



Test report No. : 4790327571-US-R1-V0
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Issued date : 2022/5/18
FCC ID : NDD9578222102

RADIO TEST REPORT

Product : AX1800 Dual-Band USB 3.0 Adapter
Model Name : EW-7822UMX
FCC ID : NDD9578222102
Test Regulation : FCC 47 CFR Part 15 Subpart C (Section 15.247)
Received Date : 2022/3/14
Test Date : 2022/3/14 ~ 2022/3/25
Issued Date : 2022/5/18

Applicant : Edimax Technology Co., Ltd.
No.278, Xinhua 1st Rd., Neihu Dist, Taipei City, Taiwan

Issued By : Underwriters Laboratories Taiwan Co., Ltd.
Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd.,
Zhudong Township, Hsinchu County, Taiwan



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Doc No: 17-EM-F0876 / 6.0



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REVISION HISTORY

Original Test Report No.: 4790327571-US-R1-V0

[illegible]

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1. Attestation of Test Results

APPLICANT: Edimax Technology Co., Ltd.
No.278, Xinhua 1st Rd., Neihu Dist, Taipei City, Taiwan

MANUFACTURER: Edimax Technology Co., Ltd.
No.278, Xinhua 1st Rd., Neihu Dist, Taipei City, Taiwan

EUT DESCRIPTION: AX1800 Dual-Band USB 3.0 Adapter

BRAND: Edimax

MODEL: EW-7822UMX

SAMPLE STAGE: Identical Prototype

DATE of TESTED: 2022/3/14 ~ 2022/3/25

APPLICABLE STANDARDS	
STANDARD	Test Results
FCC 47 CFR PART 15 Subpart C (Section 15.247)	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:

Cindy Hsin
Project Handler

Date : 2022/5/18

Approved and Authorized By:

Eric Lee
Senior Laboratory Engineer

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2. Summary of Test Results

Summary of Test Results		
FCC Clause	Test Items	Result
15.247(a)(2)	6dB Bandwidth	PASS
15.247(b)	Conducted Output Power	PASS
15.247(e)	Power Spectral Density	PASS
15.247(d)	Antenna Port Emission	PASS
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS
15.207	AC Power Conducted Emission	PASS
15.203	Antenna Requirement	PASS

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3. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2, KDB558074 D01 Meas Guidance v05r02, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013 and KDB 662911 D01 Multiple Transmitter Output v02r01.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398.

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5. Measurement Uncertainty

For statement of conformity, accuracy method (Section 8.2.4 and 8.2.5 of ISO Guide 98-4) was applied as decision rule for measurement in this test report.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k=2$.

Measurement	Frequency	Uncertainty
Conducted disturbance at mains terminals ports	150kHz ~ 30MHz	± 3.1 dB
RF Conducted	9 kHz - 40GHz	± 1.9 dB
Radiated disturbance below 30MHz	9 kHz - 30 MHz	± 1.9 dB
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	± 5.4 dB
Radiated disturbance above 1 GHz	1GHz ~ 40GHz	± 4.7 dB

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6. Equipment under Test

6.1. Description of EUT

Product	AX1800 Dual-Band USB 3.0 Adapter
Brand Name	Edimax
Model Name	EW-7822UMX
Operating Frequency	2412MHz ~ 2462MHz
Modulation	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to MCS15 802.11ac: up to MCS9 802.11ax: up to MCS11
Number of Channel	11 for 802.11b, 802.11g, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20) 7 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40)
Maximum Output Power	802.11b: 24.77 dBm 802.11g: 27.83 dBm 802.11ax (HE20): 27.36 dBm 802.11ax (HE40): 25.30 dBm
Normal Voltage	5Vdc from host equipment
Sample ID	Conducted Test: 4753438 Radiated Test: 4753438

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Note:

1. Simultaneously transmission condition:

Condition	Technology	
1	WLAN (2.4GHz)	WLAN (5GHz)

Note:

- The emission of the simultaneous operation has been evaluated and no non-compliance was found.
- We have confirmed that the simultaneous (co-location) tests were not just compliant with FCC rules but did not introduce new emissions that are within 20dB of the applicable limit.

2. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	Tx,Rx Function
802.11b	2TX,2RX
802.11g	2TX,2RX
802.11n (HT20)	2TX,2RX
802.11n (HT40)	2TX,2RX
802.11ac (VHT20)	2TX,2RX
802.11ac (VHT40)	2TX,2RX
802.11ax (HE20)	2TX,2RX
802.11ax (HE40)	2TX,2RX

* The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40 and 802.11ax mode for HE20 / HE40, therefore investigated worst case to representative mode in test report.

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer the manufacturer's or user's manual.

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6.2. Channel List

11 channels are provided for 802.11b, 802.11g, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	-	-

7 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	7	2442
4	2427	8	2447
5	2432	9	2452
6	2437	-	-

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6.3. Test Condition

Test Item	Test Site No.	Environmental Condition	Input Power	Test Date	Tested by
Antenna Port Conducted Measurement	SR4	23~26°C/ 62~67%RH	5Vdc	2022/03/14~ 2022/03/18	Patrick Kuan
Radiated Spurious Emission	966-2	23~26°C/ 62~67%RH	5Vdc	2022/03/15~ 2022/03/25	Patrick Kuan
AC power Line Conducted Emission	SR1	23~26°C/ 62~67%RH	5Vdc	2022/03/23~ 2022/03/25	Patrick Kuan

FCC Test Firm Registration Number: 498077

6.4. Description of Available Antennas

Ant. No.	Transmitter Circuit	Brand Name	Model Name	Ant. Type	Maximum Gain (dBi)
1	Chain (0)	LYNwave	7822ant-1	Printed	3.6
2	Chain (1)	LYNwave	7822ant-2	Printed	3.1

Note: The above antenna information was provided from customer and for more detailed features description, please refer the manufacturer's specification or user's manual.

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6.5. Test Mode Applicability and Tested Channel Detail

- The EUT power source types: 5Vdc from Host. Therefore the test data of the 5Vdc was recorded in this report.
- For AC power line conducted emissions, the pre-scan has been determined by AC power 120Vac/60Hz (worst case)
- The fundamental of the EUT was investigated in three orthogonal axes X-Y/Y-Z/X-Z, it was determined that X-Y plane was worst-case. Therefore, all final radiated testing was performed with the EUT in X-Y plane.
- For Antenna Port Conducted Measurement, this item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.
- For below 1 GHz radiated emission and AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Test item	Mode	Modulation Technology	Modulation Type	Available Channel	Test Channel	Data Rate
Radiated Emissions (Above 1GHz)	802.11b	DSSS	DBPSK	1 to 11	1,6,11	1 Mbps
	802.11g	OFDM	BPSK	1 to 11	1,6,11	6 Mbps
	802.11ax20	OFDMA	BPSK	1 to 11	1,6,11	HE0
	802.11ax40	OFDMA	BPSK	3 to 9	3,6,9	HE0
Radiated Emissions (Below 1GHz)	802.11g	OFDM	BPSK	1 to 11	6	6 Mbps
AC Power Line Conducted Emission	802.11g	OFDM	BPSK	1 to 11	6	6 Mbps
Antenna Port Conducted Measurement	802.11b	DSSS	DBPSK	1 to 11	1,6,11	1 Mbps
	802.11g	OFDM	BPSK	1 to 11	1,6,11	6 Mbps
	802.11ax20	OFDMA	BPSK	1 to 11	1,6,11	HE0
	802.11ax40	OFDMA	BPSK	3 to 9	3,6,9	HE0

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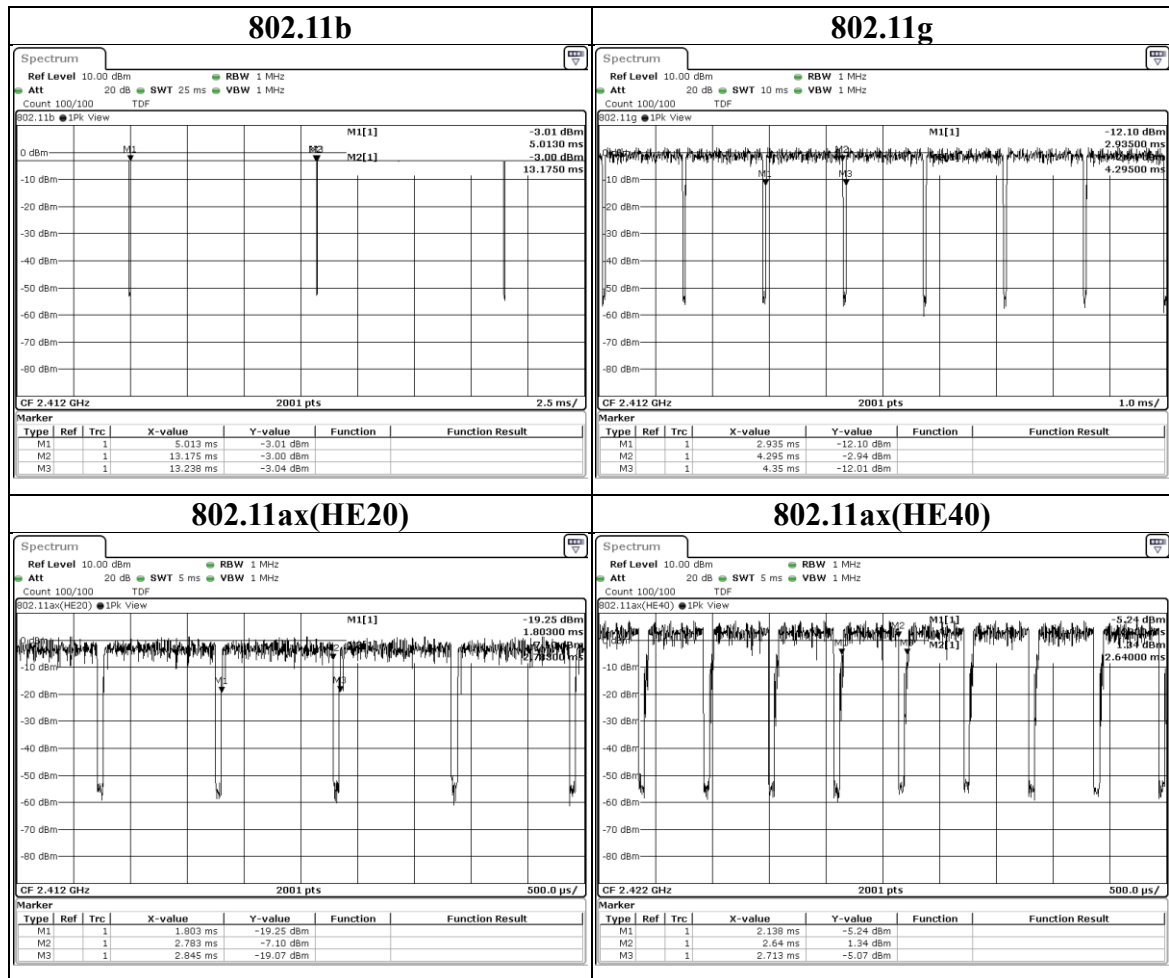
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6.6. Duty cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle	Duty Factor (dB)	VBW Set (above 1GHz)
802.11b	8.162	8.225	0.99	N/A	10Hz
802.11g	1.360	1.415	0.96	0.17	1kHz
802.11ax(HE20)	0.980	1.043	0.94	0.27	2kHz
802.11ax(HE40)	0.503	0.575	0.87	0.59	2kHz





7. Test Equipment

Test Equipment List					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Expired date
Radiated Spurious Emission					
Spectrum Analyzer	Keysight	N9010A	MY56070827	2021/11/9	2022/11/8
EMI Test Receiver	Rohde & Schwarz	ESR7	101754	2021/12/10	2022/12/9
Loop Antenna	ETS lindgren	6502	00213440	2021/12/23	2022/12/22
Trilog-Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	774 & AT-N0538	2022/2/8	2023/2/7
Horn Antenna (1-18 GHz)	Schwarzbeck	BBHA 9120 D	01690	2021/12/13	2022/12/12
Horn Antenna (18-40 GHz)	Schwarzbeck	BBHA 9170	781	2021/12/17	2022/12/16
Preamplifier (30-1000 MHz)	EMCI	EMC330E	980405	2021/6/8	2022/6/7
Preamplifier (1-18 GHz)	EMCI	EMC051835BE	980406	2022/2/16	2023/2/15
Preamplifier (18-40GHz)	EMCI	EMC184040SEE	980426	2021/5/19	2022/5/18
Cables	Hanyitek	K1K50-UP0264-K1K50-2500	170214-4 & 170425-2	2021/12/3	2022/12/2
Cables	Hanyitek	K1K50-UP0264-K1K50-2500	170214-1 & 170214-2	2021/12/3	2022/12/2

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Test Equipment List					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Expired date
Antenna Port Conducted Measurement					
Spectrum Analyzer	Keysight	N9010A	MY56070834	2021/10/29	2022/10/28
Pulse Power Sensor	Anritsu	MA2411B	1531202	2021/12/22	2022/12/21
Power Meter	Anritsu	ML2495A	1645002	2021/12/22	2022/12/21
AC power Line Conducted Emission					
EMI Test Receiver	Rohde & Schwarz	ESR7	101753	2021/11/15	2022/11/14
Two-Line V-Network	Rohde & Schwarz	ENV216	102136	2021/8/30	2022/8/29
Impuls-Begrenzer Pulse Limiter	Rohde & Schwarz	ESH3-Z2	102219-Qt	2021/8/26	2022/8/25
Cables	TITAN	CFD200	T0732ACFD20 020A300-1	2022/3/16	2023/3/15

UL Software		
Description	Name	Version
Radiated measurement	e3	6.191211 (V6)
Conducted measurement	RF Conducted Test Tools	ver 2.4.0.620b
AC power Line Conducted Emission	EZ EMC	UL-3A1.2

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8. Description of Test Setup

Support Equipment

ID	Equipment	Brand Name	Model Name	S/N	Remark
A	Laptop	Lenovo	T430	PB-8XTN7	Provide by lab

I/O Cables

ID	Equipment	Brand Name	Model Name	Length (m)	Remark
1	USB Cable	fujiei	Z08145	1m	Provide by lab

Test Setup

Controlled using a bespoke application (AX Series MP Toolkit_vesion: mp_v1.0.33) on a test Notebook. The application was used to enable a continuous transmission mode and to select the test channels, data rates, modulation schemes and power setting as required.

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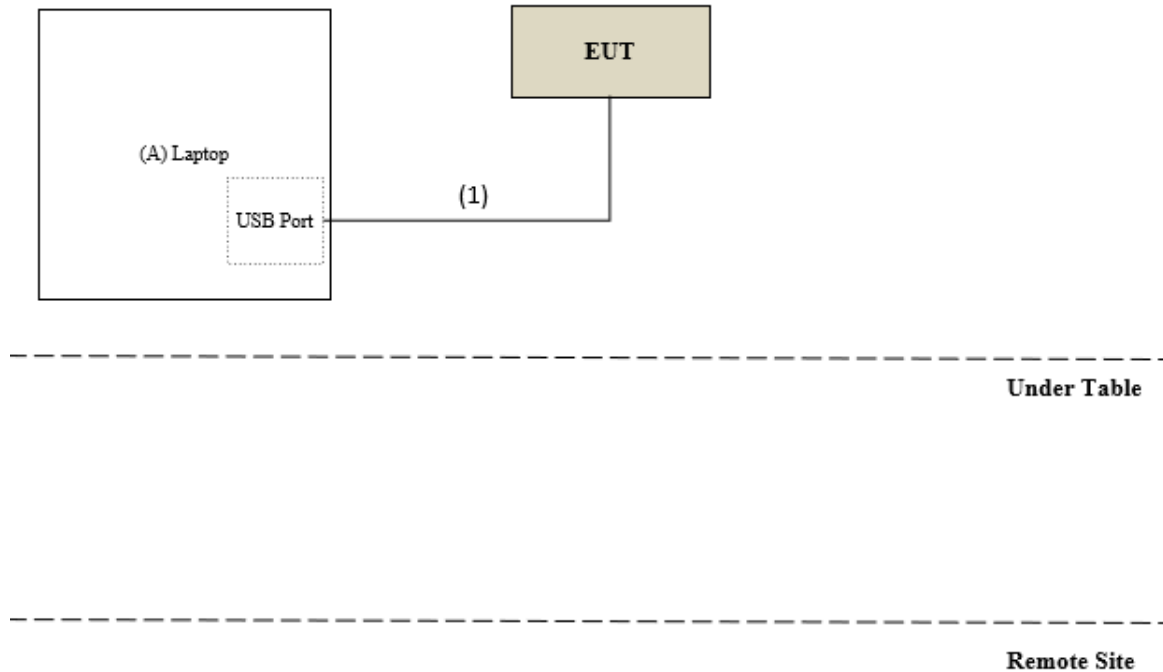
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Setup Diagram for Test



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9. Test Results

9.1. 6dB Bandwidth

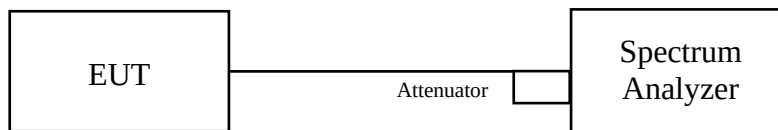
Requirements

The minimum 6 dB bandwidth shall be at least 500 kHz.

Test procedure

- Set resolution bandwidth (RBW) = 100kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

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Test Data

Mode	CH	Freq (MHz)	6dB BW (MHz)		Limit (MHz)	Result
			Chain 0	Chain 1		
802.11b	1	2412	11.091	10.092	0.5	Pass
	6	2437	10.066	10.117	0.5	Pass
	11	2462	12.063	10.120	0.5	Pass

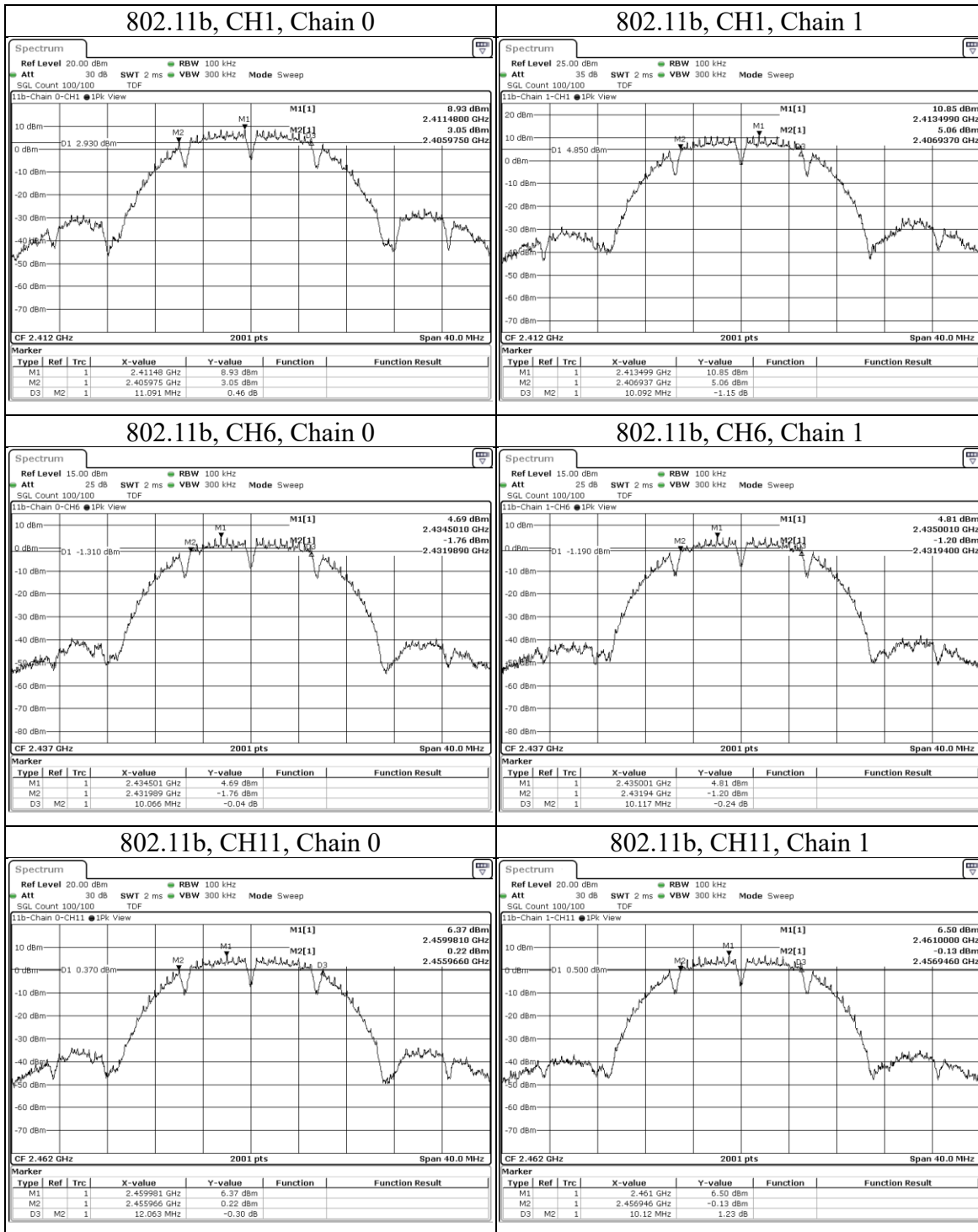
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			Chain 0	Chain 1		
802.11g	1	2412	14.434	14.469	0.5	Pass
	6	2437	15.929	16.351	0.5	Pass
	11	2462	16.328	15.735	0.5	Pass

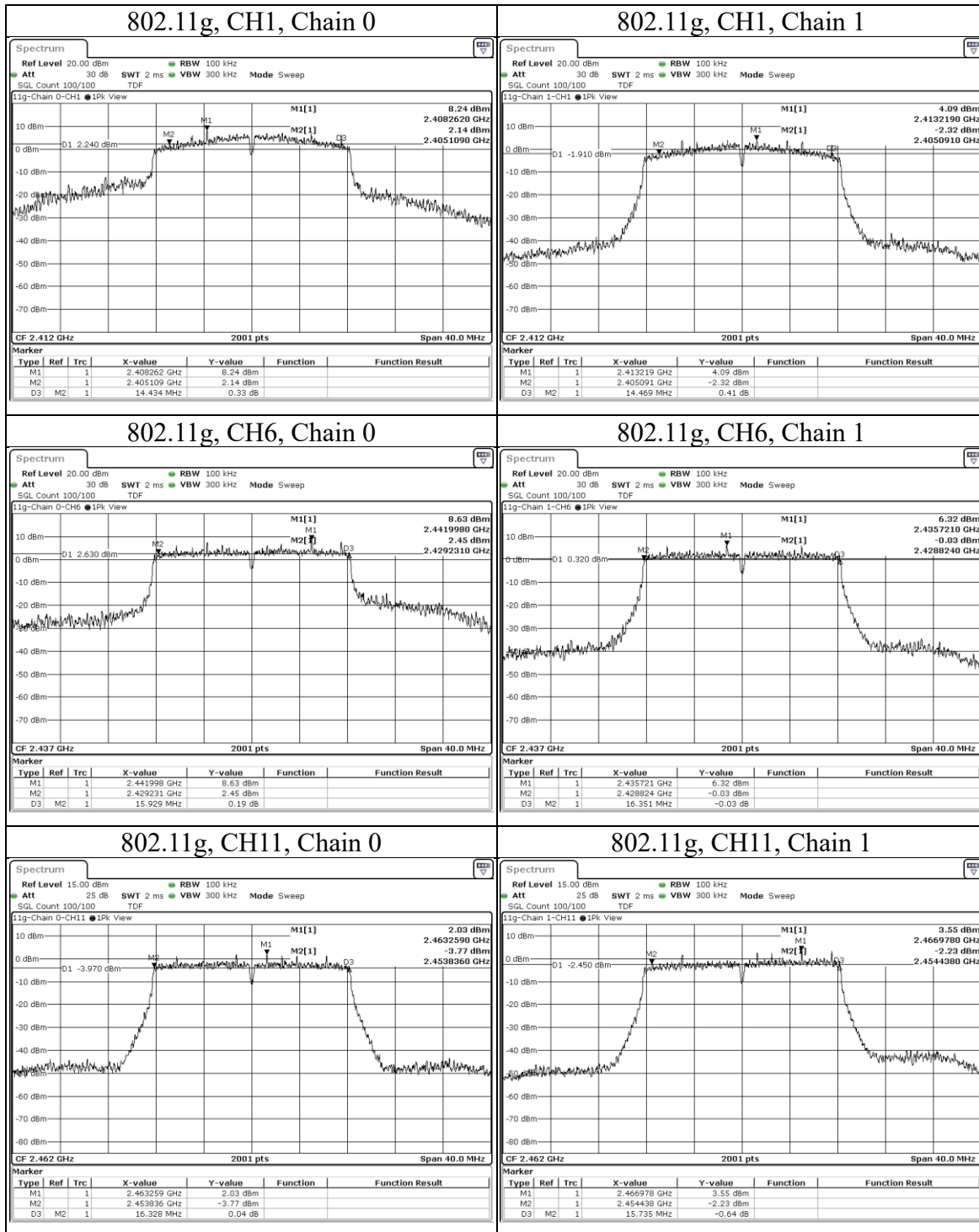
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Mode	CH	Freq (MHz)	6dB BW (MHz)		Limit (MHz)	Result
			Chain 0	Chain 1		
802.11ax(HE20)	1	2412	15.211	17.836	0.5	Pass
	6	2437	17.996	18.142	0.5	Pass
	11	2462	18.053	18.271	0.5	Pass

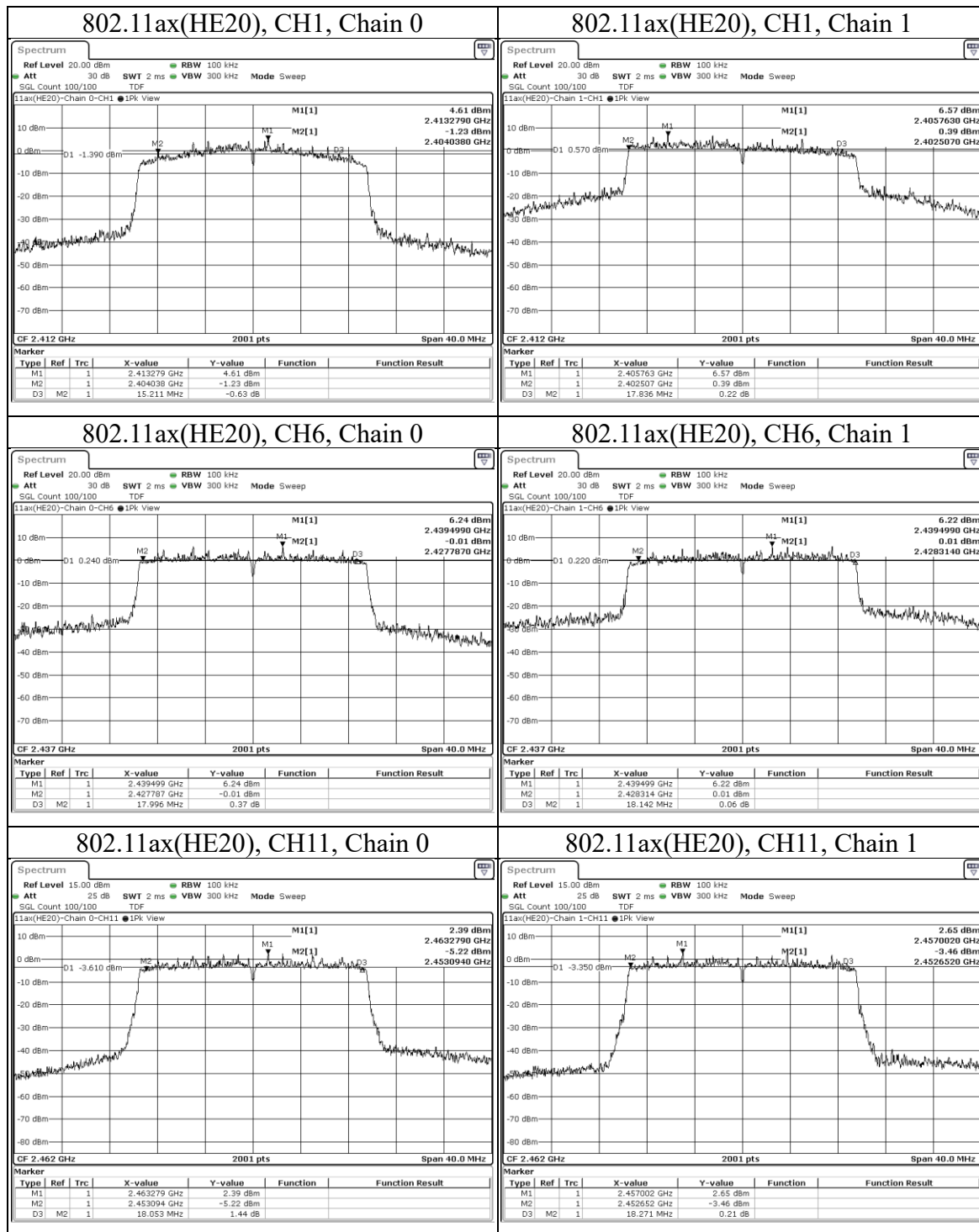
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Mode	CH	Freq (MHz)	6dB BW (MHz)		Limit (MHz)	Result
			Chain 0	Chain 1		
802.11ax(HE40)	3	2422	31.383	36.485	0.5	Pass
	6	2437	37.778	36.627	0.5	Pass
	9	2452	37.772	34.114	0.5	Pass

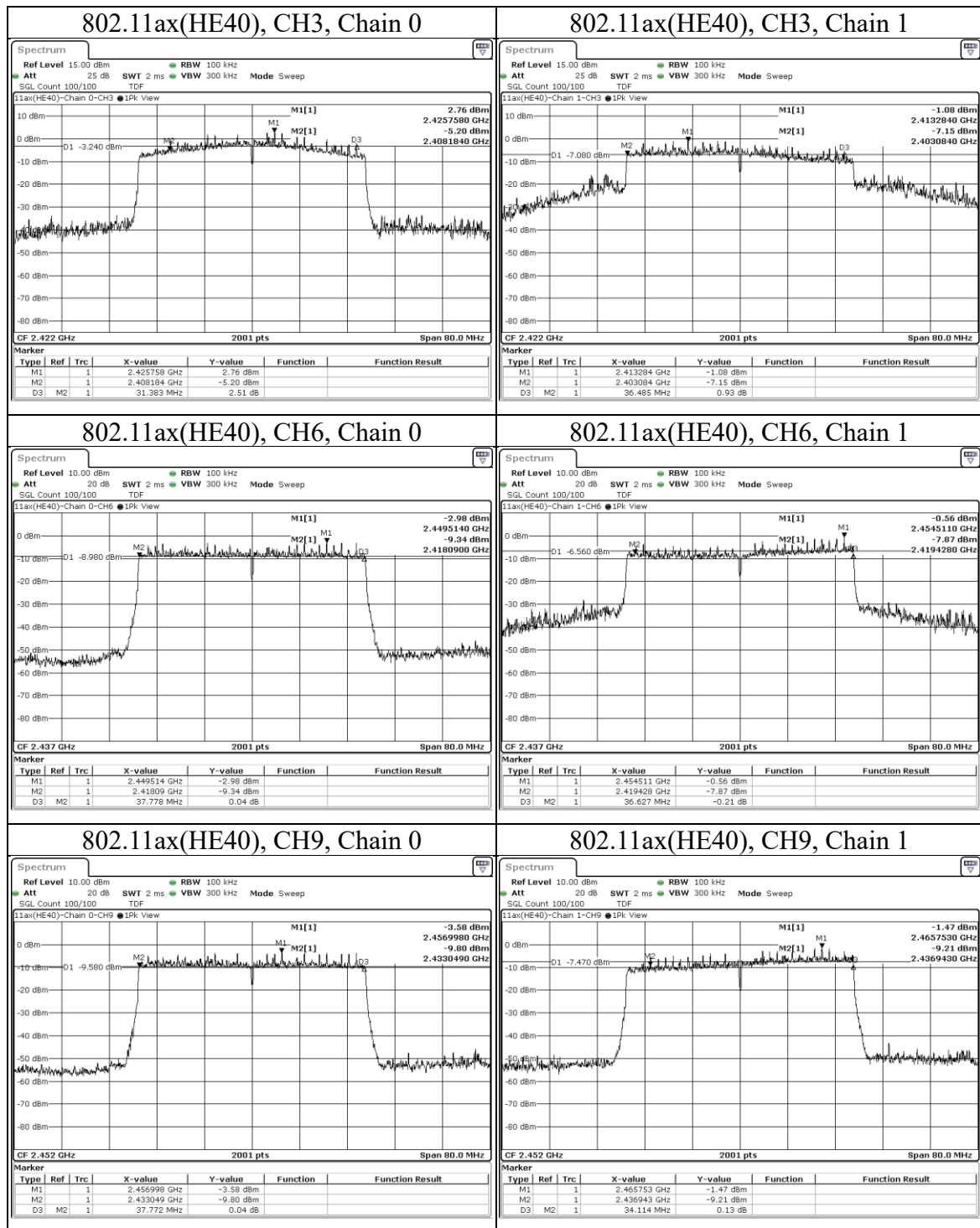
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9.2. Conducted Output Power

Requirements

For systems using digital modulation in the 2400-2483.5 MHz bands: 1 Watt.

Note:

1. Directional Gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{Gn/20})^2 / N_{ANT}]$ dBi.

N_{ANT} : Number of Transmit Antennas

$G1, G2, \dots, Gn$: Gain of Individual Antennas

2. Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

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

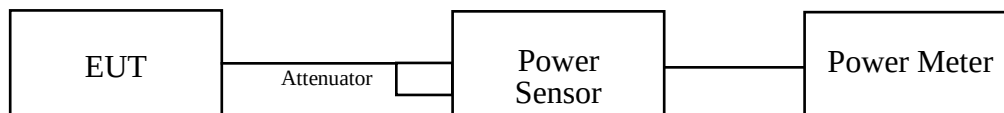
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

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

Test Procedure

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Test Setup



The loss between RF output port of the EUT and the input port of the Power Meter has been taken into consideration.

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Test Data

Peak Power

802.11b

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	21.73	21.62	294.442	24.69	30	PASS
6	2437	21.83	21.69	299.916	24.77	30	PASS
11	2462	18.83	18.85	153.109	21.85	30	PASS

802.11g

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	25.00	24.55	601.174	27.79	30	PASS
6	2437	24.98	24.65	606.736	27.83	30	PASS
11	2462	22.22	22.19	332.66	25.22	30	PASS

802.11ax (HE20)

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	24.65	23.90	537.032	27.30	30	PASS
6	2437	24.67	24.01	544.503	27.36	30	PASS
11	2462	22.92	22.78	385.478	25.86	30	PASS

802.11ax (HE40)

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	22.56	22.01	338.844	25.30	30	PASS
6	2437	20.82	20.98	246.037	23.91	30	PASS
9	2452	19.16	19.34	168.267	22.26	30	PASS

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Average Power (Reference Only)

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	19.61	19.47	179.887	22.55
6	2437	19.73	19.55	184.077	22.65
11	2462	16.87	16.90	97.724	19.90

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	19.59	18.73	165.577	22.19
6	2437	19.73	18.60	166.341	22.21
11	2462	16.79	16.83	95.94	19.82

802.11ax (HE20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
1	2412	18.80	17.65	133.968	21.27
6	2437	18.70	17.79	134.276	21.28
11	2462	15.95	15.89	78.163	18.93

802.11ax (HE40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
3	2422	17.72	16.71	105.925	20.25
6	2437	15.66	15.60	73.114	18.64
9	2452	14.16	14.32	53.088	17.25

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9.3. Power Spectral Density

Requirements

The Maximum of Power Spectral Density Measurement is 8dBm in any 3 kHz (If $G_{TX} > 6$ dBi, then $PSD = 8 - (G_{TX} - 6)$).

Note:

1. PSD = power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz.
2. G_{TX} = the maximum transmitting antenna directional gain in dBi.
3. Directional Gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{Gn/20})^2 / Nant]$ dBi.

Nant: Number of Transmit Antennas

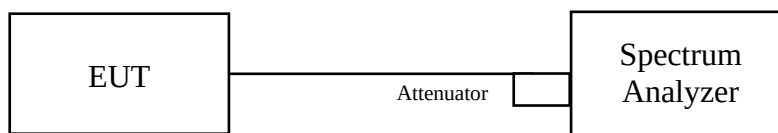
G1, G2,..., Gn: Gain of Individual Antennas

4. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

Test procedure

- a. Set analyzer center frequency to DTS channel center frequency.
- b. Set the span to 1.5 times the DTS bandwidth.
- c. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d. Set the VBW $\geq 3 \times \text{RBW}$.
- e. Detector = peak.
- f. Sweep time = auto couple.
- g. Trace mode = max hold.
- h. Allow trace to fully stabilize.
- i. Use the peak marker function to determine the maximum amplitude level within the RBW.

Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

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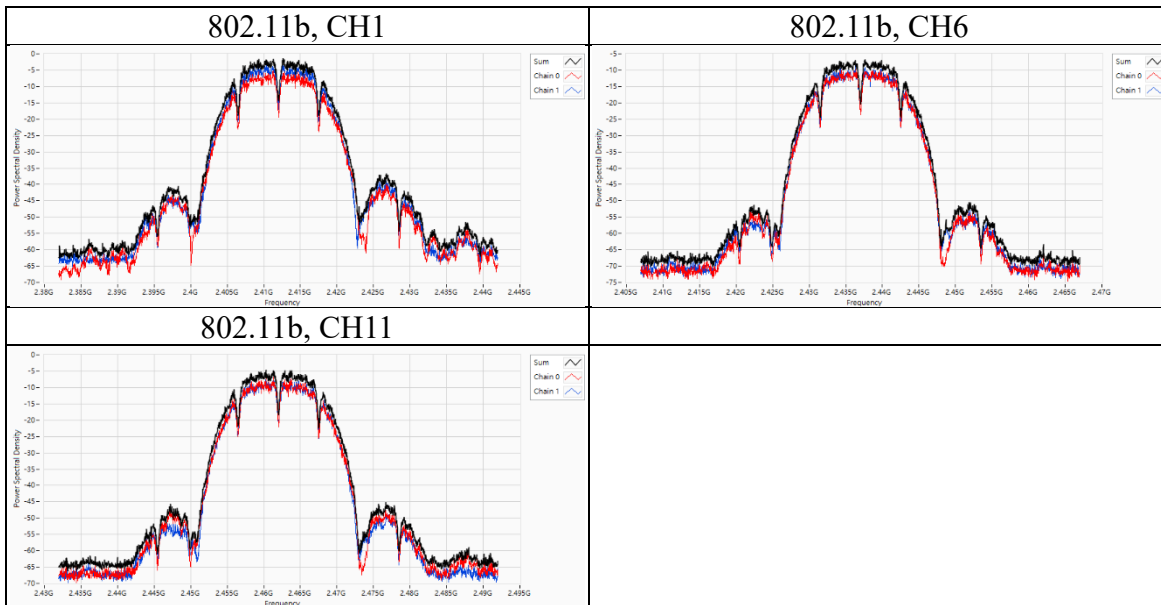
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Test Data

Mode	CH	Freq (MHz)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Directional Gain (dBi)	Result
802.11b	1	2412	-1.69	7.64	6.36	Pass
	6	2437	-6.95	7.64	6.36	Pass
	11	2462	-4.57	7.64	6.36	Pass

Mode	CH	Freq (MHz)	PSD per Chain (dBm/MHz)	
			Chain 0	Chain 1
802.11b	1	2412	-5.169	-2.94
	6	2437	-9.645	-8.556
	11	2462	-6.755	-7.641



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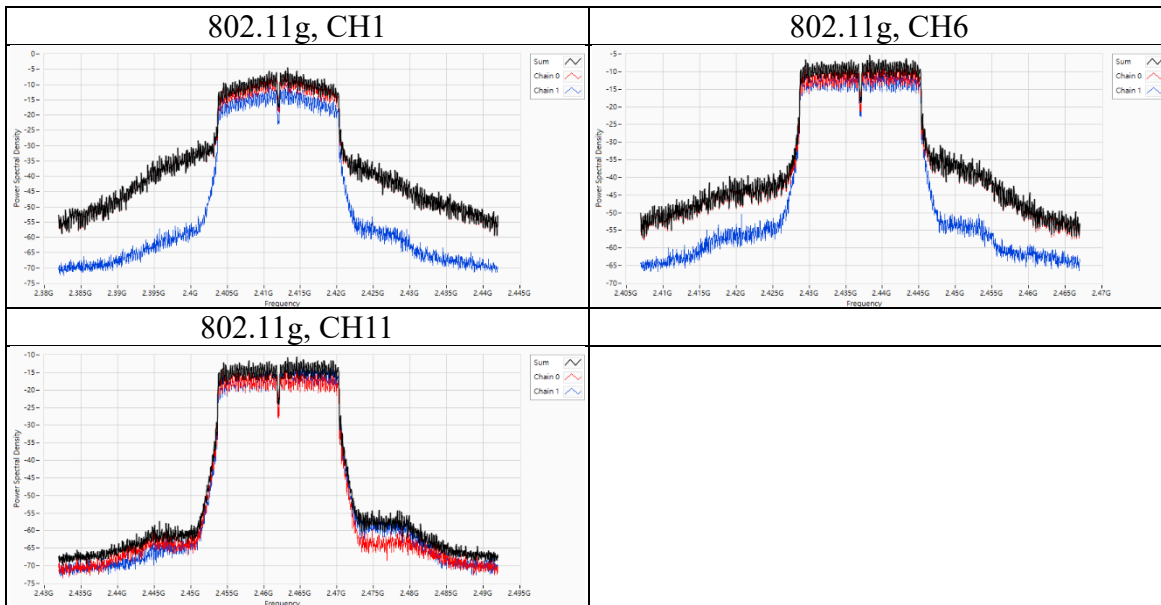
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Mode	CH	Freq (MHz)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Directional Gain (dBi)	Result
802.11g	1	2412	-4.59	7.64	6.36	Pass
	6	2437	-5.35	7.64	6.36	Pass
	11	2462	-10.59	7.64	6.36	Pass

Mode	CH	Freq (MHz)	PSD per Chain (dBm/MHz)	
			Chain 0	Chain 1
802.11g	1	2412	-6.179	-9.735
	6	2437	-7.855	-8.928
	11	2462	-14.222	-13.038



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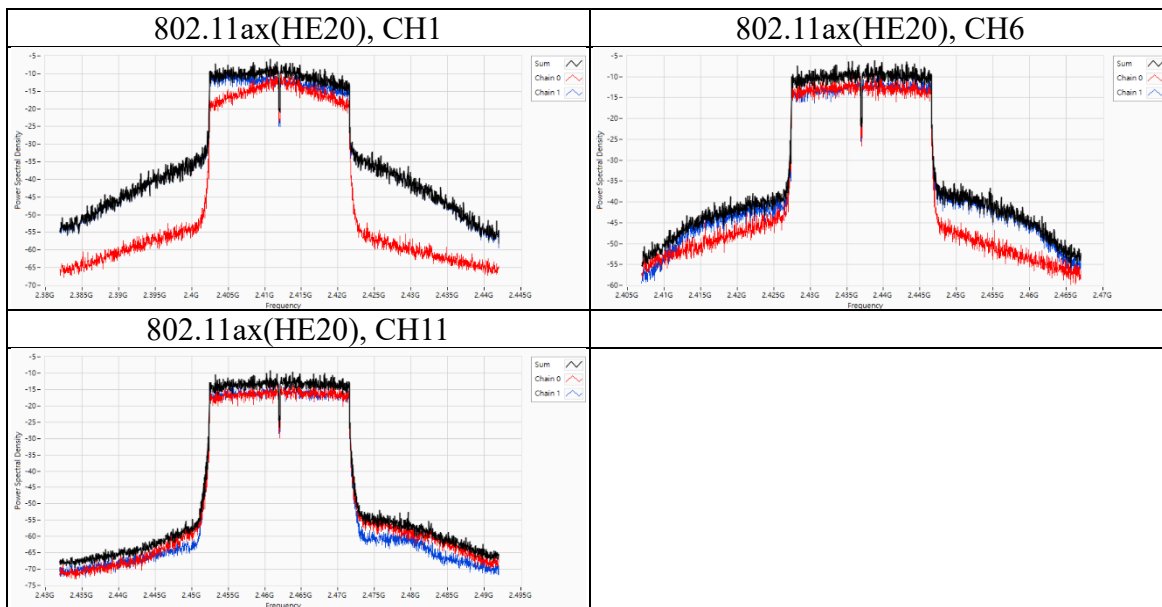
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Mode	CH	Freq (MHz)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Directional Gain (dBi)	Result
802.11ax(HE20)	1	2412	-5.84	7.64	6.36	Pass
	6	2437	-6.1	7.64	6.36	Pass
	11	2462	-9.28	7.64	6.36	Pass

Mode	CH	Freq (MHz)	PSD per Chain (dBm/MHz)	
			Chain 0	Chain 1
802.11ax(HE20)	1	2412	-9.019	-7.656
	6	2437	-8.717	-8.874
	11	2462	-12.398	-12.177



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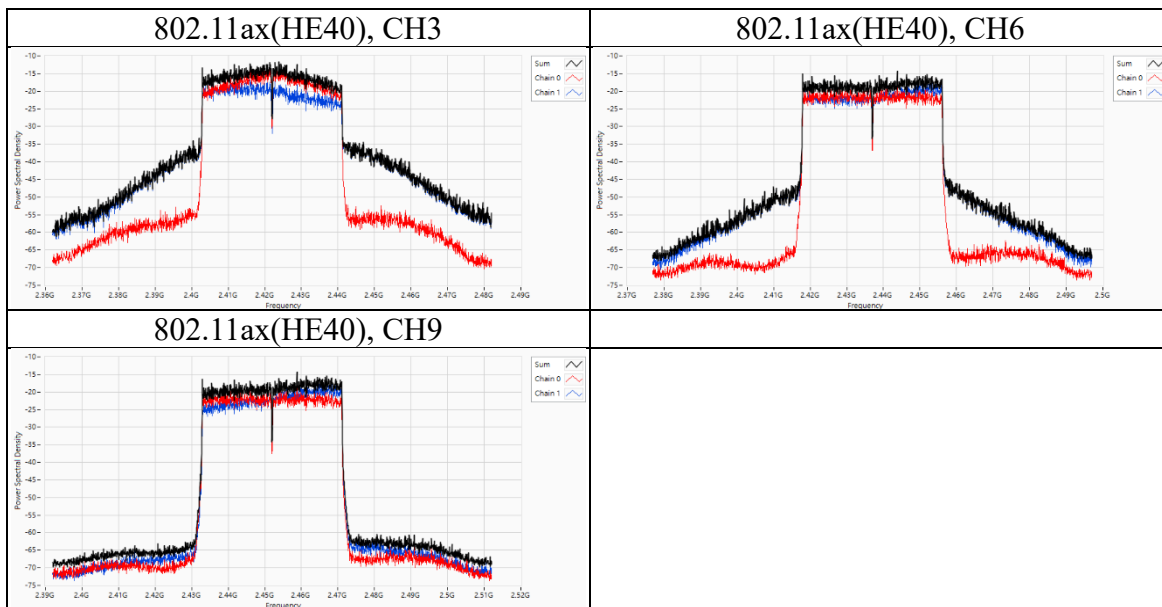
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Mode	CH	Freq (MHz)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Directional Gain (dBi)	Result
802.11ax(HE40)	3	2422	-11.61	7.64	6.36	Pass
	6	2437	-14.35	7.64	6.36	Pass
	9	2452	-14.26	7.64	6.36	Pass

Mode	CH	Freq (MHz)	PSD per Chain (dBm/MHz)	
			Chain 0	Chain 1
802.11ax(HE40)	3	2422	-12.62	-15.863
	6	2437	-18.094	-16.47
	9	2452	-18.192	-16.259



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9.4. Conducted Out of Band Emission

Requirements

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, 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 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209 (a) is not required.

Test procedure

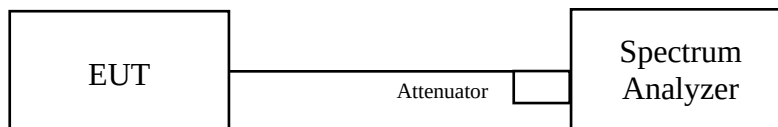
Measurement Procedure REF

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 300 kHz.
3. Set the span to 1.5 times the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

Measurement Procedure OOBE

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

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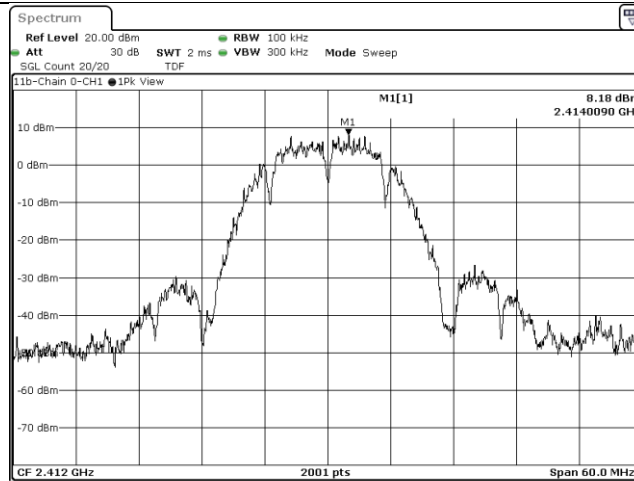
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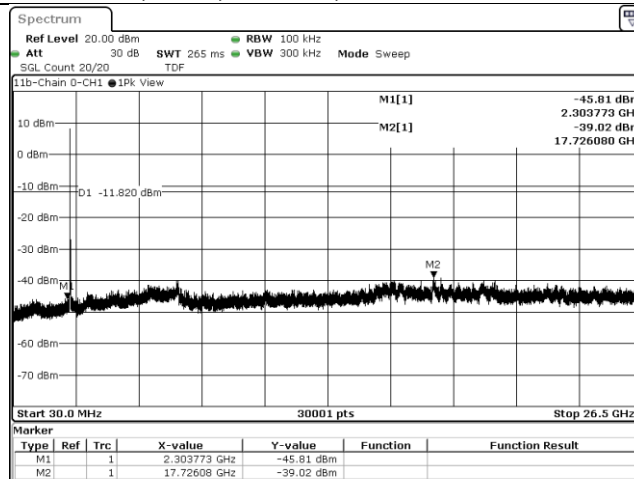


Test Data

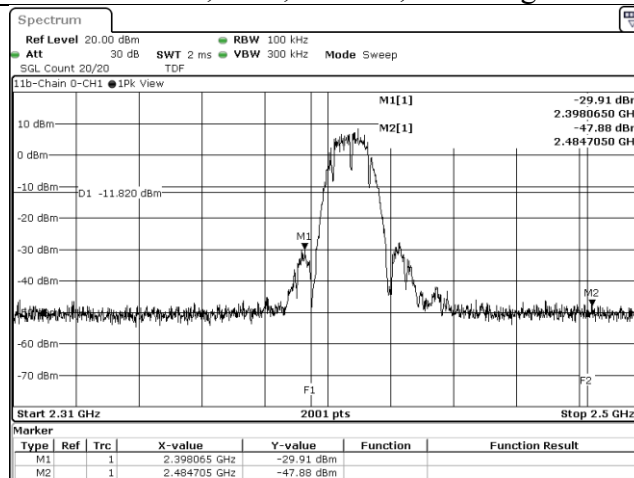
802.11b, CH1, Chain 0, Reference



802.11b, CH1, Chain 0, Conducted Emission



802.11b, CH1, Chain 0, Band edge



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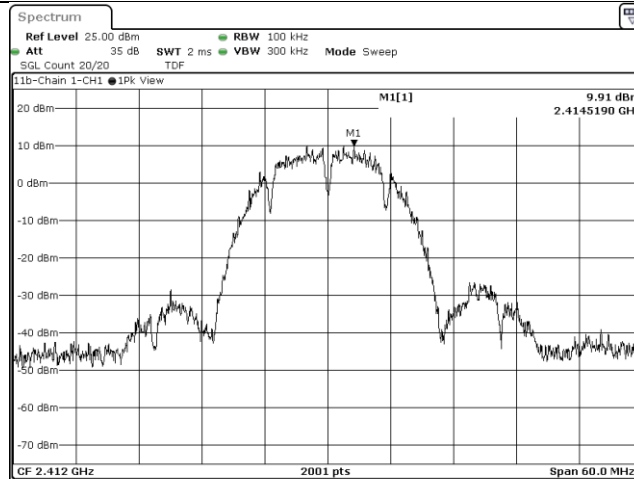
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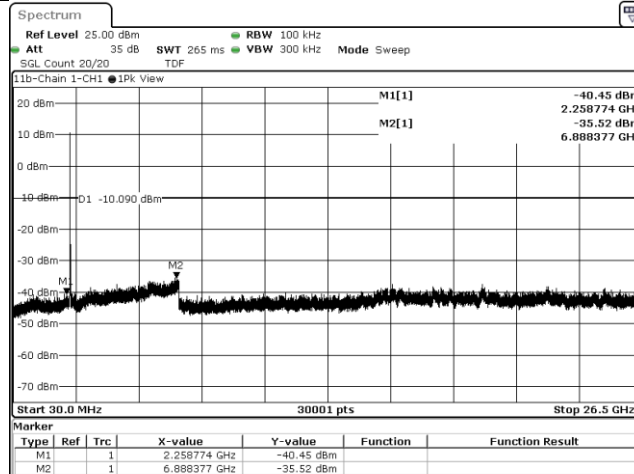
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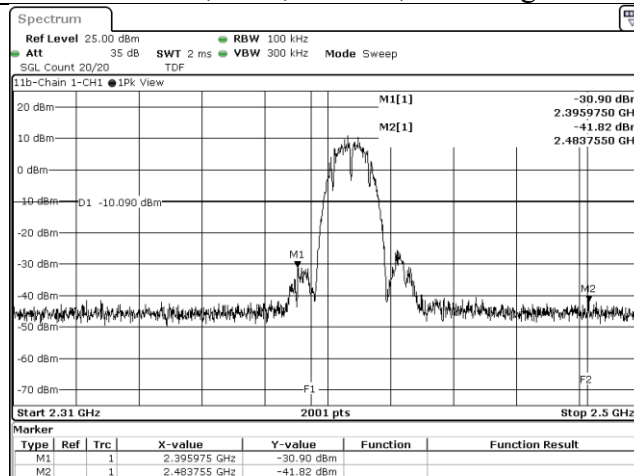
802.11b, CH1, Chain 1, Reference



802.11b, CH1, Chain 1, Conducted Emission



802.11b, CH1, Chain 1, Band edge



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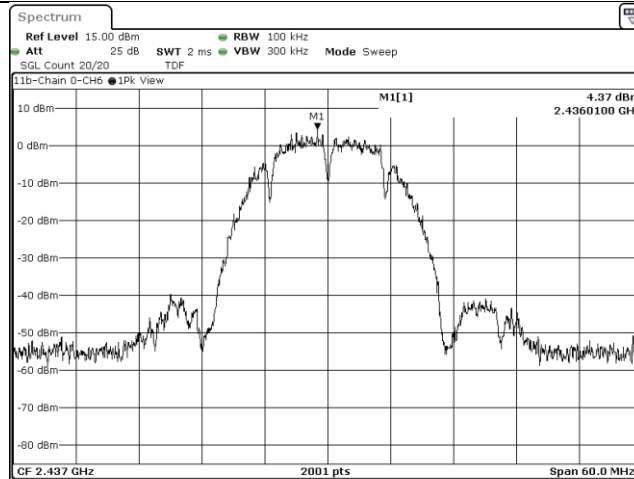
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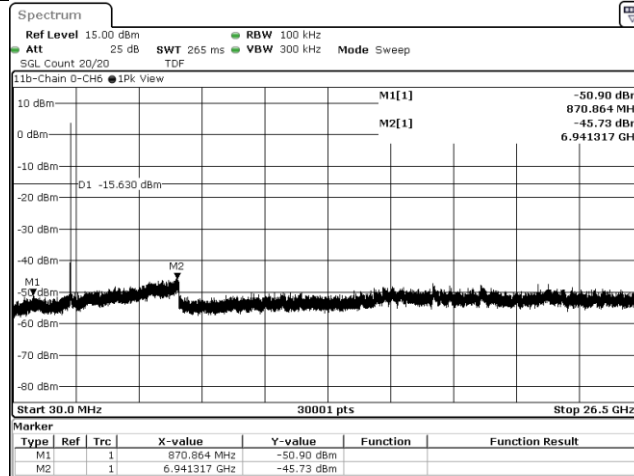
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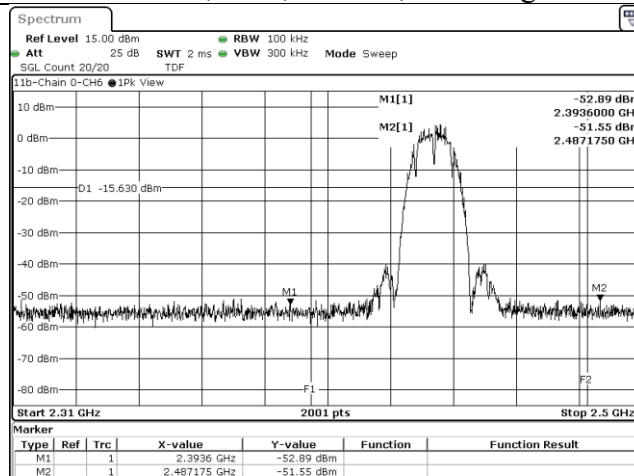
802.11b, CH6, Chain 0, Reference



802.11b, CH6, Chain 0, Conducted Emission



802.11b, CH6, Chain 0, Band edge



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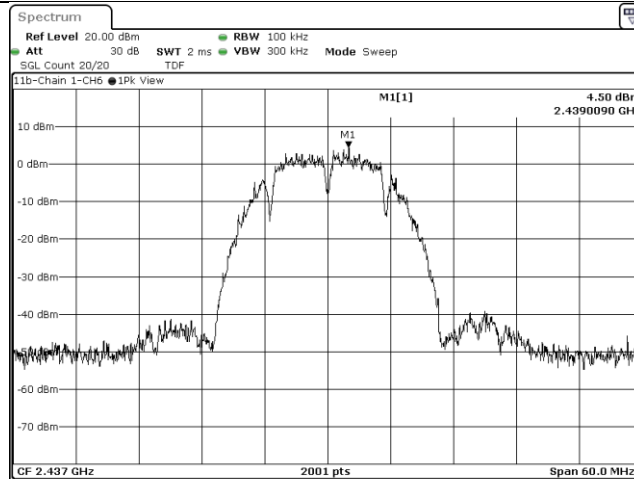
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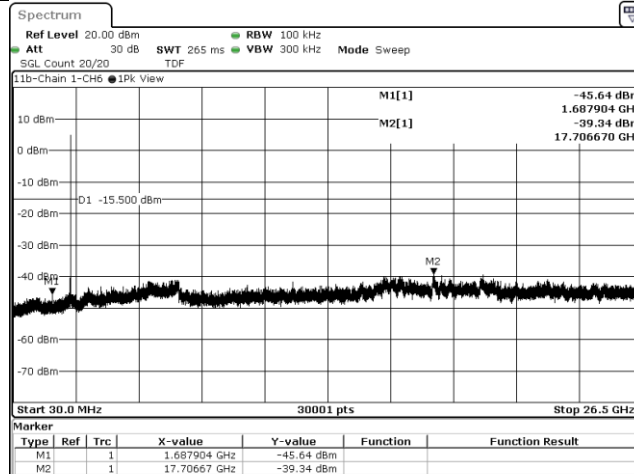
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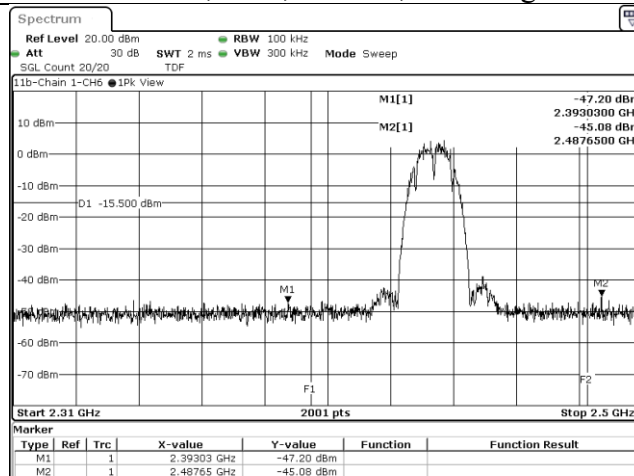
802.11b, CH6, Chain 1, Reference



802.11b, CH6, Chain 1, Conducted Emission



802.11b, CH6, Chain 1, Band edge



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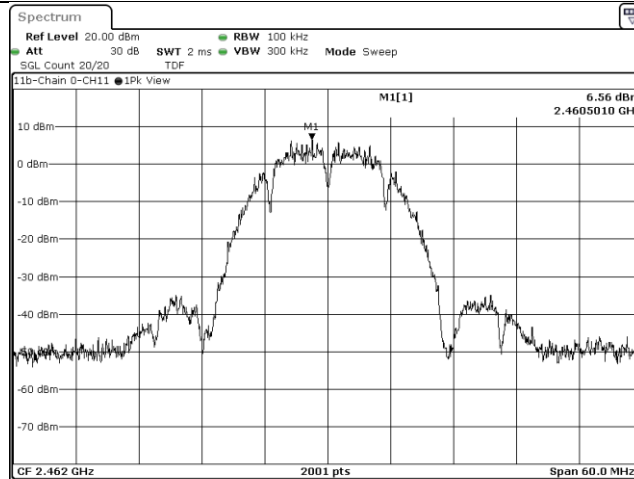
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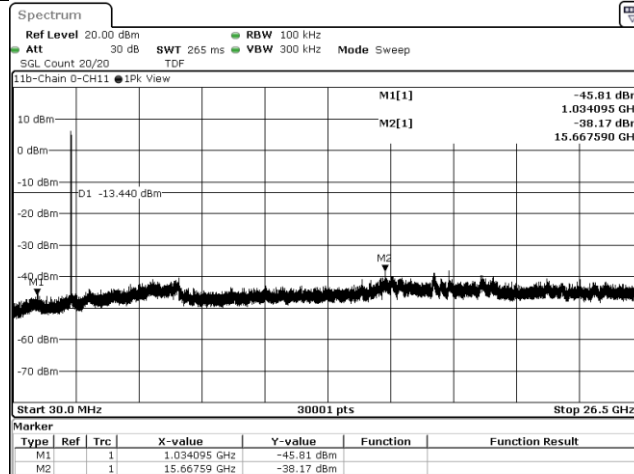
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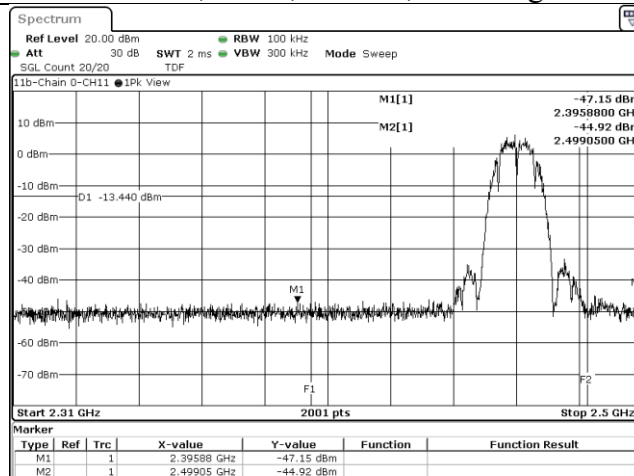
802.11b, CH11, Chain 0, Reference



802.11b, CH11, Chain 0, Conducted Emission



802.11b, CH11, Chain 0, Band edge



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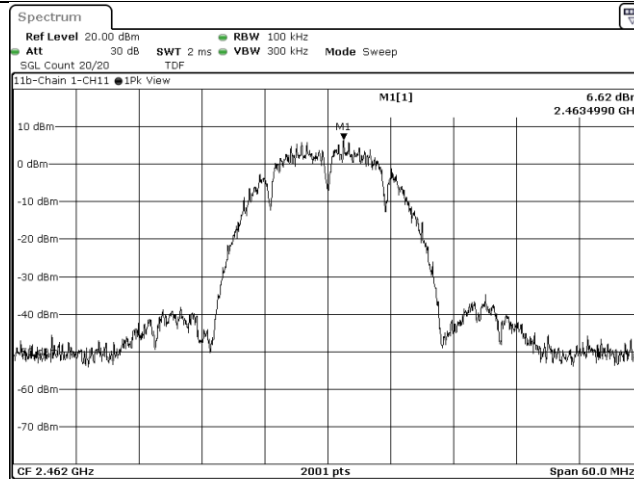
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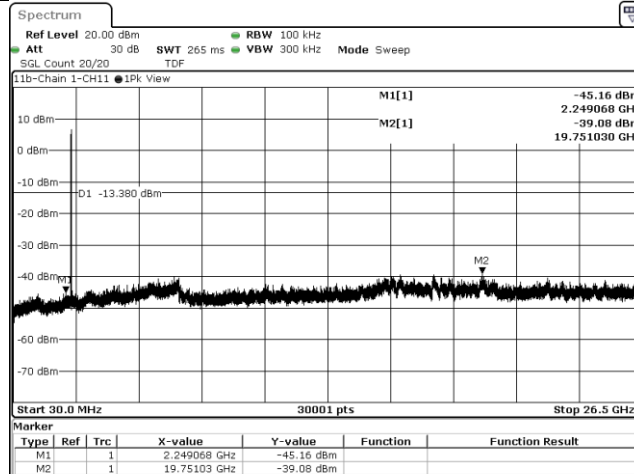
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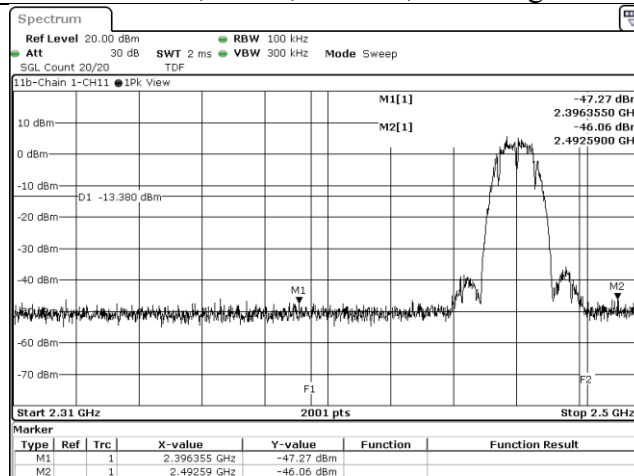
802.11b, CH11, Chain 1, Reference



802.11b, CH11, Chain 1, Conducted Emission



802.11b, CH11, Chain 1, Band edge



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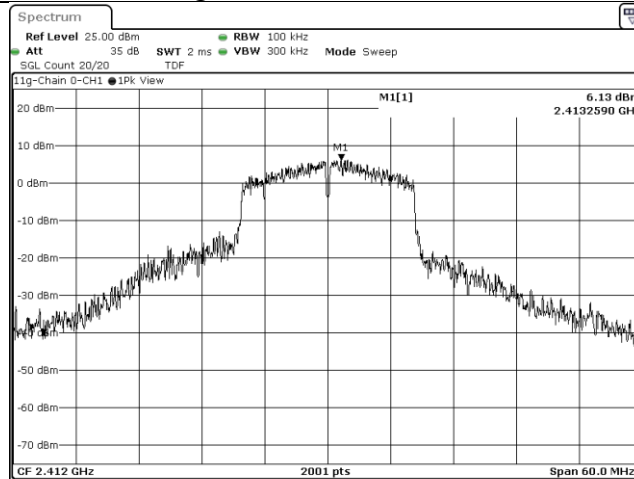
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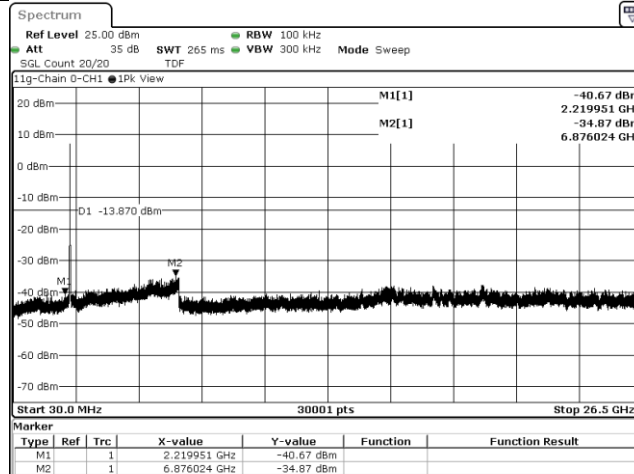
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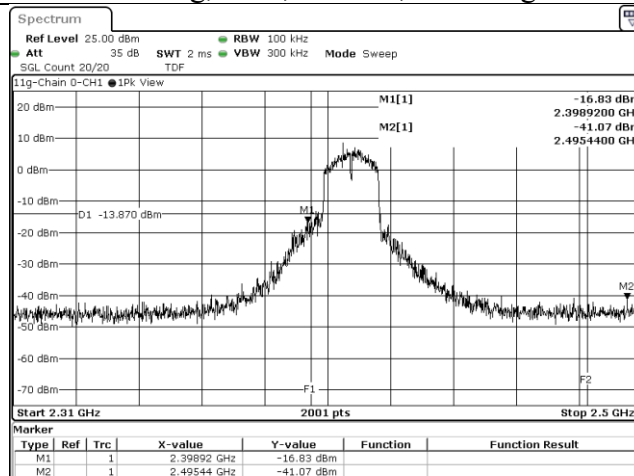
802.11g, CH1, Chain 0, Reference



802.11g, CH1, Chain 0, Conducted Emission



802.11g, CH1, Chain 0, Band edge



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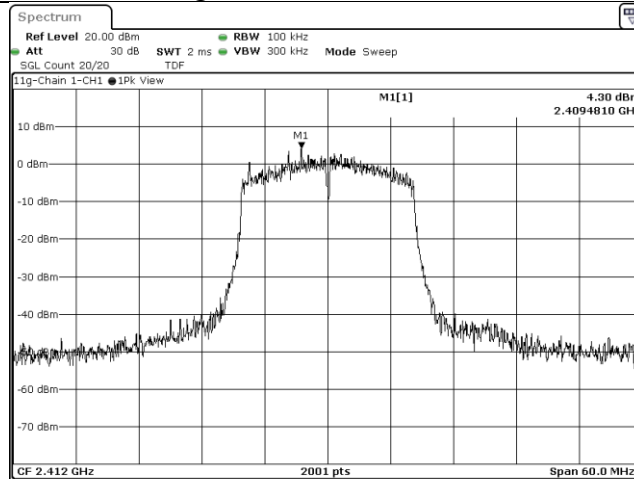
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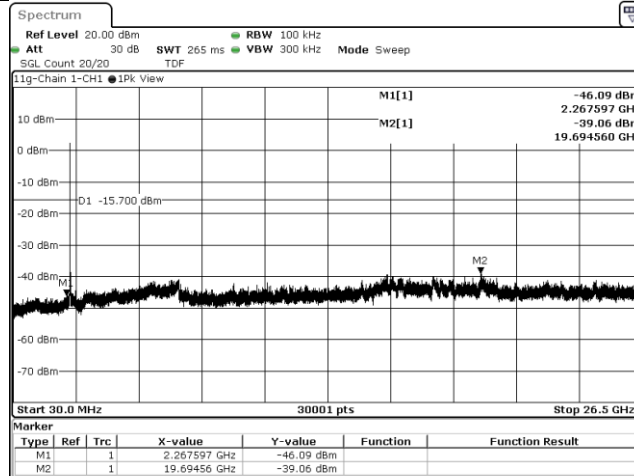
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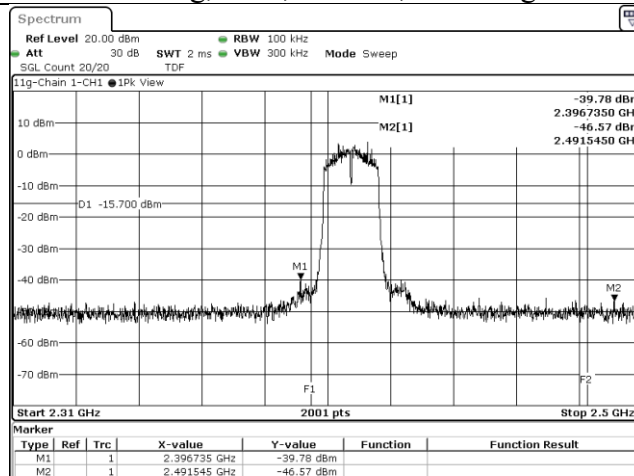
802.11g, CH1, Chain 1, Reference



802.11g, CH1, Chain 1, Conducted Emission



802.11g, CH1, Chain 1, Band edge



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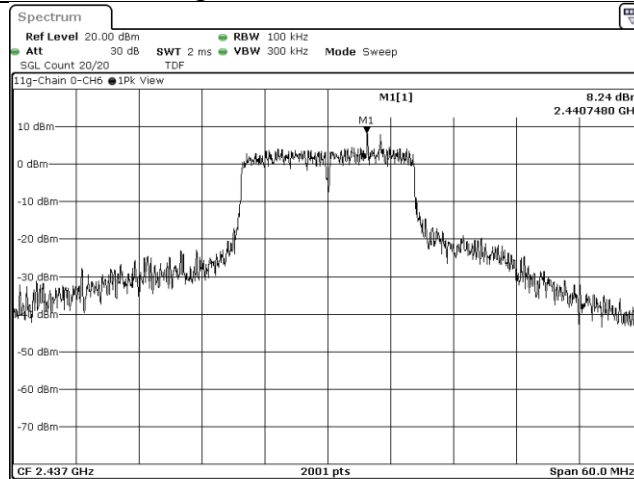
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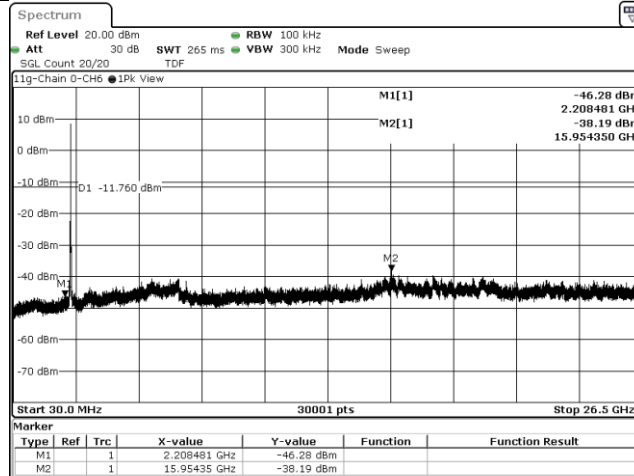
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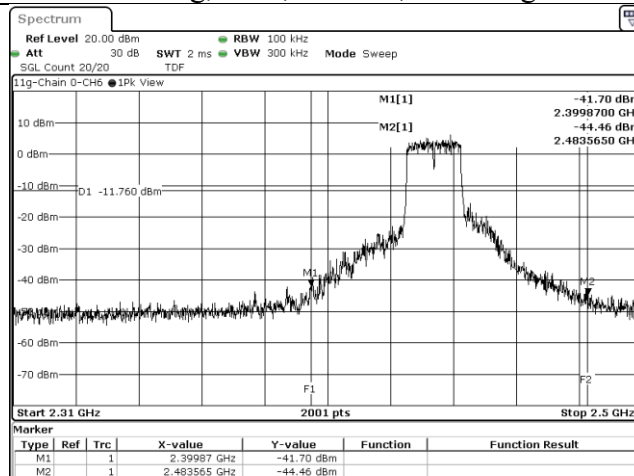
802.11g, CH6, Chain 0, Reference



802.11g, CH6, Chain 0, Conducted Emission



802.11g, CH6, Chain 0, Band edge



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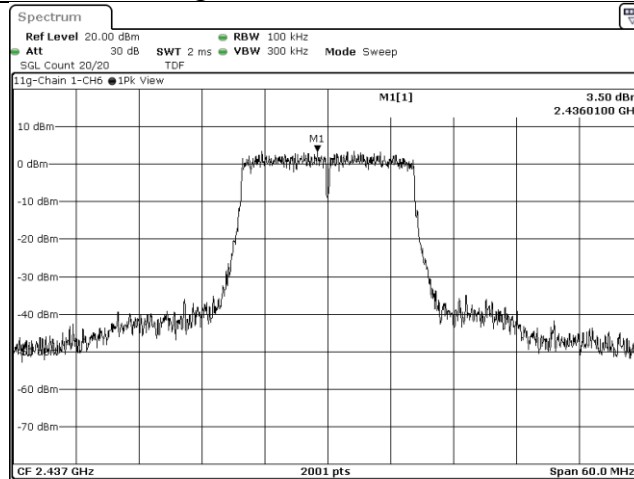
Telephone : +886-2-7737-3000

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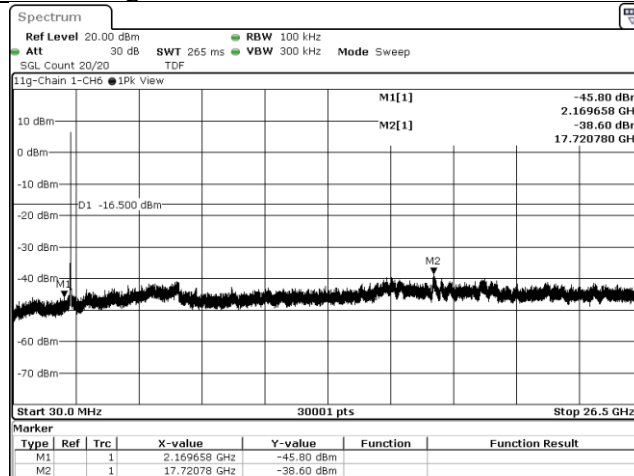
Doc No: 17-EM-F0876 / 6.0



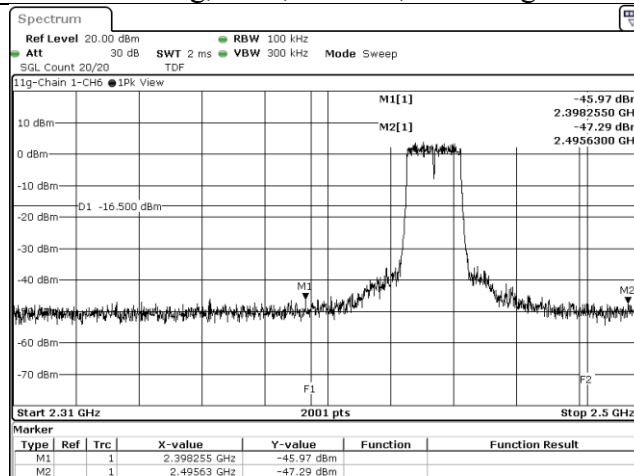
802.11g, CH6, Chain 1, Reference



802.11g, CH6, Chain 1, Conducted Emission



802.11g, CH6, Chain 1, Band edge



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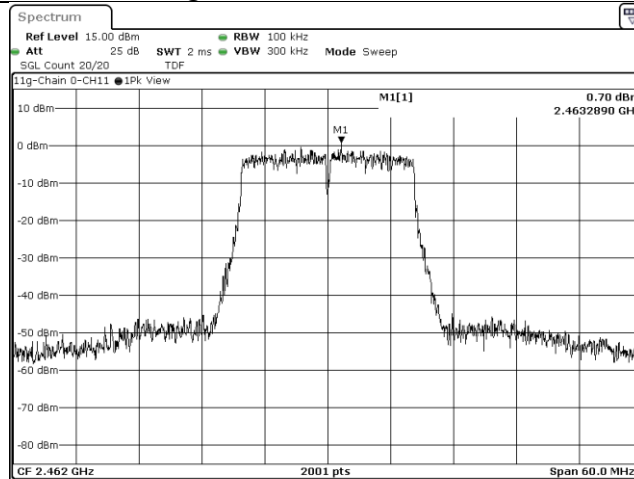
Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

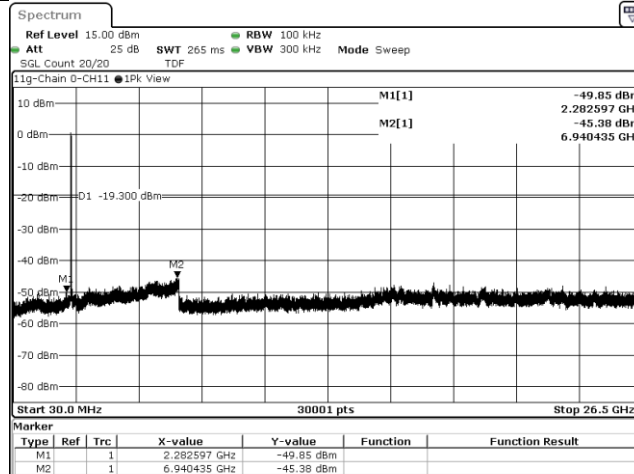
Doc No: 17-EM-F0876 / 6.0



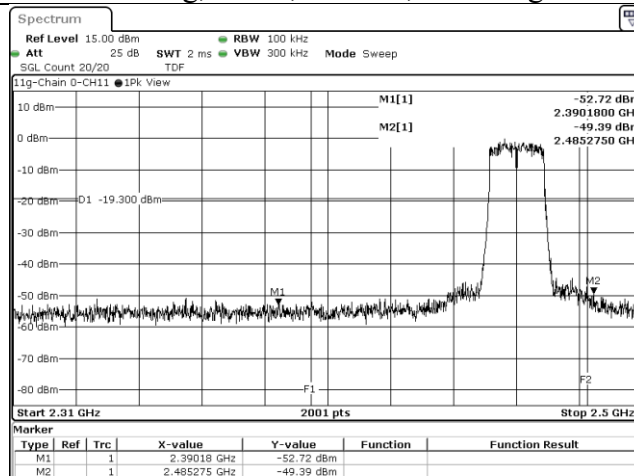
802.11g, CH11, Chain 0, Reference



802.11g, CH11, Chain 0, Conducted Emission



802.11g, CH11, Chain 0, Band edge



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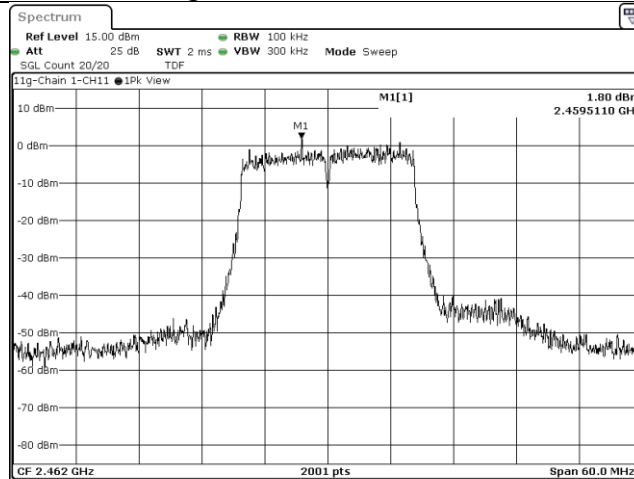
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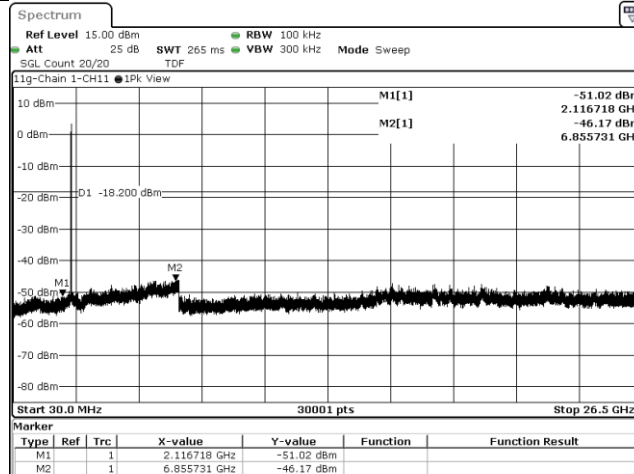
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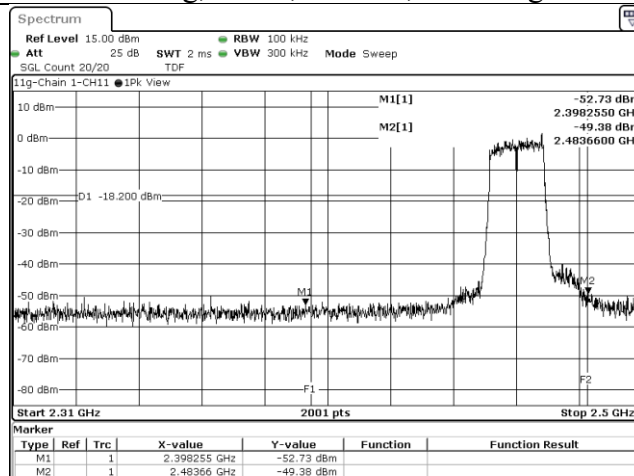
802.11g, CH11, Chain 1, Reference



802.11g, CH11, Chain 1, Conducted Emission



802.11g, CH11, Chain 1, Band edge



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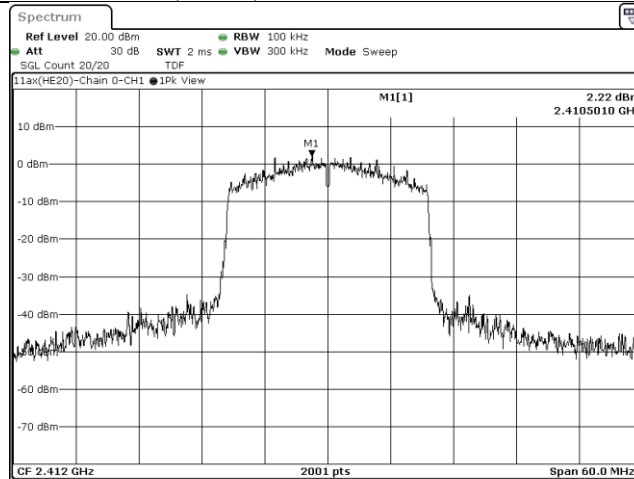
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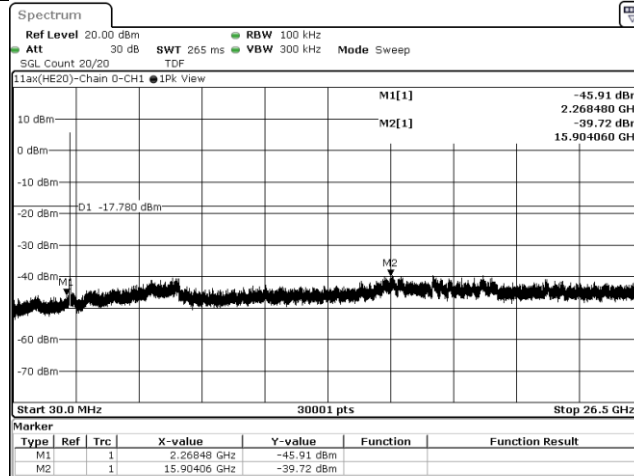
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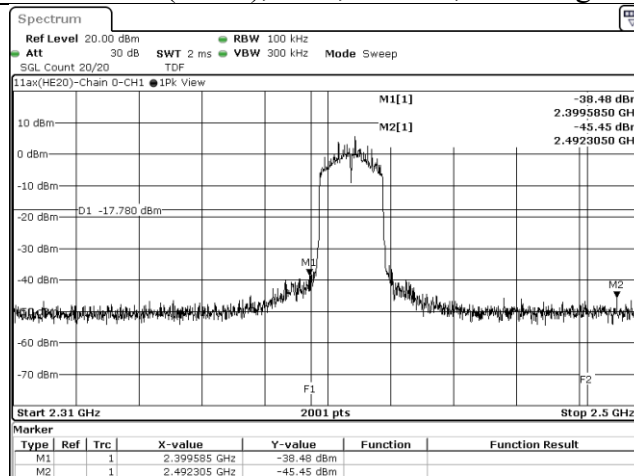
802.11ax(HE20), CH1, Chain 0, Reference



802.11ax(HE20), CH1, Chain 0, Conducted Emission



802.11ax(HE20), CH1, Chain 0, Band edge



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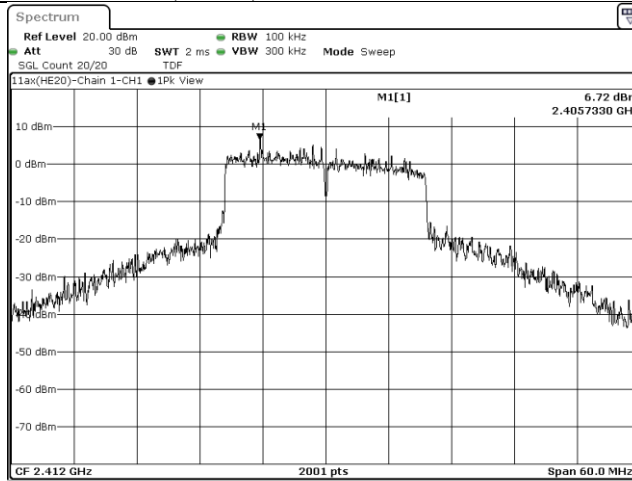
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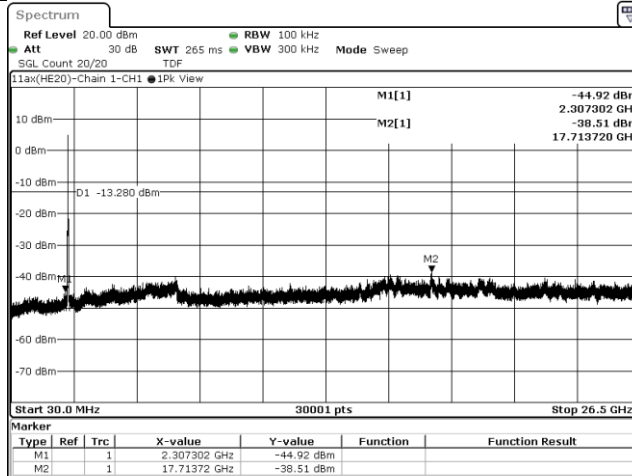
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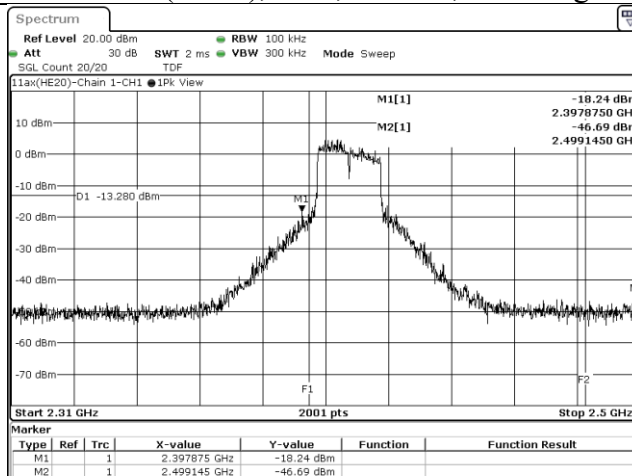
802.11ax(HE20), CH1, Chain 1, Reference



802.11ax(HE20), CH1, Chain 1, Conducted Emission



802.11ax(HE20), CH1, Chain 1, Band edge



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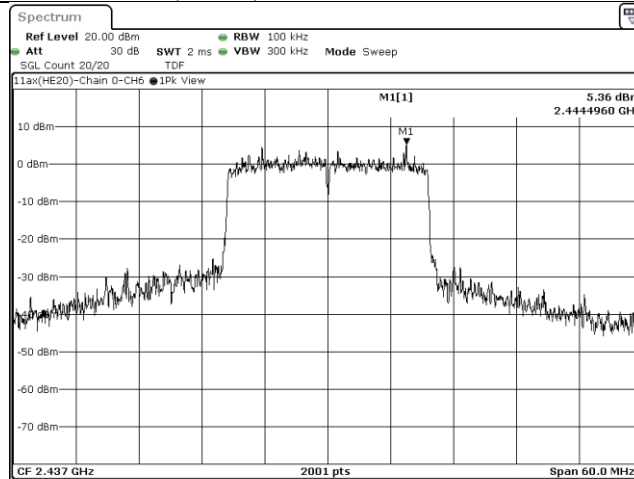
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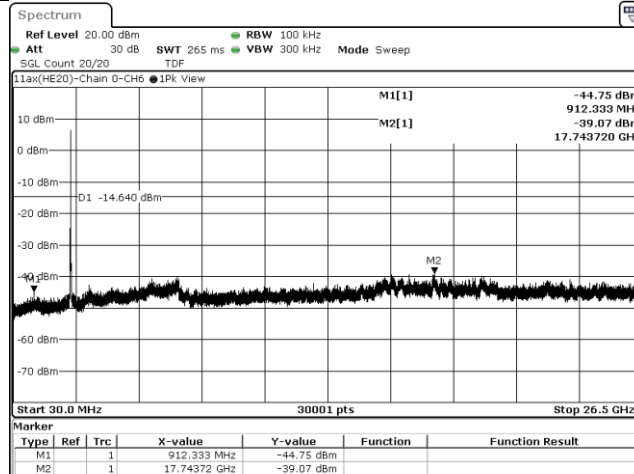
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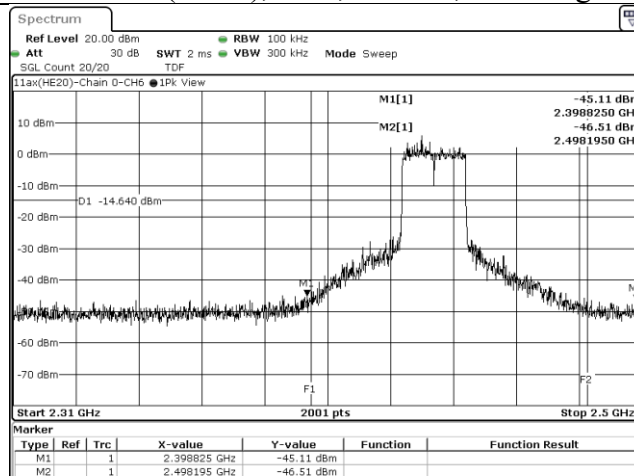
802.11ax(HE20), CH6, Chain 0, Reference



802.11ax(HE20), CH6, Chain 0, Conducted Emission



802.11ax(HE20), CH6, Chain 0, Band edge



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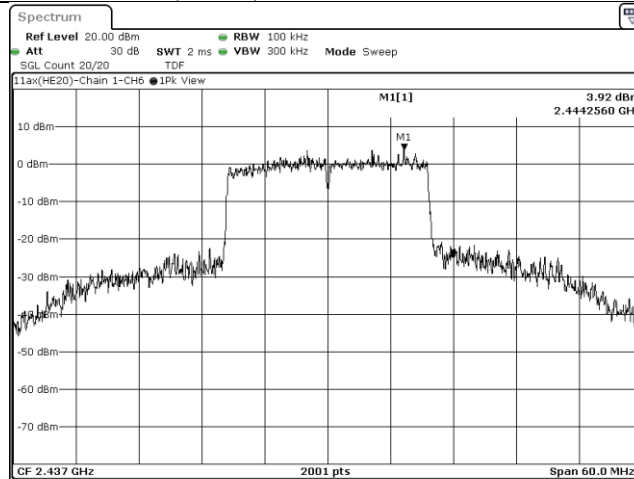
Telephone : +886-2-7737-3000

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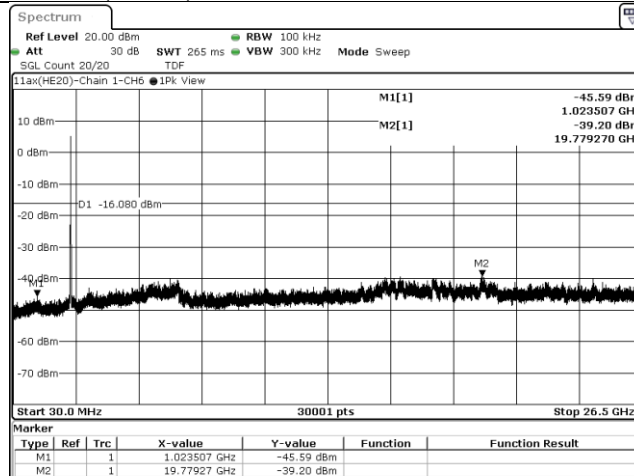
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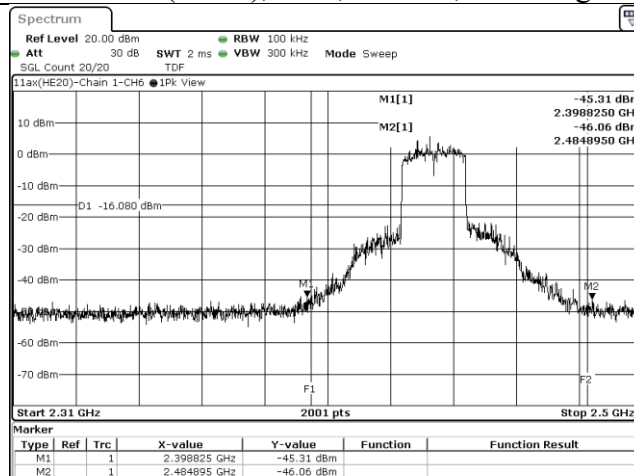
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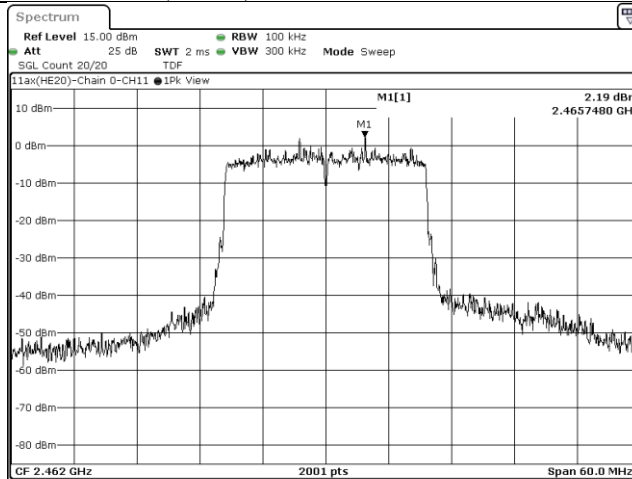


802.11ax(HE20), CH6, Chain 1, Band edge

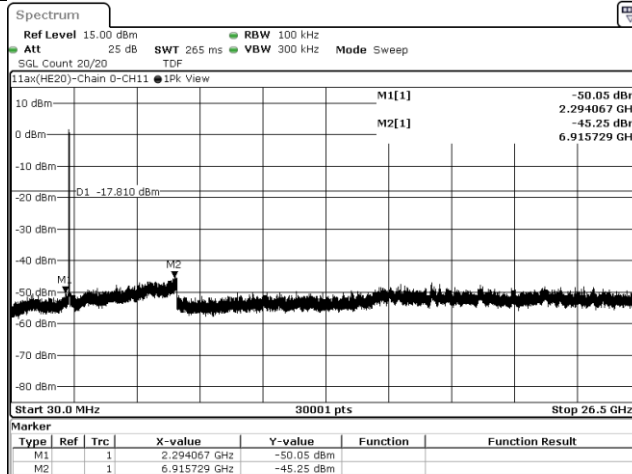




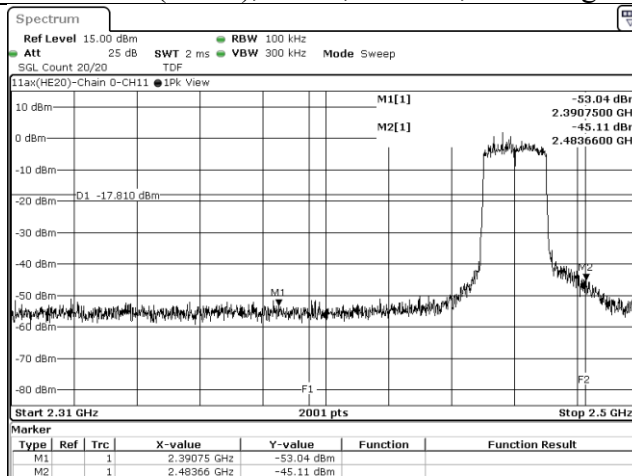
802.11ax(HE20), CH11, Chain 0, Reference



802.11ax(HE20), CH11, Chain 0, Conducted Emission



802.11ax(HE20), CH11, Chain 0, Band edge



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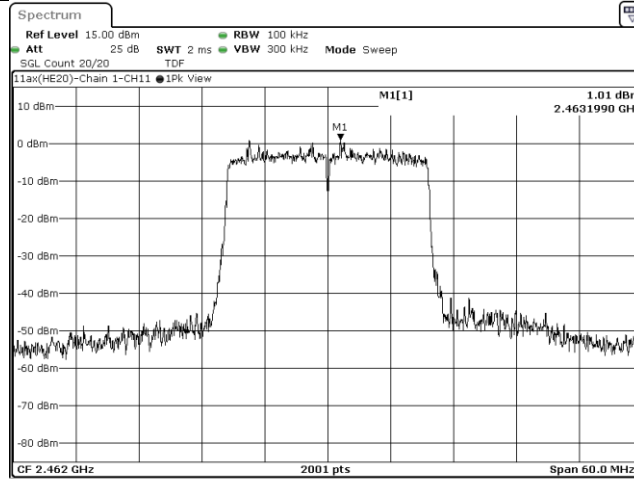
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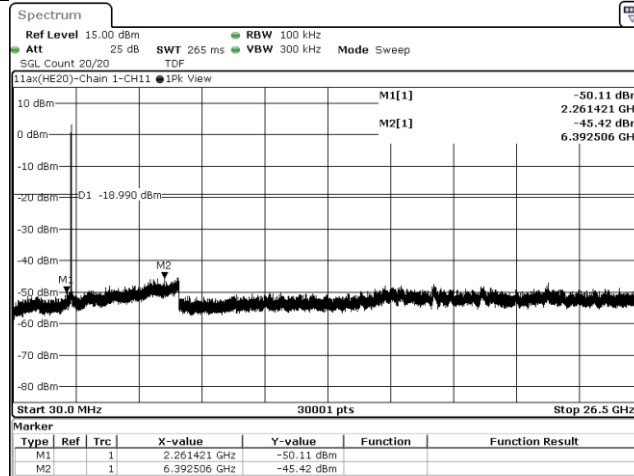
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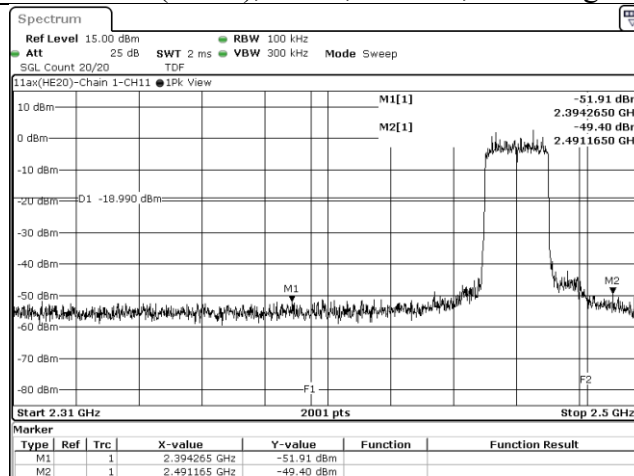
802.11ax(HE20), CH11, Chain 1, Reference



802.11ax(HE20), CH11, Chain 1, Conducted Emission



802.11ax(HE20), CH11, Chain 1, Band edge



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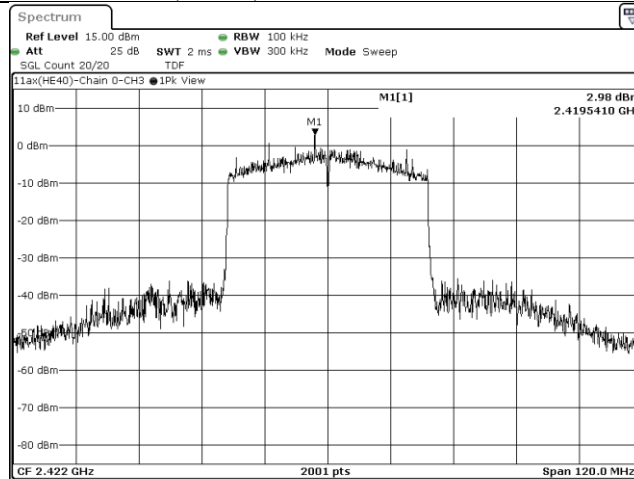
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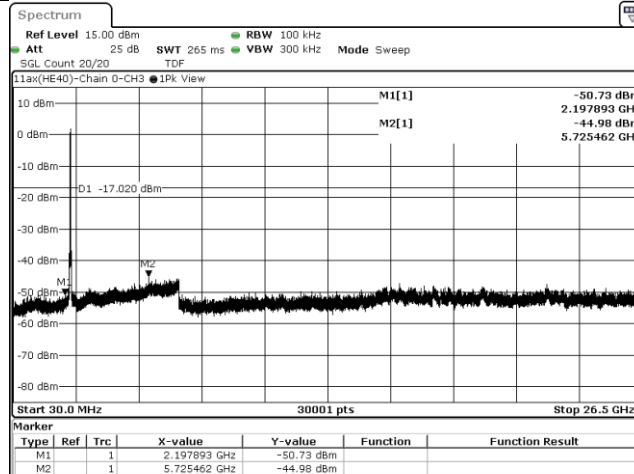
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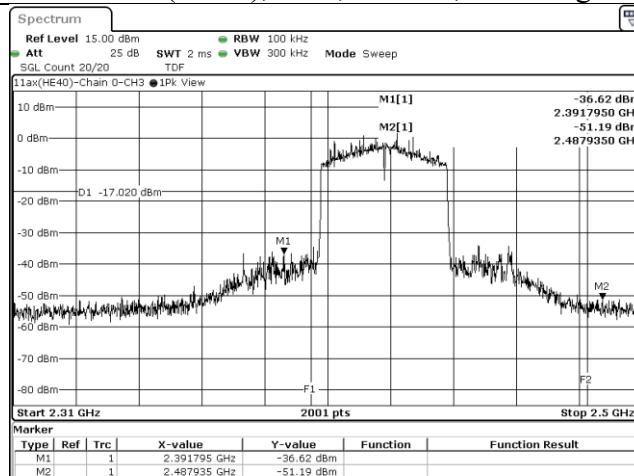
802.11ax(HE40), CH3, Chain 0, Reference



802.11ax(HE40), CH3, Chain 0, Conducted Emission



802.11ax(HE40), CH3, Chain 0, Band edge



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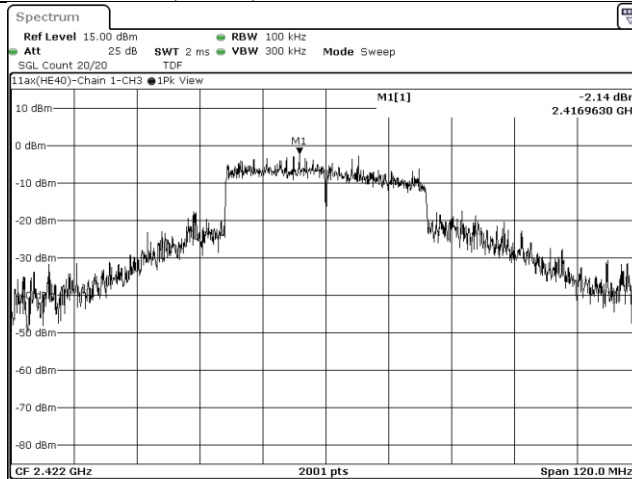
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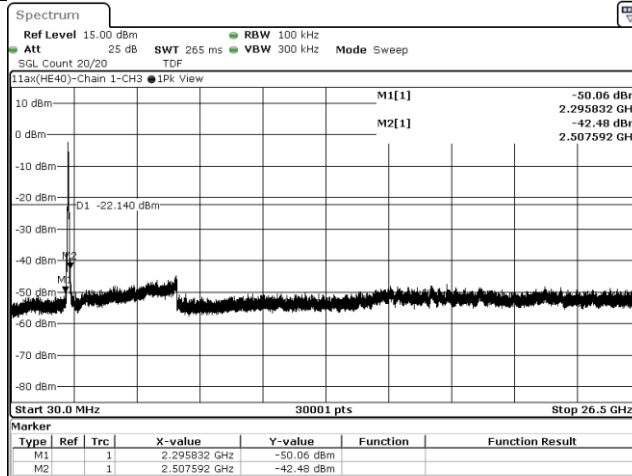
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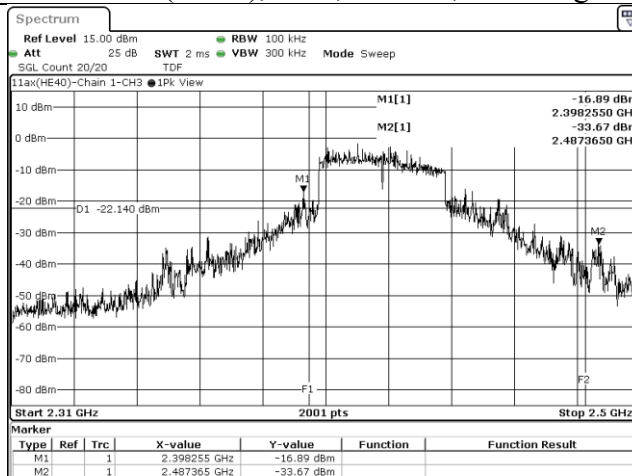
802.11ax(HE40), CH3, Chain 1, Reference



802.11ax(HE40), CH3, Chain 1, Conducted Emission



802.11ax(HE40), CH3, Chain 1, Band edge



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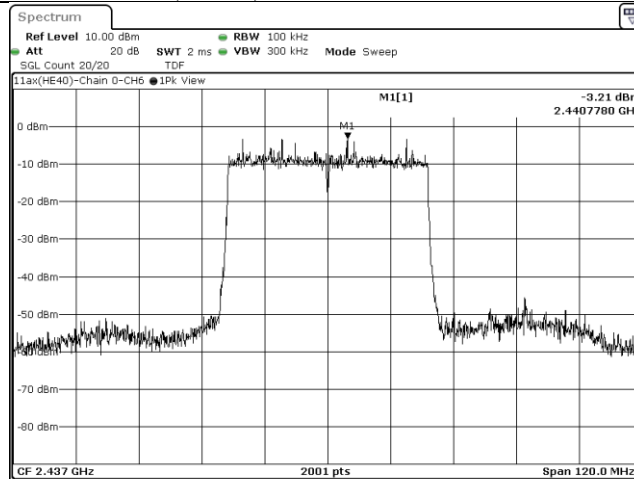
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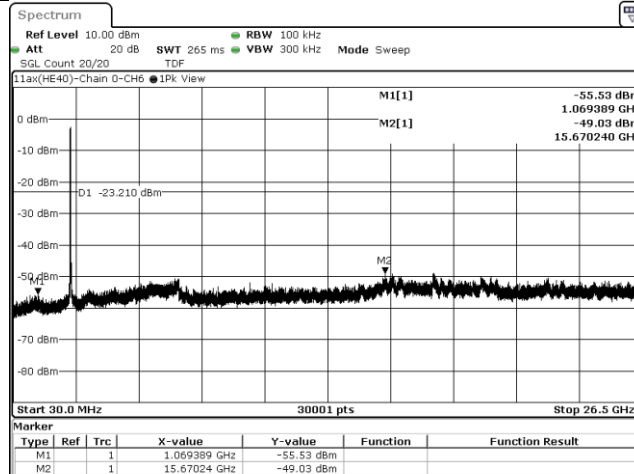
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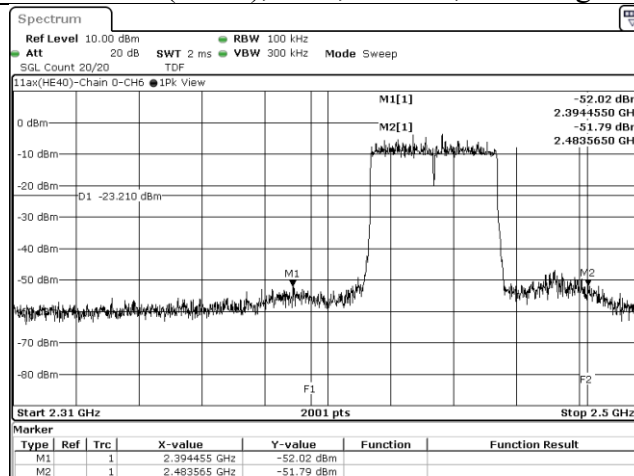
802.11ax(HE40), CH6, Chain 0, Reference



802.11ax(HE40), CH6, Chain 0, Conducted Emission



802.11ax(HE40), CH6, Chain 0, Band edge



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