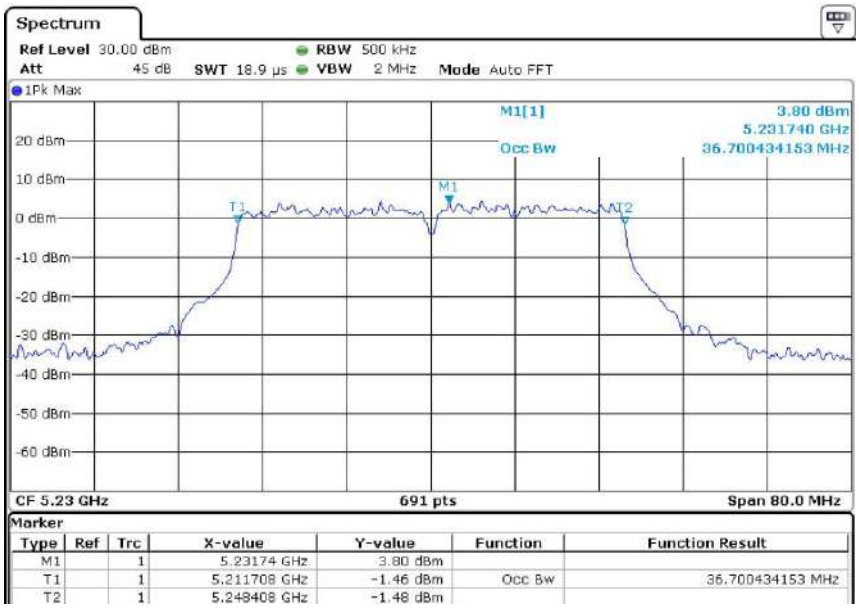
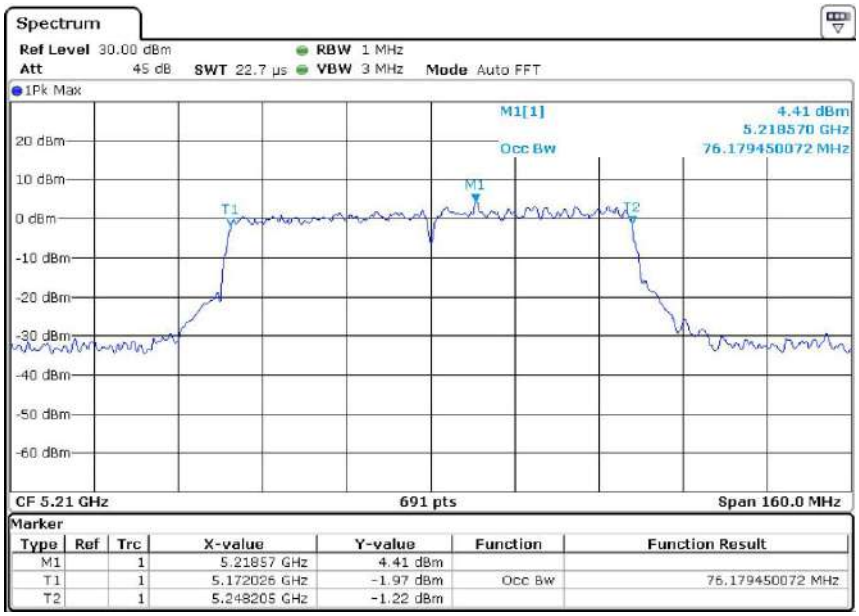
Channel: 46



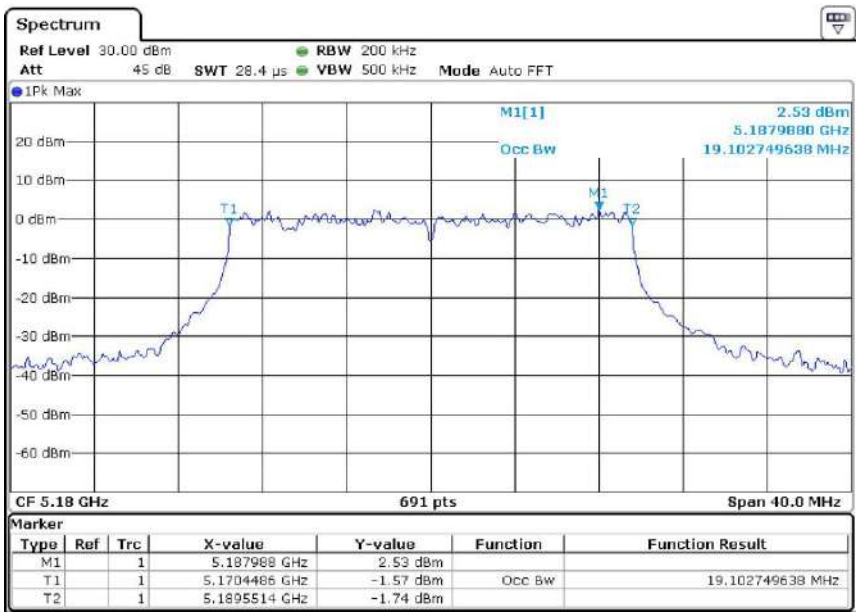
99% OBW 802.11ac80

Channel: 42

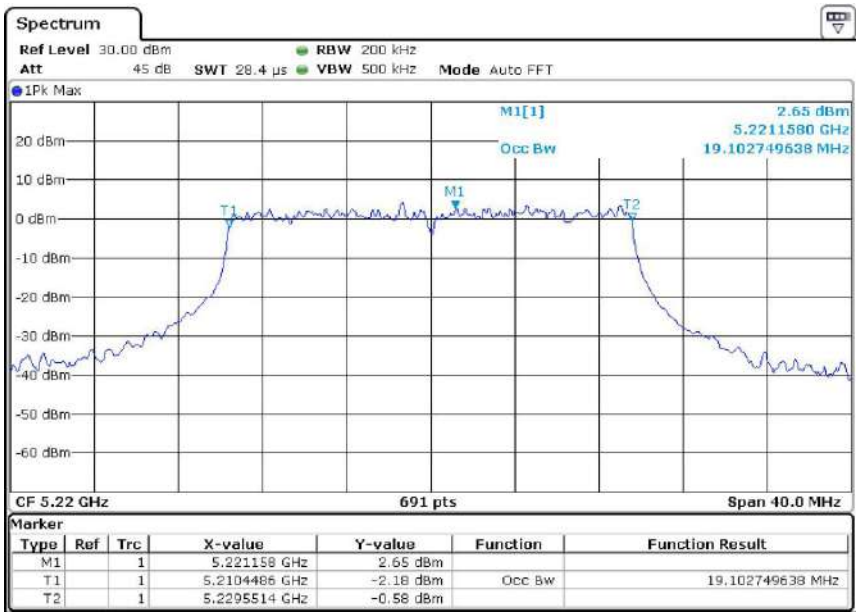


99% OBW 802.11ax20

Channel: 36



Channel: 44



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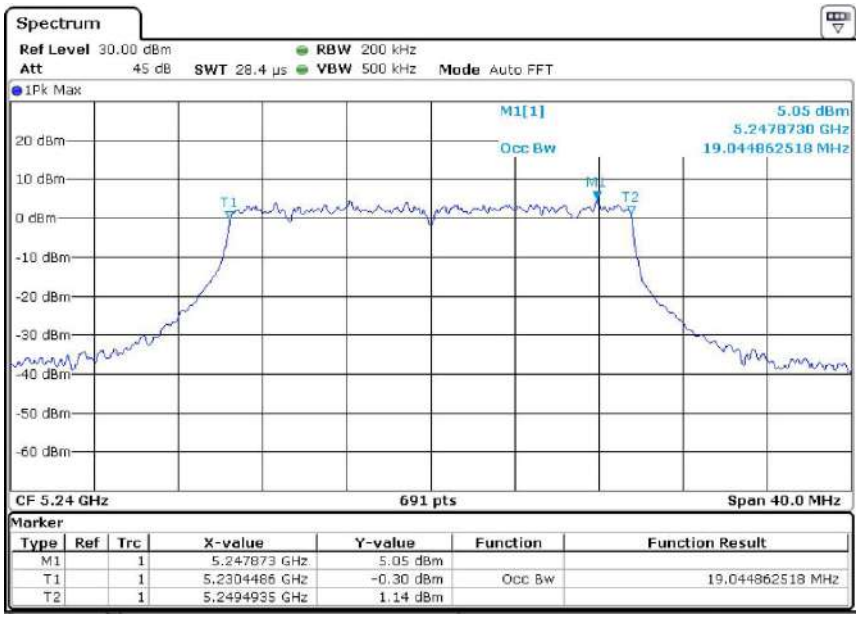
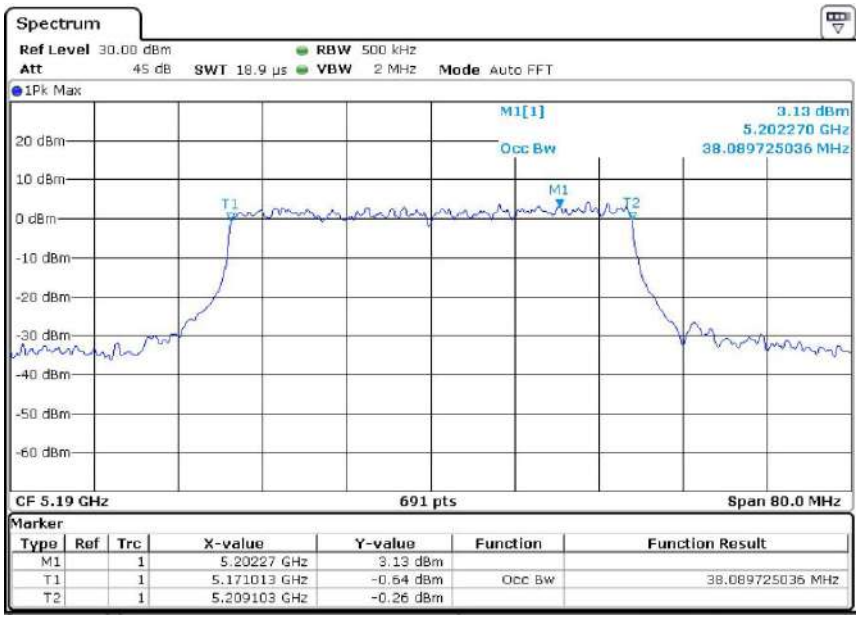
Channel: 48



99% OBW 802.11ax40

Channel: 38



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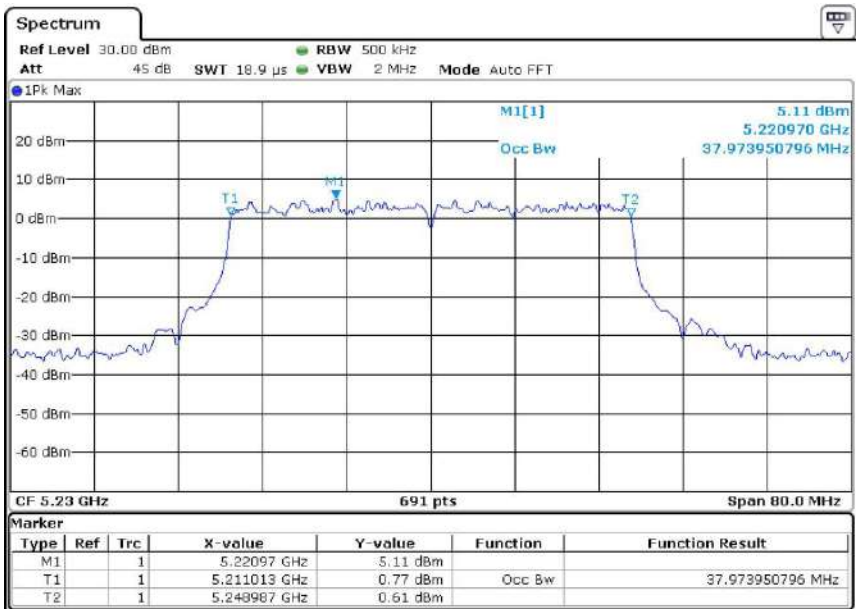
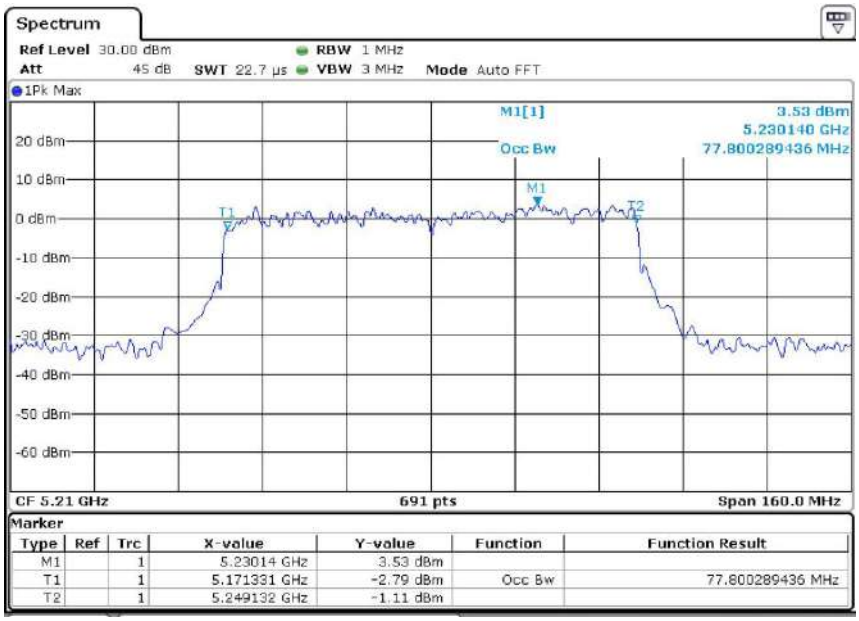
Channel: 46



99% OBW 802.11ax80

Channel: 42



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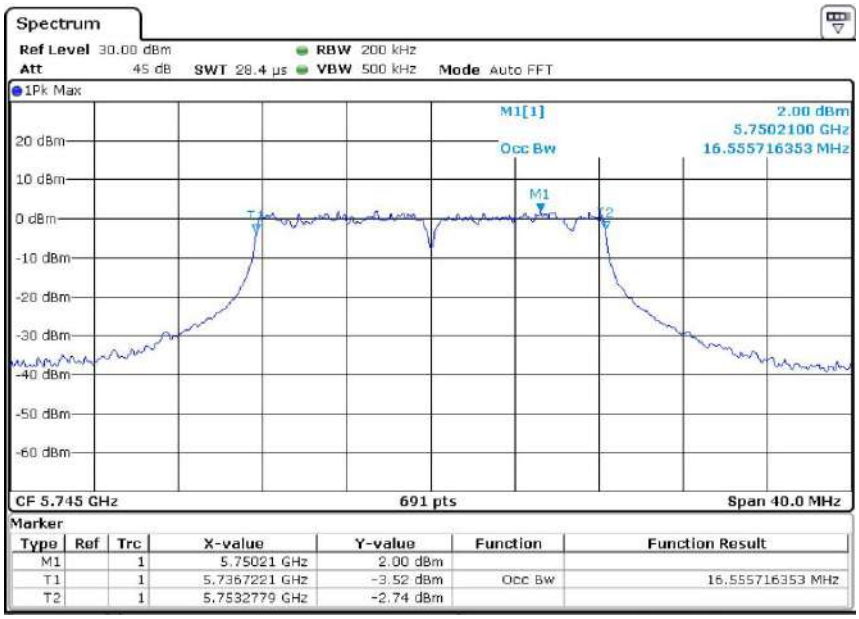
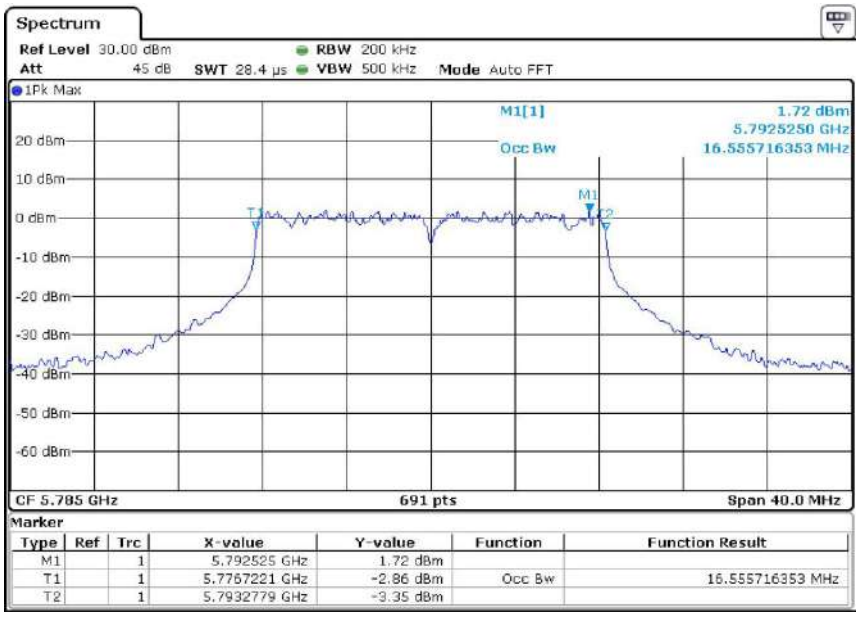
Test plots as followed: CHAIN 1

99% OBW 802.11a

Channel: 149



Channel: 157



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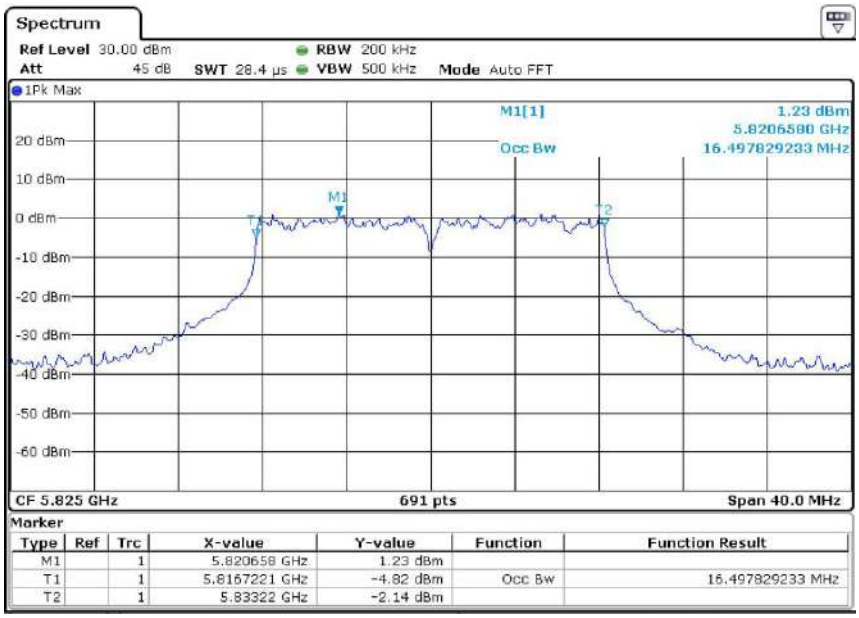
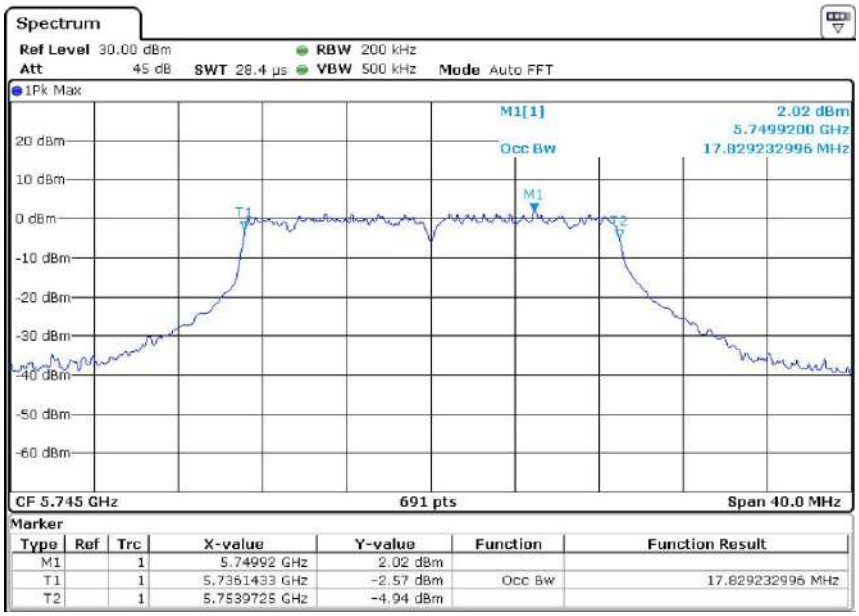
Channel: 165



99% OBW 802.11n20

Channel: 149



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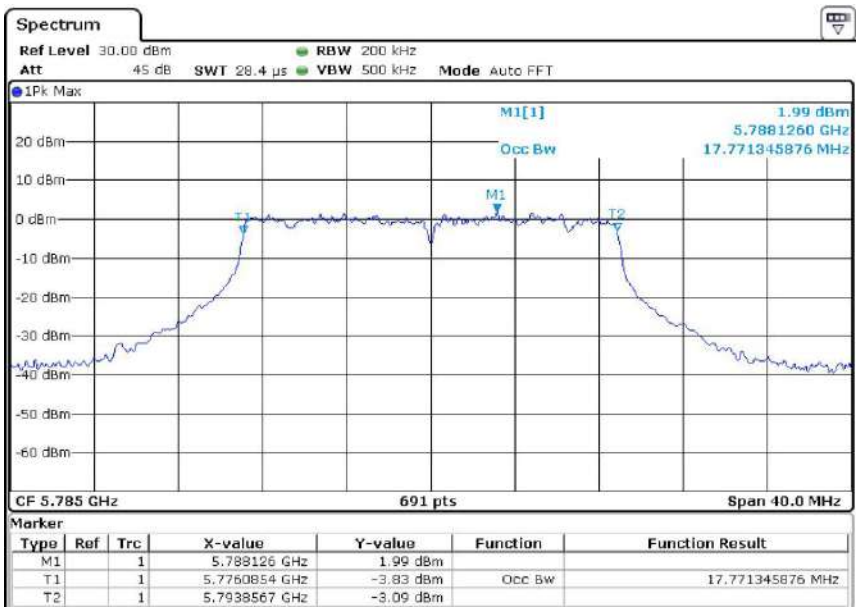
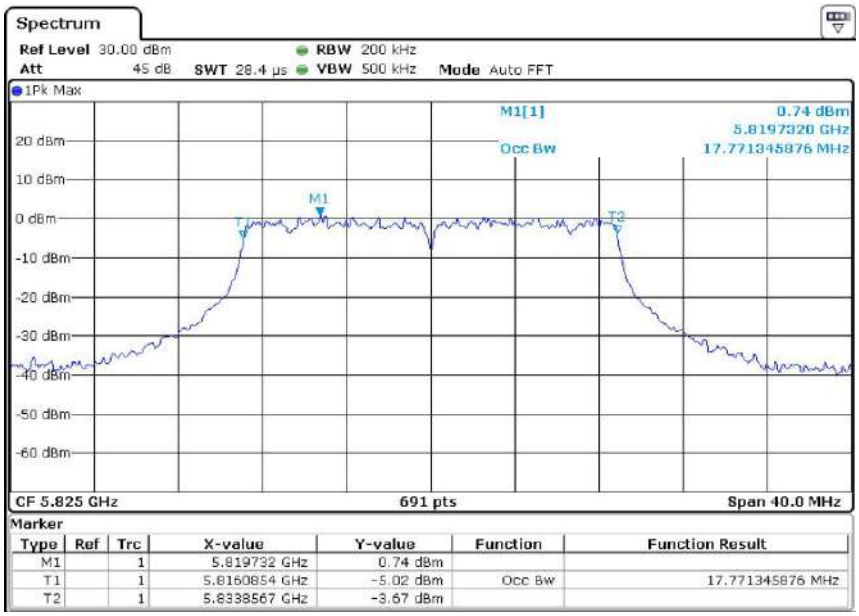
Channel: 157



Channel: 165



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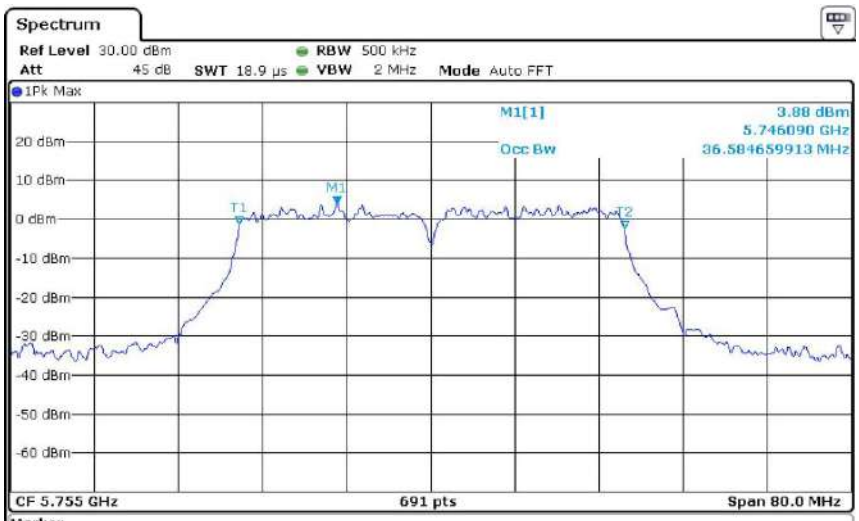
99% OBW 802.11n40

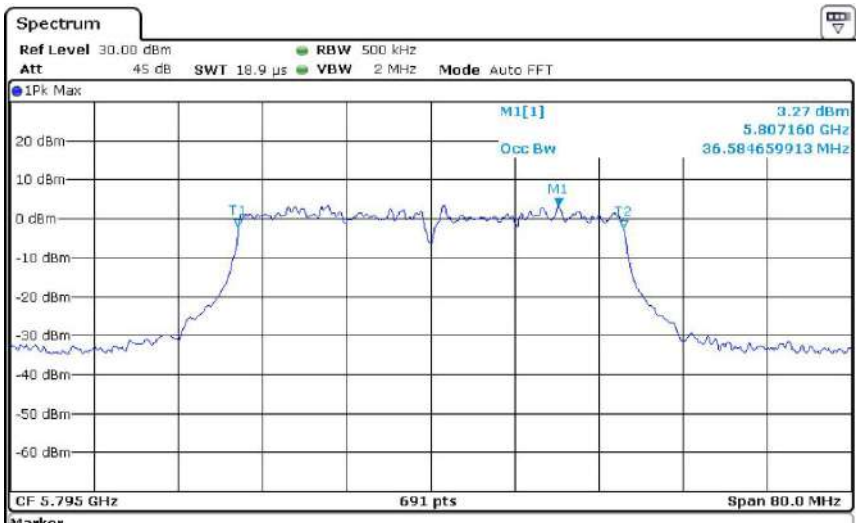
Channel: 151



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.74609 GHz	3.88 dBm		
T1		1	5.736823 GHz	-1.27 dBm	Occ Bw	36.584659913 MHz
T2		1	5.773408 GHz	-2.48 dBm		

Channel: 159



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.80716 GHz	3.27 dBm		
T1		1	5.776708 GHz	-2.04 dBm	Occ Bw	36.584659913 MHz
T2		1	5.813292 GHz	-2.39 dBm		

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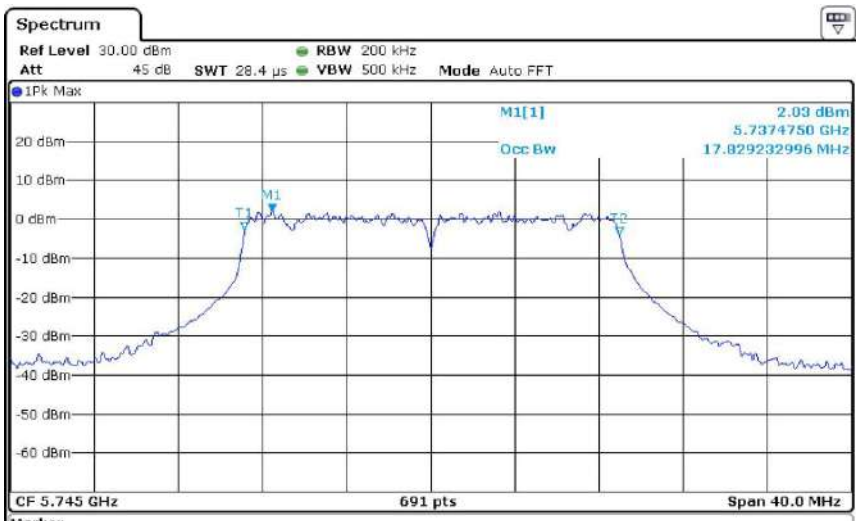
99% OBW 802.11ac20

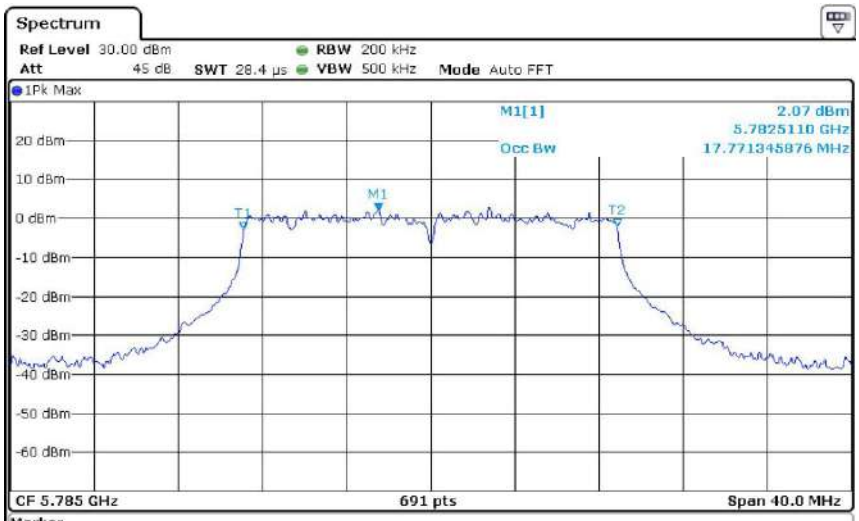
Channel: 149



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.737475 GHz	2.03 dBm		
T1		1	5.7361433 GHz	-2.68 dBm	Occ Bw	17.829232996 MHz
T2		1	5.7539725 GHz	-4.04 dBm		

Channel: 157



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.782511 GHz	2.07 dBm		
T1		1	5.7760854 GHz	-2.86 dBm	Occ Bw	17.771345876 MHz
T2		1	5.7938567 GHz	-2.15 dBm		

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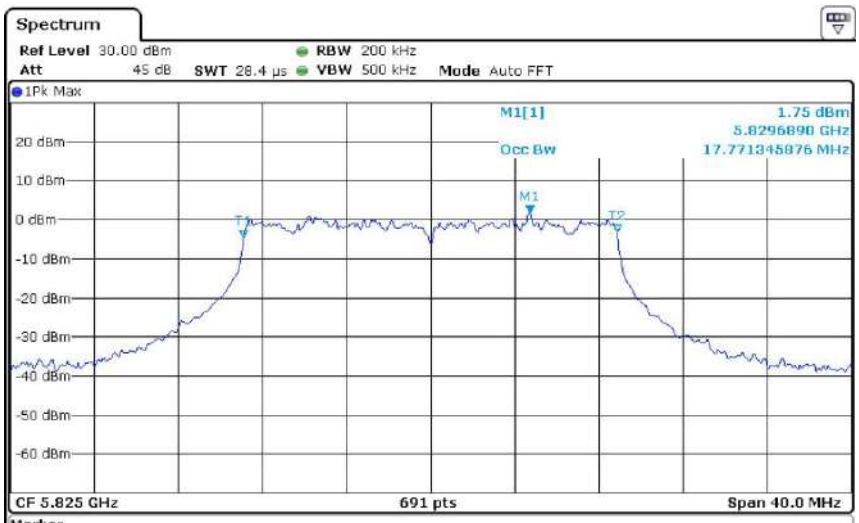
Channel: 165



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.829689 GHz	1.75 dBm		
T1		1	5.8160854 GHz	-4.52 dBm	Occ Bw	17.771345876 MHz
T2		1	5.8338567 GHz	-3.27 dBm		

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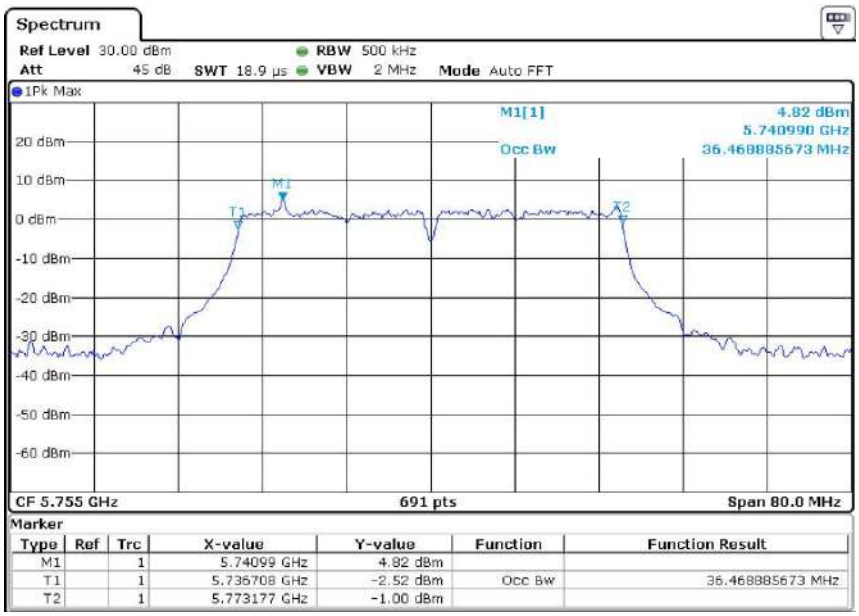
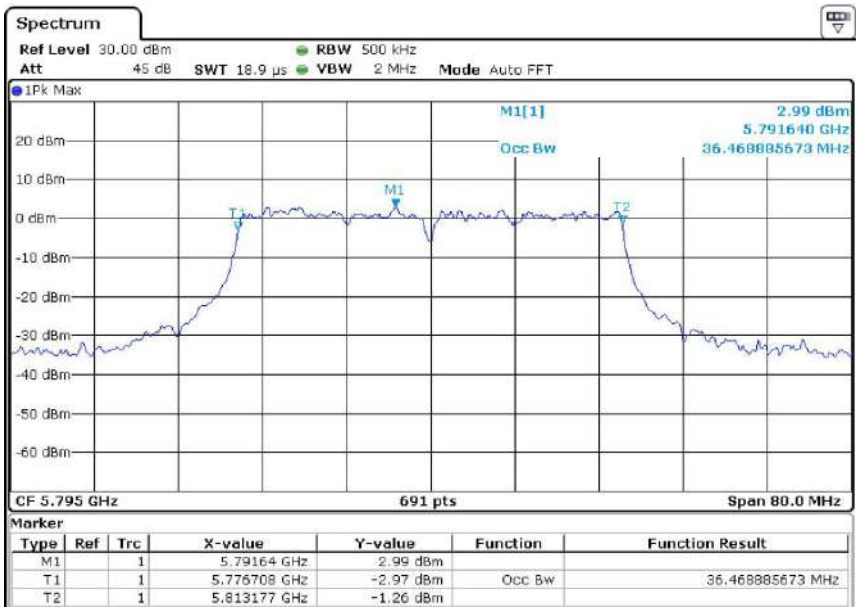
99% OBW 802.11ac40

Channel: 151



Channel: 159



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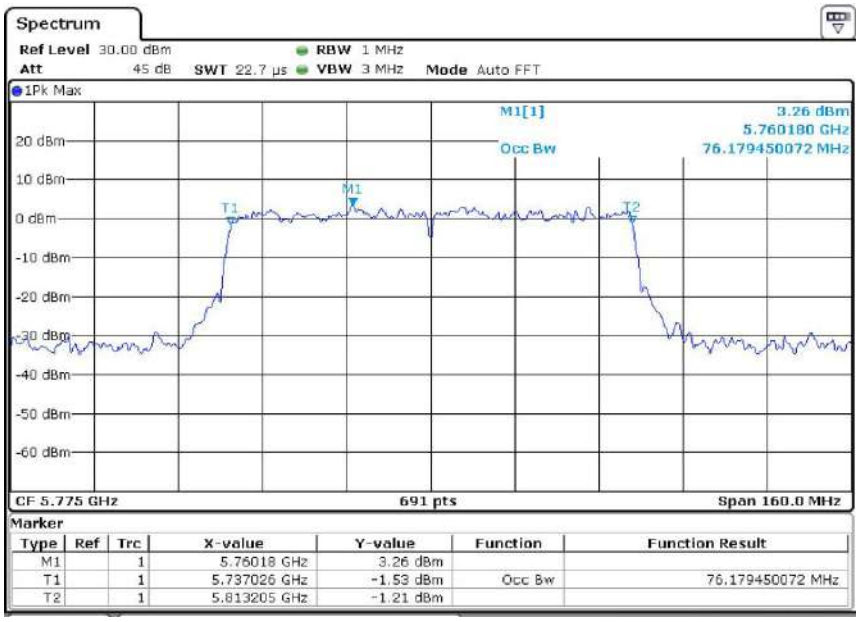
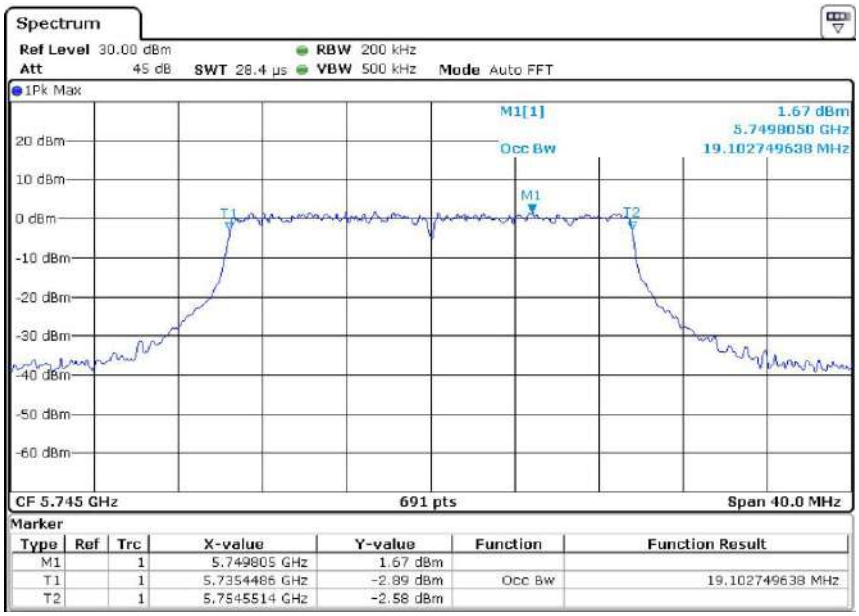
99% OBW 802.11ac80

Channel: 155



99% OBW 802.11ax20

Channel: 149



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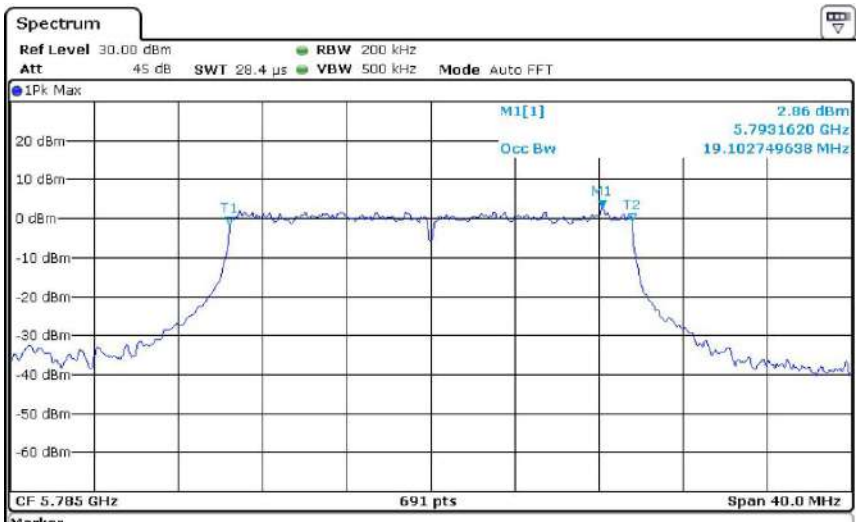
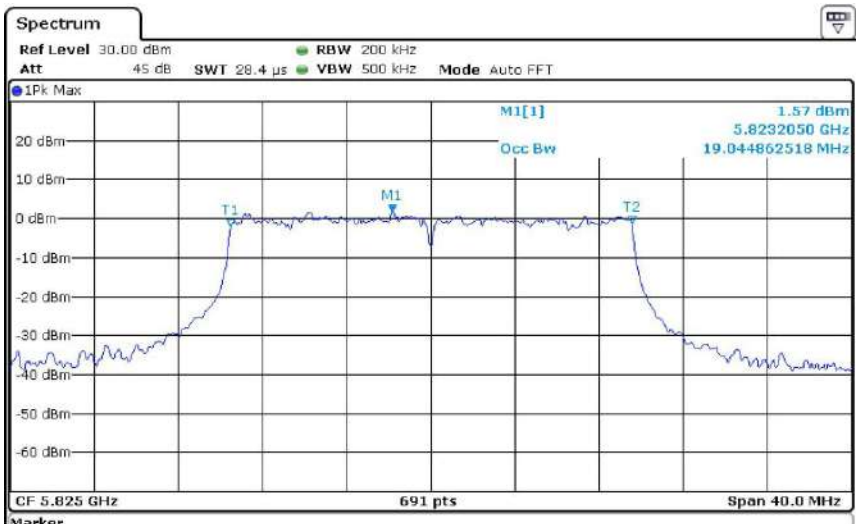
Channel: 157



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.793162 GHz	2.86 dBm		
T1		1	5.7754486 GHz	-1.65 dBm	Occ Bw	19.102749638 MHz
T2		1	5.7945514 GHz	-0.89 dBm		

Channel: 165



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.823205 GHz	1.57 dBm		
T1		1	5.8155065 GHz	-2.23 dBm	Occ Bw	19.044862518 MHz
T2		1	5.8345514 GHz	-1.39 dBm		

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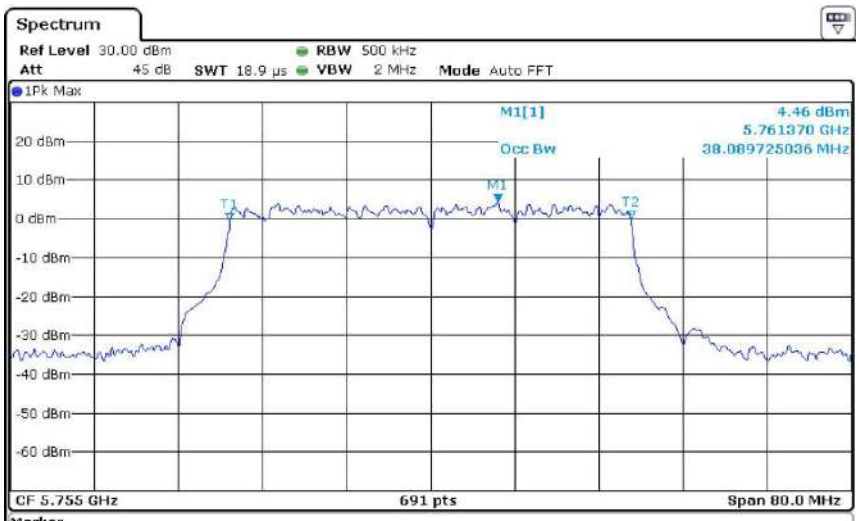
99% OBW 802.11ax40

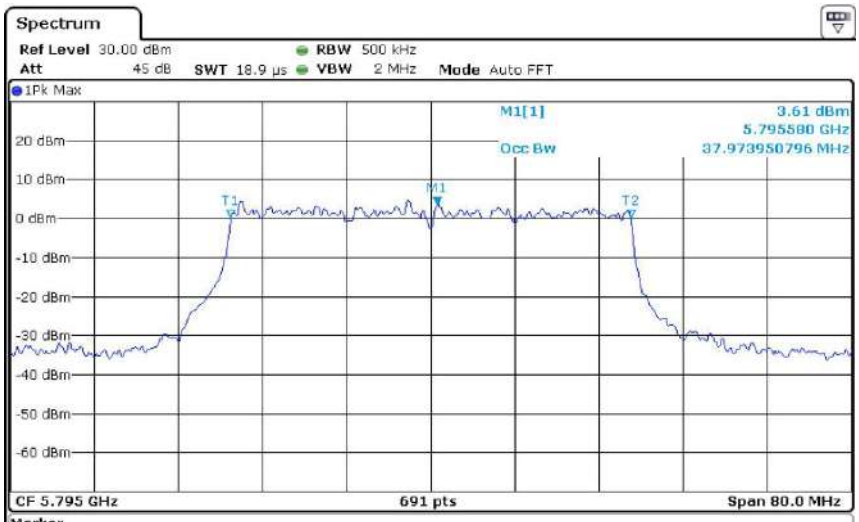
Channel: 151



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.76137 GHz	4.46 dBm		
T1		1	5.735897 GHz	-0.65 dBm	Occ Bw	38.089725036 MHz
T2		1	5.773987 GHz	0.05 dBm		

Channel: 159



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.79558 GHz	3.61 dBm		
T1		1	5.776013 GHz	0.30 dBm	Occ Bw	37.973950796 MHz
T2		1	5.813987 GHz	0.21 dBm		

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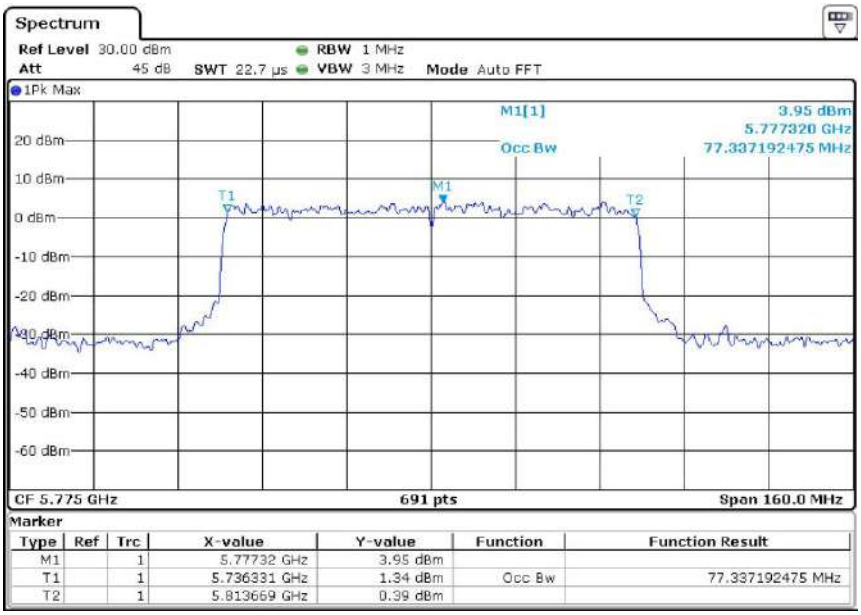
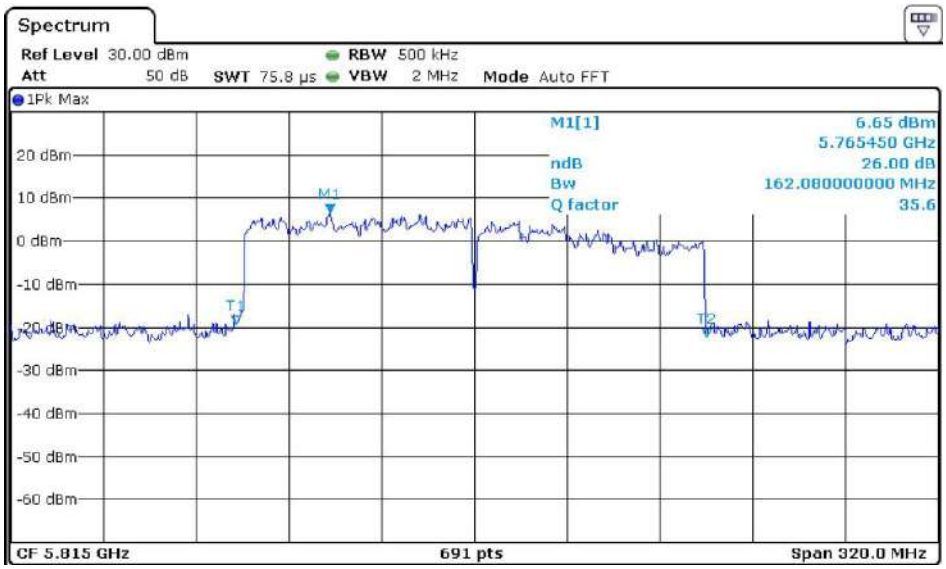
99% OBW 802.11ax80

Channel: 155



99% OBW 802.11ax160

Channel: 163



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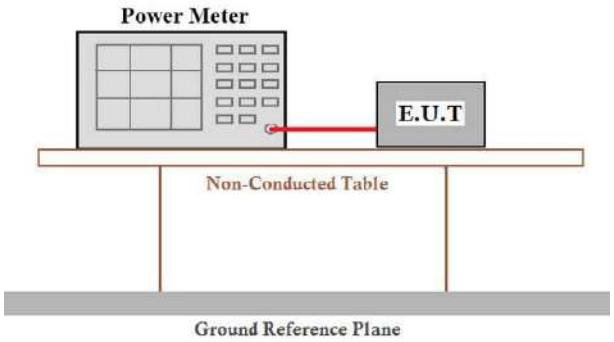
6. MAXIMUM CONDUCTED OUTPUT POWER

Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 250mW. For the band 5.745-5.850 GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 30dBm
Test setup:	
Test procedure:	**Measurement using an RF average power meter** (i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied a) The EUT is configured to transmit continuously or to transmit with a constant duty cycle. b) At all times when the EUT is transmitting, it must be transmitting at its maximum power control level. c) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five. (ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section B). (iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter. (iv) Adjust the measurement in dBm by adding 10 log(1/x) where x is the duty cycle (e.g., 10log(1/0.25) if the duty cycle is 25 percent).
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details

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6.1. TEST RESULT CHAIN 0

CH. No.	Frequency (MHz)	Output Power (dBm)				Limit(dBm)	Result
		802.11a	802.11n (HT20)	802.11ac (VHT20)	802.11ax (HE20)		
36	5180.00	20.21	19.55	20.10	21.64	23.98	Pass
44	5220.00	19.54	20.21	19.22	21.25	23.98	Pass
48	5240.00	20.15	19.66	20.54	21.35	23.98	Pass
149	5745.00	23.54	24.01	23.58	24.14	30	Pass
157	5785.00	24.32	23.21	24.51	23.61	30	Pass
165	5825.00	23.15	24.28	23.15	23.96	30	Pass

CH. No.	Frequency (MHz)	Output Power (dBm)			Limit(dBm)	Result
		802.11n (HT40)	802.11ac (VHT40)	802.11ax (HE40)		
38	5190.00	21.76	21.11	22.16	23.98	Pass
46	5230.00	21.44	20.84	20.32	23.98	Pass
151	5755.00	23.46	23.54	24.10	30	Pass
159	5795.00	24.05	23.51	23.88	30	Pass

CH. No.	Frequency (MHz)	Output Power (dBm)		Limit(dBm)	Result
		802.11ac(VHT80)	802.11ax(HE80)		
42	5210.00	20.14	20.26	23.98	Pass
155	5775.00	23.54	24.19	30	Pass

CH. No.	Frequency (MHz)	Output Power (dBm)	Limit(dBm)	Result
		802.11ax(HE160)		
163	5815.00	17.80	30	Pass

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TEST RESULT CHAIN 1

CH. No.	Frequency (MHz)	Output Power (dBm)				Limit(dBm)	Result
		802.11a	802.11n (HT20)	802.11ac (VHT20)	802.11ax (HE20)		
36	5180.00	20.19	20.48	21.21	19.46	23.98	Pass
44	5220.00	19.54	20.33	19.58	20.64	23.98	Pass
48	5240.00	20.49	19.66	20.57	20.33	23.98	Pass
149	5745.00	24.285	23.54	23.69	21.05	30	Pass
157	5785.00	24.05	23.65	24.11	21.41	30	Pass
165	5825.00	23.65	23.54	23.47	21.12	30	Pass

CH. No.	Frequency (MHz)	Output Power (dBm)			Limit(dBm)	Result
		802.11n (HT40)	802.11ac (VHT40)	802.11ax (HE40)		
38	5190.00	20.54	20.58	21.44	23.98	Pass
46	5230.00	19.65	20.54	19.36	23.98	Pass
151	5755.00	23.57	24.05	23.66	30	Pass
159	5795.00	24.38	24.11	23.63	30	Pass

CH. No.	Frequency (MHz)	Output Power (dBm)		Limit(dBm)	Result
		802.11ac(VHT80)	802.11ax(HE80)		
42	5210.00	19.67	20.45	23.98	Pass
155	5775.00	24.57	23.55	30	Pass

CH. No.	Frequency (MHz)	Output Power (dBm)	Limit(dBm)	Result
		802.11ax(HE160)		
163	5815.00	17.24	30	Pass

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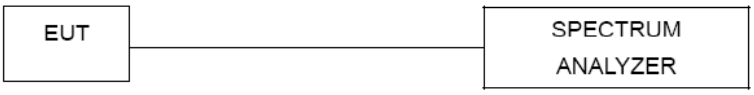
7. Band Edges Measurement

Test Requirement:	FCC Part15 E Section 15.407 and 5.205
Test Method:	ANSI C63.10:2013
Limit:	Undesirable emission limits: (1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band. (3) For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of −27 dBm/MHz.
Test Procedure:	a. The Transmitter output of EUT was connected to the spectrum analyzer. Equipment mode: Spectrum analyzer Detector function: Peak mode SPAN: 100MHz RBW: 1 MHz VBW: 1 MHz Sweep time= Auto. b. Using Peak Search to read the peak power of Carrier frequencies after Maximum Hold function is completed. c. Find the next peak frequency outside the operation frequency band.
Test setup:	
Test results:	Pass

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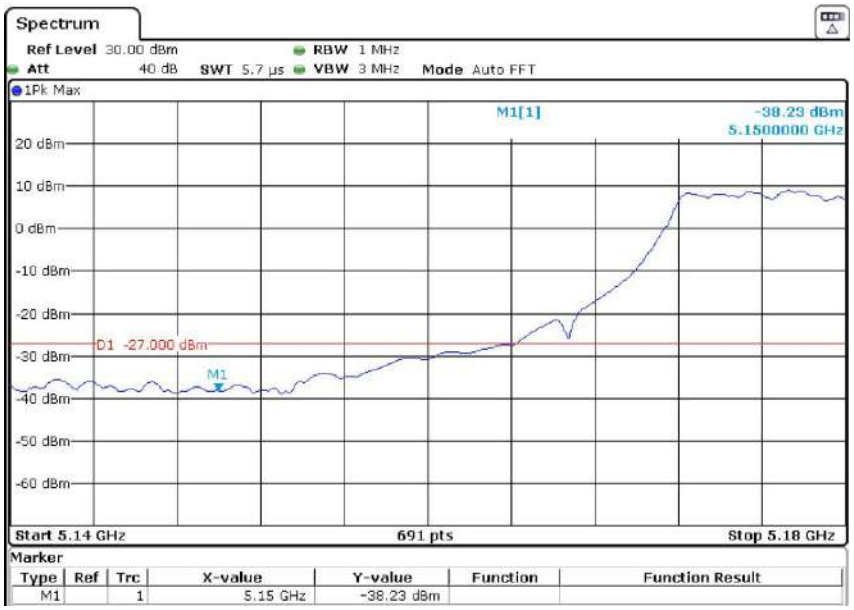
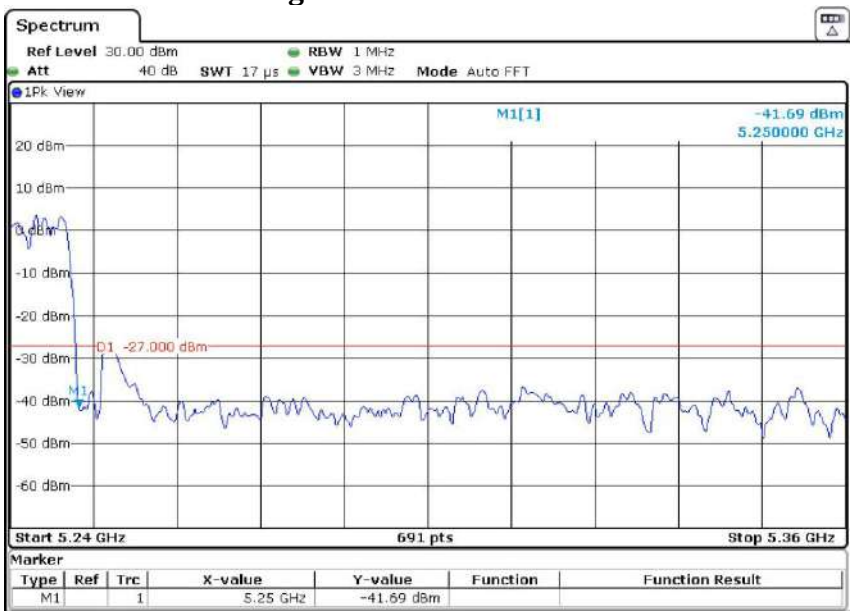
7.1. TEST RESULT CHAIN 0

802.11a (5.15GHz-5.25GHz)
The Low Channel 36: 5180MHz

8. 

802.11a (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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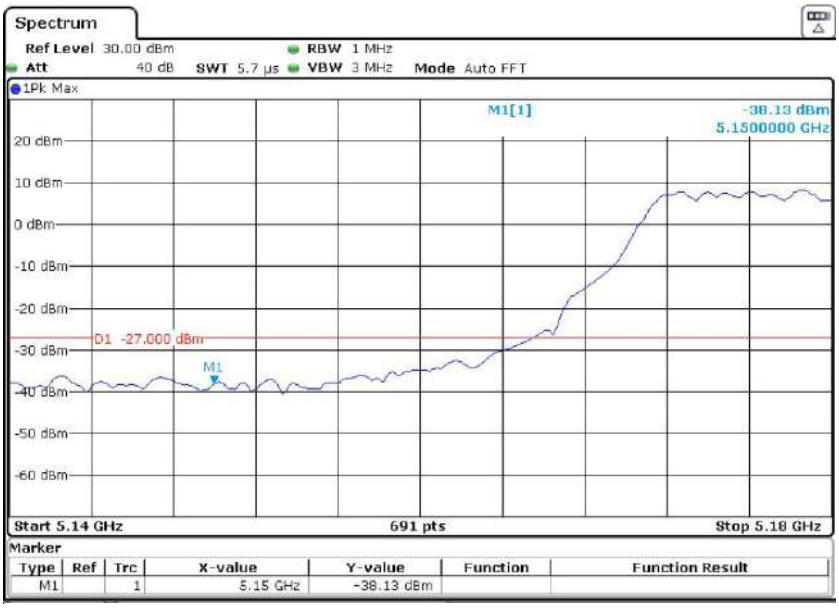
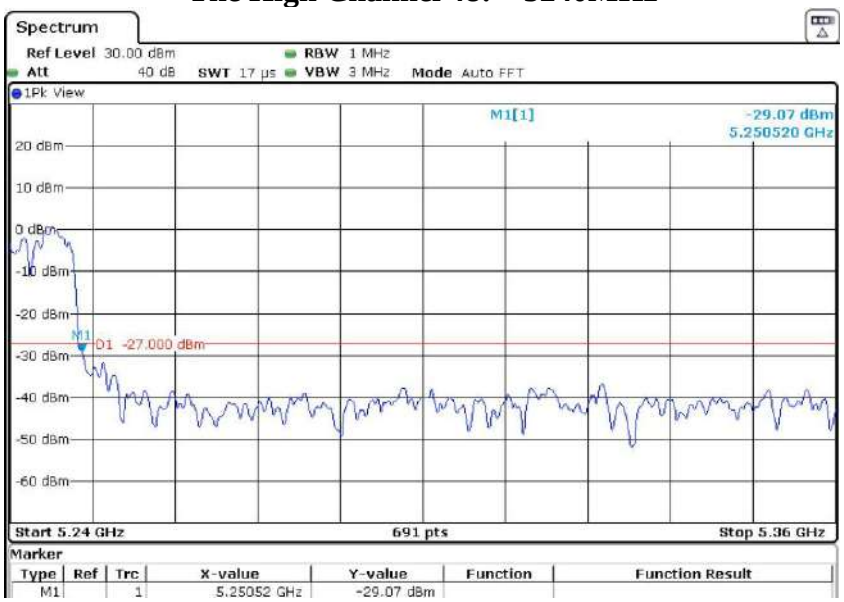
802.11n(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



802.11n(20M) (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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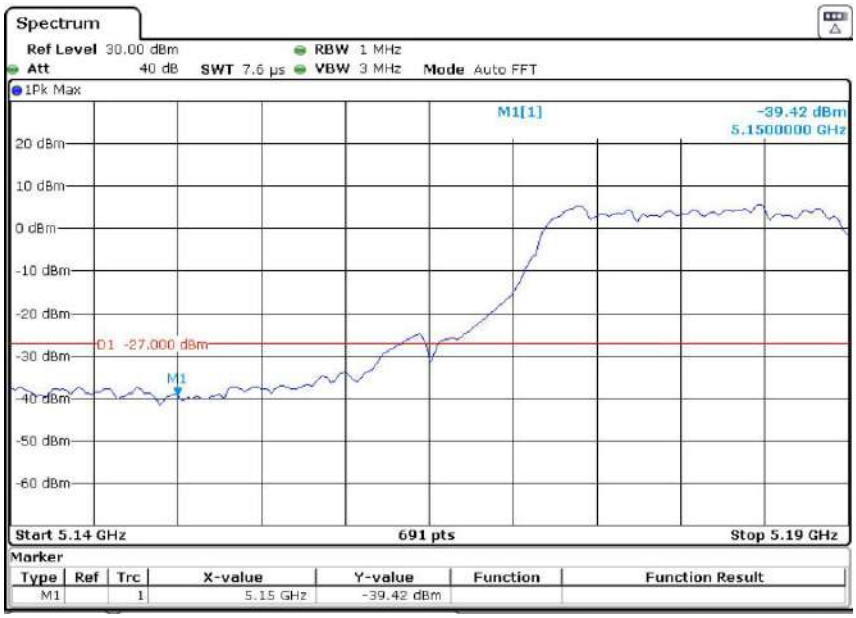
802.11n(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



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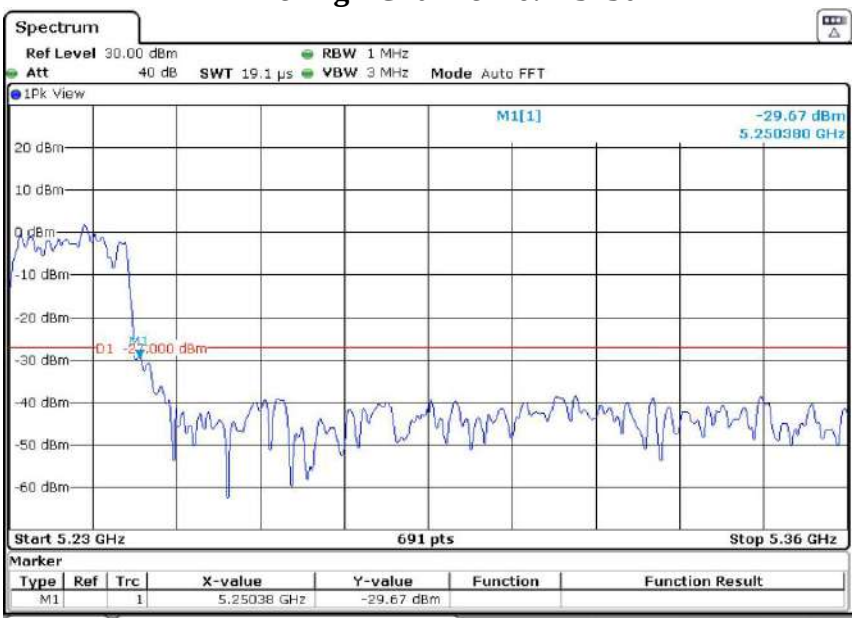
802.11n(40M) (5.15GHz-5.25GHz)
The High Channel 46: 5230MHz



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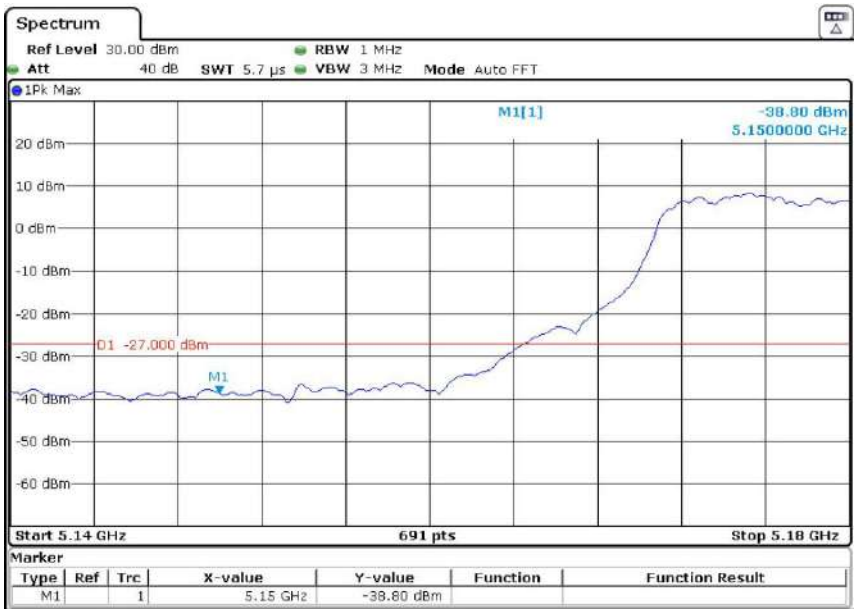
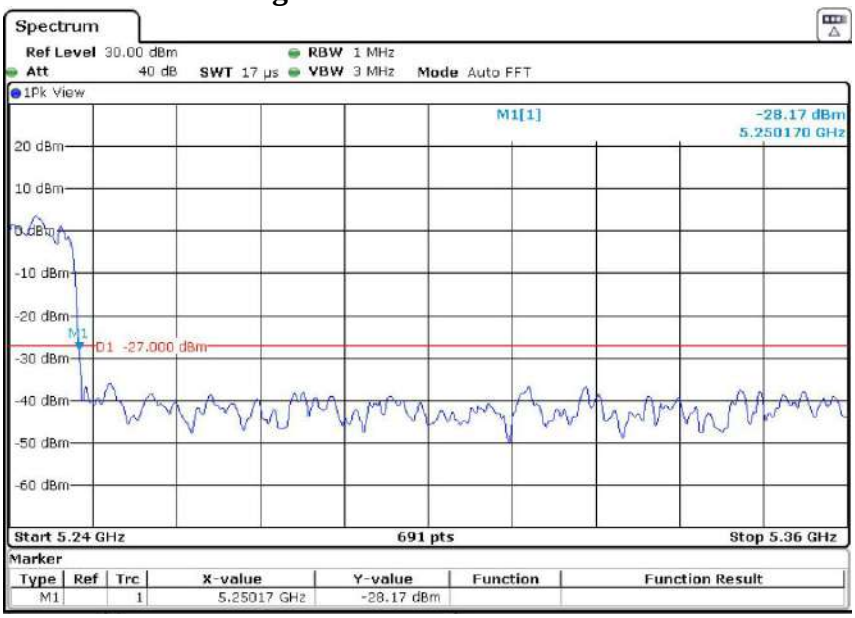
802.11ac(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



802.11ac(20M) (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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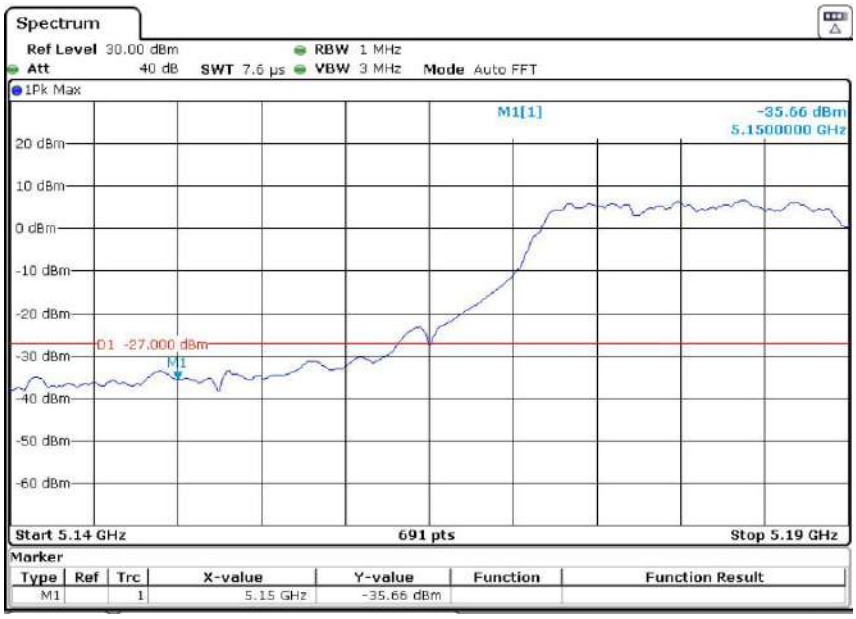
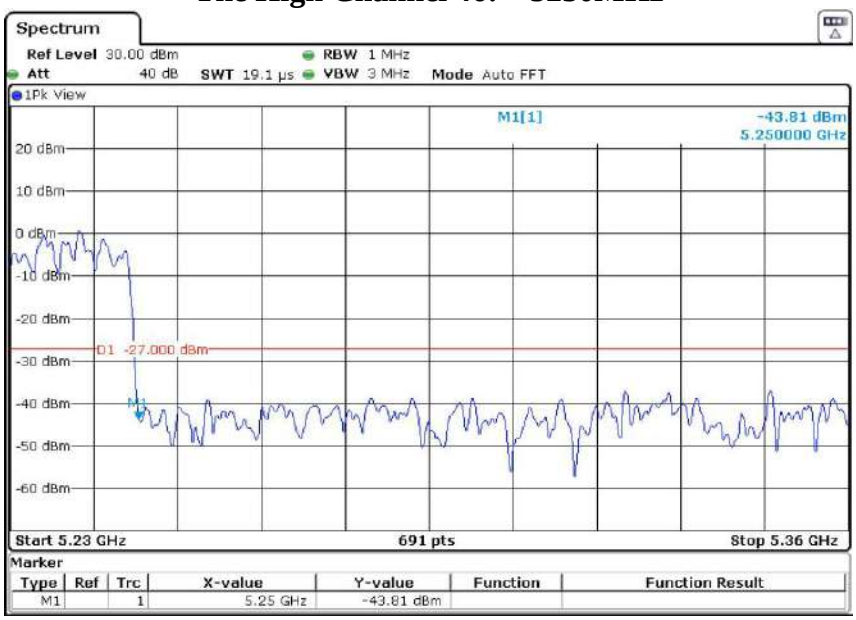
802.11ac(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



802.11ac(40M) (5.15GHz-5.25GHz)
The High Channel 46: 5230MHz



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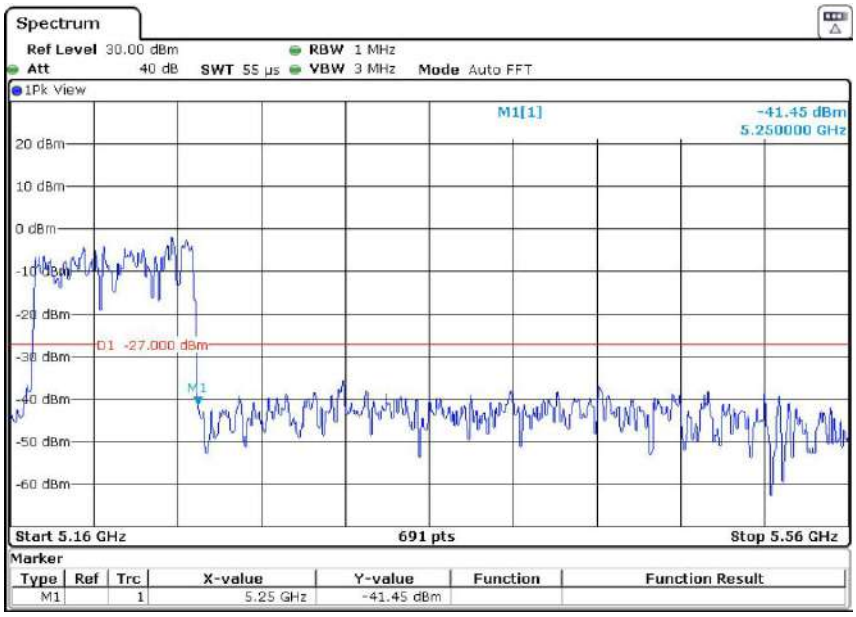
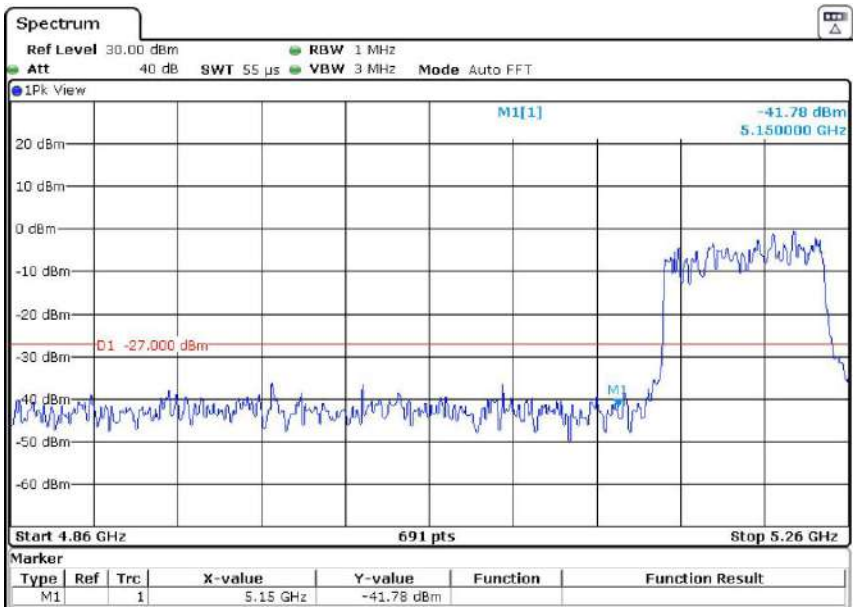
802.11ac(80M) (5.15GHz-5.25GHz)
The Lowest Channel 42: 5210MHz





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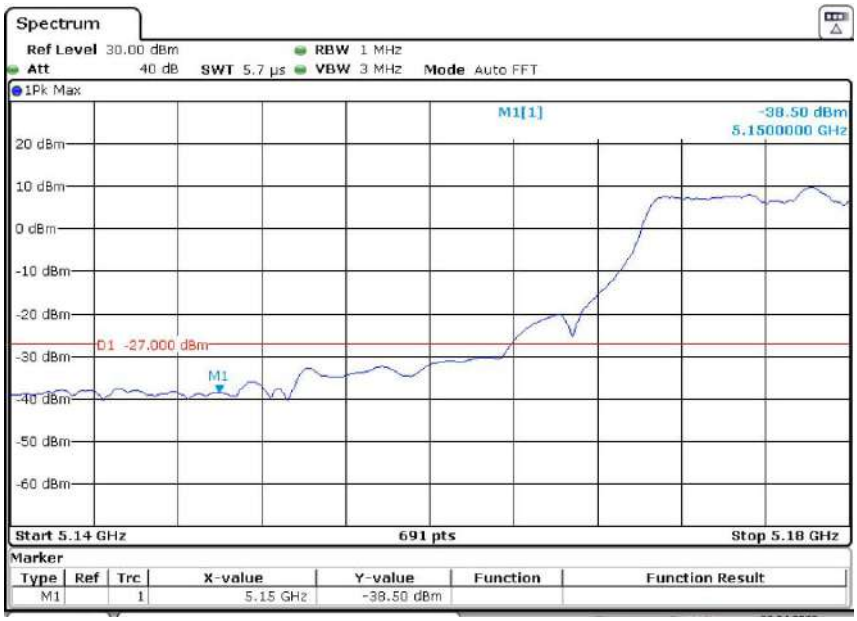
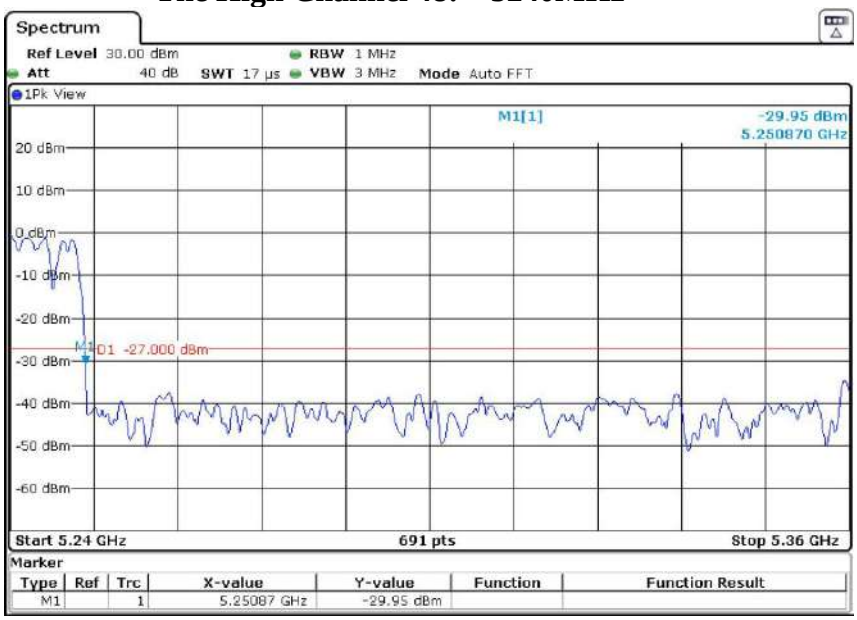
802.11ax(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



802.11ax(20M) (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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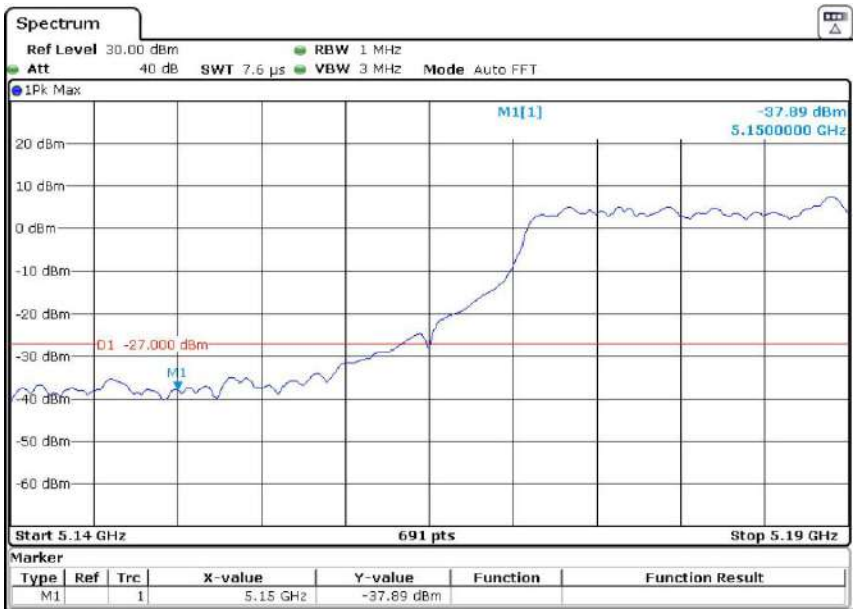
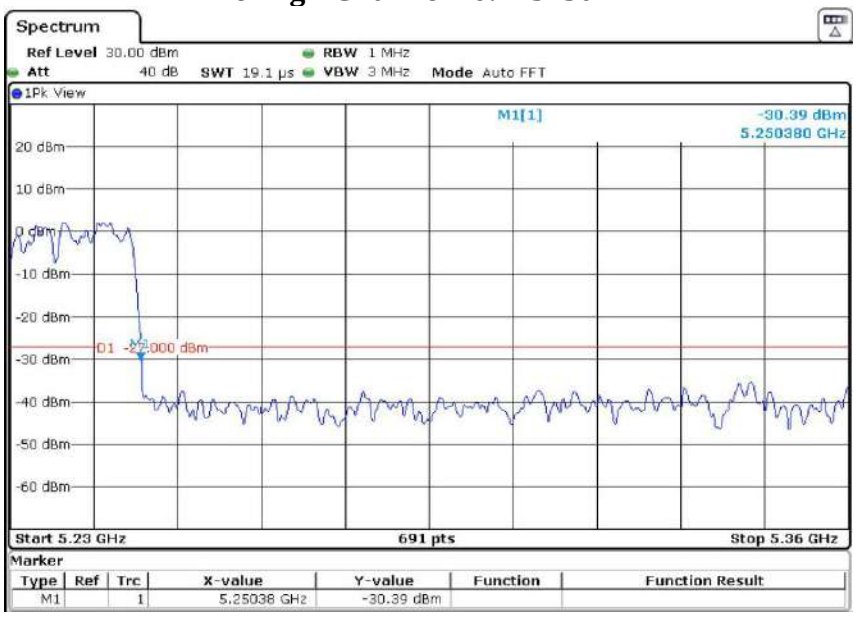
802.11ax(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



802.11ax(40M) (5.15GHz-5.25GHz)
The High Channel 46: 5230MHz



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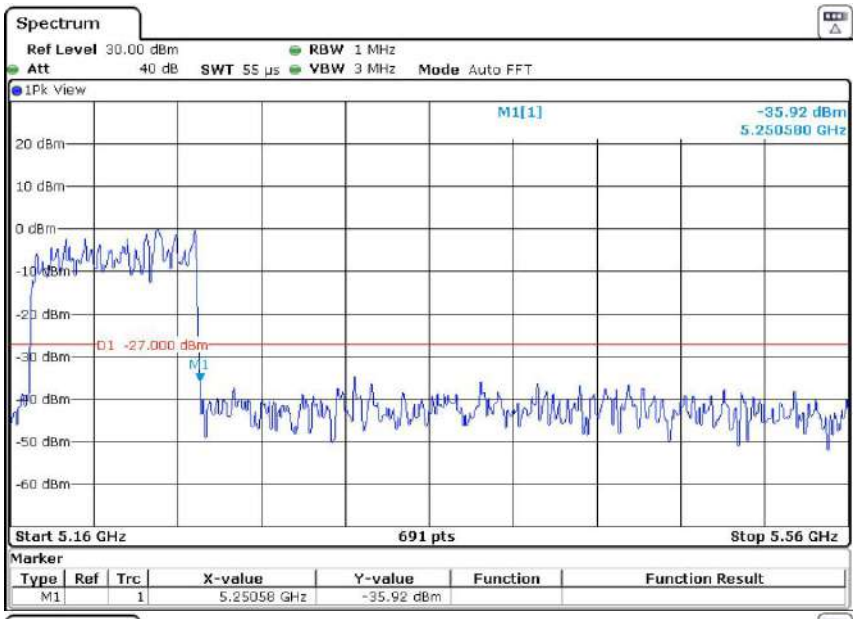
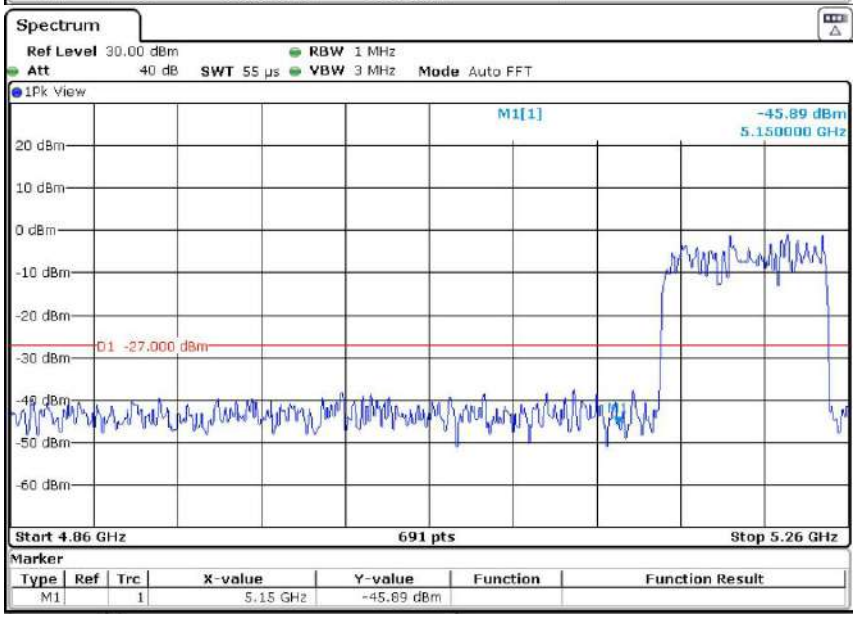
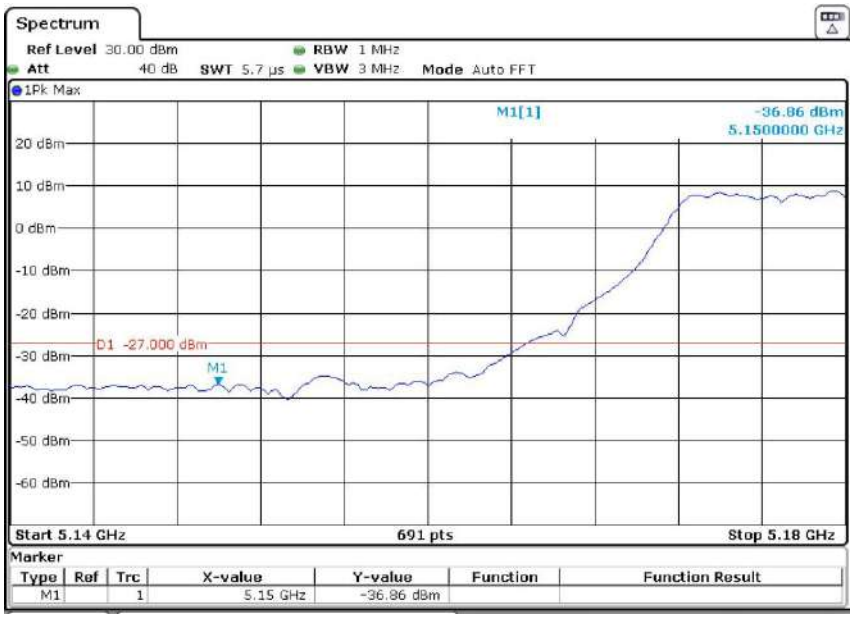
802.11ax(80M) (5.15GHz-5.25GHz)
The Lowest Channel 42: 5210MHz



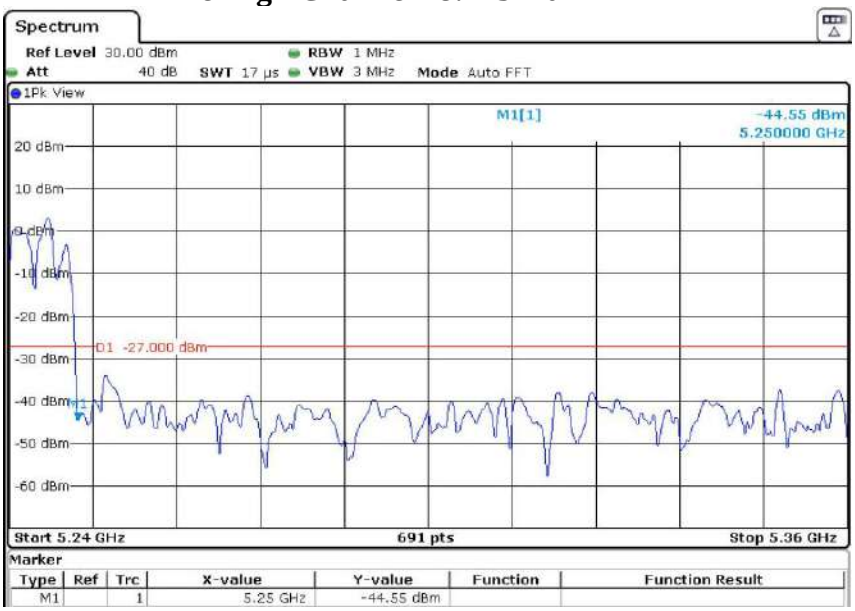


TEST RESULT CHAIN 1

802.11a (5.15GHz-5.25GHz)
The Low Channel 36: 5180MHz



802.11a (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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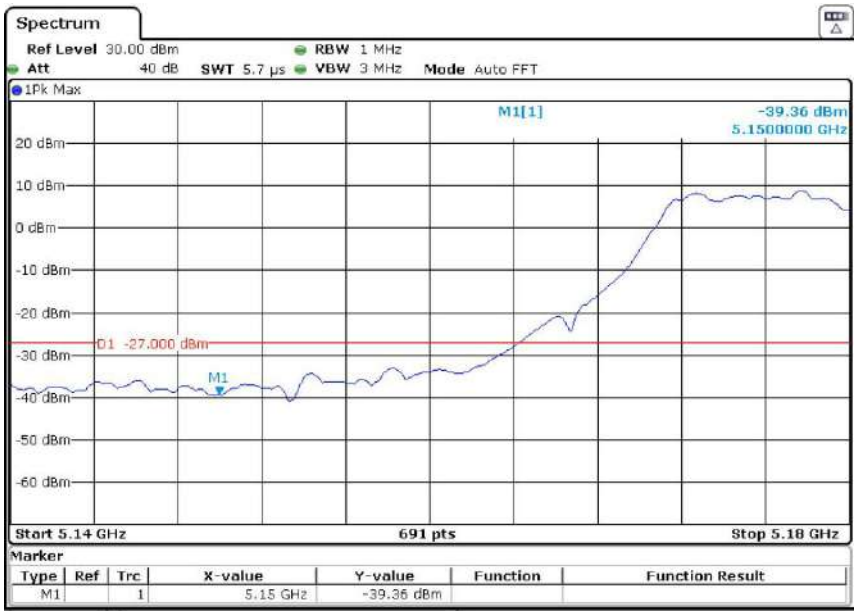
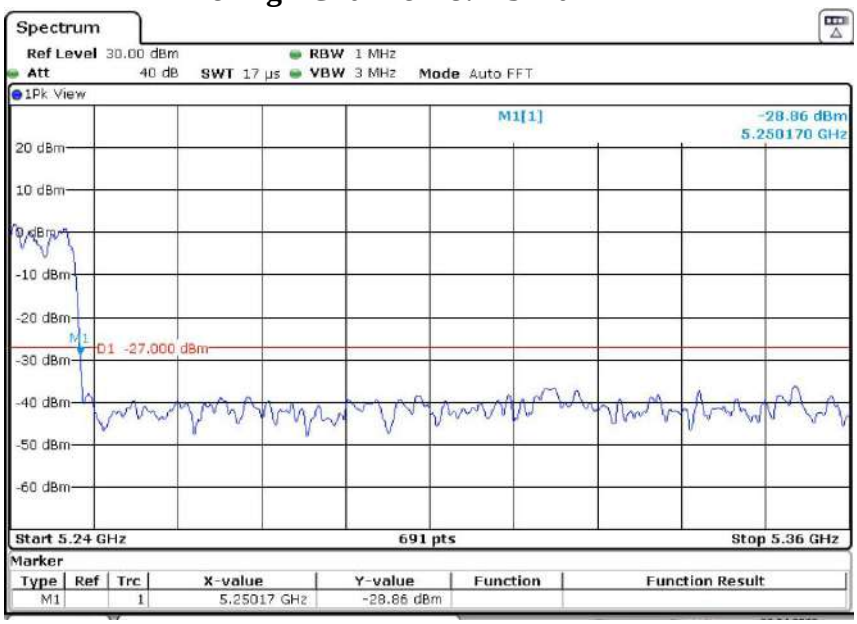
802.11n(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



802.11n(20M) (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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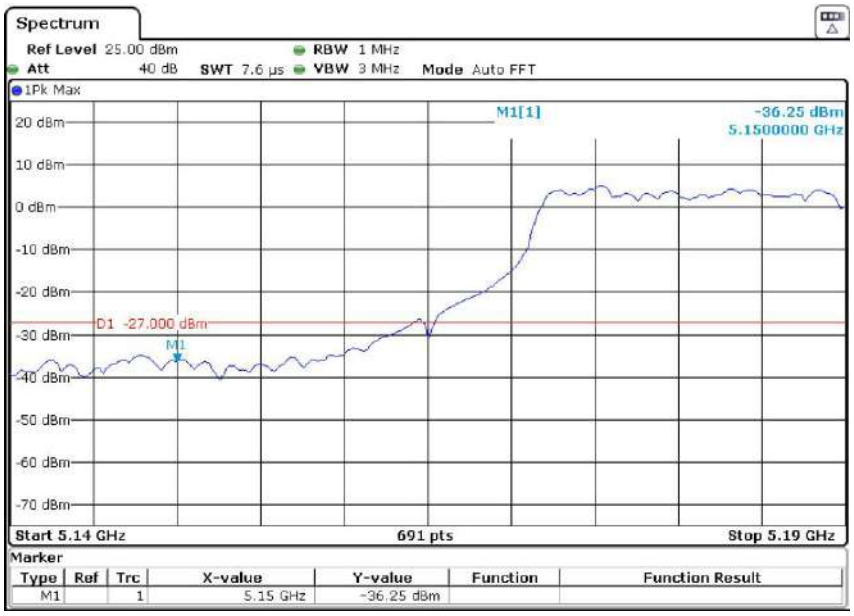
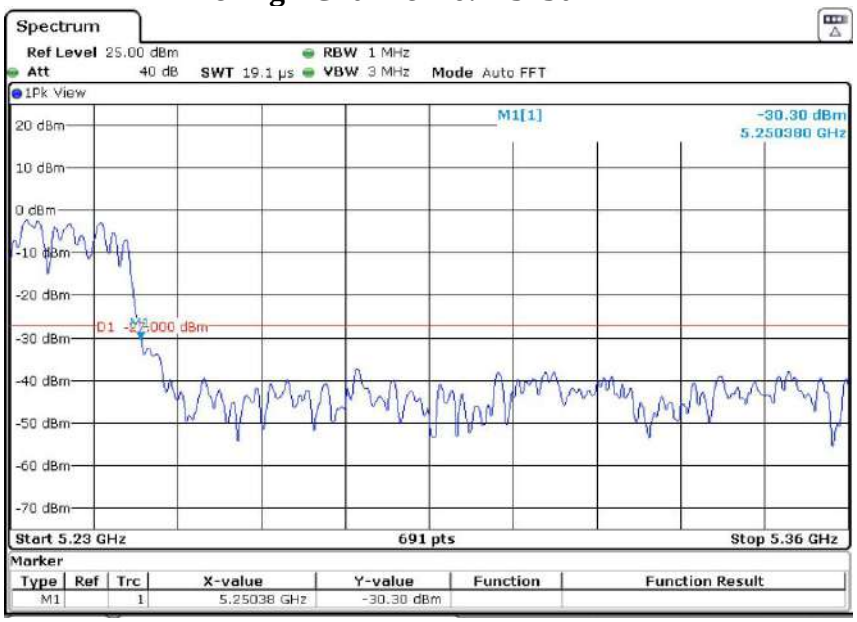
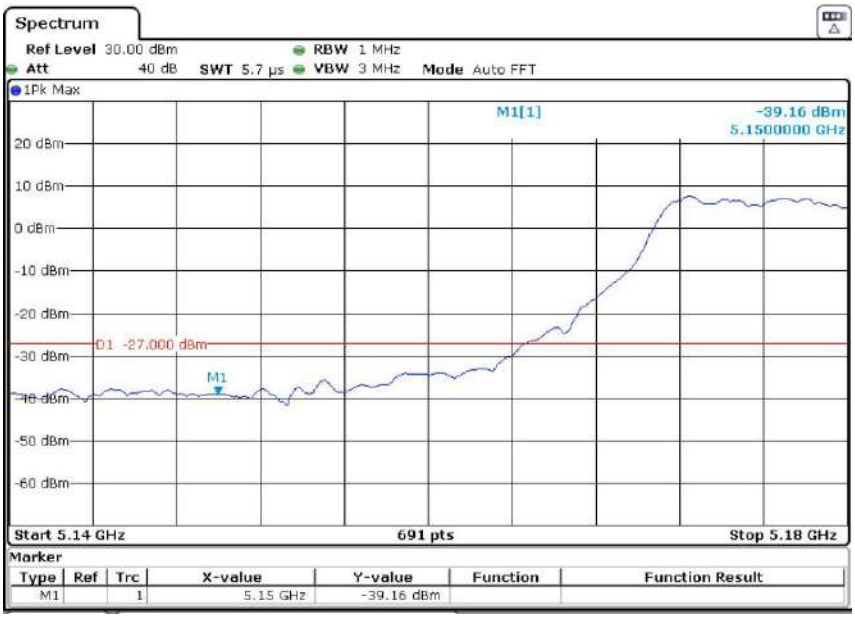
802.11n(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



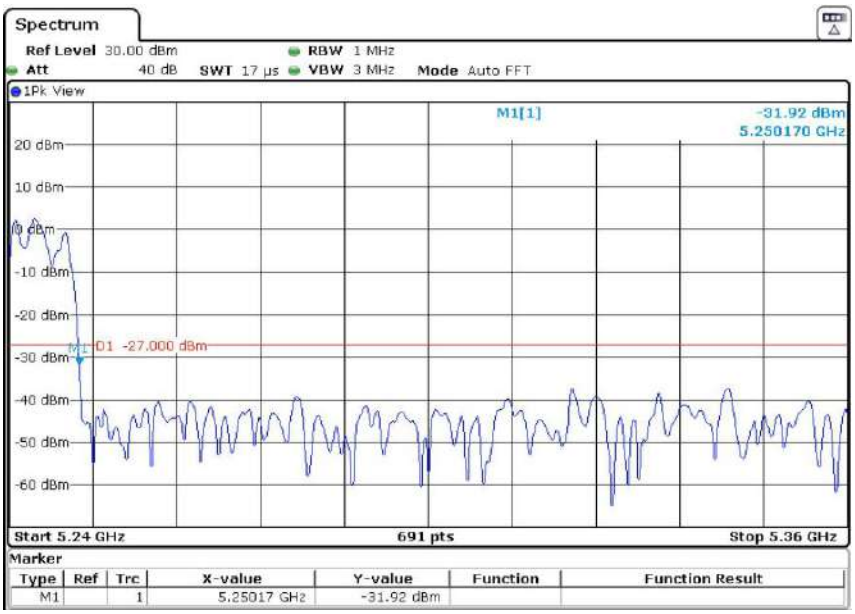
802.11n(40M) (5.15GHz-5.25GHz)
The High Channel 46: 5230MHz



802.11ac(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



802.11ac(20M) (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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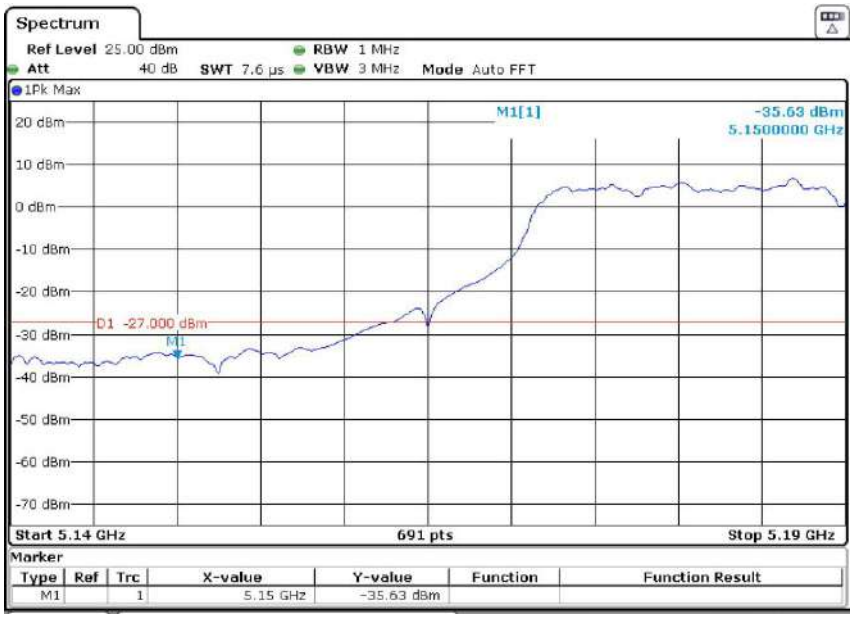
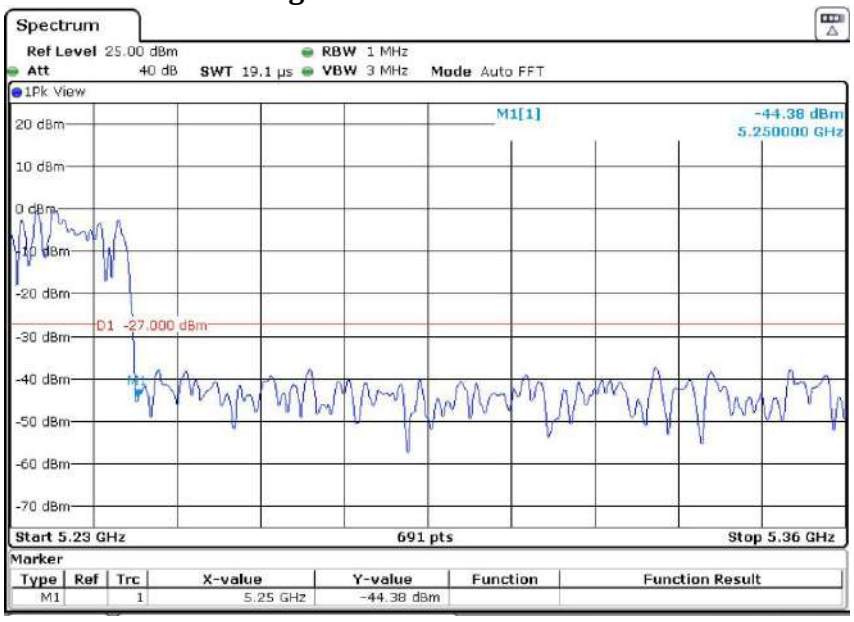
802.11ac(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



802.11ac(40M) (5.15GHz-5.25GHz)
The High Channel 46: 5230MHz



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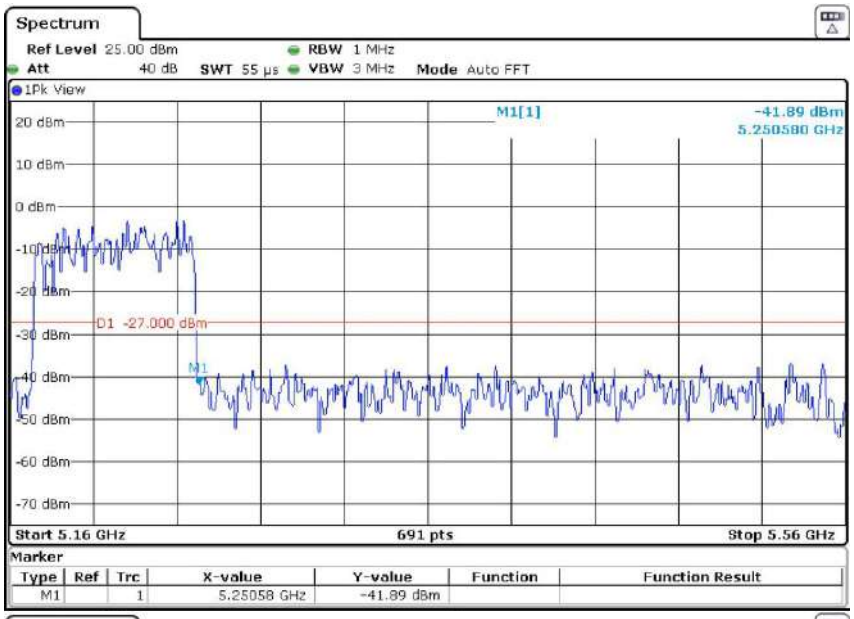
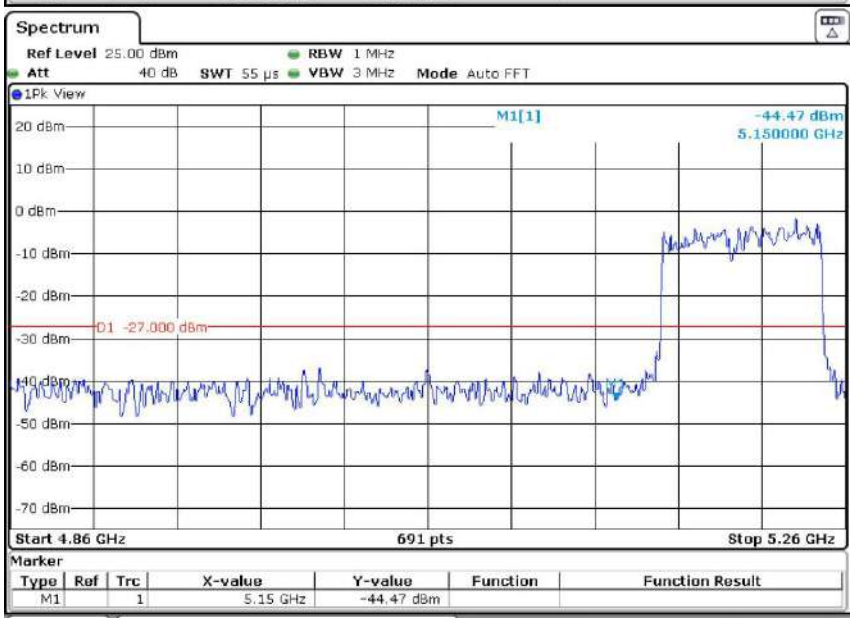
802.11ac(80M) (5.15GHz-5.25GHz)
The Lowest Channel 42: 5210MHz





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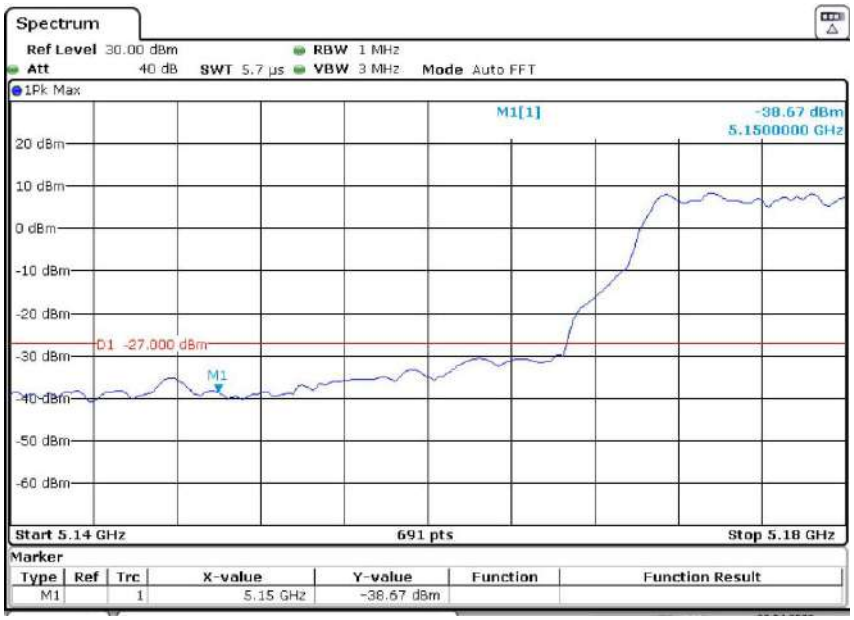
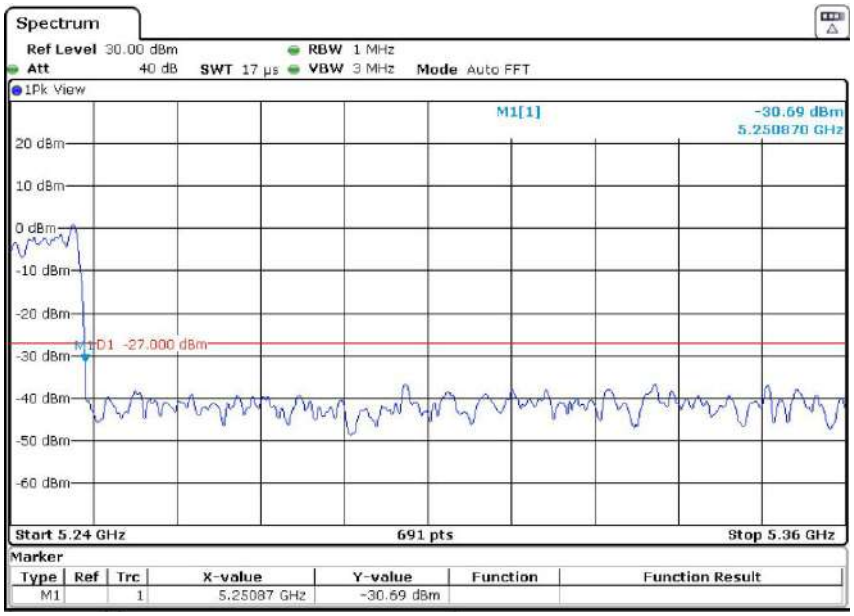
802.11ax(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



802.11ax(20M) (5.15GHz-5.25GHz)
The High Channel 48: 5240MHz



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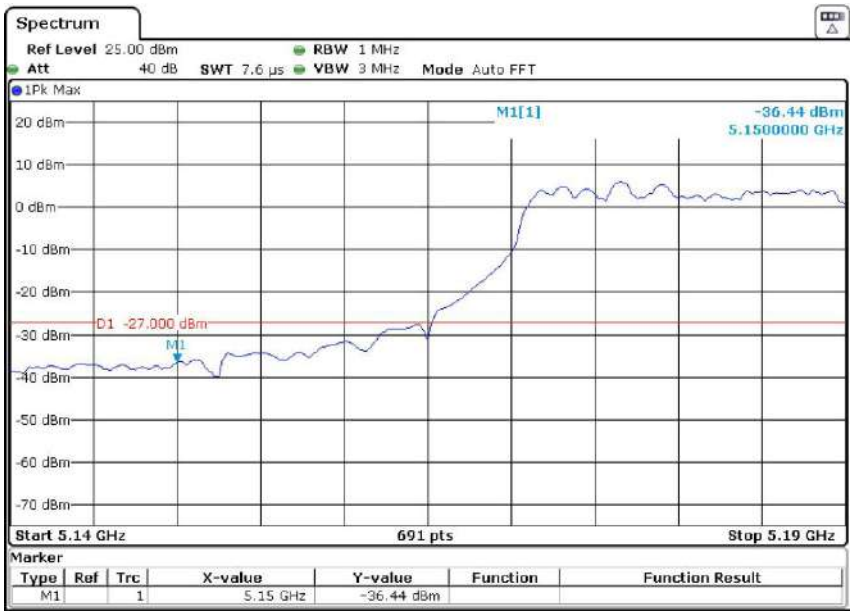
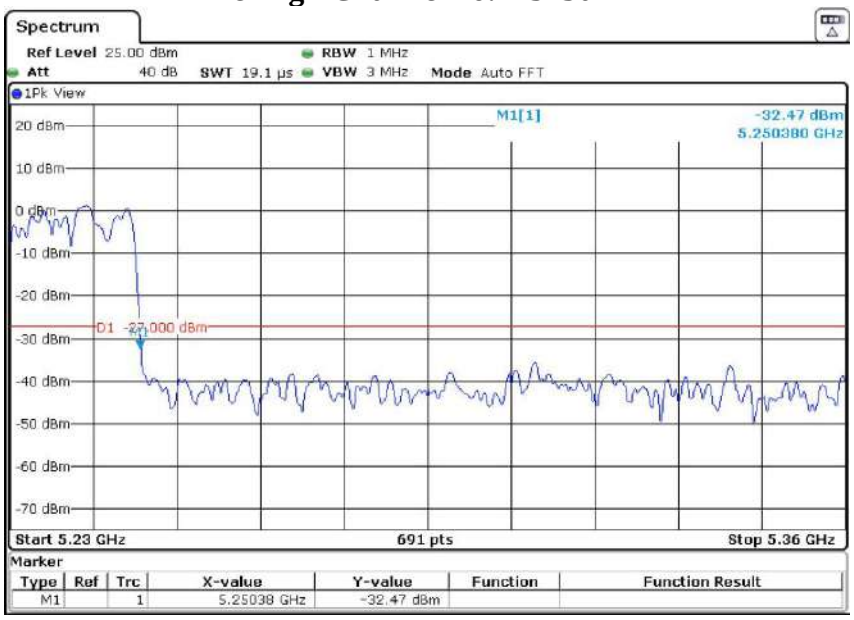
802.11ax(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



802.11ax(40M) (5.15GHz-5.25GHz)
The High Channel 46: 5230MHz



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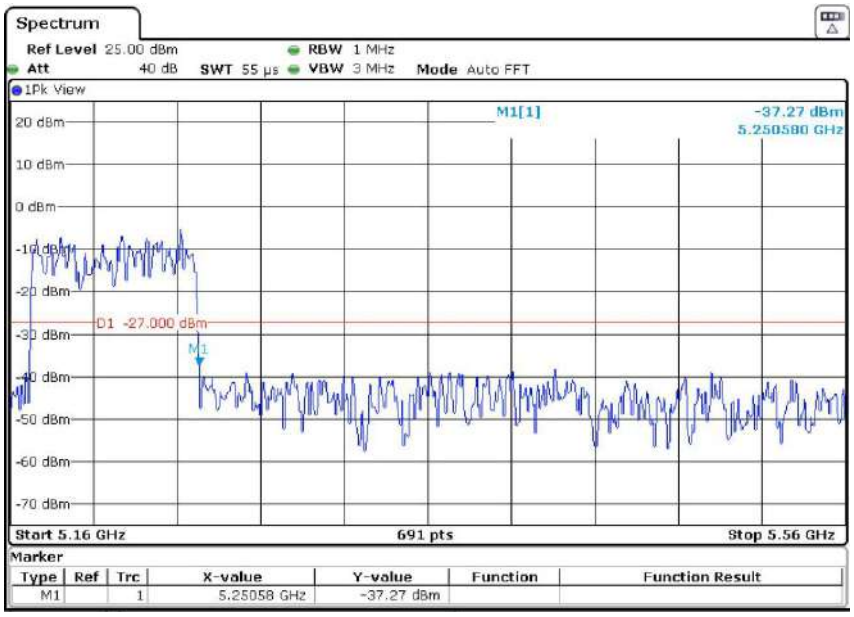
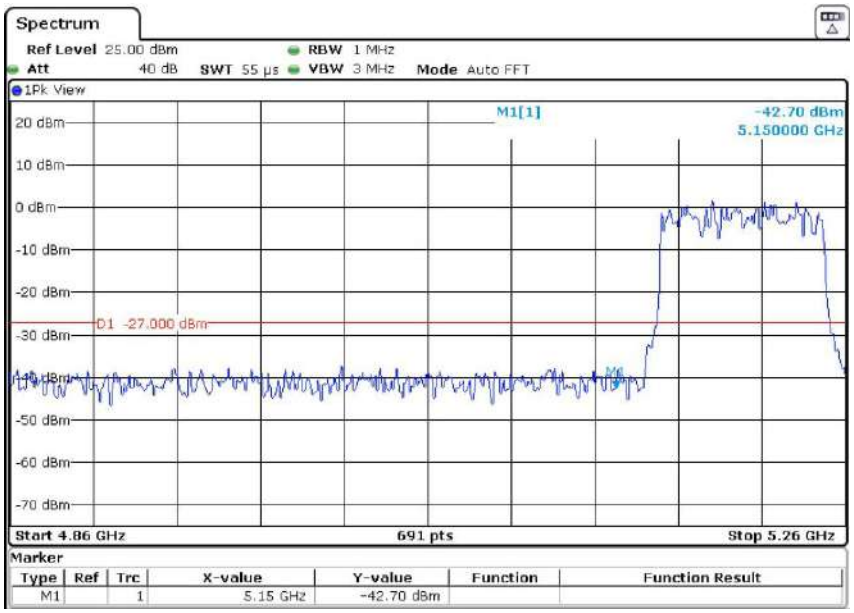
802.11ax(80M) (5.15GHz-5.25GHz)
The Lowest Channel 42: 5210MHz





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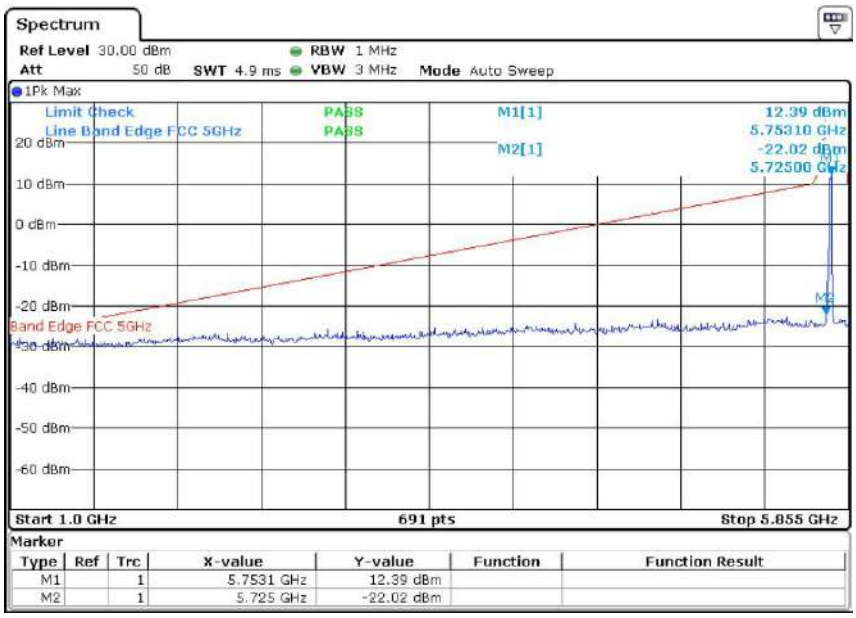
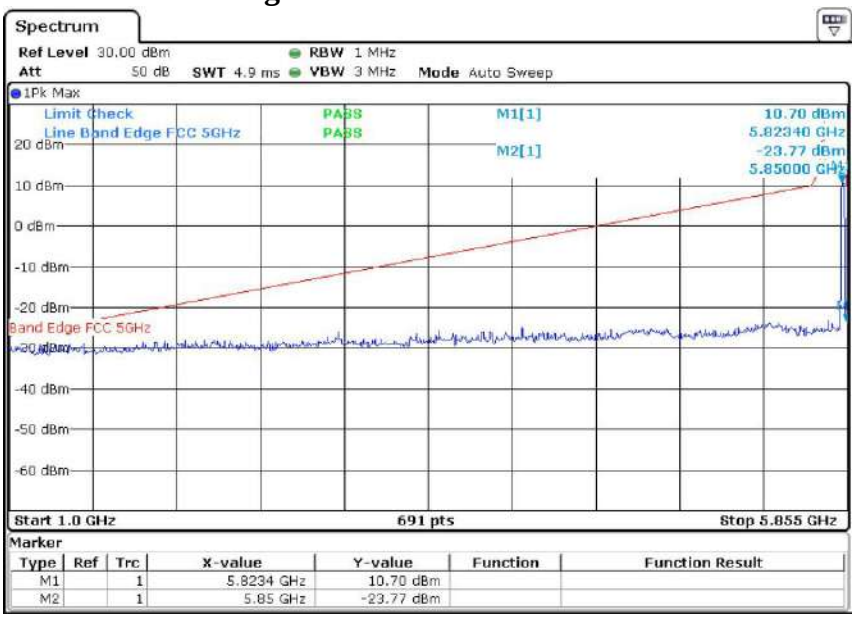
TEST RESULT ANT CHAIN 0

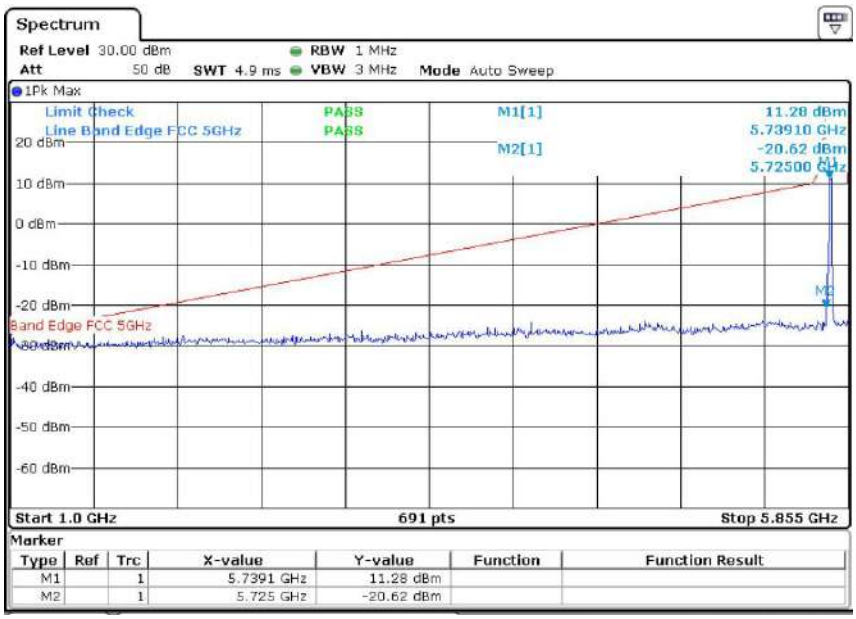
802.11a (5.725GHz-5.85GHz)
The Low Channel 149: 5745MHz



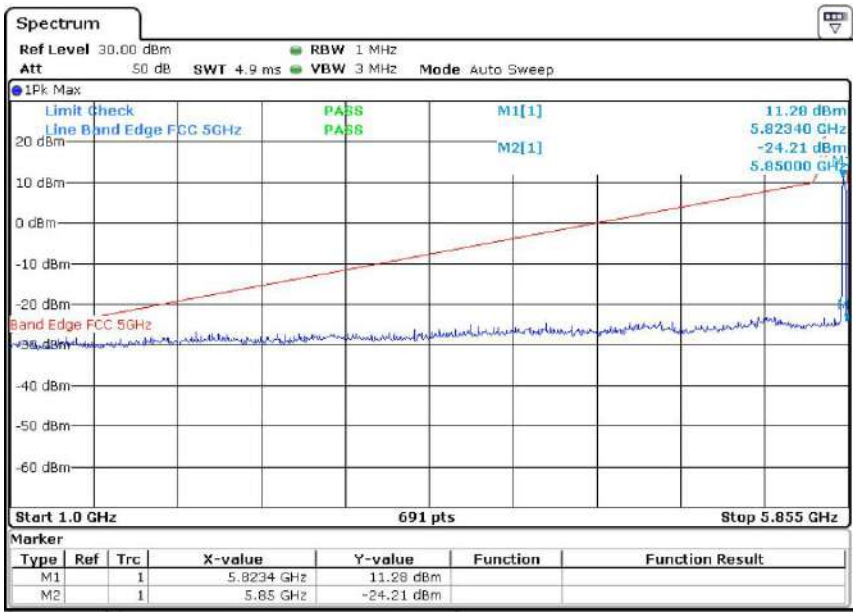
802.11a (5.725GHz-5.85GHz)
The High Channel 165: 5825MHz



802.11n(20M) (5.725GHz-5.85GHz)
The Low Channel 149: 5745MHz



802.11n(20M) (5.725GHz-5.85GHz)
The High Channel 165: 5825MHz



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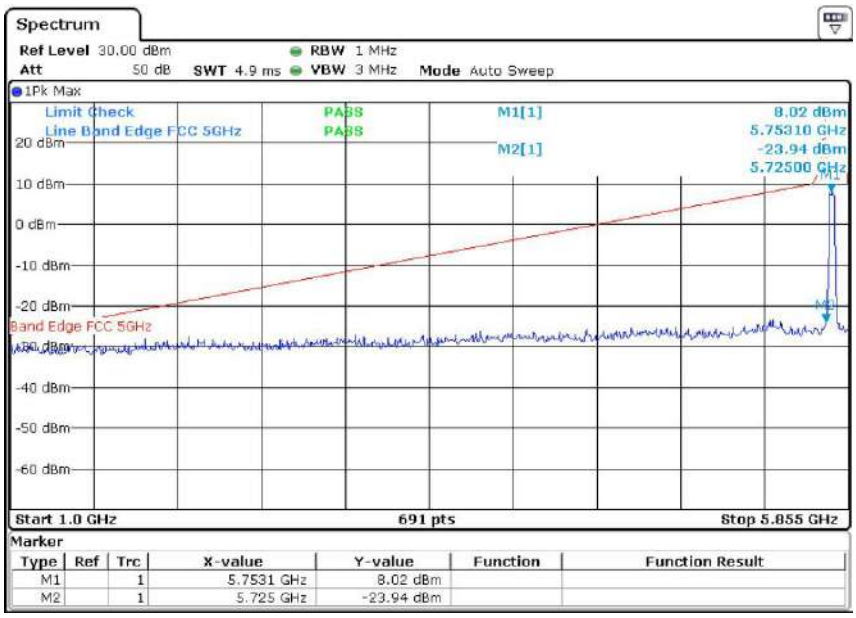
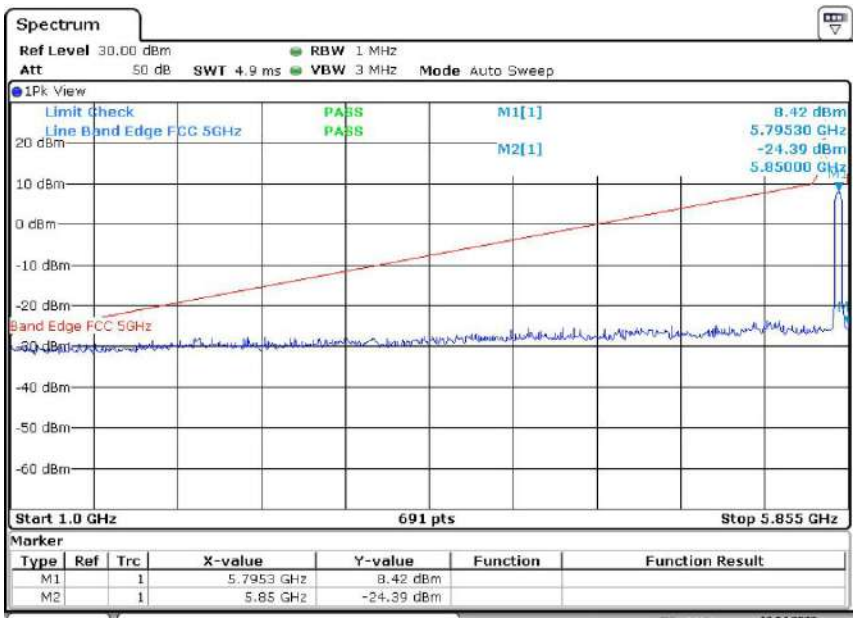
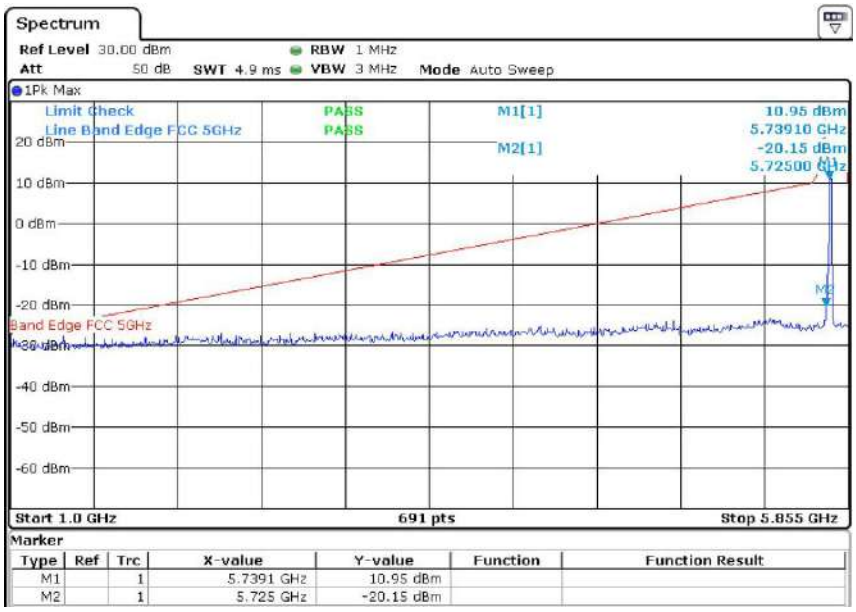
802.11n(40M) (5.725GHz-5.85GHz)
The Lowest Channel 151: 5755MHz



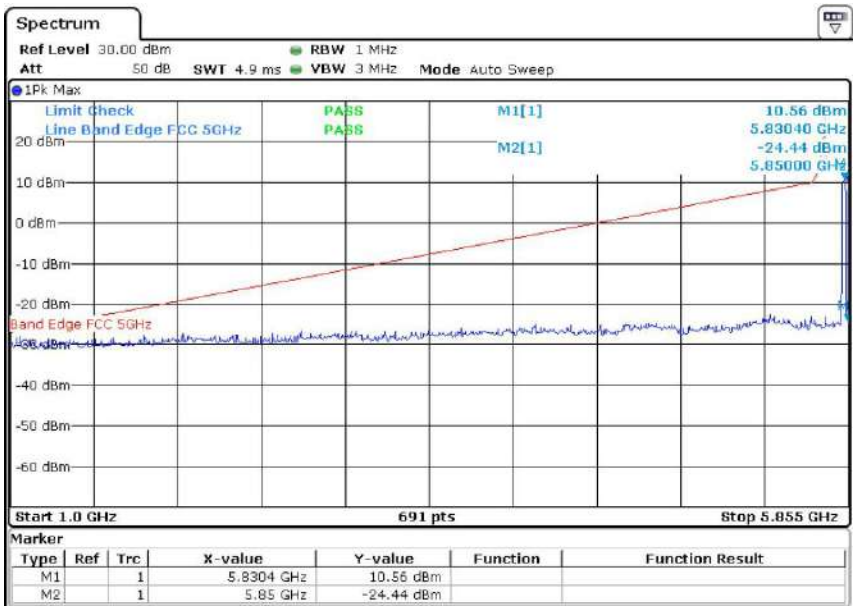
802.11n(40M) (5.725GHz-5.85GHz)
The High Channel 159: 5795MHz



802.11ac(20M) (5.725GHz-5.85GHz)
The Low Channel 149: 5745MHz



802.11ac(20M) (5.725GHz-5.85GHz)
The High Channel 165: 5825MHz



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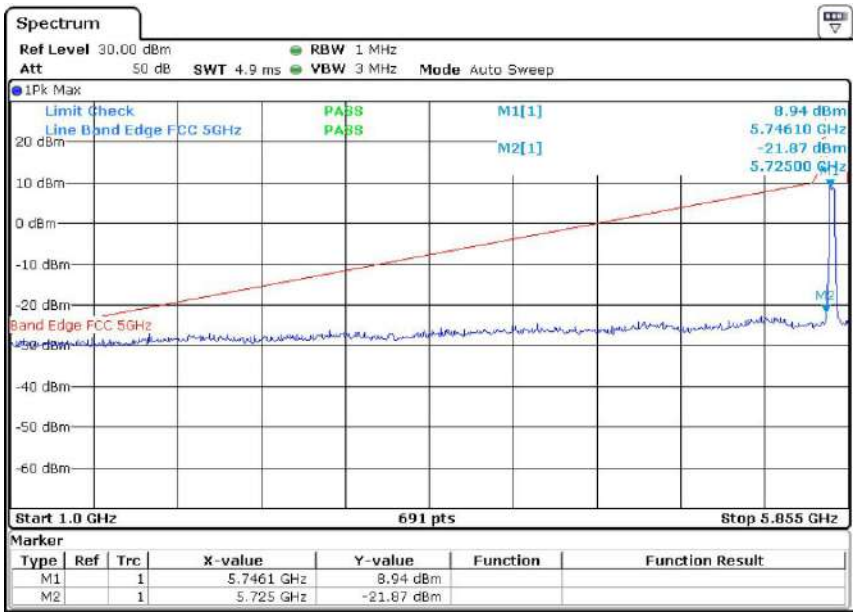
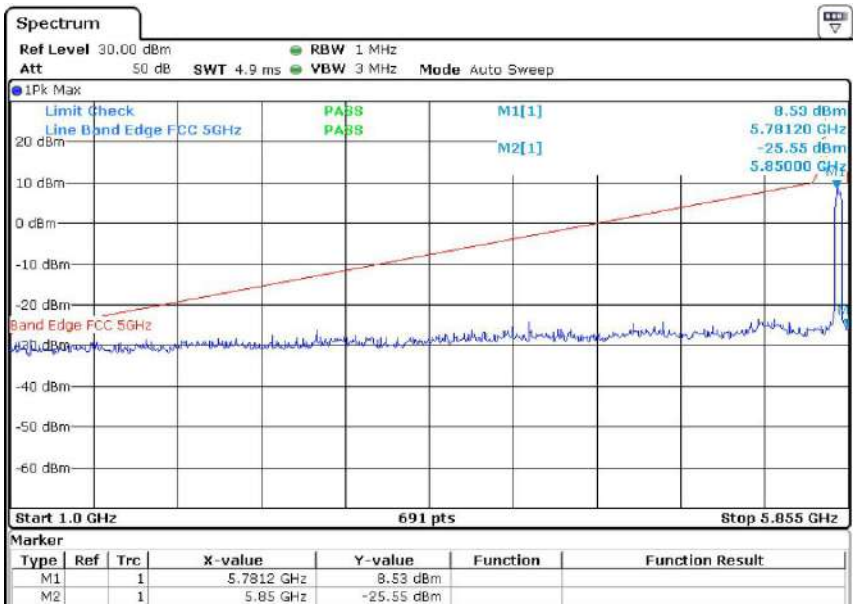
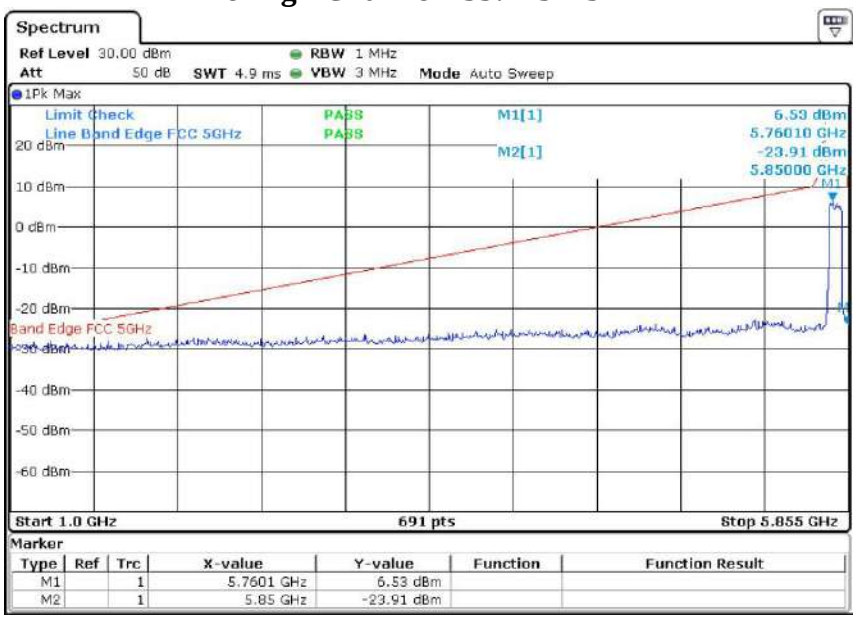
802.11ac(40M) (5.725GHz-5.85GHz)
The Lowest Channel 151: 5755MHz



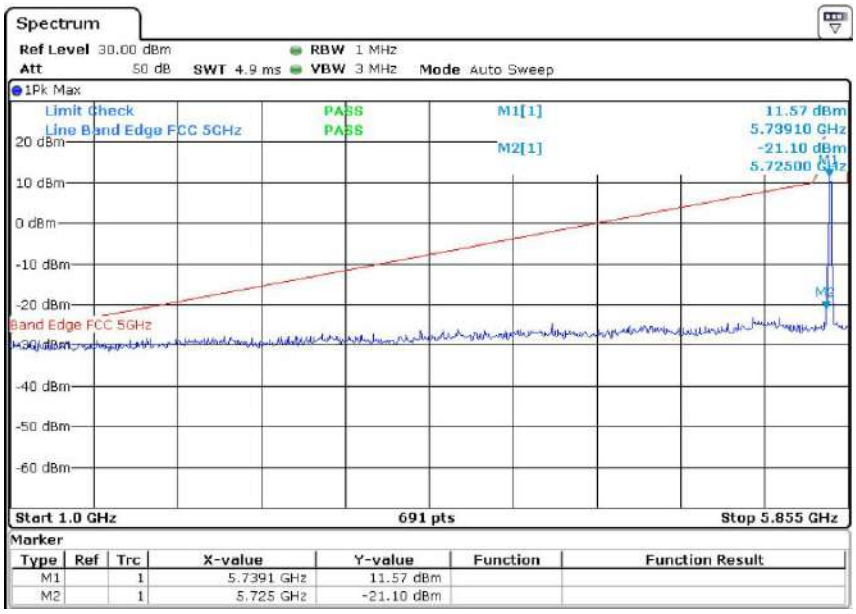
802.11ac(40M) (5.725GHz-5.85GHz)
The High Channel 159: 5795MHz



802.11ac(80M) (5.725GHz-5.85GHz)
The High Channel 155: 5775MHz



802.11ax(20M) (5.725GHz-5.85GHz)
The Low Channel 149: 5745MHz



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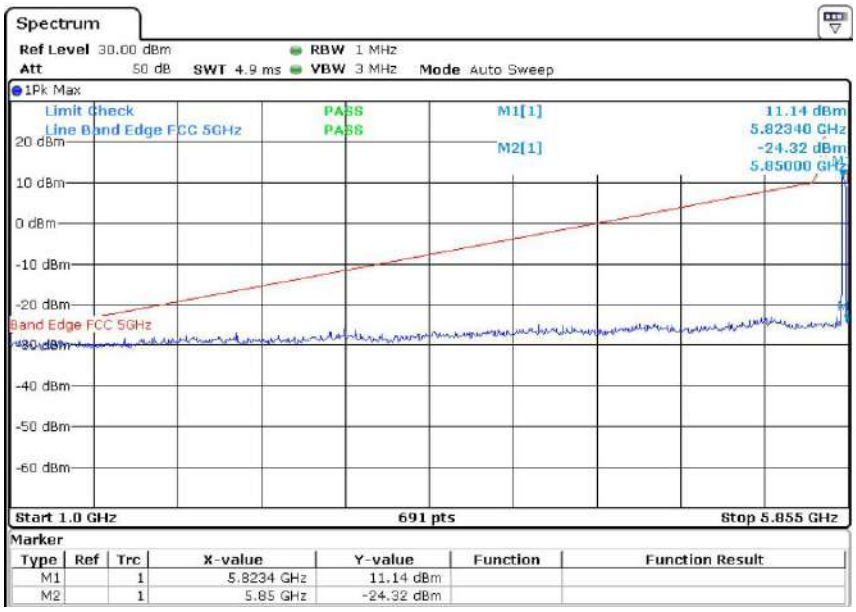
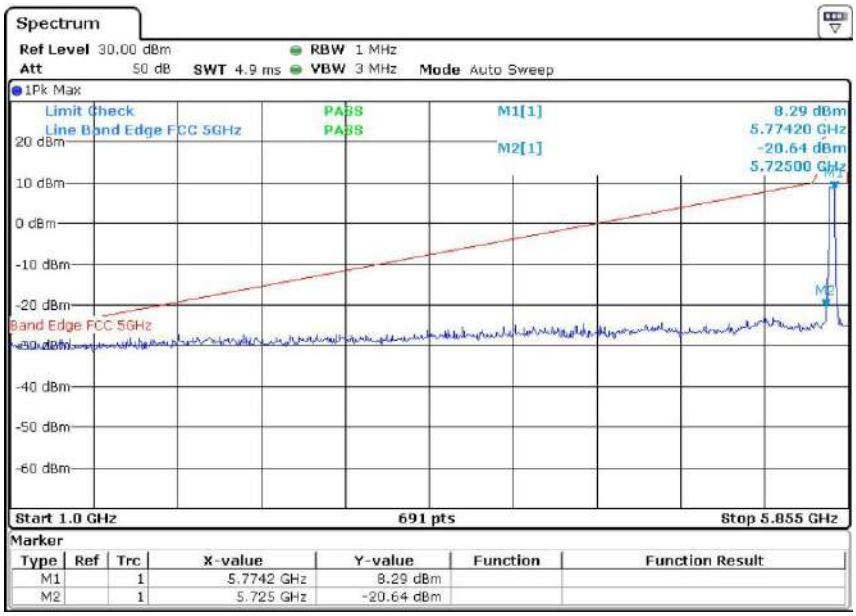
802.11ax(20M) (5.725GHz-5.85GHz)
The High Channel 165: 5825MHz



802.11ax(40M) (5.725GHz-5.85GHz)
The Lowest Channel 151: 5755MHz



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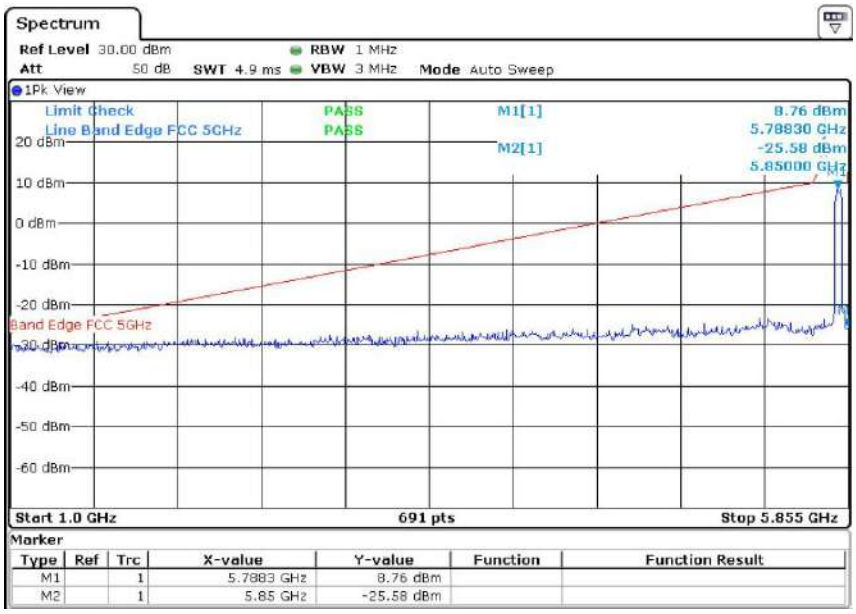
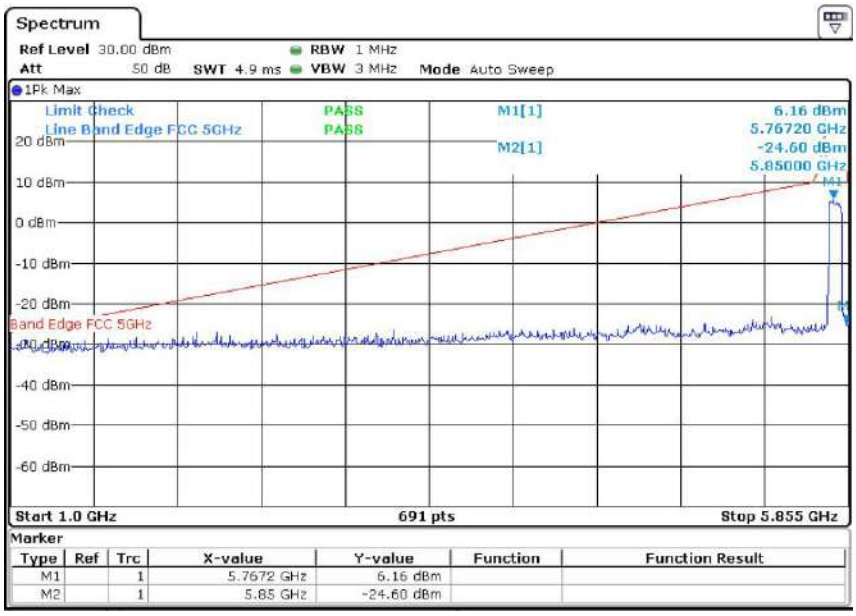
802.11ax(40M) (5.725GHz-5.85GHz)
The High Channel 159: 5795MHz



802.11ax(80M) (5.725GHz-5.85GHz)
The High Channel 155: 5775MHz



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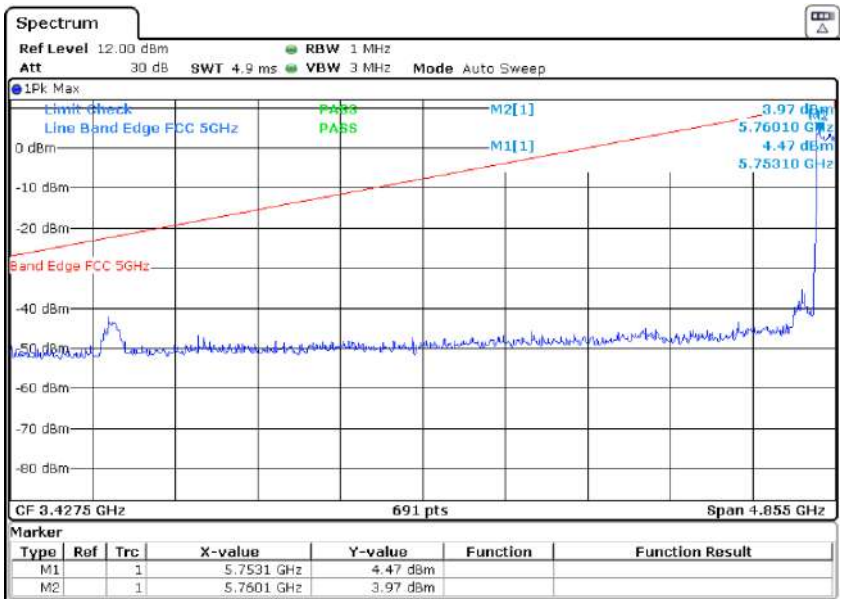
802.11ax(160M) (5.725GHz-5.85GHz)
The High Channel 163: 5815MHz



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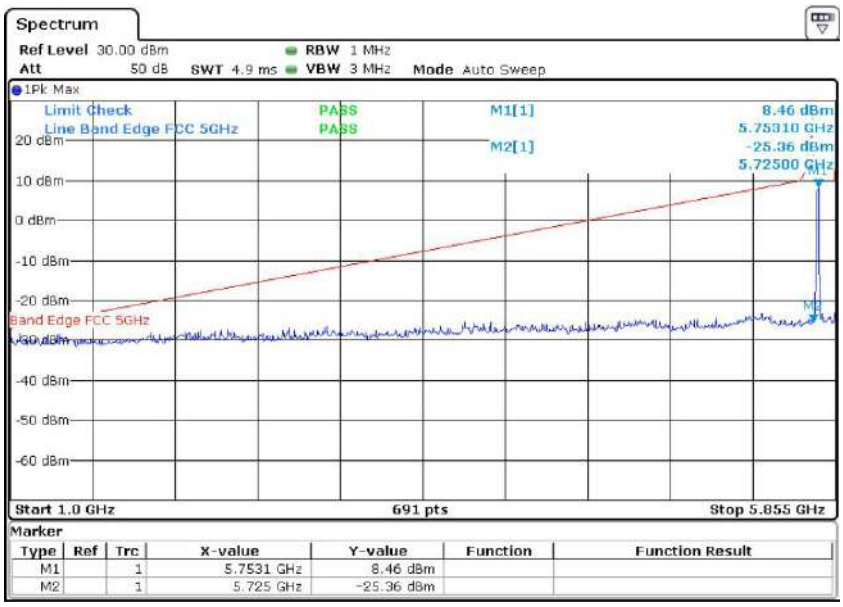
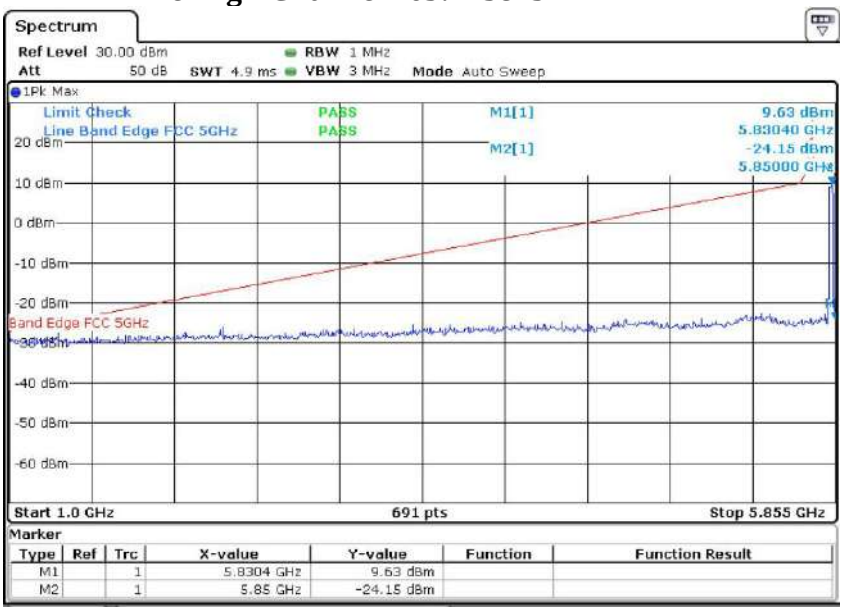
TEST RESULT CHAIN 1

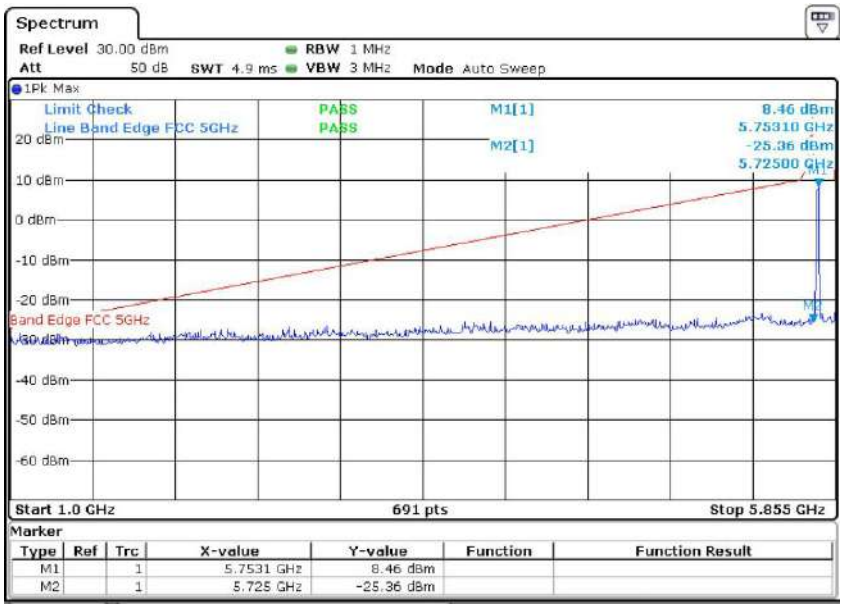
802.11a (5.725GHz-5.85GHz)
The Low Channel 149: 5745MHz



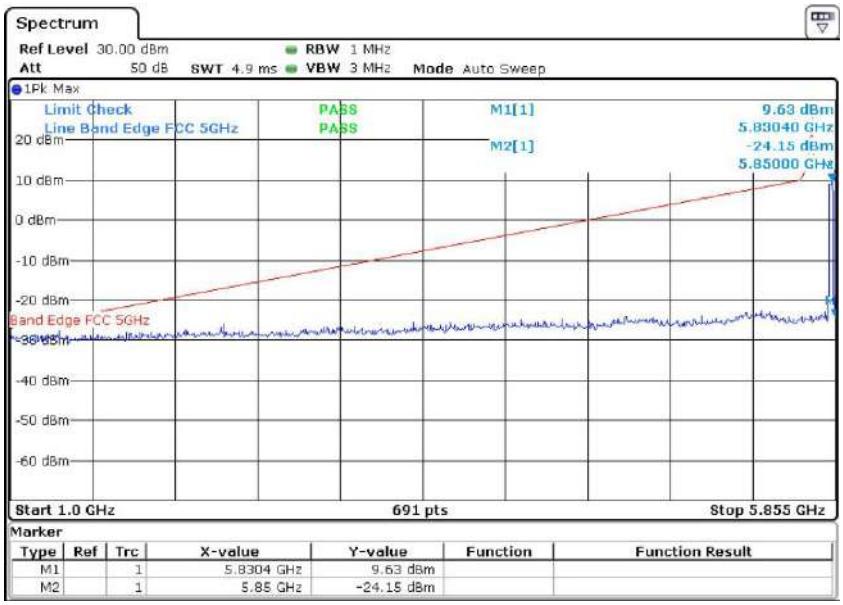
802.11a (5.725GHz-5.85GHz)
The High Channel 165: 5825MHz



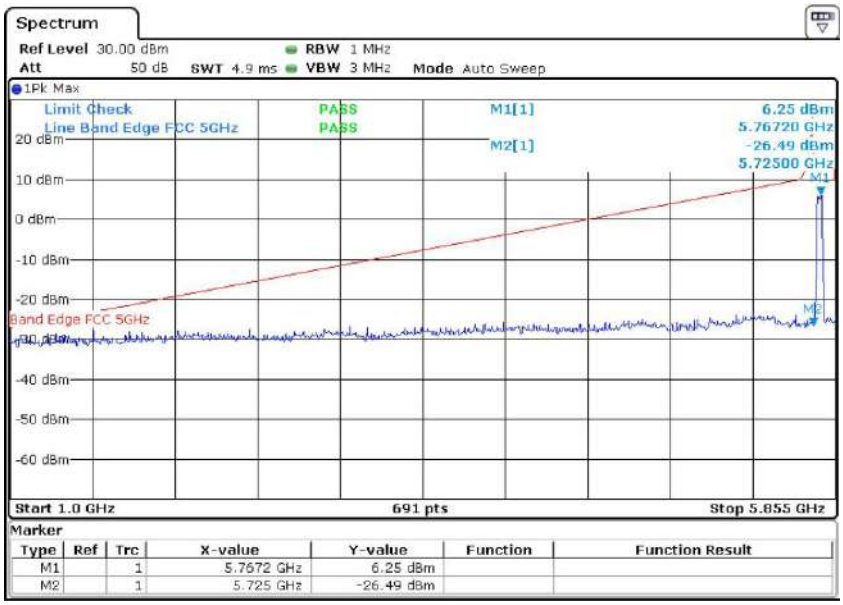
802.11n(20M) (5.725GHz-5.85GHz)
The Low Channel 149: 5745MHz



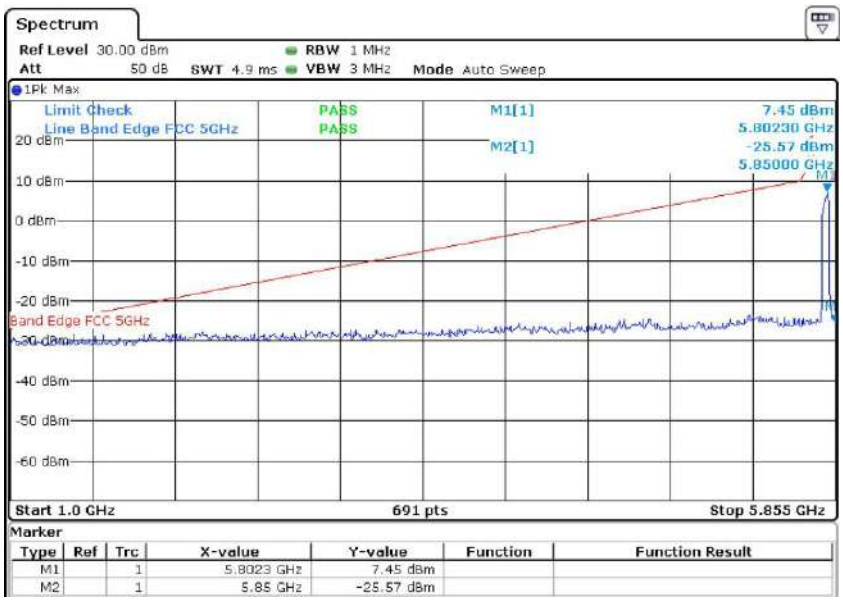
802.11n(20M) (5.725GHz-5.85GHz)
The High Channel 165: 5825MHz



802.11n(40M) (5.725GHz-5.85GHz)
The Lowest Channel 151: 5755MHz



802.11n(40M) (5.725GHz-5.85GHz)
The High Channel 159: 5795MHz



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