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

For

Panel PC

Model : VM-521

Trade Name : RuggON

Issued for

RuggON Corporation

3F., No.10, Ln. 181, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

Issued by

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Issued Date: December 05, 2014

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	12/05/2014	Initial Issue	All Page 156	Michelle Chiu

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1. TEST REPORT CERTIFICATION

Applicant	:	RuggON Corporation
Address	:	3F., No.10, Ln. 181, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)
Equipment Under Test	:	Panel PC
Model	:	VM-521
Trade Name	:	RuggON
Tested Date	:	September 01 ~ November 25, 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

2. EUT DESCRIPTION

Product Name	Panel PC
Model Number	VM-521
Identify Number	T140901D03
Received Date	September 01, 2014
Frequency Range	IEEE 802.11b/g, 802.11gn HT20 : 2412 MHz ~ 2462 MHz IEEE 802.11gn HT40 : 2422 MHz ~ 2452 MHz Bluetooth 4.0 : 2402 MHz ~ 2480 MHz
Transmit Power	IEEE 802.11b : 19.11 dBm (0.0815 W) IEEE 802.11g : 20.40 dBm (0.1096 W) IEEE 802.11gn HT20 : 23.18 dBm (0.2080 W) IEEE 802.11gn HT40 : 22.47 dBm (0.1766 W) Bluetooth 4.0 : 6.09 dBm (0.0041W)
Channel Spacing	IEEE 802.11b/g, 802.11gn HT20/HT40 : 5 MHz Bluetooth 4.0: 2 MHz
Channel Number	IEEE 802.11b/g, 802.11gn HT20 : 11 Channels IEEE 802.11gn HT40 : 7 Channels Bluetooth 4.0 : 40 Channels
Transmit Data Rate	IEEE 802.11b : up to 11 Mbps IEEE 802.11g : up to 54 Mbps IEEE 802.11gn (HT20,800ns GI) : up to 130 Mbps IEEE 802.11gn (HT20,400ns GI) : up to 144.4 Mbps IEEE 802.11gn (HT40,800ns GI) : up to 270 Mbps IEEE 802.11gn (HT40,400ns GI) : up to 300 Mbps Bluetooth 4.0 : Additional GFSK
Type of Modulation	IEEE 802.11b : DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g : OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11gn HT20/40 : OFDM (64QAM, 16QAM, QPSK, BPSK) Bluetooth 4.0 : DSSS
Antenna Type	Dipole Antenna × 2 (External), Antenna 1(Chain A), Antenna Gain : 5 dBi Antenna 2(Chain B), Antenna Gain : 5 dBi PIFA Antenna × 2 (Internal), Antenna 1(Chain A), Antenna Gain : 3.17 dBi Antenna 2(Chain B), Antenna Gain : 3.21 dBi

Power Rating	24Vdc / 48Vdc 7.5Vdc from Battery
Test Voltage	120Vac, 60Hz
DC Power Cable Type	Shielded cable, 3.1 m × 1 (Detachable)
I/O Port	Audio In Port × 1, Audio Out Port × 1, RJ-45 Port × 2, USB(RS232) Port × 1, Expansion Port × 1, Canbus Port × 2, COM Port × 2, DIO Port × 1, Power Port × 1

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: 2ABTU-VM-521 filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.*

3. DESCRIPTION OF TEST MODES

The EUT is an 802.11n transceiver in Panel PC form factor.

For IEEE 802.11b/g mode: (1TX / 1RX) : Chain A (Ant 1) transmit/receive.

For IEEE 802.11gn HT20/HT40 mode (2TX / 2RX) :

Chain A (Ant 1) & Chain B (Ant 2) transmit/receive.

For Bluetooth : Chain B (Ant 2) transmit/receive.

No.	Antenna Position	Antenna Type	Antenna Gain (dBi)		Test item	
			1	2	Spurious emissions	Conducted
1	External	Dipole	5	5	V	V
2	Internal	PIFA	3.17	3.21	V	

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 / External Antenna
2	TX Mode / Internal Antenna

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 / External Antenna TX Mode / Internal Antenna
	Conducted Emission	TX Mode / External Antenna

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

Conducted / Radiated Emission Test (Above 1 GHz)

IEEE 802.11b, 802.11g, 802.11gn HT20 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.

IEEE 802.11gn HT20 mode : 6.5Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11gn HT40 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11gn HT40 mode : 13.5Mbps data rate (worst case) were chosen for full testing.

Bluetooth 4.0 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	2402
Middle	2440
High	2480

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.*

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.

6. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

No.	Product	Manufacturer	Model No.	Serial No.
1	Notebook PC	HP	ProBook 4421s	CNF03242PJ

Power Adapter :

No.	Manufacturer	Model No.	Power Input	Power Output
1	DELTA	ADP-60DH REV.B	100-240Vac, 1.5A, 50-60Hz	19Vdc 3.16A

No.	Signal Cable Description
1	Non-shielded RJ-45 cable, 12m × 1
2	Non-shielded AC power cable, 1.8m × 1

SETUP DIAGRAM FOR TESTS

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

EUT OPERATING CONDITION

WiFi

1. EUT & peripherals setup diagram is shown in appendix setup photos.
2. Run “DRTU” Software
3. Select Test ->Select ContTx
4. TX Mode:
   - ⇨ **Tx Data Rate:**
     1Mbps Bandwidth 20 (IEEE 802.11b mode)
     6Mbps Bandwidth 20 (IEEE 802.11g mode)
     6.5Mbps Bandwidth 20 (IEEE 802.11gn HT20 mode)
     13.5Mbps Bandwidth 40 (IEEE 802.11gn HT40 mode)
   - ⇨ **Power control**
     IEEE 802.11b Channel Low (2412MHz) ChainA Power set 19
     IEEE 802.11b Channel Mid (2437MHz) ChainA Power set 19
     IEEE 802.11b Channel High (2462MHz) ChainA Power set 17.5
     IEEE 802.11g Channel Low (2412MHz) ChainA Power set 16
     IEEE 802.11g Channel Mid (2437MHz) ChainA Power set 19
     IEEE 802.11g Channel High (2462MHz) ChainA Power set 16
     IEEE 802.11gn HT20 Channel Low (2412MHz) ChainA/B Power set 13/13
     IEEE 802.11gn HT20 Channel Mid (2437MHz) ChainA/B Power set 19/19
     IEEE 802.11gn HT20 Channel High (2462MHz) ChainA/B Power set 12/12

IEEE 802.11gn HT40 Channel Low (2422MHz) ChainA/B Power set 12/12
IEEE 802.11gn HT40 Channel Mid (2437MHz) ChainA/B Power set 17/17
IEEE 802.11gn HT40 Channel High (2452MHz) ChainA/B Power set 11.5/11.5

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

Bluetooth 4.0

1. EUT & peripherals setup diagram is shown in appendix setup photos.
2. Run “DRTU” Software to test
3. PACKET TRANSMIT (TX Mode)

   Freq: 2402, 2440, 2480

   Power Setting : Default
4. All of the functions are under run
5. Start test.

7. FCC PART 15.247 REQUIREMENTS

7.1 6dB BANDWIDTH

LIMITS

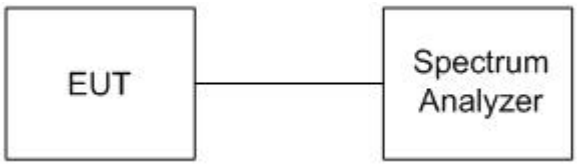
§ 15.247(a) (2) For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

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.

TEST RESULTS

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	12.025	500	PASS
Middle	2437	12.035	500	PASS
High	2462	12.040	500	PASS

IEEE 802.11g Mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	16.325	500	PASS
Middle	2437	16.305	500	PASS
High	2462	16.305	500	PASS

IEEE 802.11gn HT20 Mode (Two TX)

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain A	Chain B		
Low	2412	17.565	17.580	500	PASS
Middle	2437	17.390	17.290	500	PASS
High	2462	17.590	17.590	500	PASS

IEEE 802.11gn HT40 Mode (Two TX)

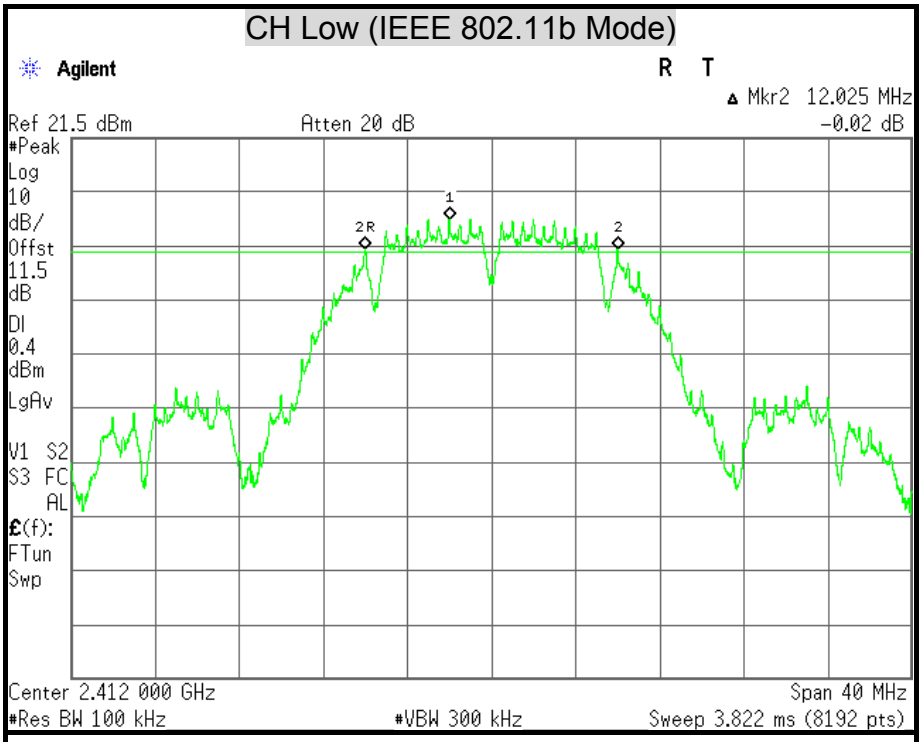
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain A	Chain B		
Low	2422	35.080	35.100	500	PASS
Middle	2437	35.120	33.840	500	PASS
High	2452	35.060	35.110	500	PASS

Bluetooth 4.0 Mode

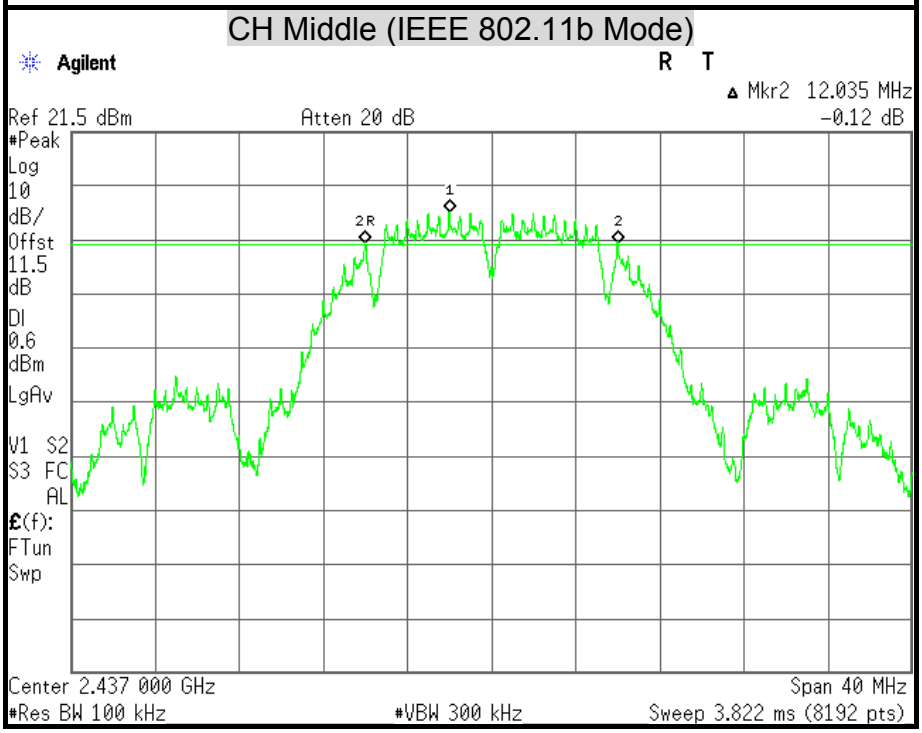
Channel	Channel Frequency (MHz)	6dB Bandwidth (kHz)	Minimum Limit (kHz)	Pass / Fail
Low	2402	648.9	500	PASS
Middle	2440	650.0	500	PASS
High	2480	669.3	500	PASS

6dB BANDWIDTH

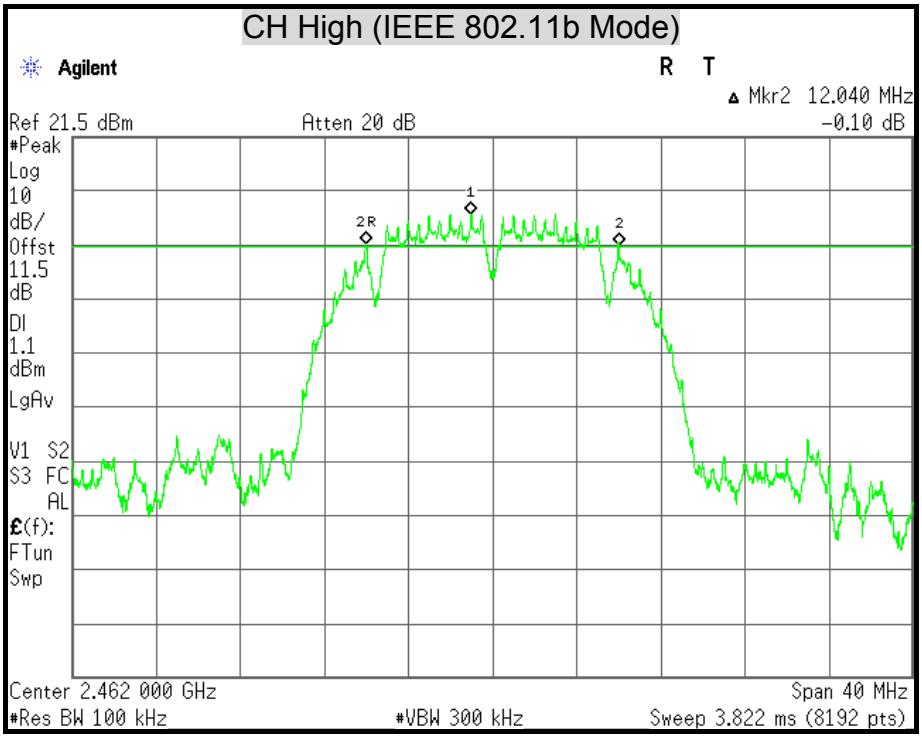
CH Low (IEEE 802.11b Mode)



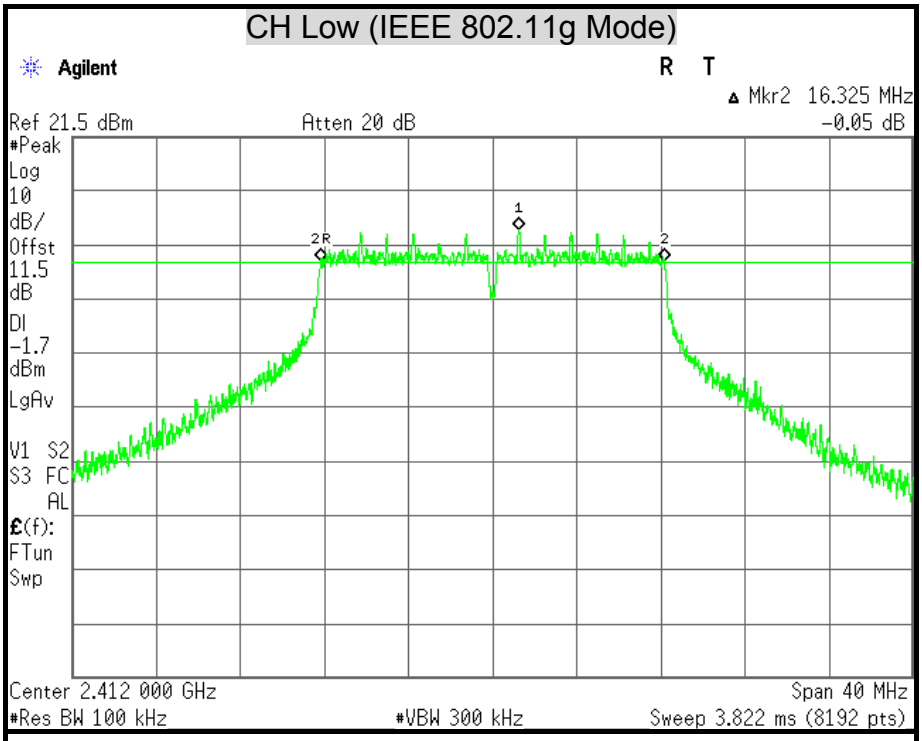
CH Middle (IEEE 802.11b Mode)



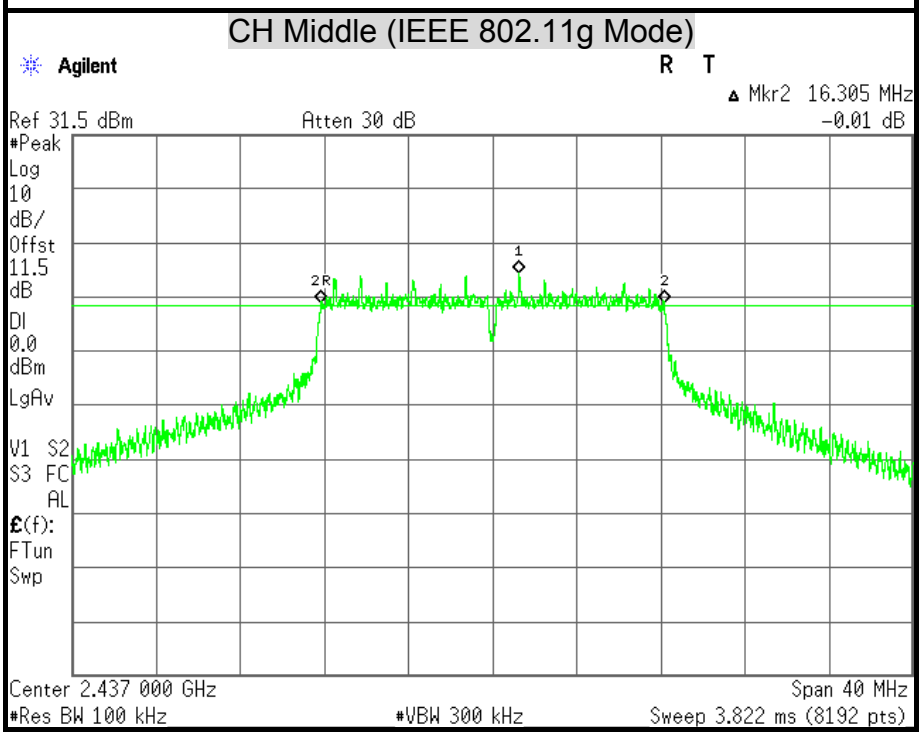
CH High (IEEE 802.11b Mode)



CH Low (IEEE 802.11g Mode)



CH Middle (IEEE 802.11g Mode)



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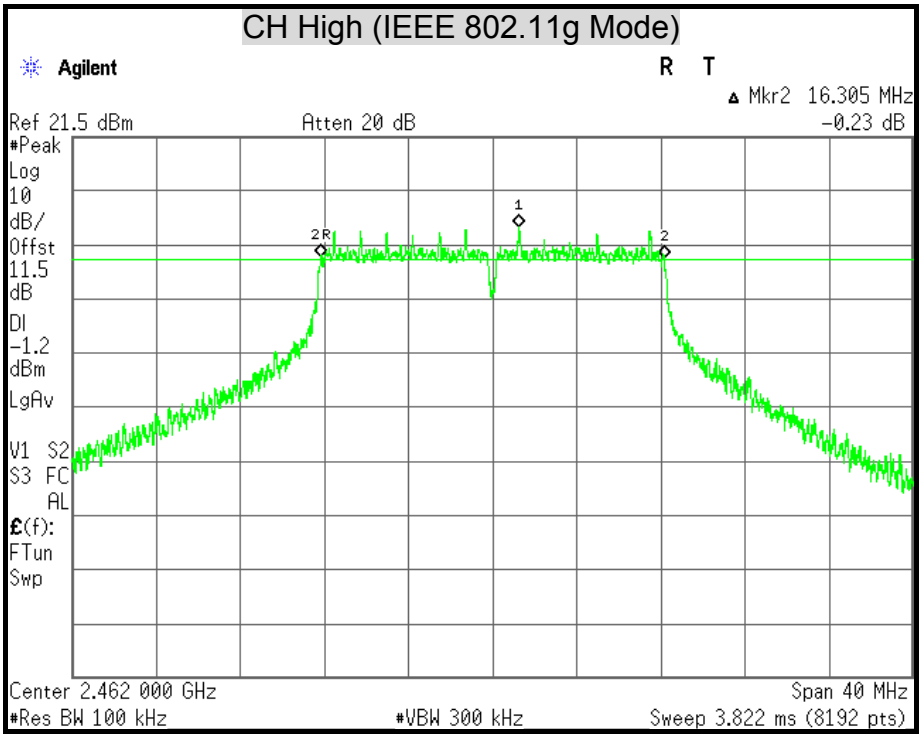
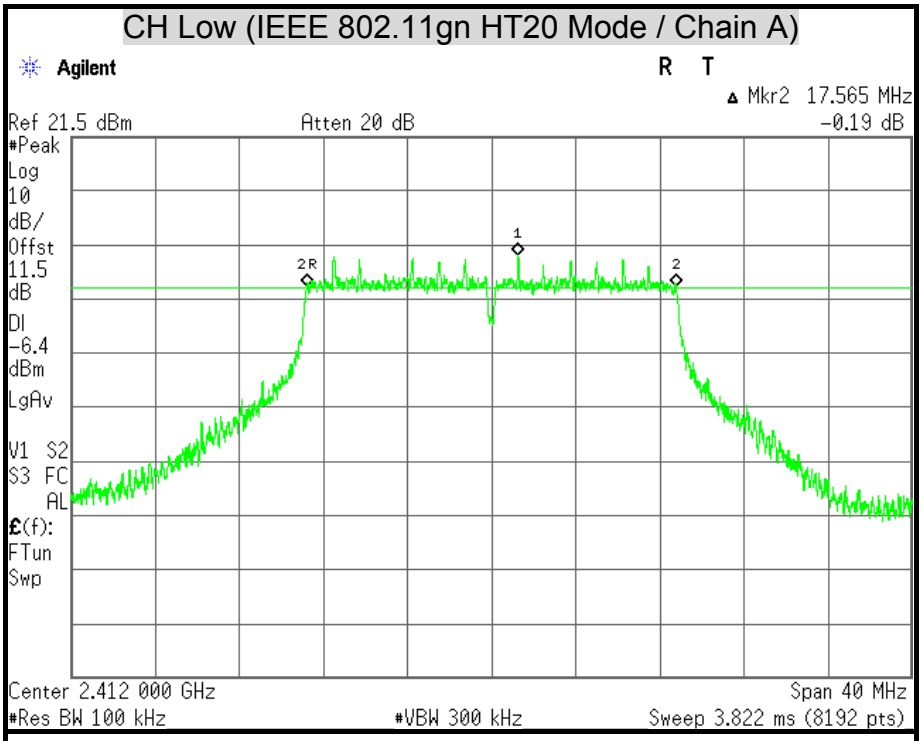


CH Low (IEEE 802.11gn HT20 Mode / Chain A)



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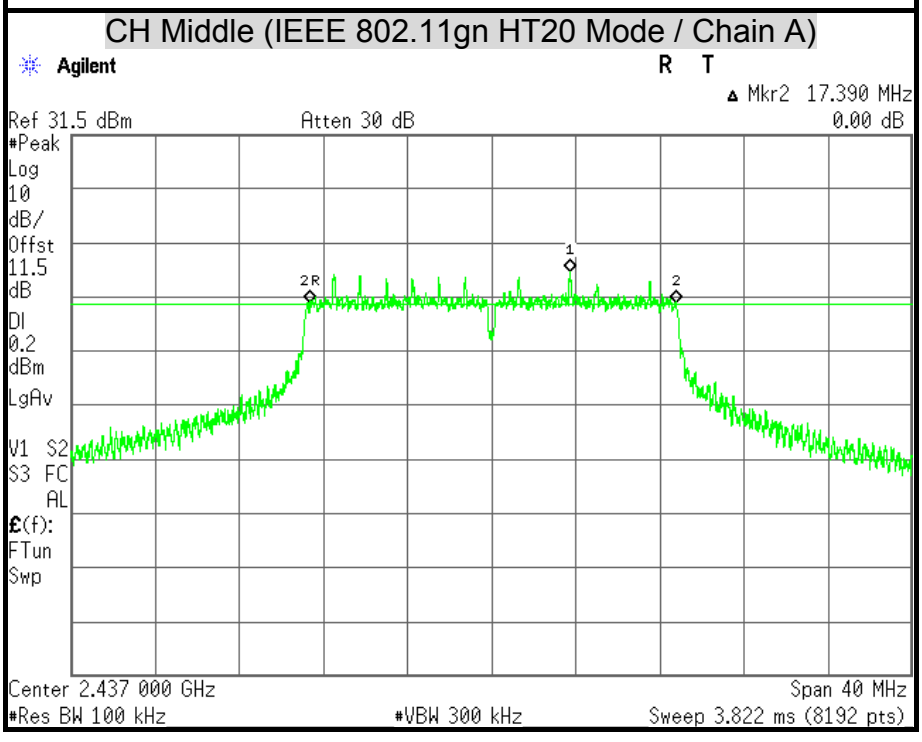
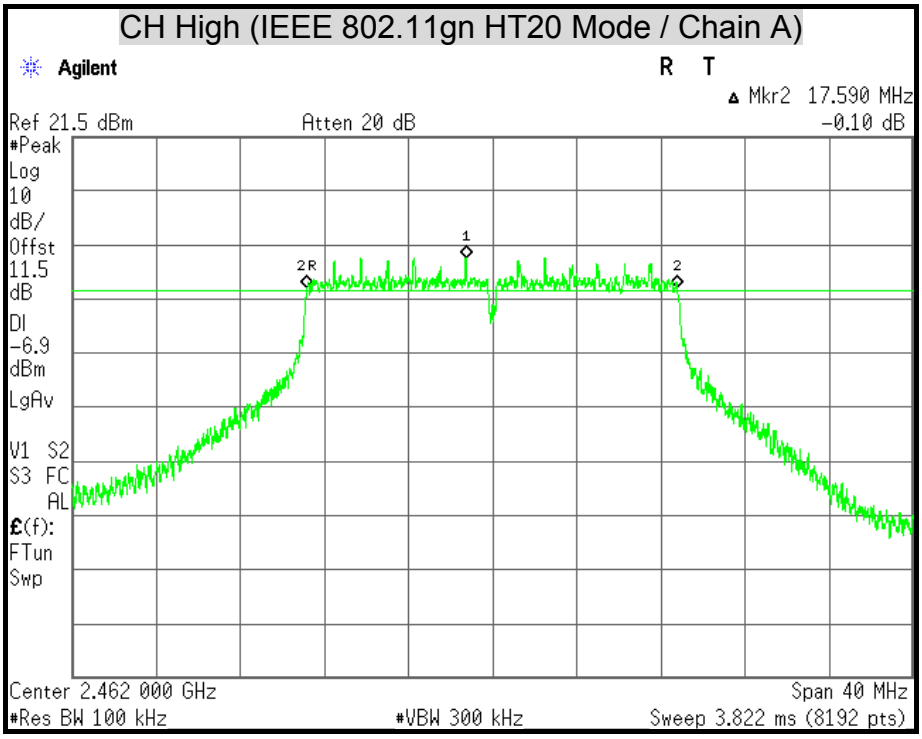
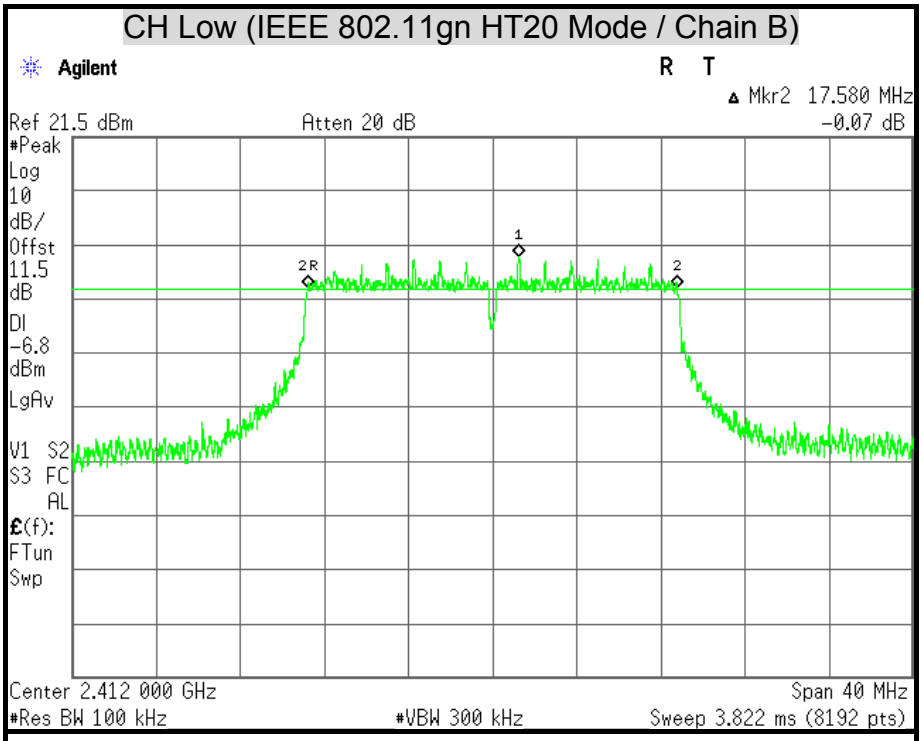


CH High (IEEE 802.11gn HT20 Mode / Chain A)



CH Low (IEEE 802.11gn HT20 Mode / Chain B)



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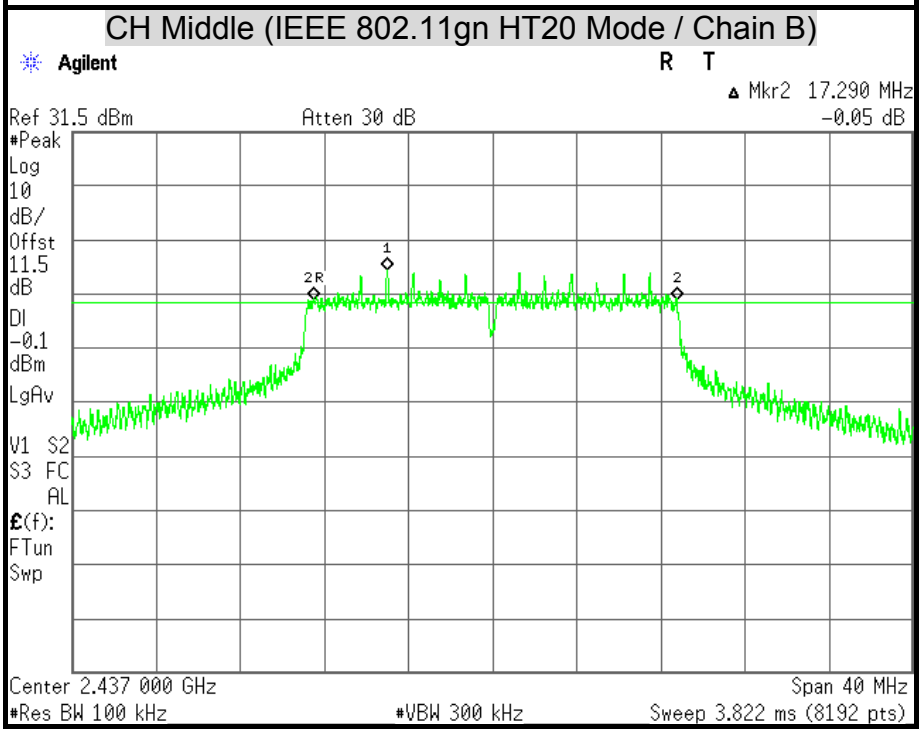
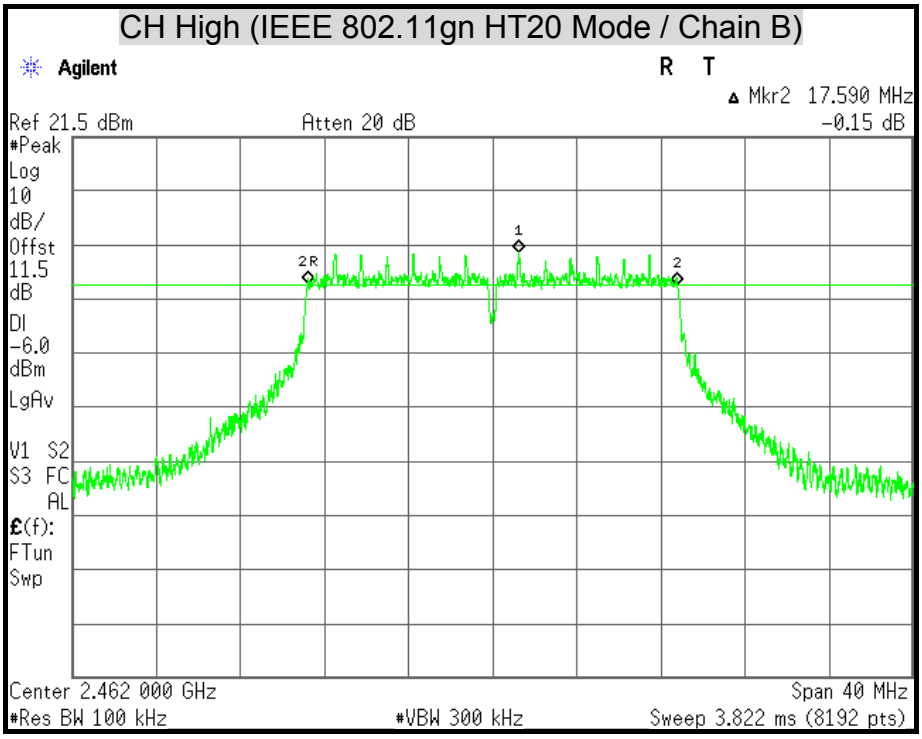
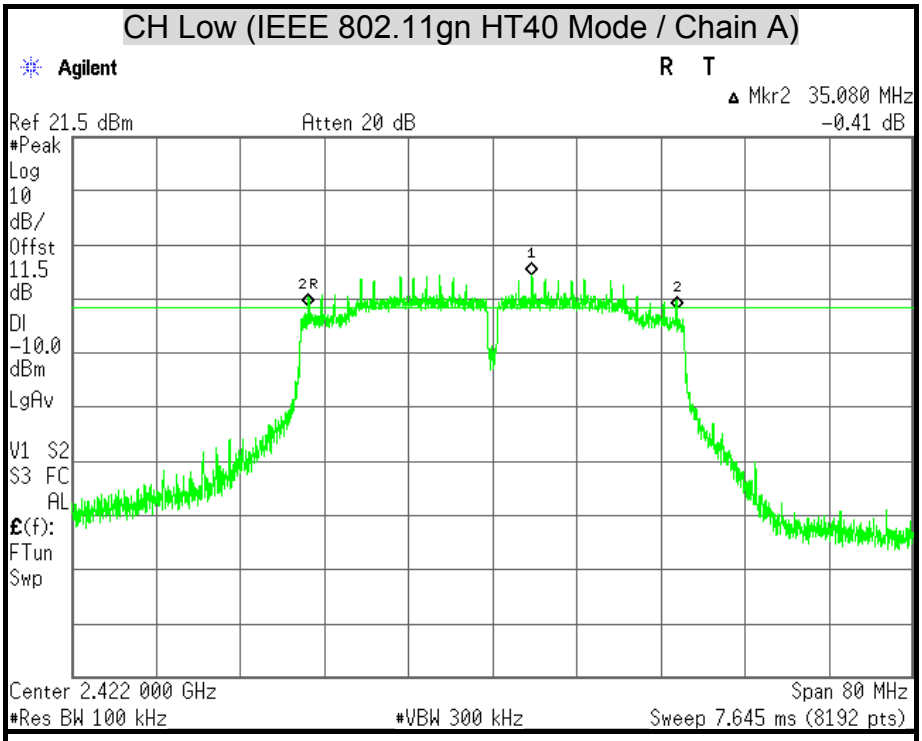


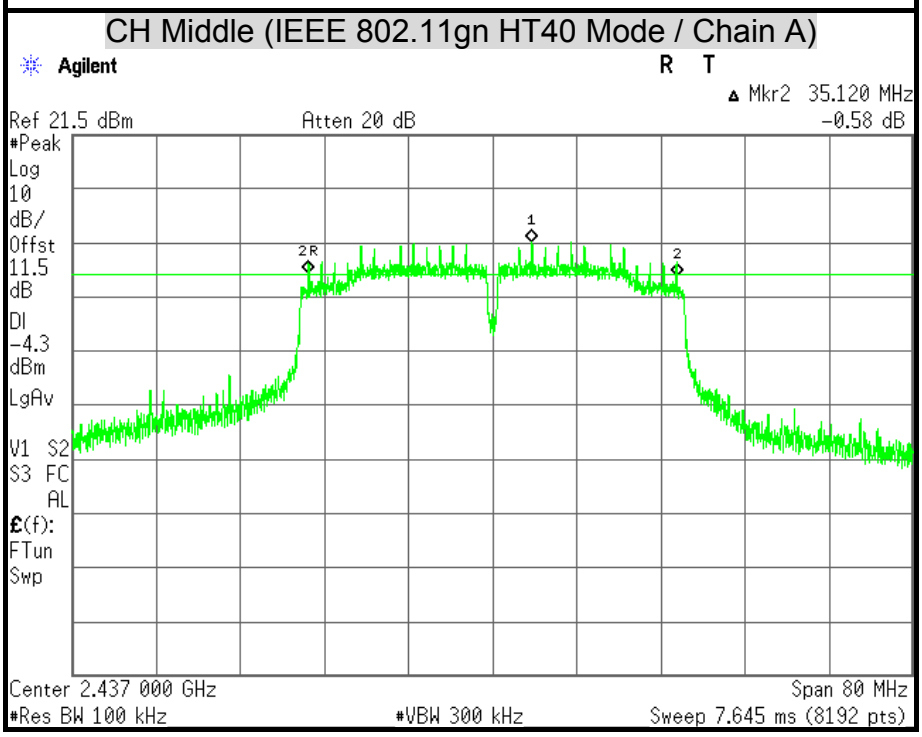
CH High (IEEE 802.11gn HT20 Mode / Chain B)



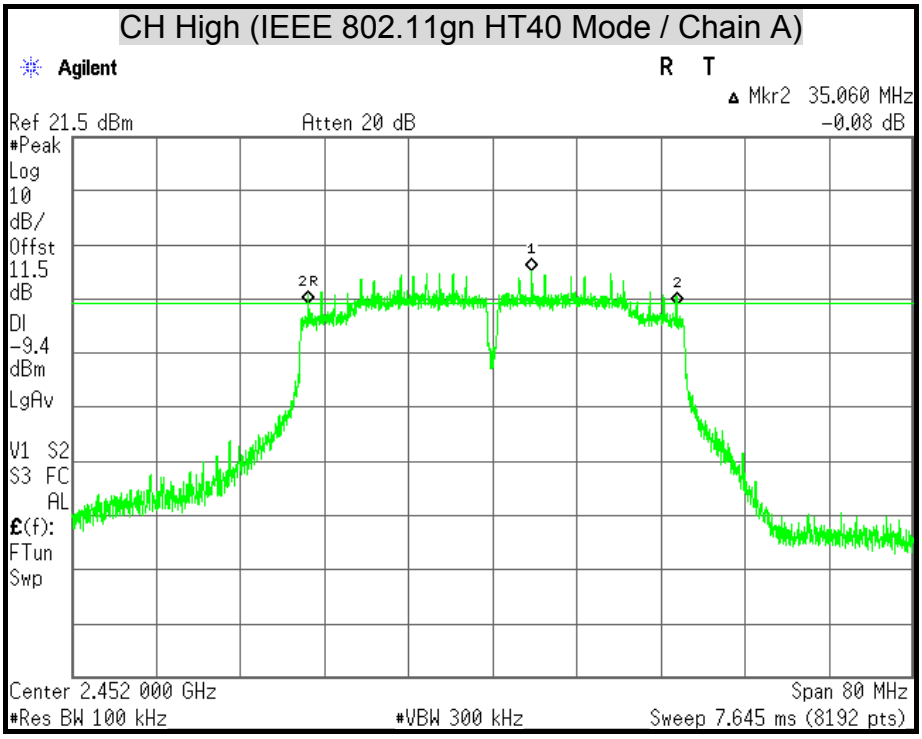
CH Low (IEEE 802.11gn HT40 Mode / Chain A)



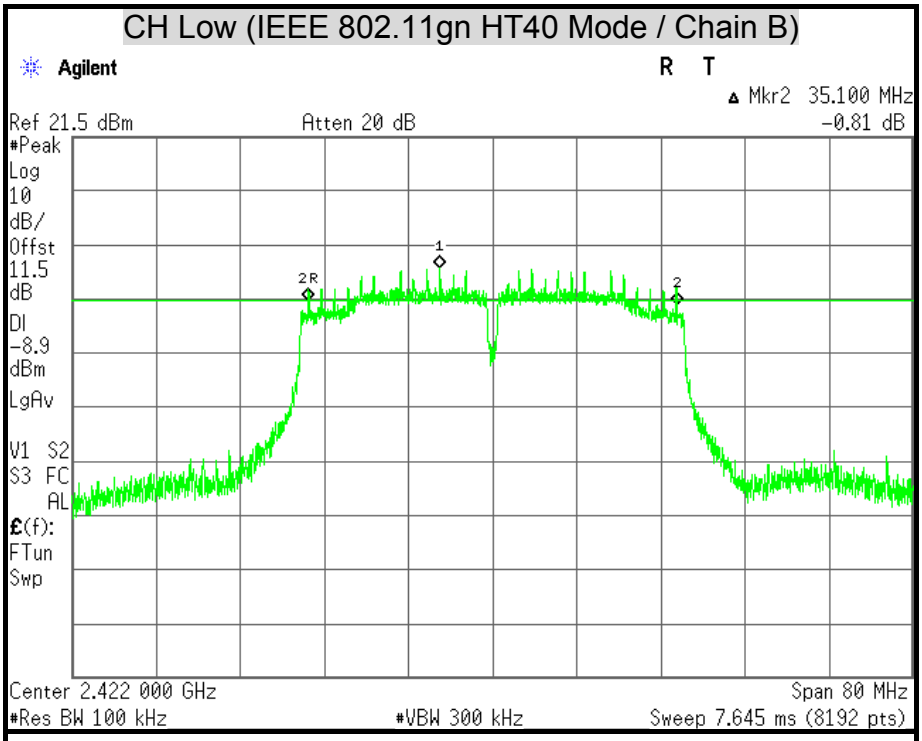
CH Middle (IEEE 802.11gn HT40 Mode / Chain A)



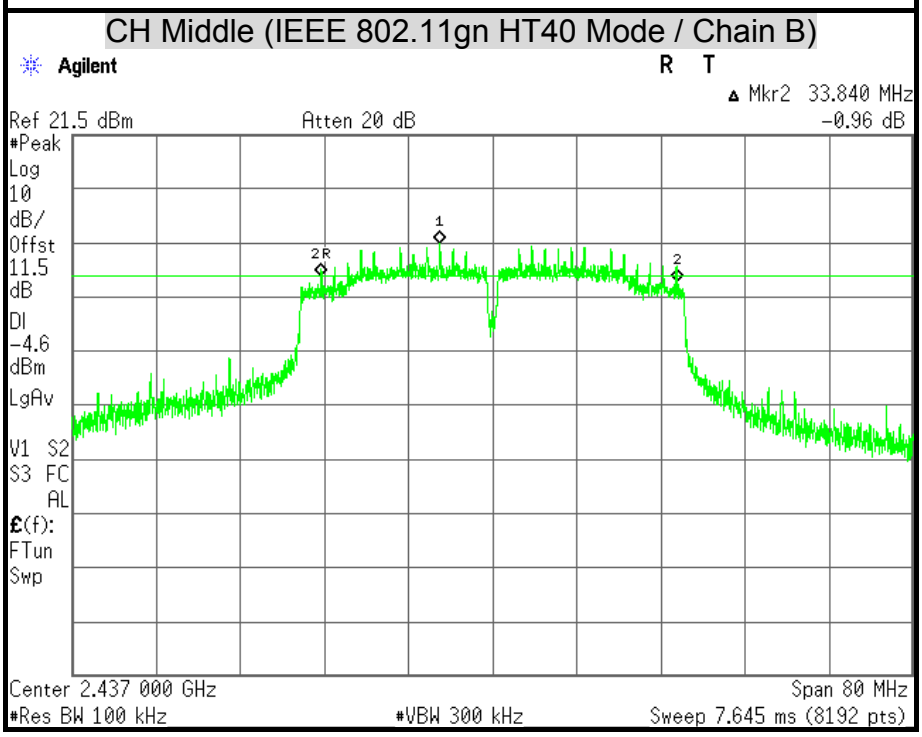
CH High (IEEE 802.11gn HT40 Mode / Chain A)



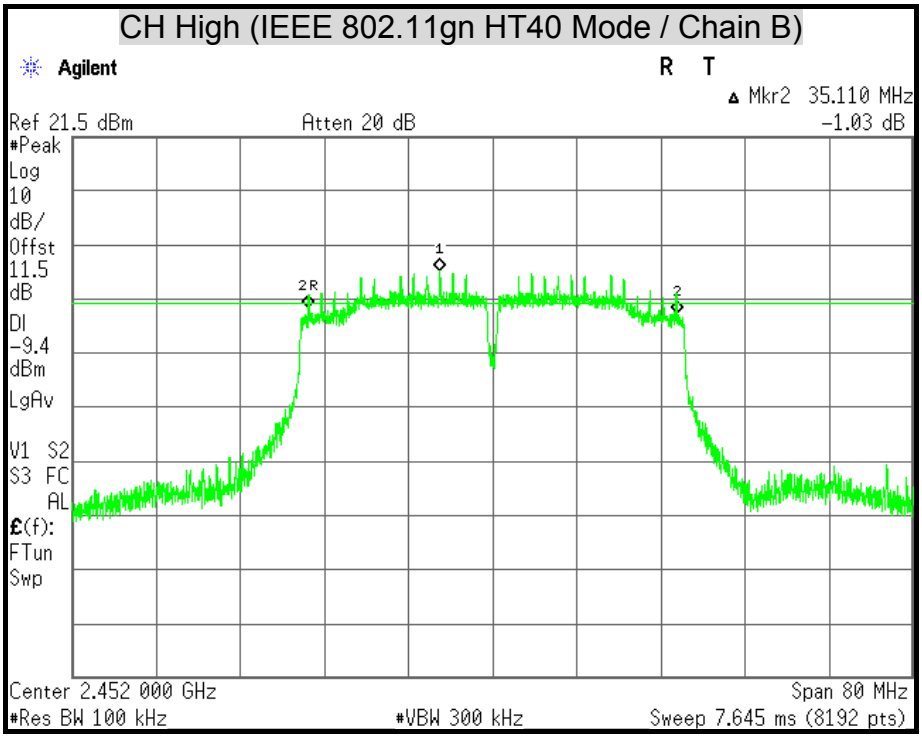
CH Low (IEEE 802.11gn HT40 Mode / Chain B)



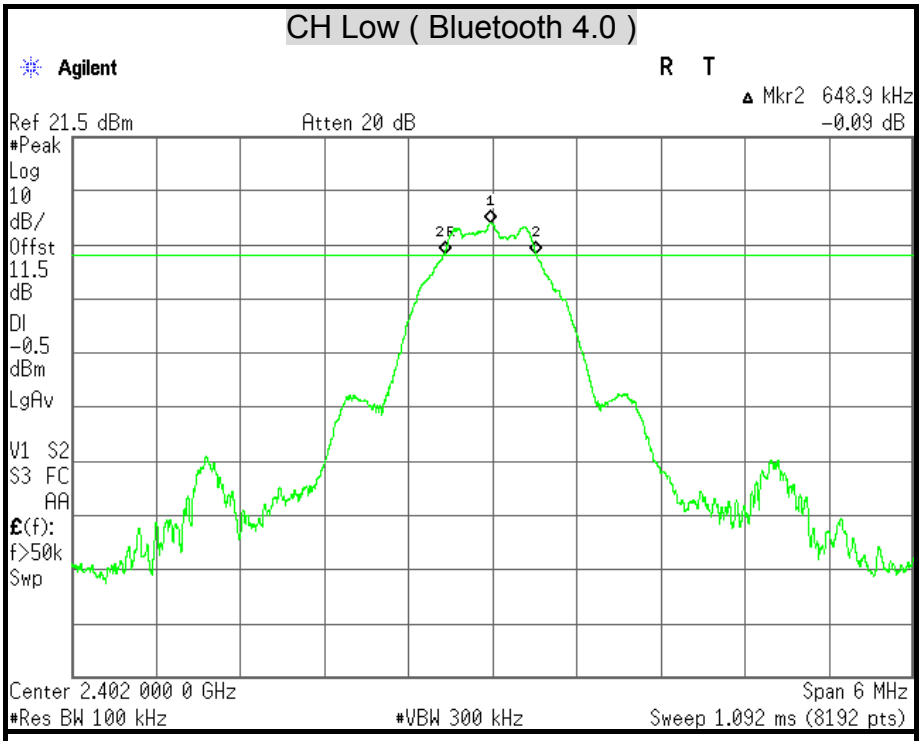
CH Middle (IEEE 802.11gn HT40 Mode / Chain B)



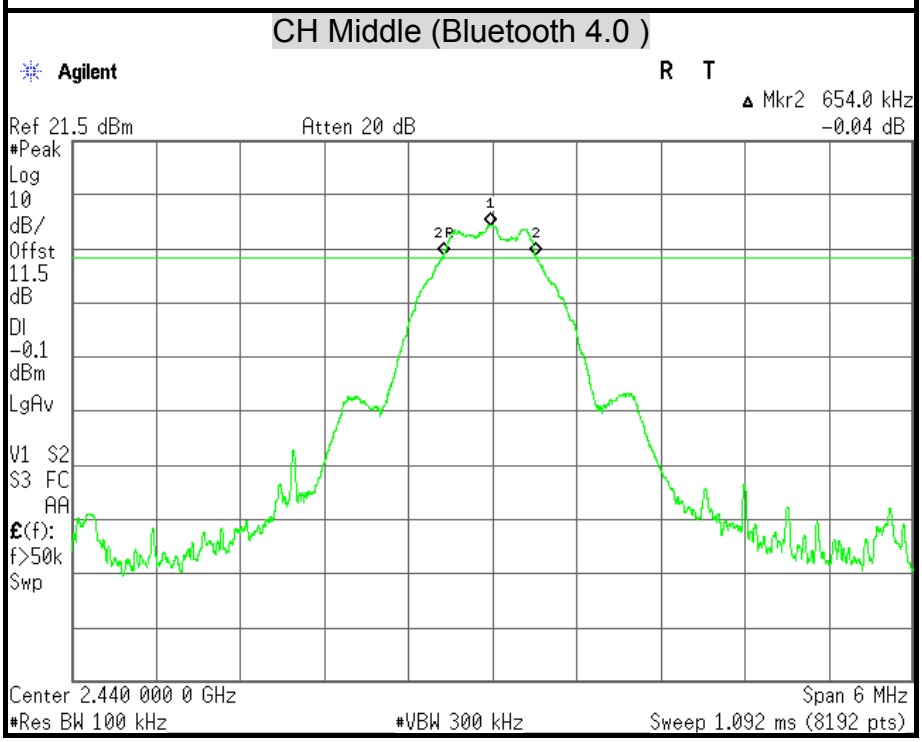
CH High (IEEE 802.11gn HT40 Mode / Chain B)



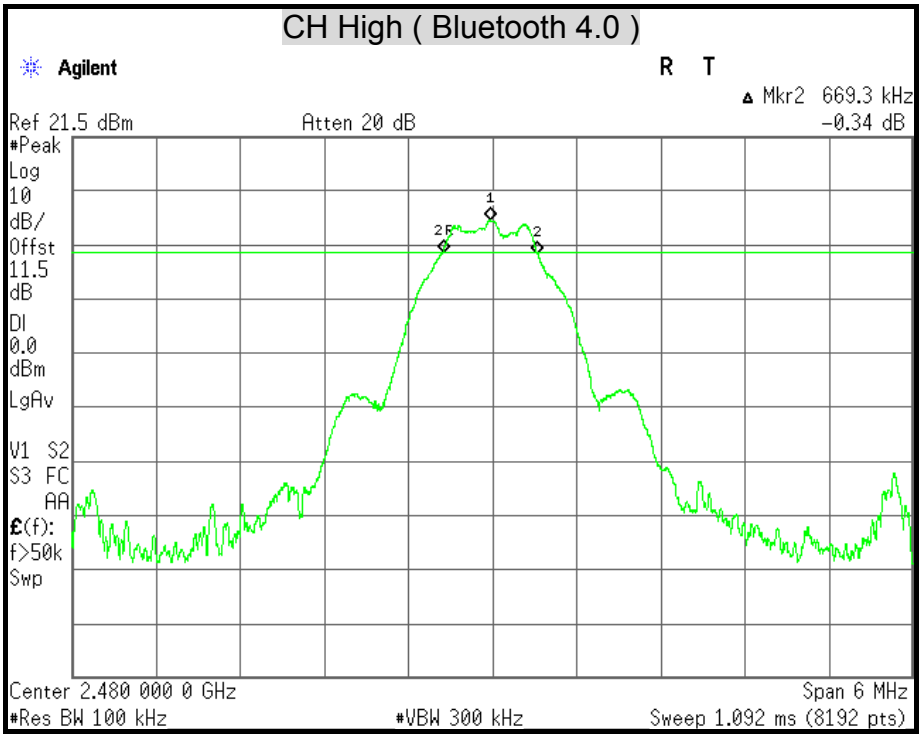
CH Low (Bluetooth 4.0)



CH Middle (Bluetooth 4.0)



CH High (Bluetooth 4.0)



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.

§ KDB 662911 : For power measurements on IEEE 802.11 devices

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

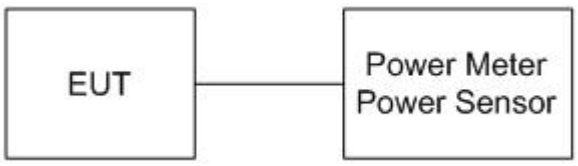
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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.

TEST RESULTS

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	18.12	0.0649	30	1	PASS
Middle	2437	18.11	0.0647	30	1	PASS
High	2462	19.11	0.0815	30	1	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.*

IEEE 802.11g Mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	19.98	0.0995	30	1	PASS
Middle	2437	20.40	0.1096	30	1	PASS
High	2462	20.20	0.1047	30	1	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.*

IEEE 802.11gn HT20 Mode (Two TX)

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain A	Chain B	(dBm)	(W)	(dBm)	(W)	
Low	2412	15.62	17.30	19.55	0.0902	30	1	PASS
Middle	2437	20.93	19.25	23.18	0.2080	30	1	PASS
High	2462	15.62	16.10	18.88	0.0773	30	1	PASS

Remark:

1. *At finial test to get the worst-case emission at 6.5Mbps.*
2. *The cable assembly insertion loss of 11.5dB (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. *Array gain = 0 dB for $N_{ANT} \leq 4$, power limit do not reduce.*
4. *Total peak power = Chain A + Chain B.*

IEEE 802.11gn HT40 Mode (Two TX)

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain A	Chain B	(dBm)	(W)	(dBm)	(W)	
Low	2422	14.65	14.84	17.76	0.0597	30	1	PASS
Middle	2437	19.40	19.51	22.47	0.1766	30	1	PASS
High	2452	14.05	15.05	17.59	0.0574	30	1	PASS

Remark:

1. *At finial test to get the worst-case emission at 13.5Mbps.*
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. *Array gain = 0 dB for $N_{ANT} \leq 4$, power limit do not reduce.*
4. *Total peak power = Chain A + Chain B.*

Bluetooth 4.0 Mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2402	5.64	0.0037	30	1	PASS
Middle	2440	5.99	0.0040	30	1	PASS
High	2480	6.09	0.0041	30	1	PASS

Remark: *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.*

7.3 AVERAGE POWER

LIMITS

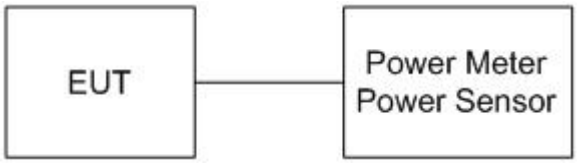
None; for reporting purposes only.

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.

TEST RESULTS

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	16.10
Middle	2437	16.15
High	2462	16.85

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

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	15.02
Middle	2437	16.08
High	2462	15.21

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.

IEEE 802.11gn HT20 Mode (Two TX)

Channel	Channel Frequency (MHz)	Average Power (dBm)	
		Chain A	Chain B
Low	2412	10.10	11.35
Middle	2437	17.07	15.80
High	2462	10.27	10.24

Remark:
1. At finial test to get the worst-case emission at 6.5Mbps.
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 802.11gn HT40 Mode (Two TX)

Channel	Channel Frequency (MHz)	Average Power (dBm)	
		Chain A	Chain B
Low	2422	9.77	9.47
Middle	2437	14.55	14.65
High	2452	9.25	9.88

Remark:
1. At finial test to get the worst-case emission at 13.5Mbps.
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.

Bluetooth 4.0 Mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2402	5.53
Middle	2440	5.89
High	2480	5.98

Remark: *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.*

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.

TEST RESULTS

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-8.40	8	PASS
Middle	2437	-8.36	8	PASS
High	2462	-8.12	8	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.*

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IEEE 802.11g Mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-10.05	8	PASS
Middle	2437	-9.04	8	PASS
High	2462	-9.84	8	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.*

IEEE 802.11gn HT20 Mode (Two TX)

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain A	Chain B			
Low	2412	-15.92	-15.13	-12.50	5.99	PASS
Middle	2437	-9.97	-10.07	-7.01	5.99	PASS
High	2462	-15.83	-14.77	-12.26	5.99	PASS

Remark:

1. *At finial test to get the worst-case emission at 6.5Mbps.*
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 for the MIMO mode is 8.01 dBi which is more than 6dBi, the limit should be 5.99 dBm.*
4. *Total power spectral density = Chain A + Chain B.*

IEEE 802.11gn HT40 Mode (Two TX)

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain A	Chain B			
Low	2422	-19.31	-17.65	-15.39	5.99	PASS
Middle	2437	-13.99	-14.13	-11.05	5.99	PASS
High	2452	-19.10	-17.84	-15.41	5.99	PASS

Remark:

1. *At finial test to get the worst-case emission at 13.5Mbps.*
2. *The cable assembly insertion loss of 10.5 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 for the MIMO mode is 8.01 dBi which is more than 6dBi, the limit should be 5.99 dBm.*
4. *Total power spectral density = Chain A + Chain B.*

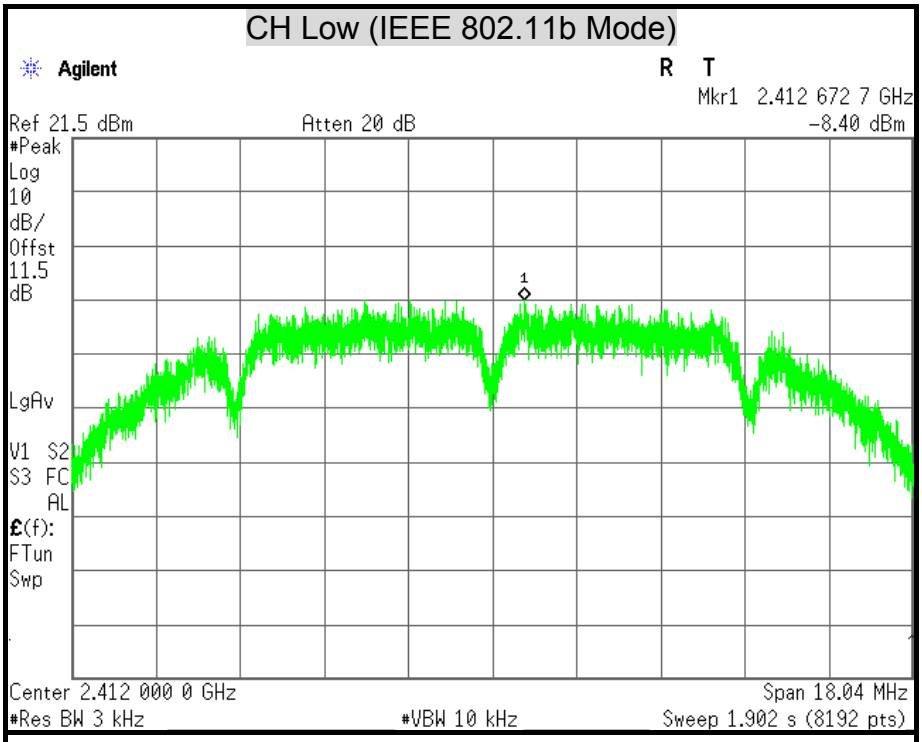
Bluetooth 4.0 Mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2402	-9.75	8	PASS
Middle	2440	-9.66	8	PASS
High	2480	-9.47	8	PASS

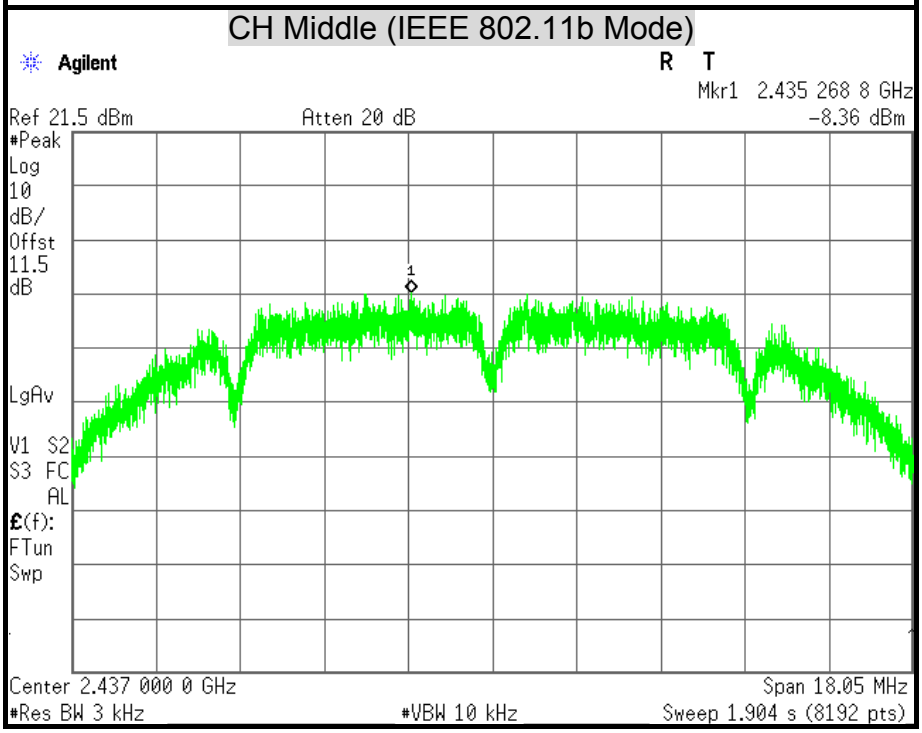
Remark: *The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was Entered as an offset in the spectrum analyzer to allow for direct reading of power.*

POWER SPECTRAL DENSITY

CH Low (IEEE 802.11b Mode)



CH Middle (IEEE 802.11b Mode)



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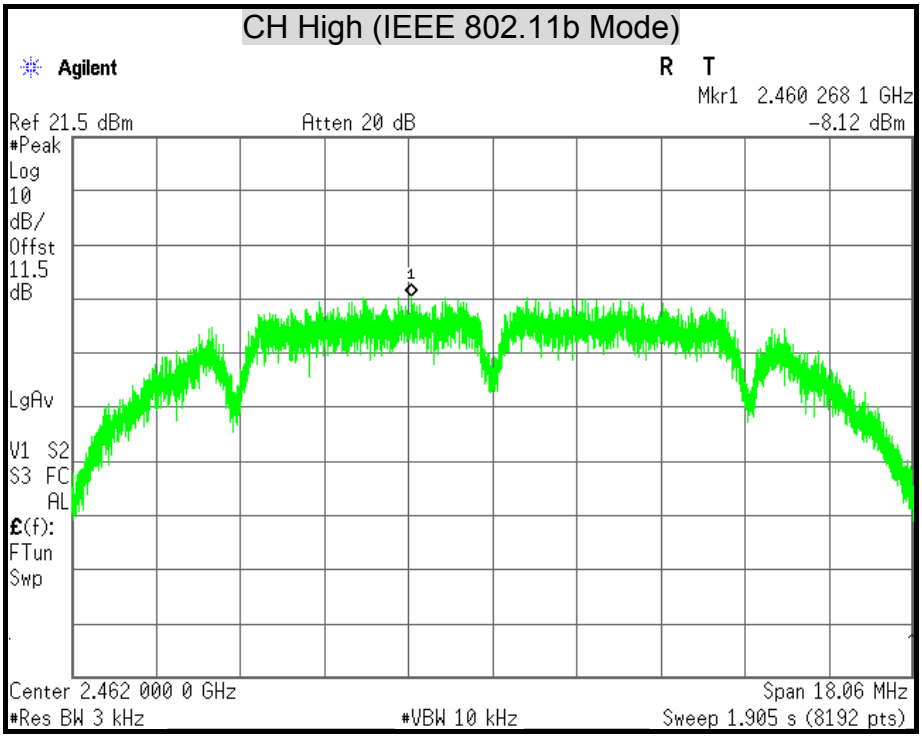
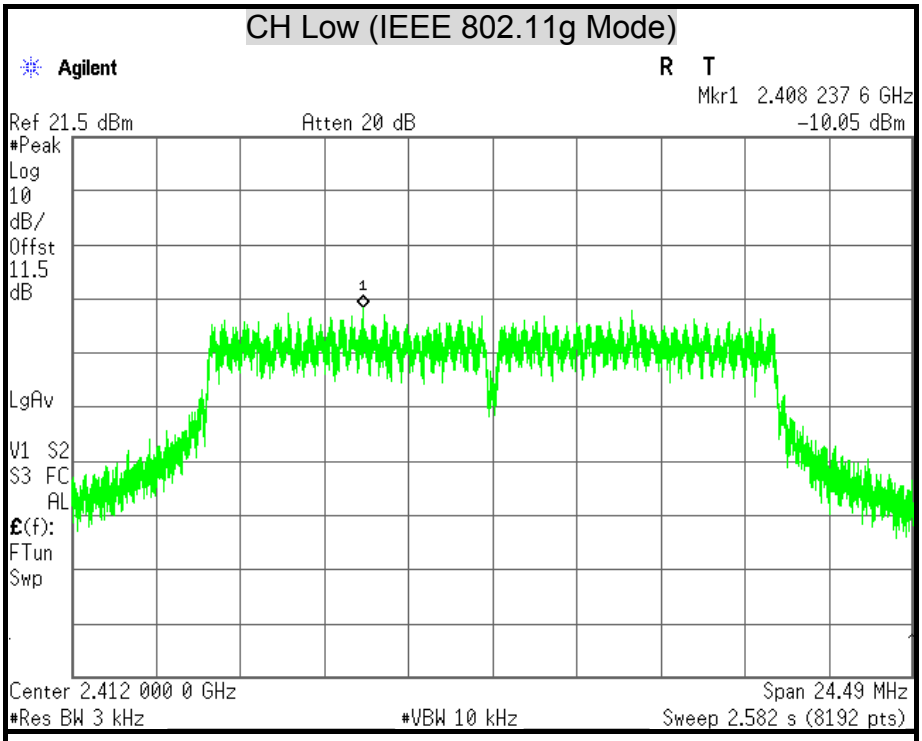
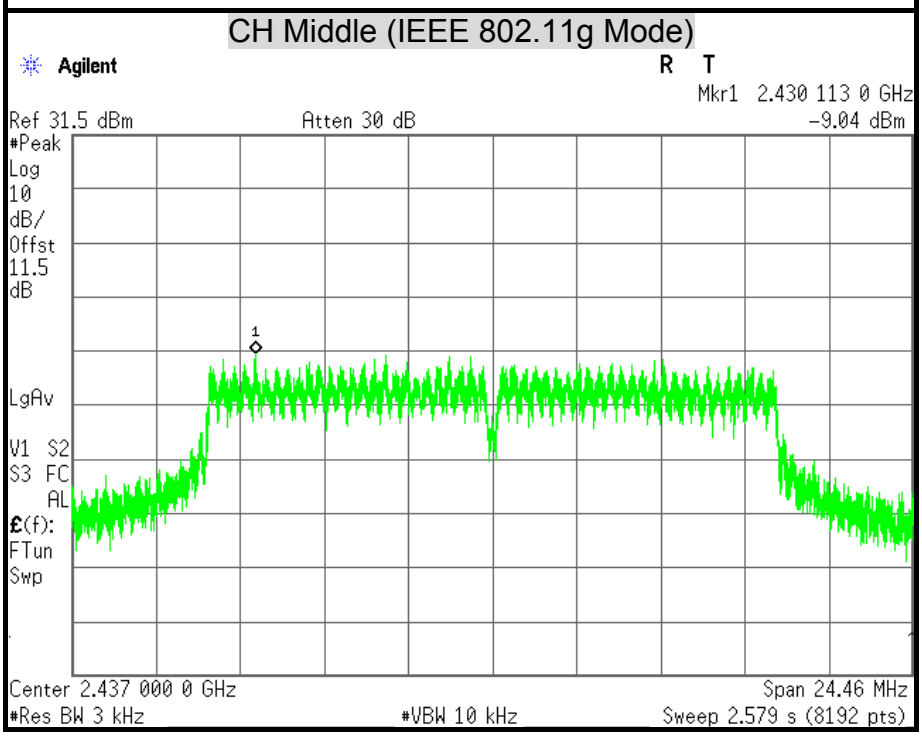


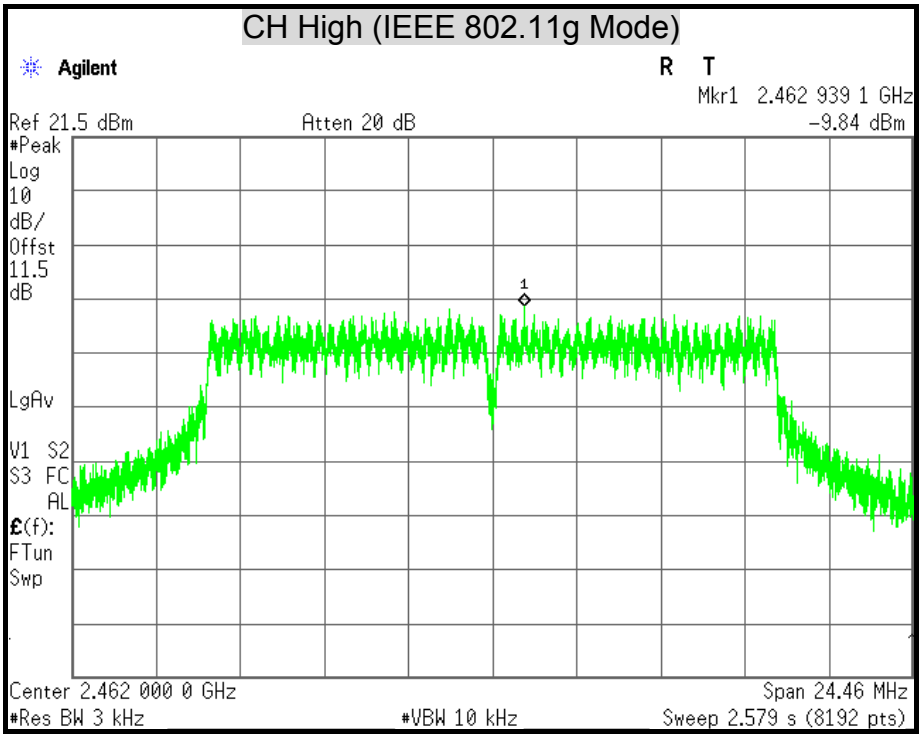
CH Low (IEEE 802.11g Mode)



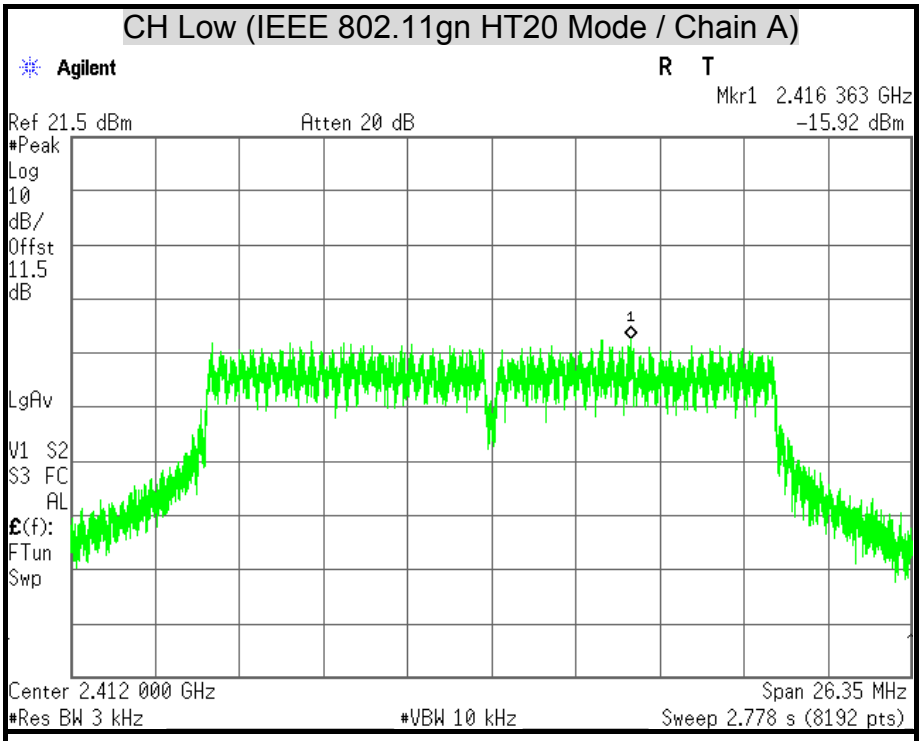
CH Middle (IEEE 802.11g Mode)



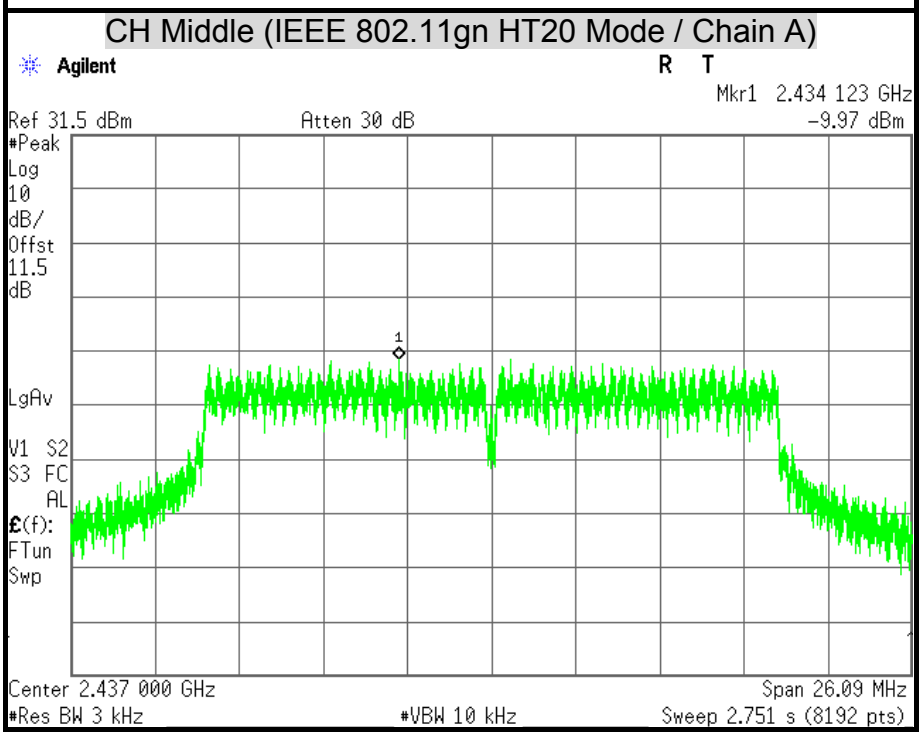
CH High (IEEE 802.11g Mode)



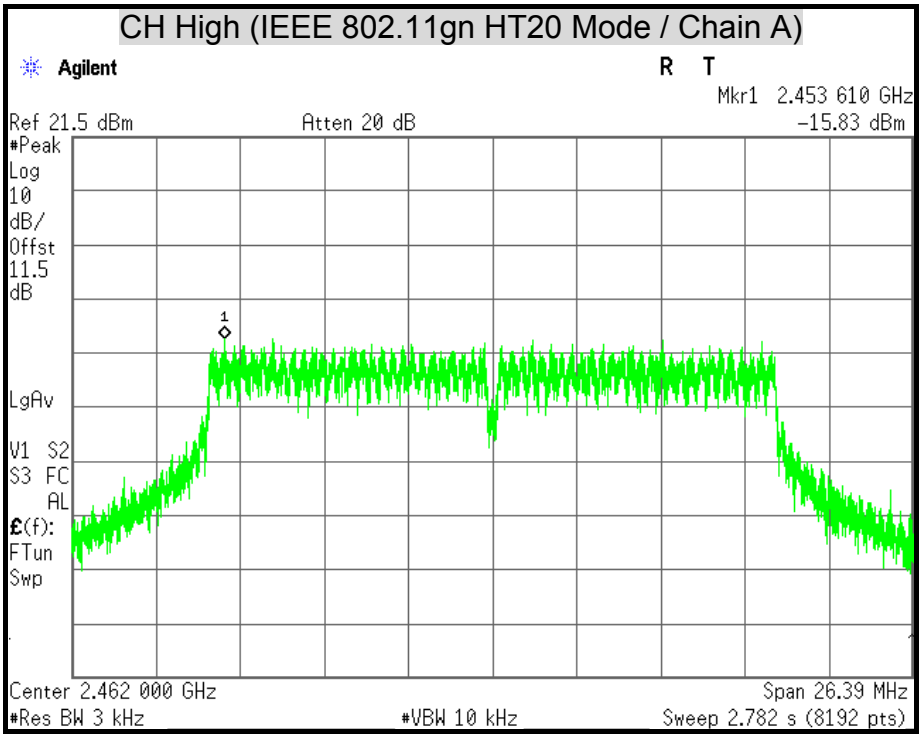
CH Low (IEEE 802.11gn HT20 Mode / Chain A)



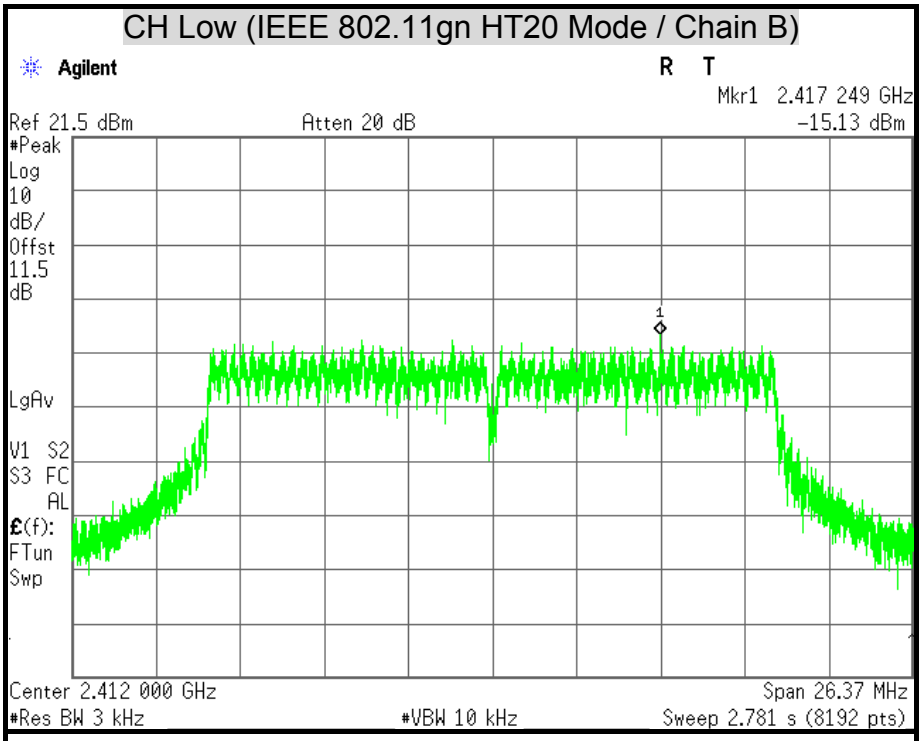
CH Middle (IEEE 802.11gn HT20 Mode / Chain A)



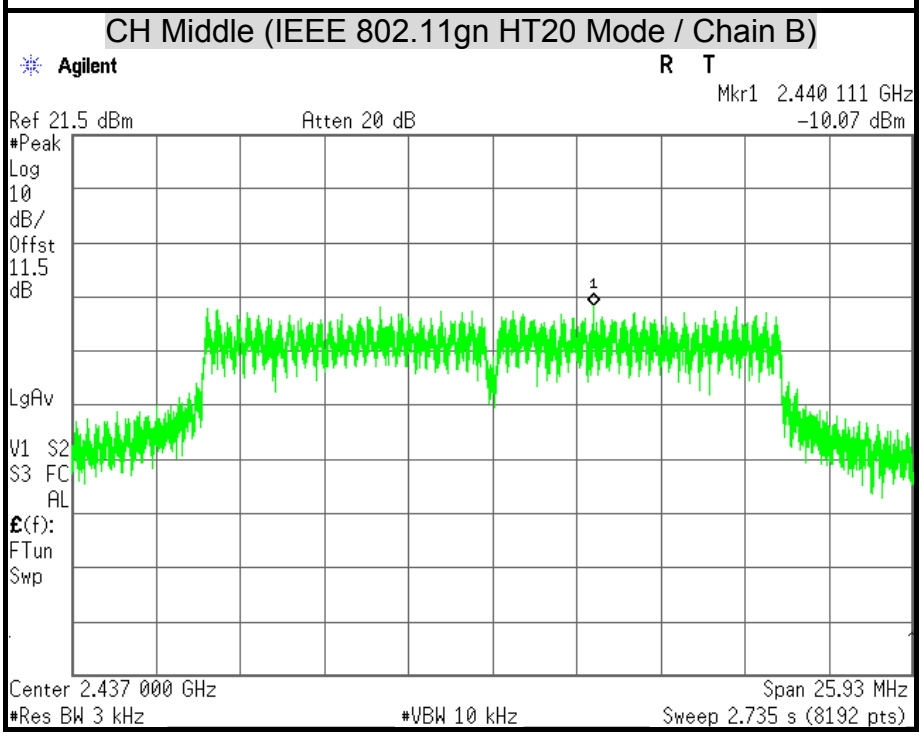
CH High (IEEE 802.11gn HT20 Mode / Chain A)



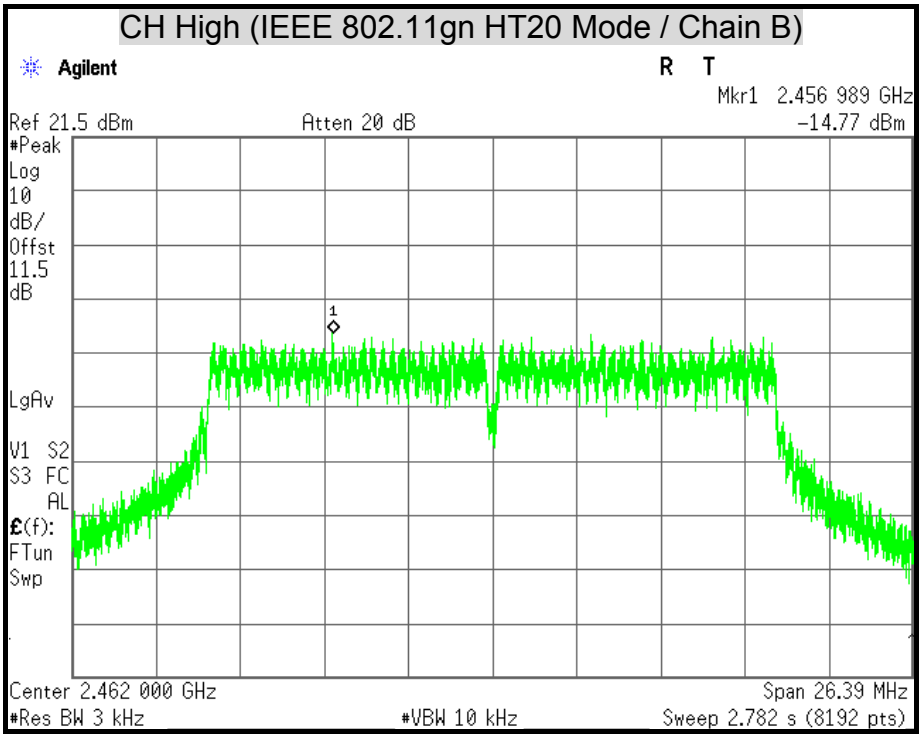
CH Low (IEEE 802.11gn HT20 Mode / Chain B)



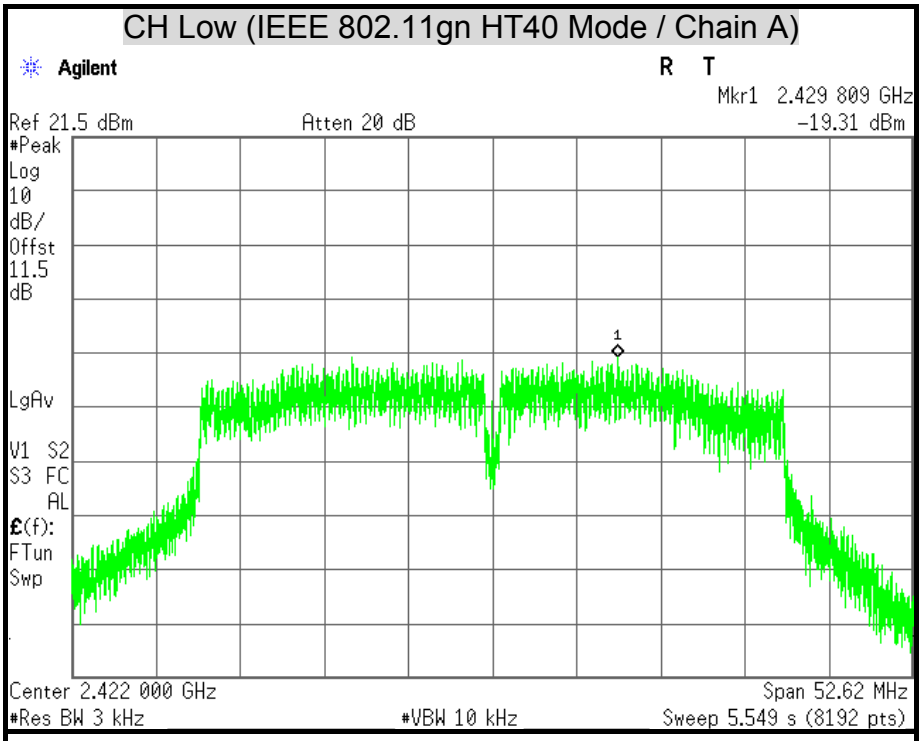
CH Middle (IEEE 802.11gn HT20 Mode / Chain B)



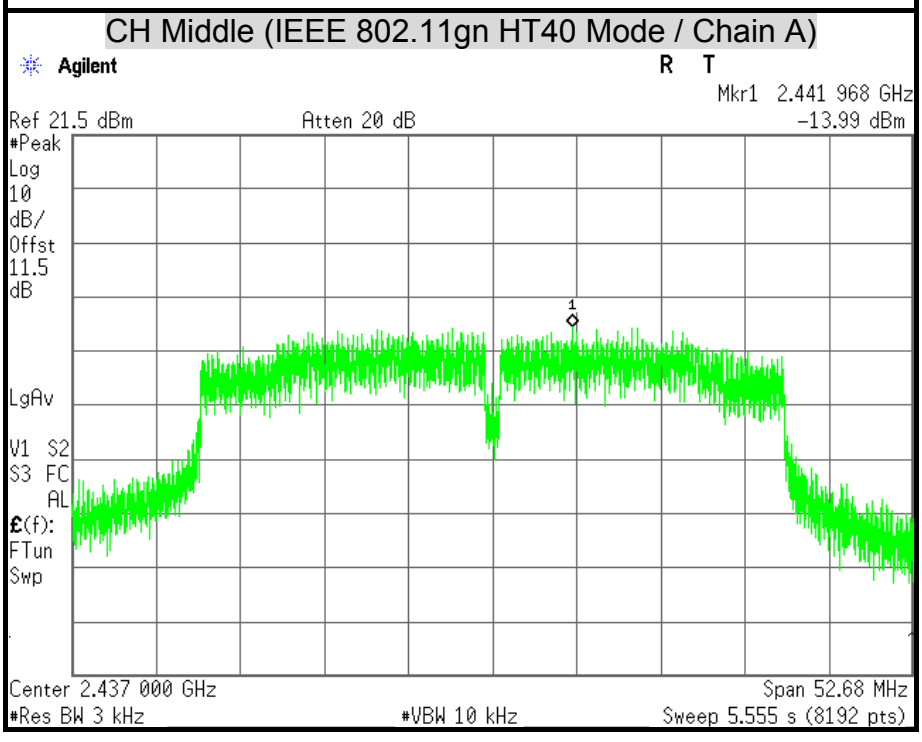
CH High (IEEE 802.11gn HT20 Mode / Chain B)



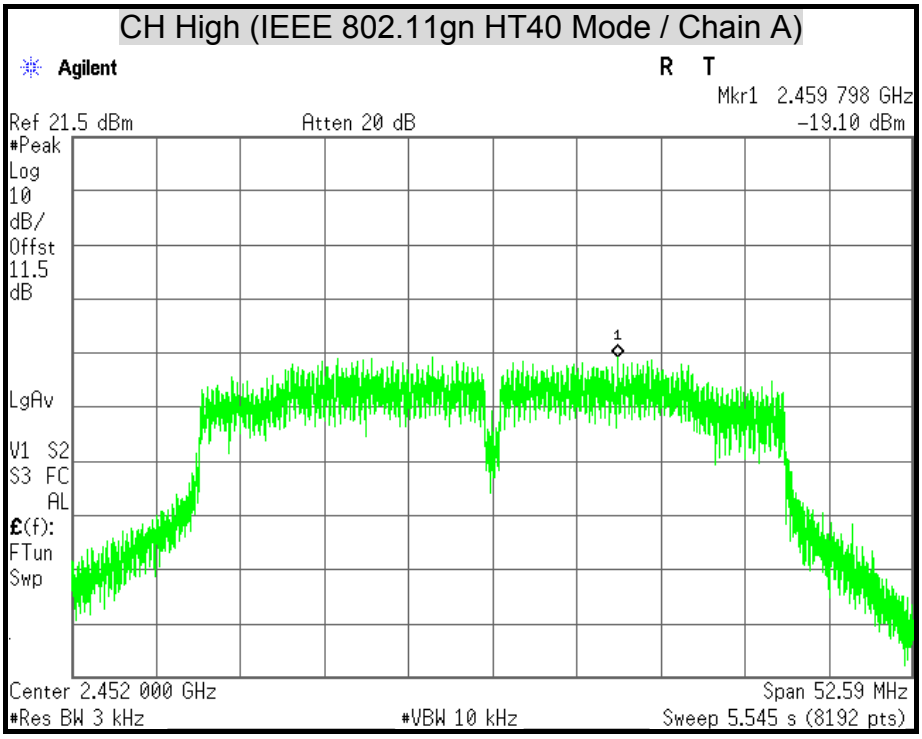
CH Low (IEEE 802.11gn HT40 Mode / Chain A)



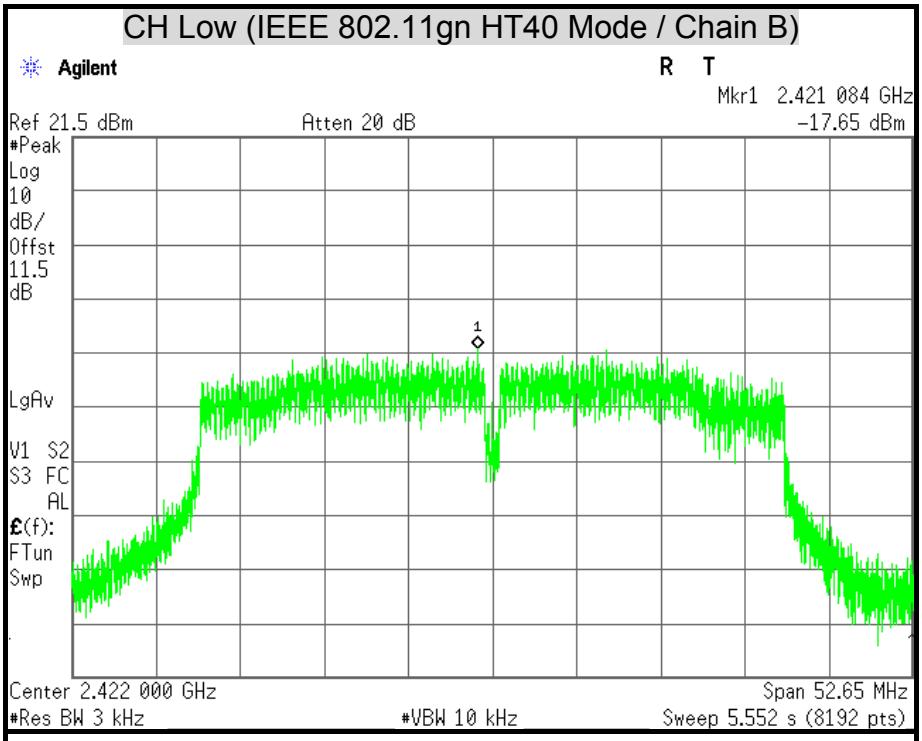
CH Middle (IEEE 802.11gn HT40 Mode / Chain A)



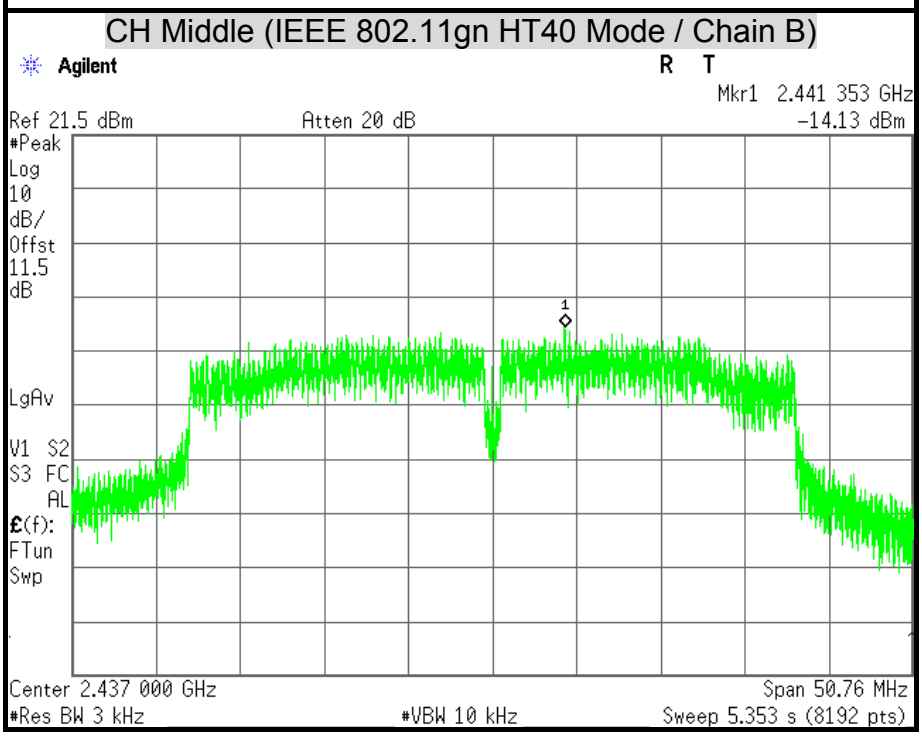
CH High (IEEE 802.11gn HT40 Mode / Chain A)



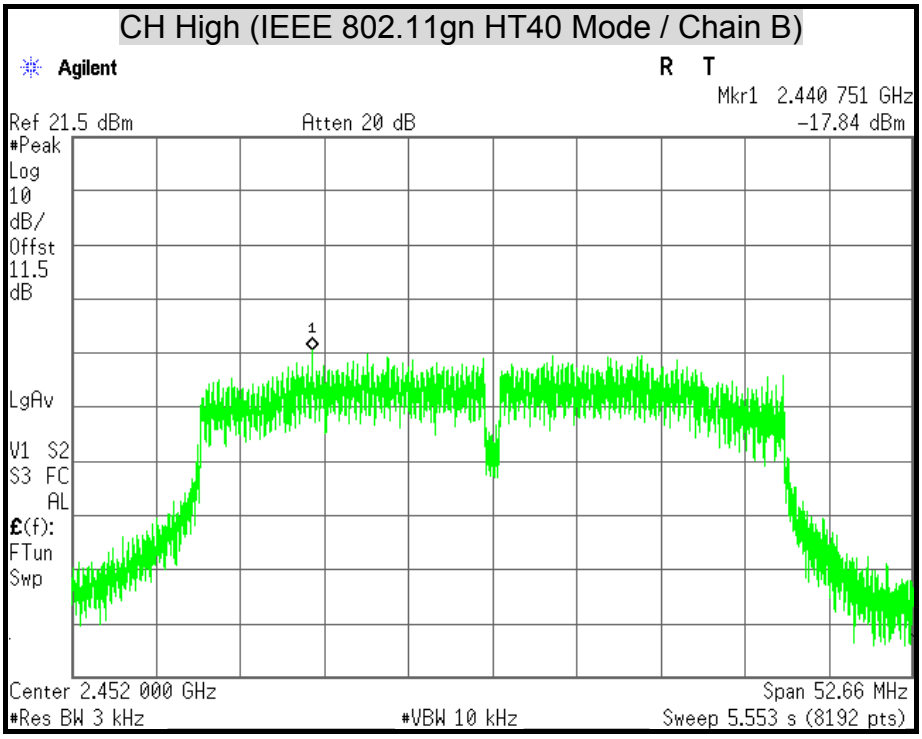
CH Low (IEEE 802.11gn HT40 Mode / Chain B)



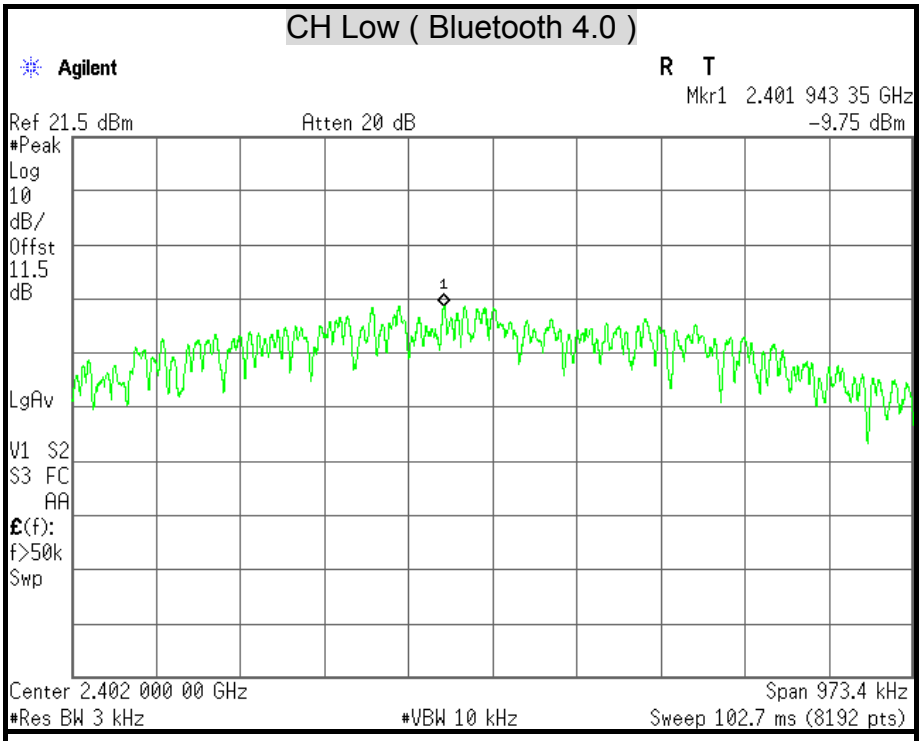
CH Middle (IEEE 802.11gn HT40 Mode / Chain B)



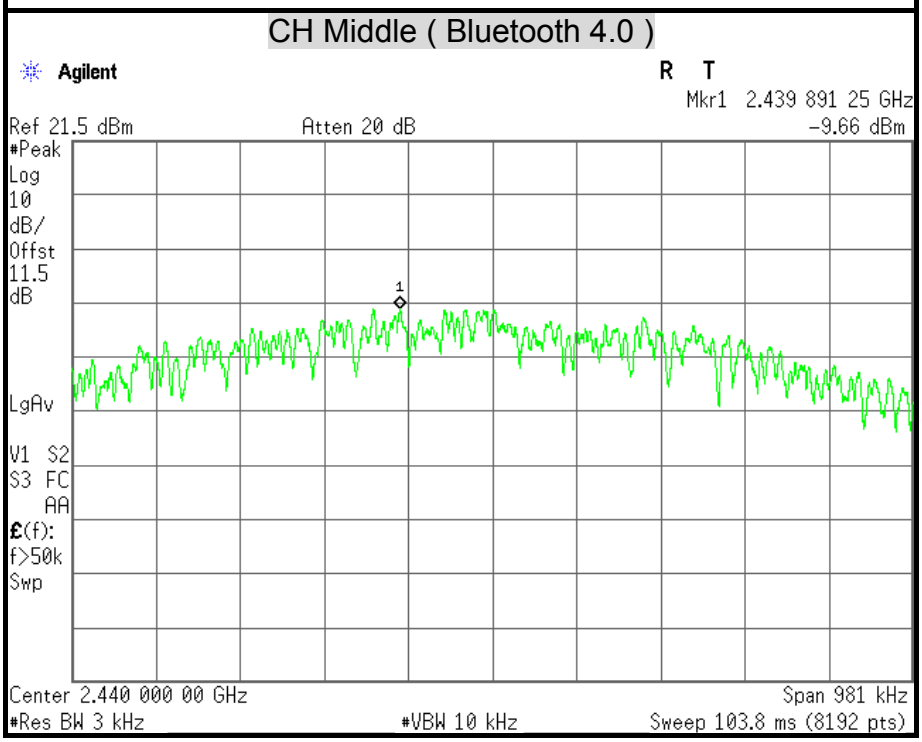
CH High (IEEE 802.11gn HT40 Mode / Chain B)



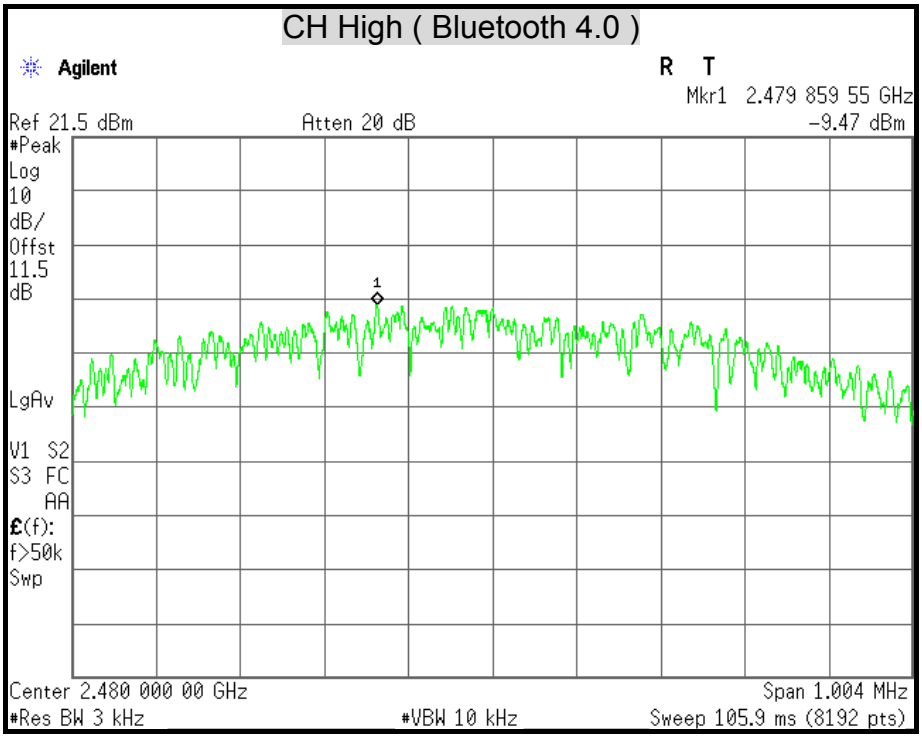
CH Low (Bluetooth 4.0)



CH Middle (Bluetooth 4.0)



CH High (Bluetooth 4.0)



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

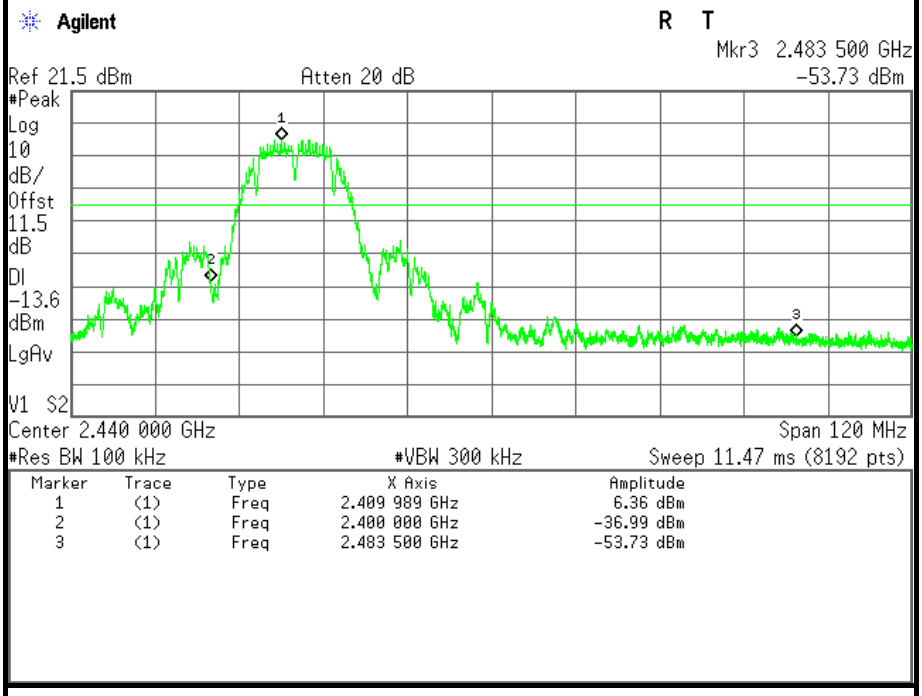
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

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.

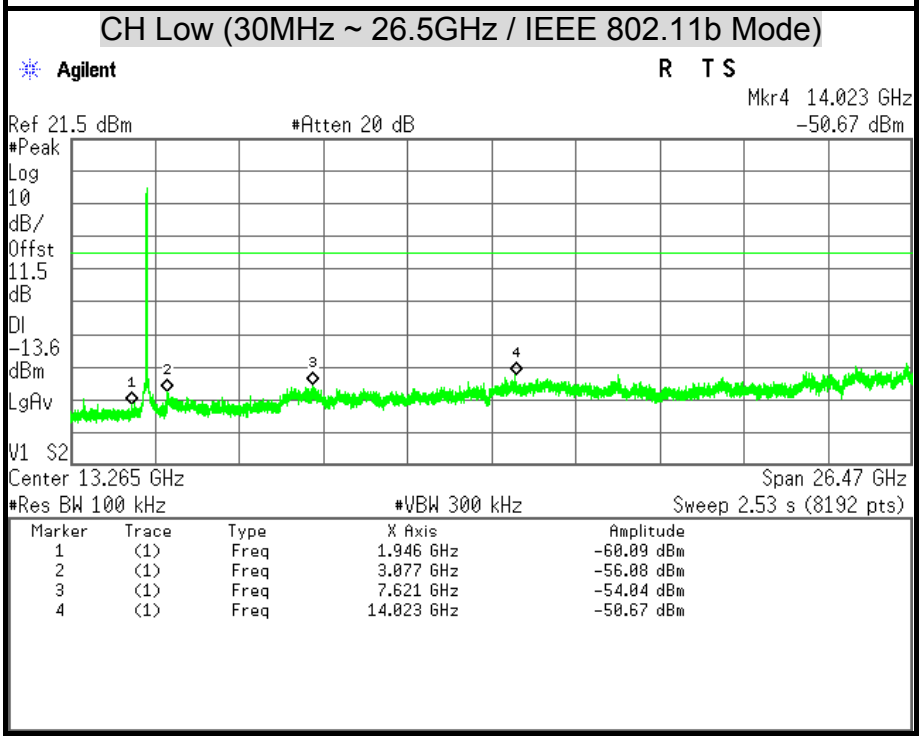
TEST RESULTS

OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

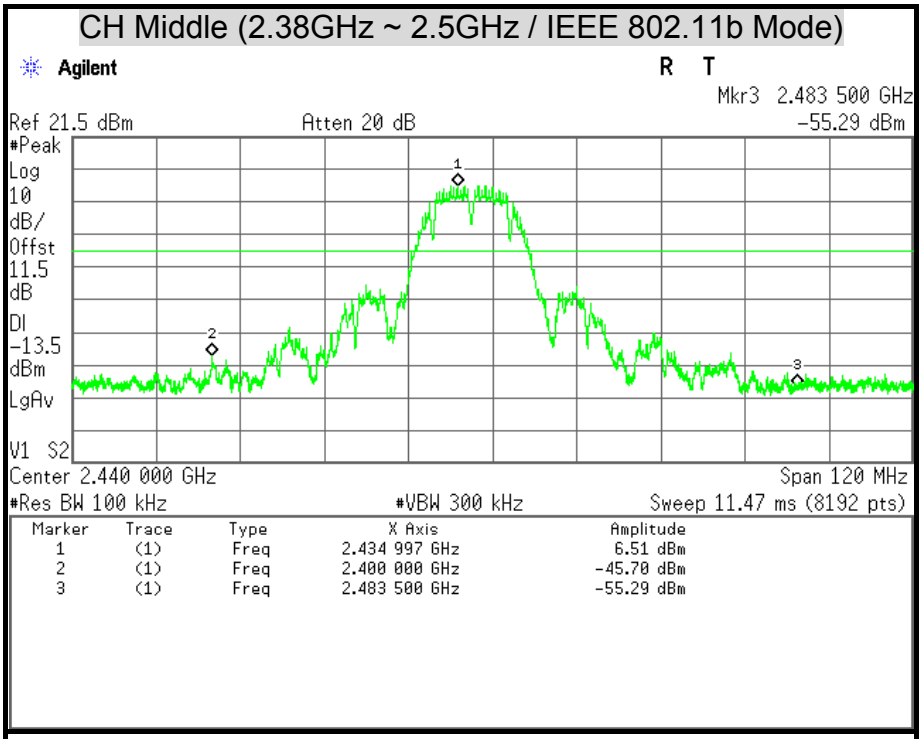
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode)



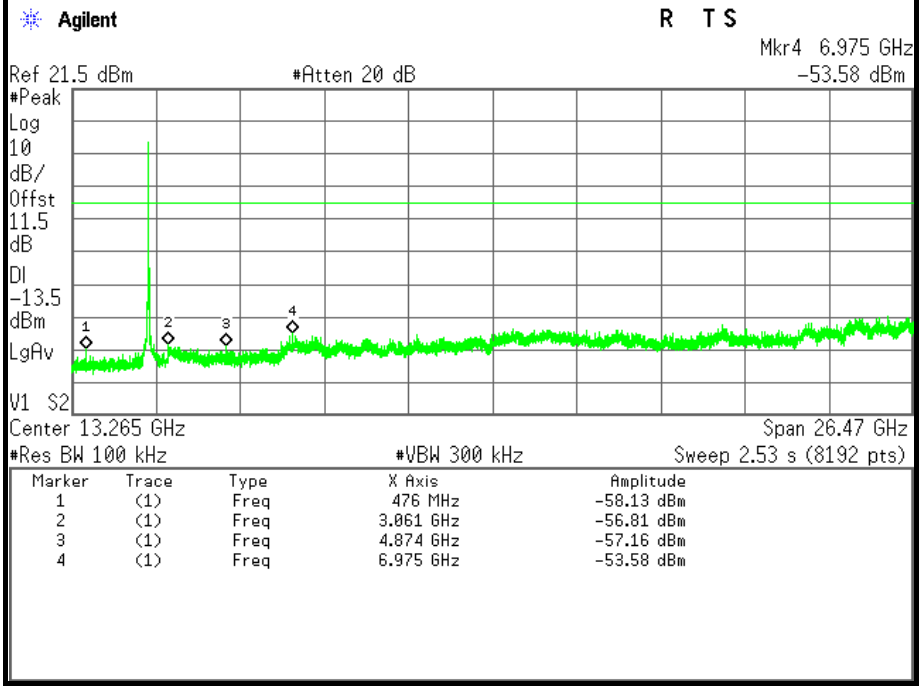
CH Low (30MHz ~ 26.5GHz / IEEE 802.11b Mode)



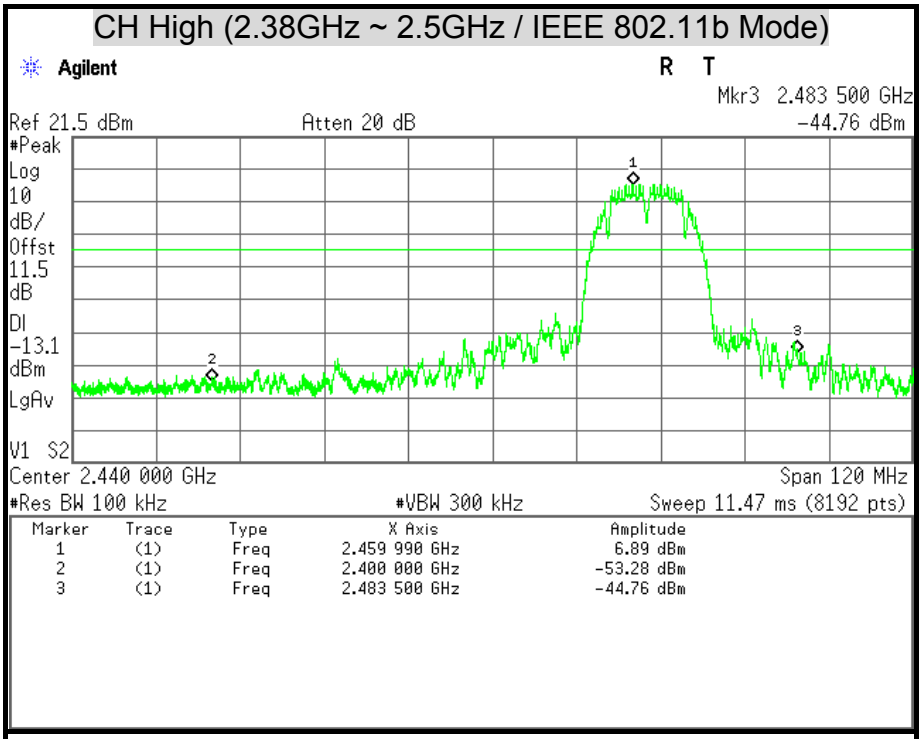
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode)



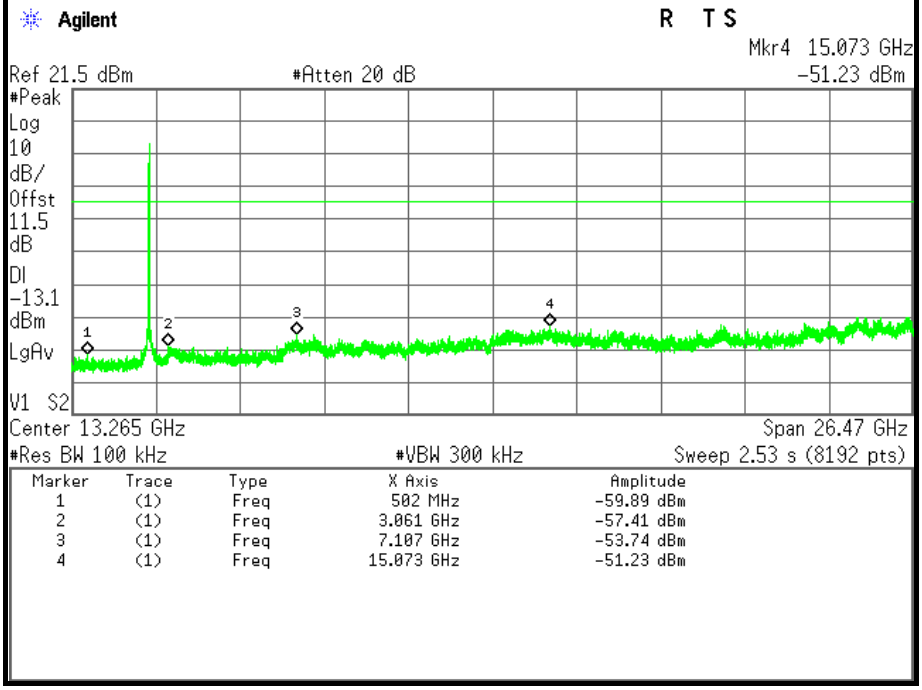
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b Mode)



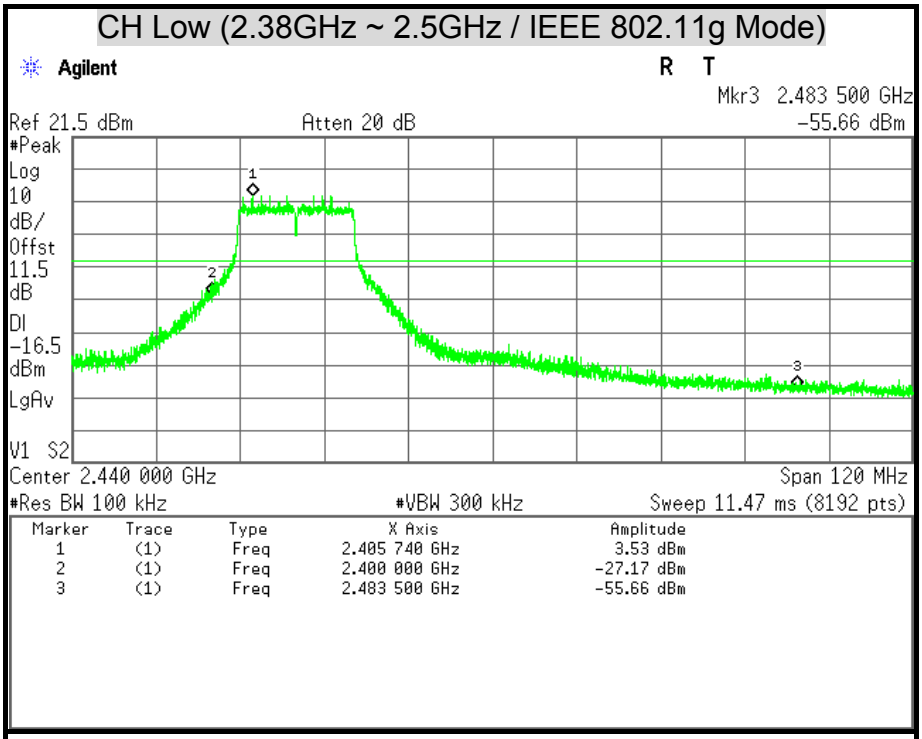
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode)



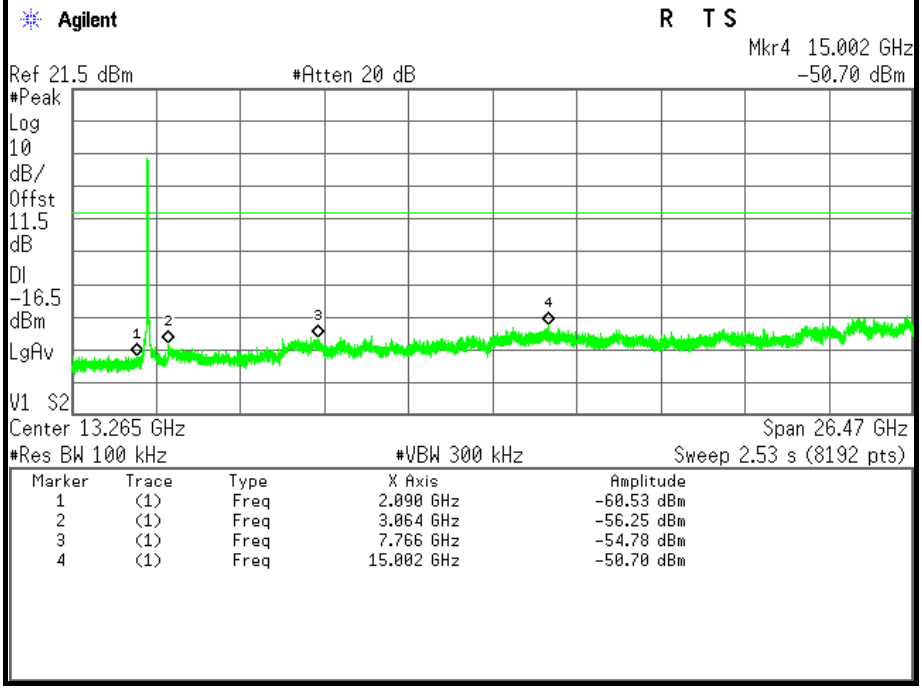
CH High (30MHz ~ 26.5GHz / IEEE 802.11b Mode)



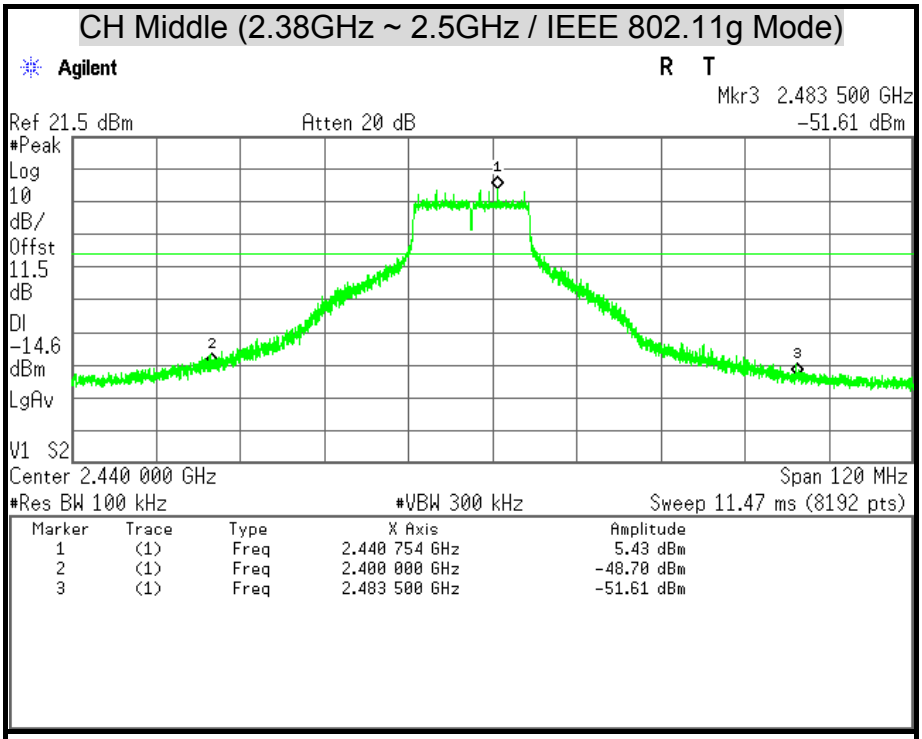
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode)



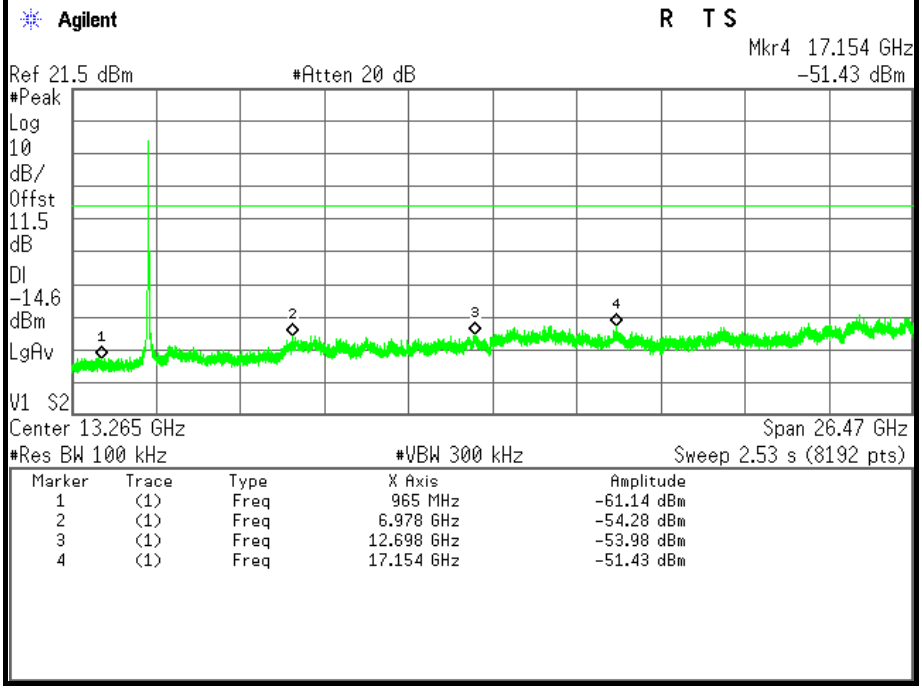
CH Low (30MHz ~ 26.5GHz / IEEE 802.11g Mode)



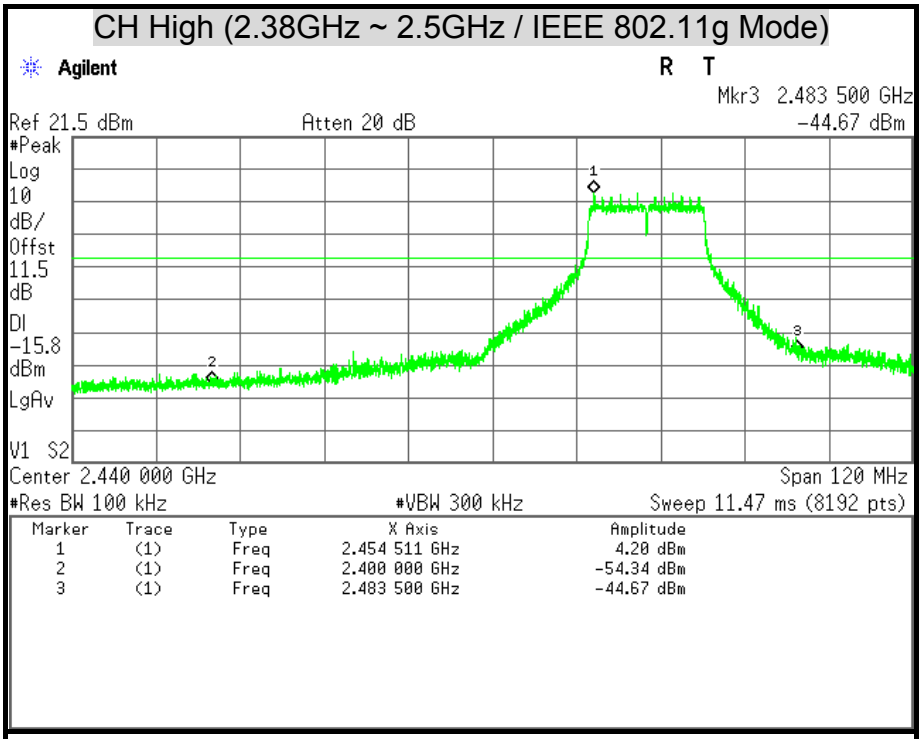
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode)



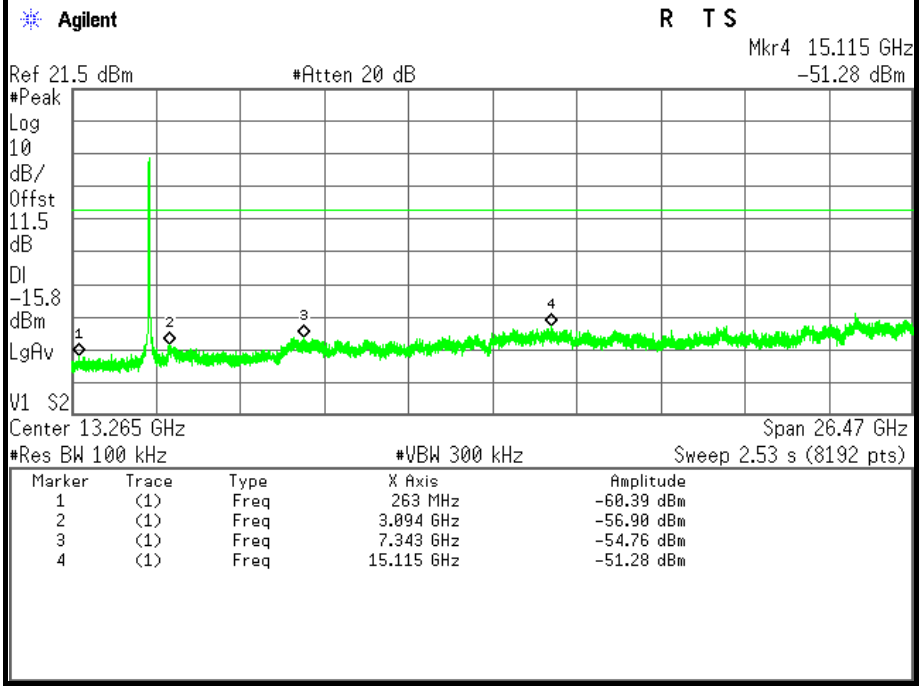
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g Mode)



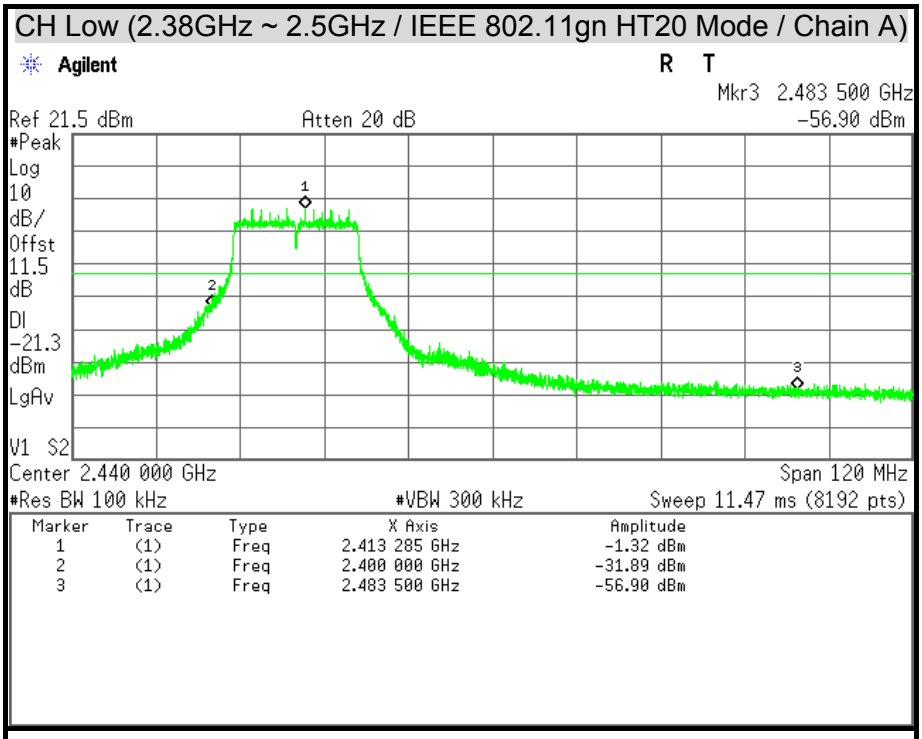
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode)



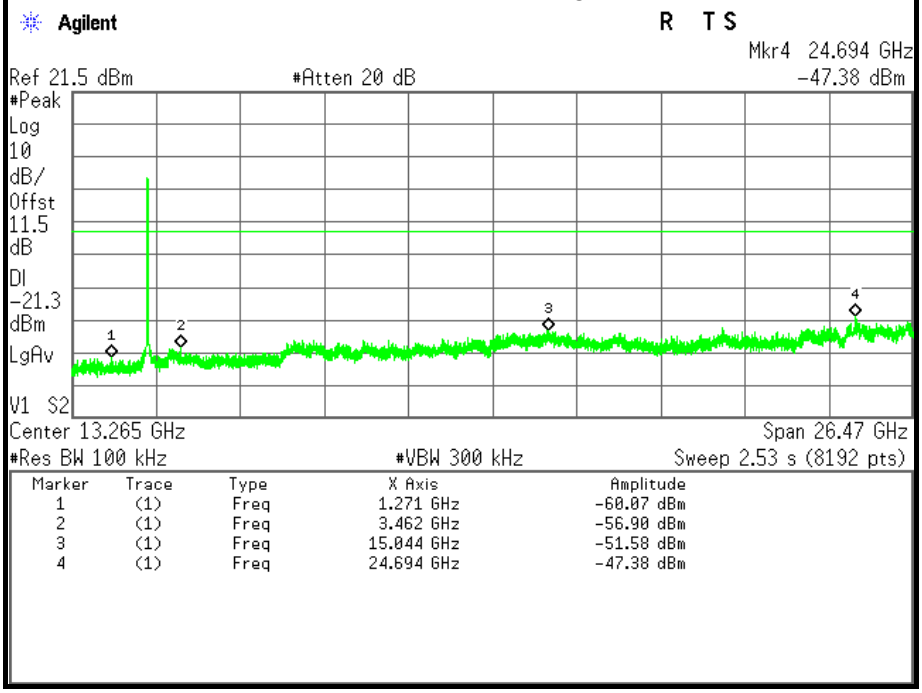
CH High (30MHz ~ 26.5GHz / IEEE 802.11g Mode)



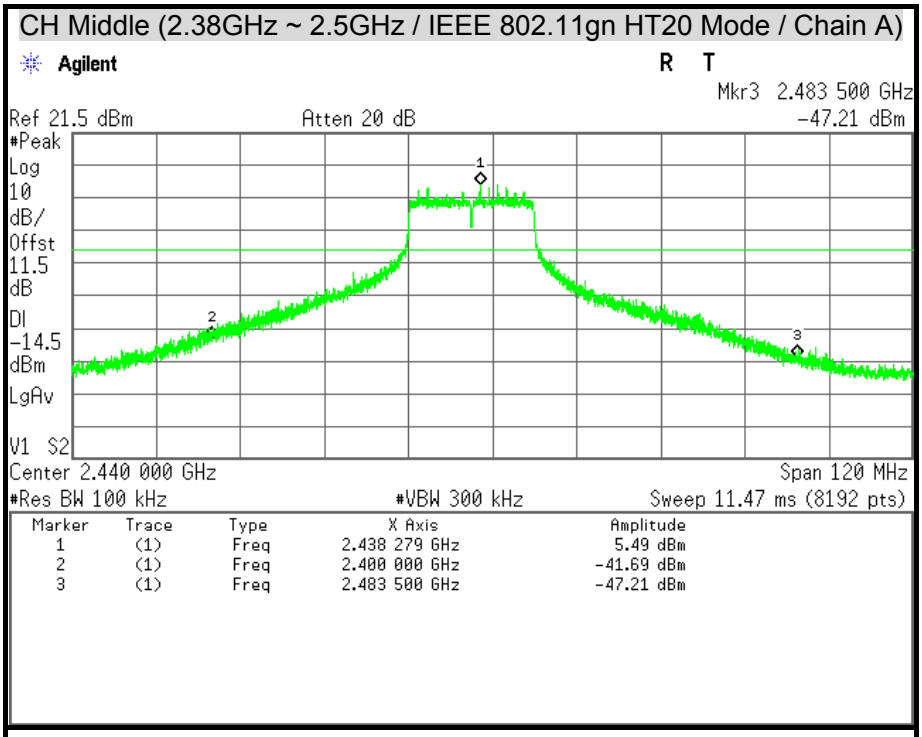
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain A)



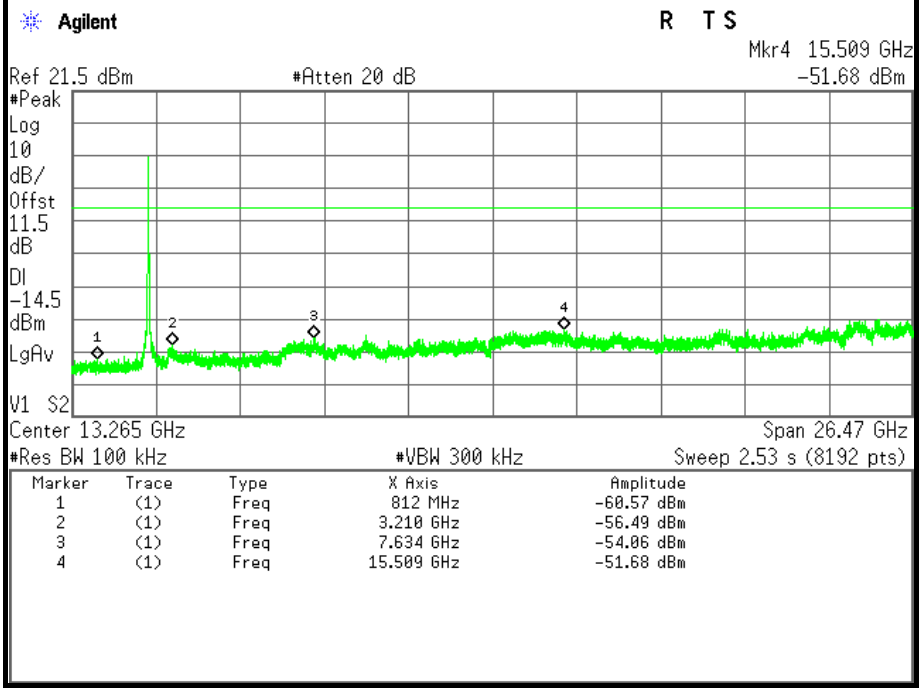
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain A)



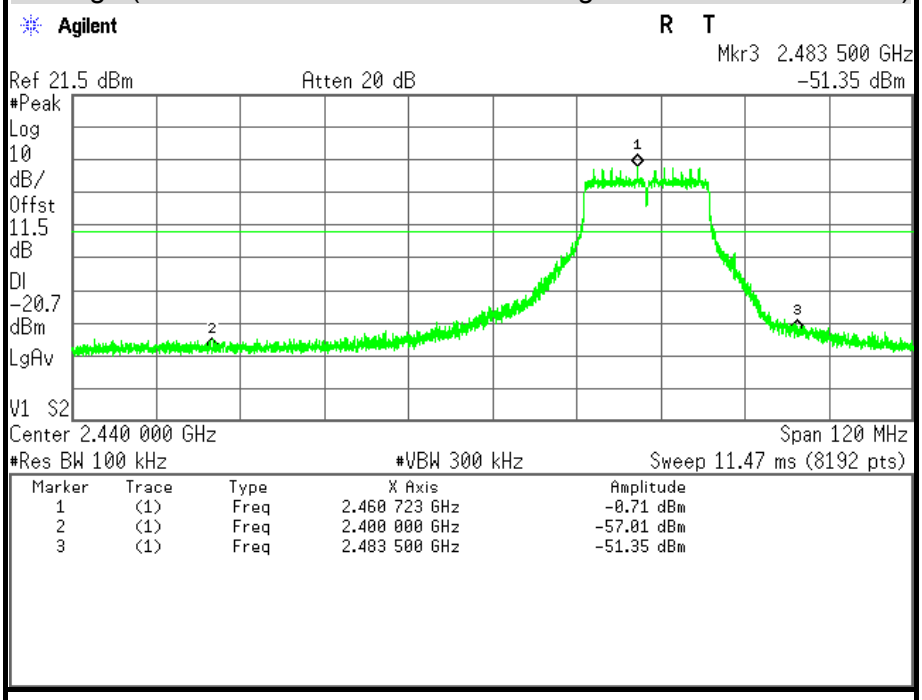
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain A)



CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain A)

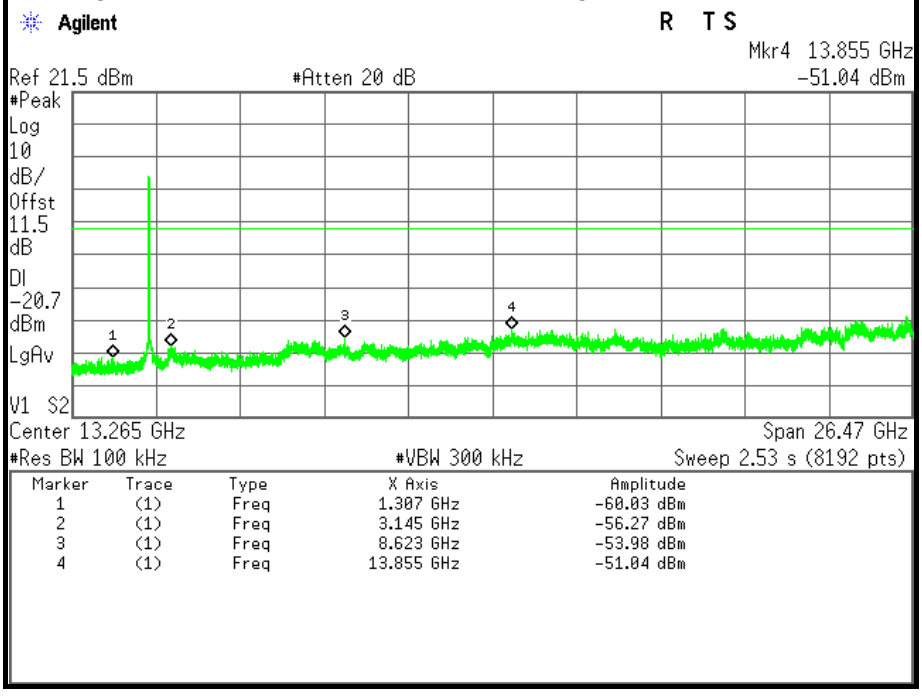


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain A)



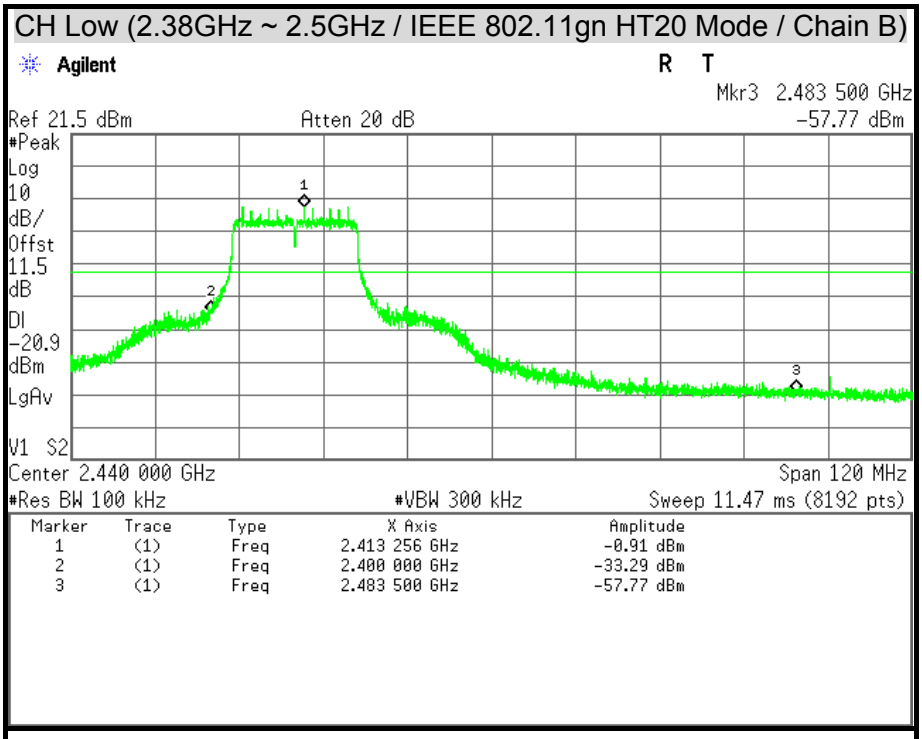
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.460 723 GHz	-0.71 dBm
2	(1)	Freq	2.400 000 GHz	-57.01 dBm
3	(1)	Freq	2.483 500 GHz	-51.35 dBm

CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain A)



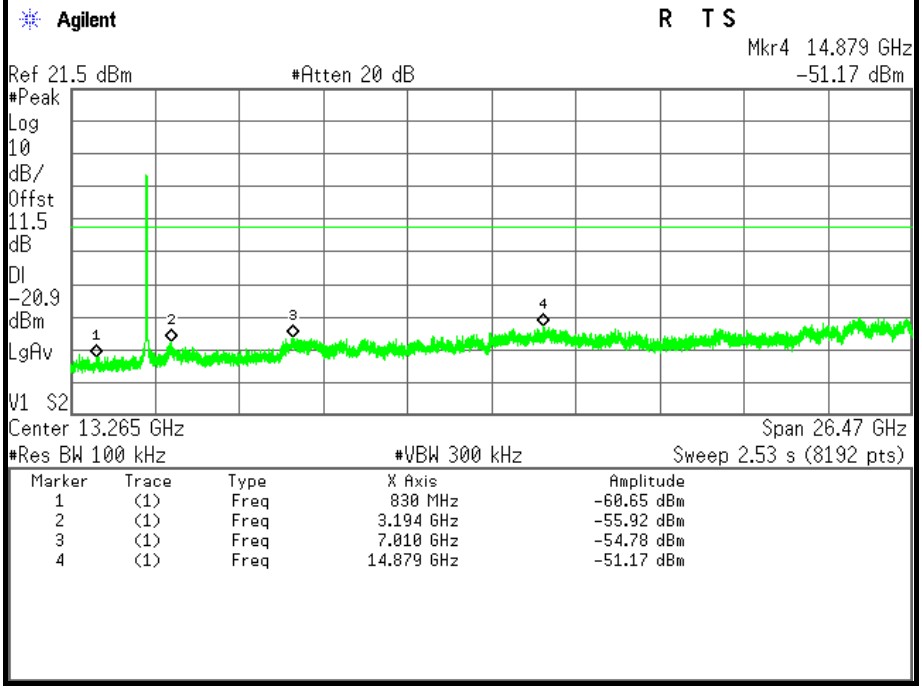
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.307 GHz	-60.03 dBm
2	(1)	Freq	3.145 GHz	-56.27 dBm
3	(1)	Freq	8.623 GHz	-53.98 dBm
4	(1)	Freq	13.855 GHz	-51.04 dBm

CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain B)



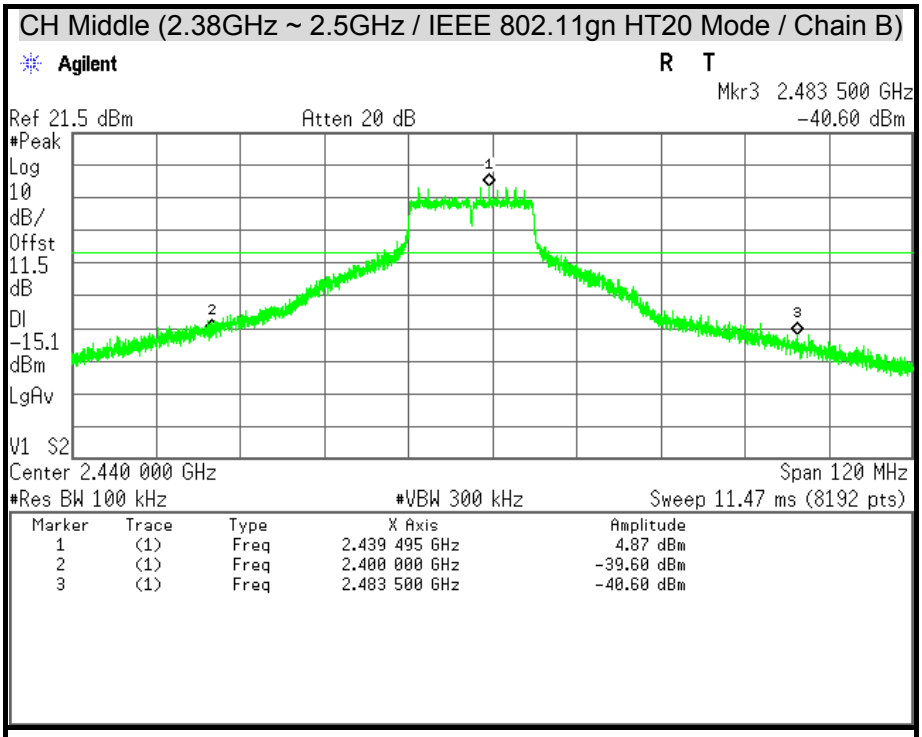
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.413 256 GHz	-0.91 dBm
2	(1)	Freq	2.400 000 GHz	-33.29 dBm
3	(1)	Freq	2.483 500 GHz	-57.77 dBm

CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain B)



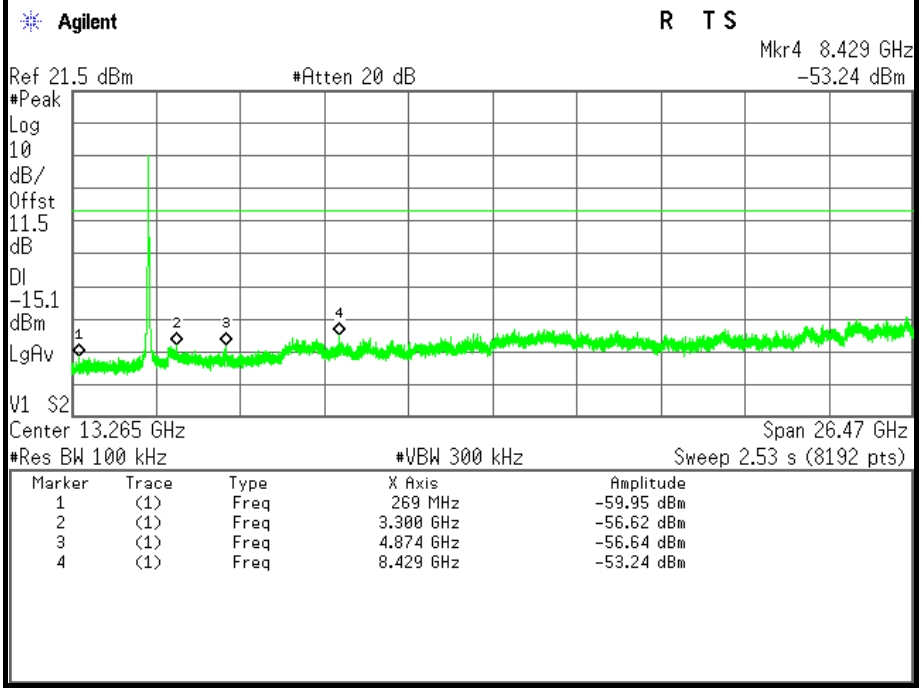
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	830 MHz	-60.65 dBm
2	(1)	Freq	3.194 GHz	-55.92 dBm
3	(1)	Freq	7.010 GHz	-54.78 dBm
4	(1)	Freq	14.879 GHz	-51.17 dBm

CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain B)



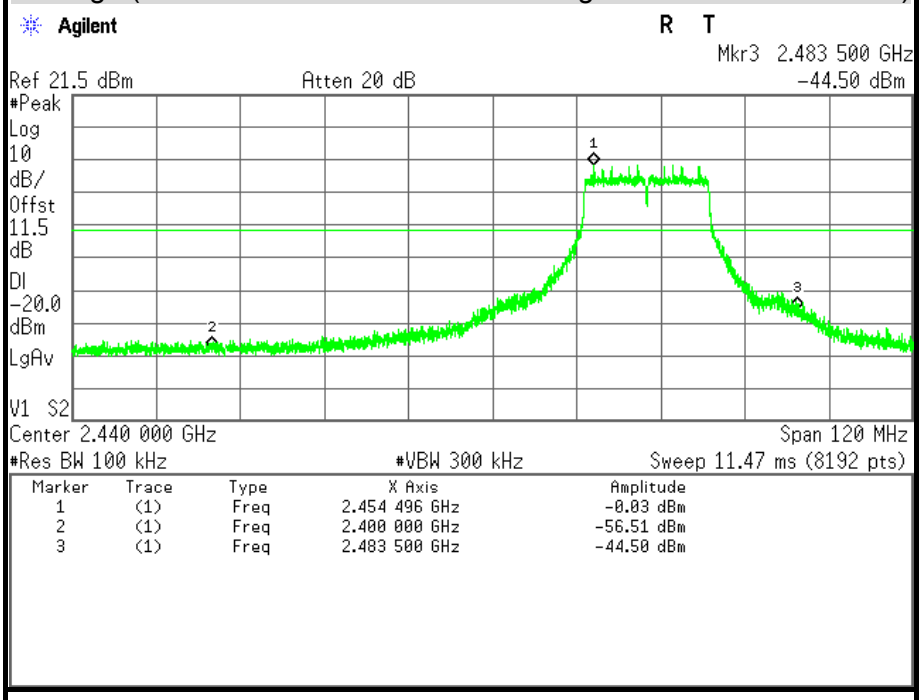
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.439 495 GHz	4.87 dBm
2	(1)	Freq	2.400 000 GHz	-39.60 dBm
3	(1)	Freq	2.483 500 GHz	-40.60 dBm

CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain B)

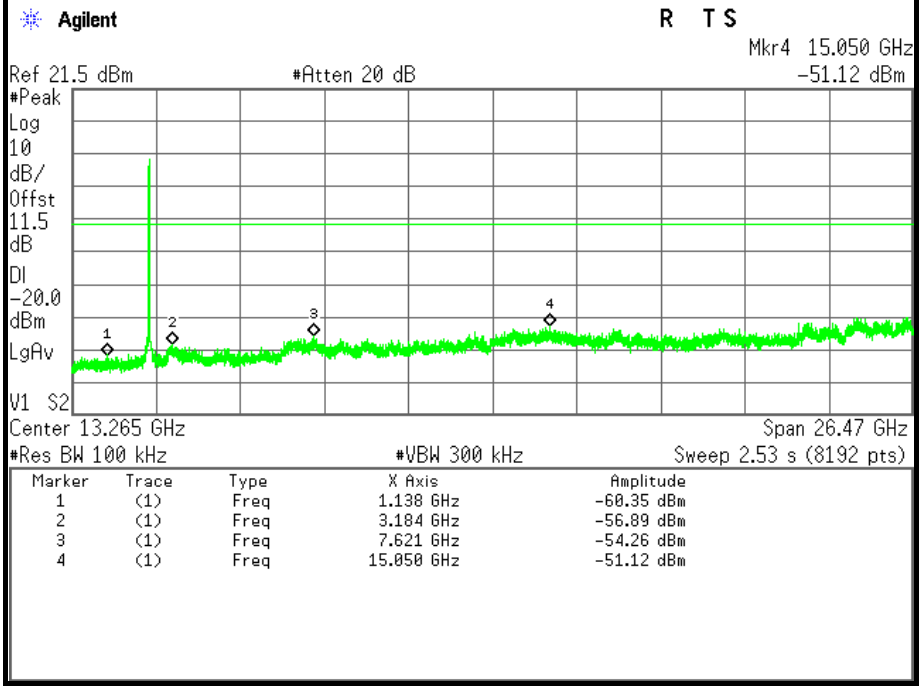


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	269 MHz	-59.95 dBm
2	(1)	Freq	3.300 GHz	-56.62 dBm
3	(1)	Freq	4.874 GHz	-56.64 dBm
4	(1)	Freq	8.429 GHz	-53.24 dBm

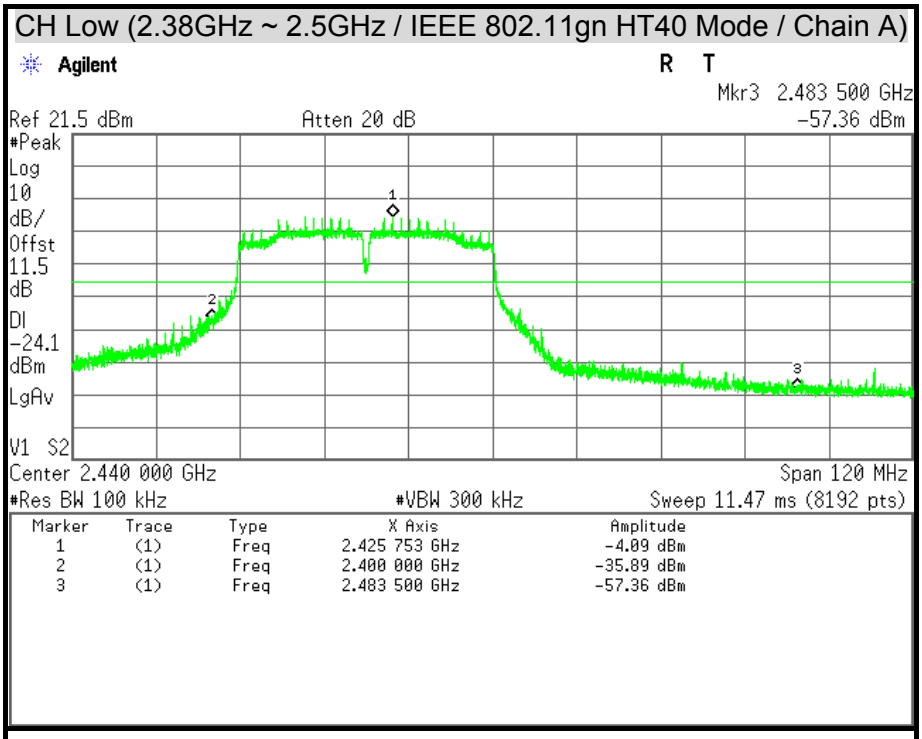
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain B)



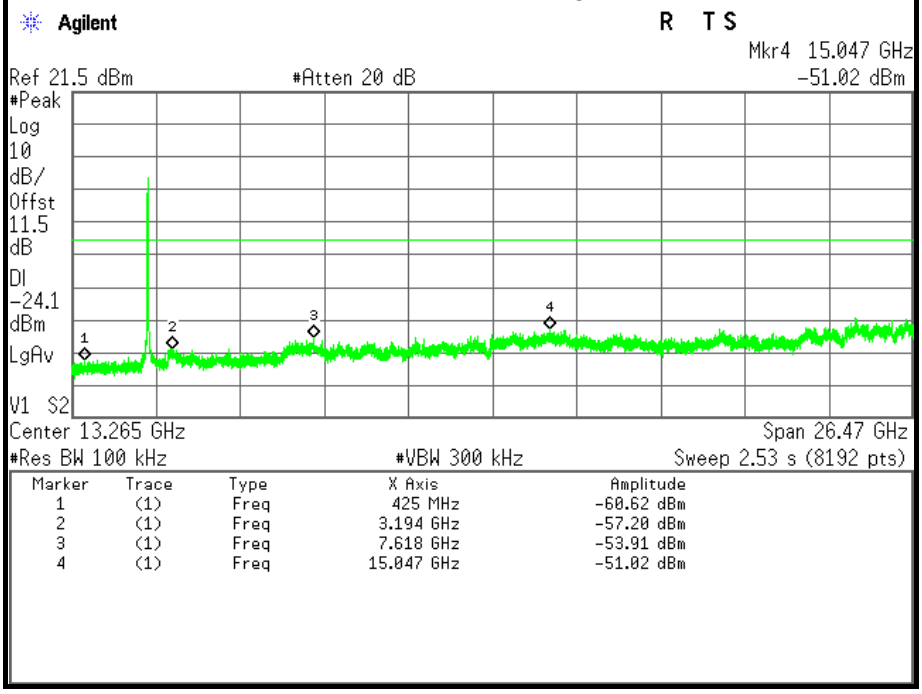
CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain B)



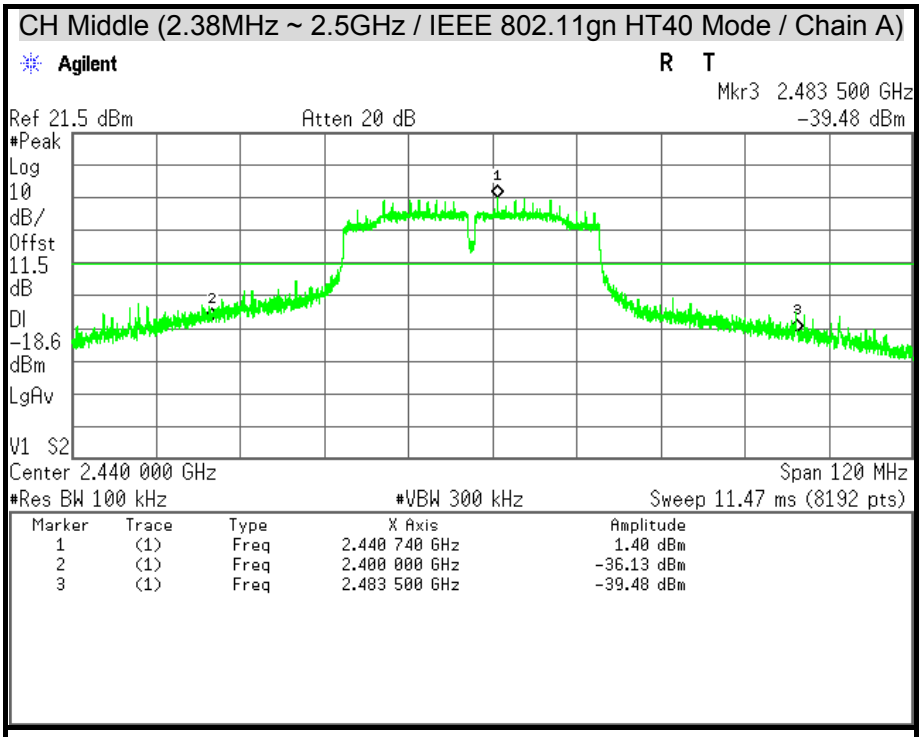
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain A)



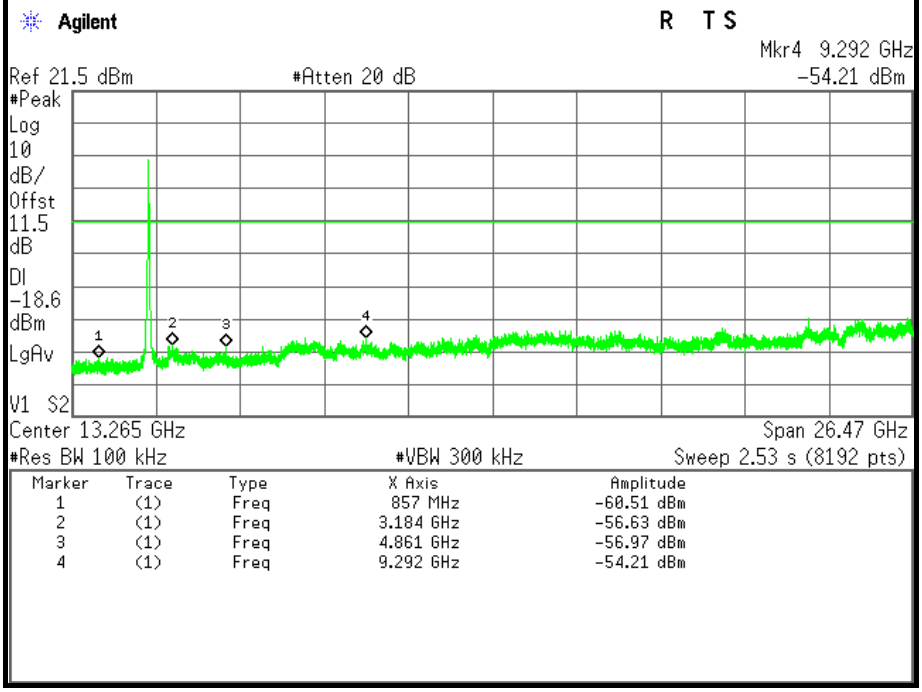
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain A)



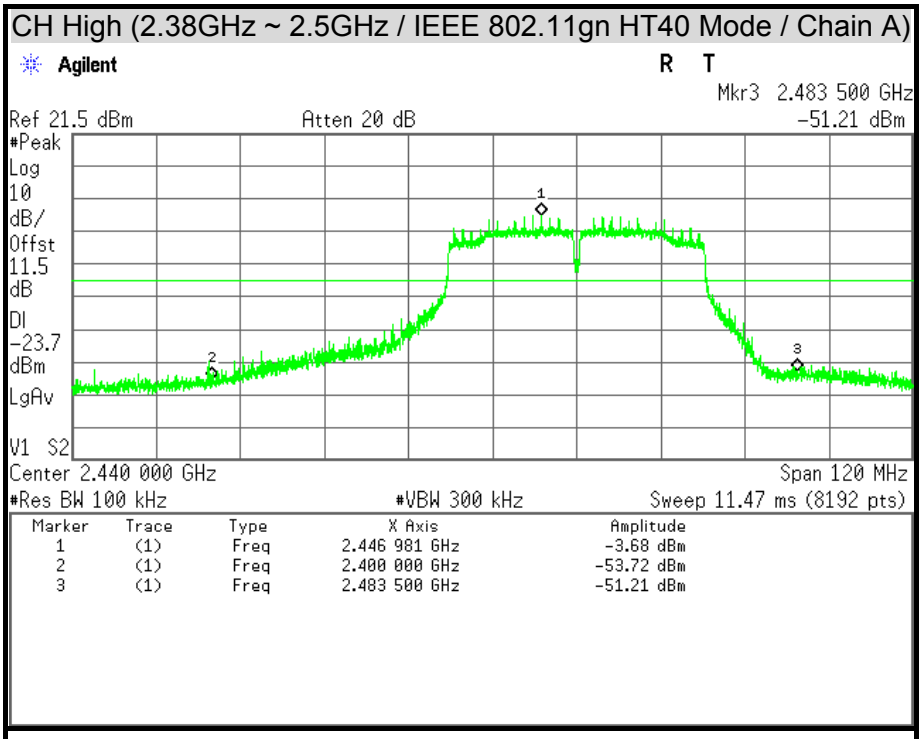
CH Middle (2.38MHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain A)



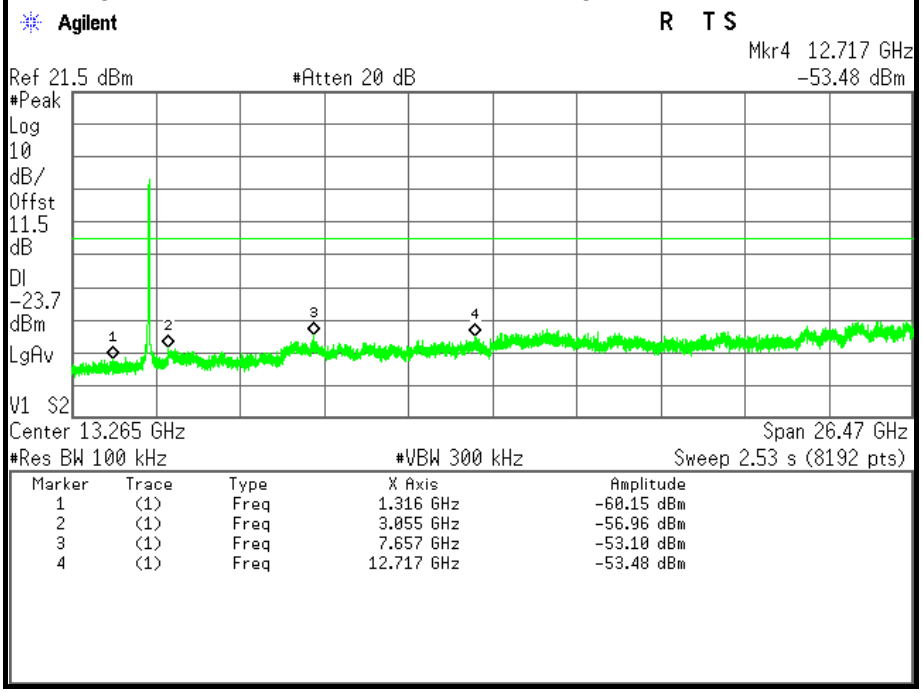
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain A)



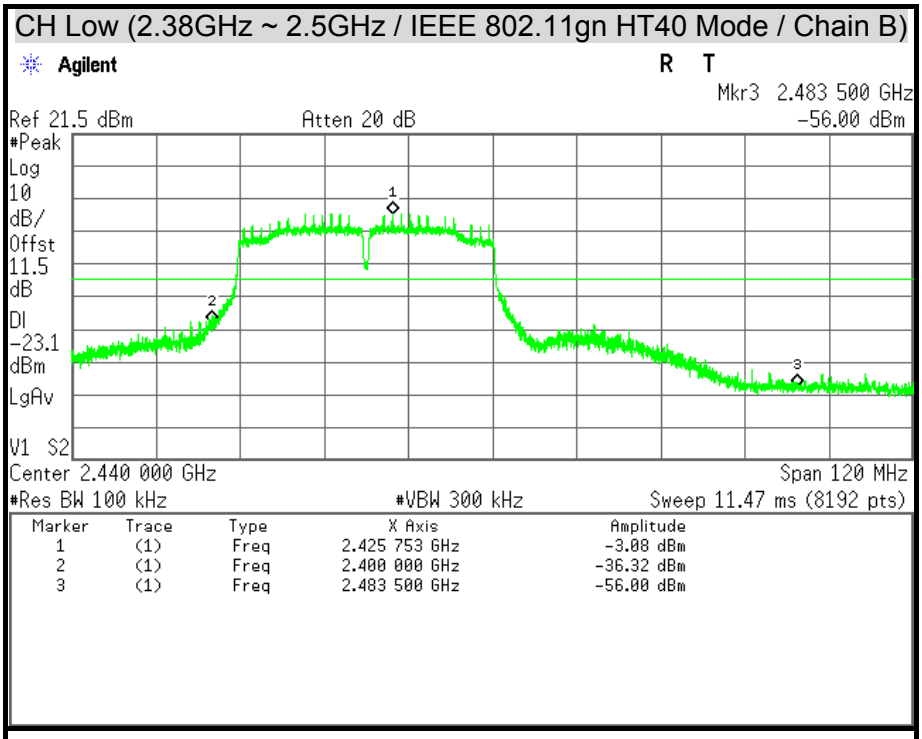
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain A)



CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode /Chain A)

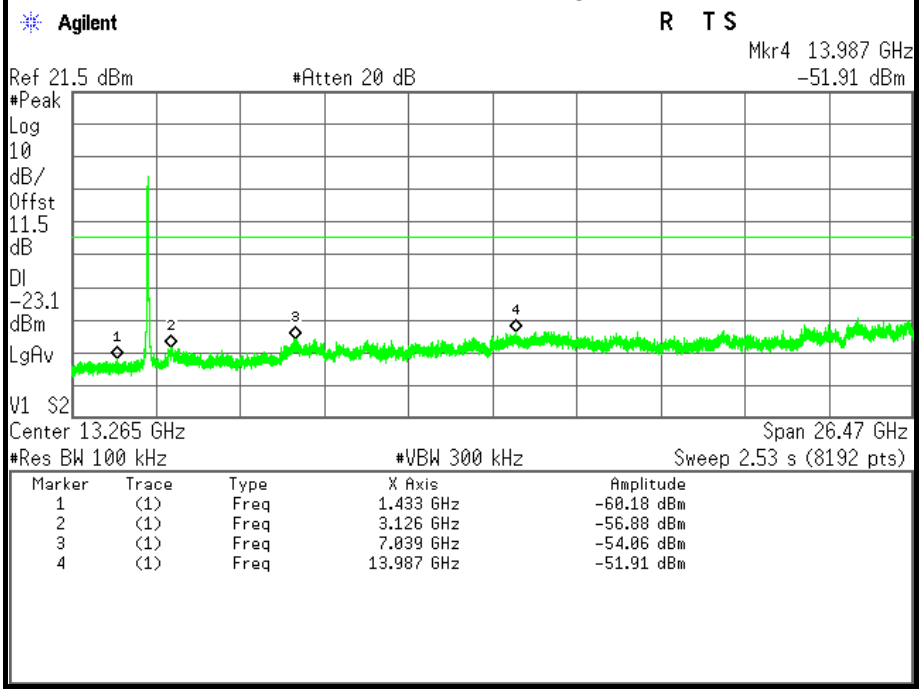


CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain B)



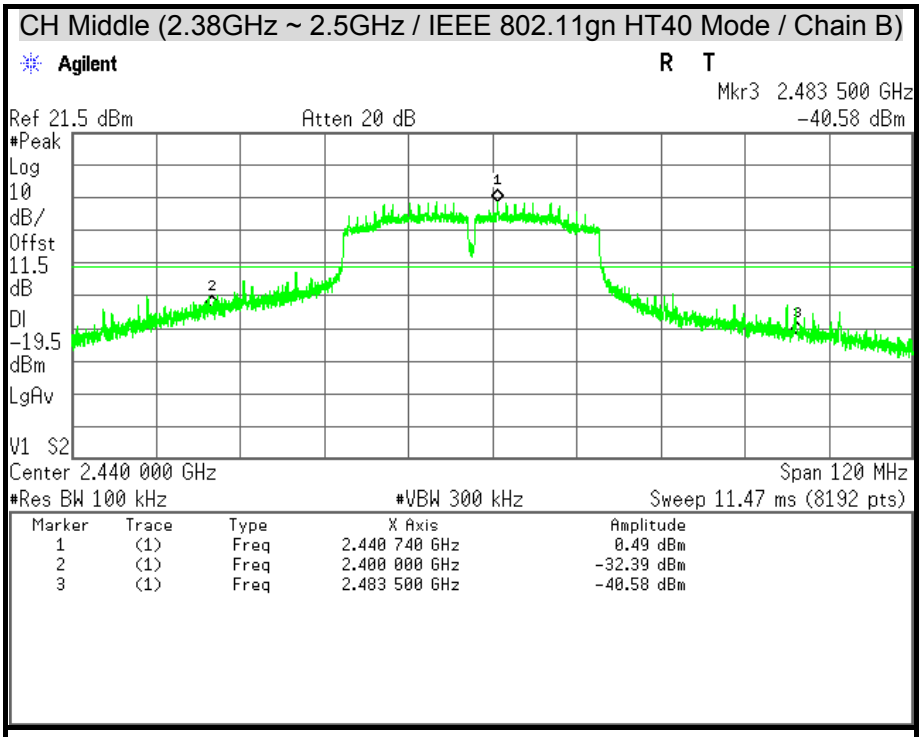
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.425 753 GHz	-3.08 dBm
2	(1)	Freq	2.400 000 GHz	-36.32 dBm
3	(1)	Freq	2.483 500 GHz	-56.00 dBm

CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain B)



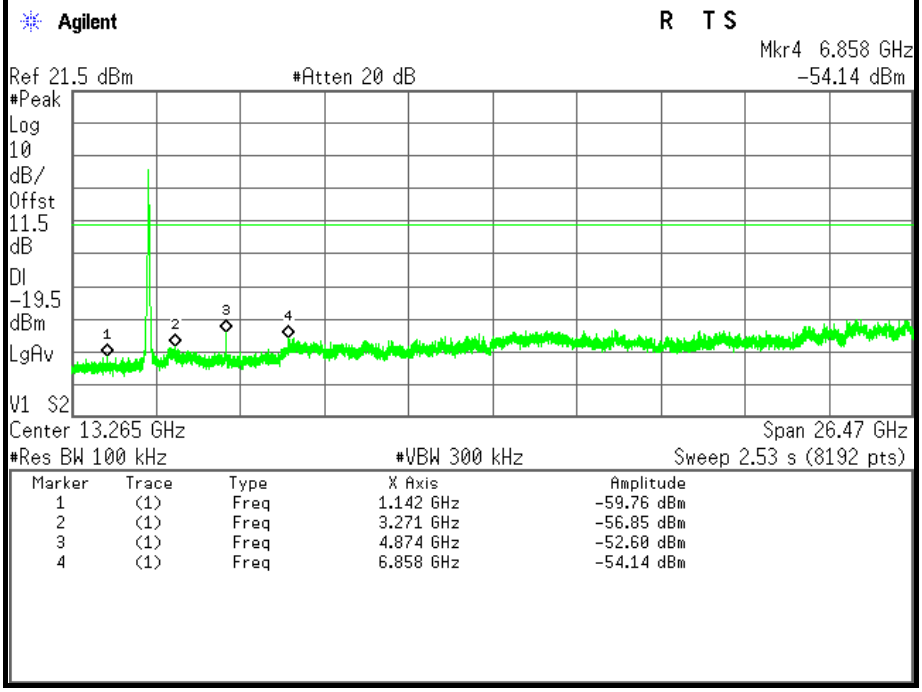
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.433 GHz	-60.18 dBm
2	(1)	Freq	3.126 GHz	-56.88 dBm
3	(1)	Freq	7.039 GHz	-54.06 dBm
4	(1)	Freq	13.987 GHz	-51.91 dBm

CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain B)



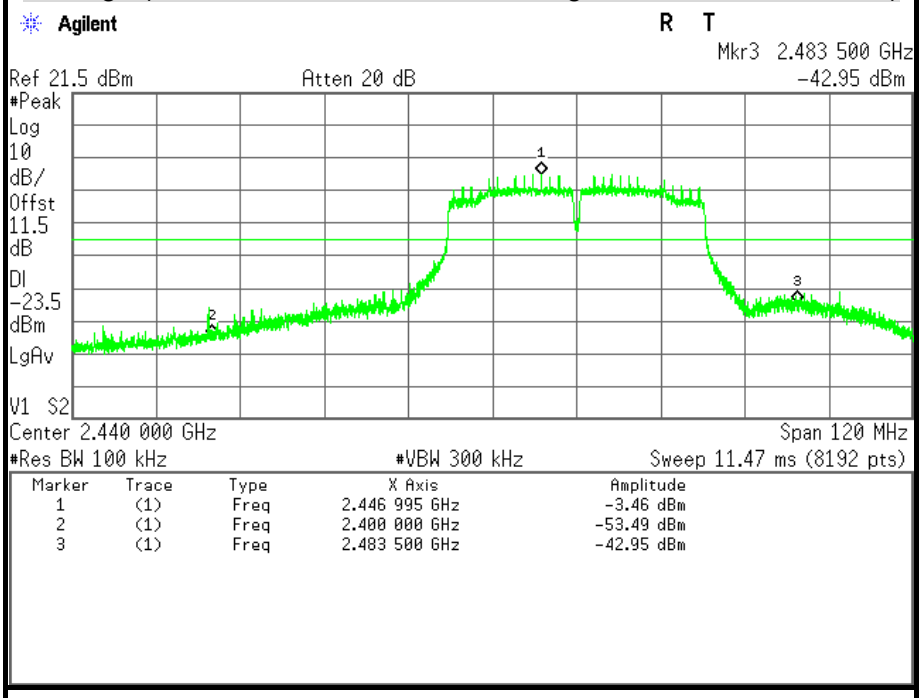
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.440 740 GHz	0.49 dBm
2	(1)	Freq	2.400 000 GHz	-32.39 dBm
3	(1)	Freq	2.483 500 GHz	-40.58 dBm

CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain B)

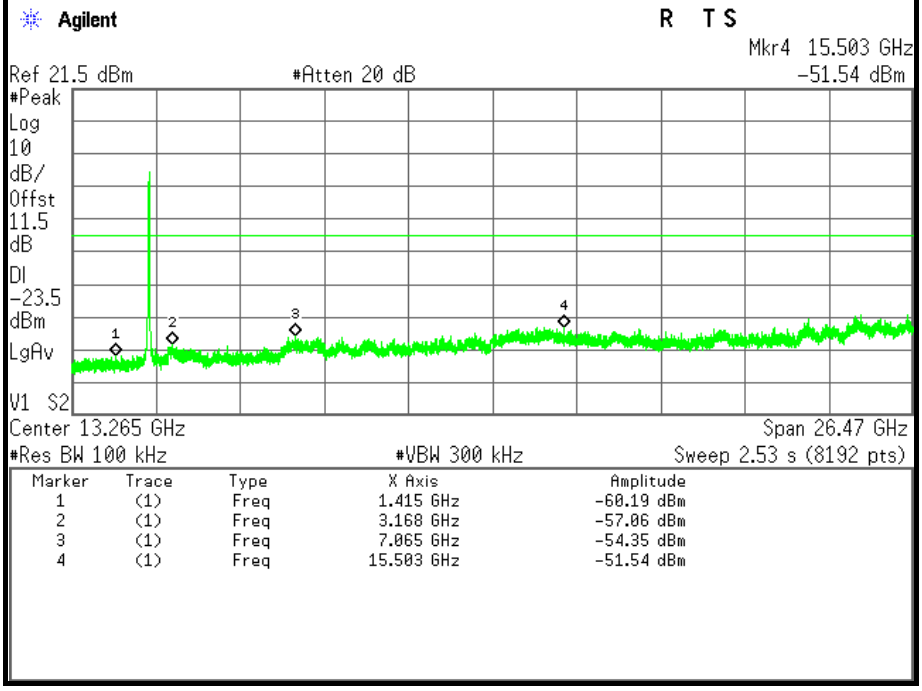


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	1.142 GHz	-59.76 dBm
2	(1)	Freq	3.271 GHz	-56.85 dBm
3	(1)	Freq	4.874 GHz	-52.60 dBm
4	(1)	Freq	6.858 GHz	-54.14 dBm

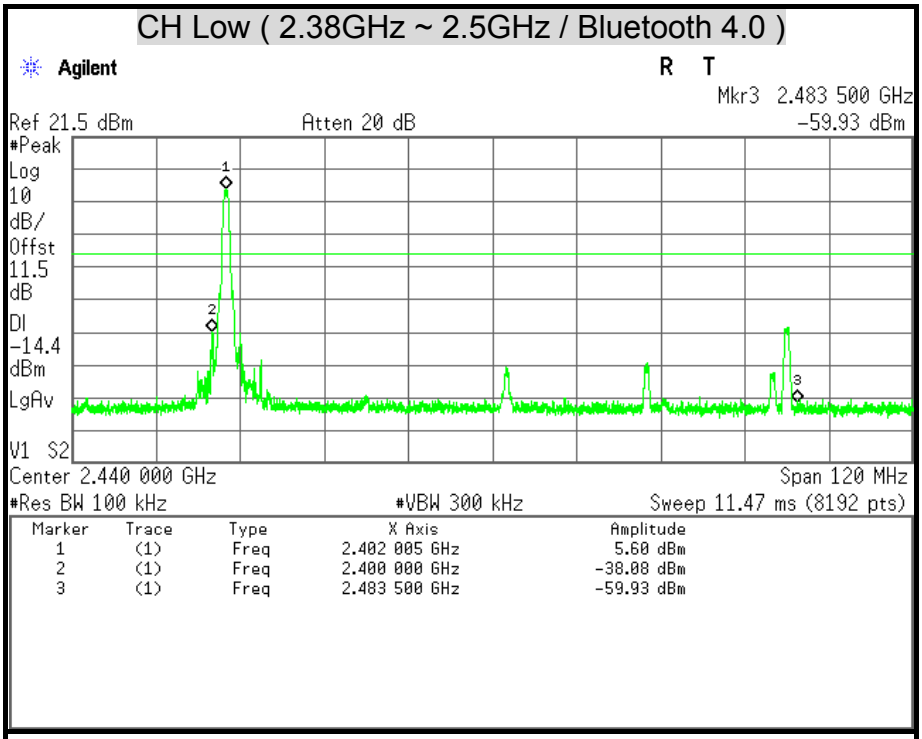
CH High (2.38Hz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain B)



CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain B)

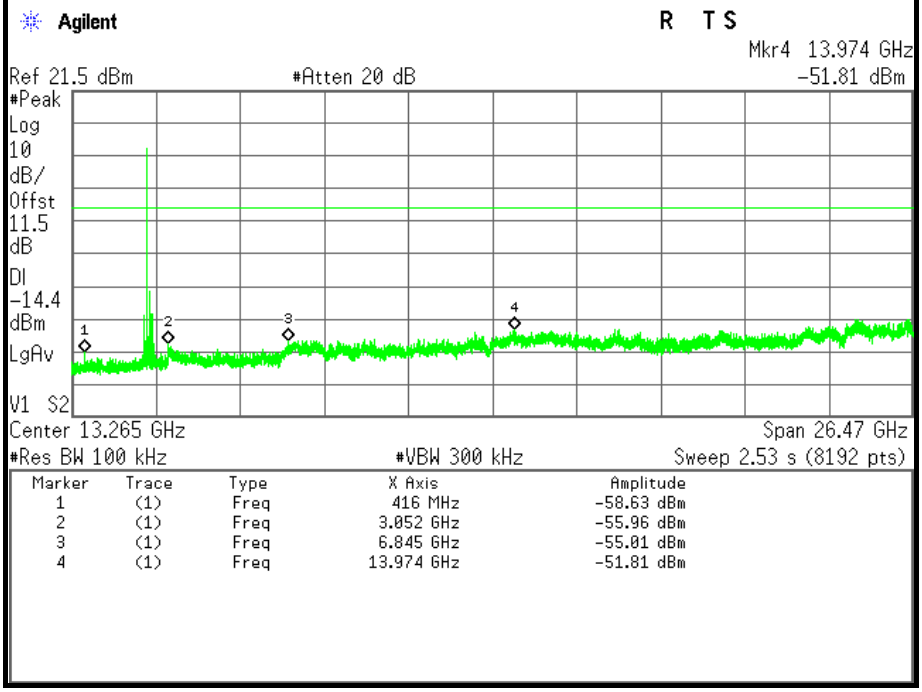


CH Low (2.38GHz ~ 2.5GHz / Bluetooth 4.0)



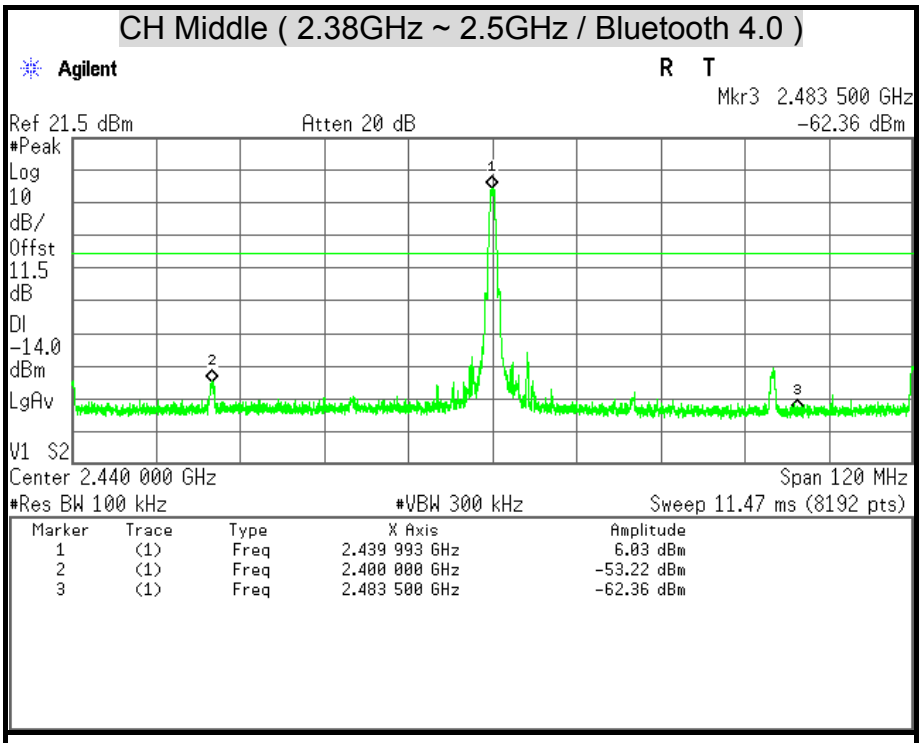
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.402 005 GHz	5.60 dBm
2	(1)	Freq	2.400 000 GHz	-38.08 dBm
3	(1)	Freq	2.483 500 GHz	-59.93 dBm

CH Low (30MHz ~ 26.5GHz / Bluetooth 4.0)

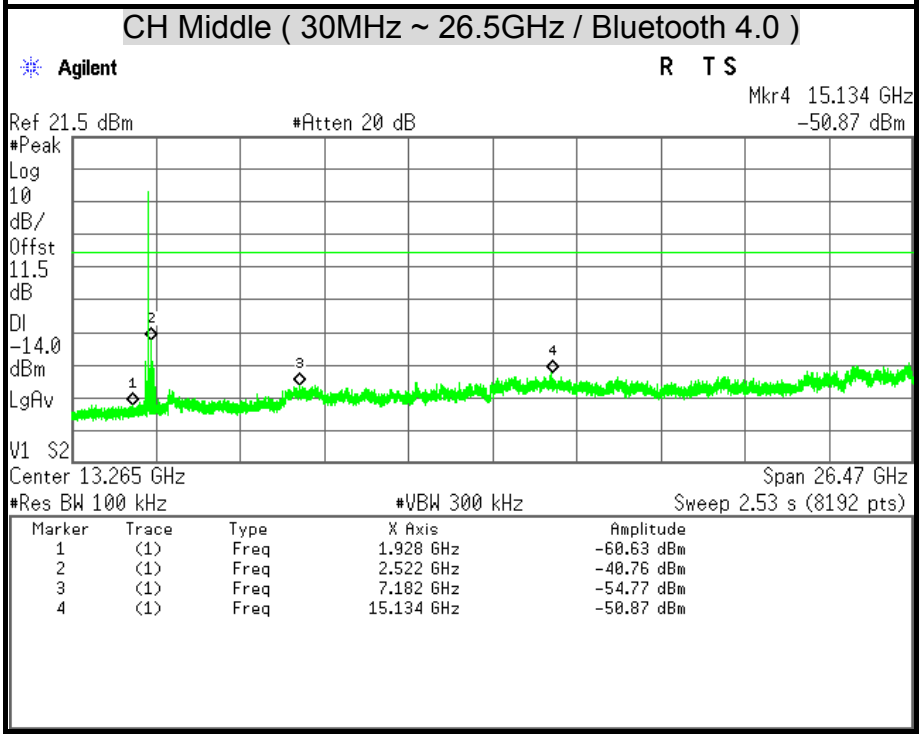


Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	416 MHz	-58.63 dBm
2	(1)	Freq	3.052 GHz	-55.96 dBm
3	(1)	Freq	6.845 GHz	-55.01 dBm
4	(1)	Freq	13.974 GHz	-51.81 dBm

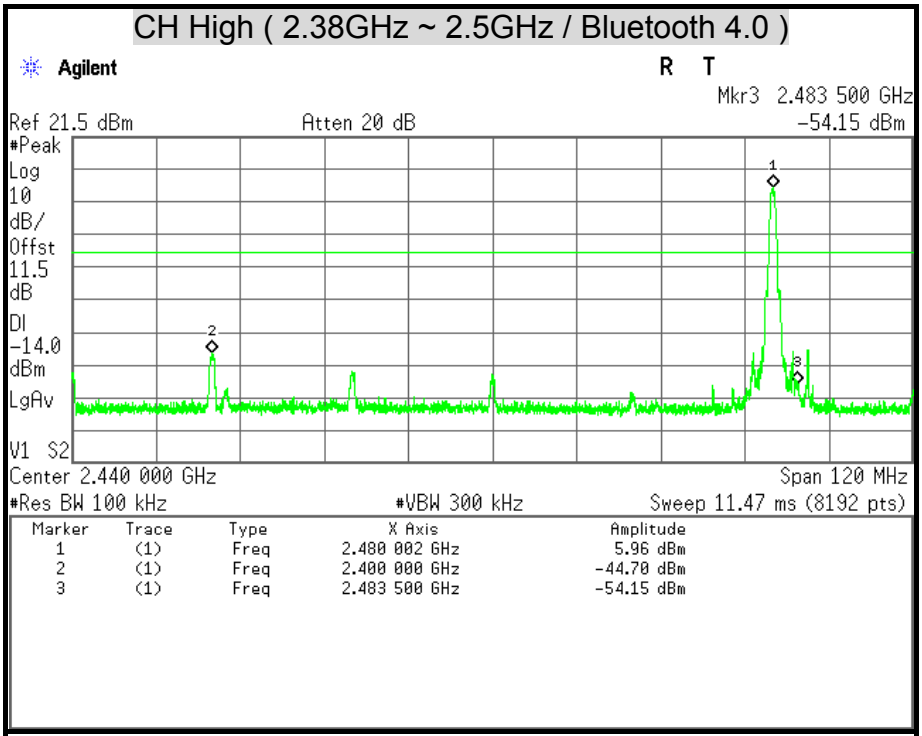
CH Middle (2.38GHz ~ 2.5GHz / Bluetooth 4.0)



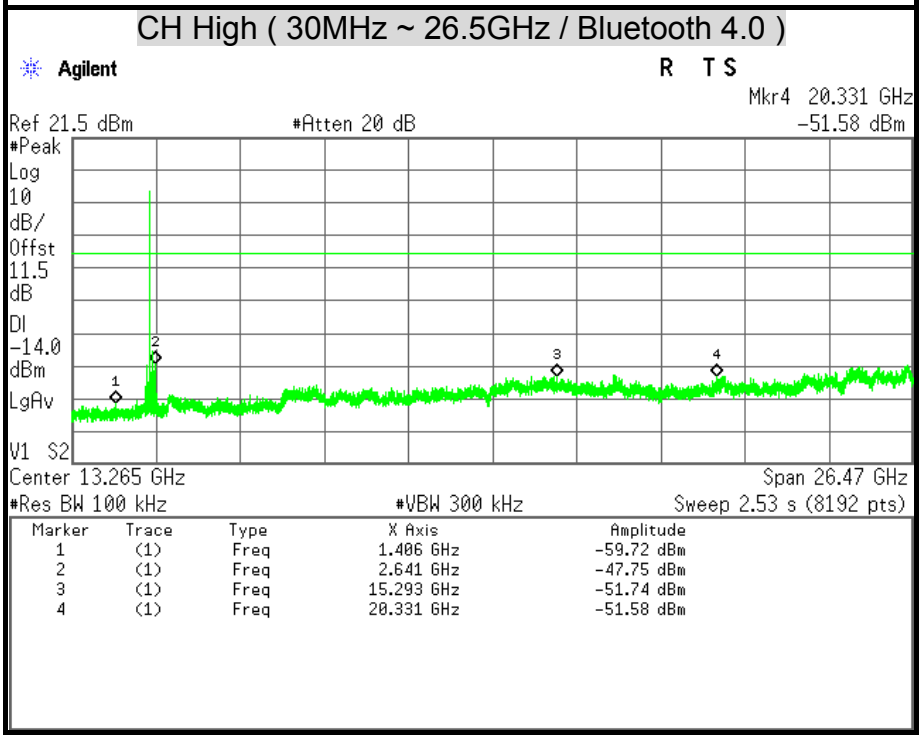
CH Middle (30MHz ~ 26.5GHz / Bluetooth 4.0)



CH High (2.38GHz ~ 2.5GHz / Bluetooth 4.0)



CH High (30MHz ~ 26.5GHz / Bluetooth 4.0)



7.6 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.

(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

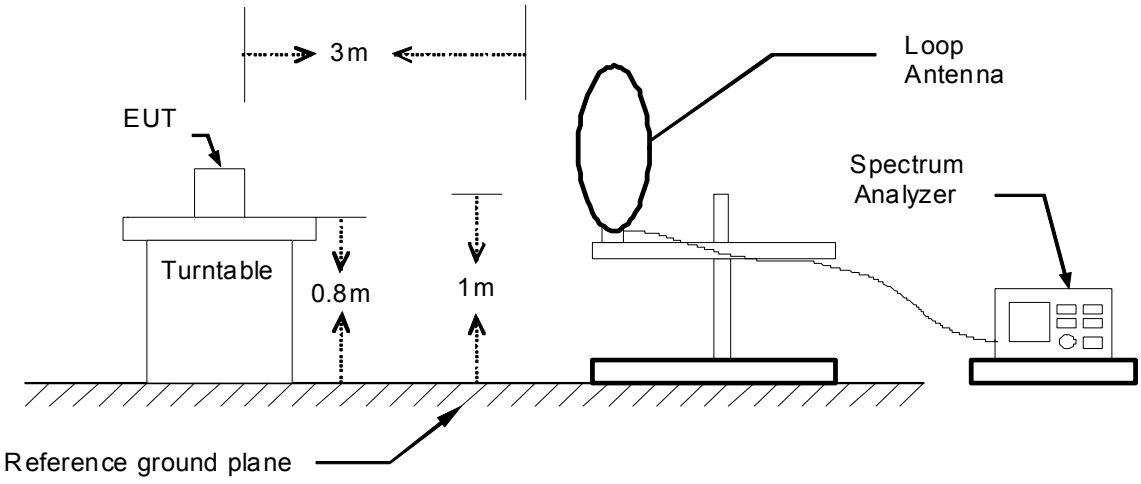
Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY46180323	04/15/2015
EMI Test Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	10/14/2015
Bi-log Antenna	SCHWARZBECK	VULB 9168	9168-250	08/21/2015
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-778	08/19/2015
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	EMCO	6502	8905-2356	09/23/2015
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.

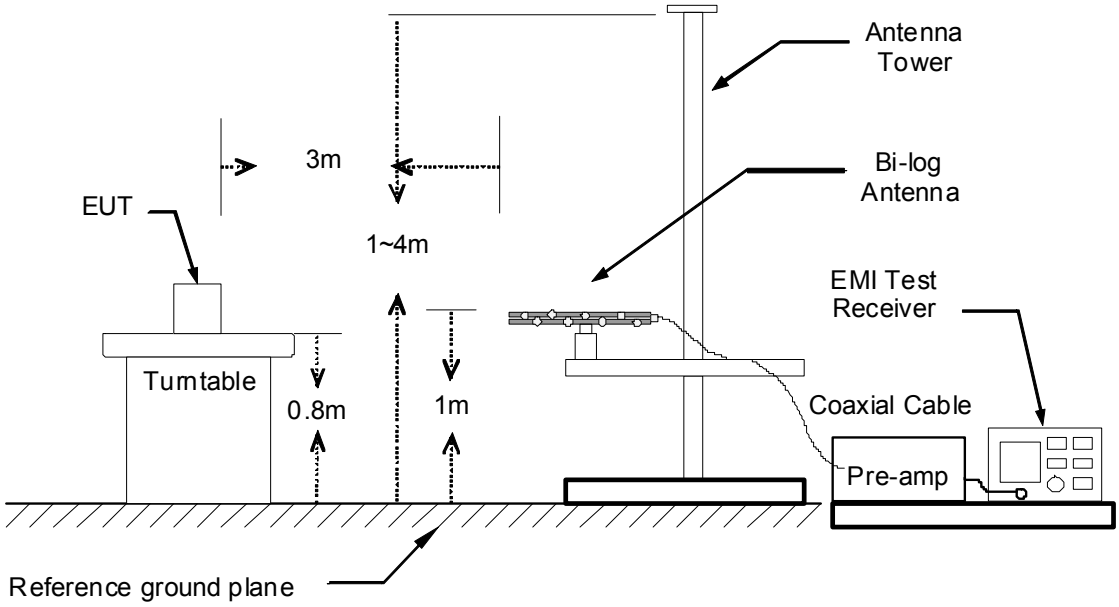
TEST SETUP

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

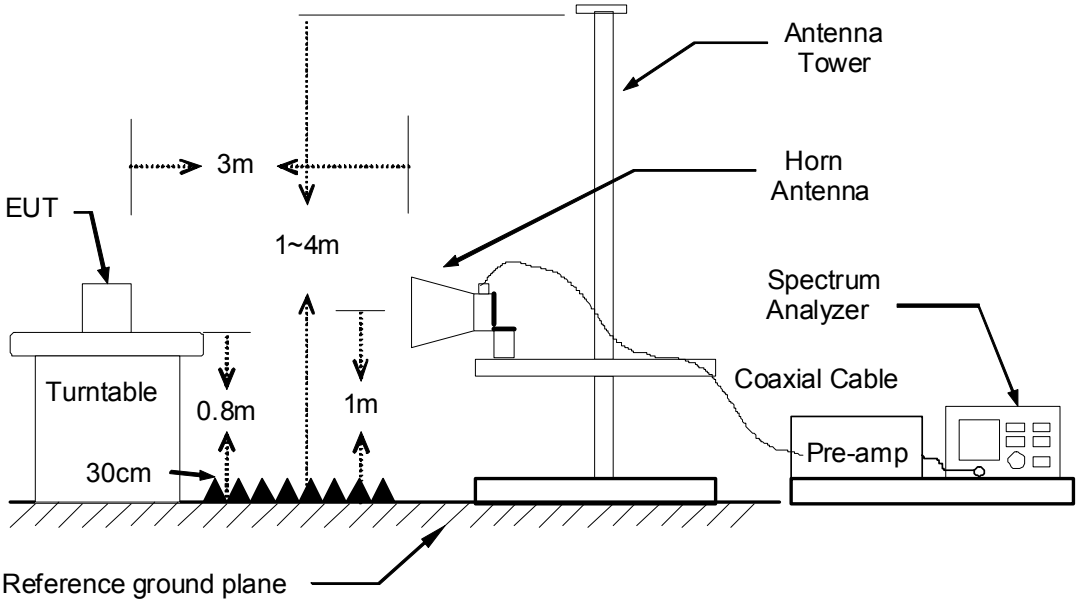
9kHz ~ 30MHz



30MHz ~ 1GHz



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.*

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	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/20
Test Mode	TX Mode / External Antenna	Temp. & Humidity	24.5°C, 33%

966 Chamber_B at 3Meter / Horizontal						
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark
89.17	55.32	-19.55	35.77	43.50	-7.73	Peak
183.26	48.10	-14.60	33.50	43.50	-10.00	Peak
259.89	44.43	-12.88	31.56	46.00	-14.44	Peak
324.88	42.25	-10.98	31.27	46.00	-14.73	Peak
600.36	38.83	-5.82	33.01	46.00	-12.99	Peak
649.83	37.91	-5.36	32.55	46.00	-13.45	Peak

966 Chamber_B at 3Meter / Vertical						
Frequency (MHz)	Reading (dBµV)	Correction Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark
32.91	49.30	-15.08	34.22	40.00	-5.78	Peak
89.17	54.05	-19.55	34.51	43.50	-8.99	Peak
183.26	53.41	-14.60	38.81	43.50	-4.69	Peak
423.82	39.25	-9.02	30.23	46.00	-15.77	Peak
600.36	44.01	-5.82	38.19	46.00	-7.81	Peak
943.74	31.50	-0.19	31.31	46.00	-14.69	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).*

Product Name	Panel PC	Test By	Rex Chiu
Test Model	VM-521	Test Date	2014/11/10
Test Mode	TX Mode / Internal Antenna	Temp. & Humidity	26°C, 52%

966 Chamber_B at 3Meter / Horizontal						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
87.23	55.70	-19.28	36.42	40.00	-3.58	QP
173.56	52.41	-14.02	38.39	43.50	-5.11	Peak
324.88	44.43	-10.98	33.45	46.00	-12.55	Peak
365.62	43.31	-10.20	33.11	46.00	-12.89	Peak
482.99	39.09	-8.06	31.03	46.00	-14.97	Peak
600.36	39.29	-5.82	33.47	46.00	-12.53	Peak

966 Chamber_B at 3Meter / Vertical						
Frequency (MHz)	Reading (dBμV)	Correction Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
32.91	50.60	-15.08	35.52	40.00	-4.48	QP
74.62	51.83	-17.06	34.77	40.00	-5.23	Peak
86.26	55.28	-19.15	36.12	40.00	-3.88	Peak
172.59	52.57	-13.95	38.62	43.50	-4.88	Peak
600.36	47.10	-5.82	41.28	46.00	-4.72	Peak
974.78	30.82	0.24	31.06	54.00	-22.94	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).*

Above 1 GHz

Product Name	Panel PC	Test By	Audi Chang
Test Model	VM-521	Test Date	2014/11/12
Test Mode	IEEE 802.11b TX / CH Low / External Antenna	Temp. & Humidity	25°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	56.12	43.41	-2.06	54.06	41.35	74.00	54.00	-12.65	AVG
2068.00	51.59	39.04	2.76	54.35	41.80	74.00	54.00	-12.20	AVG
2482.00	51.20	38.82	3.57	54.77	42.39	74.00	54.00	-11.61	AVG
3165.00	41.97	---	5.07	47.04	---	74.00	54.00	-6.96	Peak
3660.00	40.89	---	5.86	46.75	---	74.00	54.00	-7.25	Peak
4800.00	39.62	---	8.71	48.33	---	74.00	54.00	-5.67	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
1080.00	56.93	45.62	-2.06	54.87	43.56	74.00	54.00	-10.44	AVG
1724.00	54.91	44.86	0.07	54.98	44.93	74.00	54.00	-9.07	AVG
2484.00	52.10	40.81	3.58	55.68	44.39	74.00	54.00	-9.61	AVG
3345.00	40.65	---	5.37	46.02	---	74.00	54.00	-7.98	Peak
3855.00	40.10	---	6.14	46.24	---	74.00	54.00	-7.76	Peak
4845.00	39.23	---	8.68	47.92	---	74.00	54.00	-6.08	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)

Product Name	Panel PC	Test By	Audi Chang
Test Model	VM-521	Test Date	2014/11/12
Test Mode	IEEE 802.11b TX / CH Middle / External Antenna	Temp. & Humidity	25°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
1780.00	54.18	39.57	0.59	54.77	40.16	74.00	54.00	-13.84	AVG
2390.00	51.26	39.59	3.39	54.65	42.98	74.00	54.00	-11.02	AVG
2482.00	52.09	40.22	3.57	55.66	43.79	74.00	54.00	-10.21	AVG
3165.00	41.98	---	5.07	47.04	---	74.00	54.00	-6.96	Peak
3825.00	39.46	---	6.10	45.56	---	74.00	54.00	-8.44	Peak
4590.00	38.68	---	8.81	47.48	---	74.00	54.00	-6.52	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
1546.00	55.59	40.20	-1.58	54.01	38.62	74.00	54.00	-15.38	AVG
2390.00	51.86	39.93	3.39	55.25	43.32	74.00	54.00	-10.68	AVG
2482.00	52.69	40.58	3.57	56.26	44.15	74.00	54.00	-9.85	AVG
3195.00	41.20	---	5.12	46.32	---	74.00	54.00	-7.68	Peak
4515.00	39.90	---	8.84	48.74	---	74.00	54.00	-5.26	Peak
4875.00	39.69	---	8.67	48.36	---	74.00	54.00	-5.64	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)

Product Name	Panel PC	Test By	Audi Chang
Test Model	VM-521	Test Date	2014/11/12
Test Mode	IEEE 802.11b TX / CH High / External Antenna	Temp. & Humidity	25°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
2018.00	51.87	39.19	2.67	54.54	41.86	74.00	54.00	-12.14	AVG
2216.00	51.15	39.00	3.05	54.20	42.05	74.00	54.00	-11.95	AVG
2390.00	51.99	40.02	3.39	55.38	43.41	74.00	54.00	-10.59	AVG
3210.00	41.29	---	5.14	46.43	---	74.00	54.00	-7.57	Peak
4305.00	40.29	---	7.87	48.16	---	74.00	54.00	-5.84	Peak
4830.00	40.05	---	8.69	48.74	---	74.00	54.00	-5.26	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
1942.00	52.48	39.34	2.09	54.57	41.43	74.00	54.00	-12.57	AVG
2076.00	51.36	39.00	2.78	54.14	41.78	74.00	54.00	-12.22	AVG
2390.00	52.96	40.87	3.39	56.35	44.26	74.00	54.00	-9.74	AVG
3150.00	42.81	---	5.04	47.85	---	74.00	54.00	-6.15	Peak
3630.00	40.65	---	5.82	46.47	---	74.00	54.00	-7.53	Peak
4395.00	39.97	---	8.32	48.30	---	74.00	54.00	-5.70	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11g TX / CH Low / External Antenna	Temp. & Humidity	23°C, 54%

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
1584.00	48.32	---	-1.23	47.09	---	74.00	54.00	-6.91	Peak
1714.00	46.56	---	-0.02	46.54	---	74.00	54.00	-7.46	Peak
2486.00	45.71	---	3.58	49.30	---	74.00	54.00	-4.70	Peak
4695.00	40.04	---	8.76	48.79	---	74.00	54.00	-5.21	Peak
5925.00	38.29	---	12.44	50.73	---	74.00	54.00	-3.27	Peak
7230.00	38.49	---	13.46	51.95	---	74.00	54.00	-2.05	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
1366.00	45.16	---	-2.03	43.13	---	74.00	54.00	-10.87	Peak
2034.00	42.48	---	2.70	45.18	---	74.00	54.00	-8.82	Peak
2484.00	49.68	36.33	3.58	53.26	39.91	74.00	54.00	-14.09	AVG
4635.00	39.23	---	8.79	48.01	---	74.00	54.00	-5.99	Peak
6000.00	38.39	---	12.77	51.16	---	74.00	54.00	-2.84	Peak
7230.00	37.67	---	13.46	51.13	---	74.00	54.00	-2.87	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11g TX / CH Middle / External Antenna	Temp. & Humidity	23°C, 54%

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
1668.00	50.30	---	-0.45	49.85	---	74.00	54.00	-4.15	Peak
2388.00	50.56	37.36	3.39	53.95	40.75	74.00	54.00	-13.25	AVG
2500.00	49.56	38.55	3.61	53.17	42.16	74.00	54.00	-11.84	AVG
4470.00	39.67	---	8.70	48.37	---	74.00	54.00	-5.63	Peak
6195.00	38.33	---	12.68	51.01	---	74.00	54.00	-2.99	Peak
7305.00	38.18	---	13.26	51.45	---	74.00	54.00	-2.55	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
1952.00	42.94	---	2.18	45.13	---	74.00	54.00	-8.87	Peak
2390.00	53.40	40.10	3.39	56.79	43.49	74.00	54.00	-10.51	AVG
2484.00	52.92	39.71	3.58	56.50	43.29	74.00	54.00	-10.71	AVG
4800.00	39.74	---	8.71	48.45	---	74.00	54.00	-5.55	Peak
6045.00	38.51	---	12.75	51.26	---	74.00	54.00	-2.74	Peak
7005.00	38.29	---	14.06	52.35	---	74.00	54.00	-1.65	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11g TX / CH High / External Antenna	Temp. & Humidity	23°C, 54%

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
1714.00	48.64	---	-0.02	48.62	---	74.00	54.00	-5.38	Peak
2390.00	46.50	---	3.39	49.90	---	74.00	54.00	-4.10	Peak
2908.00	42.01	---	4.57	46.58	---	74.00	54.00	-7.42	Peak
4635.00	40.13	---	8.79	48.92	---	74.00	54.00	-5.08	Peak
6135.00	38.42	---	12.71	51.14	---	74.00	54.00	-2.86	Peak
7380.00	37.25	---	13.07	50.31	---	74.00	54.00	-3.69	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
2188.00	42.15	---	3.00	45.15	---	74.00	54.00	-8.85	Peak
2390.00	47.36	---	3.39	50.75	---	74.00	54.00	-3.25	Peak
2728.00	42.89	---	4.15	47.04	---	74.00	54.00	-6.96	Peak
4905.00	40.22	---	8.66	48.87	---	74.00	54.00	-5.13	Peak
6090.00	38.34	---	12.73	51.08	---	74.00	54.00	-2.92	Peak
7215.00	39.03	---	13.50	52.53	---	74.00	54.00	-1.47	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT20 TX / CH Low / External Antenna	Temp. & Humidity	23°C, 54%

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
1714.00	51.05	---	-0.02	51.03	---	74.00	54.00	-2.97	Peak
2488.00	47.05	---	3.59	50.64	---	74.00	54.00	-3.36	Peak
2792.00	47.81	---	4.30	52.11	---	74.00	54.00	-1.89	Peak
4830.00	40.39	---	8.69	49.08	---	74.00	54.00	-4.92	Peak
5985.00	38.28	---	12.70	50.99	---	74.00	54.00	-3.01	Peak
7230.00	38.11	---	13.46	51.57	---	74.00	54.00	-2.43	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
1692.00	48.12	---	-0.23	47.89	---	74.00	54.00	-6.11	Peak
2246.00	47.83	---	3.11	50.94	---	74.00	54.00	-3.06	Peak
2484.00	48.01	---	3.58	51.59	---	74.00	54.00	-2.41	Peak
4755.00	39.70	---	8.73	48.43	---	74.00	54.00	-5.57	Peak
5985.00	38.91	---	12.70	51.62	---	74.00	54.00	-2.38	Peak
7290.00	39.05	---	13.30	52.35	---	74.00	54.00	-1.65	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT20 TX / CH Middle / External Antenna	Temp. & Humidity	23°C, 54%

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
1834.00	48.63	---	1.09	49.72	---	74.00	54.00	-4.28	Peak
2390.00	50.04	36.66	3.39	53.43	40.05	74.00	54.00	-13.95	Peak
2498.00	50.41	37.29	3.61	54.02	40.90	74.00	54.00	-13.10	Peak
4620.00	39.87	---	8.79	48.66	---	74.00	54.00	-5.34	Peak
6030.00	38.69	---	12.76	51.45	---	74.00	54.00	-2.55	Peak
7110.00	38.19	---	13.78	51.97	---	74.00	54.00	-2.03	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
2286.00	48.99	---	3.19	52.18	---	74.00	54.00	-1.82	Peak
2390.00	53.53	39.56	3.39	56.92	42.95	74.00	54.00	-11.05	AVG
2484.00	53.96	40.23	3.58	57.54	43.81	74.00	54.00	-10.19	AVG
4710.00	39.63	---	8.75	48.38	---	74.00	54.00	-5.62	Peak
5955.00	37.78	---	12.57	50.35	---	74.00	54.00	-3.65	Peak
7020.00	38.47	---	14.02	52.49	---	74.00	54.00	-1.51	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT20 TX / CH High / External Antenna	Temp. & Humidity	23°C, 54%

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
1724.00	48.67	---	0.07	48.74	---	74.00	54.00	-5.26	Peak
2254.00	47.57	---	3.13	50.70	---	74.00	54.00	-3.30	Peak
2390.00	46.16	---	3.39	49.55	---	74.00	54.00	-4.45	Peak
4575.00	40.06	---	8.81	48.87	---	74.00	54.00	-5.13	Peak
6195.00	38.59	---	12.68	51.28	---	74.00	54.00	-2.72	Peak
7380.00	37.36	---	13.07	50.43	---	74.00	54.00	-3.57	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
1708.00	47.64	---	-0.08	47.56	---	74.00	54.00	-6.44	Peak
2088.00	47.92	---	2.80	50.73	---	74.00	54.00	-3.27	Peak
2390.00	48.54	---	3.39	51.94	---	74.00	54.00	-2.06	Peak
4800.00	40.64	---	8.71	49.35	---	74.00	54.00	-4.65	Peak
6270.00	39.18	---	12.65	51.83	---	74.00	54.00	-2.17	Peak
6915.00	38.75	---	13.81	52.56	---	74.00	54.00	-1.44	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT40 TX / CH Low / External Antenna	Temp. & Humidity	23°C, 54%

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
1784.00	47.70	---	0.63	48.32	---	74.00	54.00	-5.68	Peak
2256.00	47.35	---	3.13	50.49	---	74.00	54.00	-3.51	Peak
2494.00	47.00	---	3.60	50.60	---	74.00	54.00	-3.40	Peak
4770.00	40.28	---	8.72	49.00	---	74.00	54.00	-5.00	Peak
5865.00	38.73	---	12.18	50.92	---	74.00	54.00	-3.08	Peak
7230.00	38.82	---	13.46	52.28	---	74.00	54.00	-1.72	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
1882.00	47.94	---	1.53	49.48	---	74.00	54.00	-4.52	Peak
2254.00	47.78	---	3.13	50.91	---	74.00	54.00	-3.09	Peak
2484.00	47.86	---	3.58	51.43	---	74.00	54.00	-2.57	Peak
4470.00	40.56	---	8.70	49.26	---	74.00	54.00	-4.74	Peak
6180.00	38.40	---	12.69	51.09	---	74.00	54.00	-2.91	Peak
7230.00	37.48	---	13.46	50.95	---	74.00	54.00	-3.05	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT40 TX / CH Middle / External Antenna	Temp. & Humidity	23°C, 54%

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
1738.00	48.95	---	0.20	49.15	---	74.00	54.00	-4.85	Peak
2390.00	59.47	47.44	3.39	62.86	50.83	74.00	54.00	-3.17	AVG
2484.00	58.40	44.96	3.58	61.98	48.54	74.00	54.00	-5.46	AVG
4935.00	40.16	---	8.64	48.80	---	74.00	54.00	-5.20	Peak
6285.00	38.60	---	12.64	51.25	---	74.00	54.00	-2.75	Peak
7305.00	38.55	---	13.26	51.81	---	74.00	54.00	-2.19	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
1734.00	47.87	---	0.16	48.03	---	74.00	54.00	-5.97	Peak
2390.00	63.54	49.84	3.39	66.93	53.23	74.00	54.00	-0.77	AVG
2484.00	60.19	49.52	3.58	63.77	53.10	74.00	54.00	-0.90	AVG
4650.00	40.39	---	8.78	49.17	---	74.00	54.00	-4.83	Peak
6105.00	38.72	---	12.72	51.44	---	74.00	54.00	-2.56	Peak
7305.00	37.46	---	13.26	50.73	---	74.00	54.00	-3.27	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT40 TX / CH High / External Antenna	Temp. & Humidity	23°C, 54%

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
1704.00	48.66	---	-0.12	48.54	---	74.00	54.00	-5.46	Peak
2162.00	47.51	---	2.95	50.46	---	74.00	54.00	-3.54	Peak
2382.00	48.15	---	3.38	51.53	---	74.00	54.00	-2.47	Peak
4590.00	40.03	---	8.81	48.84	---	74.00	54.00	-5.16	Peak
5970.00	38.70	---	12.64	51.34	---	74.00	54.00	-2.66	Peak
7350.00	37.30	---	13.15	50.44	---	74.00	54.00	-3.56	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
1742.00	48.18	---	0.24	48.41	---	74.00	54.00	-5.59	Peak
2070.00	47.14	---	2.77	49.91	---	74.00	54.00	-4.09	Peak
2384.00	48.55	---	3.38	51.94	---	74.00	54.00	-2.06	Peak
4785.00	40.06	---	8.71	48.77	---	74.00	54.00	-5.23	Peak
5970.00	38.29	---	12.64	50.93	---	74.00	54.00	-3.07	Peak
7185.00	38.80	---	13.58	52.38	---	74.00	54.00	-1.62	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)

Product Name	Panel PC	Test By	Rex Chiu
Test Model	VM-521	Test Date	2014/11/12
Test Mode	Bluetooth 4.0 / TX Mode / CH Low / External Antenna	Temp. & Humidity	23°C, 54%

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
1704.00	49.86	---	-0.12	49.74	---	74.00	54.00	-4.26	Peak
2522.00	48.44	---	3.66	52.10	---	74.00	54.00	-1.90	Peak
2562.00	49.32	43.57	3.76	53.08	47.33	74.00	54.00	-6.67	AVG
4590.00	40.09	---	8.81	48.90	---	74.00	54.00	-5.10	Peak
6195.00	38.77	---	12.68	51.45	---	74.00	54.00	-2.55	Peak
7110.00	38.74	---	13.78	52.52	---	74.00	54.00	-1.48	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
2502.00	52.18	46.32	3.61	55.79	49.93	74.00	54.00	-4.07	AVG
2522.00	52.52	46.74	3.66	56.18	50.40	74.00	54.00	-3.60	AVG
2562.00	53.44	47.52	3.76	57.20	51.28	74.00	54.00	-2.72	AVG
4545.00	39.51	---	8.83	48.34	---	74.00	54.00	-5.66	Peak
6135.00	38.89	---	12.71	51.60	---	74.00	54.00	-2.40	Peak
6780.00	38.09	---	13.40	51.49	---	74.00	54.00	-2.51	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)

Product Name	Panel PC	Test By	Rex Chiu
Test Model	VM-521	Test Date	2014/11/12
Test Mode	Bluetooth 4.0 / TX Mode / CH Middle / External Antenna	Temp. & Humidity	23°C, 54%

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
1630.00	48.34	---	-0.80	47.54	---	74.00	54.00	-6.46	Peak
2520.00	52.12	46.27	3.66	55.78	49.93	74.00	54.00	-4.07	AVG
2540.00	48.29	---	3.70	52.00	---	74.00	54.00	-2.00	Peak
4530.00	39.54	---	8.84	48.37	---	74.00	54.00	-5.63	Peak
5910.00	38.17	---	12.38	50.55	---	74.00	54.00	-3.45	Peak
7110.00	38.72	---	13.78	52.50	---	74.00	54.00	-1.50	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
2360.00	52.03	46.11	3.34	55.37	49.45	74.00	54.00	-4.55	AVG
2520.00	57.99	49.84	3.66	61.65	53.50	74.00	54.00	-0.50	AVG
2540.00	52.30	46.41	3.70	56.01	50.11	74.00	54.00	-3.89	AVG
4545.00	39.59	---	8.83	48.42	---	74.00	54.00	-5.58	Peak
6045.00	38.79	---	12.75	51.54	---	74.00	54.00	-2.46	Peak
7005.00	38.30	---	14.06	52.35	---	74.00	54.00	-1.65	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)

Product Name	Panel PC	Test By	Rex Chiu
Test Model	VM-521	Test Date	2014/11/12
Test Mode	Bluetooth 4.0 / TX Mode / CH High / External Antenna	Temp. & Humidity	23°C, 54%

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
1704.00	50.49	---	-0.12	50.37	---	74.00	54.00	-3.63	Peak
2560.00	51.38	45.53	3.75	55.14	49.28	74.00	54.00	-4.72	AVG
2580.00	46.25	---	3.80	50.05	---	74.00	54.00	-3.95	Peak
4785.00	39.64	---	8.71	48.36	---	74.00	54.00	-5.64	Peak
5985.00	38.52	---	12.70	51.23	---	74.00	54.00	-2.77	Peak
7185.00	38.88	---	13.58	52.46	---	74.00	54.00	-1.54	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
2380.00	48.01	---	3.37	51.38	---	74.00	54.00	-2.62	Peak
2560.00	55.99	49.62	3.75	59.75	53.37	74.00	54.00	-0.63	AVG
2580.00	51.73	45.91	3.80	55.53	49.71	74.00	54.00	-4.29	AVG
3435.00	41.30	---	5.52	46.83	---	74.00	54.00	-7.17	Peak
4545.00	39.96	---	8.83	48.79	---	74.00	54.00	-5.21	Peak
6195.00	39.06	---	12.68	51.74	---	74.00	54.00	-2.26	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)

Product Name	Panel PC	Test By	Audi Chang
Test Model	VM-521	Test Date	2014/11/12
Test Mode	IEEE 802.11b TX / CH Low / Internal Antenna	Temp. & Humidity	25°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
1742.00	53.80	39.83	0.24	54.04	40.07	74.00	54.00	-13.93	AVG
2482.00	50.56	39.94	3.57	54.13	43.51	74.00	54.00	-10.49	AVG
2514.00	51.27	39.34	3.64	54.91	42.98	74.00	54.00	-11.02	AVG
3270.00	41.46	---	5.24	46.70	---	74.00	54.00	-7.30	Peak
3660.00	40.91	---	5.86	46.77	---	74.00	54.00	-7.23	Peak
4530.00	39.13	---	8.84	47.96	---	74.00	54.00	-6.04	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
1926.00	52.78	39.44	1.94	54.72	41.38	74.00	54.00	-12.62	AVG
2482.00	51.21	39.84	3.57	54.78	43.41	74.00	54.00	-10.59	AVG
2660.00	50.51	38.66	3.99	54.50	42.65	74.00	54.00	-11.35	AVG
3210.00	42.01	---	5.14	47.15	---	74.00	54.00	-6.85	Peak
3900.00	39.98	---	6.21	46.18	---	74.00	54.00	-7.82	Peak
4530.00	39.10	---	8.84	47.93	---	74.00	54.00	-6.07	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)

Product Name	Panel PC	Test By	Audi Chang
Test Model	VM-521	Test Date	2014/11/12
Test Mode	IEEE 802.11b TX / CH Middle / Internal Antenna	Temp. & Humidity	25°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
2390.00	51.56	39.67	3.39	54.95	43.06	74.00	54.00	-10.94	AVG
2484.00	51.85	40.14	3.58	55.43	43.72	74.00	54.00	-10.28	AVG
2742.00	50.34	38.43	4.18	54.52	42.61	74.00	54.00	-11.39	AVG
3195.00	42.46	---	5.12	47.58	---	74.00	54.00	-6.42	Peak
4500.00	39.52	---	8.85	48.37	---	74.00	54.00	-5.63	Peak
5430.00	39.24	---	10.32	49.57	---	74.00	54.00	-4.43	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
2102.00	51.77	39.22	2.83	54.60	42.05	74.00	54.00	-11.95	AVG
2390.00	51.02	39.60	3.39	54.41	42.99	74.00	54.00	-11.01	AVG
2482.00	50.88	39.45	3.57	54.45	43.02	74.00	54.00	-10.98	AVG
3255.00	41.06	---	5.22	46.28	---	74.00	54.00	-7.72	Peak
3855.00	39.99	---	6.14	46.13	---	74.00	54.00	-7.87	Peak
4770.00	39.33	---	8.72	48.05	---	74.00	54.00	-5.95	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)

Product Name	Panel PC	Test By	Audi Chang
Test Model	VM-521	Test Date	2014/11/12
Test Mode	IEEE 802.11b TX / CH High / Internal Antenna	Temp. & Humidity	25°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
1834.00	53.39	39.56	1.09	54.48	40.65	74.00	54.00	-13.35	AVG
2068.00	51.56	39.10	2.76	54.32	41.86	74.00	54.00	-12.14	AVG
2390.00	51.24	39.85	3.39	54.63	43.24	74.00	54.00	-10.76	AVG
3210.00	41.04	---	5.14	46.18	---	74.00	54.00	-7.82	Peak
3675.00	41.30	---	5.88	47.19	---	74.00	54.00	-6.81	Peak
4350.00	39.65	---	8.10	47.75	---	74.00	54.00	-6.25	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
1822.00	53.91	39.67	0.98	54.89	40.65	74.00	54.00	-13.35	AVG
2040.00	52.14	39.26	2.71	54.85	41.97	74.00	54.00	-12.03	AVG
2390.00	51.61	39.57	3.39	55.00	42.96	74.00	54.00	-11.04	AVG
3240.00	40.30	---	5.19	45.49	---	74.00	54.00	-8.51	Peak
3765.00	40.41	---	6.01	46.43	---	74.00	54.00	-7.57	Peak
4485.00	39.35	---	8.78	48.12	---	74.00	54.00	-5.88	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11g TX / CH Low / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1710.00	47.62	---	-0.06	47.56	---	74.00	54.00	-6.44	Peak
2222.00	46.87	---	3.07	49.93	---	74.00	54.00	-4.07	Peak
2490.00	48.99	---	3.59	52.58	---	74.00	54.00	-1.42	Peak
4425.00	39.24	---	8.48	47.71	---	74.00	54.00	-6.29	Peak
6000.00	38.19	---	12.77	50.96	---	74.00	54.00	-3.04	Peak
7035.00	38.57	---	13.98	52.54	---	74.00	54.00	-1.46	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
1788.00	47.80	---	0.66	48.47	---	74.00	54.00	-5.53	Peak
2210.00	47.56	---	3.04	50.60	---	74.00	54.00	-3.40	Peak
2494.00	48.14	---	3.60	51.73	---	74.00	54.00	-2.27	Peak
4530.00	39.03	---	8.84	47.87	---	74.00	54.00	-6.13	Peak
6030.00	38.07	---	12.76	50.82	---	74.00	54.00	-3.18	Peak
7020.00	38.46	---	14.02	52.48	---	74.00	54.00	-1.52	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11g TX / CH Middle / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1708.00	48.12	---	-0.08	48.04	---	74.00	54.00	-5.96	Peak
2386.00	52.69	40.59	3.39	56.07	43.98	74.00	54.00	-10.02	AVG
2484.00	53.48	42.36	3.58	57.06	45.94	74.00	54.00	-8.06	AVG
4770.00	39.18	---	8.72	47.90	---	74.00	54.00	-6.10	Peak
5850.00	38.74	---	12.12	50.86	---	74.00	54.00	-3.14	Peak
7005.00	38.49	---	14.06	52.55	---	74.00	54.00	-1.45	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
1710.00	48.13	---	-0.06	48.07	---	74.00	54.00	-5.93	Peak
2390.00	51.72	40.33	3.39	55.11	43.72	74.00	54.00	-10.28	AVG
2484.00	49.39	---	3.58	52.97	---	74.00	54.00	-1.03	Peak
4800.00	38.98	---	8.71	47.69	---	74.00	54.00	-6.31	Peak
6015.00	38.18	---	12.76	50.94	---	74.00	54.00	-3.06	Peak
7155.00	38.66	---	13.66	52.32	---	74.00	54.00	-1.68	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11g TX / CH High / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1704.00	48.78	---	-0.12	48.66	---	74.00	54.00	-5.34	Peak
2230.00	47.05	---	3.08	50.13	---	74.00	54.00	-3.87	Peak
2390.00	49.73	---	3.39	53.12	---	74.00	54.00	-0.88	Peak
4815.00	38.90	---	8.70	47.60	---	74.00	54.00	-6.40	Peak
6435.00	38.52	---	12.58	51.10	---	74.00	54.00	-2.90	Peak
7020.00	37.98	---	14.02	52.00	---	74.00	54.00	-2.00	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
1728.00	47.92	---	0.11	48.03	---	74.00	54.00	-5.97	Peak
2284.00	47.65	---	3.19	50.83	---	74.00	54.00	-3.17	Peak
2390.00	48.83	---	3.39	52.22	---	74.00	54.00	-1.78	Peak
4440.00	39.50	---	8.55	48.05	---	74.00	54.00	-5.95	Peak
5985.00	37.88	---	12.70	50.59	---	74.00	54.00	-3.41	Peak
6675.00	38.51	---	13.08	51.59	---	74.00	54.00	-2.41	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT20 TX / CH Low/ Internal Antenna	Temp. & Humidity	23°C, 54%

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
1550.00	49.12	---	-1.55	47.57	---	74.00	54.00	-6.43	Peak
2232.00	47.26	---	3.08	50.35	---	74.00	54.00	-3.65	Peak
2488.00	47.89	---	3.59	51.48	---	74.00	54.00	-2.52	Peak
4830.00	39.10	---	8.69	47.79	---	74.00	54.00	-6.21	Peak
5730.00	38.49	---	11.60	50.09	---	74.00	54.00	-3.91	Peak
7155.00	38.19	---	13.66	51.86	---	74.00	54.00	-2.14	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
1720.00	48.00	---	0.03	48.03	---	74.00	54.00	-5.97	Peak
2246.00	47.63	---	3.11	50.75	---	74.00	54.00	-3.25	Peak
2488.00	47.60	---	3.59	51.19	---	74.00	54.00	-2.81	Peak
4815.00	38.41	---	8.70	47.11	---	74.00	54.00	-6.89	Peak
6165.00	38.58	---	12.70	51.28	---	74.00	54.00	-2.72	Peak
6975.00	38.47	---	13.99	52.47	---	74.00	54.00	-1.53	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT20 TX / CH Middle / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1702.00	49.05	---	-0.14	48.92	---	74.00	54.00	-5.08	Peak
2390.00	52.62	40.11	3.39	56.02	43.50	74.00	54.00	-10.50	AVG
2484.00	52.64	39.67	3.58	56.22	43.25	74.00	54.00	-10.75	AVG
4800.00	38.84	---	8.71	47.55	---	74.00	54.00	-6.45	Peak
6000.00	37.30	---	12.77	50.07	---	74.00	54.00	-3.93	Peak
6960.00	38.35	---	13.95	52.30	---	74.00	54.00	-1.70	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
2236.00	46.49	---	3.09	49.58	---	74.00	54.00	-4.42	Peak
2388.00	50.82	38.60	3.39	54.21	41.99	74.00	54.00	-12.01	AVG
2484.00	50.43	39.16	3.58	54.01	42.74	74.00	54.00	-11.26	AVG
4455.00	39.04	---	8.62	47.66	---	74.00	54.00	-6.34	Peak
5835.00	37.80	---	12.05	49.85	---	74.00	54.00	-4.15	Peak
7020.00	38.46	---	14.02	52.48	---	74.00	54.00	-1.52	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT20 TX / CH High / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1718.00	47.63	---	0.01	47.65	---	74.00	54.00	-6.35	Peak
2246.00	47.41	---	3.11	50.52	---	74.00	54.00	-3.48	Peak
2390.00	49.63	---	3.39	53.02	---	74.00	54.00	-0.98	Peak
4590.00	38.87	---	8.81	47.67	---	74.00	54.00	-6.33	Peak
6120.00	38.01	---	12.72	50.72	---	74.00	54.00	-3.28	Peak
7320.00	38.32	---	13.23	51.55	---	74.00	54.00	-2.45	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
1810.00	48.32	---	0.87	49.18	---	74.00	54.00	-4.82	Peak
2166.00	48.22	---	2.96	51.18	---	74.00	54.00	-2.82	Peak
2390.00	46.68	---	3.39	50.08	---	74.00	54.00	-3.92	Peak
4560.00	38.79	---	8.82	47.61	---	74.00	54.00	-6.39	Peak
6120.00	37.92	---	12.72	50.64	---	74.00	54.00	-3.36	Peak
6990.00	38.56	---	14.04	52.60	---	74.00	54.00	-1.40	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT40 TX / CH Low / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1710.00	47.58	---	-0.06	47.52	---	74.00	54.00	-6.48	Peak
2204.00	47.41	---	3.03	50.44	---	74.00	54.00	-3.56	Peak
2484.00	47.39	---	3.58	50.96	---	74.00	54.00	-3.04	Peak
4530.00	38.85	---	8.84	47.68	---	74.00	54.00	-6.32	Peak
6090.00	37.57	---	12.73	50.30	---	74.00	54.00	-3.70	Peak
7035.00	38.05	---	13.98	52.03	---	74.00	54.00	-1.97	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
1712.00	47.32	---	-0.04	47.28	---	74.00	54.00	-6.72	Peak
2228.00	46.90	---	3.08	49.97	---	74.00	54.00	-4.03	Peak
2484.00	46.72	---	3.58	50.30	---	74.00	54.00	-3.70	Peak
4740.00	38.36	---	8.73	47.10	---	74.00	54.00	-6.90	Peak
6120.00	37.68	---	12.72	50.39	---	74.00	54.00	-3.61	Peak
6975.00	38.33	---	13.99	52.32	---	74.00	54.00	-1.68	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT40 TX / CH Middle / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1718.00	47.55	---	0.01	47.56	---	74.00	54.00	-6.44	Peak
2390.00	66.58	50.03	3.39	69.97	53.42	74.00	54.00	-0.58	AVG
2484.00	61.90	48.51	3.58	65.48	52.09	74.00	54.00	-1.91	AVG
4800.00	39.20	---	8.71	47.91	---	74.00	54.00	-6.09	Peak
6015.00	37.61	---	12.76	50.37	---	74.00	54.00	-3.63	Peak
7170.00	38.24	---	13.62	51.86	---	74.00	54.00	-2.14	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
2226.00	47.29	---	3.07	50.37	---	74.00	54.00	-3.63	Peak
2390.00	62.38	49.80	3.39	65.77	53.19	74.00	54.00	-0.81	AVG
2484.00	59.68	46.16	3.58	63.26	49.74	74.00	54.00	-4.26	AVG
4710.00	38.79	---	8.75	47.54	---	74.00	54.00	-6.46	Peak
5985.00	37.19	---	12.70	49.90	---	74.00	54.00	-4.10	Peak
6930.00	38.70	---	13.86	52.55	---	74.00	54.00	-1.45	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)

Product Name	Panel PC	Test By	Davis Tseng
Test Model	VM-521	Test Date	2014/11/14
Test Mode	IEEE 802.11gn HT40 TX / CH High / Internal Antenna	Temp. & Humidity	23°C, 54%

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
1720.00	48.33	---	0.03	48.36	---	74.00	54.00	-5.64	Peak
2032.00	47.73	---	2.69	50.42	---	74.00	54.00	-3.58	Peak
2390.00	48.46	---	3.39	51.85	---	74.00	54.00	-2.15	Peak
4545.00	38.70	---	8.83	47.53	---	74.00	54.00	-6.47	Peak
6240.00	37.68	---	12.66	50.34	---	74.00	54.00	-3.66	Peak
7170.00	38.41	---	13.62	52.03	---	74.00	54.00	-1.97	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
1724.00	48.35	---	0.07	48.41	---	74.00	54.00	-5.59	Peak
2230.00	47.18	---	3.08	50.27	---	74.00	54.00	-3.73	Peak
2390.00	47.57	---	3.39	50.97	---	74.00	54.00	-3.03	Peak
4815.00	39.66	---	8.70	48.36	---	74.00	54.00	-5.64	Peak
5970.00	37.74	---	12.64	50.38	---	74.00	54.00	-3.62	Peak
7080.00	38.68	---	13.86	52.54	---	74.00	54.00	-1.46	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)

Product Name	Panel PC	Test By	Rex Chiu
Test Model	VM-521	Test Date	2014/11/11
Test Mode	Bluetooth 4.0 / TX Mode / CH Low / Internal Antenna	Temp. & Humidity	24°C, 52%

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
2502.00	49.76	42.87	3.61	53.38	46.48	74.00	54.00	-7.52	AVG
2522.00	50.16	44.36	3.66	53.82	48.02	74.00	54.00	-5.98	AVG
2562.00	50.92	45.07	3.76	54.68	48.83	74.00	54.00	-5.17	AVG
4455.00	40.09	---	8.62	48.72	---	74.00	54.00	-5.28	Peak
6000.00	38.17	---	12.77	50.94	---	74.00	54.00	-3.06	Peak
6990.00	38.29	---	14.04	52.33	---	74.00	54.00	-1.67	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
1940.00	44.77	---	2.07	46.84	---	74.00	54.00	-7.16	Peak
2522.00	50.04	44.16	3.66	53.70	47.82	74.00	54.00	-6.18	AVG
2562.00	50.07	44.25	3.76	53.83	48.01	74.00	54.00	-5.99	AVG
4425.00	40.07	---	8.48	48.55	---	74.00	54.00	-5.45	Peak
6180.00	39.40	---	12.69	52.09	---	74.00	54.00	-1.91	Peak
6990.00	38.46	---	14.04	52.50	---	74.00	54.00	-1.50	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)

Product Name	Panel PC	Test By	Rex Chiu
Test Model	VM-521	Test Date	2014/11/11
Test Mode	Bluetooth 4.0 / TX Mode / CH Middle / Internal Antenna	Temp. & Humidity	24°C, 52%

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
2520.00	54.15	48.27	3.66	57.81	51.93	74.00	54.00	-2.07	AVG
2540.00	49.62	43.84	3.70	53.33	47.54	74.00	54.00	-6.46	AVG
2560.00	48.68	---	3.75	52.43	---	74.00	54.00	-1.57	Peak
4590.00	40.31	---	8.81	49.11	---	74.00	54.00	-4.89	Peak
6045.00	37.78	---	12.75	50.53	---	74.00	54.00	-3.47	Peak
7095.00	38.40	---	13.82	52.22	---	74.00	54.00	-1.78	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
2360.00	45.18	---	3.34	48.52	---	74.00	54.00	-5.48	Peak
2520.00	53.86	47.98	3.66	57.52	51.64	74.00	54.00	-2.36	AVG
2540.00	49.22	43.46	3.70	52.93	47.16	74.00	54.00	-6.84	AVG
4800.00	39.67	---	8.71	48.38	---	74.00	54.00	-5.62	Peak
6000.00	37.87	---	12.77	50.64	---	74.00	54.00	-3.36	Peak
6960.00	38.43	---	13.95	52.38	---	74.00	54.00	-1.62	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)

Product Name	Panel PC	Test By	Rex Chiu
Test Model	VM-521	Test Date	2014/11/11
Test Mode	Bluetooth 4.0 / TX Mode / CH High / Internal Antenna	Temp. & Humidity	24°C, 52%

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
1786.00	48.13	---	0.64	48.78	---	74.00	54.00	-5.22	Peak
2560.00	53.41	47.61	3.75	57.16	51.36	74.00	54.00	-2.64	AVG
2580.00	47.56	---	3.80	51.36	---	74.00	54.00	-2.64	Peak
4800.00	39.75	---	8.71	48.46	---	74.00	54.00	-5.54	Peak
5940.00	38.22	---	12.51	50.73	---	74.00	54.00	-3.27	Peak
7050.00	38.03	---	13.94	51.97	---	74.00	54.00	-2.03	Peak

966 Chamber_B at 3Meter / Vertical

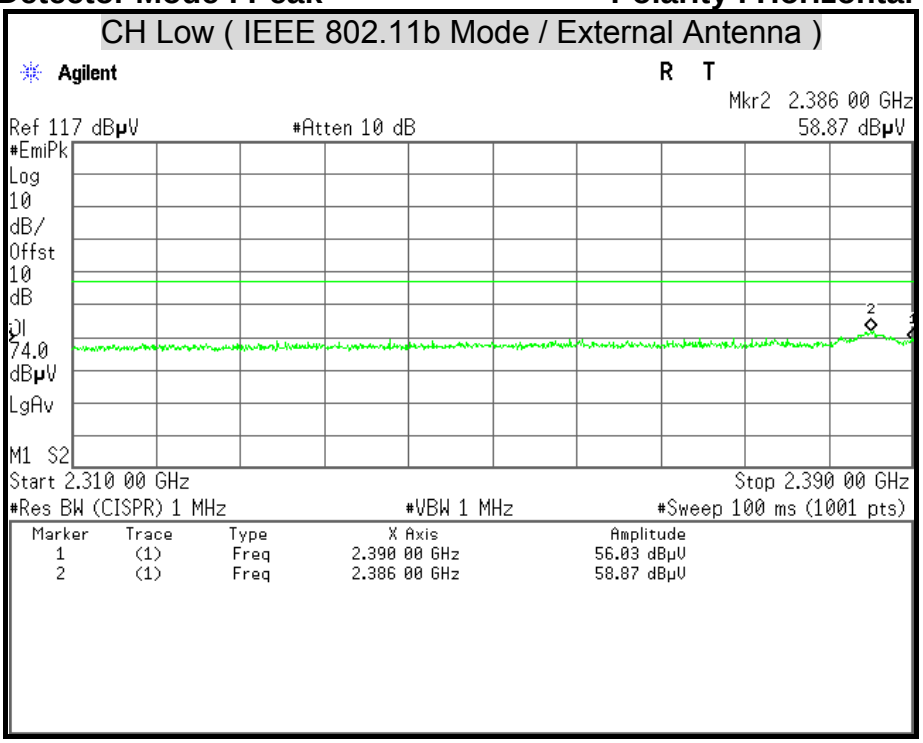
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2132.00	43.08	---	2.89	45.97	---	74.00	54.00	-8.03	Peak
2540.00	46.69	---	3.70	50.39	---	74.00	54.00	-3.61	Peak
2560.00	52.88	46.96	3.75	56.63	50.71	74.00	54.00	-3.29	AVG
4485.00	40.05	---	8.78	48.83	---	74.00	54.00	-5.17	Peak
5970.00	37.75	---	12.64	50.39	---	74.00	54.00	-3.61	Peak
7095.00	38.59	---	13.82	52.41	---	74.00	54.00	-1.59	Peak

Remark:

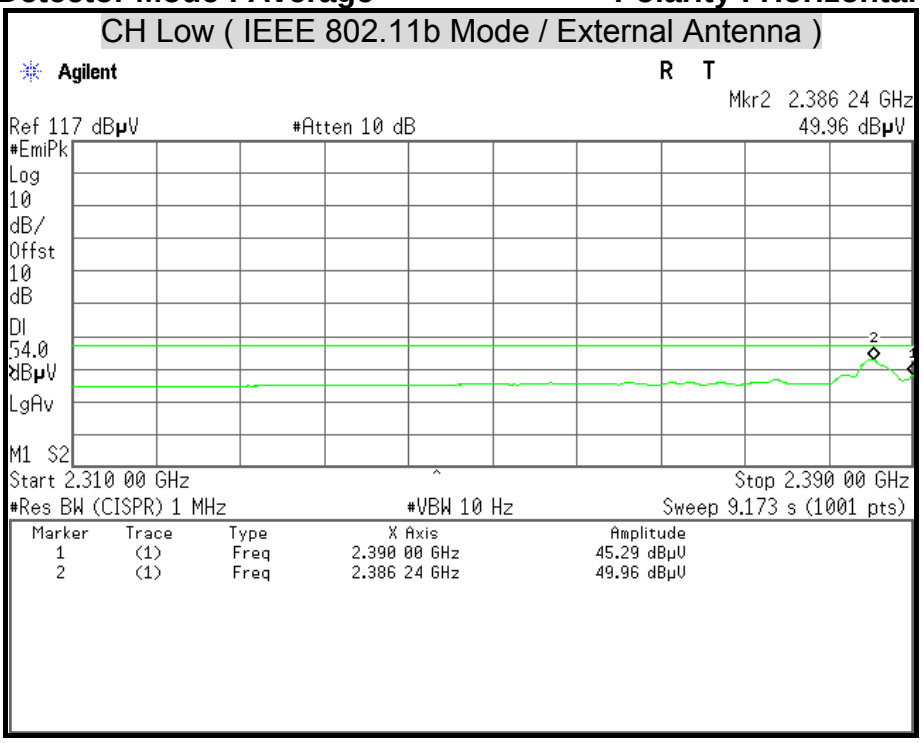
1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions 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)

Restricted Band Edges

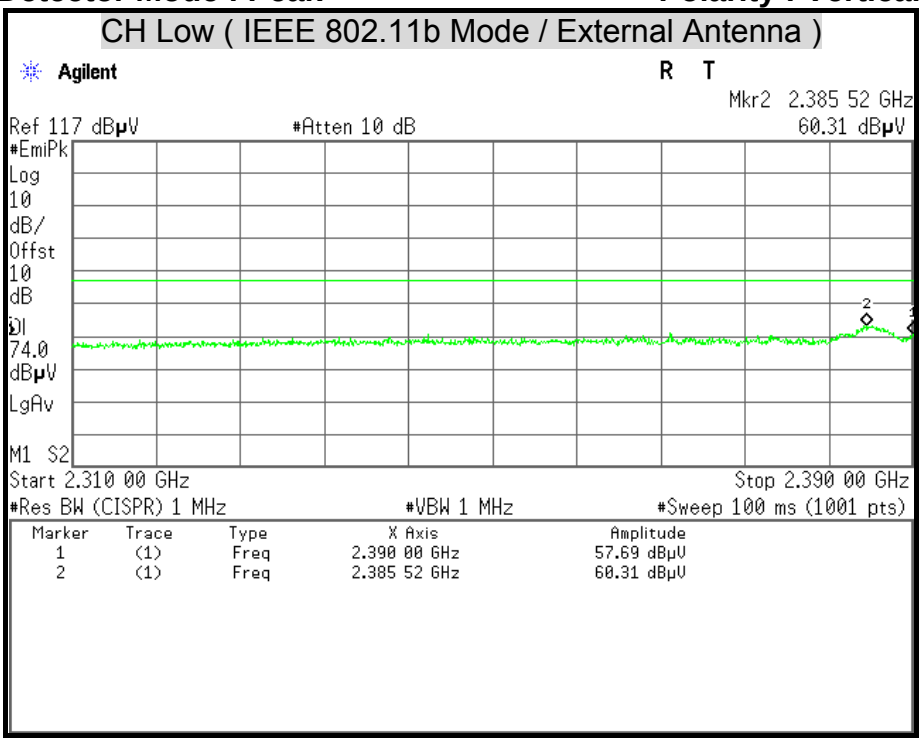
Detector Mode : Peak **Polarity : Horizontal**



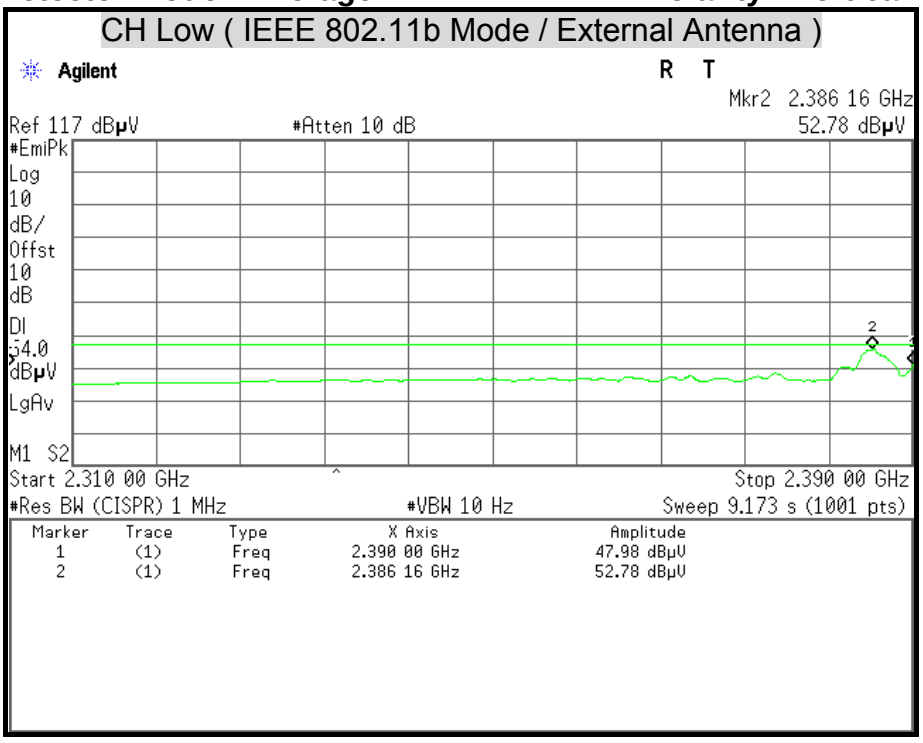
Detector Mode : Average **Polarity : Horizontal**



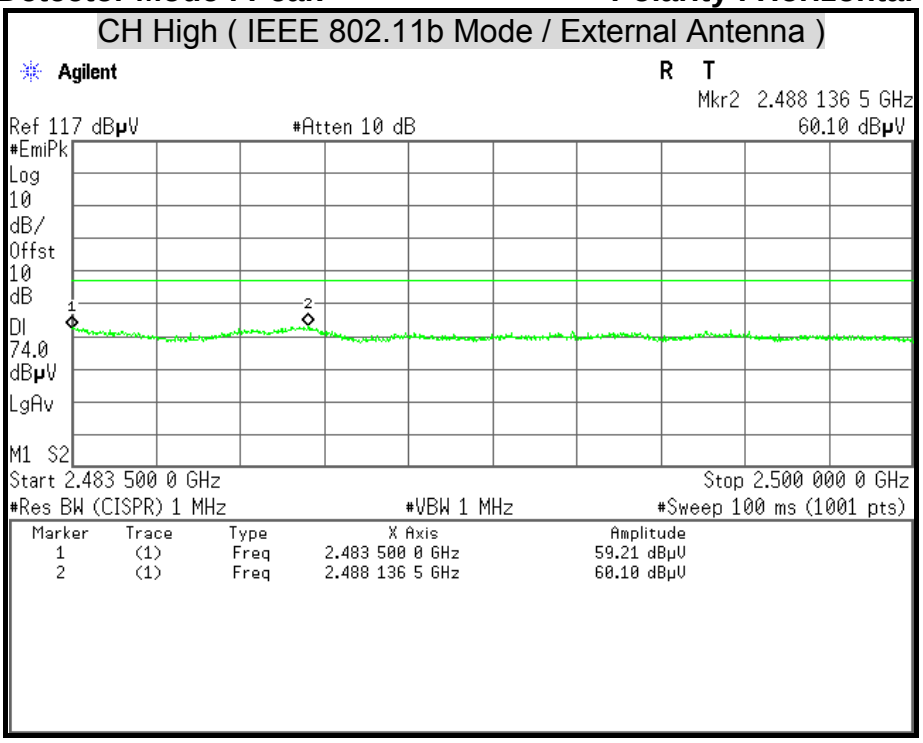
Detector Mode : Peak **Polarity : Vertical**



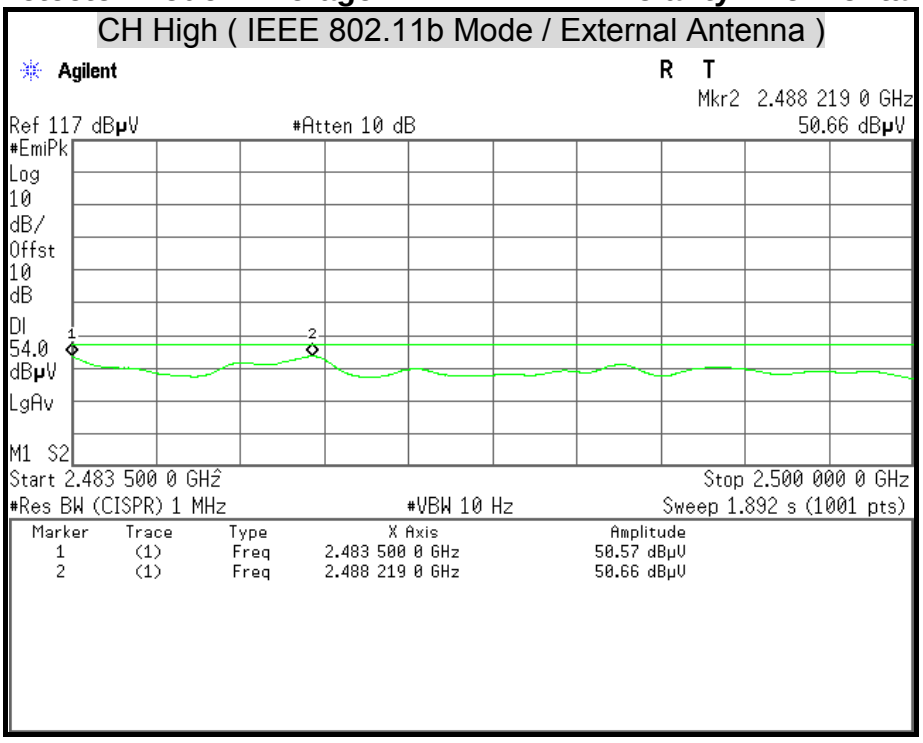
Detector Mode : Average **Polarity : Vertical**



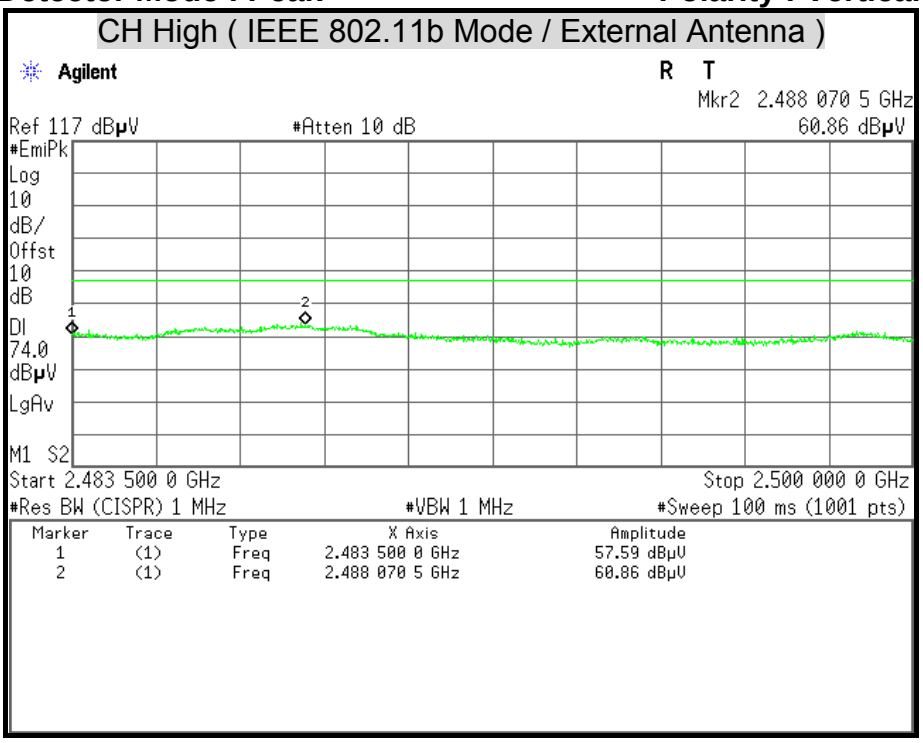
Detector Mode : Peak **Polarity : Horizontal**



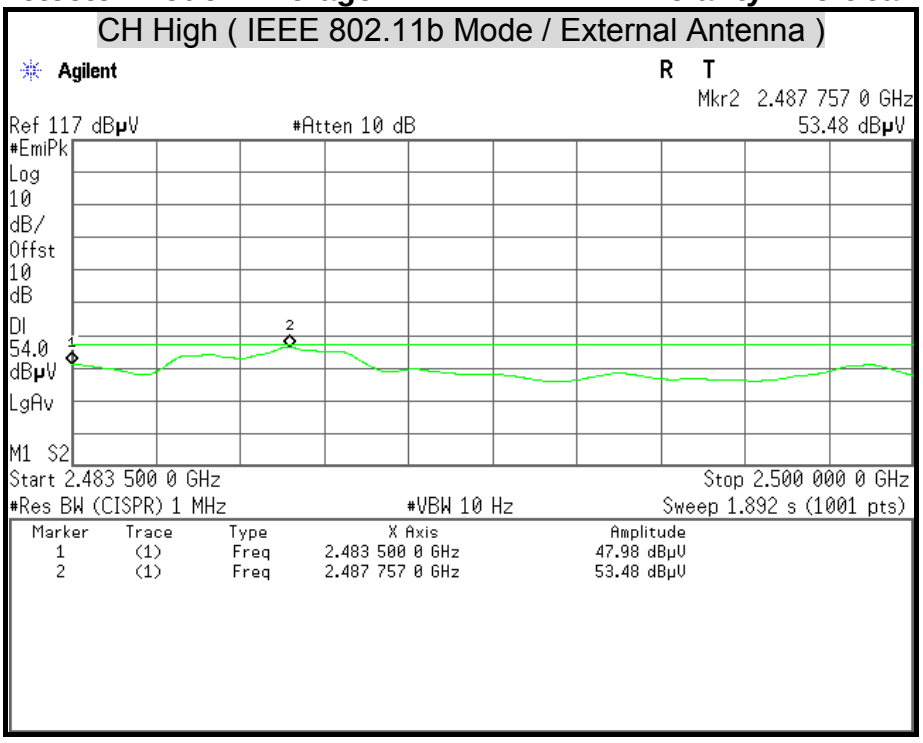
Detector Mode : Average **Polarity : Horizontal**



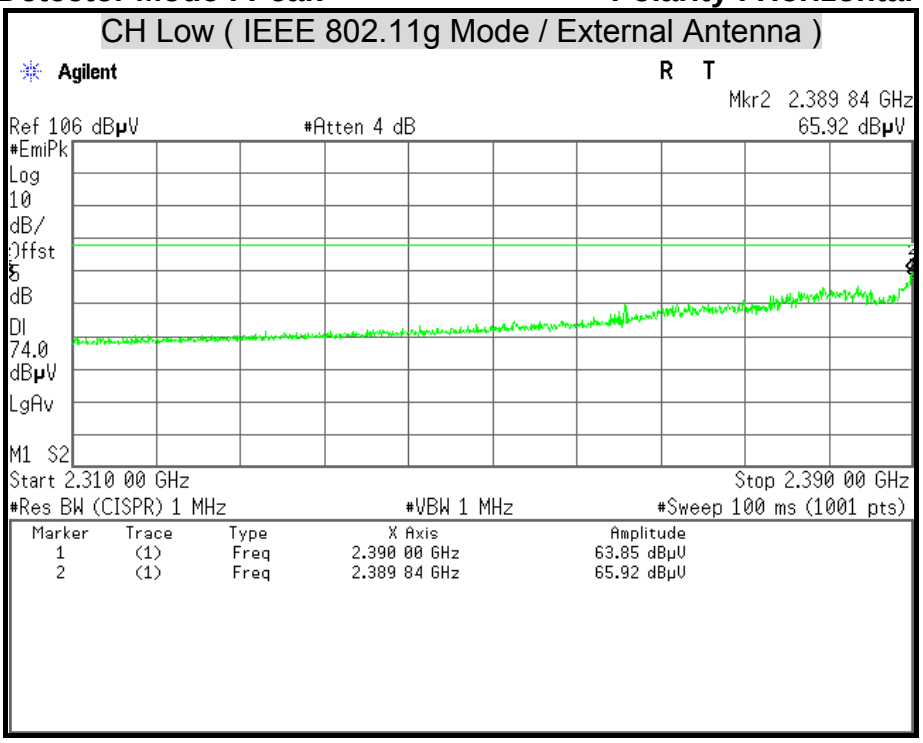
Detector Mode : Peak **Polarity : Vertical**



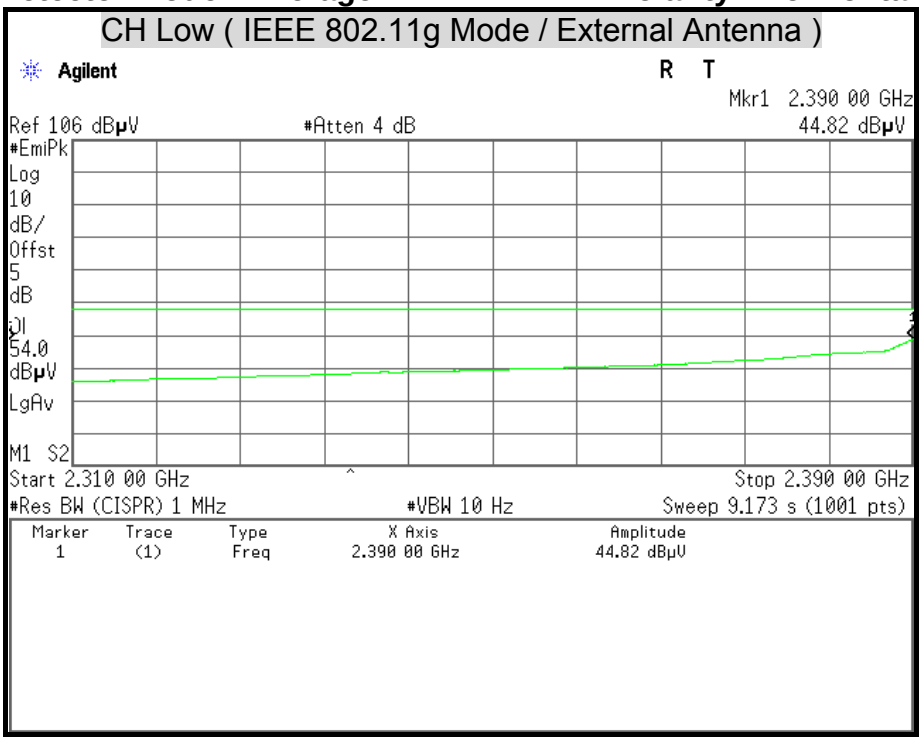
Detector Mode : Average **Polarity : Vertical**



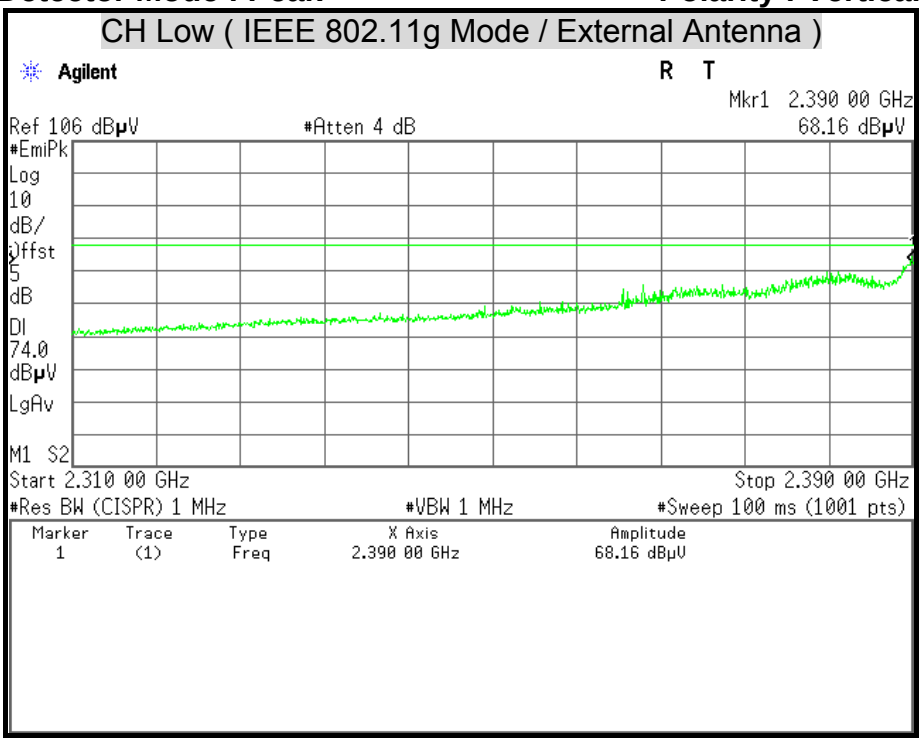
Detector Mode : Peak **Polarity : Horizontal**



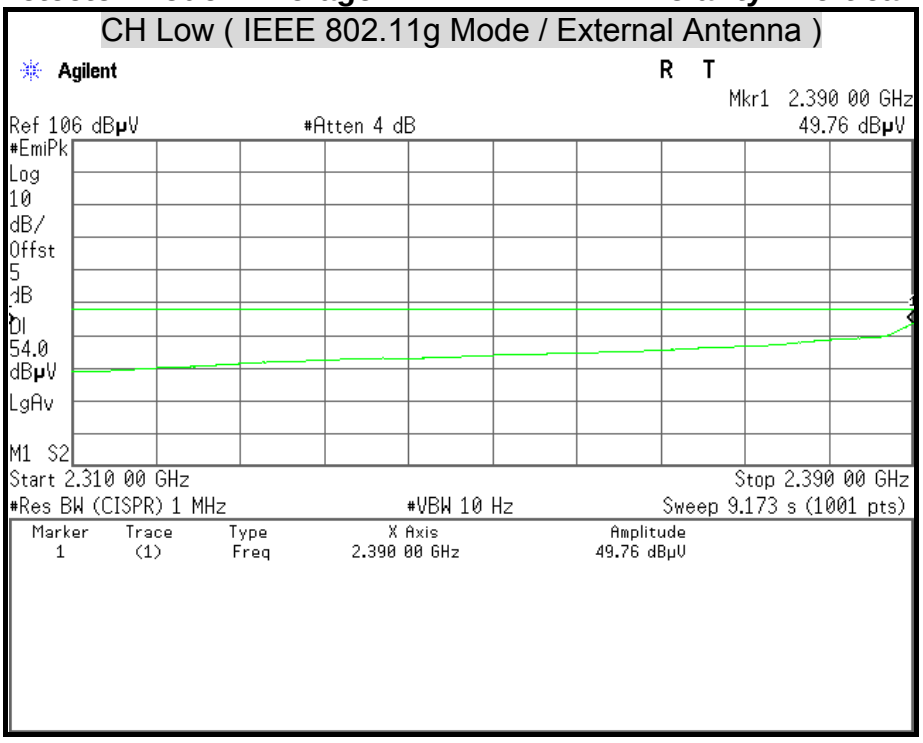
Detector Mode : Average **Polarity : Horizontal**



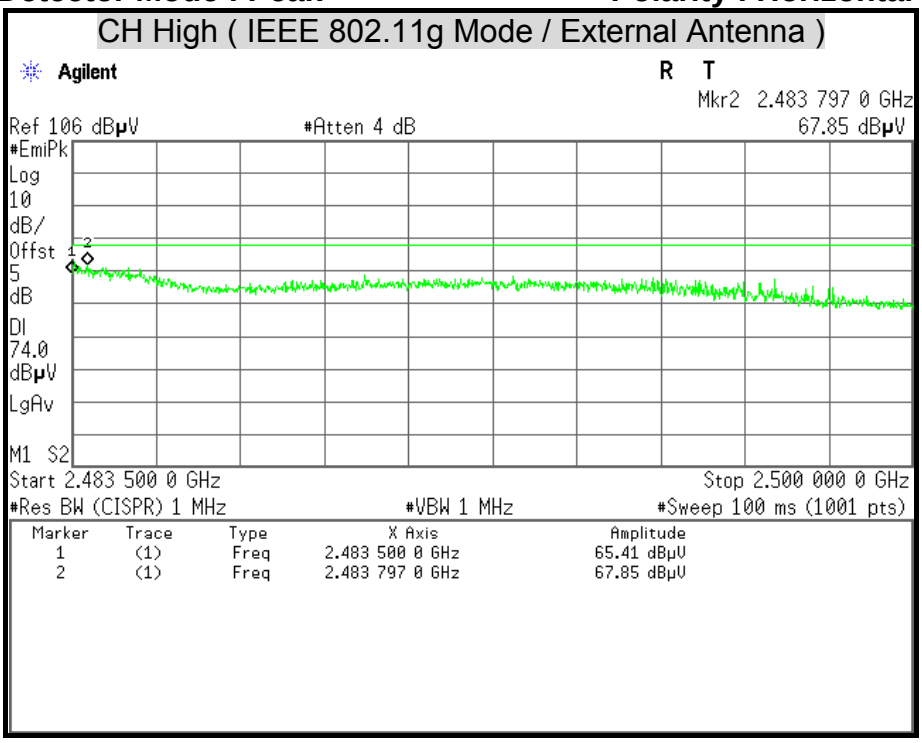
Detector Mode : Peak **Polarity : Vertical**



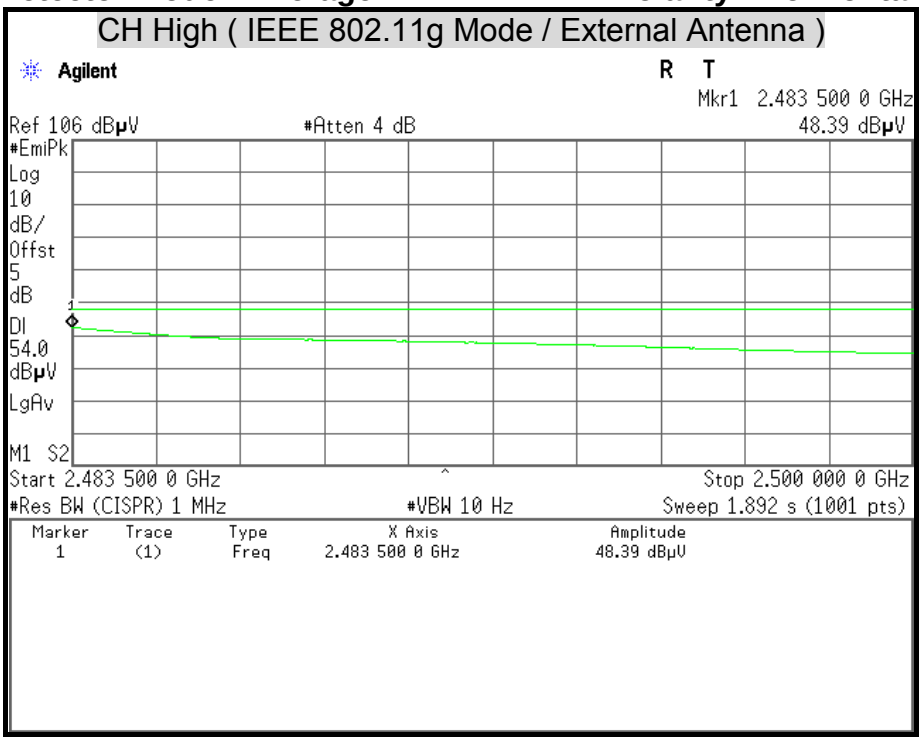
Detector Mode : Average **Polarity : Vertical**



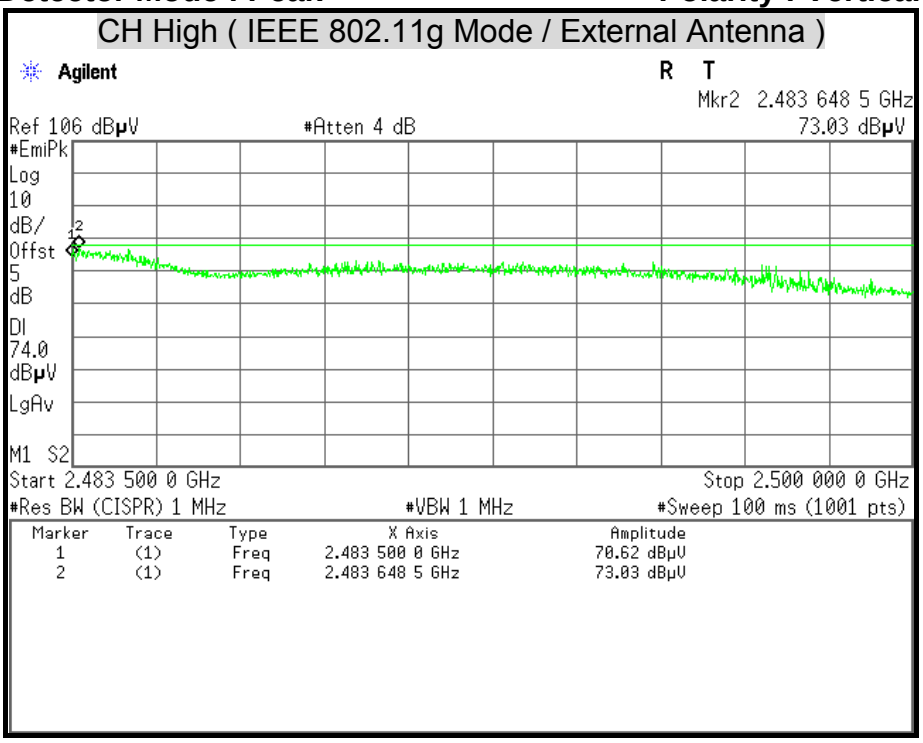
Detector Mode : Peak **Polarity : Horizontal**



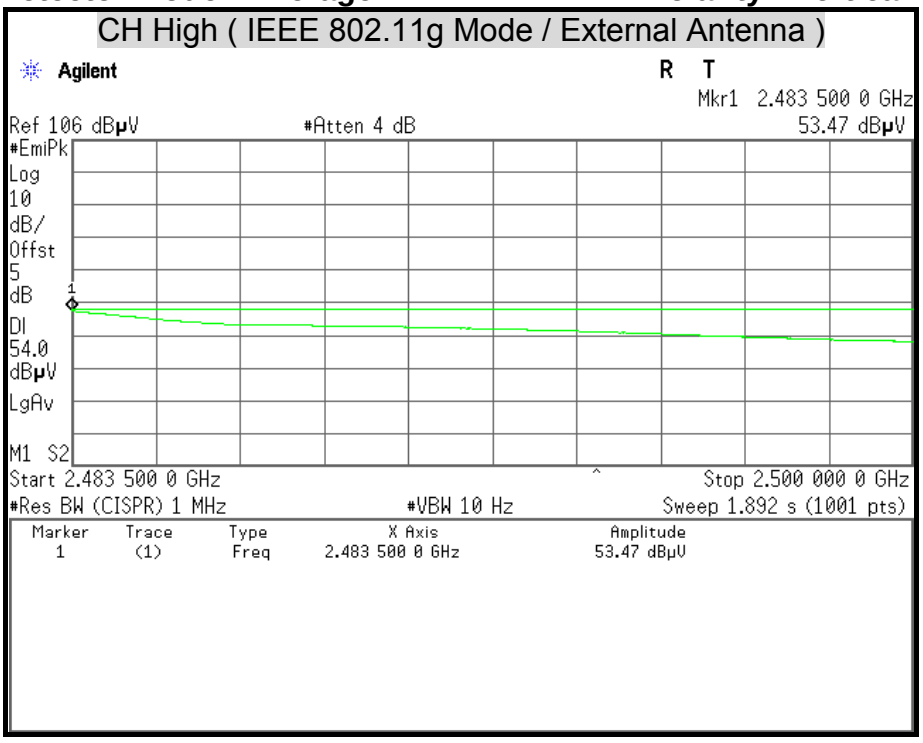
Detector Mode : Average **Polarity : Horizontal**



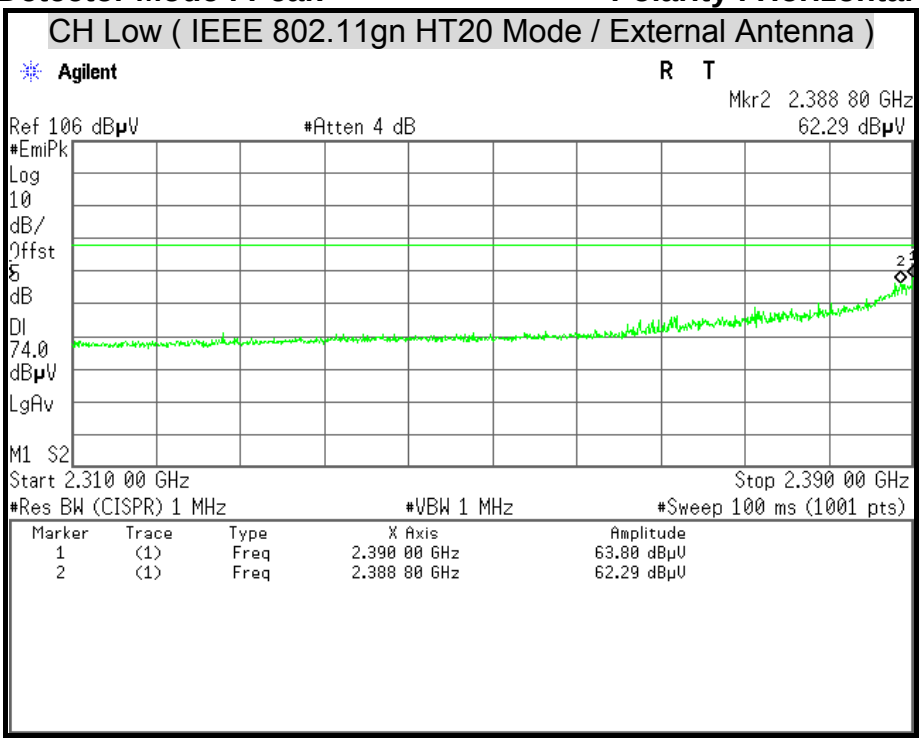
Detector Mode : Peak **Polarity : Vertical**



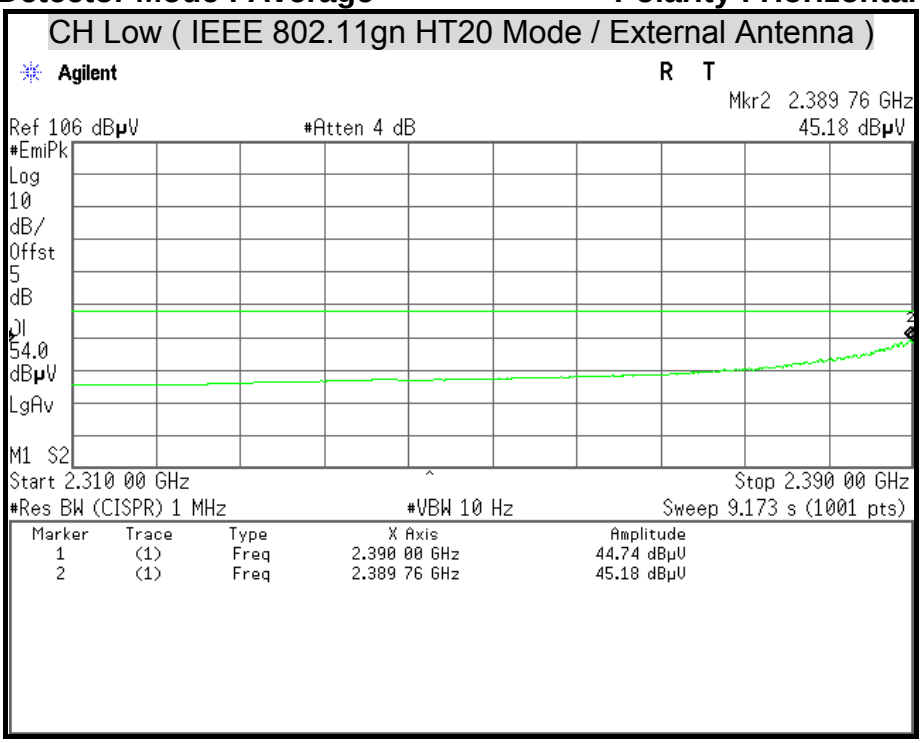
Detector Mode : Average **Polarity : Vertical**



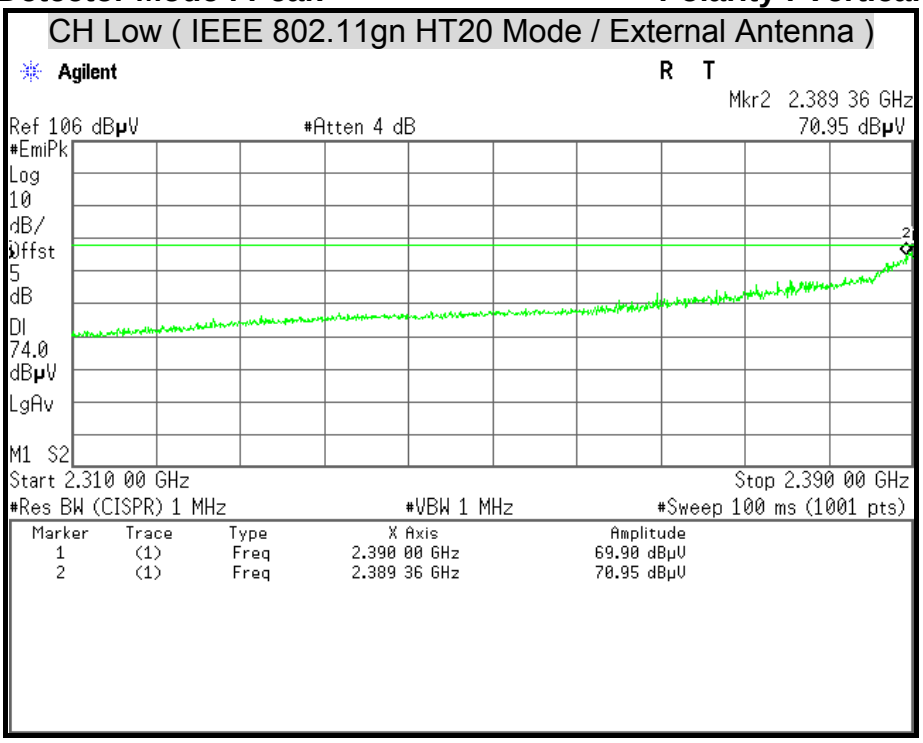
Detector Mode : Peak **Polarity : Horizontal**



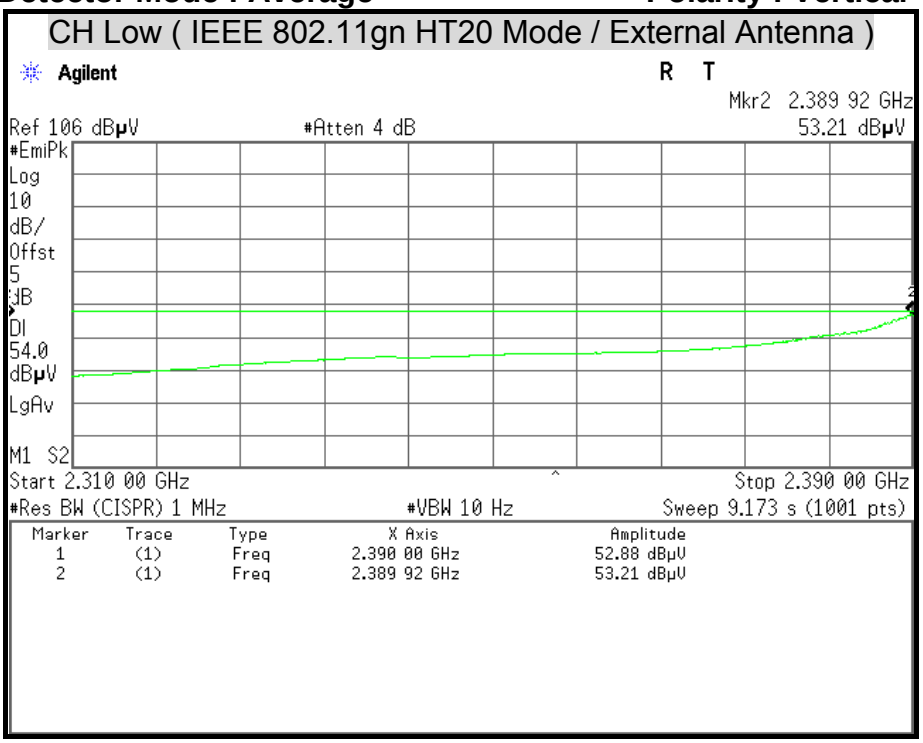
Detector Mode : Average **Polarity : Horizontal**



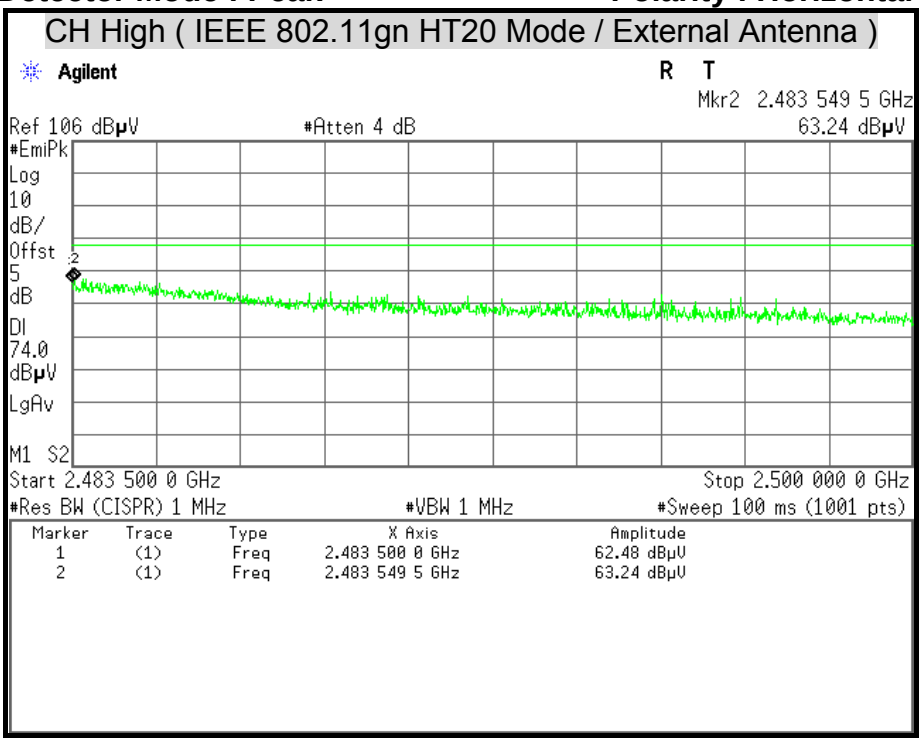
Detector Mode : Peak **Polarity : Vertical**



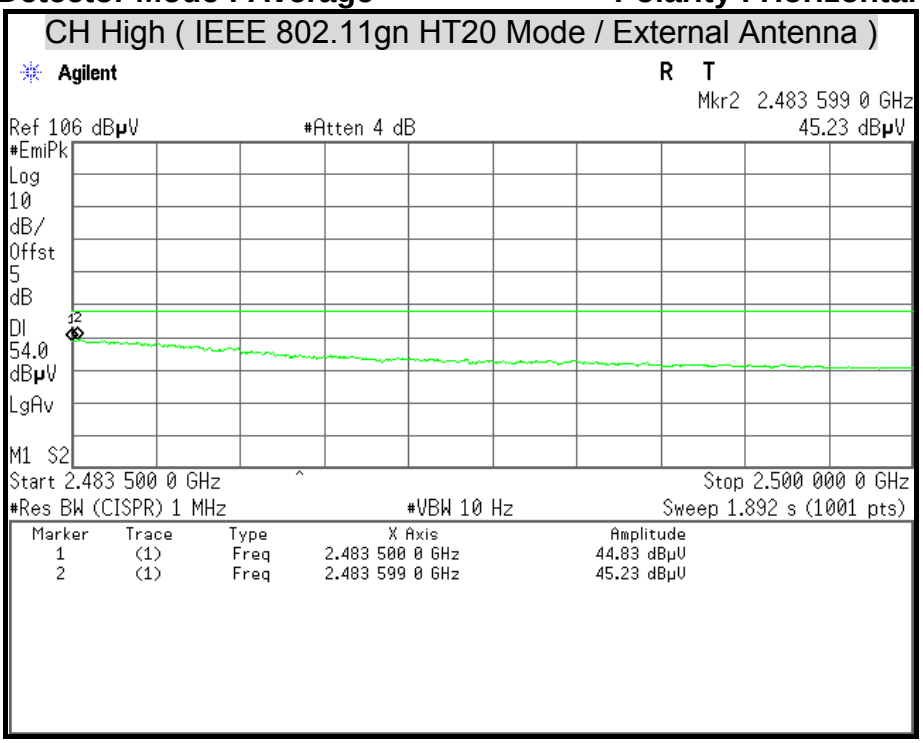
Detector Mode : Average **Polarity : Vertical**



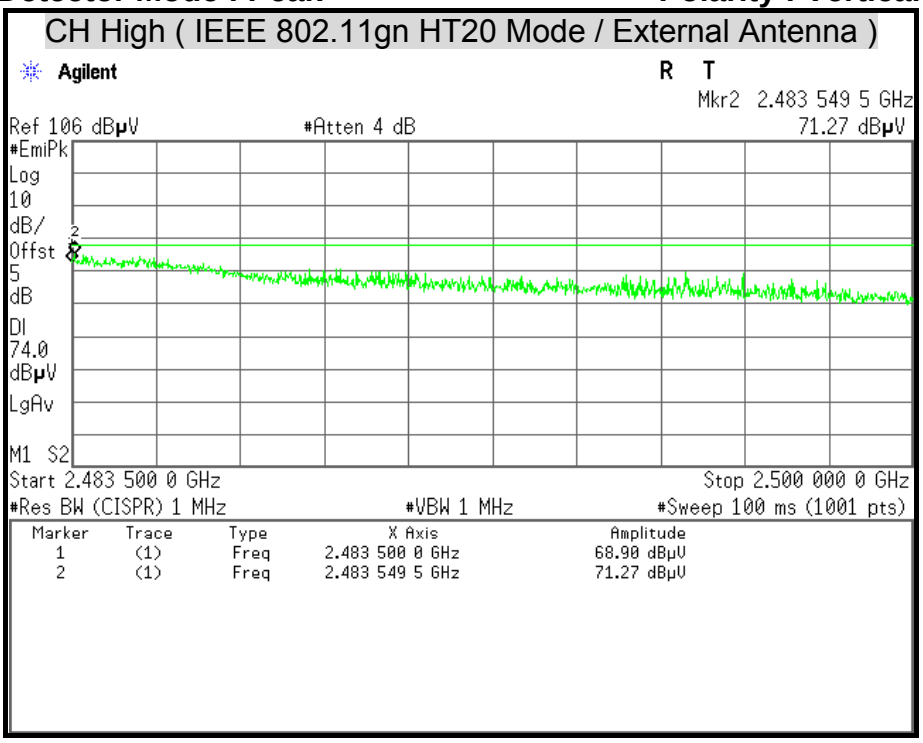
Detector Mode : Peak **Polarity : Horizontal**



Detector Mode : Average **Polarity : Horizontal**



Detector Mode : Peak **Polarity : Vertical**



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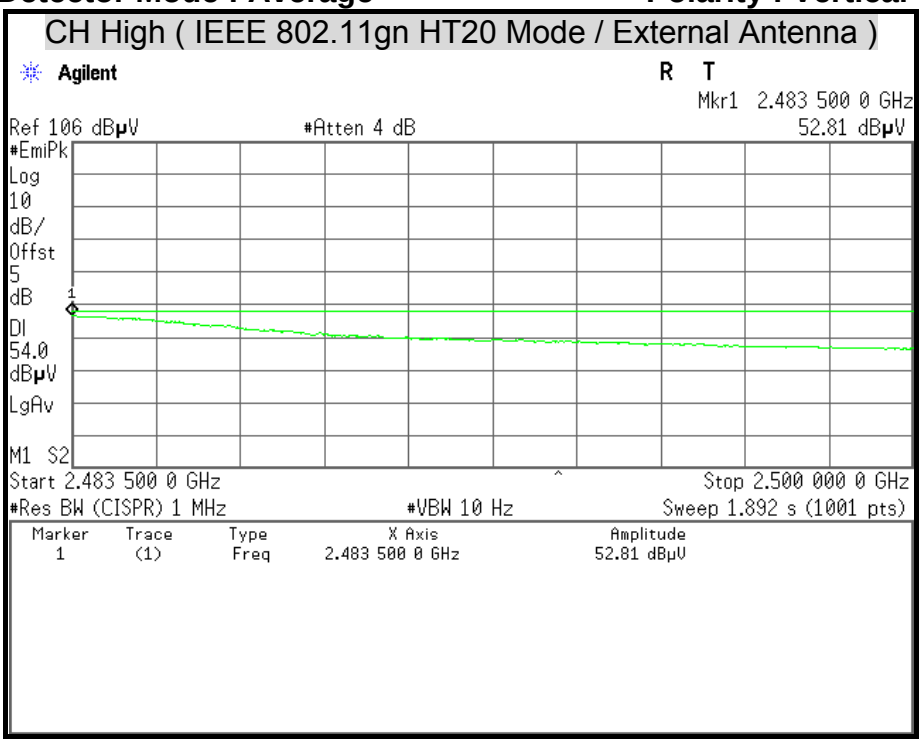
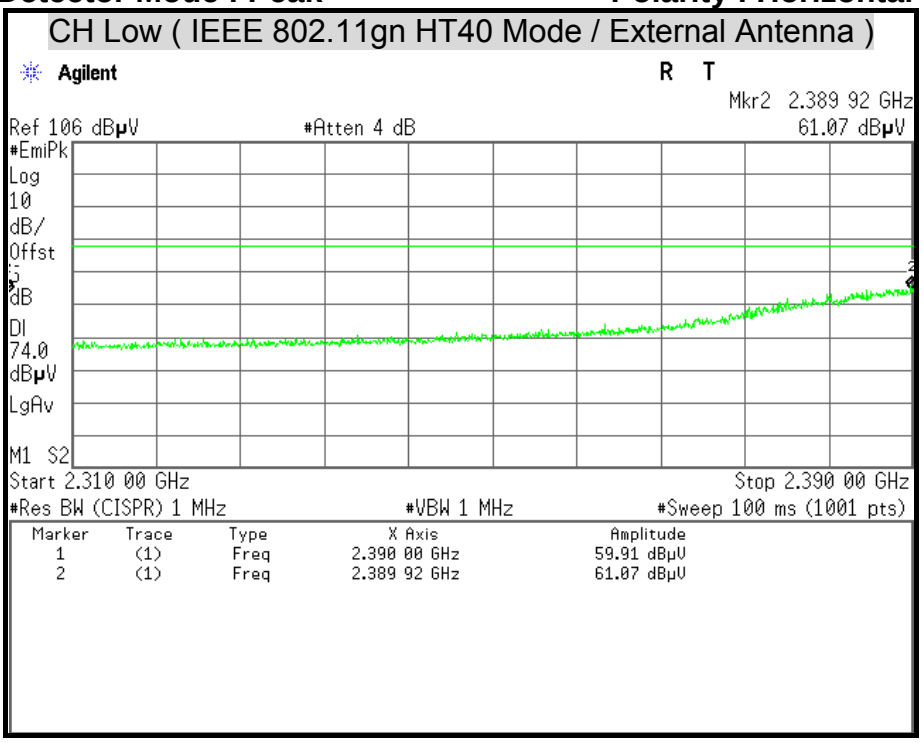
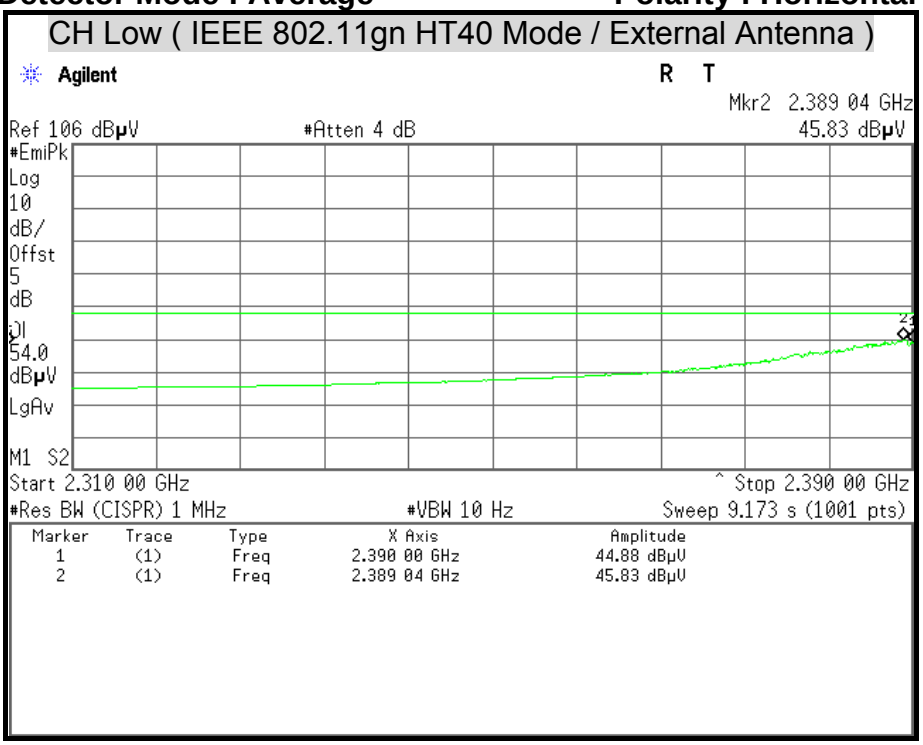


Detector Mode : Peak **Polarity : Horizontal**



Detector Mode : Average **Polarity : Horizontal**



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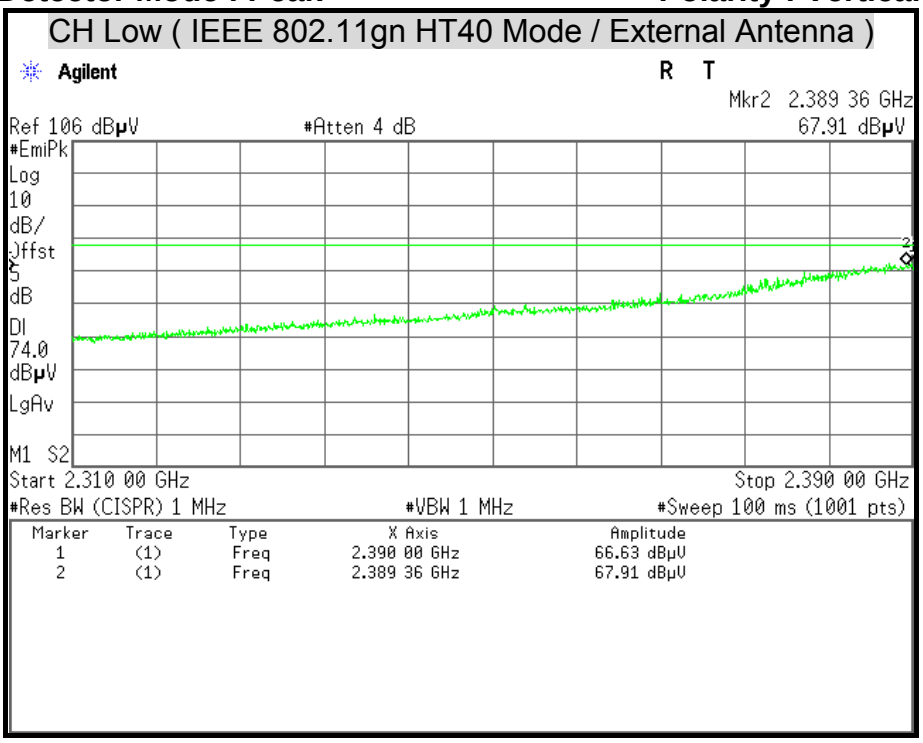

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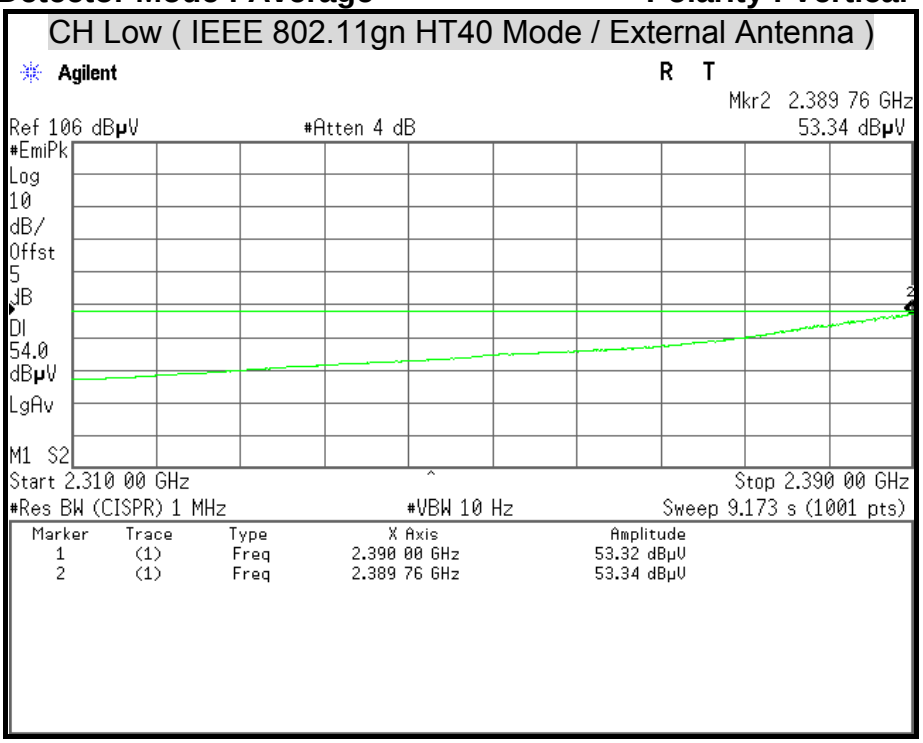
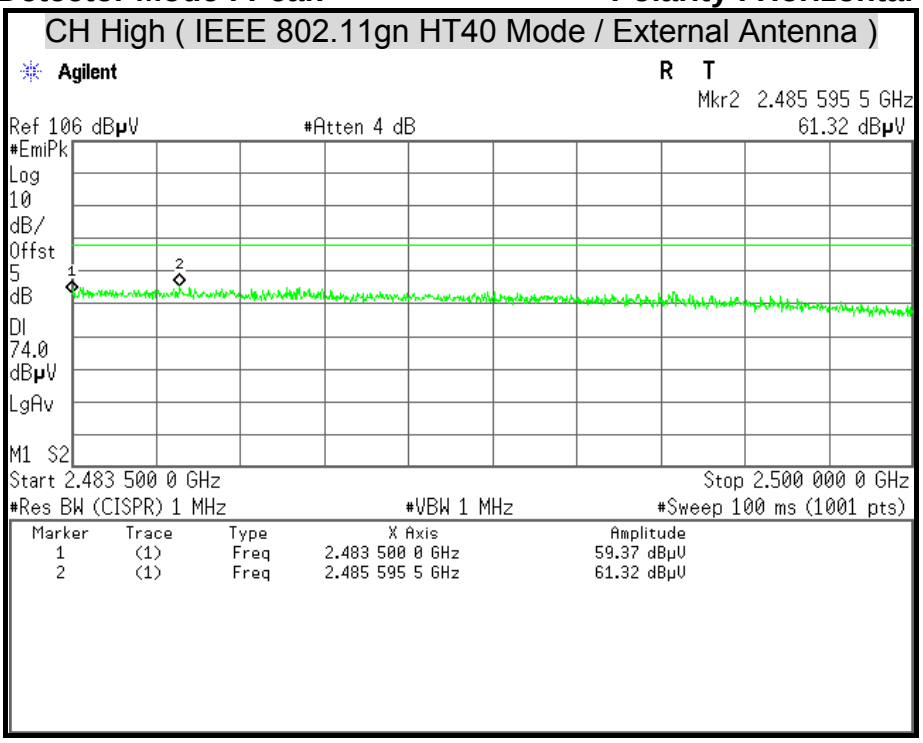
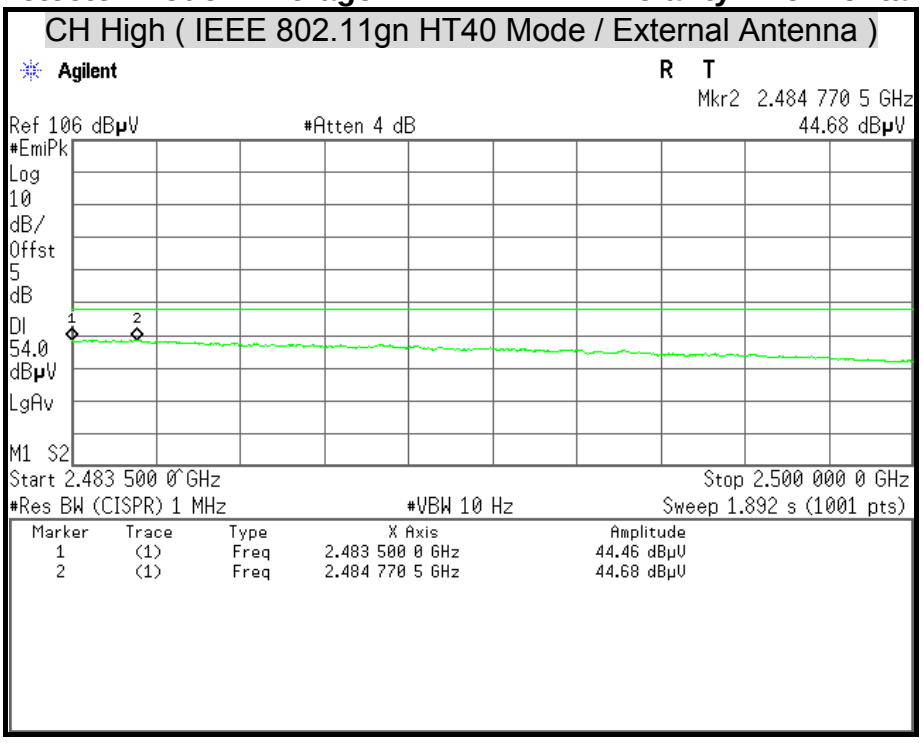


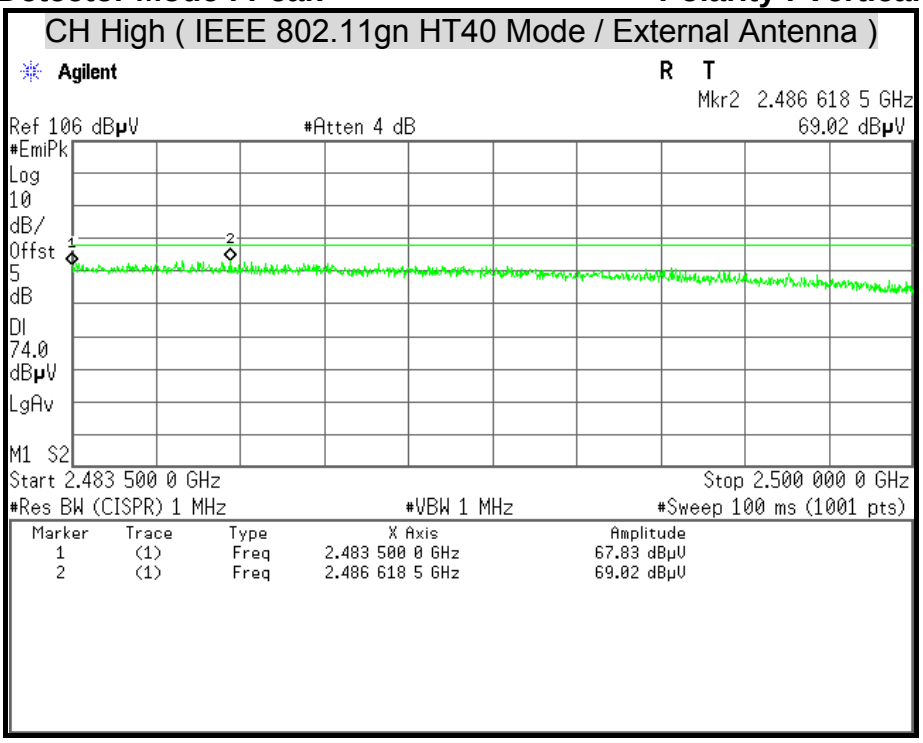
Detector Mode : Peak **Polarity : Horizontal**



Detector Mode : Average **Polarity : Horizontal**



Detector Mode : Peak **Polarity : Vertical**



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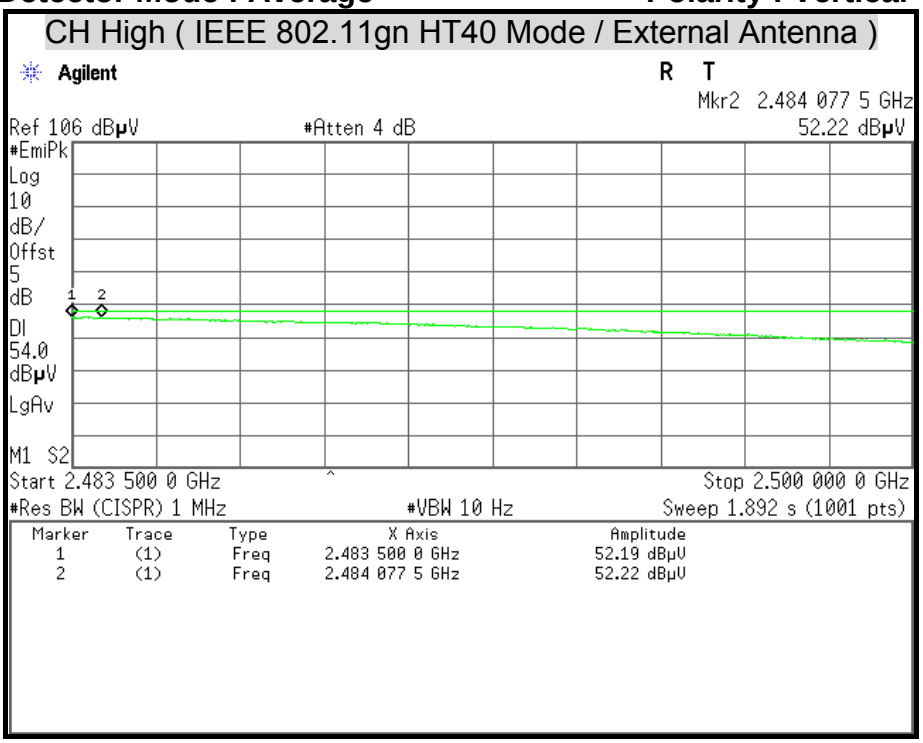
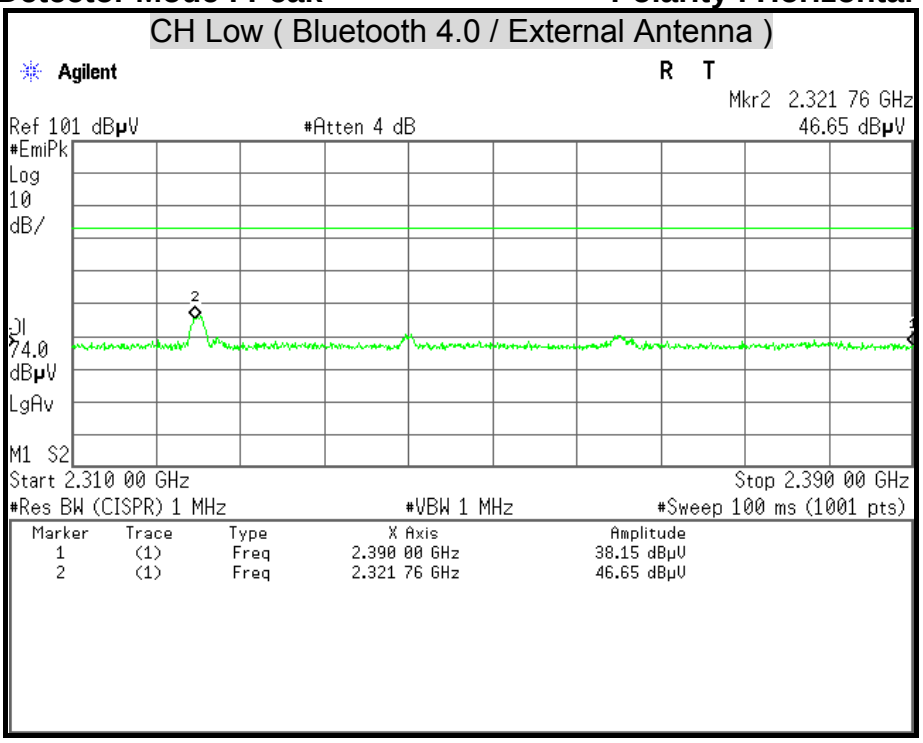
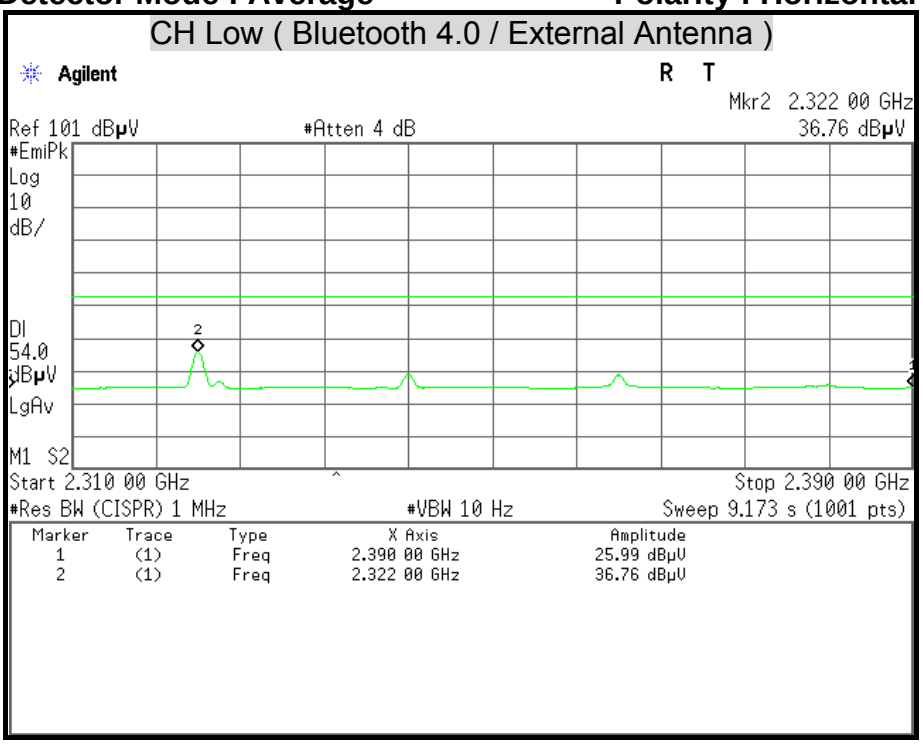


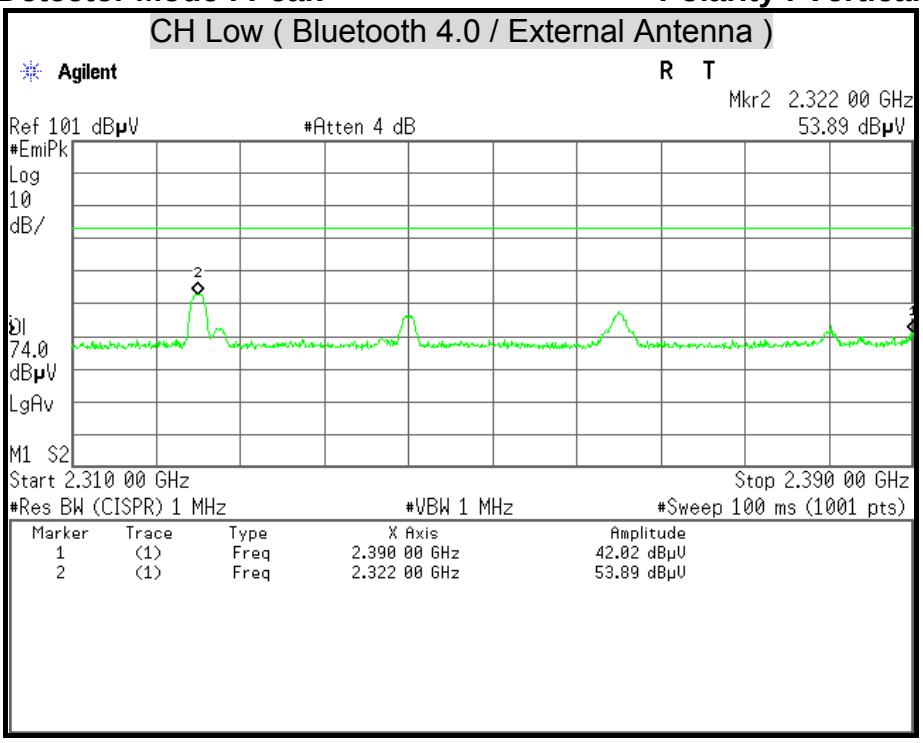
Detector Mode : Peak **Polarity : Horizontal**



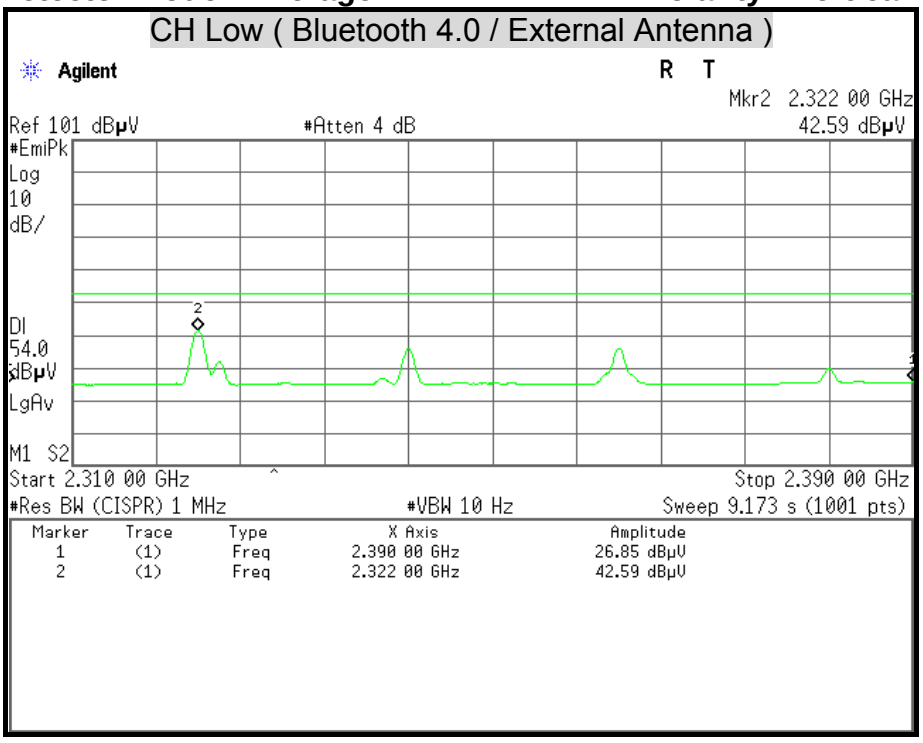
Detector Mode : Average **Polarity : Horizontal**



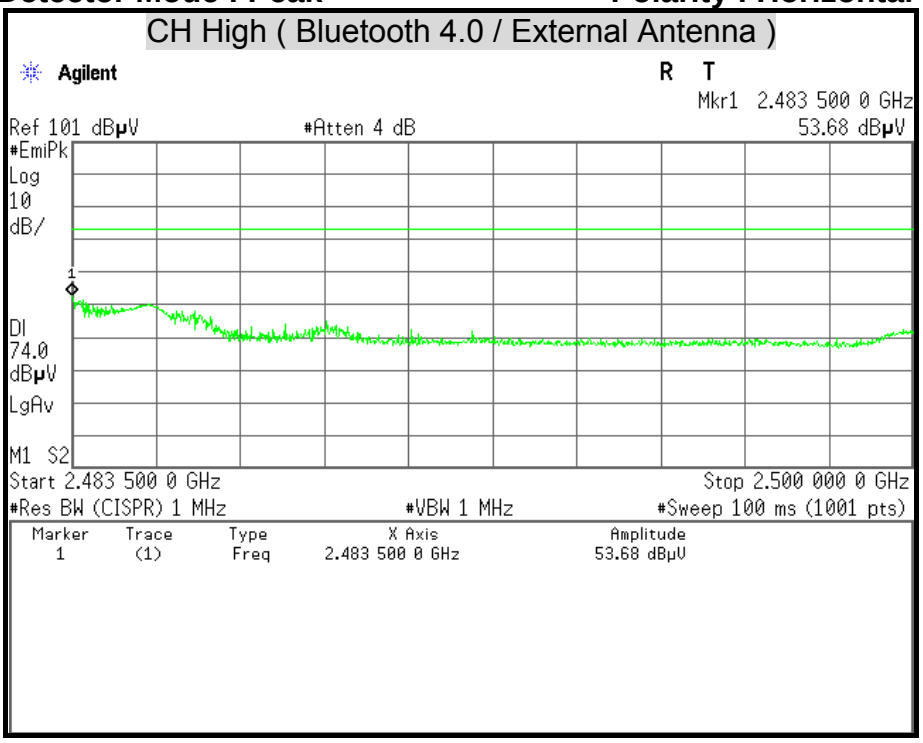
Detector Mode : Peak **Polarity : Vertical**



Detector Mode : Average **Polarity : Vertical**



Detector Mode : Peak **Polarity : Horizontal**



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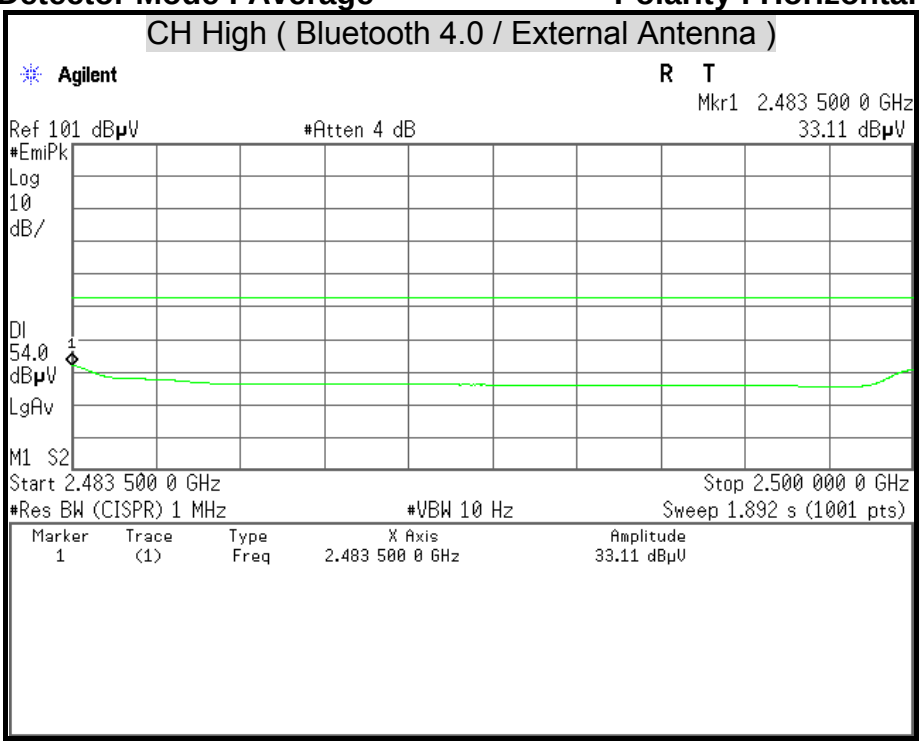

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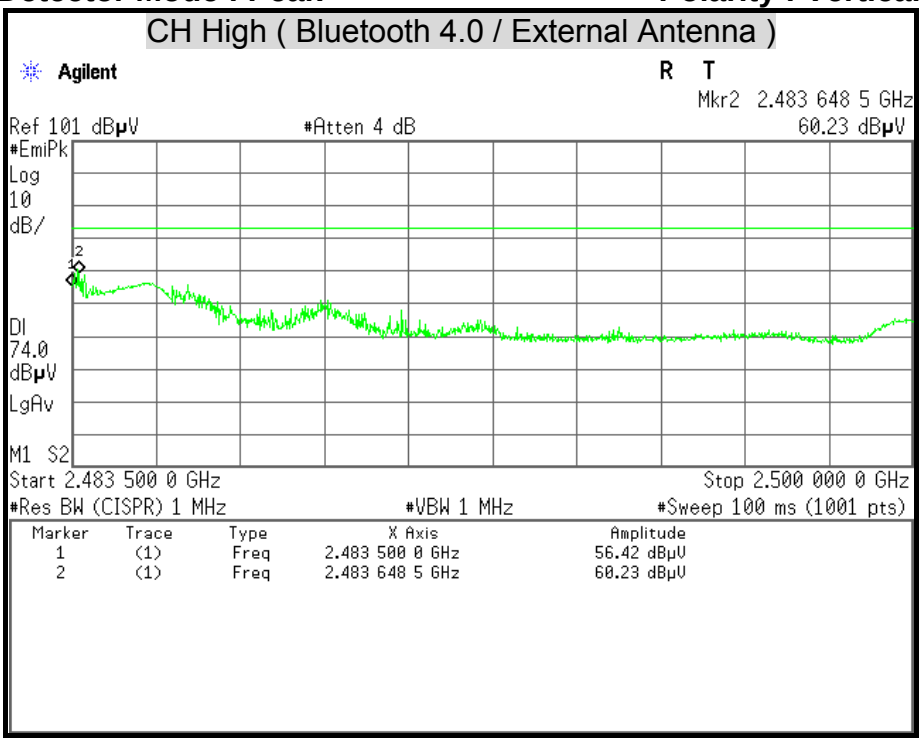

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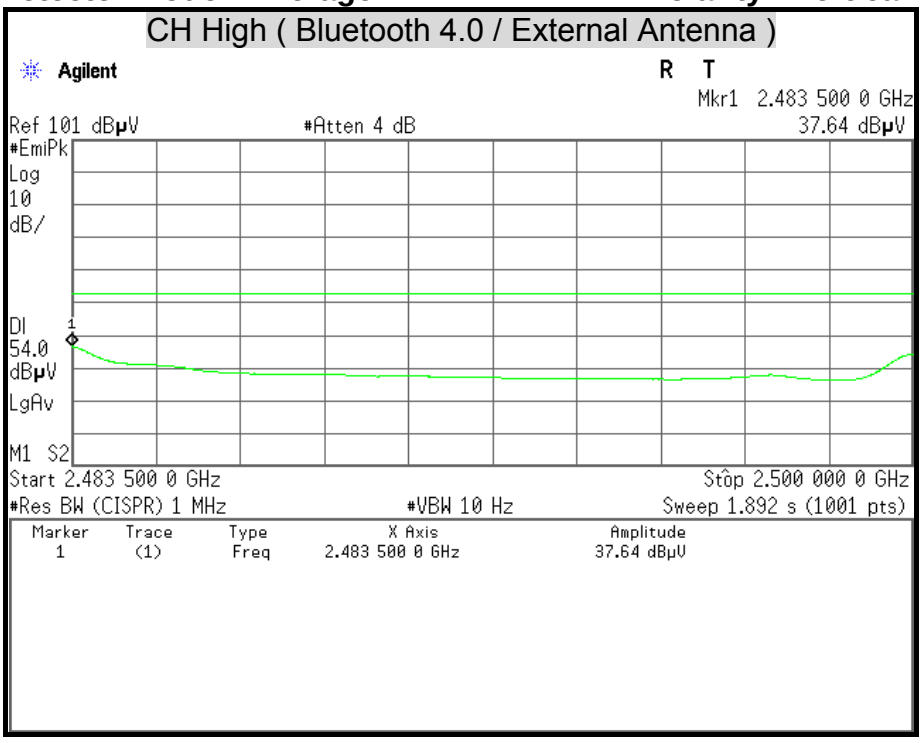

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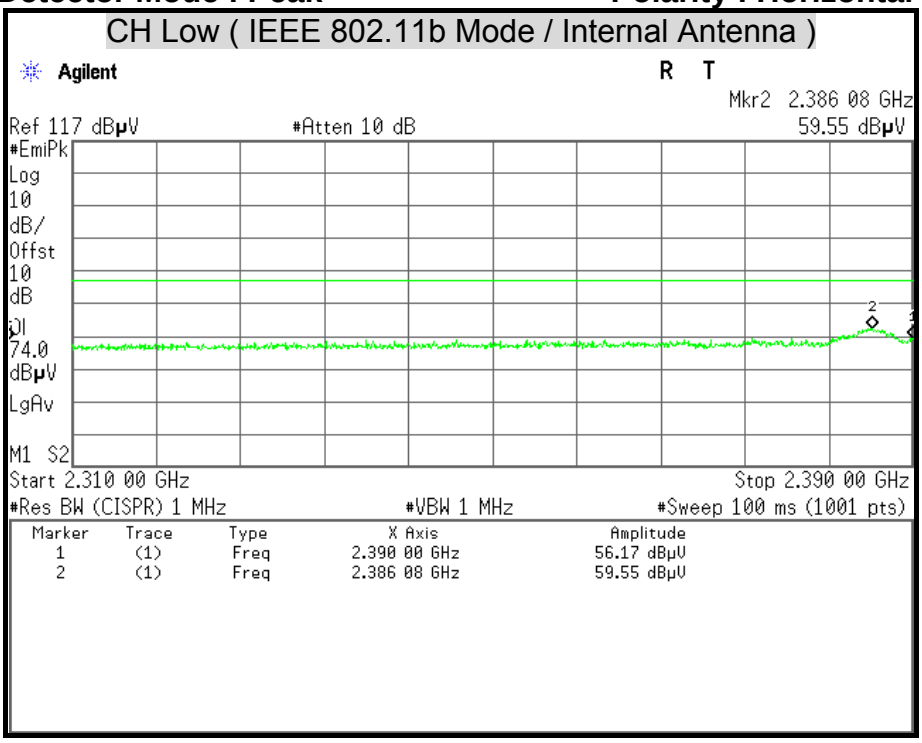

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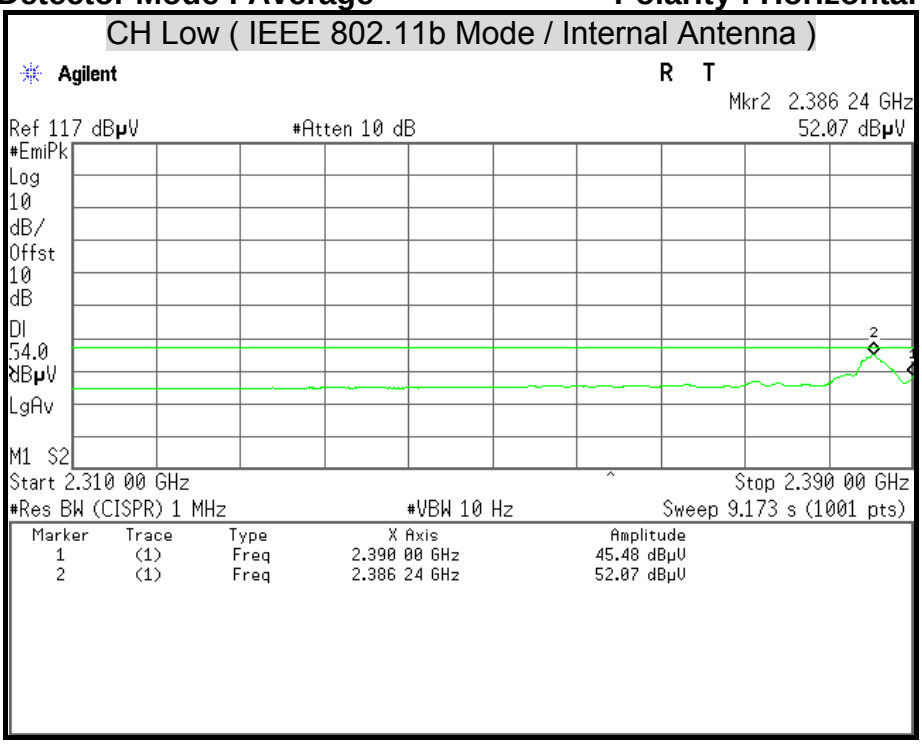

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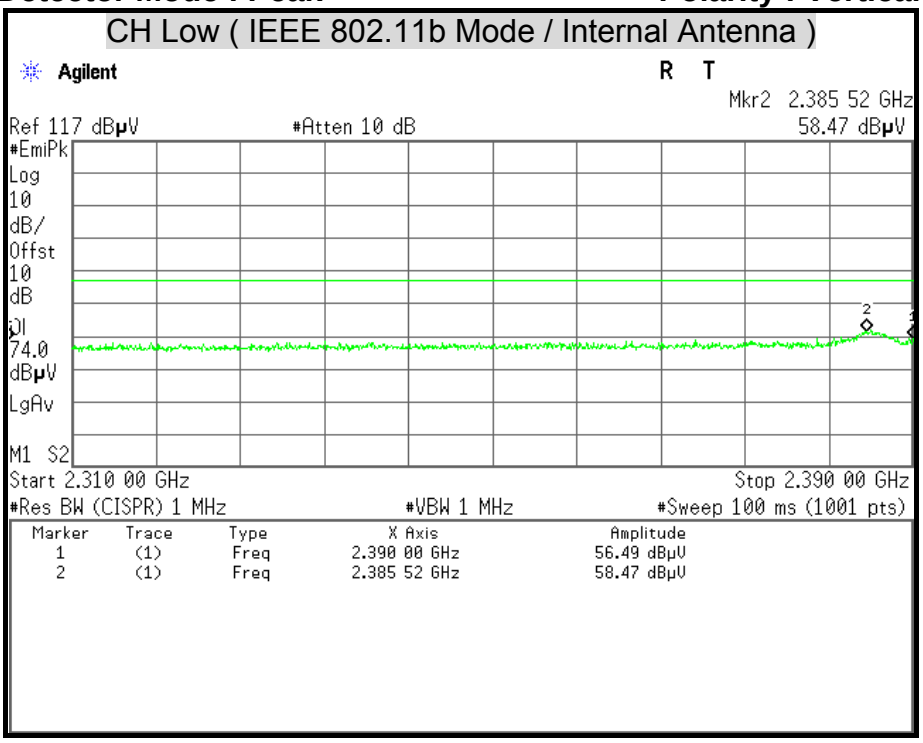

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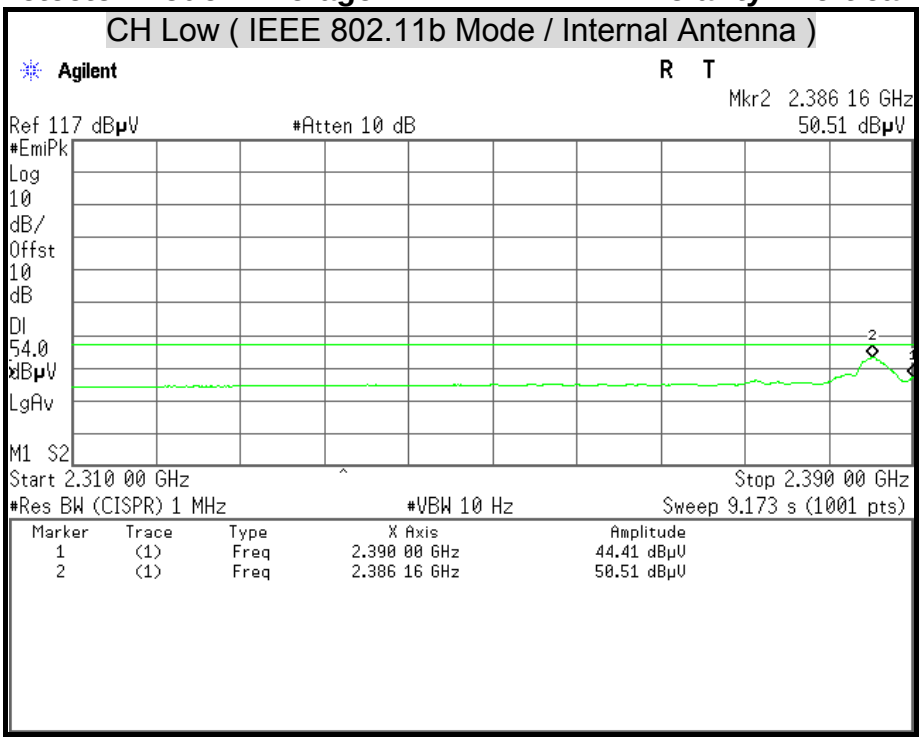

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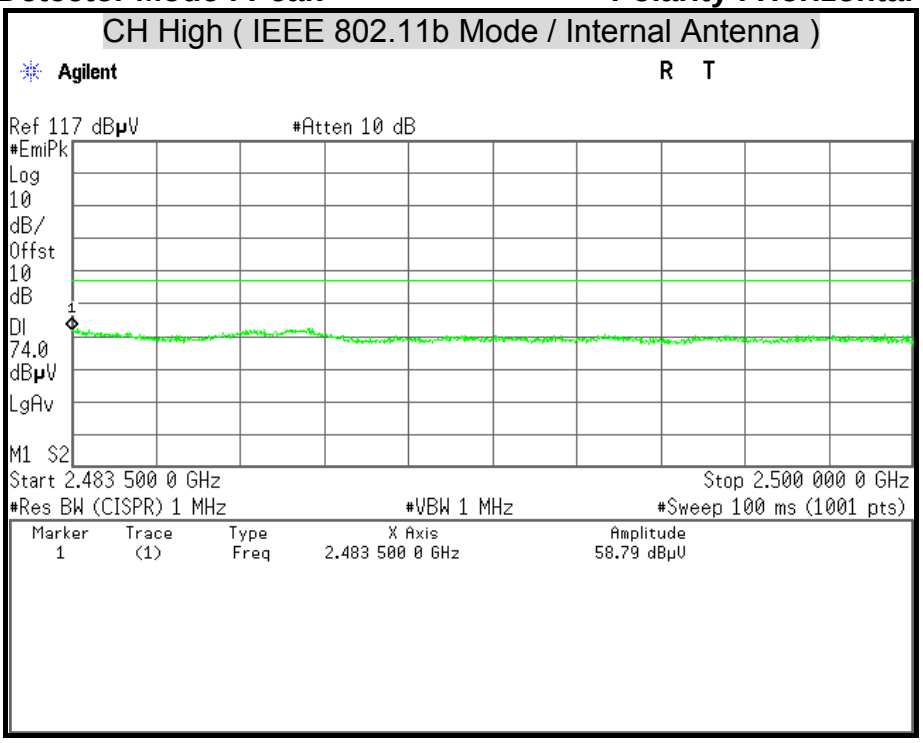

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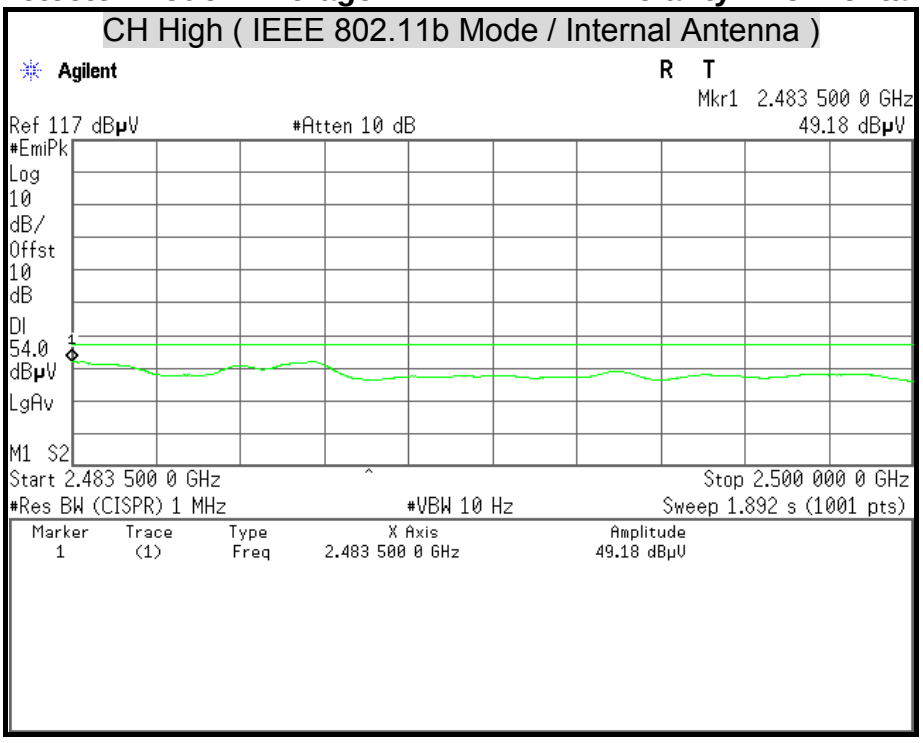

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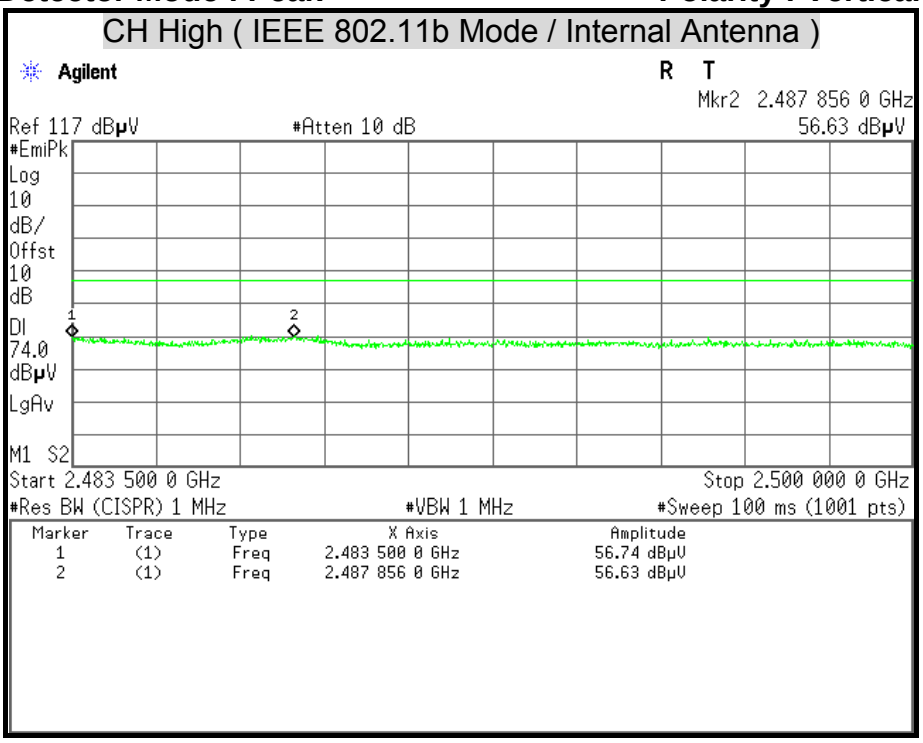

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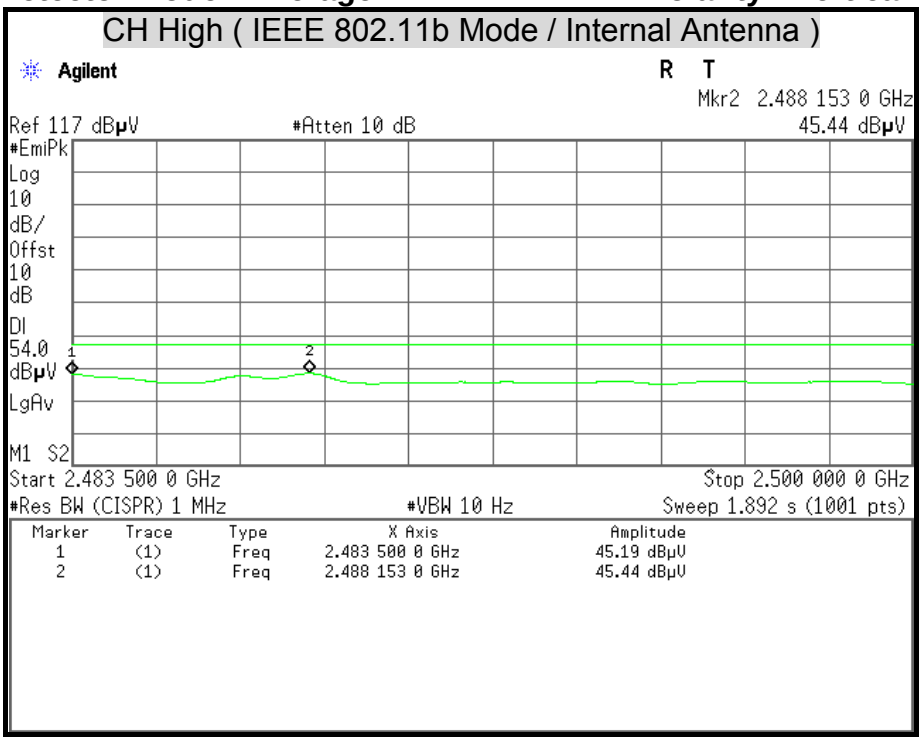

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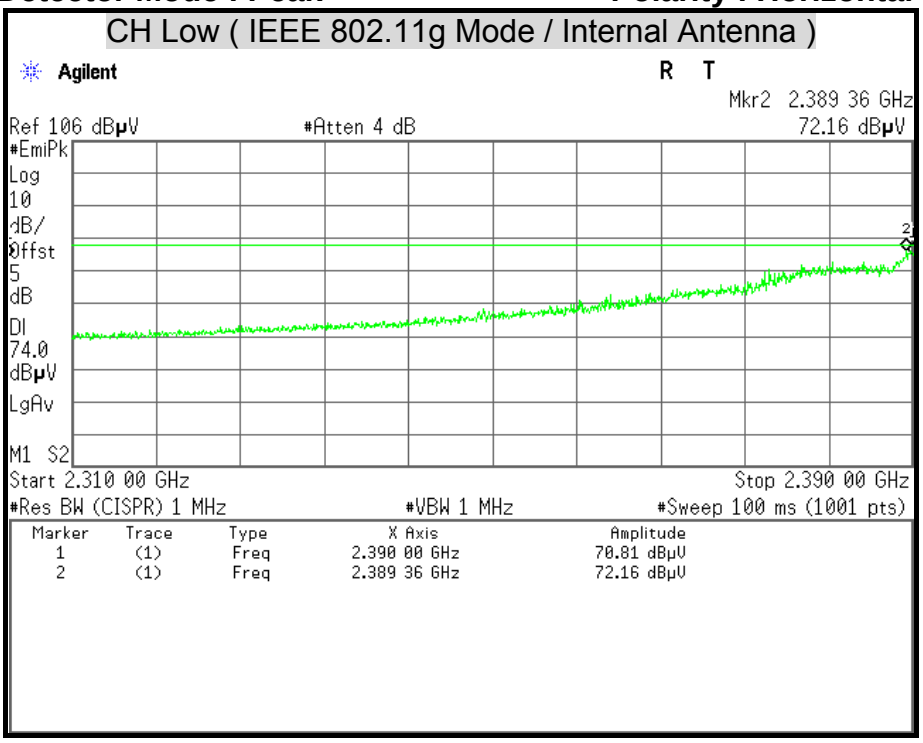

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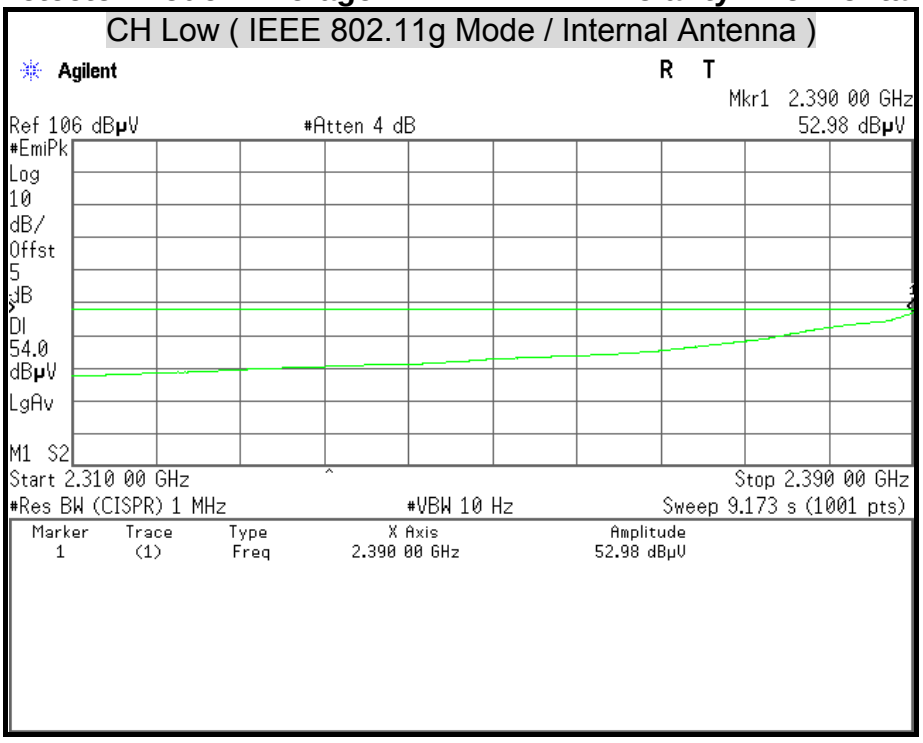

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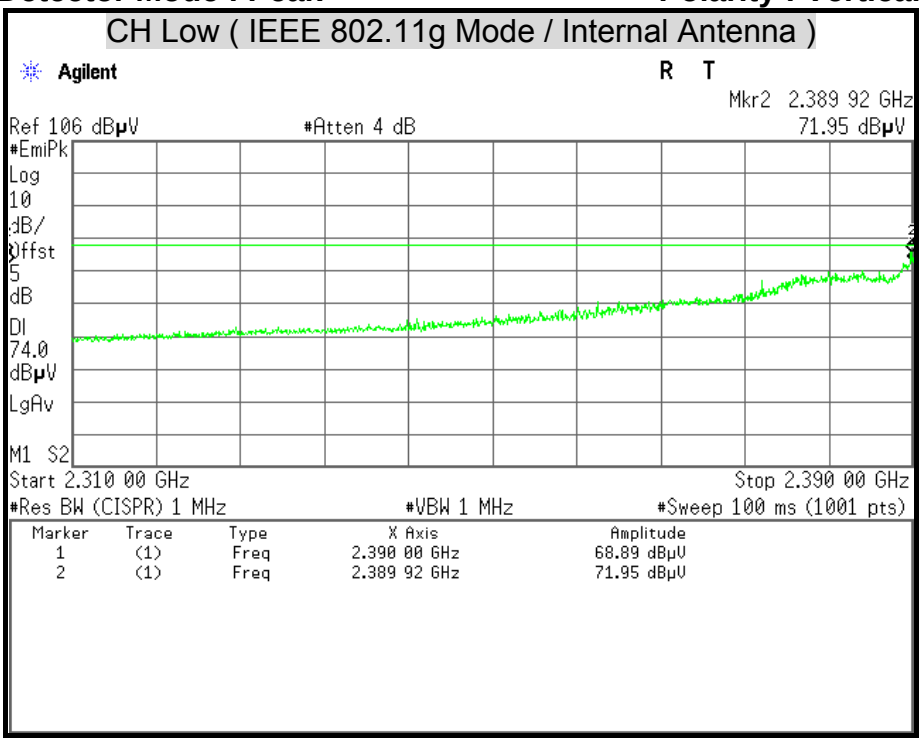

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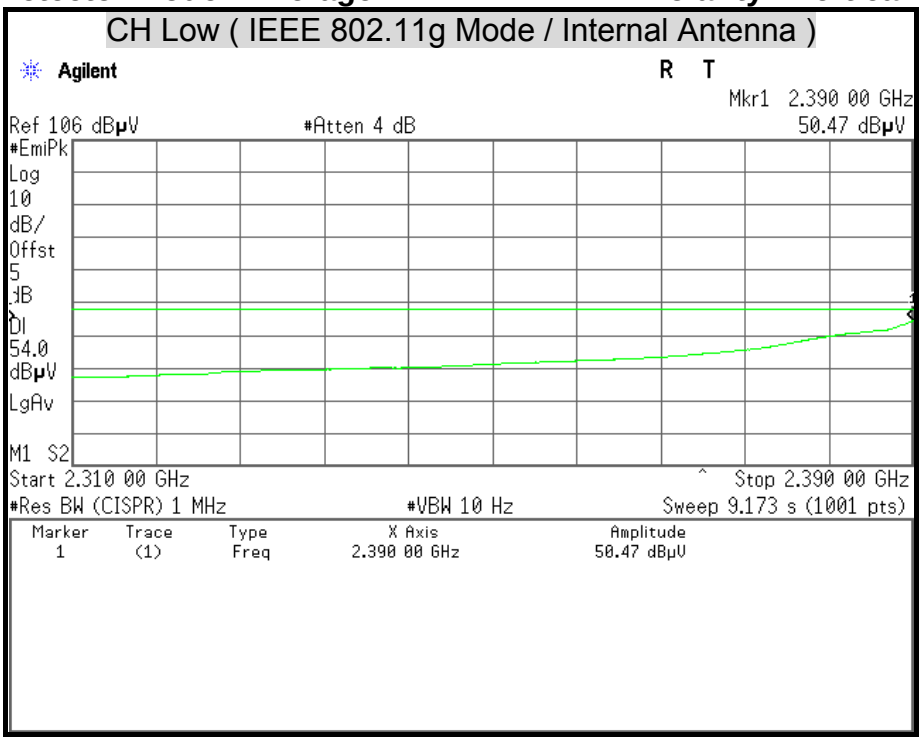
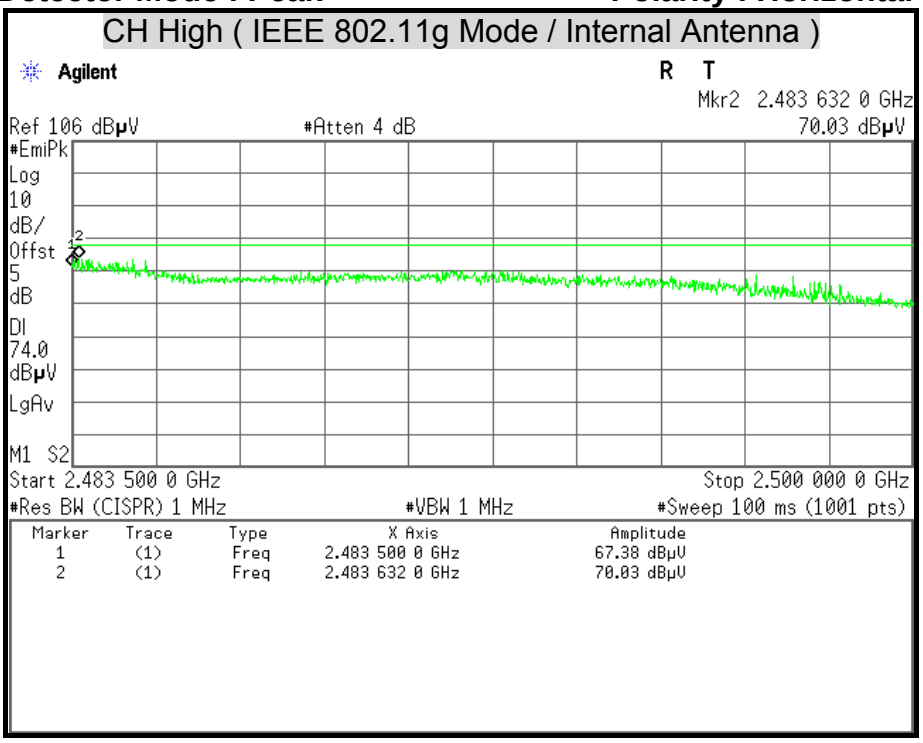
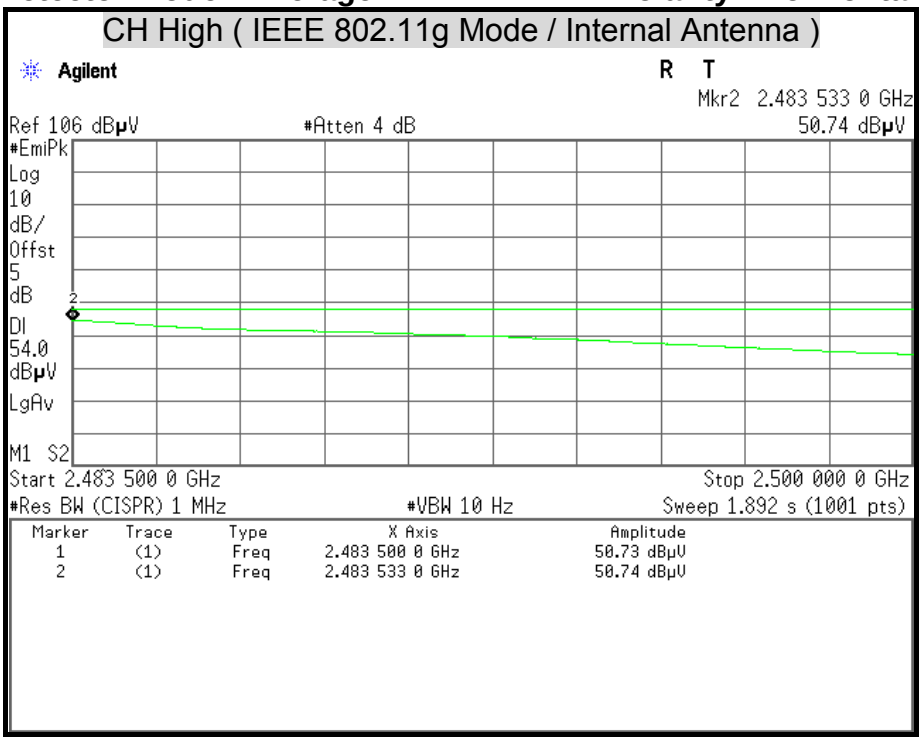


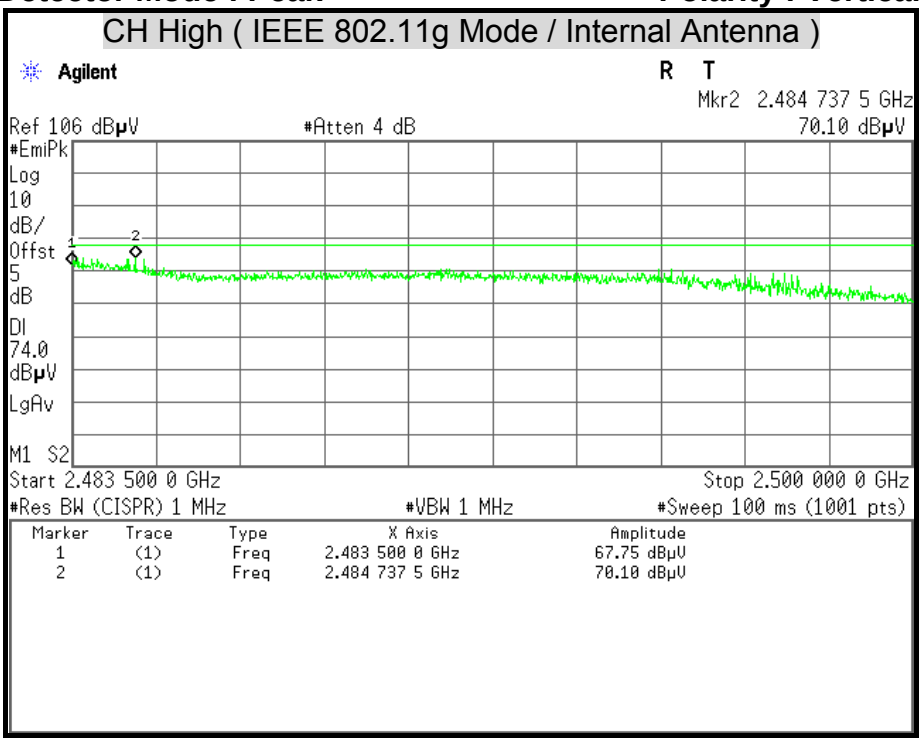
Detector Mode : Peak **Polarity : Horizontal**



Detector Mode : Average **Polarity : Horizontal**



Detector Mode : Peak **Polarity : Vertical**



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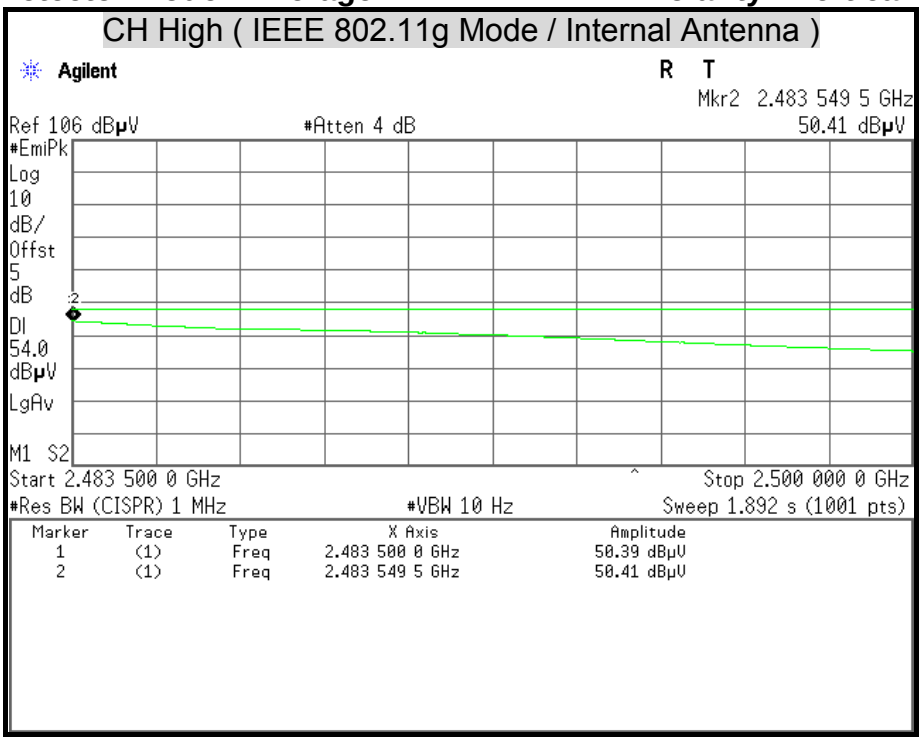

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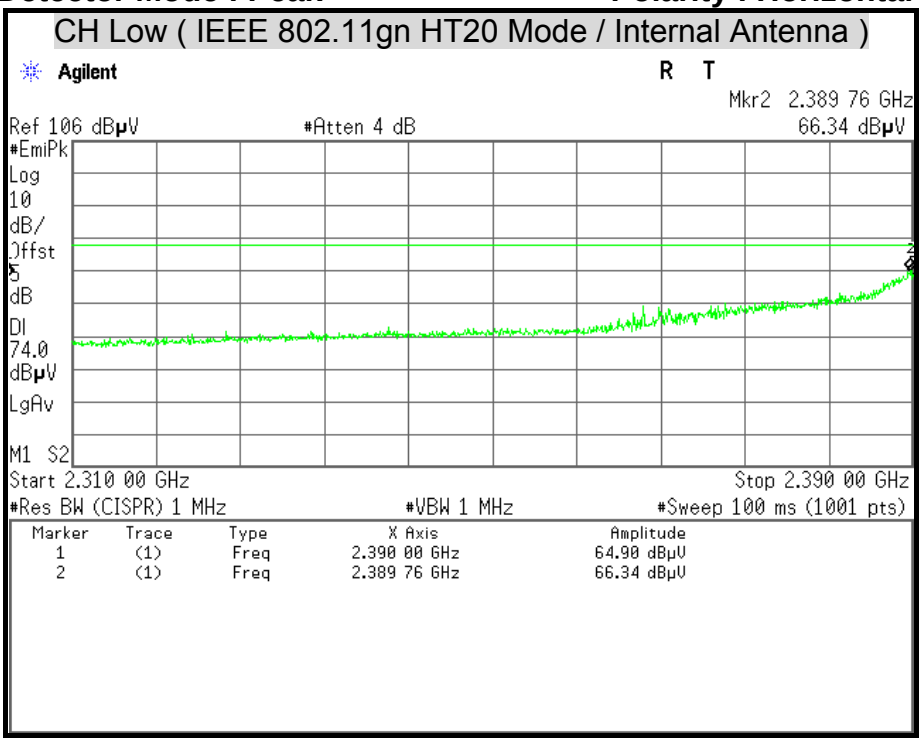

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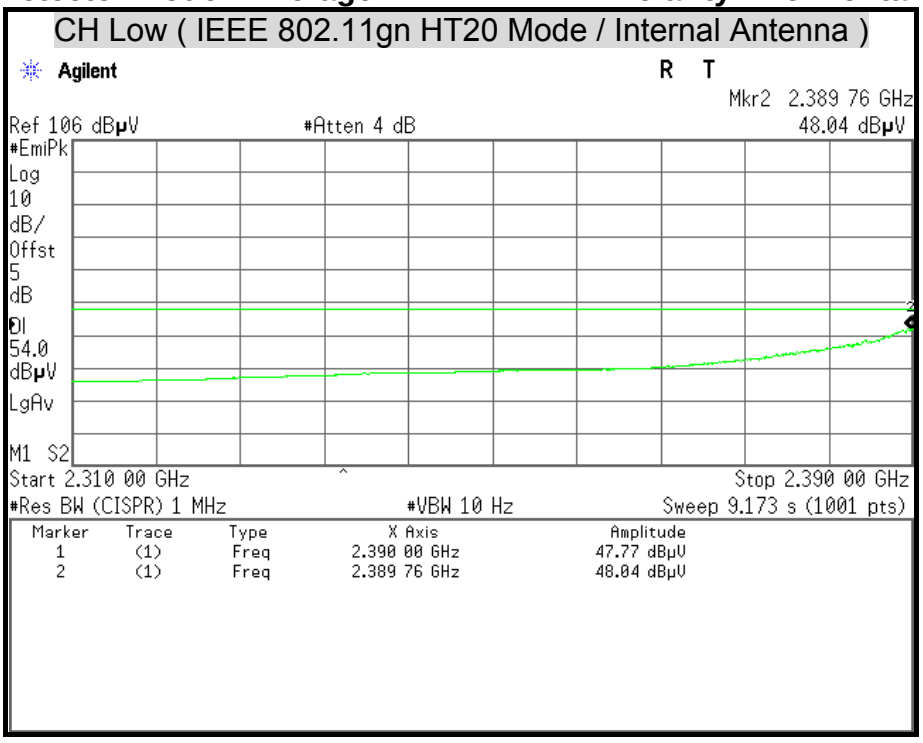

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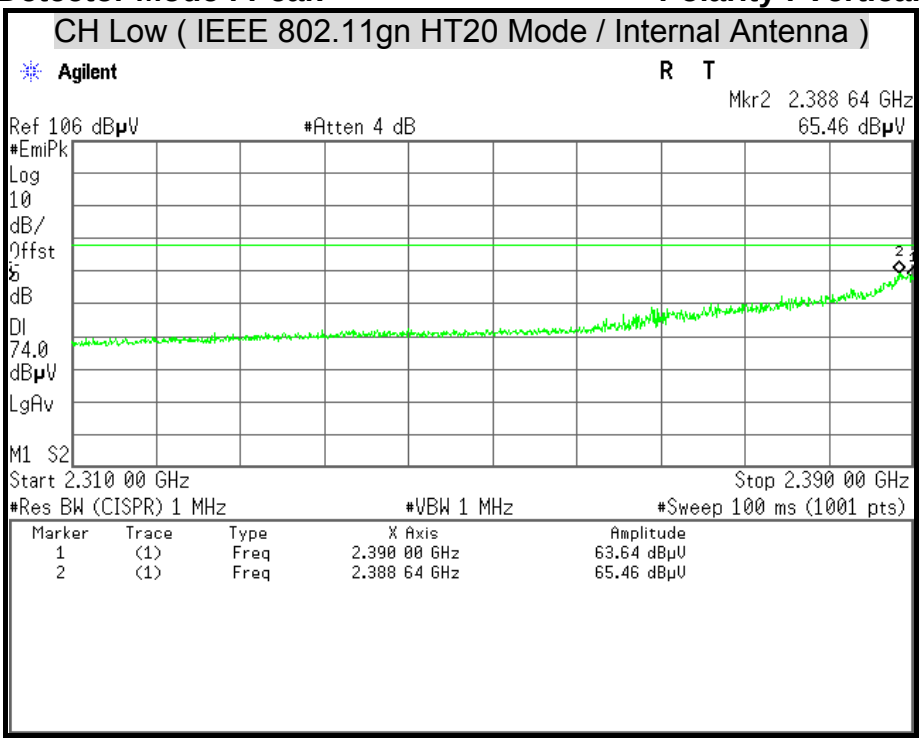

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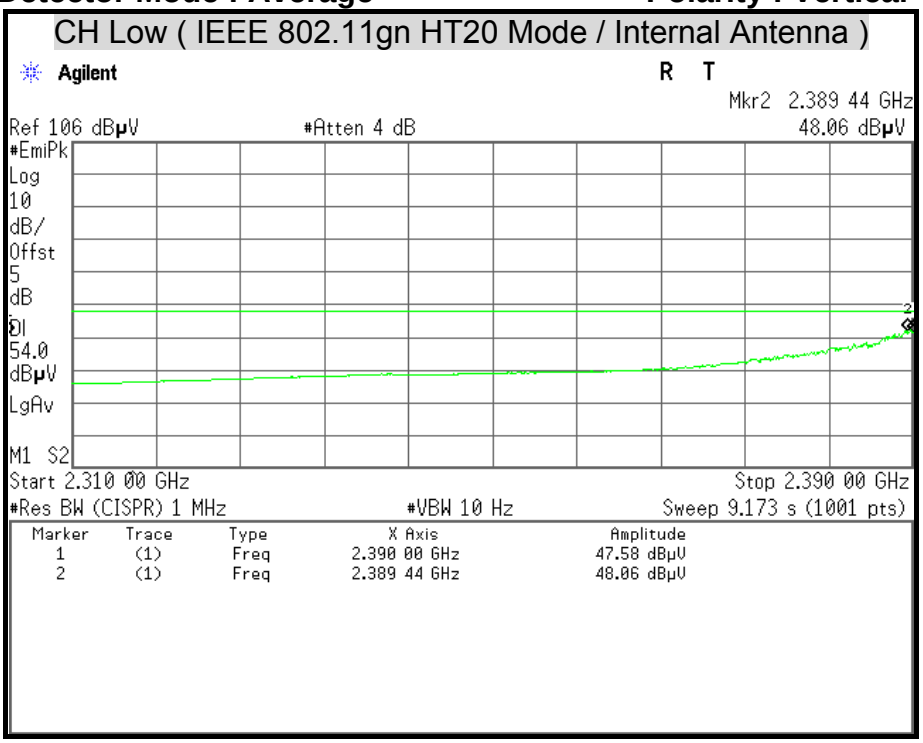
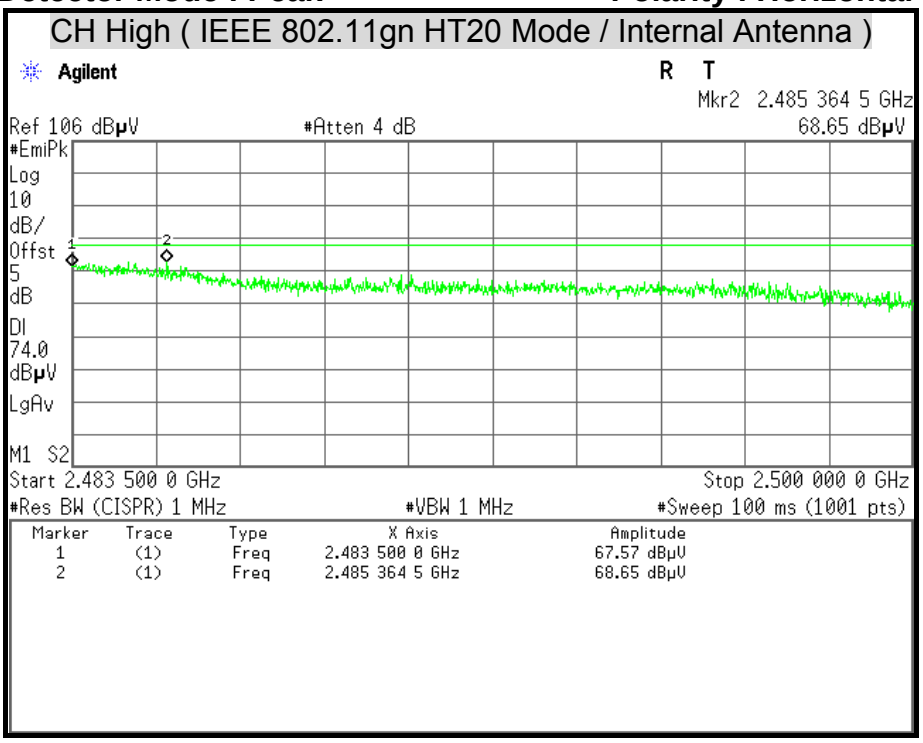


Detector Mode : Peak **Polarity : Horizontal**



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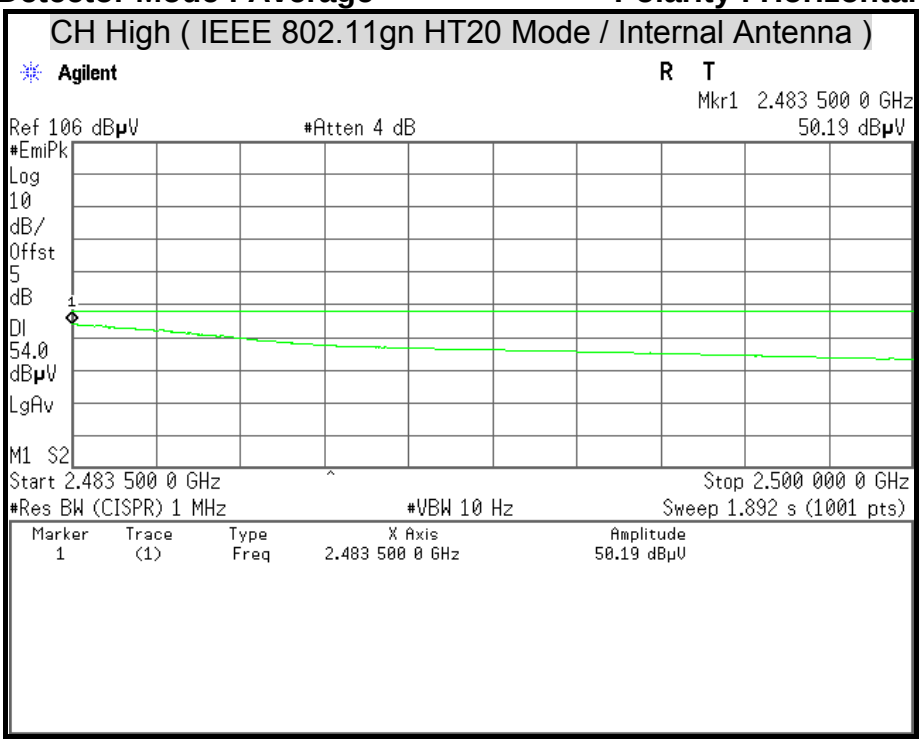

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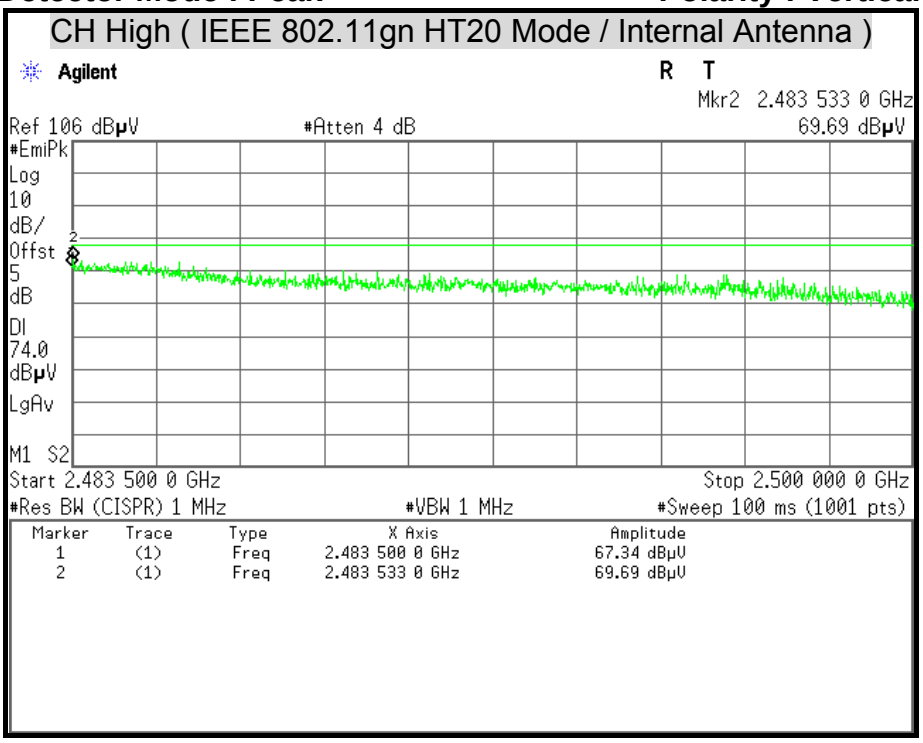

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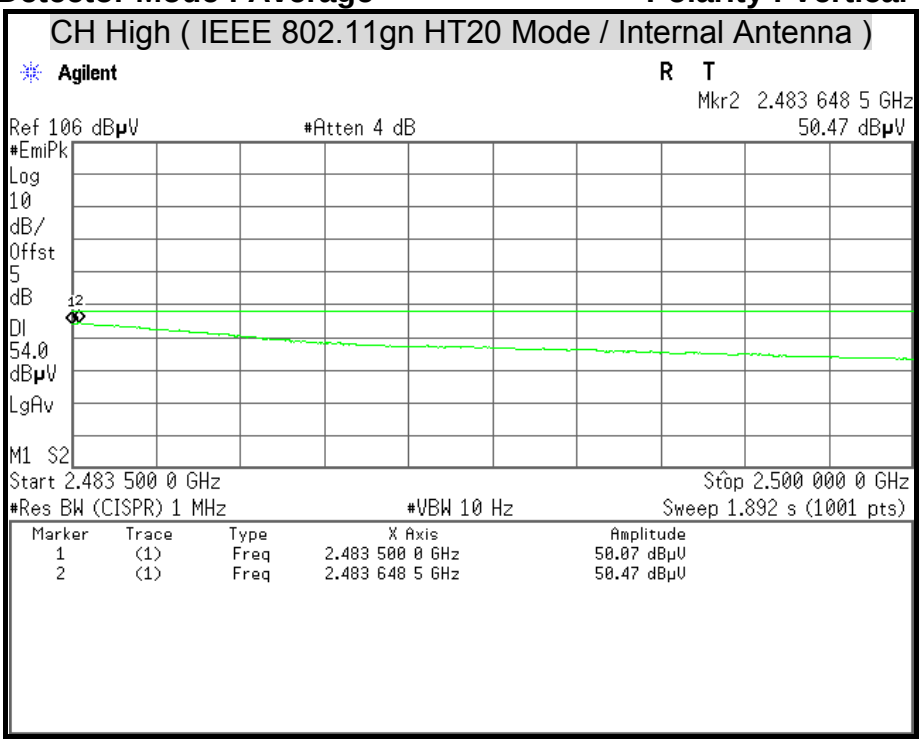

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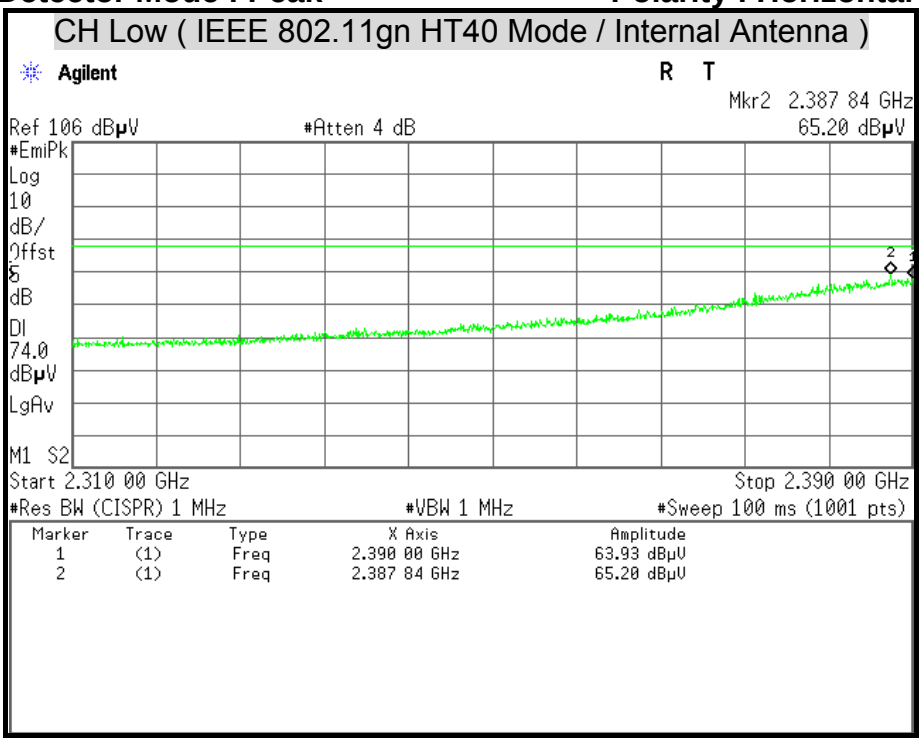

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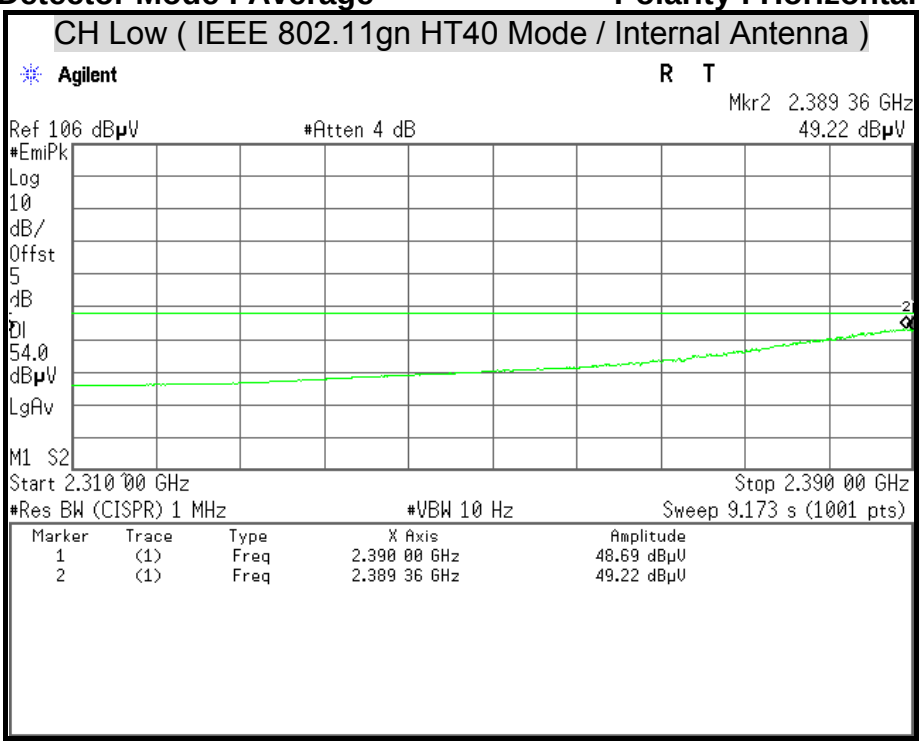

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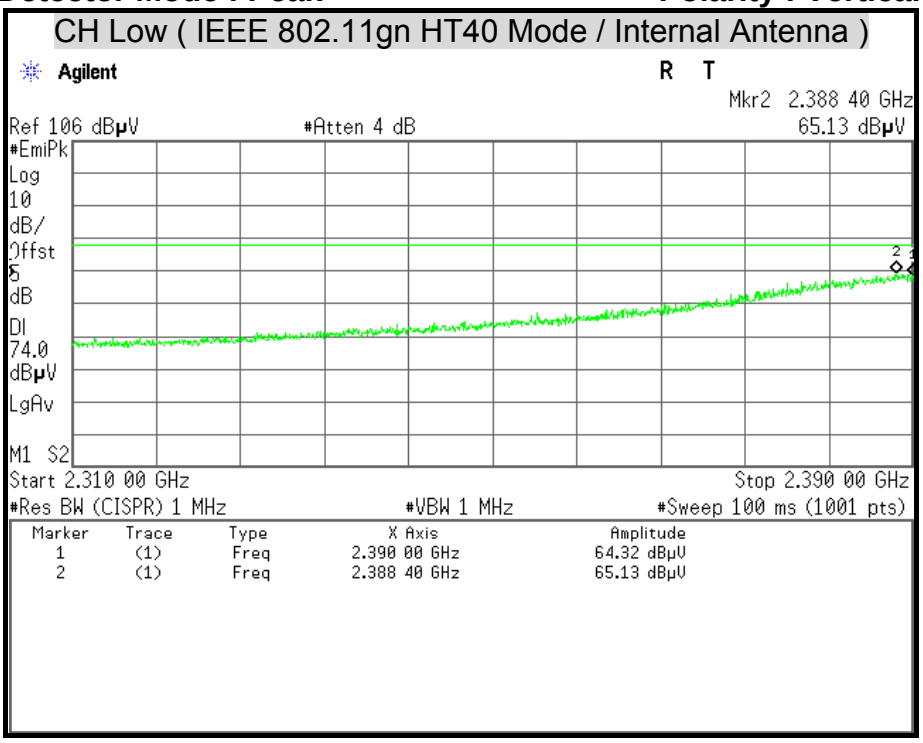

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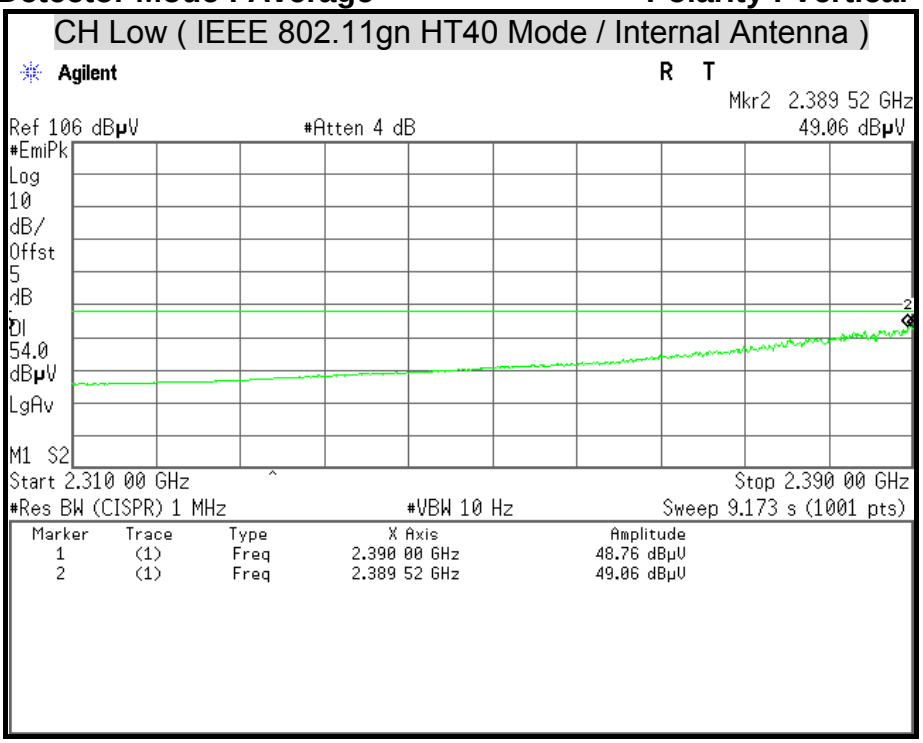
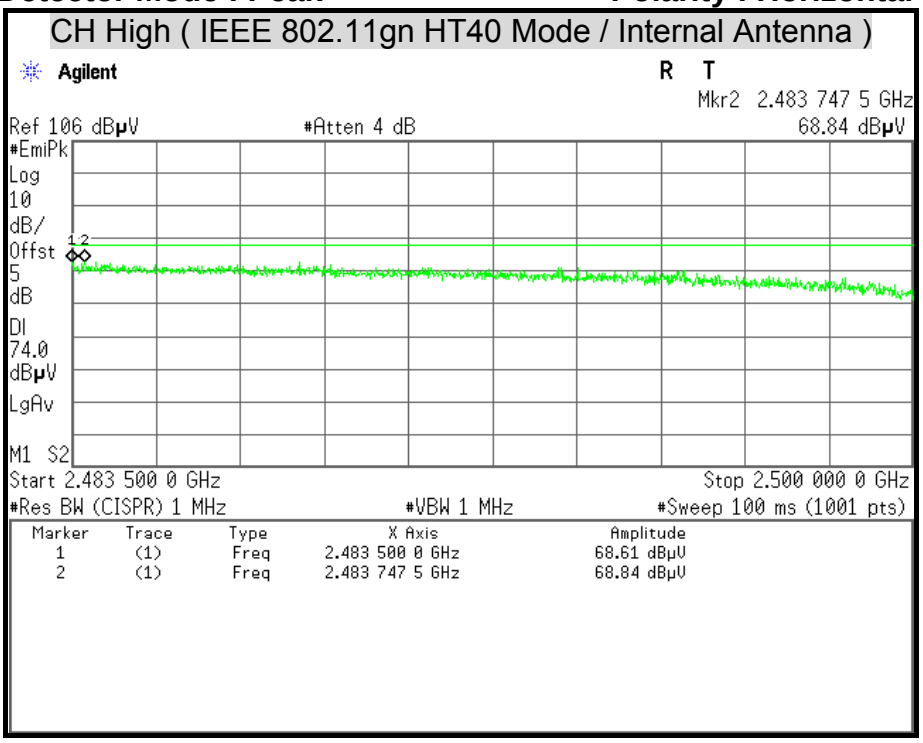


Detector Mode : Peak **Polarity : Horizontal**



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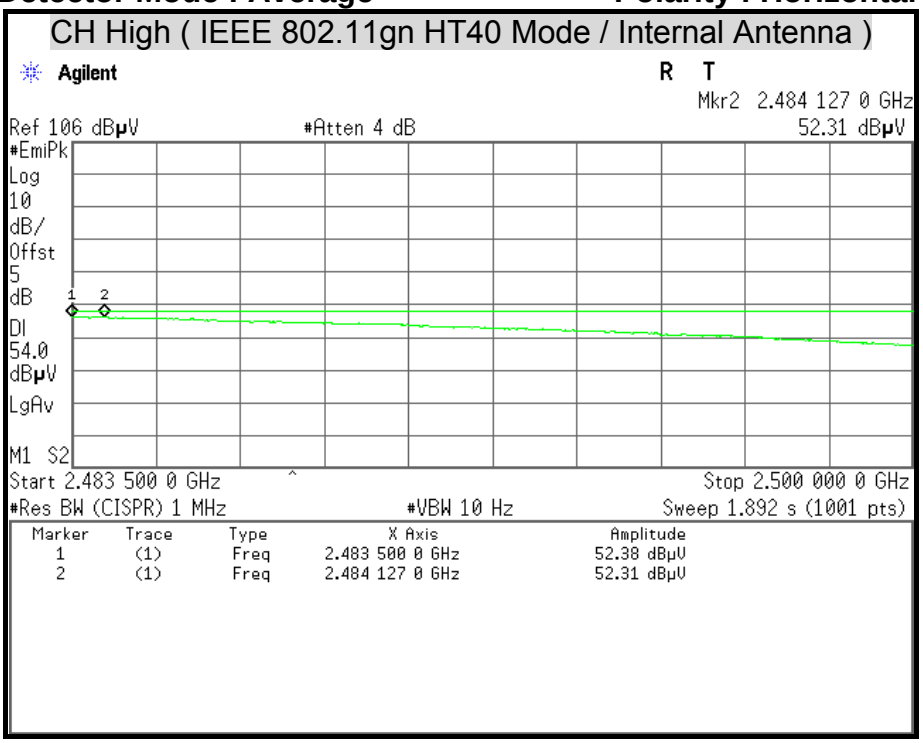

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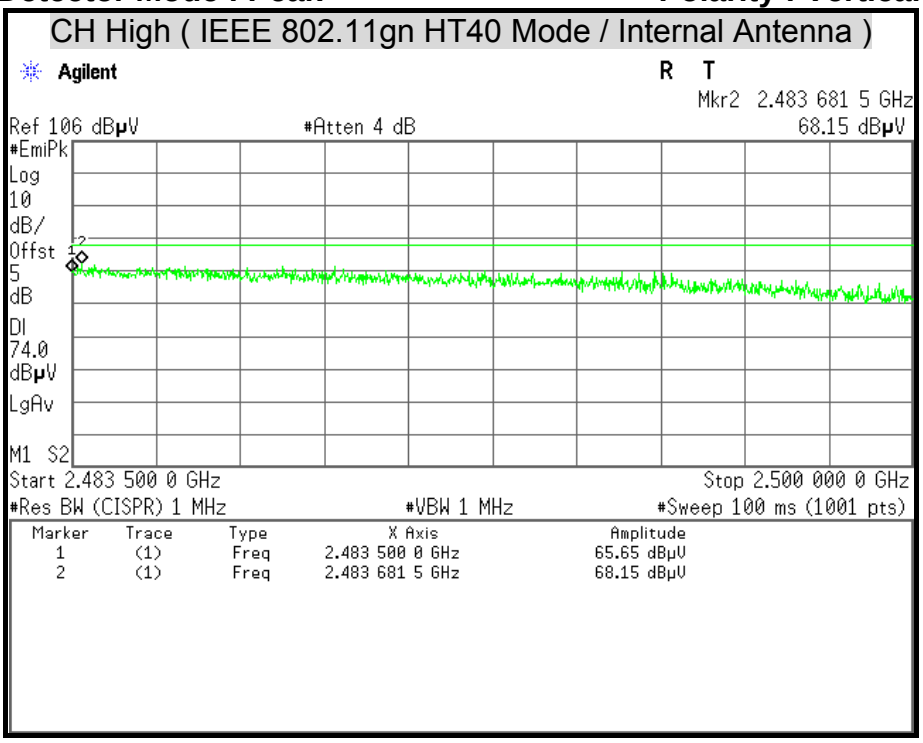

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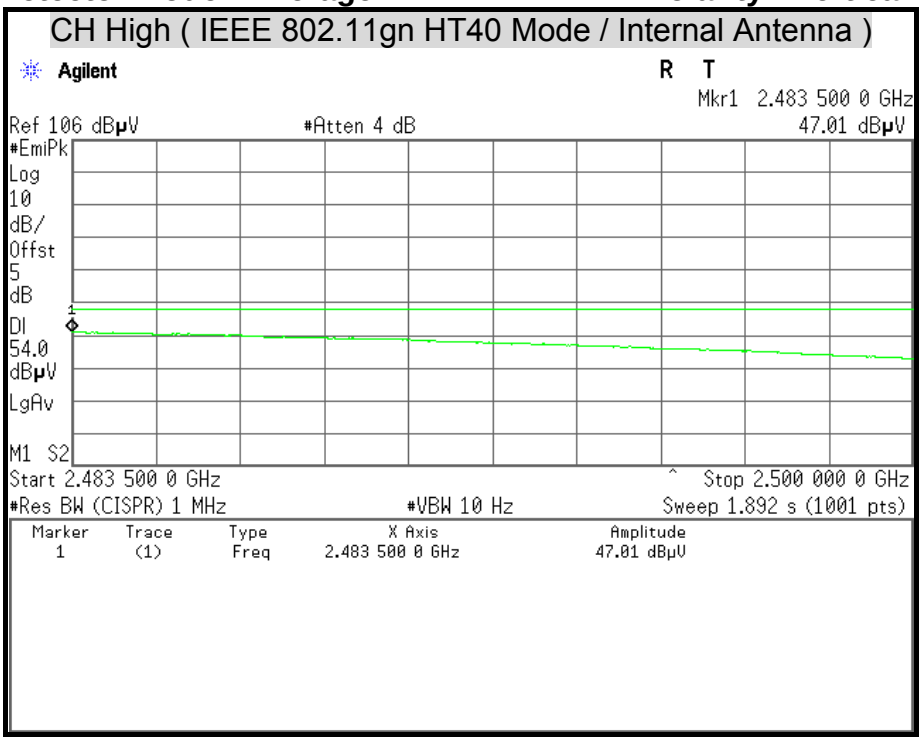

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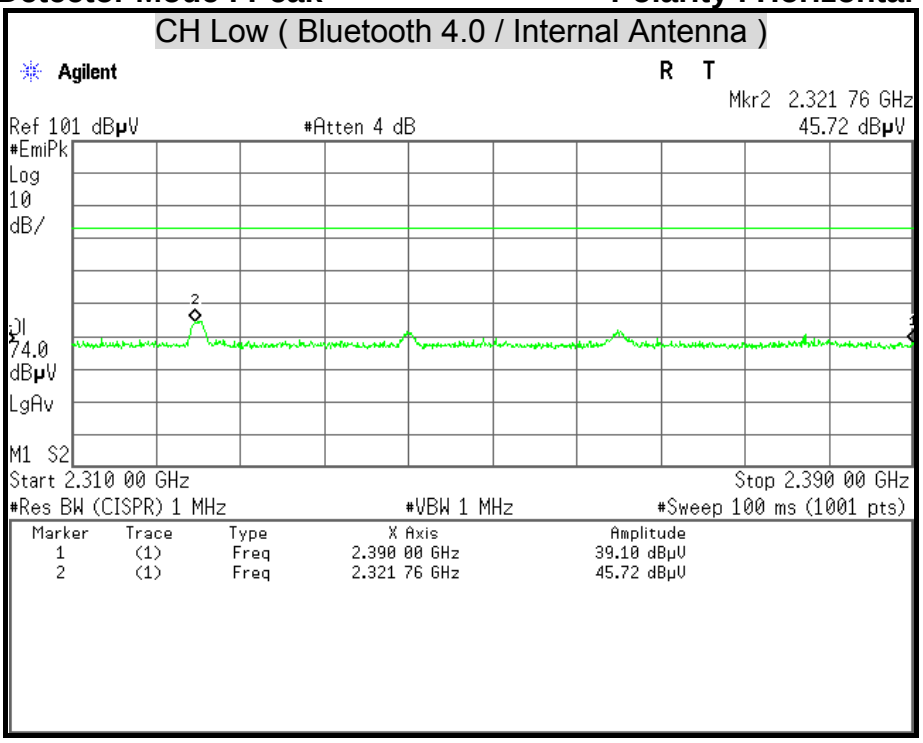

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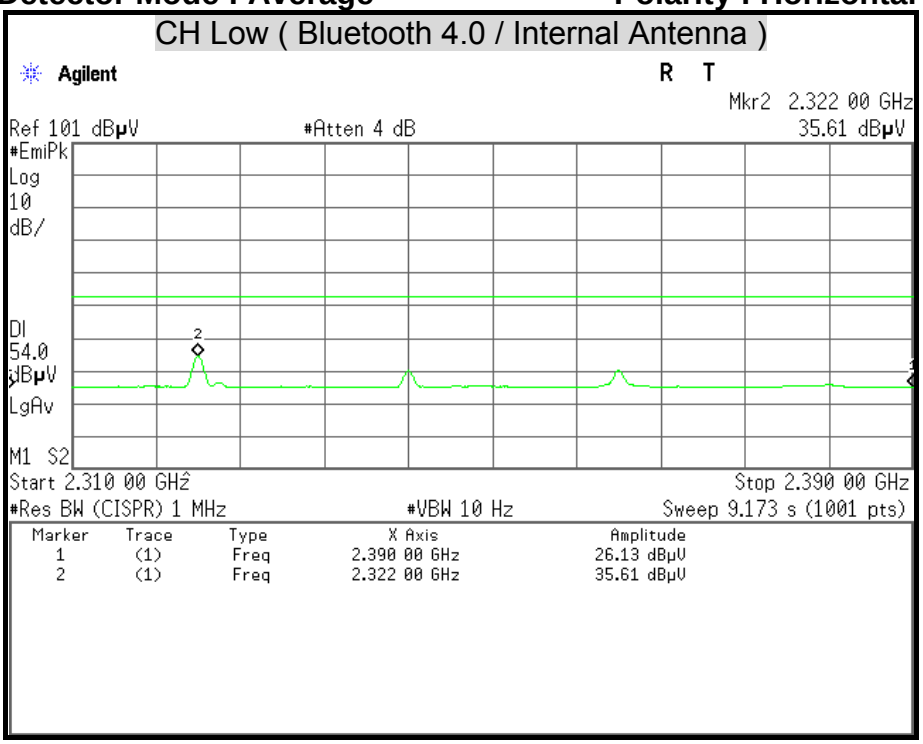
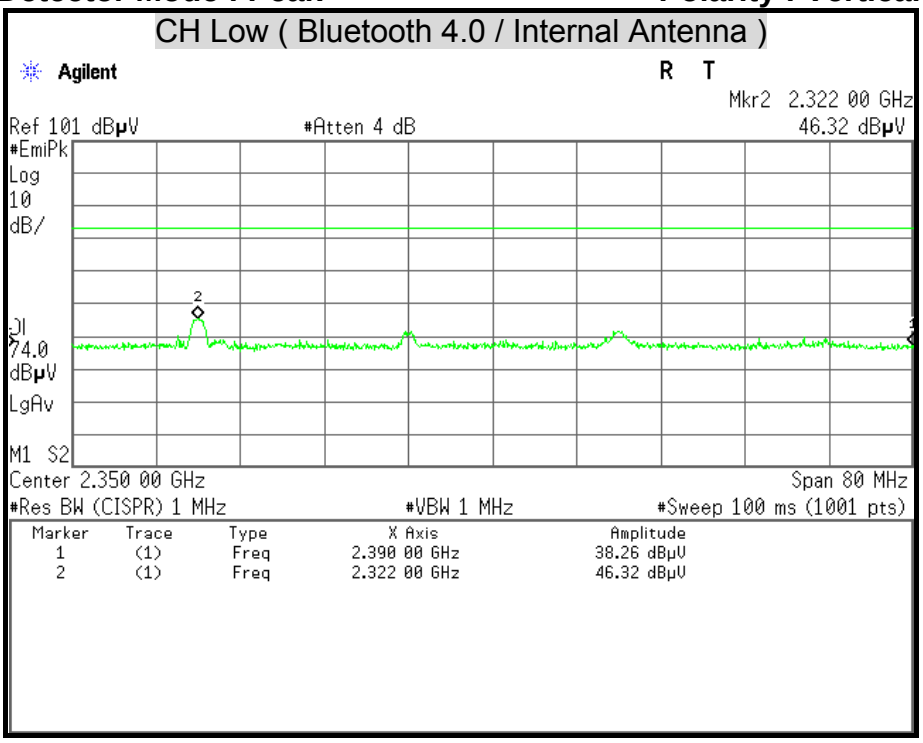
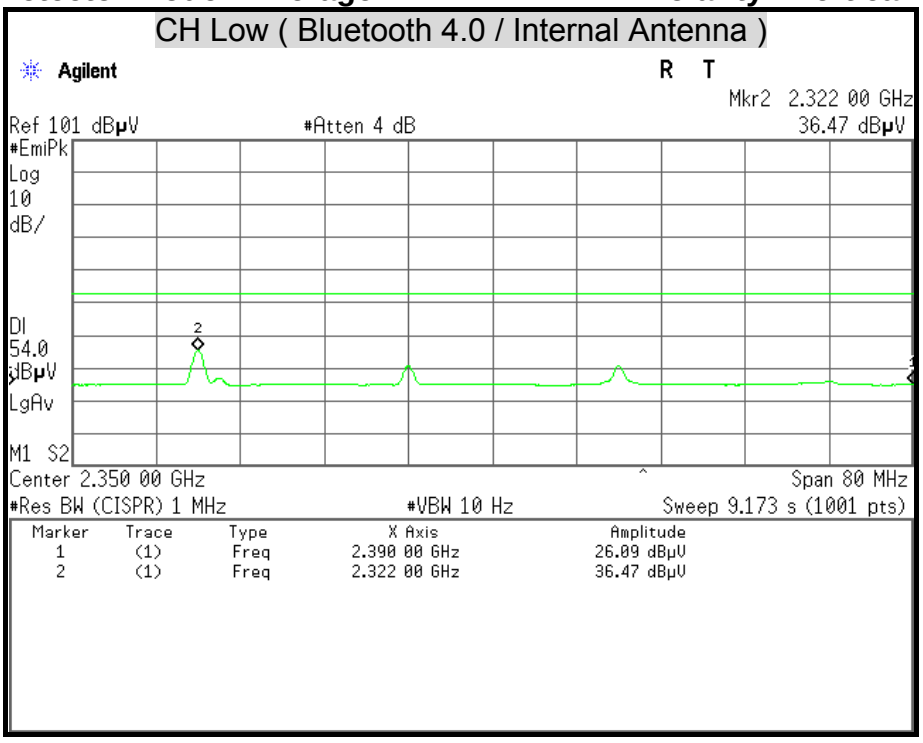


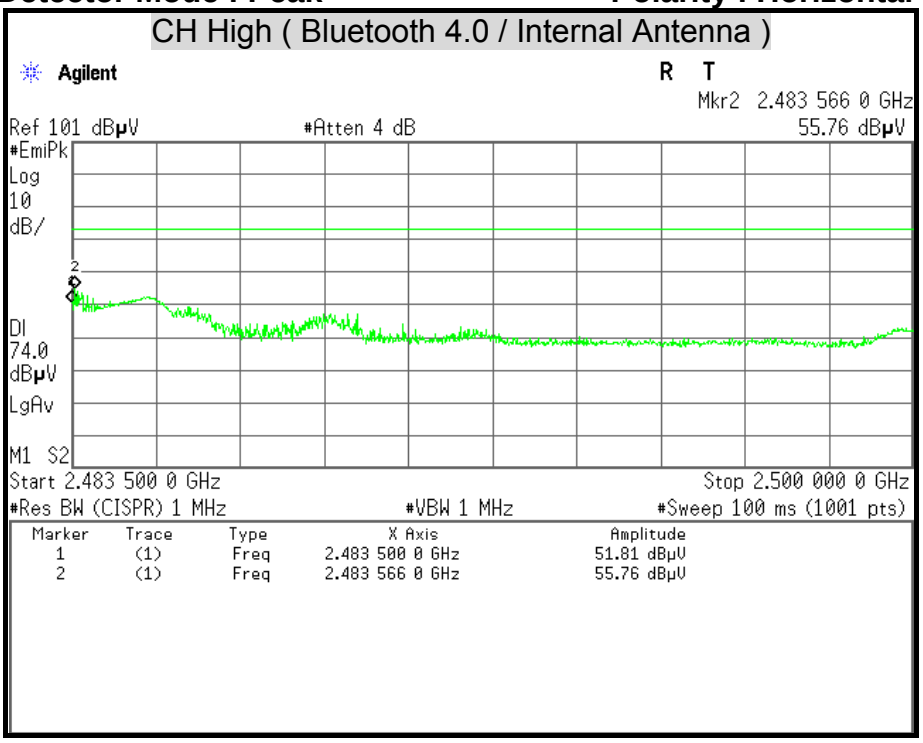
Detector Mode : Peak **Polarity : Vertical**



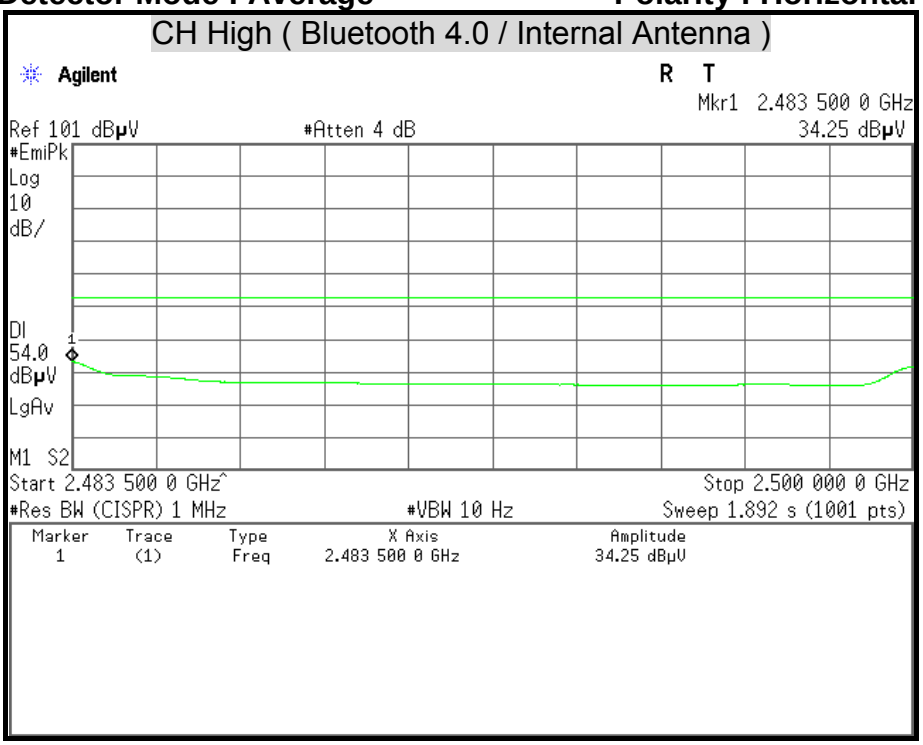
Detector Mode : Average **Polarity : Vertical**



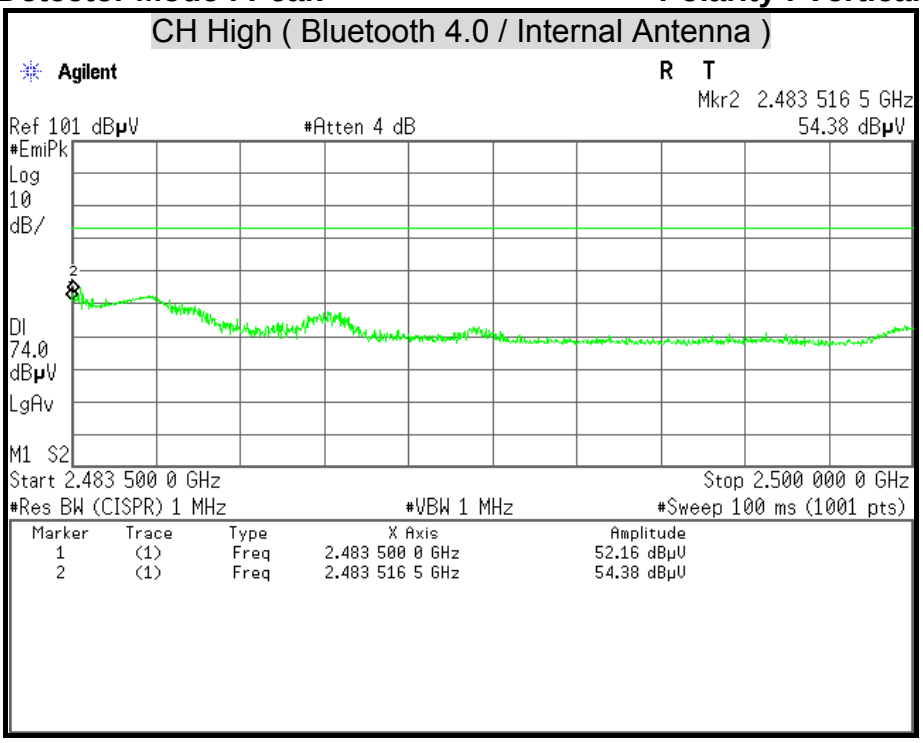
Detector Mode : Peak **Polarity : Horizontal**



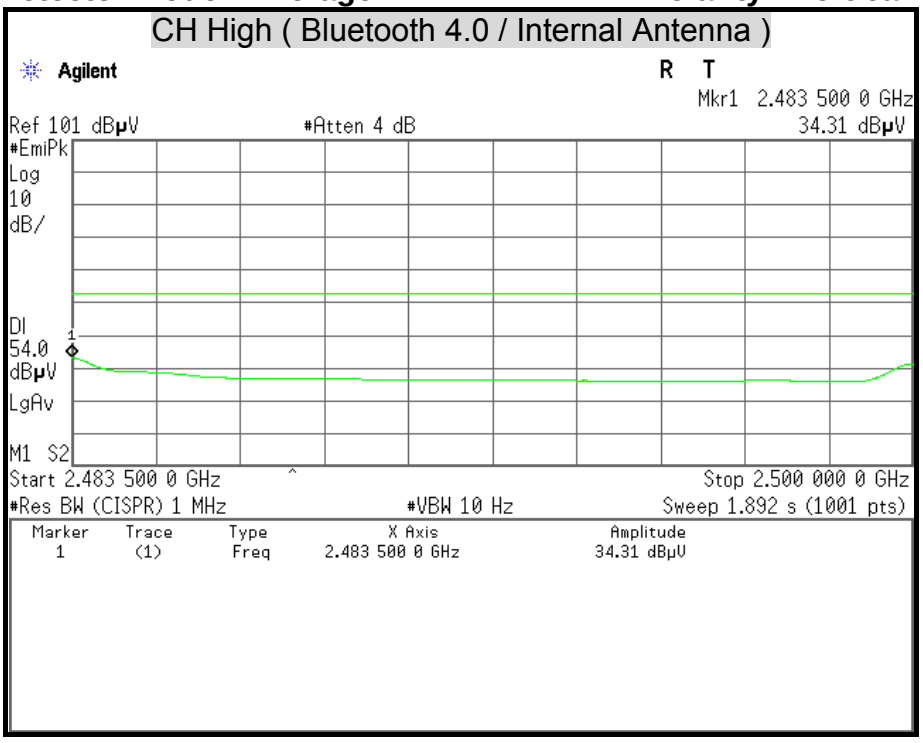
Detector Mode : Average **Polarity : Horizontal**



Detector Mode : Peak **Polarity : Vertical**



Detector Mode : Average **Polarity : Vertical**



7.7 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.

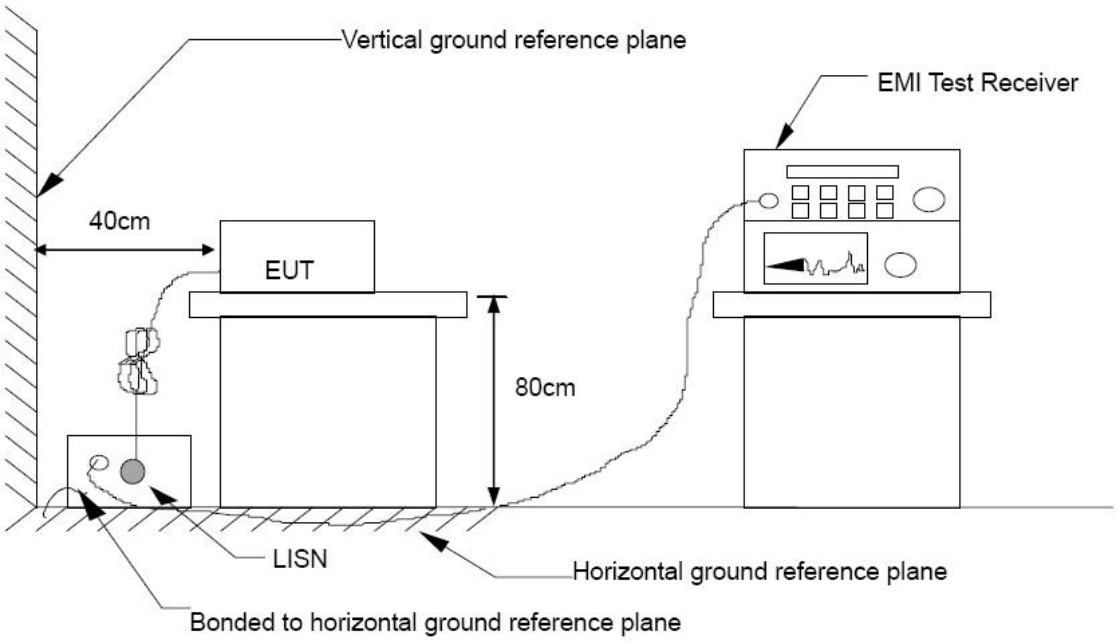
Frequency Range (MHz)	Conducted Limit (dBμv)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5.00	56	46
5.00 - 30.0	60	50

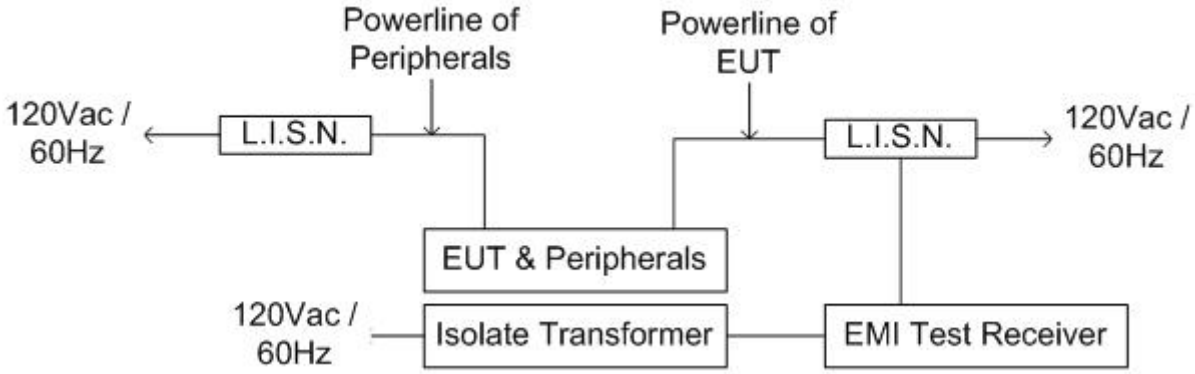
TEST EQUIPMENT

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	11/02/2015
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	100111	06/30/2015

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

TEST SETUP





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.

TEST RESULTS

Since the EUT is powered by DC Source, this test item is not applicable.