FCC 47 CFR PART 15 SUBPART C AND ANSI C63.10:2009 TEST REPORT

For

Module

Model : 830E

Issued for

Linc Technology LLC.

1125 12th Ave NW, Issaquah WA 98027 U.S.A.

Issued by

Compliance Certification Services Inc.
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Issued Date: October 13, 2014

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	10/13/2014	Initial Issue	All Page 132	Gloria Chang

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1. TEST REPORT CERTIFICATION

Applicant : Linc Technology LLC.
Address : 1125 12th Ave NW, Issaquah WA 98027 U.S.A.
Equipment Under Test : Module
Model : 830E
Tested Date : October 02 ~ 09, 2014

APPLICABLE STANDARD	
Standard	**Test Result**
FCC Part 15 Subpart C AND ANSI C63.10:2009	PASS

WE HEREBY CERTIFY THAT: The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Sb. Lu
Sr. Engineer

Reviewed by:

Gundam Lin
Sr. Engineer

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2. EUT DESCRIPTION

Product Name	Module
Model Number	830E
Identify Number	T141002S02
Received Date	October 02, 2014
Frequency Range	IEEE 802.11b/g : 2412MHz ~ 2462MHz
Transmit Power	Yagi Antenna: IEEE 802.11b : 21.54 dBm (0.1424 W) IEEE 802.11g : 26.61 dBm (0.4582 W) Omni Antenna: IEEE 802.11b : 20.04 dBm (0.1008 W) IEEE 802.11g : 26.97 dBm (0.4979 W) Patch Antenna: IEEE 802.11b : 21.67 dBm (0.1469 W) IEEE 802.11g : 25.86 dBm (0.3855 W)
Channel Spacing	IEEE 802.11b/g : 5MHz
Channel Number	IEEE 802.11b/g: 11 Channels
Transmit Data Rate	IEEE 802.11b : 11, 5.5, 2, 1 Mbps IEEE 802.11g : 54, 48, 36, 24, 18, 12, 9, 6 Mbps
Type of Modulation	IEEE 802.11b : DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g : OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Type	Yagi Antenna × 1, Antenna Gain : 14 dBi Omni Antenna × 1, Antenna Gain : 8 dBi Patch Antenna × 1, Antenna Gain : 14 dBi
Power Rating	3.3Vdc
Test Voltage	120Vac, 60Hz

Remark :

1. *The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.*
2. *For more details, please refer to the User's manual of the EUT.*
3. *This submittal(s) (test report) is intended for FCC ID: UONMEM122337 filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.*

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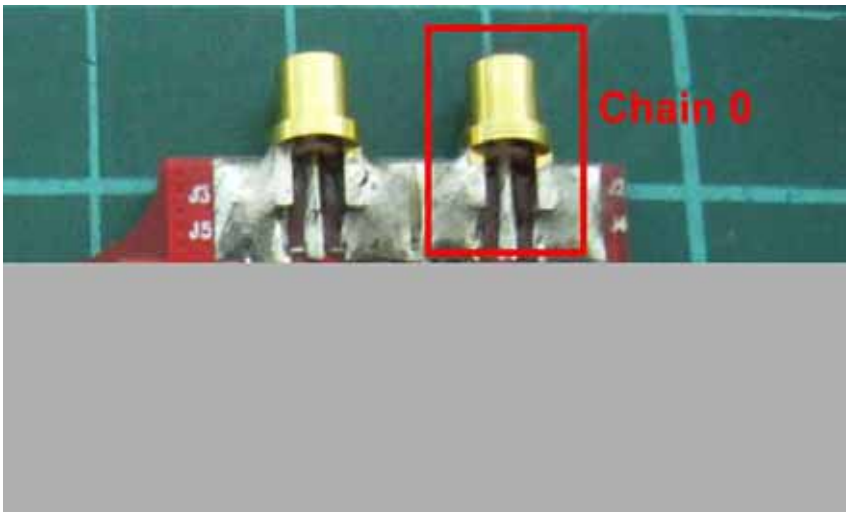
3. DESCRIPTION OF TEST MODES

The EUT is an 802.11n transceiver in Module form factor.

IEEE 802.11b/g mode (1TX / 1RX):

Chain 0 : transmit/receive.



The EUT comes with three types for sales, the detail information please refer the table as below :

No.	Antenna Type	Gain	Attenuator	Total Antenna Gain
1	Yagi	14 dBi	N/A	14 dBi
2	Omni	8 dBi	N/A	8 dBi
3	Patch	19 dBi	5 dB	14 dBi

Conducted Emission / Radiated Emission Test (Below 1 GHz)

1. The following test modes were scanned during the preliminary test:

No.	Pre-Test Mode
1	TX Mode / Antenna 1
2	TX Mode / Antenna 2
3	TX Mode / Antenna 3

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test Mode		
Emission	Radiated Emission	TX Mode / Antenna 1 TX Mode / Antenna 2 TX Mode / Antenna 3
	Conducted Emission	TX Mode / Antenna 1

Remark : *Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.*

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Conducted / Radiated Emission Test (Above 1 GHz)
IEEE 802.11b, 802.11g mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode : 1Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11g mode : 6Mbps data rate (worst case) were chosen for full testing.

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4. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10: 2009 and FCC CFR 47, 15.207, 15.209 and 15.247.

5. FACILITIES AND ACCREDITATION

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

NO. 989-1 Wen Shan Rd., Shang Shan Village,
Qionglin Shiang Hsinchu County 30741, Taiwan, R.O.C

The sites are constructed in conformance with the requirements of ANSI C63.10:2009 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

5.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan	TAF

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	INDUSTRY CANADA
Japan	VCCI
Taiwan	BSMI
USA	FCC MRA

Copies of granted accreditation certificates are available for downloading from our web site, http:///www.ccsrf.com

Remark: *FCC Designation Number TW1027.*

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5.3 MEASUREMENT UNCERTAINTY

The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2.

PARAMETER	UNCERTAINTY
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 30 to 1000 MHz	+/- 3.97
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 1 to 18GHz	+/- 3.58
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 18 to 26 GHz	+/- 3.59
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 26 to 40 GHz	+/- 3.81
Conducted Emission (Mains Terminals), 9kHz to 30MHz	+/- 2.48

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Consistent with industry standard (e.g. CISPR 22, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.

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6. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

No.	Product	Manufacturer	Model No.	Serial No.
1	Notebook PC	IBM (Lenovo)	ThinkPad T61 7663-AS6	L3F3864
2	Notebook PC	HP	ProBook 4421s	CNF03242PJ
3	DC POWER SUPPLY	ROHDE&SCH WAZ	NGSM 32/10	100232

No.	Power & Signal Cable Description
1	Non-shielded RJ-45 cable, 10m × 1

SETUP DIAGRAM FOR TESTS

EUT & peripherals setup diagram is shown in appendix setup photos.

EUT OPERATING CONDITION

RF Mode :

1. EUT & peripherals setup diagram is shown in appendix setup photos.
2. EUT Power on.
3. Run ART_V53_build12_ALL.
4. TX Mode: (select [Infinitely Packet TX] to Continue TX)

⇨ Tx Data Rate:1Mbps Bandwidth 20 (IEEE 802.11b mode)
6Mbps Bandwidth 20 (IEEE 802.11g mode)

⇨ Power control mode:

Antenna 1 Power Set: IEEE 802.11b
Channel Low (2412MHz) =16
Channel Middle (2437MHz) = 20
Channel High (2462MHz) = 16

Antenna 1 Power Set: IEEE 802.11g
Channel Low (2412MHz) =12.5
Channel Middle (2437MHz) =20
Channel High (2462MHz) = 12.5

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Antenna 2 Power Set: IEEE 802.11b
Channel Low (2412MHz) =17
Channel Middle (2437MHz) = 18
Channel High (2462MHz) = 17.5

Antenna 2 Power Set: IEEE 802.11g
Channel Low (2412MHz) =14.5
Channel Middle (2437MHz) =20
Channel High (2462MHz) = 14.5

Antenna 3 Power Set: IEEE 802.11b
Channel Low (2412MHz) =16
Channel Middle (2437MHz) = 20
Channel High (2462MHz) = 15.5

Antenna 3 Power Set: IEEE 802.11g
Channel Low (2412MHz) =12.5
Channel Middle (2437MHz) =19
Channel High (2462MHz) = 12

5. All of the functions are under run.
6. Start test.

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7. FCC PART 15.247 REQUIREMENTS

7.1 6dB BANDWIDTH

LIMITS

§ 15.247(a) (2) For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015

Remark: *Each piece of equipment is scheduled for calibration once a year.*

TEST SETUP

TEST PROCEDURE

1. The transmitter output was connected to a spectrum analyzer.
2. Set RBW = 100 kHz.
3. Set the video bandwidth (VBW) ≥ 3 x RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

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TEST RESULTS

IEEE 802.11b Mode / Antenna 1

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
		Chain 0		
Low	2412	12.045	500	PASS
Middle	2437	11.030	500	PASS
High	2462	11.090	500	PASS

IEEE 802.11g Mode / Antenna 1

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
		Chain 0		
Low	2412	16.285	500	PASS
Middle	2437	16.355	500	PASS
High	2462	16.370	500	PASS

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IEEE 802.11b Mode / Antenna 2

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
		Chain 0		
Low	2412	10.125	500	PASS
Middle	2437	12.050	500	PASS
High	2462	11.085	500	PASS

IEEE 802.11g Mode / Antenna 2

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
		Chain 0		
Low	2412	16.340	500	PASS
Middle	2437	16.320	500	PASS
High	2462	16.330	500	PASS

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IEEE 802.11b Mode / Antenna 3

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
		Chain 0		
Low	2412	12.025	500	PASS
Middle	2437	11.065	500	PASS
High	2462	12.070	500	PASS

IEEE 802.11g Mode / Antenna 3

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
		Chain 0		
Low	2412	16.345	500	PASS
Middle	2437	16.330	500	PASS
High	2462	16.335	500	PASS

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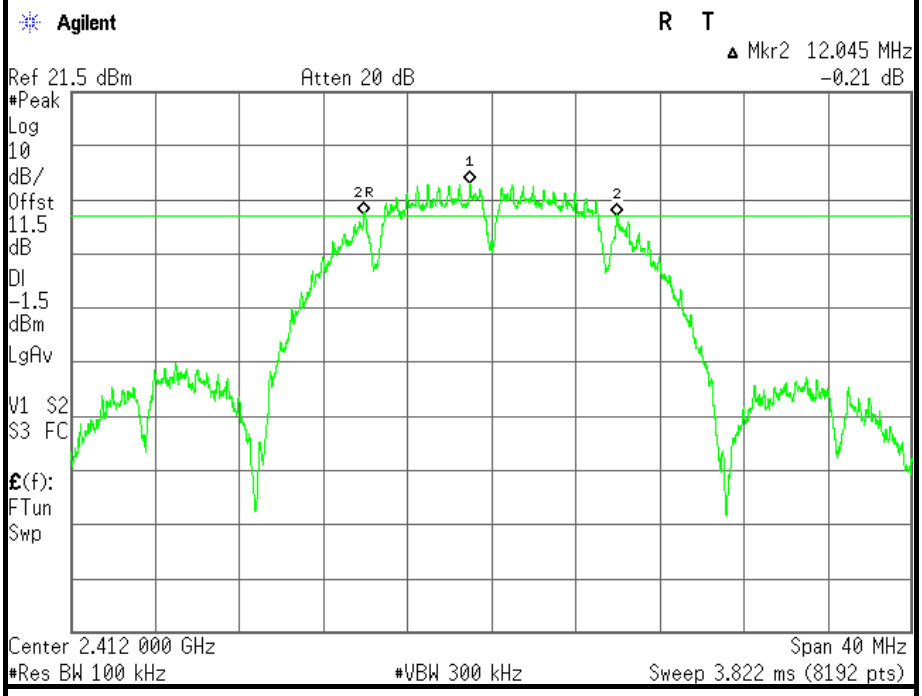
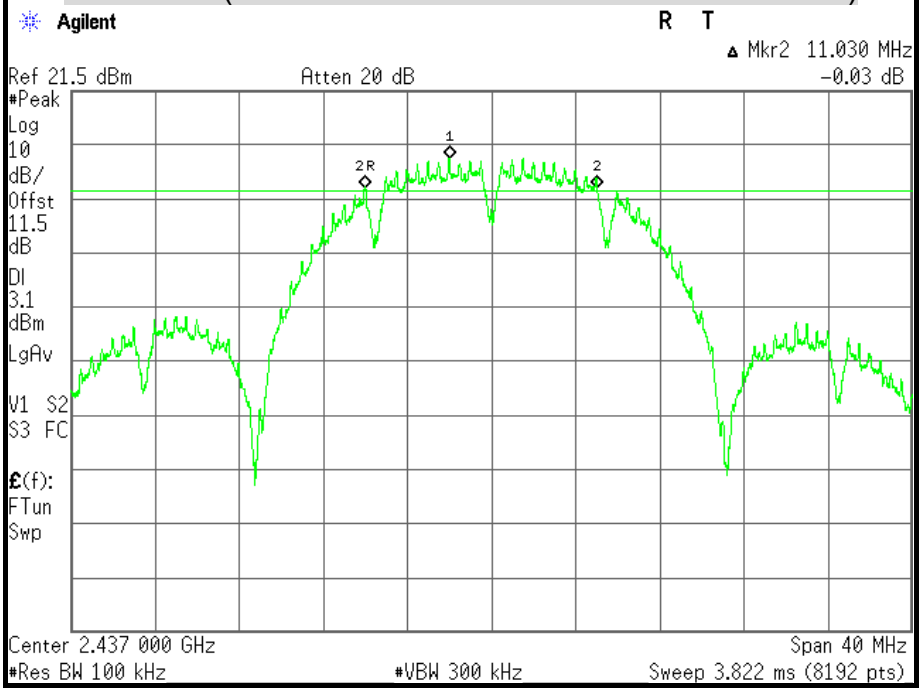
6dB BANDWIDTH

CH Low (IEEE 802.11b Mode / Antenna 1 / Chain 0)



CH Middle (IEEE 802.11b Mode / Antenna 1 / Chain 0)



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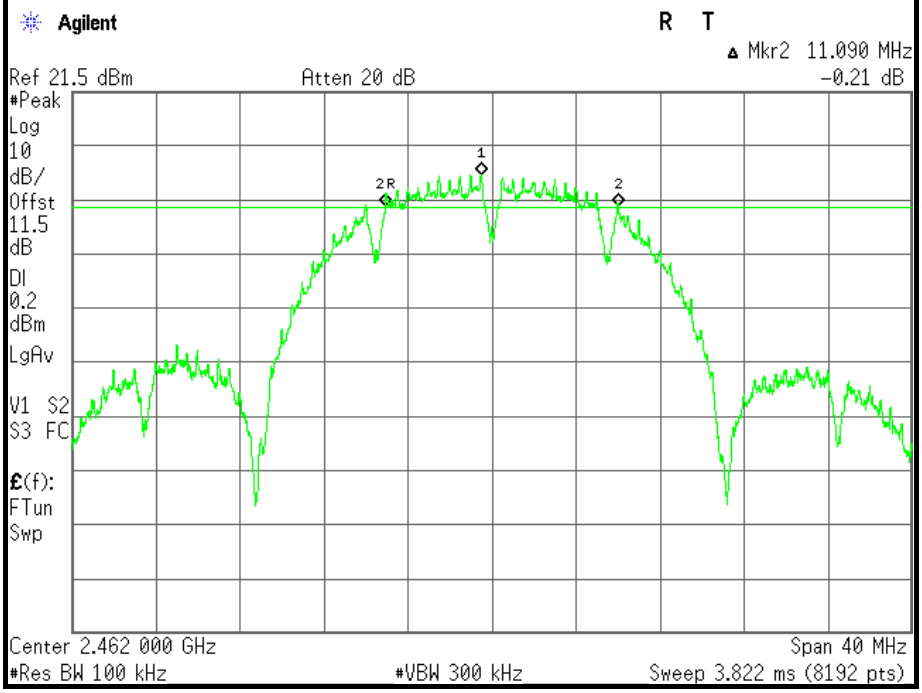
CH High (IEEE 802.11b Mode / Antenna 1 / Chain 0)



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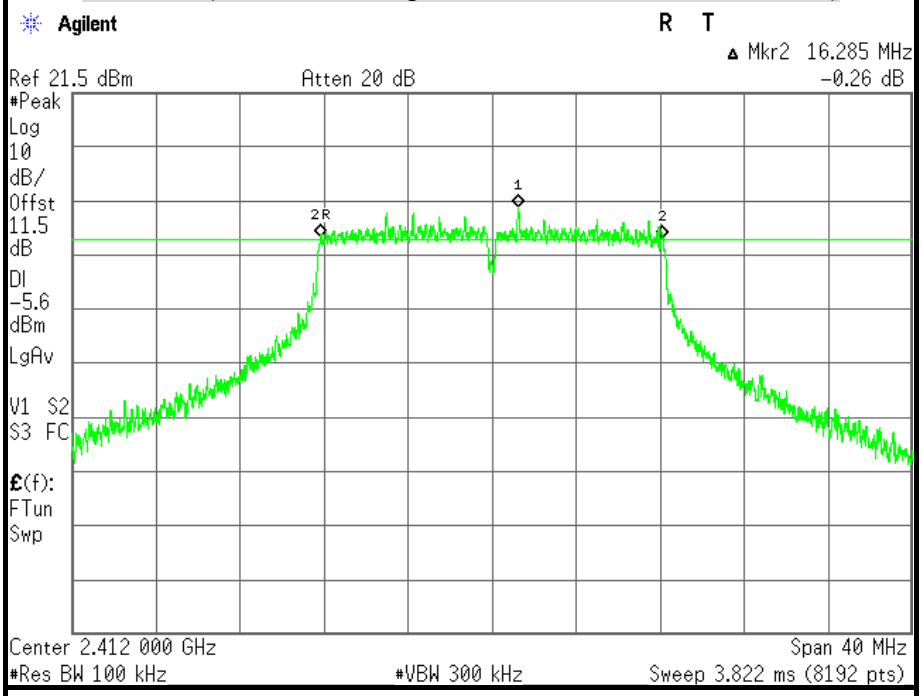
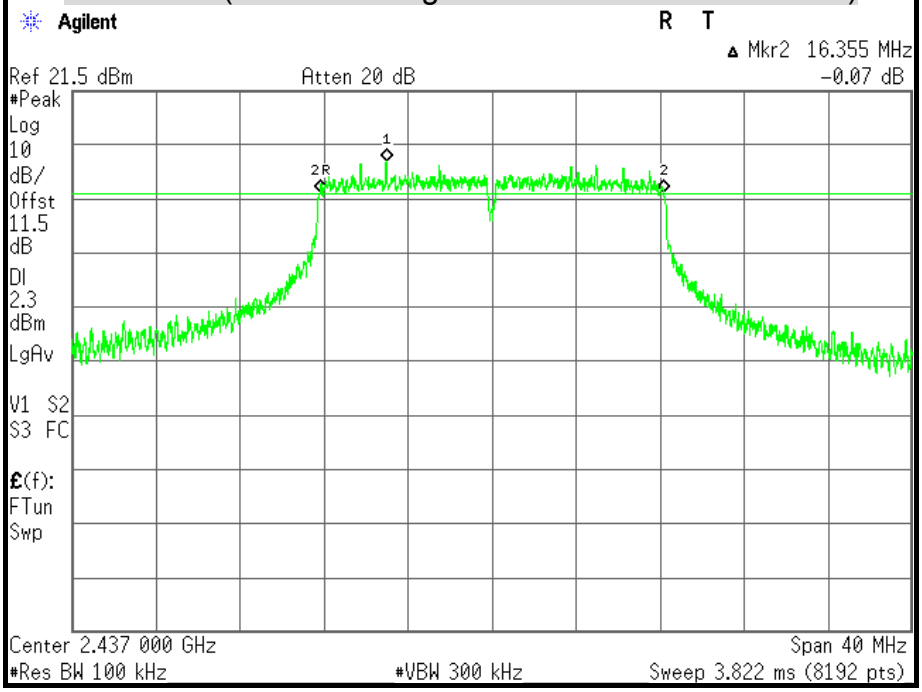
CH Low (IEEE 802.11g Mode / Antenna 1 / Chain 0)



CH Middle (IEEE 802.11g Mode / Antenna 1 / Chain 0)



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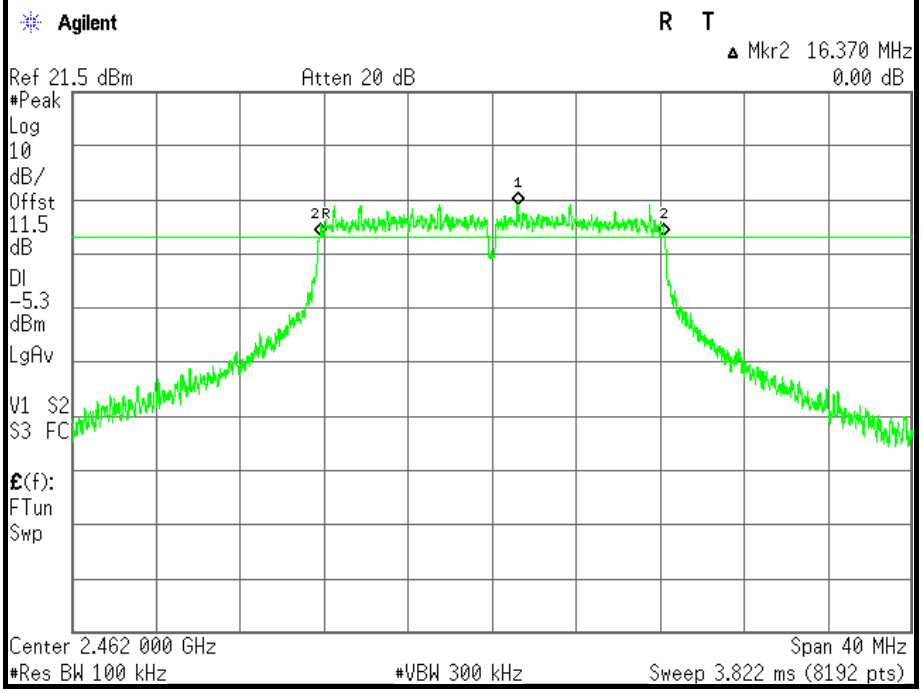
CH High (IEEE 802.11g Mode / Antenna 1 / Chain 0)



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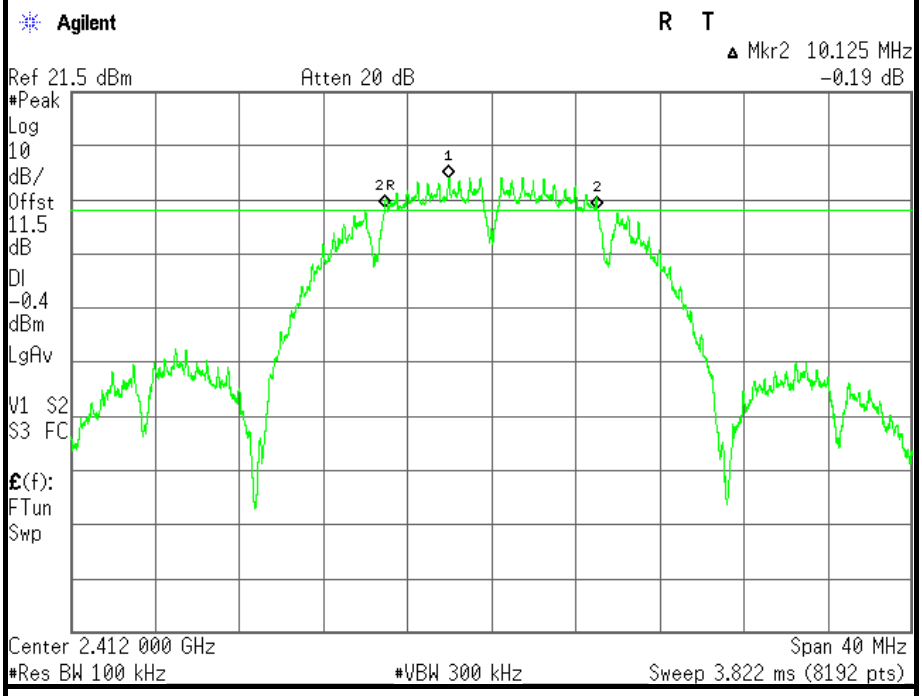
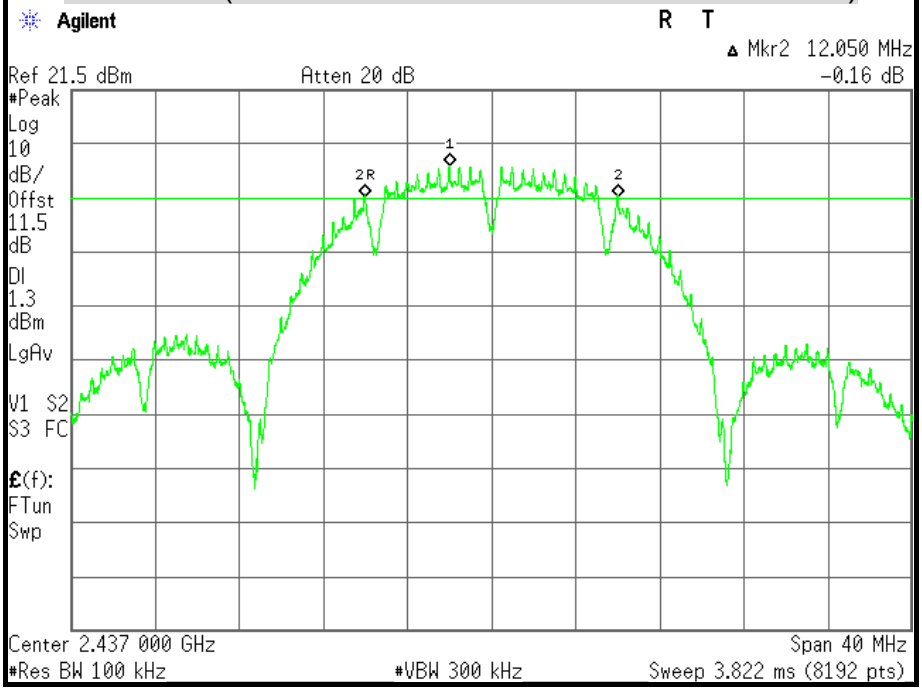
CH Low (IEEE 802.11b Mode / Antenna 2 / Chain 0)



CH Middle (IEEE 802.11b Mode / Antenna 2 / Chain 0)



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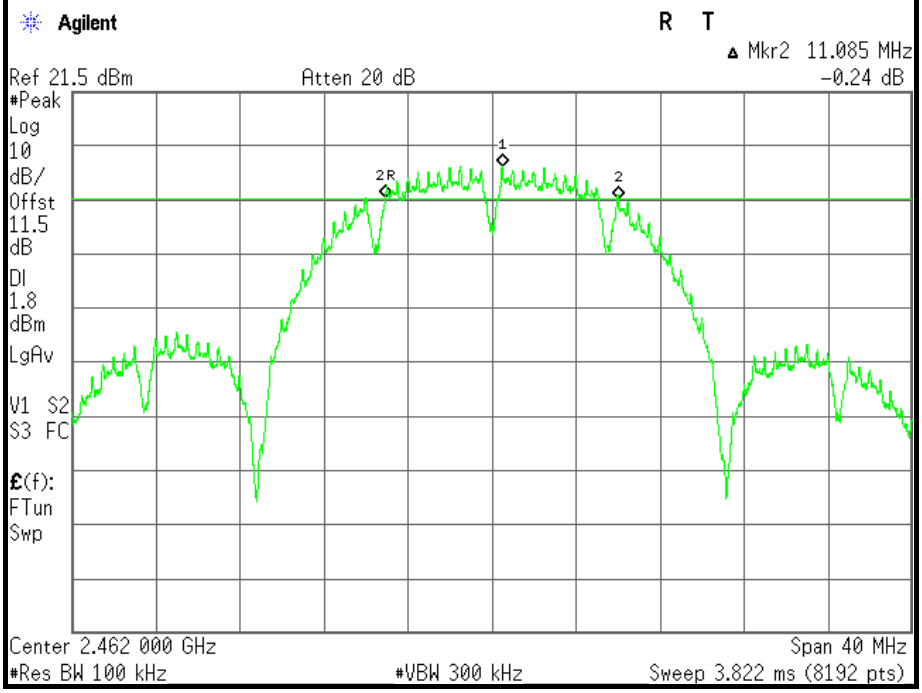
CH High (IEEE 802.11b Mode / Antenna 2 / Chain 0)



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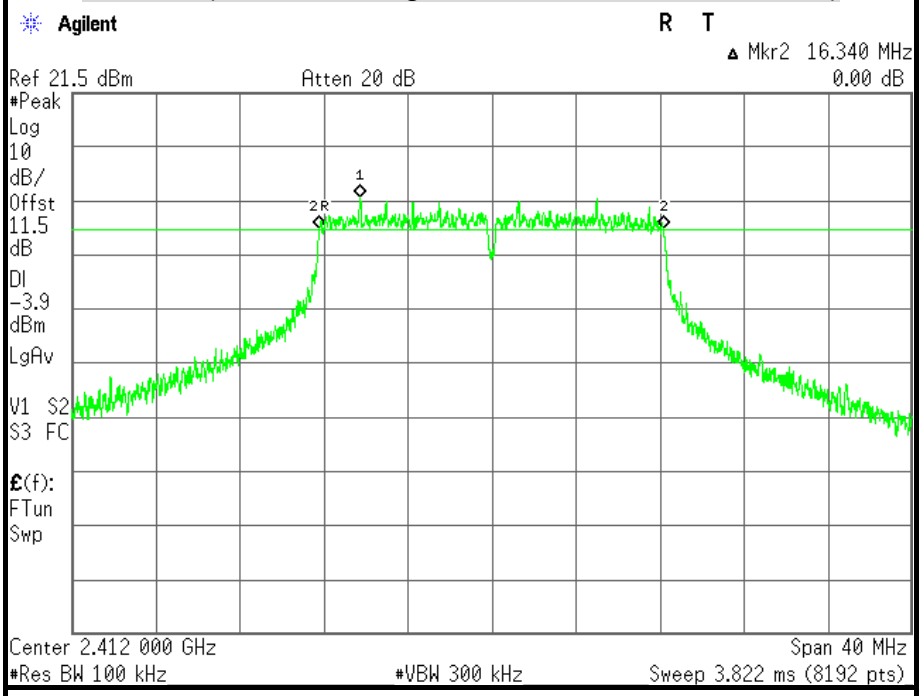
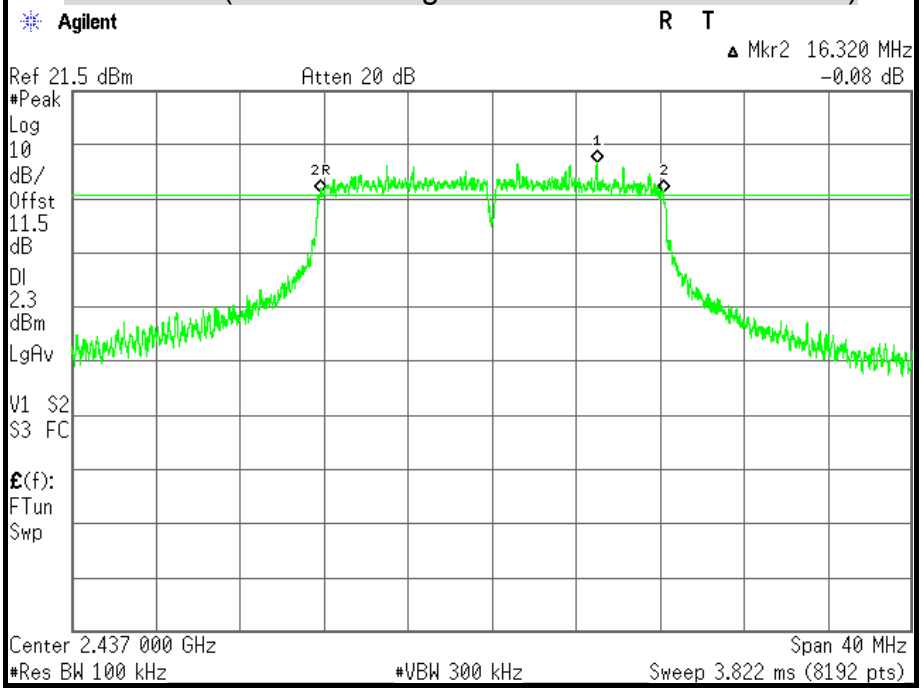
CH Low (IEEE 802.11g Mode / Antenna 2 / Chain 0)



CH Middle (IEEE 802.11g Mode / Antenna 2 / Chain 0)



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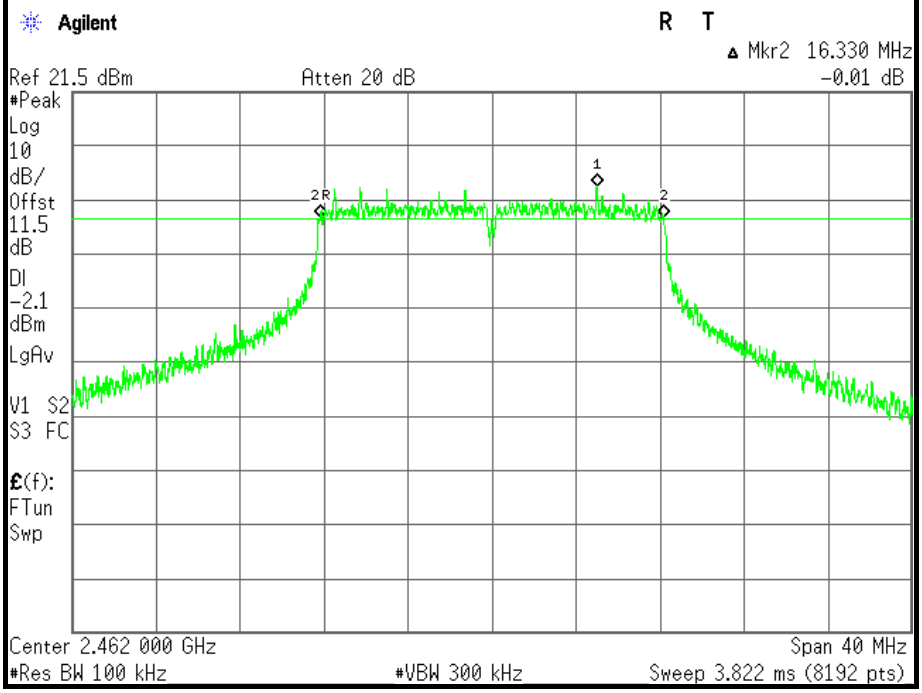
CH High (IEEE 802.11g Mode / Antenna 2 / Chain 0)



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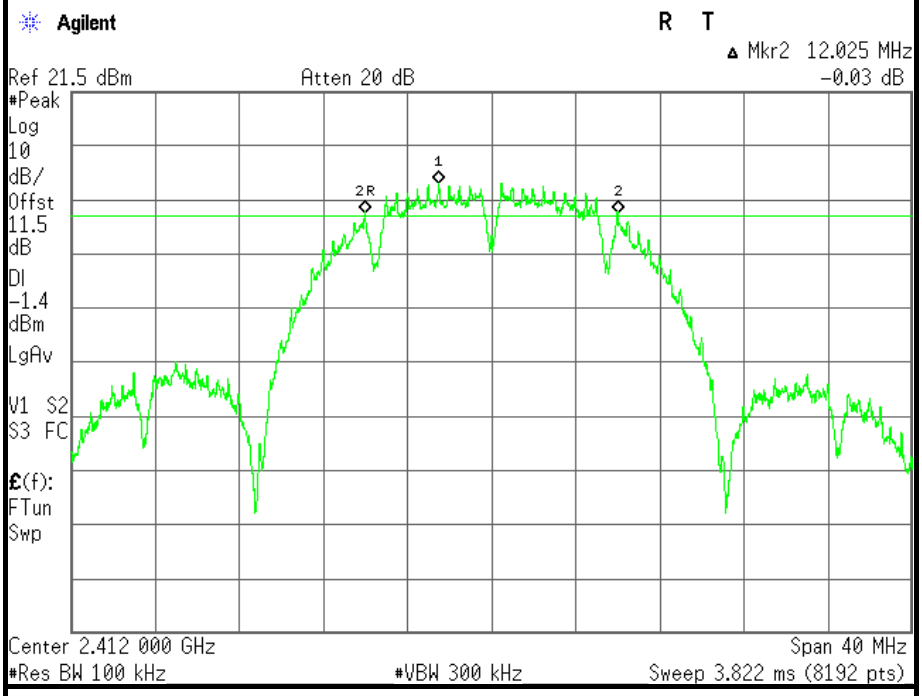
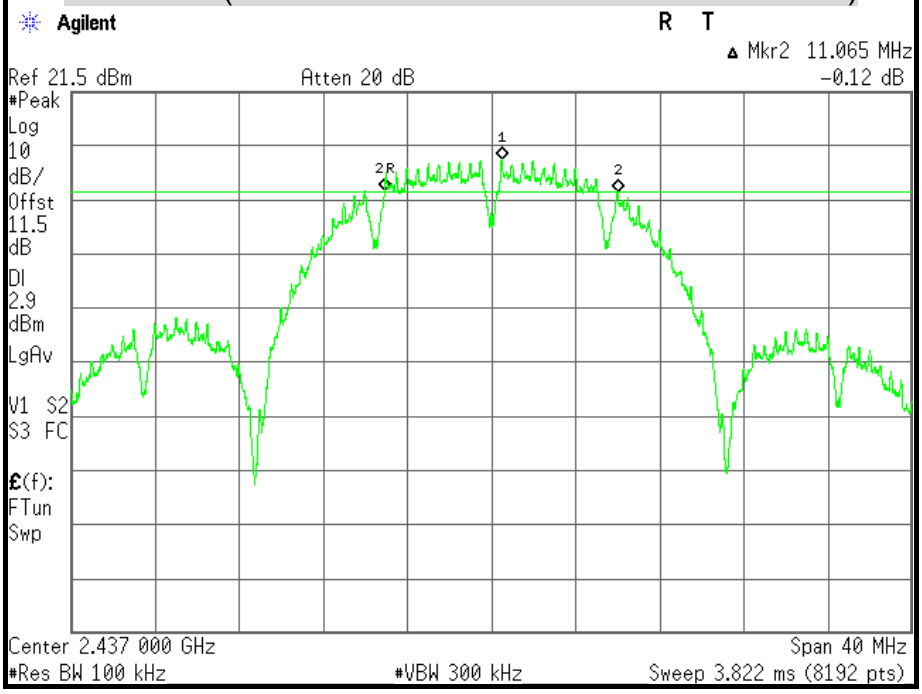
CH Low (IEEE 802.11b Mode / Antenna 3 / Chain 0)



CH Middle (IEEE 802.11b Mode / Antenna 3 / Chain 0)



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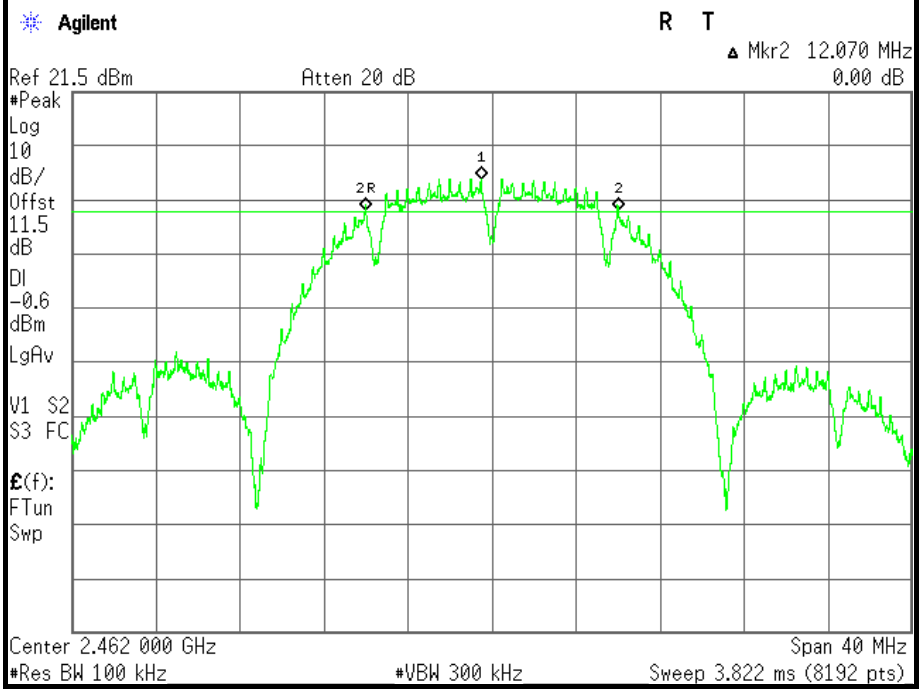
CH High (IEEE 802.11b Mode / Antenna 3 / Chain 0)



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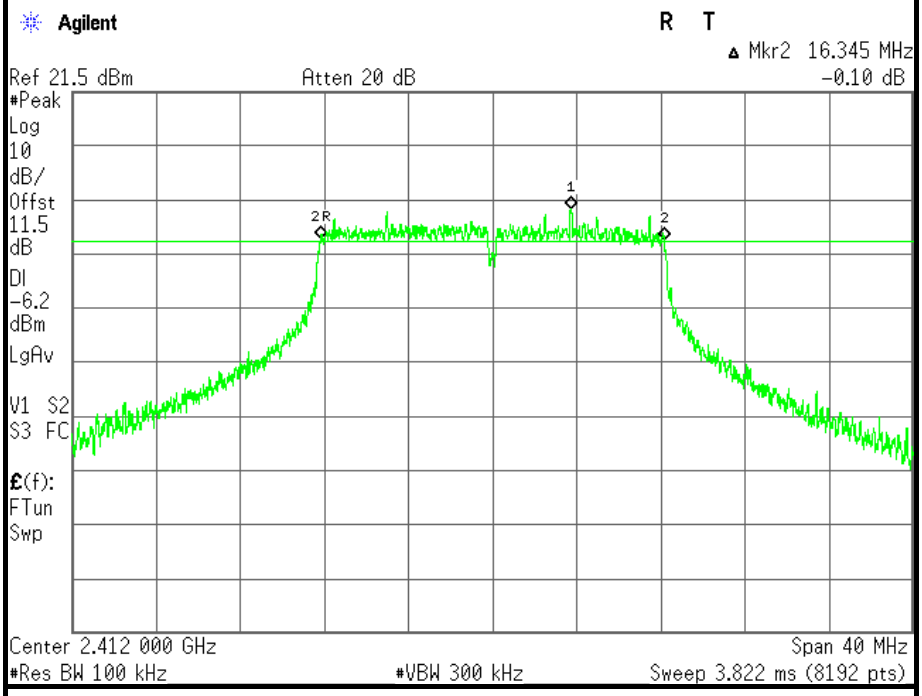
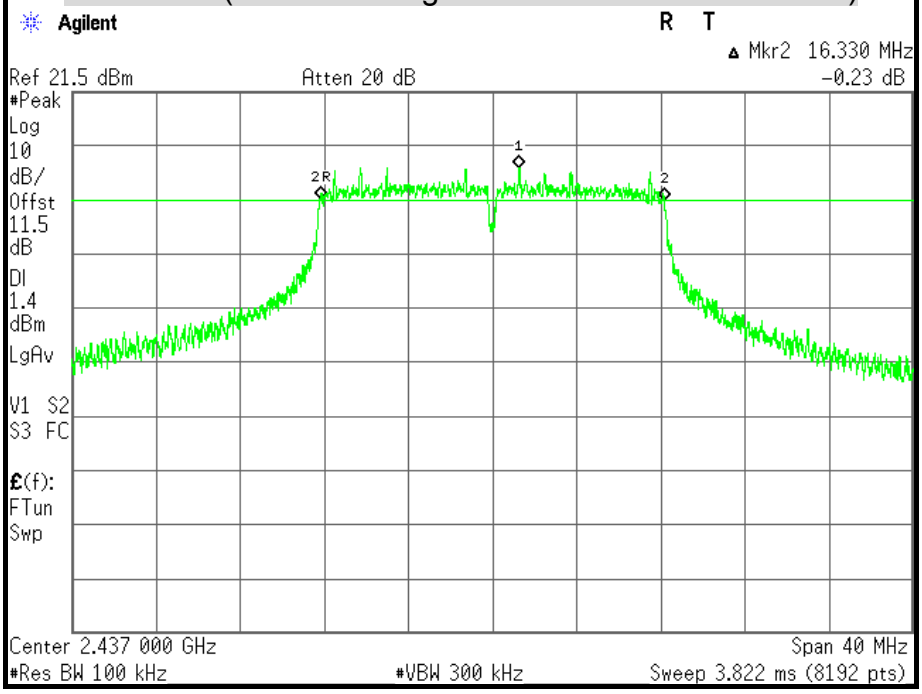
CH Low (IEEE 802.11g Mode / Antenna 3 / Chain 0)



CH Middle (IEEE 802.11g Mode / Antenna 3 / Chain 0)



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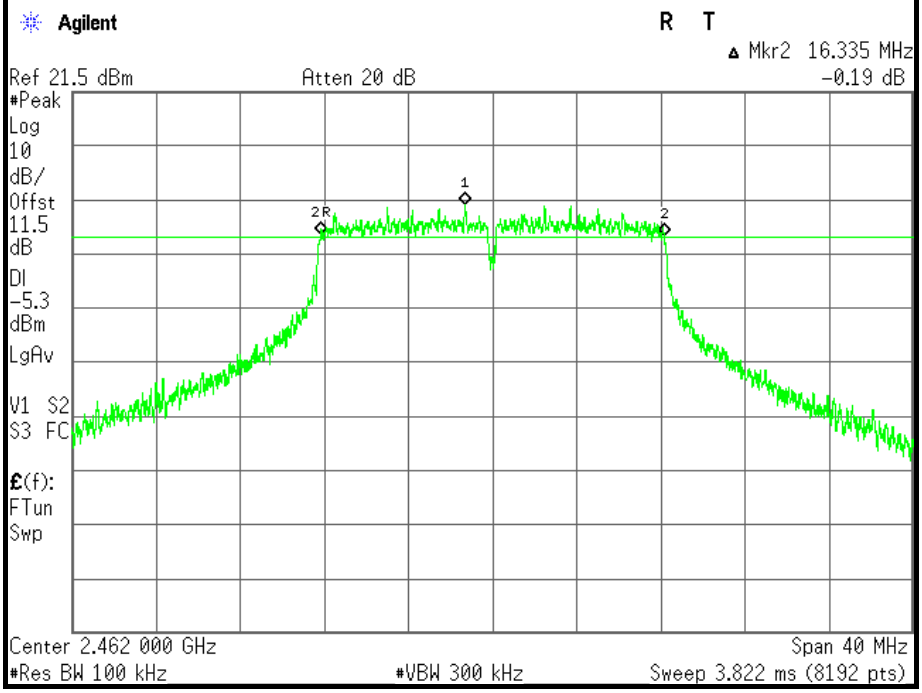
CH High (IEEE 802.11g Mode / Antenna 3 / Chain 0)



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7.2 MAXIMUM PEAK OUTPUT POWER

LIMITS

§ 15.247(b) The maximum peak output power of the intentional radiator shall not exceed the following :

§ 15.247(b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands : 1 watt.

§ 15.247(b) (4) Except as shown in paragraphs (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Power Meter	Anritsu	ML2495A	1149001	12/06/2014
Power Sensor	Anritsu	MA2411B	1126148	12/06/2014

Remark: *Each piece of equipment is scheduled for calibration once a year.*

TEST SETUP

TEST PROCEDURE

The transmitter output is connected to the power meter. The power meter is set to the peak power detection.

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TEST RESULTS

IEEE 802.11b Mode / Antenna 1

Channel	Channel Frequency (MHz)	Peak Power Chain 0		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	17.14	0.0518	28	0.6310	PASS
Middle	2437	21.54	0.1424	28	0.6310	PASS
High	2462	18.90	0.0775	28	0.6310	PASS

Remark:

1. *At finial test to get the worst-case emission at 1Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 0.6310W.*

IEEE 802.11g Mode / Antenna 1

Channel	Channel Frequency (MHz)	Peak Power Chain 0		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	17.75	0.0596	28	0.6310	PASS
Middle	2437	26.61	0.4582	28	0.6310	PASS
High	2462	19.61	0.0914	28	0.6310	PASS

Remark:

1. *At finial test to get the worst-case emission at 6Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 0.6310W.*

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IEEE 802.11b Mode / Antenna 2

Channel	Channel Frequency (MHz)	Peak Power Chain 0		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	18.07	0.0640	28	0.6310	PASS
Middle	2437	19.79	0.0953	28	0.6310	PASS
High	2462	20.04	0.1008	28	0.6310	PASS

Remark:

1. *At finial test to get the worst-case emission at 1Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.*
3. *The maximum antenna gain 8dBi which is more than 6dBi, the limit should be 0.6310W.*

IEEE 802.11g Mode / Antenna 2

Channel	Channel Frequency (MHz)	Peak Power Chain 0		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	20.54	0.1133	28	0.6310	PASS
Middle	2437	26.97	0.4979	28	0.6310	PASS
High	2462	22.10	0.1623	28	0.6310	PASS

Remark:

1. *At finial test to get the worst-case emission at 6Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.*
3. *The maximum antenna gain 8dBi which is more than 6dBi, the limit should be 0.6310W.*

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IEEE 802.11b Mode / Antenna 3

Channel	Channel Frequency (MHz)	Peak Power Chain 0		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	17.46	0.0557	28	0.6310	PASS
Middle	2437	21.67	0.1469	28	0.6310	PASS
High	2462	18.29	0.0674	28	0.6310	PASS

Remark:

1. *At finial test to get the worst-case emission at 1Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 0.6310W.*

IEEE 802.11g Mode / Antenna 3

Channel	Channel Frequency (MHz)	Peak Power Chain 0		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	18.36	0.0685	28	0.6310	PASS
Middle	2437	25.86	0.3855	28	0.6310	PASS
High	2462	19.27	0.0845	28	0.6310	PASS

Remark:

1. *At finial test to get the worst-case emission at 6Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 0.6310W.*

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7.3 AVERAGE POWER

LIMITS

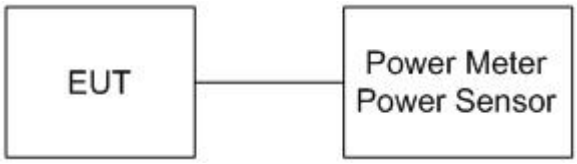
None; for reporting purposes only.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Power Meter	ANRITSU	ML2495A	1149001	12/06/2014
Power Sensor	ANRITSU	MA2411B	1126148	12/06/2014

Remark: *Each piece of equipment is scheduled for calibration once a year.*

TEST SETUP



TEST PROCEDURE

The transmitter output is connected to the power meter. The power meter is set to the average power detection.

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TEST RESULTS

IEEE 802.11b Mode / Antenna 1

Channel	Channel Frequency (MHz)	Average Power (dBm)
		Chain 0
Low	2412	13.57
Middle	2437	18.29
High	2462	15.17

Remark:
1. At finial test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11g Mode / Antenna 1

Channel	Channel Frequency (MHz)	Average Power (dBm)
		Chain 0
Low	2412	10.30
Middle	2437	19.62
High	2462	12.37

Remark:
1. At finial test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

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IEEE 802.11b Mode / Antenna 2

Channel	Channel Frequency (MHz)	Average Power (dBm)
		Chain 0
Low	2412	14.38
Middle	2437	16.26
High	2462	17.03

Remark:
1. At finial test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11g Mode / Antenna 2

Channel	Channel Frequency (MHz)	Average Power (dBm)
		Chain 0
Low	2412	13.24
Middle	2437	19.87
High	2462	14.86

Remark:
1. At finial test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

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IEEE 802.11b Mode / Antenna 3

Channel	Channel Frequency (MHz)	Average Power (dBm)
		Chain 0
Low	2412	13.55
Middle	2437	18.30
High	2462	14.91

Remark:
1. At finial test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11g Mode / Antenna 3

Channel	Channel Frequency (MHz)	Average Power (dBm)
		Chain 0
Low	2412	10.76
Middle	2437	18.71
High	2462	11.97

Remark:
1. At finial test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the power meter to allow for direct reading of power.

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7.4 POWER SPECTRAL DENSITY

LIMITS

§ 15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015

Remark: *Each piece of equipment is scheduled for calibration once a year.*

TEST SETUP

TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set analyzer center frequency to DTS channel center frequency.
3. Set the span to 1.5 times the DTS channel bandwidth.
4. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
5. Set the VBW ≥ 3 x RBW.
6. Detector = peak.
7. Sweep time = auto couple.
8. Trace mode = max hold.
9. Allow trace to fully stabilize.
10. Use the peak marker function to determine the maximum amplitude level within the RBW.
11. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

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TEST RESULTS

IEEE 802.11b Mode / Antenna 1

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0		
Low	2412	-9.60	6	PASS
Middle	2437	-4.76	6	PASS
High	2462	-8.46	6	PASS

Remark:

1. *At finial test to get the worst-case emission at 1Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 6dBm.*

IEEE 802.11g Mode / Antenna 1

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0		
Low	2412	-14.19	6	PASS
Middle	2437	-5.40	6	PASS
High	2462	-11.82	6	PASS

Remark:

1. *At finial test to get the worst-case emission at 6Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 6dBm.*

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IEEE 802.11b Mode / Antenna 2

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0		
Low	2412	-8.60	6	PASS
Middle	2437	-7.41	6	PASS
High	2462	-5.49	6	PASS

Remark:

1. *At finial test to get the worst-case emission at 1Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *The maximum antenna gain 8dBi which is more than 6dBi, the limit should be 6dBm.*

IEEE 802.11g Mode / Antenna 2

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0		
Low	2412	-10.59	6	PASS
Middle	2437	-5.78	6	PASS
High	2462	-10.31	6	PASS

Remark:

1. *At finial test to get the worst-case emission at 6Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *The maximum antenna gain 8dBi which is more than 6dBi, the limit should be 6dBm.*

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IEEE 802.11b Mode / Antenna 3

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0		
Low	2412	-9.98	6	PASS
Middle	2437	-5.42	6	PASS
High	2462	-8.93	6	PASS

Remark:

1. *At finial test to get the worst-case emission at 1Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 6dBm.*

IEEE 802.11g Mode / Antenna 3

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0		
Low	2412	-14.08	6	PASS
Middle	2437	-5.98	6	PASS
High	2462	-13.48	6	PASS

Remark:

1. *At finial test to get the worst-case emission at 6Mbps.*
2. *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.*
3. *The maximum antenna gain 14dBi which is more than 6dBi, the limit should be 6dBm.*

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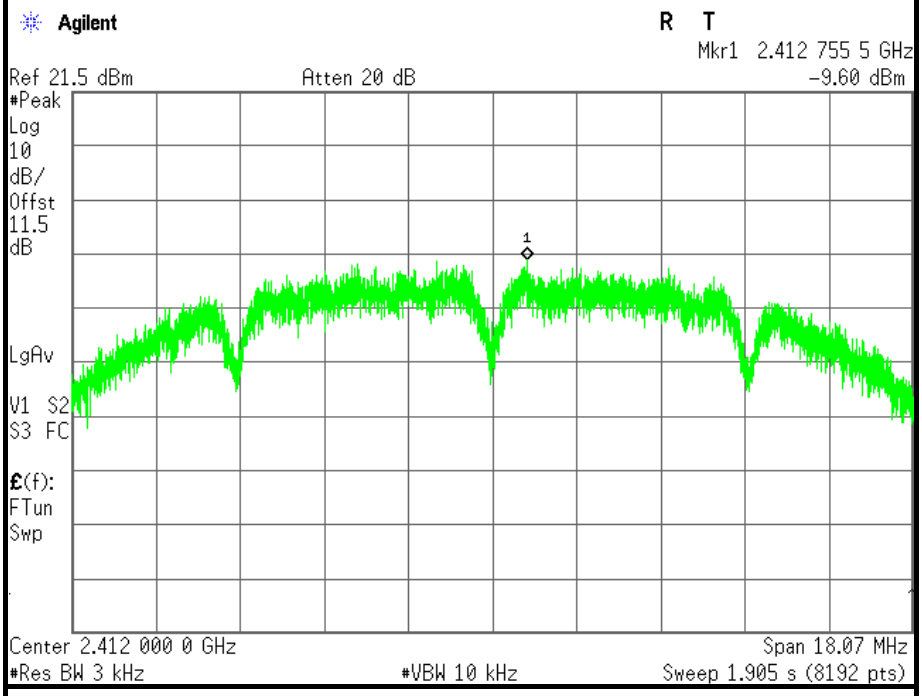
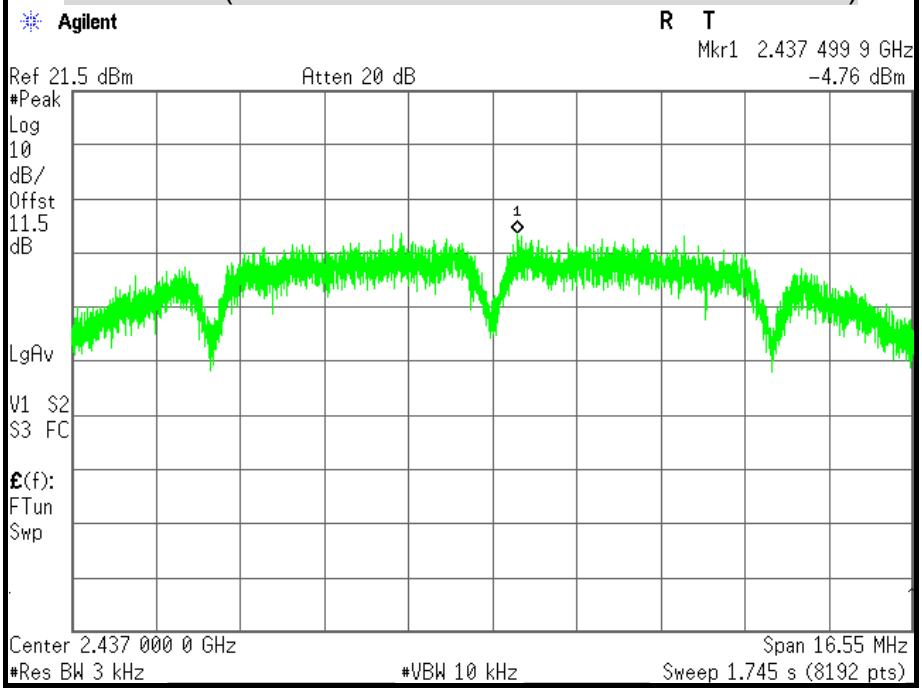
POWER SPECTRAL DENSITY

CH Low (IEEE 802.11b Mode / Antenna 1 / Chain 0)



CH Middle (IEEE 802.11b Mode / Antenna 1 / Chain 0)



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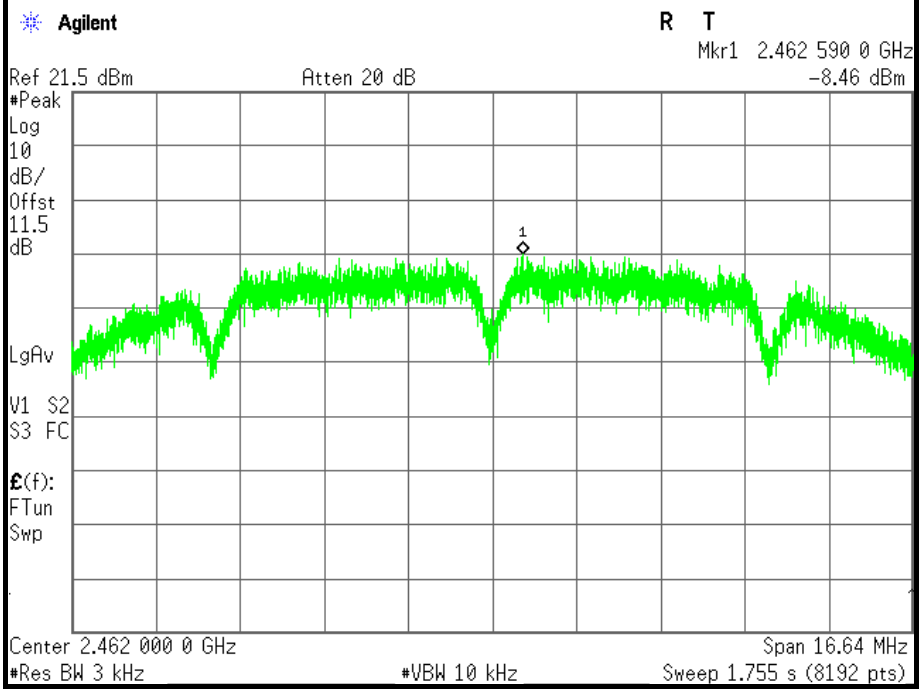
CH High (IEEE 802.11b Mode / Antenna 1 / Chain 0)



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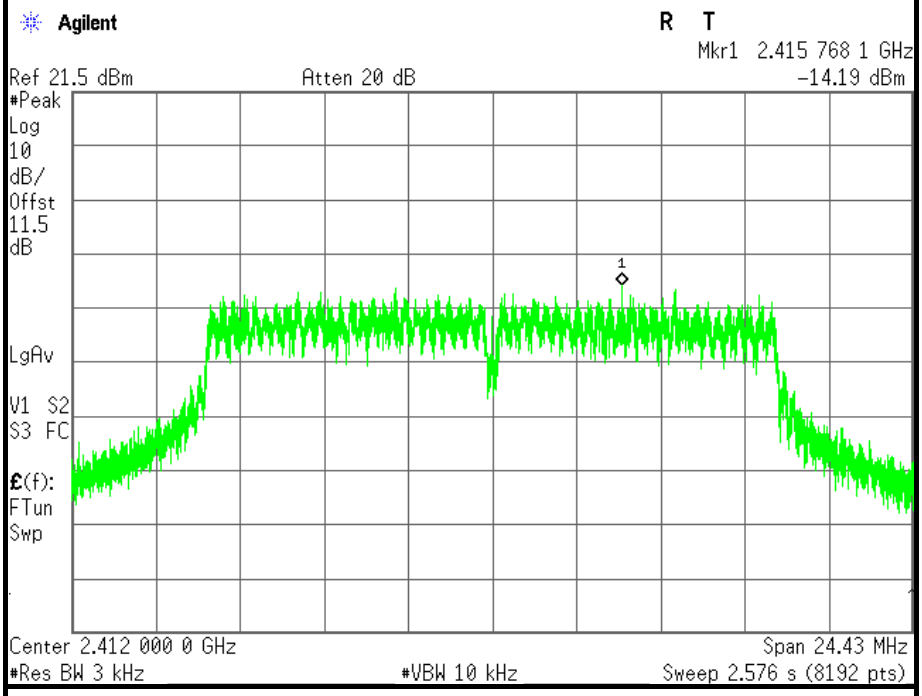
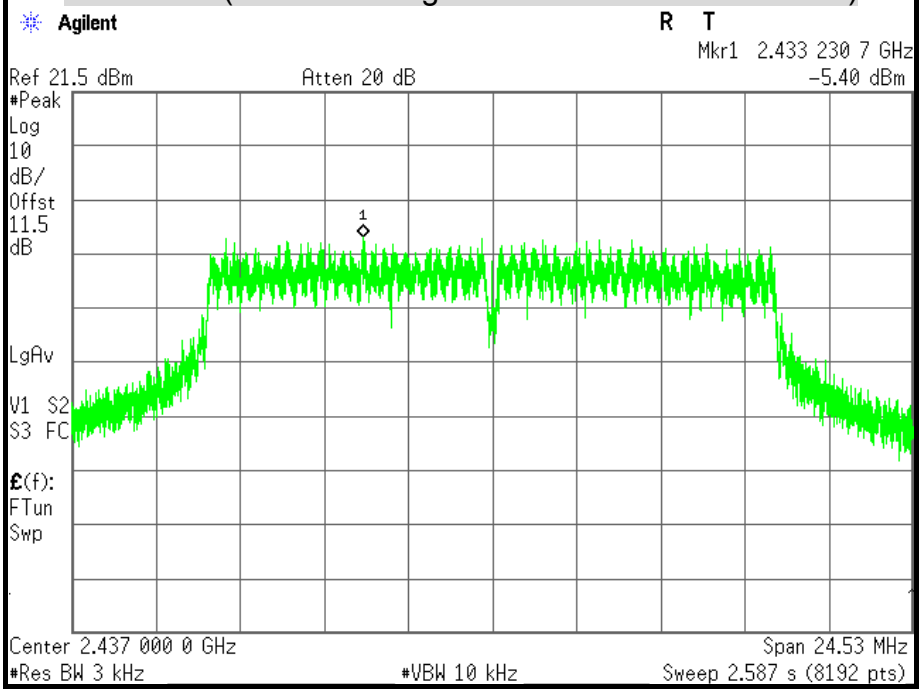
CH Low (IEEE 802.11g Mode / Antenna 1 / Chain 0)



CH Middle (IEEE 802.11g Mode / Antenna 1 / Chain 0)



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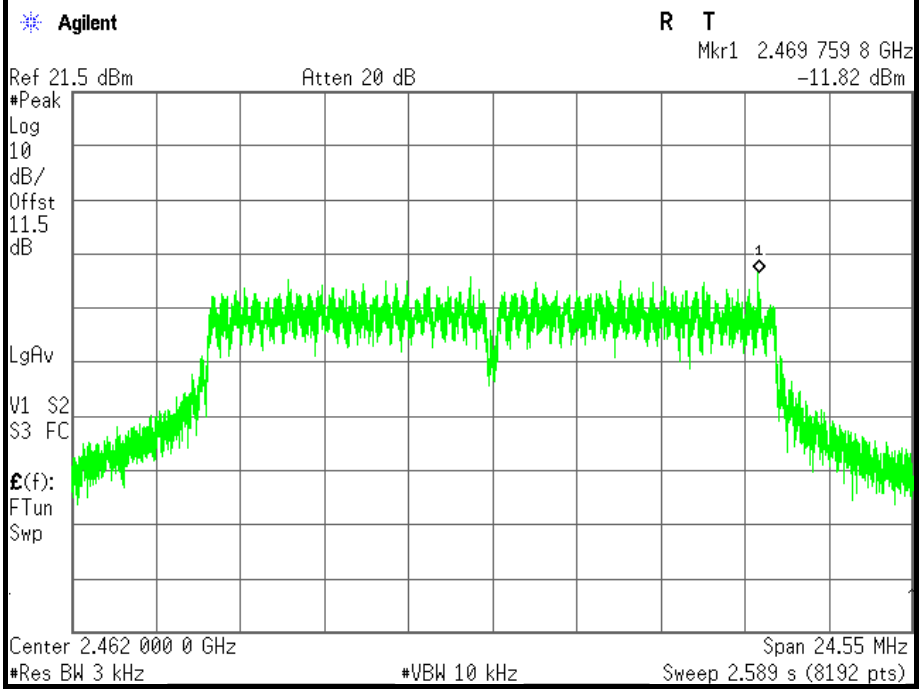
CH High (IEEE 802.11g Mode / Antenna 1 / Chain 0)



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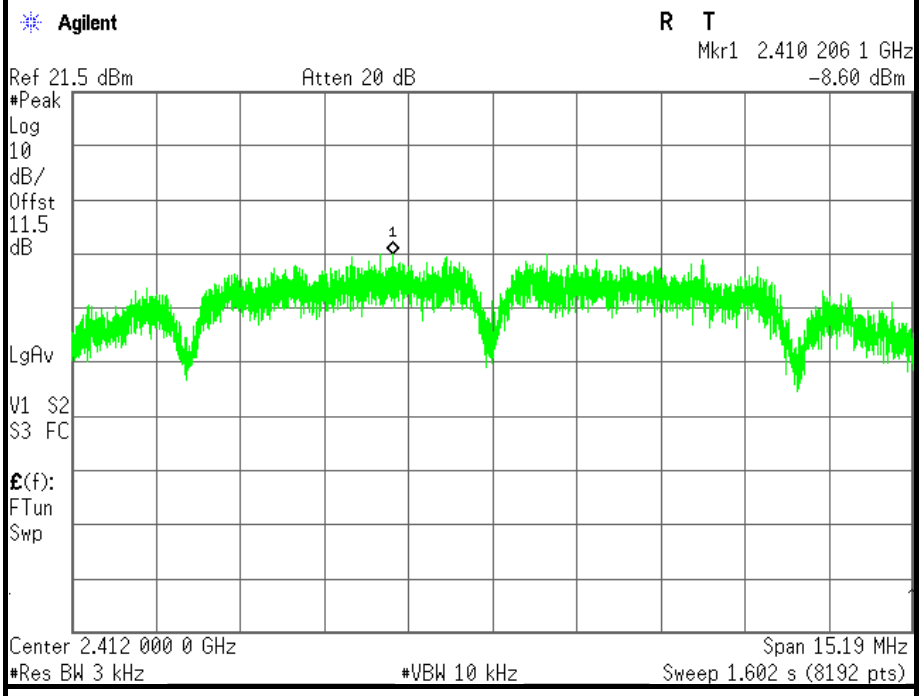
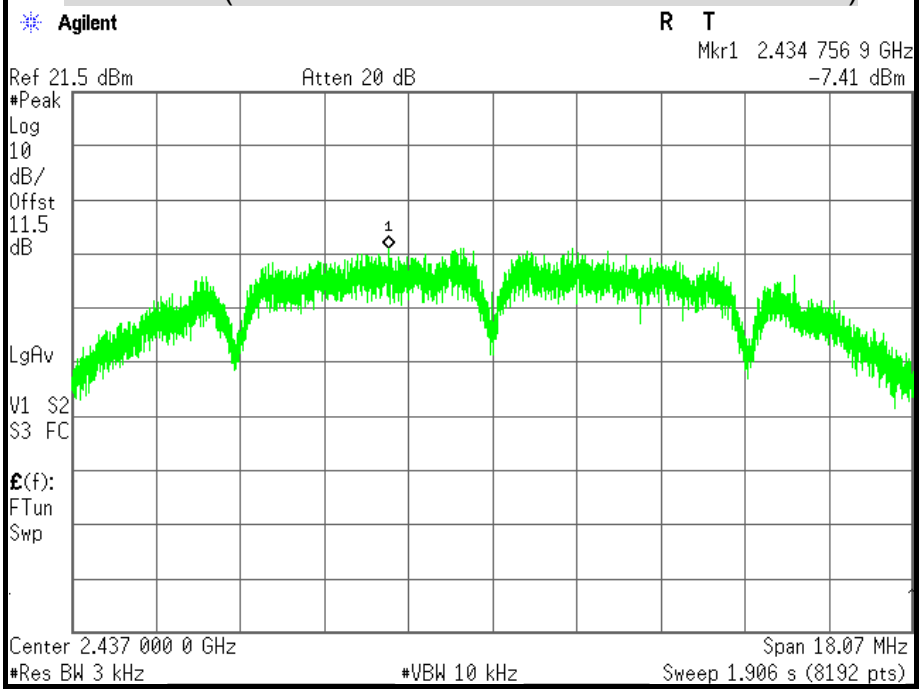
CH Low (IEEE 802.11b Mode / Antenna 2 / Chain 0)



CH Middle (IEEE 802.11b Mode / Antenna 2 / Chain 0)



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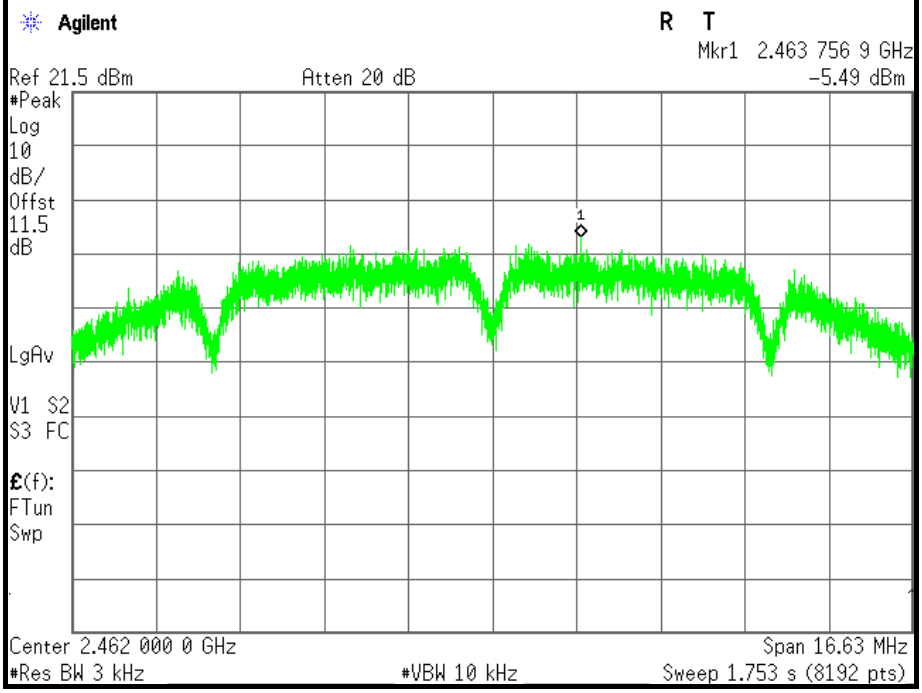
CH High (IEEE 802.11b Mode / Antenna 2 / Chain 0)



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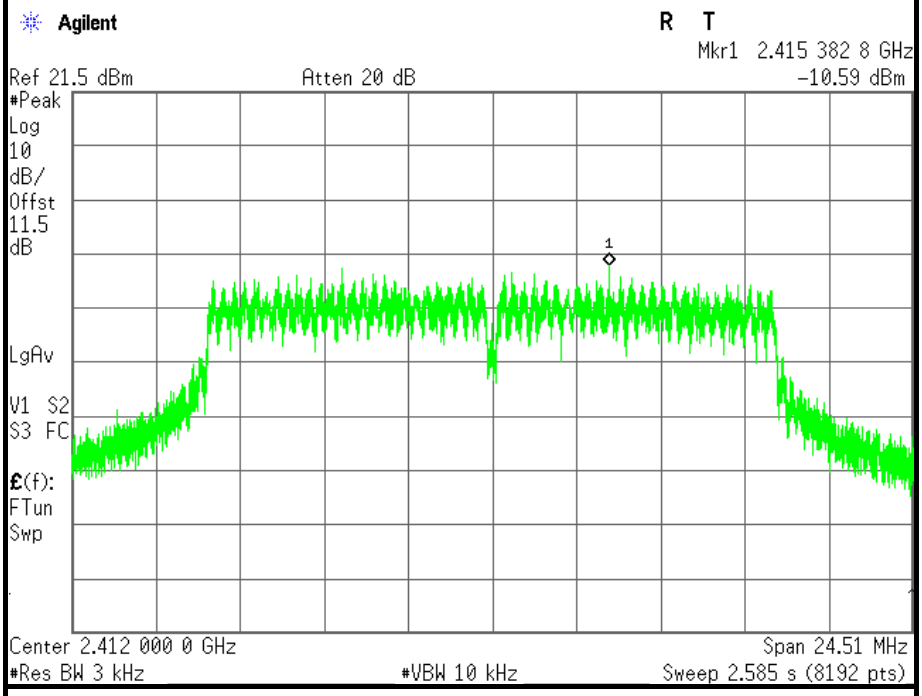
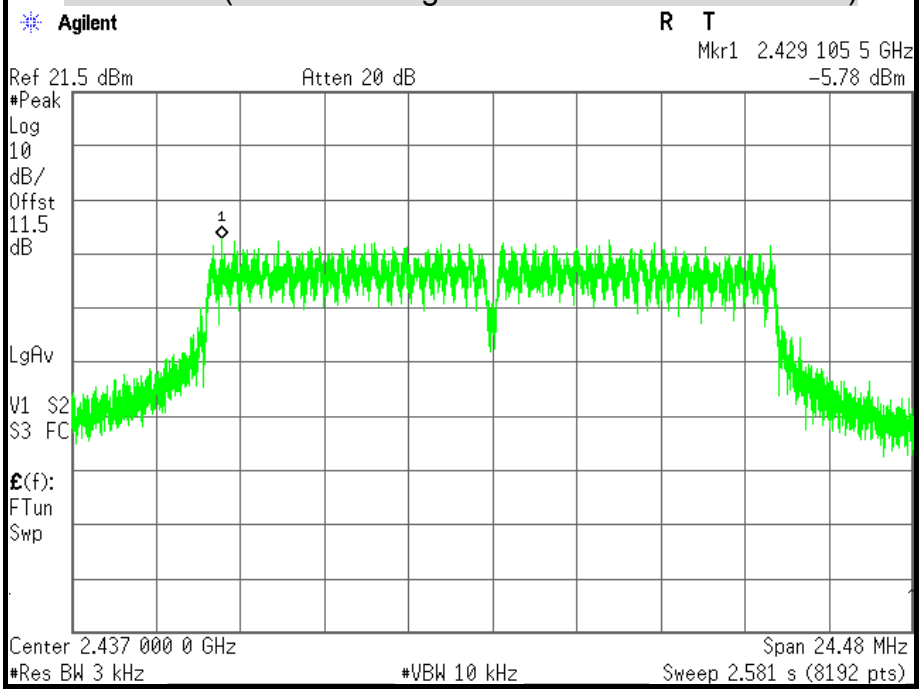
CH Low (IEEE 802.11g Mode / Antenna 2 / Chain 0)



CH Middle (IEEE 802.11g Mode / Antenna 2 / Chain 0)



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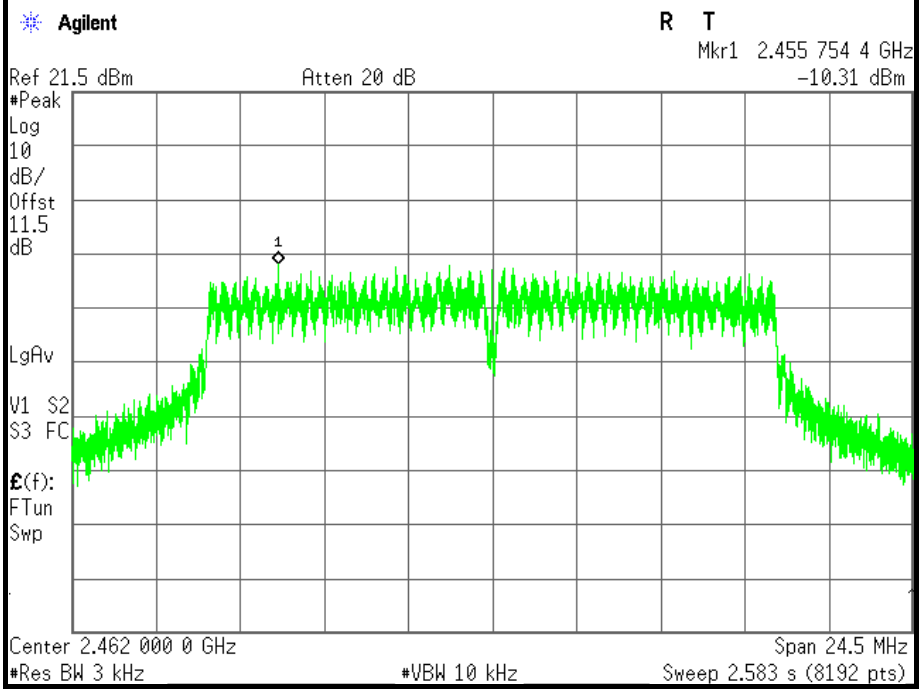
CH High (IEEE 802.11g Mode / Antenna 2 / Chain 0)



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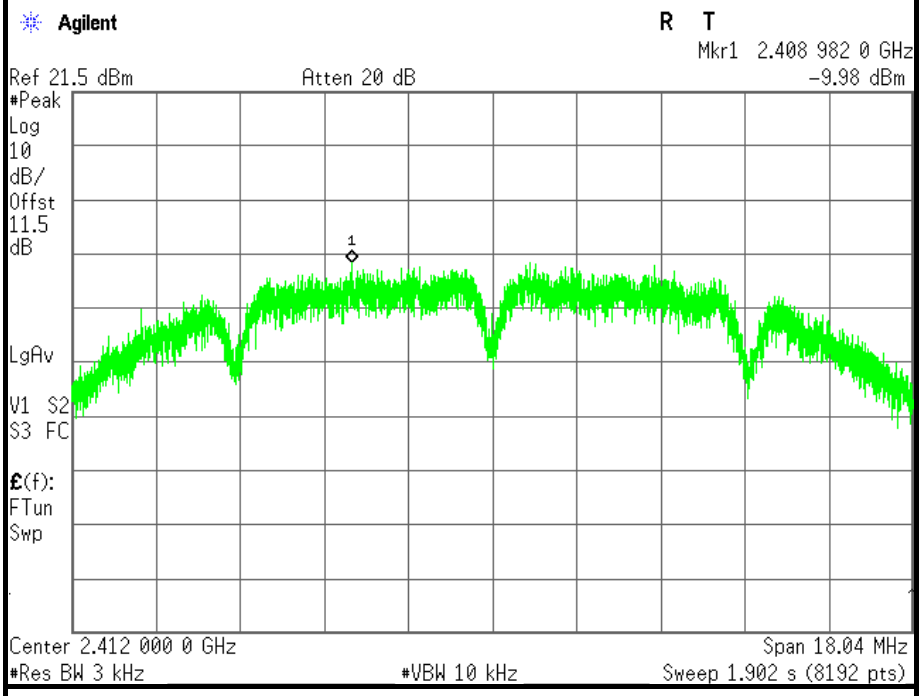
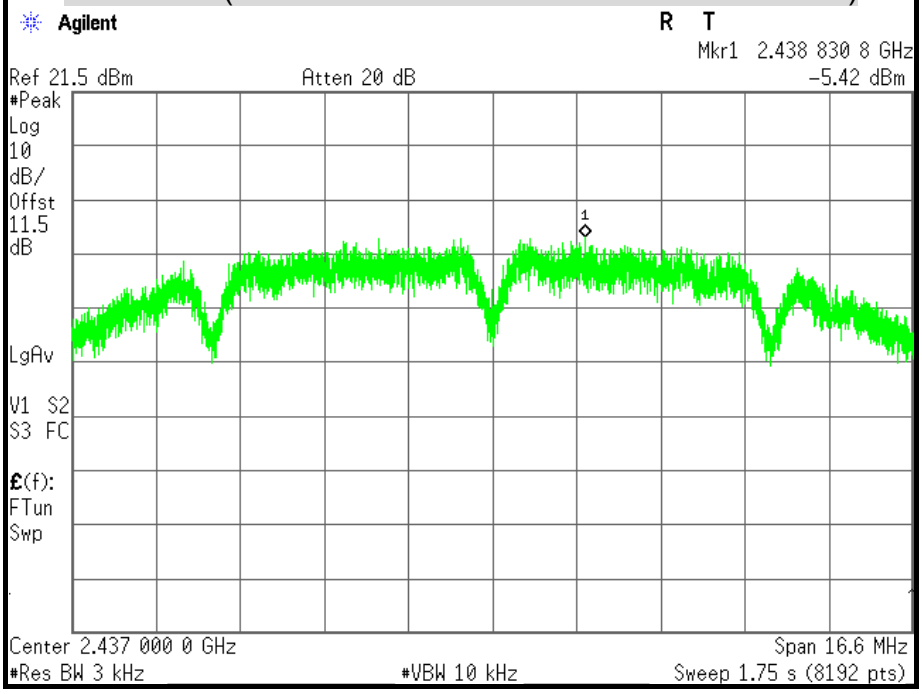
CH Low (IEEE 802.11b Mode / Antenna 3 / Chain 0)



CH Middle (IEEE 802.11b Mode / Antenna 3 / Chain 0)



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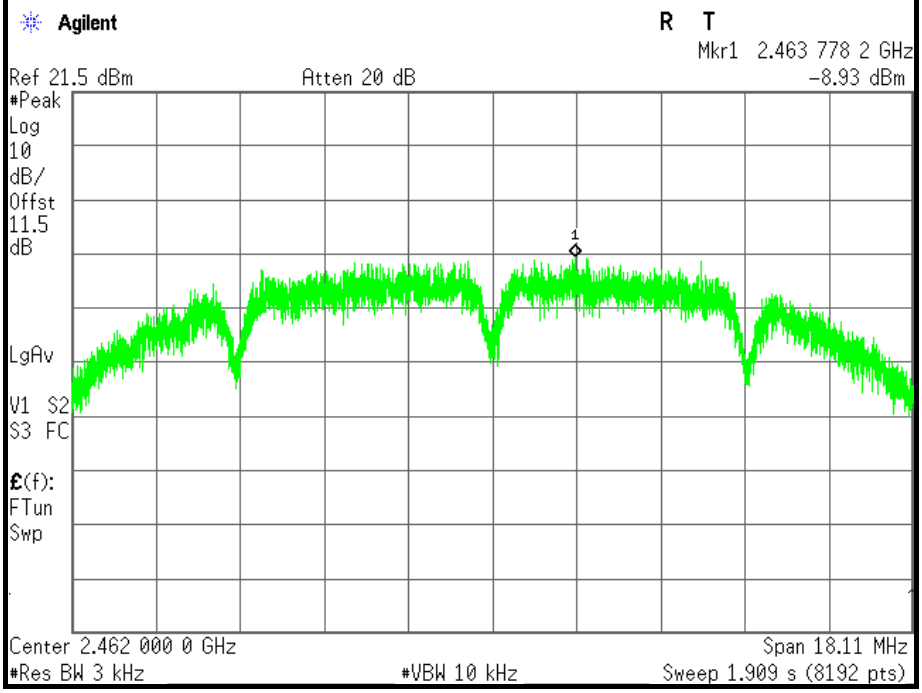
CH High (IEEE 802.11b Mode / Antenna 3 / Chain 0)



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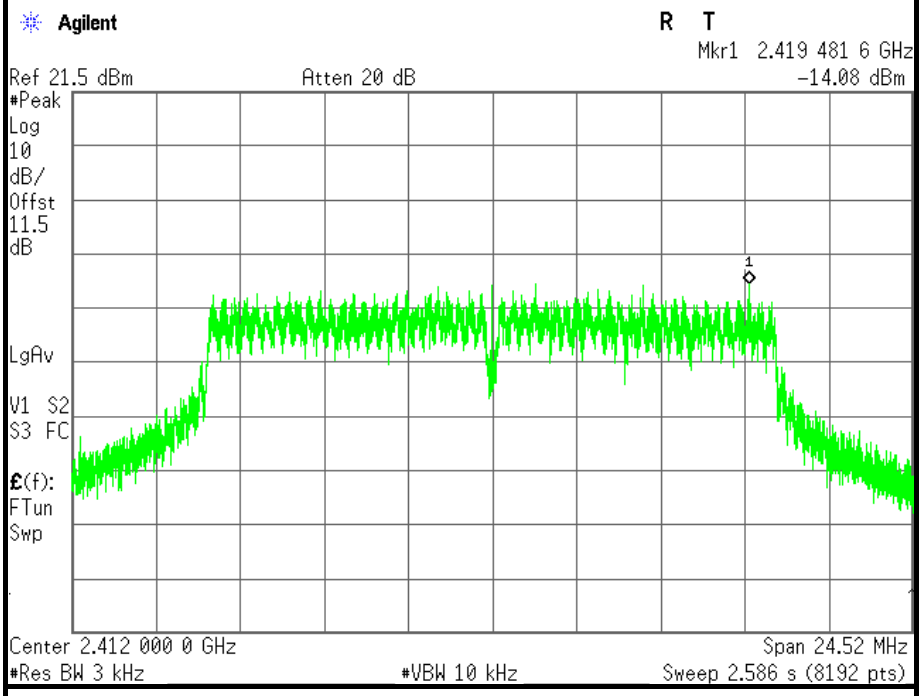
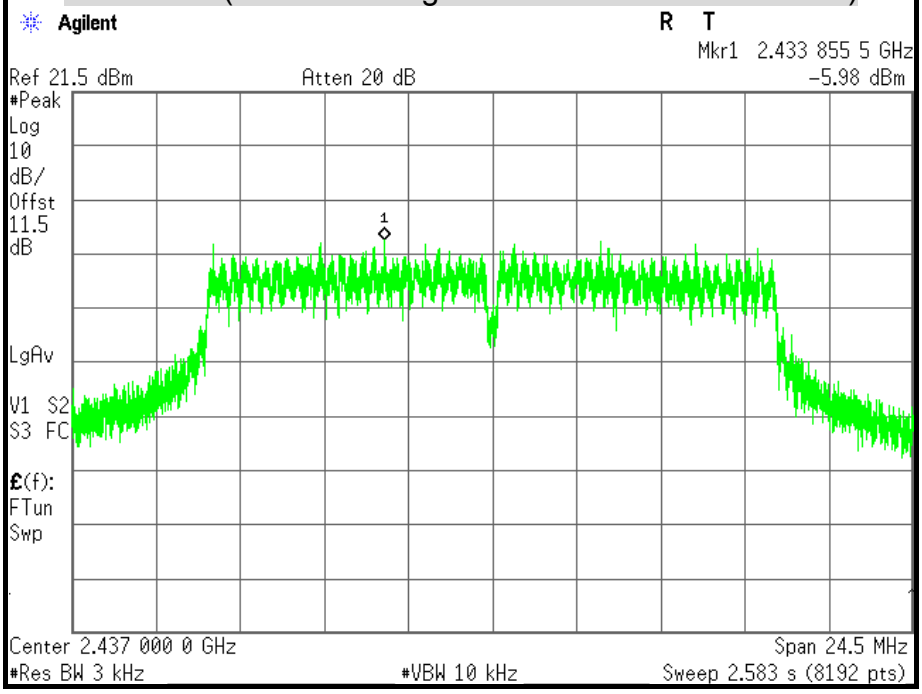
CH Low (IEEE 802.11g Mode / Antenna 3 / Chain 0)



CH Middle (IEEE 802.11g Mode / Antenna 3 / Chain 0)



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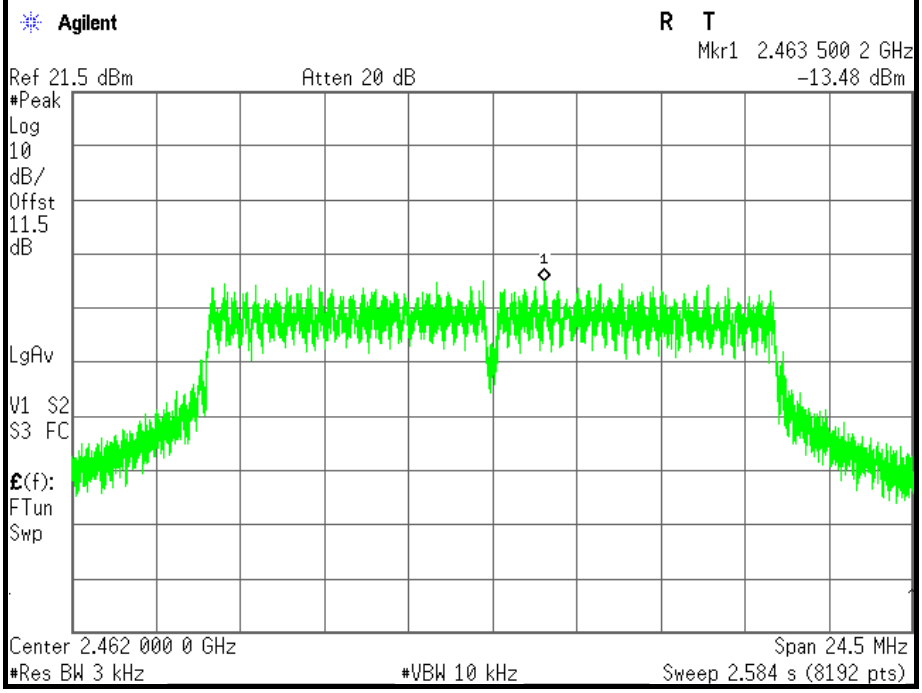
CH High (IEEE 802.11g Mode / Antenna 3 / Chain 0)



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7.5 CONDUCTED SPURIOUS EMISSION

LIMITS

§ 15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the and that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015

Remark: *Each piece of equipment is scheduled for calibration once a year.*

TEST SETUP

TEST PROCEDURE

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

The spectrum from 30 MHz to 26.5 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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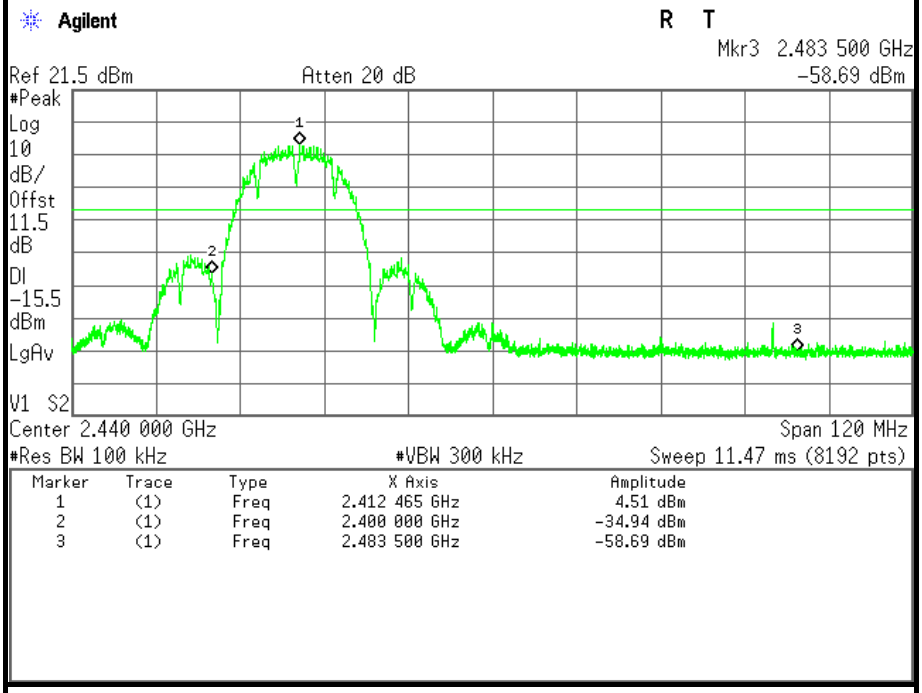
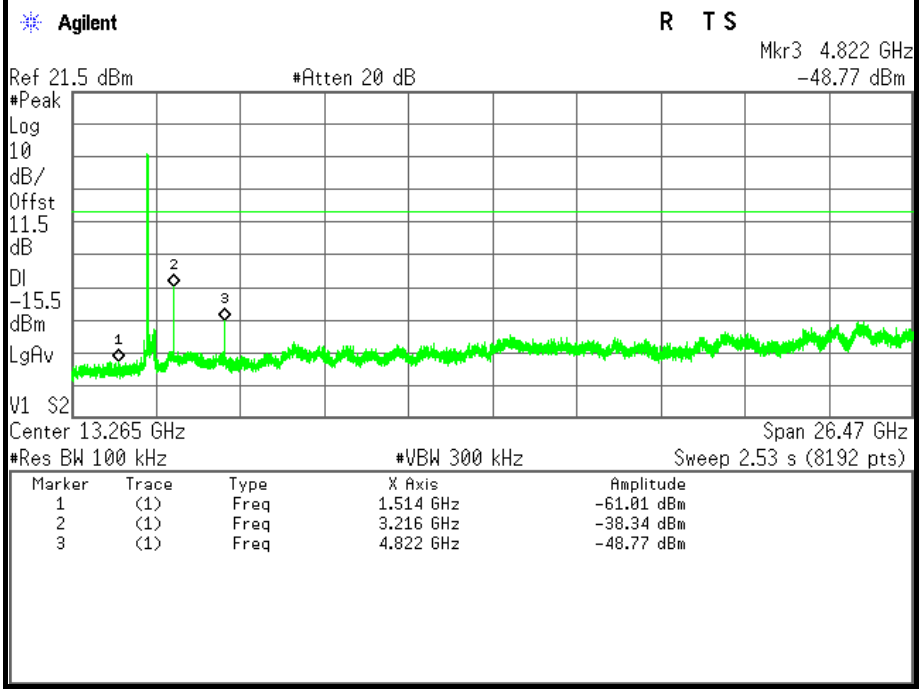
TEST RESULTS

OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 1 / Chain 0)



CH Low (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 1 / Chain 0)



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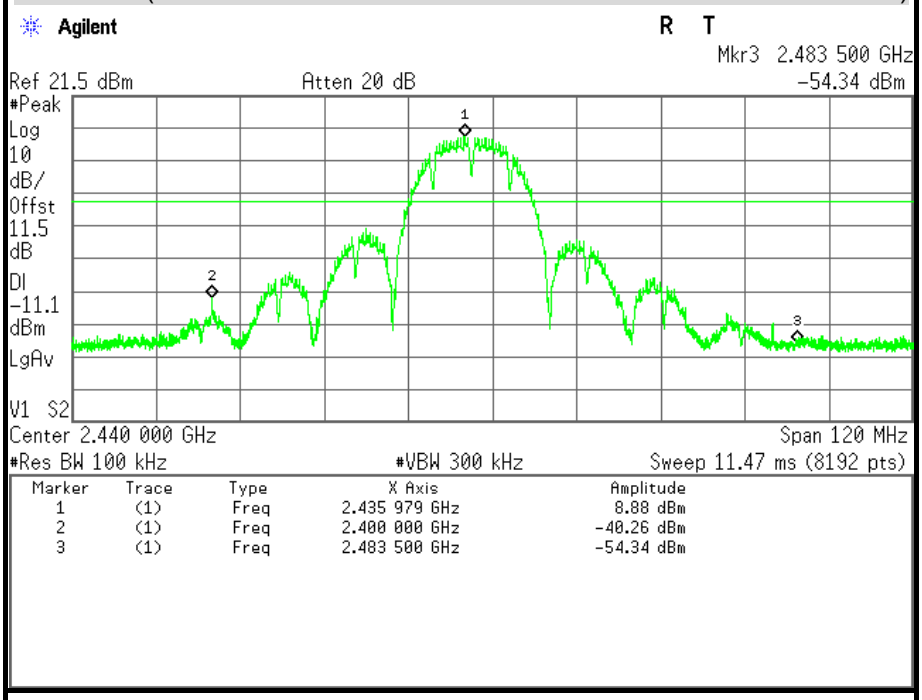
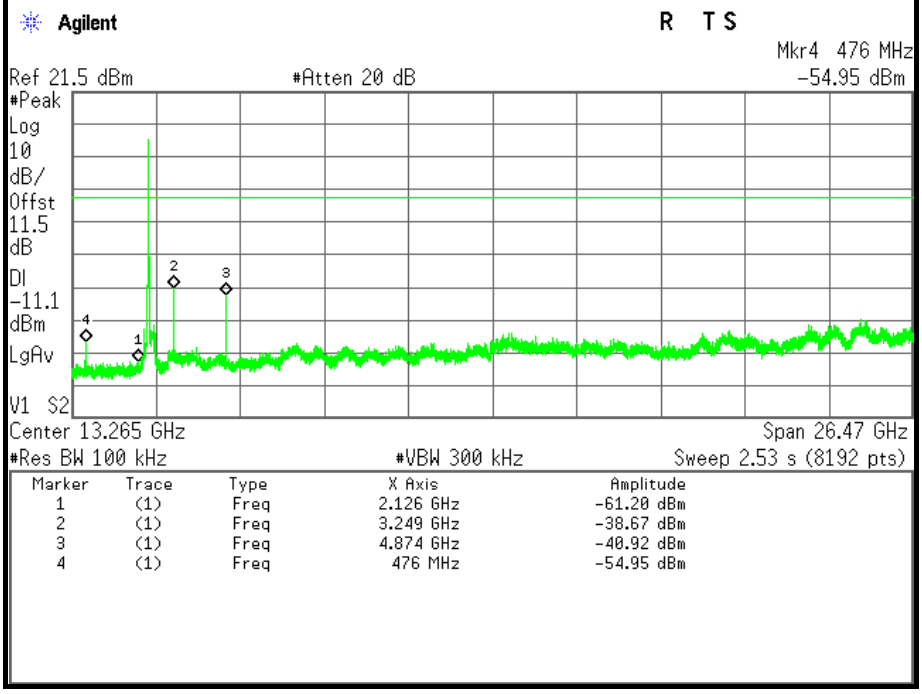
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 1 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.435 979 GHz	8.88 dBm
2	(1)	Freq	2.400 000 GHz	-40.26 dBm
3	(1)	Freq	2.483 500 GHz	-54.34 dBm

CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 1 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.126 GHz	-61.20 dBm
2	(1)	Freq	3.249 GHz	-38.67 dBm
3	(1)	Freq	4.874 GHz	-40.92 dBm
4	(1)	Freq	476 MHz	-54.95 dBm

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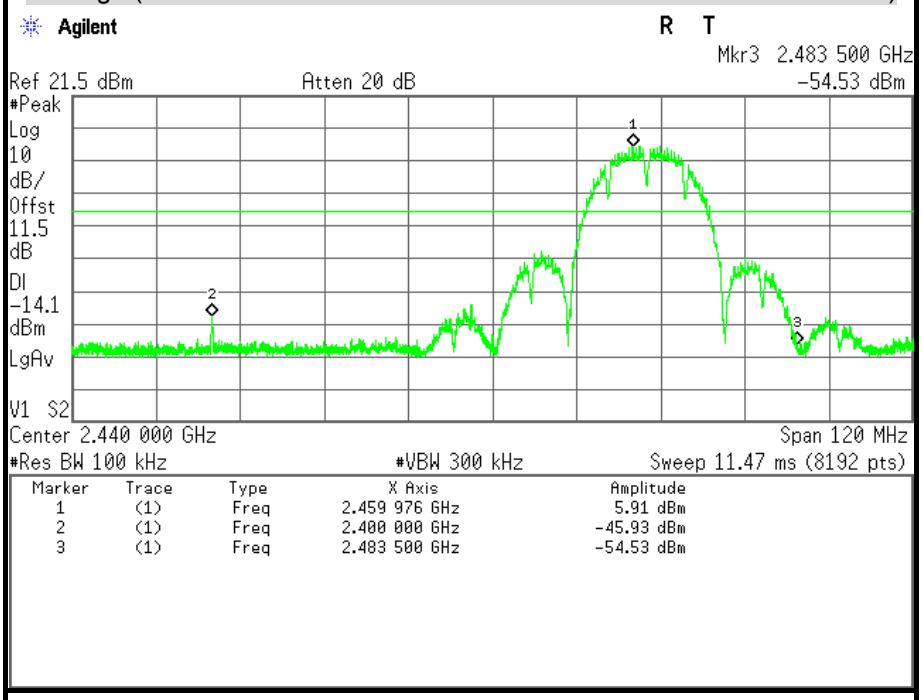
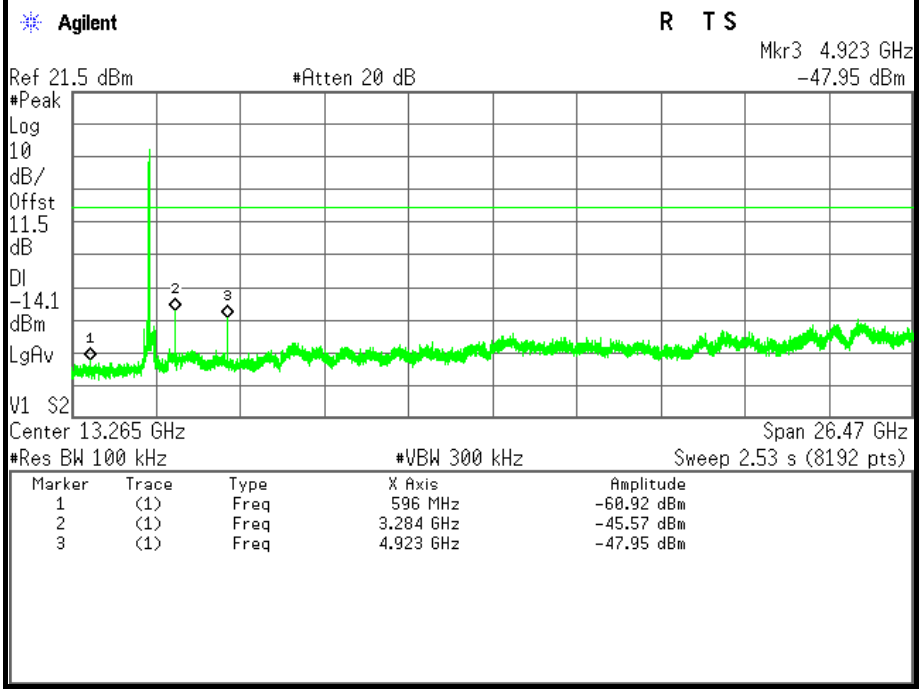
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 1 / Chain 0)



CH High (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 1 / Chain 0)



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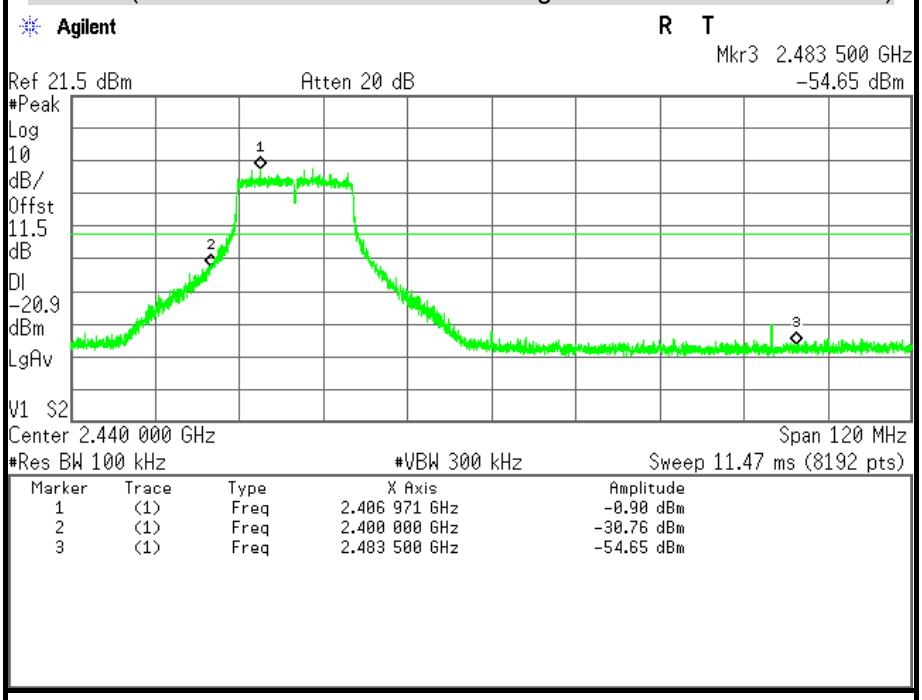
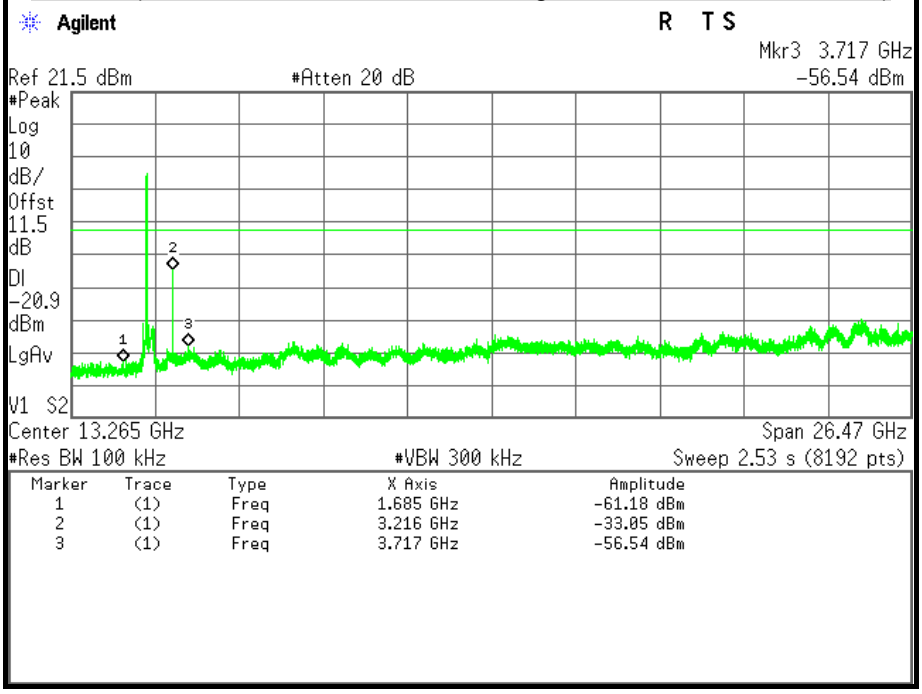
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 1 / Chain 0)



CH Low (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 1 / Chain 0)



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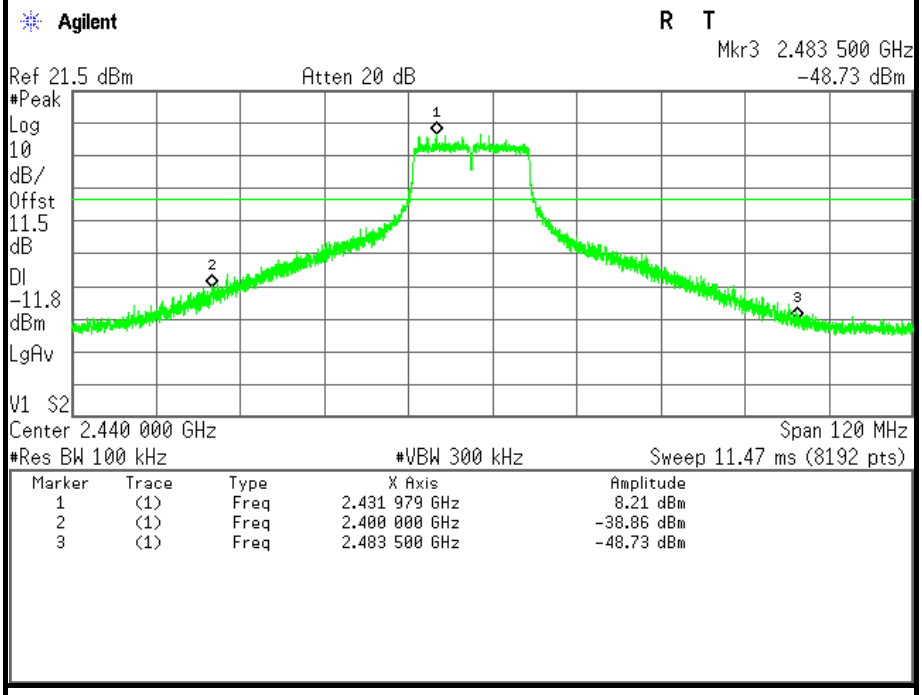
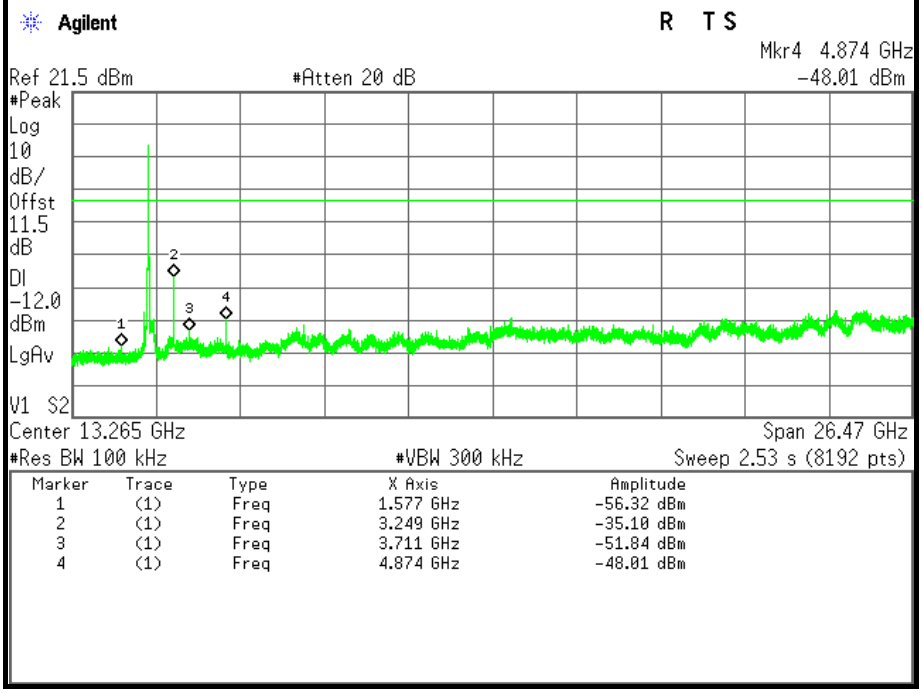
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 1 / Chain 0)



CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 1 / Chain 0)



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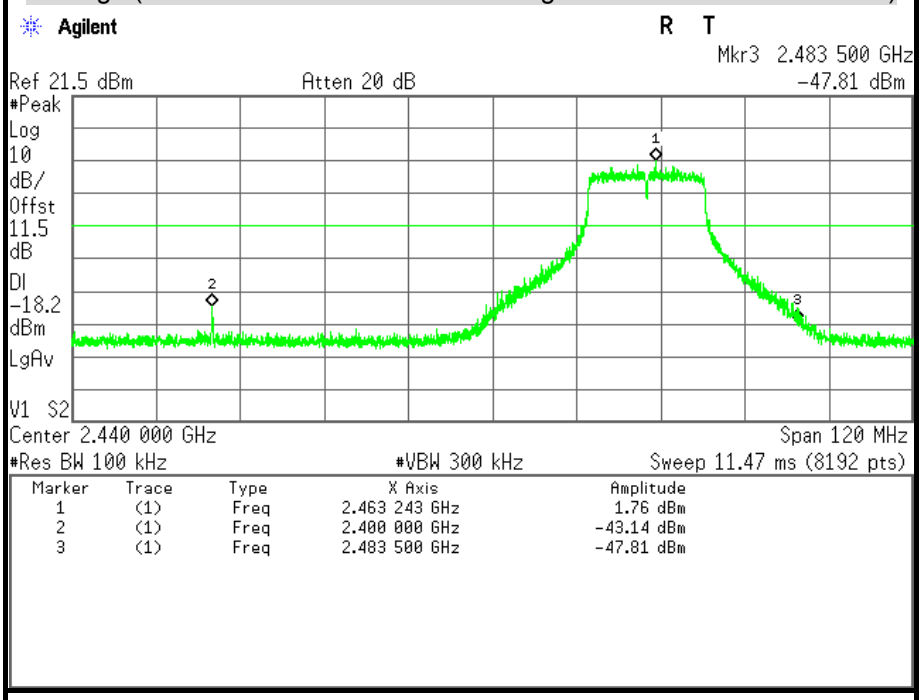
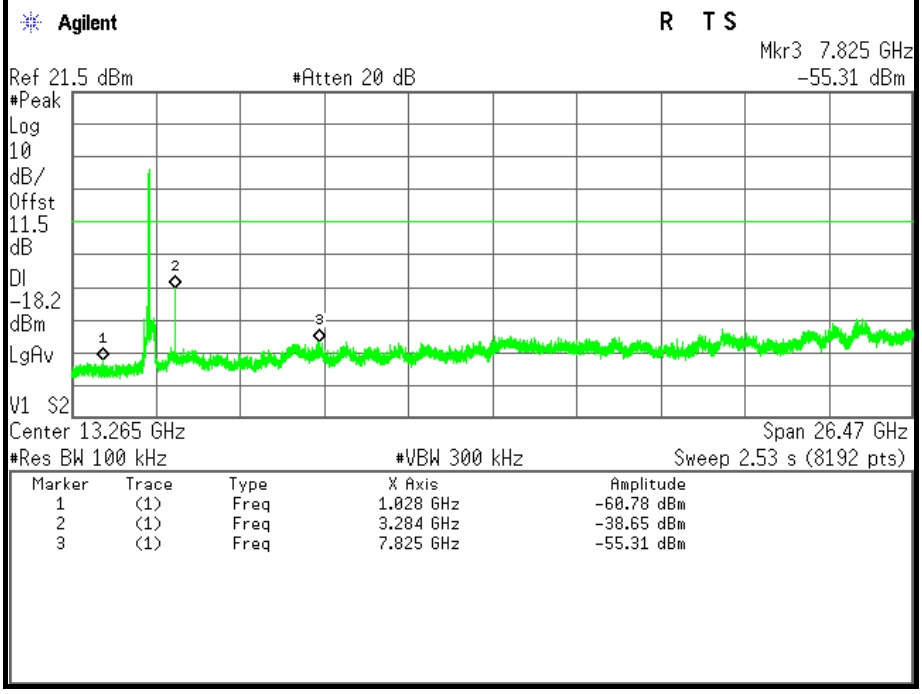
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 1 / Chain 0)



CH High (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 1 / Chain 0)



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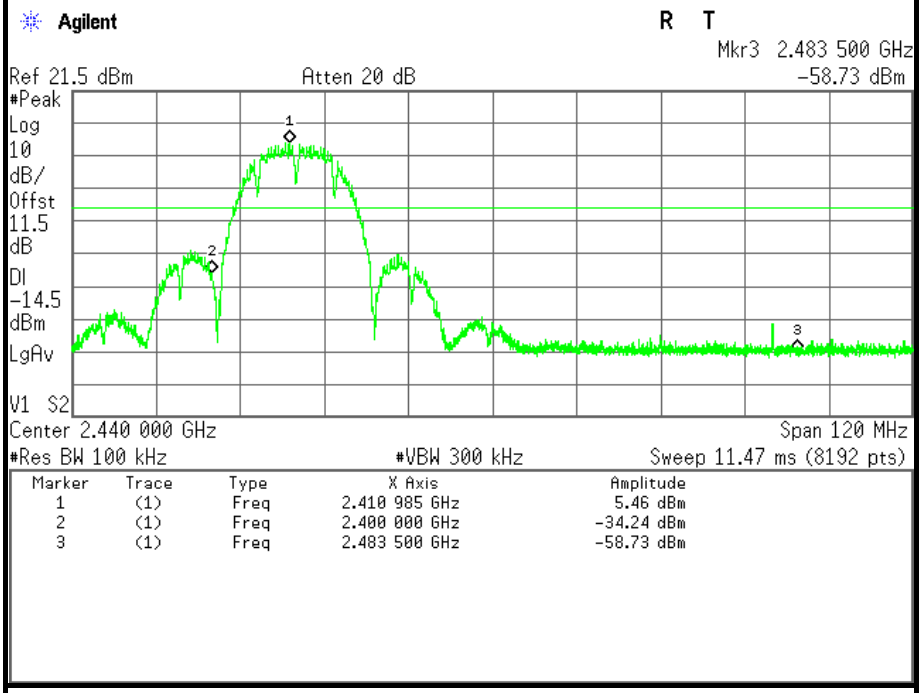
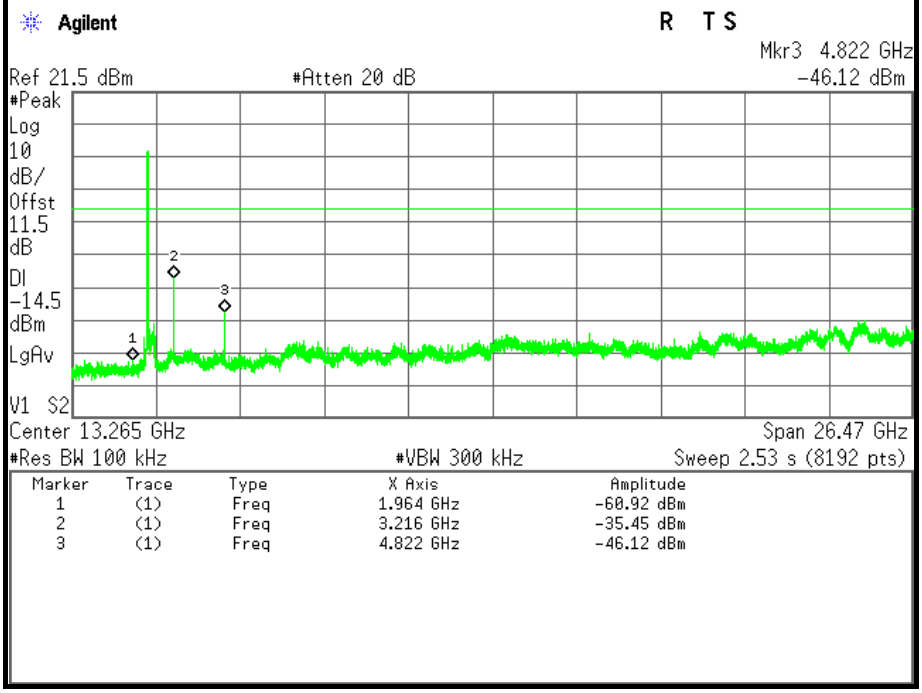
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 2 / Chain 0)



CH Low (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 2 / Chain 0)



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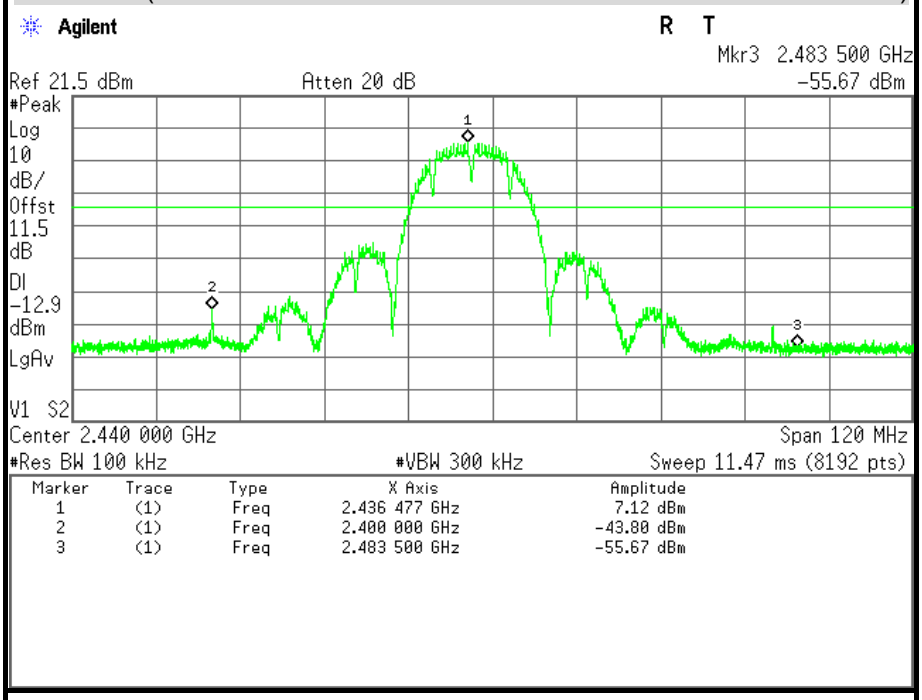
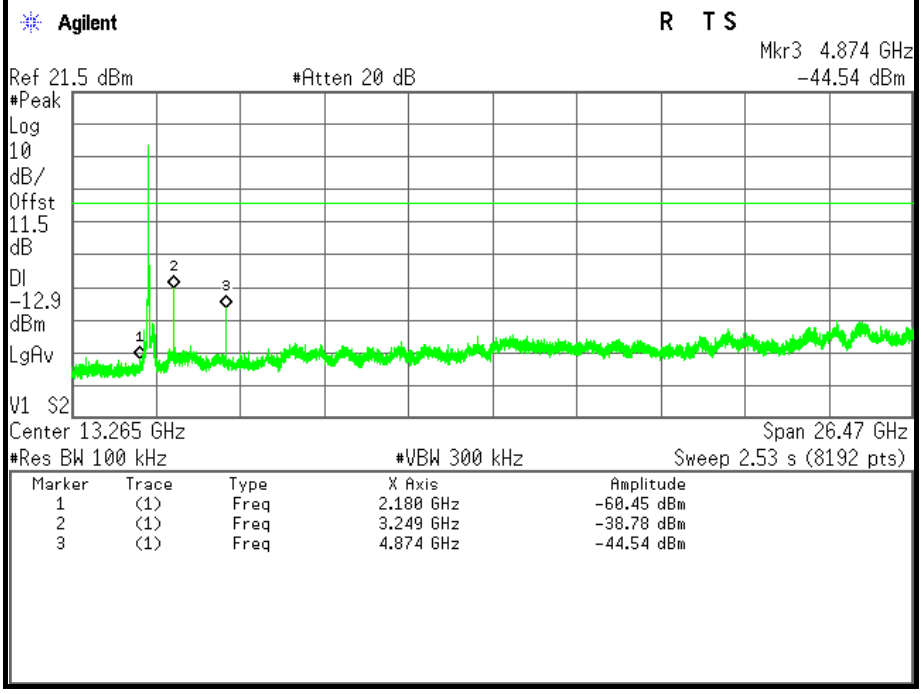
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 2 / Chain 0)



CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 2 / Chain 0)



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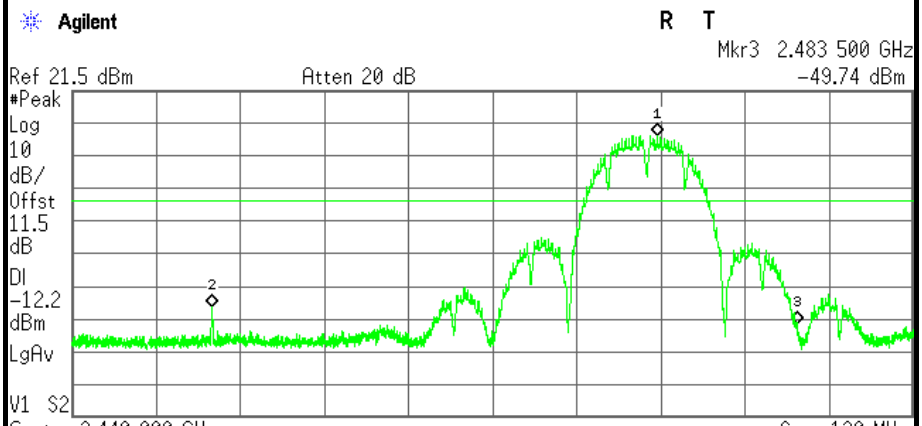
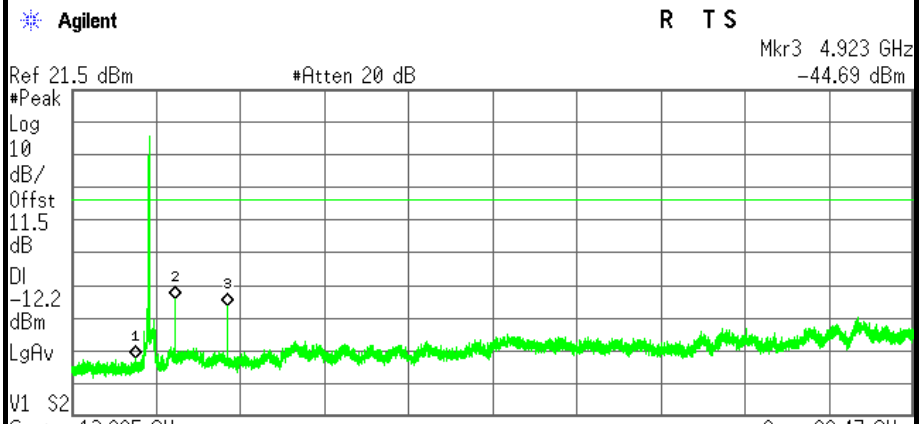
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 2 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.463 477 GHz	7.75 dBm
2	(1)	Freq	2.400 000 GHz	-44.92 dBm
3	(1)	Freq	2.483 500 GHz	-49.74 dBm

CH High (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 2 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.027 GHz	-60.91 dBm
2	(1)	Freq	3.284 GHz	-42.73 dBm
3	(1)	Freq	4.923 GHz	-44.69 dBm

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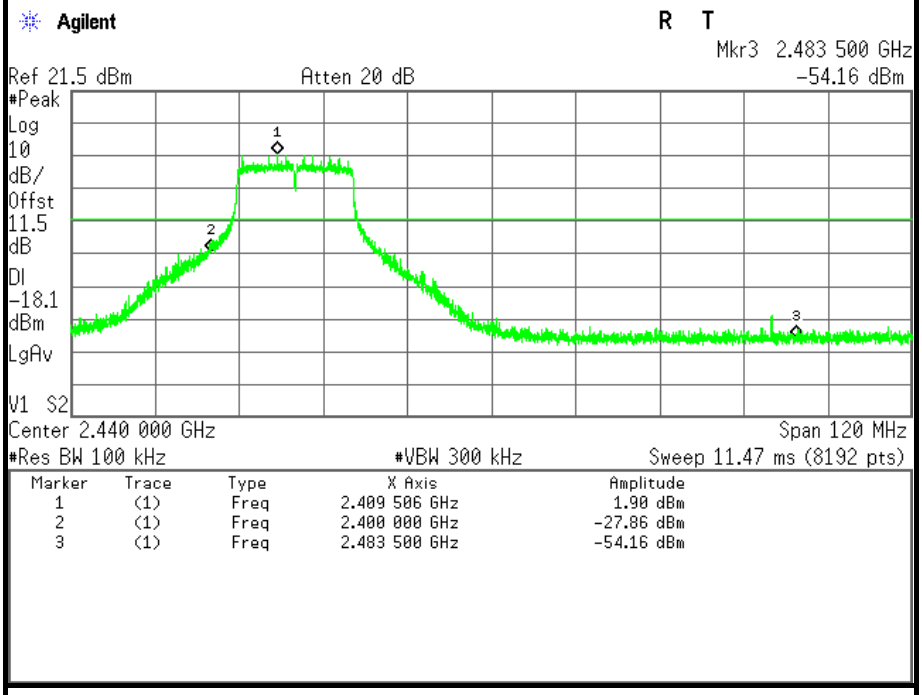
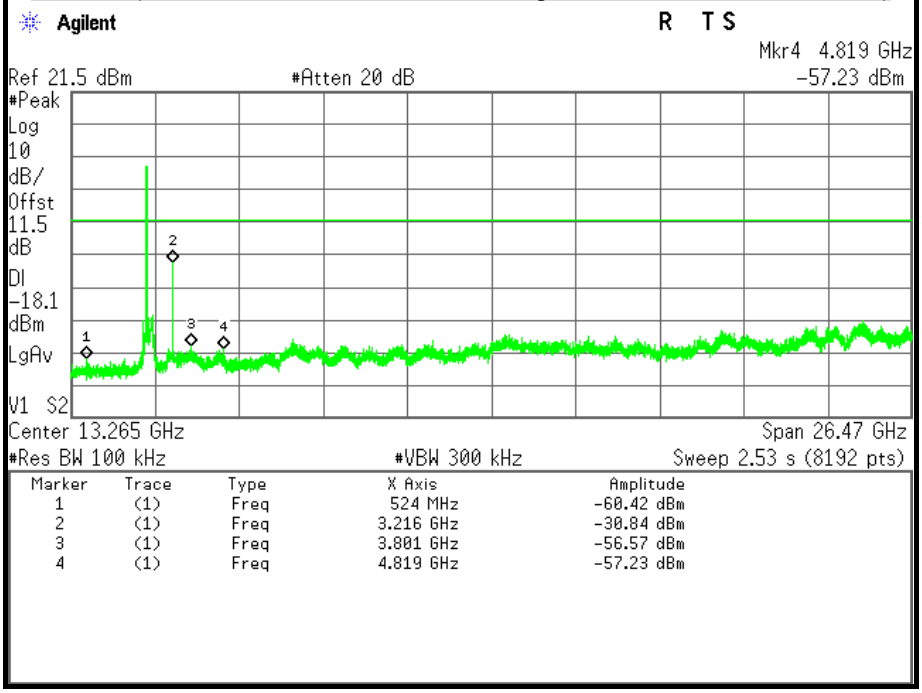
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 2 / Chain 0)



CH Low (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 2 / Chain 0)



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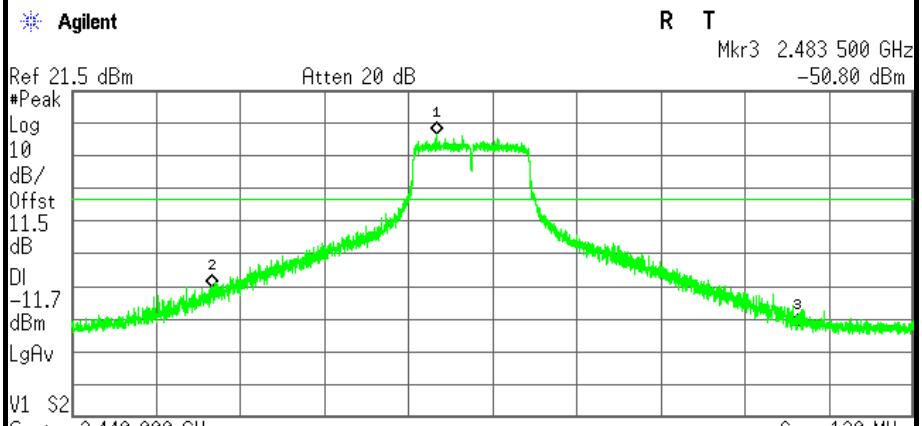
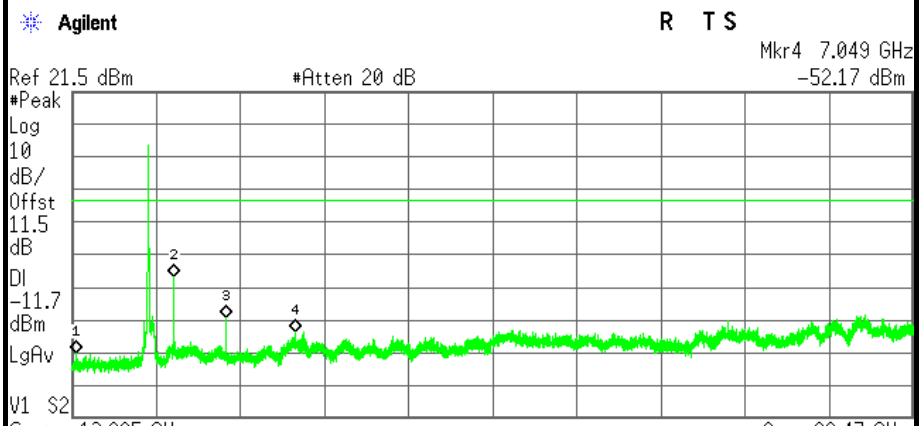
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 2 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.431 964 GHz	8.29 dBm
2	(1)	Freq	2.400 000 GHz	-38.52 dBm
3	(1)	Freq	2.483 500 GHz	-50.80 dBm

CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 2 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	182 MHz	-58.76 dBm
2	(1)	Freq	3.249 GHz	-35.13 dBm
3	(1)	Freq	4.868 GHz	-47.75 dBm
4	(1)	Freq	7.049 GHz	-52.17 dBm

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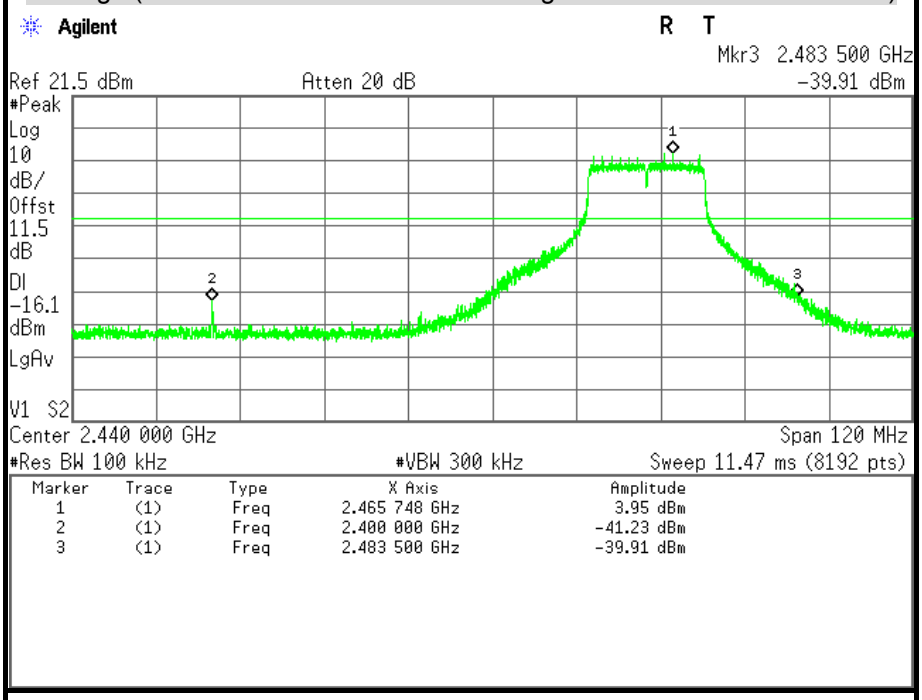
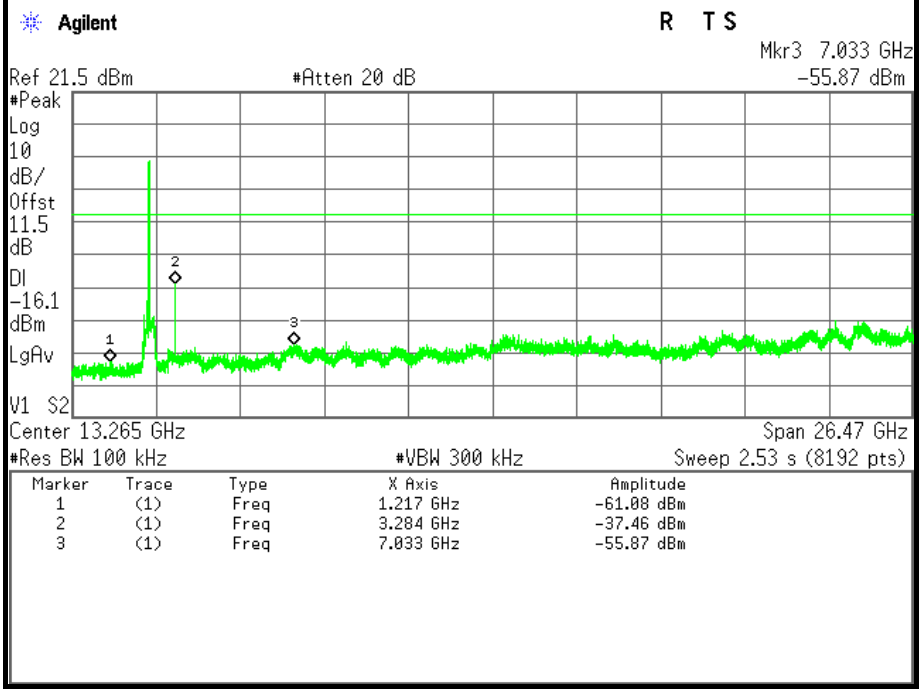
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 2 / Chain 0)



CH High (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 2 / Chain 0)



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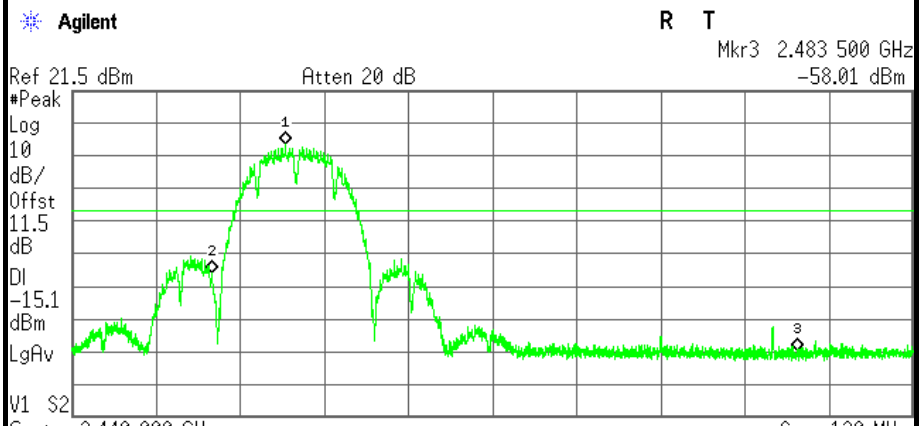
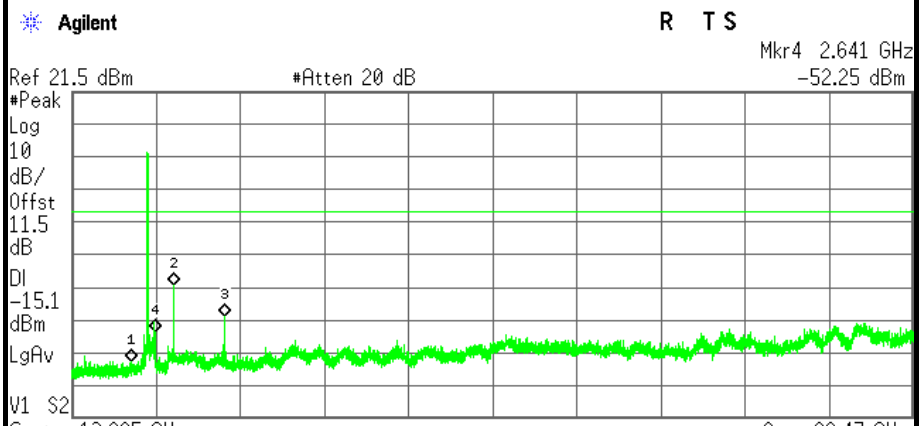
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 3 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.410 472 GHz	4.89 dBm
2	(1)	Freq	2.400 000 GHz	-34.32 dBm
3	(1)	Freq	2.483 500 GHz	-58.01 dBm

CH Low (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 3 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.919 GHz	-61.10 dBm
2	(1)	Freq	3.216 GHz	-37.65 dBm
3	(1)	Freq	4.822 GHz	-47.21 dBm
4	(1)	Freq	2.641 GHz	-52.25 dBm

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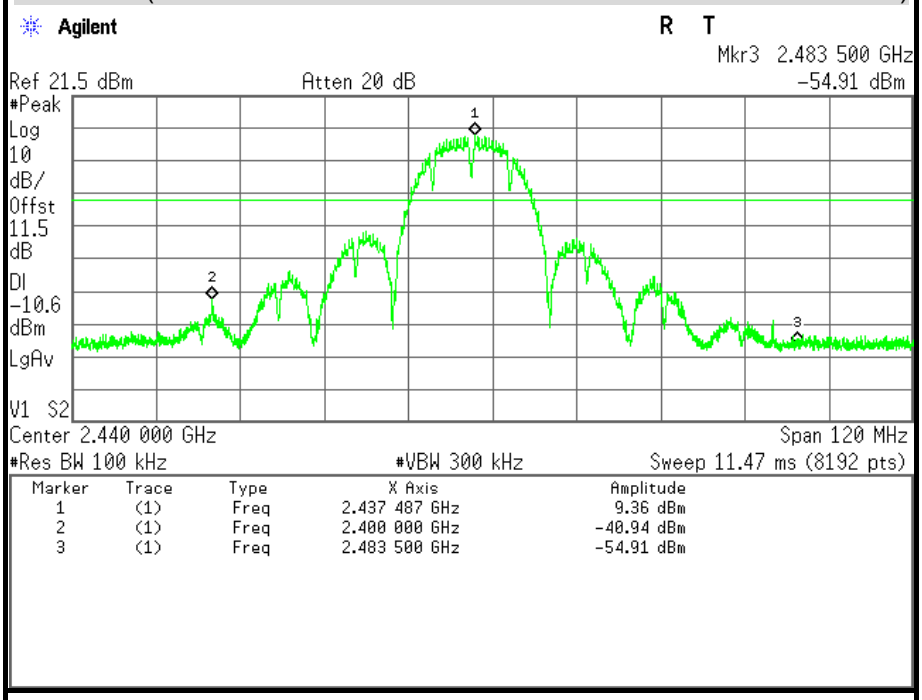
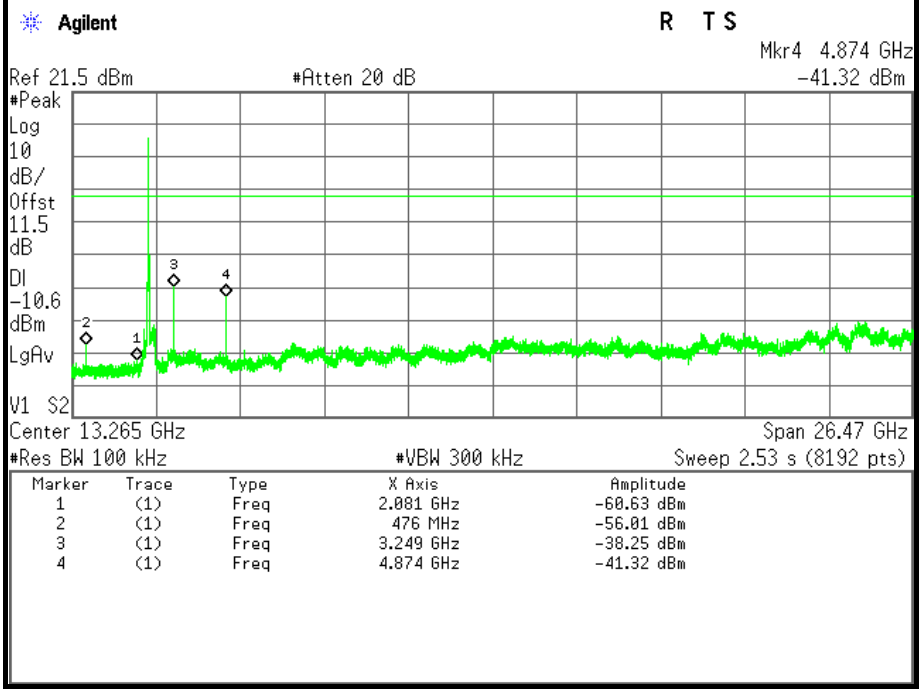
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 3 / Chain 0)



CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 3 / Chain 0)



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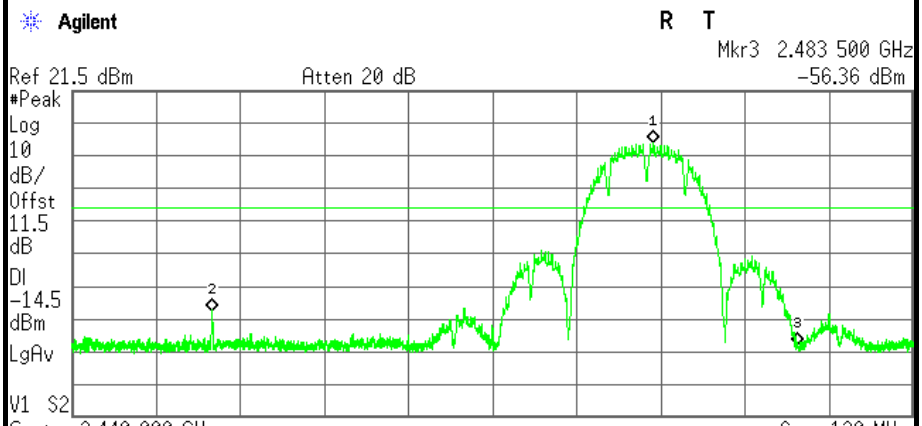
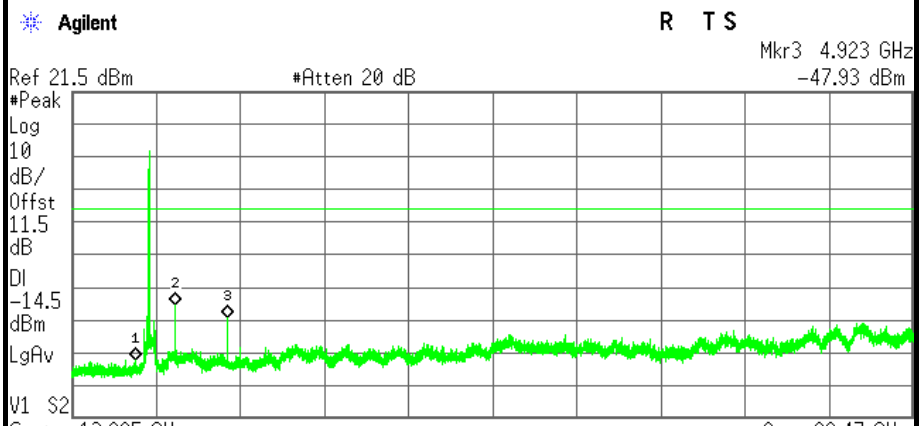
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Antenna 3 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.462 979 GHz	5.47 dBm
2	(1)	Freq	2.400 000 GHz	-45.94 dBm
3	(1)	Freq	2.483 500 GHz	-56.36 dBm

CH High (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Antenna 3 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.054 GHz	-60.69 dBm
2	(1)	Freq	3.284 GHz	-44.06 dBm
3	(1)	Freq	4.923 GHz	-47.93 dBm

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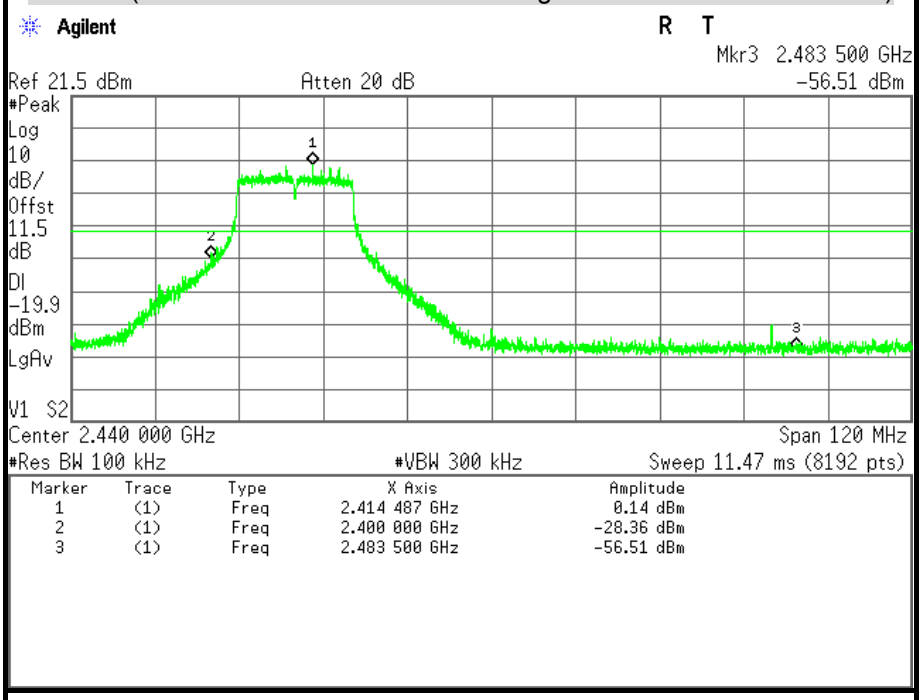
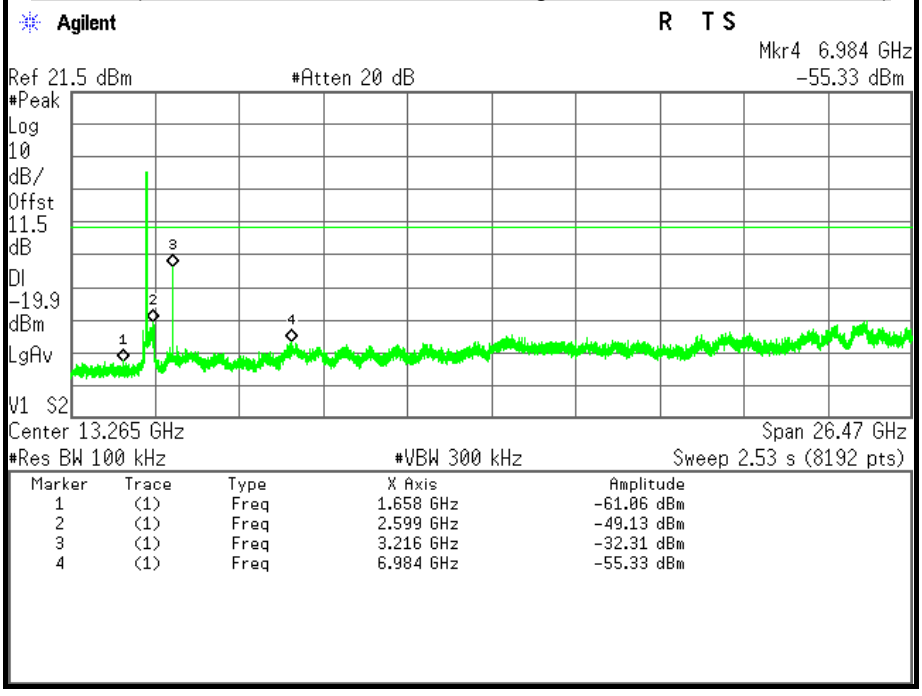
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 3 / Chain 0)



CH Low (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 3 / Chain 0)



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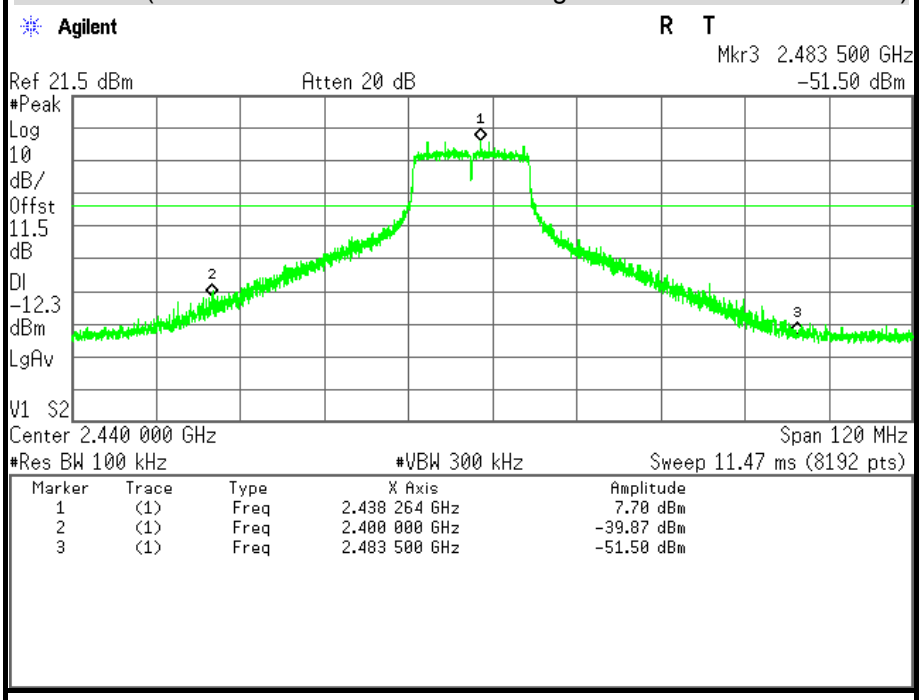
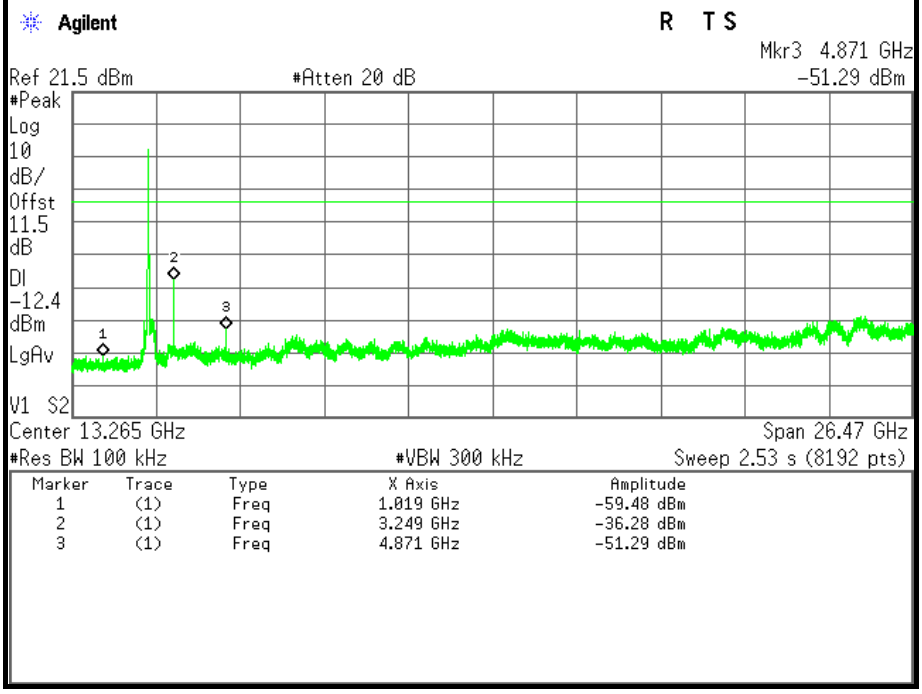
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 3 / Chain 0)



CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 3 / Chain 0)



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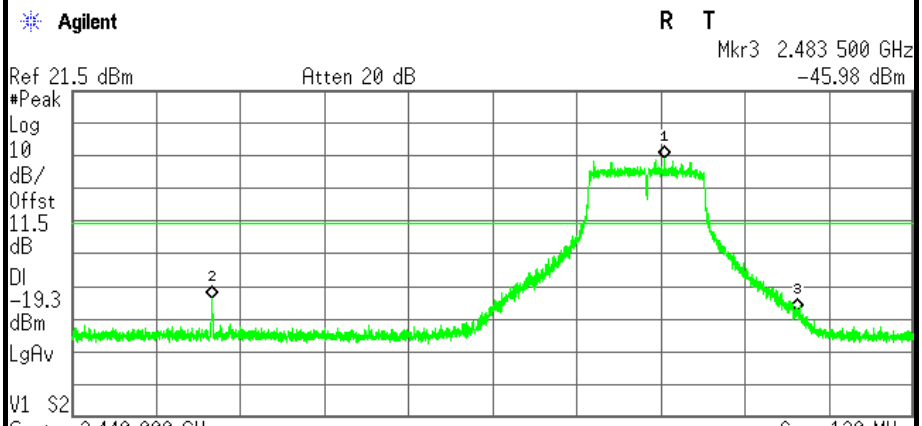
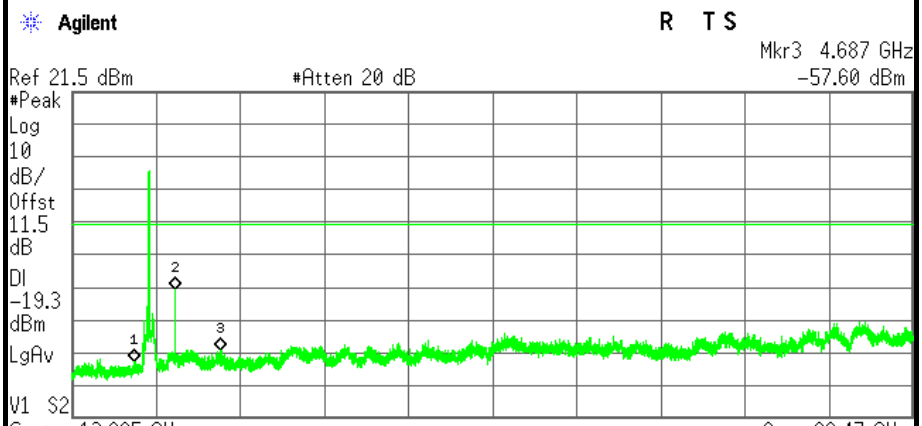
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Antenna 3 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.464 459 GHz	0.75 dBm
2	(1)	Freq	2.400 000 GHz	-42.26 dBm
3	(1)	Freq	2.483 500 GHz	-45.98 dBm

CH High (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Antenna 3 / Chain 0)



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.009 GHz	-61.19 dBm
2	(1)	Freq	3.284 GHz	-39.18 dBm
3	(1)	Freq	4.687 GHz	-57.60 dBm

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7.7 RADIATED EMISSION

LIMITS

(1) According to § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]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	2655 - 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 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 -335.4	3600 - 4400	([2])
13.36 - 13.41			

Remark:

1. *[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.*
2. *[2] Above 38.6*

(2) According to § 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown is Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

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(3) According to § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

Remark: ***Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.*

(4) According to § 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST EQUIPMENT

Radiated Emission / 966Chamber_B

Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY46180323	04/15/2015
EMI Test Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	10/16/2014
Bi-log Antenna	SCHWARZBECK	VULB 9168	9168-250	08/21/2015
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-778	08/19/2015
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078733	12/05/2014
Horn Antenna	COM-POWER	AH-840	03077	12/18/2014
Pre-Amplifier	Agilent	8447D	2944A10052	07/15/2015
Pre-Amplifier	Agilent	8449B	3008A01916	07/15/2015
LOOP Antenna	COM-POWER	AL-130	121051	01/12/2015
Notch Filters Band Reject	Micro-Tronics	BRM05702-01	026	N.C.R

Remark: *1. Each piece of equipment is scheduled for calibration once a year.*
2. N.C.R = No Calibration Request.

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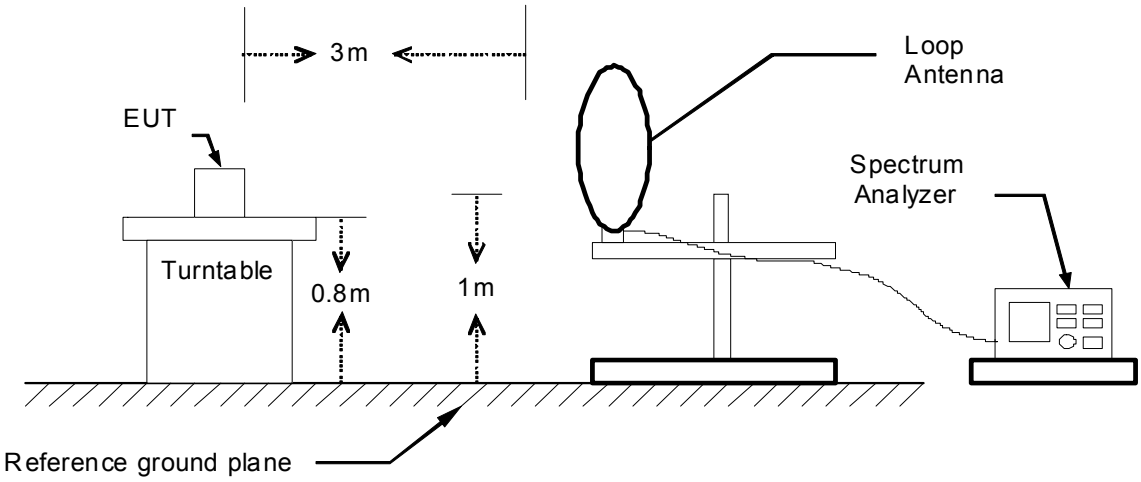
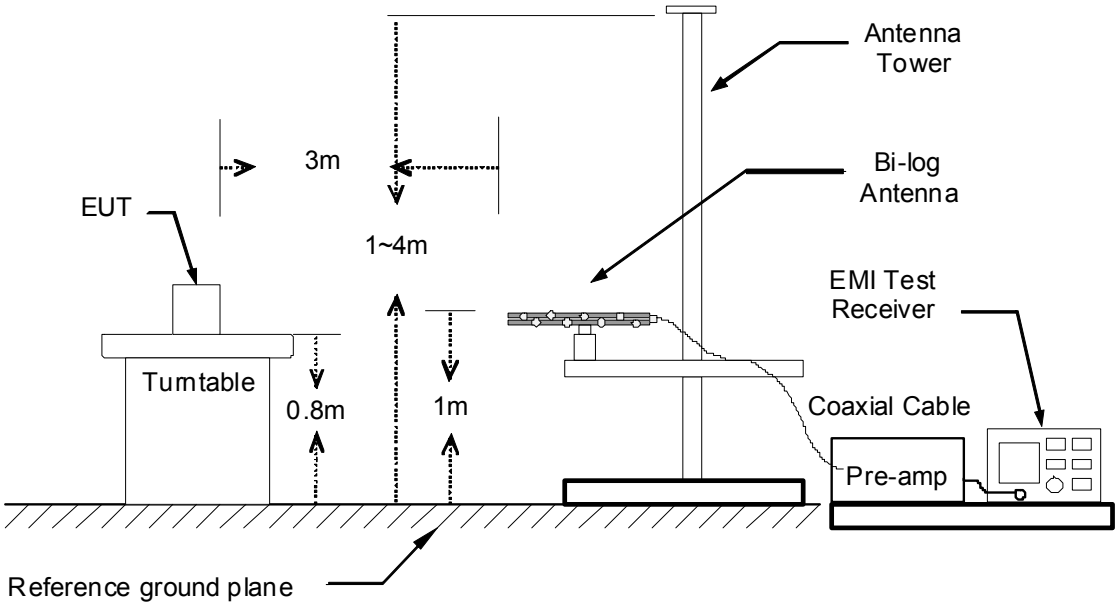
TEST SETUP

The diagram below shows the test setup that is utilized to make the measurements for emission below 1GHz.

9kHz ~ 30MHz



30MHz ~ 1GHz



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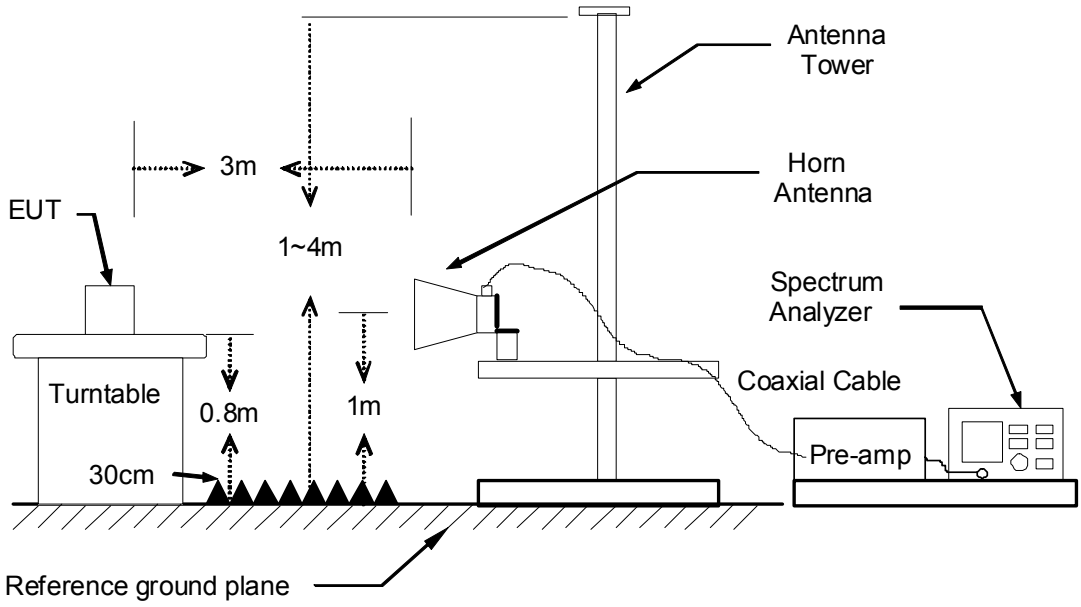
The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



TEST PROCEDURE

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
2. While measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. While measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Remark：

1. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.*
2. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.*
3. *The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.*

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TEST RESULTS

Below 1 GHz (9kHz ~ 30MHz)

No emission found between lowest internal used/generated frequency to 30MHz.

Below 1 GHz (30MHz ~ 1GHz)

Product Name	Module	**Test By**	Audi Chang
Test Model	830E	**Test Date**	2014/10/05
Test Mode	TX Mode / Antenna 1	**Temp. & Humidity**	30°C, 50%

966 Chamber_B at 3Meter / Horizontal						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
99.84	57.70	-18.65	39.05	43.50	-4.45	QP
166.77	57.10	-13.83	43.27	43.50	-0.23	QP
232.73	55.70	-14.60	41.10	46.00	-4.90	QP
299.66	55.50	-11.92	43.58	46.00	-2.42	Peak
430.61	51.61	-9.27	42.34	46.00	-3.66	Peak
499.48	50.48	-8.21	42.27	46.00	-3.73	Peak

966 Chamber_B at 3Meter / Vertical						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
99.84	59.67	-18.65	41.01	43.50	-2.49	Peak
166.77	49.80	-13.83	35.97	43.50	-7.53	QP
231.76	52.83	-14.66	38.17	46.00	-7.83	Peak
432.55	48.52	-9.23	39.30	46.00	-6.70	Peak
499.48	51.01	-8.21	42.80	46.00	-3.20	Peak
563.50	45.94	-7.01	38.93	46.00	-7.07	Peak

Remark:

1. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.*
2. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
3. *Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)*
4. *Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)*
5. *Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).*

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	TX Mode / Antenna 2	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
99.84	58.20	-18.65	39.55	43.50	-3.95	QP
165.80	57.00	-13.77	43.23	43.50	-0.27	QP
231.76	60.50	-14.66	45.84	46.00	-0.16	QP
399.57	54.56	-9.94	44.62	46.00	-1.38	QP
432.55	53.92	-9.23	44.69	46.00	-1.31	Peak
563.50	51.35	-7.01	44.34	46.00	-1.66	Peak

966 Chamber_B at 3Meter / Vertical						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
99.84	58.90	-18.65	40.25	43.50	-3.25	QP
166.77	55.54	-13.83	41.71	43.50	-1.79	Peak
366.59	48.60	-10.57	38.03	46.00	-7.97	Peak
432.55	50.49	-9.23	41.27	46.00	-4.73	Peak
497.54	50.39	-8.23	42.16	46.00	-3.84	Peak
902.03	41.07	-1.13	39.95	46.00	-6.05	Peak

Remark:

1. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.*
2. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
3. *Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)*
4. *Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)*
5. *Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).*

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	TX Mode / Antenna 3	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
165.80	57.00	-13.77	43.23	43.50	-0.27	QP
199.75	57.75	-16.04	41.71	43.50	-1.79	QP
231.76	60.30	-14.66	45.64	46.00	-0.36	QP
399.57	53.14	-9.94	43.20	46.00	-2.80	Peak
433.52	53.02	-9.21	43.81	46.00	-2.19	Peak
563.50	50.24	-7.01	43.23	46.00	-2.77	Peak

966 Chamber_B at 3Meter / Vertical						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
99.84	58.20	-18.65	39.55	43.50	-3.95	Peak
166.77	53.13	-13.83	39.30	43.50	-4.20	Peak
231.76	53.55	-14.66	38.89	46.00	-7.11	Peak
433.52	48.27	-9.21	39.06	46.00	-6.94	Peak
496.57	49.98	-8.24	41.73	46.00	-4.27	Peak
566.41	45.20	-6.92	38.28	46.00	-7.72	Peak

Remark:

1. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.*
2. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
3. *Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)*
4. *Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)*
5. *Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).*

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Above 1 GHz

Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11b TX / CH Low / Antenna 1	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1212.00	49.66	---	-2.89	46.77	---	74.00	54.00	-7.23	Peak
1592.00	49.95	---	-2.03	47.92	---	74.00	54.00	-6.08	Peak
2582.00	54.91	46.01	3.02	57.93	49.03	74.00	54.00	-4.97	AVG
3210.00	50.00	44.83	4.25	54.25	49.08	74.00	54.00	-4.92	AVG
3885.00	41.00	---	5.54	46.54	---	74.00	54.00	-7.46	Peak
4830.00	46.35	37.48	8.09	54.44	45.57	74.00	54.00	-8.43	AVG

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1196.00	51.10	---	-2.89	48.21	---	74.00	54.00	-5.79	Peak
1464.00	50.95	---	-2.90	48.06	---	74.00	54.00	-5.94	Peak
1592.00	52.18	---	-2.03	50.15	---	74.00	54.00	-3.85	Peak
3210.00	45.26	---	4.25	49.52	---	74.00	54.00	-4.48	Peak
4035.00	41.05	---	5.97	47.02	---	74.00	54.00	-6.98	Peak
5055.00	39.17	---	8.54	47.70	---	74.00	54.00	-6.30	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11b TX / CH Middle / Antenna 1	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1464.00	49.36	---	-2.90	46.46	---	74.00	54.00	-7.54	Peak
2320.00	55.77	47.21	2.45	58.22	49.66	74.00	54.00	-4.34	AVG
2568.00	58.56	46.11	2.98	61.54	49.09	74.00	54.00	-4.91	AVG
3255.00	46.34	---	4.29	50.63	---	74.00	54.00	-3.37	Peak
3900.00	41.57	---	5.59	47.16	---	74.00	54.00	-6.84	Peak
4875.00	48.29	45.70	8.18	56.47	53.88	74.00	54.00	-0.12	AVG

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1196.00	52.57	---	-2.89	49.68	---	74.00	54.00	-4.32	Peak
1464.00	50.88	---	-2.90	47.98	---	74.00	54.00	-6.02	Peak
1598.00	51.10	---	-1.97	49.13	---	74.00	54.00	-4.87	Peak
3255.00	44.10	---	4.29	48.39	---	74.00	54.00	-5.61	Peak
3975.00	40.55	---	5.79	46.35	---	74.00	54.00	-7.65	Peak
4875.00	47.05	41.32	8.18	55.23	49.50	74.00	54.00	-4.50	AVG

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11b TX / CH High / Antenna 1	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1374.00	49.93	---	-2.89	47.04	---	74.00	54.00	-6.96	Peak
2400.00	57.62	50.50	2.61	60.23	53.11	74.00	54.00	-0.89	AVG
2586.00	55.55	44.92	3.03	58.58	47.95	74.00	54.00	-6.05	AVG
3285.00	41.77	---	4.31	46.08	---	74.00	54.00	-7.92	Peak
3885.00	40.62	---	5.54	46.17	---	74.00	54.00	-7.83	Peak
4920.00	41.68	---	8.28	49.95	---	74.00	54.00	-4.05	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1194.00	50.60	---	-2.89	47.71	---	74.00	54.00	-6.29	Peak
1458.00	50.89	---	-2.90	47.99	---	74.00	54.00	-6.01	Peak
1594.00	51.69	---	-2.01	49.68	---	74.00	54.00	-4.32	Peak
3120.00	42.87	---	4.18	47.05	---	74.00	54.00	-6.95	Peak
4020.00	40.44	---	5.92	46.37	---	74.00	54.00	-7.63	Peak
4920.00	39.63	---	8.28	47.91	---	74.00	54.00	-6.09	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11g TX / CH Low / Antenna 1	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1362.00	48.48	---	-2.89	45.59	---	74.00	54.00	-8.41	Peak
1606.00	48.74	---	-1.90	46.84	---	74.00	54.00	-7.16	Peak
2596.00	58.85	46.70	3.05	61.90	49.75	74.00	54.00	-4.25	AVG
3210.00	54.71	49.50	4.25	58.96	53.75	74.00	54.00	-0.25	AVG
3855.00	40.82	---	5.46	46.28	---	74.00	54.00	-7.72	Peak
4695.00	39.71	---	7.81	47.52	---	74.00	54.00	-6.48	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1196.00	52.17	---	-2.89	49.29	---	74.00	54.00	-4.71	Peak
1464.00	51.10	---	-2.90	48.20	---	74.00	54.00	-5.80	Peak
1600.00	51.47	---	-1.96	49.51	---	74.00	54.00	-4.49	Peak
3210.00	50.08	45.91	4.25	54.33	50.16	74.00	54.00	-3.84	AVG
3855.00	40.88	---	5.46	46.34	---	74.00	54.00	-7.66	Peak
4785.00	39.99	---	8.00	47.99	---	74.00	54.00	-6.01	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11g TX / CH Middle / Antenna 1	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1506.00	49.95	---	-2.84	47.10	---	74.00	54.00	-6.90	Peak
2320.00	58.34	48.94	2.45	60.79	51.39	74.00	54.00	-2.61	AVG
2594.00	61.59	47.70	3.05	64.64	50.75	74.00	54.00	-3.25	AVG
3255.00	52.57	48.04	4.29	56.86	52.33	74.00	54.00	-1.67	AVG
4050.00	40.71	---	6.02	46.72	---	74.00	54.00	-7.28	Peak
4875.00	53.07	37.21	8.18	61.25	45.39	74.00	54.00	-8.61	AVG

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1200.00	52.73	---	-2.89	49.85	---	74.00	54.00	-4.15	Peak
1594.00	57.00	37.34	-2.01	54.99	35.33	74.00	54.00	-18.67	AVG
1930.00	47.93	---	1.16	49.09	---	74.00	54.00	-4.91	Peak
3255.00	44.88	---	4.29	49.17	---	74.00	54.00	-4.83	Peak
3990.00	41.06	---	5.83	46.90	---	74.00	54.00	-7.10	Peak
4875.00	46.22	30.73	8.18	54.40	38.91	74.00	54.00	-15.09	AVG

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11g TX / CH High / Antenna 1	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1330.00	49.27	---	-2.89	46.38	---	74.00	54.00	-7.62	Peak
2400.00	58.75	50.85	2.61	61.36	53.46	74.00	54.00	-0.54	AVG
2586.00	60.15	48.16	3.03	63.18	51.19	74.00	54.00	-2.81	AVG
3285.00	45.57	---	4.31	49.88	---	74.00	54.00	-4.12	Peak
3975.00	41.05	---	5.79	46.85	---	74.00	54.00	-7.15	Peak
4875.00	39.11	---	8.18	47.29	---	74.00	54.00	-6.71	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1198.00	50.88	---	-2.89	47.99	---	74.00	54.00	-6.01	Peak
1462.00	51.05	---	-2.90	48.16	---	74.00	54.00	-5.84	Peak
1592.00	52.87	---	-2.03	50.84	---	74.00	54.00	-3.16	Peak
3285.00	42.97	---	4.31	47.28	---	74.00	54.00	-6.72	Peak
3795.00	40.74	---	5.30	46.04	---	74.00	54.00	-7.96	Peak
4680.00	39.76	---	7.78	47.54	---	74.00	54.00	-6.46	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11b TX / CH Low / Antenna 2	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1152.00	49.44	---	-2.89	46.55	---	74.00	54.00	-7.45	Peak
1392.00	48.89	---	-2.90	45.99	---	74.00	54.00	-8.01	Peak
1900.00	47.70	---	0.88	48.58	---	74.00	54.00	-5.42	Peak
3210.00	45.37	---	4.25	49.62	---	74.00	54.00	-4.38	Peak
3960.00	41.17	---	5.75	46.92	---	74.00	54.00	-7.08	Peak
4830.00	40.77	---	8.09	48.86	---	74.00	54.00	-5.14	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1460.00	51.07	---	-2.90	48.18	---	74.00	54.00	-5.82	Peak
2320.00	52.28	42.33	2.45	54.73	44.78	74.00	54.00	-9.22	AVG
2538.00	51.47	38.91	2.91	54.38	41.82	74.00	54.00	-12.18	AVG
3885.00	40.55	---	5.54	46.10	---	74.00	54.00	-7.90	Peak
4830.00	42.14	---	8.09	50.23	---	74.00	54.00	-3.77	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11b TX / CH Middle / Antenna 2	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1186.00	49.74	---	-2.89	46.86	---	74.00	54.00	-7.14	Peak
1376.00	48.63	---	-2.90	45.73	---	74.00	54.00	-8.27	Peak
1570.00	49.69	---	-2.24	47.45	---	74.00	54.00	-6.55	Peak
3255.00	43.67	---	4.29	47.96	---	74.00	54.00	-6.04	Peak
4215.00	40.30	---	6.53	46.82	---	74.00	54.00	-7.18	Peak
4875.00	40.40	---	8.18	48.59	---	74.00	54.00	-5.41	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1596.00	51.26	---	-1.99	49.27	---	74.00	54.00	-4.73	Peak
2366.00	51.67	39.64	2.54	54.21	42.18	74.00	54.00	-11.82	AVG
2556.00	52.00	37.99	2.95	54.95	40.94	74.00	54.00	-13.06	AVG
4035.00	41.11	---	5.97	47.08	---	74.00	54.00	-6.92	Peak
4875.00	47.00	40.41	8.18	55.18	48.59	74.00	54.00	-5.41	AVG

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11b TX / CH High / Antenna 2	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1348.00	50.58	---	-2.89	47.69	---	74.00	54.00	-6.31	Peak
1526.00	48.53	---	-2.65	45.88	---	74.00	54.00	-8.12	Peak
1754.00	47.70	---	-0.50	47.20	---	74.00	54.00	-6.80	Peak
3210.00	42.69	---	4.25	46.94	---	74.00	54.00	-7.06	Peak
4020.00	40.85	---	5.92	46.78	---	74.00	54.00	-7.22	Peak
4920.00	39.91	---	8.28	48.18	---	74.00	54.00	-5.82	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1594.00	50.75	---	-2.01	48.74	---	74.00	54.00	-5.26	Peak
2400.00	57.27	49.67	2.61	59.88	52.28	74.00	54.00	-1.72	AVG
2586.00	53.82	40.29	3.03	56.85	43.32	74.00	54.00	-10.68	AVG
3285.00	51.67	48.72	4.31	55.98	53.03	74.00	54.00	-0.97	AVG
3945.00	41.11	---	5.71	46.82	---	74.00	54.00	-7.18	Peak
4920.00	42.14	---	8.28	50.42	---	74.00	54.00	-3.58	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11g TX / CH Low / Antenna 2	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1154.00	50.25	---	-2.89	47.37	---	74.00	54.00	-6.63	Peak
1452.00	49.72	---	-2.90	46.82	---	74.00	54.00	-7.18	Peak
1772.00	47.92	---	-0.33	47.59	---	74.00	54.00	-6.41	Peak
3210.00	50.00	40.63	4.25	54.25	44.88	74.00	54.00	-9.12	AVG
3855.00	41.58	---	5.46	47.04	---	74.00	54.00	-6.96	Peak
4905.00	39.75	---	8.24	47.99	---	74.00	54.00	-6.01	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1198.00	52.03	---	-2.89	49.14	---	74.00	54.00	-4.86	Peak
1596.00	51.02	---	-1.99	49.02	---	74.00	54.00	-4.98	Peak
2582.00	57.30	43.63	3.02	60.32	46.65	74.00	54.00	-7.35	AVG
3690.00	41.82	---	5.01	46.83	---	74.00	54.00	-7.17	Peak
4425.00	39.98	---	7.18	47.16	---	74.00	54.00	-6.84	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11g TX / CH Middle / Antenna 2	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1318.00	48.67	---	-2.89	45.78	---	74.00	54.00	-8.22	Peak
1596.00	48.87	---	-1.99	46.88	---	74.00	54.00	-7.12	Peak
1860.00	47.83	---	0.50	48.33	---	74.00	54.00	-5.67	Peak
3255.00	45.42	---	4.29	49.71	---	74.00	54.00	-4.29	Peak
3615.00	41.89	---	4.81	46.69	---	74.00	54.00	-7.31	Peak
4380.00	40.56	---	7.04	47.60	---	74.00	54.00	-6.40	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1462.00	52.90	---	-2.90	50.00	---	74.00	54.00	-4.00	Peak
1594.00	52.72	---	-2.01	50.71	---	74.00	54.00	-3.29	Peak
2544.00	57.11	43.53	2.92	60.03	46.45	74.00	54.00	-7.55	AVG
3930.00	41.37	---	5.67	47.04	---	74.00	54.00	-6.96	Peak
4860.00	42.32	---	8.15	50.48	---	74.00	54.00	-3.52	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	IEEE 802.11g TX / CH High / Antenna 2	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1460.00	50.39	---	-2.90	47.50	---	74.00	54.00	-6.50	Peak
1682.00	48.65	---	-1.18	47.46	---	74.00	54.00	-6.54	Peak
1926.00	47.78	---	1.12	48.90	---	74.00	54.00	-5.10	Peak
3285.00	50.00	42.00	4.31	54.31	46.31	74.00	54.00	-7.69	AVG
3840.00	41.39	---	5.42	46.81	---	74.00	54.00	-7.19	Peak
4575.00	39.61	---	7.56	47.18	---	74.00	54.00	-6.82	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1598.00	51.75	---	-1.97	49.78	---	74.00	54.00	-4.22	Peak
2364.00	56.63	44.22	2.54	59.17	46.76	74.00	54.00	-7.24	AVG
2578.00	56.68	42.78	3.01	59.69	45.79	74.00	54.00	-8.21	AVG
4005.00	41.22	---	5.88	47.09	---	74.00	54.00	-6.91	Peak
4755.00	40.62	---	7.94	48.55	---	74.00	54.00	-5.45	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11b TX / CH Low / Antenna 3	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1188.00	49.21	---	-2.89	46.32	---	74.00	54.00	-7.68	Peak
1412.00	48.94	---	-2.90	46.04	---	74.00	54.00	-7.96	Peak
1838.00	48.08	---	0.29	48.37	---	74.00	54.00	-5.63	Peak
3210.00	43.52	---	4.25	47.77	---	74.00	54.00	-6.23	Peak
4275.00	40.55	---	6.71	47.26	---	74.00	54.00	-6.74	Peak
5085.00	39.37	---	8.59	47.95	---	74.00	54.00	-6.05	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1198.00	51.13	---	-2.89	48.24	---	74.00	54.00	-5.76	Peak
1594.00	51.86	---	-2.01	49.85	---	74.00	54.00	-4.15	Peak
2600.00	56.12	46.49	3.06	59.18	49.55	74.00	54.00	-4.45	AVG
3210.00	44.83	---	4.25	49.08	---	74.00	54.00	-4.92	Peak
3960.00	40.56	---	5.75	46.31	---	74.00	54.00	-7.69	Peak
4830.00	40.30	---	8.09	48.39	---	74.00	54.00	-5.61	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11b TX / CH Middle / Antenna 3	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1104.00	49.39	---	-2.88	46.51	---	74.00	54.00	-7.49	Peak
1460.00	50.15	---	-2.90	47.25	---	74.00	54.00	-6.75	Peak
1916.00	48.55	---	1.03	49.58	---	74.00	54.00	-4.42	Peak
3255.00	42.20	---	4.29	46.49	---	74.00	54.00	-7.51	Peak
4215.00	40.22	---	6.53	46.75	---	74.00	54.00	-7.25	Peak
4875.00	41.45	---	8.18	49.63	---	74.00	54.00	-4.37	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1464.00	51.05	---	-2.90	48.15	---	74.00	54.00	-5.85	Peak
2320.00	55.06	46.98	2.45	57.51	49.43	74.00	54.00	-4.57	AVG
2568.00	58.52	45.04	2.98	61.50	48.02	74.00	54.00	-5.98	AVG
3255.00	44.82	---	4.29	49.10	---	74.00	54.00	-4.90	Peak
3840.00	40.97	---	5.42	46.39	---	74.00	54.00	-7.61	AVG
4875.00	45.82	41.15	8.18	54.00	49.33	74.00	54.00	-4.67	AVG

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11b TX / CH High / Antenna 3	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1298.00	48.67	---	-2.89	45.78	---	74.00	54.00	-8.22	Peak
1632.00	48.05	---	-1.65	46.39	---	74.00	54.00	-7.61	Peak
1902.00	47.80	---	0.89	48.69	---	74.00	54.00	-5.31	Peak
3240.00	42.03	---	4.28	46.31	---	74.00	54.00	-7.69	Peak
4530.00	39.60	---	7.47	47.07	---	74.00	54.00	-6.93	Peak
5445.00	39.40	---	9.21	48.62	---	74.00	54.00	-5.38	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1596.00	52.70	---	-1.99	50.70	---	74.00	54.00	-3.30	Peak
2320.00	52.00	45.00	2.45	54.45	47.45	74.00	54.00	-6.55	AVG
2400.00	55.00	47.00	2.61	57.61	49.61	74.00	54.00	-4.39	AVG
3285.00	42.07	---	4.31	46.39	---	74.00	54.00	-7.61	Peak
3900.00	40.85	---	5.59	46.43	---	74.00	54.00	-7.57	Peak
4905.00	40.25	---	8.24	48.50	---	74.00	54.00	-5.50	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11g TX / CH Low / Antenna 3	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1084.00	50.08	---	-2.88	47.19	---	74.00	54.00	-6.81	Peak
1570.00	48.25	---	-2.24	46.01	---	74.00	54.00	-7.99	Peak
2484.00	45.54	---	2.78	48.32	---	74.00	54.00	-5.68	Peak
3210.00	44.85	---	4.25	49.10	---	74.00	54.00	-4.90	Peak
3885.00	41.49	---	5.54	47.04	---	74.00	54.00	-6.96	Peak
4950.00	40.04	---	8.34	48.37	---	74.00	54.00	-5.63	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1594.00	50.27	---	-2.01	48.26	---	74.00	54.00	-5.74	Peak
2320.00	55.76	47.86	2.45	58.21	50.31	74.00	54.00	-3.69	AVG
2484.00	54.25	42.55	2.78	57.03	45.33	74.00	54.00	-8.67	AVG
3210.00	52.19	47.66	4.25	56.44	51.91	74.00	54.00	-2.09	AVG
4050.00	41.47	---	6.02	47.49	---	74.00	54.00	-6.51	Peak
4815.00	39.75	---	8.06	47.80	---	74.00	54.00	-6.20	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11g TX / CH Middle / Antenna 3	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1596.00	48.96	---	-1.99	46.96	---	74.00	54.00	-7.04	Peak
2390.00	45.53	---	2.59	48.12	---	74.00	54.00	-5.88	Peak
2484.00	45.67	---	2.78	48.44	---	74.00	54.00	-5.56	Peak
3255.00	43.42	---	4.29	47.70	---	74.00	54.00	-6.30	Peak
4860.00	41.34	---	8.15	49.49	---	74.00	54.00	-4.51	Peak
6450.00	38.86	---	12.12	50.98	---	74.00	54.00	-3.02	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1594.00	51.53	---	-2.01	49.52	---	74.00	54.00	-4.48	Peak
2390.00	66.41	48.87	2.59	69.00	51.46	74.00	54.00	-2.54	AVG
2484.00	56.37	45.00	2.78	59.15	47.78	74.00	54.00	-6.22	AVG
3255.00	45.87	---	4.29	50.16	---	74.00	54.00	-3.84	Peak
4875.00	40.40	---	8.18	48.58	---	74.00	54.00	-5.42	Peak
5460.00	40.25	---	9.24	49.49	---	74.00	54.00	-4.51	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/04
Test Mode	IEEE 802.11g TX / CH High / Antenna 3	Temp. & Humidity	30°C, 50%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1176.00	49.37	---	-2.89	46.48	---	74.00	54.00	-7.52	Peak
1460.00	50.98	---	-2.90	48.08	---	74.00	54.00	-5.92	Peak
1658.00	48.82	---	-1.41	47.41	---	74.00	54.00	-6.59	Peak
3195.00	42.31	---	4.24	46.55	---	74.00	54.00	-7.45	Peak
4950.00	39.02	---	8.34	47.36	---	74.00	54.00	-6.64	Peak
5760.00	38.67	---	10.08	48.75	---	74.00	54.00	-5.25	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1462.00	52.18	---	-2.90	49.29	---	74.00	54.00	-4.71	Peak
2390.00	56.79	49.61	2.59	59.38	52.20	74.00	54.00	-1.80	AVG
2484.00	70.13	50.54	2.77	72.90	53.31	74.00	54.00	-0.69	AVG
3285.00	45.26	---	4.31	49.58	---	74.00	54.00	-4.42	Peak
4245.00	39.80	---	6.62	46.42	---	74.00	54.00	-7.58	Peak
5505.00	39.26	---	9.32	48.58	---	74.00	54.00	-5.42	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

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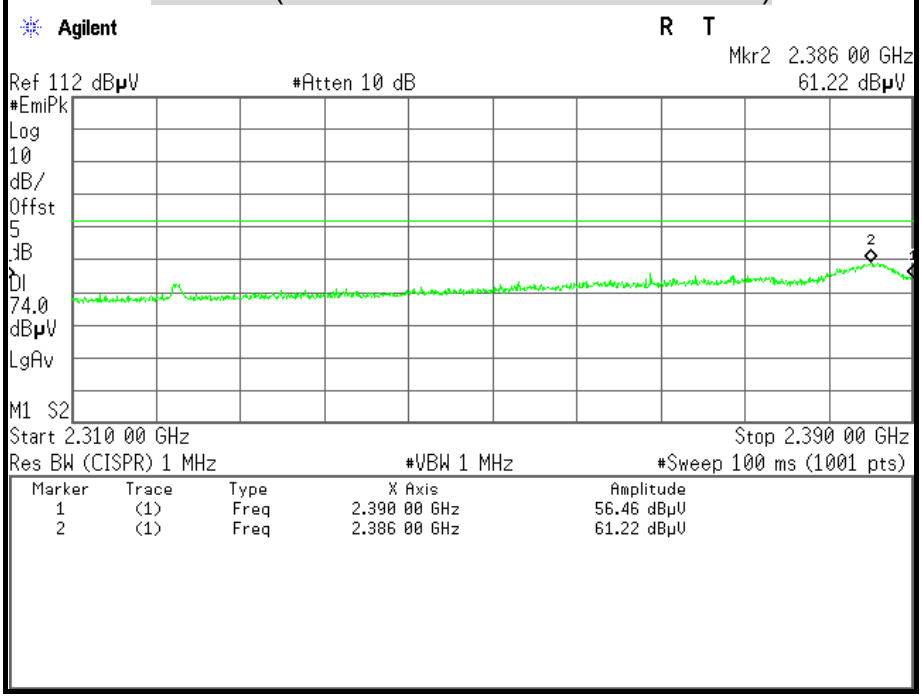
Restricted Band Edges

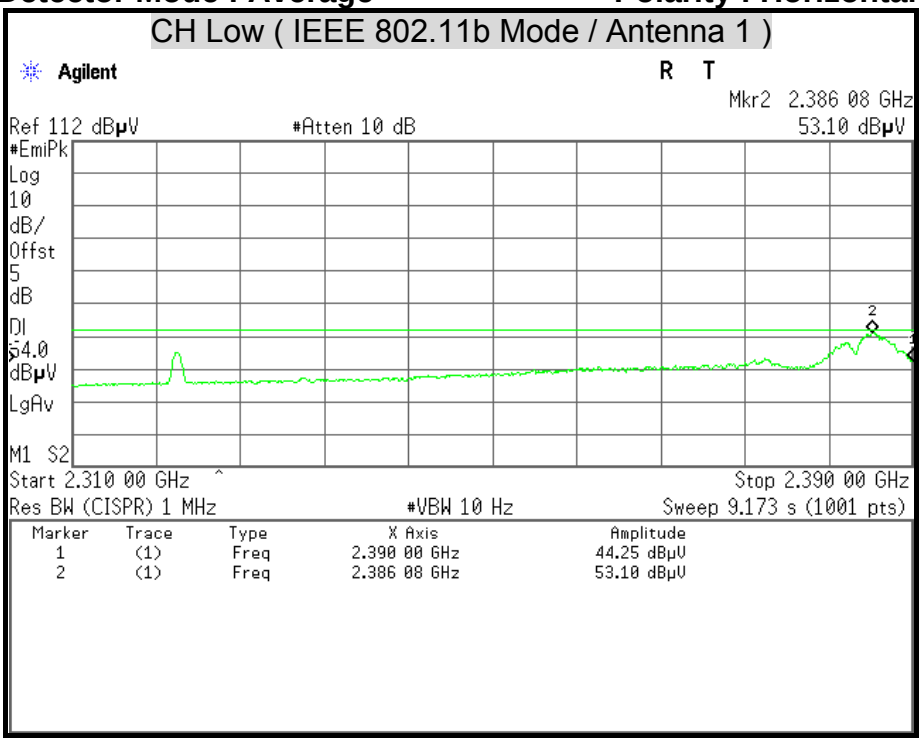
Detector Mode : Peak **Polarity : Horizontal**

CH Low (IEEE 802.11b Mode / Antenna 1)



Detector Mode : Average **Polarity : Horizontal**

CH Low (IEEE 802.11b Mode / Antenna 1)



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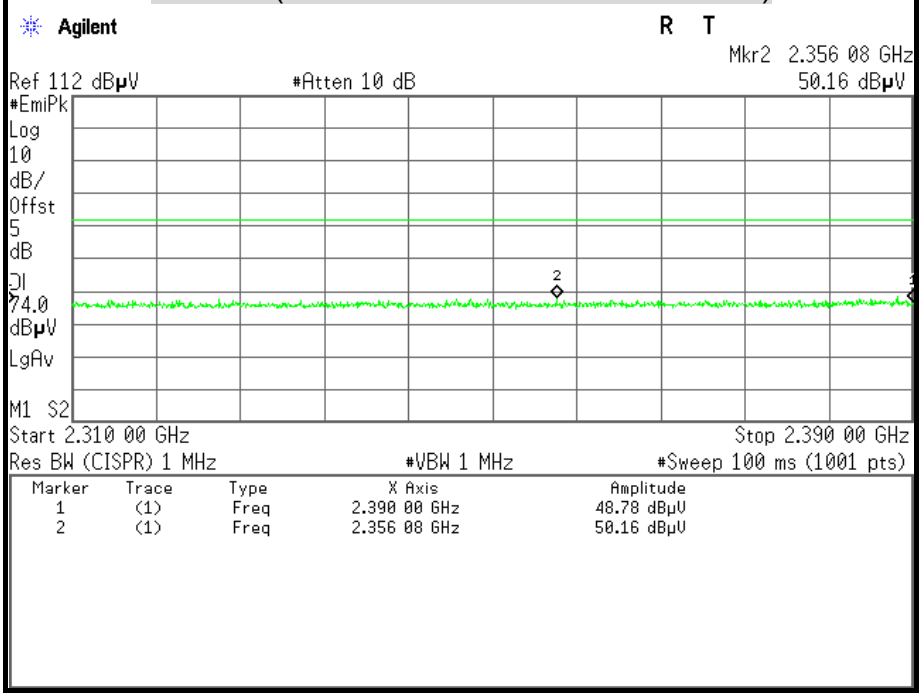
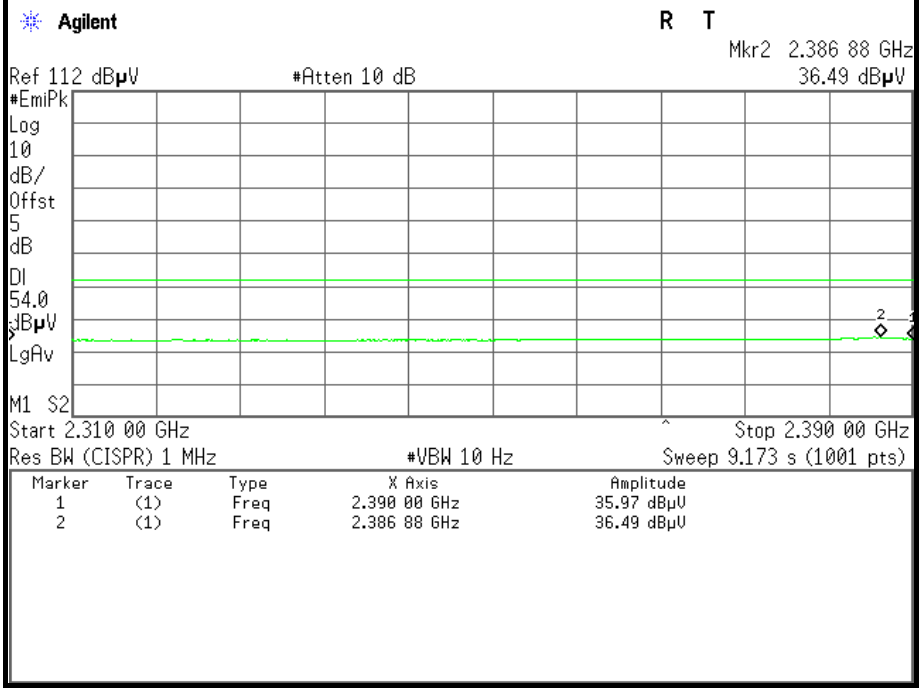
Detector Mode : Peak **Polarity : Vertical**

CH Low (IEEE 802.11b Mode / Antenna 1)



Detector Mode : Average **Polarity : Vertical**

CH Low (IEEE 802.11b Mode / Antenna 1)



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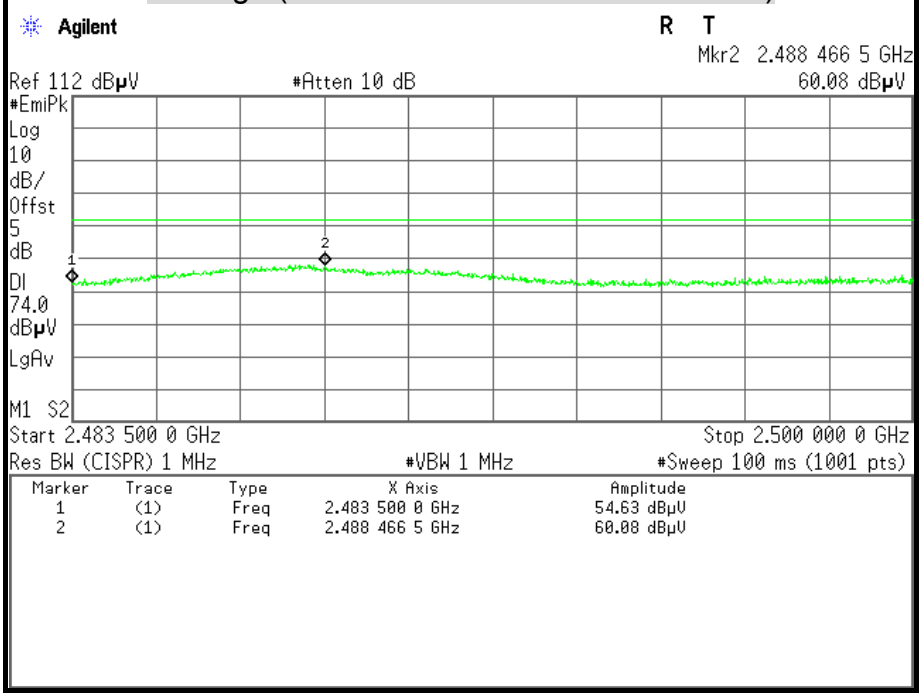
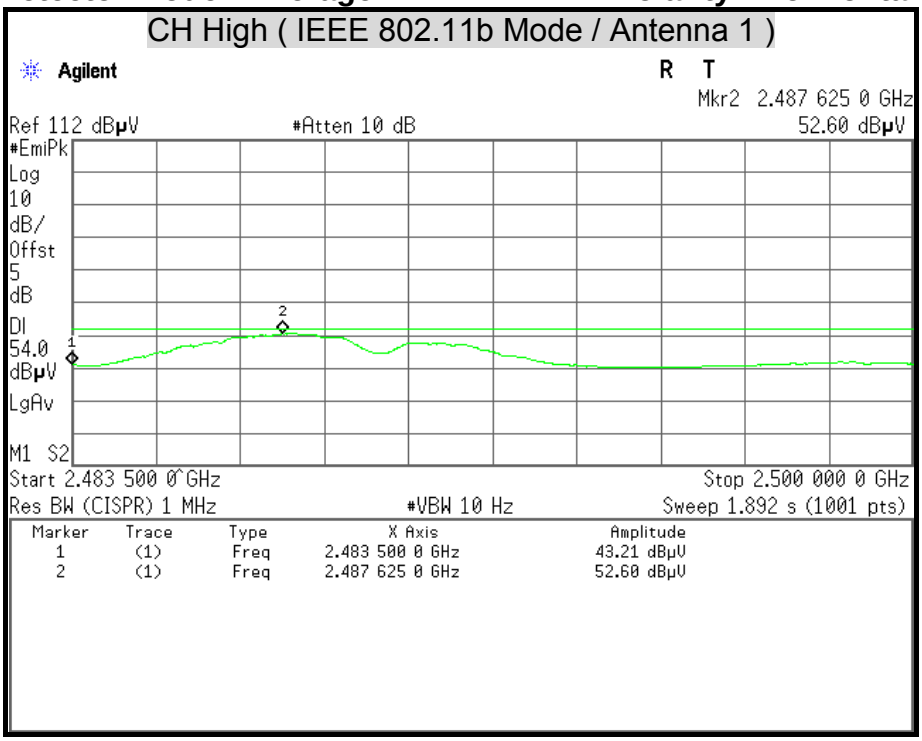
Detector Mode : Peak **Polarity : Horizontal**

CH High (IEEE 802.11b Mode / Antenna 1)



Detector Mode : Average **Polarity : Horizontal**

CH High (IEEE 802.11b Mode / Antenna 1)



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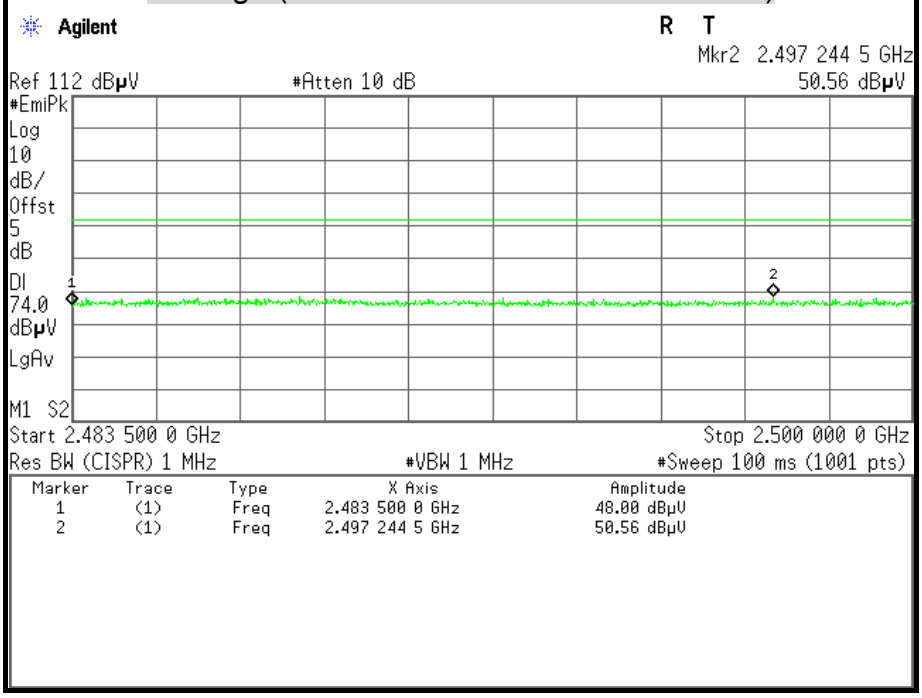
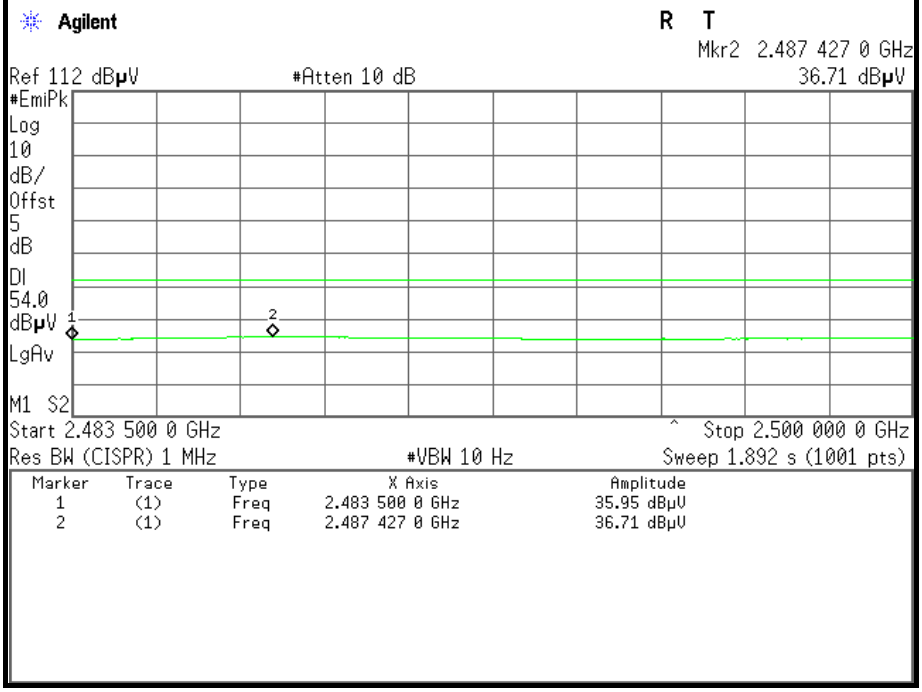
Detector Mode : Peak **Polarity : Vertical**

CH High (IEEE 802.11b Mode / Antenna 1)



Detector Mode : Average **Polarity : Vertical**

CH High (IEEE 802.11b Mode / Antenna 1)



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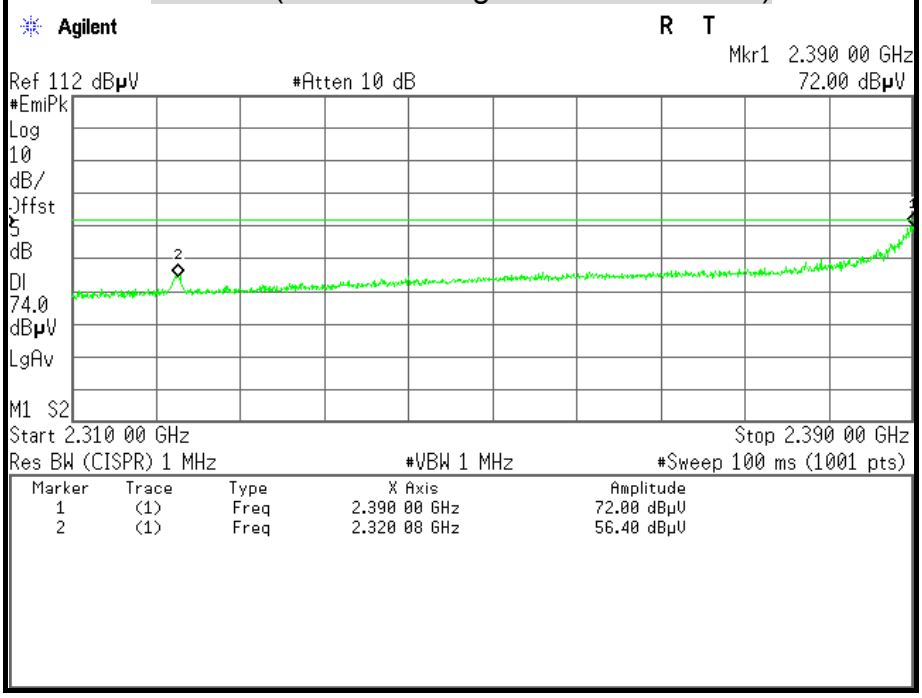
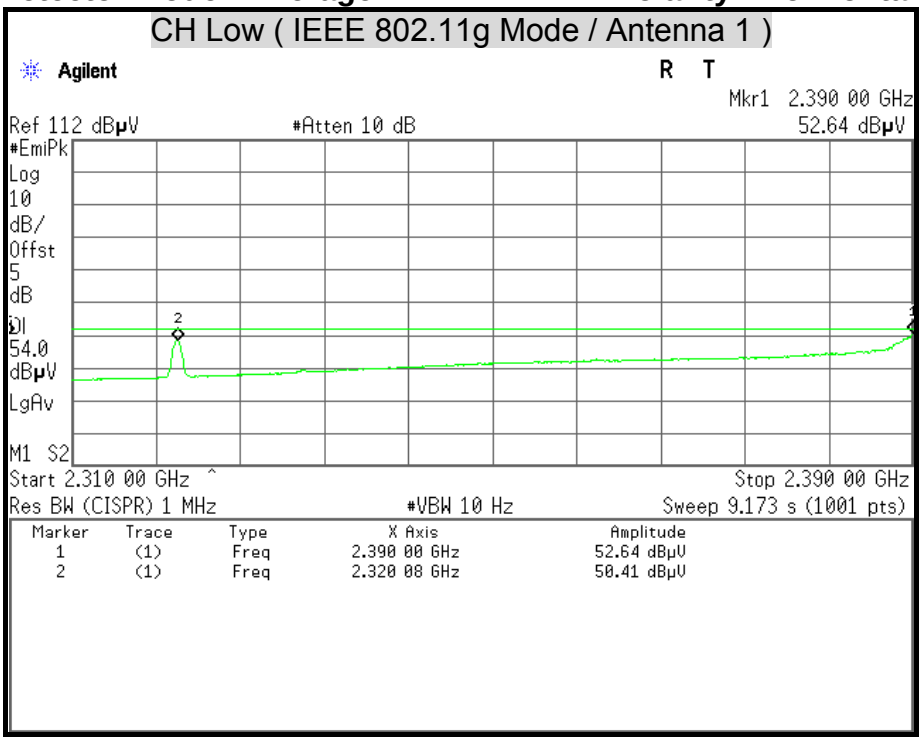
Detector Mode : Peak **Polarity : Horizontal**

CH Low (IEEE 802.11g Mode / Antenna 1)



Detector Mode : Average **Polarity : Horizontal**

CH Low (IEEE 802.11g Mode / Antenna 1)



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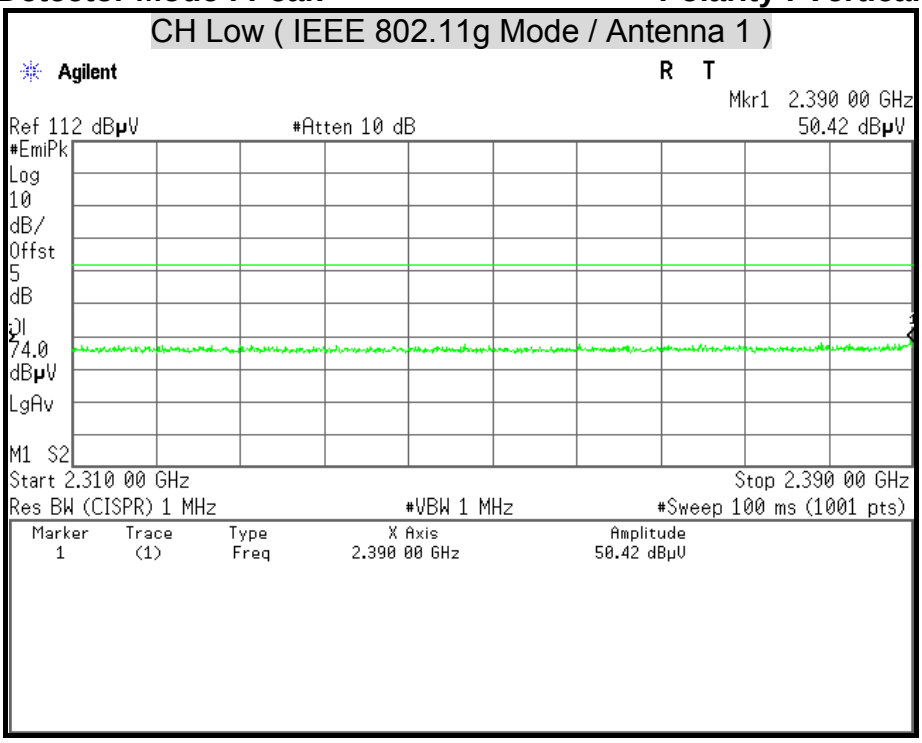
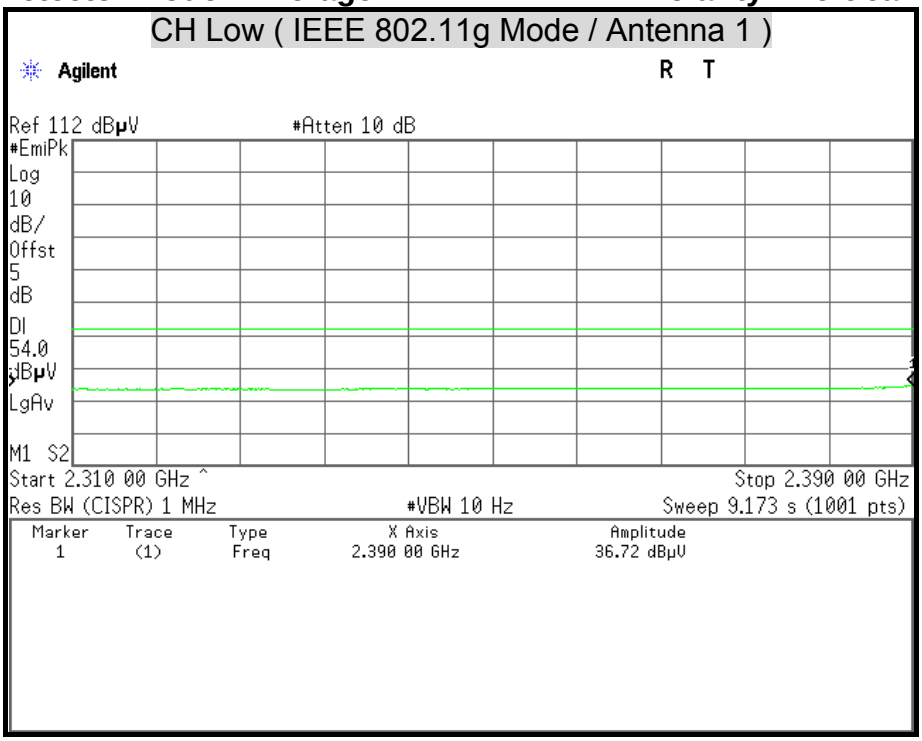
Detector Mode : Peak **Polarity : Vertical**

CH Low (IEEE 802.11g Mode / Antenna 1)



Detector Mode : Average **Polarity : Vertical**

CH Low (IEEE 802.11g Mode / Antenna 1)



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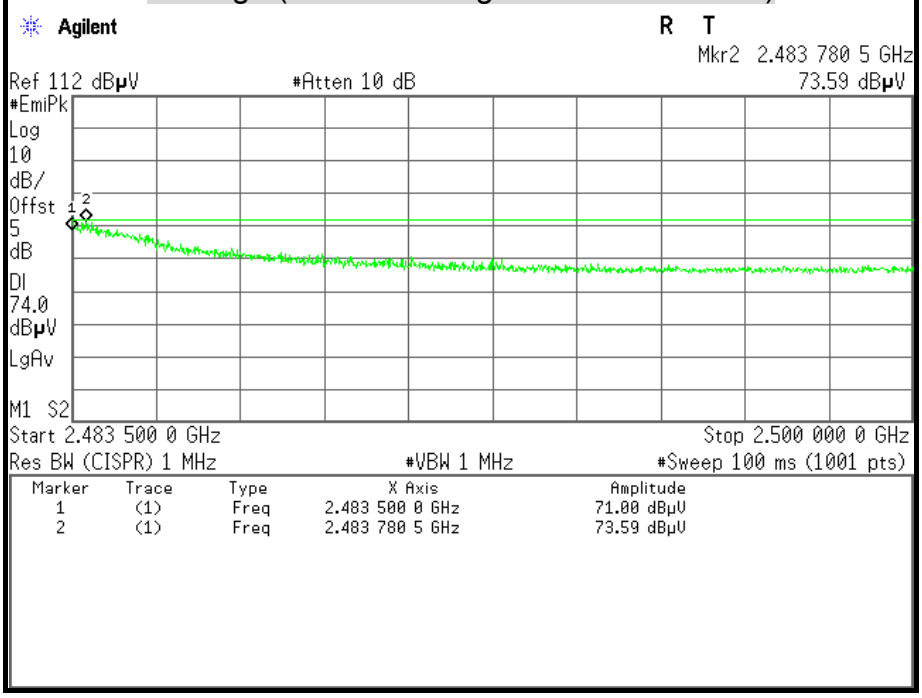
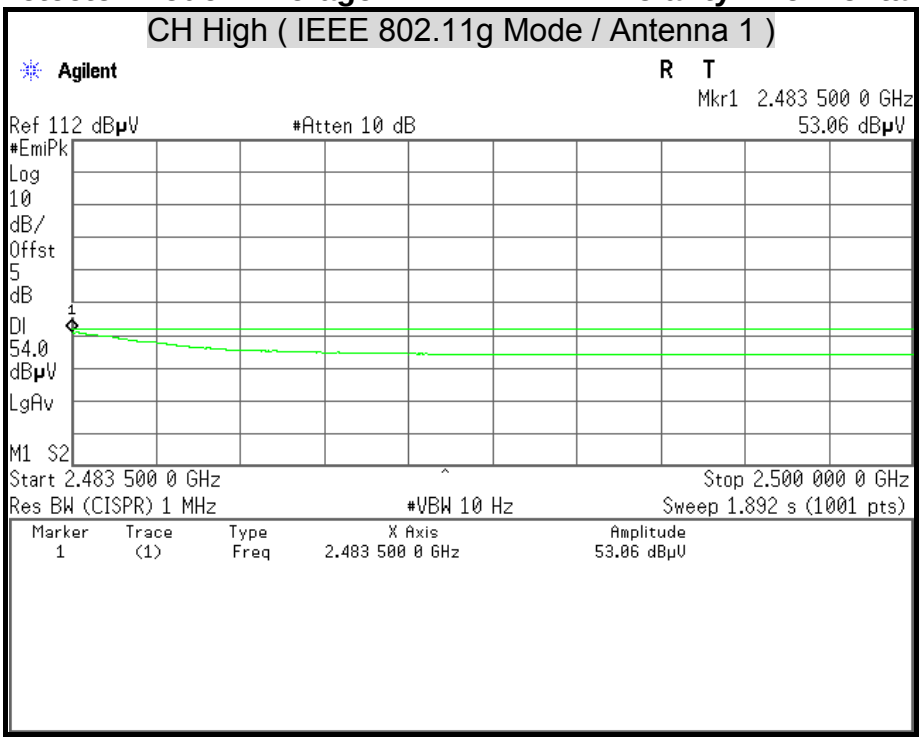
Detector Mode : Peak **Polarity : Horizontal**

CH High (IEEE 802.11g Mode / Antenna 1)



Detector Mode : Average **Polarity : Horizontal**

CH High (IEEE 802.11g Mode / Antenna 1)



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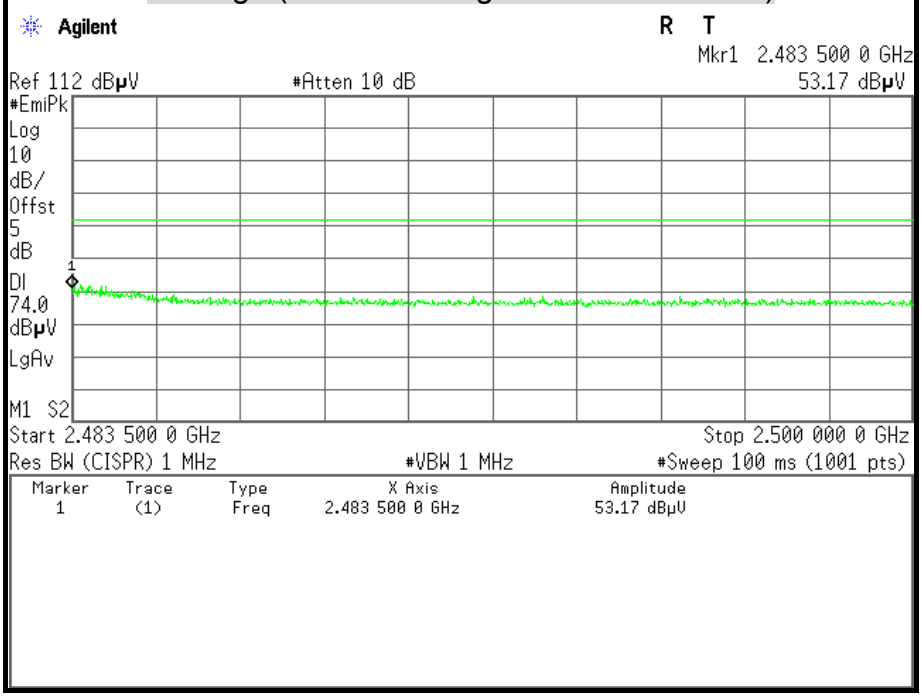
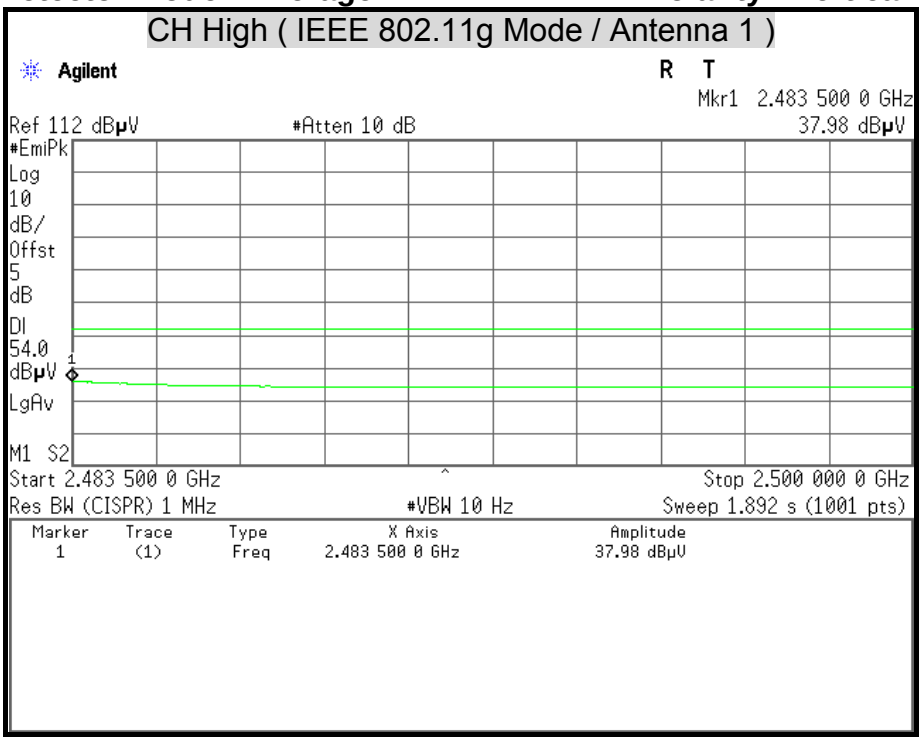
Detector Mode : Peak **Polarity : Vertical**

CH High (IEEE 802.11g Mode / Antenna 1)



Detector Mode : Average **Polarity : Vertical**

CH High (IEEE 802.11g Mode / Antenna 1)



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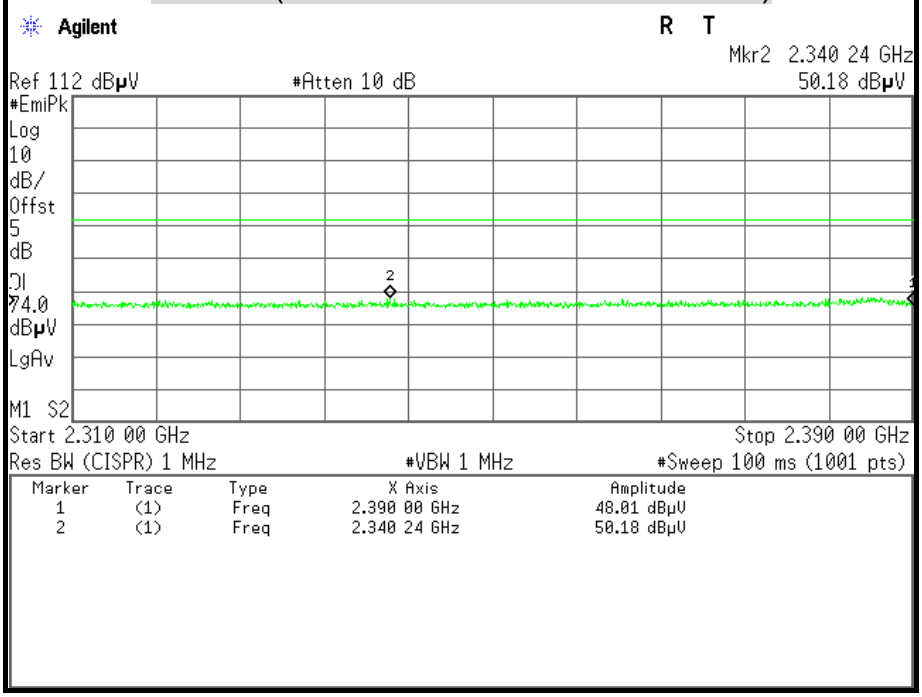
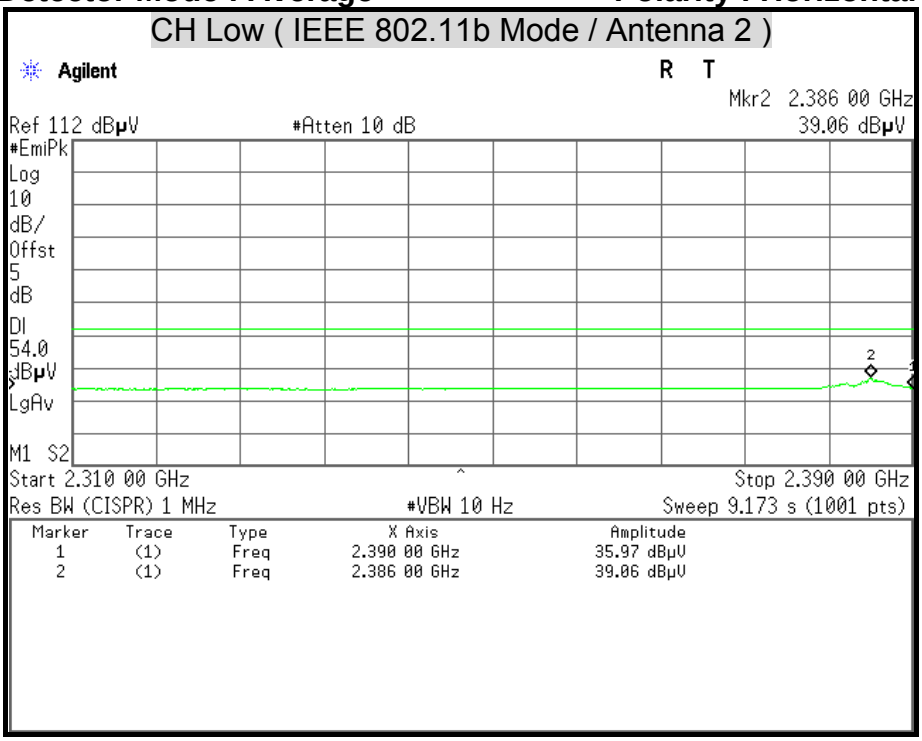
Detector Mode : Peak **Polarity : Horizontal**

CH Low (IEEE 802.11b Mode / Antenna 2)



Detector Mode : Average **Polarity : Horizontal**

CH Low (IEEE 802.11b Mode / Antenna 2)



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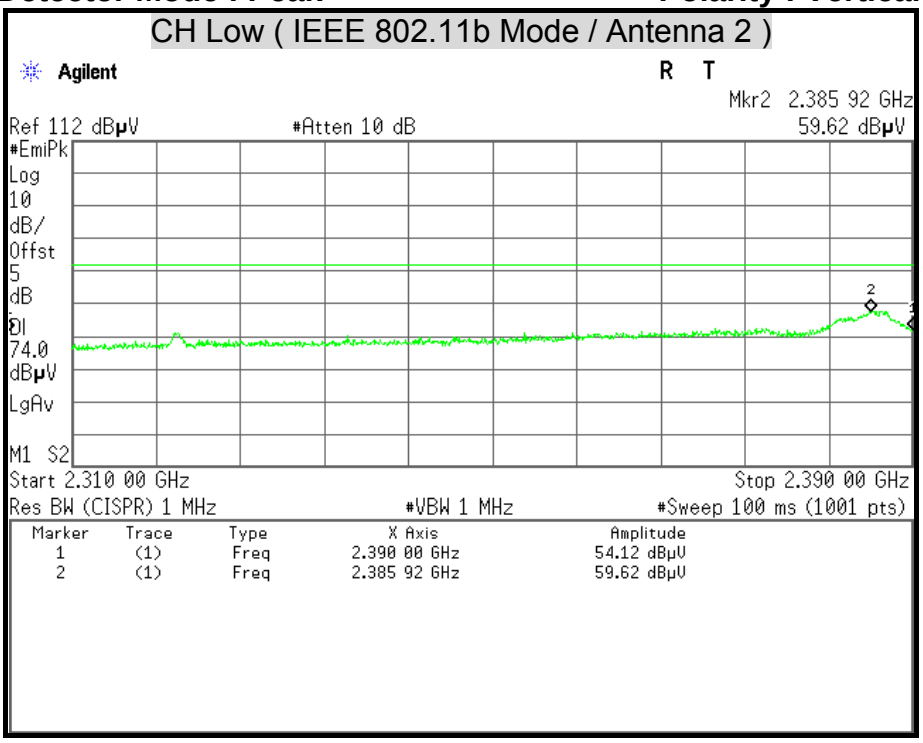
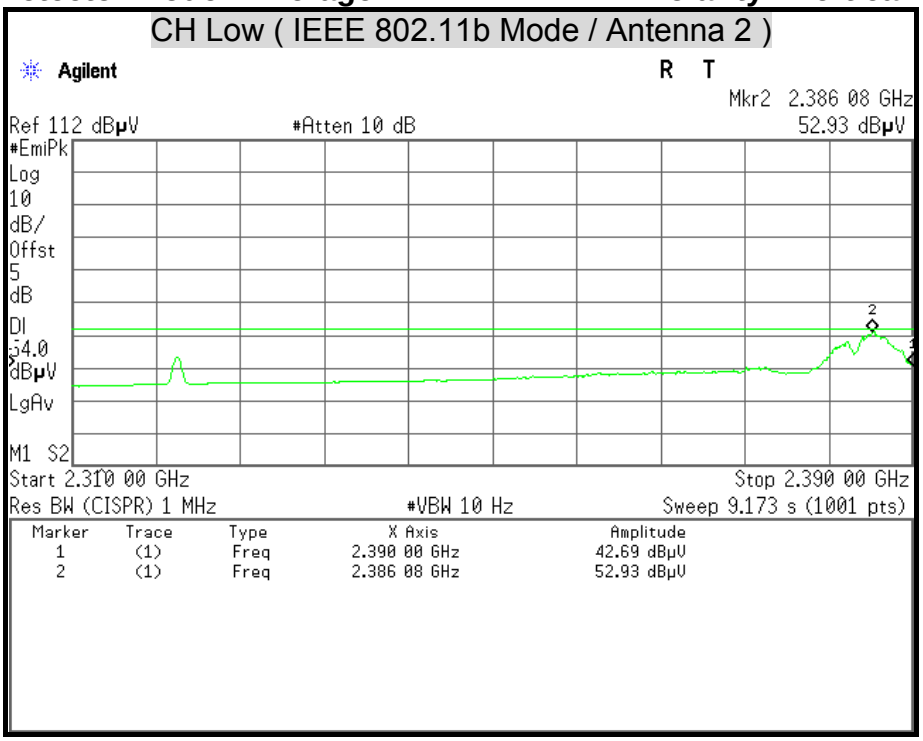
Detector Mode : Peak **Polarity : Vertical**

CH Low (IEEE 802.11b Mode / Antenna 2)



Detector Mode : Average **Polarity : Vertical**

CH Low (IEEE 802.11b Mode / Antenna 2)



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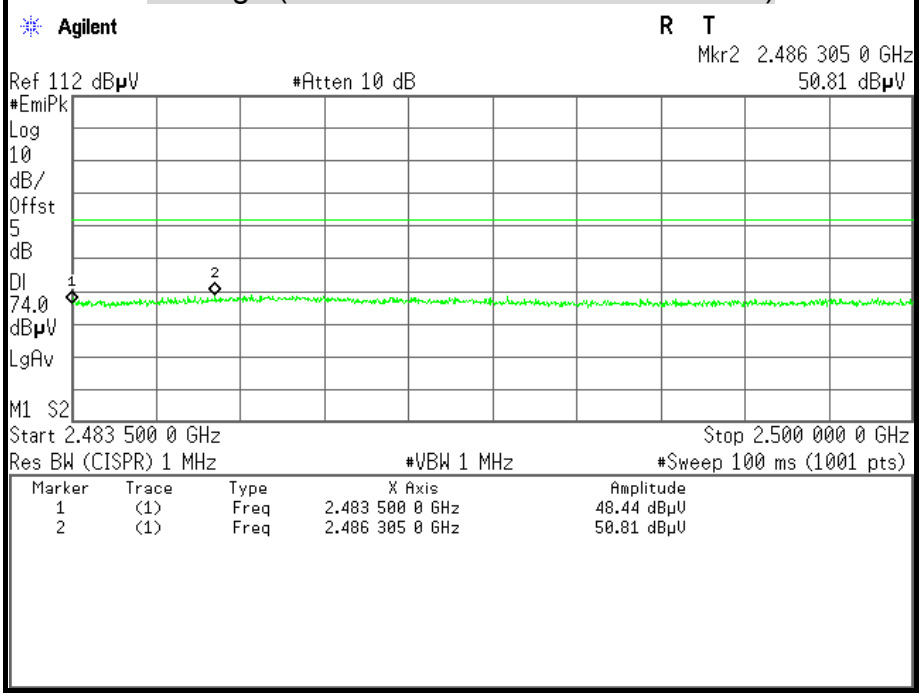
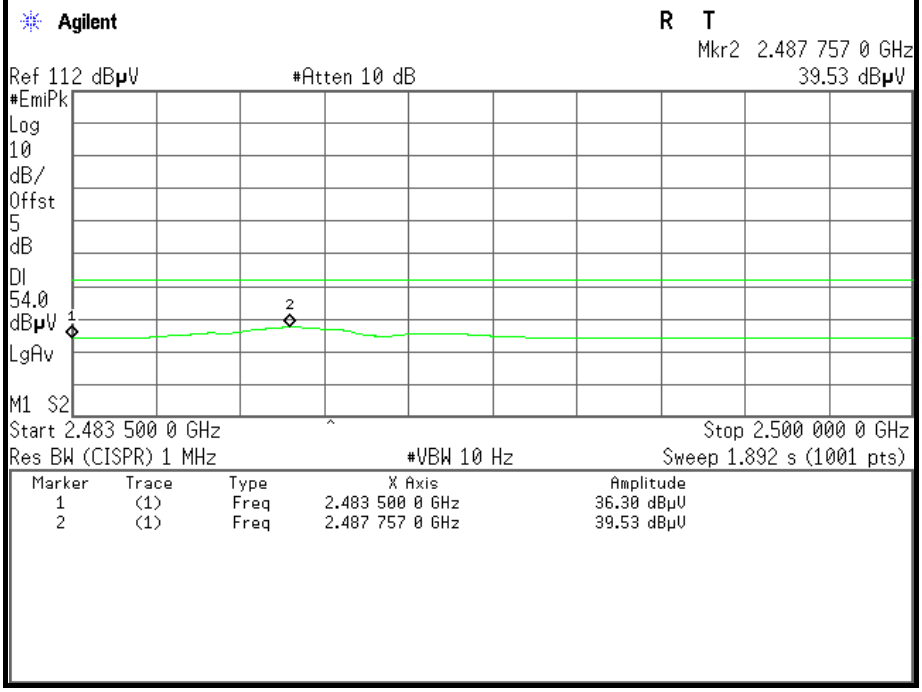
Detector Mode : Peak **Polarity : Horizontal**

CH High (IEEE 802.11b Mode / Antenna 2)



Detector Mode : Average **Polarity : Horizontal**

CH High (IEEE 802.11b Mode / Antenna 2)



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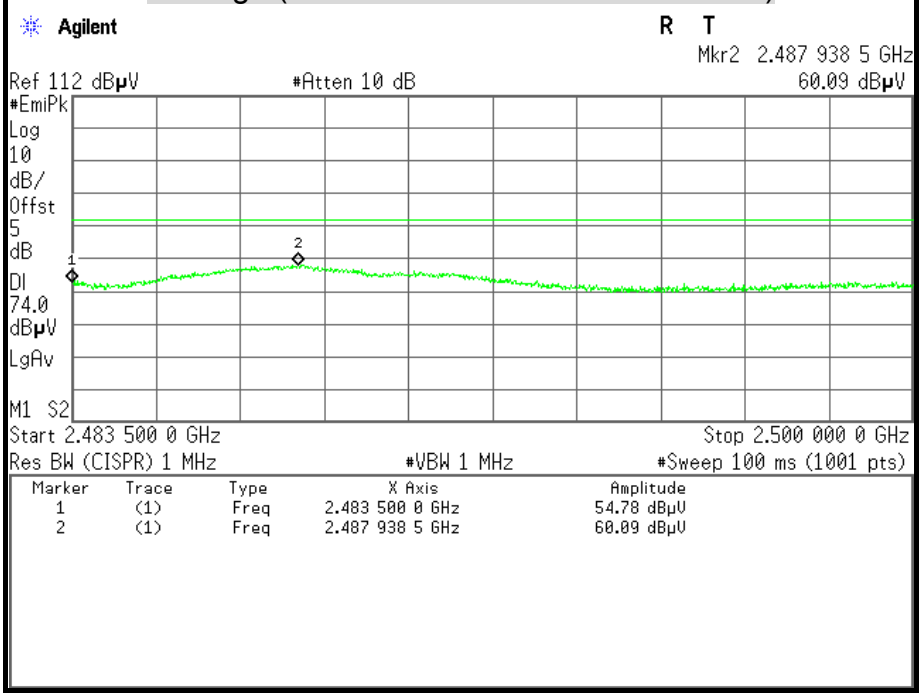
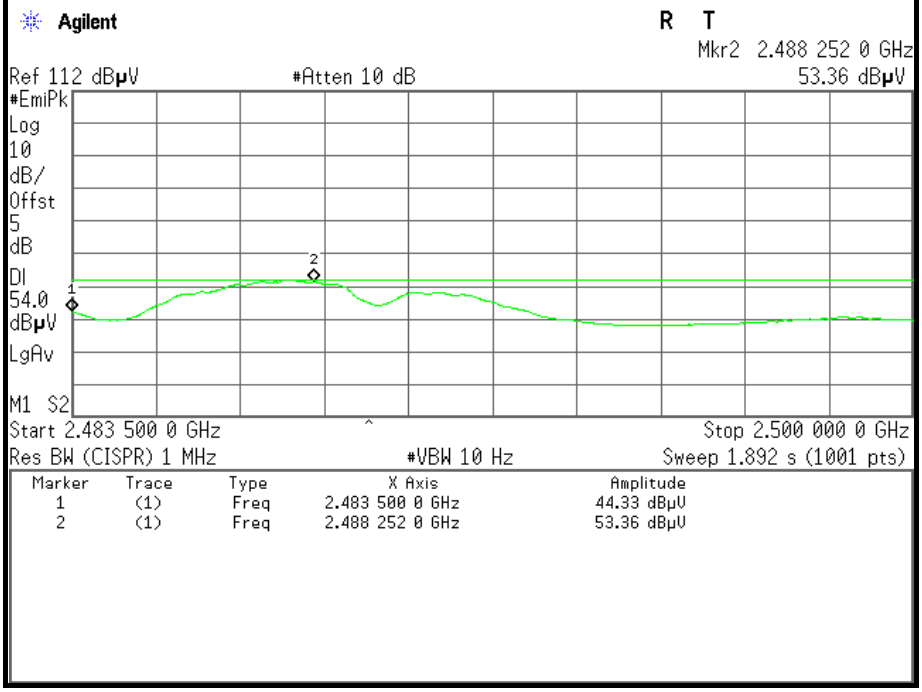
Detector Mode : Peak **Polarity : Vertical**

CH High (IEEE 802.11b Mode / Antenna 2)



Detector Mode : Average **Polarity : Vertical**

CH High (IEEE 802.11b Mode / Antenna 2)



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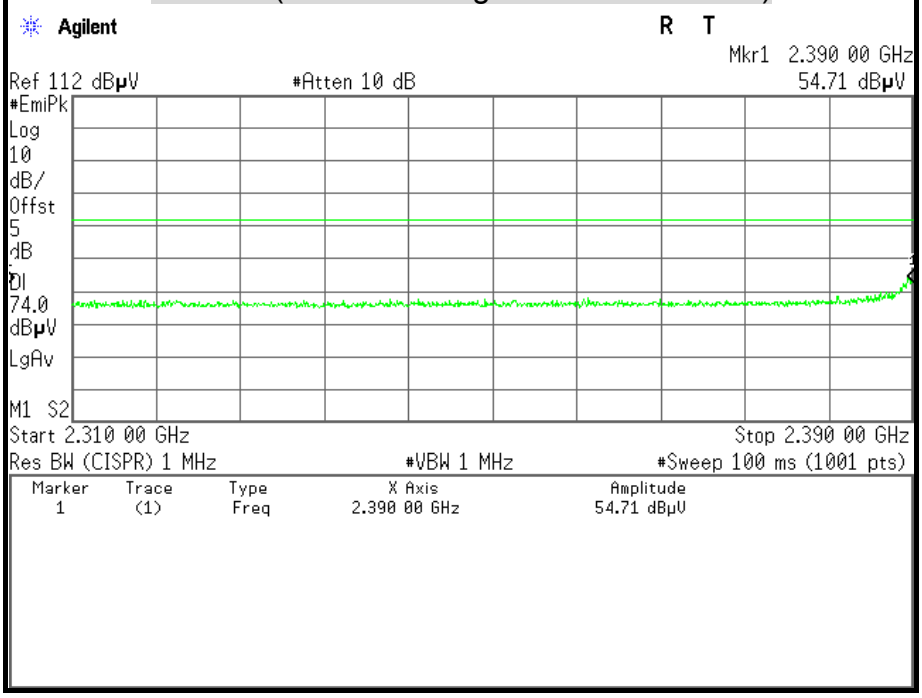
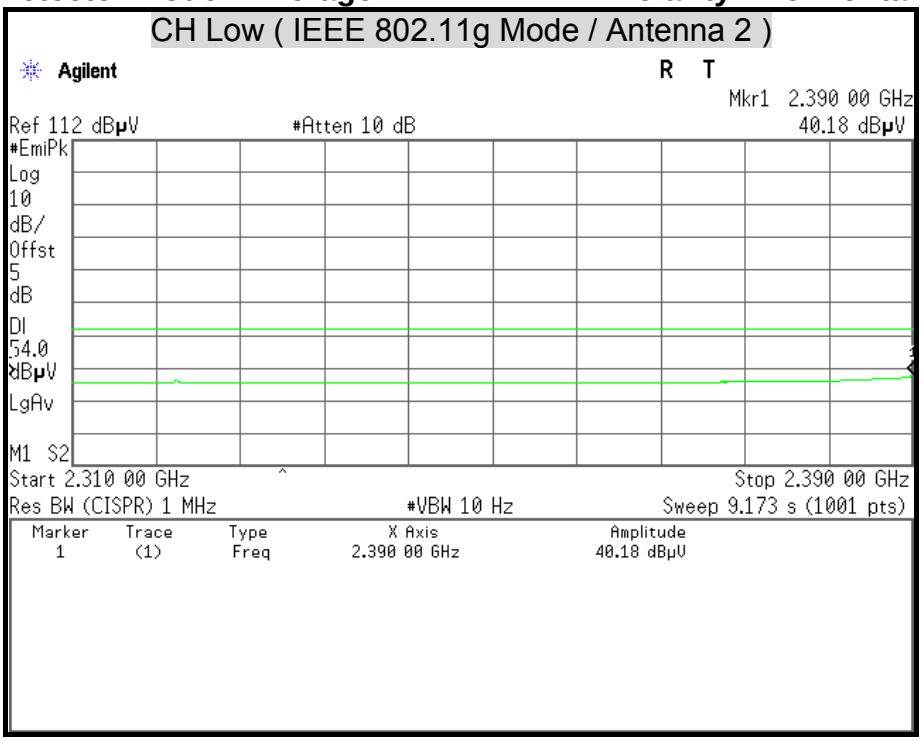
Detector Mode : Peak **Polarity : Horizontal**

CH Low (IEEE 802.11g Mode / Antenna 2)



Detector Mode : Average **Polarity : Horizontal**

CH Low (IEEE 802.11g Mode / Antenna 2)



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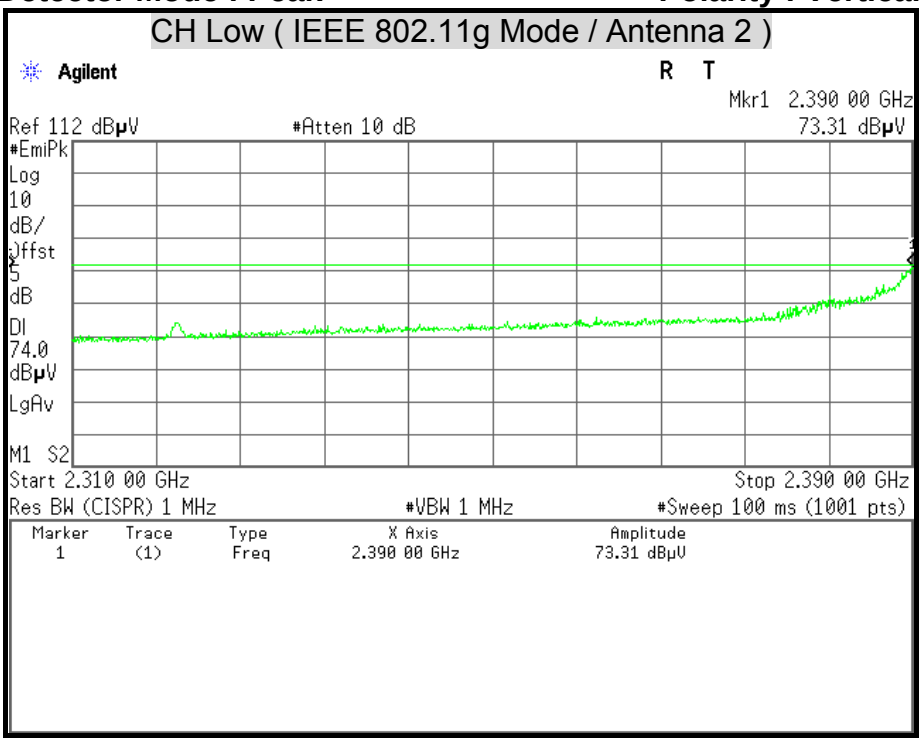
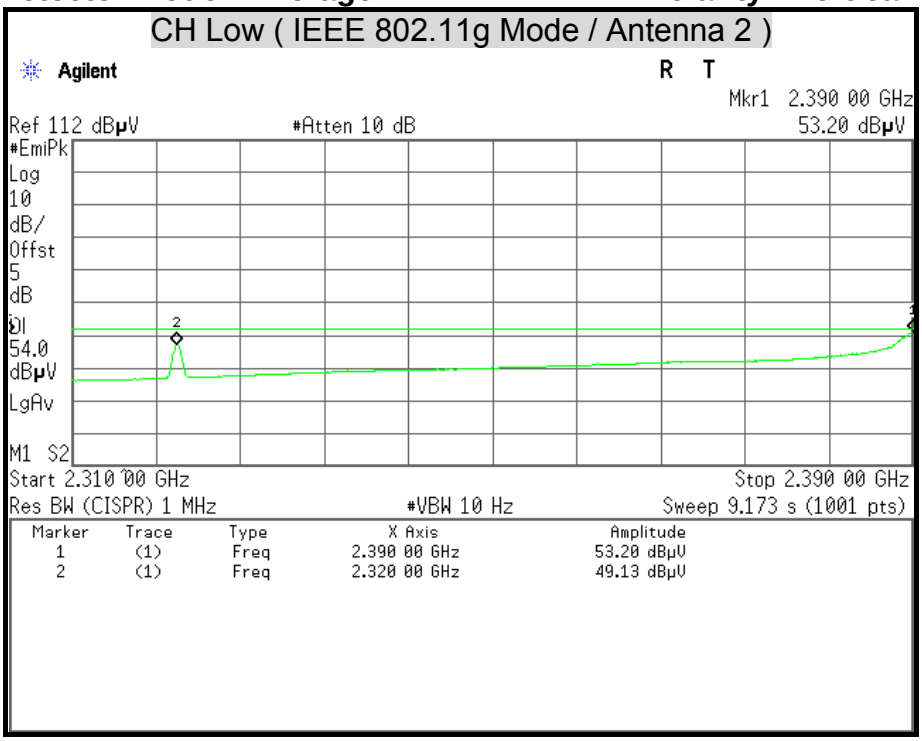
Detector Mode : Peak **Polarity : Vertical**



Detector Mode : Average **Polarity : Vertical**



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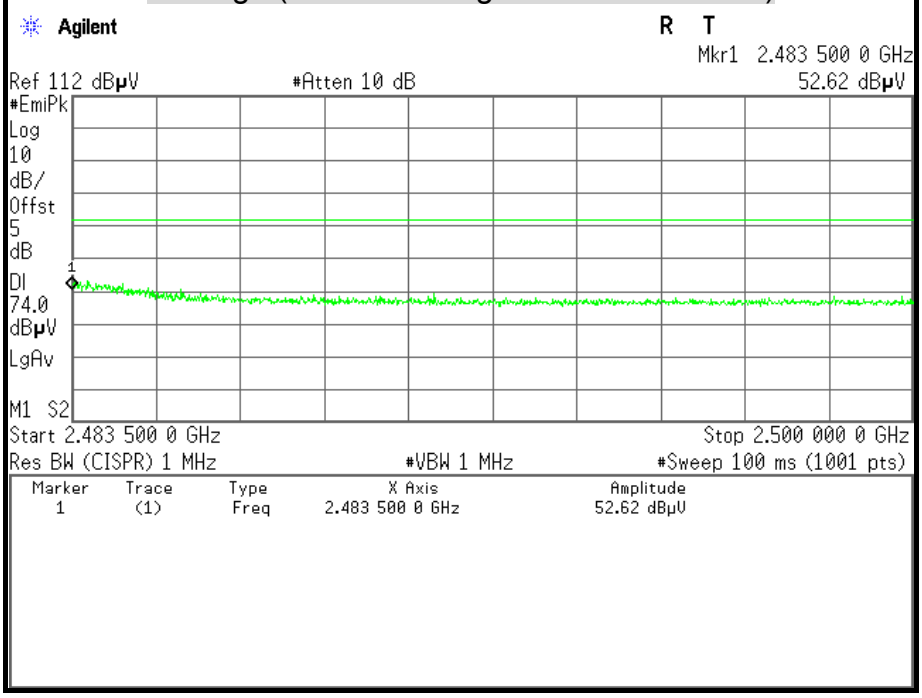
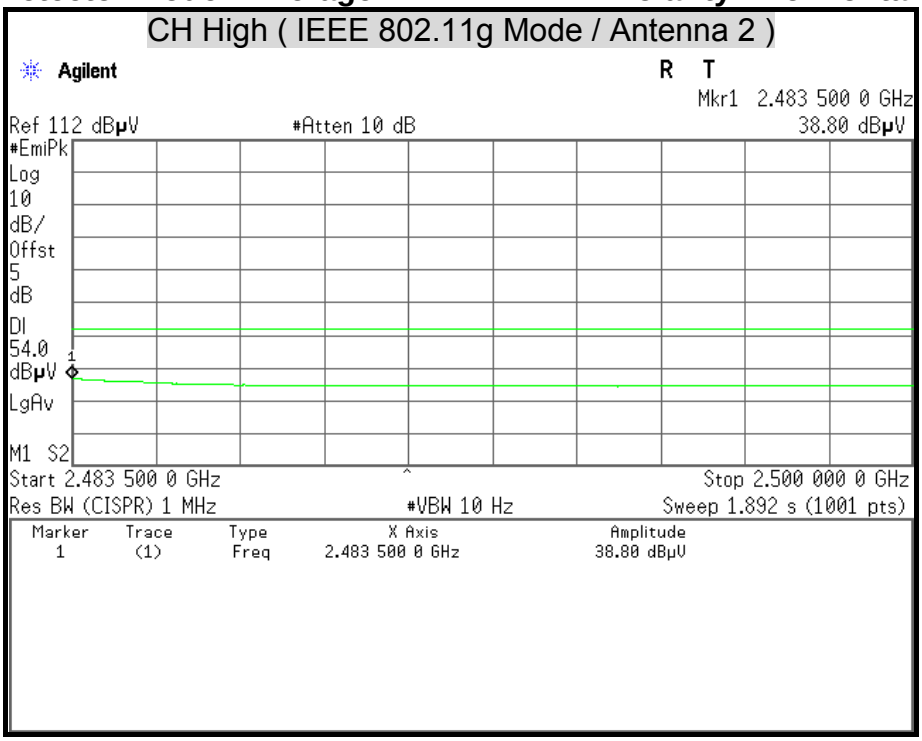
Detector Mode : Peak **Polarity : Horizontal**

CH High (IEEE 802.11g Mode / Antenna 2)



Detector Mode : Average **Polarity : Horizontal**

CH High (IEEE 802.11g Mode / Antenna 2)



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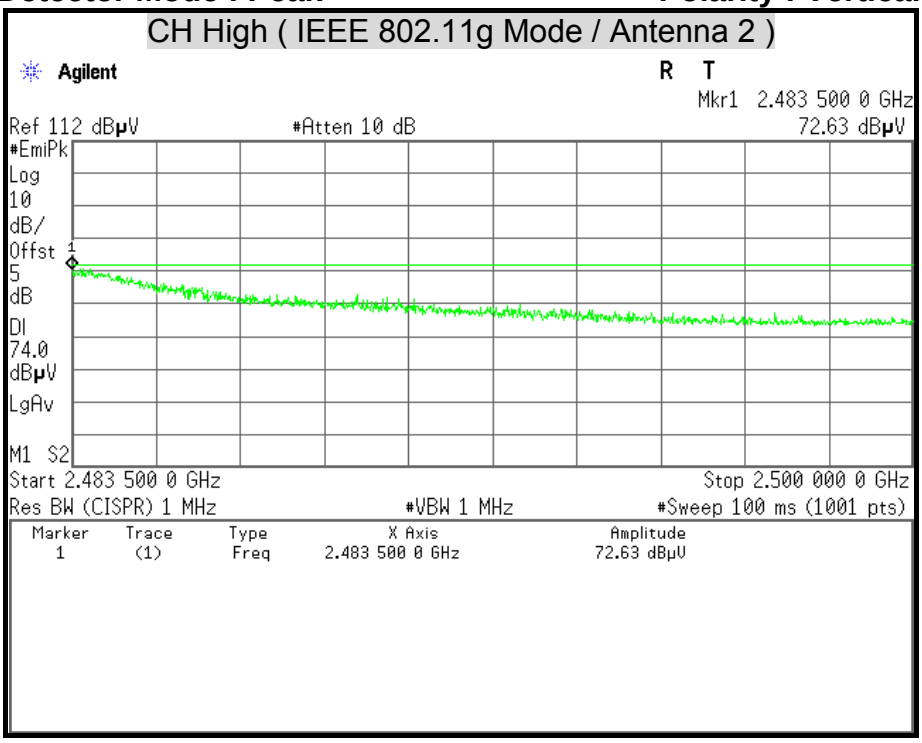
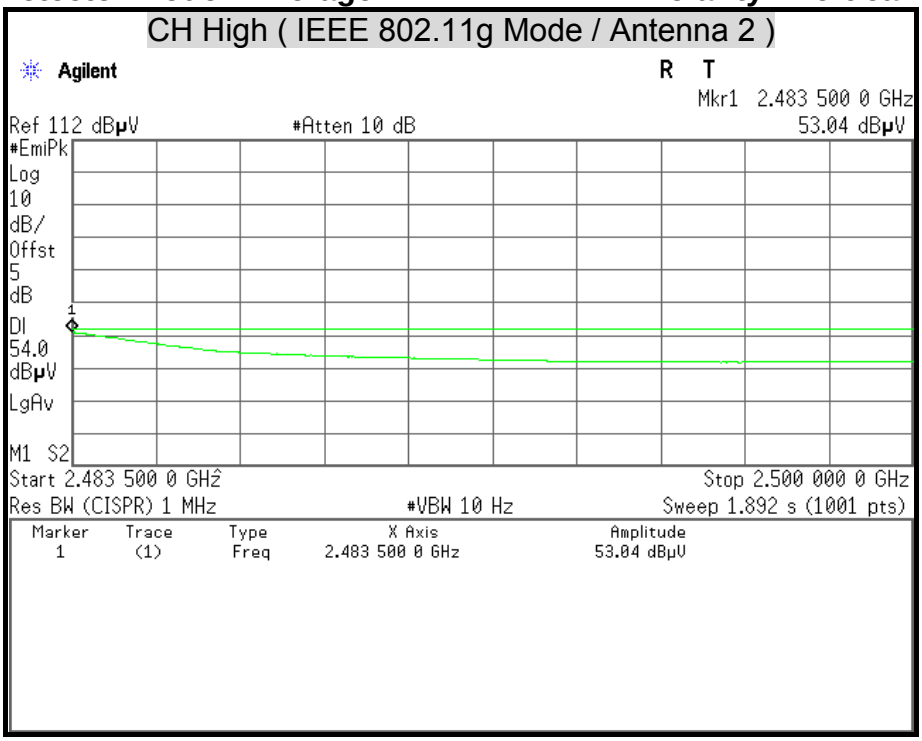
Detector Mode : Peak **Polarity : Vertical**

CH High (IEEE 802.11g Mode / Antenna 2)



Detector Mode : Average **Polarity : Vertical**

CH High (IEEE 802.11g Mode / Antenna 2)



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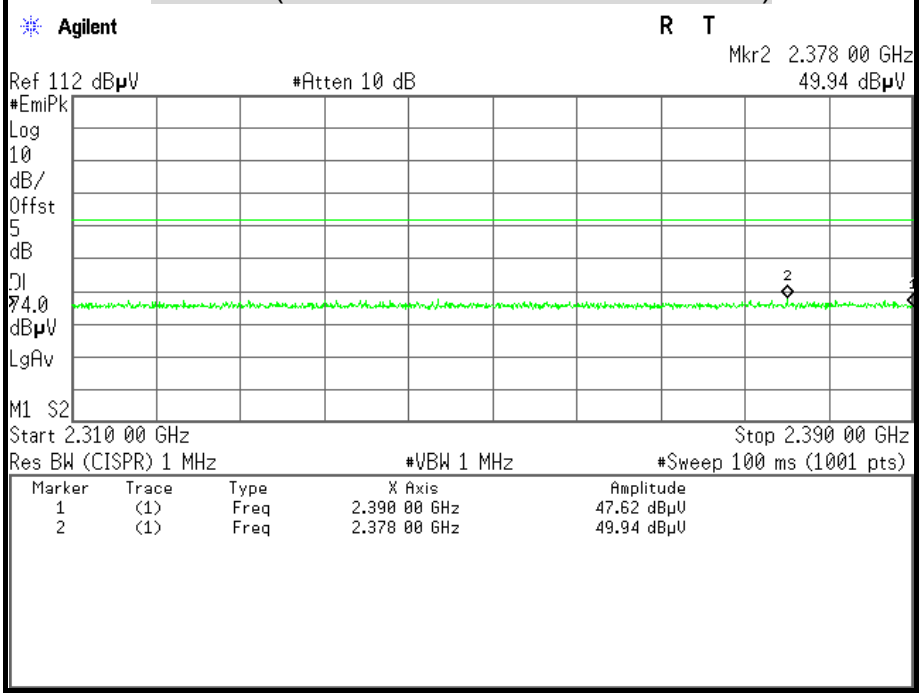
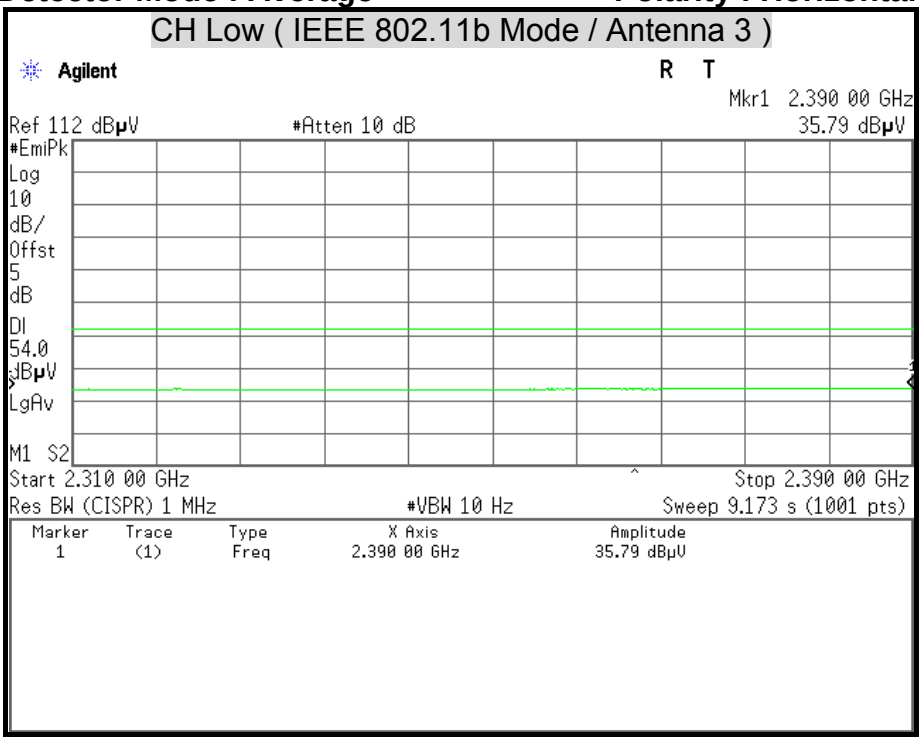
Detector Mode : Peak **Polarity : Horizontal**

CH Low (IEEE 802.11b Mode / Antenna 3)



Detector Mode : Average **Polarity : Horizontal**

CH Low (IEEE 802.11b Mode / Antenna 3)



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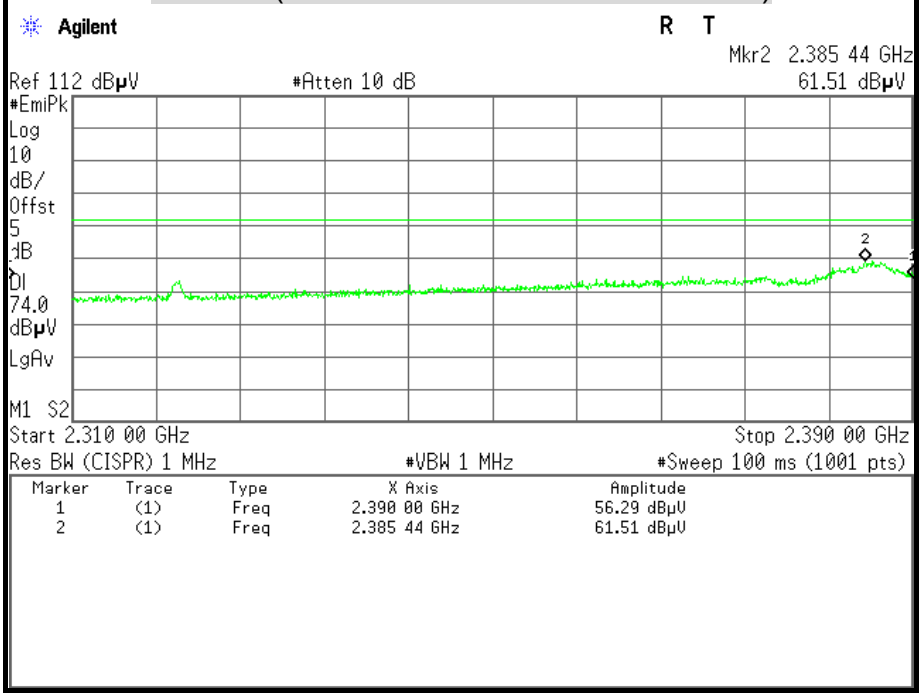
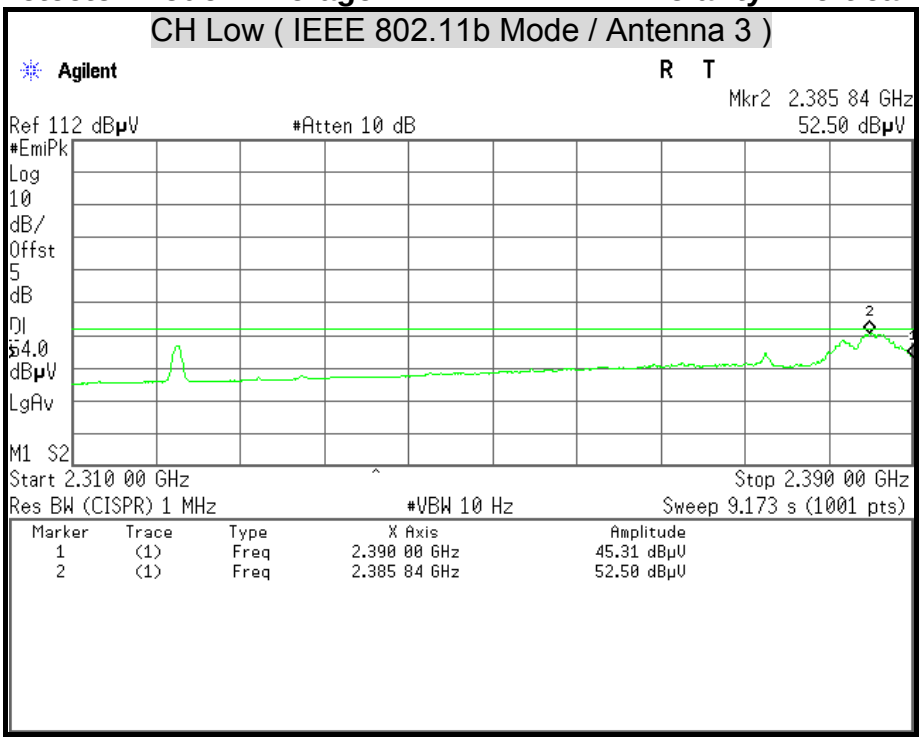
Detector Mode : Peak **Polarity : Vertical**

CH Low (IEEE 802.11b Mode / Antenna 3)



Detector Mode : Average **Polarity : Vertical**

CH Low (IEEE 802.11b Mode / Antenna 3)



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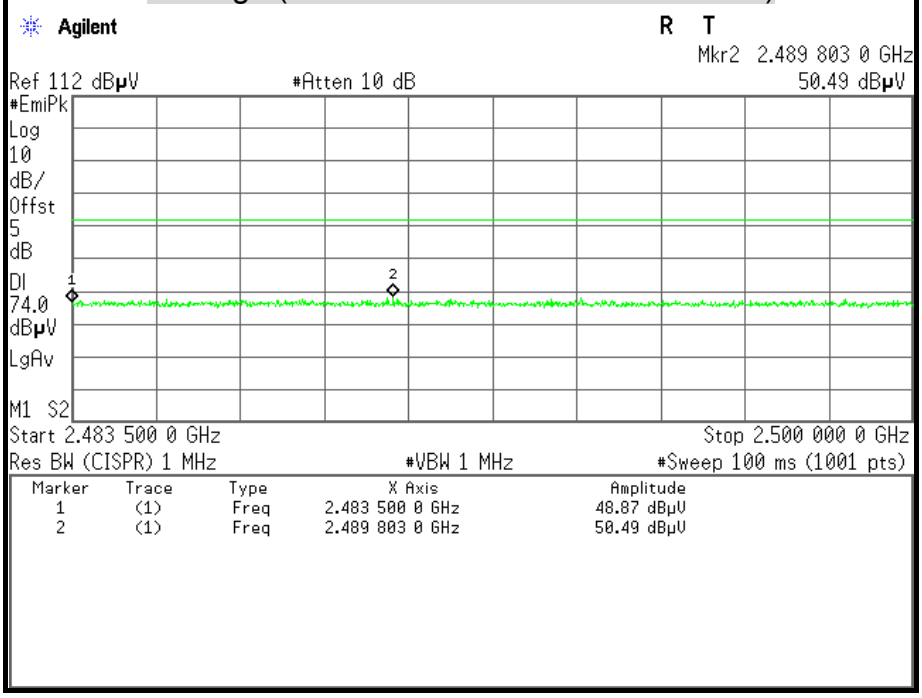
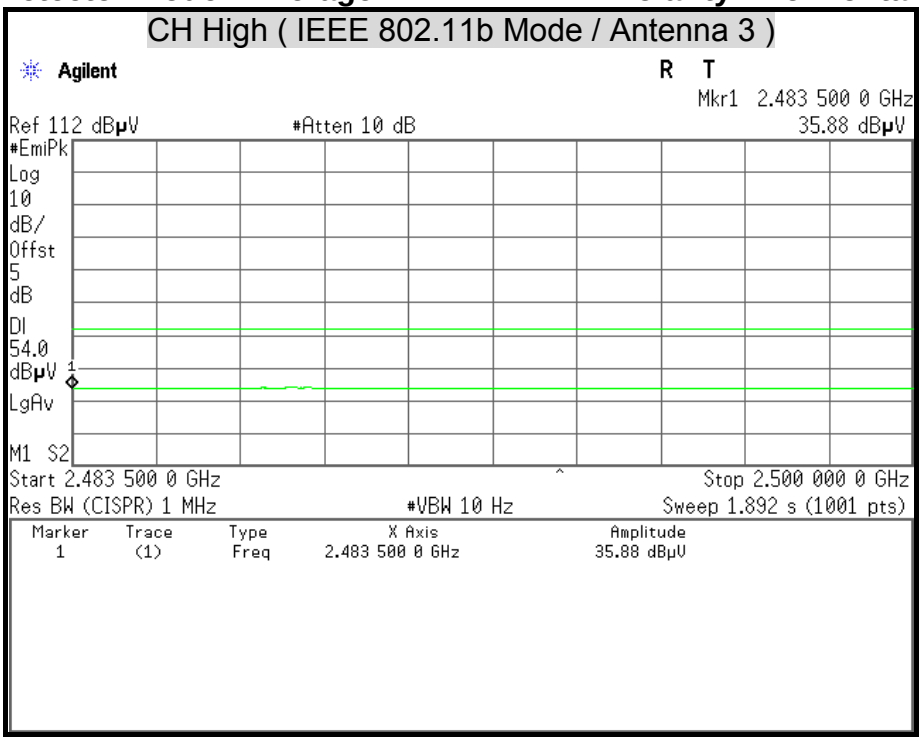
Detector Mode : Peak **Polarity : Horizontal**

CH High (IEEE 802.11b Mode / Antenna 3)



Detector Mode : Average **Polarity : Horizontal**

CH High (IEEE 802.11b Mode / Antenna 3)



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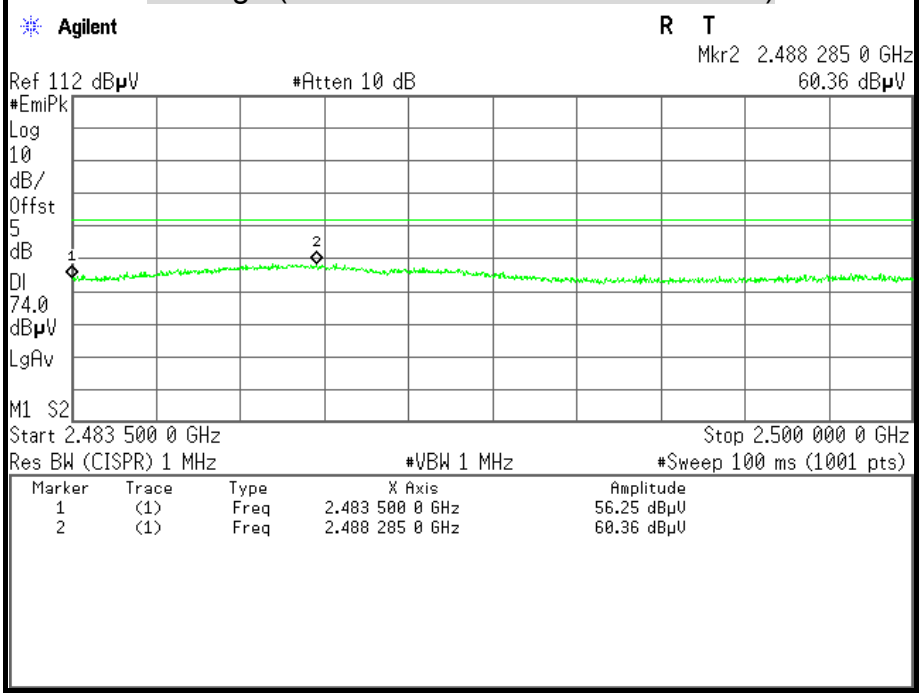
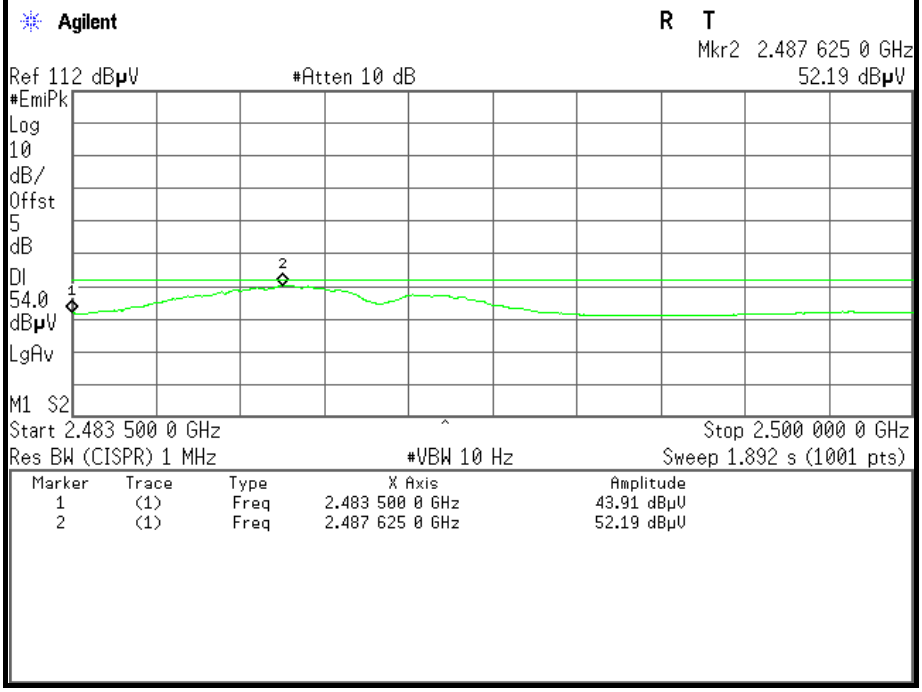
Detector Mode : Peak **Polarity : Vertical**

CH High (IEEE 802.11b Mode / Antenna 3)



Detector Mode : Average **Polarity : Vertical**

CH High (IEEE 802.11b Mode / Antenna 3)



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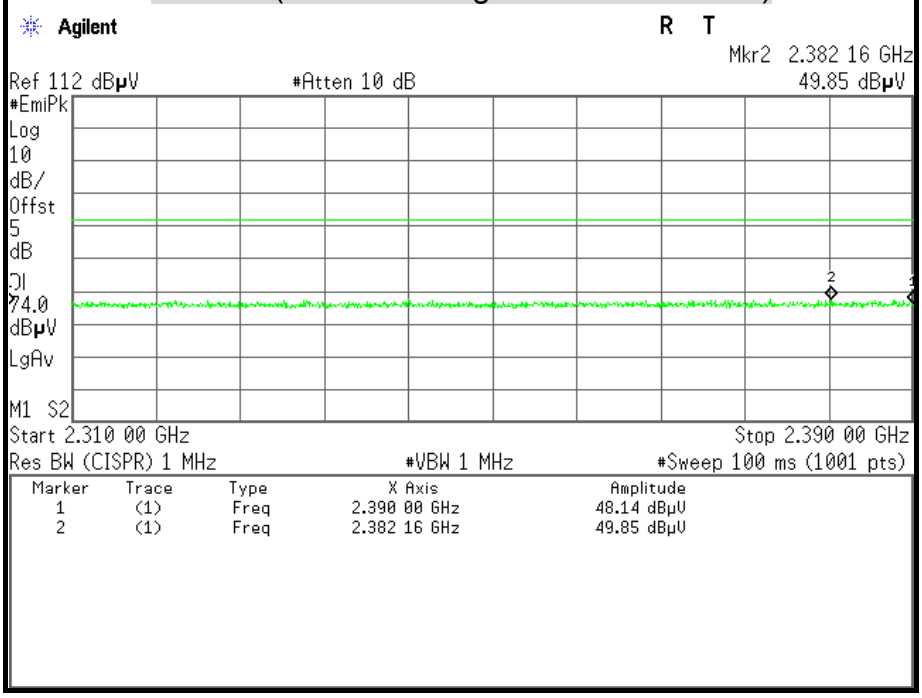
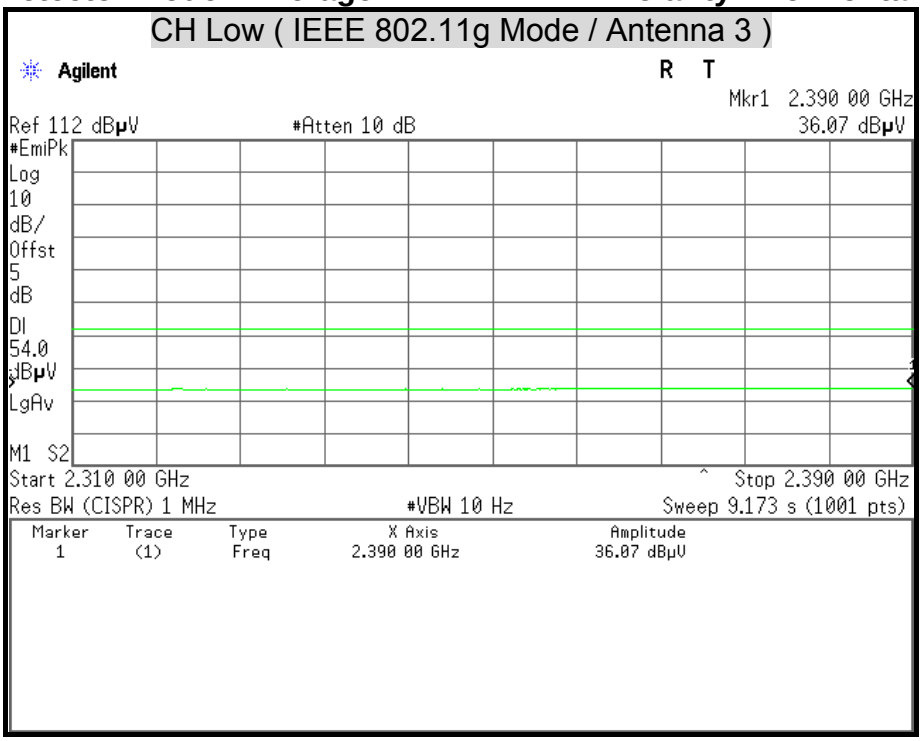
Detector Mode : Peak **Polarity : Horizontal**

CH Low (IEEE 802.11g Mode / Antenna 3)



Detector Mode : Average **Polarity : Horizontal**

CH Low (IEEE 802.11g Mode / Antenna 3)



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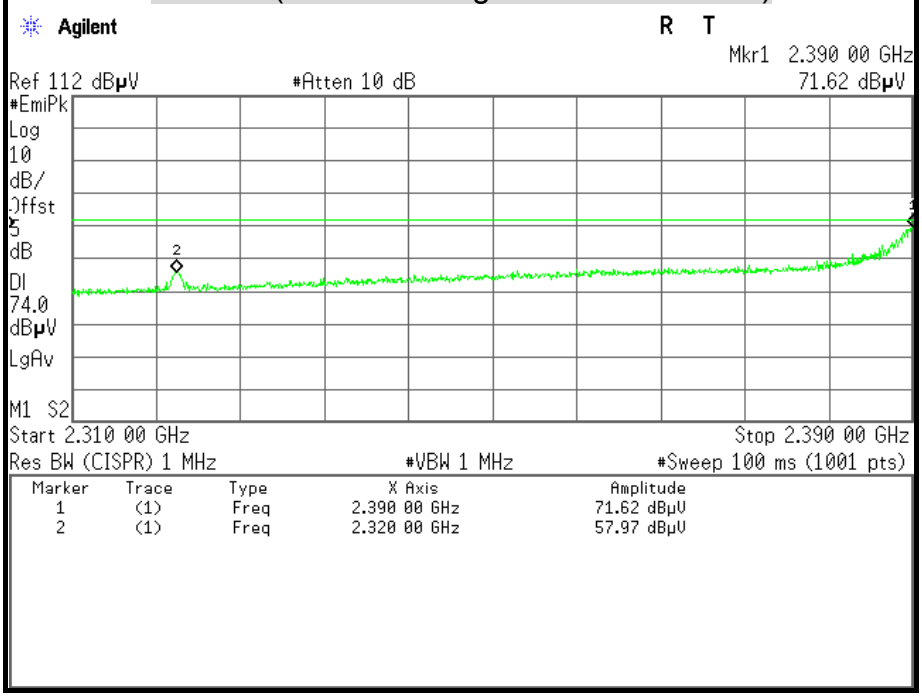
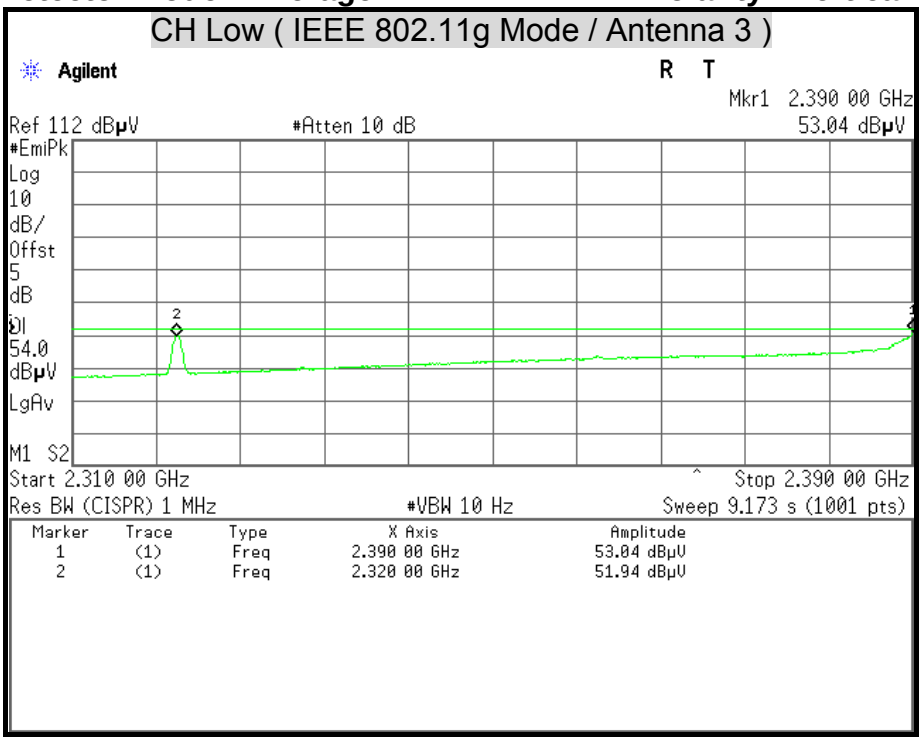
Detector Mode : Peak **Polarity : Vertical**

CH Low (IEEE 802.11g Mode / Antenna 3)



Detector Mode : Average **Polarity : Vertical**

CH Low (IEEE 802.11g Mode / Antenna 3)



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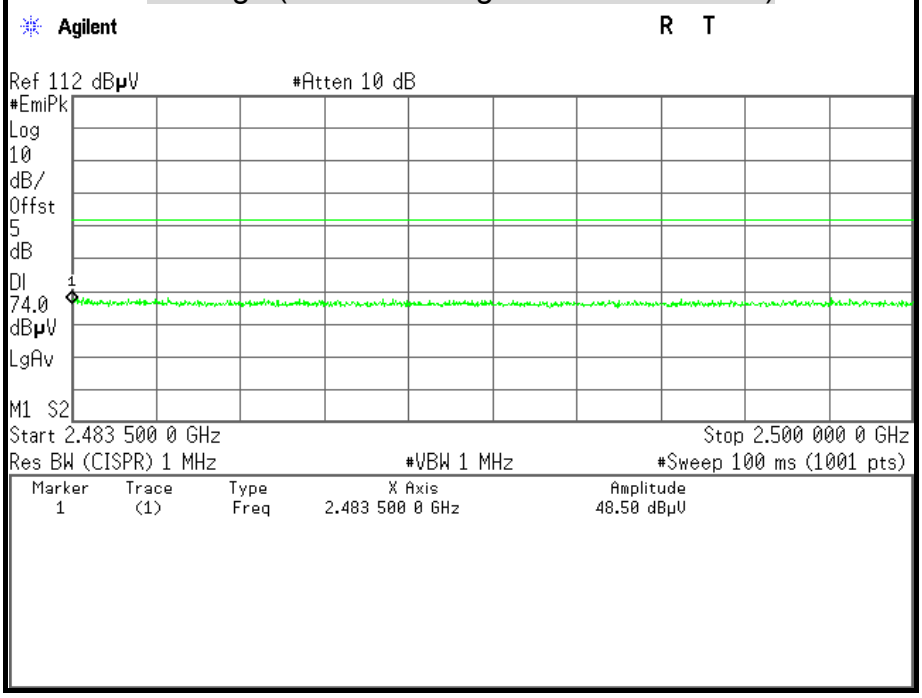
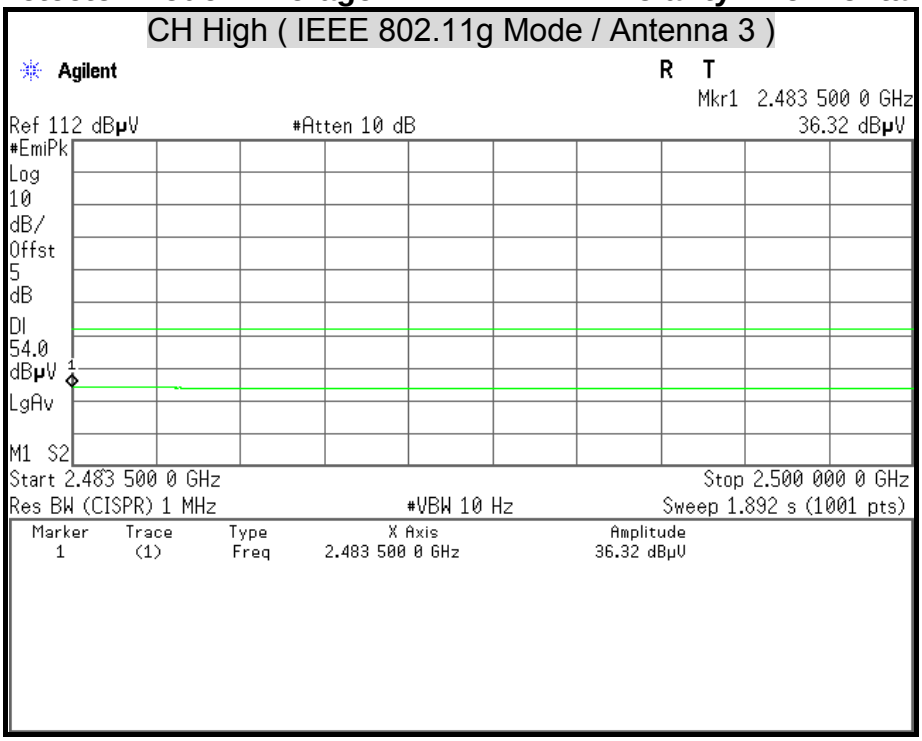
Detector Mode : Peak **Polarity : Horizontal**

CH High (IEEE 802.11g Mode / Antenna 3)



Detector Mode : Average **Polarity : Horizontal**

CH High (IEEE 802.11g Mode / Antenna 3)



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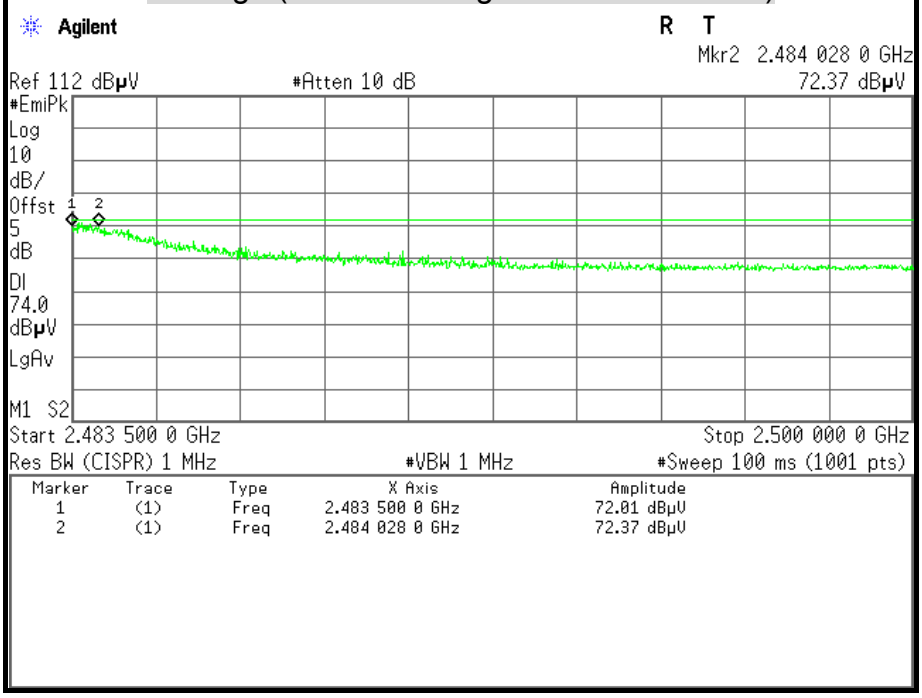
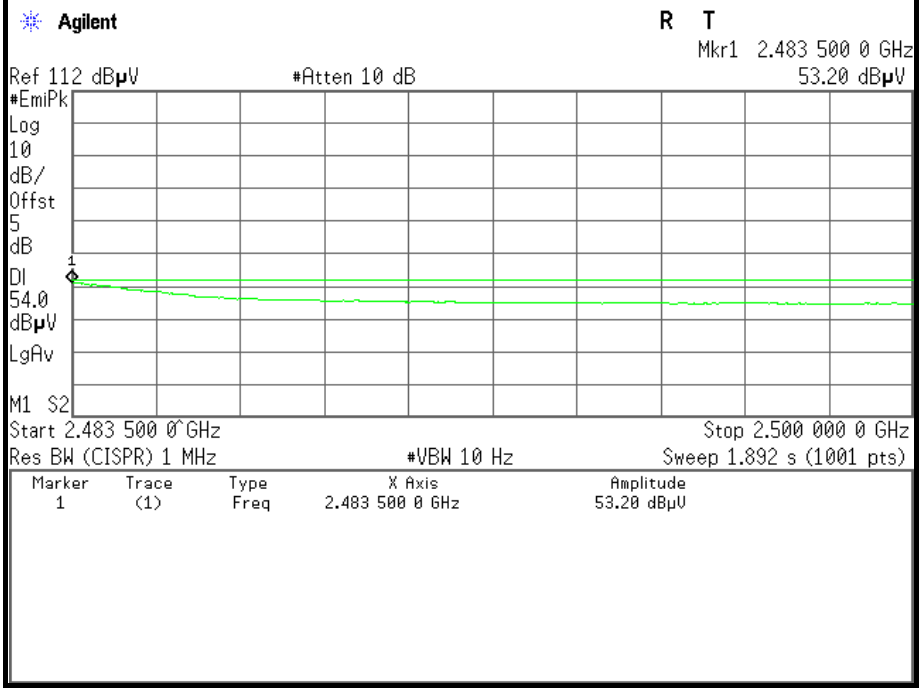
Detector Mode : Peak **Polarity : Vertical**

CH High (IEEE 802.11g Mode / Antenna 3)



Detector Mode : Average **Polarity : Vertical**

CH High (IEEE 802.11g Mode / Antenna 3)



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7.8 CONDUCTED EMISSION

LIMITS

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Conducted Limit (dBμv)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5.00	56	46
5.00 - 30.0	60	50

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-465	08/06/2015
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-473	03/10/2015
EMI Test Receiver	ROHDE & SCHWARZ	ESHS 30	838550/003	11/07/2014
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	100111	06/30/2015

Remark: *Each piece of equipment is scheduled for calibration once a year.*

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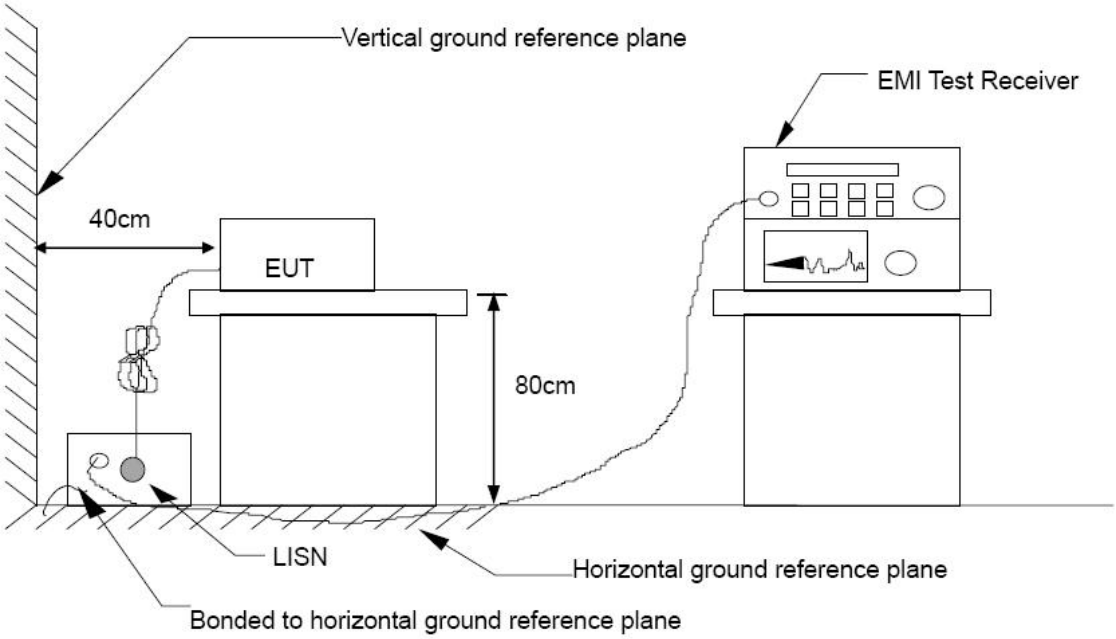
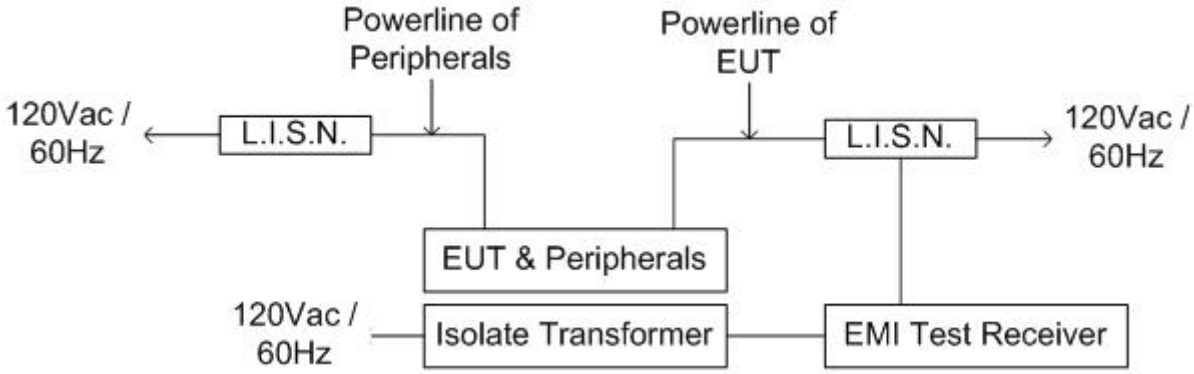
TEST SETUP





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TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.10:2009.

The test procedure is performed in a 4m × 3m × 2.4m (L×W×H) shielded room.

The EUT along with its peripherals were placed on a 1.0m (W) × 1.5m (L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.

The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.

The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

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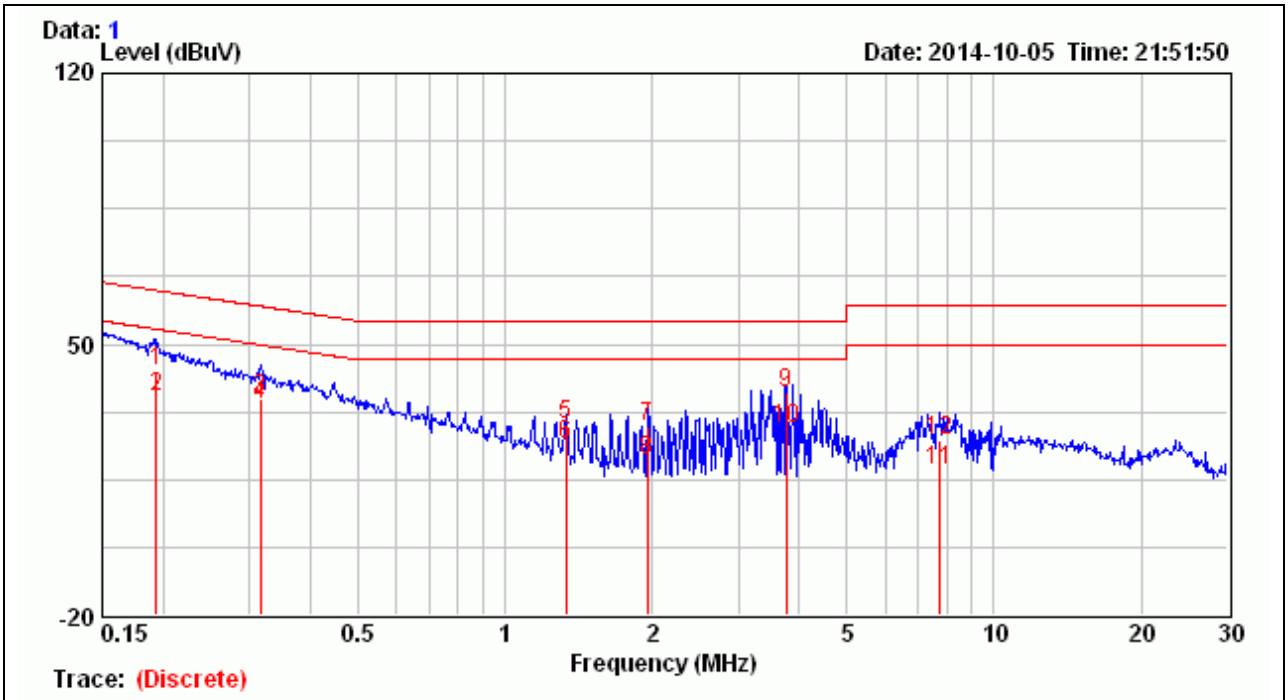
TEST RESULTS

Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	TX Mode / Antenna 1	Temp. & Humidity	28°C, 61%

LINE



Freq. MHz	Corr. Factor dB	Reading Value dBuV Q.P.	Reading Value dBuV AV.	Emission Level dBuV Q.P.	Emission Level dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.193	0.12	42.91	36.17	43.03	36.29	63.89	53.89	-20.86	-17.60
0.317	0.42	35.70	33.76	36.12	34.18	59.80	49.80	-23.67	-15.61
1.331	0.34	28.65	23.72	28.99	24.06	56.00	46.00	-27.01	-21.94
1.959	0.26	28.31	19.99	28.57	20.25	56.00	46.00	-27.43	-25.75
3.759	0.21	37.45	27.95	37.66	28.16	56.00	46.00	-18.34	-17.84
7.769	0.24	24.77	17.37	25.01	17.61	60.00	50.00	-34.99	-32.39

Remark:

1. Correction Factor = Insertion loss + Cable loss
2. Emission level = Reading Value + Correction factor
3. Margin value = Emission level – Limit value

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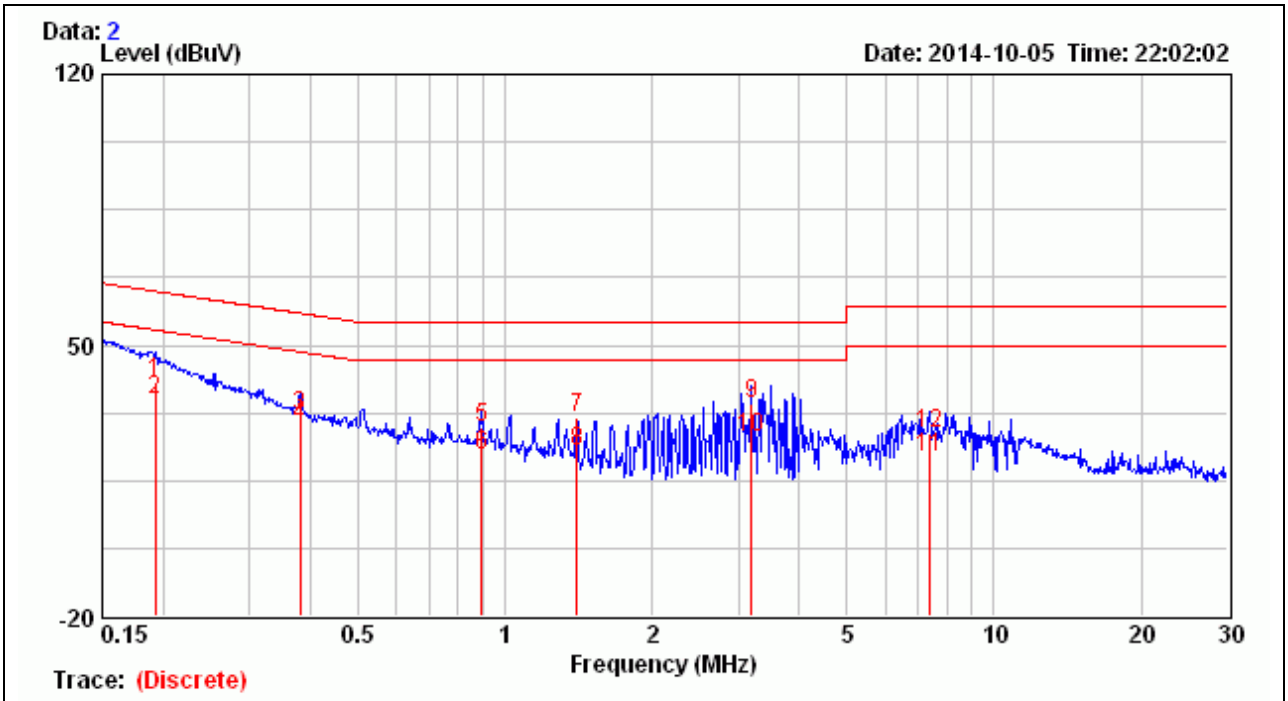
Product Name	Module	Test By	Audi Chang
Test Model	830E	Test Date	2014/10/05
Test Mode	TX Mode / Antenna 1	Temp. & Humidity	28°C, 61%

NEUTRAL



Freq. MHz	Corr. Factor dB	Reading Value dBuV Q.P.	Reading Value dBuV AV.	Emission Level dBuV Q.P.	Emission Level dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.192	0.05	40.54	35.76	40.59	35.81	63.93	53.93	-23.34	-18.12
0.381	0.08	31.57	29.34	31.65	29.42	58.25	48.25	-26.61	-18.84
0.894	0.12	28.79	21.47	28.91	21.59	56.00	46.00	-27.09	-24.41
1.403	0.13	31.21	22.24	31.34	22.37	56.00	46.00	-24.66	-23.63
3.190	0.16	34.92	26.10	35.08	26.26	56.00	46.00	-20.92	-19.74
7.368	0.27	26.75	20.76	27.02	21.03	60.00	50.00	-32.98	-28.97

Remark:

1. Correction Factor = Insertion loss + Cable loss
2. Emission level = Reading Value + Correction factor
3. Margin value = Emission level – Limit value

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