Test Report

FCC Part15 Subpart C

Product Name	:	IP-STB
Model No.	:	4400X
FCC ID	:	TC2-R1010
IC	:	5959A-R1010

Applicant	:	Roku Inc.
Address	:	12980 Saratoga Ave, Suite D Saratoga, CA 95070

Date of Receipt	:	Aug. 31, 2015
Test Date	:	Aug. 31, 2015~ Sept. 17, 2015
Issued Date	:	Sept. 24, 2015
Report No.	:	1590118R-RF-US-P06V03
Report Version	:	V1.1

Test Report Certification

Issued Date : Sept. 24, 2015
Report No. : 1590118R-RF-US-P06V03

Product Name	:	IP-STB
Applicant	:	Roku Inc.
Address	:	12980 Saratoga Ave, Suite D Saratoga, CA 95070
Manufacturer	:	Ambit Mircosystems (Shanghai) LTD.
Address	:	1925, Nanle Road, Songjiang Export Processing Zone, Shanghai, China 201613
Model No.	:	4400X
FCC ID	:	TC2-R1010
IC		5959A-R1010
EUT Voltage	:	DC 12V
Brand Name	:	Roku
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C: 2015 ANSI C63.4:2014; ANSI C63.10:2013; KDB 558074 D01v03r03 Industry Canada RSS-Gen Issue 4 Industry Canada RSS-247 Issue 1
Test Result	:	Complied
Performed Location	:	Suzhou EMC Laboratory No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration Number: 800392; IC Lab Code: 4075B

Documented By : Elaine Wang

Reviewed By : Harry Zhao

Approved By : Dream Cao

Laboratory Information

We, **QuieTek Corporation,** are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	**:**	**BSMI, NCC,TAF**
USA	**:**	**FCC**
Japan	**:**	**VCCI**
China	**:**	**CNAS**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site :http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

LinKou Testing Laboratory :
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

Suzhou Testing Laboratory :
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China
TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1590118R-RF-US-P06V03	V1.0	Initial Issued Report	Sept. 22, 2015
1590118R-RF-US-P06V03	V1.1	Modify some modes	Sept. 24, 2015

1. General Information

1.1. EUT Description

Product Name	IP-STB
Brand Name	Roku
Model No.	4400X
EUT Voltage	DC 12V
Frequency Range	**For 2.4GHz Band** 802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz): 2422~2452MHz **For 5GHz Band** 802.11a/n(20MHz)/ac(20MHz):5180~5240MHz, 5745~5825MHz 802.11n(40MHz)/ac(40MHz):5190MHz~5230MHz, 5755~5795MHz 802.11ac(80MHz):5210MHz, 5775MHz
Channel Number	**For 2.4GHz Band** 802.11b/g/n(20MHz): 11 802.11n(40MHz): 7 **For 5GHz Band** 802.11a/n(20MHz)/ac(20MHz): 9 802.11n(40MHz)/ac(40MHz): 4 802.11ac(80MHz): 2
Type of Modulation	802.11b: DSSS
	802.11a/g/n: OFDM
Data Rate	802.11a/g: 6/9/12/18/24/36/48/54 Mbps
	802.11b: 1/2/5.5/11 Mbps
	802.11n: up to 300 Mbps
	802.11ac: up to 866.6 Mbps
Channel Control	Auto
Antenna Delivery	2*Tx + 2*Rx
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List
Components	
Power Adapter	MFR: Roku M/N:W15-024N2A Input: AC 100-120V,0.8A 50-60Hz Output: DC 12V, 2.0A

For 2.4GHz Band

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A
802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

For 5.0GHz Band

802.11a/n(20MHz)/ac(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	N/A	N/A	N/A	N/A	N/A	N/A
802.11n(40MHz)/ac(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz	159	5795 MHz

802.11ac(80MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775MHz	N/A	N/A	N/A	N/A

Antenna List

Antenna No.	Manufacturer	Model No.	Peak Gain
Antenna 1	Airgain	N2430LTMSSDR4-PT	2.39dBi for 2.4GHz 3.6dBi for 5GHz
Antenna 2	Airgain	N2430LTMSSDR4-PT	2.39dBi for 2.4GHz 3.6dBi for 5GHz

. Power Parameter Value of the test software

Test Mode	Test Channel	Ant1	Ant2	MIMO MODE(Ant1+2)
802.11b	2412	62	68	×
	2437	72	72	×
	2462	66	72	×
802.11g	2412	58	64	×
	2437	72	72	×
	2462	66	68	×
802.11n(20MHz)	2412	52	64	48
	2437	72	72	72
	2462	64	68	60
802.11n(40MHz)	2422	40	48	38
	2437	54	58	54
	2452	48	60	56

The test mode of the test software can support.

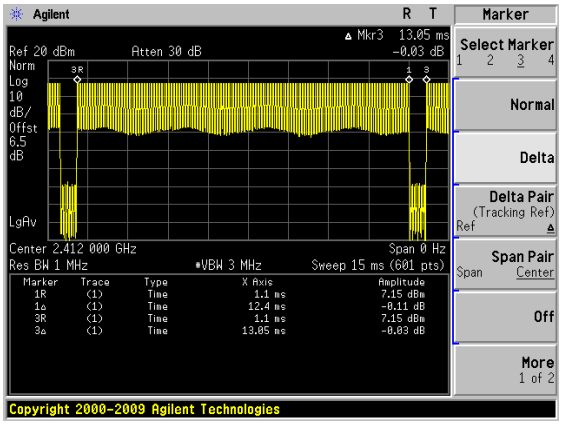
Test Mode	Test Channel	Ant1	Ant2	MIMO MODE(Ant1+2)
802.11b	2412	√	√	×
	2437	√	√	×
	2462	√	√	×
802.11g	2412	√	√	×
	2437	√	√	×
	2462	√	√	×
802.11n(20MHz)	2412	√	√	√
	2437	√	√	√
	2462	√	√	√
802.11n(40MHz)	2422	√	√	√
	2437	√	√	√
	2452	√	√	√

Duty Cycle

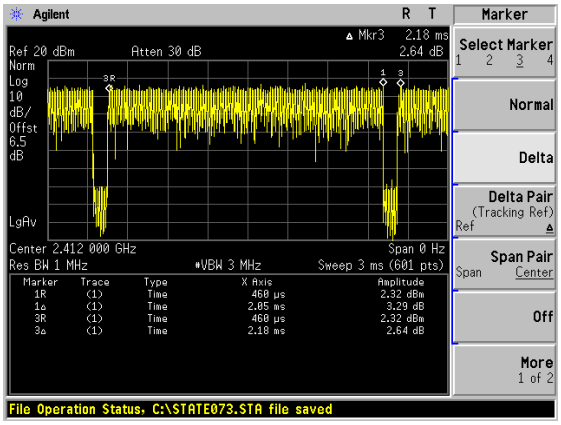
2.4GHz Band

Test Mode	Duty Cycle
802.11b	95.0%
802.11g	94.0%
802.11n(20MHz)	94.6%
802.11n(40MHz)	89.4%

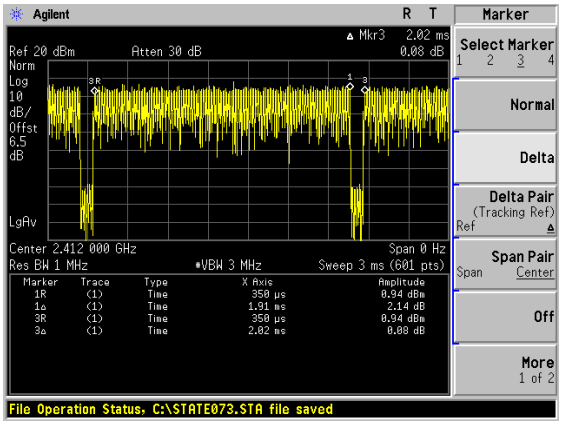
802.11b



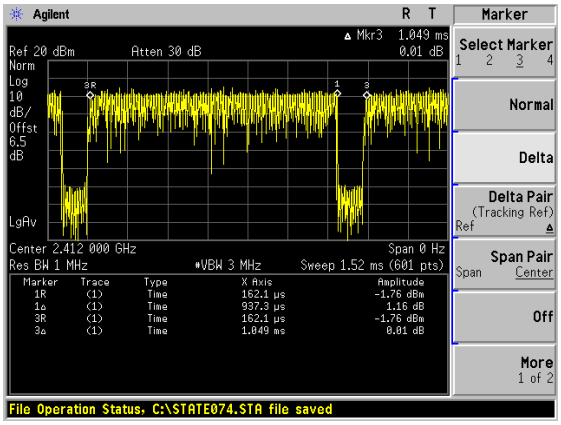
802.11g



802.11n(20MHz)



802.11n(40MHz)



1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11n(20MHz)
Mode 4: Transmit by 802.11n(40MHz)

Note:

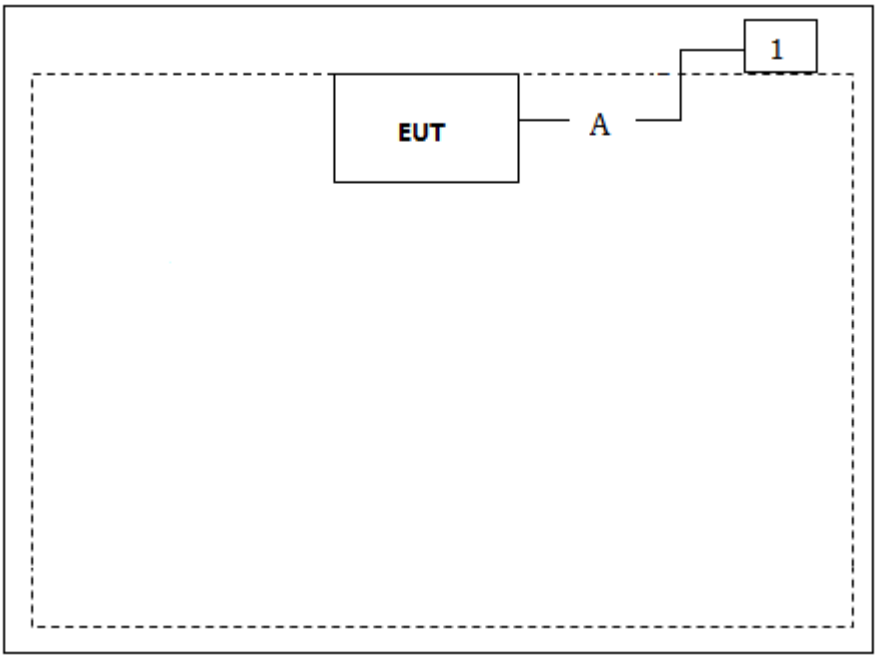
1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

2.1. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Asus	N80V	8BN0AS226971468	N/A

2.2. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	LAN Cable	Control , 0.5m

2.3. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Run the “Mtool”, and set the test mode and channel, then press OK to start continue Transmit or receive.

3. Technical Test

3.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

For FCC

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.207	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	Yes	No
RF Antenna Conducted Spurious	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(d)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	Yes	No
Operation Frequency Range of 20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 15.215(c)	Yes	No
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(2)	Yes	No
Power Output	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	Yes	No
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(e)	Yes	No

For IC

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	RSS-Gen Issue 4 November 2014 Section 8.8	Yes	No
Radiated Emission	RSS-247 Issue 1 May 2015 Section 5.5	Yes	No
RF Antenna Conducted Spurious	RSS-247 Issue 1 May 2015 Section 5.5	Yes	No
Radiated Emission Band Edge	RSS-Gen Issue 4 November 2014 Section 8.10	Yes	No
Occupied Bandwidth	RSS-Gen Issue 4 November 2014 Section 6.6 RSS-247 Issue 1 May 2015 Section 5.2	Yes	No
Power Output	RSS-247 Issue 1 May 2015 Section 5.4	Yes	No
Power Spectral Density	RSS-247 Issue 1 May 2015 Section 5.2	Yes	No

3.2. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

4. Conducted Emission

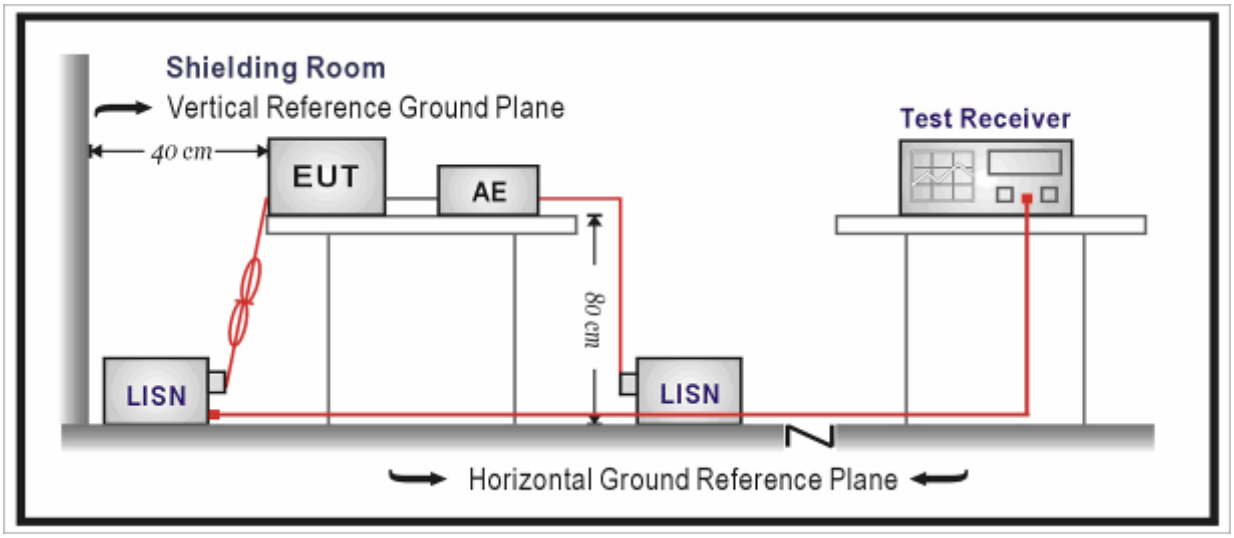
4.1. Test Equipment

Conducted Emission / TR-1

Instrument	Manufacturer	Type No.	Serial No.	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100726	2016.03.28
Two-Line V-Network	R&S	ENV216	100043	2016.03.28
Two-Line V-Network	R&S	ENV216	100044	2016.09.16
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2016.03.01
50ohm Termination	SHX	TF2	07081401	2016.09.16
Temperature/Humidity Meter	zhicheng	ZC1-2	TR1-TH	2016.01.08

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup



4.3. Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 – 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

4.4. Test Procedure

According to FCC ANSI C63.4: 2014 & ANSI C63.10: 2013& FCC 47CFR 15.247& KDB 558074 D01v03r03& Industry Canada RSS-Gen Issue 4& RSS-247 Issue 1

According to KDB 174176 D01 Line Conducted FAQ v01r01, it is required to perform the AC power-line conducted emissions testing and demonstrate compliance with the AC power-line emission requirements in Sections 15.107 or 15.207.

FCC&IC

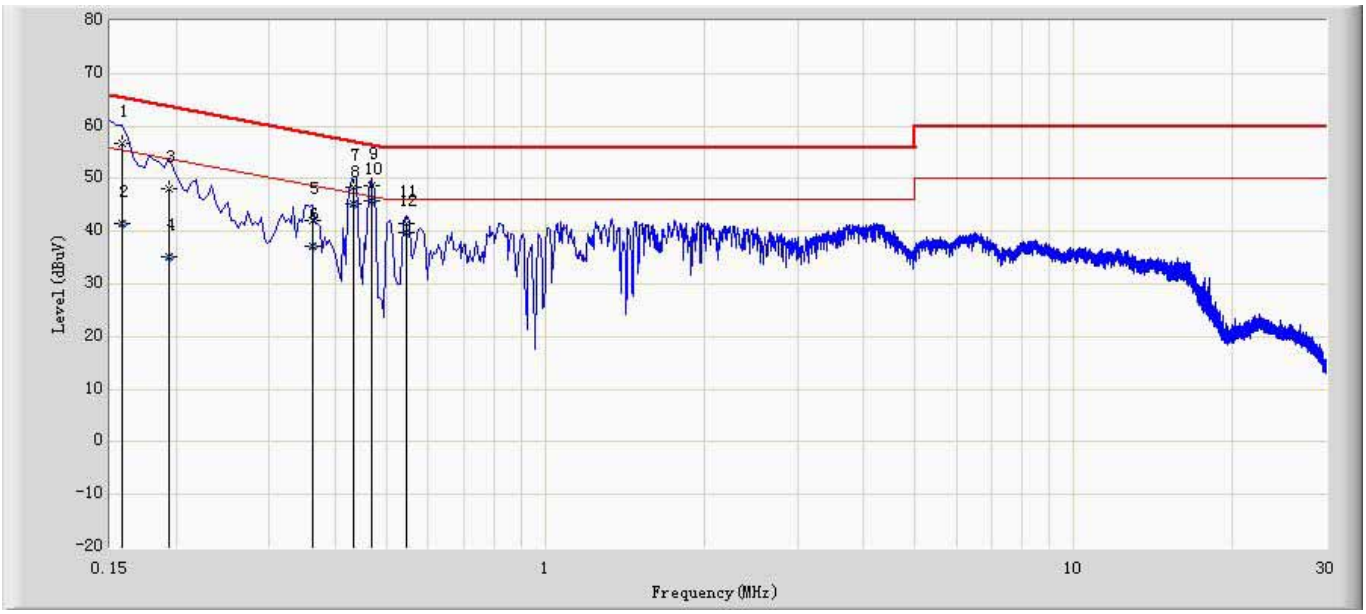
The EUT was setup according to ANSI C63.4, 2014 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

4.5. Uncertainty

The measurement uncertainty is defined as ± 2.02 dB

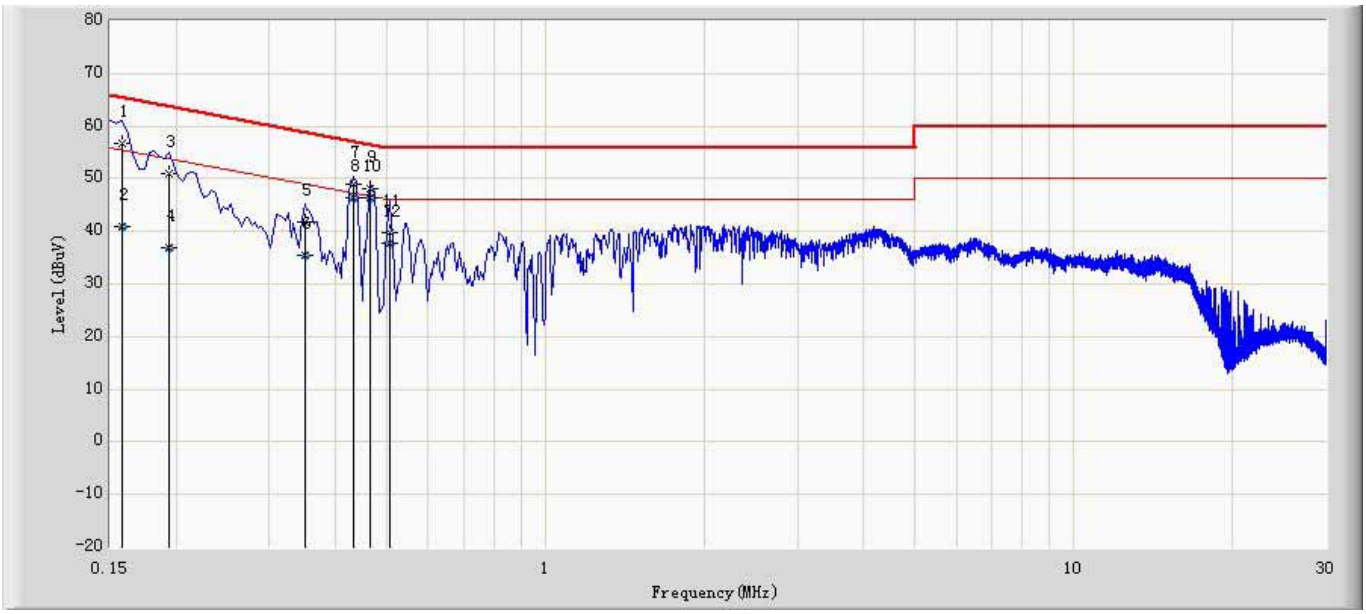
4.6. Test Result

Engineer: Scott	
Site: TR5	Time: 2015/09/06
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101044(0.009-30MHz)	Polarity: Neutral
EUT: IP-STB	Power: AC 120V/60HZ
Note: Mode 1 802.11b CH2412	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.158	56.595	46.864	-8.973	65.568	9.731	QP
2		0.158	41.633	31.902	-13.935	55.568	9.731	AV
3		0.194	48.112	38.392	-15.752	63.864	9.720	QP
4		0.194	35.304	25.584	-18.560	53.864	9.720	AV
5		0.362	42.001	32.299	-16.681	58.682	9.702	QP
6		0.362	37.128	27.426	-11.554	48.682	9.702	AV
7		0.434	48.437	38.729	-8.739	57.176	9.708	QP
8		0.434	45.099	35.391	-2.077	47.176	9.708	AV
9		0.470	48.617	38.917	-7.897	56.514	9.700	QP
10	*	0.470	45.717	36.017	-0.797	46.514	9.700	AV
11		0.546	41.569	31.869	-14.431	56.000	9.700	QP
12		0.546	39.771	30.071	-6.229	46.000	9.700	AV

Engineer: Scott	
Site: TR5	Time: 2015/09/06
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101044(0.009-30MHz)	Polarity: Line
EUT: IP-STB	Power: AC 120V/60Hz
Note: Mode 1 802.11b CH2412	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.158	56.680	46.949	-8.888	65.568	9.731	QP
2		0.158	41.040	31.309	-14.528	55.568	9.731	AV
3		0.194	51.012	41.302	-12.852	63.864	9.710	QP
4		0.194	36.908	27.198	-16.956	53.864	9.710	AV
5		0.350	41.734	32.034	-17.228	58.962	9.700	QP
6		0.350	35.446	25.746	-13.516	48.962	9.700	AV
7		0.434	48.850	39.150	-8.326	57.176	9.700	QP
8		0.434	46.447	36.747	-0.729	47.176	9.700	AV
9		0.466	48.106	38.406	-8.479	56.585	9.700	QP
10	*	0.466	46.275	36.575	-0.310	46.585	9.700	AV
11		0.506	39.911	30.211	-16.089	56.000	9.700	QP
12		0.506	37.782	28.082	-8.218	46.000	9.700	AV

Note: All the test modes are pretested and mode 1 802.11b mode was found to be the worst mode, so the data of this test mode was recorded.

5. Radiated Emission

5.1. Test Equipment

Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No.	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2016.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2015.11.17
Bilog Chainenna	Teseq GmbH	CBL6112D	27611	2015.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2016.03.01
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC2-TH	2016.01.08

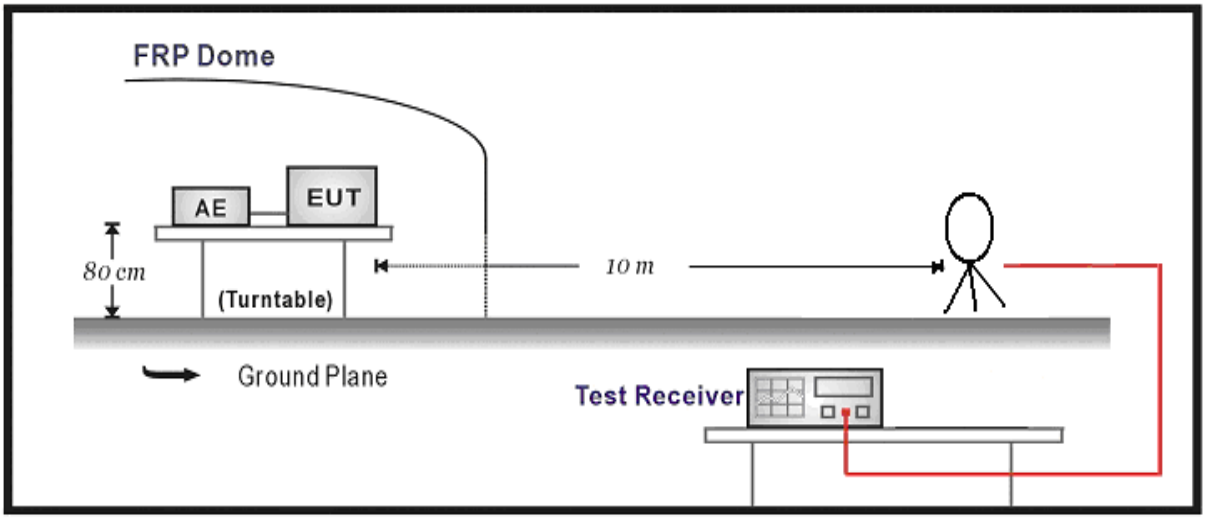
Radiated Emission / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cal. Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2016.03.28
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.07
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2016.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2015.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2016.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.08

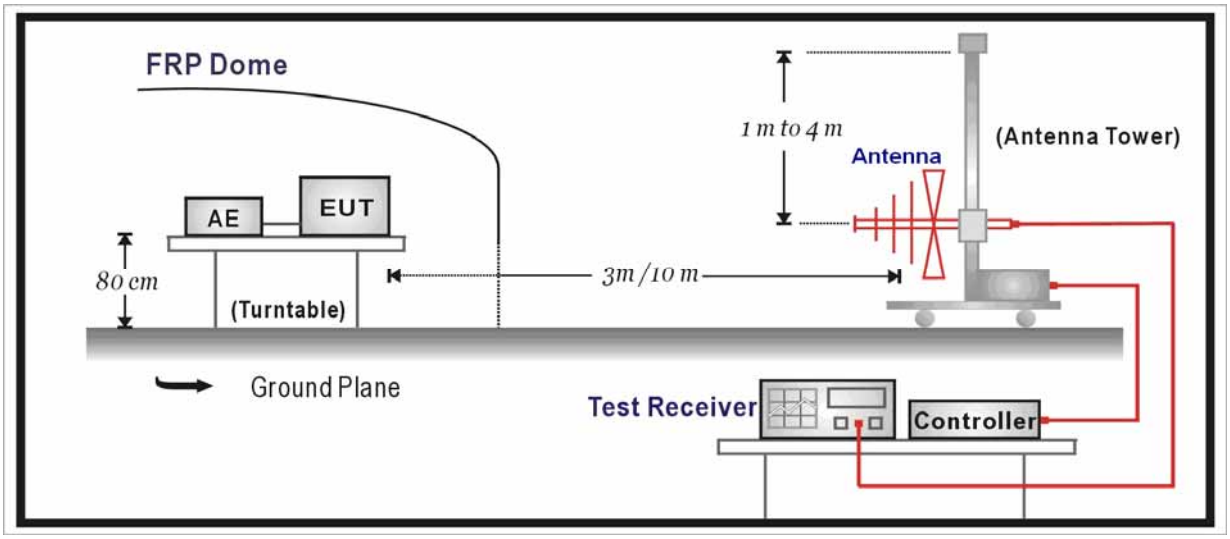
Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

5.2. Test Setup

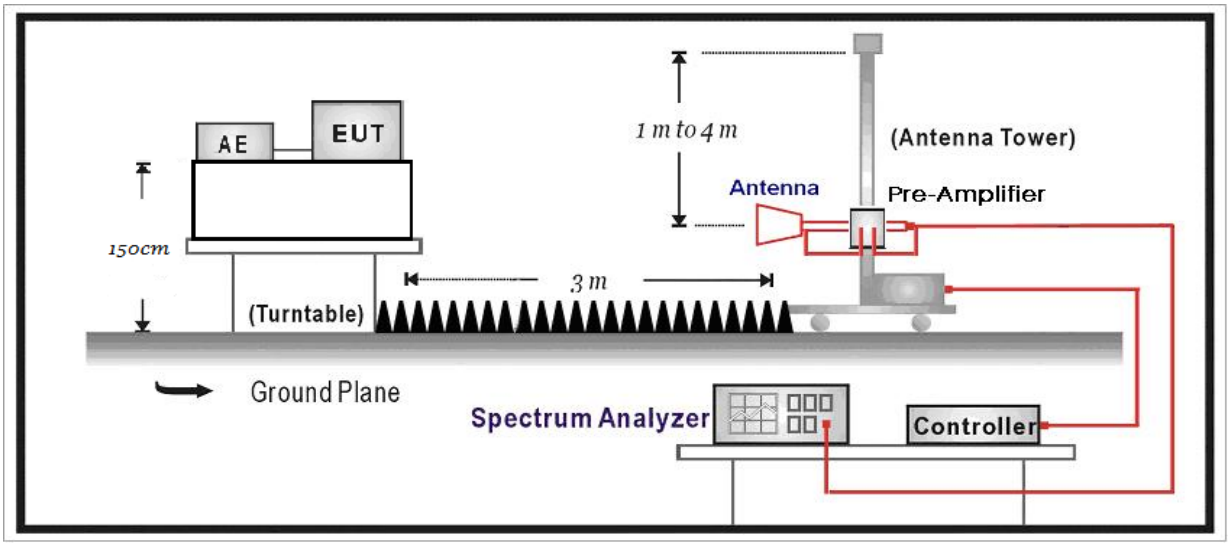
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.3. Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument Antenna and the closed point of any part of the device or system.

Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)

5.4. Test Procedure

According to FCC ANSI C63.4: 2014 & ANSI C63.10: 2013& FCC 47CFR 15.247& KDB 558074 D01v03r03& ndustry Canada RSS-Gen Issue 4& RSS-247 Issue 1

FCC&IC

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from Antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the Antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2014 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn Antenna will be bended down a little (as horn Antenna has the narrow beamwidth) in order to keeping the Antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

5.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB

below 1G is defined as ± 3.8 dB

5.6. Test Result

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Mode1: Transmit by 802.11b-Ant1

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	4824.0	51.3	-6.7	44.6	54(note3)	-9.4	PK
	V	4824.0	51.5	-6.7	44.8	54(note3)	-9.2	PK
	H	7236.0	47.1	-2.6	44.5	54(note3)	-9.5	PK
	V	7236.0	47.2	-2.6	44.6	54(note3)	-9.4	PK
	H	9648.0	44.3	1.0	45.3	54(note3)	-8.7	PK
	V	9648.0	44.1	1.0	45.1	54(note3)	-8.9	PK
6	H	4874.0	49.8	-6.6	43.2	54(note3)	-10.8	PK
	V	4874.0	50.5	-6.6	43.9	54(note3)	-10.1	PK
	H	7311.0	49.3	-2.9	46.4	54(note3)	-7.6	PK
	V	7311.0	49.3	-2.9	46.4	54(note3)	-7.6	PK
	H	9748.0	44.6	1.0	45.6	54(note3)	-8.4	PK
	V	9748.0	45.7	1.0	46.7	54(note3)	-7.3	PK
11	H	4924.0	49.2	-6.7	42.5	54(note3)	-11.5	PK
	V	4874.0	50.5	-6.6	43.9	54(note3)	-10.1	PK
	H	7386.0	47.6	-2.4	45.2	54(note3)	-8.8	PK
	V	7311.0	49.3	-2.9	46.4	54(note3)	-7.6	PK
	H	9848.0	43.5	1.2	44.7	54(note3)	-9.3	PK
	V	9748.0	45.7	1.0	46.7	54(note3)	-7.3	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode2: Transmit by 802.11g-Ant1

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	4824.0	49.0	-6.7	42.3	54(note3)	-11.7	PK
	V	7236.0	47.2	-2.6	44.6	54(note3)	-11.2	PK
	H	7236.0	47.1	-2.6	44.5	54(note3)	-13.4	PK
	V	9648.0	44.4	1.0	45.4	54(note3)	-13.0	PK
	H	9648.0	43.9	1.0	44.9	54(note3)	-12.7	PK
	V	4824.0	49.0	-6.7	42.3	54(note3)	-12.7	PK
6	H	4824.0	49.0	-6.7	42.3	54(note3)	-11.7	PK
	V	4824.0	48.7	-6.7	42.0	54(note3)	-12.0	PK
	H	7236.0	47.2	-2.6	44.6	54(note3)	-9.4	PK
	V	7236.0	47.1	-2.6	44.5	54(note3)	-9.5	PK
	H	9648.0	44.4	1.0	45.4	54(note3)	-8.6	PK
	V	9648.0	43.9	1.0	44.9	54(note3)	-9.1	PK
11	H	4924.0	49.0	-6.7	42.3	54(note3)	-11.7	PK
	V	4924.0	49.3	-6.7	42.6	54(note3)	-11.4	PK
	H	7386.0	46.9	-2.4	44.5	54(note3)	-9.5	PK
	V	7386.0	48.7	-2.4	46.3	54(note3)	-7.7	PK
	H	9848.0	43.9	1.2	45.1	54(note3)	-8.9	PK
	V	9848.0	43.6	1.2	44.8	54(note3)	-9.2	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode3: Transmit by 802.11n(20MHz)-Ant1

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	4824.0	47.8	-6.7	41.1	54(note3)	-12.9	PK
	V	4824.0	48.2	-6.7	41.5	54(note3)	-12.5	PK
	H	7236.0	46.9	-2.6	44.3	54(note3)	-9.7	PK
	V	7236.0	47.7	-2.6	45.0	54(note3)	-9.0	PK
	H	9648.0	44.1	1.0	45.1	54(note3)	-8.9	PK
	V	9648.0	44.3	1.0	45.3	54(note3)	-8.7	PK
6	H	4874.0	48.7	-6.6	42.1	54(note3)	-11.9	PK
	V	4874.0	48.3	-6.6	41.7	54(note3)	-12.3	PK
	H	7311.0	49.5	-2.9	46.6	54(note3)	-7.4	PK
	V	7311.0	49.5	-2.9	46.6	54(note3)	-7.4	PK
	H	9748.0	44.0	1.0	45.0	54(note3)	-9.0	PK
	V	9748.0	44.0	1.0	45.0	54(note3)	-9.0	PK
11	H	4924.0	48.4	-6.7	41.7	54(note3)	-12.3	PK
	V	4924.0	48.4	-6.7	41.7	54(note3)	-12.3	PK
	H	7386.0	47.2	-2.4	44.8	54(note3)	-9.2	PK
	V	7386.0	47.0	-2.4	44.6	54(note3)	-9.4	PK
	H	9848.0	43.6	1.2	44.7	54(note3)	-9.3	PK
	V	9848.0	43.7	1.2	44.9	54(note3)	-9.1	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode4: Transmit by 802.11n(40MHz)-Ant1

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
3	H	4844.0	49.4	-6.6	42.8	54(note3)	-11.2	PK
	V	4844.0	48.7	-6.6	42.1	54(note3)	-11.9	PK
	H	7266.0	47.0	-2.7	44.3	54(note3)	-9.7	PK
	V	7266.0	47.9	-2.7	45.1	54(note3)	-8.9	PK
	H	9688.0	44.9	0.8	45.8	54(note3)	-8.2	PK
	V	9688.0	44.1	0.8	44.9	54(note3)	-9.1	PK
6	H	4874.0	47.8	-6.6	41.2	54(note3)	-12.8	PK
	V	4874.0	47.7	-6.6	41.1	54(note3)	-12.9	PK
	H	7311.0	47.3	-2.9	44.3	54(note3)	-9.7	PK
	V	7311.0	46.8	-2.9	43.9	54(note3)	-10.1	PK
	H	9748.0	43.9	1.0	44.9	54(note3)	-9.1	PK
	V	9748.0	44.0	1.0	45.0	54(note3)	-9.0	PK
9	H	4904.0	48.0	-6.7	41.3	54(note3)	-12.7	PK
	V	4904.0	47.8	-6.7	41.2	54(note3)	-12.8	PK
	H	7356.0	46.9	-2.5	44.4	54(note3)	-9.6	PK
	V	7356.0	47.0	-2.5	44.5	54(note3)	-9.5	PK
	H	9808.0	45.4	1.3	46.7	54(note3)	-7.3	PK
	V	9808.0	43.9	1.3	45.2	54(note3)	-8.8	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode1: Transmit by 802.11b-Ant2

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	4824.0	51.5	-6.7	44.8	54(note3)	-9.2	PK
	V	4824.0	48.2	-6.7	41.5	54(note3)	-12.5	PK
	H	7236.0	47.4	-2.6	44.8	54(note3)	-9.2	PK
	V	7236.0	49.0	-2.6	46.4	54(note3)	-7.7	PK
	H	9648.0	43.8	1.0	44.8	54(note3)	-9.2	PK
	V	9648.0	43.5	1.0	44.5	54(note3)	-9.5	PK
6	H	4874.0	49.6	-6.6	43.0	54(note3)	-11.0	PK
	V	4874.0	47.8	-6.6	41.2	54(note3)	-12.8	PK
	H	7311.0	49.8	-2.9	46.9	54(note3)	-7.1	PK
	V	7311.0	50.8	-2.9	47.9	54(note3)	-6.1	PK
	H	9748.0	45.3	1.0	46.4	54(note3)	-7.6	PK
	V	9748.0	44.4	1.0	45.5	54(note3)	-8.5	PK
11	H	4924.0	49.3	-6.7	42.6	54(note3)	-11.4	PK
	V	4924.0	48.2	-6.7	41.5	54(note3)	-12.5	PK
	H	7386.0	48.0	-2.4	45.6	54(note3)	-8.4	PK
	V	7386.0	47.8	-2.4	45.4	54(note3)	-8.6	PK
	H	9848.0	43.1	1.2	44.3	54(note3)	-9.7	PK
	V	9848.0	44.7	1.2	45.9	54(note3)	-8.1	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode2: Transmit by 802.11g-Ant2

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	4824.0	48.0	-6.7	41.3	54(note3)	-12.7	PK
	V	4824.0	48.1	-6.7	41.5	54(note3)	-12.5	PK
	H	7236.0	46.5	-2.6	43.9	54(note3)	-10.1	PK
	V	7236.0	46.7	-2.6	44.1	54(note3)	-9.9	PK
	H	9648.0	43.7	1.0	44.7	54(note3)	-9.3	PK
	V	9648.0	43.9	1.0	44.9	54(note3)	-9.1	PK
6	H	4874.0	49.0	-6.6	42.4	54(note3)	-11.6	PK
	V	4874.0	48.3	-6.6	41.7	54(note3)	-12.3	PK
	H	7311.0	48.4	-2.9	45.5	54(note3)	-8.5	PK
	V	7311.0	49.3	-2.9	46.4	54(note3)	-7.6	PK
	H	9748.0	44.2	1.0	45.2	54(note3)	-8.8	PK
	V	9748.0	44.6	1.0	45.6	54(note3)	-8.4	PK
11	H	4924.0	48.7	-6.7	42.0	54(note3)	-12.0	PK
	V	4924.0	47.9	-6.7	41.2	54(note3)	-12.8	PK
	H	7386.0	46.7	-2.4	44.3	54(note3)	-9.7	PK
	V	7386.0	47.2	-2.4	44.8	54(note3)	-9.3	PK
	H	9848.0	43.6	1.2	44.8	54(note3)	-9.2	PK
	V	9848.0	43.5	1.2	44.6	54(note3)	-9.4	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode3: Transmit by 802.11n(20MHz)-Ant2

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	4824.0	48.2	-6.7	41.5	54(note3)	-12.5	PK
	V	4824.0	48.8	-6.7	42.1	54(note3)	-11.9	PK
	H	7236.0	47.1	-2.6	44.5	54(note3)	-9.5	PK
	V	7236.0	46.4	-2.6	43.8	54(note3)	-10.2	PK
	H	9648.0	44.9	1.0	45.9	54(note3)	-8.1	PK
	V	9648.0	43.9	1.0	44.9	54(note3)	-9.1	PK
6	H	4874.0	48.3	-6.6	41.7	54(note3)	-12.3	PK
	V	4874.0	48.9	-6.6	42.3	54(note3)	-11.7	PK
	H	7311.0	47.6	-2.9	44.6	54(note3)	-9.4	PK
	V	7311.0	48.6	-2.9	45.7	54(note3)	-8.3	PK
	H	9748.0	44.6	1.0	45.6	54(note3)	-8.4	PK
	V	9748.0	44.3	1.0	45.3	54(note3)	-8.7	PK
11	H	4924.0	48.5	-6.7	41.8	54(note3)	-12.2	PK
	V	4924.0	47.7	-6.7	41.0	54(note3)	-13.0	PK
	H	7386.0	47.6	-2.4	45.2	54(note3)	-8.8	PK
	V	7386.0	46.1	-2.4	43.7	54(note3)	-10.3	PK
	H	9848.0	43.2	1.2	44.3	54(note3)	-9.7	PK
	V	9848.0	42.9	1.2	44.1	54(note3)	-9.9	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode4: Transmit by 802.11n(40MHz)-Ant2

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
3	H	4844.0	48.0	-6.6	41.4	54(note3)	-12.6	PK
	V	4844.0	48.6	-6.6	41.9	54(note3)	-12.1	PK
	H	7266.0	47.0	-2.7	44.3	54(note3)	-9.7	PK
	V	7266.0	47.4	-2.7	44.6	54(note3)	-9.4	PK
	H	9688.0	44.3	0.8	45.1	54(note3)	-8.9	PK
	V	9688.0	44.5	0.8	45.4	54(note3)	-8.6	PK
6	H	4874.0	47.8	-6.6	41.2	54(note3)	-12.8	PK
	V	4874.0	47.5	-6.6	40.9	54(note3)	-13.1	PK
	H	7311.0	47.2	-2.9	44.3	54(note3)	-9.7	PK
	V	7311.0	47.4	-2.9	44.5	54(note3)	-9.5	PK
	H	9748.0	44.9	1.0	45.9	54(note3)	-8.1	PK
	V	9748.0	44.0	1.0	45.1	54(note3)	-8.9	PK
9	H	4904.0	48.6	-6.7	41.9	54(note3)	-12.1	PK
	V	4904.0	48.0	-6.7	41.3	54(note3)	-12.7	PK
	H	7356.0	46.5	-2.5	44.0	54(note3)	-10.0	PK
	V	7356.0	46.3	-2.5	43.8	54(note3)	-10.2	PK
	H	9808.0	44.5	1.3	45.8	54(note3)	-8.2	PK
	V	9808.0	44.9	1.3	46.2	54(note3)	-7.8	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode3: Transmit by 802.11n(20MHz)-Ant1+2

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	4824.0	48.4	-6.7	41.7	54(note3)	-12.3	PK
	V	4824.0	48.2	-6.7	41.6	54(note3)	-12.4	PK
	H	7236.0	46.1	-2.6	43.5	54(note3)	-10.5	PK
	V	7236.0	46.8	-2.6	44.2	54(note3)	-9.8	PK
	H	9648.0	44.3	1.0	45.3	54(note3)	-8.7	PK
	V	9648.0	45.2	1.0	46.2	54(note3)	-7.8	PK
6	H	4874.0	49.4	-6.6	42.8	54(note3)	-11.2	PK
	V	4874.0	48.1	-6.6	41.5	54(note3)	-12.5	PK
	H	7311.0	48.9	-2.9	46.0	54(note3)	-8.0	PK
	V	7311.0	50.1	-2.9	47.2	54(note3)	-6.8	PK
	H	9748.0	44.9	1.0	45.9	54(note3)	-8.1	PK
	V	9748.0	44.6	1.0	45.6	54(note3)	-8.4	PK
11	H	4924.0	48.7	-6.7	42.0	54(note3)	-12.0	PK
	V	4924.0	49.4	-6.7	42.7	54(note3)	-11.3	PK
	H	7386.0	47.2	-2.4	44.8	54(note3)	-9.2	PK
	V	7386.0	47.3	-2.4	44.9	54(note3)	-9.1	PK
	H	9848.0	44.3	1.2	45.5	54(note3)	-8.5	PK
	V	9848.0	44.4	1.2	45.5	54(note3)	-8.5	PK

Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode4: Transmit by 802.11n(40MHz)-Ant1+2

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
3	H	4844.0	48.8	-6.6	42.2	54(note3)	-11.9	PK
	V	4844.0	48.7	-6.6	42.1	54(note3)	-11.9	PK
	H	7266.0	47.8	-2.7	45.1	54(note3)	-8.9	PK
	V	7266.0	46.8	-2.7	44.1	54(note3)	-9.9	PK
	H	9688.0	45.1	0.8	45.9	54(note3)	-8.1	PK
	V	9688.0	44.2	0.8	45.1	54(note3)	-8.9	PK
6	H	4874.0	47.9	-6.6	41.3	54(note3)	-12.7	PK
	V	4874.0	48.0	-6.6	41.4	54(note3)	-12.6	PK
	H	7311.0	46.9	-2.9	44.0	54(note3)	-10.0	PK
	V	7311.0	47.4	-2.9	44.5	54(note3)	-9.5	PK
	H	9748.0	45.0	1.0	46.0	54(note3)	-8.0	PK
	V	9748.0	44.4	1.0	45.4	54(note3)	-8.6	PK
9	H	4904.0	48.5	-6.7	41.8	54(note3)	-12.2	PK
	V	4904.0	48.6	-6.7	41.9	54(note3)	-12.1	PK
	H	7356.0	46.6	-2.5	44.1	54(note3)	-9.9	PK
	V	7356.0	48.3	-2.5	45.8	54(note3)	-8.2	PK
	H	9808.0	44.4	1.3	45.7	54(note3)	-8.3	PK
	V	9808.0	45.0	1.3	46.3	54(note3)	-7.7	PK

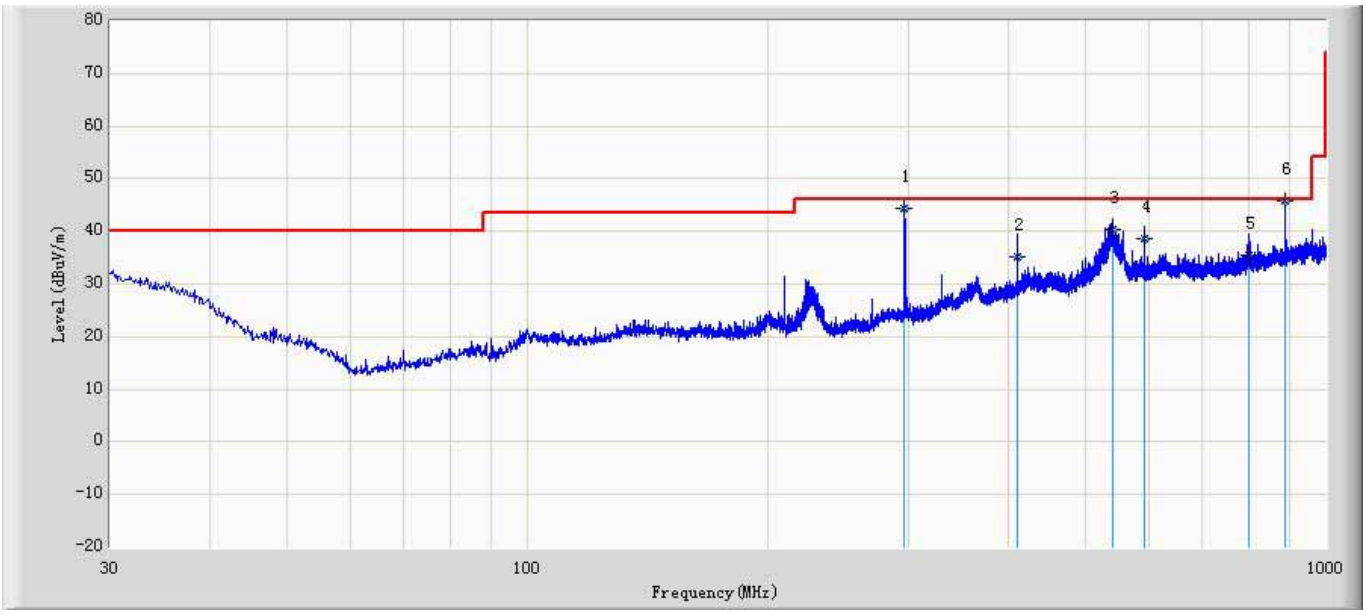
Note: 1. Measure Level = Reading Level + Factor.

2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

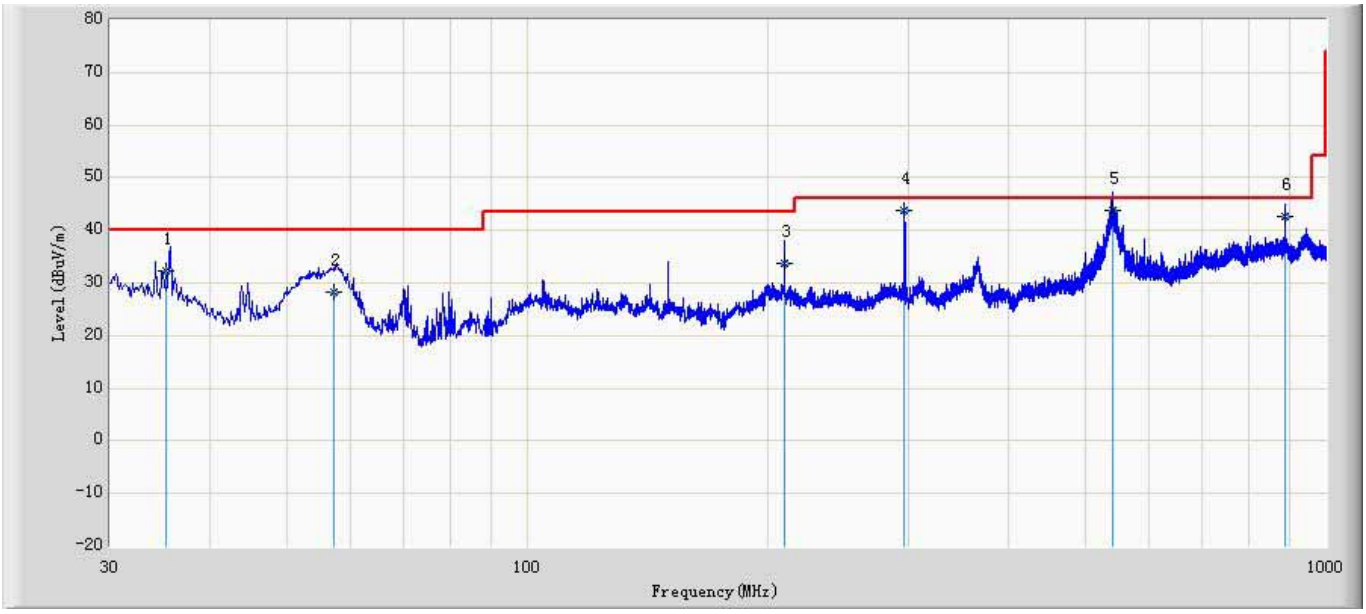
The worst case of Radiated Emission below 1GHz:

Engineer: Scott	
Site: AC2	Time: 2015/09/06
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_10M(30-1000M)20150408	Polarity: Horizontal
EUT: IP-STB	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		296.728	44.474	29.322	-1.526	46.000	15.152	QP
2		410.236	35.100	16.655	-10.900	46.000	18.445	QP
3		540.236	40.300	19.014	-5.700	46.000	21.286	QP
4		593.125	38.500	16.840	-7.500	46.000	21.660	QP
5		800.236	35.600	12.488	-10.400	46.000	23.112	QP
6	*	890.241	45.936	22.175	-0.064	46.000	23.761	QP

Engineer: Scott	
Site: AC2	Time: 2015/09/06
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_10M(30-1000M)20150408	Polarity: Vertical
EUT: IP-STB	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		35.236	32.200	15.793	-7.800	40.000	16.407	QP
2		57.125	28.200	20.391	-11.800	40.000	7.809	QP
3		209.526	33.600	22.814	-9.900	43.500	10.786	QP
4		296.729	43.679	28.527	-2.321	46.000	15.152	QP
5	*	540.754	43.890	22.586	-2.110	46.000	21.304	QP
6		890.202	42.752	18.991	-3.248	46.000	23.761	QP

6. RF Antenna Conducted Spurious

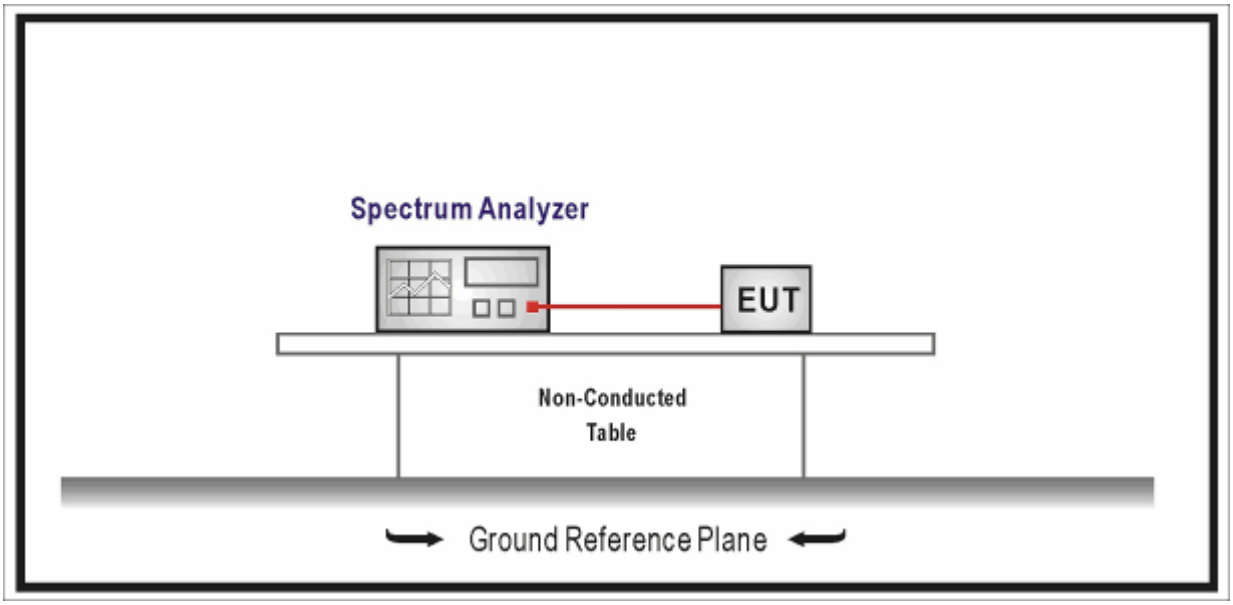
6.1. Test Equipment

RF Antenna Conducted Spurious / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.03.10
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2016.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

6.2. Test Setup



6.3. Limit

FCC&IC

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

6.4. Test Procedure

According to FCC ANSI C63.4: 2014 & ANSI C63.10: 2013& FCC 47CFR 15.247& KDB 558074 D01v03r03& Industry Canada RSS-Gen Issue 4& RSS-247 Issue 1

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

6.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

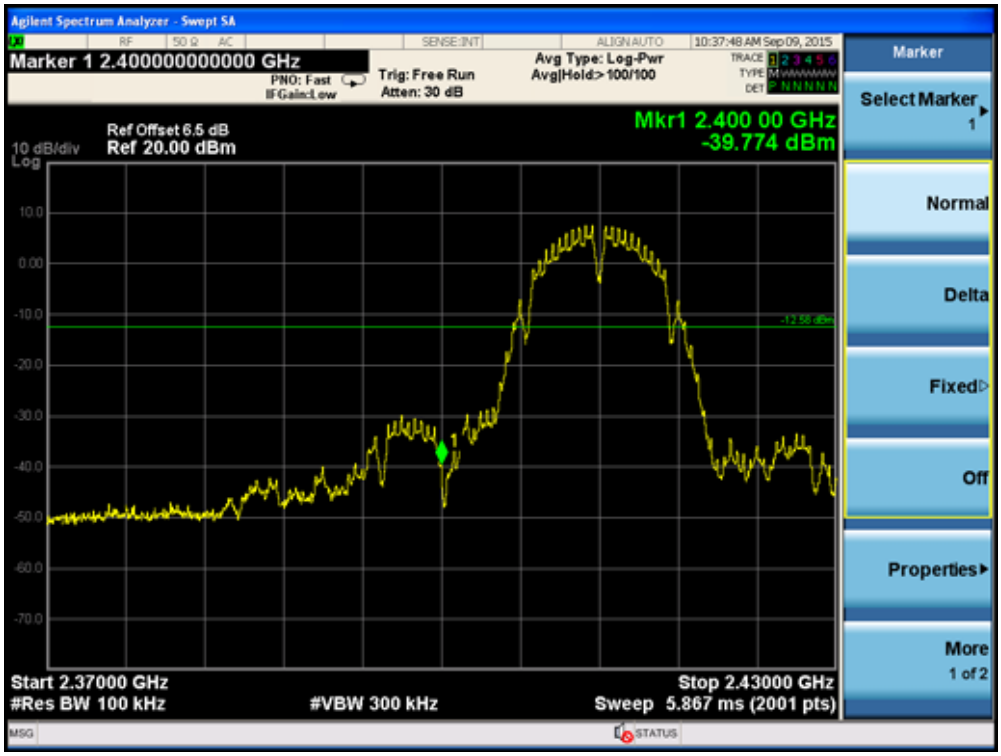
6.6. Test Result

Product	:	IP-STB
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b

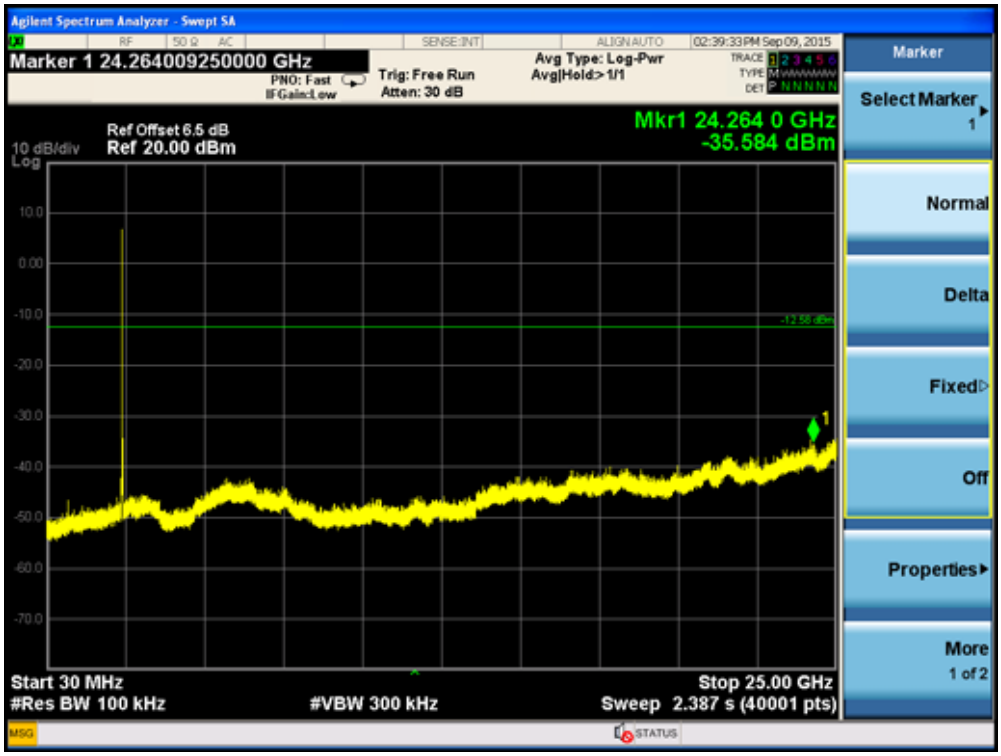
Channel 01 (2412MHz)-Ant 1

Reference Level – Frequency L

Low Band Edge - Frequency L

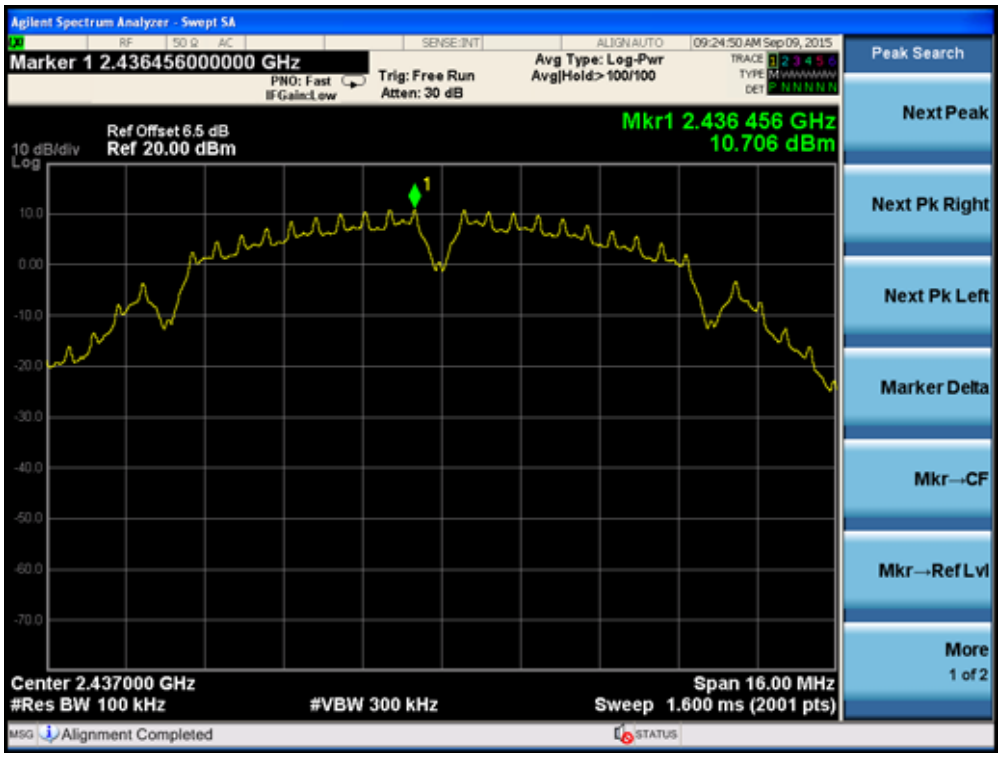


Spurious Emission 30MHz ~ 25GHz - Frequency L

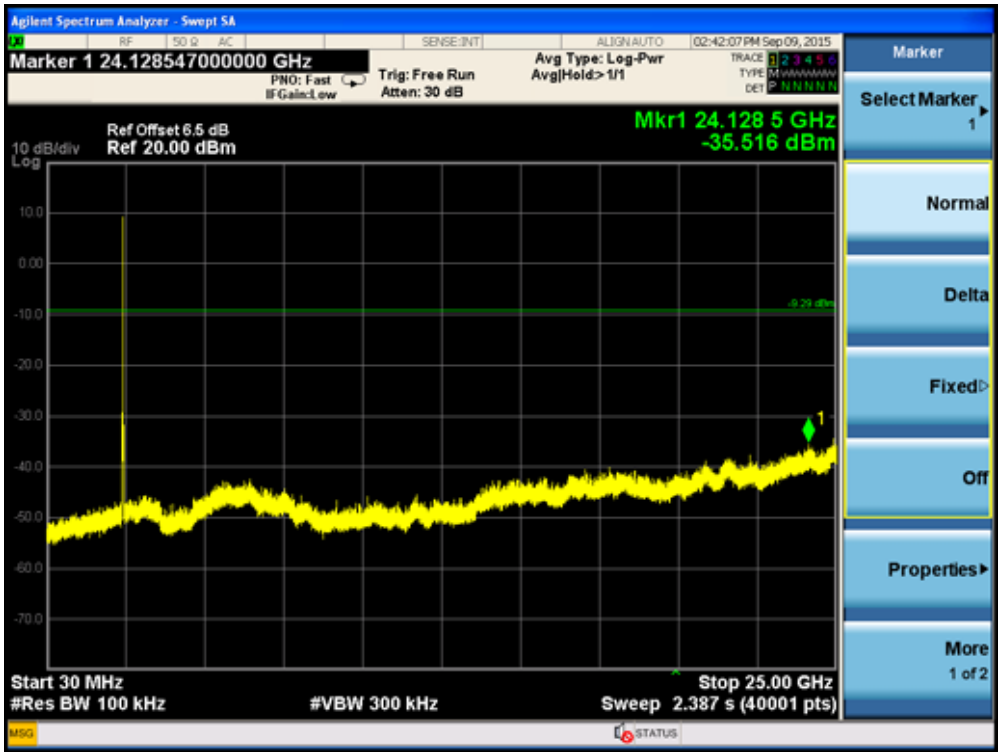


Channel 06 (2437MHz)-Ant 1

Reference Level – Frequency M



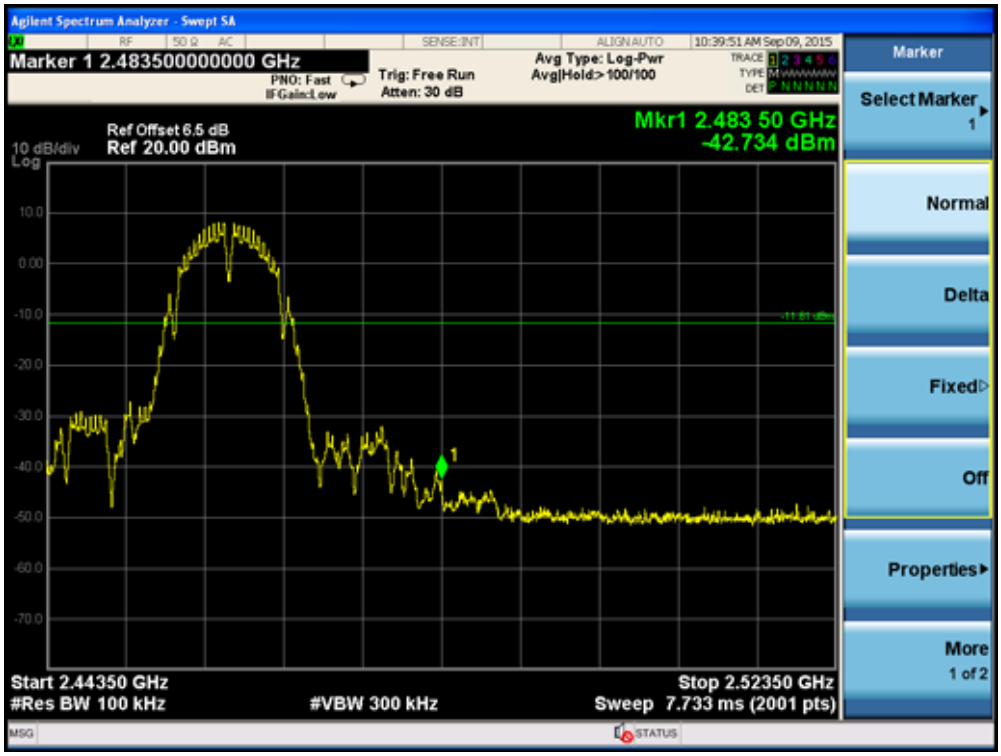
Spurious Emission 30MHz ~ 25GHz - Frequency M



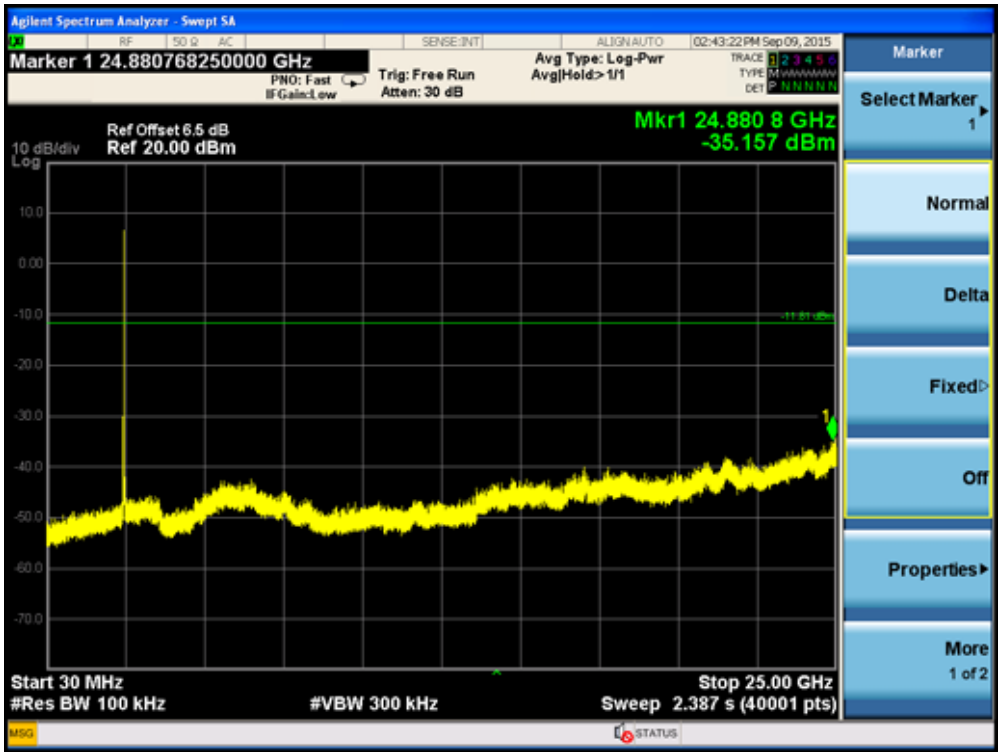
Channel 11 (2462MHz)-Ant 1

Reference Level – Frequency H

High Band Edge - Frequency H



Spurious Emission 30MHz ~ 25GHz - Frequency H

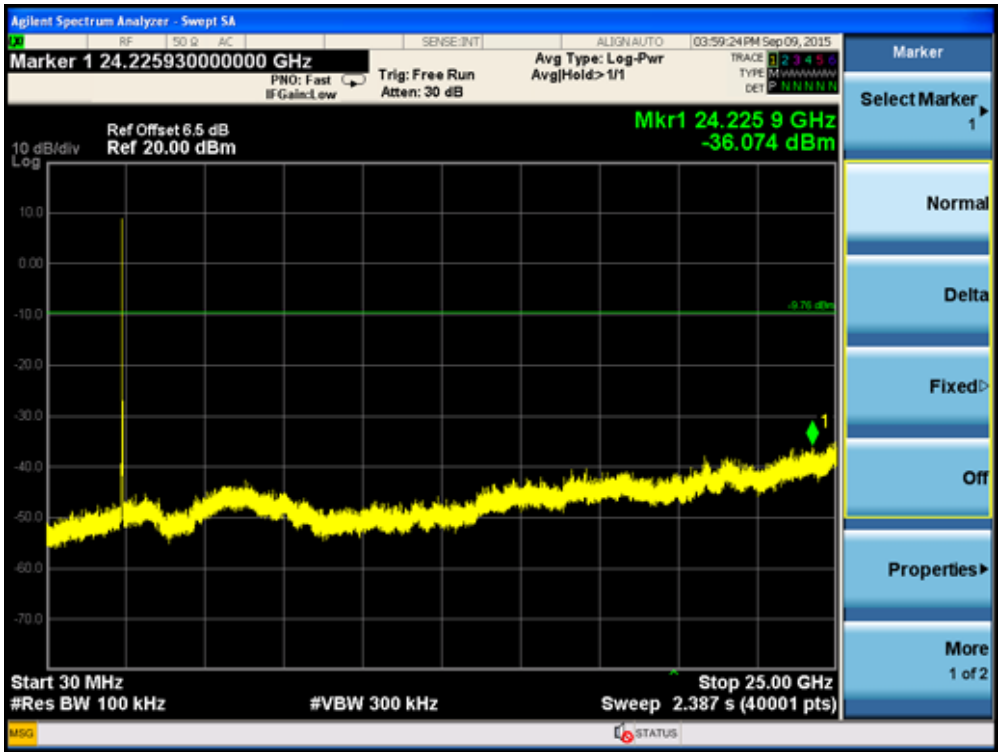


Channel 01 (2412MHz)-Ant 1

Reference Level – Frequency L

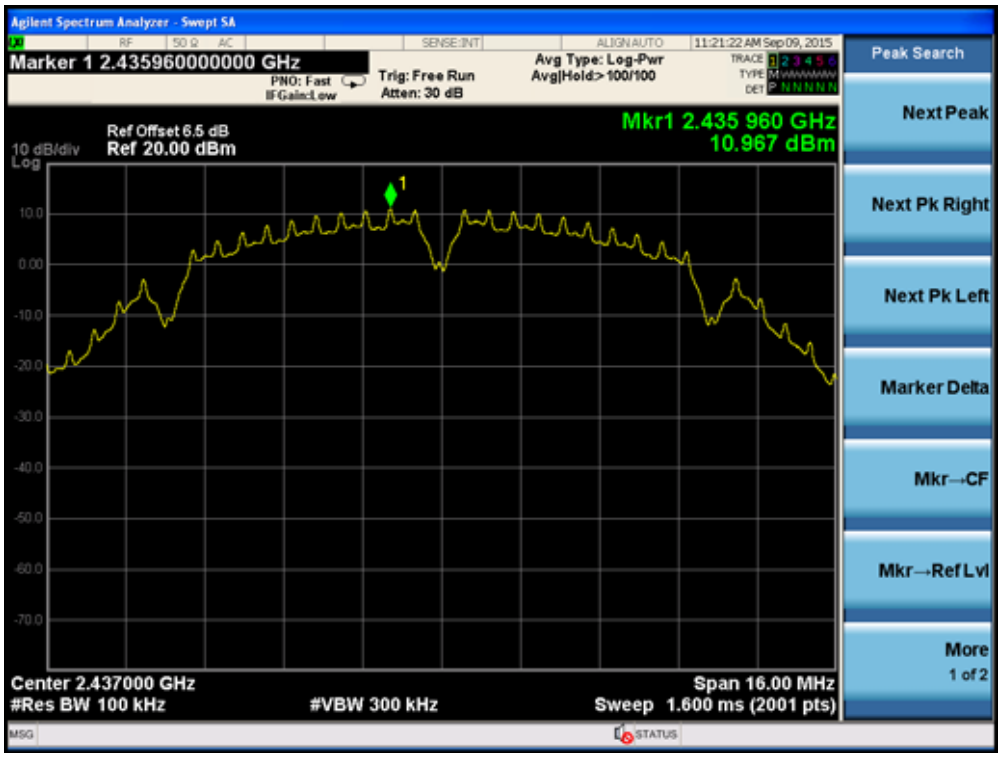
Low Band Edge - Frequency L

Spurious Emission 30MHz ~ 25GHz - Frequency L

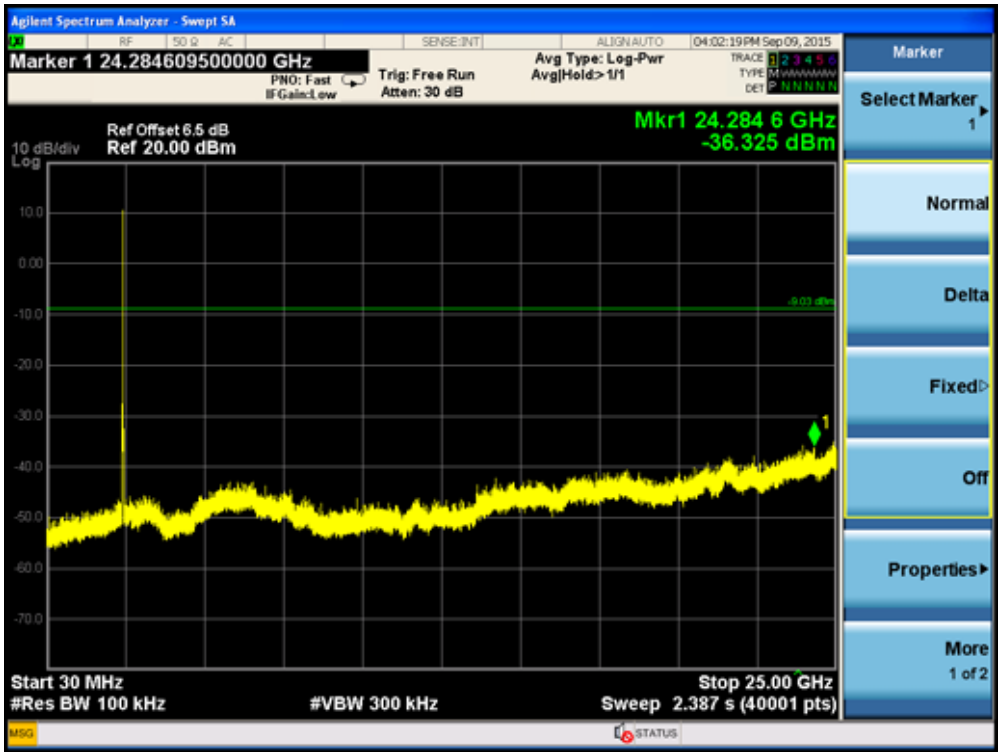


Channel 06 (2437MHz)-Ant 1

Reference Level – Frequency M



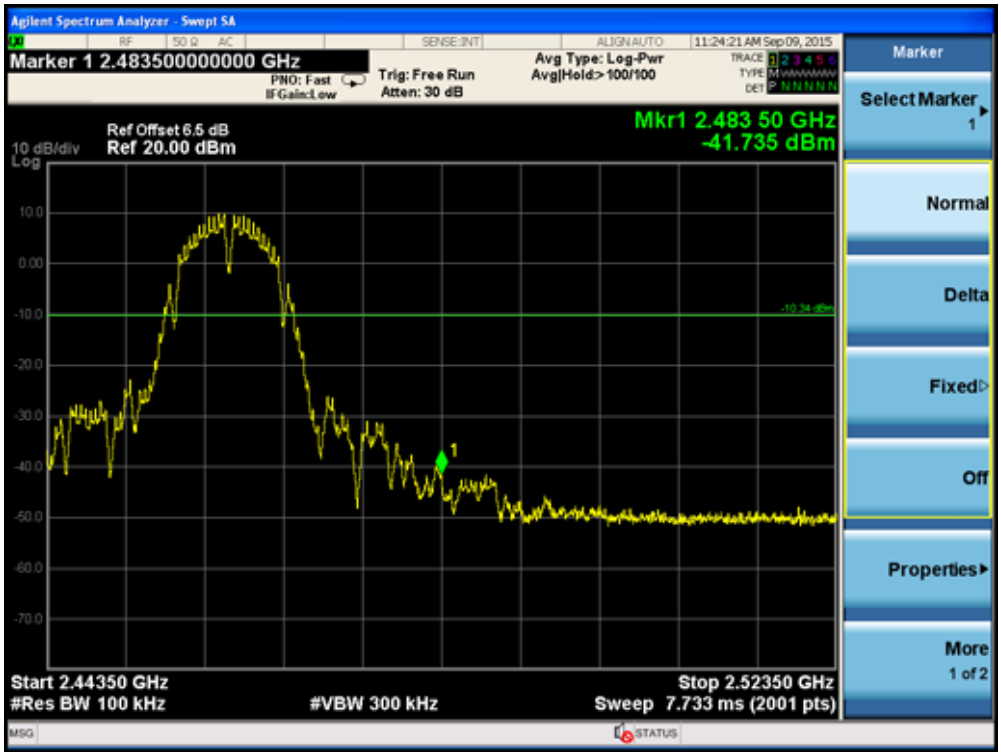
Spurious Emission 30MHz ~ 25GHz - Frequency M



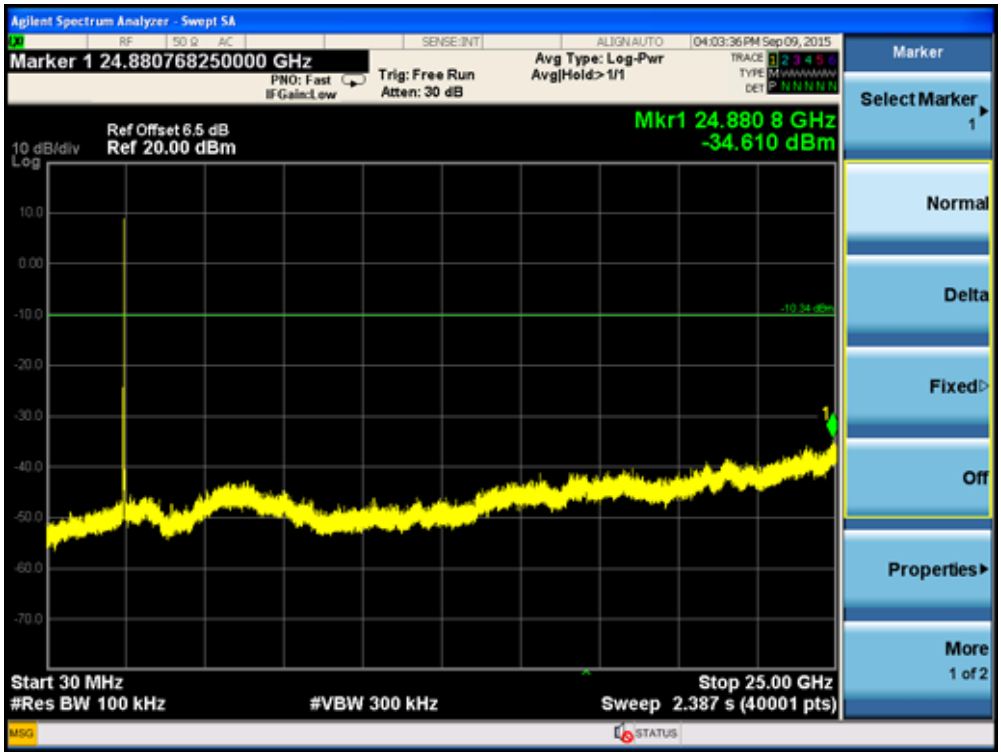
Channel 11 (2462MHz)-Ant 1

Reference Level – Frequency H

High Band Edge - Frequency H



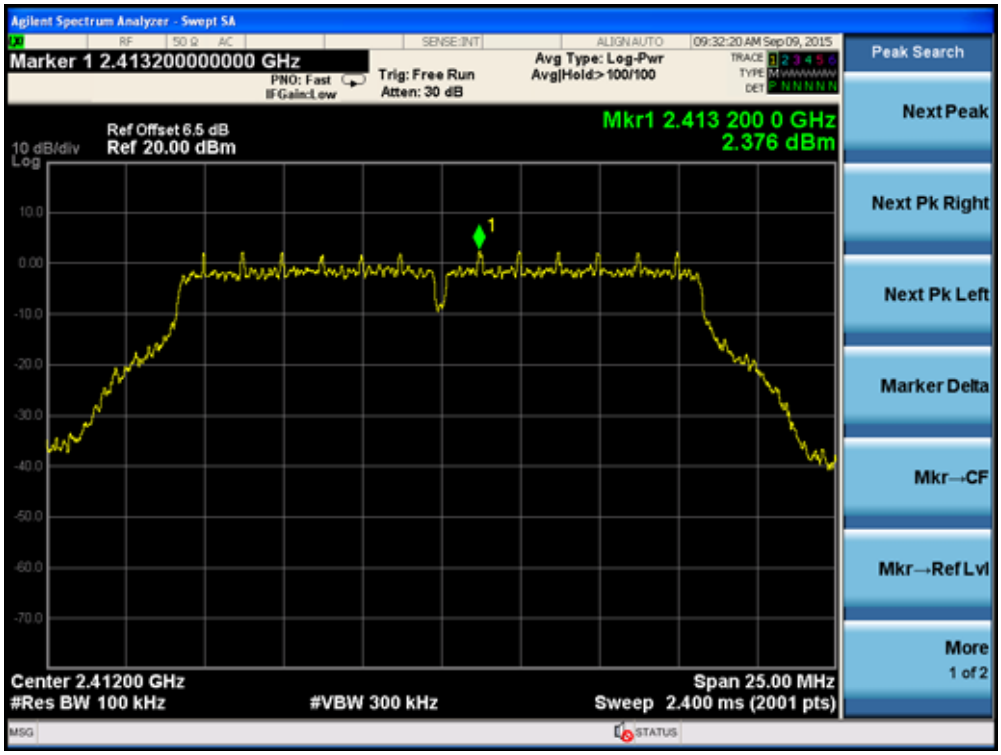
Spurious Emission 30MHz ~ 25GHz - Frequency H



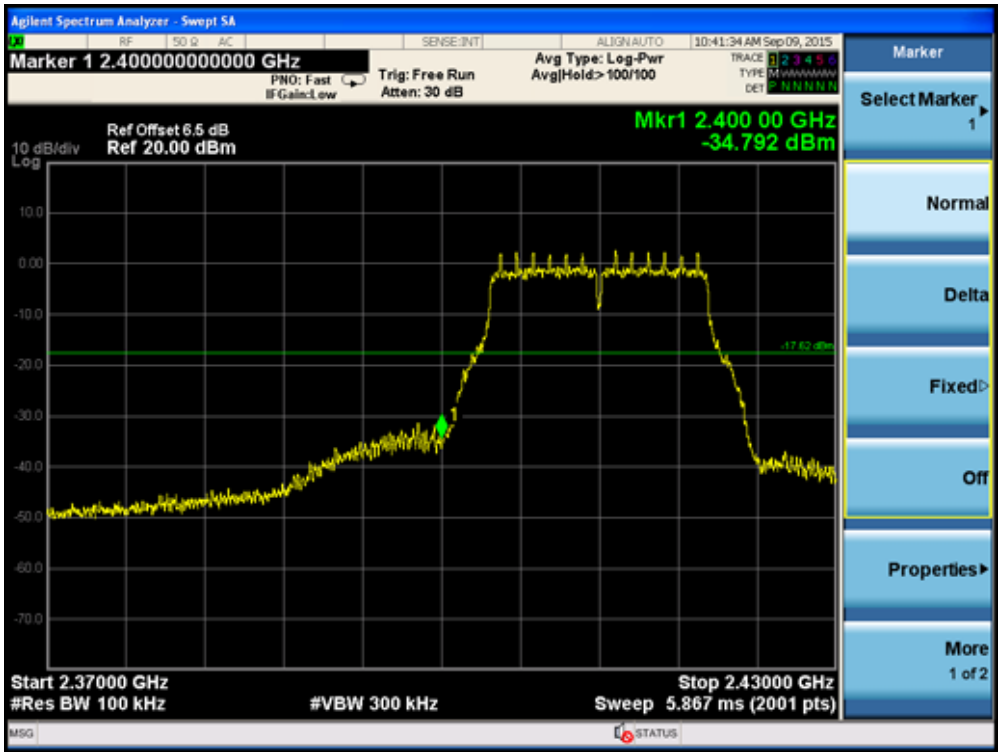
Product	:	IP-STB
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11g

Channel 01 (2412MHz)-Ant 1

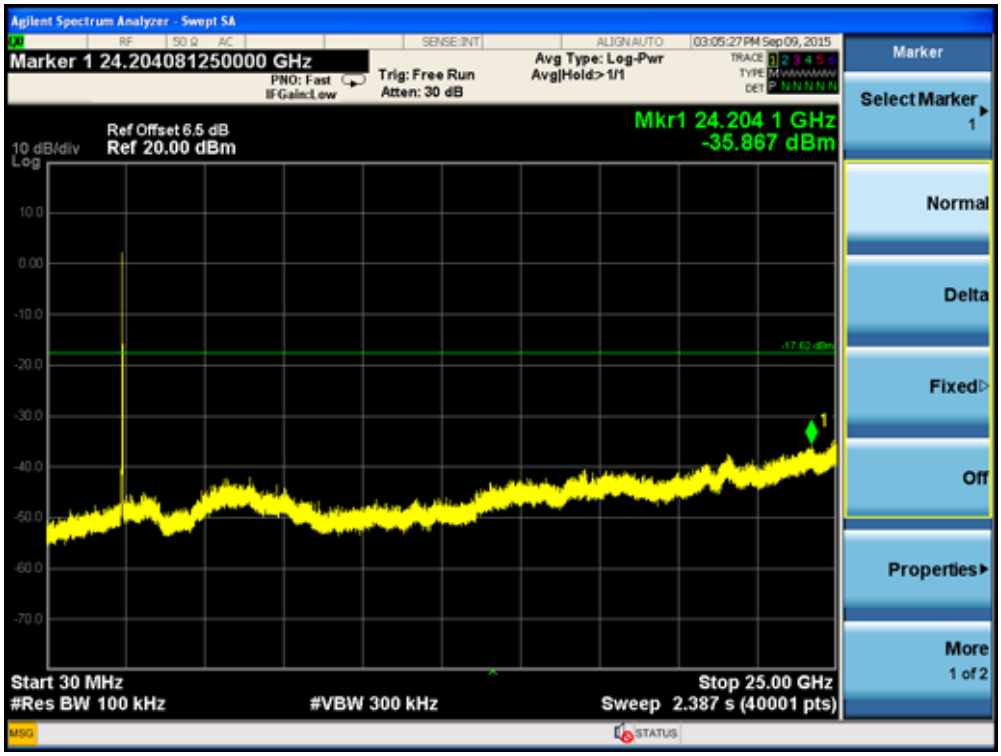
Reference Level – Frequency L



Low Band Edge - Frequency L

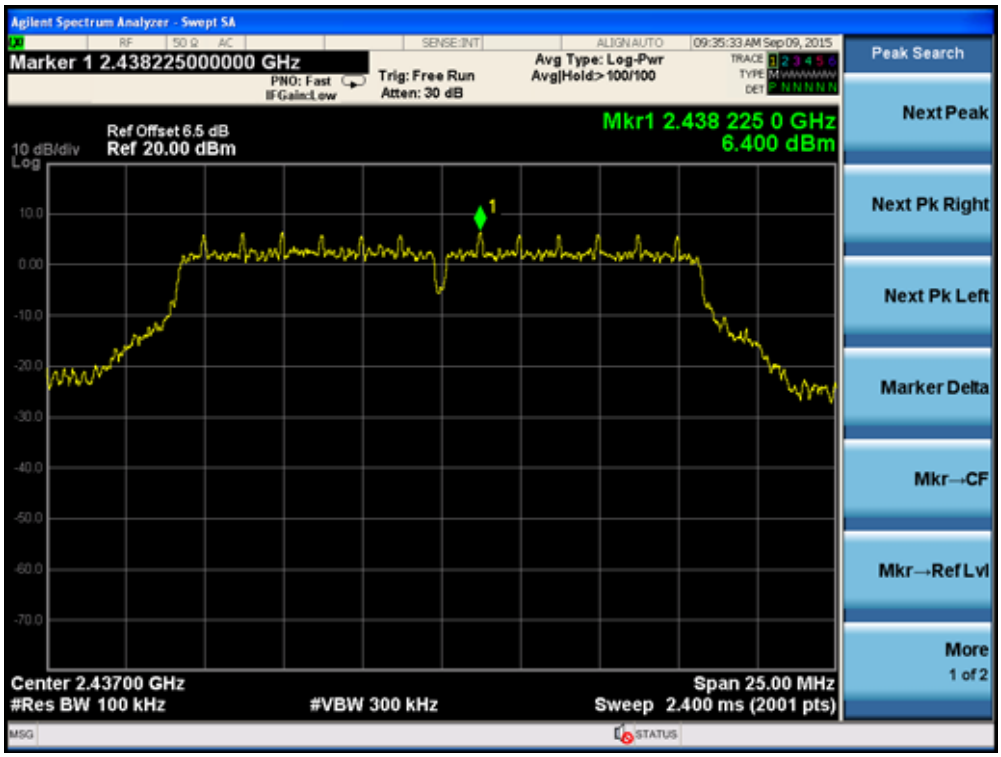


Spurious Emission 30MHz ~ 25GHz - Frequency L

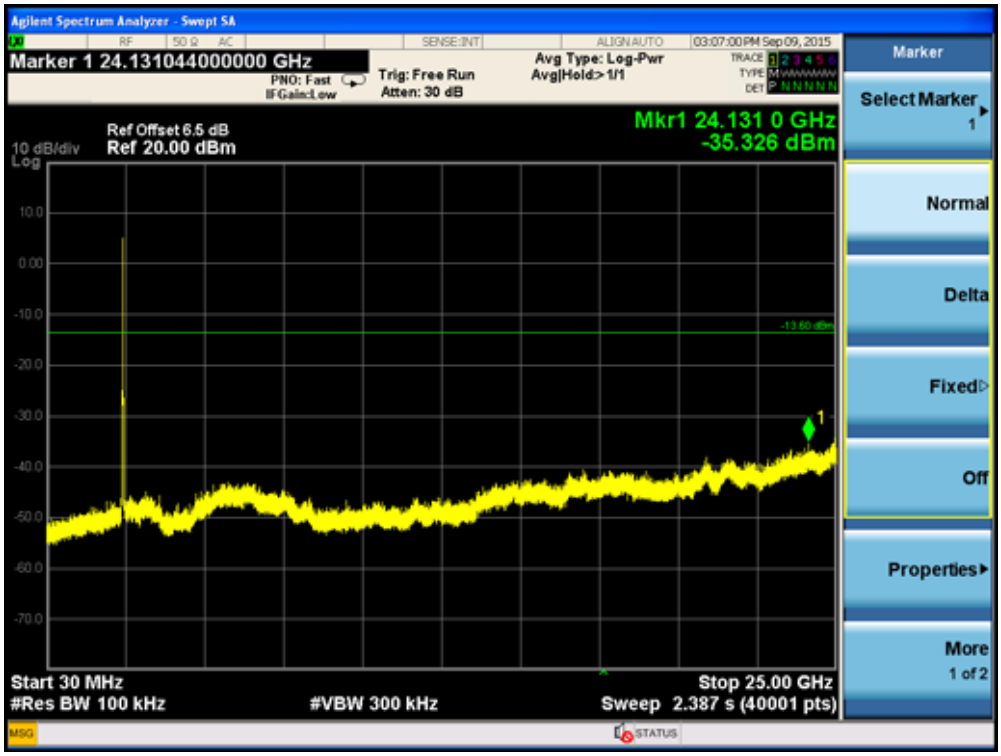


Channel 06 (2437MHz)-Ant 1

Reference Level – Frequency M

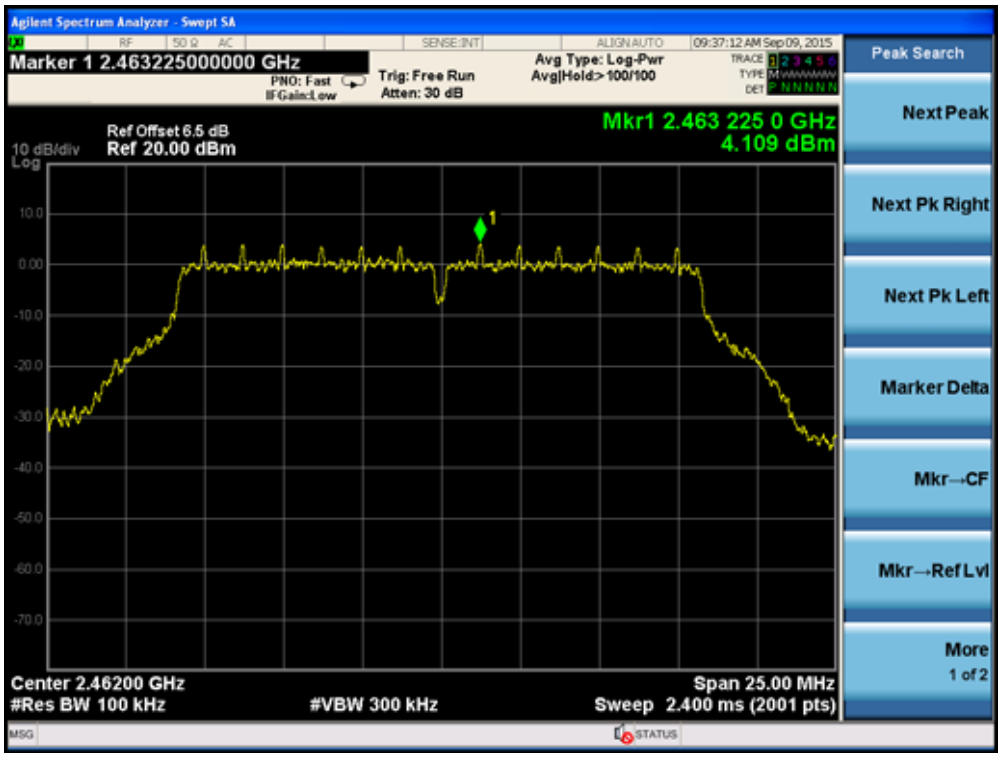


Spurious Emission 30MHz ~ 25GHz - Frequency M

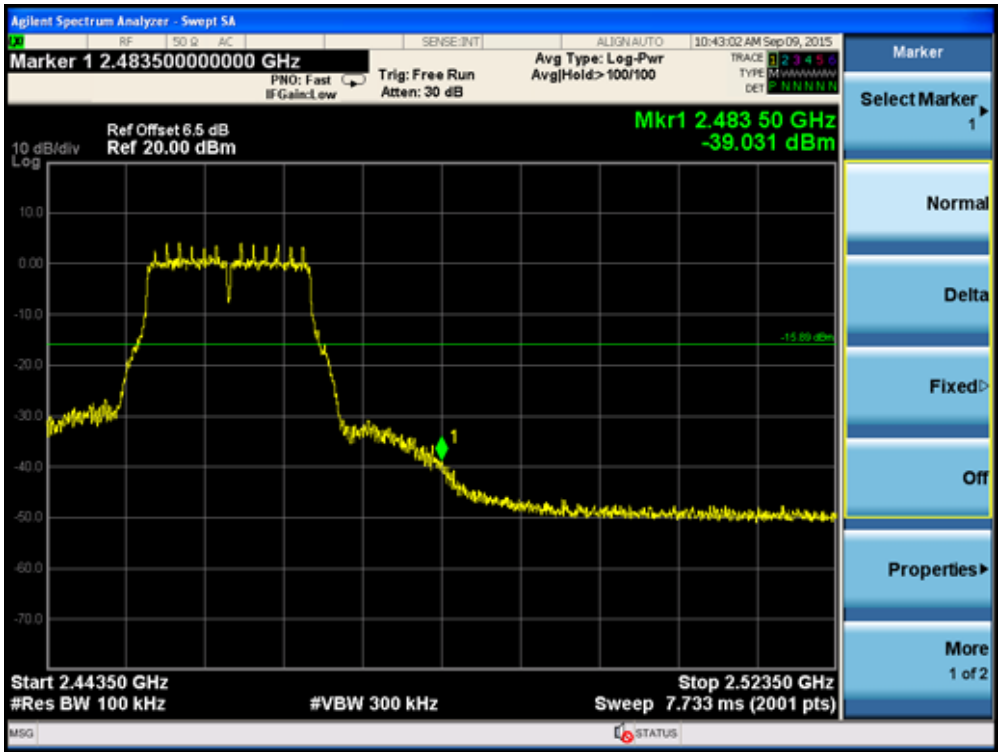


Channel 11 (2462MHz)-Ant 1

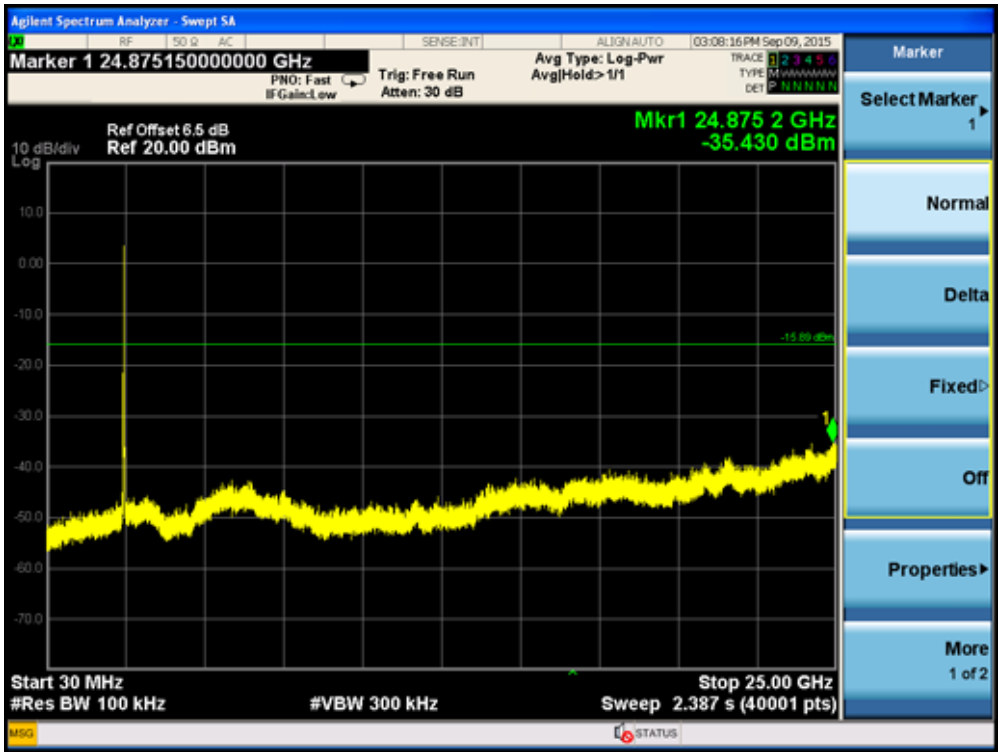
Reference Level – Frequency H



High Band Edge - Frequency H

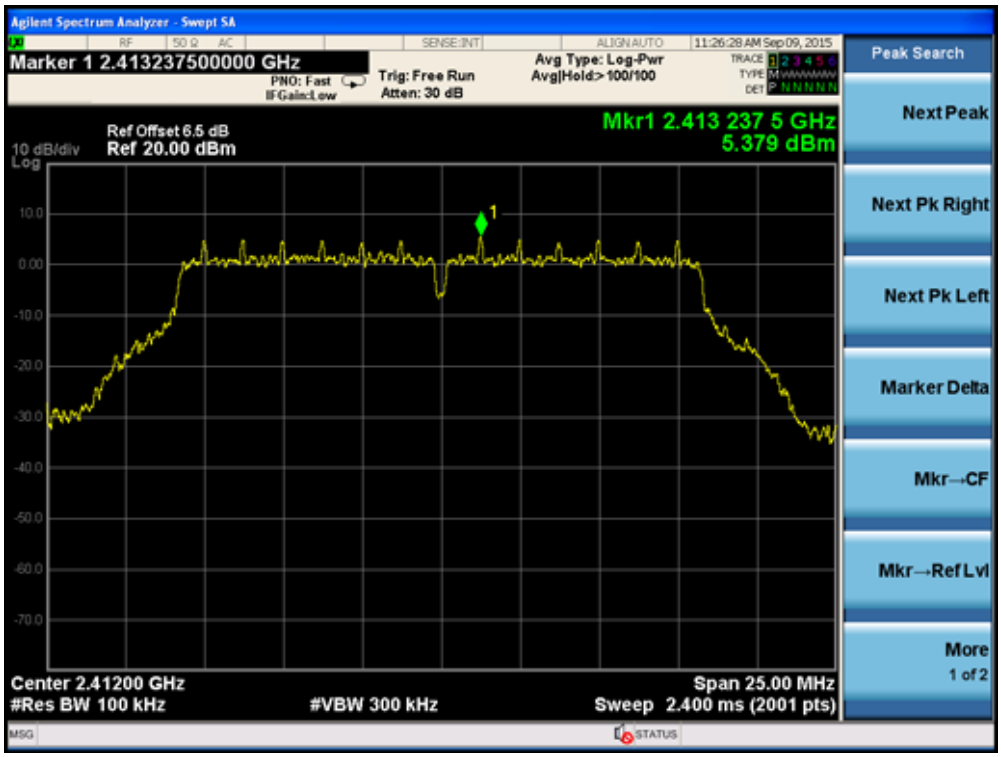


Spurious Emission 30MHz ~ 25GHz - Frequency H

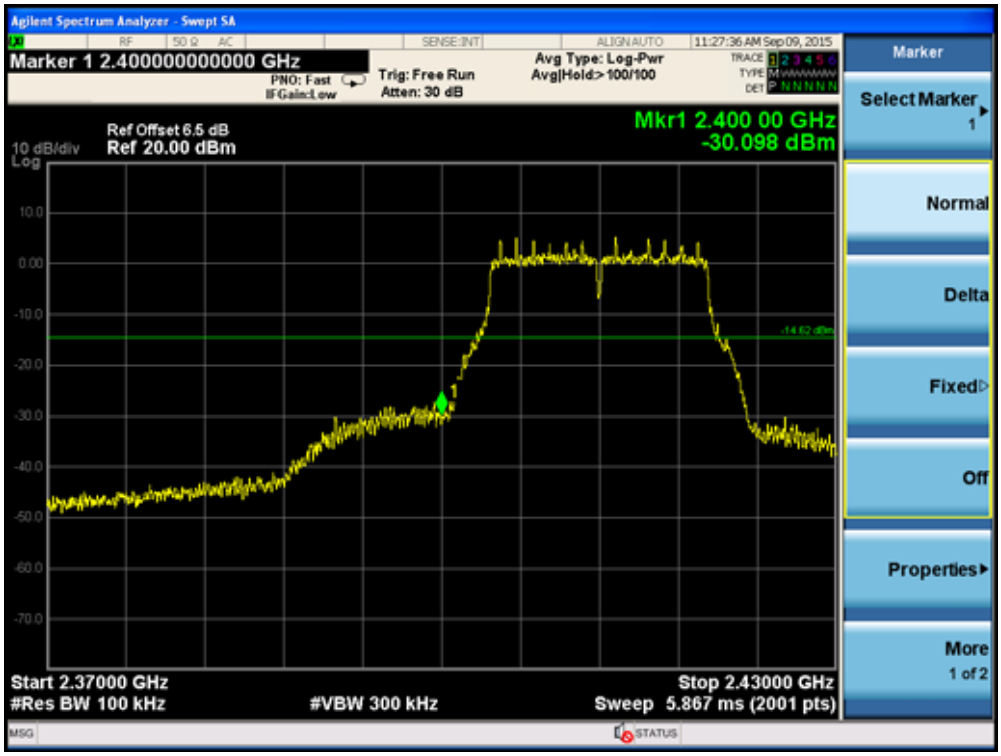


Channel 01 (2412MHz) –Ant 1

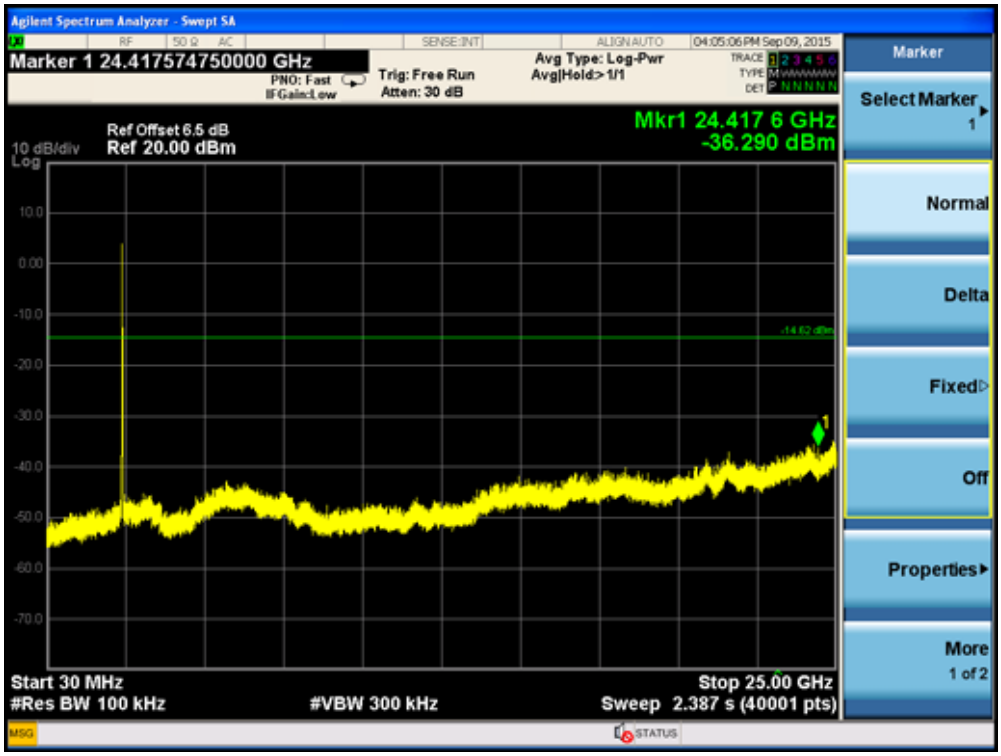
Reference Level – Frequency L



Low Band Edge - Frequency L

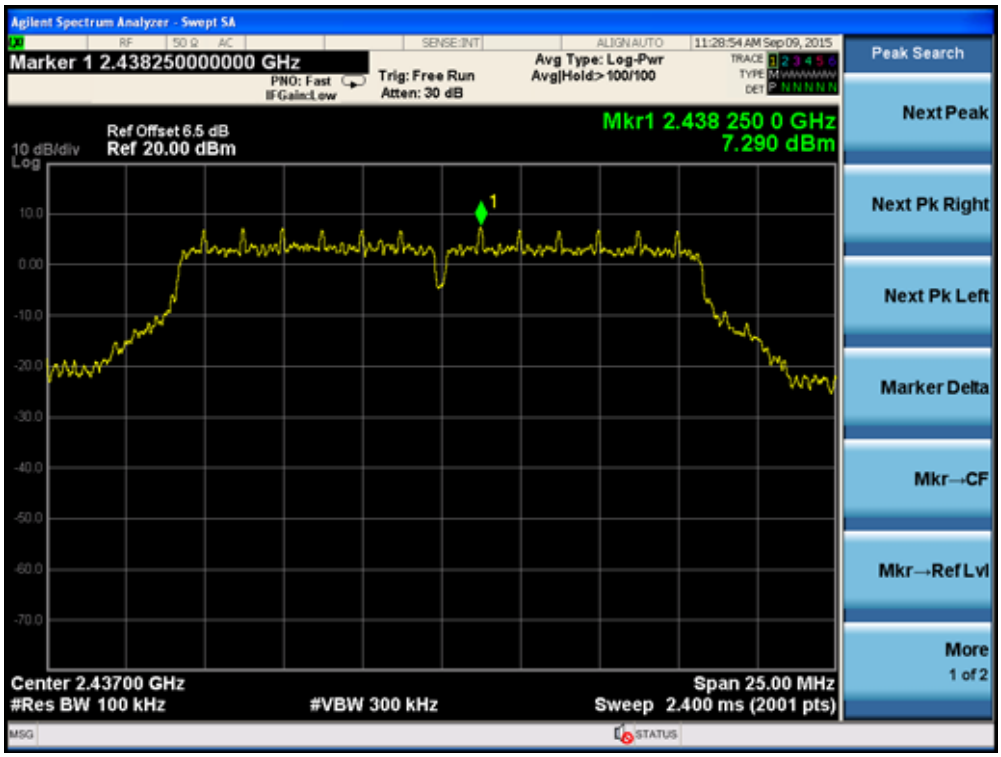


Spurious Emission 30MHz ~ 25GHz - Frequency L

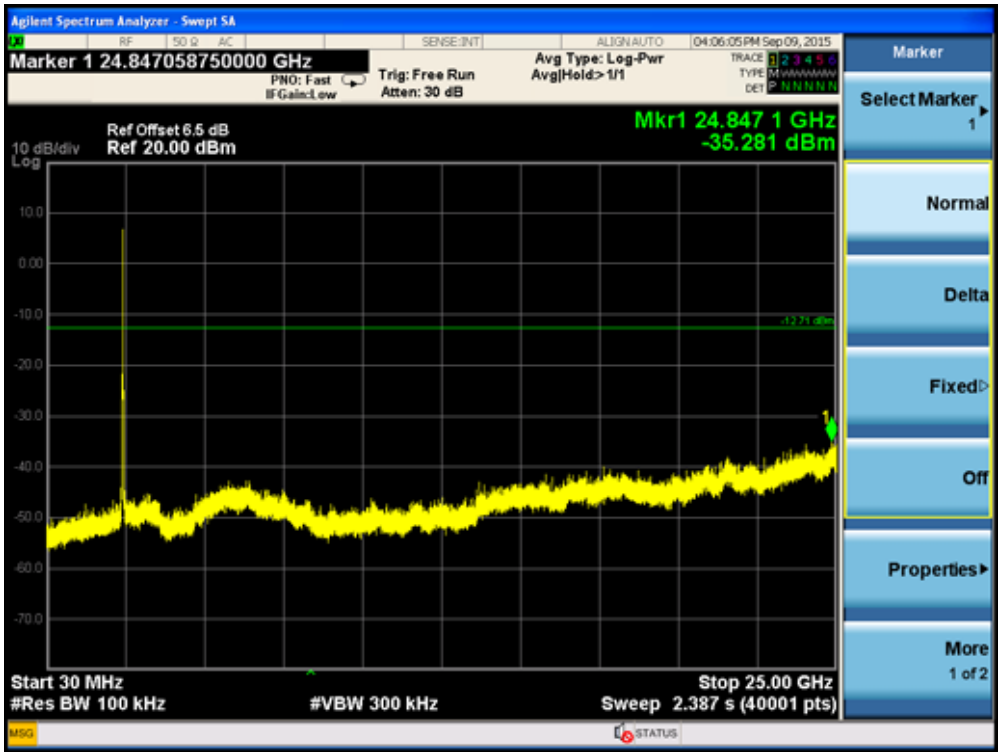


Channel 06 (2437MHz) –Ant 1

Reference Level – Frequency M

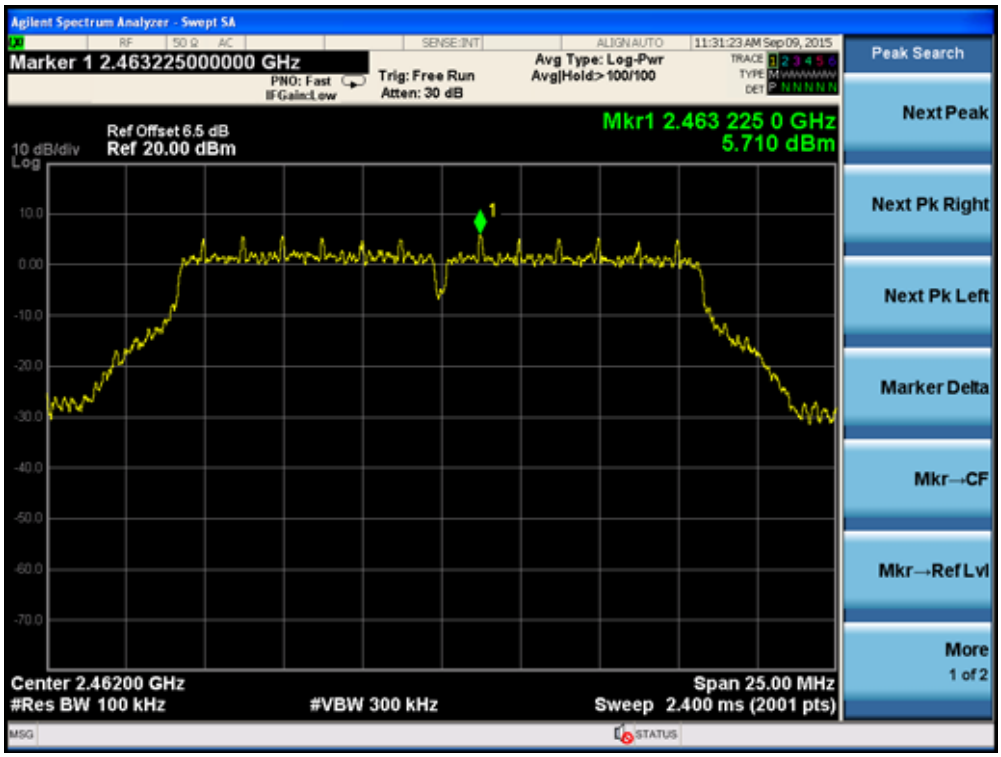


Spurious Emission 30MHz ~ 25GHz - Frequency M

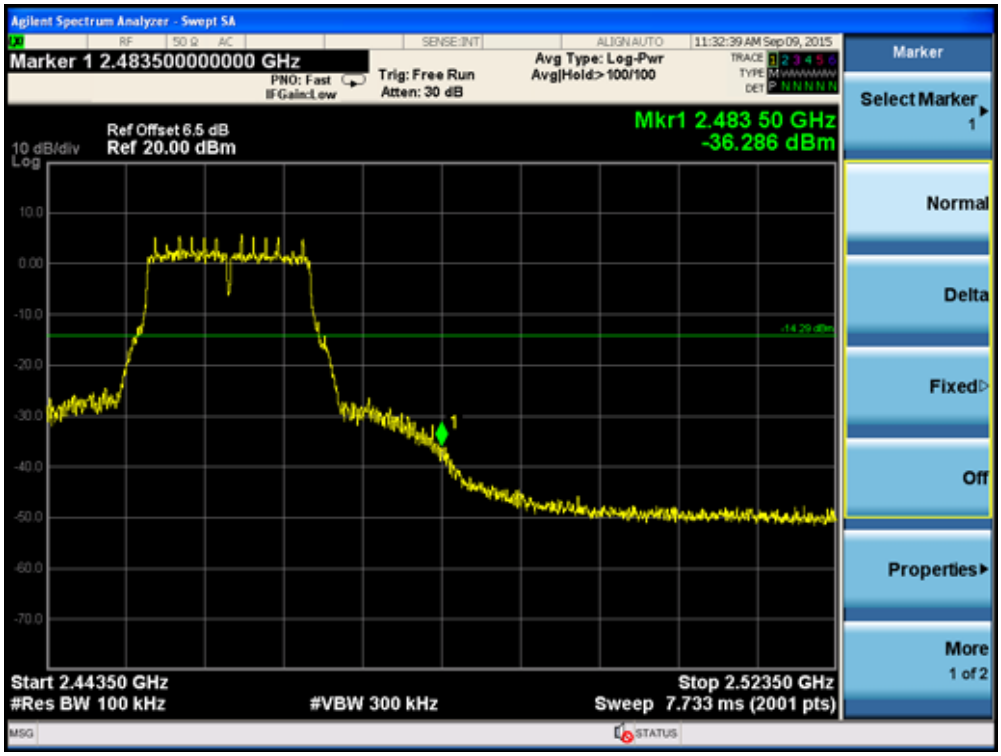


Channel 11 (2462MHz) –Ant 1

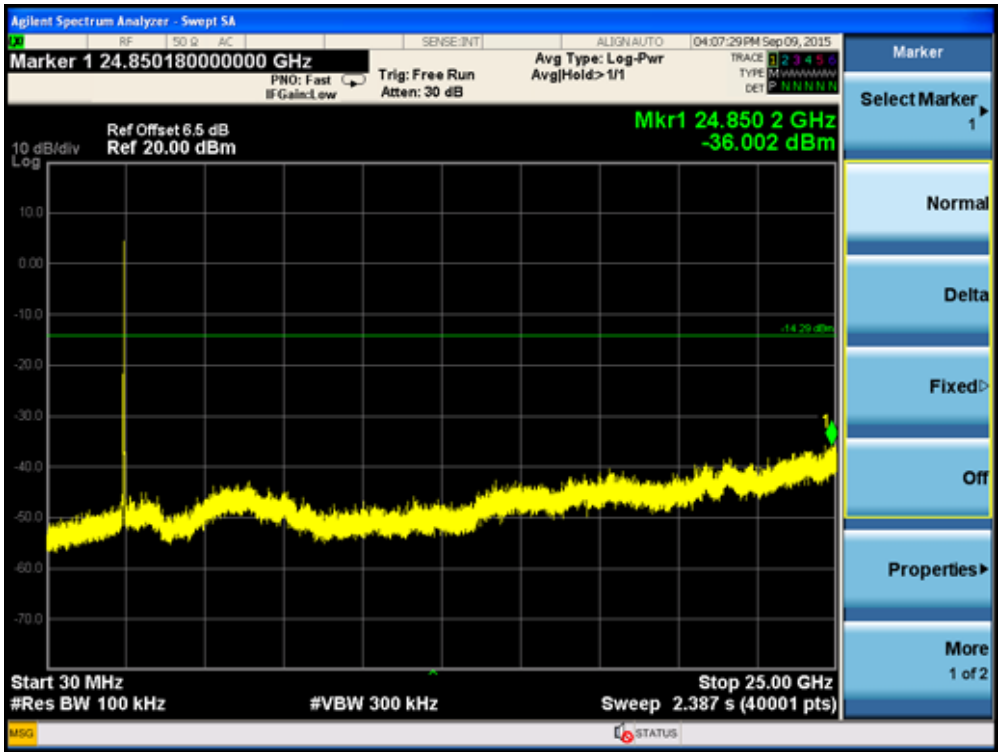
Reference Level – Frequency H



High Band Edge - Frequency H



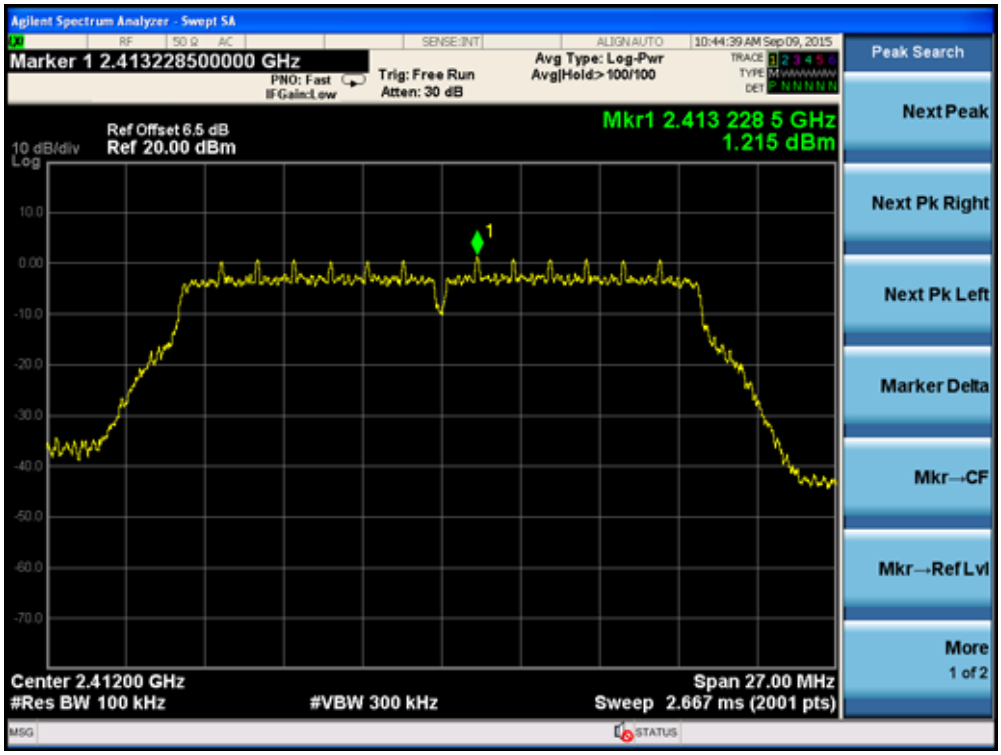
Spurious Emission 30MHz ~ 25GHz - Frequency H



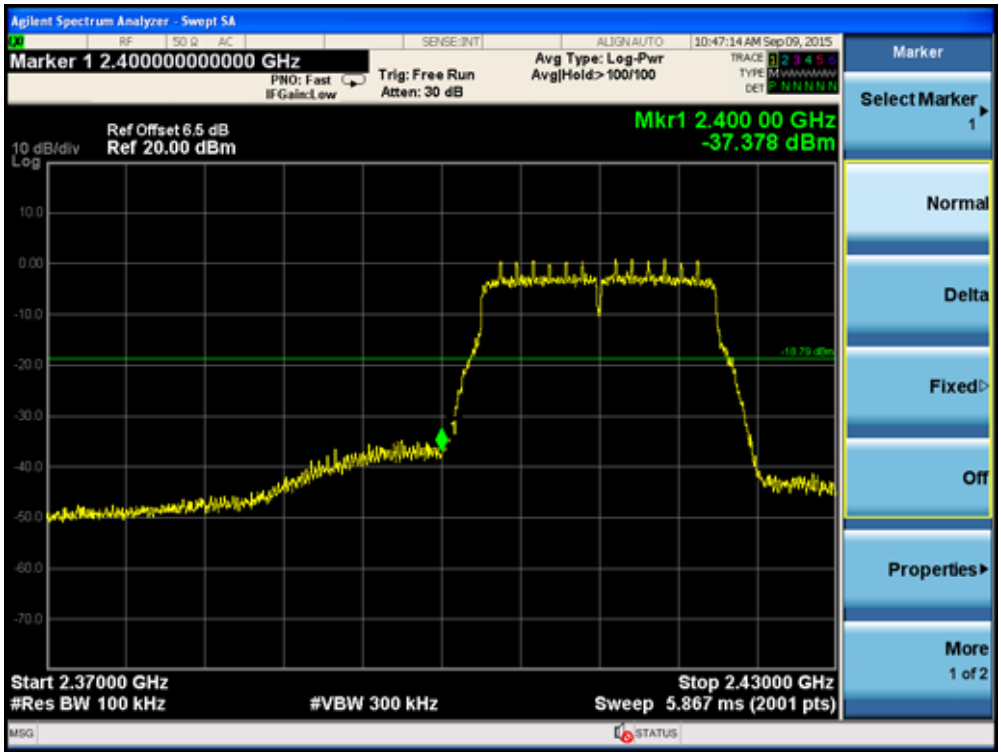
Product	:	IP-STB
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz)

Channel 01 (2412MHz)-Ant 1

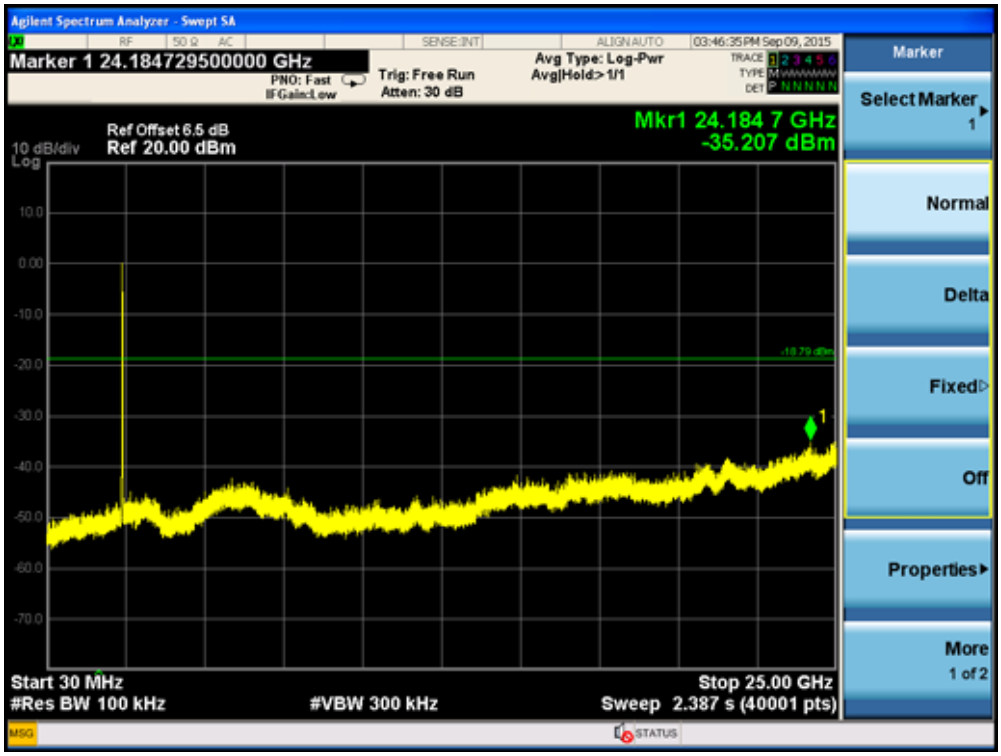
Reference Level – Frequency L



Low Band Edge - Frequency L

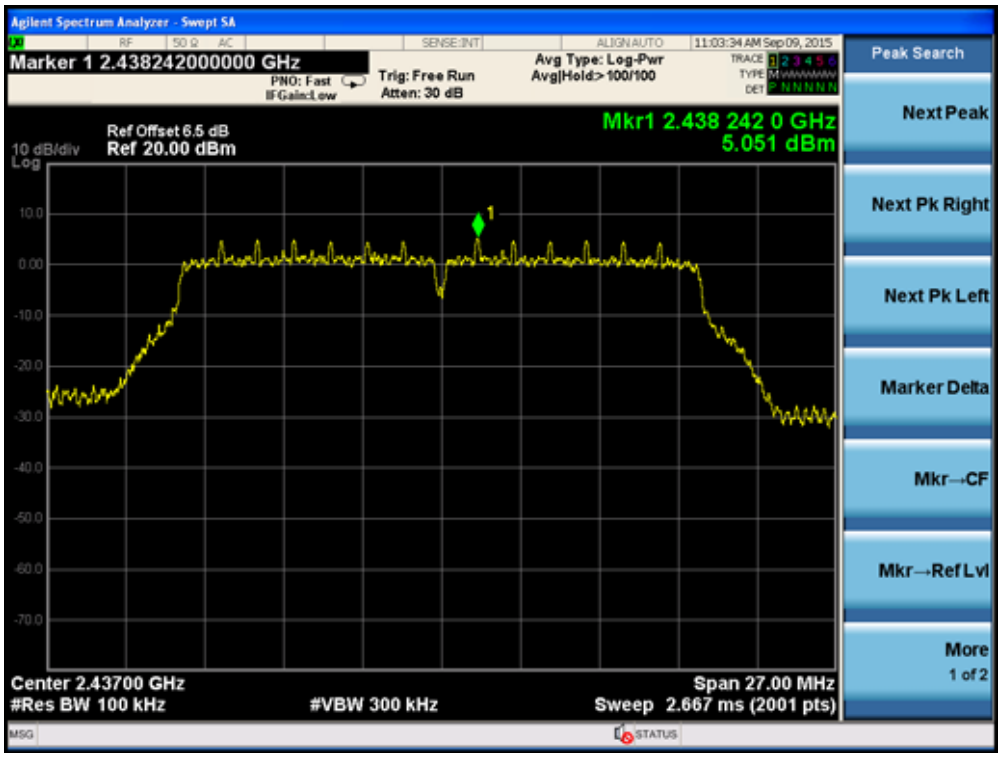


Spurious Emission 30MHz ~ 25GHz - Frequency L

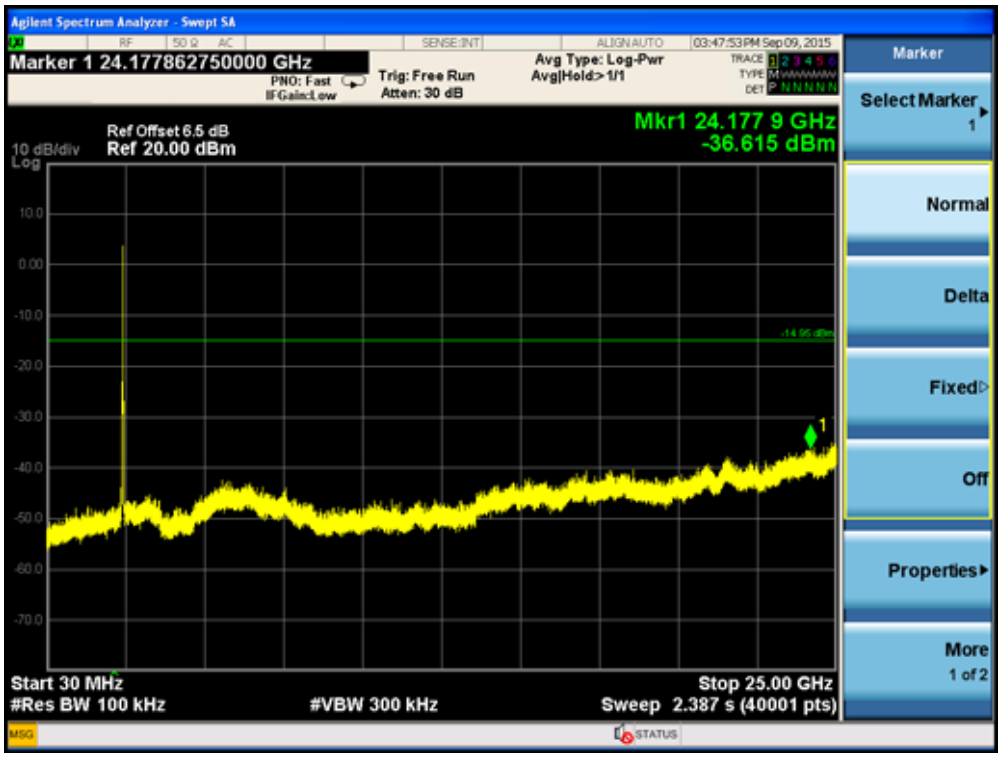


Channel 06(2437MHz)-Ant 1

Reference Level – Frequency M

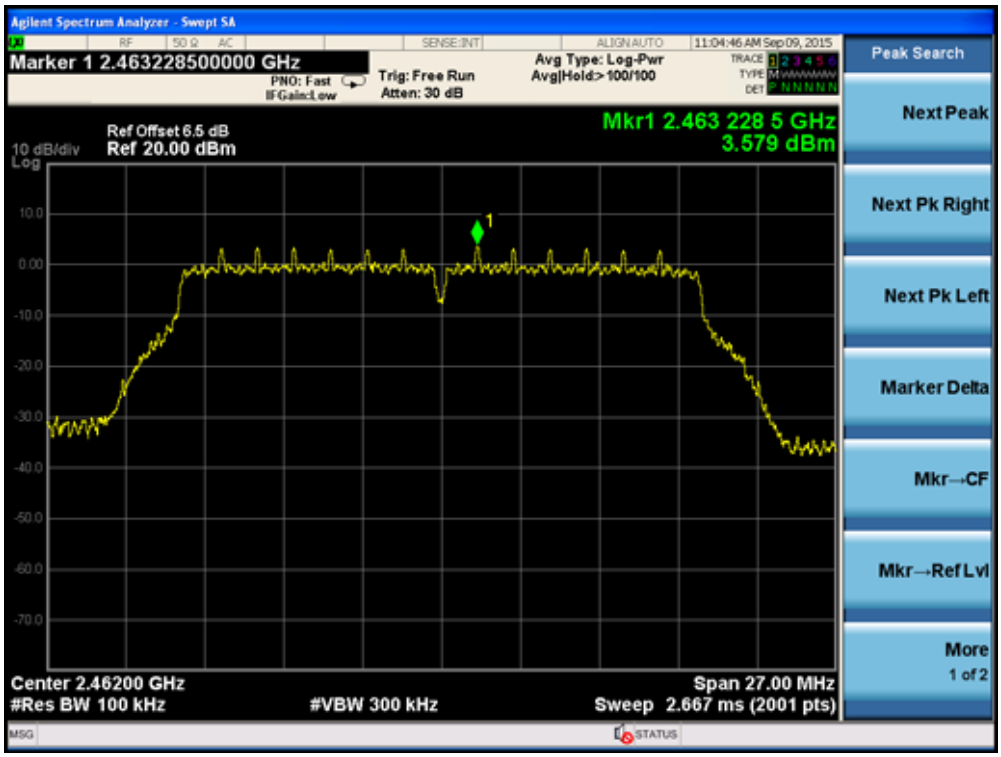


Spurious Emission 30MHz ~ 25GHz - Frequency M

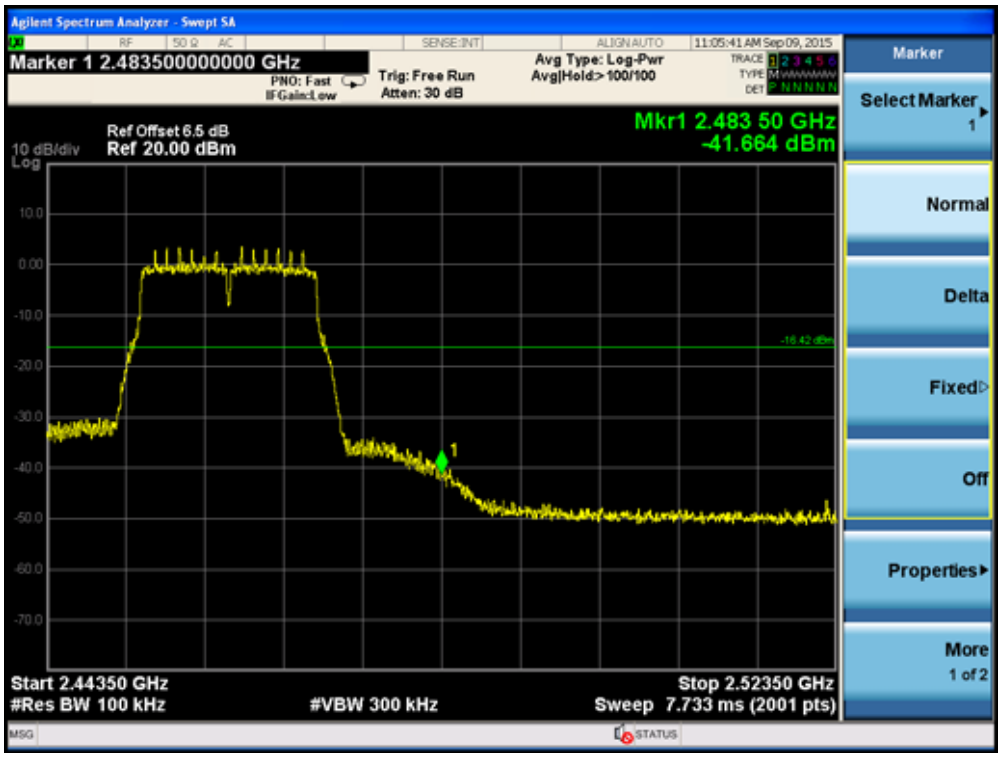


Channel 11 (2462MHz)-Ant 1

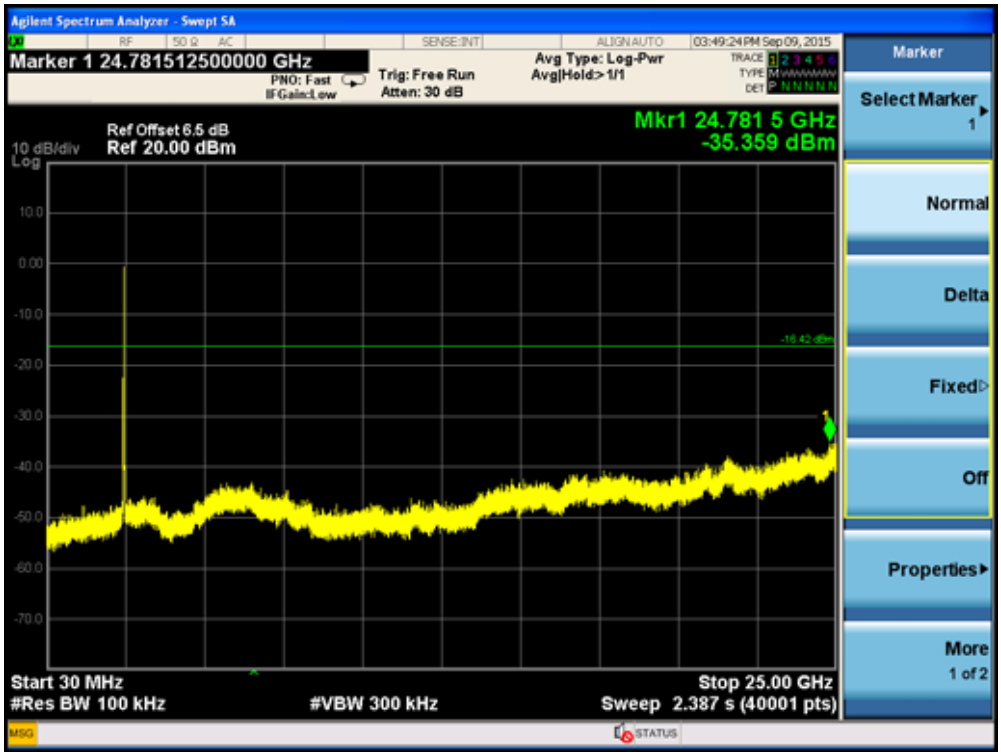
Reference Level – Frequency H



High Band Edge - Frequency H

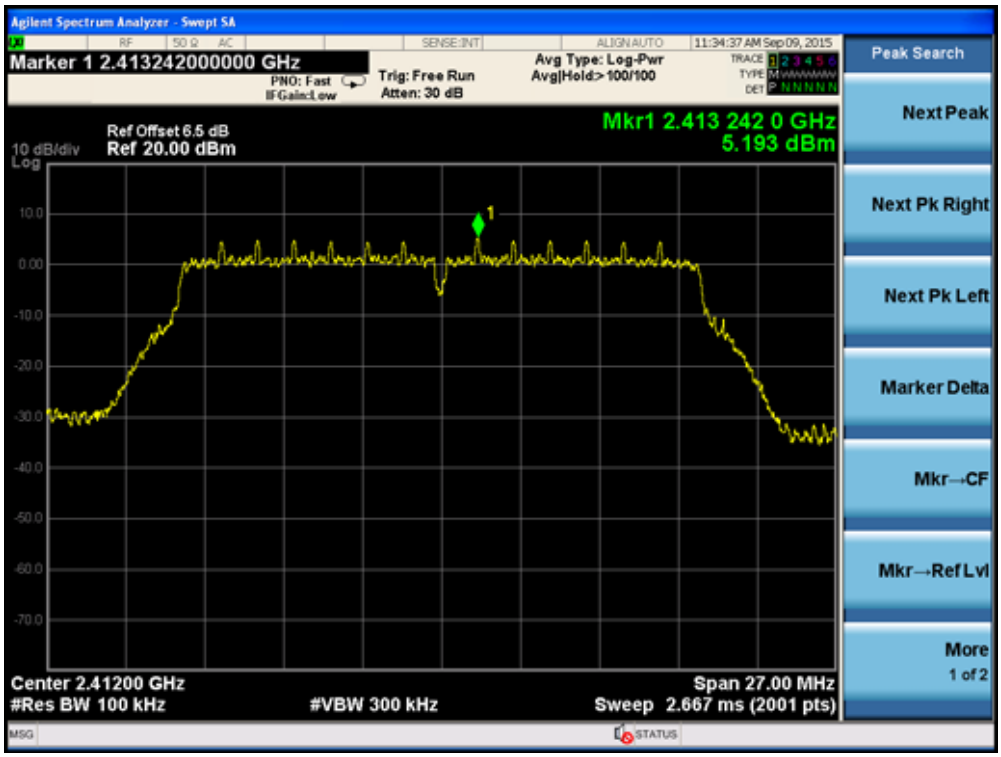


Spurious Emission 30MHz ~ 25GHz - Frequency H

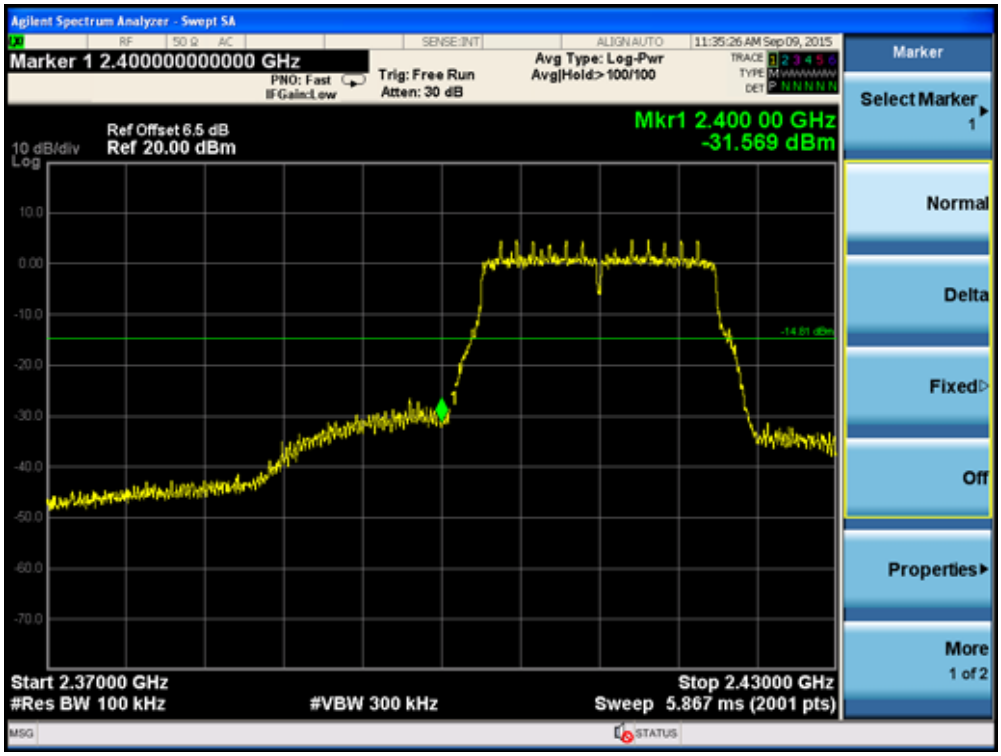


Channel 01 (2412MHz)-Ant 2

Reference Level – Frequency L



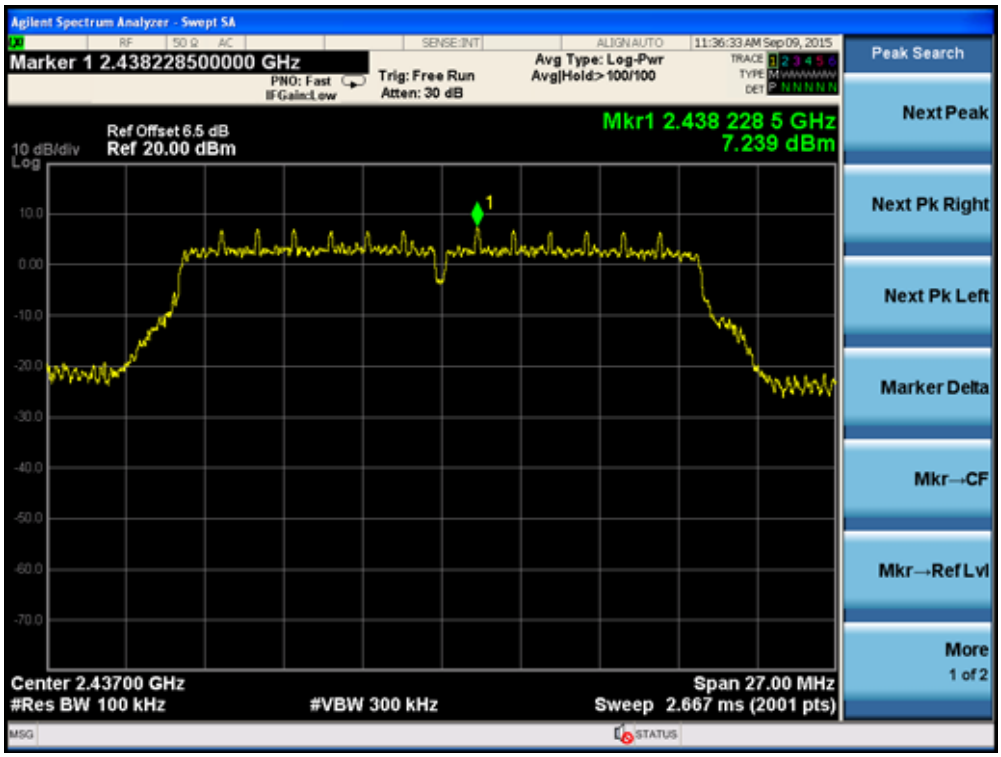
Low Band Edge - Frequency L



Spurious Emission 30MHz ~ 25GHz - Frequency L

Channel 06 (2437MHz)-Ant 2

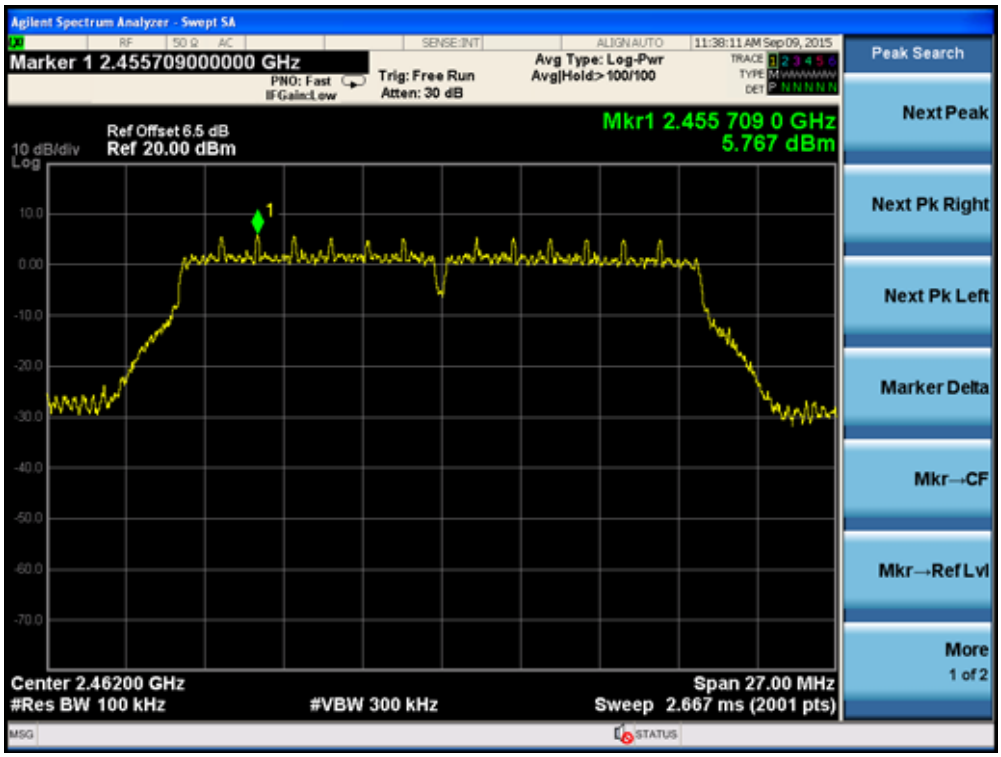
Reference Level – Frequency M



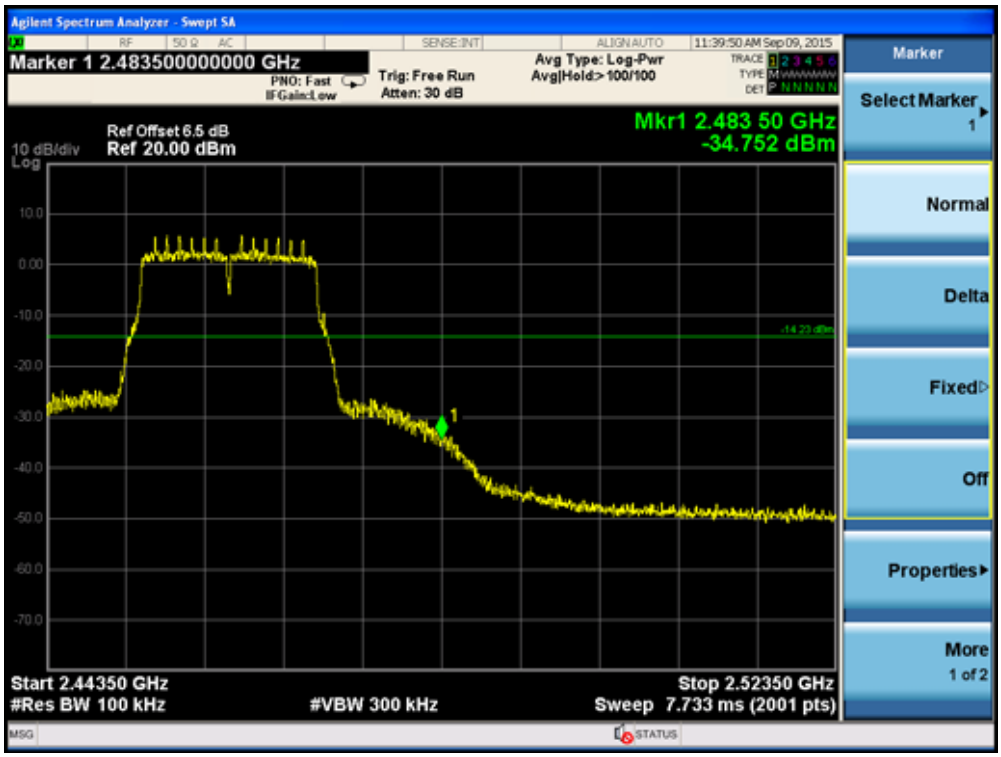
Spurious Emission 30MHz ~ 25GHz - Frequency M

Channel 11 (2462MHz)-Ant 2

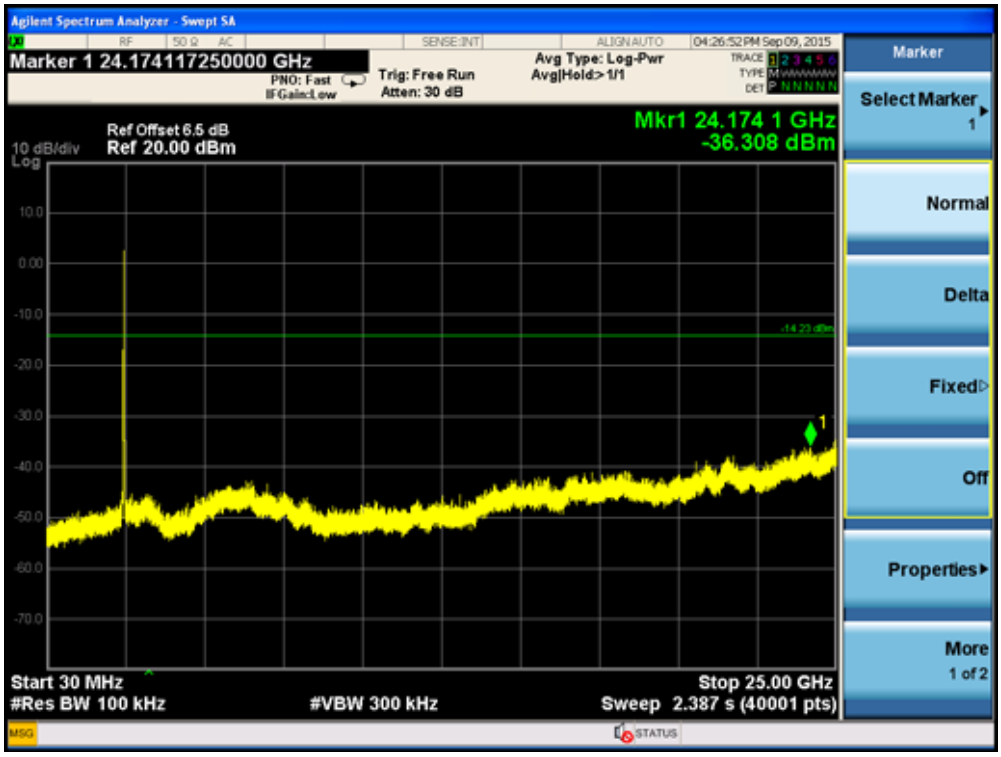
Reference Level – Frequency H



High Band Edge - Frequency H

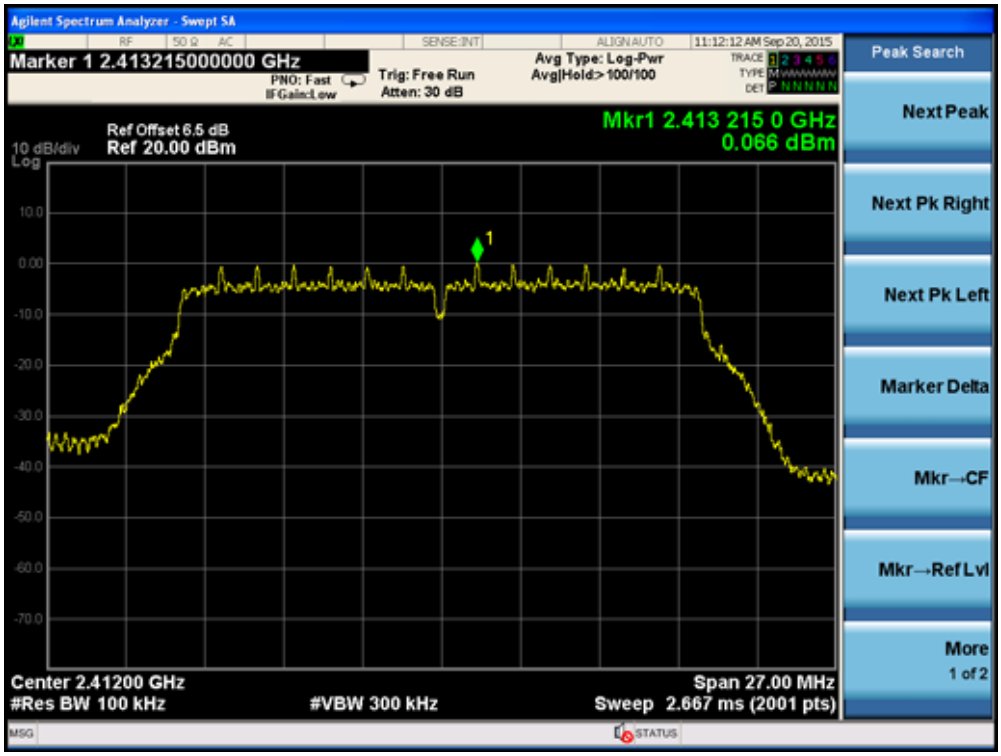


SSpurious Emission 30MHz ~ 25GHz - Frequency H

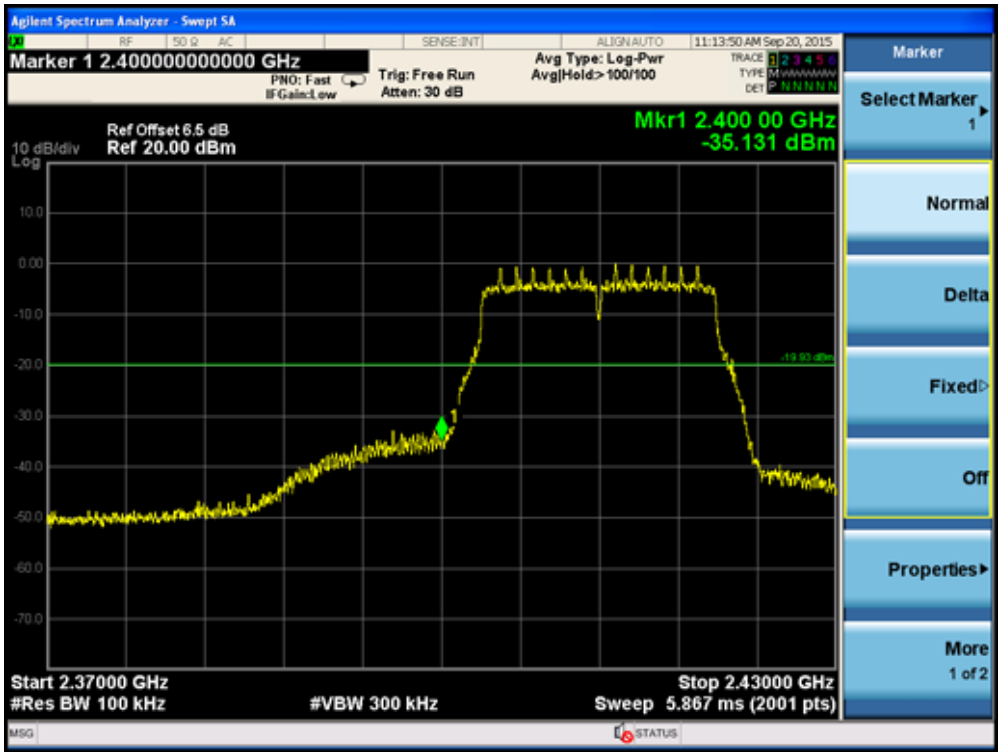


Channel 01 (2412MHz)-MIMO-Ant 2

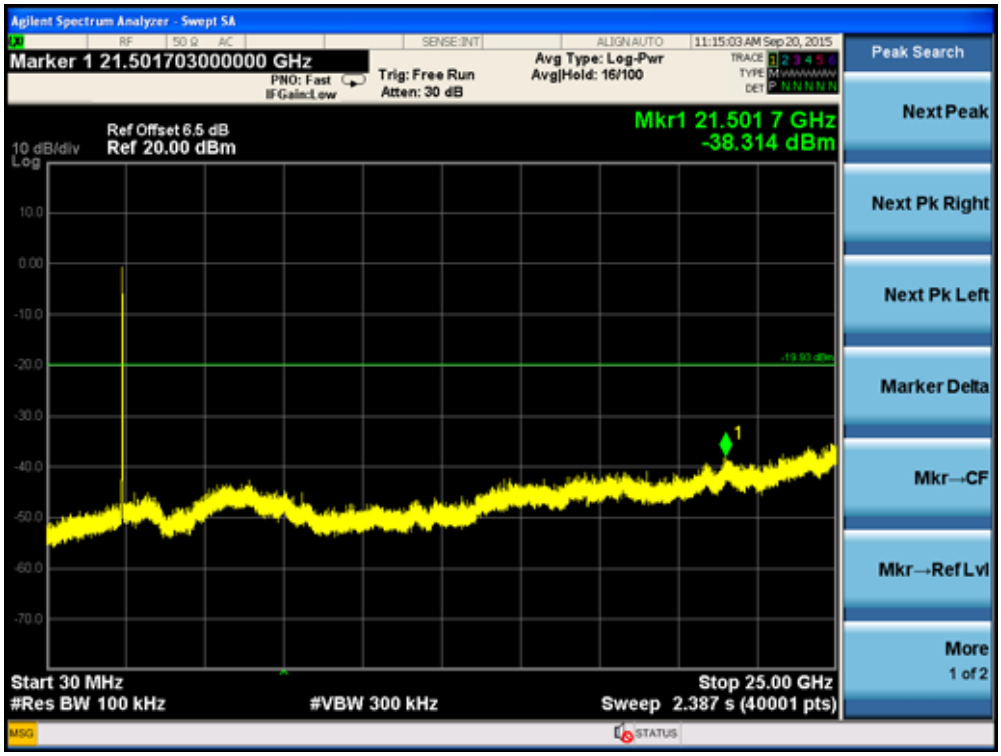
Reference Level – Frequency L



Low Band Edge - Frequency L

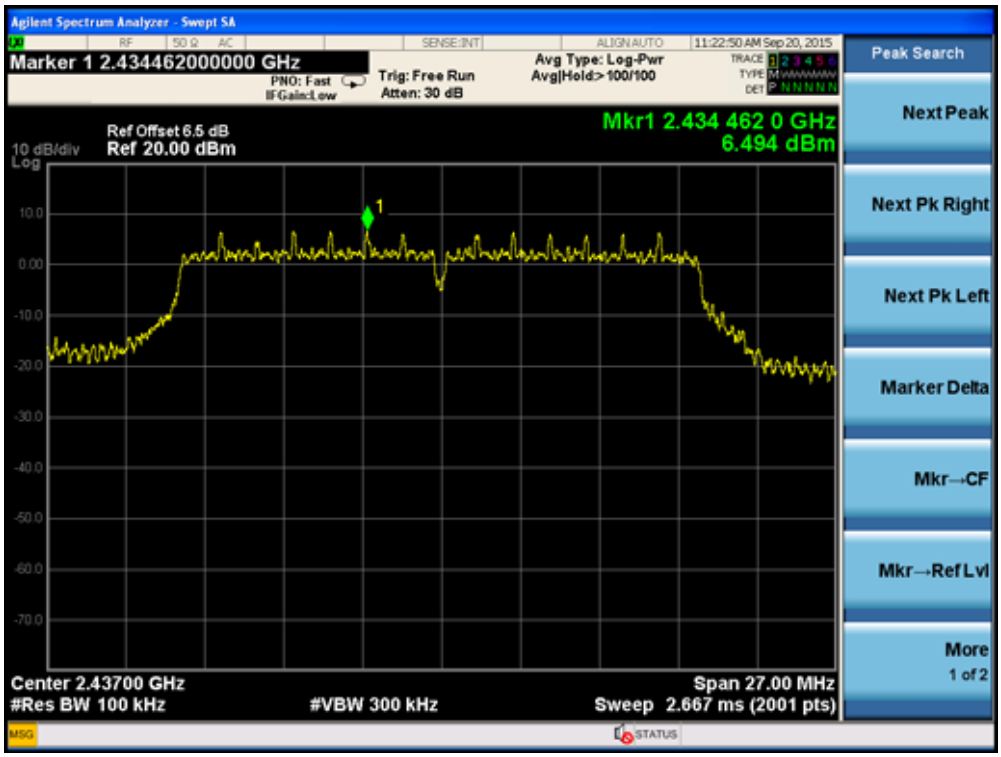


Spurious Emission 30MHz ~ 25GHz - Frequency L

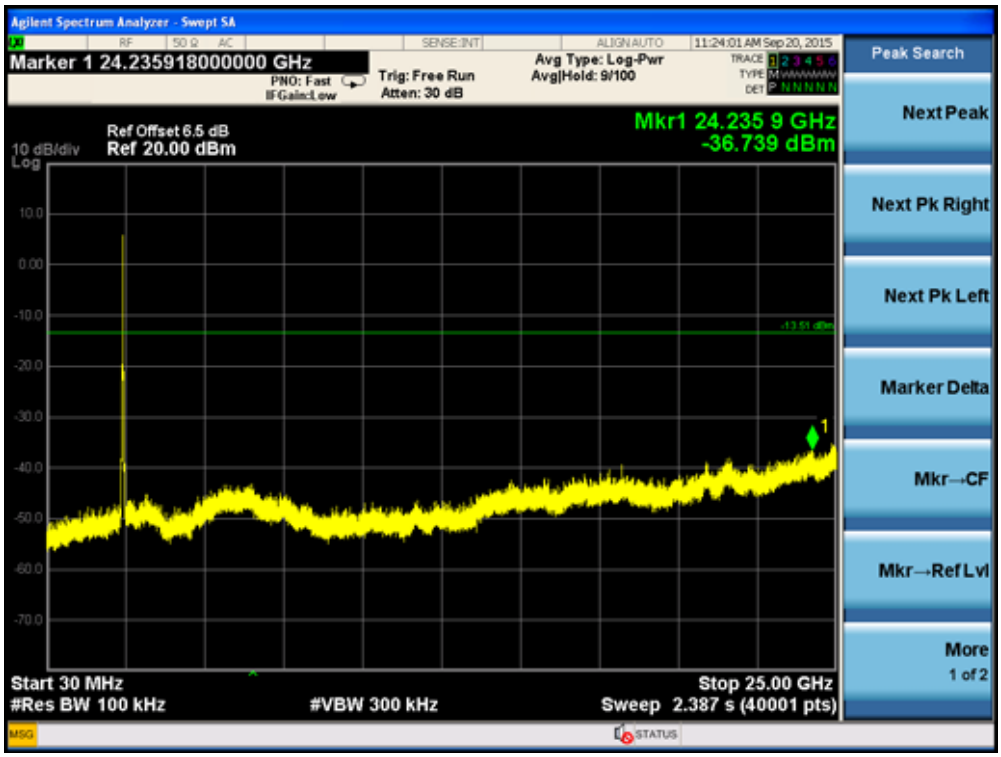


Channel 06(2437MHz)-MIMO-Ant 2

Reference Level – Frequency M

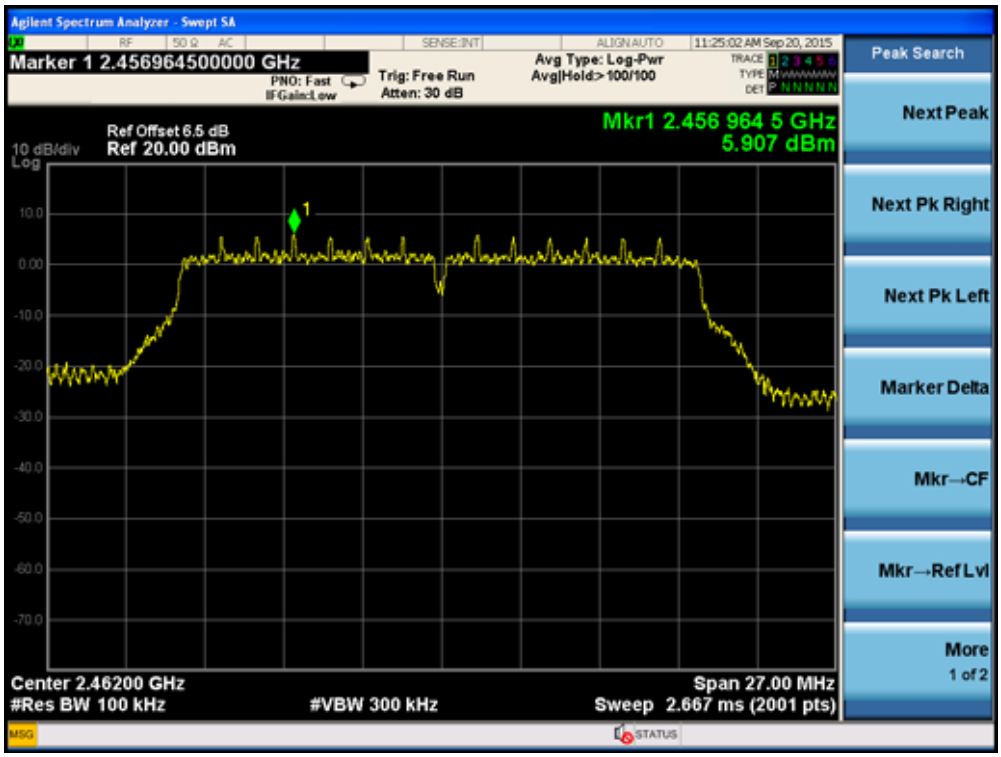


Spurious Emission 30MHz ~ 25GHz - Frequency M

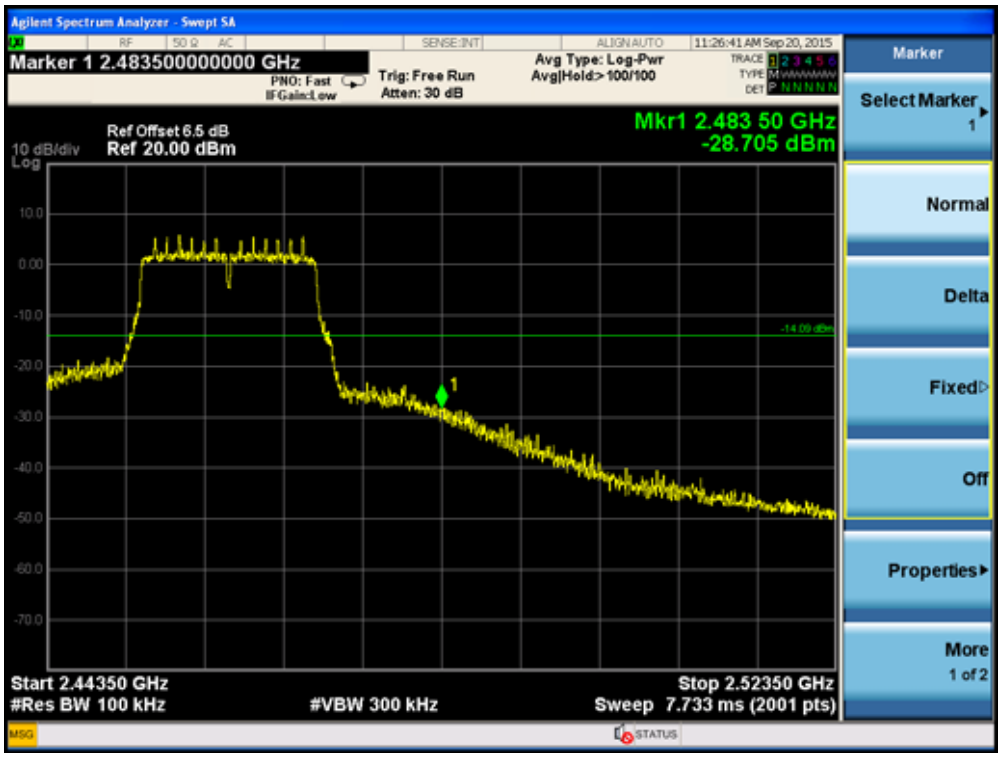


Channel 11 (2462MHz) -MIMO-Ant 2

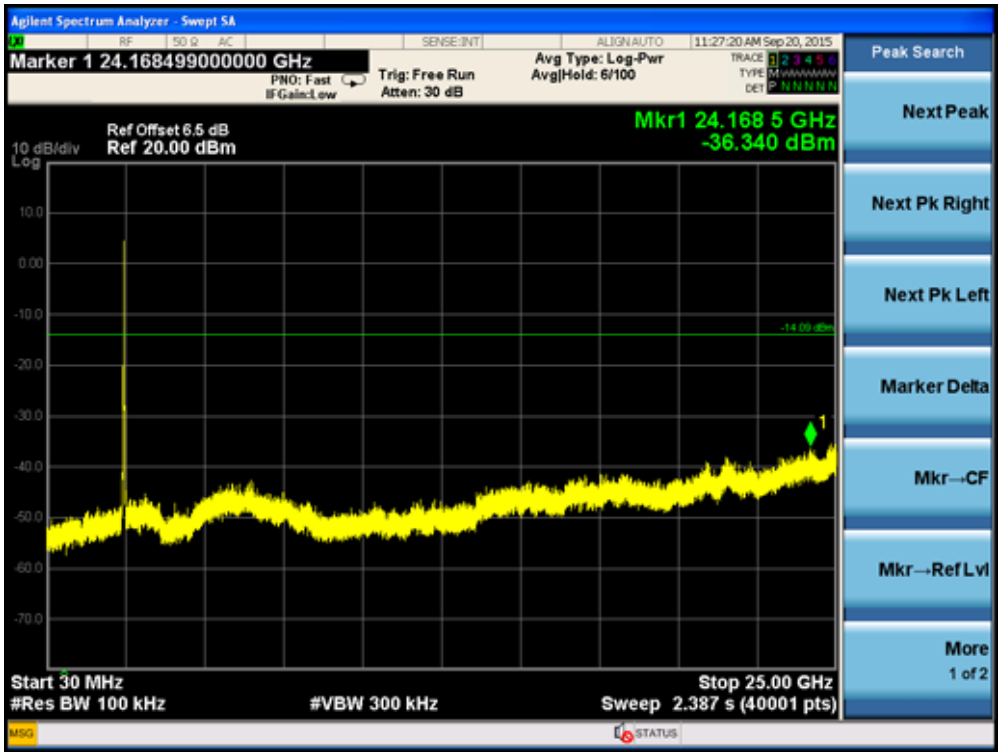
Reference Level – Frequency H



High Band Edge - Frequency H

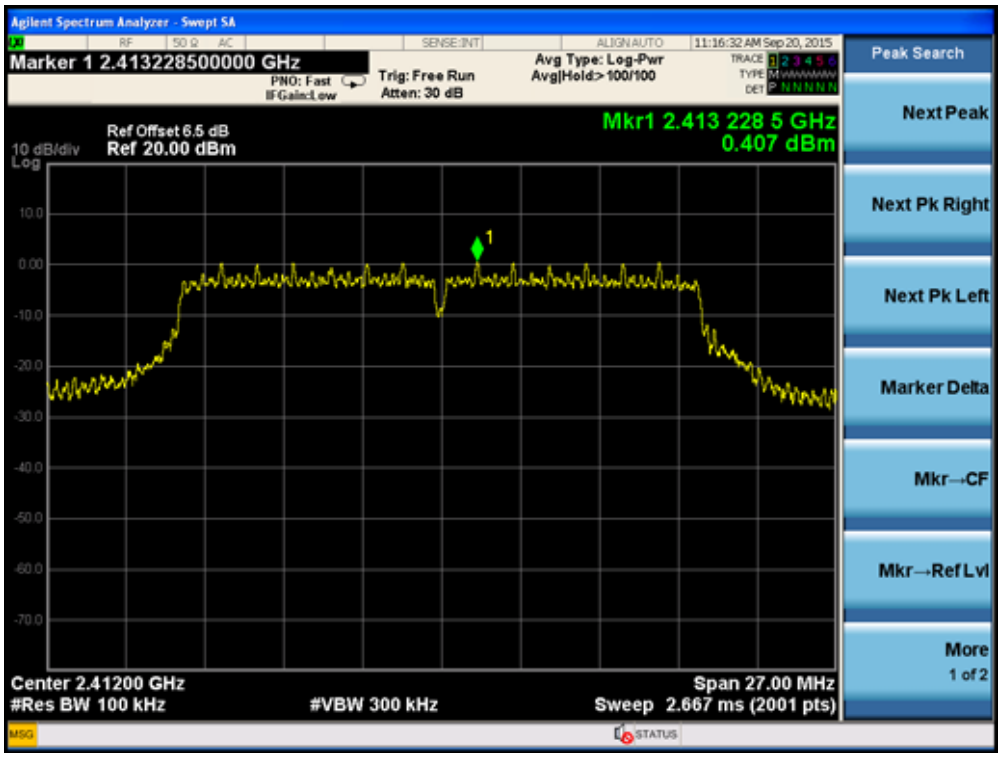


Spurious Emission 30MHz ~ 25GHz - Frequency H

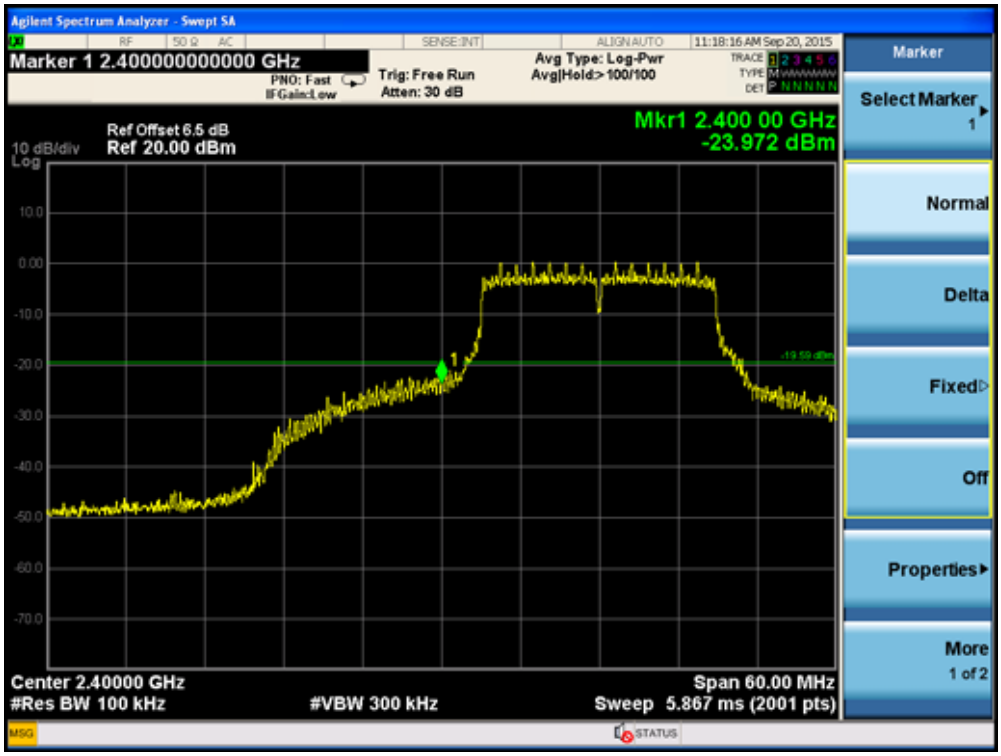


Channel 01 (2412MHz) -MIMO-Ant 2

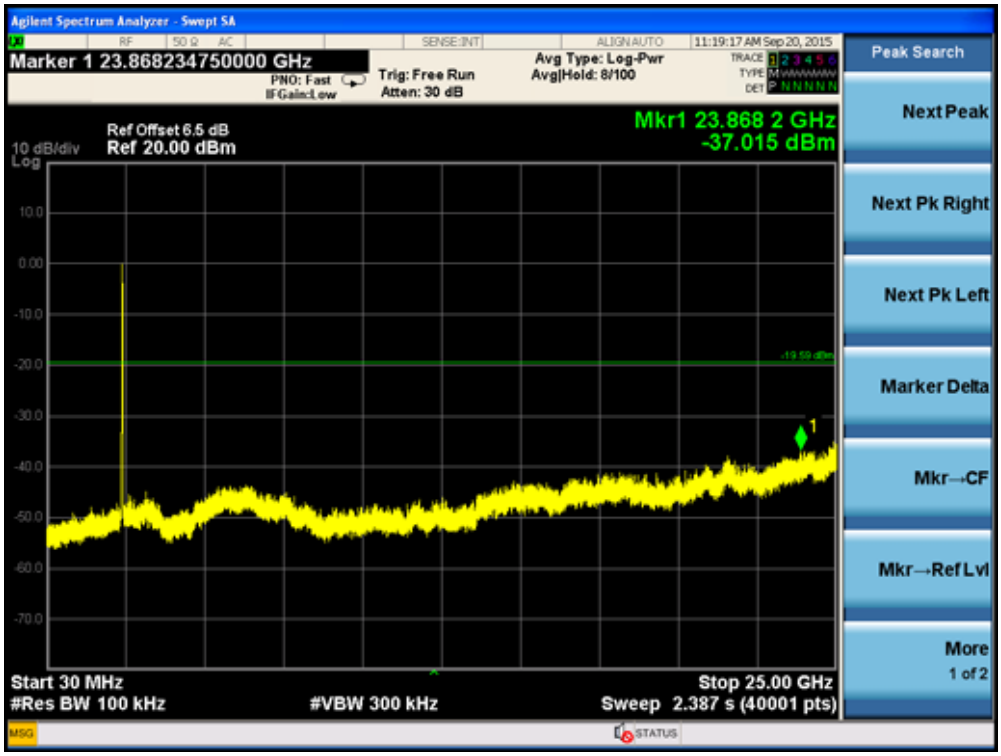
Reference Level – Frequency L



Low Band Edge - Frequency L

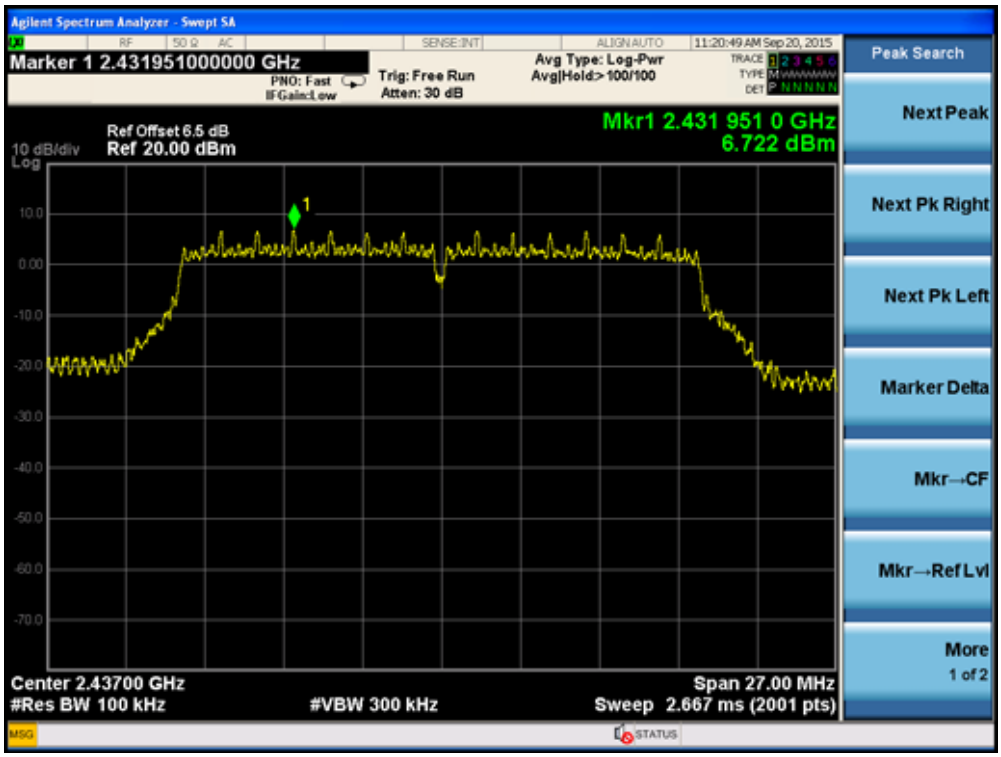


Spurious Emission 30MHz ~ 25GHz - Frequency L

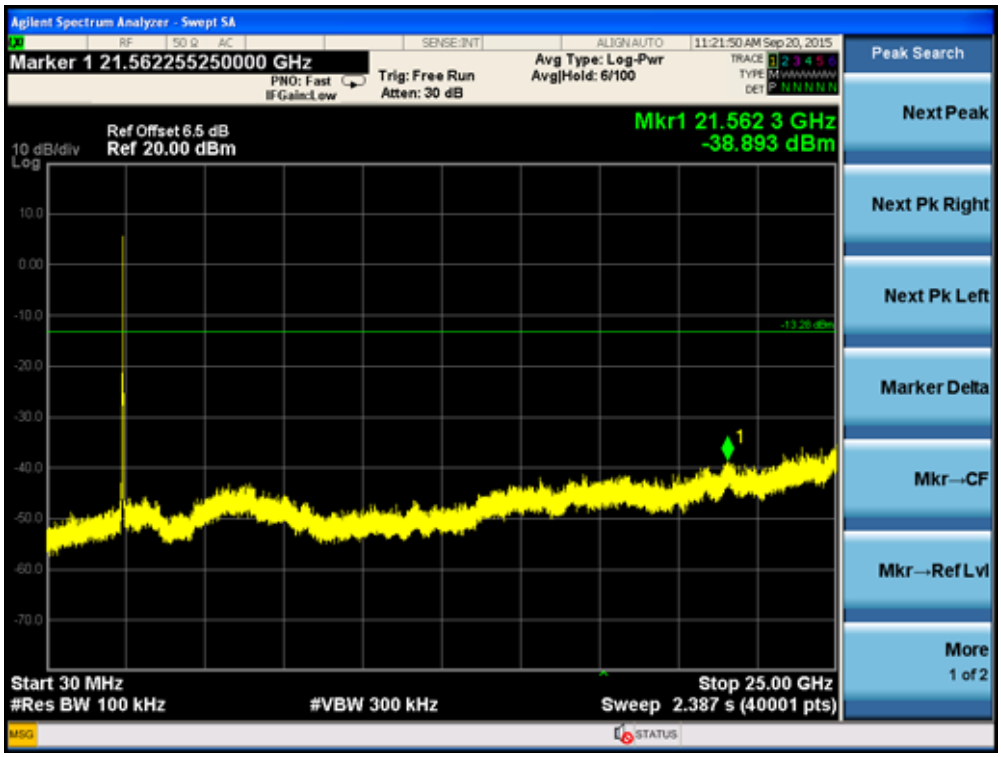


Channel 06 (2437MHz) -MIMO-Ant 2

Reference Level – Frequency M

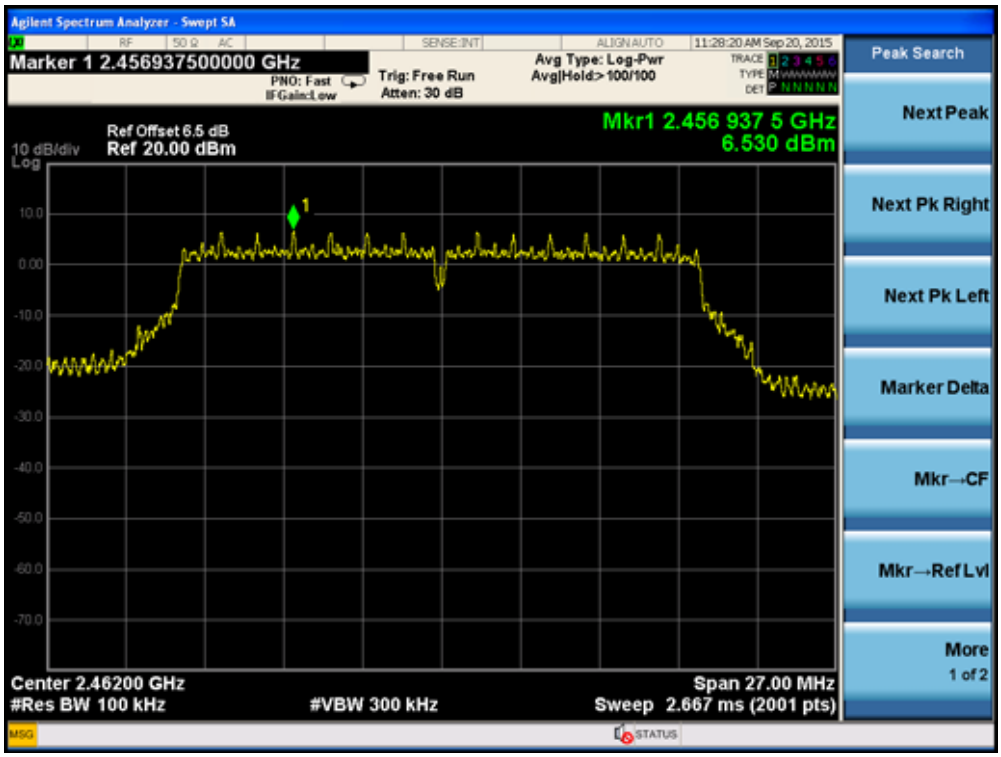


Spurious Emission 30MHz ~ 25GHz - Frequency M

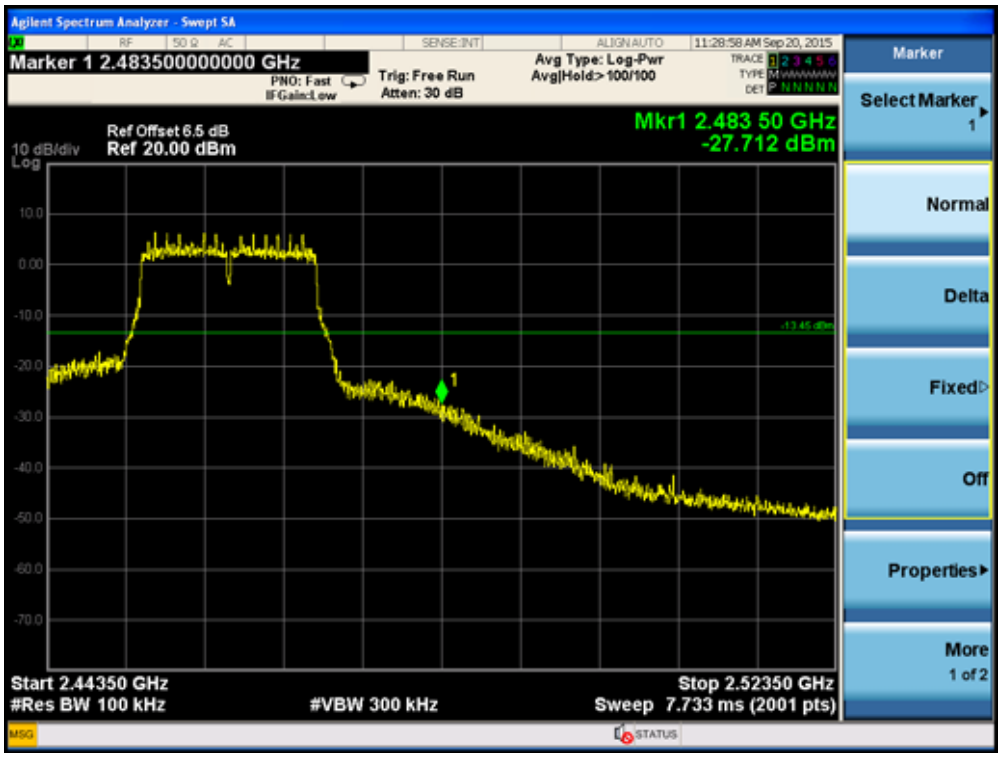


Channel 11 (2462MHz) -MIMO-Ant 2

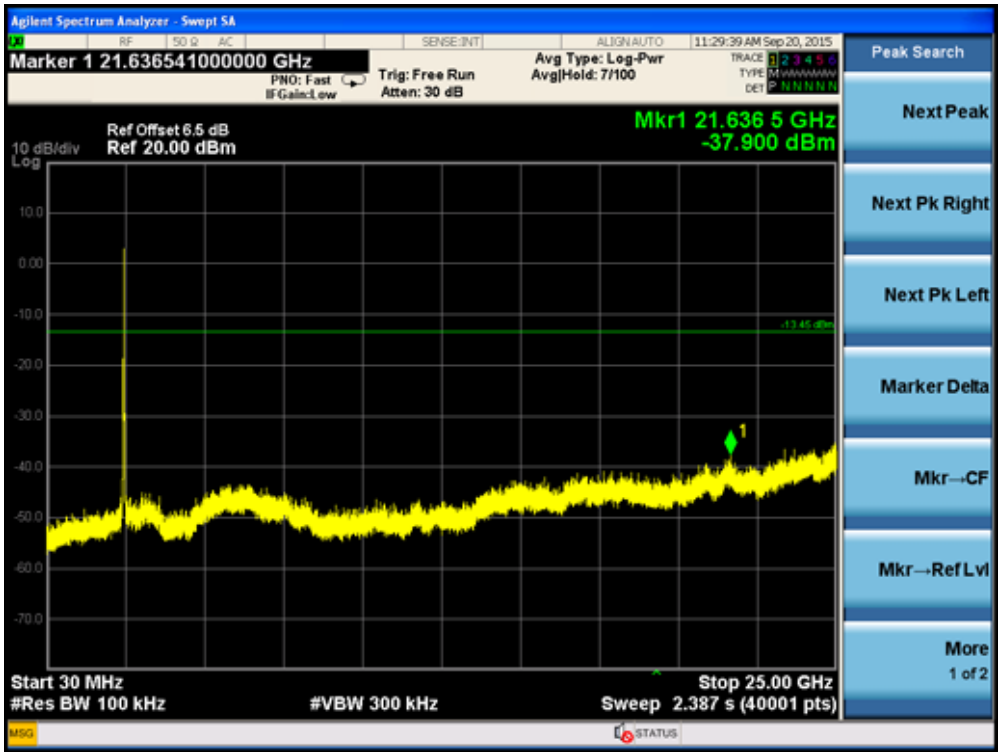
Reference Level – Frequency H



High Band Edge - Frequency H



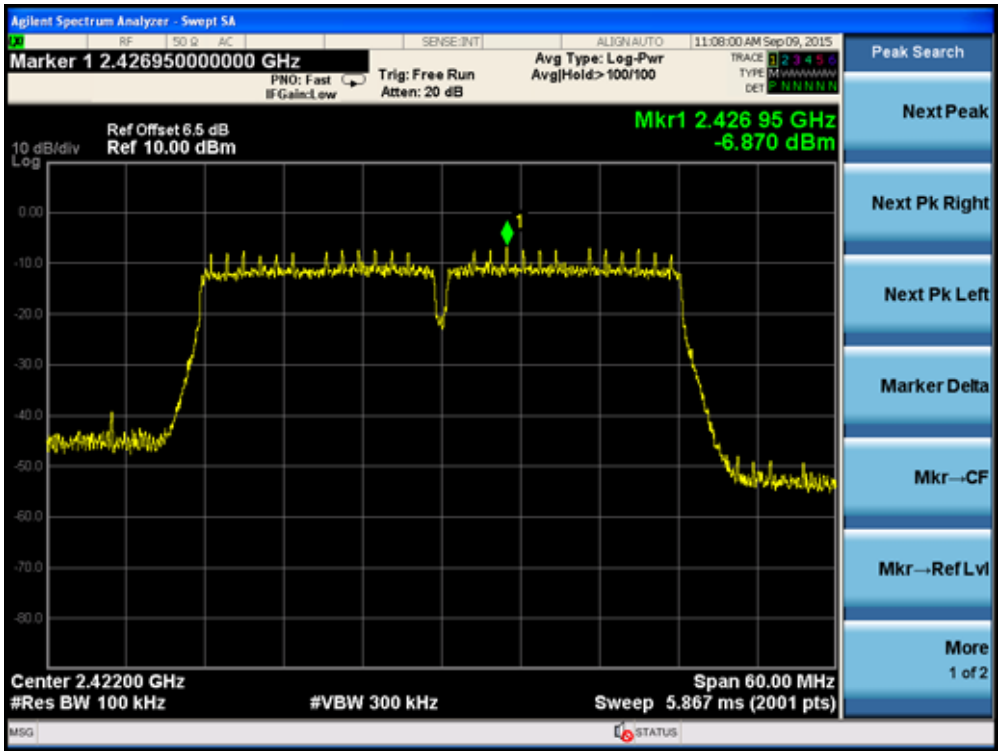
SSpurious Emission 30MHz ~ 25GHz - Frequency H



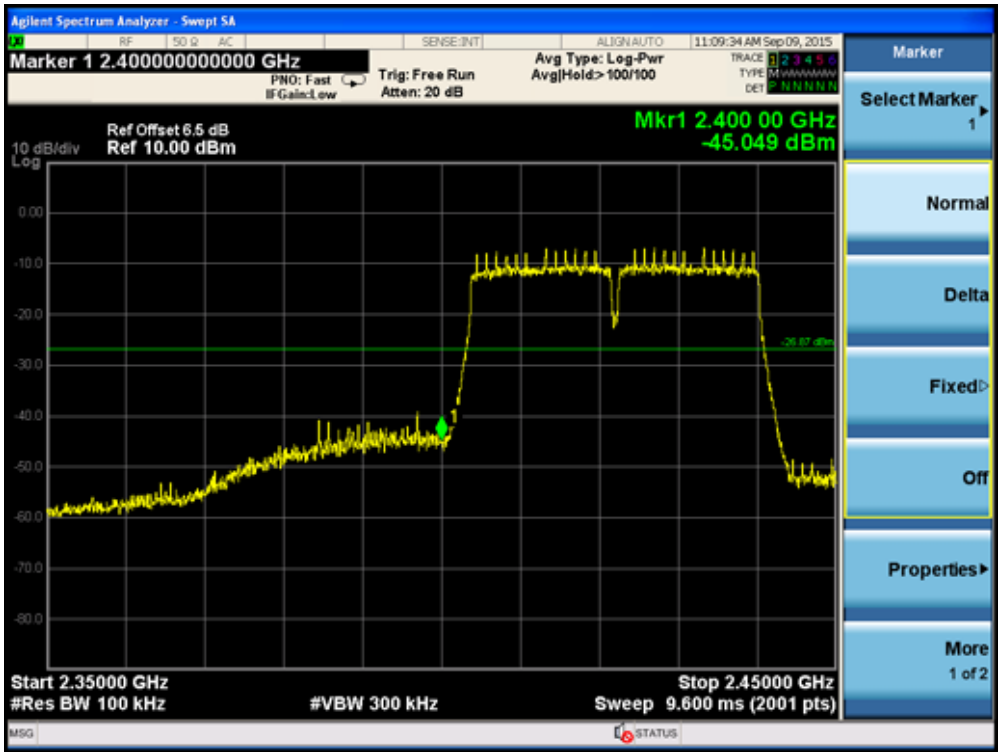
Product	:	IP-STB
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR-8
Test Mode	:	Mode 4: Transmit by 802.11n(40MHz)

Channel 03 (2422MHz)-Ant 1

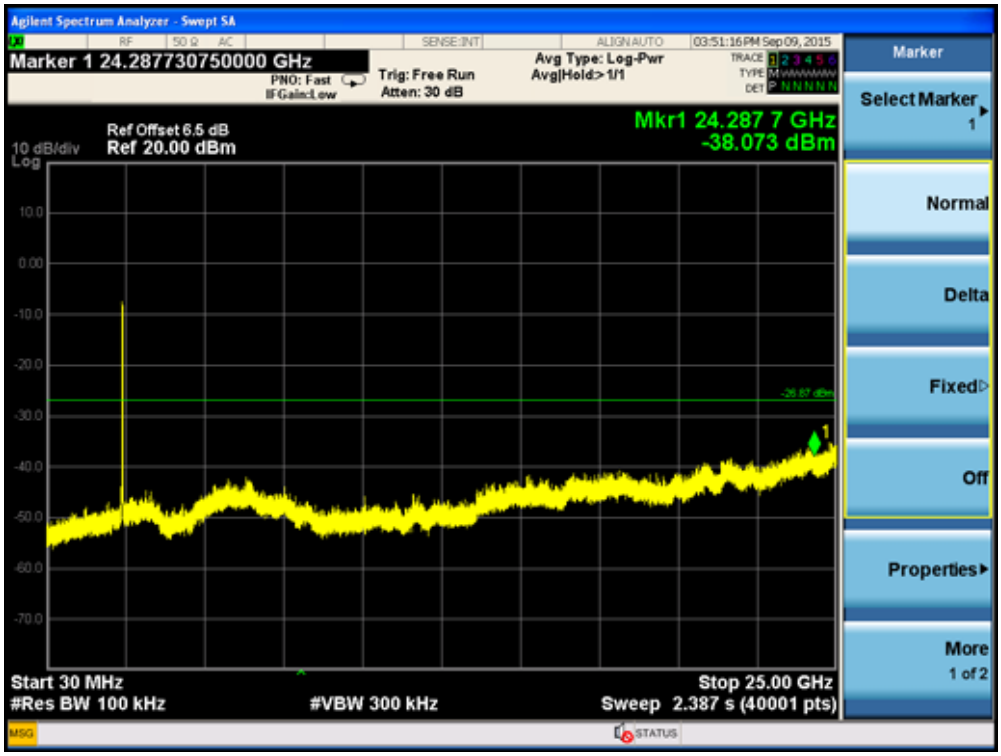
Reference Level – Frequency L



Low Band Edge - Frequency L

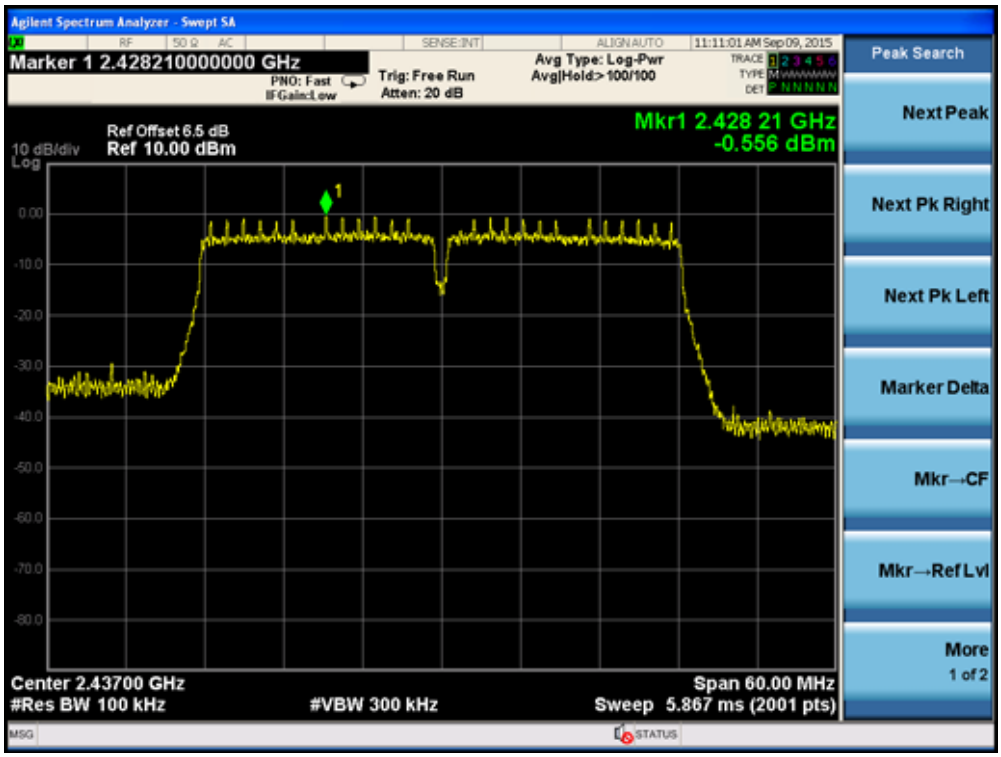


Spurious Emission 30MHz ~ 25GHz - Frequency L

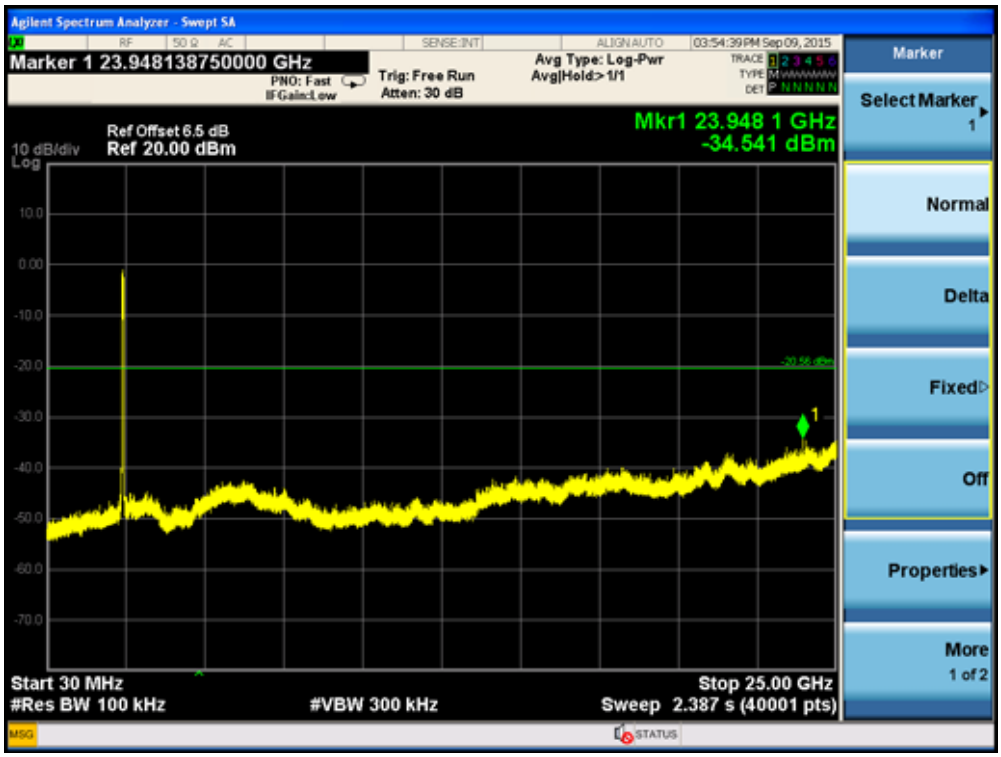


Channel 06 (2437MHz)-Ant 1

Reference Level – Frequency M

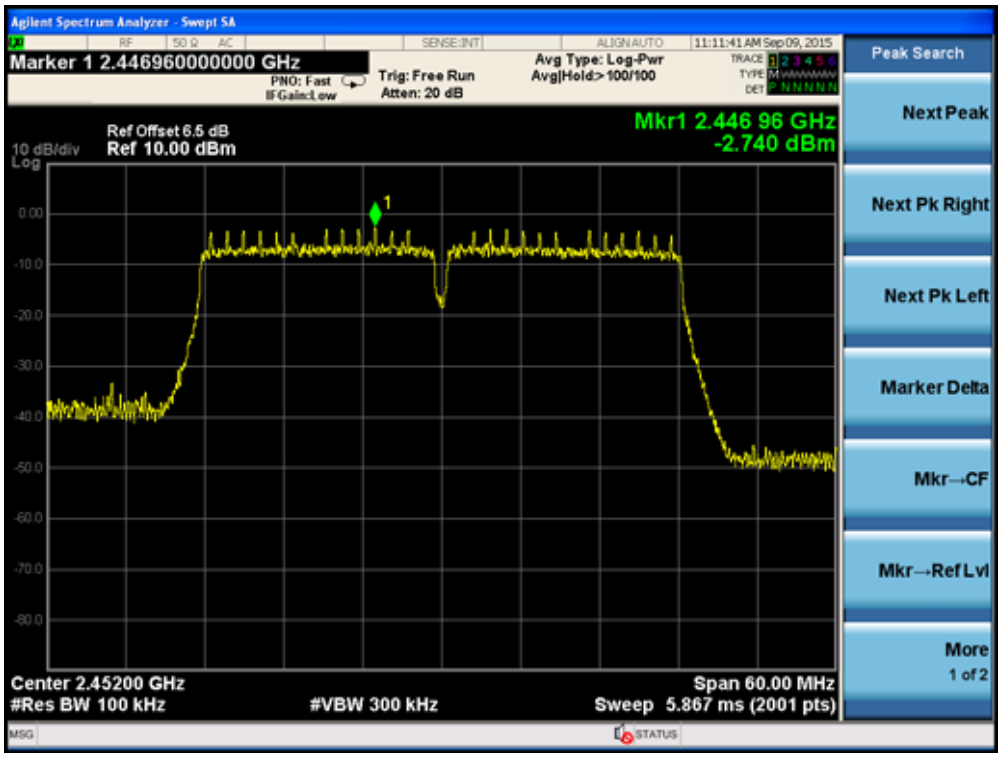


Spurious Emission 30MHz ~ 25GHz - Frequency M

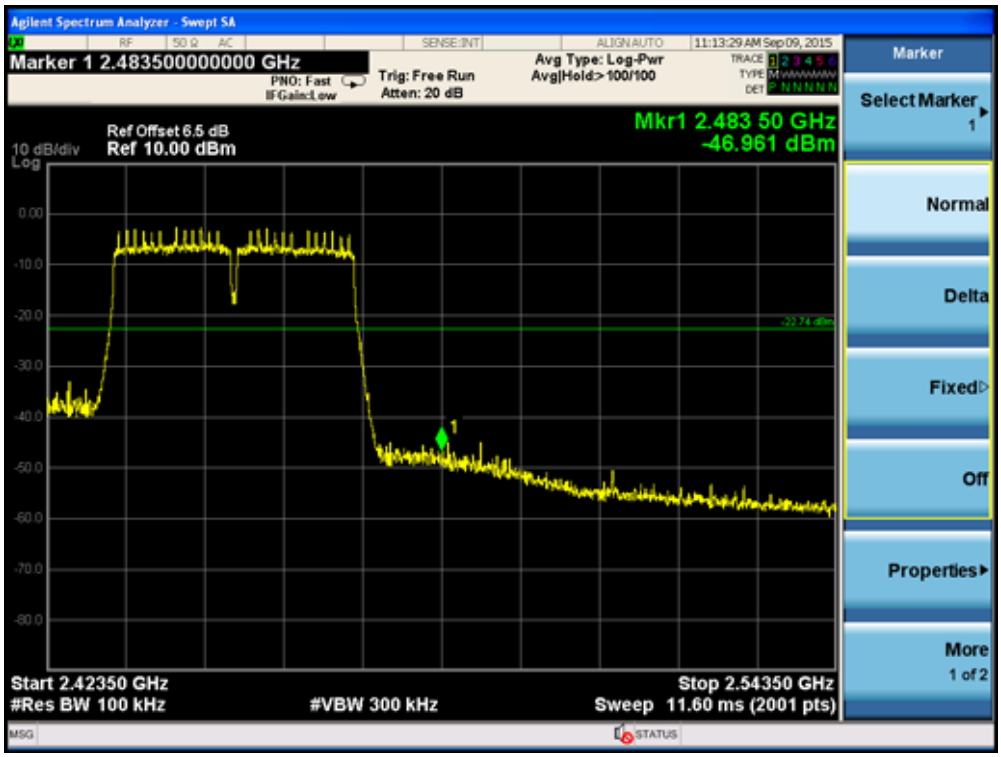


Channel 09 (2452MHz)-Ant 1

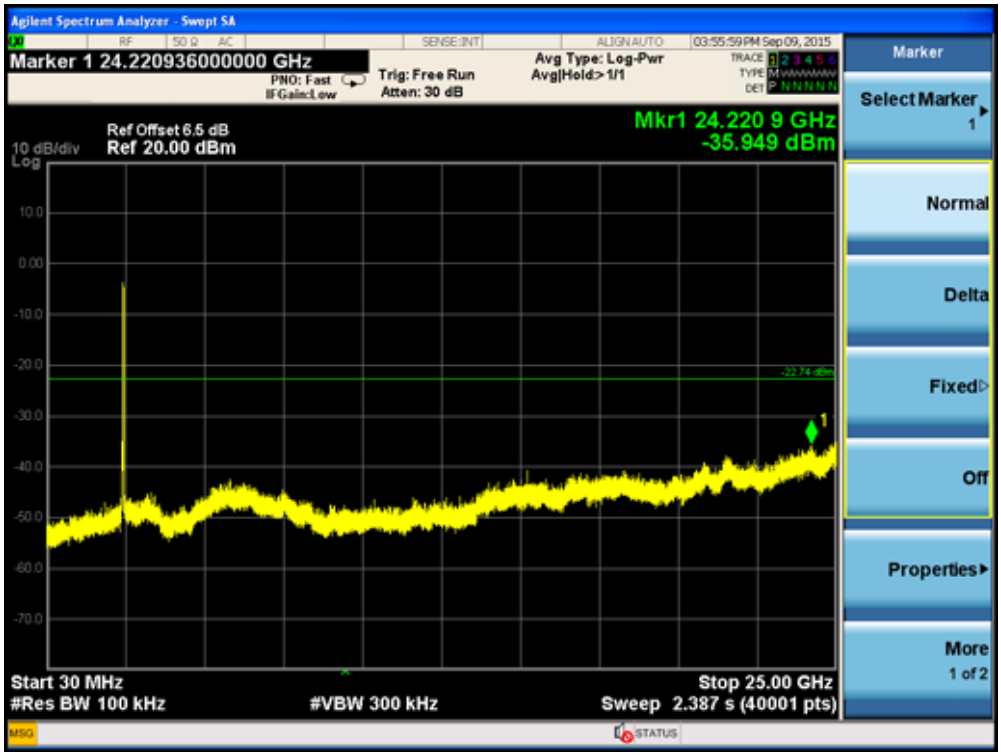
Reference Level – Frequency H



High Band Edge - Frequency H

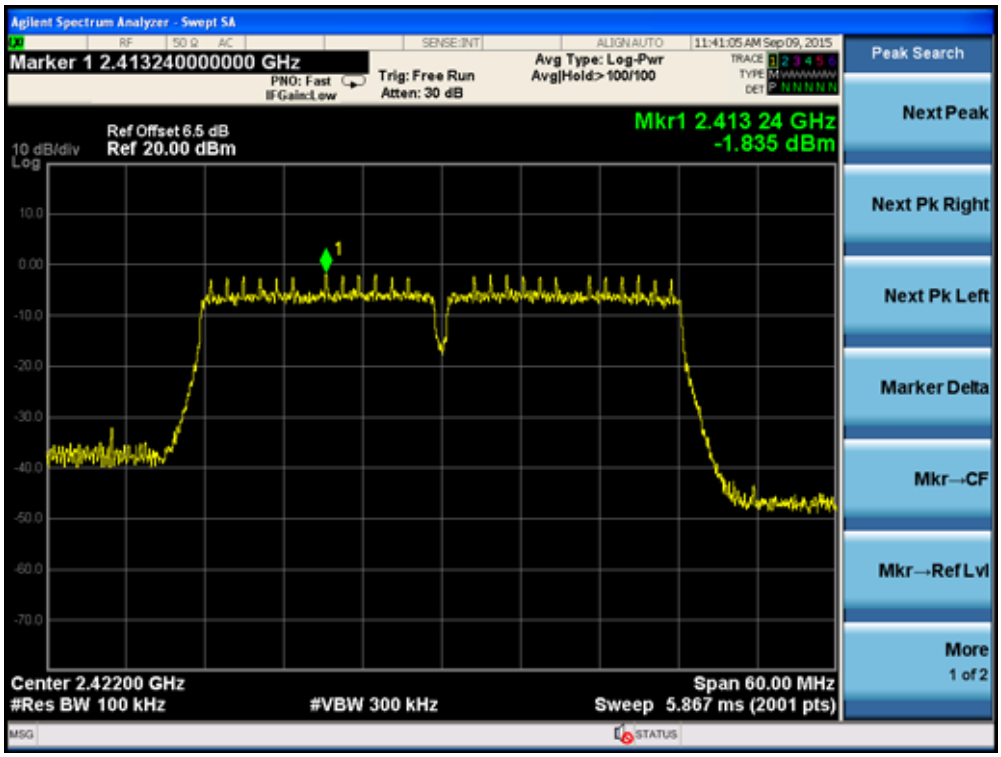


Spurious Emission 30MHz ~ 25GHz - Frequency H

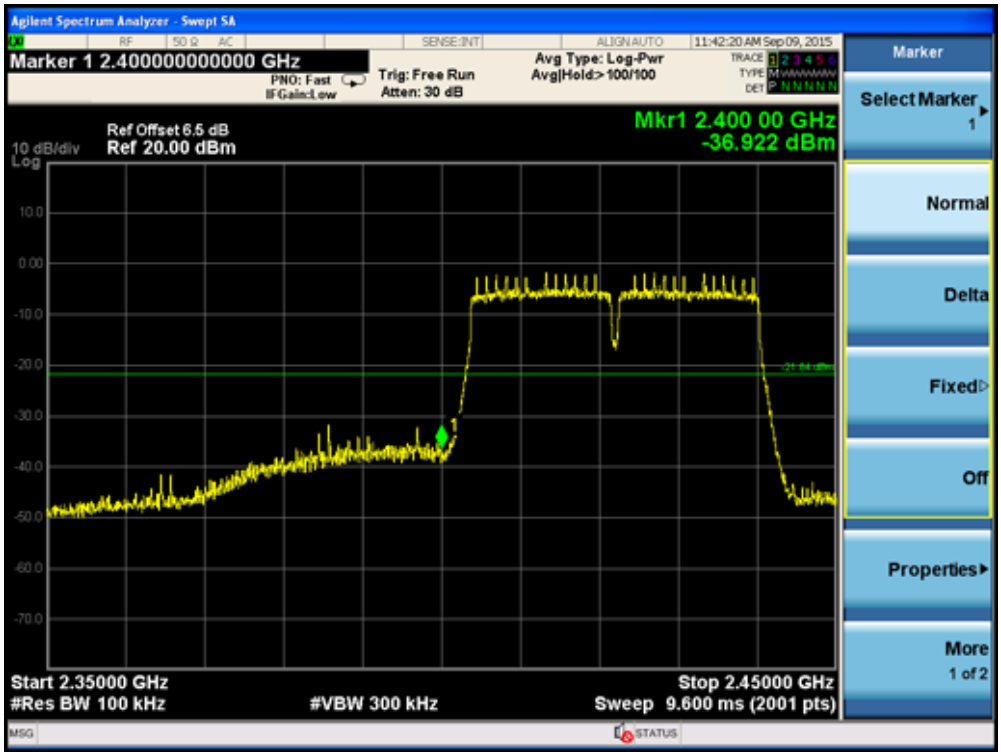


Channel 03 (2422MHz)-Ant 1

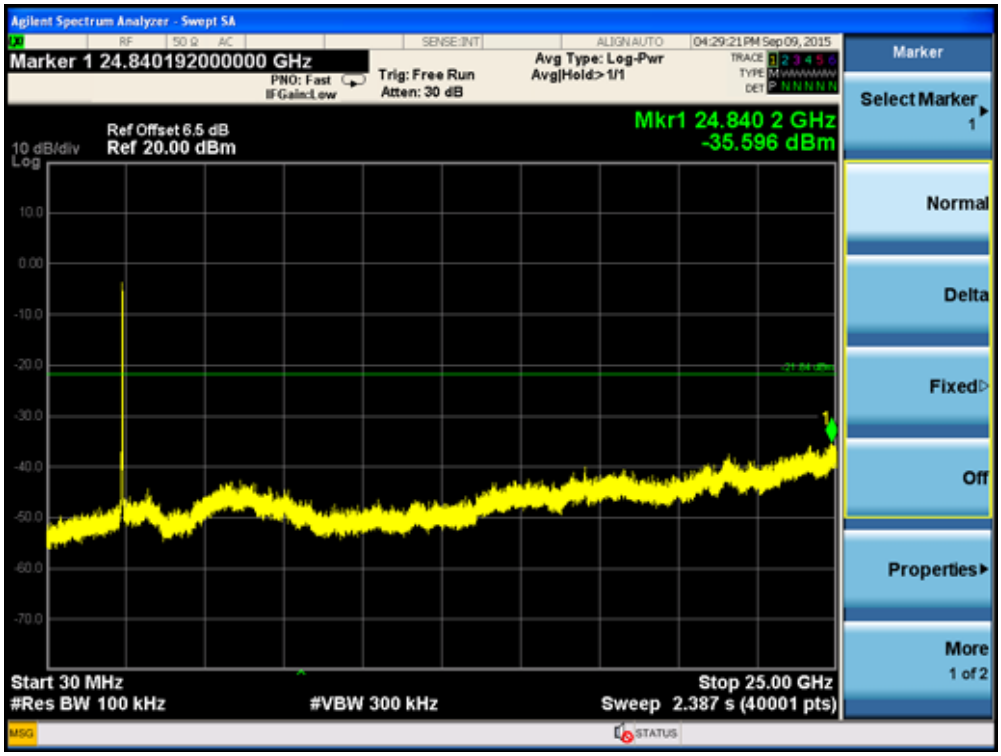
Reference Level – Frequency L



Low Band Edge - Frequency L

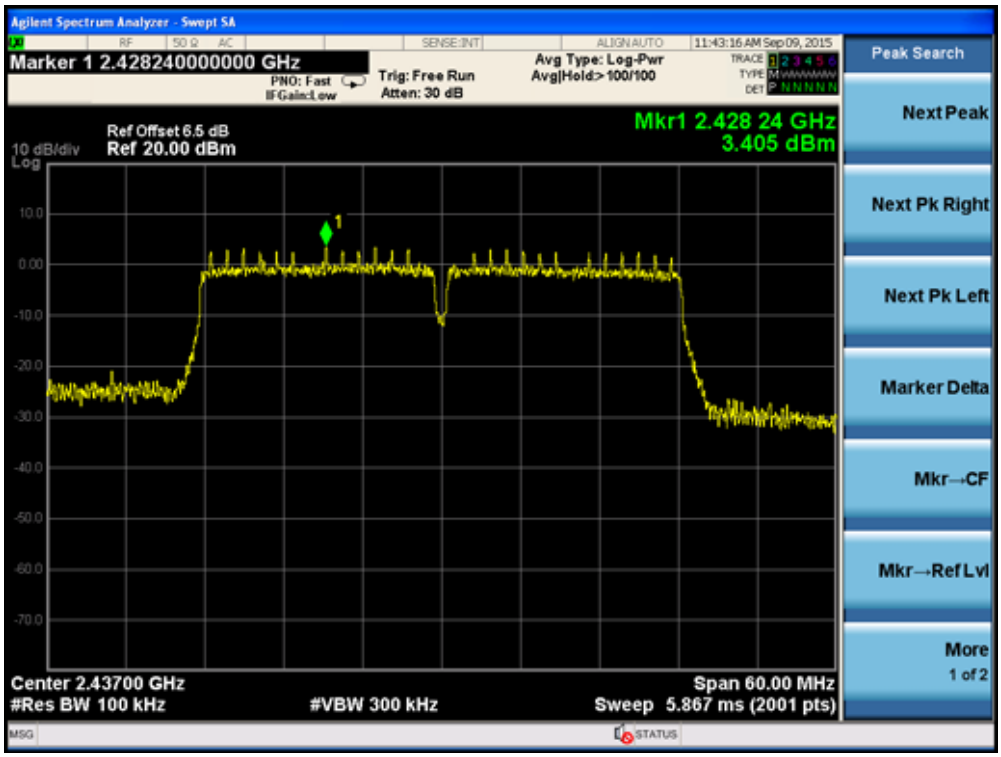


Spurious Emission 30MHz ~ 25GHz - Frequency L

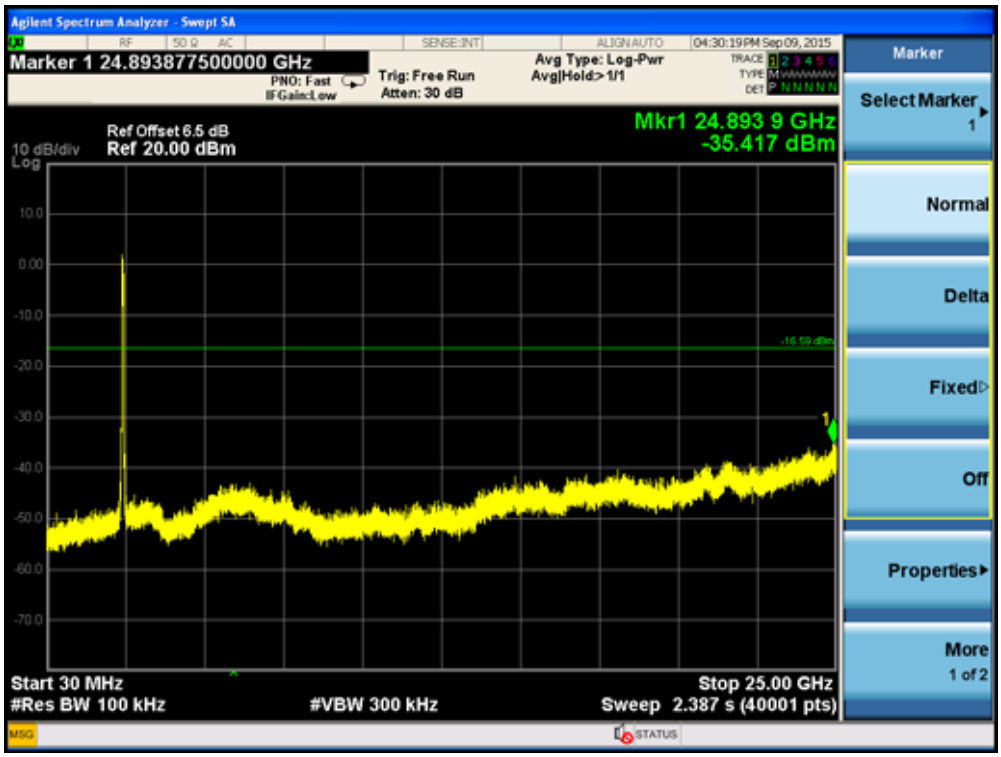


Channel 06 (2437MHz)-Ant 1

Reference Level – Frequency M

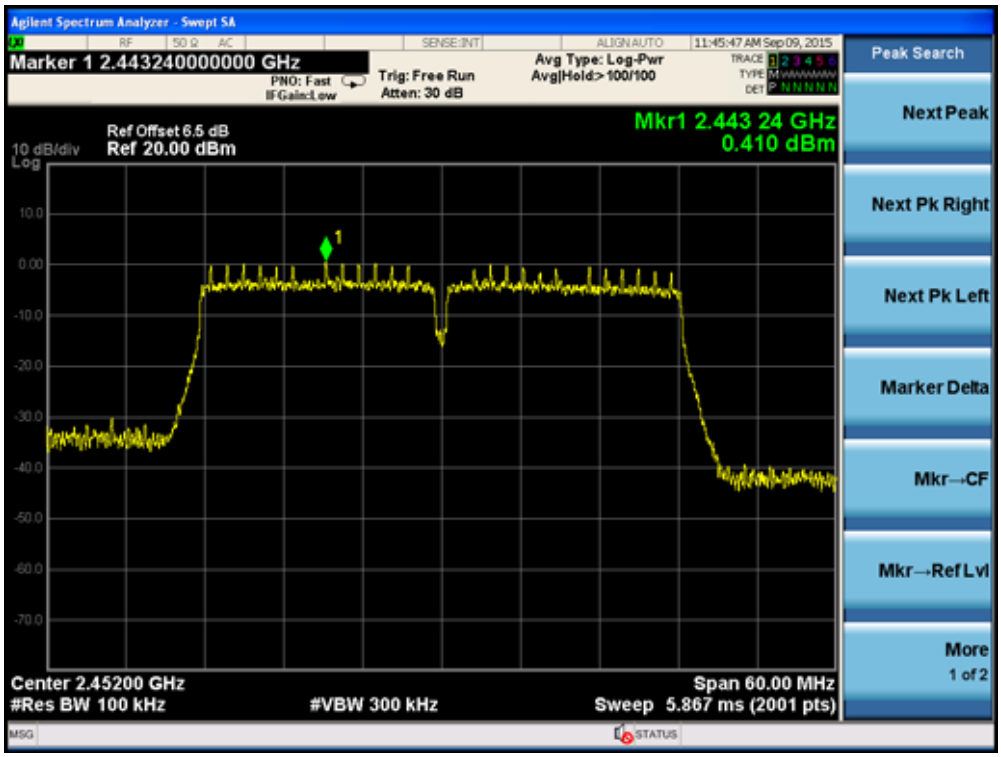


Spurious Emission 30MHz ~ 25GHz - Frequency M

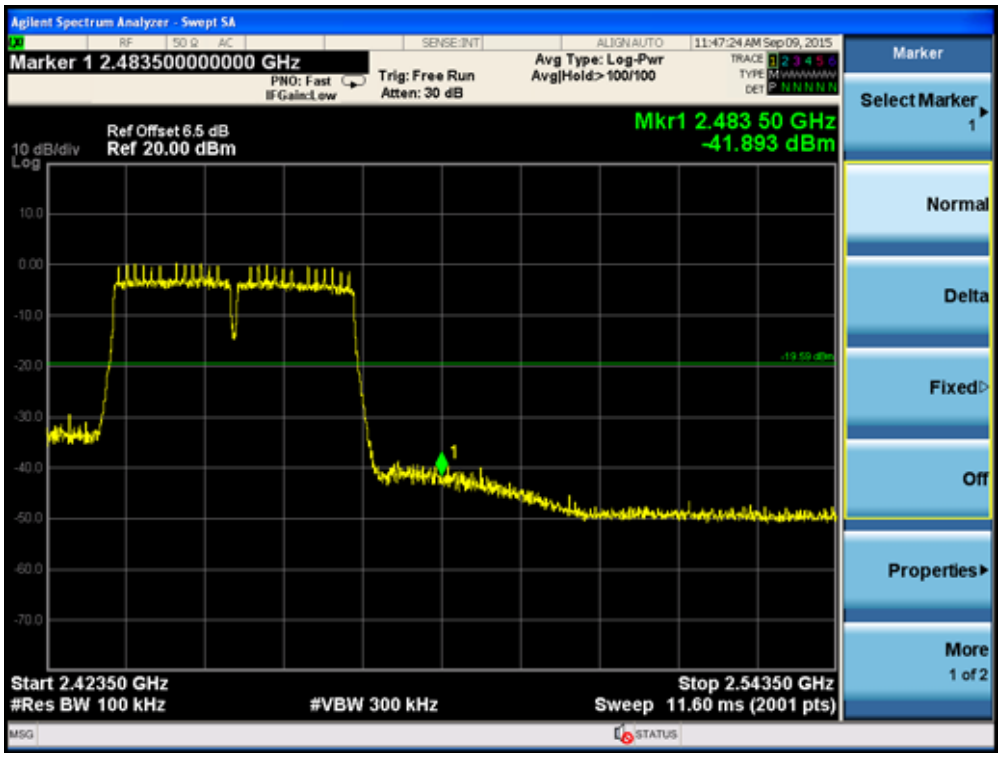


Channel 09 (2452MHz)-Ant 1

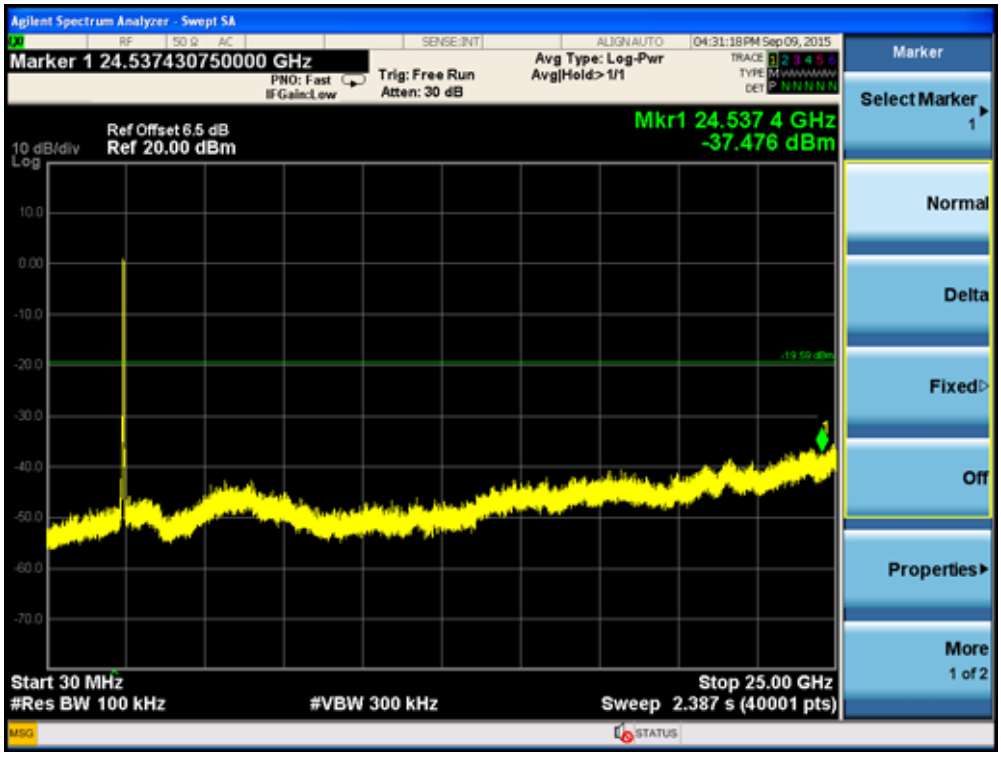
Reference Level – Frequency H



High Band Edge - Frequency H

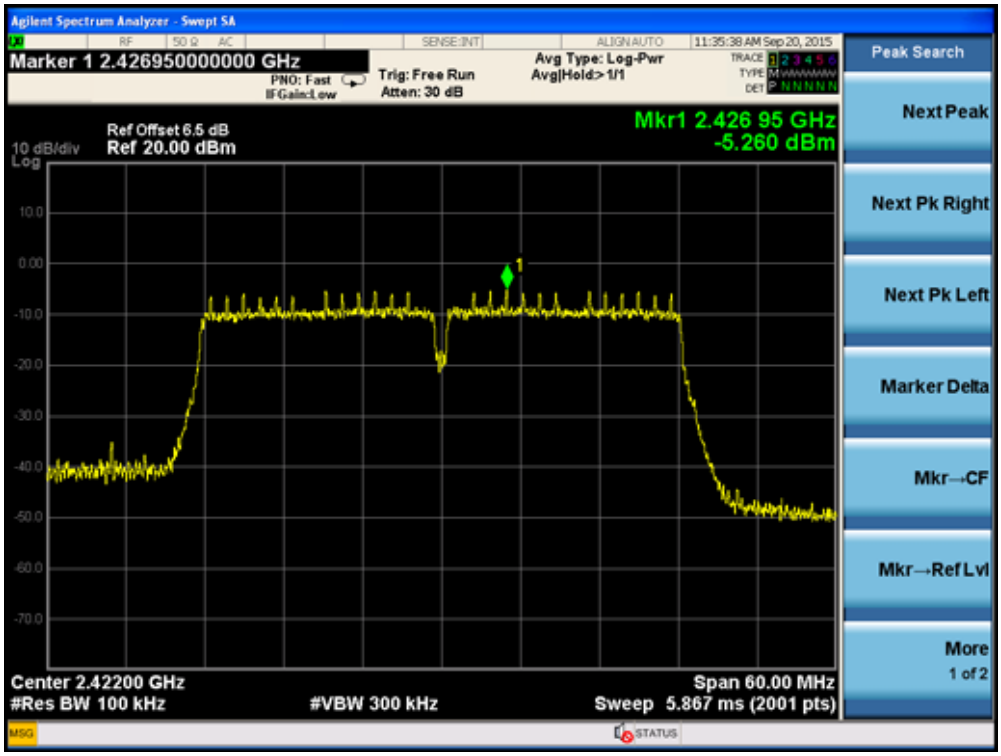


Spurious Emission 30MHz ~ 25GHz - Frequency H

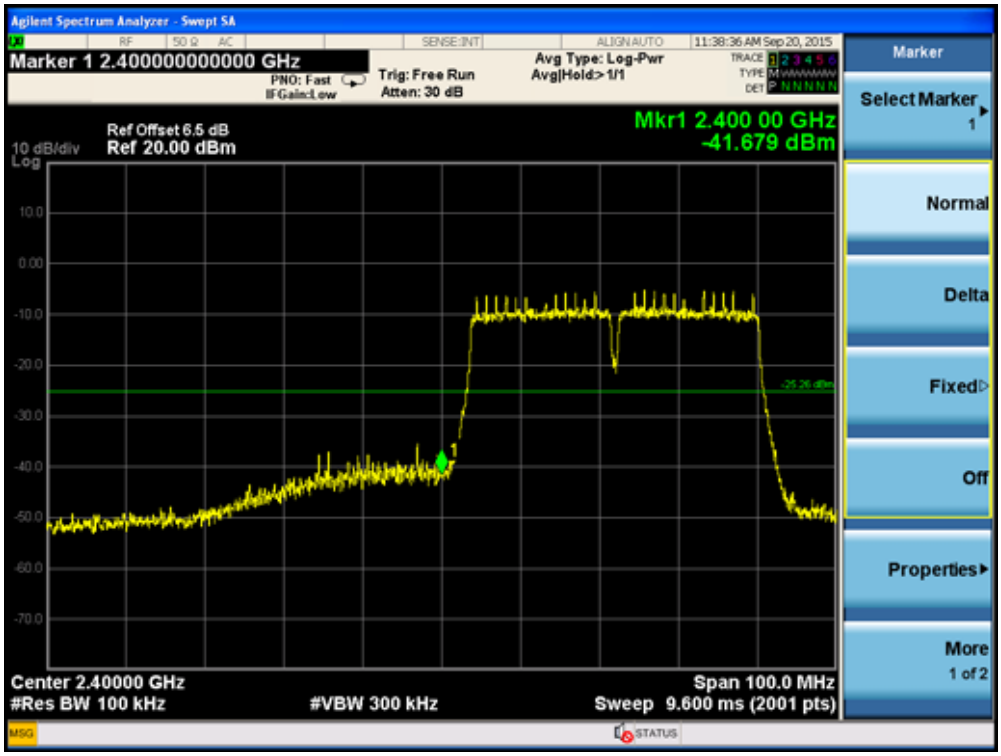


Channel 03 (2422MHz) -MIMO-Ant 1

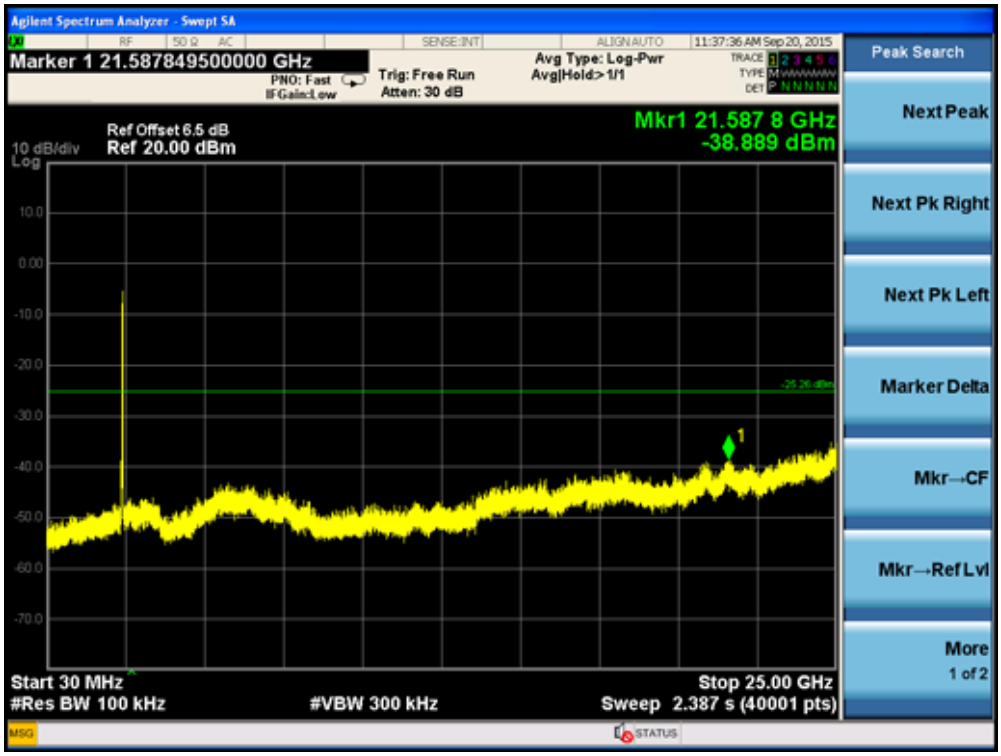
Reference Level – Frequency L



Low Band Edge - Frequency L

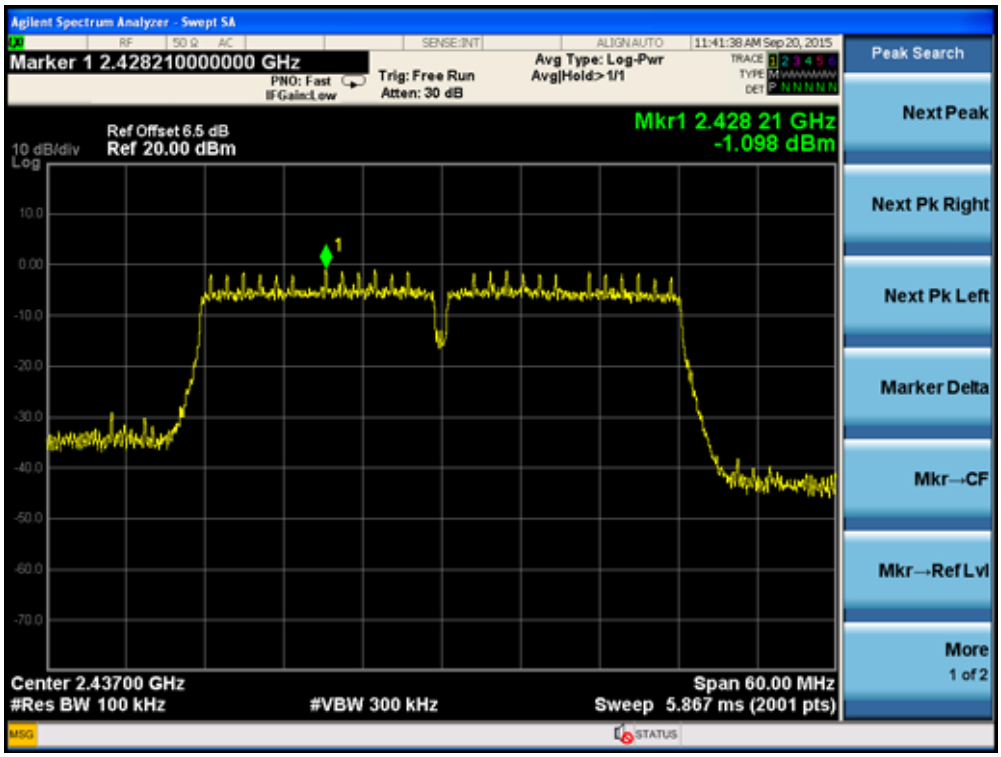


Spurious Emission 30MHz ~ 25GHz - Frequency L

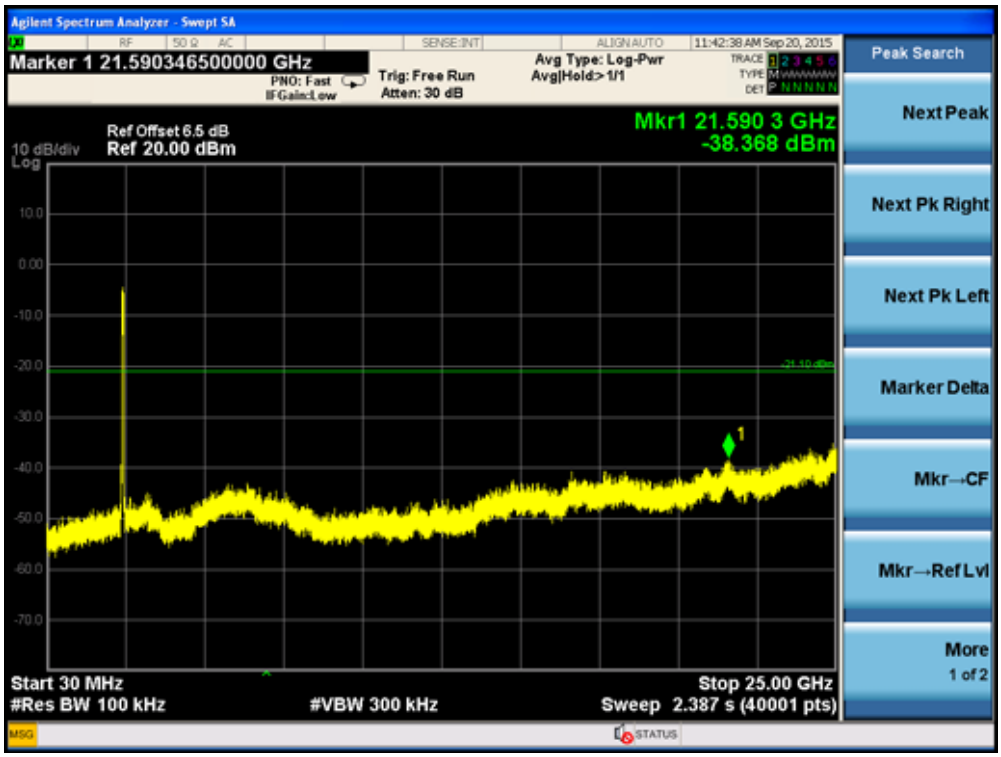


Channel 06 (2437MHz) -MIMO-Ant 1

Reference Level – Frequency M

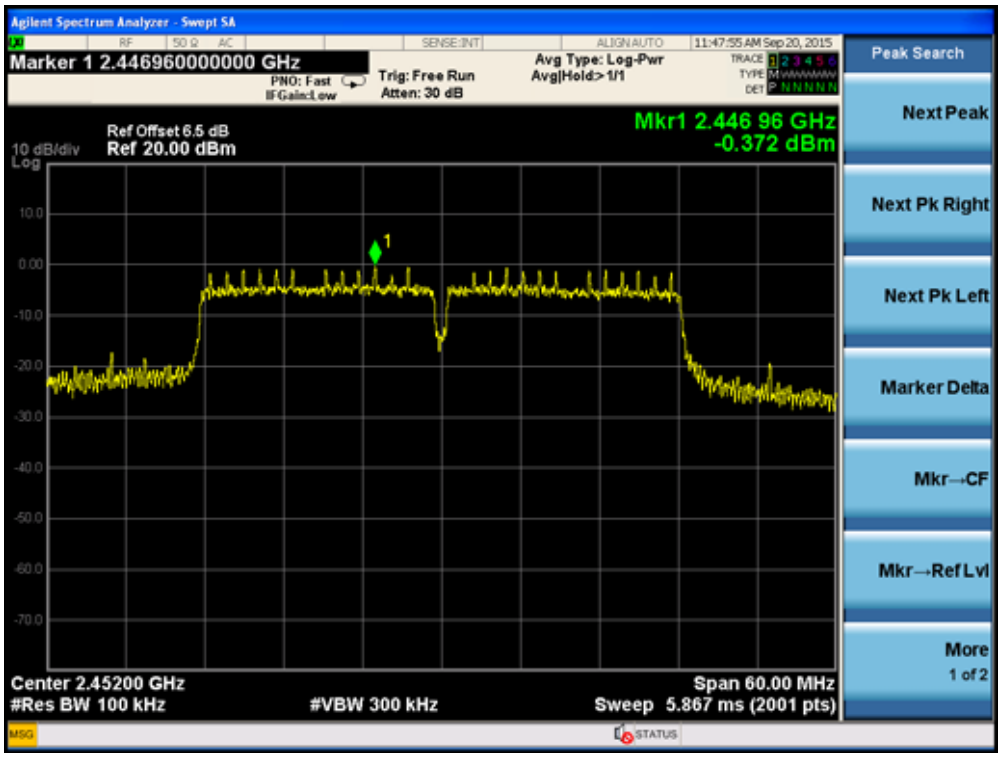


Spurious Emission 30MHz ~ 25GHz - Frequency M

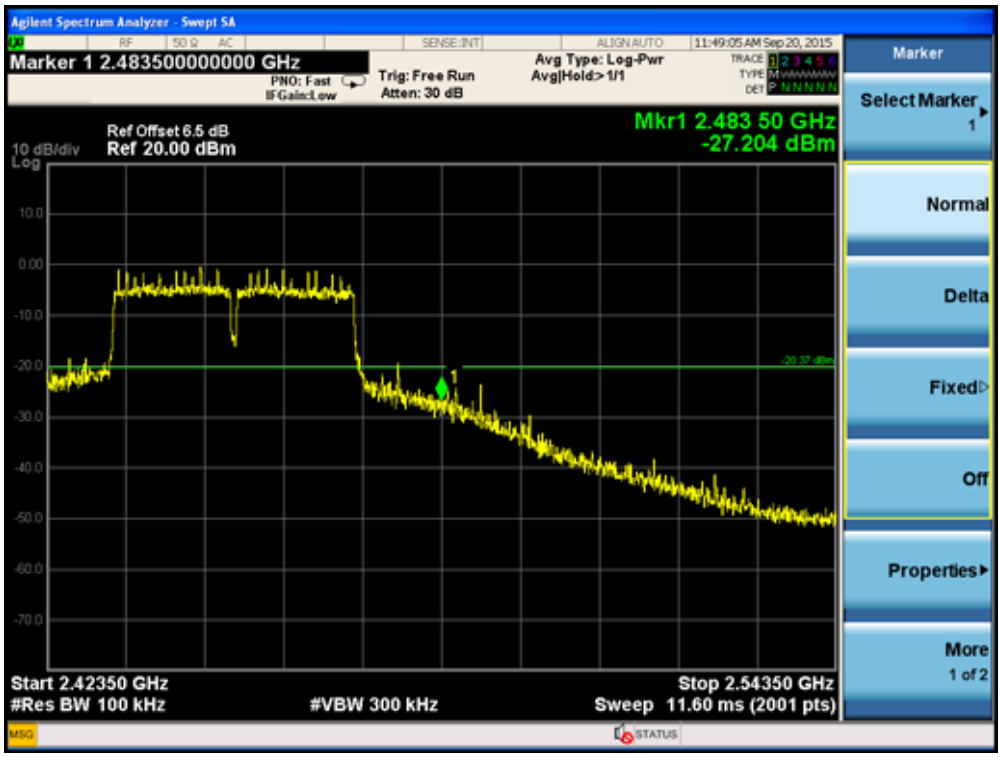


Channel 09 (2452MHz) -MIMO-Ant 1

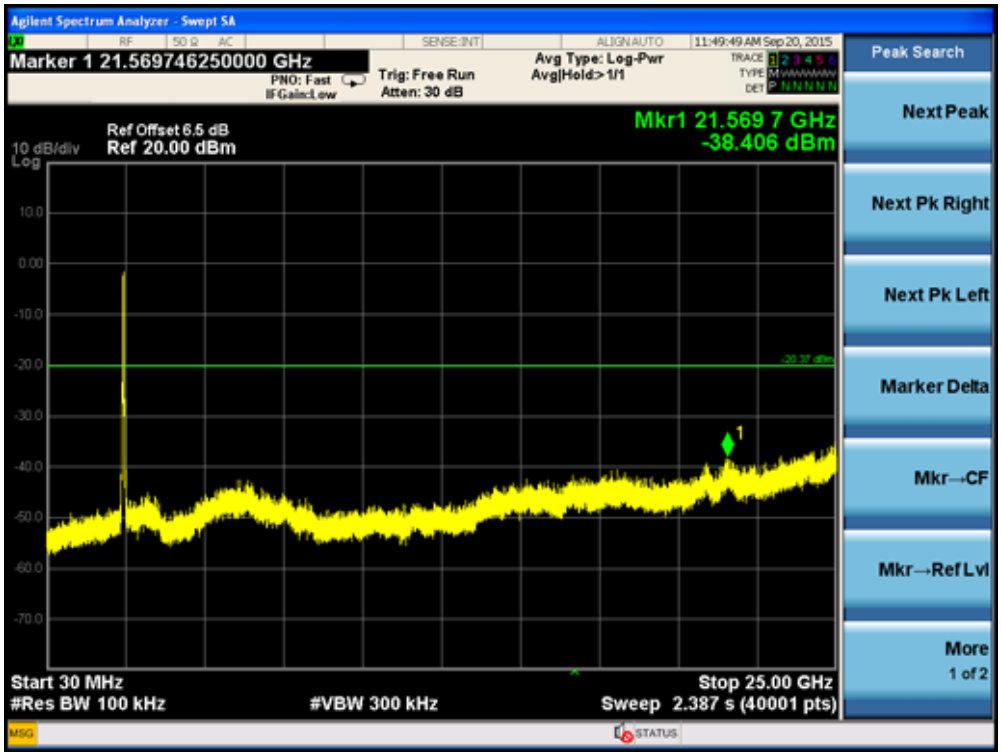
Reference Level – Frequency H



High Band Edge - Frequency H

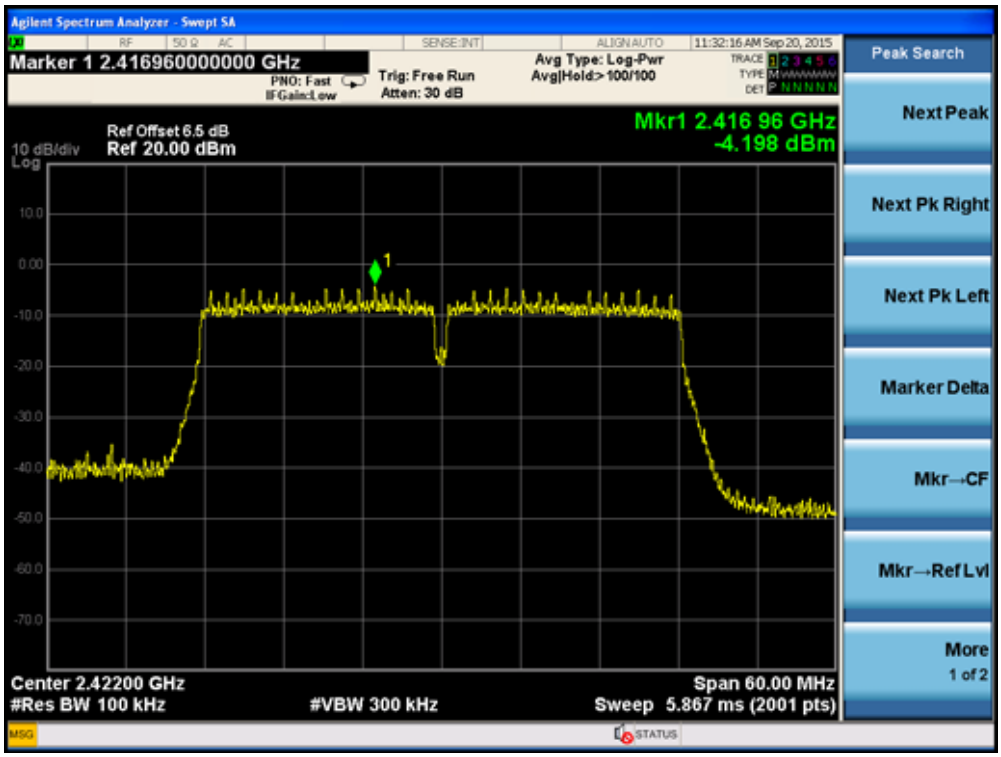


Spurious Emission 30MHz ~ 25GHz - Frequency H

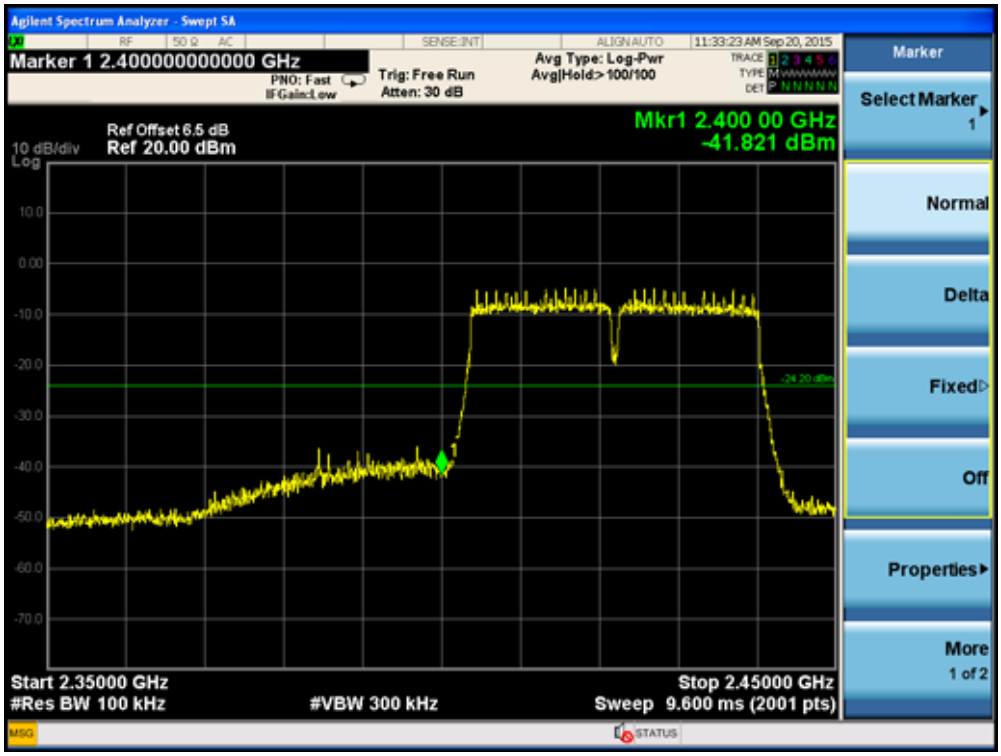


Channel 03 (2422MHz) -MIMO-Ant 1

Reference Level – Frequency L



Low Band Edge - Frequency L



Spurious Emission 30MHz ~ 25GHz - Frequency L