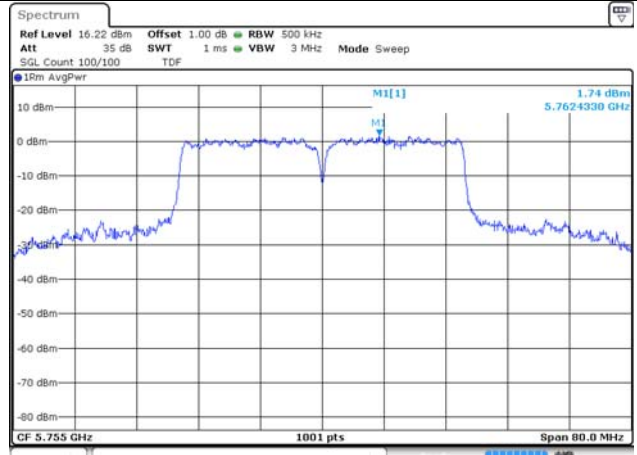


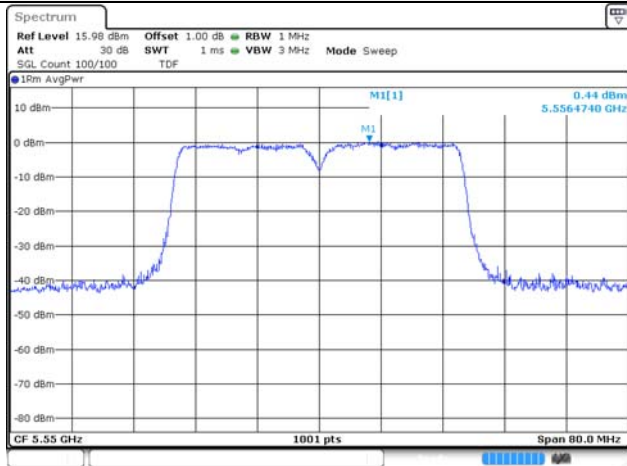
UNII-2C / 802.11n HT40 / 5 510 MHz



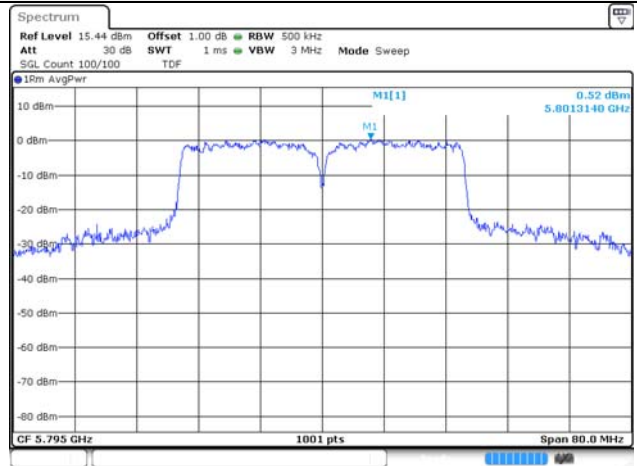
UNII-3 / 802.11n HT40 / 5 755 MHz



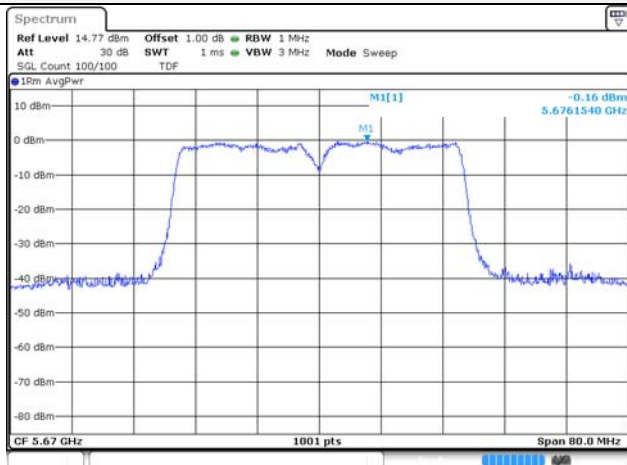
UNII-2C / 802.11n HT40 / 5 550 MHz



UNII-3 / 802.11n HT40 / 5 795 MHz

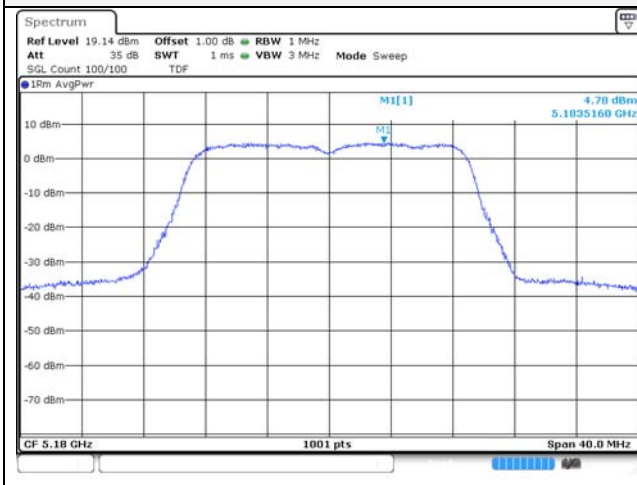


UNII-2C / 802.11n HT40 / 5 670 MHz

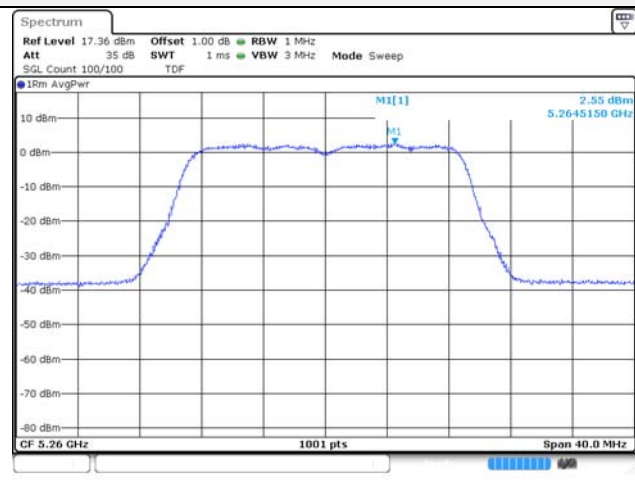


Blank

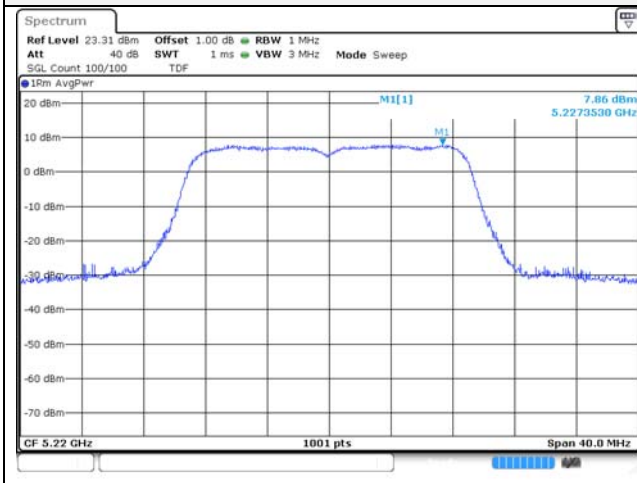
UNII-1 / 802.11ac VHT20 / 5 180 MHz



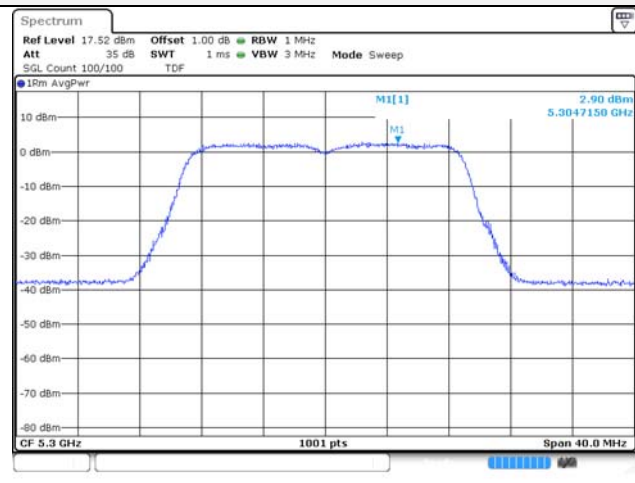
UNII-2A / 802.11ac VHT20 / 5 260 MHz



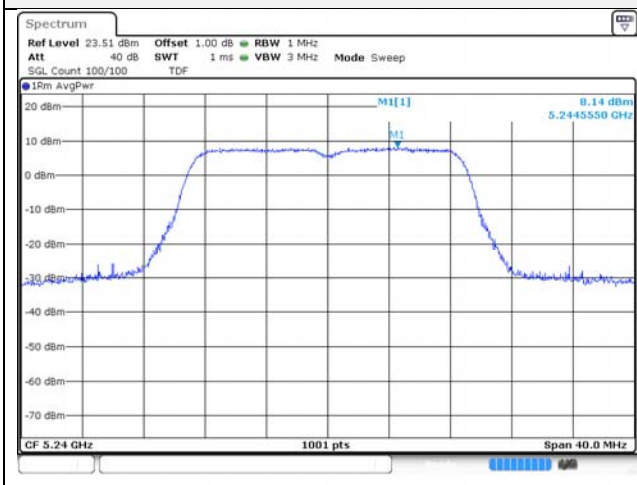
UNII-1 / 802.11ac VHT20 / 5 220 MHz



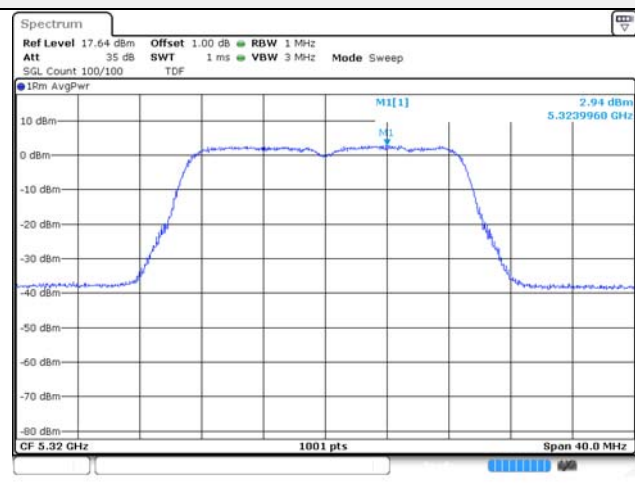
UNII-2A / 802.11ac VHT20 / 5 300 MHz



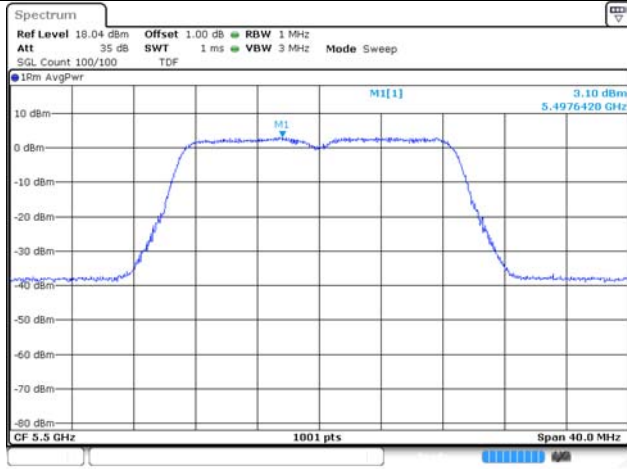
UNII-1 / 802.11ac VHT20 / 5 240 MHz



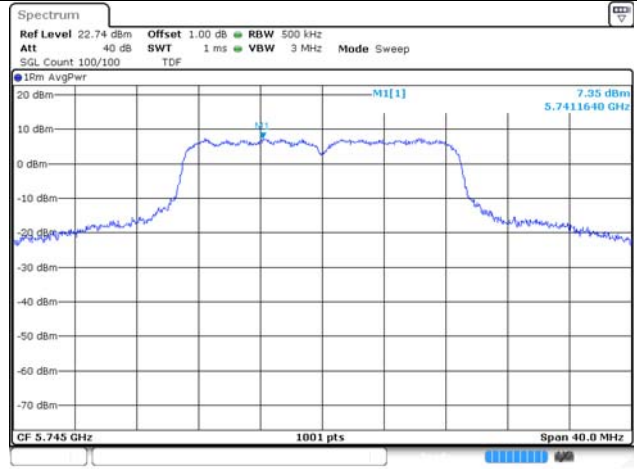
UNII-2A / 802.11ac VHT20 / 5 320 MHz



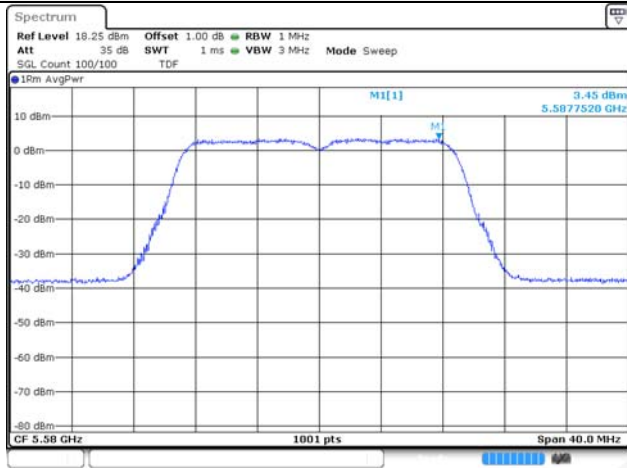
UNII-2C / 802.11ac VHT20 / 5 500 MHz



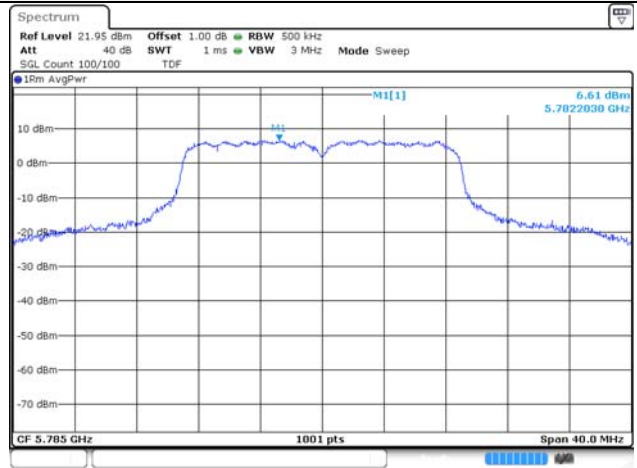
UNII-3 / 802.11ac VHT20 / 5 745 MHz



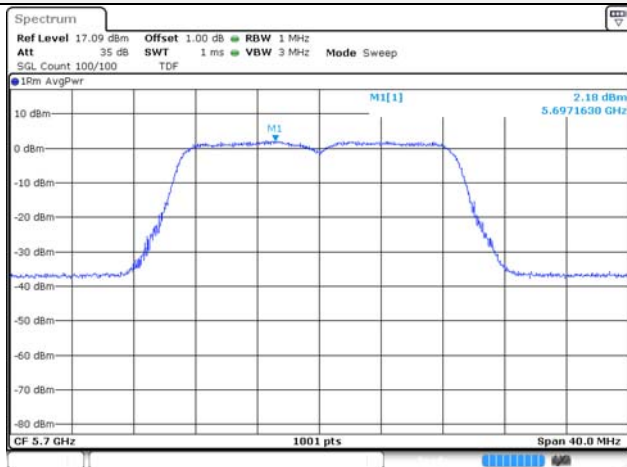
UNII-2C / 802.11ac VHT20 / 5 580 MHz



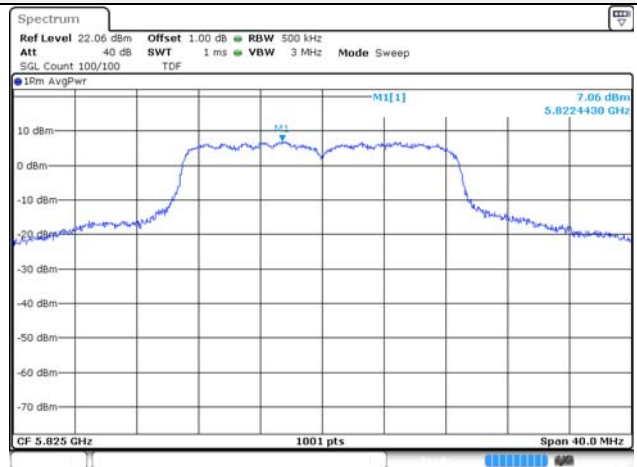
UNII-3 / 802.11ac VHT20 / 5 785 MHz



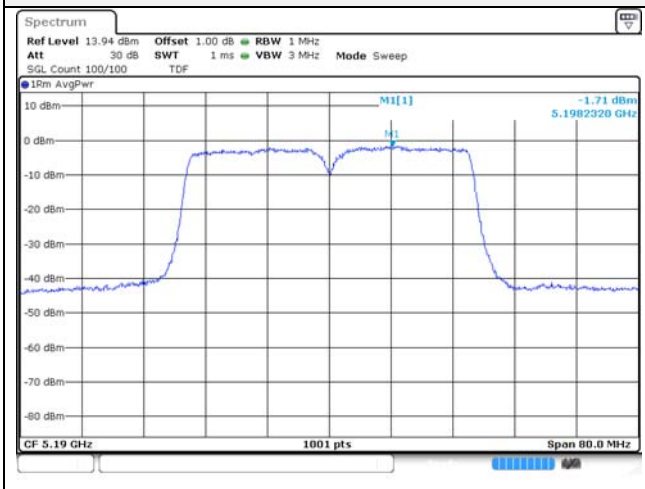
UNII-2C / 802.11ac VHT20 / 5 700 MHz



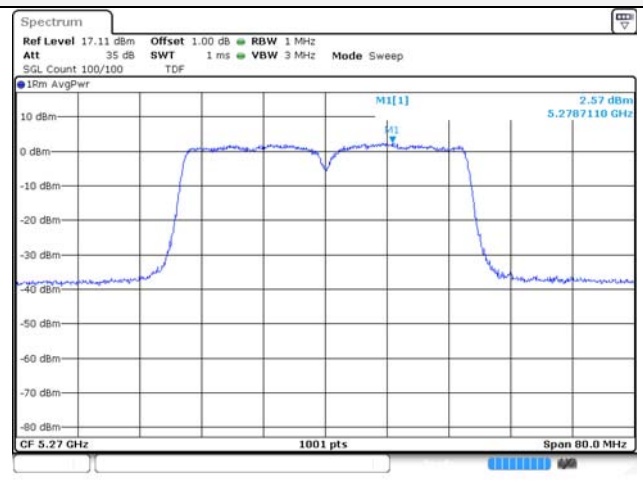
UNII-3 / 802.11ac VHT20 / 5 825 MHz



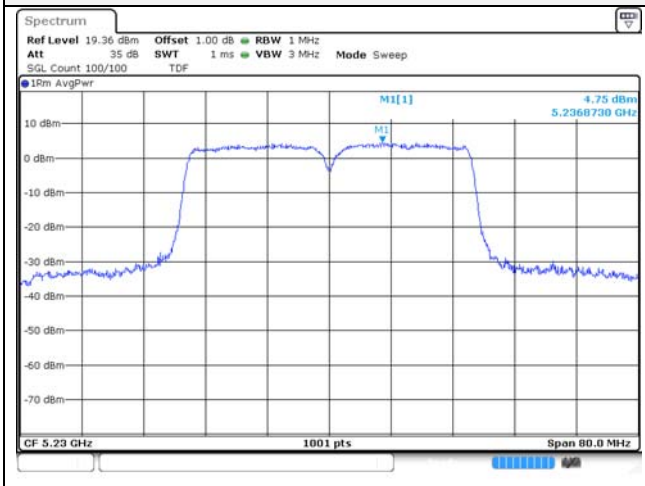
UNII-1 / 802.11ac VHT40 / 5 190 MHz



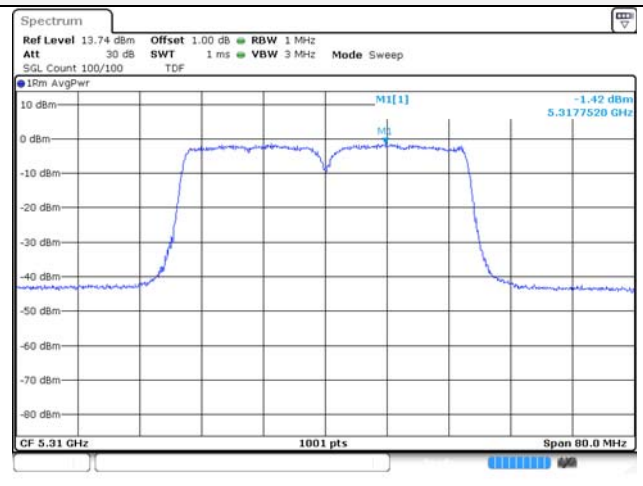
UNII-2A / 802.11ac VHT40 / 5 270 MHz



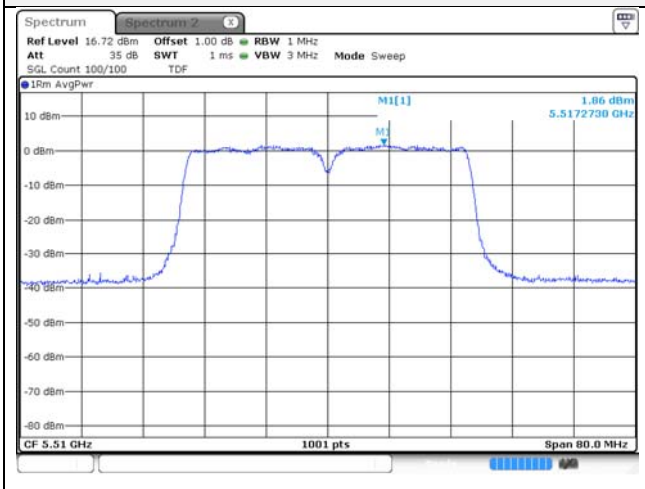
UNII-1 / 802.11ac VHT40 / 5 230 MHz



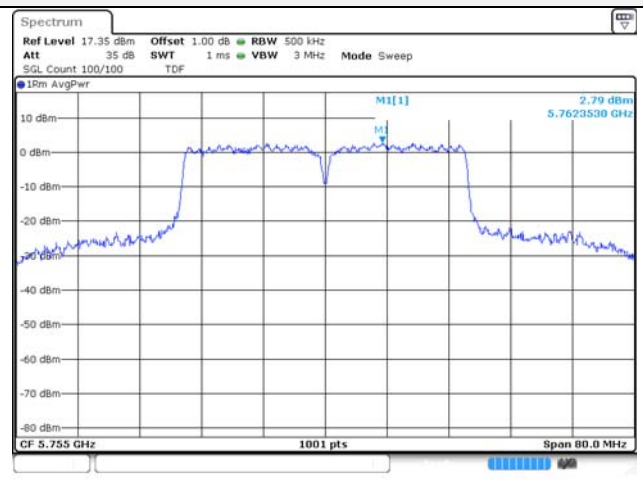
UNII-2A / 802.11ac VHT40 / 5 310 MHz



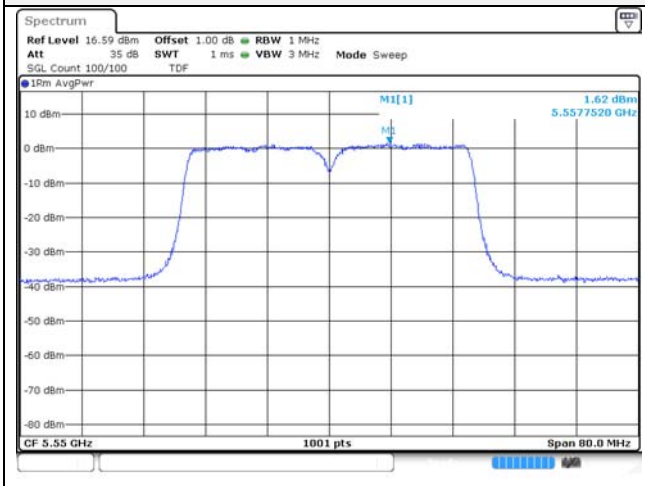
UNII-2C / 802.11ac VHT40 / 5 510 MHz



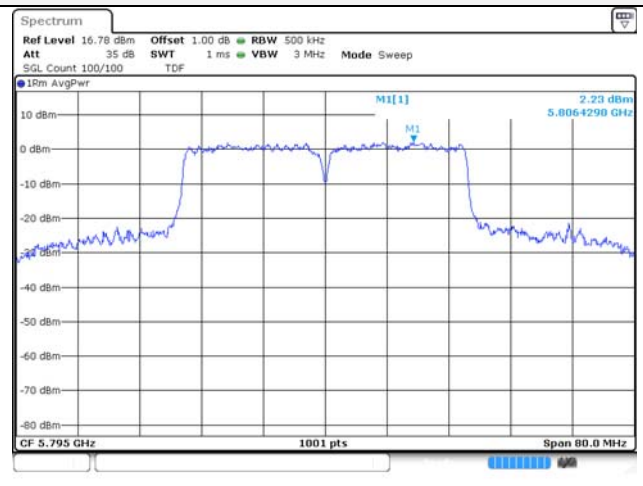
UNII-3 / 802.11ac VHT40 / 5 755 MHz



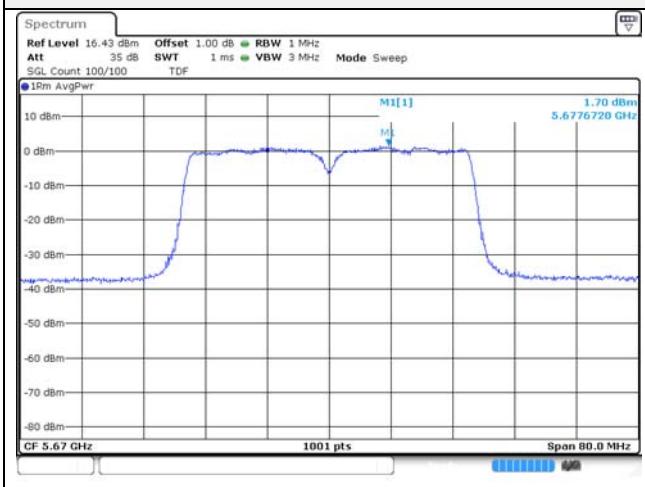
UNII-2C / 802.11ac VHT40 / 5 550 MHz



UNII-3 / 802.11ac VHT40 / 5 795 MHz

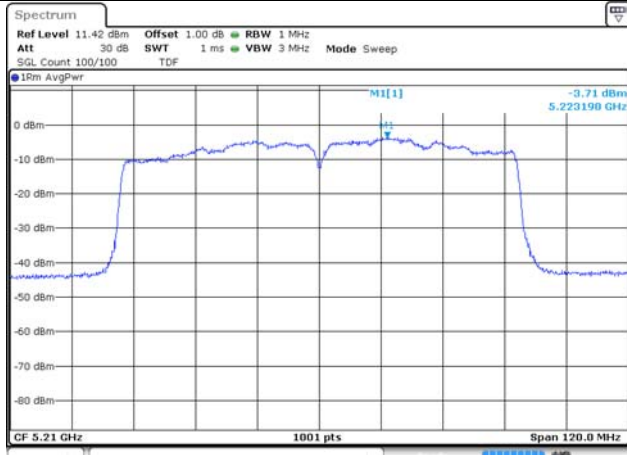


UNII-2C / 802.11ac VHT40 / 5 670 MHz

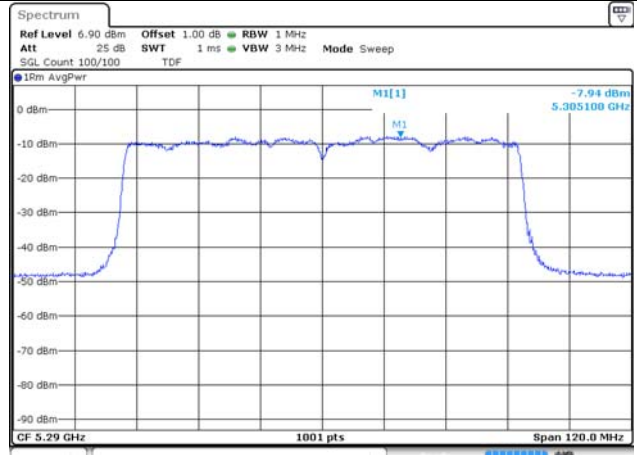


Blank

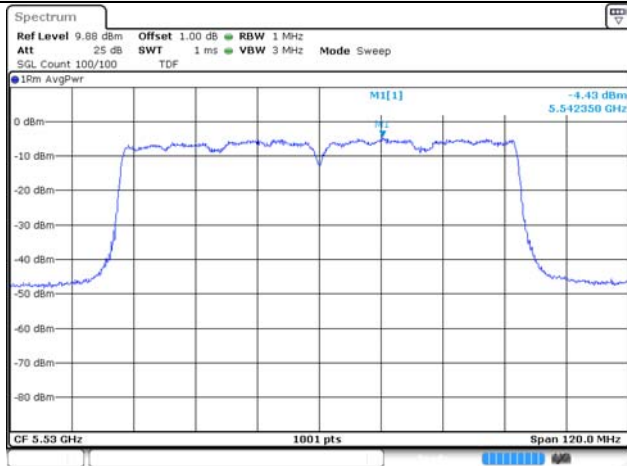
UNII-1 / 802.11ac VHT80 / 5 210 MHz



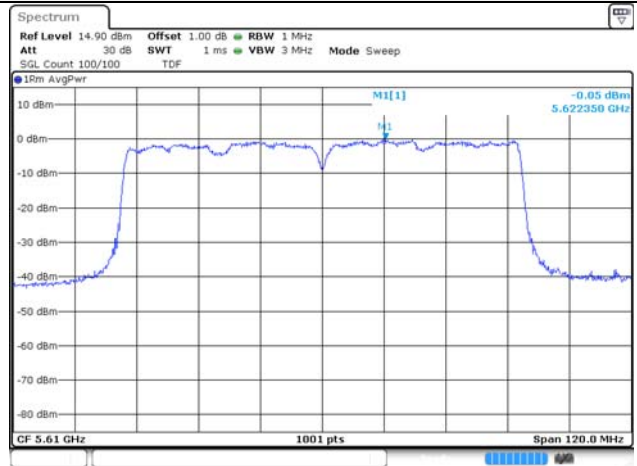
UNII-2A / 802.11ac VHT80 / 5 290 MHz



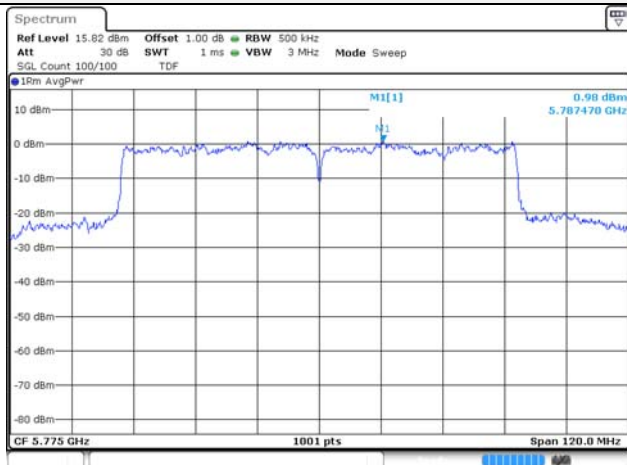
UNII-2C / 802.11ac VHT80 / 5 530 MHz



UNII-2C / 802.11ac VHT80 / 5 610 MHz

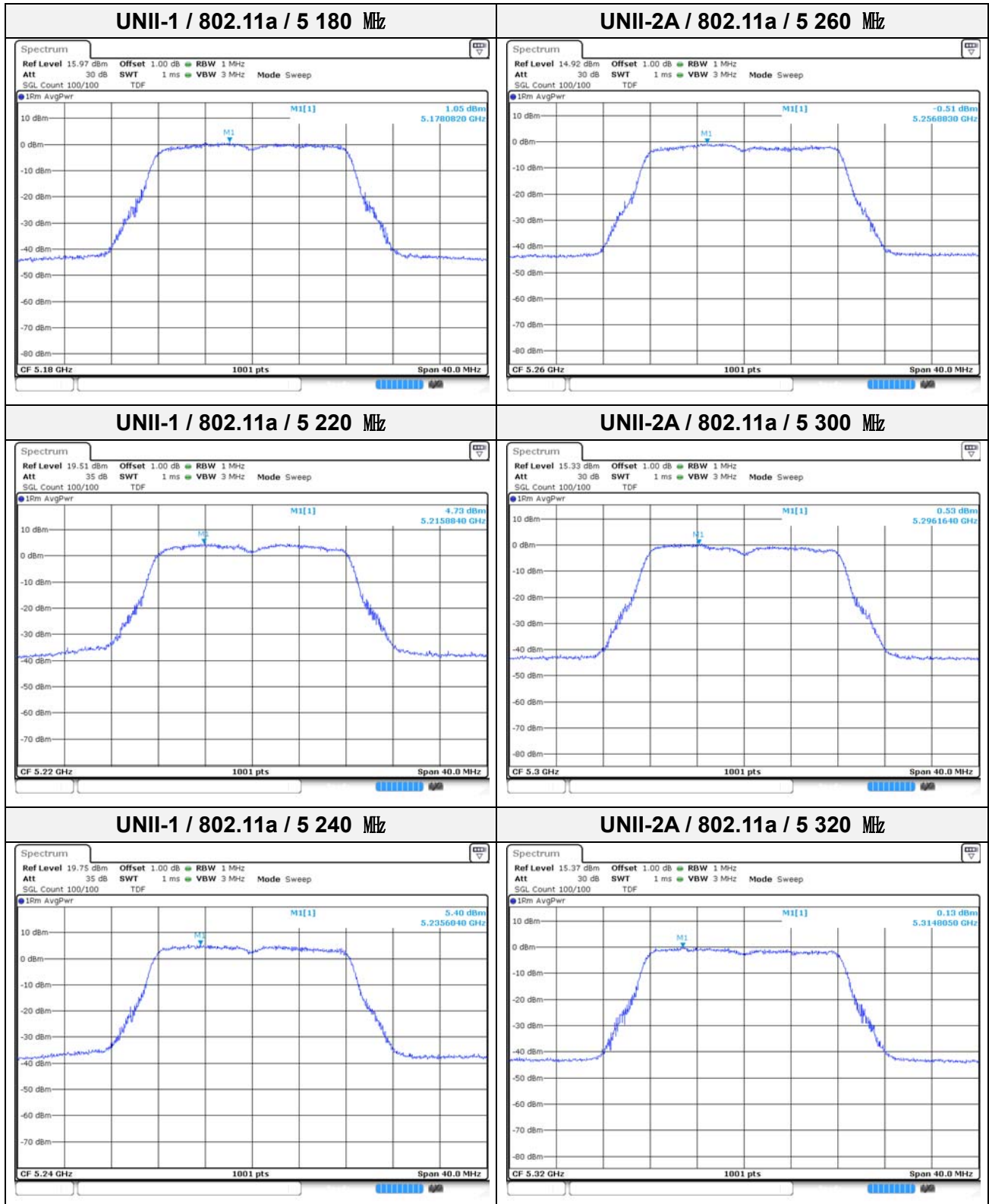


UNII-3 / 802.11ac VHT80 / 5 775 MHz

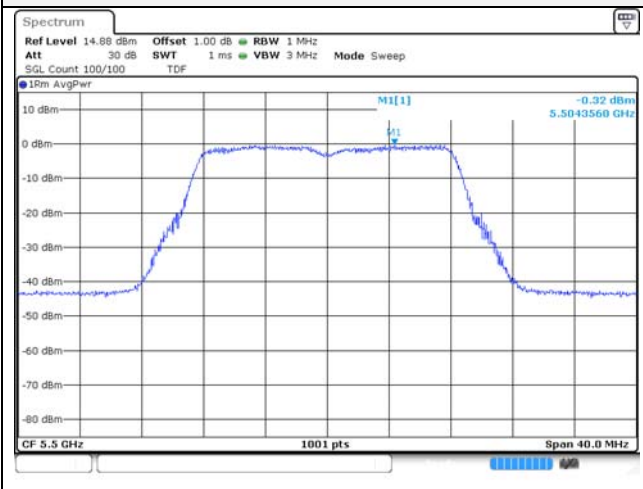


Blank

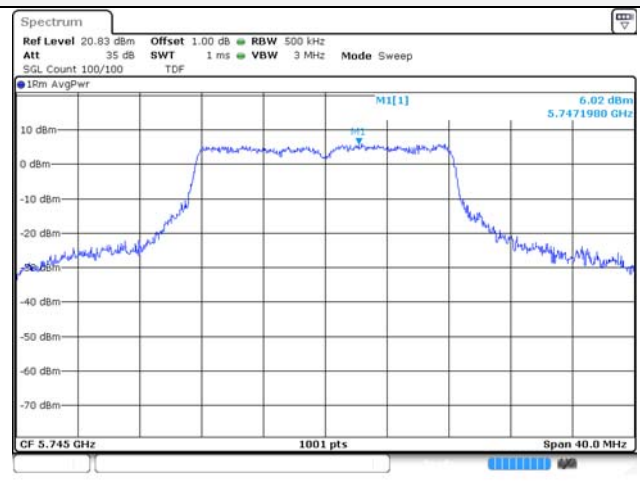
4TX MIMO ANT 2



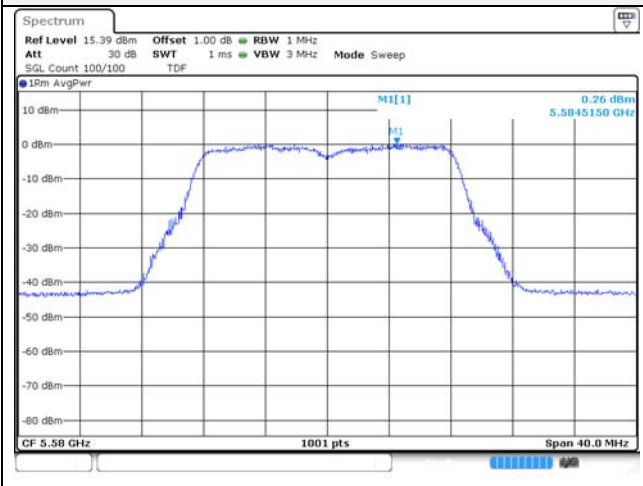
UNII-2C / 802.11a / 5 500 MHz



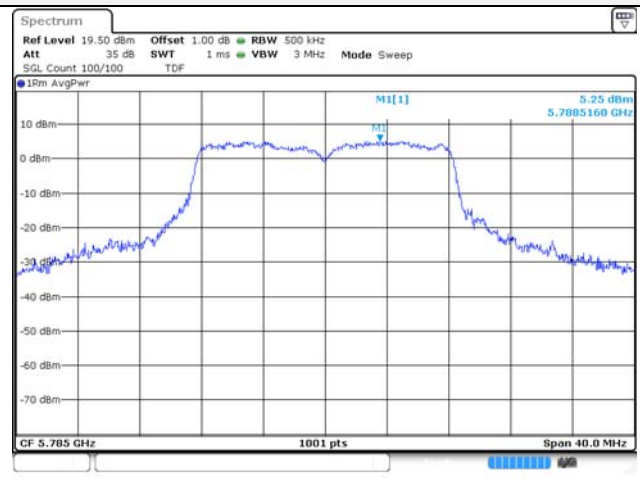
UNII-3 / 802.11a / 5 745 MHz



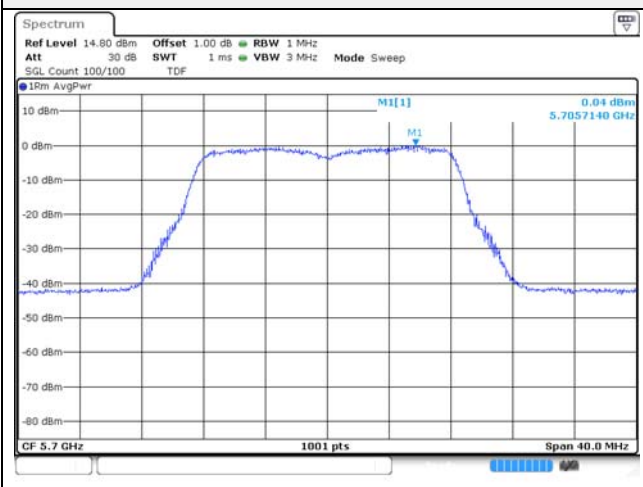
UNII-2C / 802.11a / 5 580 MHz



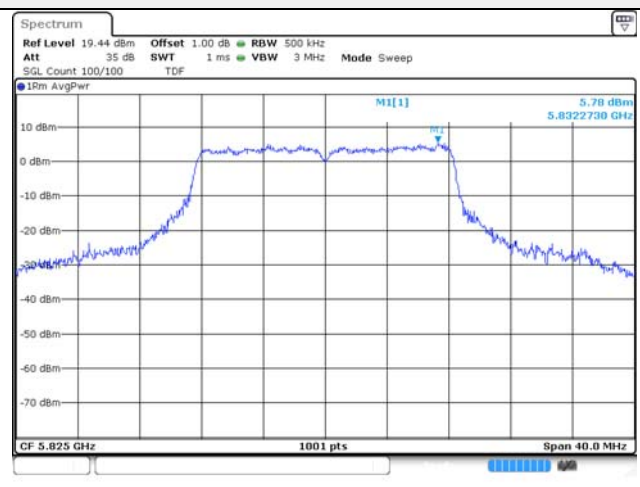
UNII-3 / 802.11a / 5 785 MHz

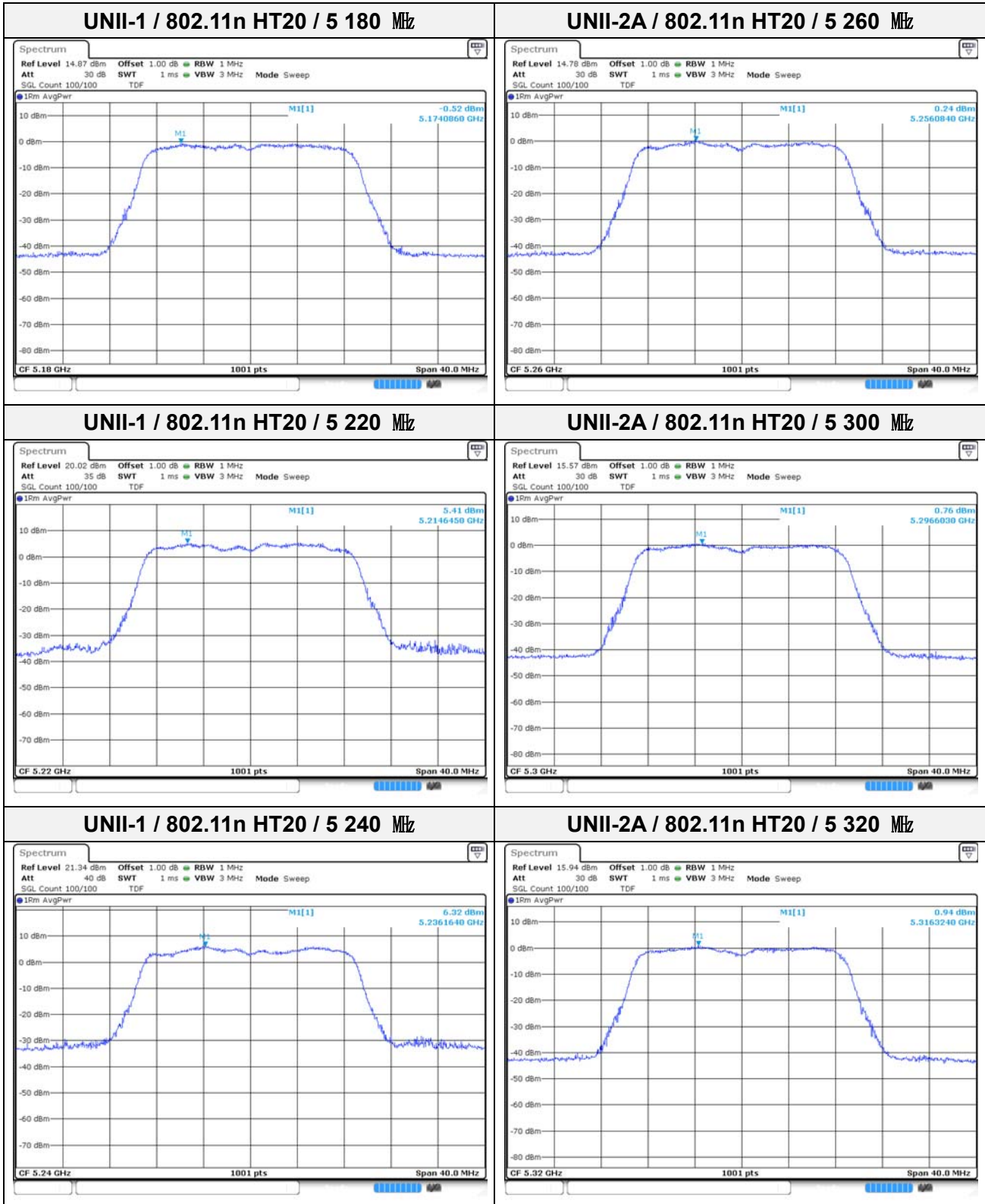


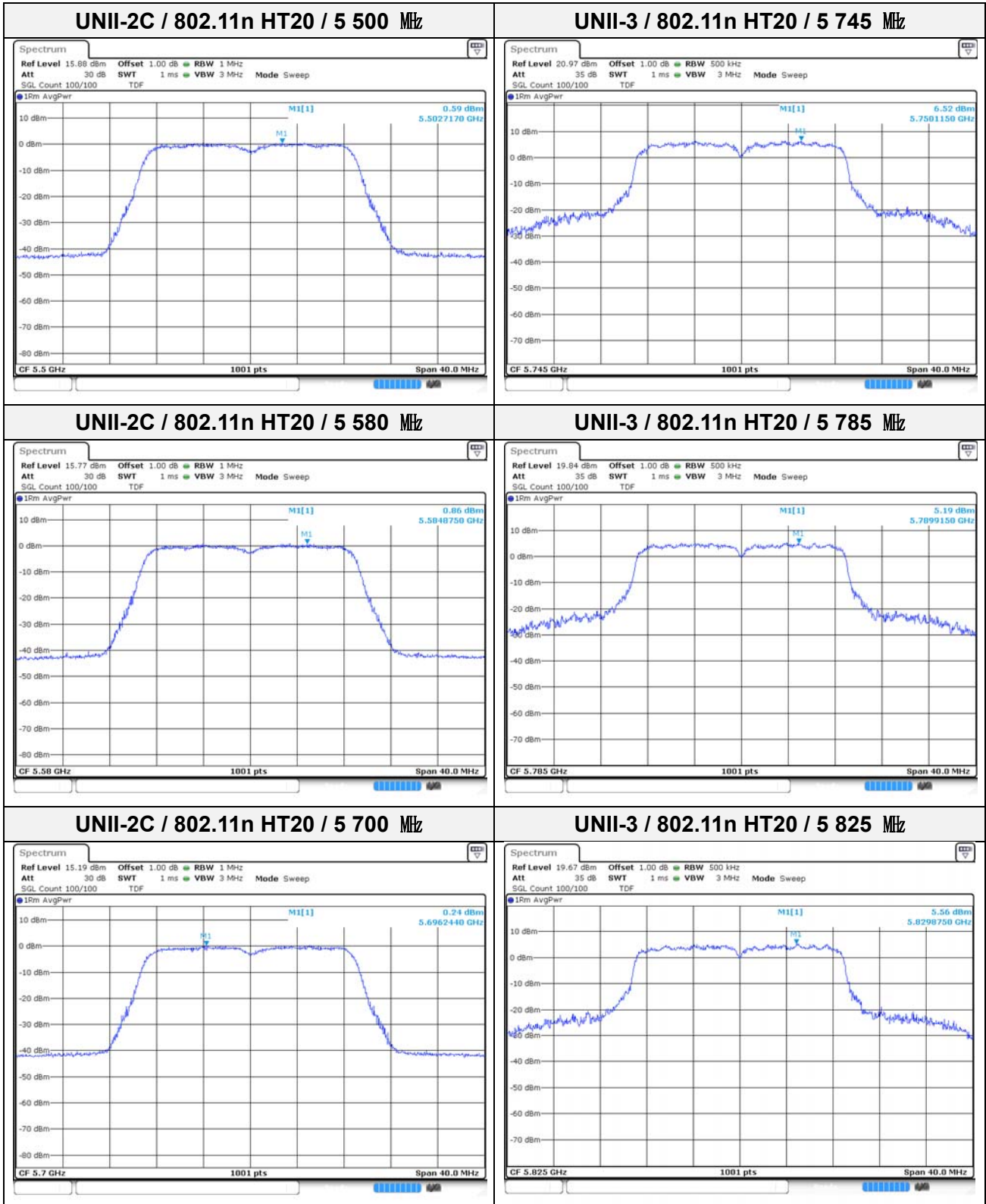
UNII-2C / 802.11a / 5 700 MHz



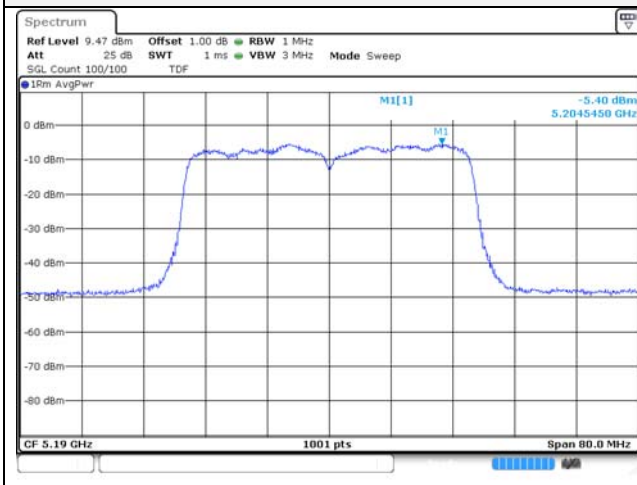
UNII-3 / 802.11a / 5 825 MHz



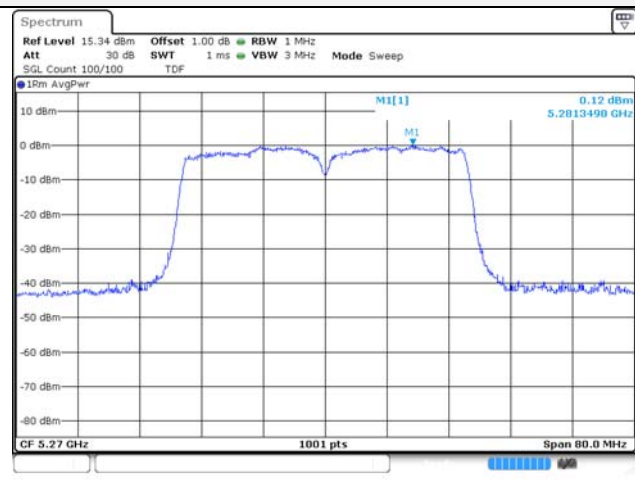




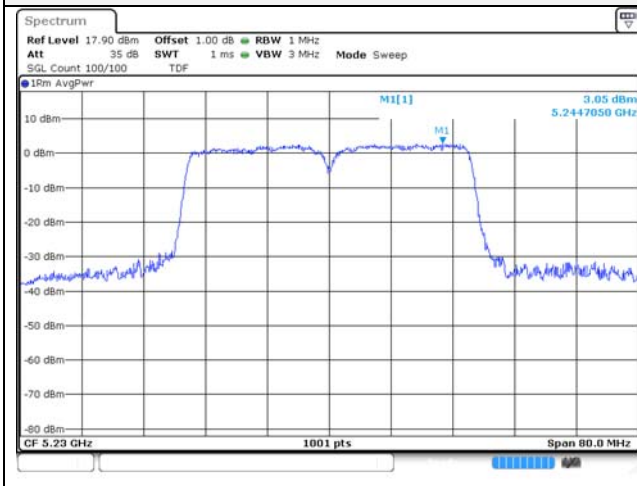
UNII-1 / 802.11n HT40 / 5 190 MHz



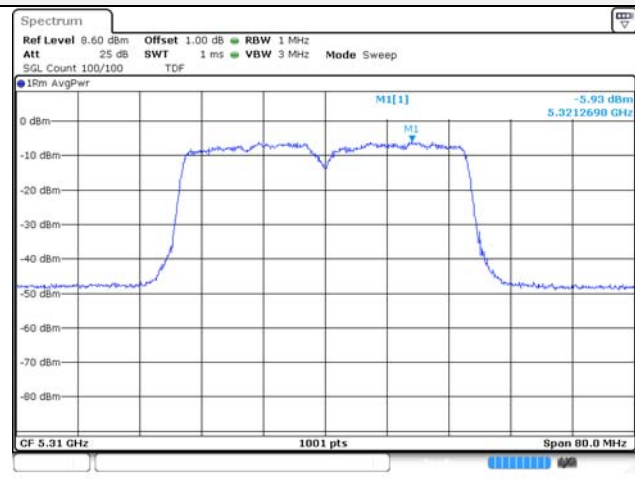
UNII-2A / 802.11n HT40 / 5 270 MHz



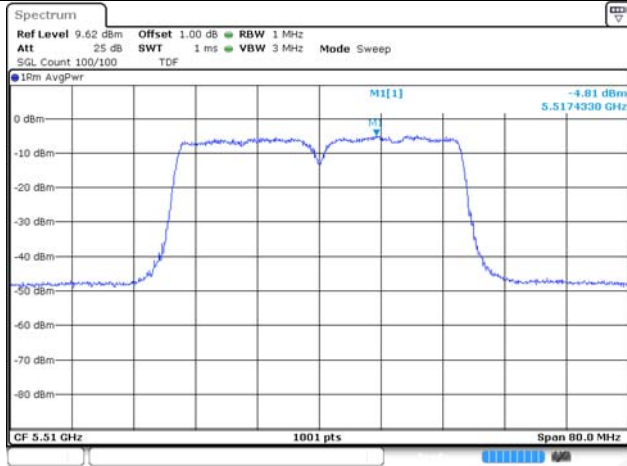
UNII-1 / 802.11n HT40 / 5 230 MHz



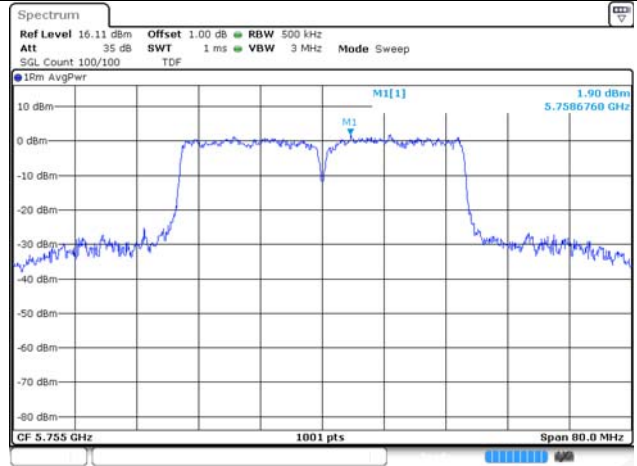
UNII-2A / 802.11n HT40 / 5 310 MHz



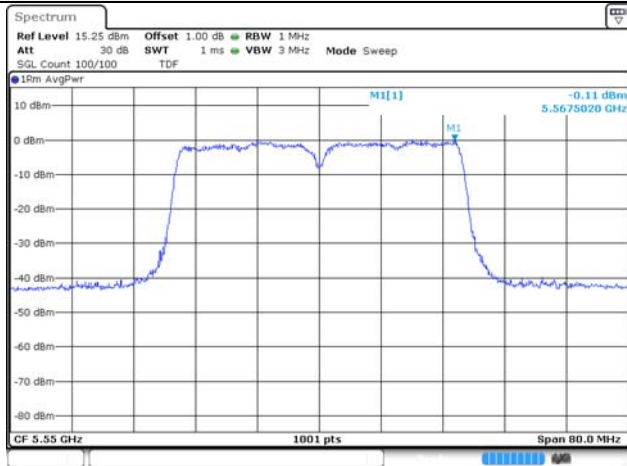
UNII-2C / 802.11n HT40 / 5 510 MHz



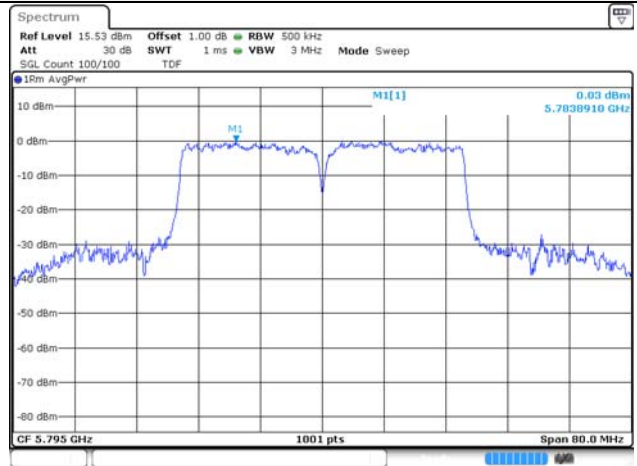
UNII-3 / 802.11n HT40 / 5 755 MHz



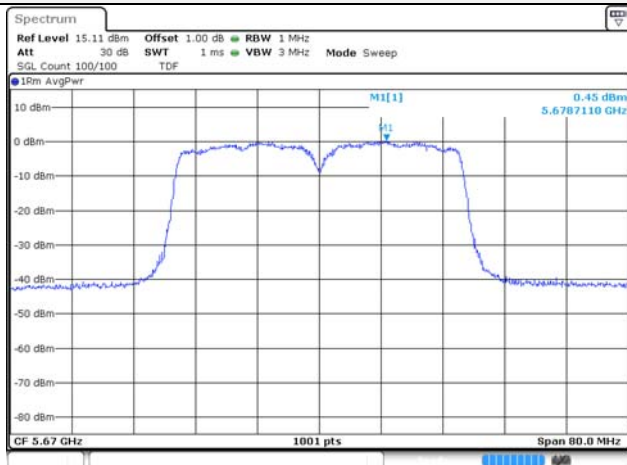
UNII-2C / 802.11n HT40 / 5 550 MHz



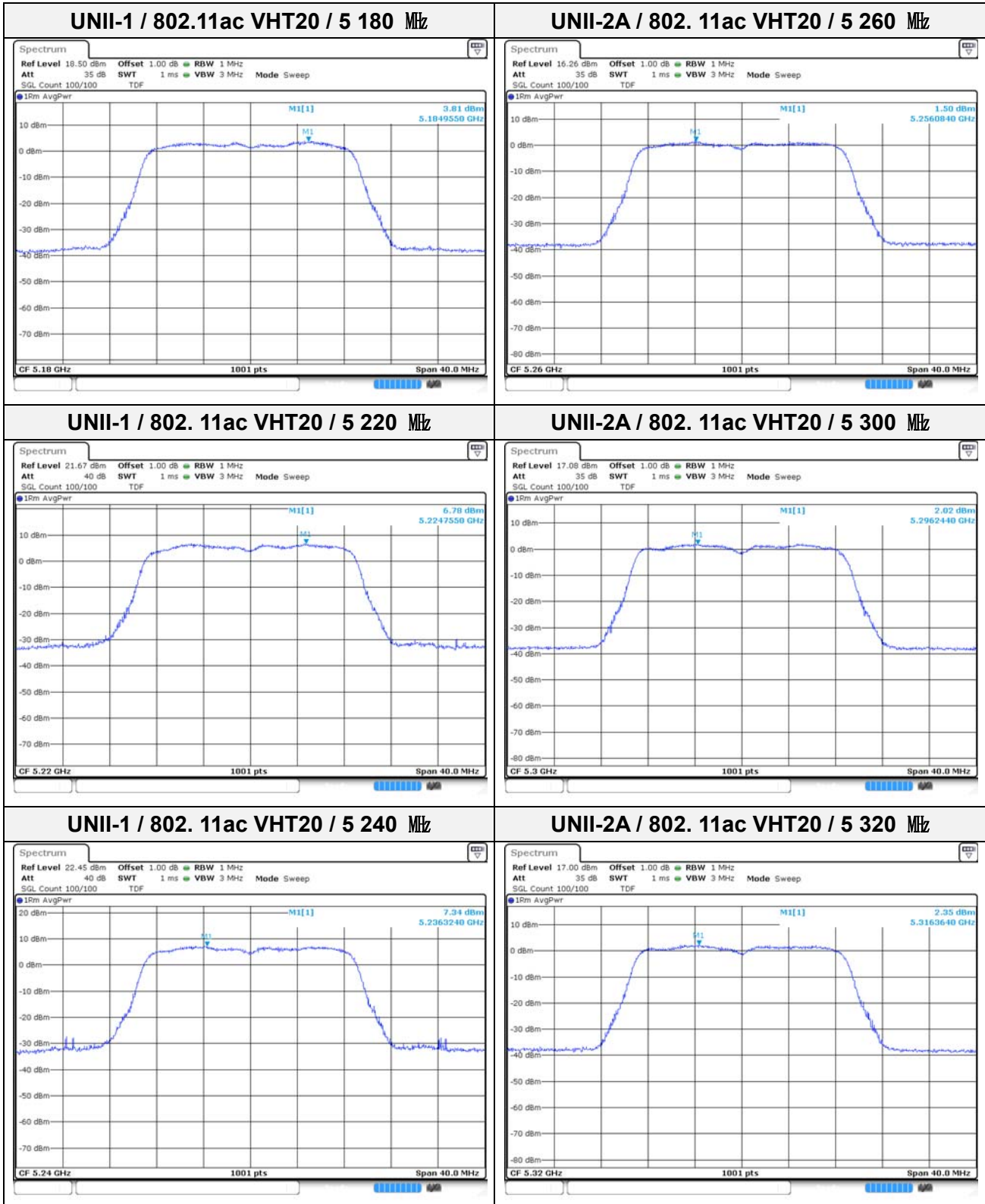
UNII-3 / 802.11n HT40 / 5 795 MHz

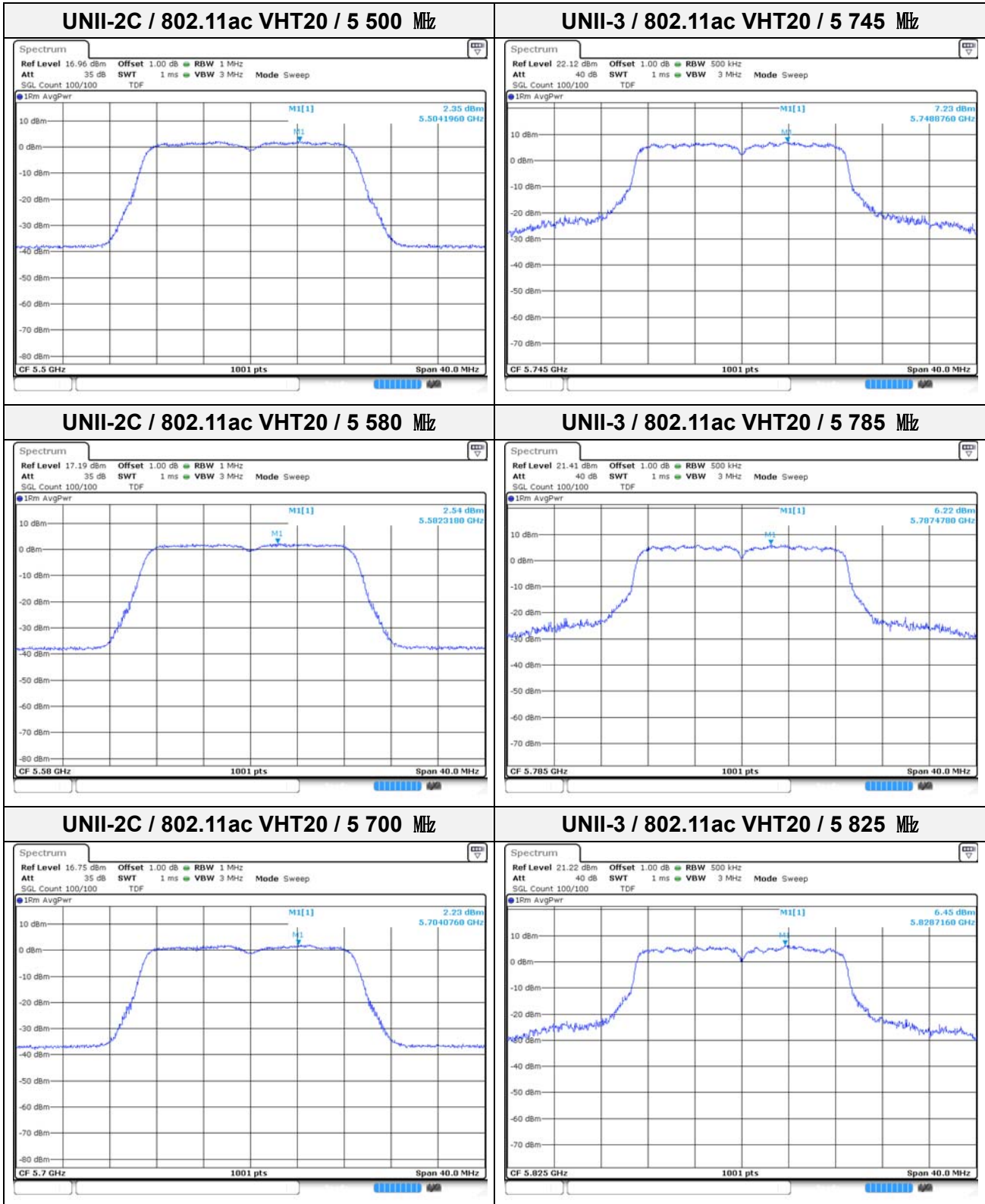


UNII-2C / 802.11n HT40 / 5 670 MHz



Blank

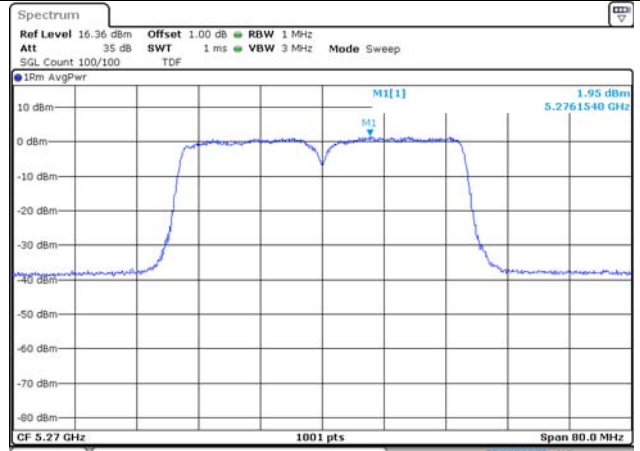




UNII-1 / 802.11ac VHT40 / 5 190 MHz



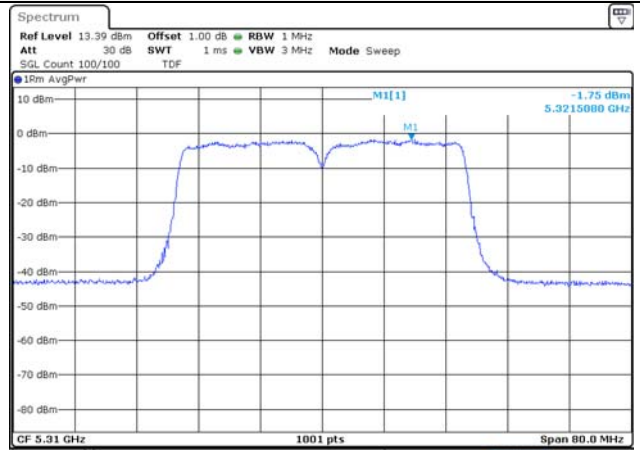
UNII-2A / 802.11ac VHT40 / 5 270 MHz



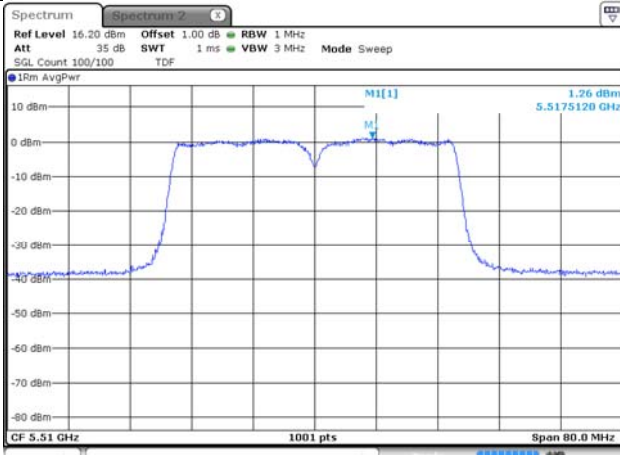
UNII-1 / 802.11ac VHT40 / 5 230 MHz



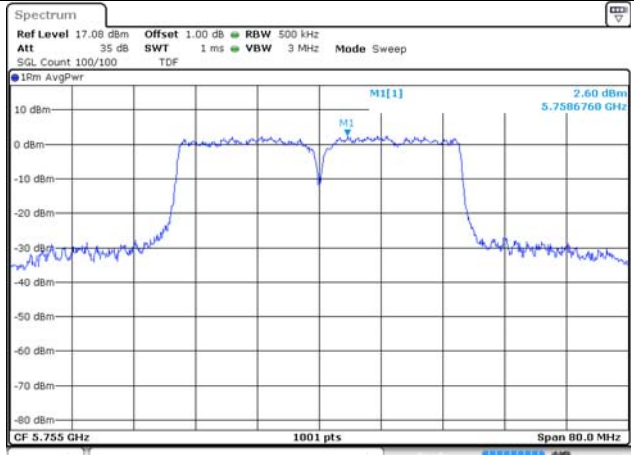
UNII-2A / 802.11ac VHT40 / 5 310 MHz



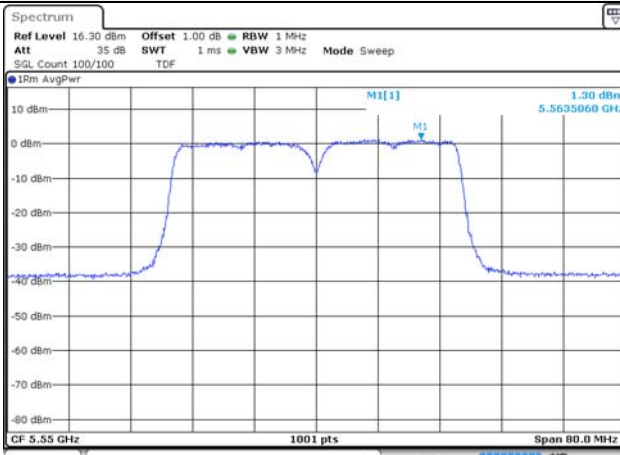
UNII-2C / 802.11ac VHT40 / 5 510 MHz



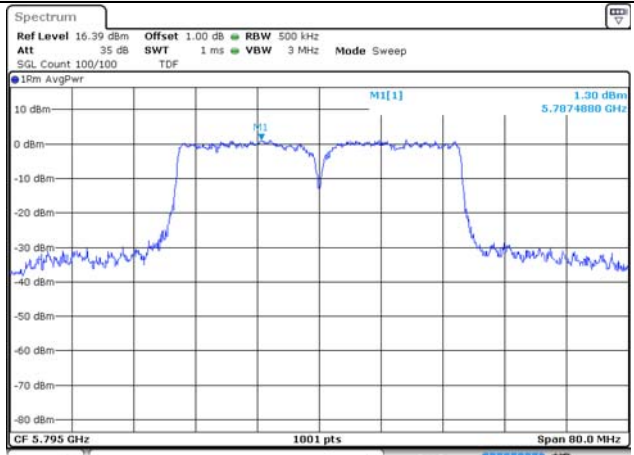
UNII-3 / 802.11ac VHT40 / 5 755 MHz



UNII-2C / 802.11ac VHT40 / 5 550 MHz



UNII-3 / 802.11ac VHT40 / 5 795 MHz



UNII-2C / 802.11ac VHT40 / 5 670 MHz

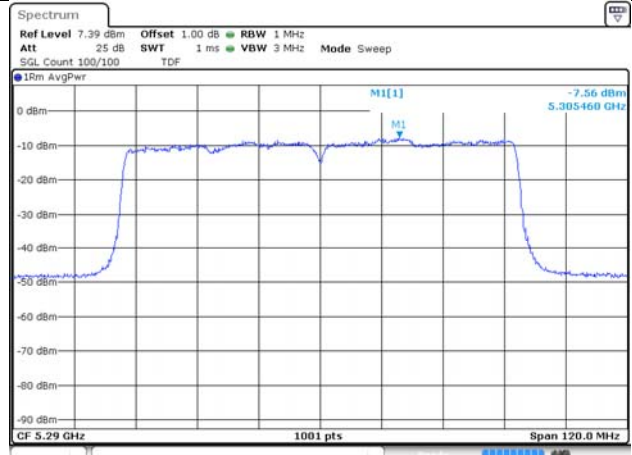


Blank

UNII-1 / 802.11ac VHT80 / 5 210 MHz



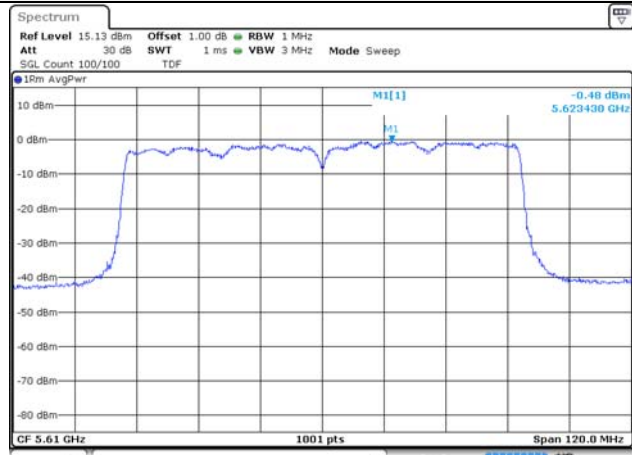
UNII-2A / 802.11ac VHT80 / 5 290 MHz



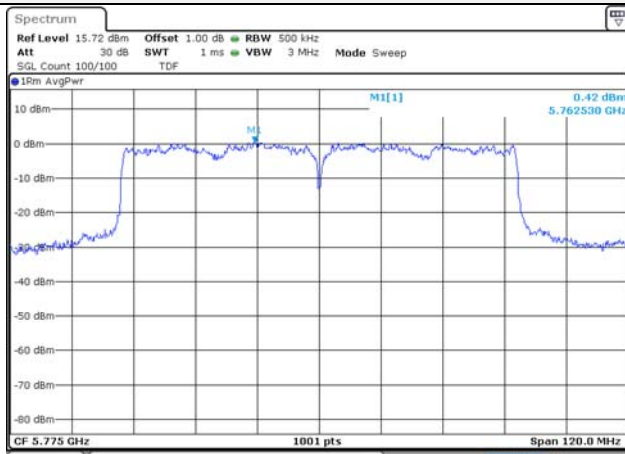
UNII-2C / 802.11ac VHT80 / 5 530 MHz



UNII-2C / 802.11ac VHT80 / 5 610 MHz

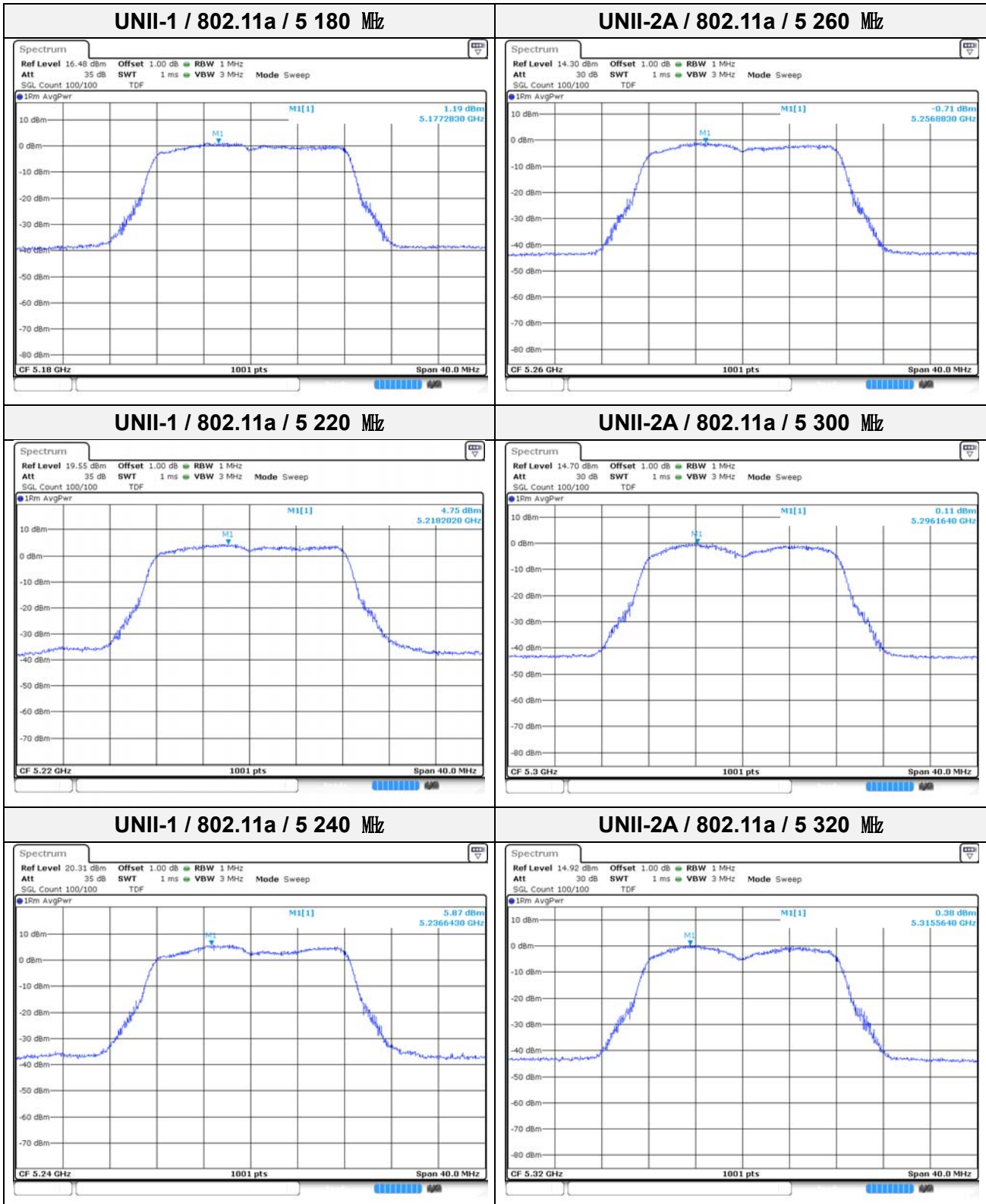


UNII-3 / 802.11ac VHT80 / 5 775 MHz

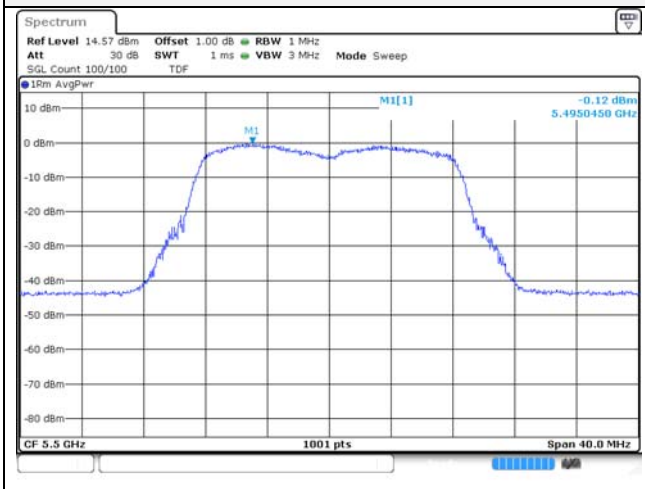


Blank

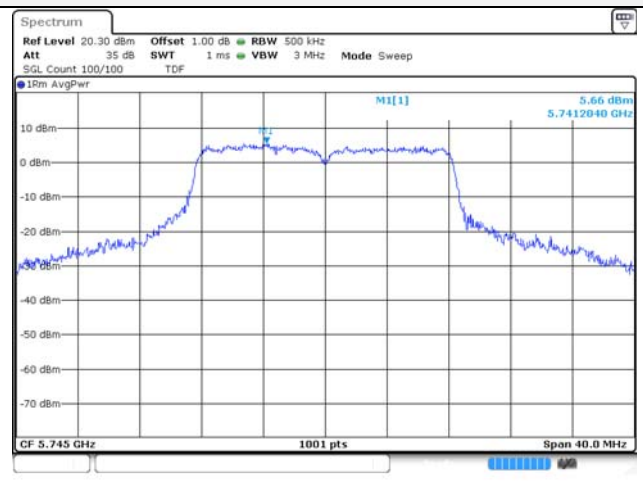
4TX MIMO ANT 3



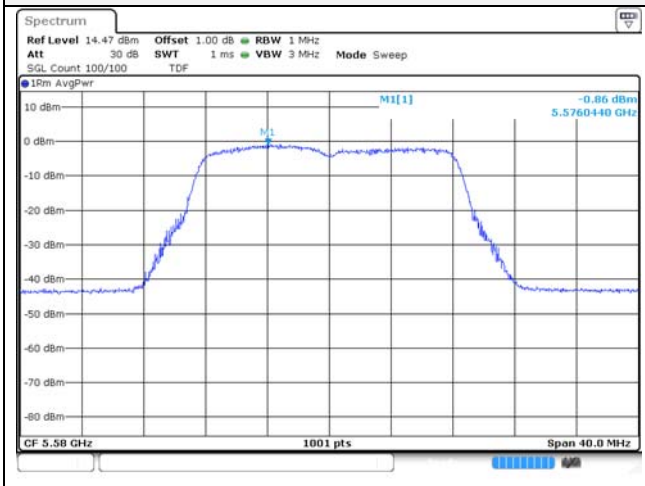
UNII-2C / 802.11a / 5 500 MHz



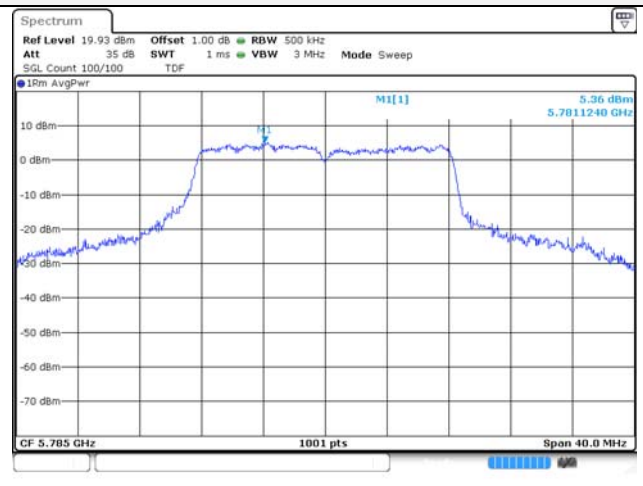
UNII-3 / 802.11a / 5 745 MHz



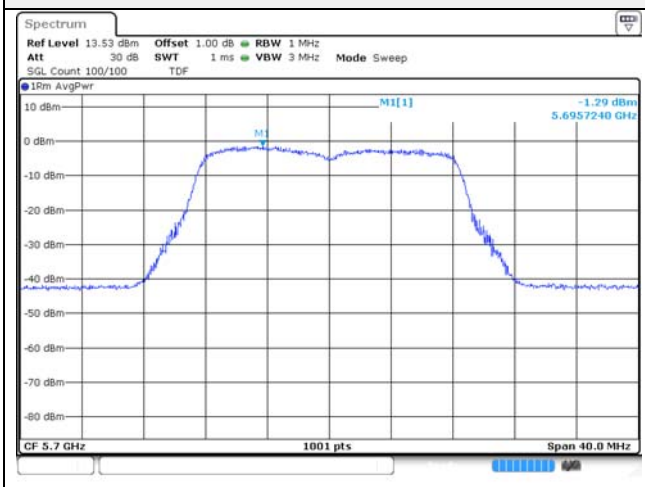
UNII-2C / 802.11a / 5 580 MHz



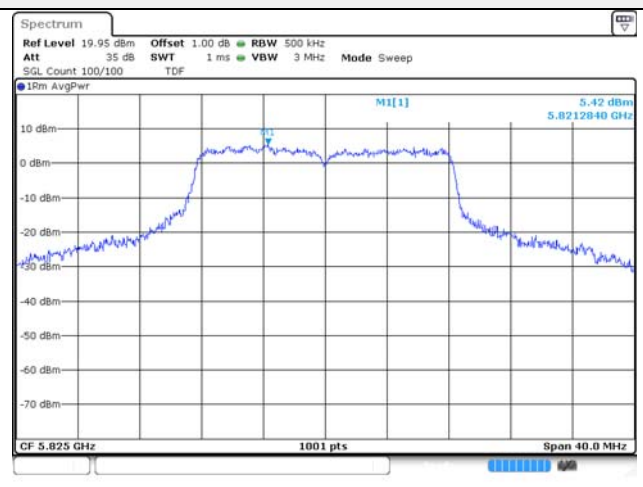
UNII-3 / 802.11a / 5 785 MHz

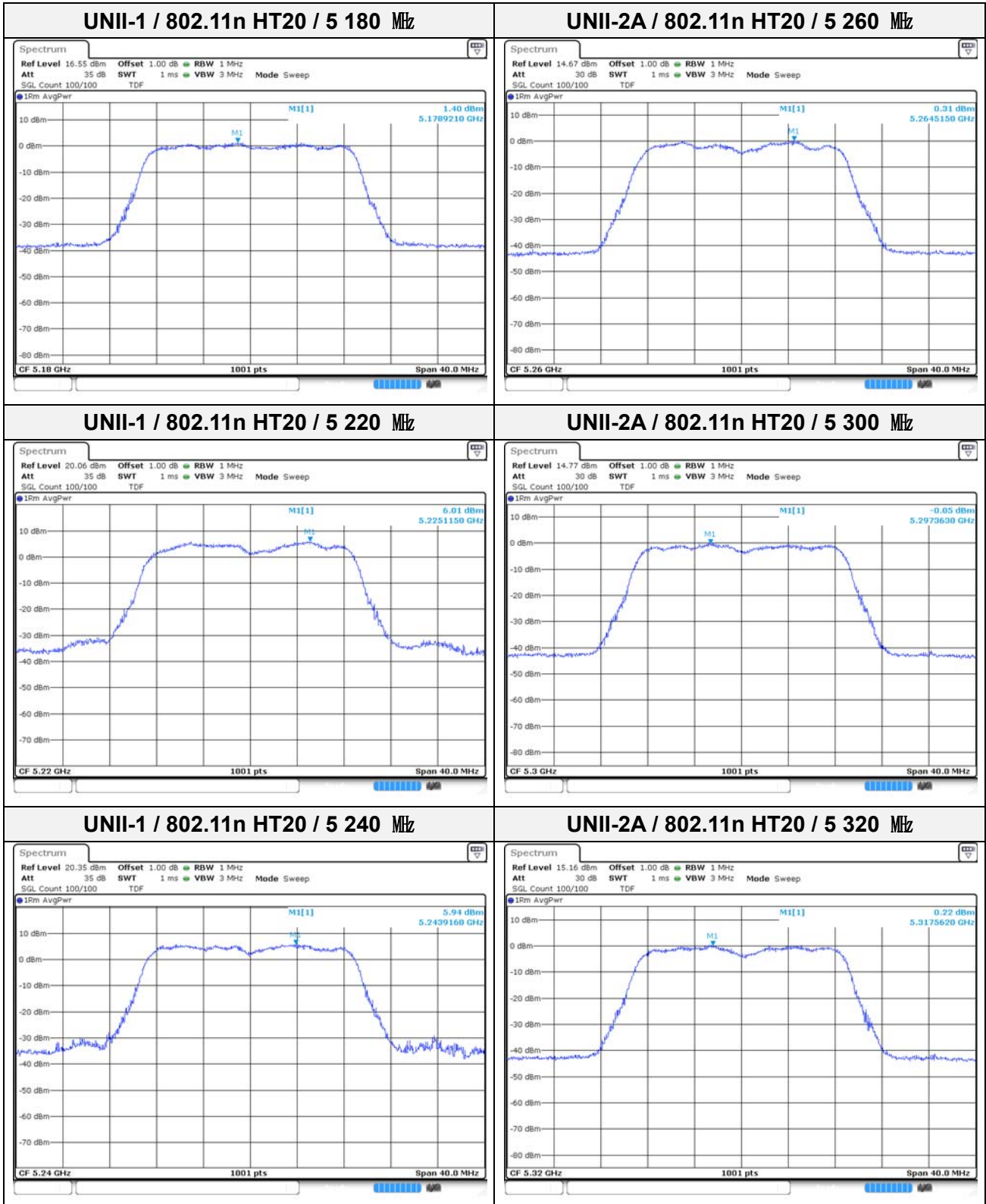


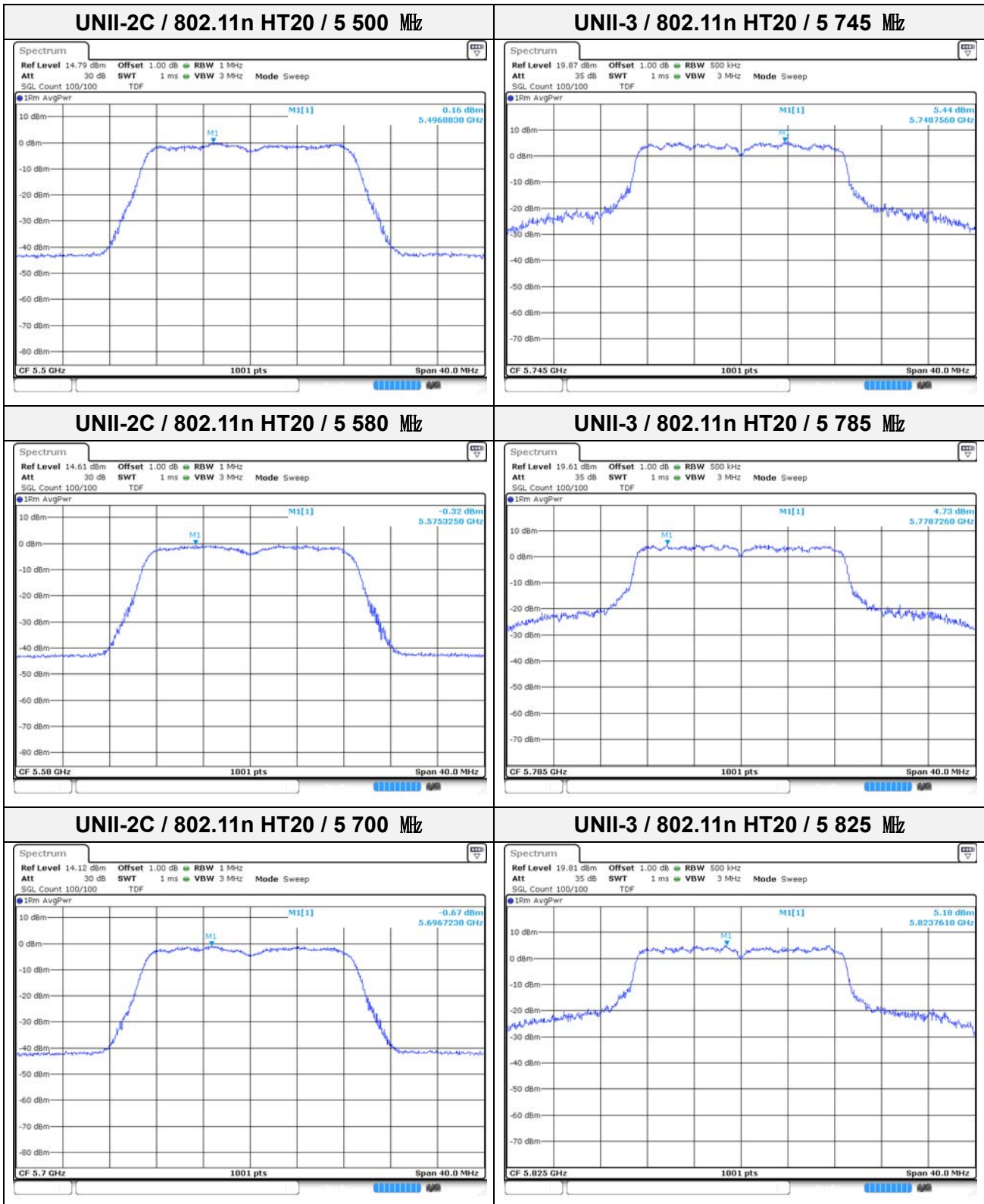
UNII-2C / 802.11a / 5 700 MHz



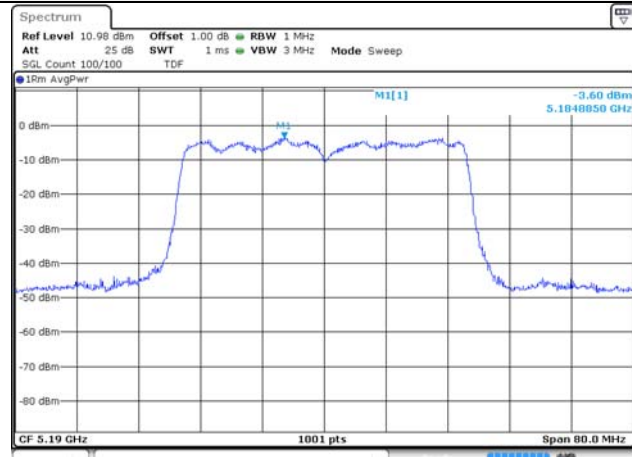
UNII-3 / 802.11a / 5 825 MHz



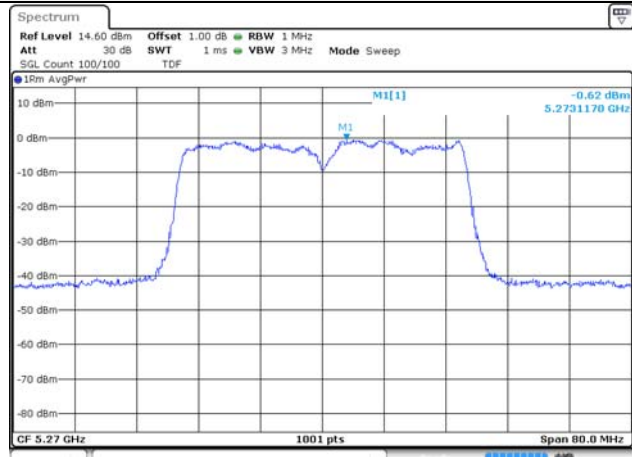




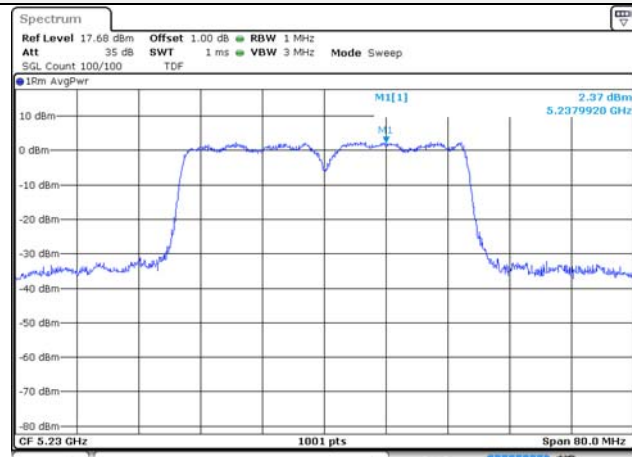
UNII-1 / 802.11n HT40 / 5 190 MHz



UNII-2A / 802.11n HT40 / 5 270 MHz



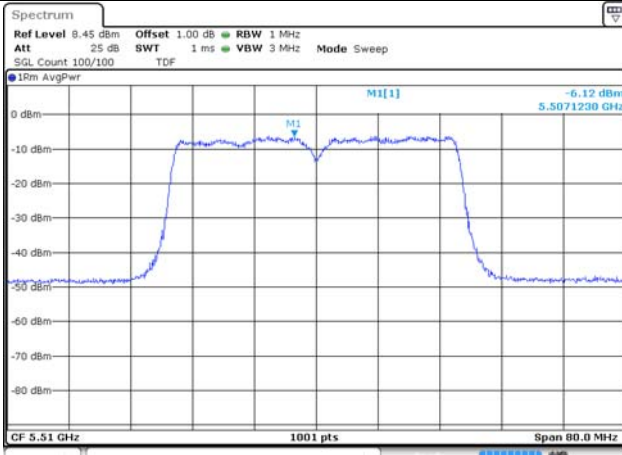
UNII-1 / 802.11n HT40 / 5 230 MHz



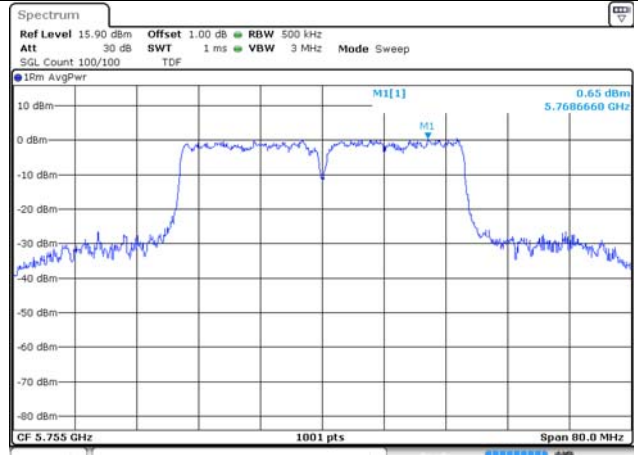
UNII-2A / 802.11n HT40 / 5 310 MHz



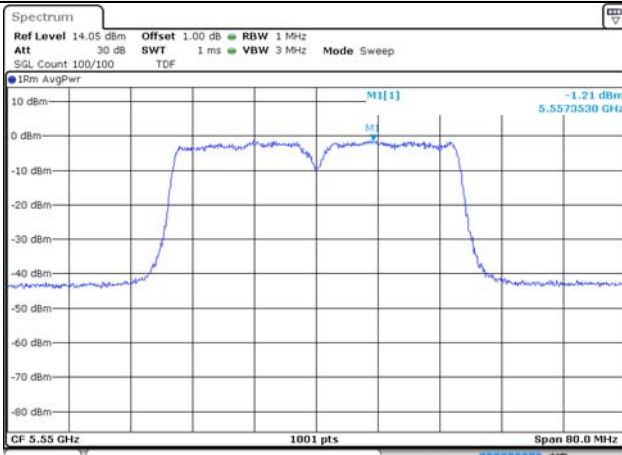
UNII-2C / 802.11n HT40 / 5 510 MHz



UNII-3 / 802.11n HT40 / 5 755 MHz



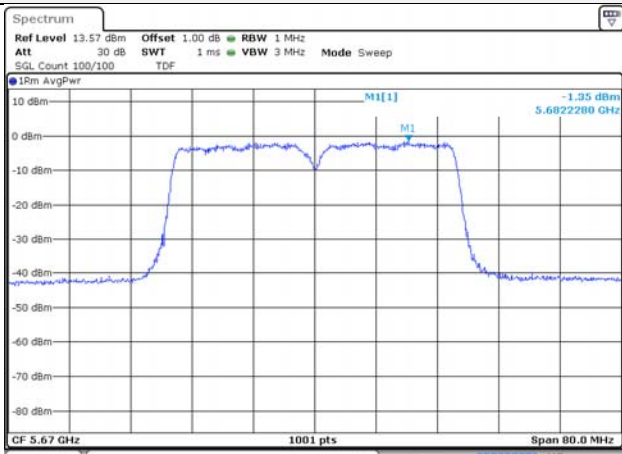
UNII-2C / 802.11n HT40 / 5 550 MHz



UNII-3 / 802.11n HT40 / 5 795 MHz

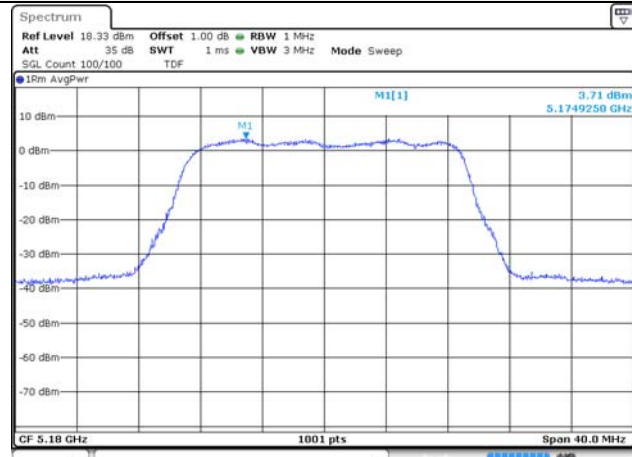


UNII-2C / 802.11n HT40 / 5 670 MHz

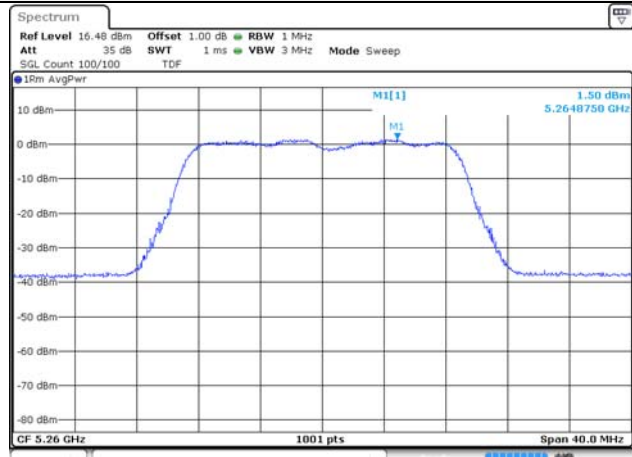


Blank

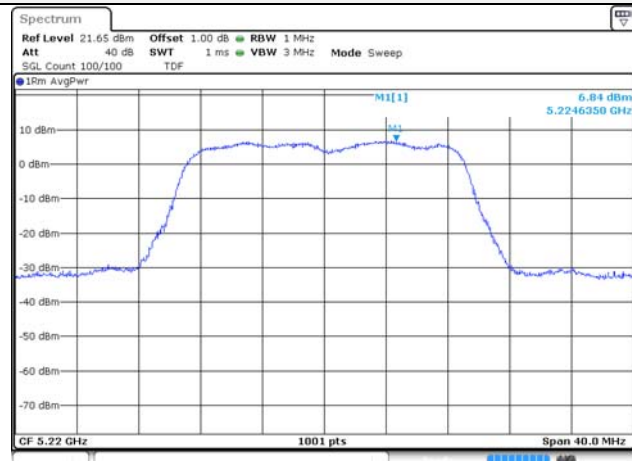
UNII-1 / 802.11ac VHT20 / 5 180 MHz



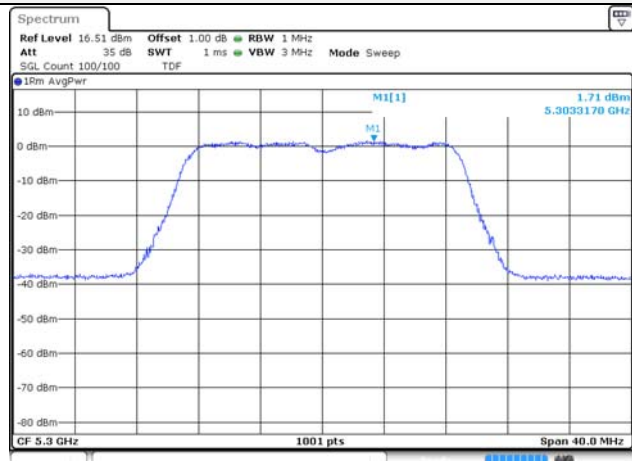
UNII-2A / 802.11ac VHT20 / 5 260 MHz



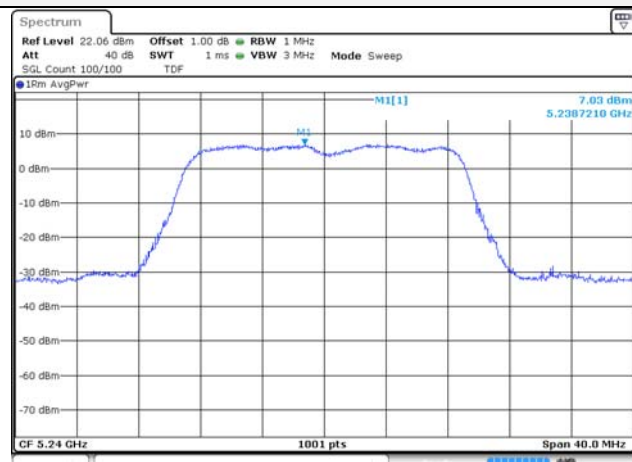
UNII-1 / 802.11ac VHT20 / 5 220 MHz



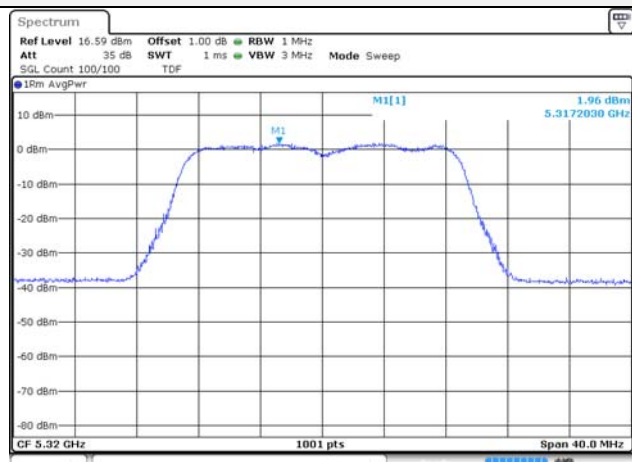
UNII-2A / 802.11ac VHT20 / 5 300 MHz



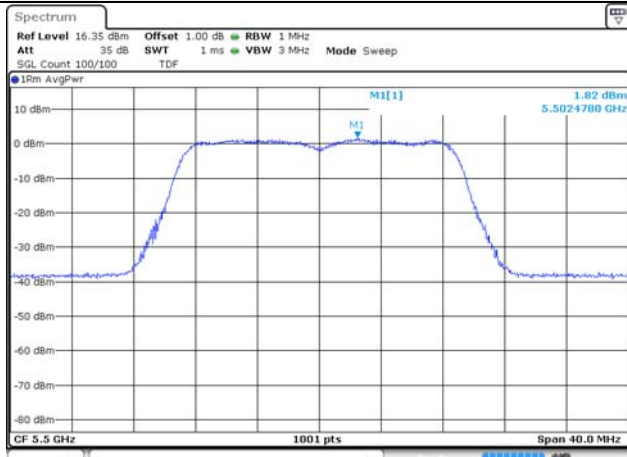
UNII-1 / 802.11ac VHT20 / 5 240 MHz



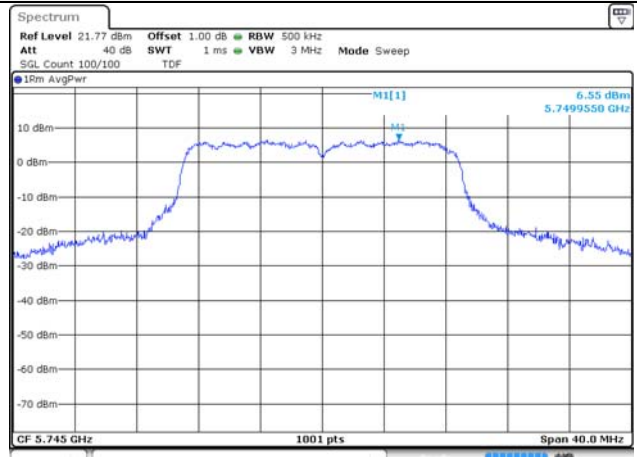
UNII-2A / 802.11ac VHT20 / 5 320 MHz



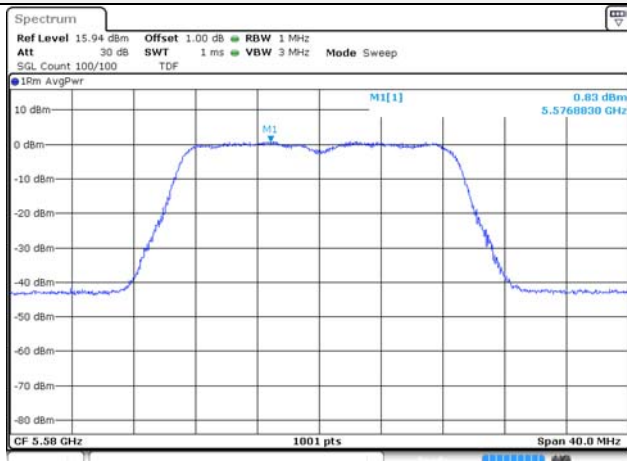
UNII-2C / 802.11ac VHT20 / 5 500 MHz



UNII-3 / 802.11ac VHT20 / 5 745 MHz



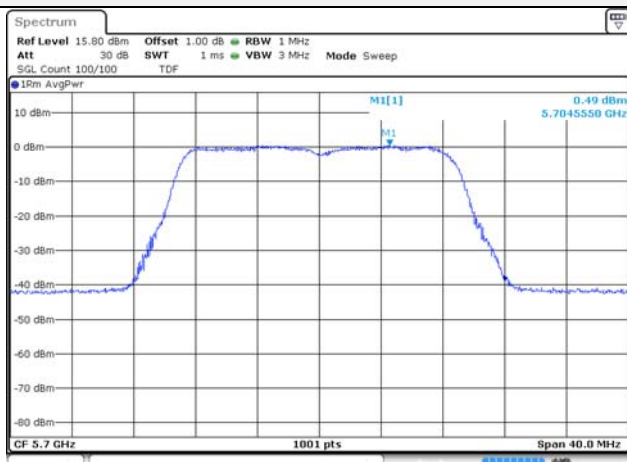
UNII-2C / 802.11ac VHT20 / 5 580 MHz



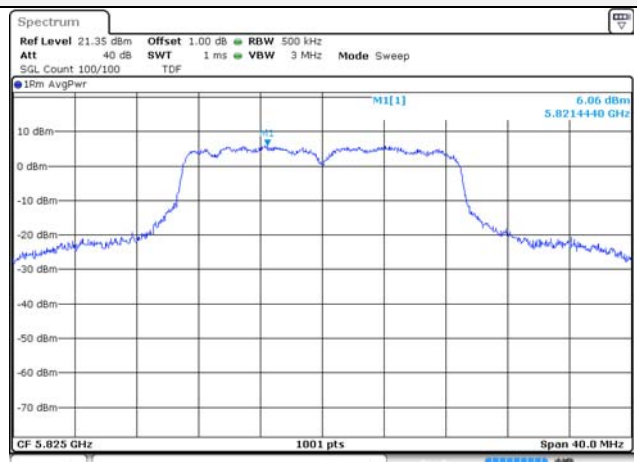
UNII-3 / 802.11ac VHT20 / 5 785 MHz



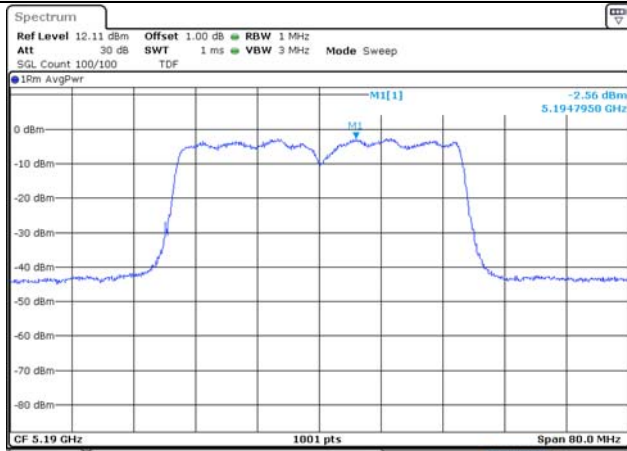
UNII-2C / 802.11ac VHT20 / 5 700 MHz



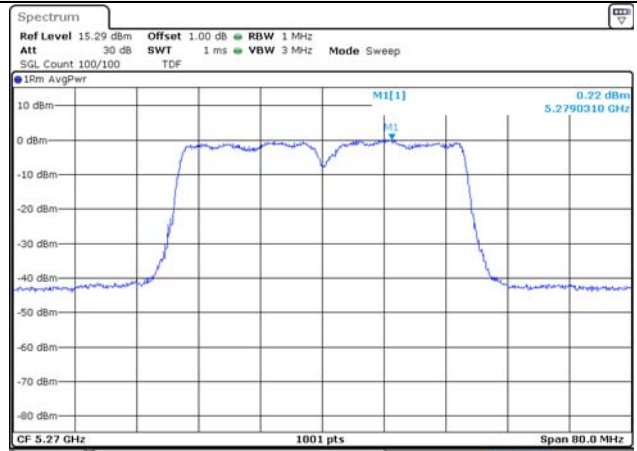
UNII-3 / 802.11ac VHT20 / 5 825 MHz



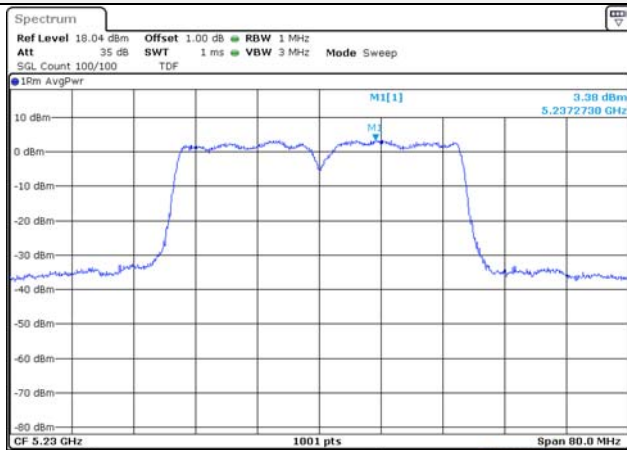
UNII-1 / 802.11ac VHT40 / 5 190 MHz



UNII-2A / 802.11ac VHT40 / 5 270 MHz



UNII-1 / 802.11ac VHT40 / 5 230 MHz



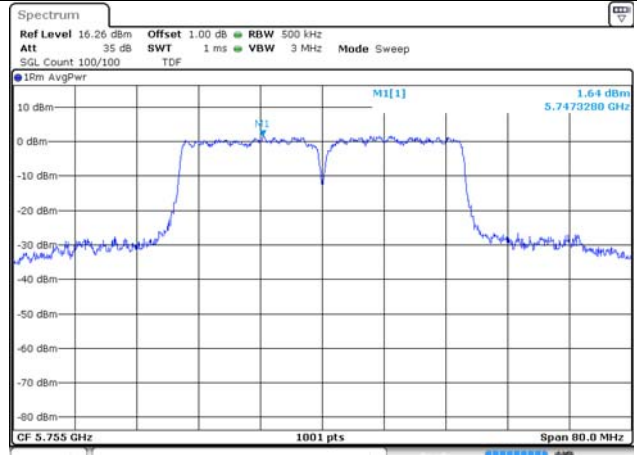
UNII-2A / 802.11ac VHT40 / 5 310 MHz



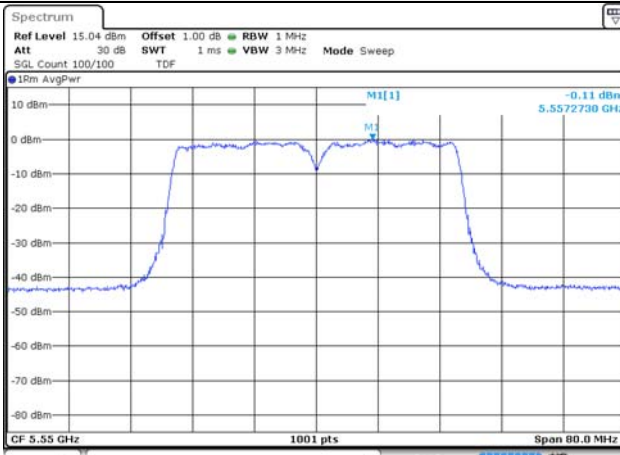
UNII-2C / 802.11ac VHT40 / 5 510 MHz



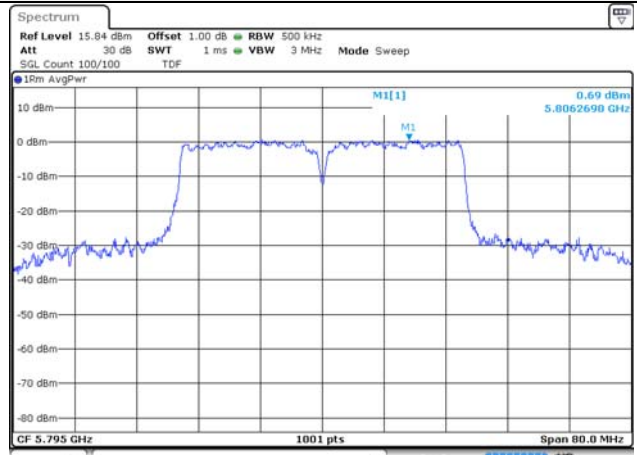
UNII-3 / 802.11ac VHT40 / 5 755 MHz



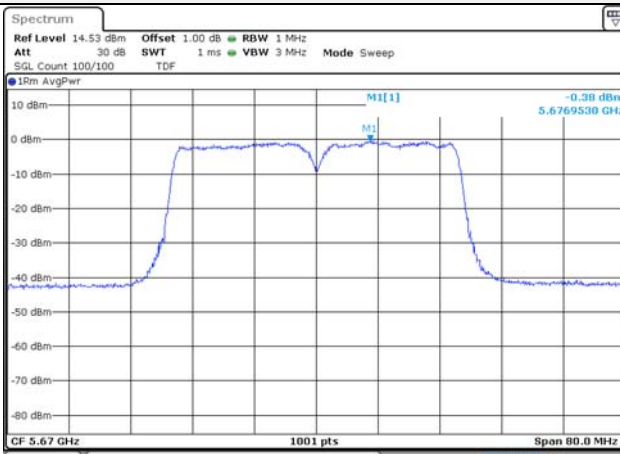
UNII-2C / 802.11ac VHT40 / 5 550 MHz



UNII-3 / 802.11ac VHT40 / 5 795 MHz

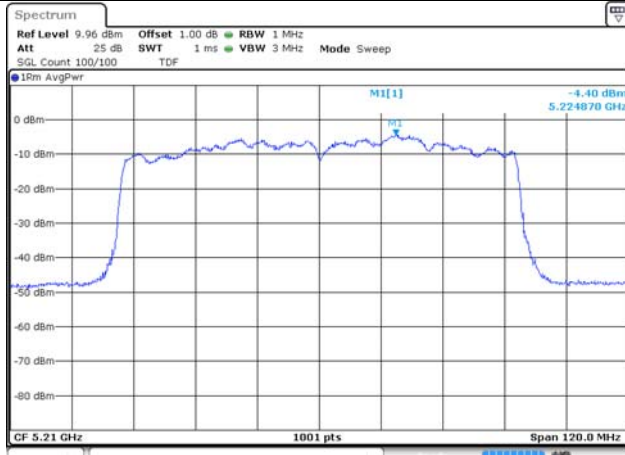


UNII-2C / 802.11ac VHT40 / 5 670 MHz

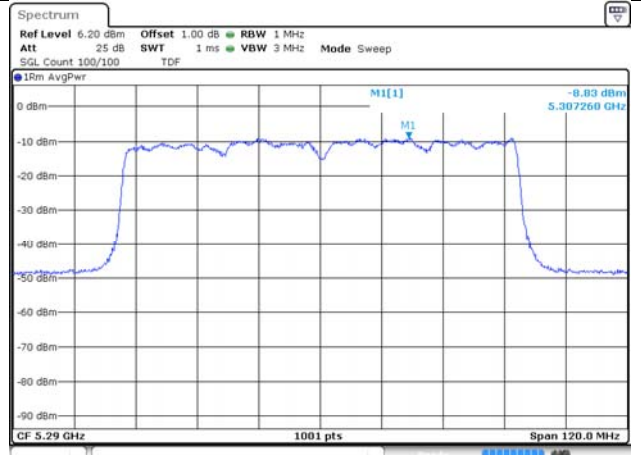


Blank

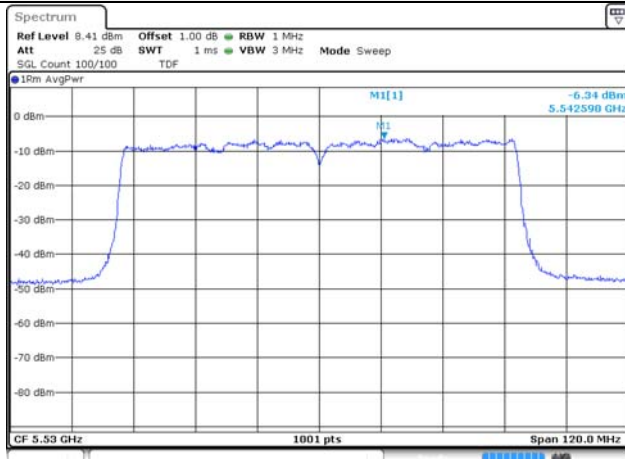
UNII-1 / 802.11ac VHT80 / 5 210 MHz



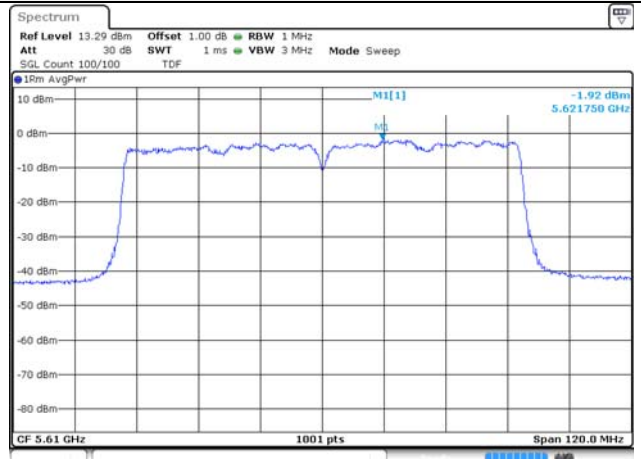
UNII-2A / 802.11ac VHT80 / 5 290 MHz



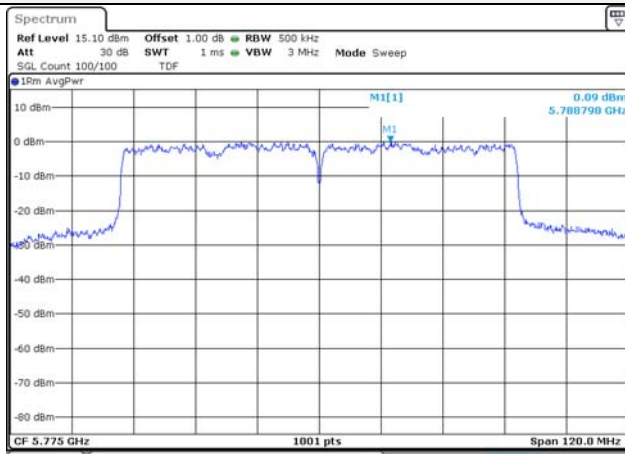
UNII-2C / 802.11ac VHT80 / 5 530 MHz



UNII-2C / 802.11ac VHT80 / 5 610 MHz



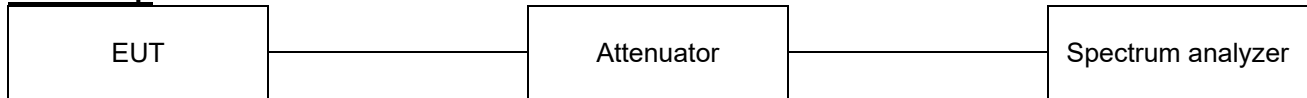
UNII-3 / 802.11ac VHT80 / 5 775 MHz



Blank

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 (26dBbandwidth)

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

Test settings

1. 26 dB Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. 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

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1% to 5% of the OBW
4. Set VBW $\geq 3 \times$ RBW
5. 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.
6. Use the 99% power bandwidth function of the instrument (if available).
7. 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.

Test results

SISO

26dB Bandwidth

Test mode	Band	Frequency(MHz)	Measured Bandwidth ANT 0 (MHz)	Measured Bandwidth ANT 1 (MHz)	Measured Bandwidth ANT 2 (MHz)	Measured Bandwidth ANT 3 (MHz)
11a	UNII-1	5 180	21.18	20.63	20.78	20.93
		5 200	21.88	23.23	21.28	21.33
		5 240	21.13	22.73	21.93	21.63
	UNII-2A	5 260	21.28	21.43	20.78	20.83
		5 280	21.38	21.83	21.48	20.93
		5 320	20.78	20.88	21.23	20.93
	UNII-2C	5 500	20.83	20.78	20.83	20.83
		5 580	20.83	21.23	20.83	20.98
		5 700	21.08	21.48	20.83	20.73
11n HT20	UNII-1	5 180	21.28	21.28	21.38	21.08
		5 200	21.83	22.73	21.48	21.23
		5 240	21.88	22.78	21.23	21.33
	UNII-2A	5 260	21.78	21.73	21.68	21.33
		5 280	21.68	21.93	21.63	21.48
		5 320	21.53	21.38	21.53	21.48
	UNII-2C	5 500	21.43	21.53	21.13	21.33
		5 580	21.28	21.88	21.43	21.18
		5 700	21.48	23.18	21.48	21.23
11n HT40	UNII-1	5 190	40.36	40.16	40.16	39.96
		5 230	40.56	40.56	41.66	40.76
	UNII-2A	5 270	41.36	42.16	41.16	40.26
		5 310	40.36	40.06	40.16	40.36
	UNII-2C	5 510	40.46	40.36	39.96	39.86
		5 550	39.66	40.26	40.46	40.16
		5 670	40.16	40.26	40.46	40.46

Test mode	Band	Frequency(MHz)	Measured Bandwidth ANT 0 (MHz)	Measured Bandwidth ANT 1 (MHz)	Measured Bandwidth ANT 2 (MHz)	Measured Bandwidth ANT 3 (MHz)
11ac VHT20	UNII-1	5 180	21.78	21.63	21.63	21.38
		5 200	21.68	21.38	21.23	21.33
		5 240	21.63	21.48	21.58	21.53
	UNII-2A	5 260	21.58	21.38	21.58	21.58
		5 280	21.38	23.88	21.88	21.28
		5 320	21.33	21.58	21.33	21.28
	UNII-2C	5 500	21.23	21.23	21.13	21.48
		5 580	21.48	21.63	21.23	21.28
		5 700	21.28	22.18	21.48	21.18
11ac VHT40	UNII-1	5 190	40.26	40.06	40.26	40.26
		5 230	40.76	40.56	40.26	40.06
	UNII-2A	5 270	40.36	40.96	40.56	40.16
		5 310	40.46	40.06	40.06	40.36
	UNII-2C	5 510	39.86	40.16	40.26	39.96
		5 550	40.06	40.56	40.16	40.56
		5 670	40.26	43.66	40.46	40.26
11ac VHT80	UNII-1	5 210	81.88	81.64	81.64	81.52
	UNII-2A	5 290	81.88	82.12	81.88	82.24
	UNII-2C	5 530	81.76	82.24	82.12	82.12
		5 610	81.76	82.24	82.60	82.36

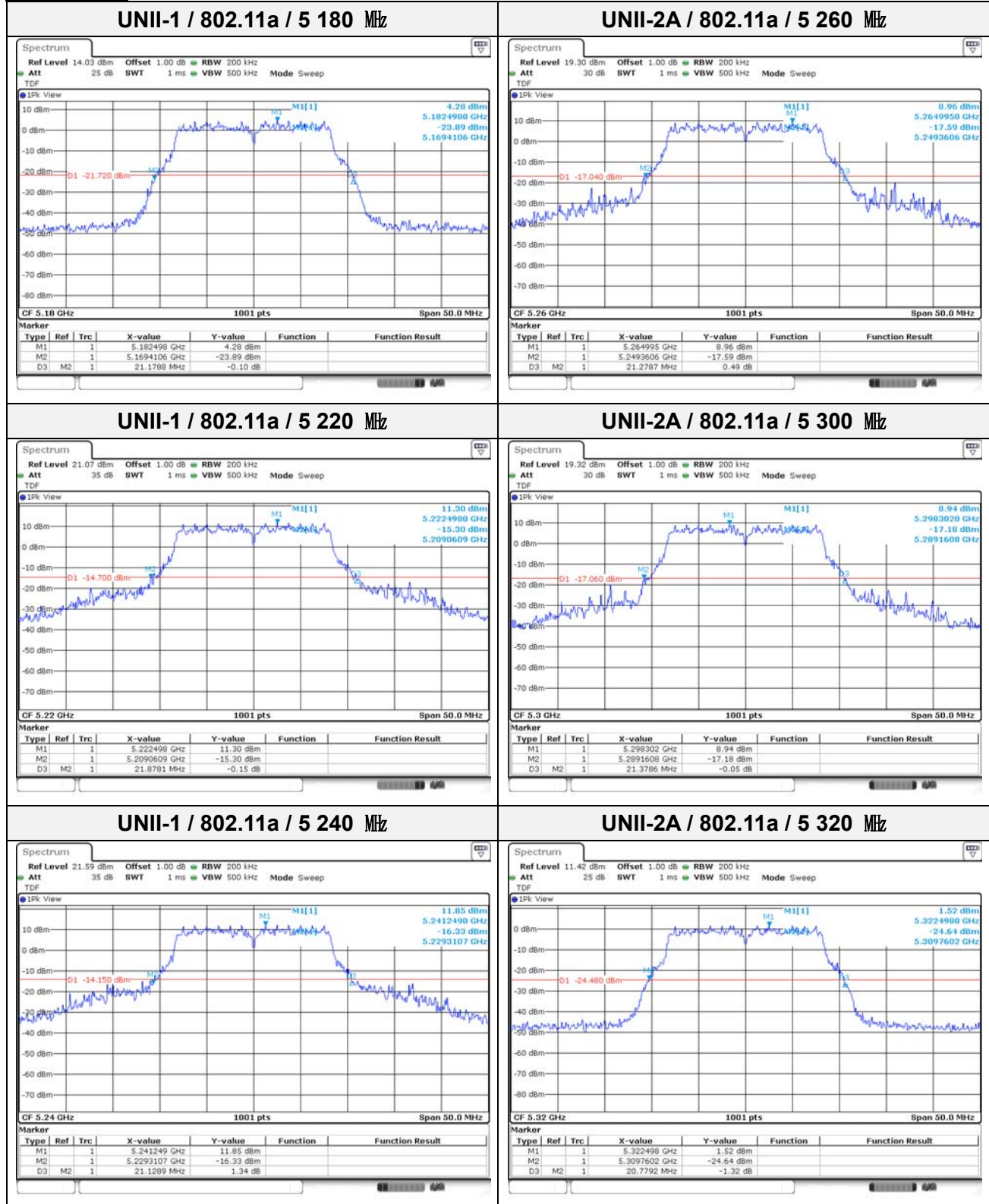
99% Bandwidth

Test mode	Band	Frequency(MHz)	Measured Bandwidth ANT 0 (MHz)	Measured Bandwidth ANT 1 (MHz)	Measured Bandwidth ANT 2 (MHz)	Measured Bandwidth ANT 3 (MHz)
11a	UNII-1	5 180	16.63	16.63	16.63	16.63
		5 200	16.78	16.83	16.73	16.68
		5 240	16.83	16.83	16.73	16.68
	UNII-2A	5 260	16.68	16.73	16.73	16.68
		5 280	16.63	16.68	16.73	16.68
		5 320	16.63	16.63	16.68	16.68
	UNII-2C	5 500	16.63	16.68	16.63	16.63
		5 580	16.58	16.68	16.63	16.68
		5 700	16.68	16.68	16.68	16.68
	UNII-3	5 745	16.98	19.63	17.18	17.18
		5 785	17.18	21.83	17.28	18.33
		5 825	17.63	23.43	17.43	18.18
11n HT20	UNII-1	5 180	17.83	17.73	17.83	17.78
		5 200	17.83	17.83	17.83	17.93
		5 240	17.88	17.88	17.83	17.83
	UNII-2A	5 260	17.83	17.88	17.83	17.83
		5 280	17.88	17.88	17.88	17.78
		5 320	17.78	17.83	17.83	17.88
	UNII-2C	5 500	17.73	17.78	17.83	17.68
		5 580	17.73	17.88	17.83	17.73
		5 700	17.83	17.88	17.78	17.78
	UNII-3	5 745	18.18	23.13	18.53	18.68
		5 785	18.08	22.28	18.28	18.78
		5 825	18.43	25.17	18.63	19.38
11n HT40	UNII-1	5 190	36.36	36.36	36.46	36.46
		5 230	36.56	36.56	36.56	36.56
	UNII-2A	5 270	36.56	36.66	36.56	36.46
		5 310	36.36	36.36	36.46	36.46
	UNII-2C	5 510	36.26	36.26	36.36	36.46
		5 550	36.36	36.56	36.36	36.46
		5 670	36.36	36.56	36.46	36.36
	UNII-3	5 755	36.86	39.66	37.06	37.16
5 795		36.66	39.06	36.96	37.16	

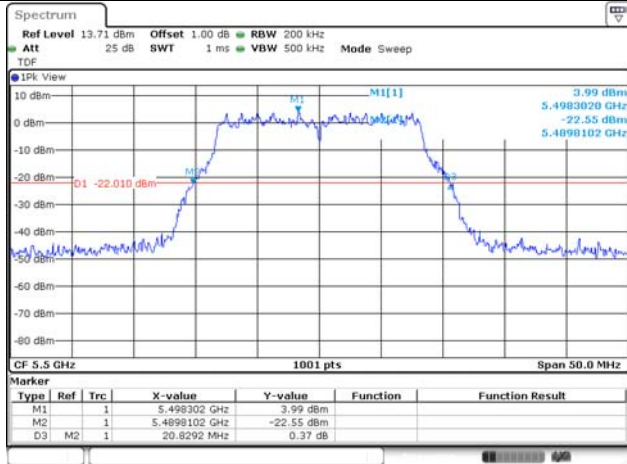
Test mode	Band	Frequency(MHz)	Measured Bandwidth ANT 0 (MHz)	Measured Bandwidth ANT 1 (MHz)	Measured Bandwidth ANT 2 (MHz)	Measured Bandwidth ANT 3 (MHz)
11ac VHT20	UNII-1	5 180	17.83	17.83	17.83	17.83
		5 200	17.83	17.78	17.83	17.88
		5 240	17.83	17.88	17.78	17.83
	UNII-2A	5 260	17.88	17.83	17.93	17.78
		5 280	17.78	17.88	17.83	17.78
		5 320	17.83	17.73	17.73	17.88
	UNII-2C	5 500	17.78	17.78	17.83	17.78
		5 580	17.78	17.88	17.83	17.83
		5 700	17.78	17.83	17.78	17.83
	UNII-3	5 745	18.08	21.83	18.48	18.63
		5 785	18.08	21.93	18.33	18.53
		5 825	18.38	24.58	18.38	19.03
11ac VHT40	UNII-1	5 190	36.46	36.46	36.56	36.56
		5 230	36.46	36.46	36.46	36.46
	UNII-2A	5 270	36.56	36.66	36.46	36.46
		5 310	36.46	36.46	36.46	36.36
	UNII-2C	5 510	36.46	36.46	36.36	36.46
		5 550	36.46	36.46	36.36	36.46
		5 670	36.56	36.46	36.46	36.46
	UNII-3	5 755	36.66	37.86	36.86	36.86
5 795		36.66	37.56	36.76	36.86	
11ac VHT80	UNII-1	5 210	74.93	74.93	74.81	74.93
	UNII-2A	5 290	75.88	75.88	75.76	75.88
	UNII-2C	5 530	75.76	75.76	75.88	75.76
		5 610	75.76	75.88	75.76	75.88
	UNII-3	5 775	76.36	78.64	76.72	76.72

26 dB bandwidth

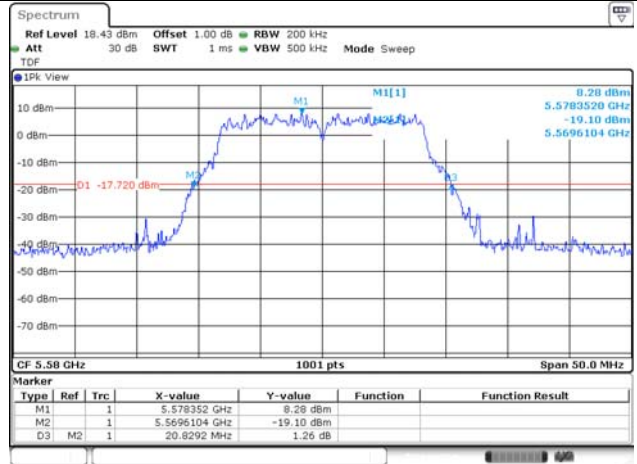
SISO ANT 0



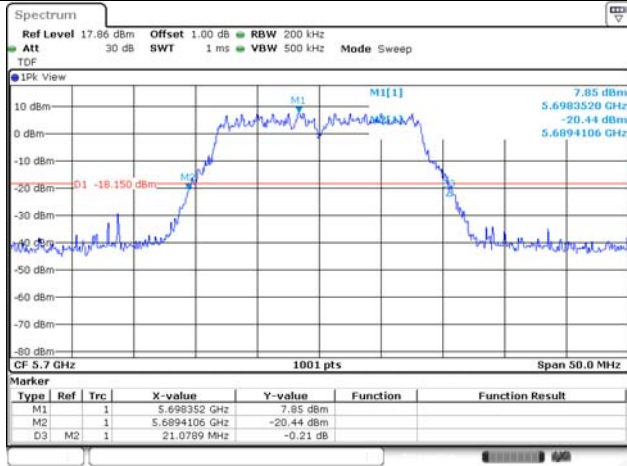
UNII-2C / 802.11a / 5 500 MHz



UNII-2C / 802.11a / 5 580 MHz

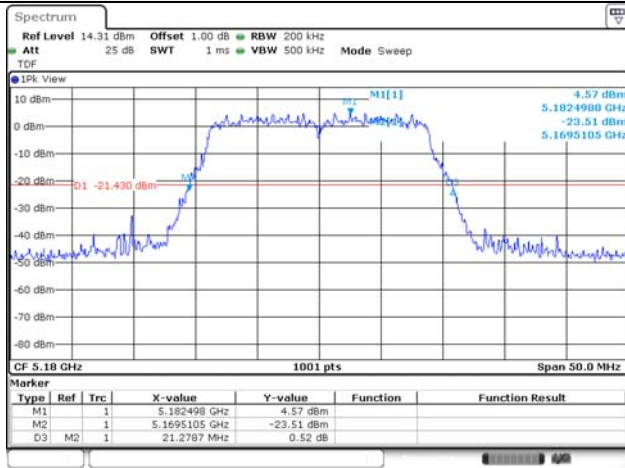


UNII-2C / 802.11a / 5 700 MHz

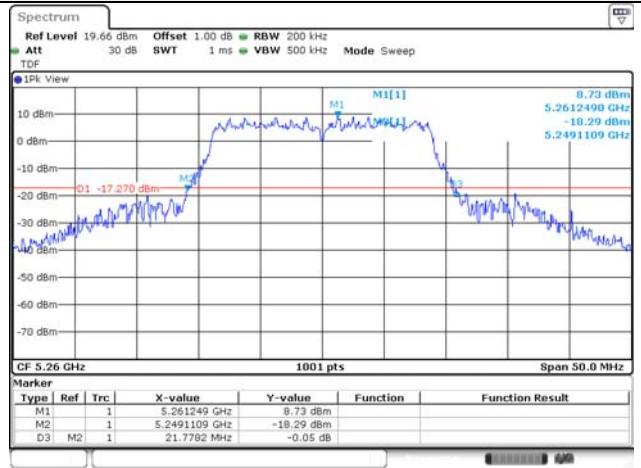


Blank

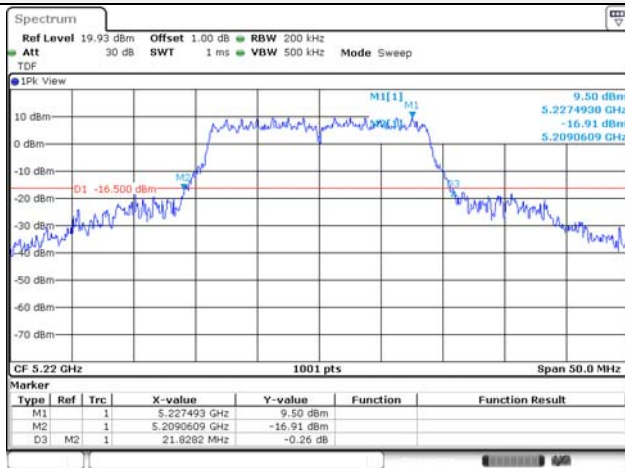
UNII-1 / 802.11n HT20 / 5 180 MHz



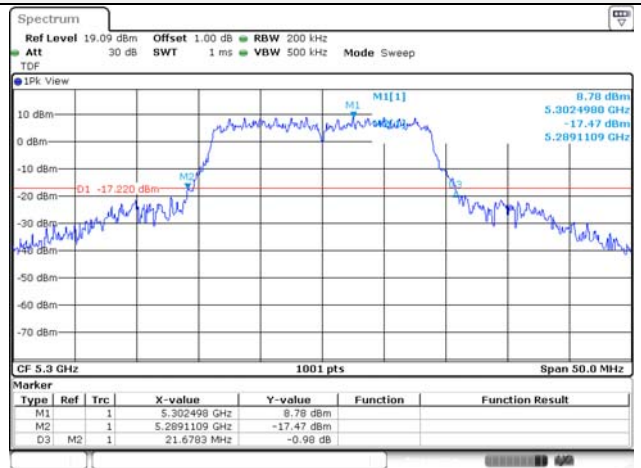
UNII-2A / 802.11n HT20 / 5 260 MHz



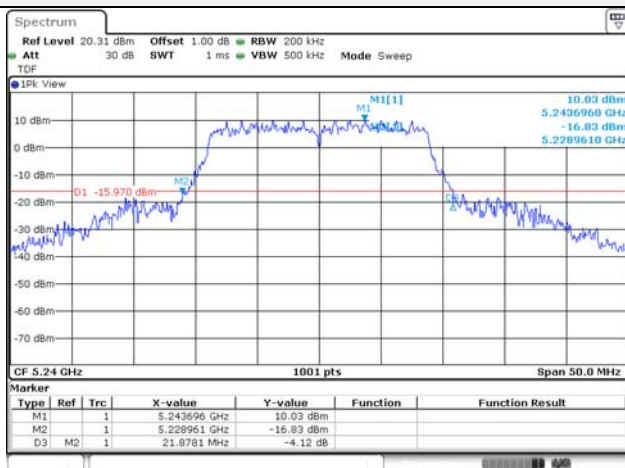
UNII-1 / 802.11n HT20 / 5 220 MHz



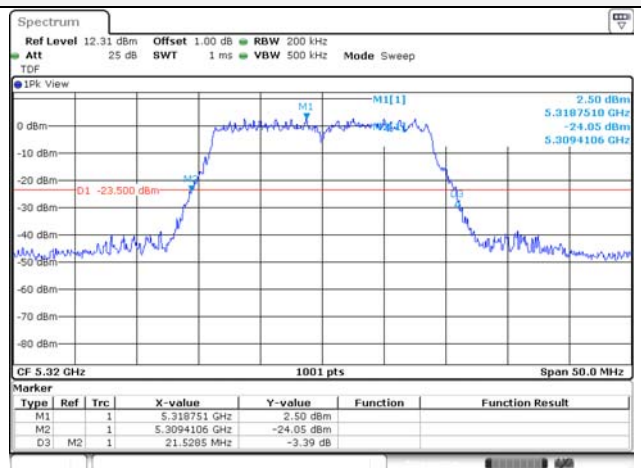
UNII-2A / 802.11n HT20 / 5 300 MHz



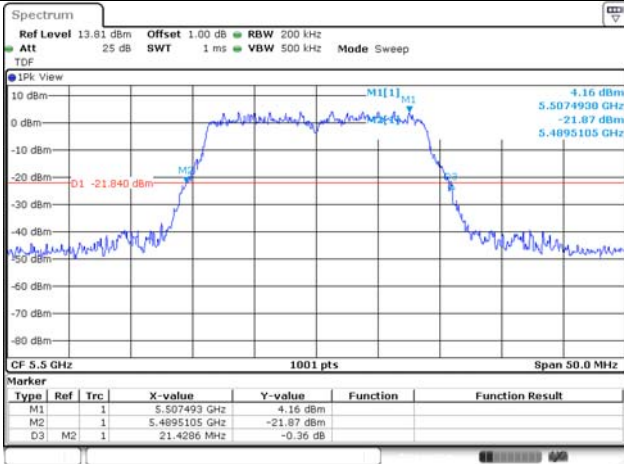
UNII-1 / 802.11n HT20 / 5 240 MHz



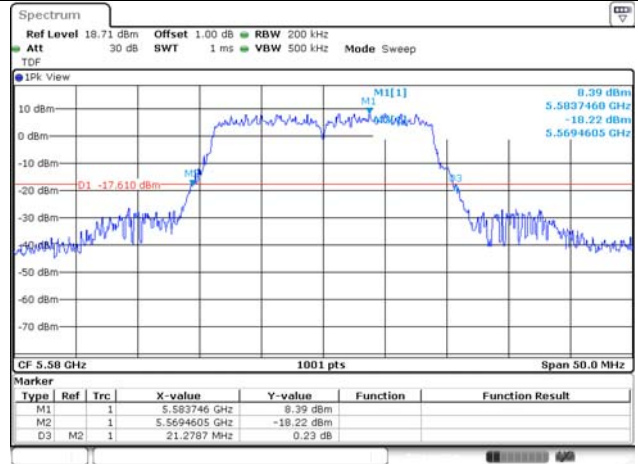
UNII-2A / 802.11n HT20 / 5 320 MHz



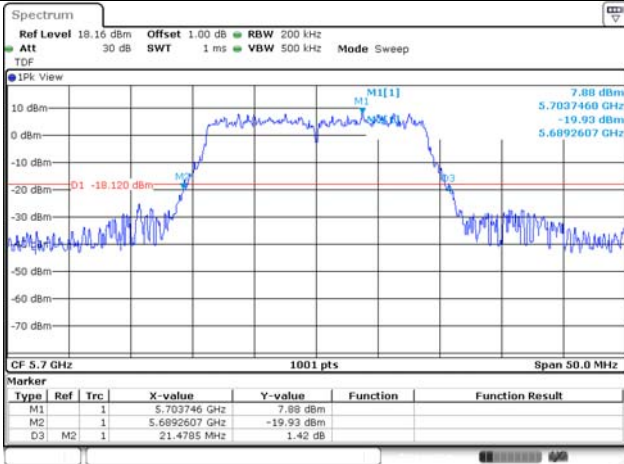
UNII-2C / 802.11n HT20 / 5 500 MHz



UNII-2C / 802.11n HT20 / 5 580 MHz

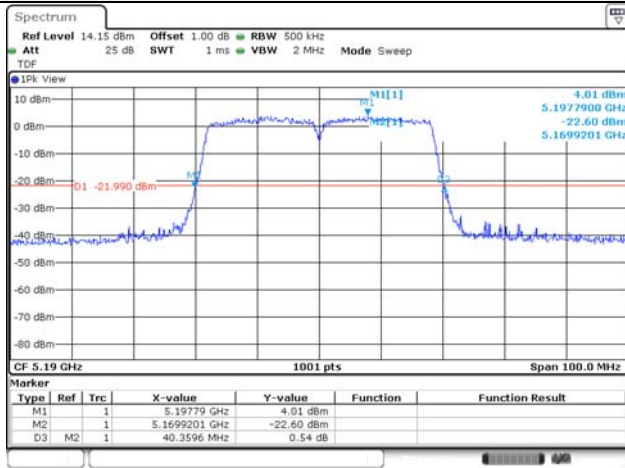


UNII-2C / 802.11n HT20 / 5 700 MHz

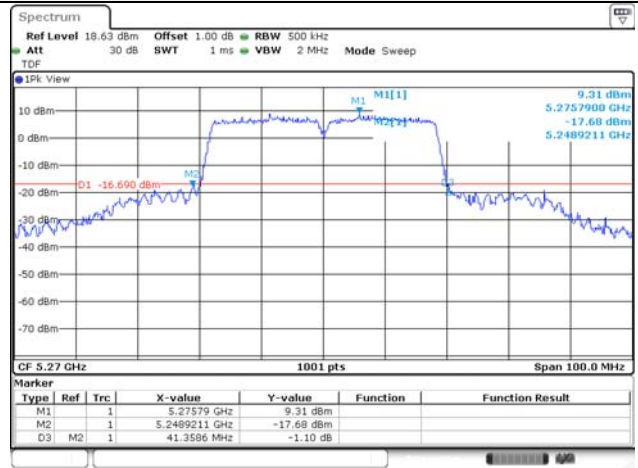


Blank

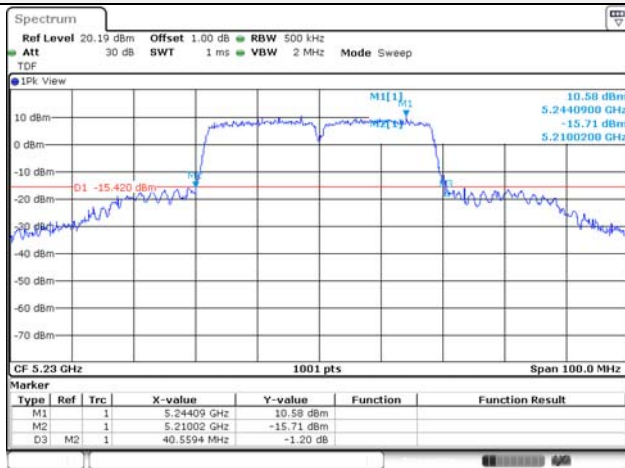
UNII-1 / 802.11n HT40 / 5 190 MHz



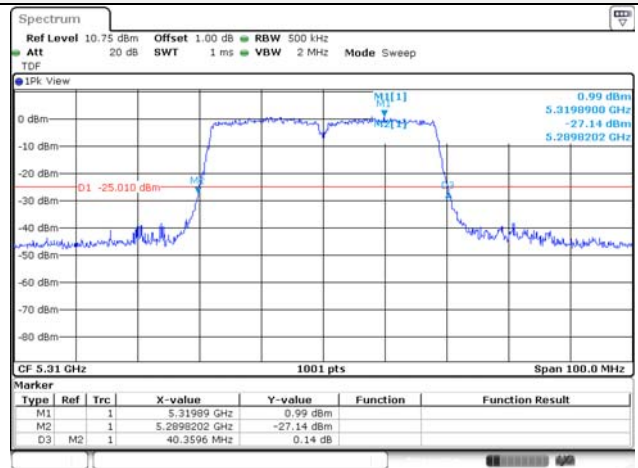
UNII-2A / 802.11n HT40 / 5 270 MHz



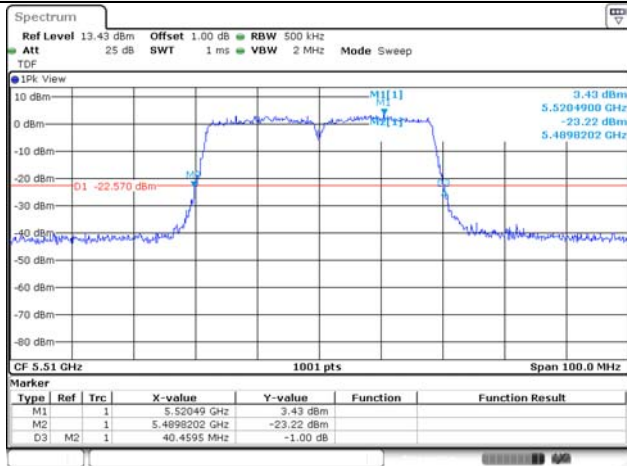
UNII-1 / 802.11n HT40 / 5 230 MHz



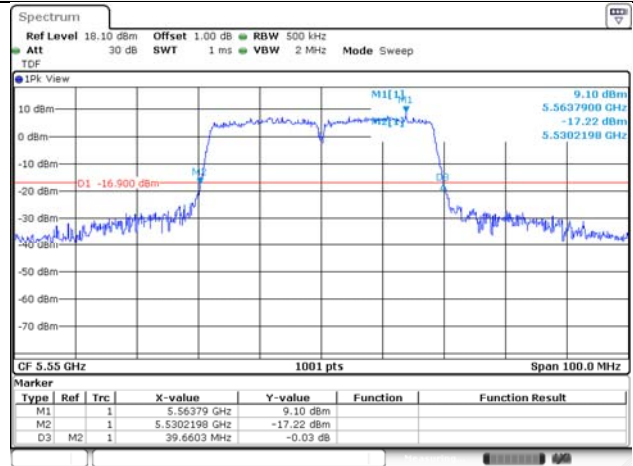
UNII-2A / 802.11n HT40 / 5 310 MHz



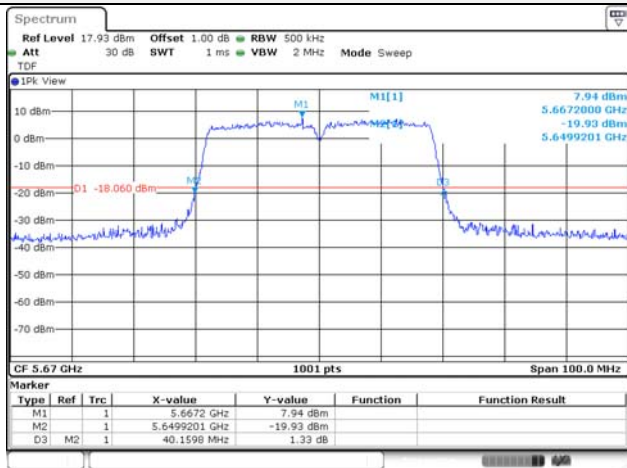
UNII-2C / 802.11n HT40 / 5 510 MHz



UNII-2C / 802.11n HT40 / 5 550 MHz

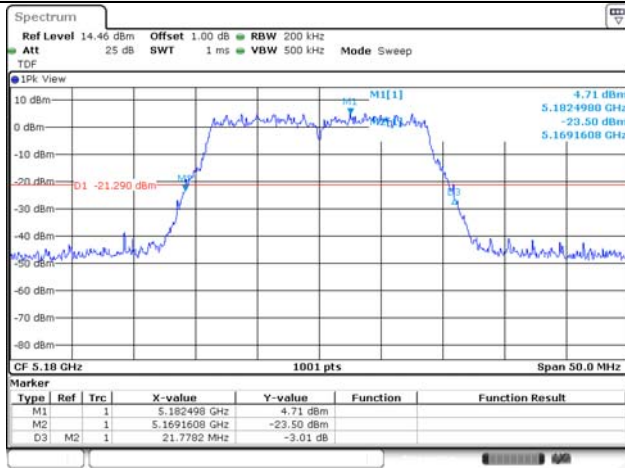


UNII-2C / 802.11n HT40 / 5 670 MHz

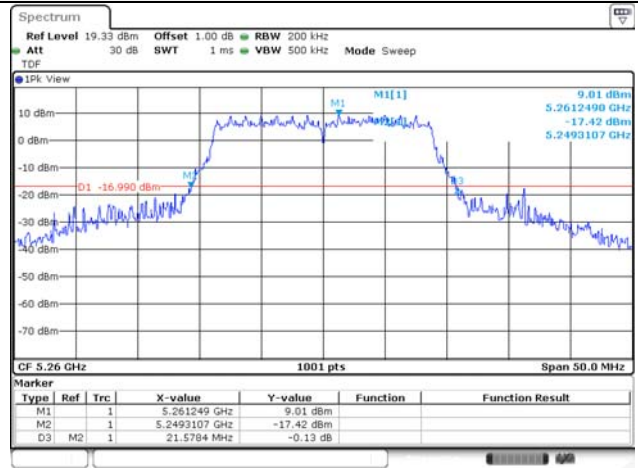


Blank

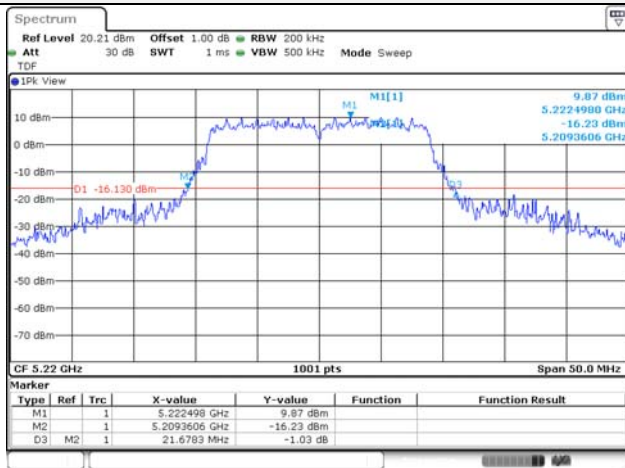
UNII-1 / 802.11ac VHT20 / 5 180 MHz



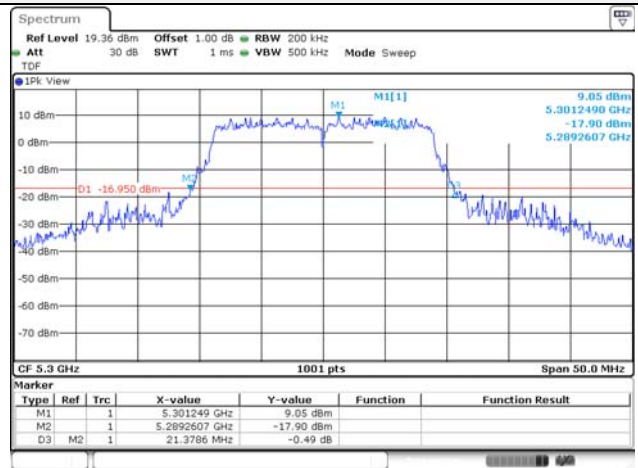
UNII-2A / 802.11ac VHT20 / 5 260 MHz



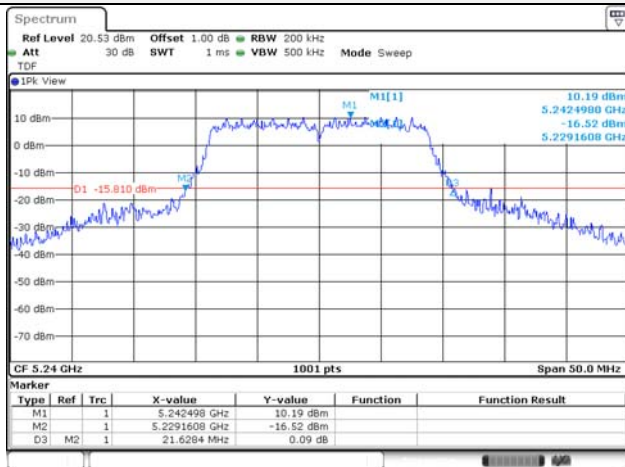
UNII-1 / 802.11ac VHT20 / 5 220 MHz



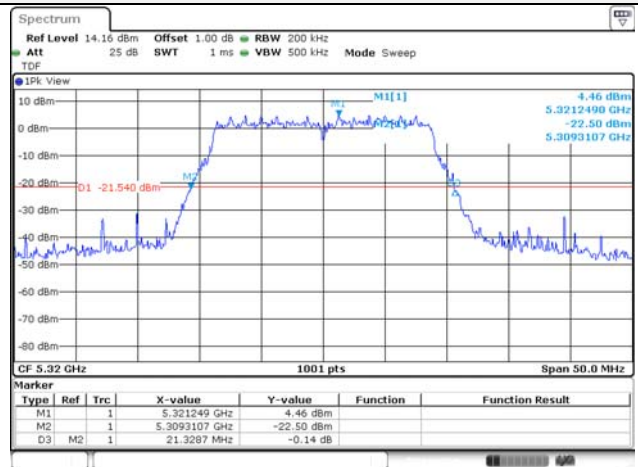
UNII-2A / 802.11ac VHT20 / 5 300 MHz



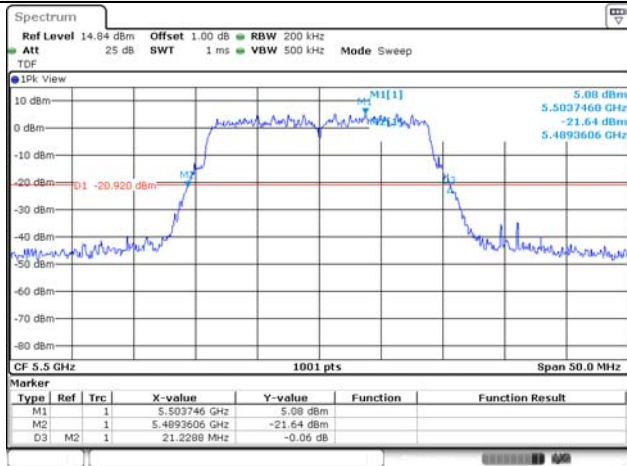
UNII-1 / 802.11ac VHT20 / 5 240 MHz



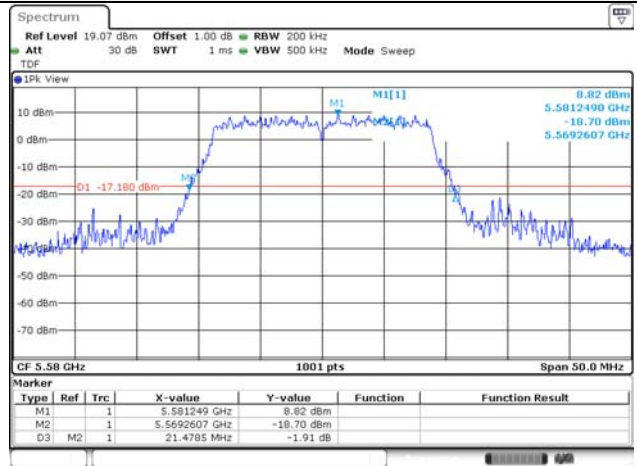
UNII-2A / 802.11ac VHT20 / 5 320 MHz



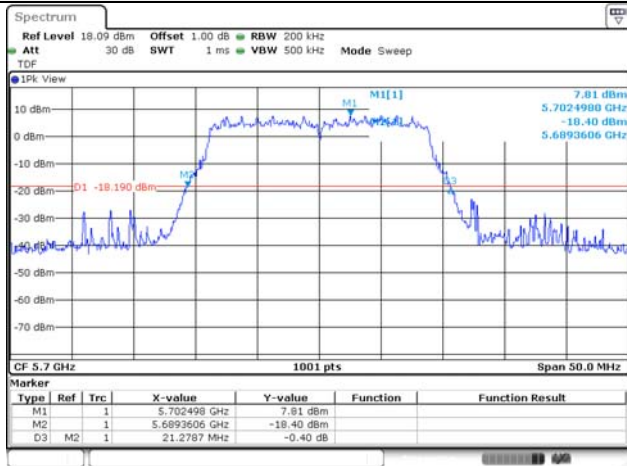
UNII-2C / 802.11ac VHT20 / 5 500 MHz



UNII-2C / 802.11ac VHT20 / 5 580 MHz



UNII-2C / 802.11ac VHT20 / 5 700 MHz



Blank