

3. 26 dB Bandwidth & 99 % Bandwidth

3.1. Test Setup



3.2. Limit

None; for reporting purpose only.

3.3. Test Procedure

All data rates and modes were investigated for this test. The full data for the worst case data rate are reported in this section.

3.3.1. 26 dB Bandwidth

1. This measurement settings are specified in section C.1 of KDB 789033 D02 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 %.

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3.3.2. 99 % Bandwidth

1. This measurement settings are specified in section D of KDB 789033_D02 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 x 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.

Remark;

In case of band crossing channels 138, 142 and 144, the measurement is complied with section III.A of KDB 789033 D02 v02r01.

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RTT5041-19(2019.04.24)(1)

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A4(210 mm x 297 mm)

3.4. Test result

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 % R.H.

Mode	Band	Frequency (MHz)	Ch.	Data Rate(Mbps)	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
11a	U-NII 1	5 180	36	6	21.013	-
		5 220	44		20.955	-
		5 240	48		21.563	16.440
	U-NII 2A	5 260	52		21.592	-
		5 300	60		21.129	-
		5 320	64		21.041	-
	U-NII 2C	5 500	100		21.129	-
		5 580	116		20.839	-
		5 700	140		20.637	-
	U-NII 3	5 745	149		20.839	-
		5 785	157		21.476	-
		5 825	165		21.129	-

Mode	Band	Frequency (MHz)	Ch.	Data Rate(Mbps)	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
11n_HT20	U-NII 1	5 180	36	MCS0	20.724	-
		5 220	44		20.839	-
		5 240	48		20.868	17.482
	U-NII 2A	5 260	52		20.781	-
		5 300	60		21.071	-
		5 320	64		21.099	-
	U-NII 2C	5 500	100		21.071	-
		5 580	116		20.839	-
		5 700	140		20.839	-
	U-NII 3	5 745	149		20.991	-
		5 785	157		21.187	-
		5 825	165		21.129	-

Mode	Band	Frequency (MHz)	Ch.	Data Rate(Mbps)	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
11n_HT40	U-NII 1	5 190	38	MCS0	42.140	-
		5 230	46		42.630	36.006
	U-NII 2A	5 270	54		42.020	-
		5 310	62		42.550	-
	U-NII 2C	5 510	102		43.880	-
		5 550	110		44.060	-
		5 670	134		43.180	-
	U-NII 3	5 755	151		43.860	-
		5 795	159		44.260	-

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Mode	Band	Frequency (MHz)	Ch.	Data Rate(Mbps)	26 dB Bandwidth (MHz)	99 % Bandwidth (MHz)
11ac_VHT80	U-NII 1	5 210	42	MCS0	85.900	75.022
	U-NII 2A	5 290	58		85.500	-
	U-NII 2C	5 530	106		85.670	-
	U-NII 3	5 775	155		87.500	-

Band	Mode	Frequency (MHz)	Ch.	Data Rate(Mbps)	26 dB Bandwidth (MHz)
U-NII 2C (Band-crossing channel)	11a	5 720	144	6	15.420
	11n_HT20	5 720	144	MCS0	15.420
	11n_HT40	5 710	142	MCS0	36.260
	11ac_VHT80	5 690	138	MCS0	78.070

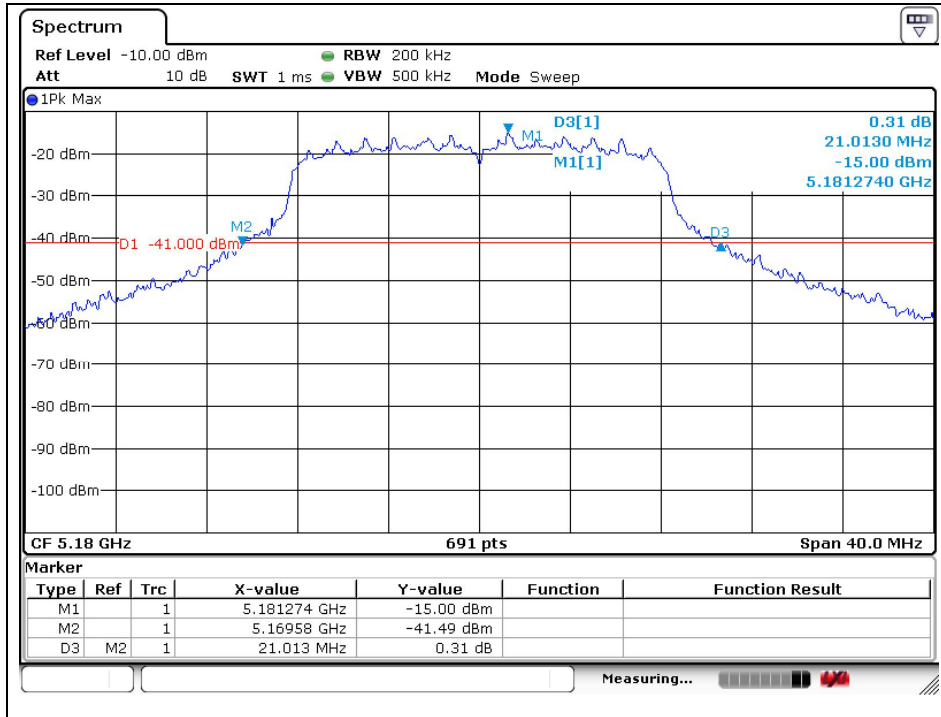
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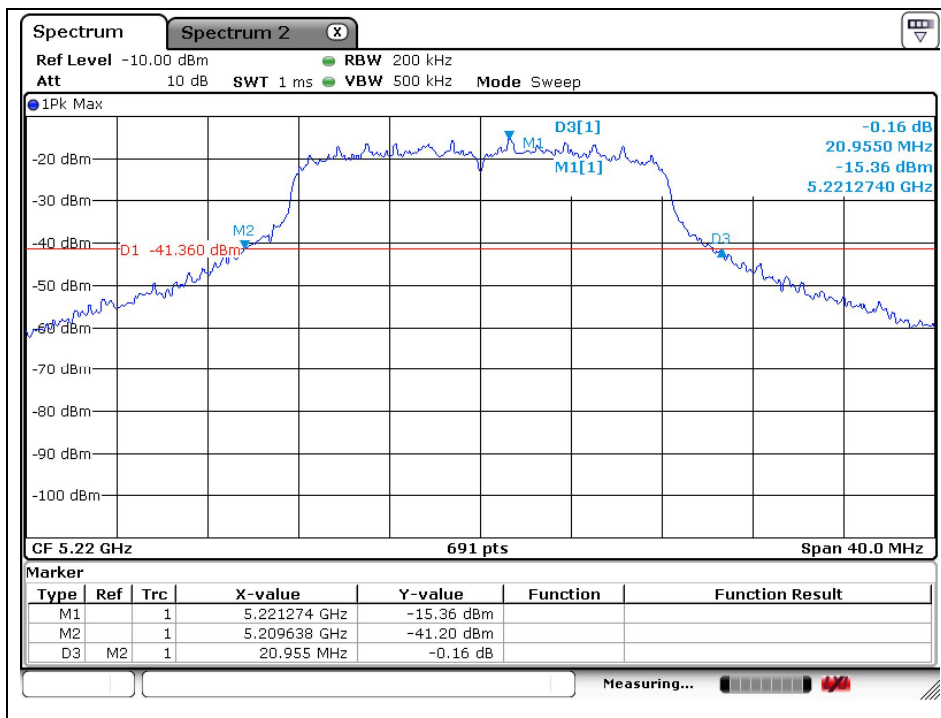
26 dB Bandwidth

802.11a (Band 1)

Low Channel (5 180 MHz)

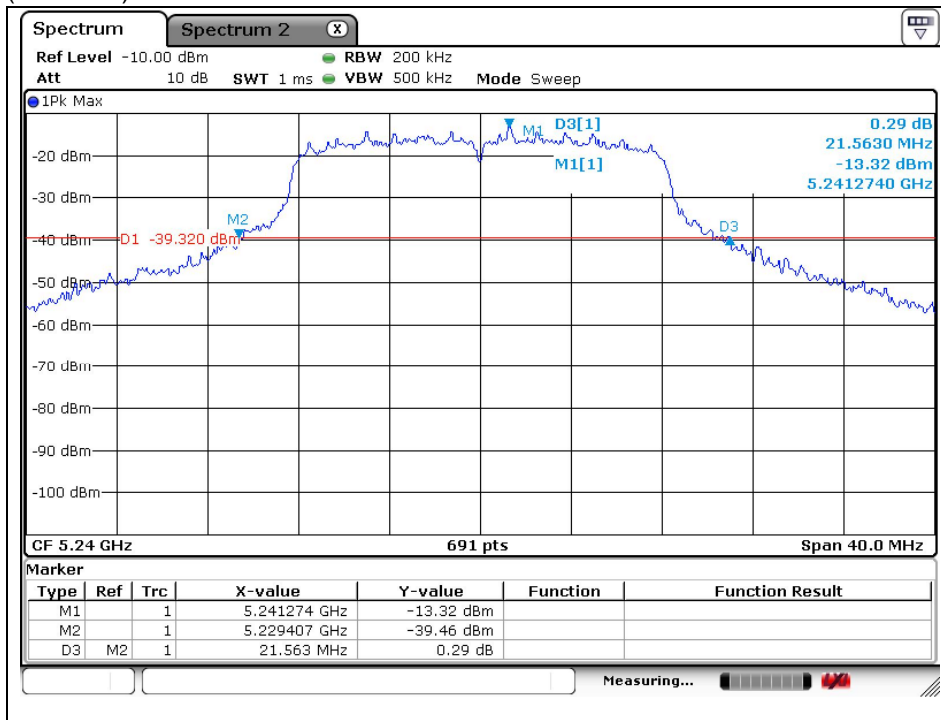


Middle Channel (5 220 MHz)



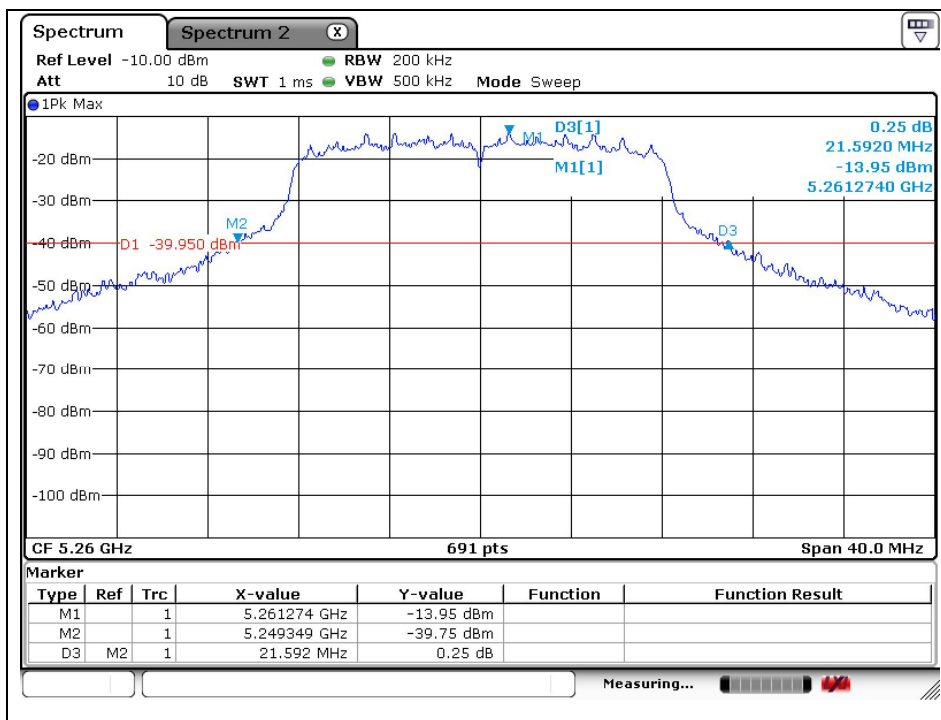
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High Channel (5 240 MHz)



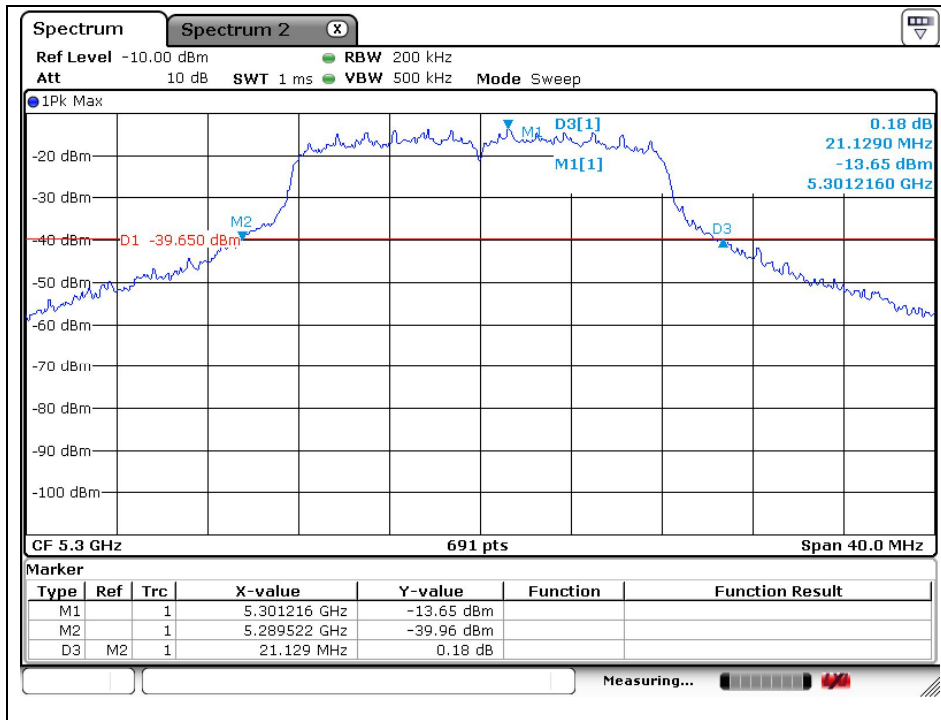
802.11a (Band 2A)

Low Channel (5 260 MHz)

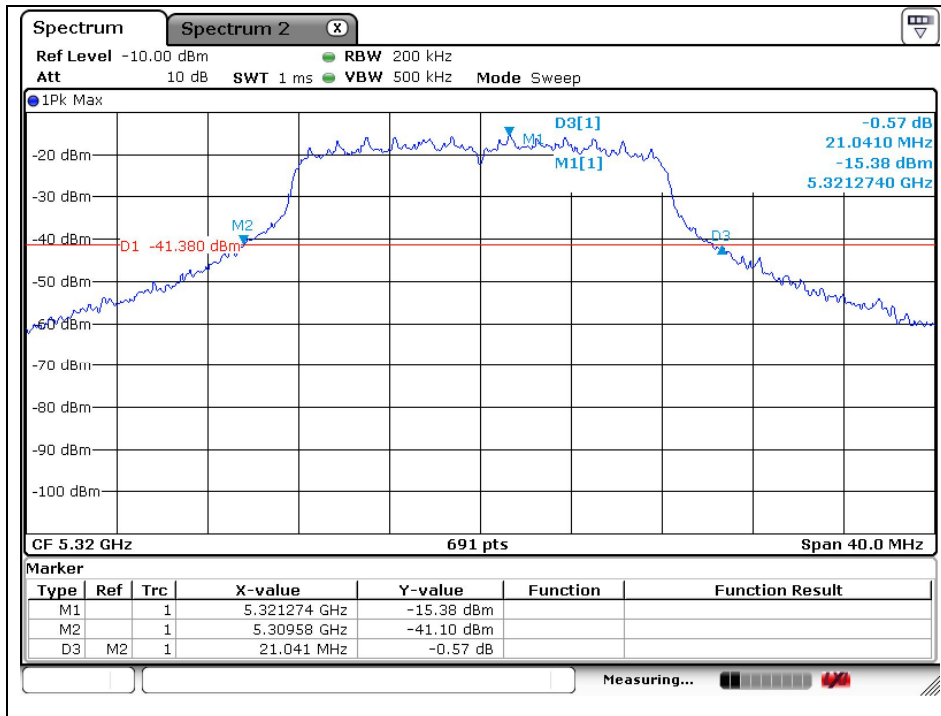


The results of this test report are effective only to the items tested. The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

Middle Channel (5 300 MHz)



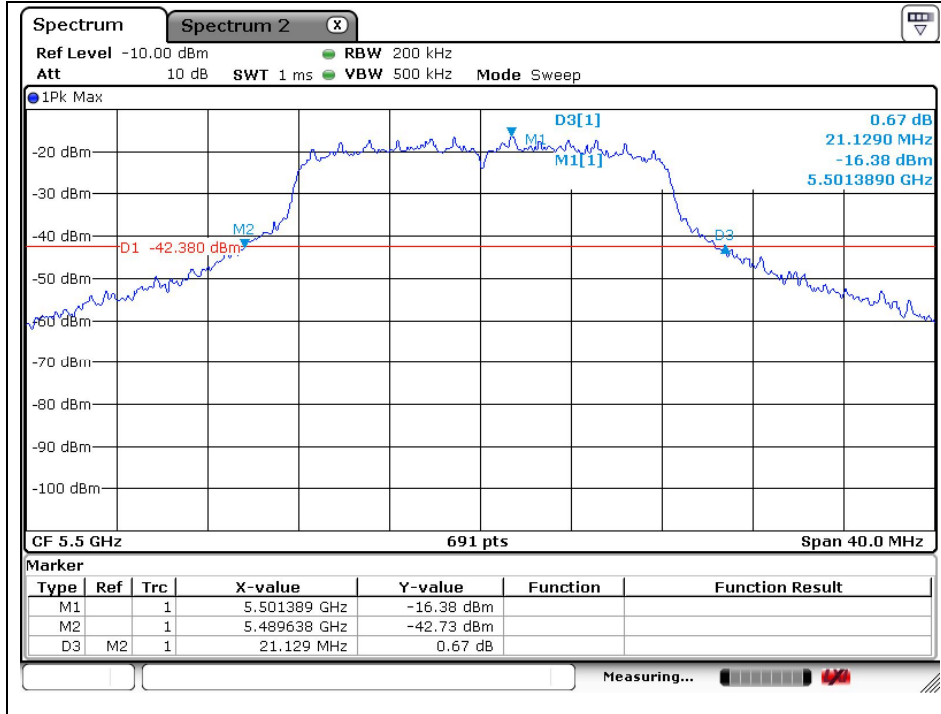
High Channel (5 320 MHz)



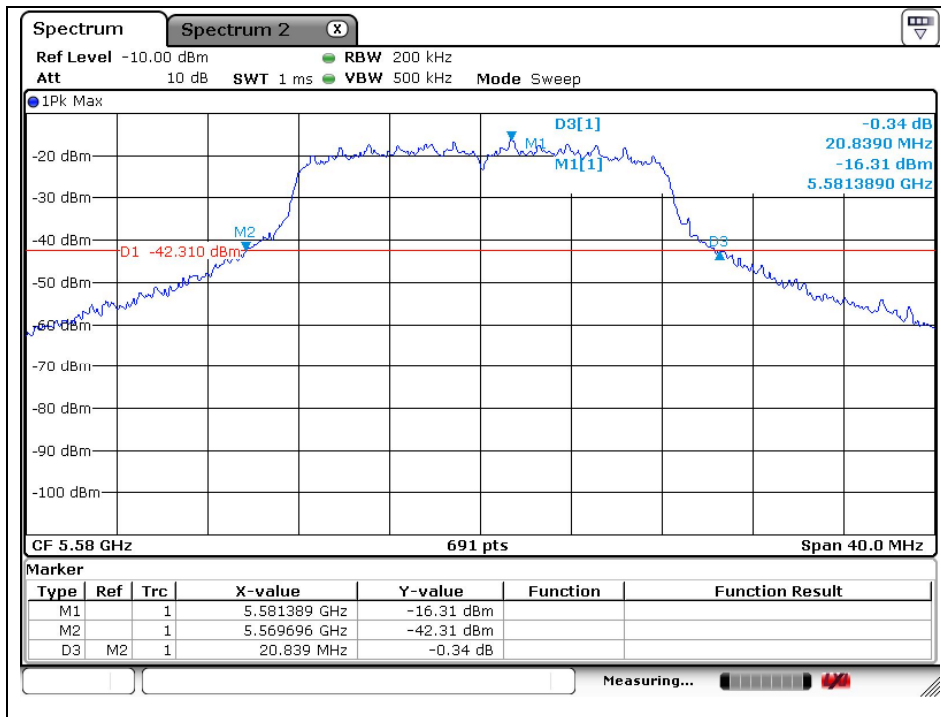
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802.11a (Band 2C)

Low Channel (5 500 MHz)

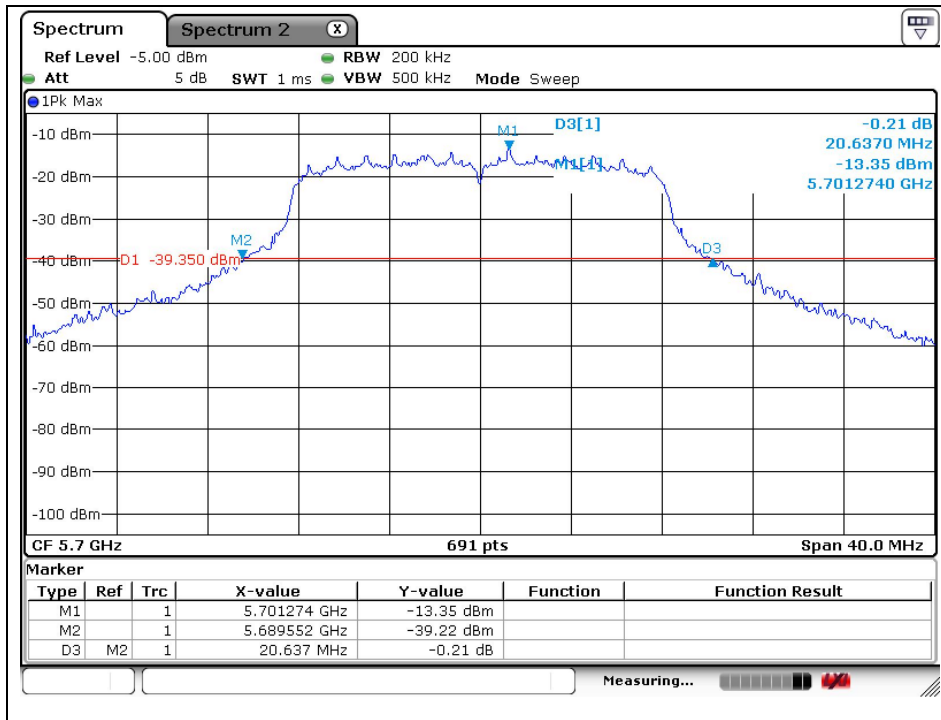


Middle Channel (5 580 MHz)



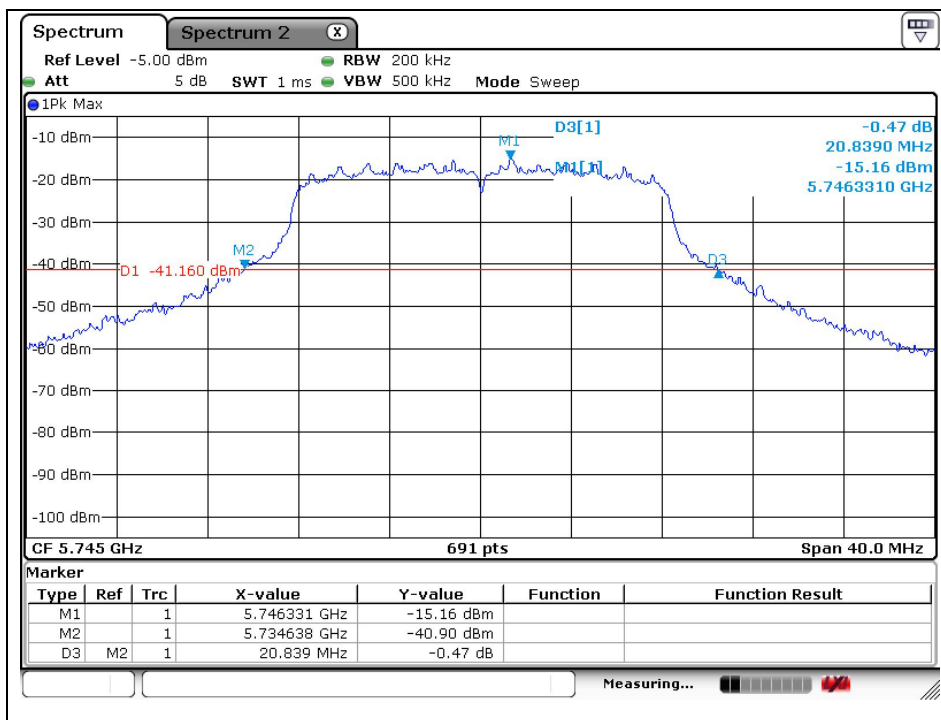
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High Channel (5 700 MHz)



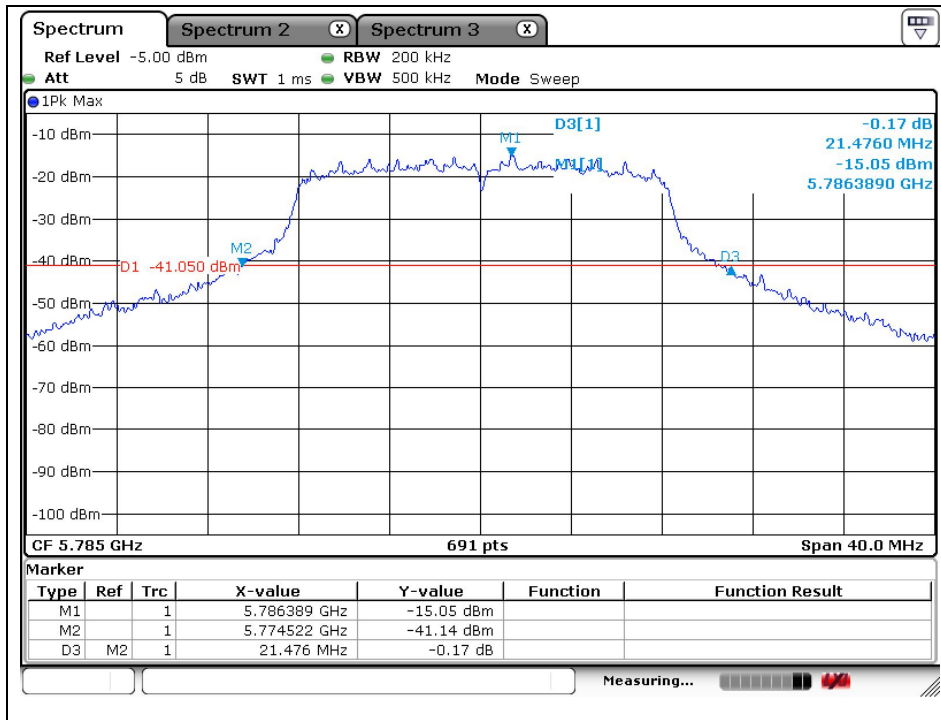
802.11a (Band 3)

Low Channel (5 745 MHz)

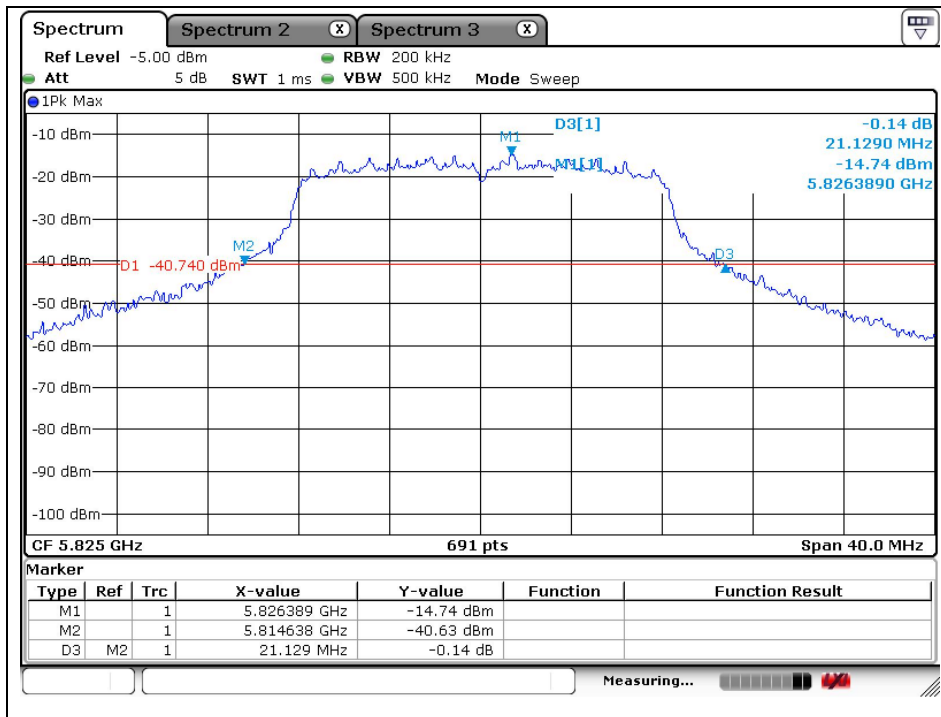


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Middle Channel (5 785 MHz)



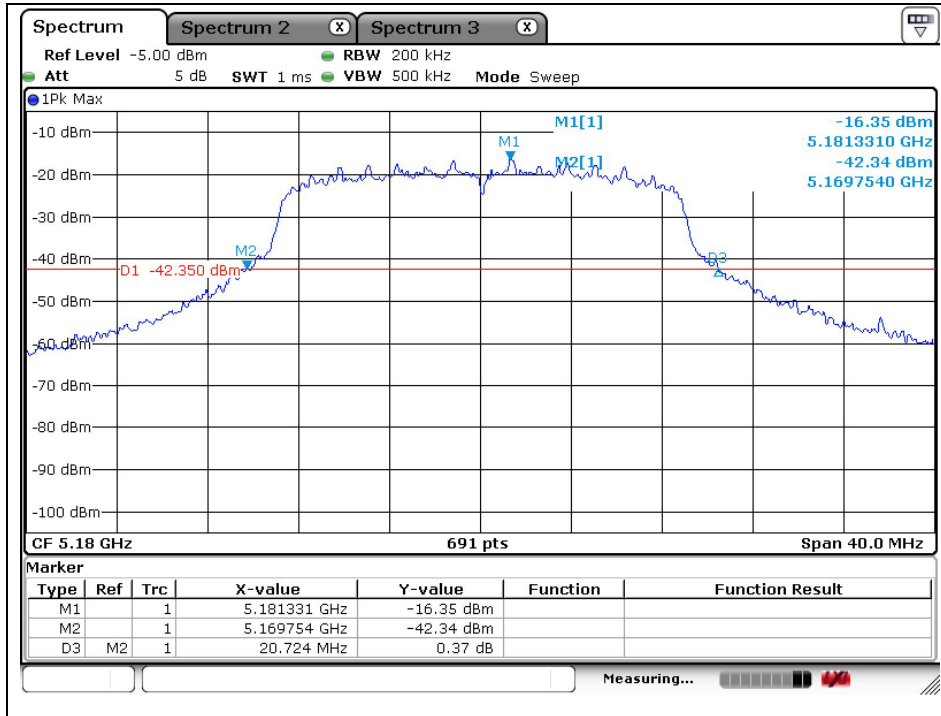
High Channel (5 825 MHz)



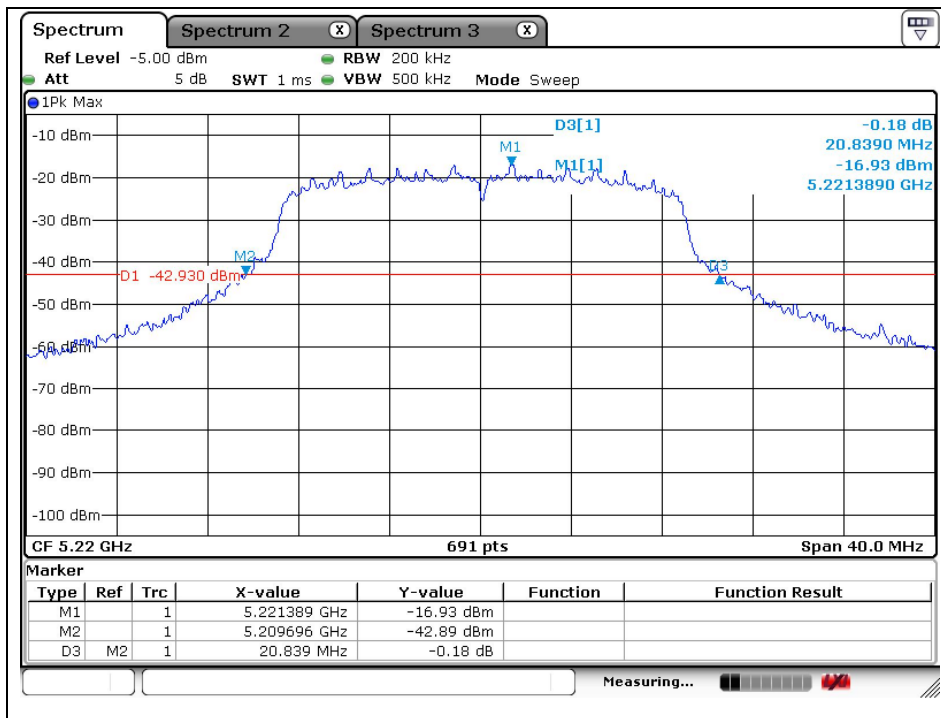
The results of this test report are effective only to the items tested. The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

802.11n_HT20 (Band 1)

Low Channel (5 180 MHz)



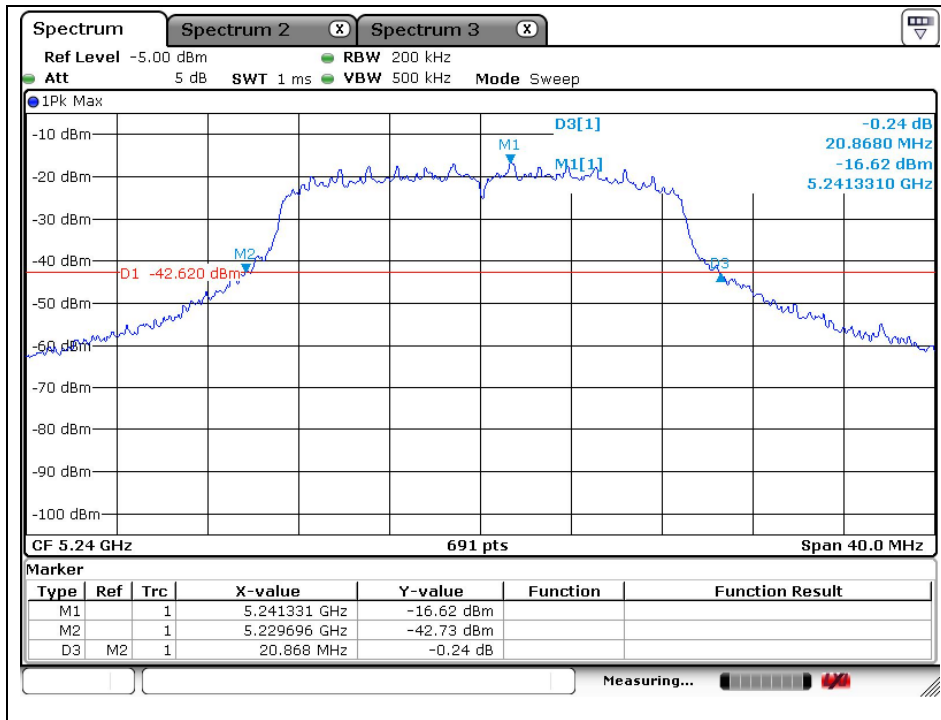
Middle Channel (5 220 MHz)



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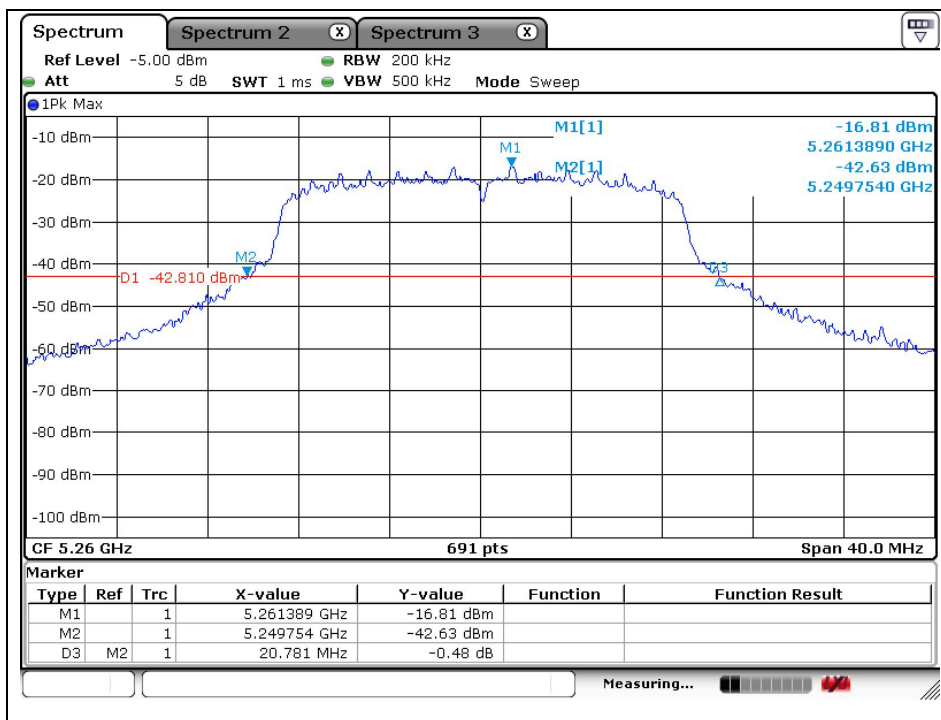
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High Channel (5 240 MHz)



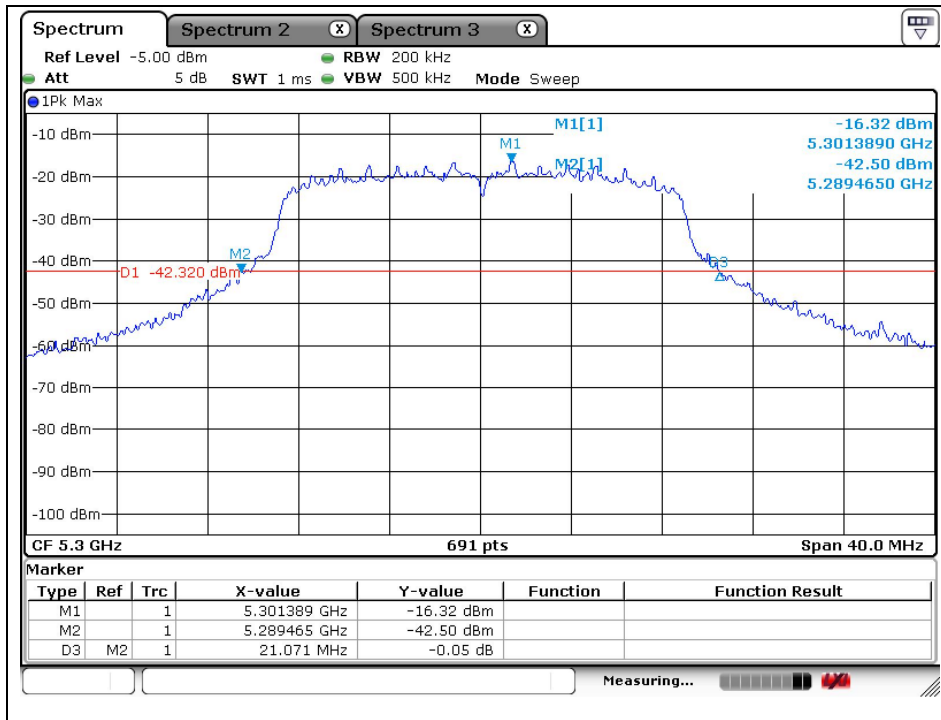
802.11n_HT20 (Band 2A)

Low Channel (5 260 MHz)

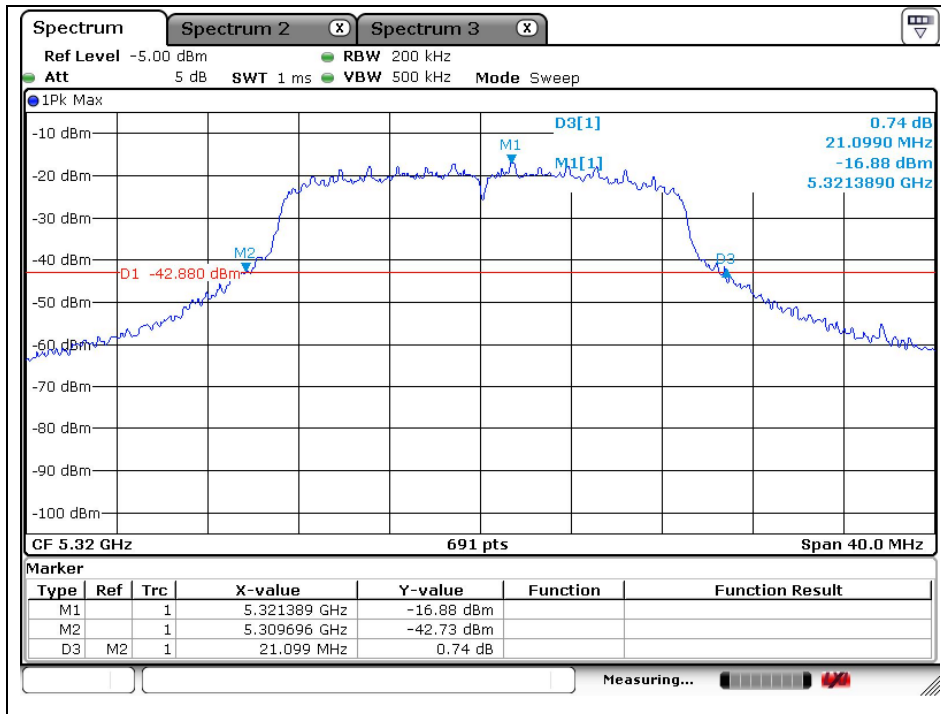


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Middle Channel (5 300 MHz)



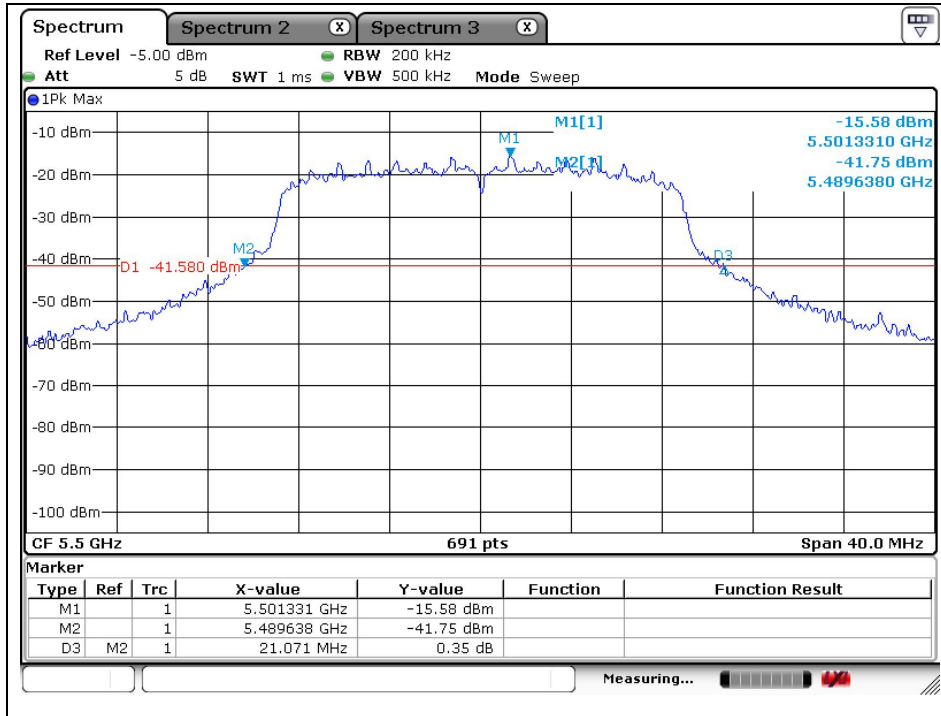
High Channel (5 320 MHz)



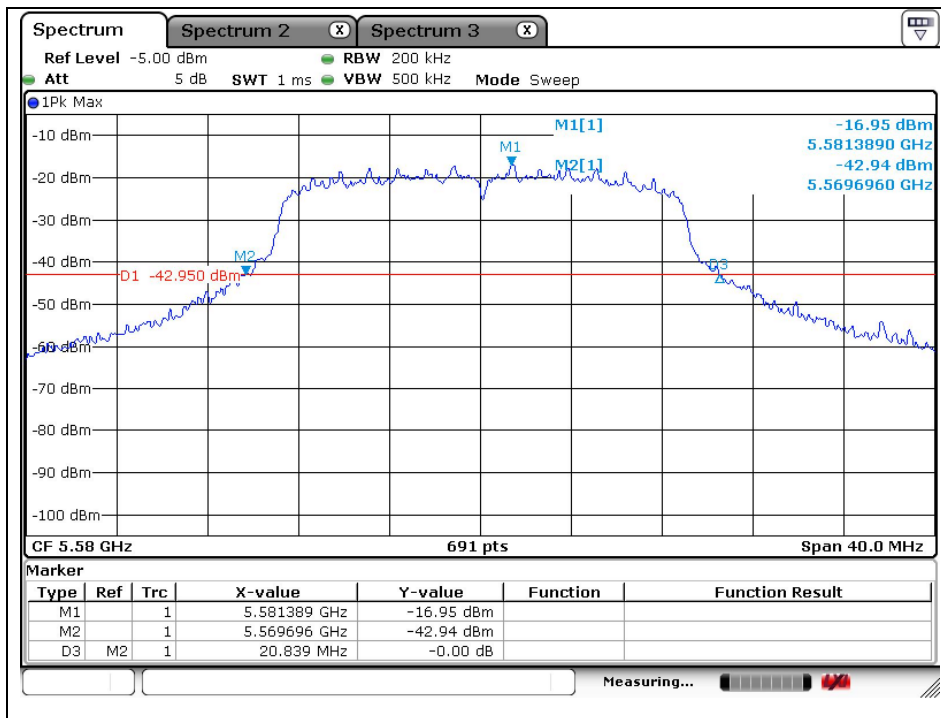
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802.11n_HT20 (Band 2C)

Low Channel (5 500 MHz)

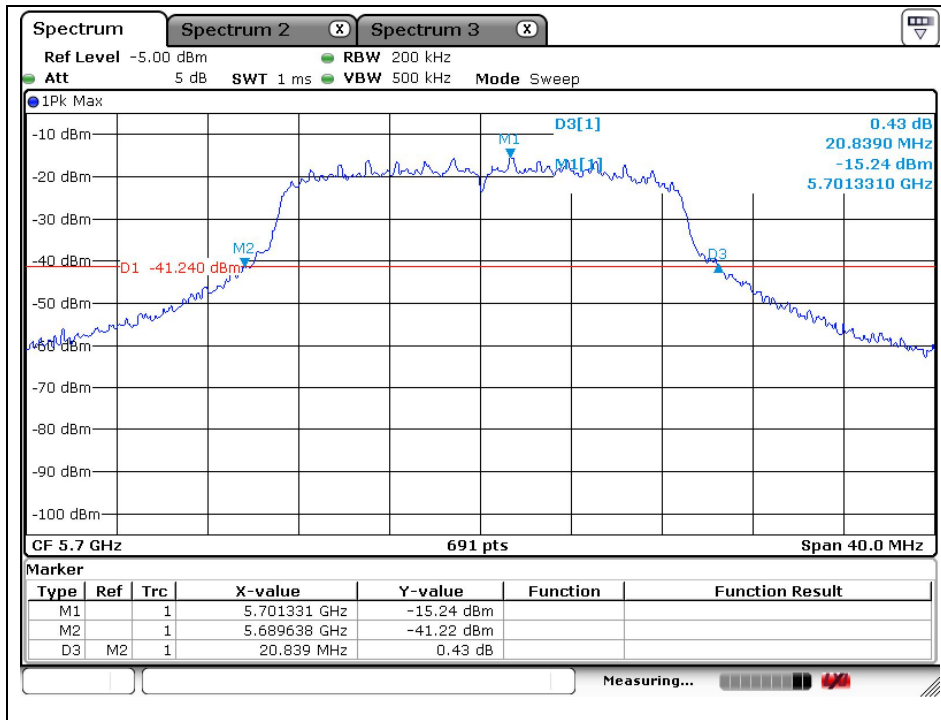


Middle Channel (5 580 MHz)



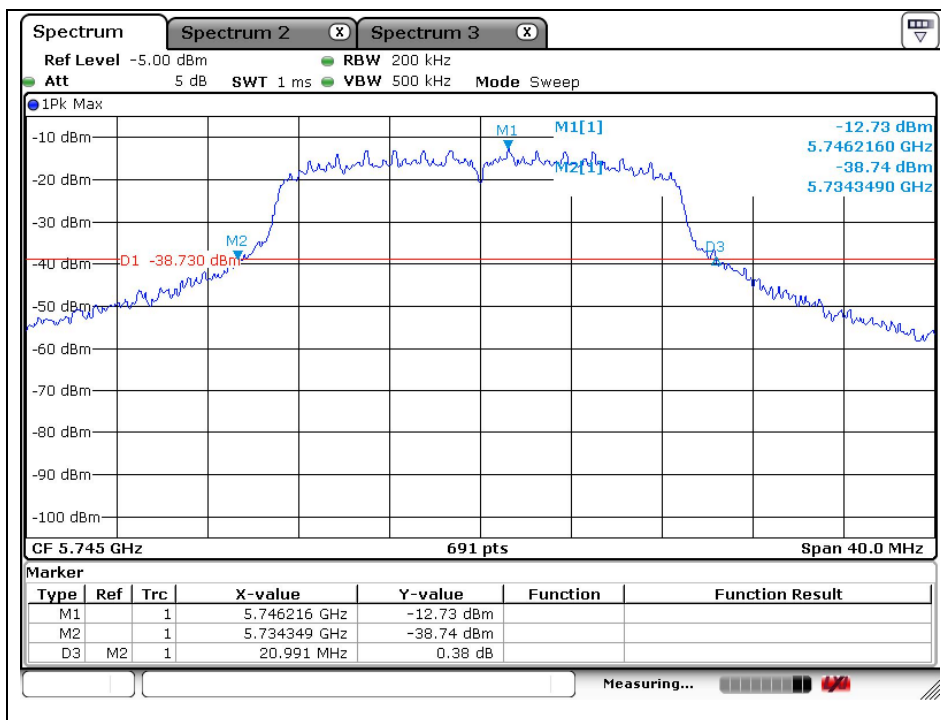
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High Channel (5 700 MHz)



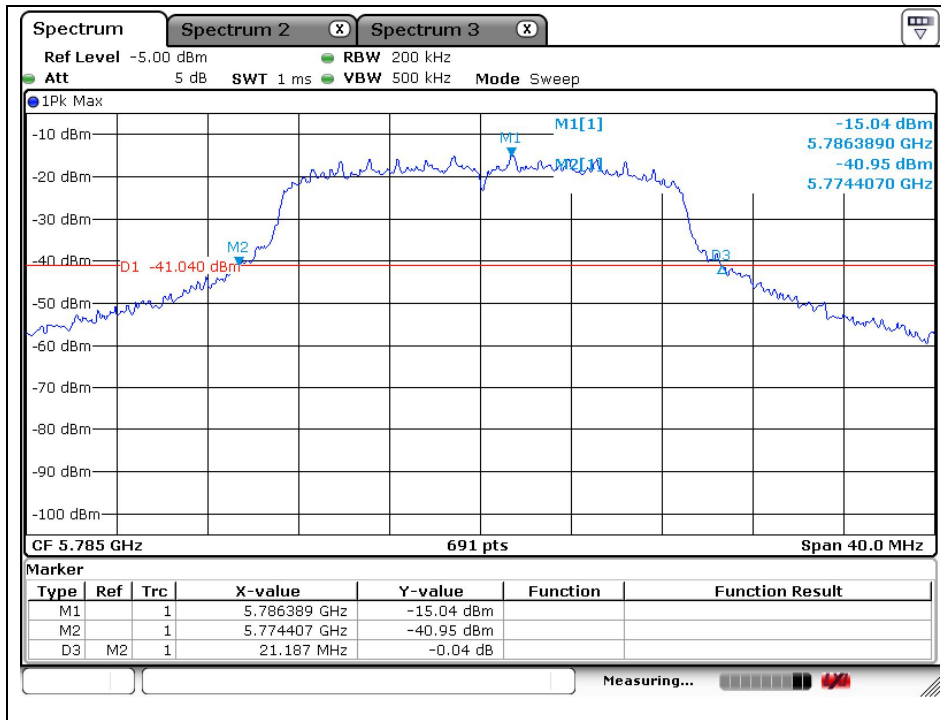
802.11n_HT20 (Band 3)

Low Channel (5 745 MHz)

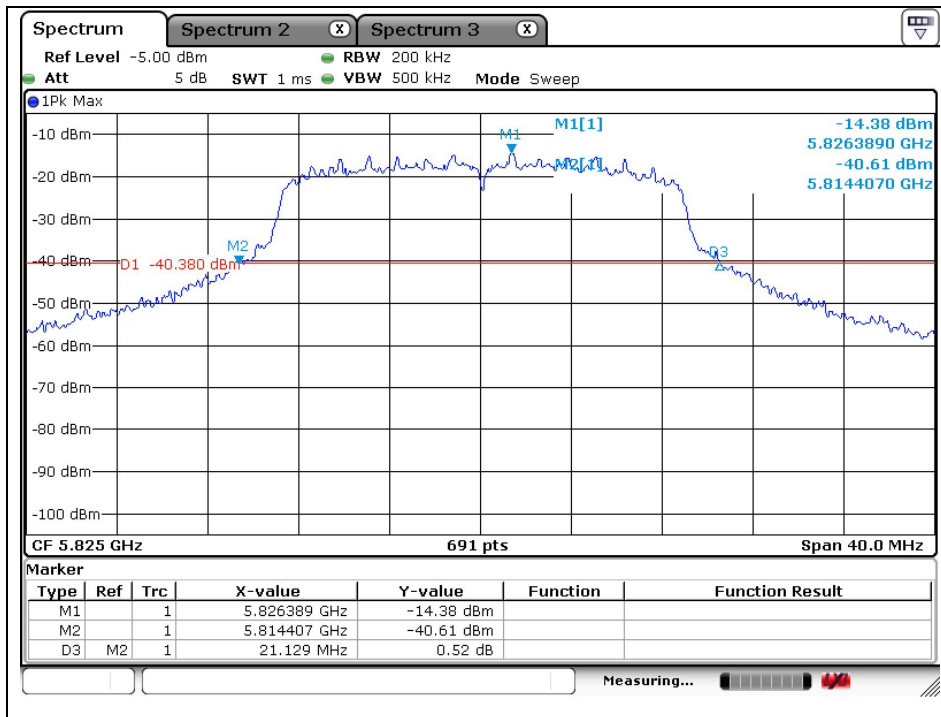


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Middle Channel (5 785 MHz)



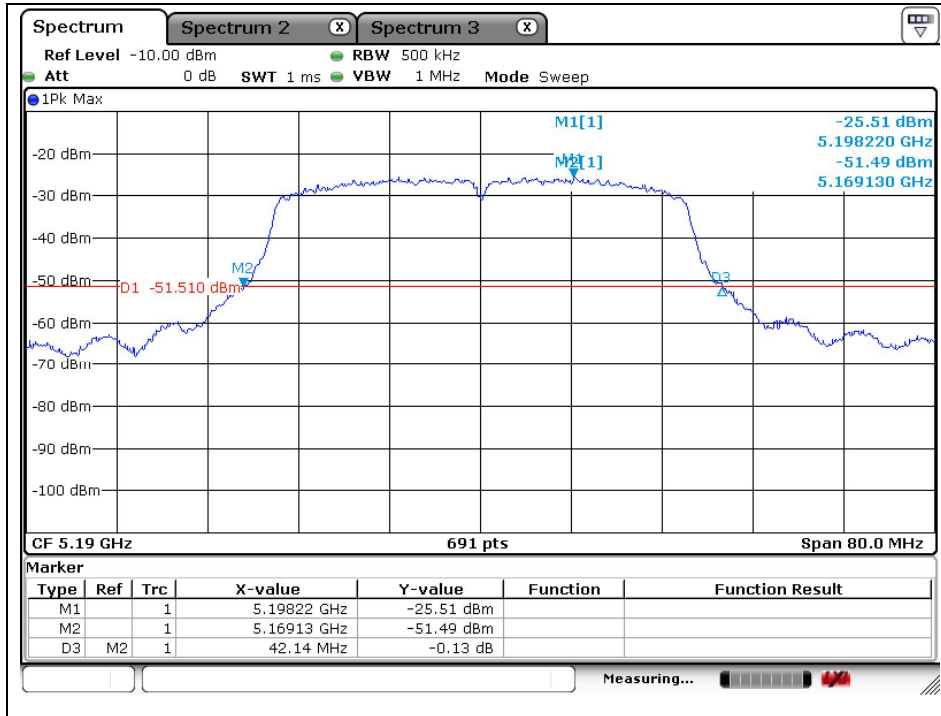
High Channel (5 825 MHz)



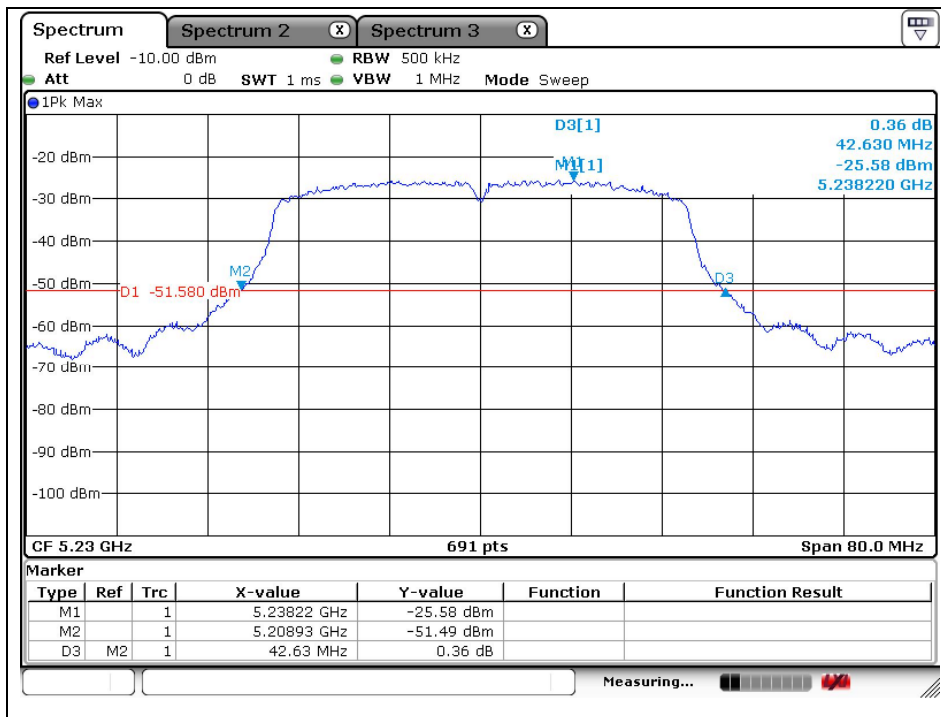
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802.11n_HT40 (Band 1)

Low Channel (5 190 MHz)



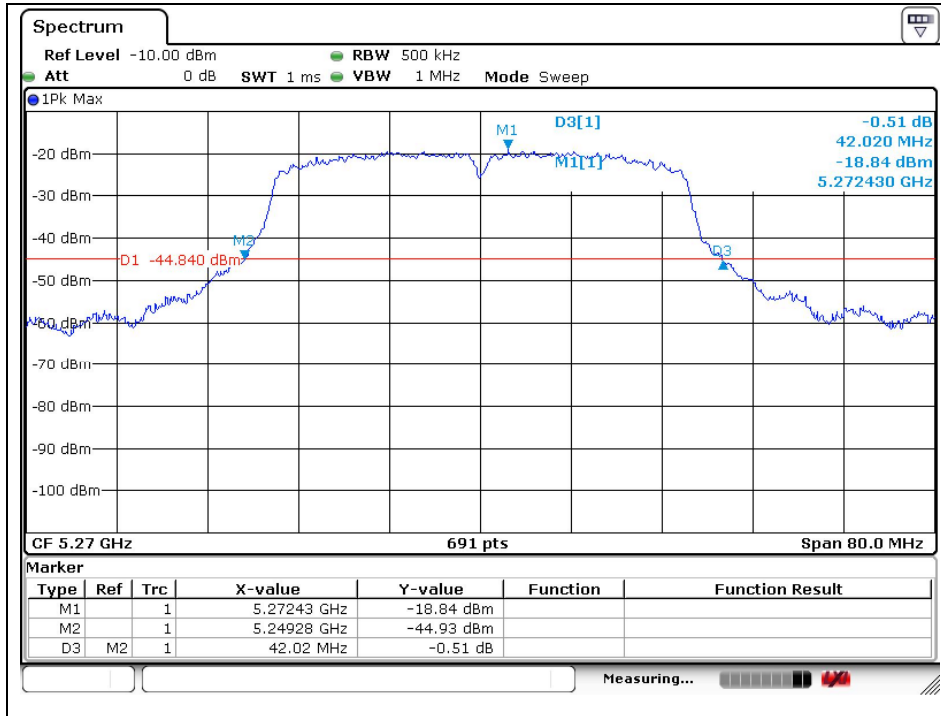
High Channel (5 230 MHz)



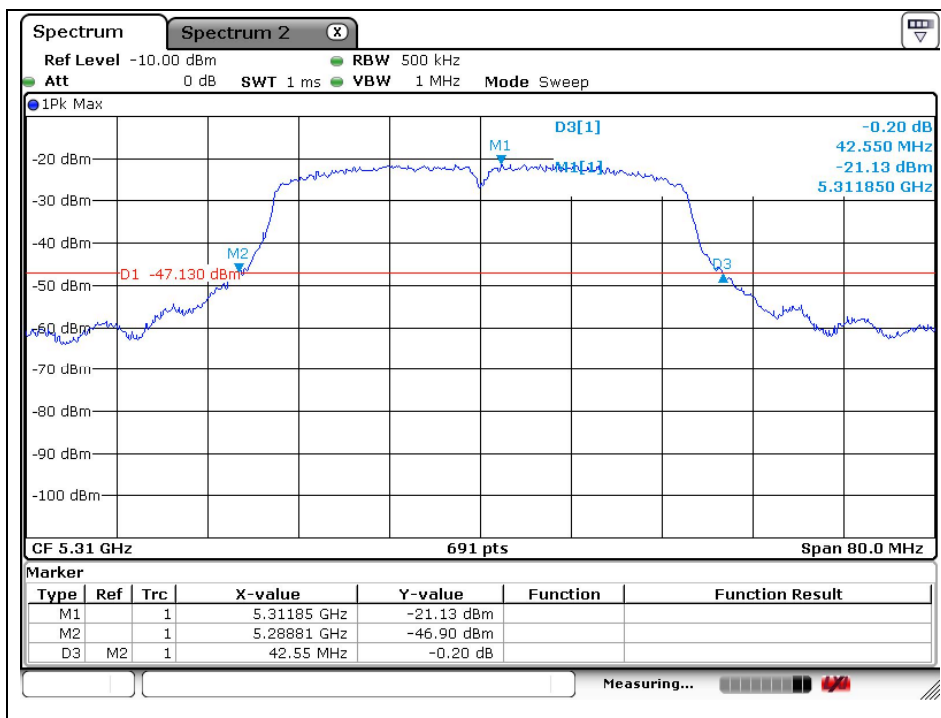
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802.11n_HT40 (Band 2A)

Low Channel (5 270 MHz)



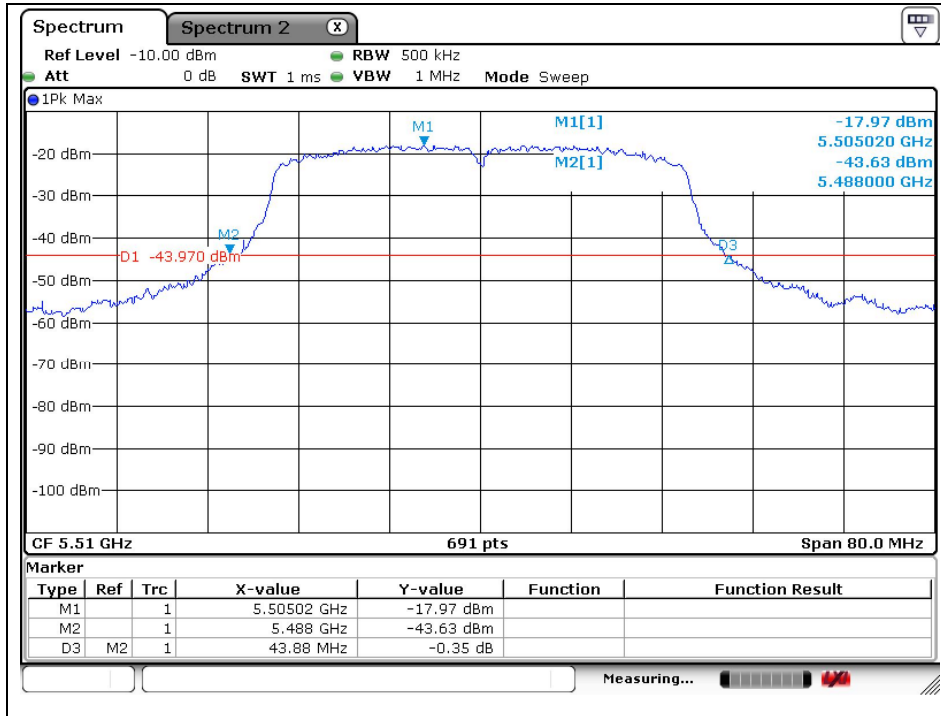
High Channel (5 310 MHz)



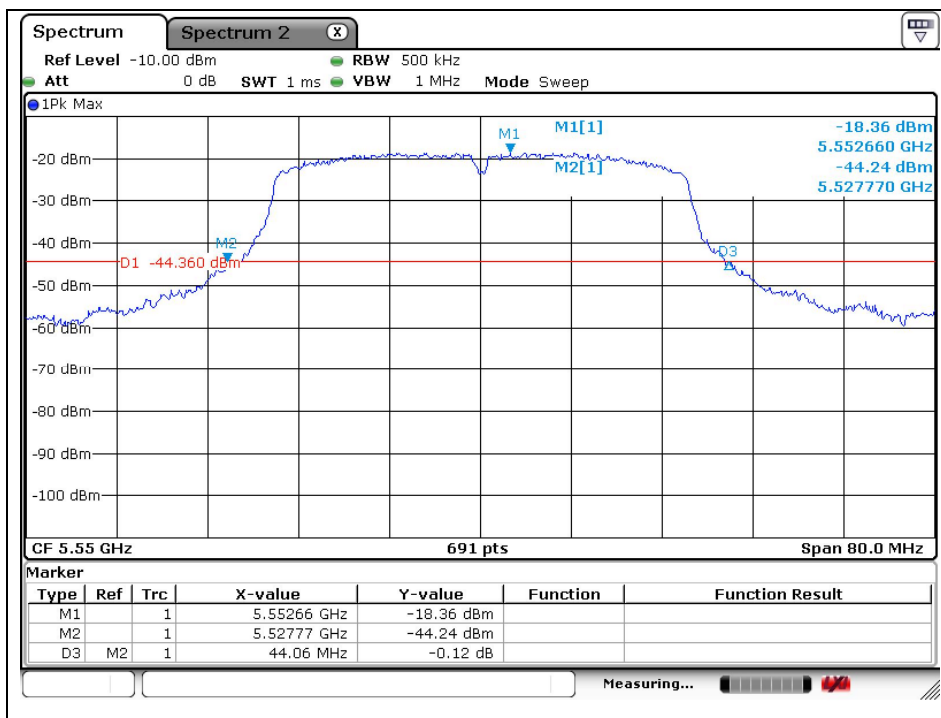
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802.11n_HT40 (Band 2C)

Low Channel (5 510 MHz)

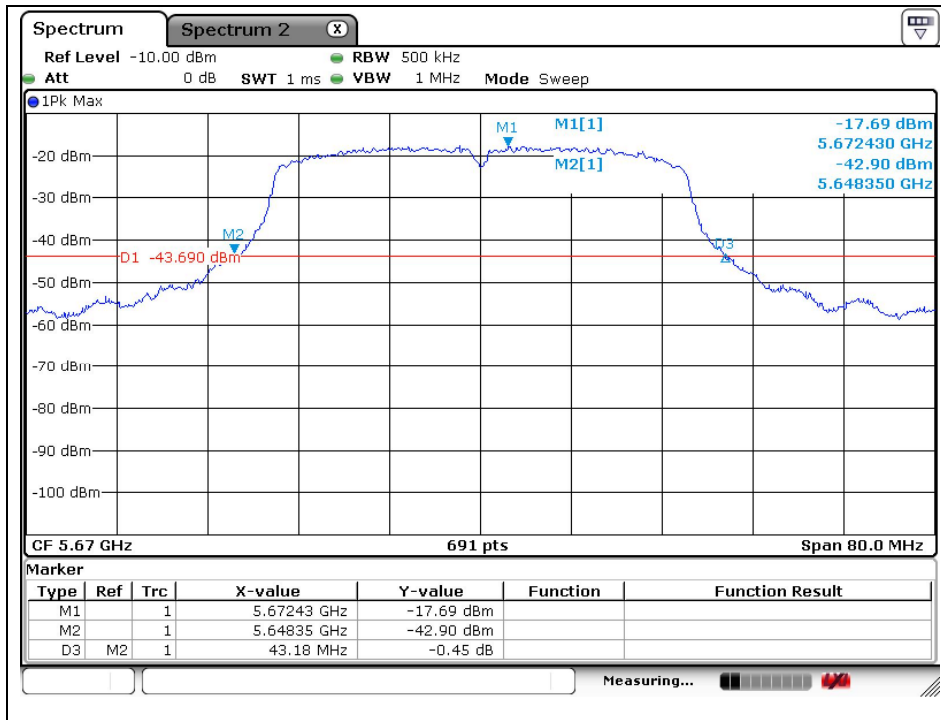


Middle Channel (5 550 MHz)



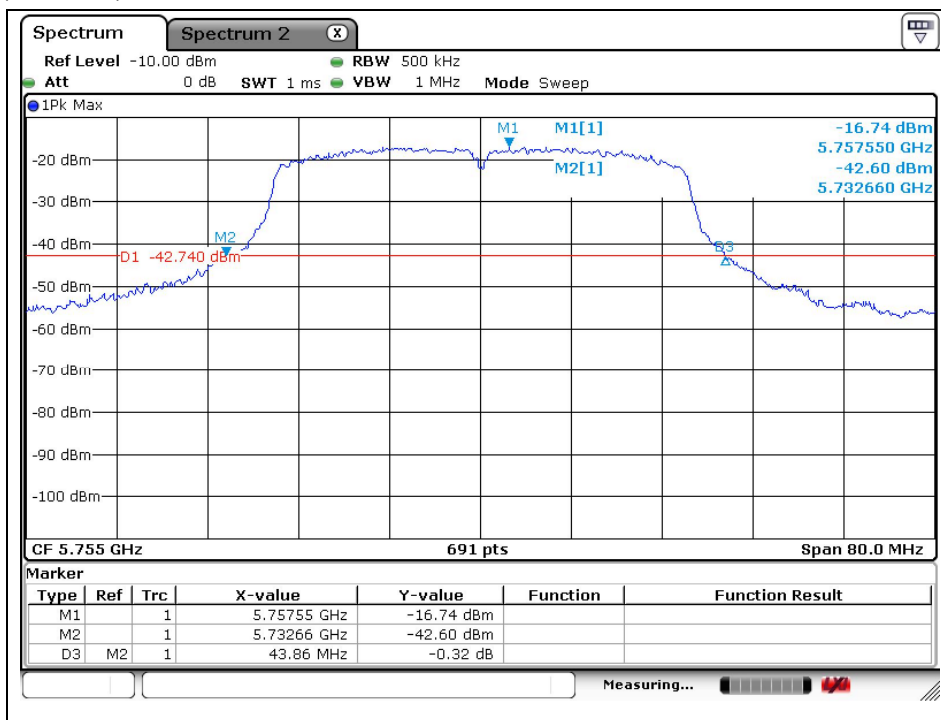
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High Channel (5 670 MHz)



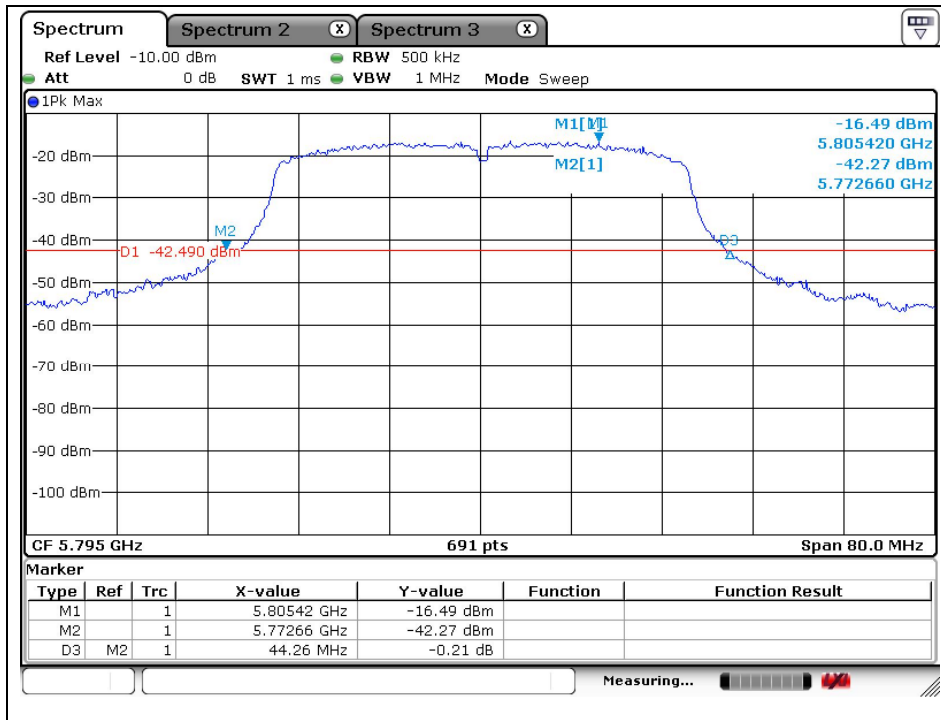
802.11n_HT40 (Band 3)

Low Channel (5 755 MHz)



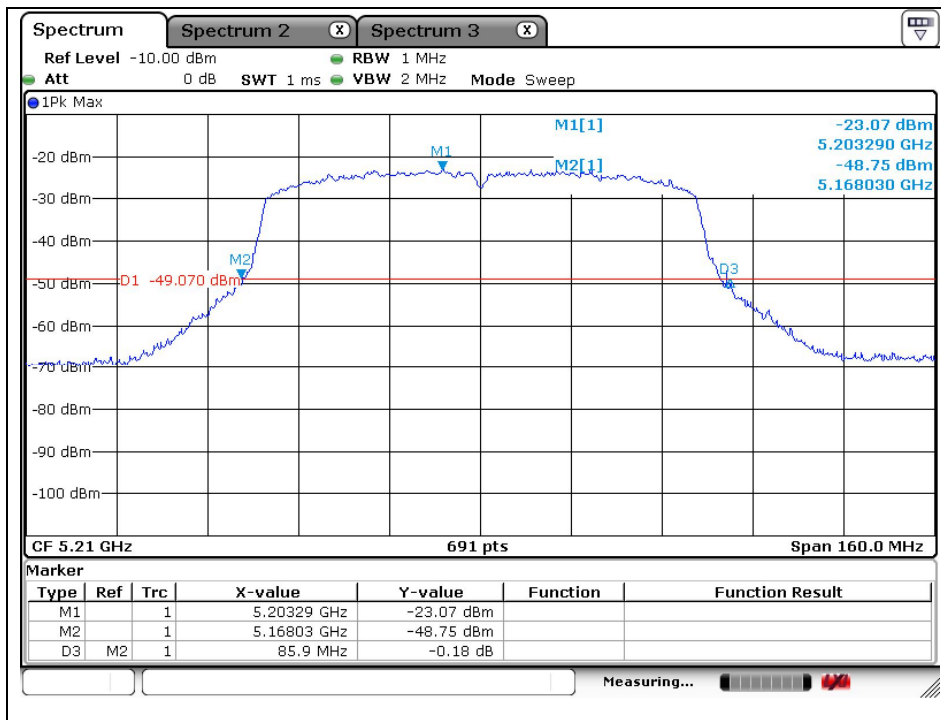
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High Channel (5 795 MHz)



802.11ac_VHT80 (Band 1)

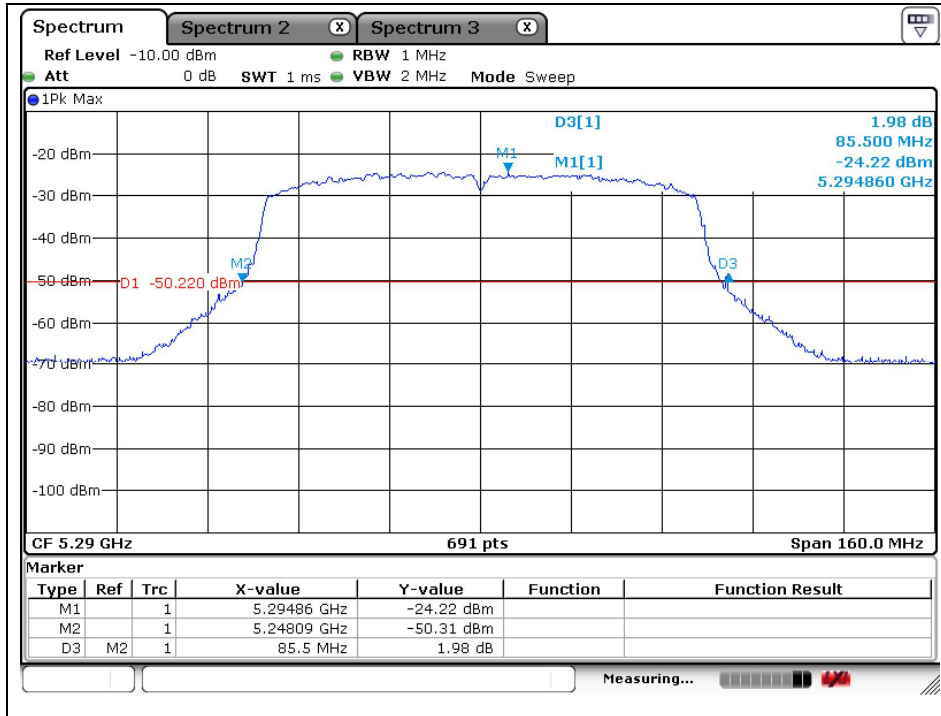
Middle Channel (5 210 MHz)



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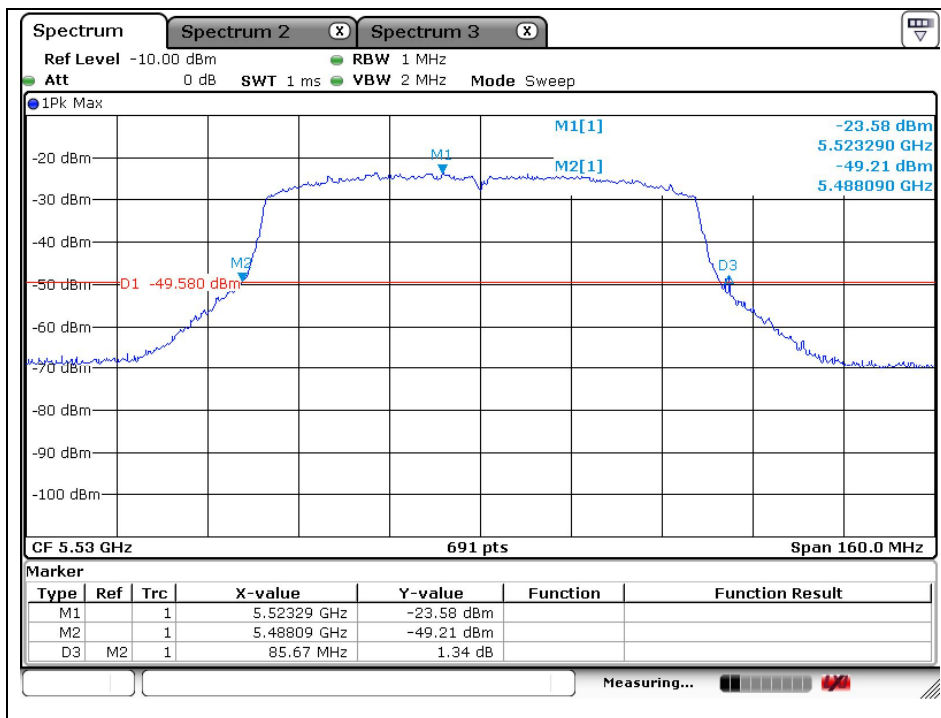
802.11ac_VHT80 (Band 2A)

Middle Channel (5 290 MHz)



802.11ac_VHT80 (Band 2C)

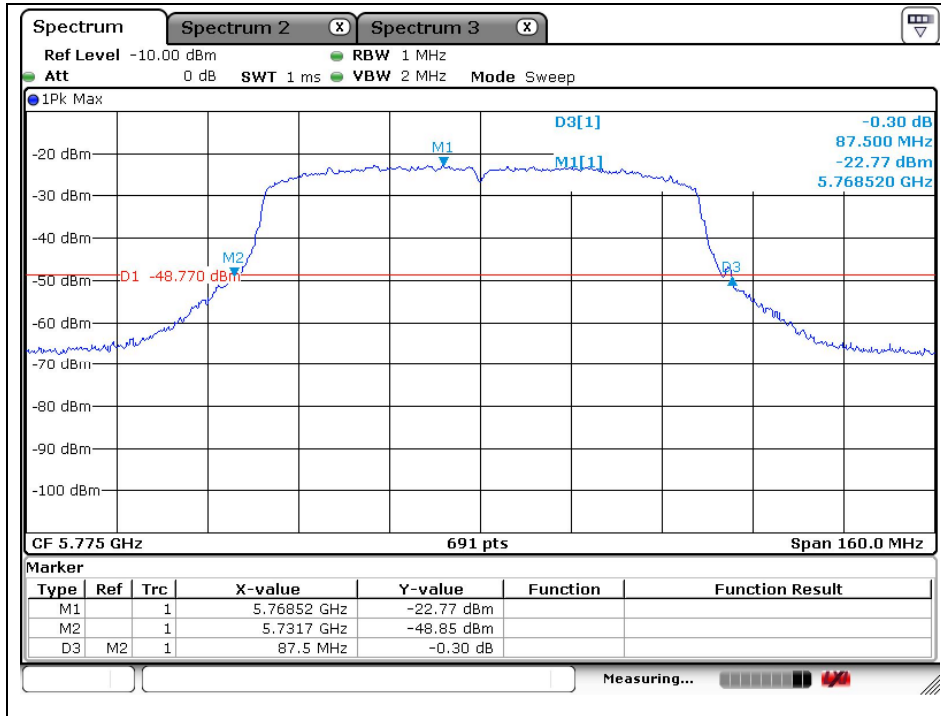
Low Channel (5 530 MHz)



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802.11ac_VHT80 (Band 3)

Middle Channel (5.775 MHz)



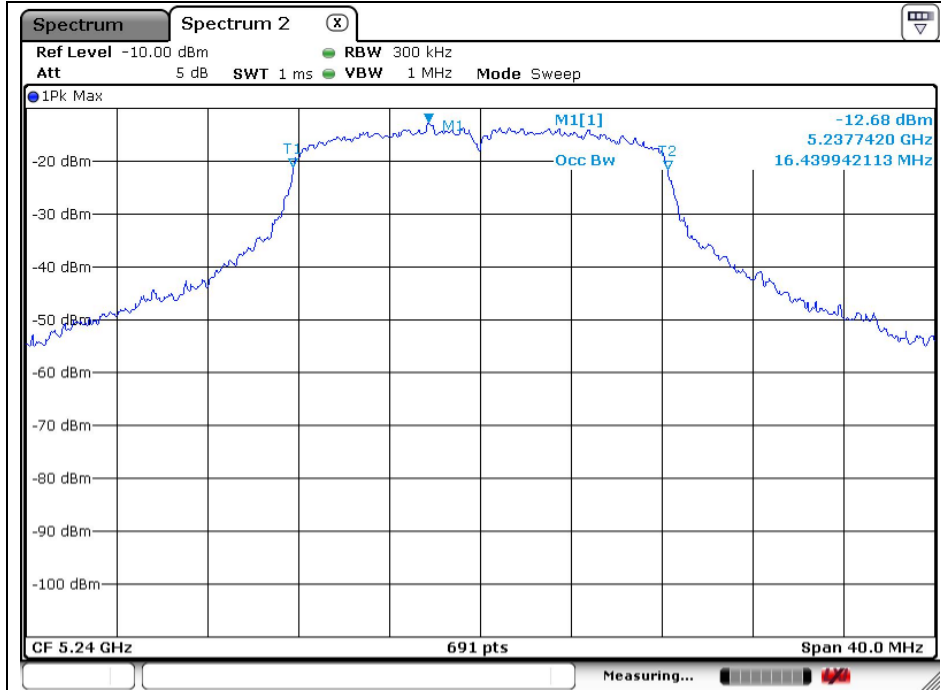
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99 % Bandwidth

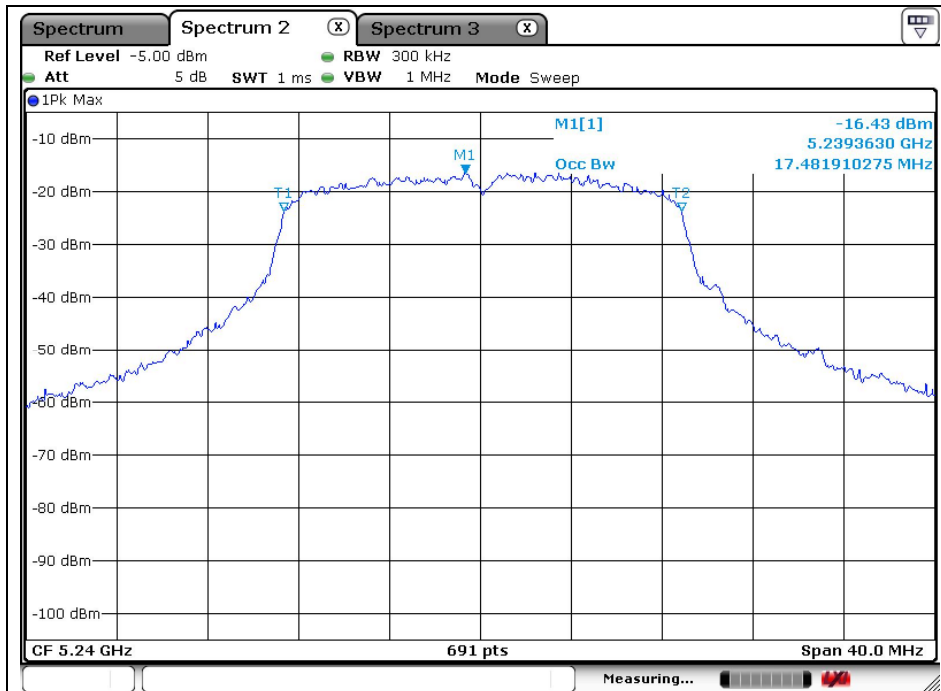
802.11a (Band 1)

High Channel (5 240 MHz)



802.11n_HT20 (Band 1)

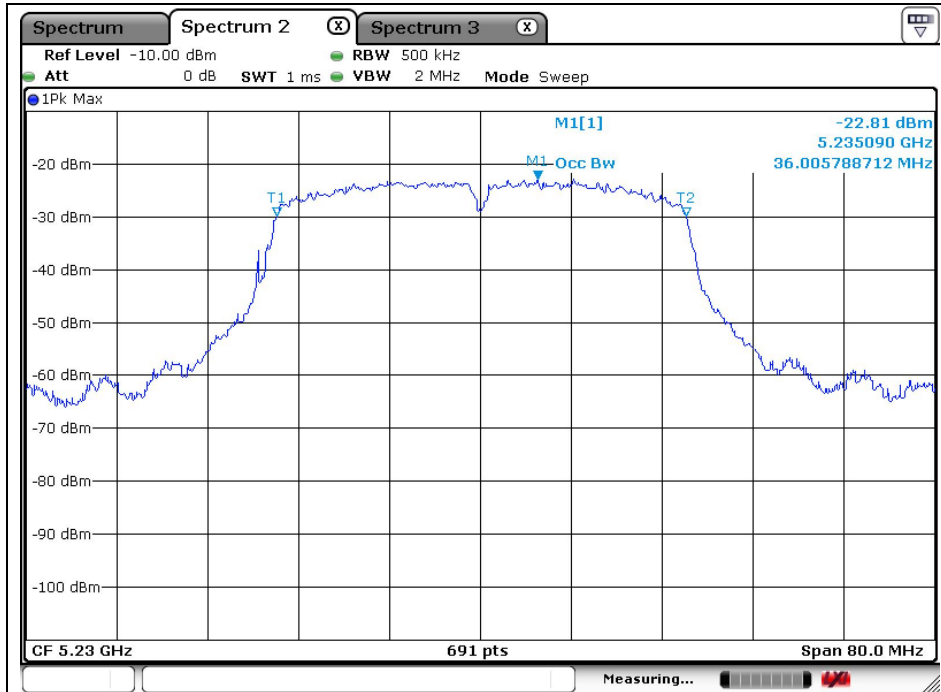
High Channel (5 240 MHz)



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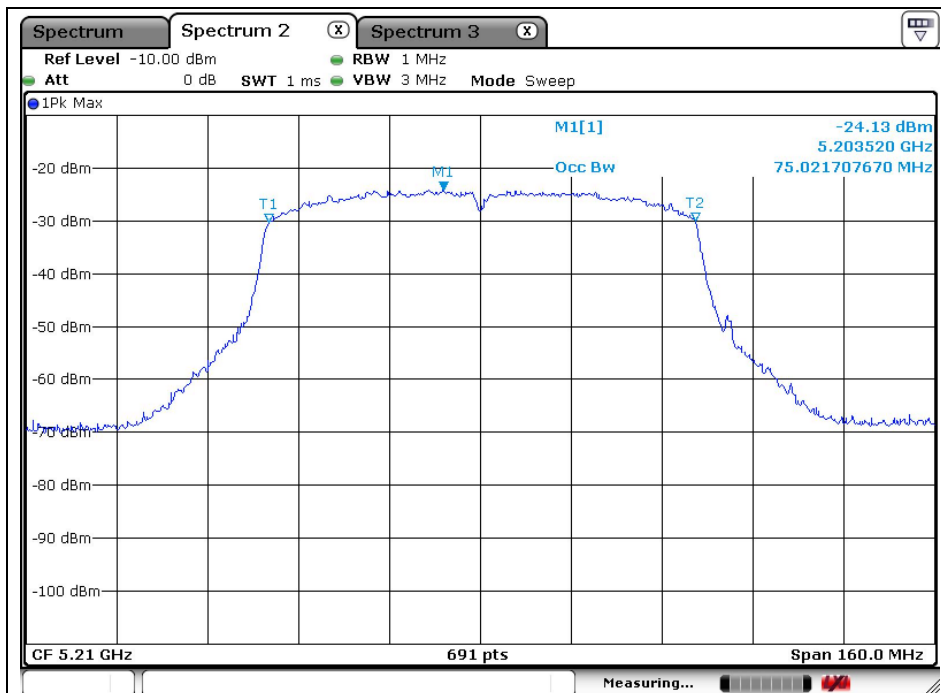
802.11n_HT40 (Band 1)

High Channel (5 230 MHz)



802.11ac_VHT80 (Band 1)

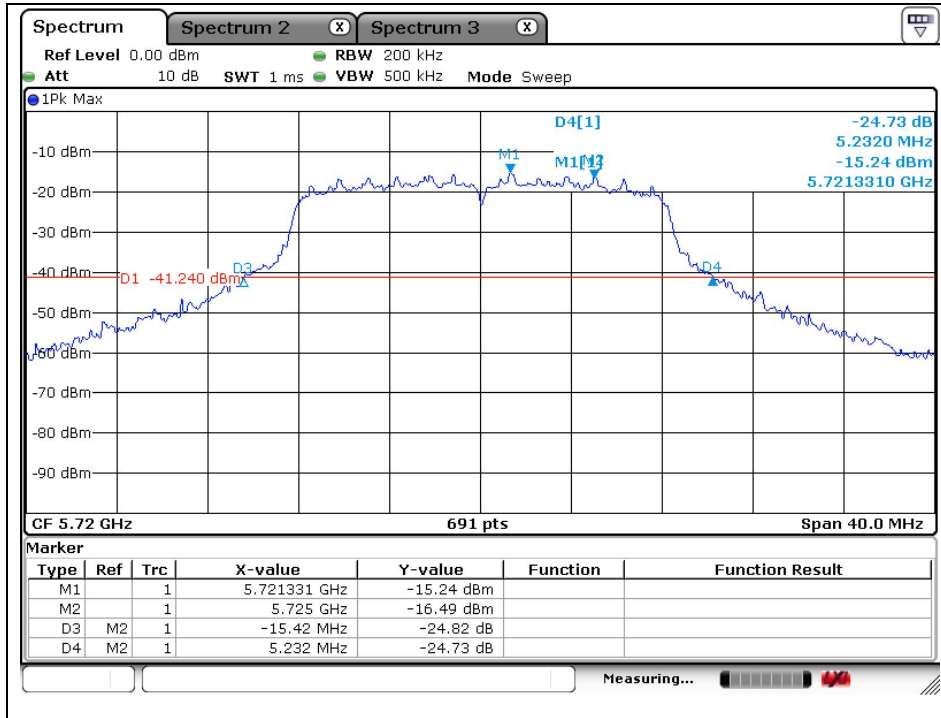
Middle Channel (5 210 MHz)



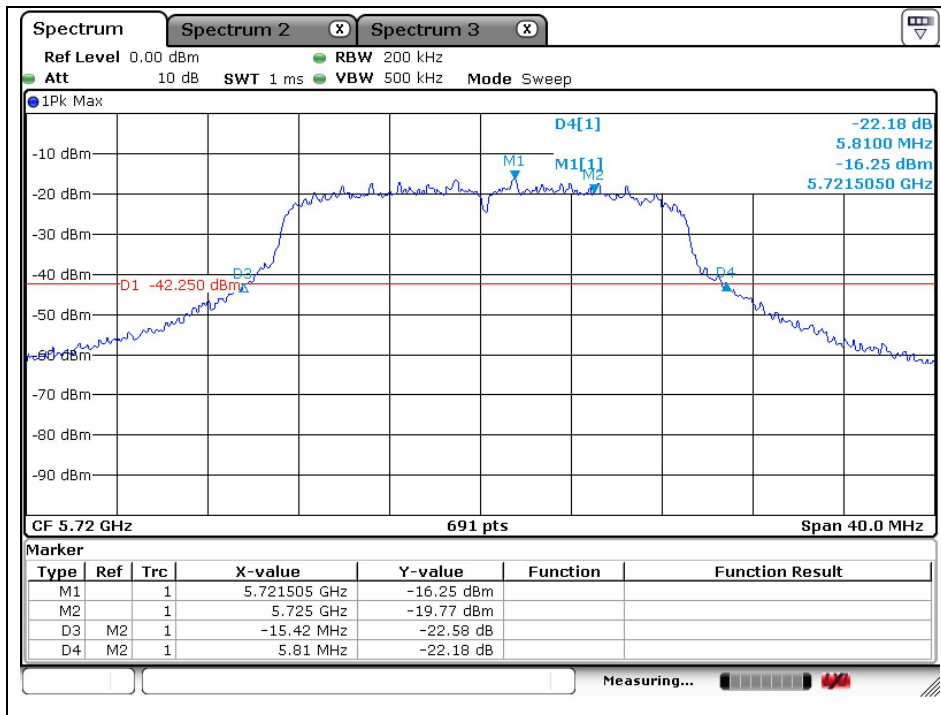
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Band-crossing channels

802.11a (5 720 MHz)

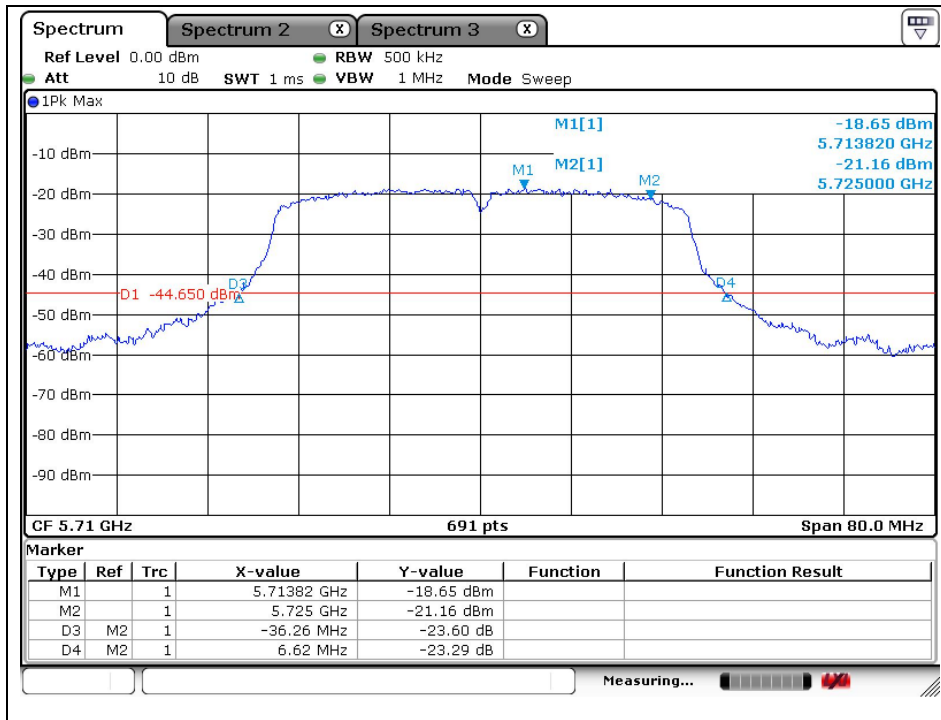


802.11n_HT20 (5 720 MHz)

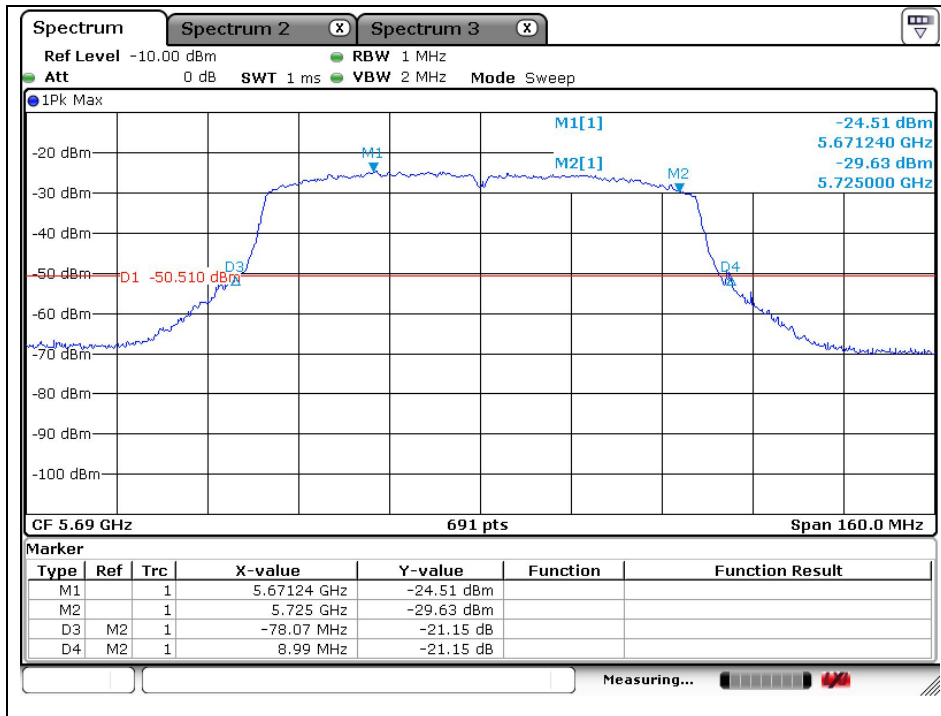


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802.11n_HT40 (5 710 MHz)



802.11ac_VHT80 (5 690 MHz)



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