

5470-5725MHz

Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)			
		ANT 0	ANT 1	Total	FCC Limit
802.11a	5500	6.65	4.10	/	11
	5580	6.15	4.13	/	11
	5700	6.02	6.53	/	11
	5720	4.70	6.34	/	11
802.11ac vht20	5500	4.92	5.09	8.02	11
	5580	3.72	4.42	7.09	11
	5700	4.31	5.57	8.00	11
	5720	3.91	5.63	7.86	11
802.11ac vht40	5510	0.86	0.54	3.71	11
	5550	0.24	0.39	3.33	11
	5670	0.7	0.82	3.77	11
	5710	0.58	1.18	3.90	11
802.11ac vht80	5530	-2.12	-2.48	0.71	11
	5610	-2.91	-2.38	0.37	11
	5690	-2.73	-1.79	0.78	11
802.11ax hew20	5500	4.81	4.41	7.62	11
	5580	4.42	4.01	7.23	11
	5700	3.88	4.92	7.44	11
	5720	4.29	4.87	7.60	11
802.11ax hew40	5510	1.86	0.92	4.43	11
	5550	1.15	0.86	4.02	11
	5670	0.28	0.67	3.49	11
	5710	0.62	1.54	4.11	11
802.11ax hew80	5530	-2.47	-2.98	0.29	11
	5610	-3.14	-2.89	0.00	11
	5690	-2.96	-2.07	0.52	11

Note:

Method SA-1 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01 was used for PSD test.

The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

Array Gain = $10 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB = $10 \cdot \log(2/1) = 3$

So, Directional gain = 3dBi+3= 6dBi

5725-5850MHz

Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)			
		ANT 0	ANT 1	Total	FCC Limit
802.11a	5745	4.44	3.83	/	30
	5785	4.42	3.92	/	30
	5825	4.57	3.47	/	30
802.11ac vht20	5745	2.65	3.76	6.25	30
	5785	2.87	3.36	6.13	30
	5825	3.61	3.38	6.51	30
802.11ac vht40	5755	0.70	1.67	4.22	30
	5795	0.40	1.31	3.89	30
802.11ac vht80	5775	-4.19	-3.24	-0.68	30
802.11ax hew20	5745	3.51	4.15	6.85	30
	5785	3.46	4.02	6.76	30
	5825	4.09	3.73	6.92	30
802.11ax hew40	5755	1.10	1.64	4.39	30
	5795	1.36	1.83	4.61	30
802.11ax hew80	5775	-4.25	-3.45	-0.82	30

Note:

Method SA-1 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01 was used for PSD test.

The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB = $10 \log(2/1)$ = 3

So, Directional gain = 1.7dBi + 3 = 4.7dBi < 6dBi

3.5.4 Duty Cycle

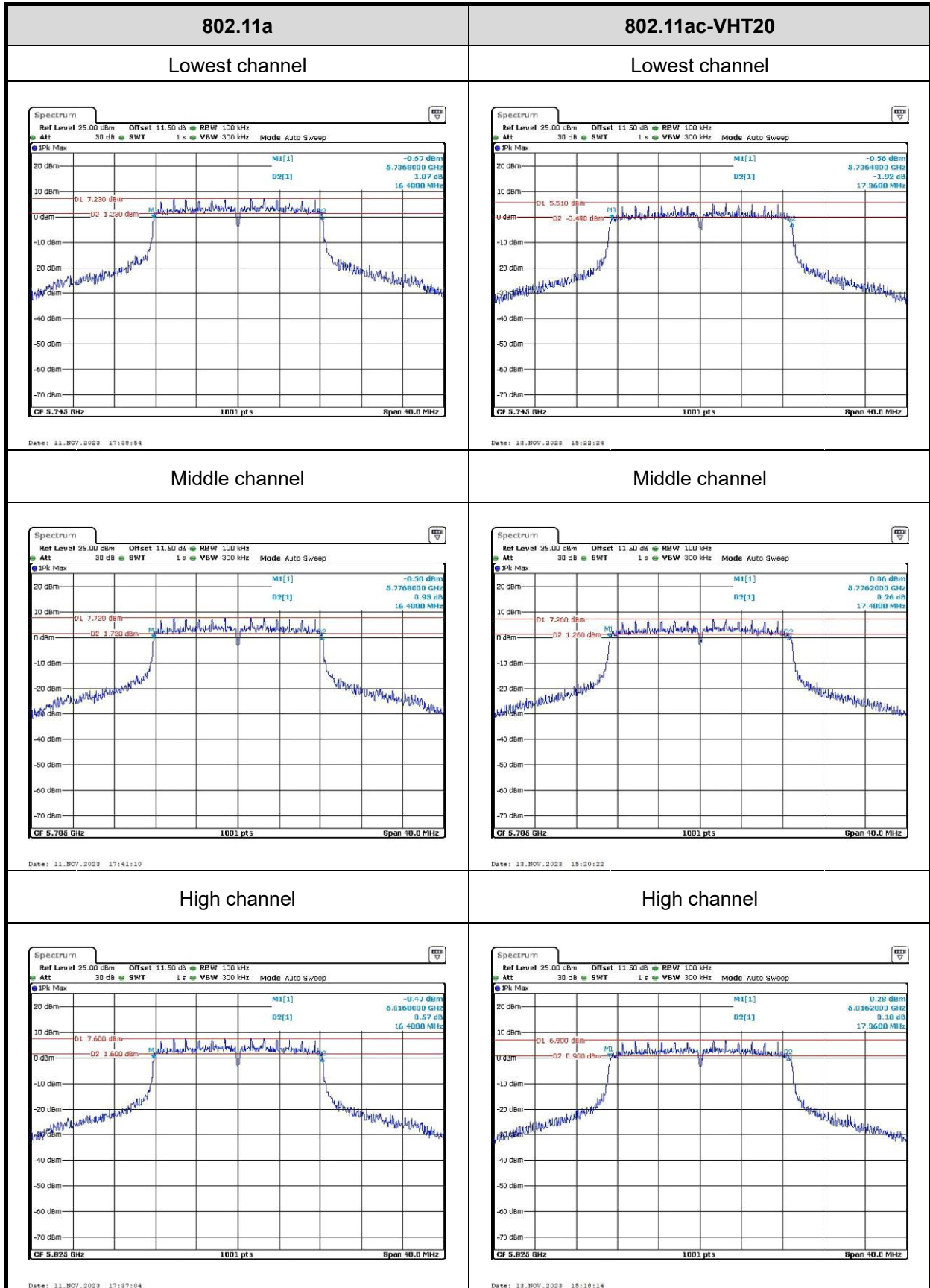
Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)	Duty Cycle Factor (dB)	1/T [kHz]	VBW Setting (Hz)
802.11a	1.978	1.998	99.00	/	/	10
802.11ac VHT20	5.426	5.449	99.59	/	/	10
802.11ac VHT40	5.430	5.449	99.66	/	/	10
802.11ac VHT80	5.426	5.449	99.59	/	/	10
802.11ax hew20	5.445	5.465	99.63	/	/	10
802.11ax hew40	5.445	5.465	99.63	/	/	10
802.11ax hew80	5.445	5.464	99.66	/	/	10

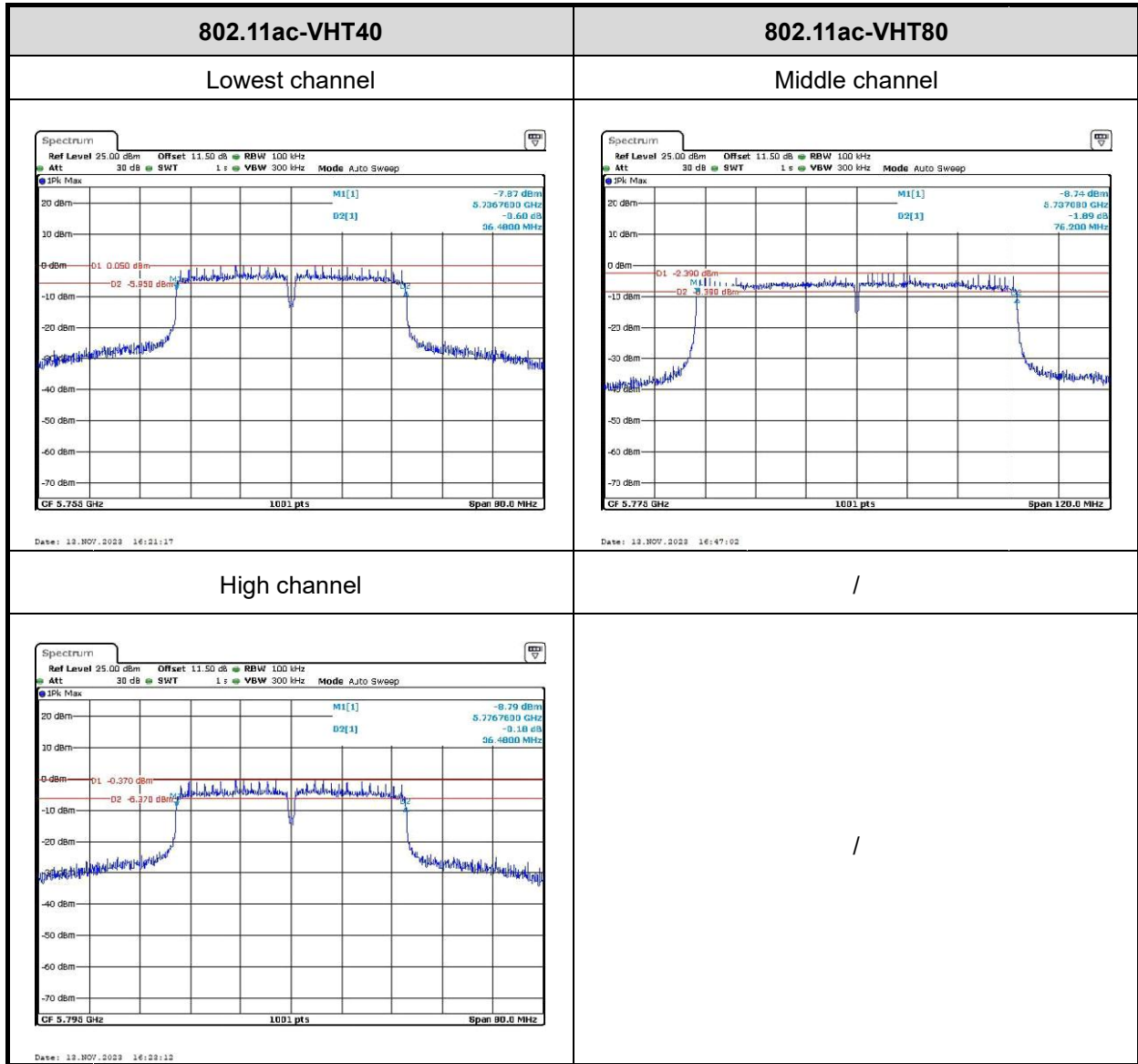
Note: test only performed on ANT 0

Note*: Radiated emission test with average value, the Spectrum analyzer VBW setting information.

Test Plots:

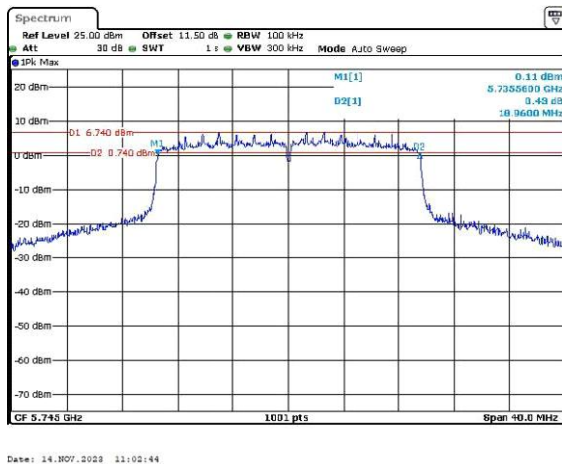
6dB Emission Bandwidth





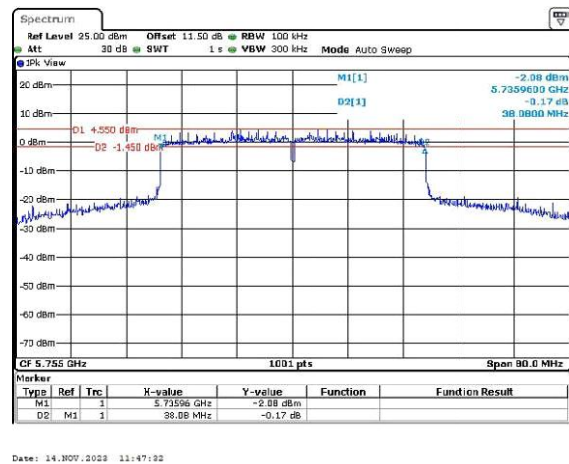
802.11ax20

Lowest channel

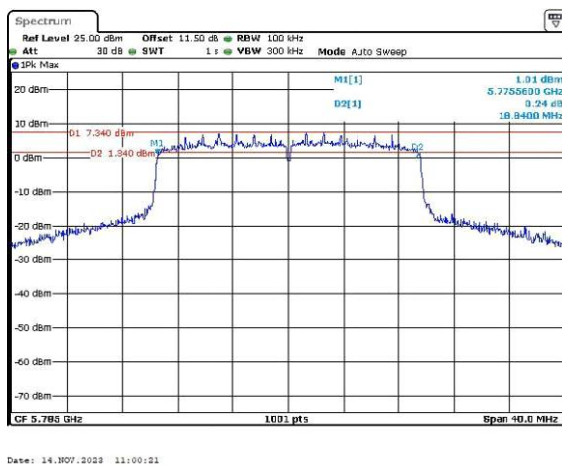


802.11ax40

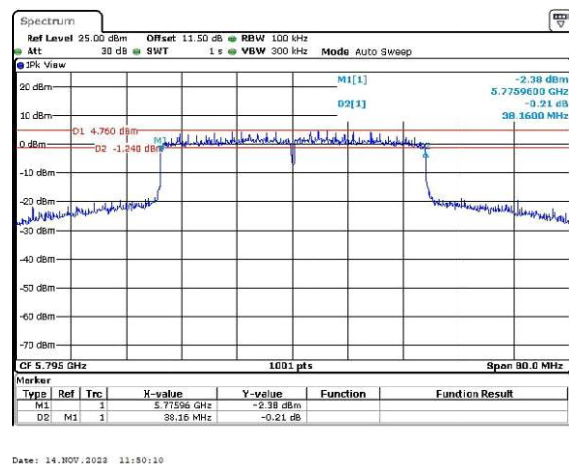
Lowest channel



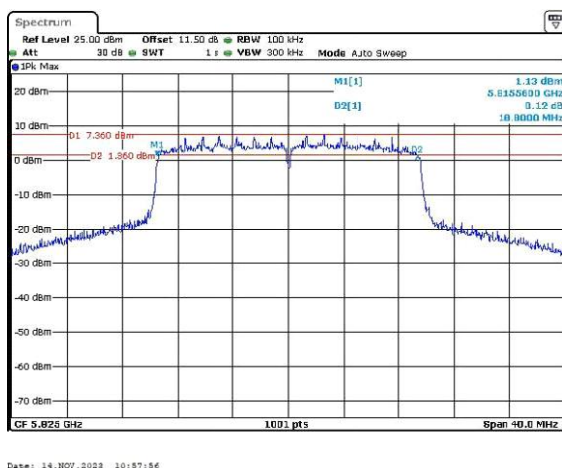
Middle channel



High channel

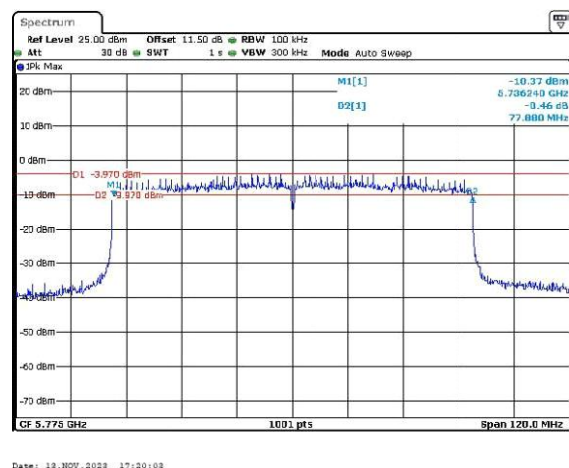


High channel



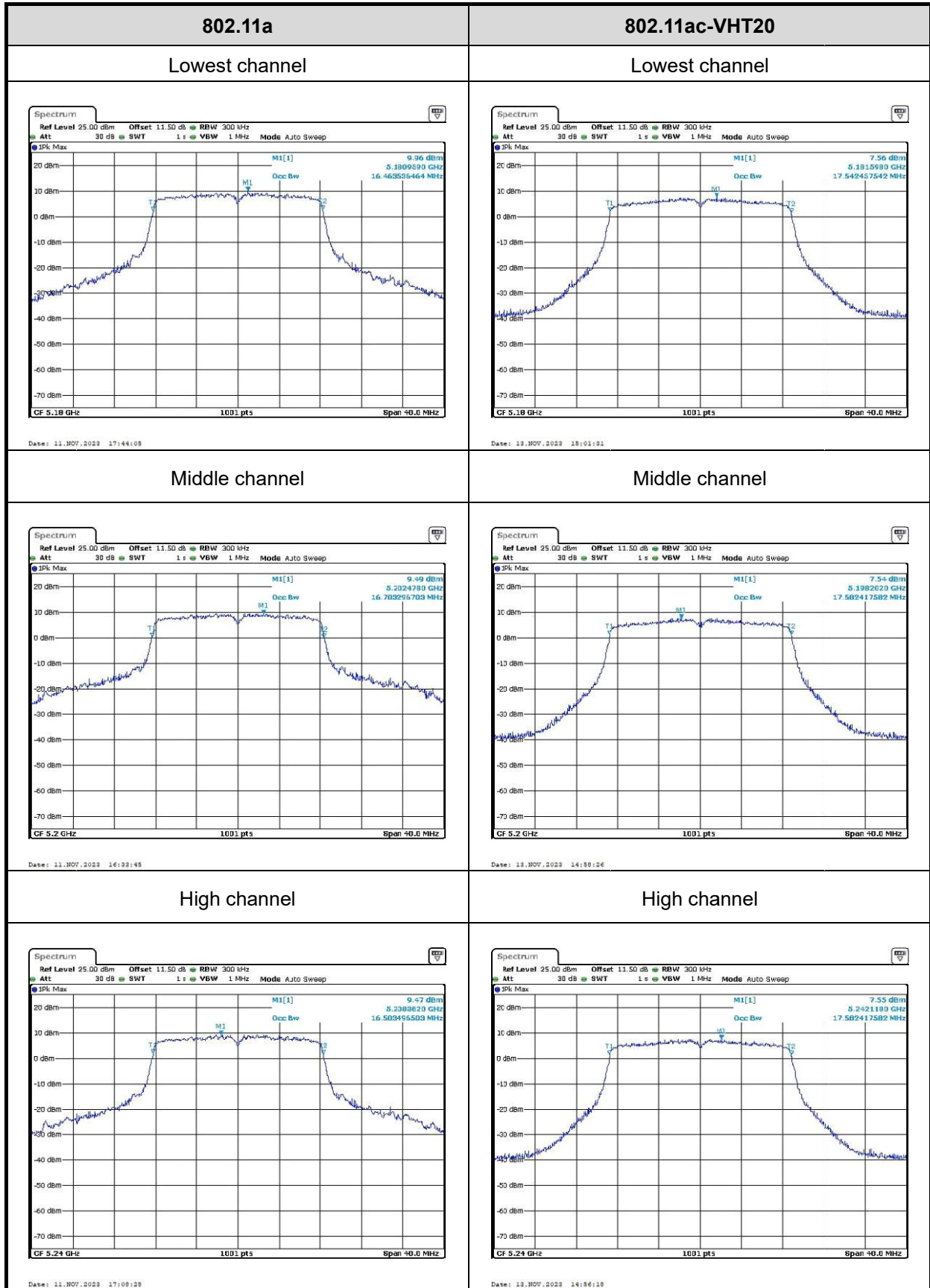
802.11ax80

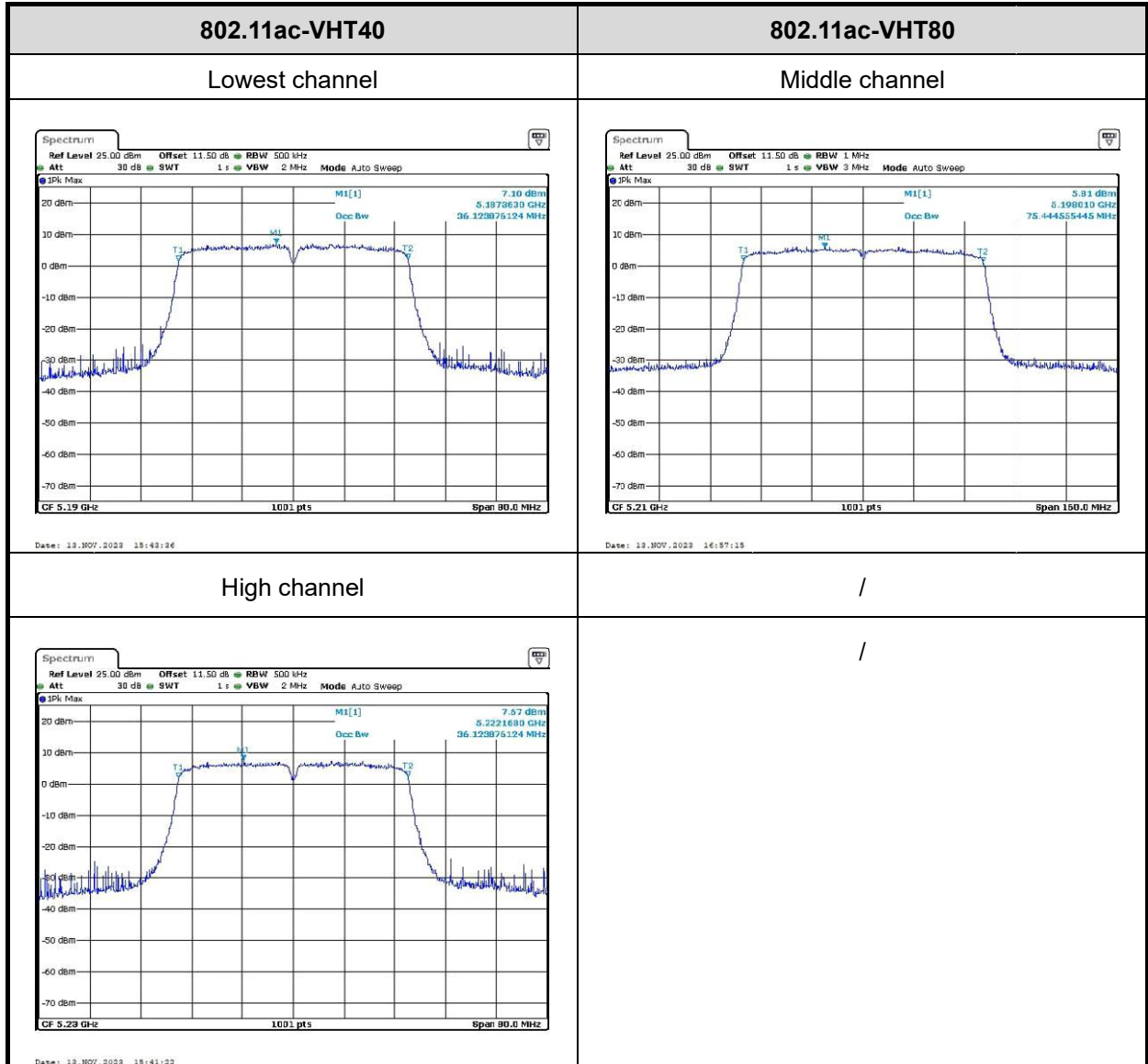
Middle channel

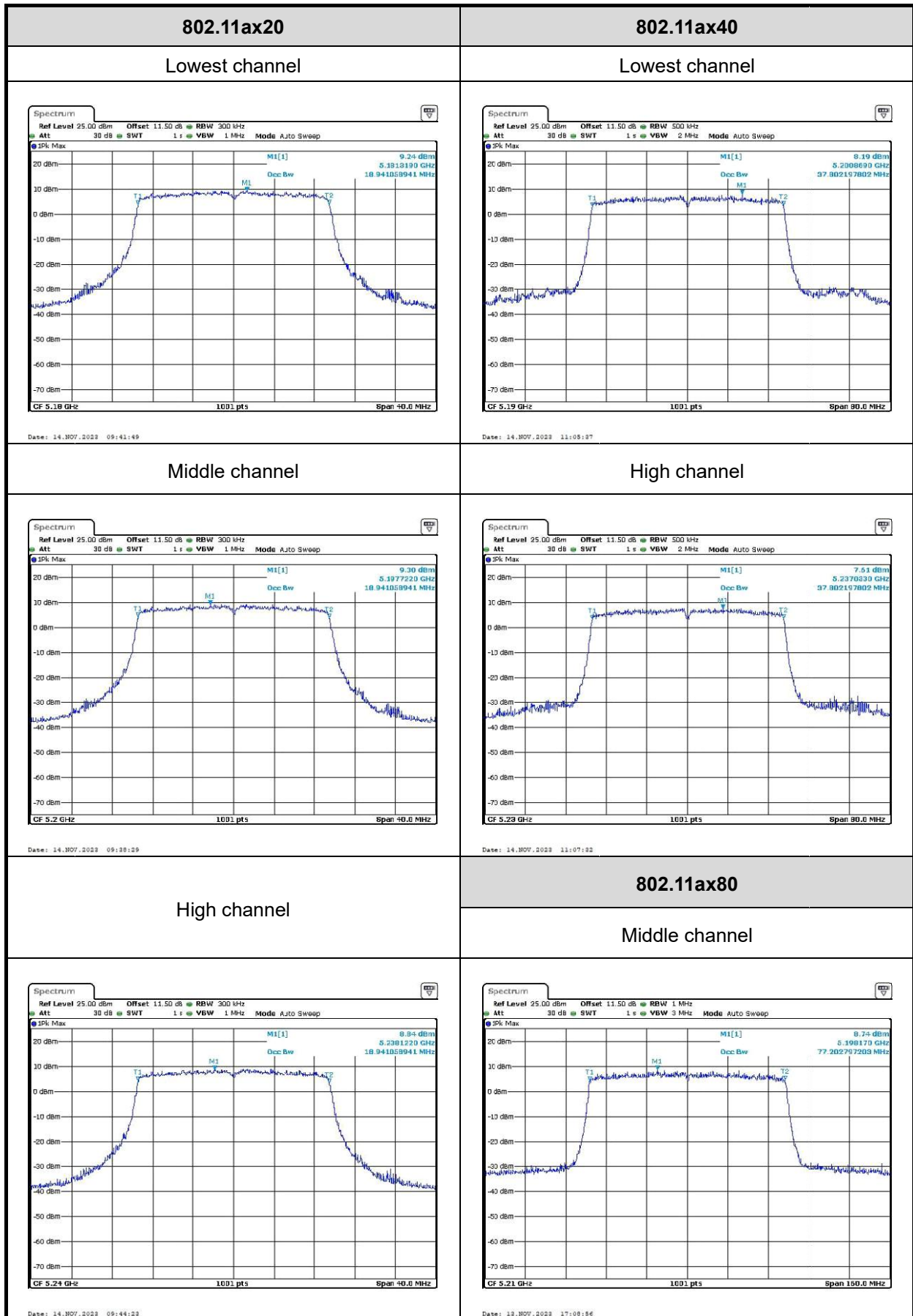


99% Occupied Bandwidth

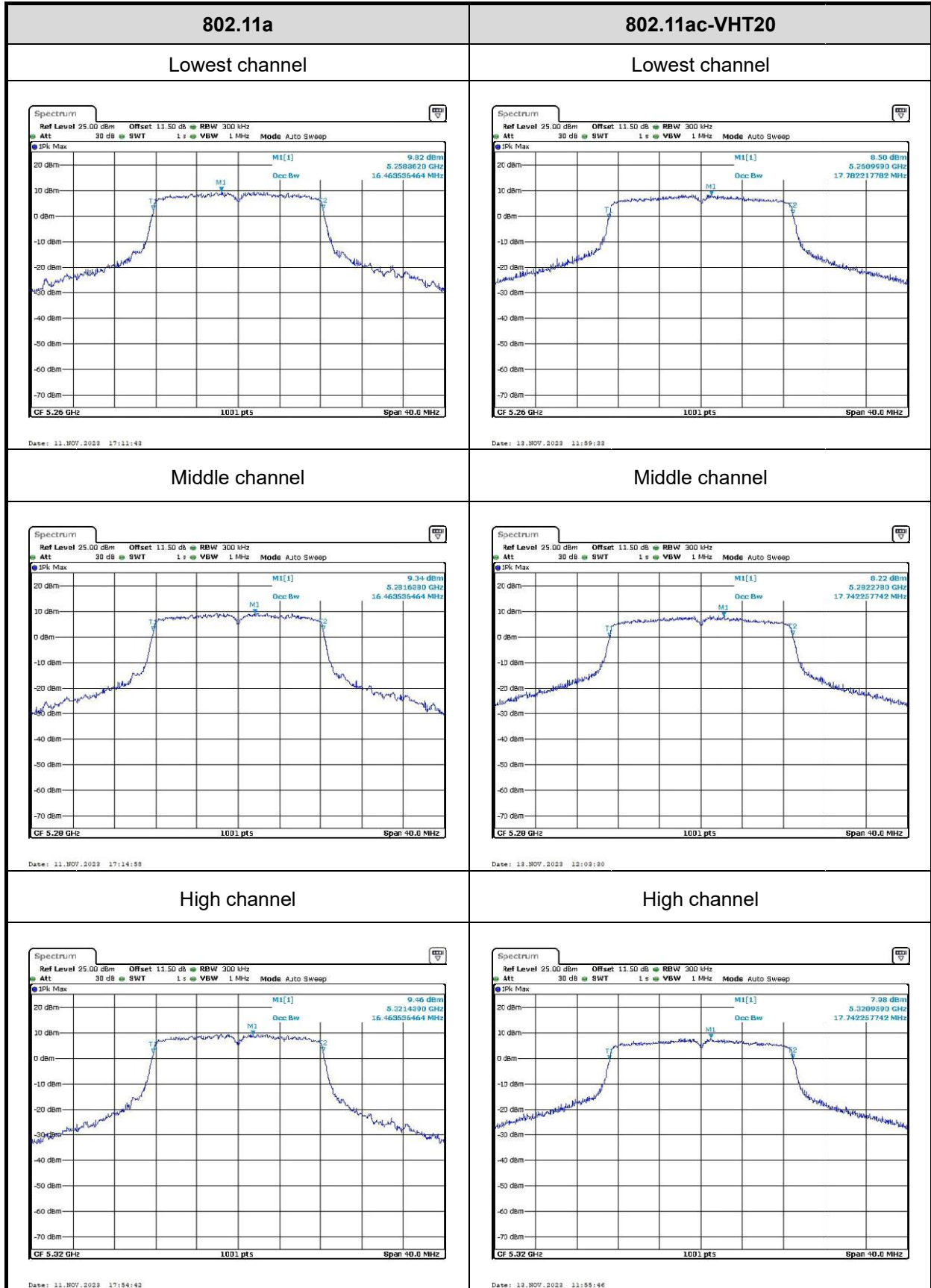
5150-5250MHz Band:

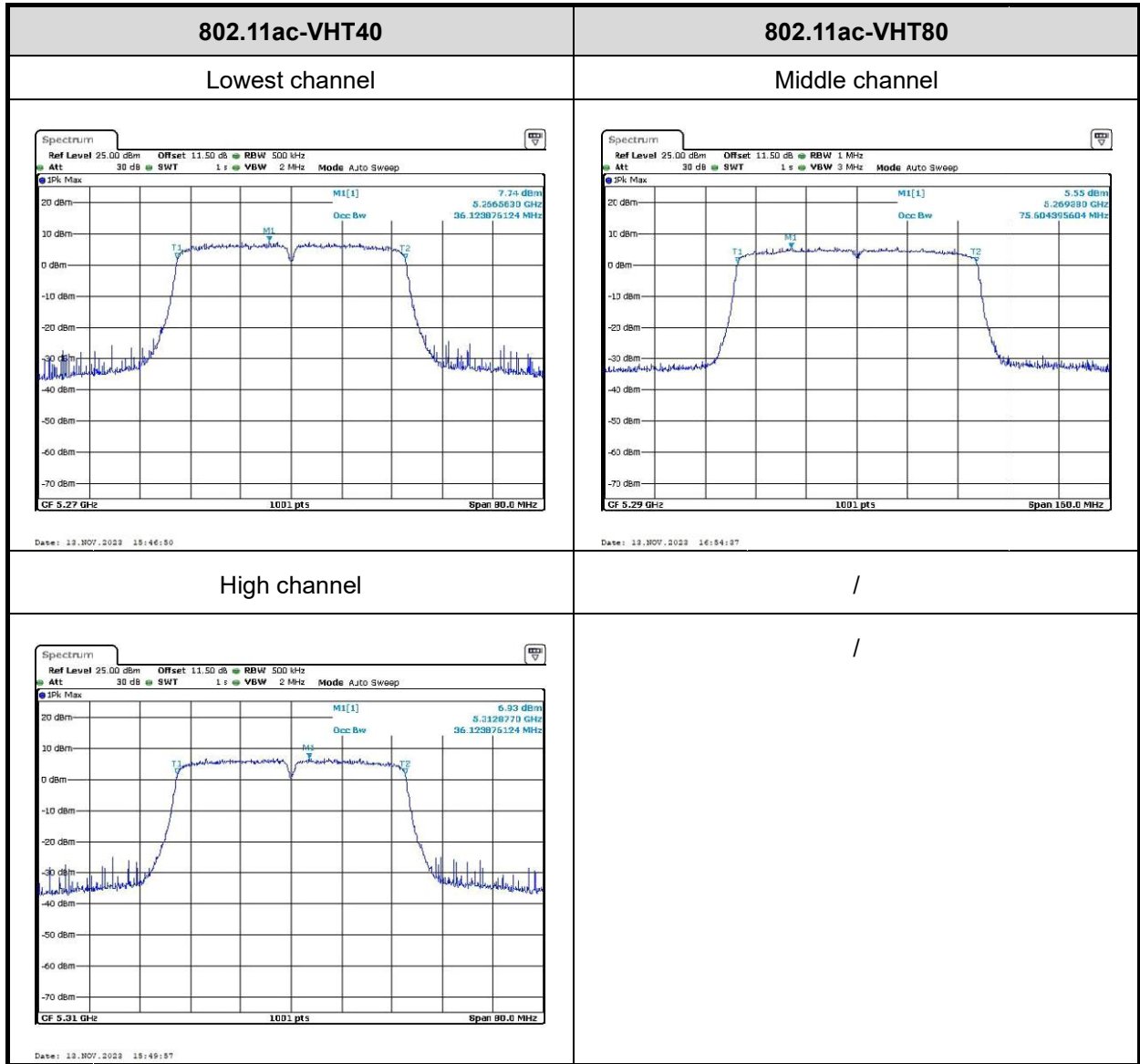


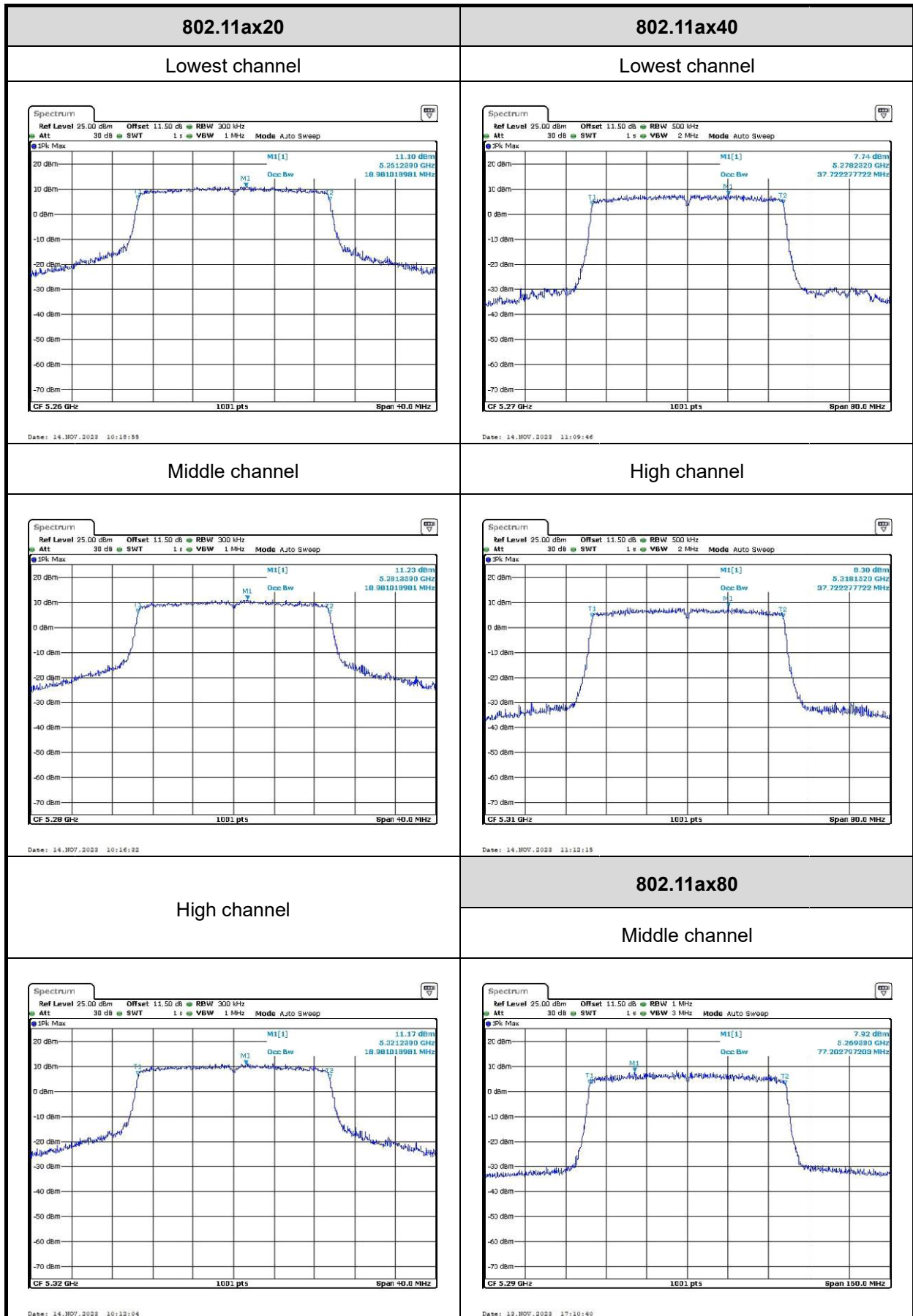




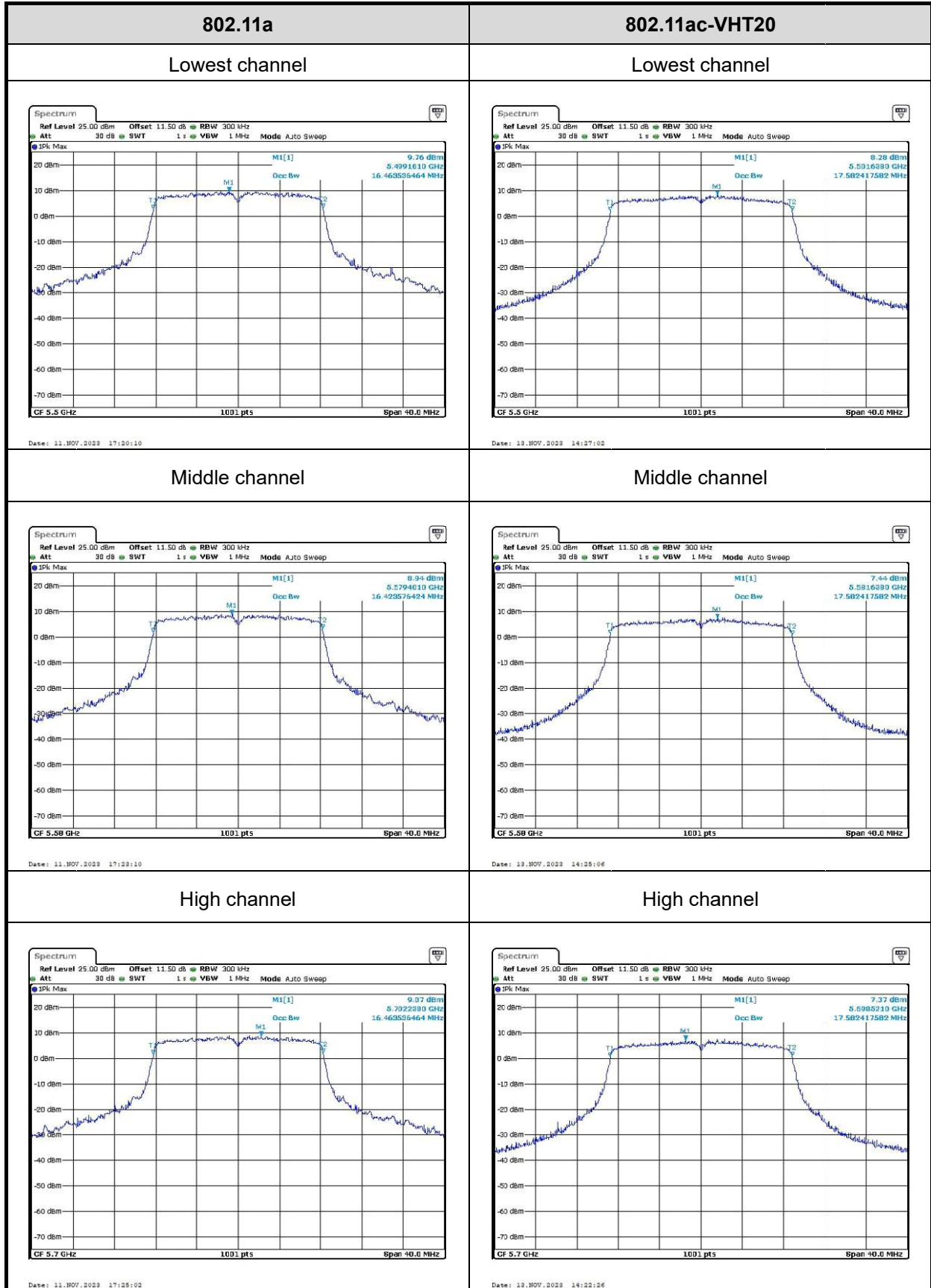
5250-5350MHz Band:

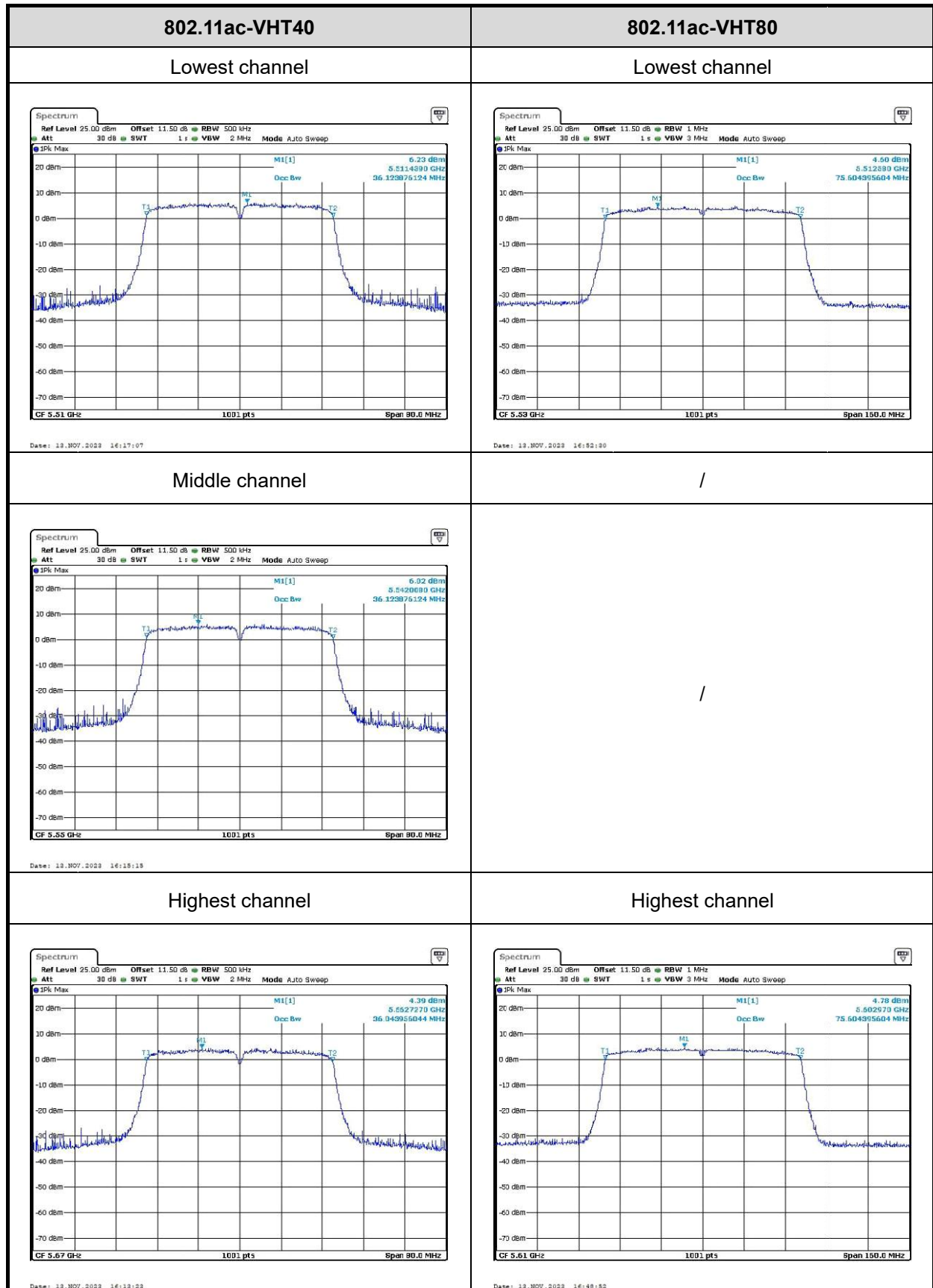


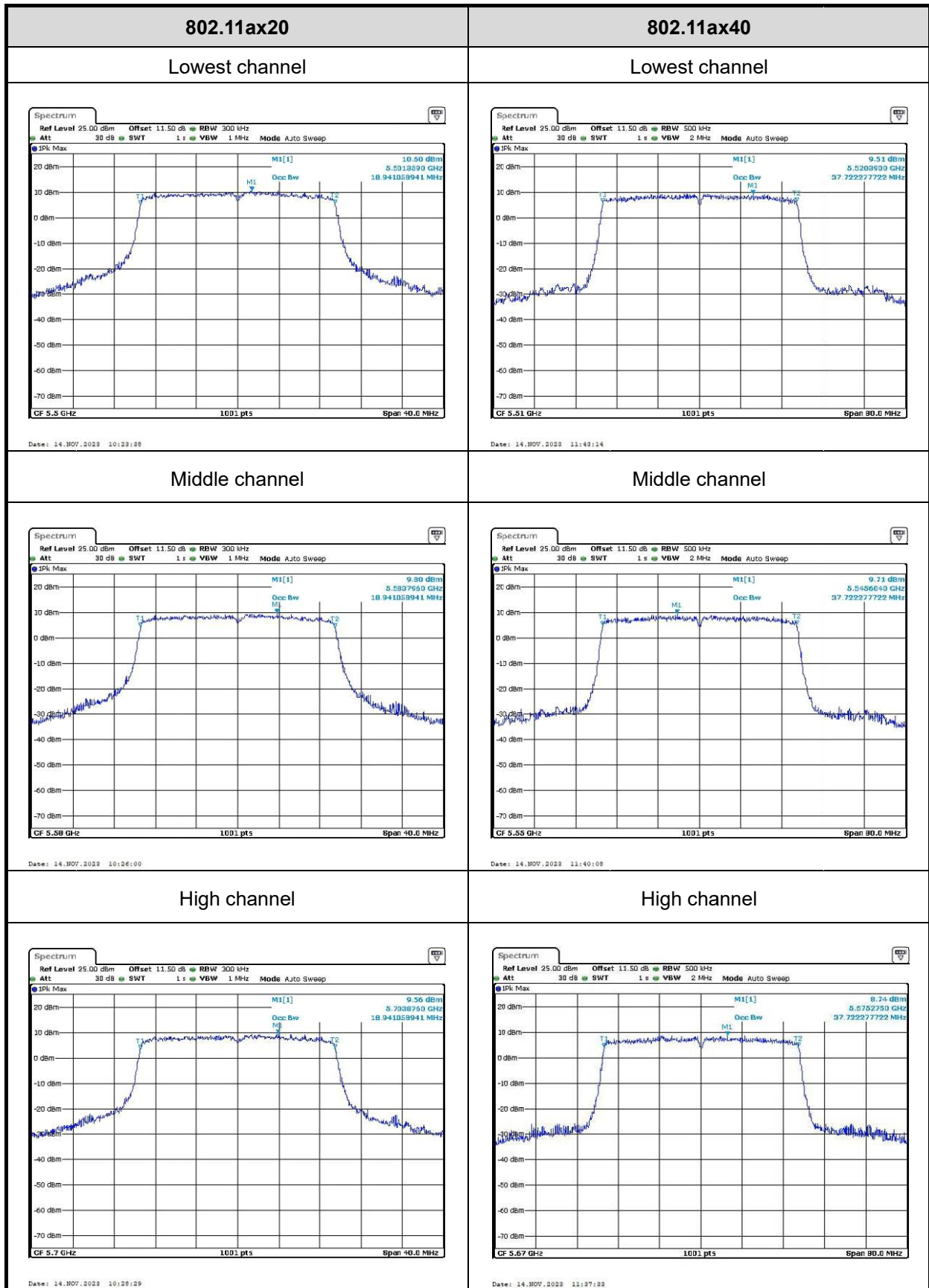


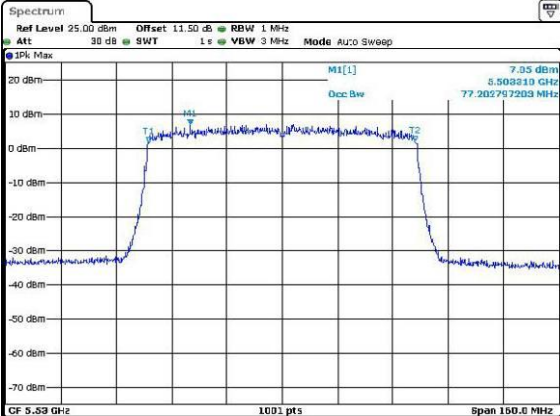
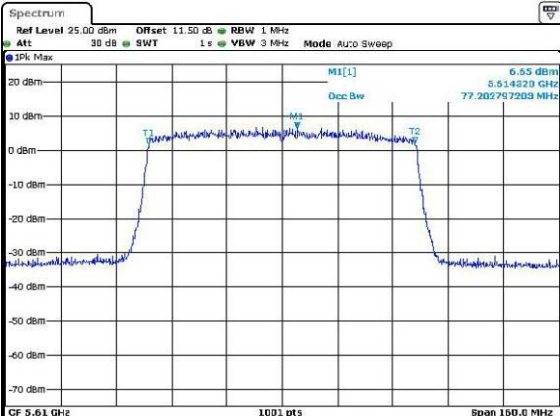


5470-5725MHz Band:

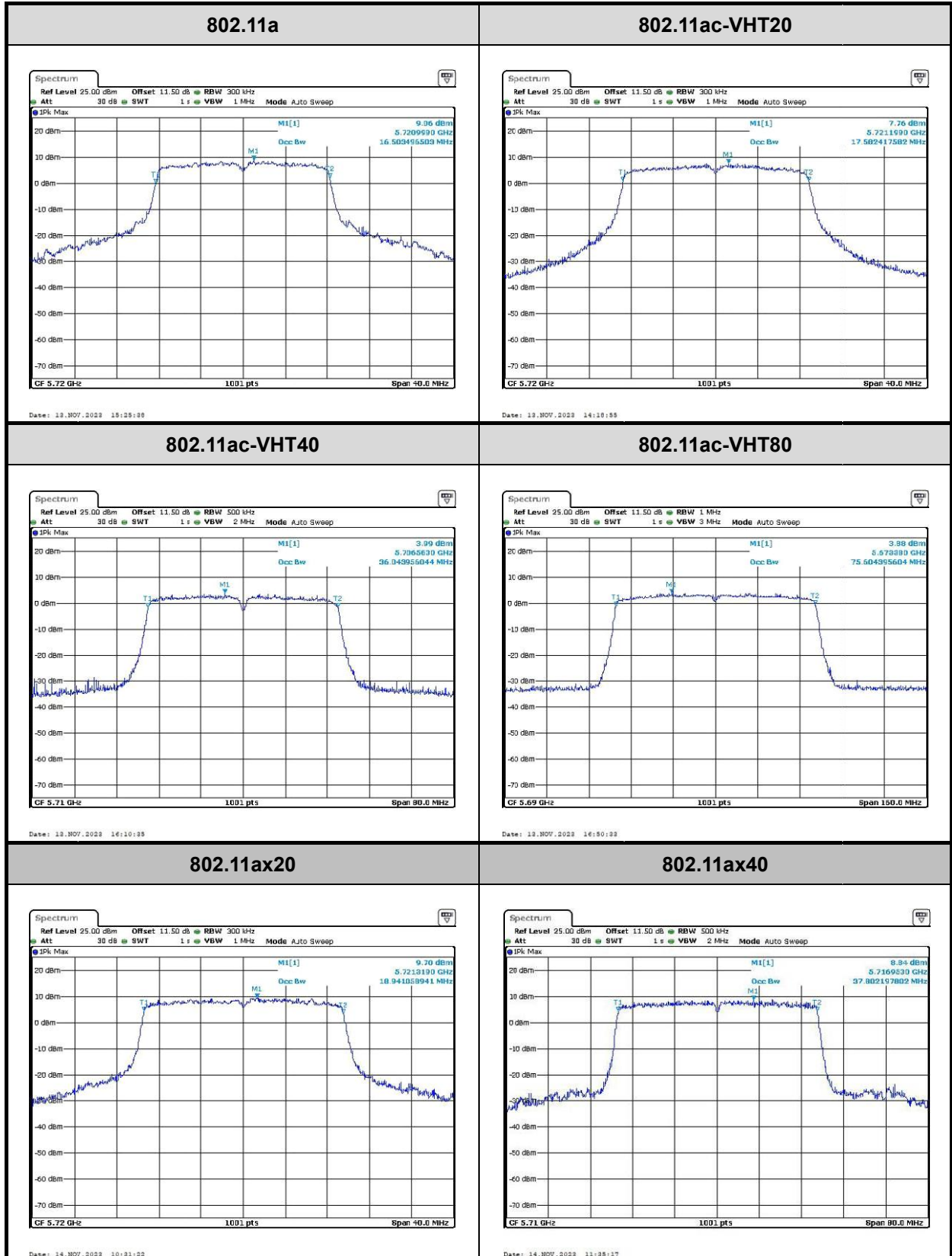


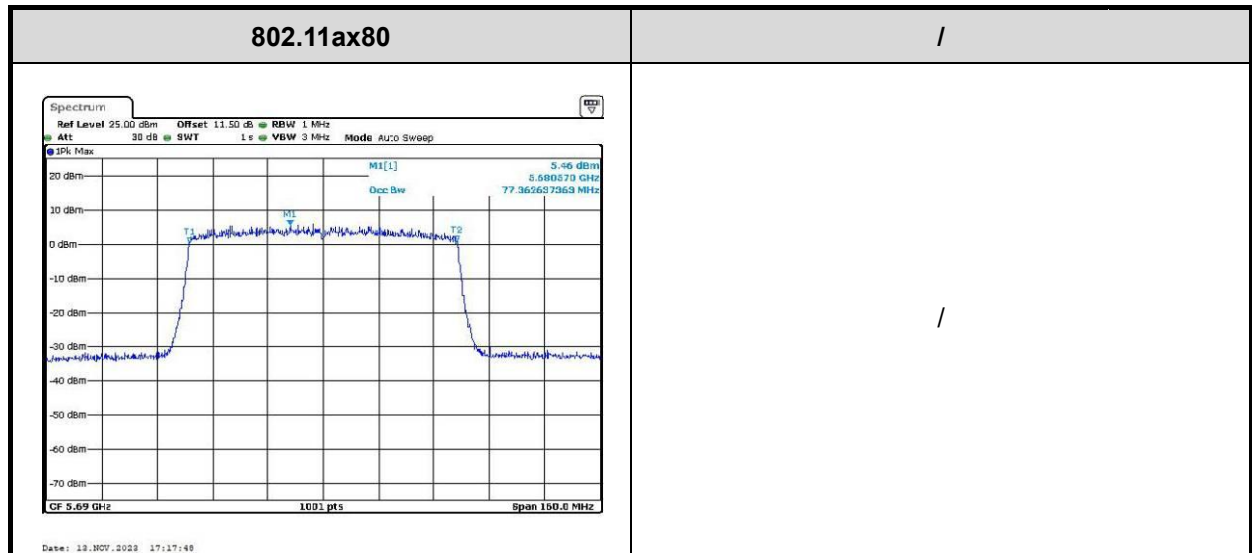




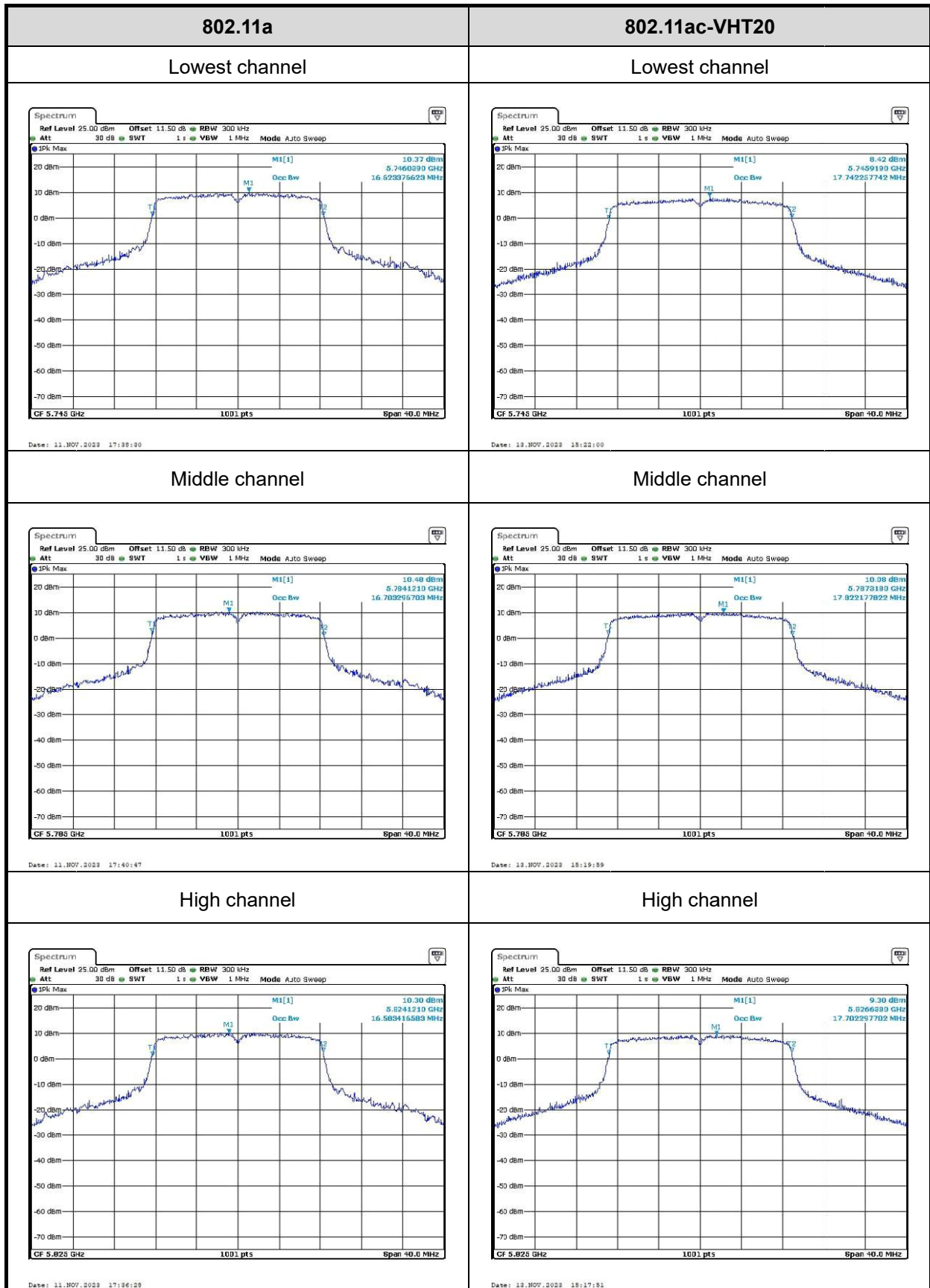
802.11ax80	/
Lowest channel	/
 CF 5.53 GHz 1001 pts Span 100.0 MHz Date: 18.NOV.2023 17:19:27	/
High channel	/
 CF 5.61 GHz 1001 pts Span 100.0 MHz Date: 18.NOV.2023 17:19:28	/

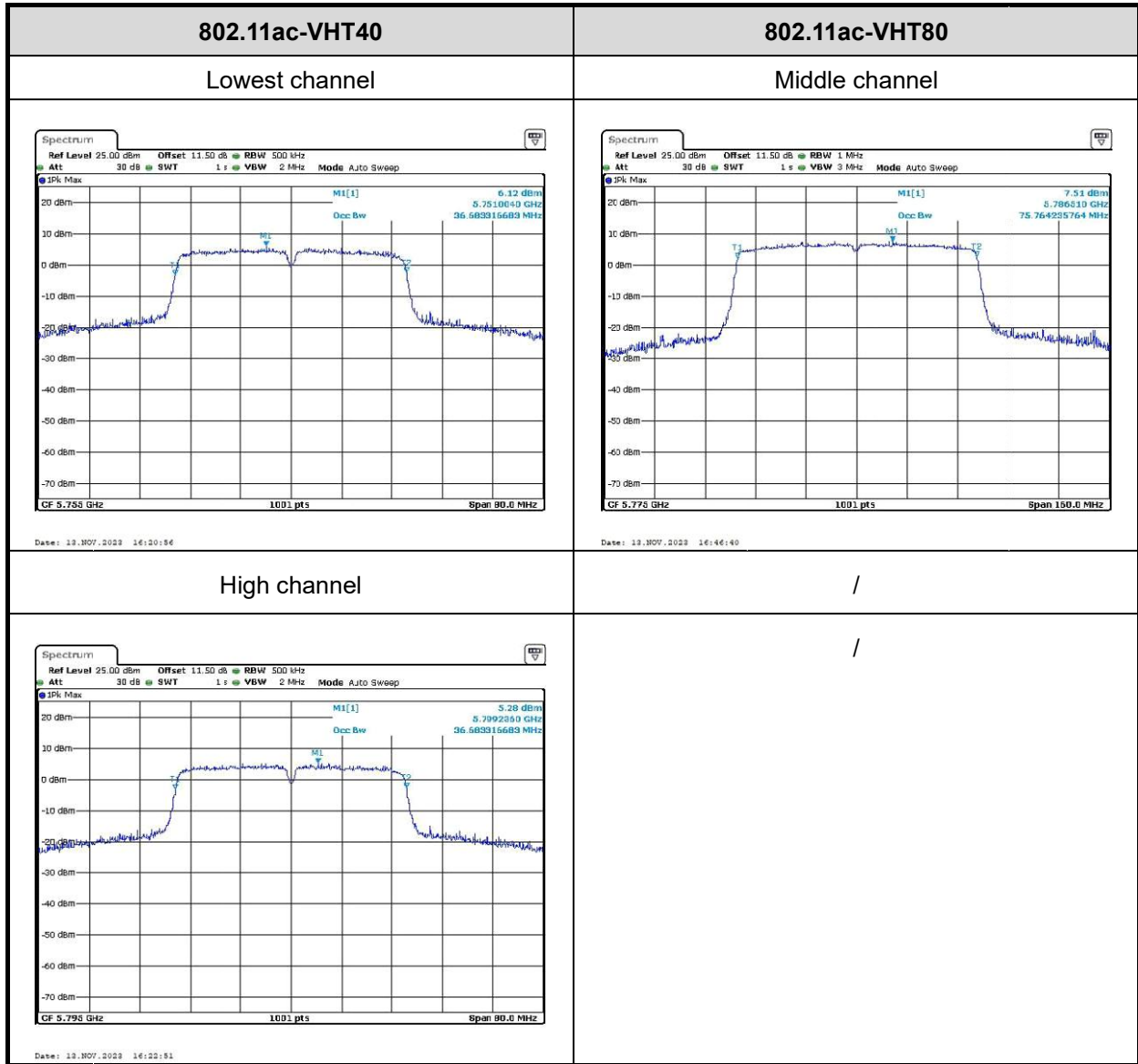
Cross channel:

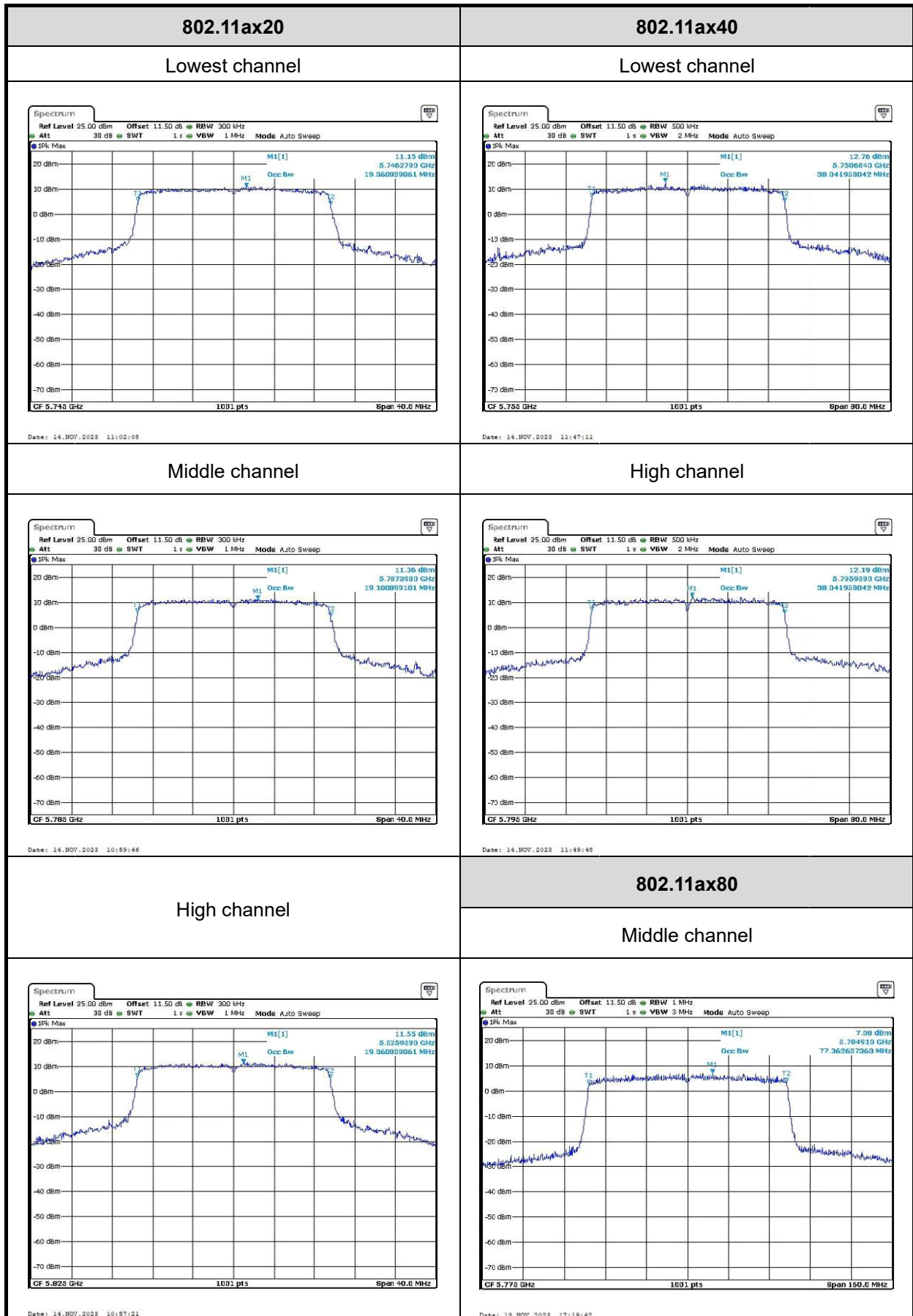




5725-5850MHz Band:

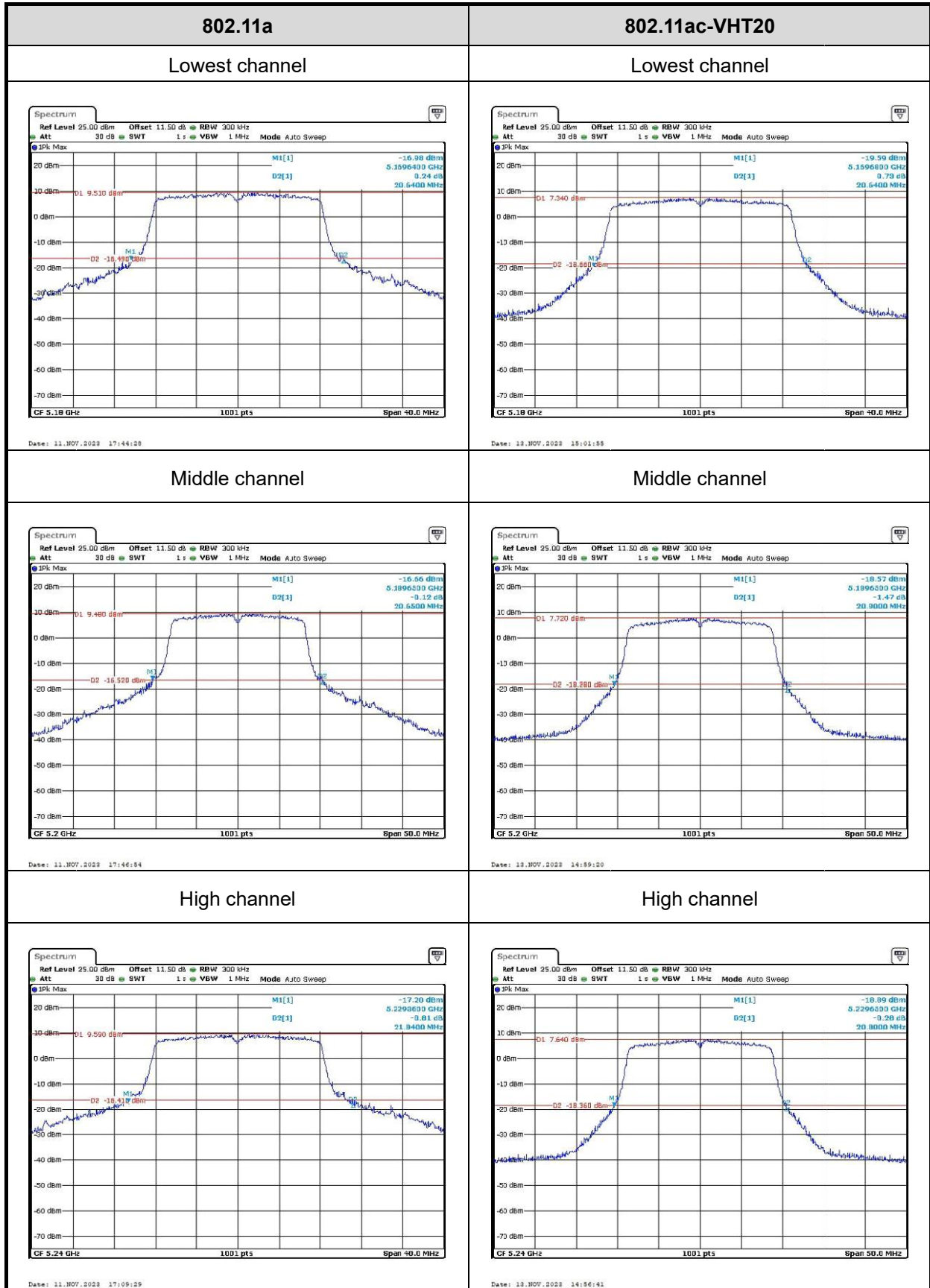


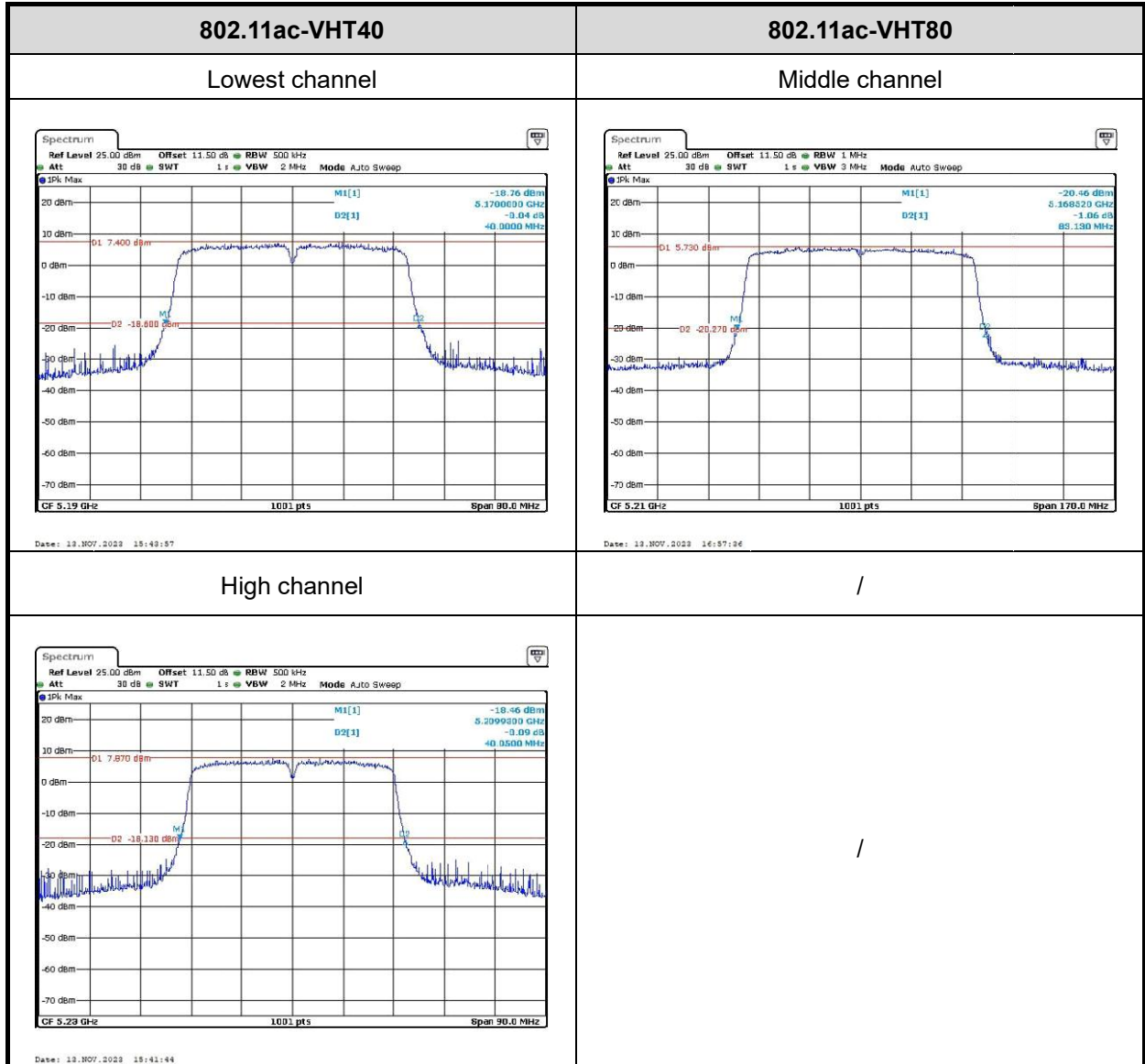




26dB Emission Bandwidth

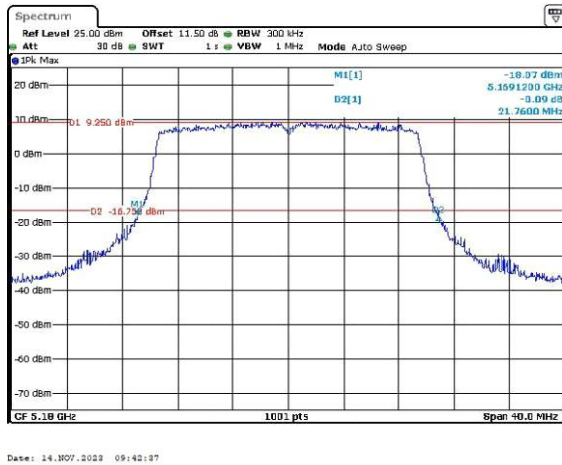
5150-5250MHz Band:





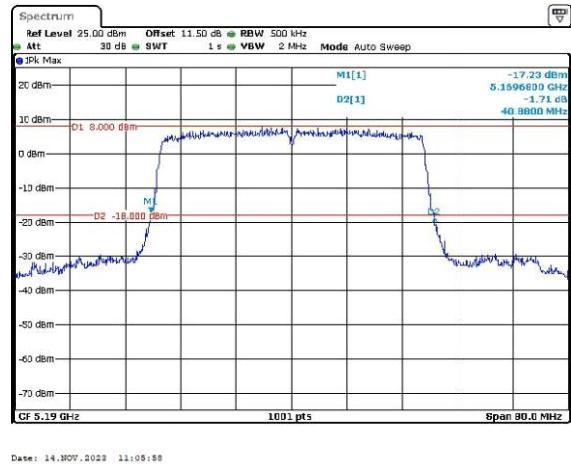
802.11ax20

Lowest channel

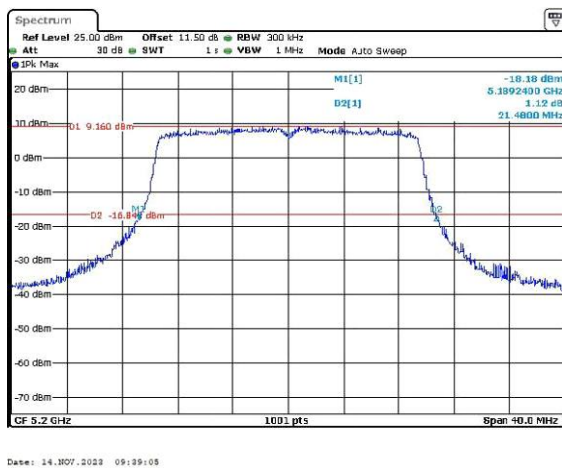


802.11ax40

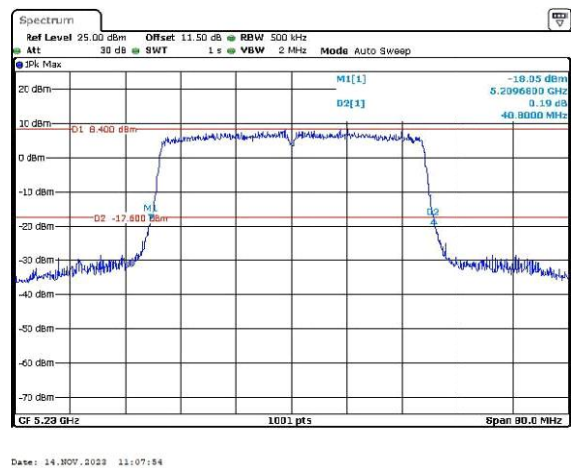
Lowest channel



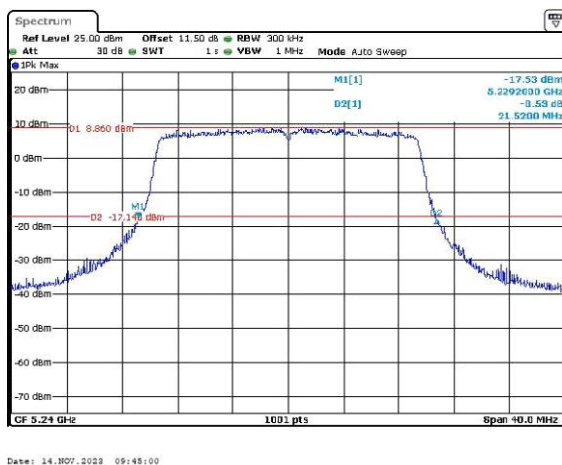
Middle channel



High channel

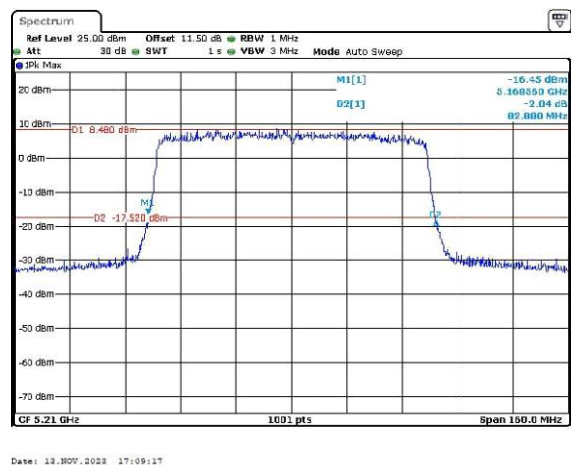


High channel

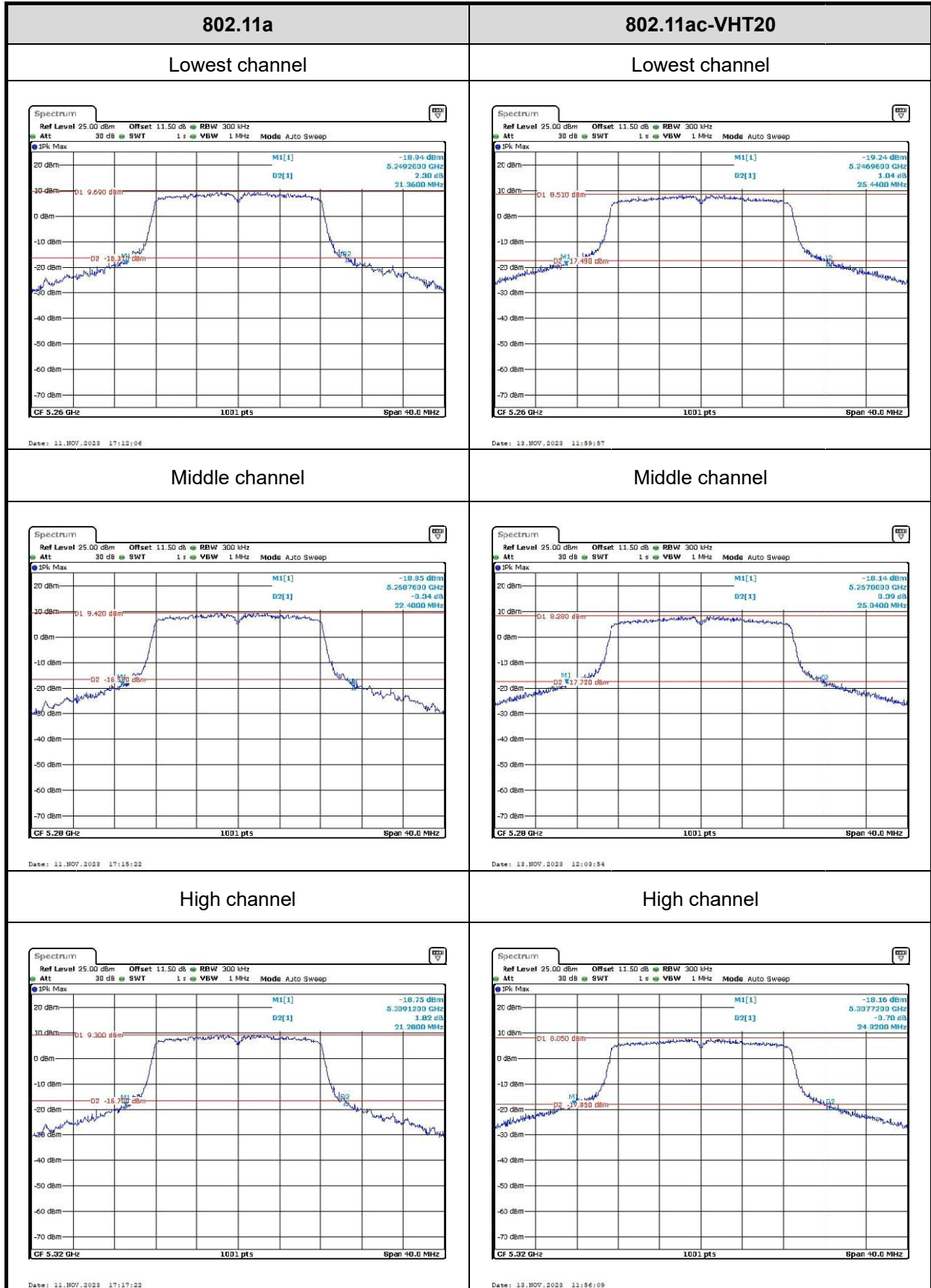


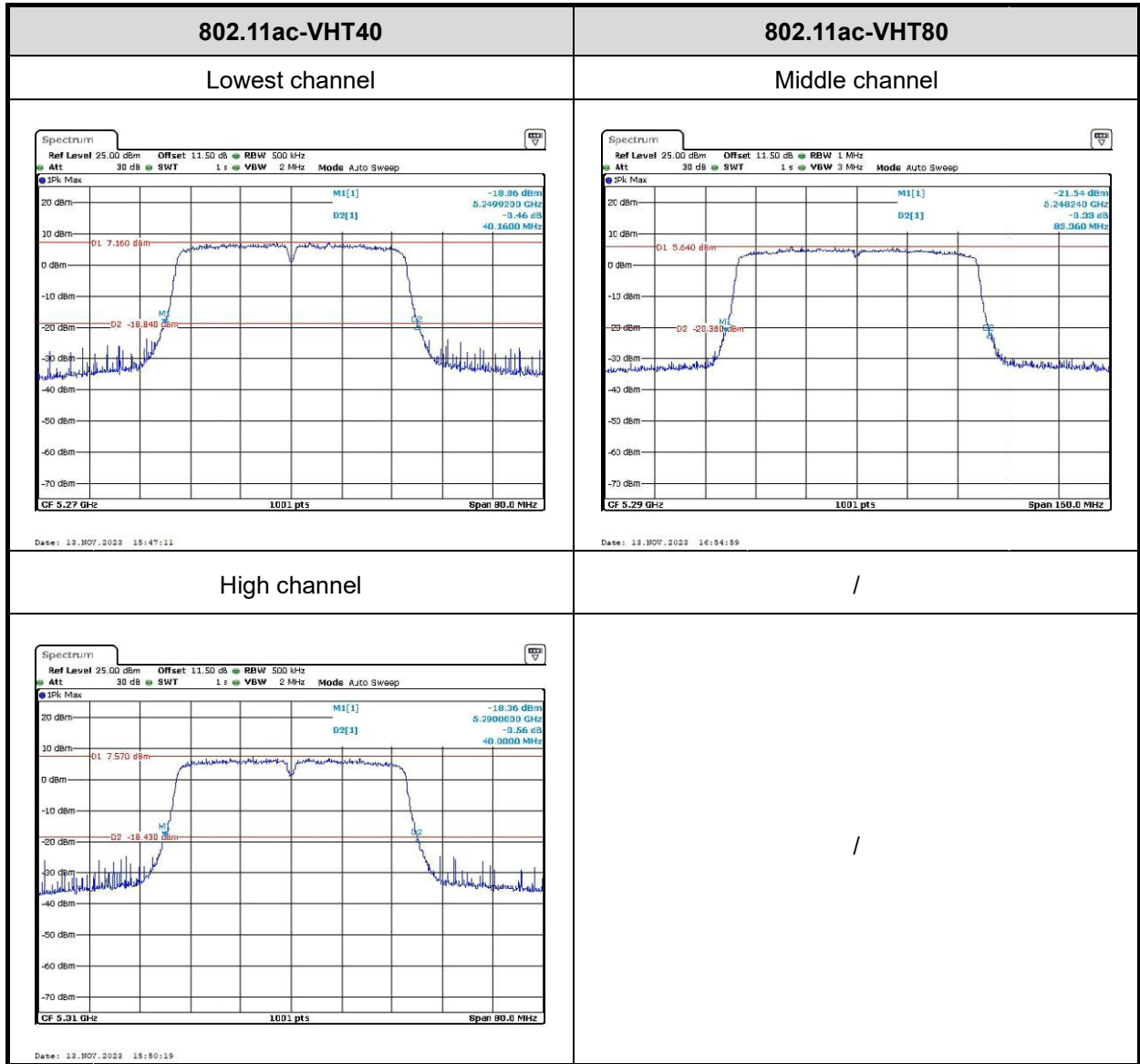
802.11ax80

Middle channel



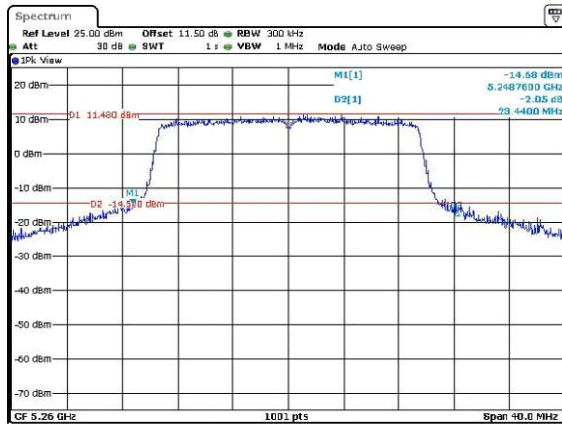
5250-5350MHz Band:





802.11ax20

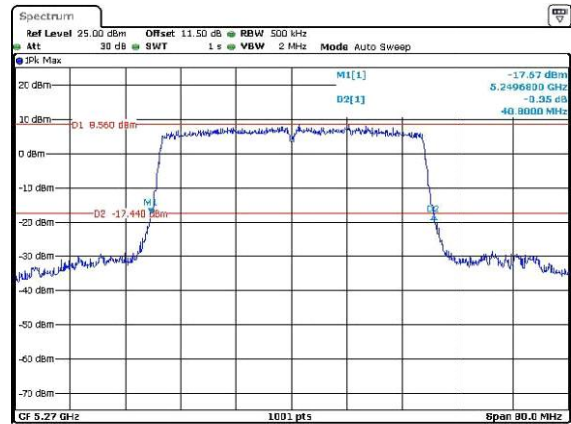
Lowest channel



Date: 14.07.2023 10:21:04

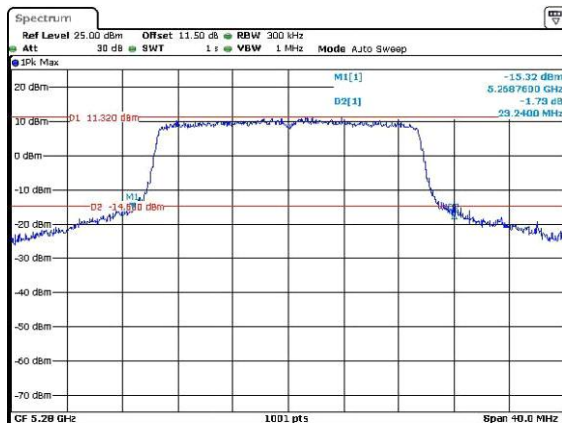
802.11ax40

Lowest channel



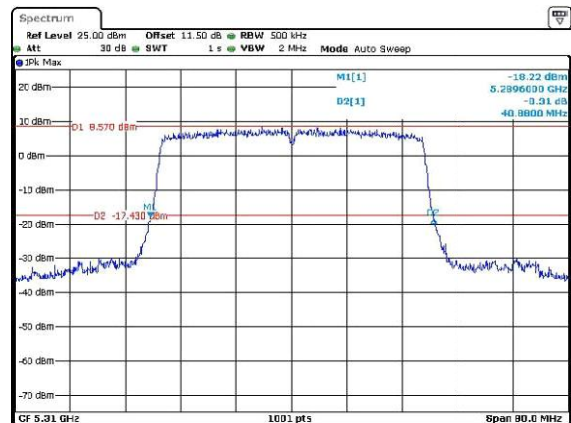
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Middle channel



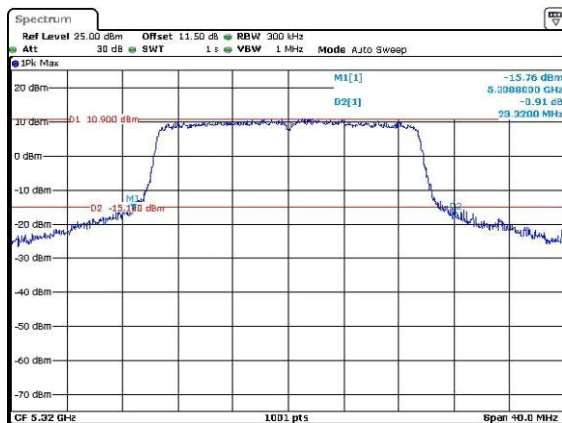
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High channel



Date: 14.07.2023 11:10:26

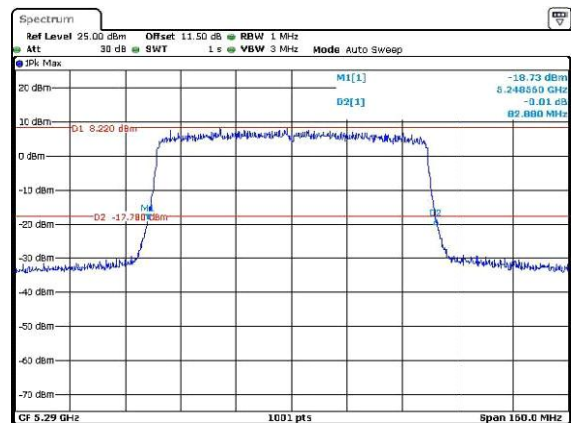
High channel



Date: 14.07.2023 10:12:40

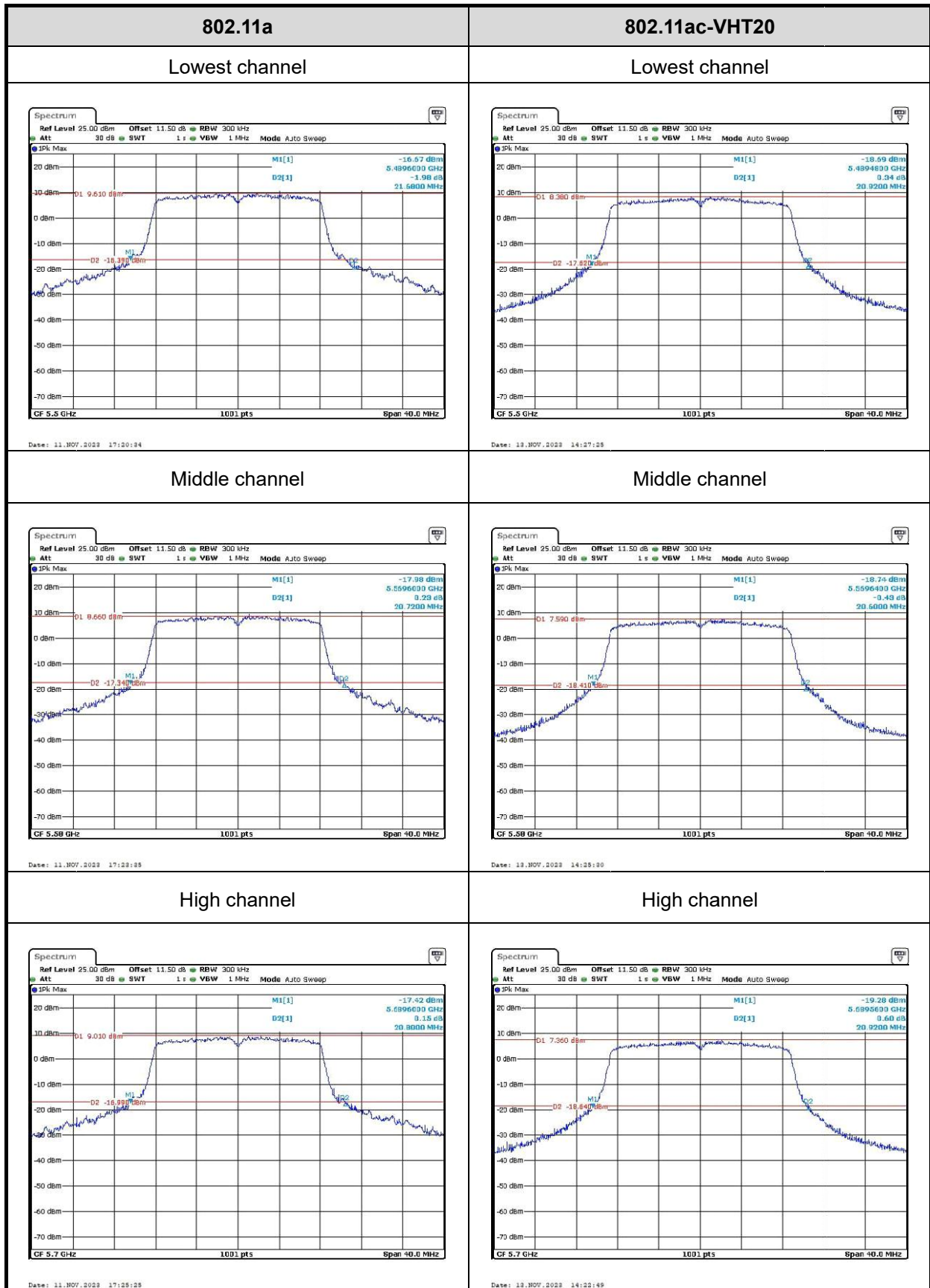
802.11ax80

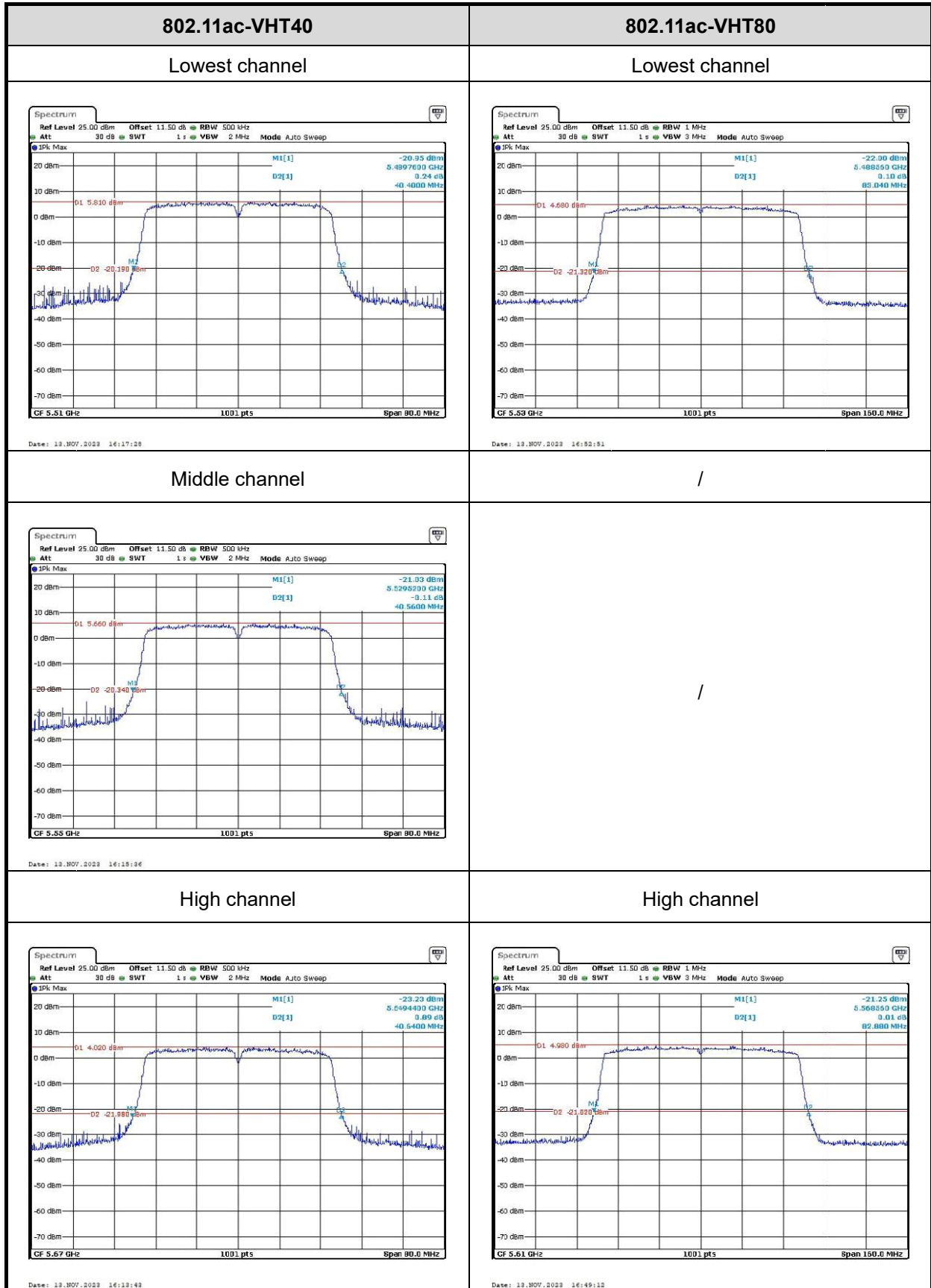
Middle channel



Date: 18.07.2023 17:11:02

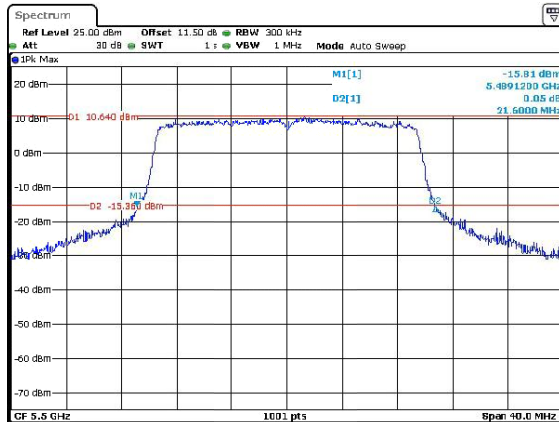
5470-5725MHz Band:





802.11ax20

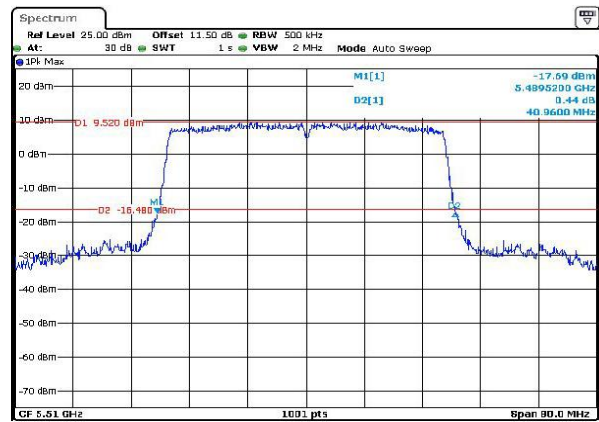
Lowest channel



Date: 14.NOV.2023 10:24:14

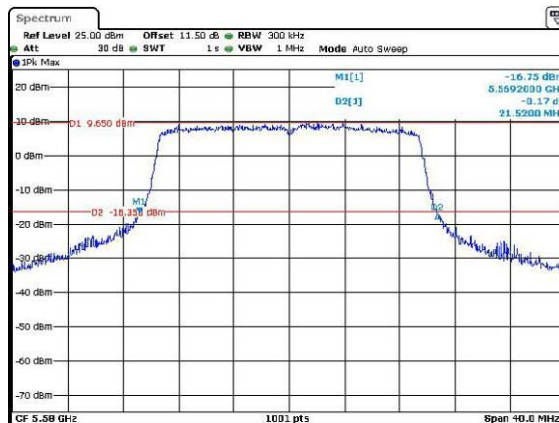
802.11ax40

Lowest channel



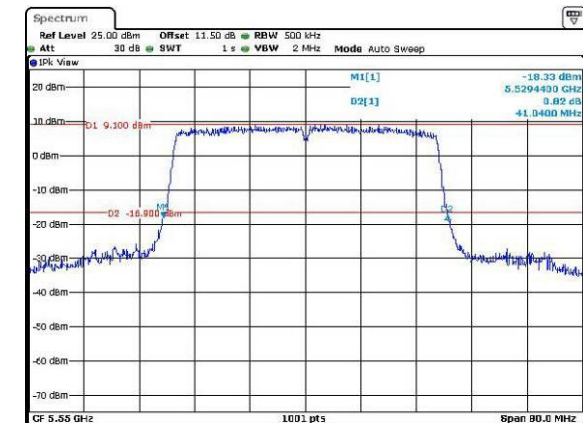
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Middle channel



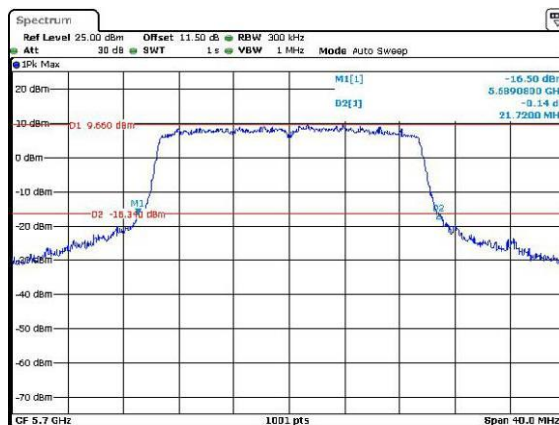
Date: 14.NOV.2023 10:26:25

Middle channel



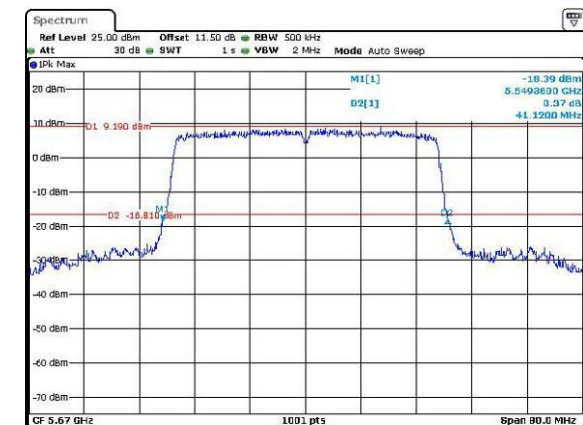
Date: 14.NOV.2023 11:41:56

High channel

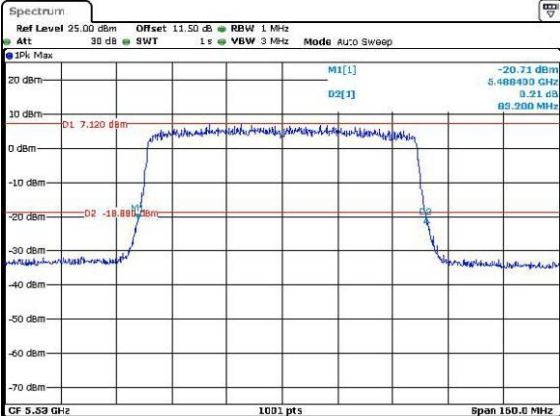
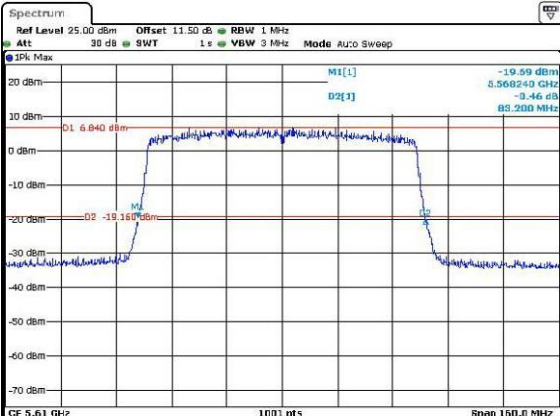


Date: 14.NOV.2023 10:29:04

High channel



Date: 14.NOV.2023 11:27:55

802.11ax80	/
Lowest channel	/
 Spectrum Ref Level 25.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep IPK Max M1[1] -20.71 dBm 5.48840 GHz 9.21 dB D2[1] 83.200 MHz D1 7.120 dBm D2 -10.881 dBm CF 5.53 GHz 1001 pts Span 150.0 MHz Date: 13 NOV 2023 17:19:49	/
High channel	/
 Spectrum Ref Level 25.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep IPK Max M1[1] -19.59 dBm 5.560240 GHz 9.46 dB D2[1] 83.200 MHz D1 6.840 dBm D2 -19.160 dBm CF 5.61 GHz 1001 pts Span 150.0 MHz Date: 13 NOV 2023 17:19:51	/

Cross channel:

