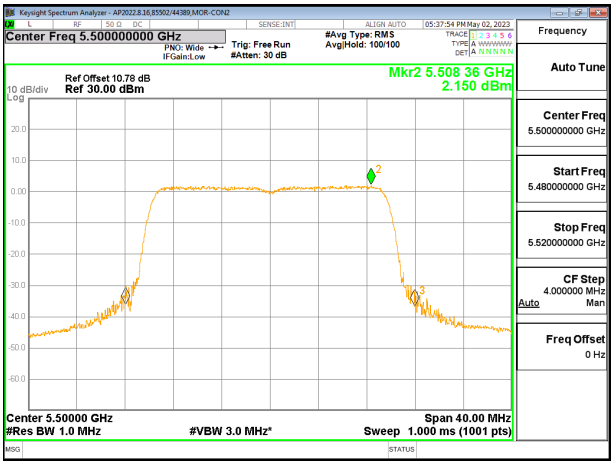
LOW CHANNEL (RU61)



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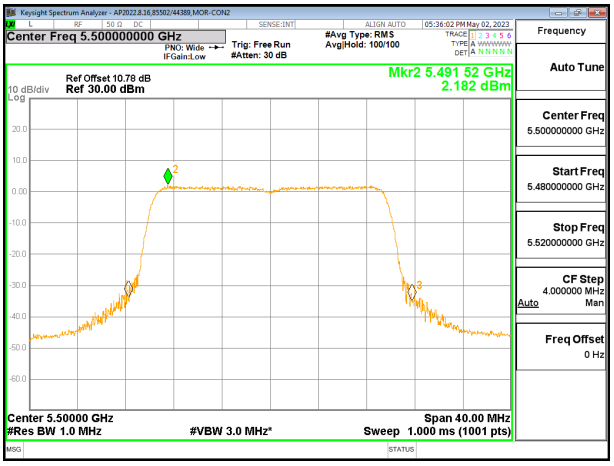
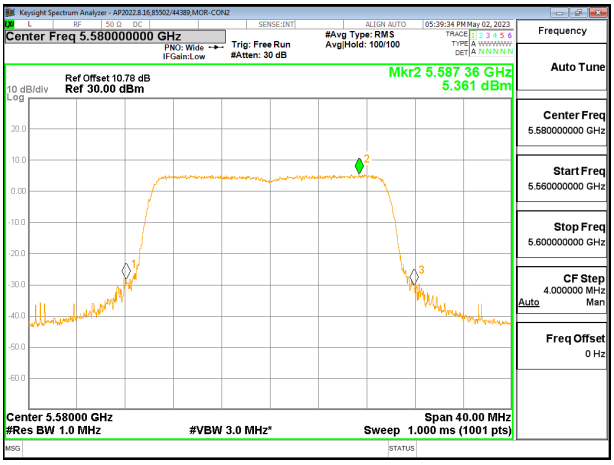
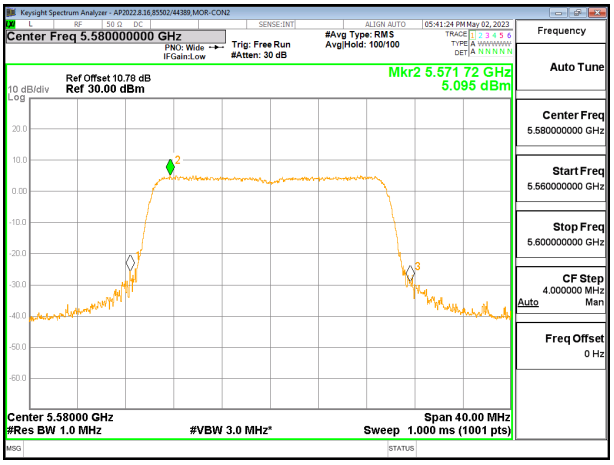


LOW CHANNEL CHAIN 1

MID CHANNEL (RU61)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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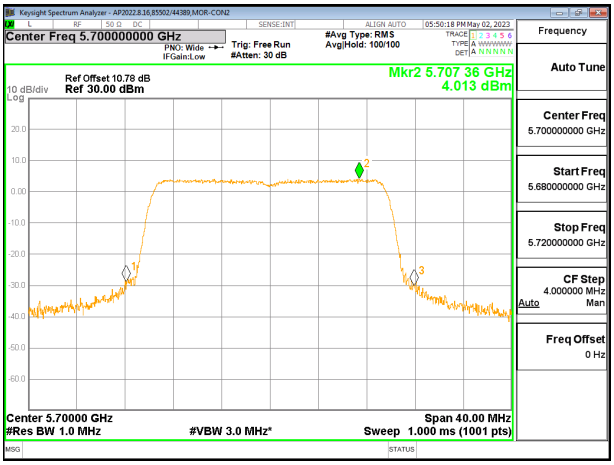
HIGH CHANNEL (RU61)



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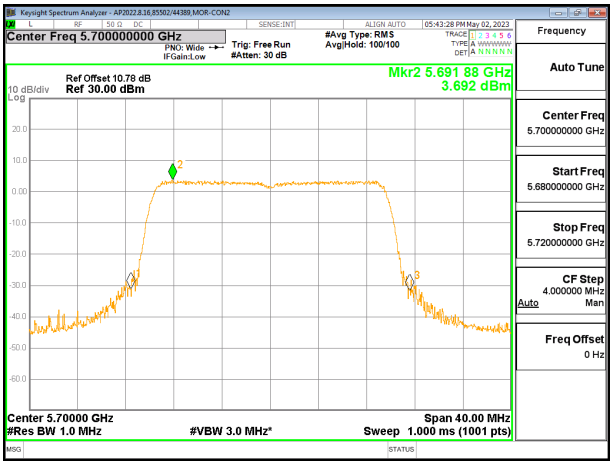
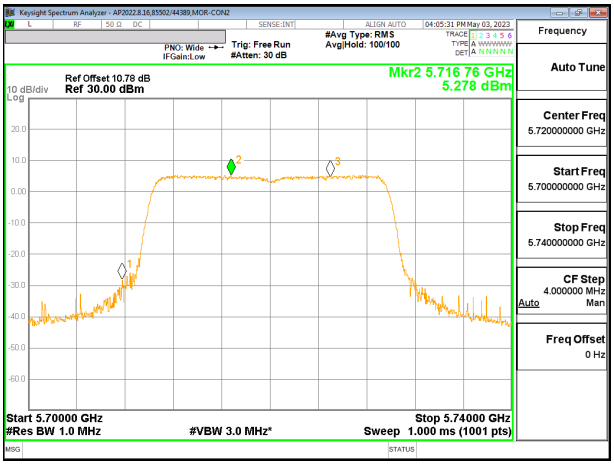
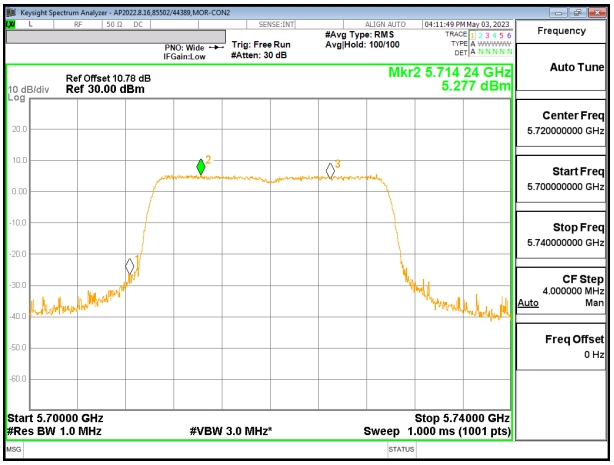


HIGH CHANNEL CHAIN 1

CHANNEL 144 (RU61)



CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

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9.3.44. 802.11ax HE40 MODE 2TX IN THE 5.6GHz BAND (FCC+IC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low (RU65)	5510	45.78	37.8980	-0.64	2.19
Mid (RU65)	5550	46.48	37.6150	-0.64	2.19
High (RU65)	5670	45.92	37.7640	-0.64	2.19
142 (RU65)	5710	38.20	37.8060	-0.64	2.19

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low (RU65)	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid (RU65)	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High (RU65)	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00
142 (RU65)	5710	24.00	24.00	30.00	24.00	11.00	11.00	11.00

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)	5510	13.53	13.27	16.41	24.00	-7.59
Mid (RU65)	5550	16.87	16.99	19.94	24.00	-4.06
High (RU65)	5670	15.42	16.61	19.07	24.00	-4.93
142 (RU65)	5710	17.01	16.61	19.82	24.00	-4.18

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 (RU65)	5510	-0.47	-0.79	2.38	11.00	-8.62
High (RU65)	5670	1.64	2.71	5.22	11.00	-5.78

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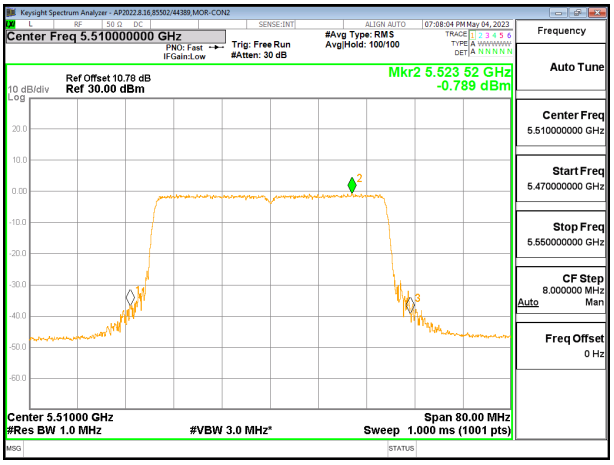
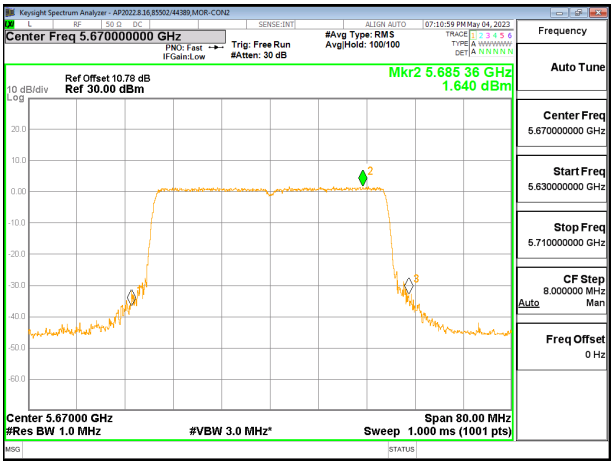
LOW CHANNEL (RU65)

LOW CHANNEL CHAIN 0

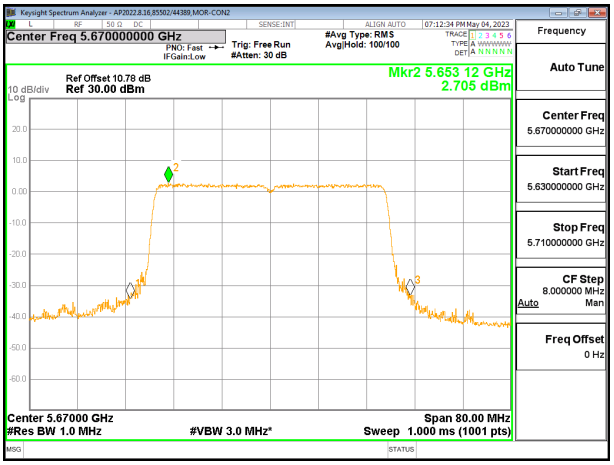


LOW CHANNEL CHAIN 1

HIGH CHANNEL (RU56)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.45. 802.11ax HE80 MODE 2TX IN THE 5.6GHz BAND (FCC+IC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)
Low (RU67)	5530	105.7600	77.6620	-0.64
High (RU67)	5610	109.1200	76.9690	-0.64
138 (RU67)	5690	80.4400	77.5020	-0.64

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)
Low (RU67)	5530	24.00	24.00	30.00	24.00
High (RU67)	5610	24.00	24.00	30.00	24.00
138 (RU67)	5690	24.00	24.00	30.00	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 (RU67)	5530	13.70	13.17	16.45	24.00	-7.55
High (RU67)	5610	15.65	15.15	18.42	24.00	-5.58
138 (RU67)	5690	15.84	15.65	18.76	24.00	-5.24

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9.3.46. 802.11ax HE160 MODE 2TX IN THE 5.6GHz BAND (FCC+IC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)
Low (RU68)	5570	168.0000	155.1500	-0.64

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Power Limit (dBm)
Low (RU68)	5570	24.00	24.00	30.00	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 (RU68)	5570	14.35	13.47	16.94	24.00	-7.06

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9.3.47. 802.11a MODE IN THE 5.8 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5745	-2.06	0.84	30.00	30.00
Mid	5785	-2.06	0.84	30.00	30.00
High	5825	-2.06	0.84	30.00	30.00
144	5720	-2.06	0.84	30.00	30.00

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	5745	16.47	16.66	19.58	30.00	-10.42
Mid	5785	15.94	17.10	19.57	30.00	-10.43
High	5825	16.12	16.90	19.54	30.00	-10.46
144	5720	16.78	16.72	19.76	30.00	-10.24

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 500KHz)	Chain 1 Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low	5745	3.01	3.40	6.79	30.00	-23.21
Mid	5785	2.56	3.57	6.67	30.00	-23.33
High	5825	2.37	3.44	6.52	30.00	-23.48
144	5720	3.45	2.84	6.74	30.00	-23.26

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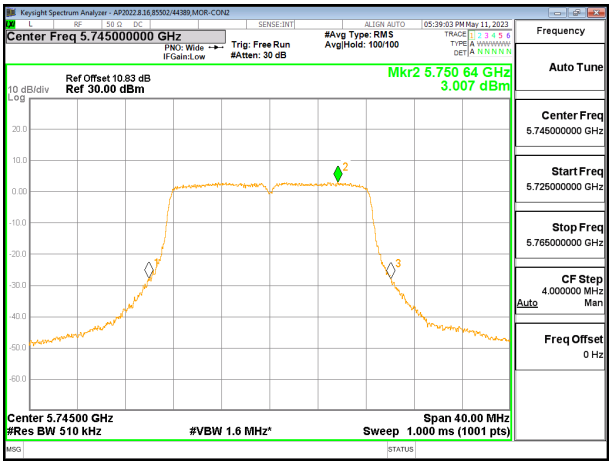
LOW CHANNEL



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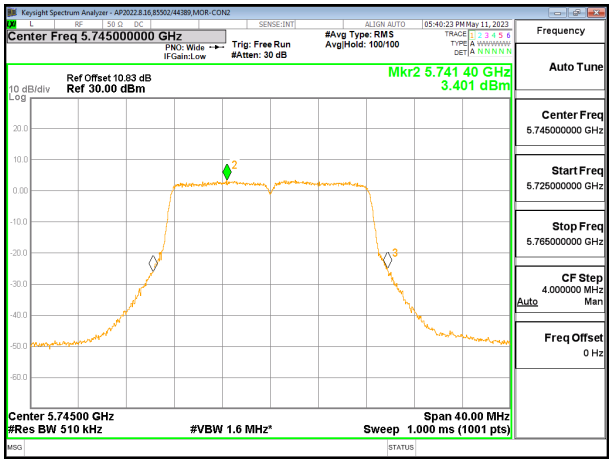
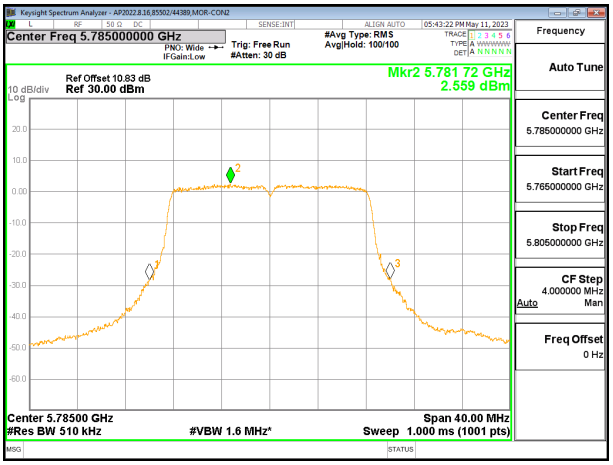


LOW CHANNEL CHAIN 1

MID CHANNEL



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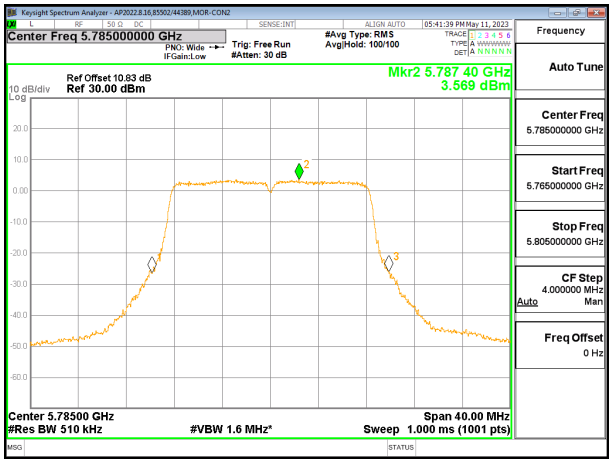

MID CHANNEL CHAIN 1

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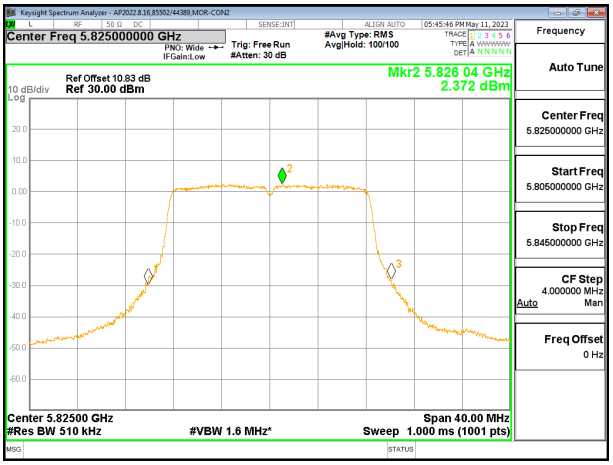
HIGH CHANNEL



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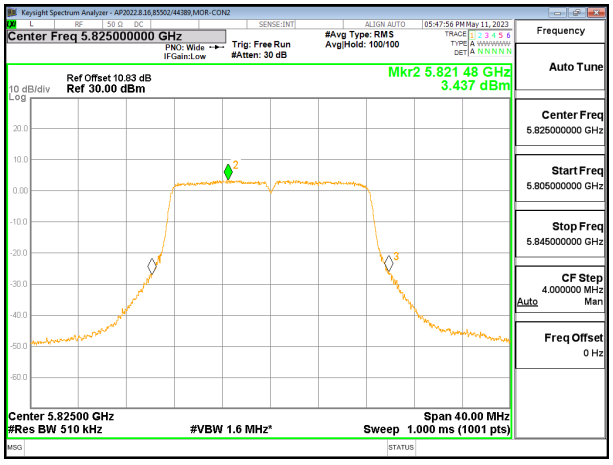
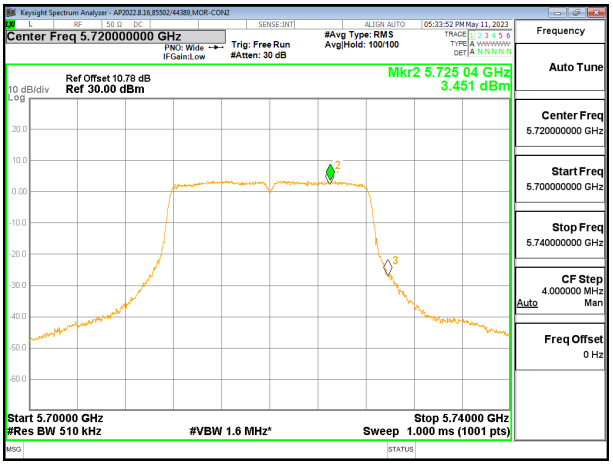
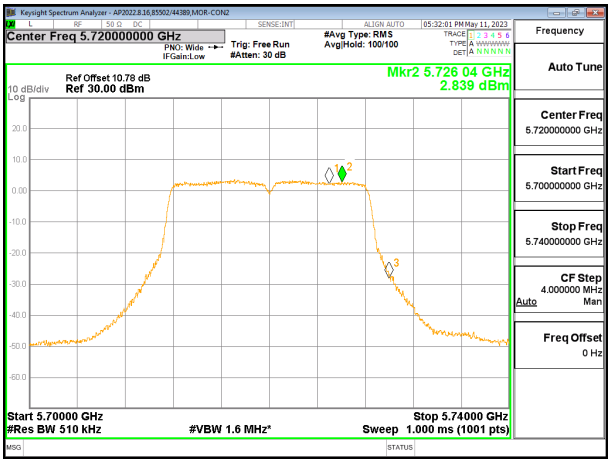


HIGH CHANNEL CHAIN 1

CHANNEL 144



CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

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9.3.48. 802.11n HT20 MODE IN THE 5.8 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Low	5745	-2.06	30.00
Mid	5785	-2.06	30.00
High	5825	-2.06	30.00
144	5720	-2.06	30.00

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	5745	16.70	16.44	19.58	30.00	-10.42
Mid	5785	16.22	17.35	19.83	30.00	-10.17
High	5825	16.31	17.16	19.77	30.00	-10.23
144	5720	16.76	16.58	19.68	30.00	-10.32

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9.3.49. 802.11n HT40 MODE IN THE 5.8 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Low	5755	-2.06	30.00
High	5795	-2.06	30.00
142	5710	-2.06	30.00

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	5755	16.21	16.95	19.61	30.00	-10.39
High	5795	15.80	17.10	19.51	30.00	-10.49
142	5710	16.86	16.57	19.73	30.00	-10.27

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9.3.50. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Mid	5755	-2.06	30.00
138	5690	-2.06	30.00

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	5755	15.42	16.31	18.90	30.00	-11.10
138	5690	16.02	15.85	18.95	30.00	-11.05

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9.3.51. 802.11a MODE IN THE 5.8 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5745	-2.06	0.84	30.00	30.00
Mid	5785	-2.06	0.84	30.00	30.00
High	5825	-2.06	0.84	30.00	30.00
144	5720	-2.06	0.84	30.00	30.00

Duty Cycle CF (dB)	0.57	**Included in Calculations of Corr'd Power & 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	5745	16.47	16.66	19.58	30.00	-10.42
Mid	5785	15.94	17.10	19.57	30.00	-10.43
High	5825	16.12	16.90	19.54	30.00	-10.46
144	5720	16.78	16.72	19.76	30.00	-10.24

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 500KHz)	Chain 1 Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low	5745	3.01	3.40	6.79	30.00	-23.21
Mid	5785	2.56	3.57	6.67	30.00	-23.33
High	5825	2.37	3.44	6.52	30.00	-23.48
144	5720	3.45	2.84	6.74	30.00	-23.26

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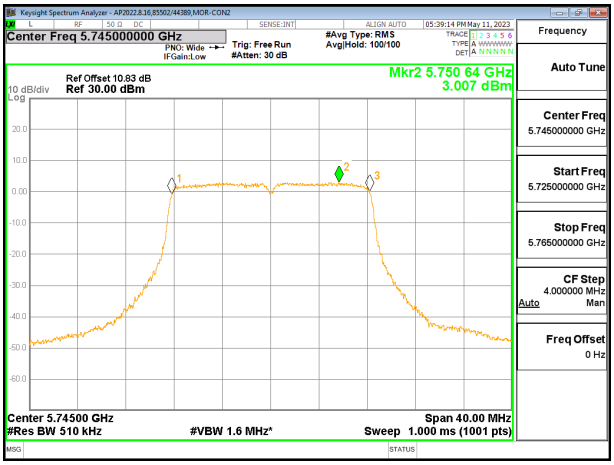
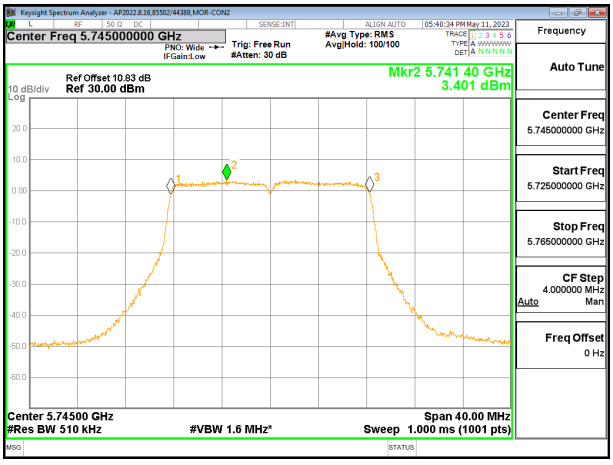
LOW CHANNEL

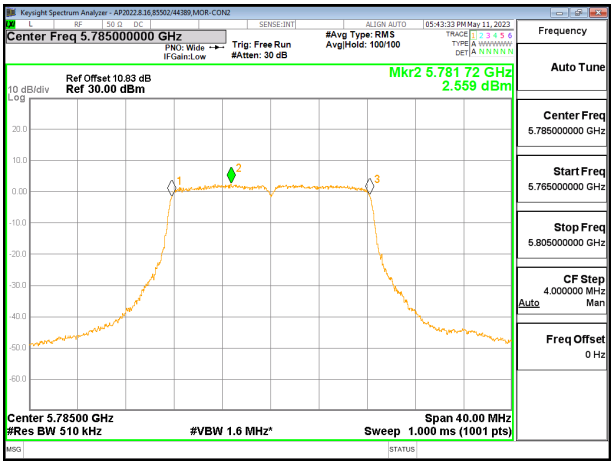


LOW CHANNEL CHAIN 0

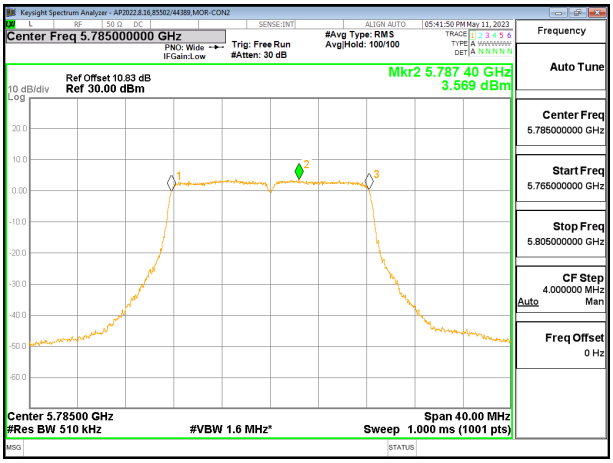


LOW CHANNEL CHAIN 1

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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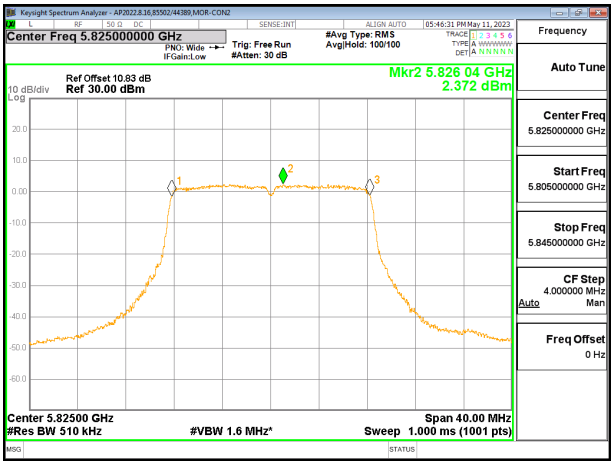
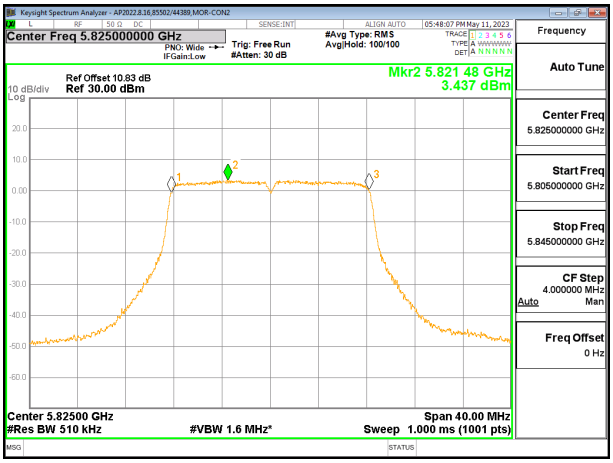
HIGH CHANNEL

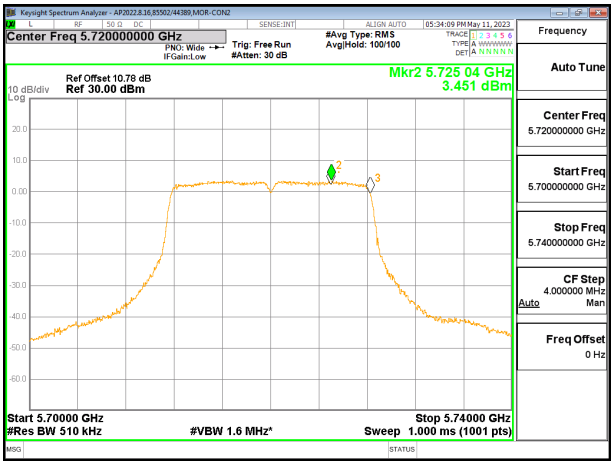


HIGH CHANNEL CHAIN 0

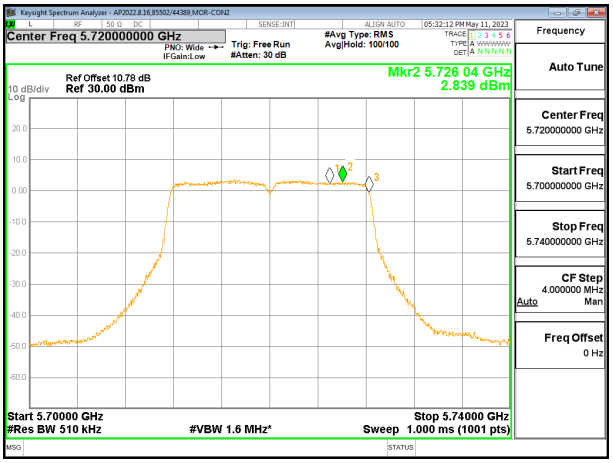


HIGH CHANNEL CHAIN 1

CHANNEL 144



CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

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9.3.52. 802.11n HT20 MODE IN THE 5.8 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Low	5745	-2.06	30.00
Mid	5785	-2.06	30.00
High	5825	-2.06	30.00
144	5720	-2.06	30.00

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	5745	16.70	16.44	19.58	30.00	-10.42
Mid	5785	16.22	17.35	19.83	30.00	-10.17
High	5825	16.31	17.16	19.77	30.00	-10.23
144	5720	16.76	16.58	19.68	30.00	-10.32

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9.3.53. 802.11n HT40 MODE IN THE 5.8 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Low	5755	-2.06	30.00
High	5795	-2.06	30.00
142	5710	-2.06	30.00

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	5755	16.21	16.95	19.61	30.00	-10.39
High	5795	15.80	17.10	19.51	30.00	-10.49
142	5710	16.86	16.57	19.73	30.00	-10.27

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9.3.54. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND (IC)

2TX CDD MODE (IC)

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Mid	5755	-2.06	30.00
138	5690	-2.06	30.00

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	5755	15.42	16.31	18.90	30.00	-11.10
138	5690	16.02	15.85	18.95	30.00	-11.05

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9.3.55. 802.11ax HE20 MODE 2TX IN THE 5.8GHz BAND (FCC+IC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	FCC/ISED Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low (RU0)	5745	-2.06	0.84	30.00	30.00
Mid (RU4)	5785	-2.06	0.84	30.00	30.00
High (RU8)	5825	-2.06	0.84	30.00	30.00
144 (RU0)	5720	-2.06	0.84	30.00	30.00

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)	5745	7.89	7.55	10.73	30.00	-19.27
Mid (RU4)	5785	6.84	8.15	10.55	30.00	-19.45
High (RU8)	5825	6.80	8.42	10.70	30.00	-19.30
144 (RU0)	5720	7.97	7.33	10.67	30.00	-19.33

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 500KHz)	Chain 1 Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low (RU0)	5745	3.658	3.177	6.434	30.00	-23.57
Mid (RU4)	5785	1.651	2.852	5.303	30.00	-24.70
High (RU8)	5825	1.934	3.762	5.954	30.00	-24.05
144 (RU0)	5720	2.971	2.949	5.970	30.00	-24.03

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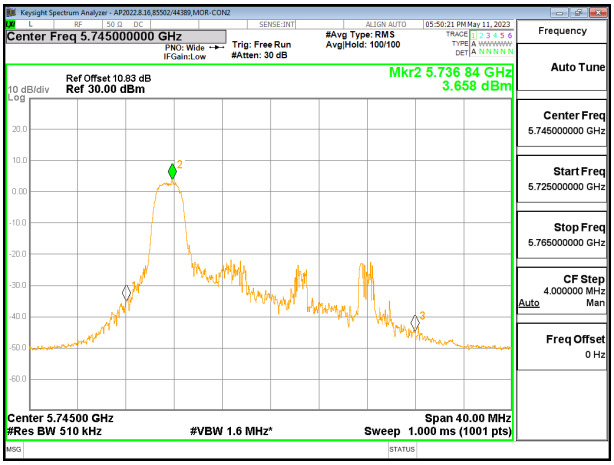
LOW CHANNEL (RU0)



LOW CHANNEL CHAIN 0

LOW CHANNEL CHAIN 1

MID CHANNEL (RU4)

MID CHANNEL CHAIN 0

MID CHANNEL CHAIN 1

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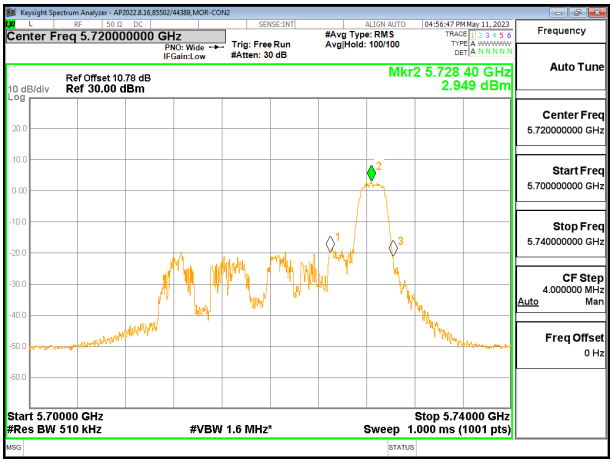
HIGH CHANNEL (RU8)

HIGH CHANNEL CHAIN 0

HIGH CHANNEL CHAIN 1

CHANNEL 144 (RU0)

CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	FCC/ISED Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low (RU37)	5745	-2.06	0.84	30.00	30.00
Mid (RU38)	5785	-2.06	0.84	30.00	30.00
High (RU40)	5825	-2.06	0.84	30.00	30.00
144 (RU37)	5720	-2.06	0.84	30.00	30.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd Power & 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)	5745	10.34	9.76	13.07	30.00	-16.93
Mid (RU38)	5785	9.66	10.90	13.33	30.00	-16.67
High (RU40)	5825	9.37	10.77	13.14	30.00	-16.86
144 (RU37)	5720	10.32	9.98	13.16	30.00	-16.84

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 500KHz)	Chain 1 Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low (RU37)	5745	2.317	2.333	5.335	30.00	-24.66
Mid (RU38)	5785	1.520	3.348	5.540	30.00	-24.46
High (RU40)	5825	1.604	3.059	5.402	30.00	-24.60
144 (RU37)	5720	2.331	2.225	5.289	30.00	-24.71

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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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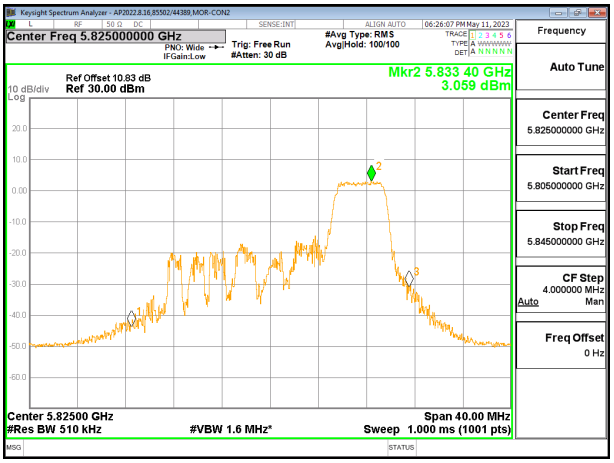
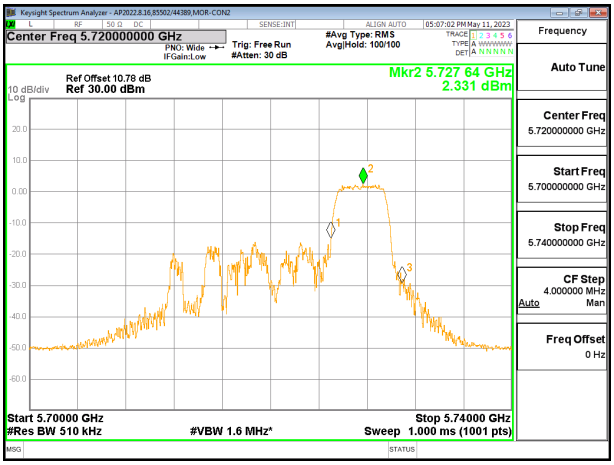
HIGH CHANNEL (RU40)

HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

CHANNEL 144 (RU37)



CHANNEL 144 CHAIN 0

CHANNEL 144 CHAIN 1

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	FCC/ISED Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low (RU53)	5745	-2.06	0.84	30.00	30.00
Mid (RU53)	5785	-2.06	0.84	30.00	30.00
High (RU54)	5825	-2.06	0.84	30.00	30.00
144 (RU53)	5720	-2.06	0.84	30.00	30.00

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)	5745	14.97	14.49	17.75	30.00	-12.25
Mid (RU53)	5785	13.89	15.09	17.54	30.00	-12.46
High (RU54)	5825	14.40	15.35	17.91	30.00	-12.09
144 (RU53)	5720	14.92	14.40	17.68	30.00	-12.32

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 500KHz)	Chain 1 Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low (RU53)	5745	4.132	3.865	7.011	30.00	-22.99
Mid (RU53)	5785	3.215	4.641	6.997	30.00	-23.00
High (RU54)	5825	3.323	4.836	7.155	30.00	-22.84
144 (RU53)	5720	3.957	3.541	6.764	30.00	-23.24

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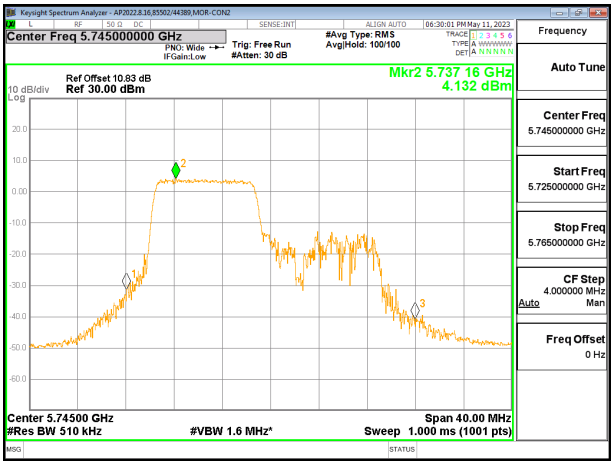
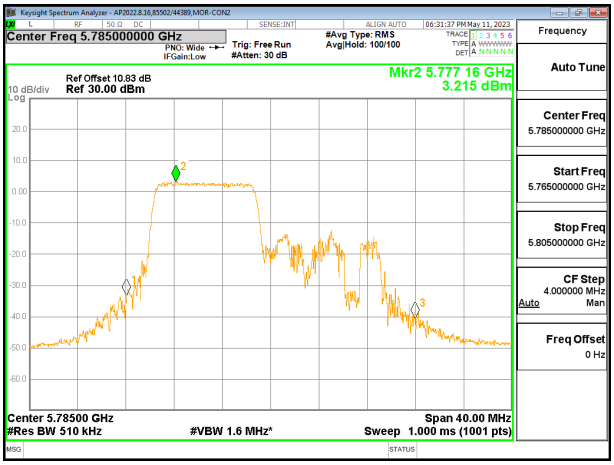
LOW CHANNEL (RU53)



LOW CHANNEL CHAIN 0

LOW CHANNEL CHAIN 1

MID CHANNEL (RU53)



MID CHANNEL CHAIN 0

MID CHANNEL CHAIN 1

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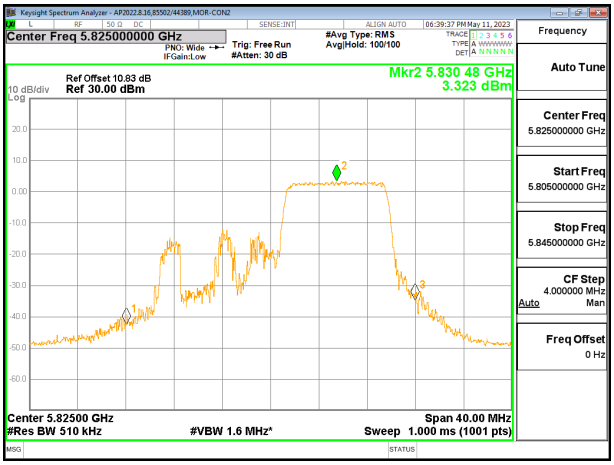
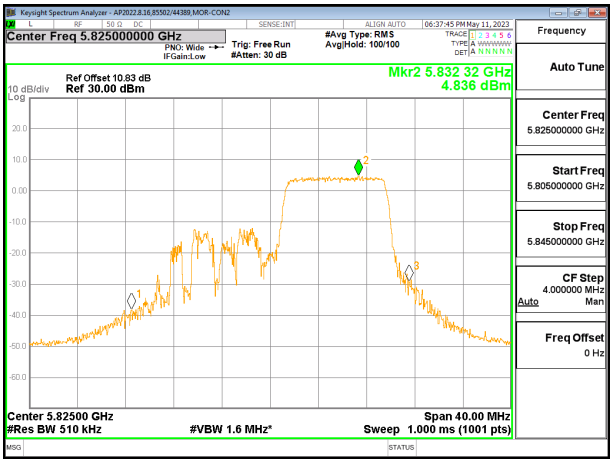
HIGH CHANNEL (RU54)



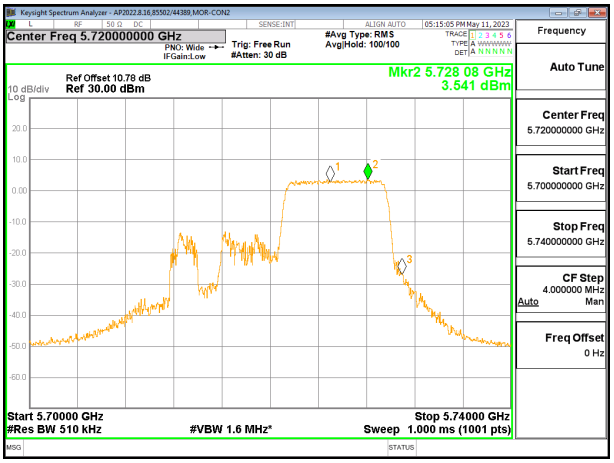
HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

CHANNEL 144 (RU53)

CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	FCC/ISED Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low (RU61)	5745	-2.06	0.84	30.00	30.00
Mid (RU61)	5785	-2.06	0.84	30.00	30.00
High (RU61)	5825	-2.06	0.84	30.00	30.00
144 (RU61)	5720	-2.06	0.84	30.00	30.00

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)	5745	16.74	16.31	19.54	30.00	-10.46
Mid (RU61)	5785	16.14	17.38	19.81	30.00	-10.19
High (RU61)	5825	16.28	17.12	19.73	30.00	-10.27
144 (RU61)	5720	17.07	16.57	19.84	30.00	-10.16

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 500KHz)	Chain 1 Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low (RU61)	5745	2.557	2.025	5.309	30.00	-24.69
Mid (RU61)	5785	1.851	3.217	5.598	30.00	-24.40
High (RU61)	5825	1.770	2.983	5.429	30.00	-24.57
144 (RU61)	5720	2.603	2.496	5.560	30.00	-24.44

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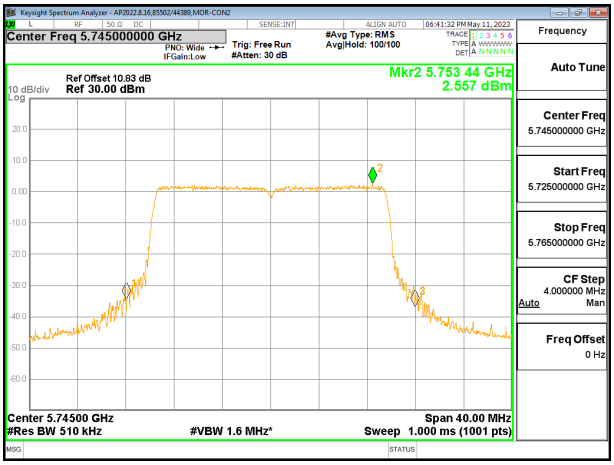
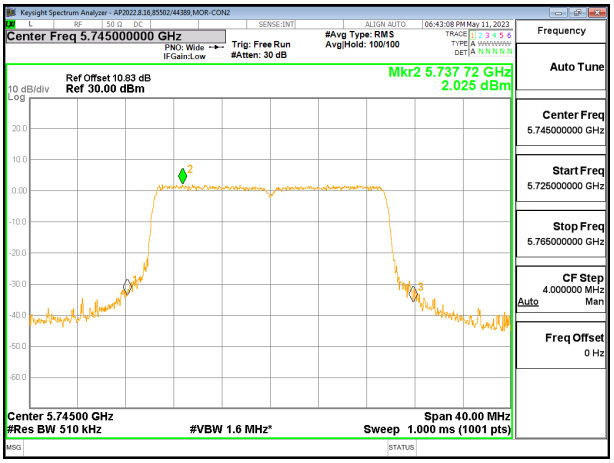
LOW CHANNEL (RU61)

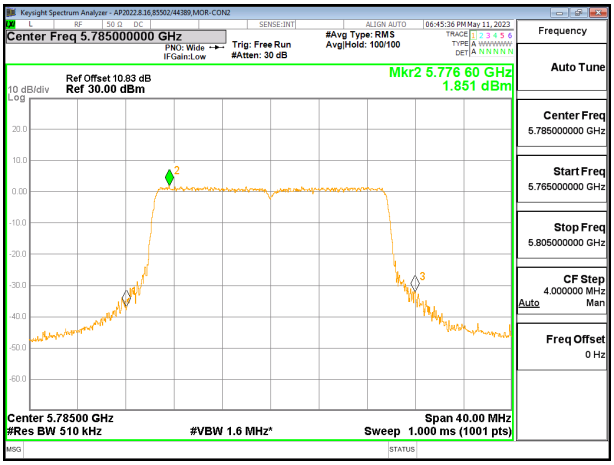


LOW CHANNEL CHAIN 0

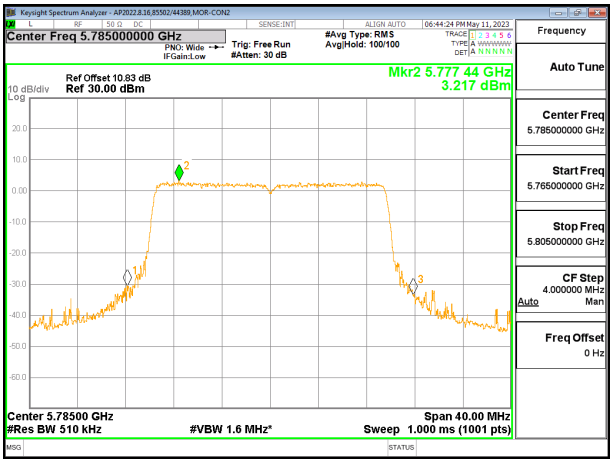


LOW CHANNEL CHAIN 1

MID CHANNEL (RU61)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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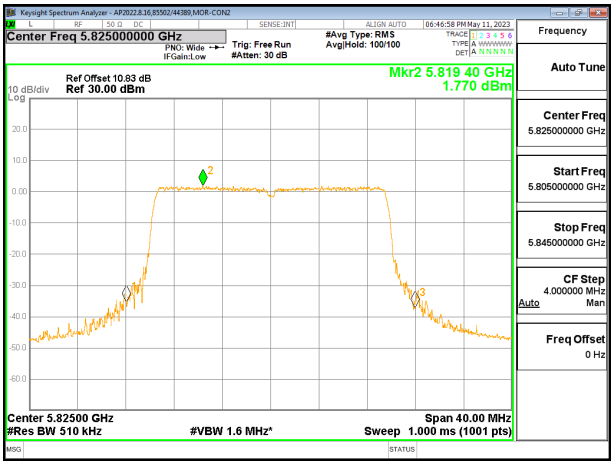
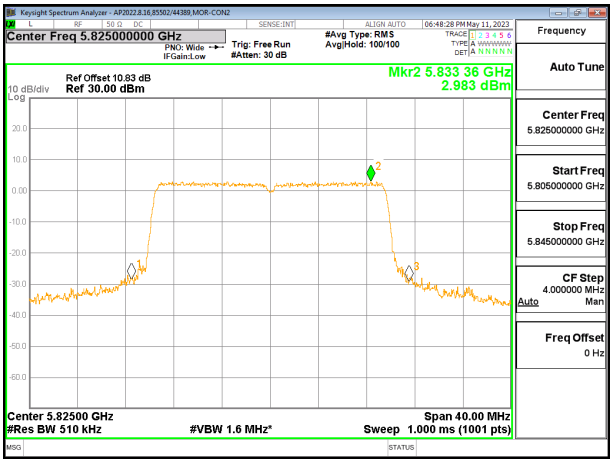
HIGH CHANNEL (RU61)

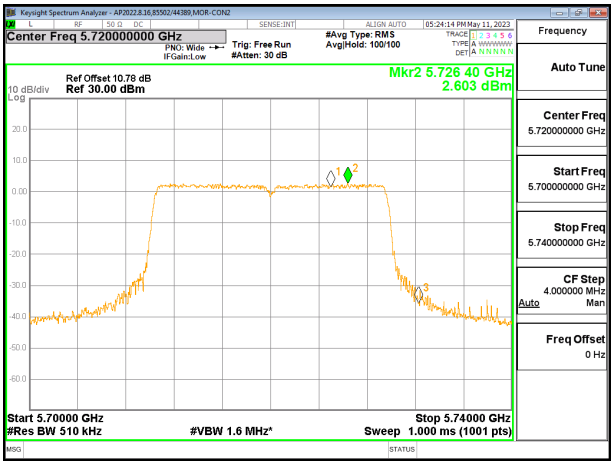


HIGH CHANNEL CHAIN 0

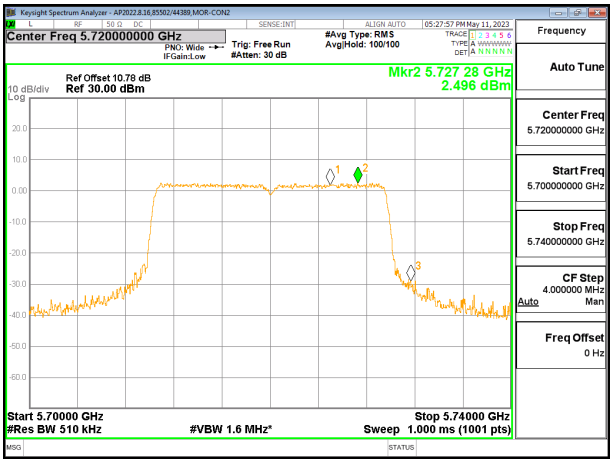


HIGH CHANNEL CHAIN 1

CHANNEL 144 (RU61)



CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

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9.3.56. 802.11ax HE40 MODE 2TX IN THE 5.8GHz BAND (FCC+IC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	FCC/ISED Power Limit (dBm)
Low (RU65)	5755	-2.06	30.00
High (RU65)	5795	-2.06	30.00
142 (RU65)	5710	-2.06	30.00

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)	5755	16.36	17.32	19.88	30.00	-10.12
High (RU65)	5795	16.03	17.36	19.76	30.00	-10.24
142 (RU65)	5710	17.01	16.61	19.82	30.00	-10.18

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9.3.57. 802.11ax HE80 MODE 2TX IN THE 5.8GHz BAND (FCC+IC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-04-18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	FCC/ISED Power Limit (dBm)
Mid (RU67)	5755	-2.06	30.00
138 (RU67)	5690	-2.06	30.00

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)	5755	14.91	16.33	18.69	30.00	-11.31
138 (RU67)	5690	15.84	15.65	18.76	30.00	-11.24

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9.3.58. 802.11a MODE IN THE 5.9 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	85502/44389
Test Date:	2023-04-20, 2023-05-02

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	EIRP Limit (dBm)	PSD EIRP Limit (dBm/ 1MHz)
Low	5845	-1.92	1.03	30.00	14.00
Mid	5865	-1.92	1.03	30.00	14.00
High	5885	-1.92	1.03	30.00	14.00

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 EIRP Power (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
Low	5845	15.70	17.36	17.70	30.00	-12.30
Mid	5865	15.93	17.23	17.72	30.00	-12.28
High	5885	15.72	17.23	17.63	30.00	-12.37

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd EIRP PSD (dBm/ 1MHz)	PSD EIRP Limit (dBm/ 1MHz)	PSD EIRP Margin (dB)
Low	5845	4.61	6.40	10.21	14.00	-3.79
Mid	5865	4.53	6.24	10.08	14.00	-3.92
High	5885	4.25	6.35	10.04	14.00	-3.96

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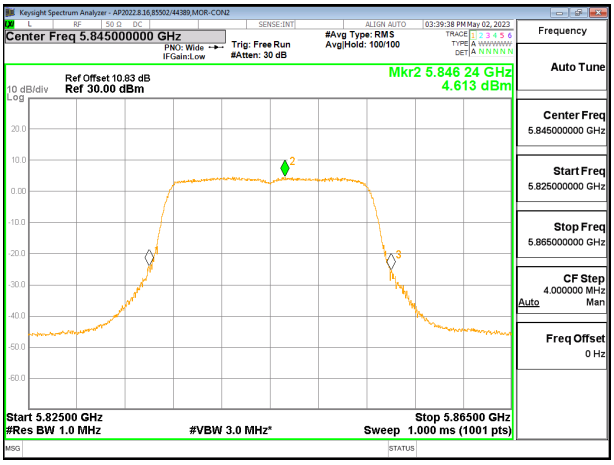
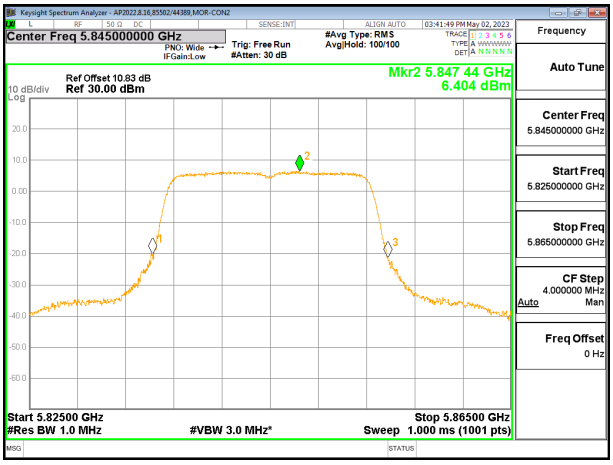
LOW CHANNEL

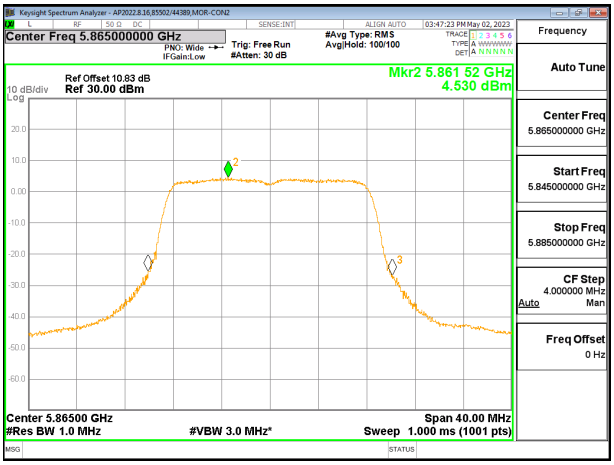


LOW CHANNEL CHAIN 0

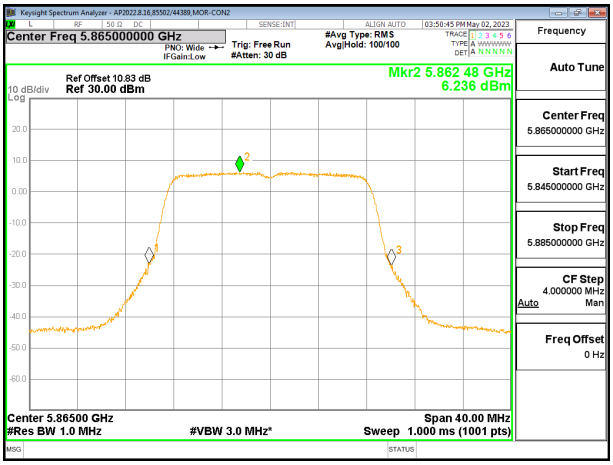


LOW CHANNEL CHAIN 1

MID CHANNEL



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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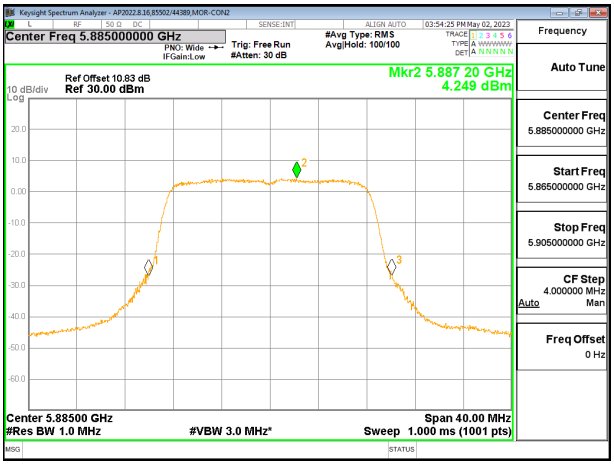
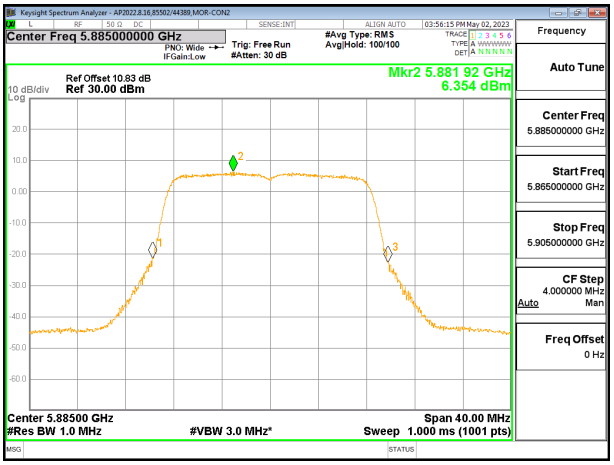
HIGH CHANNEL



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.59. 802.11n HT20 MODE IN THE 5.9 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	85502/44389
Test Date:	2023-04-12

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	EIRP Limit (dBm)
Low	5845	-1.92	30.00
Mid	5865	-1.92	30.00
High	5905	-1.92	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP Power (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
Low	5845	15.92	17.36	17.79	30.00	-12.21
Mid	5865	15.60	17.25	17.59	30.00	-12.41
High	5905	15.73	17.13	17.58	30.00	-12.42

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9.3.60. 802.11n HT40 MODE IN THE 5.9 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	85502/44389
Test Date:	2023-04-12

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Low	5835	-1.92	30.00
High	5875	-1.92	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP Power (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
Low	5835	16.48	17.06	17.87	30.00	-12.13
High	5875	15.90	17.28	17.73	30.00	-12.27

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9.3.61. 802.11ac VHT80 MODE IN THE 5.9 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	85502/44389
Test Date:	2023-04-12

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Power Limit (dBm)
Mid	5855	-1.92	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP Power (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
Mid	5855	14.89	16.33	16.76	30.00	-13.24

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9.3.62. 802.11ac VHT160 MODE IN THE 5.9 GHz BAND (FCC)

2TX CHAIN 0 + CHAIN 1 CDD MODE

Test Engineer:	85502/44389
Test Date:	2023-04-12

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Mid	5815	-1.92	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP Power (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
Mid	5815	15.09	16.46	18.84	30.00	-11.16

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9.3.63. 802.11ax HE20 MODE 2TX IN THE 5.9GHz BAND (FCC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-05-03

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	EIRP Power Limit (dBm)	EIRP PSD Limit (dBm/ 1MHz)
Low (RU0)	5845	-1.85	1.08	30.00	14.00
Mid (RU4)	5865	-1.85	1.08	30.00	14.00
High (RU8)	5885	-1.85	1.08	30.00	14.00

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 EIRP (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU0)	5845	6.46	8.41	8.70	30.00	-21.30
Mid (RU4)	5865	6.49	8.67	8.88	30.00	-21.12
High (RU8)	5885	6.86	8.42	8.87	30.00	-21.13

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd EIRP PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low (RU0)	5845	3.478	6.040	9.036	14.00	-4.96
Mid (RU4)	5865	2.480	5.774	8.522	14.00	-5.48
High (RU8)	5885	3.587	5.900	8.986	14.00	-5.01

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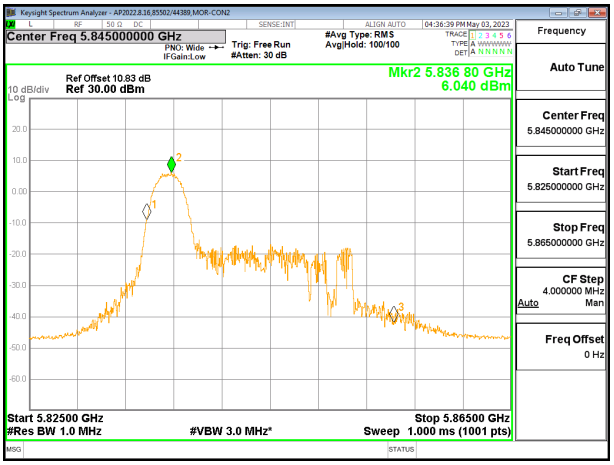
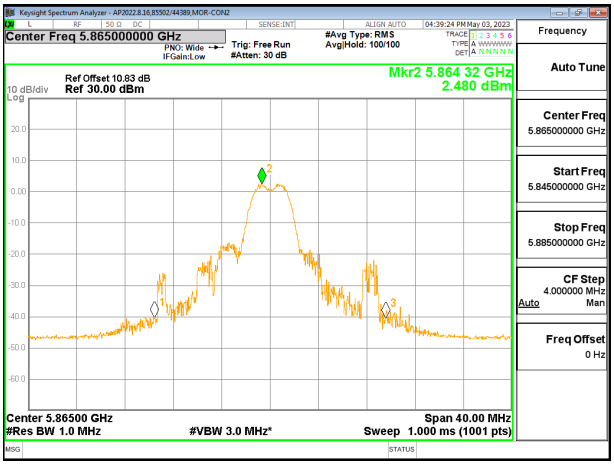
LOW CHANNEL (RU0)

LOW CHANNEL CHAIN 0

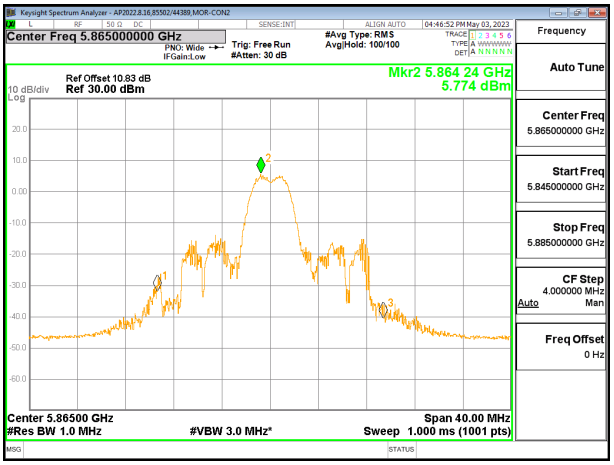


LOW CHANNEL CHAIN 1

MID CHANNEL (RU4)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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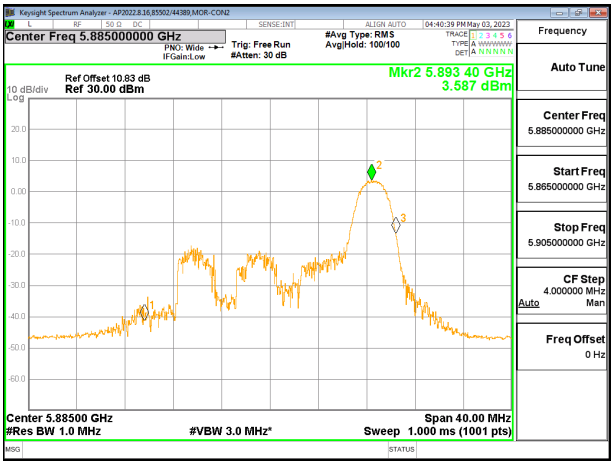
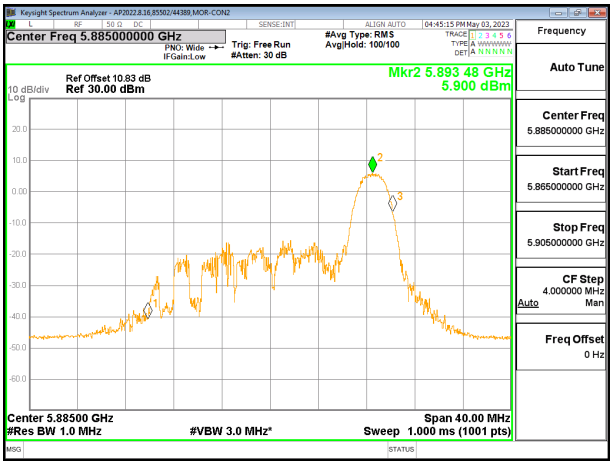
HIGH CHANNEL (RU8)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-05-03

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	EIRP Power Limit (dBm)	EIRP PSD Limit (dBm/ 1MHz)
Low (RU37)	5845	-1.85	1.08	30.00	14.00
Mid (RU38)	5865	-1.85	1.08	30.00	14.00
High (RU40)	5905	-1.85	1.08	30.00	14.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU37)	5845	9.11	11.26	11.48	30.00	-18.52
Mid (RU38)	5865	8.98	11.06	11.30	30.00	-18.70
High (RU40)	5905	9.18	10.77	11.21	30.00	-18.79

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd EIRP PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low (RU37)	5845	3.529	6.497	9.352	14.00	-4.65
Mid (RU38)	5865	3.413	5.915	8.932	14.00	-5.07
High (RU40)	5905	3.219	5.381	8.523	14.00	-5.48

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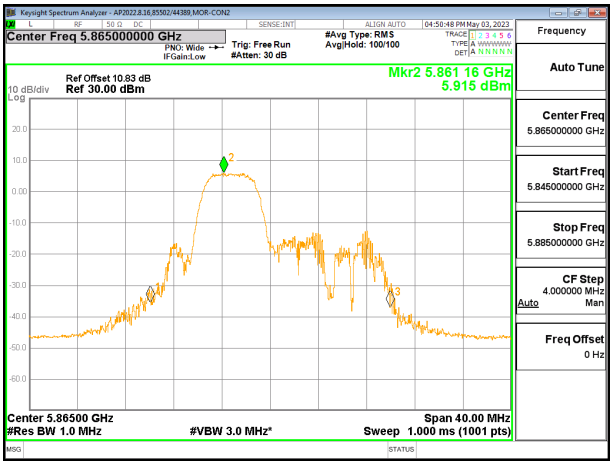
LOW CHANNEL (RU37)

LOW CHANNEL CHAIN 0

LOW CHANNEL CHAIN 1

MID CHANNEL (RU38)

MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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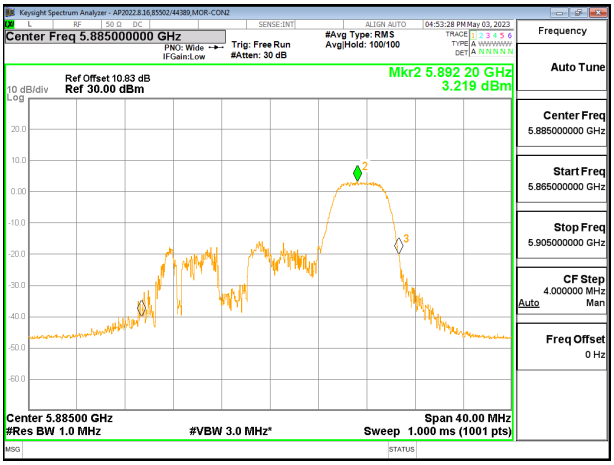
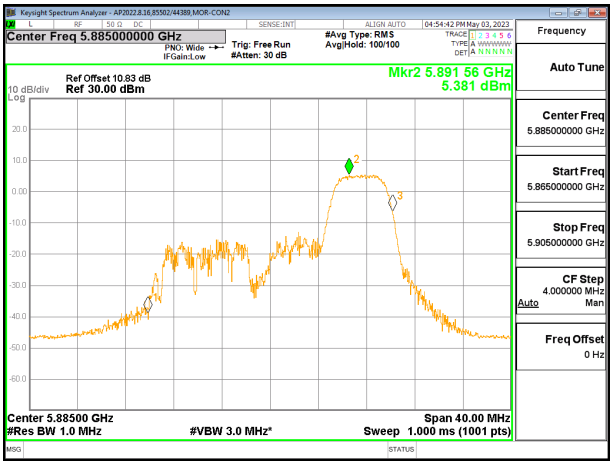
HIGH CHANNEL (RU40)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-05-03

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	EIRP Power Limit (dBm)	EIRP PSD Limit (dBm/ 1MHz)
Low (RU53)	5845	-1.85	1.08	30.00	14.00
Mid (RU53)	5865	-1.85	1.08	30.00	14.00
High (RU54)	5905	-1.85	1.08	30.00	14.00

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 EIRP (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU53)	5845	13.80	15.14	15.68	30.00	-14.32
Mid (RU53)	5865	13.79	15.35	15.80	30.00	-14.20
High (RU54)	5905	13.00	14.63	15.05	30.00	-14.95

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd EIRP PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low (RU53)	5845	5.340	7.604	10.708	14.00	-3.29
Mid (RU53)	5865	5.158	7.204	10.391	14.00	-3.61
High (RU54)	5905	4.573	6.590	9.788	14.00	-4.21

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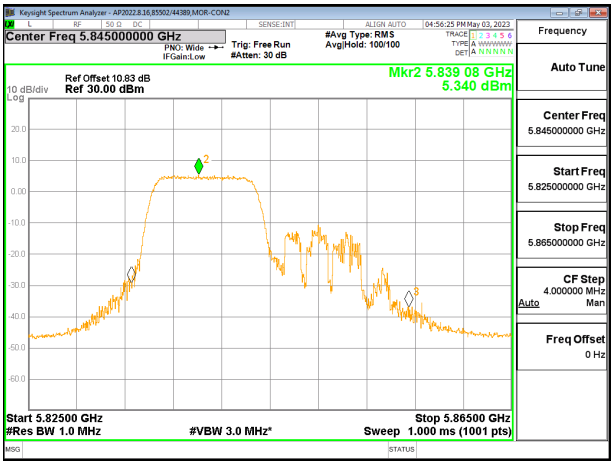
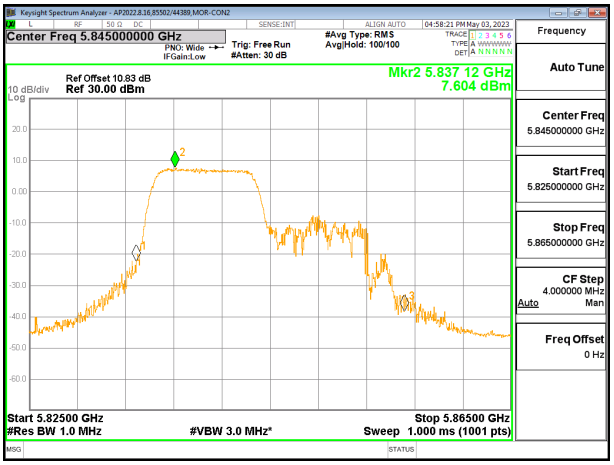
LOW CHANNEL (RU53)

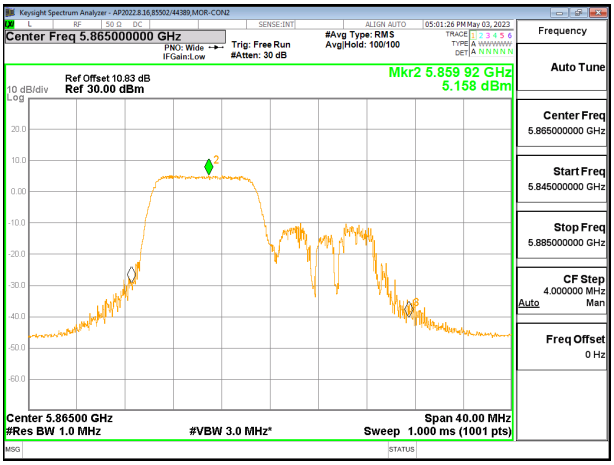


LOW CHANNEL CHAIN 0

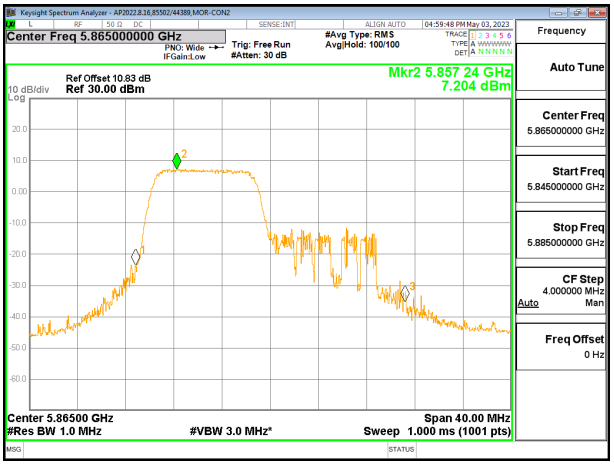


LOW CHANNEL CHAIN 1

MID CHANNEL (RU53)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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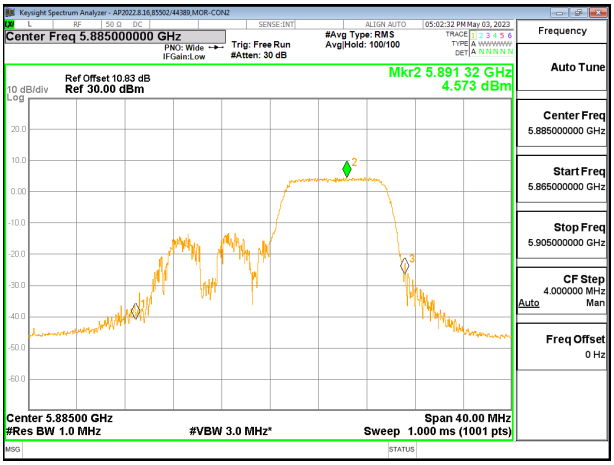
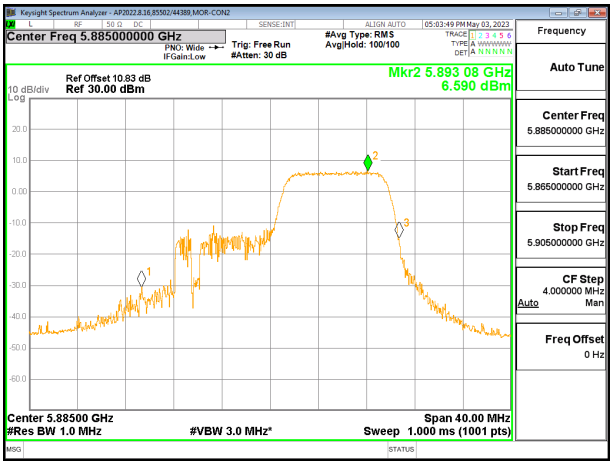
HIGH CHANNEL (RU54)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-05-03

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBm)	EIRP Power Limit (dBm)	EIRP PSD Limit (dBm/ 1MHz)
Low (RU61)	5845	-1.85	1.08	30.00	14.00
Mid (RU61)	5865	-1.85	1.08	30.00	14.00
High (RU61)	5905	-1.85	1.08	30.00	14.00

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 EIRP (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU61)	5845	16.14	17.50	18.03	30.00	-11.97
Mid (RU61)	5865	16.11	17.46	18.00	30.00	-12.00
High (RU61)	5905	16.01	17.46	17.96	30.00	-12.04

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd EIRP PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low (RU61)	5845	4.203	6.509	9.598	14.00	-4.40
Mid (RU61)	5865	4.190	6.446	9.553	14.00	-4.45
High (RU61)	5905	3.920	5.784	9.042	14.00	-4.96

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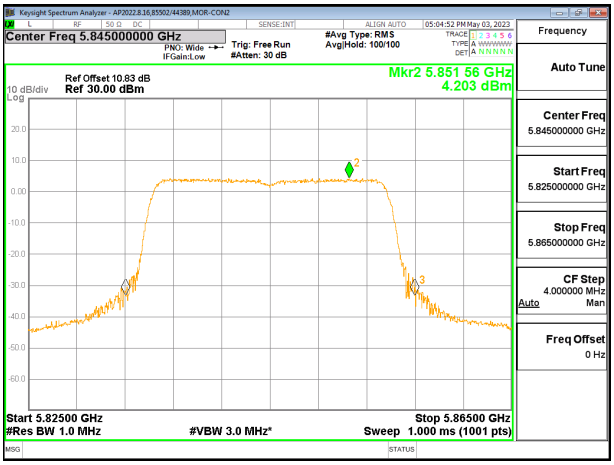
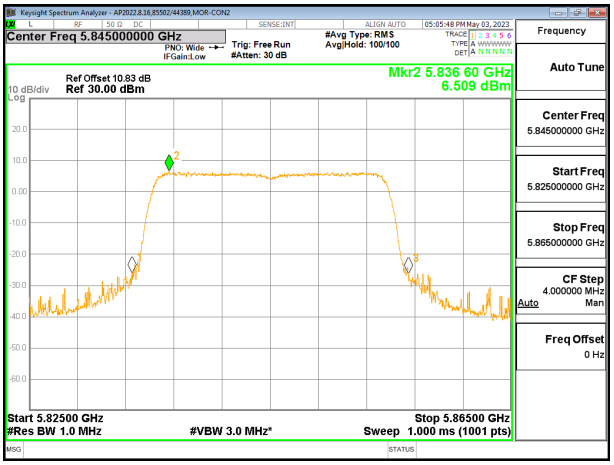
LOW CHANNEL (RU61)

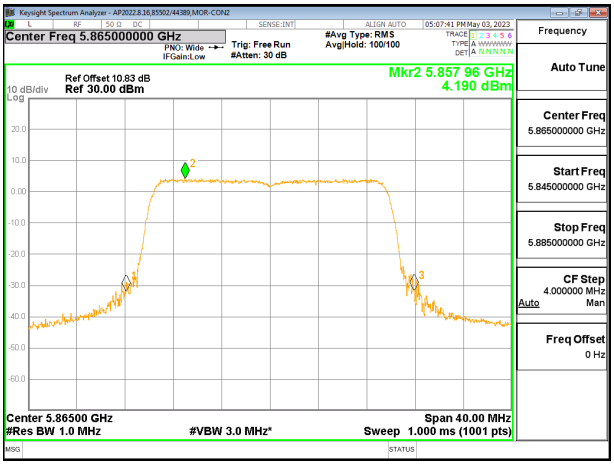


LOW CHANNEL CHAIN 0

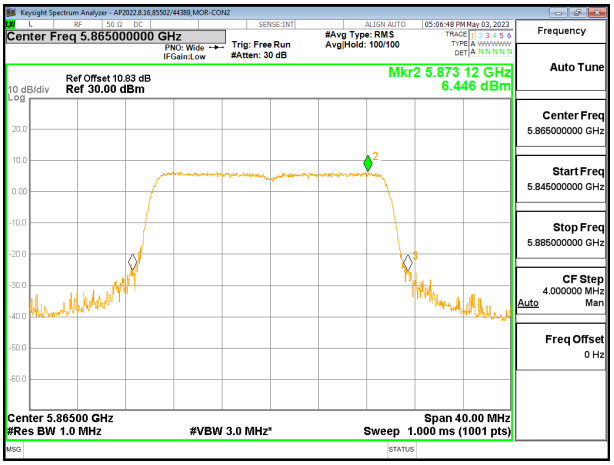


LOW CHANNEL CHAIN 1

MID CHANNEL (RU61)



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

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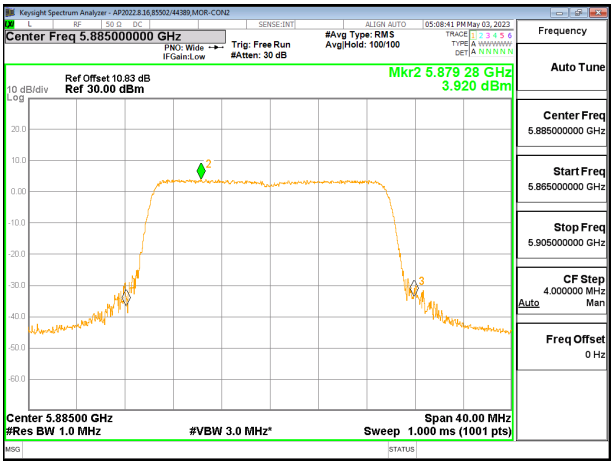
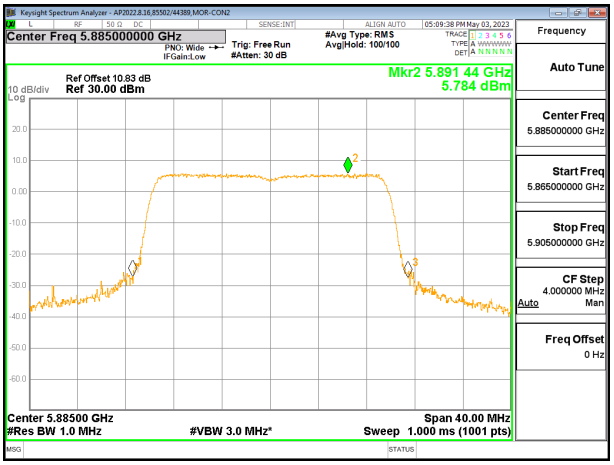
HIGH CHANNEL (RU61)



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

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9.3.64. 802.11ax HE40 MODE 2TX IN THE 5.9GHz BAND (FCC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-05-03

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)
Low (RU65)	5835	-1.85	30.00
High (RU65)	5875	-1.85	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP (dBm)	Power Limit (dBm)	Power Margin (dB)
Low (RU65)	5835	16.05	17.00	17.71	30.00	-12.29
High (RU65)	5875	16.08	17.67	18.11	30.00	-11.89

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9.3.65. 802.11ax HE80 MODE 2TX IN THE 5.9GHz BAND (FCC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-05-03

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)
Mid (RU67)	5855	-1.85	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid (RU67)	5855	14.80	16.16	16.69	30.00	-13.31

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9.3.66. 802.11ax HE160 MODE 2TX IN THE 5.9GHz BAND (FCC)

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

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-11, 2023-05-03

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	EIRP Power Limit (dBm)
Mid (RU68)	5815	-1.85	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd EIRP (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid (RU68)	5815	14.13	15.38	15.96	30.00	-14.04

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10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 - Restricted bands
FCC §15.407(b)(1-5) - Unrestricted bands

After January 01, 2019 for Outside of the Restricted Bands Emissions

RSS 247 Issue 2 Sections
6.2.1.2 (for 5150-5250 MHz band)
6.2.2.2 (for 5250-5350 MHz band)
6.2.3.2 (for 5470-5600 MHz and 5650-5725 MHz bands)
6.2.4.2 (for 5725-5850 MHz band)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 1GHz and 18GHz to 40 GHz is investigated with the transmitter set to transmit at the channel with highest output power as worst-case scenario. 1GHz to 18GHz was set to the lowest, middle, and highest channels in the 5 GHz bands.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

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3D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

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.

KDB 414788 Open Field Site (OFS) and Chamber Correlation Justification

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

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