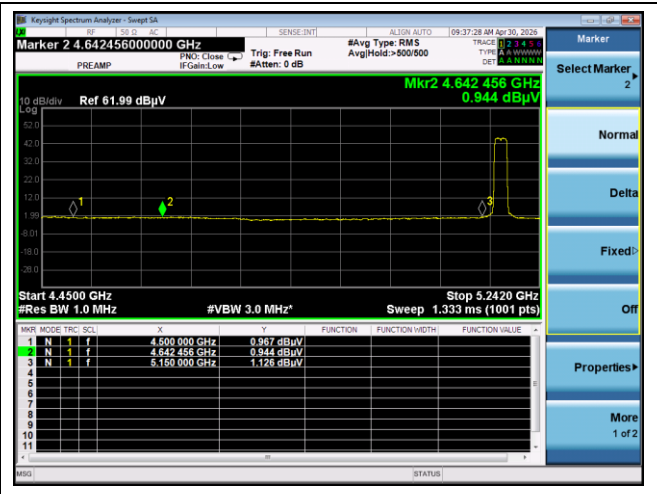
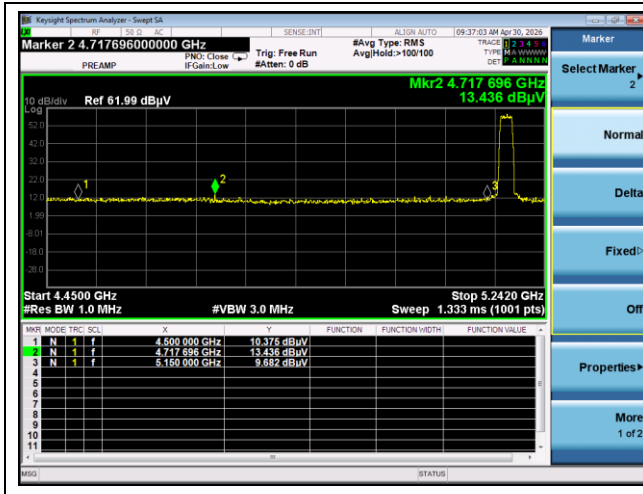


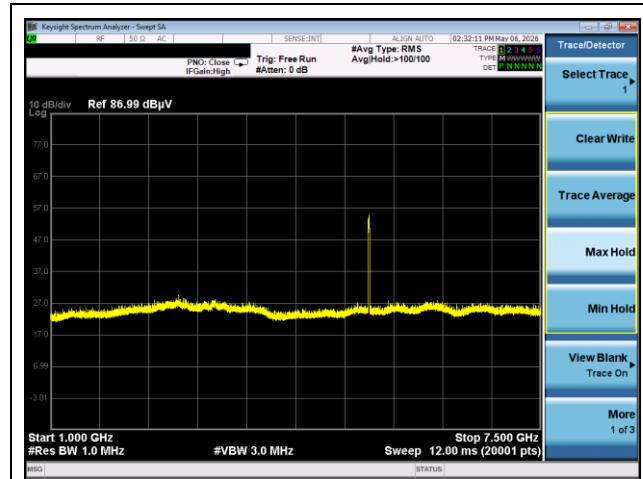
11ax_HE20

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

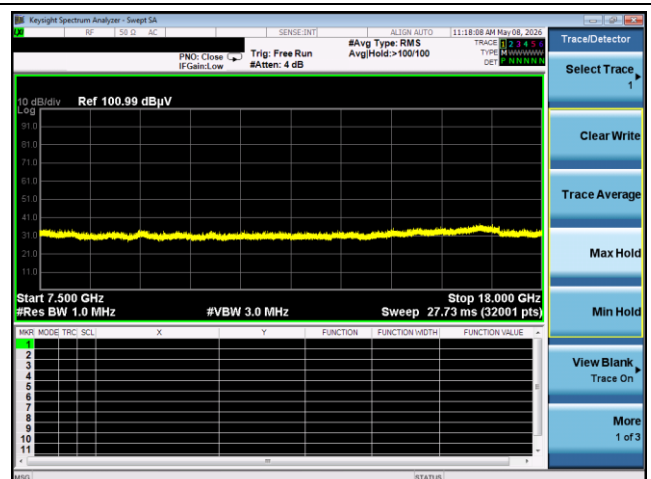
Low channel Band edge (Average) - U-NII 1



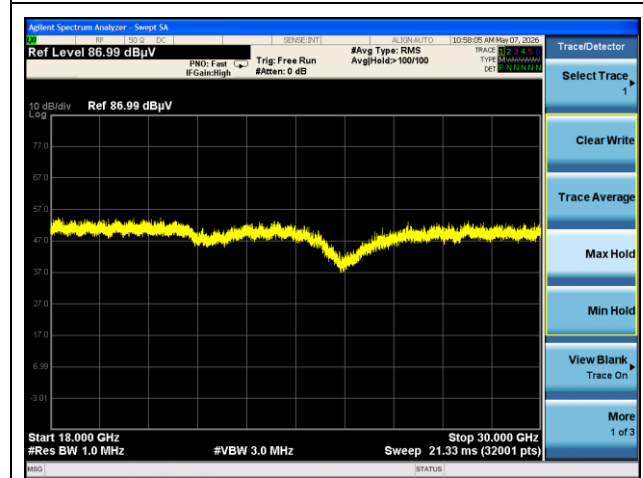
Radiated Spurious Emissions



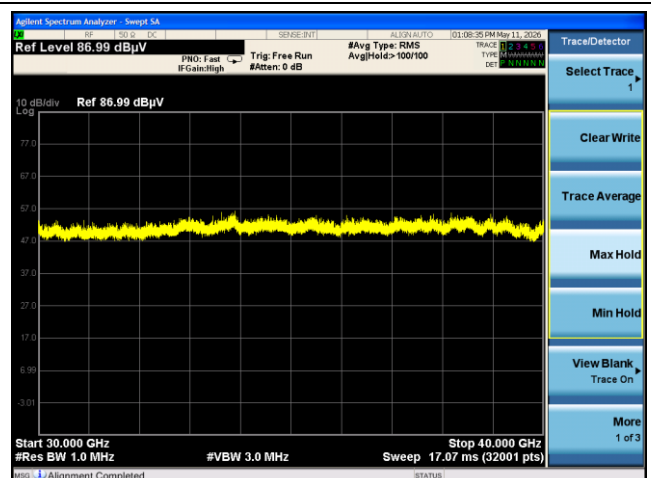
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



18 GHz ~ 30 GHz

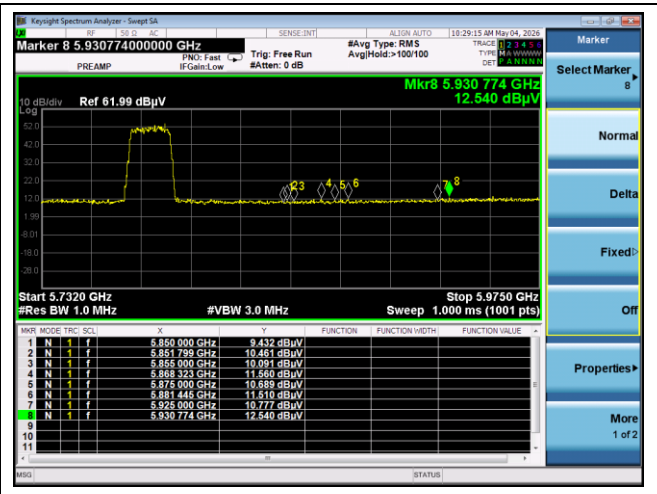
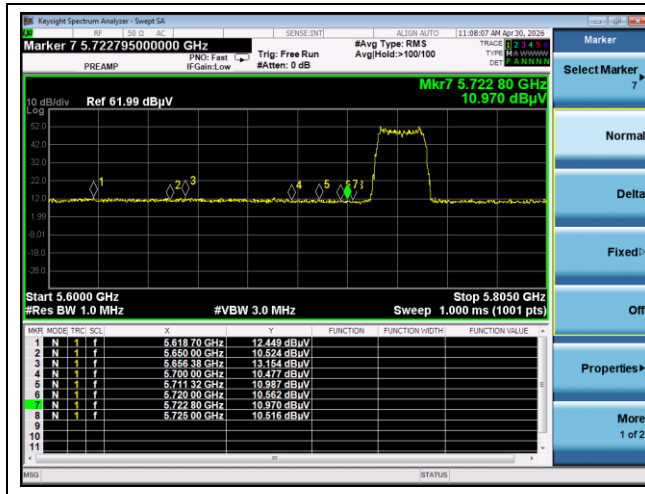


30 GHz ~ 40 GHz

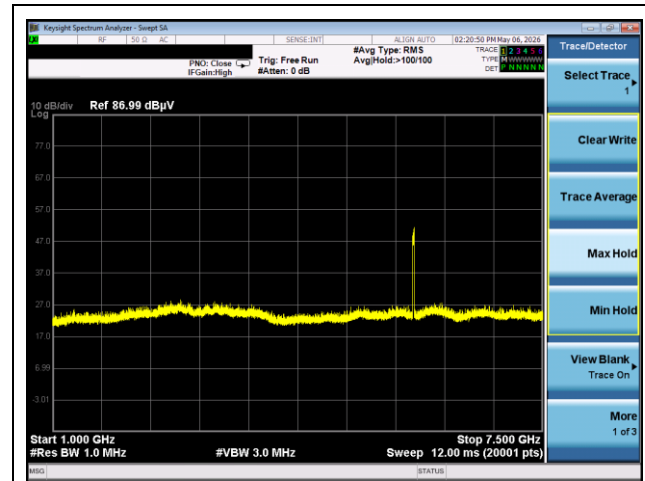
11ax_HE20

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

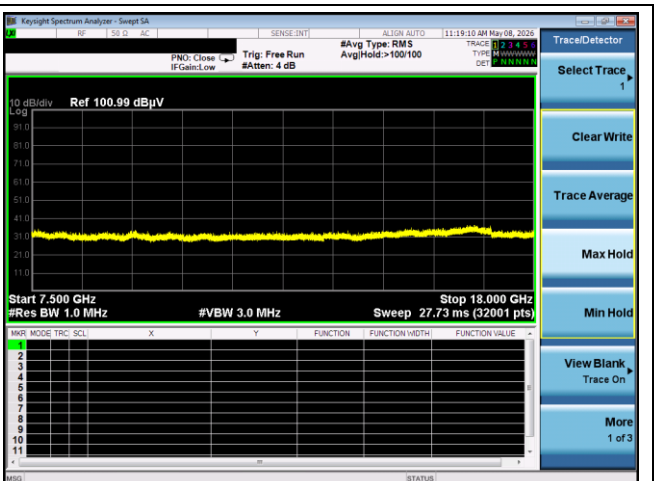
High channel Band edge (Peak) - U-NII 3



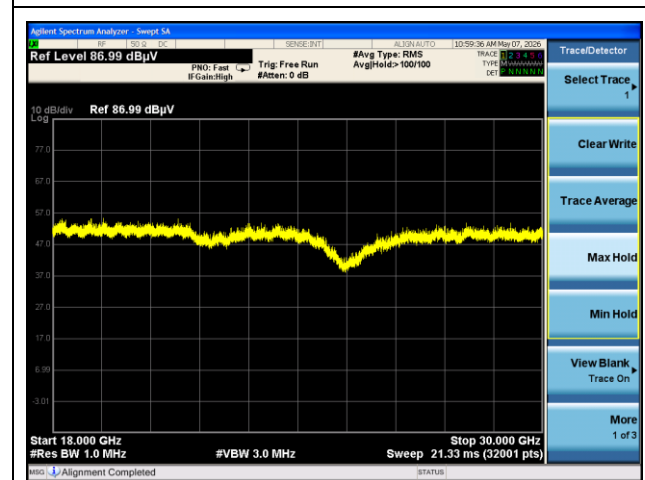
Radiated Spurious Emissions



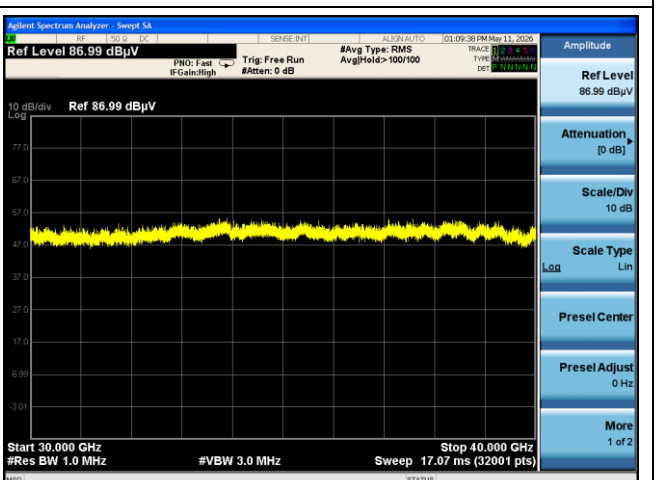
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



18 GHz ~ 30 GHz

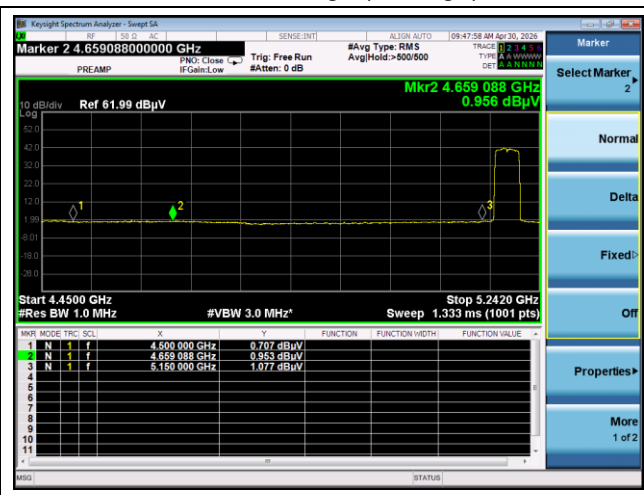
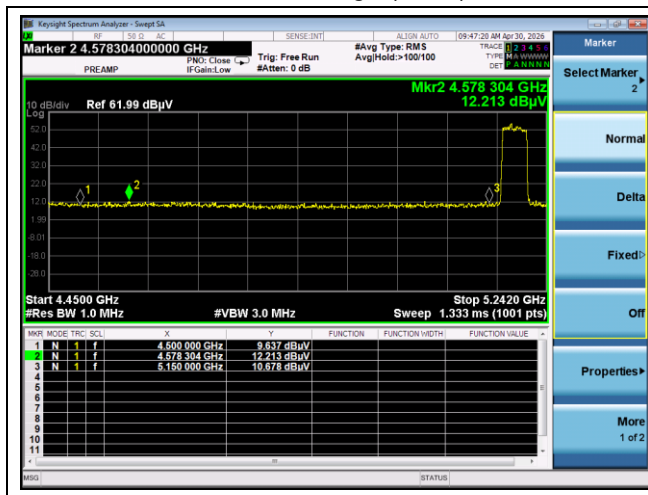


30 GHz ~ 40 GHz

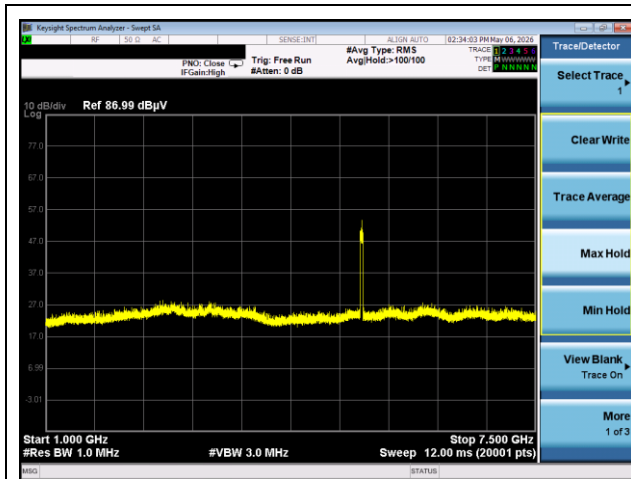
11ax_HE40

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

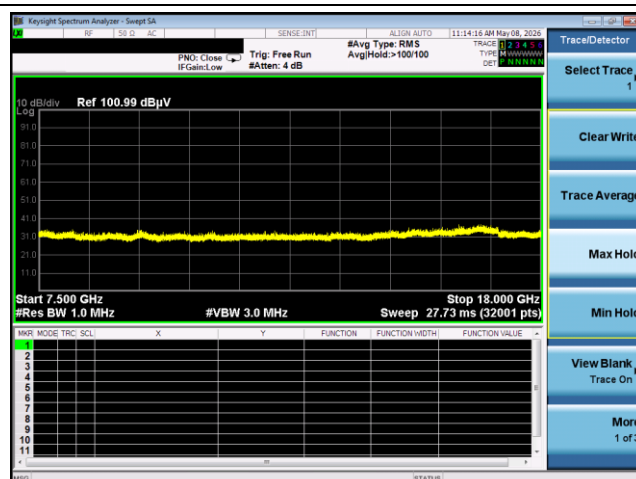
Low channel Band edge (Average) - U-NII 1



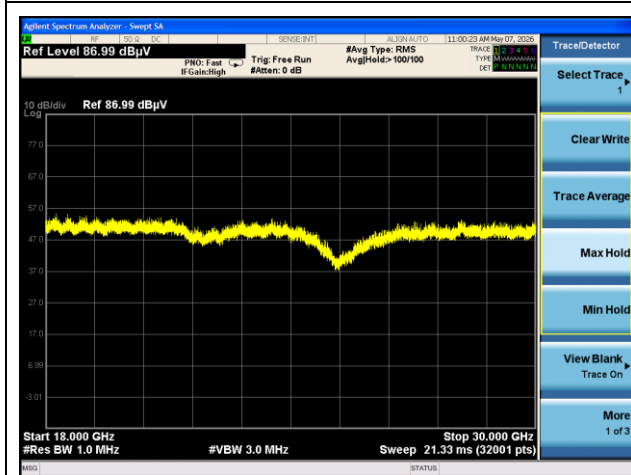
Radiated Spurious Emissions



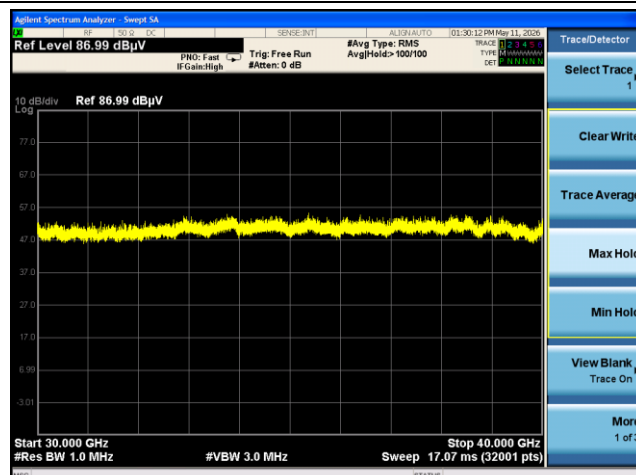
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



18 GHz ~ 30 GHz

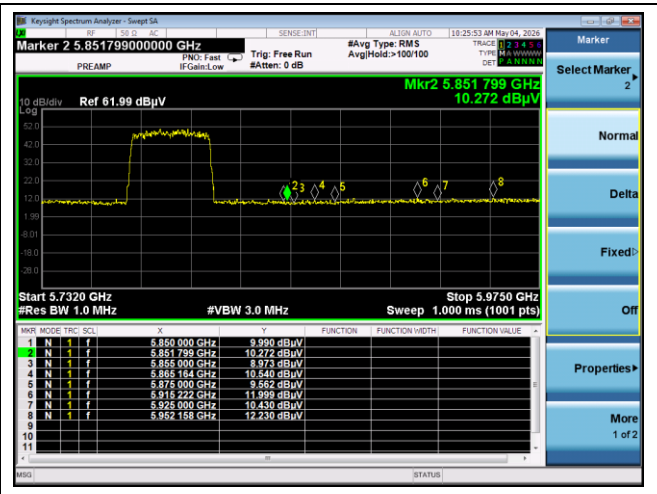
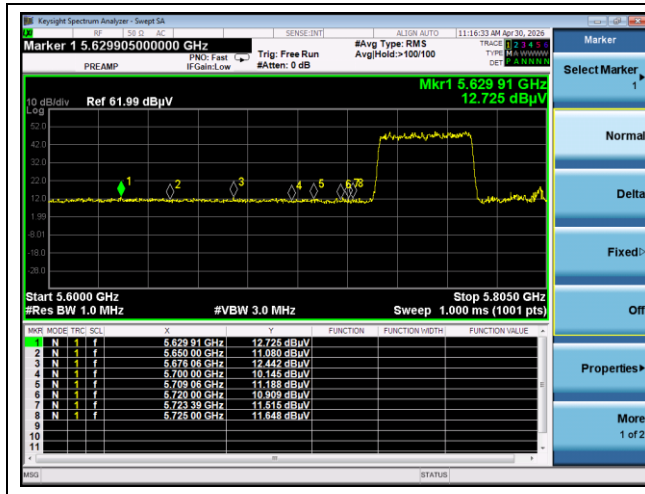


30 GHz ~ 40 GHz

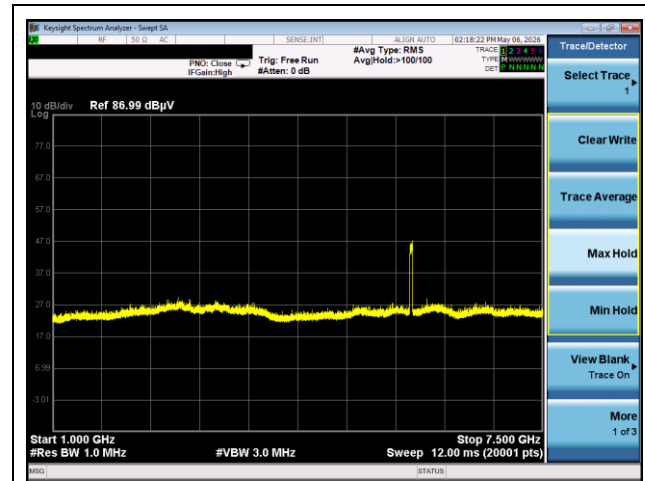
11ax_HE40

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

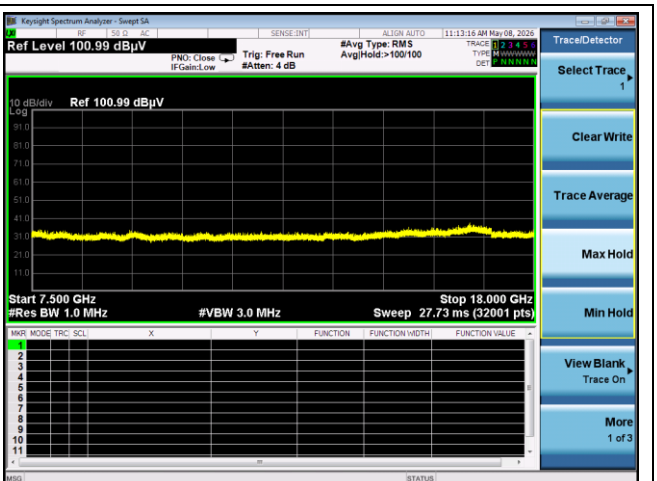
High channel Band edge (Peak) - U-NII 3



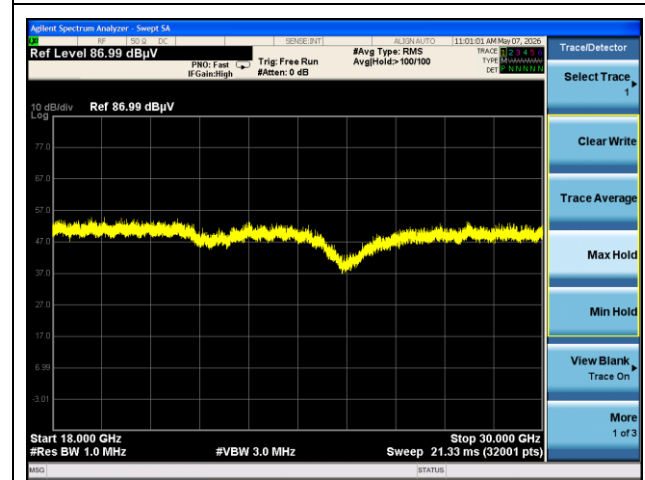
Radiated Spurious Emissions



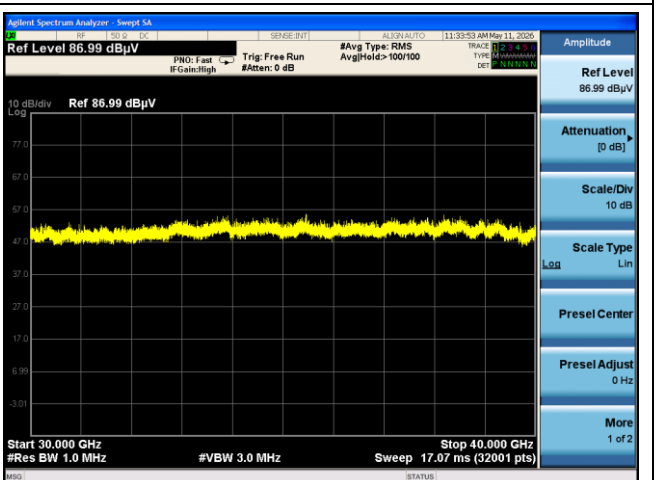
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



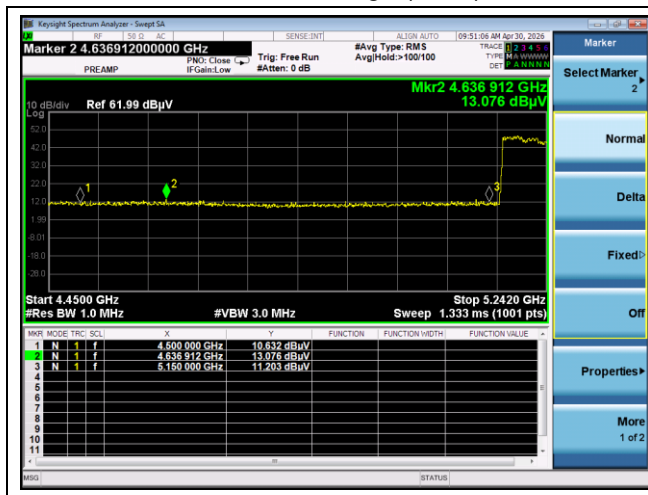
18 GHz ~ 30 GHz



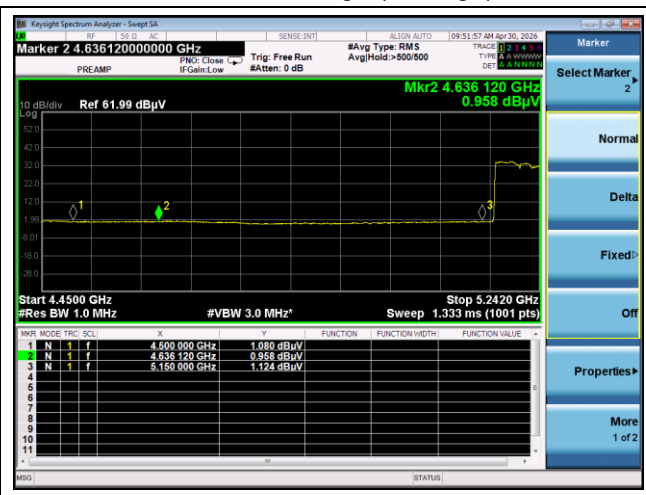
30 GHz ~ 40 GHz

11ax_HE80

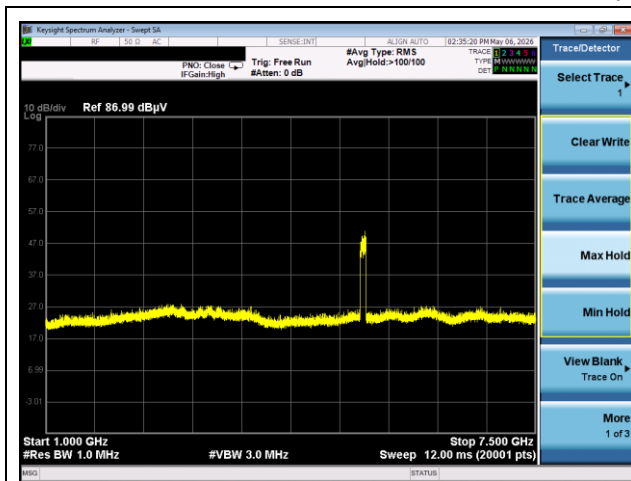
Middle channel Band edge (Peak) - U-NII 1



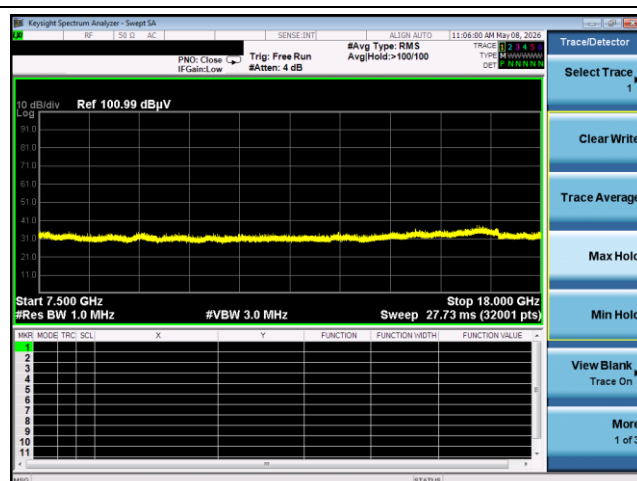
Middle channel Band edge (Average) - U-NII 1



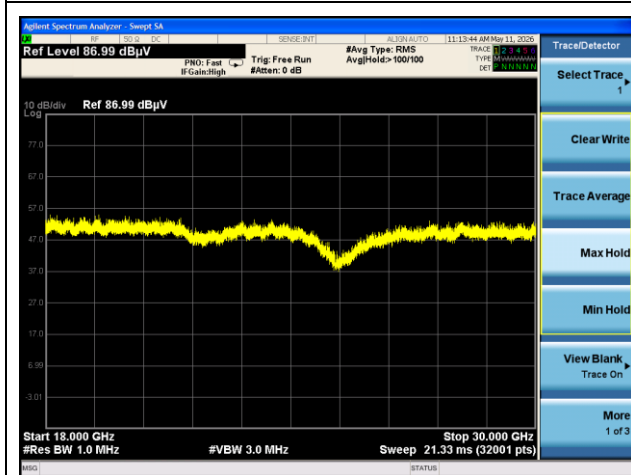
Radiated Spurious Emissions



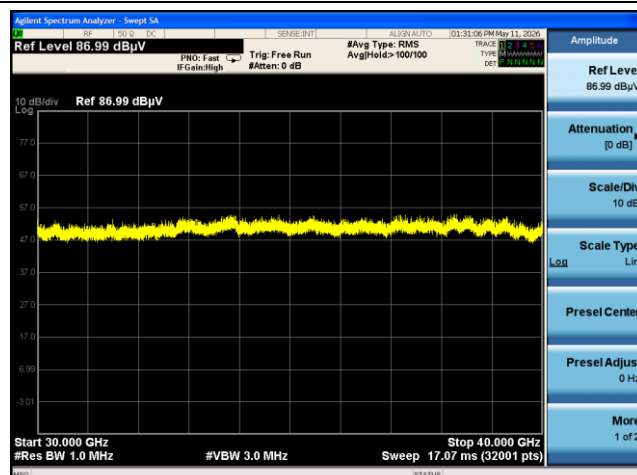
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz

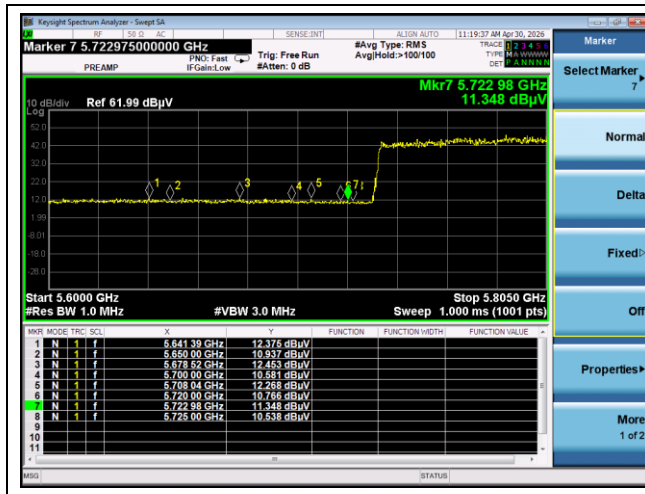


18 GHz ~ 30 GHz

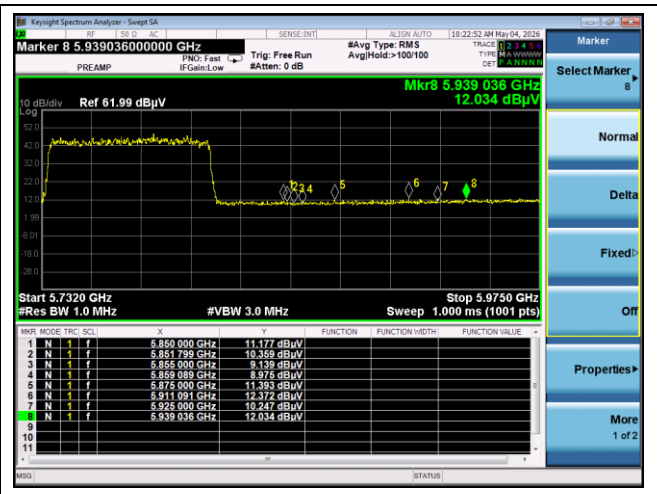


30 GHz ~ 40 GHz

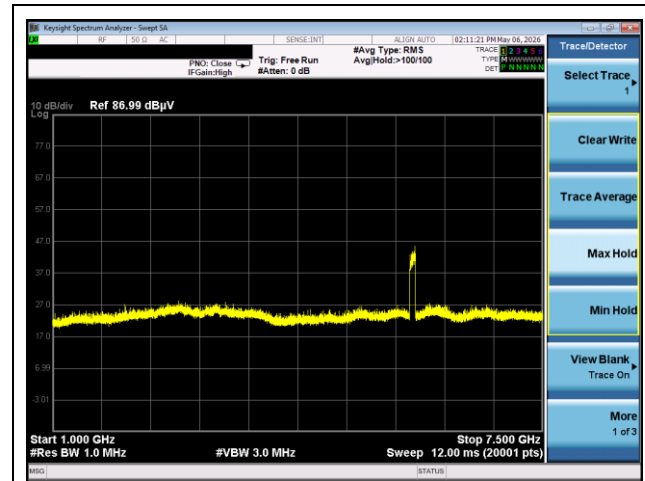
Middle channel Band edge (Peak) - U-NII 3



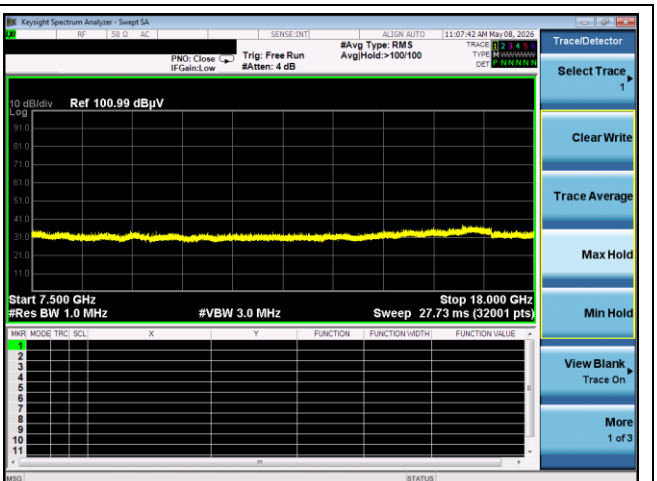
Middle channel Band edge (Peak) - U-NII 3



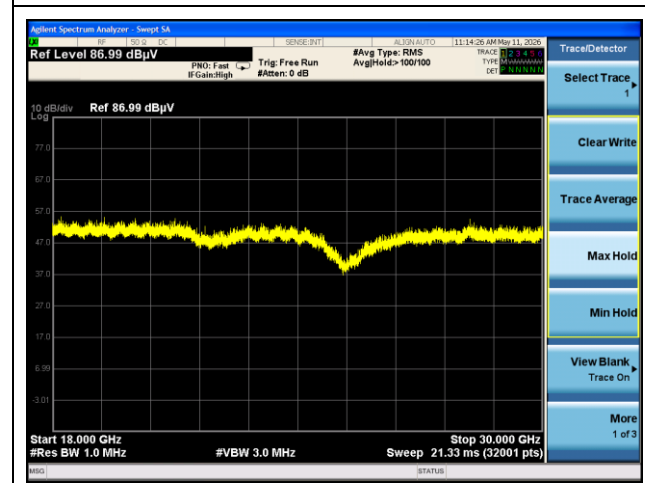
Radiated Spurious Emissions



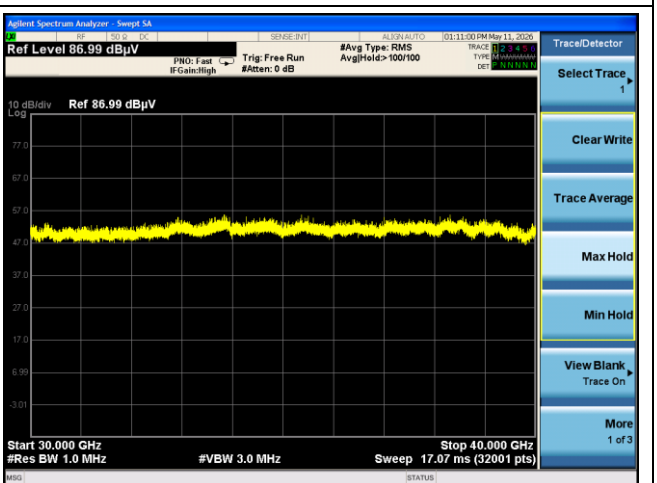
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



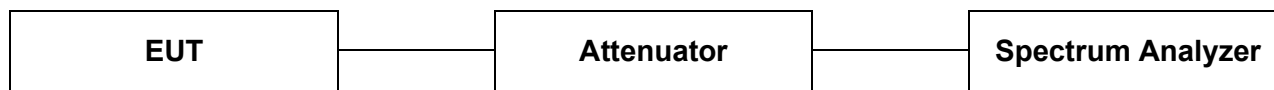
18 GHz ~ 30 GHz



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

3.3.2.1 FCC

1. This measurement settings are specified in section II.D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set center frequency to the nominal EUT channel center frequency.
3. Set span = 1.5 times to 5.0 times the OBW.
4. Set RBW = 1 % to 5 % of the OBW.
5. Set VBW $\geq 3 \times$ RBW.
6. 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.
7. Use the 99 % power bandwidth function of the instrument (if available).
8. 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.

In the result,

- DFS requirements are not applicable in the 5 150 MHz ~ 5 250 MHz.

3.3.2.2 IC

The test follows section 6.9.3 of ANSI C63.10-2020 (for FCC) and ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024 (for ISSED).

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.
 - 1) When measuring OBW for UWB, the VBW shall be set to three times the RBW or the maximum available VBW of the measuring instrument.
- 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. 0

Test mode: 11a

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	48 Mbps	20.959	16.903
	5 220	44		21.039	16.863
	5 240	48		21.019	16.863
U-NII 3	5 745	149		20.959	16.903
	5 785	157		20.879	16.863
	5 825	165		21.139	16.903

- 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	20.979	16.863
	5 220	44		21.119	16.903
	5 240	48		21.159	16.903
U-NII 3	5 745	149		21.259	16.863
	5 785	157		21.019	16.863
	5 825	165		20.959	16.903

- Ant. 0 + Ant. 1

Test mode: 11ac_VHT20

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Ant. 0	Ant. 1	Ant. 0	Ant. 1
U-NII 1	5 180	36	MCS6	21.419	21.359	18.022	18.062
	5 220	44		21.419	21.479	18.062	18.062
	5 240	48		21.339	21.319	18.062	18.022
U-NII 3	5 745	149		21.359	21.379	18.022	18.022
	5 785	157		21.239	21.479	18.022	18.022
	5 825	165		21.299	21.279	18.022	18.022

Test mode: 11ac_VHT40

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Ant. 0	Ant. 1	Ant. 0	Ant. 1
U-NII 1	5 190	38	MCS9	39.920	39.880	36.444	36.444
	5 230	46		39.960	39.760	36.364	36.444
U-NII 3	5 755	151		39.920	39.760	36.444	36.364
	5 795	159		39.680	39.720	36.284	36.284

Test mode: 11ac_VHT80

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Ant. 0	Ant. 1	Ant. 0	Ant. 1
U-NII 1	5 210	42	MCS5	81.439	81.838	75.764	75.764
U-NII 3	5 775	155		81.598	81.918	75.764	75.924

Test mode: 11ax_HE20

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Ant. 0	Ant. 1	Ant. 0	Ant. 1
U-NII 1	5 180	36	MCS2	21.758	21.778	19.101	19.141
	5 220	44		21.878	21.658	19.141	19.141
	5 240	48		21.858	21.718	19.141	19.141
U-NII 3	5 745	149		21.558	21.678	19.101	19.101
	5 785	157		21.818	21.638	19.101	19.021
	5 825	165		21.798	21.838	19.141	19.061

Test mode: 11ax_HE40

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Ant. 0	Ant. 1	Ant. 0	Ant. 1
U-NII 1	5 190	38	MCS7	40.280	40.400	37.562	37.642
	5 230	46		40.120	40.200	37.562	37.562
U-NII 3	5 755	151		40.200	40.240	37.642	37.562
	5 795	159		40.120	40.200	37.483	37.562

Test mode: 11ax_HE80

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)		99 % Bandwidth (MHz)	
				Ant. 0	Ant. 1	Ant. 0	Ant. 1
U-NII 1	5 210	42	MCS4	81.598	82.398	77.043	77.043
U-NII 3	5 775	155		82.238	82.078	77.043	77.043

- Ant. 2

Test mode: 11a

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	54 Mbps	20.899	16.823
	5 220	44		21.139	16.863
	5 240	48		20.959	16.903
U-NII 3	5 745	149		20.879	16.863
	5 785	157		20.879	16.863
	5 825	165		20.979	16.823

Test mode: 11ac_VHT20

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	MCS8	21.299	18.022
	5 220	44		21.219	18.022
	5 240	48		21.499	18.062
U-NII 3	5 745	149		21.339	18.022
	5 785	157		21.239	17.982
	5 825	165		21.419	18.022

Test mode: 11ac_VHT40

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 190	38	MCS8	39.800	36.364
	5 230	46		39.600	36.364
U-NII 3	5 755	151		39.680	36.444
	5 795	159		39.760	36.284

Test mode: 11ac_VHT80

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 210	42	MCS9	81.519	75.764
U-NII 3	5 775	155		81.678	75.924

Test mode: 11ax_HE20

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 180	36	MCS8	21.778	19.141
	5 220	44		21.738	19.141
	5 240	48		21.798	19.181
U-NII 3	5 745	149		21.678	19.101
	5 785	157		21.519	19.061
	5 825	165		21.818	19.101

Test mode: 11ax_HE40

Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 190	38	MCS8	40.280	37.642
	5 230	46		40.440	37.562
U-NII 3	5 755	151		40.400	37.642
	5 795	159		40.120	37.483

Test mode: 11ax_HE80

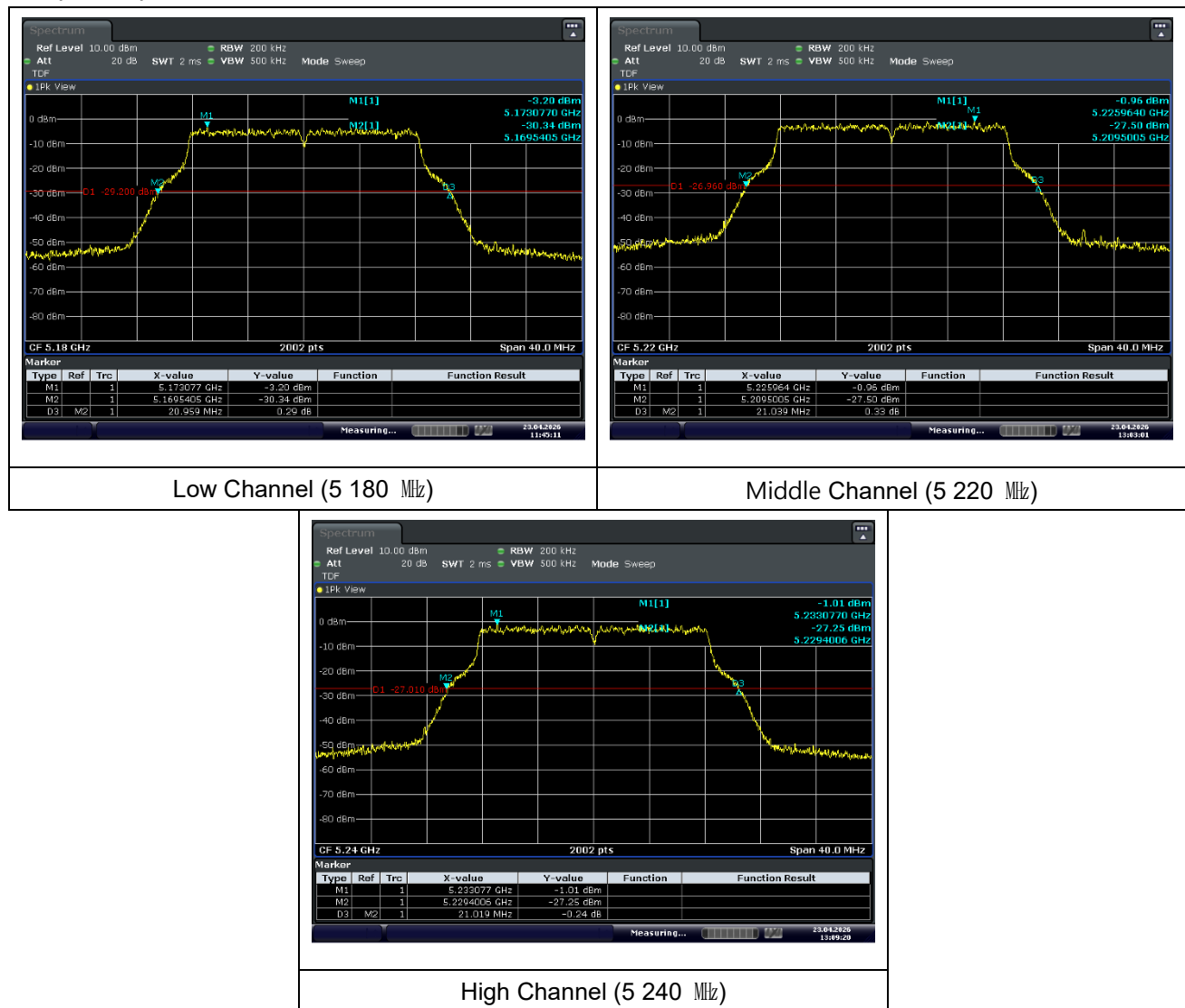
Band	Frequency (MHz)	Ch.	Data Rate	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
U-NII 1	5 210	42	MCS8	81.998	77.043
U-NII 3	5 775	155		81.918	77.043

Test plots

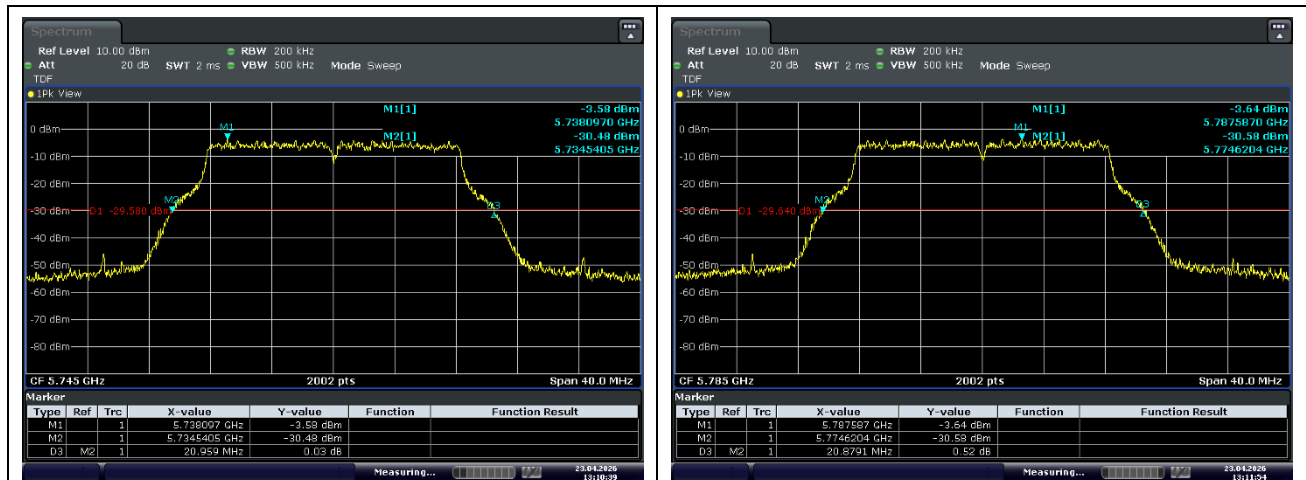
- Ant. 0

26 dB Bandwidth

11a (U-NII 1)

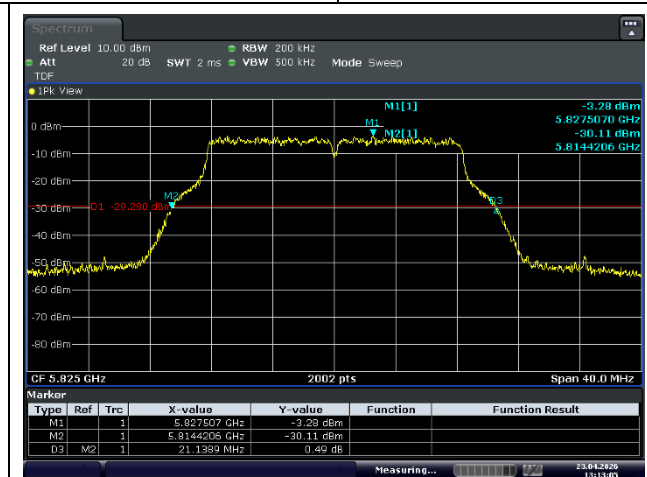


11a (U-NII 3)



Low Channel (5.745 MHz)

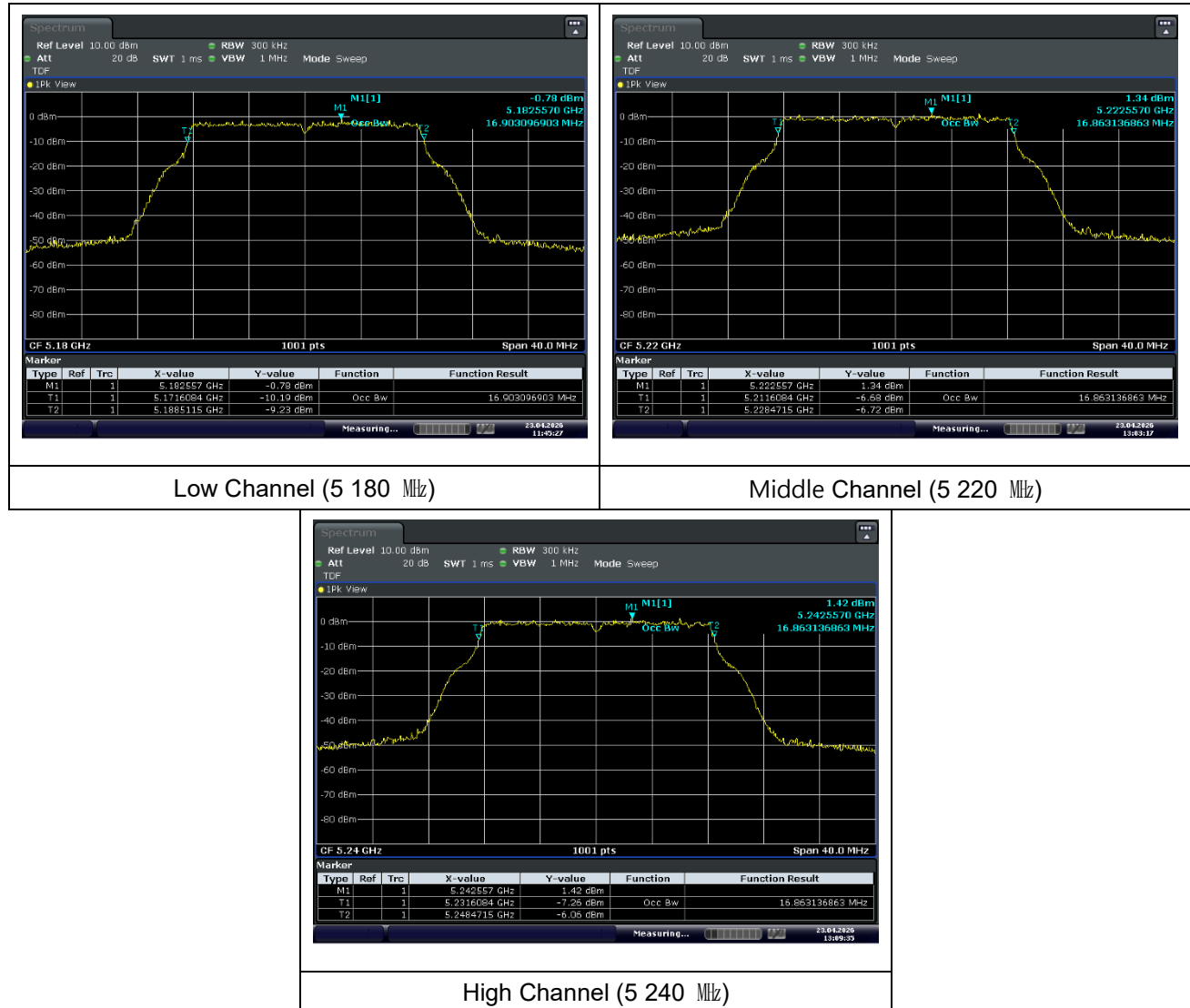
Middle Channel (5.785 MHz)



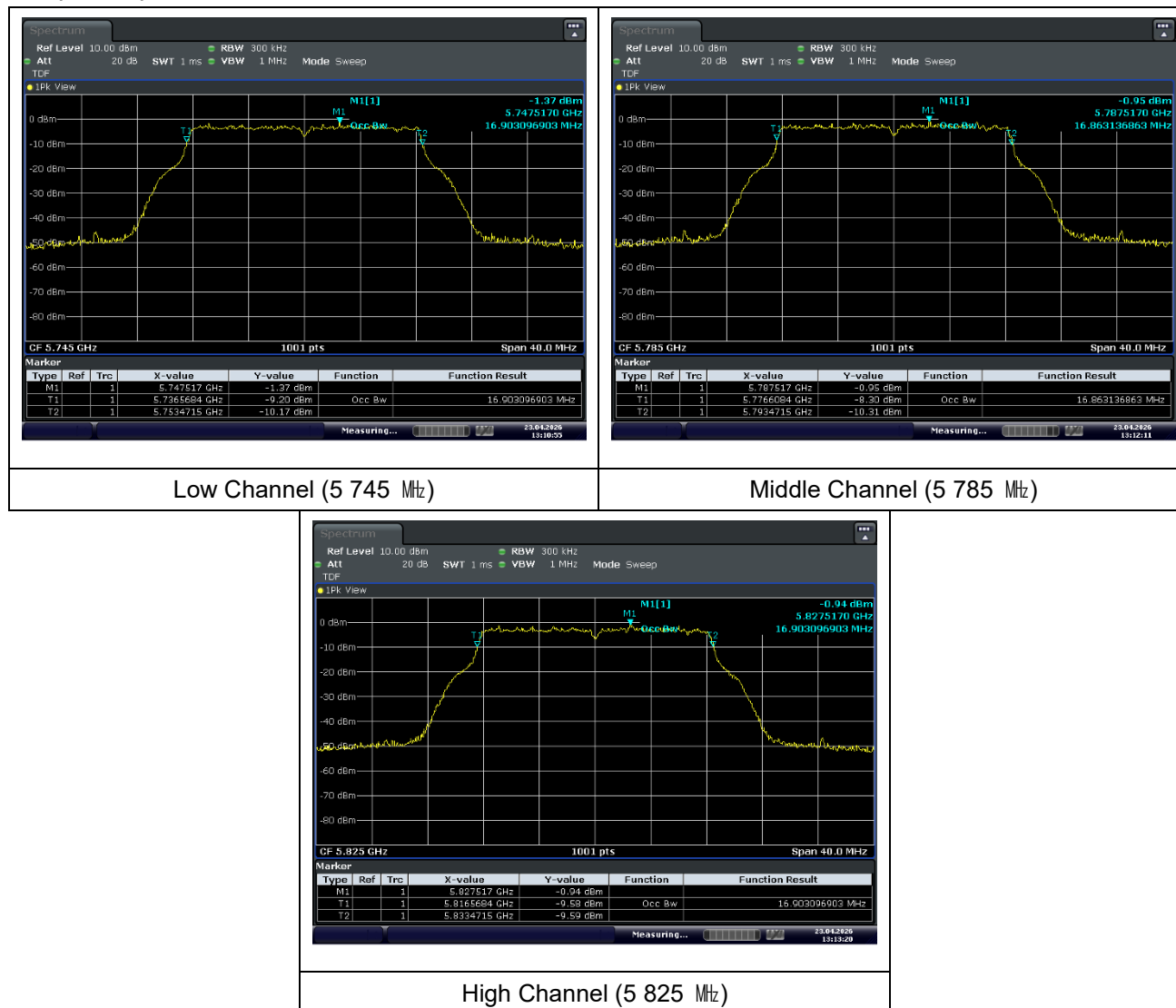
High Channel (5.825 MHz)

99 % Bandwidth

11a (U-NII 1)



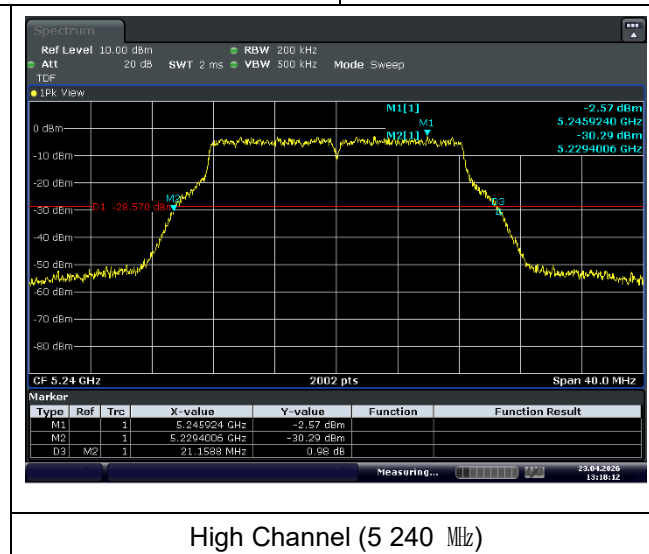
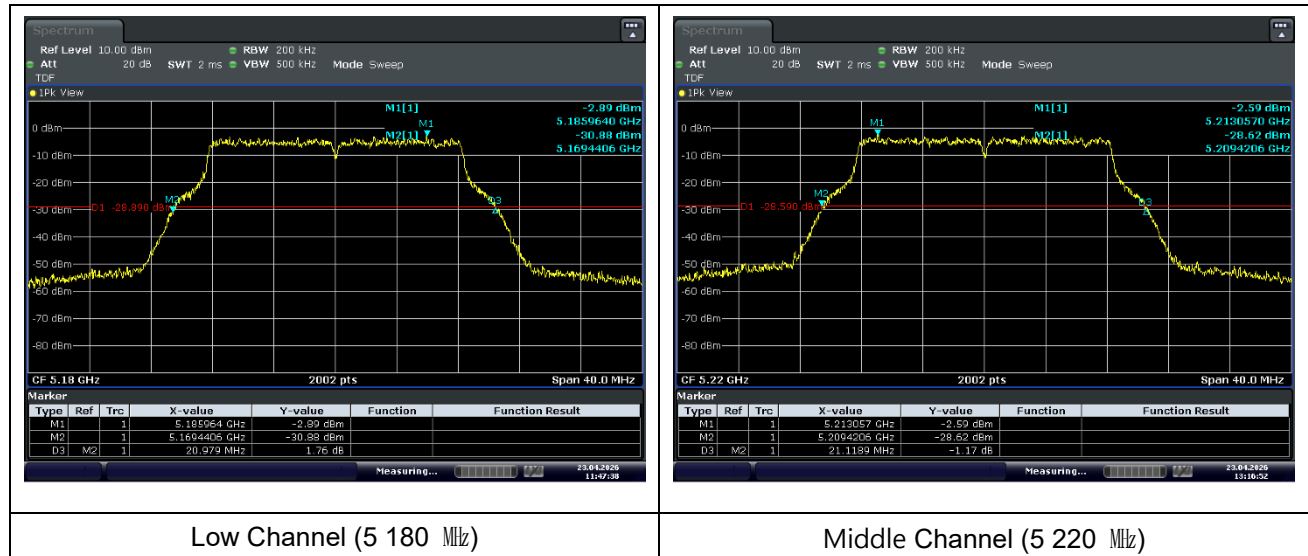
11a (U-NII 3)



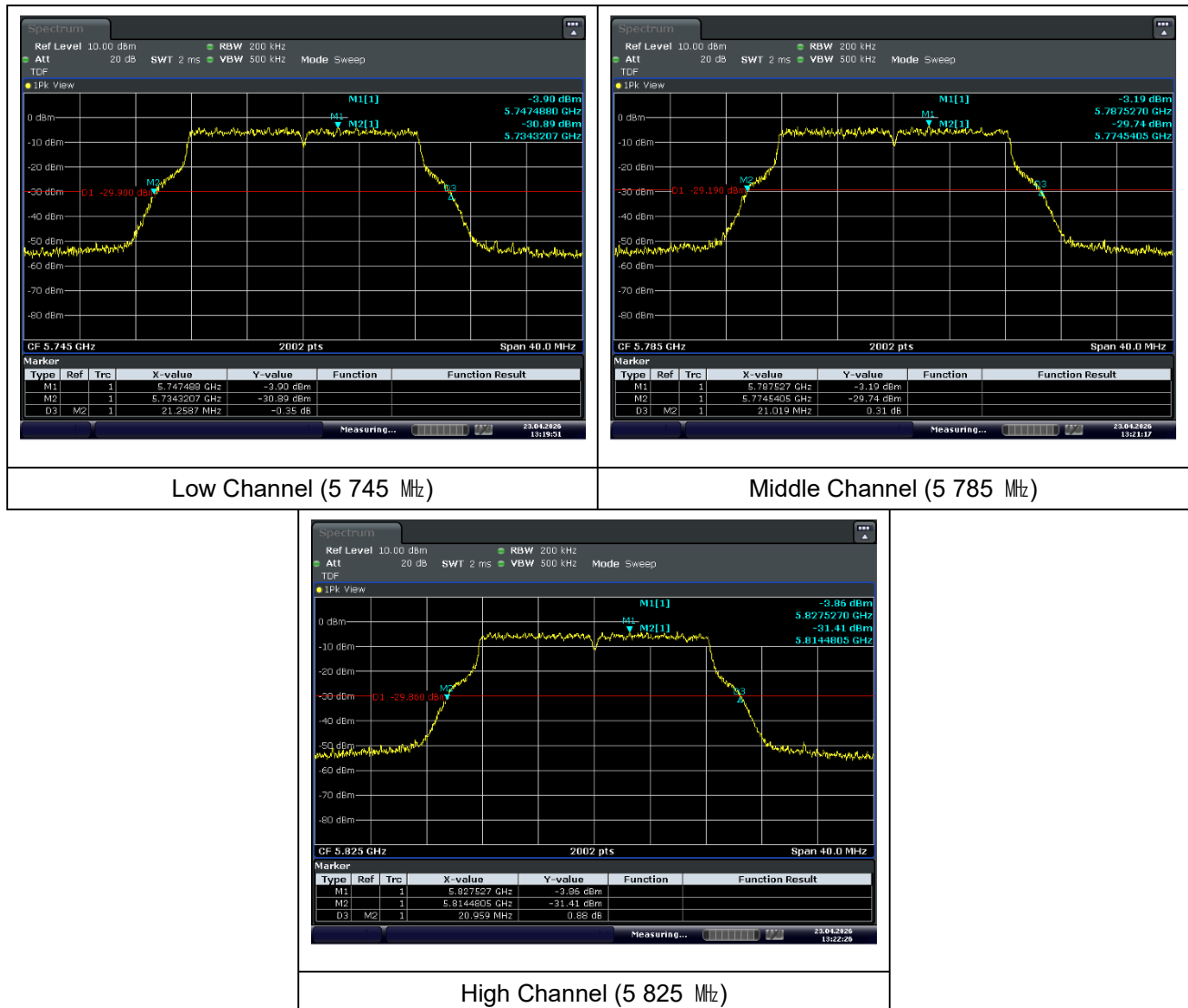
- Ant. 1

26 dB Bandwidth

11a (U-NII 1)

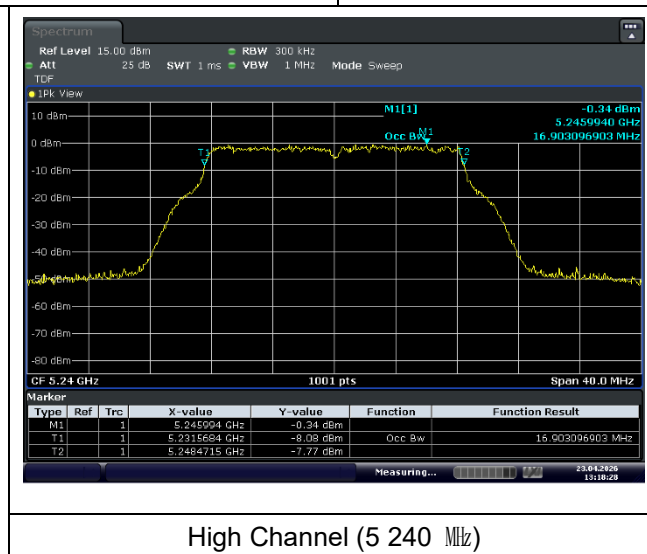
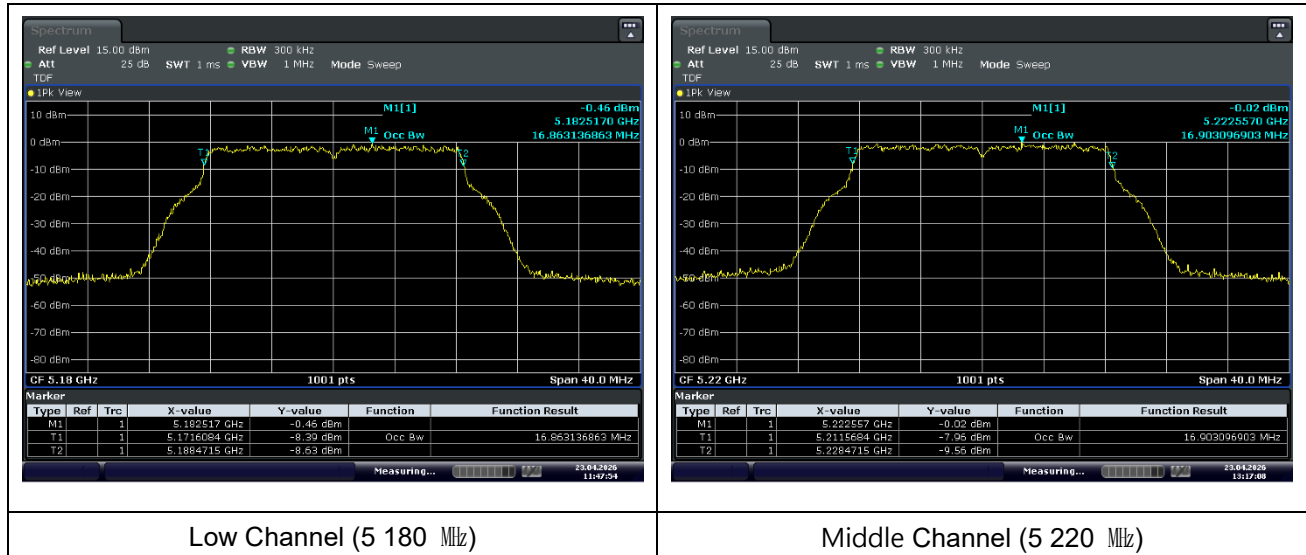


11a (U-NII 3)

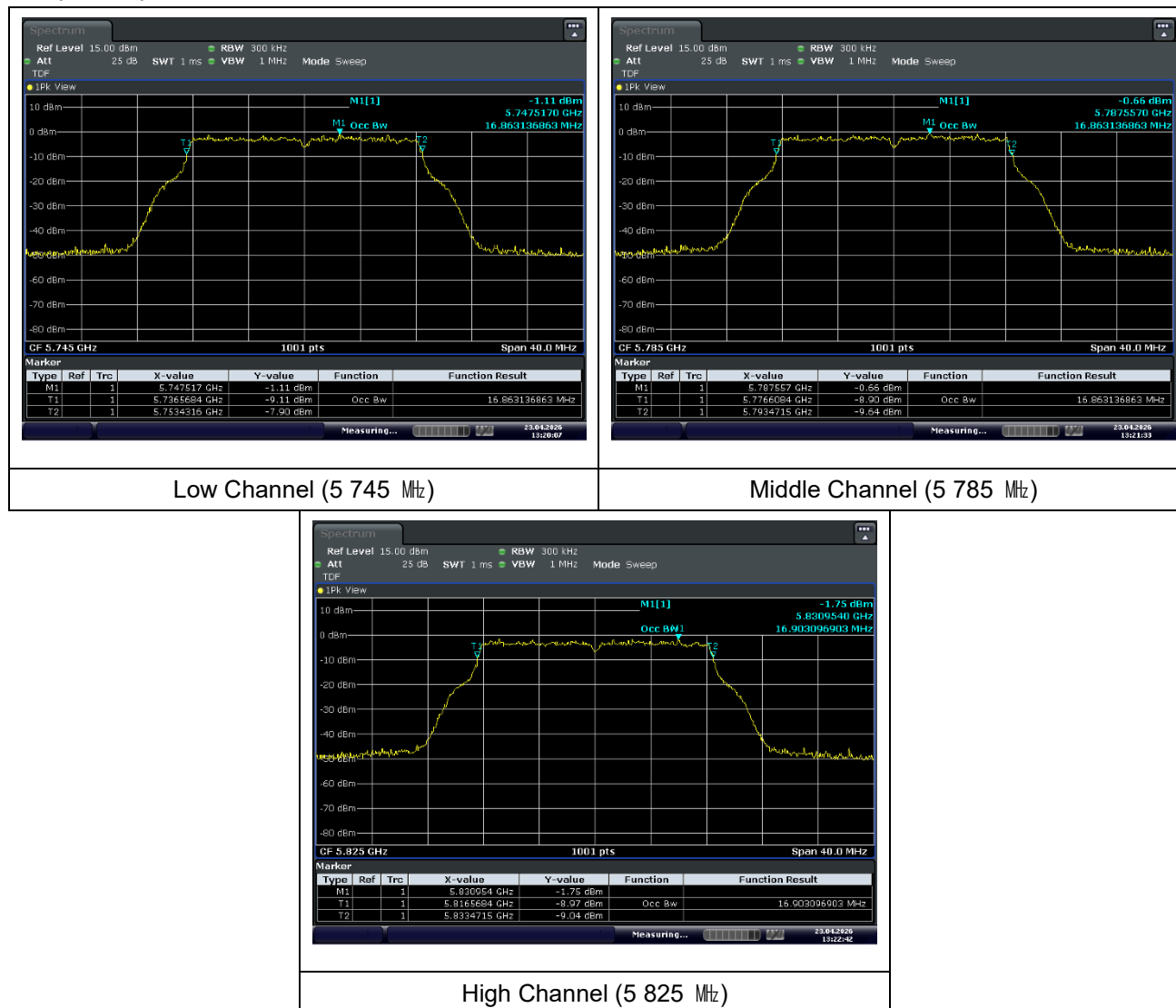


99 % Bandwidth

11a (U-NII 1)



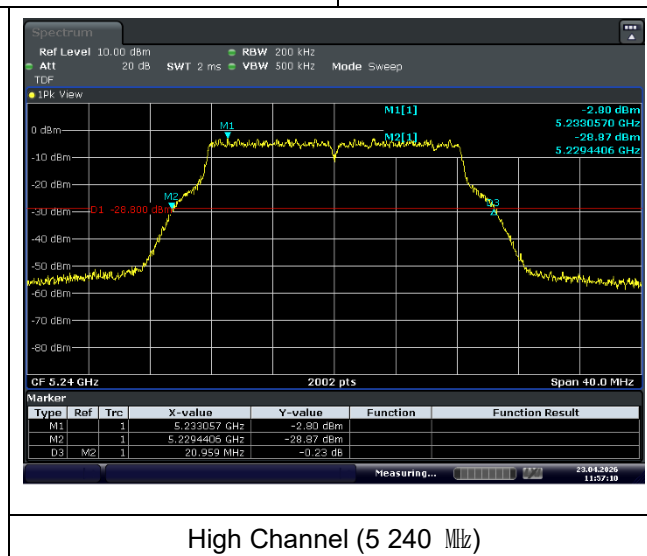
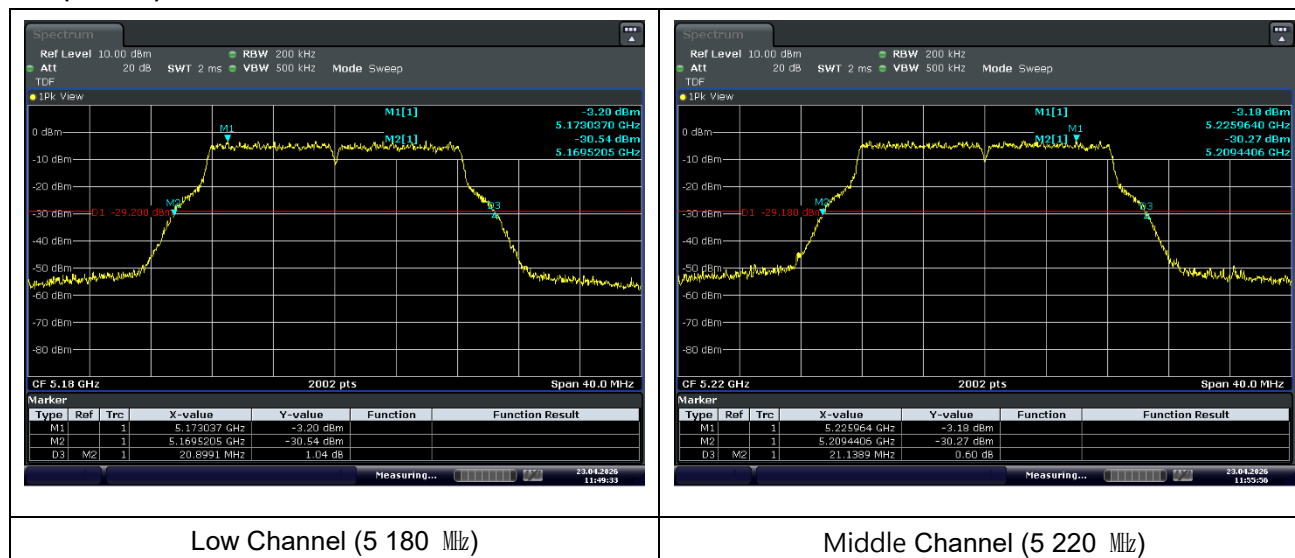
11a (U-NII 3)



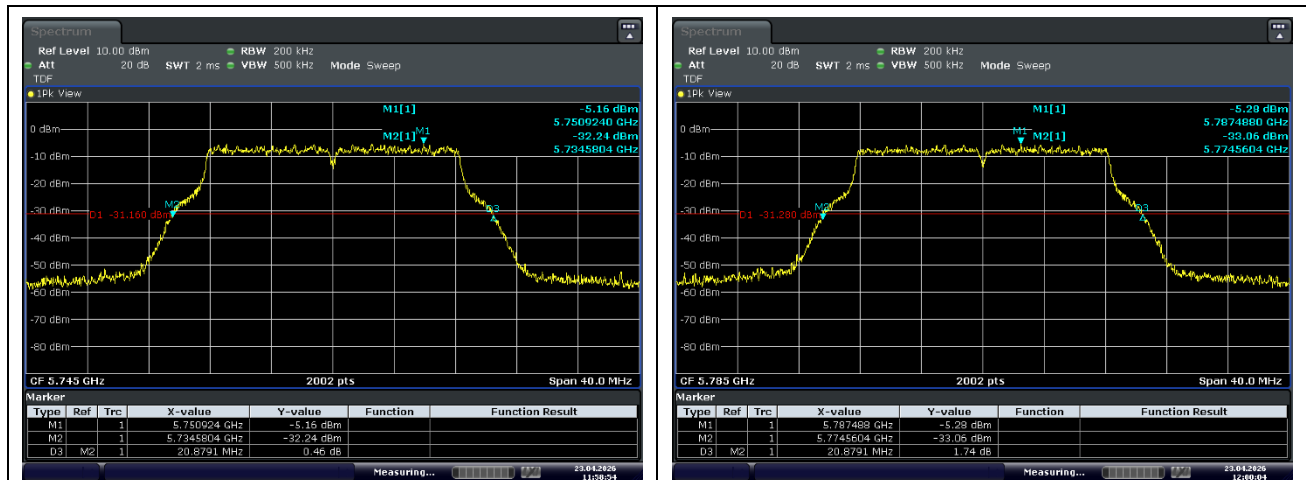
- Ant. 2

26 dB Bandwidth

11a (U-NII 1)

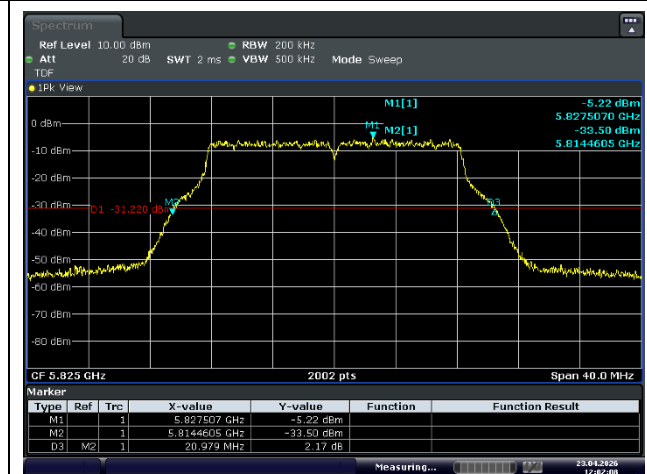


11a (U-NII 3)



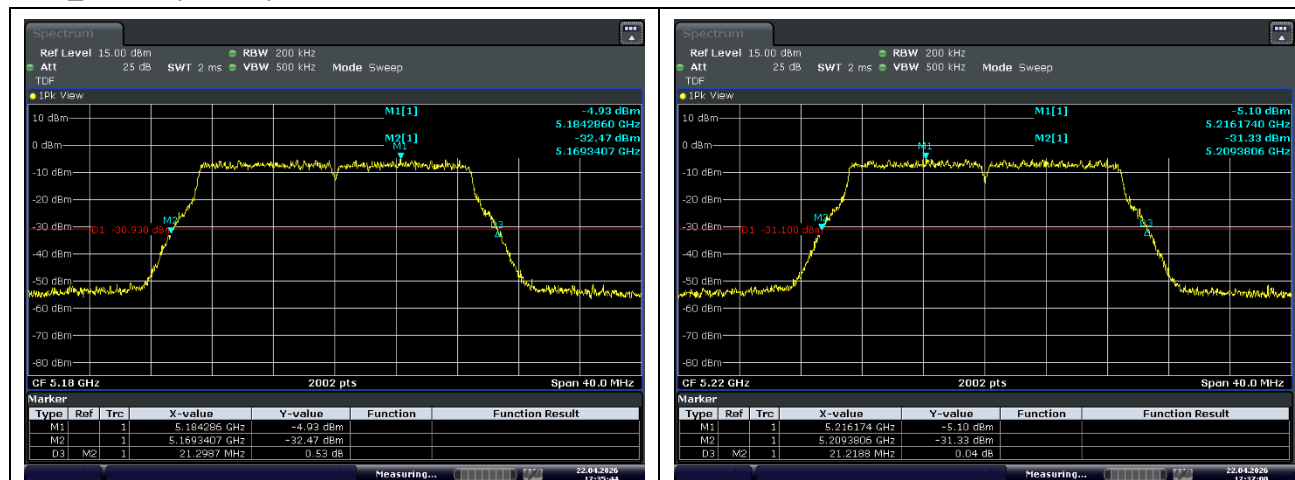
Low Channel (5.745 MHz)

Middle Channel (5.785 MHz)



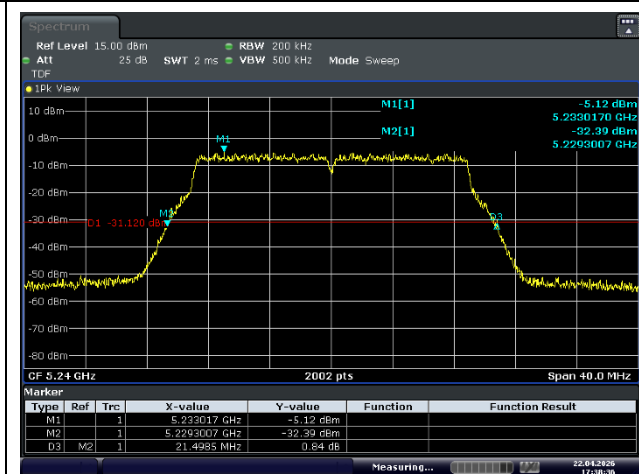
High Channel (5.825 MHz)

11ac_VHT20 (U-NII 1)



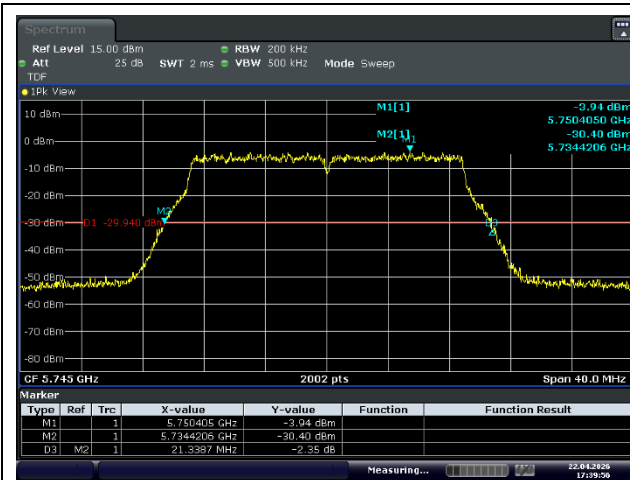
Low Channel (5.18 GHz)

Middle Channel (5.22 GHz)

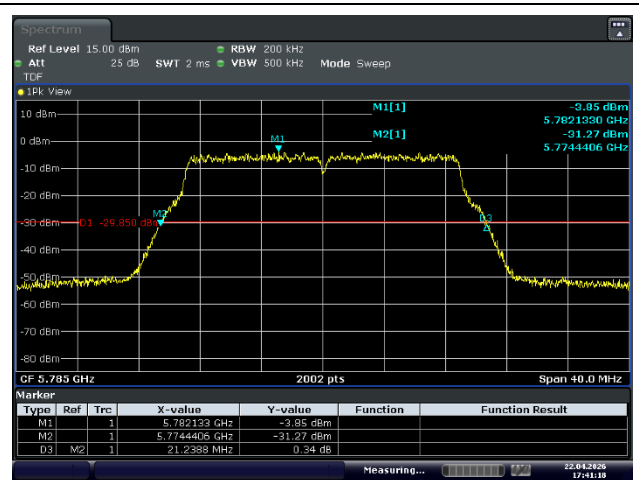


High Channel (5.24 GHz)

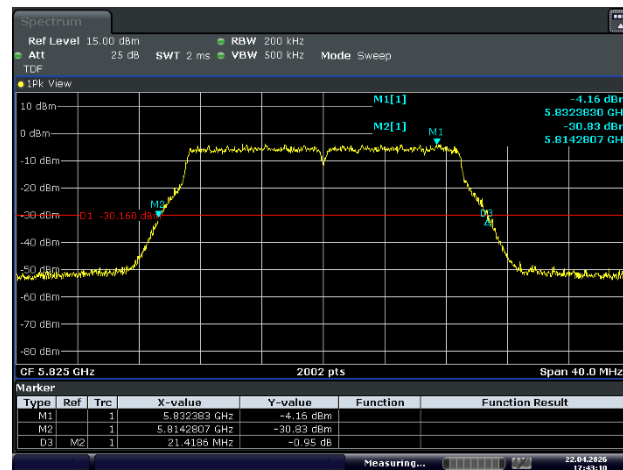
11ac_VHT20 (U-NII 3)



Low Channel (5.745 MHz)

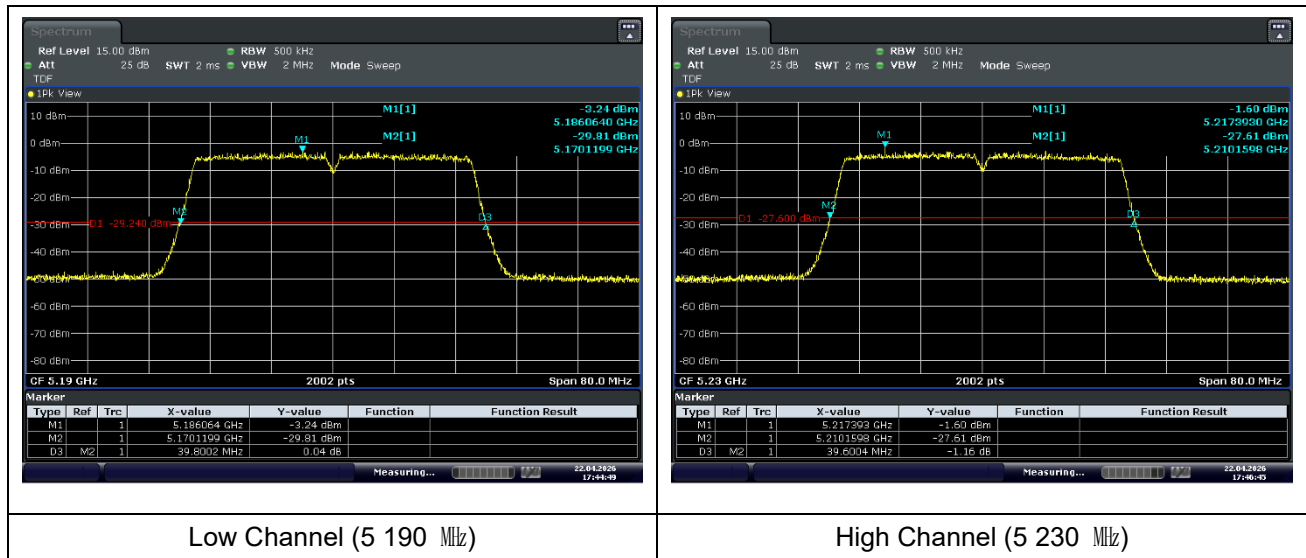


Middle Channel (5.785 MHz)

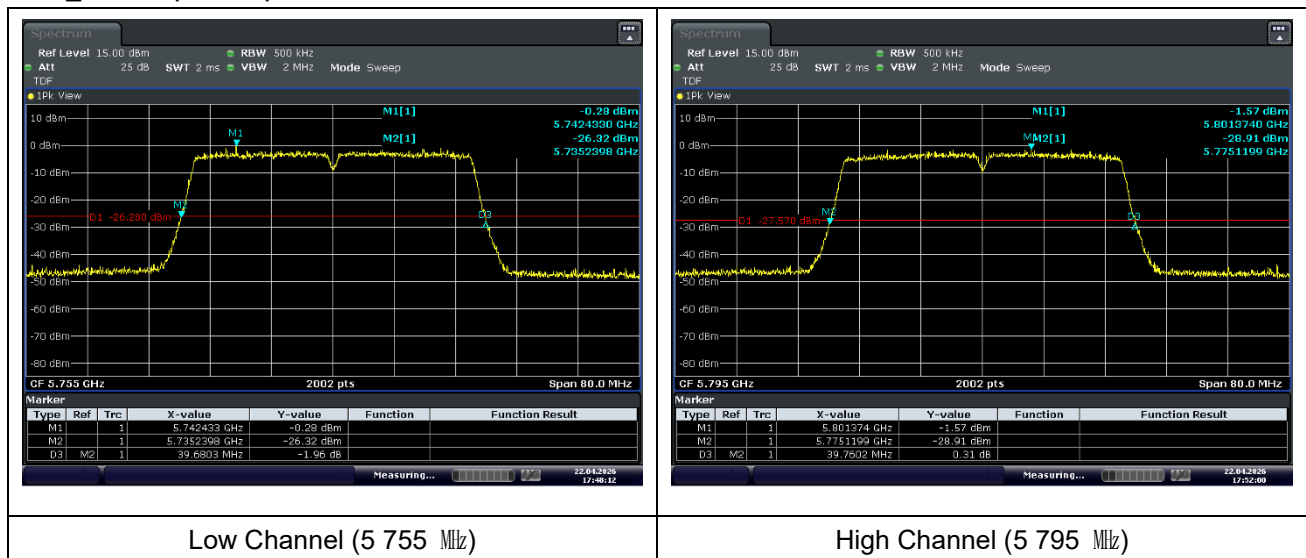


High Channel (5.825 MHz)

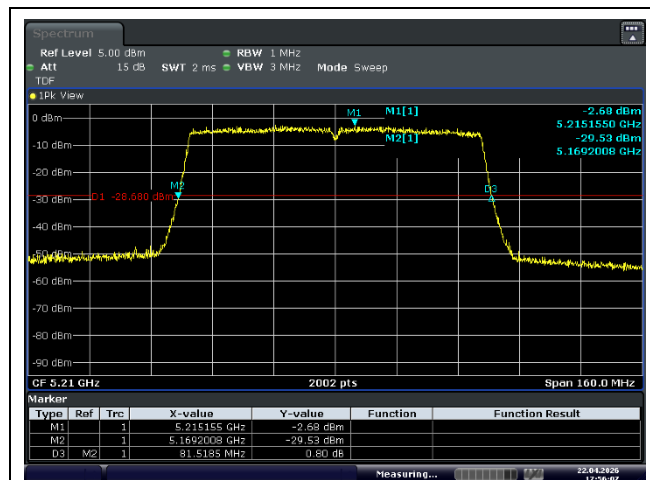
11ac_VHT40 (U-NII 1)



11ac_VHT40 (U-NII 3)

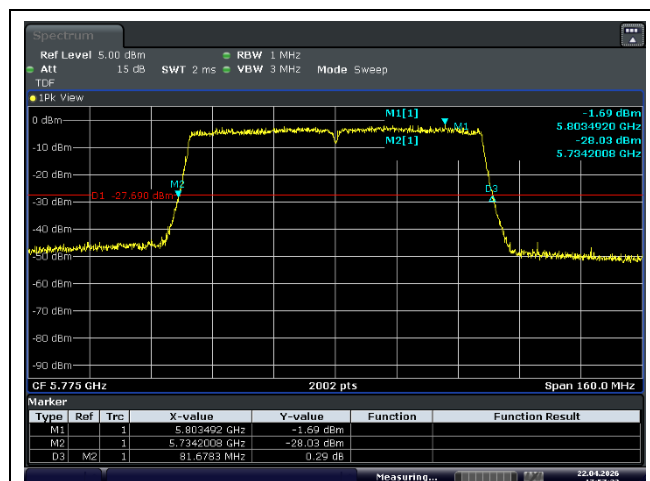


11ac_VHT80 (U-NII 1)



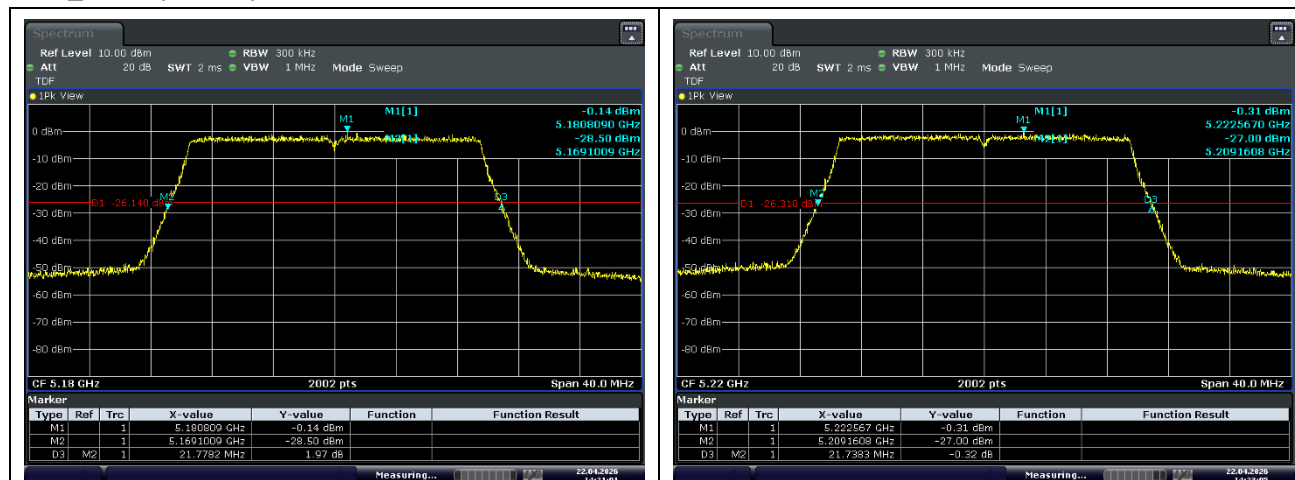
Middle Channel (5 210 MHz)

11ac_VHT80 (U-NII 3)



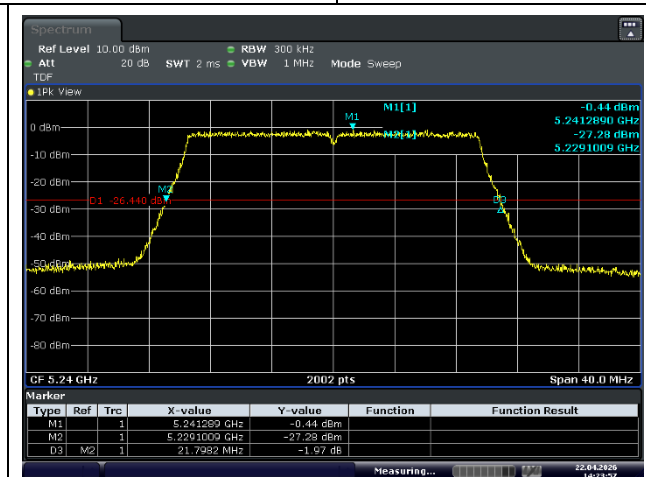
Low Channel (5 775 MHz)

11ax_HE20 (U-NII 1)



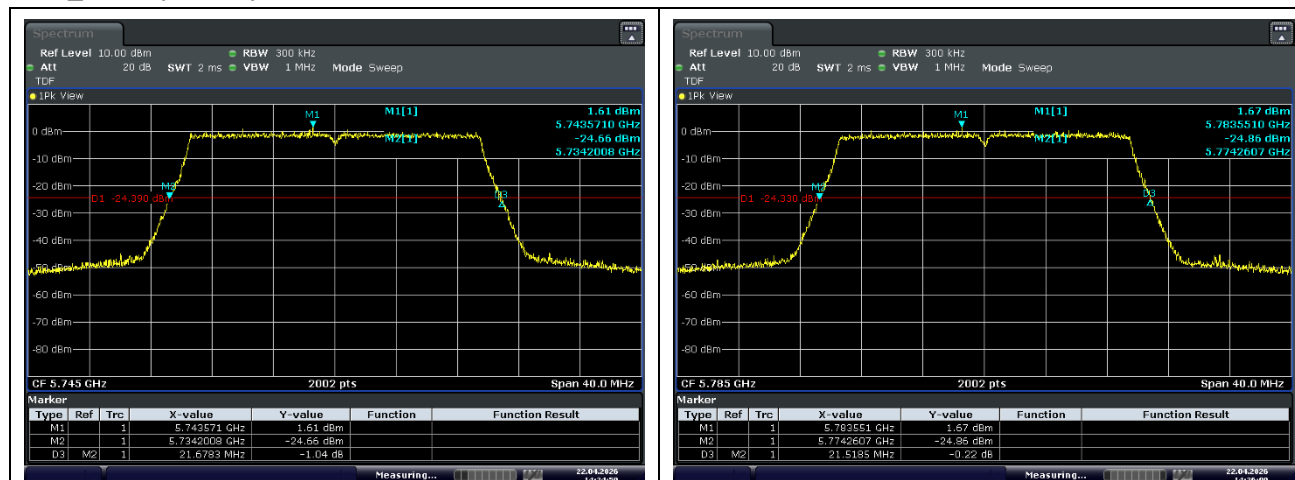
Low Channel (5 180 MHz)

Middle Channel (5 220 MHz)



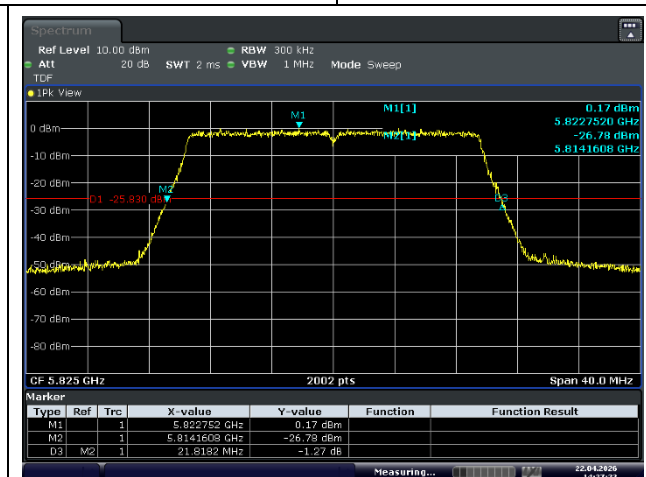
High Channel (5 240 MHz)

11ax_HE20 (U-NII 3)



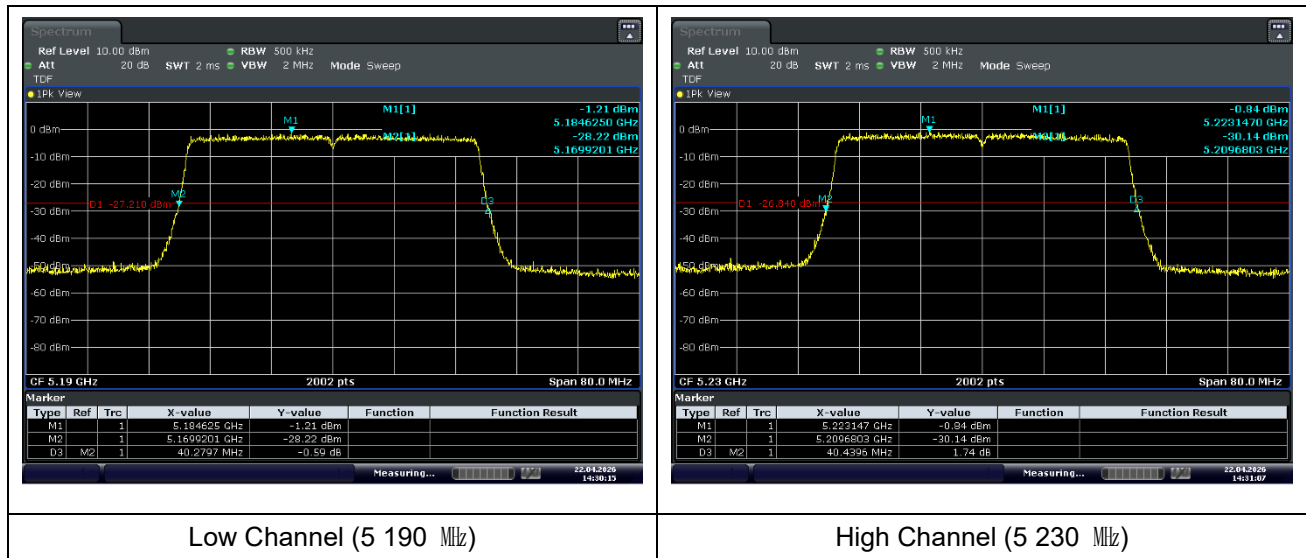
Low Channel (5 745 MHz)

Middle Channel (5 785 MHz)

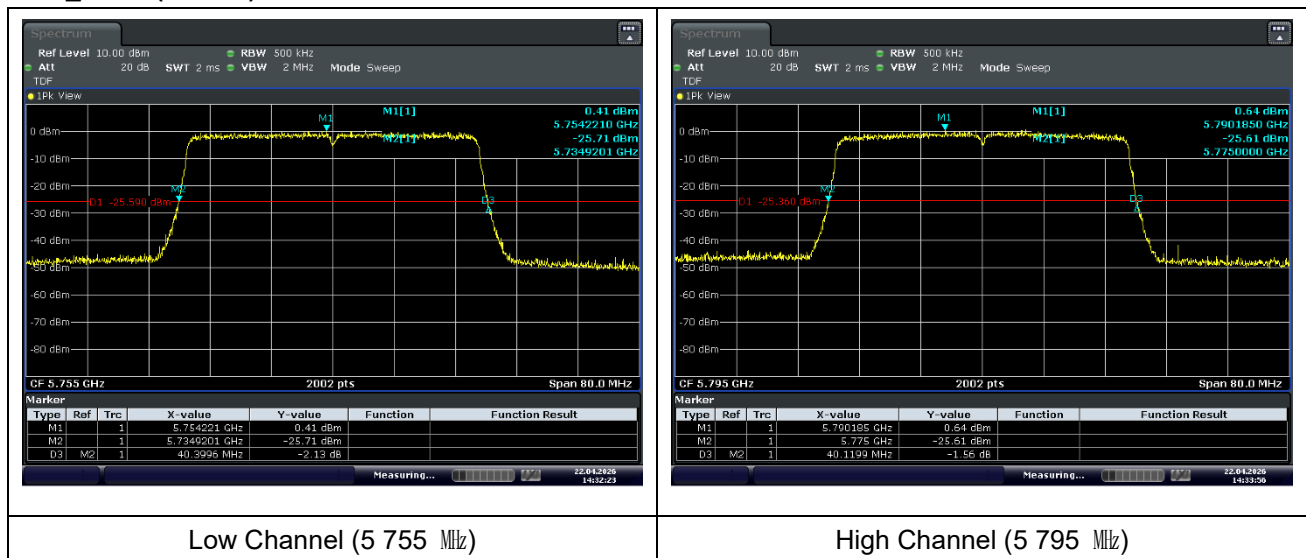


High Channel (5 825 MHz)

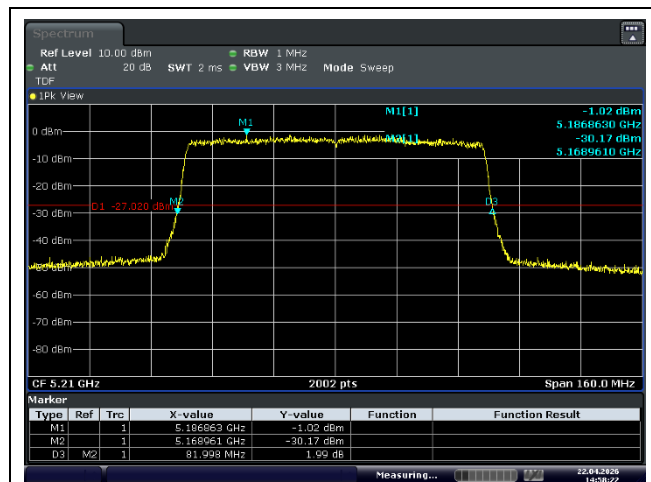
11ax_HE40 (U-NII 1)



11ax_HE40 (U-NII 3)

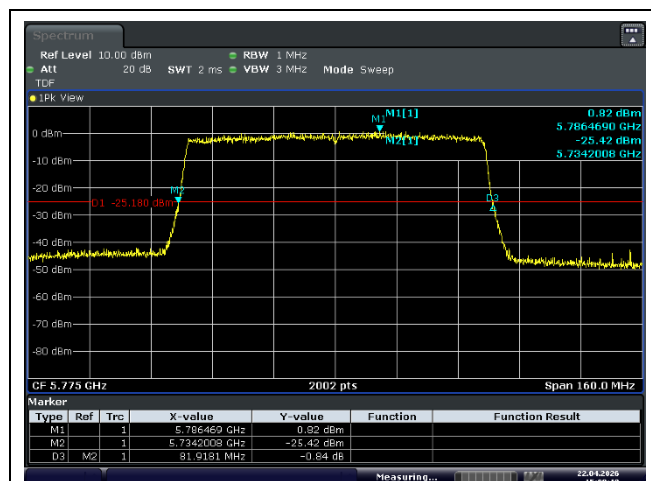


11ax_HE80 (U-NII 1)



Middle Channel (5 210 MHz)

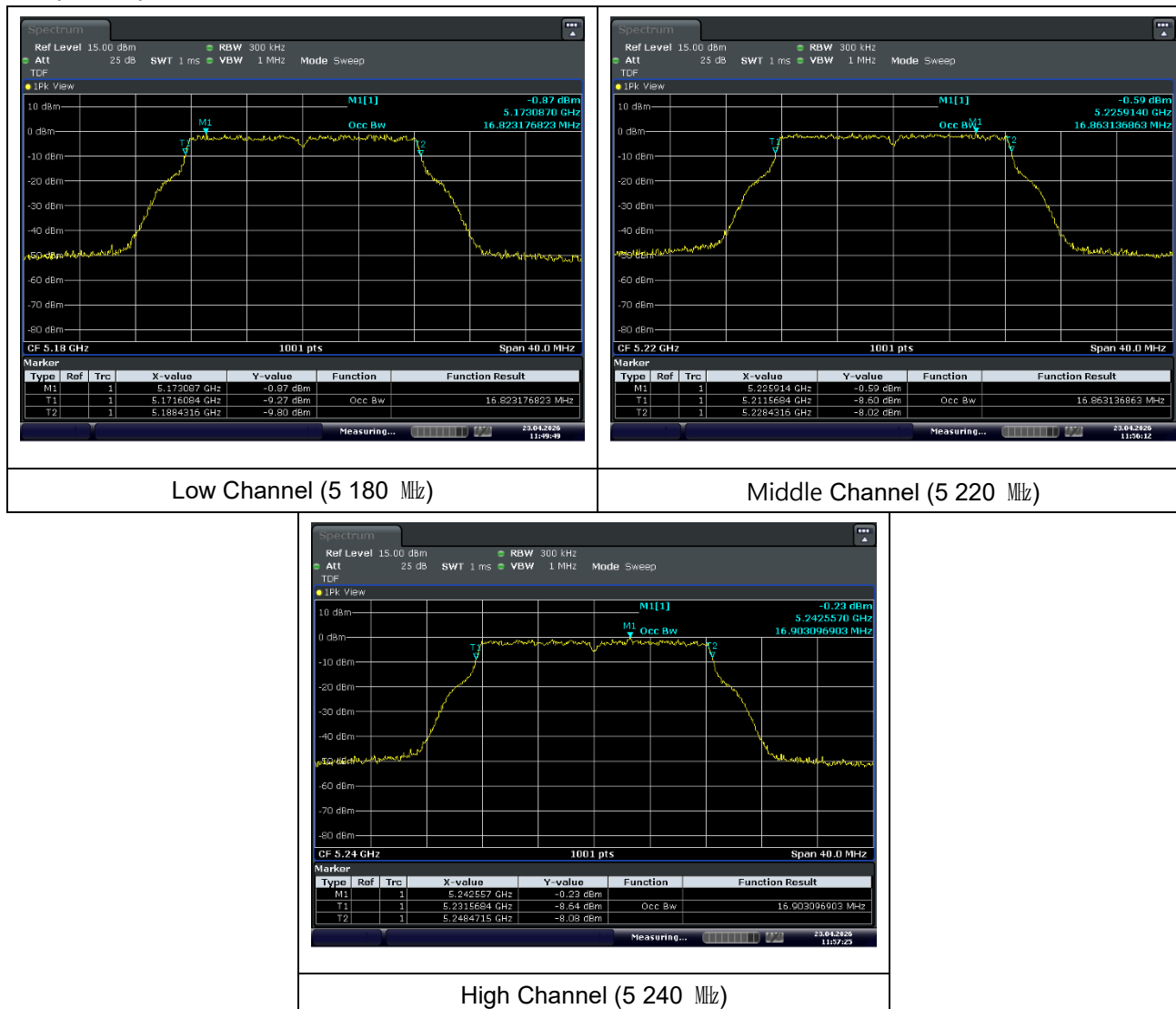
11ax_HE80 (U-NII 3)



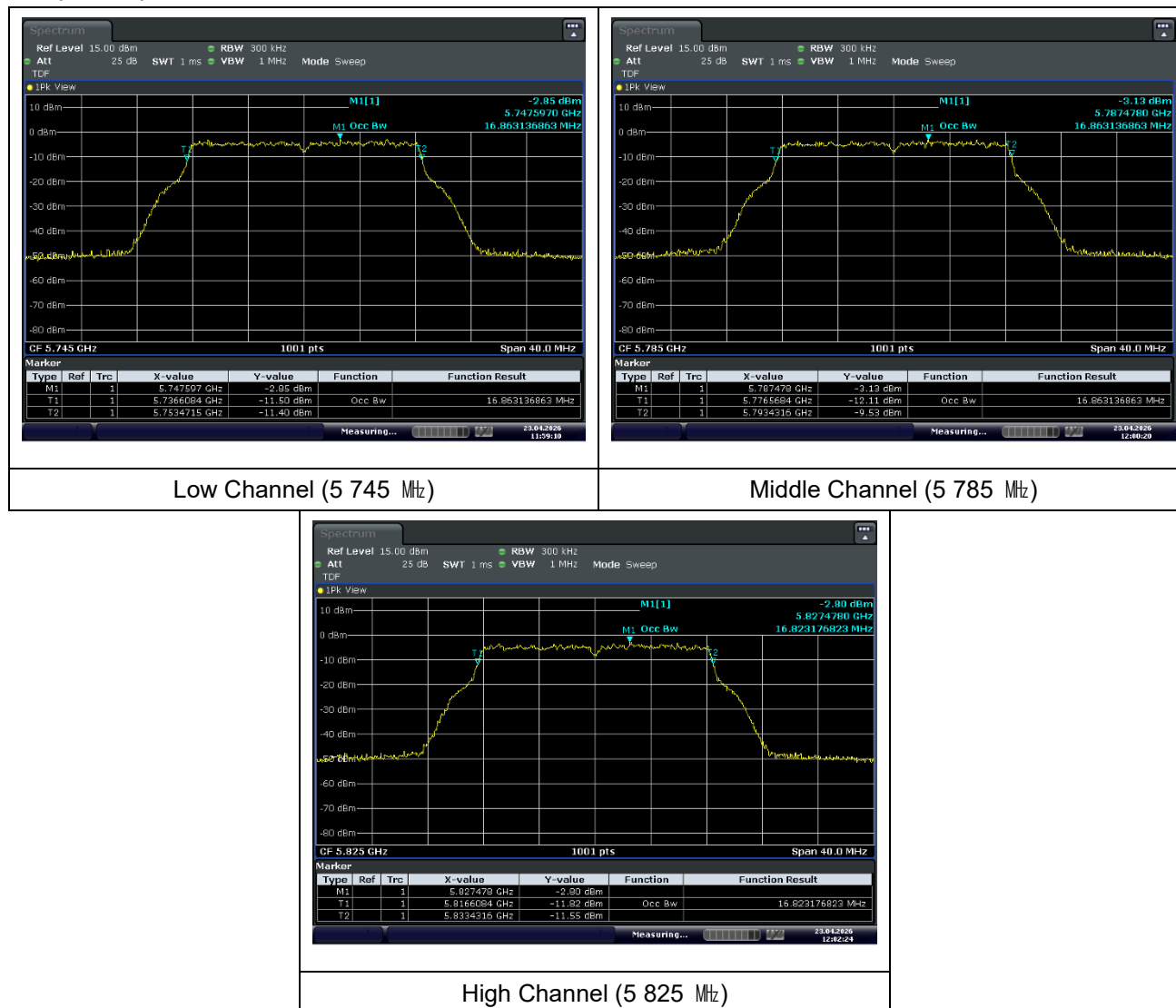
Low Channel (5 775 MHz)

99 % Bandwidth

11a (U-NII 1)



11a (U-NII 3)



11ac_VHT20 (U-NII 1)

