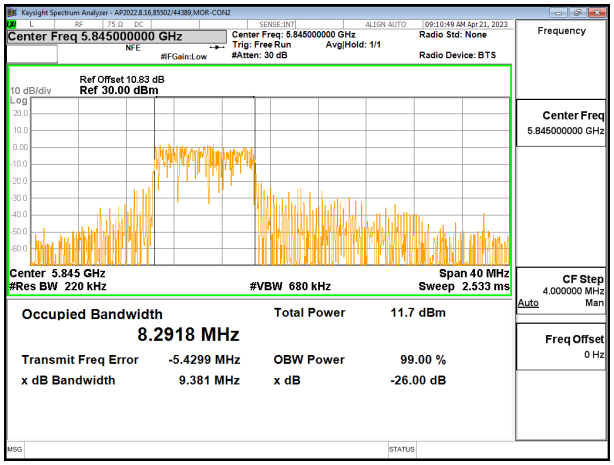
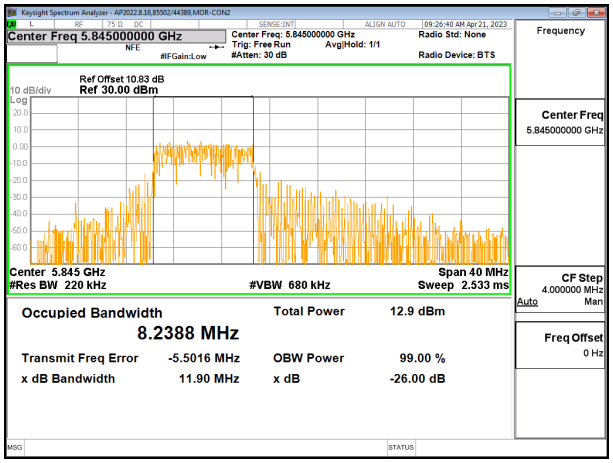
2TX CDD MODE – 106T

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	5845	8.2918	8.2388
Mid	5865	8.3060	8.3538
High	5885	8.2651	8.2872

LOW CHANNEL

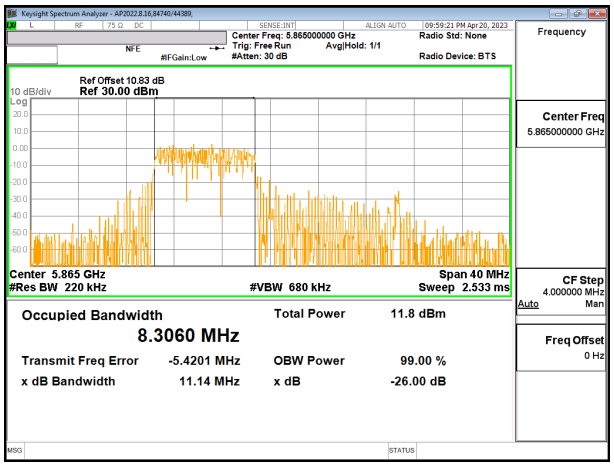


LOW CHANNEL CHAIN 0

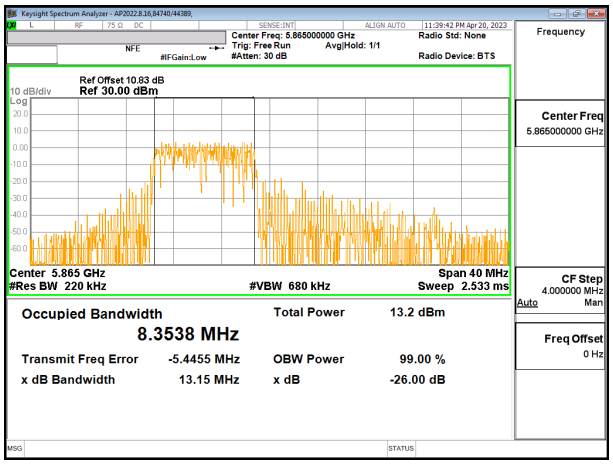


LOW CHANNEL CHAIN 1

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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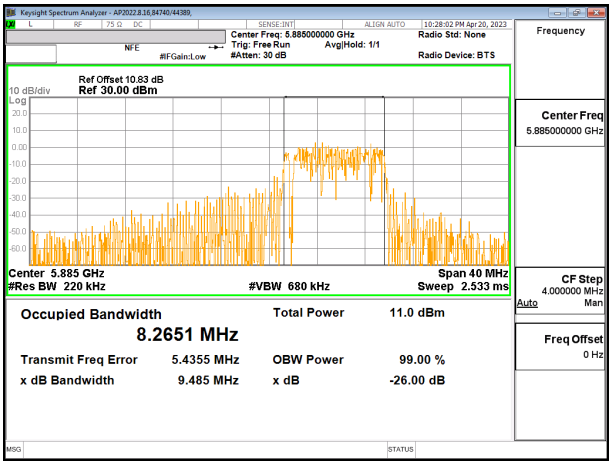
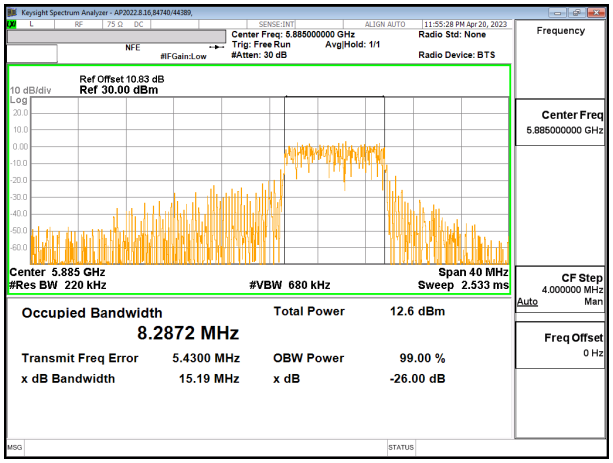
HIGH CHANNEL



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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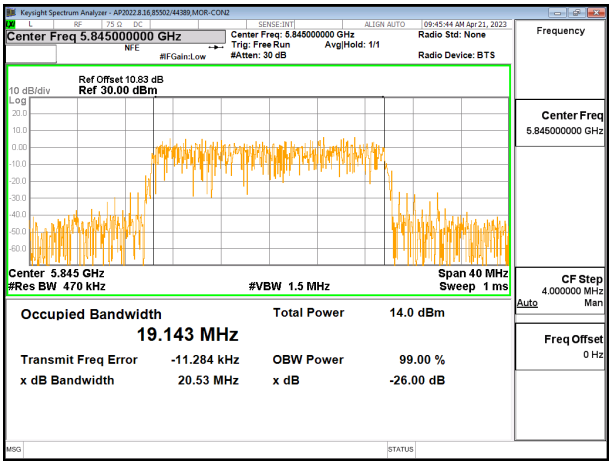
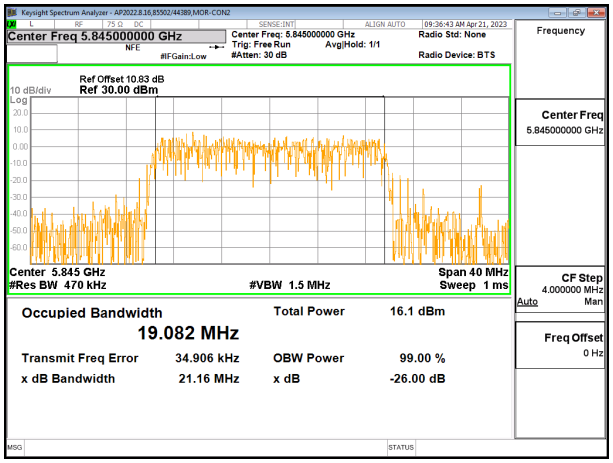
2TX CDD MODE – 242T

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	5845	19.143	19.082
Mid	5865	19.079	19.040
High	5885	19.006	19.101

LOW CHANNEL

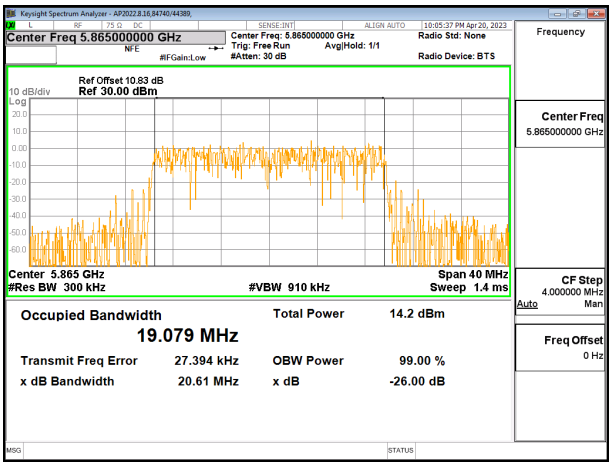


LOW CHANNEL CHAIN 0

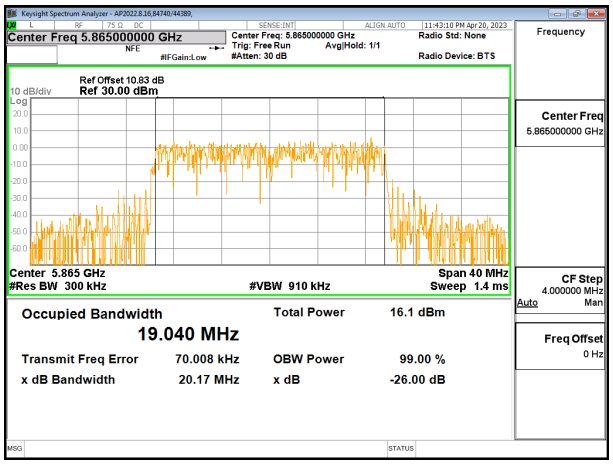


LOW CHANNEL CHAIN 1

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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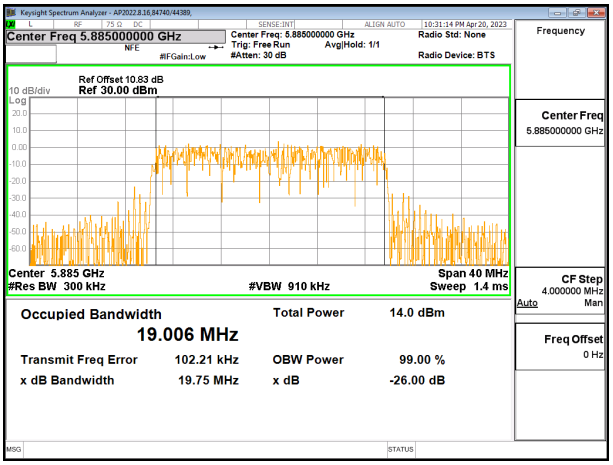
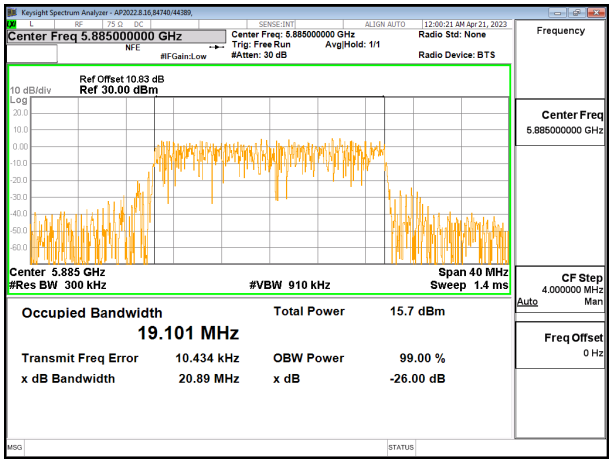
HIGH CHANNEL



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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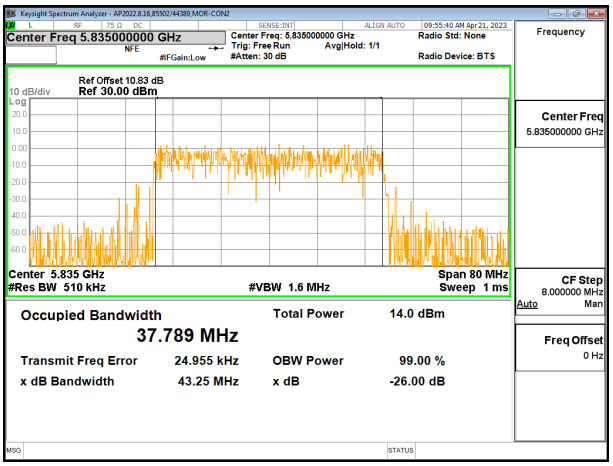
9.2.40. 802.11ax HE40 MODE IN THE 5.9 GHz BAND

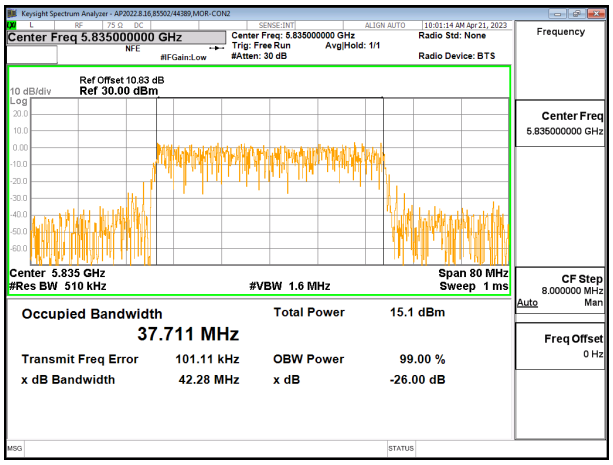
2TX CDD MODE – 484T

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	5835	37.789	37.711
High	5875	38.035	37.945

LOW CHANNEL

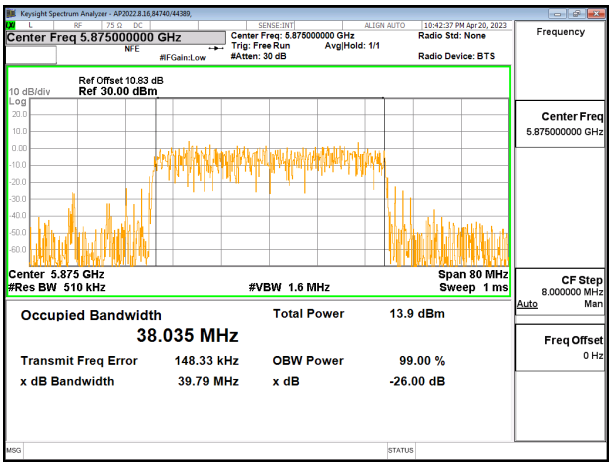


LOW CHANNEL CHAIN 0

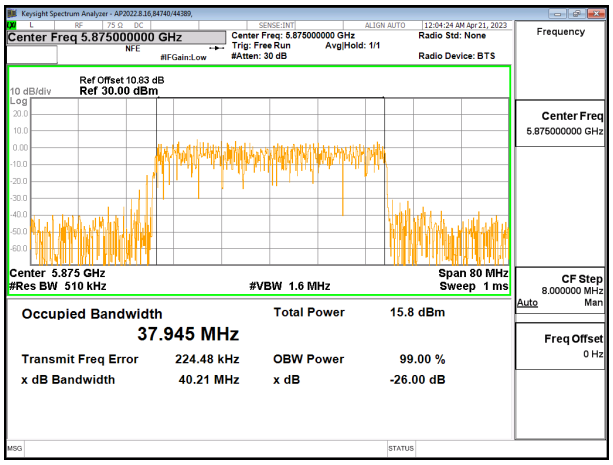


LOW CHANNEL CHAIN 1

HIGH CHANNEL



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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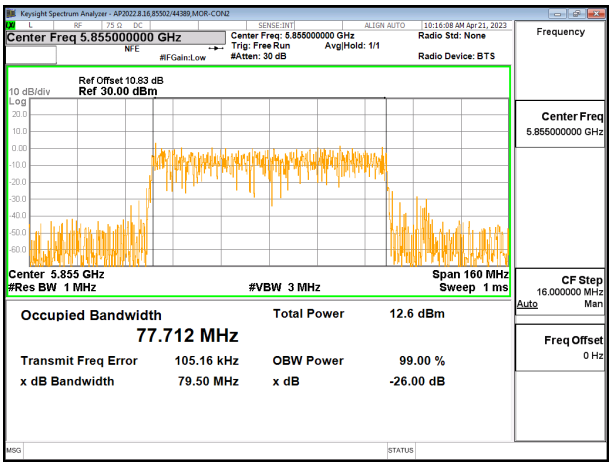
9.2.41. 802.11ax HE80 MODE IN THE 5.9 GHz BAND

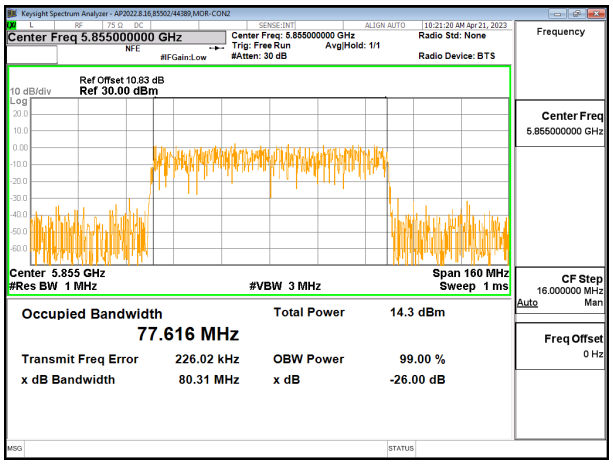
2TX CDD MODE – 996T

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Mid	5855	77.712	77.616

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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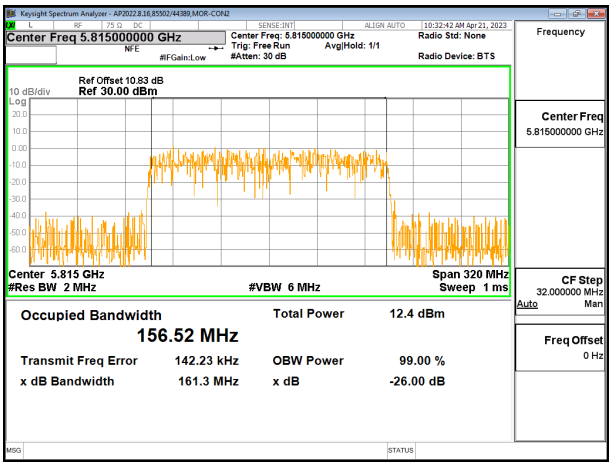
9.2.42. 802.11ax HE160 MODE IN THE 5.9 GHz BAND

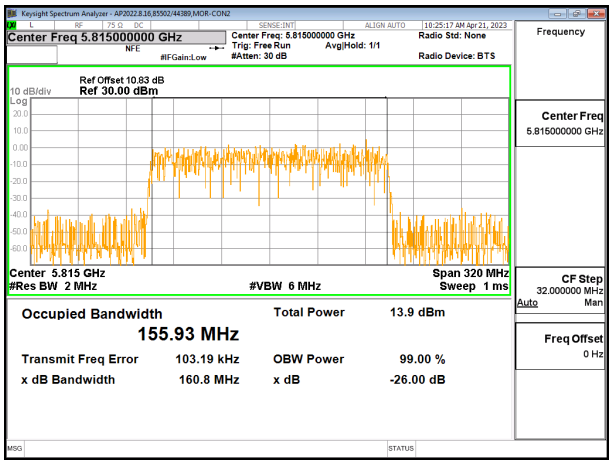
2TX CDD MODE – 996T

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Mid	5815	156.52	155.93

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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9.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

(1)(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Bands 5.25-5.35 GHz and 5.47-5.725 GHz
(2) The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Band 5.725-5.85 GHz

(3) (i) The maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

Band 5.850-5.895 GHz

(3)(iii) For client devices operating under the control of an indoor access point in the 5.850–5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725–5.850 GHz and 5.850–5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

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Band 5.15-5.25 GHz
The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

Band 5.25-5.35 GHz
The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Bands 5.47-5.6 GHz and 5.65-5.725 GHz
The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Band 5.725-5.85 GHz
The maximum conducted output power shall not exceed 1 W. The power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

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TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G).

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband average power sensor. Gated average output power was read directly from power meter. EUT was connected to spectrum analyzer for PSD measurements.

DIRECTIONAL ANTENNA GAIN

2 TX DIRECTIONAL ANTENNA GAIN

Tx chains are uncorrelated for power and correlated for PSD.The directional gains are as follows:

Band (GHz)	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	0.14	-3.38	-1.27	1.57
5.3	0.23	-3.01	-1.09	1.77
5.6	0.08	-2.82	-1.13	1.76
5.8	-0.87	-3.58	-2.02	0.89
5.9	-0.97	-3.13	-1.92	1.03

Directional gains for MIMO operations were determined using KDB662911 D01 Section F (2)(d)(i) and (ii) for unequal antenna gains, with equal transmit powers. The directional gains are calculated using the formulas for uncorrelated and correlated transmissions across the two transmit antennas.

(i) Correlated gain = $10\log((10^{G1/20} + 10^{G2/20})^2 / N_{Ant})$

(ii) Uncorrelated gain = $10\log((10^{G1/10} + 10^{G2/10}) / N_{Ant})$

Sample calculation, using 2 antennas:

Correlated gain = $10\log(10^{0.14/20} + 10^{-3.38/20})^2/2) = 1.57$dBi

Uncorrelated gain = $10\log(10^{0.14/10} + 10^{-3.38/10})/2) = -1.27$dBi

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9.3.1. 802.11a MODE IN THE 5.2 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-19

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5180	-1.27	1.57	24.00	11.00
Mid	5200	-1.27	1.57	24.00	11.00
High	5240	-1.27	1.57	24.00	11.00

Duty Cycle CF (dB)	0.57	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 1 Meas Power (dBm)	Antenna 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	14.68	14.76	17.73	24.00	-6.27
Mid	5200	14.73	14.62	17.69	24.00	-6.31
High	5240	14.55	14.33	17.45	24.00	-6.55

PSD Results

Channel	Frequency (MHz)	Antenna 1 Meas PSD (dBm/1MHz)	Antenna 2 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5180	3.72	3.88	7.38	11.00	-3.62
Mid	5200	3.96	3.70	7.41	11.00	-3.59
High	5240	3.44	3.34	6.97	11.00	-4.03

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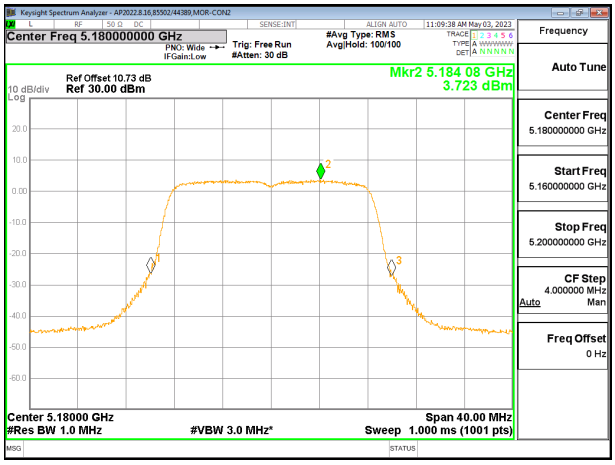
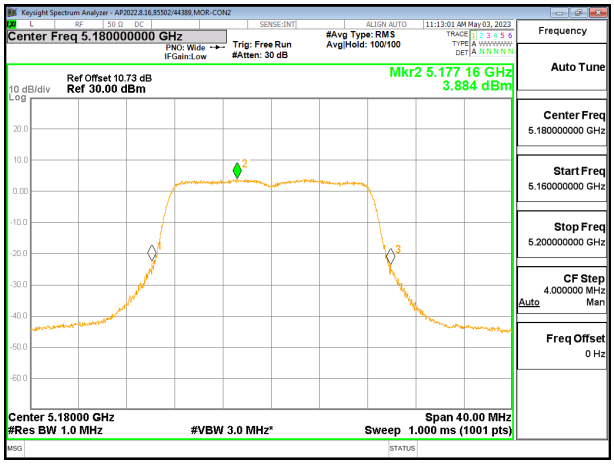
LOW CHANNEL

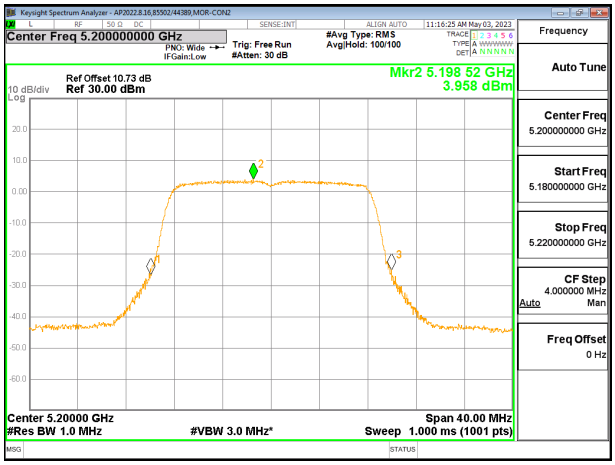


LOW CHANNEL CHAIN 0

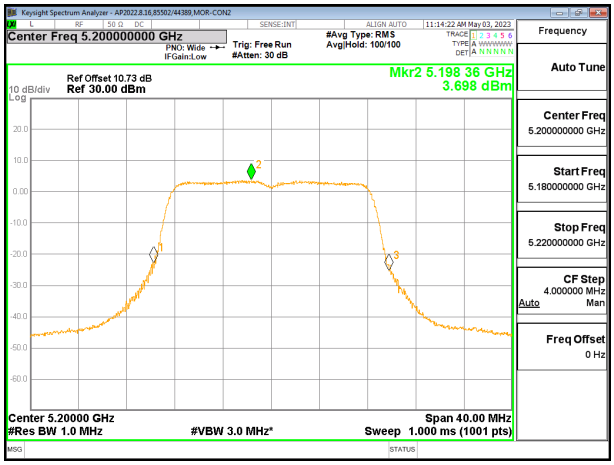


LOW CHANNEL CHAIN 1

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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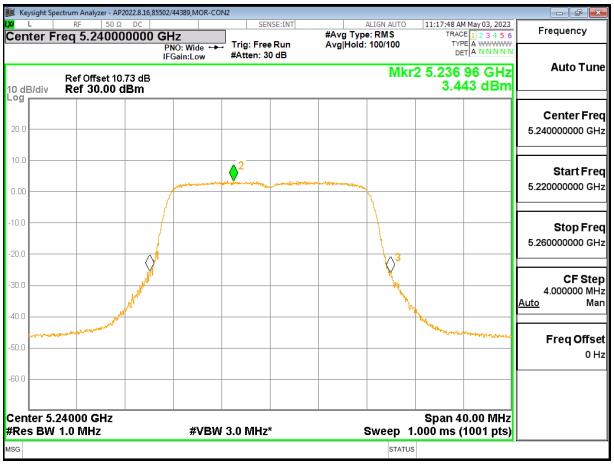
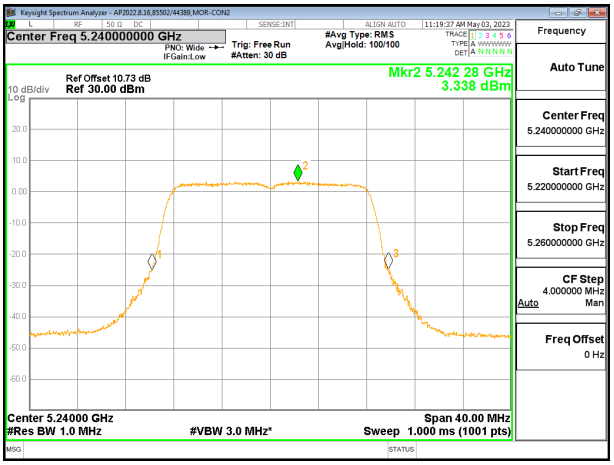
HIGH CHANNEL



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5180	-1.27	24.00
Mid	5200	-1.27	24.00
High	5240	-1.27	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	16.59	16.96	19.79	24.00	-4.21
Mid	5200	16.92	16.86	19.90	24.00	-4.10
High	5240	16.83	16.87	19.86	24.00	-4.14

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9.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5190	-1.27	24.00
High	5230	-1.27	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	16.85	16.10	19.50	24.00	-4.50
High	5230	16.88	16.20	19.56	24.00	-4.44

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9.3.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Mid	5210	-1.27	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	15.64	15.36	18.51	24.00	-5.49

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9.3.5. 802.11ac VHT160 MODE IN THE 5.2 AND 5.3 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Mid	5250	-1.09	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5250	14.92	14.82	17.88	24.00	-6.12

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9.3.6. 802.11a MODE IN THE 5.2 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)	EIRP PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low	5180	16.4090	-1.27	1.57	22.15	23.42	10.00	8.43
Mid	5200	16.3990	-1.27	1.57	22.15	23.42	10.00	8.43
High	5240	16.4170	-1.27	1.57	22.15	23.42	10.00	8.43

Duty Cycle CF (dB)	0.57	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	14.68	14.76	17.73	23.42	-5.69
Mid	5200	14.73	14.62	17.69	23.42	-5.73
High	5240	14.55	14.33	17.45	23.42	-5.97

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5180	3.63	4.16	7.49	8.43	-0.94
Mid	5200	3.85	3.76	7.38	8.43	-1.05
High	5240	3.46	3.29	6.95	8.43	-1.48

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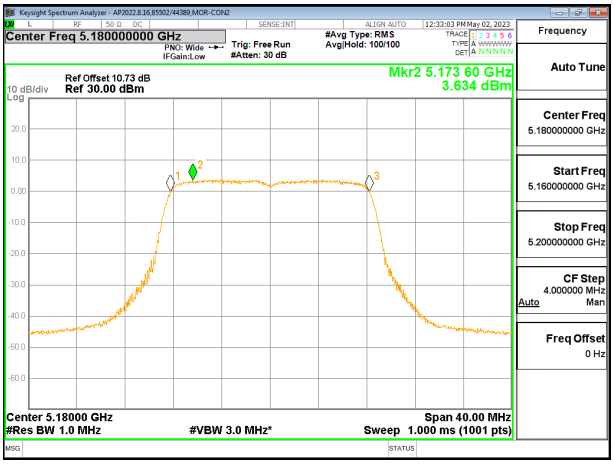
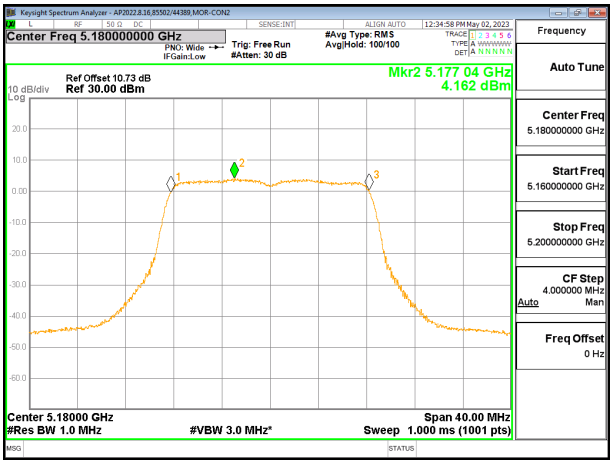
LOW CHANNEL

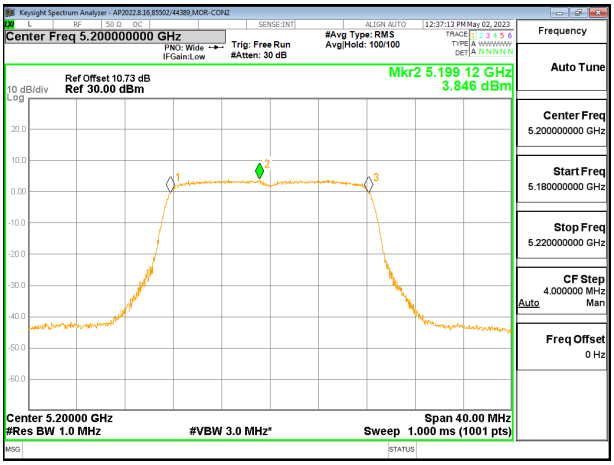


LOW CHANNEL CHAIN 0

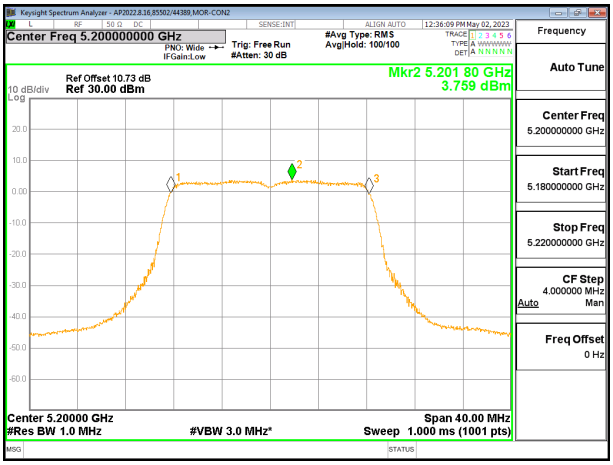


LOW CHANNEL CHAIN 1

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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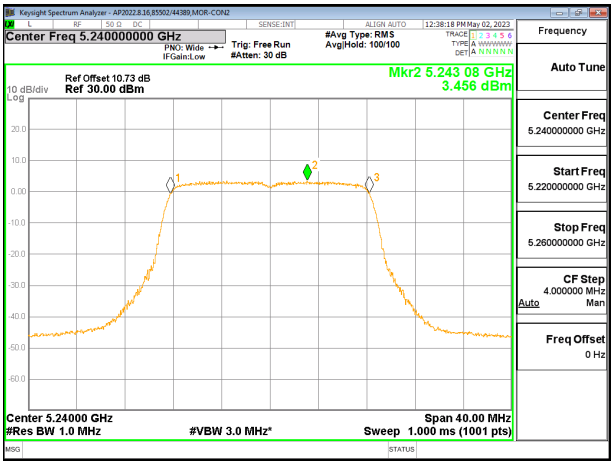
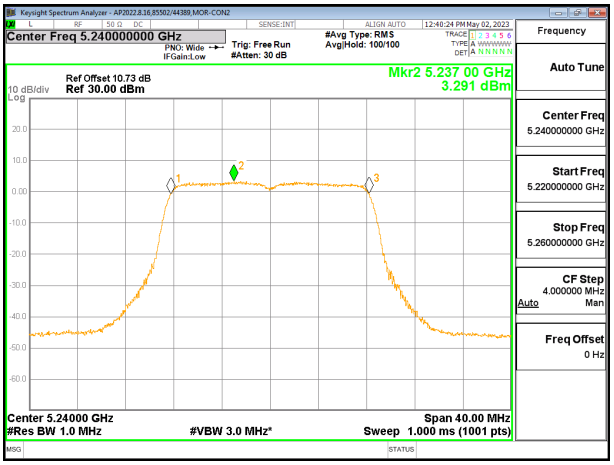
HIGH CHANNEL



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.7. 802.11n HT20 MODE IN THE 5.2 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)
Low	5180	17.631	-1.27	22.46	23.73
Mid	5200	17.638	-1.27	22.46	23.73
High	5240	17.620	-1.27	22.46	23.73

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	16.59	16.96	19.79	23.73	-3.94
Mid	5200	16.92	16.86	19.90	23.73	-3.83
High	5240	16.83	16.87	19.86	23.73	-3.87

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9.3.8. 802.11n HT40 MODE IN THE 5.2 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)
Low	5190	36.081	-1.27	23.00	24.27
High	5230	36.083	-1.27	23.00	24.27

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	16.85	16.10	19.50	24.27	-4.77
High	5230	16.88	16.20	19.56	24.27	-4.71

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9.3.9. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)
Mid	5210	75.524	-1.27	23.00	24.27

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	15.64	15.36	18.51	24.27	-5.76

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9.3.10. 802.11ac VHT160 MODE IN THE 5.2 AND 5.3 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)
Mid	5260	154.34	-1.27	23.00	24.27

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5260	14.92	14.82	17.88	24.27	-6.39

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9.3.11. 802.11ax HE20 MODE 2TX IN THE 5.2GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 26T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low (RU0)	5180	-1.27	1.57	24.00	11.00
Mid (RU4)	5200	-1.27	1.57	24.00	11.00
High (RU8)	5240	-1.27	1.57	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU0)	5180	7.24	7.29	10.28	24.00	-13.72
Mid (RU4)	5200	8.14	7.28	10.74	24.00	-13.26
High (RU8)	5240	6.98	6.72	9.86	24.00	-14.14

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU0)	5180	4.89	4.86	7.88	11.00	-3.12
Mid (RU4)	5200	4.11	4.08	7.10	11.00	-3.90
High (RU8)	5240	4.36	4.09	7.24	11.00	-3.76

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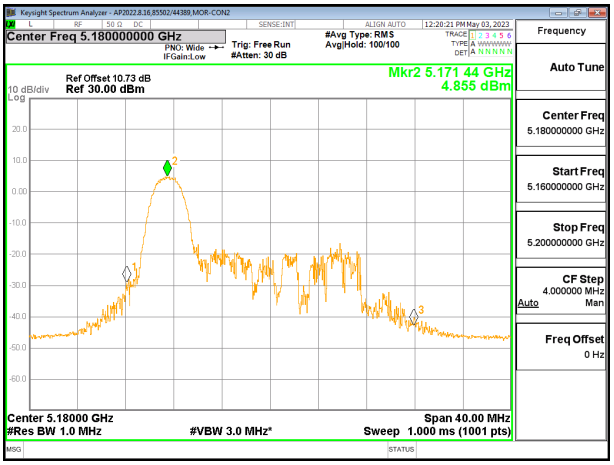
LOW CHANNEL (RU0)

LOW CHANNEL CHAIN 0



LOW CHANNEL CHAIN 1

MID CHANNEL (RU4)

MID CHANNEL CHAIN 0

MID CHANNEL CHAIN 1

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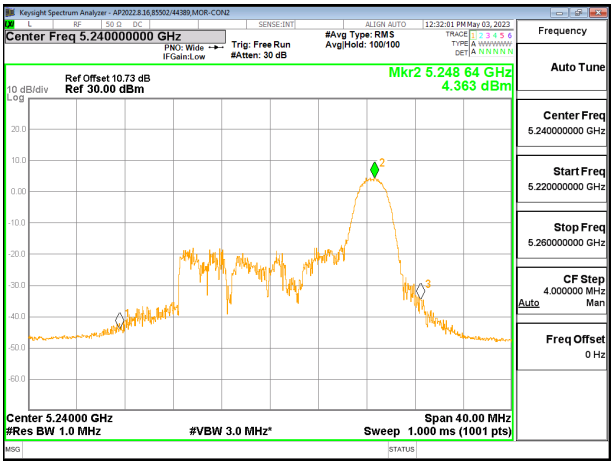
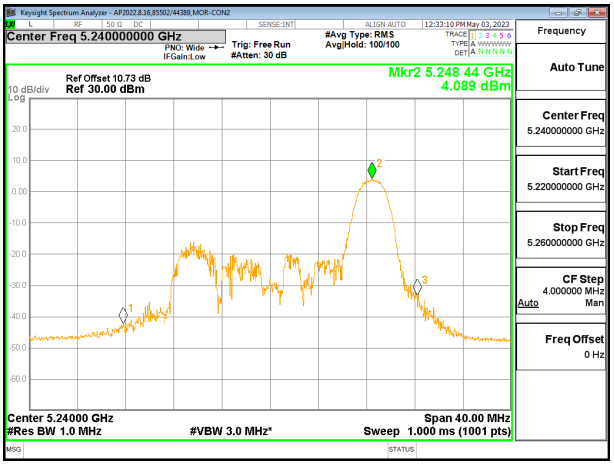
HIGH CHANNEL (RU8)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 52T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low (RU37)	5180	-1.27	1.57	24.00	11.00
Mid (RU38)	5200	-1.27	1.57	24.00	11.00
High (RU40)	5240	-1.27	1.57	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU37)	5180	9.41	9.47	12.45	24.00	-11.55
Mid (RU38)	5200	9.17	9.10	12.15	24.00	-11.85
High (RU40)	5240	9.22	9.17	12.21	24.00	-11.79

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU37)	5180	4.43	4.47	7.46	11.00	-3.54
Mid (RU38)	5200	4.29	3.97	7.14	11.00	-3.86
High (RU40)	5240	3.81	3.88	6.86	11.00	-4.14

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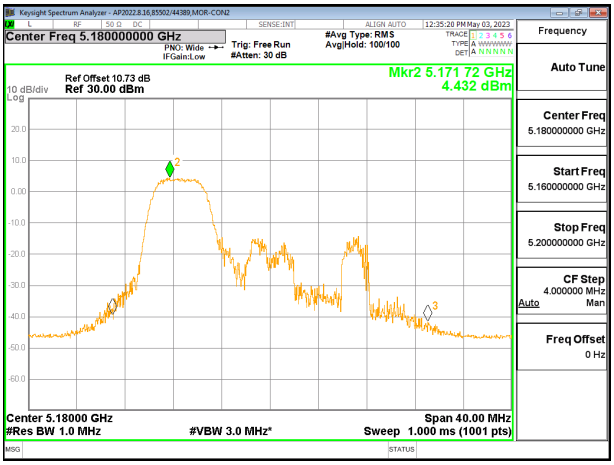
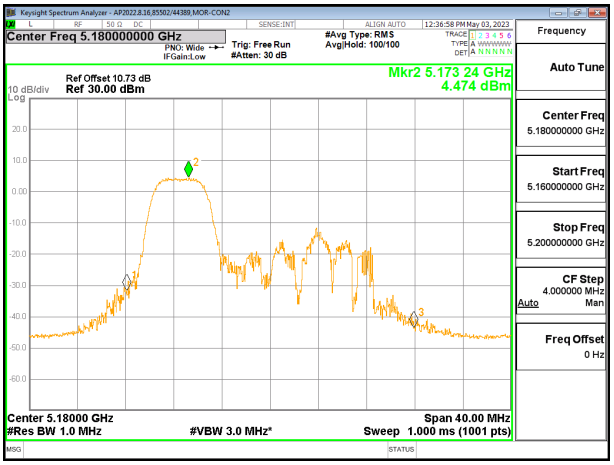
LOW CHANNEL (RU37)



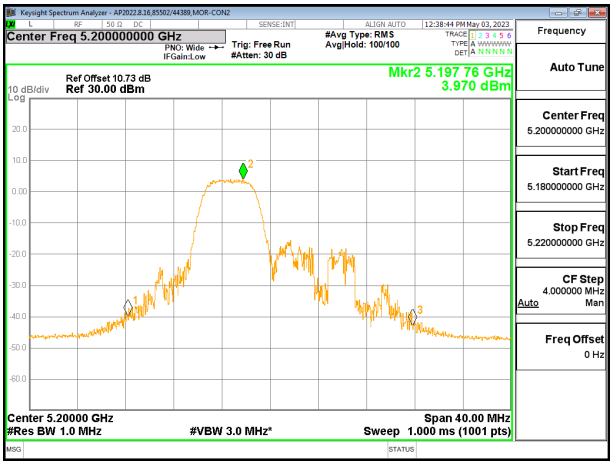
LOW CHANNEL CHAIN 0



LOW CHANNEL CHAIN 1

MID CHANNEL (RU38)

MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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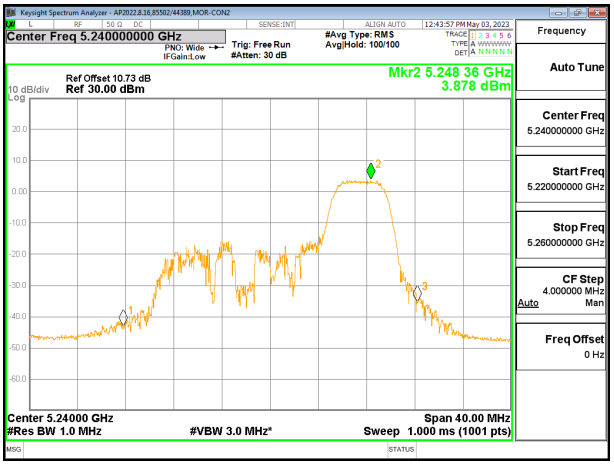
HIGH CHANNEL (RU40)

HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 106T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low (RU53)	5180	-1.27	1.57	24.00	11.00
Mid (RU53)	5200	-1.27	1.57	24.00	11.00
High (RU54)	5240	-1.27	1.57	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU53)	5180	12.57	12.30	15.45	24.00	-8.55
Mid (RU53)	5200	12.64	12.17	15.42	24.00	-8.58
High (RU54)	5240	12.48	12.51	15.51	24.00	-8.49

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU53)	5180	4.67	4.33	7.52	11.00	-3.48
Mid (RU53)	5200	4.59	4.22	7.42	11.00	-3.58
High (RU54)	5240	4.34	4.04	7.20	11.00	-3.80

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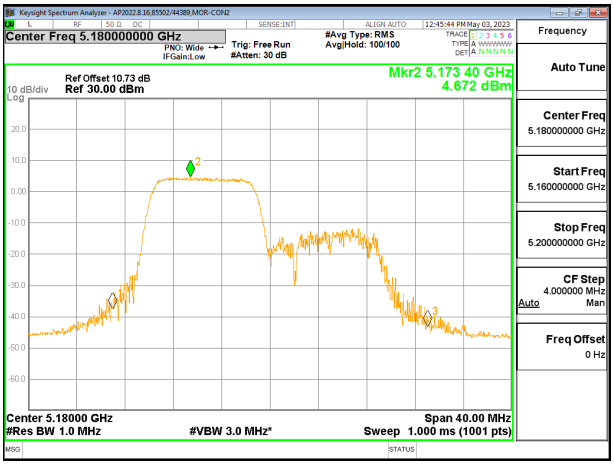
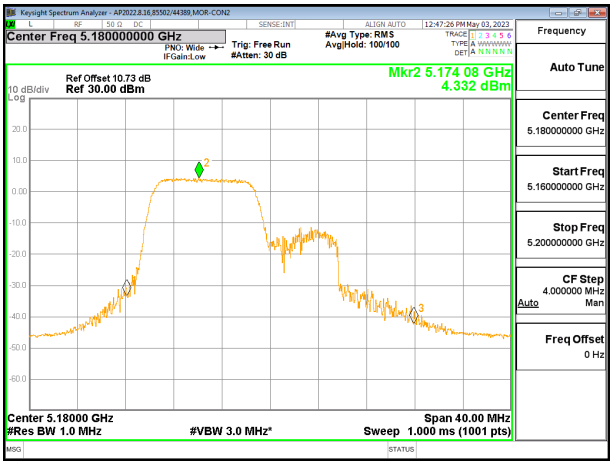
LOW CHANNEL (RU 53)

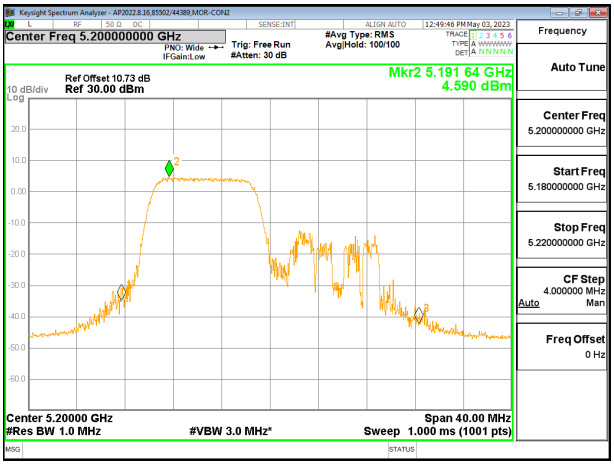


LOW CHANNEL CHAIN 0

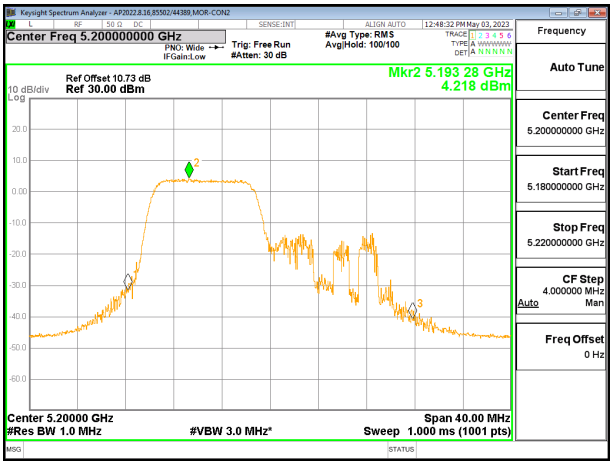


LOW CHANNEL CHAIN 1

MID CHANNEL (RU 53)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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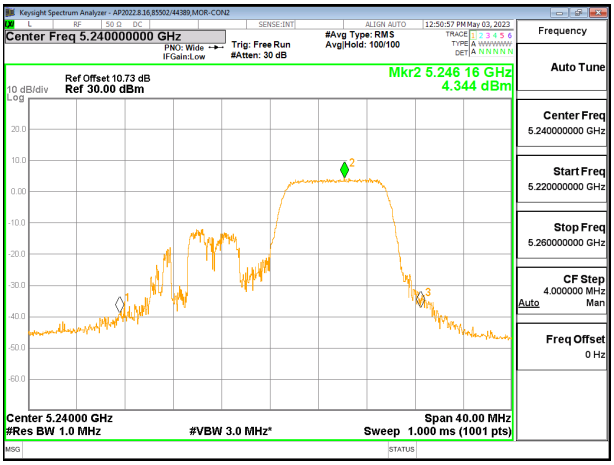
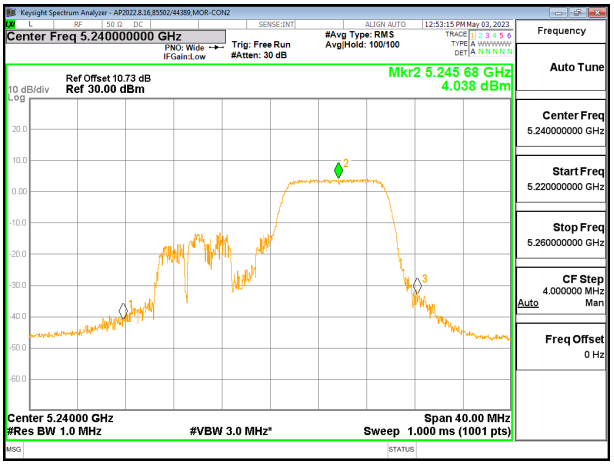
HIGH CHANNEL (RU 54)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 242T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low (RU61)	5180	-1.27	1.57	24.00	11.00
Mid (RU61)	5200	-1.27	1.57	24.00	11.00
High (RU61)	5240	-1.27	1.57	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU61)	5180	16.92	16.20	19.59	24.00	-4.41
Mid (RU61)	5200	16.89	16.08	19.51	24.00	-4.49
High (RU61)	5240	17.26	16.36	19.84	24.00	-4.16

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU61)	5180	5.12	5.10	8.12	11.00	-2.88
Mid (RU61)	5200	5.04	4.79	7.93	11.00	-3.07
High (RU61)	5240	5.29	5.11	8.21	11.00	-2.79

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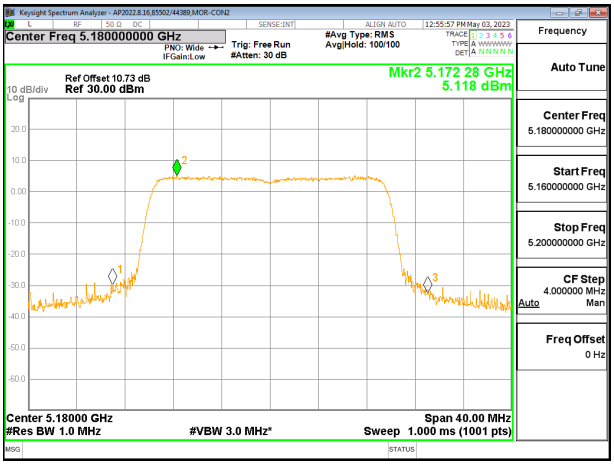
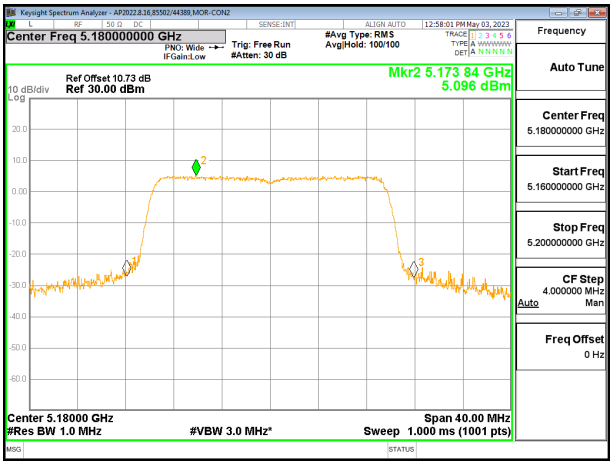
LOW CHANNEL (RU 61)

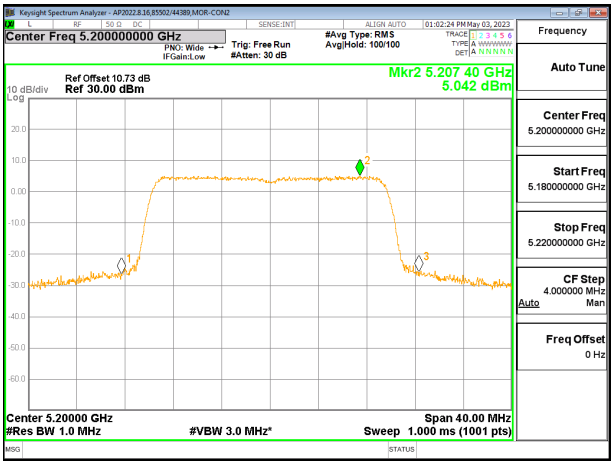


LOW CHANNEL CHAIN 0

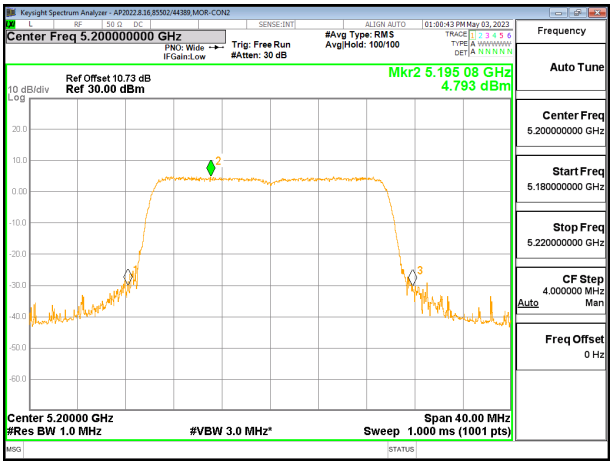


LOW CHANNEL CHAIN 1

MID CHANNEL (RU 61)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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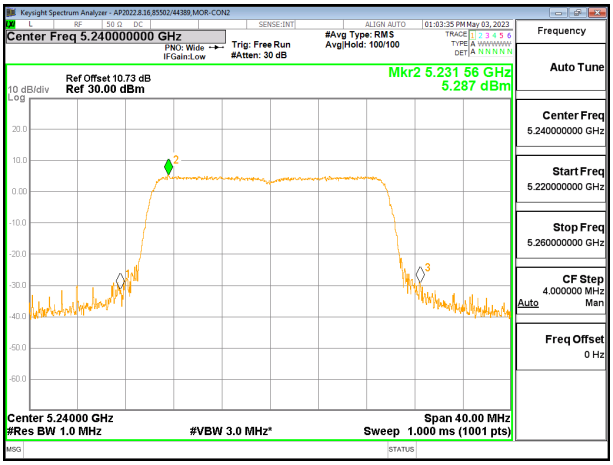
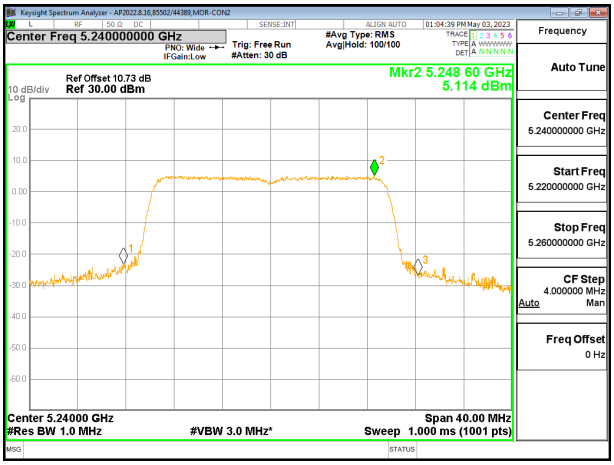
HIGH CHANNEL (RU 61)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.12. 802.11ax HE40 MODE 2TX IN THE 5.2GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T or SU

Test Engineer:	85502/44389
Test Date:	2023-04-13

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low (RU65)	5190	-1.27	24.00
High (RU65)	5230	-1.27	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU65)	5190	14.28	14.14	17.22	24.00	-6.78
High (RU65)	5230	16.80	16.86	19.84	24.00	-4.16

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9.3.13. 802.11ax HE80 MODE 2TX IN THE 5.2GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 996T or SU

Test Engineer:	85502/44389
Test Date:	2023-04-13

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Mid (RU67)	5210	-1.27	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid (RU67)	5210	14.12	13.88	17.01	24.00	-6.99

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9.3.14. 802.11ax HE160 MODE 2TX IN THE 5.2GHz & 5.3GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 2x996T

Test Engineer:	85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Mid (RU68)	5250	168.32	-1.09	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid (RU68)	5250	13.30	12.80	16.07	24.00	-7.93

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9.3.15. 802.11ax HE20 MODE 2TX IN THE 5.2GHz BAND (IC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 26T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)	EIRP PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low (RU0)	5180	2.6303	-1.27	1.57	14.20	15.47	10.00	8.43
Mid (RU4)	5200	2.8985	-1.27	1.57	14.62	15.89	10.00	8.43
High (RU8)	5240	2.8704	-1.27	1.57	14.58	15.85	10.00	8.43

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU0)	5180	7.24	7.29	10.28	15.47	-5.19
Mid (RU4)	5200	8.14	7.28	10.74	15.89	-5.15
High (RU8)	5240	6.98	6.72	9.86	15.85	-5.99

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU0)	5180	5.20	4.59	7.91	8.43	-0.52
Mid (RU4)	5200	4.11	4.08	7.10	8.43	-1.33
High (RU8)	5240	4.92	3.96	7.47	8.43	-0.96

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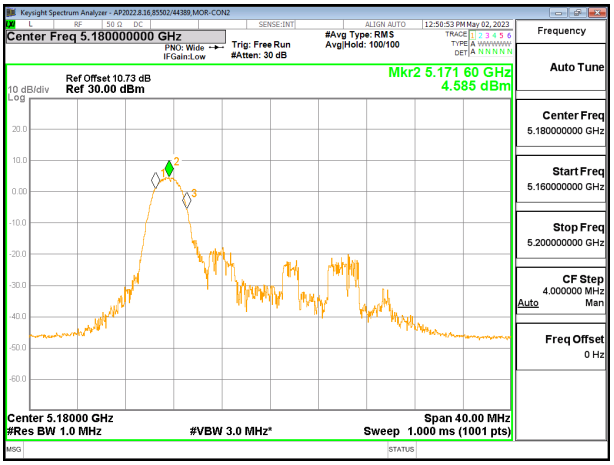
LOW CHANNEL (RU0)

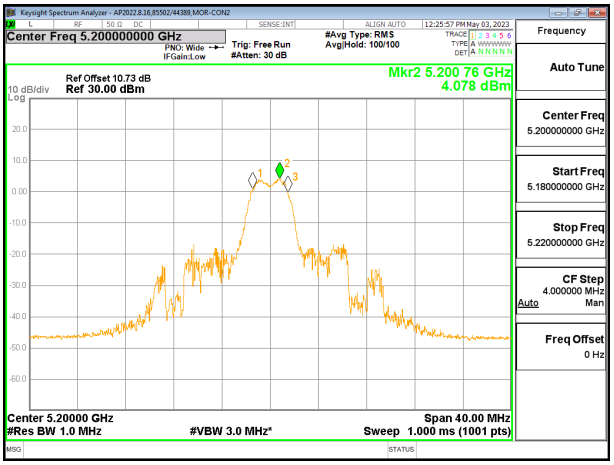
LOW CHANNEL CHAIN 0



LOW CHANNEL CHAIN 1

MID CHANNEL (RU4)

MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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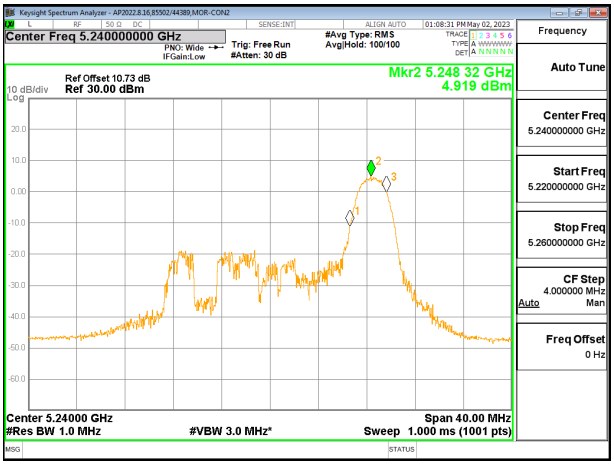
HIGH CHANNEL (RU8)



HIGH CHANNEL CHAIN 0

HIGH CHANNEL CHAIN 1

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2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 52T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)	EIRP PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low (RU37)	5180	4.1516	-1.27	1.57	16.18	17.45	10.00	8.43
Mid (RU38)	5200	4.1014	-1.27	1.57	16.13	17.40	10.00	8.43
High (RU40)	5240	4.1680	-1.27	1.57	16.20	17.47	10.00	8.43

Duty Cycle CF (dB)		**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU37)	5180	9.41	9.47	12.45	17.45	-5.00
Mid (RU38)	5200	9.17	9.10	12.15	17.40	-5.25
High (RU40)	5240	9.22	9.17	12.21	17.47	-5.26

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU37)	5180	4.27	4.61	7.45	8.43	-0.98
Mid (RU38)	5200	4.27	3.97	7.13	8.43	-1.30
High (RU40)	5240	3.73	3.26	6.51	8.43	-1.92

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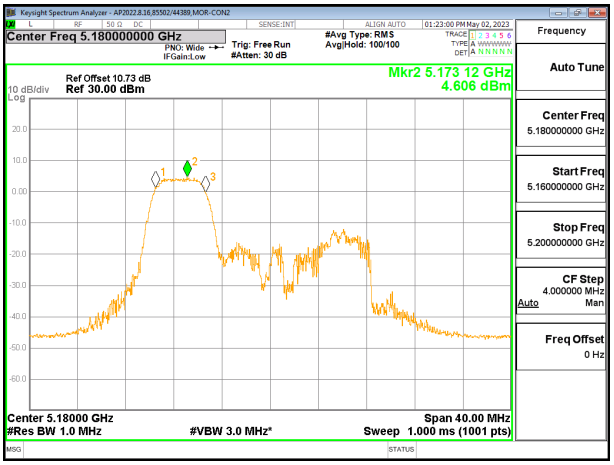
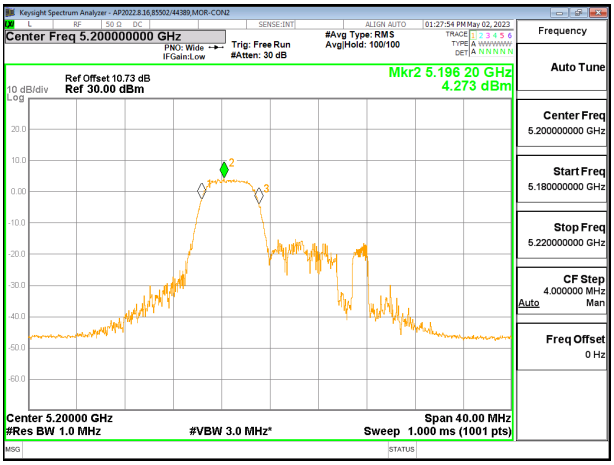
LOW CHANNEL (RU37)

LOW CHANNEL CHAIN 0

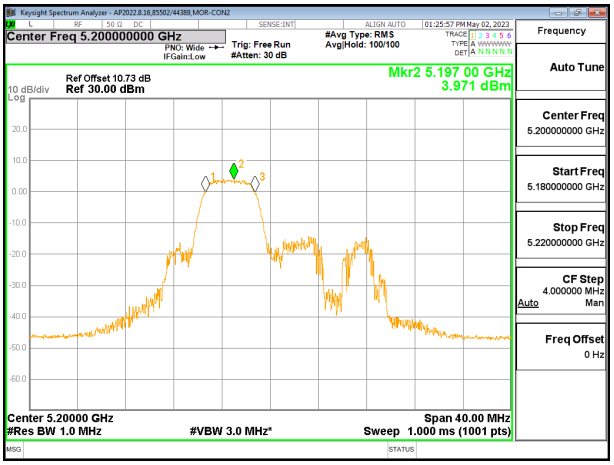


LOW CHANNEL CHAIN 1

MID CHANNEL (RU38)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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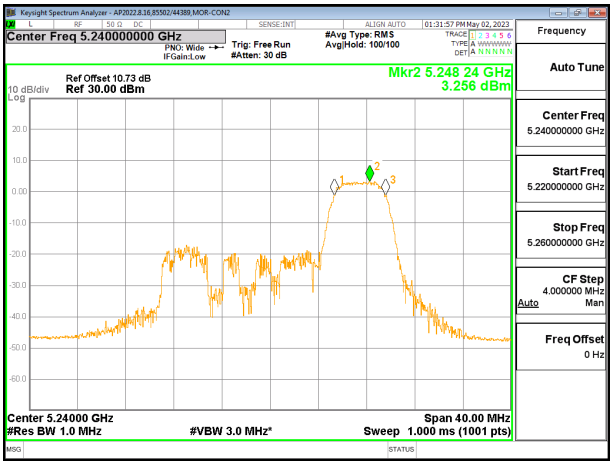
HIGH CHANNEL (RU40)

HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 106T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)	EIRP PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low (RU53)	5180	8.3329	-1.27	1.57	19.21	20.48	10.00	8.43
Mid (RU53)	5200	8.2710	-1.27	1.57	19.18	20.45	10.00	8.43
High (RU54)	5240	8.2682	-1.27	1.57	19.17	20.44	10.00	8.43

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU53)	5180	12.57	12.30	15.45	20.48	-5.03
Mid (RU53)	5200	12.64	12.17	15.42	20.45	-5.02
High (RU54)	5240	12.48	12.51	15.51	20.44	-4.94

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU53)	5180	4.70	4.34	7.53	8.43	-0.90
Mid (RU53)	5200	4.53	4.43	7.49	8.43	-0.94
High (RU54)	5240	4.16	4.19	7.19	8.43	-1.24

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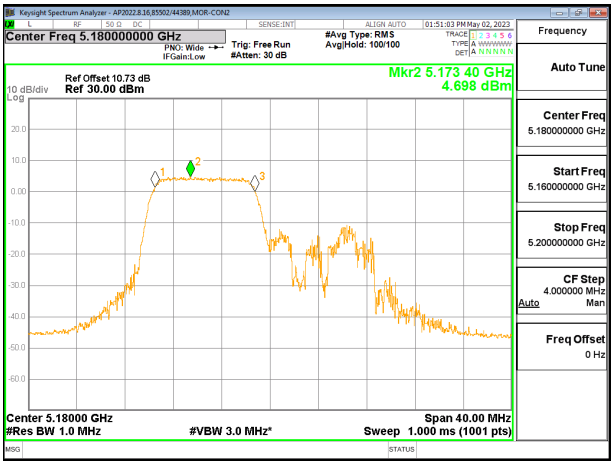
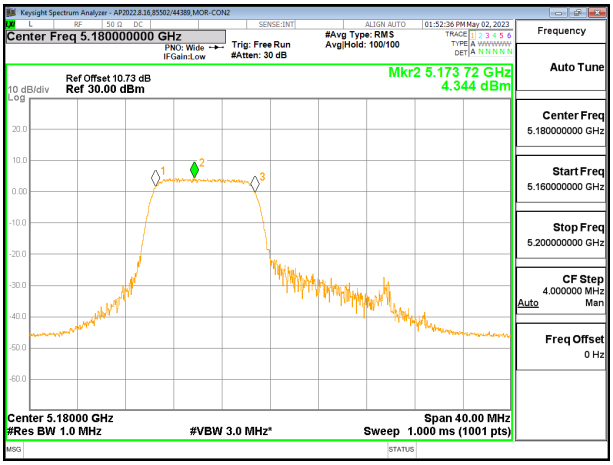
LOW CHANNEL (RU 53)

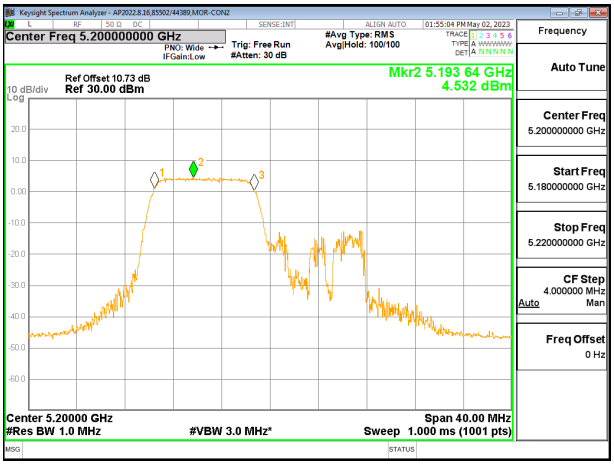


LOW CHANNEL CHAIN 0

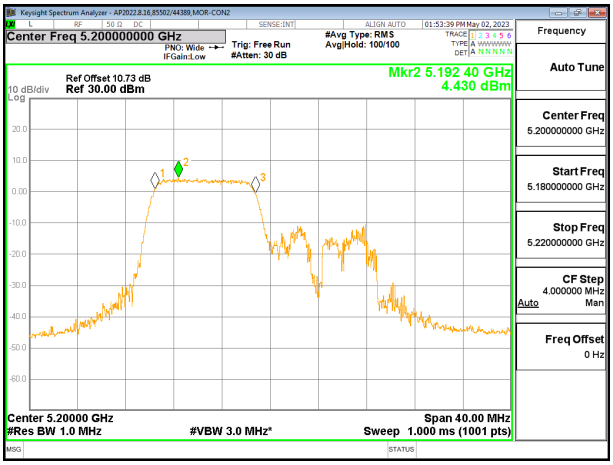


LOW CHANNEL CHAIN 1

MID CHANNEL (RU 53)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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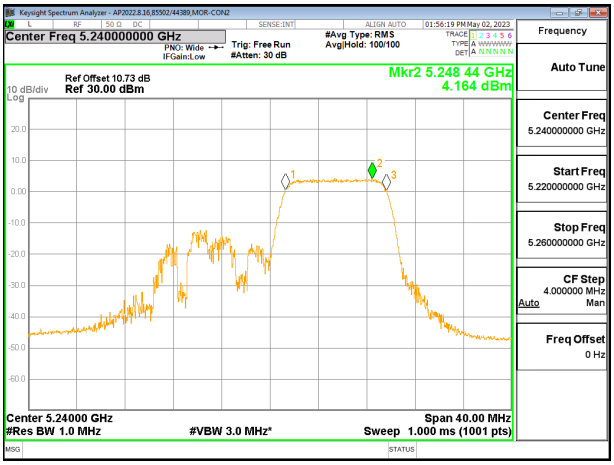
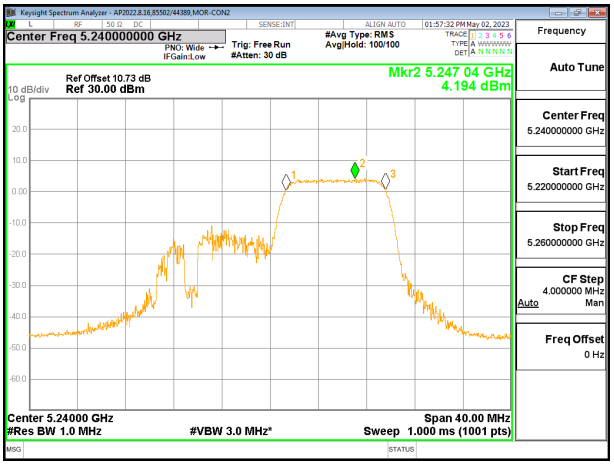
HIGH CHANNEL (RU 54)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 242T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)	EIRP PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low (RU53)	5180	19.0770	-1.27	1.57	22.81	24.08	10.00	8.43
Mid (RU53)	5200	19.1790	-1.27	1.57	22.83	24.10	10.00	8.43
High (RU54)	5240	19.1070	-1.27	1.57	22.81	24.08	10.00	8.43

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU53)	5180	16.92	16.20	19.59	24.08	-4.49
Mid (RU53)	5200	16.89	16.08	19.51	24.10	-4.58
High (RU54)	5240	17.26	16.36	19.84	24.08	-4.24

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low (RU53)	5180	4.10	4.77	7.46	8.43	-0.97
Mid (RU53)	5200	3.67	4.78	7.27	8.43	-1.16
High (RU54)	5240	4.97	4.85	7.92	8.43	-0.51

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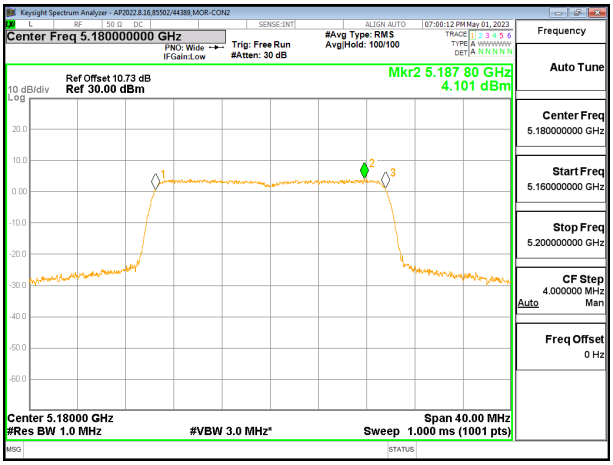
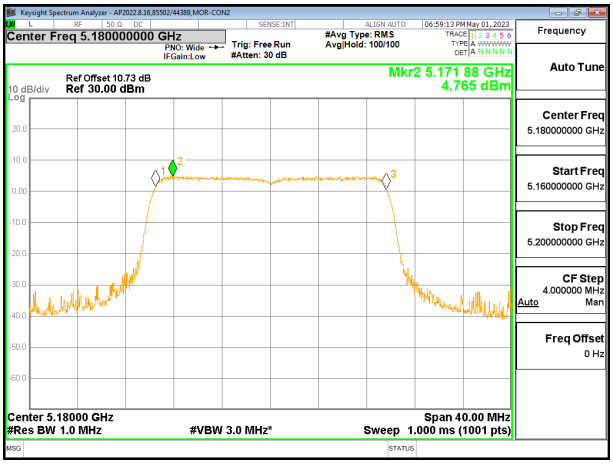
LOW CHANNEL (RU 61)

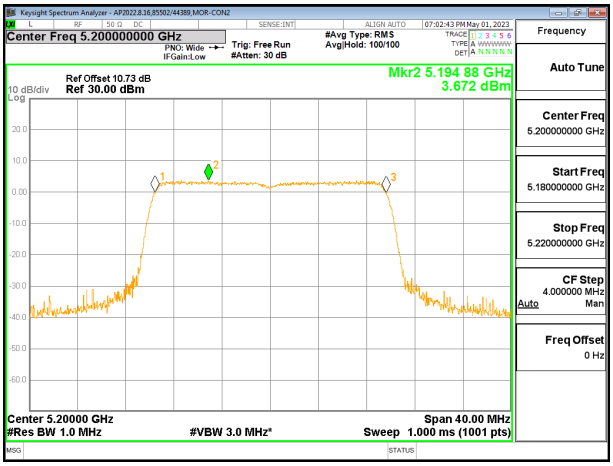


LOW CHANNEL CHAIN 0

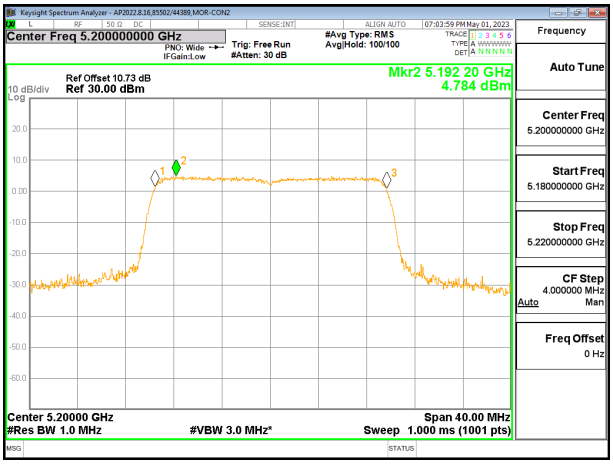


LOW CHANNEL CHAIN 1

MID CHANNEL (RU 61)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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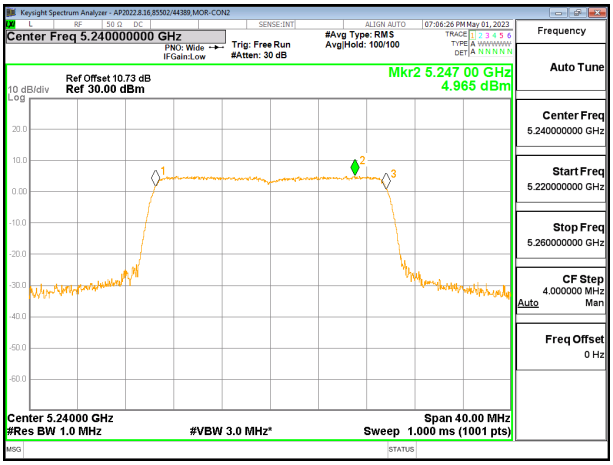
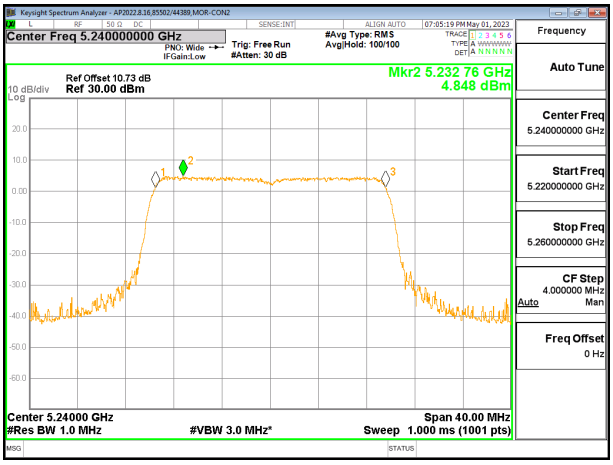
HIGH CHANNEL (RU 61)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.16. 802.11ax HE40 MODE 2TX IN THE 5.2GHz BAND (IC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T

Test Engineer:	85502/44389, 27465/44389
Test Date:	2023-04-13, 2023-05-01

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)
Low (RU65)	5190	37.9790	-1.27	23.00	24.27
High (RU65)	5230	37.8180	-1.27	23.00	24.27

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU65)	5190	14.28	14.14	17.22	24.27	-7.05
High (RU65)	5230	16.80	16.86	19.84	24.27	-4.43

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9.3.17. 802.11ax HE80 MODE 2TX IN THE 5.2GHz BAND (IC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 996T

Test Engineer:	85502/44389
Test Date:	2023-04-13

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)
Mid (RU67)	5210	77.5610	-1.27	23.00	24.27

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid (RU67)	5210	14.12	13.88	17.01	24.27	-7.26

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9.3.18. 802.11ax HE160 MODE 2TX IN THE 5.2GHz & 5.3GHz BAND (IC)

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 2x996T

Test Engineer:	85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)	Power Limit (dBm)
Mid (RU68)	5250	155.8900	-1.09	23.00	24.09

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid (RU68)	5250	13.30	12.80	16.07	24.09	-8.02

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9.3.19. 802.11a MODE IN THE 5.3 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	19.72	-1.09	1.77	23.95	11.00
Mid	5300	19.72	-1.09	1.77	23.95	11.00
High	5320	19.68	-1.09	1.77	23.94	11.00

Duty Cycle CF (dB)	0.57	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	17.00	16.68	19.85	23.95	-4.10
Mid	5300	16.99	16.78	19.90	23.95	-4.05
High	5320	17.00	16.70	19.86	23.94	-4.08

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	6.49	6.08	9.87	11.00	-1.13
Mid	5300	6.28	6.00	9.72	11.00	-1.28
High	5320	6.28	5.86	9.66	11.00	-1.34

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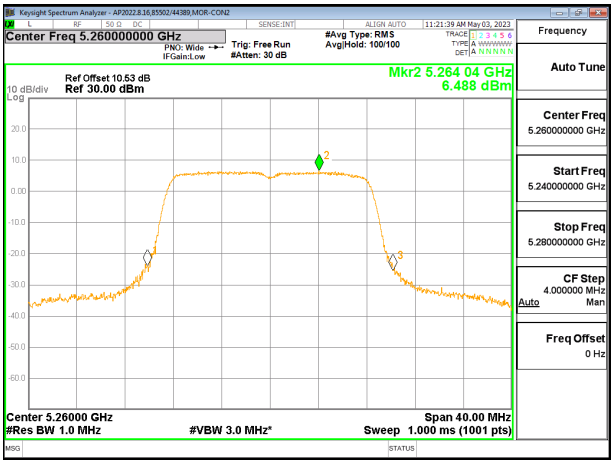
LOW CHANNEL



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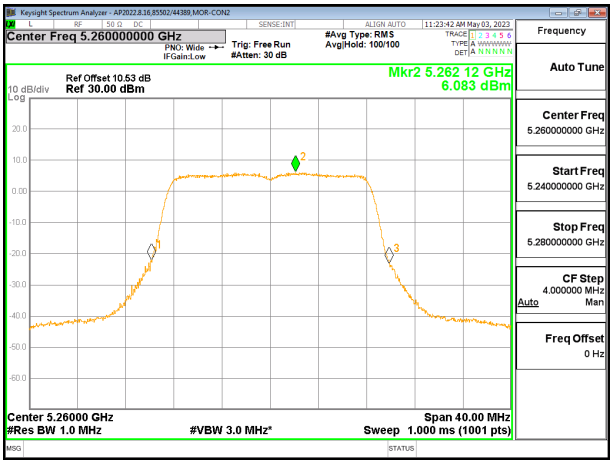
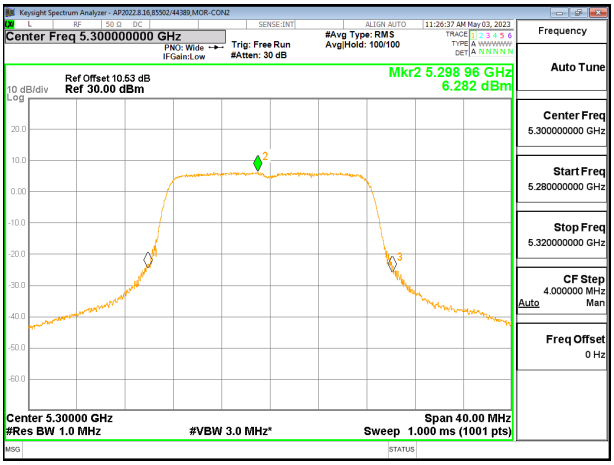


LOW CHANNEL CHAIN 1

MID CHANNEL



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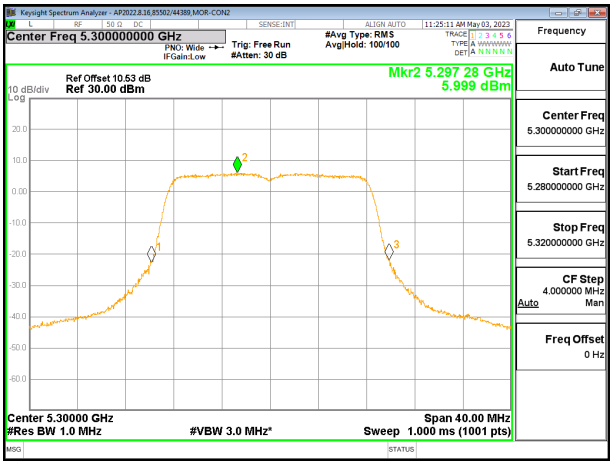

MID CHANNEL CHAIN 1

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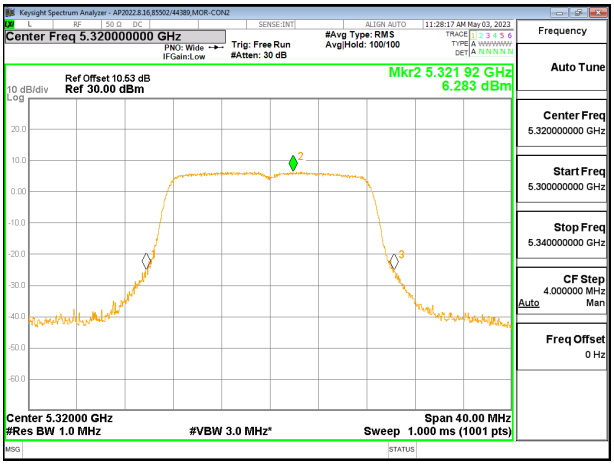
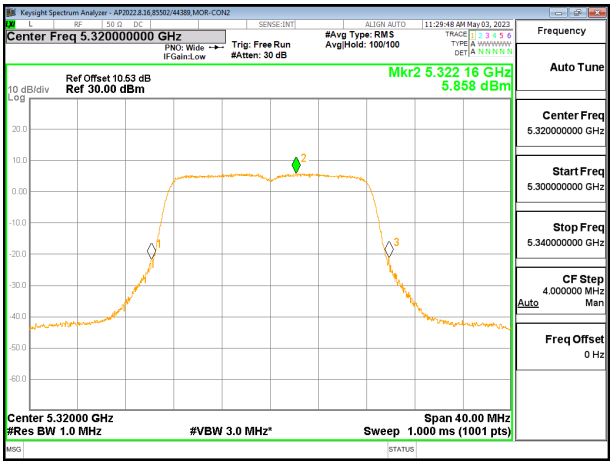
HIGH CHANNEL



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.20. 802.11n HT20 MODE IN THE 5.3 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5260	20.68	-1.09	24.00
Mid	5300	20.56	-1.09	24.00
High	5320	20.92	-1.09	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	17.38	16.44	19.95	24.00	-4.05
Mid	5300	16.99	16.39	19.71	24.00	-4.29
High	5320	16.99	16.20	19.62	24.00	-4.38

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9.3.21. 802.11n HT40 MODE IN THE 5.3 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5270	40.64	-1.09	24.00
High	5310	40.16	-1.09	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	17.10	16.51	19.83	24.00	-4.17
High	5310	16.74	16.40	19.58	24.00	-4.42

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9.3.22. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Mid	5290	83.52	-1.09	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	16.53	15.34	18.99	24.00	-5.01

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9.3.23. 802.11a MODE IN THE 5.3 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-05-02

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	16.3930	-1.09	1.77	23.15	11.00
Mid	5300	16.4400	-1.09	1.77	23.16	11.00
High	5320	16.4290	-1.09	1.77	23.16	11.00

Duty Cycle CF (dB)	0.57	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	17.00	16.68	19.85	23.15	-3.29
Mid	5300	16.99	16.78	19.90	23.16	-3.26
High	5320	17.00	16.70	19.86	23.16	-3.29

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/1MHz)	Chain 1 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	6.73	6.20	10.05	11.00	-0.95
Mid	5300	6.51	6.02	9.85	11.00	-1.15
High	5320	6.31	5.88	9.68	11.00	-1.32

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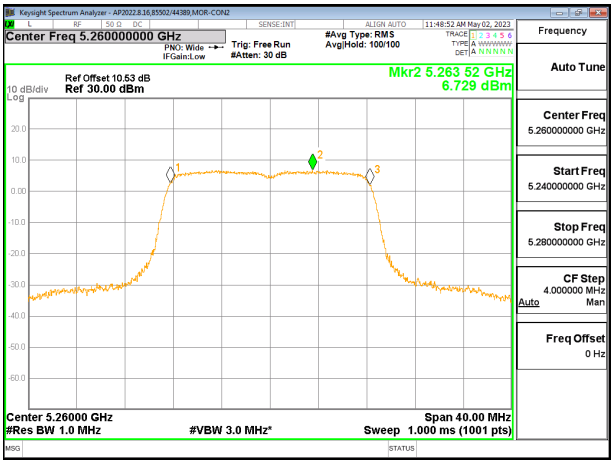
LOW CHANNEL



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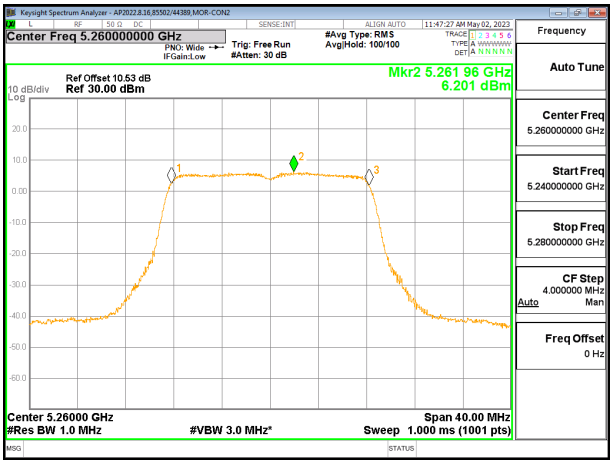
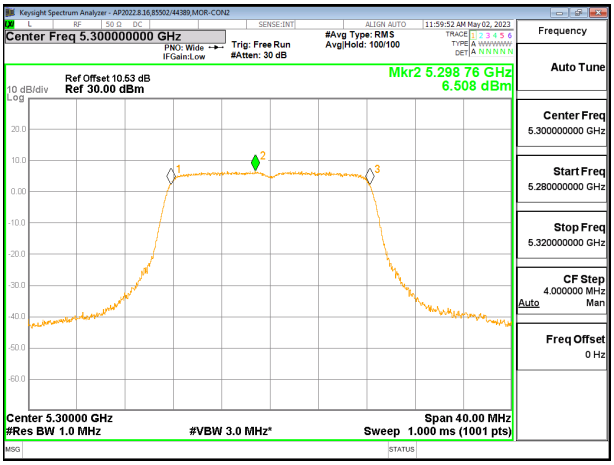


LOW CHANNEL CHAIN 1

MID CHANNEL



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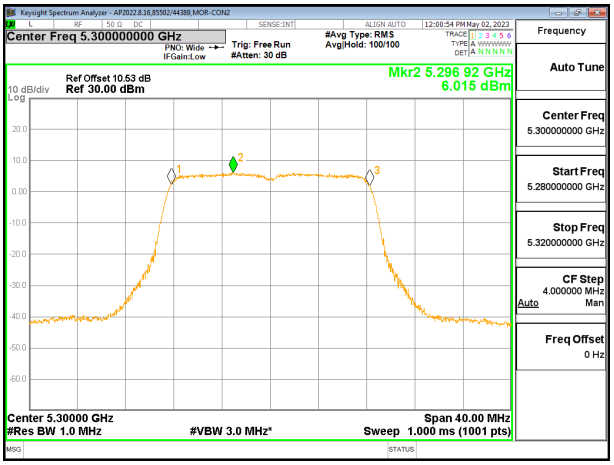

MID CHANNEL CHAIN 1

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