Binary Phase Shift Keying (DBPSK) Differential Quadrature Phase Shift Keying (DQPSK) Complementary Code Keying (CCK) Binary Phase Shift Keying (BPSK) Quadrature Phase Shift Keying (QPSK) 16-Quadrature Amplitude Modulation (16QAM) 64-Quadrature Amplitude Modulation (64QAM) <u>Land Mobile</u> Frequency Modulation (FM)
Antenna Gain	:	0.5 dBi (PIFA Antenna)

(Continued)

Port / Connectors	:	Refer to manufacturer's user manual / operating manual
Rated Input Power	:	3.7Vdc 8.5Wh 2300mAh Lithium ION battery
Accessories	:	Refer to manufacturer's user manual / operating manual

SUPPORTING EQUIPMENT DESCRIPTION

Equipment Description (Including Brand Name)	Model, Serial & FCC ID Number	Cable Description (List Length, Type & Purpose)
Fujitsu Laptop	M/N: S6310 S/N: R7100269 FCC ID: DoC	Nil
Fujitsu AC Adapter	M/N: CP293662-01 S/N: O6X00399B FCC ID: DoC	1.80m unshielded power cable
Microsoft Wheel Mouse	M/N: X08-71118 S/N: Nil FCC ID: DoC	Nil

EUT OPERATING CONDITIONS

47 CFR FCC Part 15 and RSS-GEN Issue 4 and RSS-247 Issue 1
1. Radiated Emissions (Spurious Emissions inclusive Restricted Bands Requirement) **2. Spectrum Bandwidth (6dB Bandwidth Measurement)** **3. Maximum Peak Power** **4. RF Conducted Spurious Emissions Emission (Non-Restricted Bands)** **5. RF Conducted Spurious Emissions Emission (Restricted Bands)** **6. Band Edge Compliance (Conducted)** **7. Band Edge Compliance (Radiated)** **8. Peak Power Spectral Density**
The EUT was exercised by operating in maximum continuous transmission in test mode, i.e transmitting at lower, middle and upper channels respectively at one time.

47 CFR FCC Part 15.205 and RSS-GEN 8.10 Restricted Bands

MHz			MHz			MHz			GHz		
0.090	-	0.110	16.42	-	16.423	399.9	-	410	4.5	-	5.15
0.495	-	0.505	16.69475	-	16.69525	608	-	614	5.35	-	5.46
2.1735	-	2.1905	16.80425	-	16.80475	960	-	1240	7.25	-	7.75
4.125	-	4.128	25.5	-	25.67	1300	-	1427	8.025	-	8.5
4.17725	-	4.17775	37.5	-	38.25	1435	-	1626.5	9.0	-	9.2
4.20725	-	4.20775	73	-	74.6	1645.5	-	1646.5	9.3	-	9.5
6.215	-	6.218	74.8	-	75.2	1660	-	1710	10.6	-	12.7
6.26775	-	6.26825	108	-	121.94	1718.8	-	1722.2	13.25	-	13.4
6.31175	-	6.31225	123	-	138	2200	-	2300	14.47	-	14.5
8.291	-	8.294	149.9	-	150.05	2310	-	2390	15.35	-	16.2
8.362	-	8.366	156.52475	-	156.52525	2483.5	-	2500	17.7	-	21.4
8.37625	-	8.38675	156.7	-	156.9	2690	-	2900	22.01	-	23.12
8.41425	-	8.41475	162.0125	-	167.17	3260	-	3267	23.6	-	24.0
12.29	-	12.293	167.72	-	173.2	3332	-	3339	31.2	-	31.8
12.51975	-	12.52025	240	-	285	3345.8	-	3358	36.43	-	36.5
12.57675	-	12.57725	322	-	335.4	3600	-	4400	Above 38.6		
13.36	-	13.41									

47 CFR FCC Part 15.209 and RSS-GEN 8.9 Radiated Emission Limits
Emission Limits

Frequency Range (MHz)	Quasi-Peak Limit Values (dBµV/m)
0.009 - 0.490	20 log [2400 / F (kHz)] @ 300m
0.490 - 1.705	20 log [24000 / F (kHz)] @ 30m
1.705 - 30.0	30.0 @ 30m
30 - 88	40.0 @ 3m
88 - 216	43.5 @ 3m
216 - 960	46.0 @ 3m
Above 960	54.0* @ 3m
* For frequency bands 9kHz – 90kHz, 110kHz – 490kHz and above 1GHz, average detector was used. A peak limit of 20dB above the average limit does apply.	

47 CFR FCC Part 15.209, RSS-GEN 8.9 and 8.10 Radiated Emission Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
R&S Test Receiver – ESI1	ESI40	100010	14 Jul 2016	1 year
Schaffner Bilog Antenna –(30MHz-2GHz) BL3 (Ref)	CBL6112D	2549	29 Jan 2016	1 year
ETS Horn Antenna(18GHz-40GHz)(Ref)	3116	0004-2474	02 Oct 2016	1 year
EMCO Horn Antenna(1GHz-18GHz)	3115	0003-6088	20 Apr 2016	1 year
R&S Preamplifier (1GHz -18GHz)	SCU18	102191	13 Mar 2016	1 year
Agilent Preamplifier(1GHz-26.5GHz) (PA18)	8449D	3008A02305	06 Oct 2016	1 year
Com-Power Preamplifier (1MHz-1GHz)	PAM-103	441096	13 Oct 2016	1 year
Micro-Tronics Bandstop Filter (2.4-2.5 GHz)	BRM50701	017	13 Aug 2016	1 year

47 CFR FCC Part 15.209, RSS-GEN 8.9 and 8.10 Radiated Emission Test Setup

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table. For >1GHz measurements, the EUT is raised further to a height of 1.5m with a non-metallic foam block.
2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.
3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.

47 CFR FCC Part 15.209, RSS-GEN 8.9 and 8.10 Radiated Emission Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. A prescan was carried out to pick the worst emission frequencies from the EUT. For EUT which is a portable device, the prescan was carried out by rotating the EUT through three orthogonal axes to determine which altitude and equipment arrangement produces such emissions.
3. The test was carried out at the selected frequency points obtained from the prescan in step 2. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
   a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
   b. The EUT was then rotated to the direction that gave the maximum emission.
   c. Finally, the antenna height was adjusted to the height that gave the maximum emission.
4. A Quasi-peak measurement was made for that frequency point if it was less than or equal to 1GHz. For frequency point in the range of 9kHz – 90kHz, 110kHz – 490kHz and above 1GHz, both Peak and Average measurements were carried out.
5. Steps 3 and 4 were repeated for the next frequency point, until all selected frequency points were measured.
6. The frequency range covered was from the lowest radio frequency signal generated from the EUT, without going below 9kHz to 10th harmonics of the EUT fundamental frequency, using the loop antenna for frequency below 30MHz, Bi-log antenna for frequencies from 30MHz up to 1GHz, and the Horn antenna above 1GHz.

Sample Calculation Example

At 300 MHz Q-P limit (Class B) = 46.0 dBμV/m

Log-periodic antenna factor & cable loss at 300 MHz = 18.5 dB

Q-P reading obtained directly from EMI Receiver = 40.0 dBμV/m
(Calibrated level including antenna factors & cable losses)

Therefore, Q-P margin = 46.0 - 40.0 = 6.0 i.e. 6.0 dB below Q-P limit

47 CFR FCC Part 15.205, 15.209 and RSS-GEN 8.9 and 8.10 Radiated Emission Results

Test Input Power	3.7Vdc	Temperature	24°C
Test Distance	3m (≥30MHz –25GHz)	Relative Humidity	60%
	802.11b 11Mbps (Worst Mode)	Atmospheric Pressure	1030mbar
		Tested By	Dylan Lin

Spurious Emissions ranging from 30MHz – 1GHz

Frequency (MHz)	Q-P Value (dBµV/m)	Q-P Limit (dBµV/m)	Q-P Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Channel (Worst)
33.9270	21.4	40.0	18.6	100	25	V	11
51.5970	15.4	40.0	24.6	400	265	V	11
96.7530	19.4	43.5	24.1	400	300	V	11
167.4330	13.4	43.5	30.1	400	13	V	11
324.4990	17.4	46.0	28.6	200	192	H	11
395.1790	19.2	46.0	26.8	200	249	H	11

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.1012	26.7	74.0	47.3	--	54.0	27.3	100	52	H	1
1.3441	28.9	74.0	45.1	--	54.0	25.1	400	18	V	1
1.4655	29.2	74.0	44.8	--	54.0	24.8	300	297	V	1
1.9918	29.6	74.0	44.4	--	54.0	24.4	100	238	V	1
2.1739	28.3	74.0	45.7	--	54.0	25.7	300	199	H	1
3.6009	39.7	74.0	34.3	--	54.0	14.3	300	29	V	1

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.0506	27.2	74	46.8	--	54.0	26.8	400	354	V	6
1.6578	28.2	74	45.8	--	54.0	25.8	300	73	V	6
1.8602	28.3	74	45.7	--	54.0	25.7	300	62	V	6
1.9918	28.8	74	45.2	--	54.0	25.2	100	85	H	6
2.1335	29.2	74	44.8	--	54.0	24.8	200	23	V	6
3.6009	40.3	74	33.7	--	54.0	13.7	300	30	V	6

47 CFR FCC Part 15.205, 15.209 and RSS-GEN 8.9 and 8.10 Radiated Emission Results

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.1619	25.5	74.0	48.5	--	54.0	28.5	100	52	H	11
1.3441	28.1	74.0	45.9	--	54.0	25.9	400	19	V	11
1.6376	28.8	74.0	45.2	--	54.0	25.2	300	95	V	11
1.8602	28.2	74.0	45.8	--	54.0	25.8	200	15	V	11
3.3378	41.0	74.0	33.0	--	54.0	13.0	300	36	V	11
3.6009	43.5	74.0	30.5	--	54.0	10.5	300	51	V	11

47 CFR FCC Part 15.205, 15.209 and RSS-GEN 8.9 and 8.10 Radiated Emission Results

Test Input Power	3.7Vdc	Temperature	24°C
Test Distance	3m (≥30MHz –25GHz)	Relative Humidity	60%
	802.11g 36Mbps (Worst Mode)	Atmospheric Pressure	1030mbar
		Tested By	Dylan Lin

Spurious Emissions ranging from 30MHz – 1GHz

Frequency (MHz)	Q-P Value (dBµV/m)	Q-P Limit (dBµV/m)	Q-P Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Channel (Worst)
35.5595	14.8	40.0	25.2	200	41	V	11
53.4450	13.0	40.0	27.0	300	74	V	11
99.7780	19.4	43.5	24.1	400	14	V	11
164.8890	13.5	43.5	30.0	200	56	V	11
251.8560	17.3	46.0	28.7	100	286	H	11
397.3890	19.6	46.0	26.4	100	337	H	11

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.5443	42.1	74.0	31.9	--	54.0	11.9	200	14	V	1
1.6846	42.3	74.0	31.7	--	54.0	11.7	200	41	V	1
1.9988	39.4	74.0	34.6	--	54.0	14.6	200	74	V	1
3.6484	37.0	74.0	37.0	--	54.0	17.0	200	184	V	1
4.9334	40.1	74.0	33.9	--	54.0	13.9	200	32	V	1
5.1035	40.5	74.0	33.5	--	54.0	13.5	100	226	V	1

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.1010	41.0	74.0	33.0	--	54.0	13.0	200	66	H	6
1.1852	40.8	74.0	33.2	--	54.0	13.2	200	286	V	6
1.3030	38.7	74.0	35.3	--	54.0	15.3	200	337	V	6
1.4882	42.0	74.0	32.0	--	54.0	12.0	200	56	V	6
4.7538	39.2	74.0	34.8	--	54.0	14.8	200	56	V	6
9.4744	39.1	74.0	34.9	--	54.0	14.9	100	104	V	6

47 CFR FCC Part 15.205, 15.209 and RSS-GEN 8.9 and 8.10 Radiated Emission Results

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.2974	38.8	74.0	35.2	--	54.0	15.2	200	330	V	11
1.9988	39.0	74.0	35.0	--	54.0	15.0	200	144	V	11
2.0549	38.9	74.0	35.1	--	54.0	15.1	200	61	V	11
2.1559	36.7	74.0	37.3	--	54.0	17.3	200	137	V	11
3.3454	36.9	74.0	37.1	--	54.0	17.1	200	102	V	11
5.5955	37.4	74.0	36.6	--	54.0	16.6	200	85	V	11

47 CFR FCC Part 15.205, 15.209 and RSS-GEN 8.9 and 8.10 Radiated Emission Results

Test Input Power	3.7Vdc	Temperature	24°C
Test Distance	3m (≥30MHz –25GHz)	Relative Humidity	60%
	802.11n 6.5Mbps (Worst Mode)	Atmospheric Pressure	1030mbar
		Tested By	Dylan Lin

Spurious Emissions ranging from 30MHz – 1GHz

Frequency (MHz)	Q-P Value (dBµV/m)	Q-P Limit (dBµV/m)	Q-P Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Channel (Worst)
39.6330	15.5	40.0	24.5	200	286	V	1
56.7530	20.3	40.0	19.7	200	169	V	1
97.4330	18.9	43.5	24.6	200	145	V	1
168.2960	13.7	43.5	29.8	100	242	V	1
285.2320	17.3	46.0	28.7	200	185	H	1
323.4450	18.2	46.0	27.8	200	102	H	1

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.1852	44.6	74.0	29.4	--	54.0	9.4	200	6	V	1
1.9988	42.1	74.0	31.9	--	54.0	11.9	100	305	V	1
3.0032	39.4	74.0	34.6	--	54.0	14.6	100	51	V	1
3.3398	44.0	74.0	30.0	--	54.0	10.0	100	51	V	1
4.9727	40.2	74.0	33.8	--	54.0	13.8	100	253	V	1
9.0973	40.1	74.0	33.9	--	54.0	13.9	100	255	V	1

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.1683	43.0	74.0	31.0	--	54.0	11.0	200	24	V	6
1.3423	22.9	74.0	51.1	--	54.0	31.1	200	18	V	6
1.9988	40.8	74.0	33.2	--	54.0	13.2	200	355	V	6
4.9671	38.7	74.0	35.3	--	54.0	15.3	200	42	V	6
8.9896	39.7	74.0	34.3	--	54.0	14.3	200	25	V	6
14.4436	47.9	74.0	26.1	--	54.0	6.1	200	146	V	6

47 CFR FCC Part 15.205, 15.209 and RSS-GEN 8.9 and 8.10 Radiated Emission Results

Spurious Emissions above 1GHz - 25GHz

Freq (GHz)	Peak Value (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	AV Value (dBµV/m) *See Note 4	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Azimuth (Degrees)	Pol (H/V)	Ch
1.4377	40.9	74.0	33.1	--	54.0	13.1	200	15	V	11
1.5499	42.2	74.0	31.8	--	54.0	11.8	200	24	V	11
1.6846	41.9	74.0	32.1	--	54.0	12.1	200	42	V	11
4.7482	39.3	74.0	34.7	--	54.0	14.7	200	14	H	11
5.0227	39.6	74.0	34.4	--	54.0	14.4	100	315	V	11
15.1573	47.9	74.0	26.1	--	54.0	6.1	200	44	H	11

Notes

1. All possible modes of operation were investigated. Only the worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. Quasi-peak measurement was used for frequency measurement up to 1GHz. Average and peak measurements were used for emissions above 1GHz. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second.
3. A "positive" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency. Conversely, a “negative” margin indicates a FAIL.
4. As the measured peak shows compliance to the average limits, as such no average measurements was carried out. The EUT is deemed to meet both requirements.
5. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   30MHz - 1GHz
   RBW: 100kHz VBW: 1MHz
   >1GHz
   RBW: 1MHz VBW: 3MHz
6. The upper frequency of radiated emission investigations was according to requirements stated in Section 15.33(a) for intentional radiators & Section 15.33(b) for unintentional radiators.
7. The upper frequency of radiated emission investigations was according to requirements stated in RSS-GEN 6.13.
8. The channel in the table refers to the transmit channel of the EUT.
9. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 30MHz – 25GHz is ±4.0dB.

SPECTRUM BANDWIDTH (6dB and 99% BANDWIDTH MEASUREMENT) TEST

47 CFR FCC Part 15.247(a)(2) and RSS-247 5.2(1) Spectrum Bandwidth (6dB and 99% Bandwidth Measurement) Limits

The EUT shows compliance to the requirements of this section, which states that the minimum bandwidth of the EUT employing digital modulation techniques shall be at least 500kHz.

47 CFR FCC Part 15.247(a)(2) and RSS-247 5.2(1) Spectrum Bandwidth (6dB and 99% Bandwidth Measurement) Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
Agilent Spectrum Analyzer	E4440A	MY45304764	12 Dec 2015	1 year

47 CFR FCC Part 15.247(a)(2) and RSS-247 5.2(1) Spectrum Bandwidth (6dB and 99% Bandwidth Measurement) Test Setup

1. The EUT and supporting equipment were set up as shown in the setup photo.
2. The power supply for the EUT was connected to a filtered mains.
3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.
4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to the following:
   RBW = 100kHz
   VBW = 3 times RBW
5. All other supporting equipment were powered separately from another filtered mains.

47 CFR FCC Part 15.247(a)(2) and RSS-247 5.2(1) Spectrum Bandwidth (6dB and 99% Bandwidth Measurement) Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode at lower channel with specified modulation and data rate.
2. The center frequency of the spectrum analyser was set to the transmitting frequency with the frequency span wide enough to capture the 6dB bandwidth of the transmitting frequency.
3. The spectrum analyser was set to max hold to capture the transmitting frequency. The signal capturing was continuous until no further changes were observed.
4. The peak of the transmitting frequency was detected with the marker peak function of the spectrum analyser. The frequencies below the 6dB peak frequency at lower (f_L) and upper (f_H) sides of the transmitting frequency were marked and measured by using the marker-delta function of the spectrum analyser.
5. The 6dB bandwidth of the transmitting frequency is the frequency difference between the marked lower and upper frequencies, $| f_H – f_L |$.
6. Repeat steps 1 to 5 with all possible modulations and data rates.
7. The steps 2 to 6 were repeated with the transmitting frequency was set to middle and upper channel respectively.

47 CFR FCC Part 15.247(a)(2) and RSS-247 5.2(1) Spectrum Bandwidth (6dB and 99% Bandwidth Measurement) Results

Test Input Power	3.7Vdc	Temperature	24°C
		Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Liau Lee Yin

802.11b

Channel	Channel Frequency (GHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Modulation @ Data Rate
1 *(lower ch)*	2.412	10.190	13.257	DBPSK @ 1Mbps
		10.000	13.437	DQPSK @ 2Mbps
		10.190	13.730	CCK @ 11Mbps
6 *(mid ch)*	2.437	10.190	13.374	DBPSK @ 1Mbps
		10.130	13.452	DQPSK @ 2Mbps
		10.190	13.723	CCK @ 11Mbps
11 *(upper ch)*	2.462	10.190	13.467	DBPSK @ 1Mbps
		10.000	13.467	DQPSK @ 2Mbps
		10.190	13.736	CCK @ 11Mbps

Test Input Power	3.7Vdc	Temperature	24°C
		Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Liau Lee Yin

802.11g

Channel	Channel Frequency (GHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Modulation @ Data Rate
1 *(lower ch)*	2.412	16.500	16.455	BPSK @ 9Mbps
		16.500	16.473	QPSK @ 18Mbps
		16.560	16.485	16QAM @ 36Mbps
		16.560	16.553	64QAM @ 54Mbps
6 *(mid ch)*	2.437	16.500	16.521	BPSK @ 9Mbps
		16.560	16.389	QPSK @ 18Mbps
		16.560	16.536	16QAM @ 36Mbps
		16.560	16.481	64QAM @ 54Mbps
11 *(upper ch)*	2.462	16.500	16.519	BPSK @ 9Mbps
		16.560	16.510	QPSK @ 18Mbps
		16.560	16.567	16QAM @ 36Mbps
		16.560	16.590	64QAM @ 54Mbps

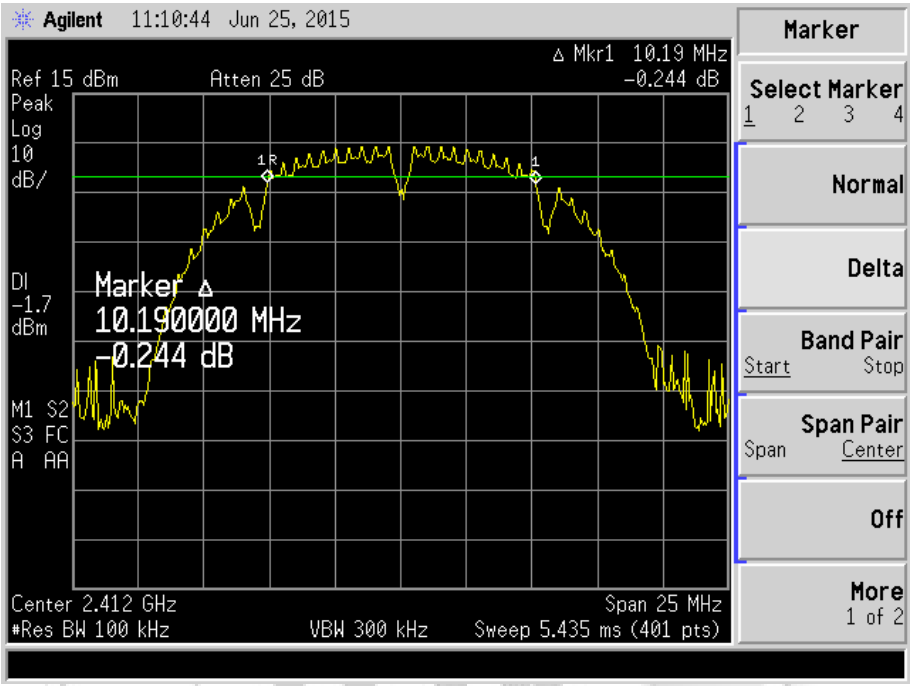
47 CFR FCC Part 15.247(a)(2) and RSS-247 5.2(1) Spectrum Bandwidth (6dB and 99% Bandwidth Measurement) Results

Test Input Power	3.7Vdc	Temperature	24°C
		Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Liau Lee Yin

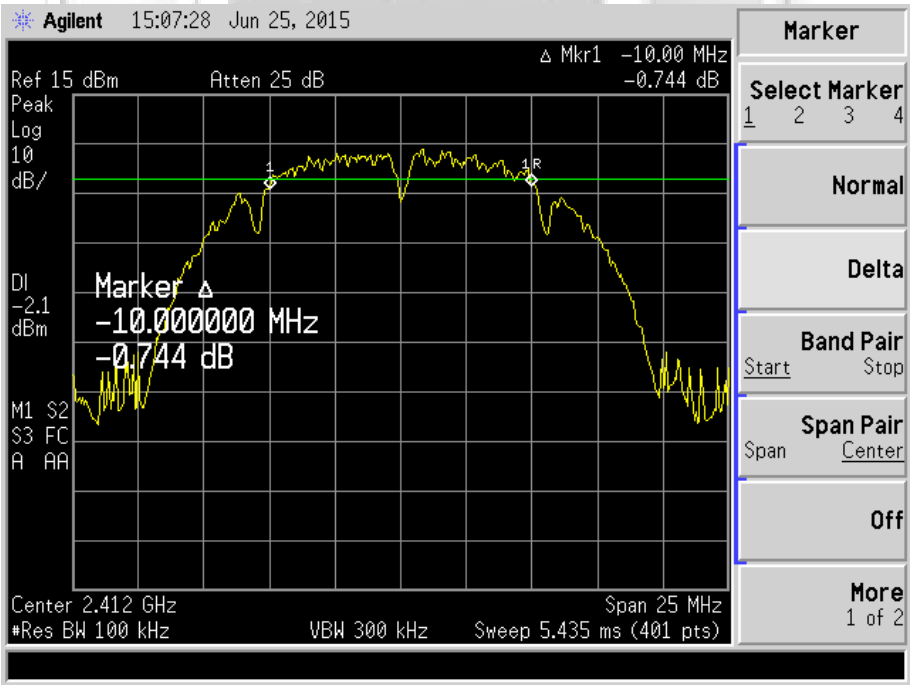
802.11n

Channel	Channel Frequency (GHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Modulation @ Data Rate
1 *(lower ch)*	2.412	17.690	17.627	BPSK @ 6.5Mbps (MCS0)
		17.690	17.660	QPSK @ 19.5Mbps (MCS2)
		17.810	17.719	16QAM @ 39Mbps (MCS4)
		17.810	17.670	64QAM @ 65Mbps (MCS7)
6 *(mid ch)*	2.437	17.690	17.680	BPSK @ 6.5Mbps (MCS0)
		17.810	17.634	QPSK @ 19.5Mbps (MCS2)
		17.810	17.776	16QAM @ 39Mbps (MCS4)
		17.810	17.655	64QAM @ 65Mbps (MCS7)
11 *(upper ch)*	2.462	17.690	17.674	BPSK @ 6.5Mbps (MCS0)
		17.690	17.753	QPSK @ 19.5Mbps (MCS2)
		17.810	17.029	16QAM @ 39Mbps (MCS4)
		17.810	17.664	64QAM @ 65Mbps (MCS7)

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11b

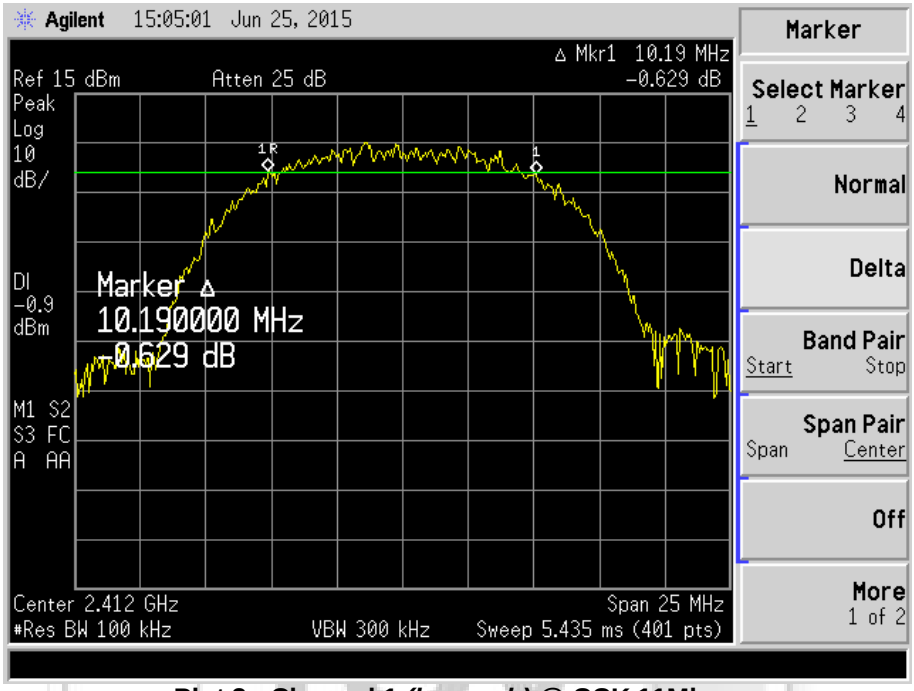


Plot 1 - Channel 1 *(lower ch)* @ DBPSK 1Mbps



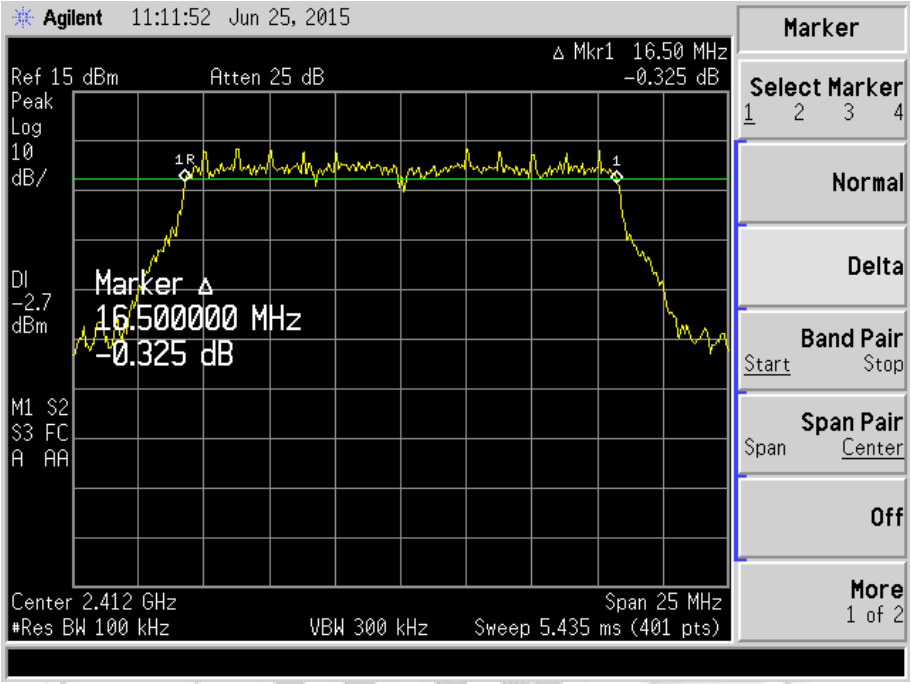
Plot 2 - Channel 1 *(lower ch)* @ DQPSK 2Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11b

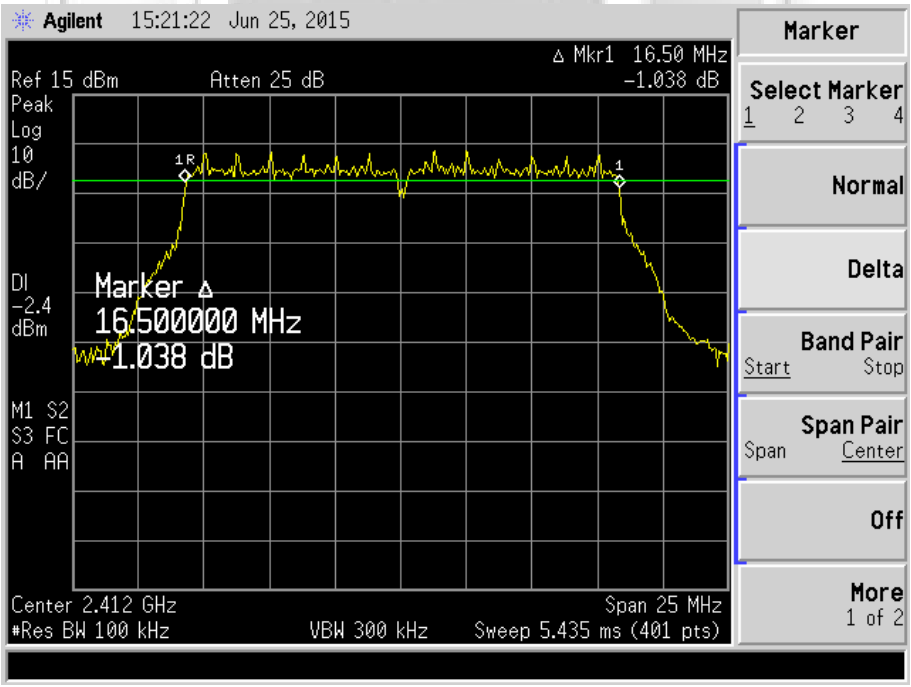


Plot 3 - Channel 1 *(lower ch)* @ CCK 11Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11g

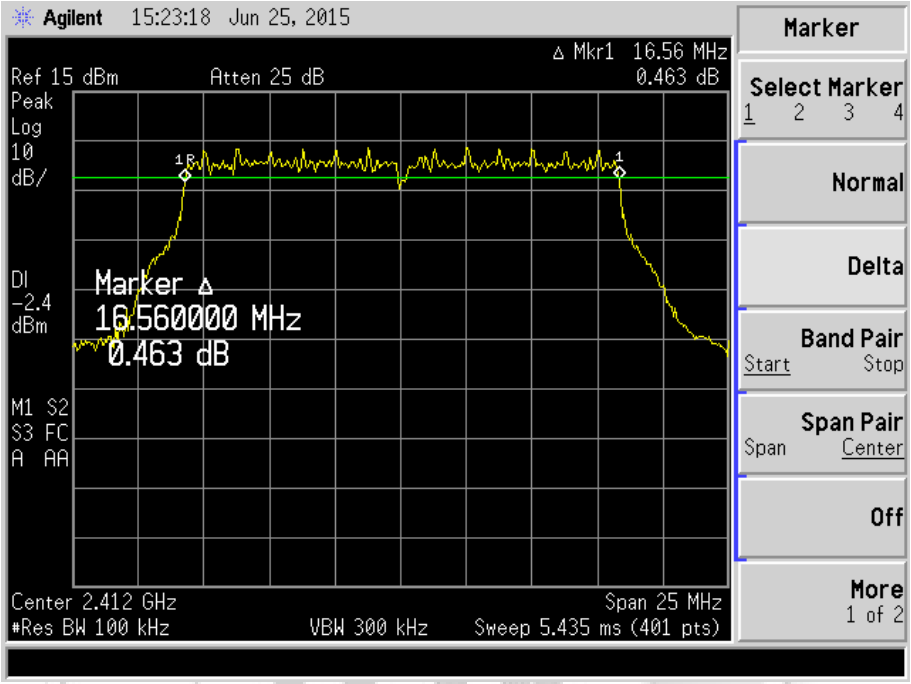


Plot 4 - Channel 1 *(lower ch)* @ BPSK 9Mbps

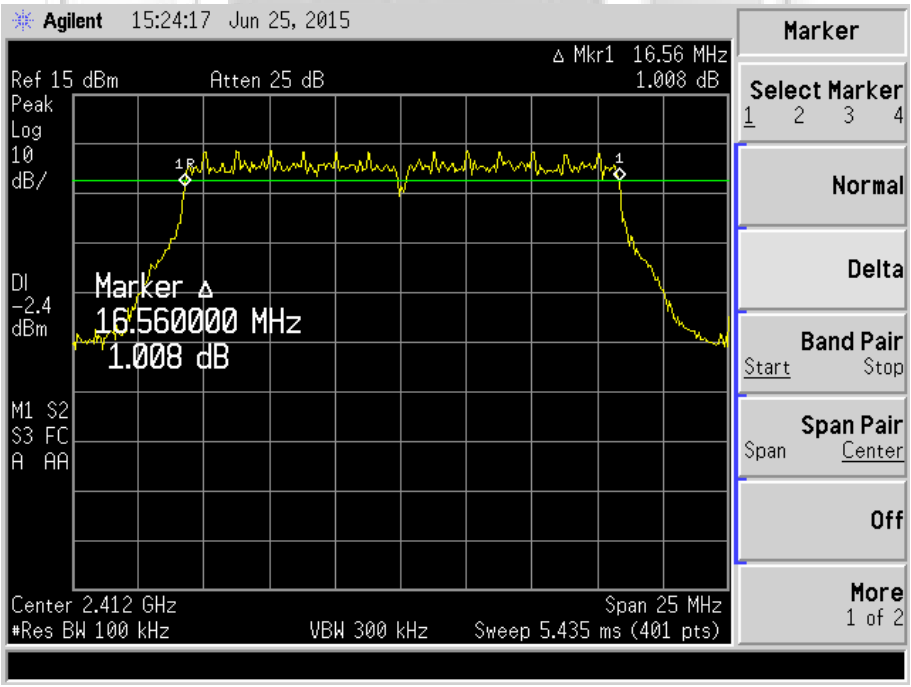


Plot 5 - Channel 1 *(lower ch)* @ QPSK 18Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11g

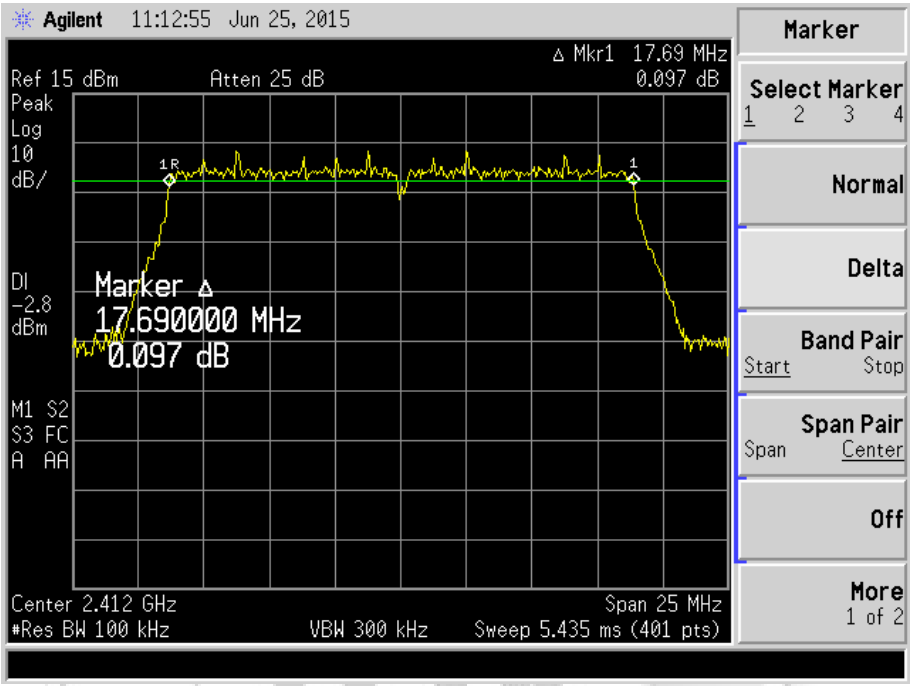


Plot 6 - Channel 1 *(lower ch)* @ 16QAM 36Mbps

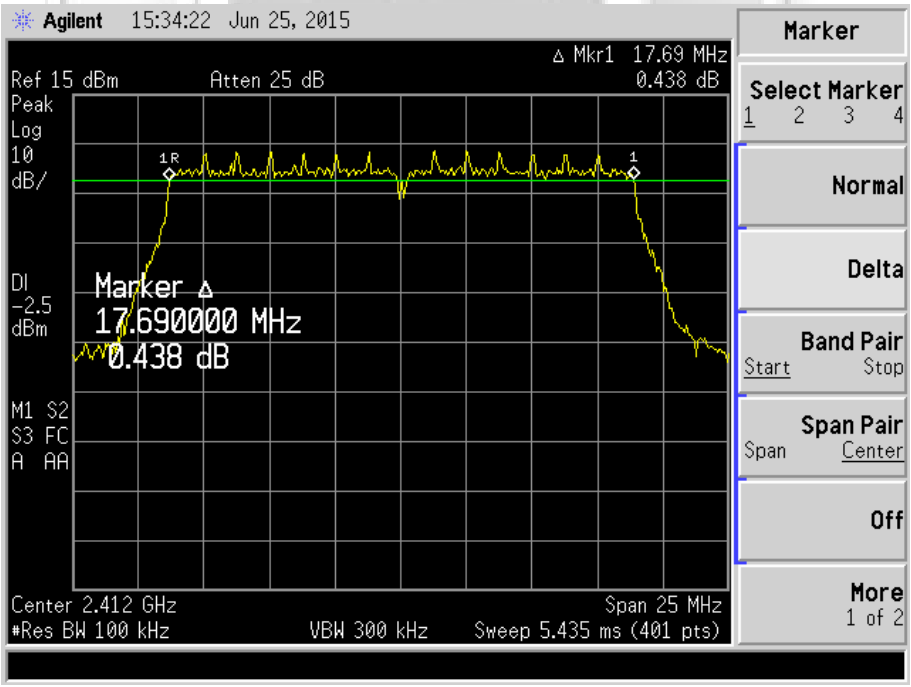


Plot 7 - Channel 1 *(lower ch)* @ 64QAM 54Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11n

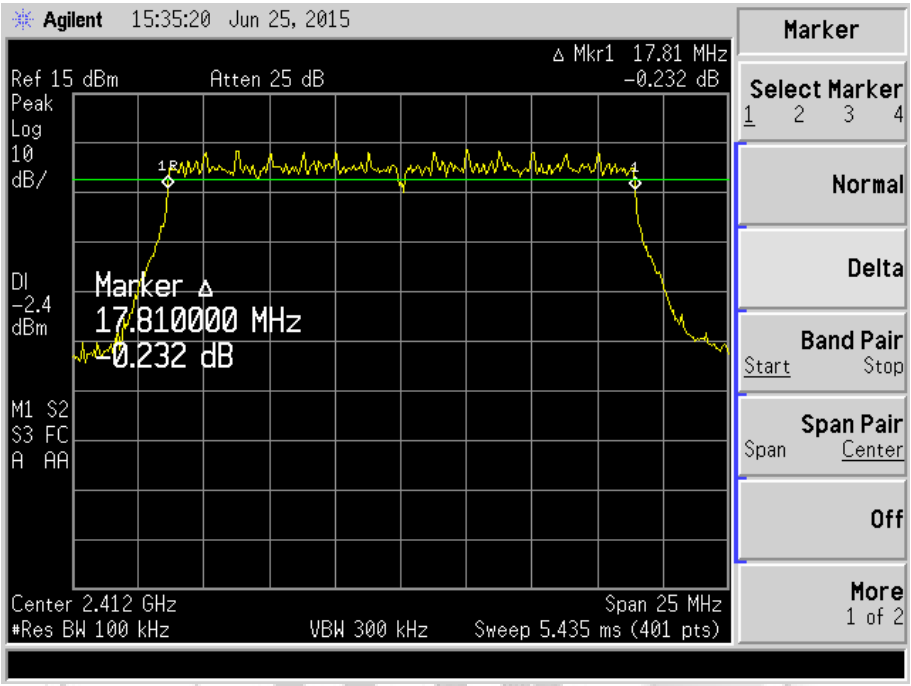


Plot 8 - Channel 1 *(lower ch)* @ BPSK 6.5Mbps

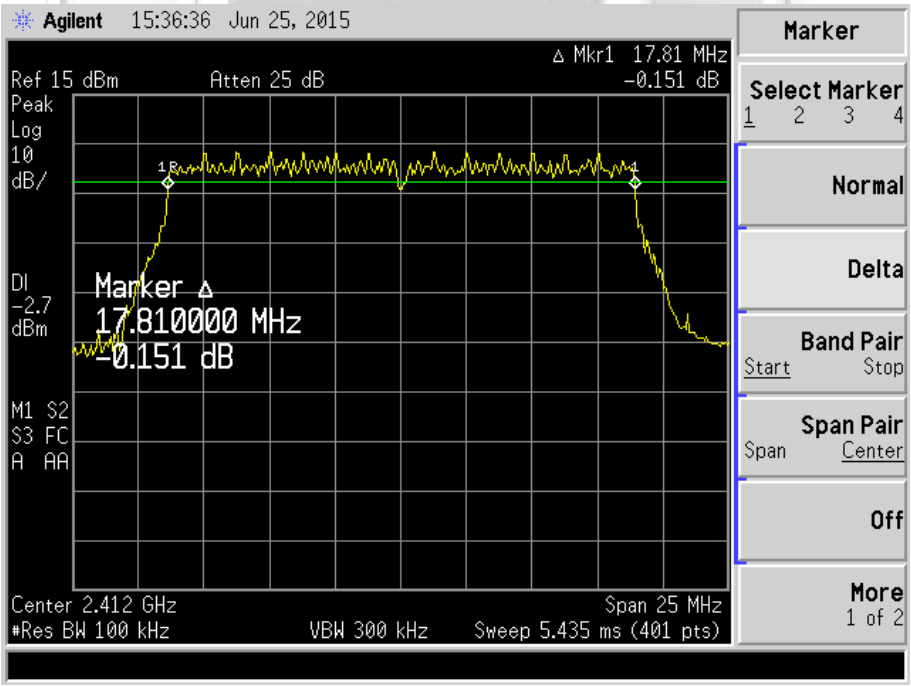


Plot 9 - Channel 1 *(lower ch)* @ QPSK 19.5Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11n

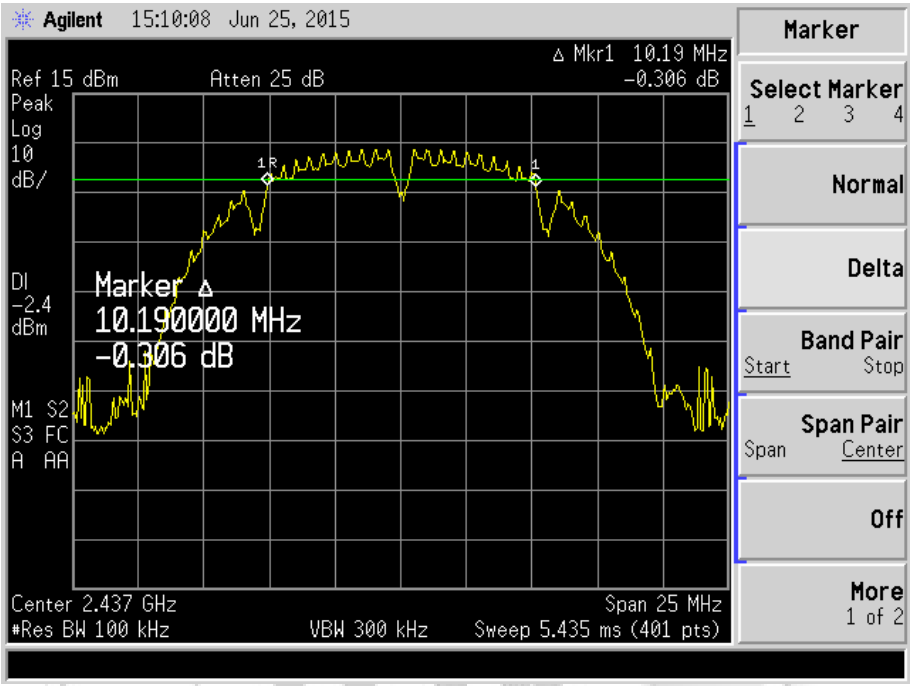


Plot 10 - Channel 1 *(lower ch)* @ 16QAM 39Mbps

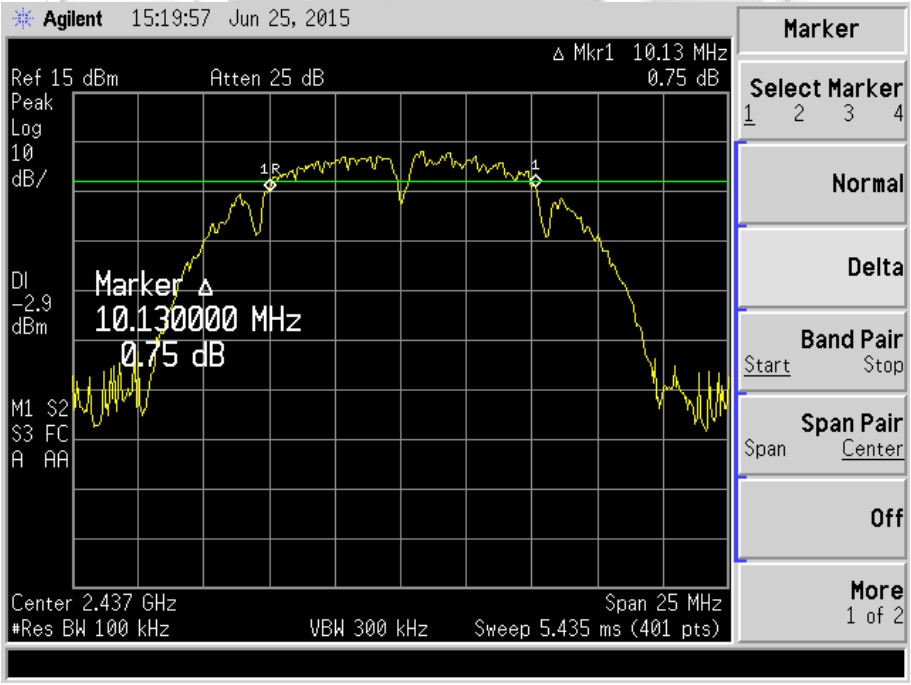


Plot 11 - Channel 1 *(lower ch)* @ 64QAM 65Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11b

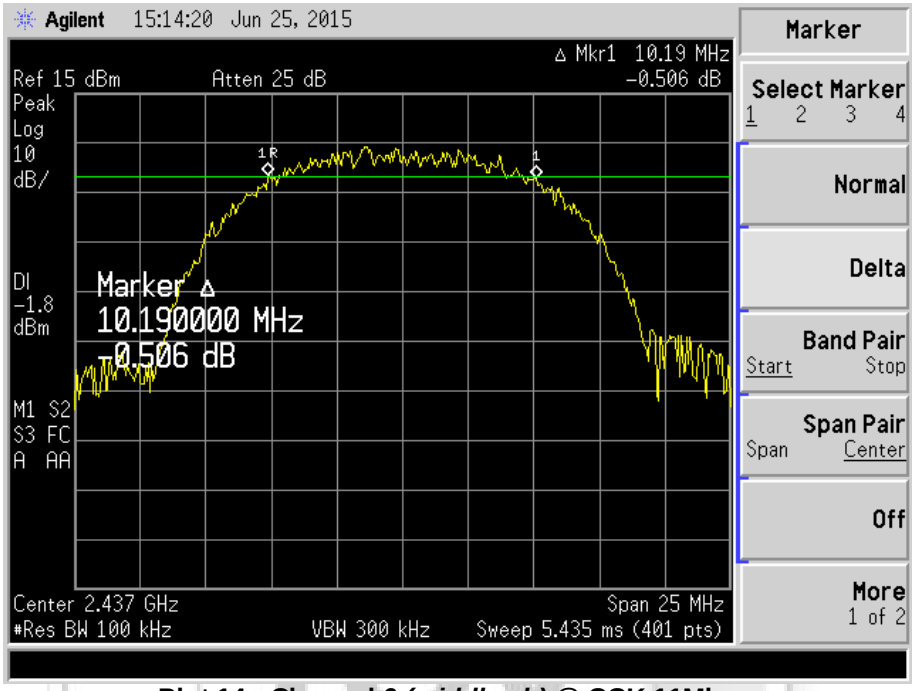


Plot 12 - Channel 6 *(middle ch)* @ DBPSK 1Mbps



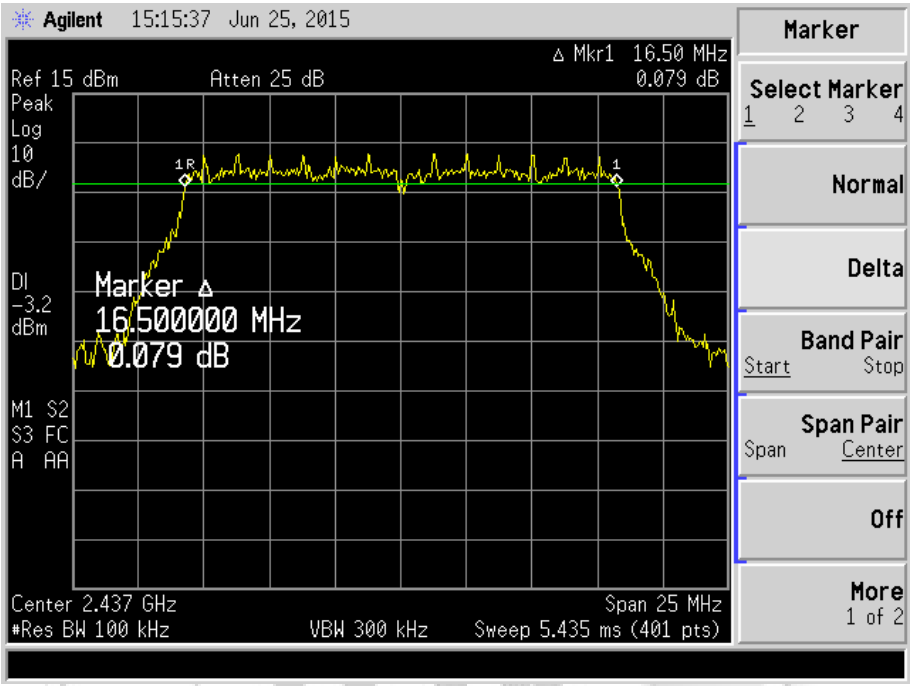
Plot 13 - Channel 6 *(middle ch)* @ DQPSK 2Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11b

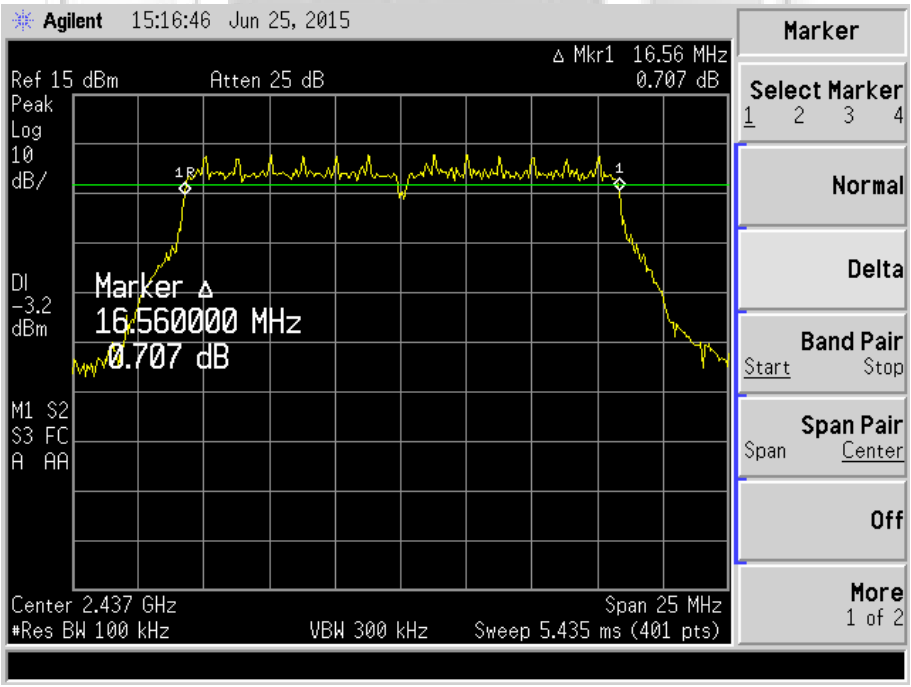


Plot 14 - Channel 6 *(middle ch)* @ CCK 11Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11g

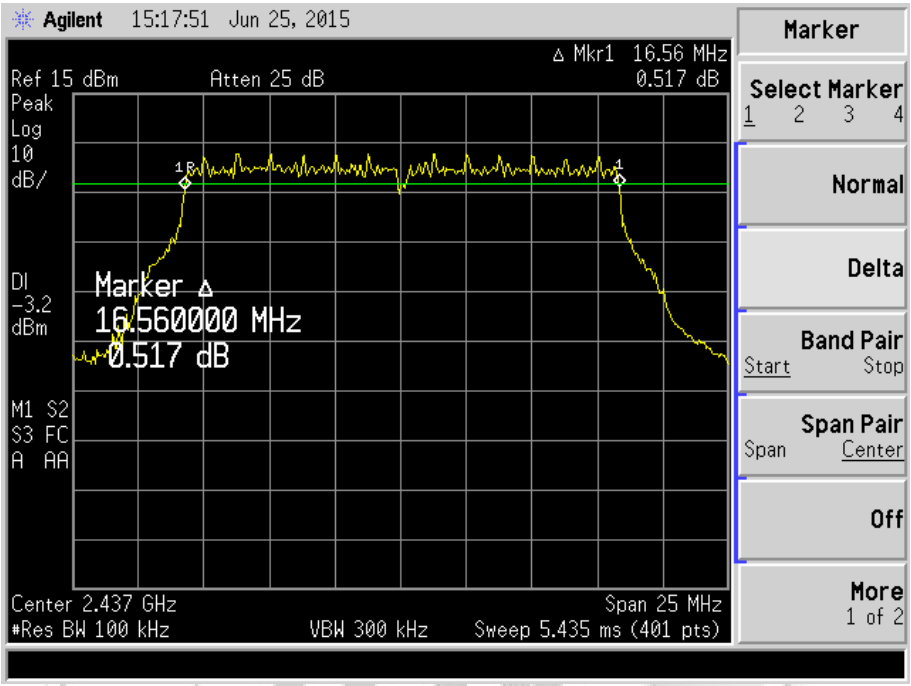


Plot 15 - Channel 6 *(middle ch)* @ BPSK 9Mbps

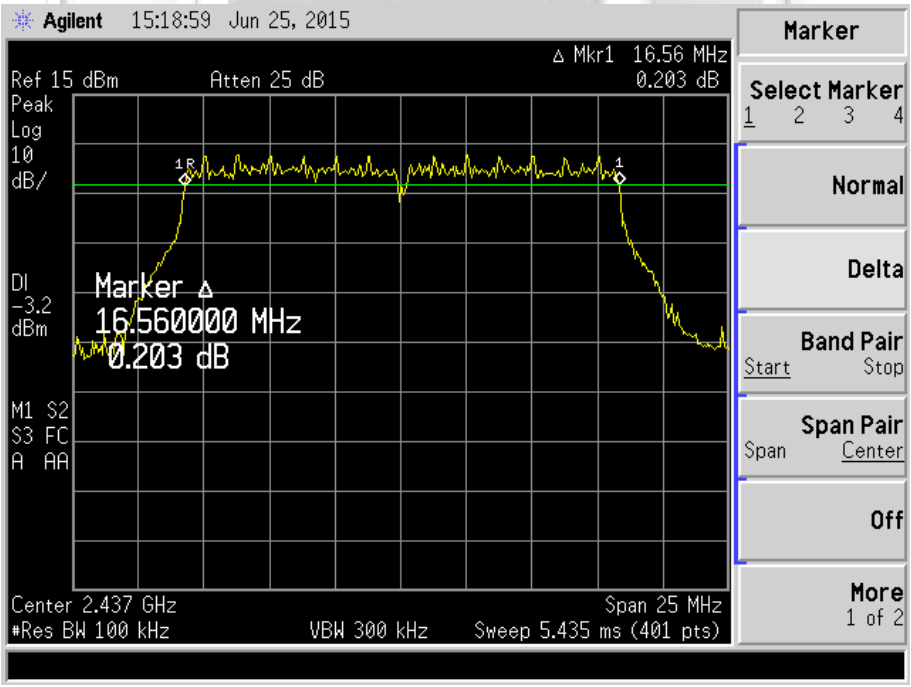


Plot 16 - Channel 6 *(middle ch)* @ QPSK 18Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11g

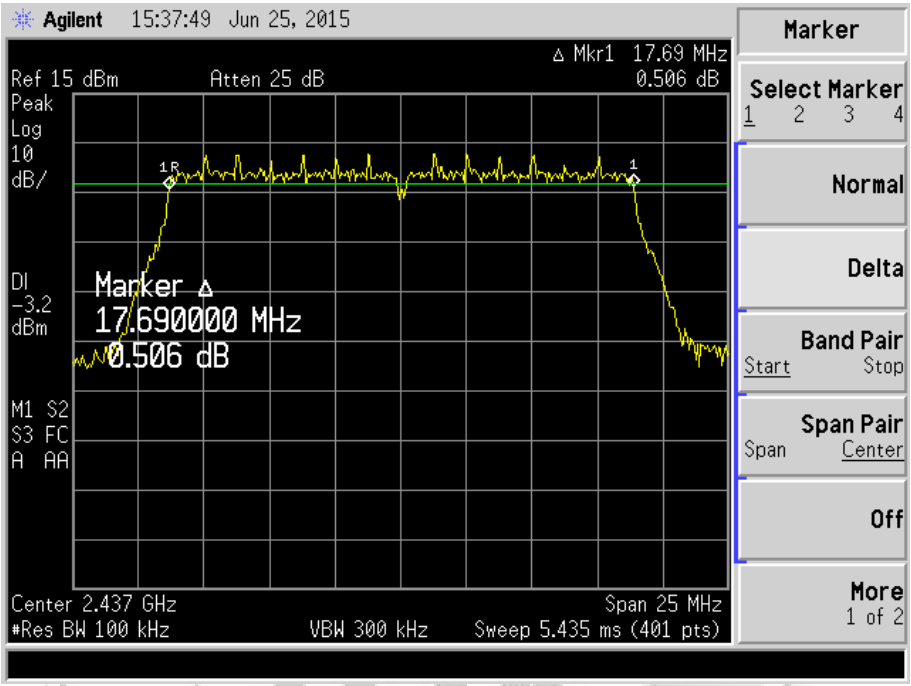


Plot 17 - Channel 6 *(middle ch)* @ 16QAM 36Mbps

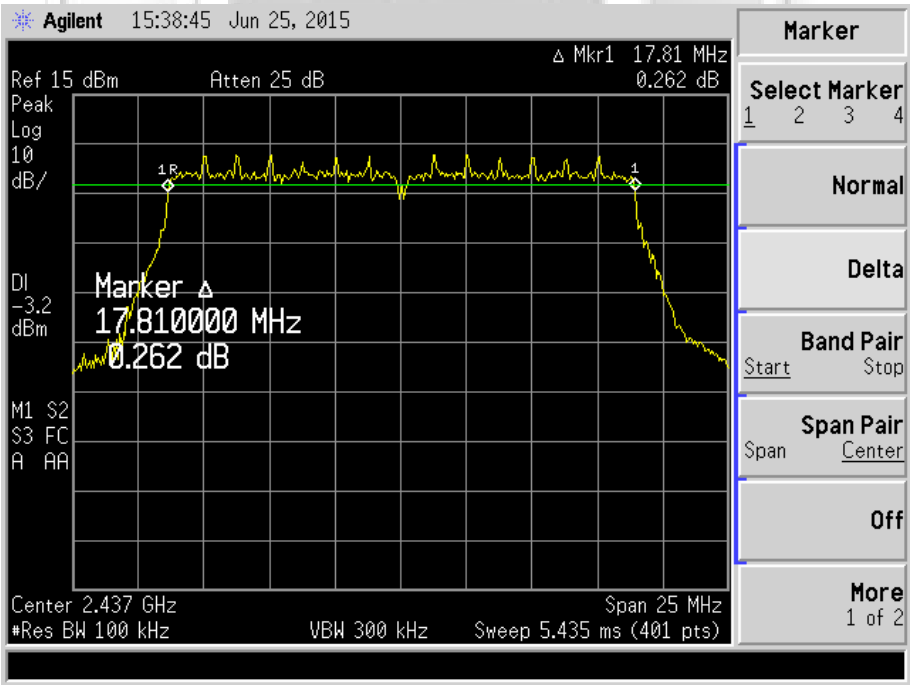


Plot 18 - Channel 6 *(middle ch)* @ 64QAM 54Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11n

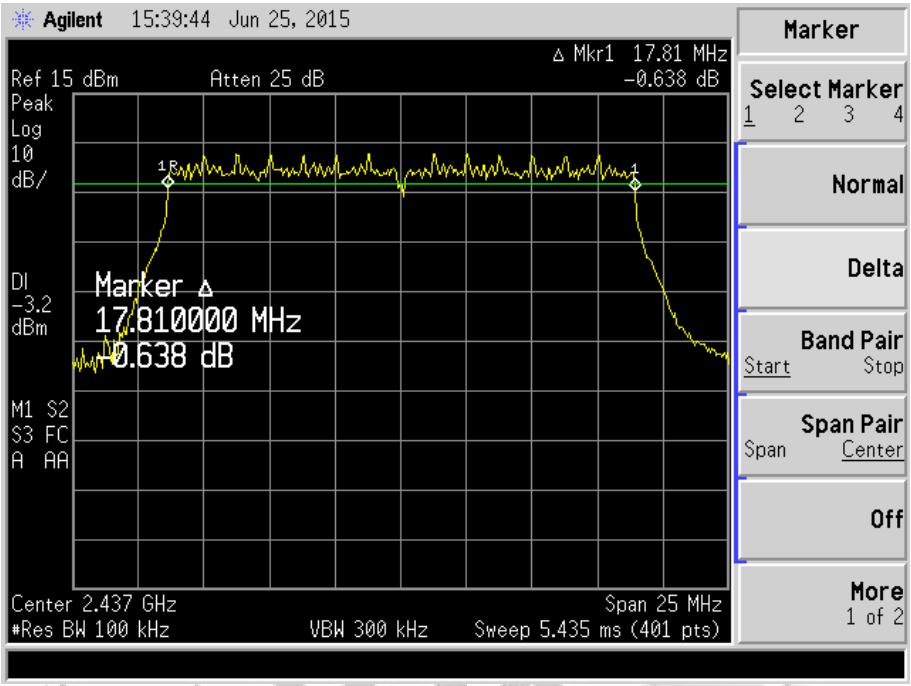


Plot 19 - Channel 6 *(middle ch)* @ BPSK 6.5Mbps

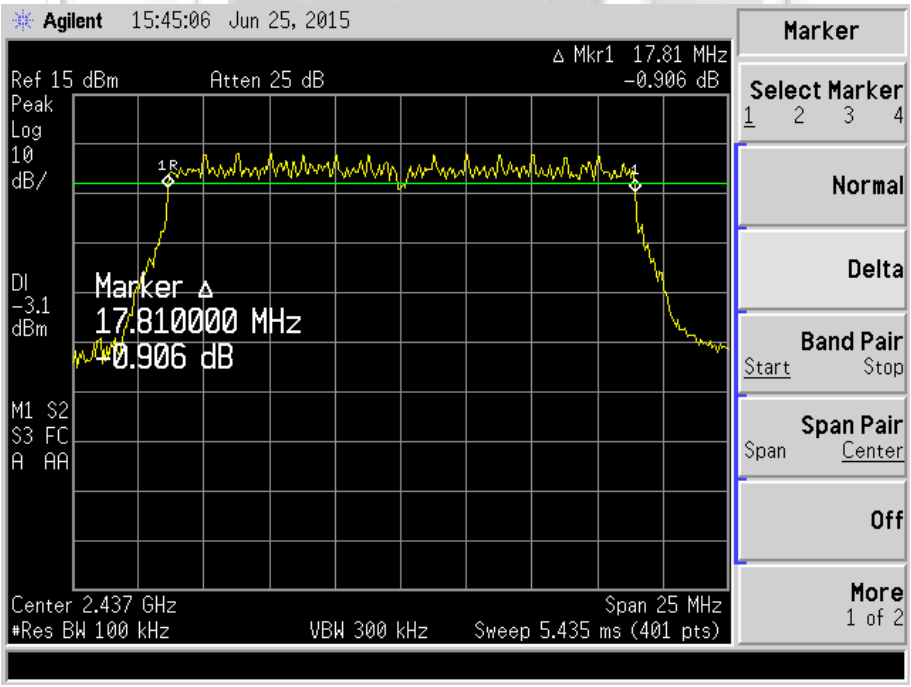


Plot 20 - Channel 6 *(middle ch)* @ QPSK 19.5Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11n

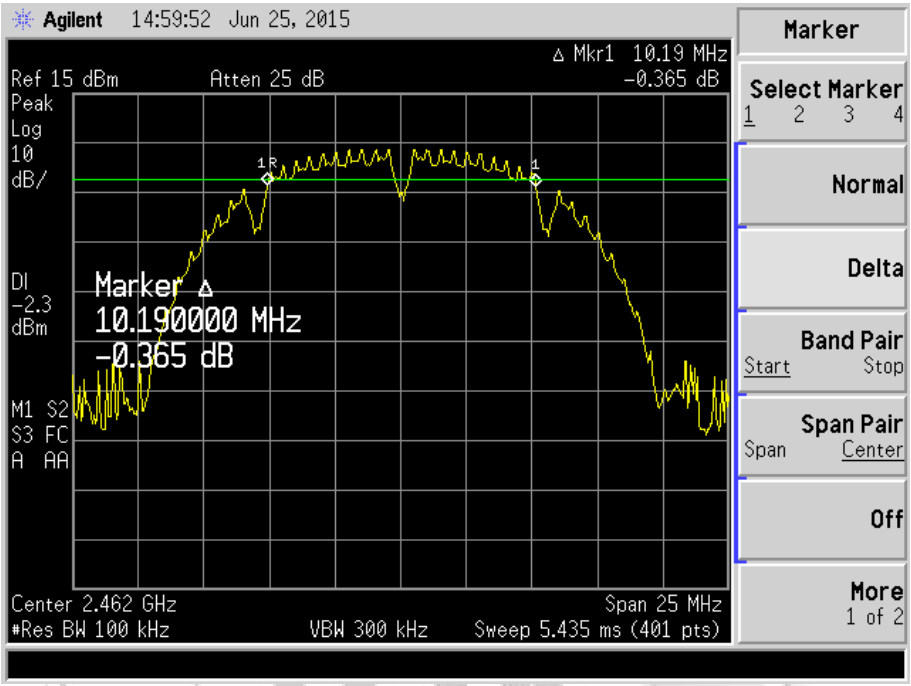


Plot 21 - Channel 6 *(middle ch)* @ 16QAM 39Mbps

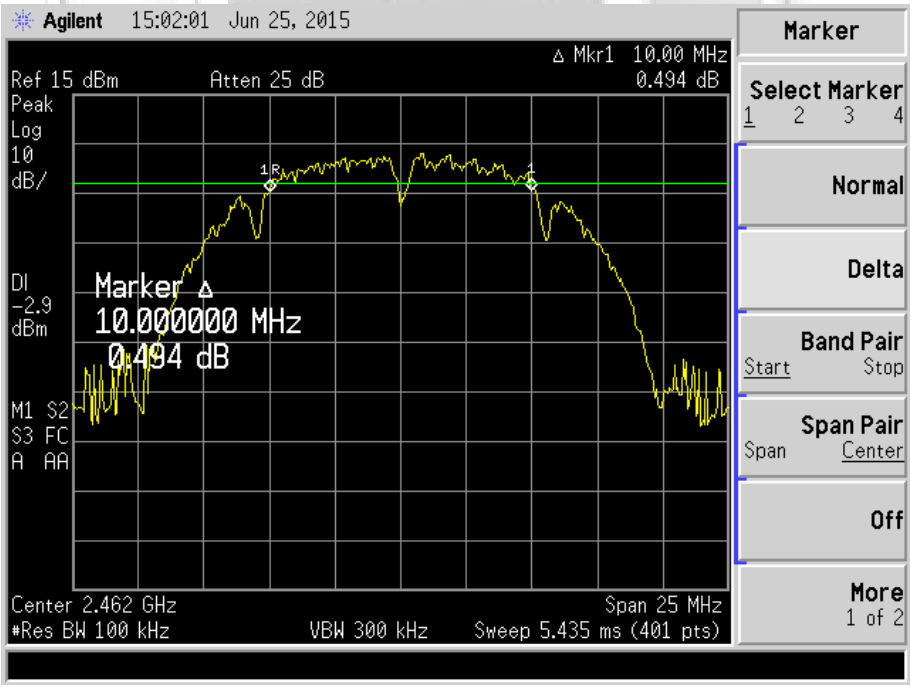


Plot 22 - Channel 6 *(middle ch)* @ 64QAM 65Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11b

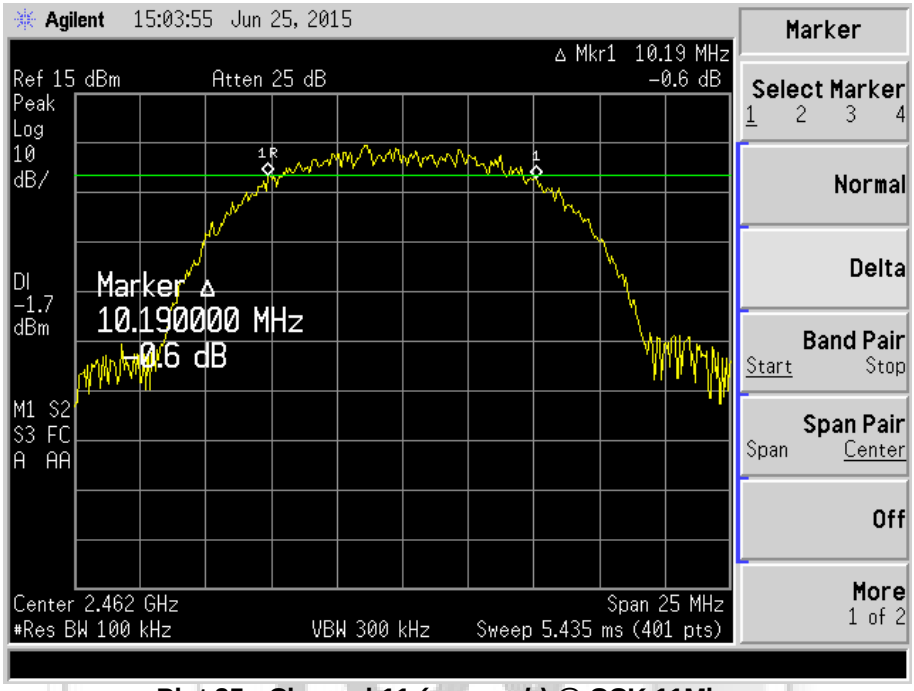


Plot 23 - Channel 11 *(upper ch)* @ DBPSK 1Mbps



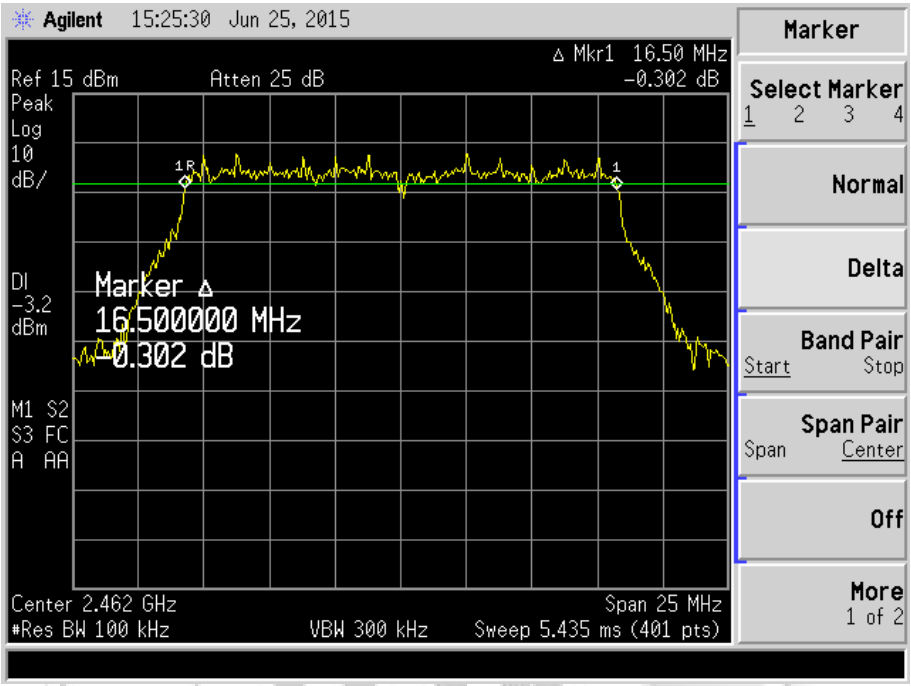
Plot 24 - Channel 11 *(upper ch)* @ DQPSK 2Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11b

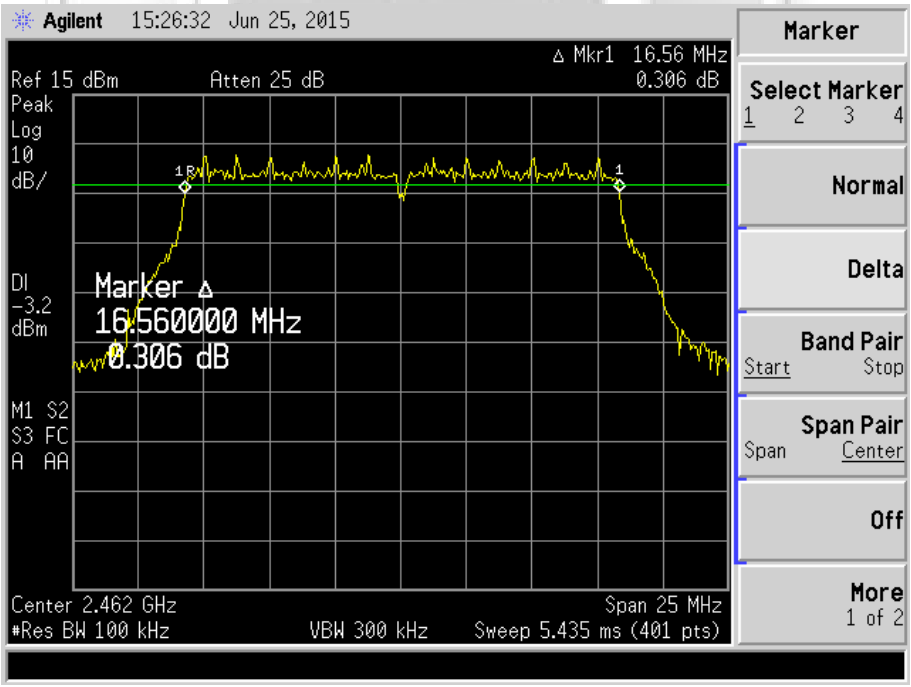


Plot 25 - Channel 11 *(upper ch)* @ CCK 11Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11g

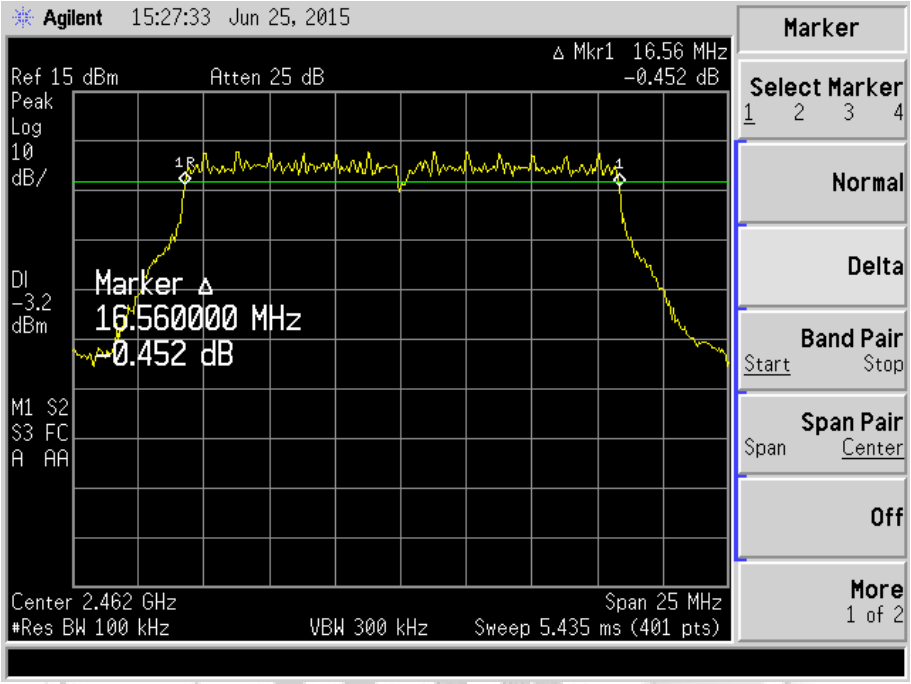


Plot 26 - Channel 11 *(upper ch)* @ BPSK 9Mbps

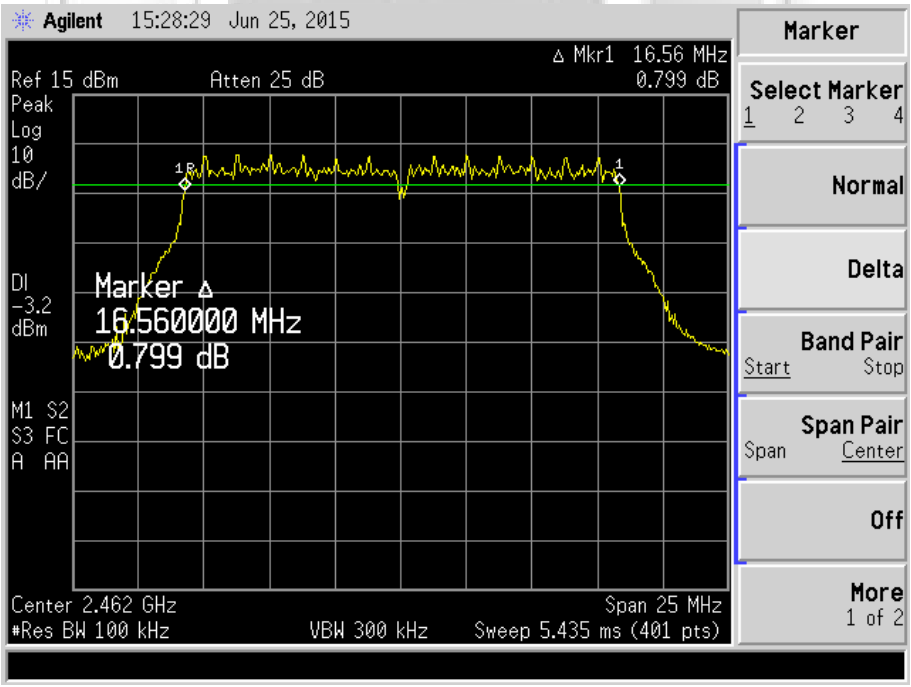


Plot 27 - Channel 11 *(upper ch)* @ QPSK 18Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11g

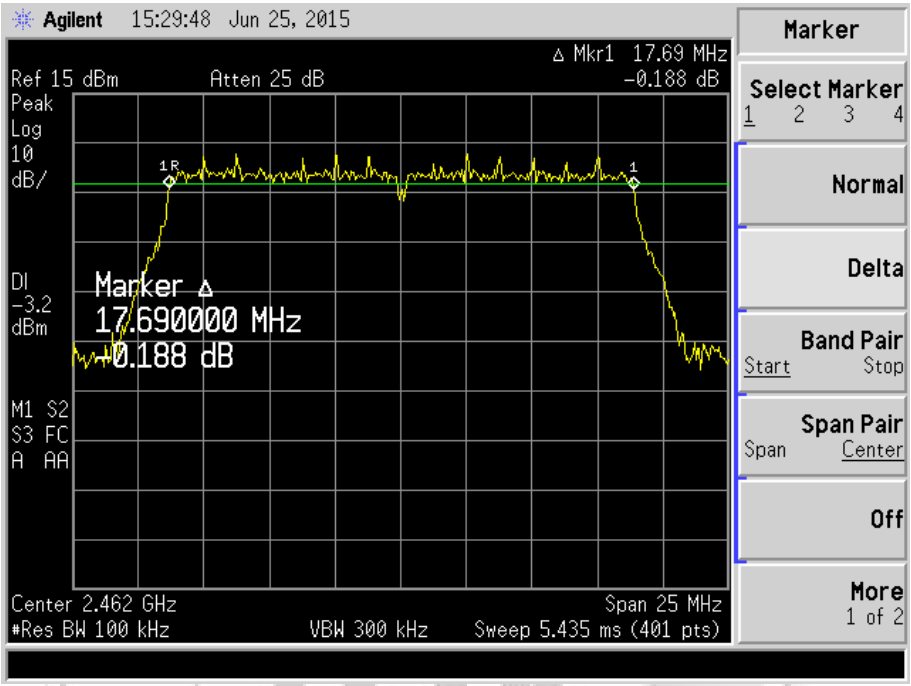


Plot 28 - Channel 11 *(upper ch)* @ 16QAM 36Mbps

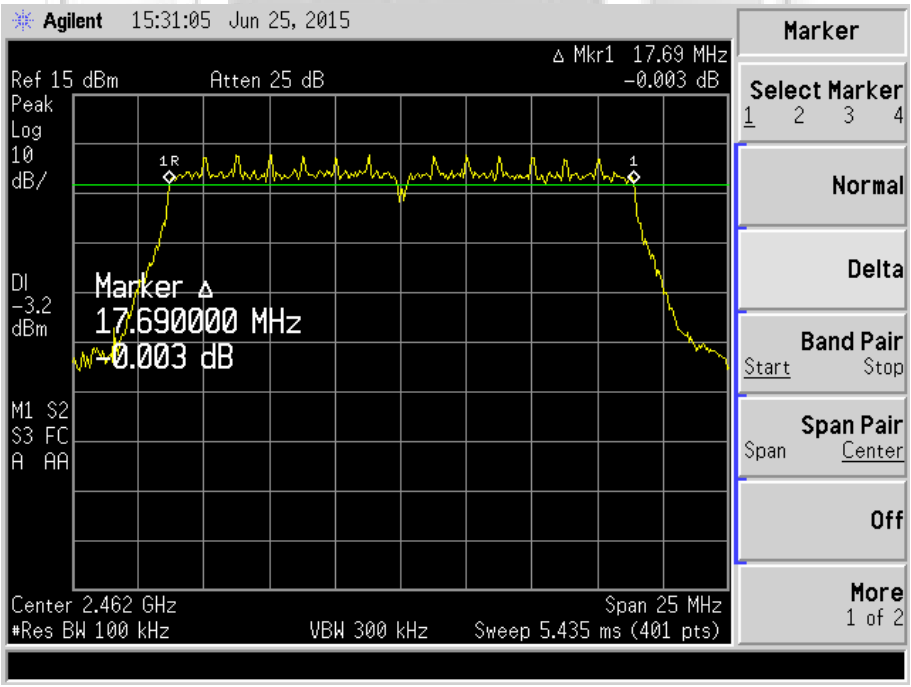


Plot 29 - Channel 11 *(upper ch)* @ 64QAM 54Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11n

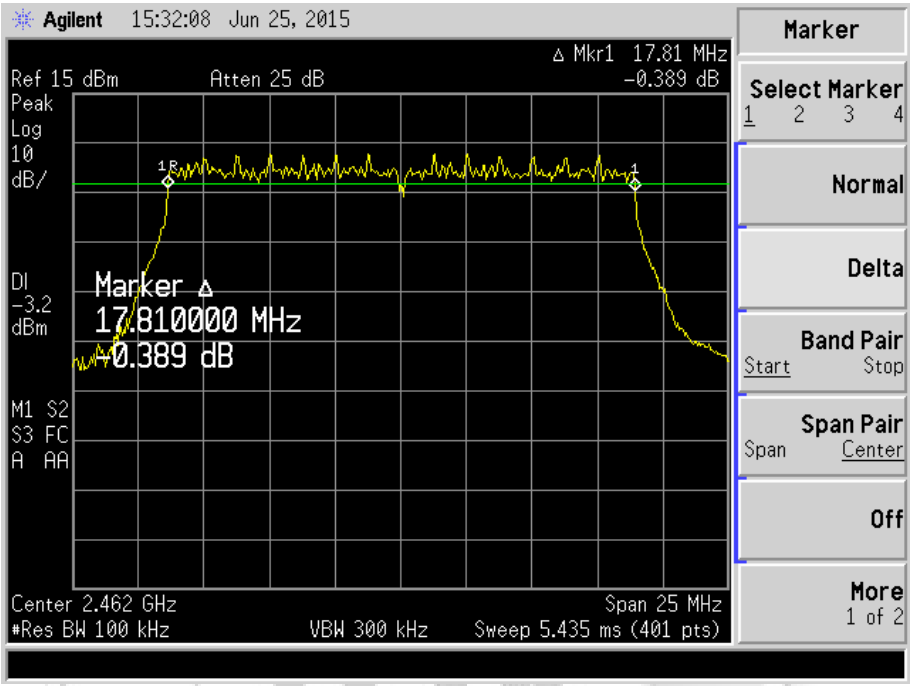


Plot 30 - Channel 11 *(upper ch)* @ BPSK 6.5Mbps

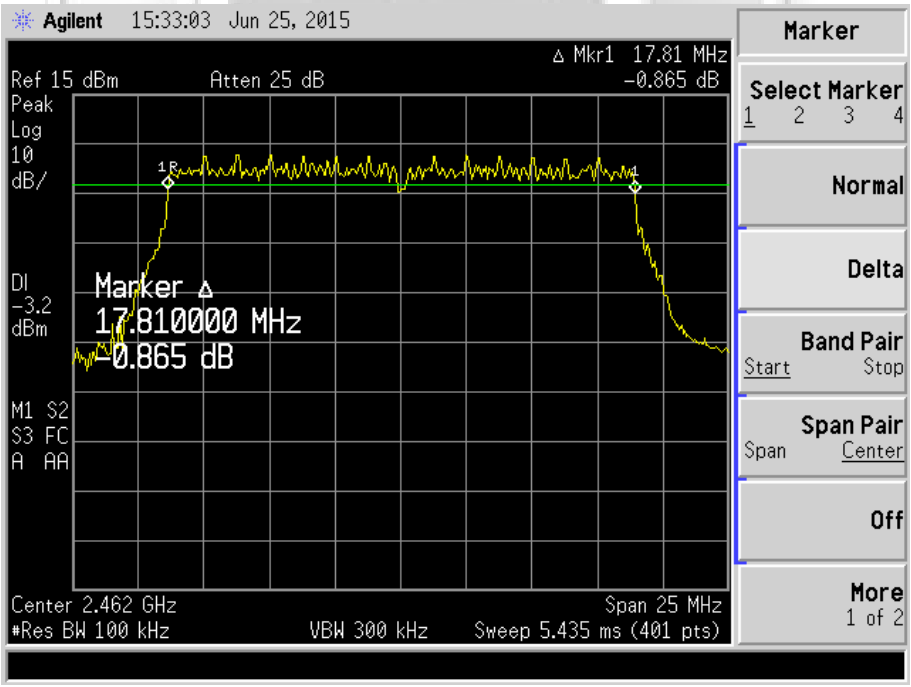


Plot 31 - Channel 11 *(upper ch)* @ QPSK 19.5Mbps

Spectrum Bandwidth (6dB Bandwidth Measurement) Plots – 802.11n

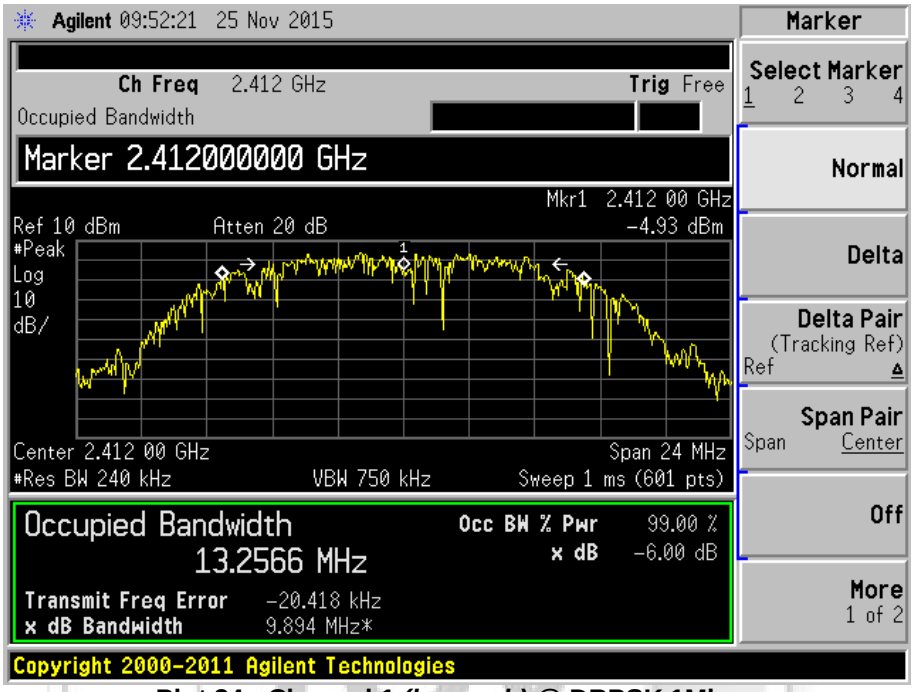


Plot 32 - Channel 11 *(upper ch)* @ 16QAM 39Mbps

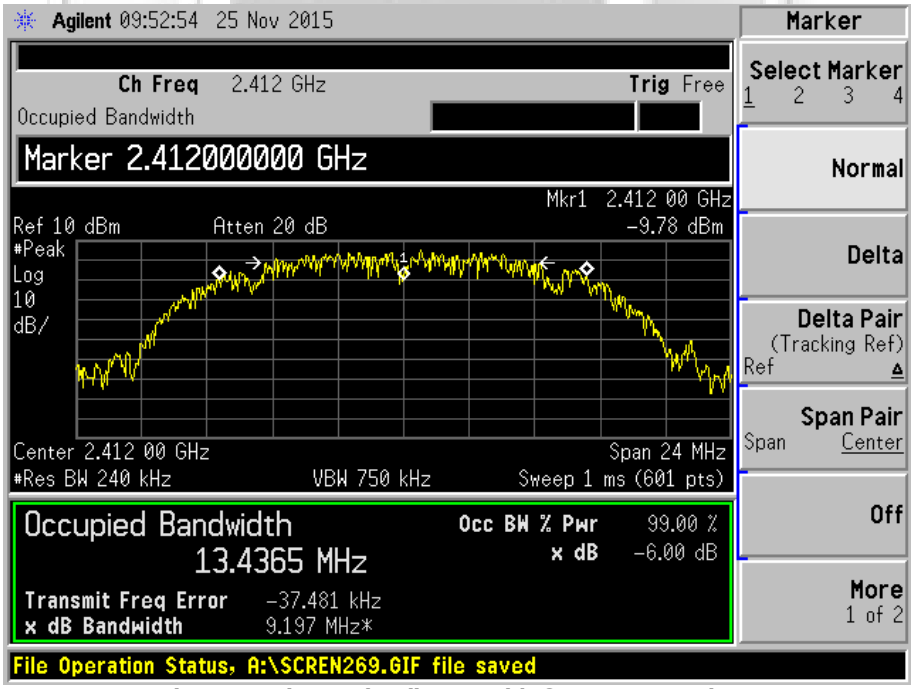


Plot 33 - Channel 11 *(upper ch)* @ 64QAM 65Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11b

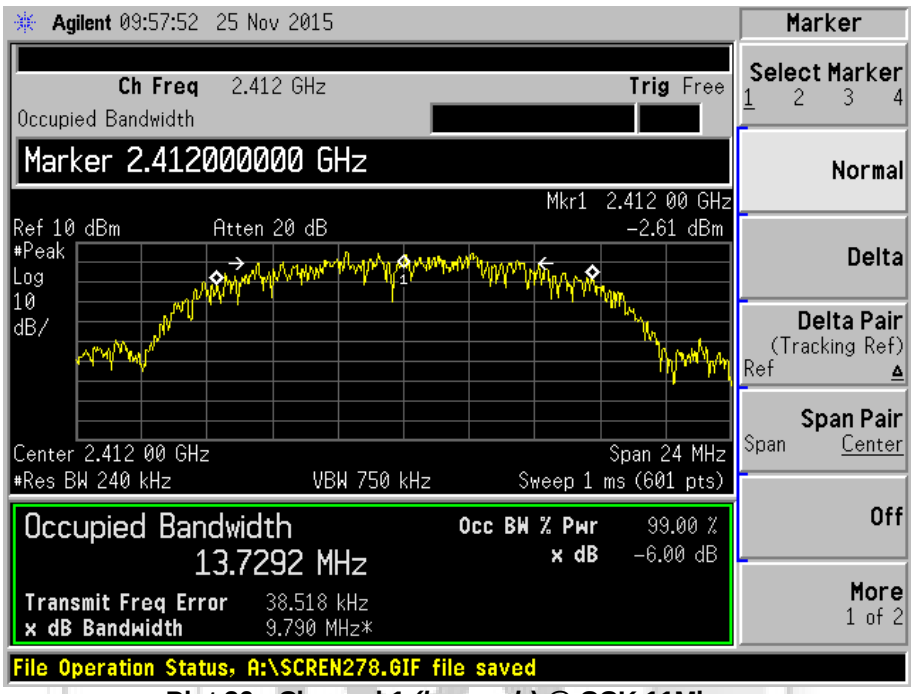


Plot 34 - Channel 1 *(lower ch)* @ DBPSK 1Mbps



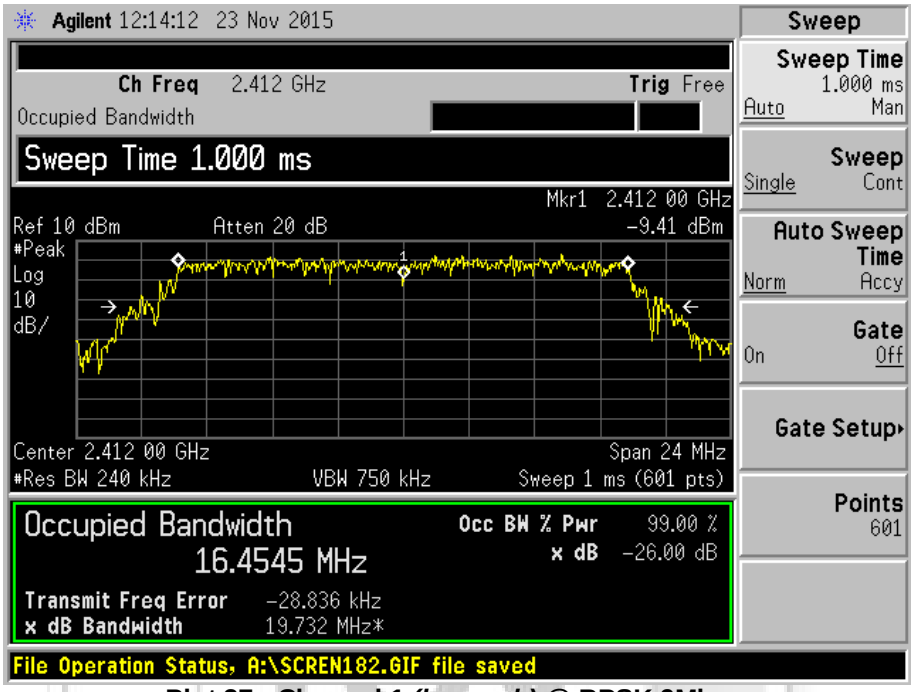
Plot 35 - Channel 1 *(lower ch)* @ DQPSK 2Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11b

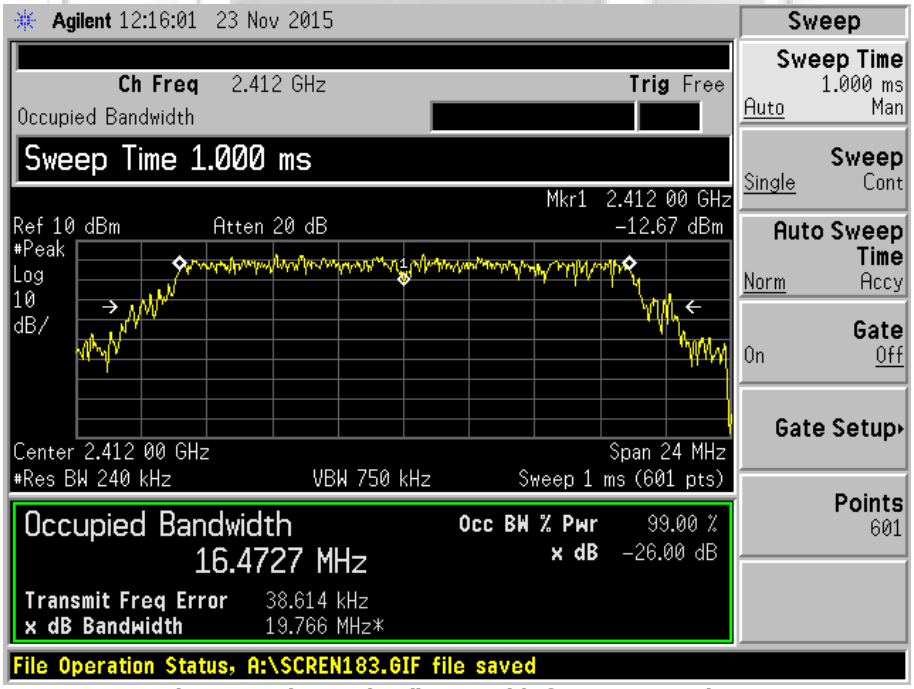


Plot 36 - Channel 1 *(lower ch)* @ CCK 11Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11g

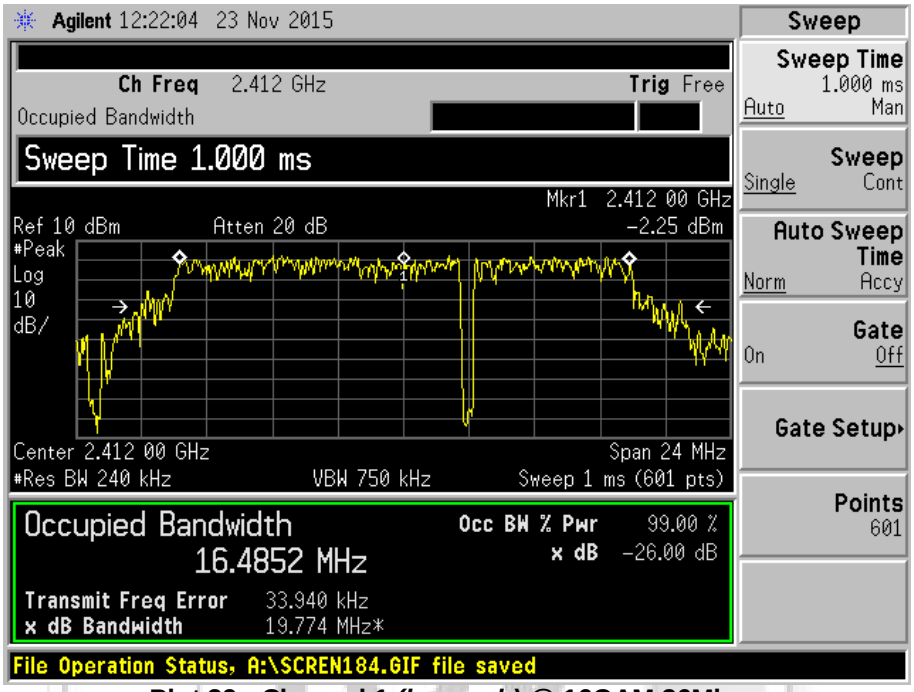


Plot 37 - Channel 1 *(lower ch)* @ BPSK 9Mbps

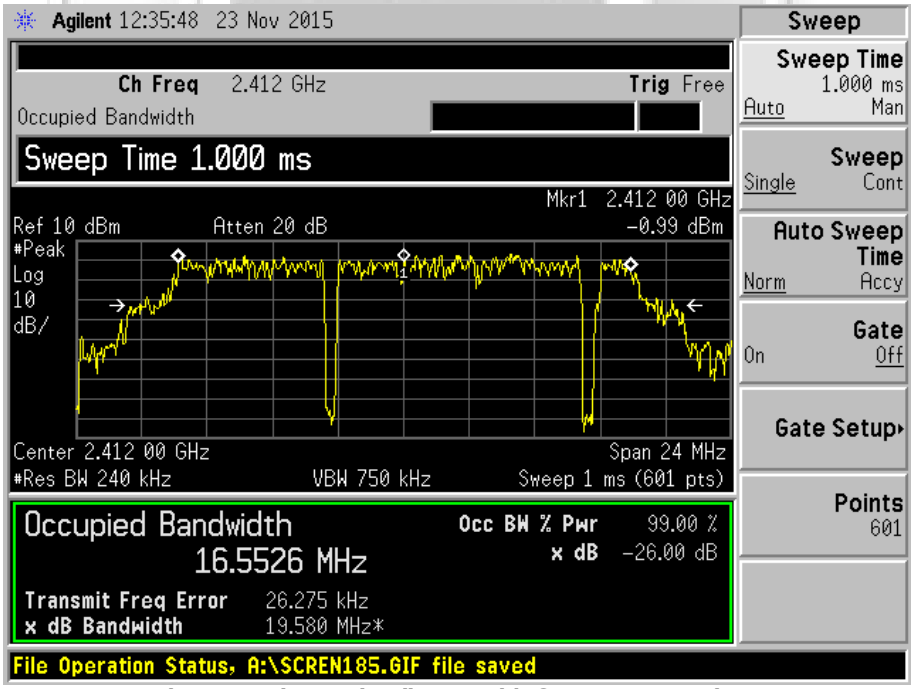


Plot 38 - Channel 1 *(lower ch)* @ QPSK 18Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11g

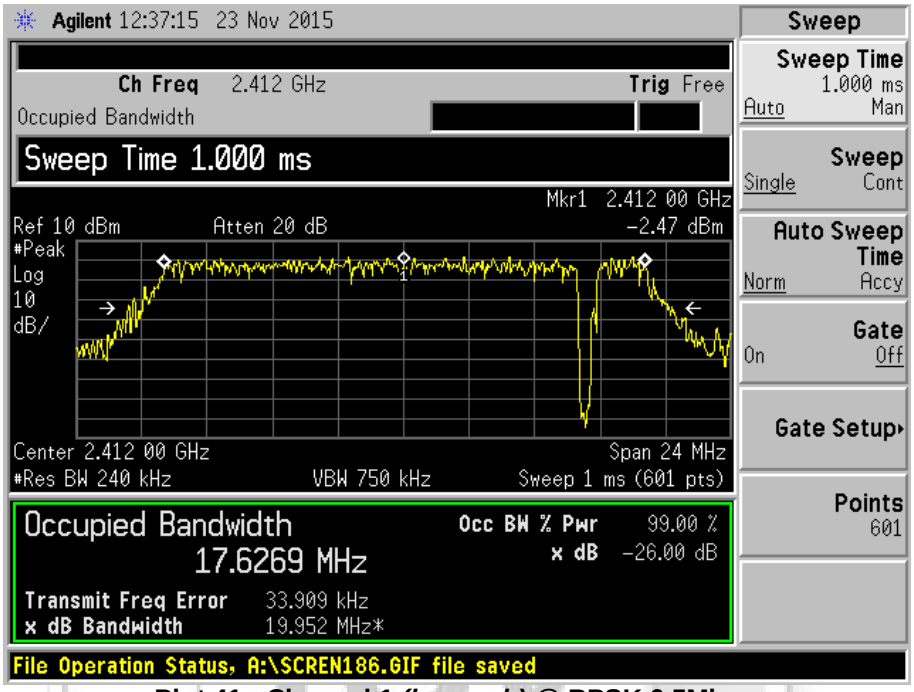


Plot 39 - Channel 1 *(lower ch)* @ 16QAM 36Mbps

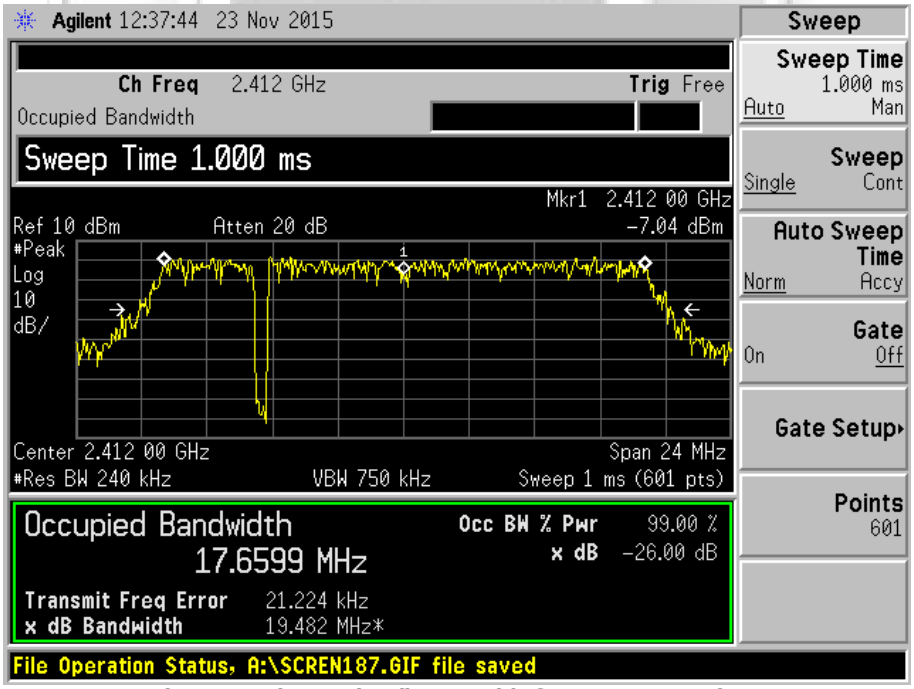


Plot 40 - Channel 1 *(lower ch)* @ 64QAM 54Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11n

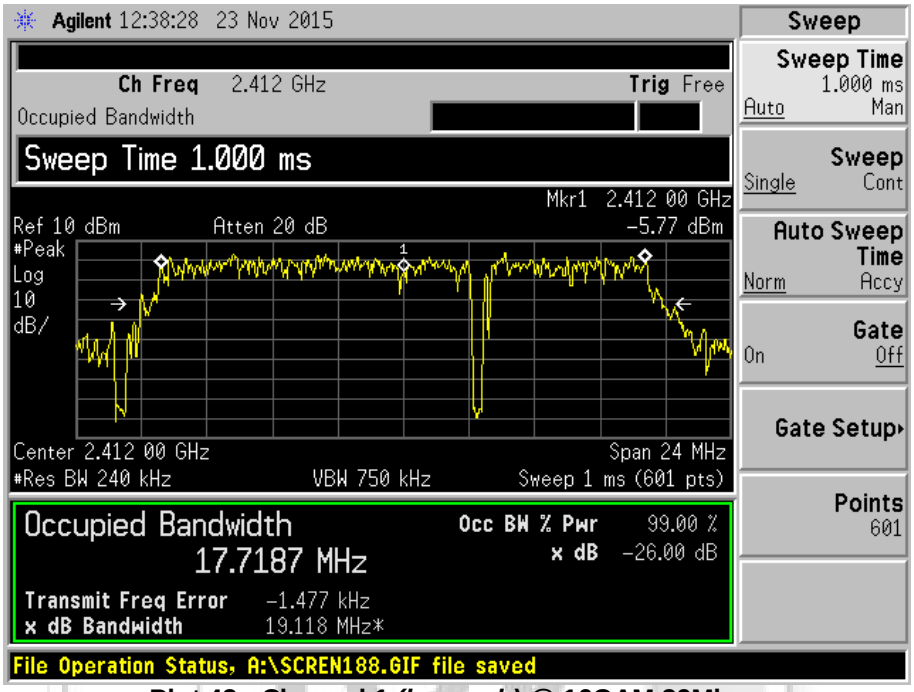


Plot 41 - Channel 1 *(lower ch)* @ BPSK 6.5Mbps

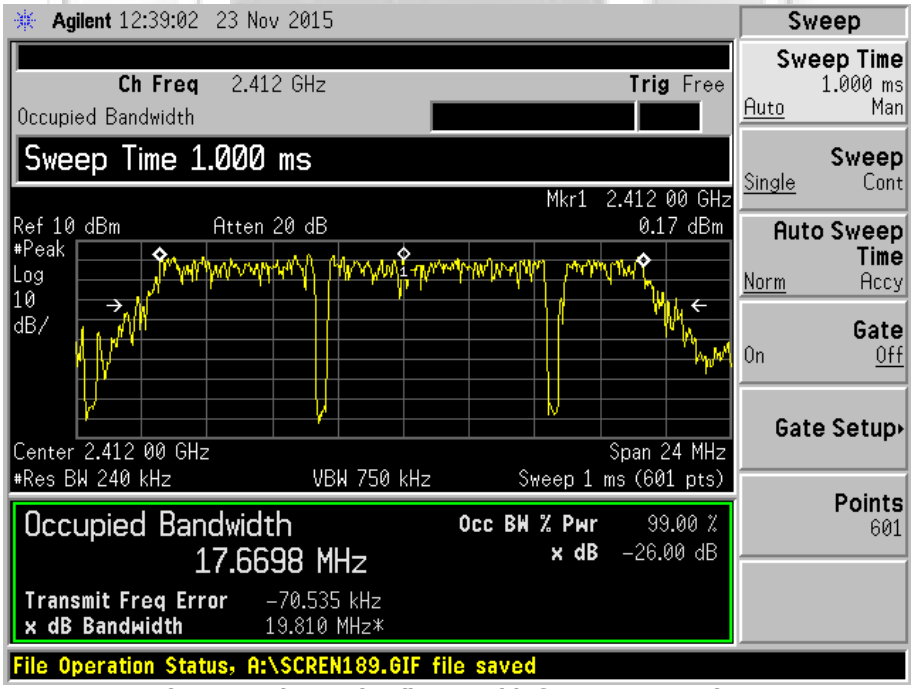


Plot 42 - Channel 1 *(lower ch)* @ QPSK 19.5Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11n

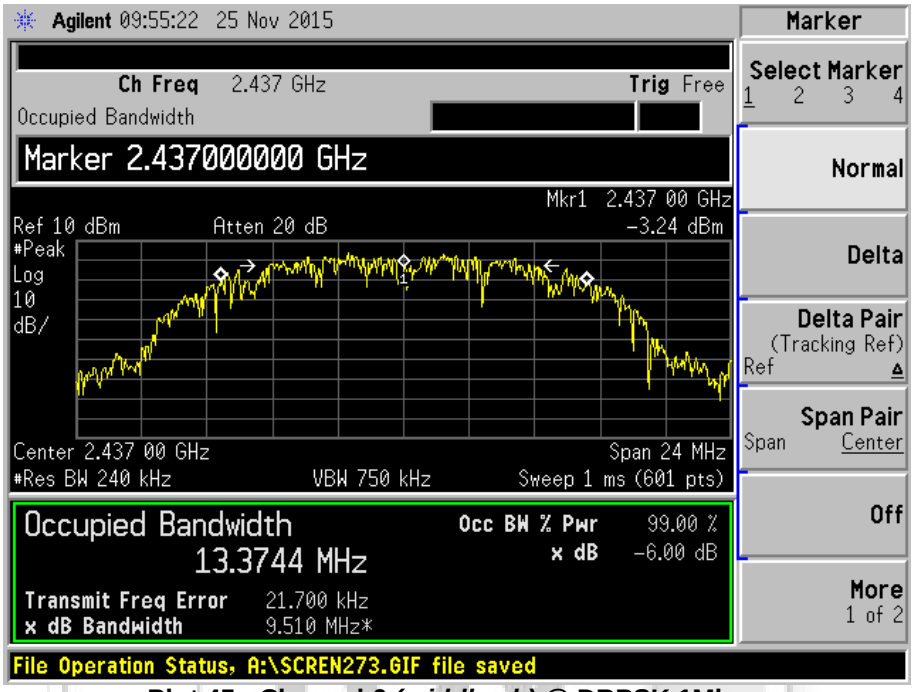


Plot 43 - Channel 1 *(lower ch)* @ 16QAM 39Mbps

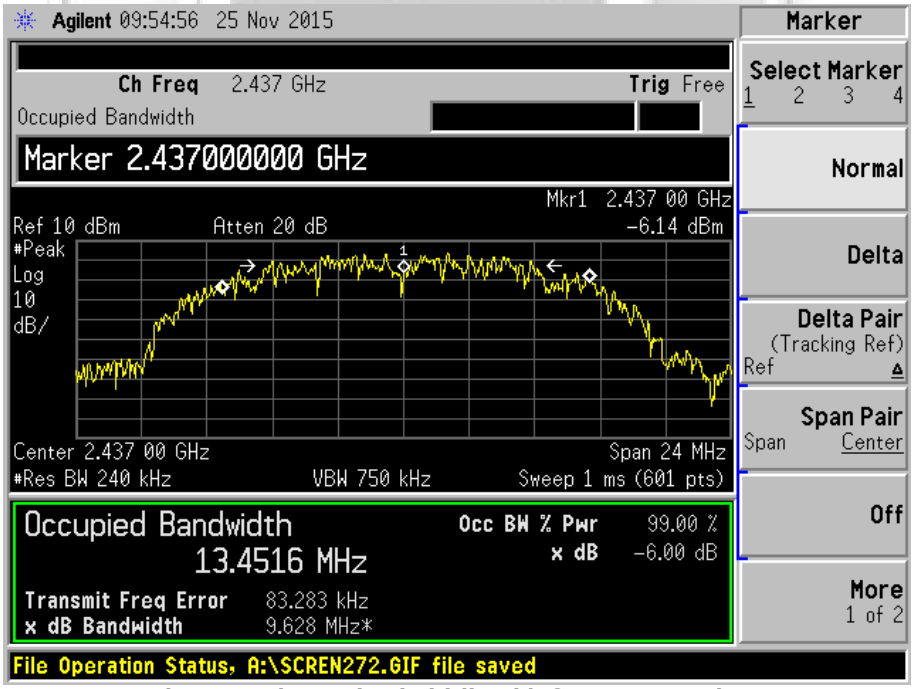


Plot 44 - Channel 1 *(lower ch)* @ 64QAM 65Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11b

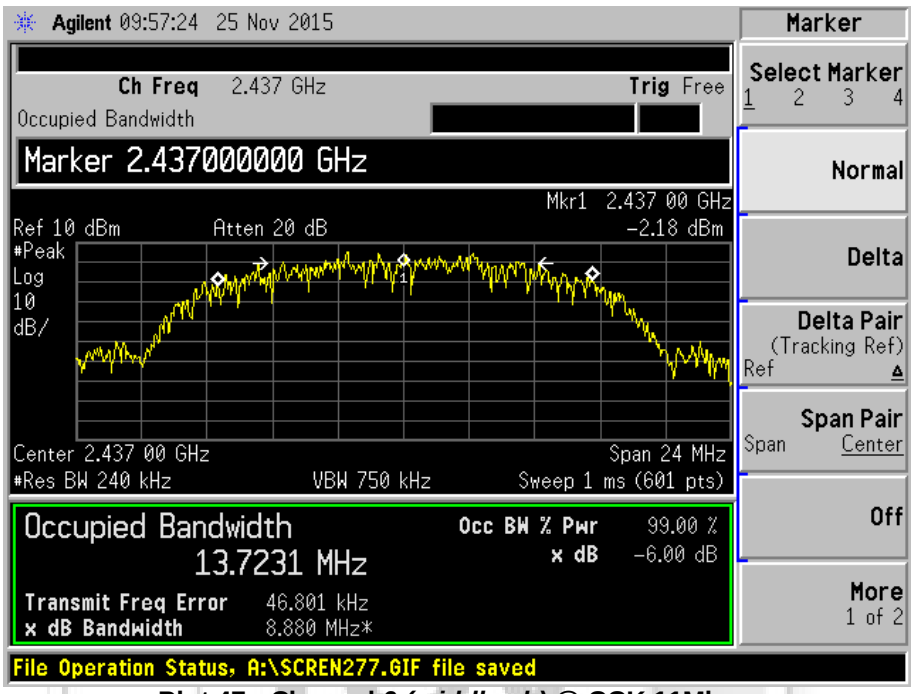


Plot 45 - Channel 6 *(middle ch)* @ DBPSK 1Mbps



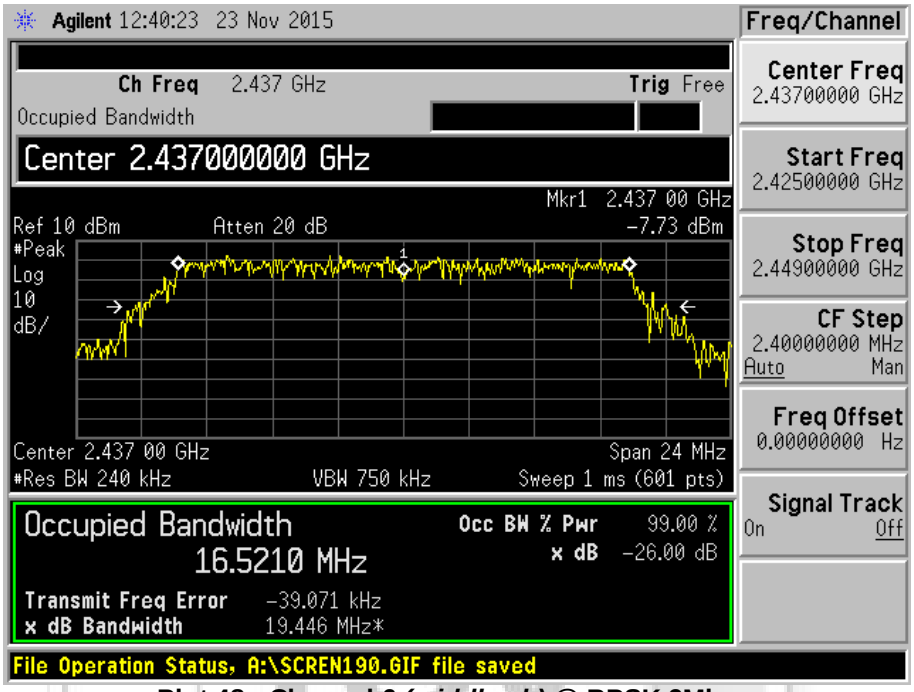
Plot 46 - Channel 6 *(middle ch)* @ DQPSK 2Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11b

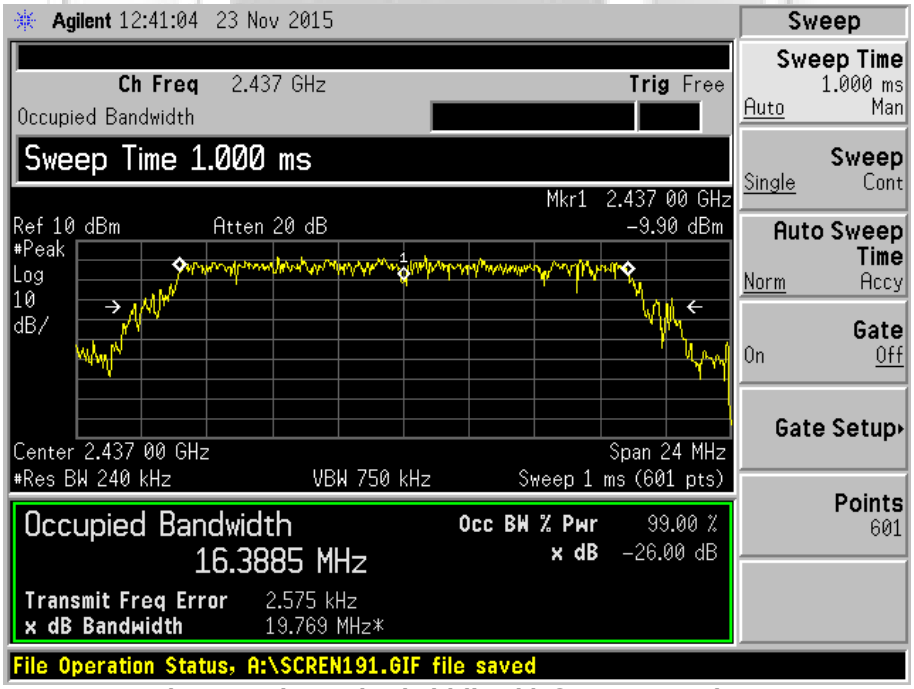


Plot 47 - Channel 6 *(middle ch)* @ CCK 11Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11g

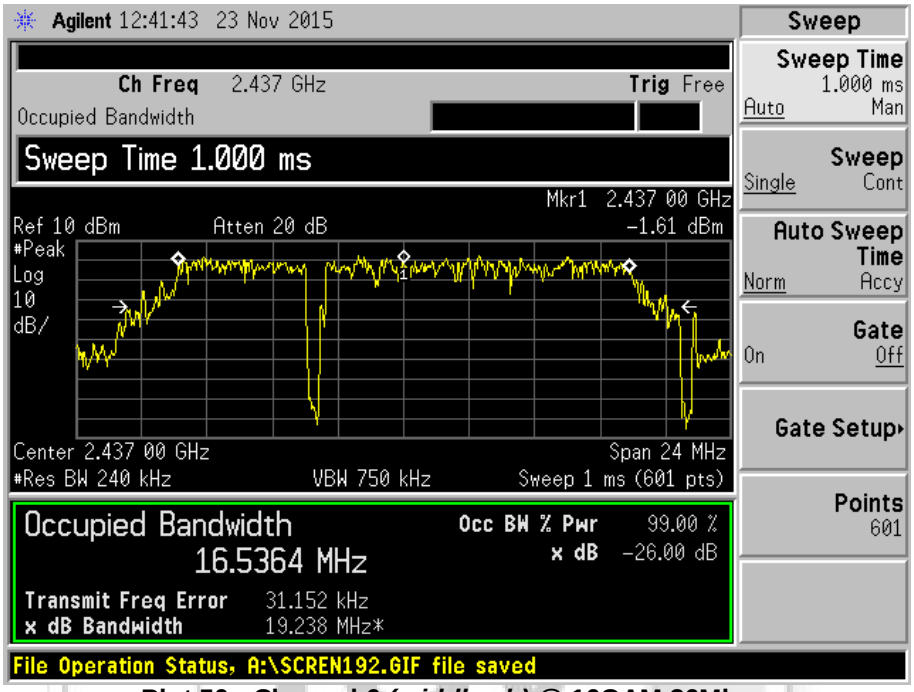


Plot 48 - Channel 6 *(middle ch)* @ BPSK 9Mbps

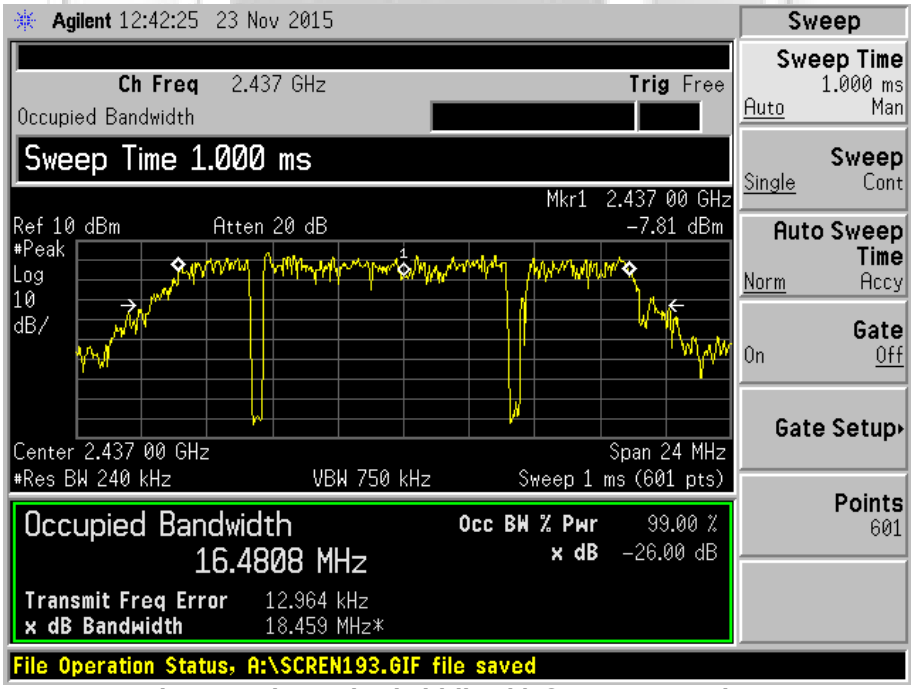


Plot 49 - Channel 6 *(middle ch)* @ QPSK 18Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11g

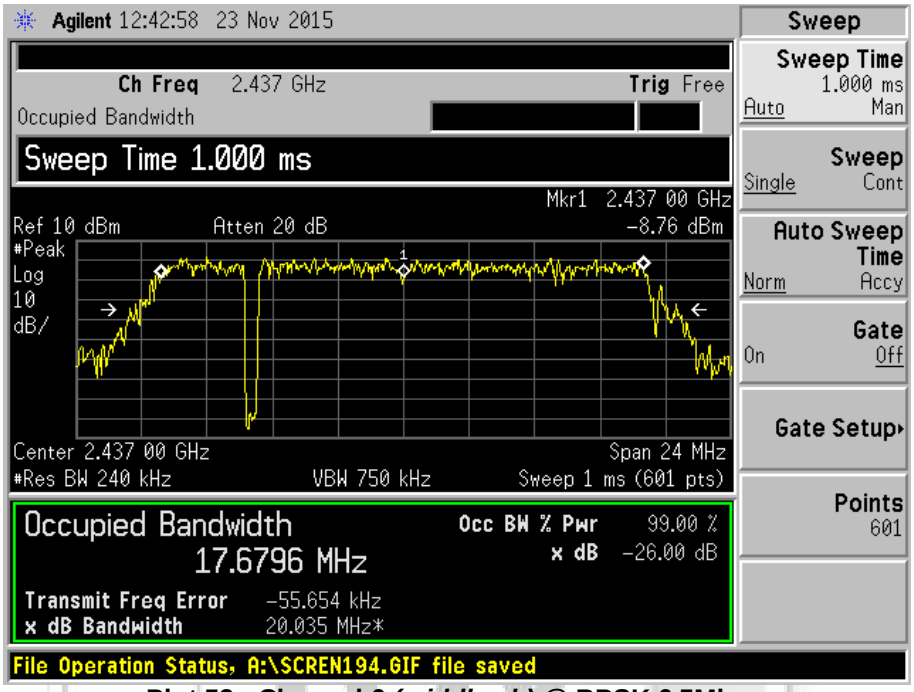


Plot 50 - Channel 6 *(middle ch)* @ 16QAM 36Mbps

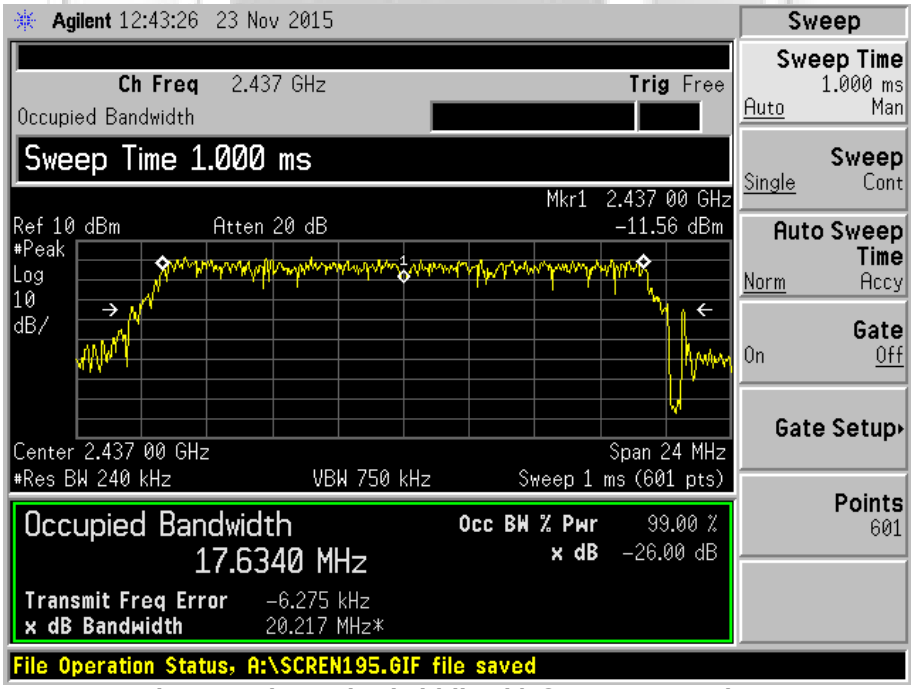


Plot 51 - Channel 6 *(middle ch)* @ 64QAM 54Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11n

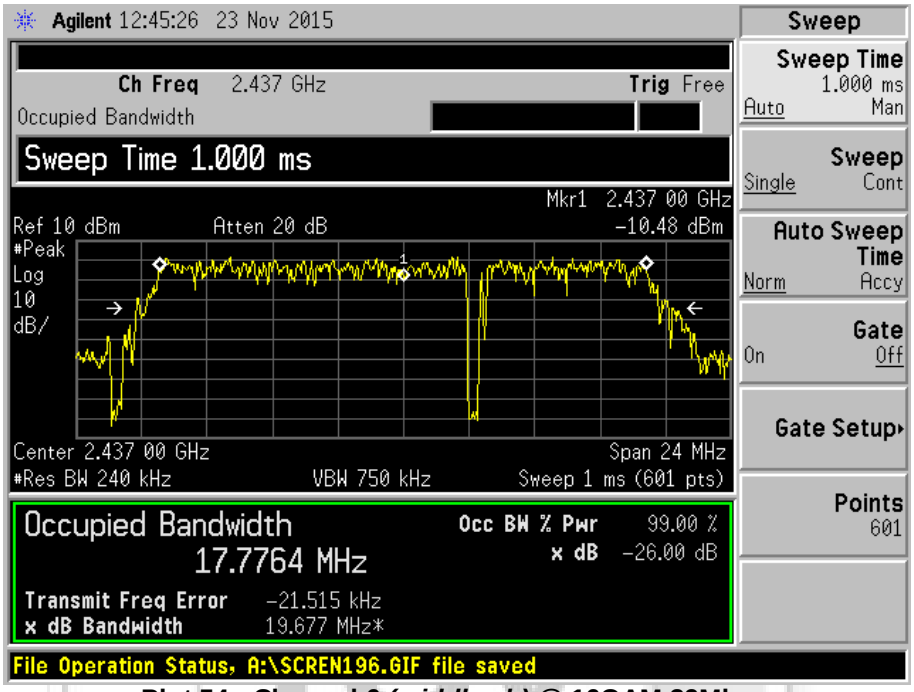


Plot 52 - Channel 6 *(middle ch)* @ BPSK 6.5Mbps

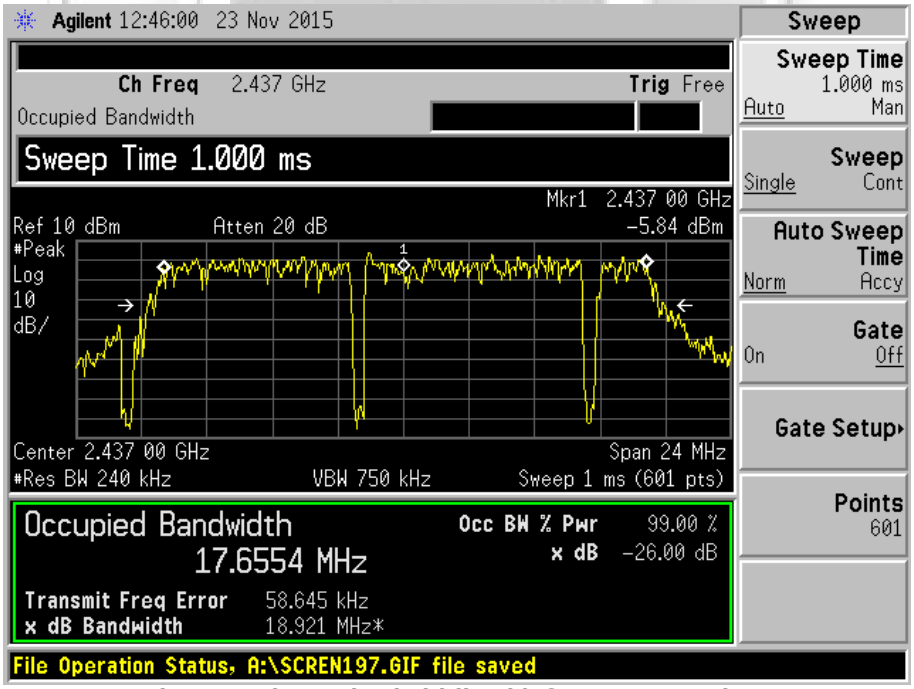


Plot 53 - Channel 6 *(middle ch)* @ QPSK 19.5Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11n

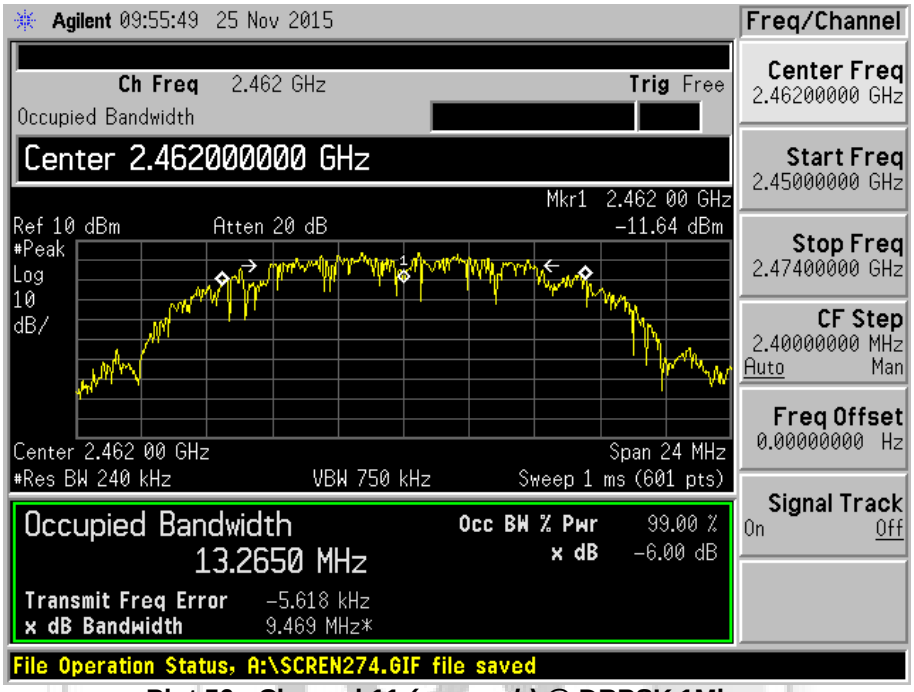


Plot 54 - Channel 6 *(middle ch)* @ 16QAM 39Mbps

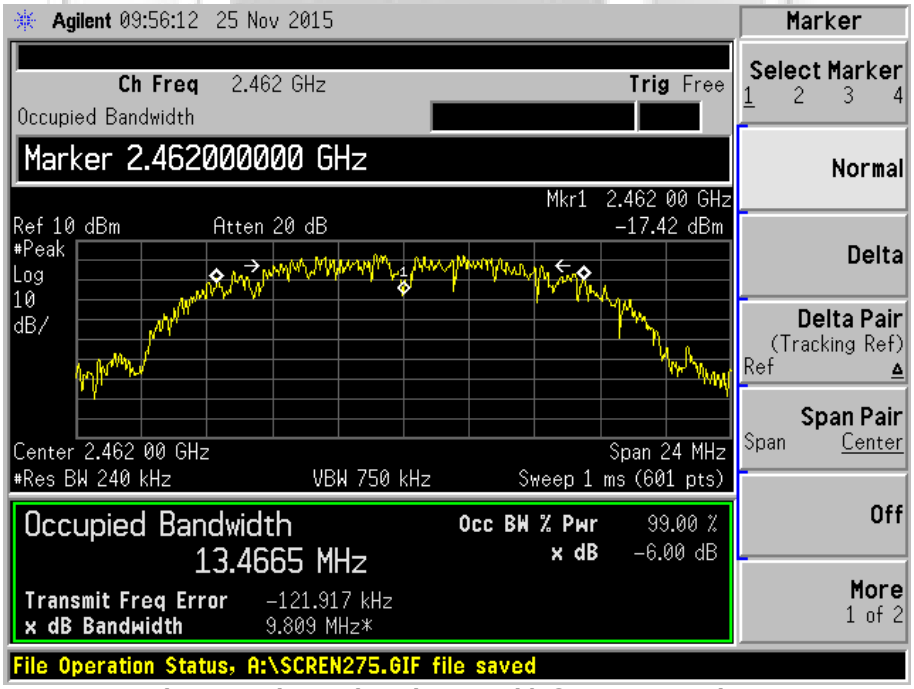


Plot 55 - Channel 6 *(middle ch)* @ 64QAM 65Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11b

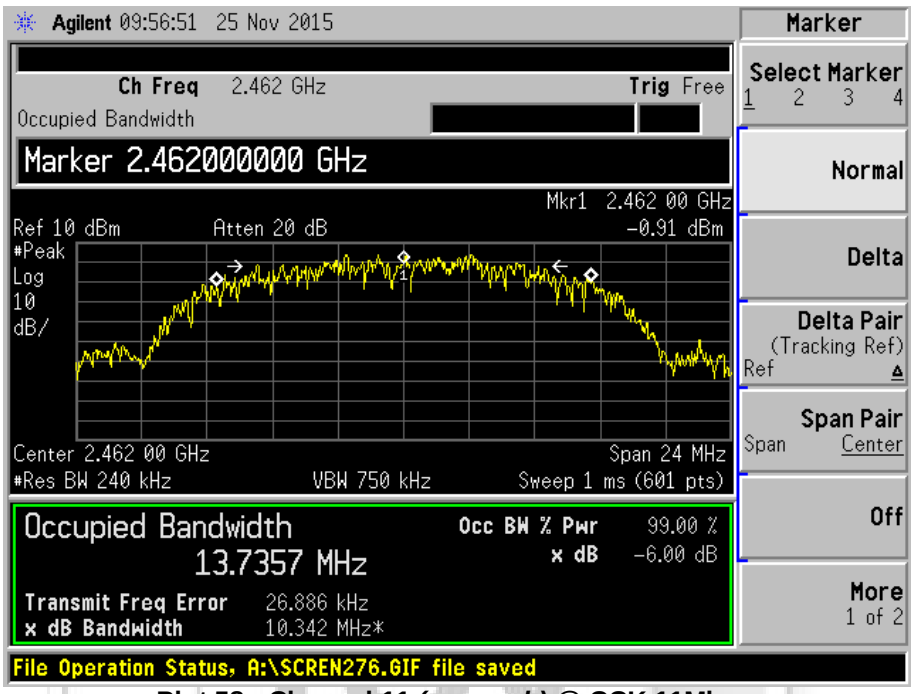


Plot 56 - Channel 11 *(upper ch)* @ DBPSK 1Mbps



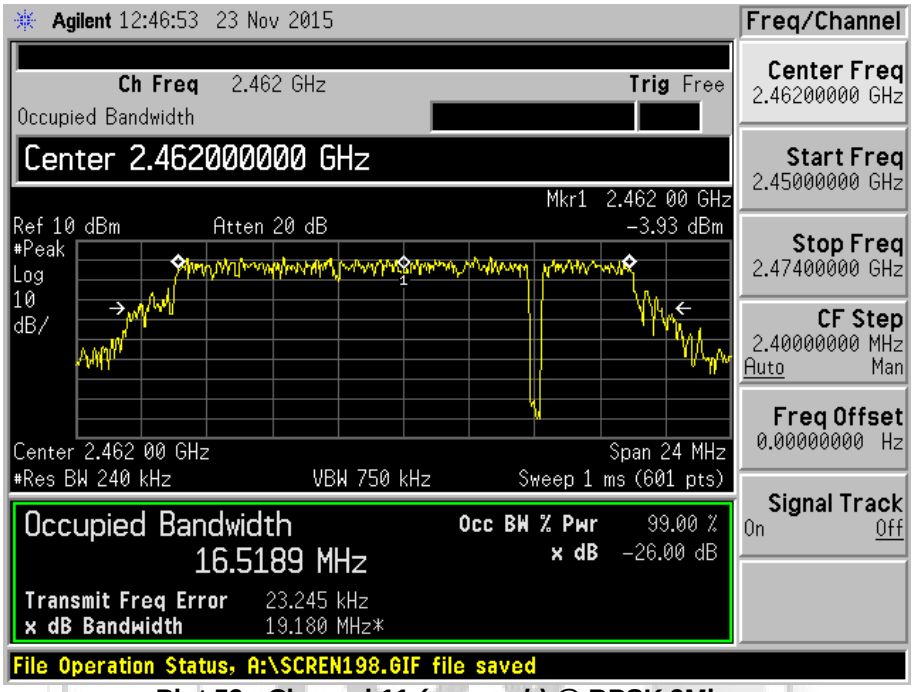
Plot 57 - Channel 11 *(upper ch)* @ DQPSK 2Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11b

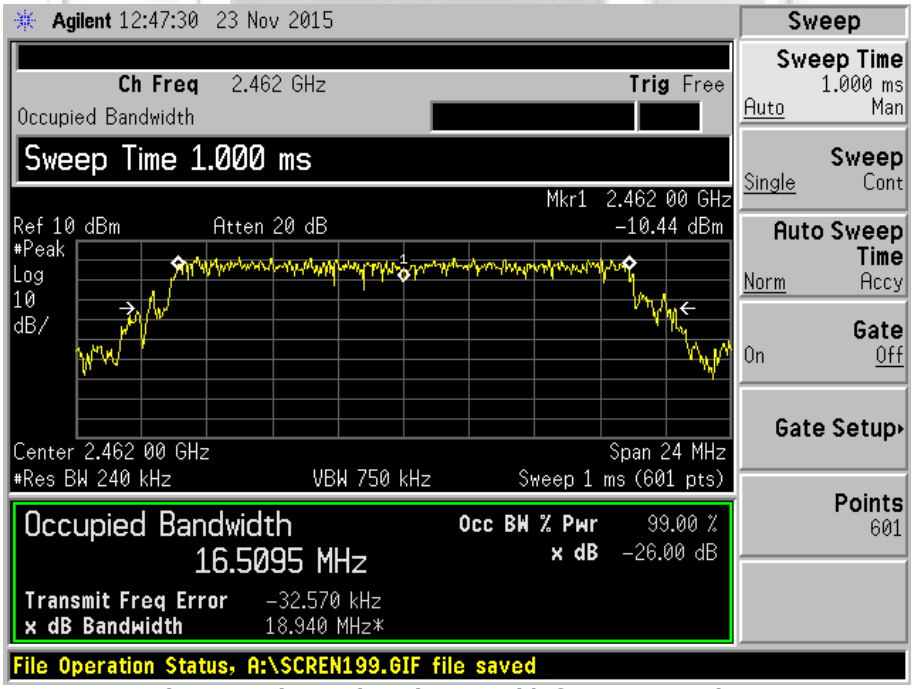


Plot 58 - Channel 11 *(upper ch)* @ CCK 11Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11g

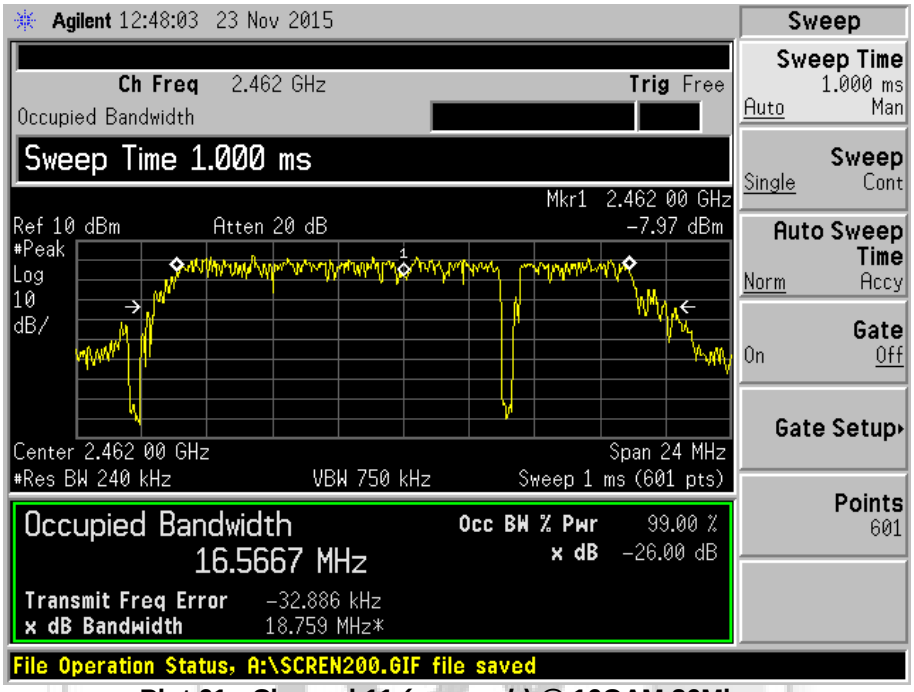


Plot 59 - Channel 11 *(upper ch)* @ BPSK 9Mbps

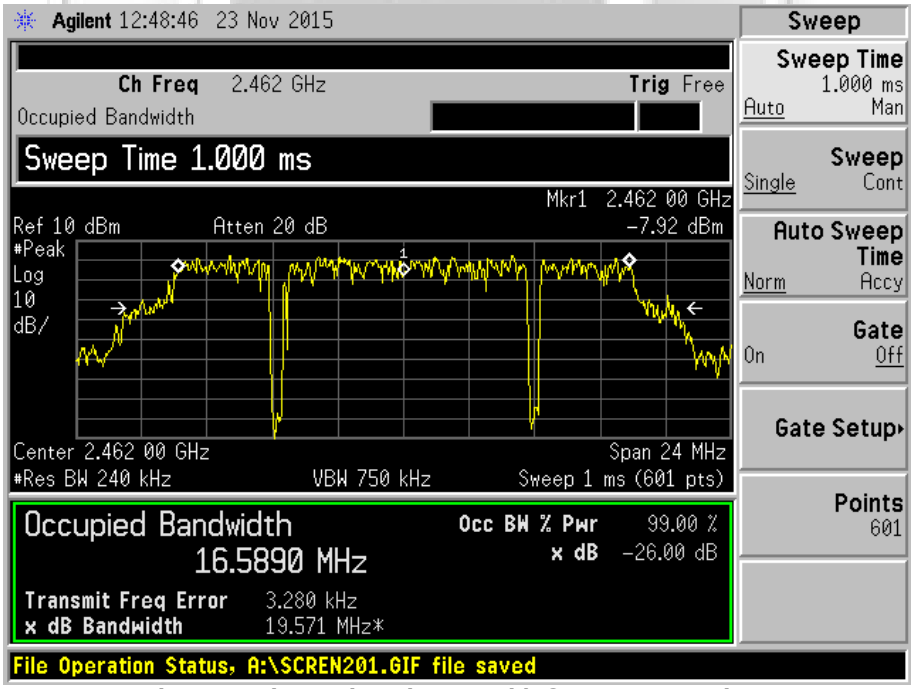


Plot 60 - Channel 11 *(upper ch)* @ QPSK 18Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11g

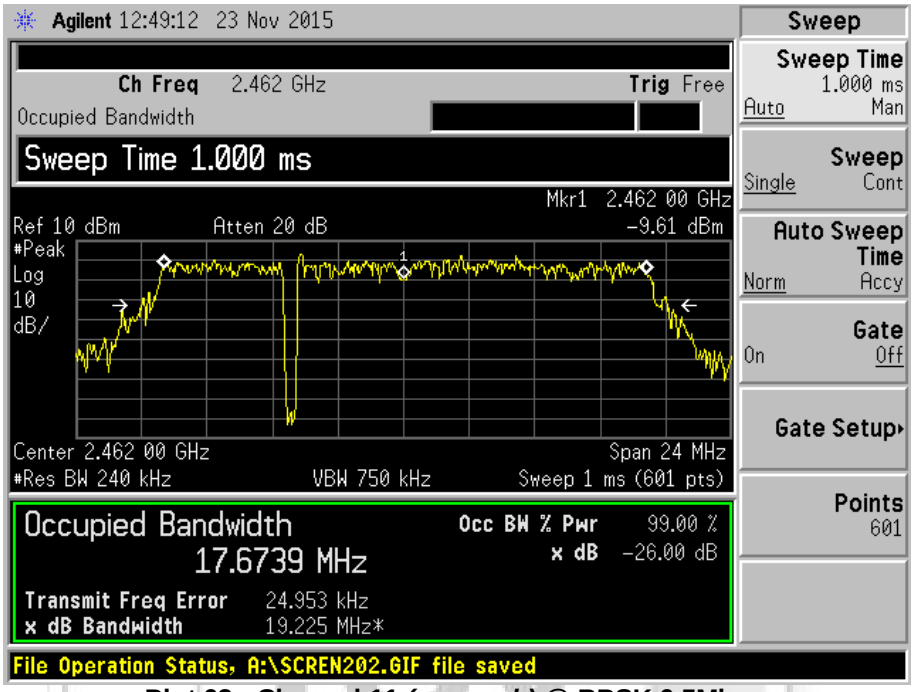


Plot 61 - Channel 11 *(upper ch)* @ 16QAM 36Mbps

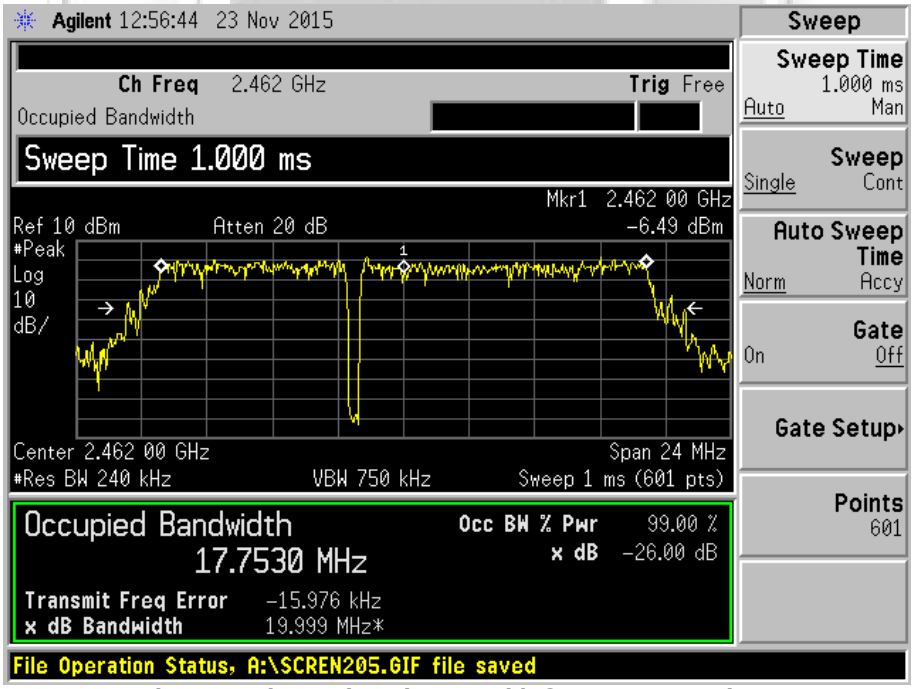


Plot 62 - Channel 11 *(upper ch)* @ 64QAM 54Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11n

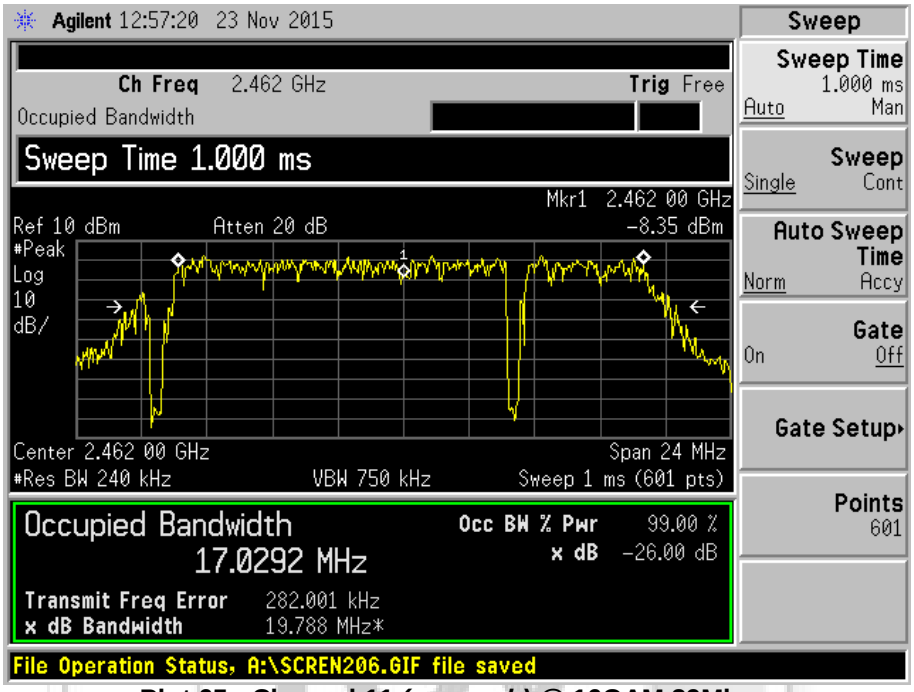


Plot 63 - Channel 11 *(upper ch)* @ BPSK 6.5Mbps

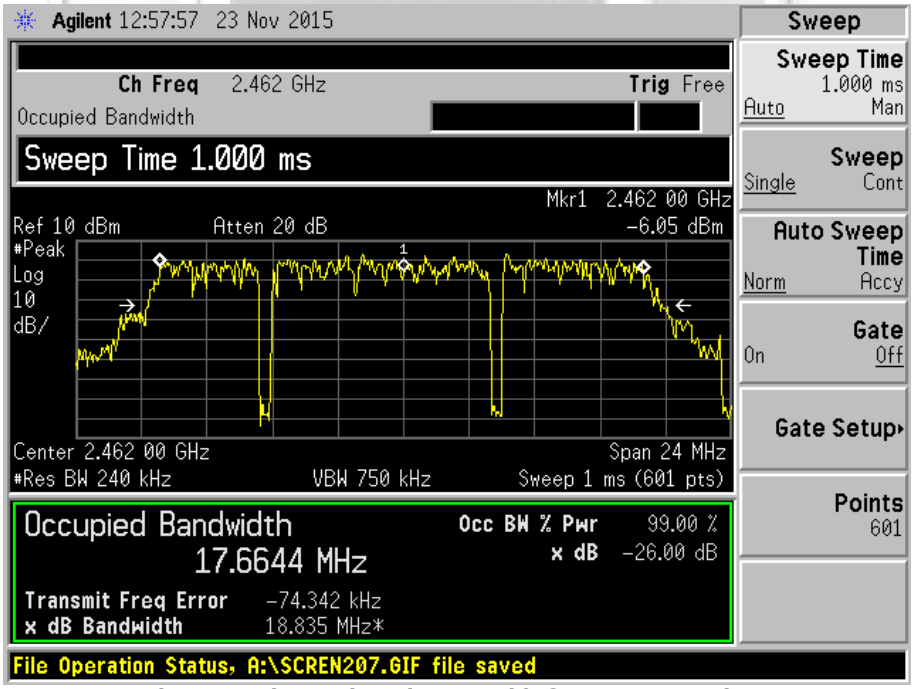


Plot 64 - Channel 11 *(upper ch)* @ QPSK 19.5Mbps

Spectrum Bandwidth (99% Bandwidth Measurement) Plots – 802.11n



Plot 65 - Channel 11 *(upper ch)* @ 16QAM 39Mbps



Plot 66 - Channel 11 *(upper ch)* @ 64QAM 65Mbps

47 CFR FCC Part 15.247(b)(3) and RSS-247 5.4(4) Maximum Peak Power Limits

The EUT shows compliance to the requirements of this section, which states the maximum peak power of the EUT employing digital modulation shall not exceed 1W (30dBm).

47 CFR FCC Part 15.247(b)(3) and RSS-247 5.4(4) Maximum Peak Power Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
Boonton Electronics RF Power Meter	4532	72901	27 Aug 2016	1 year
Boonton Electronics Peak Power Sensor	56218-S/1	1417	27 Aug 2016	1 year

47 CFR FCC Part 15.247(b)(3) and RSS-247 5.4(4) Maximum Peak Power Test Setup

1. The EUT and supporting equipment were set up as shown in the setup photo.
2. The power supply for the EUT was connected to a filtered mains.
3. The RF antenna connector was connected to the power meter.
4. All other supporting equipment were powered separately from another filtered mains.

47 CFR FCC Part 15.247(b)(3) and RSS-247 5.4(4) Maximum Peak Power Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode at lower channel with specified modulation and data rate.
2. The maximum peak power of the transmitting frequency was detected and recorded.
3. Repeat steps 1 to 2 with all possible modulations and data rates.
4. The steps 2 to 3 were repeated with the transmitting frequency was set to middle and upper respectively.

47 CFR FCC Part 15.247(b)(3) and RSS-247 5.4(4) Maximum Peak Power Results

Test Input Power	3.7Vdc	Temperature	24°C
Antenna Gain	0.5 dBi	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Liau Lee Yin

802.11b

Channel	Channel Frequency (GHz)	Maximum Peak Power (W)	Limit (W)	Modulation @ Data Rate
1 *(lower ch)*	2.412	0.018	1.0	DBPSK @ 1Mbps
		0.017	1.0	DQPSK @ 2Mbps
		0.017	1.0	CCK @ 11Mbps
6 *(mid ch)*	2.437	0.018	1.0	DBPSK @ 1Mbps
		0.018	1.0	DQPSK @ 2Mbps
		0.018	1.0	CCK @ 11Mbps
11 *(upper ch)*	2.462	0.019	1.0	DBPSK @ 1Mbps
		0.019	1.0	DQPSK @ 2Mbps
		0.020	1.0	CCK @ 11Mbps

802.11g

Channel	Channel Frequency (GHz)	Maximum Peak Power (W)	Limit (W)	Modulation @ Data Rate
1 *(lower ch)*	2.412	0.006	1.0	BPSK @ 9Mbps
		0.006	1.0	QPSK @ 18Mbps
		0.006	1.0	16QAM @ 36Mbps
		0.006	1.0	64QAM @ 54Mbps
6 *(mid ch)*	2.437	0.006	1.0	BPSK @ 9Mbps
		0.006	1.0	QPSK @ 18Mbps
		0.006	1.0	16QAM @ 36Mbps
		0.006	1.0	64QAM @ 54Mbps
11 *(upper ch)*	2.462	0.006	1.0	BPSK @ 9Mbps
		0.006	1.0	QPSK @ 18Mbps
		0.006	1.0	16QAM @ 36Mbps
		0.006	1.0	64QAM @ 54Mbps

47 CFR FCC Part 15.247(b)(3) and RSS-247 5.4(4) Maximum Peak Power Results

Test Input Power	3.7Vdc	Temperature	24°C
Antenna Gain	0.5 dBi	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Liau Lee Yin

802.11n

Channel	Channel Frequency (GHz)	Maximum Peak Power (W)	Limit (W)	Modulation @ Data Rate
1 *(lower ch)*	2.412	0.006	1.0	BPSK @ 6.5Mbps (MCS0)
		0.006	1.0	QPSK @ 19.5Mbps (MCS2)
		0.006	1.0	16QAM @ 39Mbps (MCS4)
		0.006	1.0	64QAM @ 65Mbps (MCS7)
6 *(mid ch)*	2.437	0.006	1.0	BPSK @ 6.5Mbps (MCS0)
		0.006	1.0	QPSK @ 19.5Mbps (MCS2)
		0.006	1.0	16QAM @ 39Mbps (MCS4)
		0.006	1.0	64QAM @ 65Mbps (MCS7)
11 *(upper ch)*	2.462	0.006	1.0	BPSK @ 6.5Mbps (MCS0)
		0.006	1.0	QPSK @ 19.5Mbps (MCS2)
		0.006	1.0	16QAM @ 39Mbps (MCS4)
		0.006	1.0	64QAM @ 65Mbps (MCS7)

Notes

1. Nil.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Non-Restricted Bands) Limits

The EUT shows compliance to the requirements of this section, which states in any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator (EUT) is operating, the radio frequency power that is produced by the EUT shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Non-Restricted Bands) Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
Agilent Spectrum Analyzer	E4440A	MY45304764	12 Dec 2015	1 year

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Non-Restricted Bands) Test Setup

1. The EUT and supporting equipment were set up as shown in the setup photo.
2. The power supply for the EUT was connected to a filtered mains.
3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.
4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz.
5. All other supporting equipment were powered separately from another filtered mains.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Non-Restricted Bands) Test Method

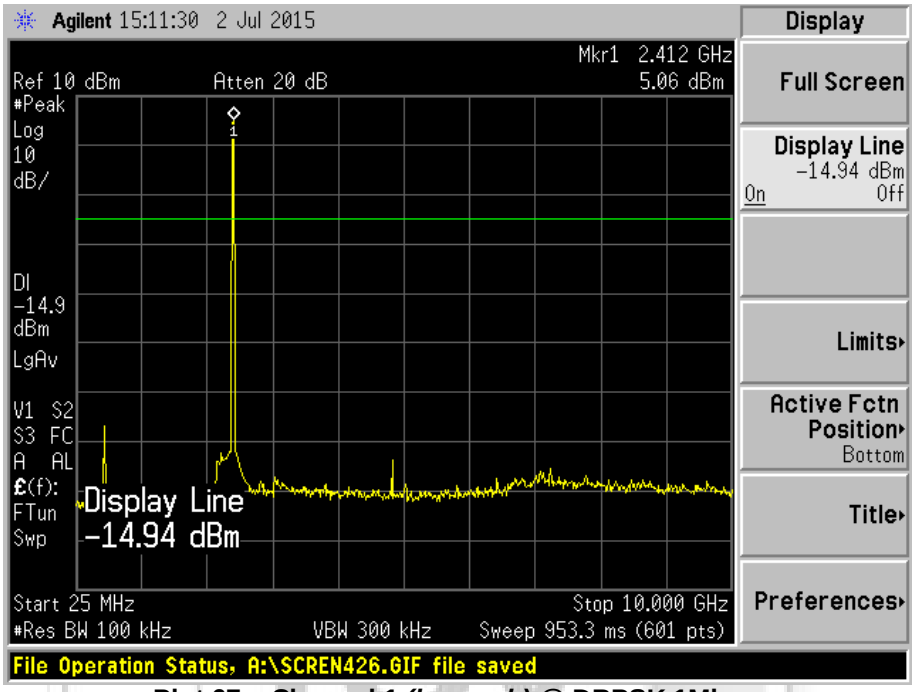
1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode, with the transmitting frequency was set to lower channel with specified modulation and data rate.
2. The start and stop frequencies of the spectrum analyser were set to 30MHz and 10GHz.
3. The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected.
4. The steps 2 to 3 were repeated with frequency span was set from 10GHz to 25GHz.
5. Repeat steps 1 to 4 with all possible modulations and data rates.
6. The steps 2 to 5 were repeated with the transmitting frequency was set to middle and upper channel respectively.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Non-Restricted Bands) Results

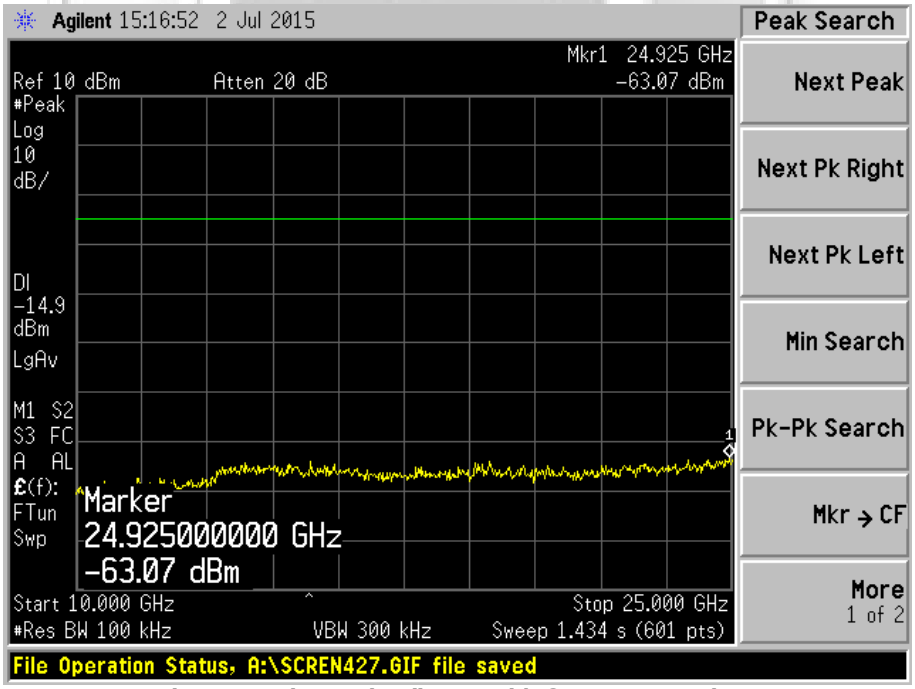
Test Input Power	3.7Vdc	Temperature	24°C
Attached Plots	67 – 84 (802.11b) 85 – 108 (802.11g) 109 – 132 (802.11n)	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Chang Wai Kit

All spurious signals found were below the specified limit. Please refer to the attached plots.

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

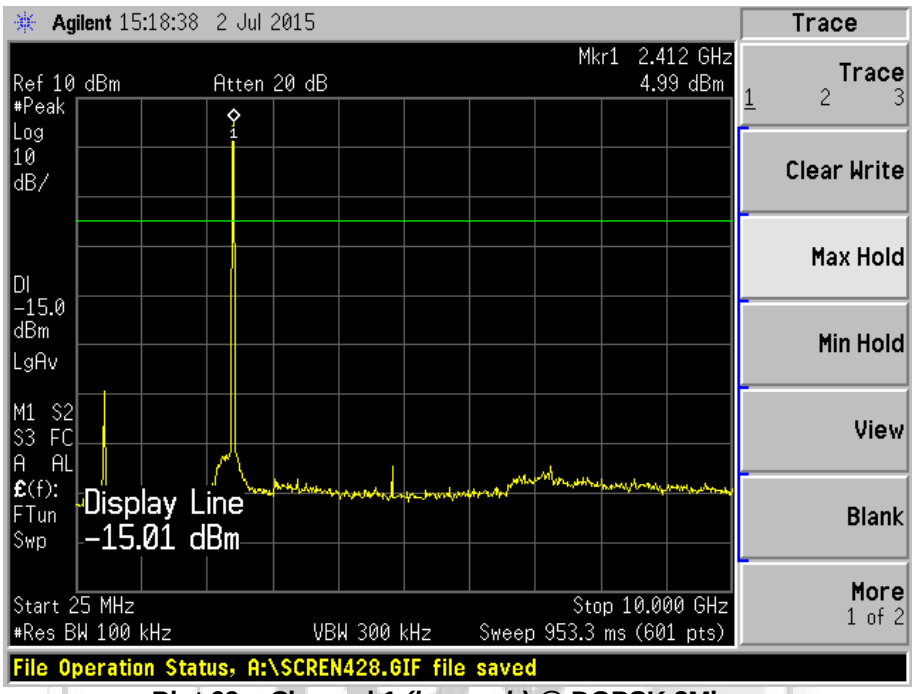


Plot 67 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

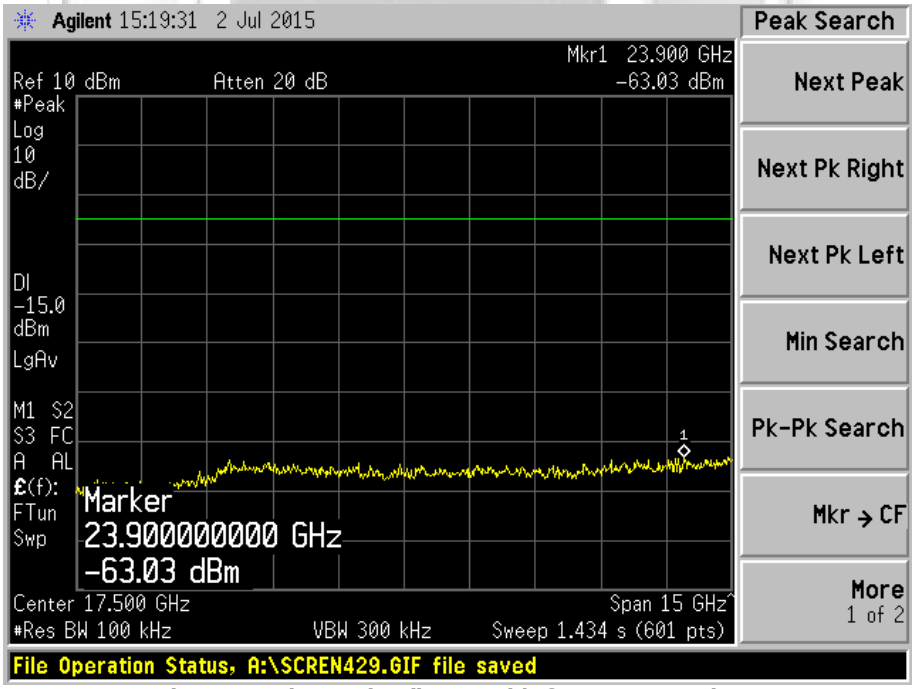


Plot 68 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

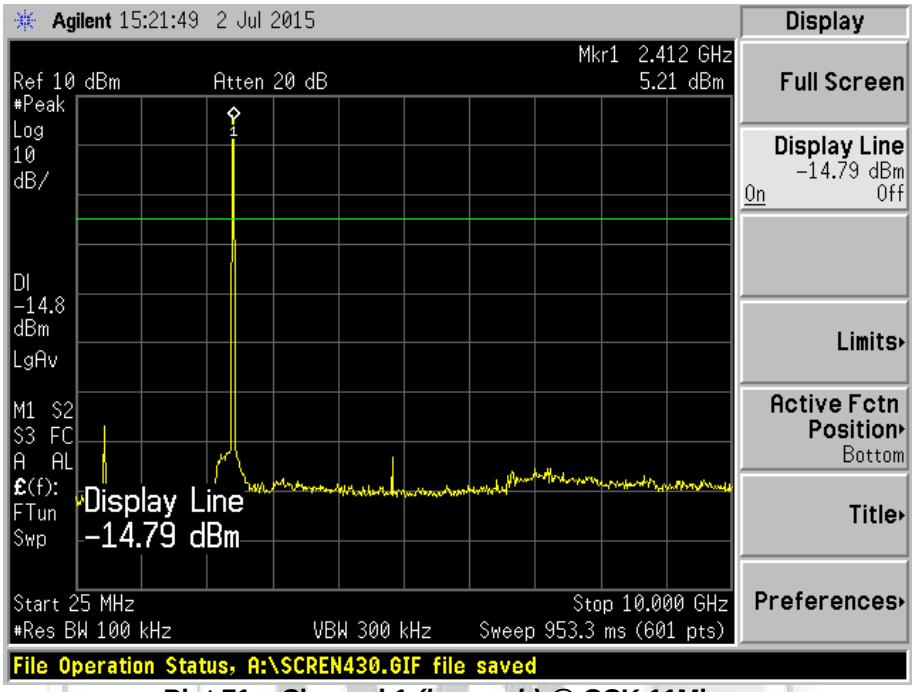


Plot 69 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

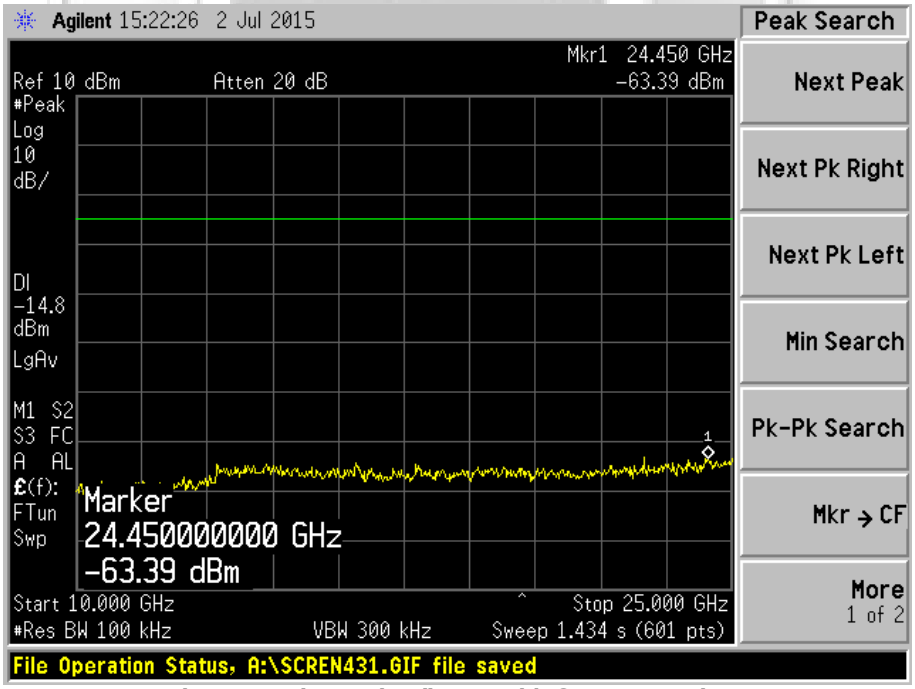


Plot 70 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

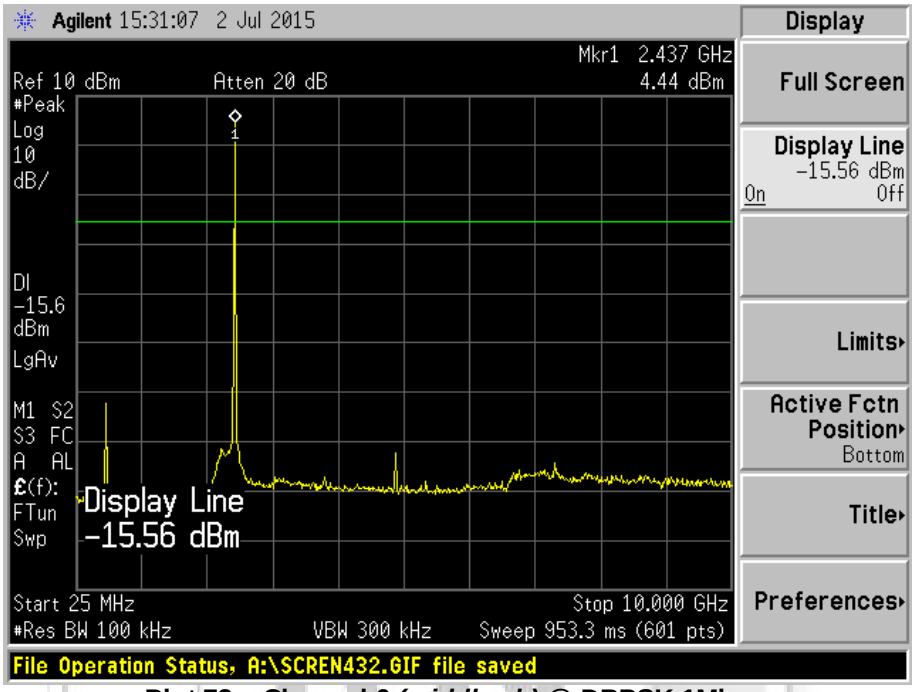


Plot 71 – Channel 1 *(lower ch)* @ CCK 11Mbps

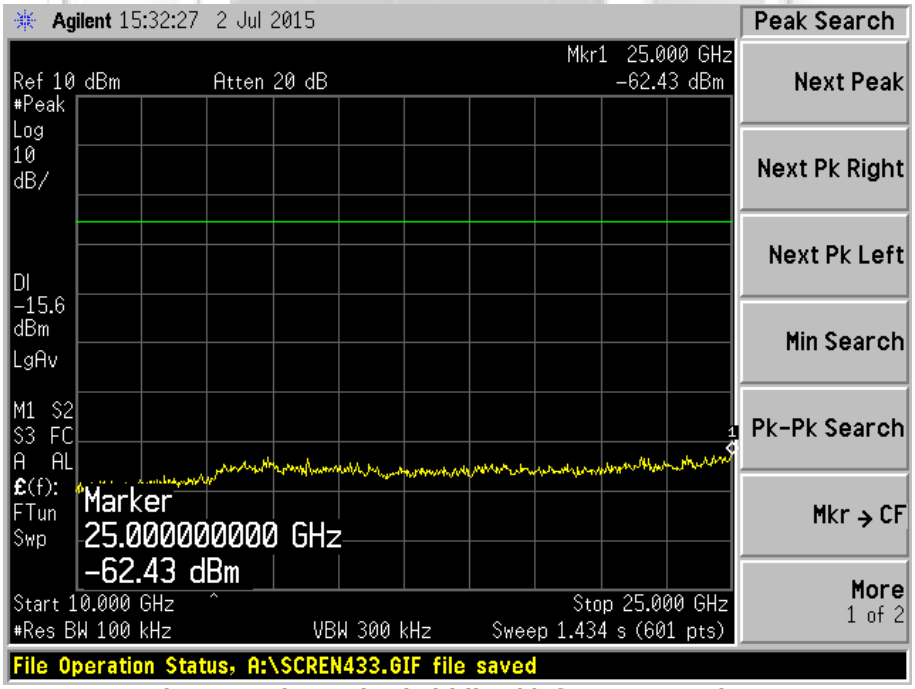


Plot 72 – Channel 1 *(lower ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

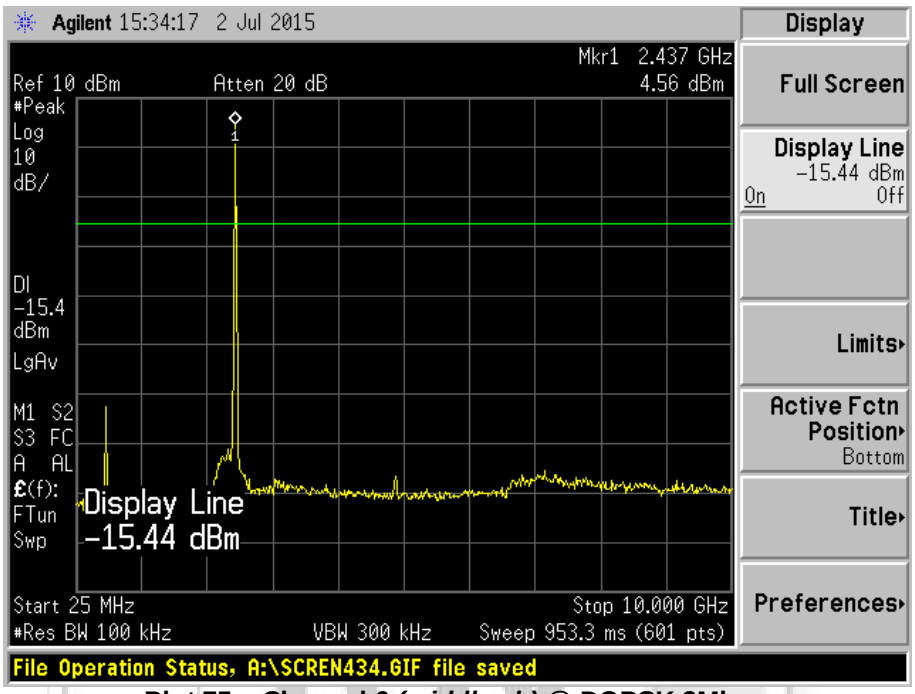


Plot 73 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

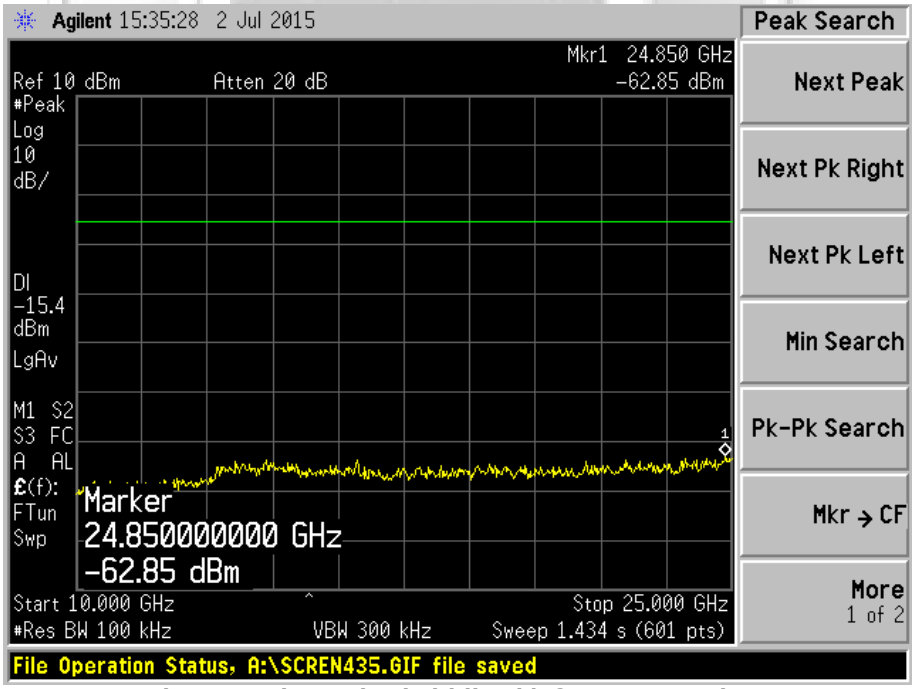


Plot 74 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

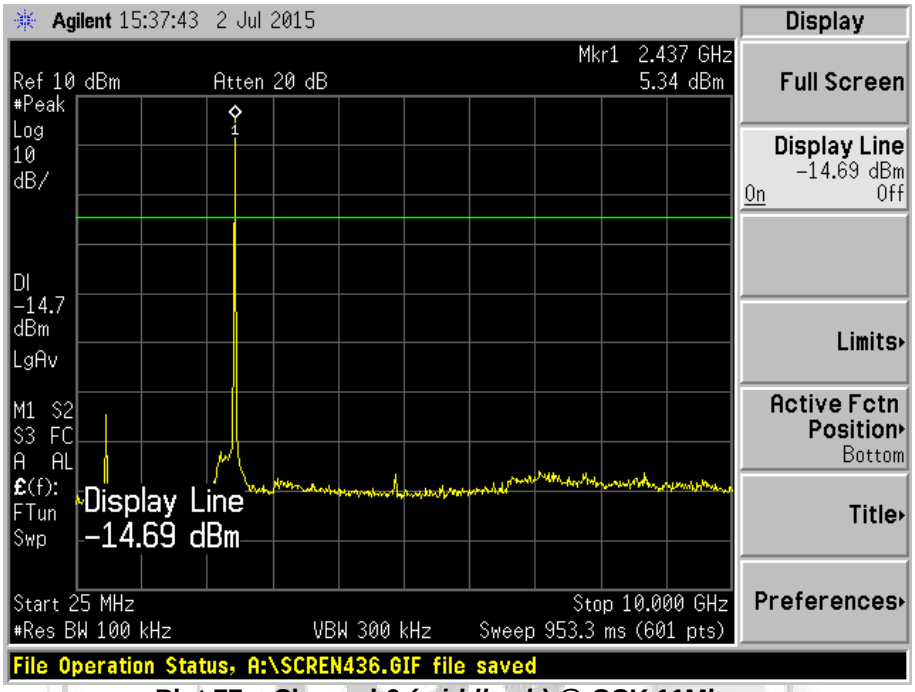


Plot 75 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

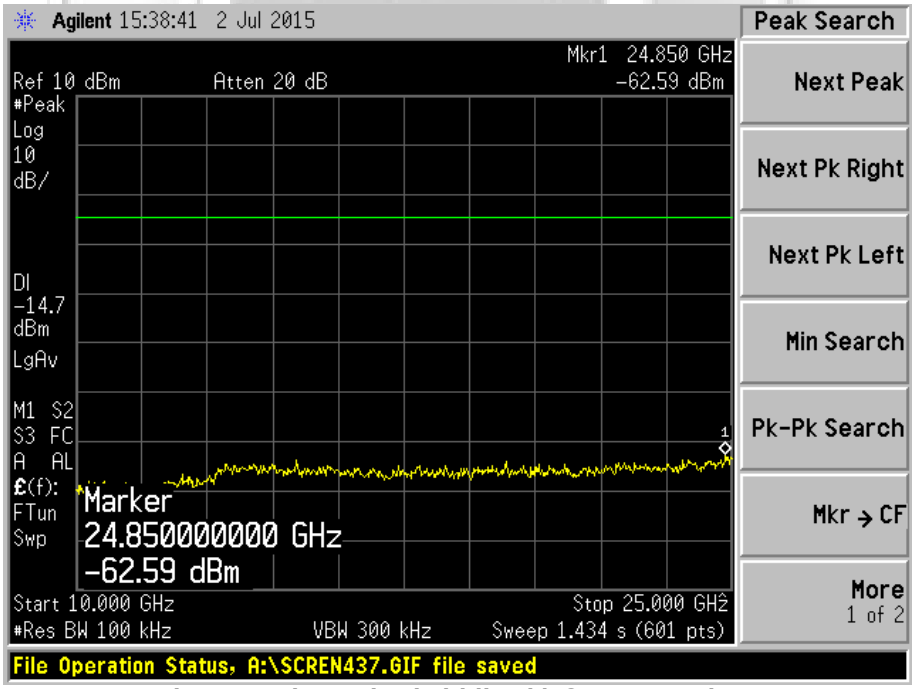


Plot 76 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

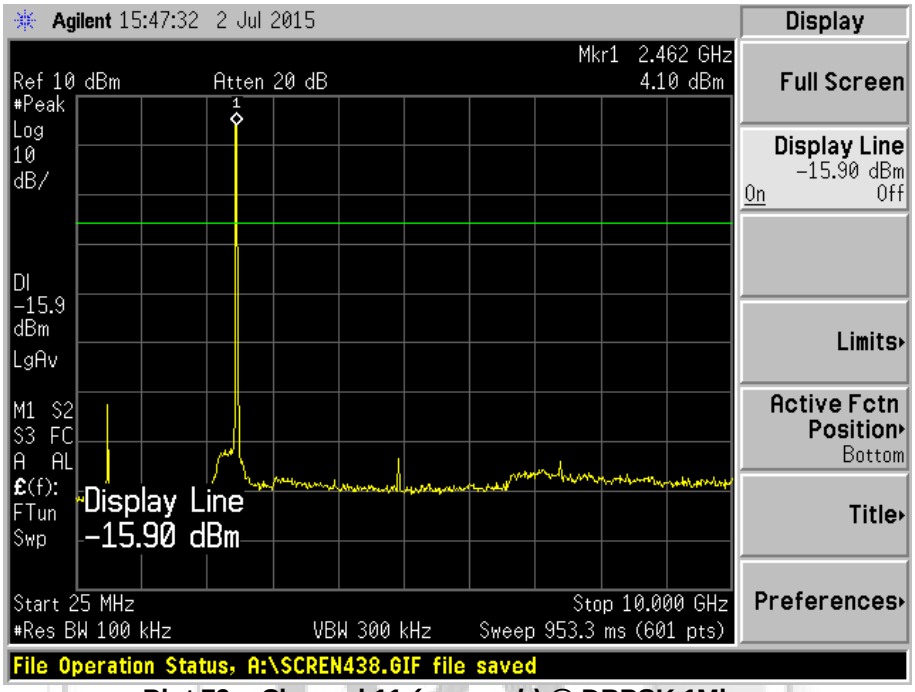


Plot 77 – Channel 6 *(middle ch)* @ CCK 11Mbps

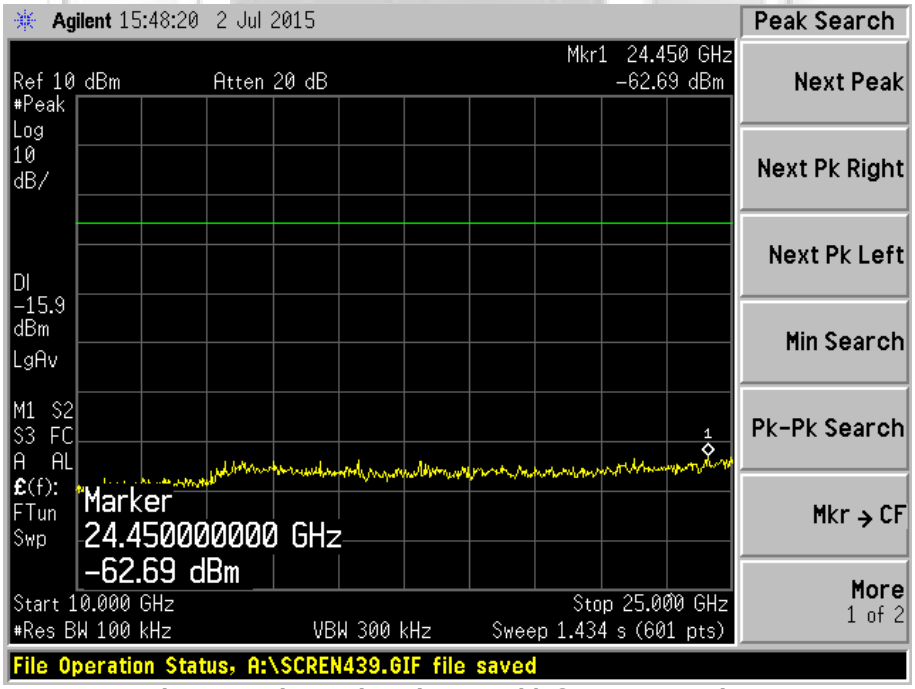


Plot 78 – Channel 6 *(middle ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

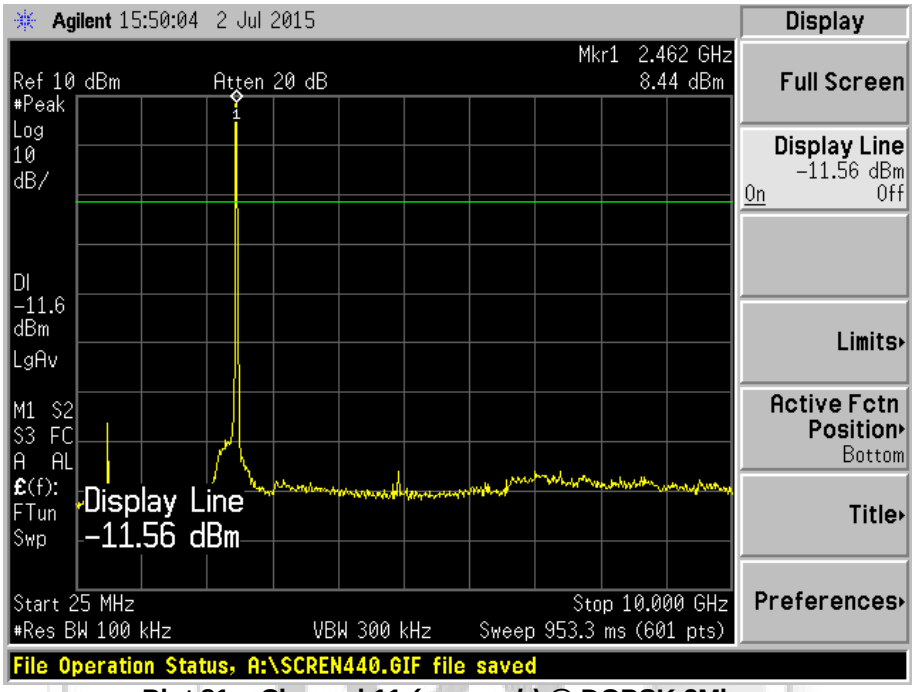


Plot 79 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

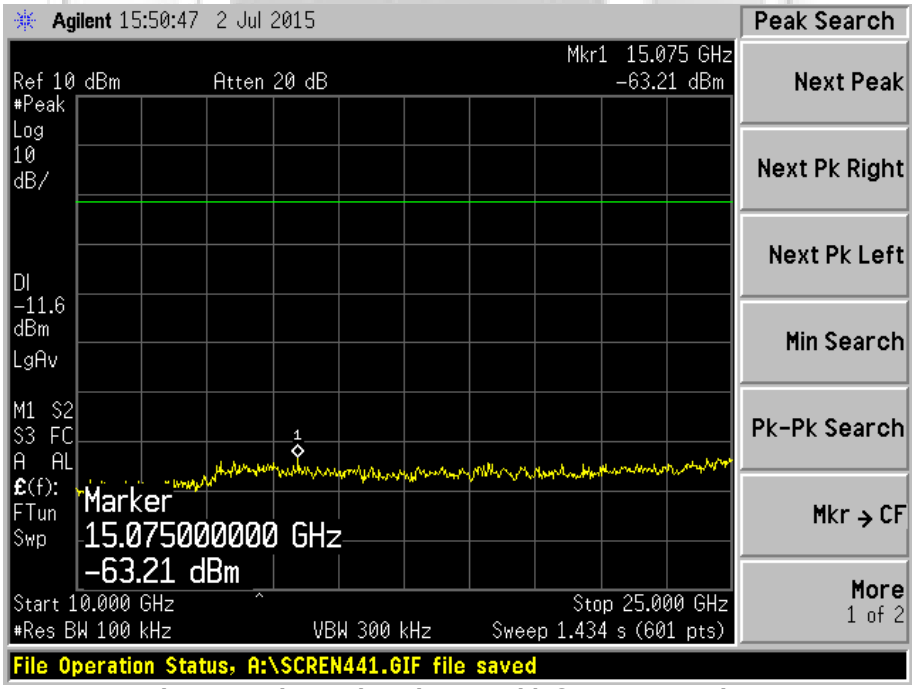


Plot 80 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

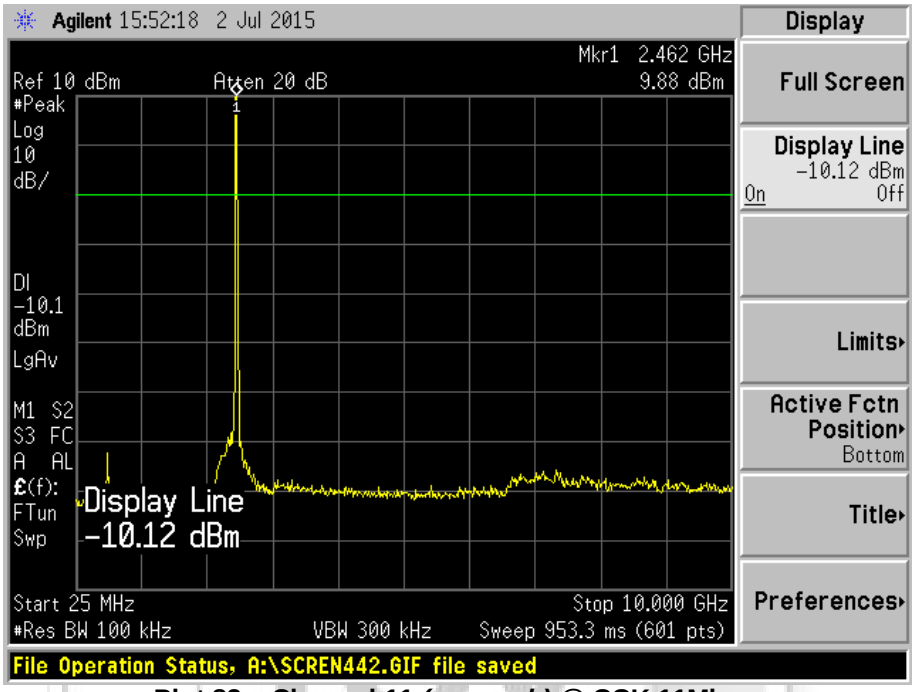


Plot 81 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

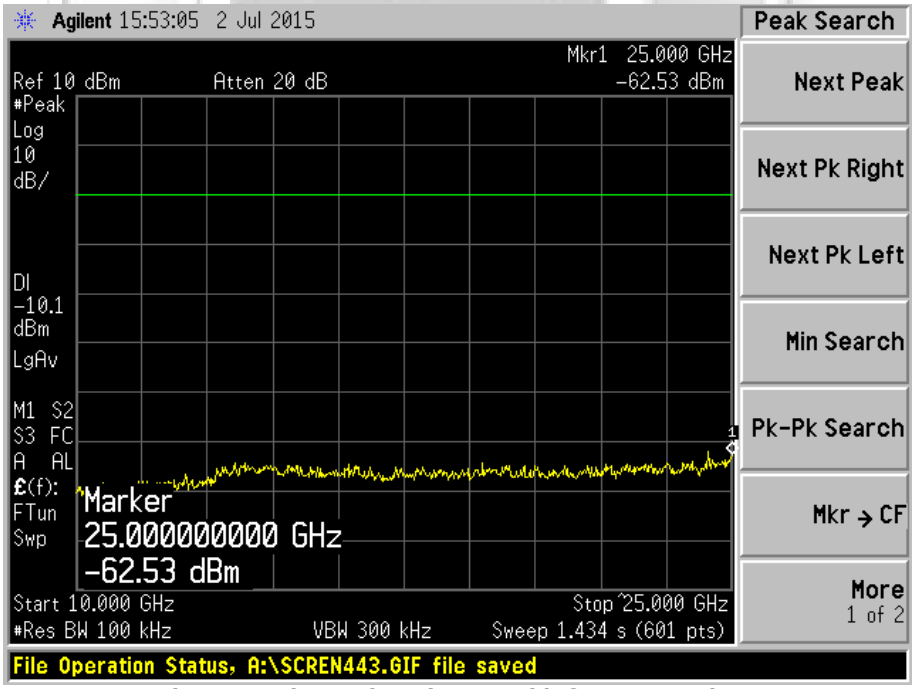


Plot 82 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11b

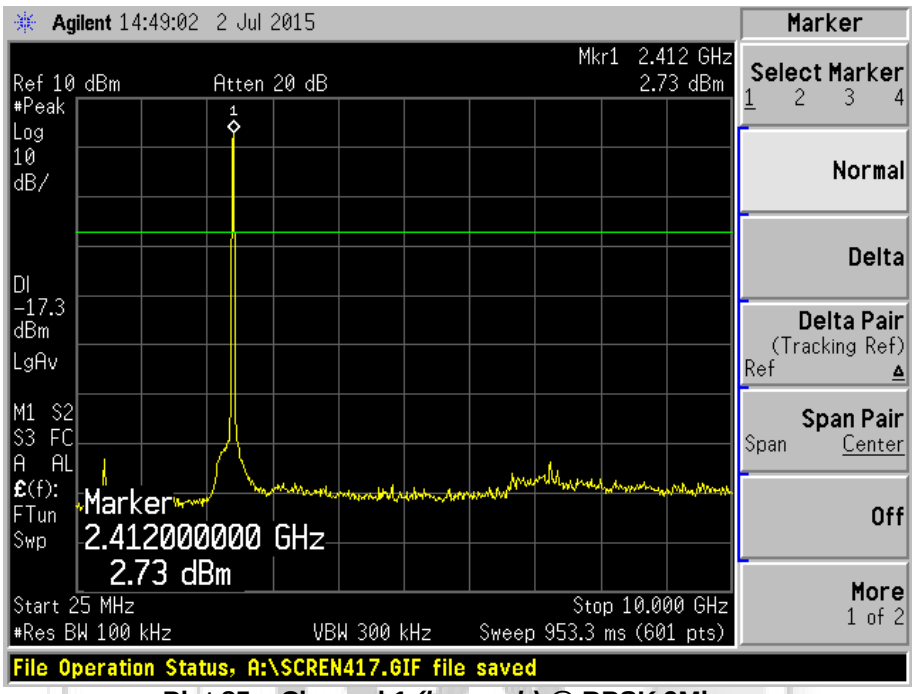


Plot 83 – Channel 11 *(upper ch)* @ CCK 11Mbps

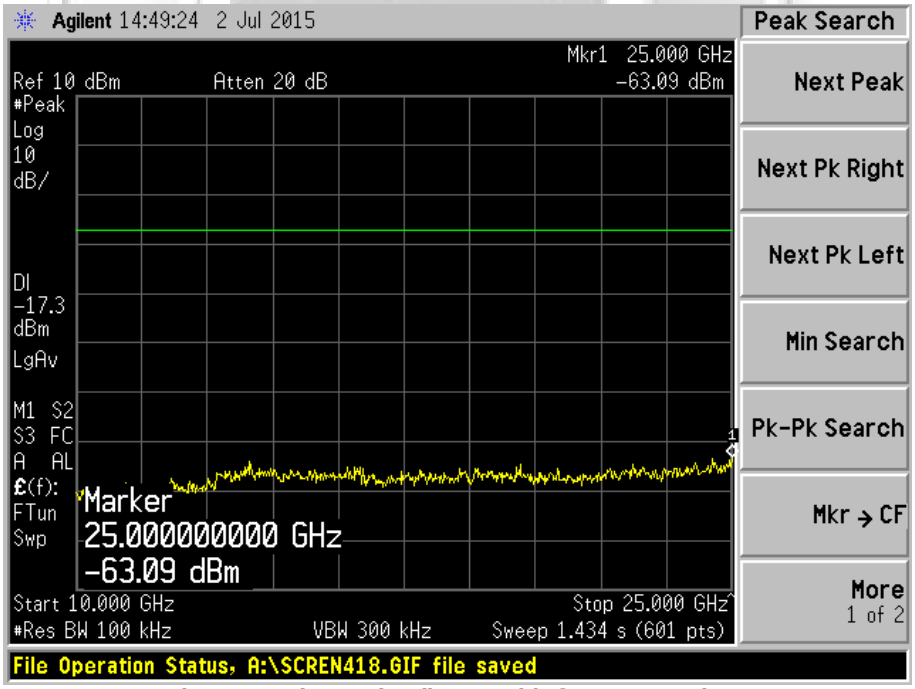


Plot 84 – Channel 11 *(upper ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

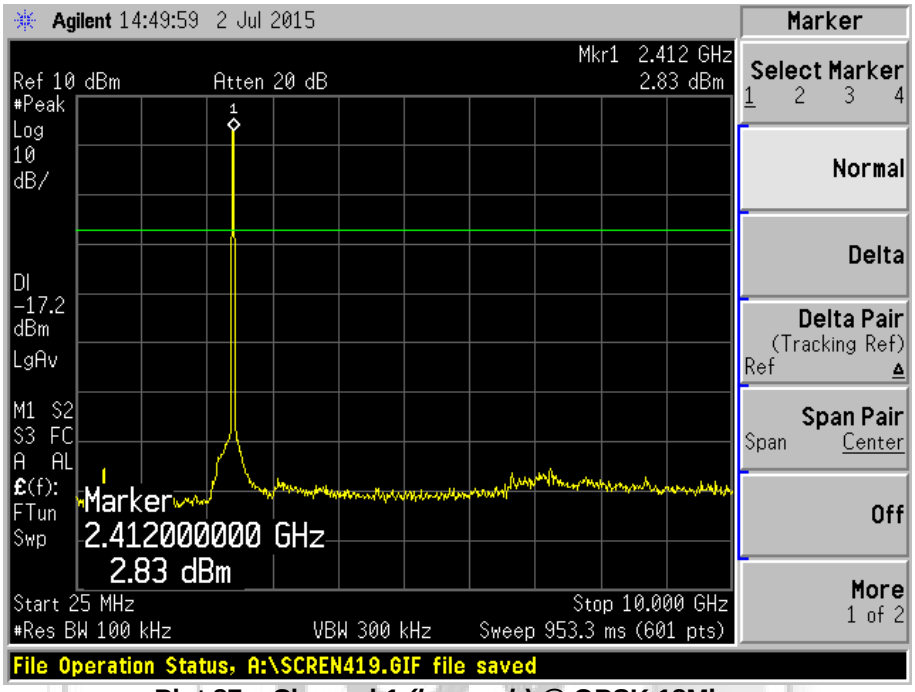


Plot 85 – Channel 1 *(lower ch)* @ BPSK 9Mbps

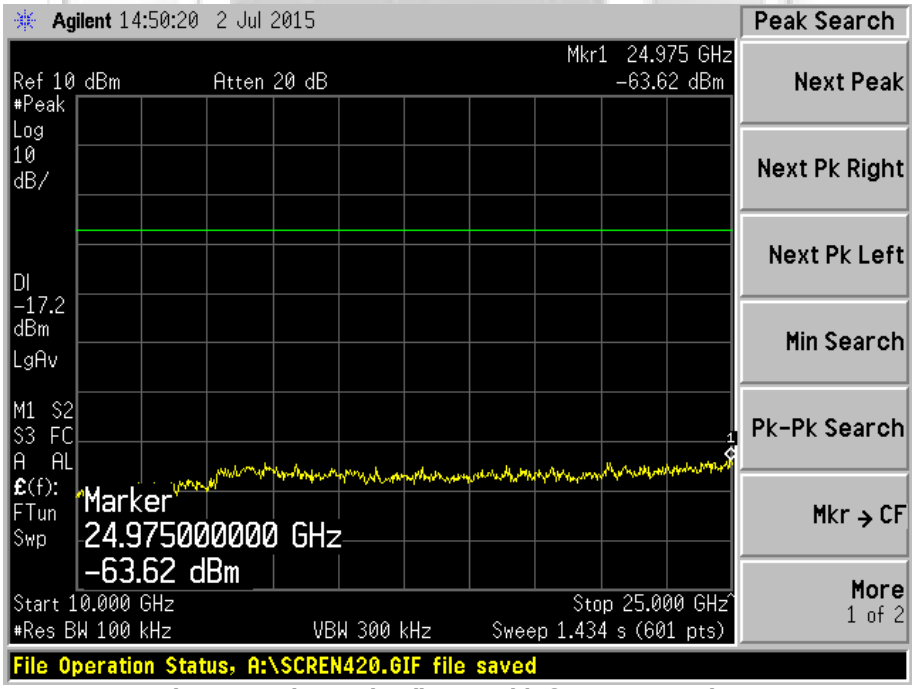


Plot 86 – Channel 1 *(lower ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

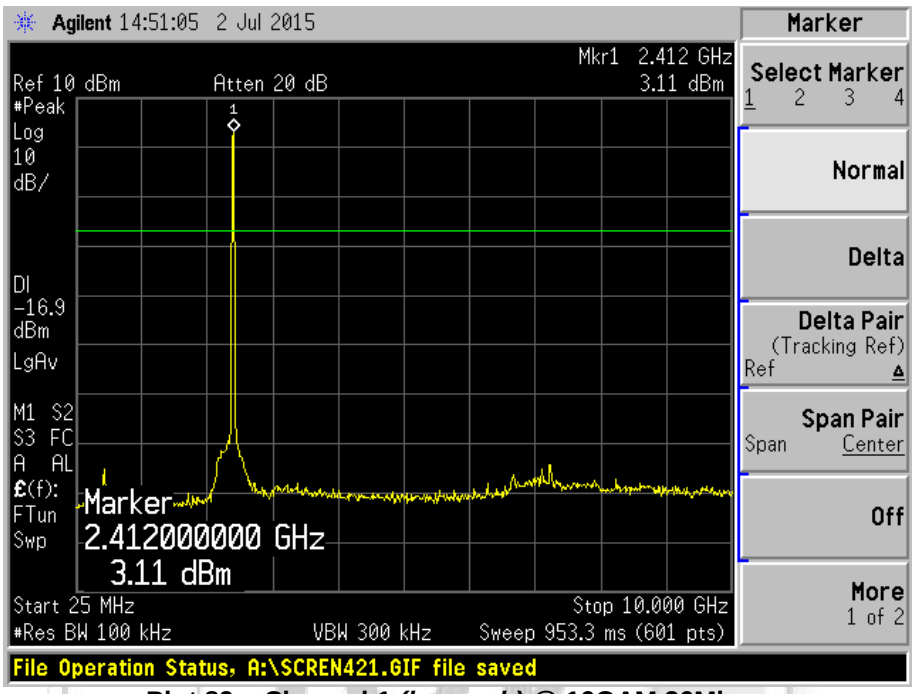


Plot 87 – Channel 1 *(lower ch)* @ QPSK 18Mbps

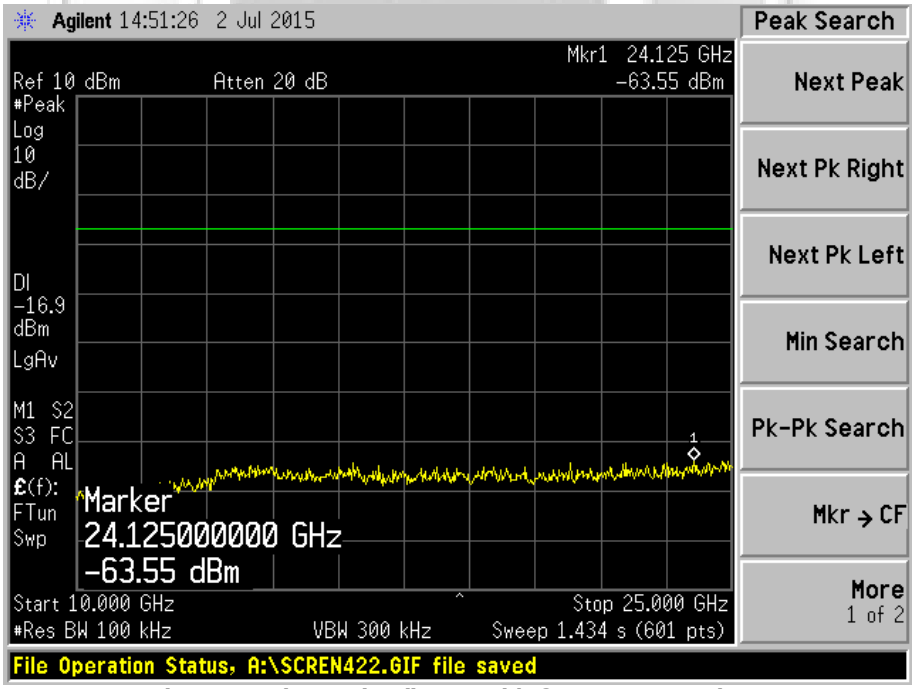


Plot 88 – Channel 1 *(lower ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

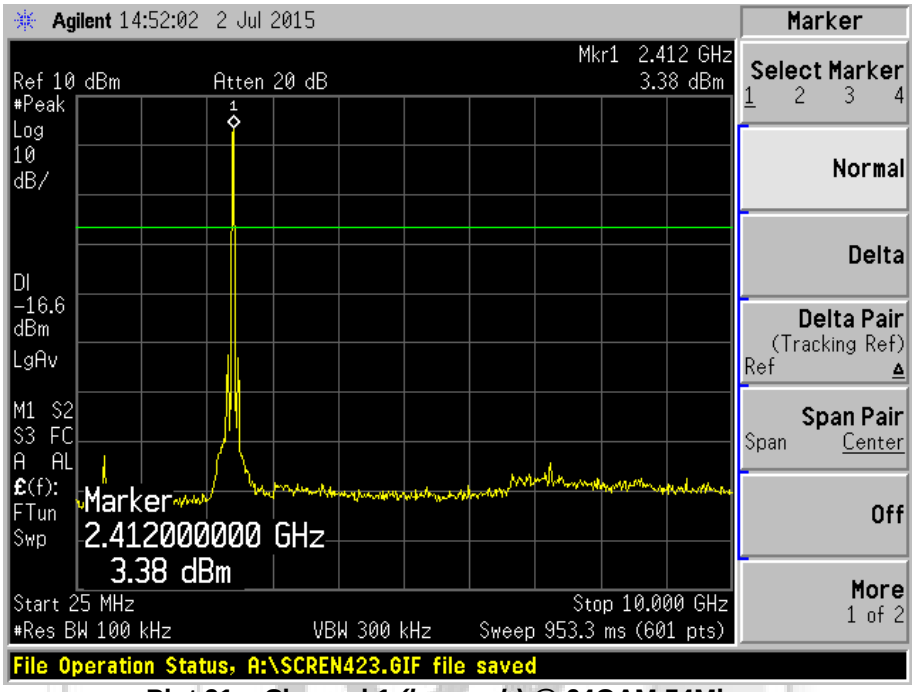


Plot 89 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

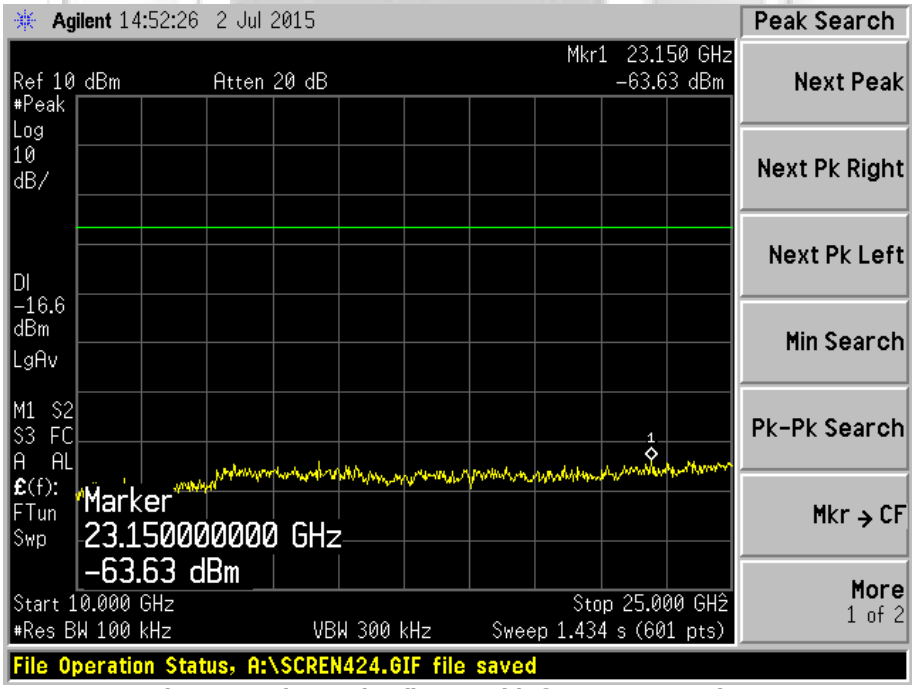


Plot 90 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

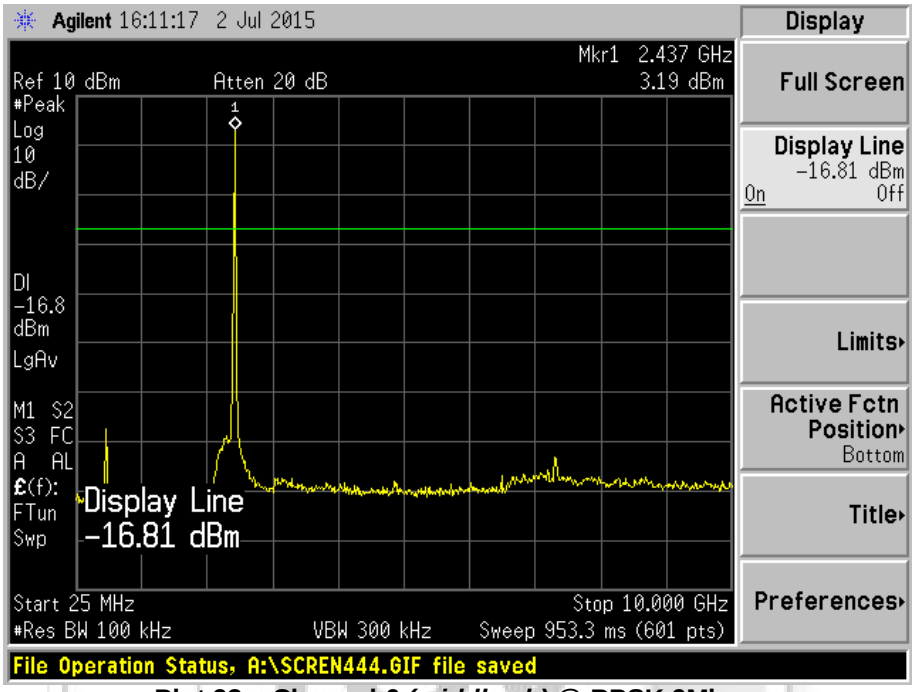


Plot 91 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

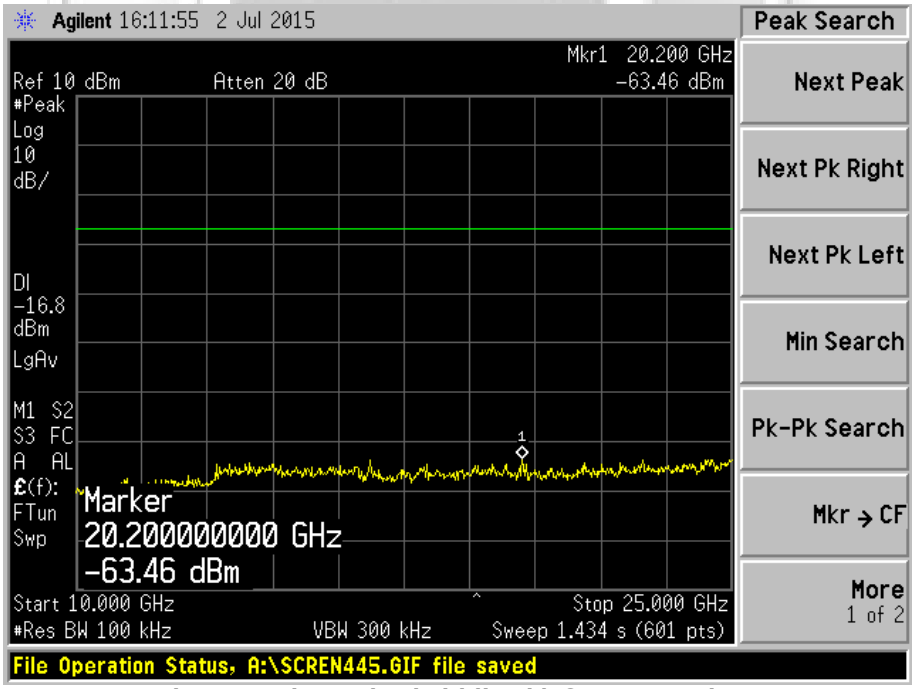


Plot 92 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

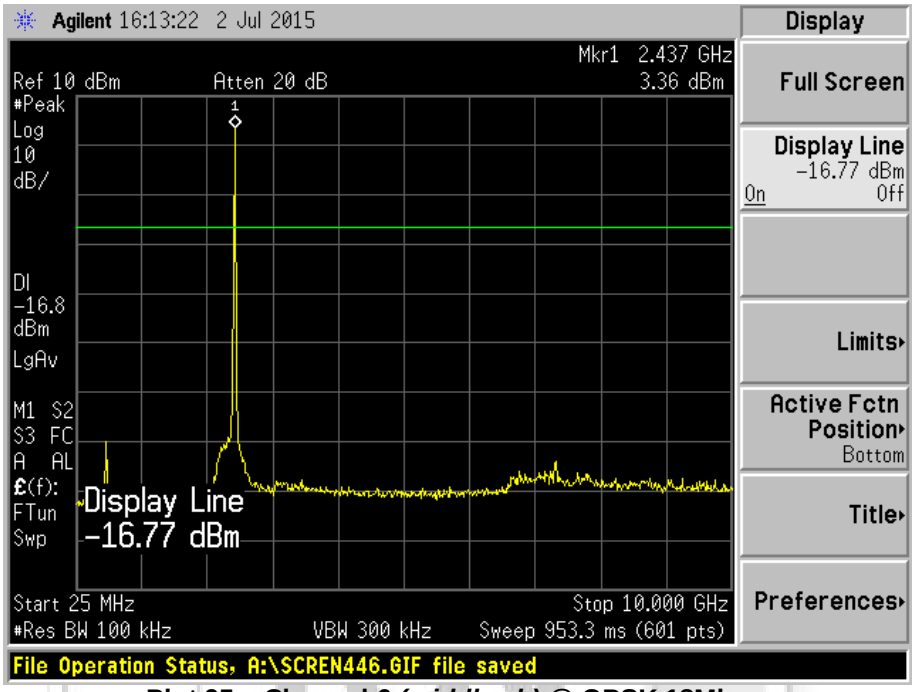


Plot 93 – Channel 6 *(middle ch)* @ BPSK 9Mbps

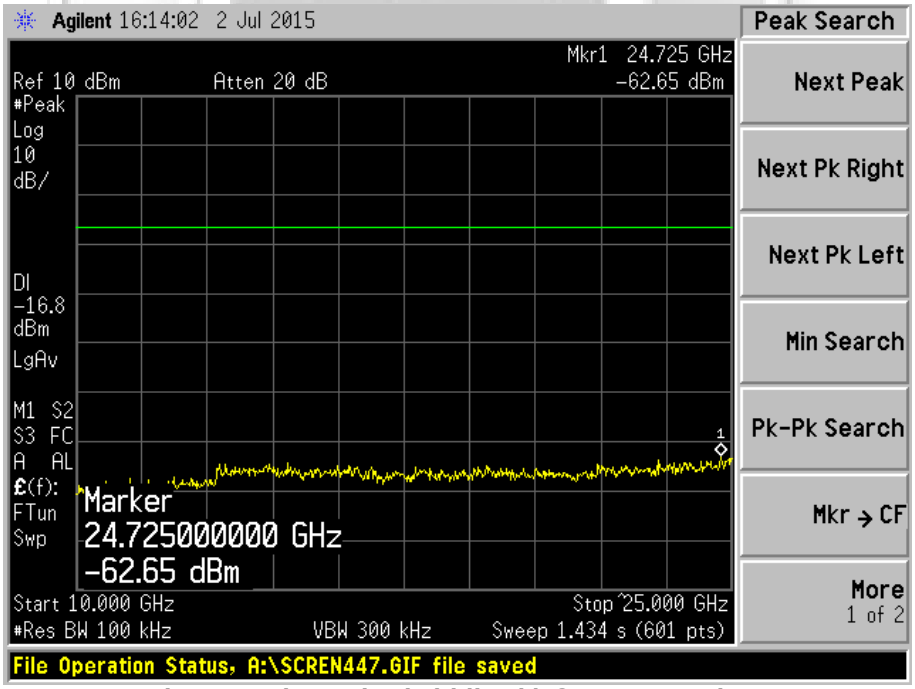


Plot 94 – Channel 6 *(middle ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

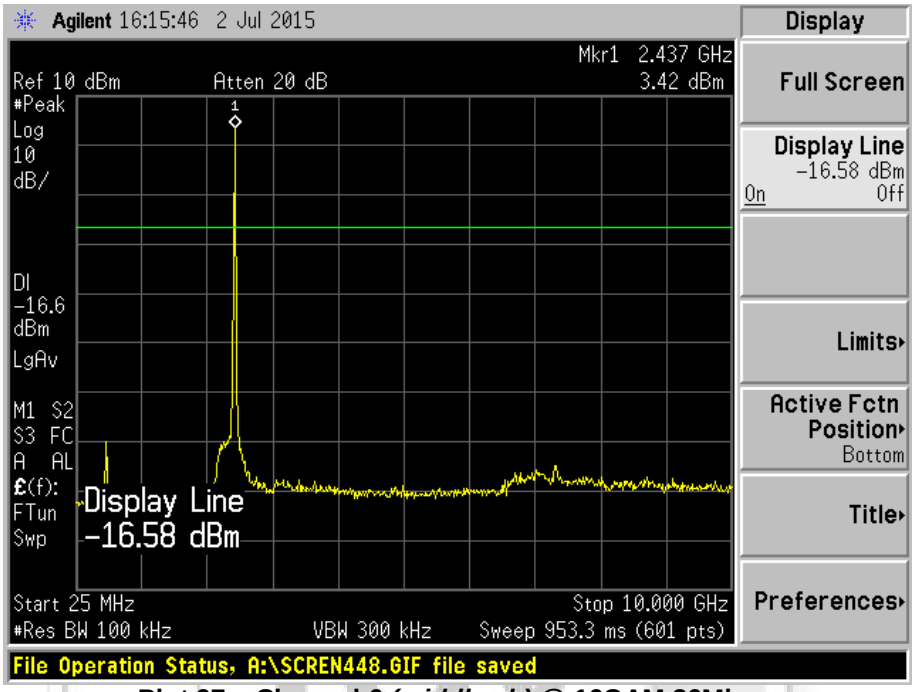


Plot 95 – Channel 6 *(middle ch)* @ QPSK 18Mbps

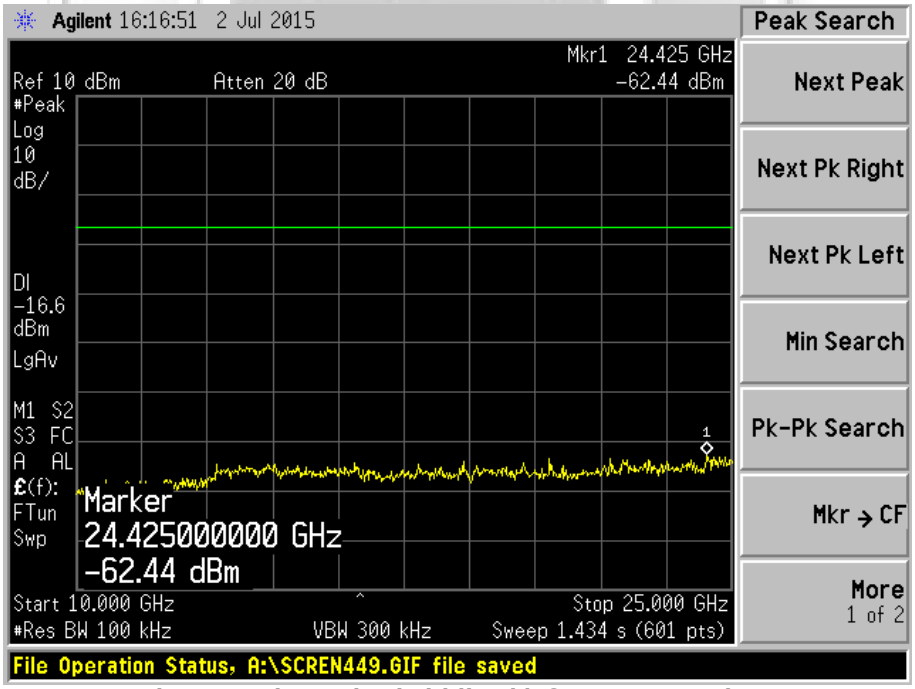


Plot 96 – Channel 6 *(middle ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

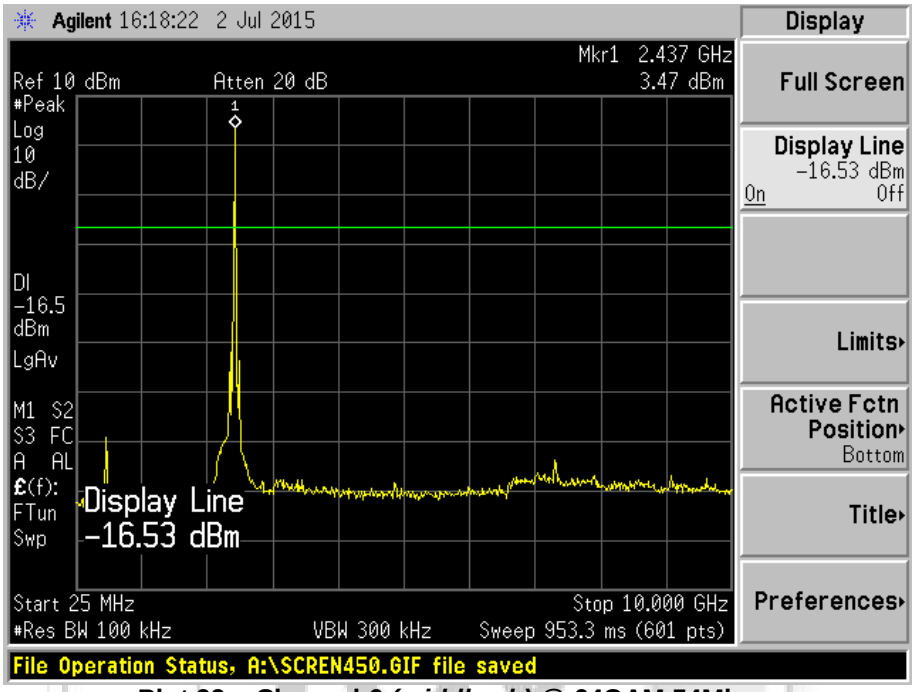


Plot 97 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

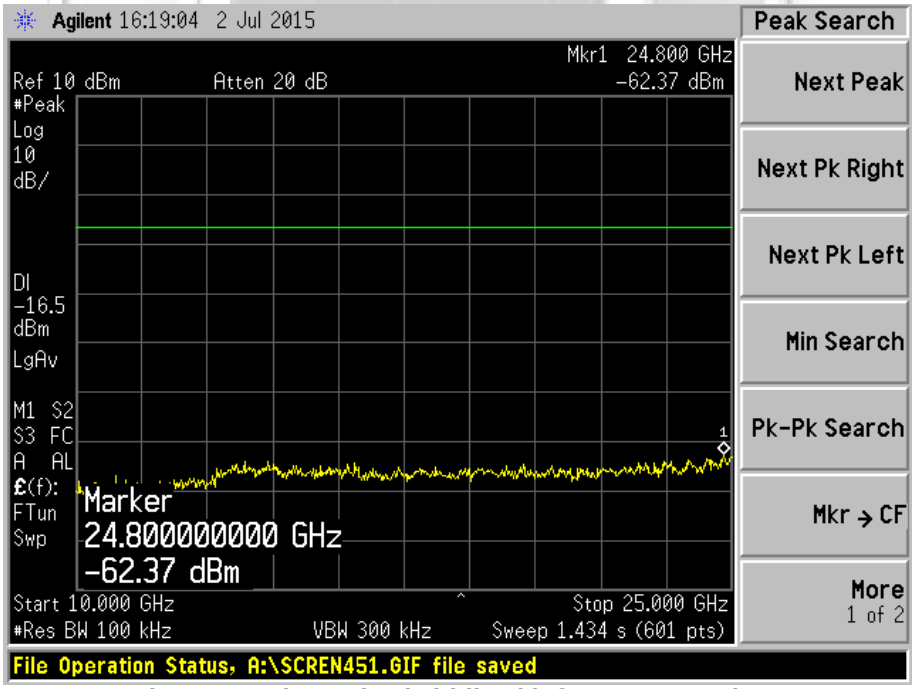


Plot 98 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

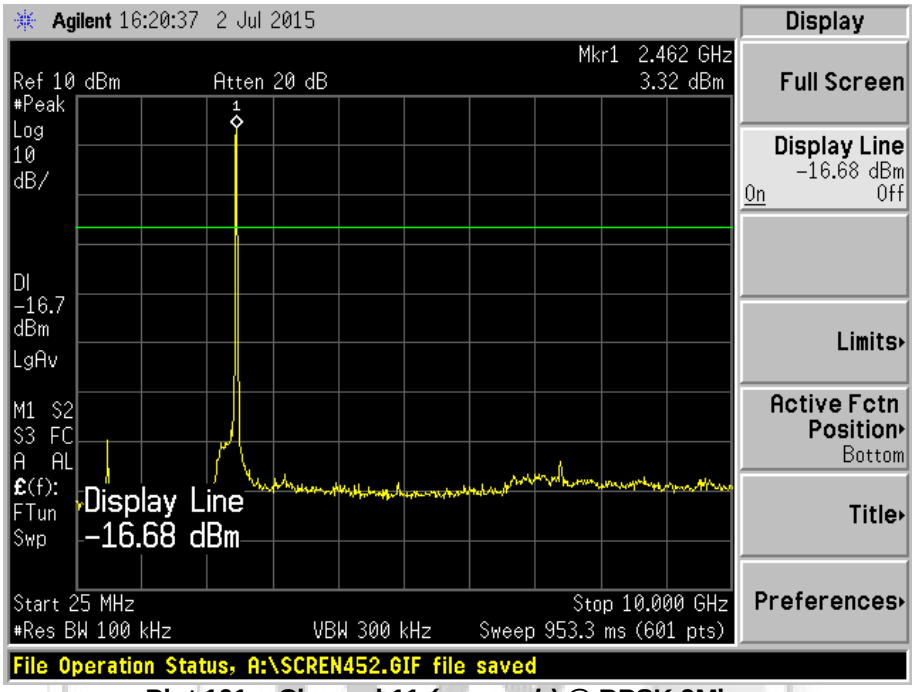


Plot 99 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

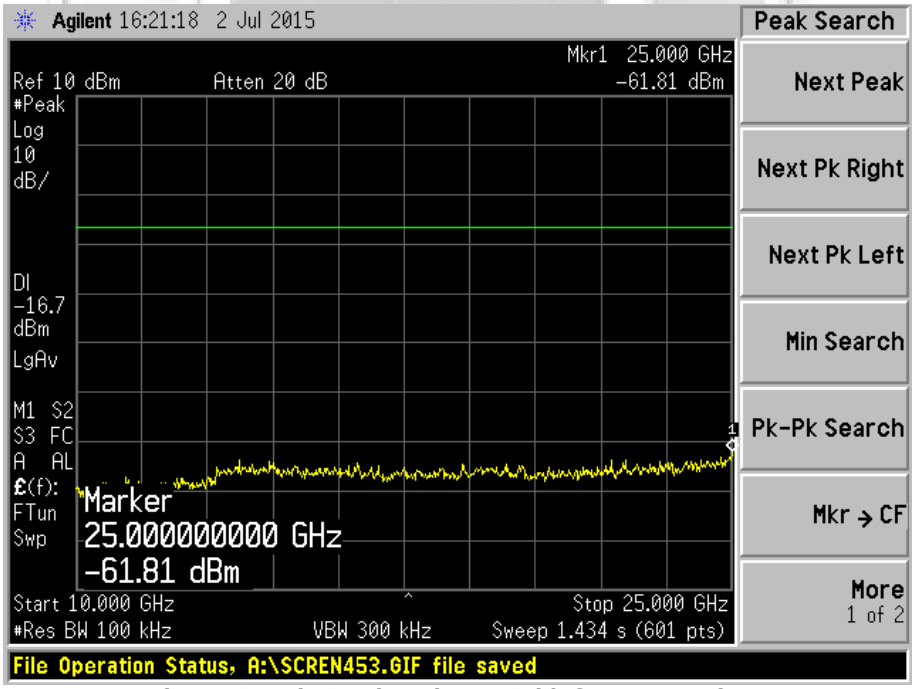


Plot 100 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

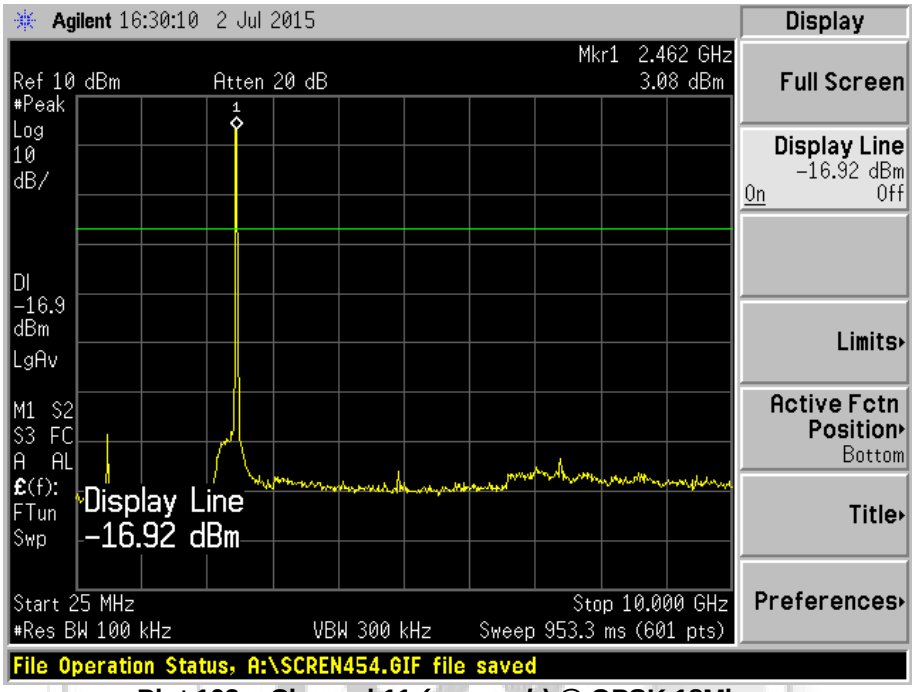


Plot 101 – Channel 11 *(upper ch)* @ BPSK 9Mbps

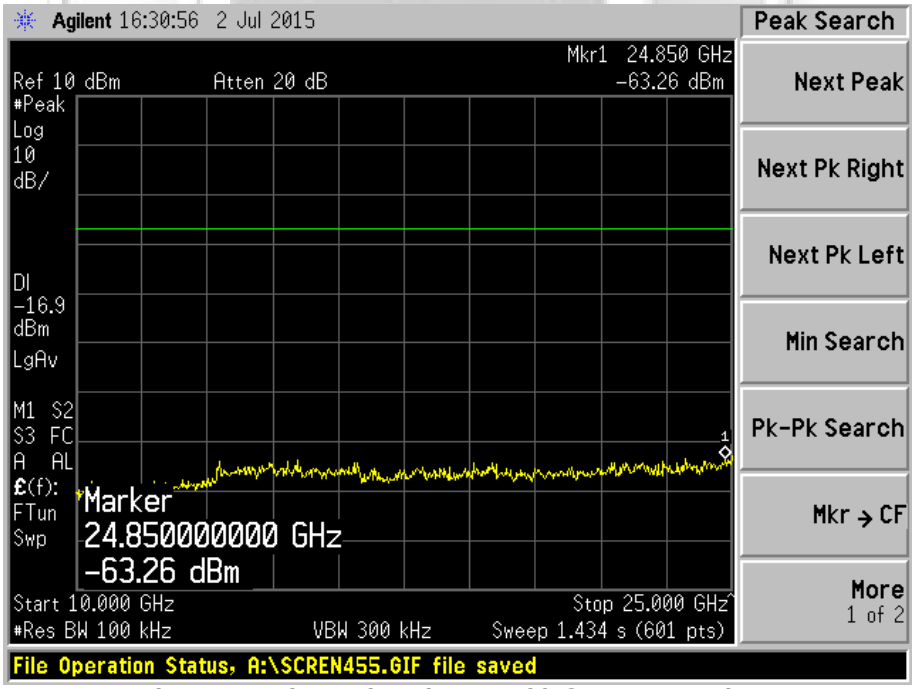


Plot 102 – Channel 11 *(upper ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

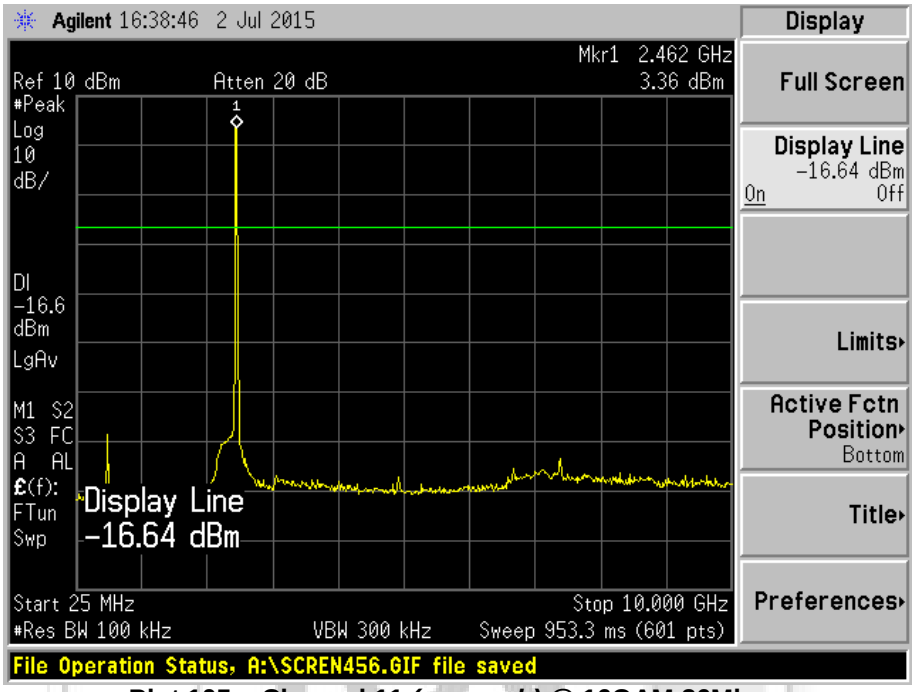


Plot 103 – Channel 11 *(upper ch)* @ QPSK 18Mbps

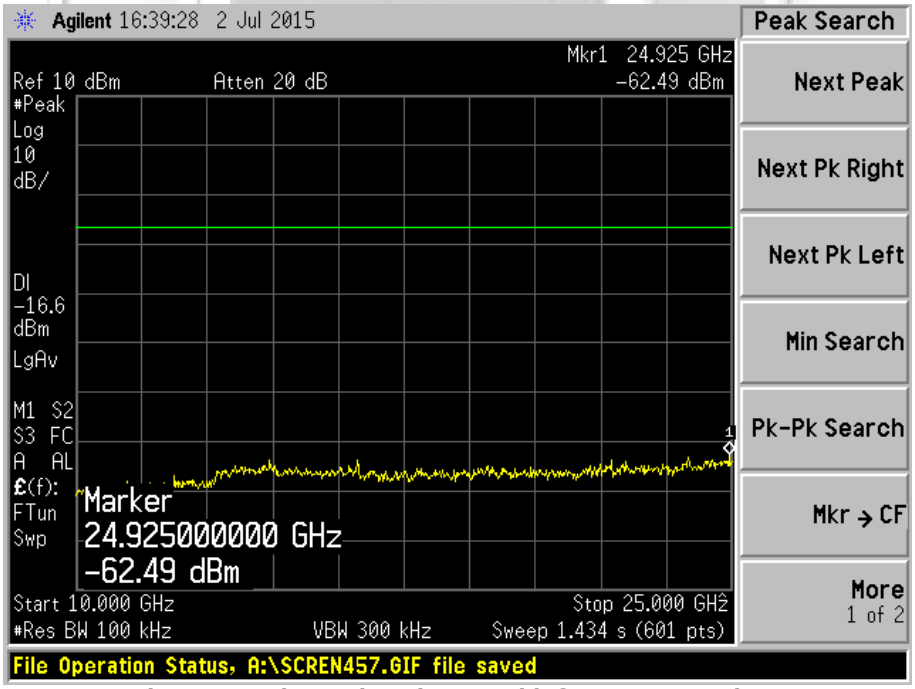


Plot 104 – Channel 11 *(upper ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

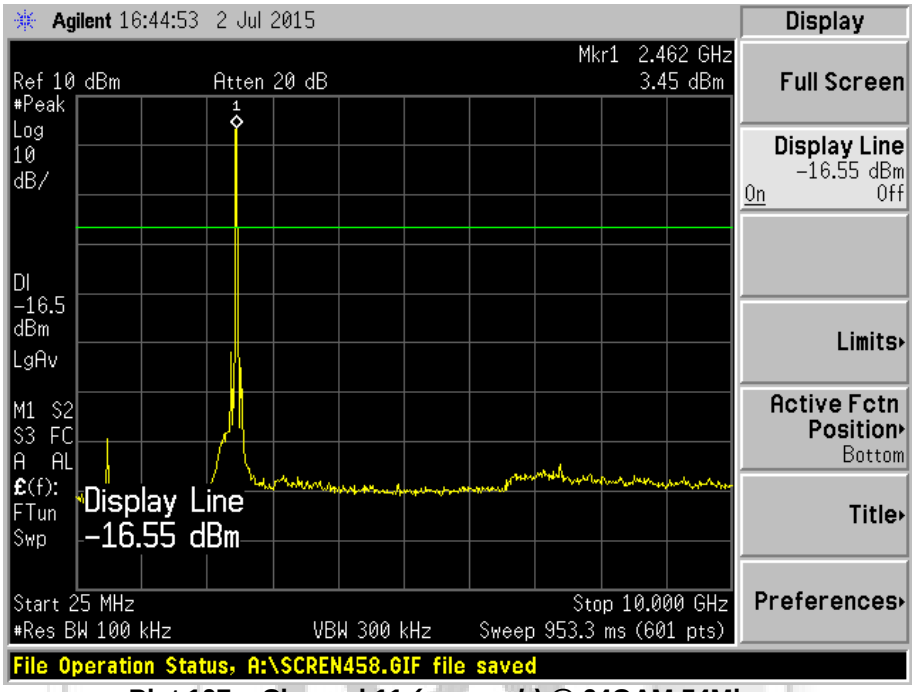


Plot 105 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

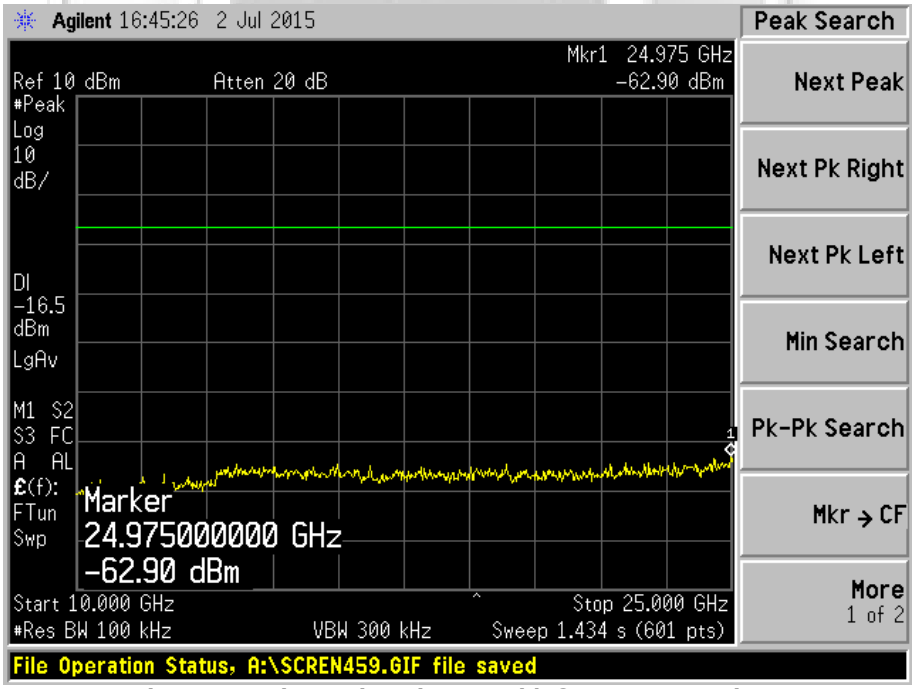


Plot 106 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g

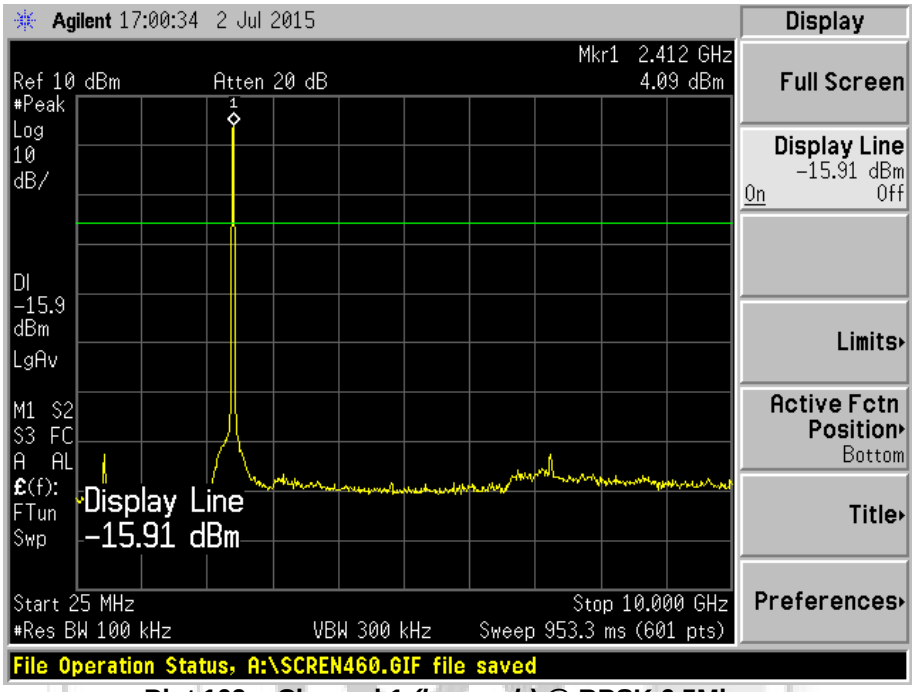


Plot 107 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

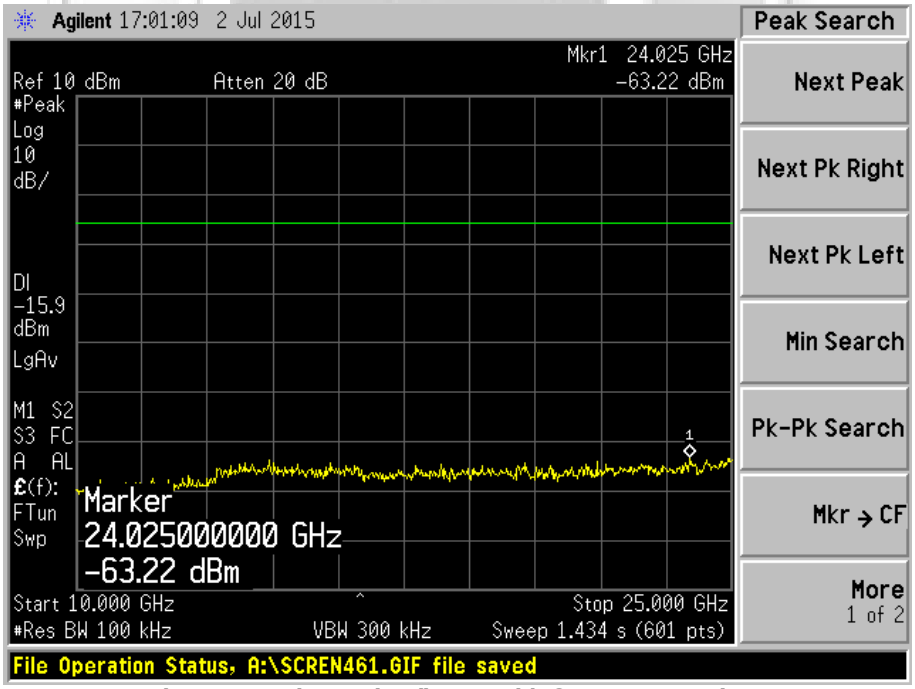


Plot 108 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

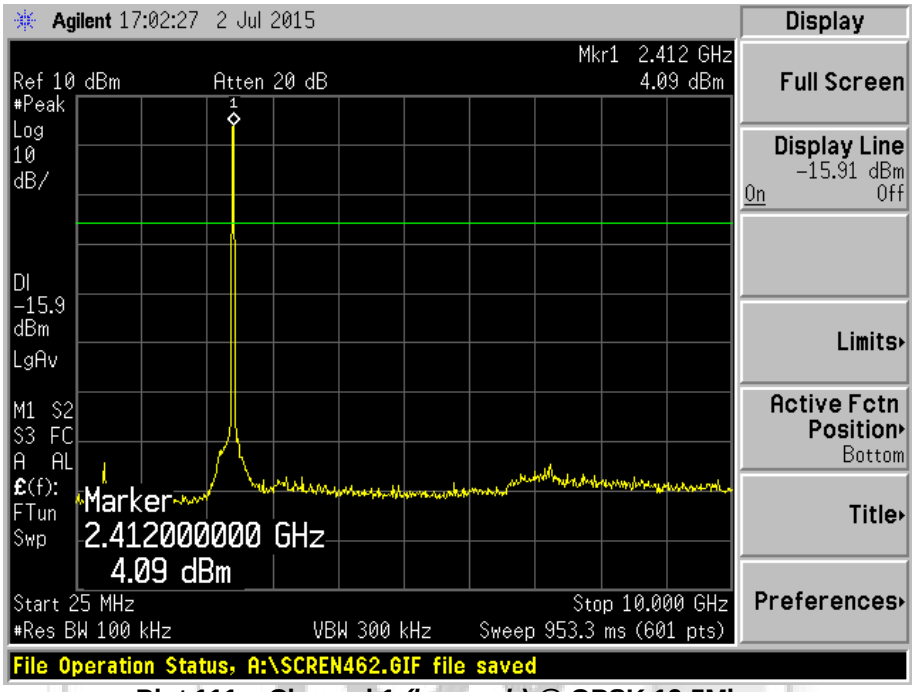


Plot 109 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

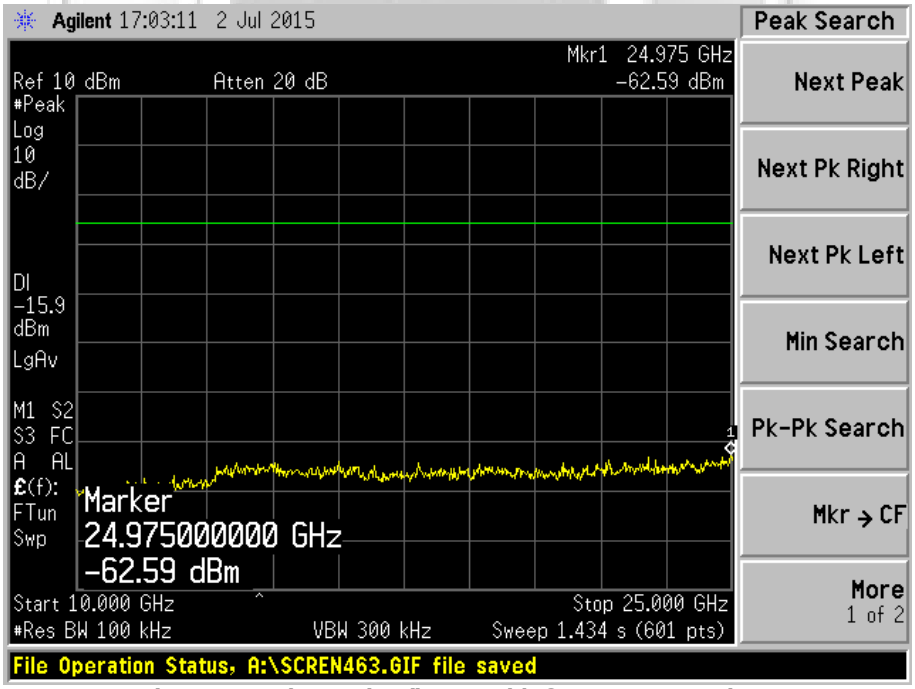


Plot 110 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

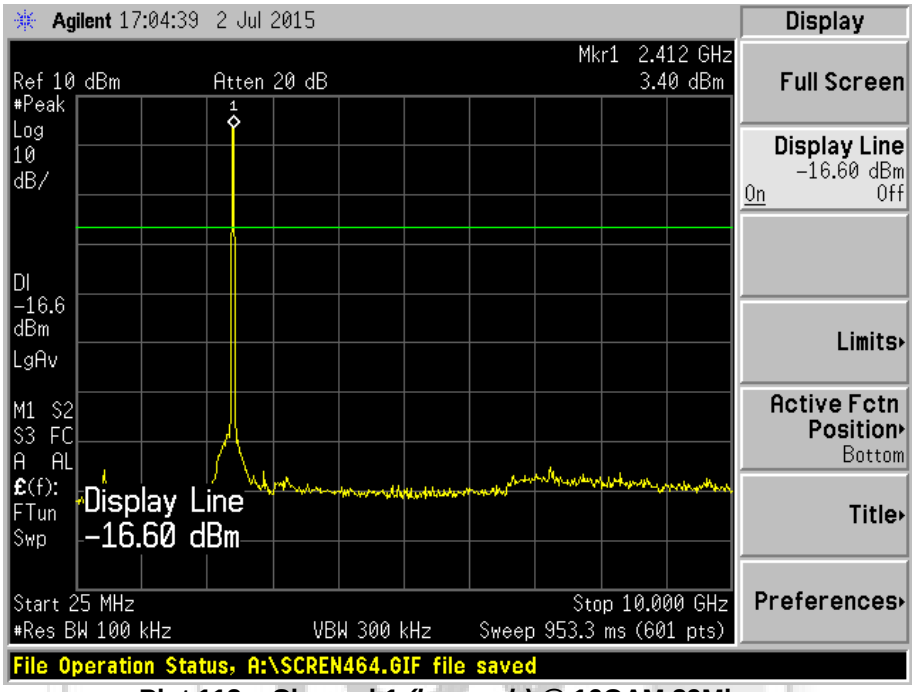


Plot 111 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

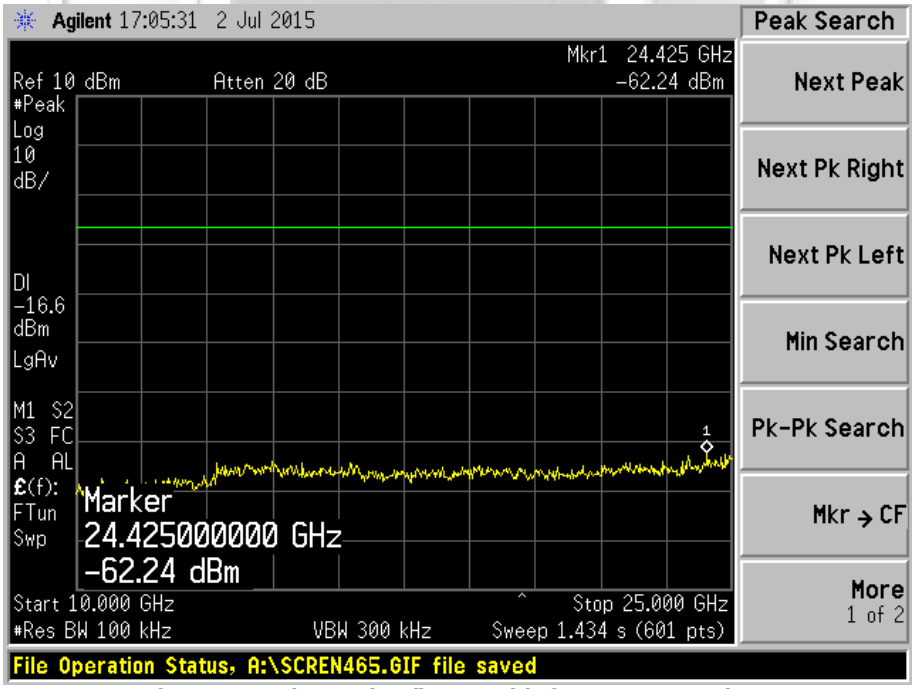


Plot 112 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

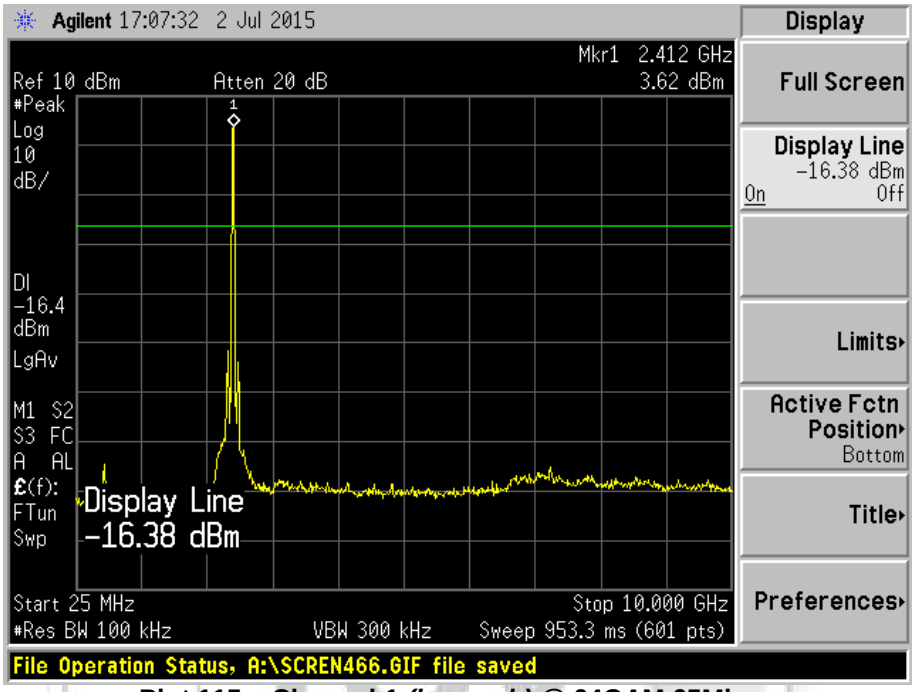


Plot 113 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

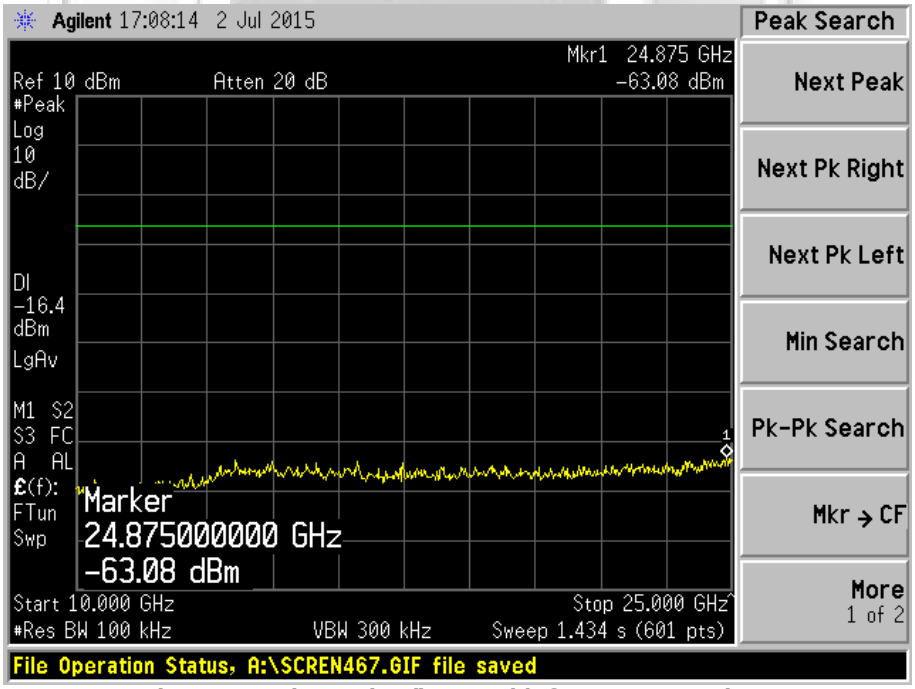


Plot 114 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

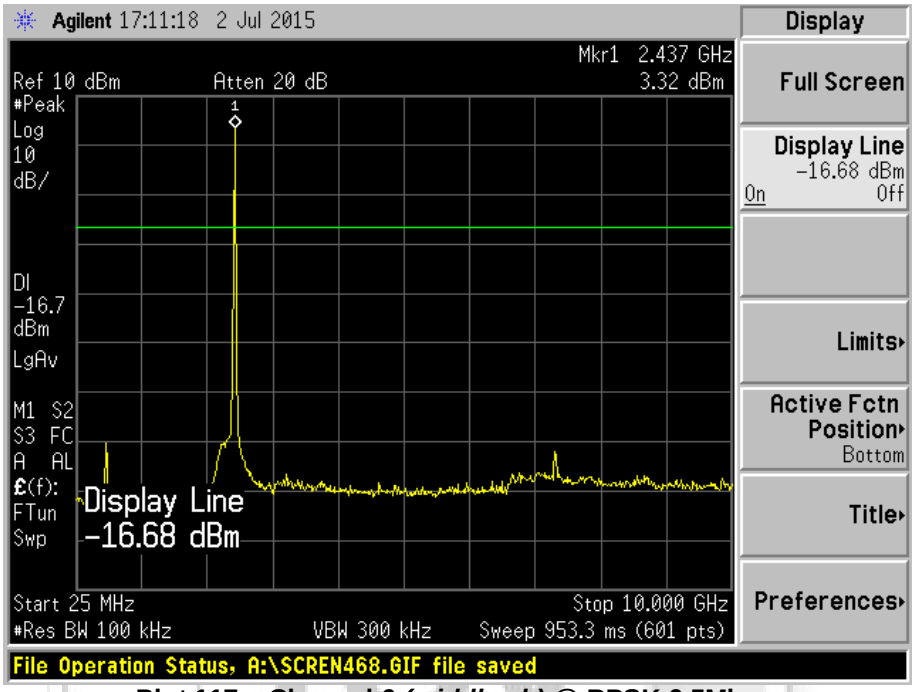


Plot 115 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

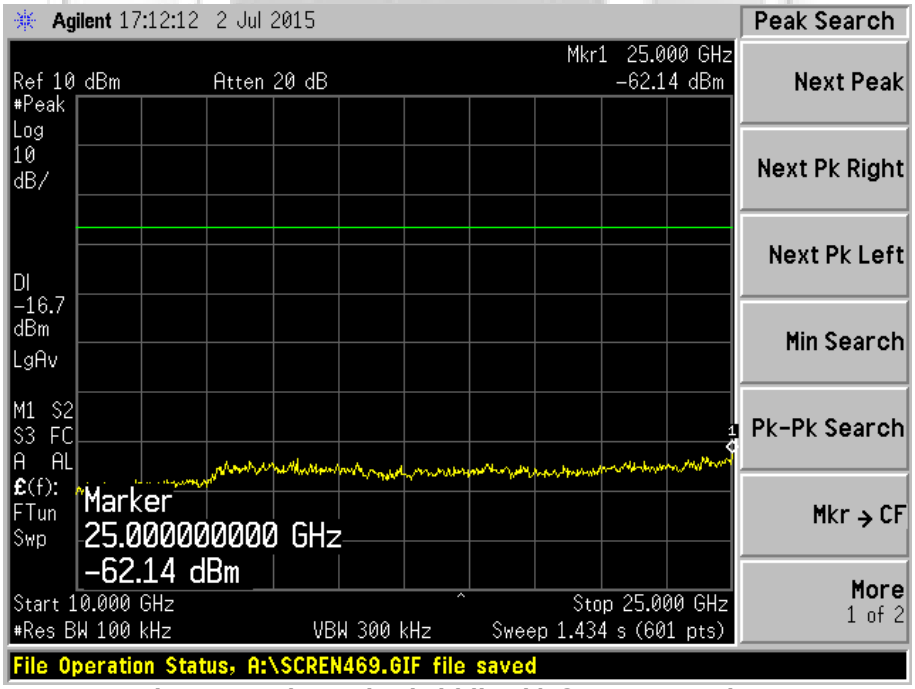


Plot 116 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

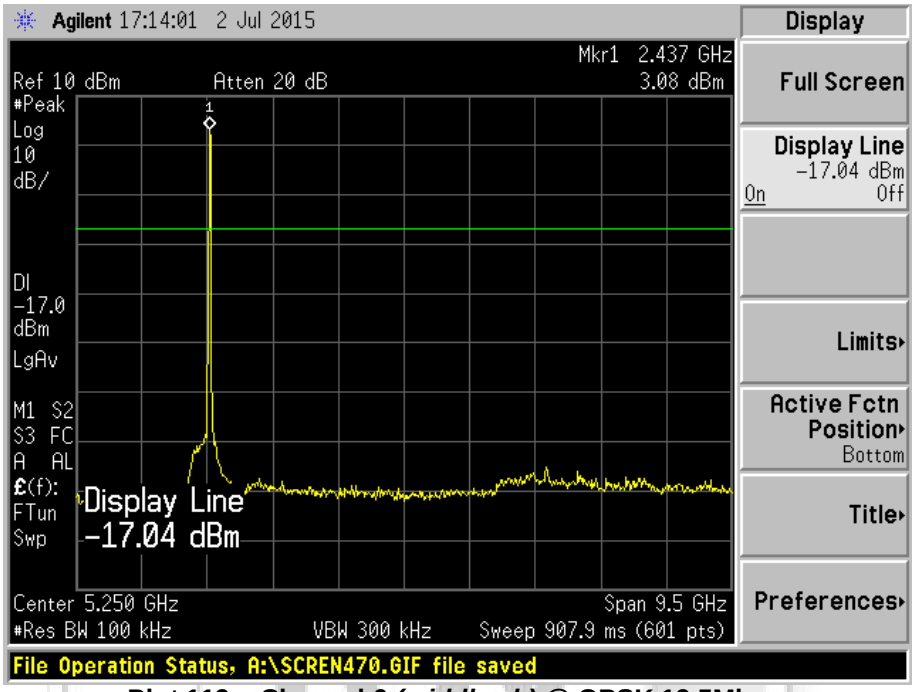


Plot 117 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

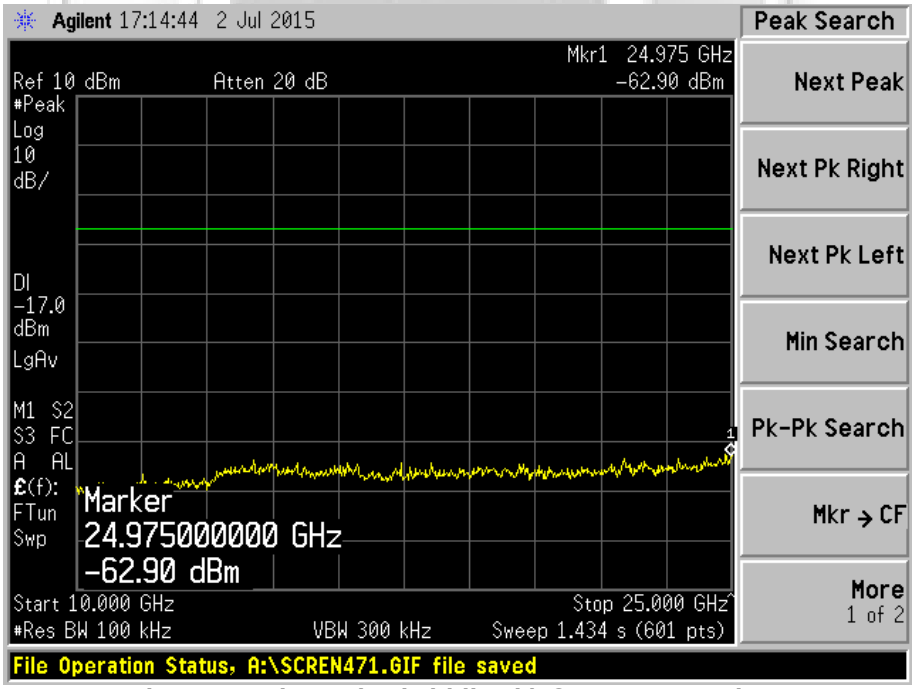


Plot 118 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

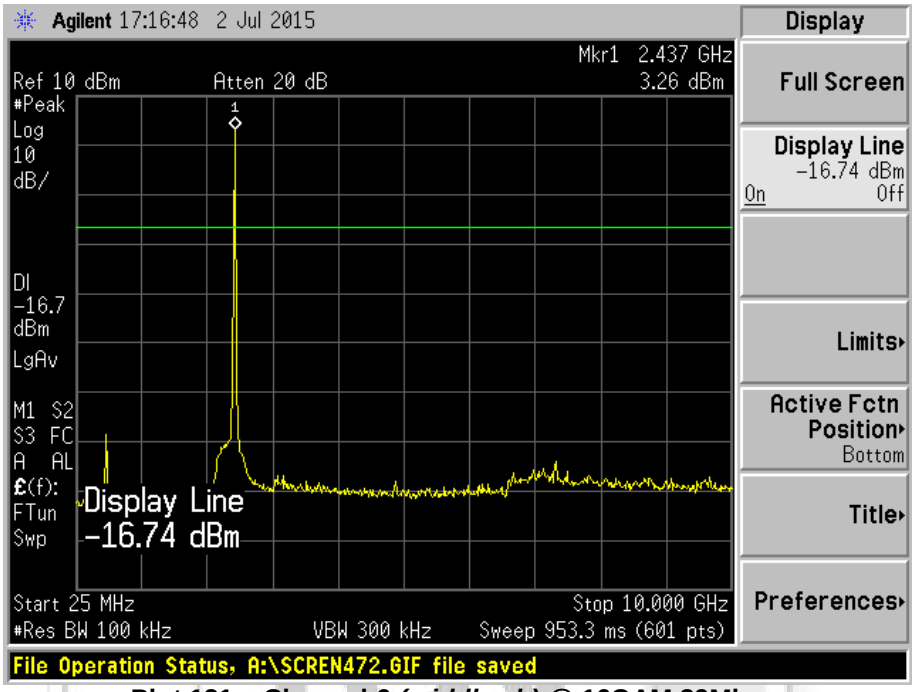


Plot 119 – Channel 6 *(middle ch)* @ QPSK 19.5Mbps

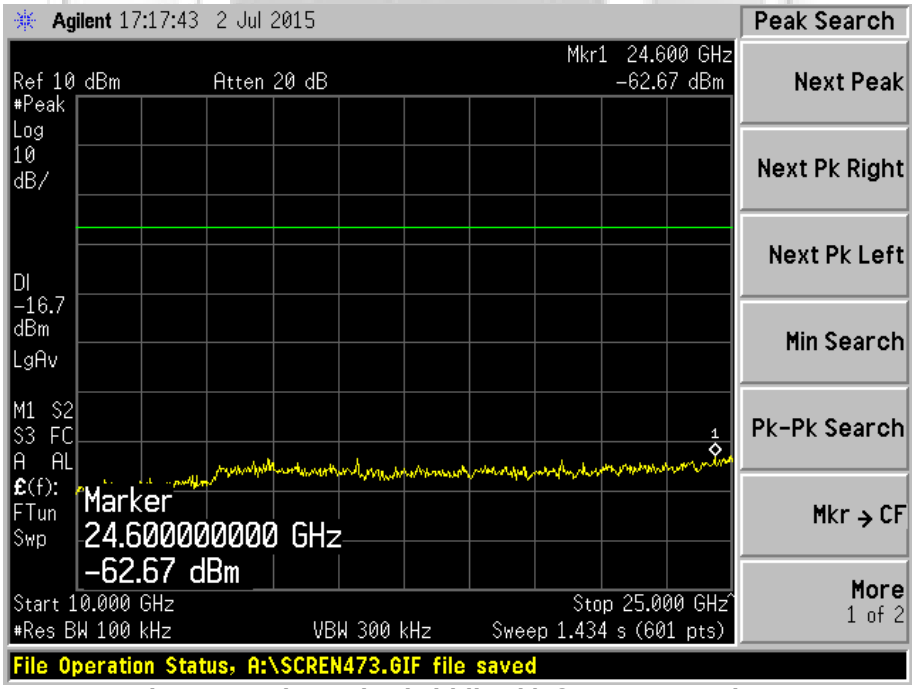


Plot 120 – Channel 6 *(middle ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

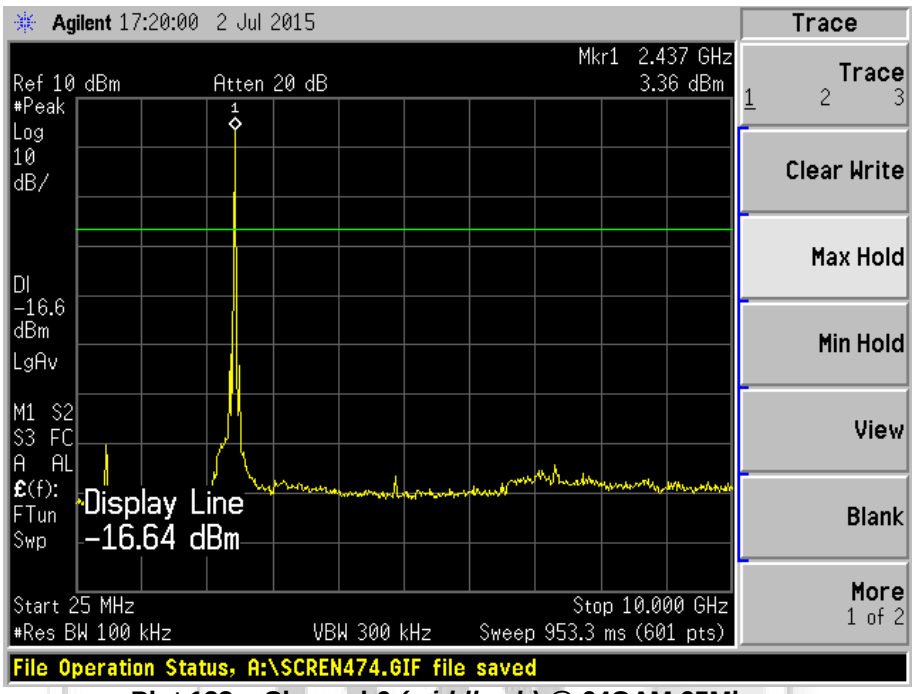


Plot 121 – Channel 6 *(middle ch)* @ 16QAM 39Mbps

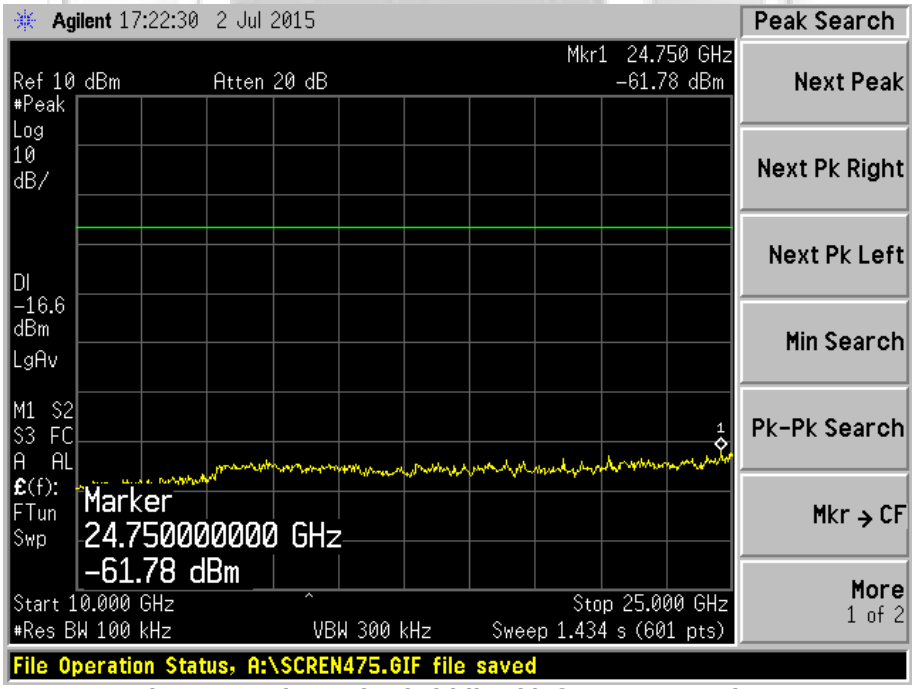


Plot 122 – Channel 6 *(middle ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

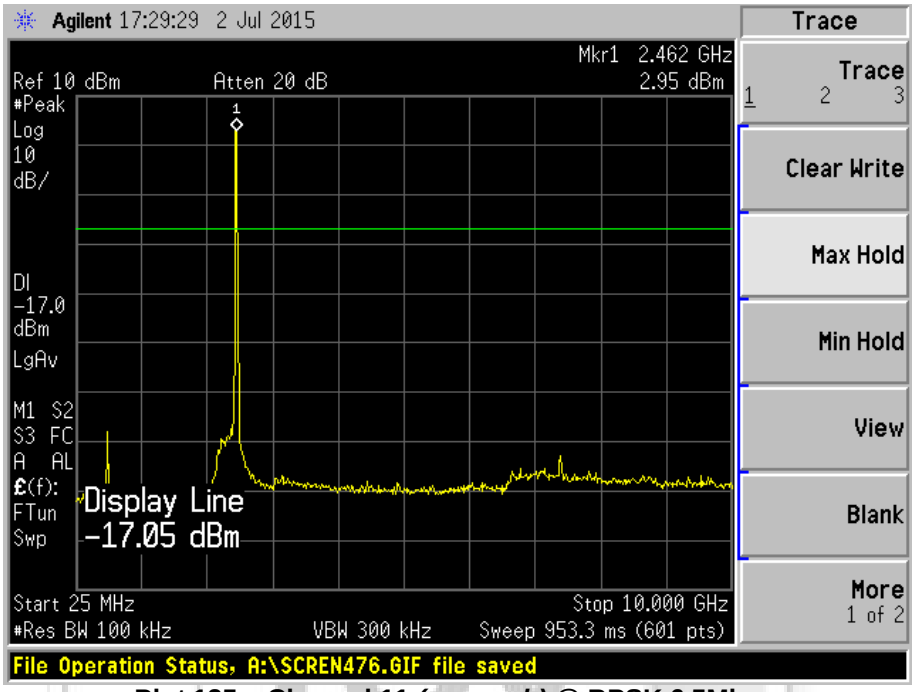


Plot 123 – Channel 6 *(middle ch)* @ 64QAM 65Mbps

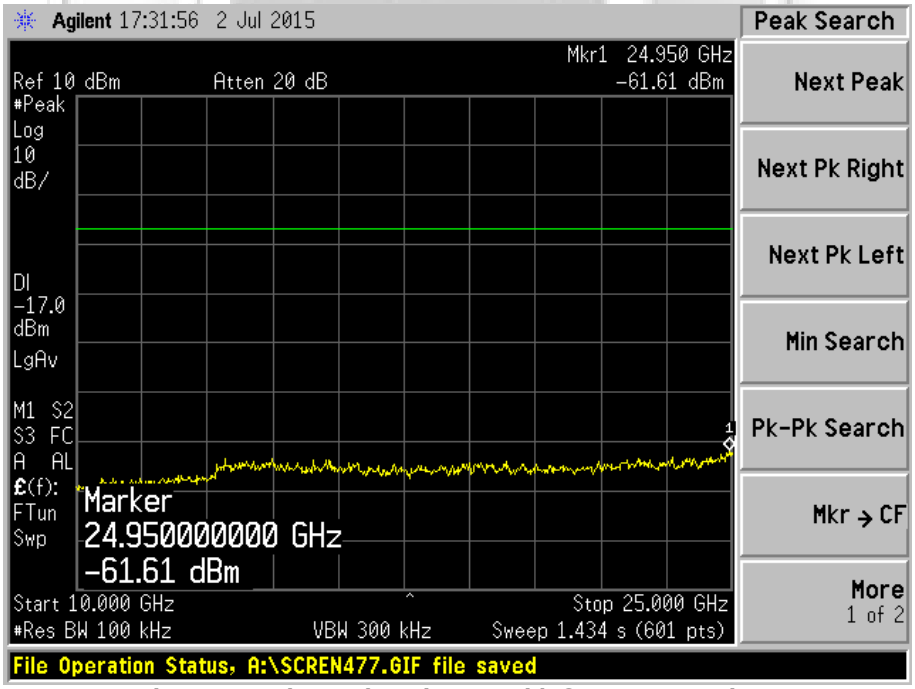


Plot 124 – Channel 6 *(middle ch)* @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

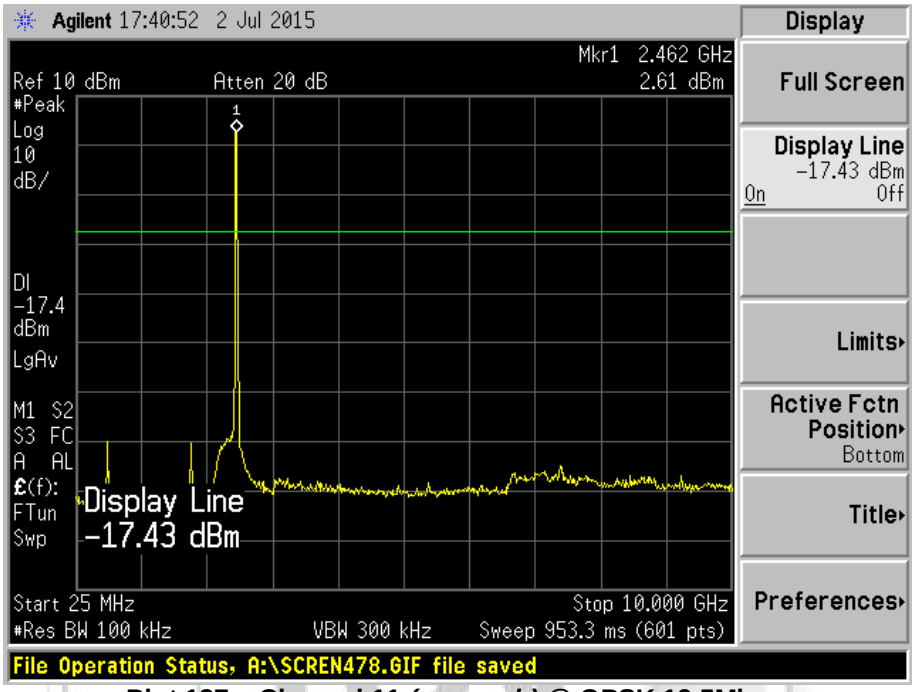


Plot 125 – Channel 11 *(upper ch)* @ BPSK 6.5Mbps

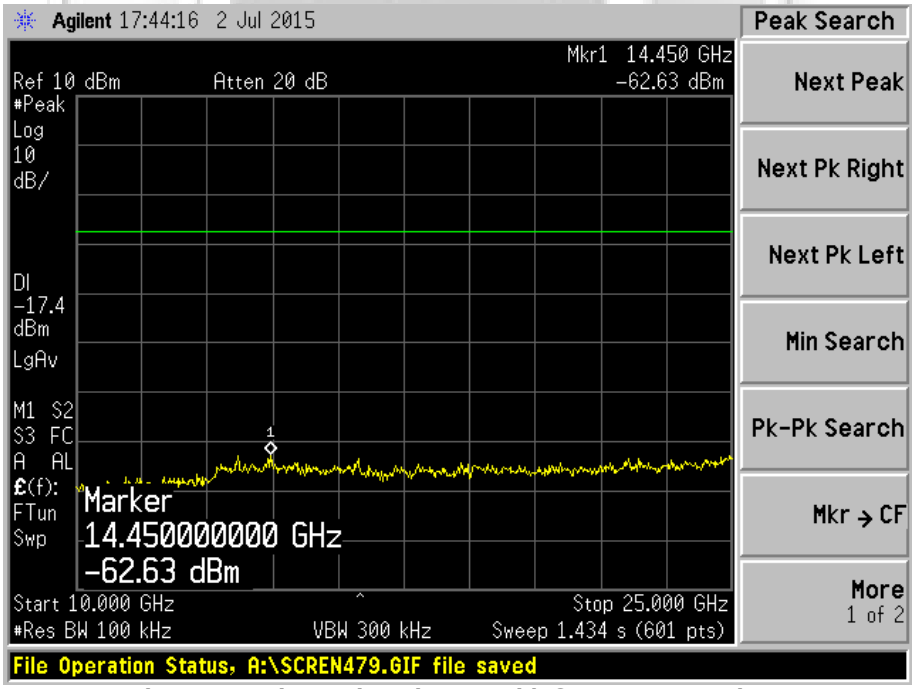


Plot 126 – Channel 11 *(upper ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

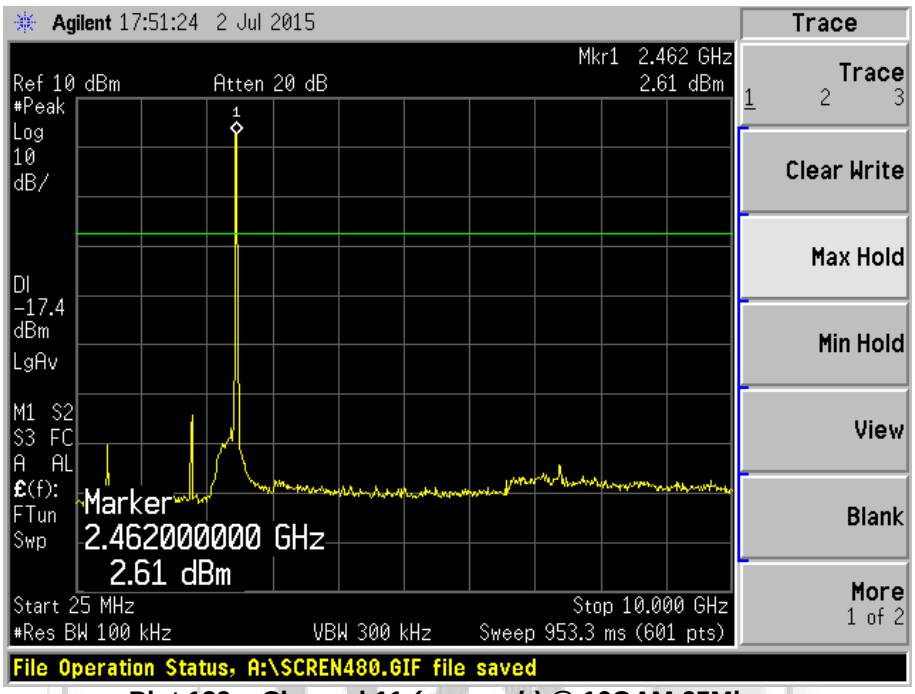


Plot 127 – Channel 11 *(upper ch)* @ QPSK 19.5Mbps

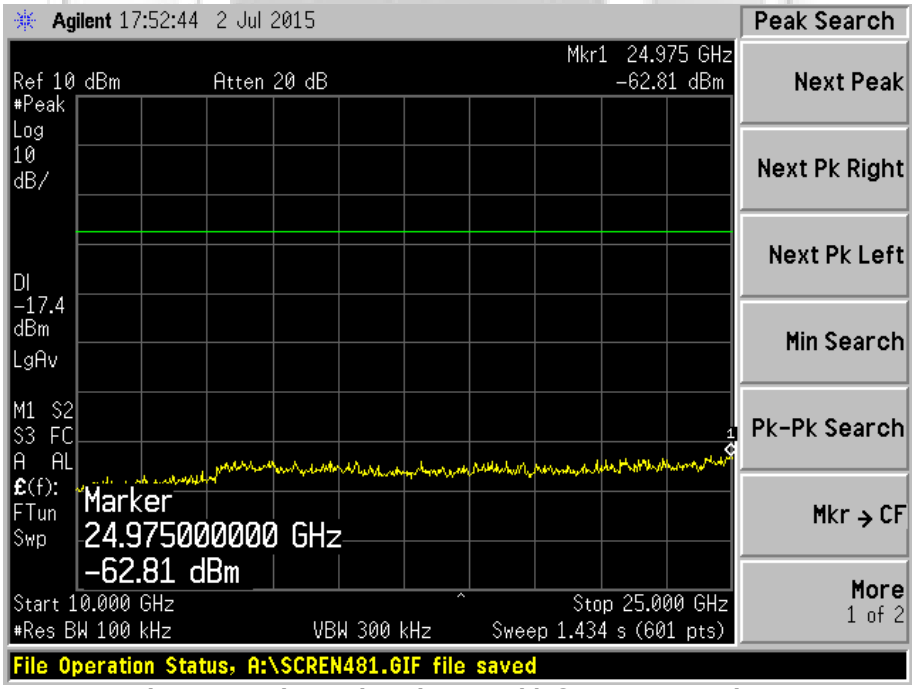


Plot 128 – Channel 11 *(upper ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11n

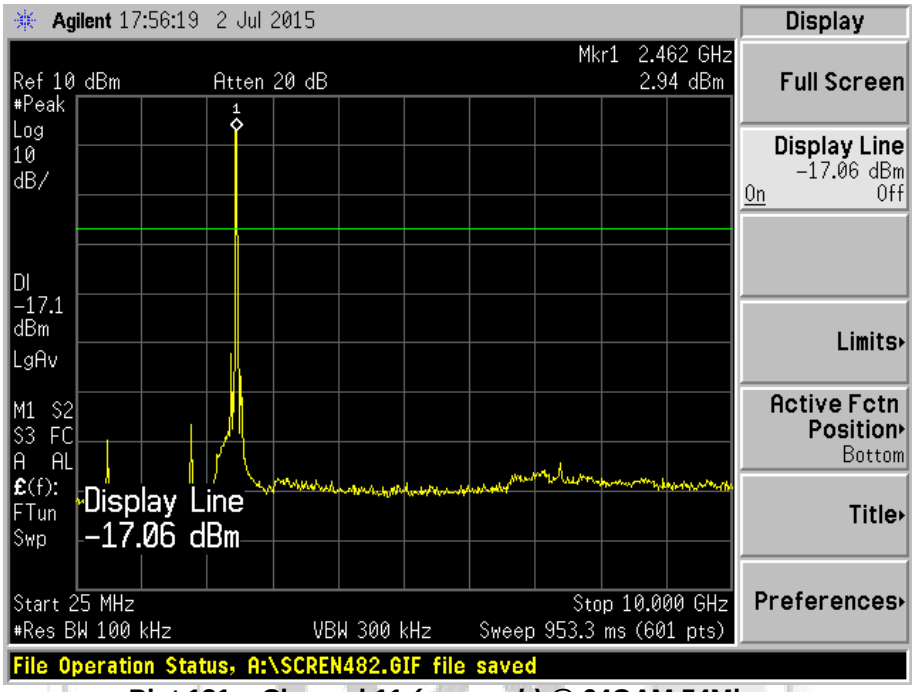


Plot 129 – Channel 11 *(upper ch)* @ 16QAM 65Mbps

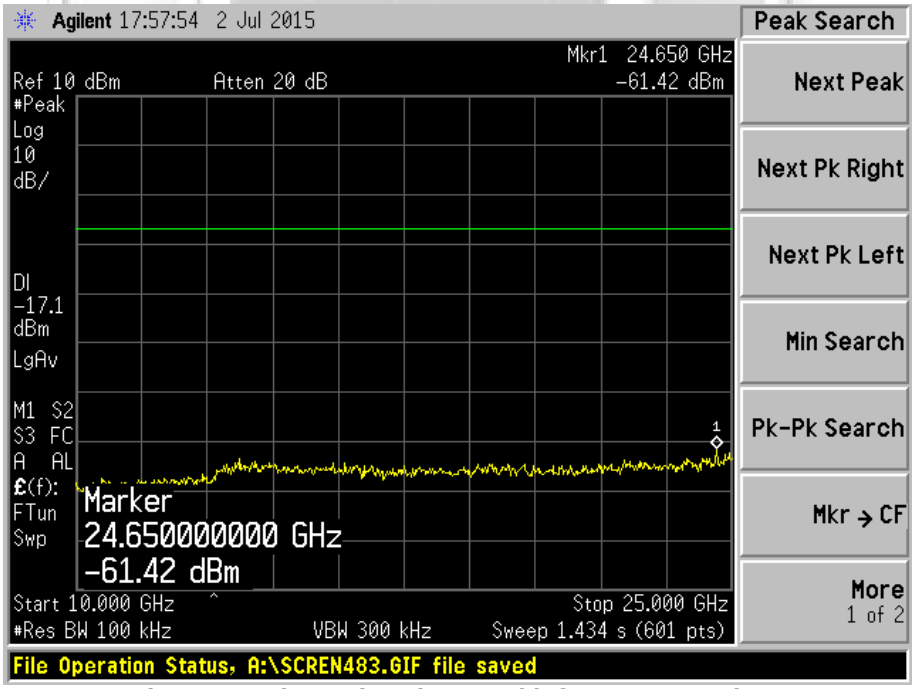


Plot 130 – Channel 11 *(upper ch)* @ 16QAM 65Mbps

RF Conducted Spurious Emissions (Non-Restricted Bands) Plots – 802.11g



Plot 131 – Channel 11 *(upper ch)* @ 64QAM 54Mbps



Plot 132 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

47 CFR FCC Part 15.205 and RSS-GEN 8.10 Restricted Bands

MHz			MHz			MHz			GHz		
0.090	-	0.110	16.42	-	16.423	399.9	-	410	4.5	-	5.15
0.495	-	0.505	16.69475	-	16.69525	608	-	614	5.35	-	5.46
2.1735	-	2.1905	16.80425	-	16.80475	960	-	1240	7.25	-	7.75
4.125	-	4.128	25.5	-	25.67	1300	-	1427	8.025	-	8.5
4.17725	-	4.17775	37.5	-	38.25	1435	-	1626.5	9.0	-	9.2
4.20725	-	4.20775	73	-	74.6	1645.5	-	1646.5	9.3	-	9.5
6.215	-	6.218	74.8	-	75.2	1660	-	1710	10.6	-	12.7
6.26775	-	6.26825	108	-	121.94	1718.8	-	1722.2	13.25	-	13.4
6.31175	-	6.31225	123	-	138	2200	-	2300	14.47	-	14.5
8.291	-	8.294	149.9	-	150.05	2310	-	2390	15.35	-	16.2
8.362	-	8.366	156.52475	-	156.52525	2483.5	-	2500	17.7	-	21.4
8.37625	-	8.38675	156.7	-	156.9	2690	-	2900	22.01	-	23.12
8.41425	-	8.41475	162.0125	-	167.17	3260	-	3267	23.6	-	24.0
12.29	-	12.293	167.72	-	173.2	3332	-	3339	31.2	-	31.8
12.51975	-	12.52025	240	-	285	3345.8	-	3358	36.43	-	36.5
12.57675	-	12.57725	322	-	335.4	3600	-	4400	Above 38.6		
13.36	-	13.41									

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Restricted Bands) Limits

The EUT shows compliance to the requirements of this section, which states that emissions which fall in the restricted bands must comply with the radiated emission limits specified in the table below:

Frequency Range (MHz)	EIRP (dBm)	Radiated Emissions (dBµV/m)
0.009 – 0.490	-6.7 – (-41.4) **	67.6 – 20logF* @ 300m **
0.490 – 1.705	-41.4 – (-52.3) **	87.6 – 20logF* @ 30m **
1.705 – 30	-45.7	29.5 @ 30m
30 - 88	-55.2	40.0 @ 3m
88 - 216	-51.7	43.5 @ 3m
216 - 960	-49.2	46.0 @ 3m
>960	-41.2 ***	54.0 @ 3m ***
* F is frequency in kHz.		
** Decreasing linearly with the logarithm of the frequency.		
*** Above 1GHz, a peak limit of 20dB above the average limit does apply.		

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Restricted Bands) Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
Agilent Spectrum Analyzer	E4440A	MY45304764	12 Dec 2015	1 year
Micro-tronics Bandstop Filter (2.4GHz)	BRM50701-02	007	13 Aug 2016	1 year

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Restricted Bands) Test Setup

1. The EUT and supporting equipment were set up as shown in the setup photo.
2. The power supply for the EUT was connected to a filtered mains.
3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.
4. The resolution bandwidth (RBW) of the spectrum analyser was set to the following settings. The video bandwidth (VBW) was set to at least three times of the RBW.

Frequency (MHz)	RBW (kHz)
0.009 – 0.150	0.2
0.150 – 30.0	9.0
30.0 - 1000	100.0
> 1000	1000.0

5. The detector of the spectrum analyser was set to peak detection mode.
6. All other supporting equipment were powered separately from another filtered mains.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Restricted Bands) Test Method

1. Measurement in the range 9kHz – 1000MHz

1.1 The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode, with the transmitting frequency was set to lower channel with specified modulation and data rate.

1.2 The start and stop frequencies of the spectrum analyser were set according to the supported RBW.

1.3 The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected.

1.4 No further measurement was required if all the captured emissions complied to the limits. Else, the spectrum analyser was set to zoom to the captured emission with the detector of the spectrum analyser was set to quasi-peak. The emission level of the captured frequency was measured.

1.5 The step 1.4 was repeated until all the captured emissions which exceeding the limits were measured.

1.6 Repeat steps 1.1 to 1.5 with all possible modulations and data rates.

1.7 The steps 1.2 to 1.6 were repeated with the transmitting frequency was set to middle and upper channel respectively.

2. Measurement above 1000MHz

2.1 The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode, with the transmitting frequency was set to lower channel with specified modulation and data rate.

2.2 The start and stop frequencies of the spectrum analyser were set according to the supported frequency band of the set RBW with the number of points in a sweep was set to equal or greater than 2 times of the ratio of span over RBW.

2.3 The detector of the spectrum analyser was set to power average (RMS) mode with the sweep time was set to equal or greater than 10 times of the product of number of measurement points in a sweep and transmission symbol time.

2.4 The spectrum analyser was then allowed to capture any spurious emissions within a single sweep. The peak marker function of the spectrum analyser was used to locate the highest power level.

2.5 The steps 2.2 to 2.4 were repeated until all the required frequency bands were measured.

2.6 Repeat steps 2.1 to 2.5 with all possible modulations and data rates.

2.7 The steps 2.2 to 2.6 were repeated with the transmitting frequency was set to middle and upper channel respectively.

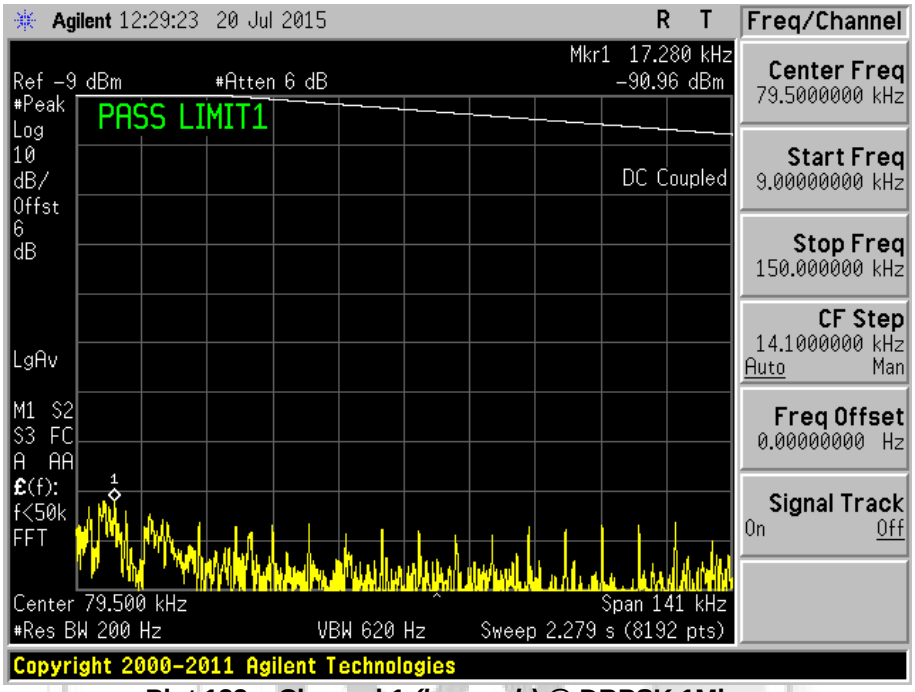
2.8 The measurements were repeated with the detector of the spectrum analyser was set to peak detecting mode. The sweep time was set to auto coupler.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 RF Conducted Spurious Emissions (Restricted Bands) Results

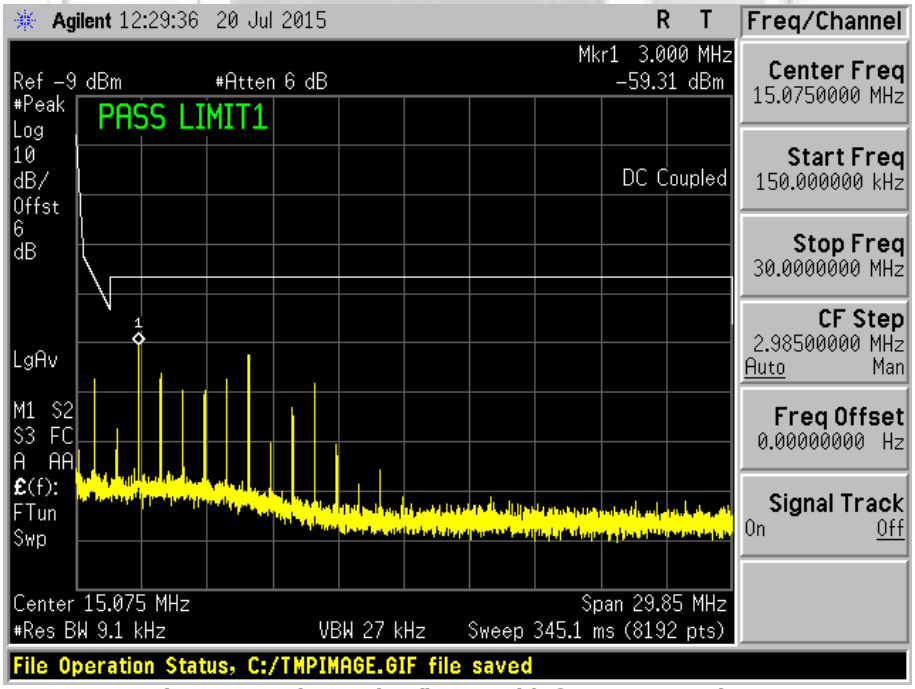
Test Input Power	3.7Vdc	Temperature	24°C
Attached Plots	133 – 222 (802.11b) 223 – 342 (802.11g) 343 – 462 (802.11n)	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Chang Wai Kit

All spurious signals found were below the specified limit. Please refer to the attached plots.

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

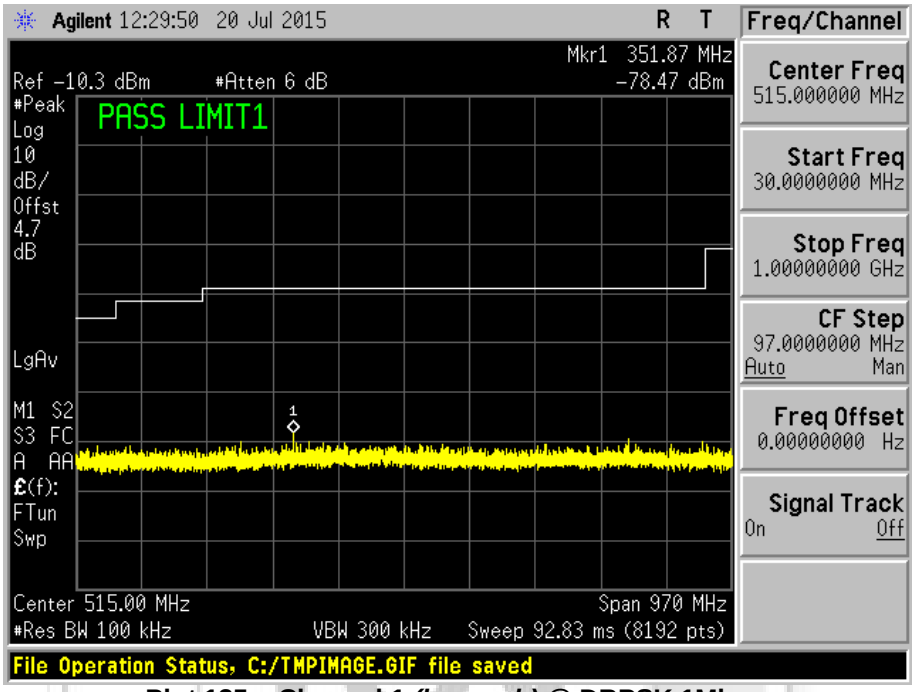


Plot 133 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

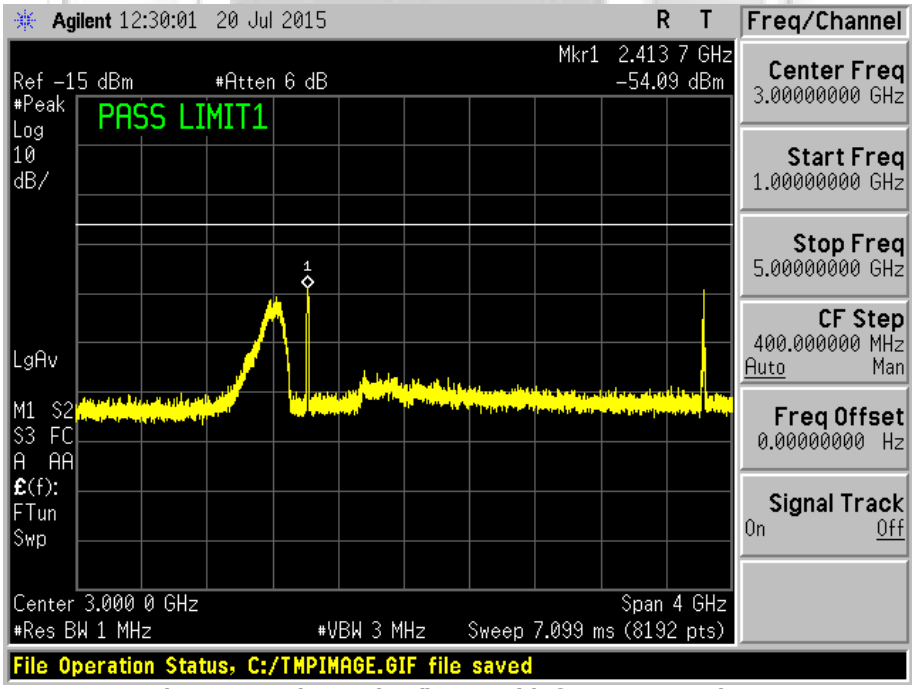


Plot 134 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

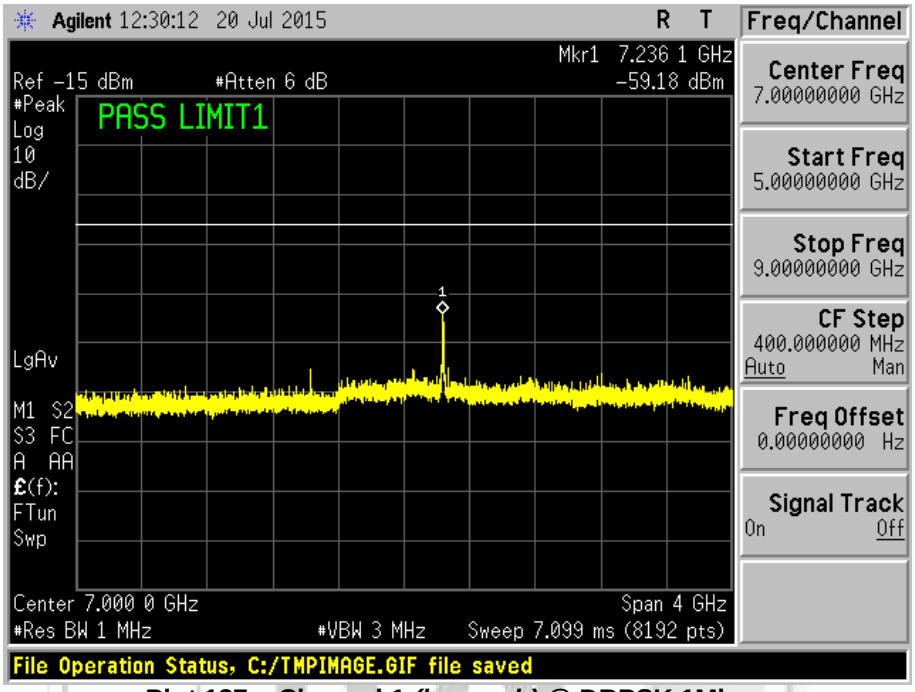


Plot 135 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

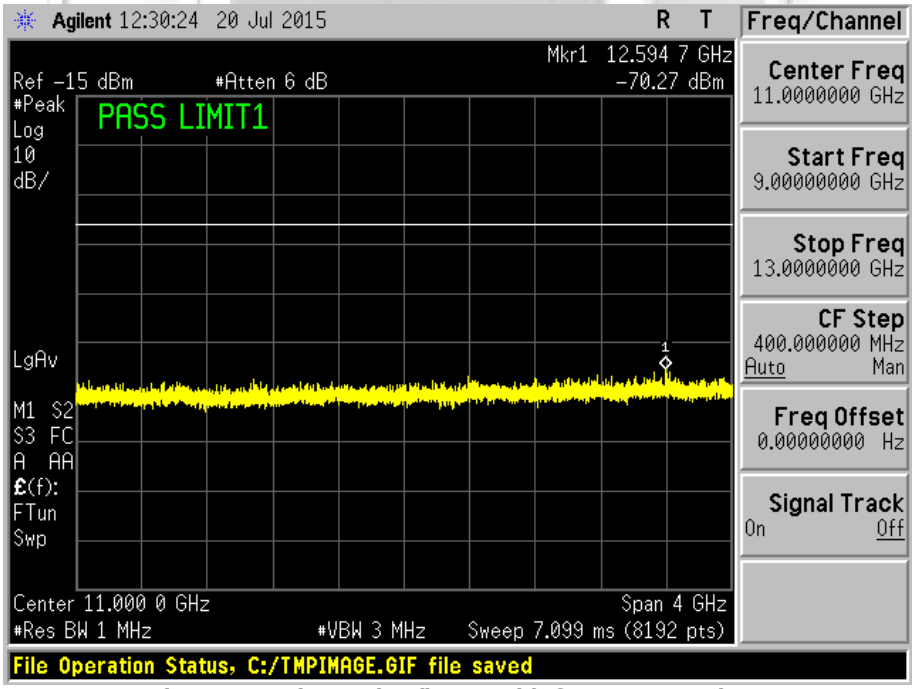


Plot 136 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

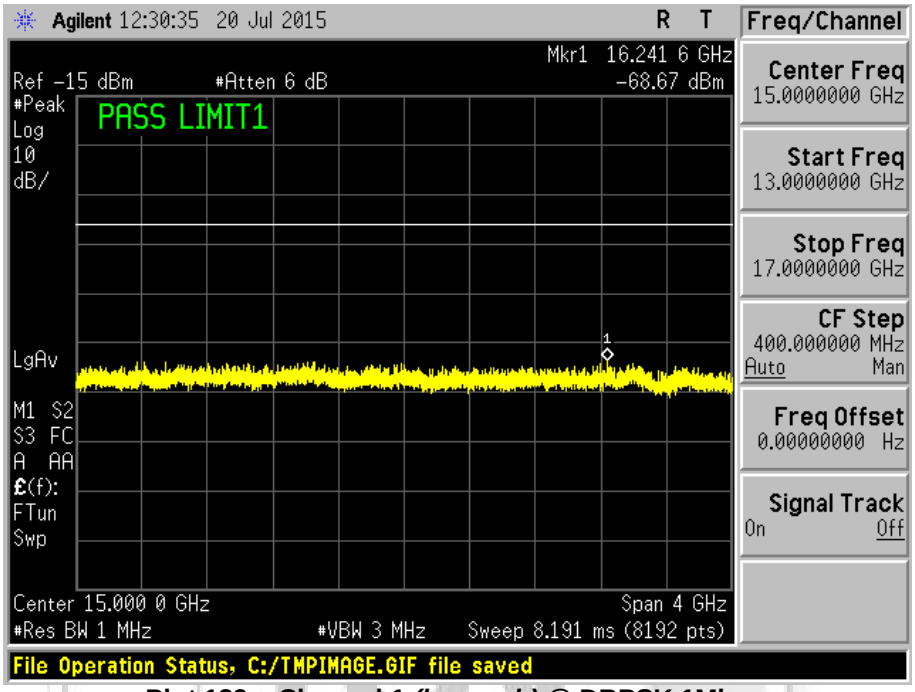


Plot 137 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

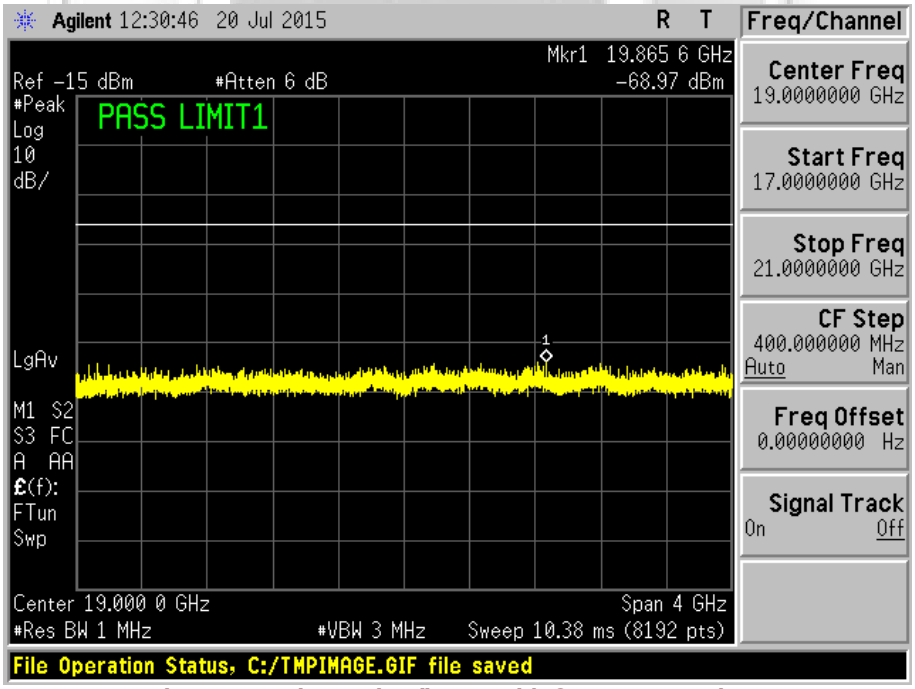


Plot 138 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

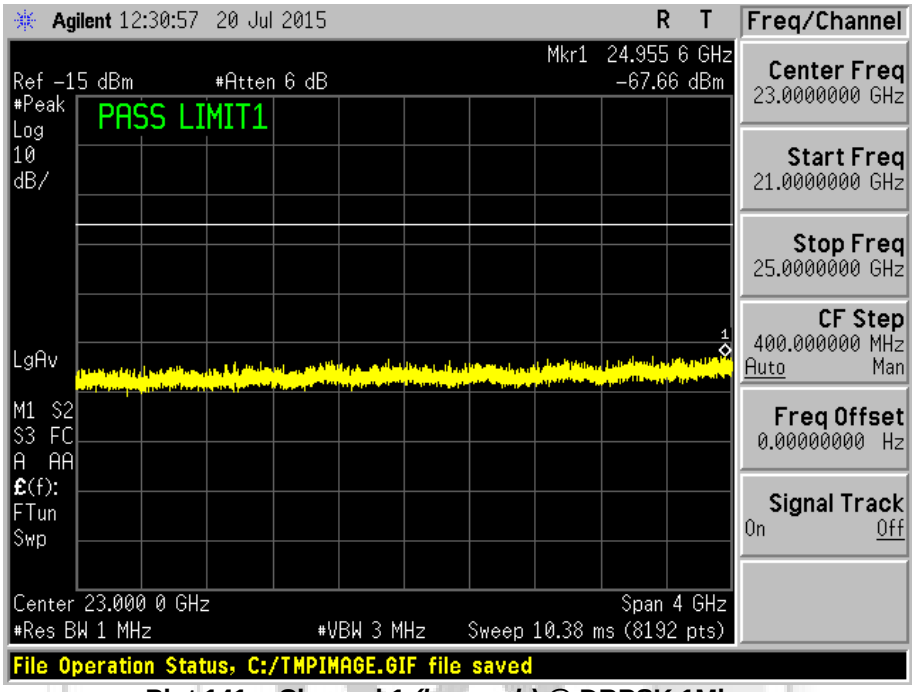


Plot 139 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

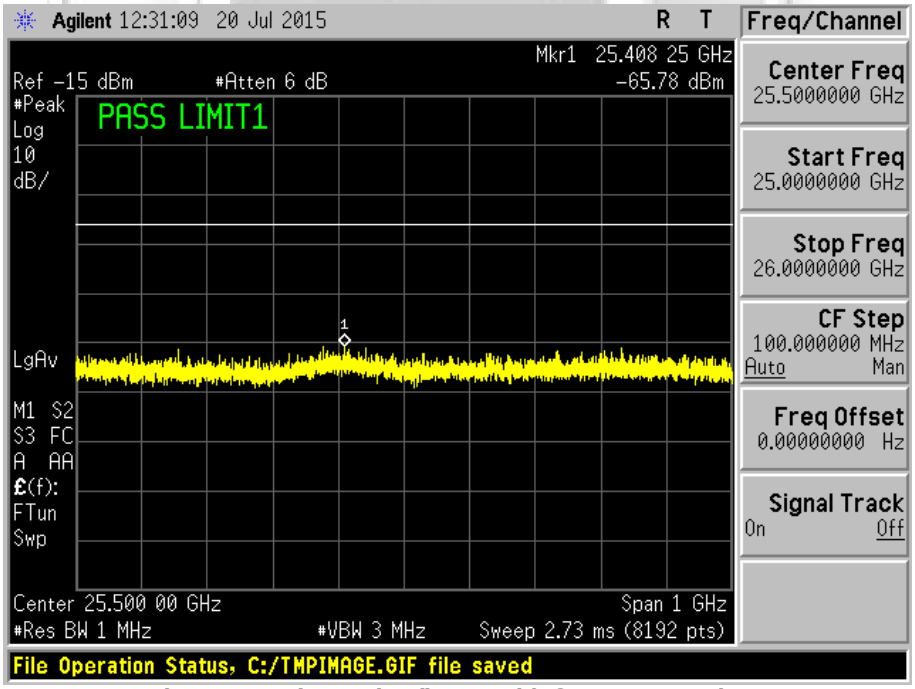


Plot 140 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

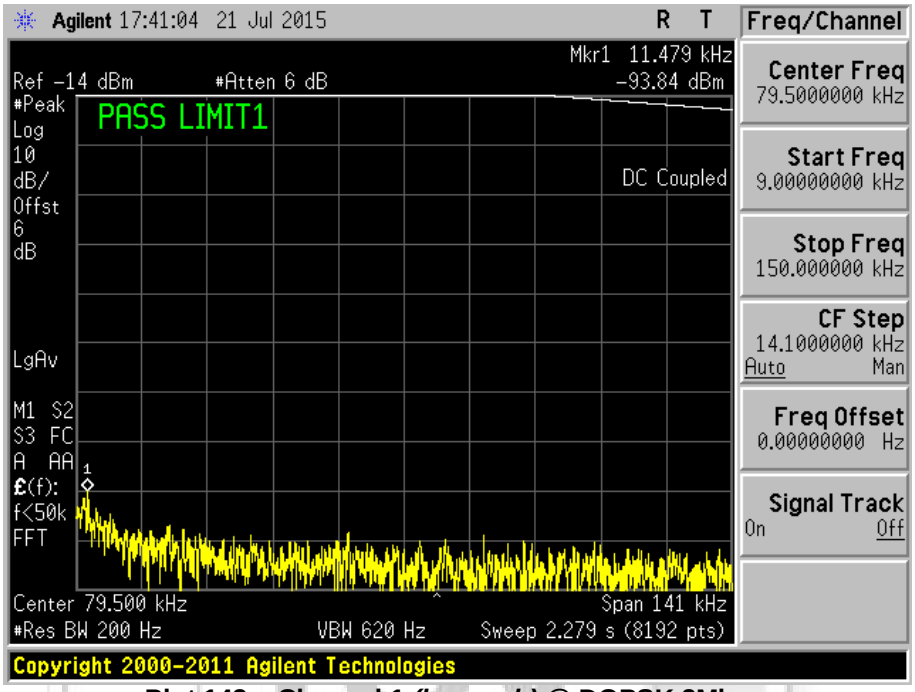


Plot 141 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

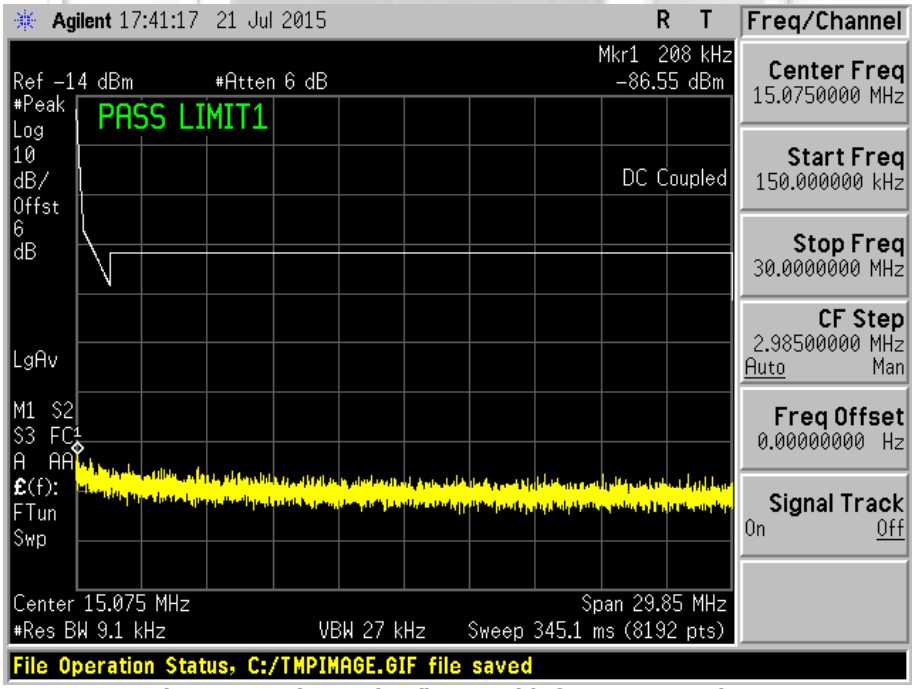


Plot 142 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

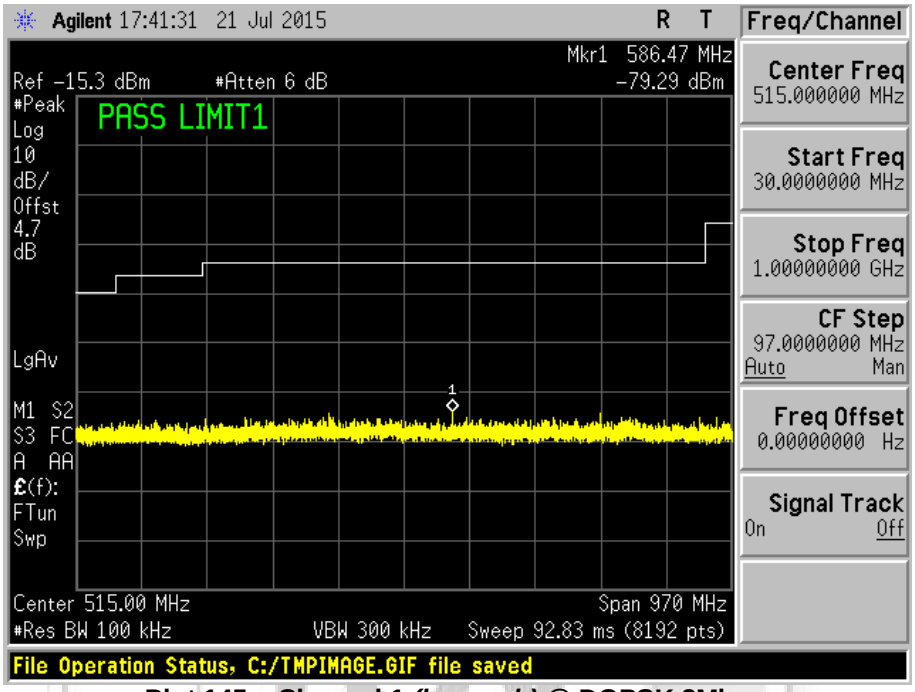


Plot 143 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

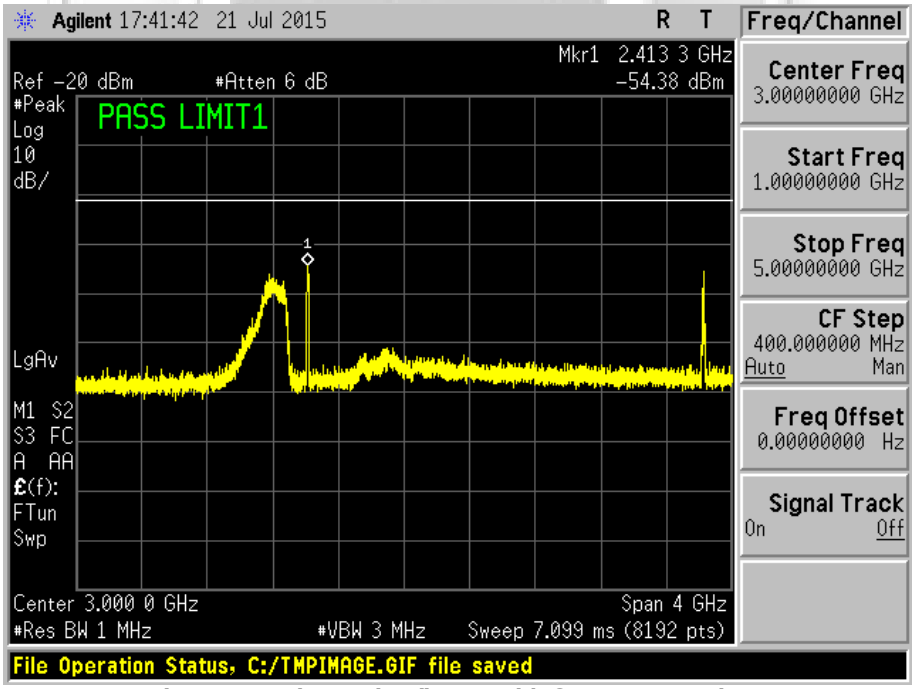


Plot 144 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

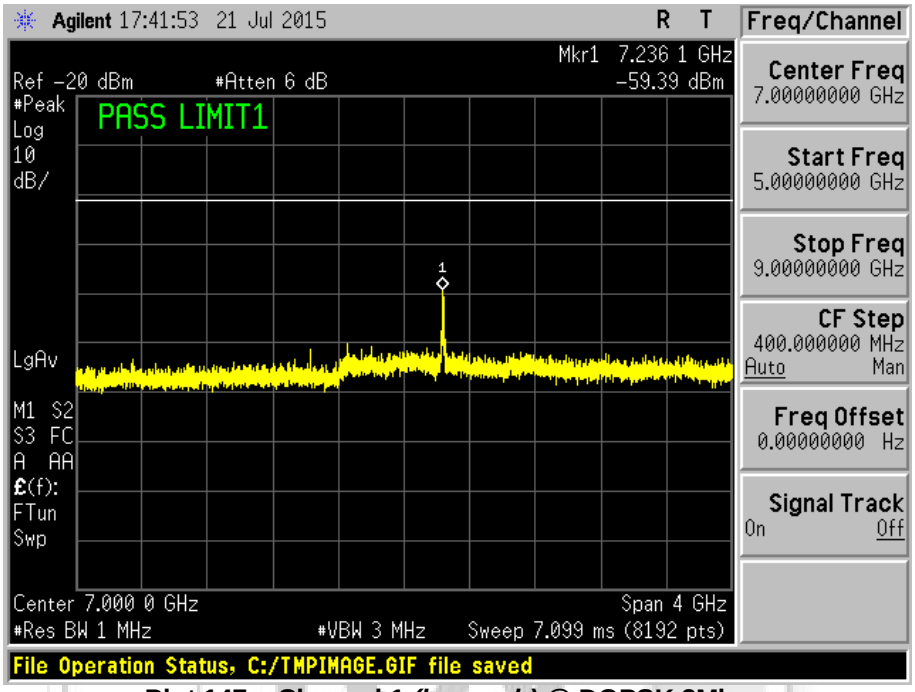


Plot 145 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

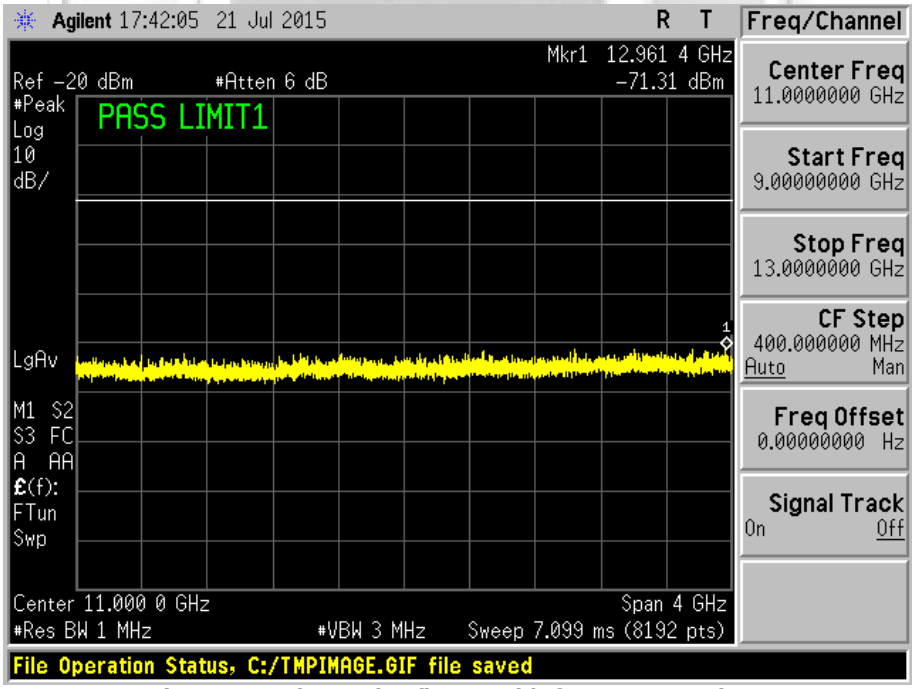


Plot 146 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

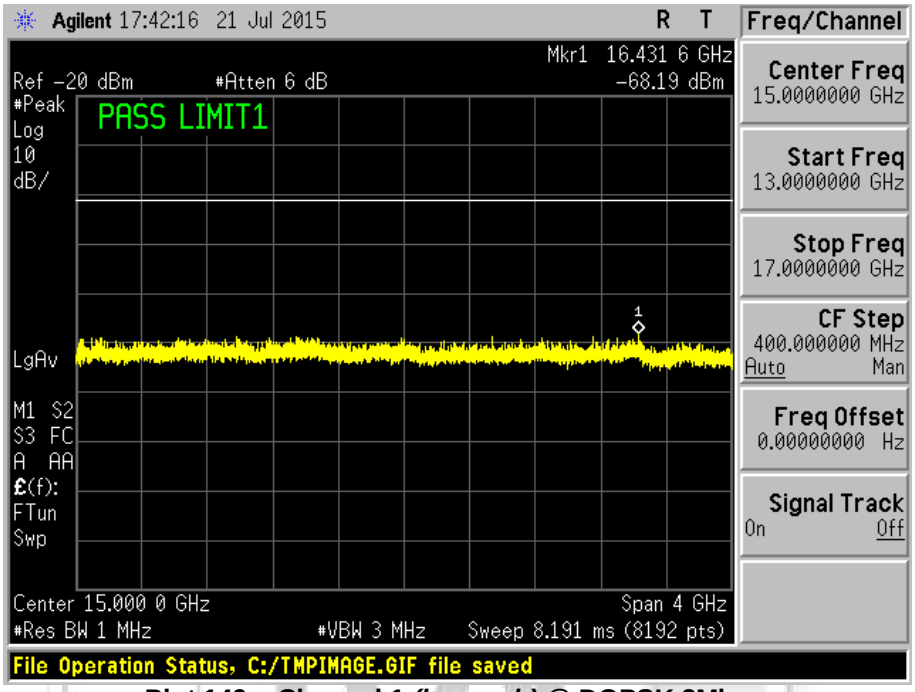


Plot 147 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

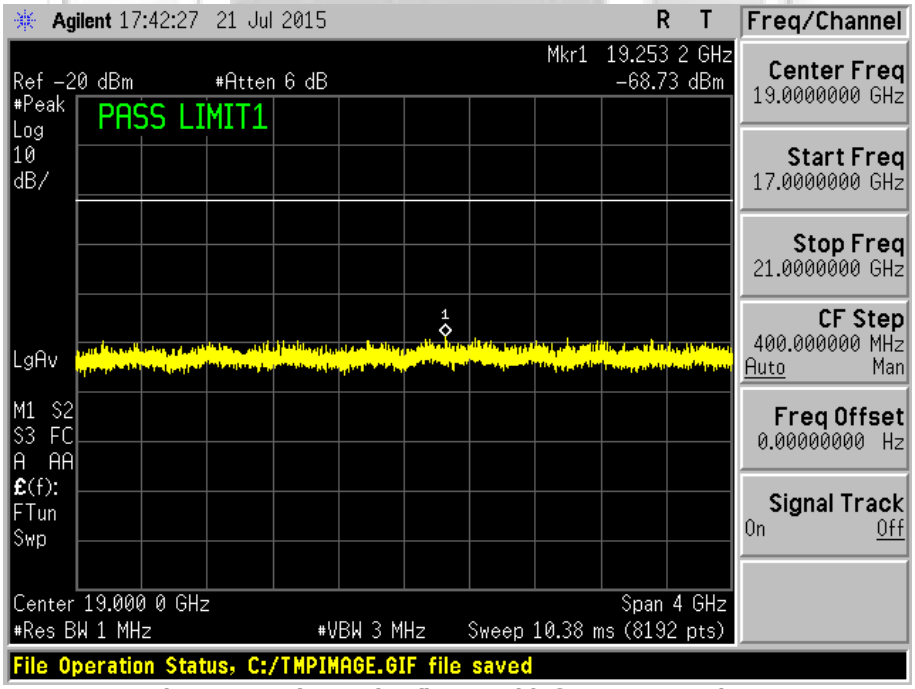


Plot 148 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

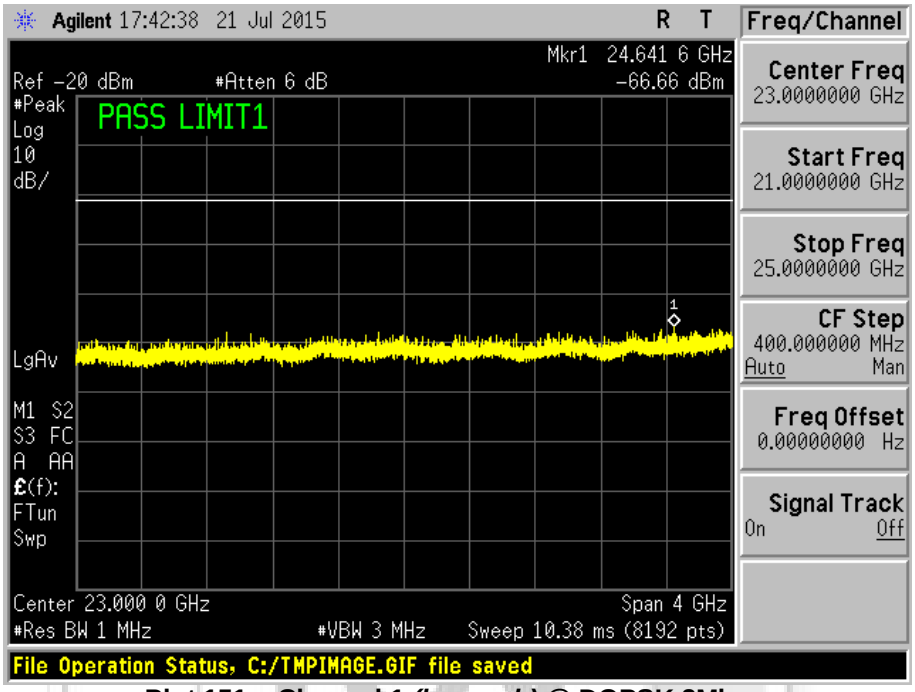


Plot 149 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

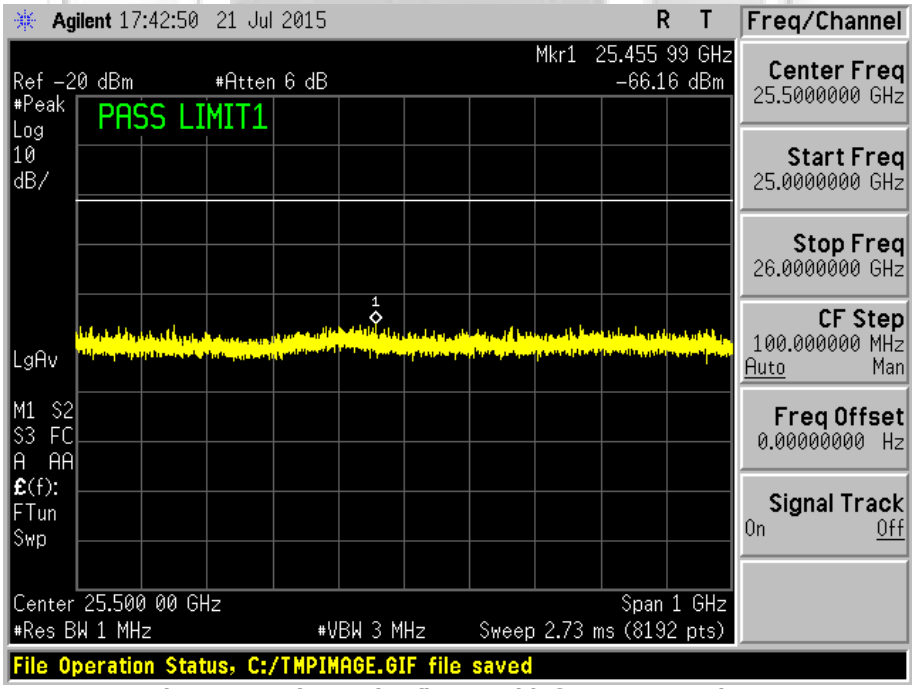


Plot 150 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

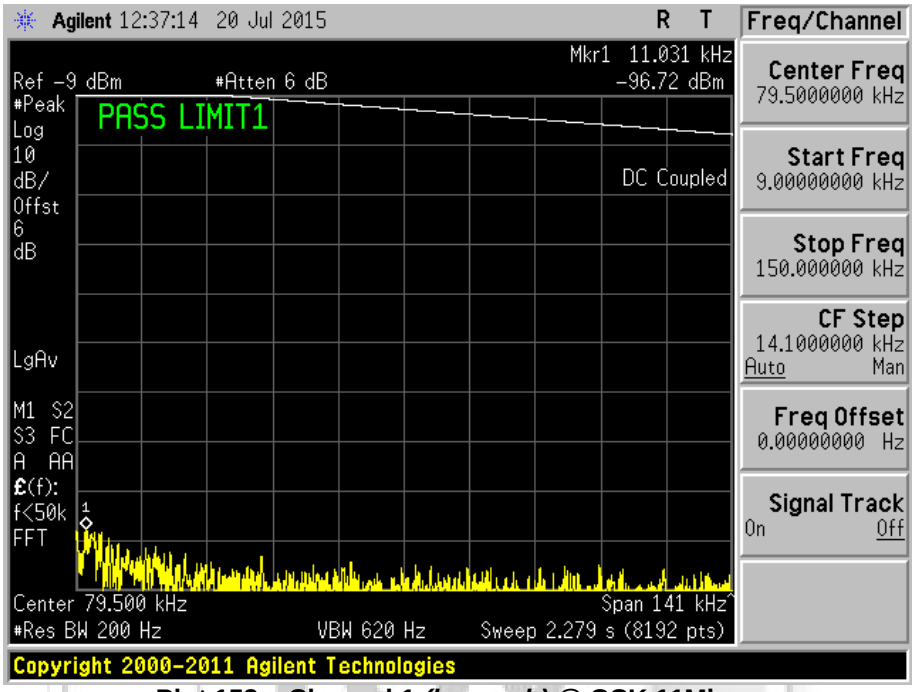


Plot 151 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

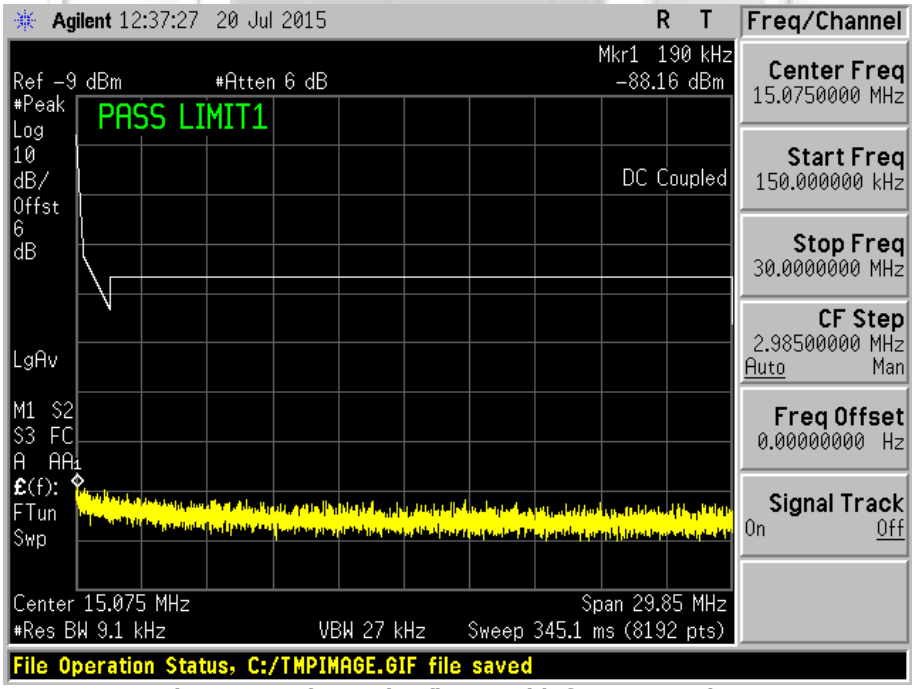


Plot 152 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

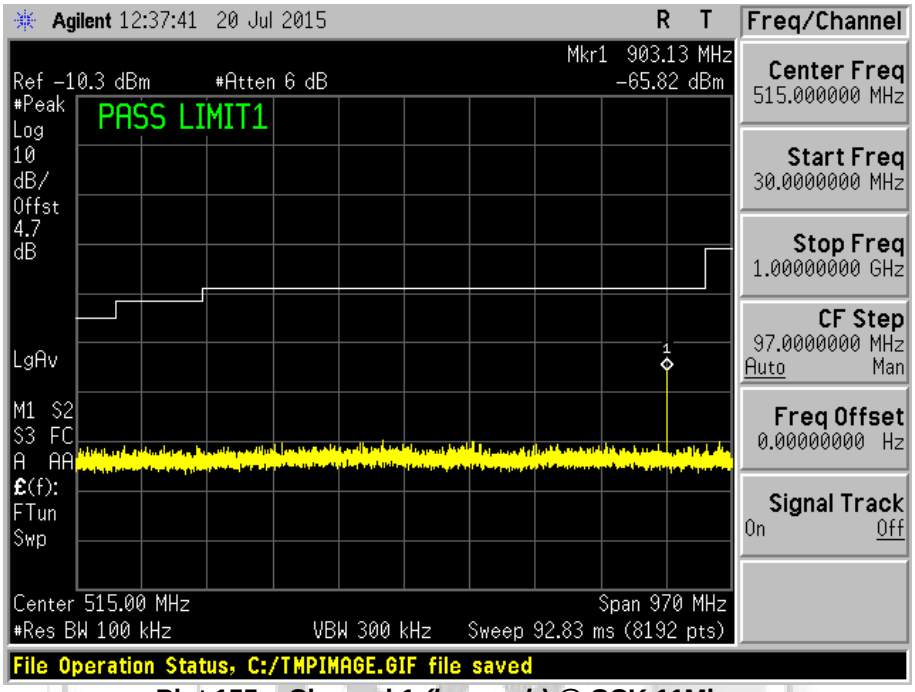


Plot 153 – Channel 1 *(lower ch)* @ CCK 11Mbps

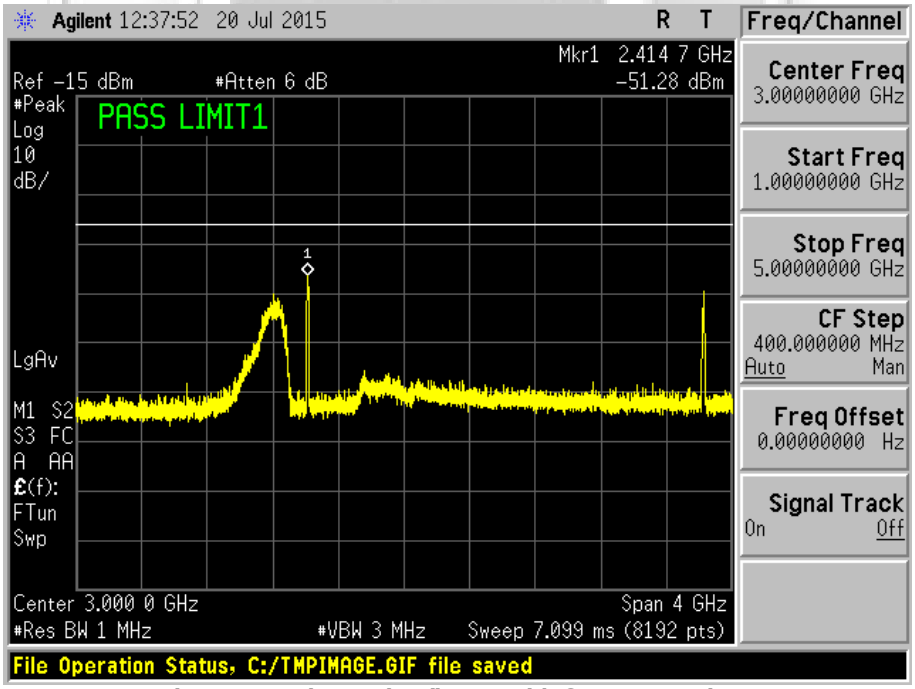


Plot 154 – Channel 1 *(lower ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

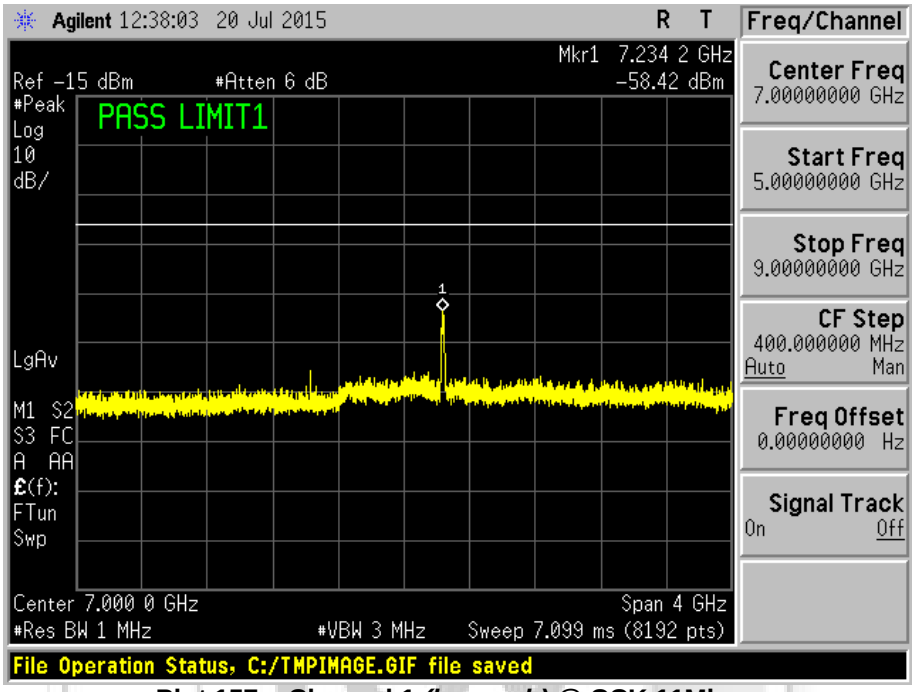


Plot 155 – Channel 1 *(lower ch)* @ CCK 11Mbps

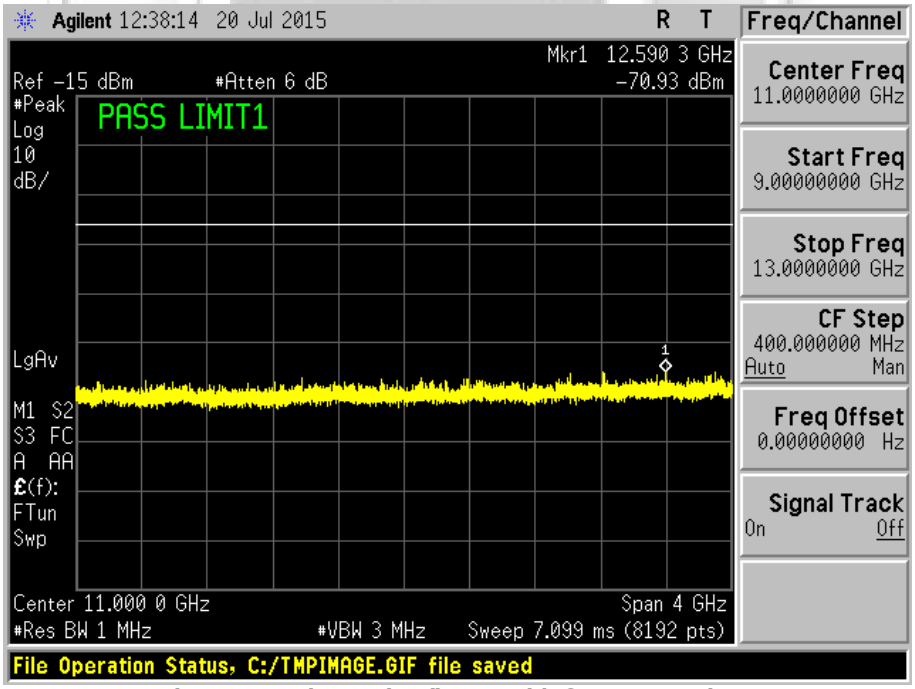


Plot 156 – Channel 1 *(lower ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

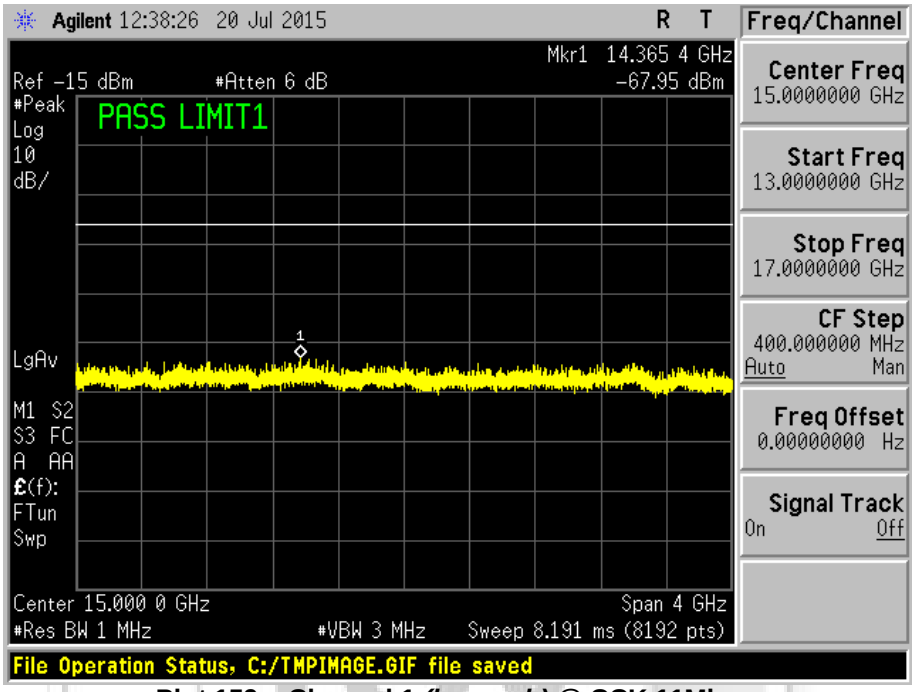


Plot 157 – Channel 1 *(lower ch)* @ CCK 11Mbps

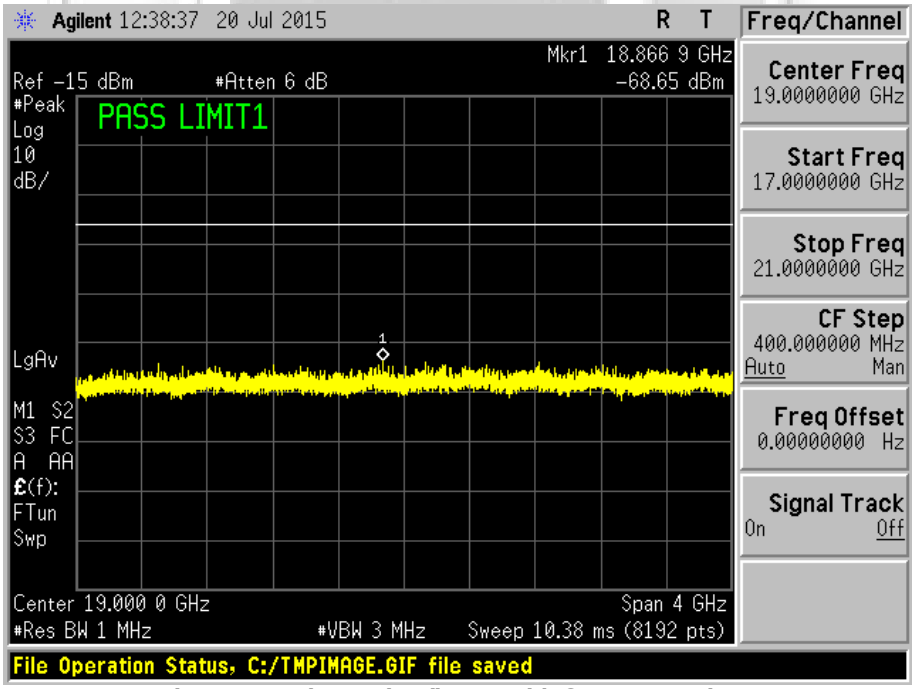


Plot 158 – Channel 1 *(lower ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

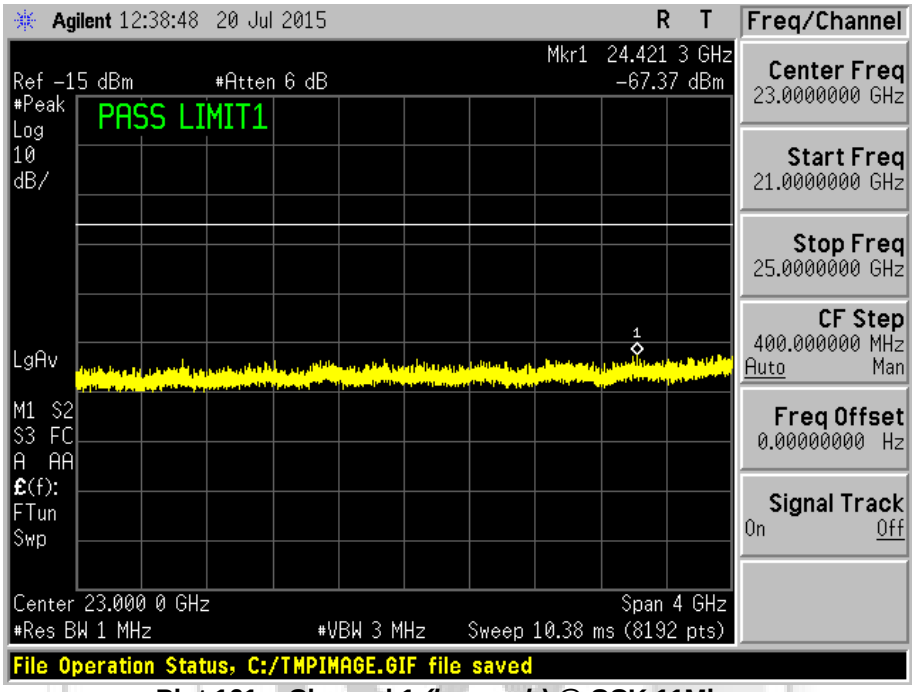


Plot 159 – Channel 1 *(lower ch)* @ CCK 11Mbps

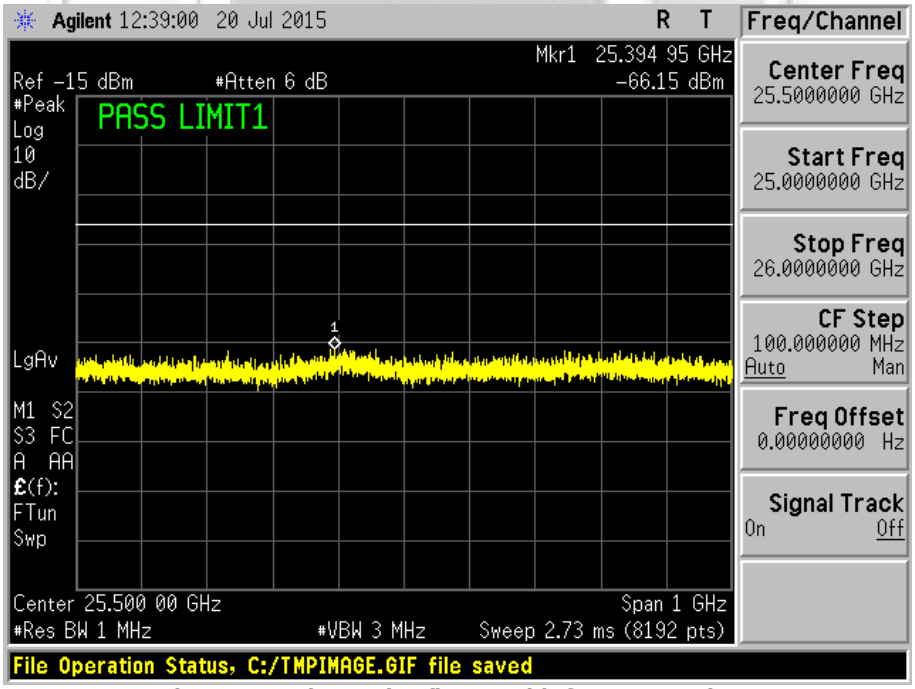


Plot 160 – Channel 1 *(lower ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

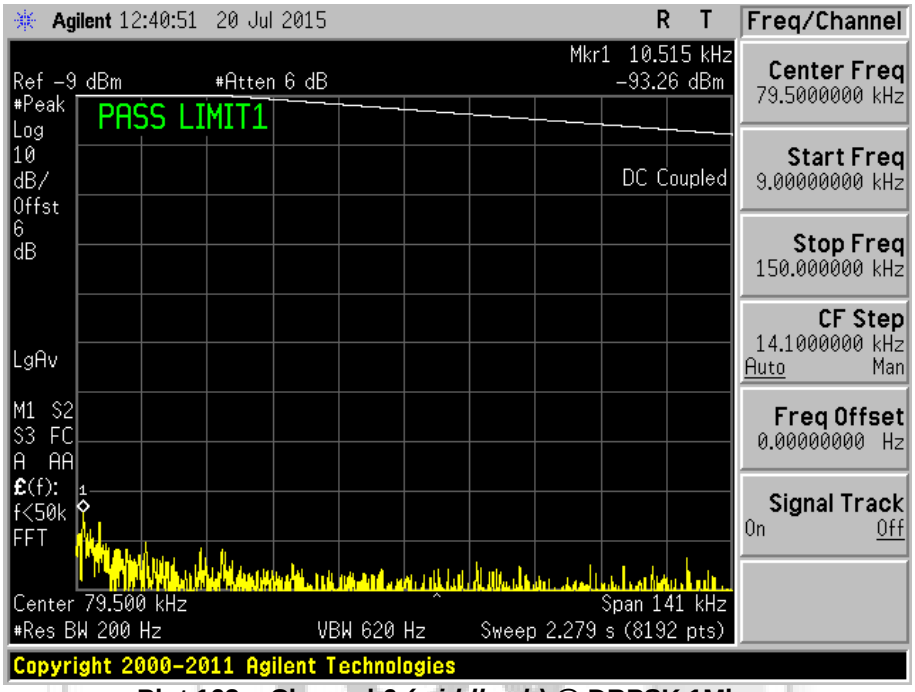


Plot 161 – Channel 1 *(lower ch)* @ CCK 11Mbps

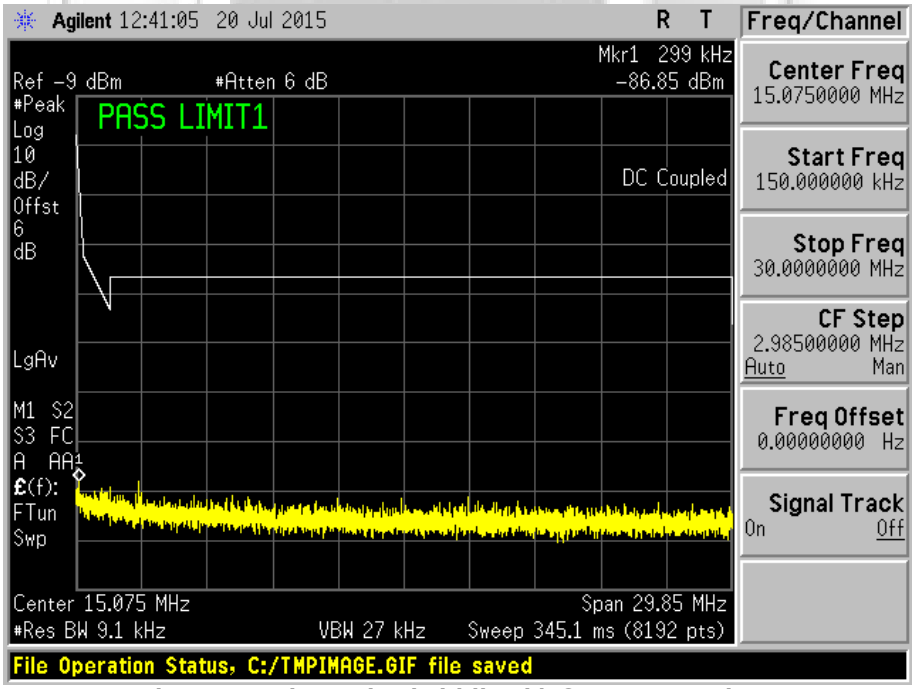


Plot 162 – Channel 1 *(lower ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

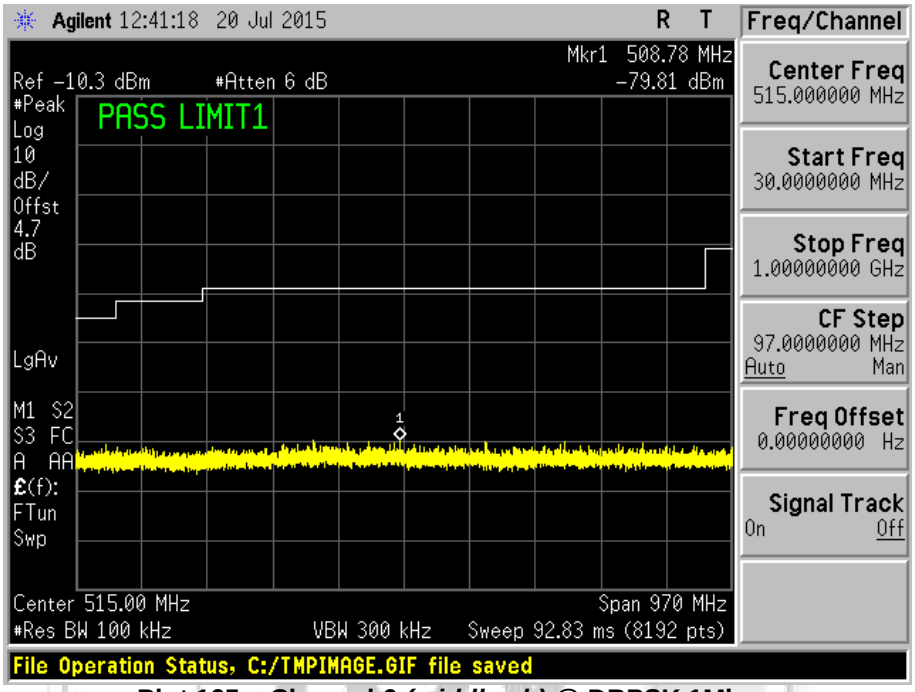


Plot 163 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

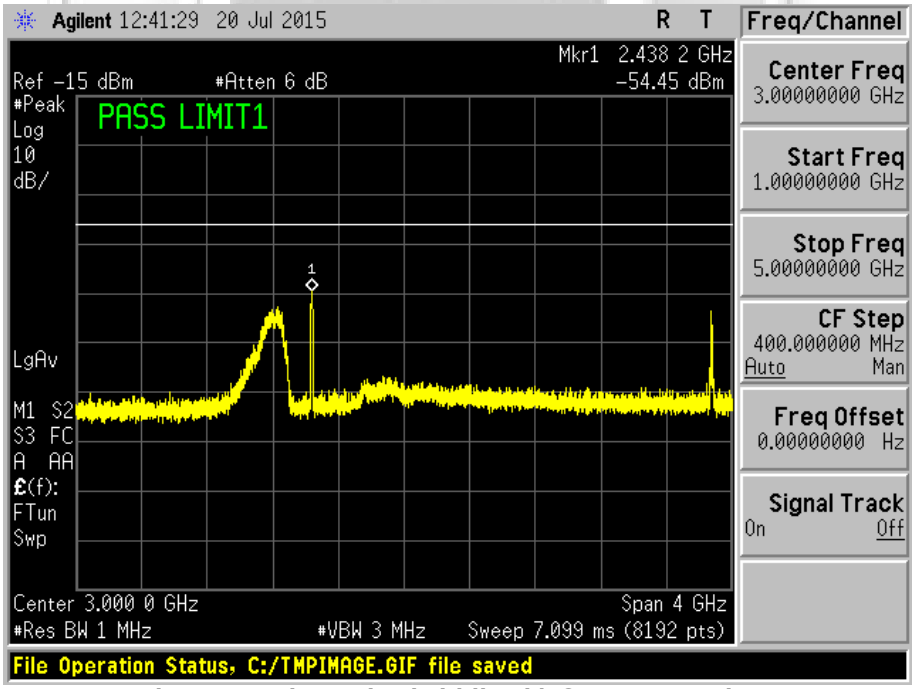


Plot 164 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

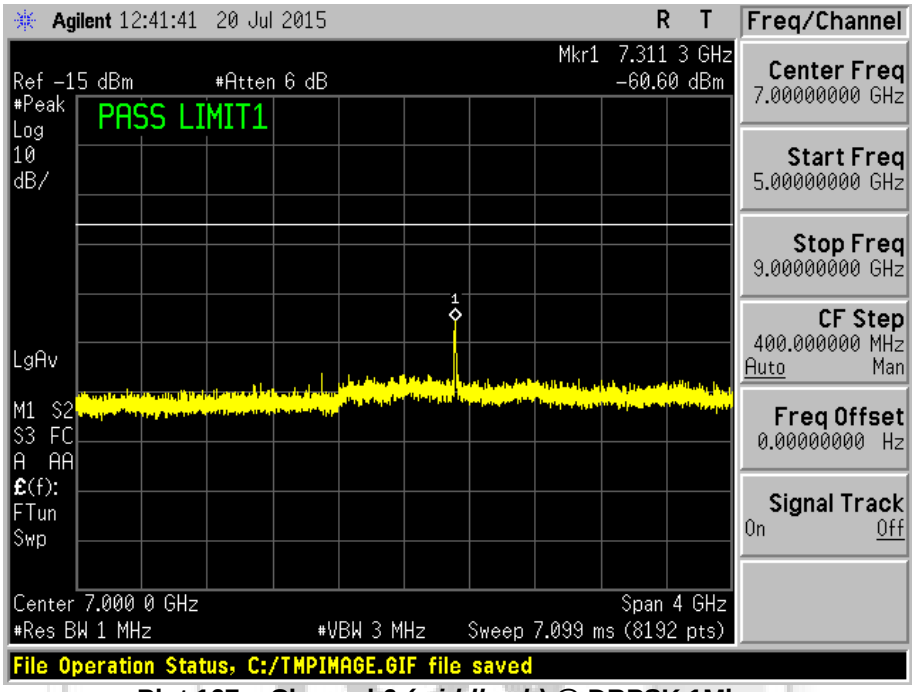


Plot 165 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

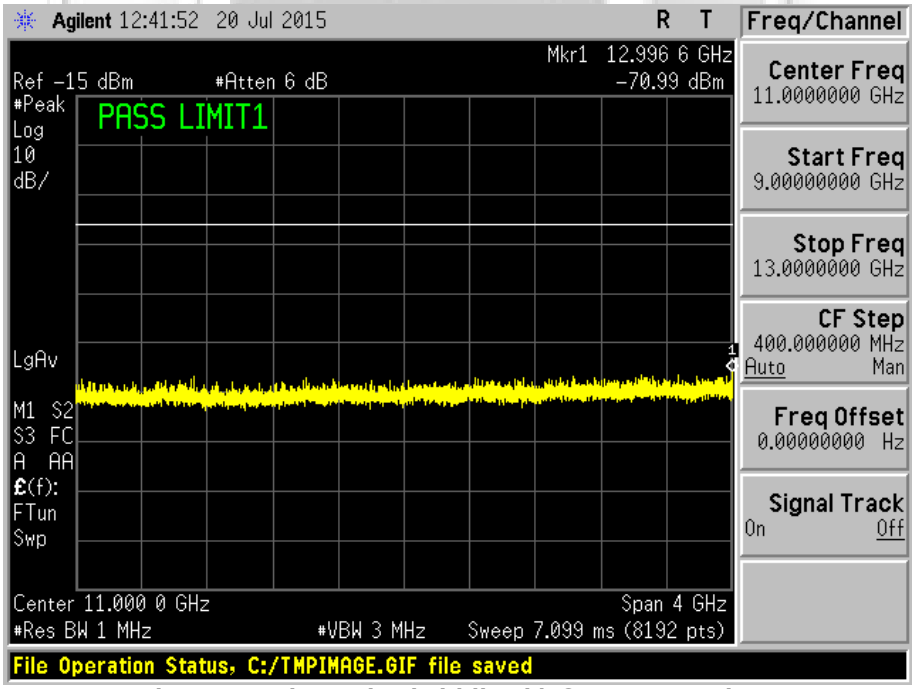


Plot 166 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

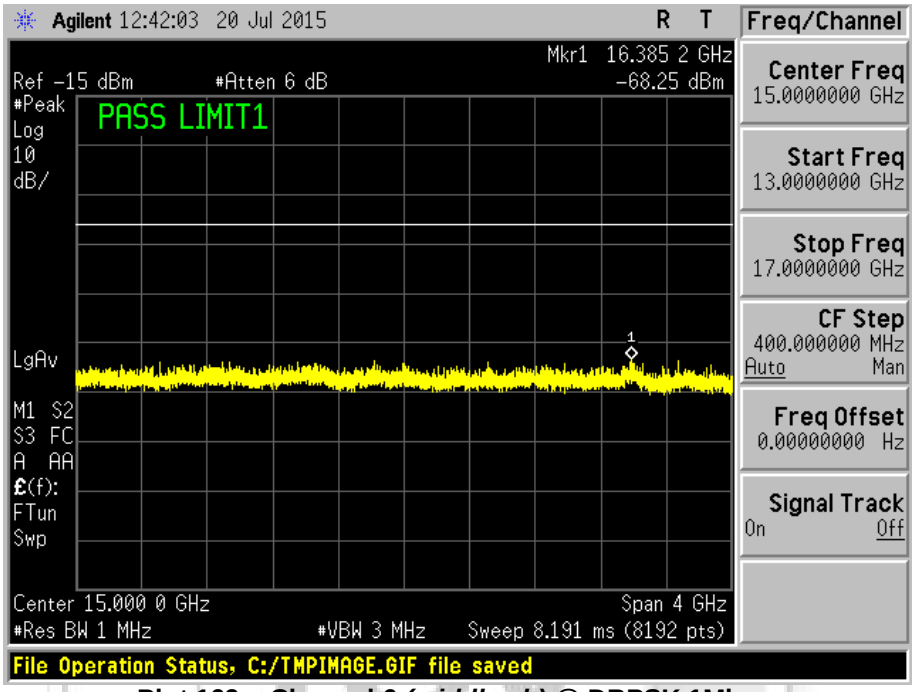


Plot 167 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

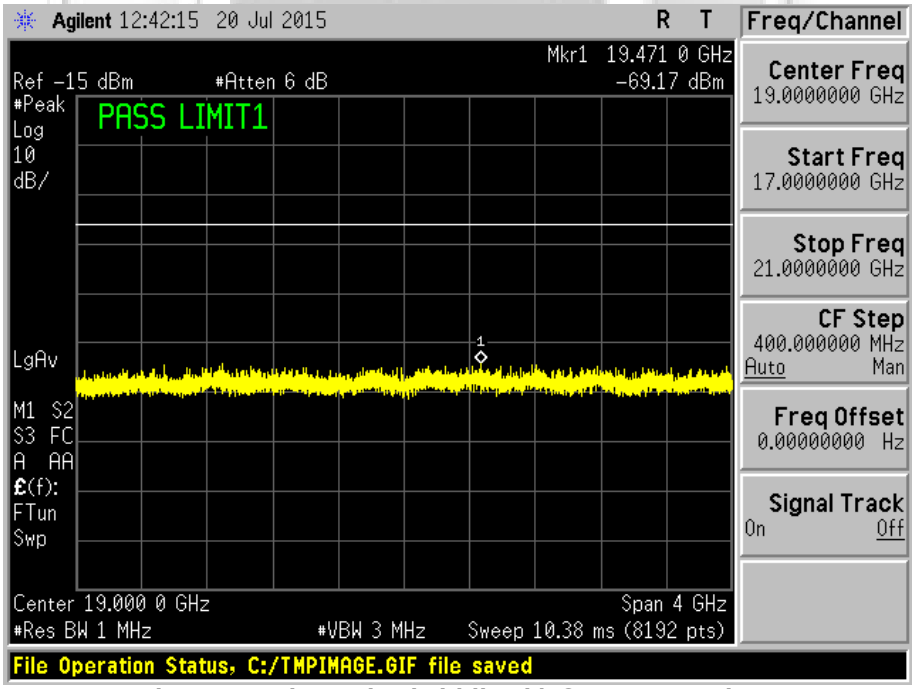


Plot 168 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

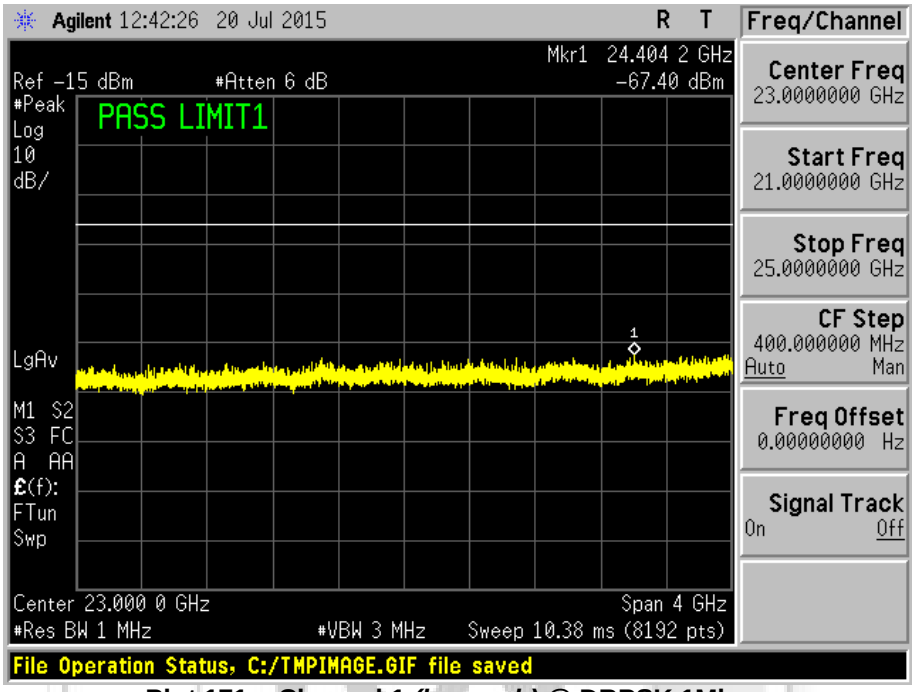


Plot 169 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

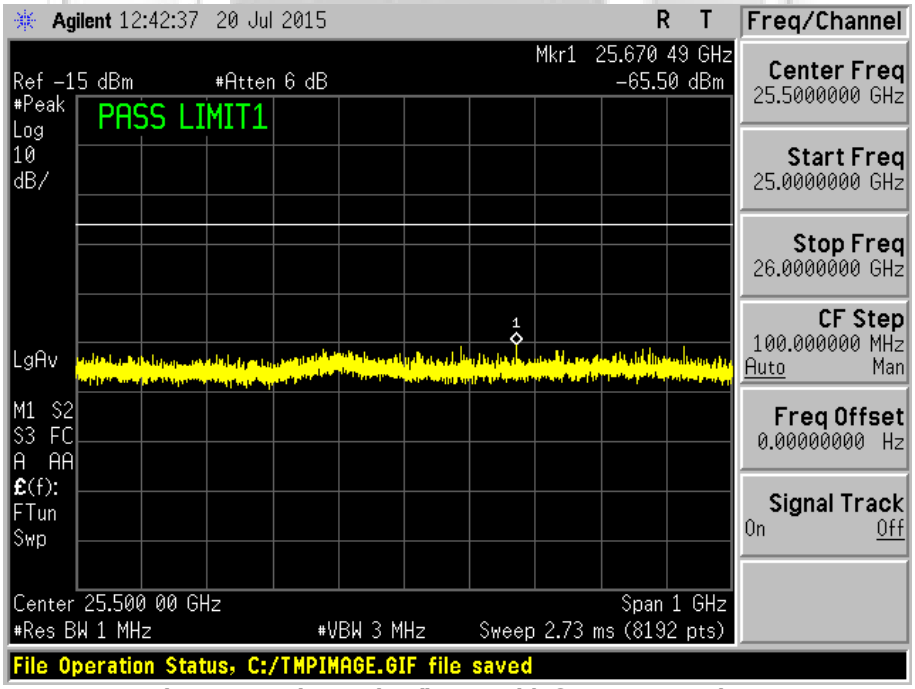


Plot 170 – Channel 6 *(middle ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

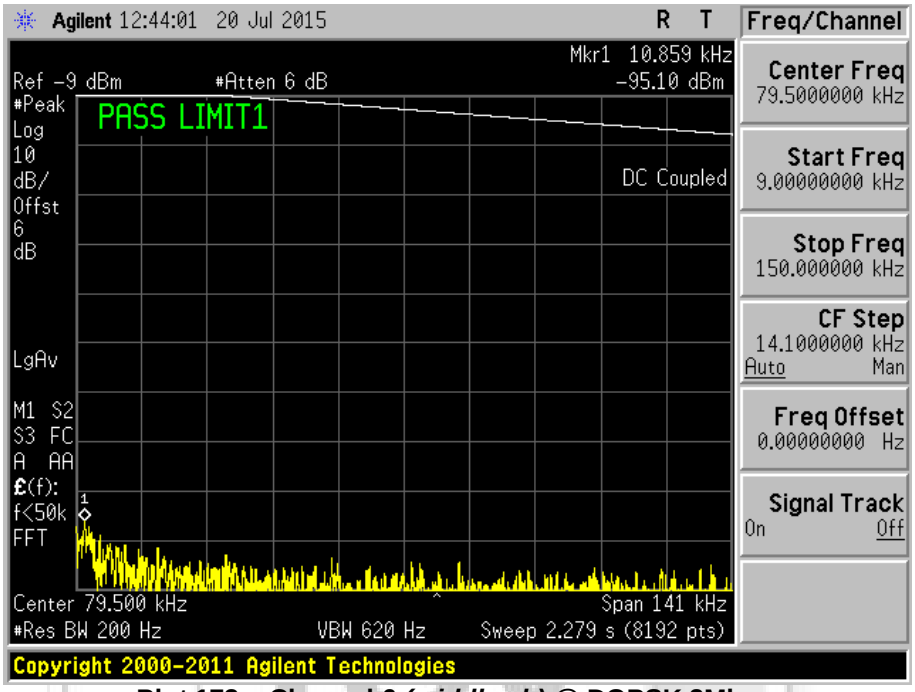


Plot 171 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

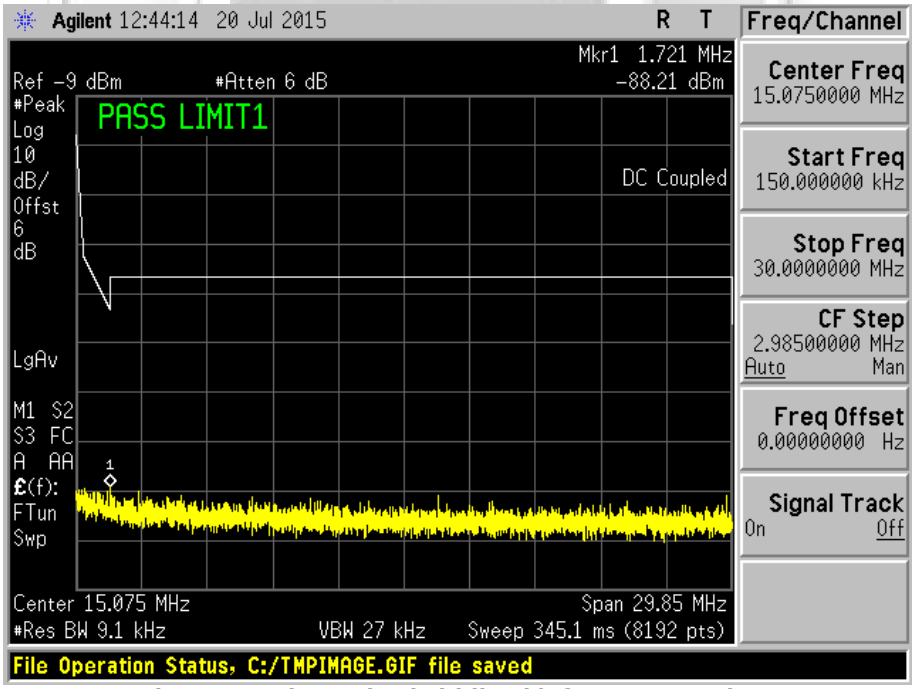


Plot 172 – Channel 1 *(lower ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

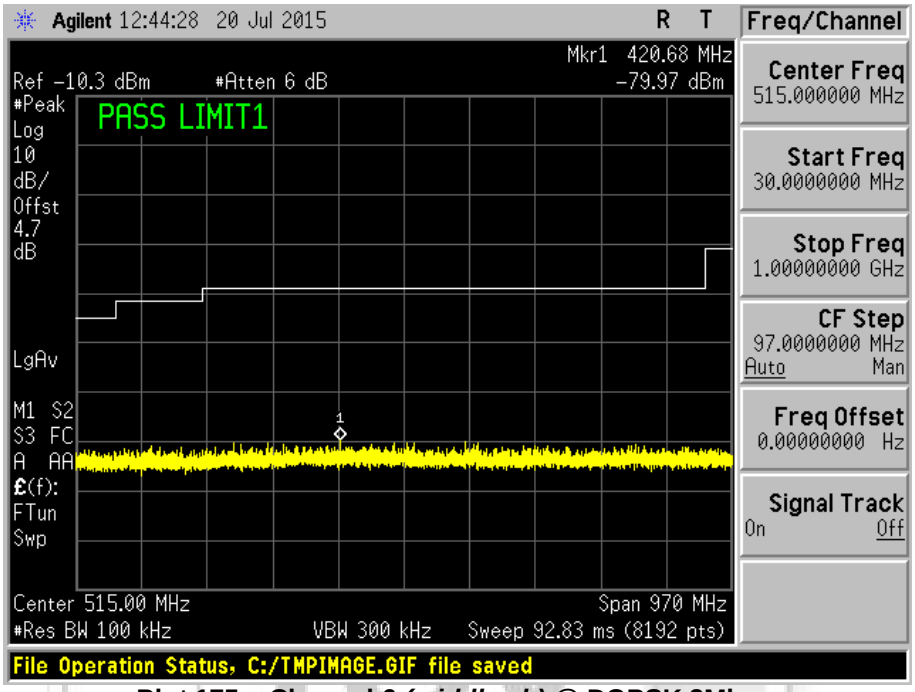


Plot 173 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

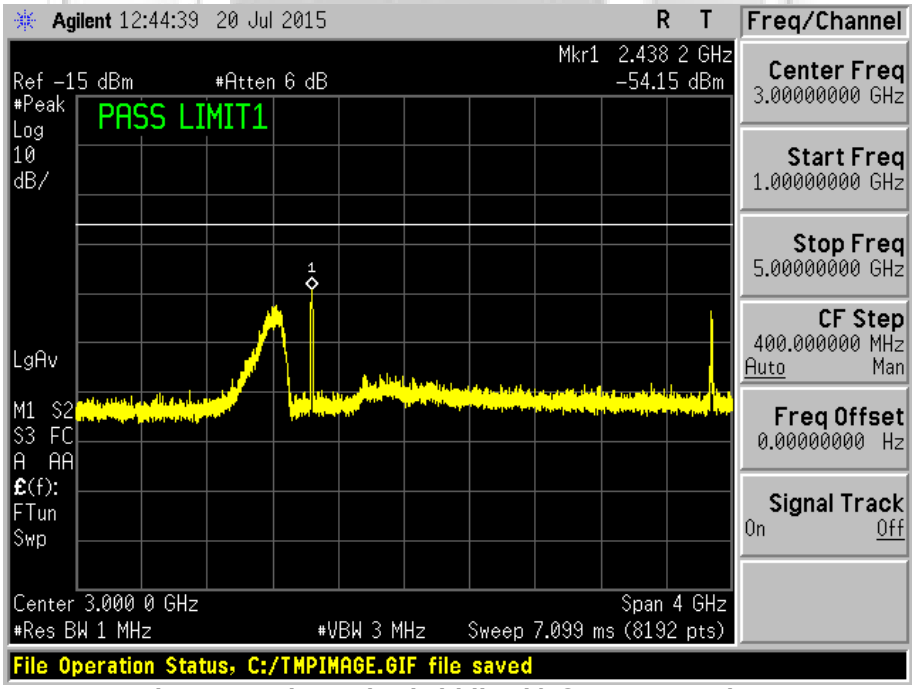


Plot 174 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

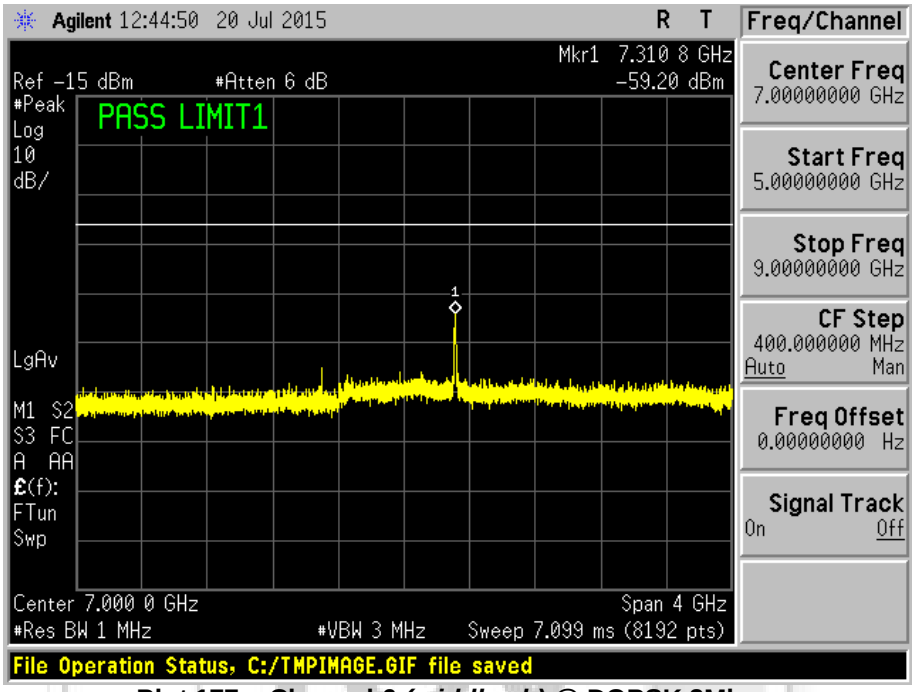


Plot 175 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

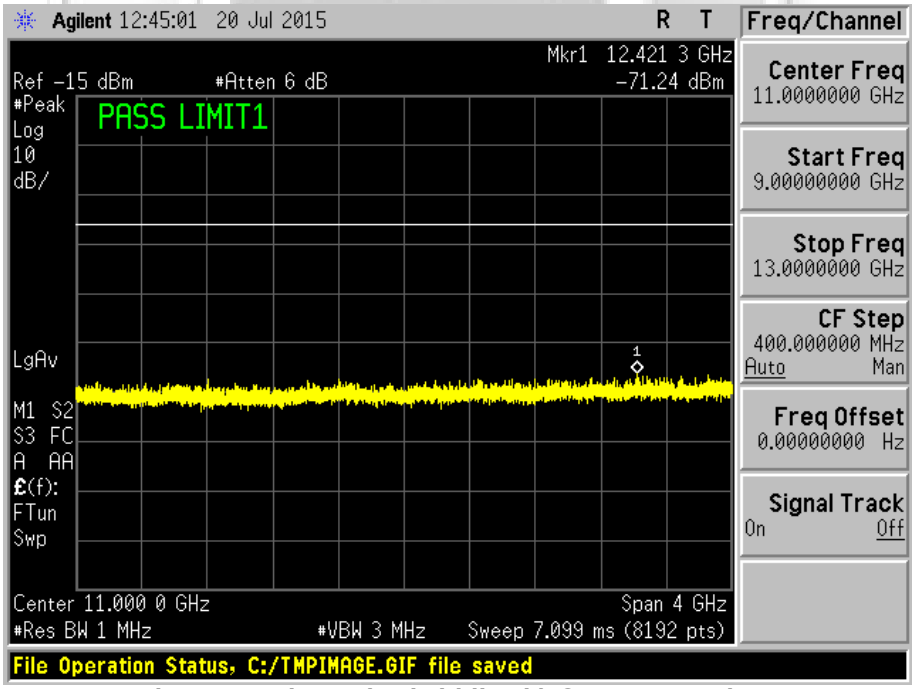


Plot 176 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

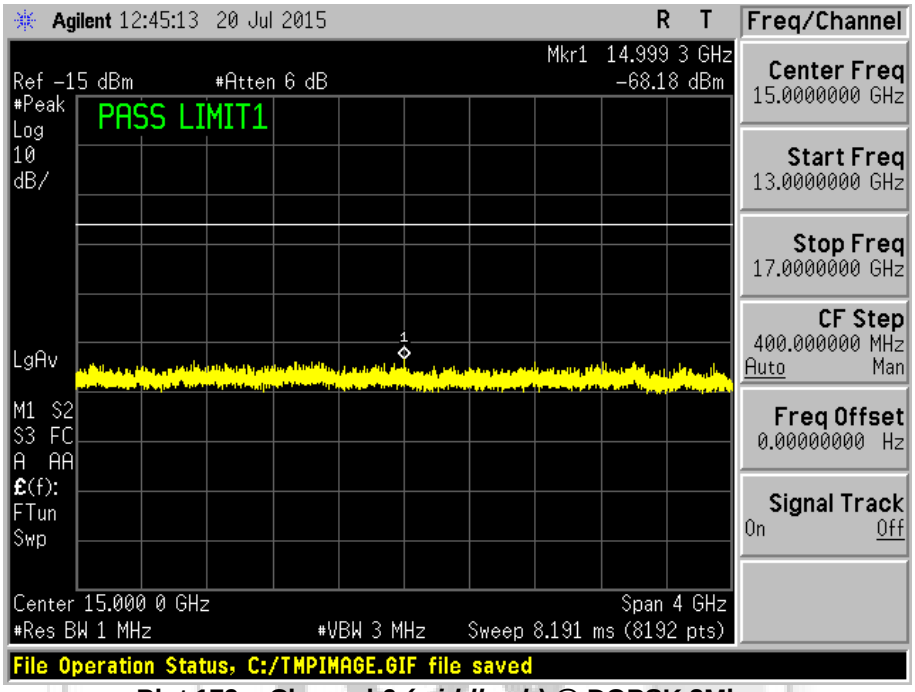


Plot 177 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

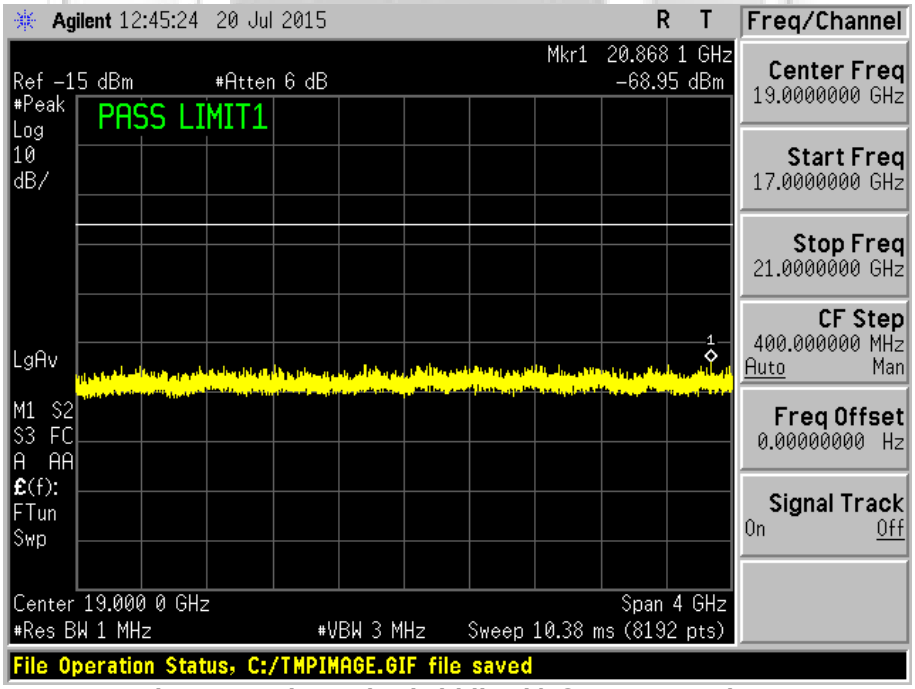


Plot 178 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

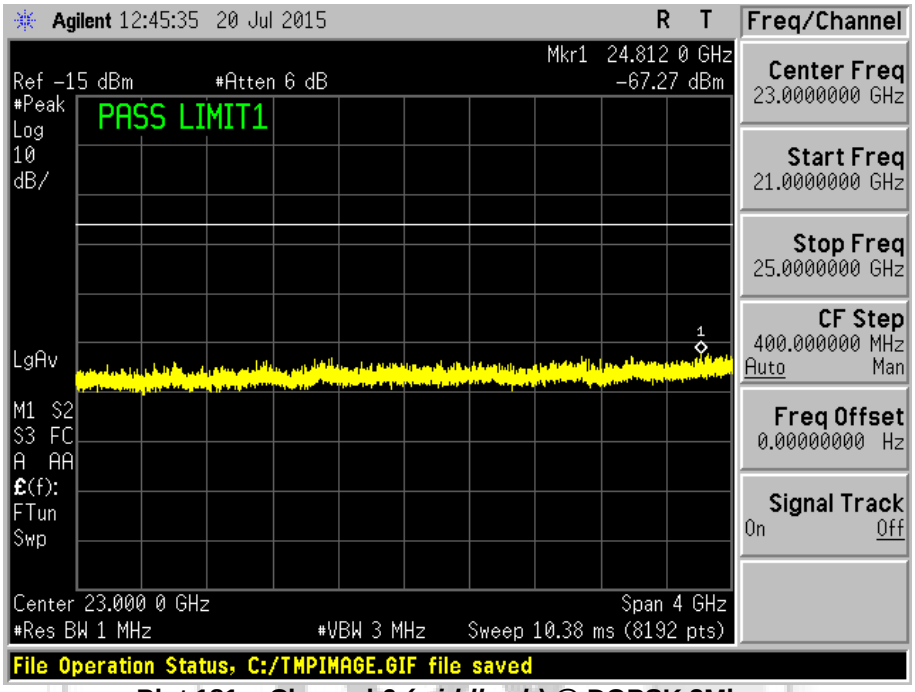


Plot 179 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

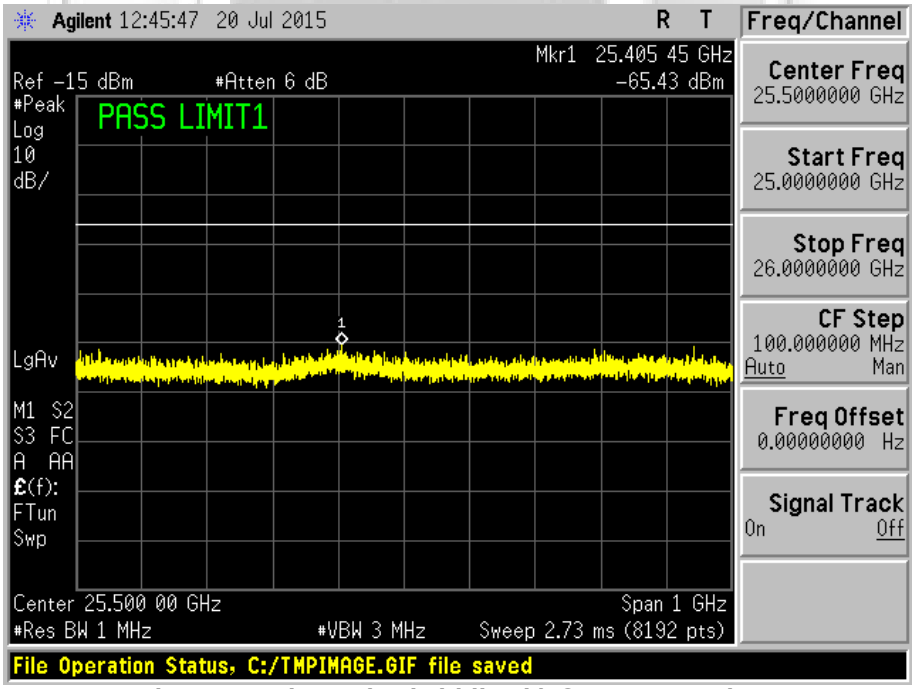


Plot 180 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

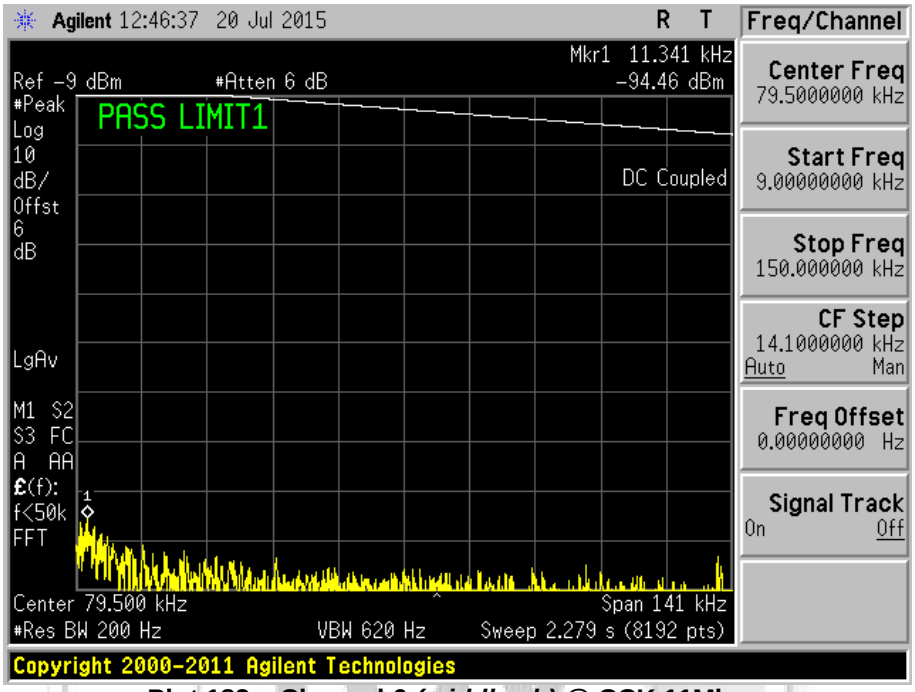


Plot 181 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

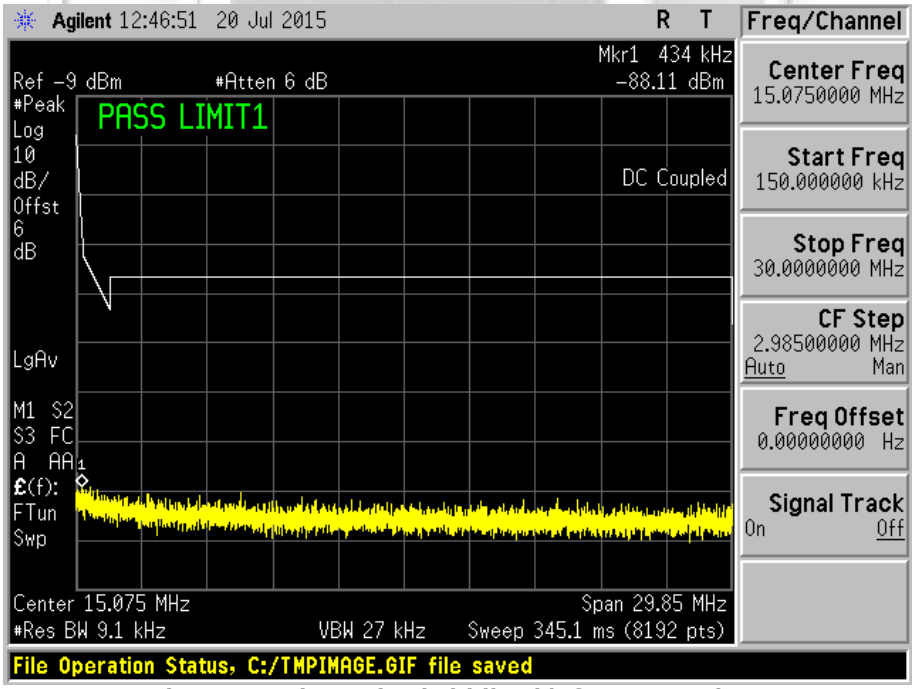


Plot 182 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

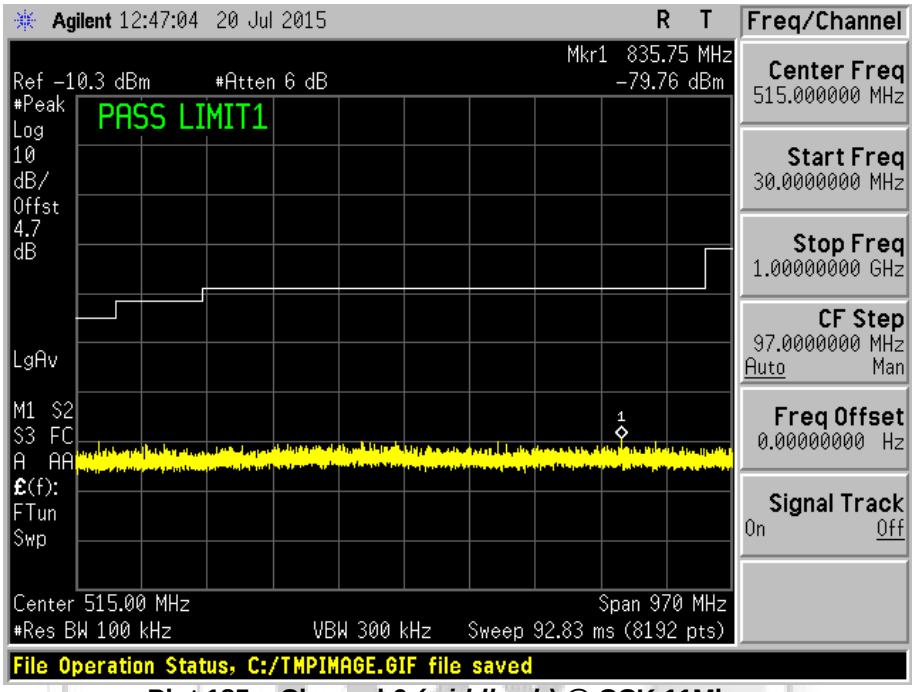


Plot 183 – Channel 6 *(middle ch)* @ CCK 11Mbps

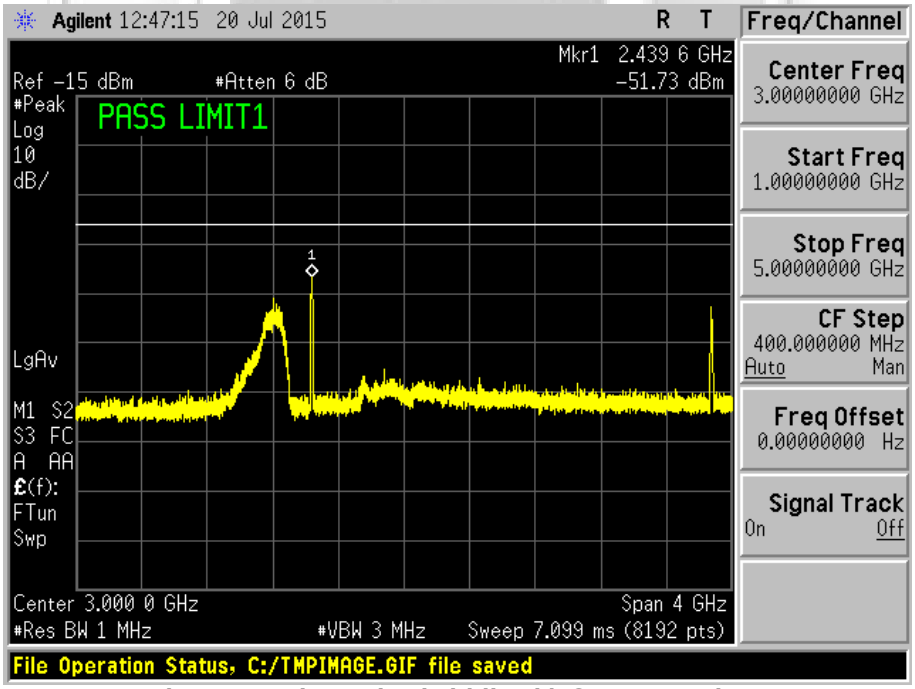


Plot 184 – Channel 6 *(middle ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

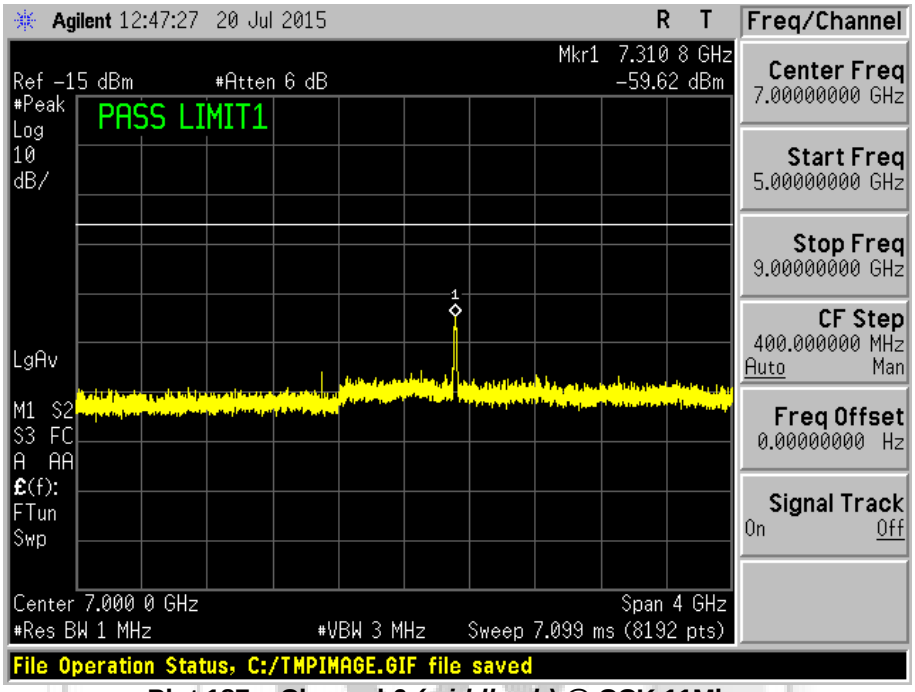


Plot 185 – Channel 6 *(middle ch)* @ CCK 11Mbps

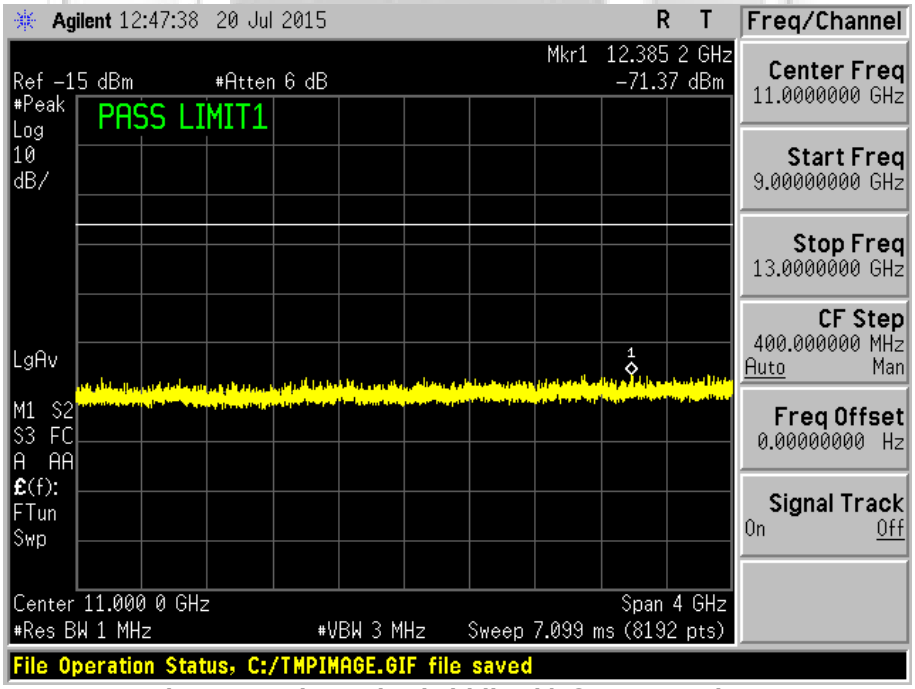


Plot 186 – Channel 6 *(middle ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

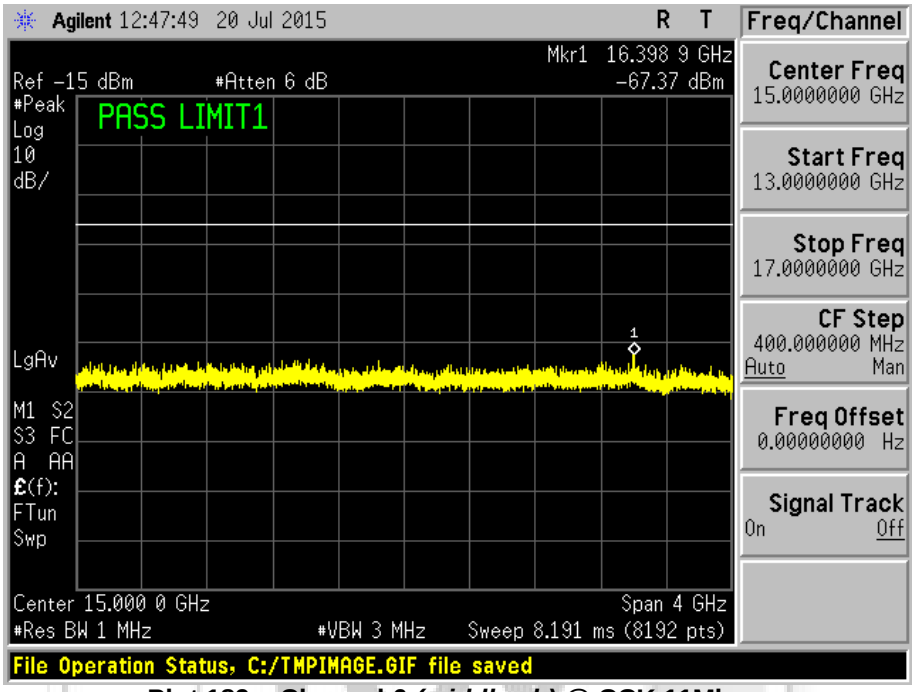


Plot 187 – Channel 6 *(middle ch)* @ CCK 11Mbps

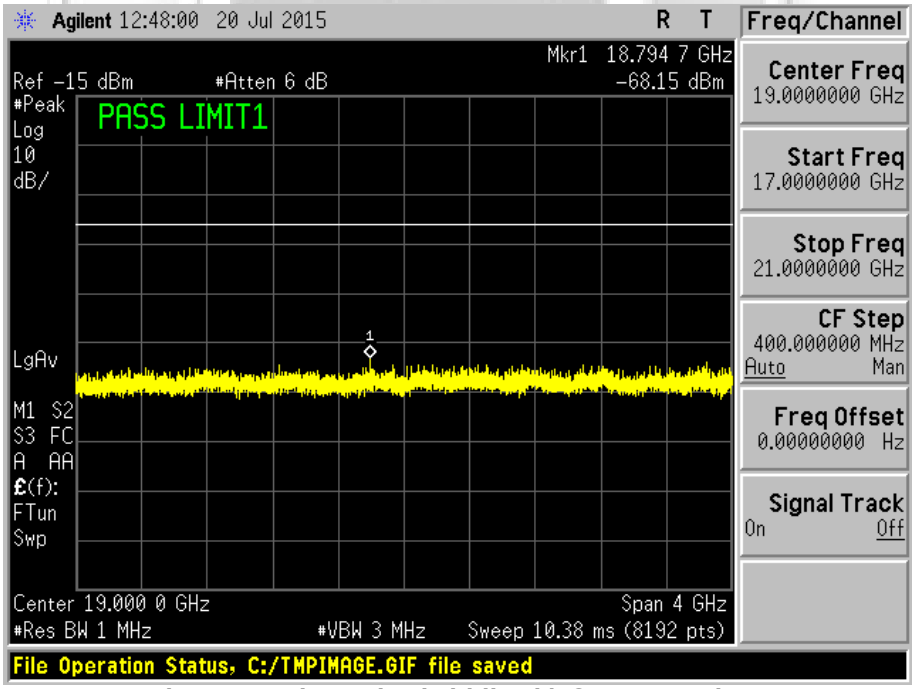


Plot 188 – Channel 6 *(middle ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

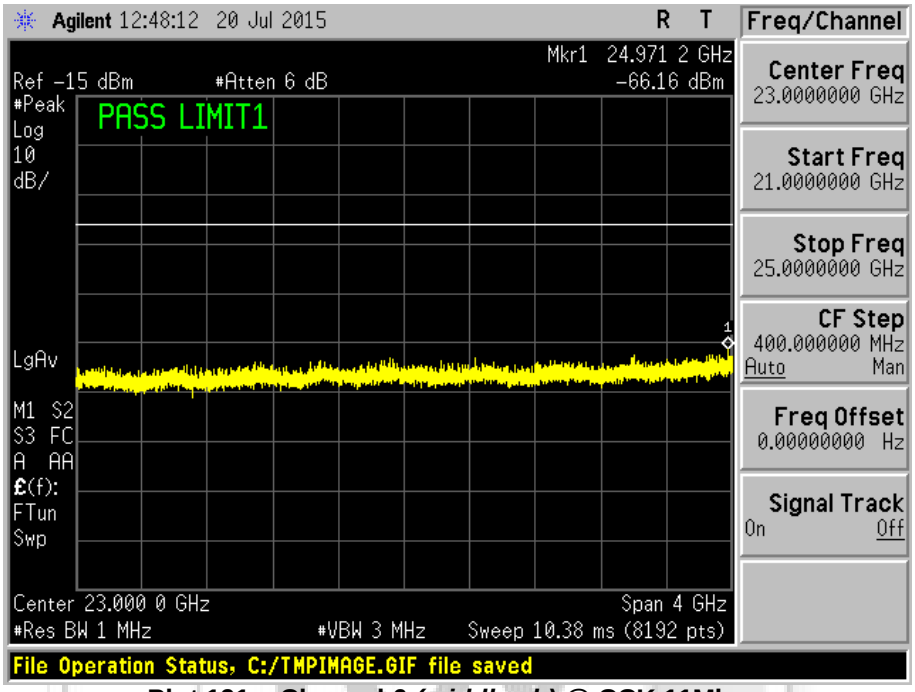


Plot 189 – Channel 6 *(middle ch)* @ CCK 11Mbps

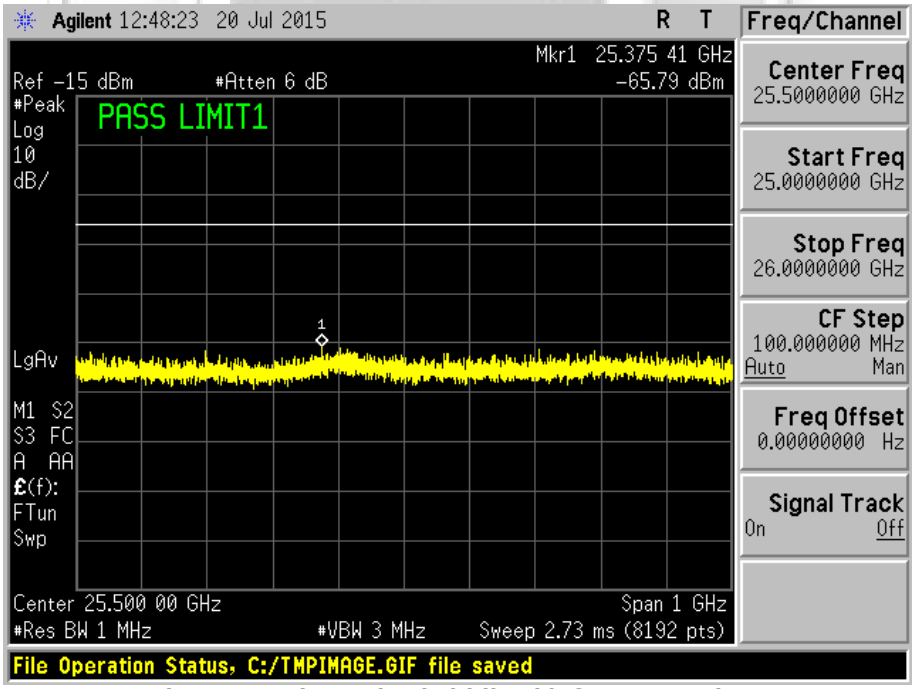


Plot 190 – Channel 6 *(middle ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

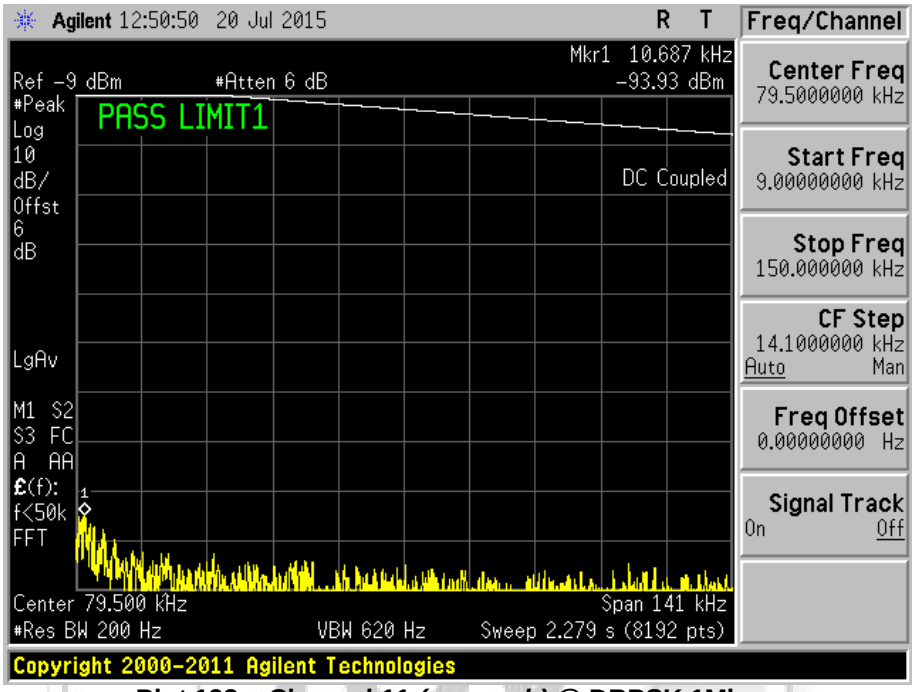


Plot 191 – Channel 6 *(middle ch)* @ CCK 11Mbps

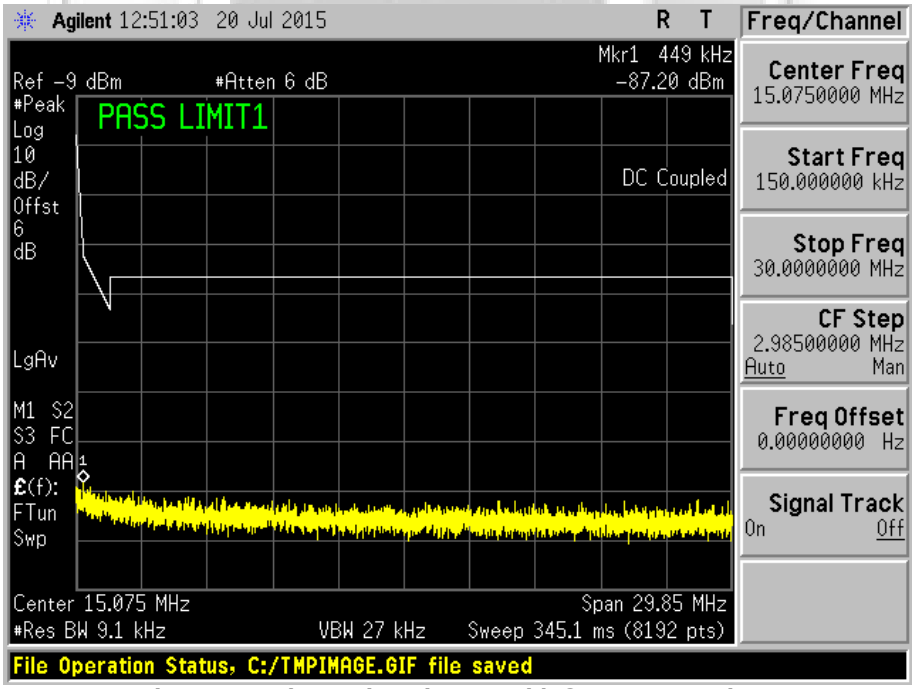


Plot 192 – Channel 6 *(middle ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

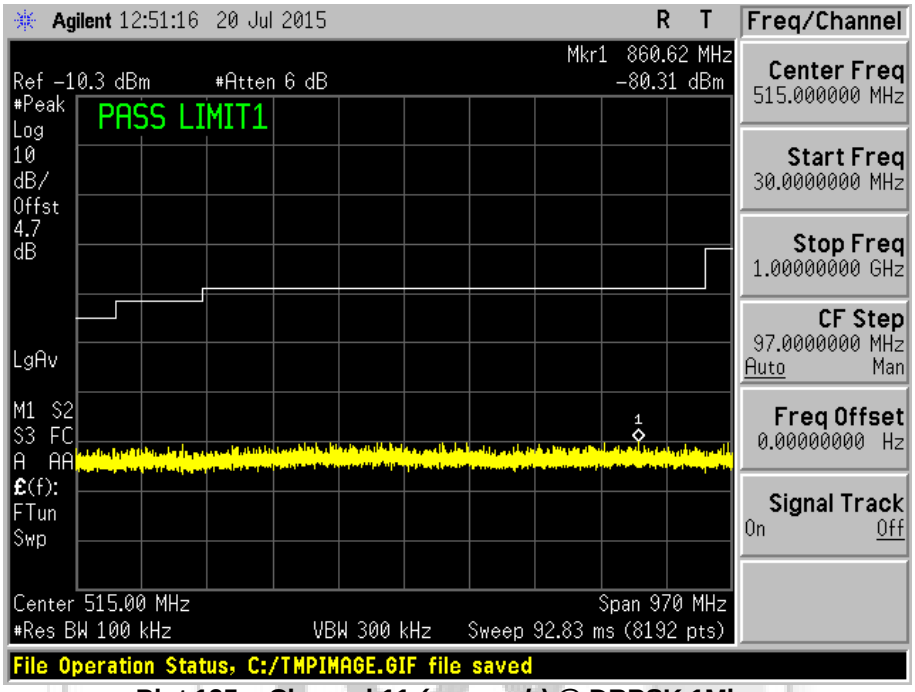


Plot 193 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

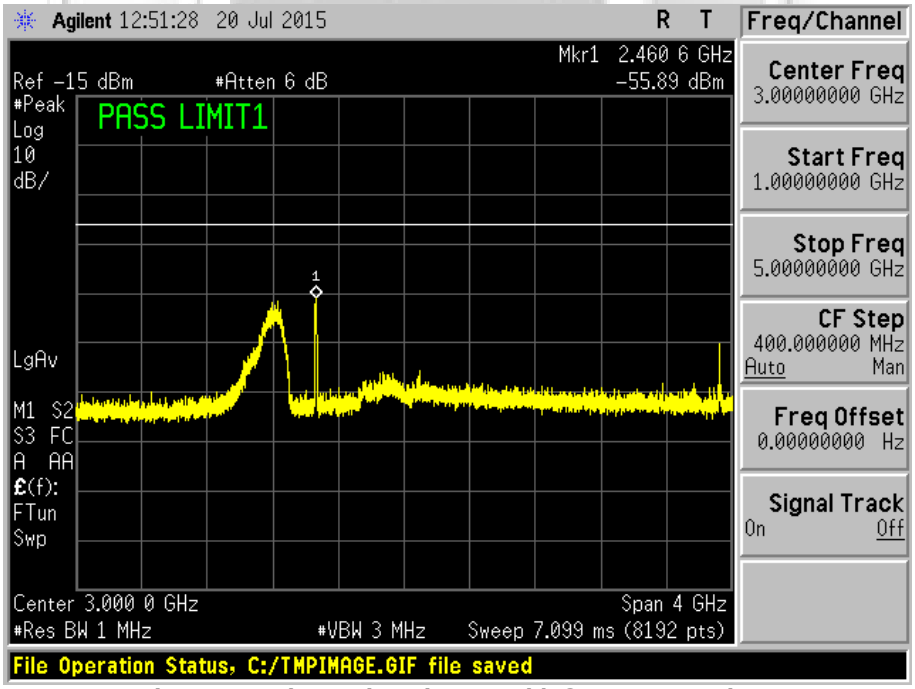


Plot 194 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

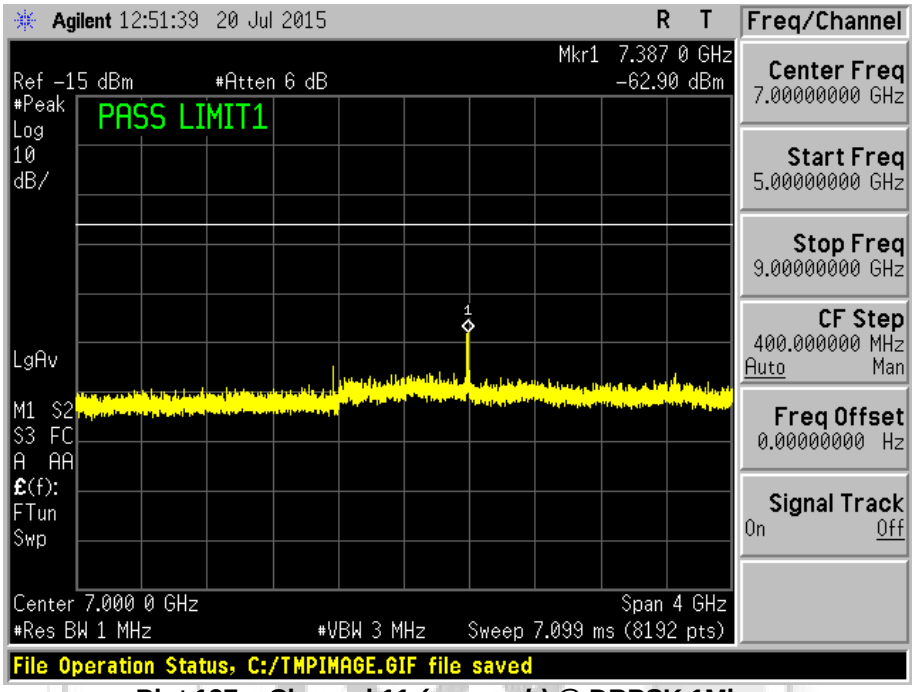


Plot 195 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

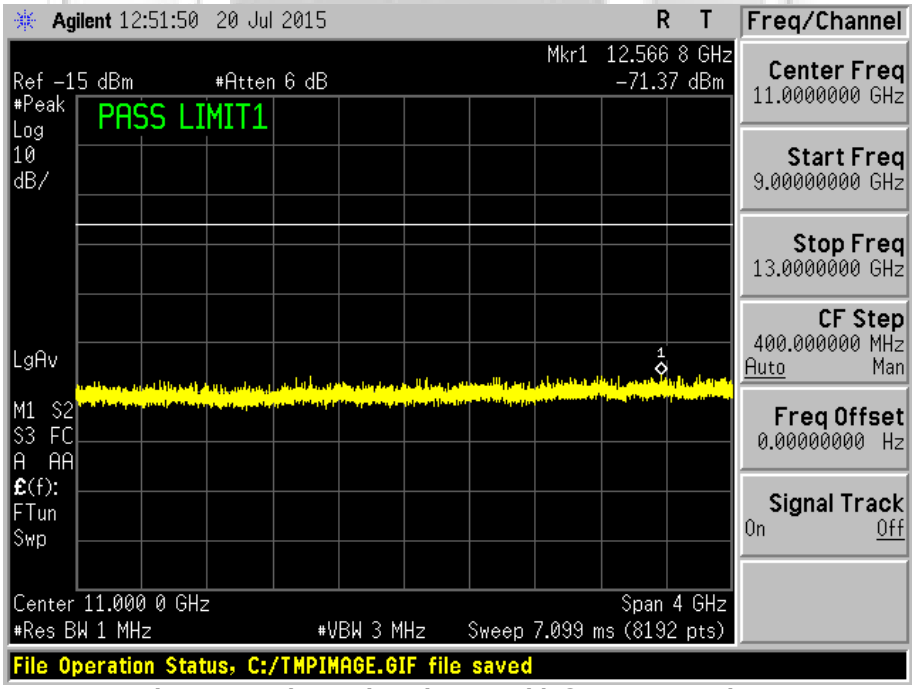


Plot 196 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

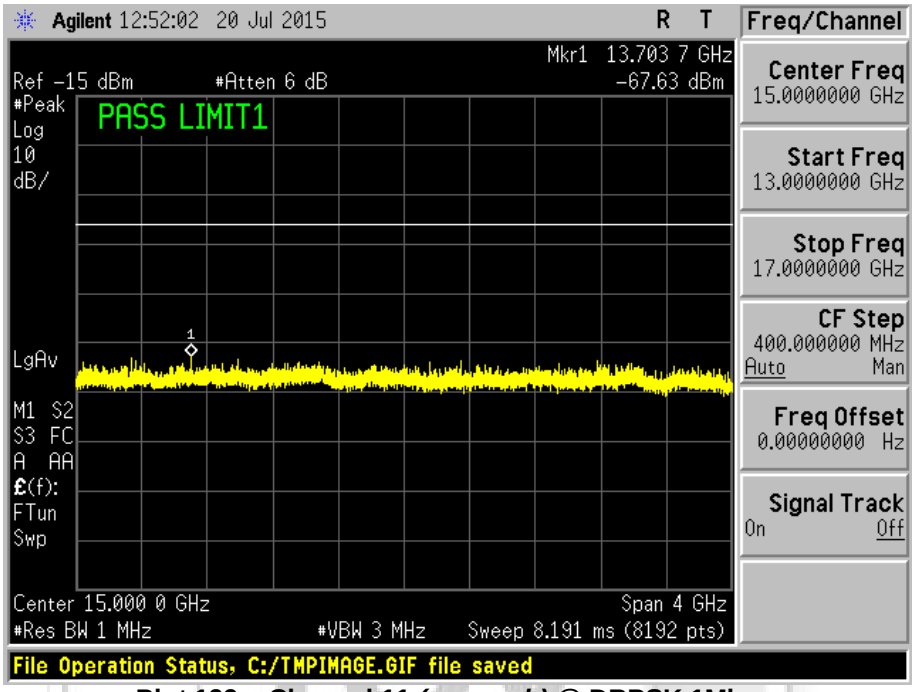


Plot 197 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

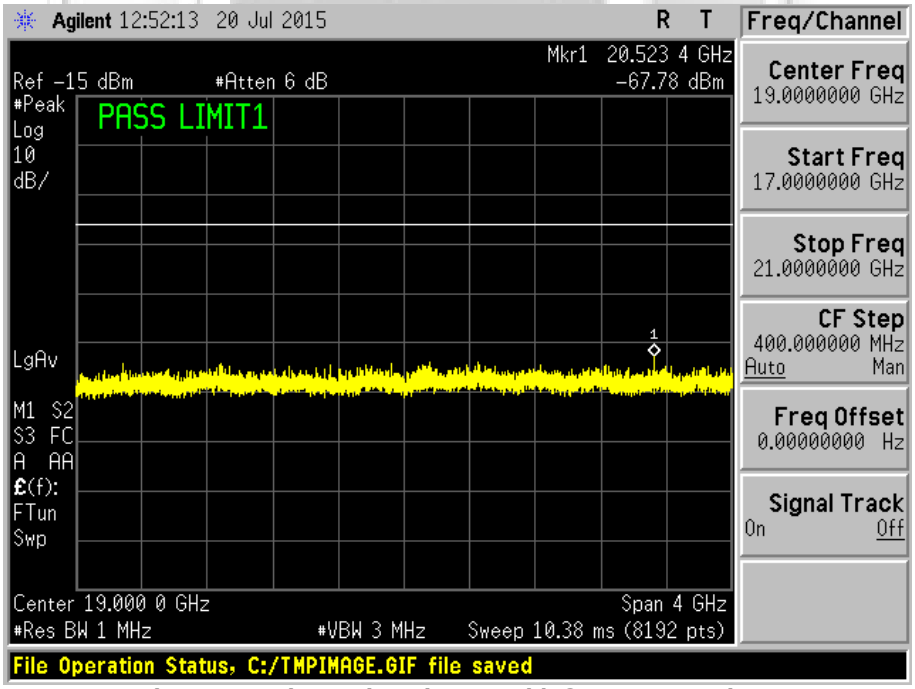


Plot 198 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

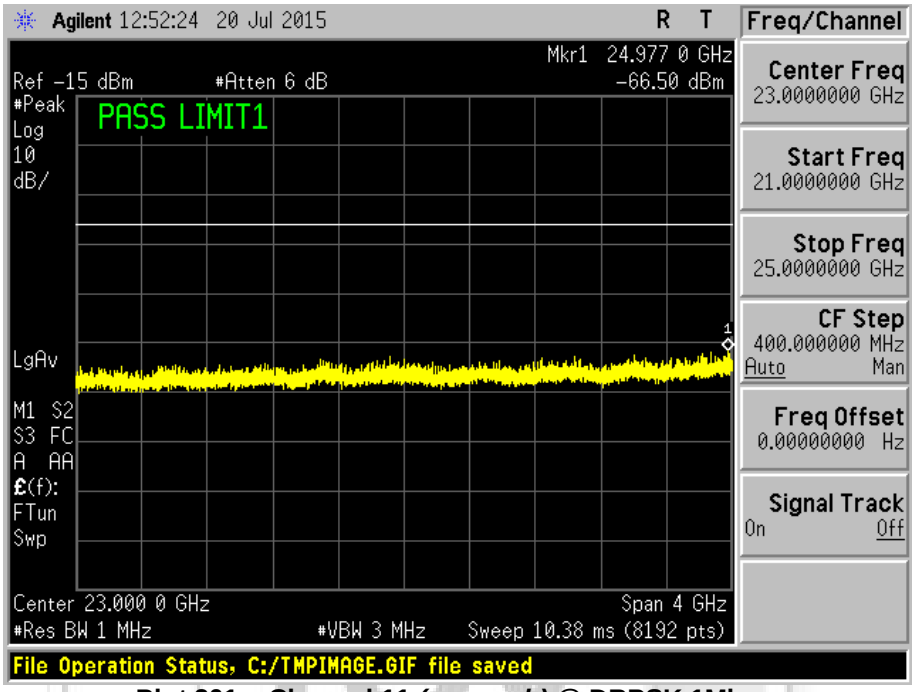


Plot 199 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

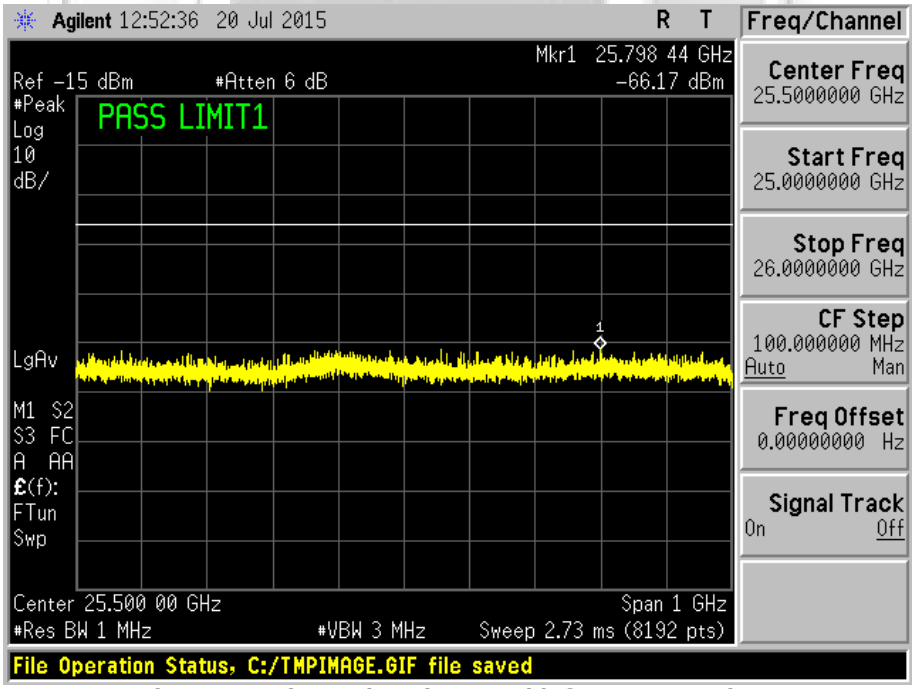


Plot 200 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

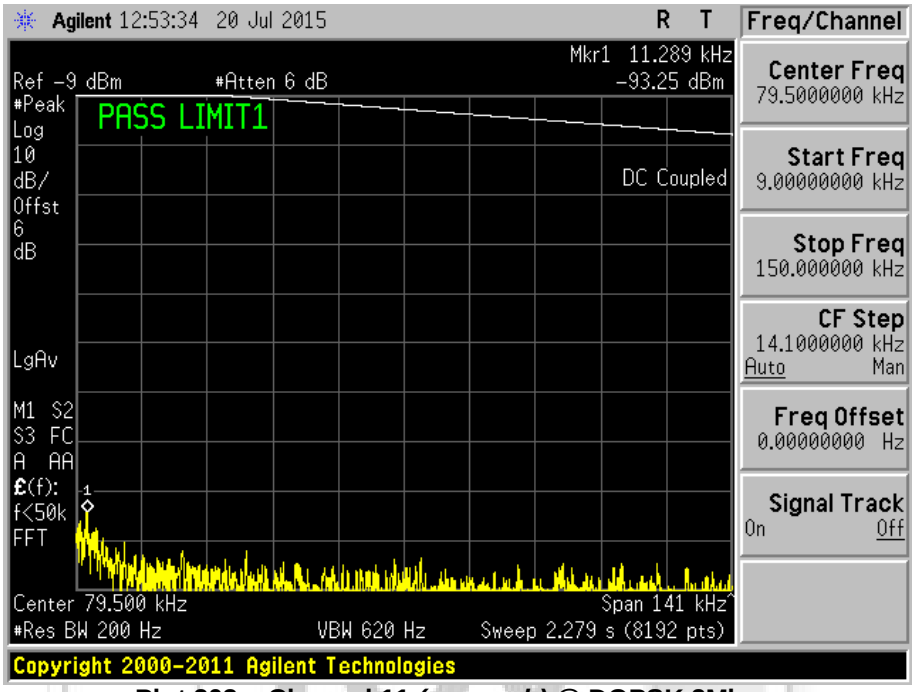


Plot 201 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

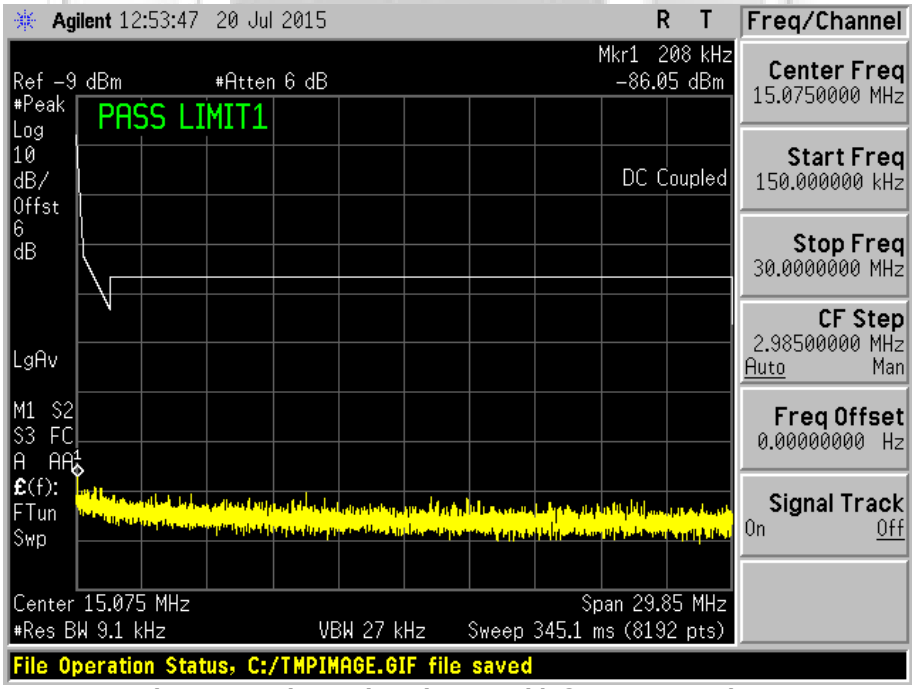


Plot 202 – Channel 11 *(upper ch)* @ DBPSK 1Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

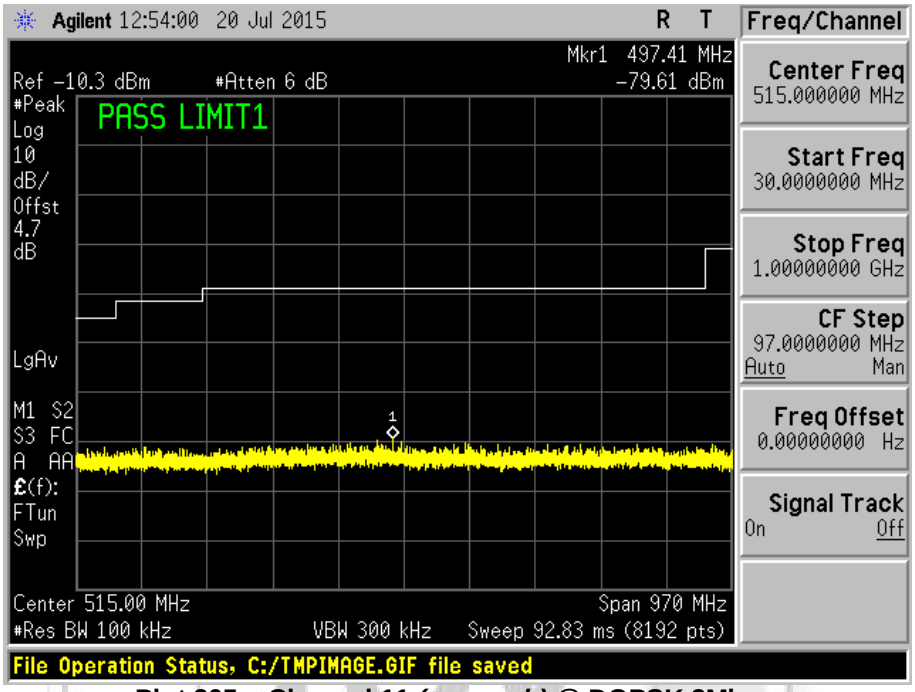


Plot 203 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

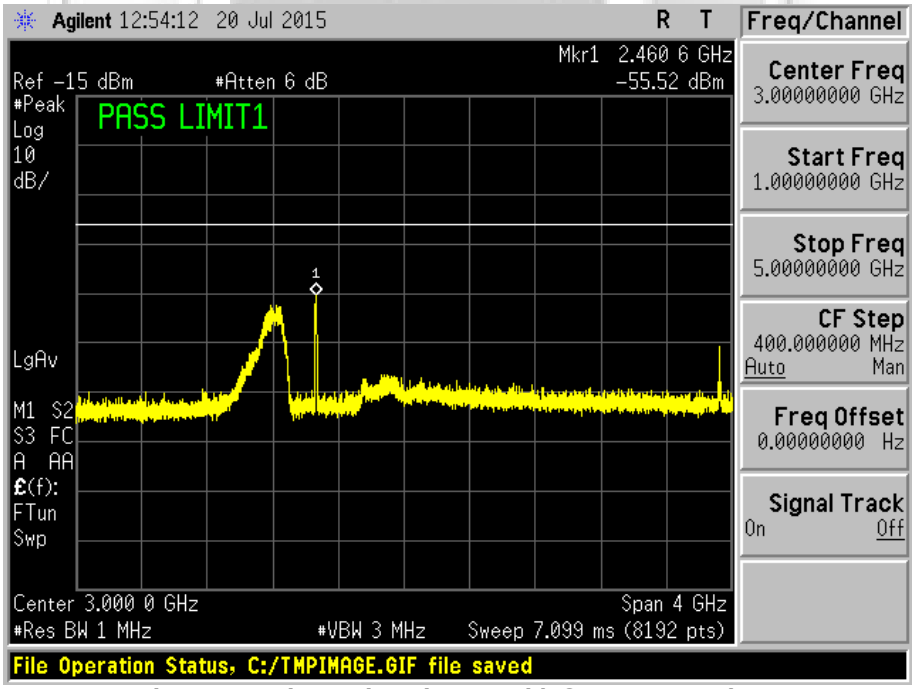


Plot 204 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

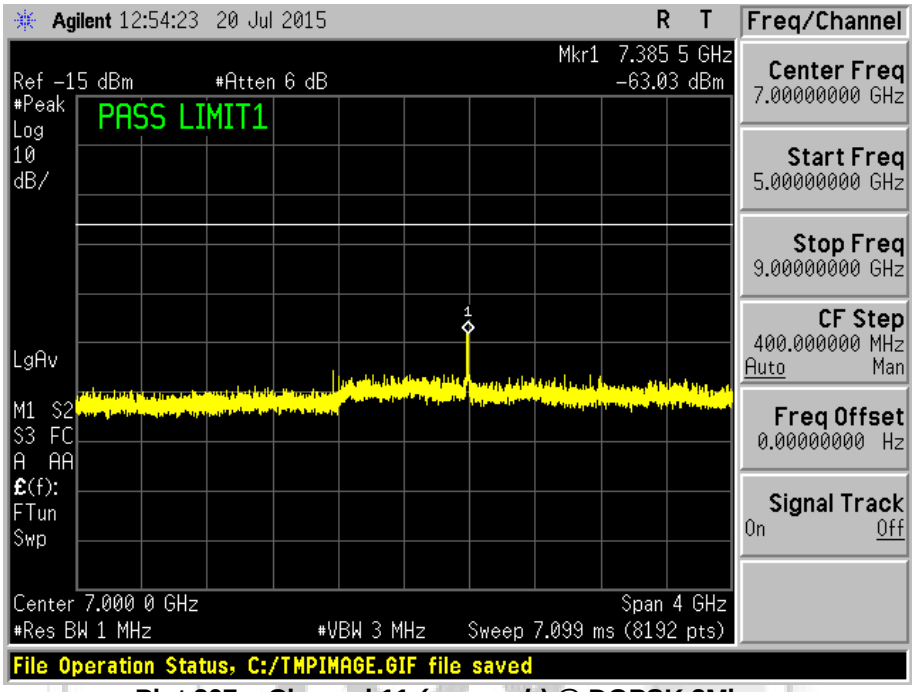


Plot 205 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

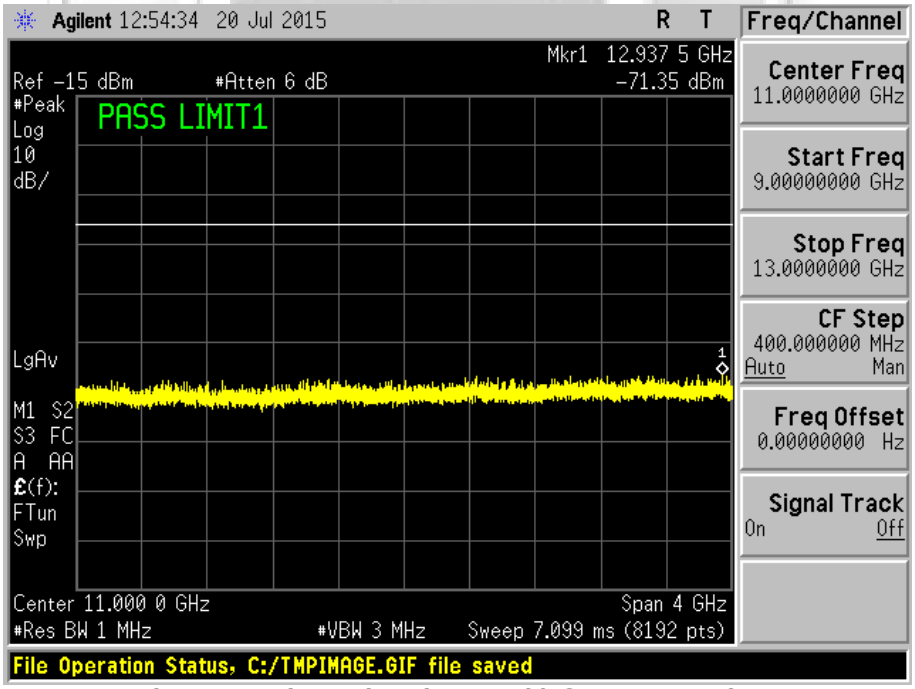


Plot 206 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

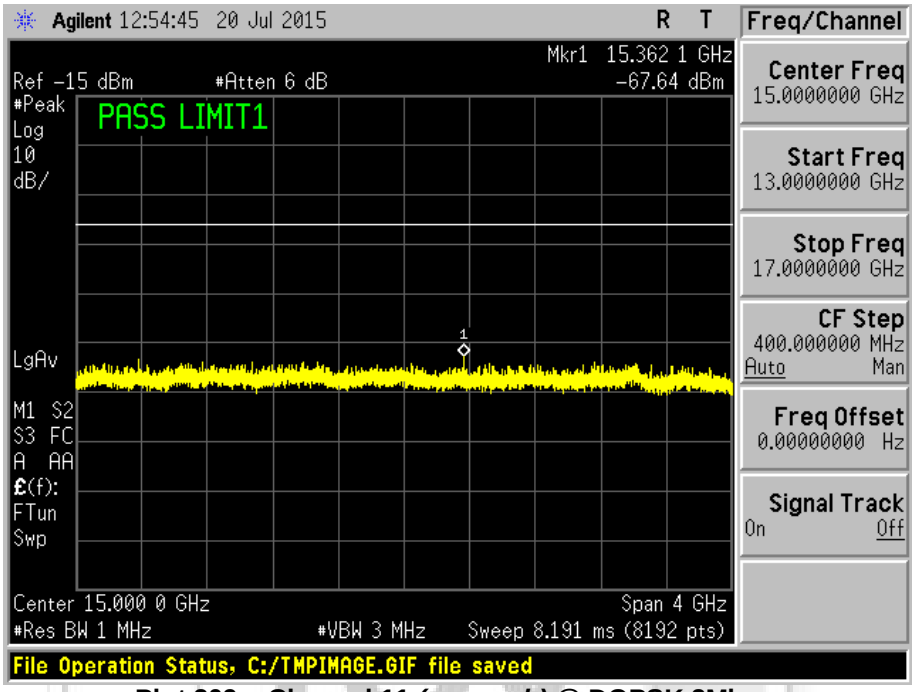


Plot 207 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

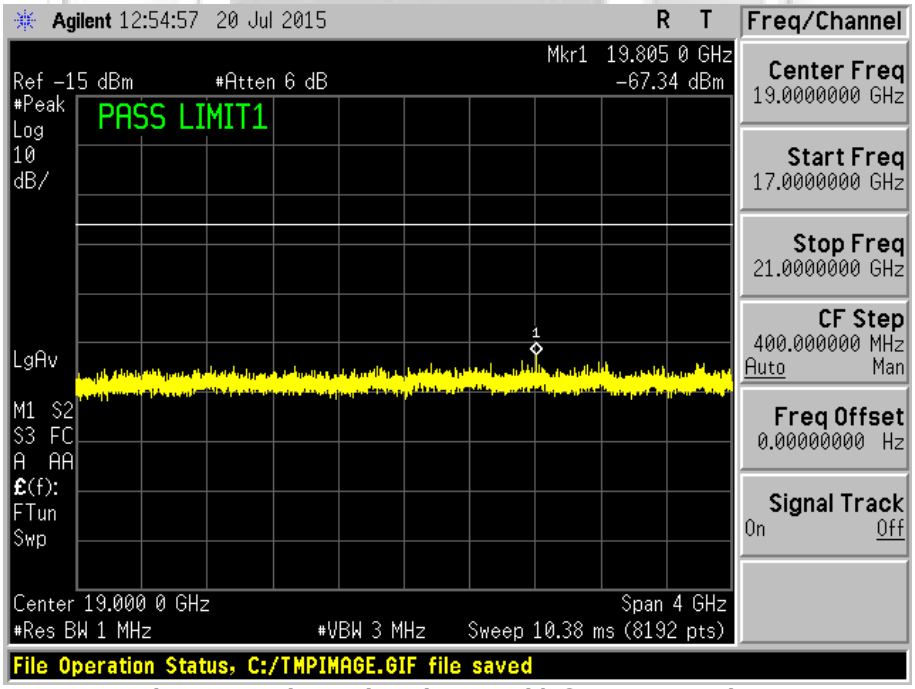


Plot 208 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

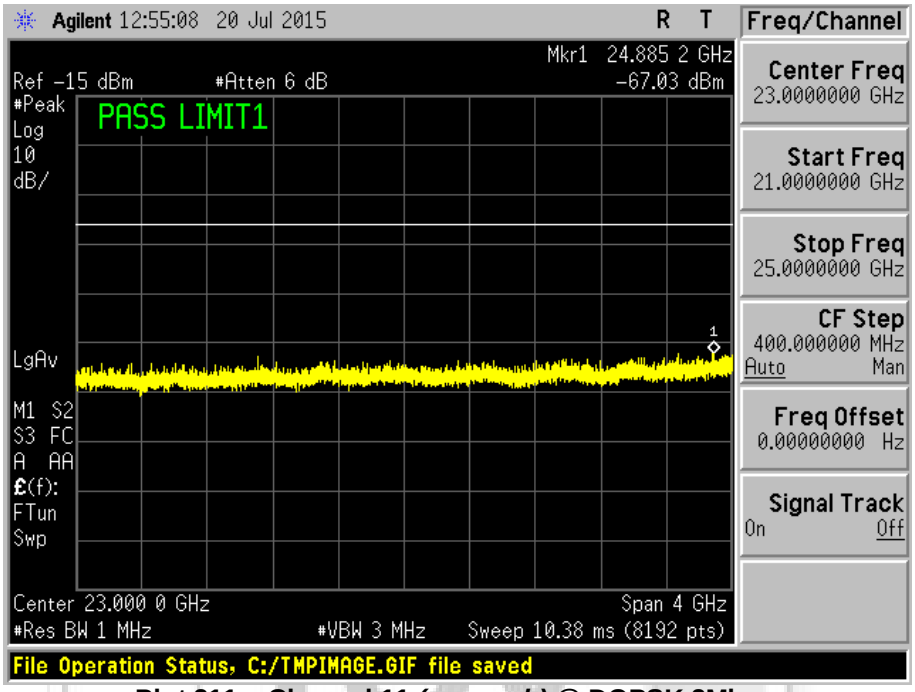


Plot 209 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

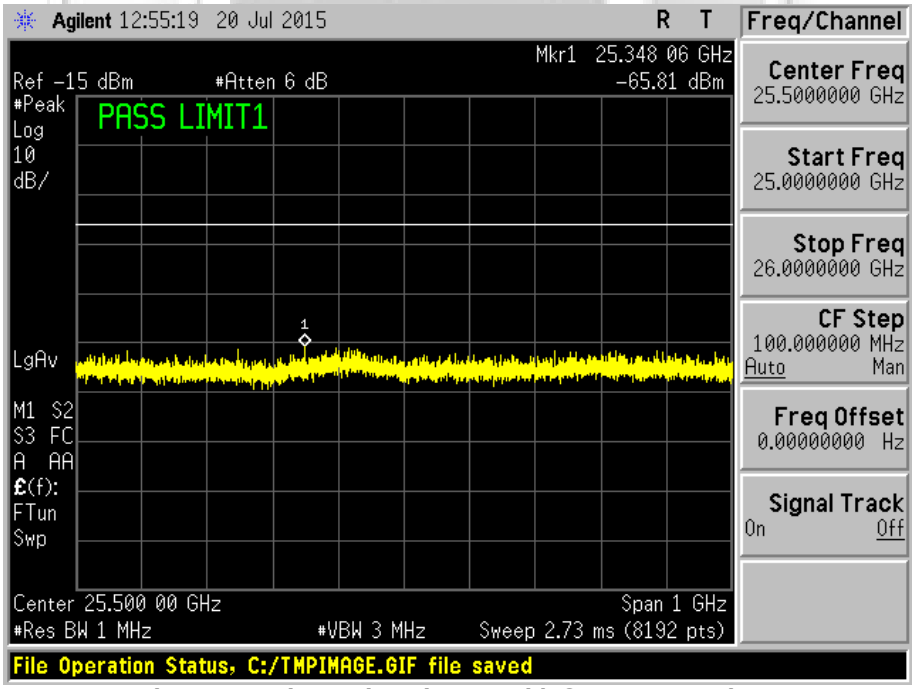


Plot 210 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

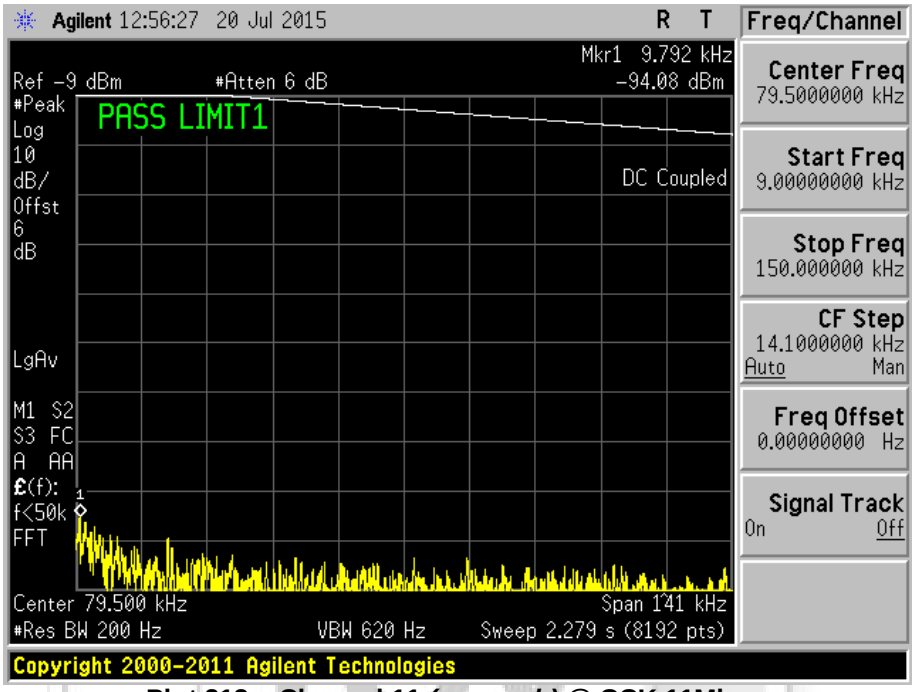


Plot 211 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

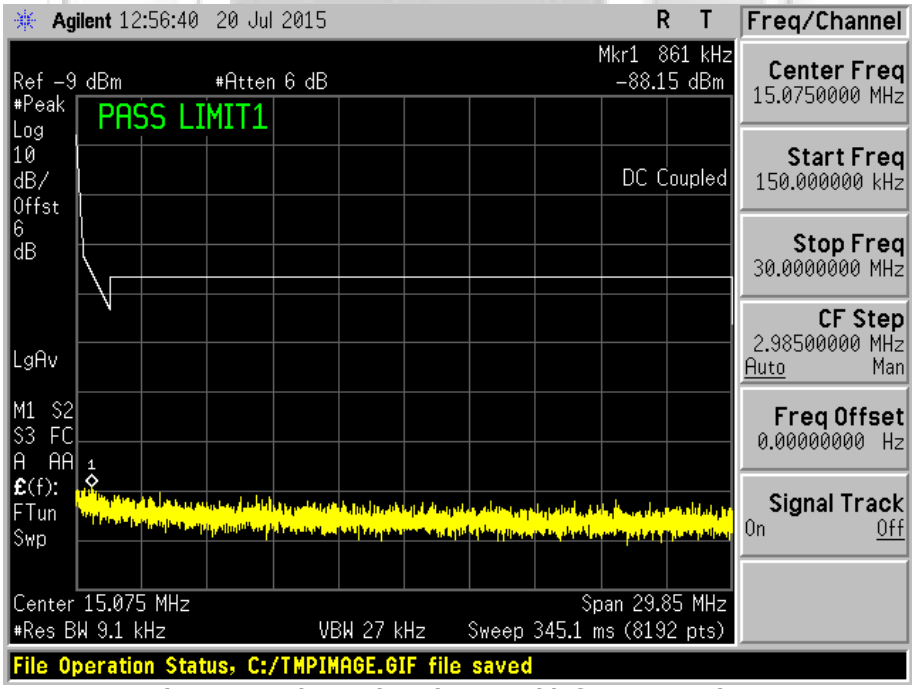


Plot 212 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

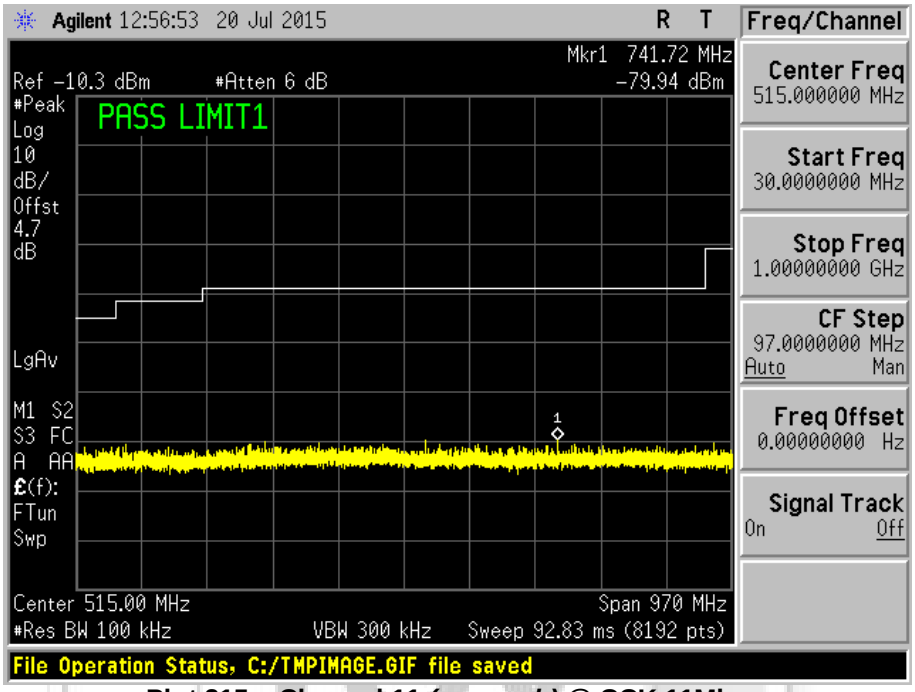


Plot 213 – Channel 11 *(upper ch)* @ CCK 11Mbps

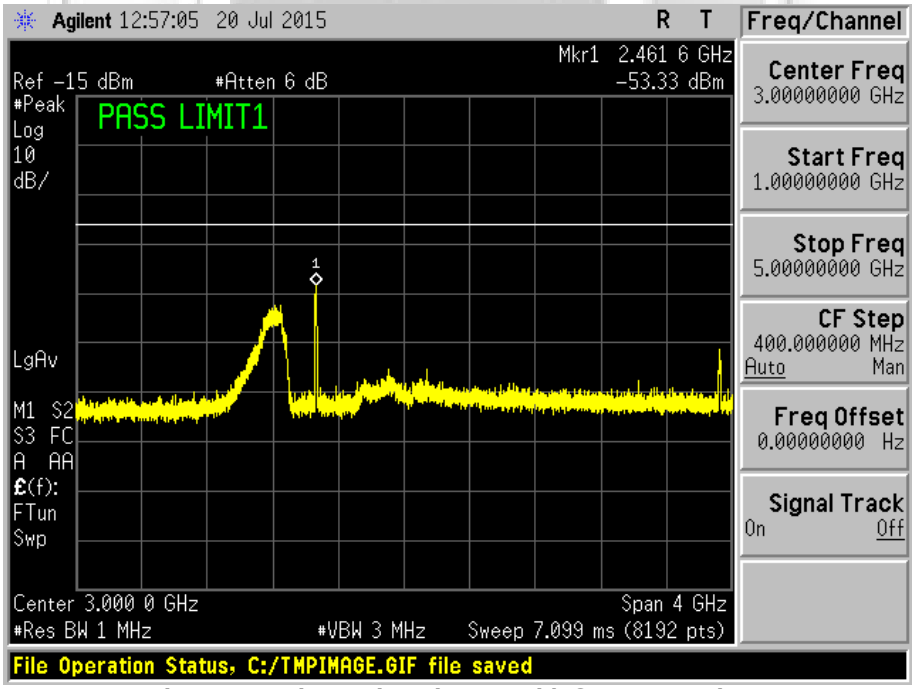


Plot 214 – Channel 11 *(upper ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

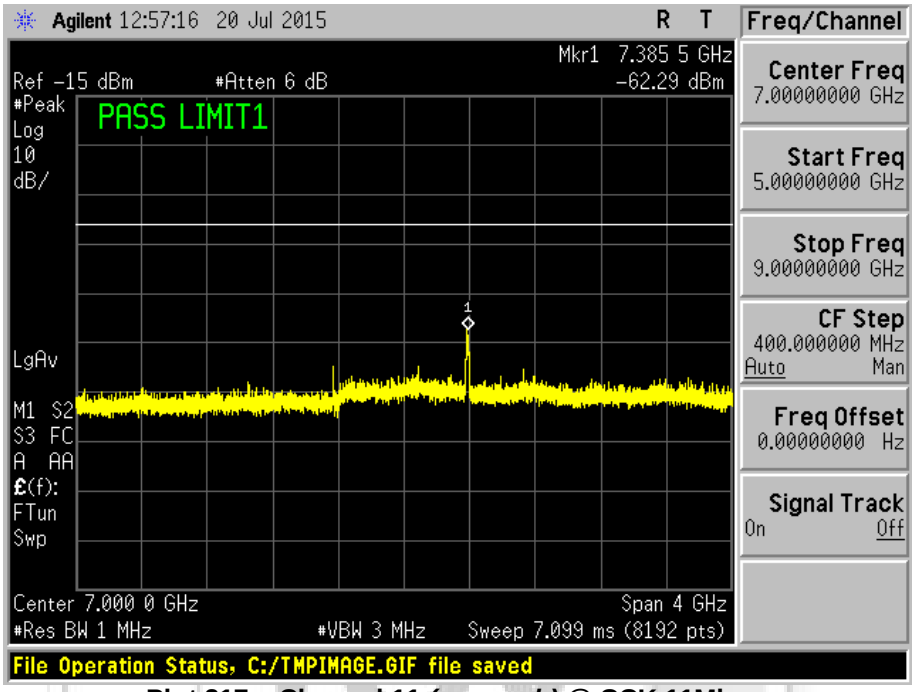


Plot 215 – Channel 11 *(upper ch)* @ CCK 11Mbps

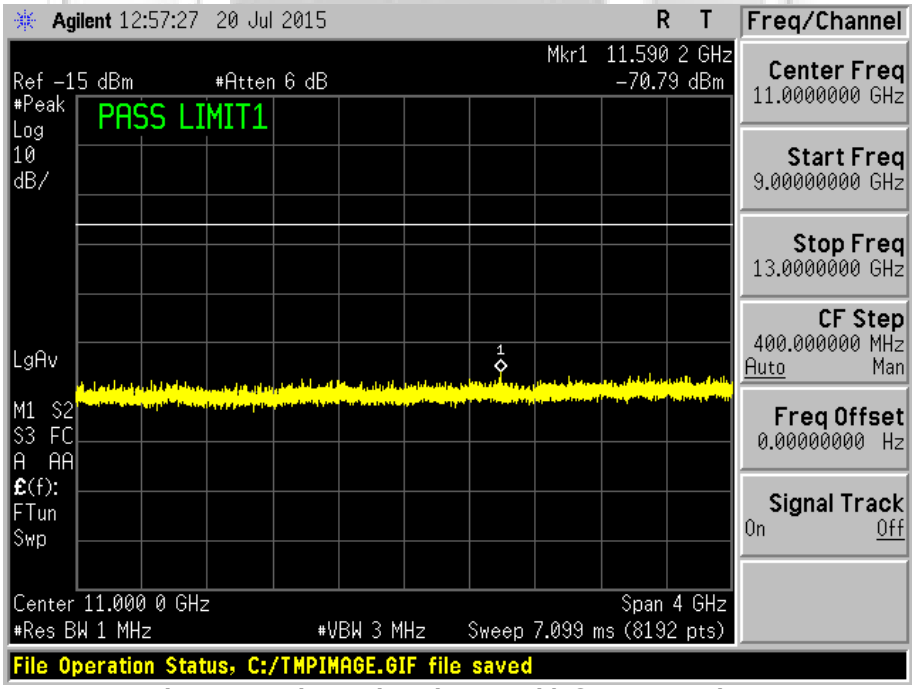


Plot 216 – Channel 11 *(upper ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

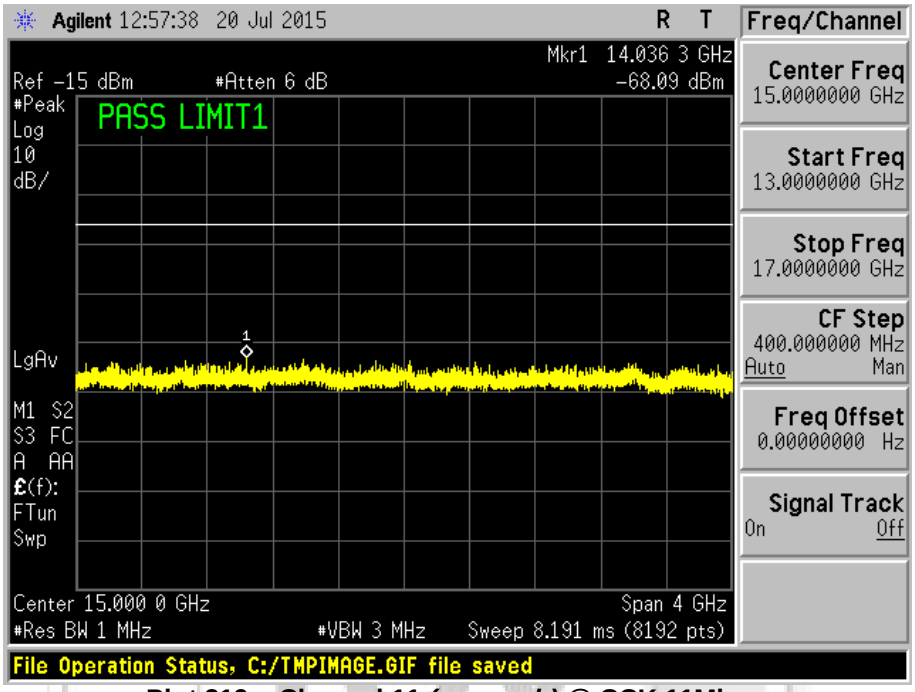


Plot 217 – Channel 11 *(upper ch)* @ CCK 11Mbps

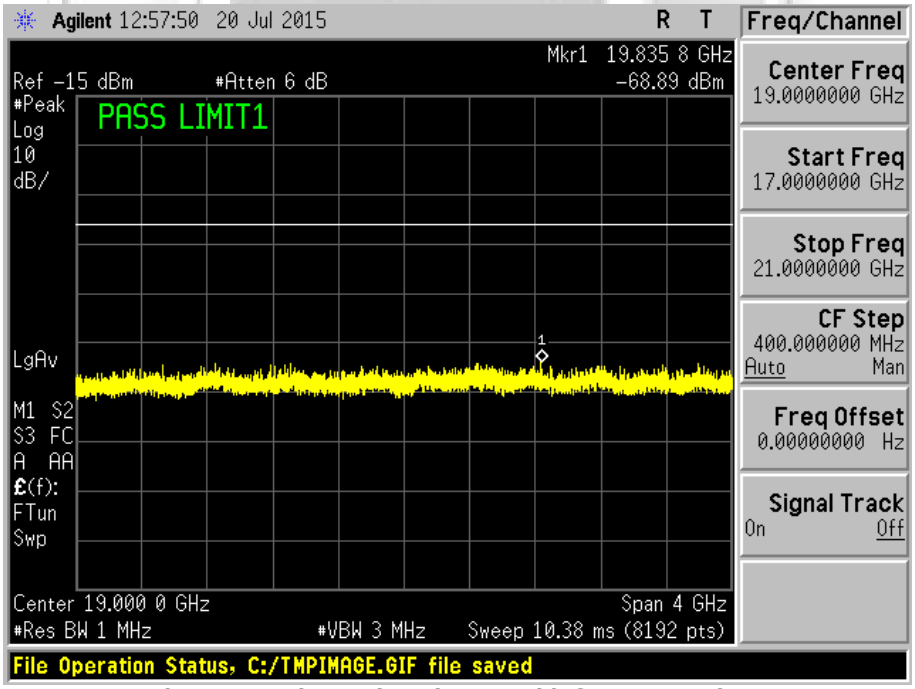


Plot 218 – Channel 11 *(upper ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

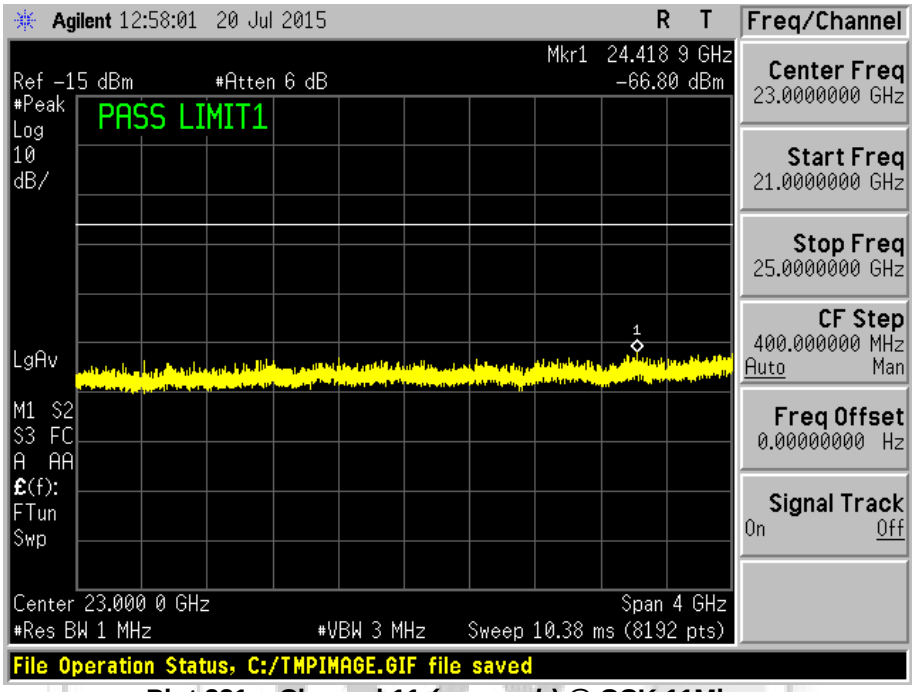


Plot 219 – Channel 11 *(upper ch)* @ CCK 11Mbps

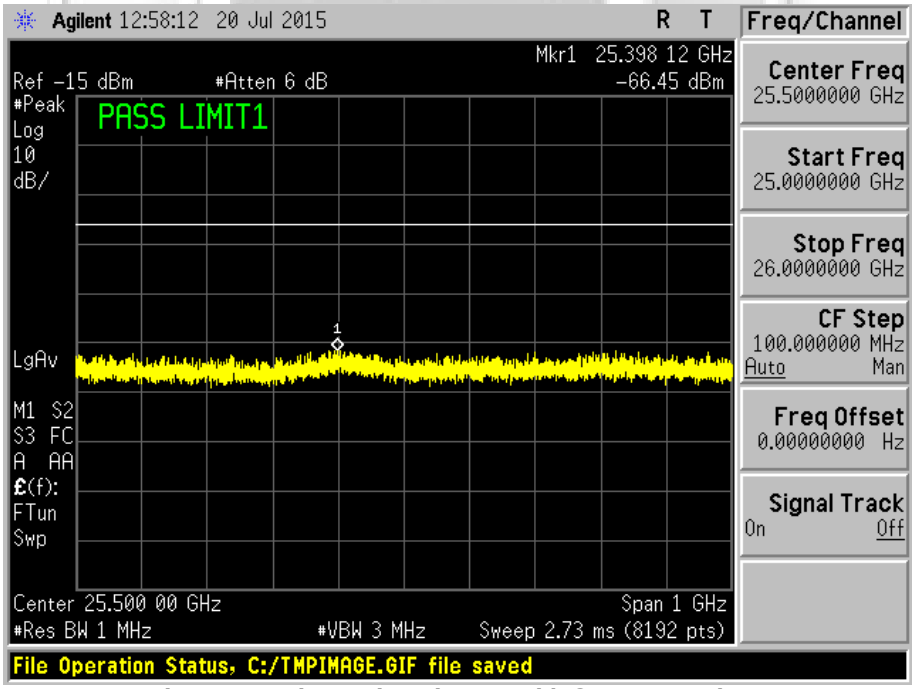


Plot 220 – Channel 11 *(upper ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11b

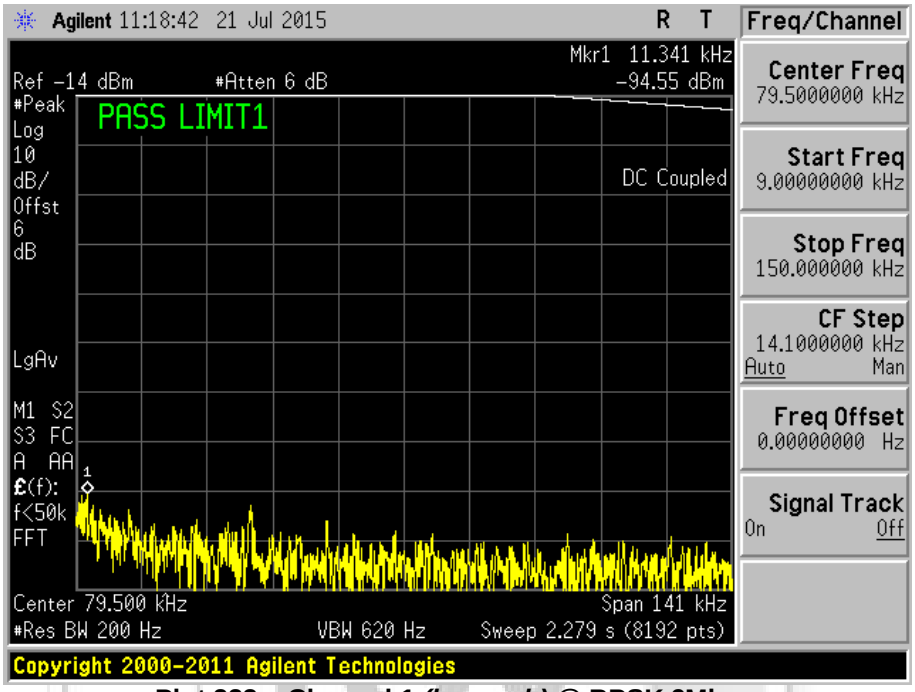


Plot 221 – Channel 11 *(upper ch)* @ CCK 11Mbps

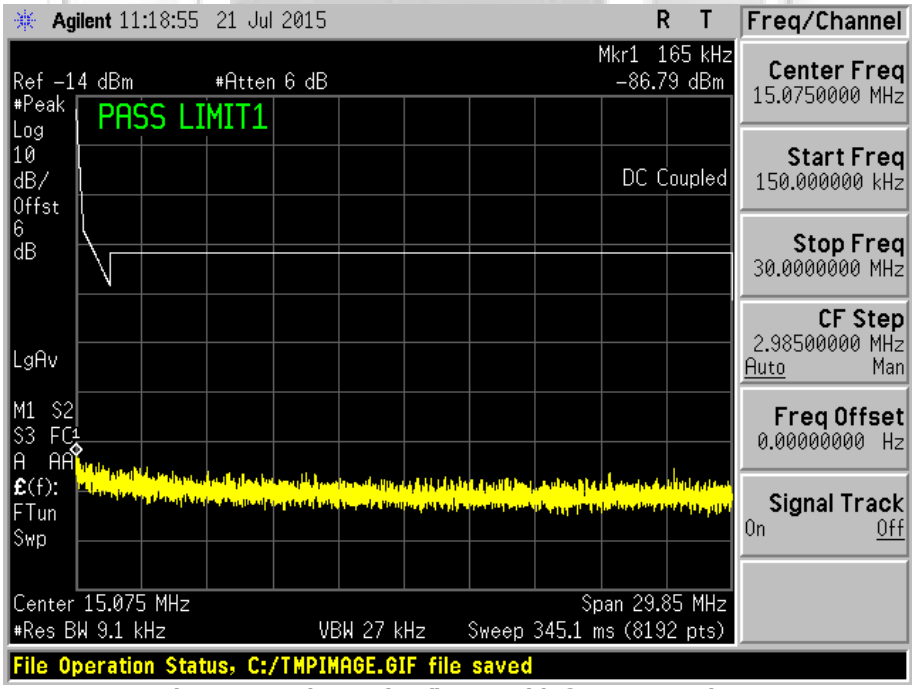


Plot 222 – Channel 11 *(upper ch)* @ CCK 11Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

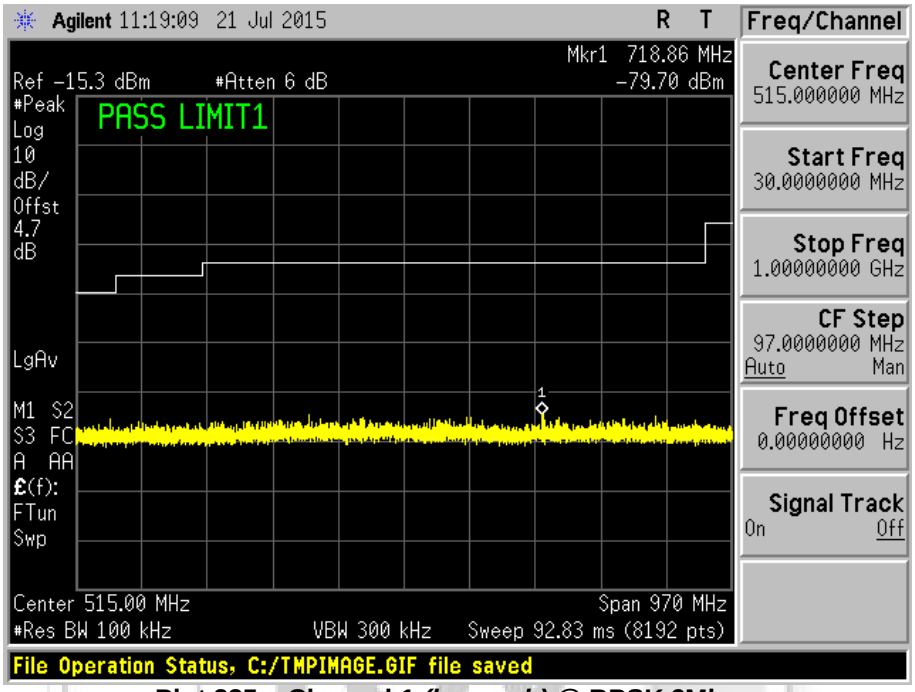


Plot 223 – Channel 1 *(lower ch)* @ BPSK 9Mbps

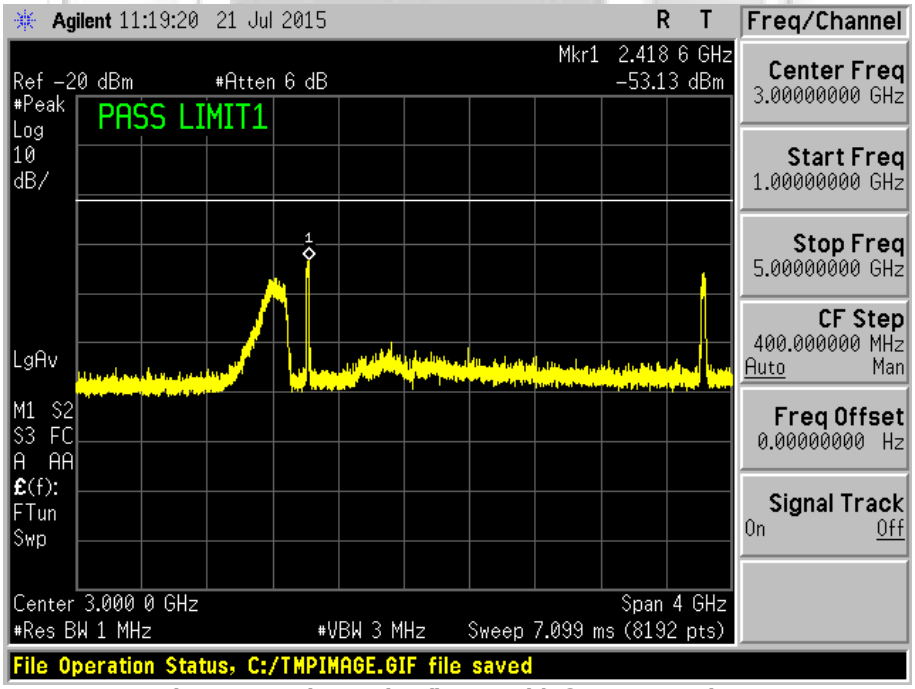


Plot 224 – Channel 1 *(lower ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

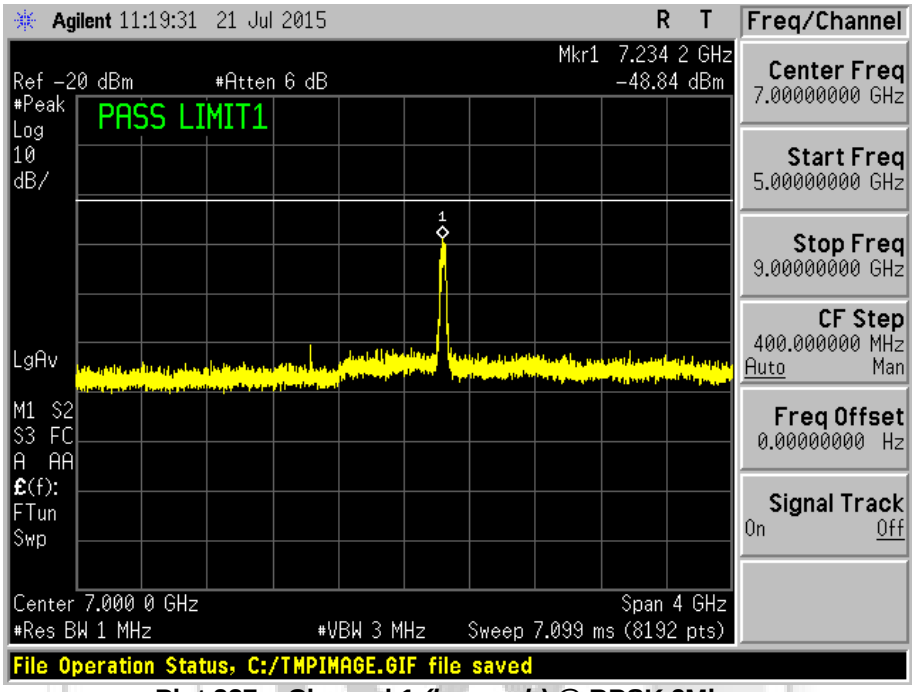


Plot 225 – Channel 1 *(lower ch)* @ BPSK 9Mbps

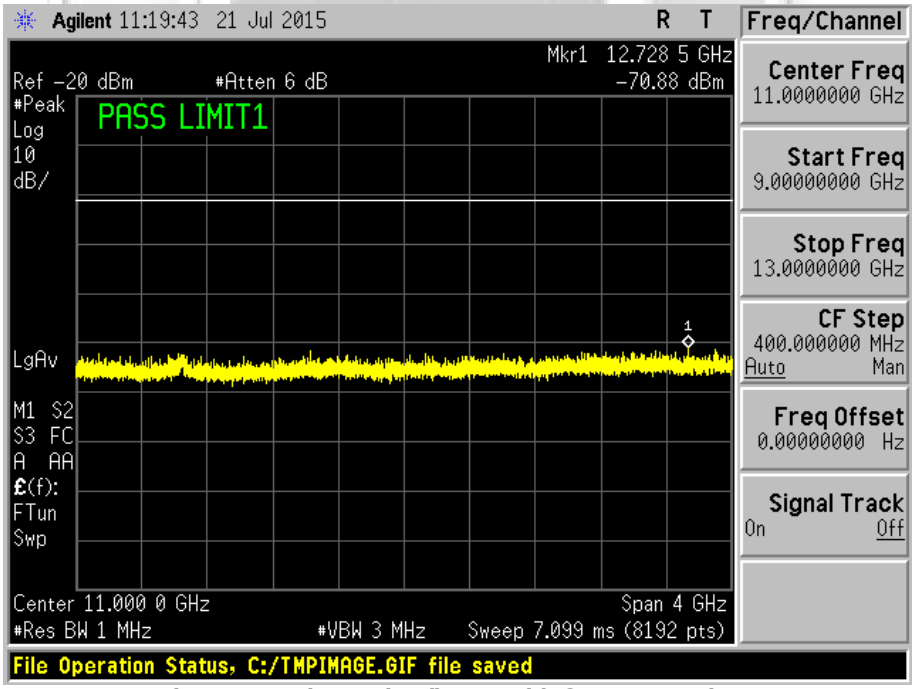


Plot 226 – Channel 1 *(lower ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

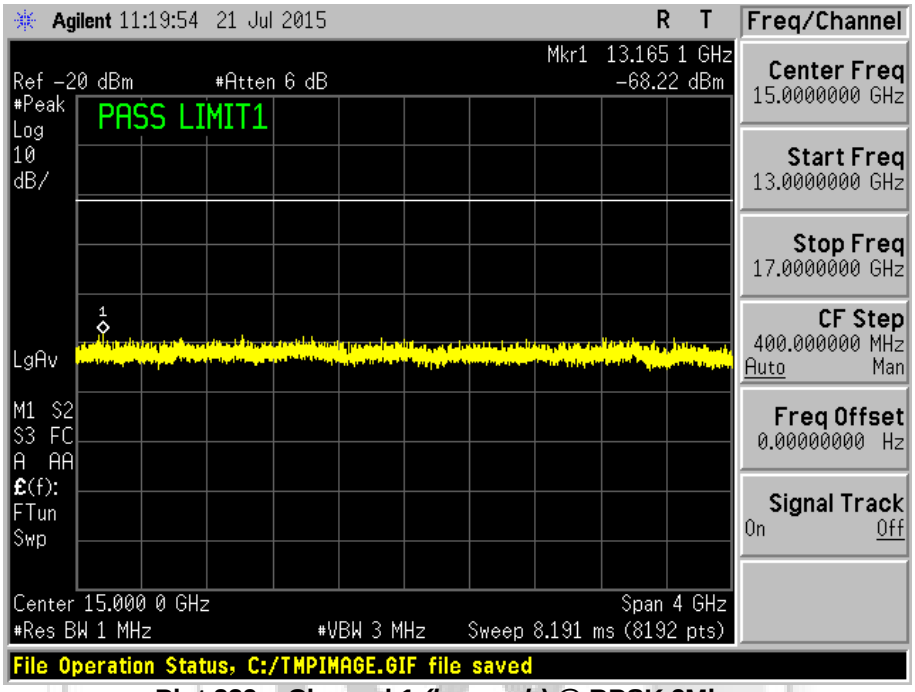


Plot 227 – Channel 1 *(lower ch)* @ BPSK 9Mbps

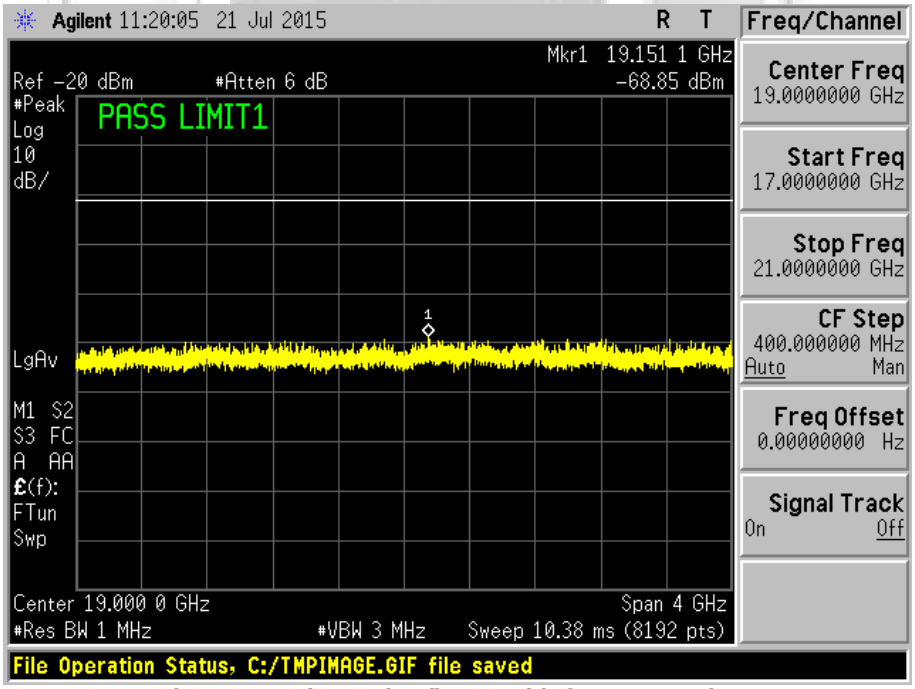


Plot 228 – Channel 1 *(lower ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

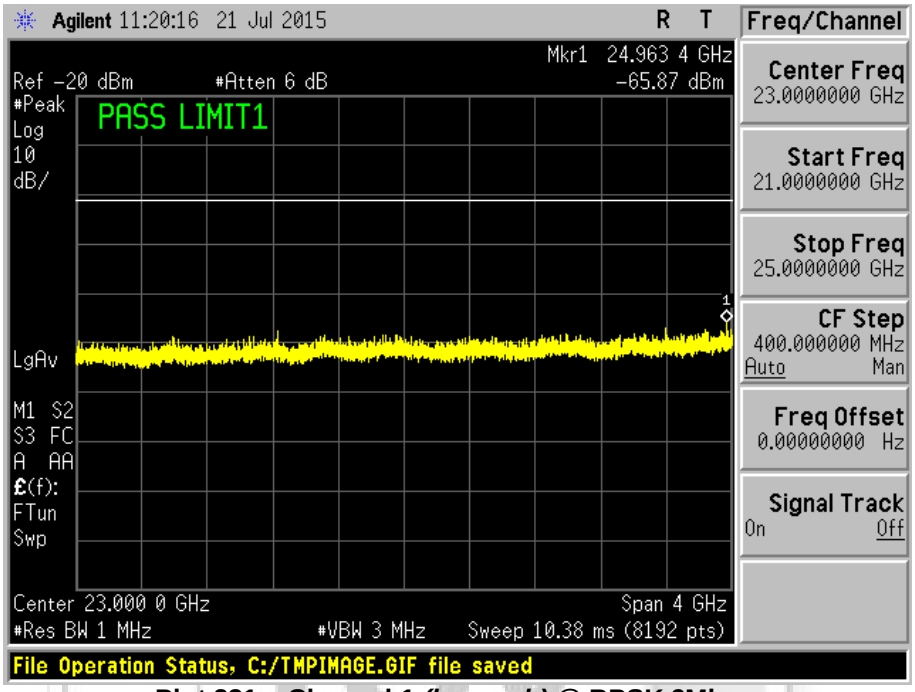


Plot 229 – Channel 1 *(lower ch)* @ BPSK 9Mbps

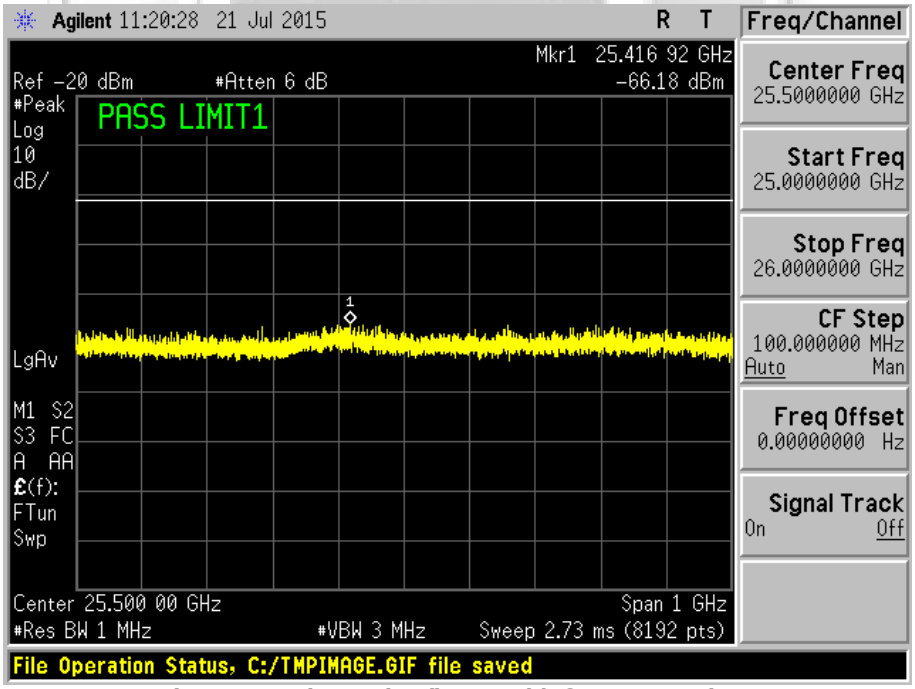


Plot 230 – Channel 1 *(lower ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

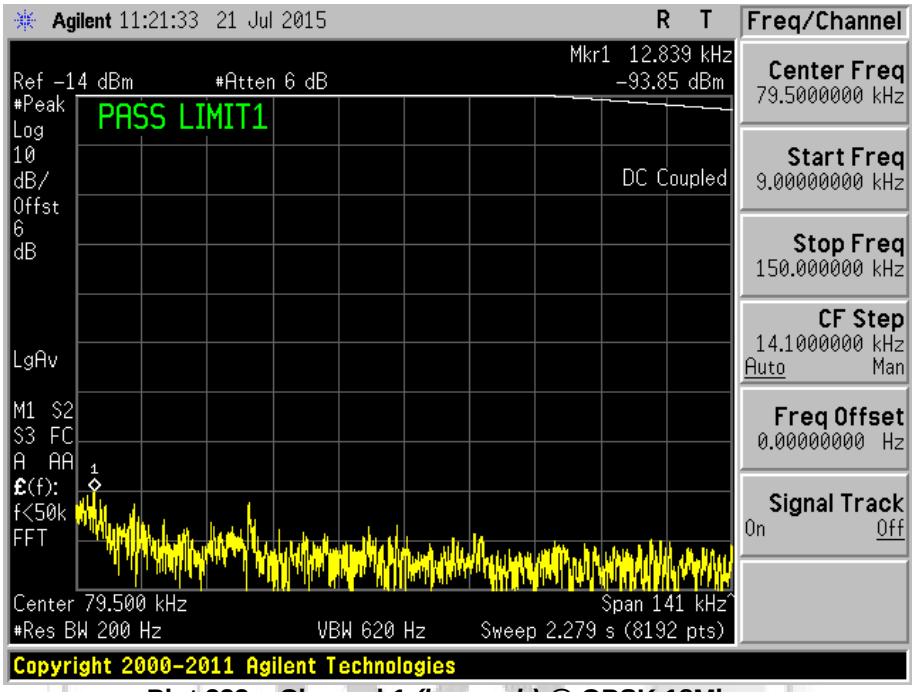


Plot 231 – Channel 1 *(lower ch)* @ BPSK 9Mbps

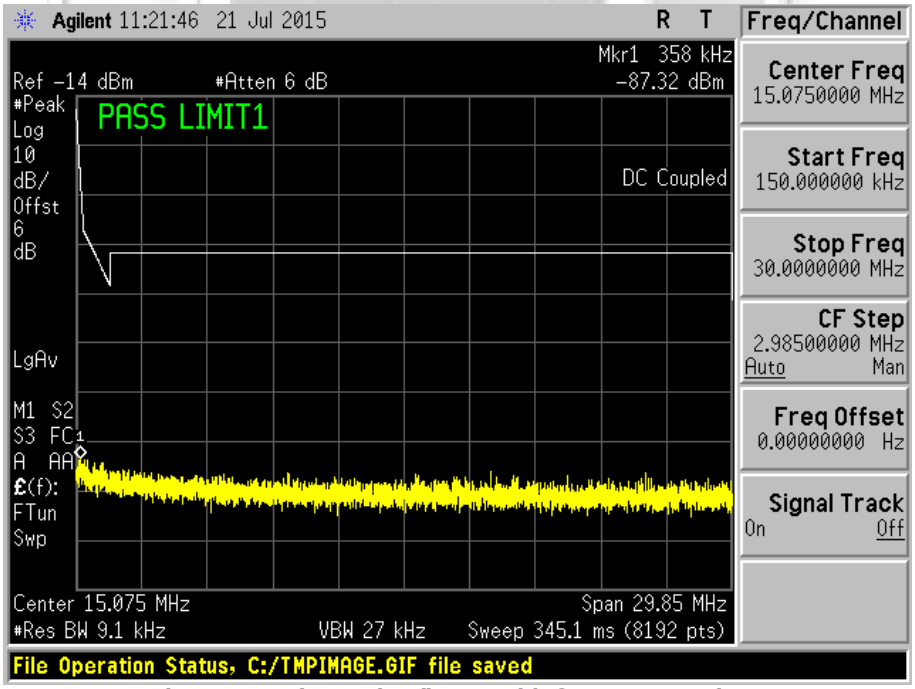


Plot 232 – Channel 1 *(lower ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

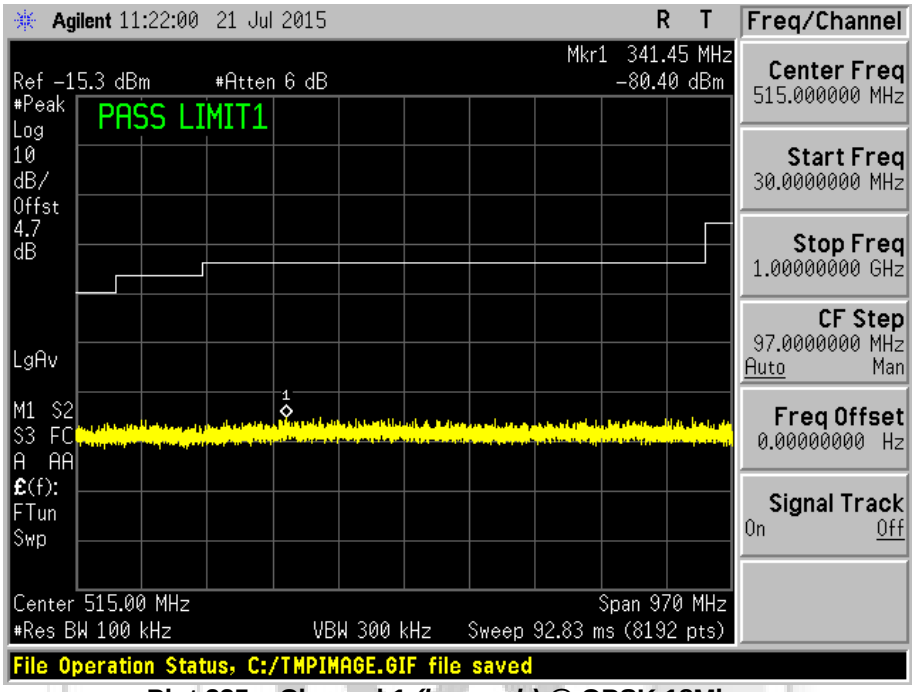


Plot 233 – Channel 1 *(lower ch)* @ QPSK 18Mbps

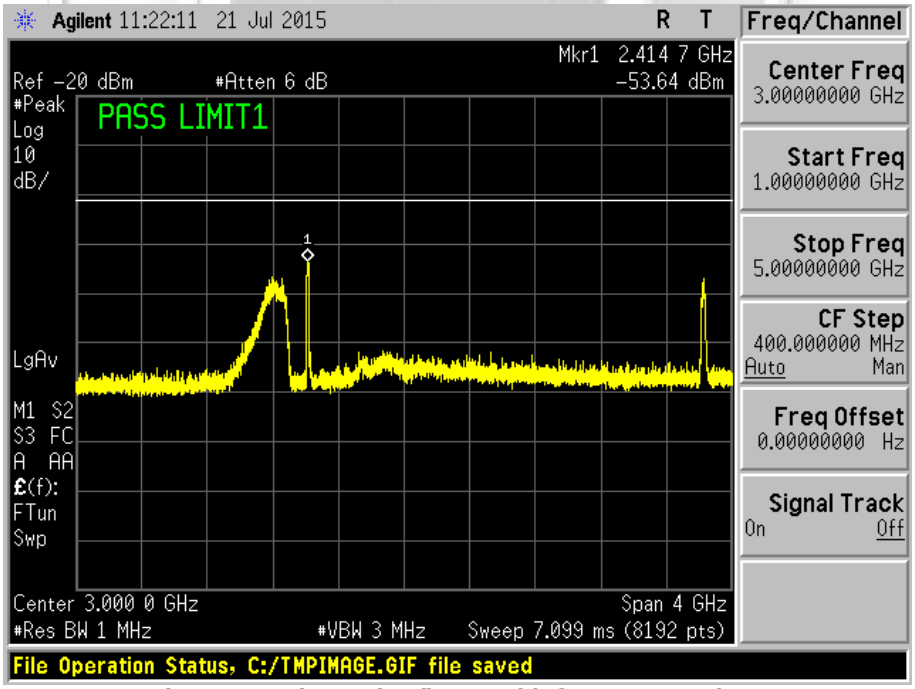


Plot 234 – Channel 1 *(lower ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

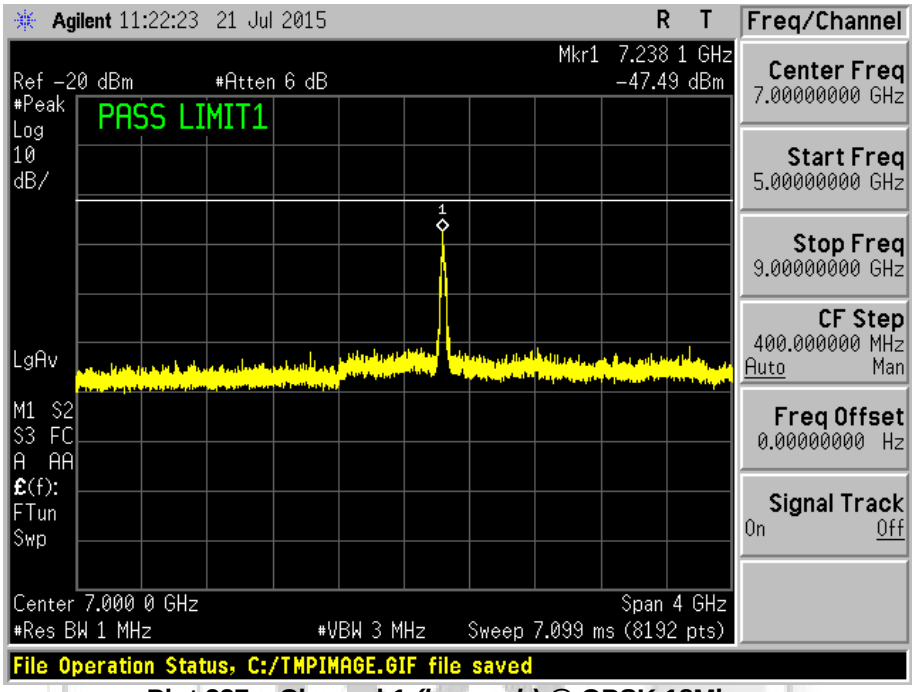


Plot 235 – Channel 1 *(lower ch)* @ QPSK 18Mbps

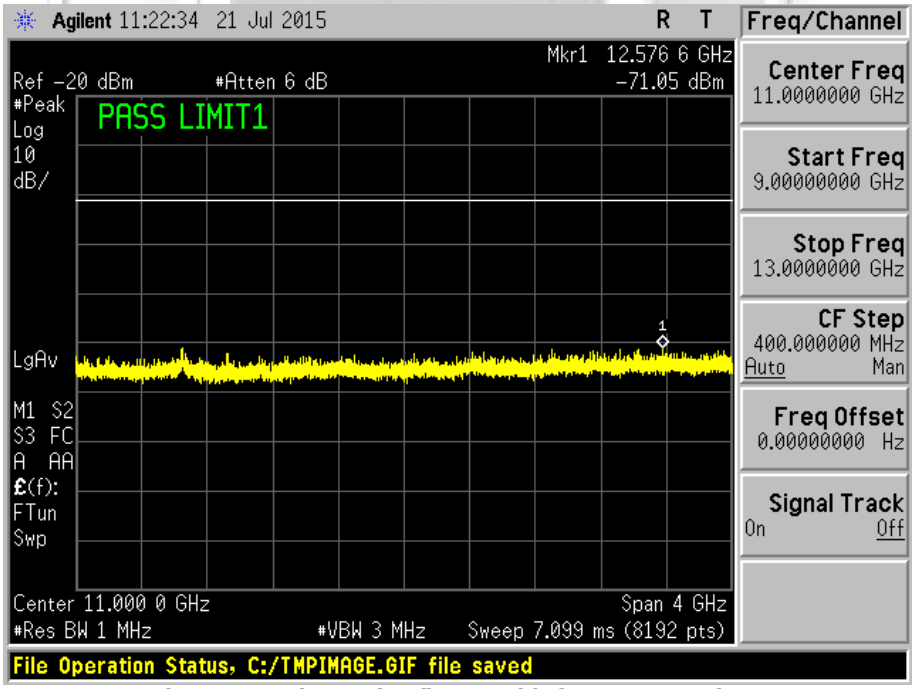


Plot 236 – Channel 1 *(lower ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

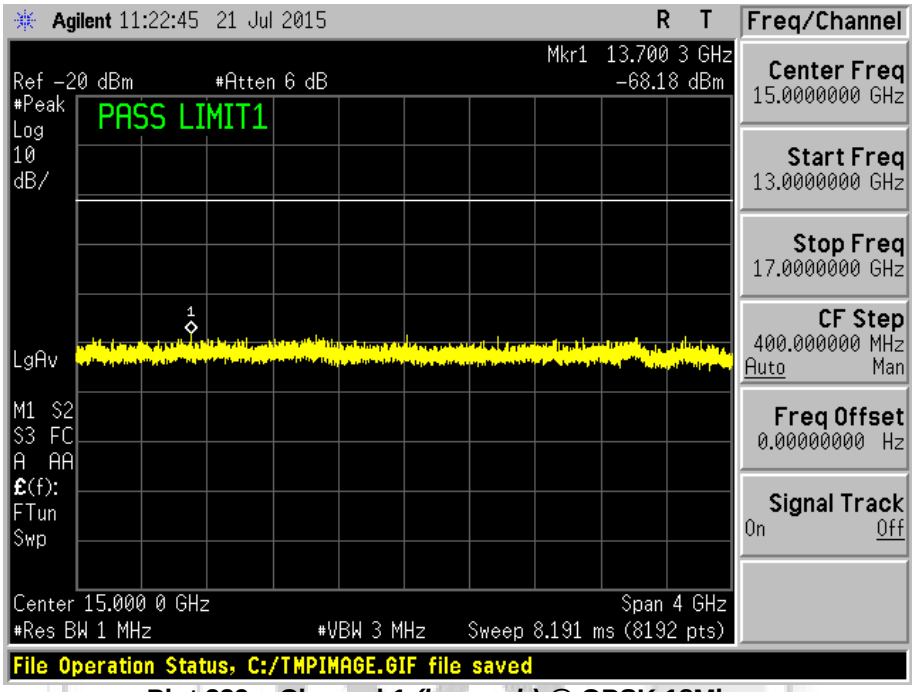


Plot 237 – Channel 1 *(lower ch)* @ QPSK 18Mbps

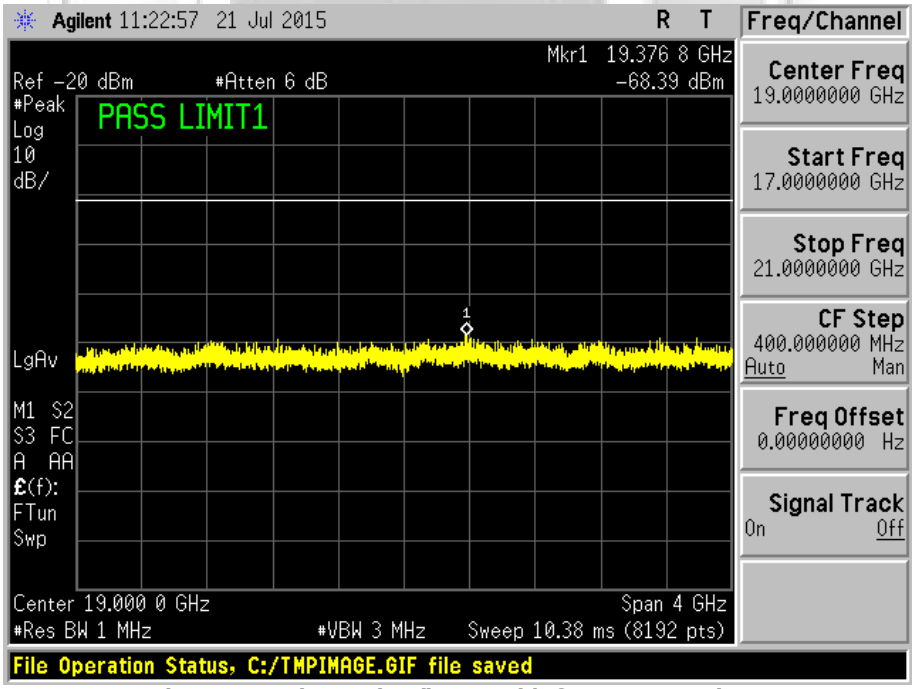


Plot 238 – Channel 1 *(lower ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

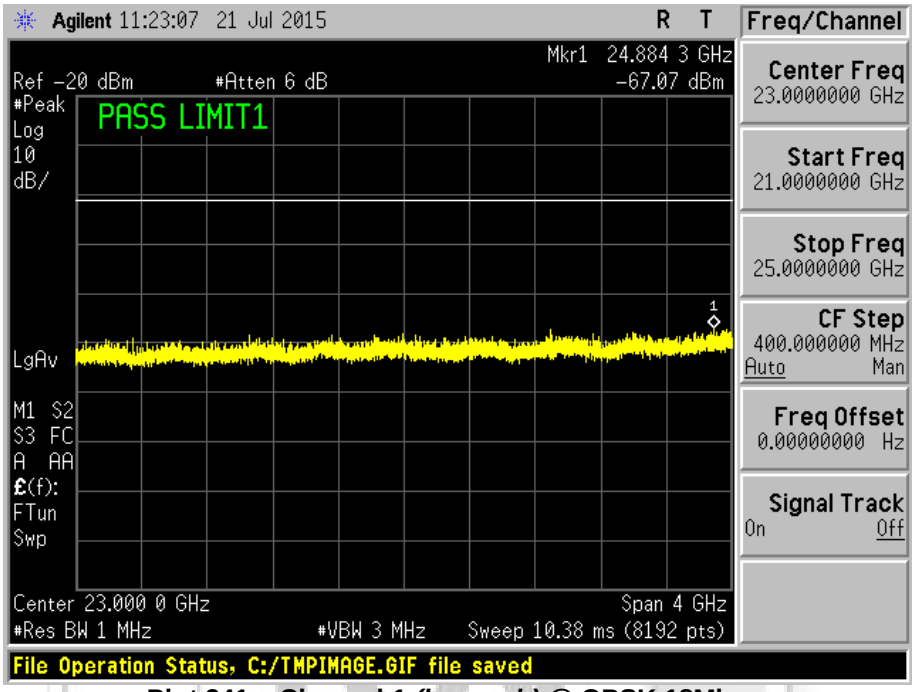


Plot 239 – Channel 1 *(lower ch)* @ QPSK 18Mbps

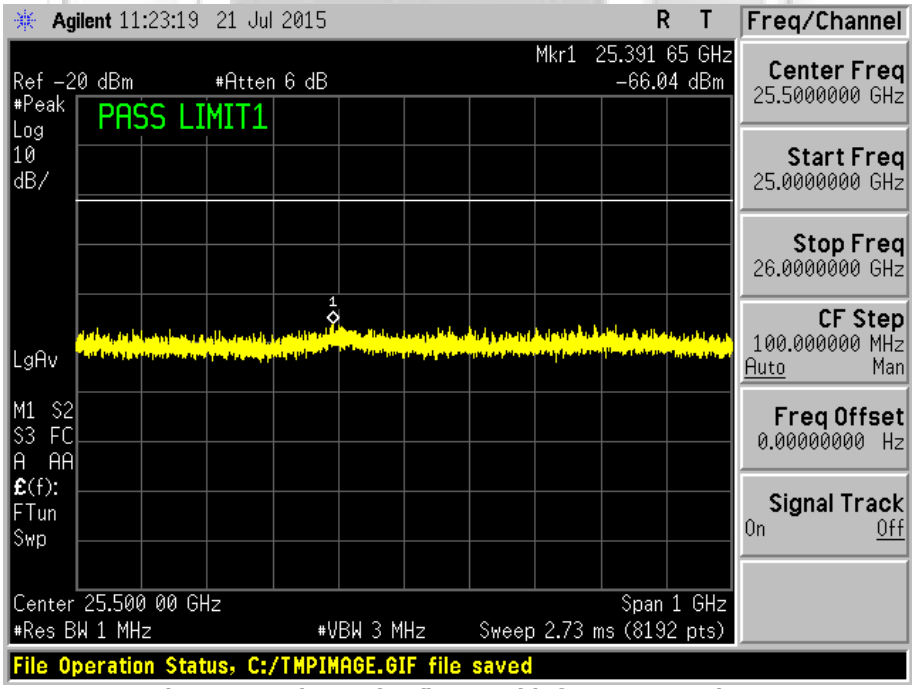


Plot 240 – Channel 1 *(lower ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

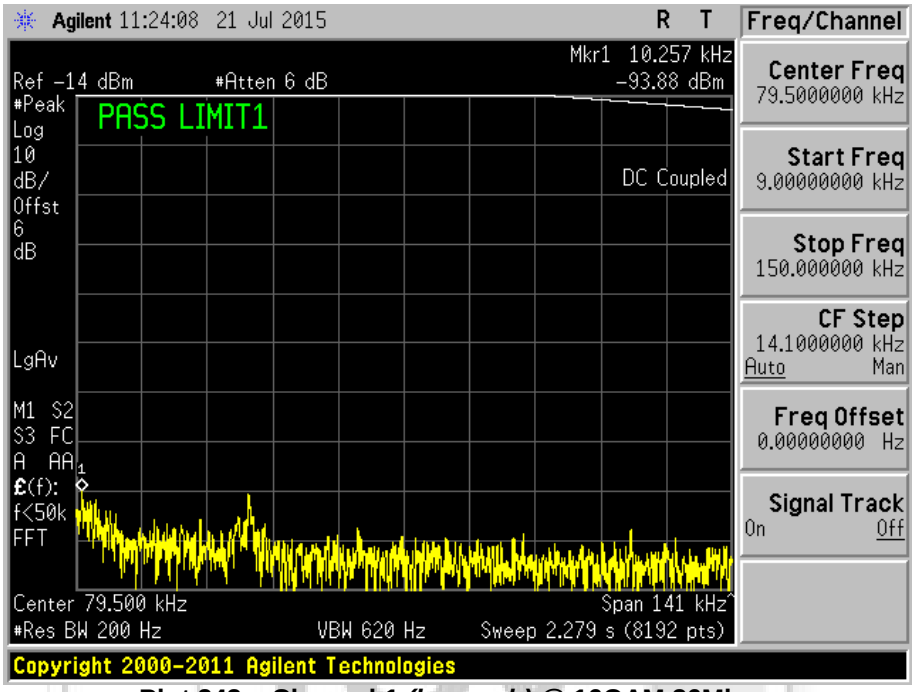


Plot 241 – Channel 1 *(lower ch)* @ QPSK 18Mbps

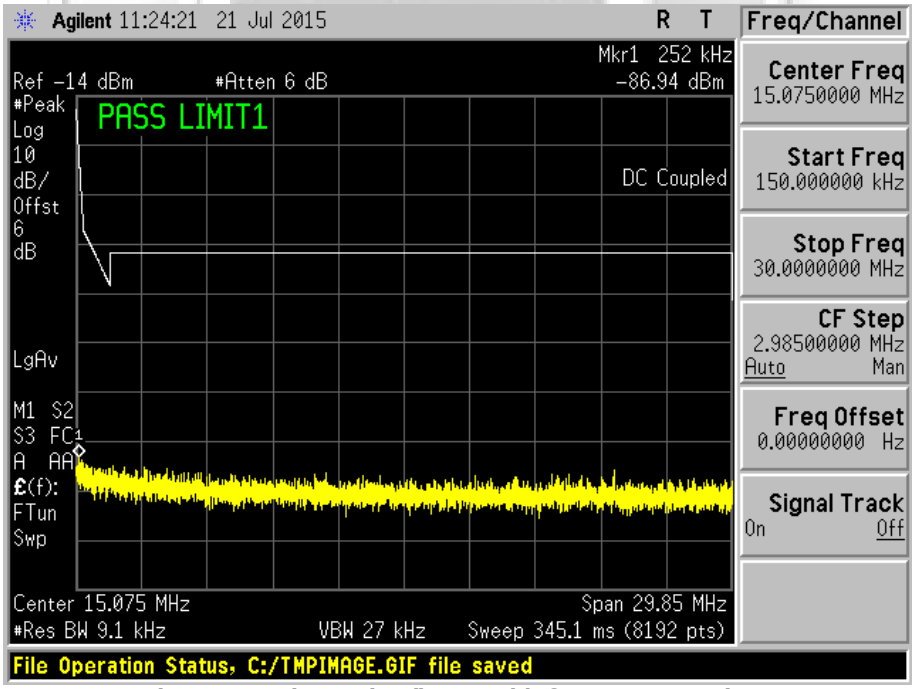


Plot 242 – Channel 1 *(lower ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

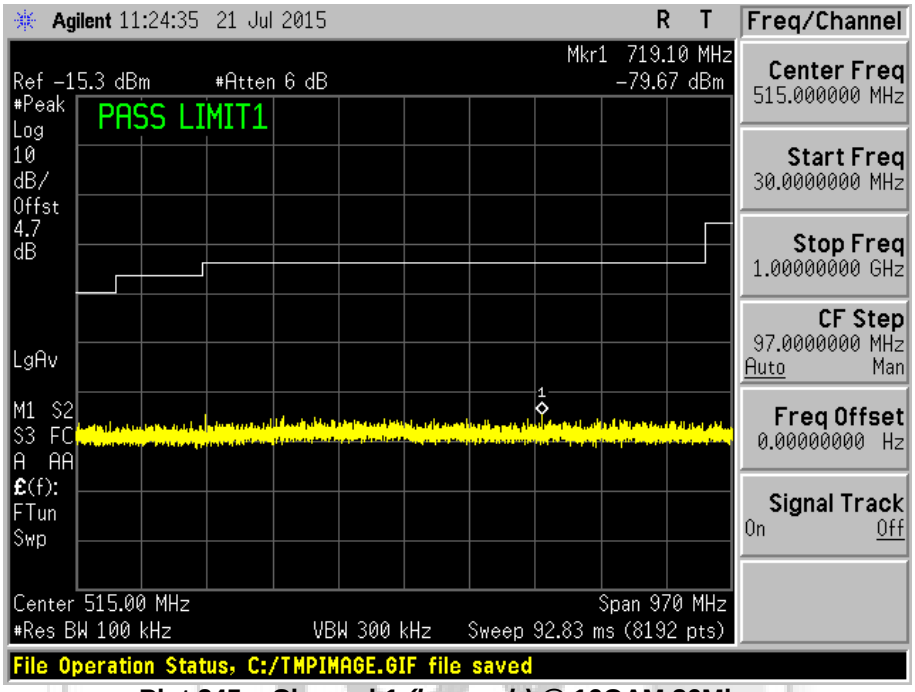


Plot 243 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

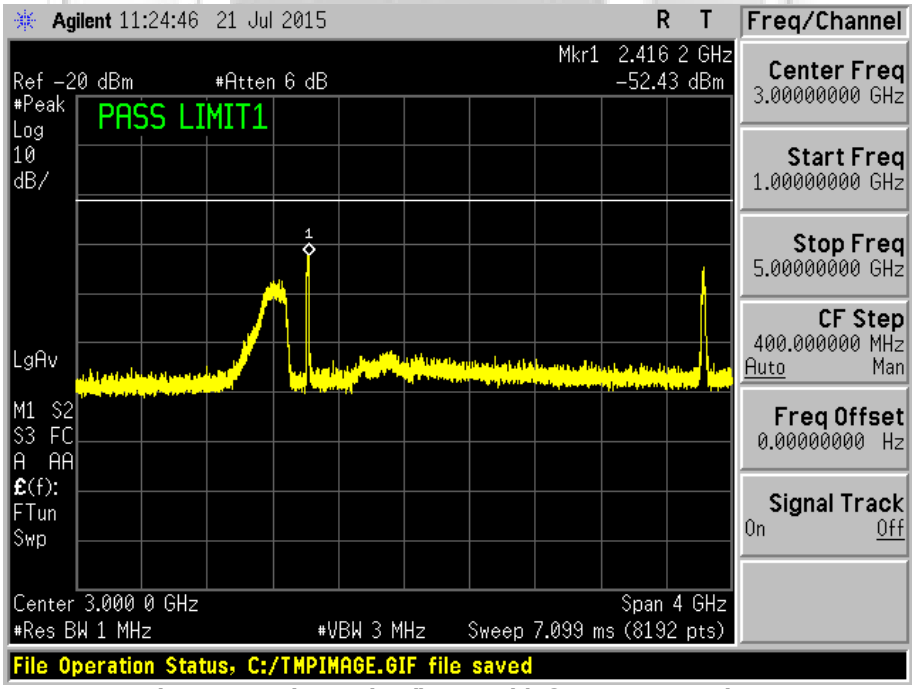


Plot 244 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

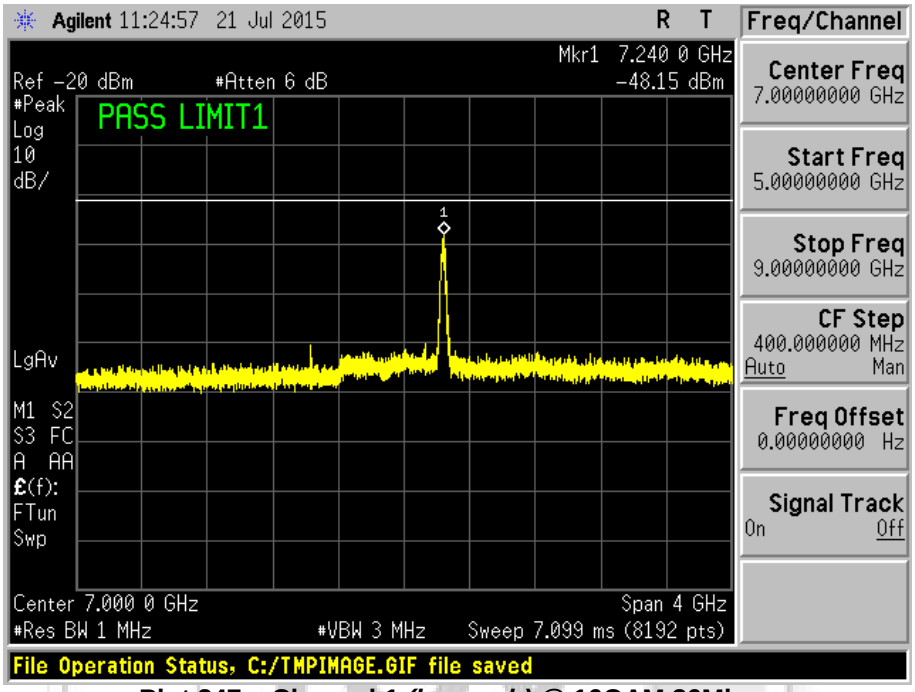


Plot 245 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

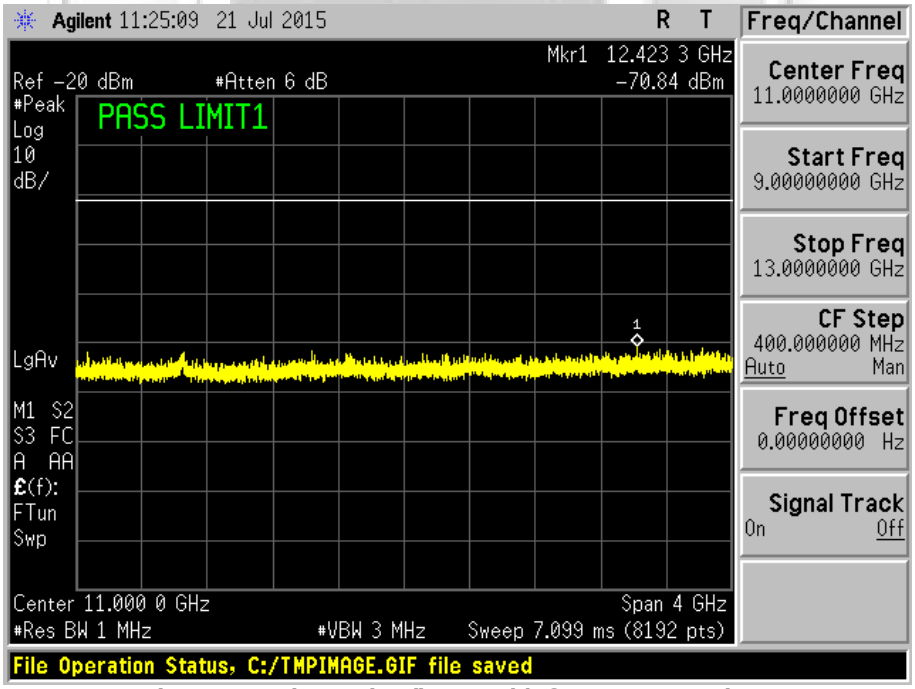


Plot 246 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

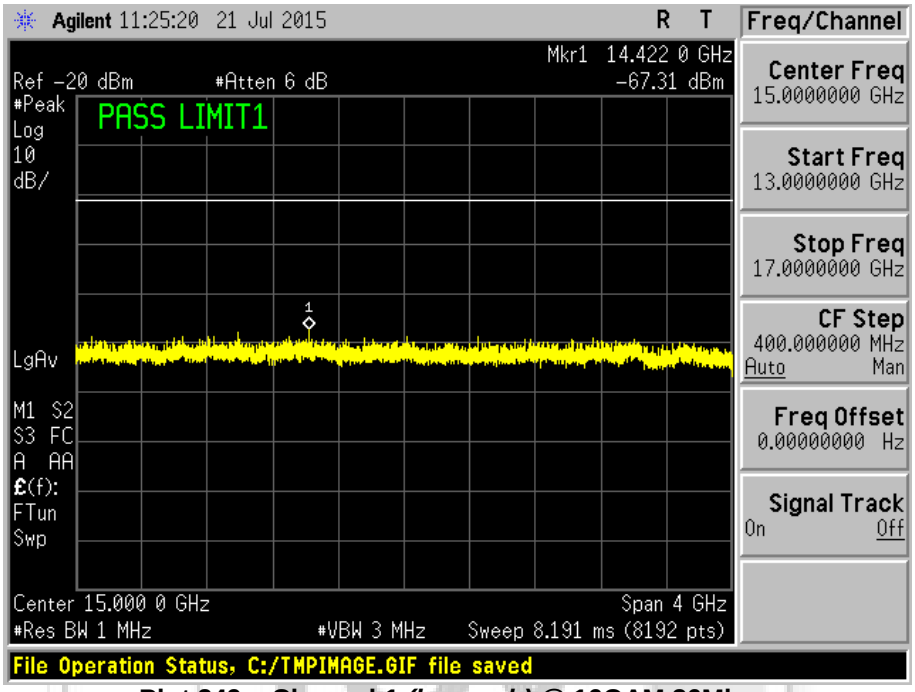


Plot 247 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

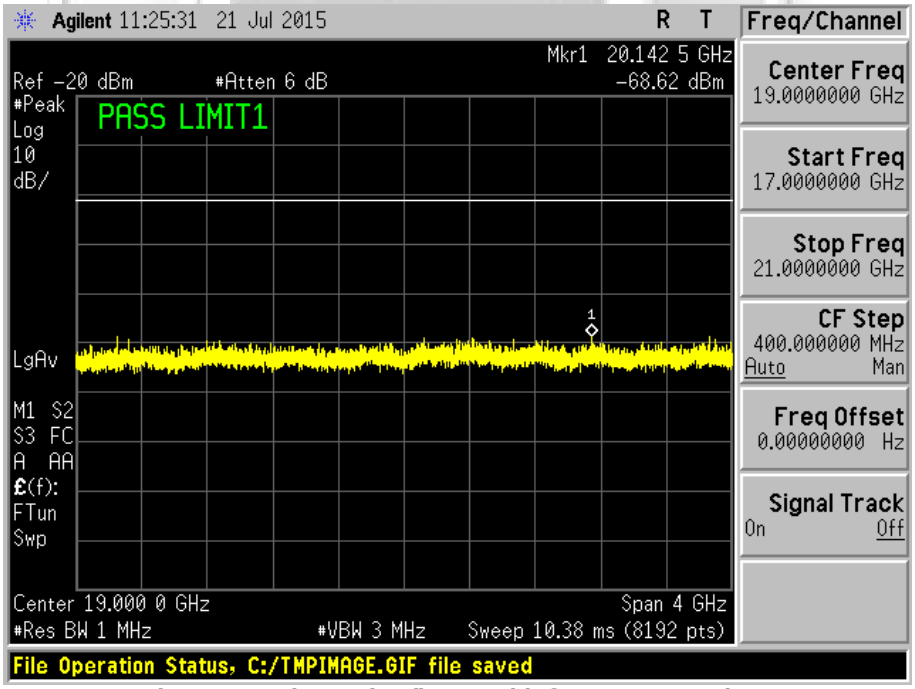


Plot 248 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

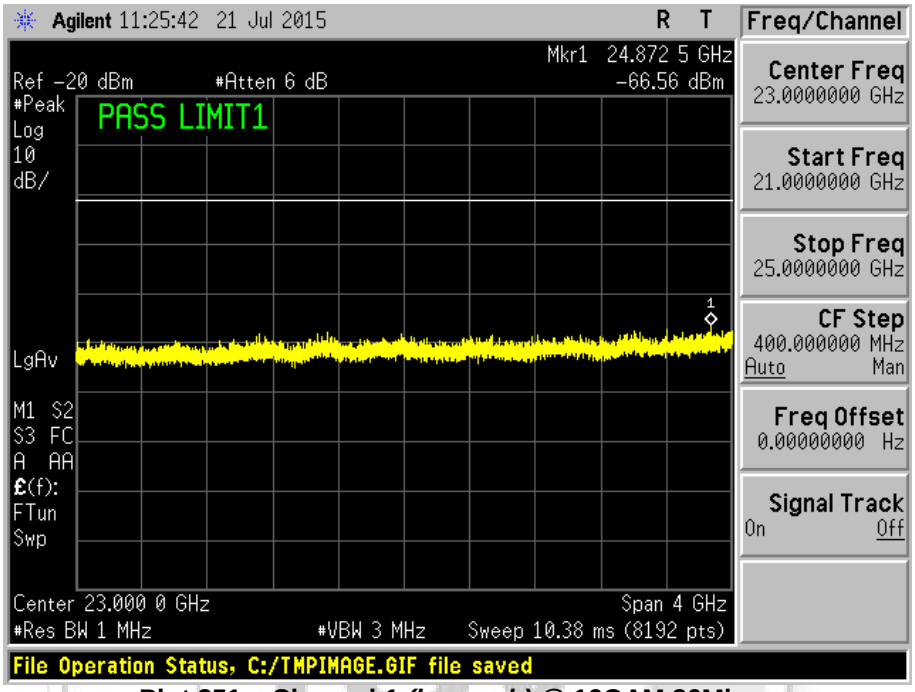


Plot 249 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

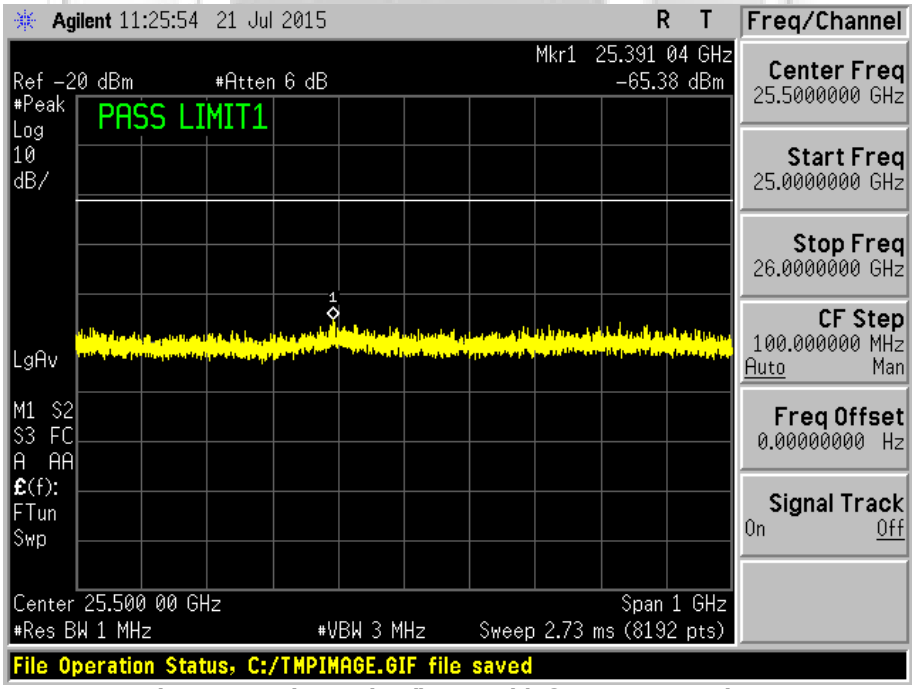


Plot 250 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

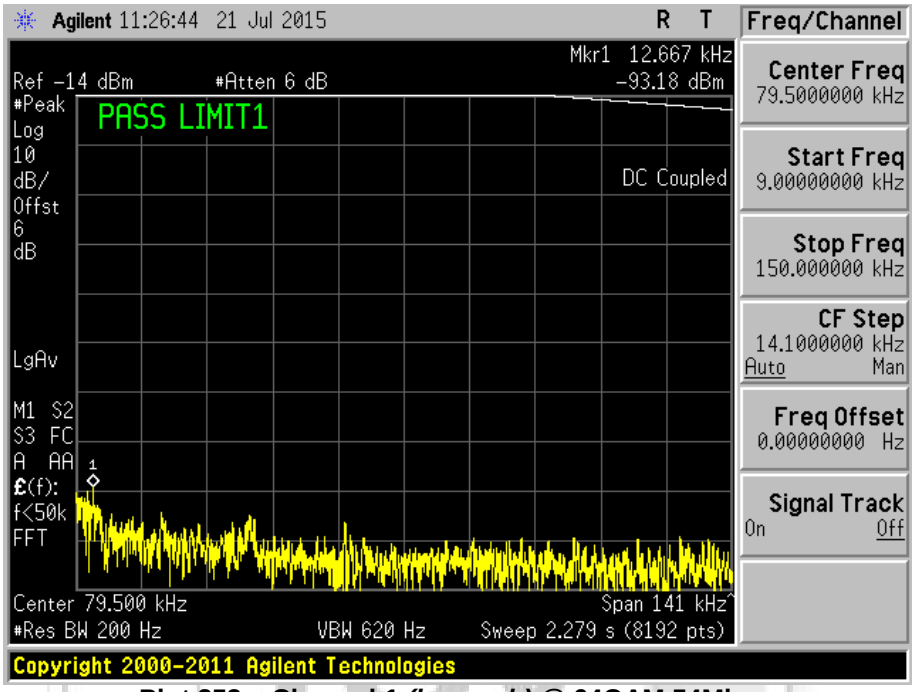


Plot 251 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

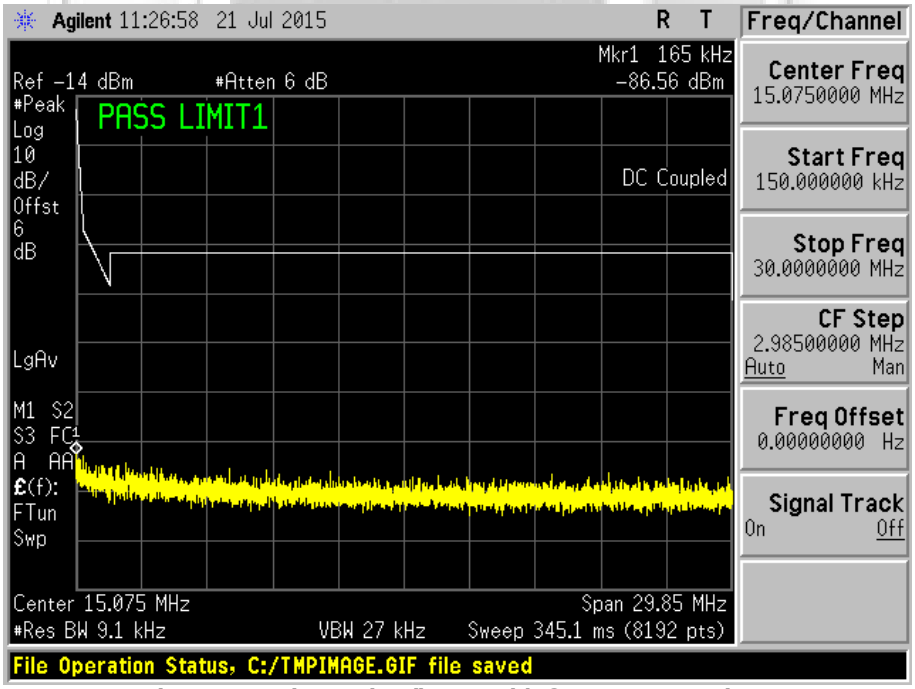


Plot 252 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

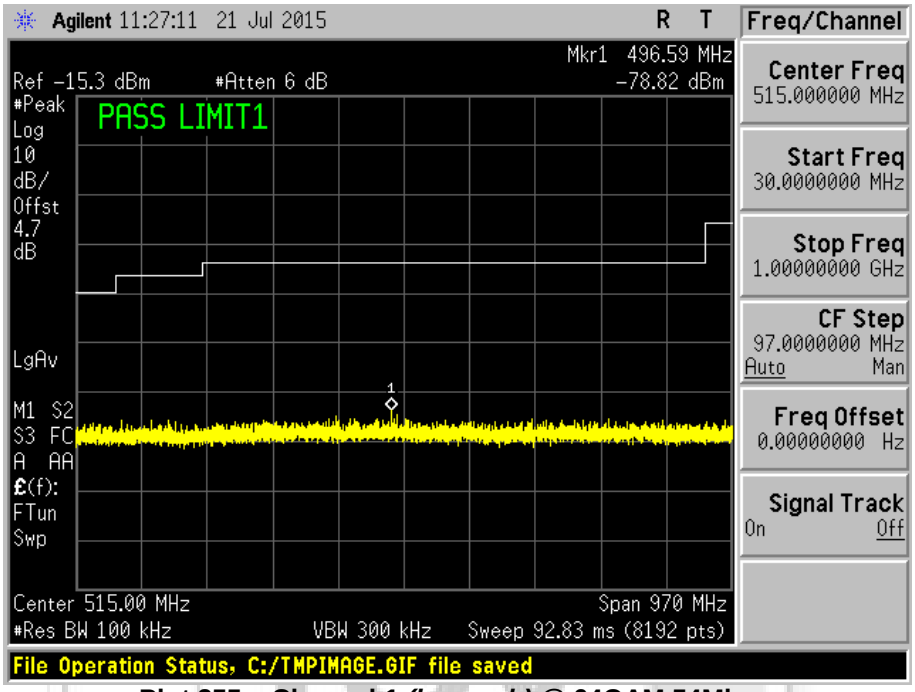


Plot 253 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

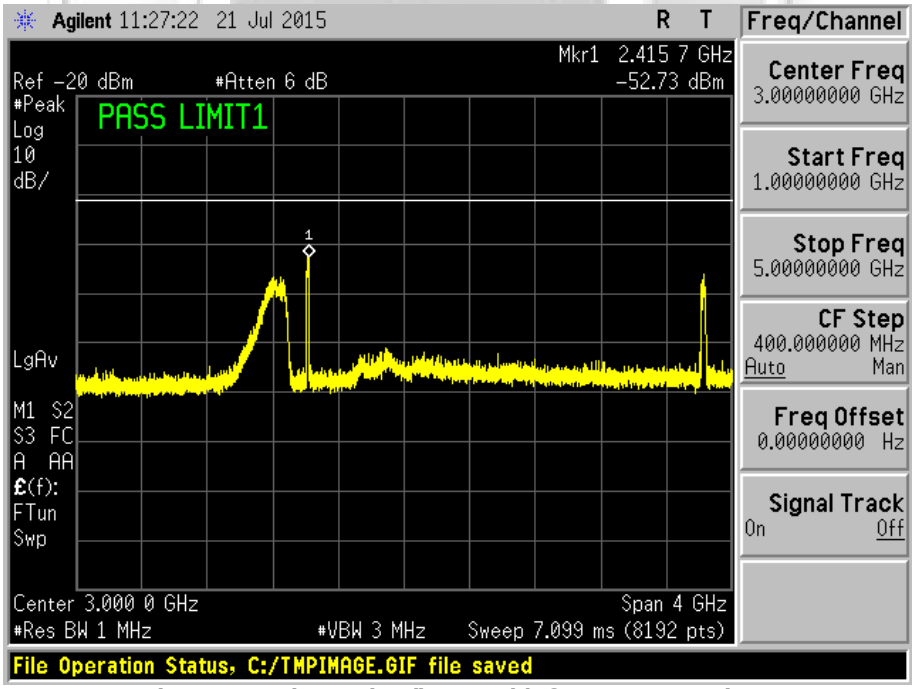


Plot 254 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

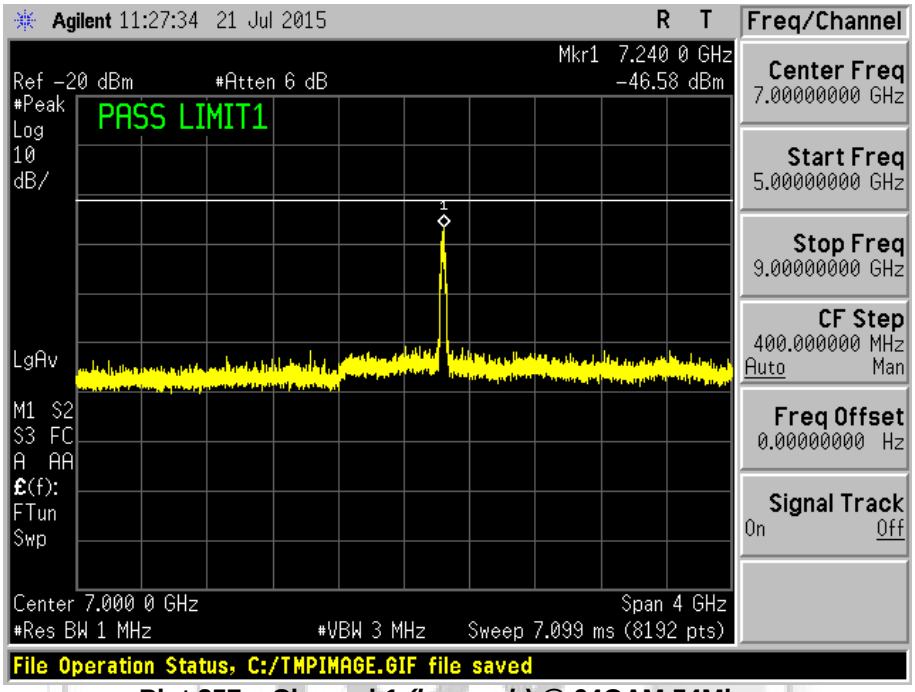


Plot 255 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

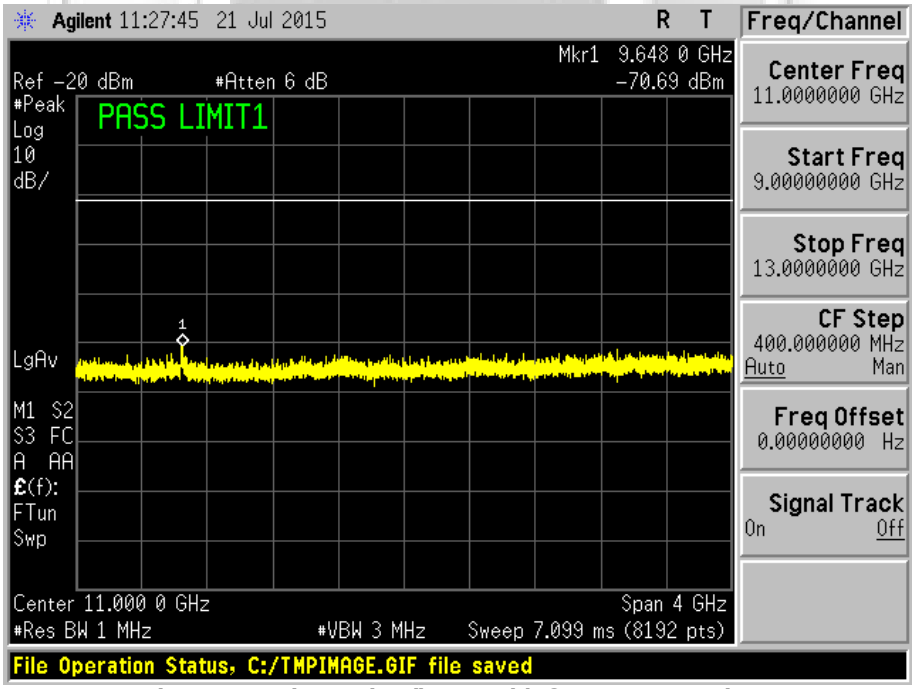


Plot 256 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

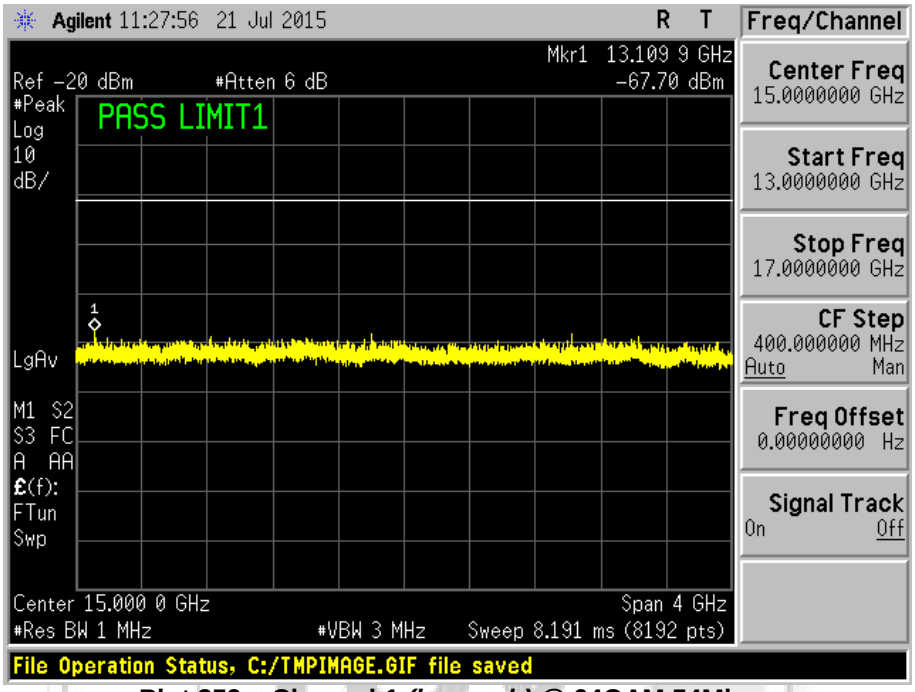


Plot 257 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

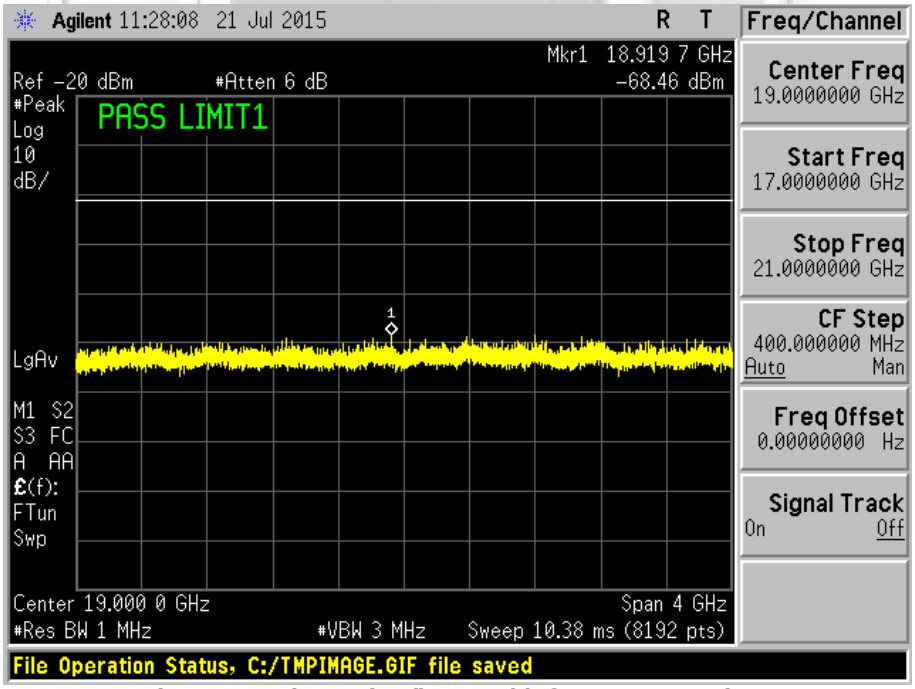


Plot 258 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

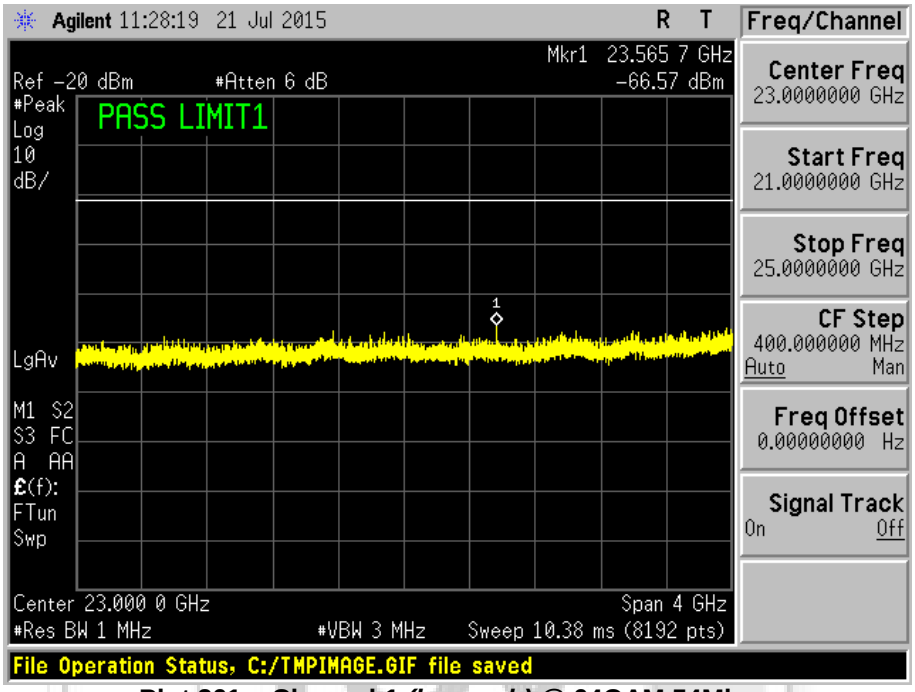


Plot 259 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

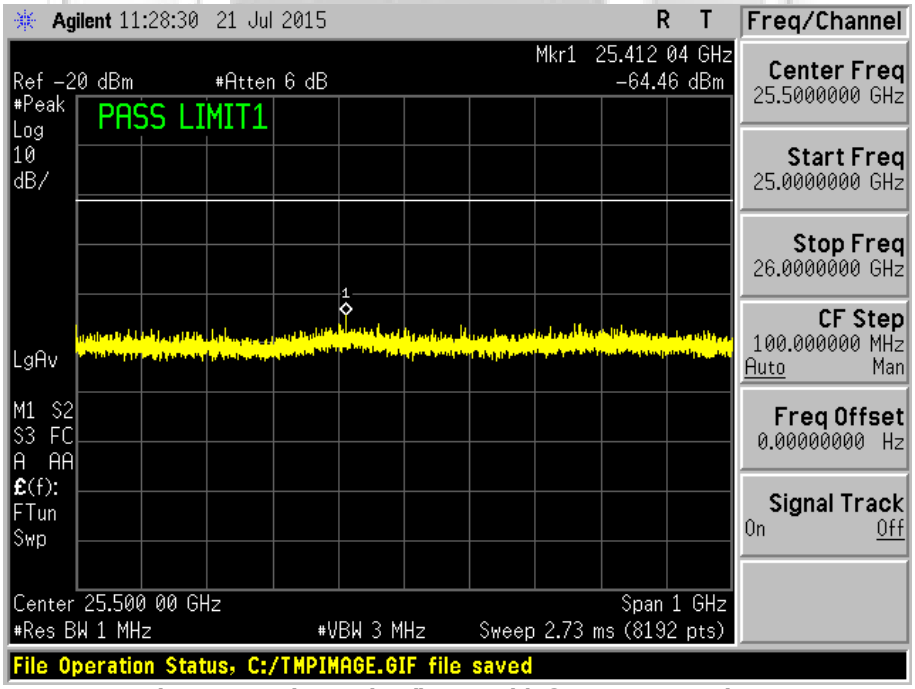


Plot 260 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

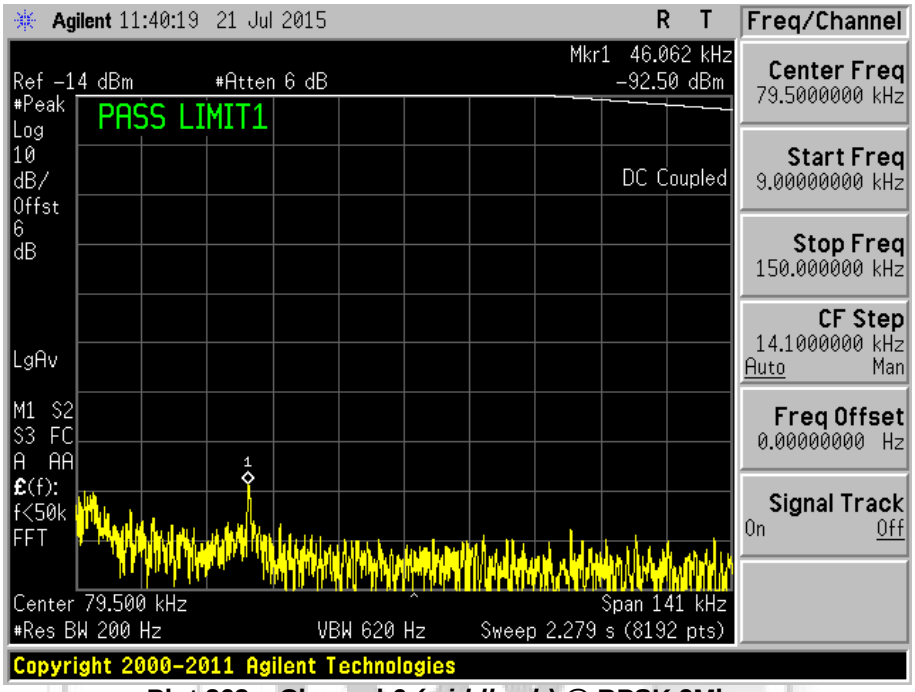


Plot 261 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

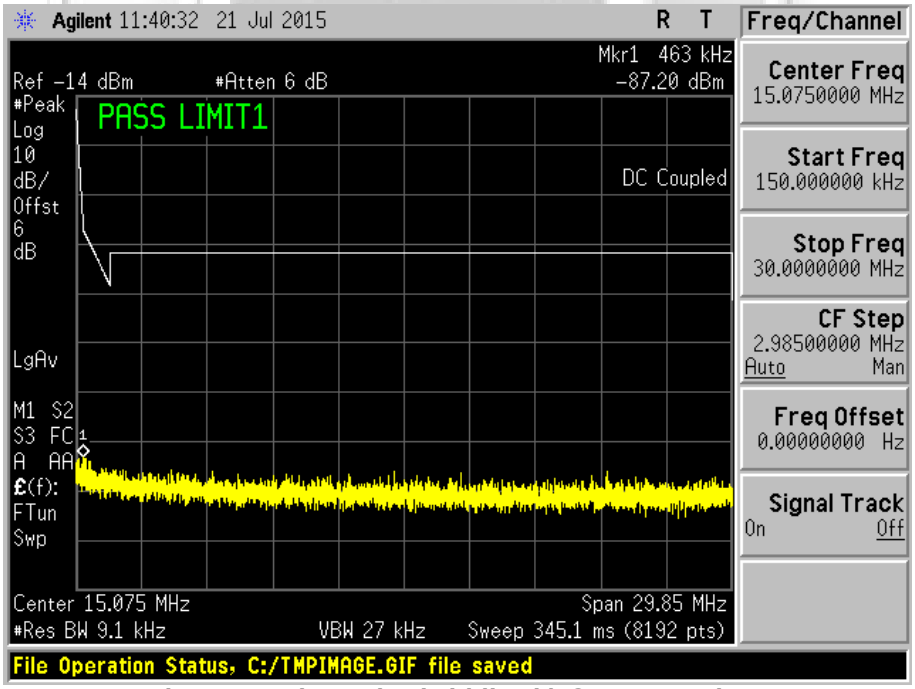


Plot 262 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

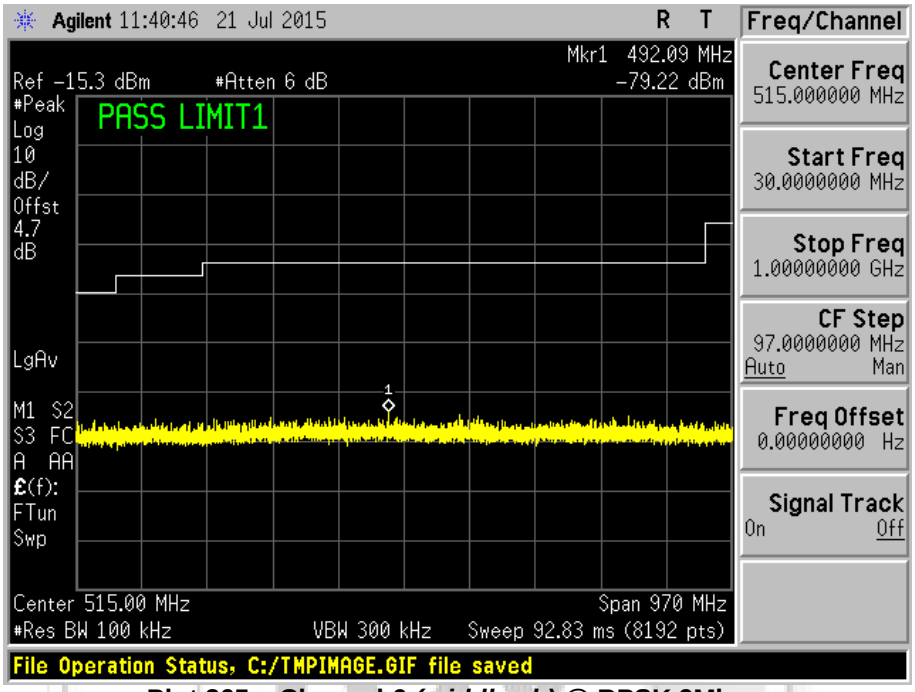


Plot 263 – Channel 6 *(middle ch)* @ BPSK 9Mbps

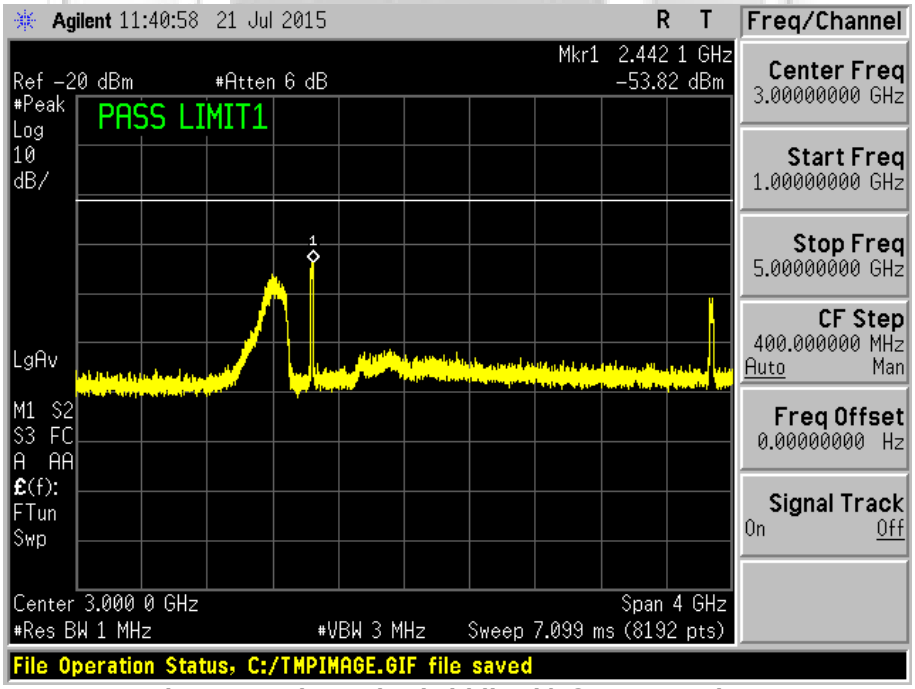


Plot 264 – Channel 6 *(middle ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

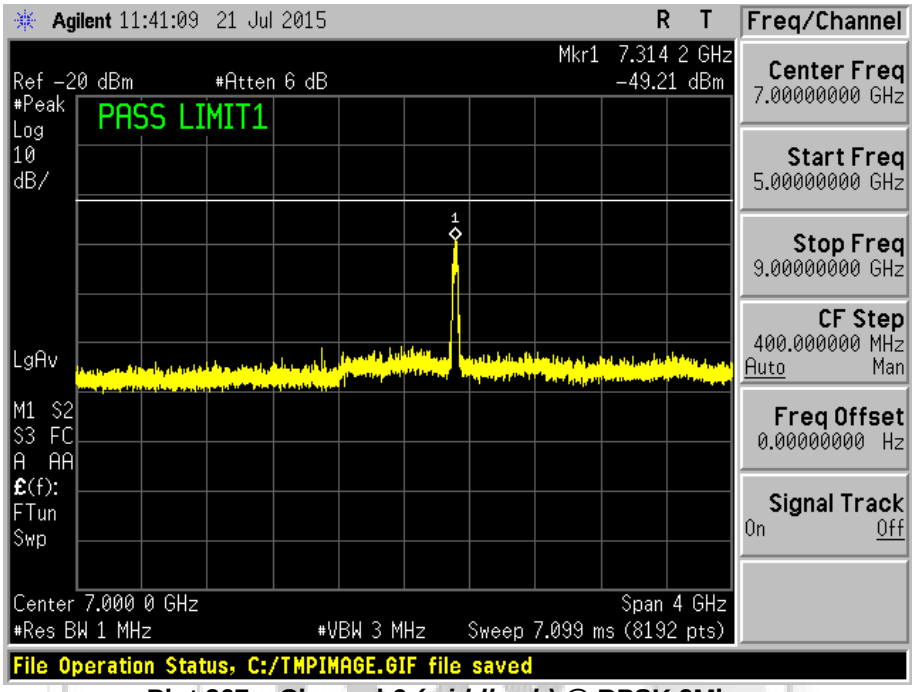


Plot 265 – Channel 6 *(middle ch)* @ BPSK 9Mbps

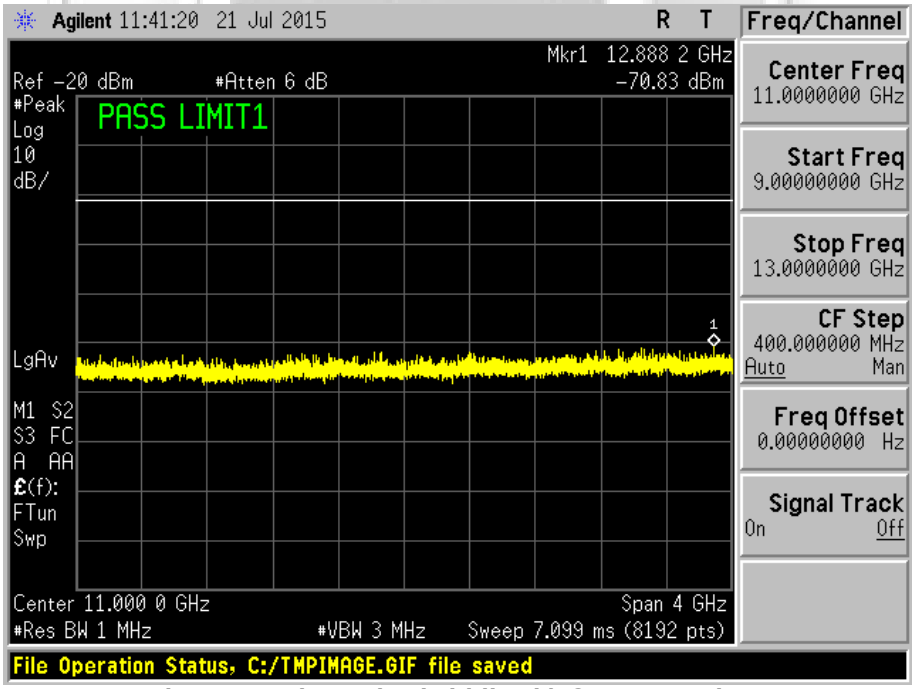


Plot 266 – Channel 6 *(middle ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

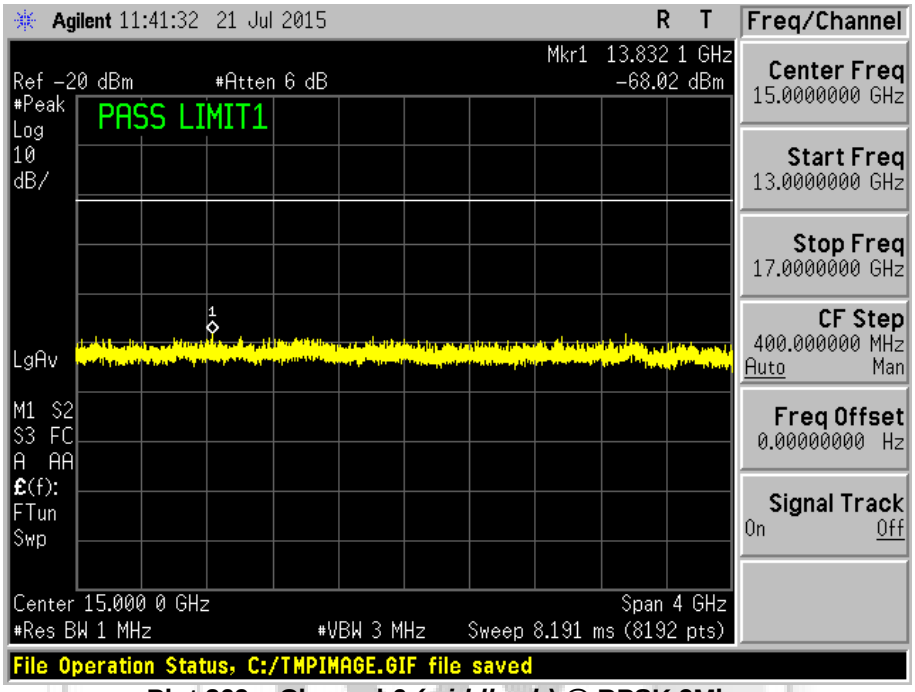


Plot 267 – Channel 6 *(middle ch)* @ BPSK 9Mbps

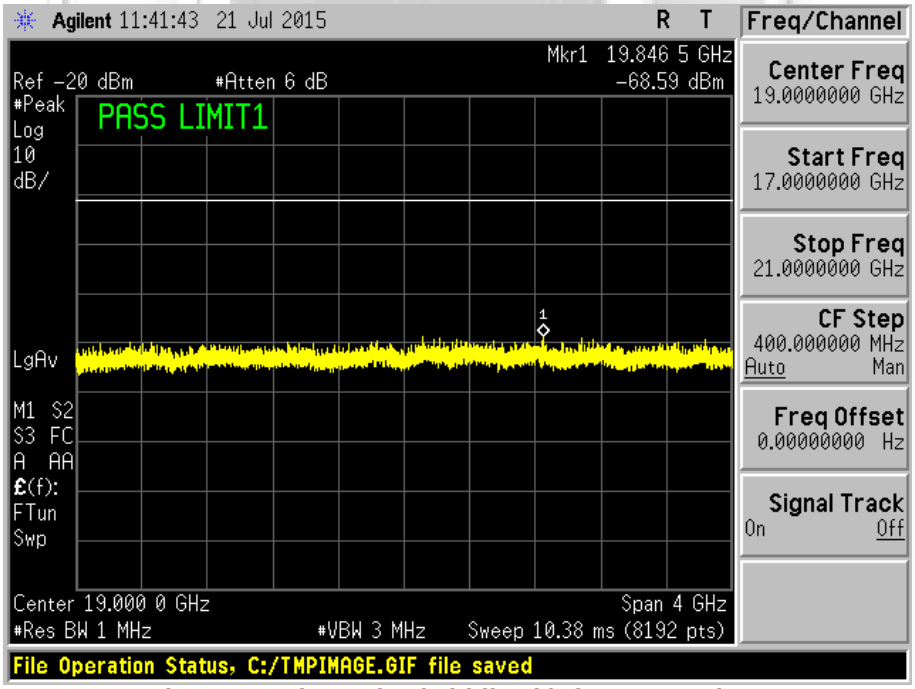


Plot 268 – Channel 6 *(middle ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

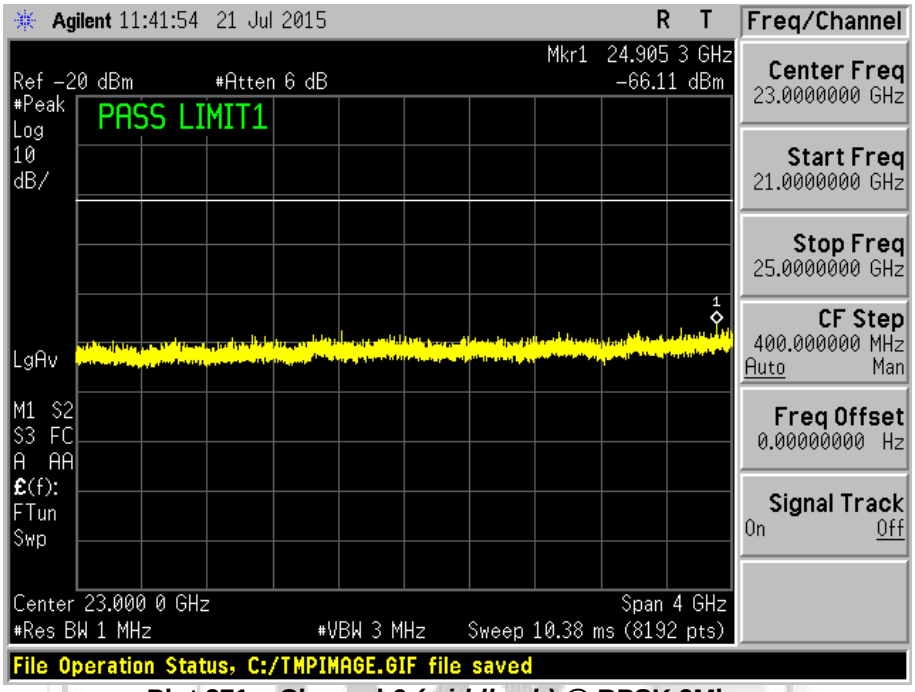


Plot 269 – Channel 6 *(middle ch)* @ BPSK 9Mbps

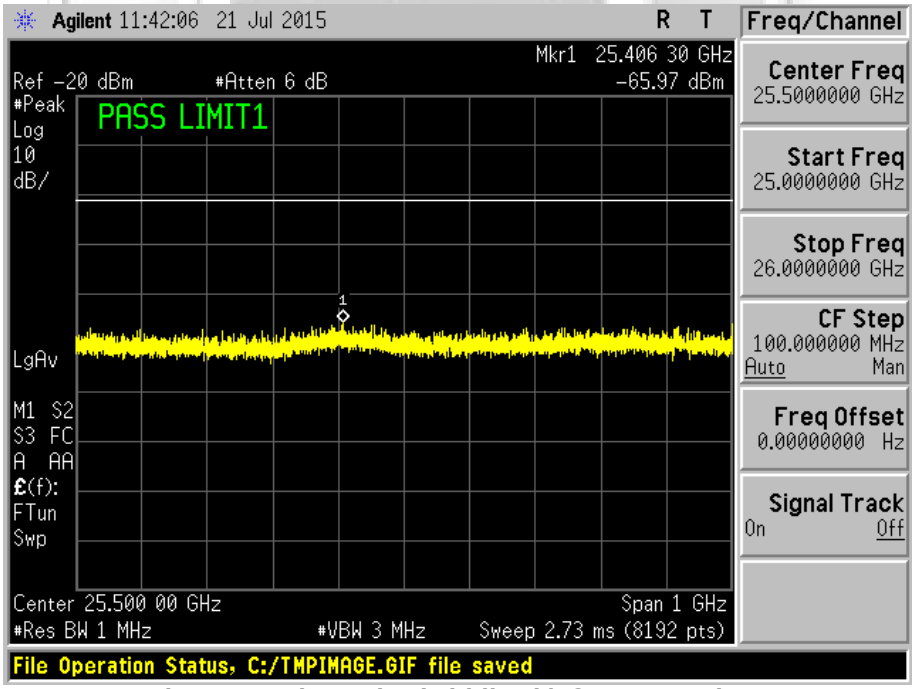


Plot 270 – Channel 6 *(middle ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

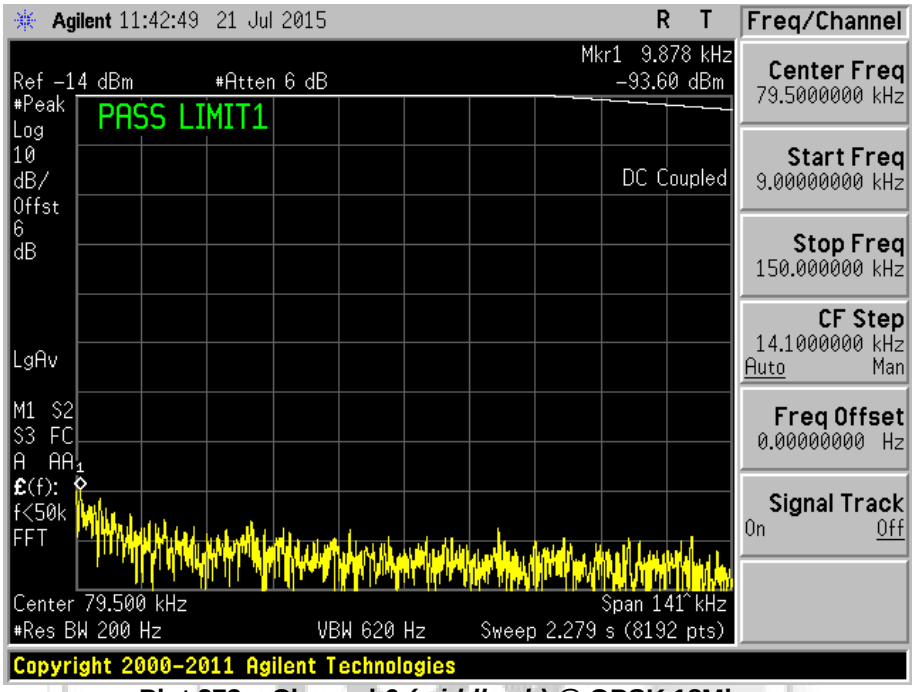


Plot 271 – Channel 6 *(middle ch)* @ BPSK 9Mbps

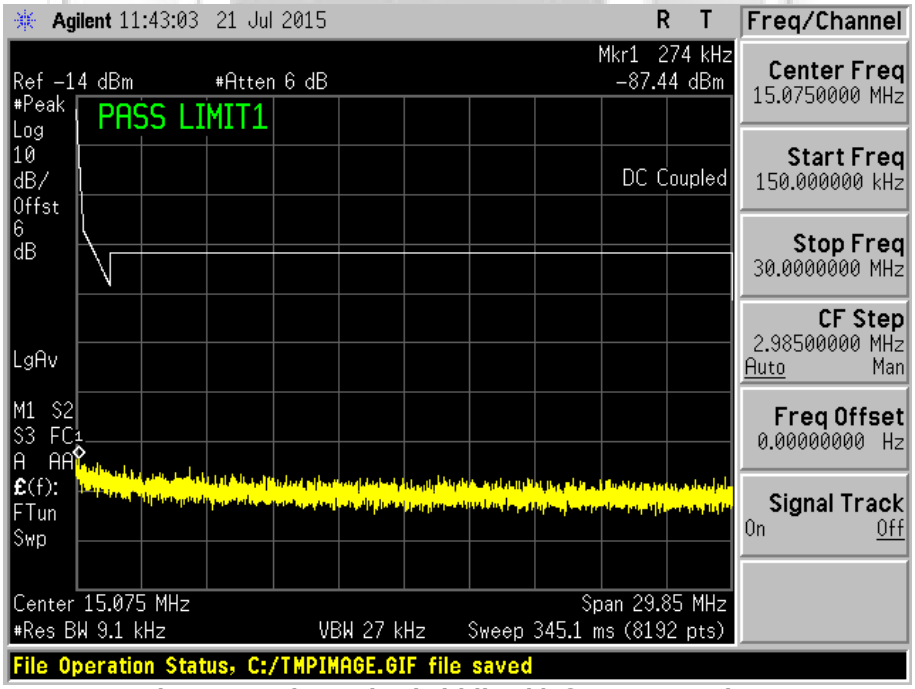


Plot 272 – Channel 6 *(middle ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

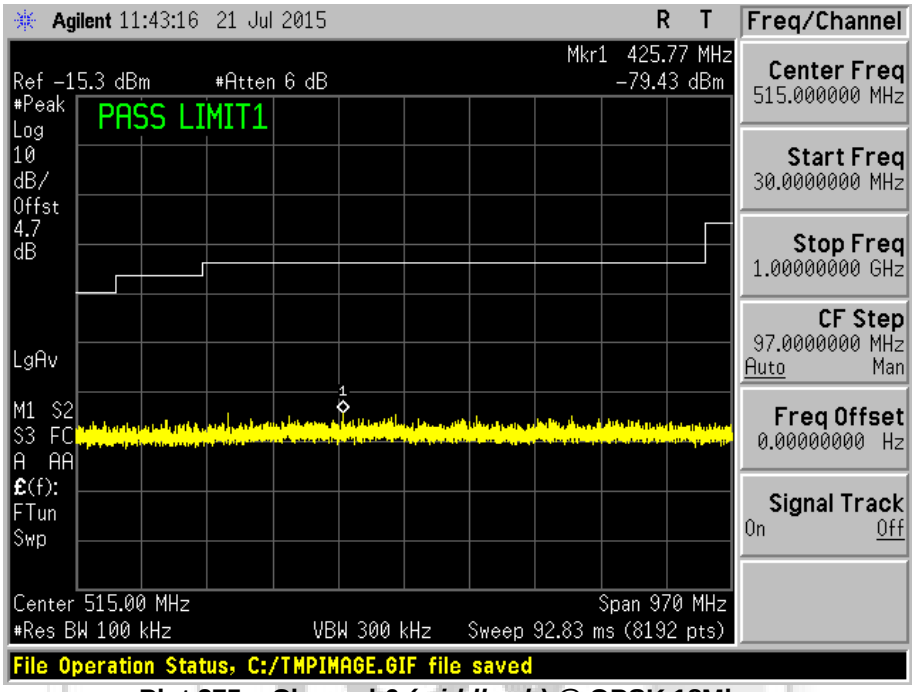


Plot 273 – Channel 6 *(middle ch)* @ QPSK 18Mbps

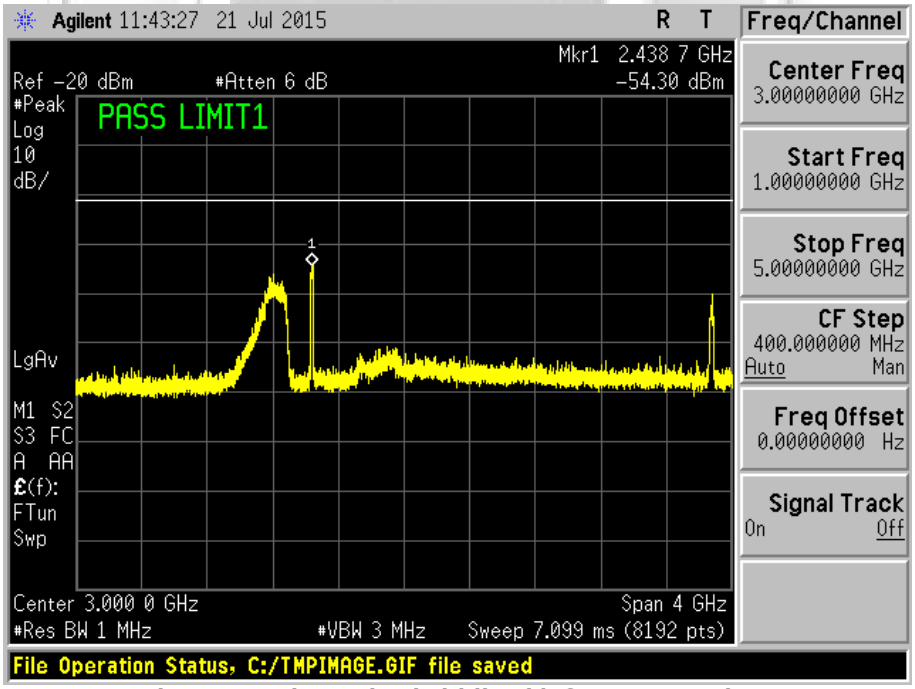


Plot 274 – Channel 6 *(middle ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

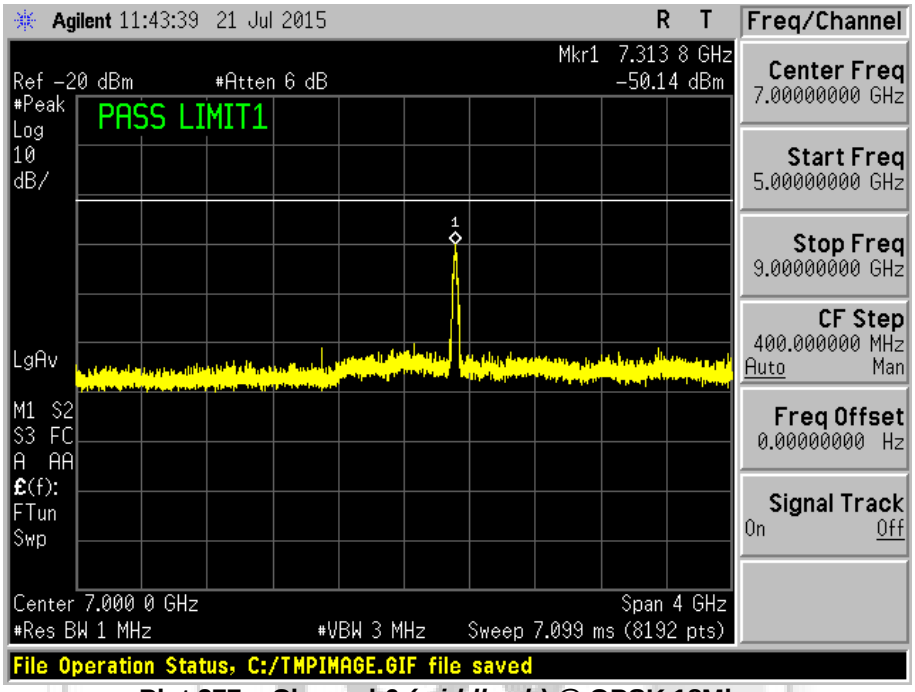


Plot 275 – Channel 6 *(middle ch)* @ QPSK 18Mbps

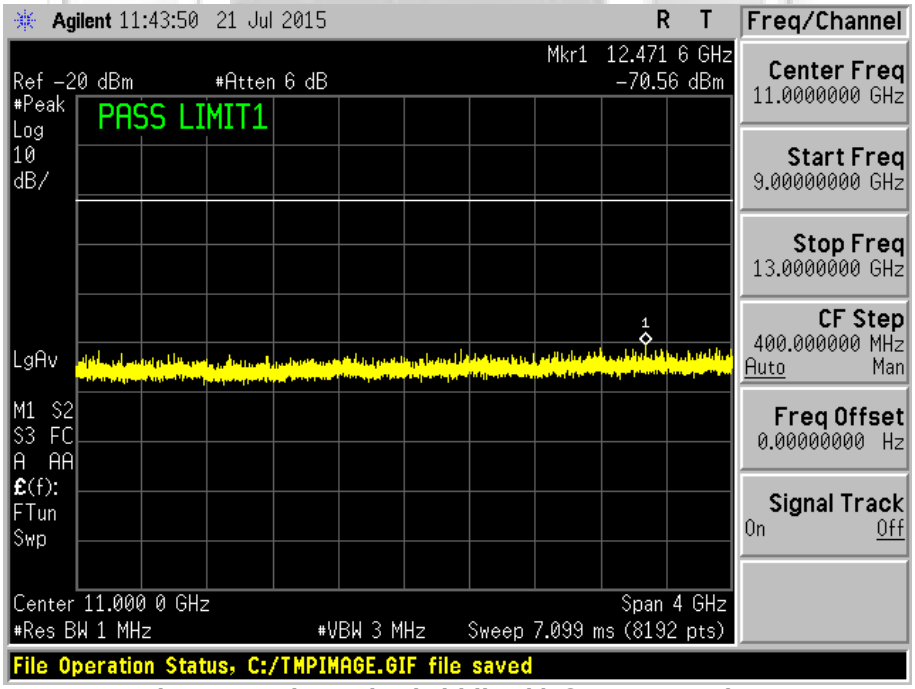


Plot 276 – Channel 6 *(middle ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

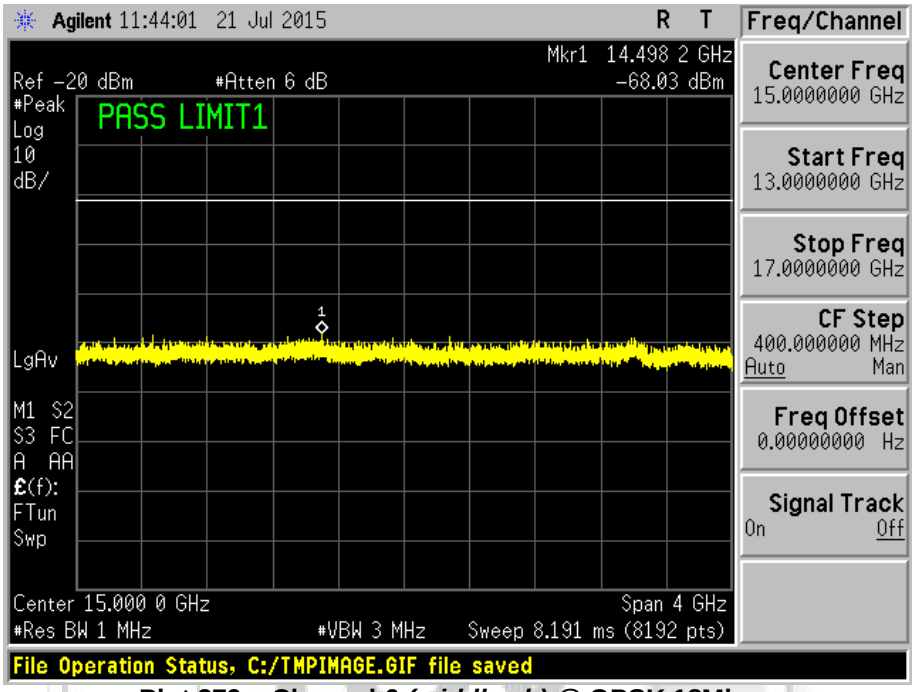


Plot 277 – Channel 6 *(middle ch)* @ QPSK 18Mbps

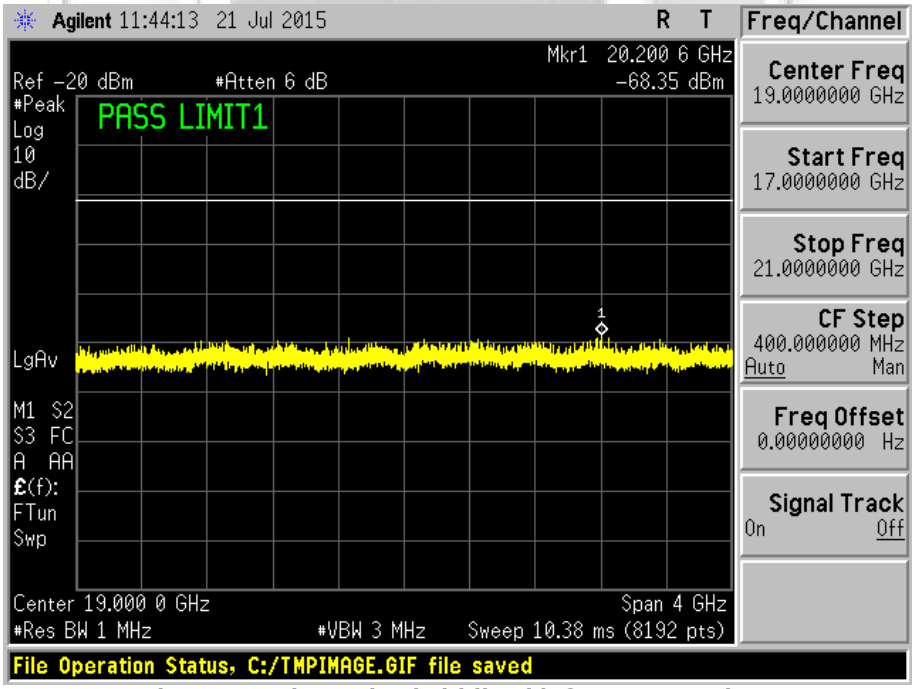


Plot 278 – Channel 6 *(middle ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

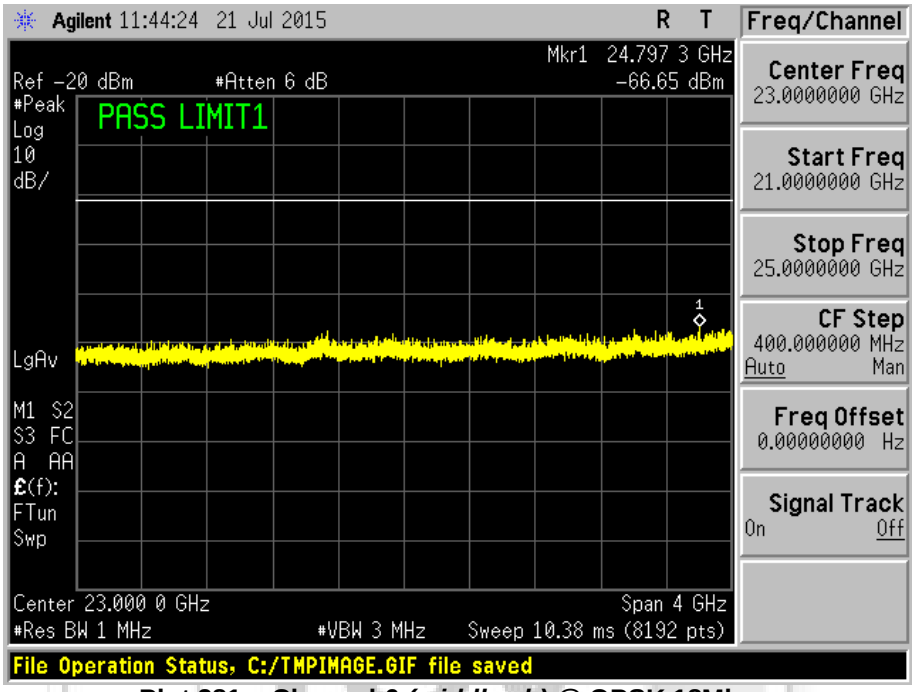


Plot 279 – Channel 6 *(middle ch)* @ QPSK 18Mbps

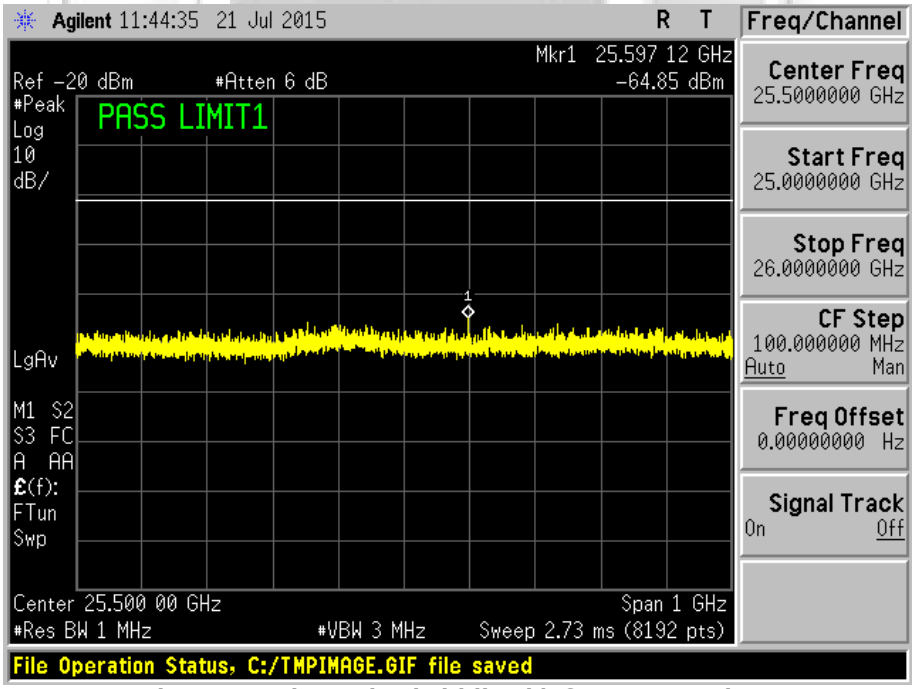


Plot 280 – Channel 6 *(middle ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

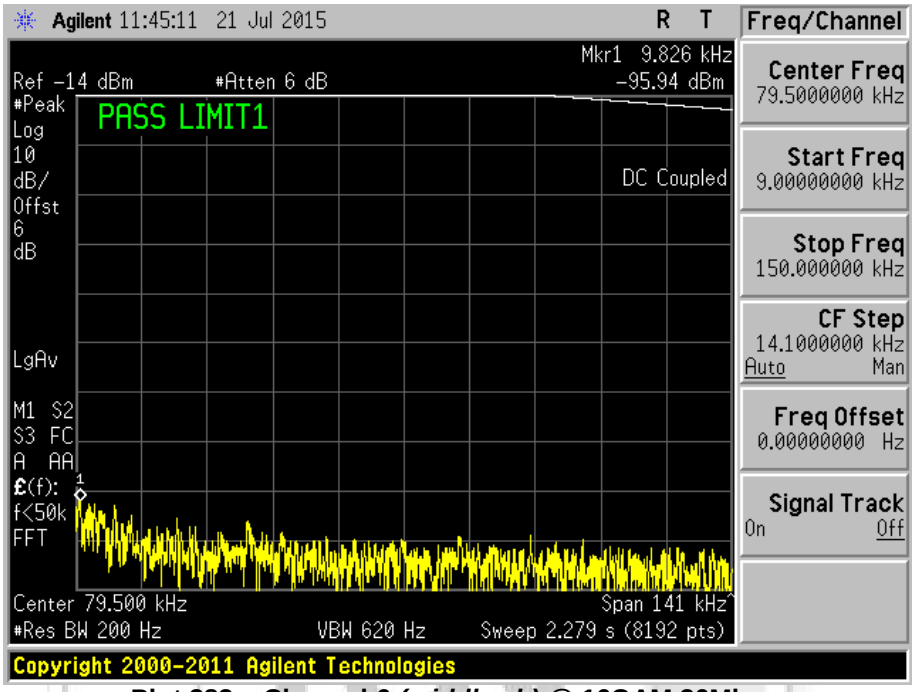


Plot 281 – Channel 6 *(middle ch)* @ QPSK 18Mbps

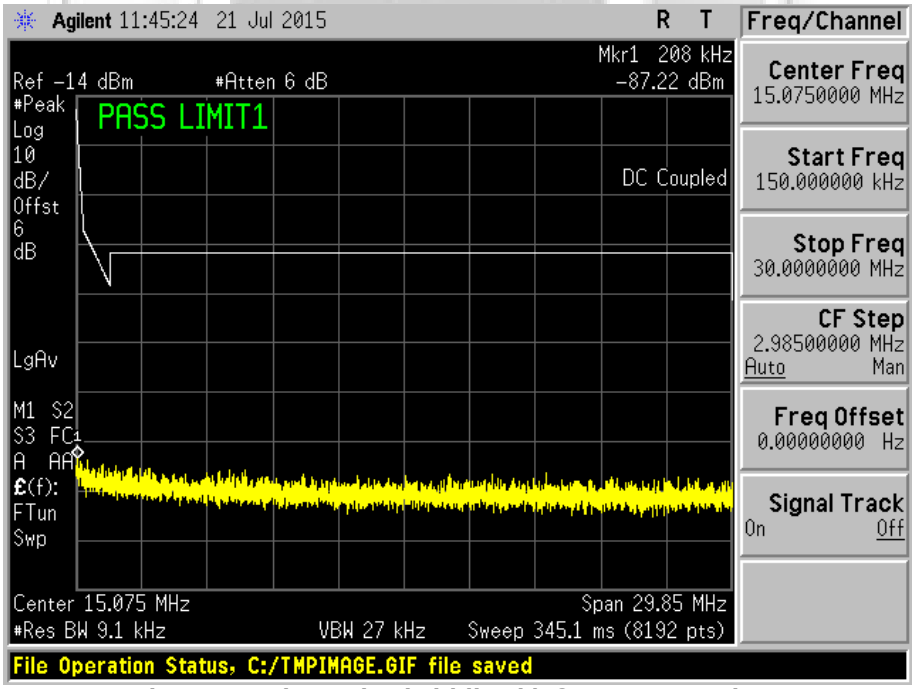


Plot 282 – Channel 6 *(middle ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

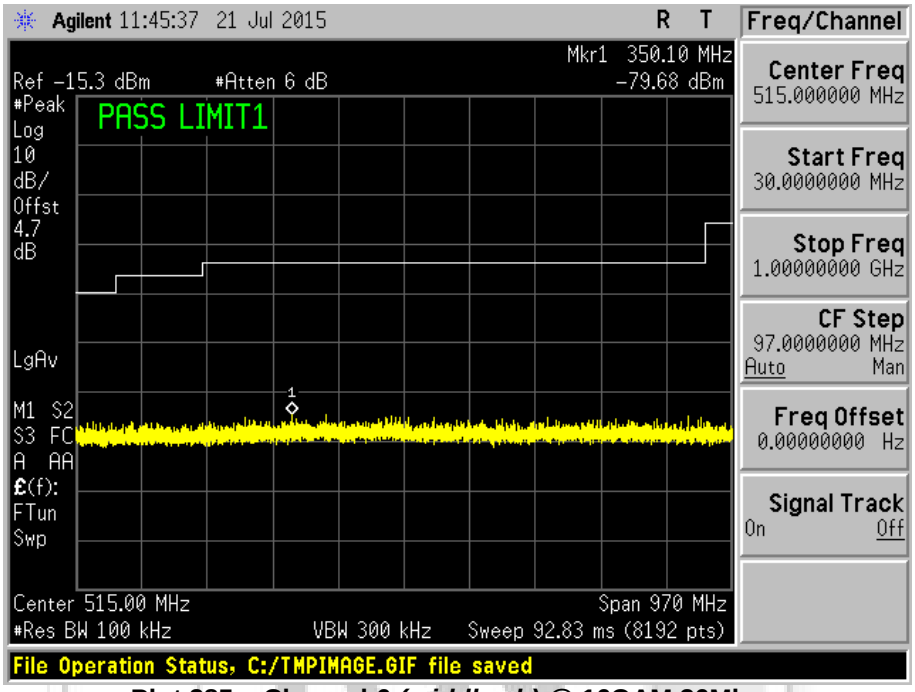


Plot 283 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

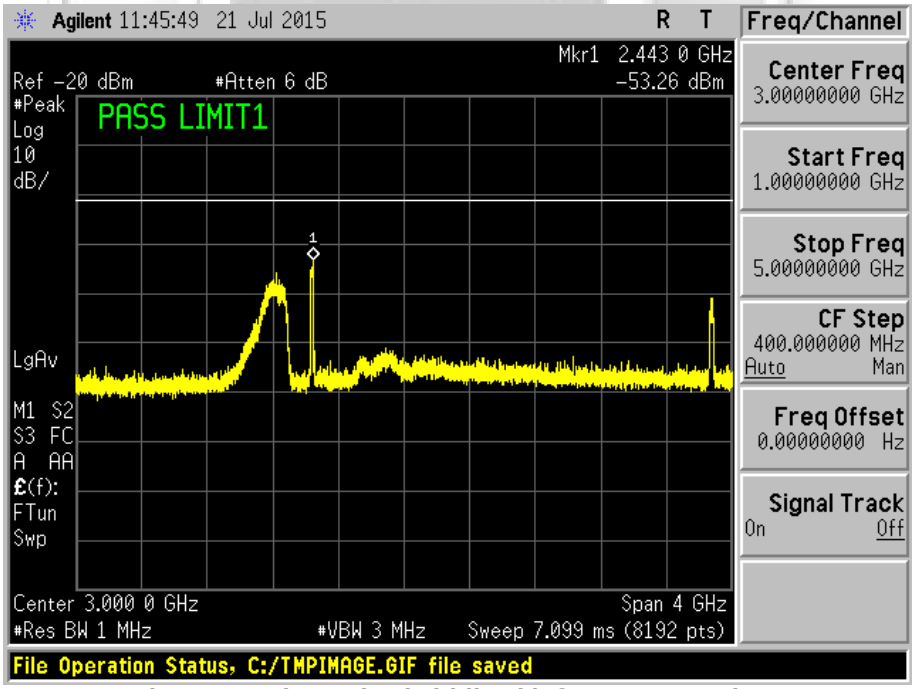


Plot 284 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

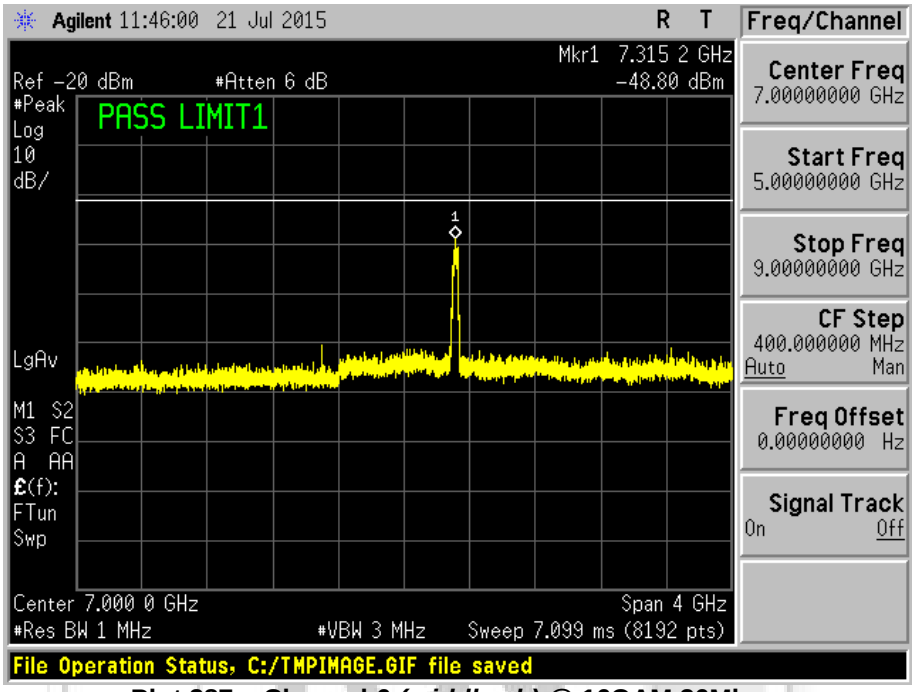


Plot 285 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

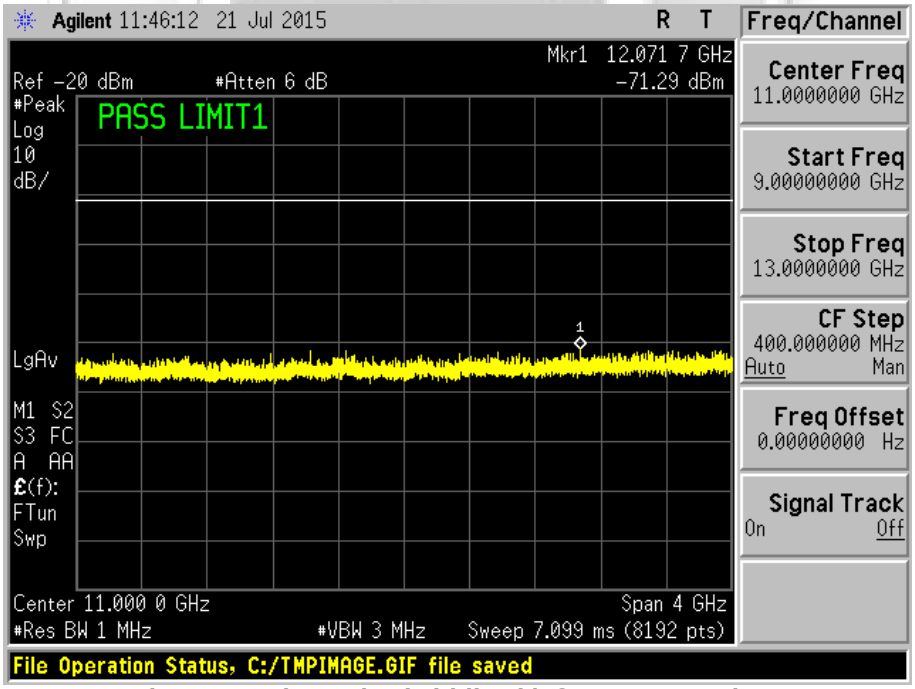


Plot 286 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

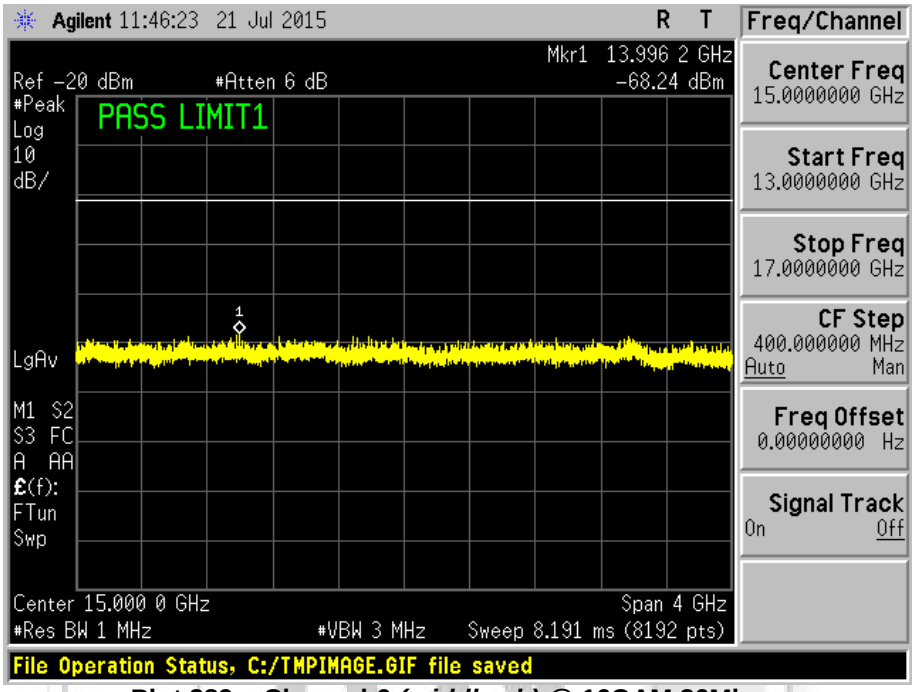


Plot 287 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

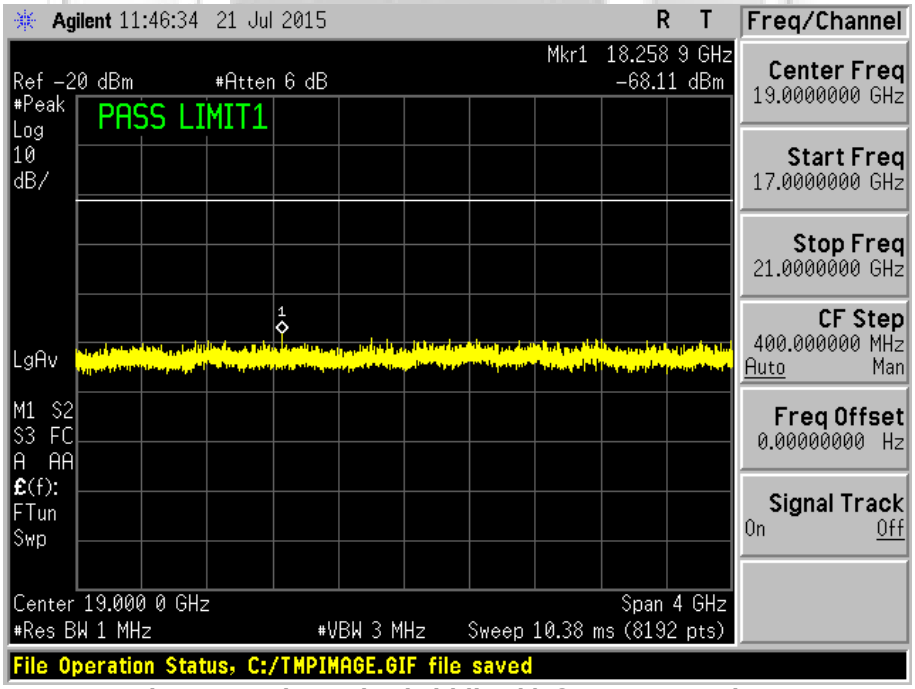


Plot 288 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

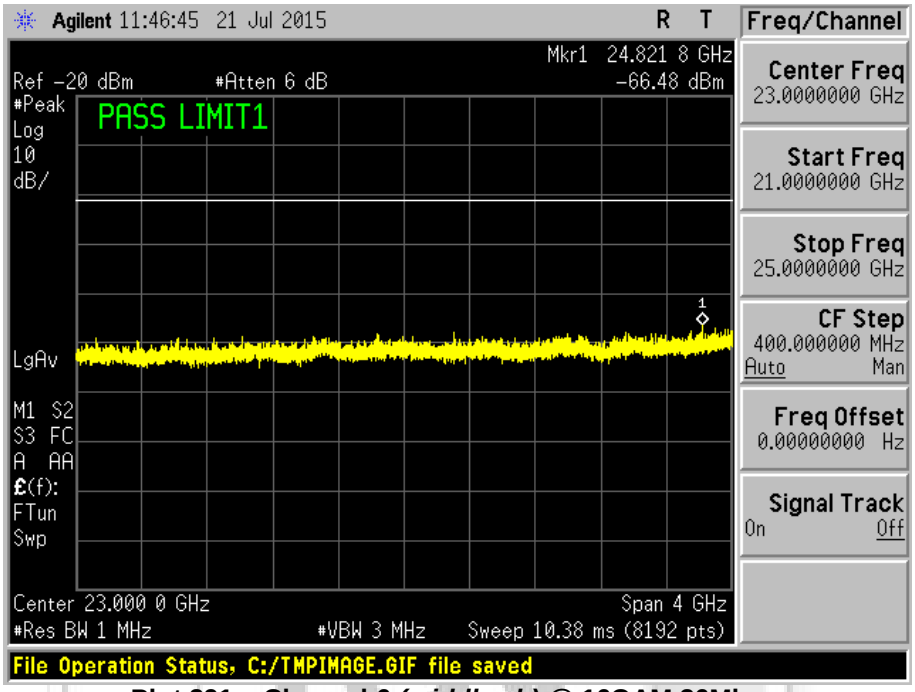


Plot 289 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

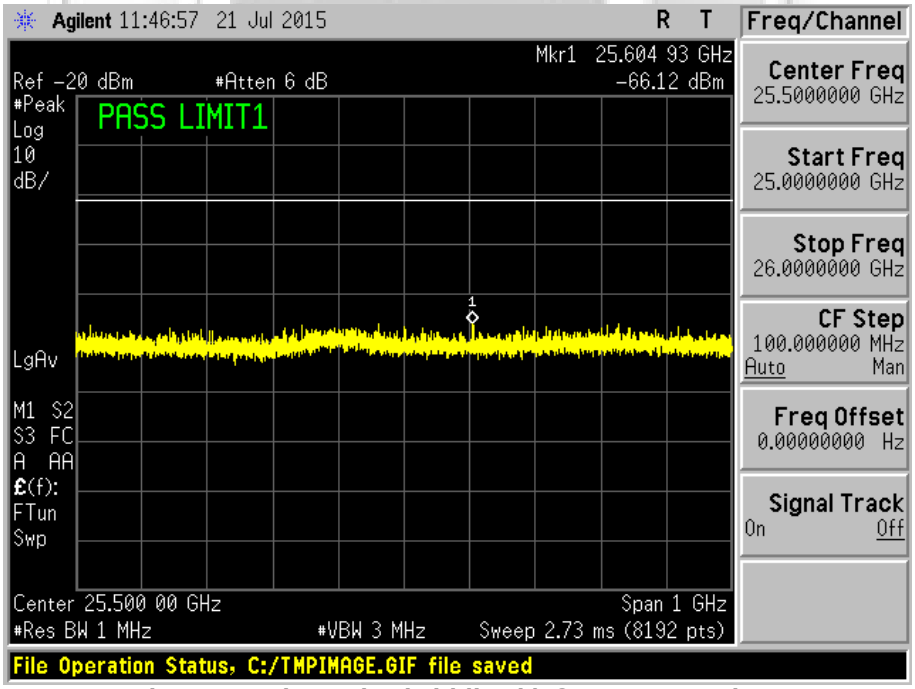


Plot 290 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

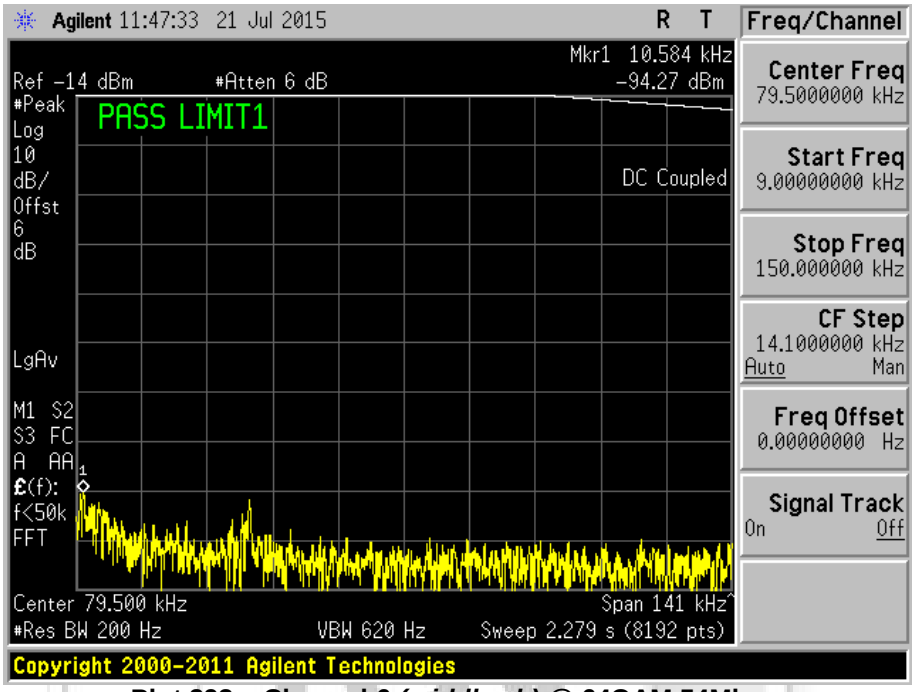


Plot 291 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

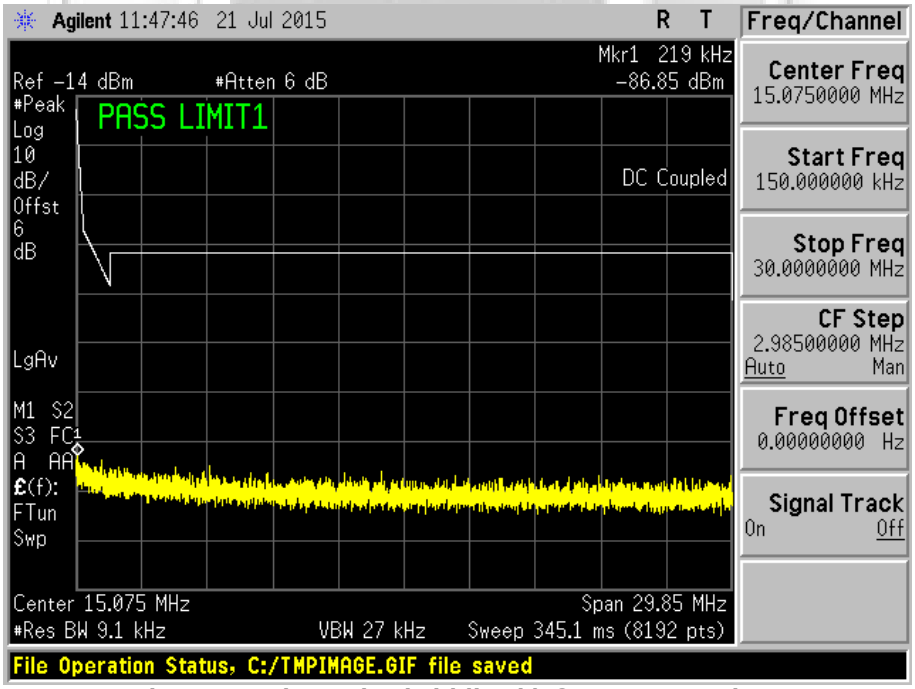


Plot 292 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

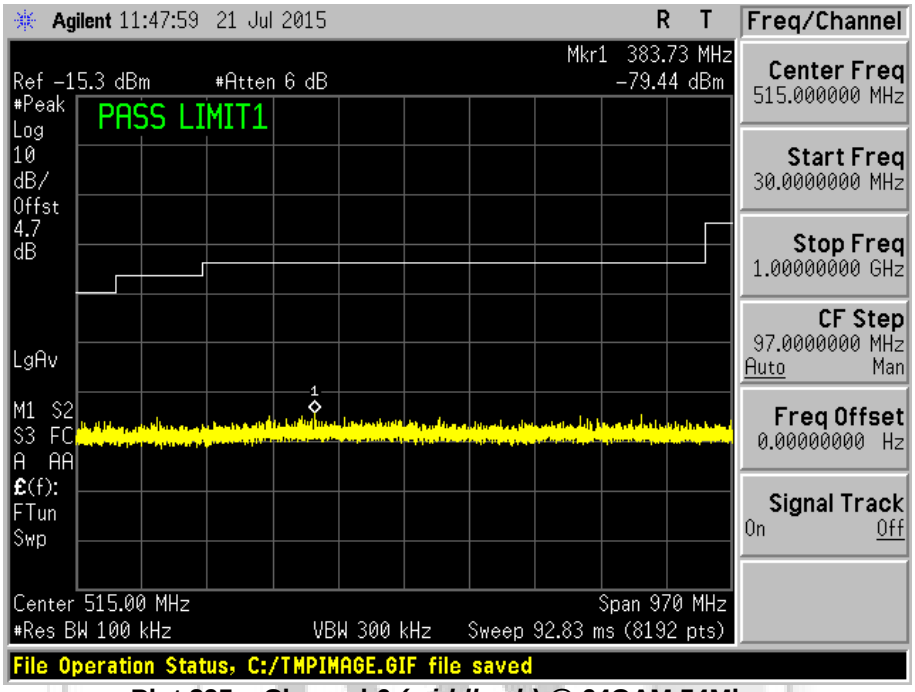


Plot 293 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

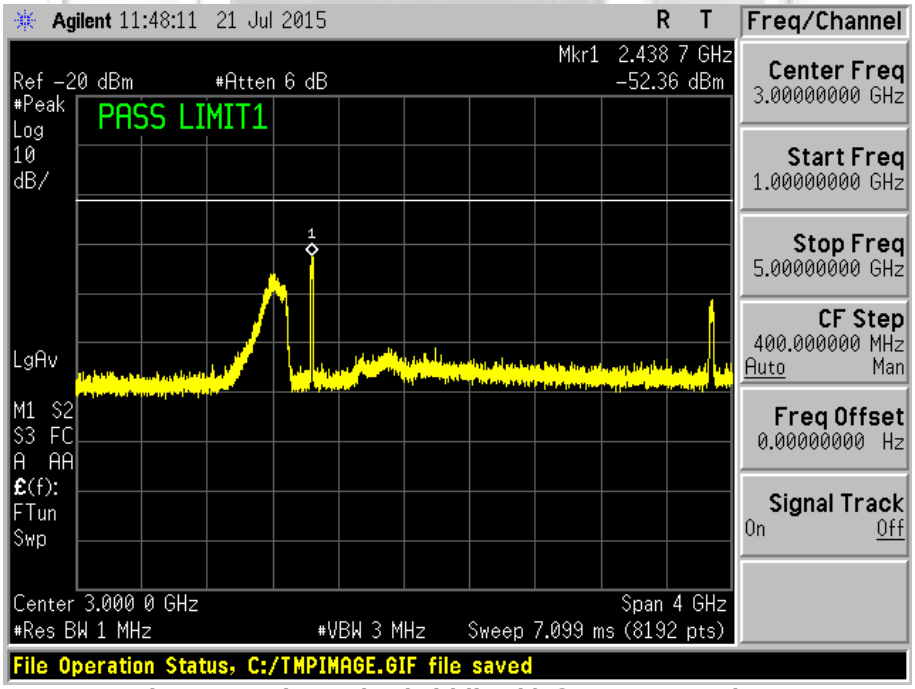


Plot 294 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

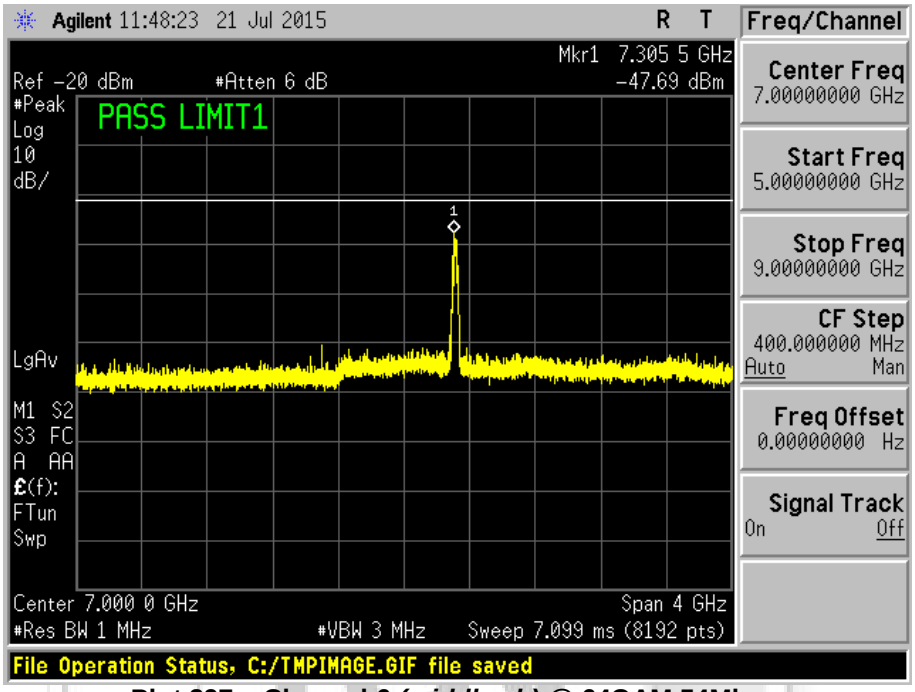


Plot 295 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

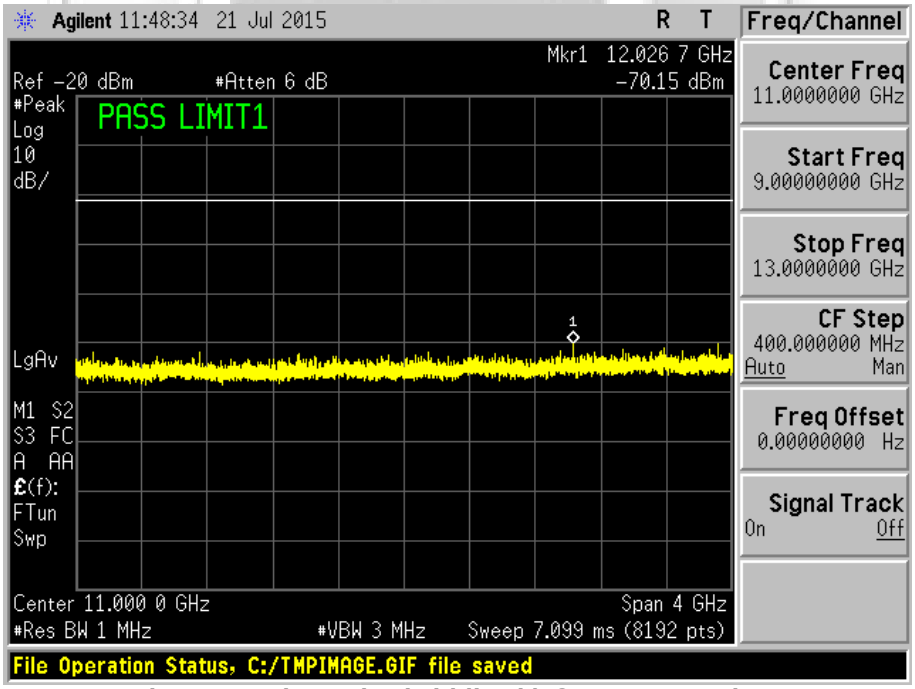


Plot 296 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

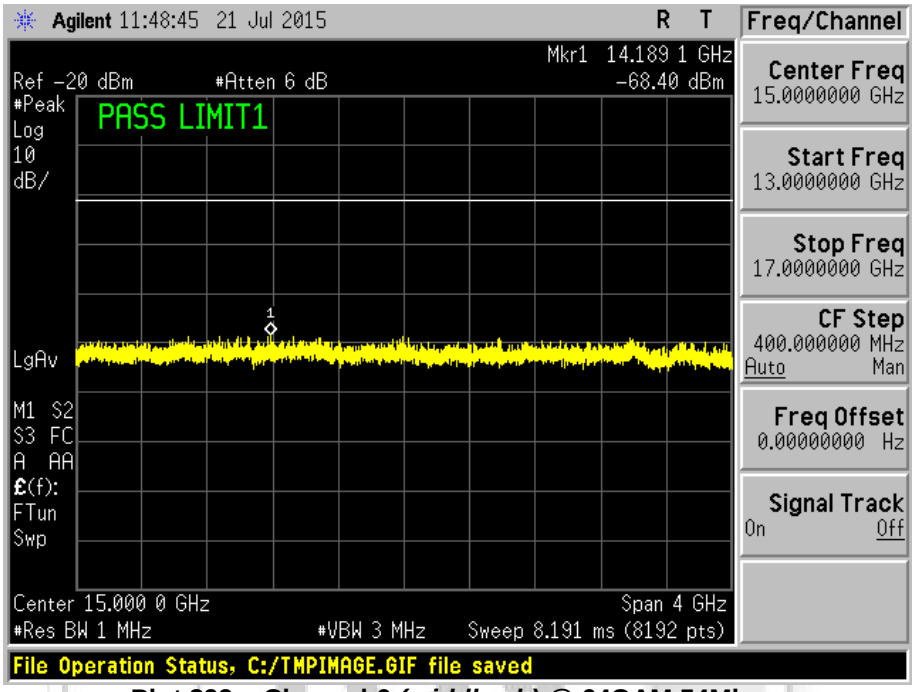


Plot 297 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

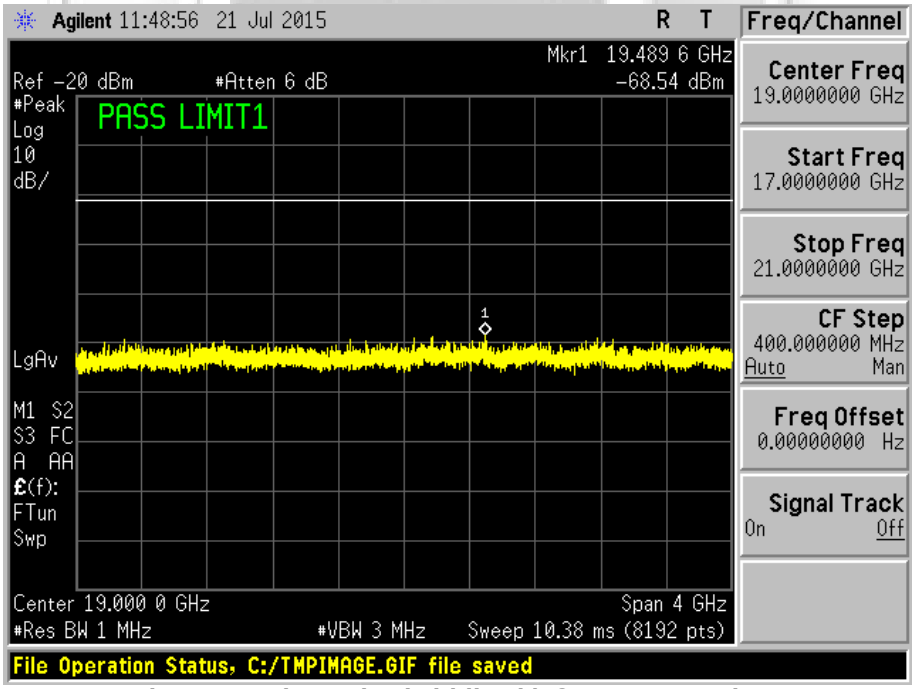


Plot 298 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

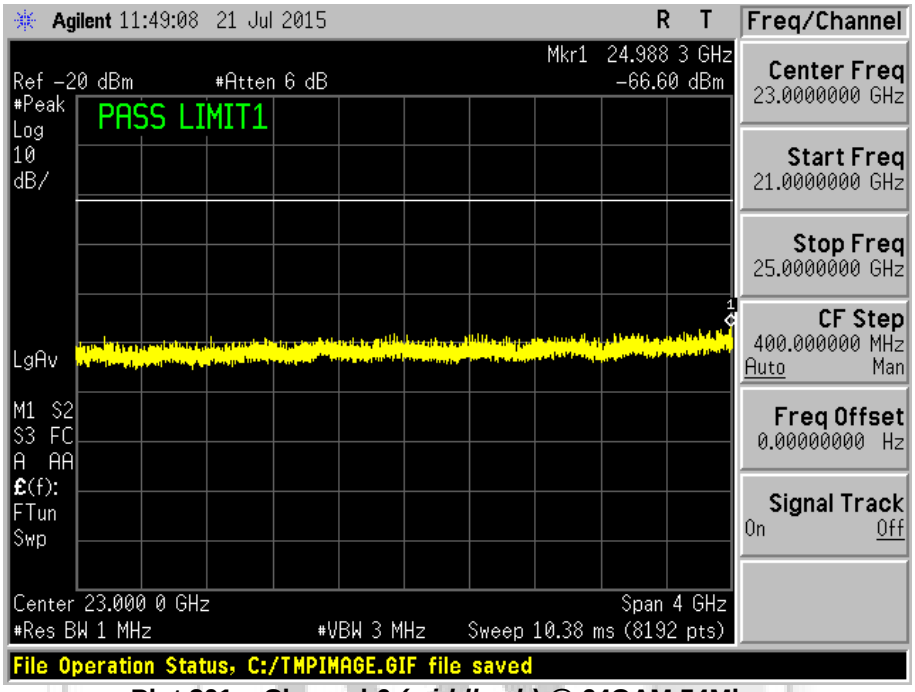


Plot 299 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

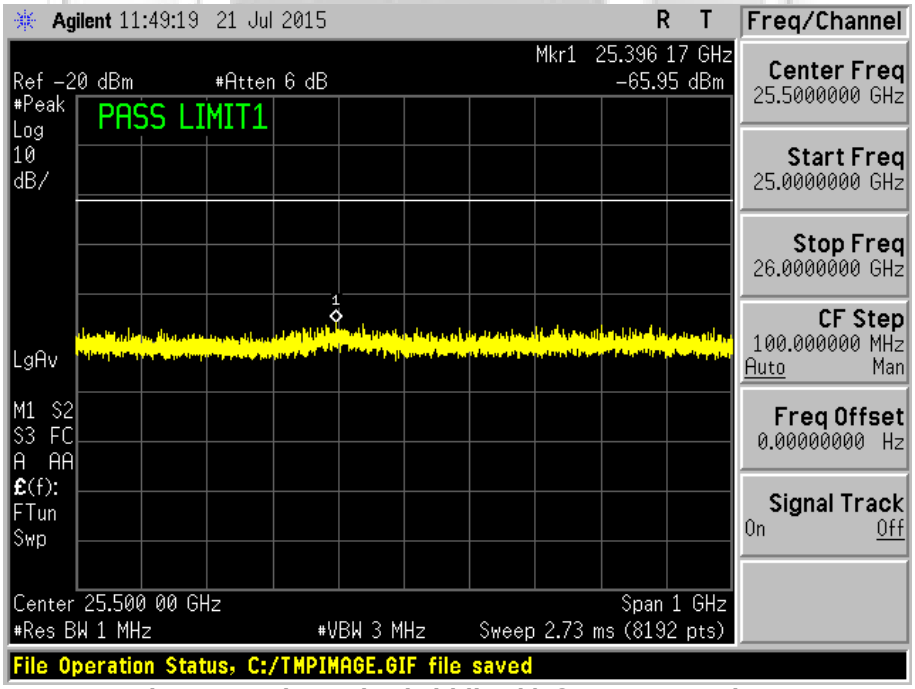


Plot 300 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

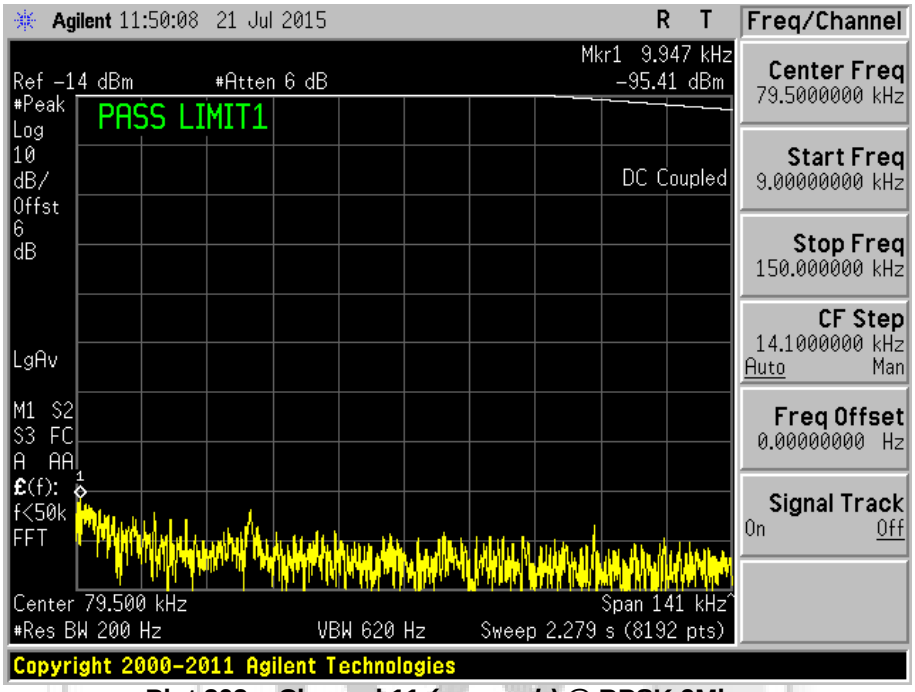


Plot 301 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

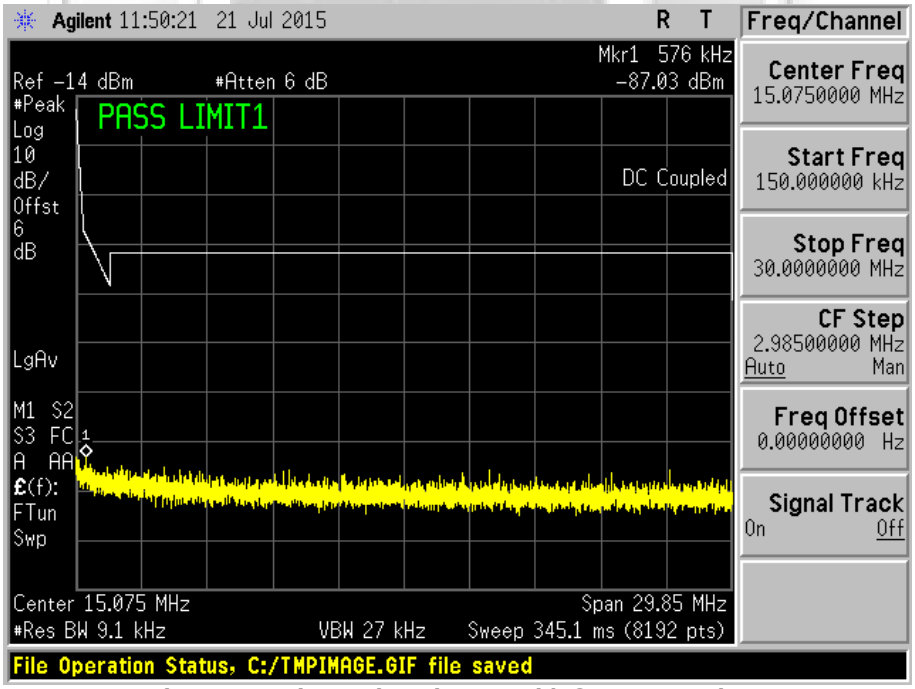


Plot 302 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

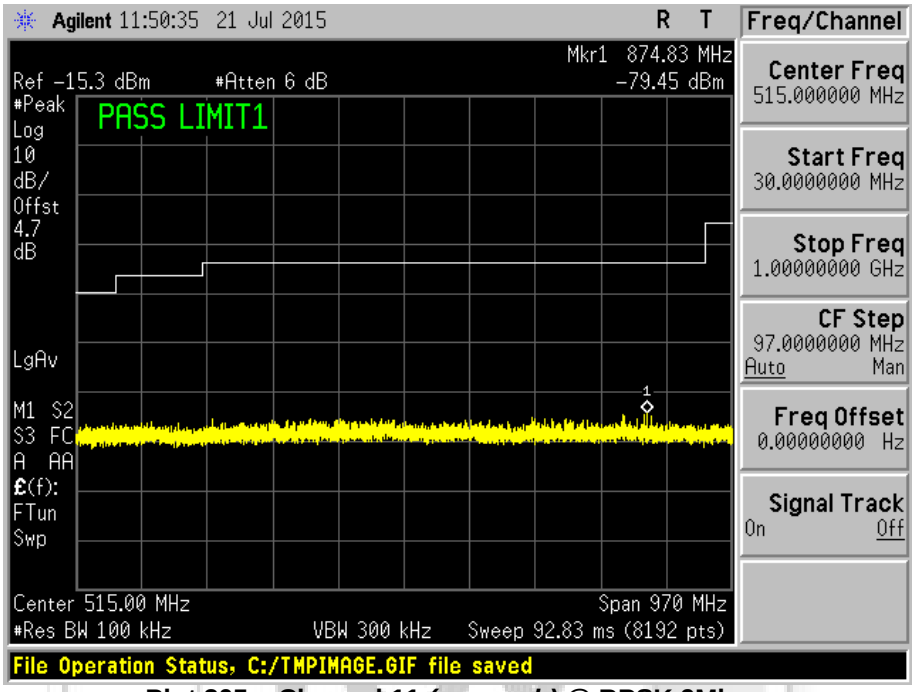


Plot 303 – Channel 11 *(upper ch)* @ BPSK 9Mbps

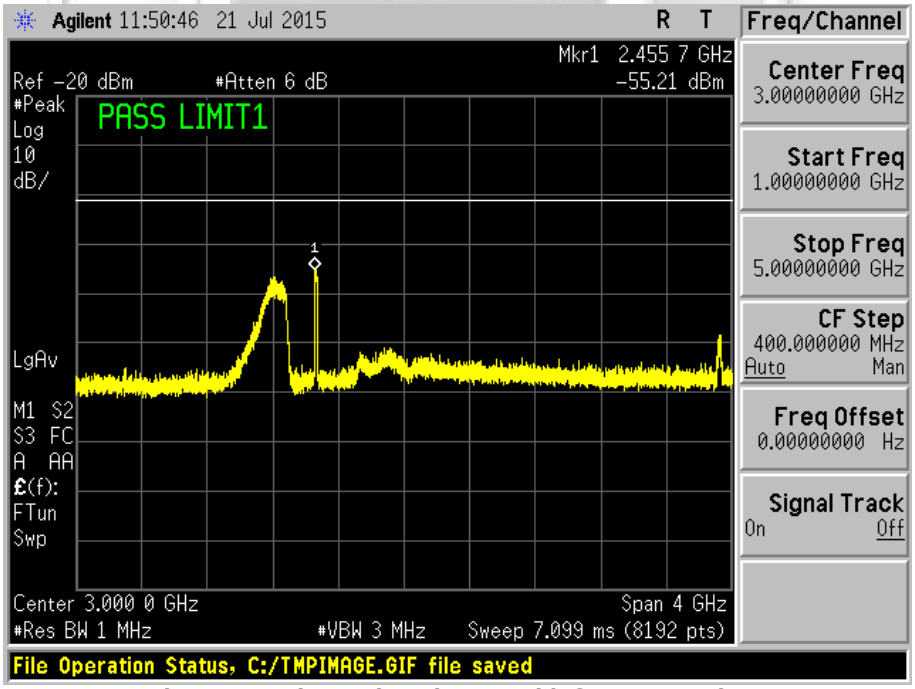


Plot 304 – Channel 11 *(upper ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

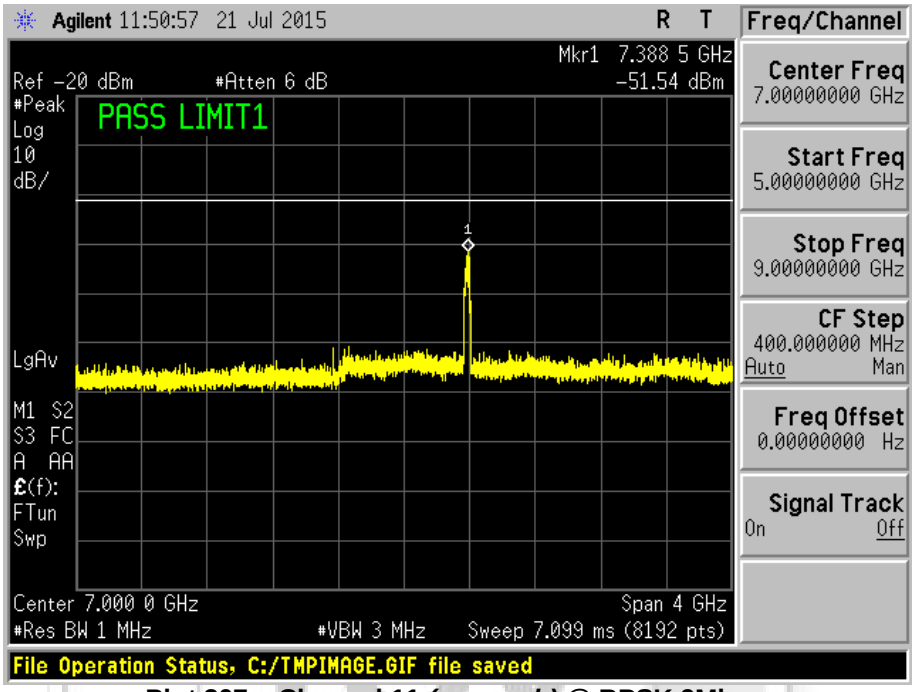


Plot 305 – Channel 11 *(upper ch)* @ BPSK 9Mbps

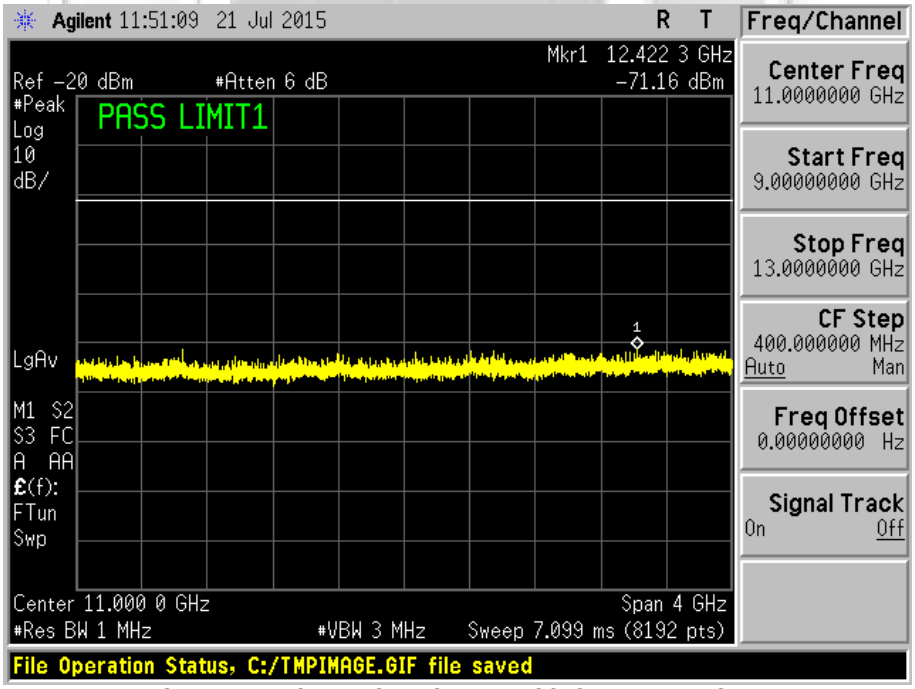


Plot 306 – Channel 11 *(upper ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

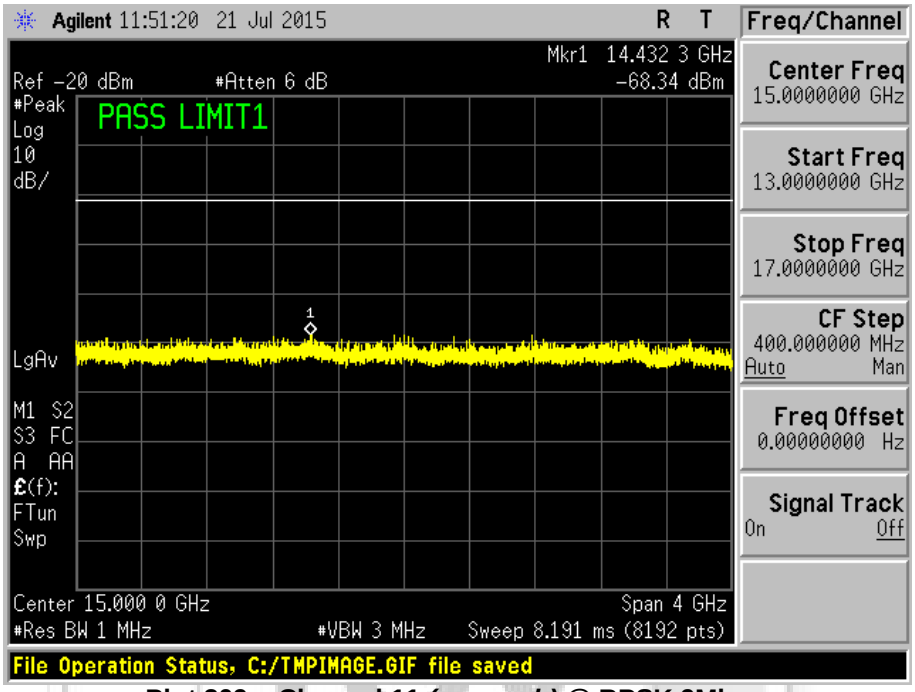


Plot 307 – Channel 11 *(upper ch)* @ BPSK 9Mbps

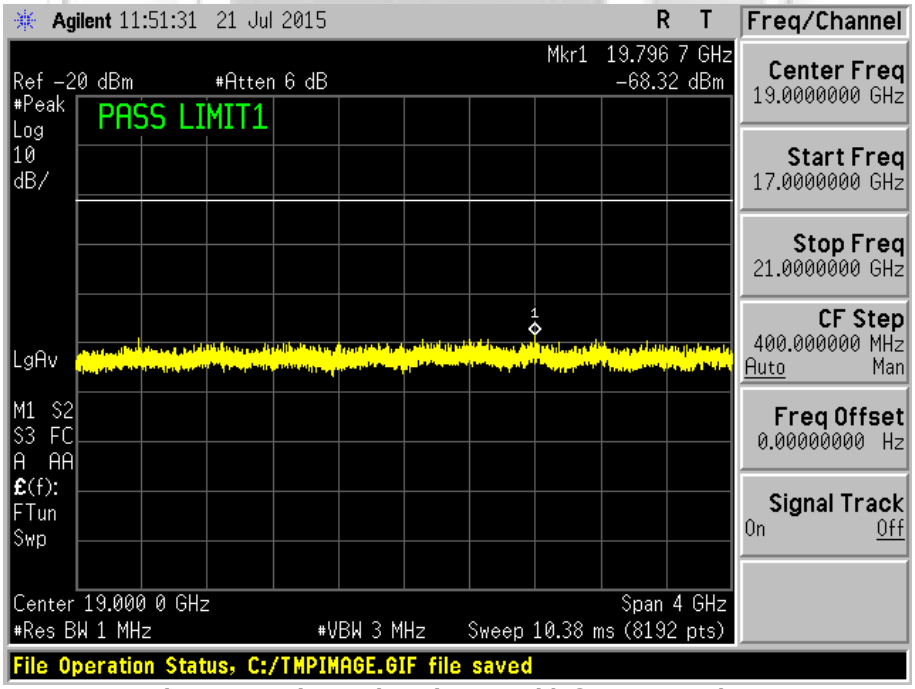


Plot 308 – Channel 11 *(upper ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

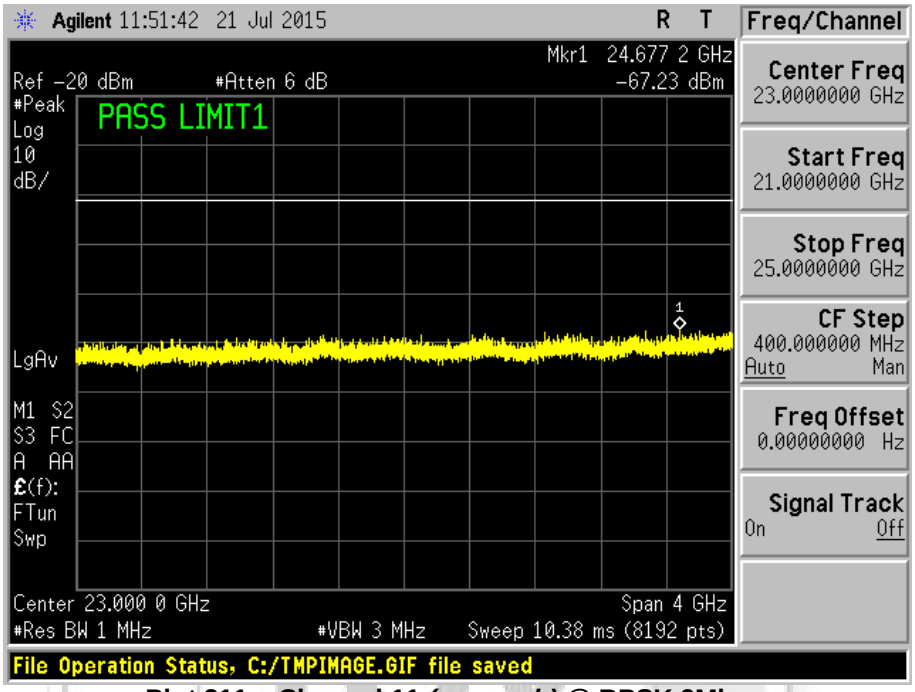


Plot 309 – Channel 11 *(upper ch)* @ BPSK 9Mbps

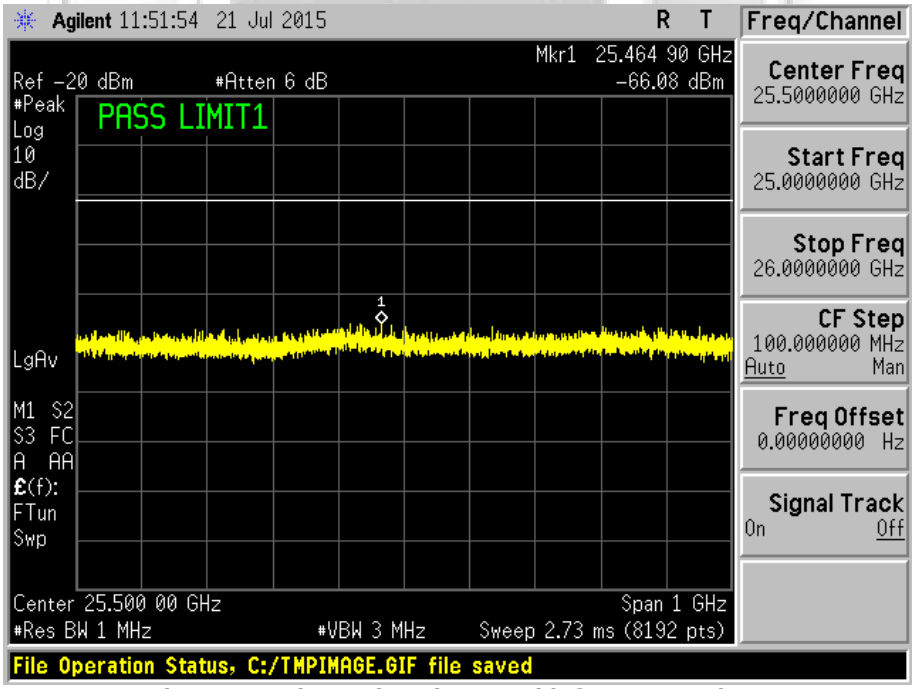


Plot 310 – Channel 11 *(upper ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

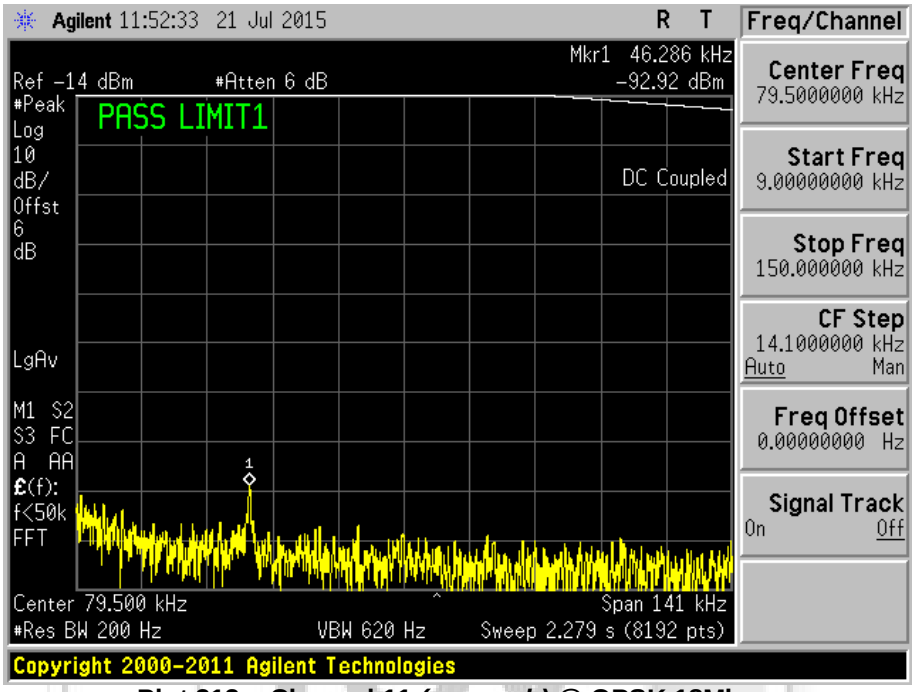


Plot 311 – Channel 11 *(upper ch)* @ BPSK 9Mbps

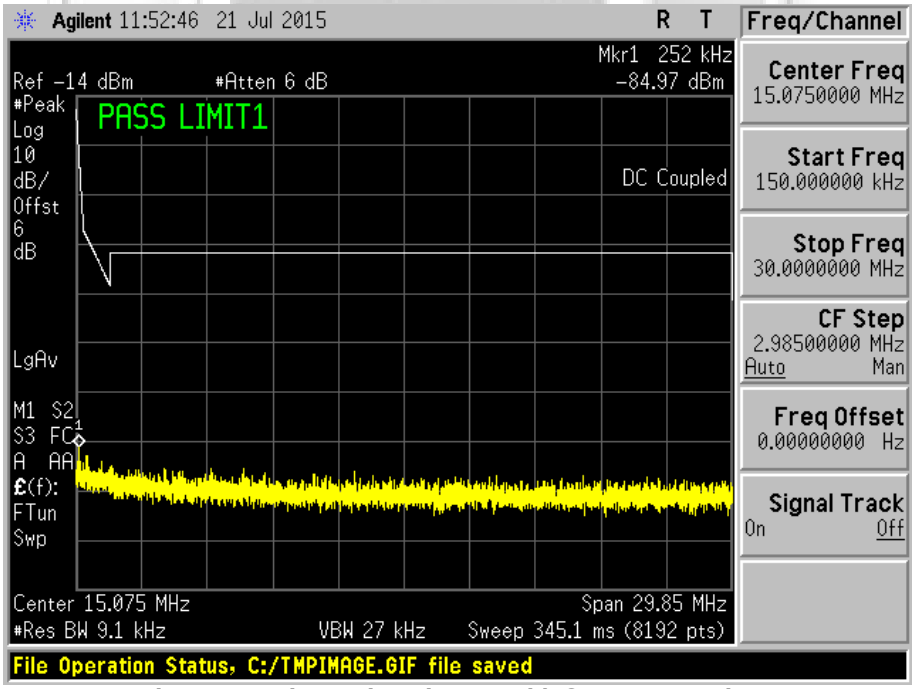


Plot 312 – Channel 11 *(upper ch)* @ BPSK 9Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

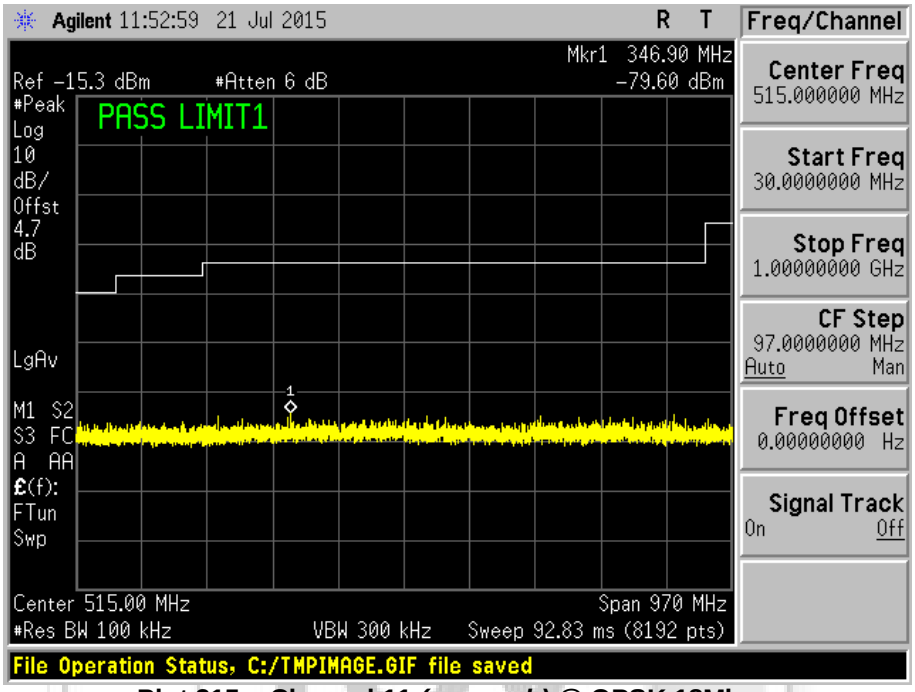


Plot 313 – Channel 11 *(upper ch)* @ QPSK 18Mbps

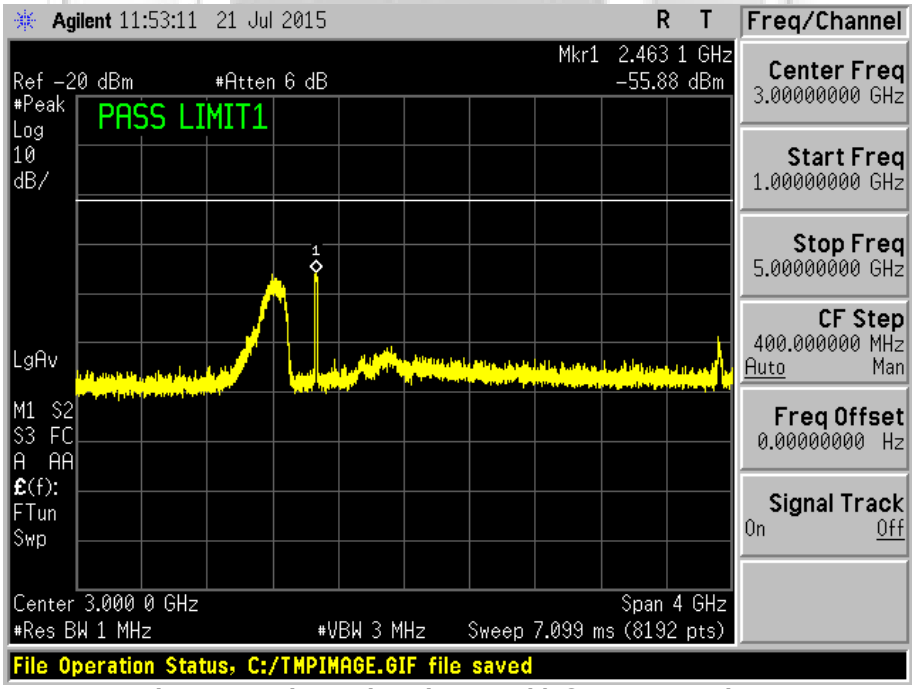


Plot 314 – Channel 11 *(upper ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

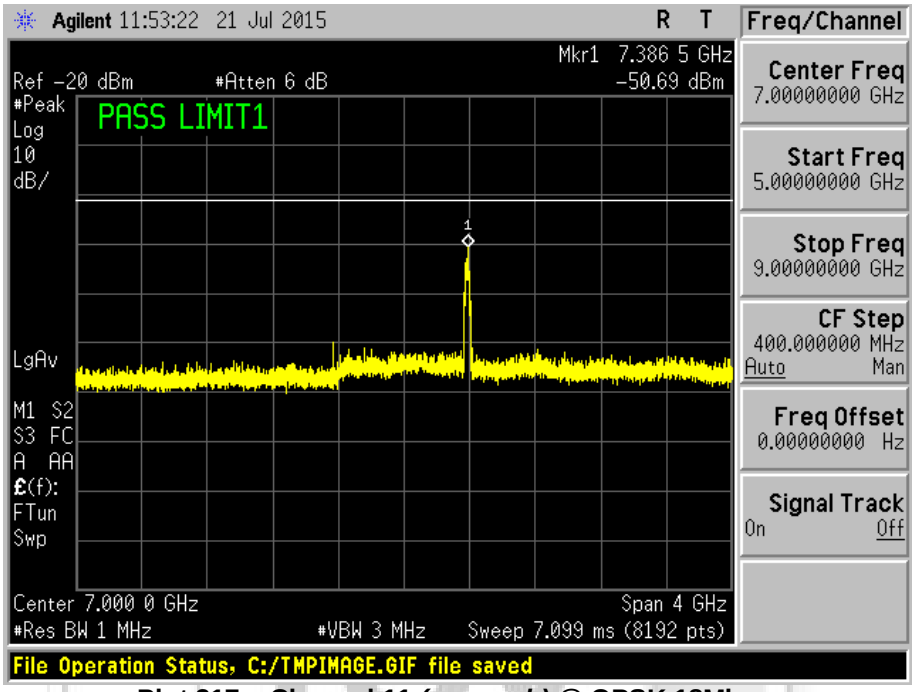


Plot 315 – Channel 11 *(upper ch)* @ QPSK 18Mbps

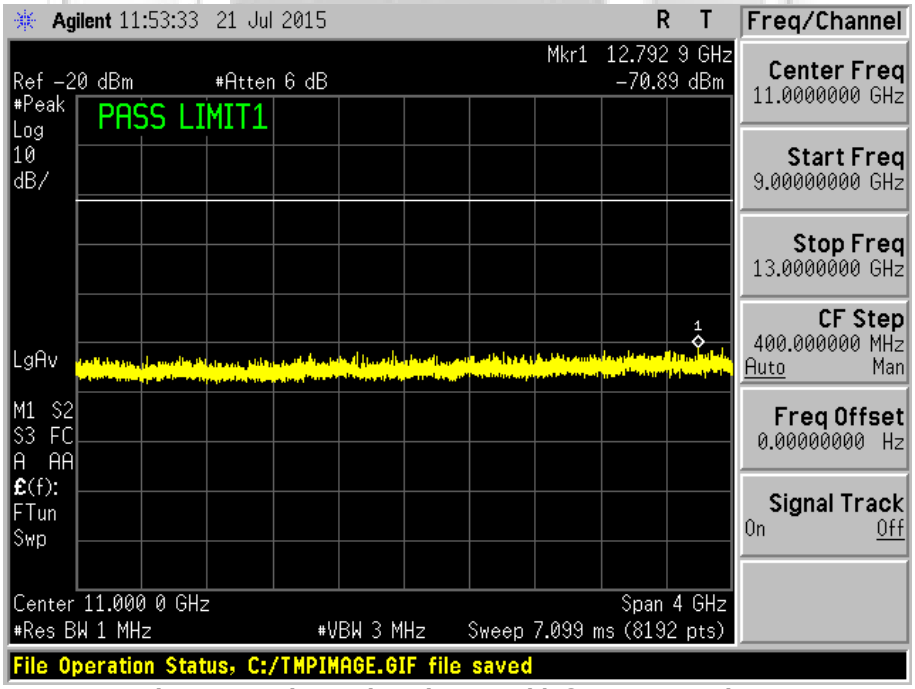


Plot 316 – Channel 11 *(upper ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

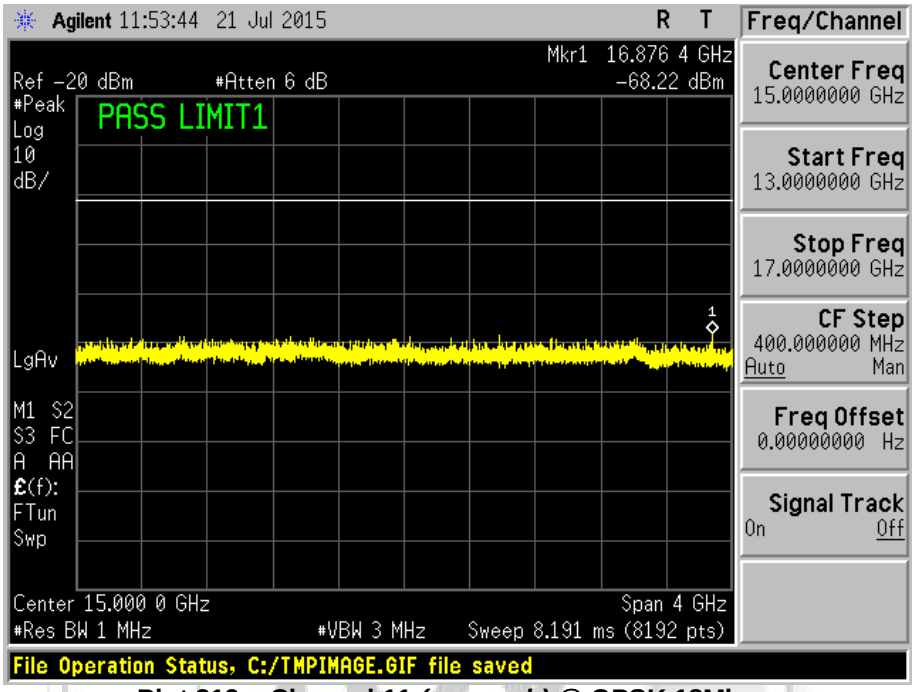


Plot 317 – Channel 11 *(upper ch)* @ QPSK 18Mbps

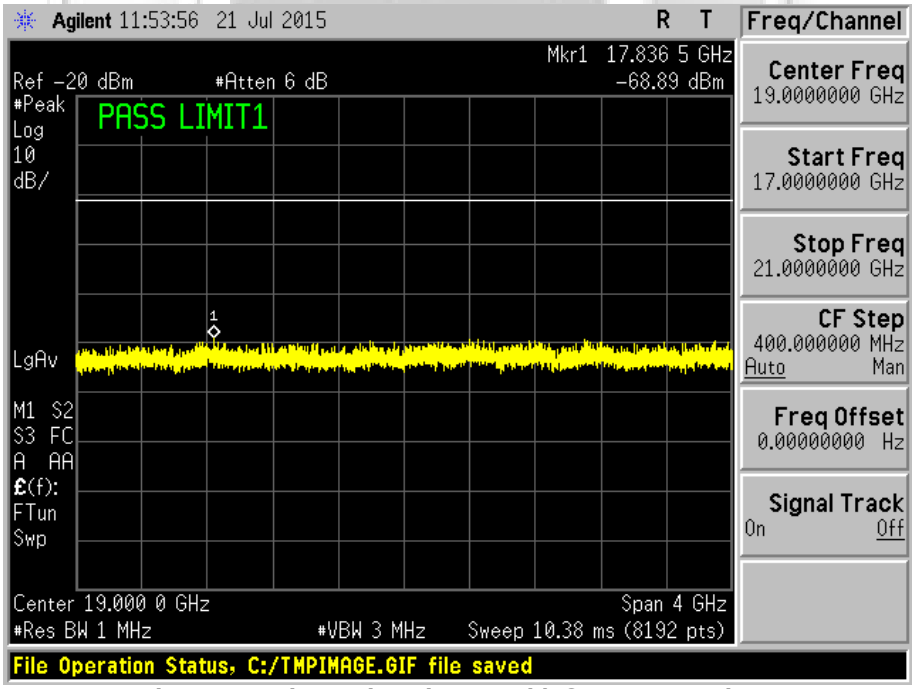


Plot 318 – Channel 11 *(upper ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

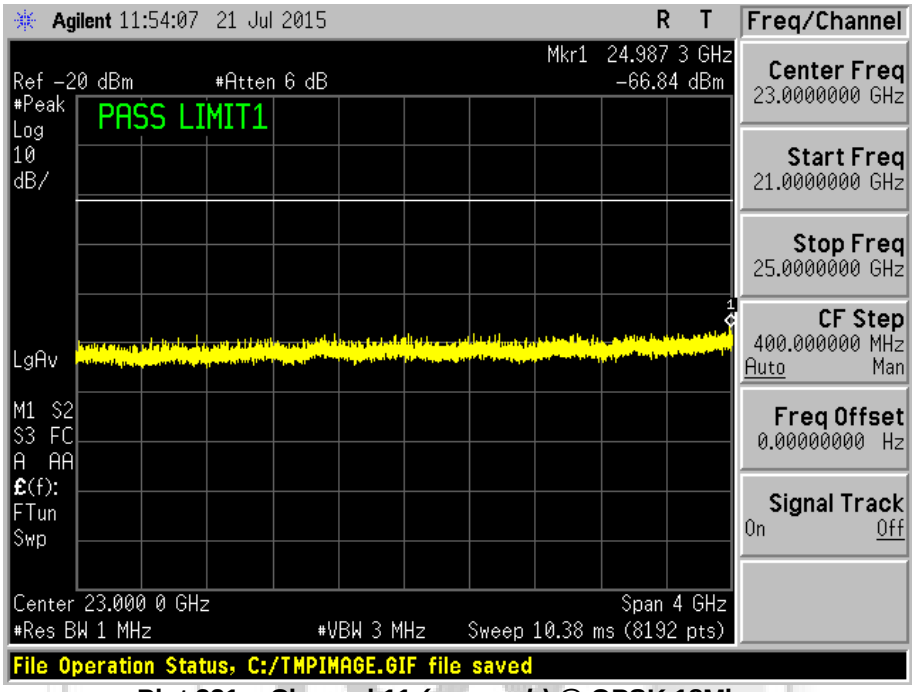


Plot 319 – Channel 11 *(upper ch)* @ QPSK 18Mbps

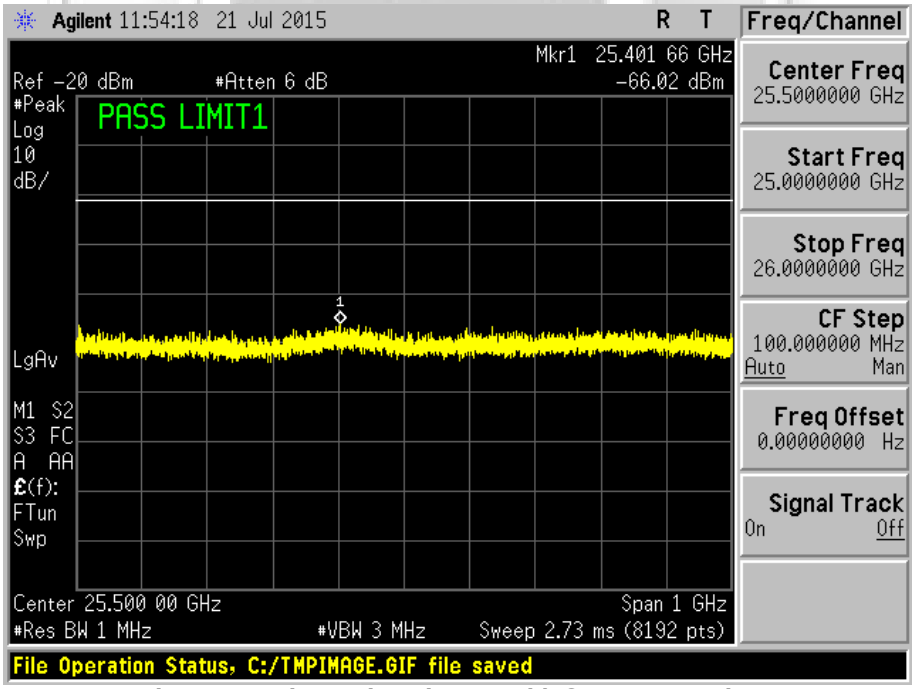


Plot 320 – Channel 11 *(upper ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

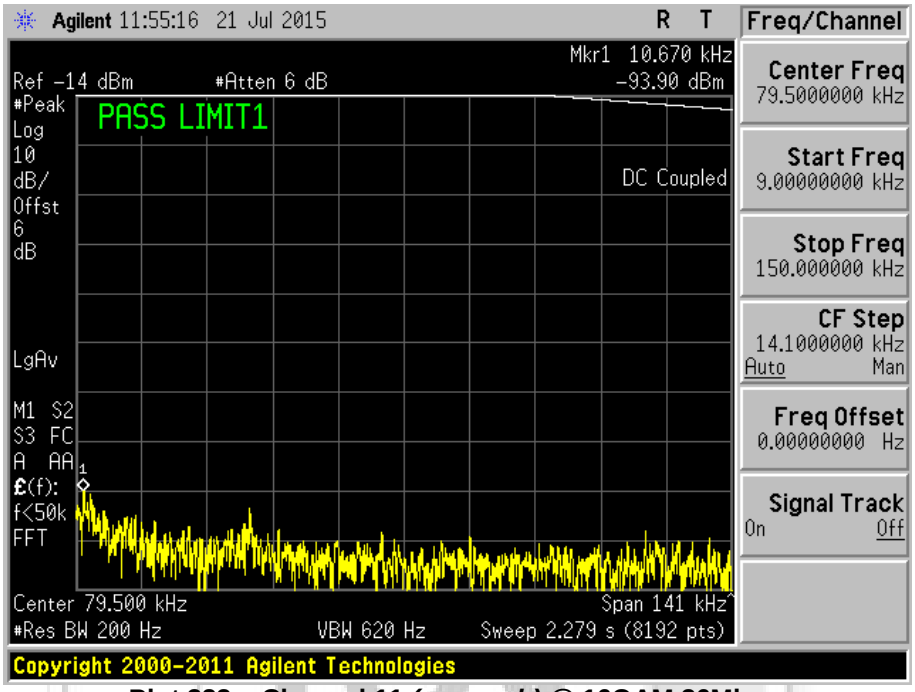


Plot 321 – Channel 11 *(upper ch)* @ QPSK 18Mbps

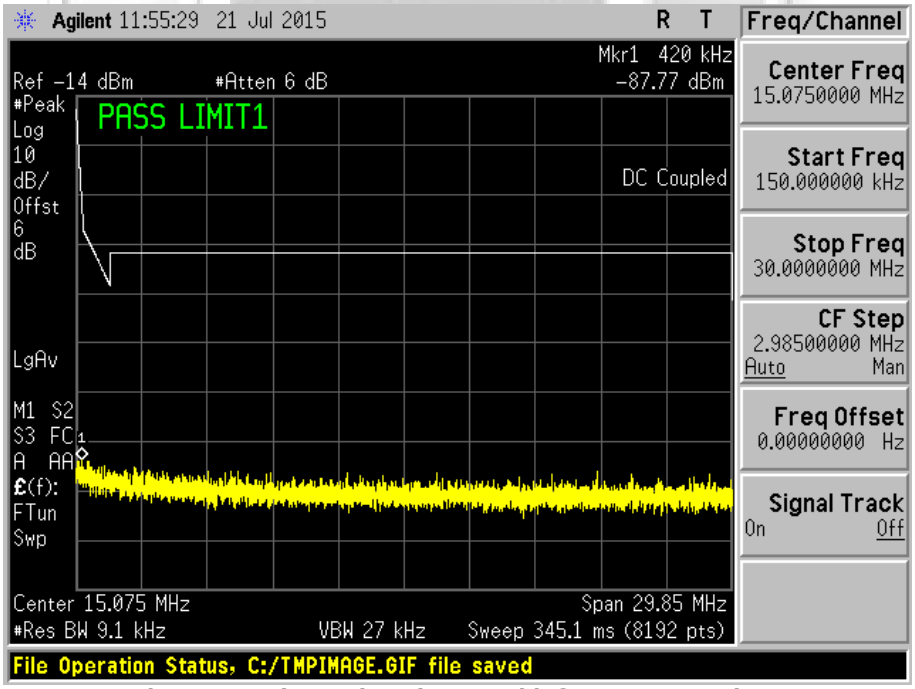


Plot 322 – Channel 11 *(upper ch)* @ QPSK 18Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

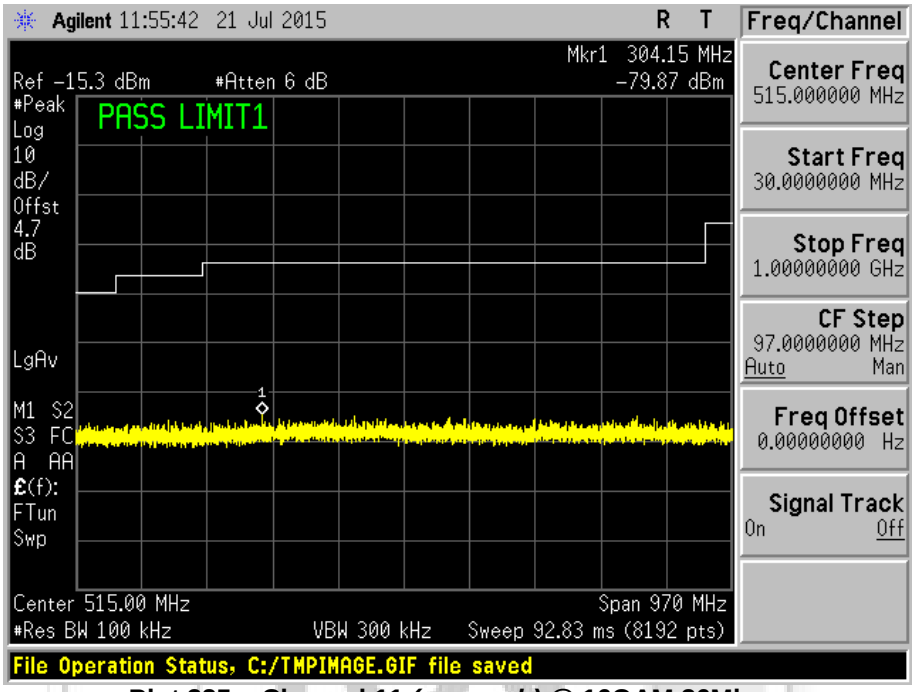


Plot 323 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

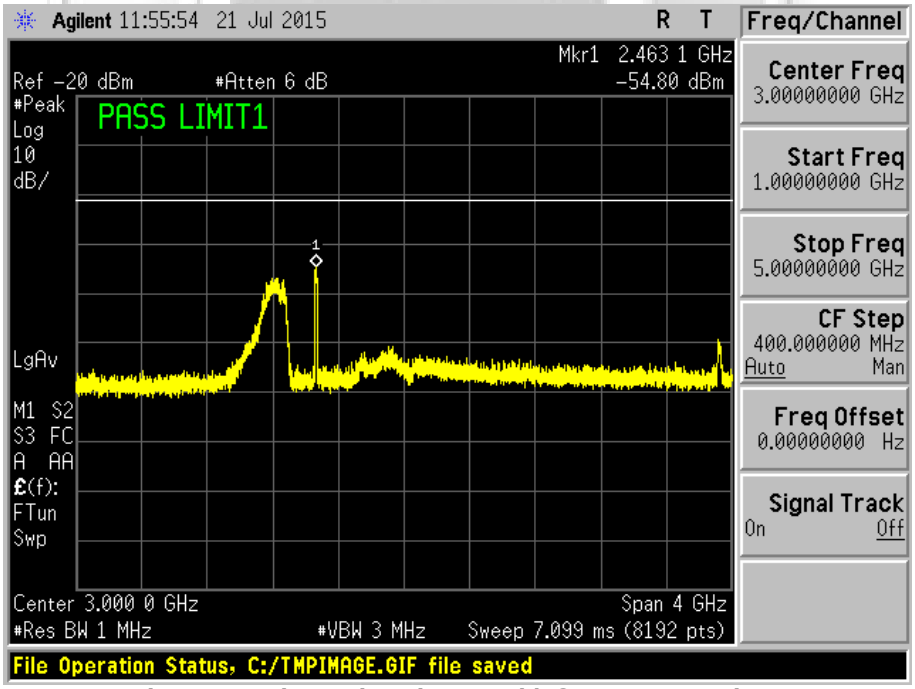


Plot 324 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

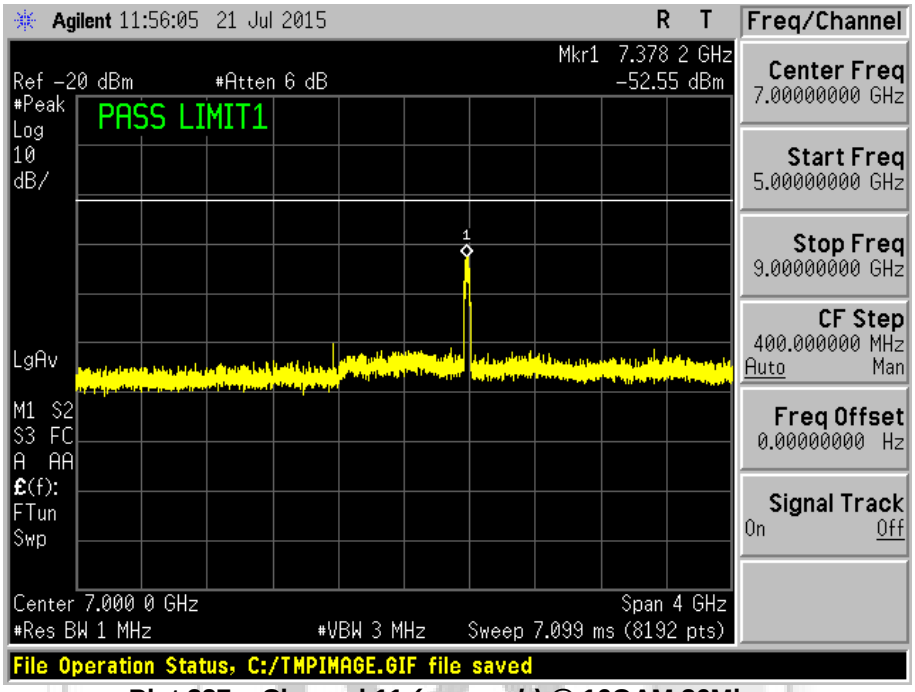


Plot 325 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

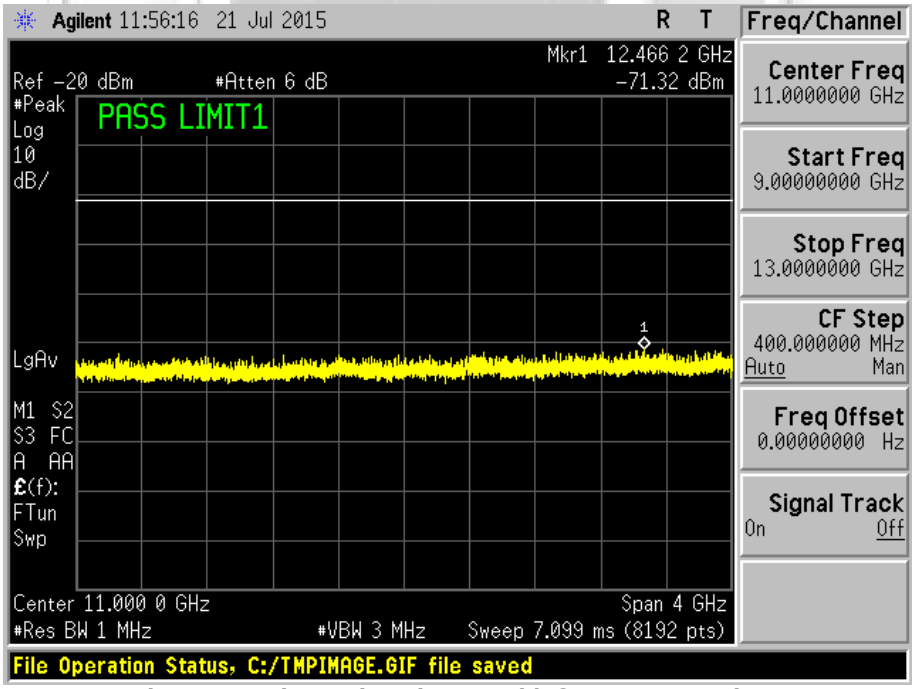


Plot 326 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

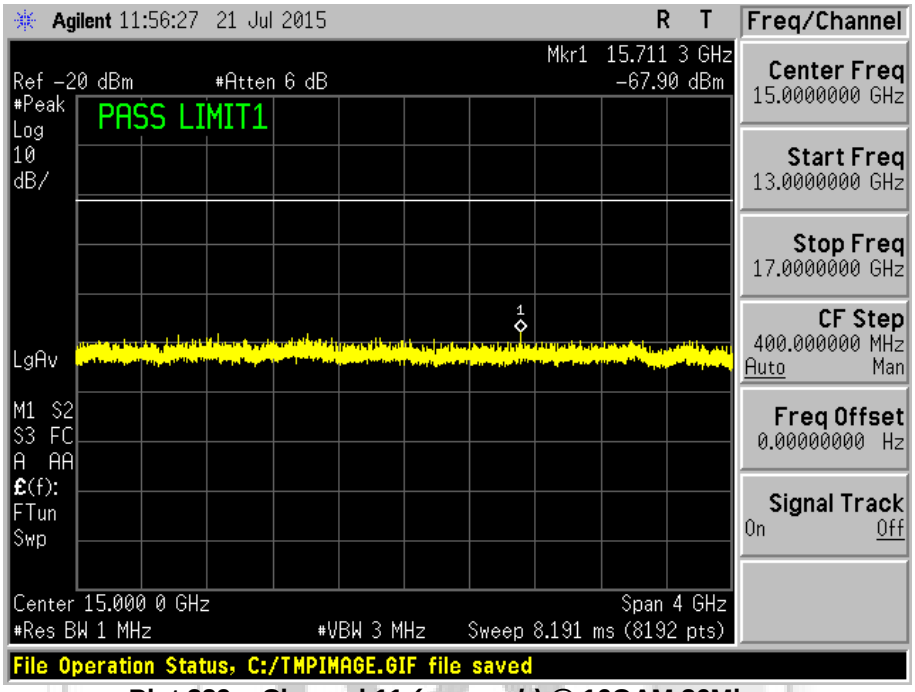


Plot 327 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

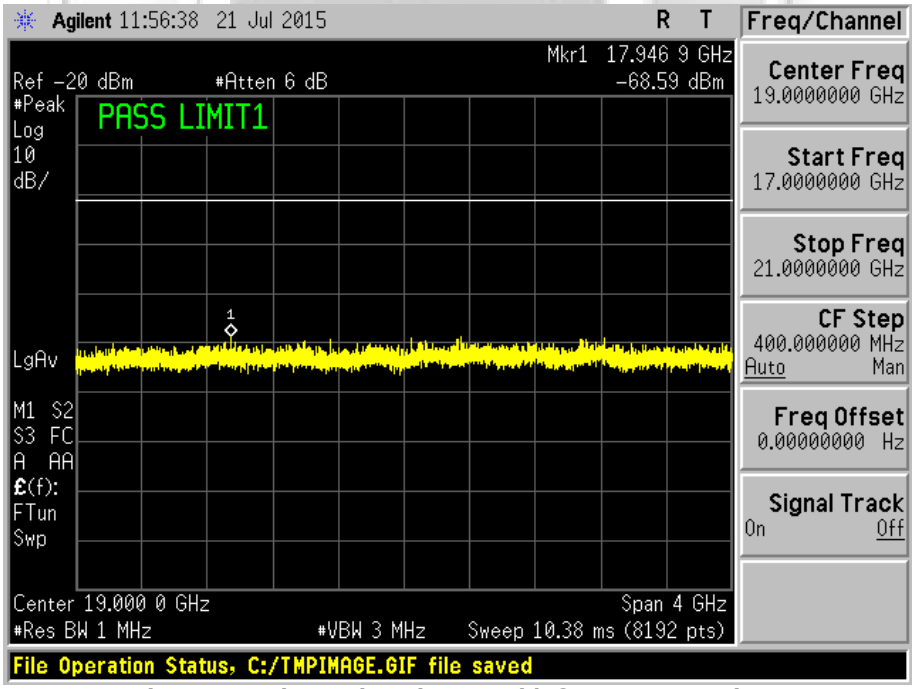


Plot 328 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

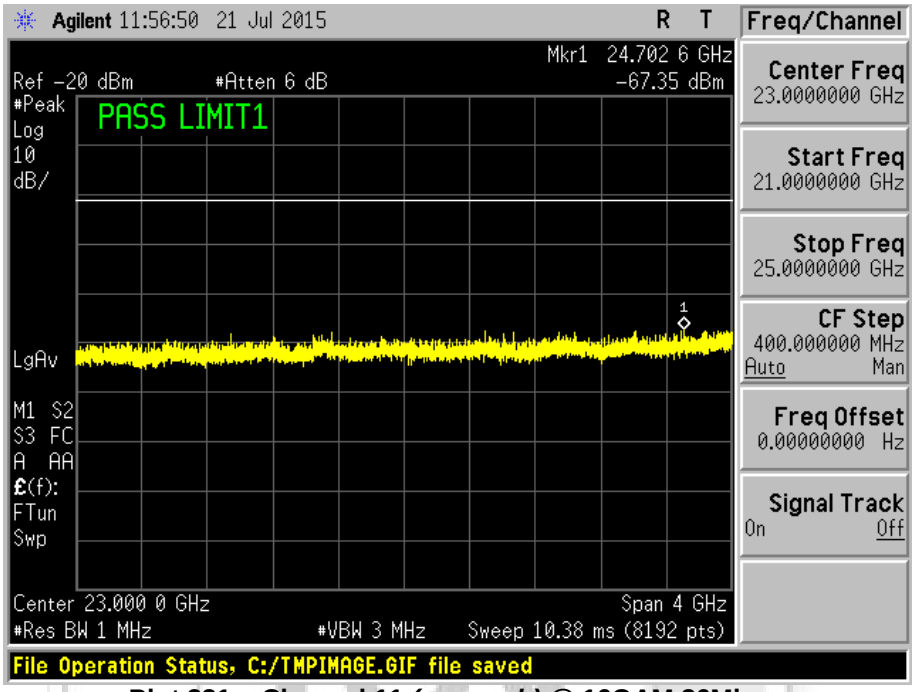


Plot 329 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

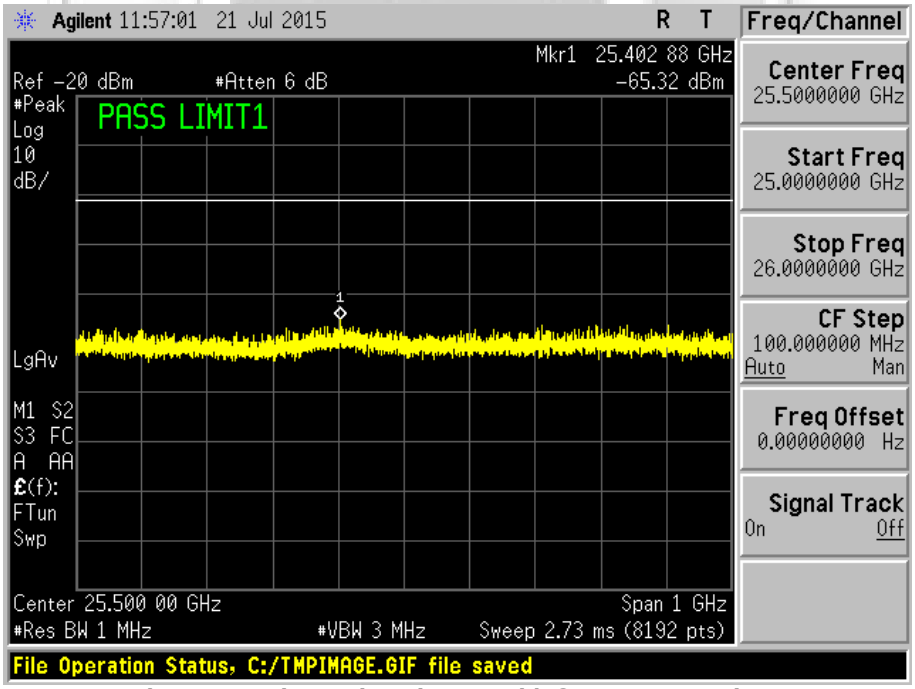


Plot 330 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

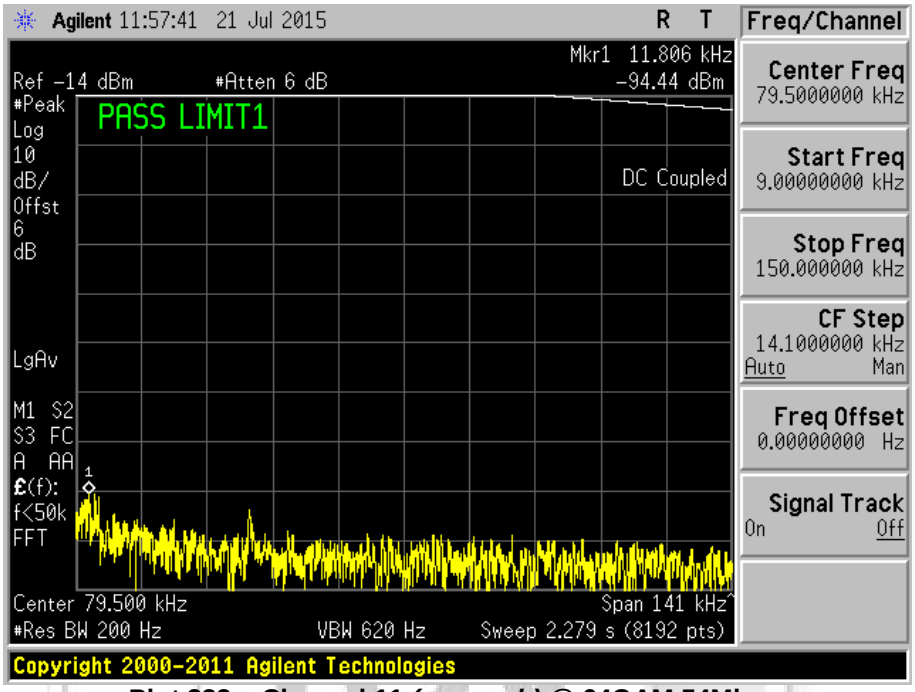


Plot 331 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

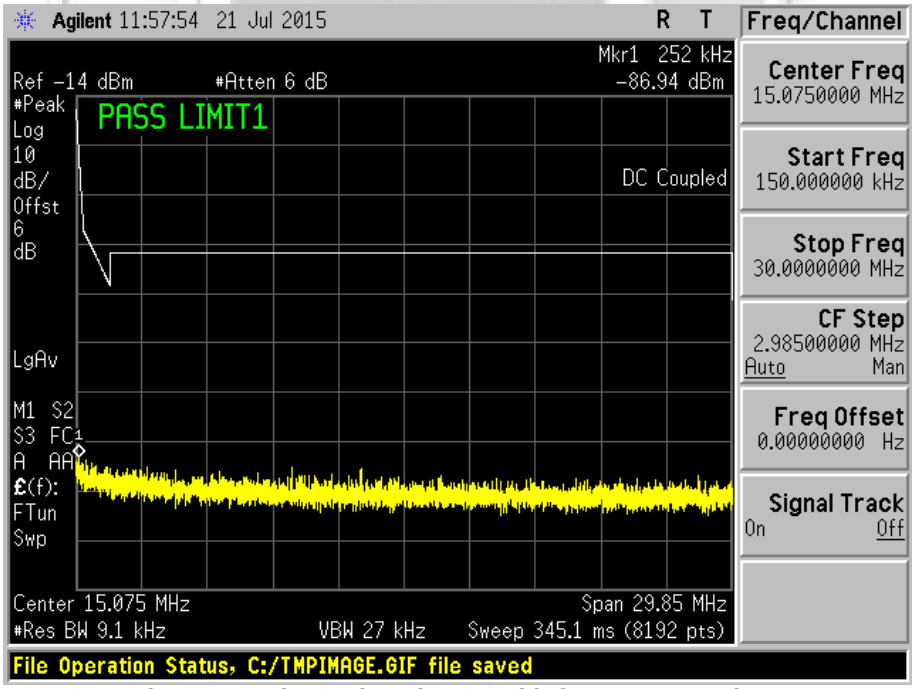


Plot 332 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

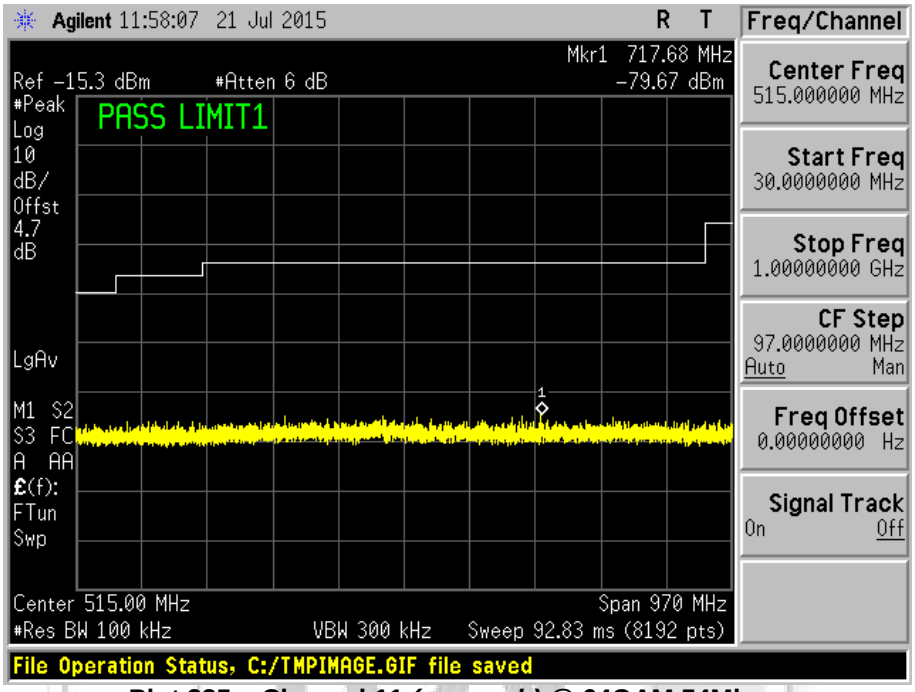


Plot 333 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

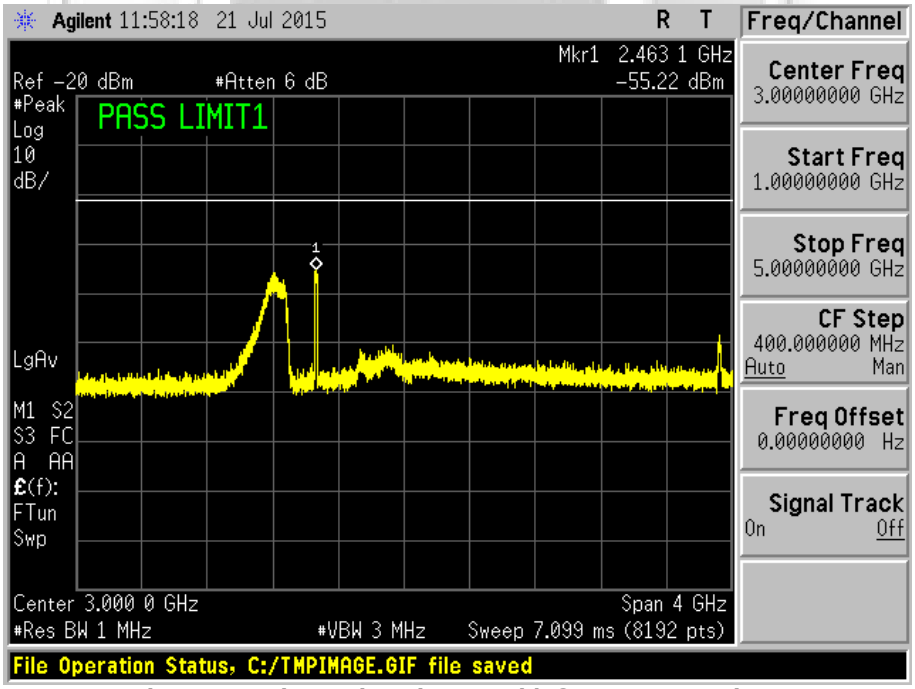


Plot 334 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

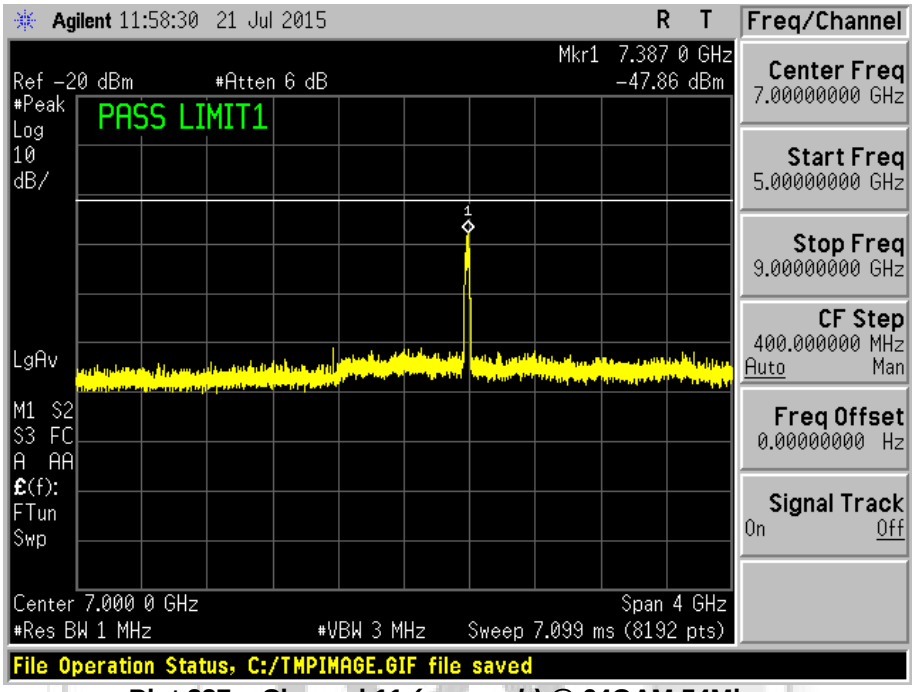


Plot 335 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

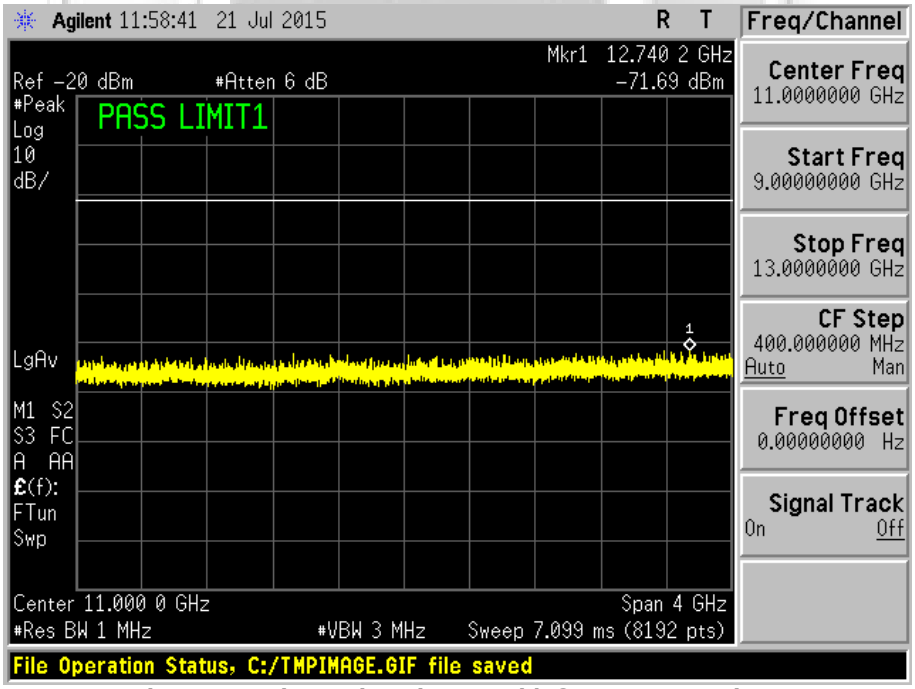


Plot 336 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

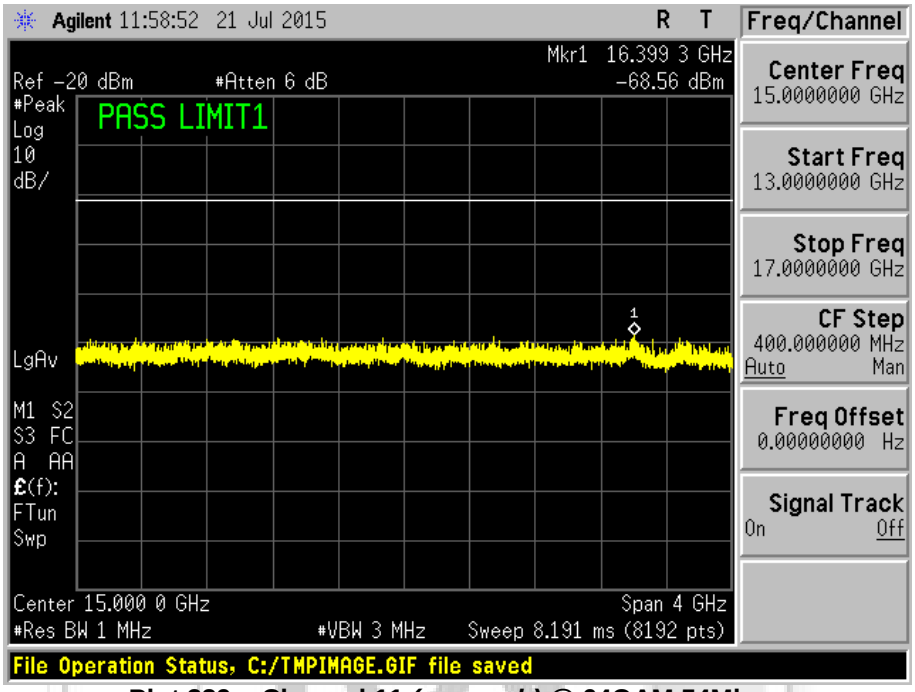


Plot 337 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

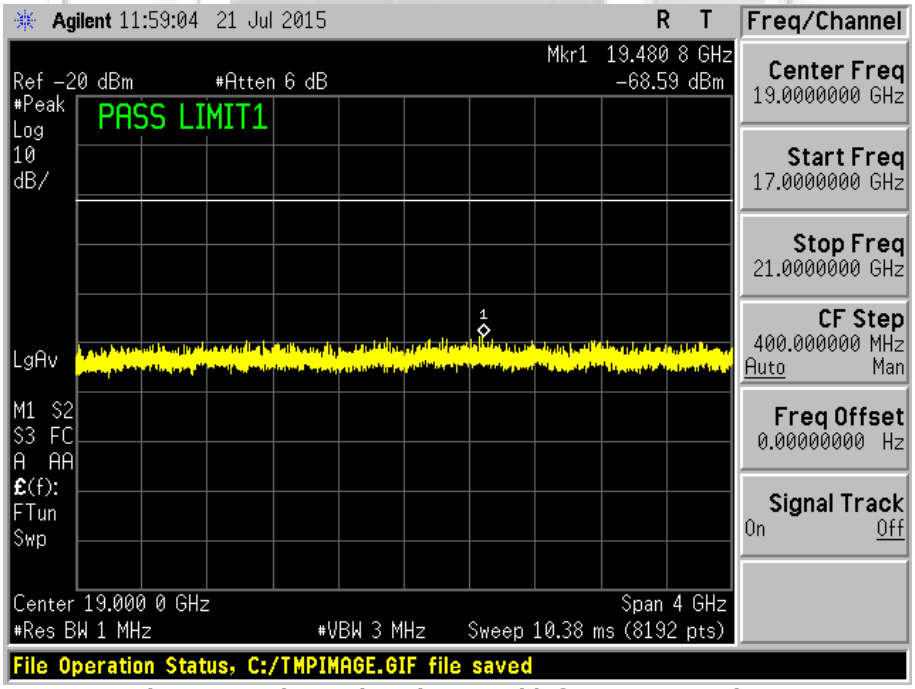


Plot 338 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

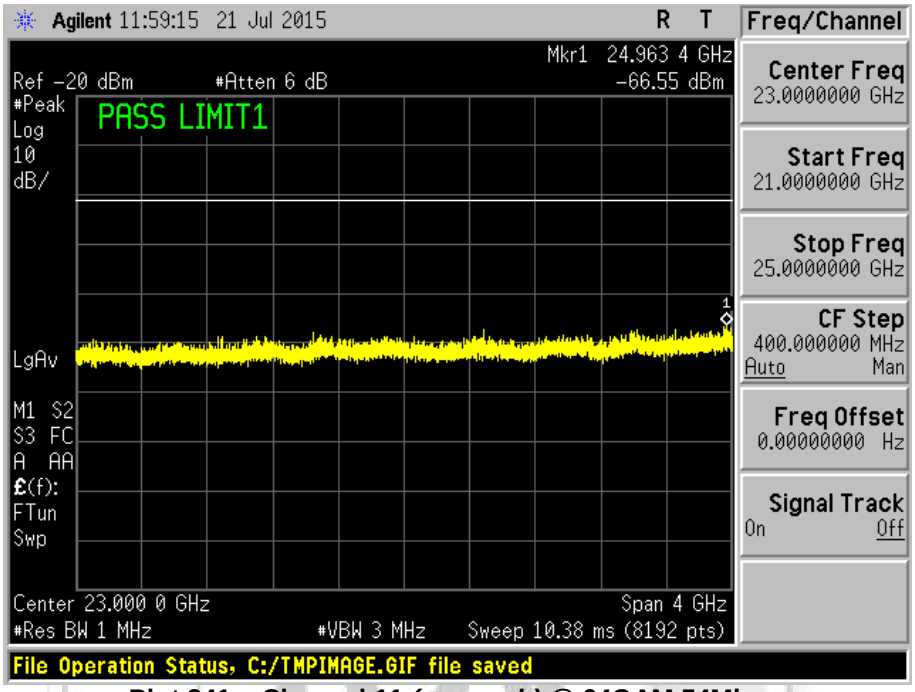


Plot 339 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

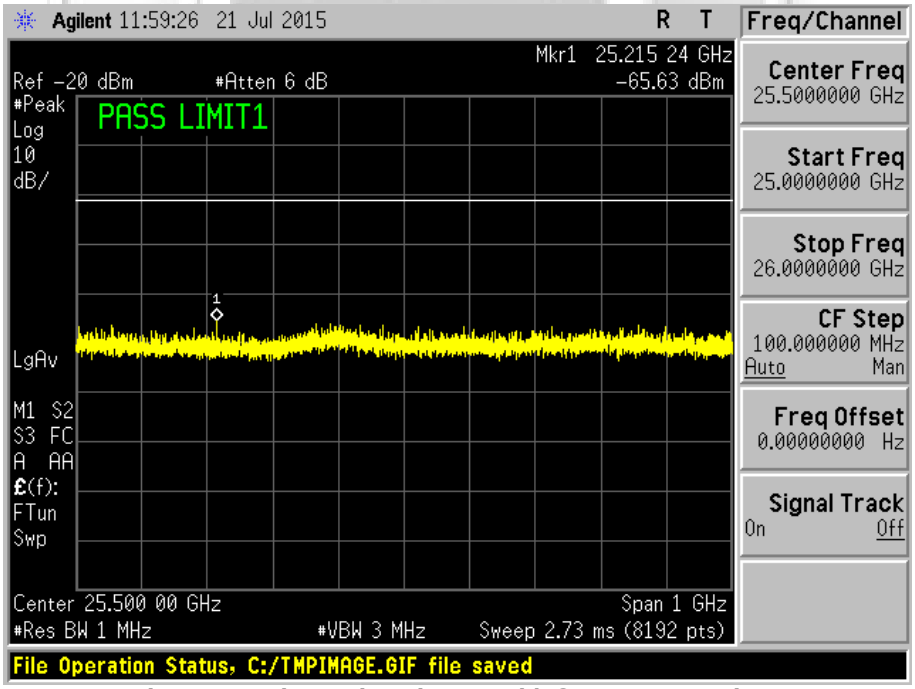


Plot 340 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11g

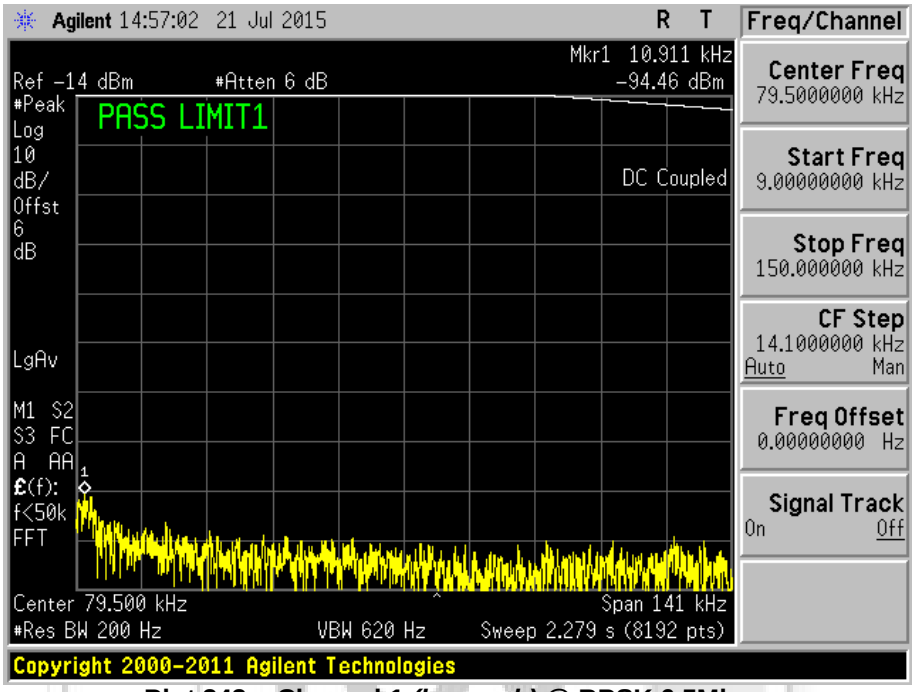


Plot 341 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

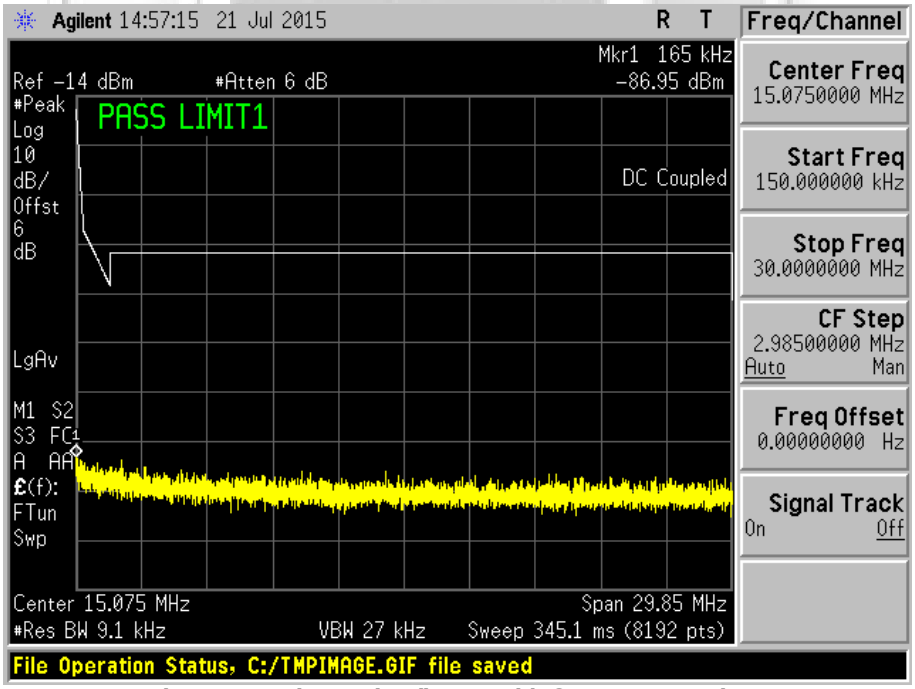


Plot 342 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

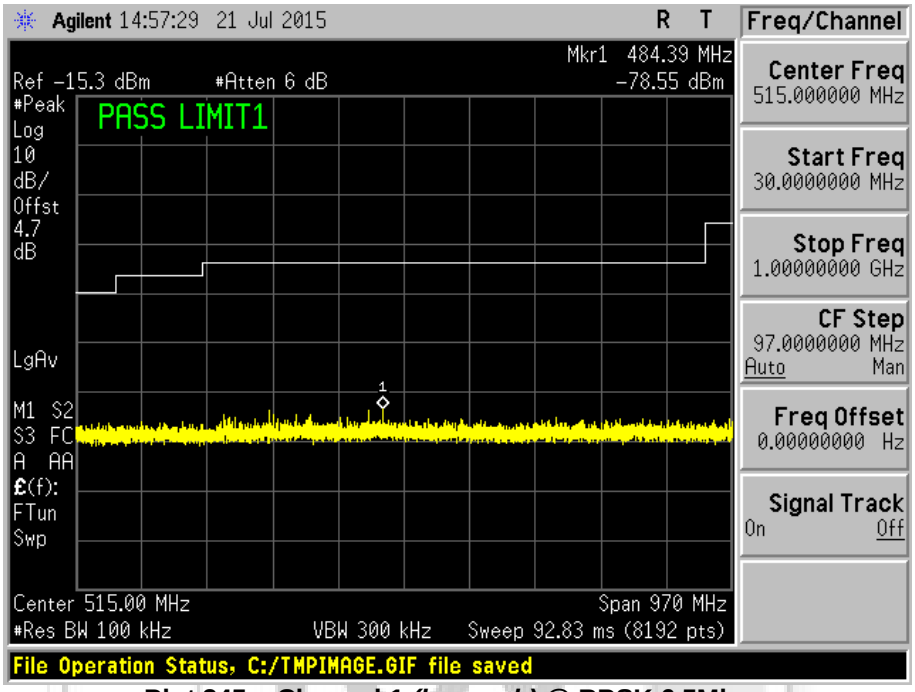


Plot 343 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

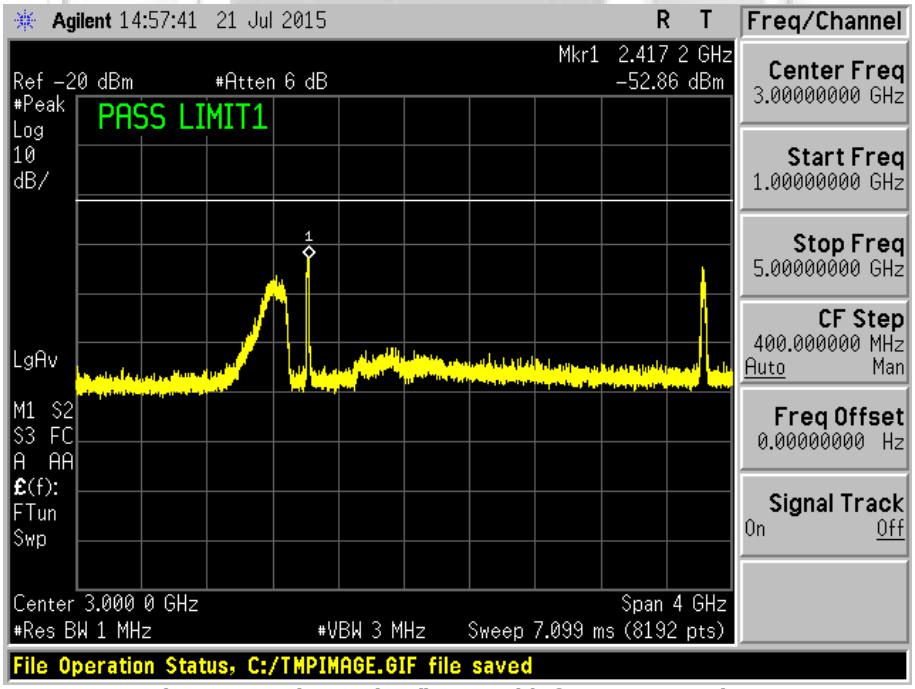


Plot 344 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

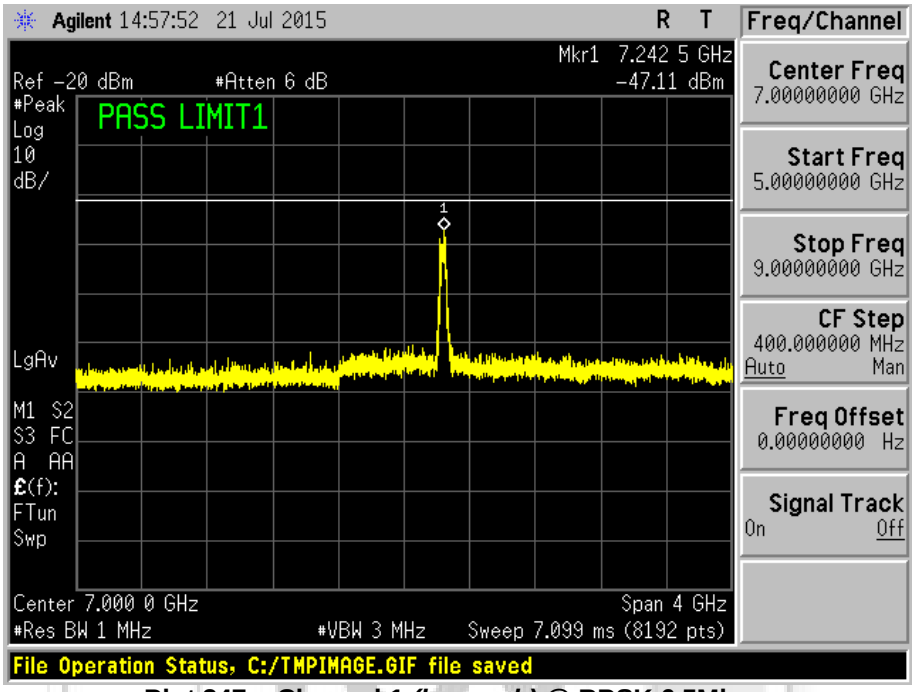


Plot 345 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

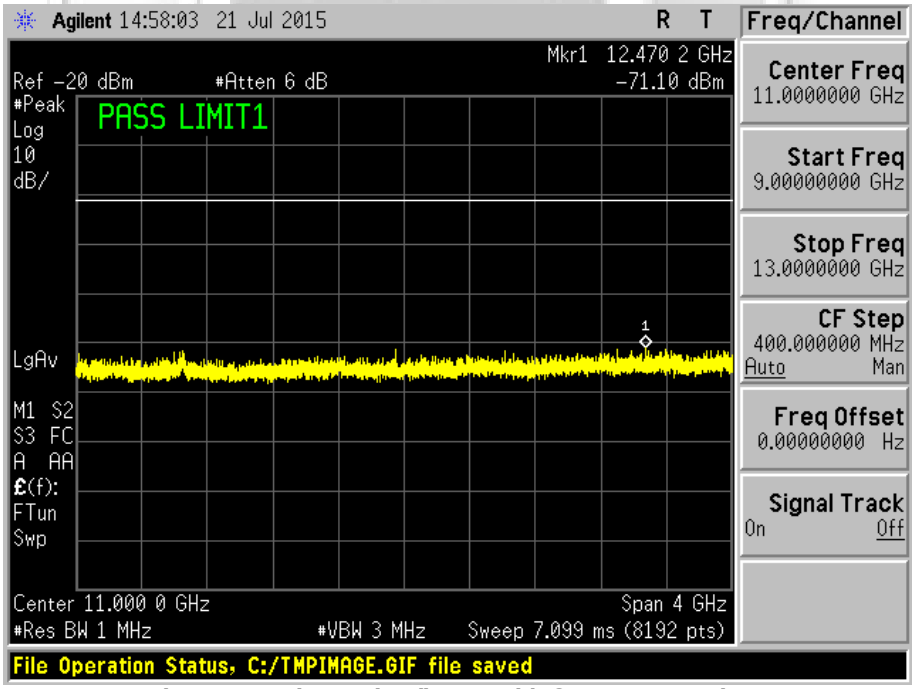


Plot 346 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

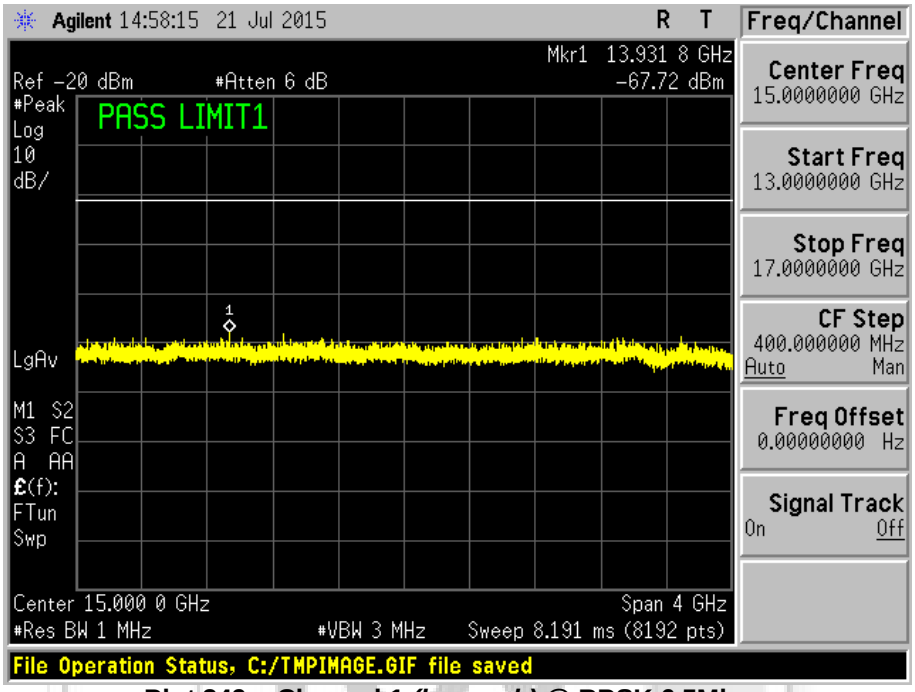


Plot 347 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

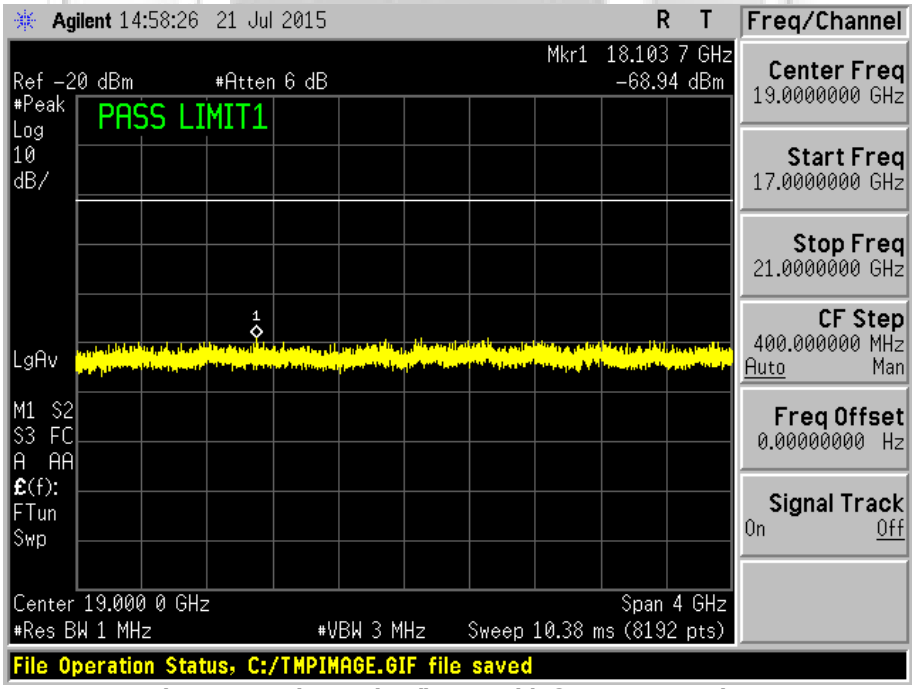


Plot 348 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

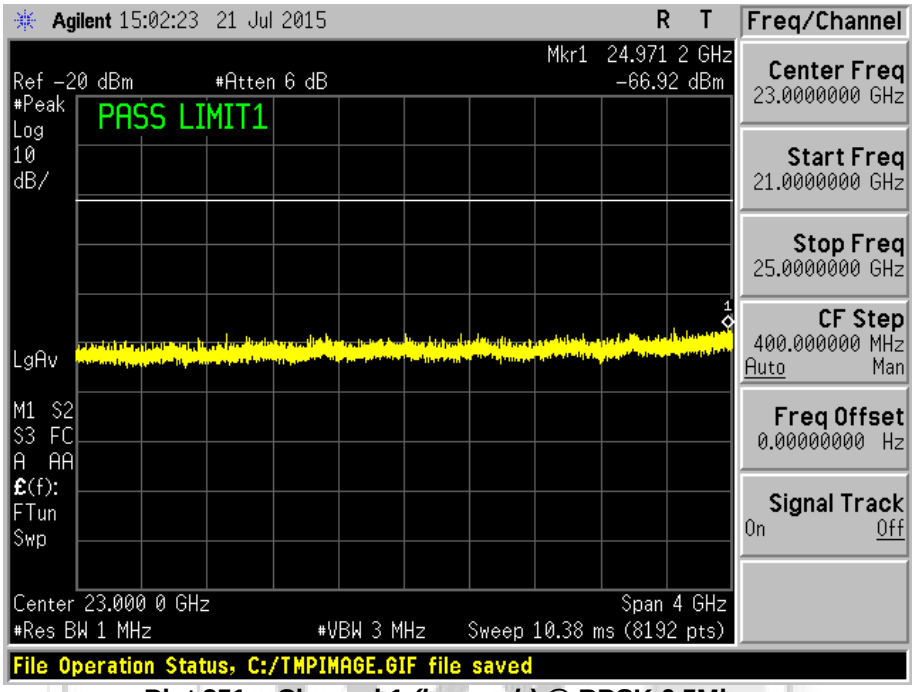


Plot 349 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

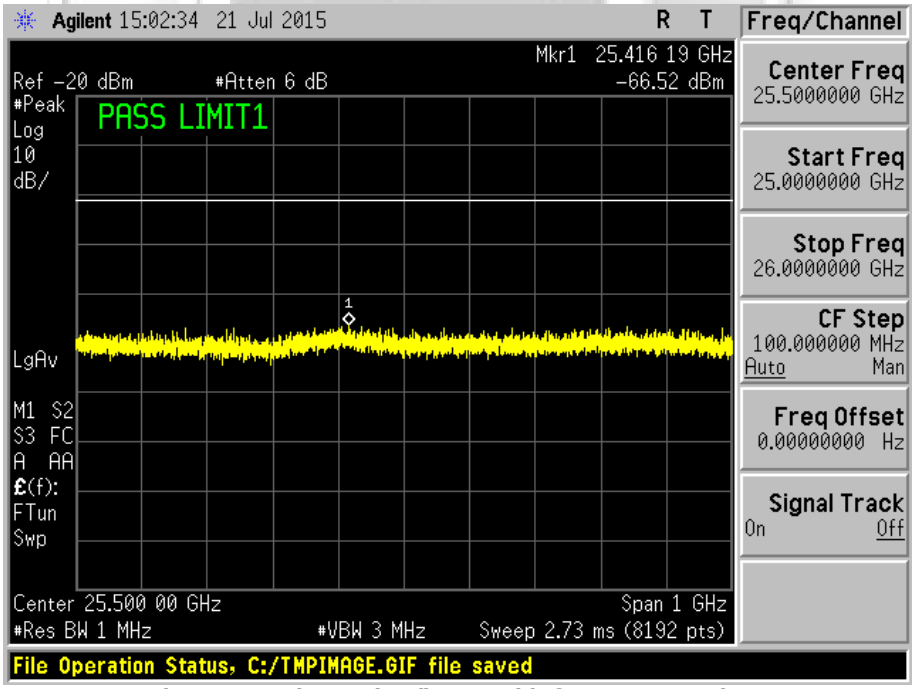


Plot 350 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

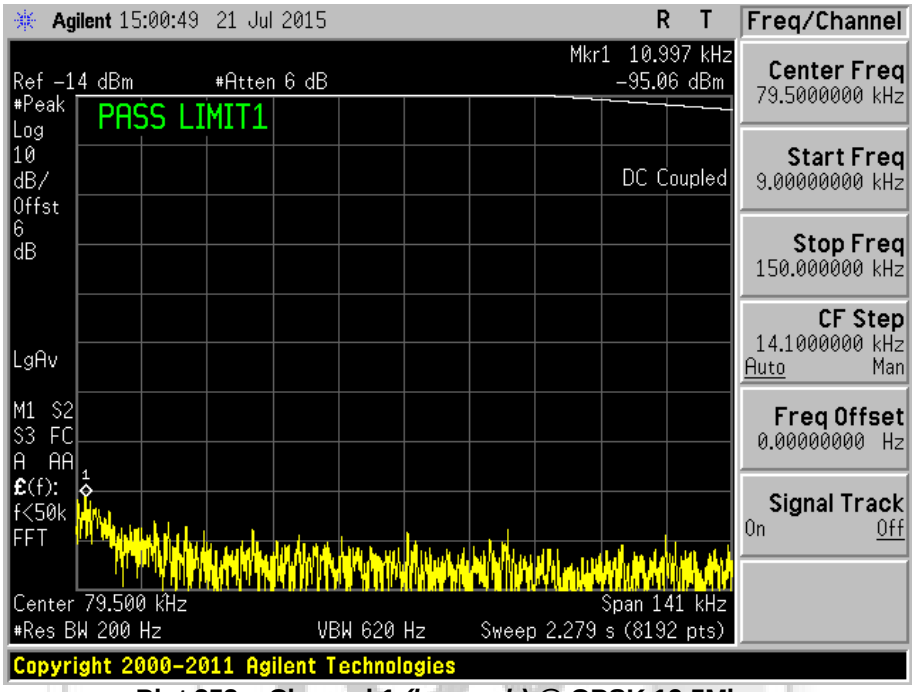


Plot 351 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

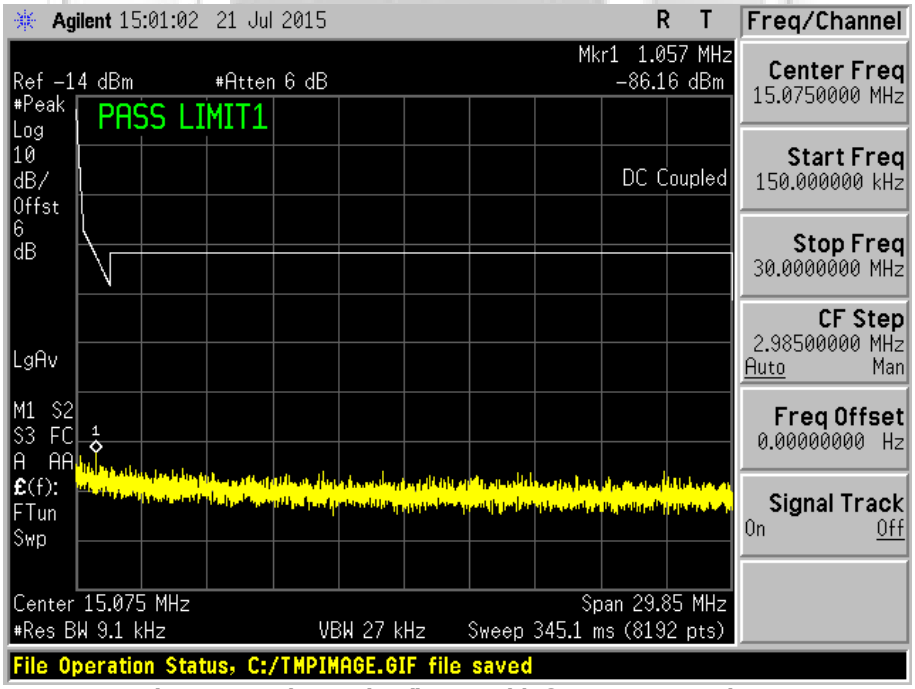


Plot 352 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

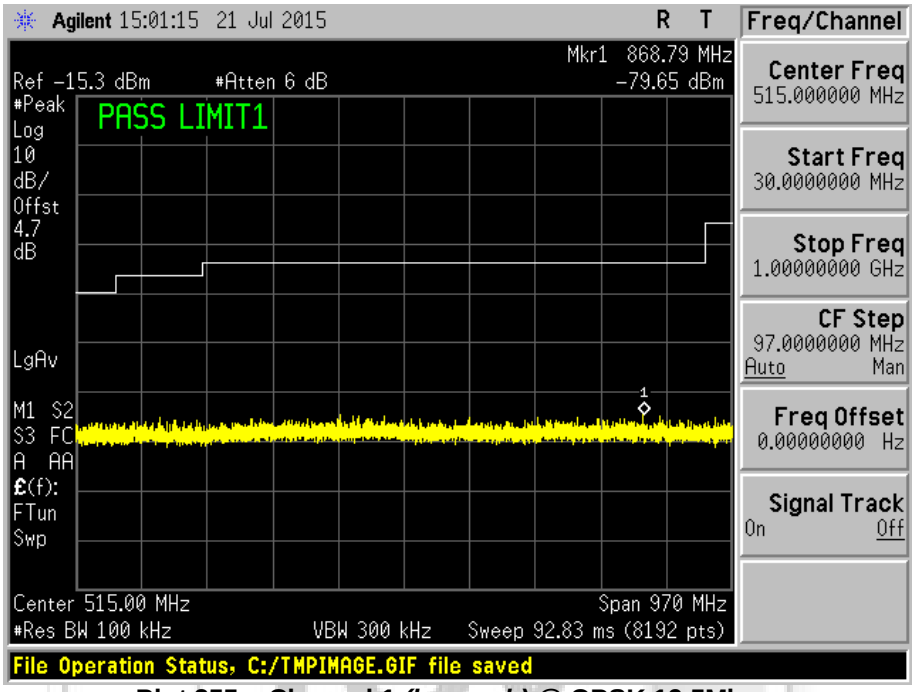


Plot 353 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

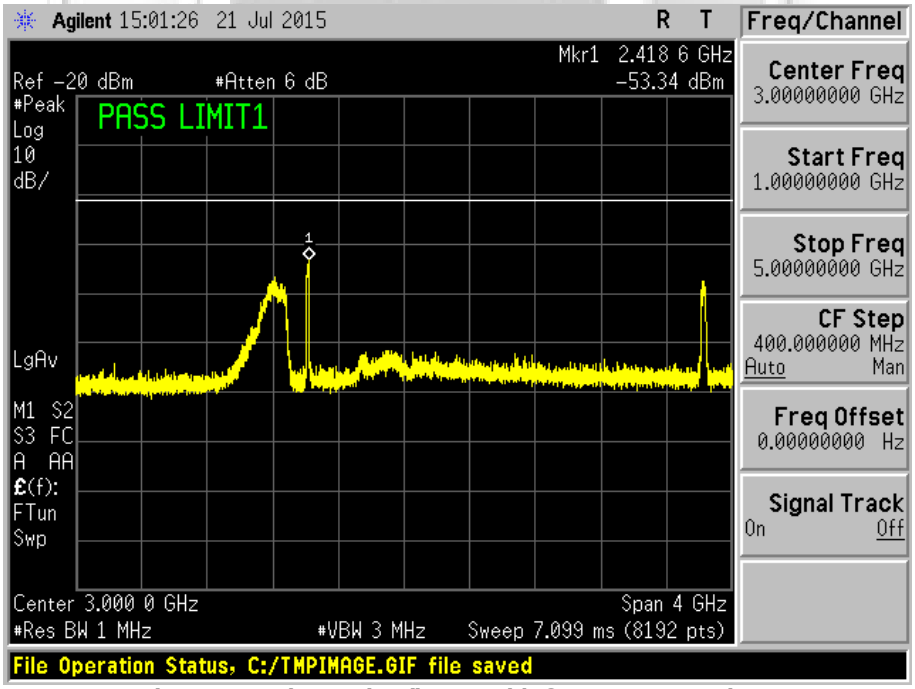


Plot 354 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

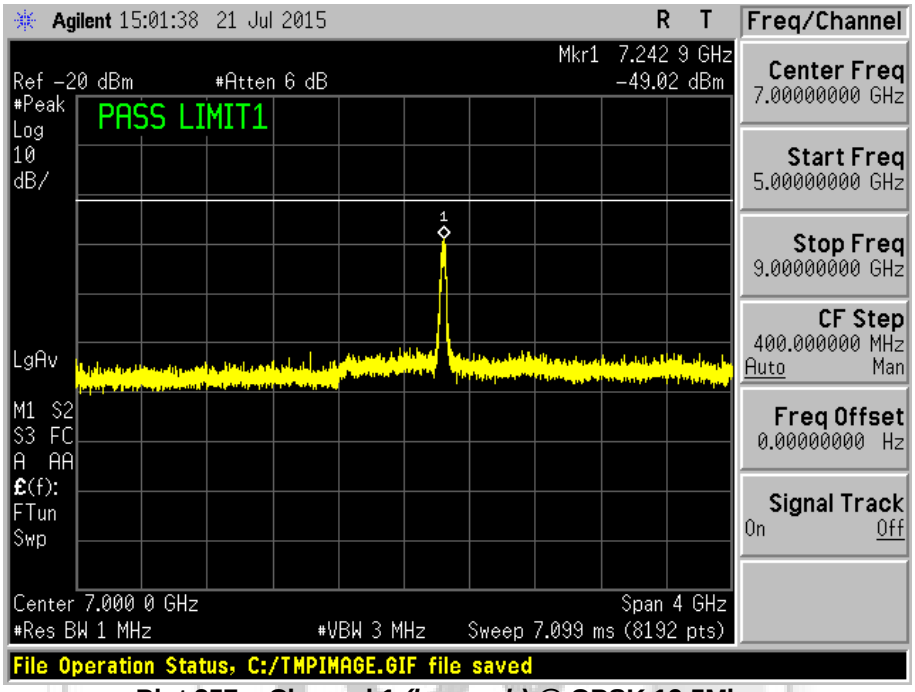


Plot 355 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

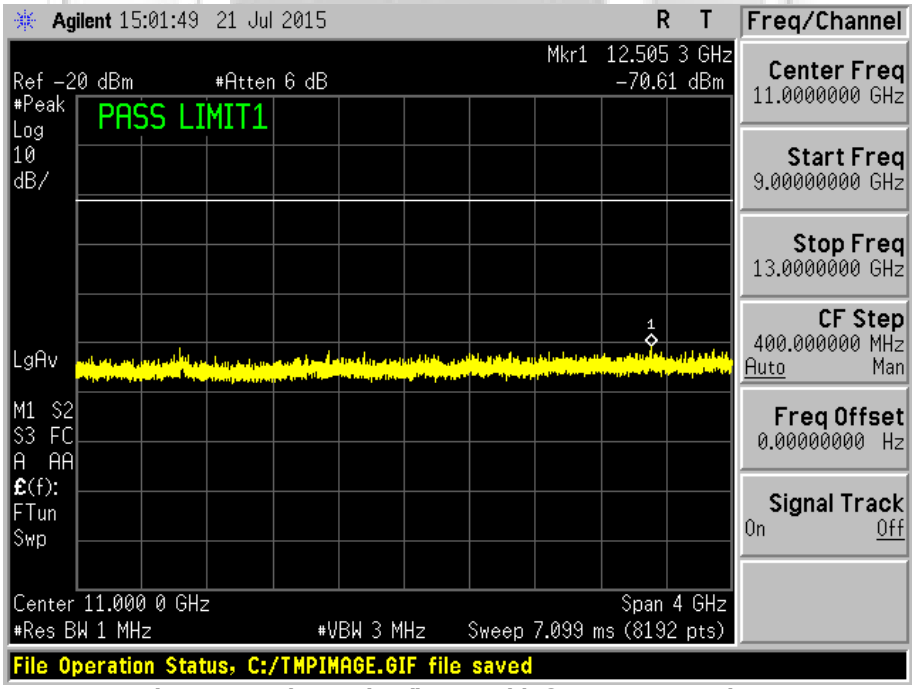


Plot 356 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

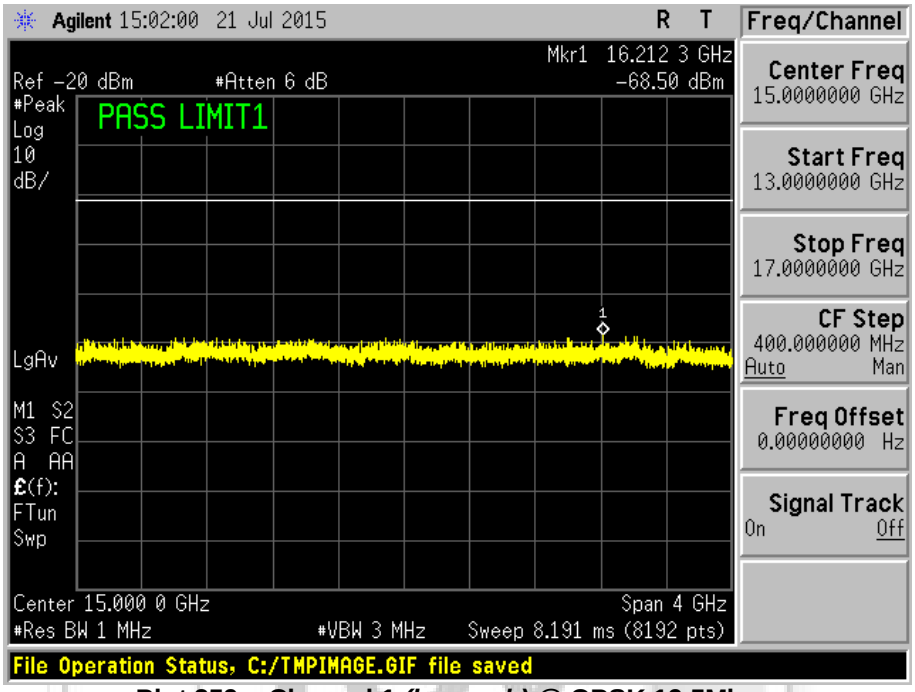


Plot 357 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

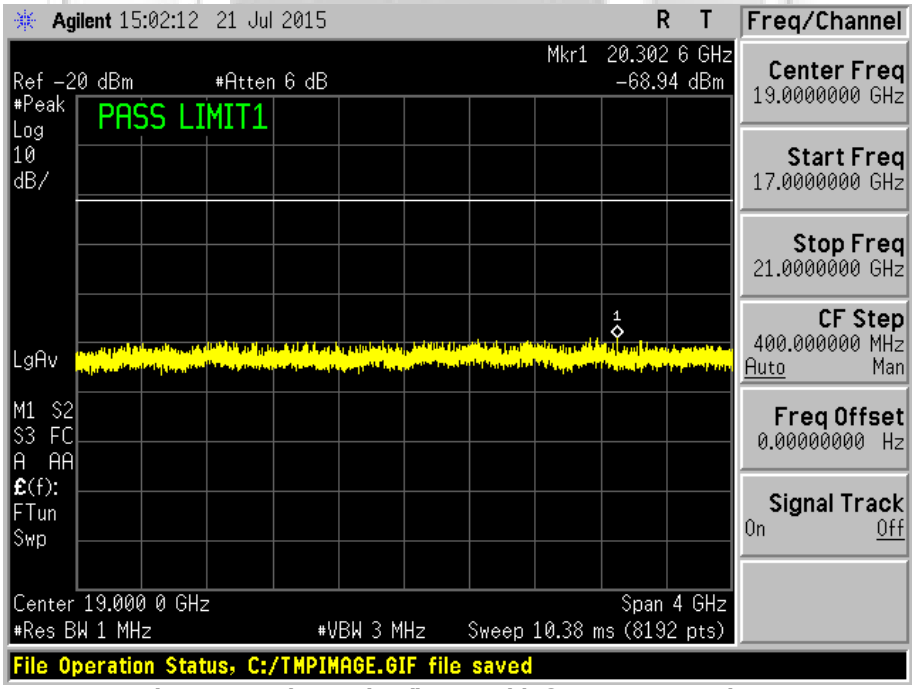


Plot 358 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

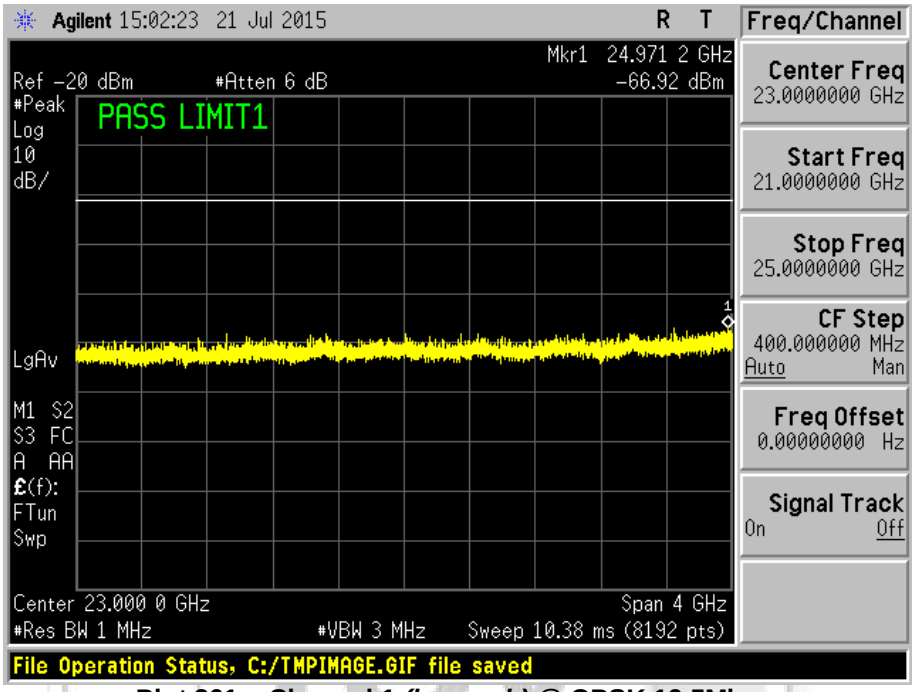


Plot 359 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

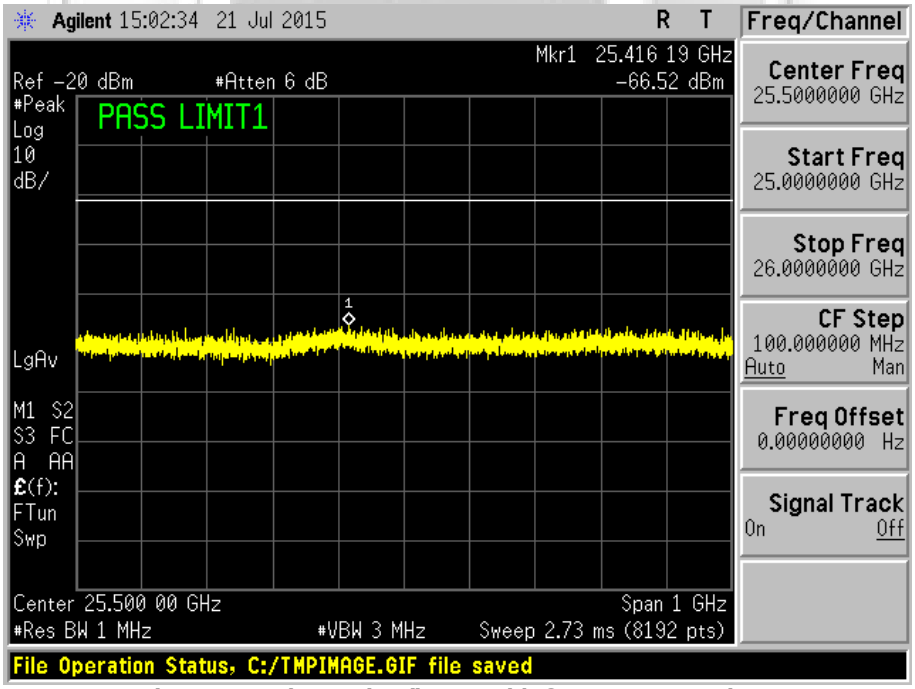


Plot 360 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

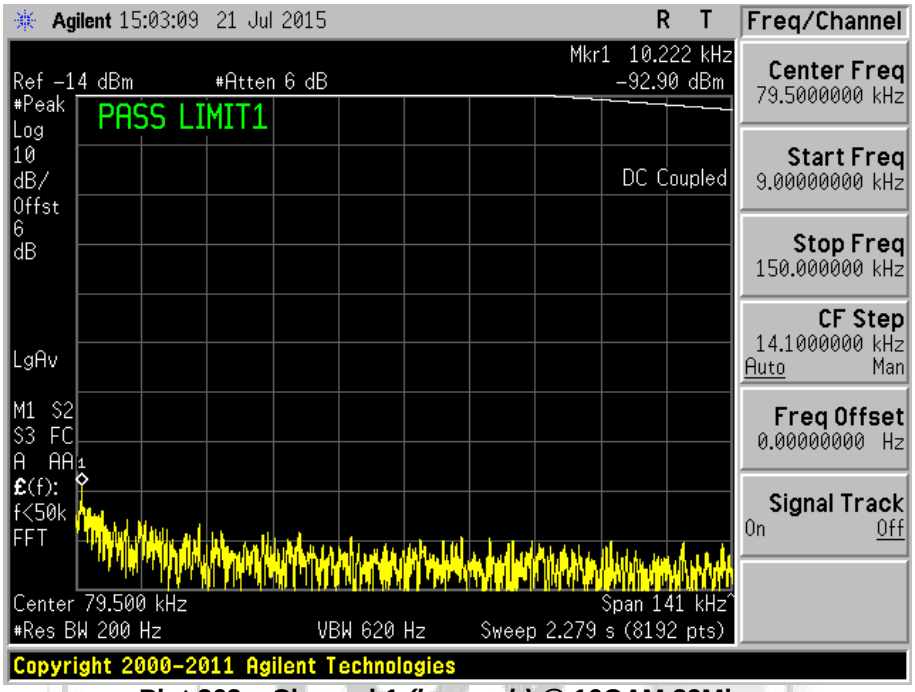


Plot 361 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

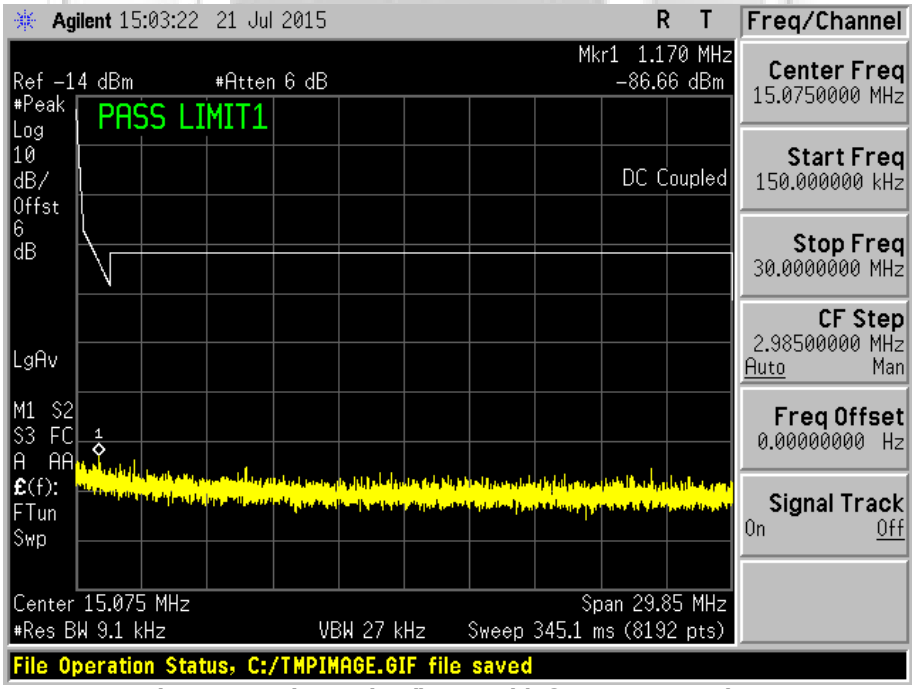


Plot 362 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

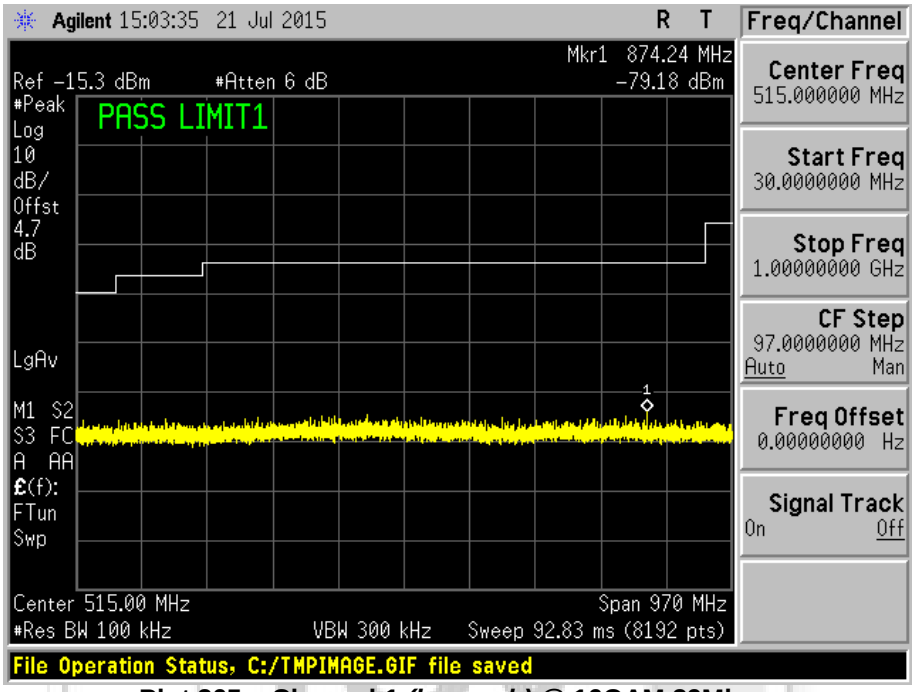


Plot 363 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

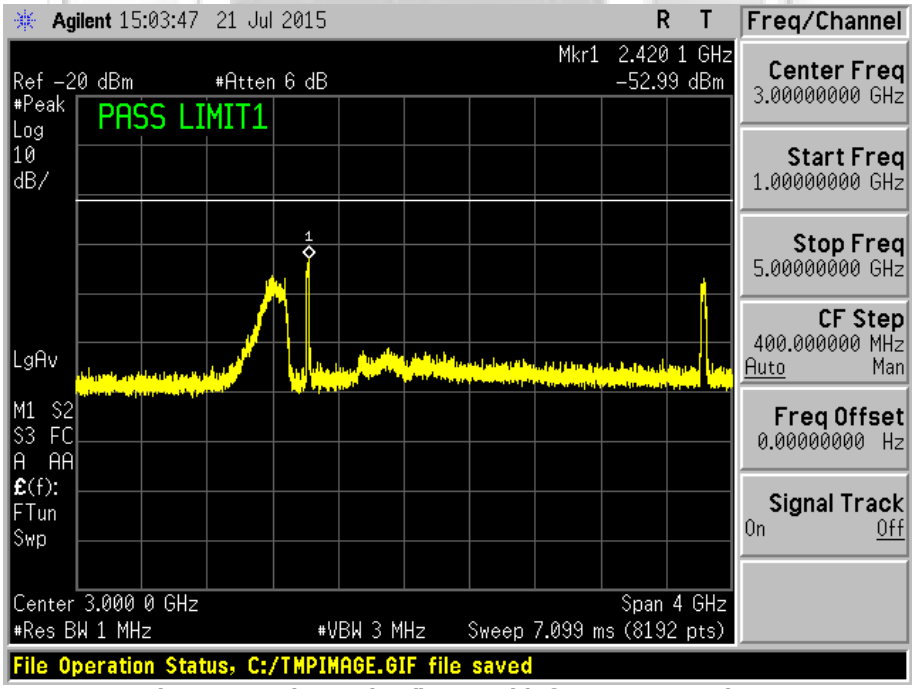


Plot 364 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

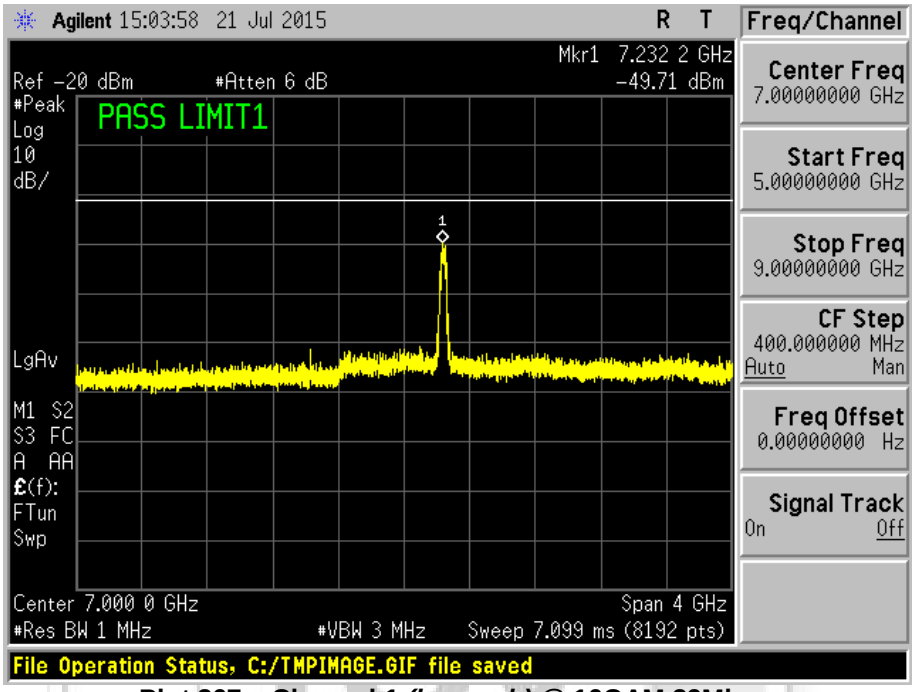


Plot 365 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

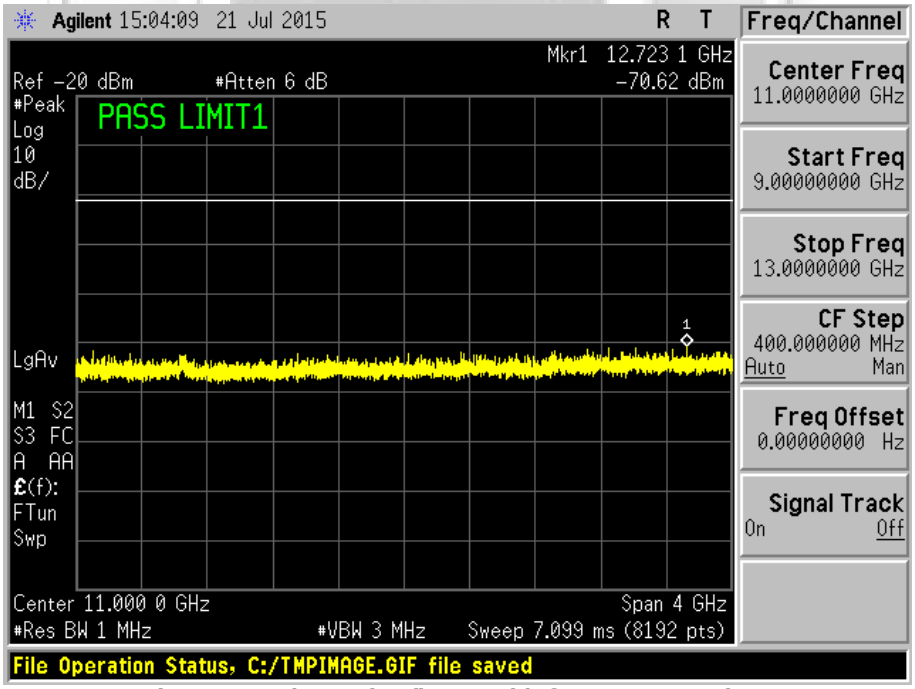


Plot 366 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

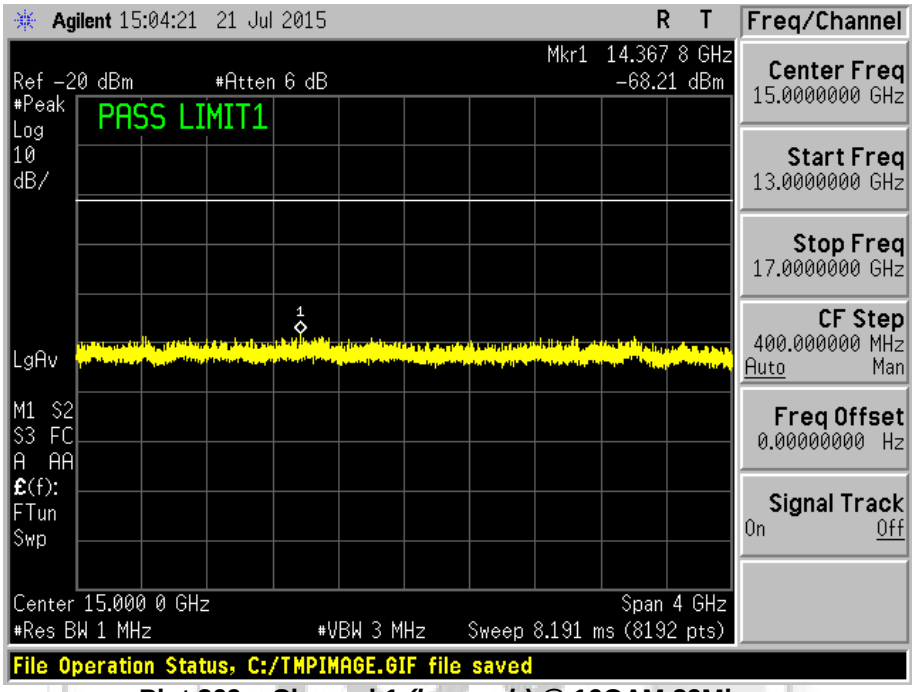


Plot 367 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

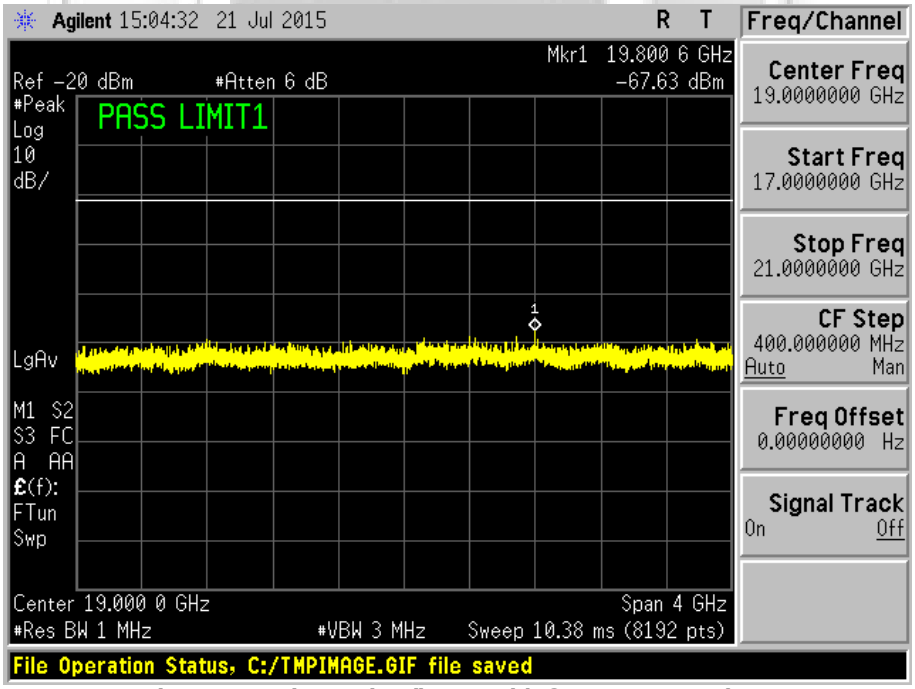


Plot 368 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

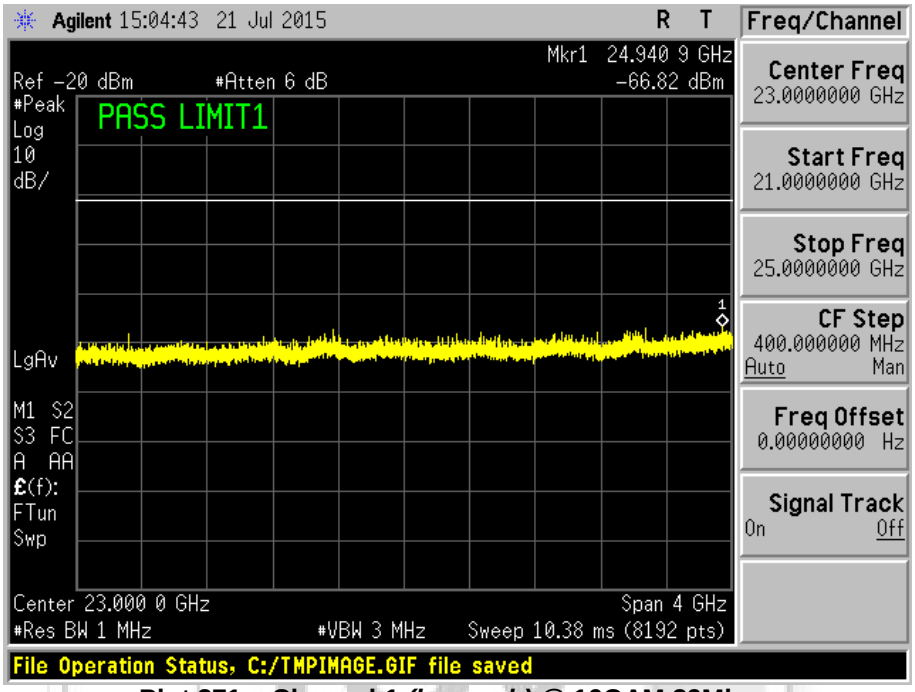


Plot 369 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

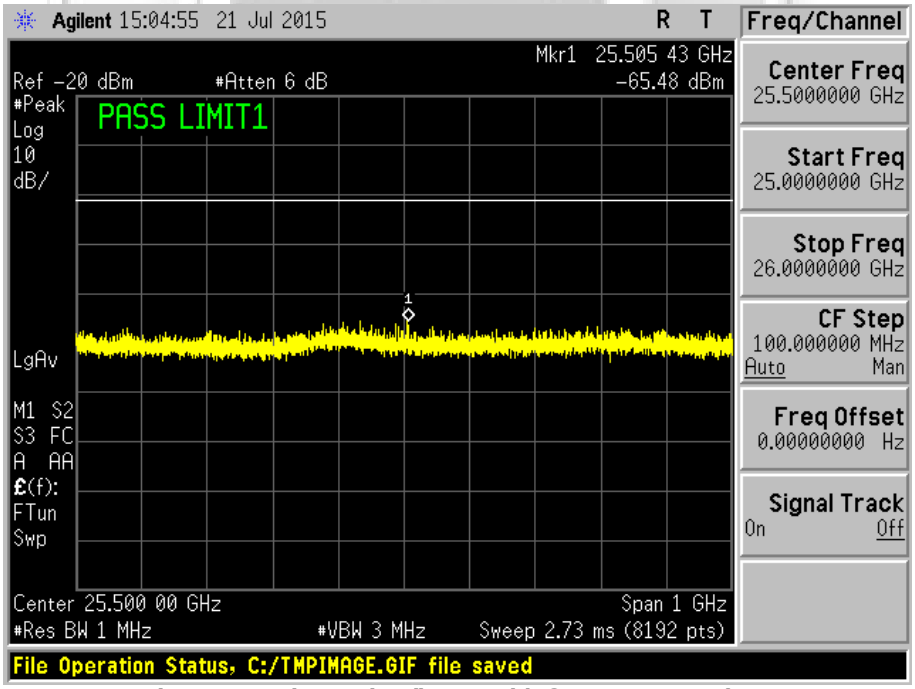


Plot 370 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

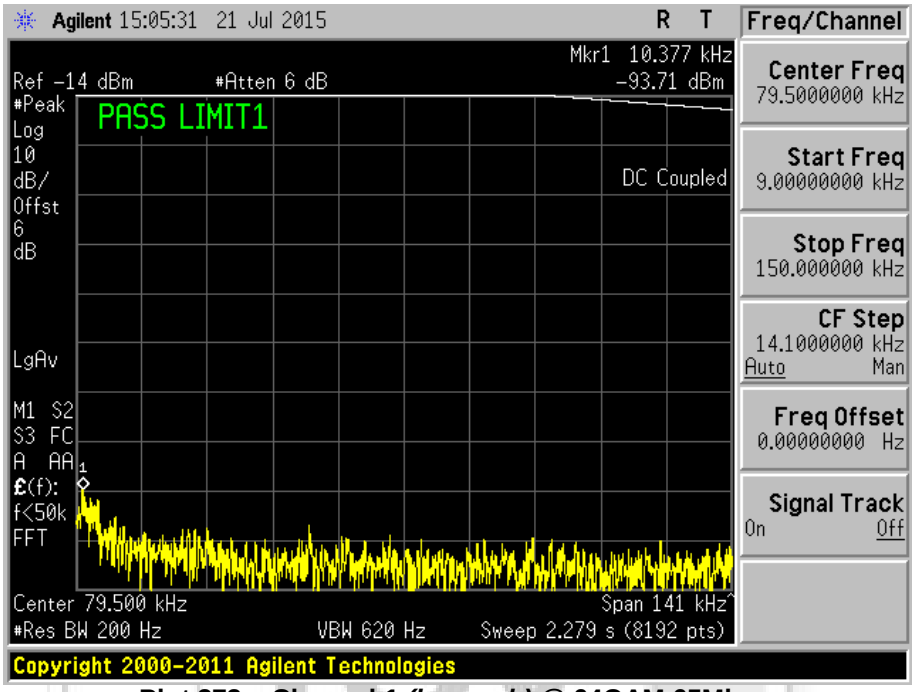


Plot 371 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

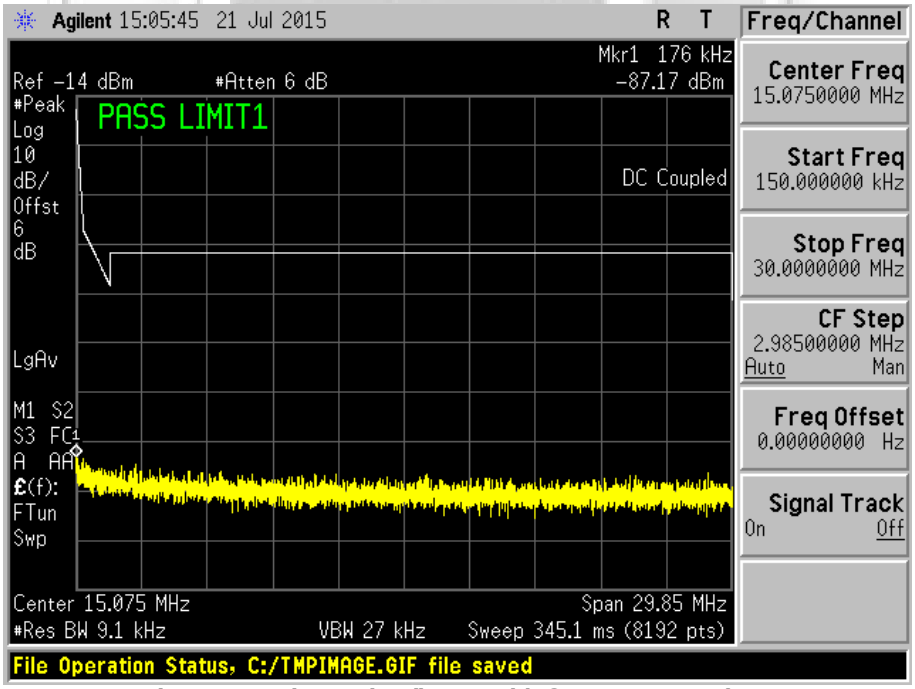


Plot 372 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

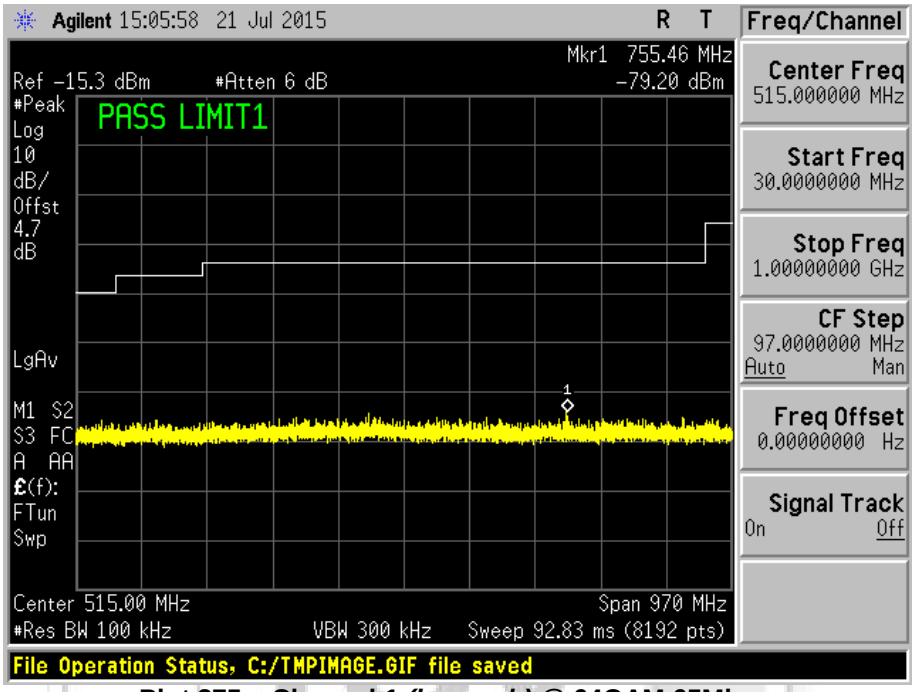


Plot 373 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

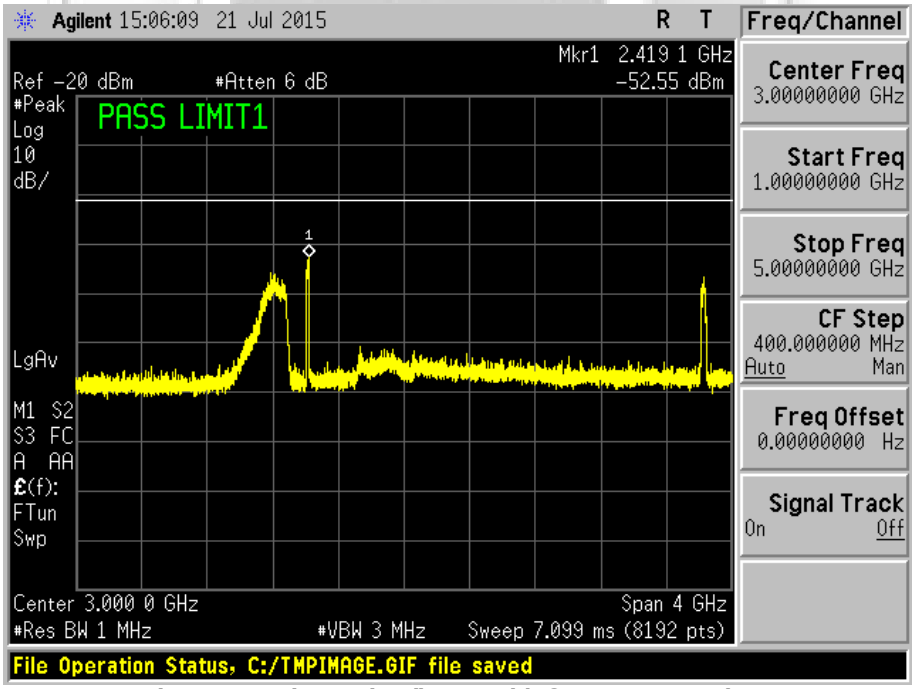


Plot 374 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

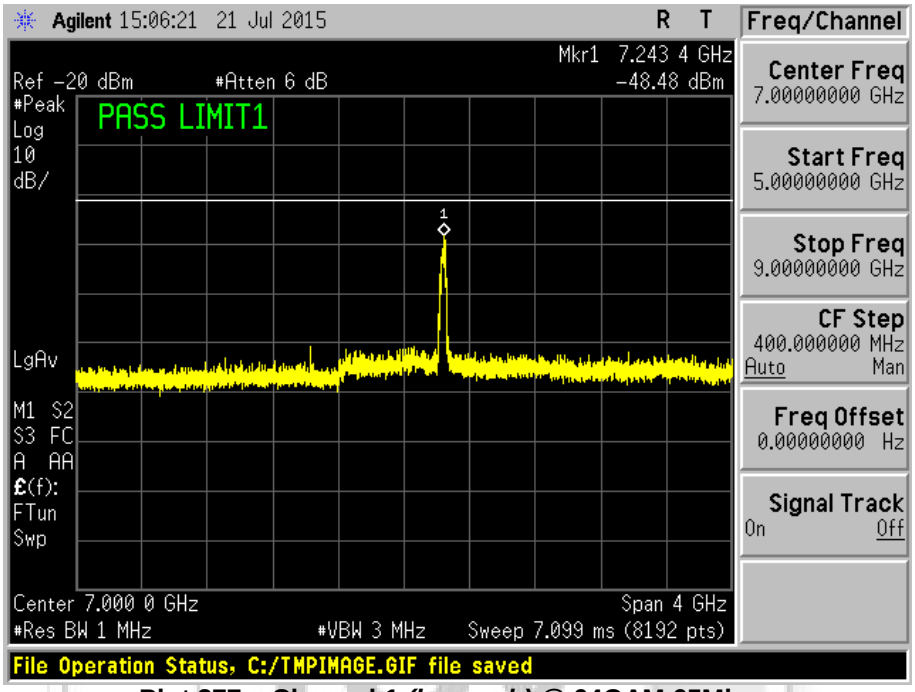


Plot 375 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

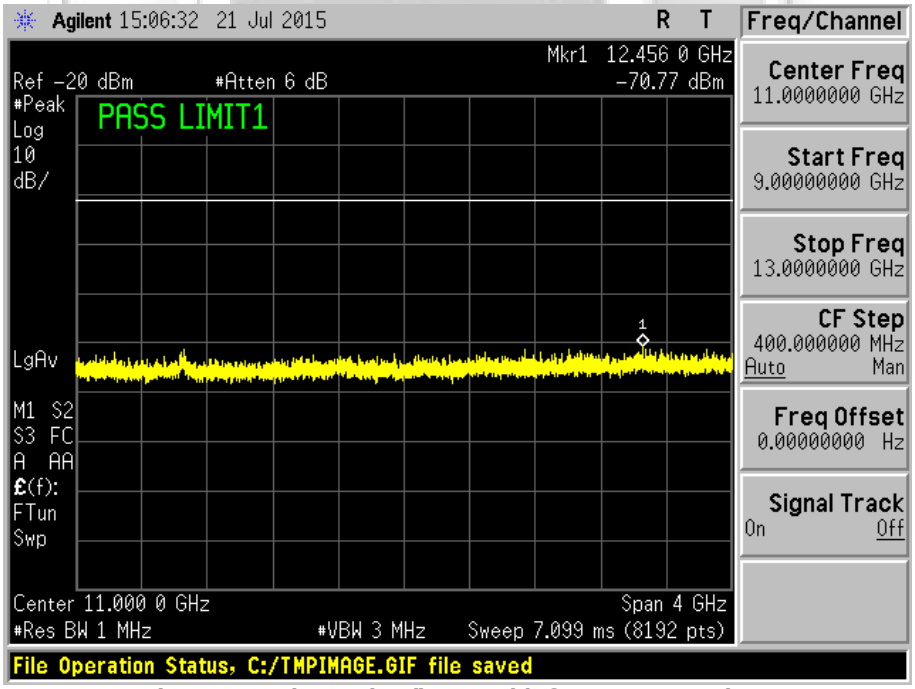


Plot 376 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

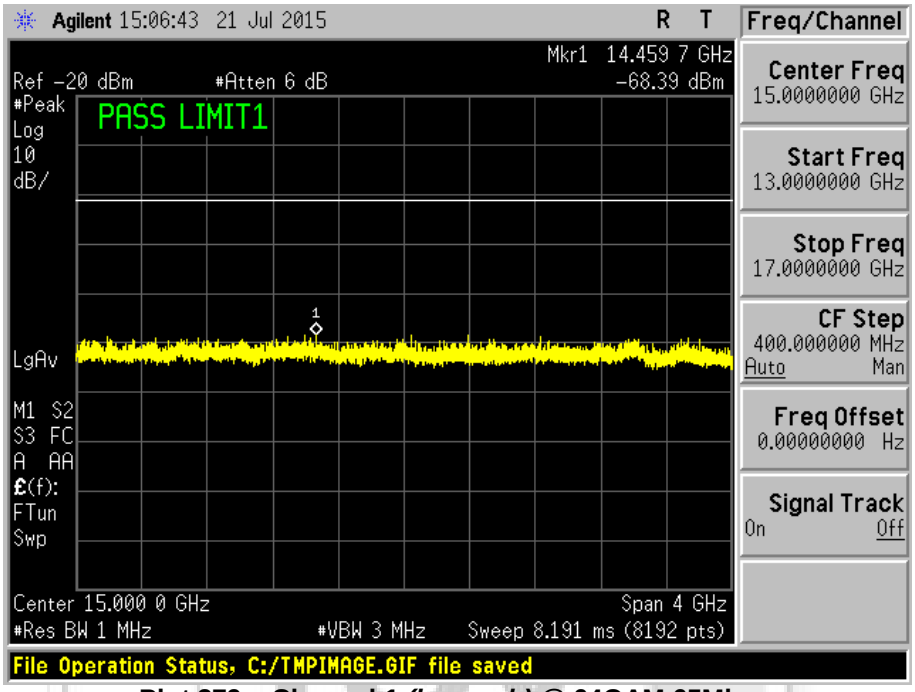


Plot 377 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

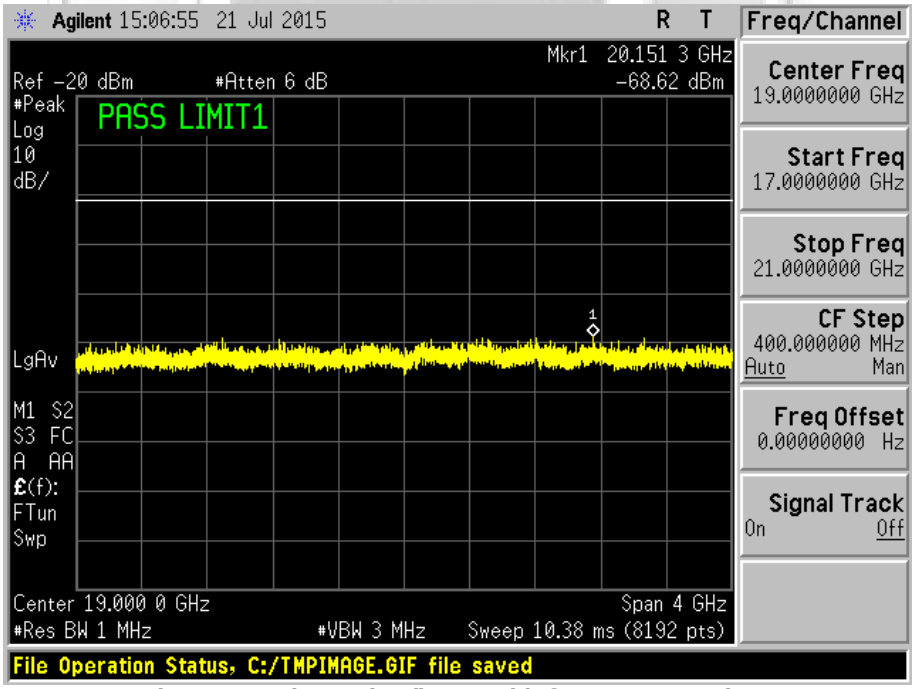


Plot 378 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

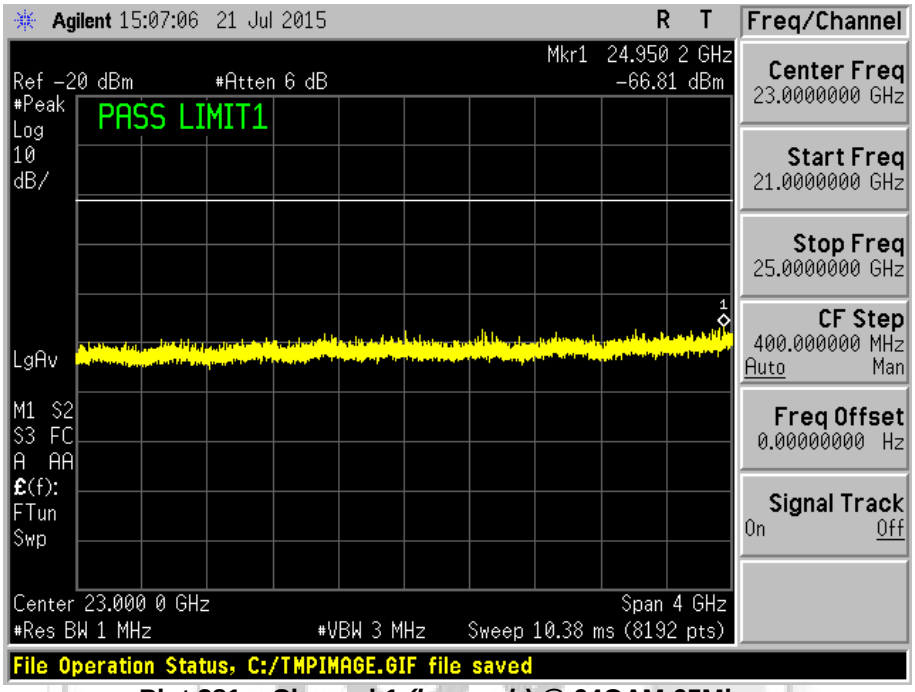


Plot 379 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

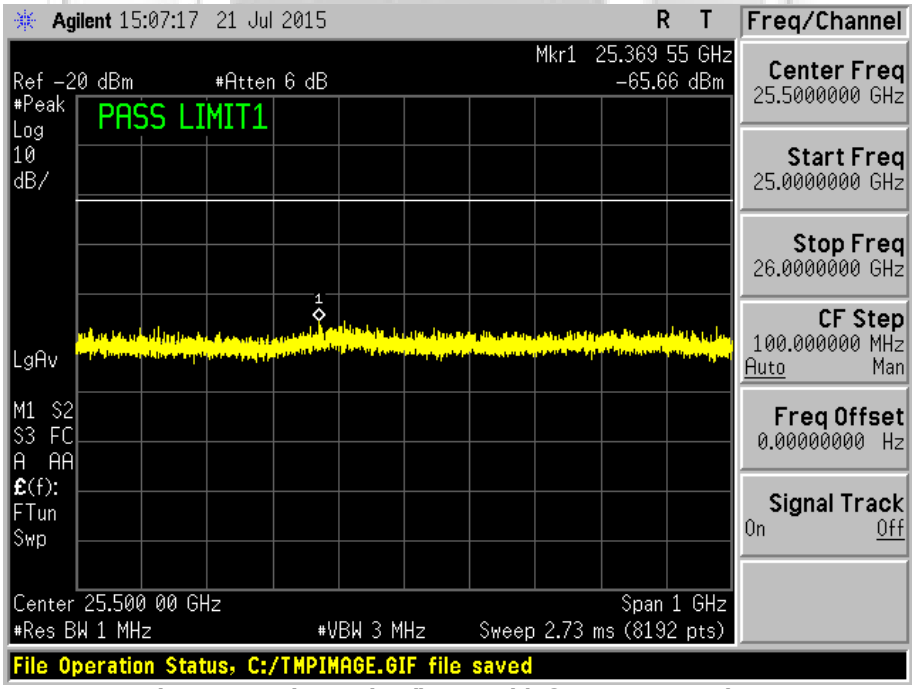


Plot 380 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

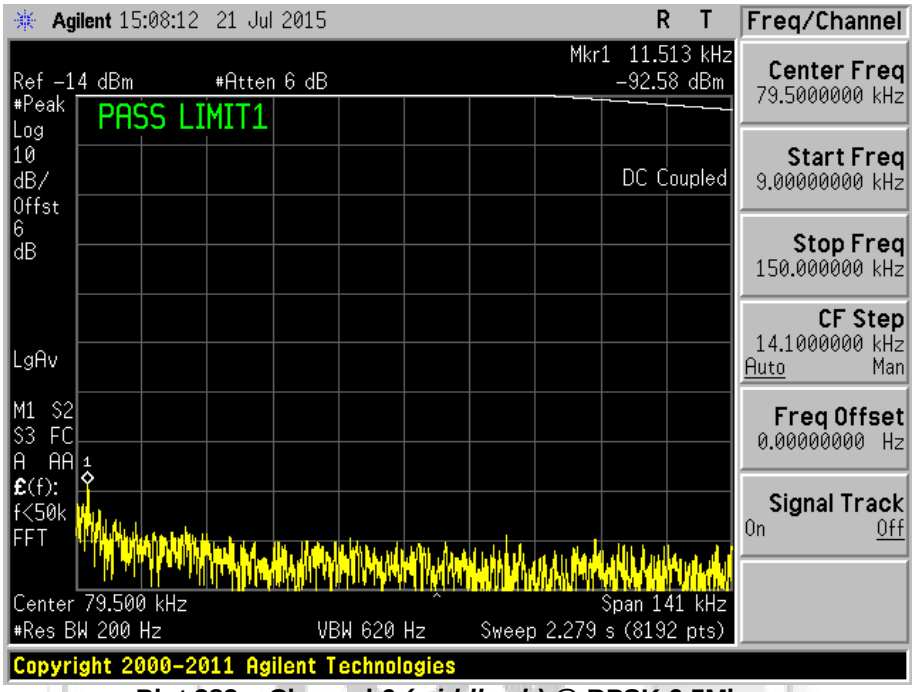


Plot 381 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

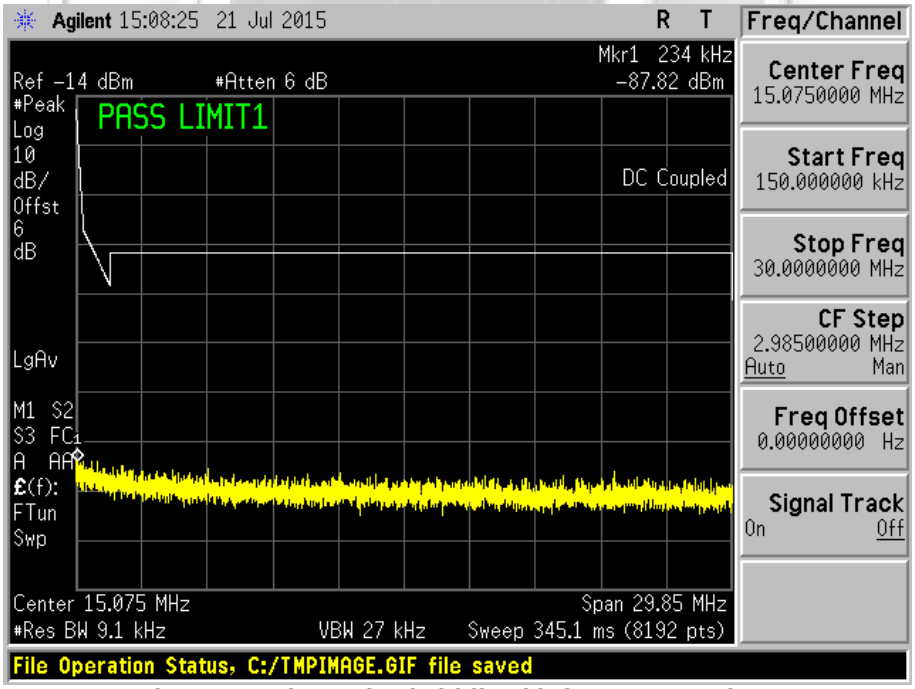


Plot 382 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

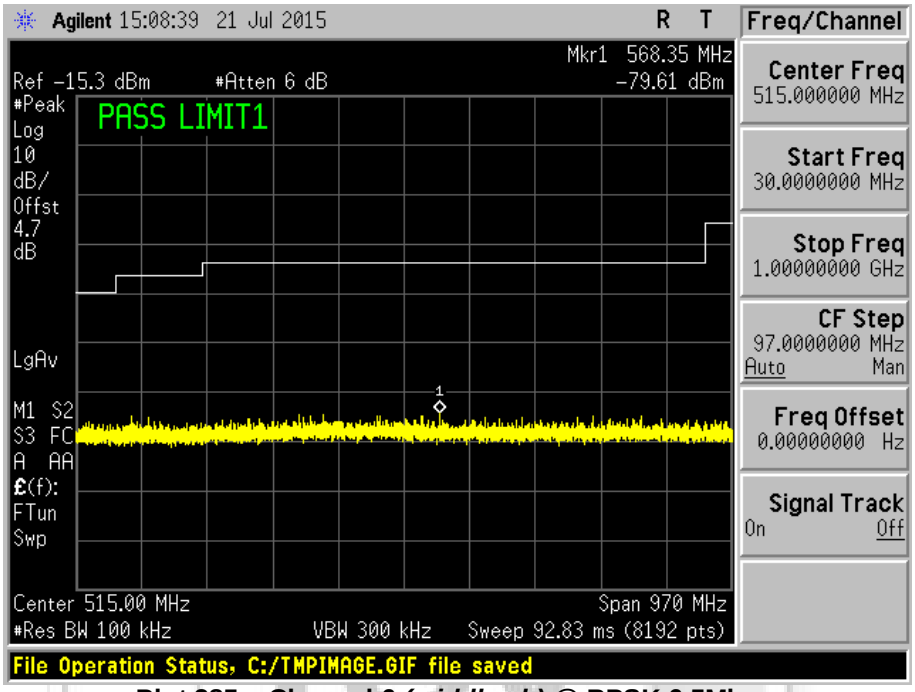


Plot 383 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

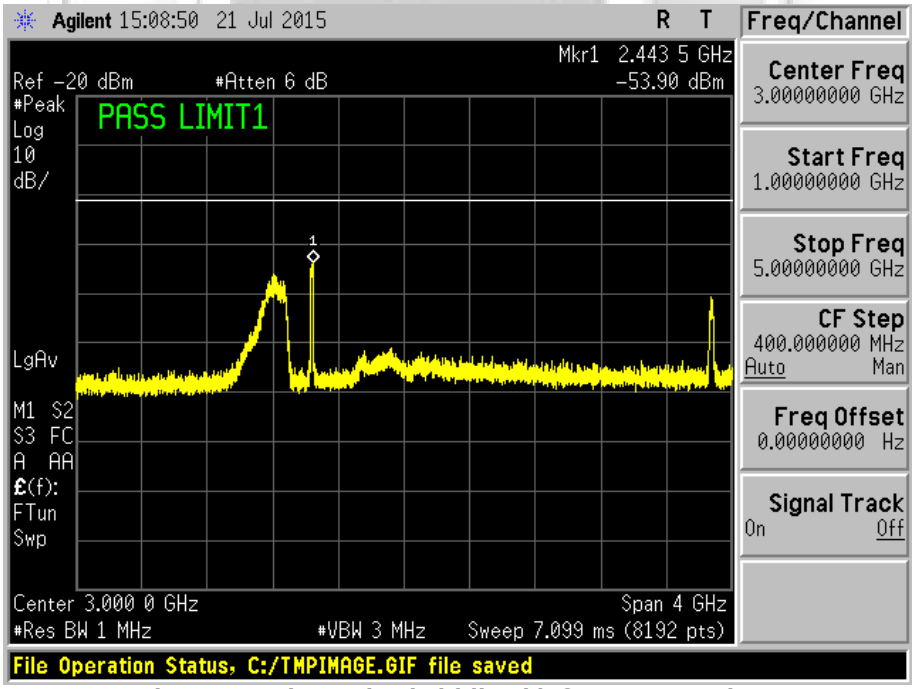


Plot 384 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

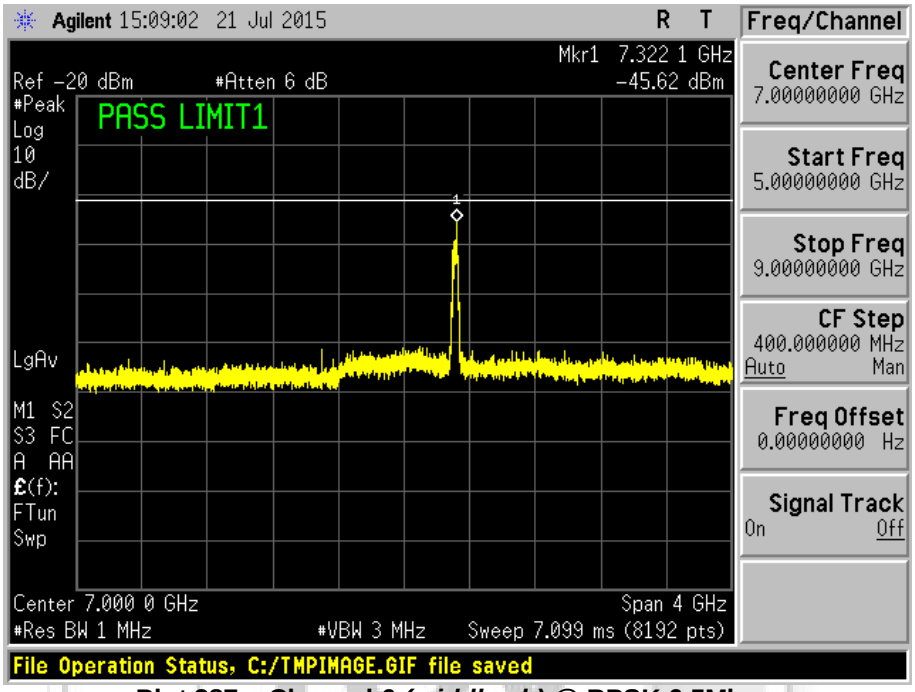


Plot 385 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

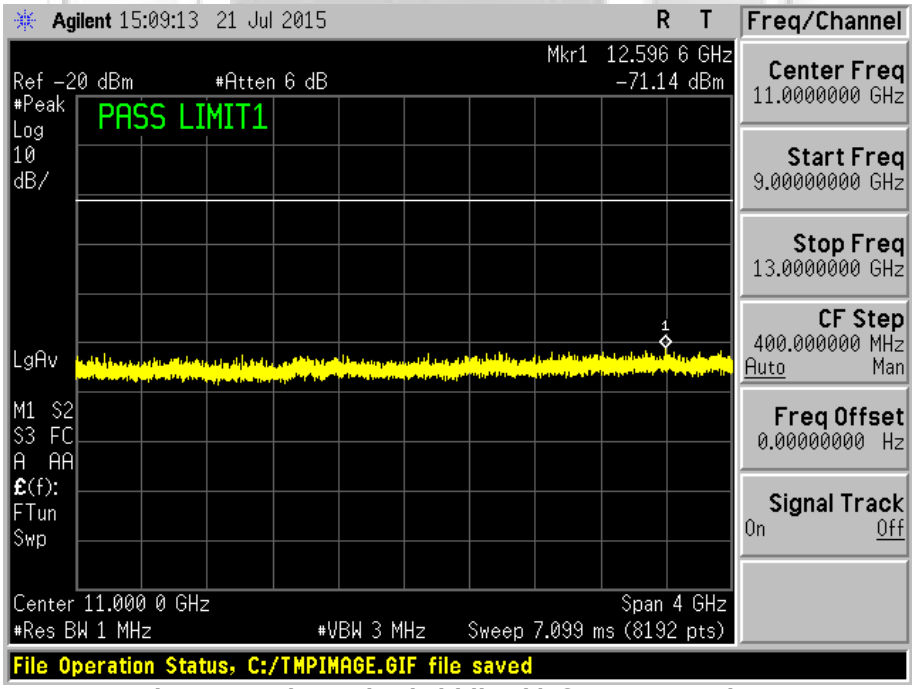


Plot 386 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

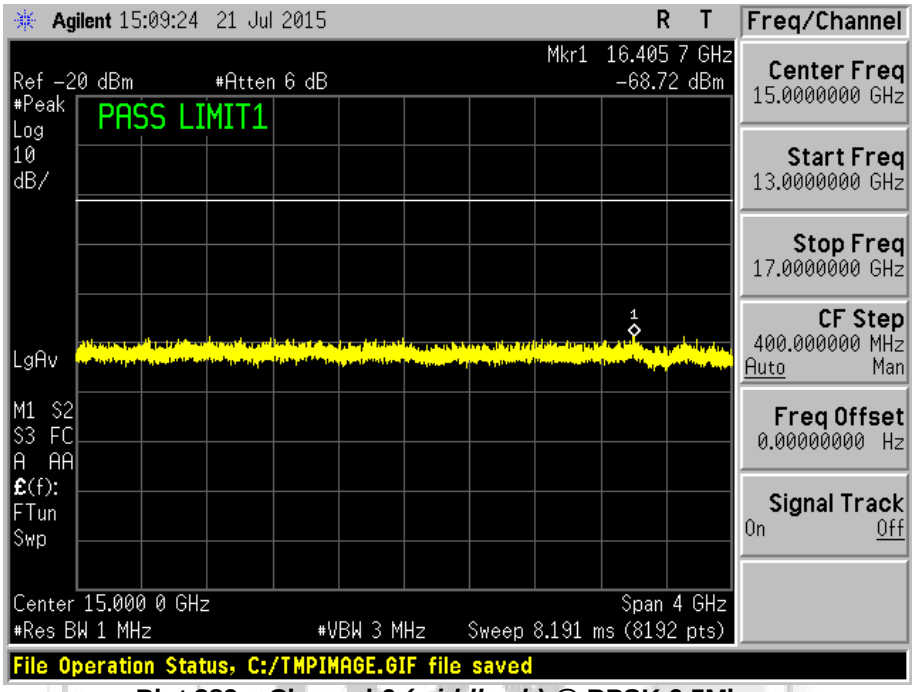


Plot 387 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

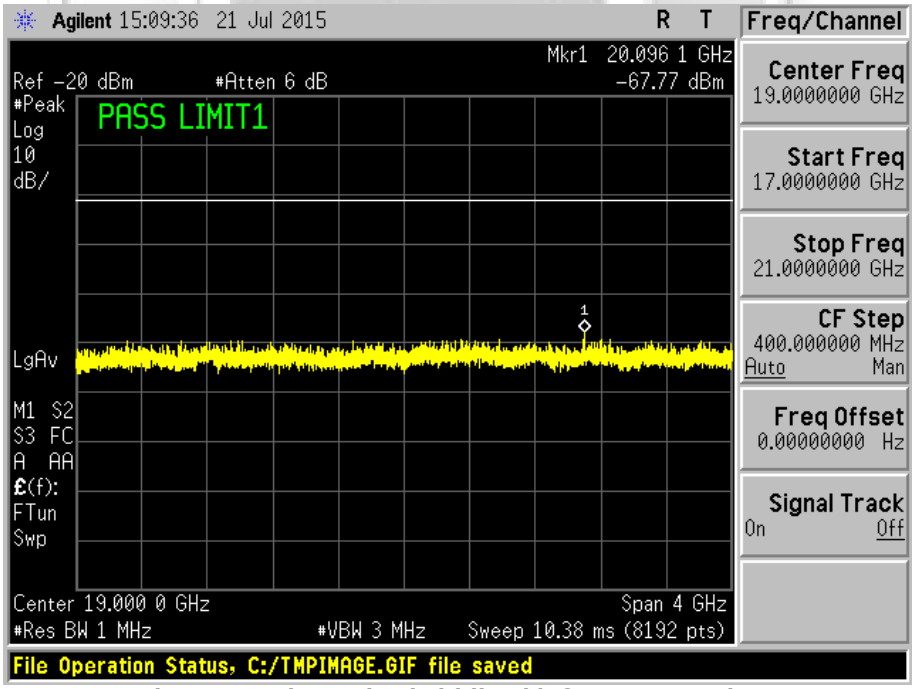


Plot 388 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

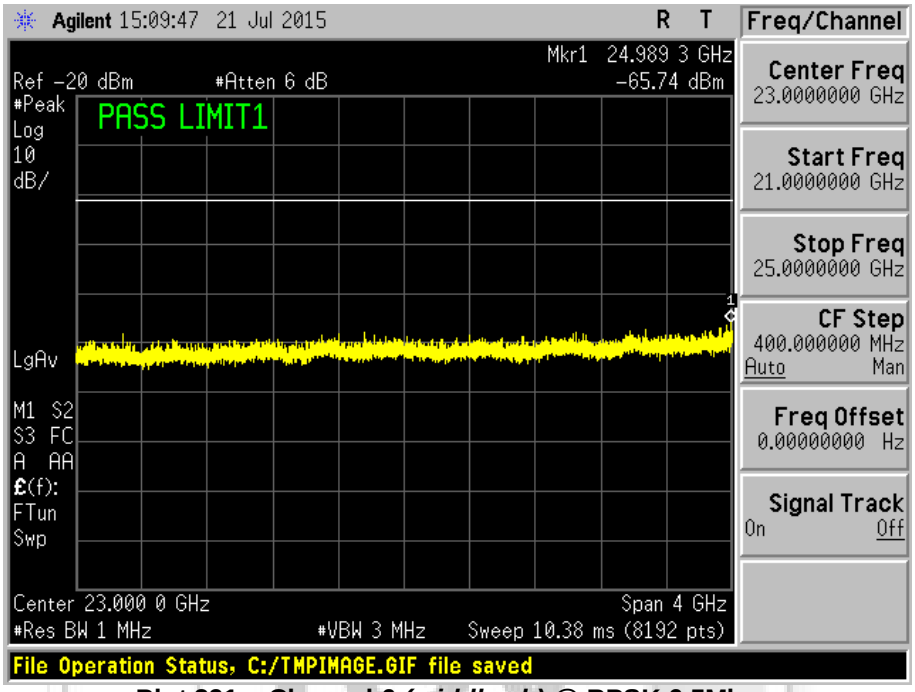


Plot 389 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

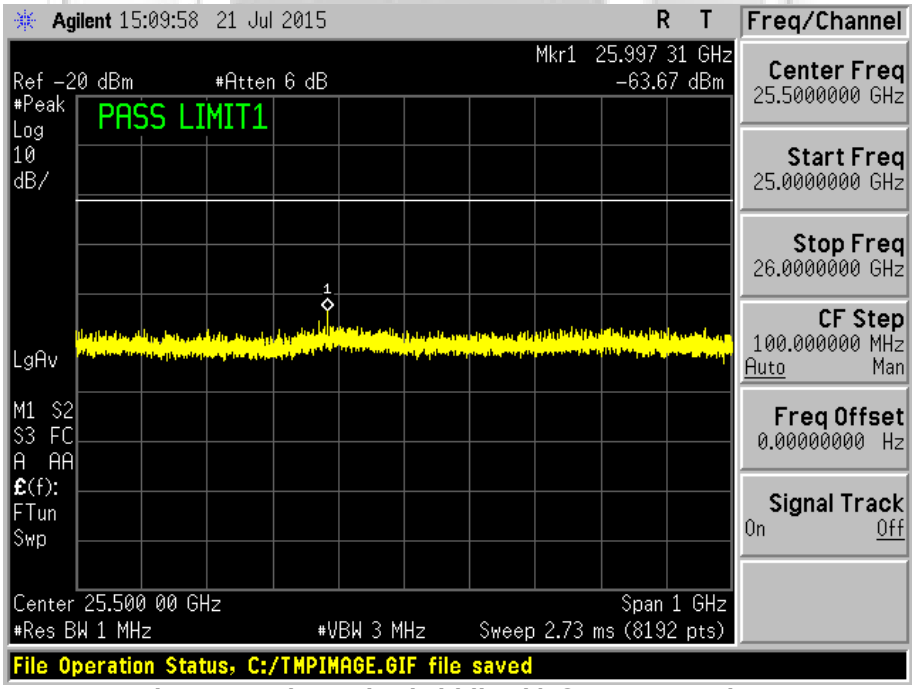


Plot 390 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

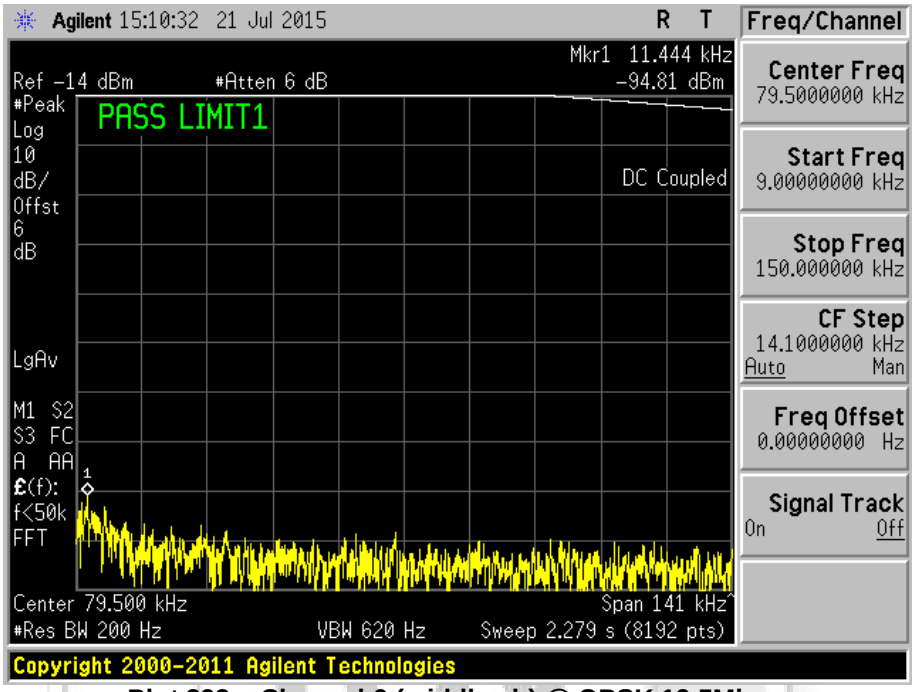


Plot 391 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

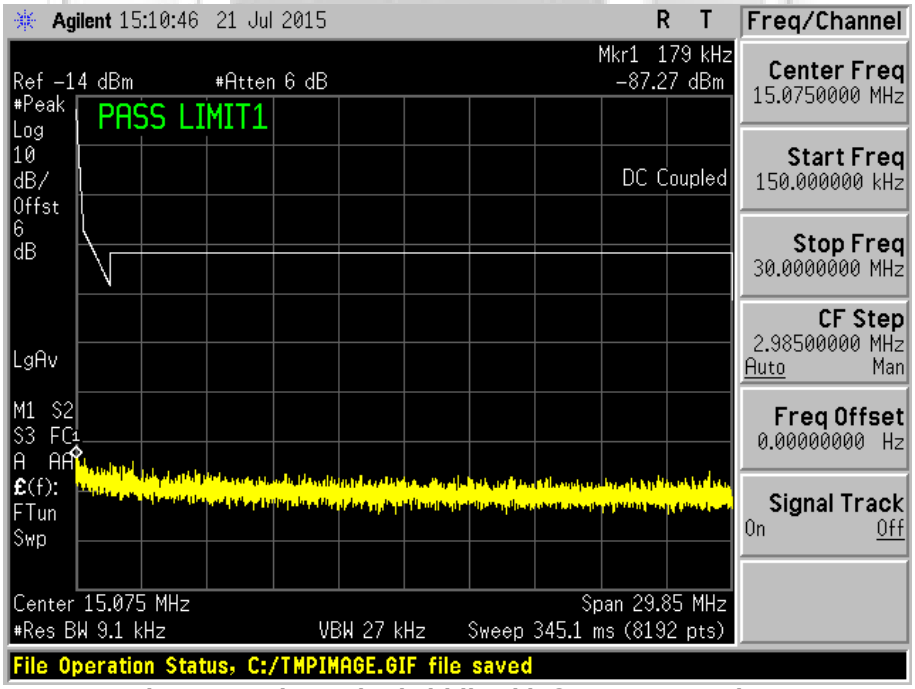


Plot 392 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

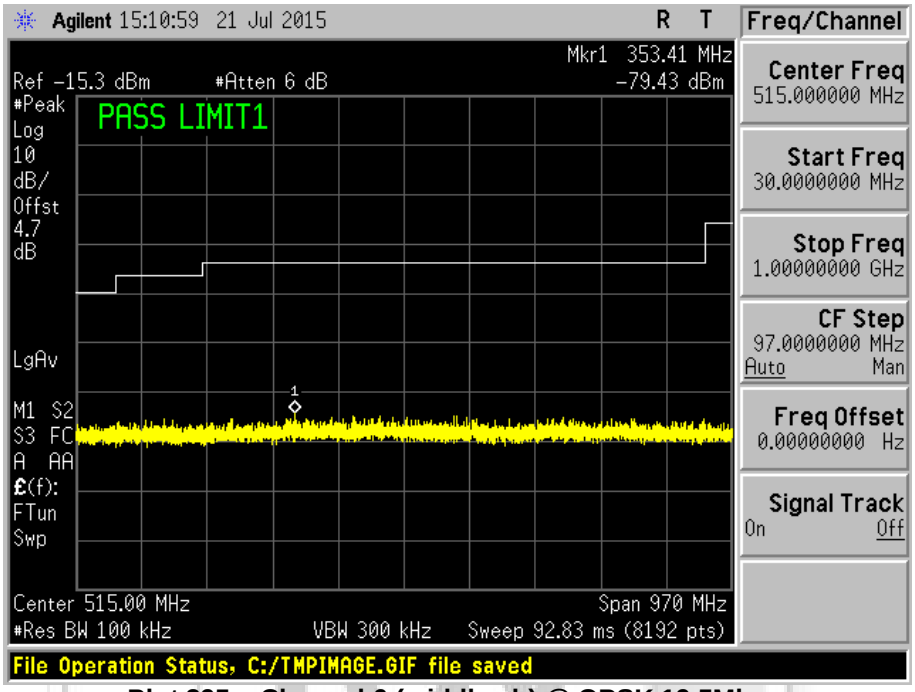


Plot 393 – Channel 6 (middle ch) @ QPSK 19.5Mbps

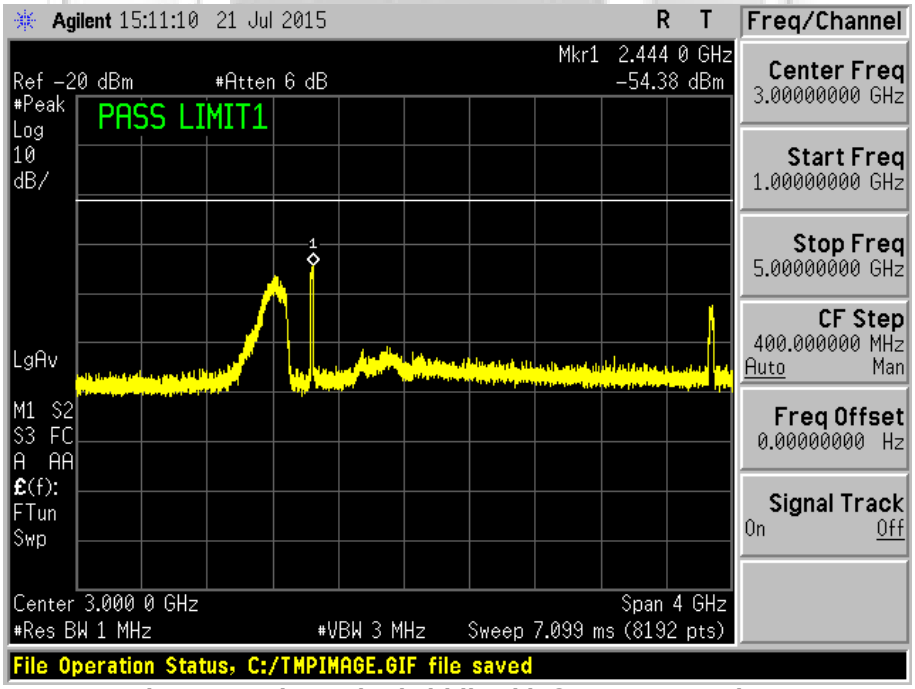


Plot 394 – Channel 6 (middle ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

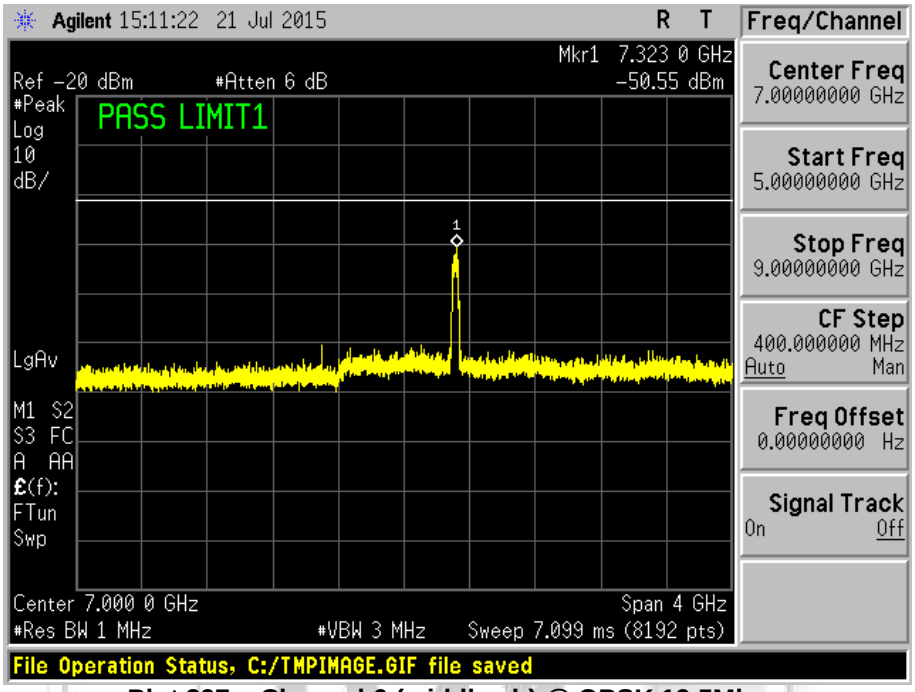


Plot 395 – Channel 6 (middle ch) @ QPSK 19.5Mbps

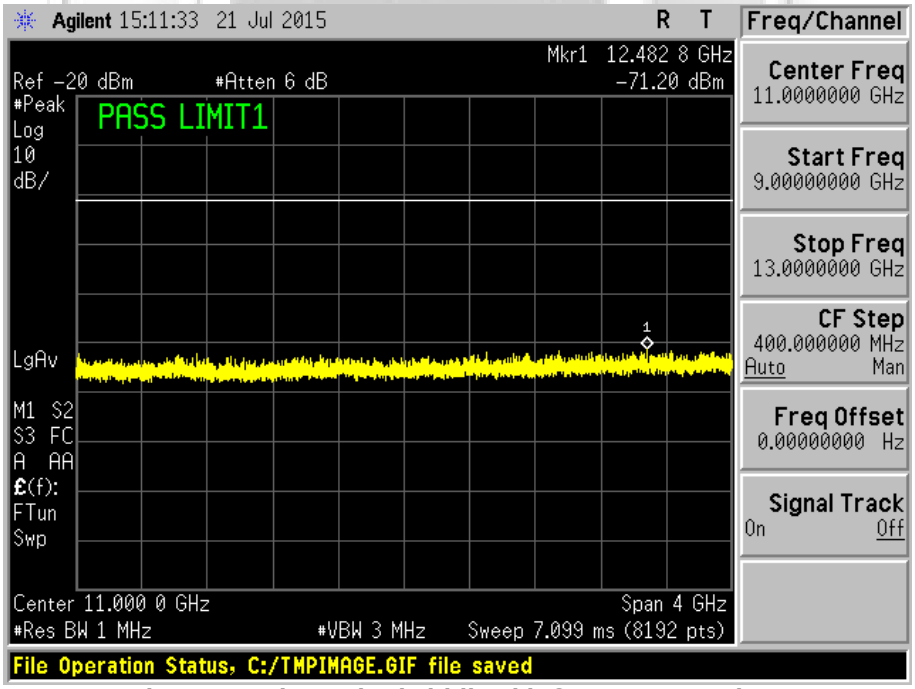


Plot 396 – Channel 6 (middle ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

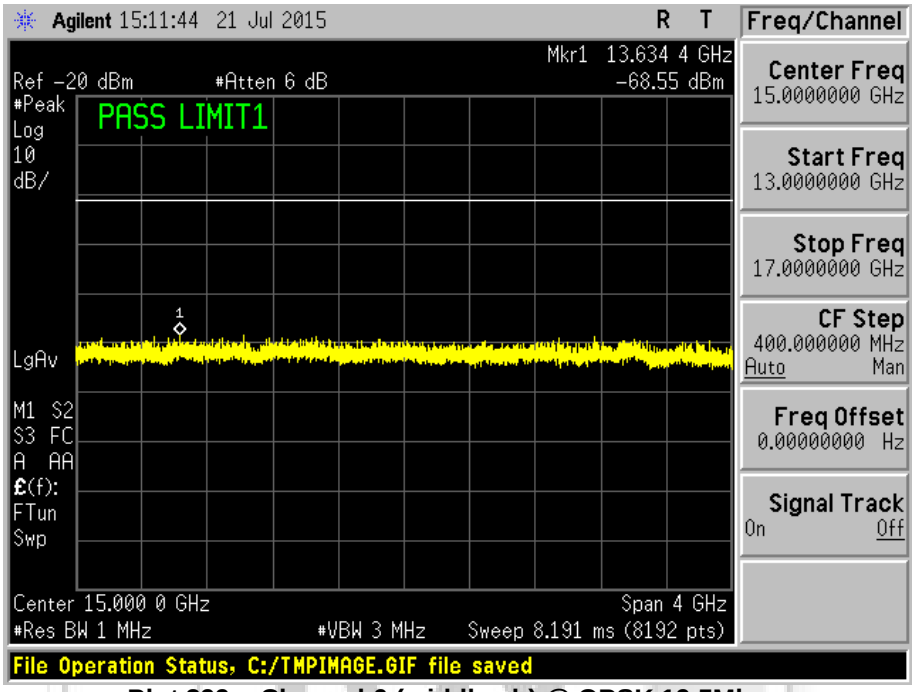


Plot 397 – Channel 6 (middle ch) @ QPSK 19.5Mbps

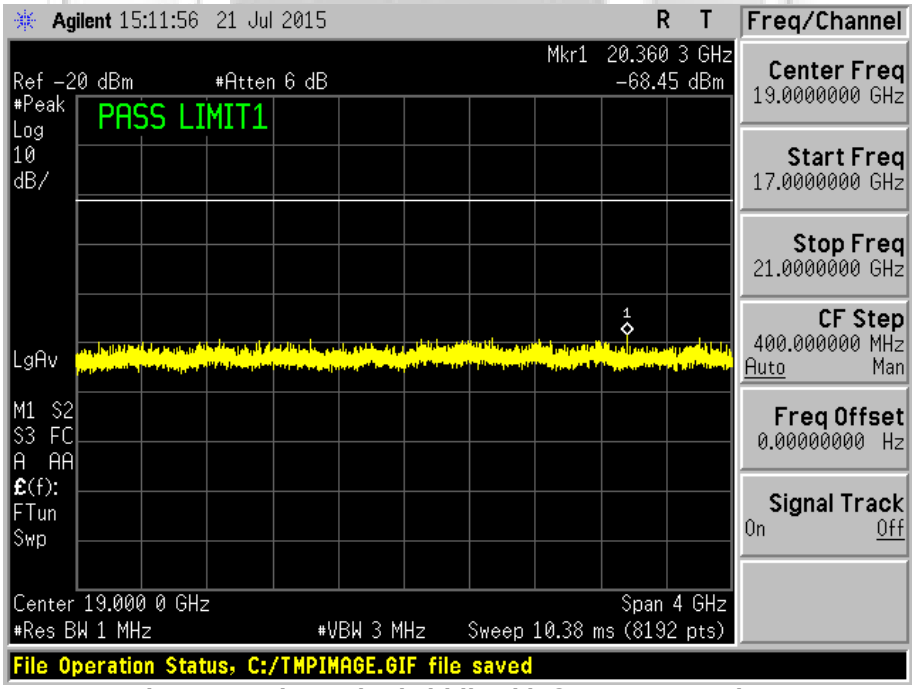


Plot 398 – Channel 6 (middle ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

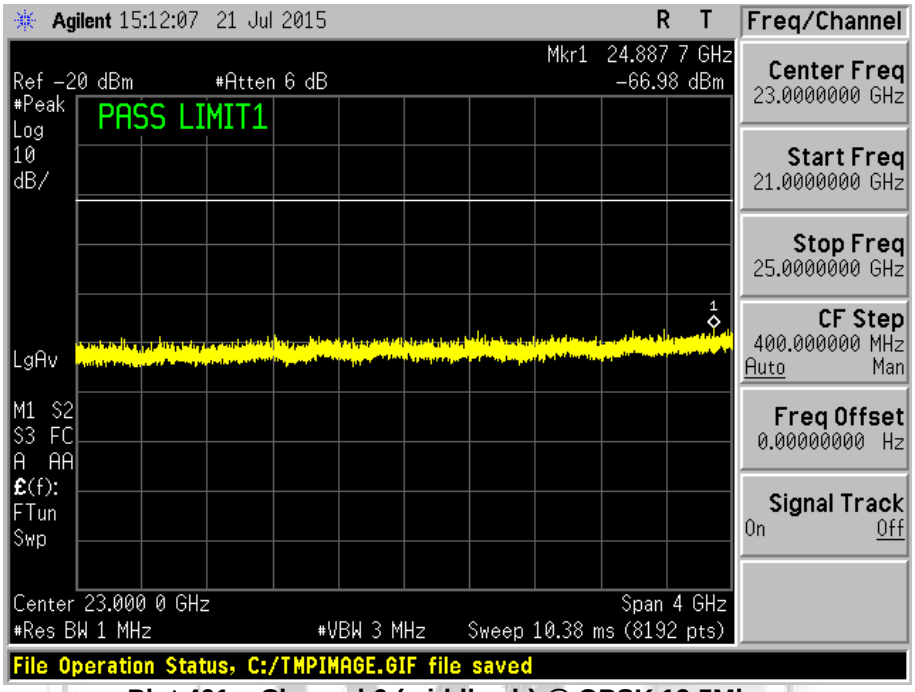


Plot 399 – Channel 6 (middle ch) @ QPSK 19.5Mbps

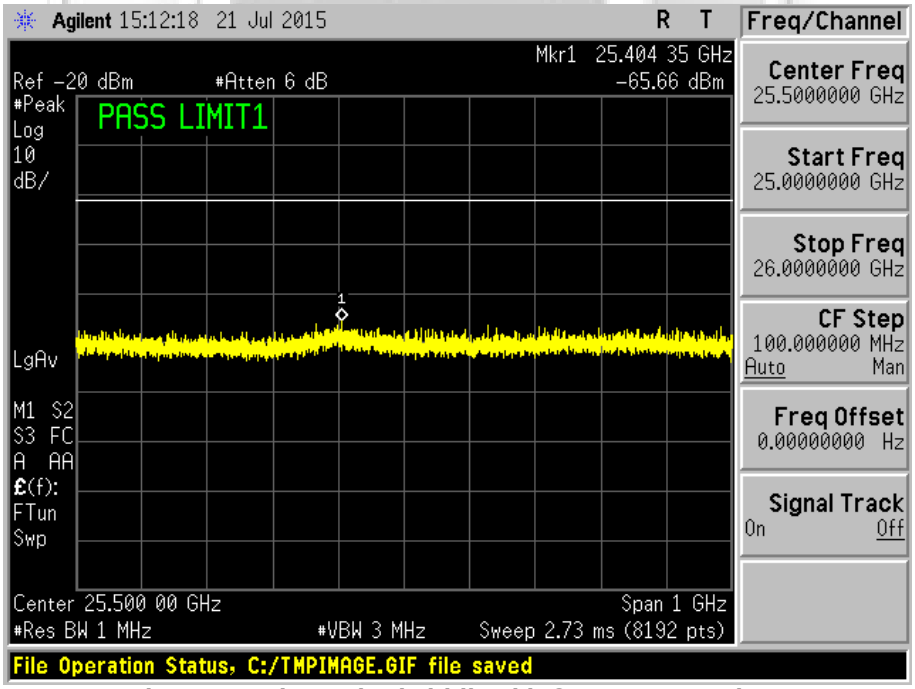


Plot 400 – Channel 6 (middle ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

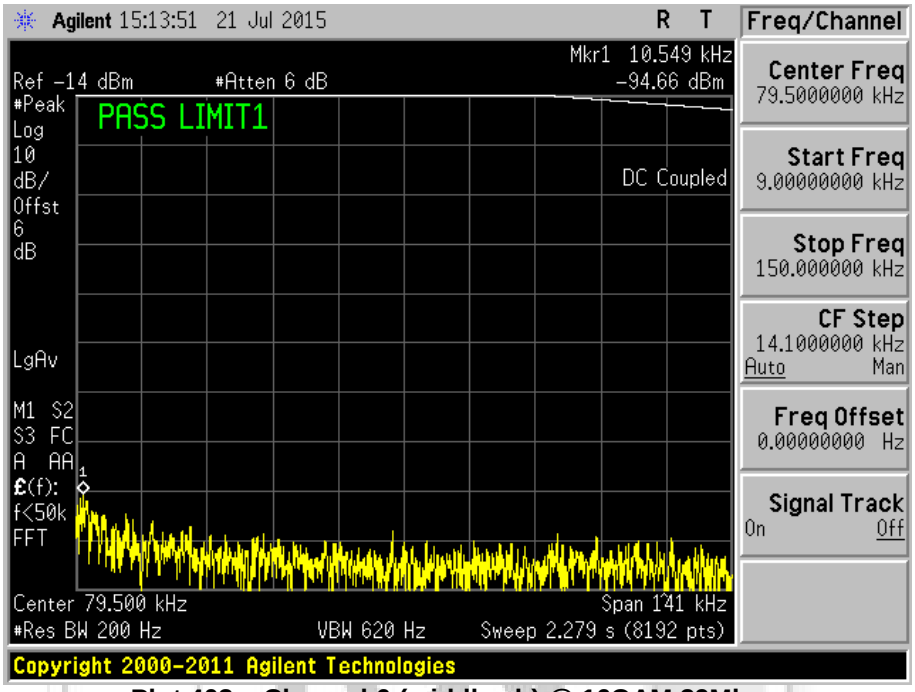


Plot 401 – Channel 6 (middle ch) @ QPSK 19.5Mbps

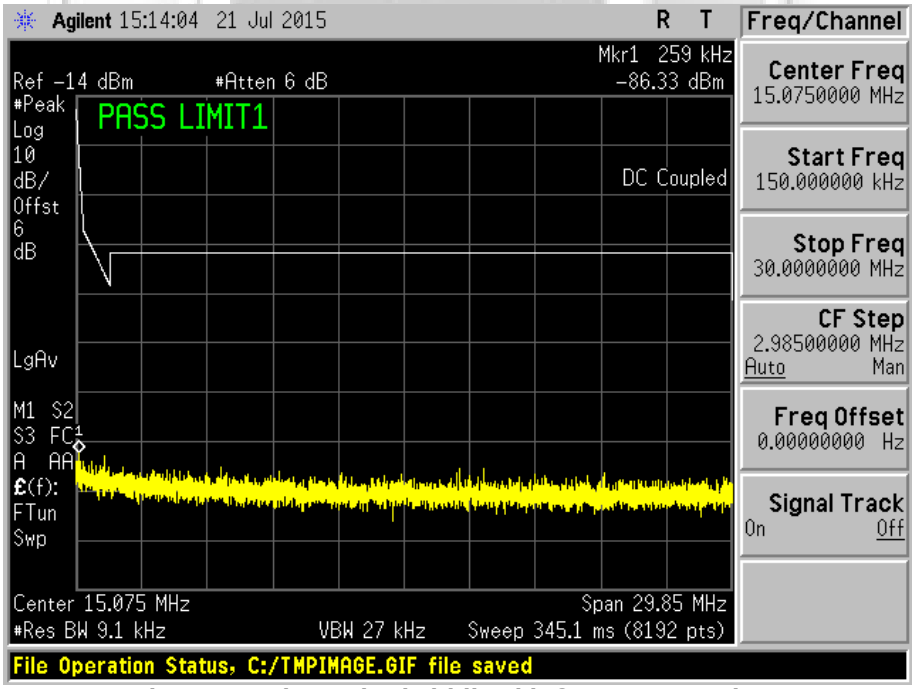


Plot 402 – Channel 6 (middle ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

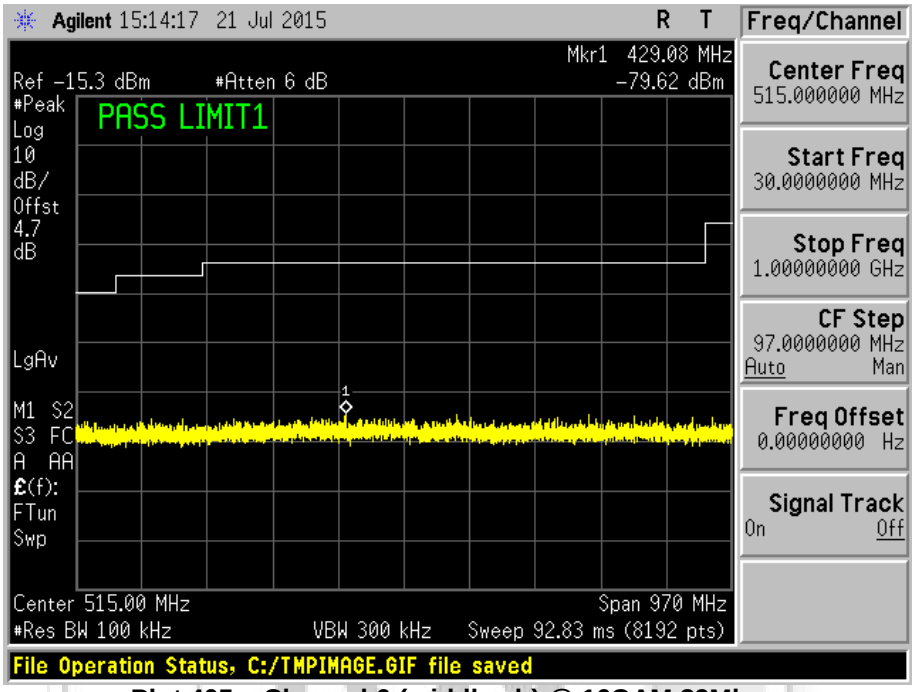


Plot 403 – Channel 6 (middle ch) @ 16QAM 39Mbps

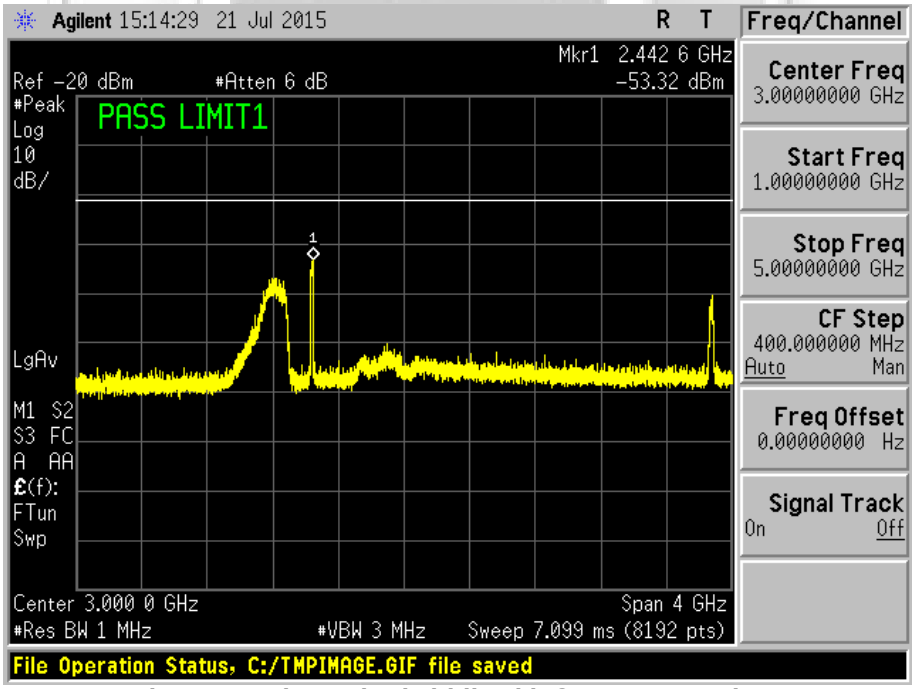


Plot 404 – Channel 6 (middle ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

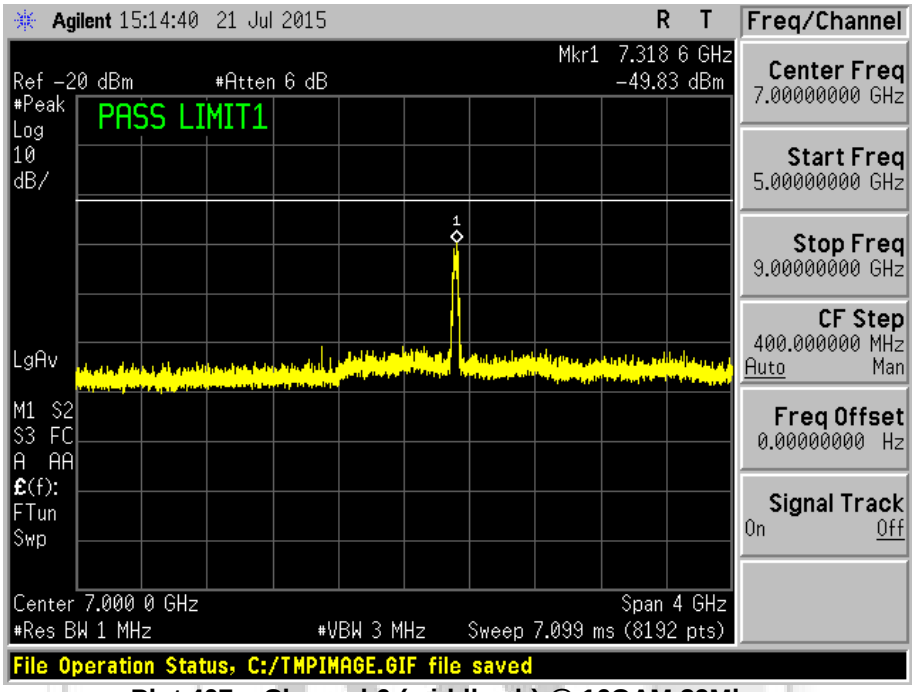


Plot 405 – Channel 6 (middle ch) @ 16QAM 39Mbps

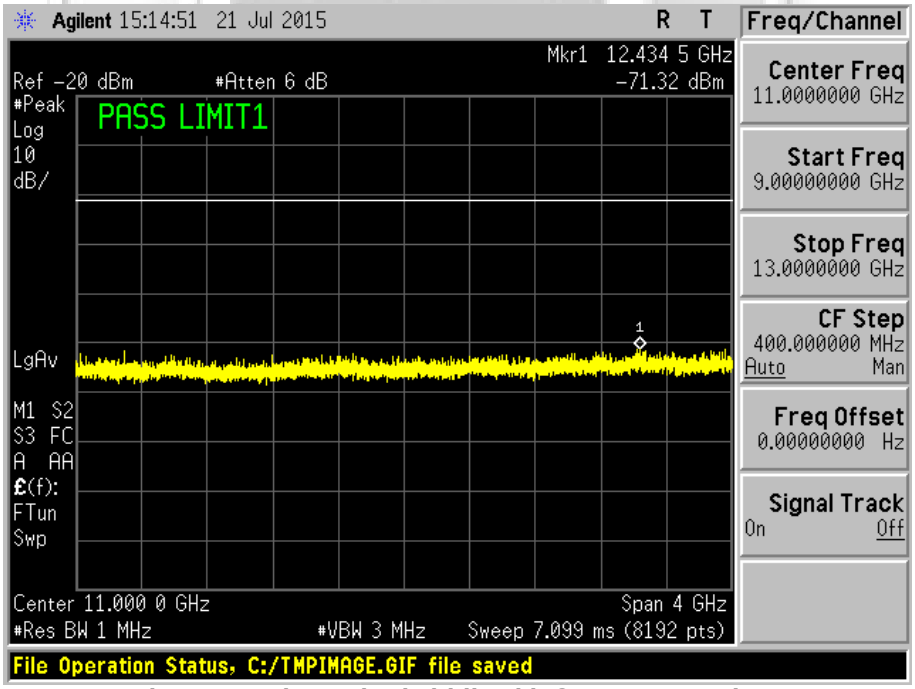


Plot 406 – Channel 6 (middle ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

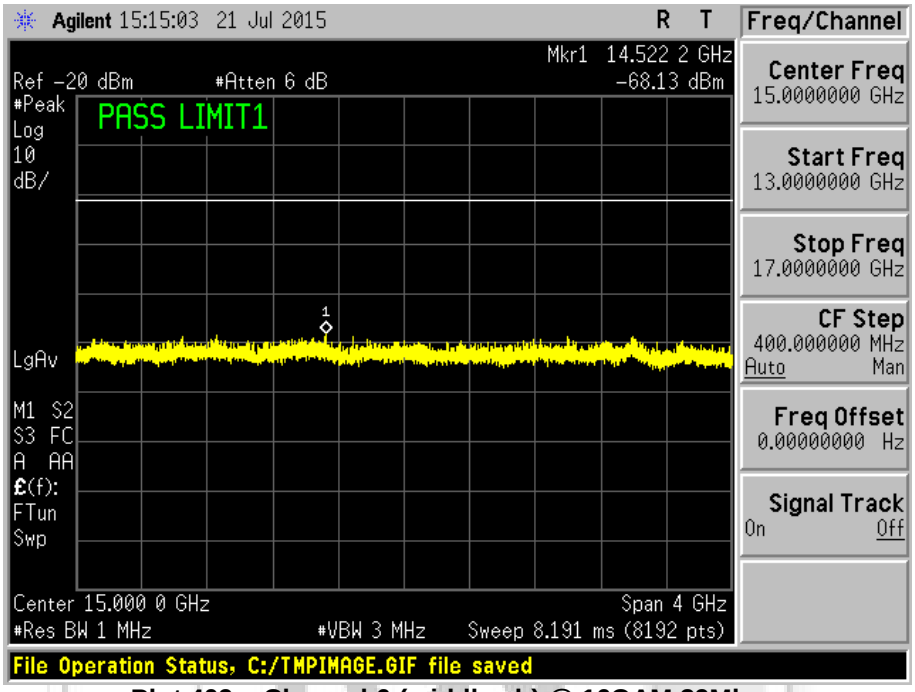


Plot 407 – Channel 6 (middle ch) @ 16QAM 39Mbps

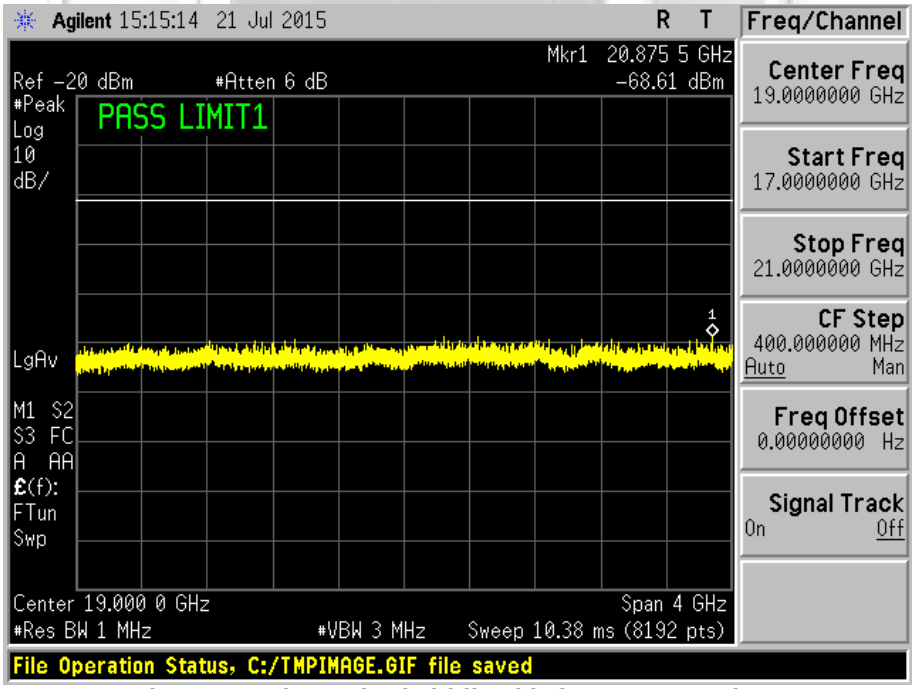


Plot 408 – Channel 6 (middle ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

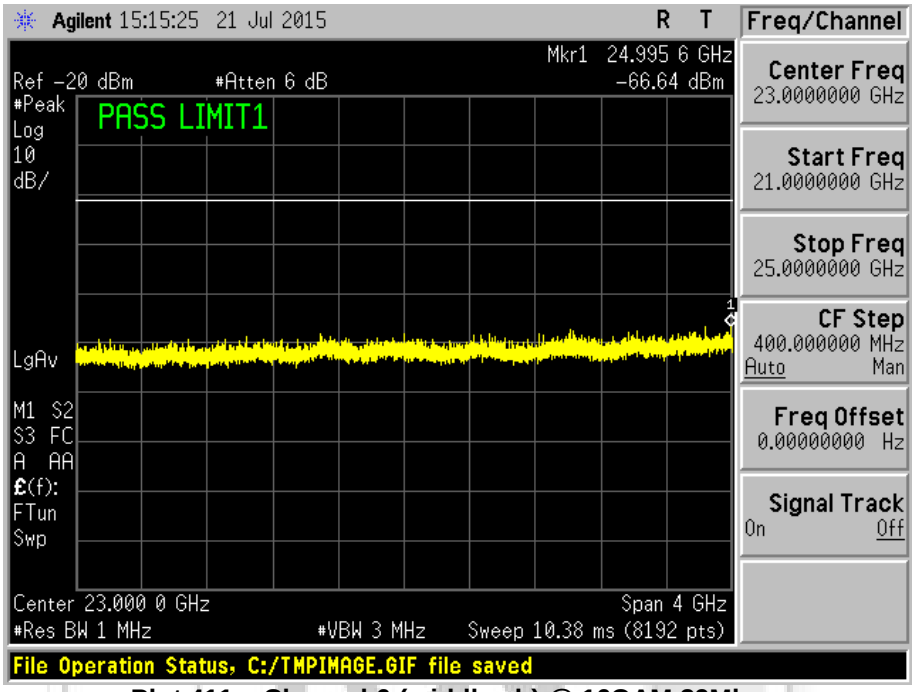


Plot 409 – Channel 6 (middle ch) @ 16QAM 39Mbps

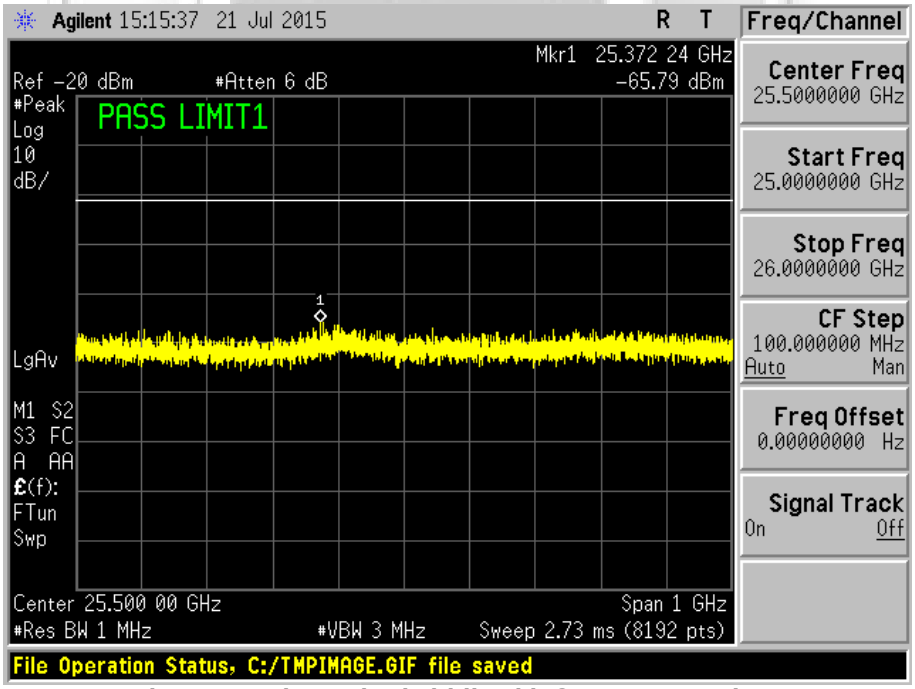


Plot 410 – Channel 6 (middle ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

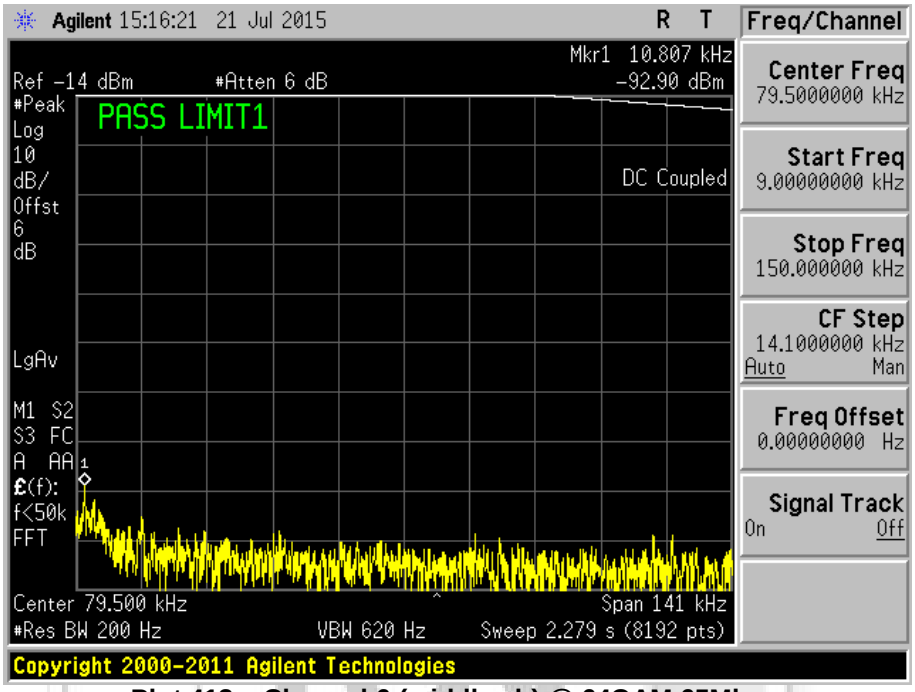


Plot 411 – Channel 6 (middle ch) @ 16QAM 39Mbps

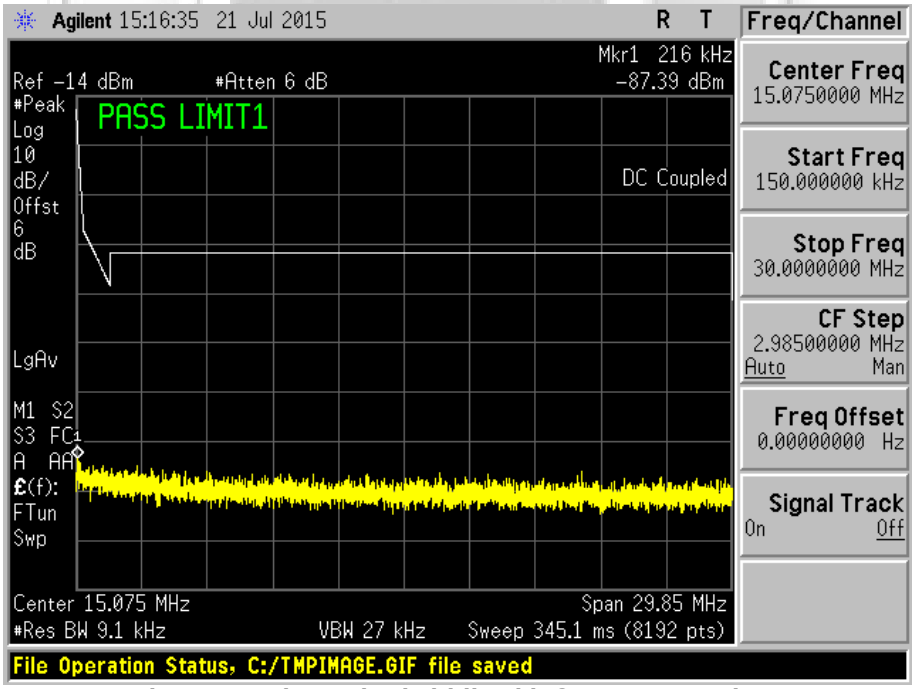


Plot 412 – Channel 6 (middle ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

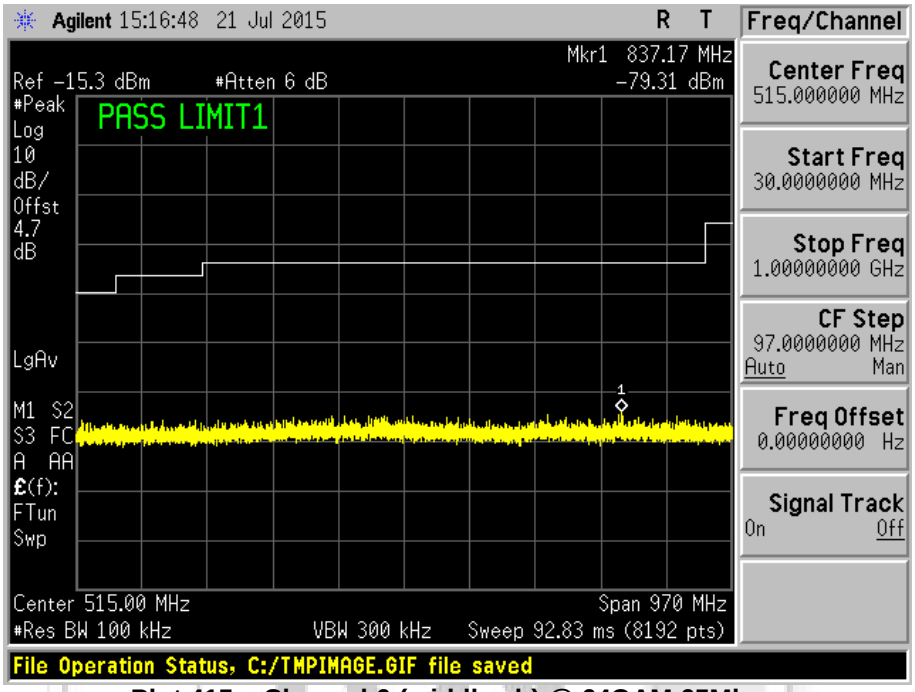


Plot 413 – Channel 6 (middle ch) @ 64QAM 65Mbps

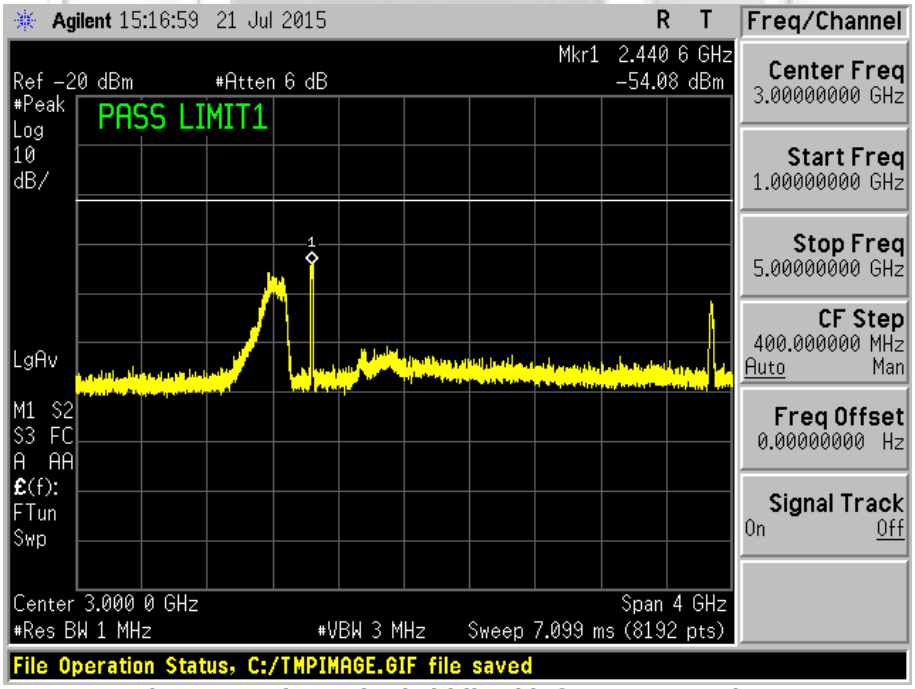


Plot 414 – Channel 6 (middle ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

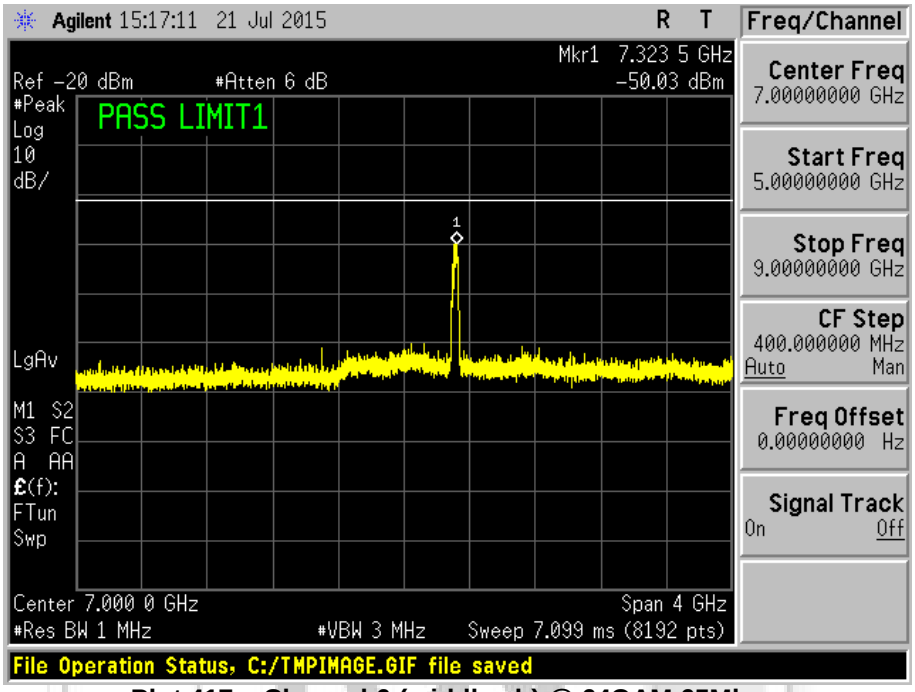


Plot 415 – Channel 6 (middle ch) @ 64QAM 65Mbps

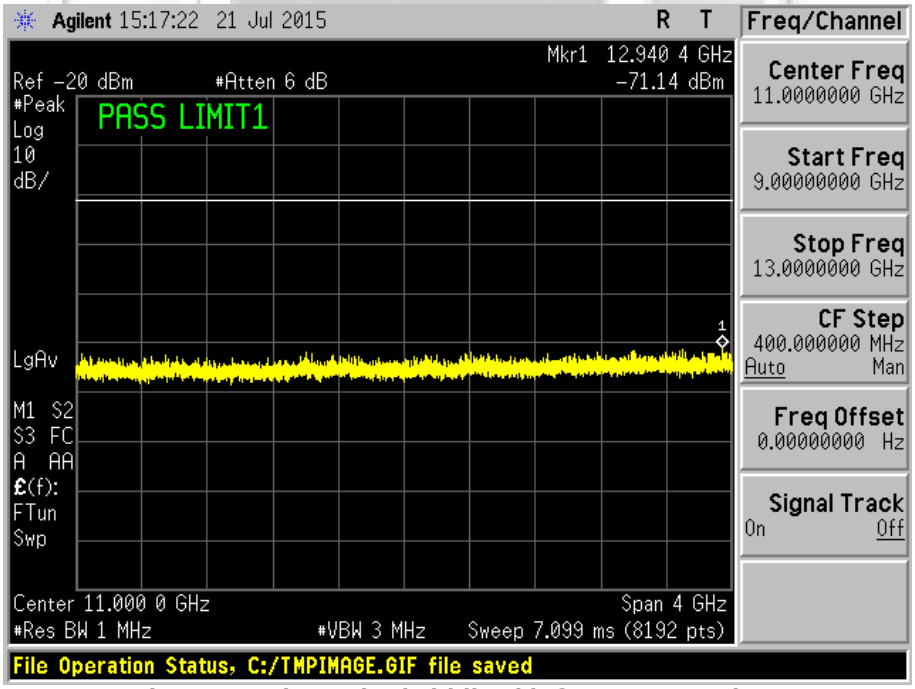


Plot 416 – Channel 6 (middle ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

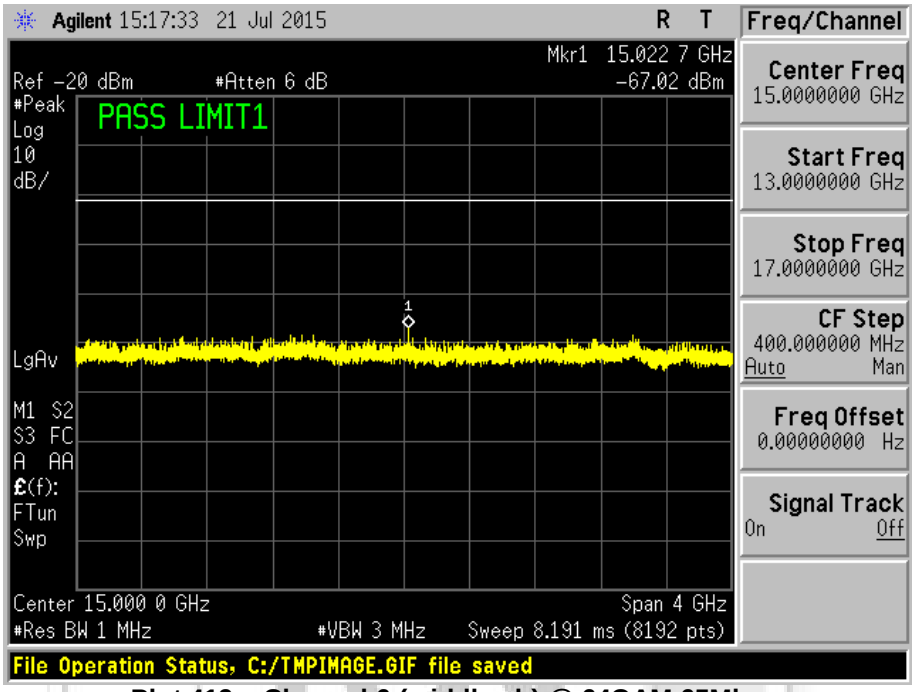


Plot 417 – Channel 6 (middle ch) @ 64QAM 65Mbps

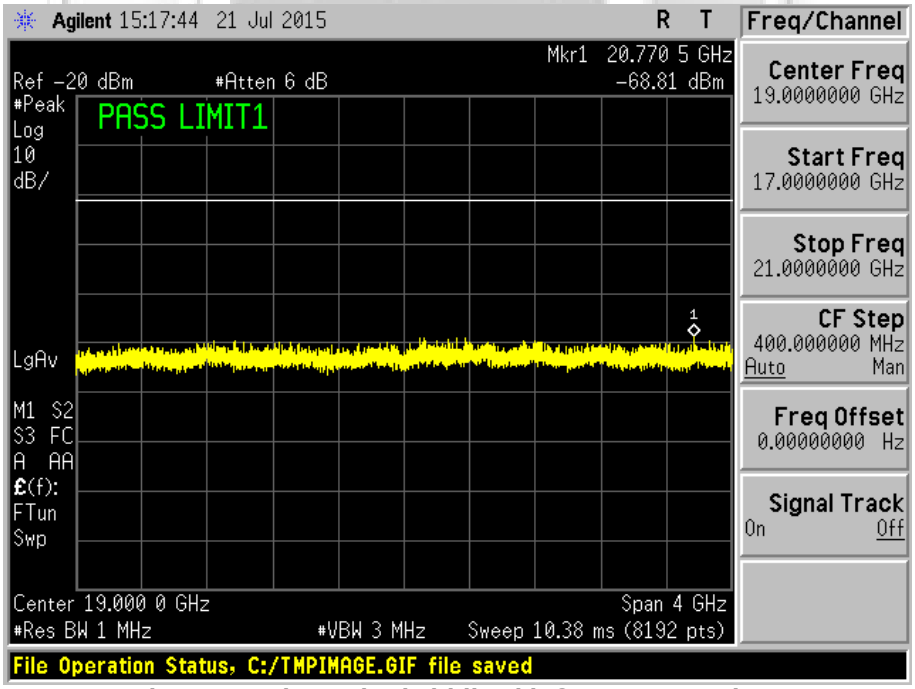


Plot 418 – Channel 6 (middle ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

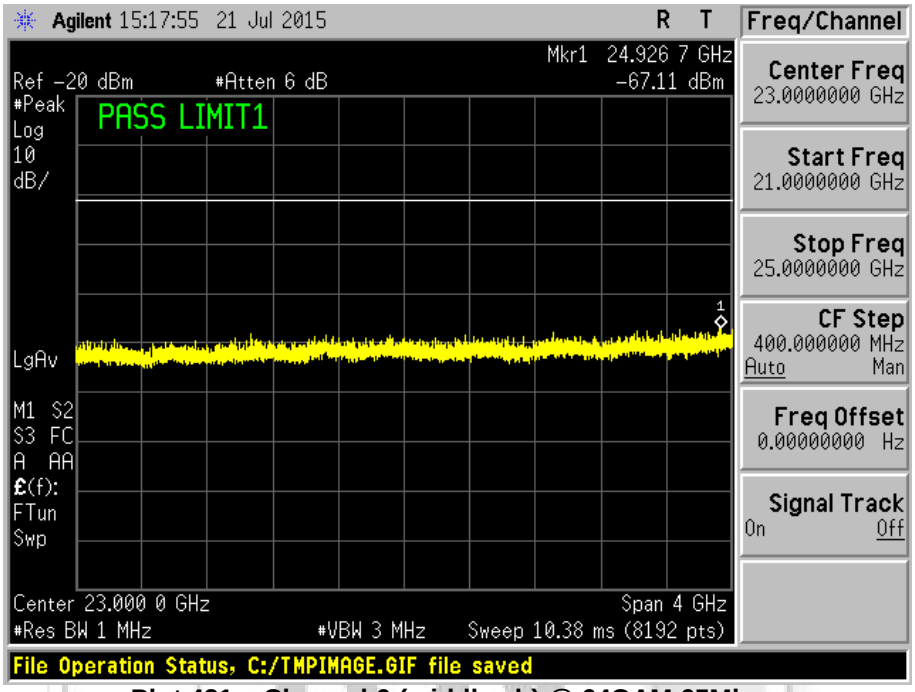


Plot 419 – Channel 6 (middle ch) @ 64QAM 65Mbps

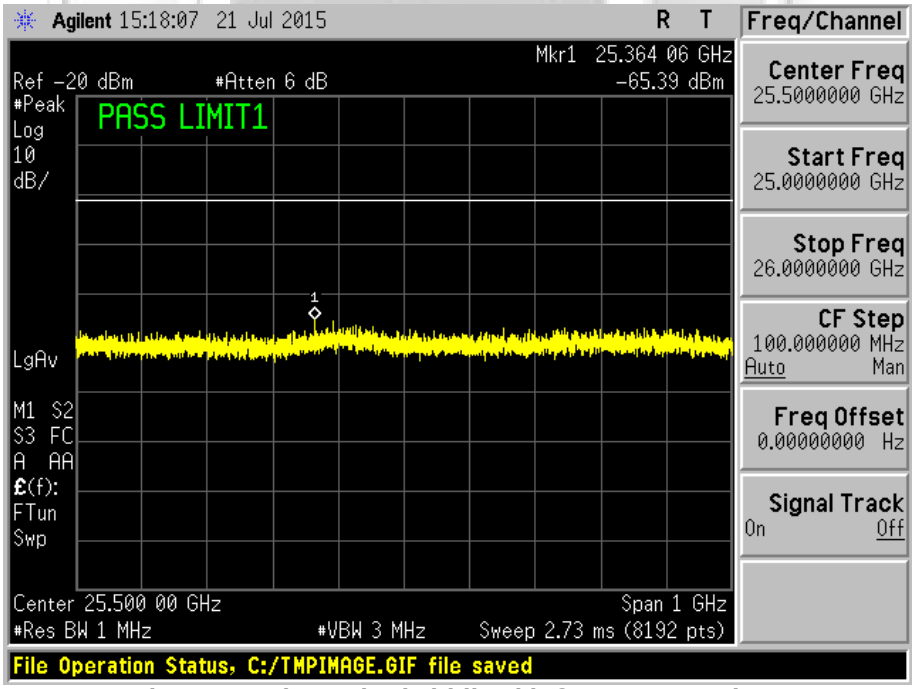


Plot 420 – Channel 6 (middle ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

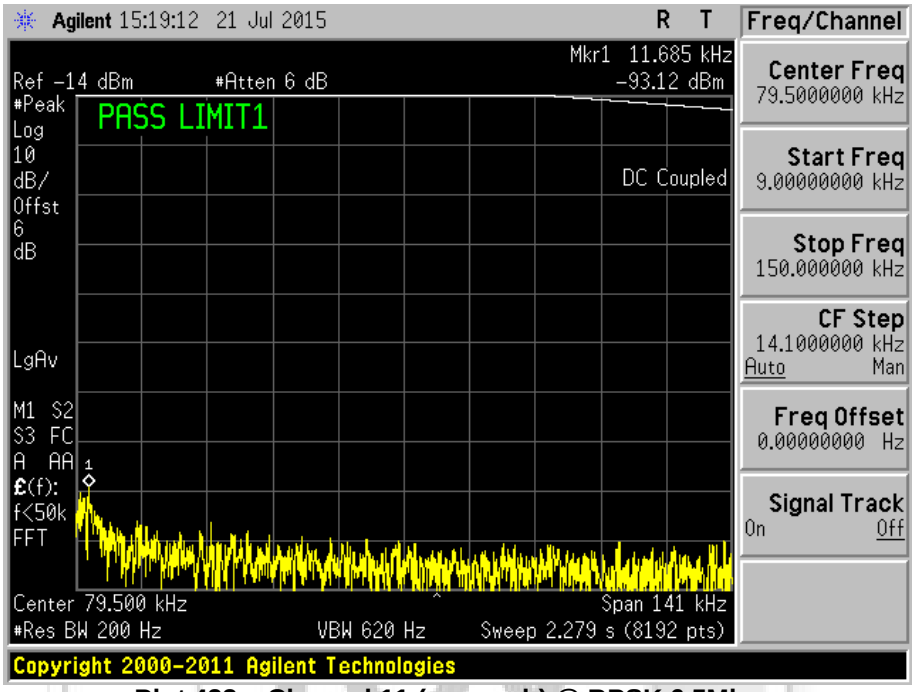


Plot 421 – Channel 6 (middle ch) @ 64QAM 65Mbps

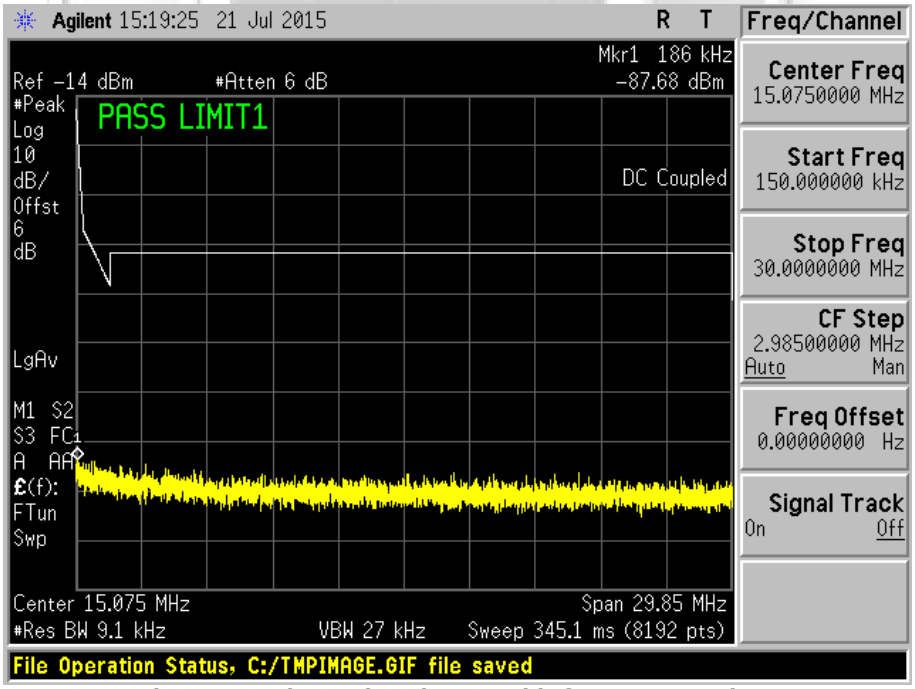


Plot 422 – Channel 6 (middle ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

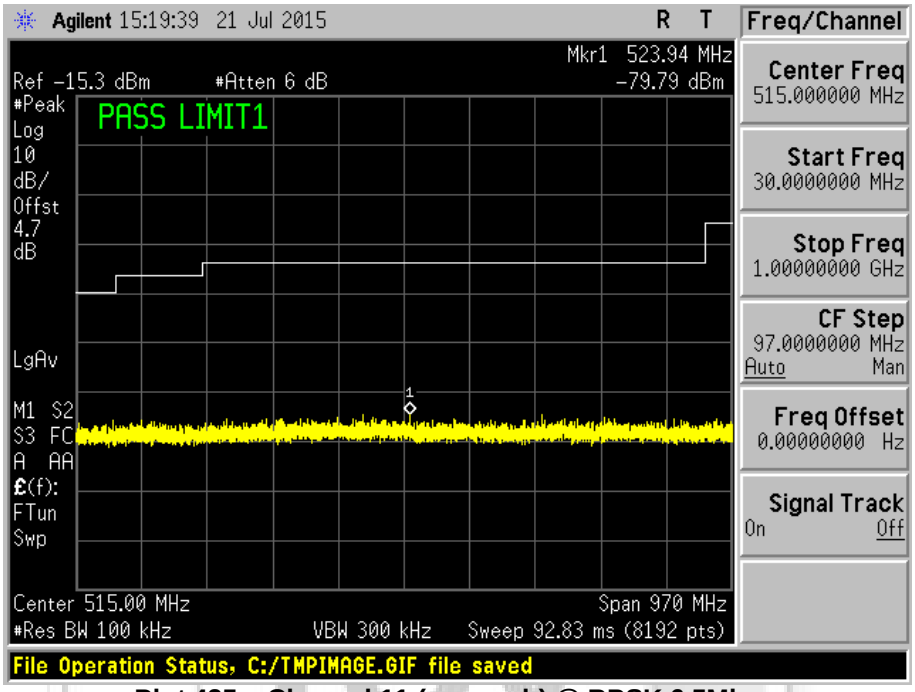


Plot 423 – Channel 11 (upper ch) @ BPSK 6.5Mbps

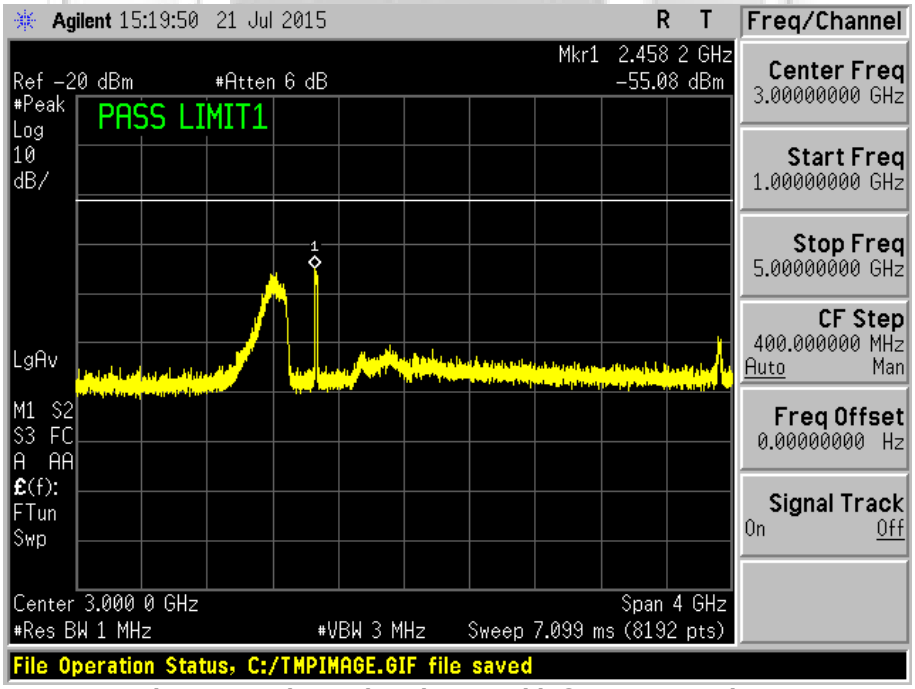


Plot 424 – Channel 11 (upper ch) @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

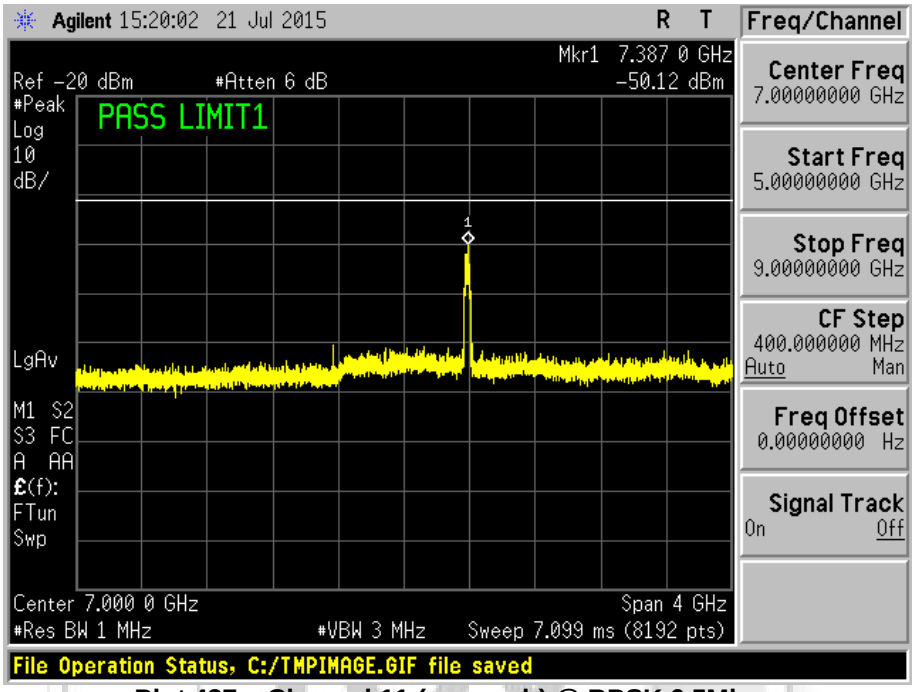


Plot 425 – Channel 11 (upper ch) @ BPSK 6.5Mbps

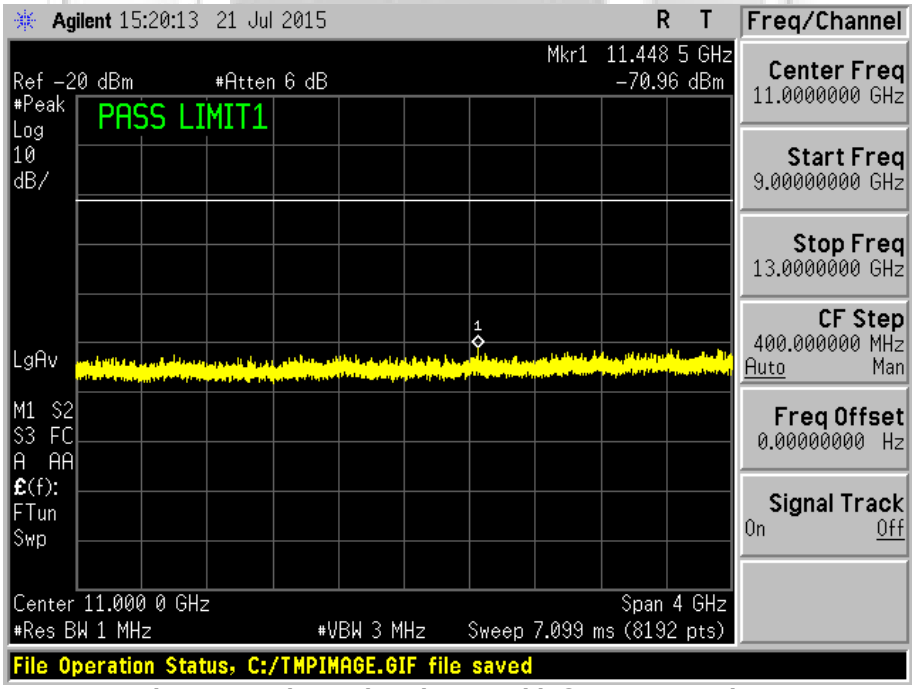


Plot 426 – Channel 11 (upper ch) @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

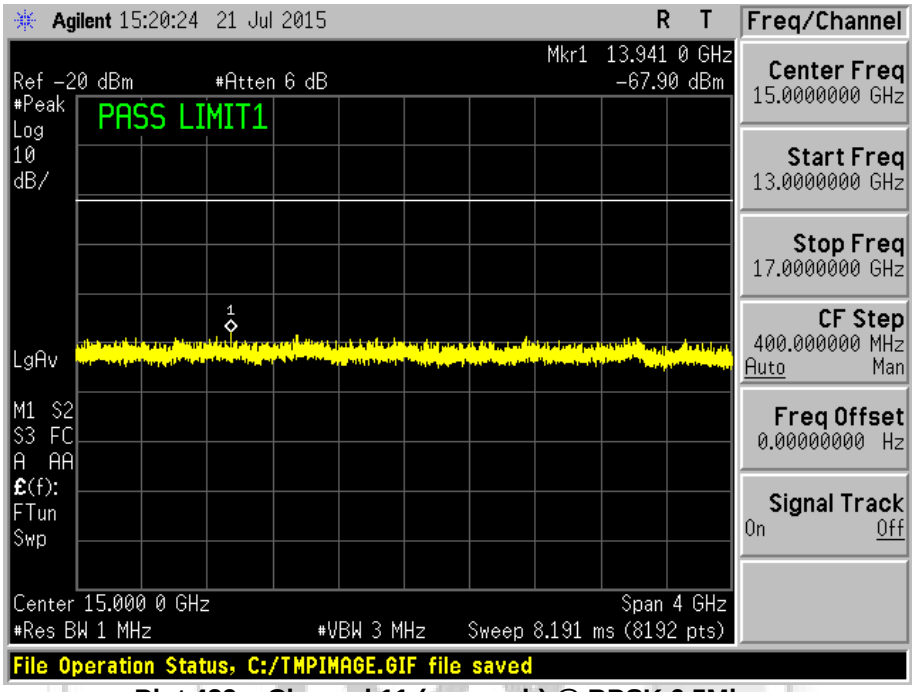


Plot 427 – Channel 11 (upper ch) @ BPSK 6.5Mbps

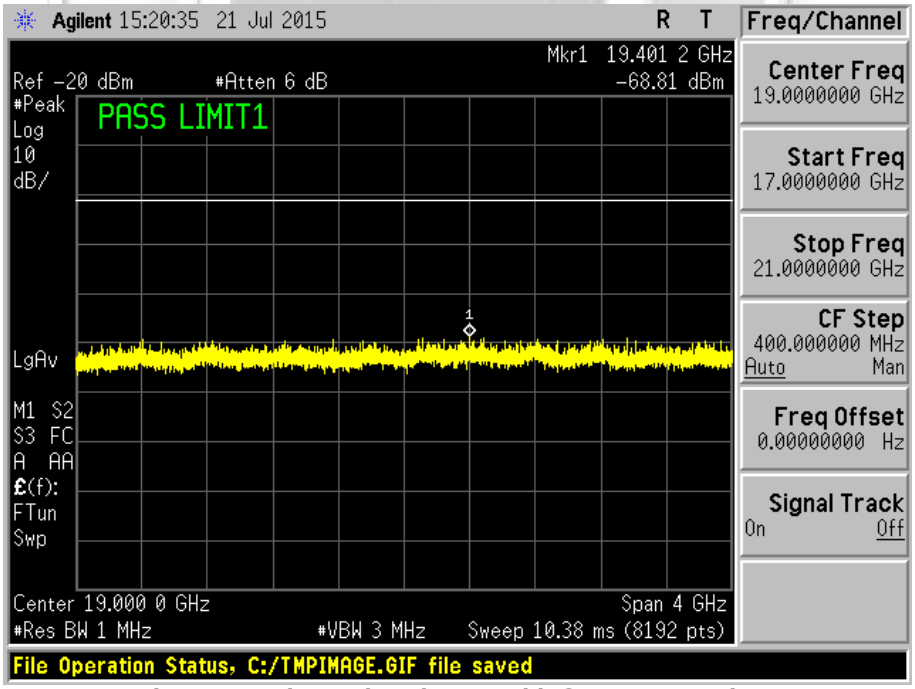


Plot 428 – Channel 11 (upper ch) @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

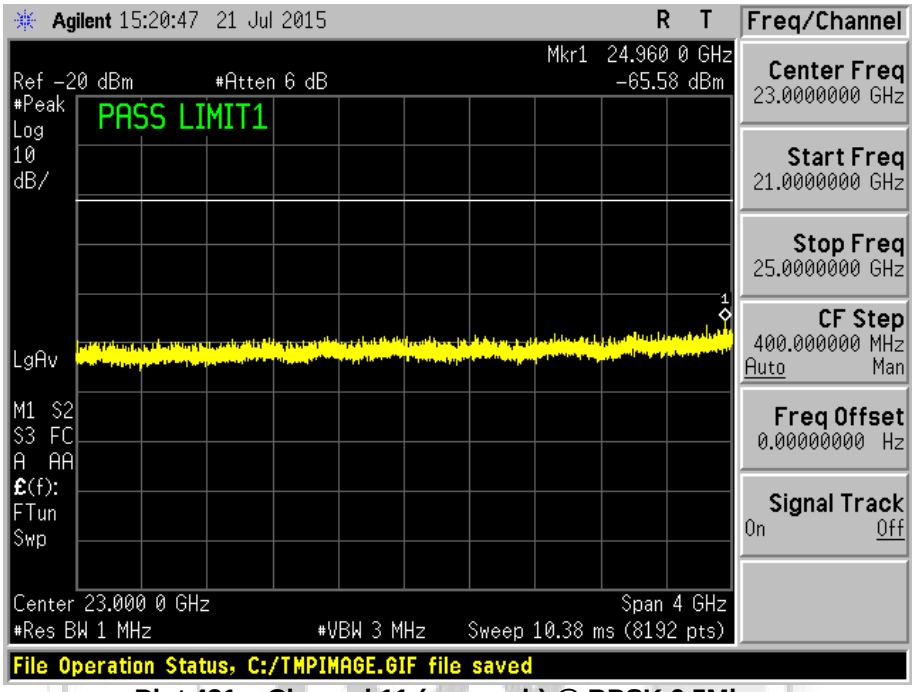


Plot 429 – Channel 11 (upper ch) @ BPSK 6.5Mbps

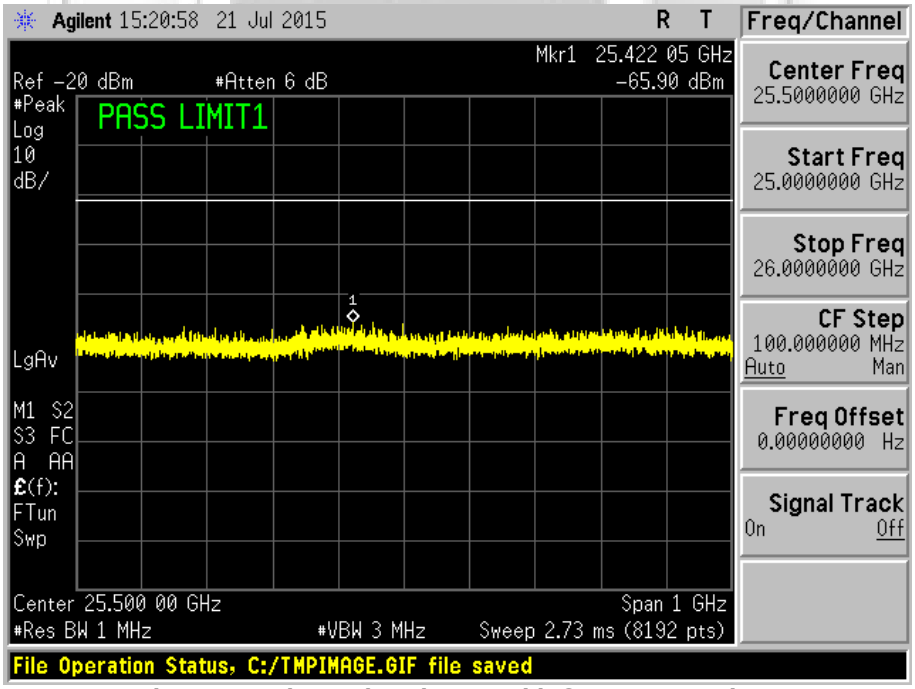


Plot 430 – Channel 11 (upper ch) @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

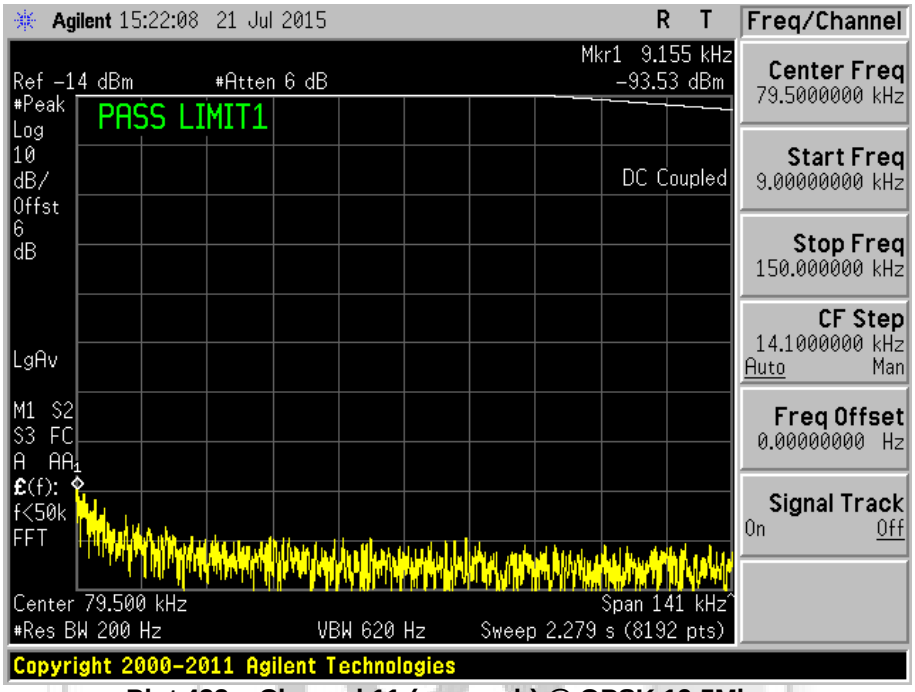


Plot 431 – Channel 11 (upper ch) @ BPSK 6.5Mbps

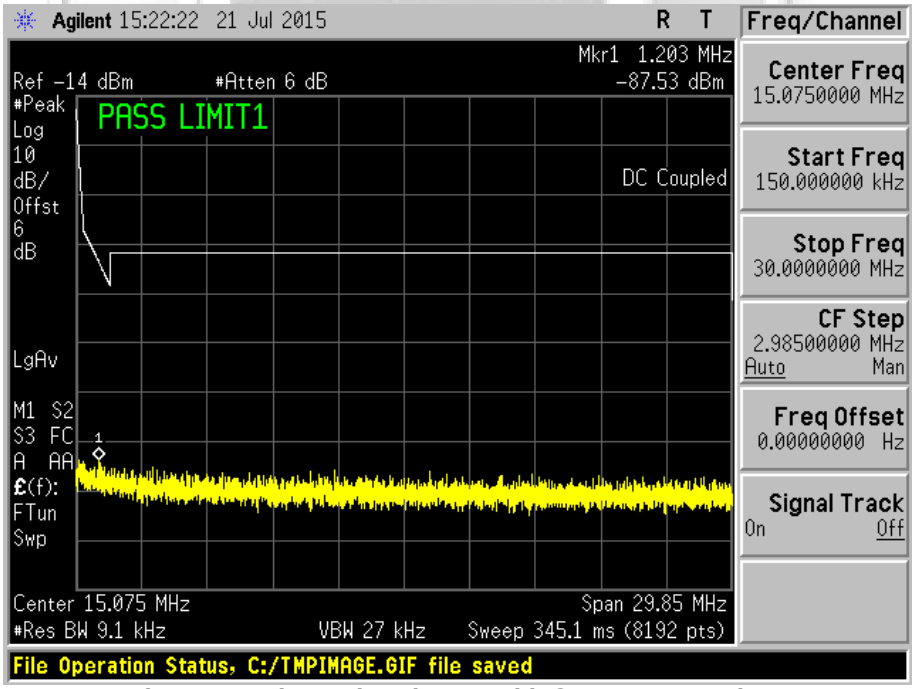


Plot 432 – Channel 11 (upper ch) @ BPSK 6.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

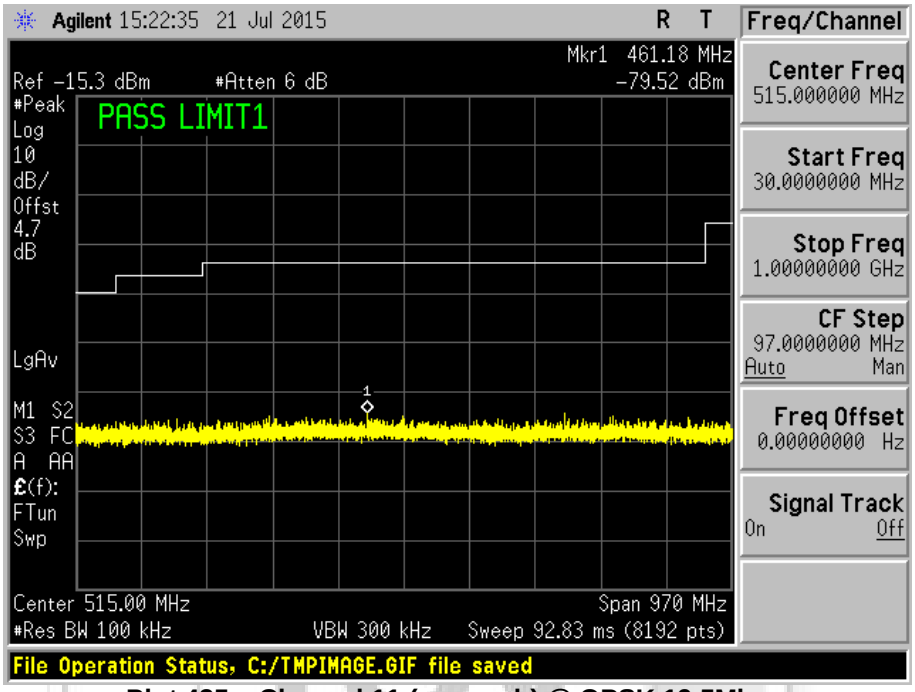


Plot 433 – Channel 11 (upper ch) @ QPSK 19.5Mbps

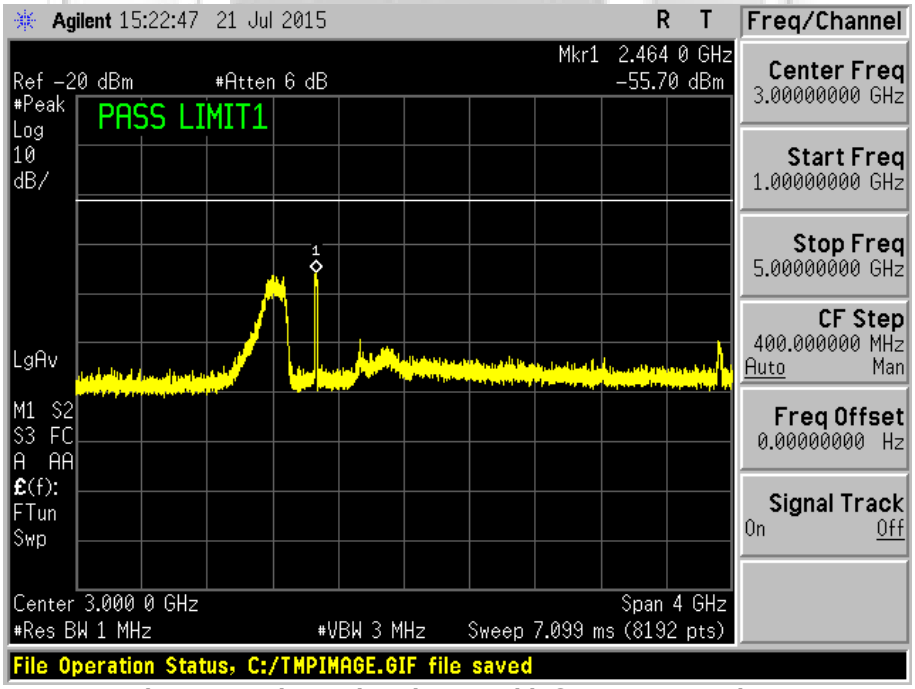


Plot 434 – Channel 11 (upper ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

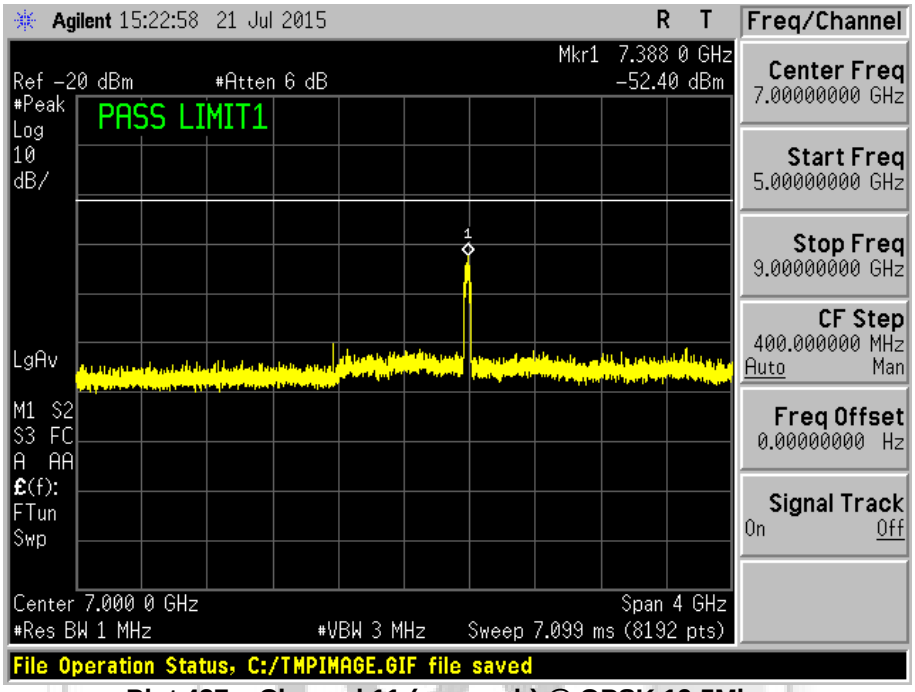


Plot 435 – Channel 11 (upper ch) @ QPSK 19.5Mbps

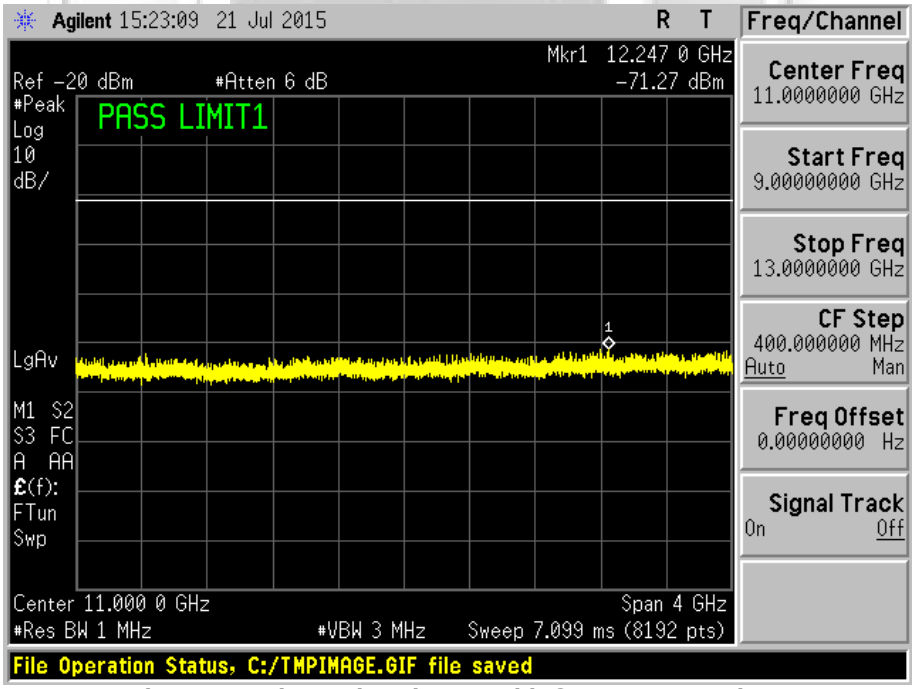


Plot 436 – Channel 11 (upper ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

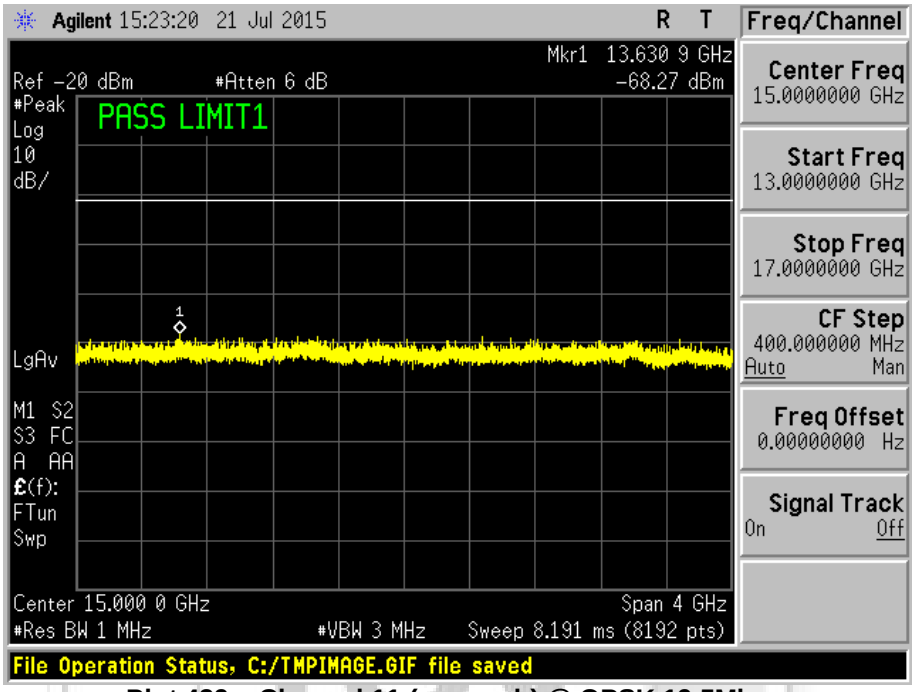


Plot 437 – Channel 11 (upper ch) @ QPSK 19.5Mbps

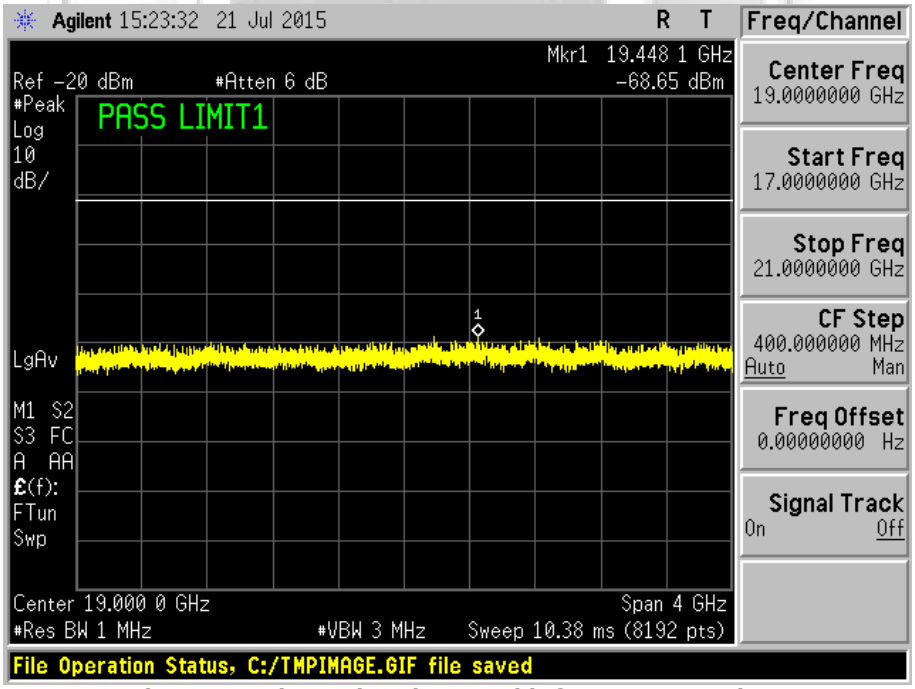


Plot 438 – Channel 11 (upper ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

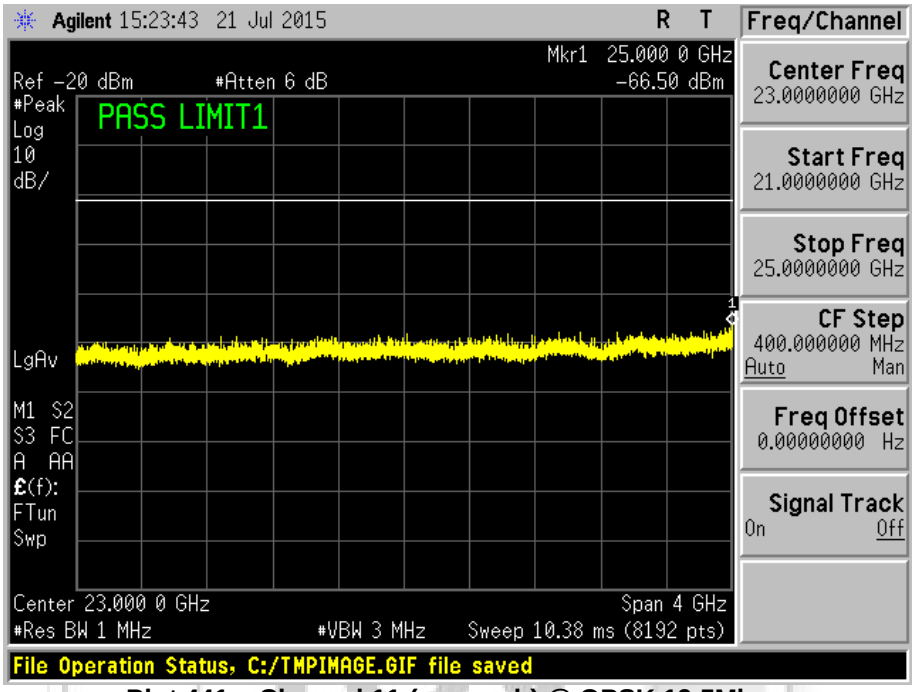


Plot 439 – Channel 11 (upper ch) @ QPSK 19.5Mbps

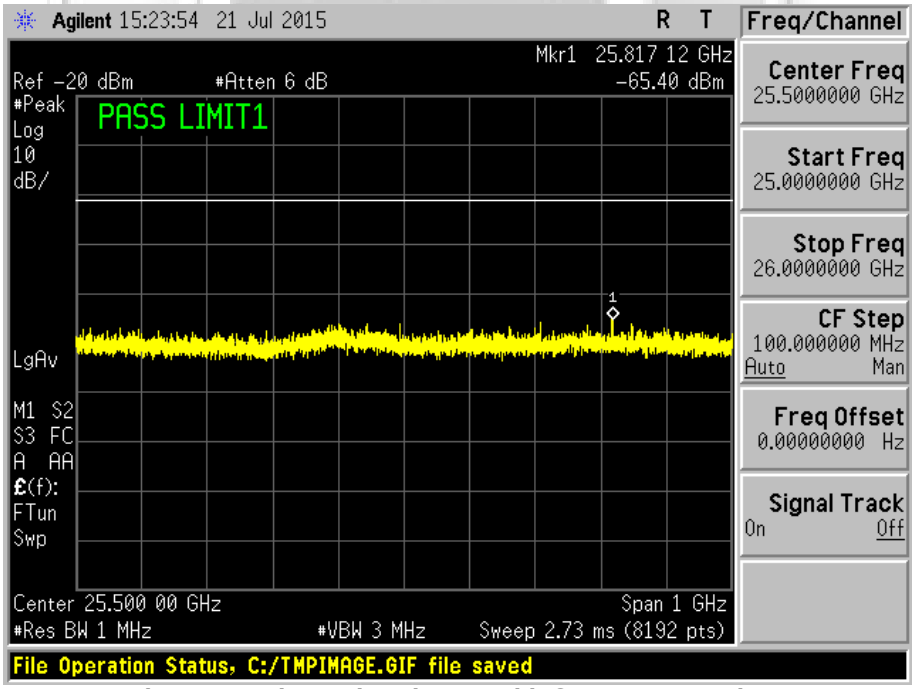


Plot 440 – Channel 11 (upper ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

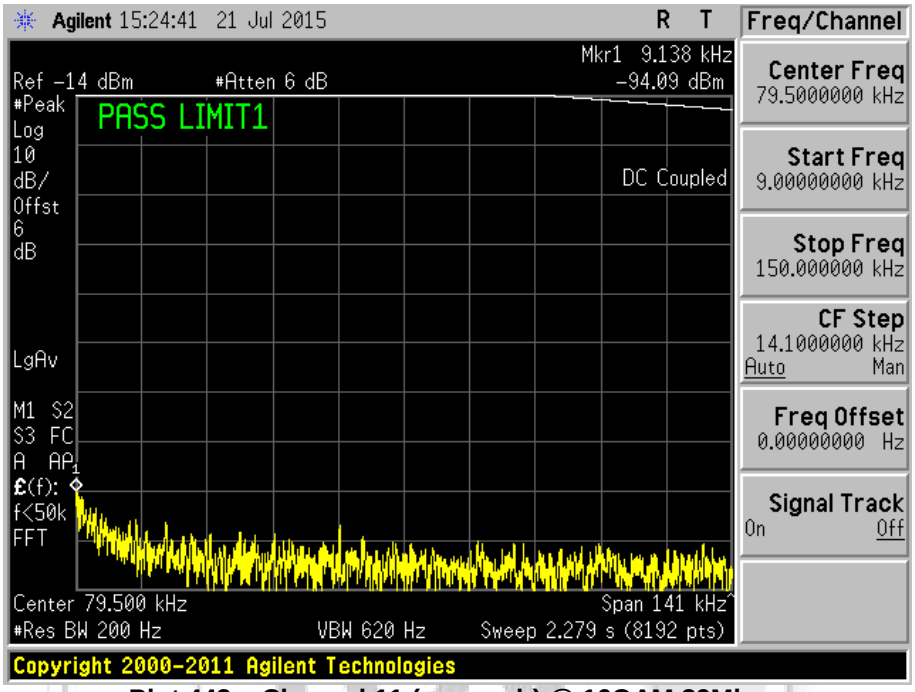


Plot 441 – Channel 11 (upper ch) @ QPSK 19.5Mbps

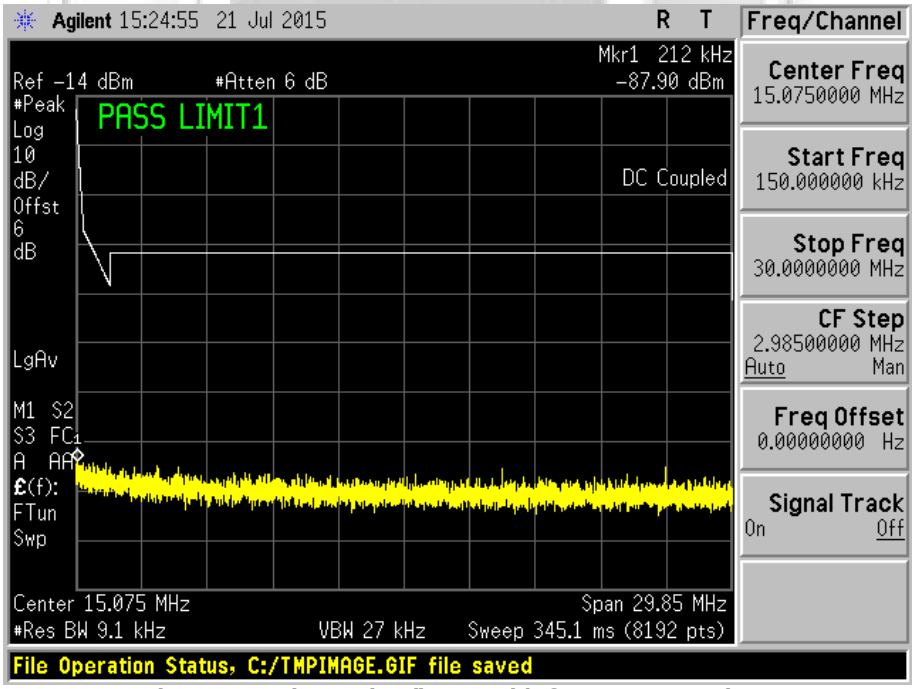


Plot 442 – Channel 11 (upper ch) @ QPSK 19.5Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

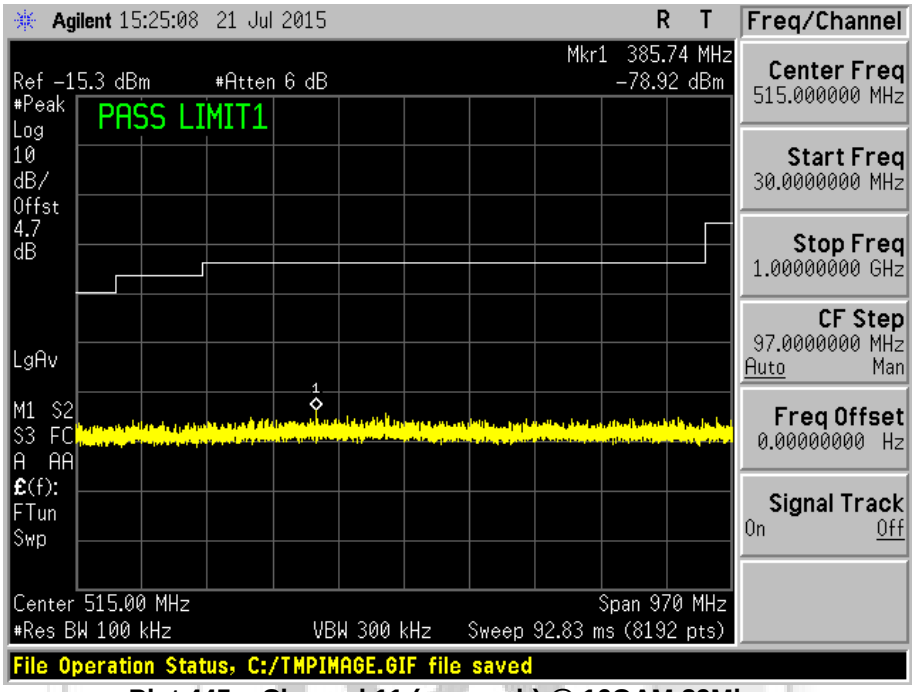


Plot 443 – Channel 11 (upper ch) @ 16QAM 39Mbps

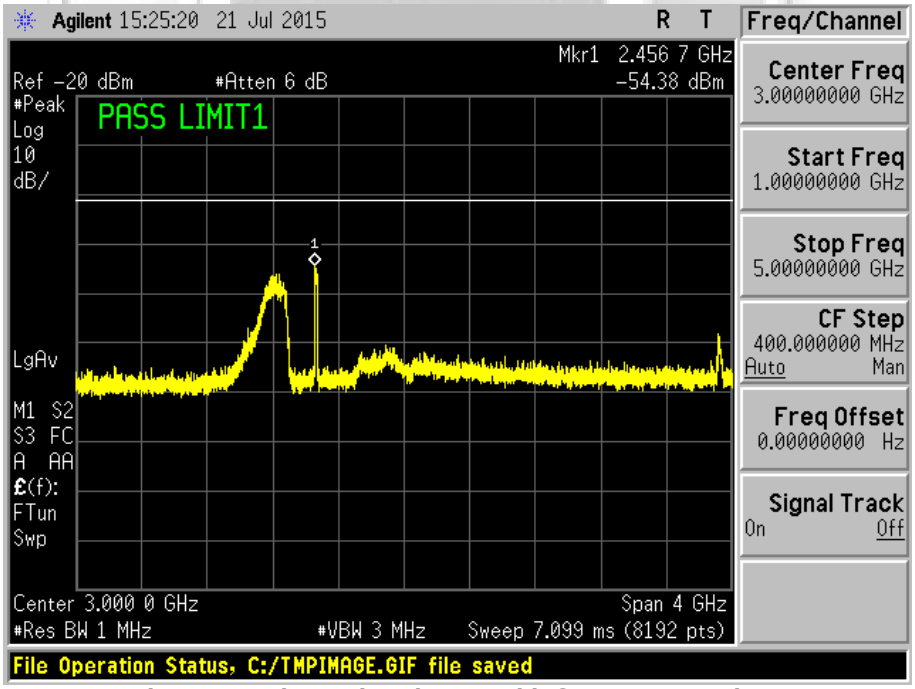


Plot 444 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

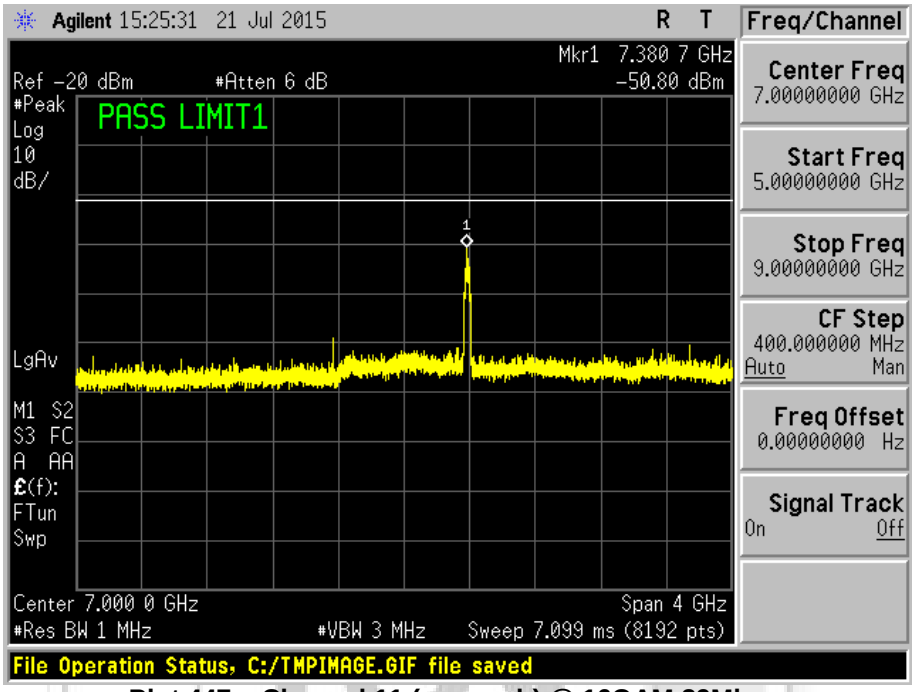


Plot 445 – Channel 11 (upper ch) @ 16QAM 39Mbps

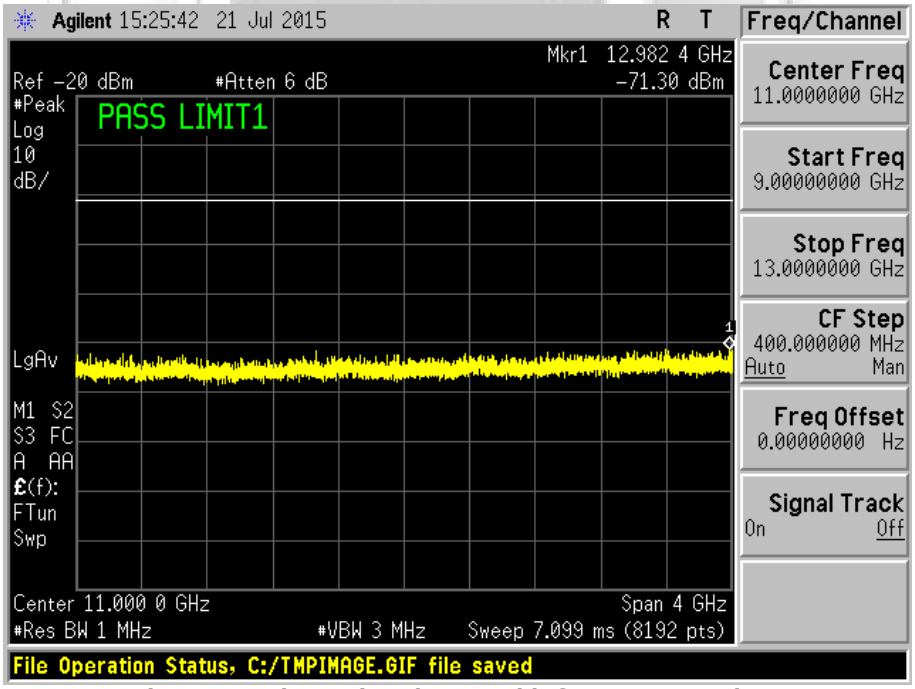


Plot 446 – Channel 11 (upper ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

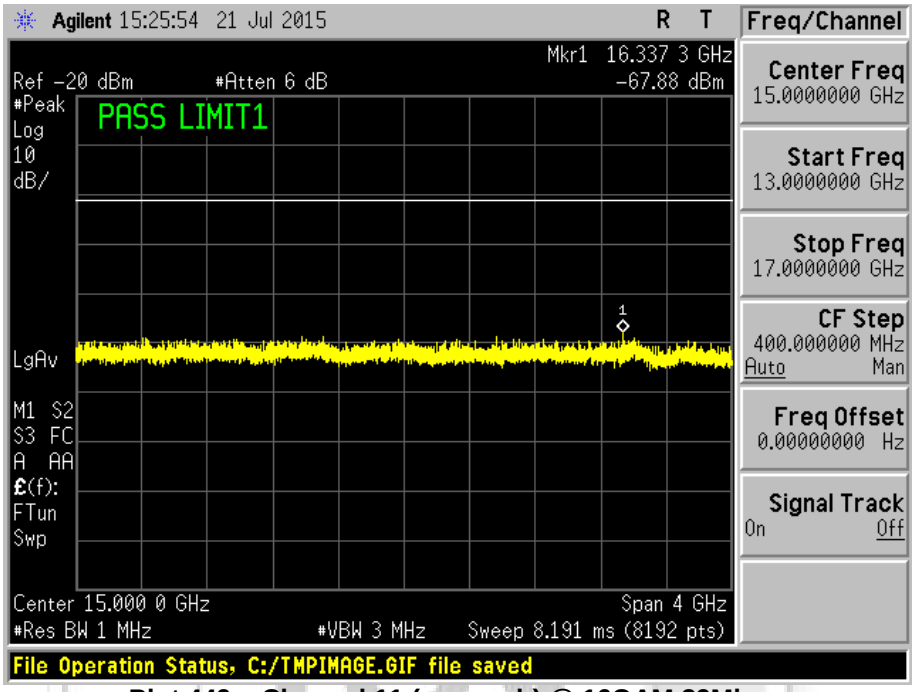


Plot 447 – Channel 11 (upper ch) @ 16QAM 39Mbps

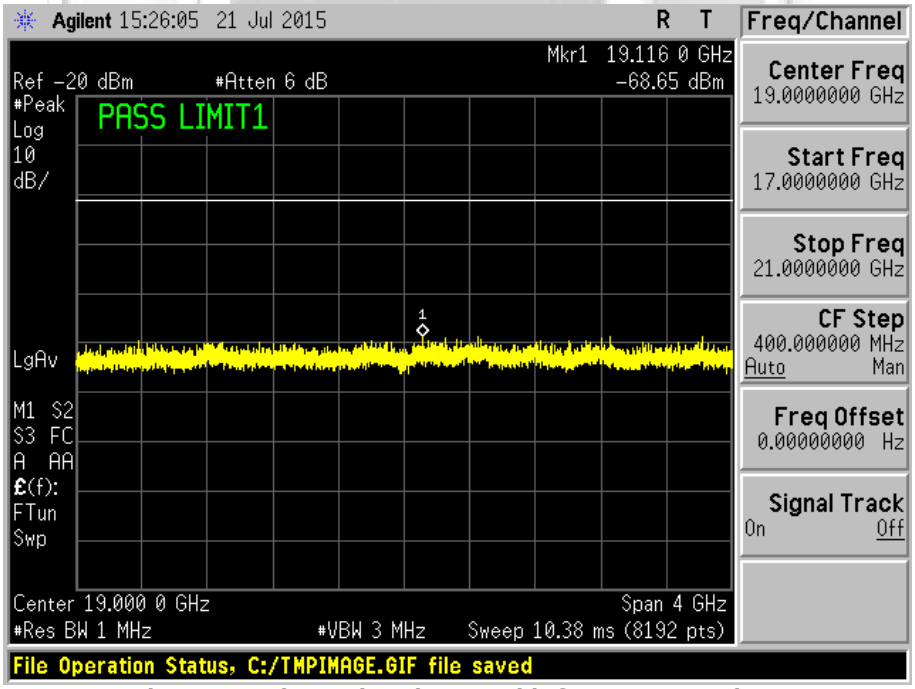


Plot 448 – Channel 11 (upper ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

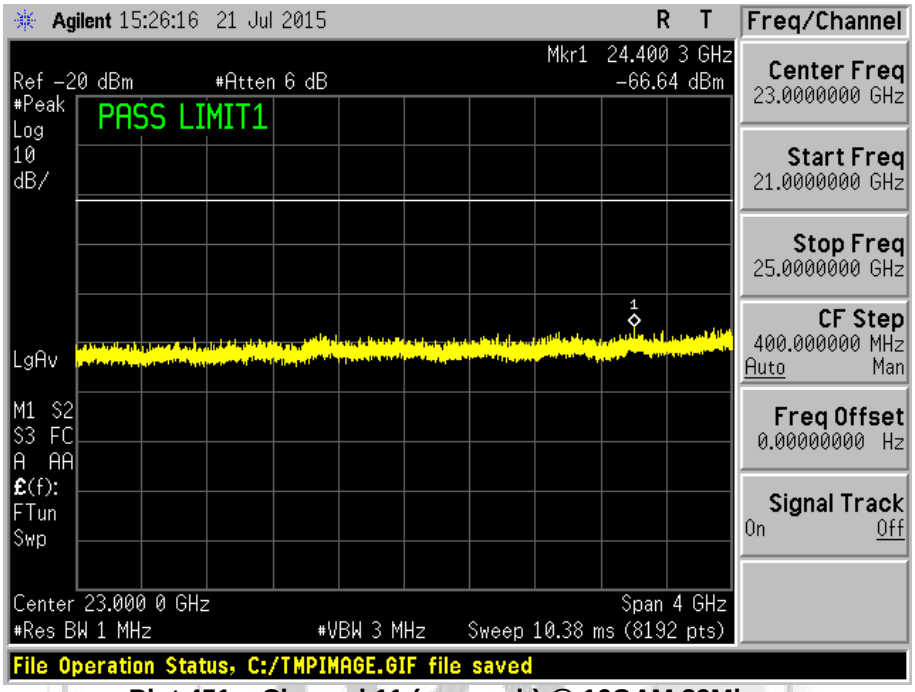


Plot 449 – Channel 11 (upper ch) @ 16QAM 39Mbps

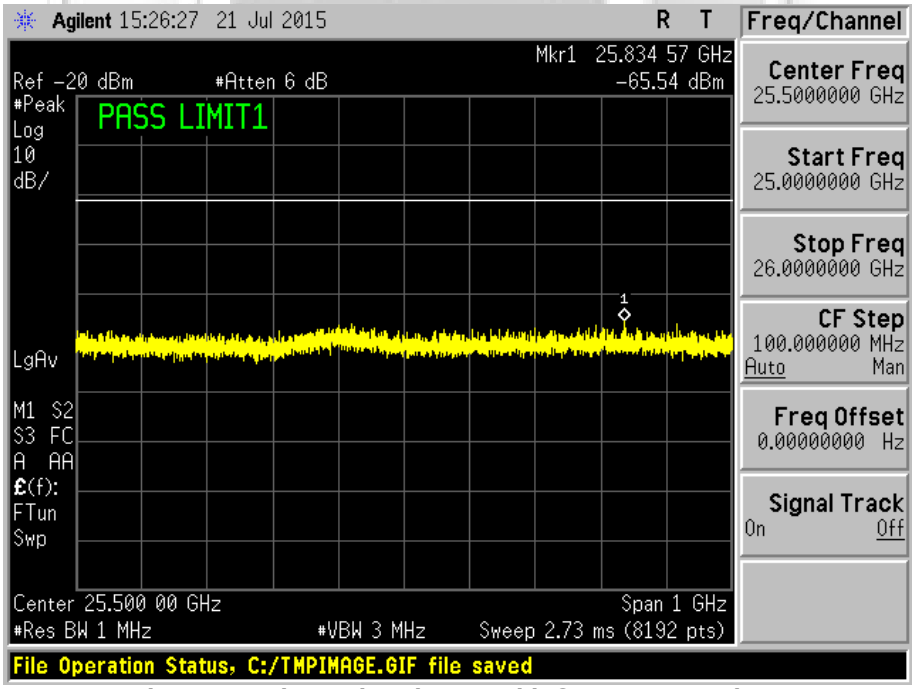


Plot 450 – Channel 11 (upper ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

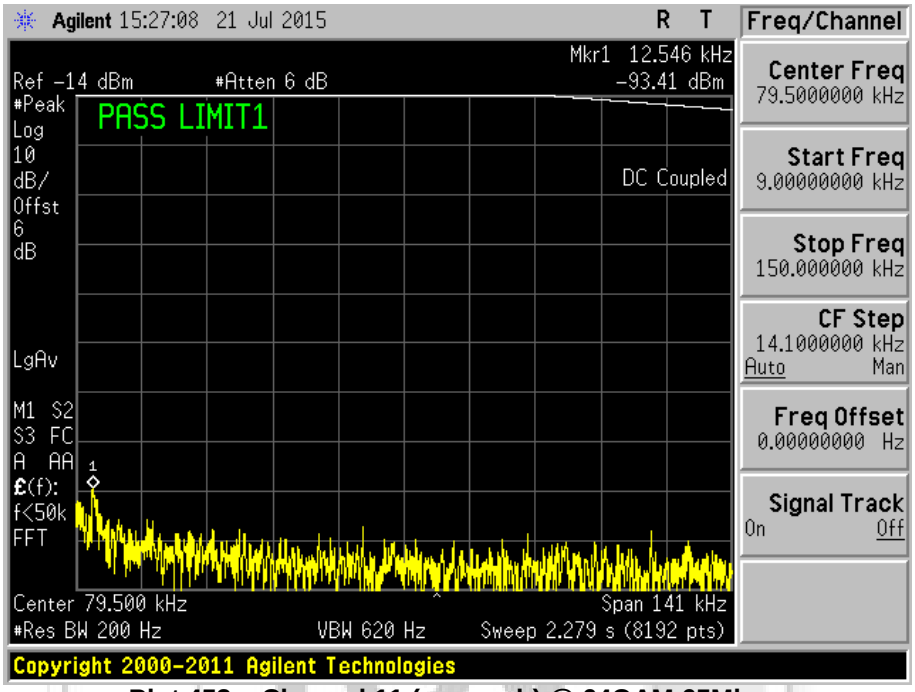


Plot 451 – Channel 11 (upper ch) @ 16QAM 39Mbps

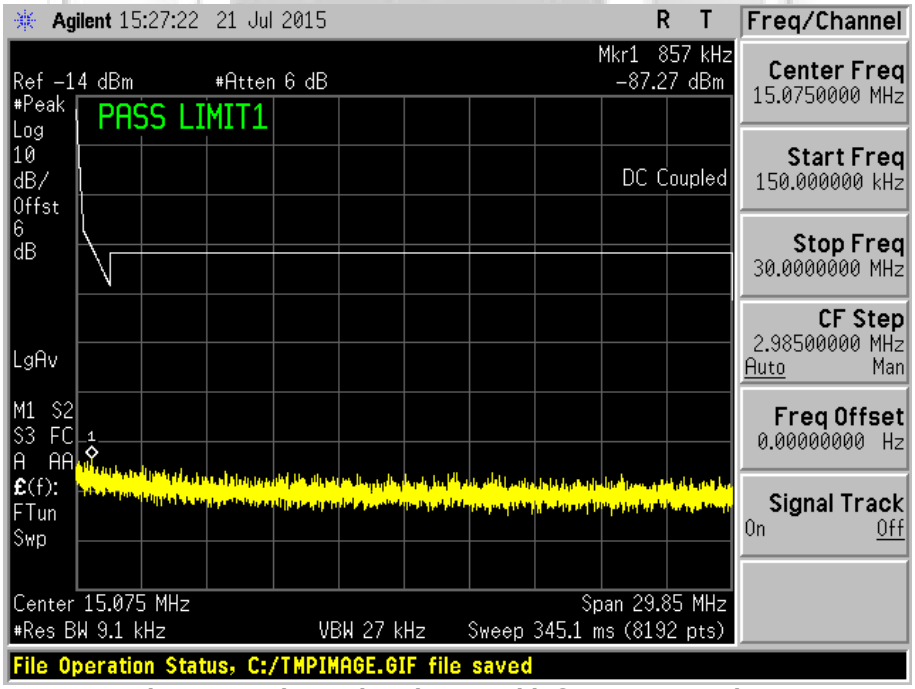


Plot 452 – Channel 11 (upper ch) @ 16QAM 39Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

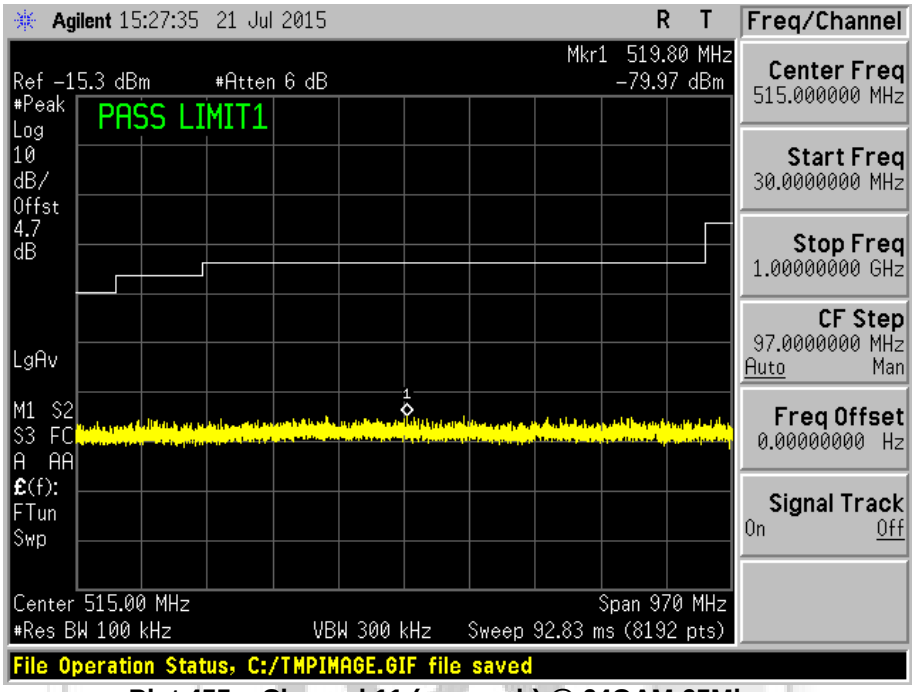


Plot 453 – Channel 11 (upper ch) @ 64QAM 65Mbps

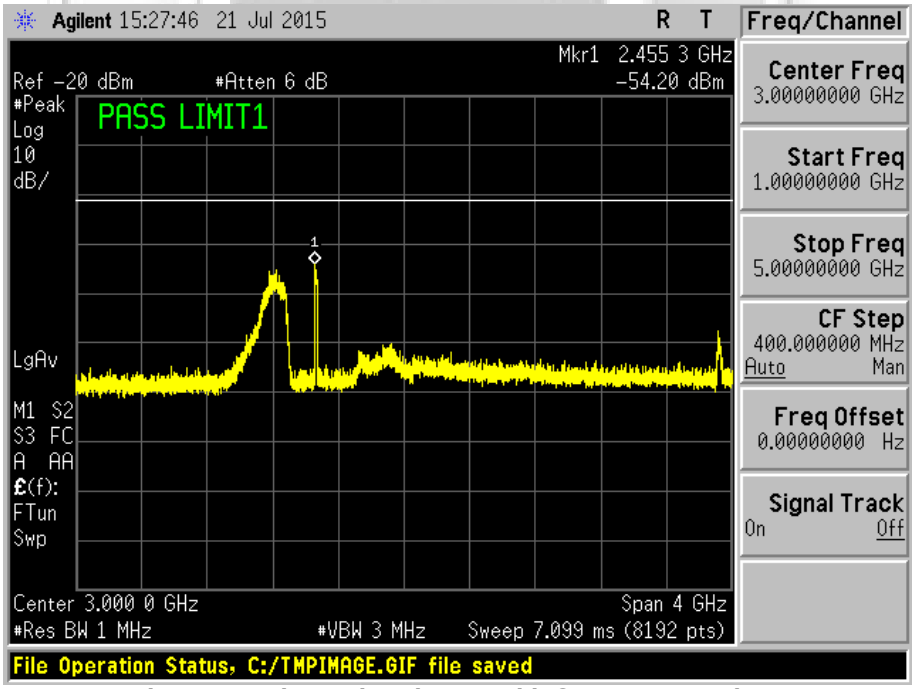


Plot 454 – Channel 11 (upper ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

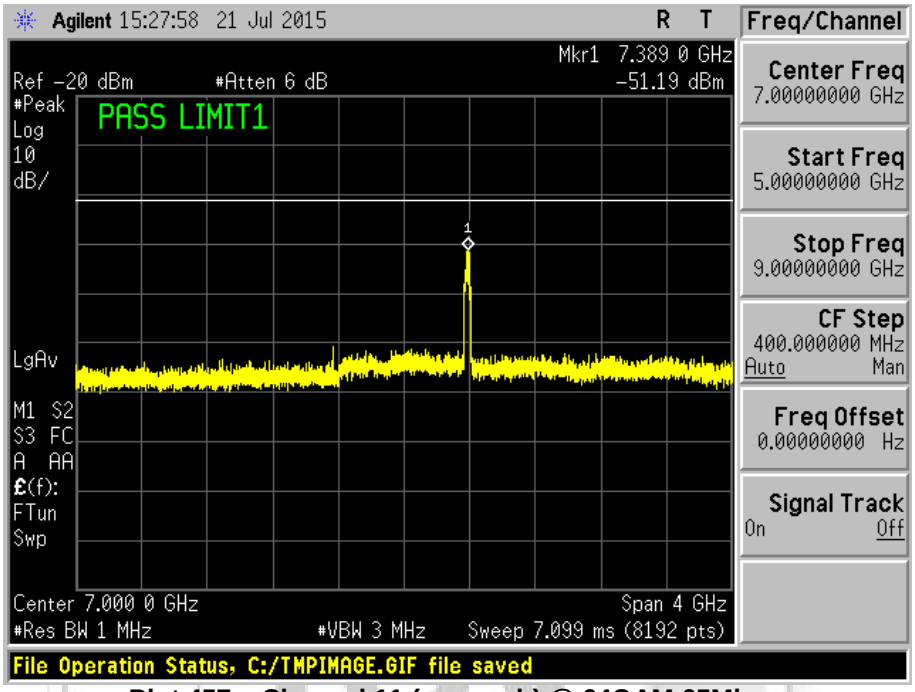


Plot 455 – Channel 11 (upper ch) @ 64QAM 65Mbps

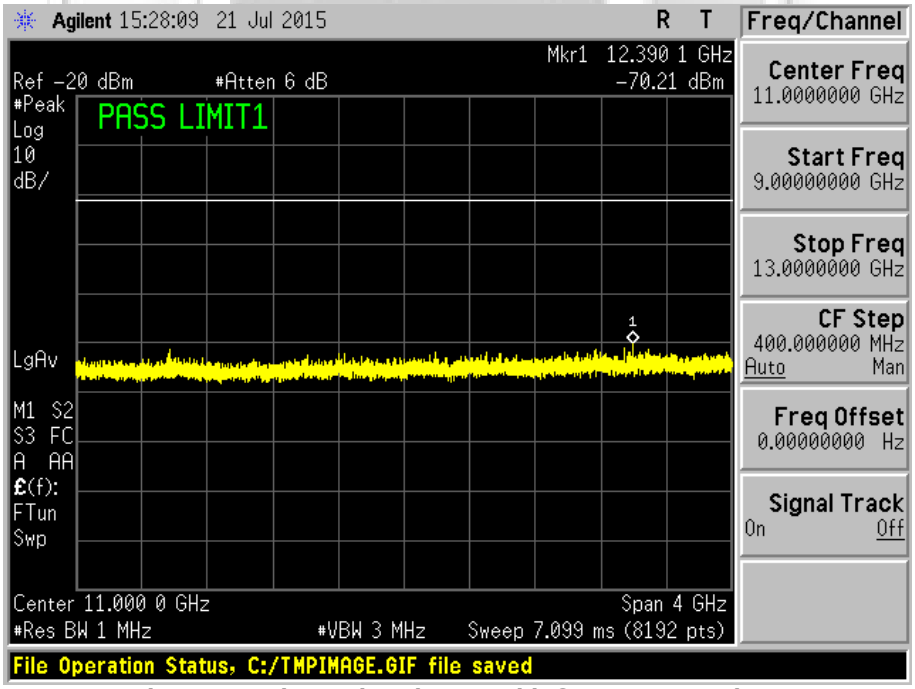


Plot 456 – Channel 11 (upper ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

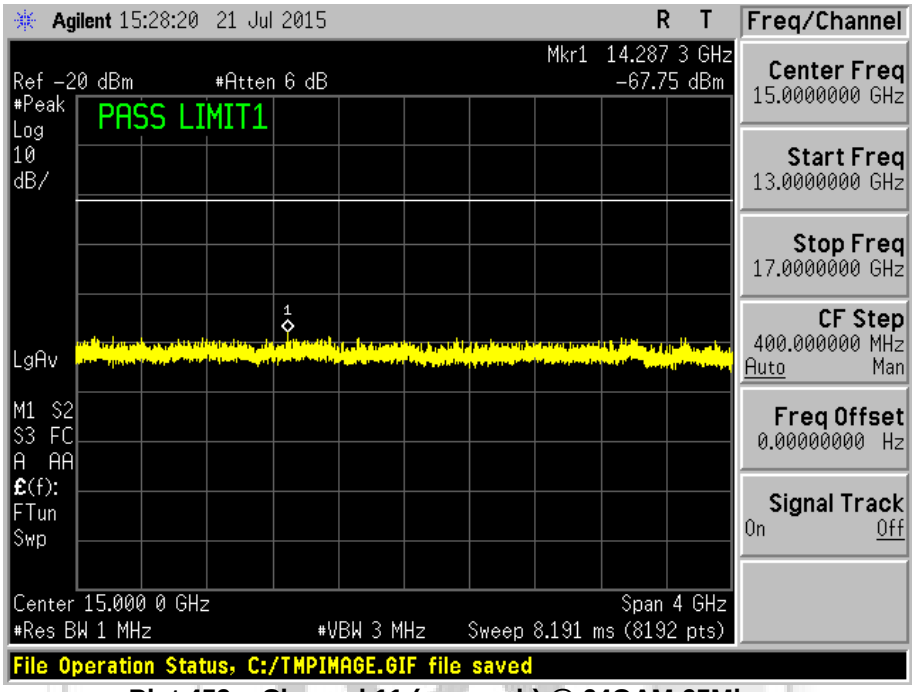


Plot 457 – Channel 11 (upper ch) @ 64QAM 65Mbps

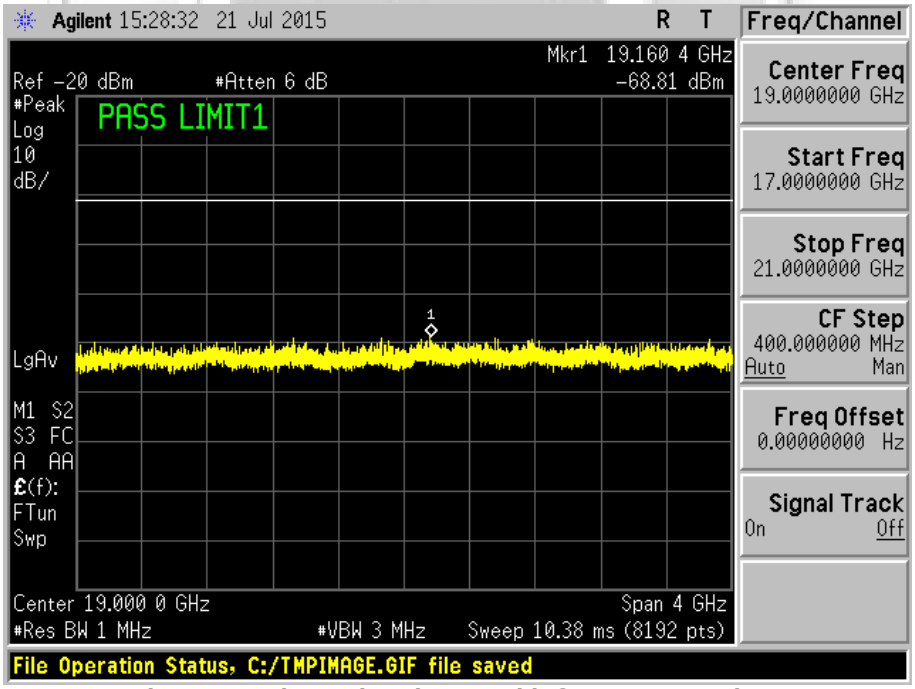


Plot 458 – Channel 11 (upper ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n

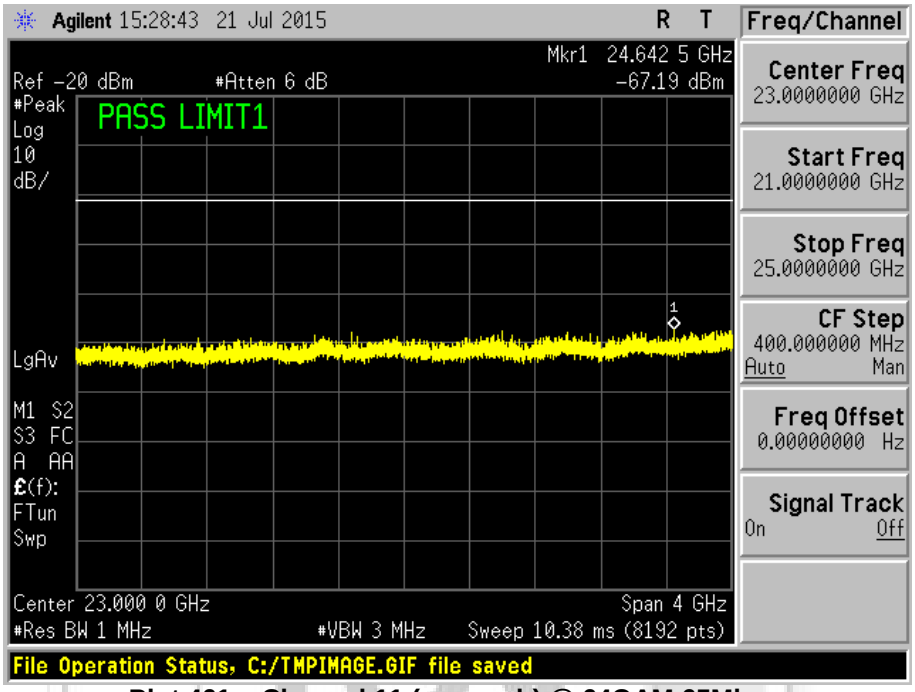


Plot 459 – Channel 11 (upper ch) @ 64QAM 65Mbps

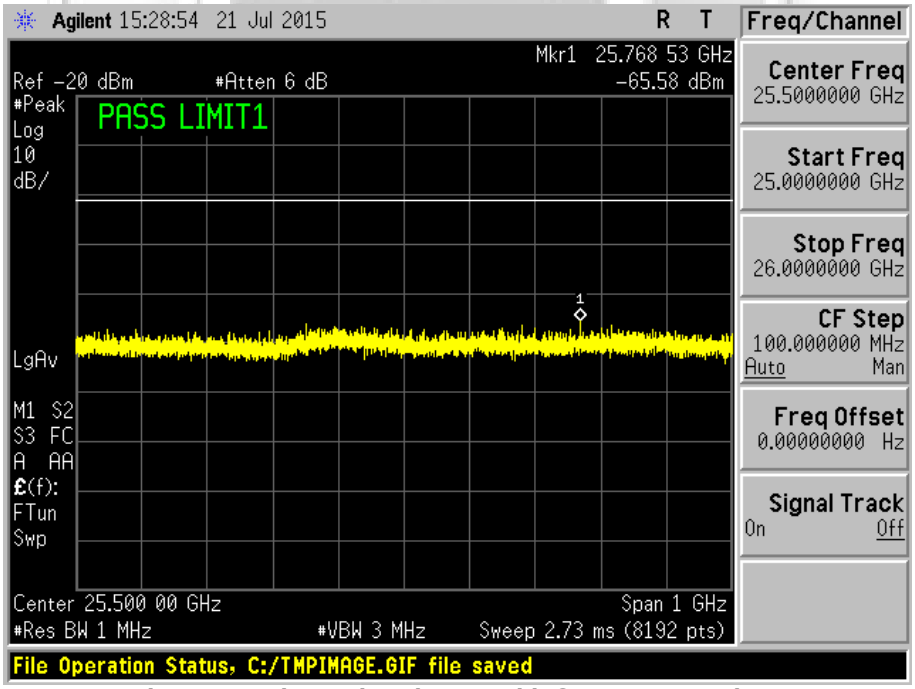


Plot 460 – Channel 11 (upper ch) @ 64QAM 65Mbps

RF Conducted Spurious Emissions (Restricted) Plots – 802.11n



Plot 461 – Channel 11 (upper ch) @ 64QAM 65Mbps



Plot 462 – Channel 11 (upper ch) @ 64QAM 65Mbps

BAND EDGE COMPLIANCE (CONDUCTED) TEST

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Conducted) Limits

The EUT shows compliance to the requirements of this section, which states in any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator (EUT) is operating, the radio frequency power that is produced by the EUT shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Conducted) Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
Agilent Spectrum Analyzer	E4440A	MY45304764	12 Dec 2015	1 year

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Conducted) Test Setup

1. The EUT and supporting equipment were set up as shown in the setup photo.
2. The power supply for the EUT was connected to a filtered mains.
3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.
4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz.
5. All other supporting equipment were powered separately from another filtered mains.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Conducted) Test Method

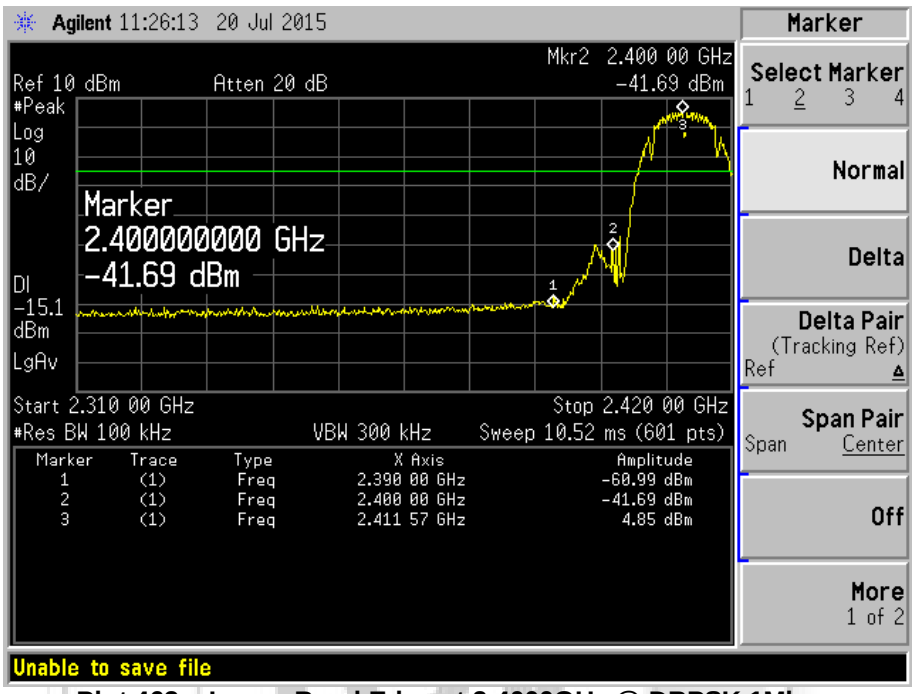
1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode with specified modulation and data rate.
2. The frequency span of the spectrum analyser was set to wide enough to capture the lower band edge of the transmission band, 2.400GHz and any spurious emissions at the band edge.
3. The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected.
4. Repeat steps 1 to 3 with all possible modulations and data rates.
5. The steps 2 to 4 were repeated with the frequency span of the spectrum analyser was set to wide enough to capture the upper band edge frequency of the transmission band, 2.4835GHz and the any spurious emissions at the band-edge.

47 CFR FCC Part 15.247(d) Band Edge Compliance (Conducted) Results

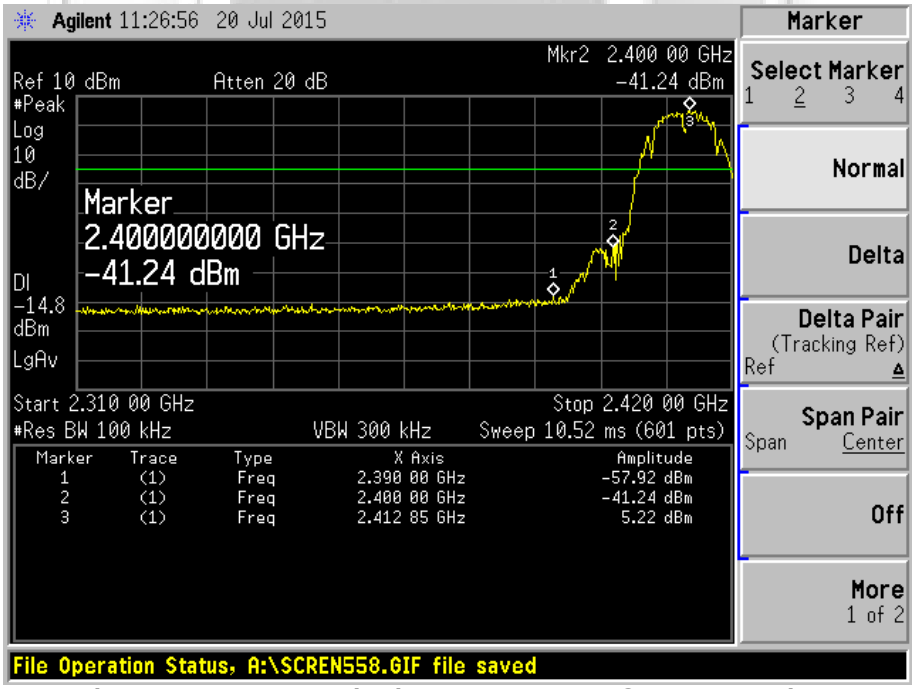
Test Input Power	3.7Vdc	Temperature	24°C
Attached Plots	463 – 468 (802.11b) 469 – 476 (802.11g) 477 – 484 (802.11n)	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Chang Wai Kit

No significant signal was found and they were below the specified limit.

Band Edge Compliance (Conducted) Plots – 802.11b

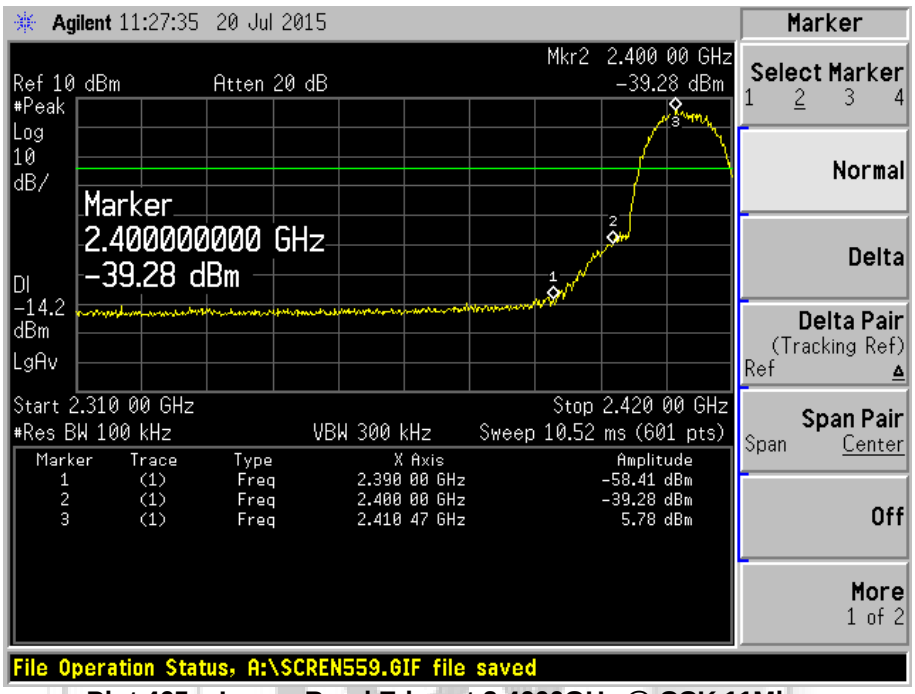


Plot 463 – Lower Band Edge at 2.4000GHz @ DBPSK 1Mbps



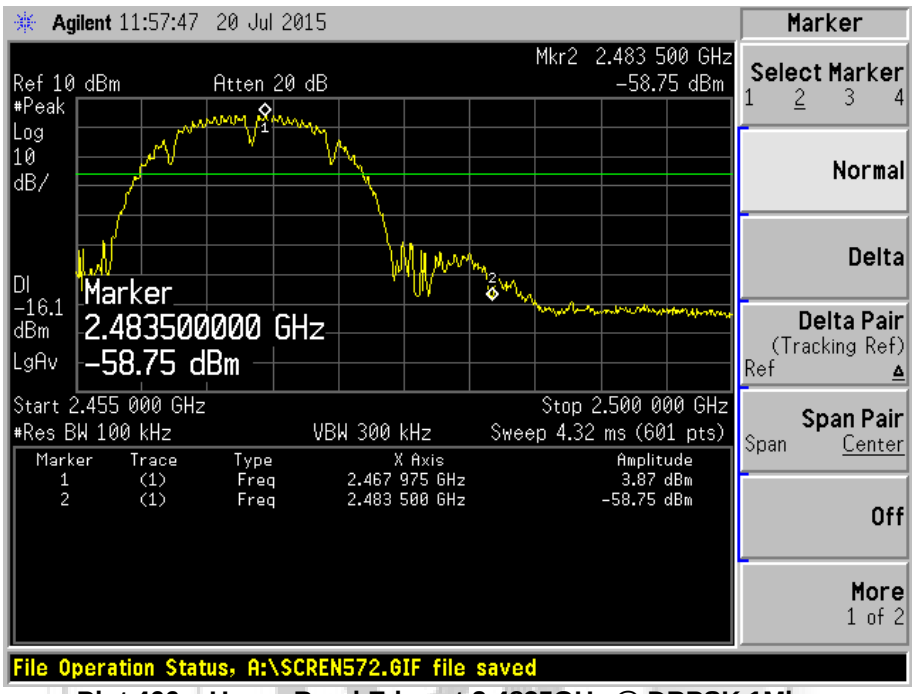
Plot 464 – Lower Band Edge at 2.4000GHz @ DQPSK 2Mbps

Band Edge Compliance (Conducted) Plots – 802.11b

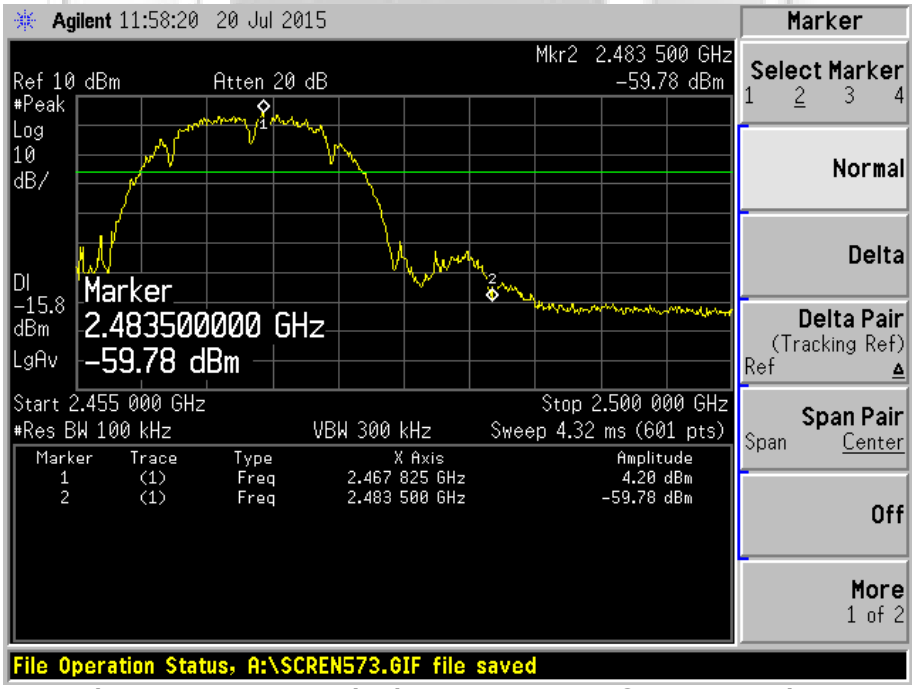


Plot 465 – Lower Band Edge at 2.4000GHz @ CCK 11Mbps

Band Edge Compliance (Conducted) Plots – 802.11b

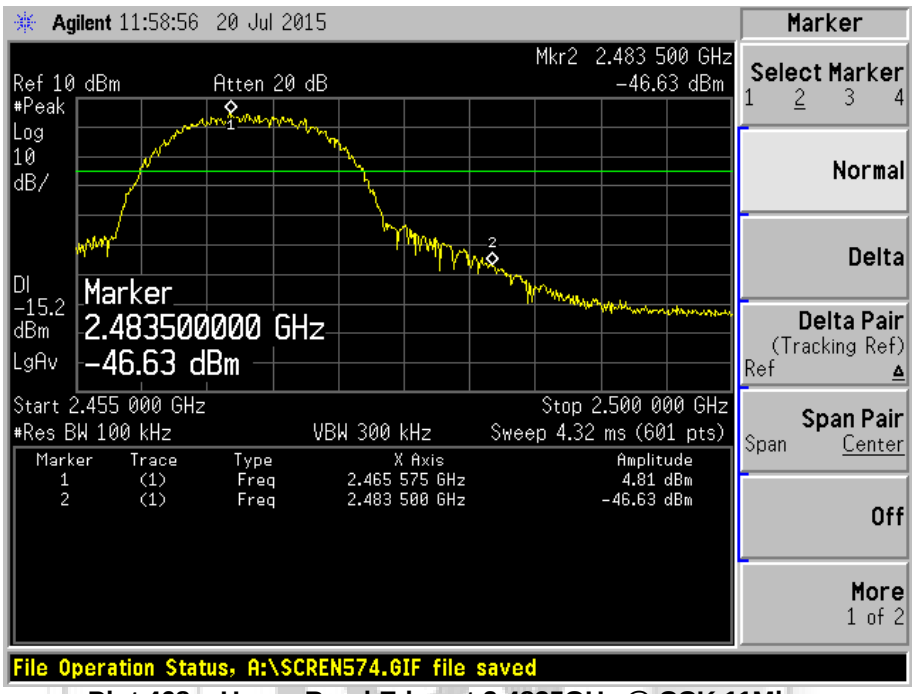


Plot 466 – Upper Band Edge at 2.4835GHz @ DBPSK 1Mbps



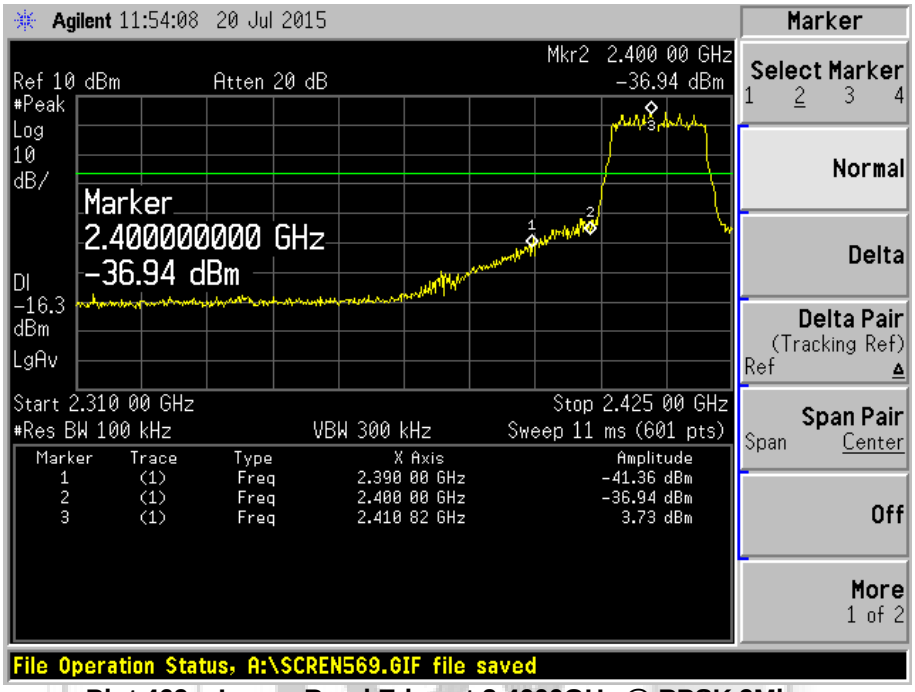
Plot 467 – Upper Band Edge at 2.4835GHz @ DQPSK 2Mbps

Band Edge Compliance (Conducted) Plots – 802.11b

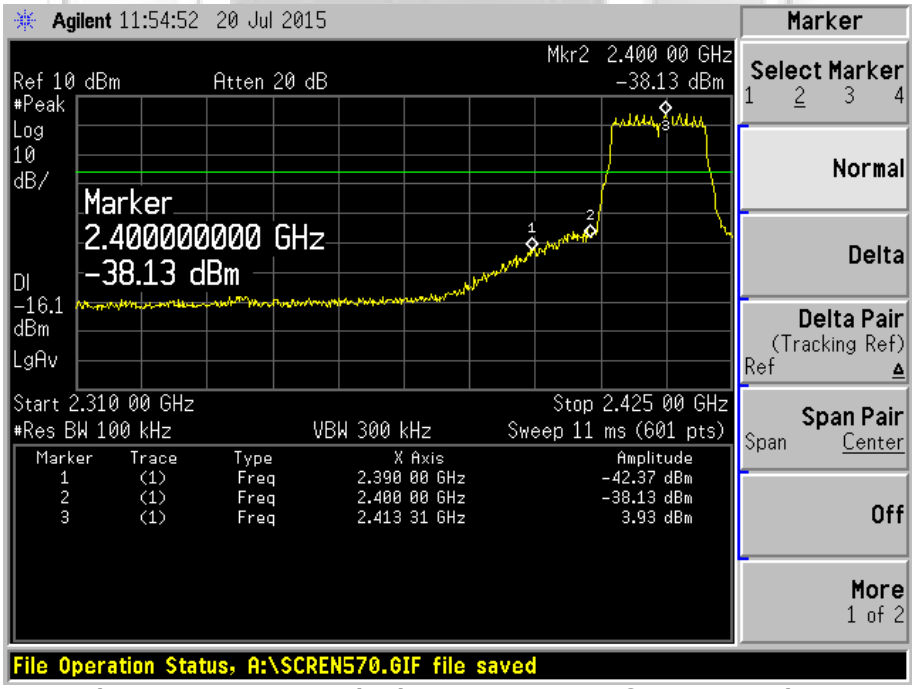


Plot 468 – Upper Band Edge at 2.4835GHz @ CCK 11Mbps

Band Edge Compliance (Conducted) Plots – 802.11g

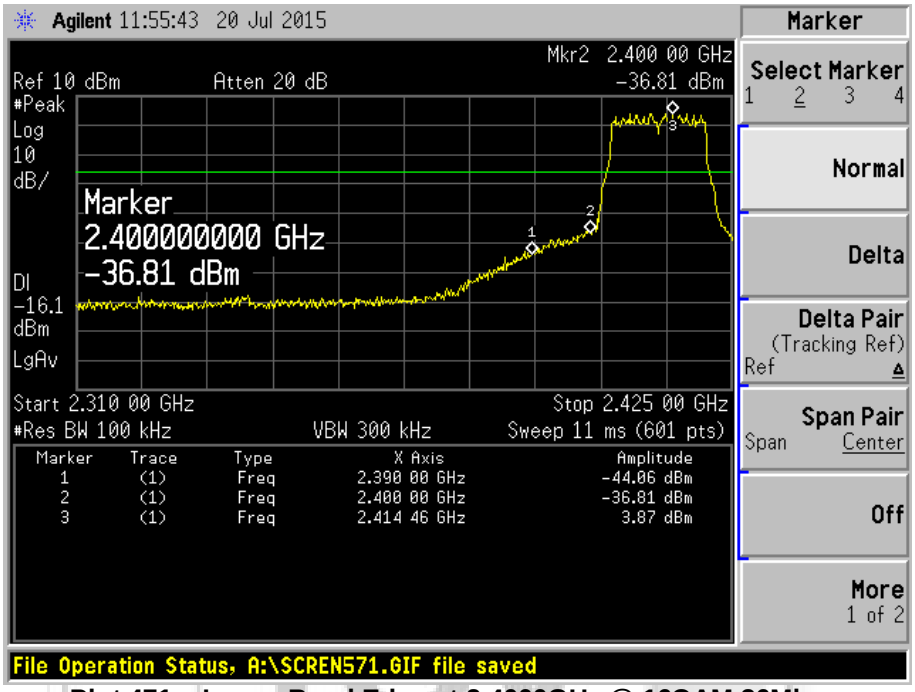


Plot 469 – Lower Band Edge at 2.4000GHz @ BPSK 9Mbps

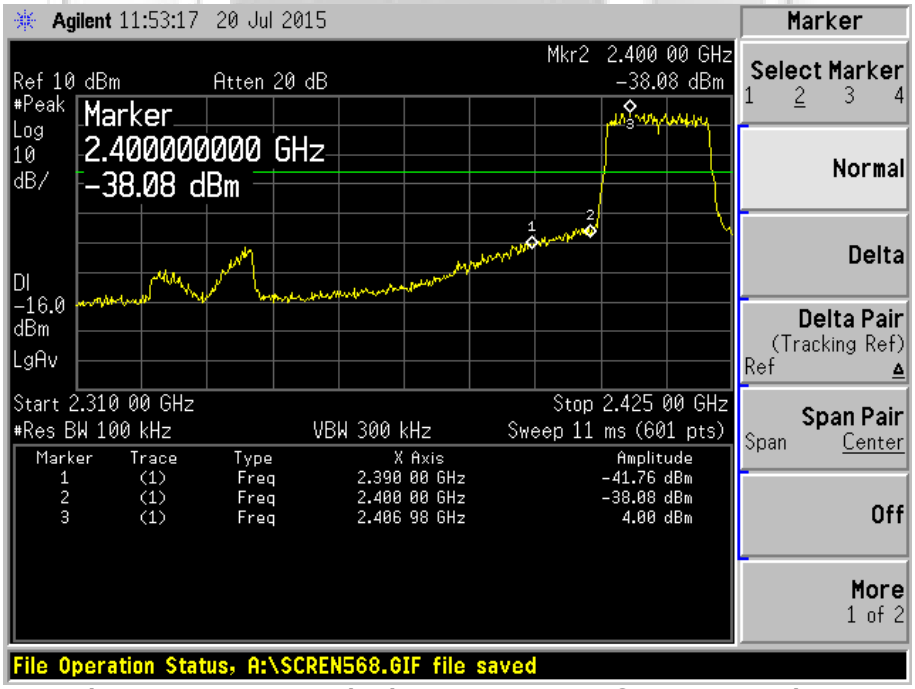


Plot 470 – Lower Band Edge at 2.4000GHz @ QPSK 18Mbps

Band Edge Compliance (Conducted) Plots – 802.11g

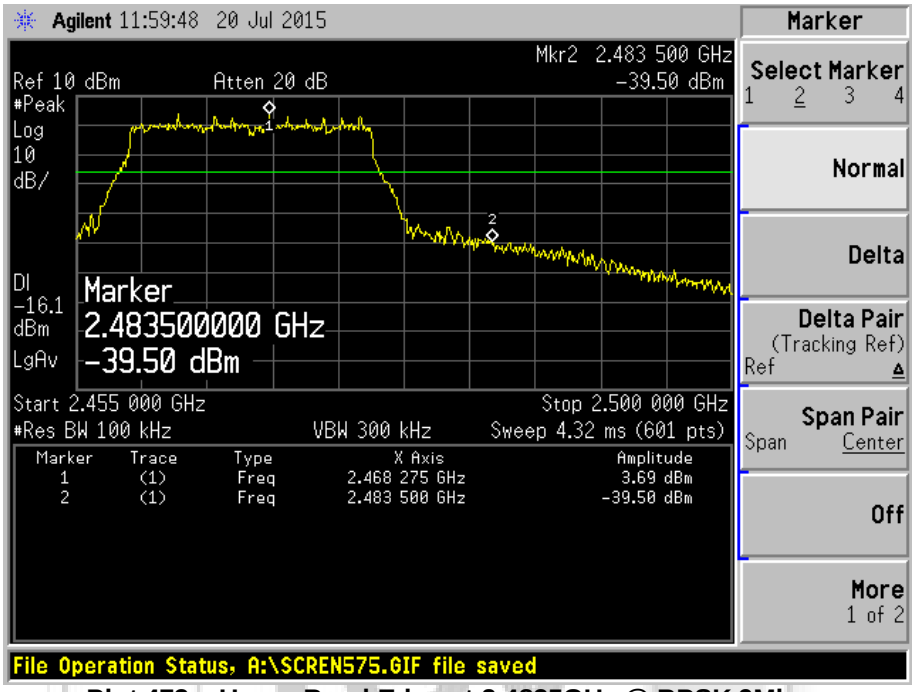


Plot 471 – Lower Band Edge at 2.4000GHz @ 16QAM 36Mbps

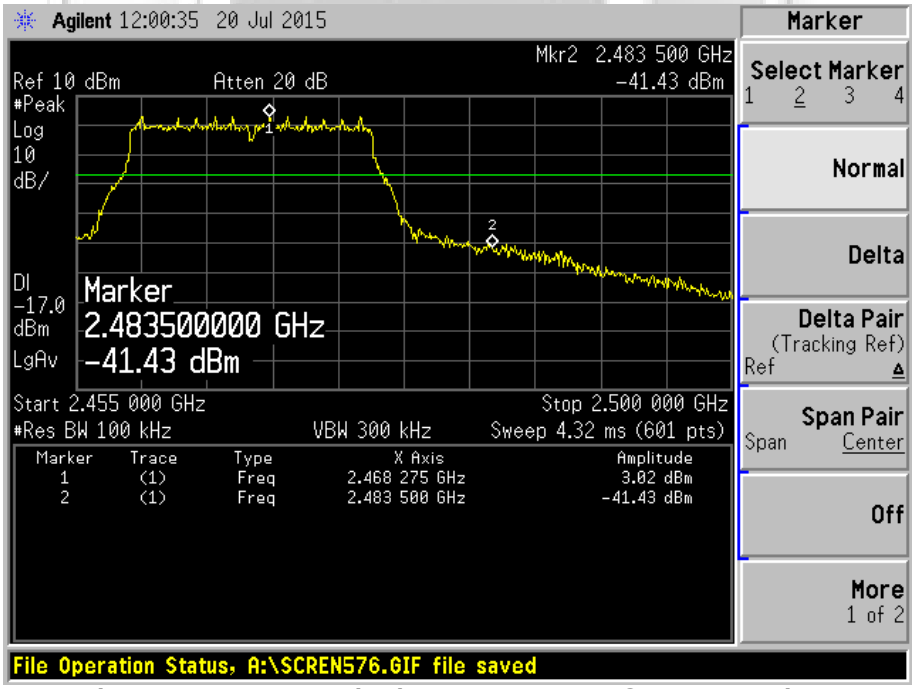


Plot 472 – Lower Band Edge at 2.4000GHz @ 64QAM 54Mbps

Band Edge Compliance (Conducted) Plots – 802.11g

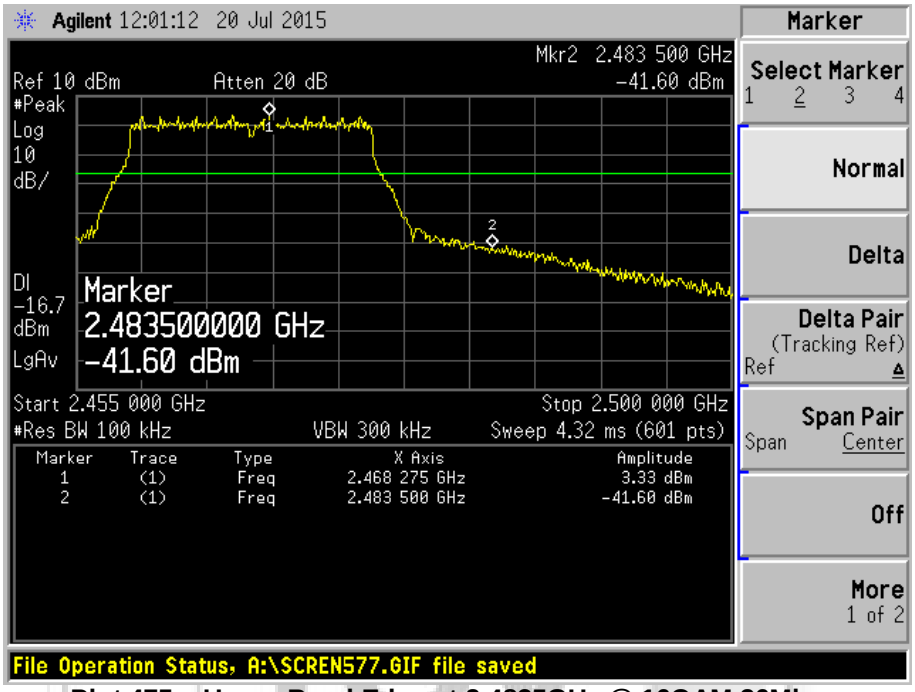


Plot 473 – Upper Band Edge at 2.4835GHz @ BPSK 9Mbps

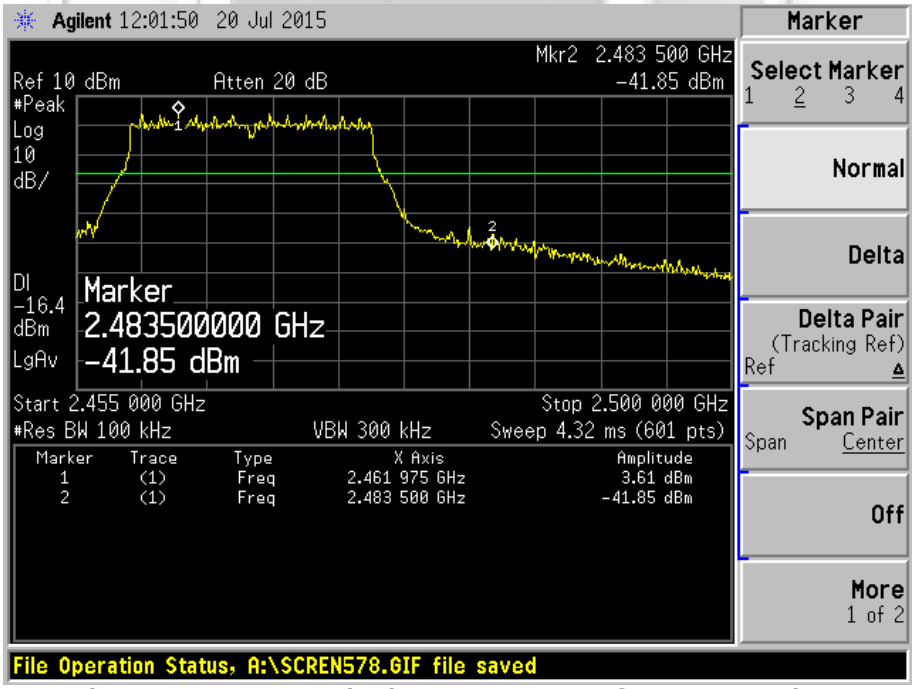


Plot 474 – Upper Band Edge at 2.4835GHz @ QPSK 18Mbps

Band Edge Compliance (Conducted) Plots – 802.11g

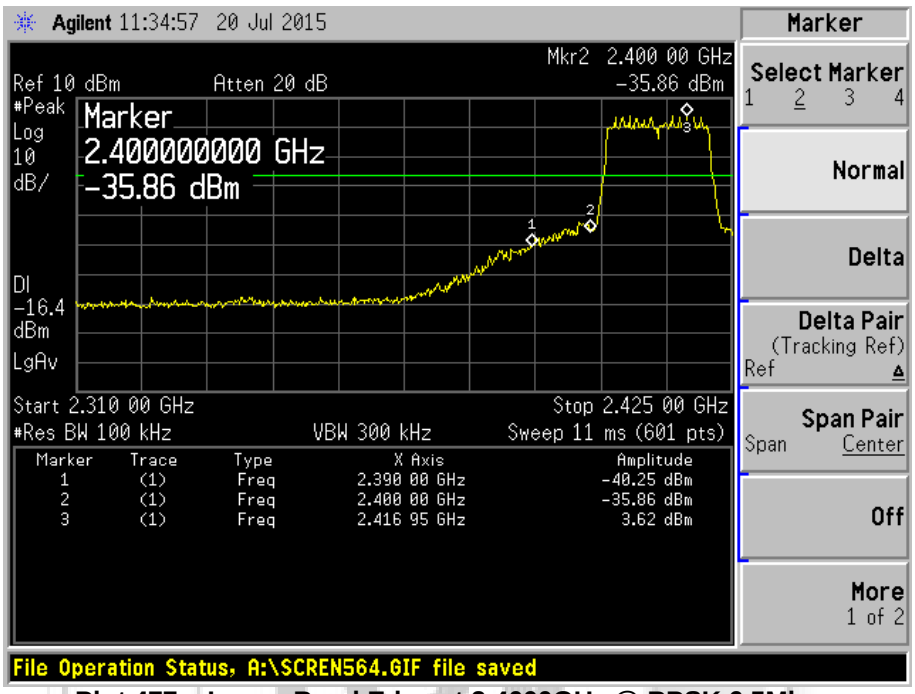


Plot 475 – Upper Band Edge at 2.4835GHz @ 16QAM 36Mbps

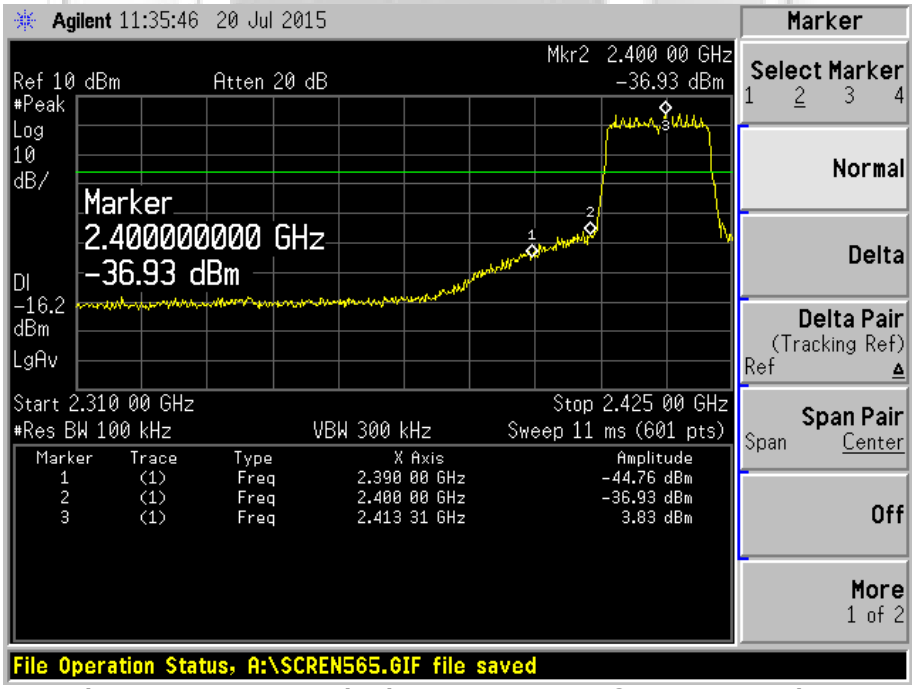


Plot 476 – Upper Band Edge at 2.4835GHz @ 64QAM 54Mbps

Band Edge Compliance (Conducted) Plots – 802.11n

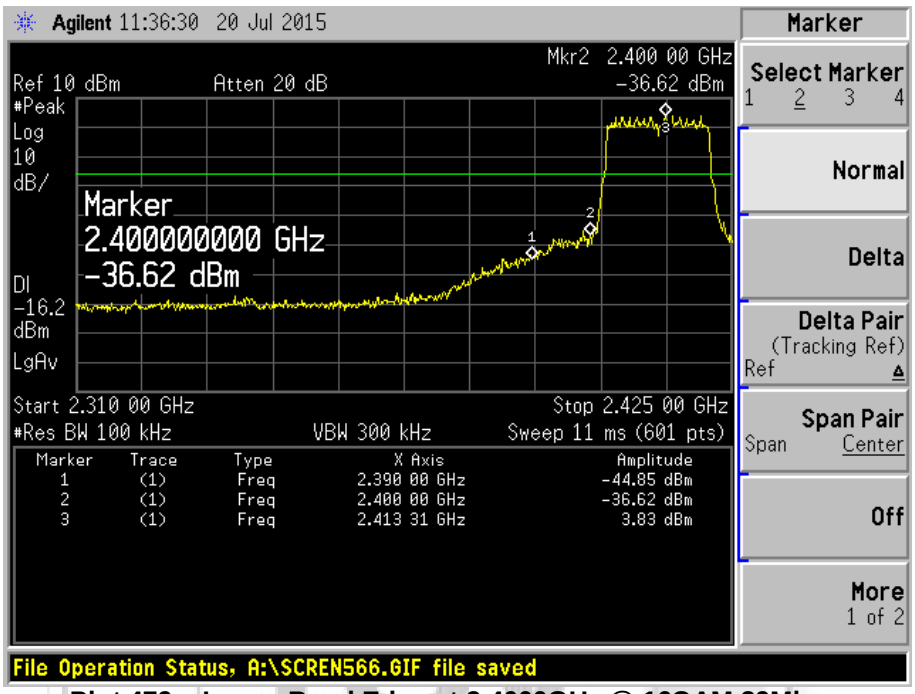


Plot 477 – Lower Band Edge at 2.4000GHz @ BPSK 6.5Mbps

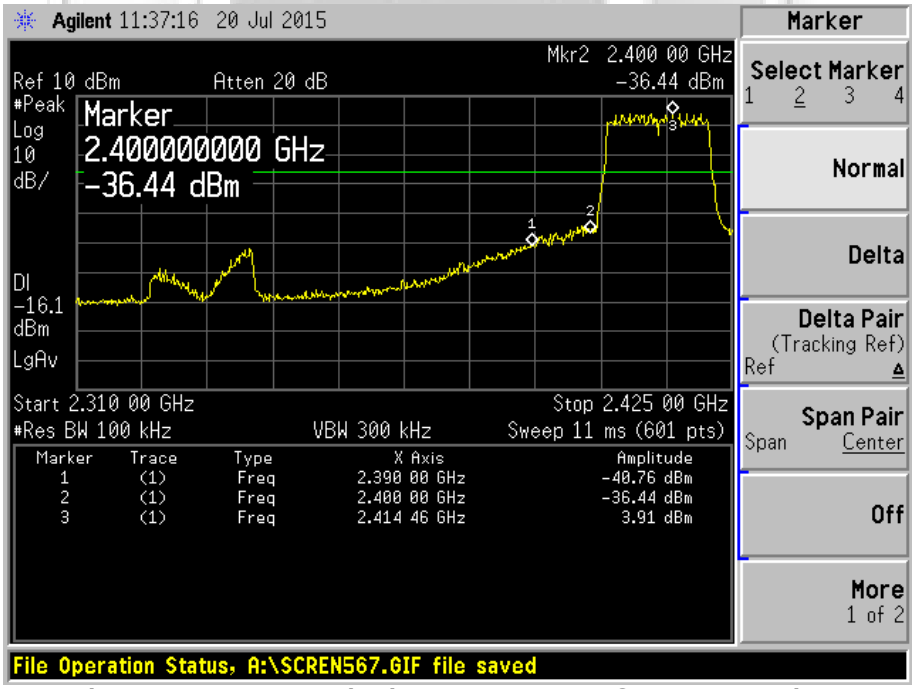


Plot 478 – Lower Band Edge at 2.4000GHz @ QPSK 19.5Mbps

Band Edge Compliance (Conducted) Plots – 802.11n

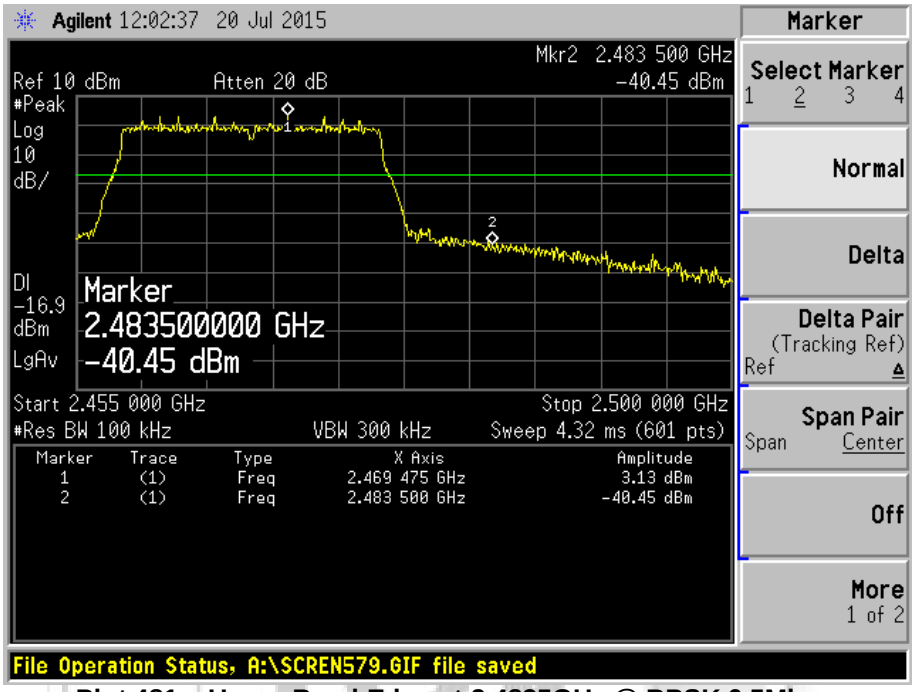


Plot 479 – Lower Band Edge at 2.4000GHz @ 16QAM 39Mbps

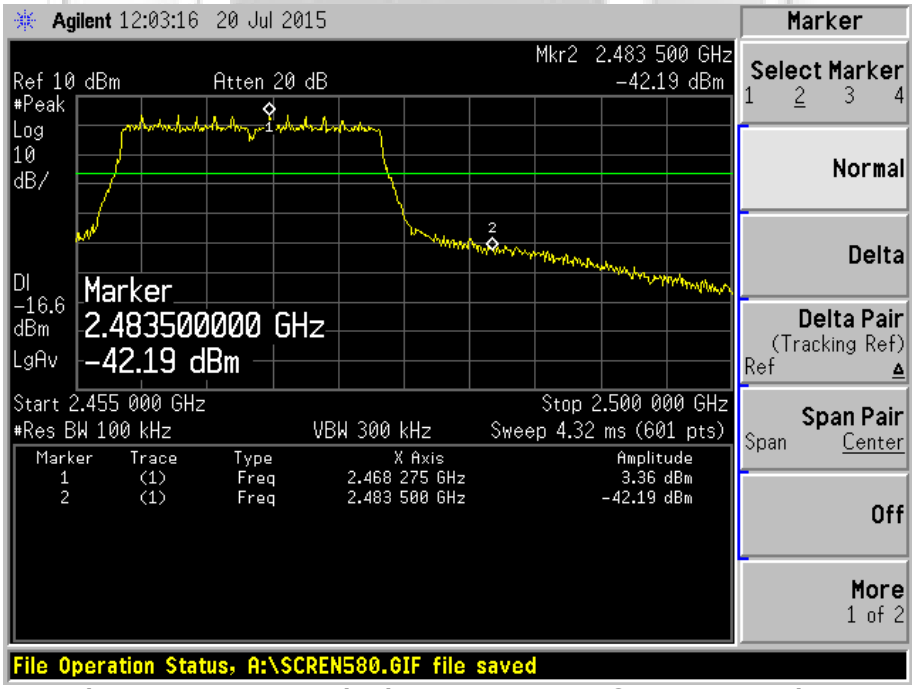


Plot 480 – Lower Band Edge at 2.4000GHz @ 64QAM 65Mbps

Band Edge Compliance (Conducted) Plots – 802.11n

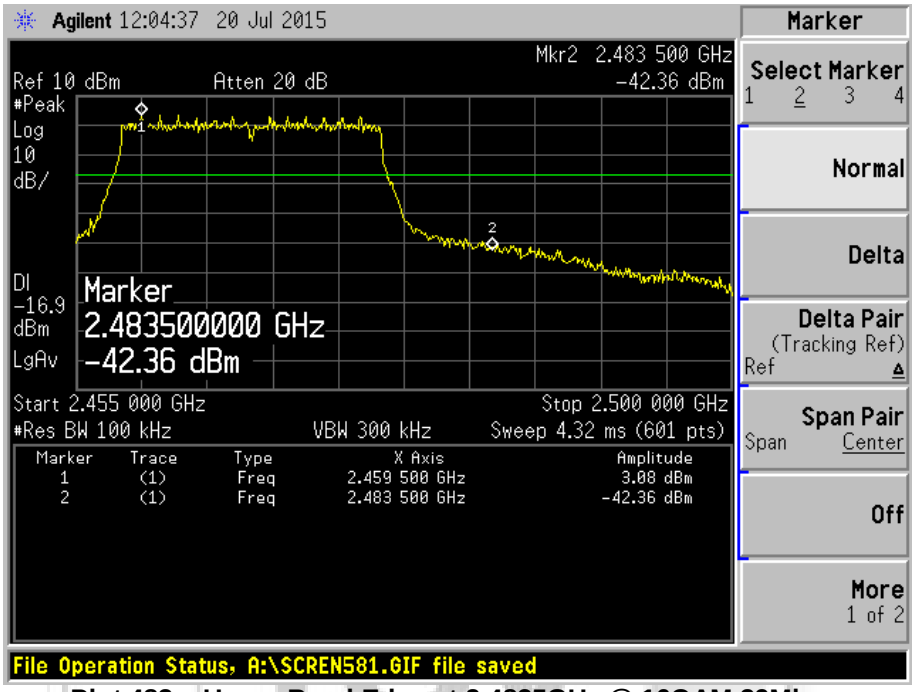


Plot 481 – Upper Band Edge at 2.4835GHz @ BPSK 6.5Mbps

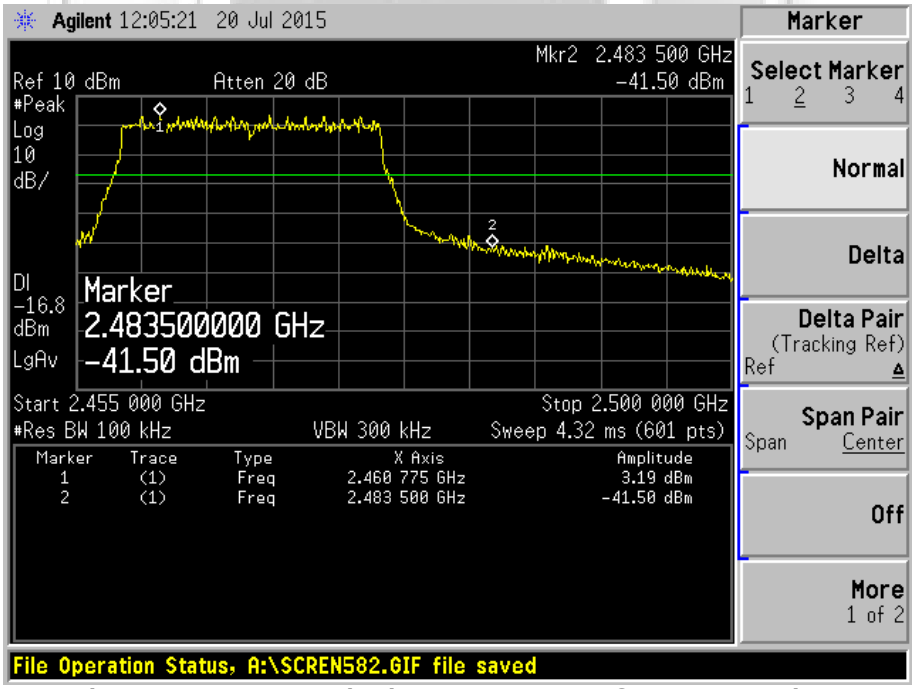


Plot 482 – Upper Band Edge at 2.4835GHz @ QPSK 19.5Mbps

Band Edge Compliance (Conducted) Plots – 802.11n



Plot 483 – Upper Band Edge at 2.4835GHz @ 16QAM 39Mbps



Plot 484 – Upper Band Edge at 2.4835GHz @ 64QAM 65Mbps

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Radiated) Limits

The EUT shows compliance to the requirements of this section, which states in any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator (EUT) is operating, the radio frequency power that is produced by the EUT shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power. In addition, radiated emissions which fall in the restricted bands shall comply to the radiated emission limits specified in 15.209.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Radiated) Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
R&S Test Receiver – ESI1	ESI40	100010	14 Jul 2016	1 year
TDK-RF Horn Antenna	HRN-0118	130256	20 Apr 2016	1 year
R&S Preamplifier (1GHz -18GHz)	SCU18	102191	13 Mar 2016	1 year

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Radiated) Test Setup

1. The EUT and supporting equipment were set up as shown in the setup photo.
2. The power supply for the EUT was connected to a filtered mains.
3. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz to show compliance of spurious at band edges are at least 20dB below the carriers. For restricted band spurious at band edges, peak and average measurement plots were taken using the following setting:
   a. Peak Plot:
      RBW = 1MHz, VBW = 3MHz
   b. Average Plot
      RBW = 1MHz, VBW = 30Hz
4. All other supporting equipment were powered separately from another filtered mains.

47 CFR FCC Part 15.247(d) and RSS-247 5.5 Band Edge Compliance (Radiated) Test Method

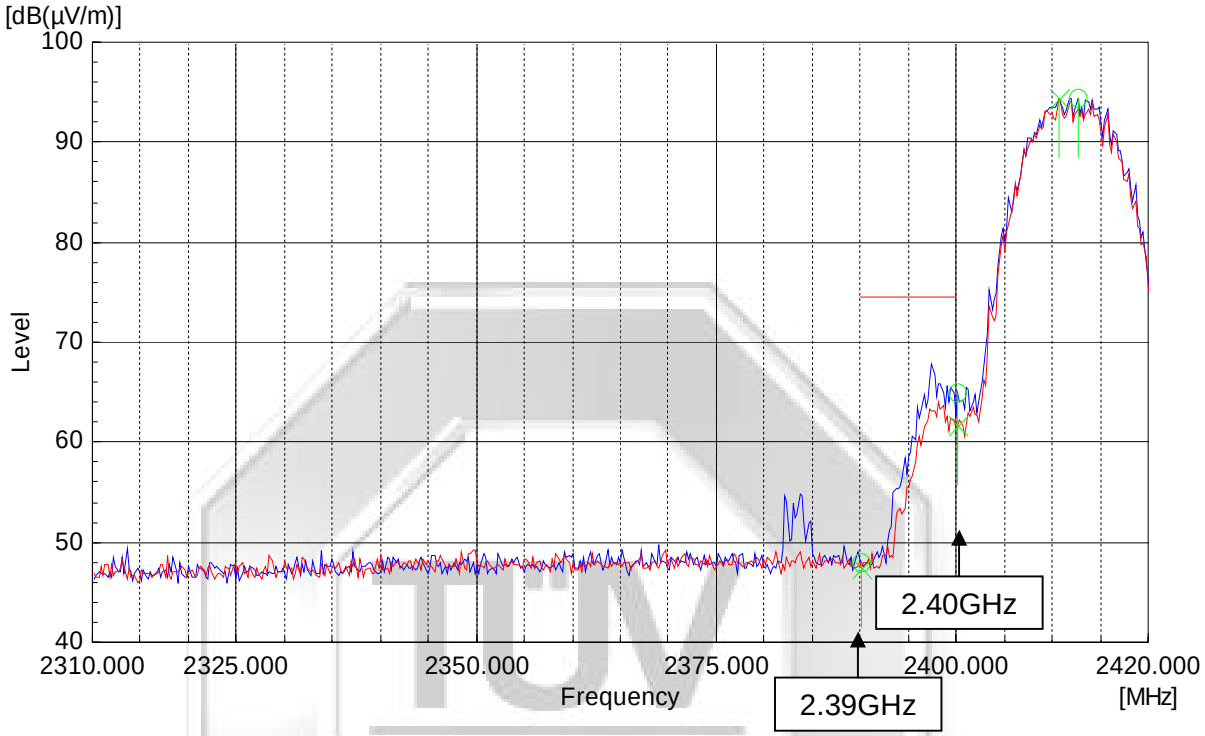
1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode with specified modulation and data rate.
2. The frequency span of the spectrum analyser was set to wide enough to capture the lower band edge of the transmission band, 2.400GHz and any spurious emissions at the band edge.
3. The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected. For the average measurement, it was done via a video average mode with a reduced VBW.
4. Repeat steps 1 to 3 with all possible modulations and data rates.
5. The steps 2 to 4 were repeated with the frequency span of the spectrum analyser was set to wide enough to capture the upper band edge frequency of the transmission band, 2.4835GHz and the any spurious emissions at the band-edge.

47 CFR FCC Part 15.247(d) Band Edge Compliance (Radiated) Results

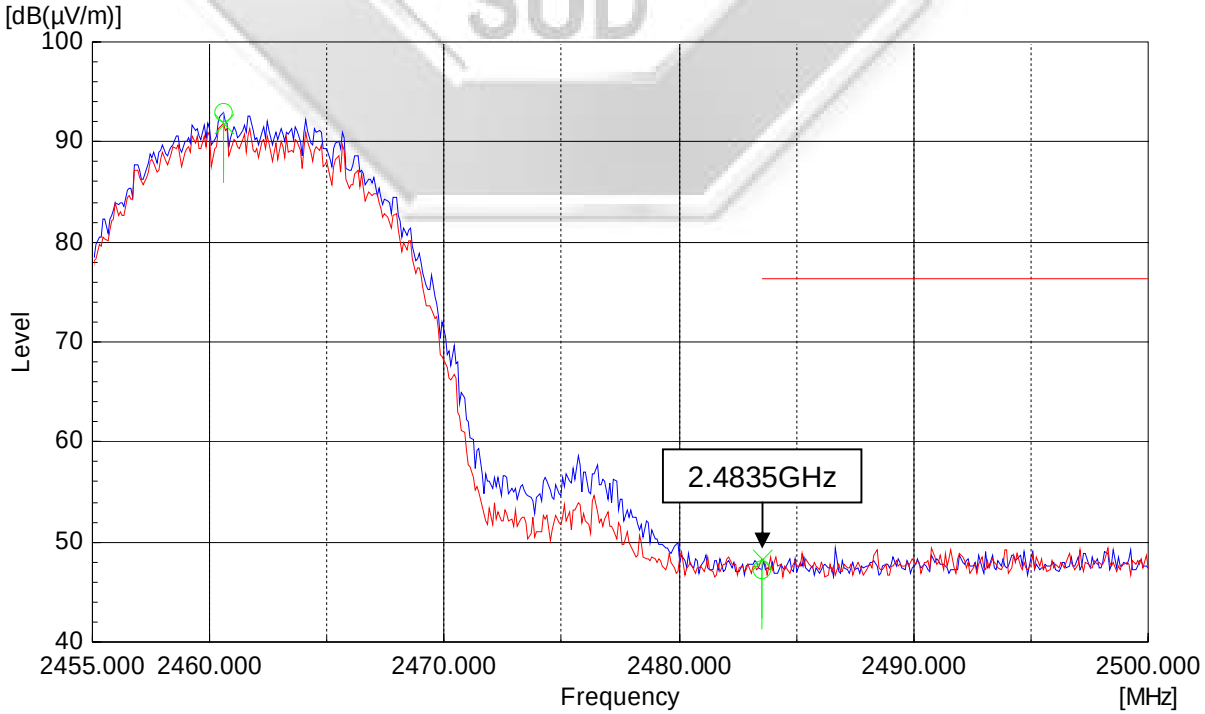
Test Input Power	3Vdc	Temperature	24°C
Attached Plots	485 – 490 (802.11b) 491 – 496 (802.11g) 497 – 502 (802.11n)	Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Dylan Lin

No significant signal was found and they were below the specified limit.

Band Edge Compliance (Radiated) Plots (20dB Delta from Carrier at Band Edge) – 802.11b

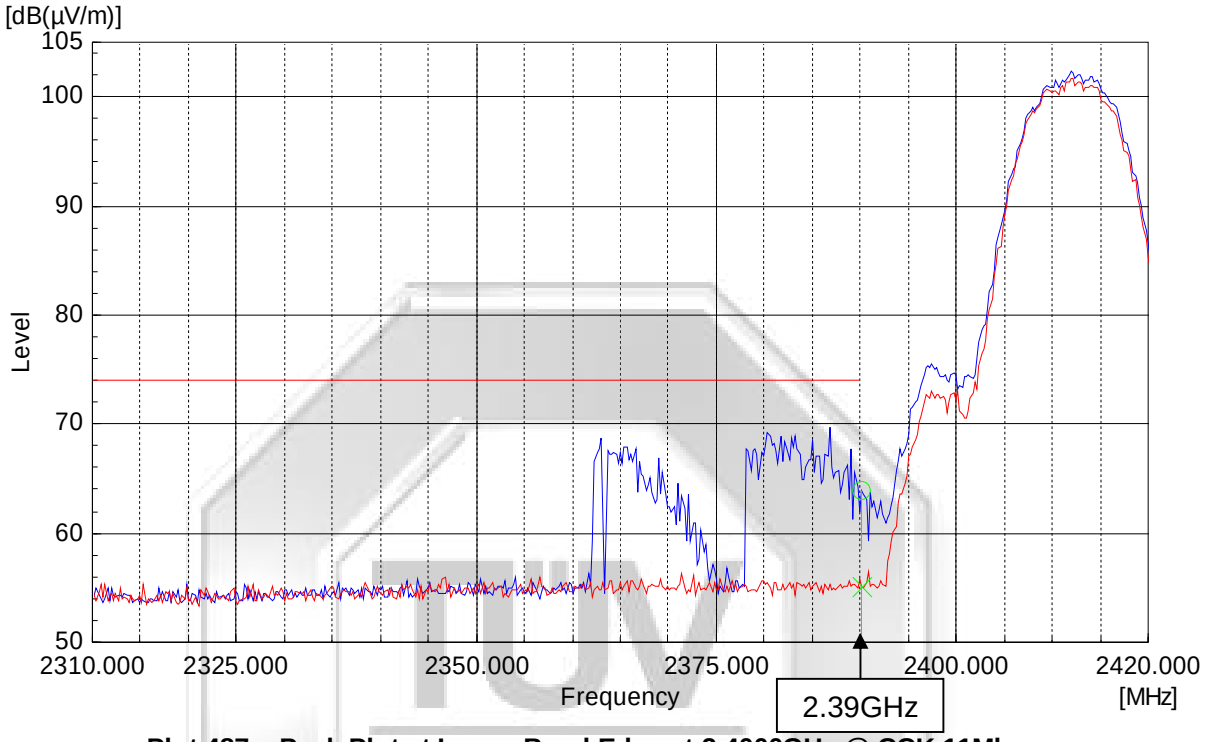


Plot 485 – Lower Band Edge at 2.4000GHz @ CCK 11Mbps

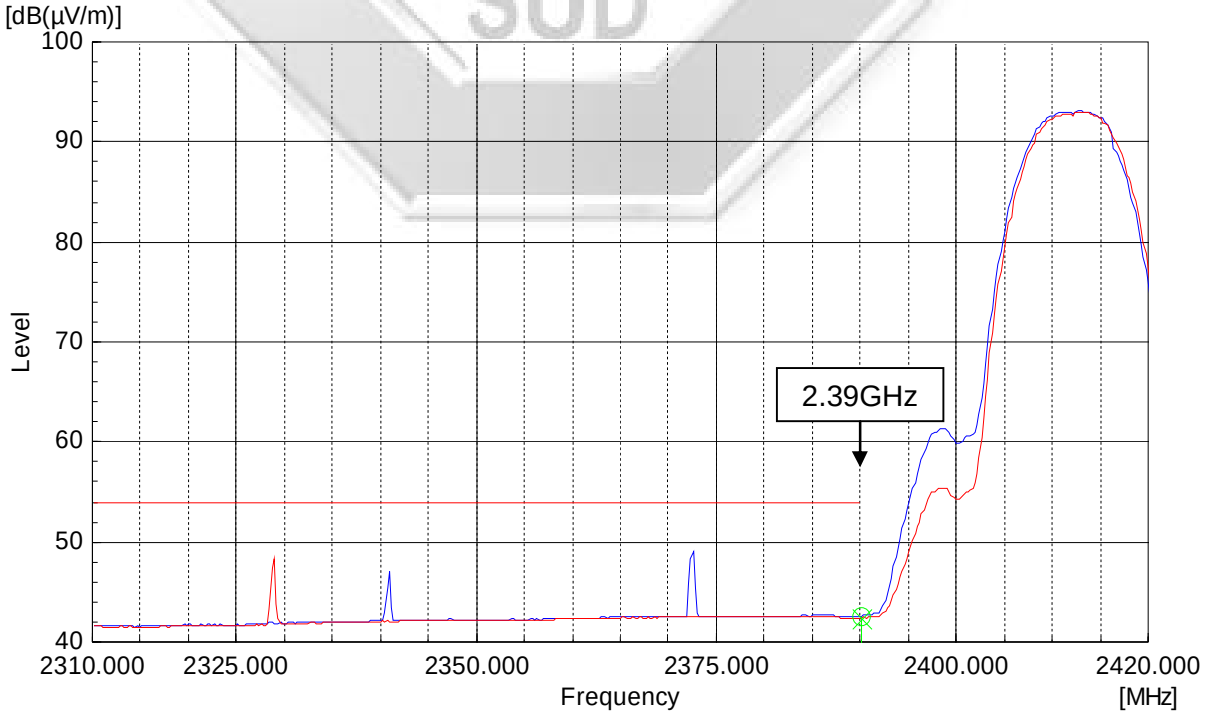


Plot 486 – Upper Band Edge at 2.4835GHz @ CCK 11Mbps

Band Edge Compliance (Radiated) Plots (Restricted Band) – 802.11b

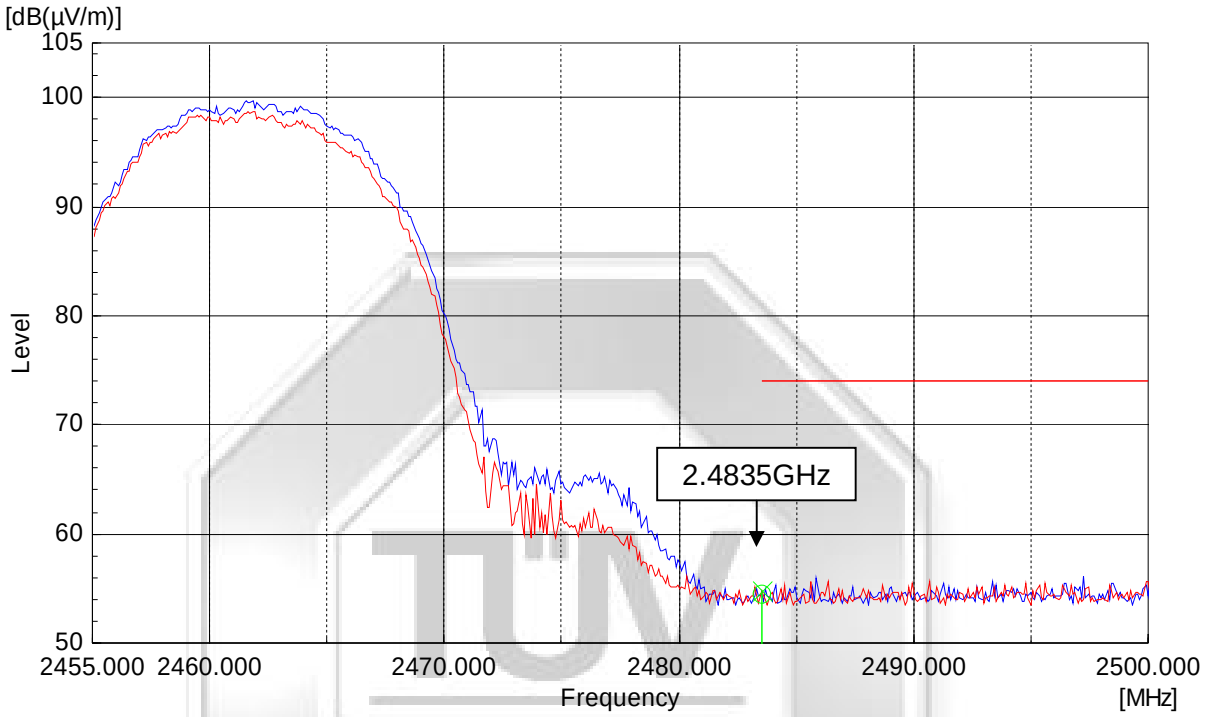


Plot 487 – Peak Plot at Lower Band Edge at 2.4000GHz @ CCK 11Mbps

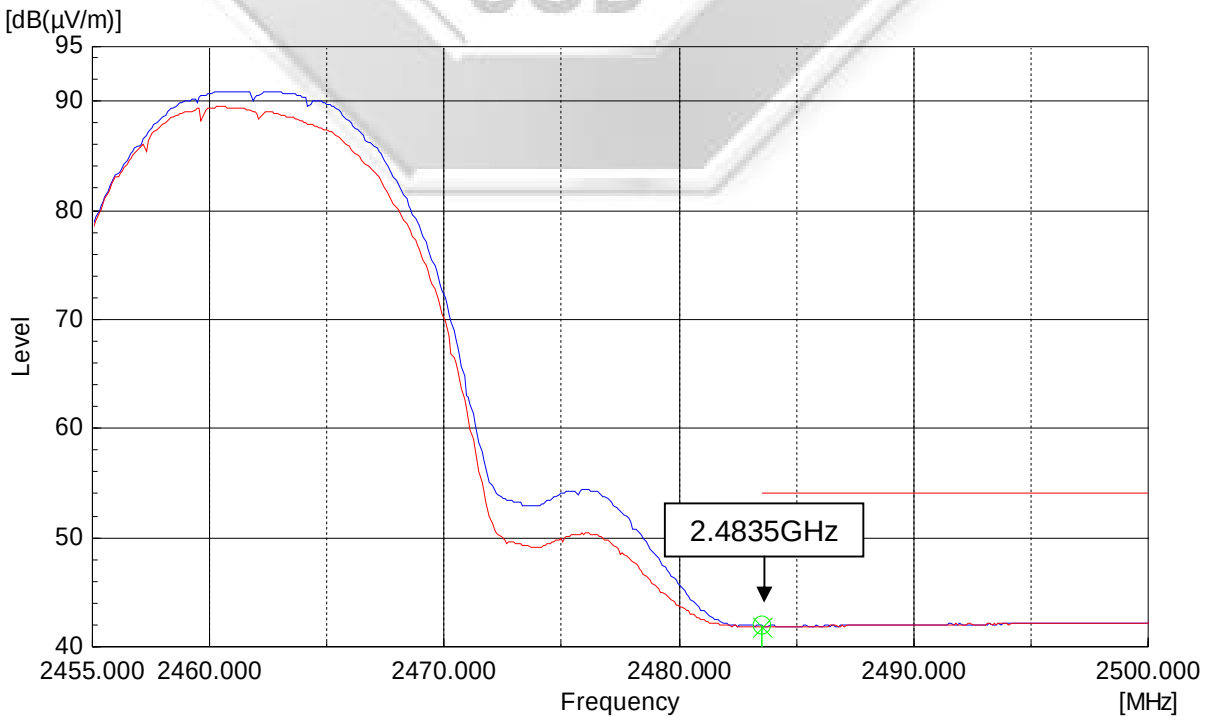


Plot 488 – Average Plot at Lower Band Edge at 2.4000GHz @ CCK 11Mbps

Band Edge Compliance (Radiated) Plots (Restricted Band) – 802.11b

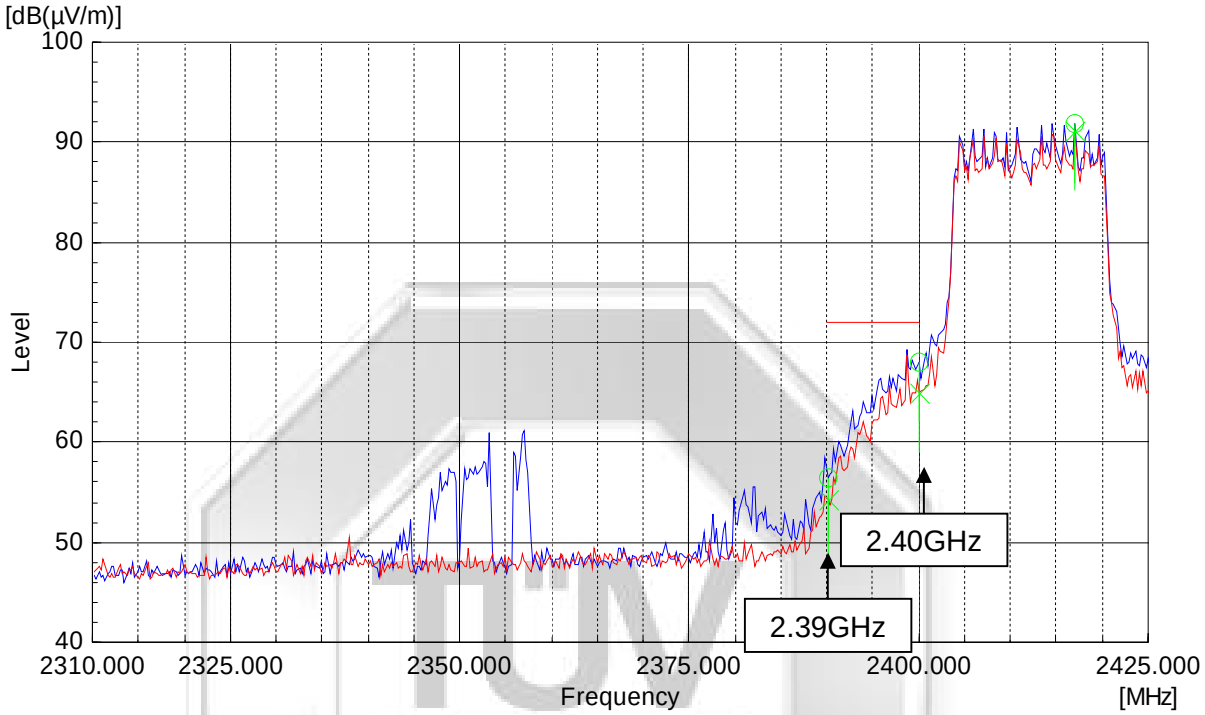


Plot 489 – Peak Plot at Upper Band Edge at 2.4835GHz @ CCK 11Mbps

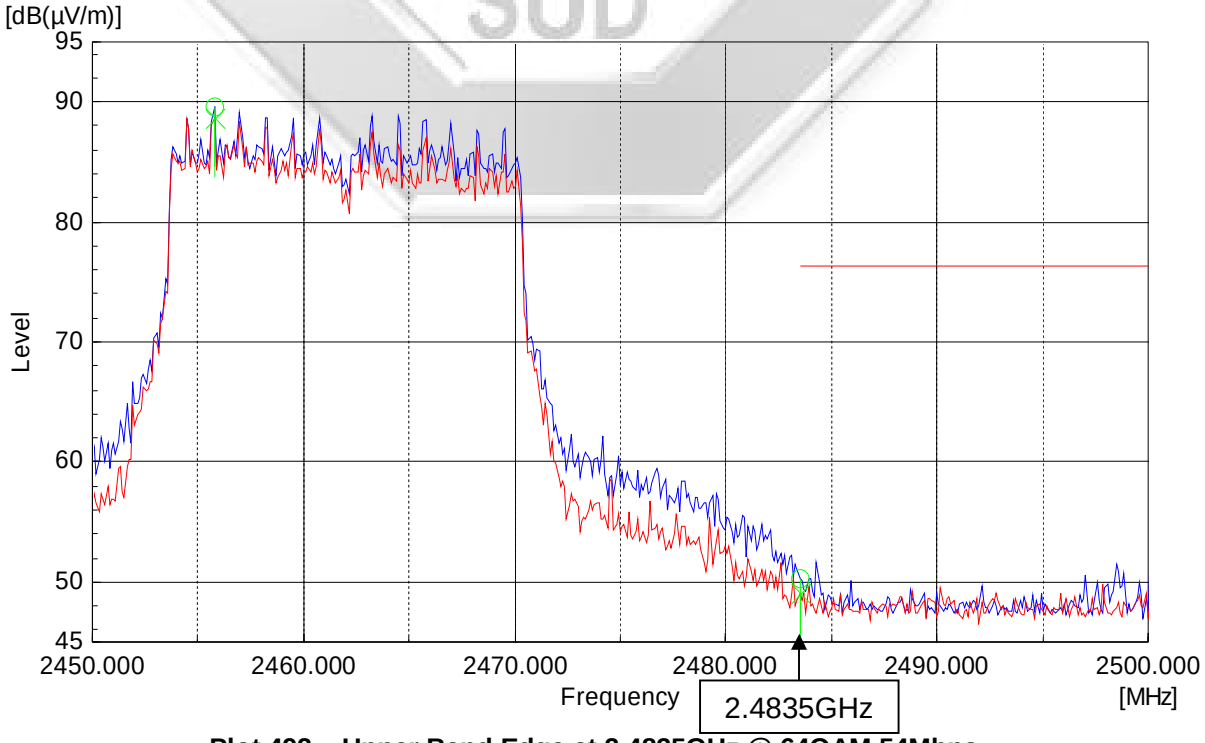


Plot 490 – Average Plot at Upper Band Edge at 2.4835GHz @ CCK 11Mbps

Band Edge Compliance (Radiated) Plots (20dB Delta from Carrier at Band Edge) – 802.11g

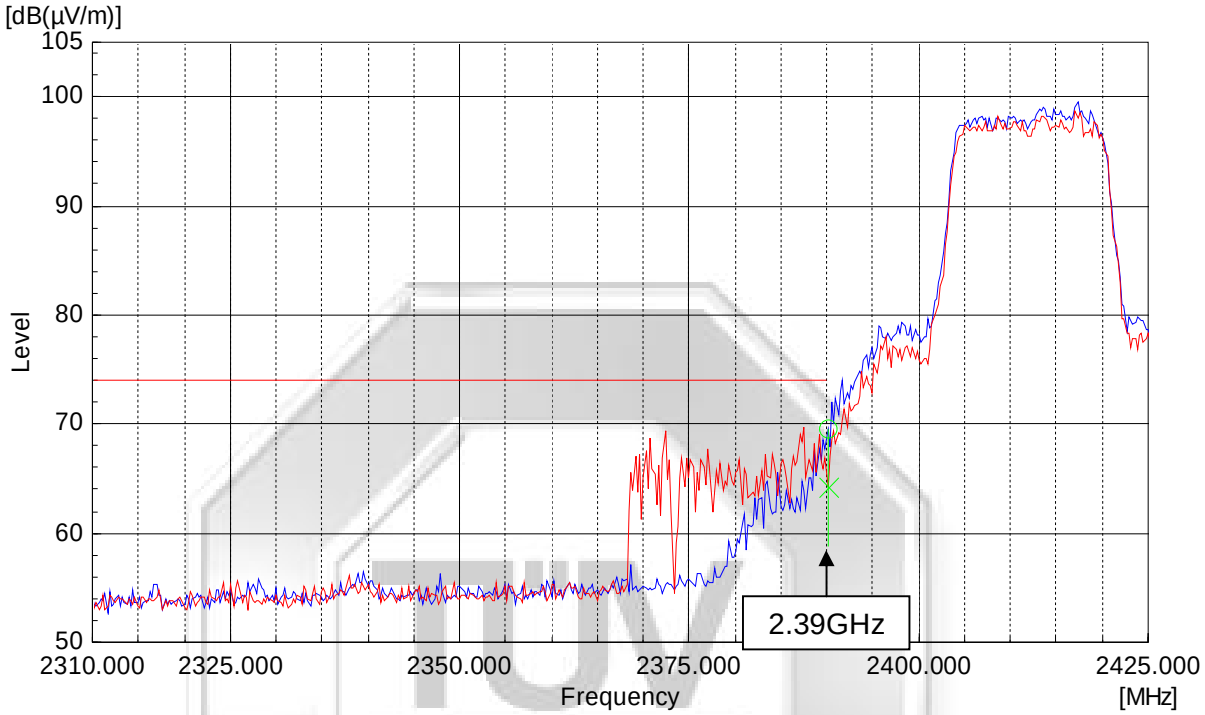


Plot 491 – Lower Band Edge at 2.4000GHz @ 64QAM 54Mbps

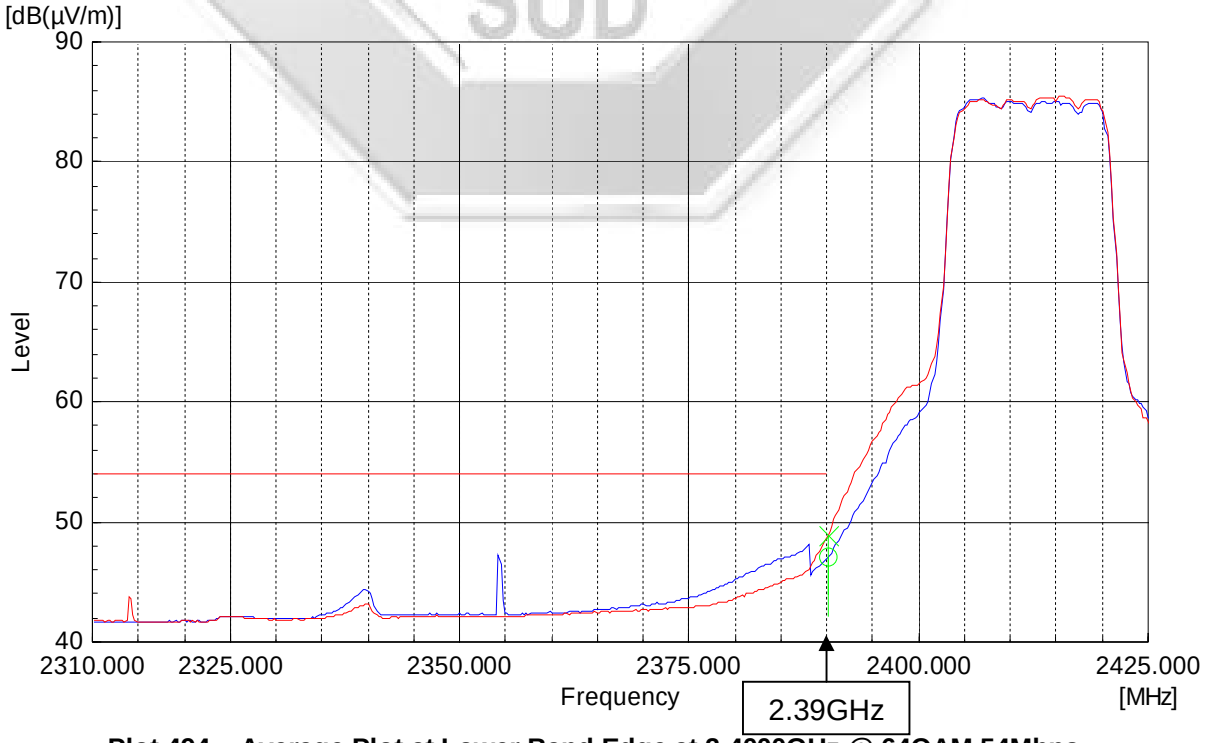


Plot 492 – Upper Band Edge at 2.4835GHz @ 64QAM 54Mbps

Band Edge Compliance (Radiated) Plots (Restricted Band) – 802.11g

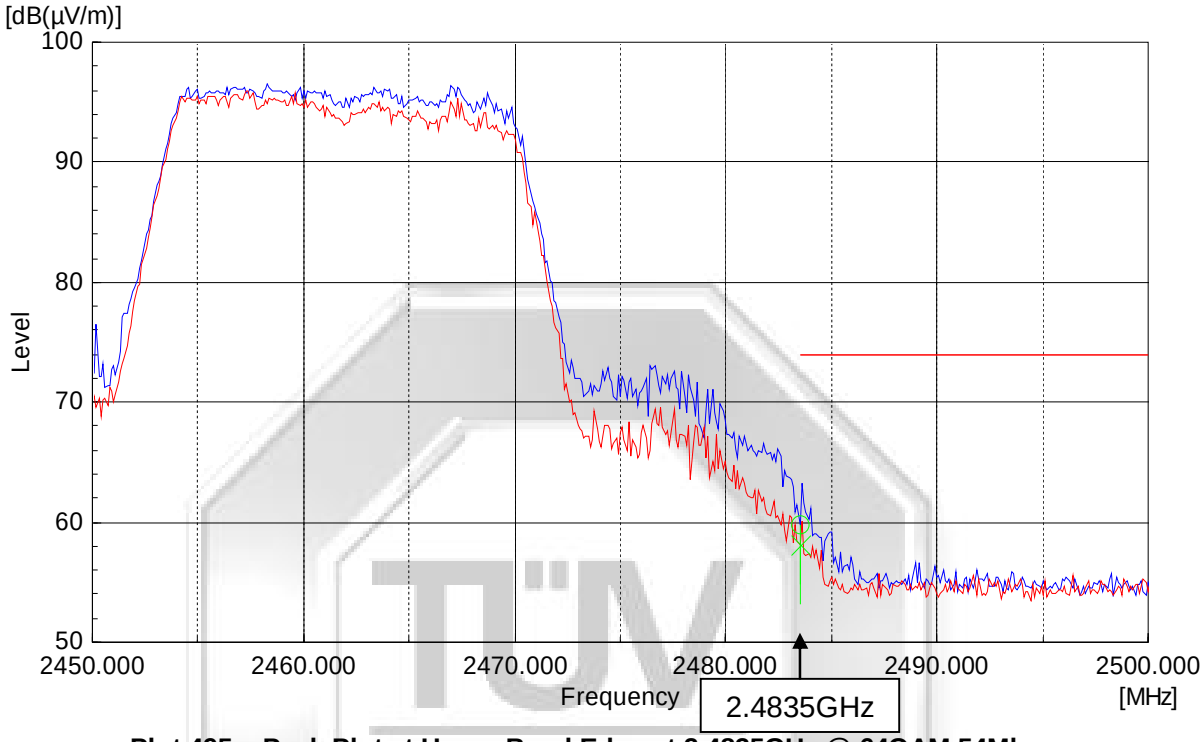


Plot 493 – Peak Plot at Lower Band Edge at 2.4000GHz @ 64QAM 54Mbps

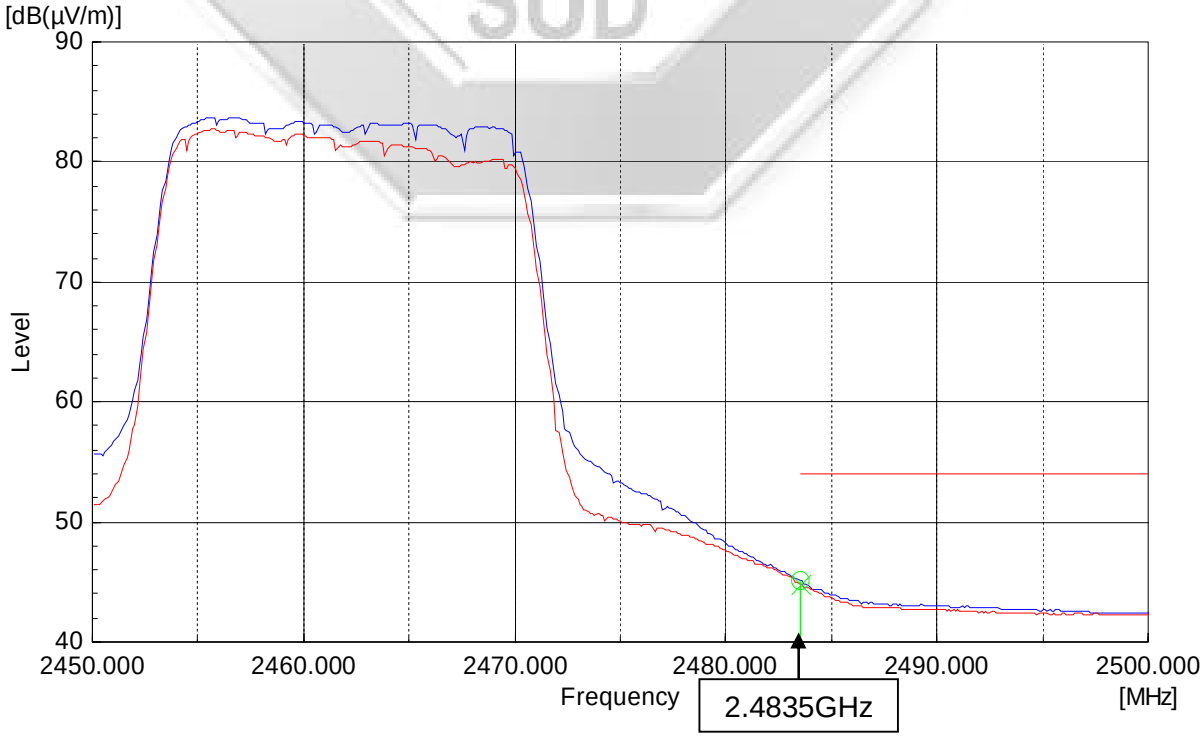


Plot 494 – Average Plot at Lower Band Edge at 2.4000GHz @ 64QAM 54Mbps

Band Edge Compliance (Radiated) Plots (Restricted Band) – 802.11g

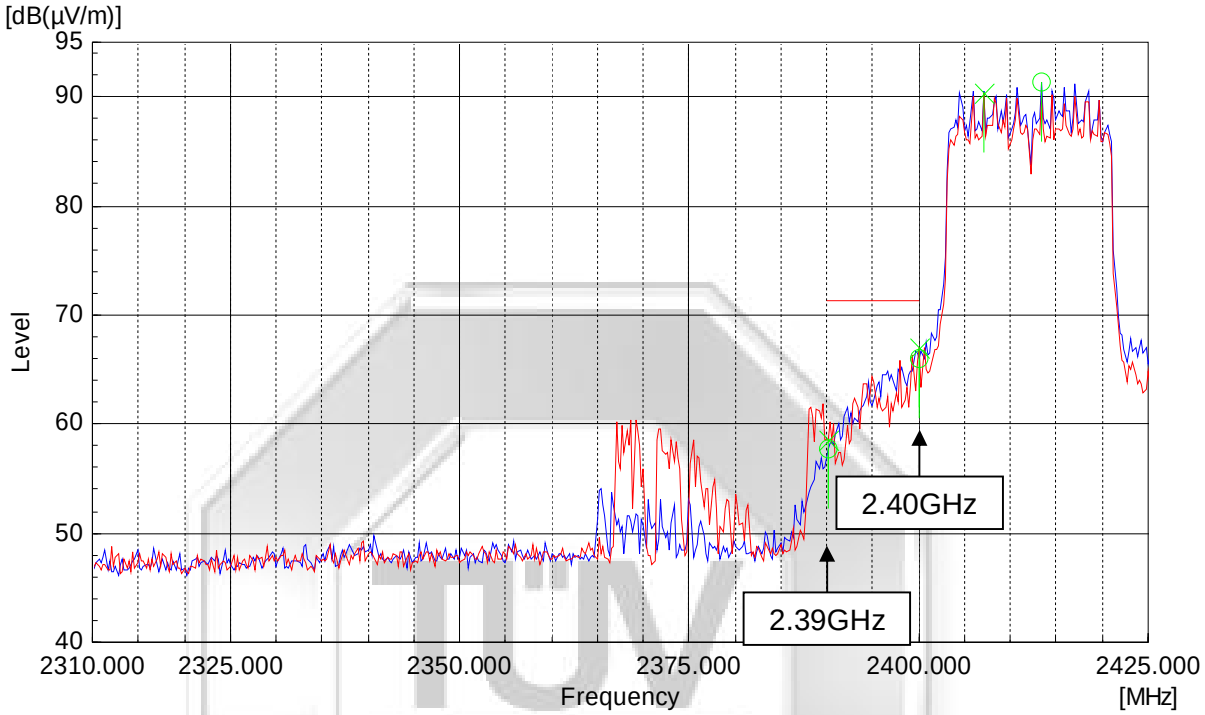


Plot 495 – Peak Plot at Upper Band Edge at 2.4835GHz @ 64QAM 54Mbps

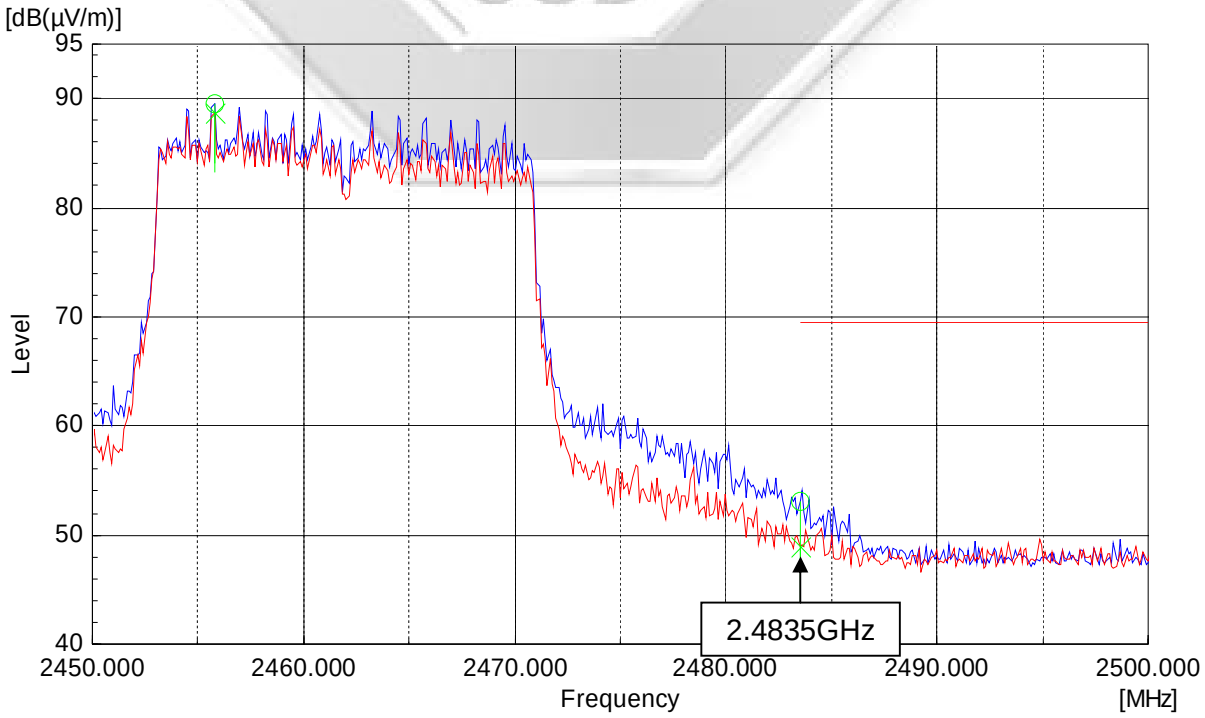


Plot 496 – Average Plot at Upper Band Edge at 2.4835GHz @ 64QAM 54Mbps

Band Edge Compliance (Radiated) Plots (20dB Delta from Carrier at Band Edge) – 802.11n

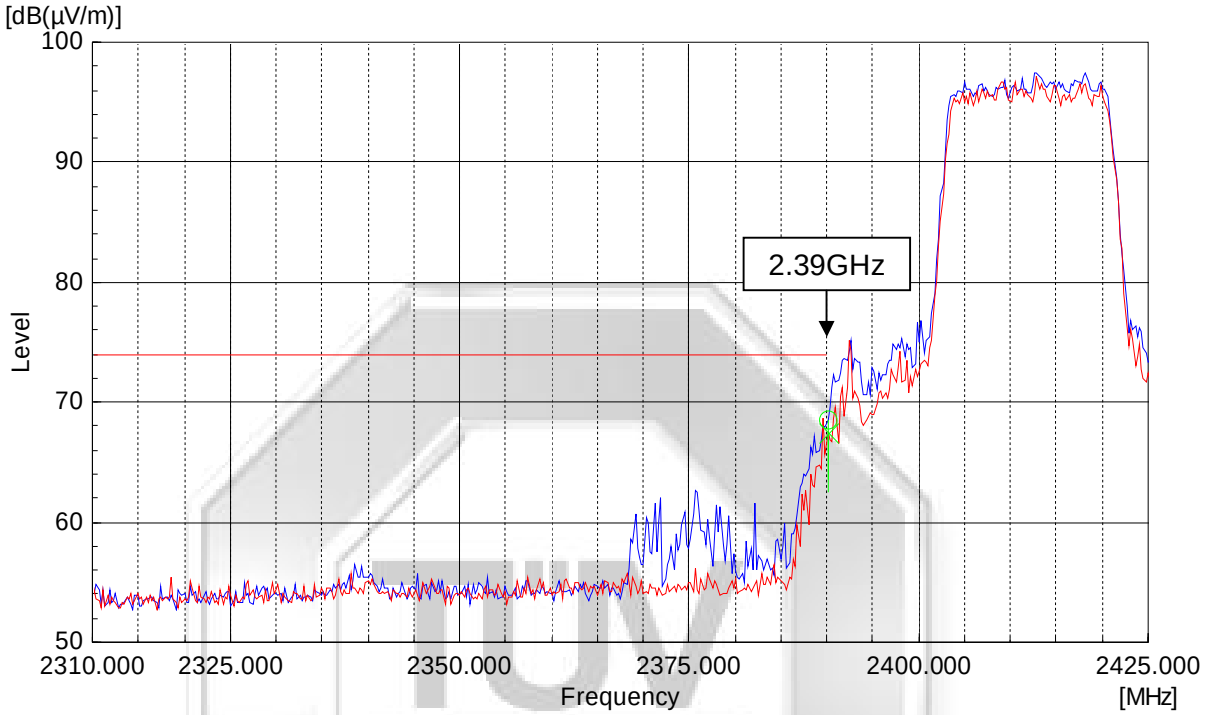


Plot 497 – Lower Band Edge at 2.4000GHz @ 64QAM 65Mbps

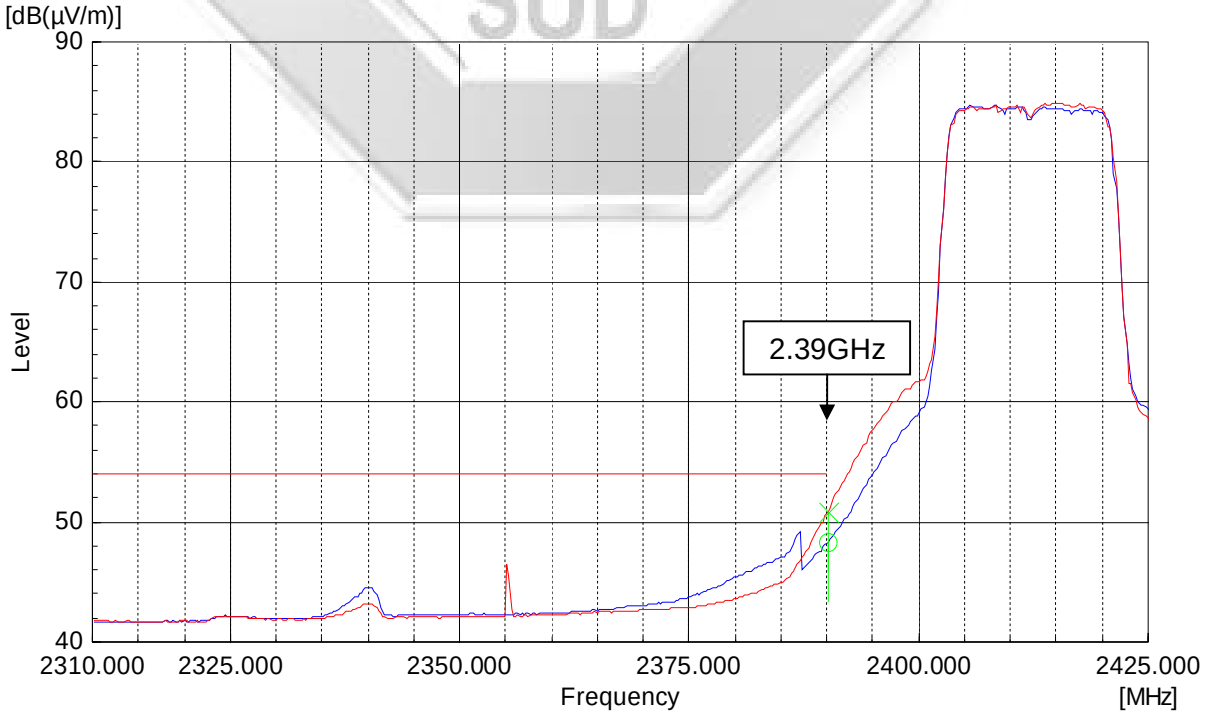


Plot 498 – Upper Band Edge at 2.4835GHz @ 64QAM 65Mbps

Band Edge Compliance (Radiated) Plots (Restricted Band) – 802.11n

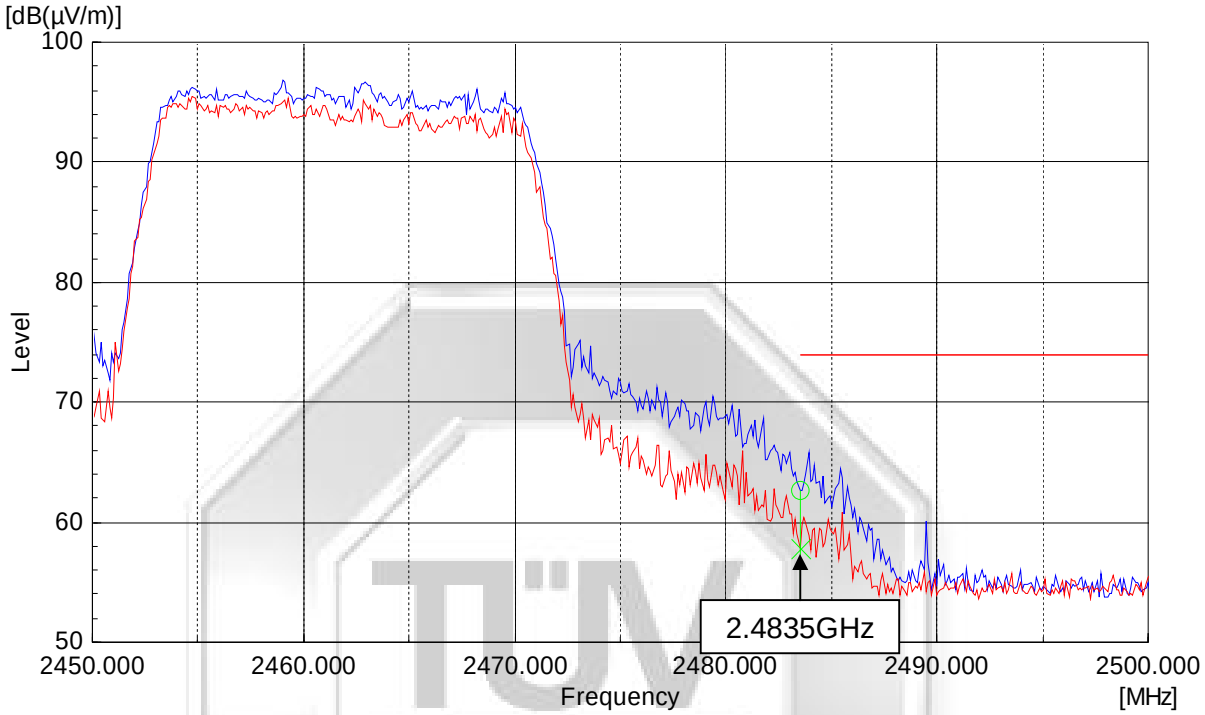


Plot 499 – Peak Plot at Lower Band Edge at 2.4000GHz @ 64QAM 65Mbps

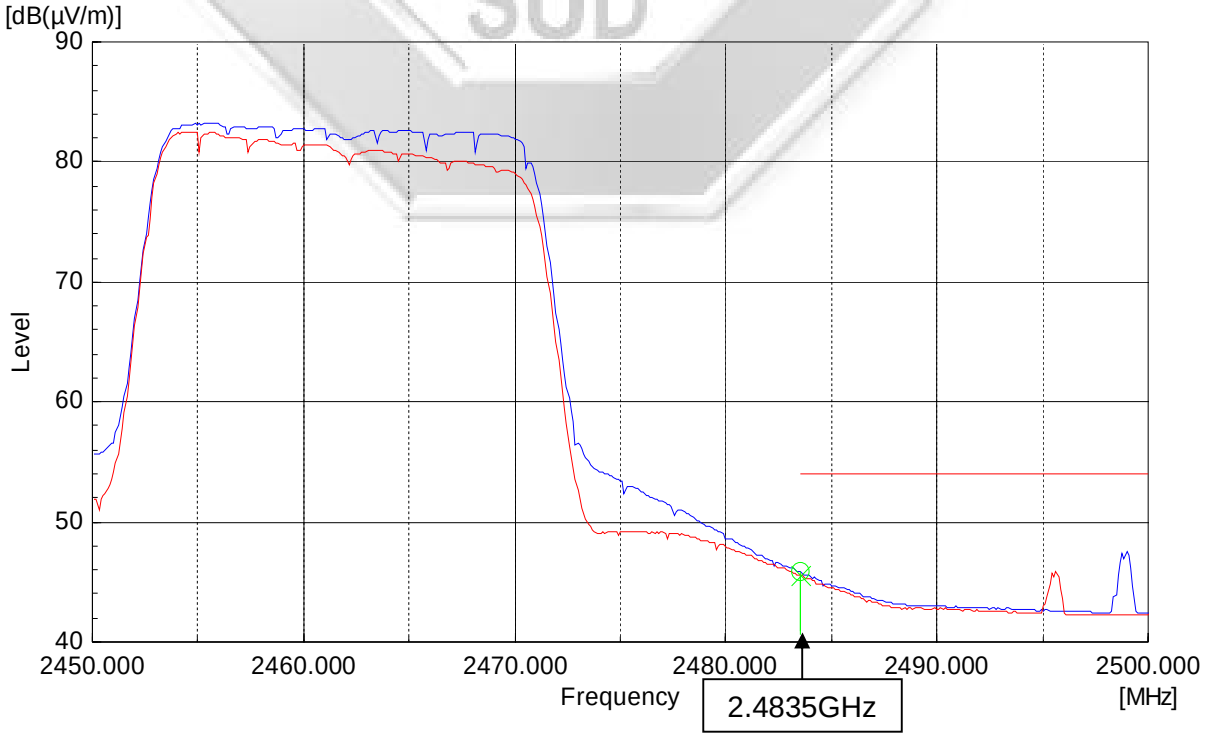


Plot 500 – Average Plot at Lower Band Edge at 2.4000GHz @ 64QAM 65Mbps

Band Edge Compliance (Radiated) Plots (Restricted Band) – 802.11n



Plot 501 – Peak Plot at Upper Band Edge at 2.4835GHz @ 64QAM 65Mbps



Plot 502 – Average Plot at Upper Band Edge at 2.4835GHz @ 64QAM 65Mbps

47 CFR FCC Part 15.247(e) and RSS-247 5.2(2) Peak Power Spectral Density Limits

The EUT shows compliance to the requirements of this section, which states the peak power spectral density conducted from the intentional radiator (EUT) to the antenna shall not be greater than 8dBm (6.3mW) in any 3kHz band during any time interval of continuous transmission.

47 CFR FCC Part 15.247(e) and RSS-247 5.2(2) Peak Power Spectral Density Test Instrumentation

Instrument	Model	S/No	Cal Due Date	Cal Interval
Agilent Spectrum Analyzer	E4440A	MY45304764	12 Dec 2015	1 year

47 CFR FCC Part 15.247(e) and RSS-247 5.2(2) Peak Power Spectral Density Test Setup

1. The EUT and supporting equipment were set up as shown in the setup photo.
2. The power supply for the EUT was connected to a filtered mains.
3. The RF antenna connector was connected to the spectrum via a low-loss coaxial cable.
4. The resolution bandwidth (RBW), video bandwidth (VBW) and span of the spectrum analyser were set to the following:
   RBW = 3kHz
   VBW = 9kHz
   Span = 1.5 times the channel bandwidth
   Sweep time = auto couple
5. All other supporting equipment were powered separately from another filtered mains.

47 CFR FCC Part 15.247(e) and RSS-247 5.2(2) Peak Power Spectral Density Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the test mode at lower channel with specified modulation and data rate.
2. The peak of the transmitting frequency was detected with the marker peak function of the spectrum analyser.
3. The peak power density of the transmitting frequency was plotted and recorded.
4. Repeat steps 1 to 3 with all possible modulations and data rates.
5. The steps 2 to 4 were repeated with the transmitting frequency was set to middle and upper channel respectively.

47 CFR FCC Part 15.247(e) and RSS-247 5.2(2) Peak Power Spectral Density Results

Test Input Power	3.7Vdc	Temperature	24°C
		Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Chang Wai Kit

802.11b

Channel	Channel Frequency (GHz)	Peak Power Spectral Density (mW)	Limit (mW)	Modulation @ Data Rate
1 *(lower ch)*	2.412	0.0813	6.3	DBPSK @ 1Mbps
		0.1720	6.3	DQPSK @ 2Mbps
		0.1411	6.3	CCK @ 11Mbps
6 *(mid ch)*	2.437	0.0561	6.3	DBPSK @ 1Mbps
		0.1429	6.3	DQPSK @ 2Mbps
		0.1156	6.3	CCK @ 11Mbps
11 *(upper ch)*	2.462	0.0688	6.3	DBPSK @ 1Mbps
		0.1393	6.3	DQPSK @ 2Mbps
		0.1146	6.3	CCK @ 11Mbps

Test Input Power	3.7Vdc	Temperature	24°C
		Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Chang Wai Kit

802.11g

Channel	Channel Frequency (GHz)	Peak Power Spectral Density (mW)	Limit (mW)	Modulation @ Data Rate
1 *(lower ch)*	2.412	0.1172	6.3	BPSK @ 9Mbps
		0.1337	6.3	QPSK @ 18Mbps
		0.1450	6.3	16QAM @ 36Mbps
		0.1189	6.3	64QAM @ 54Mbps
6 *(mid ch)*	2.437	0.1375	6.3	BPSK @ 9Mbps
		0.1367	6.3	QPSK @ 18Mbps
		0.1276	6.3	16QAM @ 36Mbps
		0.1368	6.3	64QAM @ 54Mbps
11 *(upper ch)*	2.462	0.1070	6.3	BPSK @ 9Mbps
		0.1054	6.3	QPSK @ 18Mbps
		0.1218	6.3	16QAM @ 36Mbps
		0.1082	6.3	64QAM @ 54Mbps

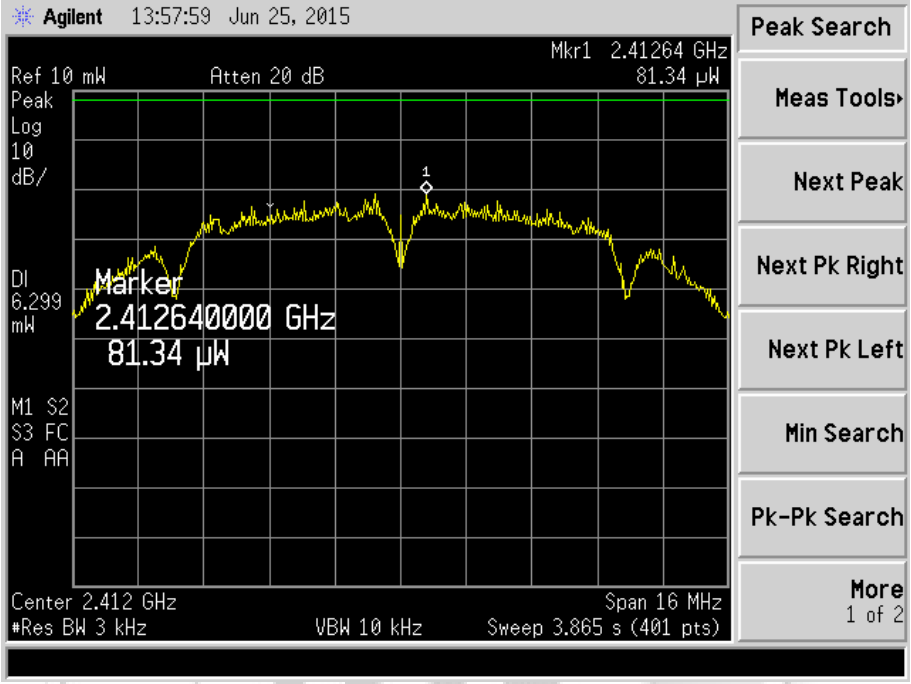
47 CFR FCC Part 15.247(e) and RSS-247 5.2(2) Peak Power Spectral Density Results

Test Input Power	3.7Vdc	Temperature	24°C
		Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Chang Wai Kit

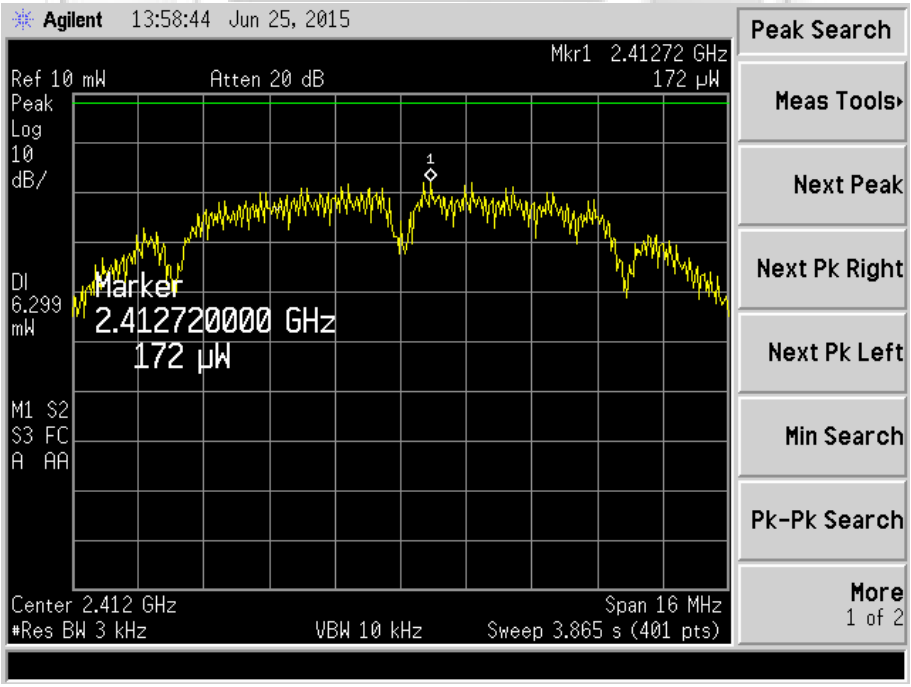
802.11n

Channel	Channel Frequency (GHz)	Peak Power Spectral Density (mW)	Limit (mW)	Modulation @ Data Rate
1 *(lower ch)*	2.412	0.1250	6.3	BPSK @ 6.5Mbps (MCS0)
		0.1220	6.3	QPSK @ 19.5Mbps (MCS2)
		0.1275	6.3	16QAM @ 39Mbps (MCS4)
		0.1157	6.3	64QAM @ 65Mbps (MCS7)
6 *(mid ch)*	2.437	0.1064	6.3	BPSK @ 6.5Mbps (MCS0)
		0.1144	6.3	QPSK @ 19.5Mbps (MCS2)
		0.1346	6.3	16QAM @ 39Mbps (MCS4)
		0.1123	6.3	64QAM @ 65Mbps (MCS7)
11 *(upper ch)*	2.462	0.1056	6.3	BPSK @ 6.5Mbps (MCS0)
		0.1250	6.3	QPSK @ 19.5Mbps (MCS2)
		0.1087	6.3	16QAM @ 39Mbps (MCS4)
		0.1093	6.3	64QAM @ 65Mbps (MCS7)

Peak Power Spectral Density Plots – 802.11b

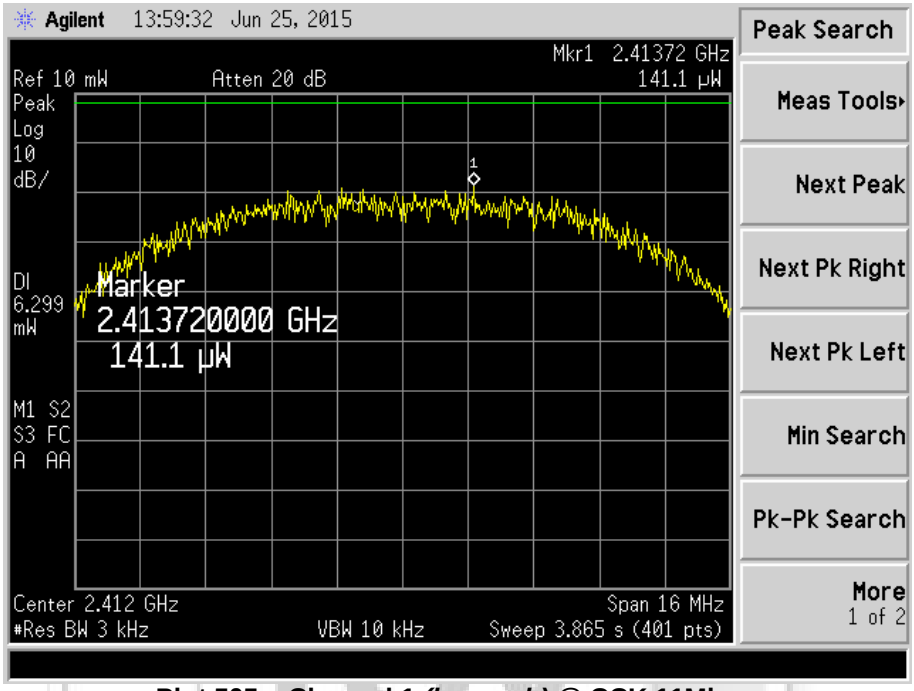


Plot 503 – Channel 1 *(lower ch)* @ DBPSK 1Mbps



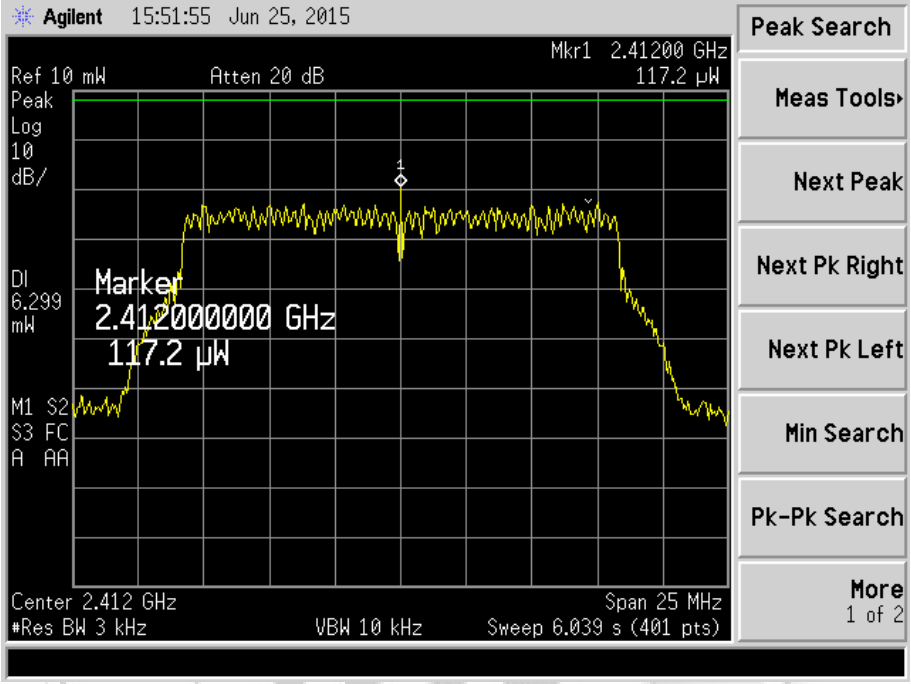
Plot 504 – Channel 1 *(lower ch)* @ DQPSK 2Mbps

Peak Power Spectral Density Plots – 802.11b

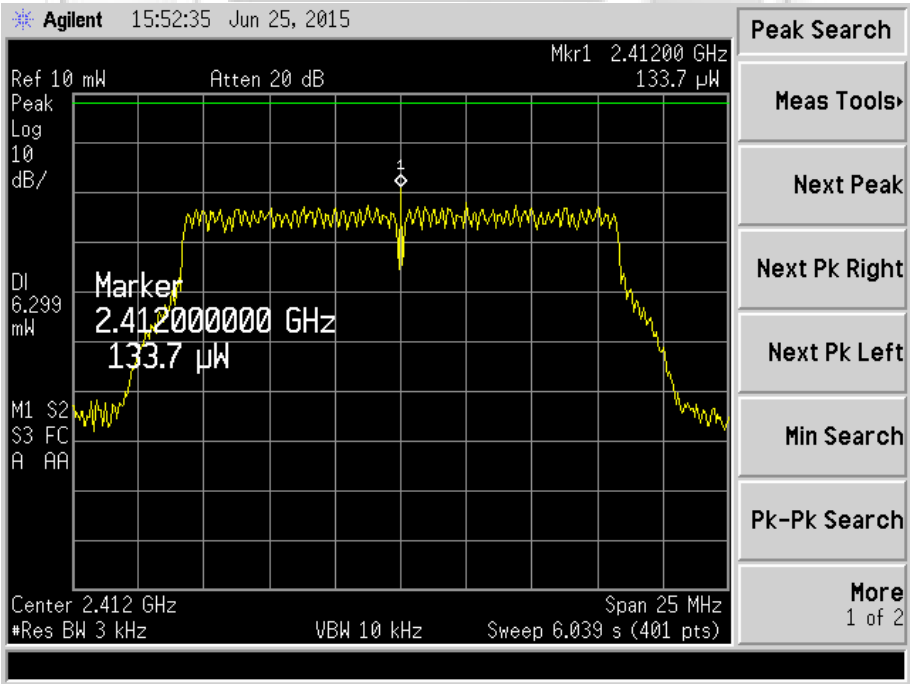


Plot 505 – Channel 1 *(lower ch)* @ CCK 11Mbps

Peak Power Spectral Density Plots – 802.11g

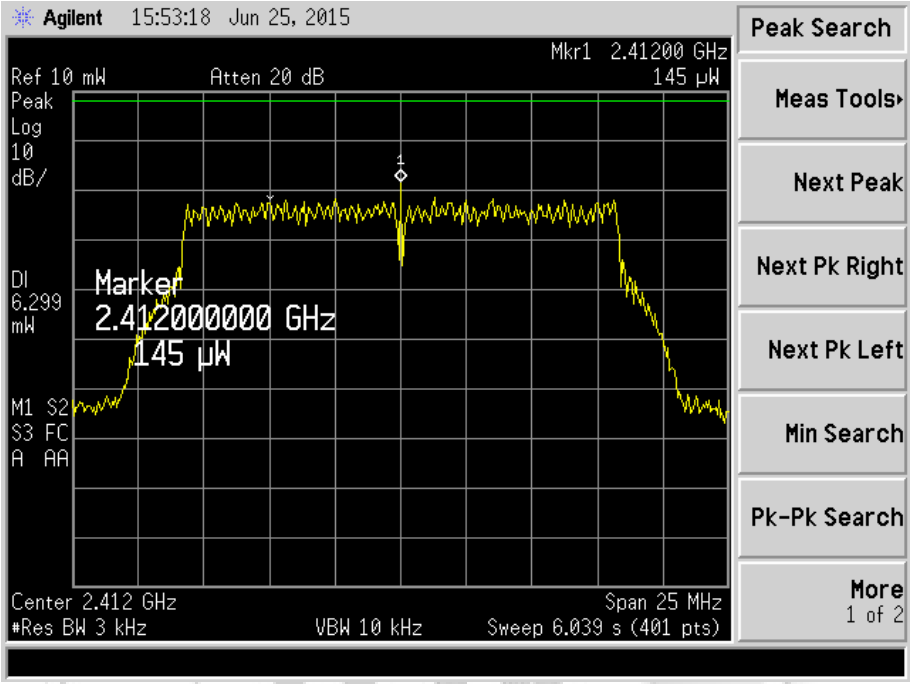


Plot 506 – Channel 1 *(lower ch)* @ BPSK 9Mbps

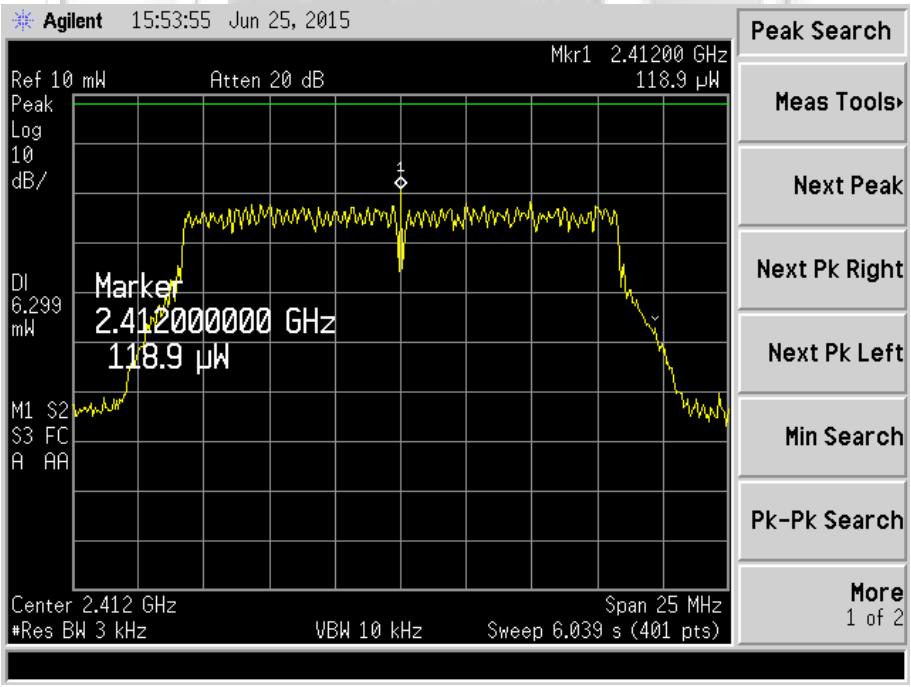


Plot 507 – Channel 1 *(lower ch)* @ QPSK 18Mbps

Peak Power Spectral Density Plots – 802.11g

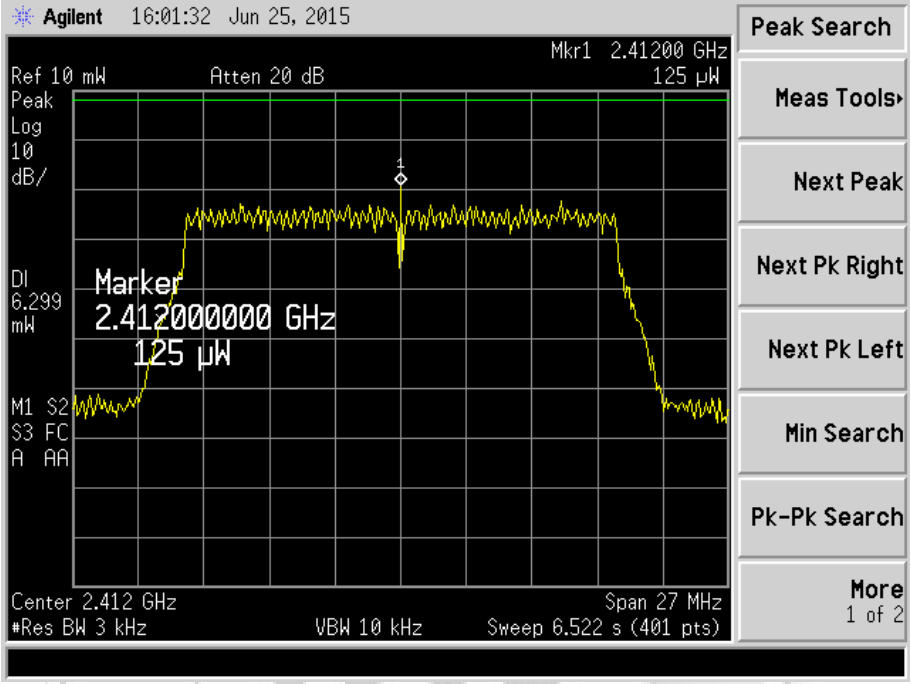


Plot 508 – Channel 1 *(lower ch)* @ 16QAM 36Mbps

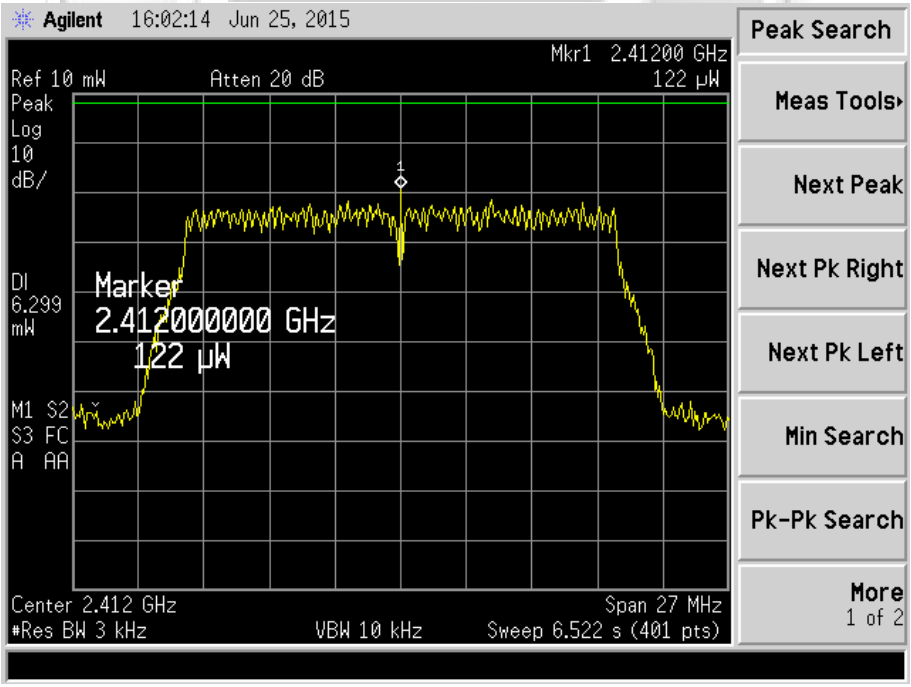


Plot 509 – Channel 1 *(lower ch)* @ 64QAM 54Mbps

Peak Power Spectral Density Plots – 802.11n

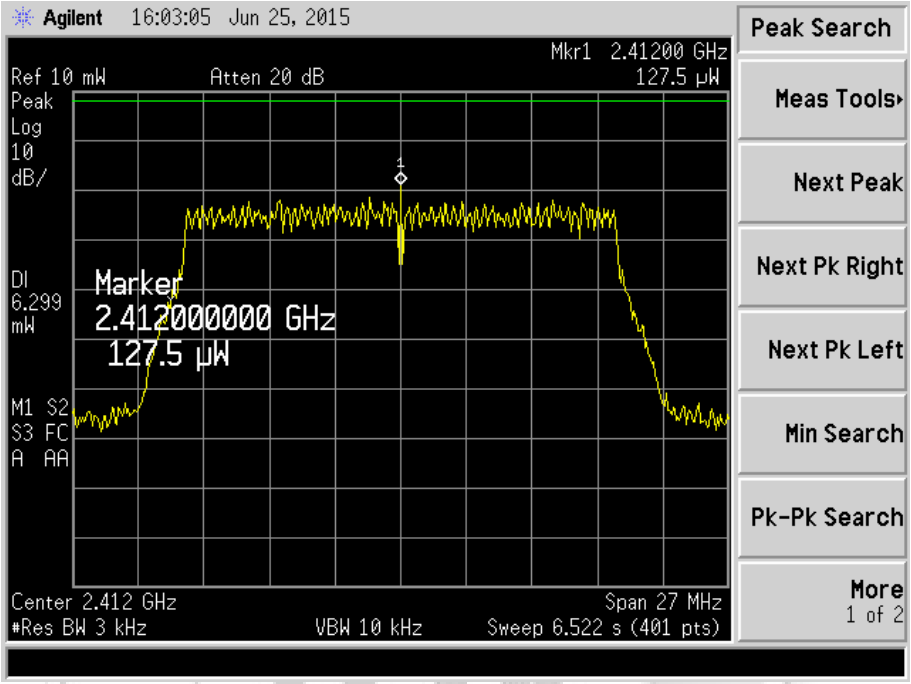


Plot 510 – Channel 1 *(lower ch)* @ BPSK 6.5Mbps

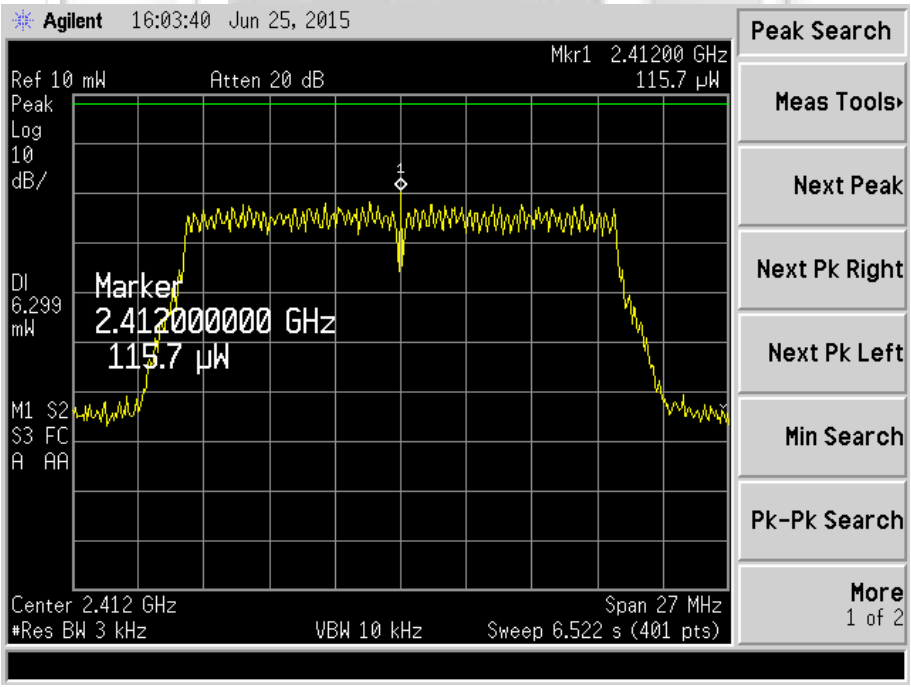


Plot 511 – Channel 1 *(lower ch)* @ QPSK 19.5Mbps

Peak Power Spectral Density Plots – 802.11n

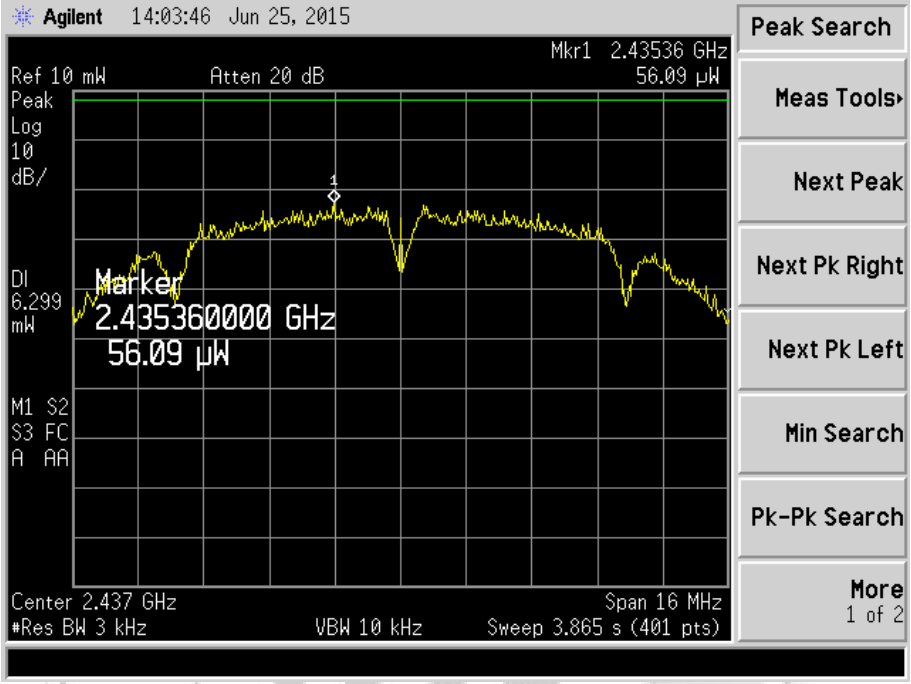


Plot 512 – Channel 1 *(lower ch)* @ 16QAM 39Mbps

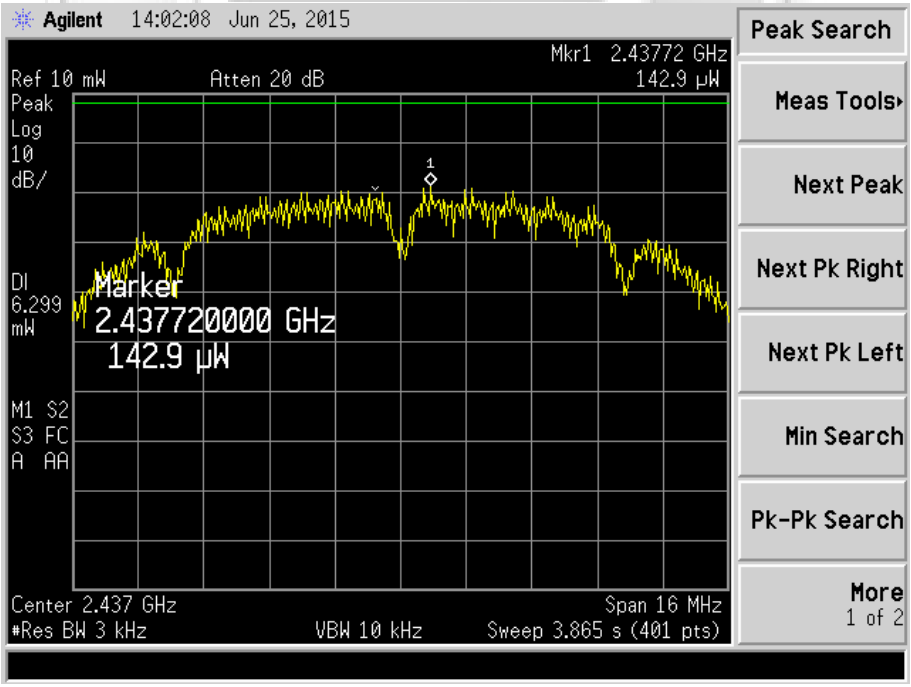


Plot 513 – Channel 1 *(lower ch)* @ 64QAM 65Mbps

Peak Power Spectral Density Plots – 802.11b

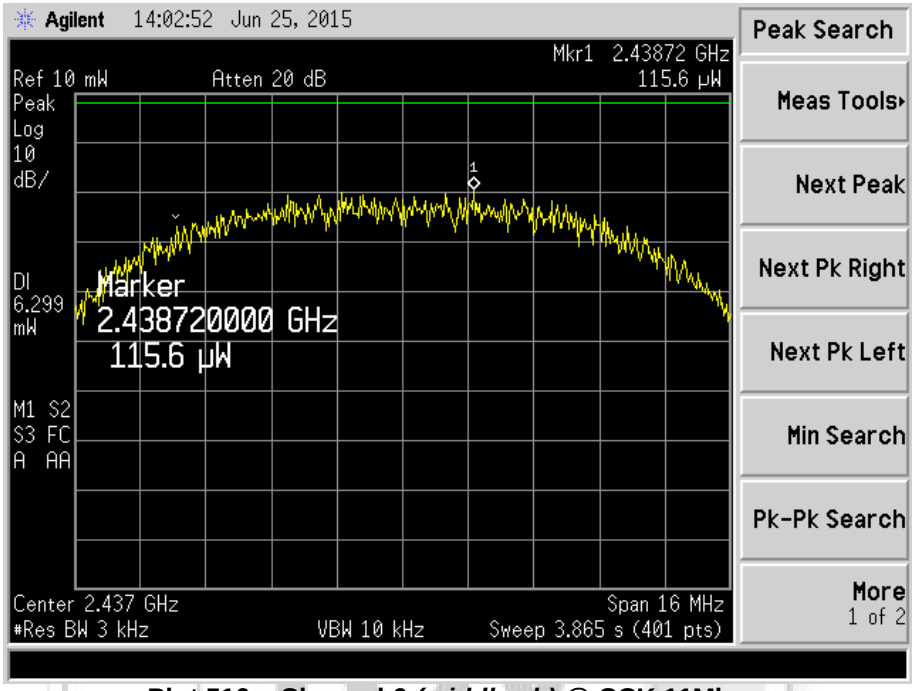


Plot 514 – Channel 6 *(middle ch)* @ DBPSK 1Mbps



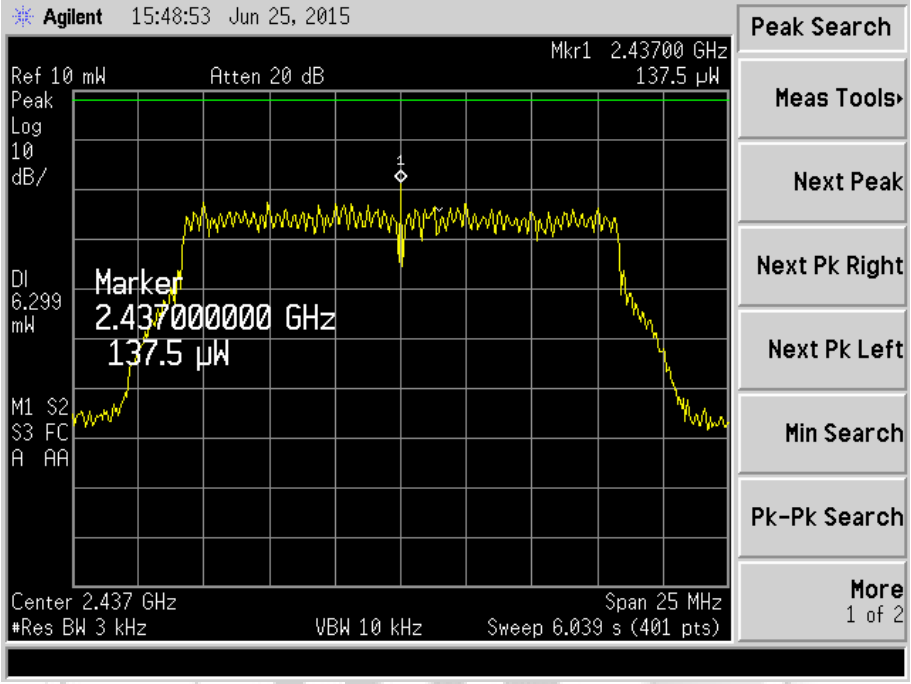
Plot 515 – Channel 6 *(middle ch)* @ DQPSK 2Mbps

Peak Power Spectral Density Plots – 802.11b

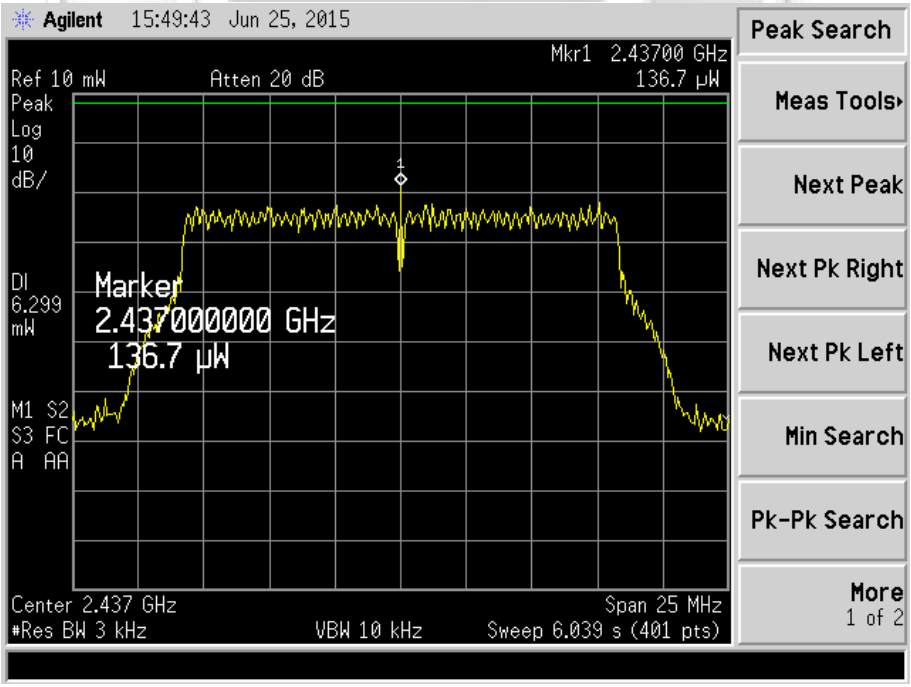


Plot 516 – Channel 6 *(middle ch)* @ CCK 11Mbps

Peak Power Spectral Density Plots – 802.11g

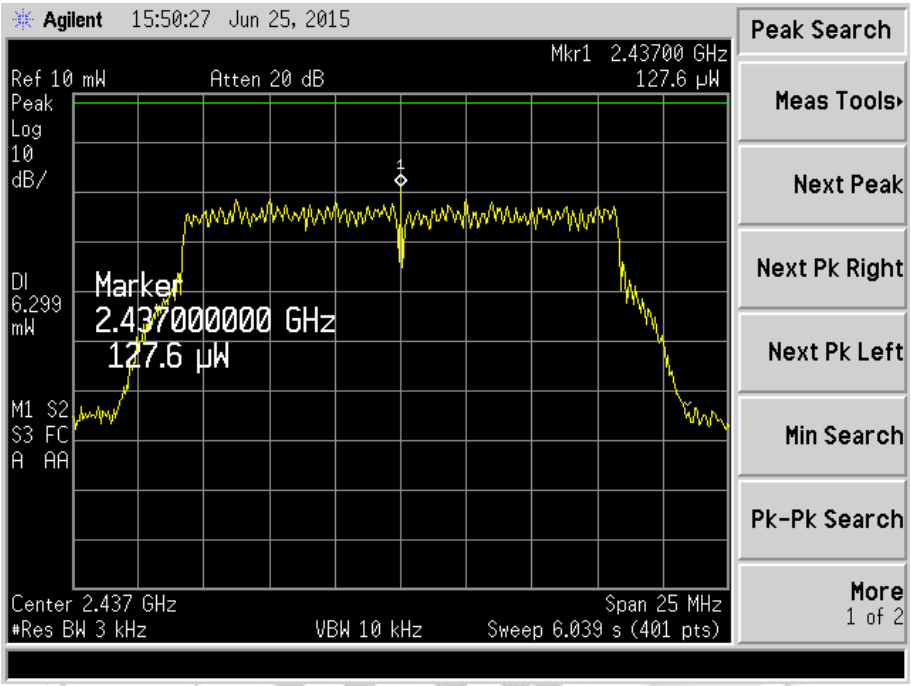


Plot 517 – Channel 6 *(middle ch)* @ BPSK 9Mbps

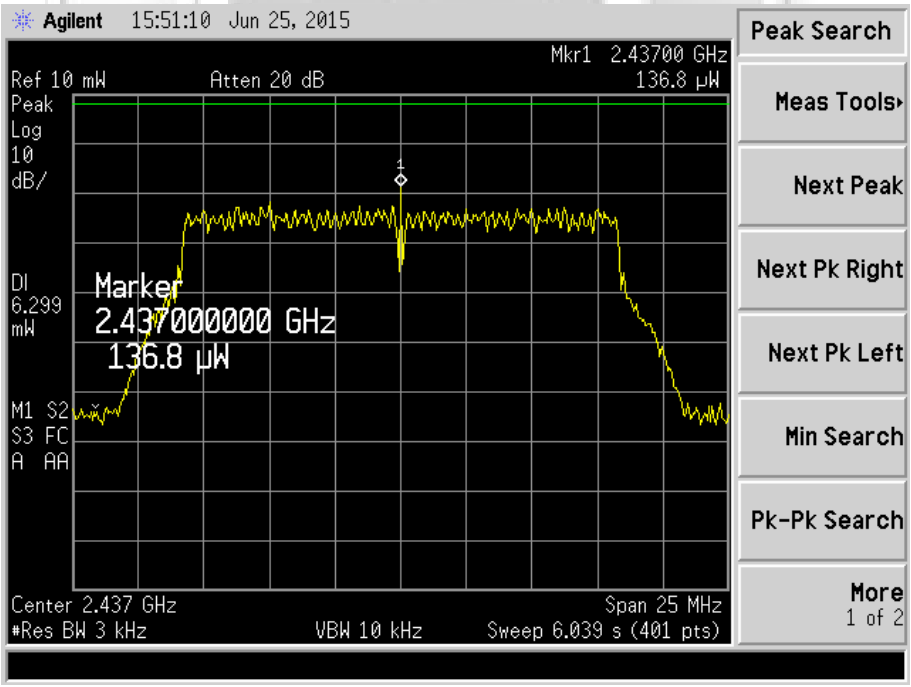


Plot 518 – Channel 6 *(middle ch)* @ QPSK 18Mbps

Peak Power Spectral Density Plots – 802.11g

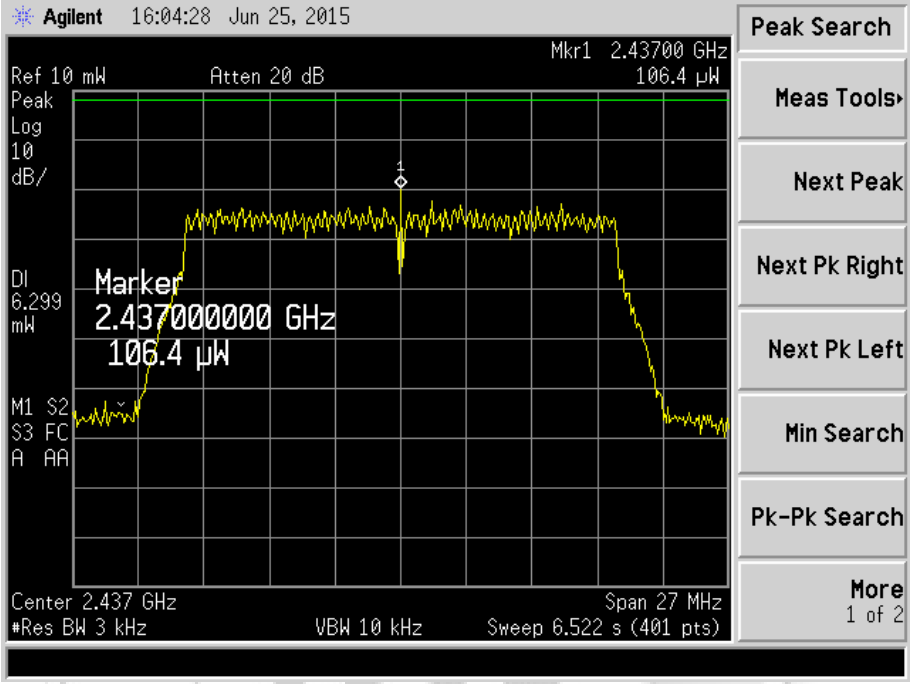


Plot 519 – Channel 6 *(middle ch)* @ 16QAM 36Mbps

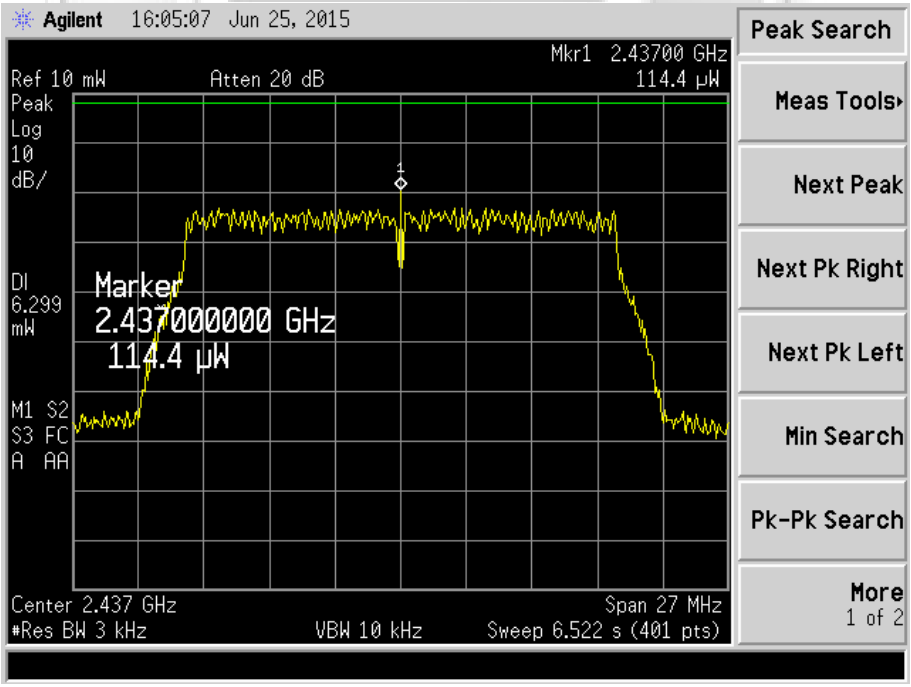


Plot 520 – Channel 6 *(middle ch)* @ 64QAM 54Mbps

Peak Power Spectral Density Plots – 802.11n

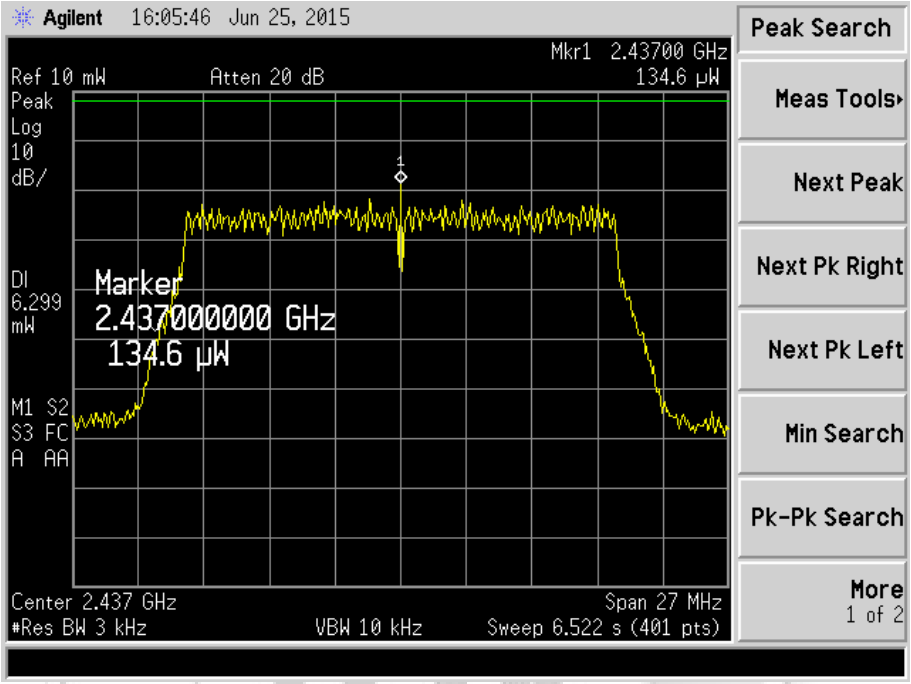


Plot 521 – Channel 6 *(middle ch)* @ BPSK 6.5Mbps

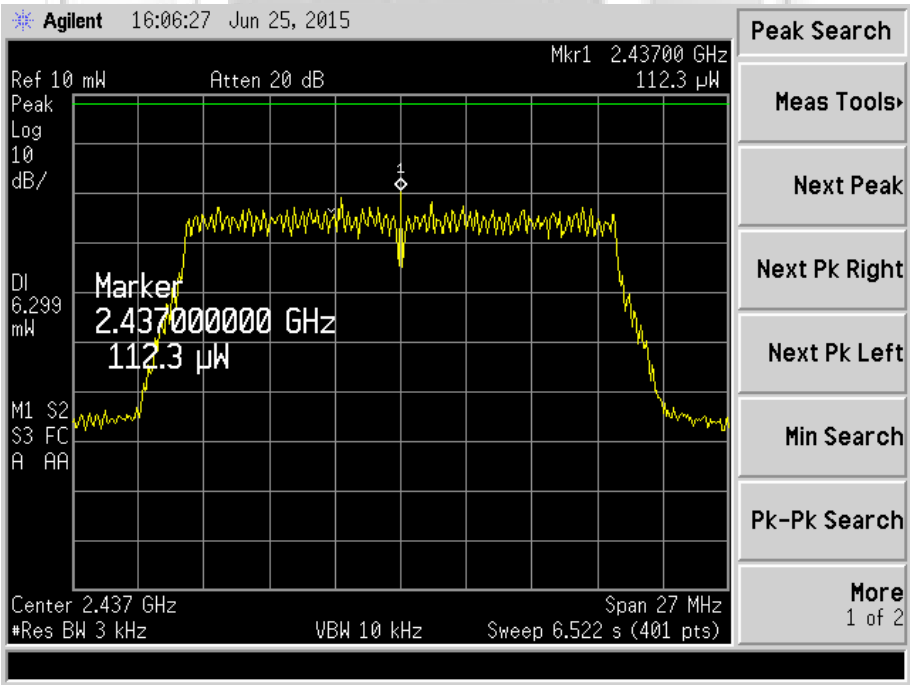


Plot 522 – Channel 6 *(middle ch)* @ QPSK 19.5Mbps

Peak Power Spectral Density Plots – 802.11n

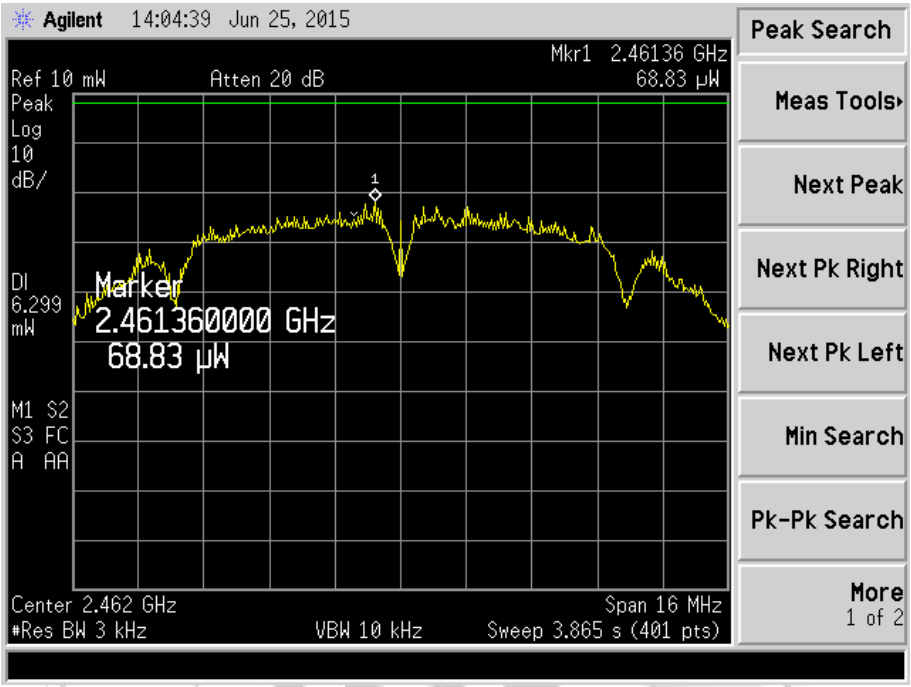


Plot 523 – Channel 6 *(middle ch)* @ 16QAM 39Mbps

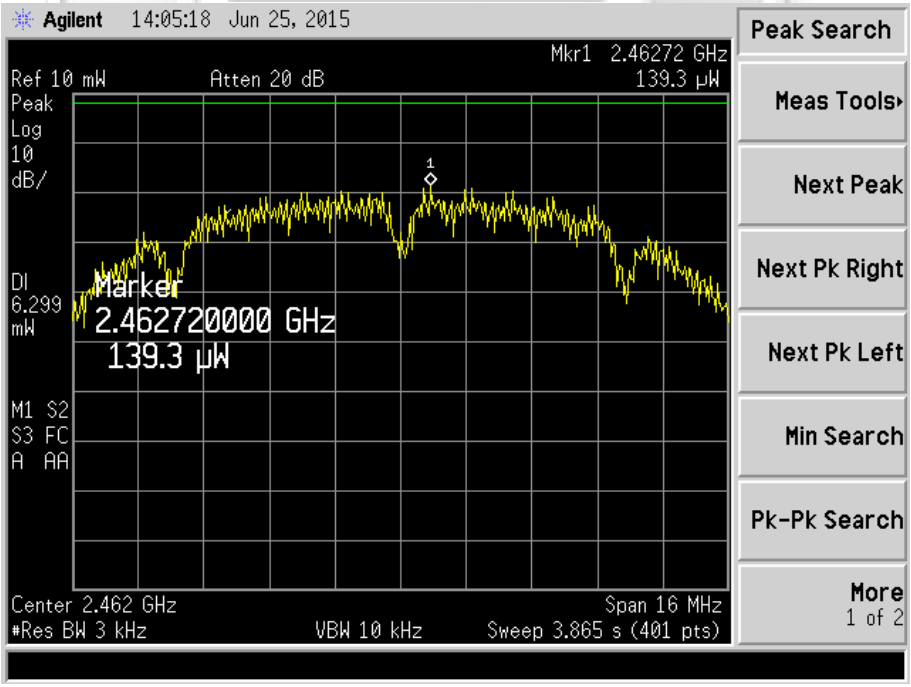


Plot 524 – Channel 6 *(middle ch)* @ 64QAM 65Mbps

Peak Power Spectral Density Plots – 802.11b

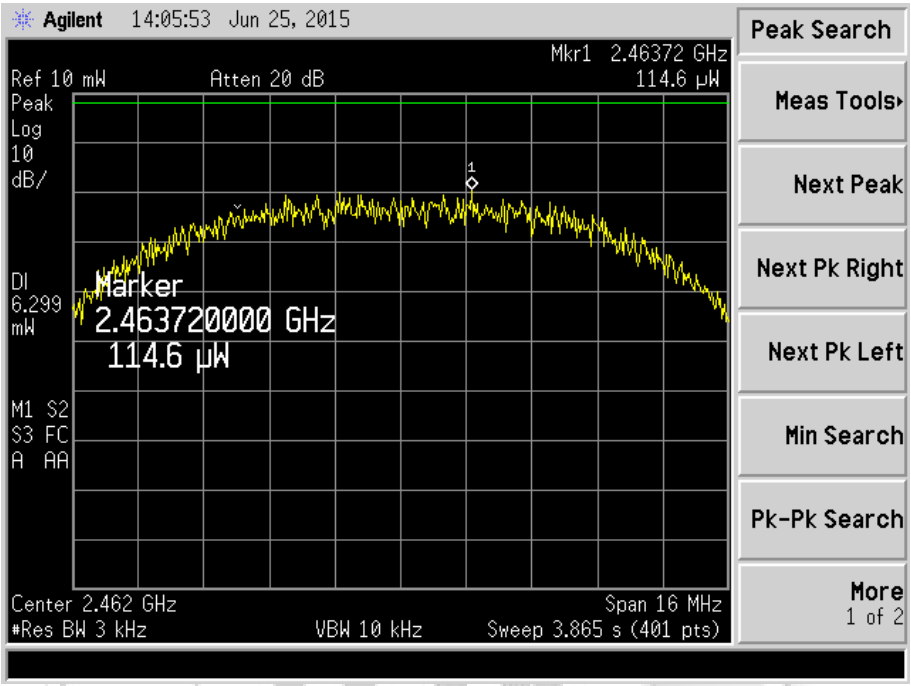


Plot 525 – Channel 11 *(upper ch)* @ DBPSK 1Mbps



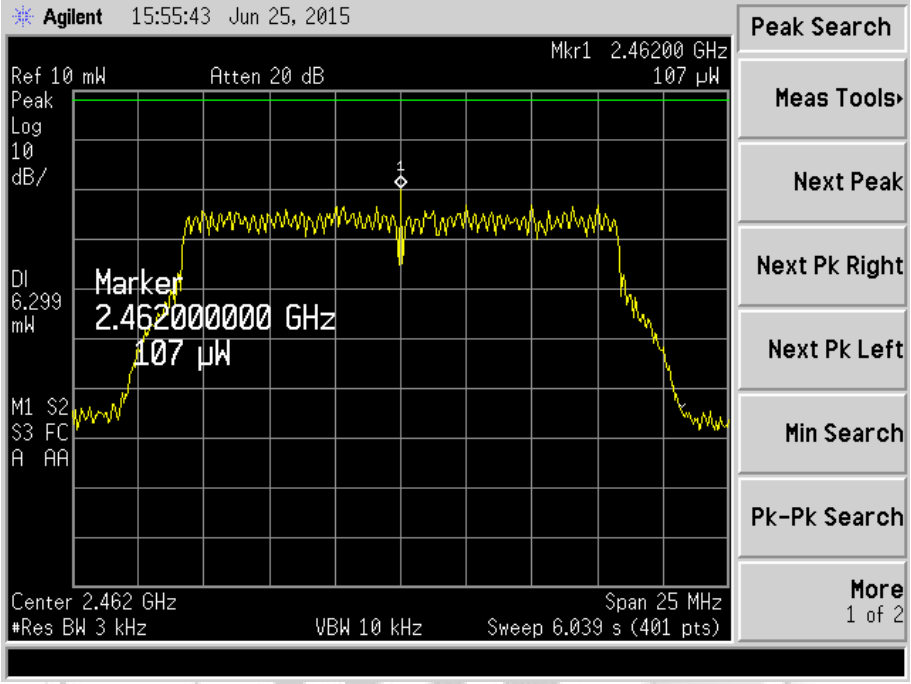
Plot 526 – Channel 11 *(upper ch)* @ DQPSK 2Mbps

Peak Power Spectral Density Plots – 802.11b

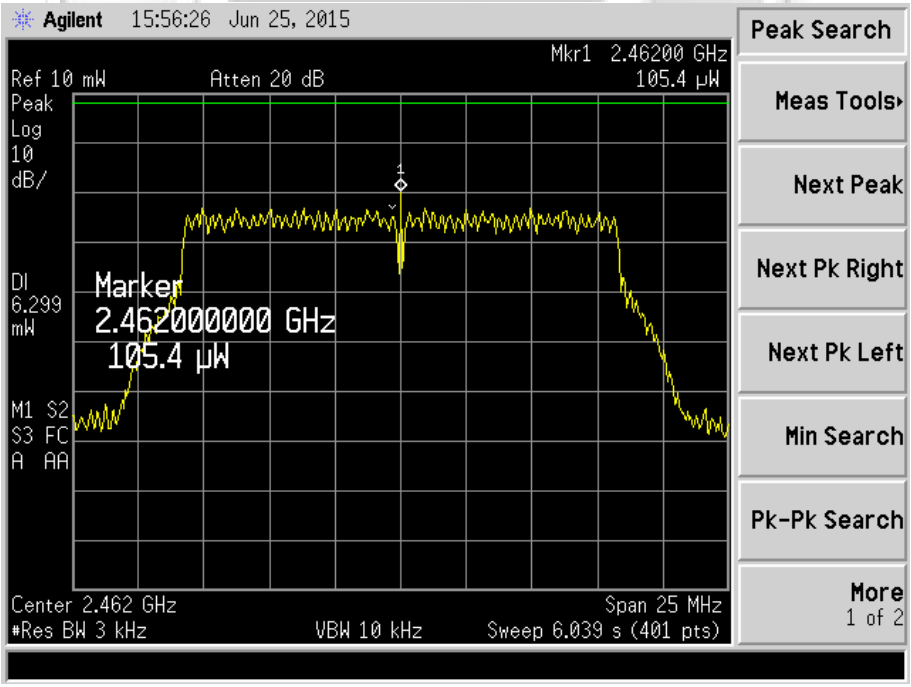


Plot 527 – Channel 11 *(upper ch)* @ CCK 11Mbps

Peak Power Spectral Density Plots – 802.11g

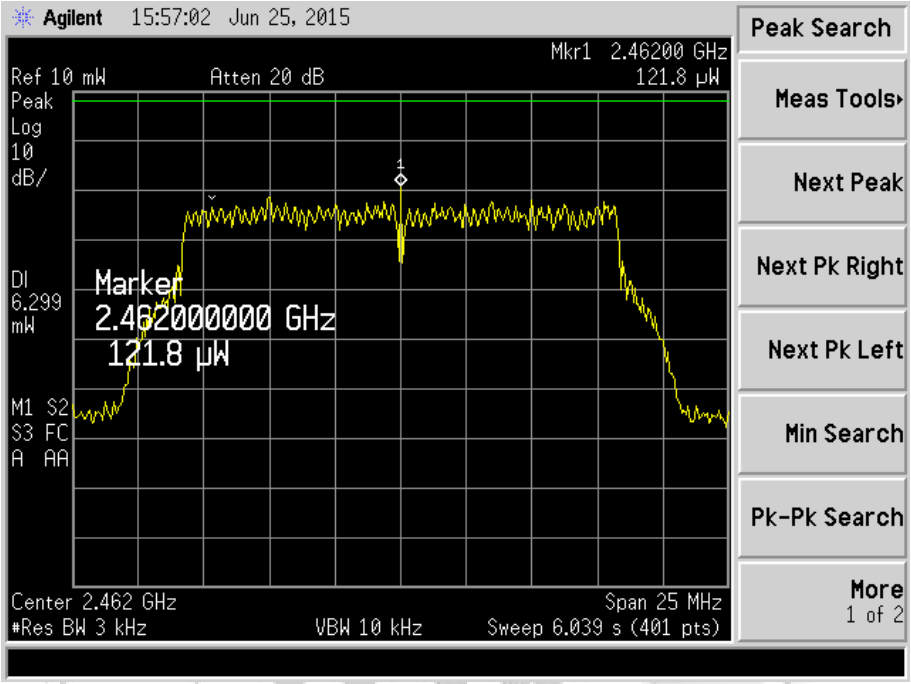


Plot 528 – Channel 11 *(upper ch)* @ BPSK 9Mbps

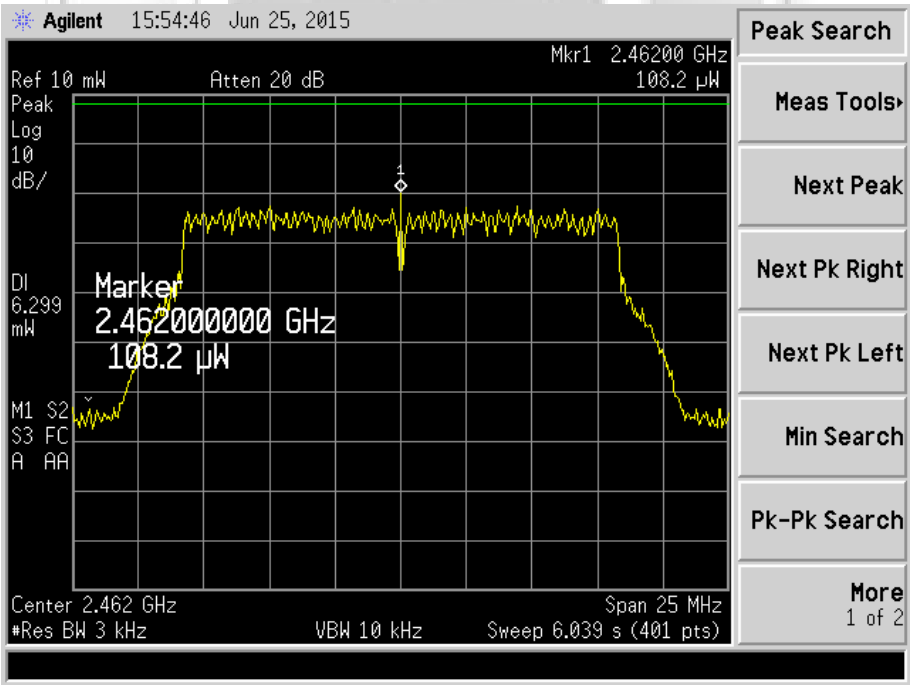


Plot 529 – Channel 11 *(upper ch)* @ QPSK 18Mbps

Peak Power Spectral Density Plots – 802.11g

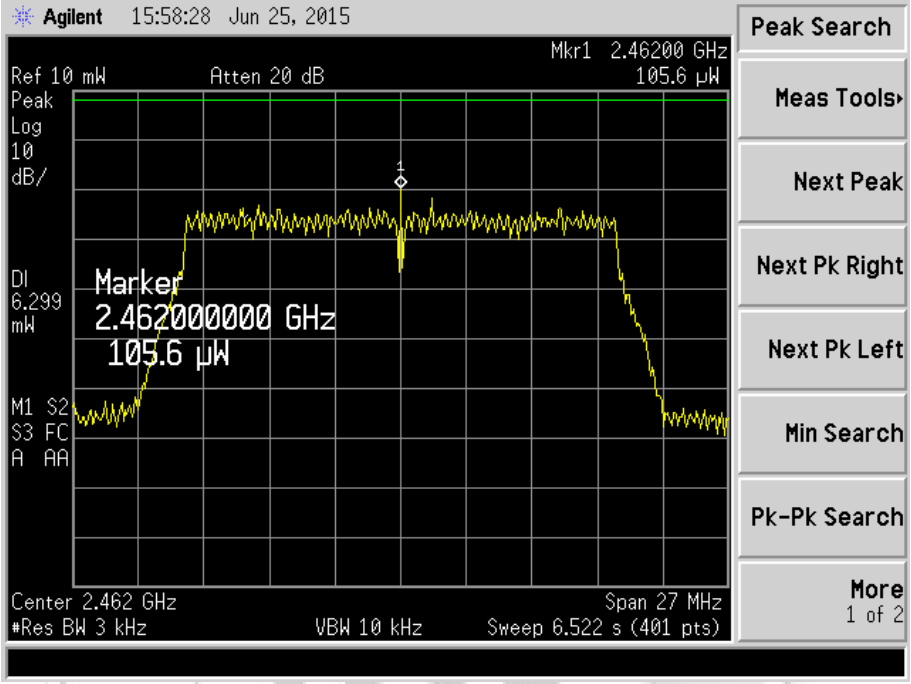


Plot 530 – Channel 11 *(upper ch)* @ 16QAM 36Mbps

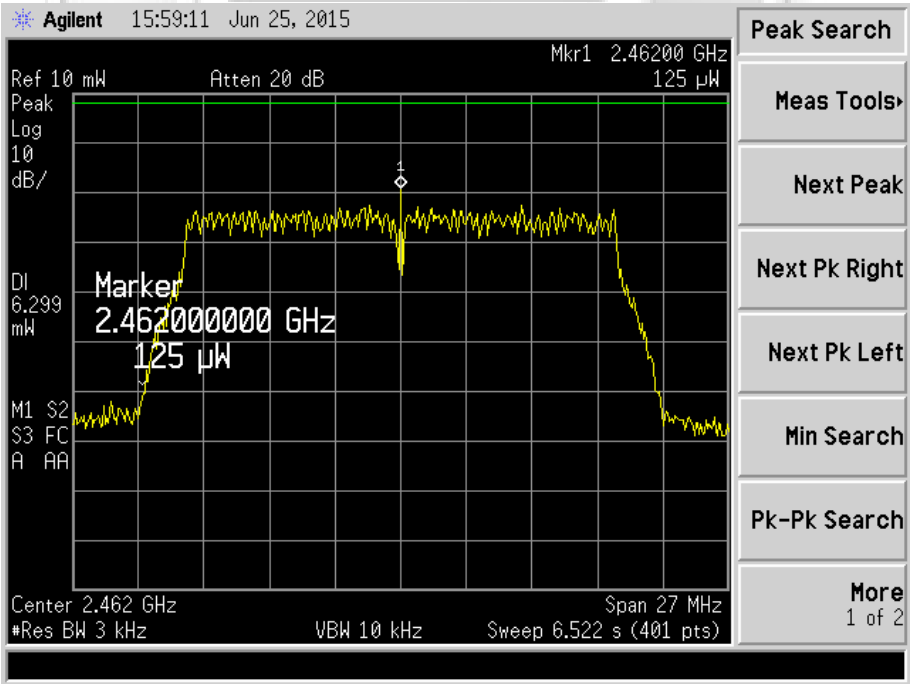


Plot 531 – Channel 11 *(upper ch)* @ 64QAM 54Mbps

Peak Power Spectral Density Plots – 802.11n

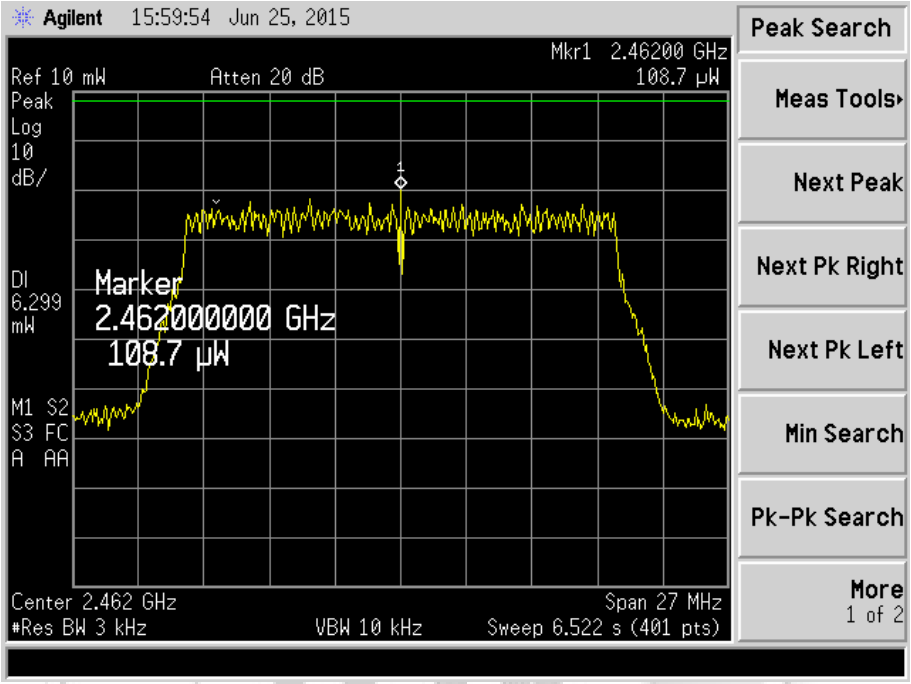


Plot 532 – Channel 11 *(upper ch)* @ BPSK 6.5Mbps

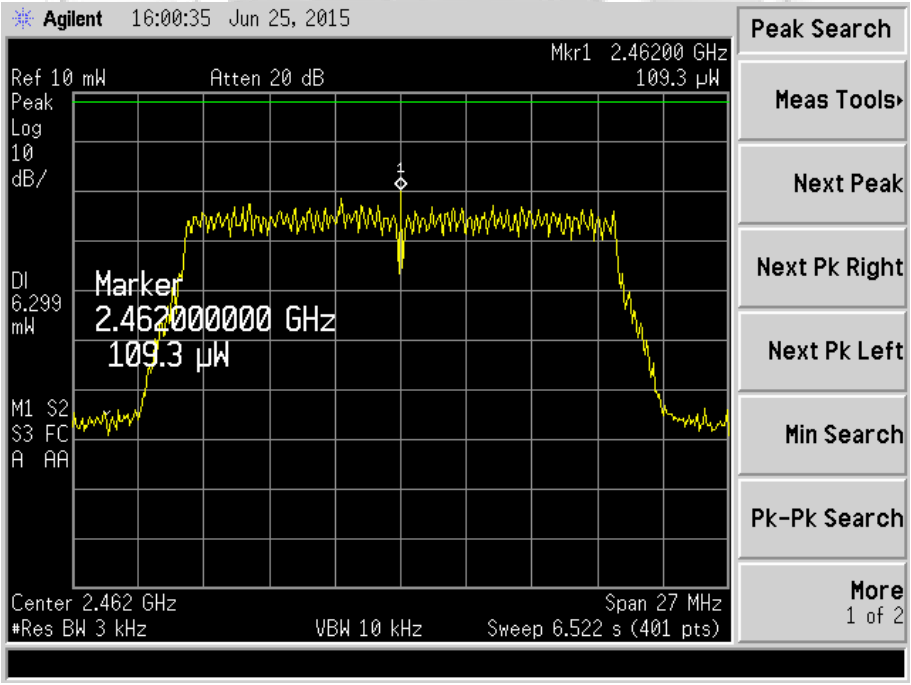


Plot 533 – Channel 11 *(upper ch)* @ QPSK 19.5Mbps

Peak Power Spectral Density Plots – 802.11n



Plot 534 – Channel 11 *(upper ch)* @ 16QAM 39Mbps



Plot 535 Channel 11 *(upper ch)* @ 64QAM 65Mbps

Please note that this Report is issued under the following terms :

1. This report applies to the sample of the specific product/equipment given at the time of its testing/calibration. The results are not used to indicate or imply that they are applicable to other similar items. In addition, such results must not be used to indicate or imply that TÜV SÜD PSB approves, recommends or endorses the manufacturer, supplier or user of such product/equipment, or that TÜV SÜD PSB in any way "guarantees" the later performance of the product/equipment. Unless otherwise stated in this report, no tests were conducted to determine long term effects of using the specific product/equipment.

2. The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client. TÜV SÜD PSB therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.

3. Nothing in this report shall be interpreted to mean that TÜV SÜD PSB has verified or ascertained any endorsement or marks from any other testing authority or bodies that may be found on that sample.

4. This report shall not be reproduced wholly or in parts and no reference shall be made by the Client to TÜV SÜD PSB or to the report or results furnished by TÜV SÜD PSB in any advertisements or sales promotion.

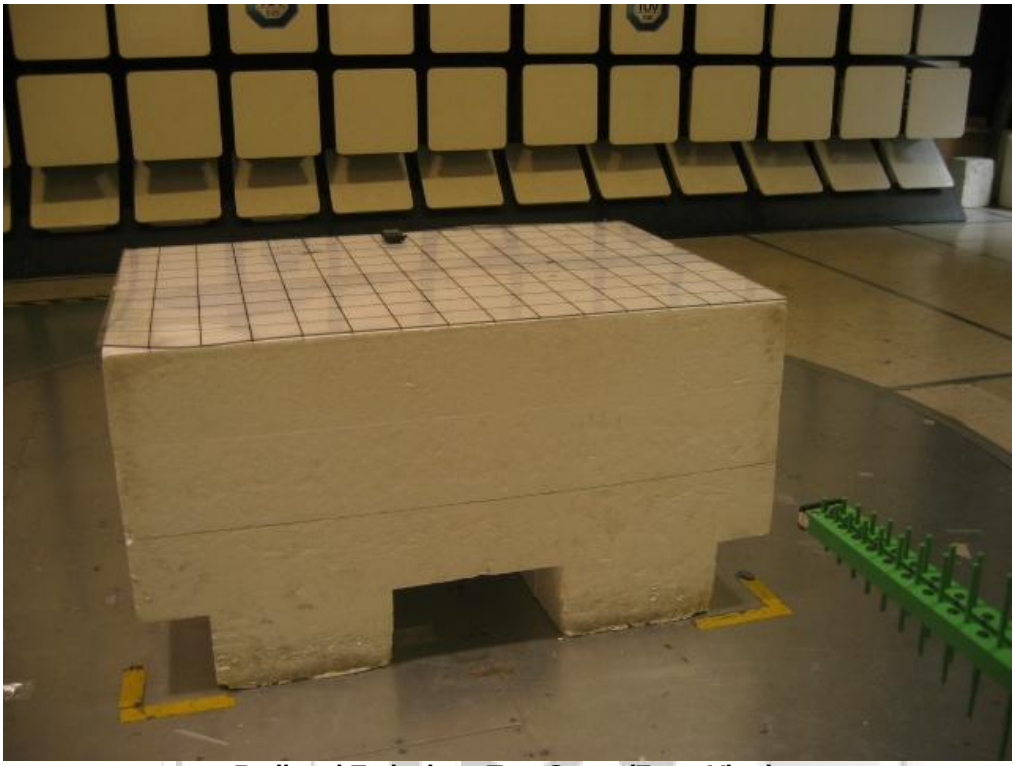
5. Unless otherwise stated, the tests were carried out in TÜV SÜD PSB Pte Ltd, No.1 Science Park Drive Singapore 118221.

July 2011

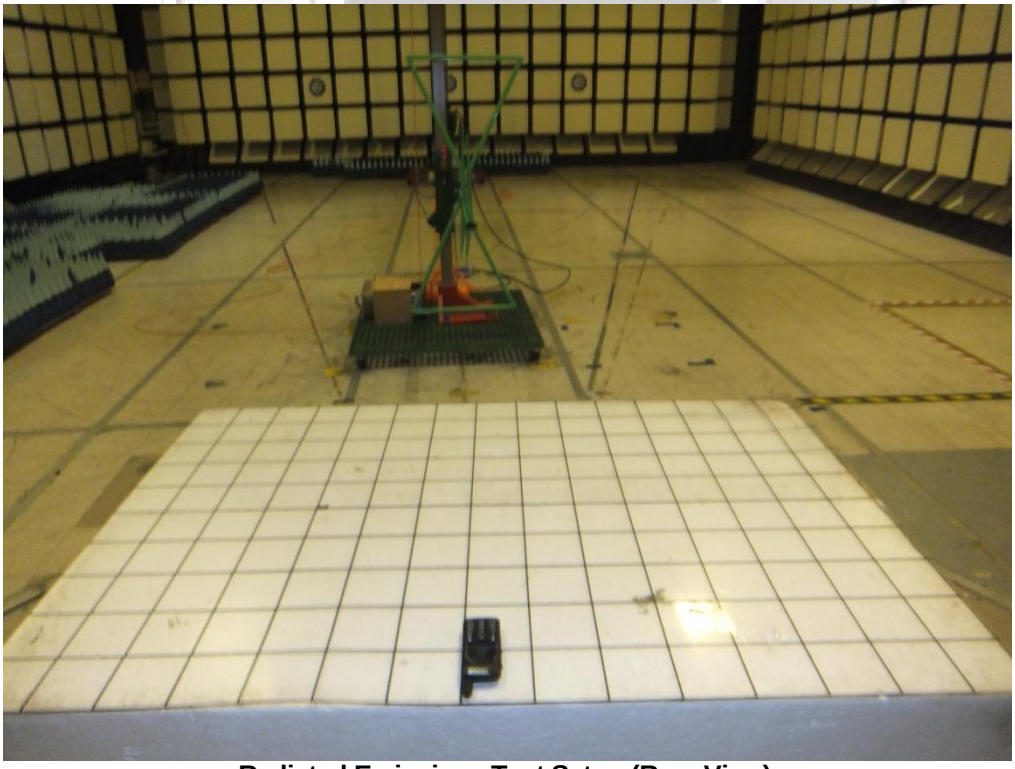
ANNEX A

TEST SETUP / EUT PHOTOGRAPHS / DIAGRAMS

TEST SETUP (30MHz to 1GHz)

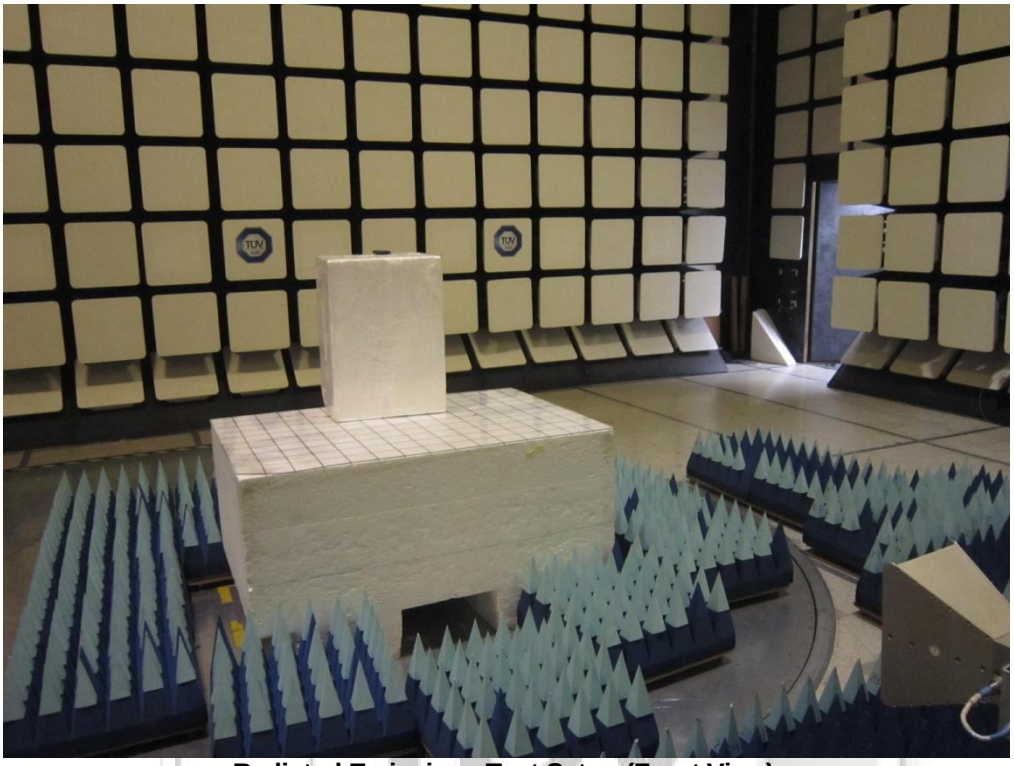


Radiated Emissions Test Setup (Front View)

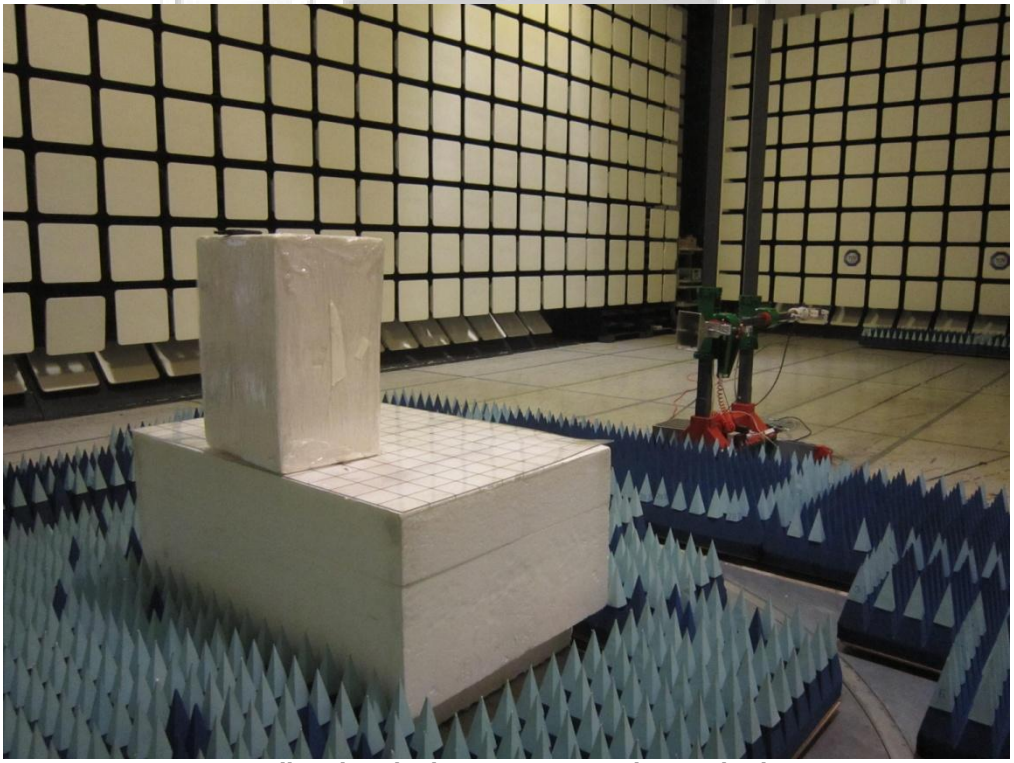


Radiated Emissions Test Setup (Rear View)

TEST SETUP (Above 1GHz)



Radiated Emissions Test Setup (Front View)



Radiated Emissions Test Setup (Rear View)

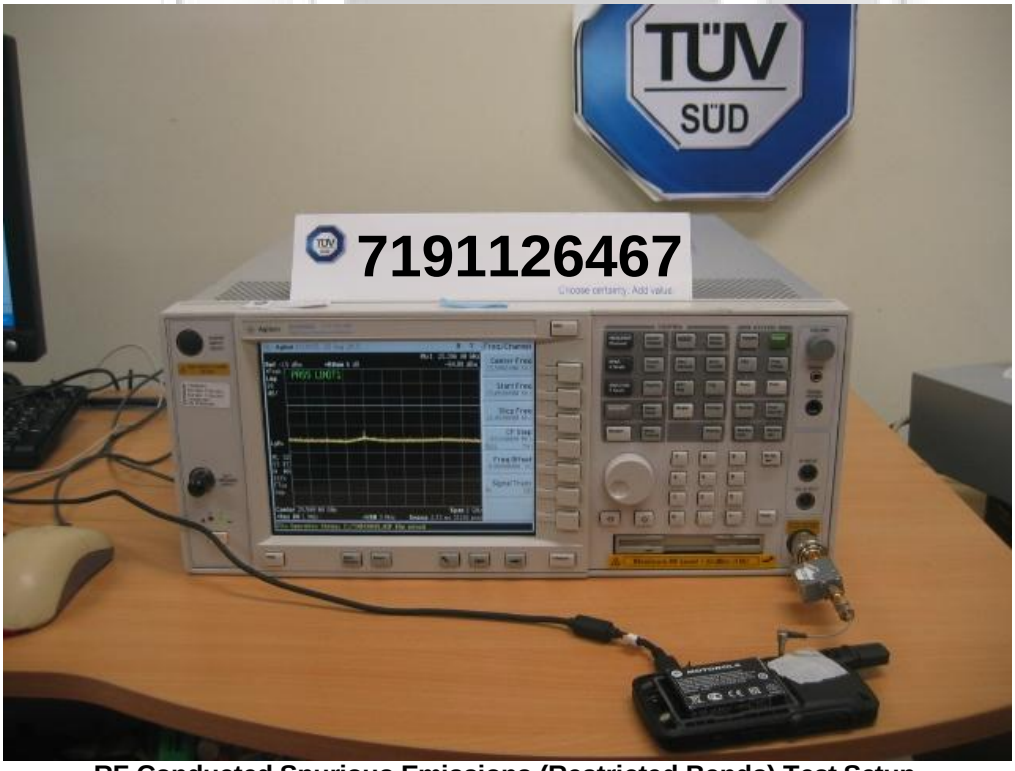
TEST SETUP

Spectrum Bandwidth (6dB Bandwidth Measurement) Test Setup

Maximum Peak Power Test Setup

TEST SETUP

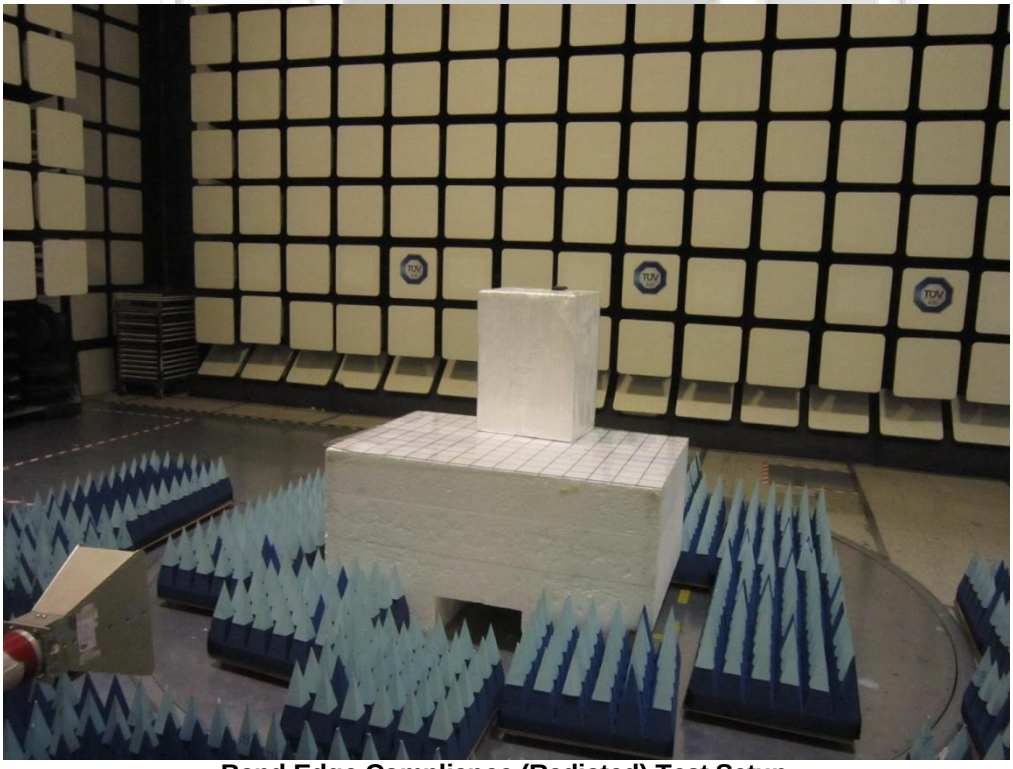
RF Conducted Spurious Emissions (Non-Restricted Bands) Test Setup



RF Conducted Spurious Emissions (Restricted Bands) Test Setup

TEST SETUP

Band Edge Compliance (Conducted) Test Setup



Band Edge Compliance (Radiated) Test Setup

TEST SETUP

Peak Power Spectral Density Test Setup

EUT PHOTOGRAPHS

Front View

Rear View

ANNEX B

USER MANUAL
TECHNICAL DESCRIPTION
BLOCK & CIRCUIT DIAGRAMS

(Please refer to manufacturer for details)

ANNEX C

FCC, IC LABEL & POSITION

ANNEX C FCC LABEL & POSITION

Labelling requirements per Section 2.925 & 15.19

The label shown will be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.

Sample Label & Physical Location of FCC and IC Label on EUT

ANNEX D

TEST SITE DESCRIPTION

Radiated Emission Test Site Description

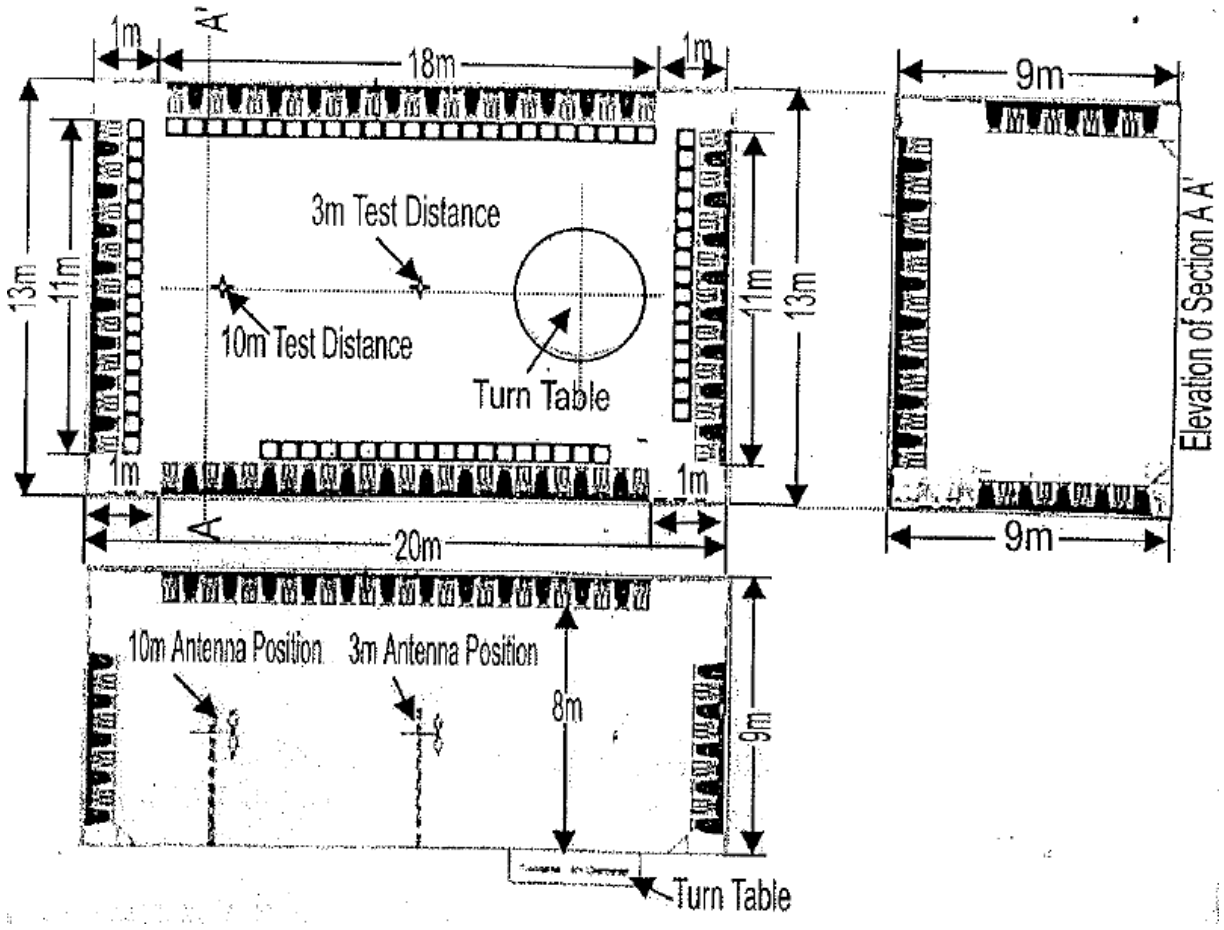
The Radiated Emission test facility consists of a RF-shielded enclosure (Model: 04" x 07") manufactured by Lindgren whose dimensions are shown below. The exterior of the chamber is made of rigid steel panels while the interior is covered with RF absorbing panels on the 4 walls and ceiling. The steel-clad ground place is covered with vinyl flooring.

The Turntable is mounted flushed with the chamber floor and is driven by a pneumatic motor, which is capable of supporting 4,000 kg.

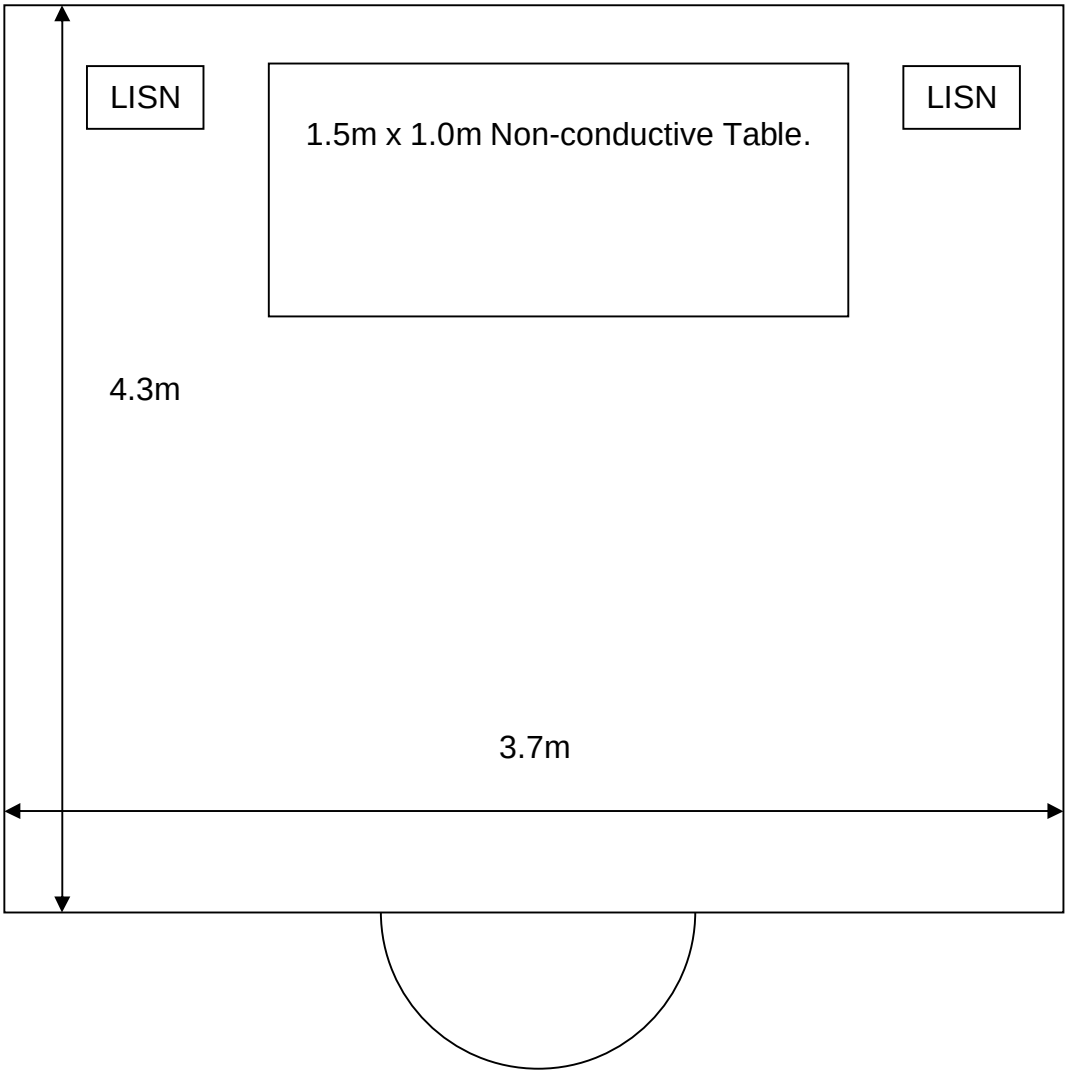
The Boresight Antenna mast is driven by a pneumatic motor with heights variation from 1m- 4m for both vertical and horizontal polarity and with tilt capability.

Both turntable and antenna mast in the chamber are controlled by the system controller stationed outside the chamber.

The physical layout of the chamber is show below:



Conducted Emission Test Site Description

The Conducted Emission facility consists of an RF-shielded enclosure measuring 4.3m x 3.7m x 2.45m manufactured by Universal Shielding Corporation. The Conducted Emission data were taken using two LISNs.

The physical layout of the test site is show below: