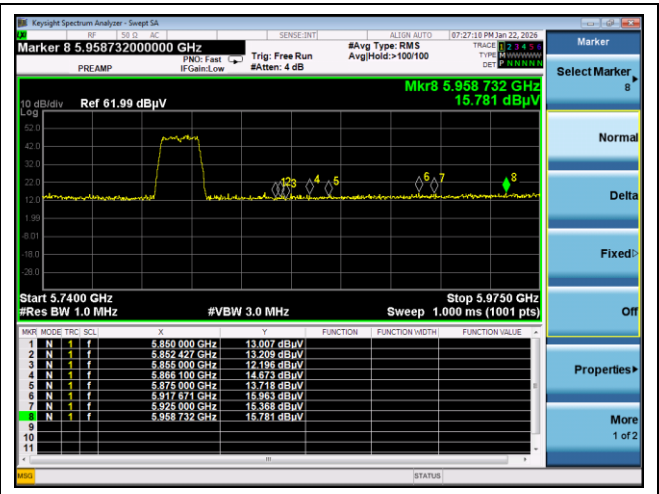
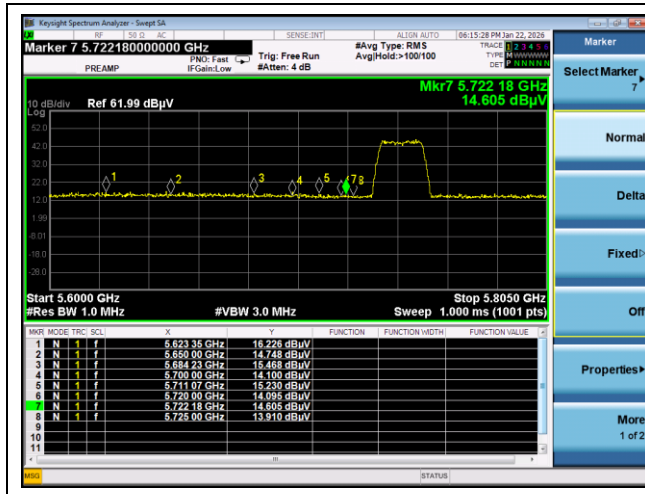


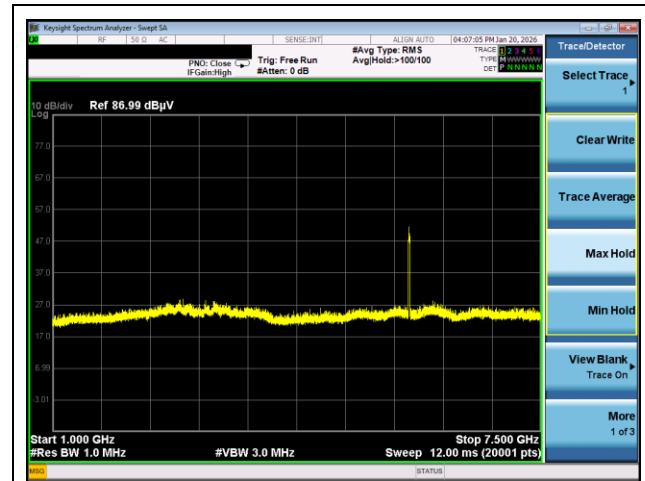
11ac_VHT20

Low channel Band edge (Peak) - U-NII 3

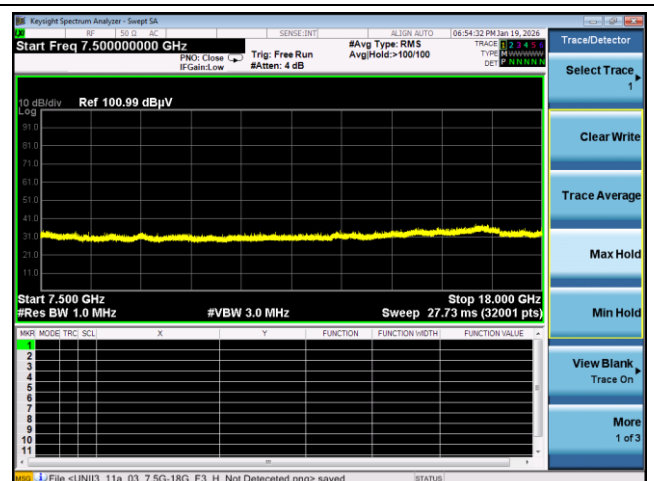
High channel Band edge (Peak) - U-NII 3



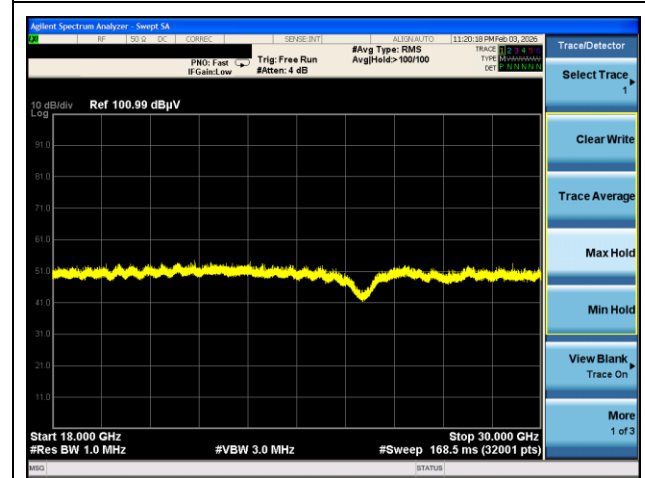
Radiated Spurious Emissions



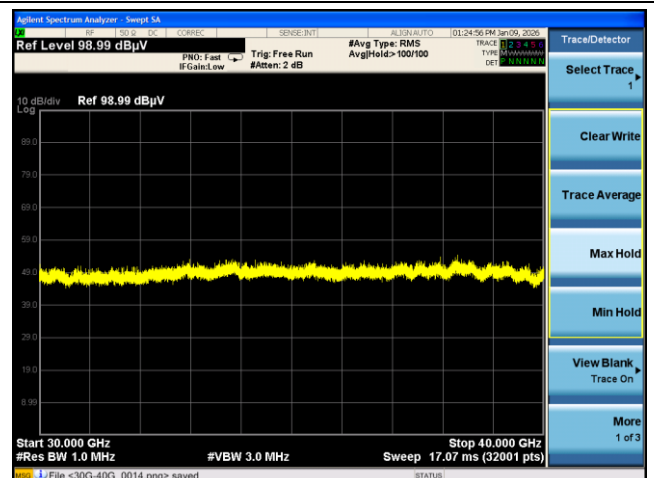
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



18 GHz ~ 30 GHz

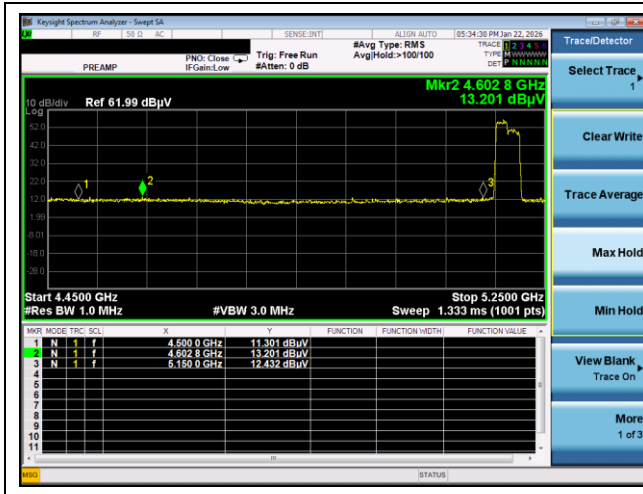


30 GHz ~ 40 GHz

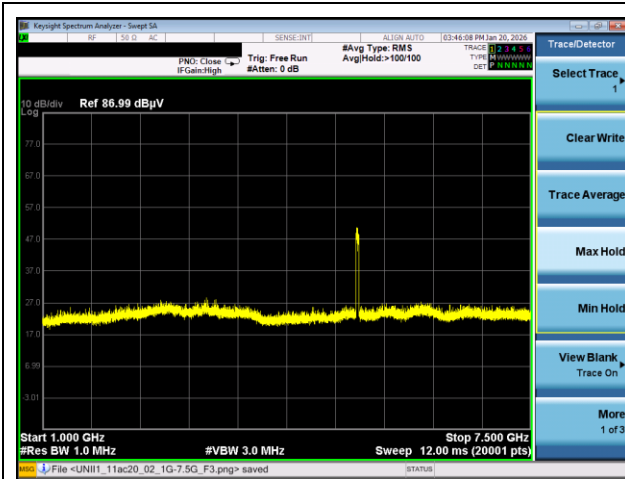
11n_HT40

Low channel Band edge (Peak) - U-NII 1

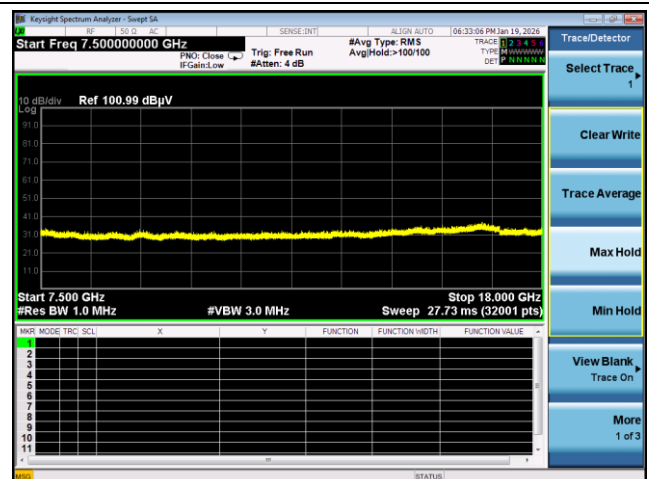
Low channel Band edge (Average) - U-NII 1



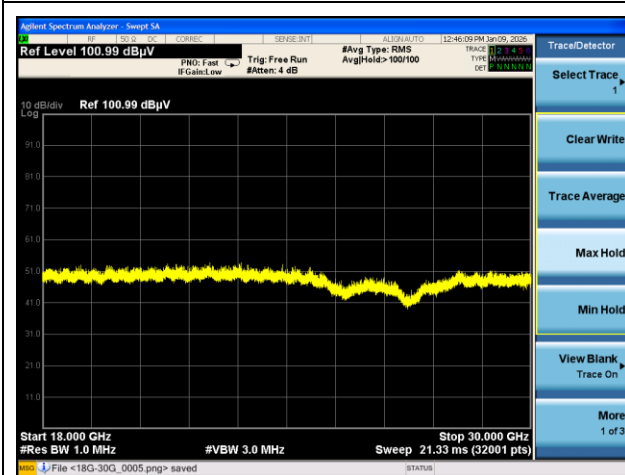
Radiated Spurious Emissions



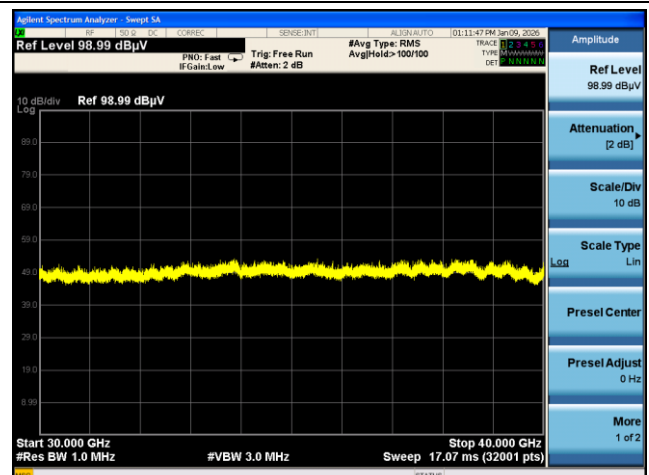
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



18 GHz ~ 30 GHz

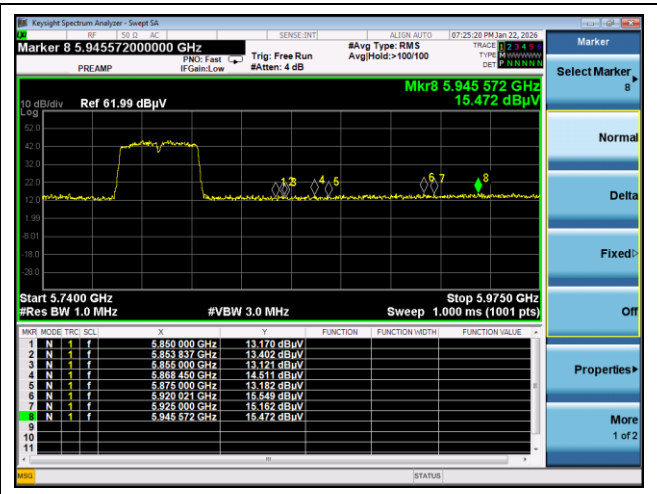
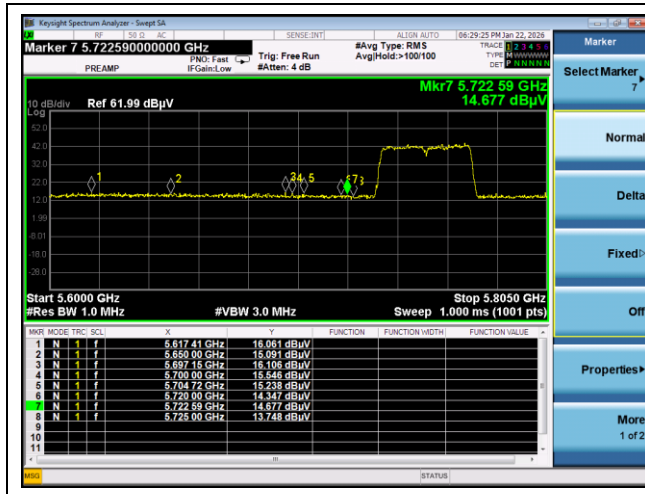


30 GHz ~ 40 GHz

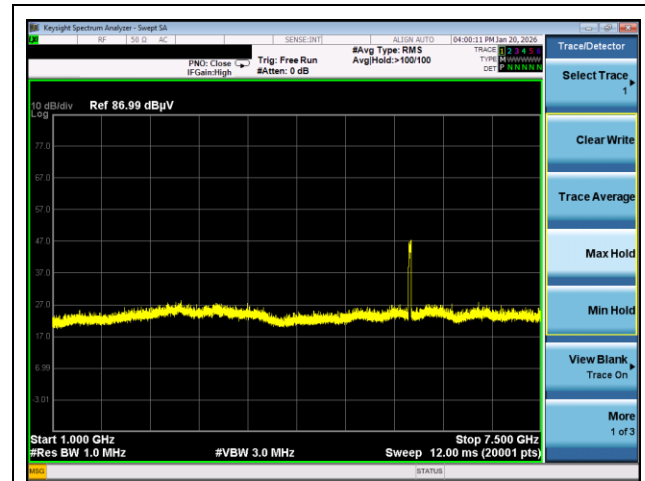
11n_HT40

Low channel Band edge (Peak) - U-NII 3

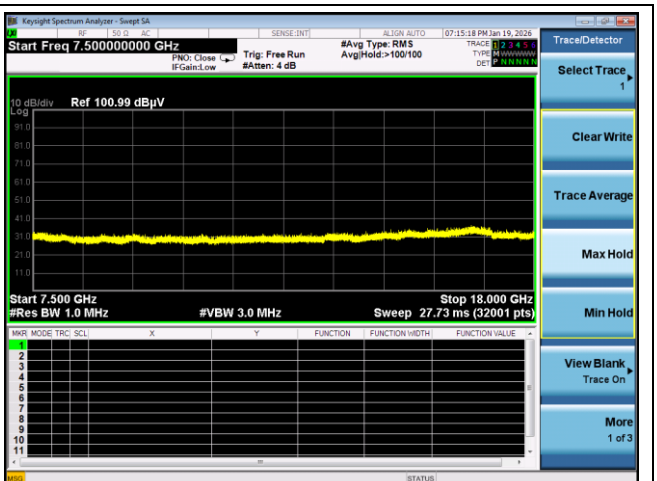
High channel Band edge (Peak) - U-NII 3



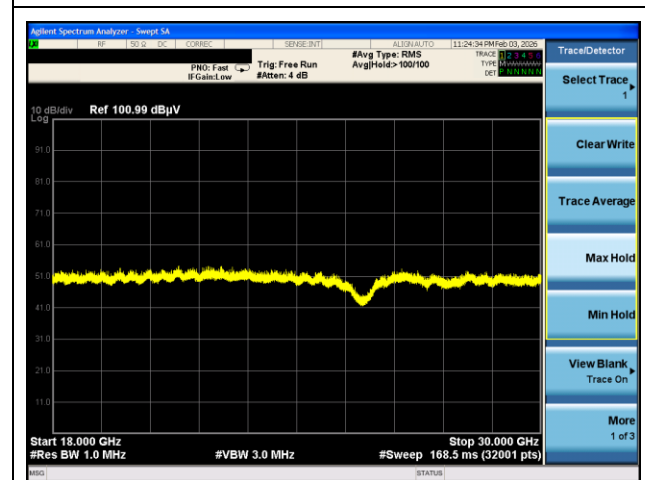
Radiated Spurious Emissions



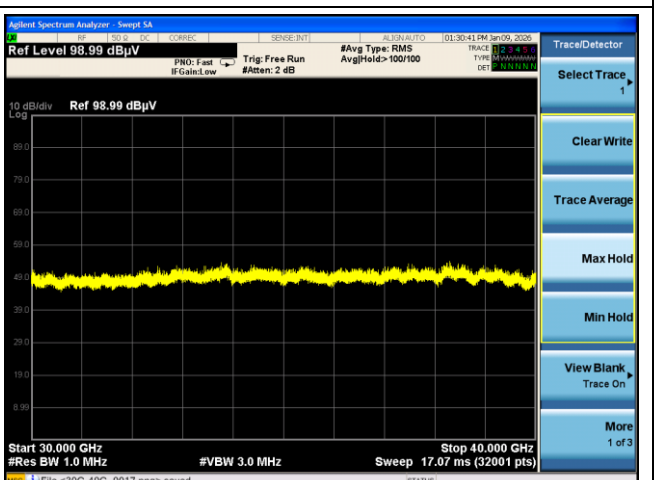
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



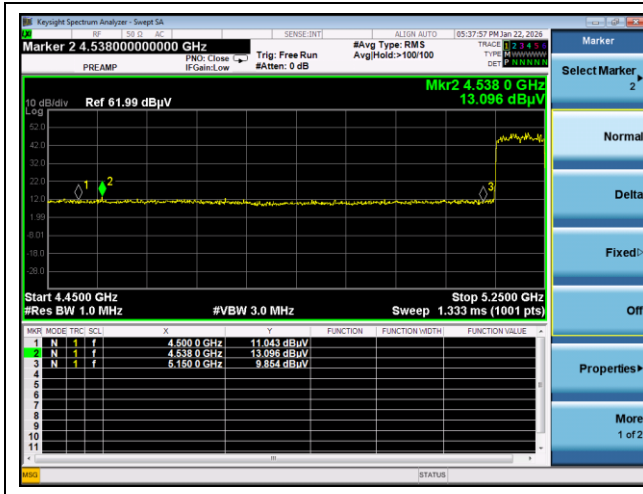
18 GHz ~ 30 GHz



30 GHz ~ 40 GHz

11ac_VHT80

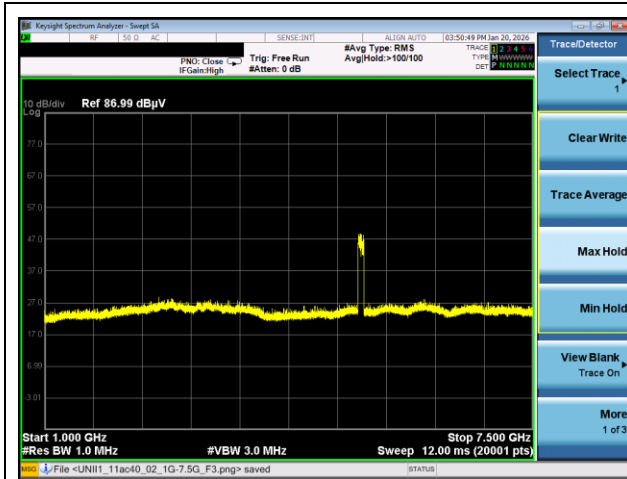
Middle channel Band edge (Peak) - U-NII 1



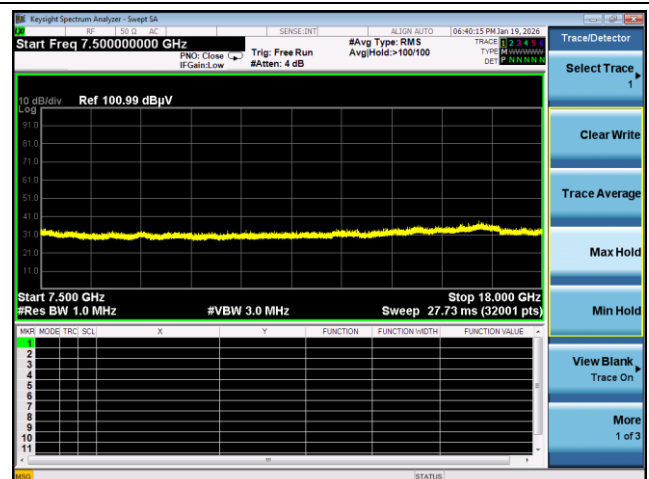
Middle channel Band edge (Average) - U-NII 1



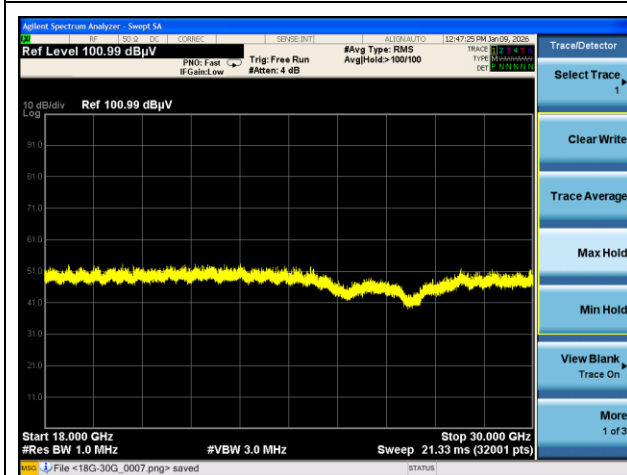
Radiated Spurious Emissions



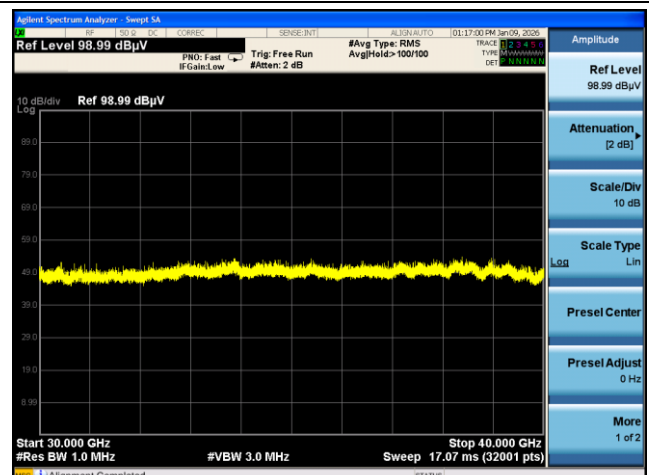
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



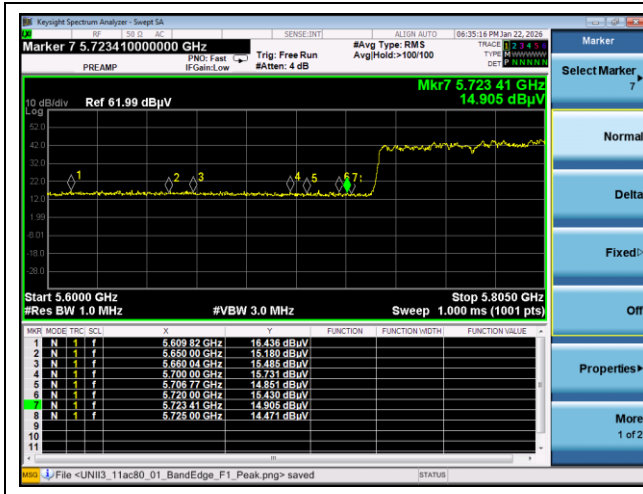
18 GHz ~ 30 GHz



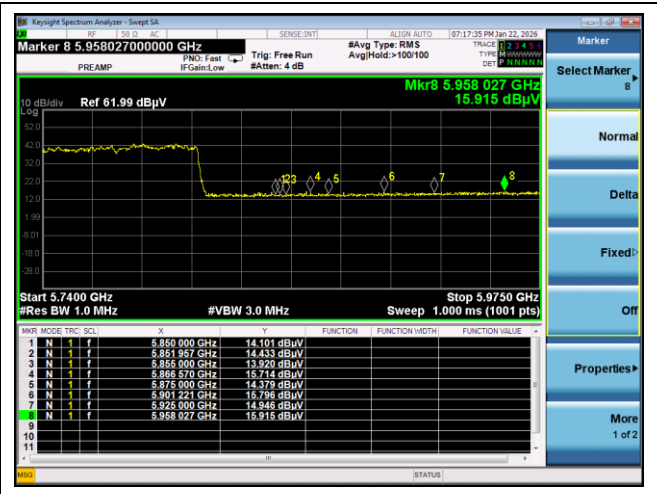
30 GHz ~ 40 GHz

11ac_VHT80

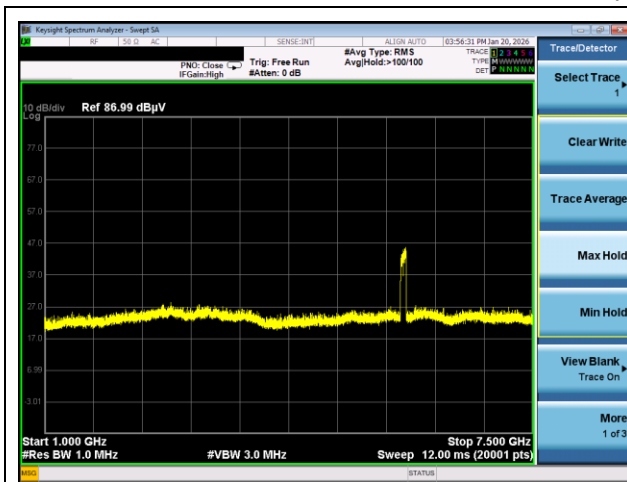
Middle channel Band edge (Peak) - U-NII 3



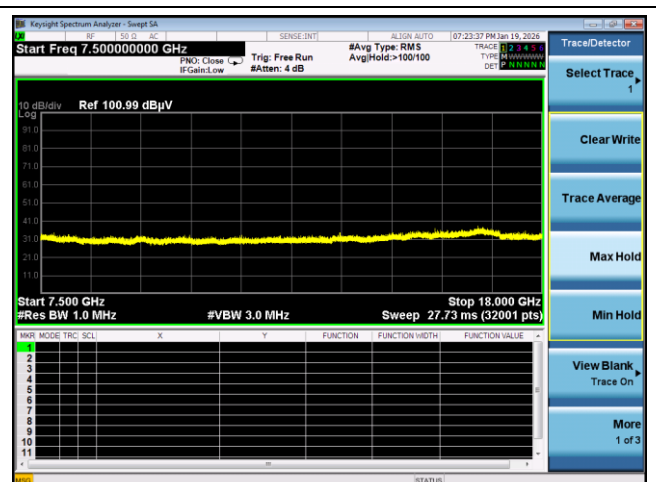
Middle channel Band edge (Peak) - U-NII 3



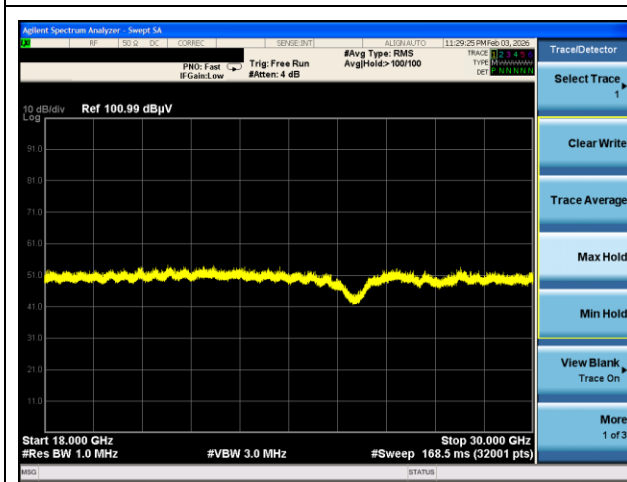
Radiated Spurious Emissions



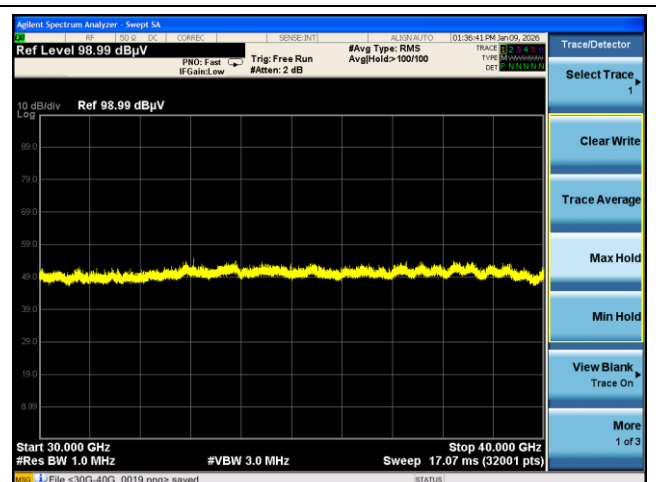
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



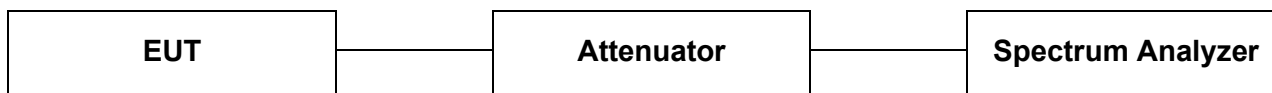
18 GHz ~ 30 GHz



30 GHz ~ 40 GHz

3. 26 dB Bandwidth & 99 % Bandwidth

3.1. Test Setup



3.2. Limit

None; for reporting purpose only.

3.3. Test Procedure

3.3.1. 26 dB Bandwidth

1. This measurement settings are specified in section II.C.1 of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW = approximately 1 % of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak 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 %.

3.3.2. 99 % Bandwidth

The test follows section 6.9.3 of ANSI C63.10-2020.

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $10 \log (\text{OBW}/\text{RBW})$ below the reference level. Specific guidance is given in 4.1.6.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- 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) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. 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% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

3.4. Test Result

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 %

- Ant. 1

Test mode: 11a

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	48 Mbps	20.850	16.942
	5 220	44		20.950	16.937
	5 240	48		20.950	16.933
U-NII 3	5 745	149		20.990	16.947
	5 785	157		20.930	16.907
	5 805	161		20.910	16.929

- Ant. 2

Test mode: 11a

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	48 Mbps	20.950	16.942
	5 220	44		20.990	16.938
	5 240	48		20.950	16.945
U-NII 3	5 745	149		21.070	16.980
	5 785	157		21.050	16.939
	5 805	161		21.070	16.923

- Ant. 3

Test mode: 11a

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	48 Mbps	20.930	16.876
	5 220	44		20.850	16.862
	5 240	48		20.890	16.852
U-NII 3	5 745	149		20.910	16.842
	5 785	157		20.890	16.866
	5 805	161		20.870	16.845

Test mode: 11n_HT20

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	MCS5	21.409	17.971
	5 220	44		21.329	18.038
	5 240	48		21.389	17.998
U-NII 3	5 745	149		21.369	17.977
	5 785	157		21.169	18.000
	5 805	161		21.249	18.011

Test mode: 11n_HT40

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 190	38	MCS5	39.660	36.337
	5 230	46		39.820	36.269
U-NII 3	5 755	151		39.620	36.364
	5 795	159		39.580	36.309

Test mode: 11ac_VHT80

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 210	42	MCS5	81.719	75.816
U-NII 3	5 775	155		81.639	75.850

- Ant. 1 + Ant. 2

Test mode: 11ac_VHT20

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Port 1	Port 2	Port 1	Port 2
U-NII 1	5 180	36	MCS5	21.269	21.399	17.998	18.062
	5 220	44		21.389	21.499	18.083	18.062
	5 240	48		21.349	21.479	18.025	18.062
U-NII 3	5 745	149		21.369	21.319	18.014	18.062
	5 785	157		21.149	21.399	18.020	18.022
	5 805	161		21.409	21.359	18.014	18.062

Test mode: 11n_HT40

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Port 1	Port 2	Port 1	Port 2
U-NII 1	5 190	38	MCS6	39.940	40.120	36.444	36.364
	5 230	46		39.820	39.960	36.352	36.444
U-NII 3	5 755	151		39.980	40.000	36.363	36.364
	5 795	159		39.980	39.800	36.369	36.284

Test mode: 11ac_VHT80

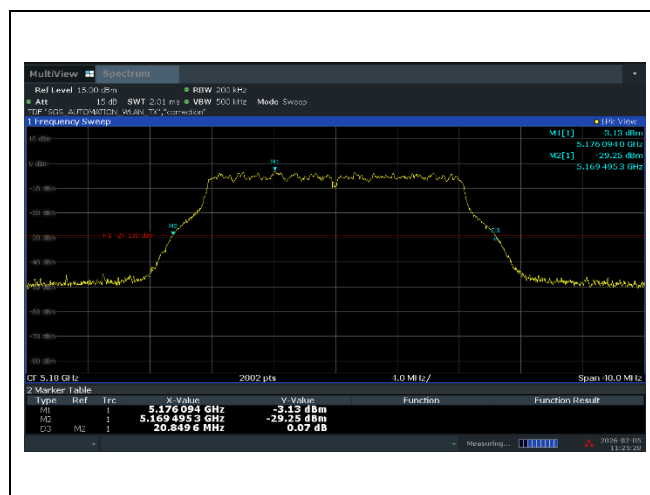
Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Port 1	Port 2	Port 1	Port 2
U-NII 1	5 210	42	MCS5	81.559	81.279	75.795	75.924
U-NII 3	5 775	155		81.879	81.838	75.824	75.924

Test plots

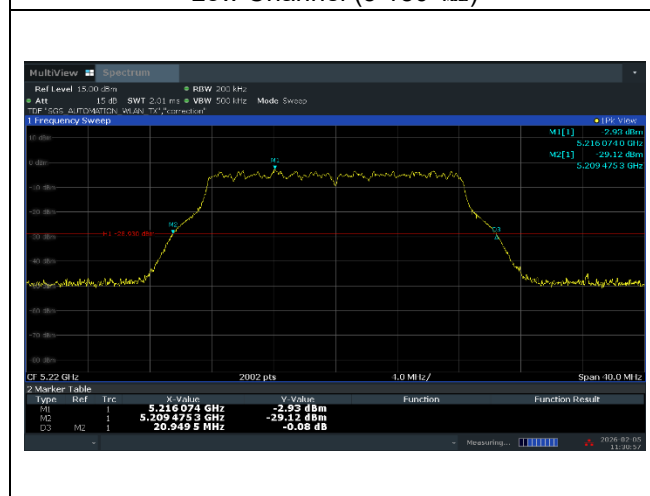
- Ant. 1

26 dB Bandwidth

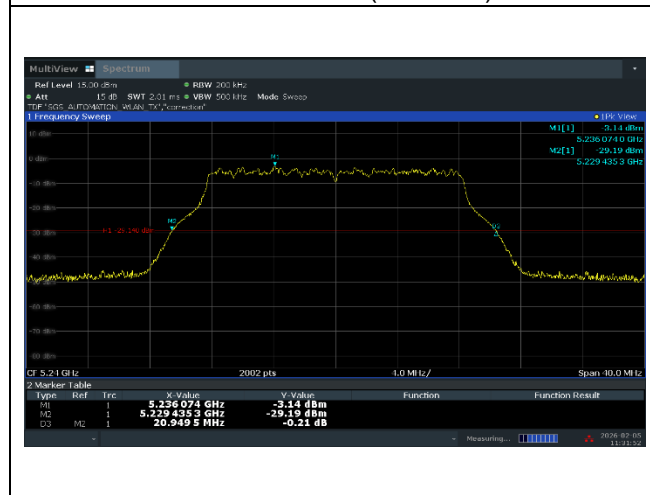
11a (U-NII 1)



Low Channel (5 180 MHz)

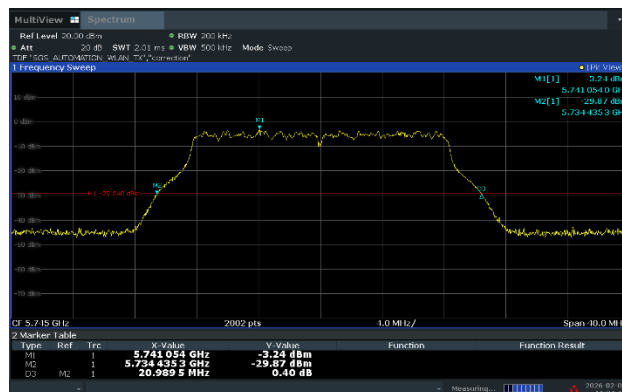


Middle Channel (5 220 MHz)

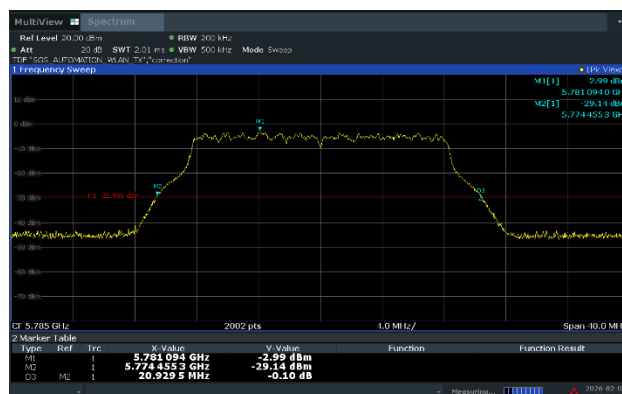


High Channel (5 240 MHz)

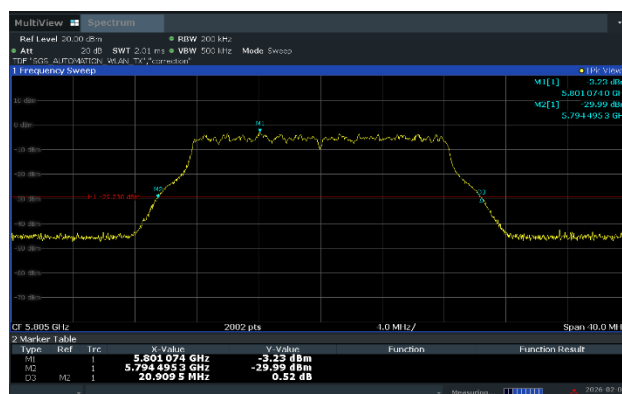
11a (U-NII 3)



Low Channel (5.745 MHz)



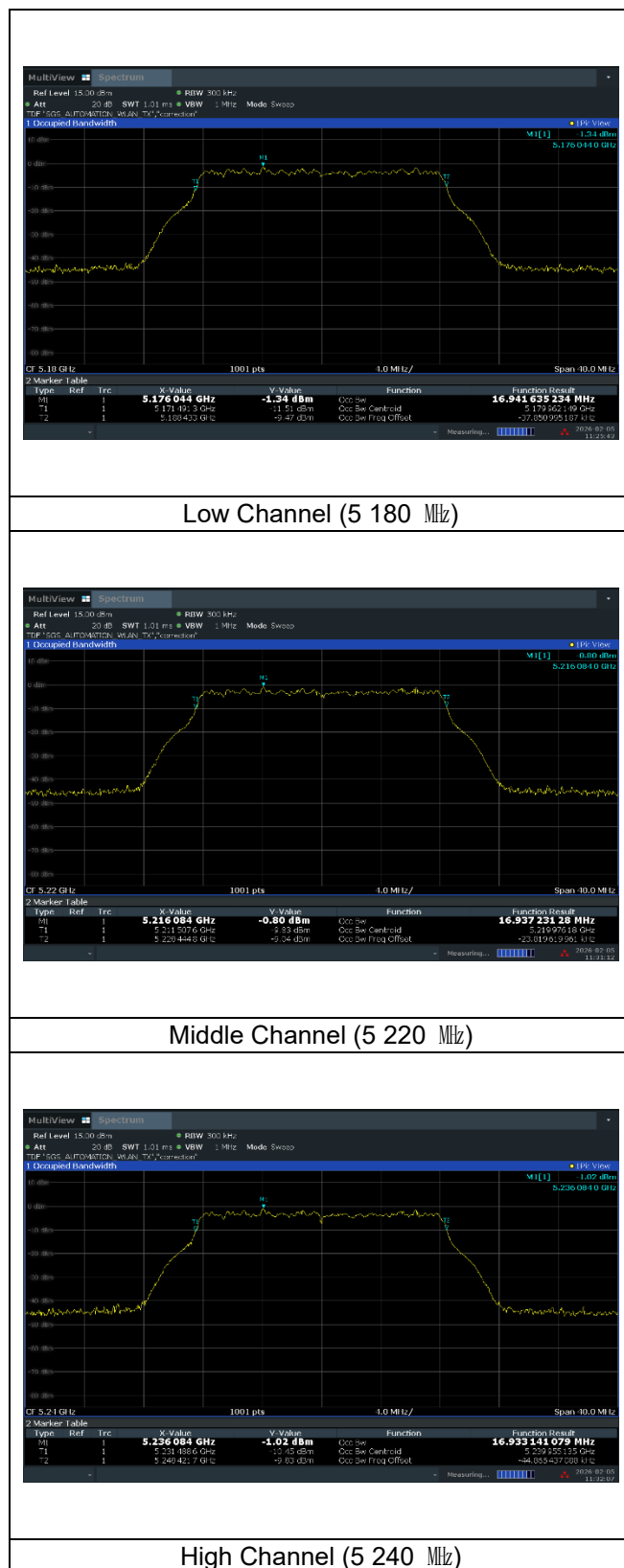
Middle Channel (5.785 MHz)



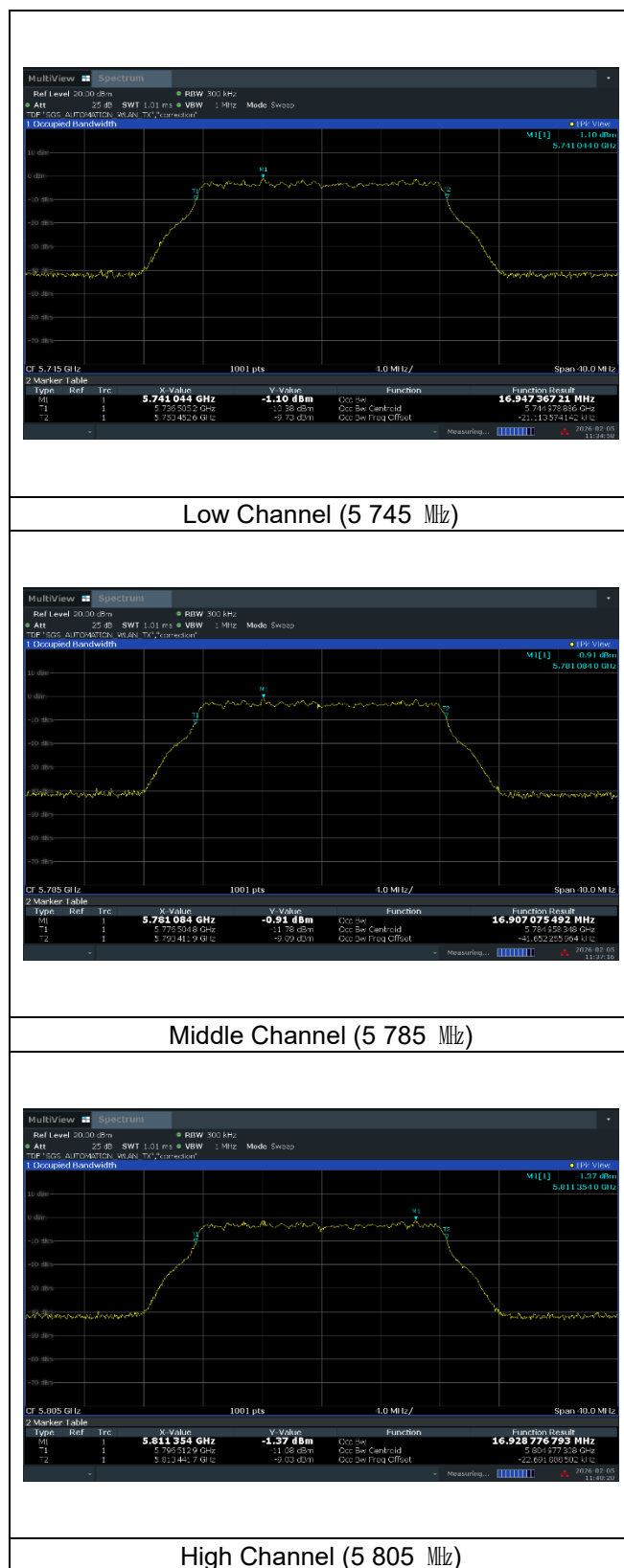
High Channel (5.805 MHz)

99 % Bandwidth

11a (U-NII 1)



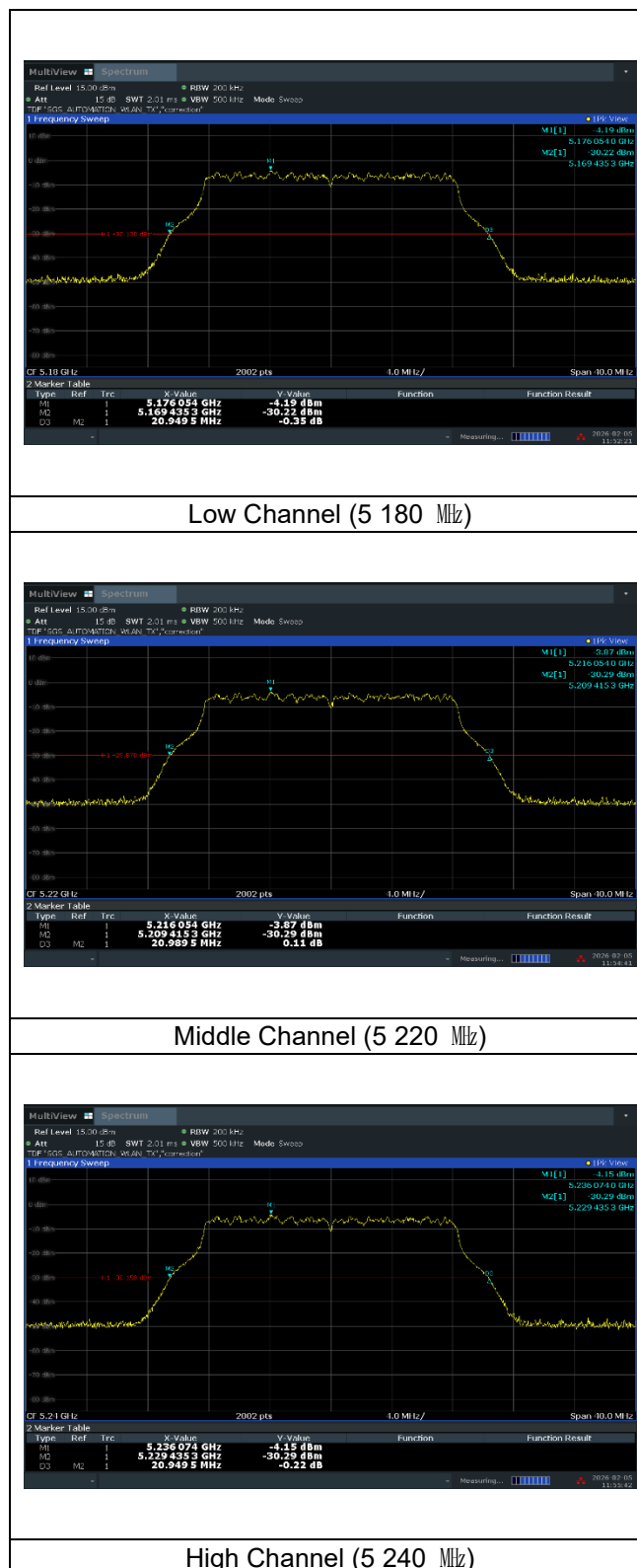
11a (U-NII 3)



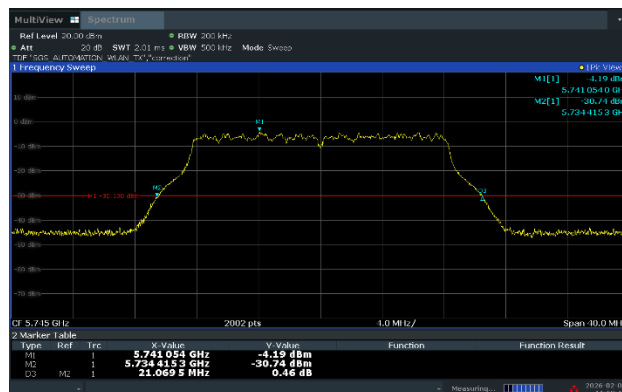
- Ant. 2

26 dB Bandwidth

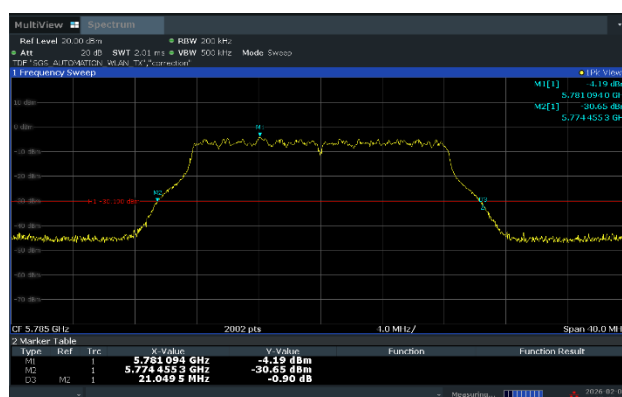
11a (U-NII 1)



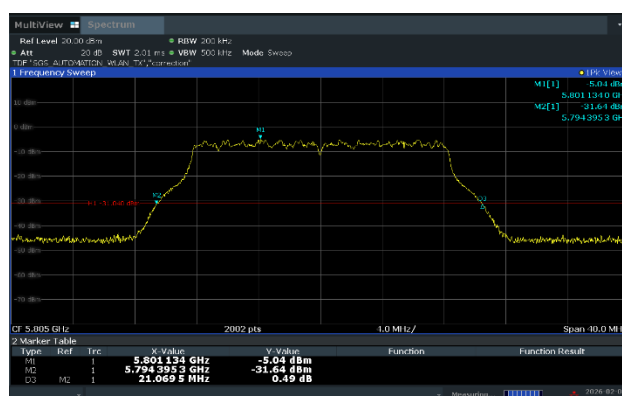
11a (U-NII 3)



Low Channel (5 745 MHz)



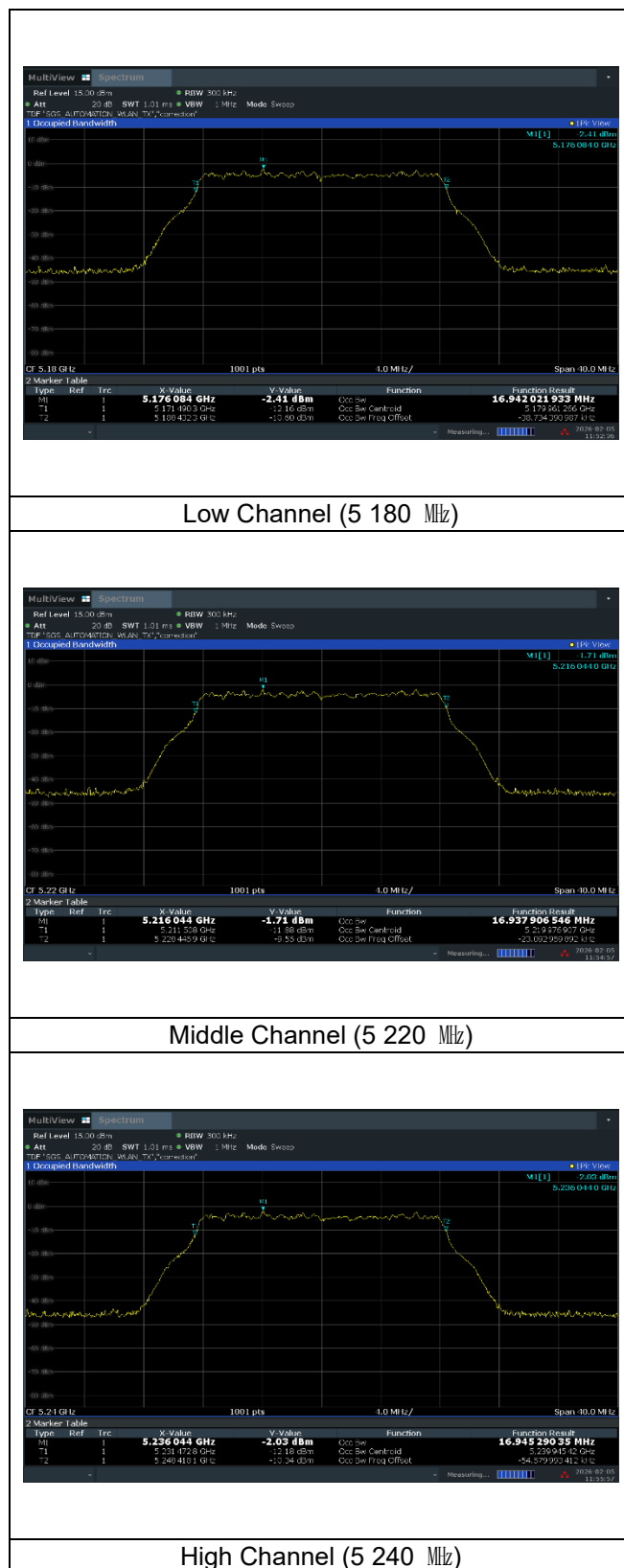
Middle Channel (5 785 MHz)



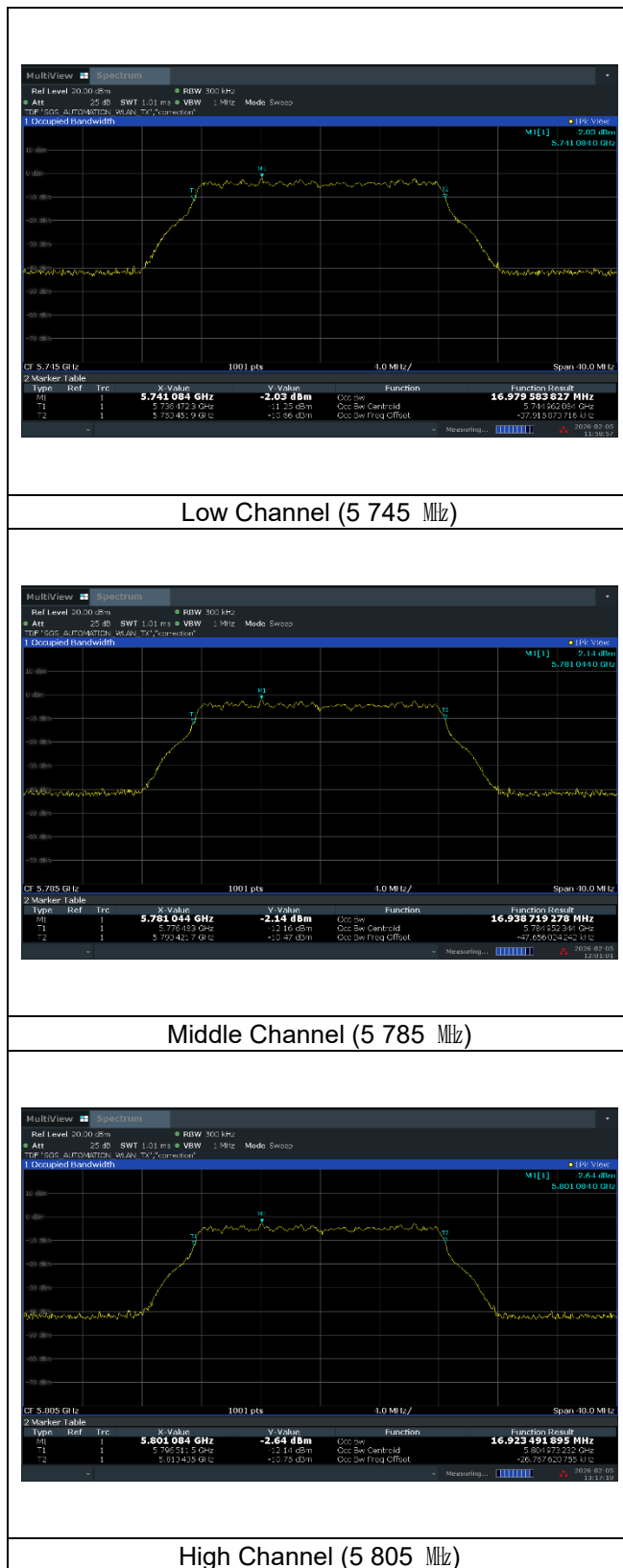
High Channel (5 805 MHz)

99 % Bandwidth

11a (U-NII 1)



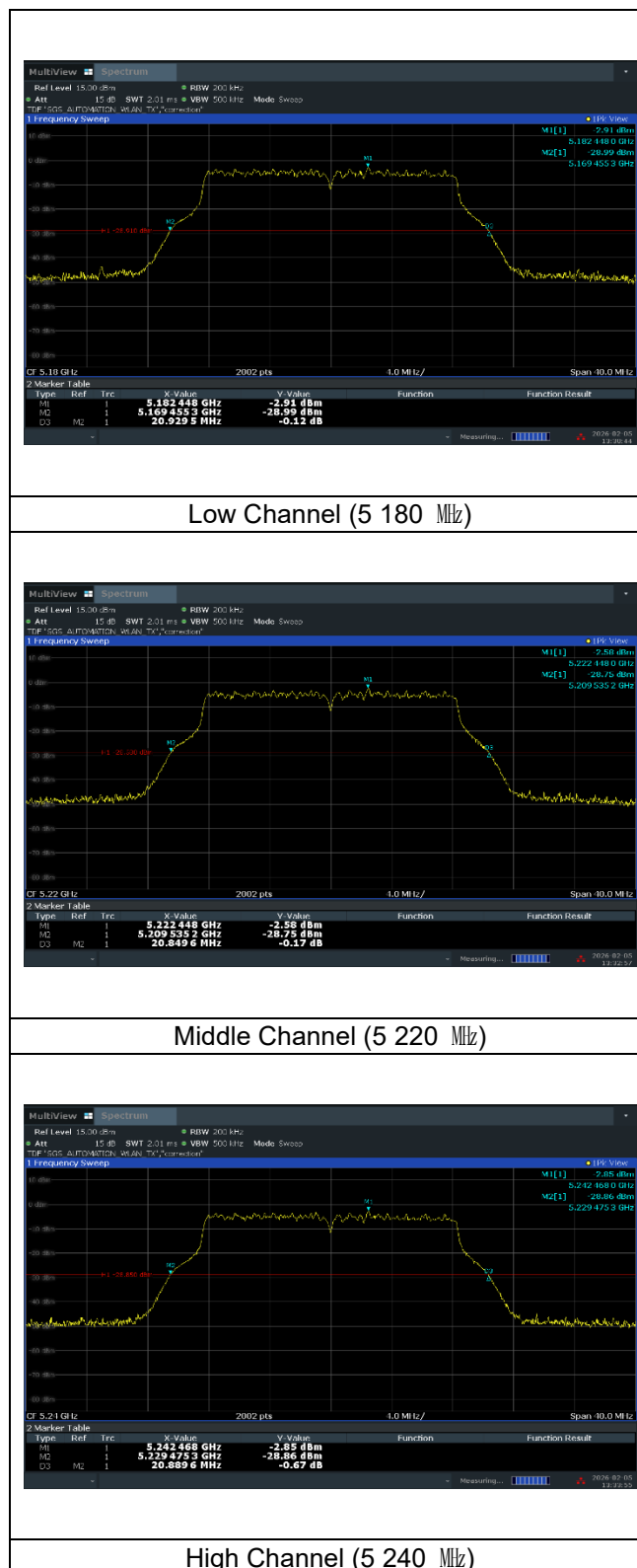
11a (U-NII 3)



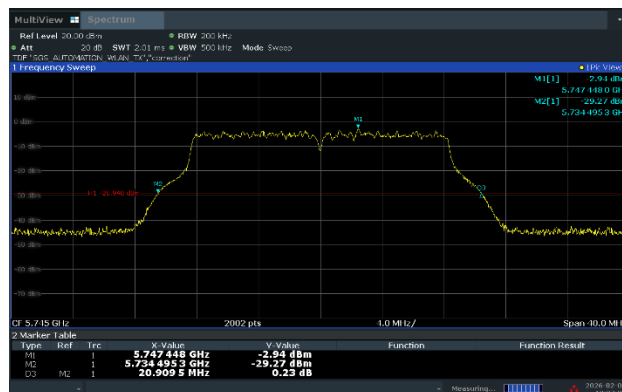
- Ant. 3

26 dB Bandwidth

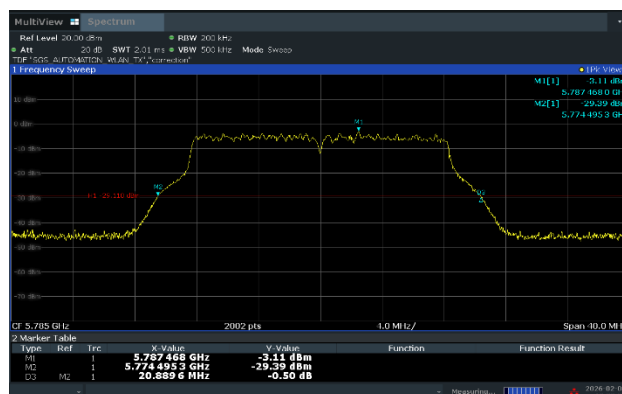
11a (U-NII 1)



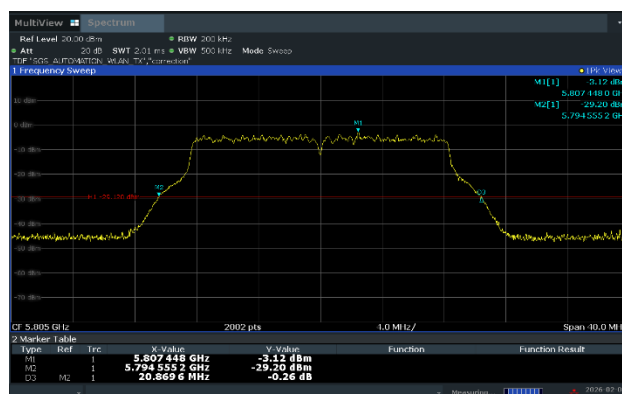
11a (U-NII 3)



Low Channel (5745 MHz)

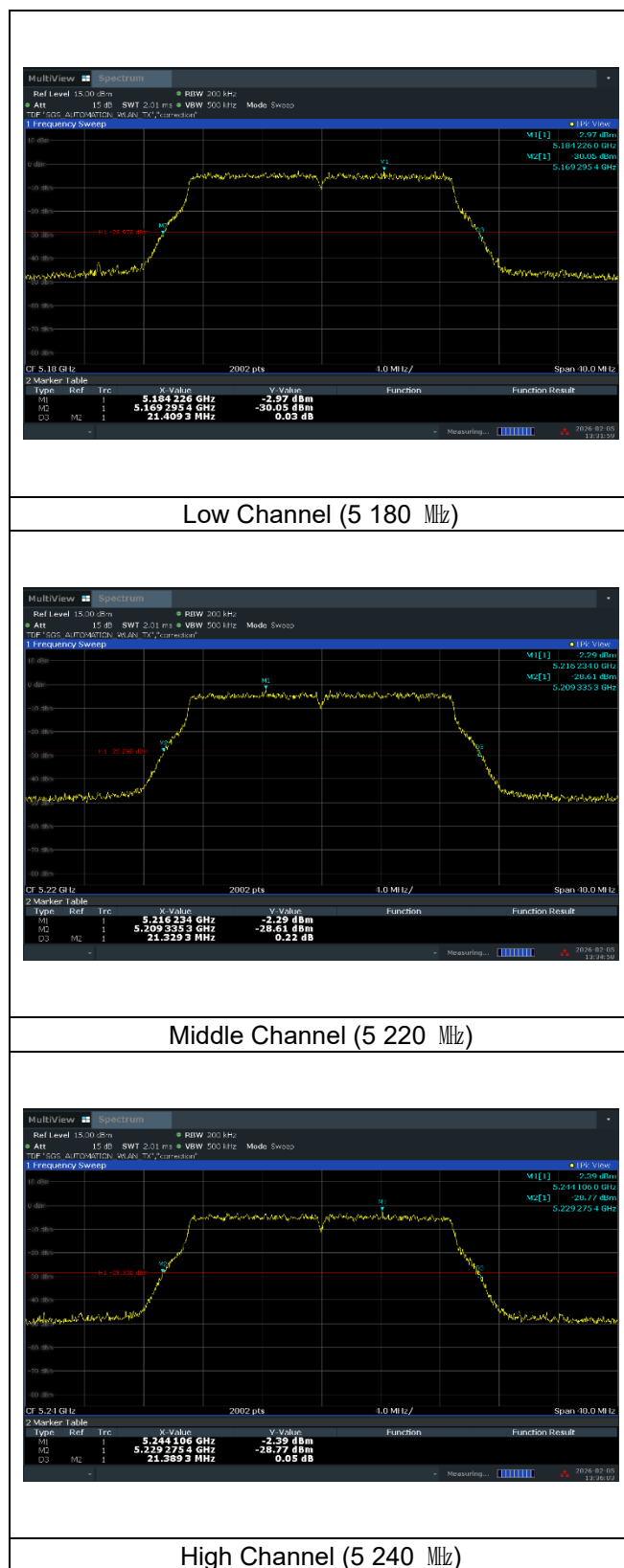


Middle Channel (5785 MHz)

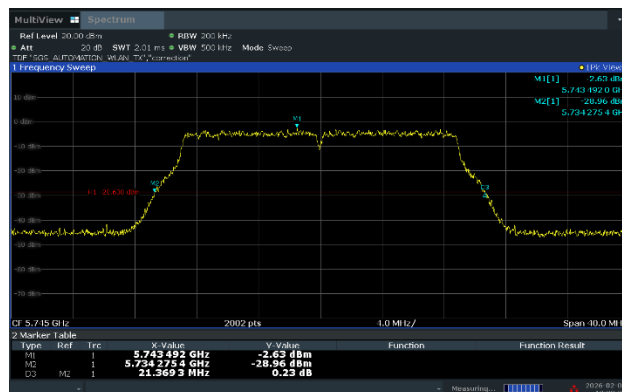


High Channel (5805 MHz)

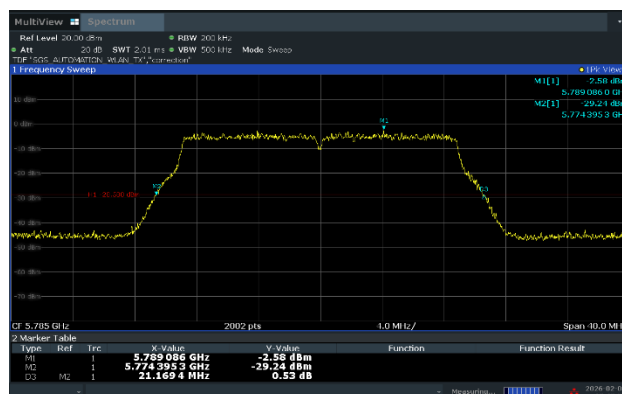
11n_HT20 (U-NII 1)



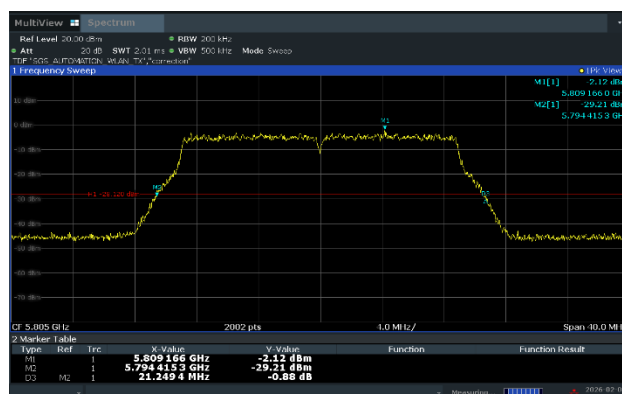
11n_HT20 (U-NII 3)



Low Channel (5745 MHz)

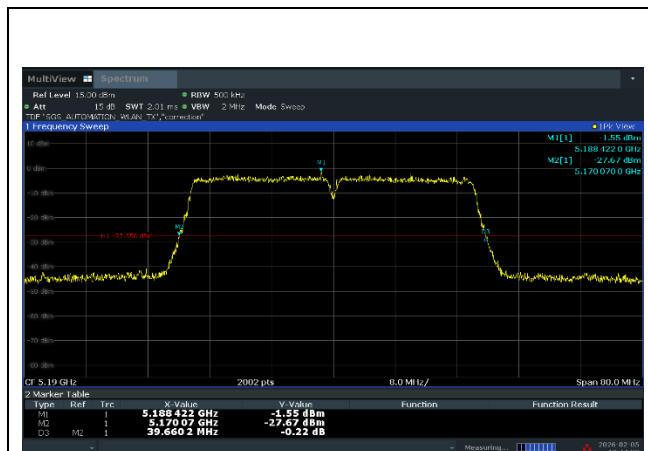


Middle Channel (5785 MHz)

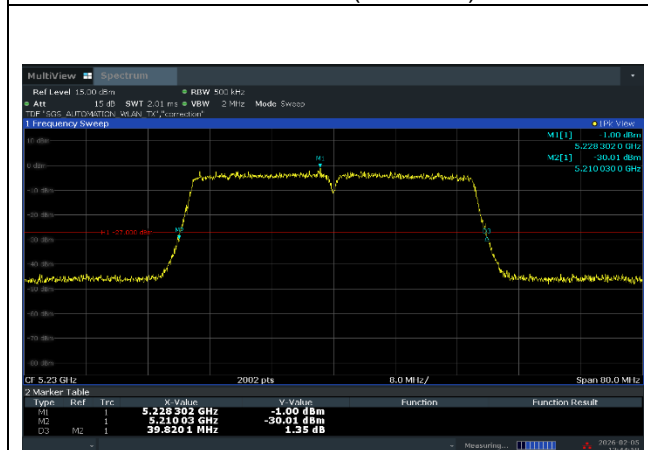


High Channel (5805 MHz)

11n_HT40 (U-NII 1)

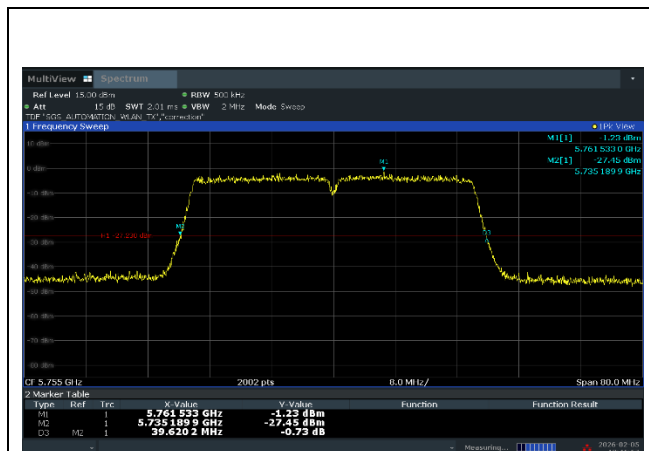


Low Channel (5190 MHz)

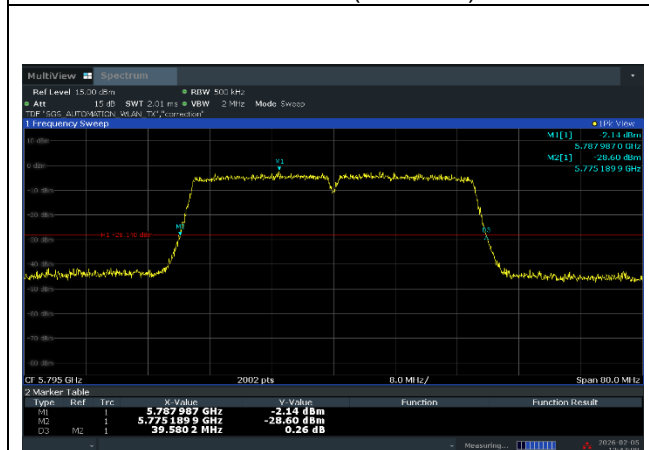


High Channel (5230 MHz)

11n_HT40 (U-NII 3)

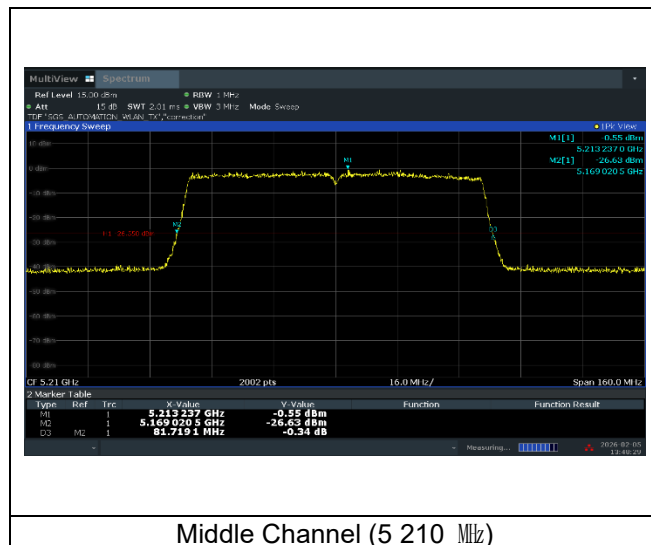


Low Channel (5.755 MHz)

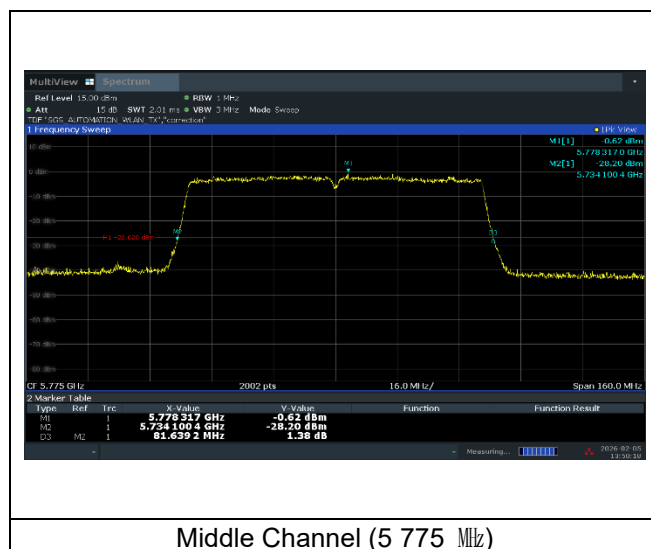


High Channel (5.795 MHz)

11ac_VHT80 (U-NII 1)

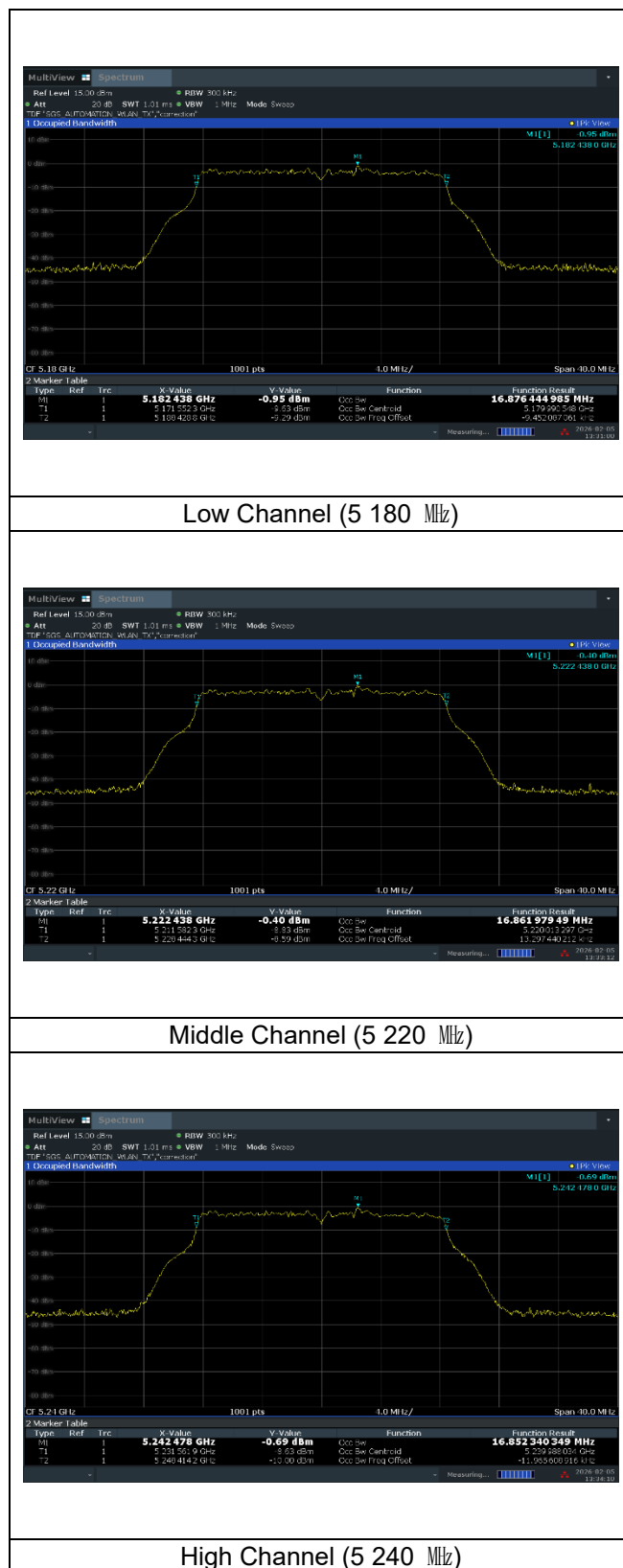


11ac_VHT80 (U-NII 3)

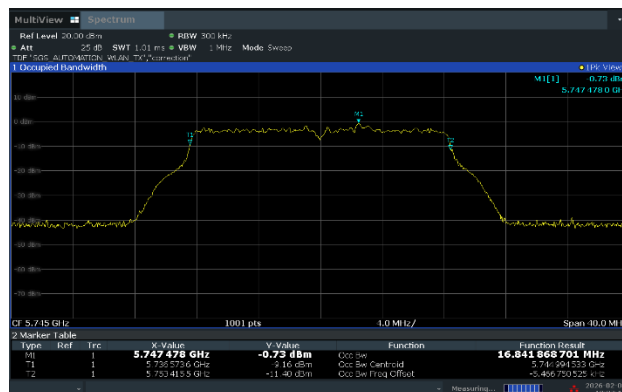


99 % Bandwidth

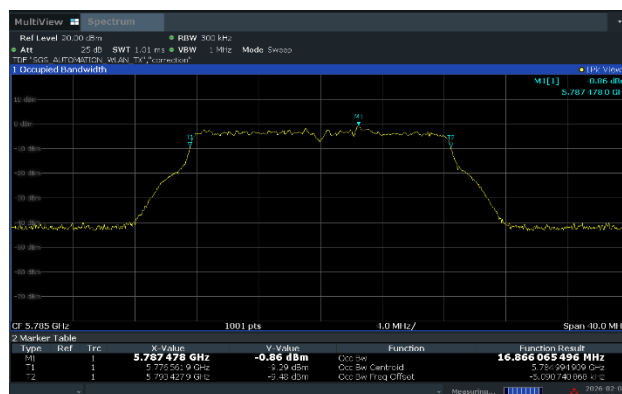
11a (U-NII 1)



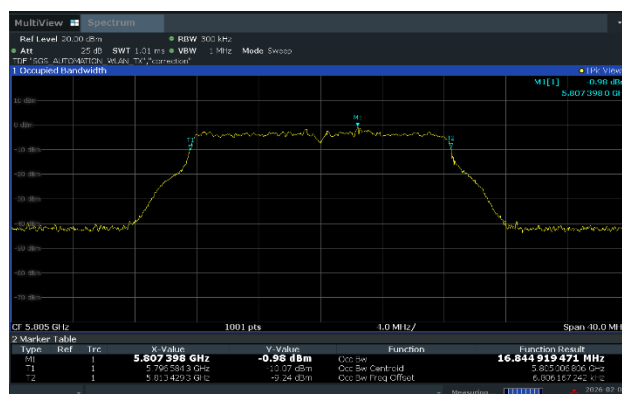
11a (U-NII 3)



Low Channel (5.745 MHz)

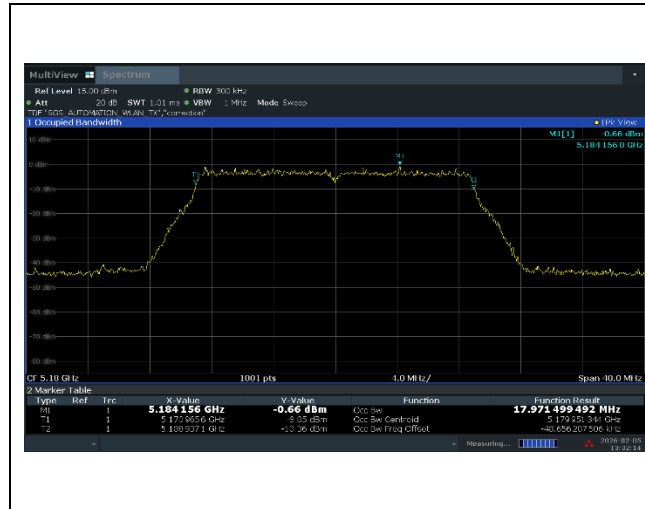


Middle Channel (5.785 MHz)

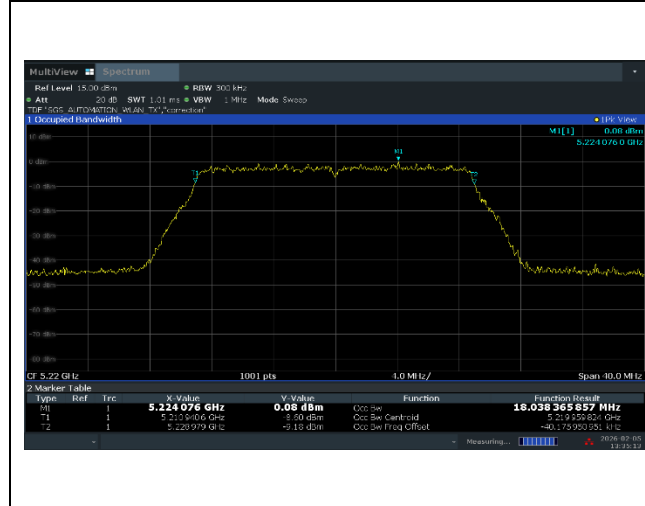


High Channel (5.805 MHz)

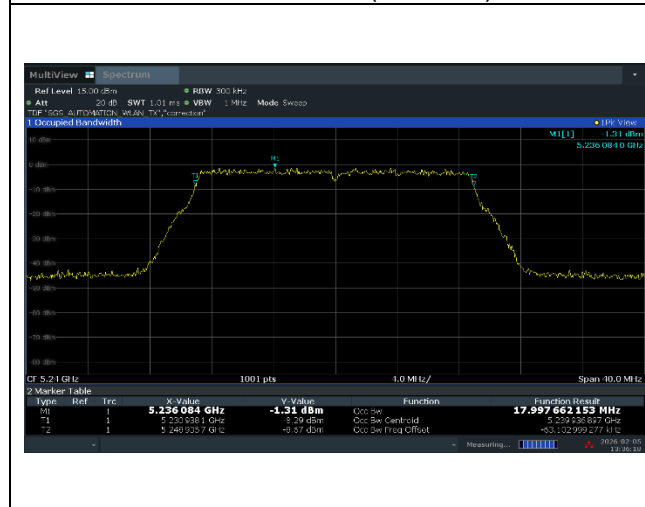
11n_HT20 (U-NII 1)



Low Channel (5180 MHz)

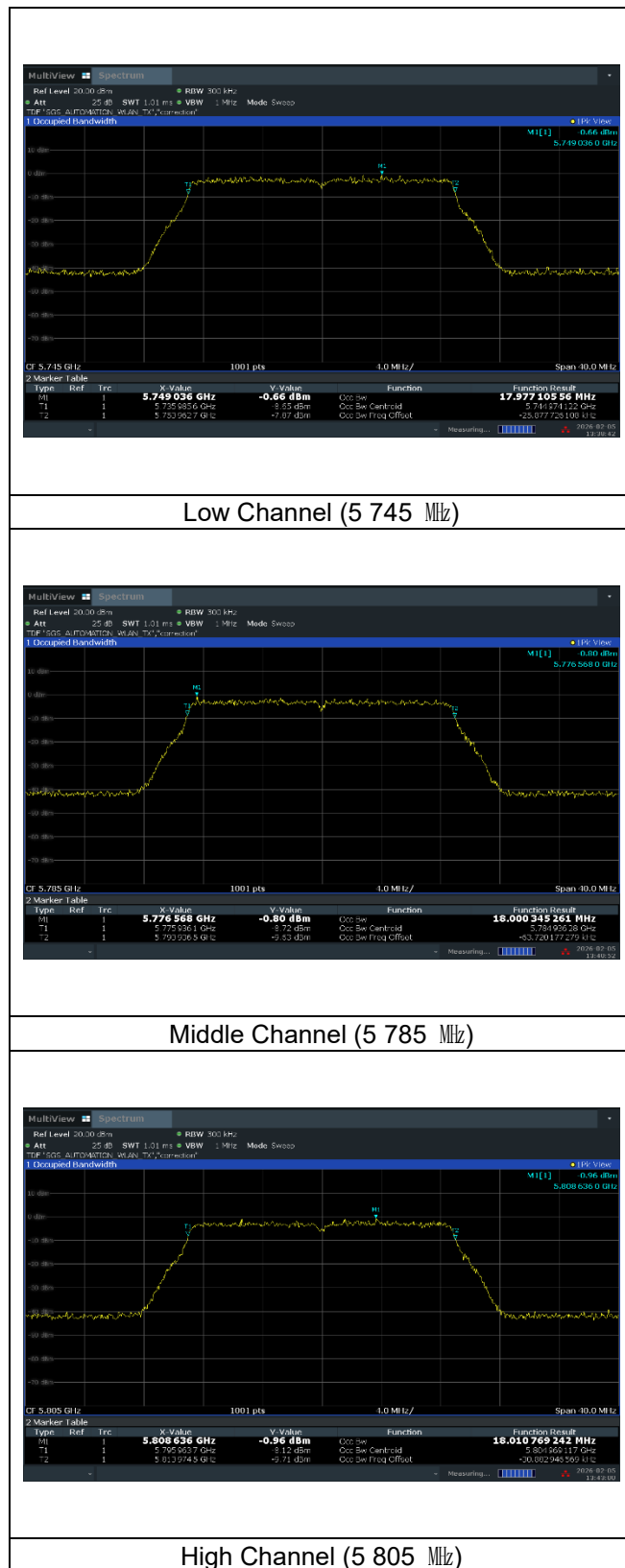


Middle Channel (5220 MHz)

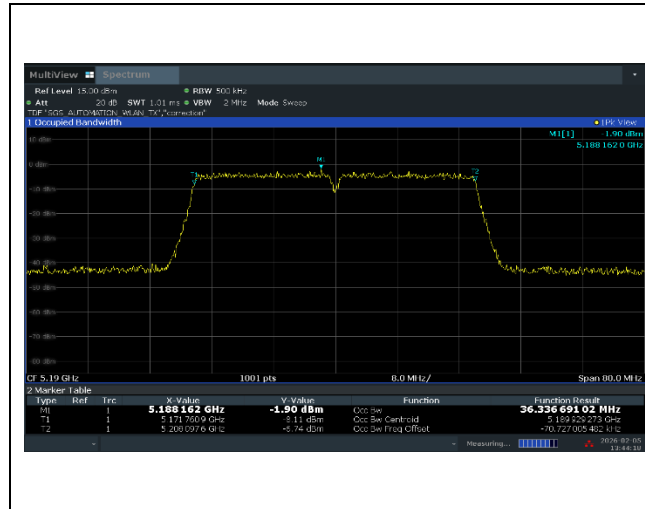


High Channel (5240 MHz)

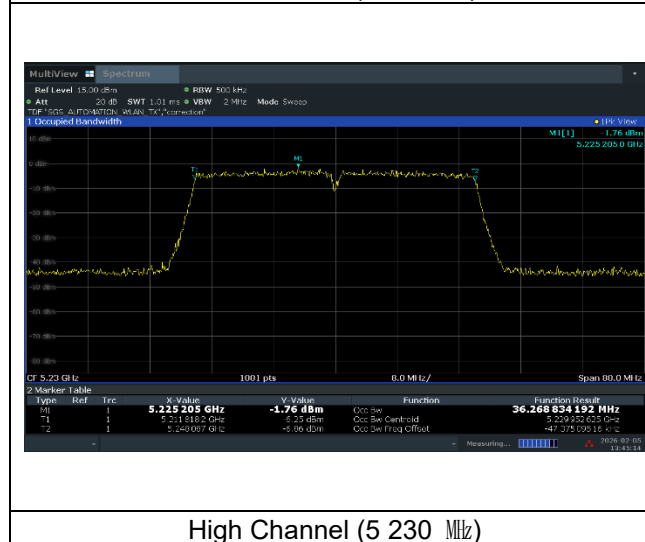
11n_HT20 (U-NII 3)



11n_HT40 (U-NII 1)



Low Channel (5190 MHz)



High Channel (5230 MHz)