

KCTL Inc.

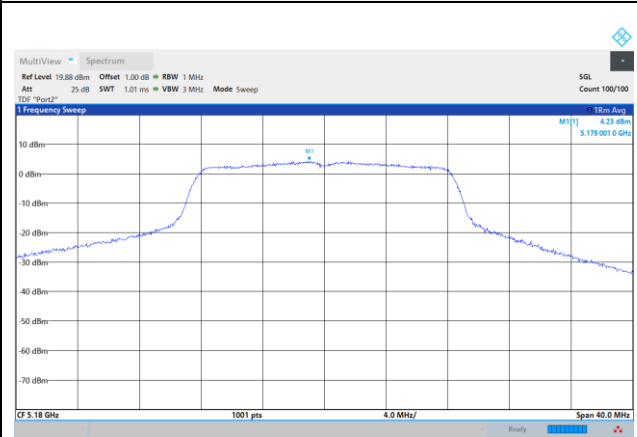
65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
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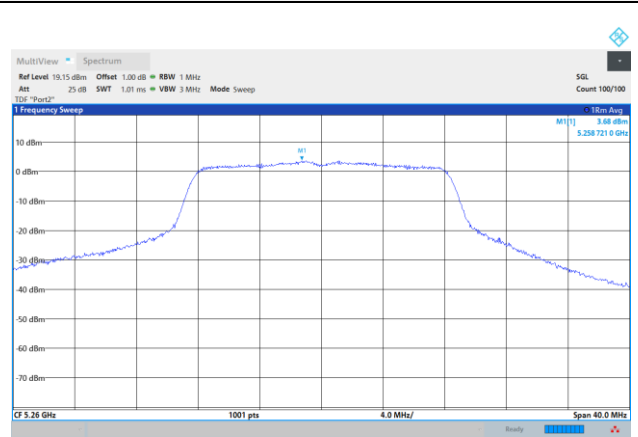


MIMO ANT 2

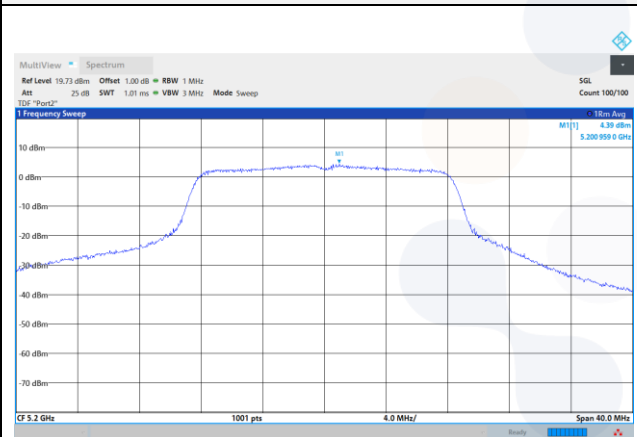
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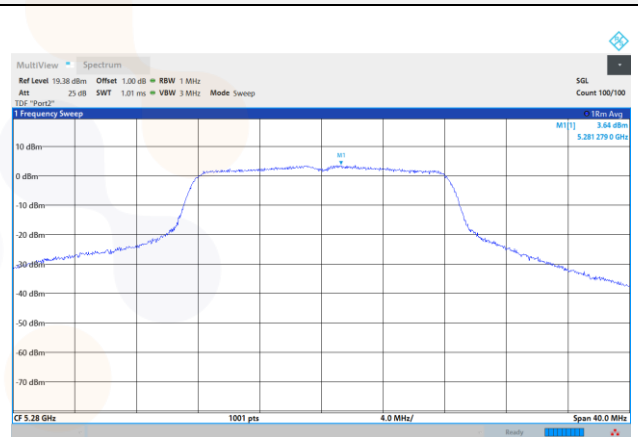
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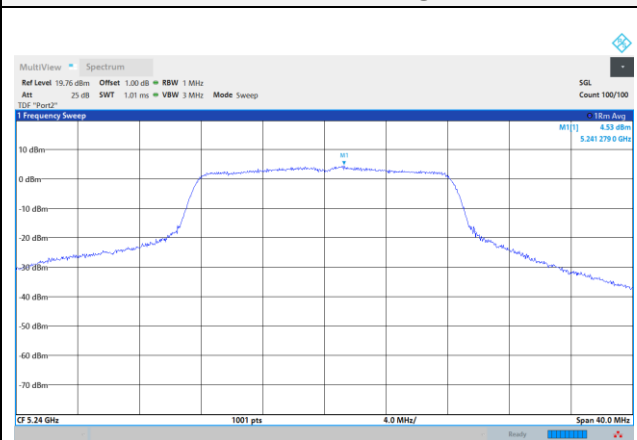
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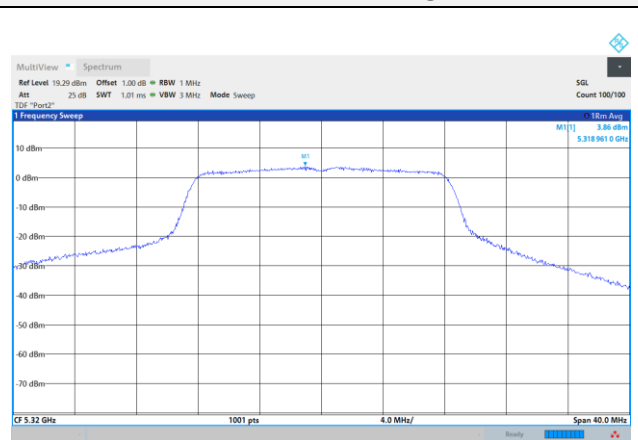
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UNII-1 / 802.11a / High ch.



UNII-2A / 802.11a / High ch.



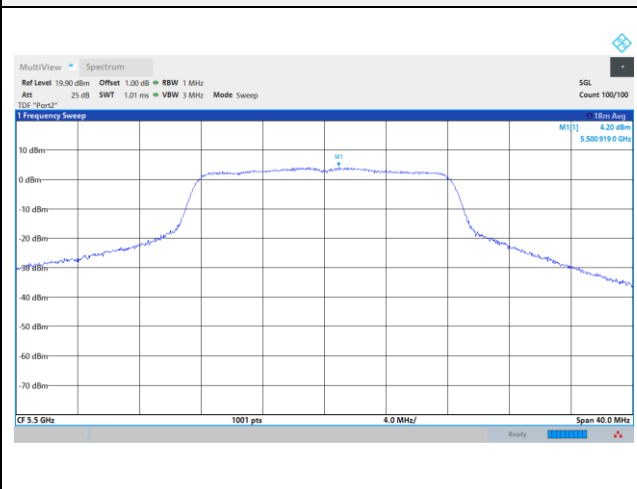
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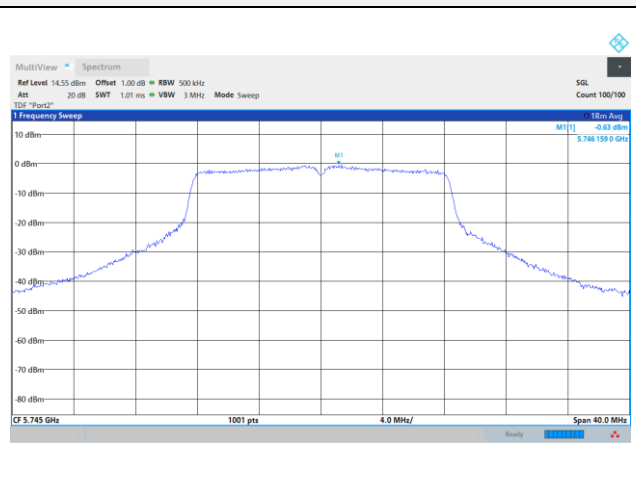
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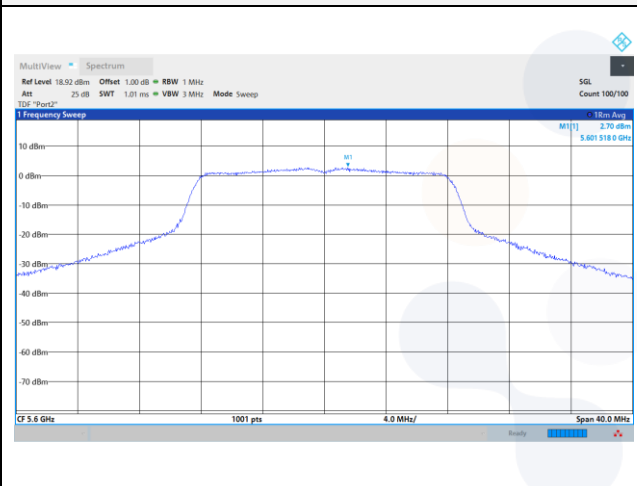
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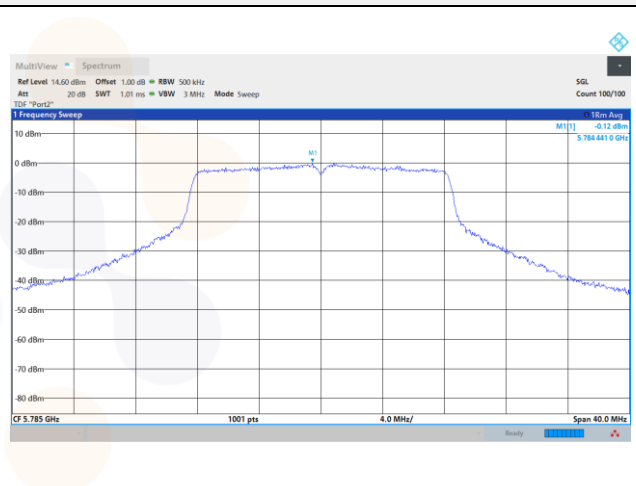
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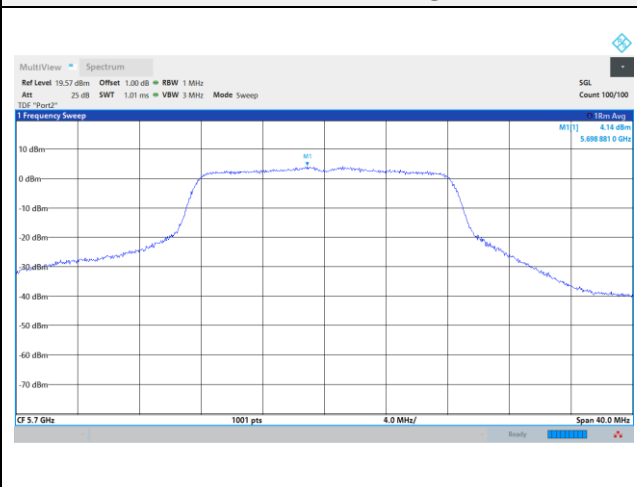
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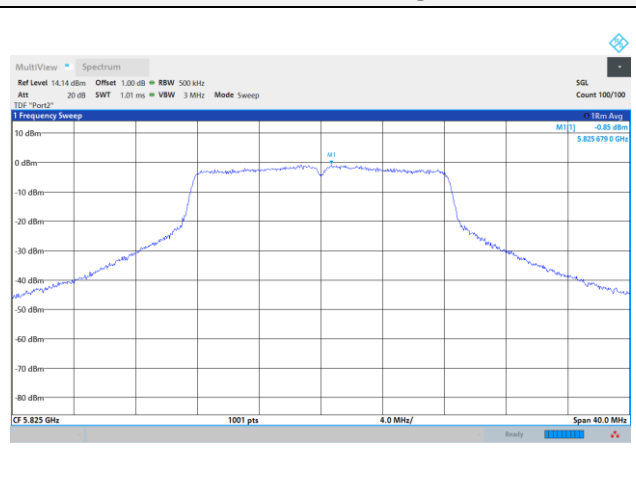
UNII-3 / 802.11a / Mid ch.



UNII-2C / 802.11a / High ch.



UNII-3 / 802.11a / High ch.



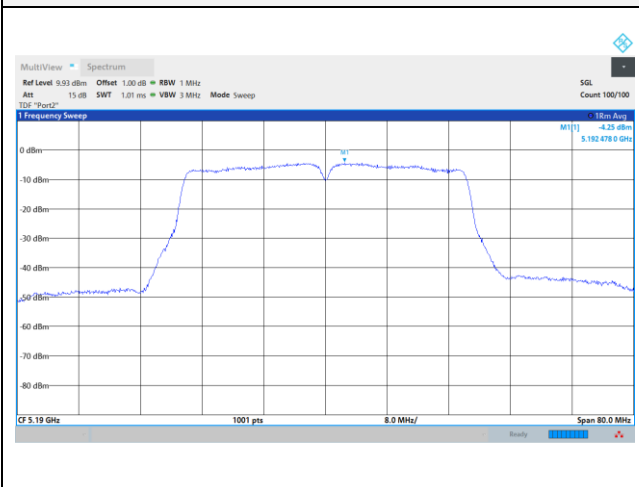
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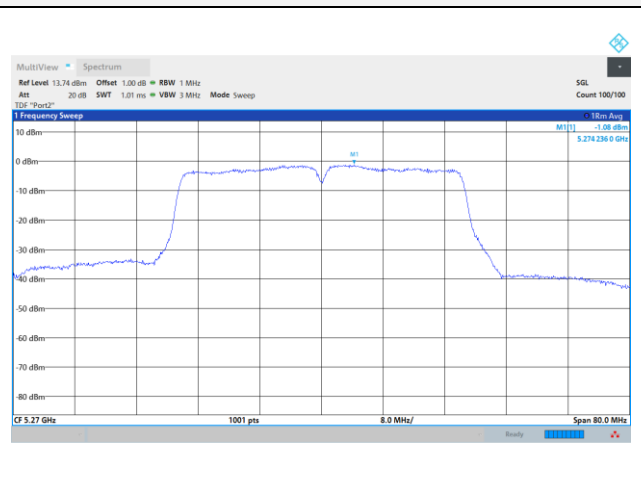
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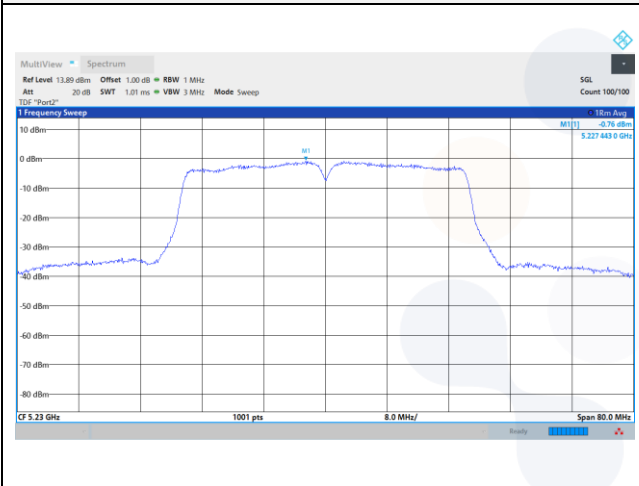
UNII-1 / 802.11n HT40 / Low ch.



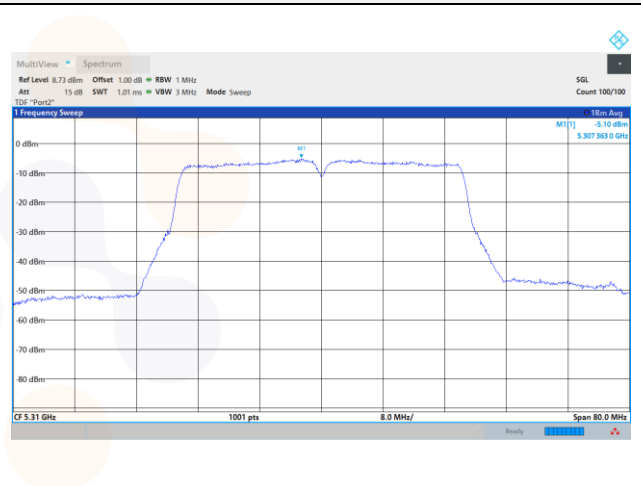
UNII-2A / 802.11n HT40 / Low ch.



UNII-1 / 802.11n HT40 / High ch.



UNII-2A / 802.11n HT40 / High ch.



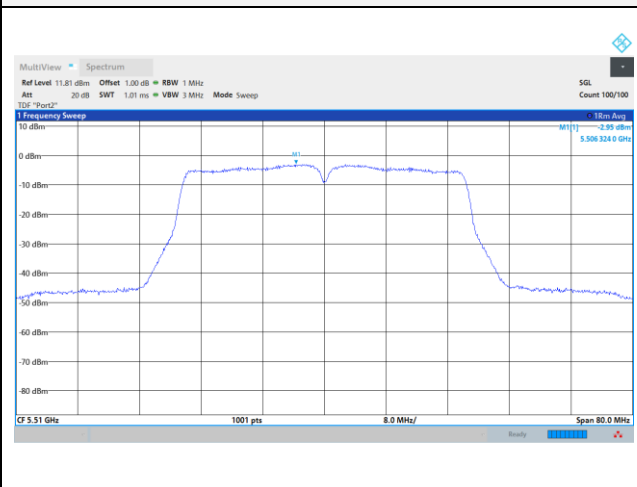
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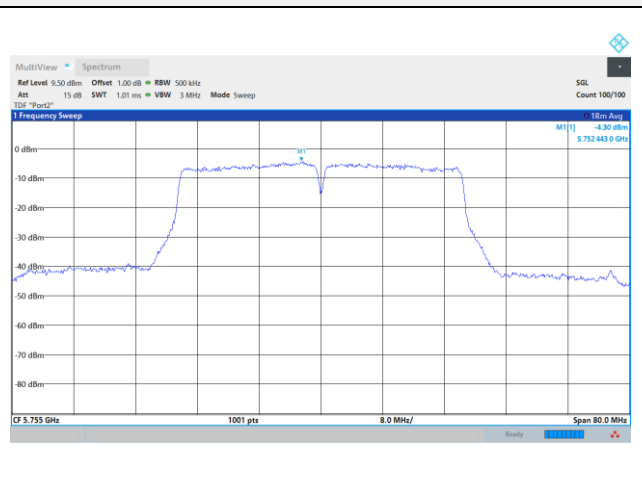
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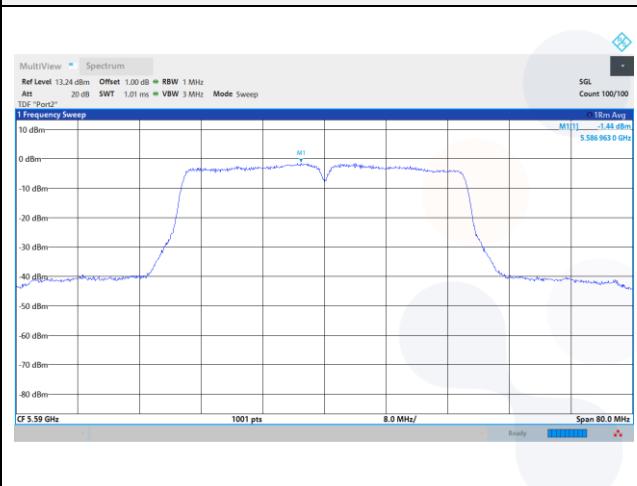
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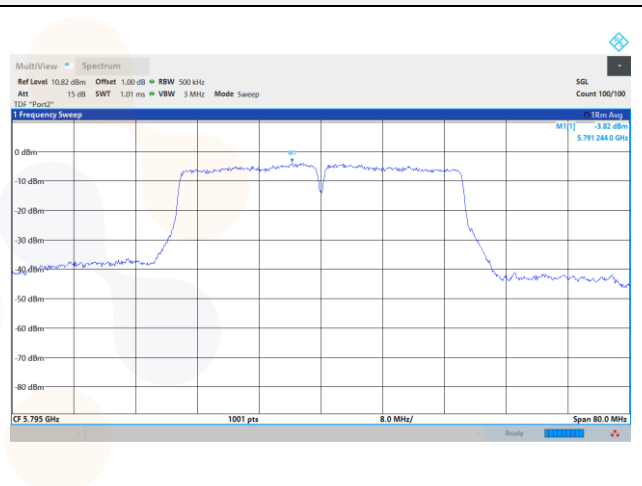
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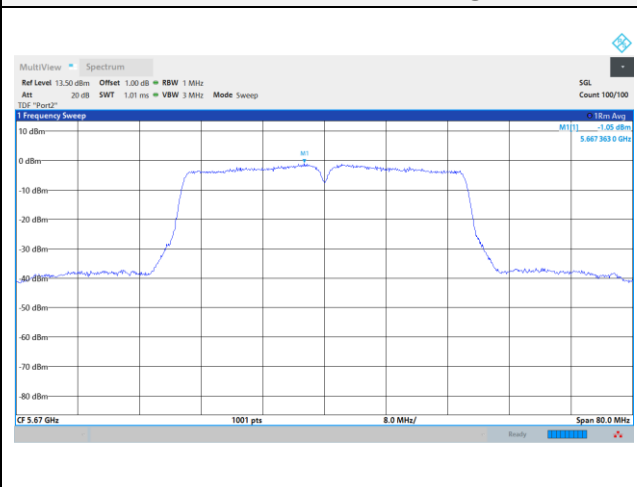
UNII-2C / 802.11n HT40 / Mid ch.



UNII-3 / 802.11n HT40 / High ch.



UNII-2C / 802.11n HT40 / High ch.



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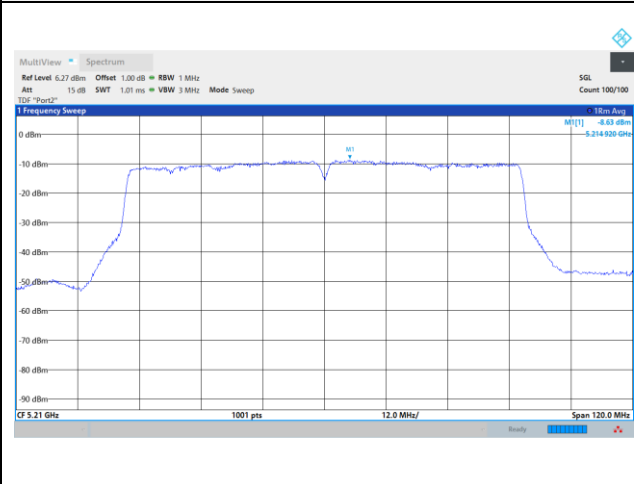
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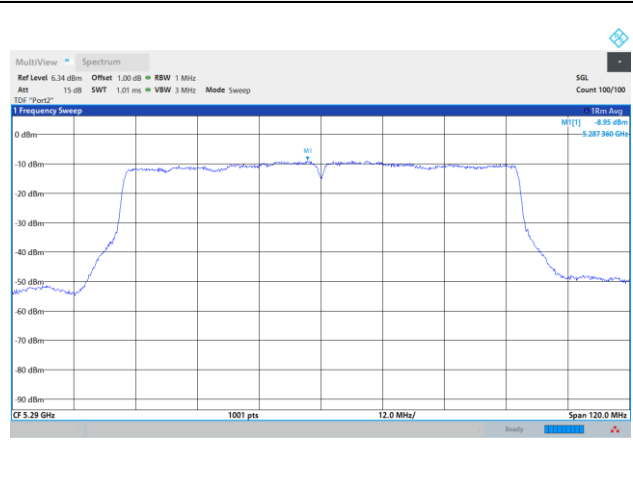
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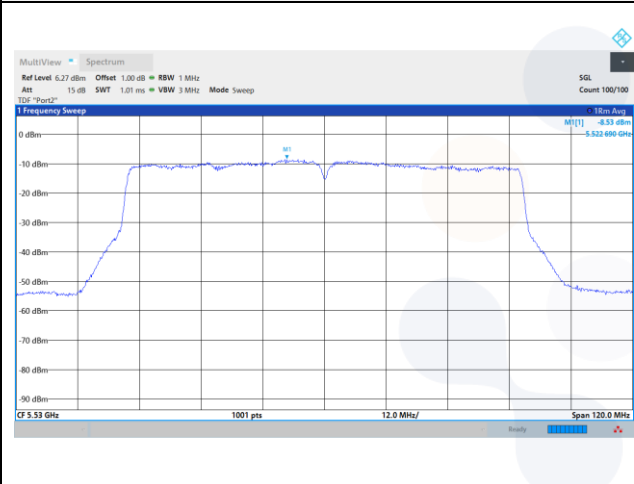
UNII-1 / 802.11ac VHT80 / Low ch.



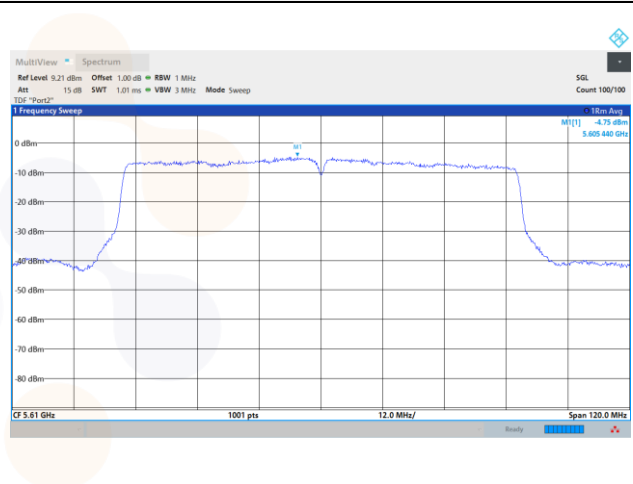
UNII-2A / 802.11ac VHT80 / Low ch.



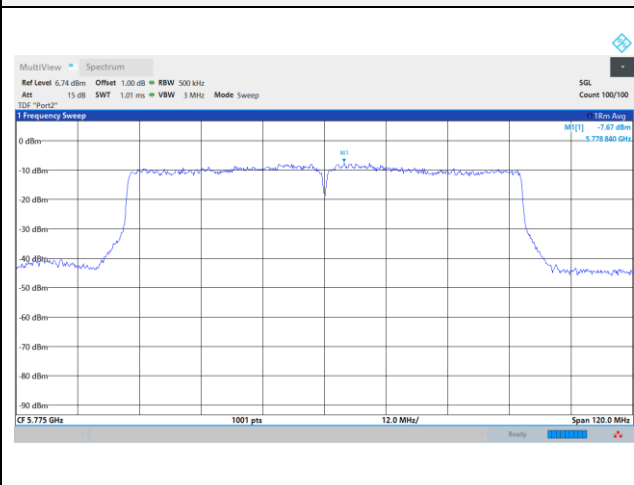
UNII-2C / 802.11ac VHT80 / Low ch.



UNII-2C / 802.11ac VHT80 / High ch.



UNII-3 / 802.11ac VHT80 / Low ch.



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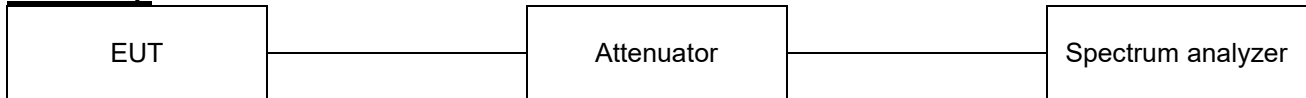
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7.3. 26 dB Bandwidth & 99% Bandwidth

Test setup



Limit

N/A

Test procedure

ANSI C63.10-2013 Section 12.4

KDB 789033 D02 v02r01 - Section C.1 (26dB bandwidth)

KDB 789033 D02 v02r01 - Section D (99% bandwidth)

Test settings

1. 26 dB Bandwidth

- a. Set RBW = approximately 1% of the emission bandwidth.
- b. Set the VBW > RBW.
- c. Detector = Peak.
- d. Trace mode = max hold.
- e. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. 99% Occupied Bandwidth

- a. Set center frequency to the nominal EUT channel center frequency.
- b. Set span = 1.5 times to 5.0 times the OBW.
- c. Set RBW = 1% to 5% of the OBW
- d. Set VBW $\geq 3 \times$ RBW
- e. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f. Use the 99% power bandwidth function of the instrument (if available).
- g. If the instrument does not have a 99% power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

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**Test results****SISO**

Test mode	Band	Frequency(MHz)	26 dB bandwidth (MHz)		99% bandwidth (MHz)	
			ANT1	ANT2	ANT1	ANT2
802.11a	UNII-1	5 180	23.65	24.30	16.88	16.91
		5 200	24.25	23.90	16.87	16.91
		5 240	24.20	24.10	16.88	16.84
	UNII-2A	5 260	24.15	24.45	16.84	16.95
		5 280	23.60	24.35	16.87	16.92
		5 320	23.50	23.80	16.85	16.94
	UNII-2C	5 500	23.50	23.75	16.87	16.88
		5 600	24.30	26.35	16.90	17.12
		5 700	23.55	23.25	16.89	16.86
802.11n HT20	UNII-1	5 180	25.65	25.10	18.01	18.04
		5 200	24.80	25.25	18.02	18.05
		5 240	24.90	25.65	17.98	18.04
	UNII-2A	5 260	25.10	25.65	17.97	18.05
		5 280	25.15	26.95	18.00	18.08
		5 320	24.25	24.95	17.97	18.04
	UNII-2C	5 500	25.20	24.60	18.00	18.01
		5 600	25.25	27.05	18.04	18.17
		5 700	25.50	25.05	18.02	17.99
802.11n HT40	UNII-1	5 190	41.90	42.10	36.36	36.35
		5 230	41.50	41.80	36.37	36.37
	UNII-2A	5 270	41.80	41.60	36.37	36.40
		5 310	41.50	41.70	36.34	36.36
	UNII-2C	5 510	41.50	41.70	36.34	36.32
		5 590	41.60	41.90	36.43	36.38
		5 670	41.60	41.80	36.37	36.37

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Test mode	Band	Frequency(MHz)	26 dB bandwidth (MHz)		99% bandwidth (MHz)	
			ANT1	ANT2	ANT1	ANT2
802.11ac VHT20	UNII-1	5 180	24.45	26.00	18.02	18.04
		5 200	25.35	24.75	18.05	18.04
		5 240	25.25	25.65	18.01	18.01
	UNII-2A	5 260	25.05	26.25	18.00	18.09
		5 280	25.20	25.15	17.99	18.04
		5 320	24.60	25.80	17.98	18.10
	UNII-2C	5 500	25.10	24.70	18.02	17.99
		5 600	25.50	27.25	18.09	18.17
		5 700	25.20	24.65	18.04	17.98
802.11ac VHT40	UNII-1	5 190	41.70	41.90	36.34	36.36
		5 230	41.80	41.90	36.37	36.38
	UNII-2A	5 270	41.60	41.80	36.34	36.40
		5 310	42.00	41.60	36.32	36.37
	UNII-2C	5 510	41.80	41.50	36.36	36.37
		5 590	42.10	41.50	36.39	36.38
		5 670	41.30	41.50	36.37	36.40
802.11ac VHT80	UNII-1	5 210	84.72	84.00	75.60	75.61
	UNII-2A	5 290	84.48	84.24	75.56	75.68
	UNII-2C	5 530	84.60	83.76	75.72	75.58
		5 610	84.48	84.00	75.74	75.63

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**MIMO**

Test mode	Band	Frequency(MHz)	26 dB bandwidth (MHz)		99% bandwidth (MHz)	
			ANT1	ANT2	ANT1	ANT2
802.11a	UNII-1	5 180	23.65	29.25	16.88	17.38
		5 200	25.40	26.70	16.88	17.05
		5 240	25.80	25.75	16.90	16.85
	UNII-2A	5 260	24.00	25.00	16.90	16.87
		5 280	24.10	24.55	16.89	16.82
		5 320	23.25	27.15	16.85	16.89
	UNII-2C	5 500	24.05	26.60	16.87	17.03
		5 600	27.85	28.40	16.98	17.24
		5 700	29.90	22.70	17.14	16.76
802.11n HT20	UNII-1	5 180	25.35	27.15	17.98	17.94
		5 200	25.85	25.85	18.04	17.99
		5 240	25.40	25.05	18.03	17.94
	UNII-2A	5 260	25.20	26.60	18.01	17.94
		5 280	24.50	26.00	18.00	17.91
		5 320	25.35	25.95	18.01	18.00
	UNII-2C	5 500	24.60	25.45	18.01	18.03
		5 600	24.45	25.90	18.03	18.02
		5 700	30.70	24.85	18.19	17.87
802.11n HT40	UNII-1	5 190	41.60	40.80	36.33	36.24
		5 230	42.20	41.40	36.37	36.25
	UNII-2A	5 270	41.70	41.30	36.35	36.26
		5 310	41.50	41.30	36.37	36.28
	UNII-2C	5 510	41.80	41.00	36.39	36.19
		5 590	41.90	41.10	36.42	36.24
		5 670	41.80	41.30	36.44	36.24

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Test mode	Band	Frequency(MHz)	26 dB bandwidth (MHz)		99% bandwidth (MHz)	
			ANT1	ANT2	ANT1	ANT2
802.11ac VHT20	UNII-1	5 180	24.70	25.85	18.01	17.95
		5 200	25.40	25.25	18.06	17.99
		5 240	25.20	25.60	18.04	17.97
	UNII-2A	5 260	24.50	25.15	18.00	17.96
		5 280	24.05	25.60	18.00	17.92
		5 320	24.00	25.35	18.00	18.00
	UNII-2C	5 500	25.15	27.00	18.02	18.06
		5 600	25.15	27.00	18.02	18.05
		5 700	29.90	24.55	18.19	17.89
802.11ac VHT40	UNII-1	5 190	41.90	41.00	36.34	36.25
		5 230	41.70	40.90	36.35	36.24
	UNII-2A	5 270	41.60	41.40	36.38	36.26
		5 310	41.50	41.10	36.35	36.22
	UNII-2C	5 510	41.60	41.00	36.37	36.17
		5 590	42.00	41.10	36.46	36.25
		5 670	48.00	40.70	36.43	36.22
802.11ac VHT80	UNII-1	5 210	84.24	83.88	75.59	75.48
	UNII-2A	5 290	84.24	83.64	75.54	75.51
	UNII-2C	5 530	84.24	83.76	75.70	75.54
		5 610	84.84	83.76	75.69	75.53

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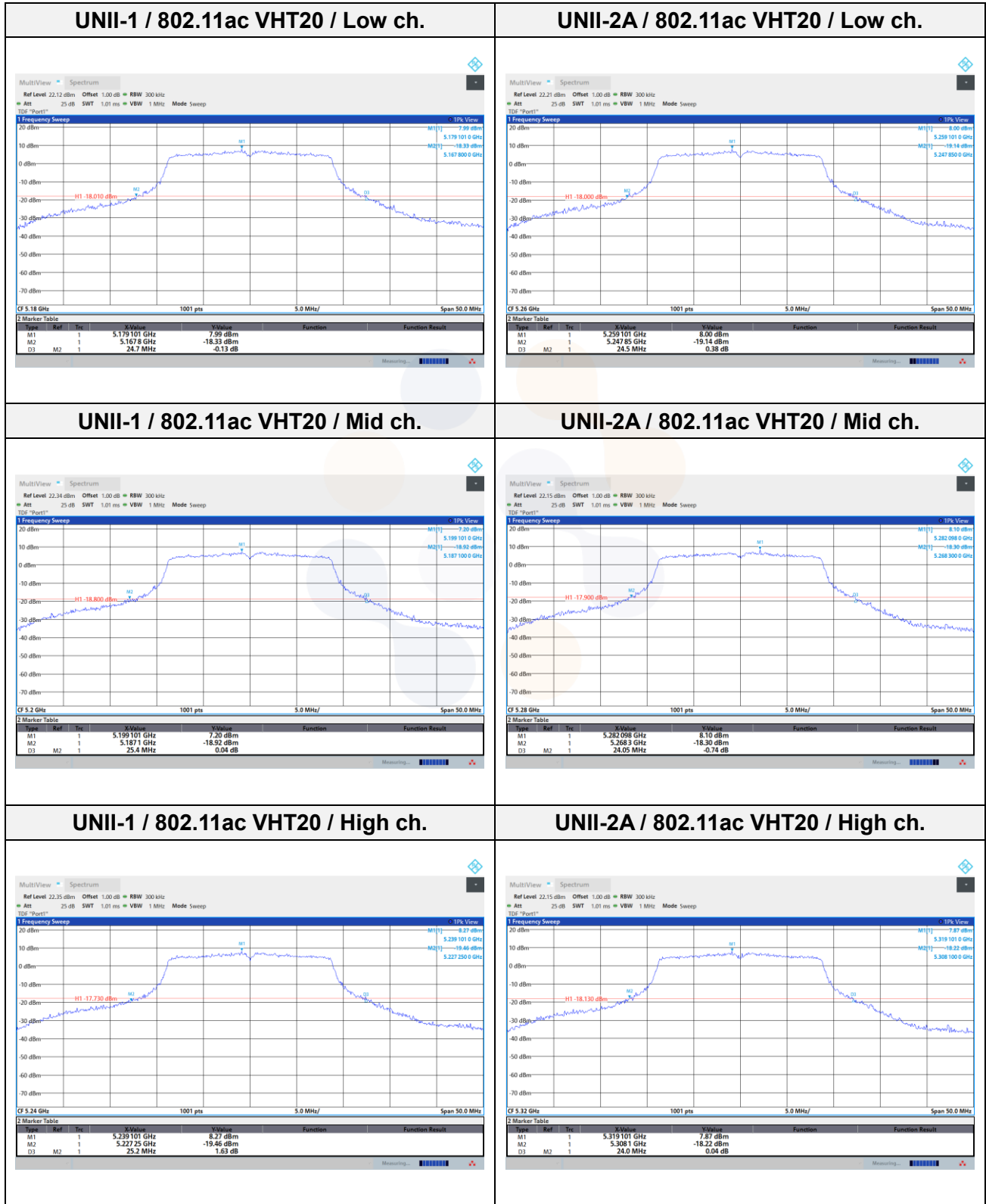
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In order to simplify the report, attached plots were only MIMO ANT 1

26 dB bandwidth



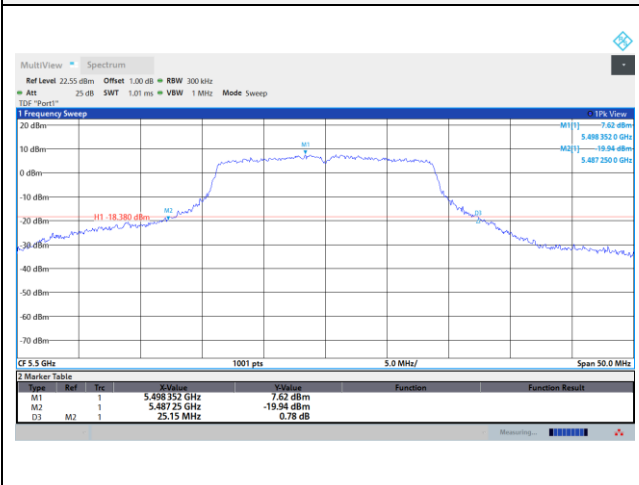
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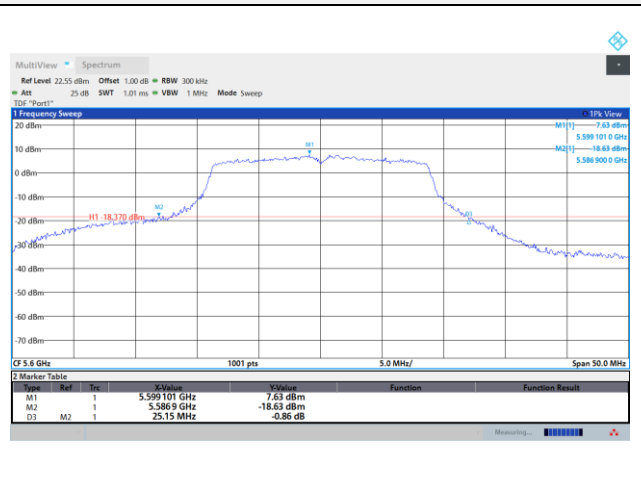
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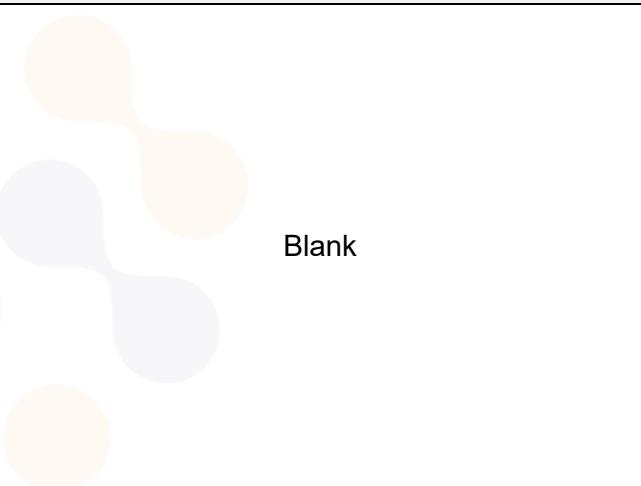
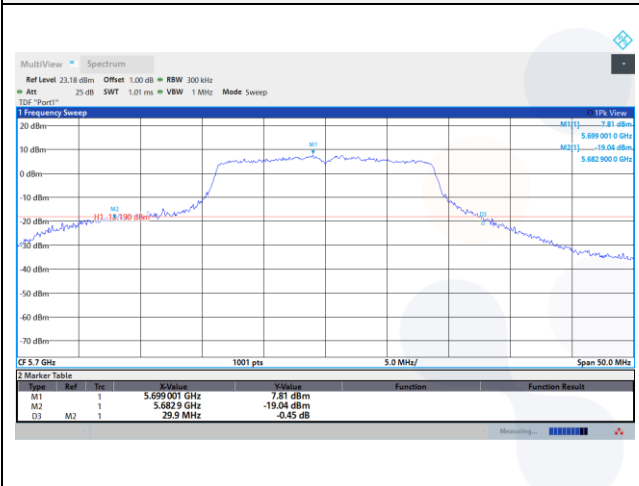
UNII-2C / 802.11ac VHT20 / Low ch.



UNII-2C / 802.11ac VHT20 / Mid ch.



UNII-2C / 802.11ac VHT20 / High ch.



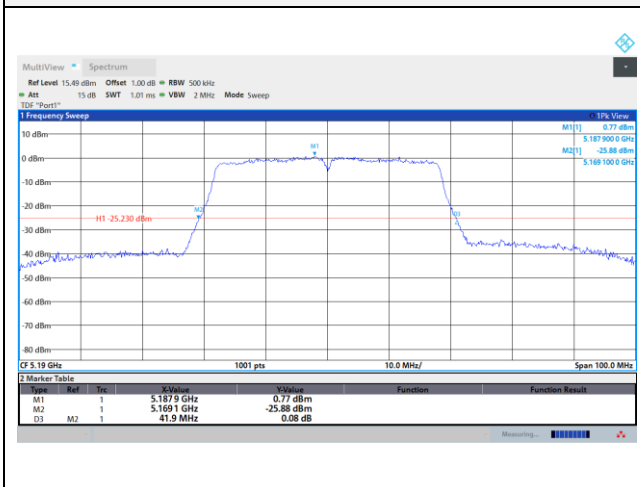
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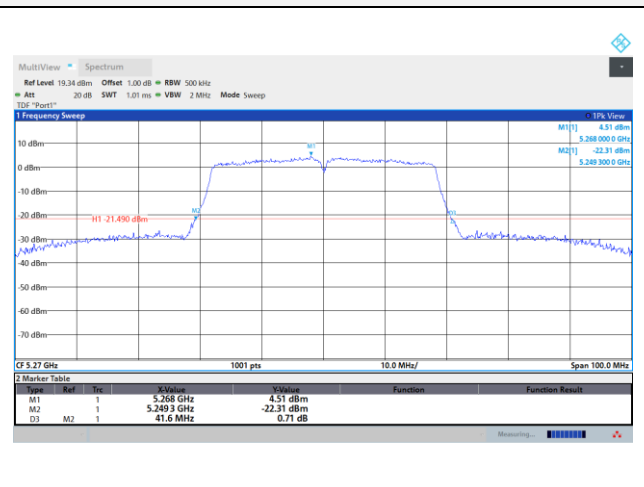
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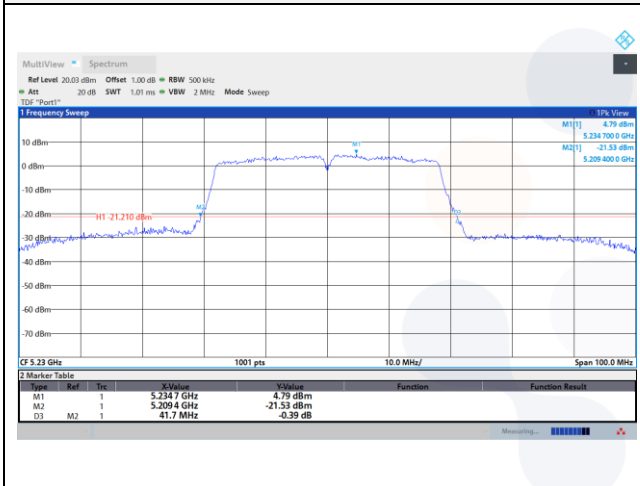
UNII-1 / 802.11ac VHT40 / Low ch.



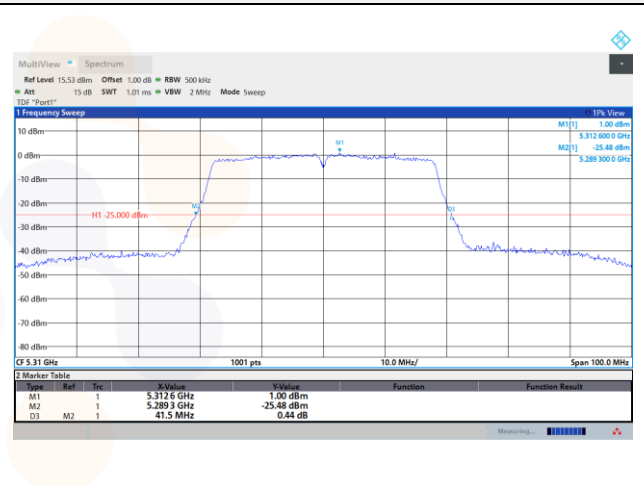
UNII-2A / 802.11ac VHT40 / Low ch.



UNII-1 / 802.11ac VHT40 / High ch.



UNII-2A / 802.11ac VHT40 / High ch.



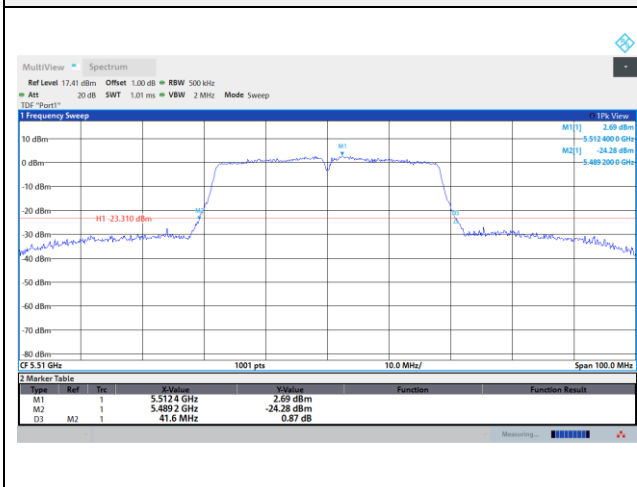
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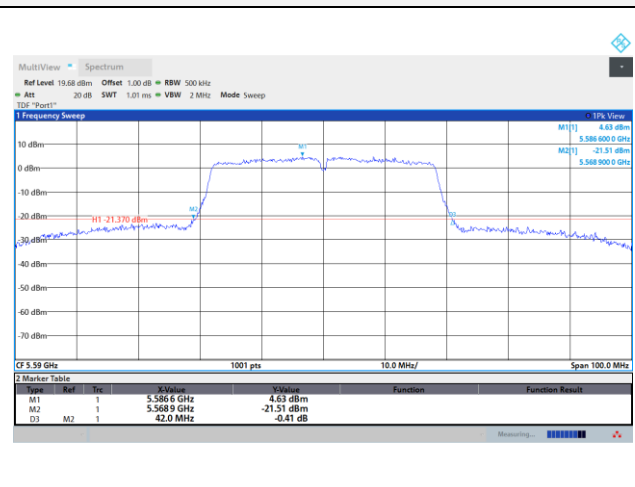
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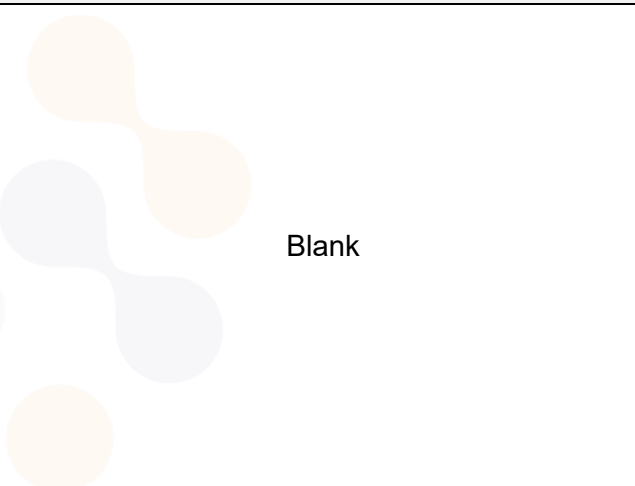
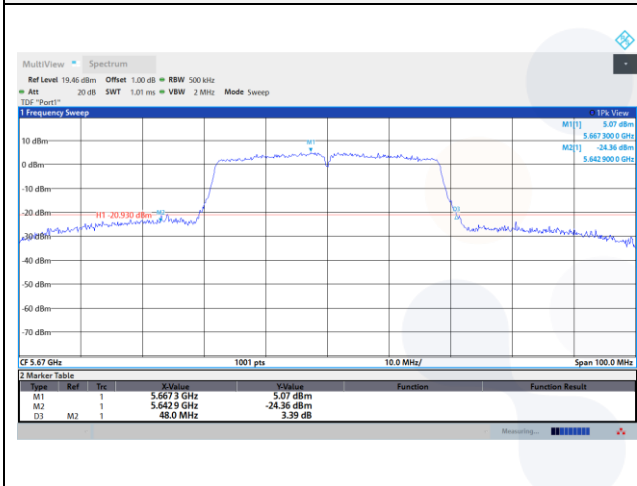
UNII-2C / 802.11ac VHT40 / Low ch.



UNII-2C / 802.11ac VHT40 / Mid ch.



UNII-2C / 802.11ac VHT40 / High ch.



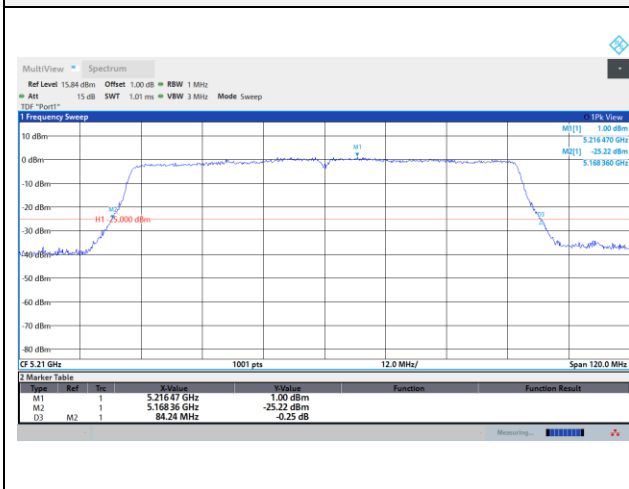
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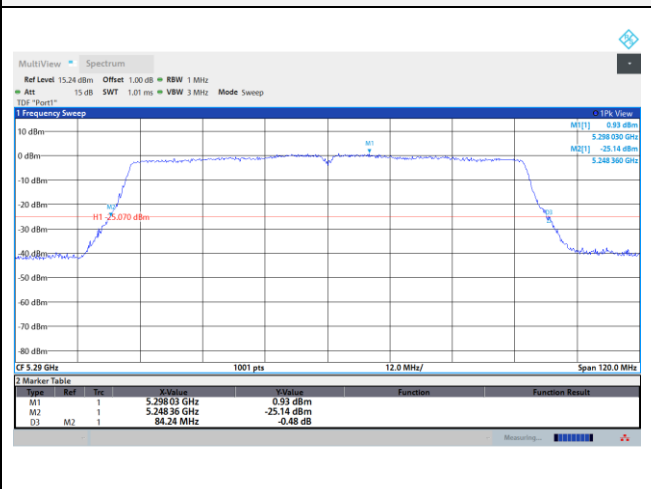
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UNII-1 / 802.11ac VHT80 / Low ch.



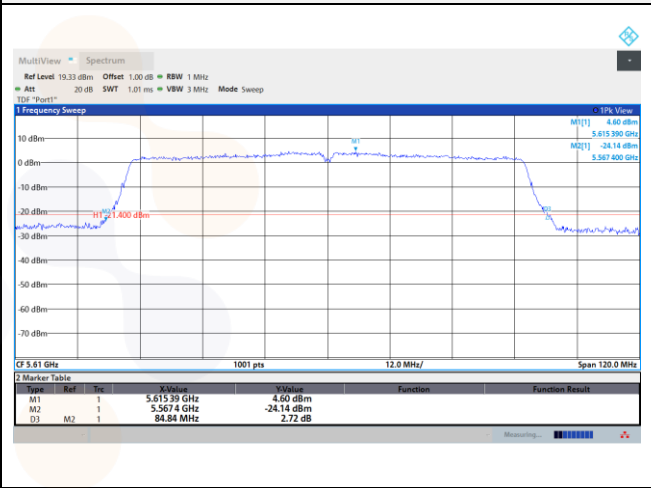
UNII-2A / 802.11ac VHT80 / Low ch.



UNII-2C / 802.11ac VHT80 / Low ch.



UNII-2C / 802.11ac VHT80 / High ch.



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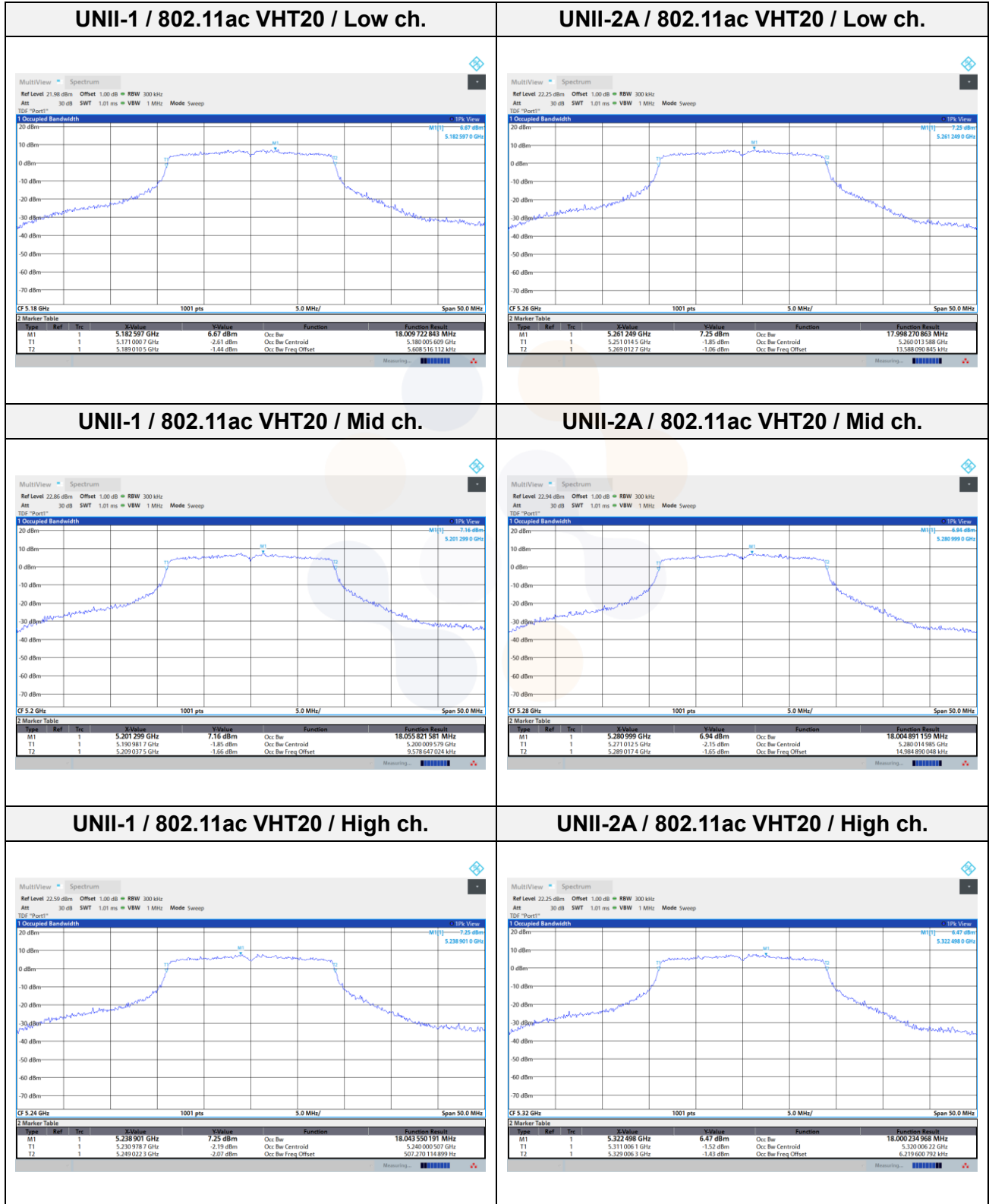
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In order to simplify the report, attached plots were only MIMO ANT 1

99% bandwidth



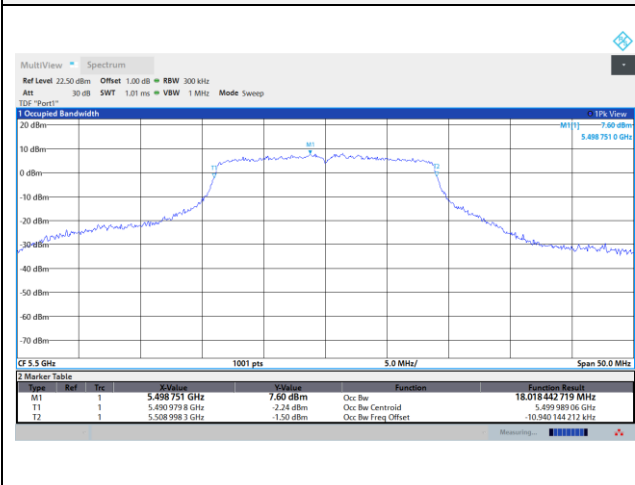
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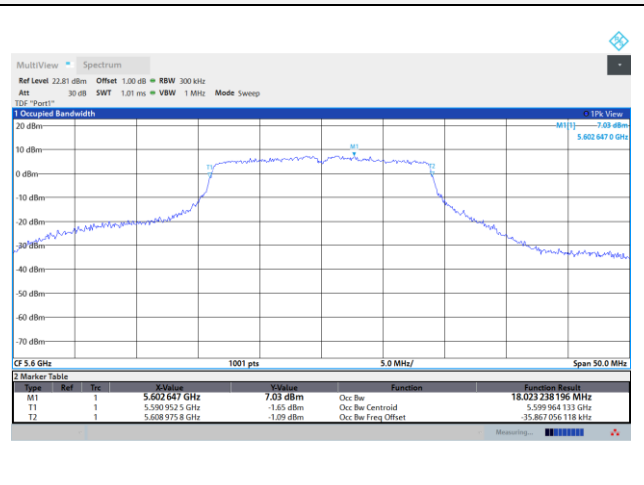
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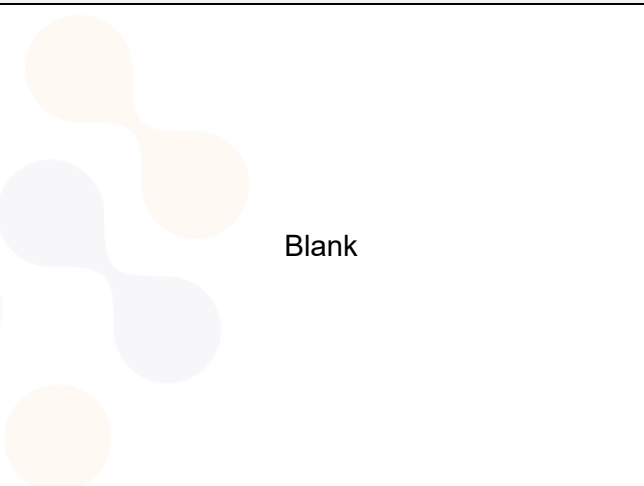
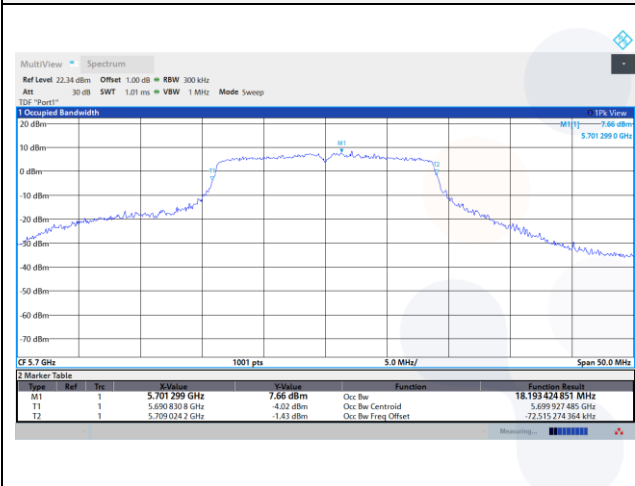
UNII-2C / 802.11ac VHT20 / Low ch.



UNII-2C / 802.11ac VHT20 / Mid ch.



UNII-2C / 802.11ac VHT20 / High ch.



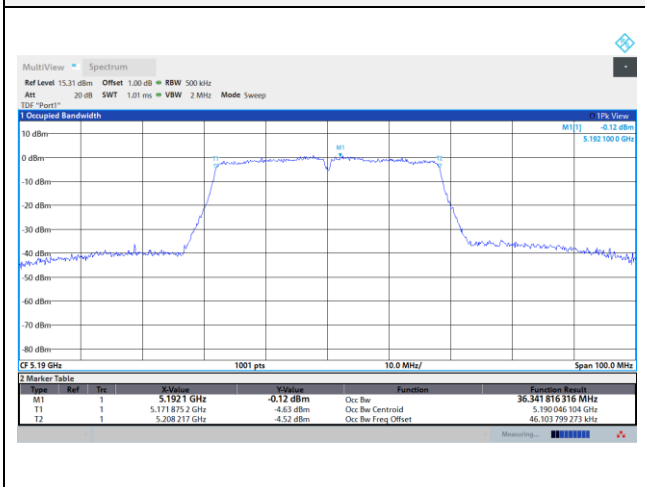
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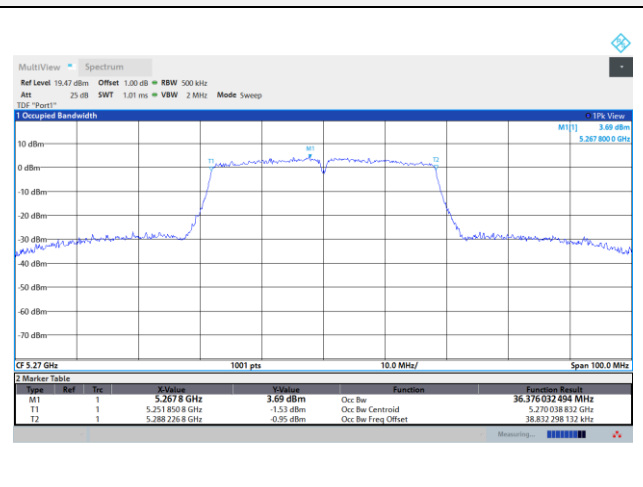
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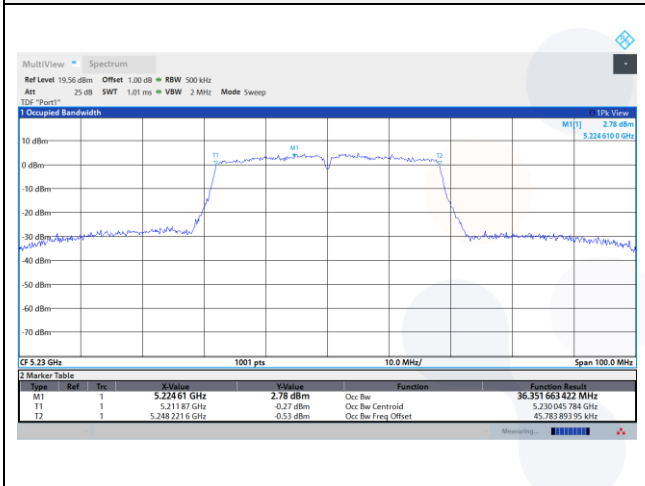
UNII-1 / 802.11ac VHT40 / Low ch.



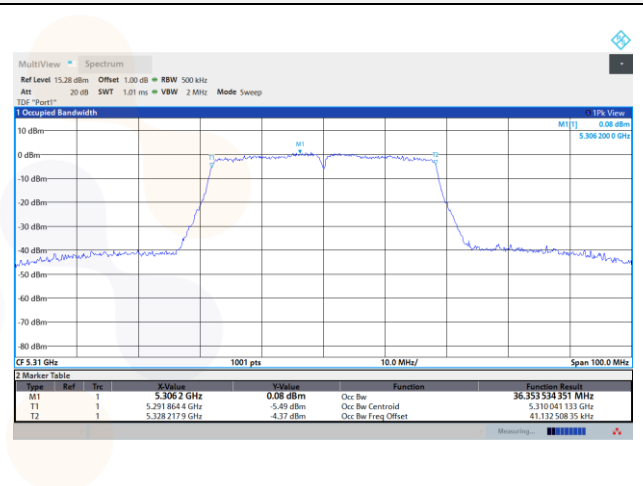
UNII-2A / 802.11ac VHT40 / Low ch.



UNII-1 / 802.11ac VHT40 / High ch.



UNII-2A / 802.11ac VHT40 / High ch.



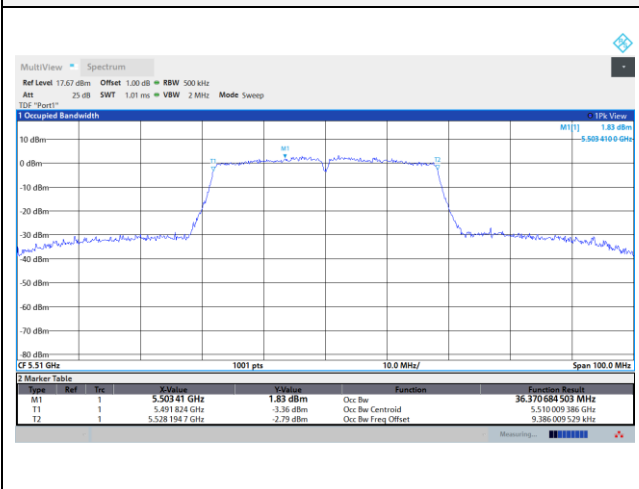
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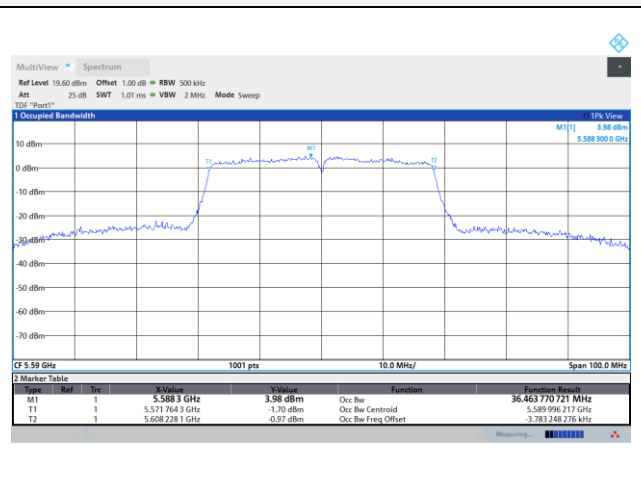
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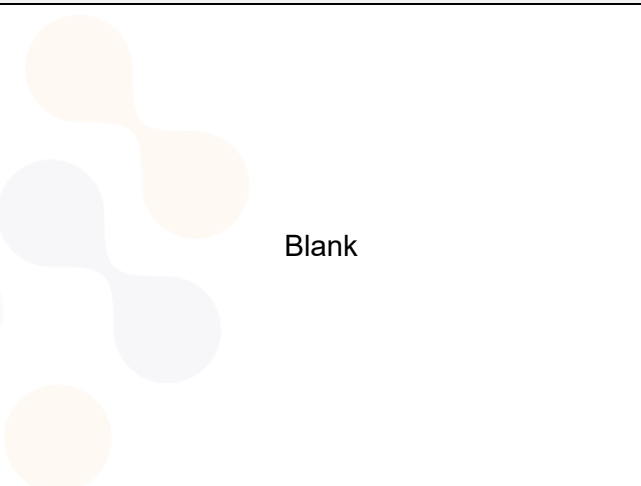
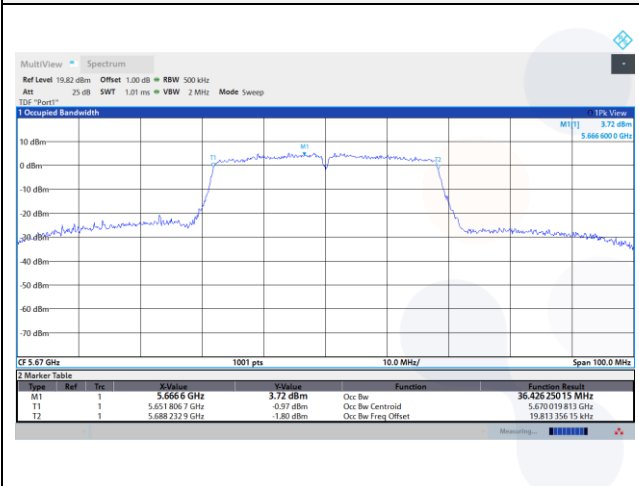
UNII-2C / 802.11ac VHT40 / Low ch.



UNII-2C / 802.11ac VHT40 / Mid ch.



UNII-2C / 802.11ac VHT40 / High ch.



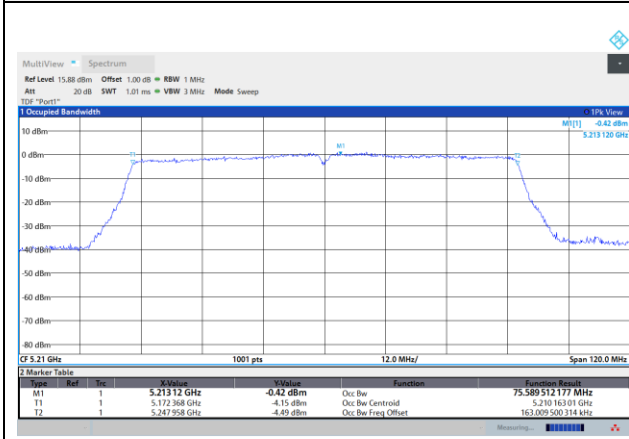
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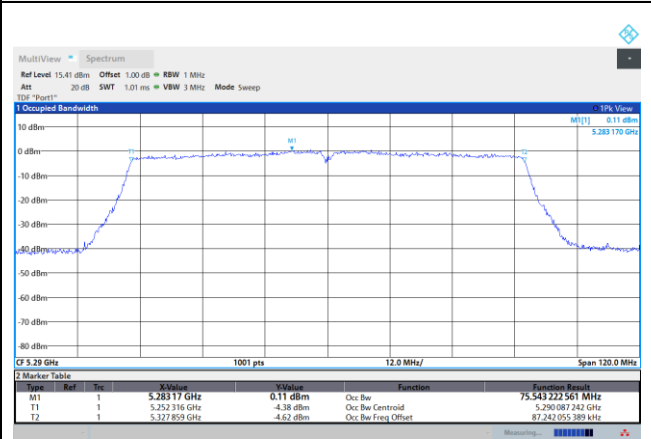
Report No.:
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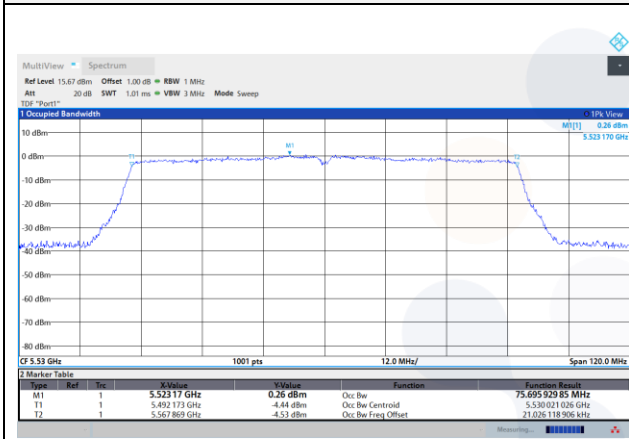
UNII-1 / 802.11ac VHT80 / Low ch.



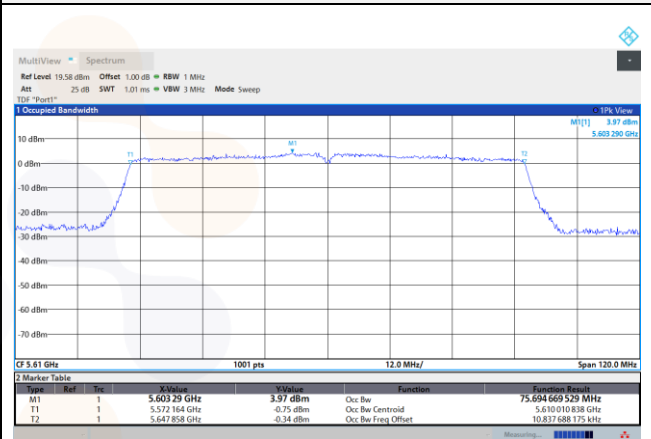
UNII-2A / 802.11ac VHT80 / Low ch.



UNII-2C / 802.11ac VHT80 / Low ch.

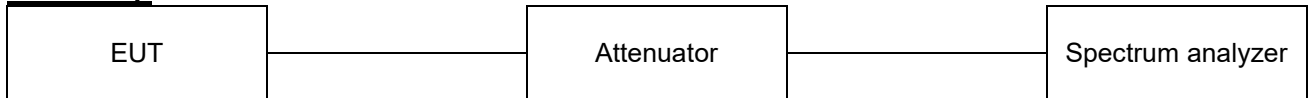


UNII-2C / 802.11ac VHT80 / High ch.



7.4. 6 dB Bandwidth & 99% Bandwidth

Test setup



Limit

According to §15.407(e), RSS-247(6.2.4) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth if U-NII devices shall be at least 500kHz

Test procedure

ANSI C63.10-2013 Section 6.9.2
KDB 789033 D02 v02r01 - Section C.2

Test settings

Minimum Emission Bandwidth for the band 5.725–5.85 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 kHz for the band 5.725–5.85 GHz. The following procedure shall be used for measuring this bandwidth:

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

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**Test results****SISO**

Test mode	Band	Frequency (MHz)	6dB bandwidth (MHz)		Limit (MHz)	99% bandwidth (MHz)	
			ANT1	ANT2		ANT1	ANT2
802.11a	UNII-3	5 745	15.45	15.80	0.50	16.89	16.87
		5 785	16.20	15.45	0.50	16.83	16.88
		5 825	15.80	15.75	0.50	16.89	16.88
802.11n HT20	UNII-3	5 745	15.65	16.05	0.50	18.00	18.01
		5 785	16.40	15.45	0.50	18.00	18.01
		5 825	16.10	15.90	0.50	18.02	18.00
802.11n HT40	UNII-3	5 755	35.90	35.60	0.50	36.47	36.40
		5 795	35.50	35.50	0.50	36.38	36.38
802.11ac VHT20	UNII-3	5 745	16.05	15.80	0.50	18.05	18.02
		5 785	15.75	15.45	0.50	18.00	18.00
		5 825	15.80	16.00	0.50	18.01	17.97
802.11ac VHT40	UNII-3	5 755	36.10	35.90	0.50	36.42	36.36
		5 795	35.50	36.20	0.50	36.36	36.39
802.11ac VHT80	UNII-3	5 775	75.48	75.48	0.50	75.59	75.70

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**MIMO**

Test mode	Band	Frequency (MHz)	6dB bandwidth (MHz)		Limit (MHz)	99% bandwidth (MHz)	
			ANT1	ANT2		ANT1	ANT2
802.11a	UNII-3	5 745	15.90	16.40	0.50	16.87	16.75
		5 785	16.15	16.40	0.50	16.85	16.81
		5 825	16.00	16.40	0.50	16.89	16.79
802.11n HT20	UNII-3	5 745	16.15	17.25	0.50	17.98	17.88
		5 785	15.75	17.25	0.50	18.00	17.87
		5 825	16.60	16.65	0.50	18.02	17.87
802.11n HT40	UNII-3	5 755	35.80	36.50	0.50	36.41	36.24
		5 795	36.00	36.50	0.50	36.41	36.27
802.11ac VHT20	UNII-3	5 745	16.05	17.65	0.50	17.99	17.89
		5 785	15.25	17.05	0.50	17.97	17.86
		5 825	15.45	17.05	0.50	17.97	17.89
802.11ac VHT40	UNII-3	5 755	36.20	36.00	0.50	36.39	36.25
		5 795	35.70	35.90	0.50	36.40	36.24
802.11ac VHT80	UNII-3	5 775	75.36	75.36	0.50	75.64	75.50

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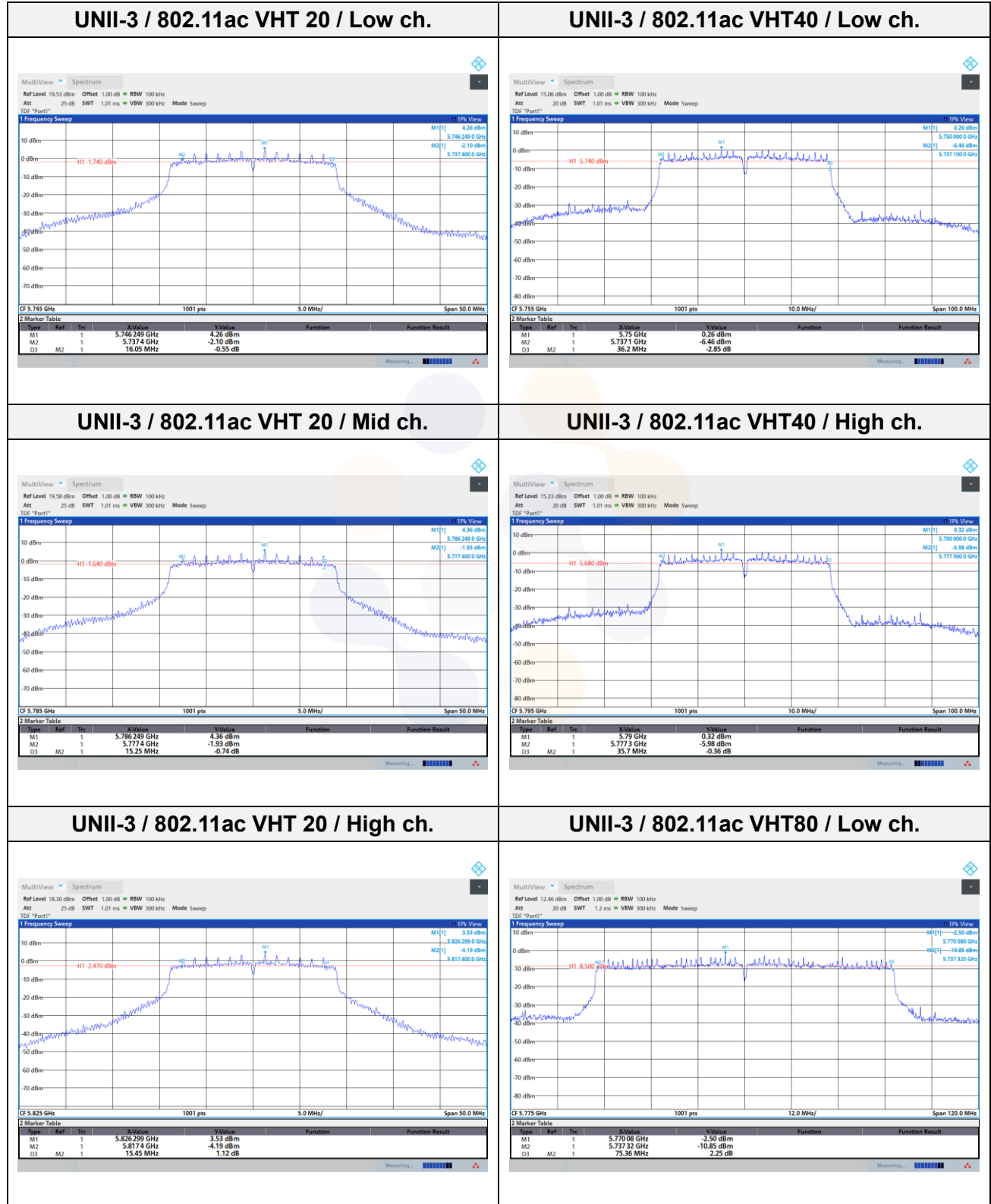
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6 dB bandwidth



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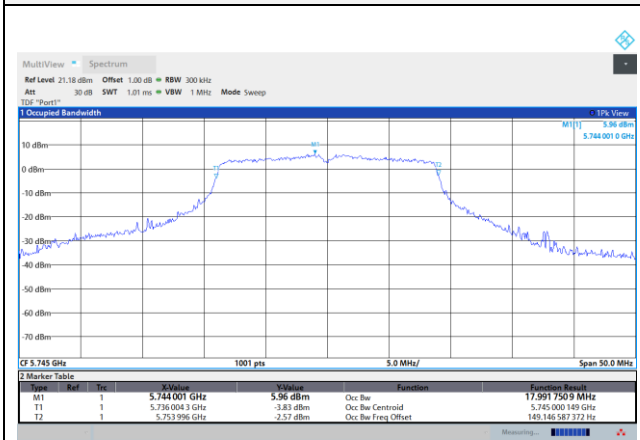
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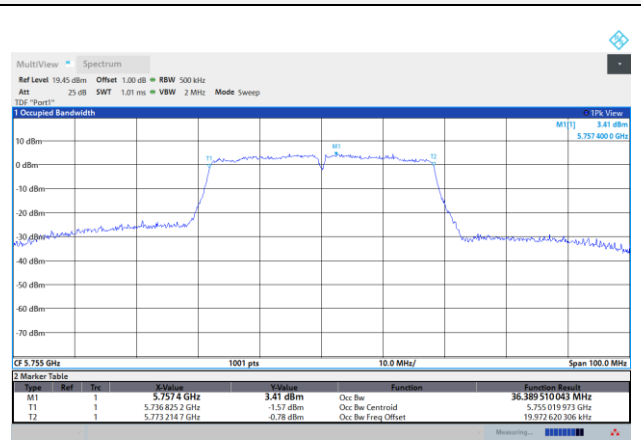


99% bandwidth

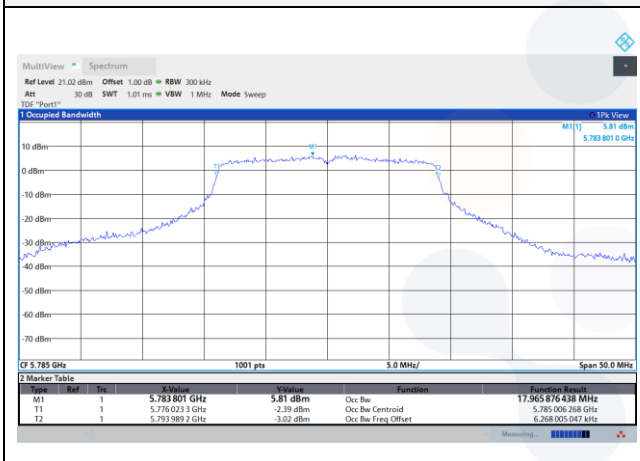
UNII-3 / 802.11ac VHT 20 / Low ch.



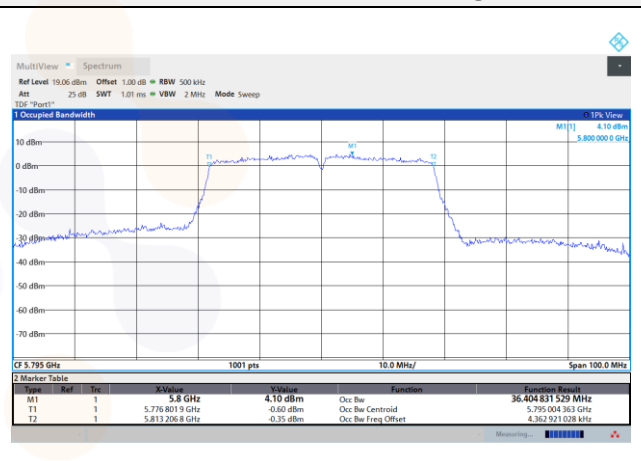
UNII-3 / 802.11ac VHT40 / Low ch.



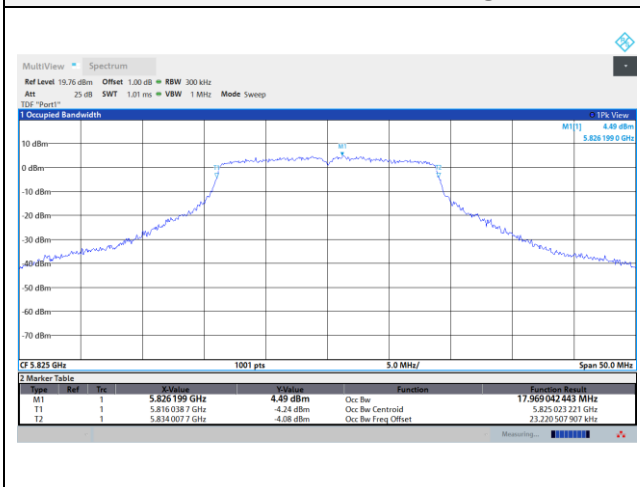
UNII-3 / 802.11ac VHT 20 / Mid ch.



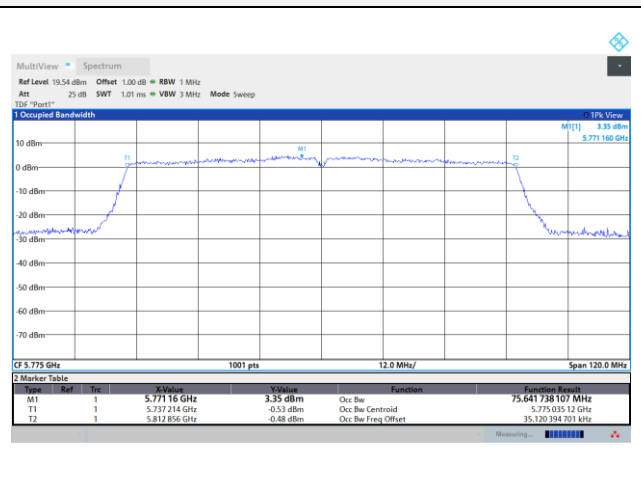
UNII-3 / 802.11ac VHT40 / High ch.



UNII-3 / 802.11ac VHT 20 / High ch.



UNII-3 / 802.11ac VHT80 / Low ch.



7.5. Straddle channel

26dB bandwidth & 99% Bandwidth

SISO

Test mode	Band	Frequency (MHz)	26dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			ANT1	ANT2	ANT1	ANT2
802.11a	UNII-2C	5 720	16.85	16.85	13.44	13.39
802.11n HT20			17.45	17.05	13.99	13.97
802.11ac VHT20			17.30	17.60	13.99	13.99
802.11a	UNII-3	5 720	7.55	6.80	3.46	3.43
802.11n HT20			7.85	7.00	4.05	4.01
802.11ac VHT20			7.95	7.35	4.04	4.02
802.11n HT40	UNII-2C	5 710	35.90	35.80	33.15	33.17
802.11ac VHT40			35.50	36.00	33.15	33.21
802.11n HT40	UNII-3	5 710	6.10	5.80	3.22	3.21
802.11ac VHT40			5.80	5.90	3.24	3.22
802.11ac VHT80	UNII-2C	5 690	76.88	77.00	72.73	72.80
	UNII-3	5 690	8.20	7.24	2.93	2.84

Notes:

- For 99% Bandwidth, measured 99% occupied bandwidth is separated as below.
 - For UNII band 2C = 5 725 MHz – T1 (Measured frequency on the marker table)
 - For UNII band 3 = T2 (Measured frequency on the marker table) – 5 725 MHz

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**MIMO**

Test mode	Band	Frequency (MHz)	26dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			ANT1	ANT2	ANT1	ANT2
802.11a	UNII-2C	5 720	21.35	18.20	13.55	13.54
802.11n HT20			23.45	16.85	14.15	13.94
802.11ac VHT20			21.05	17.05	14.12	13.92
802.11a	UNII-3	5 720	7.40	8.40	3.42	3.61
802.11n HT20			7.00	7.50	3.97	3.93
802.11ac VHT20			7.00	7.35	3.99	3.93
802.11n HT40	UNII-2C	5 710	35.90	35.70	33.20	33.11
802.11ac VHT40			35.90	35.80	33.21	33.12
802.11n HT40	UNII-3	5 710	5.80	5.80	3.22	3.16
802.11ac VHT40			6.10	5.60	3.24	3.15
802.11ac VHT80	UNII-2C	5 690	76.88	76.76	72.74	72.75
	UNII-3	5 690	8.32	6.52	2.95	2.77

Notes:

- For 99% Bandwidth, measured 99% occupied bandwidth is separated as below.
 - For UNII band 2C = 5 725 MHz – T1 (Measured frequency on the marker table)
 - For UNII band 3 = T2 (Measured frequency on the marker table) – 5 725 MHz

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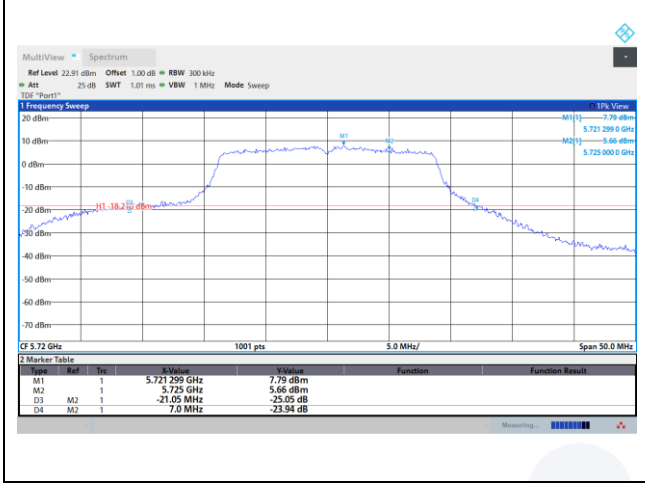
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In order to simplify the report, attached plots were only MIMO ANT 1

26dB bandwidth

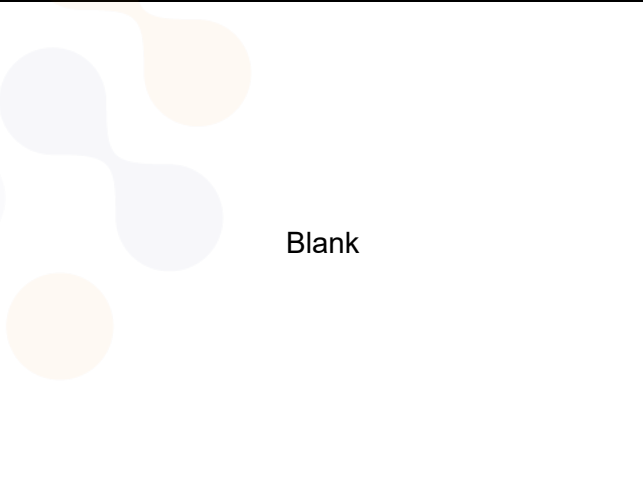
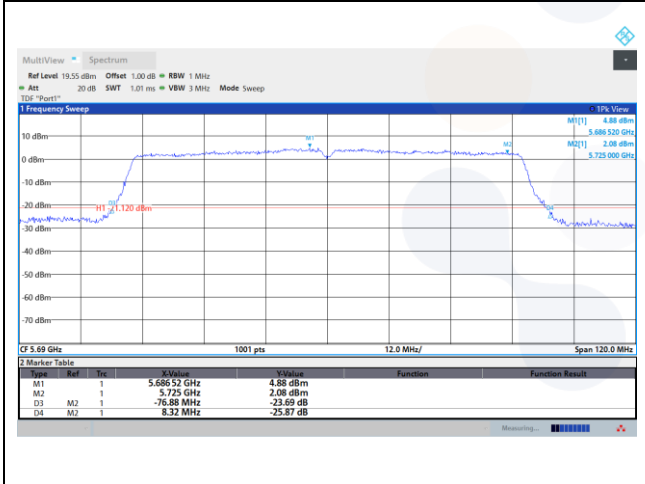
802.11ac VHT20



802.11ac VHT40



802.11ac VHT80



Blank

KCTL Inc.

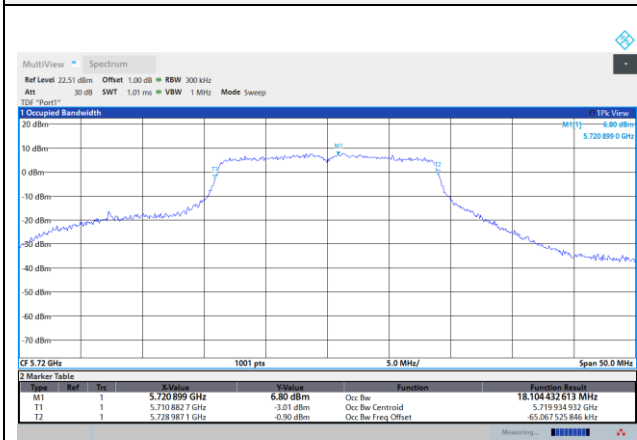
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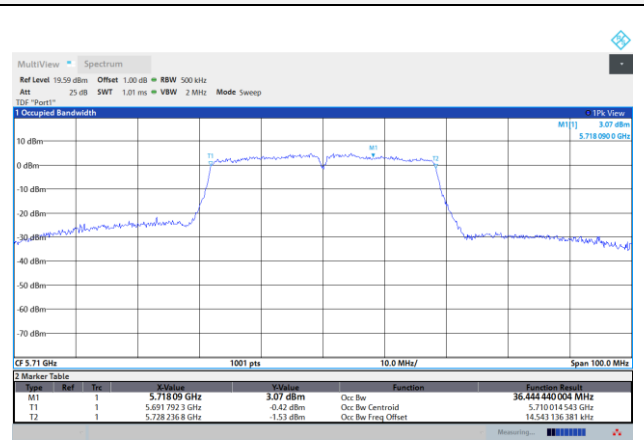


99% bandwidth

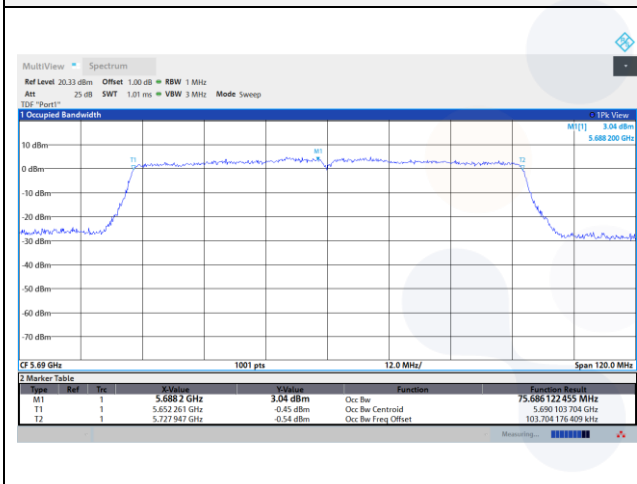
802.11ac VHT20



802.11ac VHT40



802.11ac VHT80



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**6dB bandwidth****SISO**

Test mode	Band	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT1	ANT2	
802.11a	UNII-3	5 720	2.85	2.95	0.5
802.11n HT20			2.65	3.20	0.5
802.11ac VHT20			2.65	2.65	0.5
802.11n HT40	UNII-3	5 710	2.90	2.90	0.5
802.11ac VHT40			3.30	3.30	0.5
802.11ac VHT80	UNII-3	5 690	2.80	2.80	0.5

MIMO

Test mode	Band	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT1	ANT2	
802.11a	UNII-3	5 720	2.65	3.20	0.5
802.11n HT20			3.20	3.80	0.5
802.11ac VHT20			2.65	3.45	0.5
802.11n HT40	UNII-3	5 710	2.90	3.30	0.5
802.11ac VHT40			3.00	2.90	0.5
802.11ac VHT80	UNII-3	5 690	2.80	2.68	0.5

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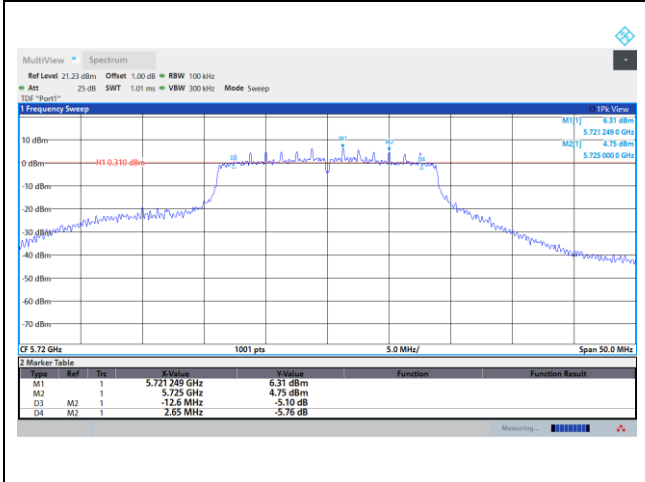
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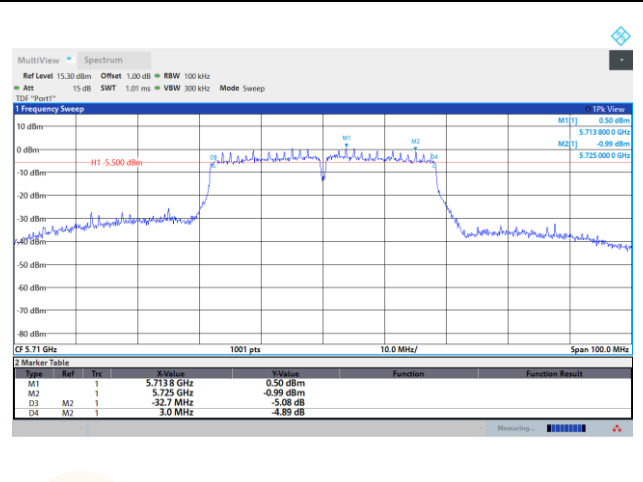


In order to simplify the report, attached plots were only MIMO ANT 1

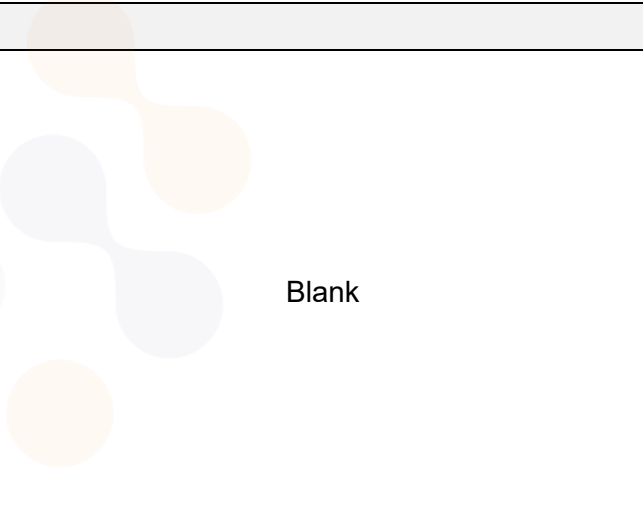
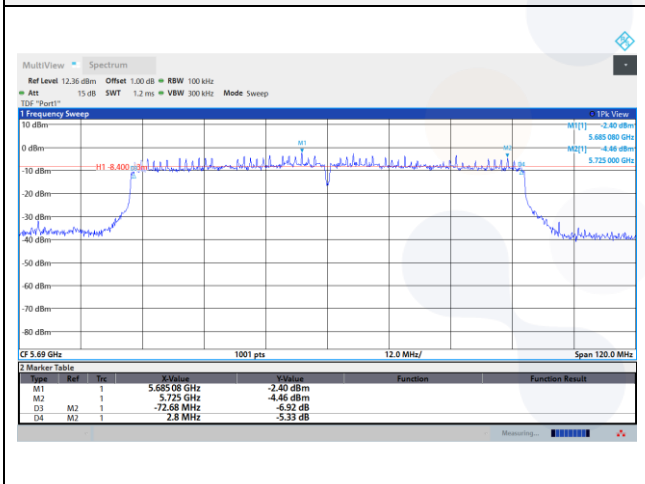
802.11ac VHT20



802.11ac VHT40



802.11ac VHT80



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**Output Power****-SISO Conducted Output Power**

Test mode	Band	Frequency (MHz)	Measured output power					Limit (dBm)
			Reading (dBm)		DCF (dB)	Result (dBm)		
			ANT1	ANT2		ANT1	ANT2	
802.11a	UNII-2C	5 720	14.76	14.40	0.11	14.87	14.51	24.00
802.11n HT20			14.55	14.23	0.12	14.67	14.35	
802.11ac VHT20			14.31	14.22	0.12	14.43	14.34	
802.11a	UNII-3	5 720	7.86	7.61	0.11	7.97	7.72	30.00
802.11n HT20			8.30	7.96	0.12	8.42	8.08	
802.11ac VHT20			8.02	7.92	0.12	8.14	8.04	
802.11n HT40	UNII-2C	5 710	12.72	13.11	0.23	12.95	13.34	24.00
802.11ac VHT40			12.62	13.02	0.24	12.86	13.26	
802.11n HT40	UNII-3	5 710	2.18	2.26	0.23	2.41	2.49	30.00
802.11ac VHT40			1.78	2.27	0.24	2.02	2.51	
802.11ac VHT80	UNII-2C	5 690	12.12	11.78	0.45	12.57	12.23	24.00
	UNII-3	5 690	-1.71	-2.45	0.45	-1.26	-2.00	30.00

Notes.

1. Result(dB m) = Reading Power + D.C.F

-SISO e.i.r.p.

Test mode	Band	Frequency (MHz)	Measured output power						MAX e.i.r.p Limit (dBm)
			Conducted Output Power (dBm)		ANT gain (dB)		MAX e.i.r.p (dBm)		
			ANT1	ANT2	ANT1	ANT2	ANT1	ANT2	
802.11a	UNII-2C	5 720	14.87	14.51	-6.30	-8.10	8.57	6.41	29.26
802.11n HT20			14.67	14.35			8.37	6.25	29.55
802.11ac VHT20			14.43	14.34			8.13	6.24	29.56
802.11a	UNII-3	5 720	7.97	7.72	-6.80	-7.00	1.17	0.72	30.00
802.11n HT20			8.42	8.08			1.62	1.08	30.00
802.11ac VHT20			8.14	8.04			1.34	1.04	30.00
802.11n HT40	UNII-2C	5 710	12.95	13.34	-6.30	-8.10	6.65	5.24	30.00
802.11ac VHT40			12.86	13.26			6.56	5.16	30.00
802.11n HT40	UNII-3	5 710	2.41	2.49	-6.80	-7.00	-4.39	-4.51	30.00
802.11ac VHT40			2.02	2.51			-4.78	-4.49	30.00
802.11ac VHT80	UNII-2C	5 690	12.57	12.23	-6.30	-8.10	6.27	4.13	30.00
	UNII-3	5 690	-1.26	-2.00	-6.80	-7.00	-8.06	-9.00	30.00

Notes:

1. e.i.r.p. Calculation: e.i.r.p. (dBm) = Conducted output power (dBm) + Antenna gain (dBi)

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**-MIMO Conducted Output Power**

Test mode	Band	Frequency (MHz)	Measured output power				Limit (dBm)
			Reading (dBm)		DCF (dB)	Result (dBm)	
			ANT1	ANT2			
802.11a	UNII-2C	5 720	14.67	12.59	0.11	16.87	24.00
802.11n HT20			14.68	13.06	0.23	17.19	
802.11ac VHT20			14.54	13.13	0.22	17.12	
802.11a	UNII-3	5 720	7.77	5.87	0.11	10.04	30.00
802.11n HT20			8.21	6.80	0.23	10.80	
802.11ac VHT20			8.22	6.88	0.22	10.83	
802.11n HT40	UNII-2C	5 710	12.20	11.73	0.42	15.40	24.00
802.11ac VHT40			12.61	11.79	0.41	15.64	
802.11n HT40	UNII-3	5 710	1.50	1.01	0.42	4.69	30.00
802.11ac VHT40			1.92	0.86	0.41	4.84	
802.11ac VHT80	UNII-2C	5 690	11.90	11.01	0.75	15.24	24.00
	UNII-3	5 690	-1.98	-3.04	0.75	1.28	30.00

Notes:

1. $\text{Result}(\text{dBm}) = 10\log(10^{(\text{ANT } 1/10)} + 10^{(\text{ANT } 2/10)}) + \text{D.C.F}$

-MIMO e.i.r.p.

Test mode	Band	Frequency (MHz)	Measured output power			Limit (dBm)
			Conducted output Power (dBm)	ANT gain (dBi)	MAX e.i.r.p (dBm)	
802.11a	UNII-2C	5 720	16.87	-4.14	12.73	29.30
802.11n HT20			17.19		13.05	29.52
802.11ac VHT20			17.12		12.98	29.52
802.11a	UNII-3	5 720	10.04	-3.89	6.15	30.00
802.11n HT20			10.80		6.91	
802.11ac VHT20			10.83		6.94	
802.11n HT40	UNII-2C	5 710	15.40	-4.14	11.26	30.00
802.11ac VHT40			15.64		11.50	
802.11n HT40	UNII-3	5 710	4.69	-3.89	0.80	30.00
802.11ac VHT40			4.84		0.95	
802.11ac VHT80	UNII-2C	5 690	15.24	-4.14	11.10	30.00
	UNII-3	5 690	1.28	-3.89	-2.61	30.00

Notes:

1. e.i.r.p. Calculation: $\text{e.i.r.p. (dBm)} = \text{Conducted output power (dBm)} + \text{Antenna gain (dBi)}$

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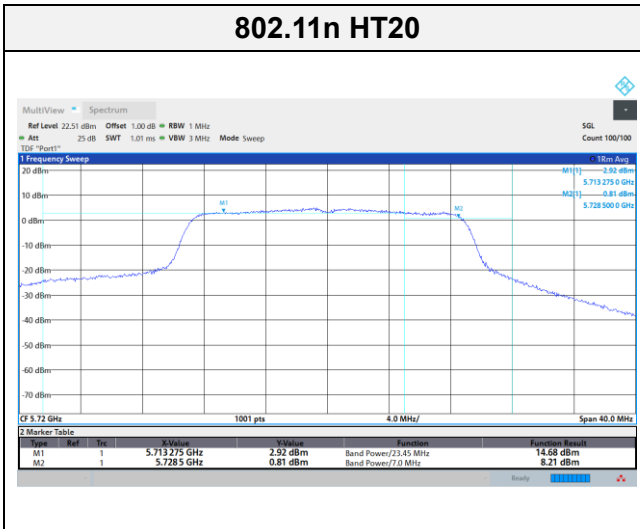
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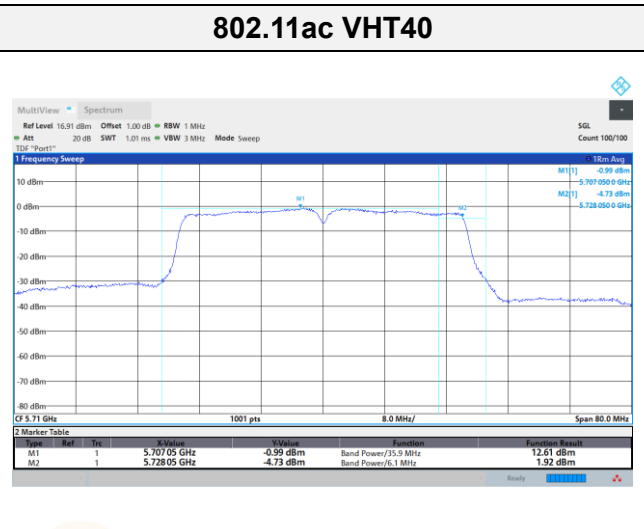


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ANT 1

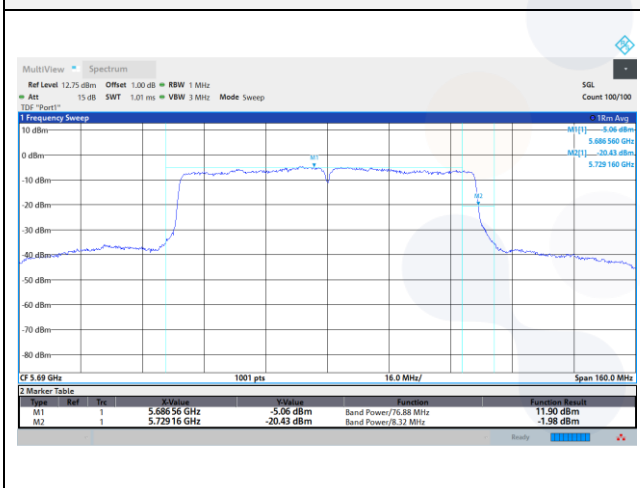
802.11n HT20



802.11ac VHT40



802.11ac VHT80



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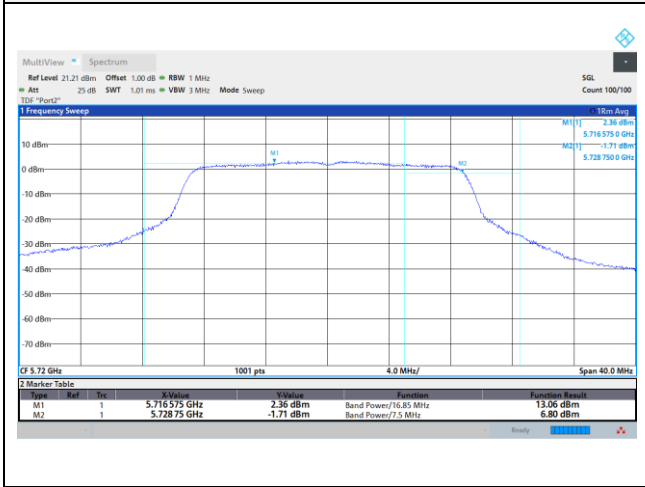
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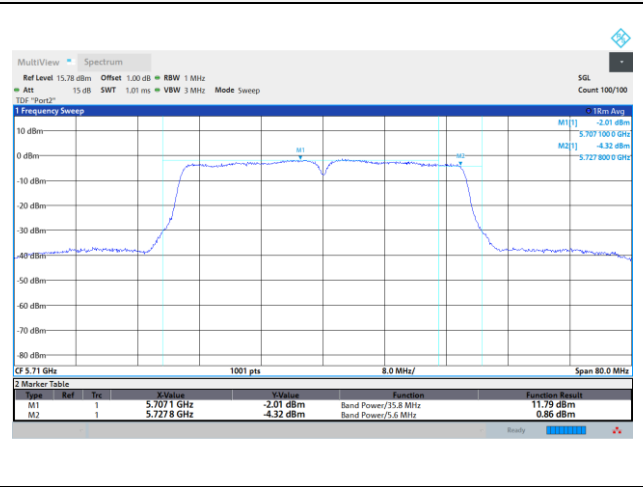


ANT2

802.11n HT20



802.11ac VHT40



802.11ac VHT80

