



Mode	802.11ax(HE160)	Channel	175
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Polarization	Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal		5904.8	30.45	14.97	45.42	68.2	-22.78	AVG
		5907.6	40.78	14.97	55.75	88.2	-32.45	PK
	@	6825	67.56	18.1	85.66	N/A	N/A	PK
	@	6825	56.34	18.1	74.44	N/A	N/A	AVG
		7184.4	40.01	20.04	60.05	88.2	-28.15	PK
		7223.6	29.48	20.25	49.73	68.2	-18.47	AVG
	*	13650	29.88	22.85	52.73	88.2	-35.47	PK
Vertical		5916	40.69	14.97	55.66	88.2	-32.54	PK
		5916	30.36	14.97	45.33	68.2	-22.87	AVG
	@	6825	79.22	18.1	97.32	N/A	N/A	PK
	@	6825	69.15	18.1	87.25	N/A	N/A	AVG
		7155	39.77	19.88	59.65	88.2	-28.55	PK
		7206.8	29.6	20.16	49.76	68.2	-18.44	AVG
	*	13650	30.02	22.85	52.87	88.2	-35.33	PK

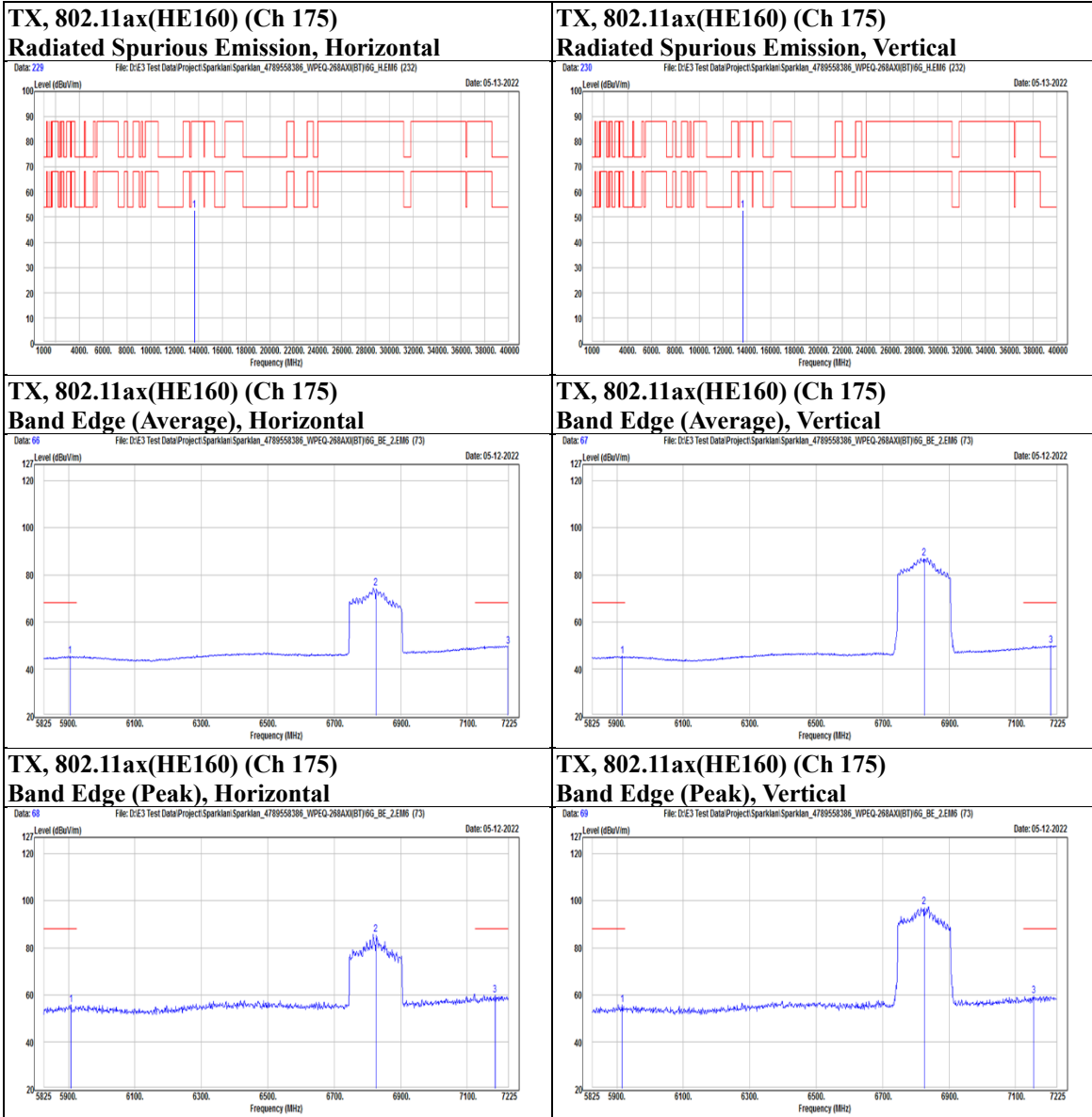
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FCC ID : RYK-WPEQ268AXB

Mode	802.11ax(HE160)	Channel	207
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Polarization	Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal	@	6985	63.03	18.68	81.71	N/A	N/A	PK
	@	6985	55.88	18.68	74.56	N/A	N/A	AVG
		7220.8	39.78	20.23	60.01	88.2	-28.19	PK
		7223.6	29.44	20.25	49.69	68.2	-18.51	AVG
	*	13970	30.21	23.81	54.02	88.2	-34.18	PK
Vertical	@	6985	77.88	18.68	96.56	N/A	N/A	PK
	@	6985	67.37	18.68	86.05	N/A	N/A	AVG
		7159.2	40.61	19.9	60.51	88.2	-27.69	PK
		7222.2	29.67	20.25	49.92	68.2	-18.28	AVG
	*	13970	29.73	23.81	53.54	88.2	-34.66	PK

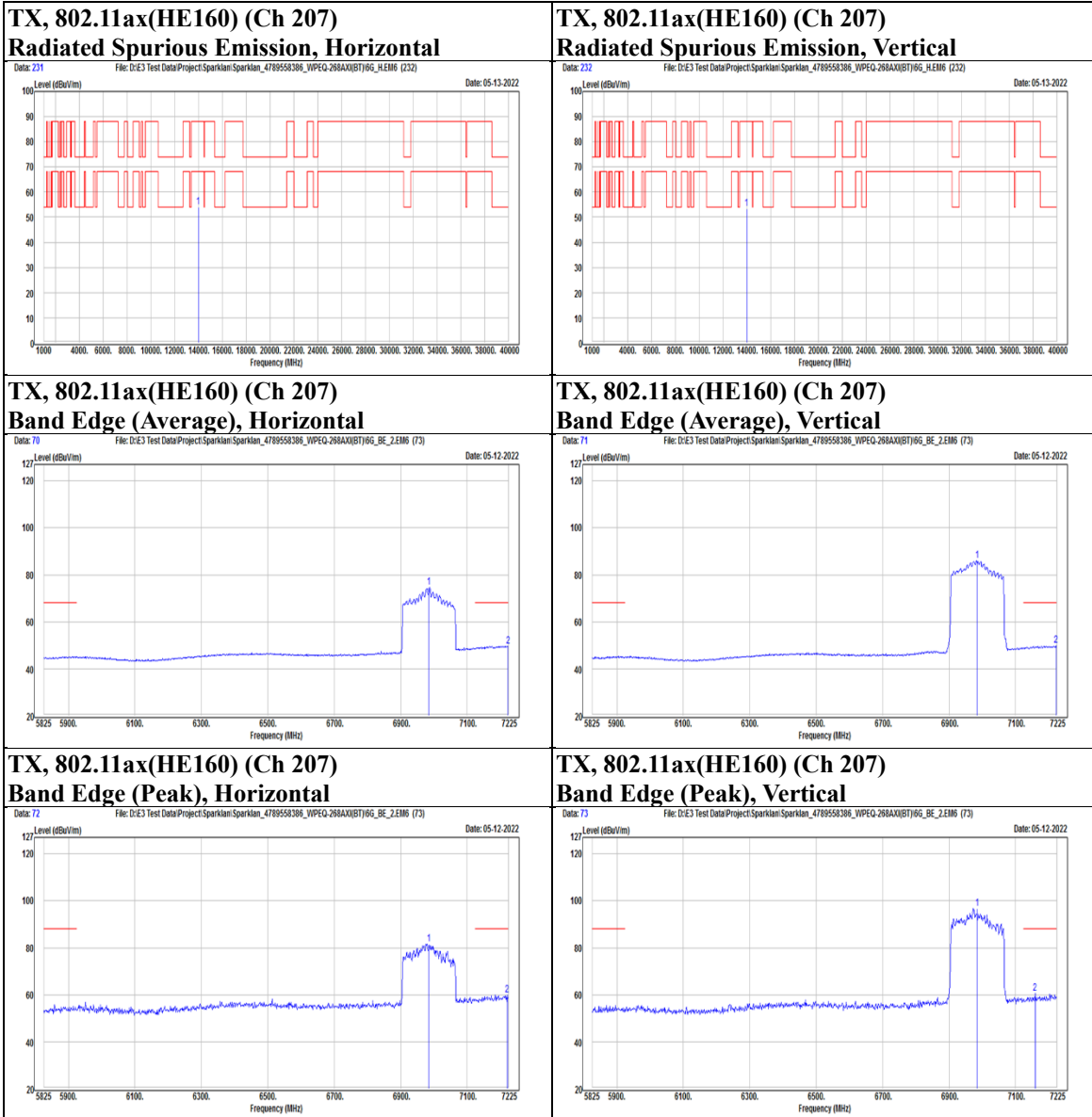
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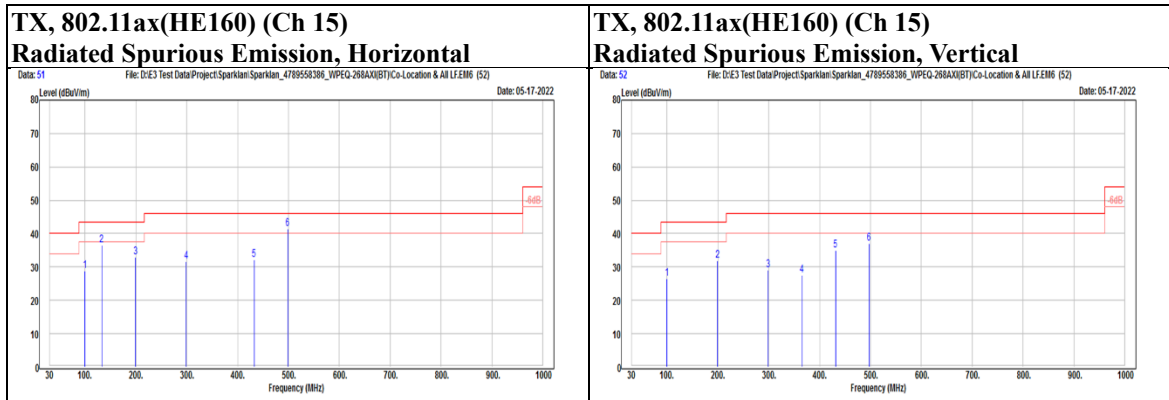




Below 1 GHz

Mode	802.11ax(HE160)	Channel	15
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Polarization	Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal		99.84	45.34	-16.47	28.87	43.5	-14.63	PK
		132.82	49.44	-12.95	36.49	43.5	-7.01	PK
		199.75	46.8	-13.94	32.86	43.5	-10.64	QP
		298.69	41.68	-10.04	31.64	46	-14.36	PK
		432.55	38.4	-6.24	32.16	46	-13.84	PK
		498.51	46.24	-4.86	41.38	46	-4.62	PK
Vertical		99.84	43.08	-16.47	26.61	43.5	-16.89	PK
		199.75	45.87	-13.94	31.93	43.5	-11.57	PK
		298.69	39.02	-10.04	28.98	46	-17.02	PK
		365.62	35.55	-8.04	27.51	46	-18.49	PK
		431.58	41.14	-6.25	34.89	46	-11.11	PK
		497.54	41.9	-4.86	37.04	46	-8.96	QP



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9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

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9.7. AC Power Line Conducted Emission

Requirements

Frequency (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Procedures

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE:

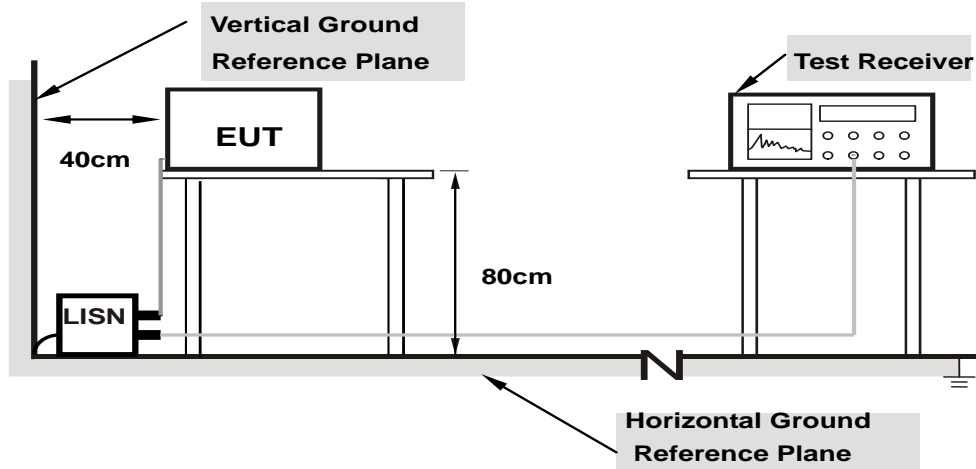
1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.
2. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
3. Test data of Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB).
4. Test data of Margin(dB) = Result value (dBuV) - Limit value (dBuV).
5. Test data of Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).

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Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the Setup Configurations.

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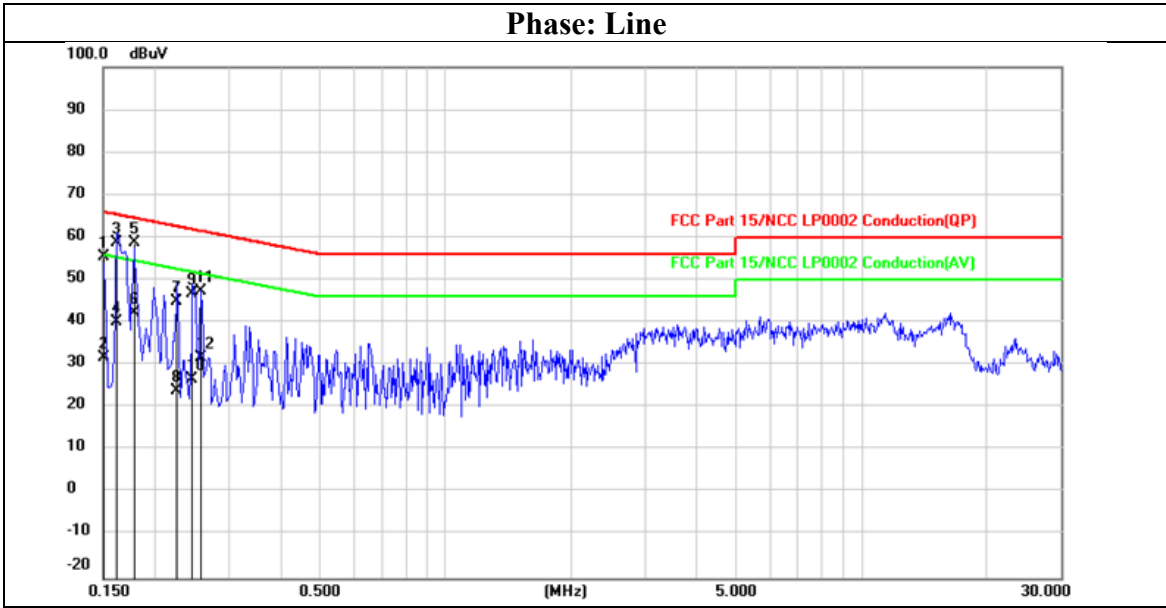
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Test Data

Mode	802.11ax (HE160) TX	Channel	15
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	35.98	19.51	55.49	66.00	-10.51	QP
2	0.1500	12.39	19.51	31.90	56.00	-24.10	AVG
3	0.1620	39.27	19.51	58.78	65.36	-6.58	QP
4	0.1620	20.69	19.51	40.20	55.36	-15.16	AVG
5	0.1780	39.35	19.51	58.86	64.58	-5.72	QP
6	0.1780	22.83	19.51	42.34	54.58	-12.24	AVG
7	0.2260	25.53	19.51	45.04	62.60	-17.56	QP
8	0.2260	4.52	19.51	24.03	52.60	-28.57	AVG
9	0.2460	27.37	19.51	46.88	61.89	-15.01	QP
10	0.2460	7.08	19.51	26.59	51.89	-25.30	AVG
11	0.2580	27.71	19.51	47.22	61.50	-14.28	QP
12	0.2580	12.15	19.51	31.66	51.50	-19.84	AVG

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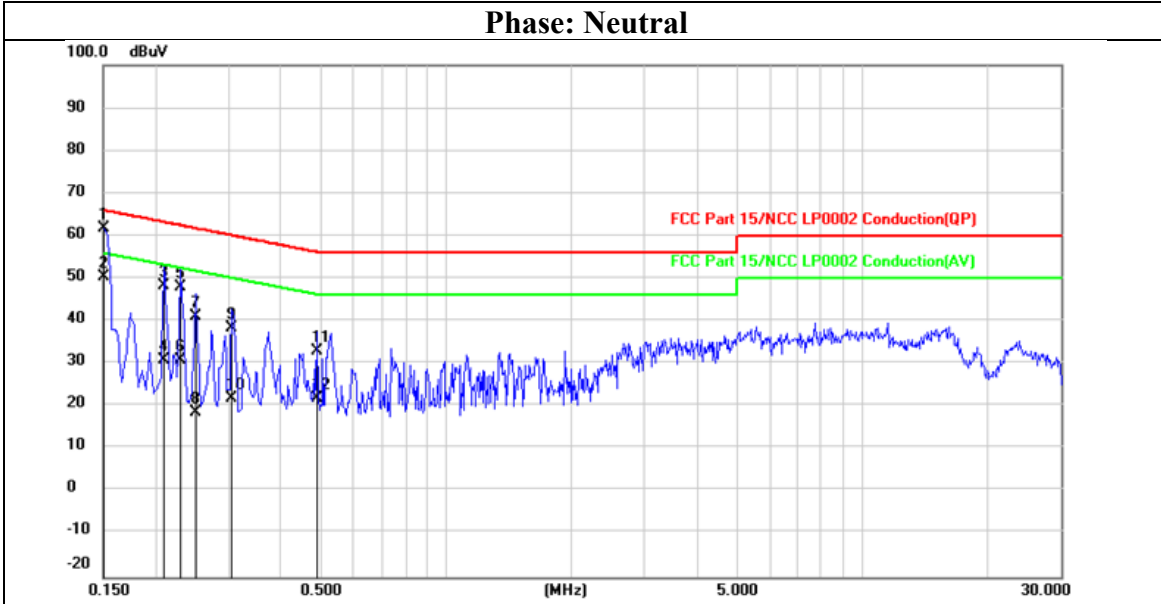
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Mode	802.11ax (HE160)_TX6025	Channel	15
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	42.35	19.51	61.86	66.00	-4.14	QP
2	0.1500	30.87	19.51	50.38	56.00	-5.62	AVG
3	0.2100	28.89	19.51	48.40	63.21	-14.81	QP
4	0.2100	11.47	19.51	30.98	53.21	-22.23	AVG
5	0.2300	28.58	19.51	48.09	62.45	-14.36	QP
6	0.2300	11.28	19.51	30.79	52.45	-21.66	AVG
7	0.2500	21.57	19.51	41.08	61.76	-20.68	QP
8	0.2500	-1.01	19.51	18.50	51.76	-33.26	AVG
9	0.3060	18.74	19.51	38.25	60.08	-21.83	QP
10	0.3060	2.36	19.51	21.87	50.08	-28.21	AVG
11	0.4900	13.46	19.51	32.97	56.17	-23.20	QP
12	0.4900	2.45	19.51	21.96	46.17	-24.21	AVG

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9.8. In-Band Emission (Mask) Measurement

Requirements

Test Item	Frequencies (MHz)	(X) dBc ^{*1}
Emission Mask	At 1 MHz outside of channel edge	20
	At one channel bandwidth from the channel center ^{*2}	28
	At one- and one-half times the channel bandwidth away from channel center ^{*3}	40
	More than one- and one-half times the channel bandwidth	40

*1 :The power spectral density must be suppressed by “x” dB

*2 : At frequencies between one megahertz outside an unlicensed device’s channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression,

*3 : At frequencies between one and one- and one-half times an unlicensed device’s channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression.

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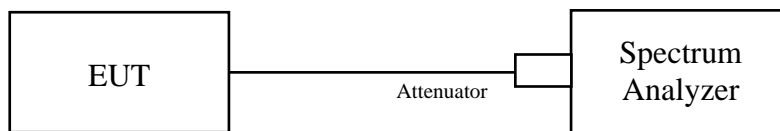


Test procedure

Using method:

- a. Connect output of the antenna port to a spectrum analyzer and adjust appropriate attenuation.
- b. Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (Determine the channel edge.)
- c. Measure the power spectral density (for emissions mask reference) using the following procedure:
 - a) Set the span to encompass the entire 26 dB EBW of the signal.
 - b) Set RBW = same RBW used for 26 dB EBW measurement.
 - c) Set VBW $\geq 3 \times$ RBW
 - d) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
 - e) Sweep time = auto.
 - f) Detector = RMS (i.e., power averaging)
 - g) Trace average at least 100 traces in power averaging (rms) mode.
 - h) Use the peak search function on the instrument to find the peak of the spectrum.
- d. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
 - a) Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
 - b) Suppressed by 28 dB at one channel bandwidth from the channel center.
 - c) Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
- e. Adjust the span to encompass the entire mask as necessary and clear trace.
- f. Trace average at least 100 traces in power averaging (rms) mode.
- g. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask

Test Setup



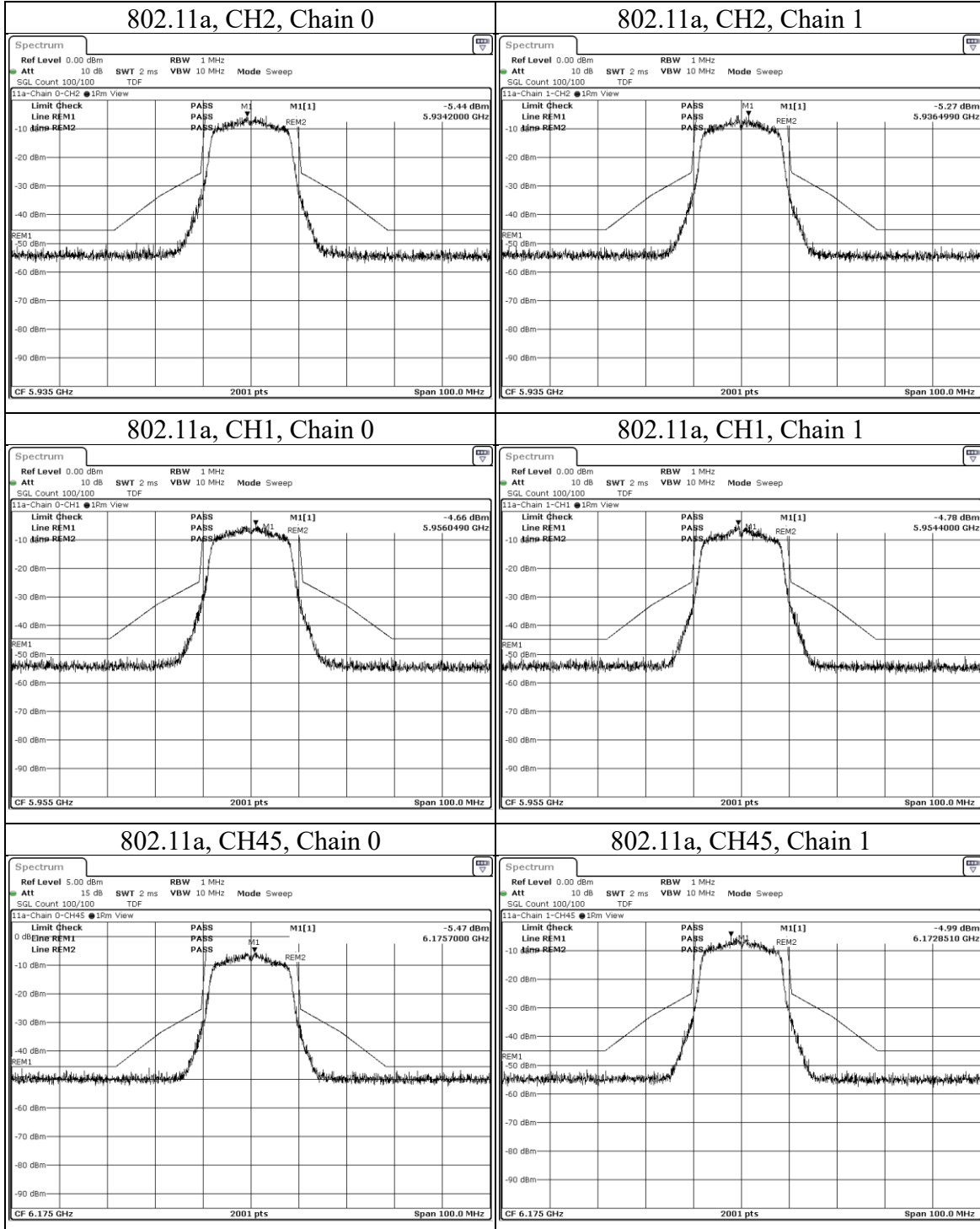
The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

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Test Data



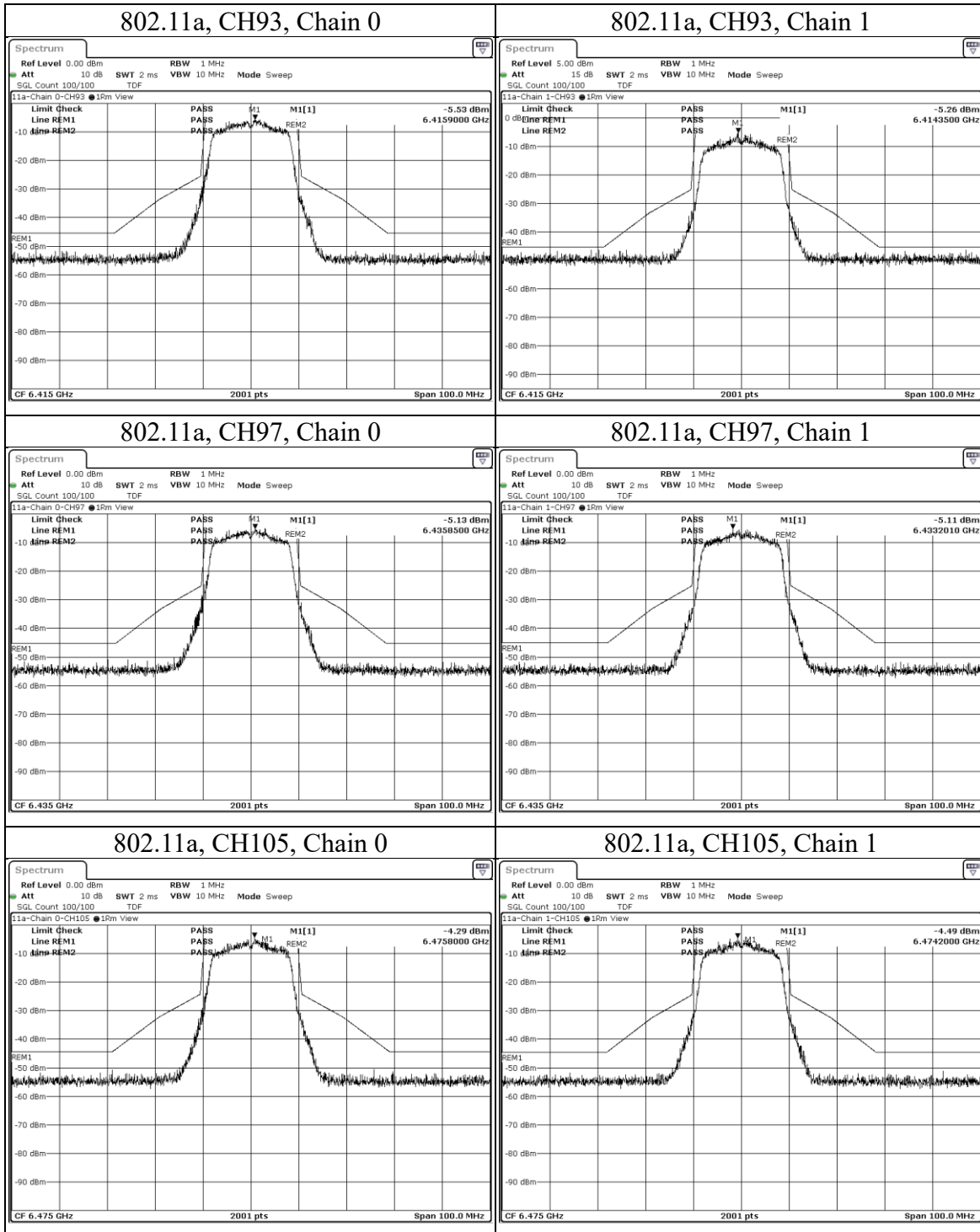
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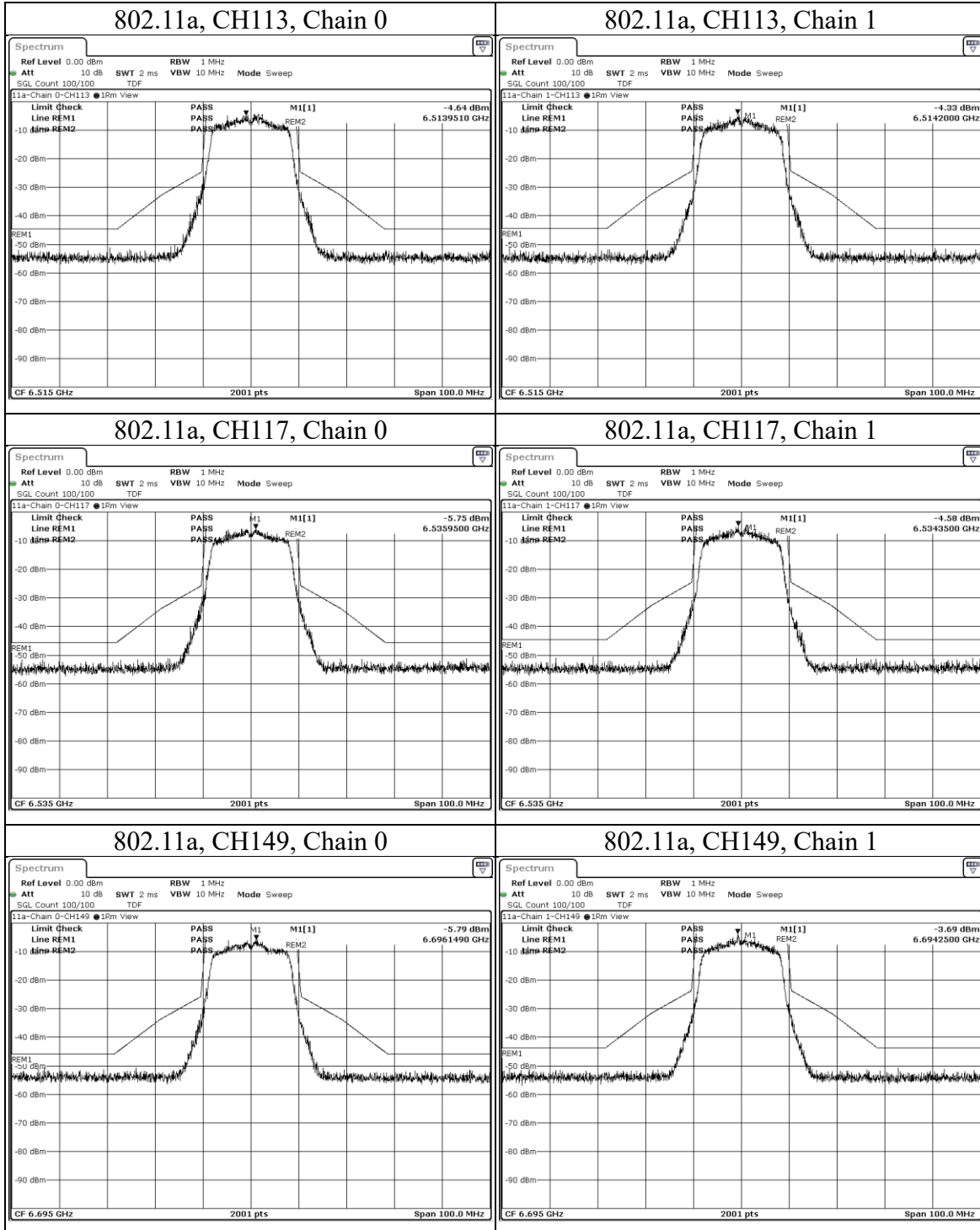
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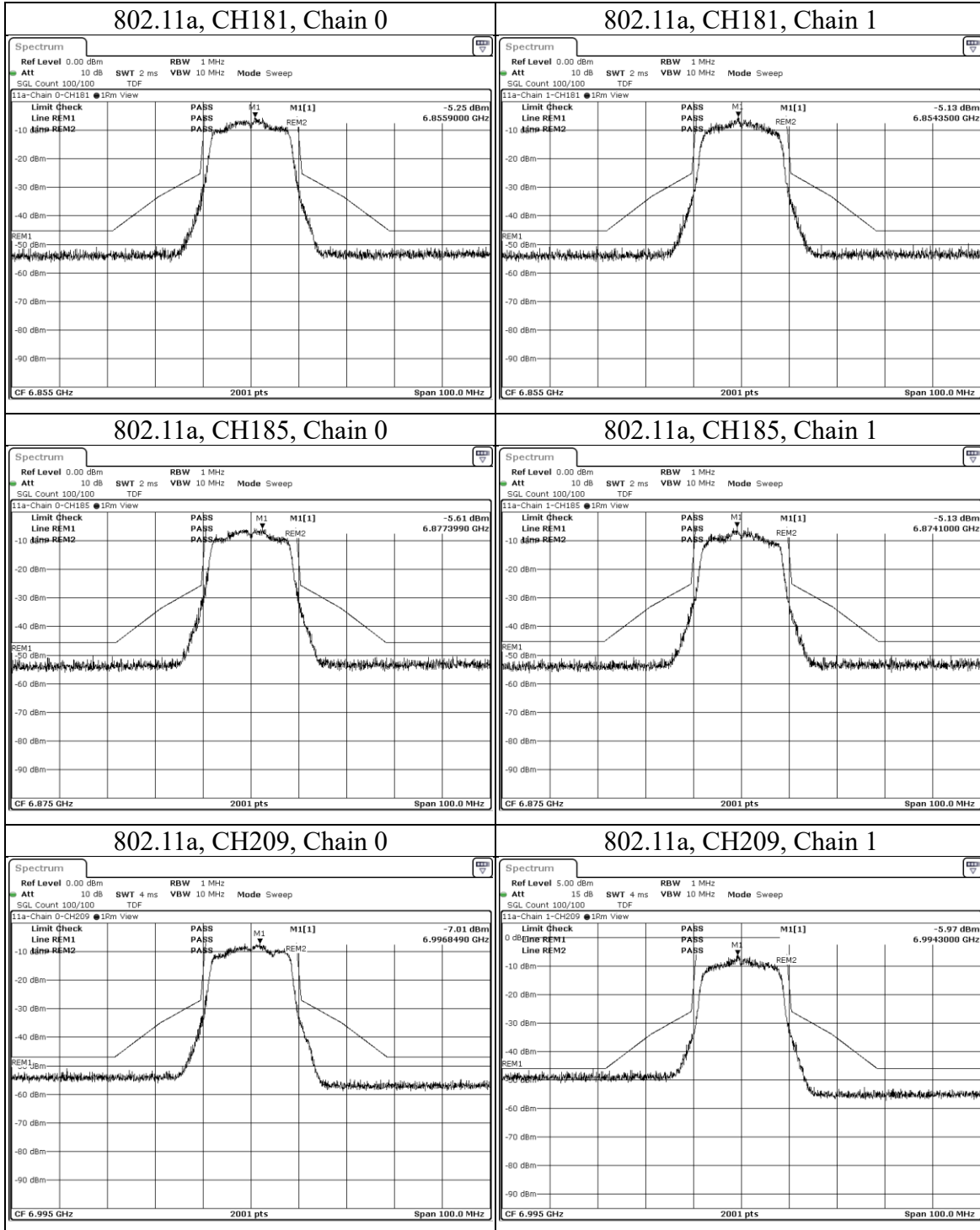
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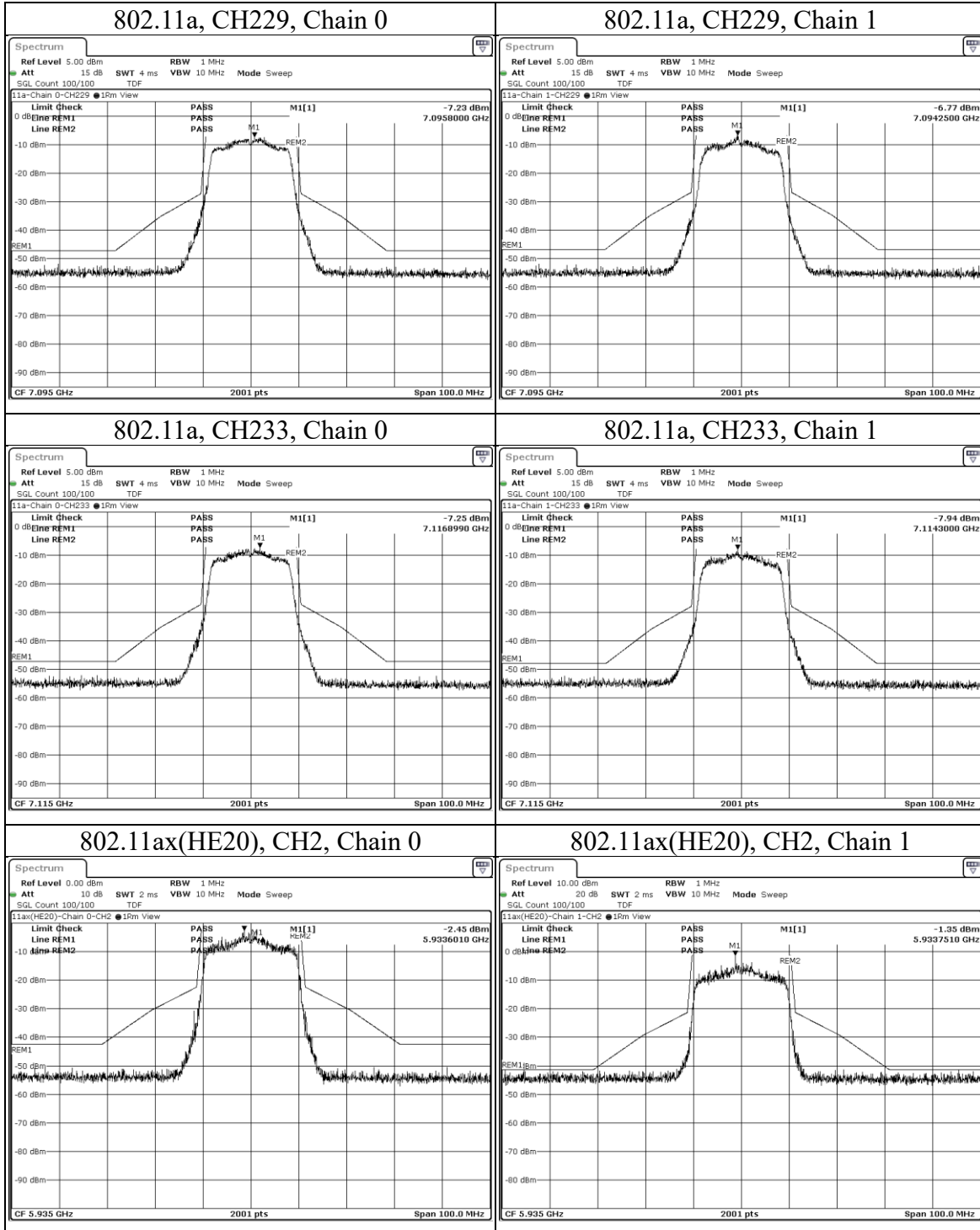
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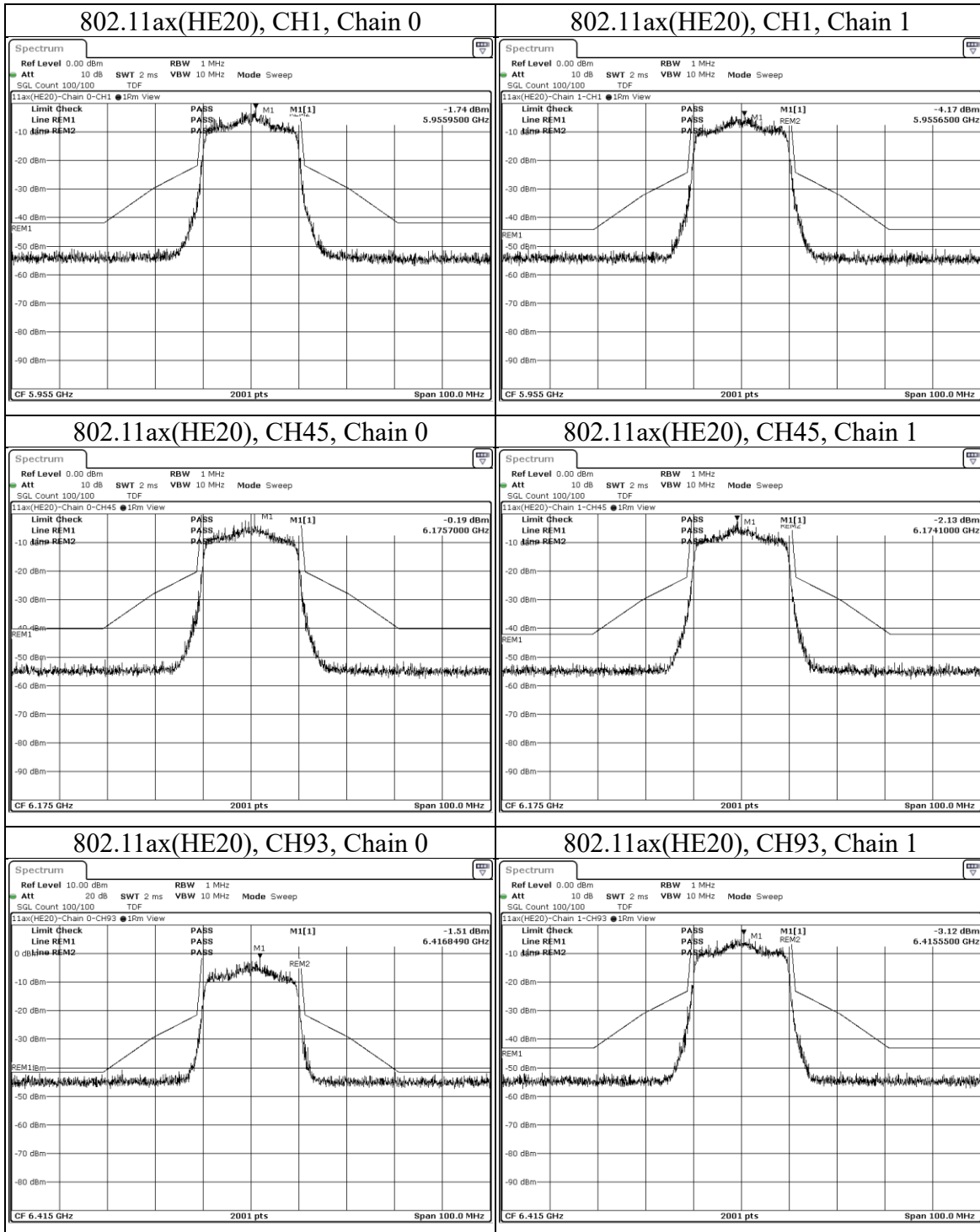
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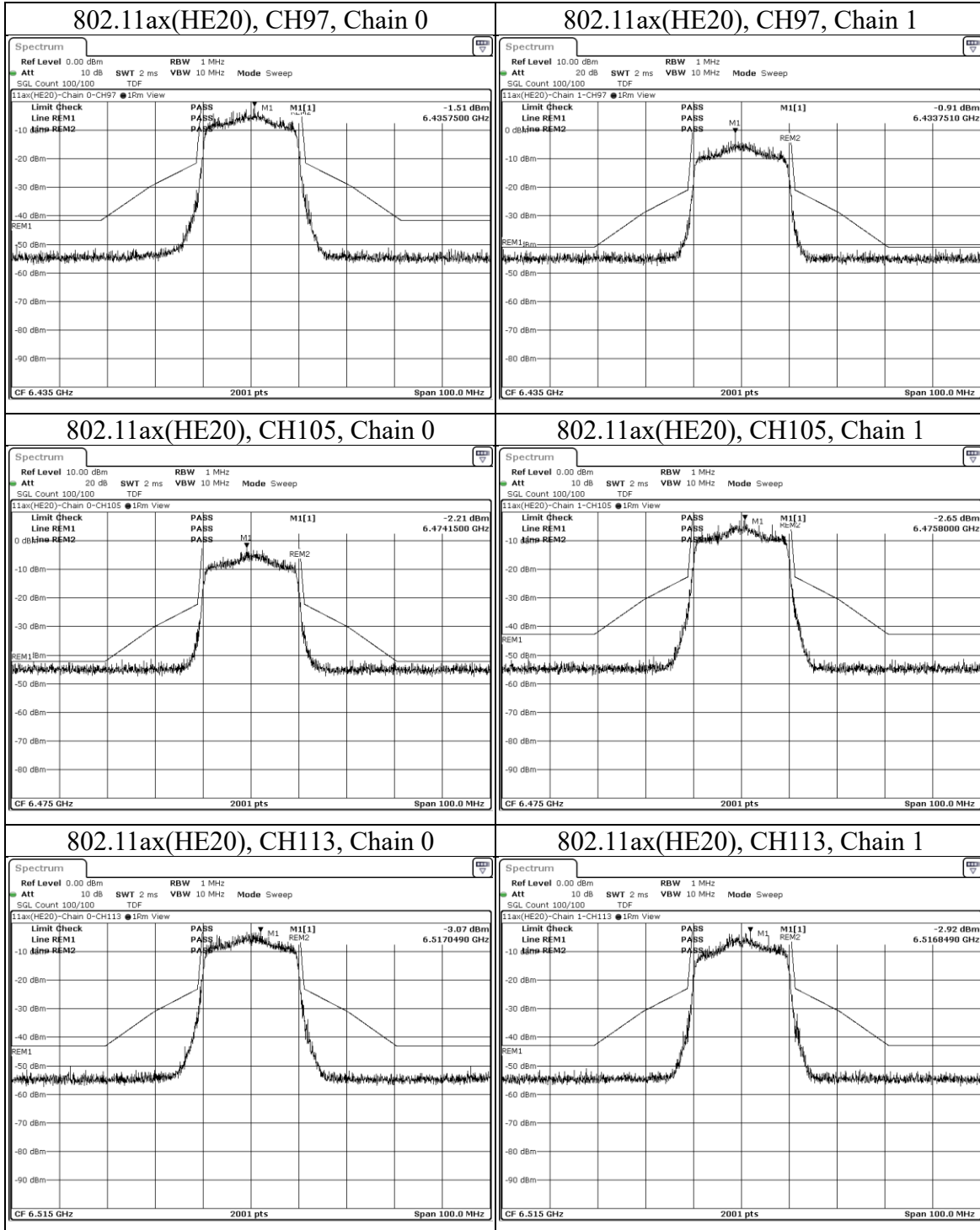
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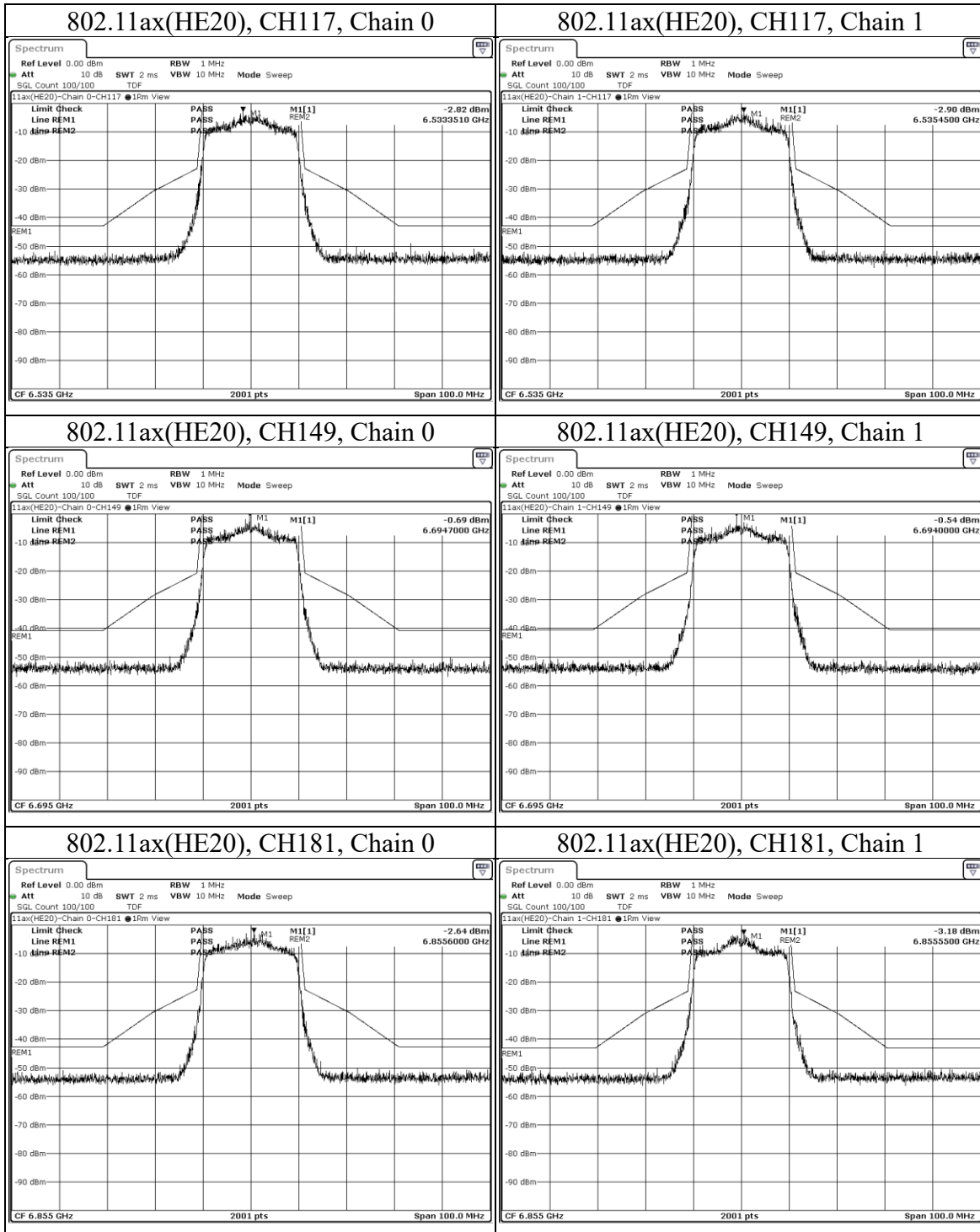
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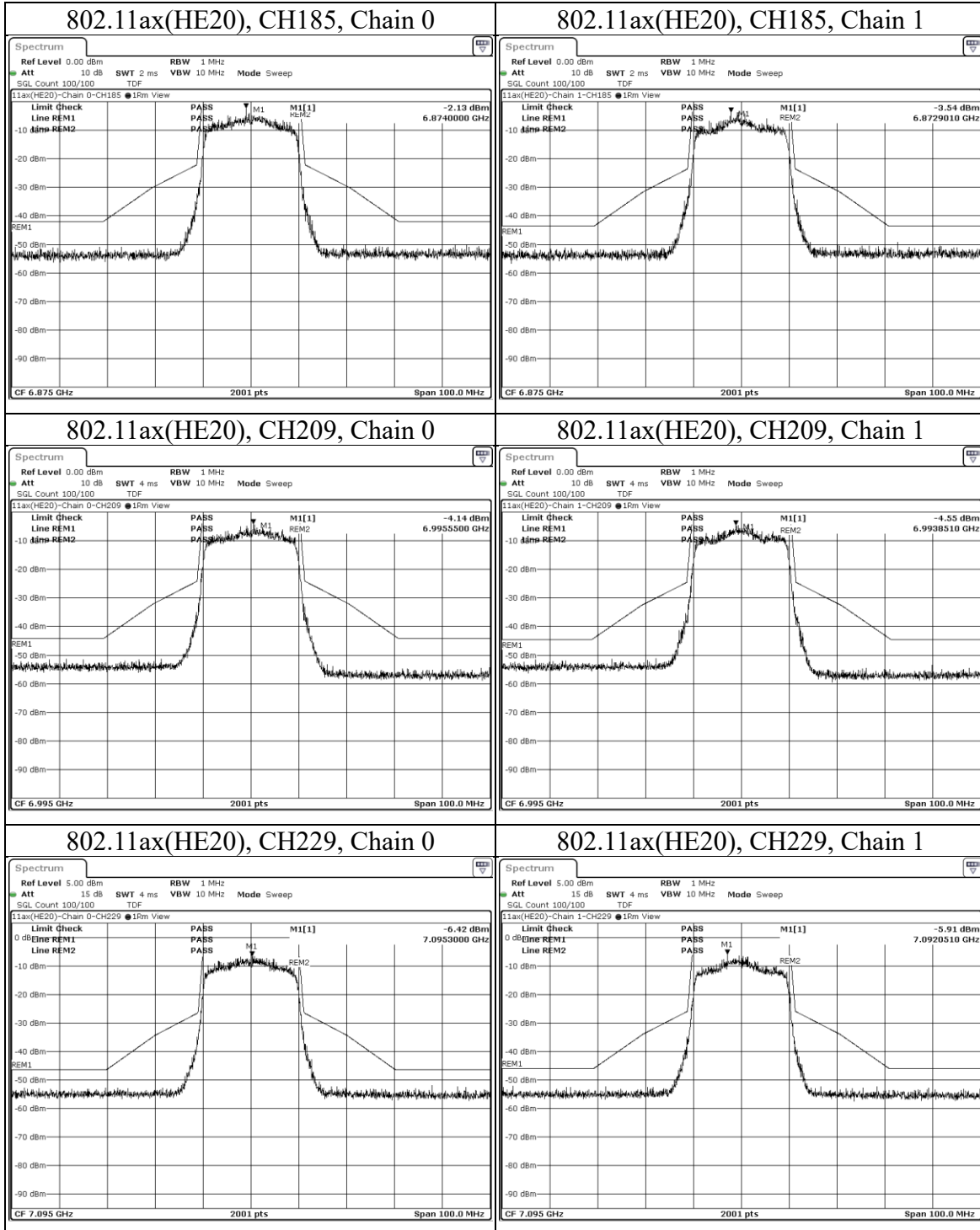
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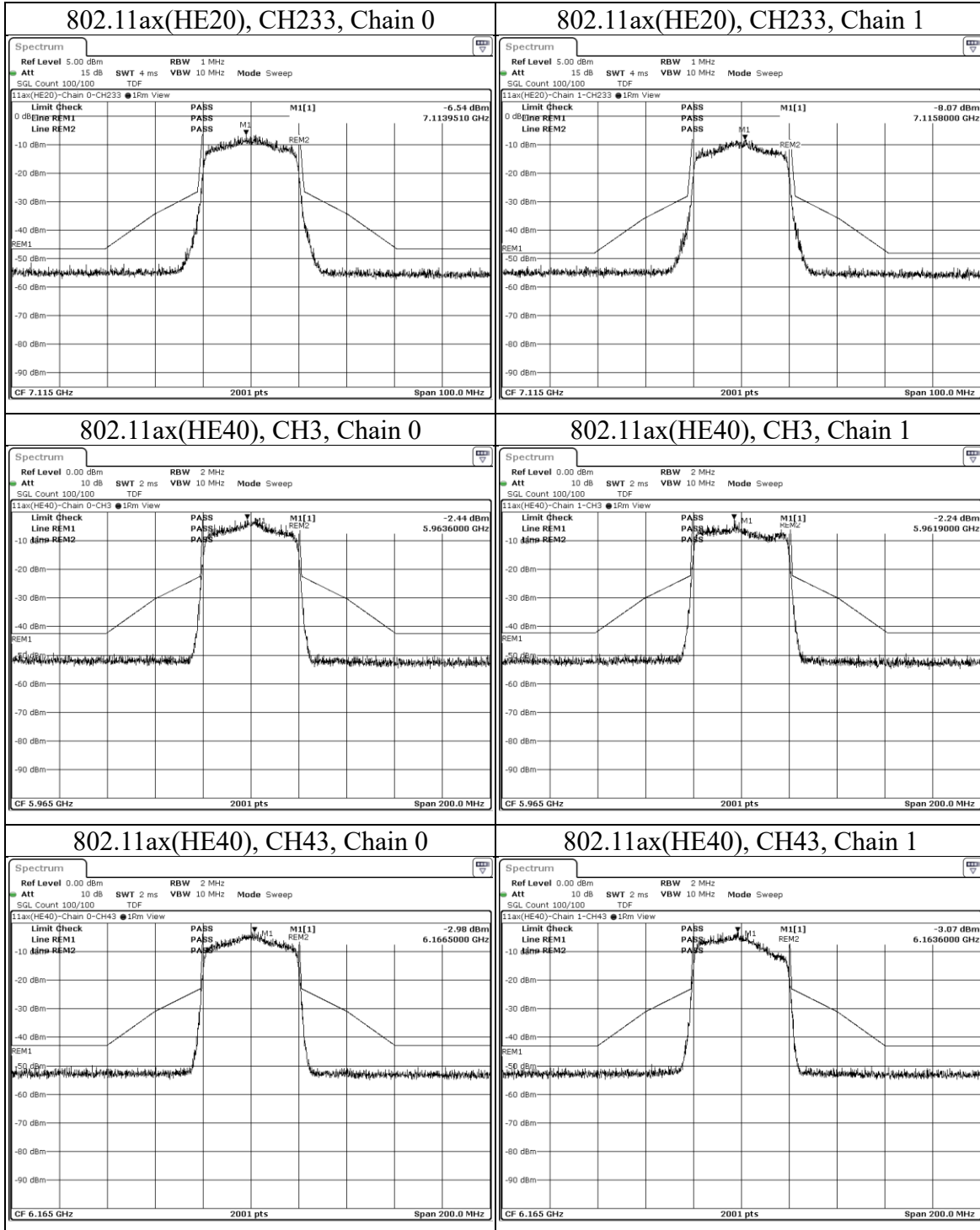


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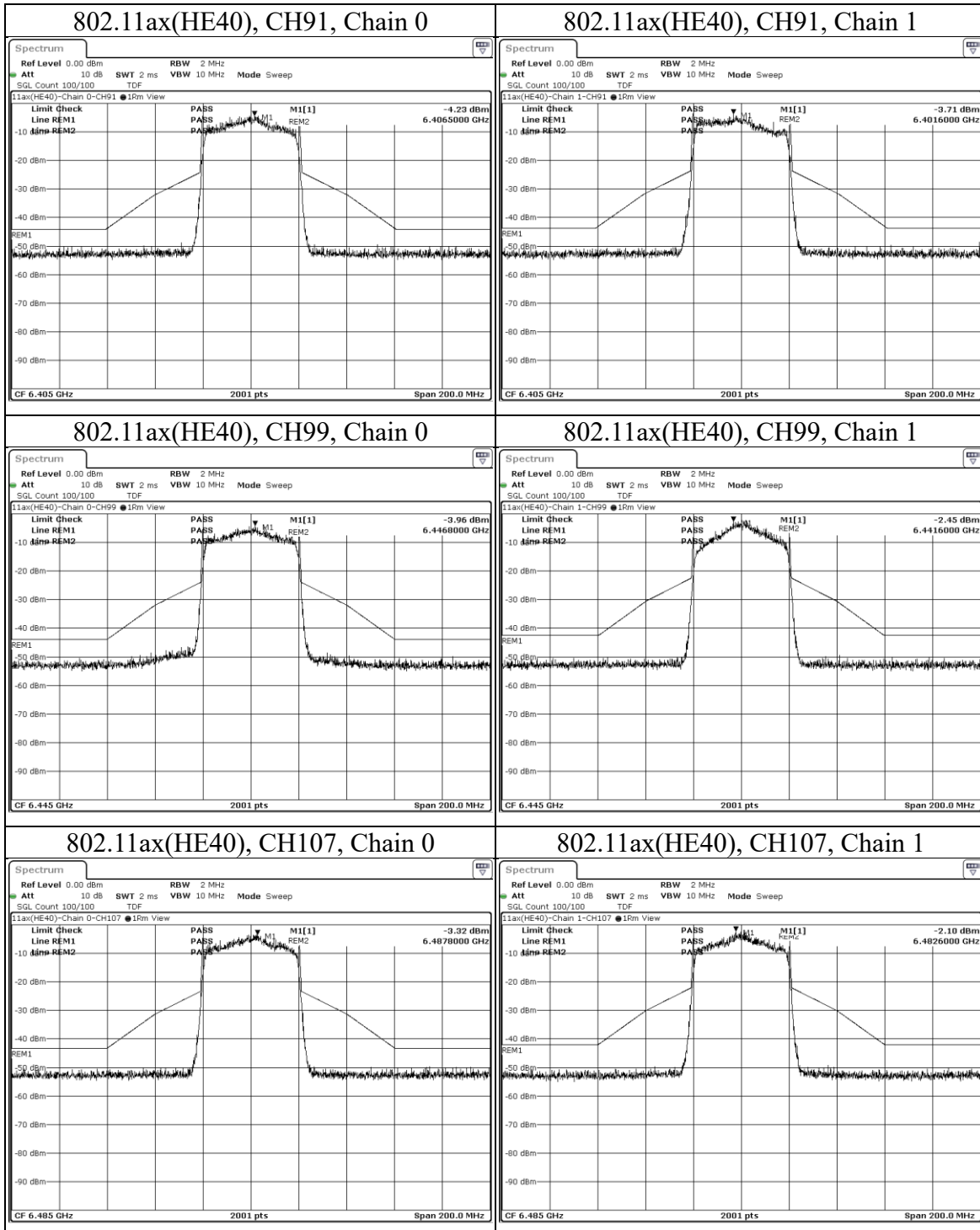
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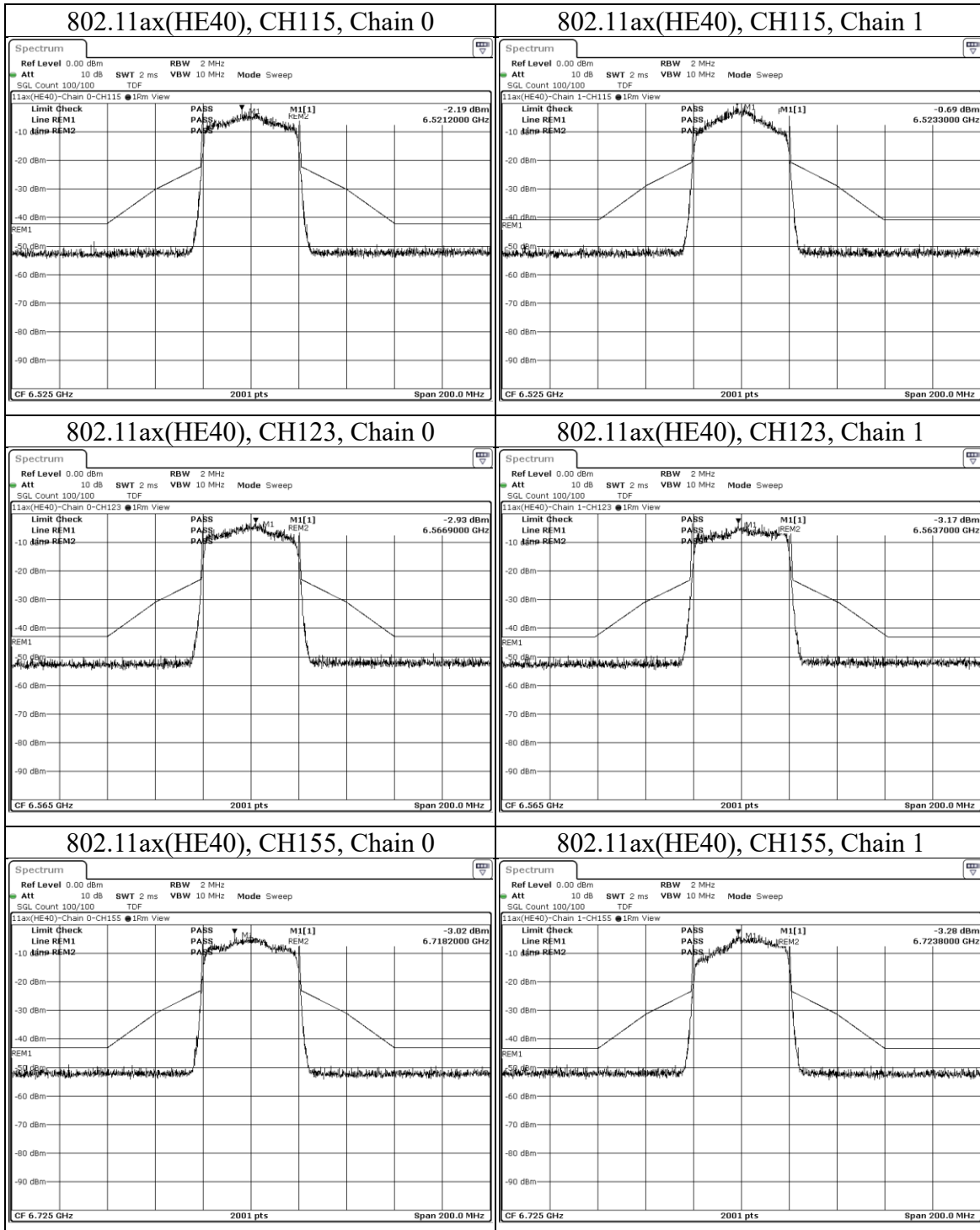


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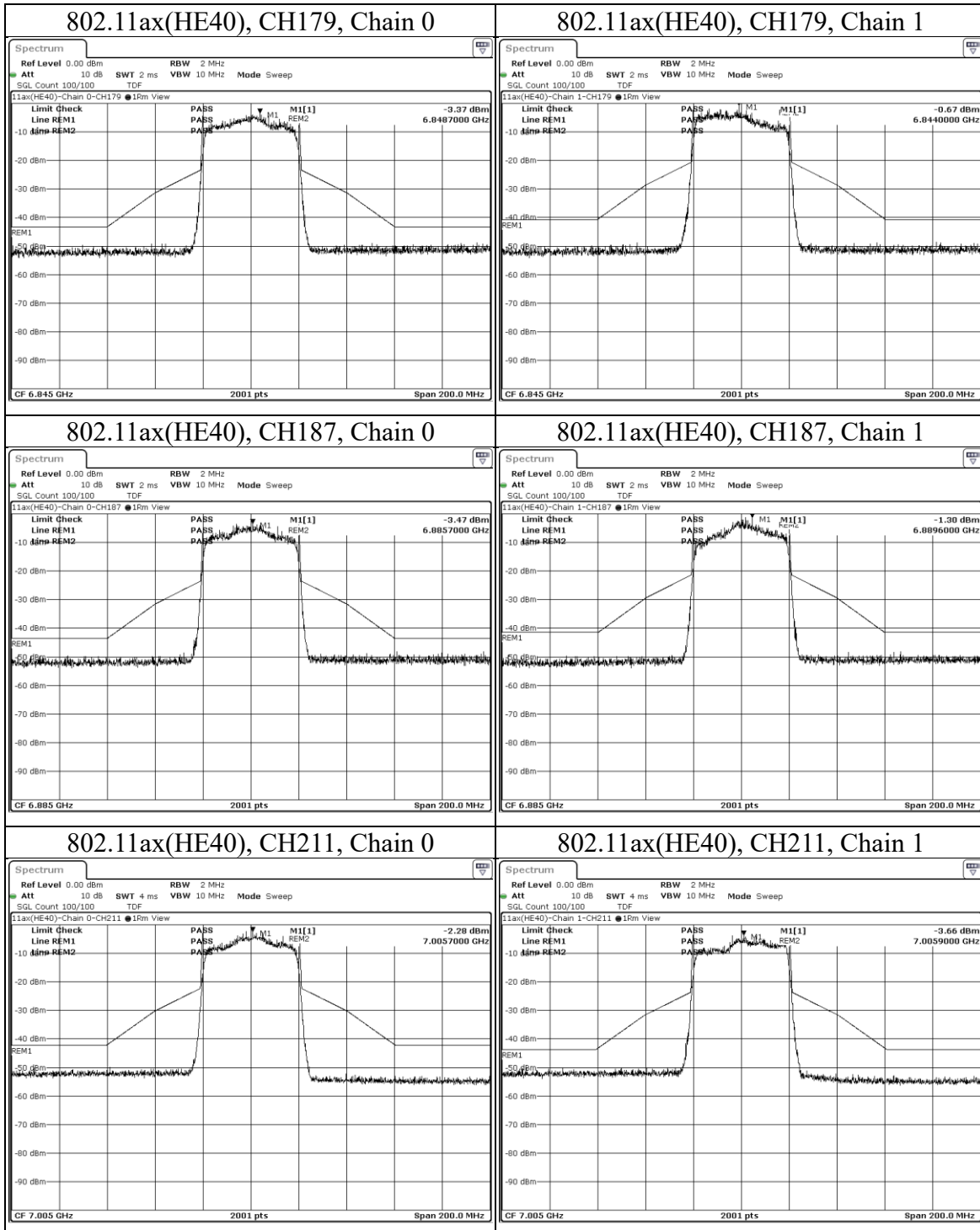
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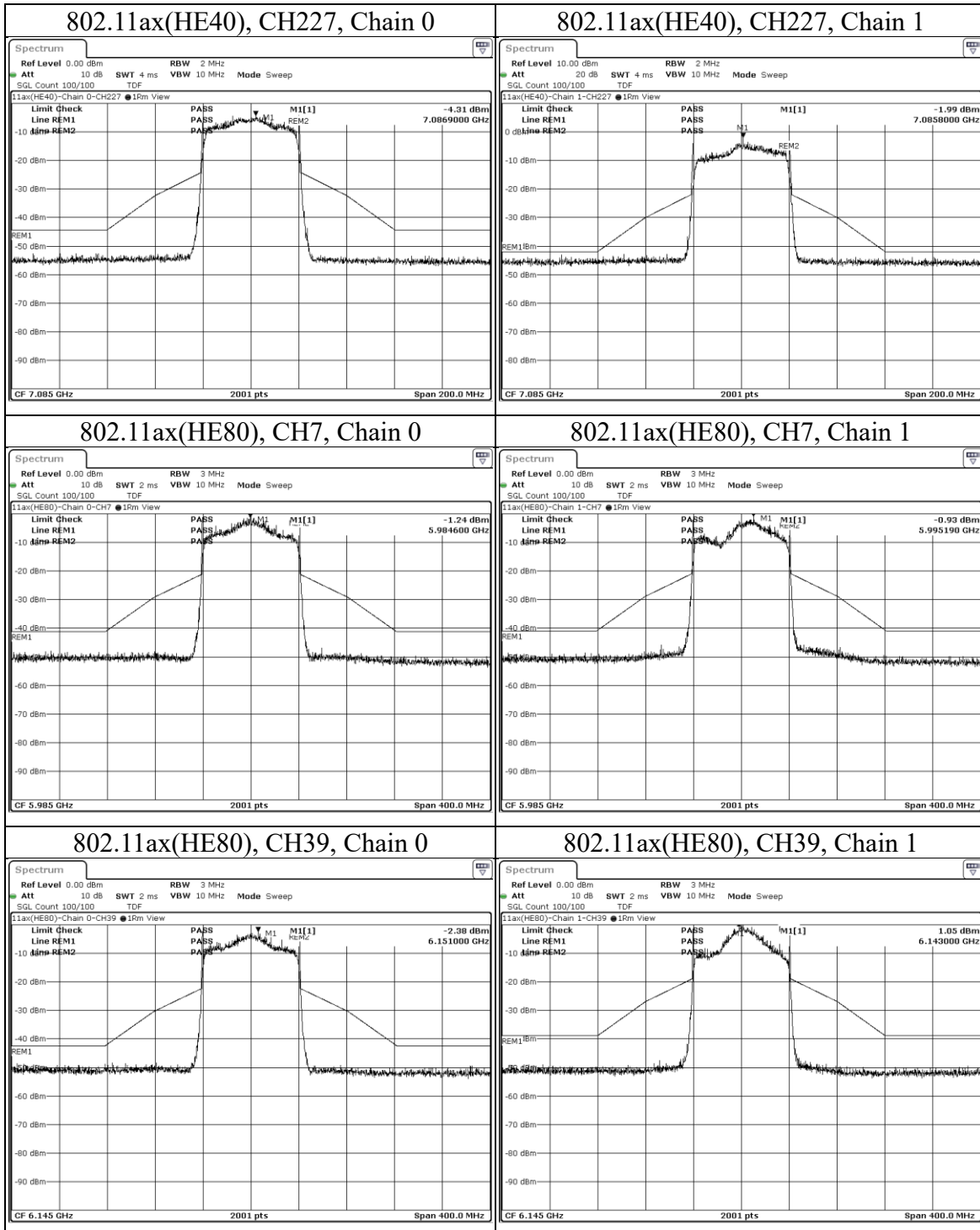
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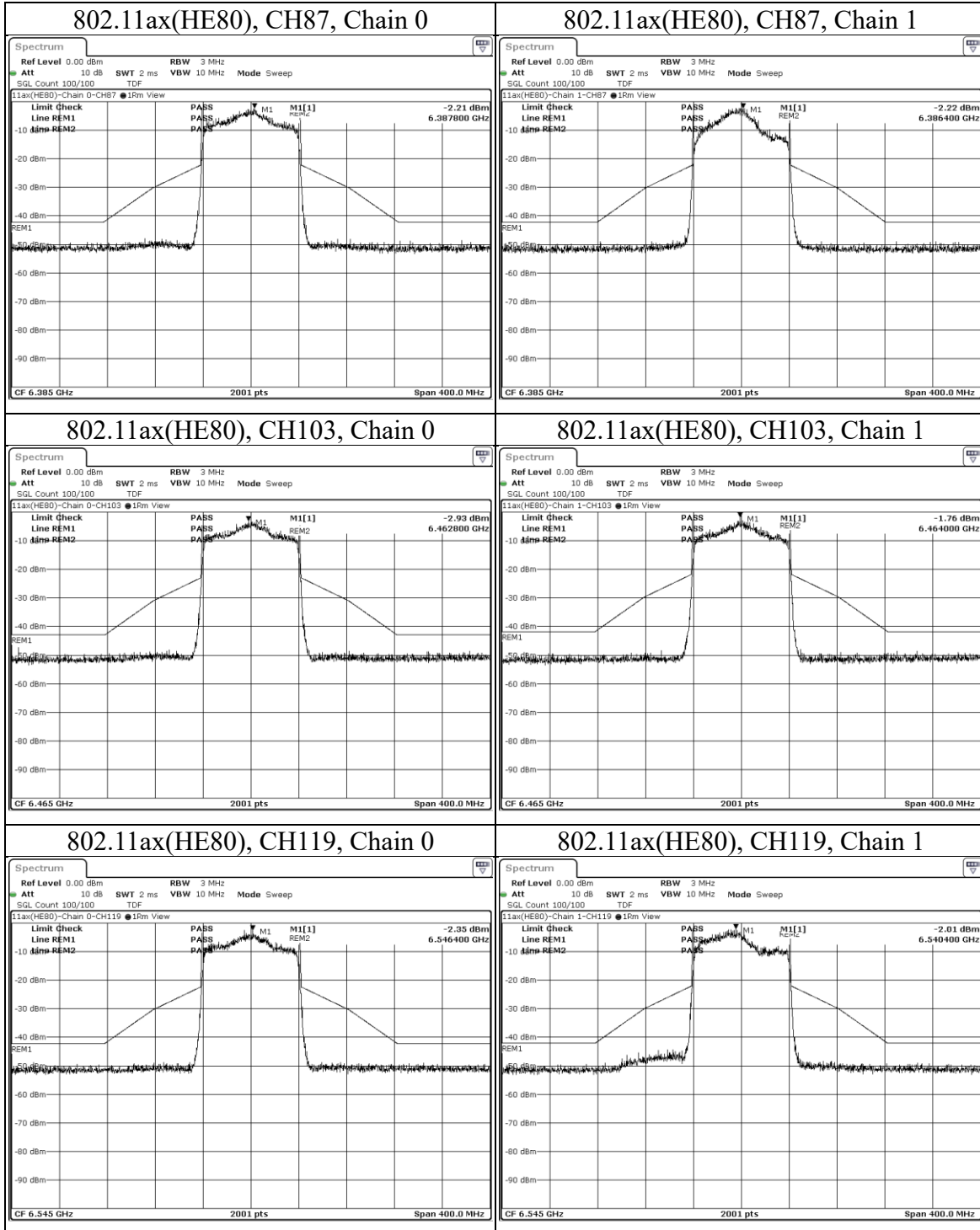


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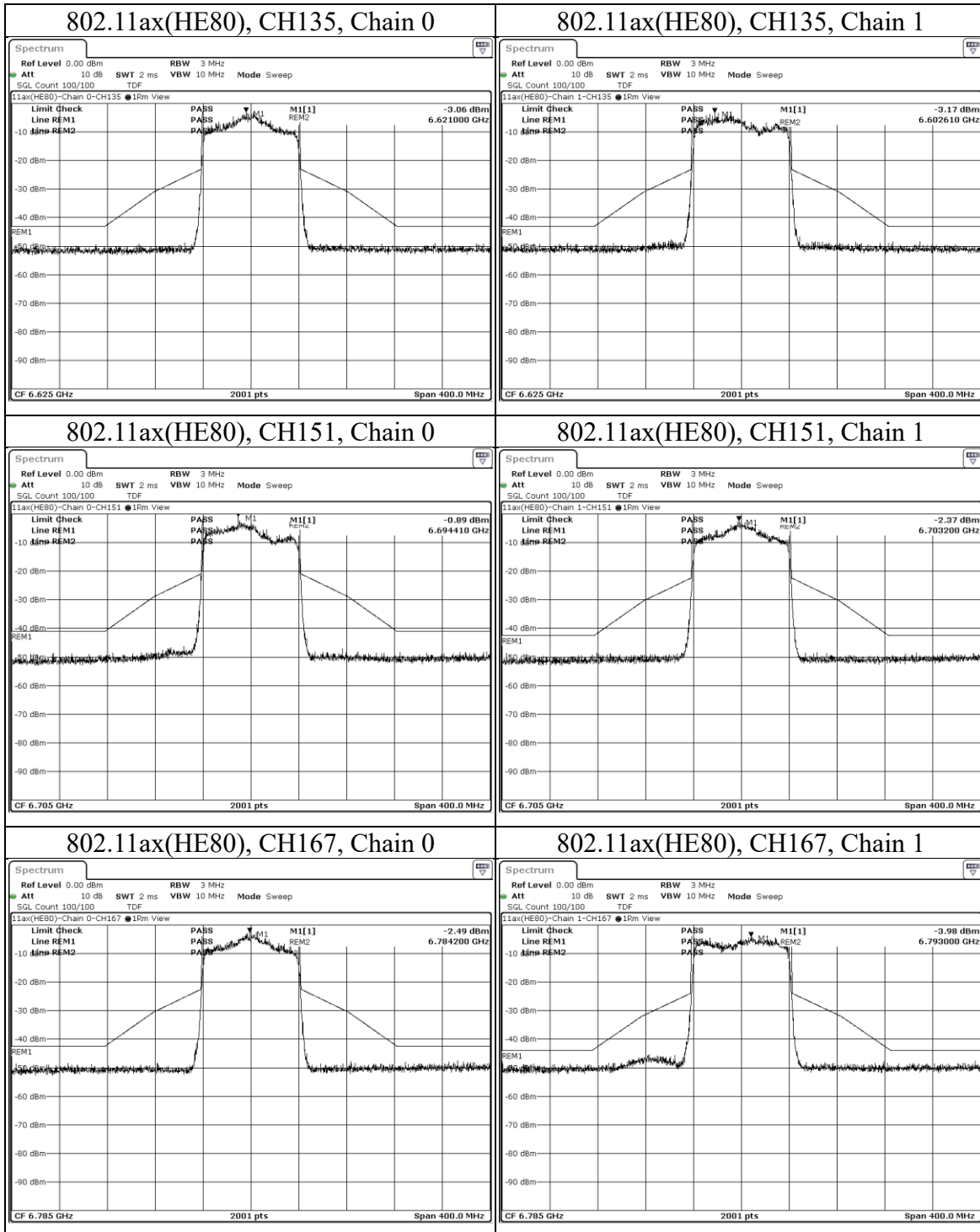
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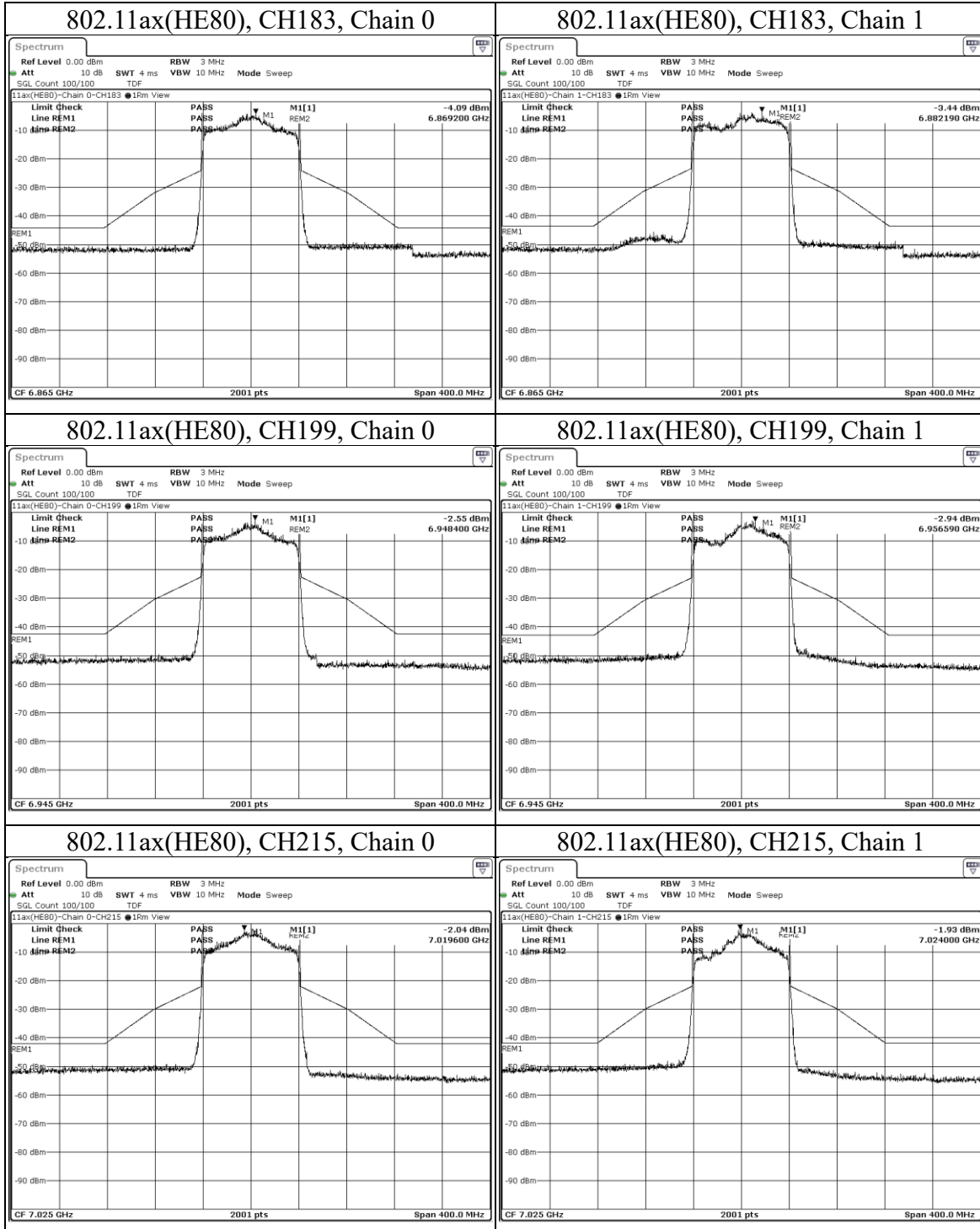
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