

TEST REPORT

Reference No...... : WTX22X05104028W002
FCC ID : 2A7LU-MSR-W6-V1
Applicant : IoT Security Group, SL
Address..... : Calle Pez Dorado, 27, local 2 29620 Torremolinos Malaga, Spain
Manufacturer : The same as Applicant
Address..... : The same as Applicant
Product Name : MSR-W6
Model No...... : MSR-W6-V1
Standards : FCC Part 15.247
Date of Receipt sample : 2022-05-25
Date of Test..... : 2022-05-25 to 2022-06-29
Date of Issue : 2022-06-29
Test Report Form No. : WTX_Part 15_247W
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

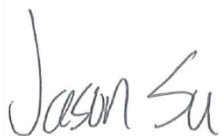
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Report version

Version No.	Date of issue	Description
Rev.00	2022-06-29	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	MSR-W6
Trade Name:	/
Model No.:	MSR-W6-V1
Adding Model(s):	/
Rated Voltage:	AC120V
Battery Capacity:	/
Power Adapter 1#:	MODEL: DSA-18PFCA-09 INPUT:AC100-240V~50/60Hz 0.6A OUTPUT:DC12V,1.5A
Power Adapter 2#:	MODEL:AMS200-1201500F INPUT:AC100-240V~50/60Hz 0.8A OUTPUT:DC12V,1.5A
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11a, 802.11n(HT20), 802.11n-HT40, 802.11ax-HE20, 802.11ax-HE40
Frequency Range:	2412-2462MHz for 802.11b/g/n/ax(HT20) 2422-2452MHz for 802.11n/ax(HT40)
RF Output Power:	Antenna 0: 15.04dBm (Conducted) Antenna 1: 15.21dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Quantity of Channels:	11 for 802.11b/g/n(HT20); 11 for 802.11ax(HT20) 7 for 802.11n(HT40); 7 for 802.11ax(HT40)
Channel Separation:	5MHz
Type of Antenna:	External Antenna
Antenna Gain:	5dBi
Note: The Antenna Gain is provided by the customer and can affect the validity of results.	

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

558074 D01 15.247 Meas Guidance v05r02: Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating under section 15.247 of the FCC rules.

662911 D01 Multiple Transmitter Output v02r01: Emissions Testing of Transmitters with Multiple Outputs in the Same Band.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 662911 D01 Multiple Transmitter Output v02r01

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, with a duty cycle equal to 100%, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11b	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM2	802.11g	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM3	802.11n-HT20	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM4	802.11n-HT40	Low:2422MHz, Middle:2437MHz,High:2452MHz
TM5	802.11ax-HE20	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM6	802.11ax-HE40	Low:2422MHz, Middle:2437MHz,High:2452MHz
Note 1: The 2.4GHz WIFI has two antennas and support Multiple Outputs for 802.11n/ax mode for this report; Antenna 0 Gain is 5.0dBi; Ant 1 Gain is 5.0dBi; For this function is belong to Correlated Categorization equipment According to KDB 662911, for Unequal antenna gains. Directional gain = GANT + 10 log(NANT) dBi =5.0+10log(2) dBi=8.0 dBi Note 2: 802.11ax resource unit (RU) support: only Full RU configuration are supported.		

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~55 %.
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
DC Cable	1.2	Unshielded	Without Ferrite
RJ45 Cable	0.79	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
RJ45	1.8	Unshielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	TianYi310-14ISK	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	$\pm 0.42\text{dB}$
Occupied Bandwidth	Conducted	$\pm 1.5\%$
Power Spectral Density	Conducted	$\pm 1.8\text{dB}$
Conducted Spurious Emission	Conducted	$\pm 2.17\text{dB}$
Conducted Emissions	Conducted	9-150kHz $\pm 3.74\text{dB}$
		0.15-30MHz $\pm 3.34\text{dB}$
Transmitter Spurious Emissions	Radiated	30-200MHz $\pm 4.52\text{dB}$
		0.2-1GHz $\pm 5.56\text{dB}$
		1-6GHz $\pm 3.84\text{dB}$
		6-26GHz $\pm 3.92\text{dB}$

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
SEMT-1075	Communication Tester	Rohde & Schwarz	CMW500	148650	2022-03-22	2023-03-21
SEMT-1063	GSM Tester	Rohde & Schwarz	CMU200	114403	2022-03-22	2023-03-21
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2022-03-25	2023-03-24
SEMT-1079	Spectrum Analyzer	Agilent	N9020A	US47140102	2022-03-22	2023-03-21
SEMT-1080	Signal Generator	Agilent	83752A	3610A01453	2022-03-22	2023-03-21
SEMT-1081	Vector Signal Generator	Agilent	N5182A	MY47070202	2022-03-22	2023-03-21
SEMT-1028	Power Divider	Weinschel	1506A	PM204	2022-03-22	2023-03-21
SEMT-C001	Cable	Zheng DI	LL142-07-07-10M(A)	/	/	/
SEMT-C002	Cable	Zheng DI	ZT40-2.92J-2.92J-6M	/	/	/
SEMT-C003	Cable	Zheng DI	ZT40-2.92J-2.92J-2.5M	/	/	/
SEMT-C004	Cable	Zheng DI	2M0RFC	/	/	/
SEMT-C005	Cable	Zheng DI	1M0RFC	/	/	/
SEMT-C006	Cable	Zheng DI	1M0RFC	/	/	/
☒ Chamber A: Below 1GHz						
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2022-03-22	2023-03-21
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2022-03-22	2023-03-21
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2022-01-07	2023-01-06
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2023-03-19
SEMT-1068	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2021-03-20	2023-03-19
☒ Chamber A: Above 1GHz						
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2022-03-22	2023-03-21
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2022-03-22	2023-03-21
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2022-03-22	2023-03-21
SEMT-1042	Horn Antenna	ETS	3117	00086197	2021-03-19	2023-03-18
SEMT-1121	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170582	2021-04-27	2023-04-26
SEMT-1216	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2022-03-25	2023-03-24

SEMT-1163	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2022-03-22	2023-03-21
☐ Chamber B:Below 1GHz						
SEMT-1068	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2023-04-08
SEMT-1067	Amplifier	Agilent	8447D	2944A10179	2022-03-22	2023-03-21
SEMT-1066	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2022-03-22	2023-03-21
☐ Chamber C:Below 1GHz						
SEMT-1319	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2022-01-07	2023-01-06
SEMT-1343	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2021-05-28	2023-05-27
SEMT-1333	Amplifier	HP	8447F	2944A03869	2022-03-22	2023-03-21
☒ Conducted Room 1#						
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2022-03-21	2023-03-20
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2022-03-25	2023-03-24
SEMT-1003	AC LISN	Schwarz beck	NSLK8126	8126-224	2022-03-22	2023-03-21
☐ Conducted Room 2#						
SEMT-1334	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2022-03-22	2023-03-21
SEMT-1336	LISN	Rohde & Schwarz	ENV 216	100097	2022-03-22	2023-03-21

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

*Remark: indicates software version used in the compliance certification testing.

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§15.203; §15.247(b)(4)(i)	Antenna Requirement	Compliant
§15.205	Restricted Band of Operation	Compliant
§15.207(a)	Conducted Emission	Compliant
§15.247(e)	Power Spectral Density	Compliant
§15.247(a)(2)	DTS Bandwidth	Compliant
§15.247(b)(3)	RF Output Power	Compliant
§15.209(a)	Radiated Emission	Compliant
§15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: Not applicable.

3. Antenna Requirement

3.1 Standard Applicable

According to FCC Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.2 Evaluation Information

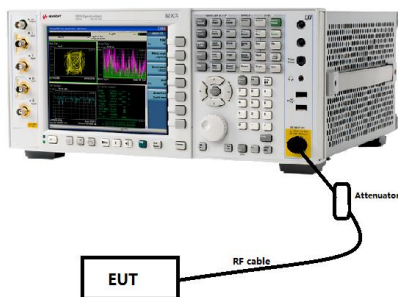
This product has two External Antennas, fulfill the requirement of this section.

4. Power Spectral Density

4.1 Standard Applicable

According to 15.247(a)(1)(iii), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

4.2 Test Setup Block Diagram



4.3 Test Procedure

According to the KDB 558074 D01 v05r02 Subclause 8.4 and ANSI C63.10-2013 Subclause 11.10.3, such specifications require that the same method as used to determine the conducted output power shall also be used to determine the power spectral density. The test method of power spectral density as below:

- a) Set instrument center frequency to DTS channel center frequency.
- b) Set span to at least 1.5 times the OBW.
- c) Set RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{kHz}$.
- d) Set VBW $\geq 3 \times \text{RBW}$.
- e) Detector = power averaging (RMS) or sample detector (when RMS not available).
- f) Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span}/\text{RBW}$.
- g) Sweep time = auto couple.
- h) Employ trace averaging (RMS) mode over a minimum of 100 traces.
- i) Use the peak marker function to determine the maximum amplitude level.
- j) If measured value exceeds limit, reduce RBW (no less than 3kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span in order to meet the minimum measurement point requirement as the RBW is reduced).

4.4 Summary of Test Results/Plots

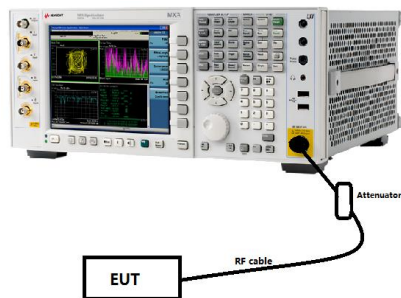
Please refer to Appendix A

5. DTS Bandwidth

5.1 Standard Applicable

According to 15.247(a)(2), systems using digital modulation techniques may operate in the 902–928MHz, 2400–2483.5MHz, and 5725–5850MHz bands. The minimum 6dB bandwidth shall be at least 500kHz.

5.2 Test Setup Block Diagram



5.3 Test Procedure

According to the KDB 558074 D01 v05r02 Subclause 8.2 and ANSI C63.10-2013 Subclause 11.8.1, the test method of DTS Bandwidth as below:

- Set RBW = 100kHz.
- Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Allow the trace to stabilize.
- 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 6dB relative to the maximum level measured in the fundamental emission.

5.4 Summary of Test Results/Plots

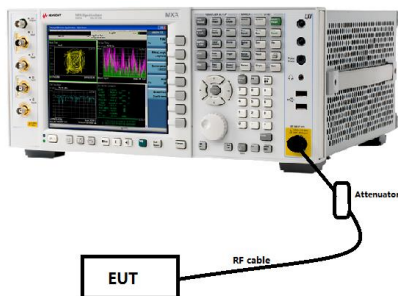
Please refer to Appendix B

6. RF Output Power

6.1 Standard Applicable

According to 15.247(b)(3), for systems using digital modulation in the 902–928MHz, 2400–2483.5MHz, and 5725–5850MHz bands: 1 Watt.

6.2 Test Setup Block Diagram



6.3 Test Procedure

According to the KDB-558074 D01 v05r02 Subclause 8.3.2.2 and ANSI C63.10-2013 Subclause 11.9.2.2, when this option is exercised, the measured power is to be referenced to the OBW rather than the DTS bandwidth

- Set span to at least 1.5 times the OBW.
- Set RBW = 1-5% of the OBW, not to exceed 1MHz.
- Set VBW $\geq 3 \times$ RBW.
- Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This gives bin-to-bin spacing $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto.
- Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- If transmit duty cycle $< 98\%$, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle $\geq 98\%$, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.
- Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

6.4 Summary of Test Results/Plots

Please refer to Appendix C

7. Field Strength of Spurious Emissions

7.1 Standard Applicable

According to §15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. 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).

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

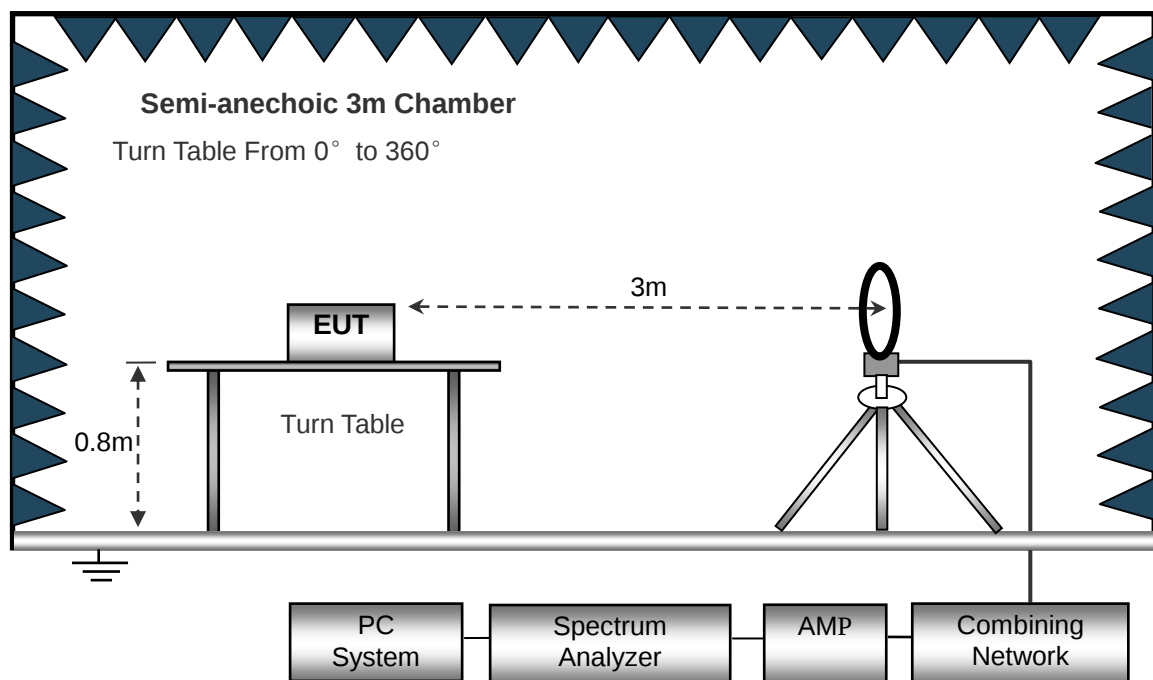
7.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.

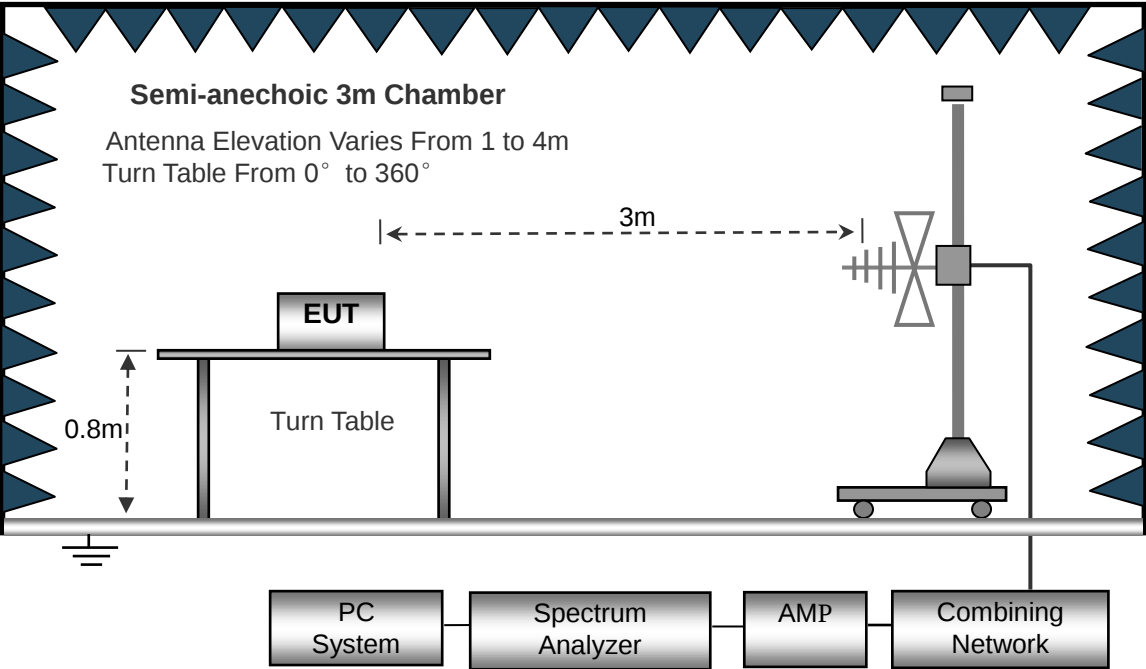
The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle.

The spacing between the peripherals was 10cm.

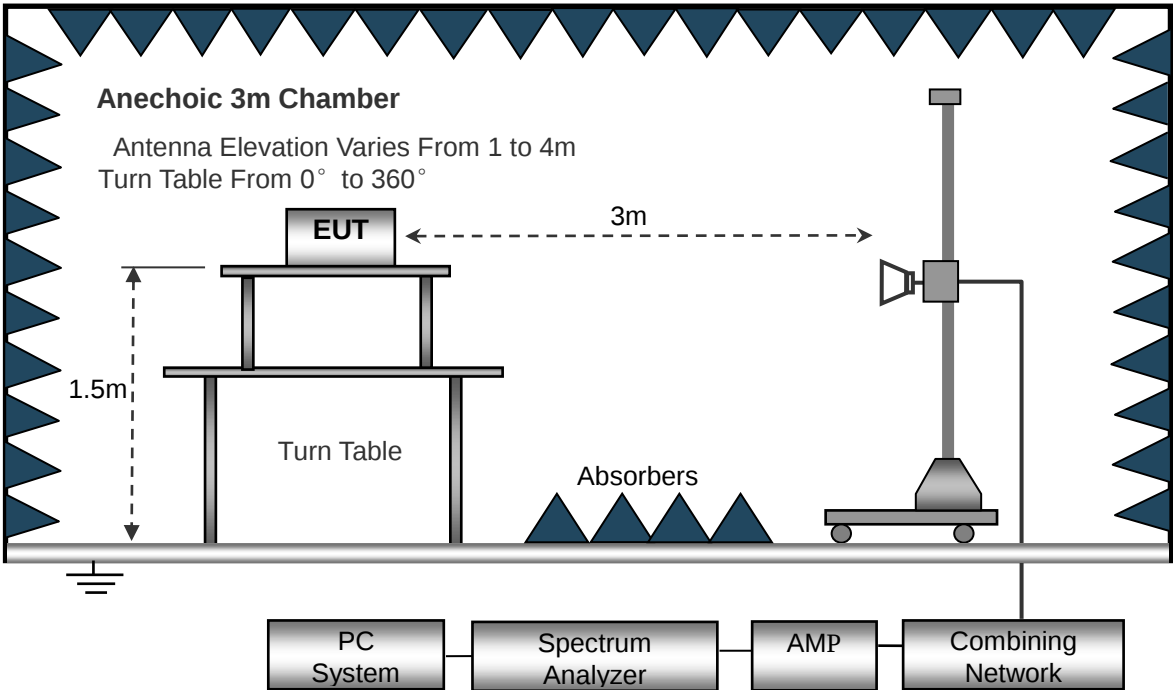
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30MHz to 1GHz.



The test setup for emission measurement above 1GHz.



Frequency :9kHz-30MHz RBW=10KHz, VBW =30KHz Sweep time= Auto Trace = max hold Detector function = peak	Frequency :30MHz-1GHz RBW=120KHz, VBW=300KHz Sweep time= Auto Trace = max hold Detector function = peak, QP	Frequency :Above 1GHz RBW=1MHz, VBW=3MHz(Peak), 10Hz(AV) Sweep time= Auto Trace = max hold Detector function = peak, AV
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7.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

7.4 Summary of Test Results/Plots

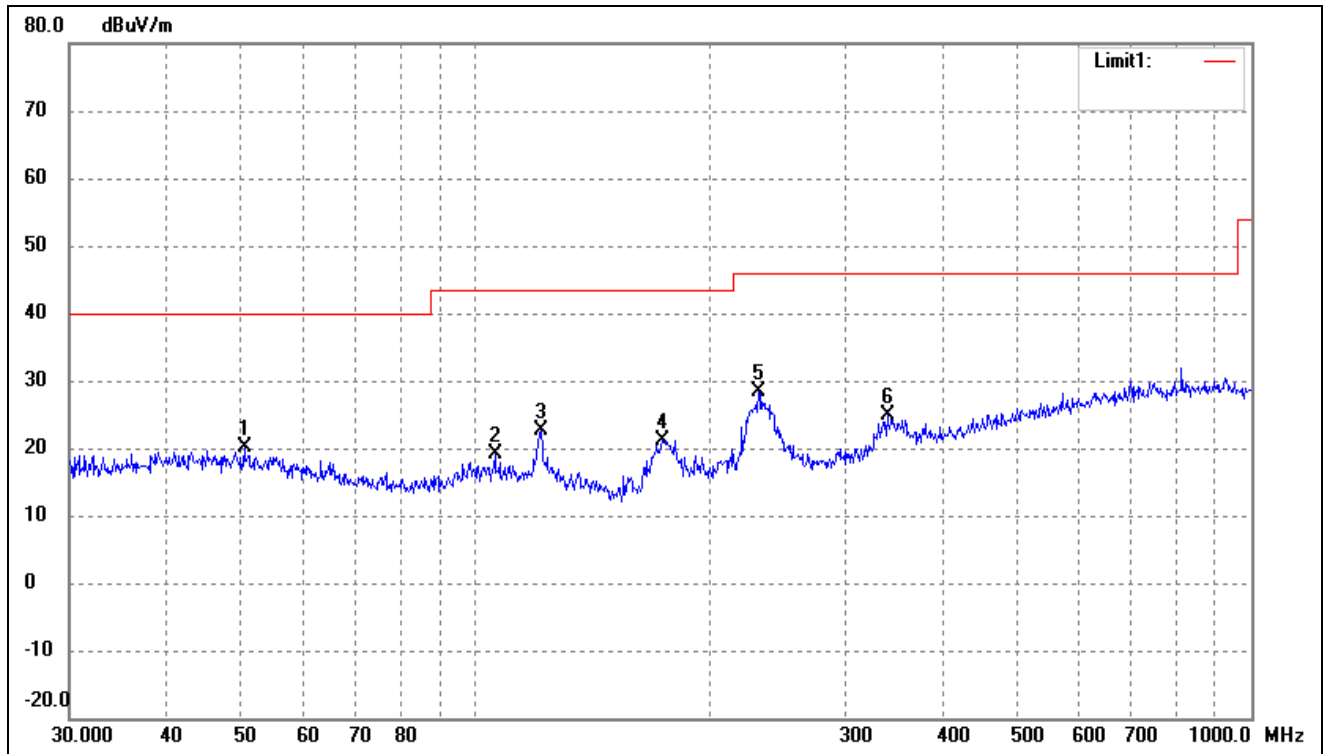
Note: 1.This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

All test modes (different data rate and different modulation) are performed, but only the worst case(802.11b_11Mbps) is recorded in this report.

Reference No.: WTX22X05104028W002

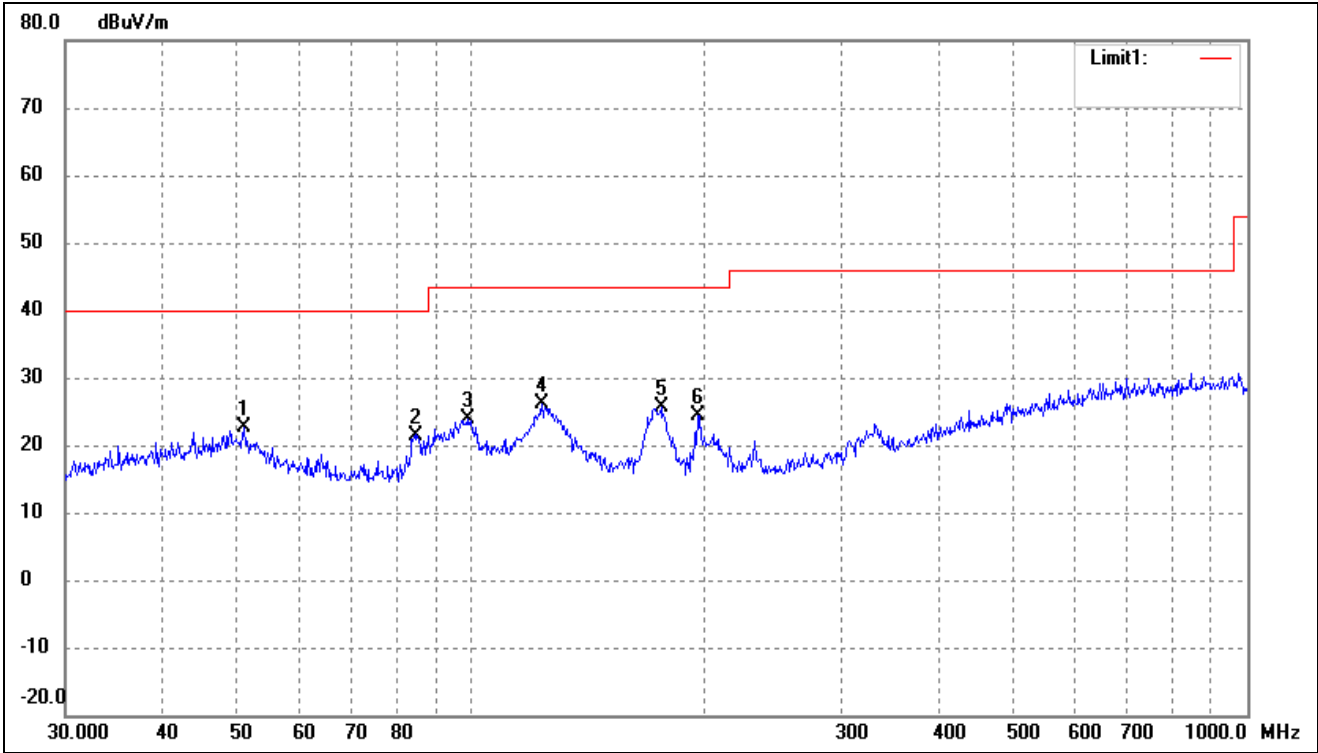
- Spurious Emissions Below 1GHz
- Antenna 0

802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



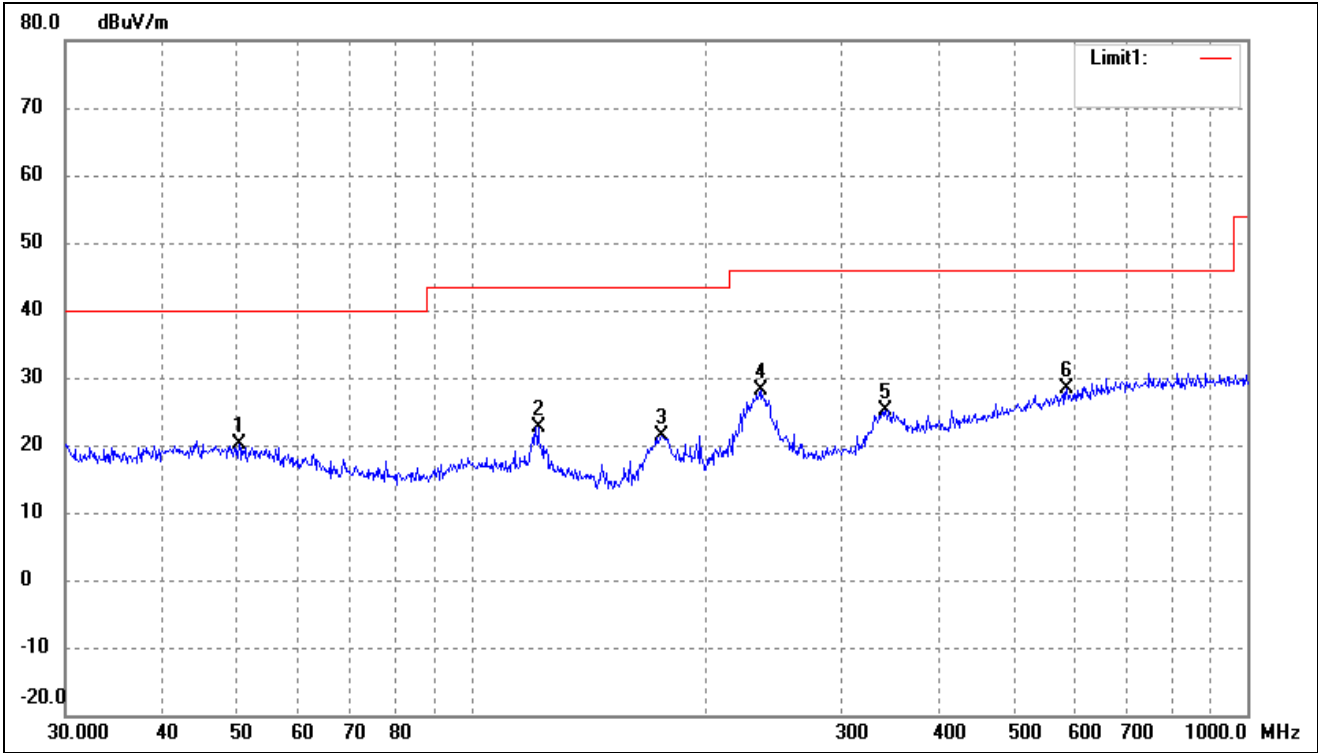
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	50.4089	27.26	-7.02	20.24	40.00	-19.76	-	-	peak
2	106.0126	27.95	-8.82	19.13	43.50	-24.37	-	-	peak
3	121.5486	32.48	-9.88	22.60	43.50	-20.90	-	-	peak
4	174.4241	32.61	-11.53	21.08	43.50	-22.42	-	-	peak
5	231.7179	37.11	-8.83	28.28	46.00	-17.72	-	-	peak
6	339.5888	30.51	-5.72	24.79	46.00	-21.21	-	-	peak

802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



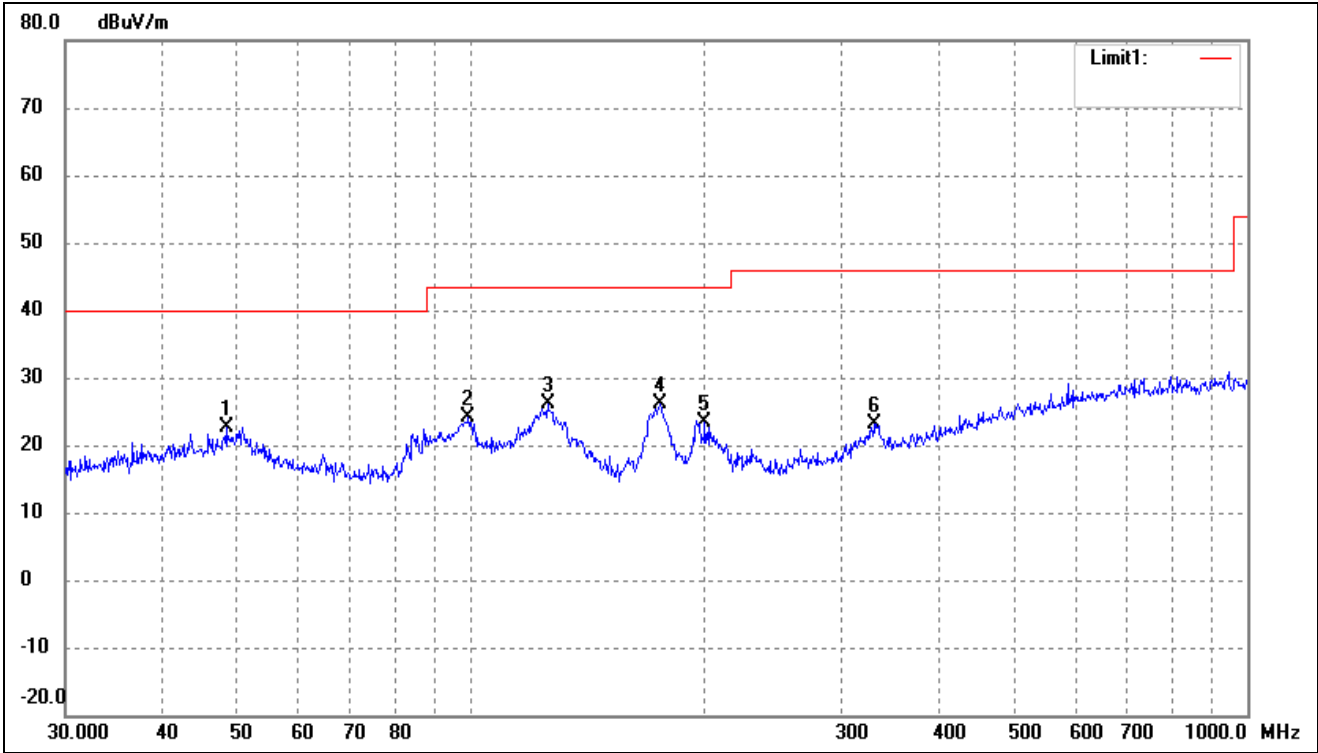
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	50.9420	29.77	-7.10	22.67	40.00	-17.33	-	-	peak
2	84.9995	32.15	-10.65	21.50	40.00	-18.50	-	-	peak
3	98.8326	32.82	-8.94	23.88	43.50	-19.62	-	-	peak
4	123.2655	36.44	-10.20	26.24	43.50	-17.26	-	-	peak
5	175.6516	37.18	-11.47	25.71	43.50	-17.79	-	-	peak
6	195.8220	34.33	-9.85	24.48	43.50	-19.02	-	-	peak

802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



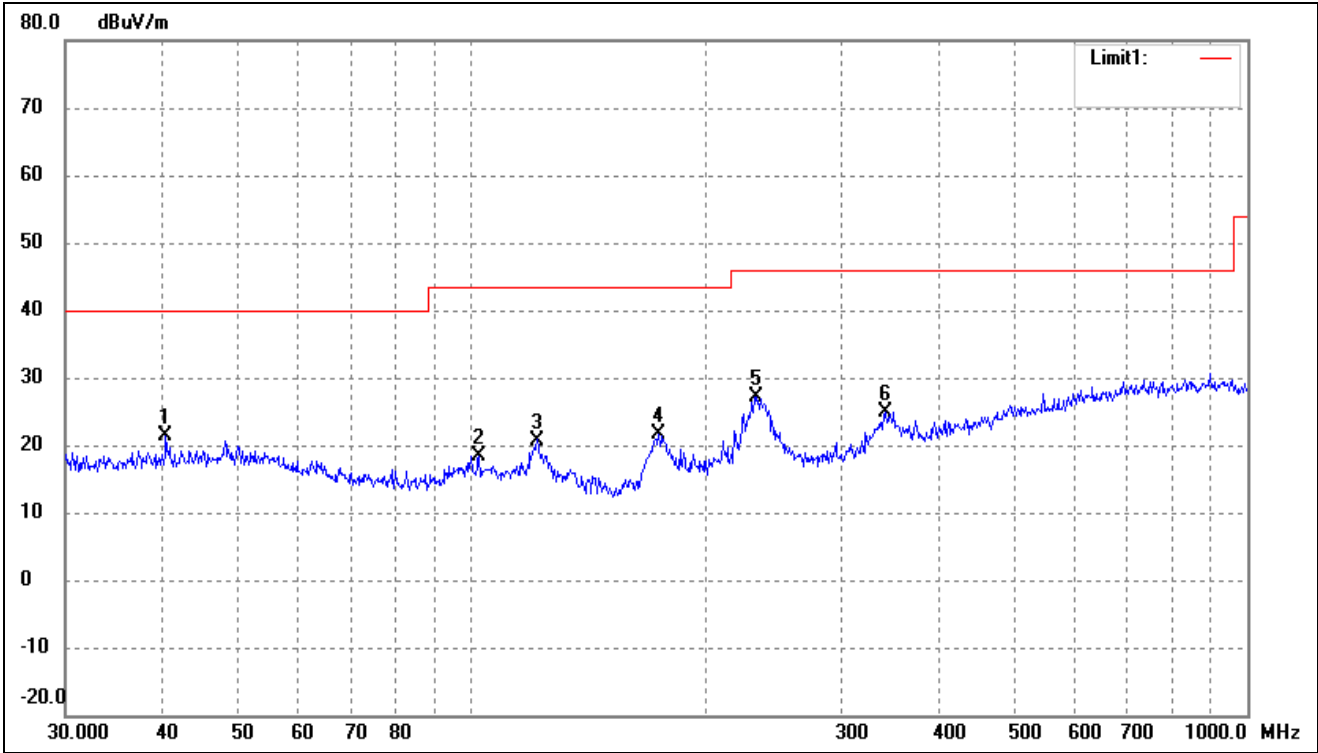
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	50.2325	27.07	-6.99	20.08	40.00	-19.92	-	-	peak
2	121.9755	32.58	-9.96	22.62	43.50	-20.88	-	-	peak
3	175.6516	32.84	-11.47	21.37	43.50	-22.13	-	-	peak
4	235.8164	36.78	-8.71	28.07	46.00	-17.93	-	-	peak
5	341.9787	30.88	-5.65	25.23	46.00	-20.77	-	-	peak
6	584.7895	28.19	0.11	28.30	46.00	-17.70	-	-	peak

802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



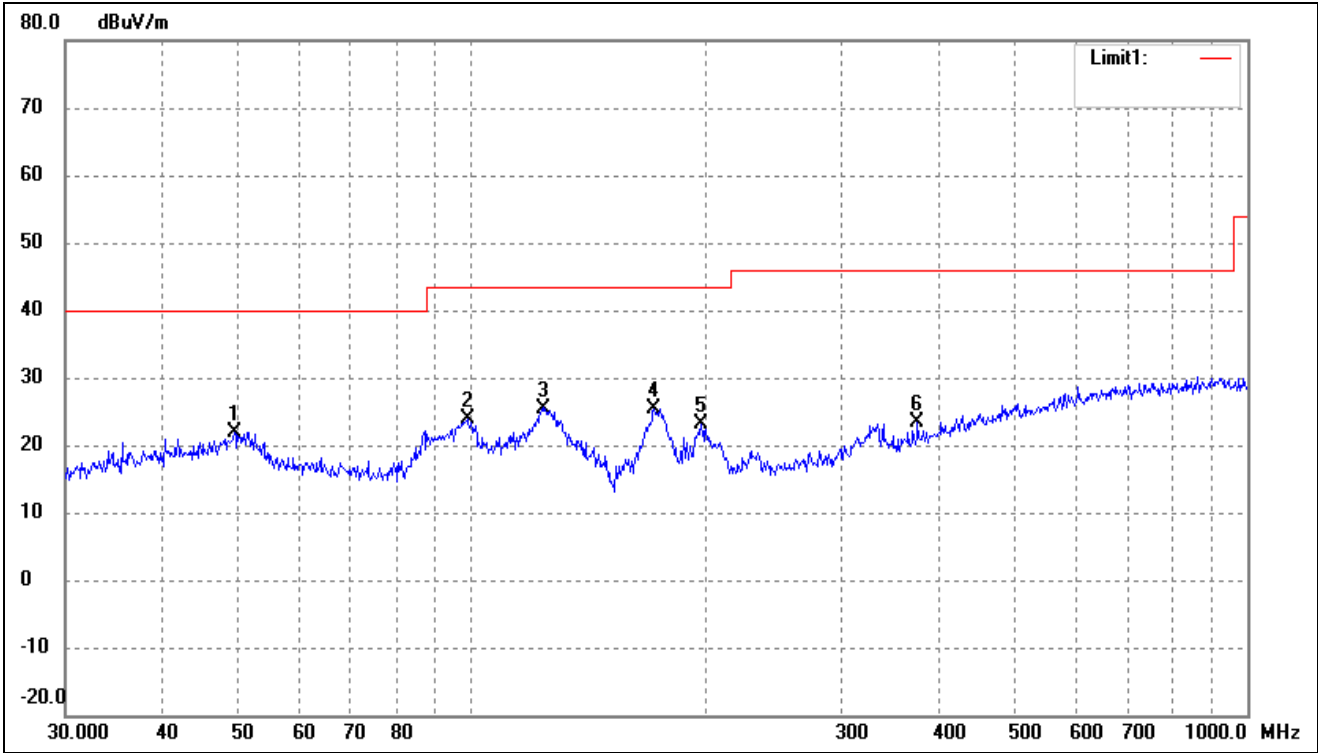
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	48.3318	29.68	-6.96	22.72	40.00	-17.28	-	-	peak
2	99.1797	32.94	-8.88	24.06	43.50	-19.44	-	-	peak
3	125.4457	36.70	-10.59	26.11	43.50	-17.39	-	-	peak
4	175.0368	37.63	-11.50	26.13	43.50	-17.37	-	-	peak
5	199.9856	33.13	-9.70	23.43	43.50	-20.07	-	-	peak
6	330.1949	29.23	-6.02	23.21	46.00	-22.79	-	-	peak

802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.4172	28.37	-6.99	21.38	40.00	-18.62	-	-	peak
2	102.3597	27.20	-8.77	18.43	43.50	-25.07	-	-	peak
3	121.5486	30.63	-9.88	20.75	43.50	-22.75	-	-	peak
4	174.4241	33.16	-11.53	21.63	43.50	-21.87	-	-	peak
5	232.5318	35.91	-8.80	27.11	46.00	-18.89	-	-	peak
6	341.9787	30.56	-5.65	24.91	46.00	-21.09	-	-	peak

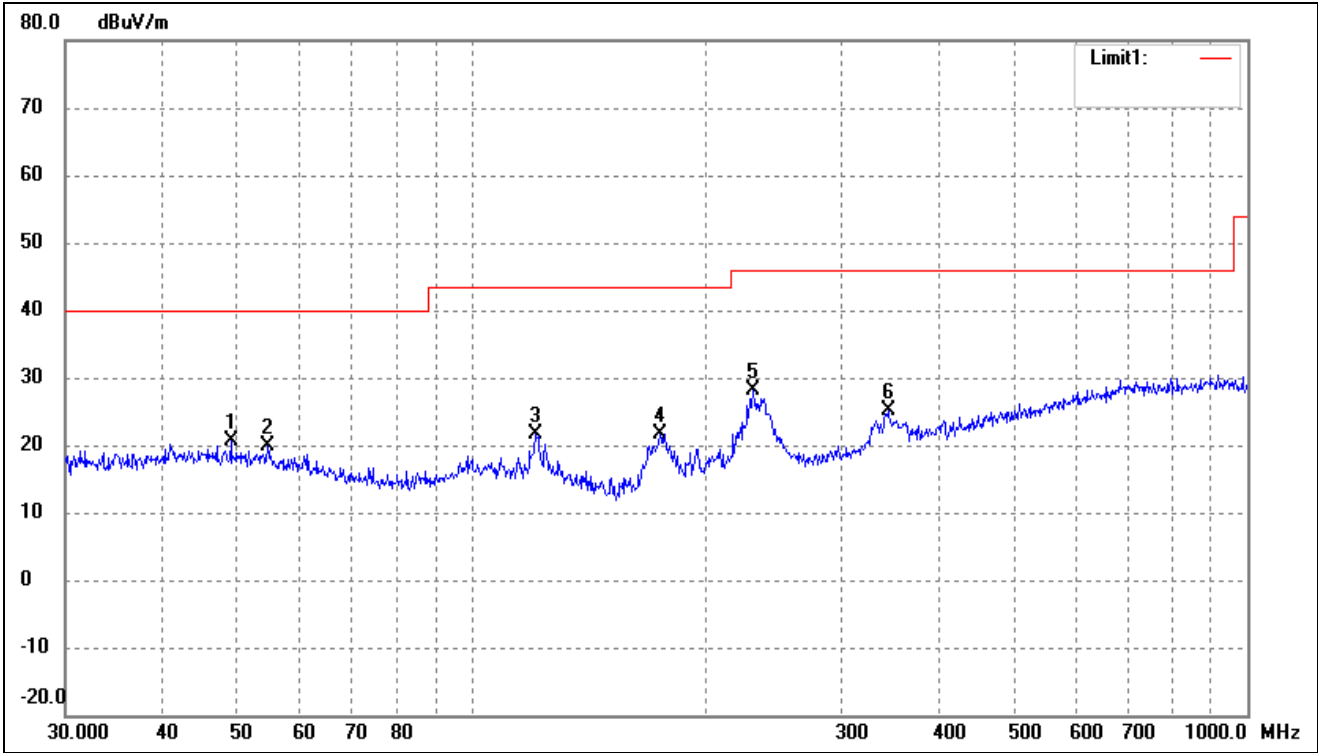
802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	49.5328	28.85	-6.97	21.88	40.00	-18.12	-	-	peak
2	98.8326	32.70	-8.94	23.76	43.50	-19.74	-	-	peak
3	123.6985	35.78	-10.28	25.50	43.50	-18.00	-	-	peak
4	171.9946	36.95	-11.63	25.32	43.50	-18.18	-	-	peak
5	197.8928	32.83	-9.76	23.07	43.50	-20.43	-	-	peak
6	375.9385	27.94	-4.61	23.33	46.00	-22.67	-	-	peak

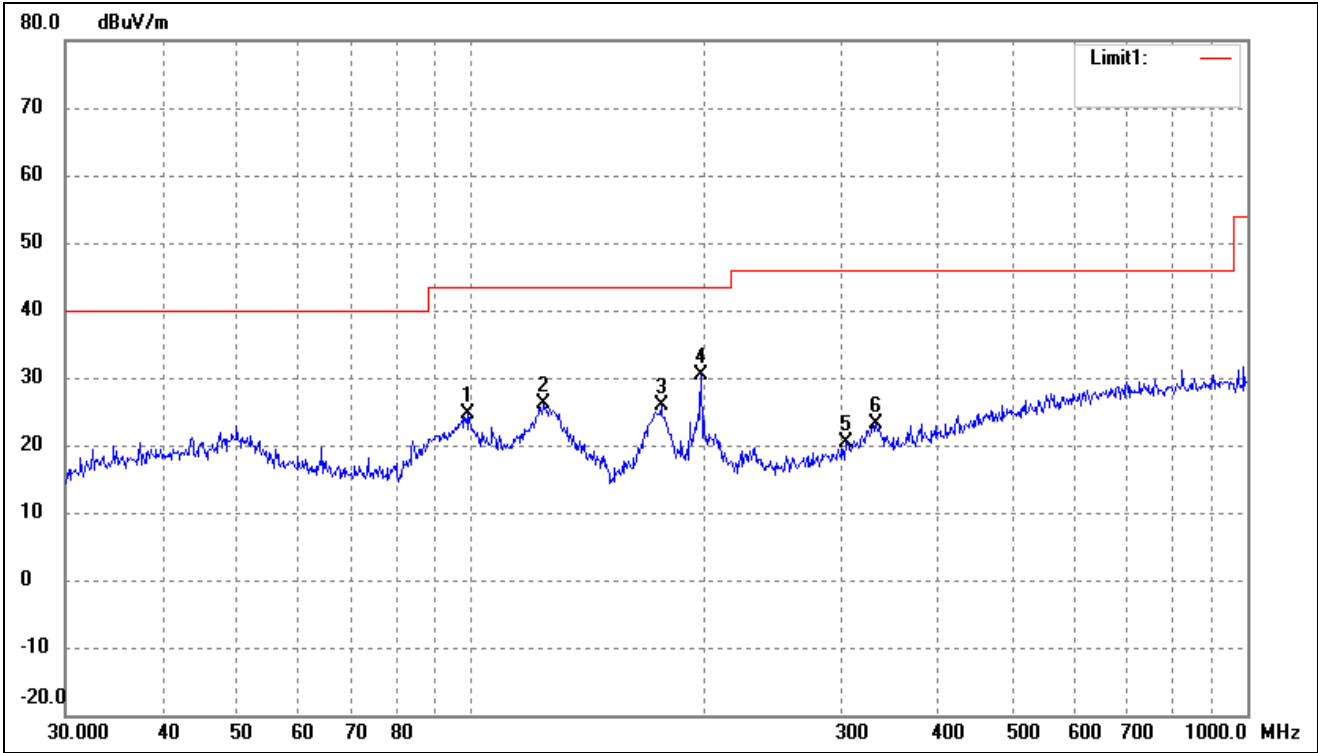
➤ Antenna 1

802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



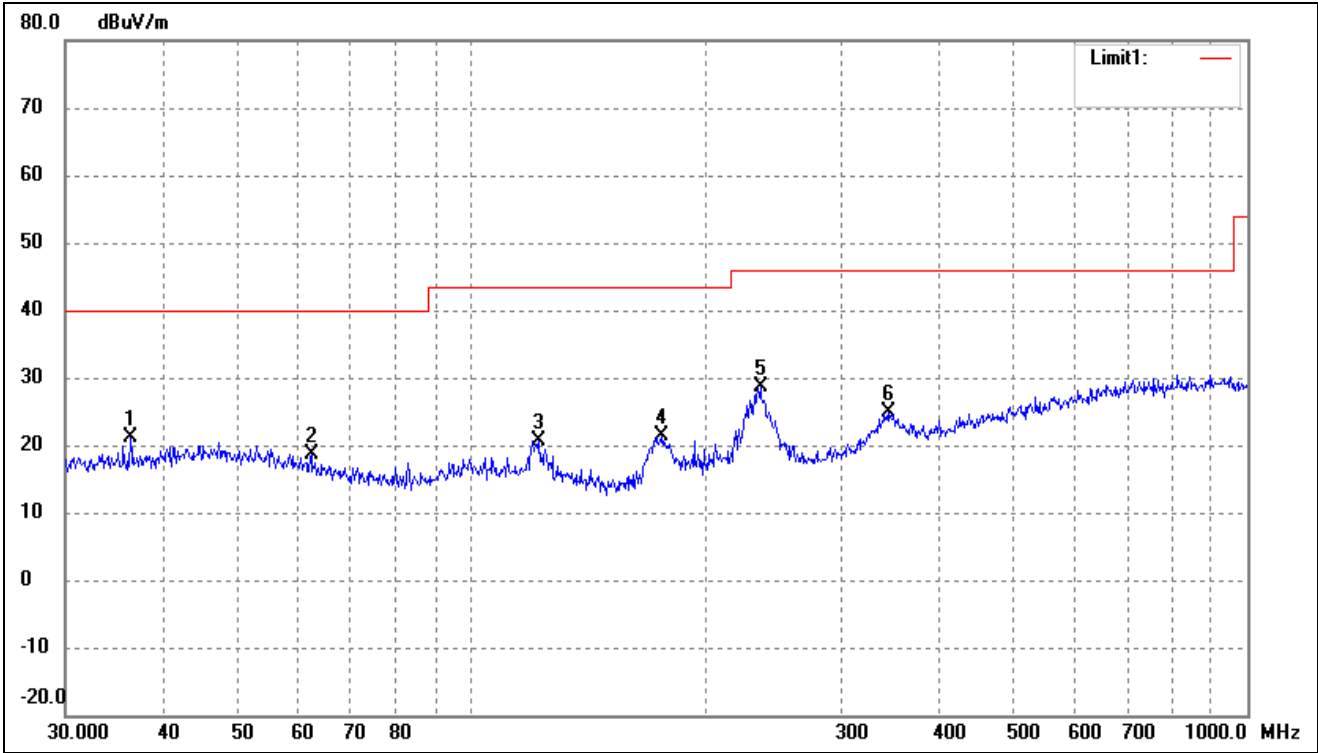
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	49.0145	27.51	-6.96	20.55	40.00	-19.45	-	-	peak
2	54.6429	27.53	-7.64	19.89	40.00	-20.11	-	-	peak
3	121.1231	31.31	-9.80	21.51	43.50	-21.99	-	-	peak
4	175.0368	33.25	-11.50	21.75	43.50	-21.75	-	-	peak
5	230.9068	36.94	-8.85	28.09	46.00	-17.91	-	-	peak
6	344.3855	30.59	-5.57	25.02	46.00	-20.98	-	-	peak

802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



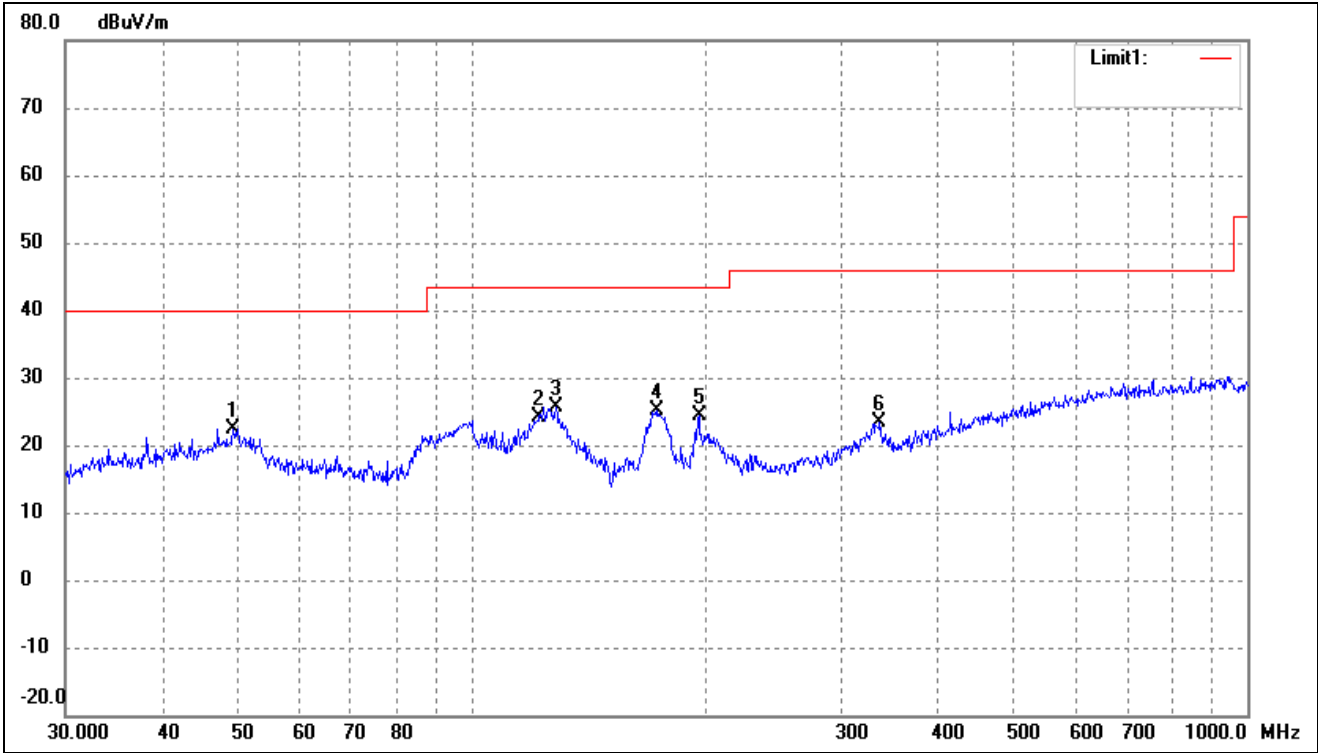
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	98.8326	33.50	-8.94	24.56	43.50	-18.94	-	-	peak
2	124.1330	36.46	-10.36	26.10	43.50	-17.40	-	-	peak
3	175.6516	37.35	-11.47	25.88	43.50	-17.62	-	-	peak
4	197.8928	40.08	-9.76	30.32	43.50	-13.18	-	-	peak
5	303.5437	27.18	-6.85	20.33	46.00	-25.67	-	-	peak
6	332.5187	29.03	-5.94	23.09	46.00	-22.91	-	-	peak

802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



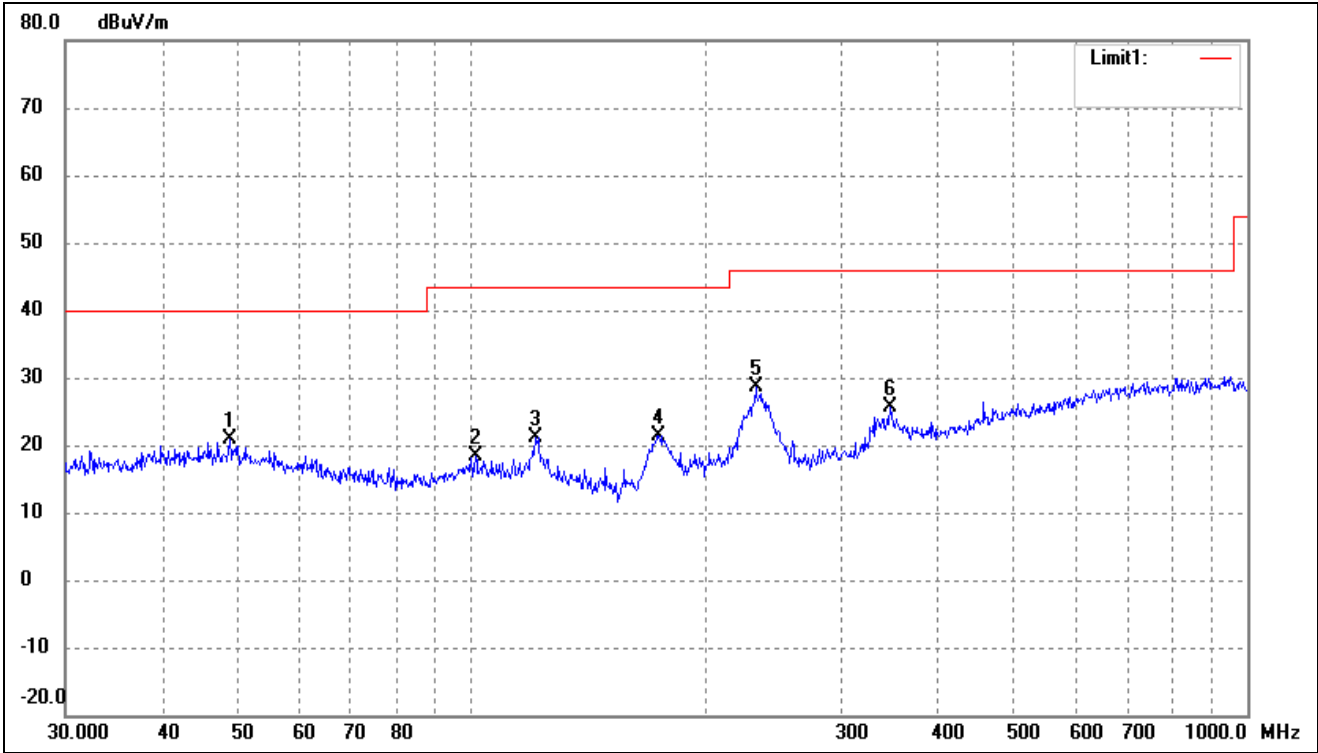
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	36.3814	28.90	-7.88	21.02	40.00	-18.98	-	-	peak
2	62.2128	27.44	-8.81	18.63	40.00	-21.37	-	-	peak
3	122.4040	30.69	-10.05	20.64	43.50	-22.86	-	-	peak
4	176.2686	32.83	-11.44	21.39	43.50	-22.11	-	-	peak
5	235.8164	37.34	-8.71	28.63	46.00	-17.37	-	-	peak
6	344.3855	30.55	-5.57	24.98	46.00	-21.02	-	-	peak

802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



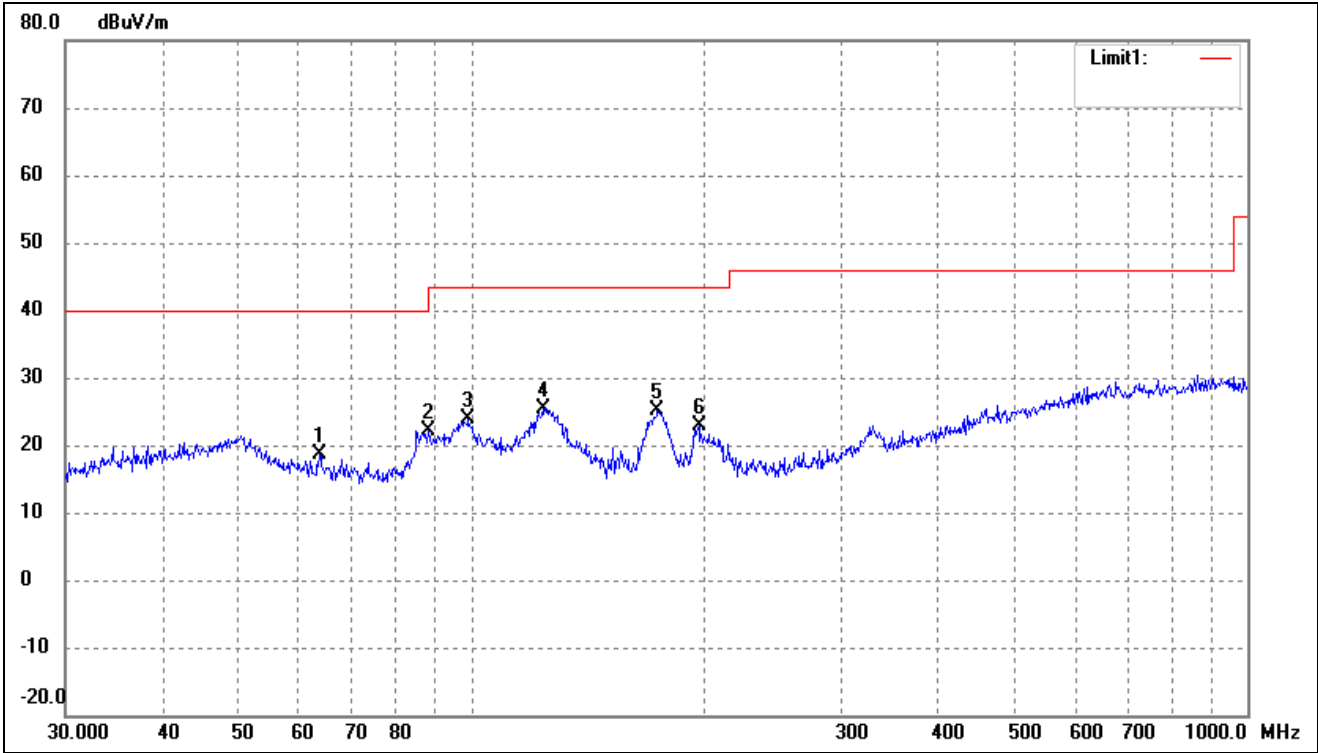
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	49.3594	29.46	-6.96	22.50	40.00	-17.50	-	-	peak
2	122.4040	34.07	-10.05	24.02	43.50	-19.48	-	-	peak
3	128.5630	36.87	-11.17	25.70	43.50	-17.80	-	-	peak
4	173.8135	36.67	-11.55	25.12	43.50	-18.38	-	-	peak
5	196.5098	34.13	-9.81	24.32	43.50	-19.18	-	-	peak
6	336.0352	29.30	-5.83	23.47	46.00	-22.53	-	-	peak

802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	48.8429	27.85	-6.97	20.88	40.00	-19.12	-	-	peak
2	101.2885	27.16	-8.75	18.41	43.50	-25.09	-	-	peak
3	121.1231	30.93	-9.80	21.13	43.50	-22.37	-	-	peak
4	174.4241	33.03	-11.53	21.50	43.50	-22.00	-	-	peak
5	232.5318	37.39	-8.80	28.59	46.00	-17.41	-	-	peak
6	346.8092	31.10	-5.50	25.60	46.00	-20.40	-	-	peak

802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	63.7588	27.72	-9.08	18.64	40.00	-21.36	-	-	peak
2	88.0329	32.85	-10.61	22.24	43.50	-21.26	-	-	peak
3	99.1797	32.64	-8.88	23.76	43.50	-19.74	-	-	peak
4	123.6985	35.70	-10.28	25.42	43.50	-18.08	-	-	peak
5	173.8135	36.64	-11.55	25.09	43.50	-18.41	-	-	peak
6	196.5098	32.77	-9.81	22.96	43.50	-20.54	-	-	peak

Remark: ‘-’Means’ the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

- Spurious Emissions Above 1GHz
- Antenna 0
- Test Mode: 802.11b_11Mbps(worst case)

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	59.32	-6.07	53.25	74	-20.75	H	PK
4824.000	42.11	-6.07	36.04	54	-17.96	H	AV
7236.000	54.03	-1.63	52.4	74	-21.6	H	PK
7236.000	38.59	-1.63	36.96	54	-17.04	H	AV
4824.000	61.89	-6.07	55.82	74	-18.18	V	PK
4824.000	41.82	-6.07	35.75	54	-18.25	V	AV
7236.000	53.93	-1.63	52.3	74	-21.7	V	PK
7236.000	39.18	-1.63	37.55	54	-16.45	V	AV
Middle Channel-2437MHz							
4874.000	61.96	-5.94	56.02	74	-17.98	H	PK
4874.000	41.31	-5.94	35.37	54	-18.63	H	AV
7311.000	53.51	-1.59	51.92	74	-22.08	H	PK
7311.000	39.84	-1.59	38.25	54	-15.75	H	AV
4874.000	59.69	-5.94	53.75	74	-20.25	V	PK
4874.000	41.11	-5.94	35.17	54	-18.83	V	AV
7311.000	52.13	-1.59	50.54	74	-23.46	V	PK
7311.000	40.69	-1.59	39.1	54	-14.9	V	AV
High Channel-2462MHz							
4924.000	58.48	-5.81	52.67	74	-21.33	H	PK
4924.000	43.08	-1.55	41.53	54	-12.47	H	AV
7386.000	54.47	-5.81	48.66	74	-25.34	H	PK
7386.000	39.22	-1.55	37.67	54	-16.33	H	AV
4924.000	59.21	-5.81	53.4	74	-20.6	V	PK
4924.000	41.73	-1.55	40.18	54	-13.82	V	AV
7386.000	55.73	-5.81	49.92	74	-24.08	V	PK
7386.000	40.2	-1.55	38.65	54	-15.35	V	AV

- Antenna 1
- Test Mode: 802.11b_11Mbps(worst case)

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	58.36	-6.07	52.29	74	-21.71	H	PK
4824.000	43.86	-6.07	37.79	54	-16.21	H	AV
7236.000	55.9	-1.63	54.27	74	-19.73	H	PK
7236.000	40.35	-1.63	38.72	54	-15.28	H	AV
4824.000	58.05	-6.07	51.98	74	-22.02	V	PK
4824.000	43.31	-6.07	37.24	54	-16.76	V	AV
7236.000	53.27	-1.63	51.64	74	-22.36	V	PK
7236.000	38.46	-1.63	36.83	54	-17.17	V	AV
Middle Channel-2437MHz							
4874.000	59.65	-5.94	53.71	74	-20.29	H	PK
4874.000	41.53	-5.94	35.59	54	-18.41	H	AV
7311.000	55.36	-1.59	53.77	74	-20.23	H	PK
7311.000	38.76	-1.59	37.17	54	-16.83	H	AV
4874.000	60.53	-5.94	54.59	74	-19.41	V	PK
4874.000	42.71	-5.94	36.77	54	-17.23	V	AV
7311.000	55.09	-1.59	53.5	74	-20.5	V	PK
7311.000	40.34	-1.59	38.75	54	-15.25	V	AV
High Channel-2462MHz							
4924.000	59.36	-5.81	53.55	74	-20.45	H	PK
4924.000	43.75	-1.55	42.2	54	-11.8	H	AV
7386.000	52.45	-5.81	46.64	74	-27.36	H	PK
7386.000	38.07	-1.55	36.52	54	-17.48	H	AV
4924.000	60.43	-5.81	54.62	74	-19.38	V	PK
4924.000	42.27	-1.55	40.72	54	-13.28	V	AV
7386.000	53.91	-5.81	48.1	74	-25.9	V	PK
7386.000	40.91	-1.55	39.36	54	-14.64	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

8. Out of Band Emissions

8.1 Standard Applicable

According to §15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. 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).

8.2 Test Procedure

According to the KDB 558074D01 v05r02 Subclause 8.4 and ANSI C63.10-2013 Subclause 11.11, the Emissions in nonrestricted frequency bands test method as follows:

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100kHz.
- c) Set the VBW $\geq [3 \times \text{RBW}]$.
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

According to the KDB 558074 D01 v05r02 Subclause 8.5 and ANSI C63.10-2013 Subclause 11.12, the Emissions in restricted frequency bands test method as follows:

A. Radiated emission measurements:

Set span = wide enough to capture the peak level of the emission operating on the channel closest to the bandedge, as well as any modulation products which fall outside of the authorized band of operation (2310MHz to 2420MHz for low bandedge, 2460MHz to 2500MHz for the high bandedge)

RBW = 1MHz, VBW = 1MHz for peak value measured

RBW = 1MHz, VBW = 10Hz for average value measured

Sweep = auto; Detector function = peak/average; Trace = max hold

All the trace to stabilize, set the marker on the emission at the bandedge, or on the highest modulation product outside of the band, if this level is greater than that at the bandedge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. Those emission must comply with the 15.209 limit for fall in the restricted bands listed in section 15.205. Note that the method of measurement

KDB publication number: 913591 may be used for the radiated bandedge measurements.

B. Antenna-port conducted measurements

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 9.
- b) $VBW \geq [3 \times RBW]$.
- c) Detector = peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be lengthened for low-duty-cycle applications.)

Table 9—RBW as a function of frequency

Frequency	RBW
9 kHz to 150 kHz	200 Hz to 300 Hz
0.15 MHz to 30 MHz	9 kHz to 10 kHz
30 MHz to 1000 MHz	100 kHz to 120 kHz
>1000 MHz	1 MHz

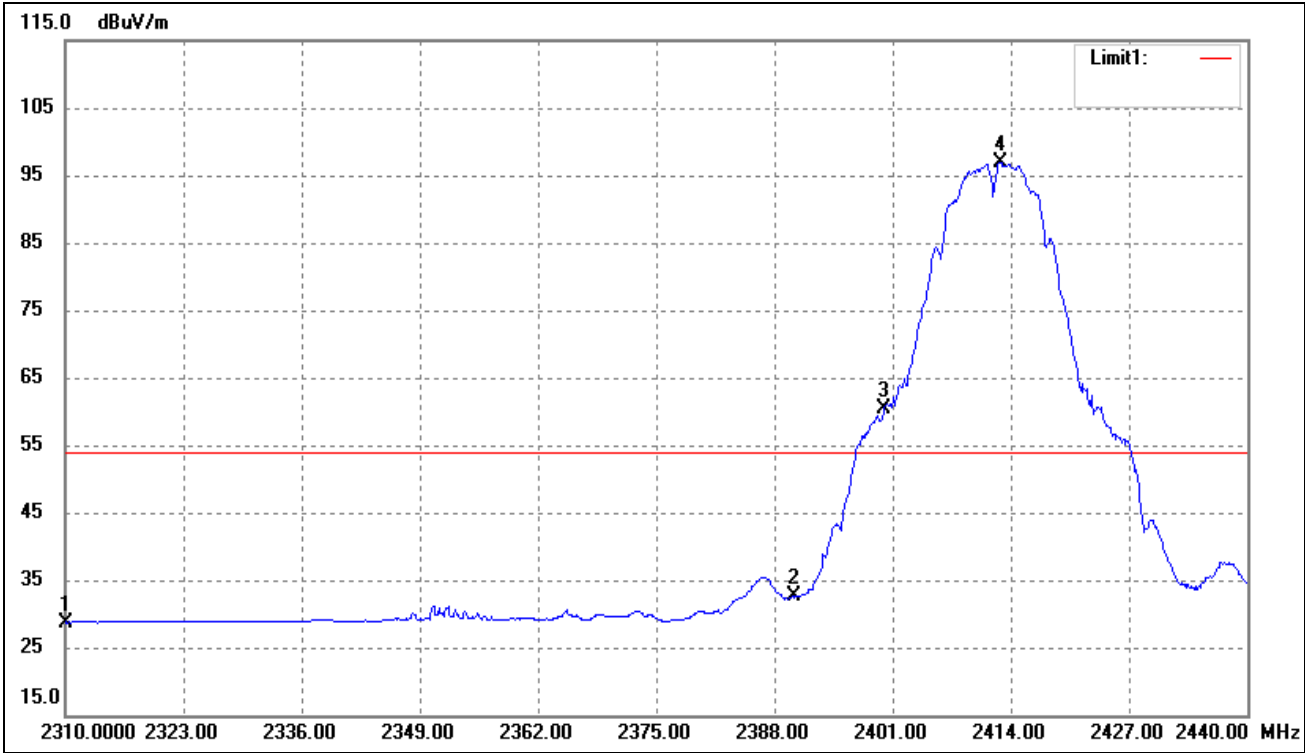
If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in section 8.1. Report the three highest emissions relative to the limit.

8.3 Summary of Test Results/Plots

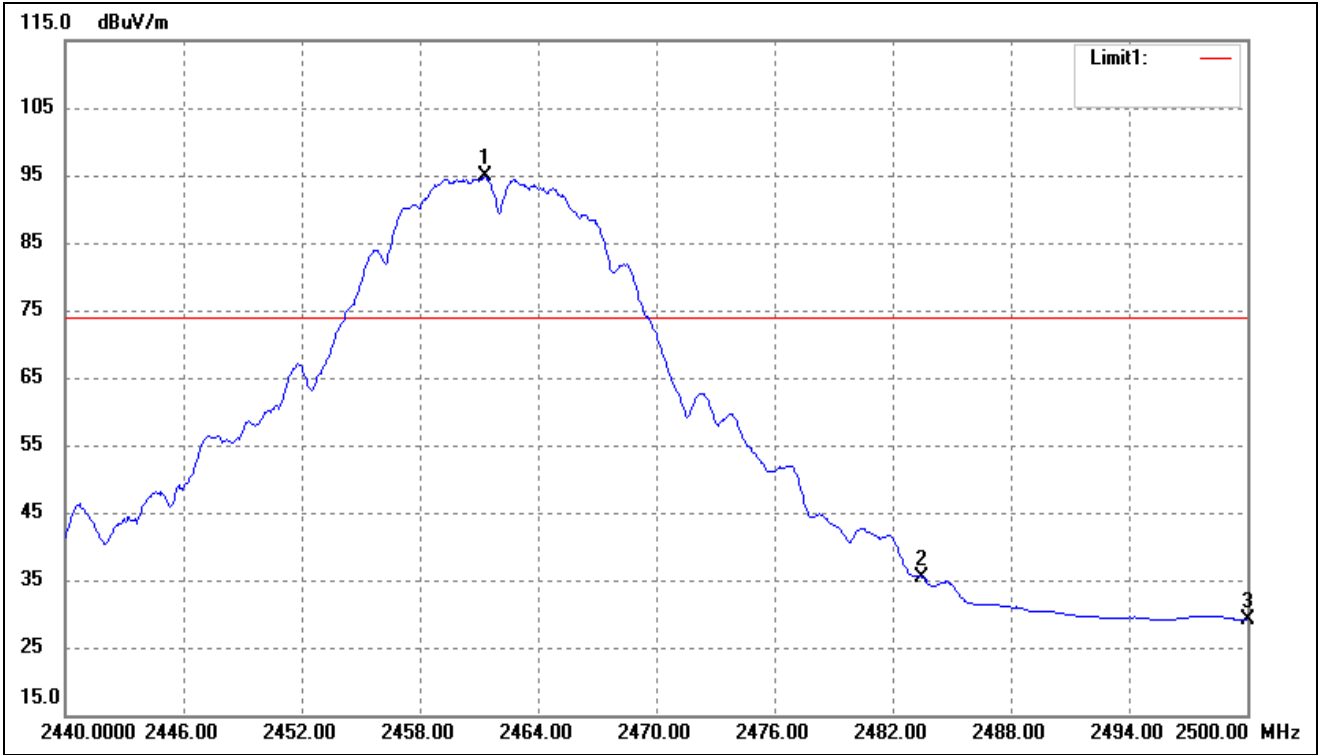
- Radiated test
- Antenna 0

802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



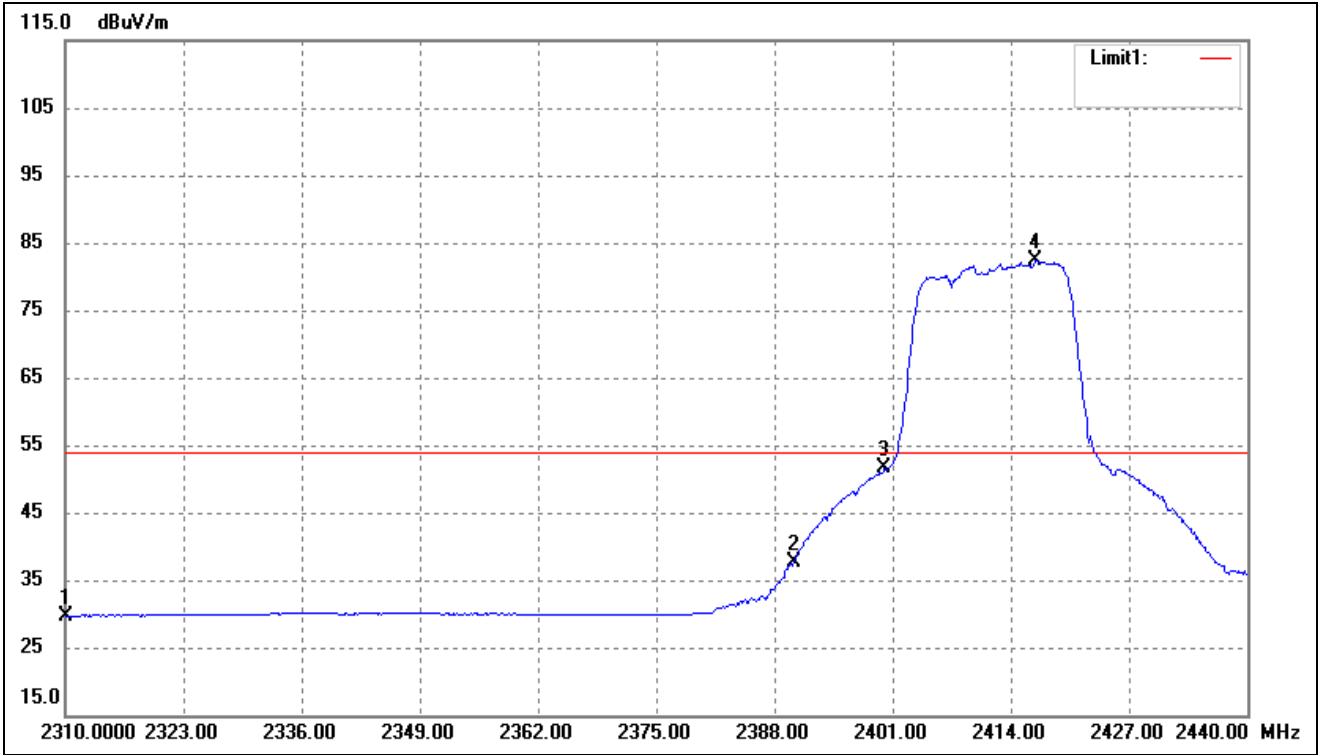
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	39.56	-10.82	28.74	54.00	-25.26	Average Detector
	2310.000	53.55	-10.82	42.73	74.00	-31.27	Peak Detector
2	2390.000	43.30	-10.70	32.60	54.00	-21.40	Average Detector
	2390.000	60.28	-10.70	49.58	74.00	-24.42	Peak Detector
3	2400.000	71.07	-10.69	60.38	Delta=36.58dBc		Average Detector
4	2412.830	107.63	-10.67	96.96			Average Detector

802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



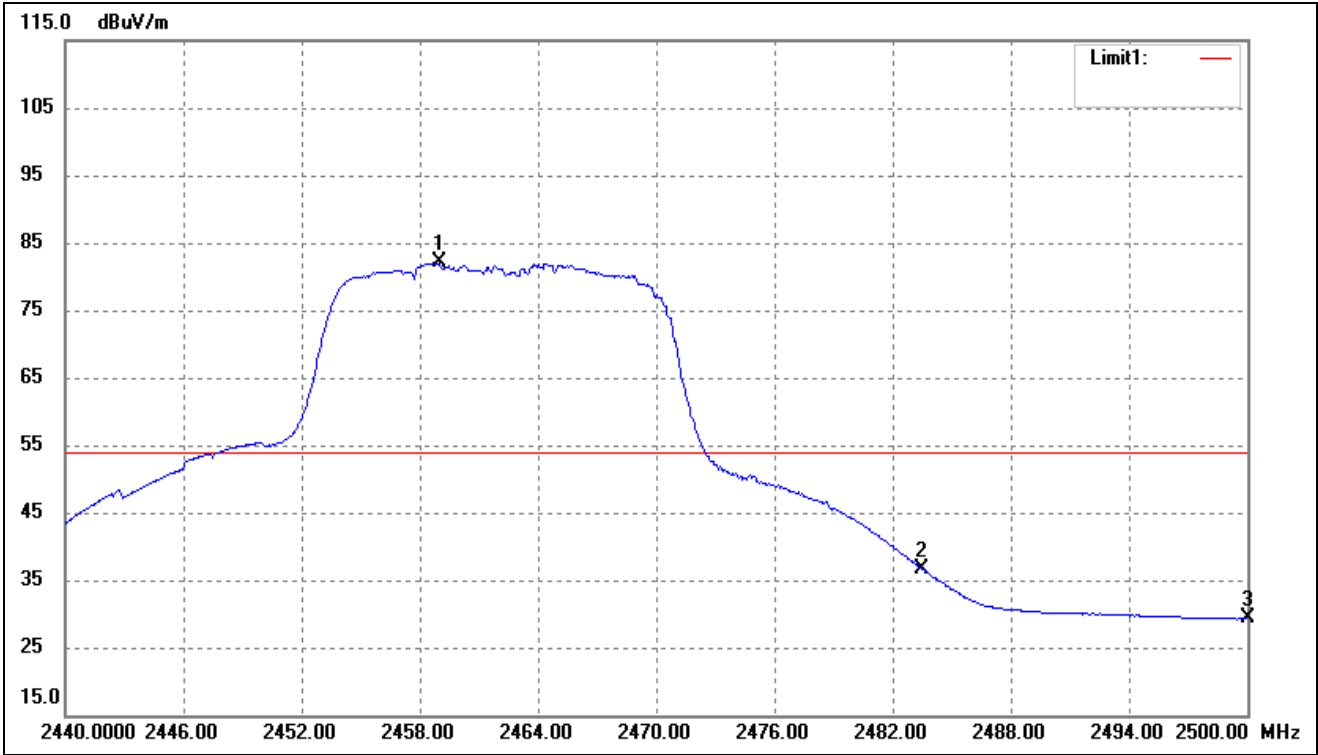
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.300	105.40	-10.61	94.79	/	/	Average Detector
	2460.580	111.70	-10.61	101.09	/	/	Peak Detector
2	2483.500	46.06	-10.58	35.48	74.00	-38.52	Average Detector
	2483.500	57.01	-10.58	46.43	74.00	-27.57	Peak Detector
3	2500.000	39.63	-10.55	29.08	74.00	-44.92	Average Detector
	2500.000	52.20	-10.55	41.65	74.00	-32.35	Peak Detector

802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.49	-10.82	29.67	54.00	-24.33	Average Detector
	2310.000	53.16	-10.82	42.34	74.00	-31.66	Peak Detector
2	2390.000	48.21	-10.70	37.51	54.00	-16.49	Average Detector
	2390.000	68.04	-10.70	57.34	74.00	-16.66	Peak Detector
3	2400.000	62.33	-10.69	51.64	Delta=30.63dBc		Average Detector
4	2416.730	92.93	-10.66	82.27			Average Detector

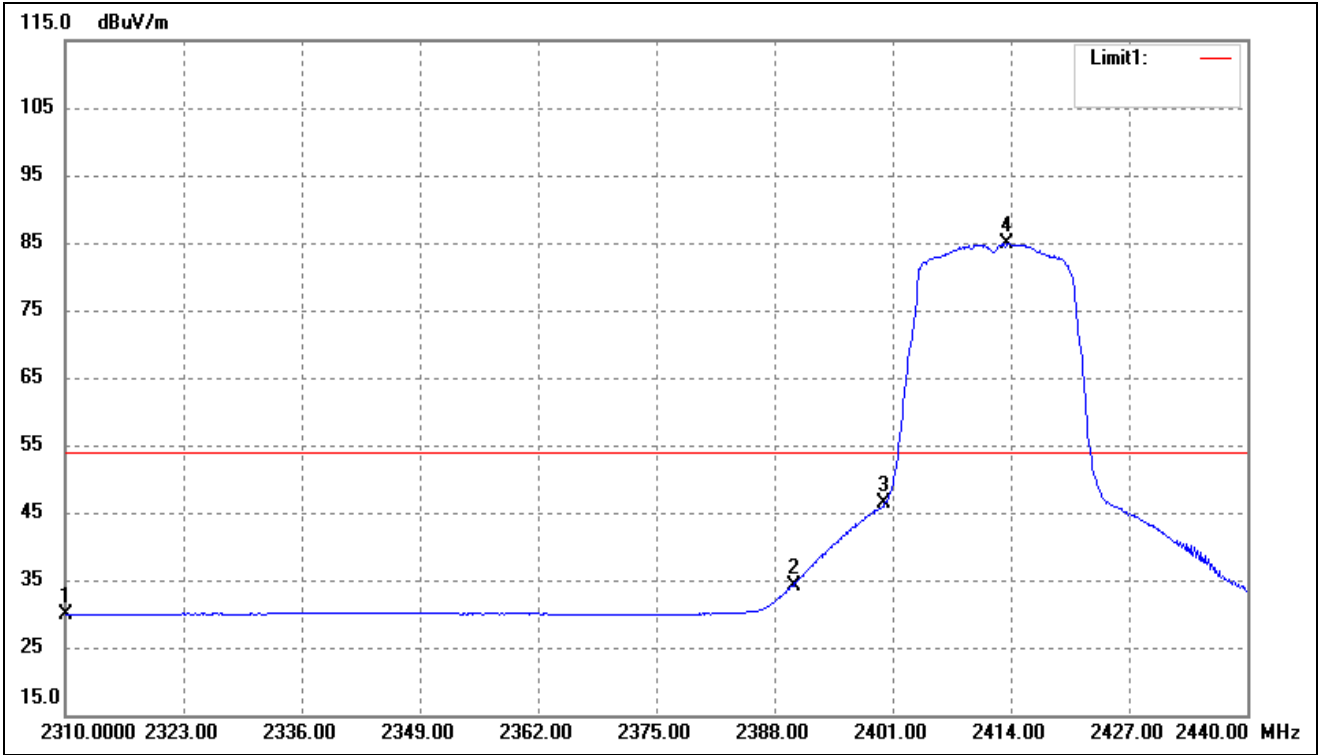
802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2458.960	92.66	-10.61	82.05	/	/	Average Detector
	2465.440	108.49	-10.59	97.90	/	/	Peak Detector
2	2483.500	47.31	-10.58	36.73	54.00	-17.27	Average Detector
	2483.500	70.12	-10.58	59.54	74.00	-14.46	Peak Detector
3	2500.000	39.83	-10.55	29.28	54.00	-24.72	Average Detector
	2500.000	51.92	-10.55	41.37	74.00	-32.63	Peak Detector

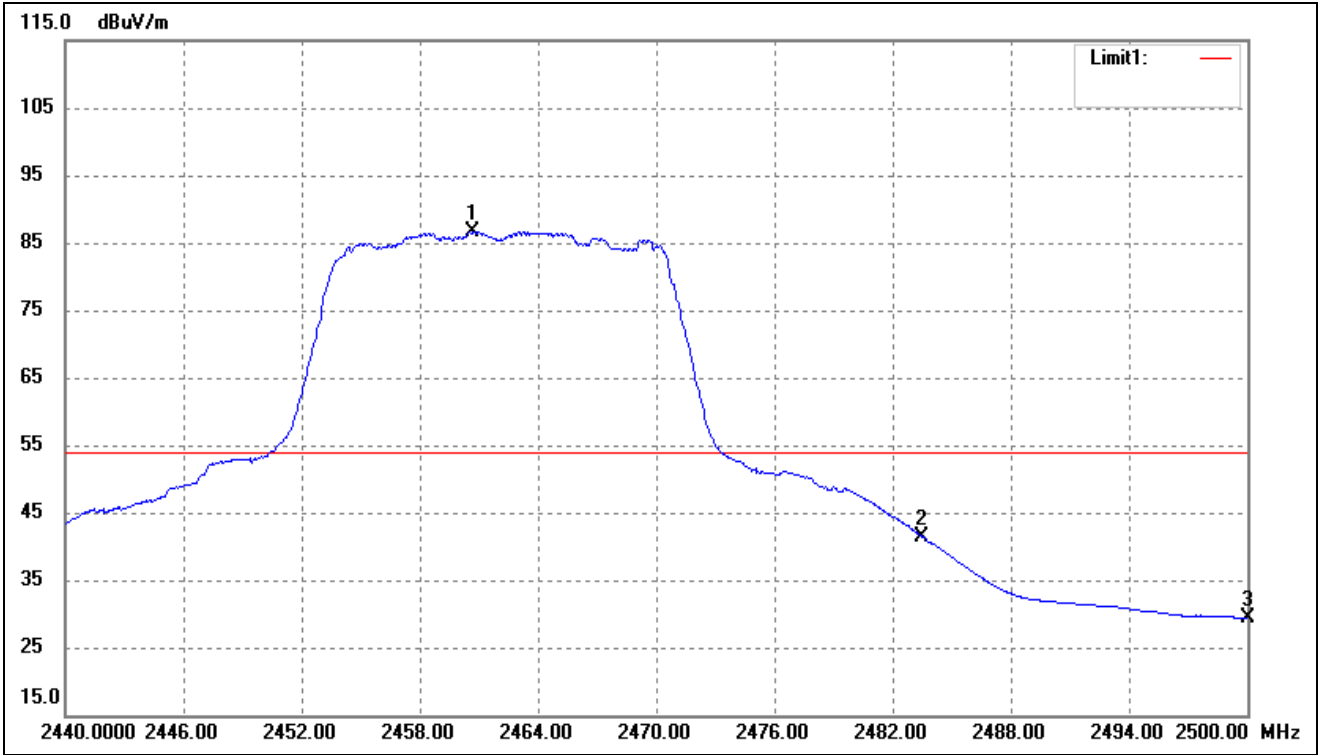
➤ Antenna 0+Antenna1

802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



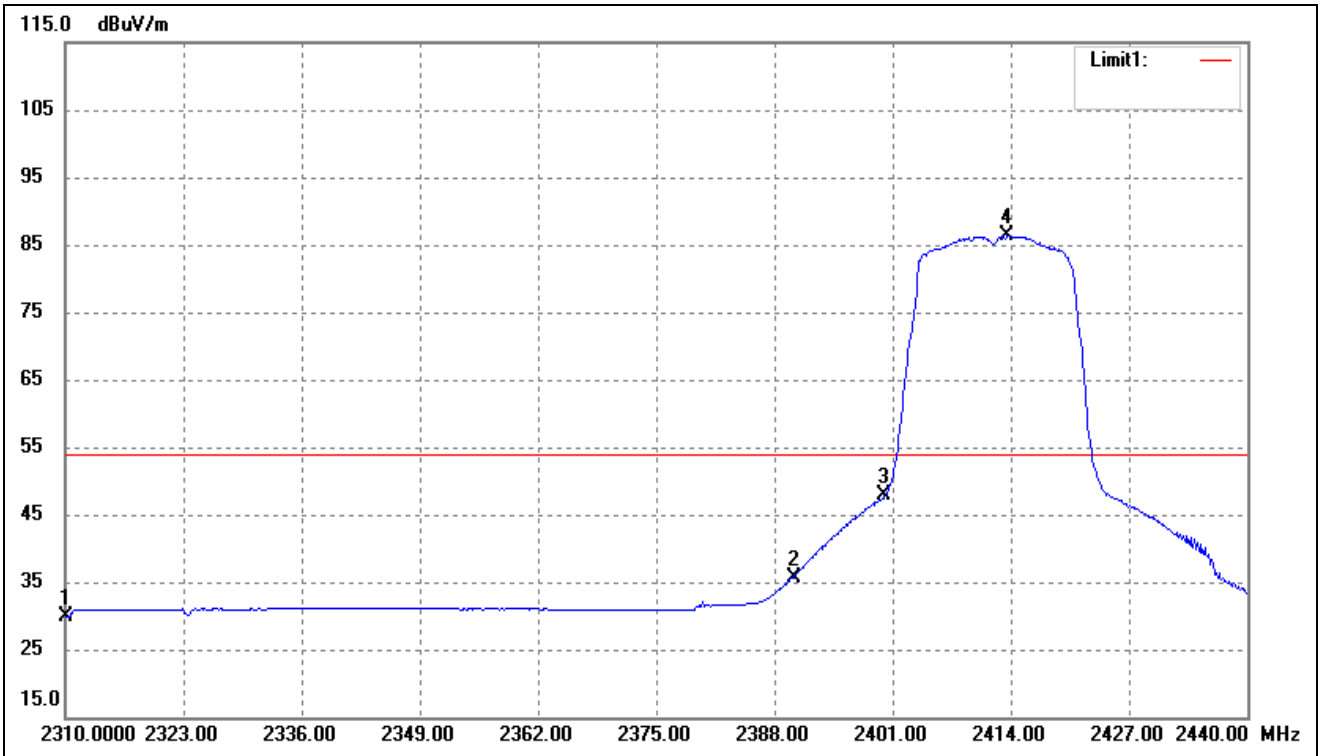
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.68	-10.82	29.86	54.00	-24.14	Average Detector
	2310.000	53.11	-10.82	42.29	74.00	-31.71	Peak Detector
2	2390.000	44.94	-10.70	34.24	54.00	-19.76	Average Detector
	2390.000	65.84	-10.70	55.14	74.00	-18.86	Peak Detector
3	2400.000	57.04	-10.69	46.35	Delta=38.46dBc		Average Detector
4	2413.610	95.47	-10.66	84.81			Average Detector

802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



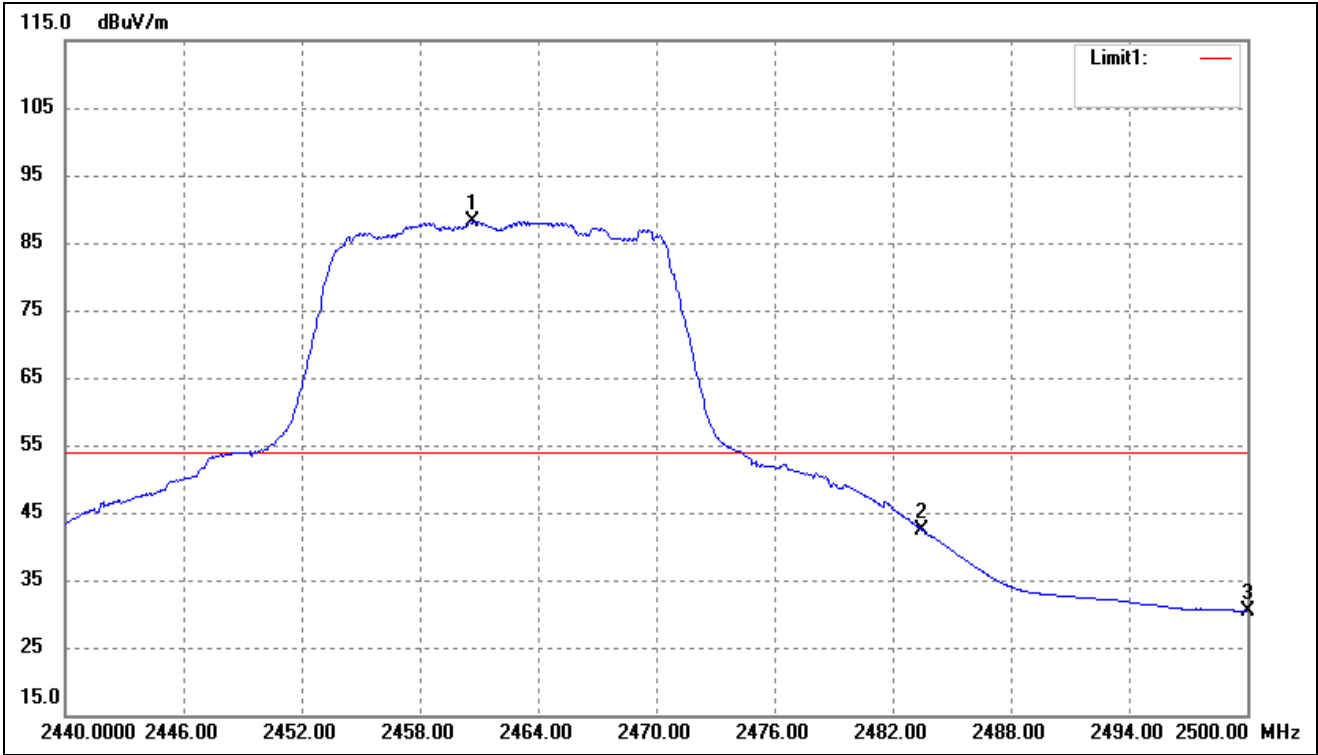
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.640	97.24	-10.61	86.63	/	/	Average Detector
	2458.840	111.67	-10.61	101.06	/	/	Peak Detector
2	2483.500	52.07	-10.58	41.49	54.00	-12.51	Average Detector
	2483.500	67.89	-10.58	57.31	74.00	-16.69	Peak Detector
3	2500.000	40.01	-10.55	29.46	54.00	-24.54	Average Detector
	2500.000	54.32	-10.55	43.77	74.00	-30.23	Peak Detector

802.11ax-HE20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



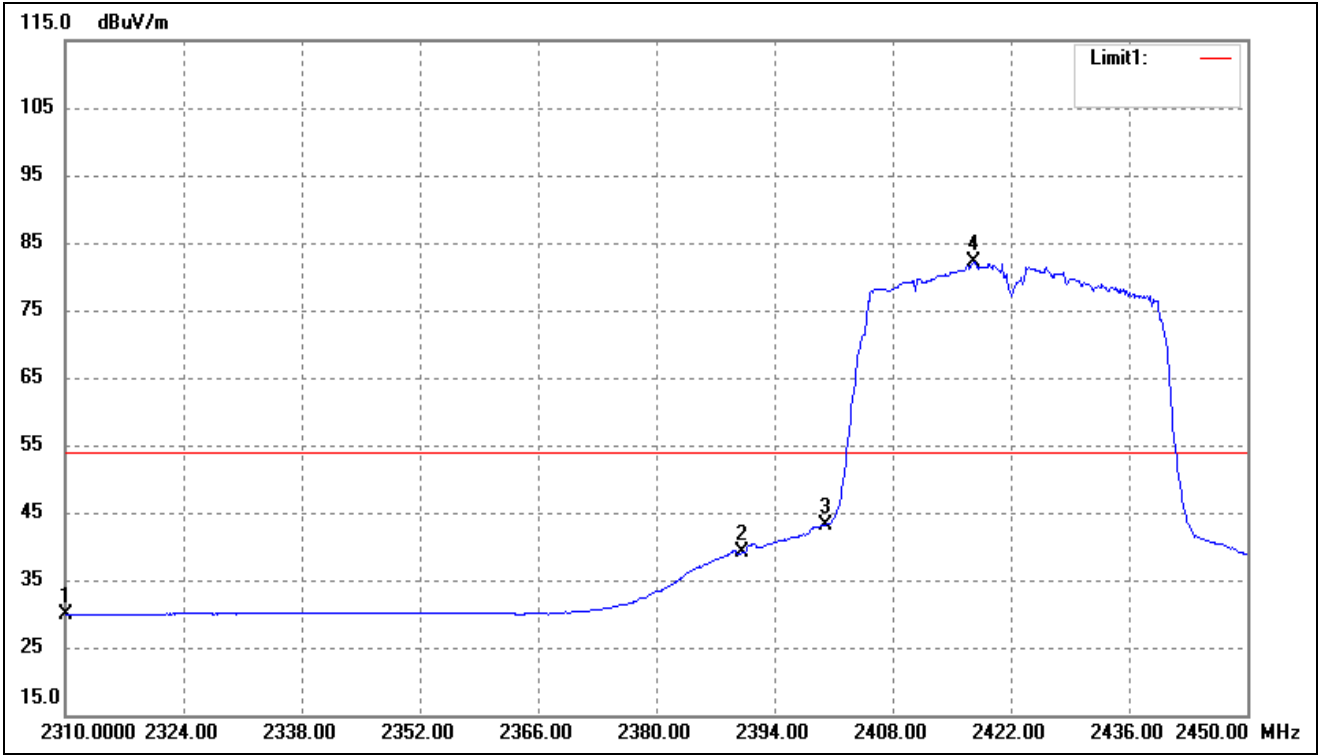
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.68	-10.82	29.86	54.00	-24.14	Average Detector
	2310.000	51.61	-10.82	40.79	74.00	-33.21	Peak Detector
2	2390.000	46.44	-10.70	35.74	54.00	-18.26	Average Detector
	2390.000	63.84	-10.70	53.14	74.00	-20.86	Peak Detector
3	2400.000	58.54	-10.69	47.85	Delta=38.46dBc		Average Detector
4	2413.610	96.97	-10.66	86.31			Average Detector

802.11ax-HE20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



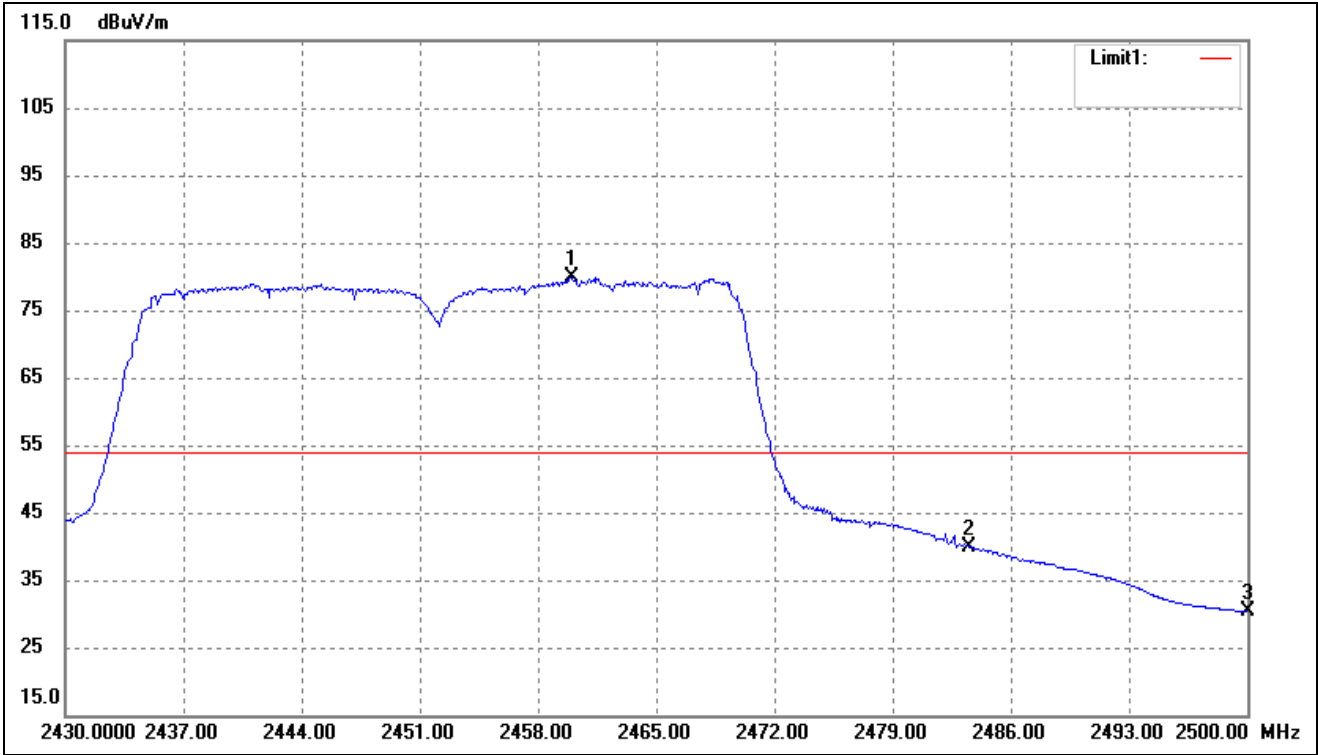
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.640	98.74	-10.61	88.13	/	/	Average Detector
	2465.500	114.57	-10.59	103.98	/	/	Peak Detector
2	2483.500	53.07	-10.58	42.49	54.00	-11.51	Average Detector
	2483.500	65.39	-10.58	54.81	74.00	-19.19	Peak Detector
3	2500.000	41.01	-10.55	30.46	54.00	-23.54	Average Detector
	2500.000	52.82	-10.55	42.27	74.00	-31.73	Peak Detector

802.11n-HT40_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



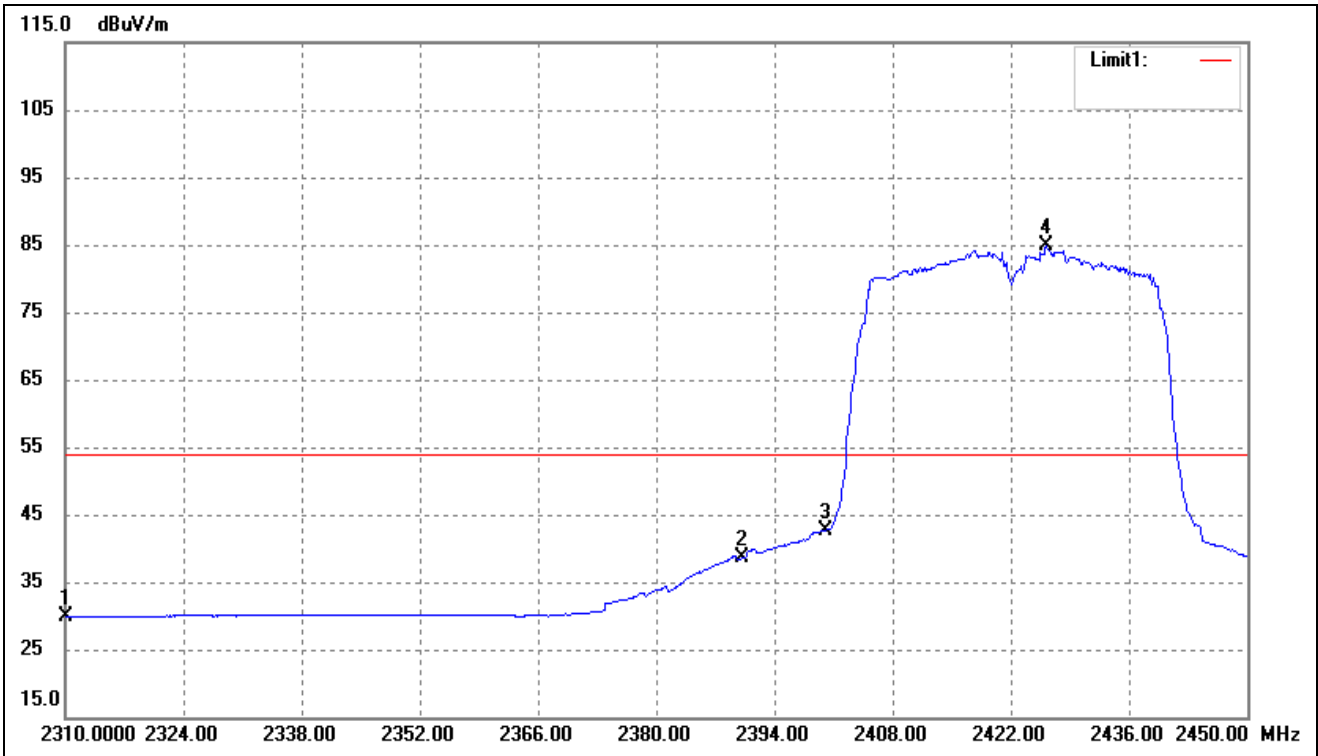
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.67	-10.82	29.85	54.00	-24.15	Average Detector
	2310.000	53.49	-10.82	42.67	74.00	-31.33	Peak Detector
2	2390.000	49.79	-10.70	39.09	54.00	-14.91	Average Detector
	2390.000	70.45	-10.70	59.75	74.00	-14.25	Peak Detector
3	2400.000	53.88	-10.69	43.19	Delta=39.04dBc		Average Detector
4	2417.520	92.89	-10.66	82.23			Average Detector

802.11n-HT40_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



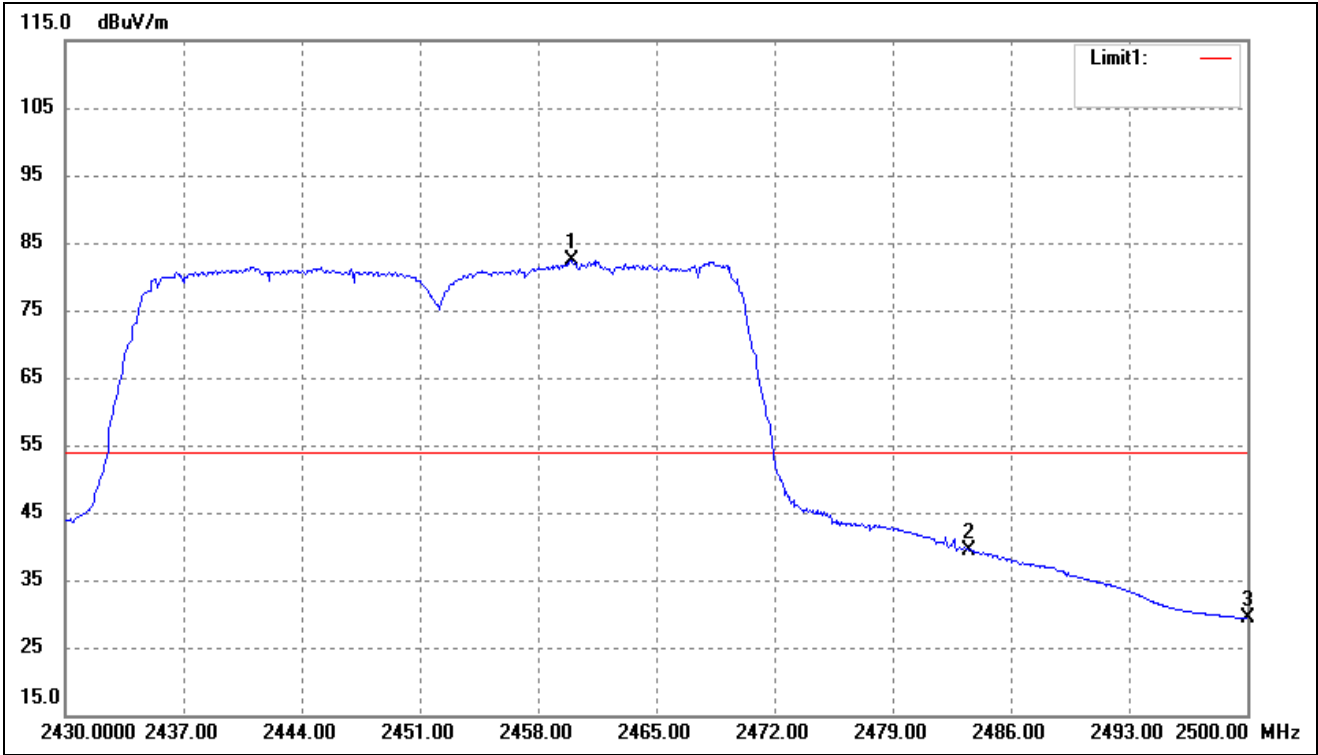
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2459.960	90.53	-10.61	79.92	/	/	Average Detector
	2439.800	106.92	-10.63	96.29	/	/	Peak Detector
2	2483.500	50.54	-10.58	39.96	54.00	-14.04	Average Detector
	2483.500	65.63	-10.58	55.05	74.00	-18.95	Peak Detector
3	2500.000	40.82	-10.55	30.27	54.00	-23.73	Average Detector
	2500.000	56.14	-10.55	45.59	74.00	-28.41	Peak Detector

802.11ax-HE40_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.67	-10.82	29.85	54.00	-24.15	Average Detector
	2310.000	51.99	-10.82	41.17	74.00	-32.83	Peak Detector
2	2390.000	49.29	-10.70	38.59	54.00	-15.41	Average Detector
	2390.000	67.45	-10.70	56.75	74.00	-17.25	Peak Detector
3	2400.000	53.38	-10.69	42.69	Delta=42.18dBc		Average Detector
4	2426.200	95.52	-10.65	84.87			Average Detector

802.11ax-HE40_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2459.960	93.03	-10.61	82.42	/	/	Average Detector
	2439.800	109.42	-10.63	98.79	/	/	Peak Detector
2	2483.500	50.04	-10.58	39.46	54.00	-14.54	Average Detector
	2483.500	63.13	-10.58	52.55	74.00	-21.45	Peak Detector
3	2500.000	39.82	-10.55	29.27	54.00	-24.73	Average Detector
	2500.000	56.14	-10.55	45.59	74.00	-28.41	Peak Detector

➤ Conducted test
Please refer to Appendix D

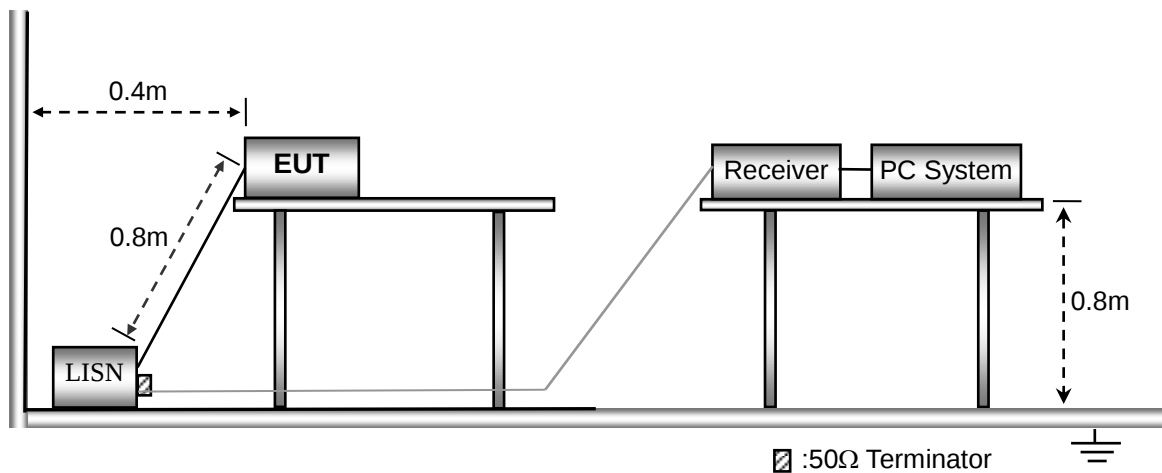
9. Conducted Emissions

9.1 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

9.2 Basic Test Setup Block Diagram



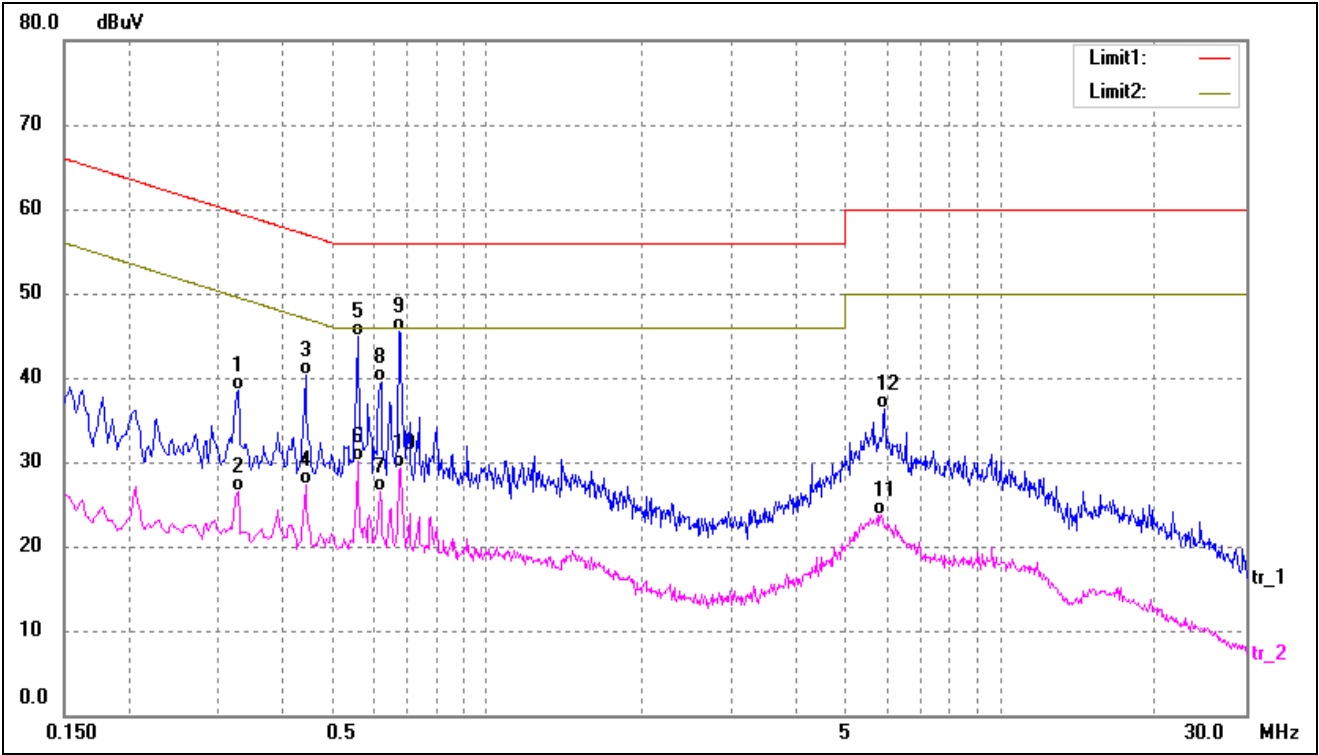
9.3 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency	150kHz
Stop Frequency	30MHz
Sweep Speed	Auto
IF Bandwidth.....	10kHz
Quasi-Peak Adapter Bandwidth	9kHz
Quasi-Peak Adapter Mode	Normal

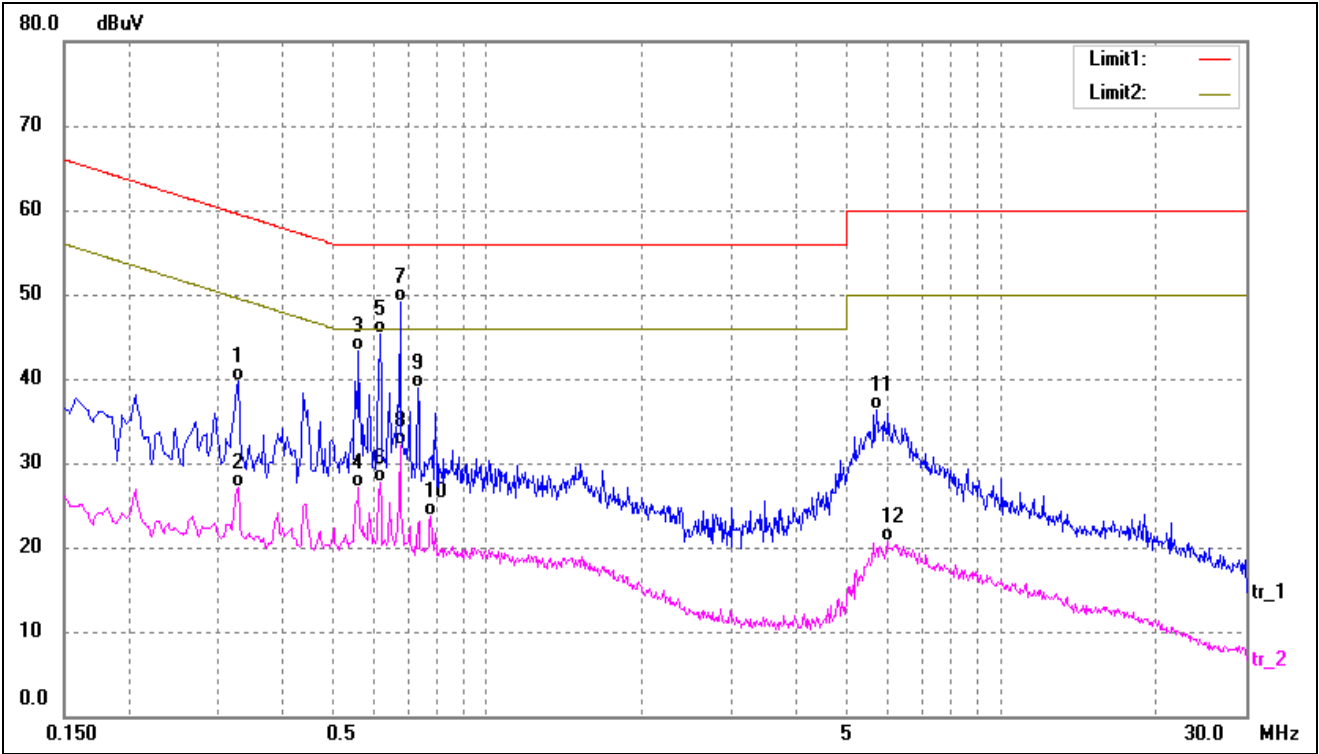
9.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3260	28.15	10.33	38.48	59.55	-21.07	QP
2	0.3260	16.17	10.33	26.50	49.55	-23.05	AVG
3	0.4420	30.09	10.28	40.37	57.02	-16.65	QP
4	0.4420	16.98	10.28	27.26	47.02	-19.76	AVG
5	0.5580	34.62	10.29	44.91	56.00	-11.09	QP
6	0.5580	19.80	10.29	30.09	46.00	-15.91	AVG
7	0.6180	16.13	10.33	26.46	46.00	-19.54	AVG
8	0.6220	29.15	10.33	39.48	56.00	-16.52	QP
9*	0.6740	35.20	10.36	45.56	56.00	-10.44	QP
10	0.6780	19.00	10.37	29.37	46.00	-16.63	AVG
11	5.8540	13.81	9.97	23.78	50.00	-26.22	AVG
12	5.9300	26.30	9.97	36.27	60.00	-23.73	QP

Test Mode	Communication	AC120V 60Hz	Polarity:	Line
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3260	29.30	10.33	39.63	59.55	-19.92	QP
2	0.3260	16.69	10.33	27.02	49.55	-22.53	AVG
3	0.5620	33.03	10.30	43.33	56.00	-12.67	QP
4	0.5620	16.84	10.30	27.14	46.00	-18.86	AVG
5	0.6180	35.06	10.33	45.39	56.00	-10.61	QP
6	0.6180	17.29	10.33	27.62	46.00	-18.38	AVG
7*	0.6780	38.73	10.37	49.10	56.00	-6.90	QP
8	0.6780	21.81	10.37	32.18	46.00	-13.82	AVG
9	0.7340	28.52	10.40	38.92	56.00	-17.08	QP
10	0.7780	13.22	10.43	23.65	46.00	-22.35	AVG
11	5.7180	26.28	9.99	36.27	60.00	-23.73	QP
12	5.9980	10.74	9.97	20.71	50.00	-29.29	AVG

APPENDIX SUMMARY

Project No.	WTX22X05104028W	Test Engineer	Gala Wang
Start date	2022/6/7	Finish date	2022/6/09
Temperature	23℃	Humidity	45%
RF specifications	WIFI-2.4G		

APPENDIX	Description of Test Item	Result
A	Power Spectral Density	Compliant
B	DTS Bandwidth	Compliant
C	RF Output Power	Compliant
D	Conducted Out of Band Emissions	Compliant

APPENDIX A

Power Spectral Density					
Test Mode	Test Channel MHz	Test Result(dBm/3kHz)		Total dBm	Limit dBm/3kHz
		Antenna 0	Antenna 1		
802.11b_1Mbps	2412	-15.27	-17.78	/	8
	2437	-14.94	-17.64	/	8
	2462	-15.42	-17.53	/	8
802.11g_6Mbps	2412	-17.31	-18.49	/	8
	2437	-17.88	-19.35	/	8
	2462	-17.05	-19.32	/	8
802.11n-HT20_MCS0	2412	-18.28	-19.59	-15.88	8
	2437	-18.60	-18.80	-15.69	8
	2462	-19.62	-19.35	-16.47	8
802.11n-HT40_MCS0	2422	-22.24	-22.52	-19.37	8
	2437	-22.14	-22.76	-19.43	8
	2452	-22.38	-22.72	-19.54	8
802.11ax-HE20_MCS0	2412	-19.91	-20.42	-17.15	8
	2437	-20.02	-20.18	-17.09	8
	2462	-19.60	-20.68	-17.10	8
802.11ax-HE40_MCS0	2422	-22.91	-23.16	-20.02	8
	2437	-23.30	-23.52	-20.40	8
	2452	-23.17	-23.78	-20.45	8

Antenna 1

802.11b-Low	Agilent R T Ref 21 dBm Atten 30 dB Mkr1 2.41272 GHz -15.27 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.412720000 GHz -15.27 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools ▶ Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11b-Middle	Agilent R T Ref 21 dBm Atten 30 dB Mkr1 2.43775 GHz -14.94 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.437750000 GHz -14.94 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools ▶ Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11b-High	Agilent R T Ref 21 dBm Atten 30 dB Mkr1 2.46278 GHz -15.42 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.462780000 GHz -15.42 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools ▶ Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11g-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.41266 GHz -17.31 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.412660000 GHz -17.31 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11g-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43730 GHz -17.88 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.437300000 GHz -17.88 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11g-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.46167 GHz -17.05 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.461670000 GHz -17.05 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11n-HT20-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.41230 GHz -18.28 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.412300000 GHz -18.28 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT20-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43730 GHz -18.6 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.437300000 GHz -18.6 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT20-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.46107 GHz -19.62 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.461070000 GHz -19.62 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11n-HT40-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.42296 GHz -22.24 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.422960000 GHz -22.24 dBm Center 2.422 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT40-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43886 GHz -22.14 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.438860000 GHz -22.14 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT40-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.45386 GHz -22.38 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.453860000 GHz -22.38 dBm Center 2.452 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11ax-HE20-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.41272 GHz -19.91 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.412720000 GHz -19.91 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE20-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43625 GHz -20.02 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.436250000 GHz -20.02 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE20-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.46218 GHz -19.6 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.462180000 GHz -19.6 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11ax-HE40-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.42074 GHz -22.91 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.420740000 GHz -22.91 dBm Center 2.422 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE40-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43616 GHz -23.3 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.436160000 GHz -23.3 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE40-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.45380 GHz -23.17 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.453800000 GHz -23.17 dBm Center 2.452 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

Antenna 2

802.11b-Low	Agilent R T Ref 21 dBm Atten 30 dB Mkr1 2.41137 GHz -17.78 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.411370000 GHz -17.78 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools ▶ Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11b-Middle	Agilent R T Ref 21 dBm Atten 30 dB Mkr1 2.43766 GHz -17.64 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.437660000 GHz -17.64 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools ▶ Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11b-High	Agilent R T Ref 21 dBm Atten 30 dB Mkr1 2.46128 GHz -17.53 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.461280000 GHz -17.53 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools ▶ Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11g-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.41107 GHz -18.49 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.411070000 GHz -18.49 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11g-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43607 GHz -19.35 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Center 2.437000000 GHz Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Trace/View 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.46230 GHz -19.32 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.462300000 GHz -19.32 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11n-HT20-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.41164 GHz -19.59 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.411640000 GHz -19.59 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT20-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43733 GHz -18.8 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.437330000 GHz -18.8 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT20-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.46107 GHz -19.35 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.461070000 GHz -19.35 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11n-HT40-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.42134 GHz -22.52 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.421340000 GHz -22.52 dBm Center 2.422 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT40-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43514 GHz -22.76 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.435140000 GHz -22.76 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11n-HT40-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.45044 GHz -22.72 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.450440000 GHz -22.72 dBm Center 2.452 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

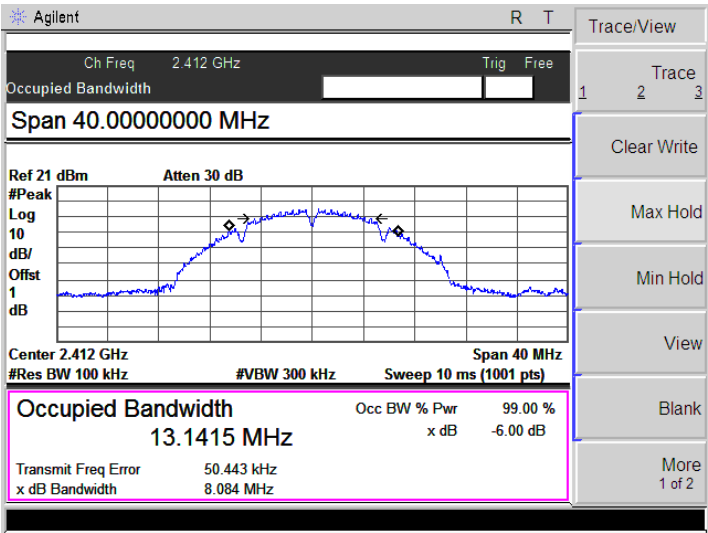
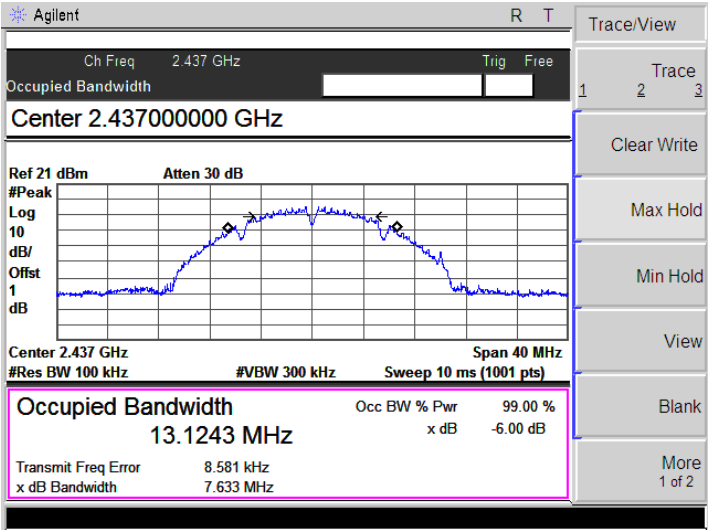
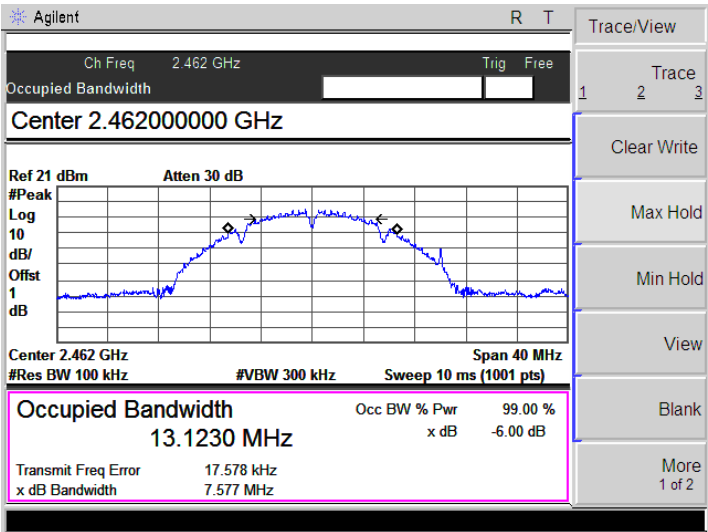
802.11ax-HE20-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.41170 GHz -20.42 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.411700000 GHz -20.42 dBm Center 2.412 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE20-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43724 GHz -20.18 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.437240000 GHz -20.18 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE20-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.46248 GHz -20.68 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.462480000 GHz -20.68 dBm Center 2.462 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 5.425 s (1001 pts) Span 30 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

802.11ax-HE40-Low	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.42116 GHz -23.16 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.421160000 GHz -23.16 dBm Center 2.422 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE40-Middle	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.43592 GHz -23.52 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.435920000 GHz -23.52 dBm Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2
802.11ax-HE40-High	Agilent Ref 21 dBm Atten 30 dB Mkr1 2.45140 GHz -23.78 dBm #Avg Log 10 dB/ Offst 1 dB M1 S2 S3 FC AA Marker 2.451400000 GHz -23.78 dBm Center 2.452 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 10.85 s (1001 pts) Span 60 MHz Peak Search Meas Tools Next Peak Next Pk Right Next Pk Left Min Search Pk-Pk Search More 1 of 2

APPENDIX B

DTS Bandwidth				
Test Mode	Test Channel MHz	Test Result(MHz)		Limit kHz
		Antenna 0	Antenna 1	
802.11b_1Mbps	2412	8.0840	8.031	≥500
	2437	7.6330	8.087	≥500
	2462	7.5770	8.056	≥500
802.11g_6Mbps	2412	15.093	13.848	≥500
	2437	14.429	15.109	≥500
	2462	15.720	15.149	≥500
802.11n-HT20_MCS0	2412	16.303	16.902	≥500
	2437	16.902	16.573	≥500
	2462	7.6620	15.615	≥500
802.11n-HT40_MCS0	2422	32.335	35.331	≥500
	2437	34.797	29.924	≥500
	2452	35.680	33.321	≥500
802.11ax-HE20_MCS0	2412	17.819	15.321	≥500
	2437	18.314	17.023	≥500
	2462	15.328	13.829	≥500
802.11ax-HE40_MCS0	2422	36.270	30.390	≥500
	2437	35.128	36.602	≥500
	2452	36.199	37.147	≥500

Antenna 1

802.11b-Low	
802.11b-Middle	
802.11b-High	

802.11g-Low	Agilent Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Center 2.41200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 16.2399 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 14.537 kHz x dB Bandwidth 15.093 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.43700000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 16.2228 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 3.793 kHz x dB Bandwidth 14.429 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-High	Agilent Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.46200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 16.2410 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 5.754 kHz x dB Bandwidth 15.720 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

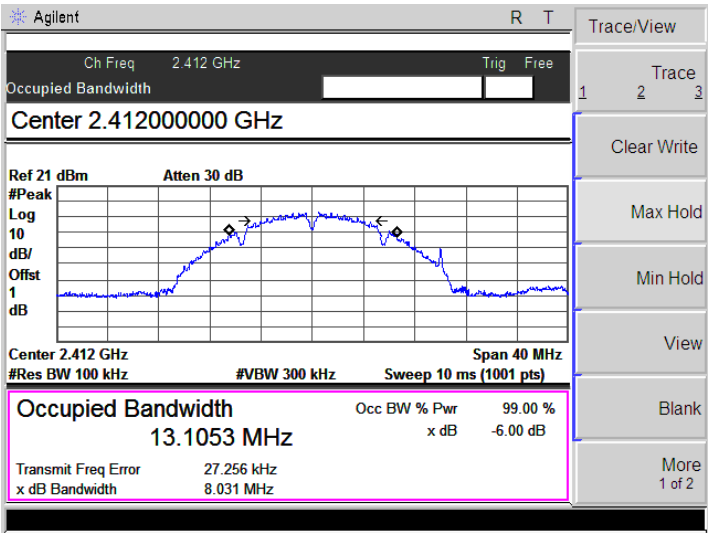
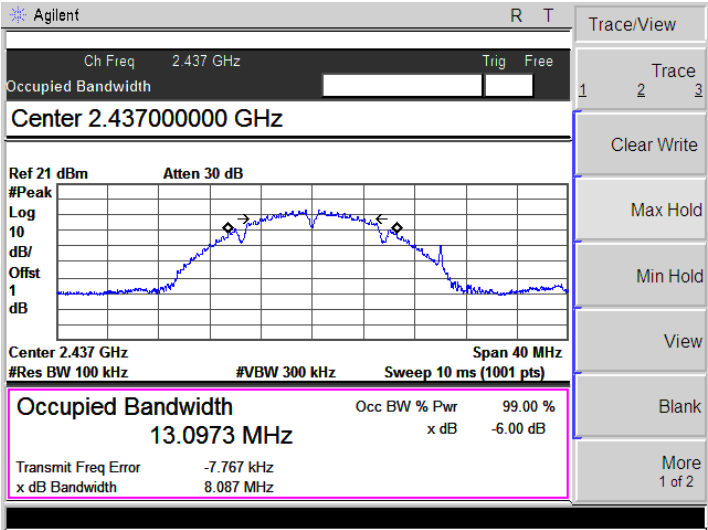
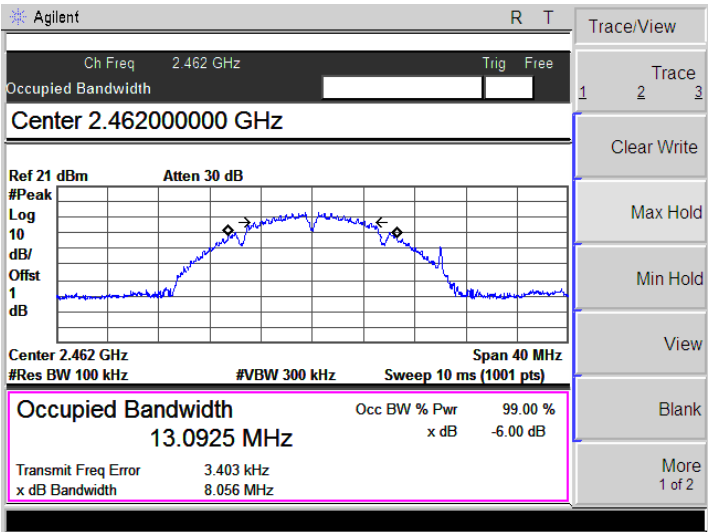
802.11n-HT20-Low	Agilent Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Center 2.41200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 17.4800 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 16.491 kHz x dB Bandwidth 16.303 MHz Freq/Channel Center Freq 2.41200000 GHz Start Freq 2.39200000 GHz Stop Freq 2.43200000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Scale Type Log Lin
802.11n-HT20-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 17.4762 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 10.611 kHz x dB Bandwidth 16.902 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT20-High	Agilent Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.462000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 17.4785 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 4.604 kHz x dB Bandwidth 7.662 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-HT40-Low	Agilent Ch Freq2.422 GHz TrigFree Occupied Bandwidth Span 80.00000000 MHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 35.8136 MHz Occ BW % Pwr99.00 % x dB-6.00 dB Transmit Freq Error14.754 kHz x dB Bandwidth32.335 MHz Trace/View 1Trace23 Clear Write Max Hold Min Hold View Blank More1 of 2
802.11n-HT40-Middle	Agilent Ch Freq2.437 GHz TrigFree Occupied Bandwidth Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 35.8063 MHz Occ BW % Pwr99.00 % x dB-6.00 dB Transmit Freq Error-3.200 kHz x dB Bandwidth34.797 MHz Trace/View 1Trace23 Clear Write Max Hold Min Hold View Blank More1 of 2
802.11n-HT40-High	Agilent Ch Freq2.452 GHz TrigFree Occupied Bandwidth Center 2.452000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 35.8404 MHz Occ BW % Pwr99.00 % x dB-6.00 dB Transmit Freq Error-30.992 kHz x dB Bandwidth35.680 MHz Trace/View 1Trace23 Clear Write Max Hold Min Hold View Blank More1 of 2

802.11ax-HE20-Low	Agilent Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Center 2.41200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 18.7991 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 26.931 kHz x dB Bandwidth 17.819 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11ax-HE20-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.43700000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 18.7842 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 14.996 kHz x dB Bandwidth 18.314 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11ax-HE20-High	Agilent Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.46200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 18.7647 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 7.946 kHz x dB Bandwidth 15.328 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11ax-HE40-Low	Agilent Ch Freq 2.422 GHz Trig Free Occupied Bandwidth Span 80.00000000 MHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 37.4098 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 19.207 kHz x dB Bandwidth 36.270 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11ax-HE40-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 37.4388 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -14.612 kHz x dB Bandwidth 35.128 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11ax-HE20-High	Agilent Ch Freq 2.452 GHz Trig Free Occupied Bandwidth Center 2.452 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 37.4675 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 9.870 kHz x dB Bandwidth 36.199 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

Antenna 2

802.11b-Low	
802.11b-Middle	
802.11b-High	

802.11g-Low	Agilent Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Center 2.41200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 16.2351 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 10.965 kHz x dB Bandwidth 13.848 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.43700000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 16.2142 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -151.553 Hz x dB Bandwidth 15.109 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-High	Agilent Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.46200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 16.2467 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 1.359 kHz x dB Bandwidth 15.149 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-HT20-Low	Agilent Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 17.4909 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 13.866 kHz x dB Bandwidth 16.902 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT20-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.43700000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 17.4873 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -3.143 kHz x dB Bandwidth 16.573 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT20-High	Agilent Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.46200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 17.4921 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 793.124 Hz x dB Bandwidth 15.615 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-HT40-Low	Agilent Ch Freq 2.422 GHz Trig Free Occupied Bandwidth Span 80.00000000 MHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 35.8057 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -16.818 kHz x dB Bandwidth 35.331 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT40-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 35.7842 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -16.344 kHz x dB Bandwidth 29.924 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT40-High	Agilent Ch Freq 2.452 GHz Trig Free Occupied Bandwidth Center 2.452000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 35.8669 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -44.250 kHz x dB Bandwidth 33.321 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11ax-HE20-Low	Agilent Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Span 40.00000000 MHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 18.7603 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 7.408 kHz x dB Bandwidth 15.321 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11ax-HE20-Middle	Agilent Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 18.7414 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -8.066 kHz x dB Bandwidth 17.023 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11ax-HE20-High	Agilent Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.462000000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 40 MHz Occupied Bandwidth 18.7718 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -928.712 Hz x dB Bandwidth 13.829 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11ax-HE40-Low	Agilent Ch Freq 2.422 GHz Occupied Bandwidth Center 2.42200000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 37.4275 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 14.677 kHz x dB Bandwidth 30.390 MHz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11ax-HE40-Middle	Agilent Ch Freq 2.437 GHz Occupied Bandwidth Center 2.43700000 GHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 37.4117 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -25.567 kHz x dB Bandwidth 36.602 MHz Freq/Channel Center Freq 2.43700000 GHz Start Freq 2.39700000 GHz Stop Freq 2.47700000 GHz CF Step 8.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Scale Type Log Lin
802.11ax-HE40-High	Agilent Ch Freq 2.452 GHz Occupied Bandwidth Span 80.00000000 MHz Ref 21 dBm Atten 30 dB #Peak Log 10 dB/ Offst 1 dB Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 80 MHz Occupied Bandwidth 37.4563 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -27.780 kHz x dB Bandwidth 37.147 MHz Span Span 80.00000000 MHz Span Zoom Full Span Zero Span Last Span Zone ▶

APPENDIX C

RF Output Power					
Test Mode	Frequency MHz	Antenna 0 dBm	Antenna 1 dBm	Total Power dBm	Limit dBm
802.11b_1Mbps	2412	14.49	15.17	/	30
	2437	14.72	15.21	/	30
	2462	15.04	15.16	/	30
802.11g_6Mbps	2412	14.50	13.76	/	30
	2437	14.92	13.73	/	30
	2462	14.34	13.59	/	30
802.11n HT20_MCS0	2412	12.89	12.33	15.63	28
	2437	13.22	12.37	15.83	28
	2462	12.92	11.81	15.41	28
802.11n HT40_MCS0	2422	11.27	12.27	14.81	28
	2437	11.62	12.33	15.00	28
	2452	11.34	12.17	14.79	28
802.11ax-HE20_MCS0	2412	12.85	12.20	15.55	28
	2437	12.87	12.03	15.48	28
	2462	12.71	12.48	15.61	28
802.11ax-HE40_MCS0	2422	11.10	12.04	14.61	28
	2437	11.39	12.40	14.93	28
	2452	11.32	11.98	14.67	28

Antenna 0

802.11b-Low	Agilent R T Ch Freq 2.412 GHz Trig Free Channel Power Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.412 GHz Res BW 300 kHz #VBW 1 MHz Sweep 8 ms (401 pts) Span 30 MHz Channel Power 14.49 dBm / 20.0000 MHz Power Spectral Density -58.52 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11b-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz Res BW 300 kHz #VBW 1 MHz Sweep 8 ms (401 pts) Span 30 MHz Channel Power 14.72 dBm / 20.0000 MHz Power Spectral Density -58.29 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11b-High	Agilent R T Ch Freq 2.462 GHz Trig Free Channel Power Center 2.462000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.462 GHz Res BW 300 kHz #VBW 1 MHz Sweep 8 ms (401 pts) Span 30 MHz Channel Power 15.04 dBm / 20.0000 MHz Power Spectral Density -57.97 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11g-Low	Agilent Ch Freq 2.412 GHz Channel Power Center 2.412000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.412 GHz Res BW 300 kHz #VBW 1 MHz Sweep 8 ms (401 pts) Span 30 MHz Channel Power Power Spectral Density 14.50 dBm / 20.0000 MHz -58.51 dBm/Hz Trace/View Trace Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-Middle	Agilent Ch Freq 2.437 GHz Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz Res BW 300 kHz #VBW 1 MHz Sweep 8 ms (401 pts) Span 30 MHz Channel Power Power Spectral Density 14.92 dBm / 20.0000 MHz -58.09 dBm/Hz Trace/View Trace Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-High	Agilent Ch Freq 2.462 GHz Channel Power Center 2.462000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.462 GHz Res BW 300 kHz #VBW 1 MHz Sweep 8 ms (401 pts) Span 30 MHz Channel Power Power Spectral Density 14.34 dBm / 20.0000 MHz -58.44 dBm/Hz Trace/View Trace Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-HT20-Low	Agilent R T Ch Freq 2.412 GHz Trig Free Channel Power Center 2.412000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.412 GHz Res BW 300 kHz Span 30 MHz #VBW 1 MHz Sweep 8 ms (401 pts) Channel Power Power Spectral Density 12.89 dBm / 20.0000 MHz -60.04 dBm/Hz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT20-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz Res BW 300 kHz Span 30 MHz #VBW 1 MHz Sweep 8 ms (401 pts) Channel Power Power Spectral Density 13.22 dBm / 20.0000 MHz -59.79 dBm/Hz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT20-High	Agilent R T Ch Freq 2.462 GHz Trig Free Channel Power Center 2.462000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.462 GHz Res BW 300 kHz Span 30 MHz #VBW 1 MHz Sweep 8 ms (401 pts) Channel Power Power Spectral Density 12.92 dBm / 20.0000 MHz -60.10 dBm/Hz Trace/View 1 Trace 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-HT40-Low	Agilent Ch Freq 2.422 GHz Channel Power Trig Free Ref 21 dBm #Avg Log 10 dB/ Offst 1 dB Atten 30 dB Center 2.422 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Span 60 MHz Channel Power Power Spectral Density 11.27 dBm / 40.0000 MHz -64.75 dBm/Hz Marker Select Marker 1 2 3 4 Normal Delta Delta Pair (Tracking Ref) Ref Span Pair Center Off More 1 of 2
802.11n-HT40-Middle	Agilent Ch Freq 2.437 GHz Channel Power Trig Free Center 2.43700000 GHz Ref 21 dBm #Avg Log 10 dB/ Offst 1 dB Atten 30 dB Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Span 60 MHz Channel Power Power Spectral Density 11.62 dBm / 40.0000 MHz -64.40 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT40-High	Agilent Ch Freq 2.452 GHz Channel Power Trig Free Ref 21 dBm #Avg Log 10 dB/ Offst 1 dB Atten 30 dB Center 2.452 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Span 60 MHz Channel Power Power Spectral Density 11.34 dBm / 40.0000 MHz -64.69 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-AX20-Low	Agilent Ch Freq 2.412 GHz Trig Free Channel Power Span 30.00000000 MHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 8 ms Span 30 MHz (401 pts) Channel Power Power Spectral Density 12.85 dBm / 20.0000 MHz -60.51 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX20-Middle	Agilent Ch Freq 2.437 GHz Trig Free Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 8 ms Span 30 MHz (401 pts) Channel Power Power Spectral Density 12.87 dBm / 20.0000 MHz -60.14 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX20-High	Agilent Ch Freq 2.462 GHz Trig Free Channel Power Center 2.462000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 8 ms Span 30 MHz (401 pts) Channel Power Power Spectral Density 12.71 dBm / 20.0000 MHz -60.30 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-AX40-Low	Agilent R T Ch Freq 2.422 GHz Trig Free Channel Power Span 60.00000000 MHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.422 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Span 60 MHz Channel Power Power Spectral Density 11.10 dBm / 40.0000 MHz -64.92 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX40-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Span 60 MHz Channel Power Power Spectral Density 11.39 dBm / 40.0000 MHz -64.63 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX40-High	Agilent R T Ch Freq 2.452 GHz Trig Free Channel Power Center 2.452000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.452 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8 ms (401 pts) Span 60 MHz Channel Power Power Spectral Density 11.32 dBm / 40.0000 MHz -64.70 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2

Antenna 1

802.11b-Low	Agilent R T Ch Freq 2.412 GHz Trig Free Channel Power VBW 1.00000000 MHz Ref 21 dBm Atten 30 dB #Avg 10 Log dB/ Offst 1 dB Center 2.412 GHz Span 30 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Channel Power Power Spectral Density 15.17 dBm / 20.0000 MHz -57.84 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11b-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Channel Power Center 2.43700000 GHz Ref 21 dBm Atten 30 dB #Avg 10 Log dB/ Offst 1 dB Center 2.437 GHz Span 30 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Channel Power Power Spectral Density 15.21 dBm / 20.0000 MHz -57.80 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11b-High	Agilent R T Ch Freq 2.462 GHz Trig Free Channel Power Center 2.46200000 GHz Ref 21 dBm Atten 30 dB #Avg 10 Log dB/ Offst 1 dB Center 2.462 GHz Span 30 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Channel Power Power Spectral Density 15.16 dBm / 20.0000 MHz -57.85 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11g-Low	Agilent Ch Freq 2.412 GHz Channel Power Center 2.412000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power Power Spectral Density 13.76 dBm / 20.0000 MHz -59.25 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-Middle	Agilent Ch Freq 2.437 GHz Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power Power Spectral Density 13.73 dBm / 20.0000 MHz -59.28 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11g-High	Agilent Ch Freq 2.462 GHz Channel Power Center 2.462000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power Power Spectral Density 13.59 dBm / 20.0000 MHz -59.42 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-HT20-Low	Agilent Ch Freq 2.412 GHz Channel Power Trig Free Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power 12.33 dBm / 20.0000 MHz Power Spectral Density -60.68 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT20-Middle	Agilent Ch Freq 2.437 GHz Channel Power Trig Free Center 2.43700000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power 12.37 dBm / 20.0000 MHz Power Spectral Density -60.65 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT20-High	Agilent Ch Freq 2.462 GHz Channel Power Trig Free Center 2.46200000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power 11.81 dBm / 20.0000 MHz Power Spectral Density -61.20 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-HT40-Low	Agilent Ch Freq 2.422 GHz Channel Power RBW 1.000000000 MHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.422 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 20 ms (1001 pts) Span 60 MHz Channel Power 12.27 dBm / 40.0000 MHz Power Spectral Density -63.76 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT40-Middle	Agilent Ch Freq 2.437 GHz Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 20 ms (1001 pts) Span 60 MHz Channel Power 12.33 dBm / 40.0000 MHz Power Spectral Density -63.69 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-HT40-High	Agilent Ch Freq 2.452 GHz Channel Power Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.452 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 20 ms (1001 pts) Span 60 MHz Channel Power 12.17 dBm / 40.0000 MHz Power Spectral Density -63.85 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

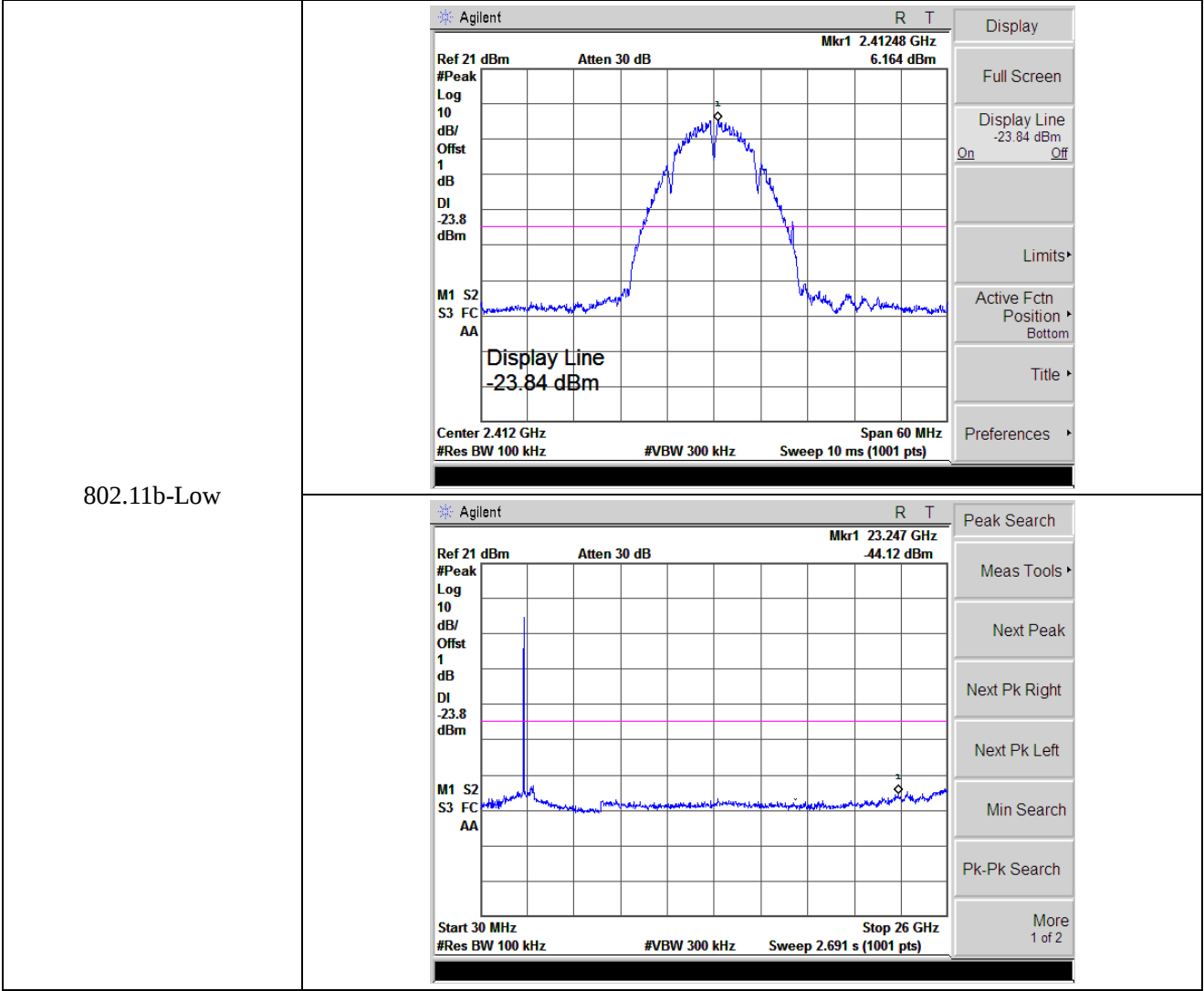
802.11n-AX20-Low	Agilent Ch Freq 2.412 GHz Trig Free Channel Power VBW 1.000000000 MHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power Power Spectral Density 12.20 dBm / 20.0000 MHz -60.81 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX20-Middle	Agilent Ch Freq 2.437 GHz Trig Free Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power Power Spectral Density 12.03 dBm / 20.0000 MHz -60.98 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX20-High	Agilent Ch Freq 2.462 GHz Trig Free Channel Power Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offst 1 dB Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Sweep 20 ms (1001 pts) Span 30 MHz Channel Power Power Spectral Density 12.48 dBm / 20.0000 MHz -60.53 dBm/Hz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2

802.11n-AX40-Low	Agilent R T Ch Freq 2.422 GHz Trig Free Channel Power RBW 1.000000000 MHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offset 1 dB Center 2.422 GHz Span 60 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 20 ms (1001 pts) Channel Power Power Spectral Density 12.04 dBm / 40.0000 MHz -63.98 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX40-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Channel Power Center 2.437000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offset 1 dB Center 2.437 GHz Span 60 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 20 ms (1001 pts) Channel Power Power Spectral Density 12.40 dBm / 40.0000 MHz -63.62 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11n-AX40-High	Agilent R T Ch Freq 2.452 GHz Trig Free Channel Power Center 2.452000000 GHz Ref 21 dBm Atten 30 dB #Avg Log 10 dB/ Offset 1 dB Center 2.452 GHz Span 60 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 20 ms (1001 pts) Channel Power Power Spectral Density 11.98 dBm / 40.0000 MHz -64.04 dBm/Hz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2

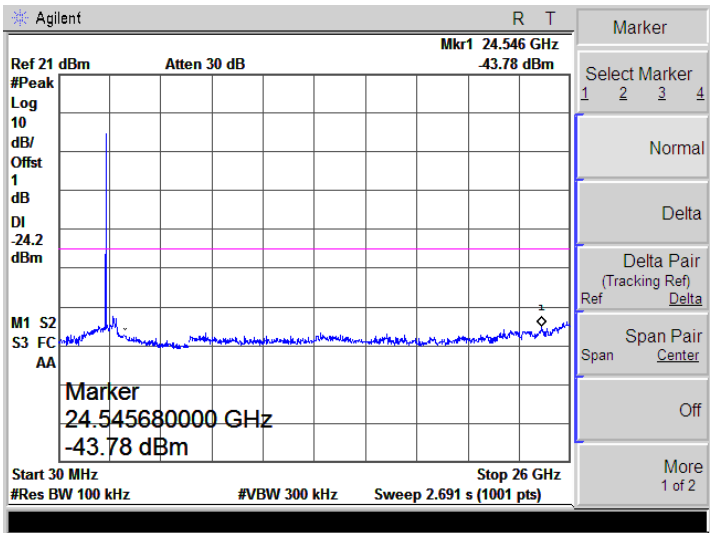
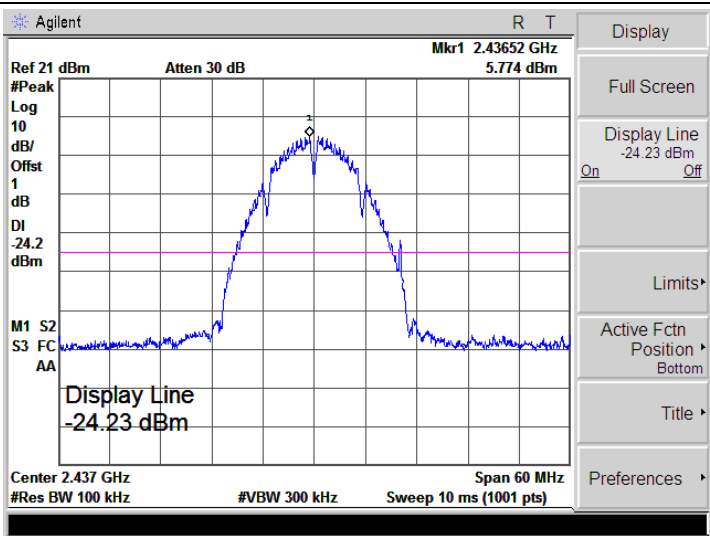
APPENDIX D

Conducted Out of Band Emissions

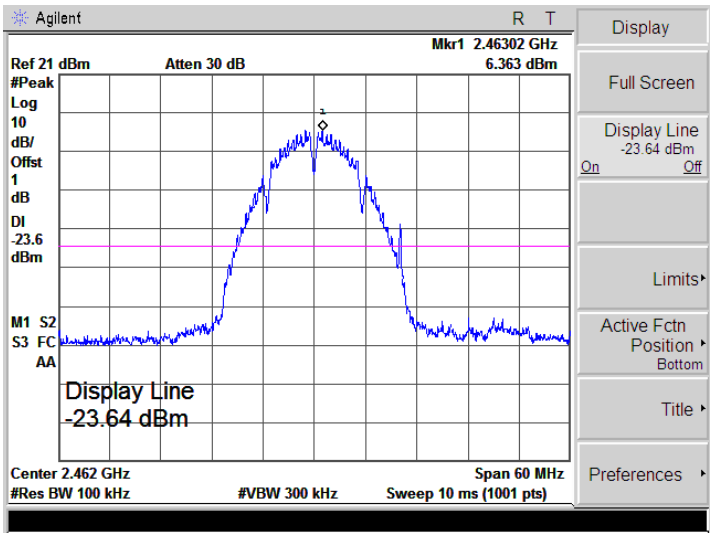
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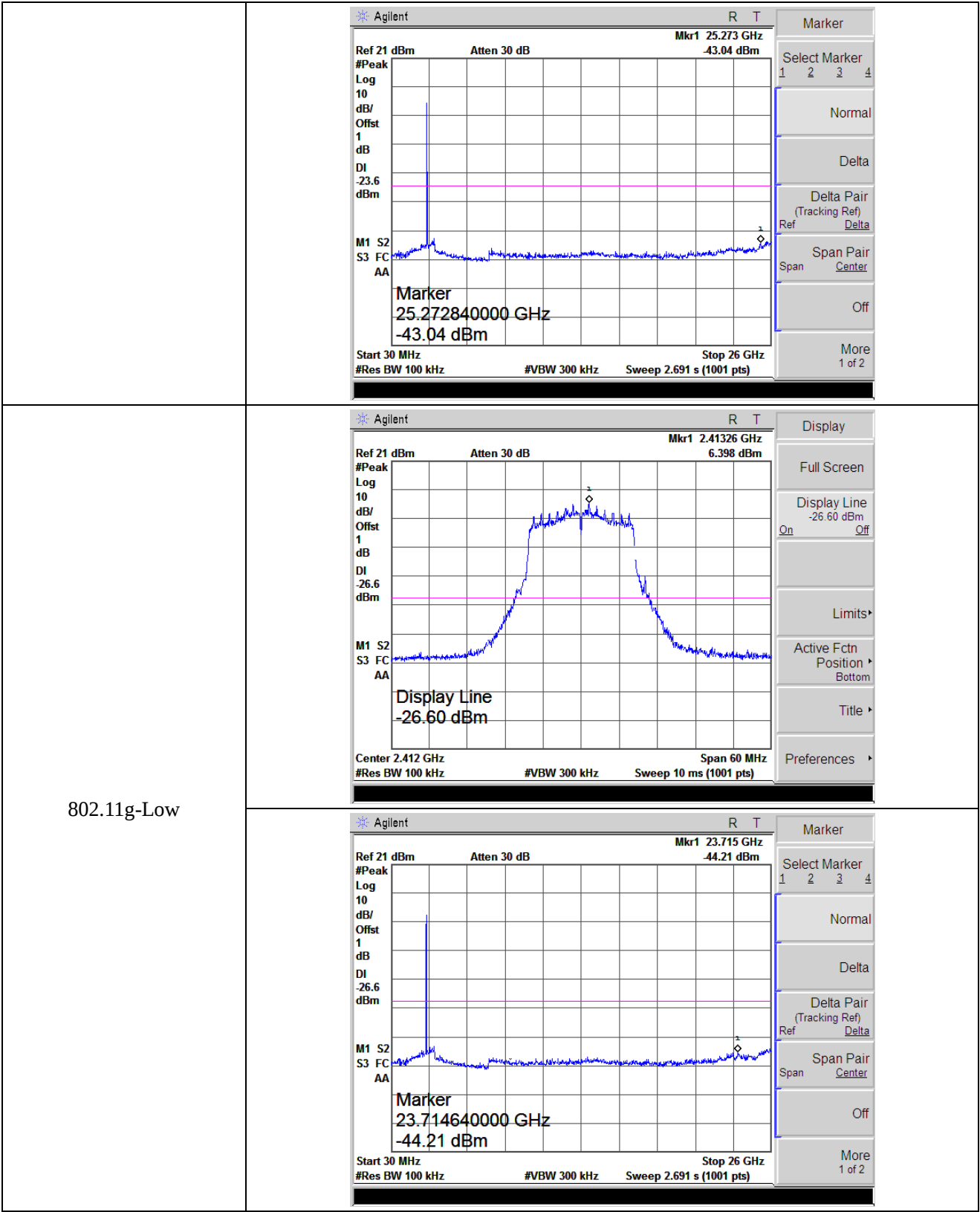


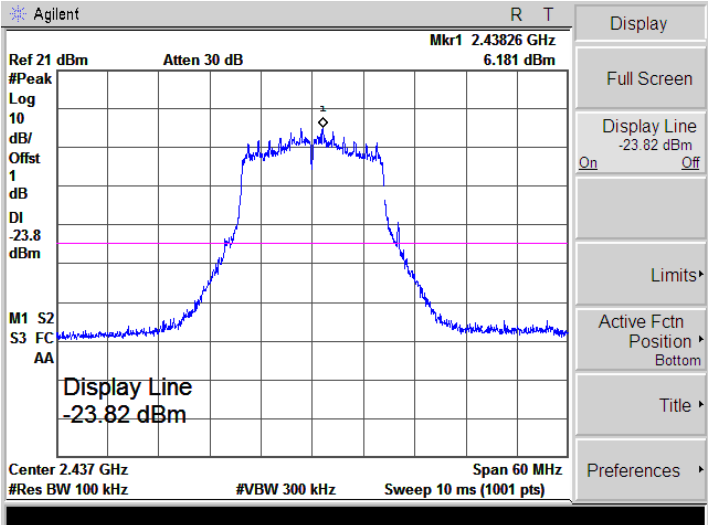
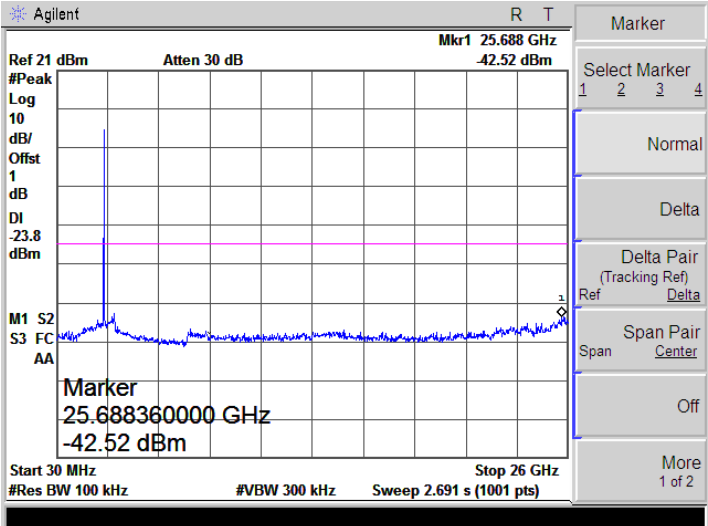
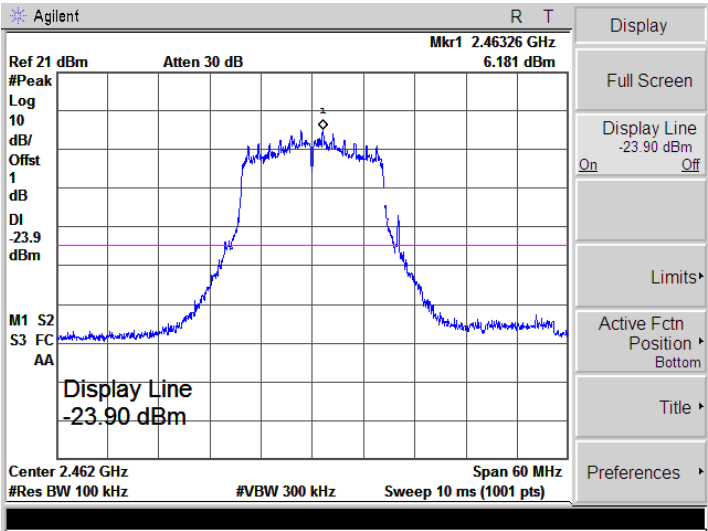
802.11b-Middle

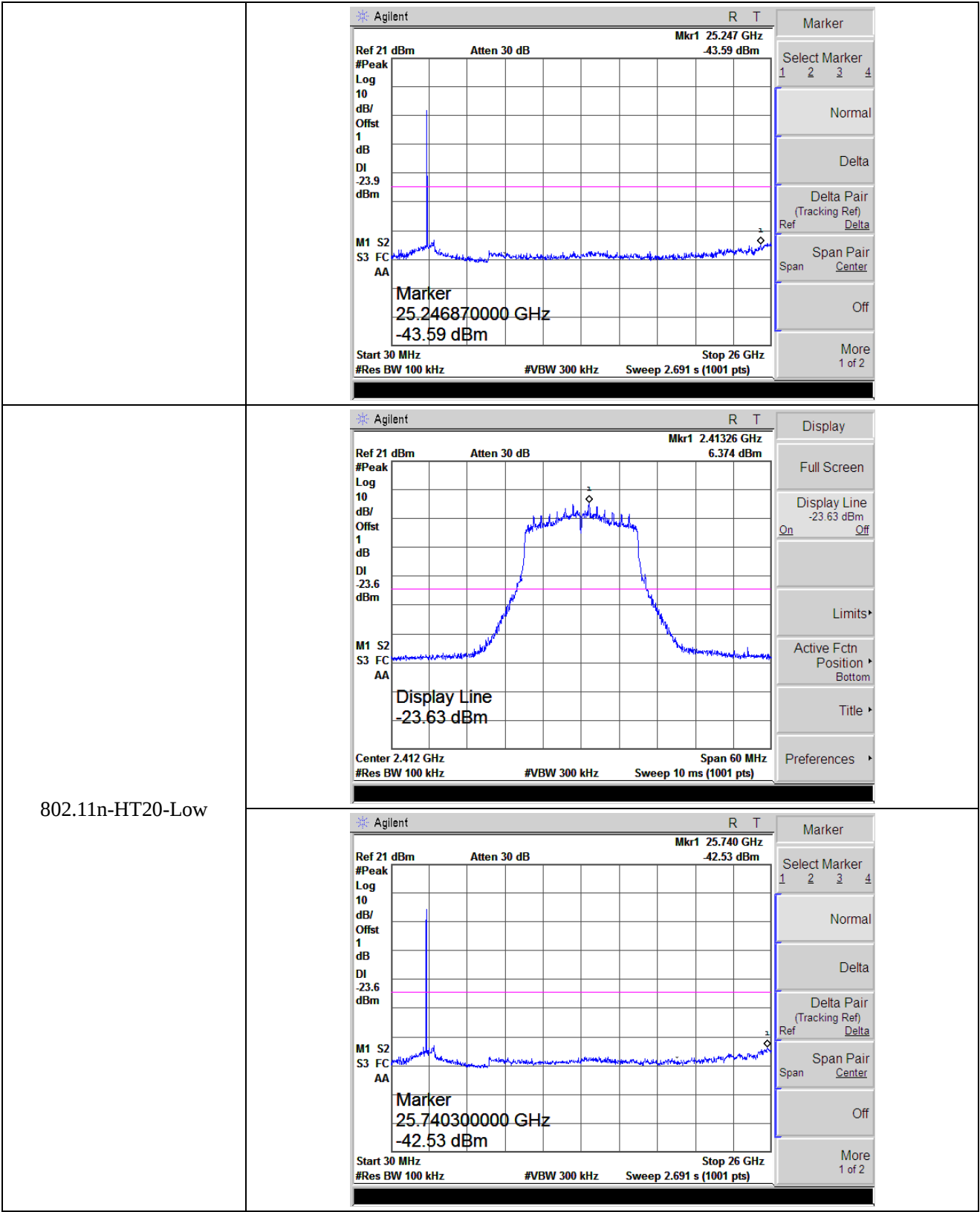


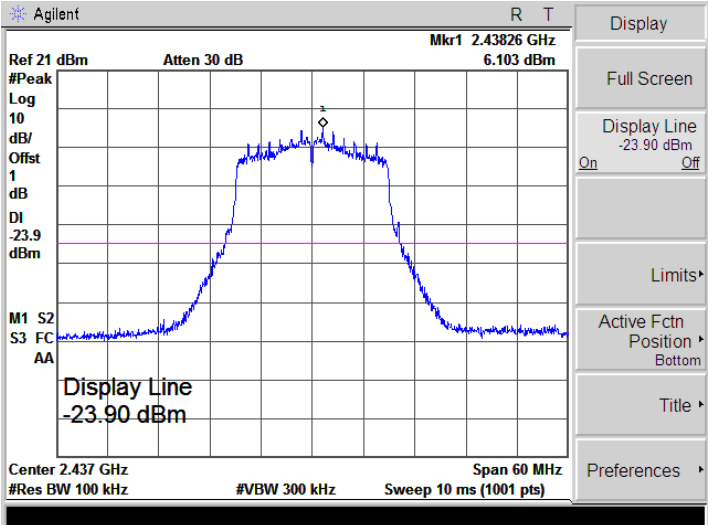
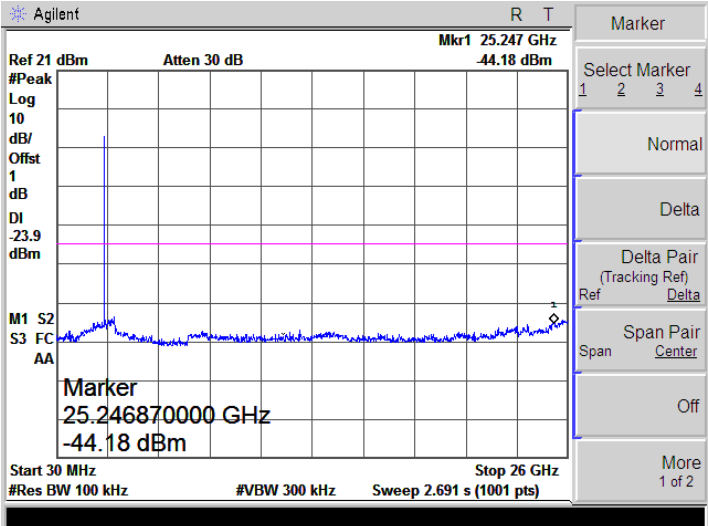
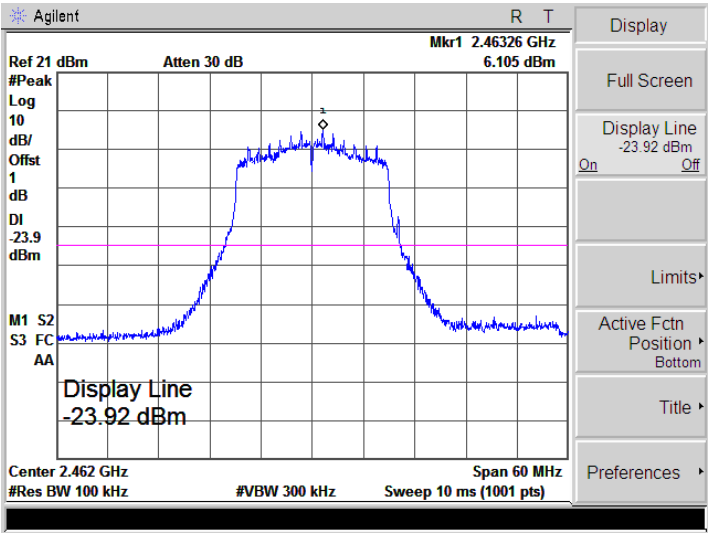
802.11b-High

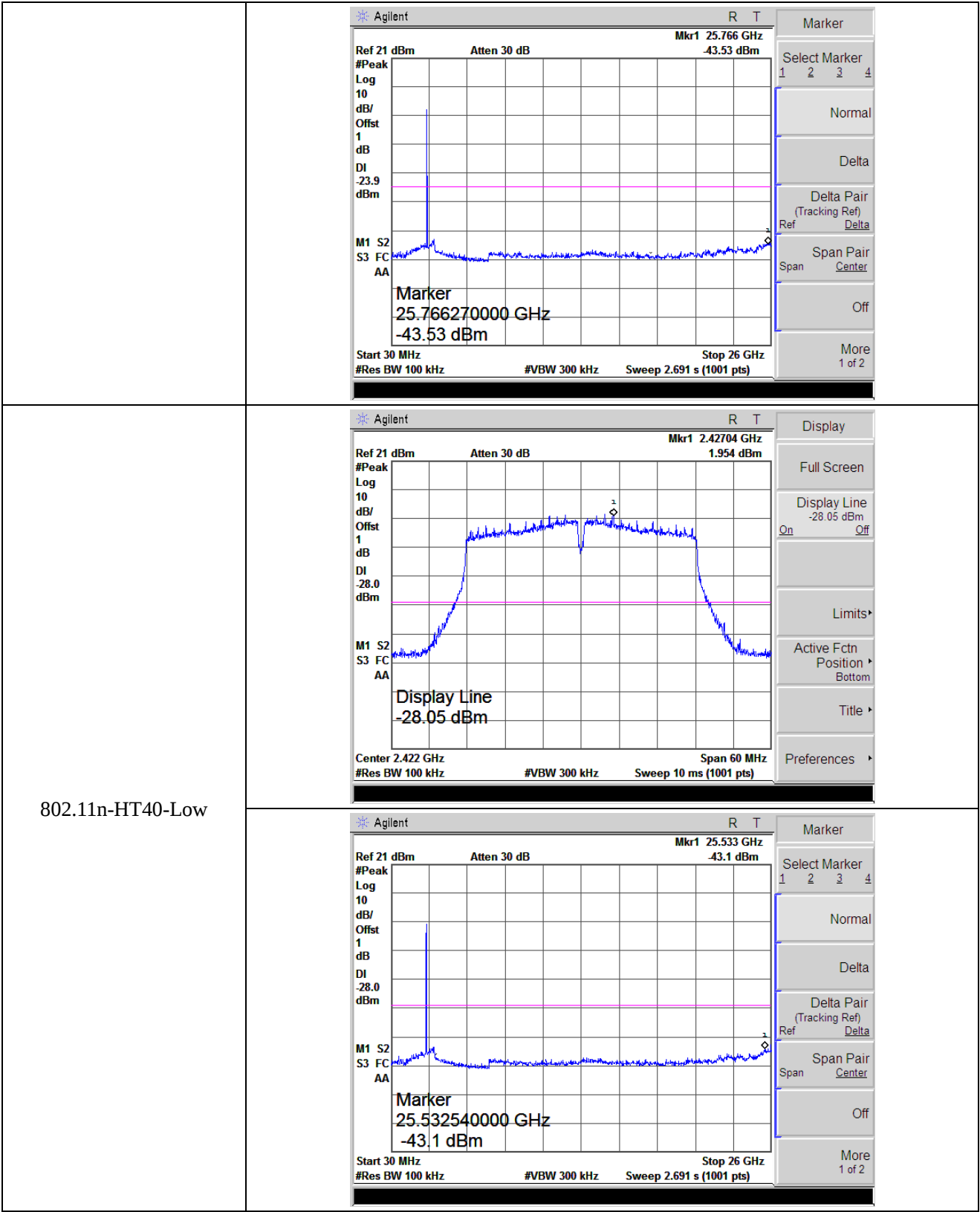


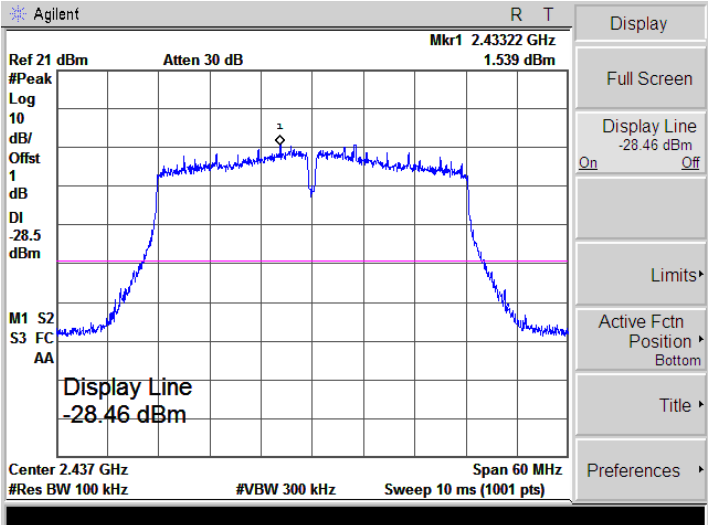
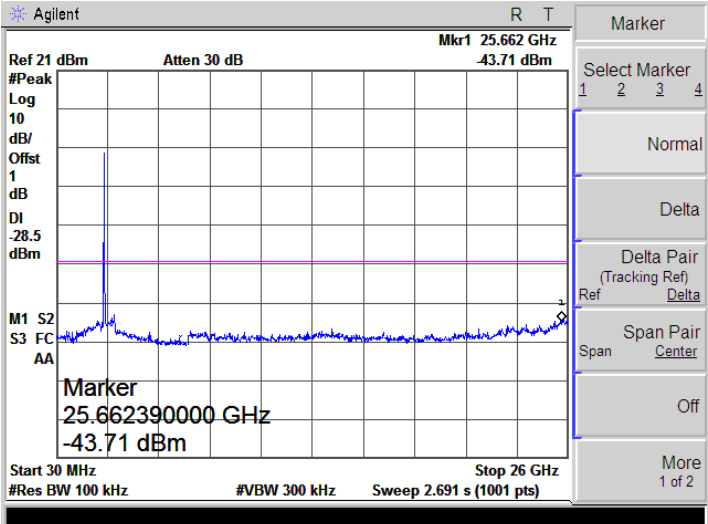
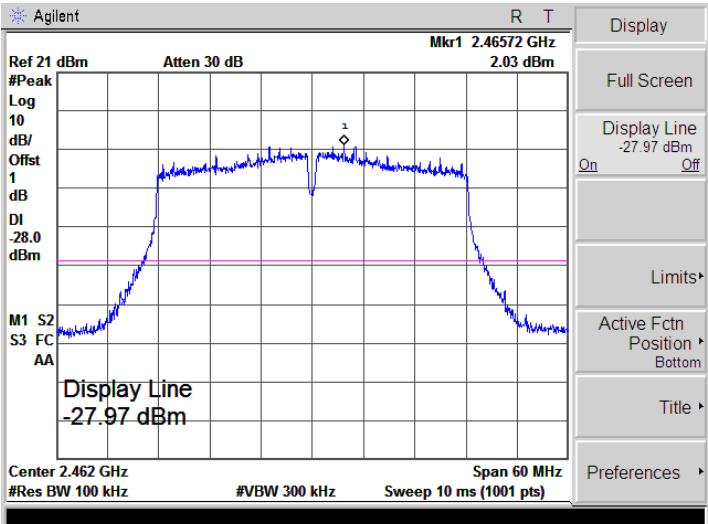


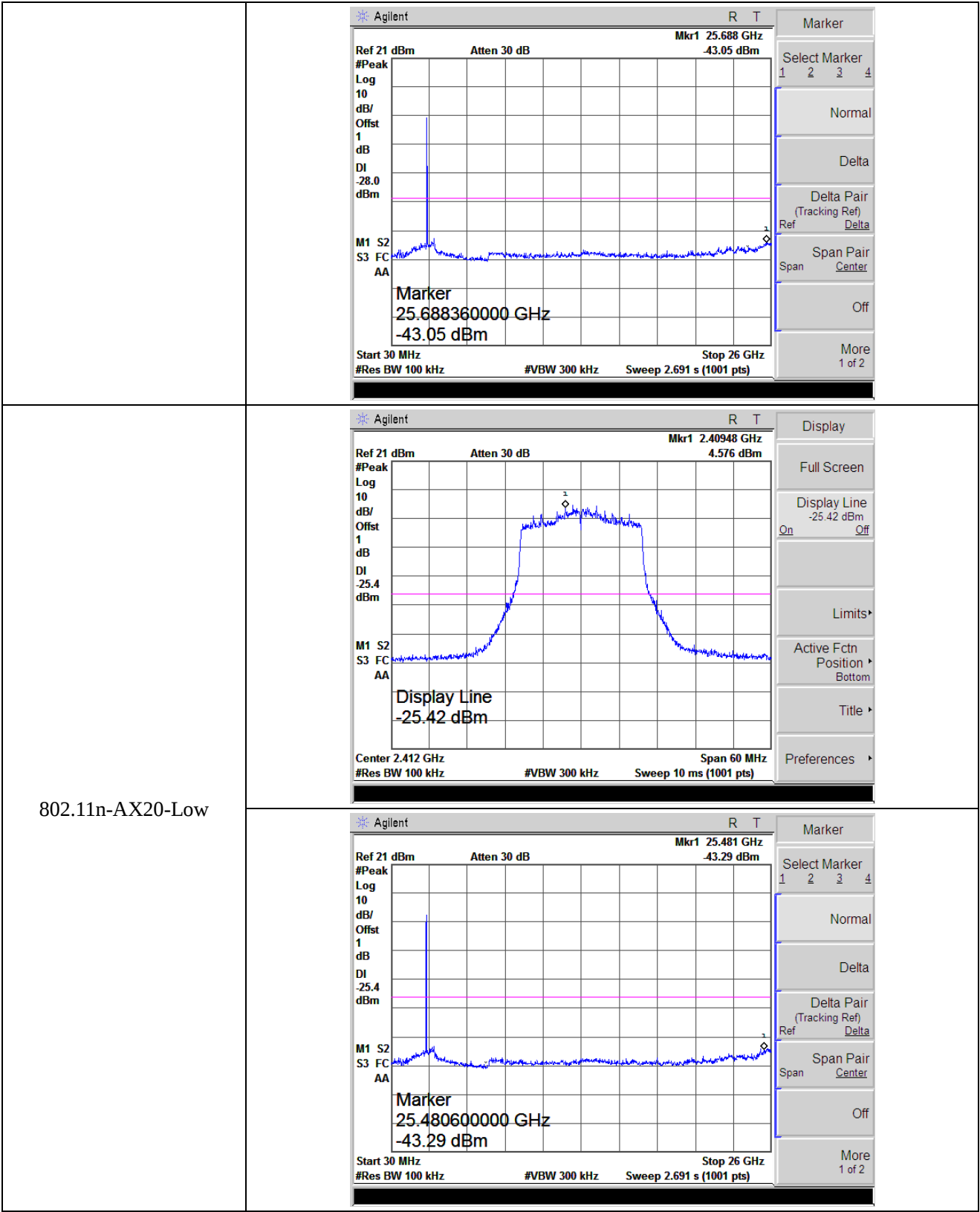
802.11g-Middle	
	
802.11g-High	



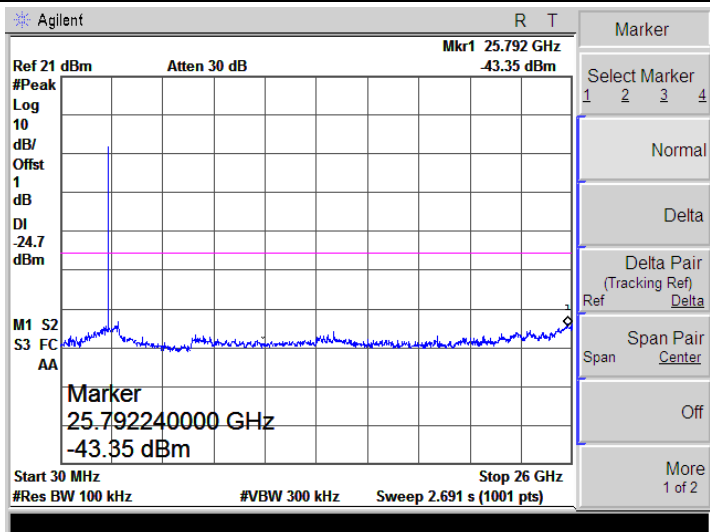
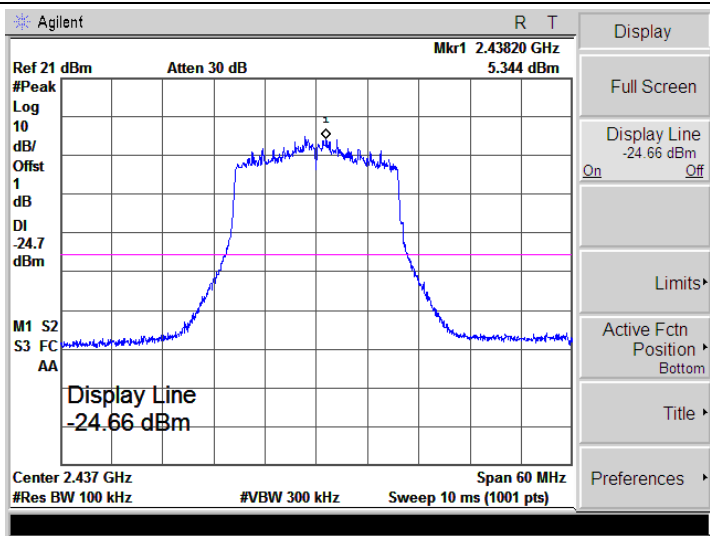
802.11n-HT20-Middle	
	
802.11n-HT20-High	



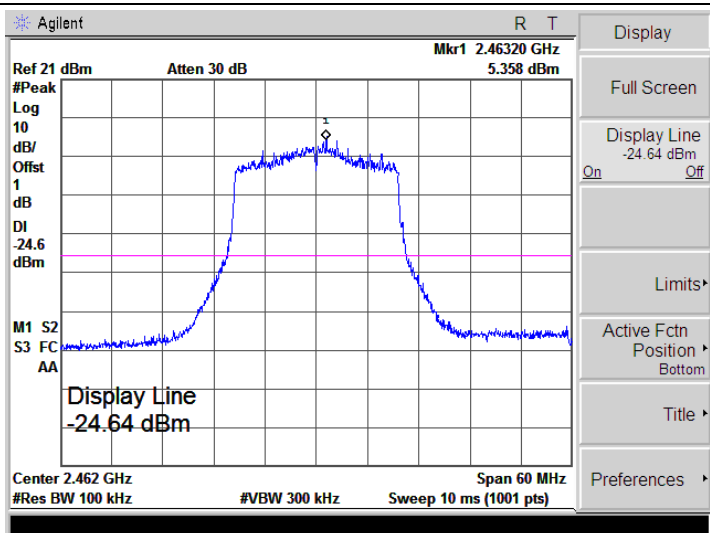
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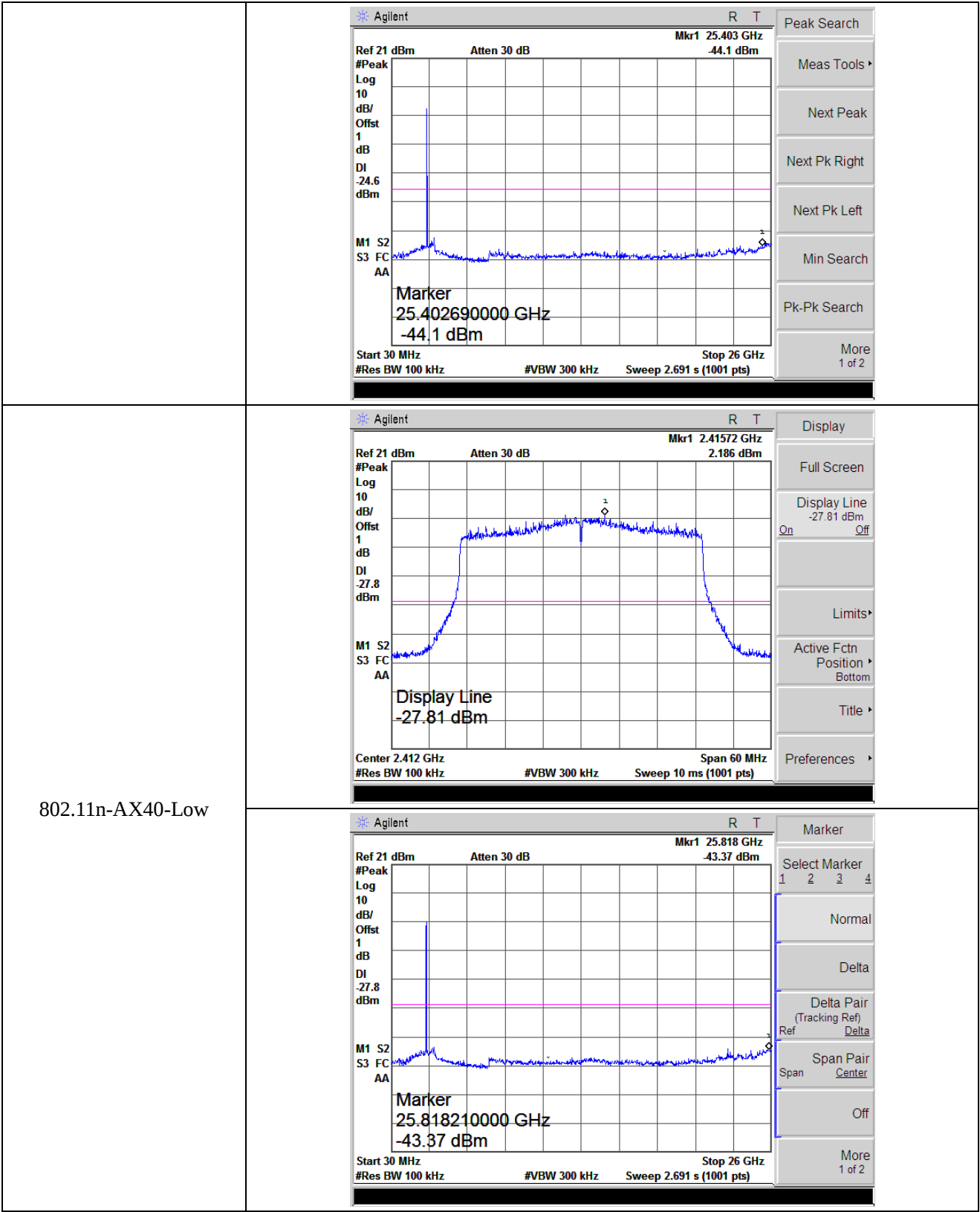


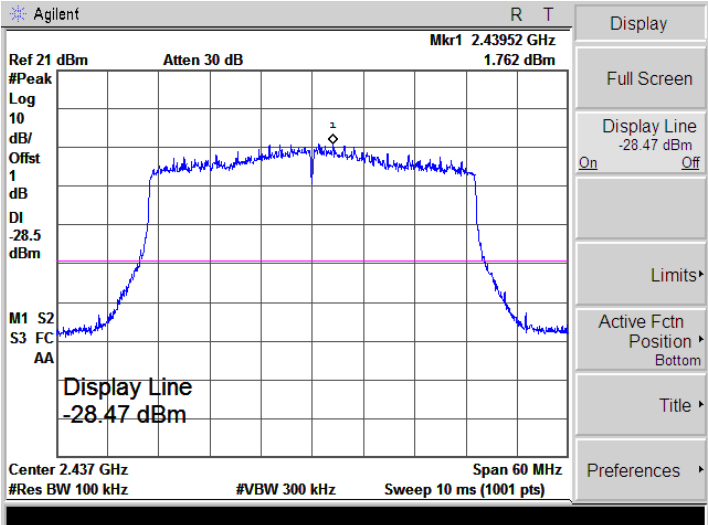
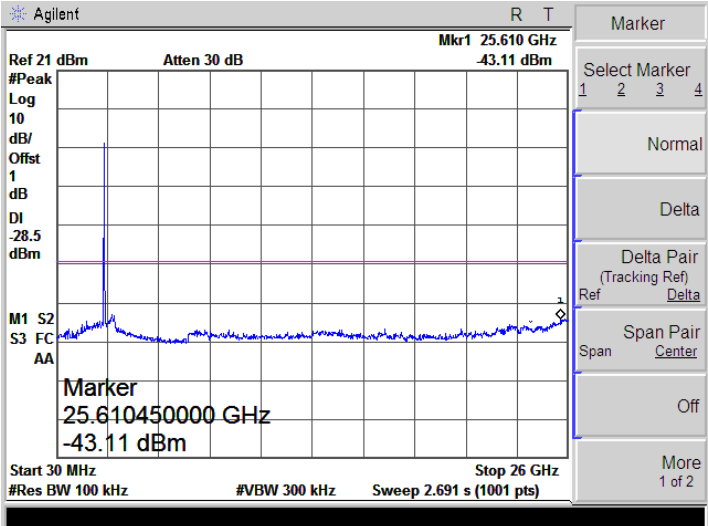
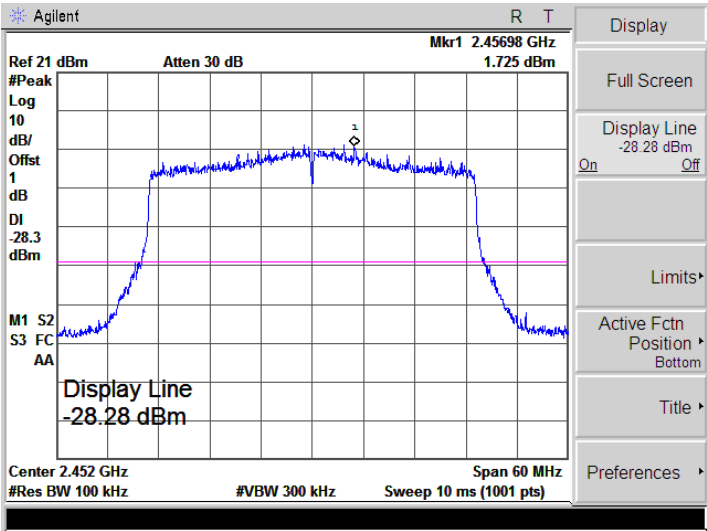
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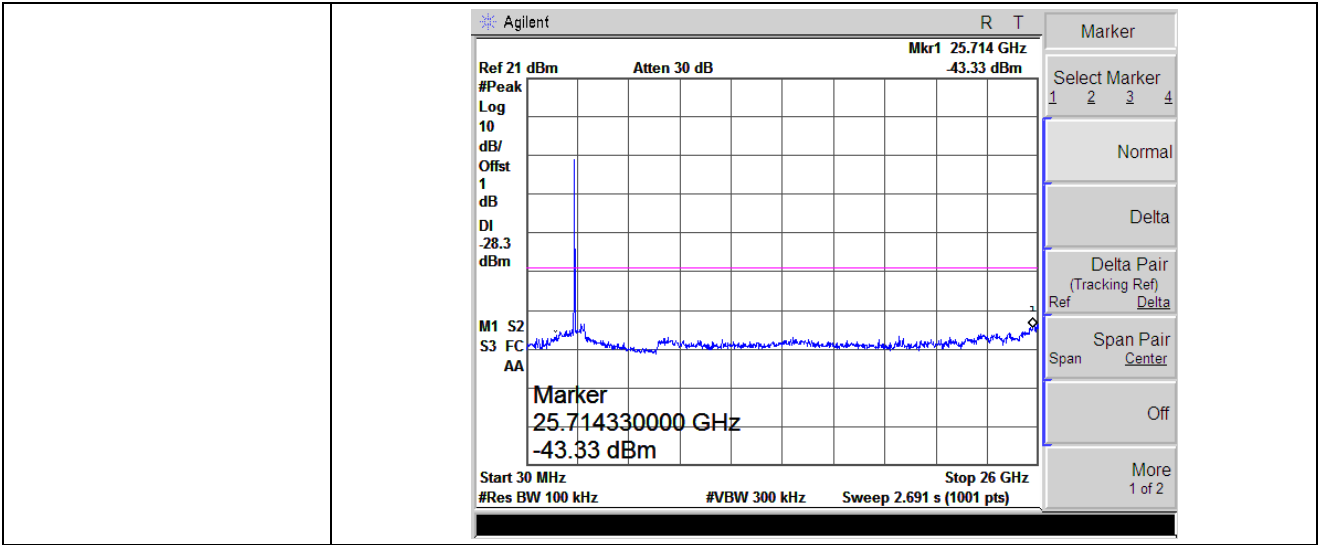


802.11n-AX20-High



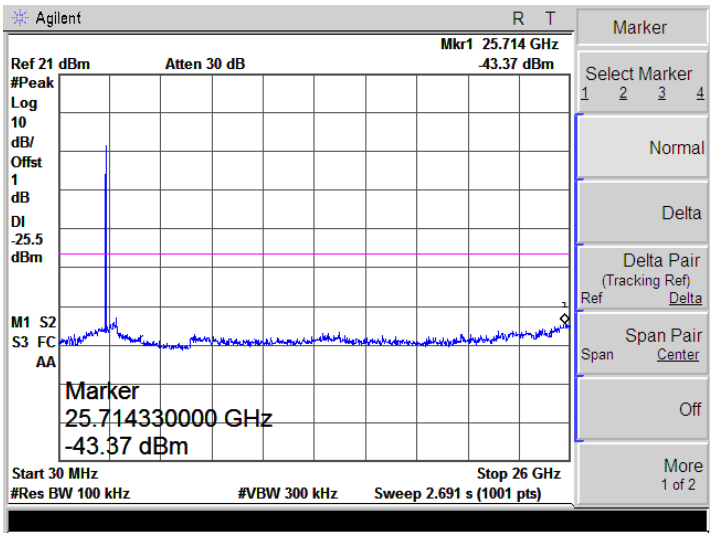
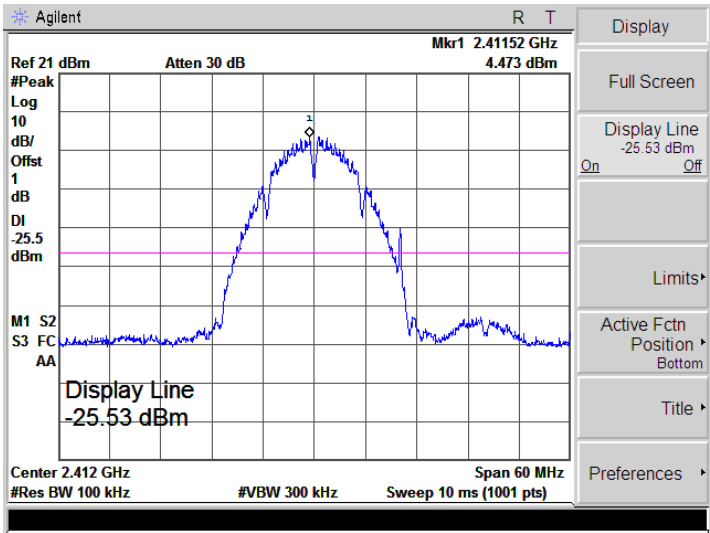


802.11n-AX40-Middle	
	
802.11n-AX40-High	

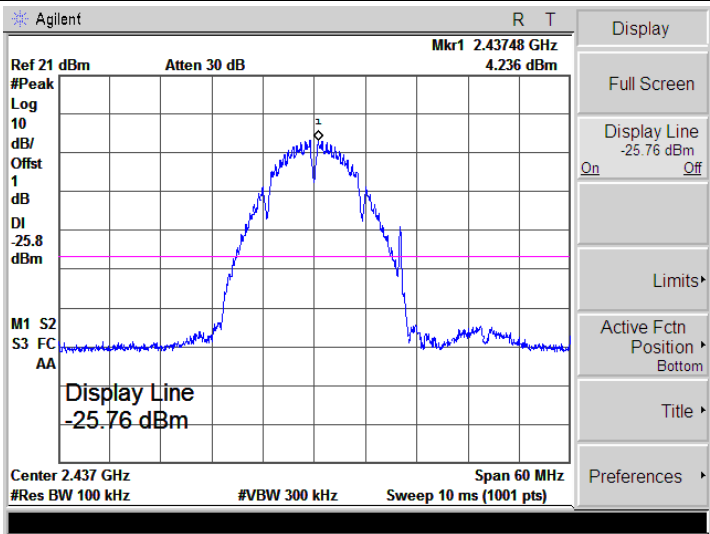


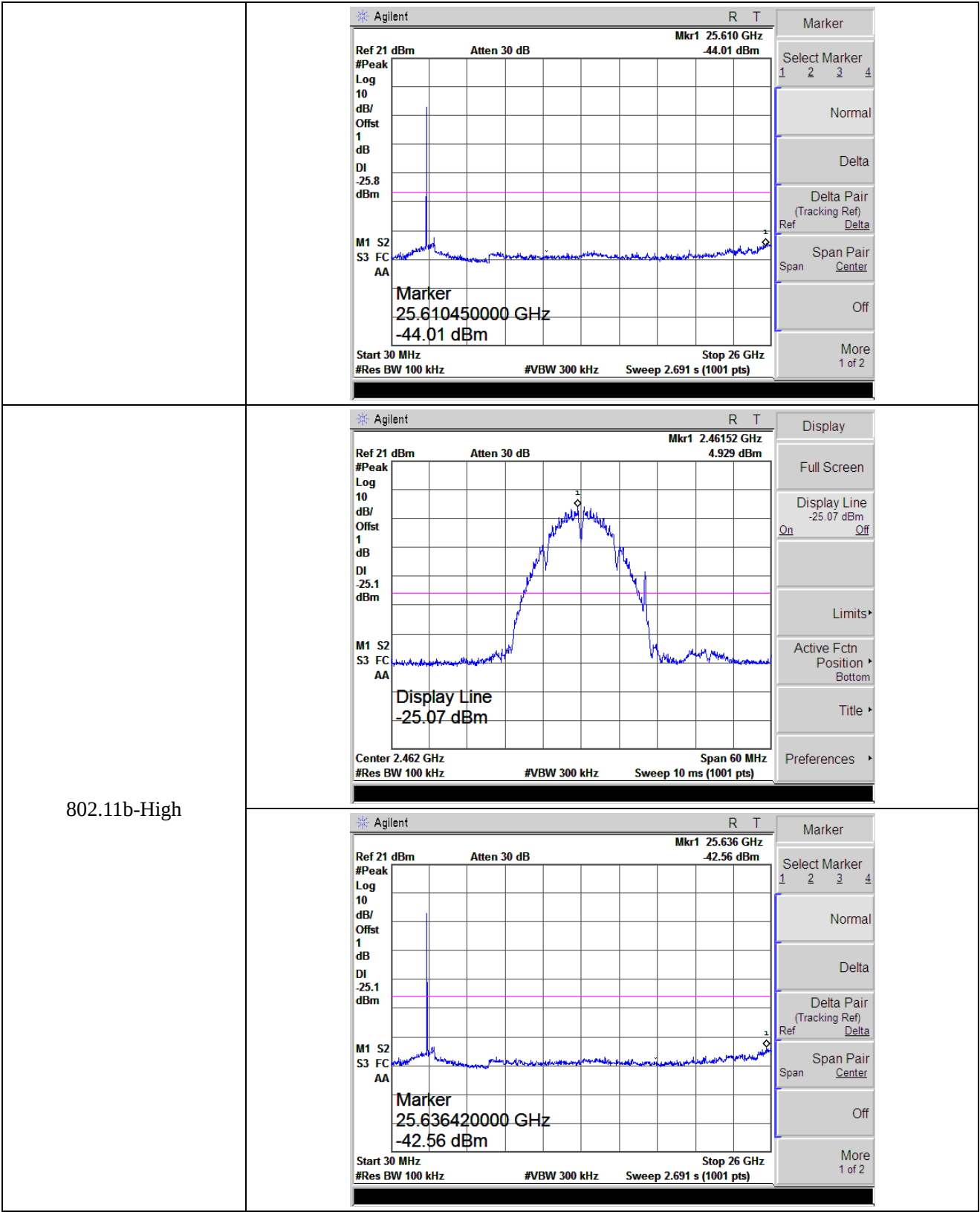
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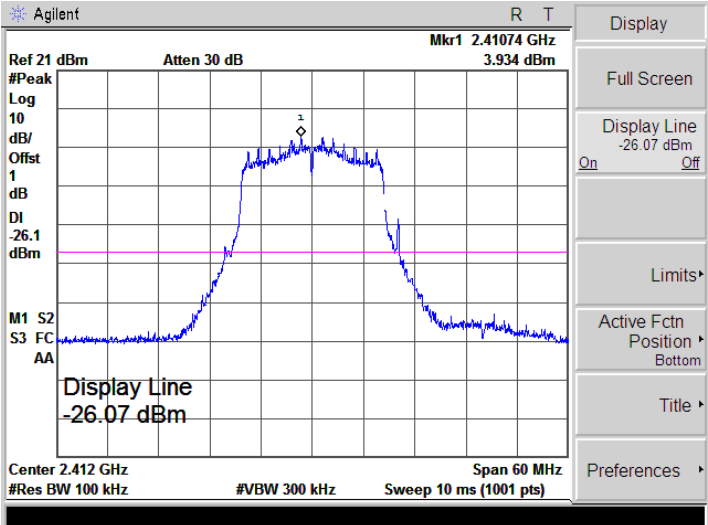
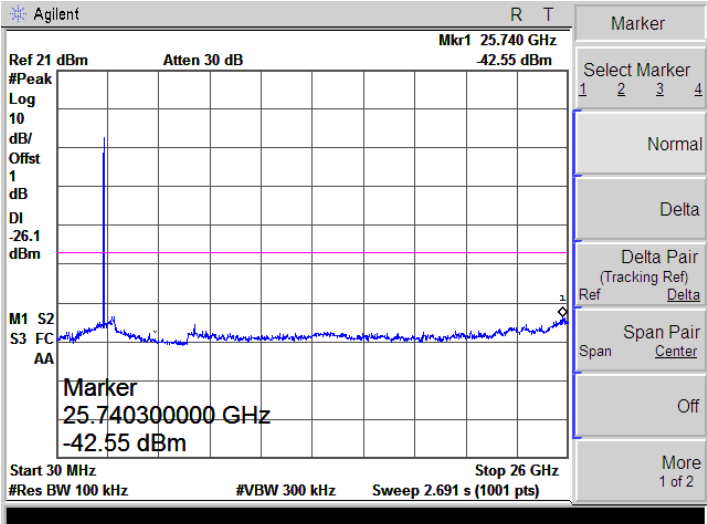
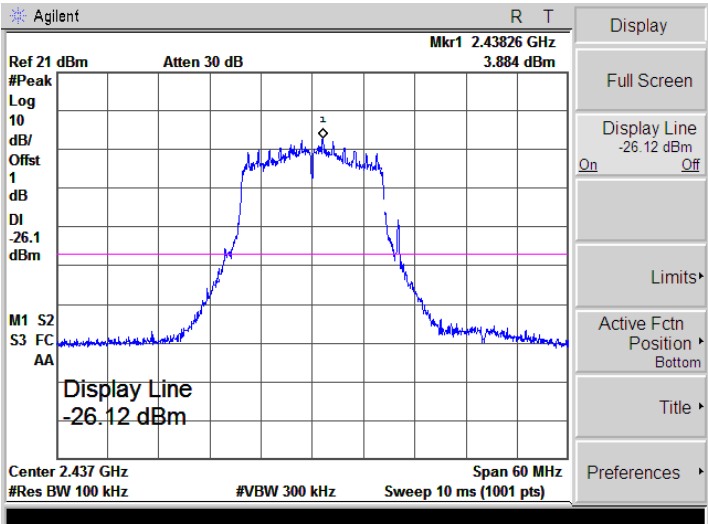
802.11b-Low

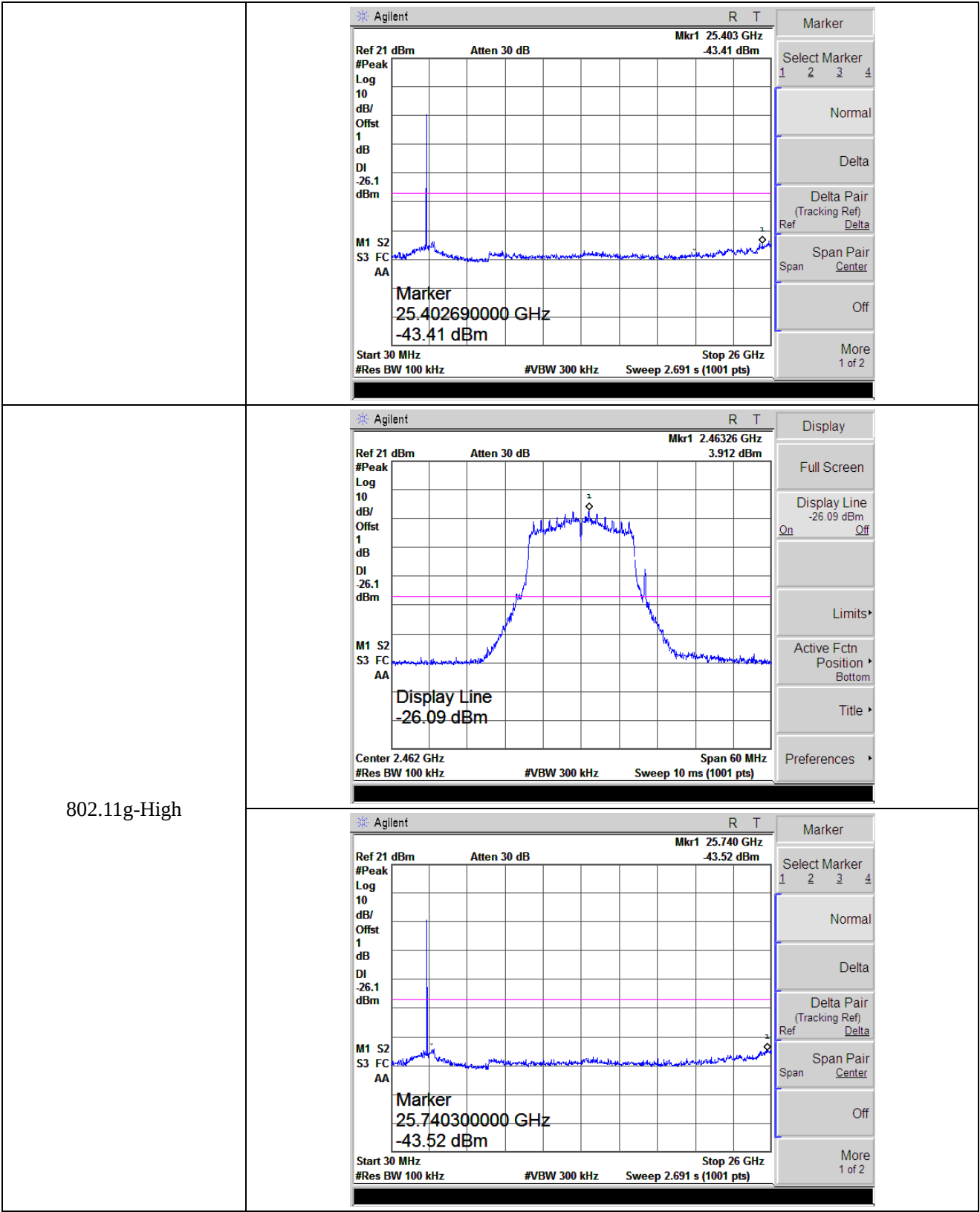


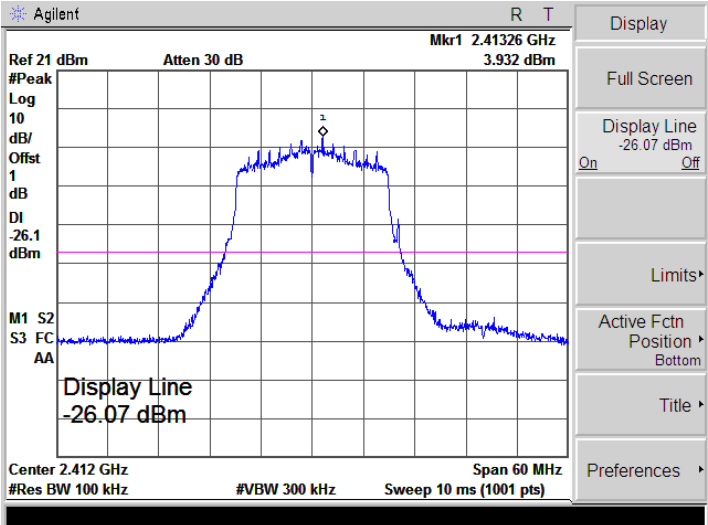
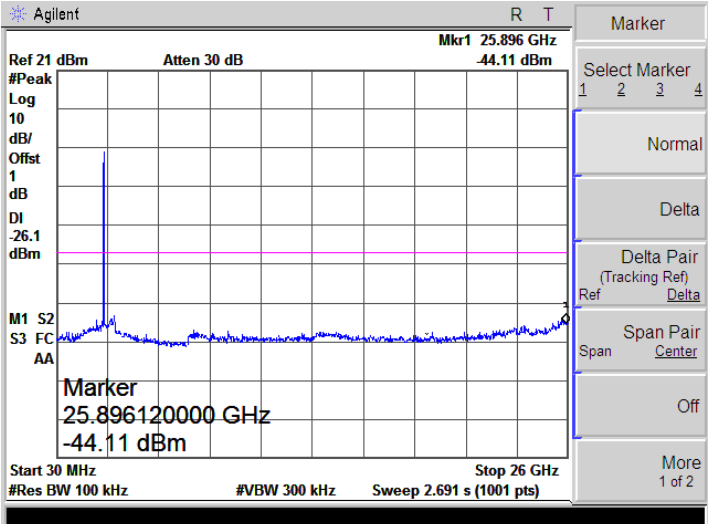
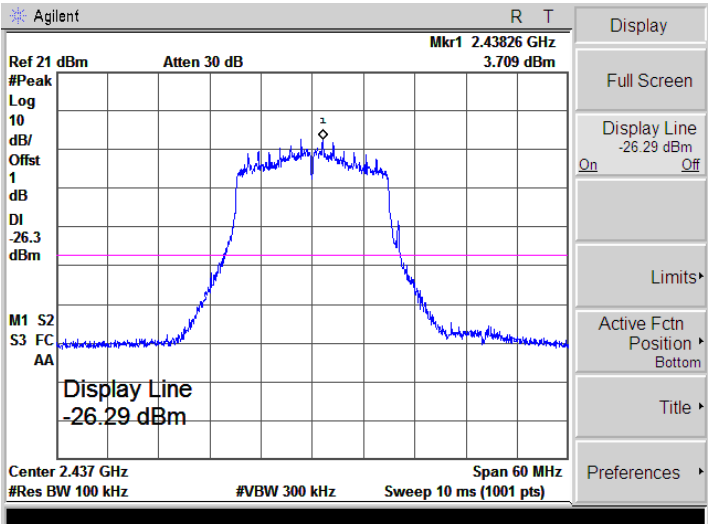
802.11b-Middle

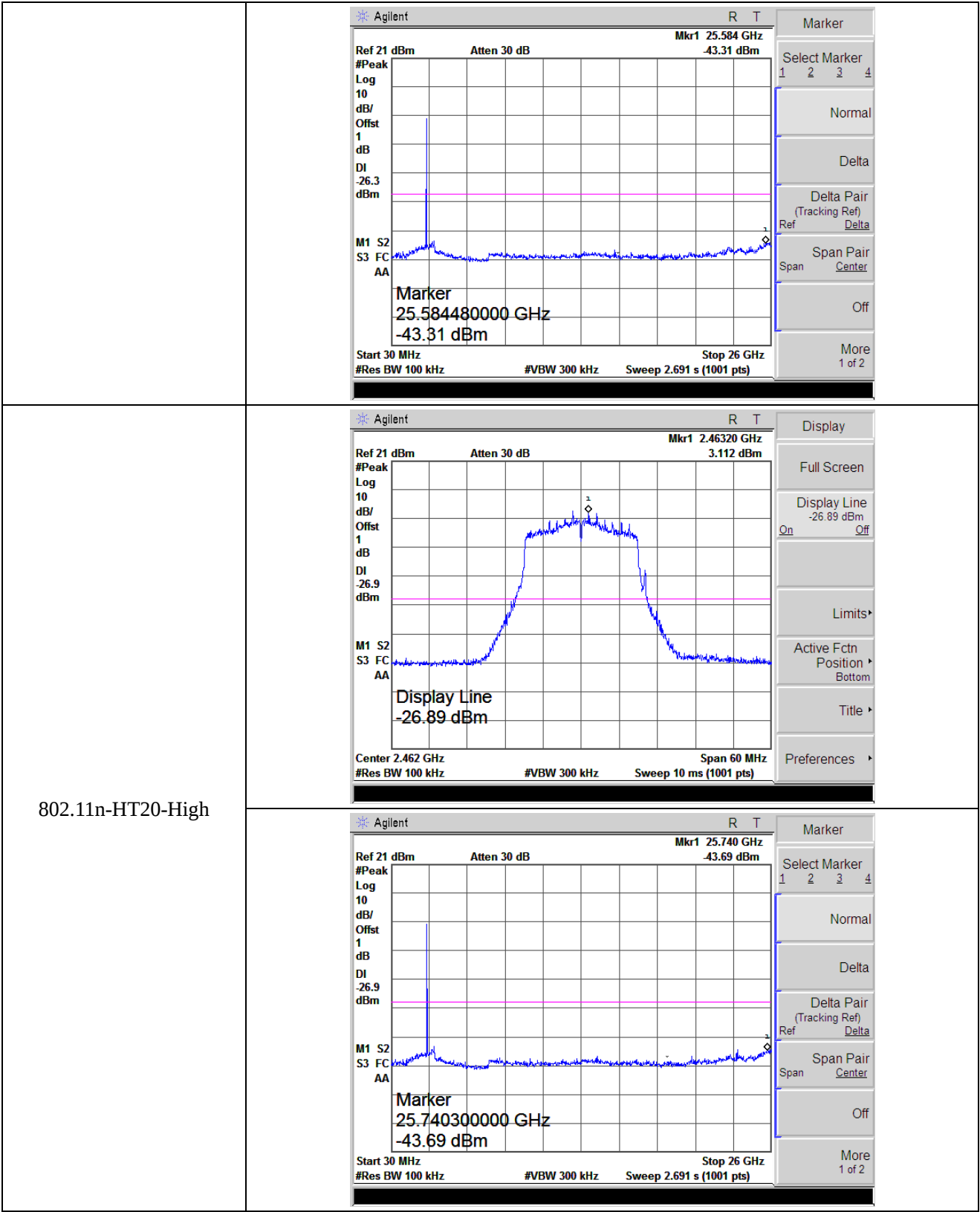


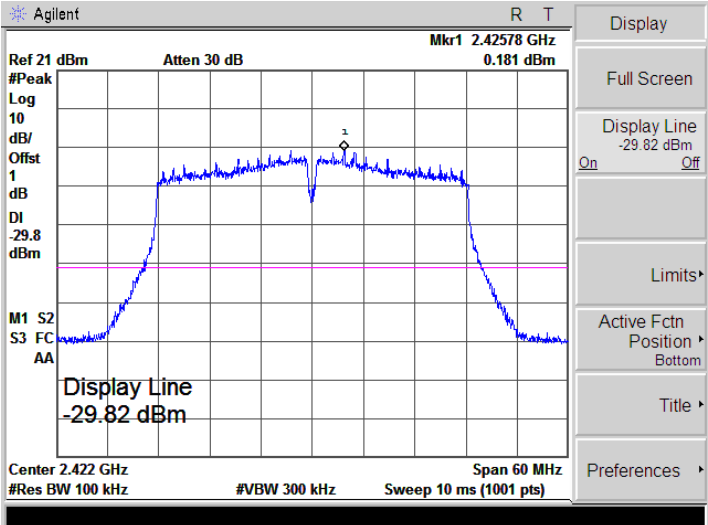
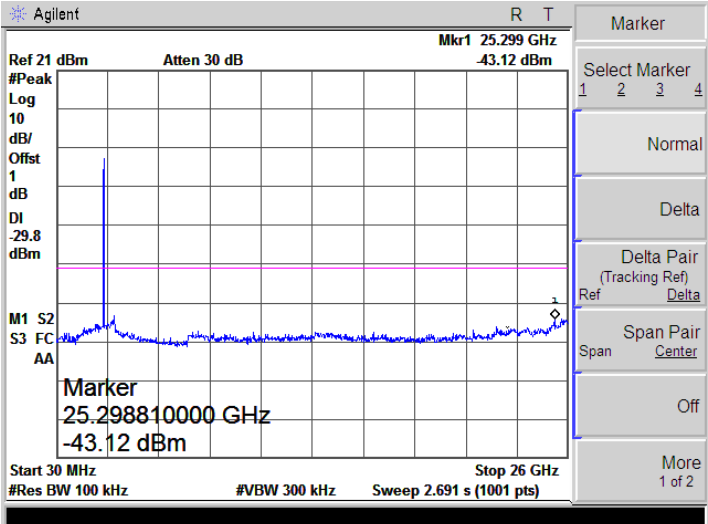
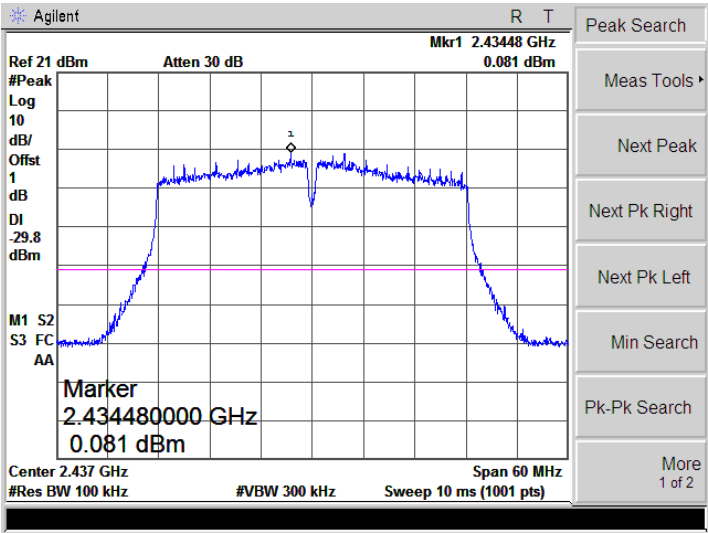


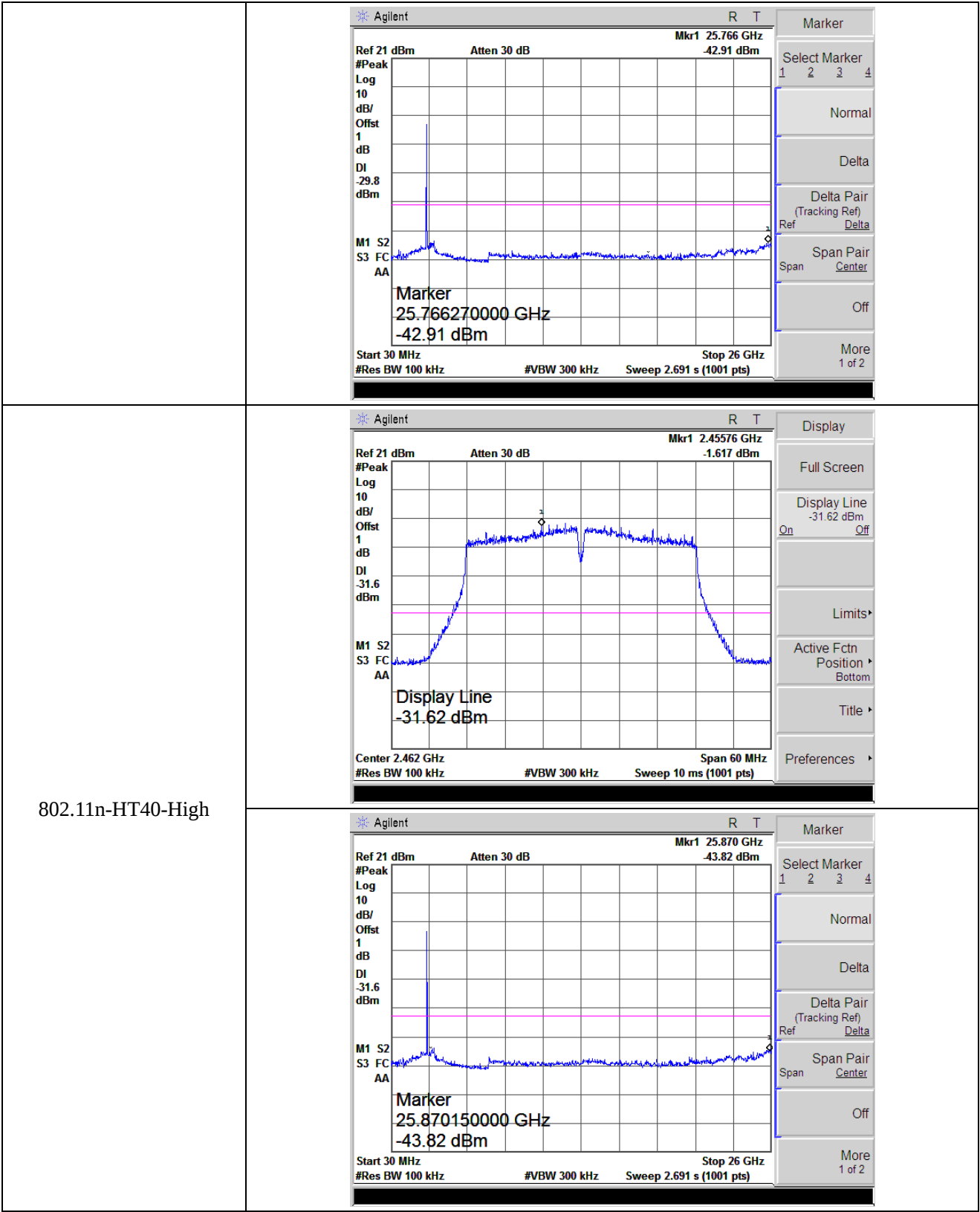
802.11g-Low	
	
802.11g-Middle	

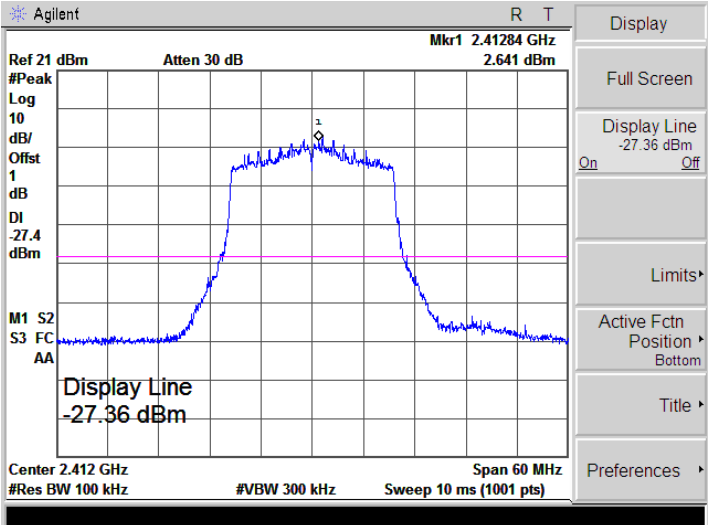
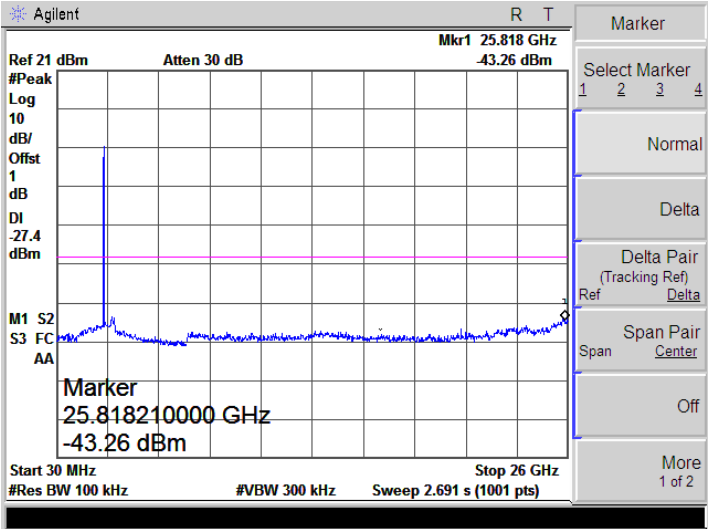
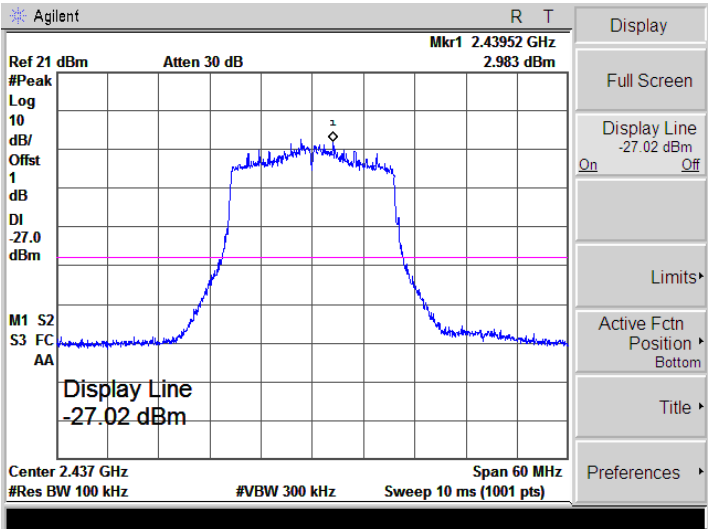


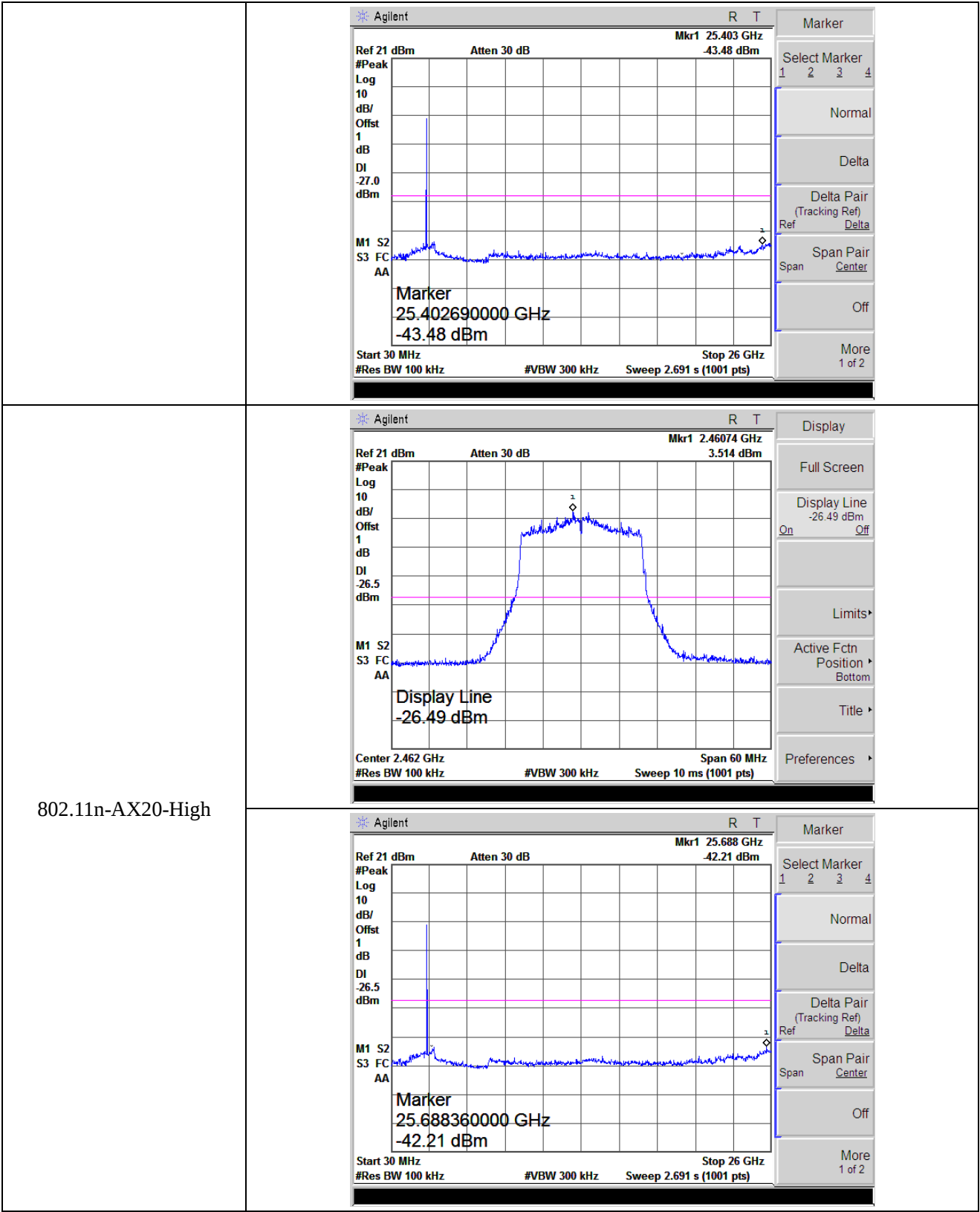
802.11n-HT20-Low	
	
802.11n-HT20-Middle	

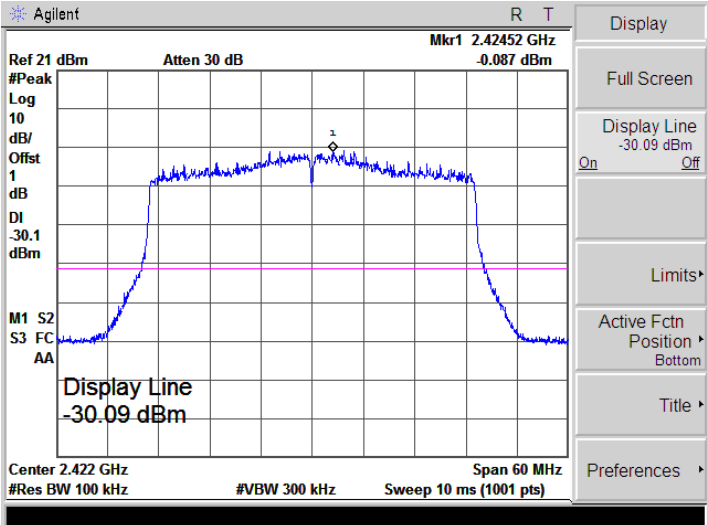
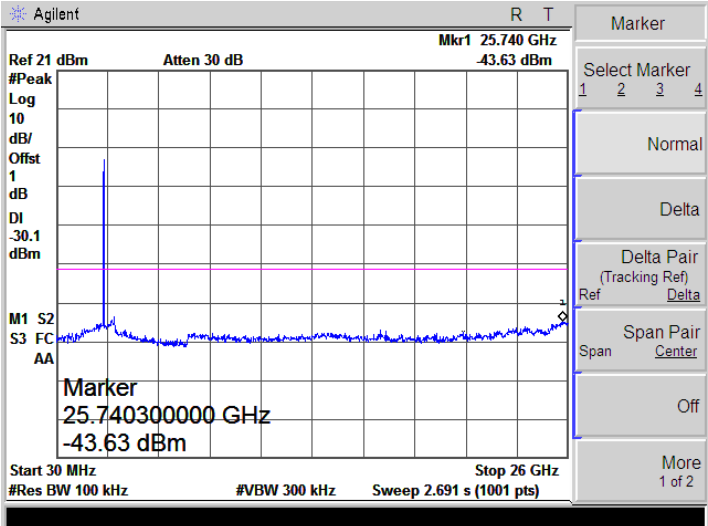
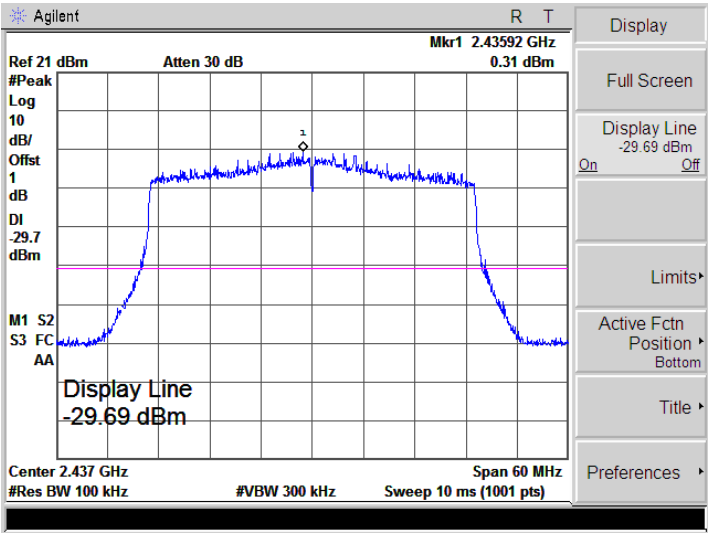


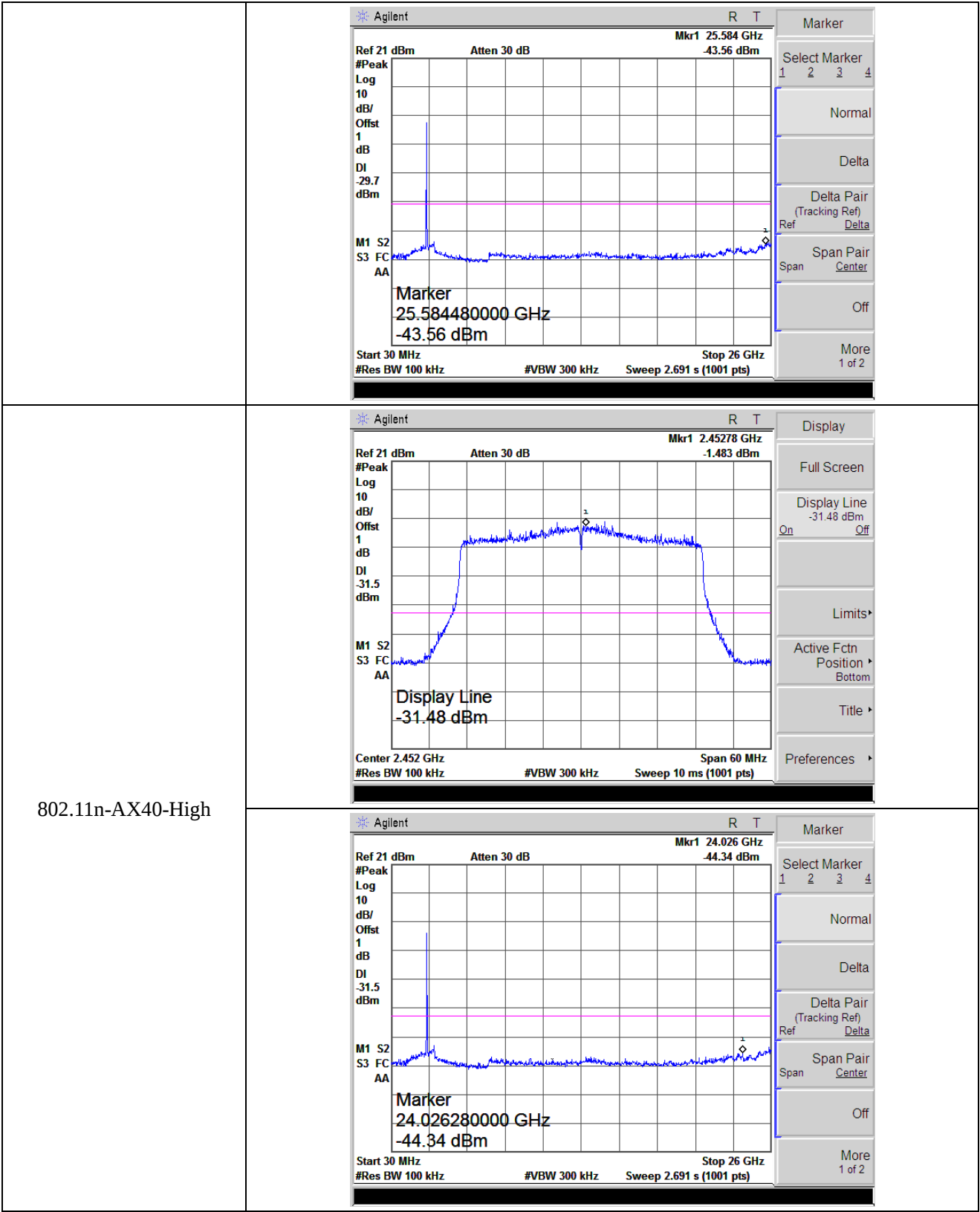
802.11n-HT40-Low	
	
802.11n-HT40-Middle	



802.11n-AX20-Low	
	
802.11n-AX20-Middle	



802.11n-AX40-Low	
	
802.11n-AX40-Middle	



APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

******* END OF REPORT *******