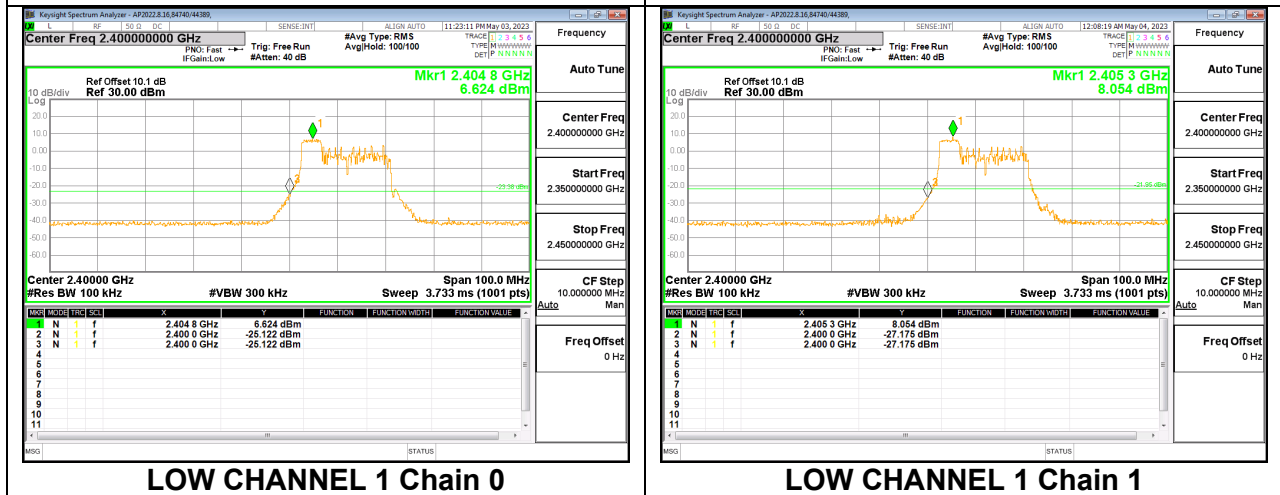
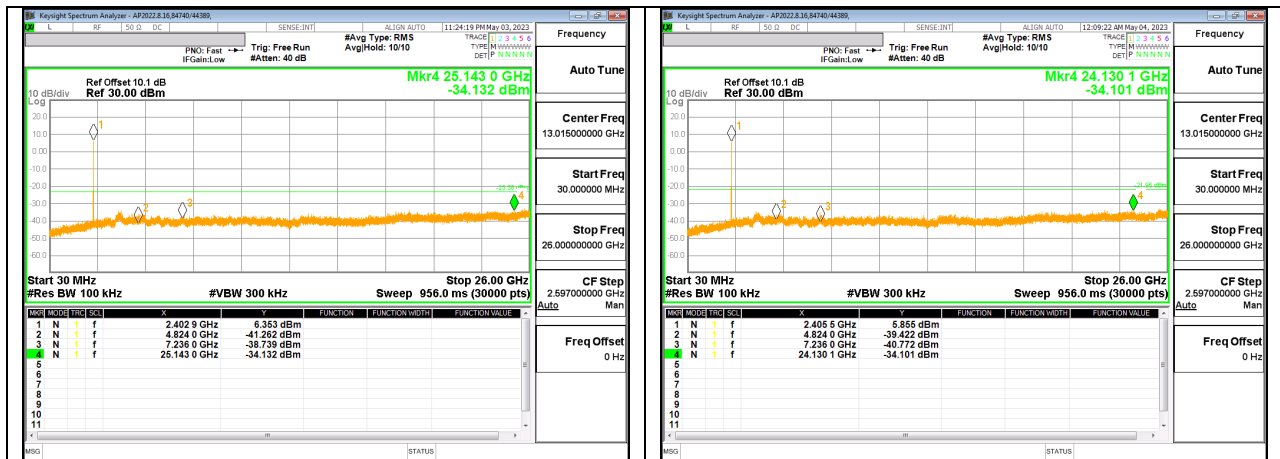
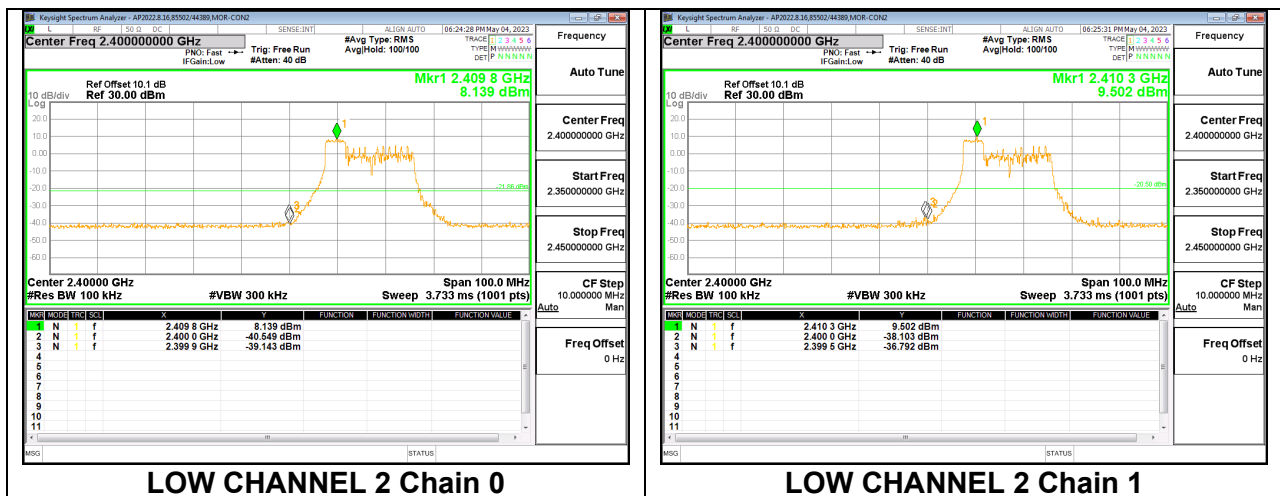


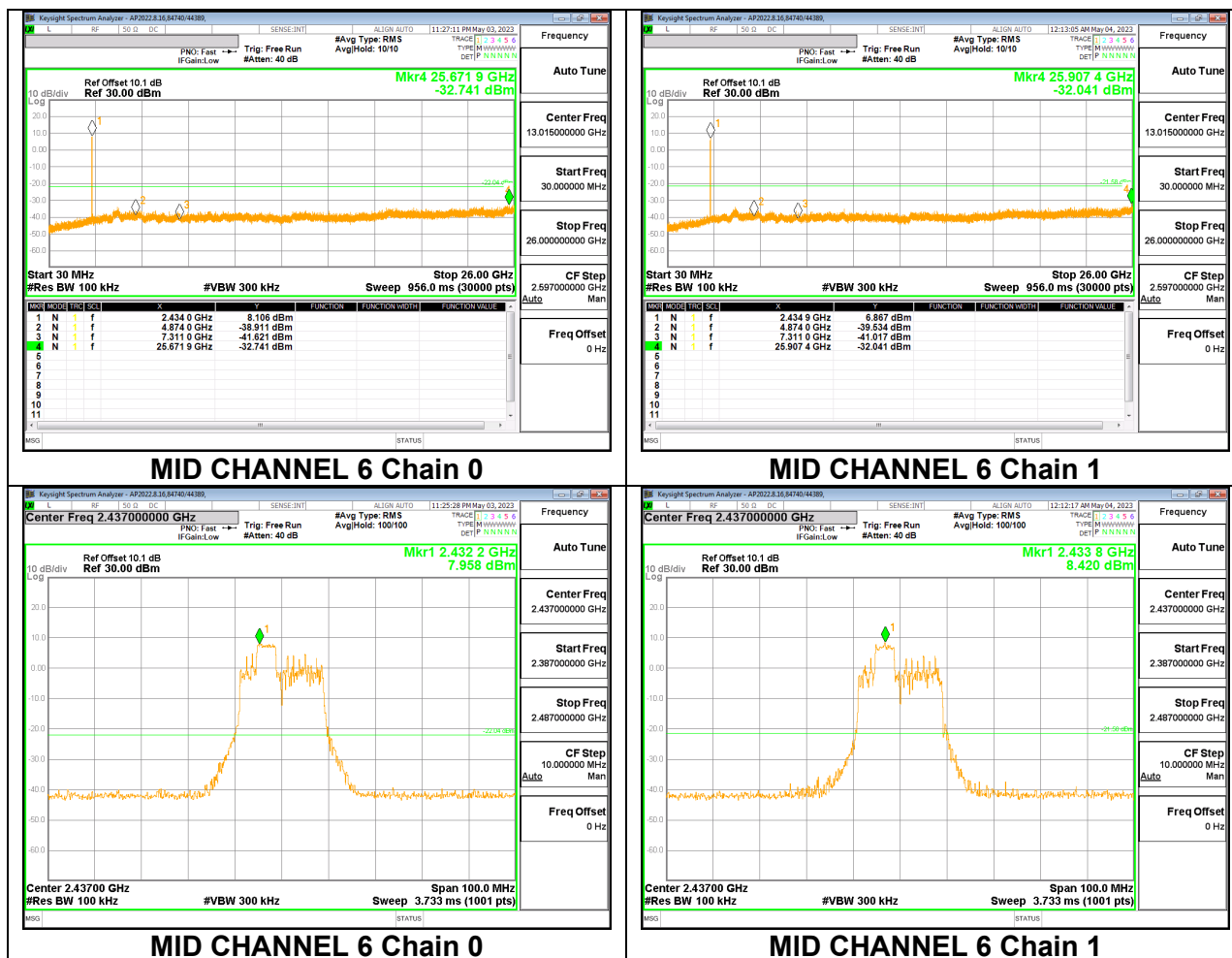
2TX Chain 0 + Chain 1 CDD OFDMA MODE: 52-Tones, RU Index 37
LOW CHANNEL 1



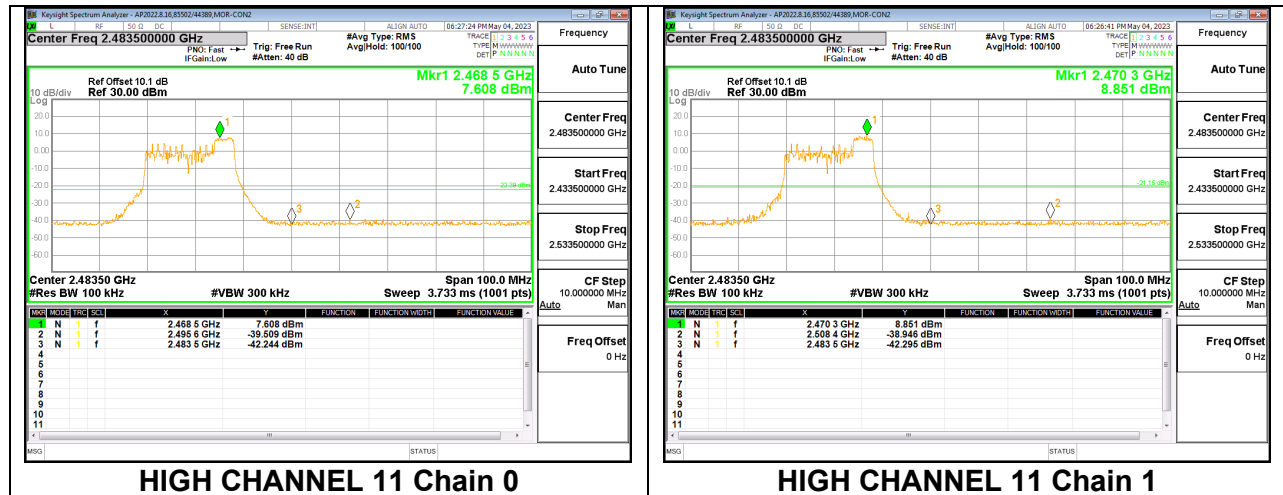
LOW CHANNEL 2



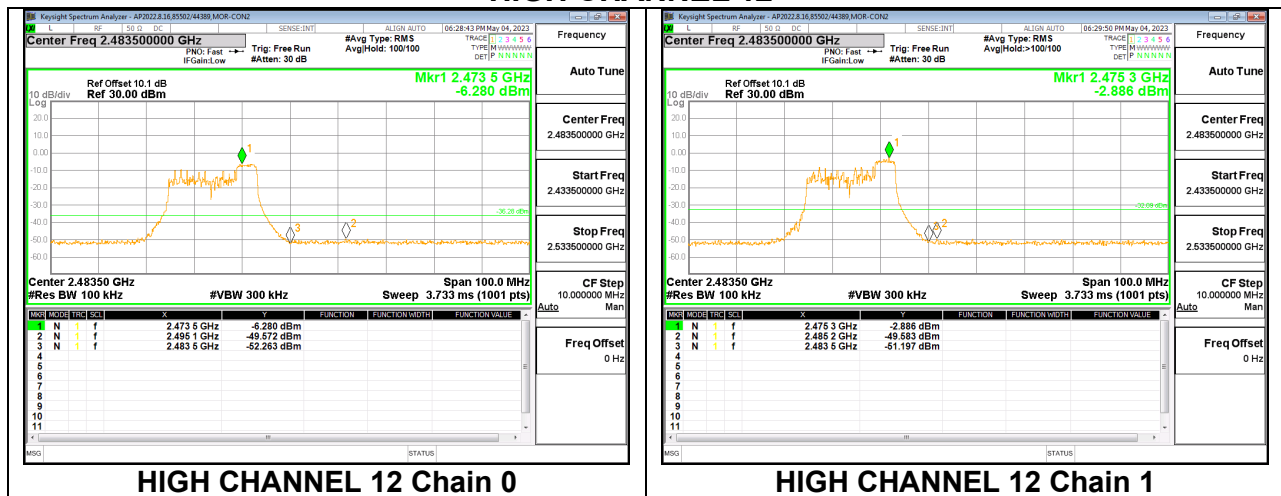
2TX Chain 0 + Chain 1 CDD OFDMA MODE: 52-Tones, RU Index 38
MID CHANNEL 6



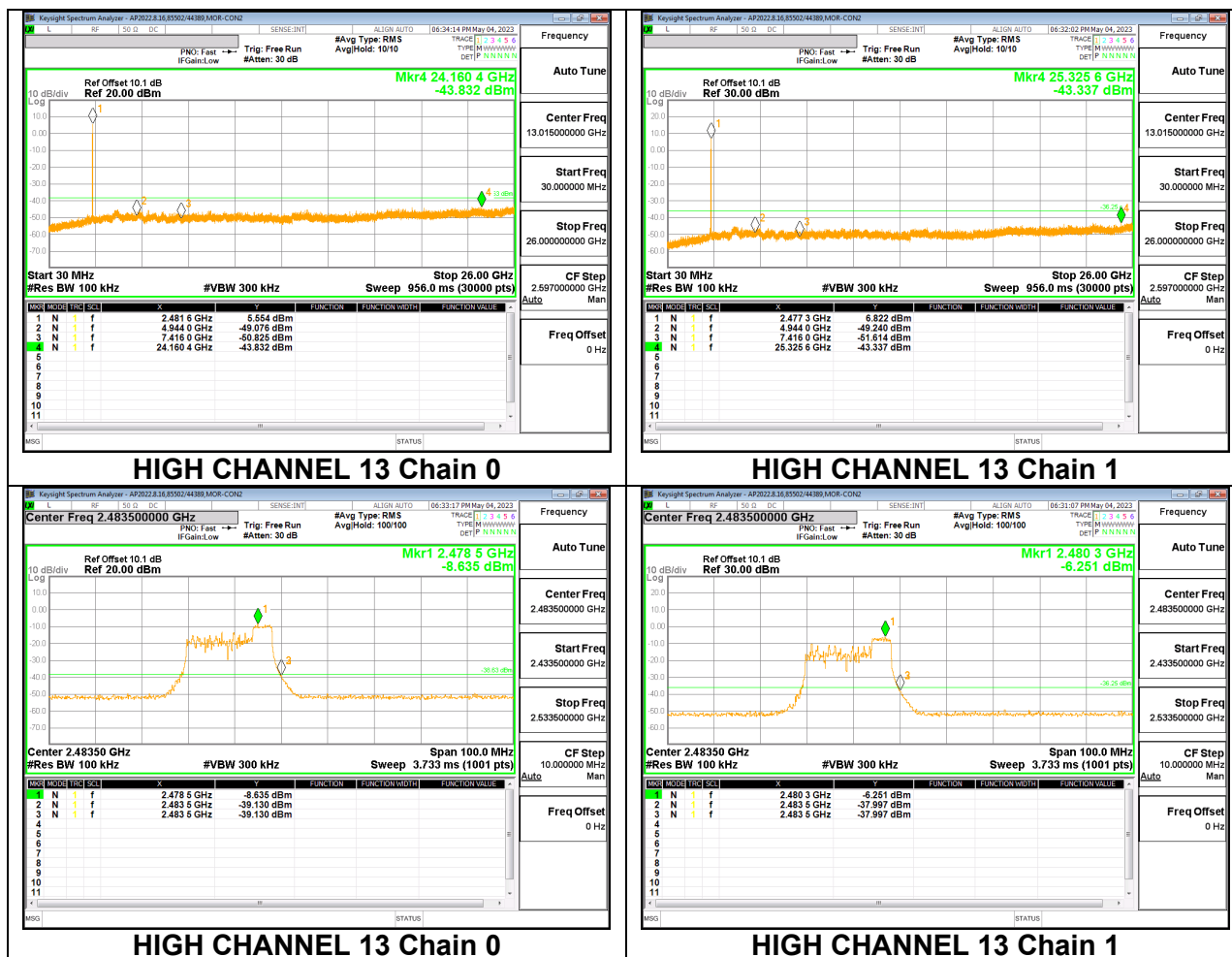
2TX Chain 0 + Chain 1 CDD OFDMA MODE: 52-Tones, RU Index 40
HIGH CHANNEL 11



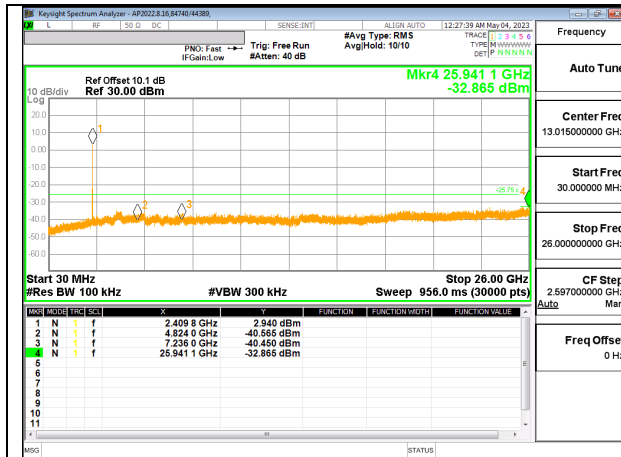
HIGH CHANNEL 12



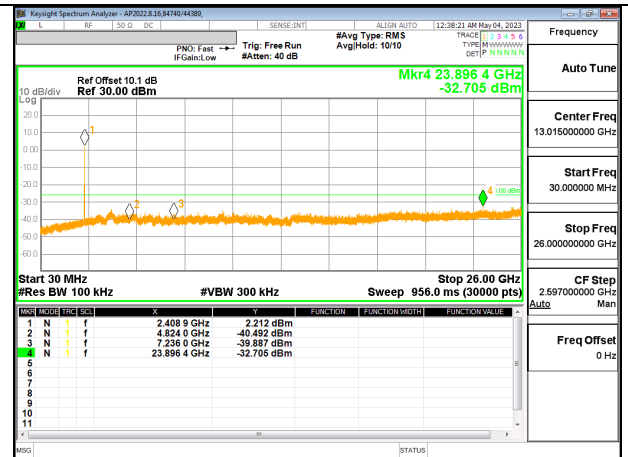
HIGH CHANNEL 13



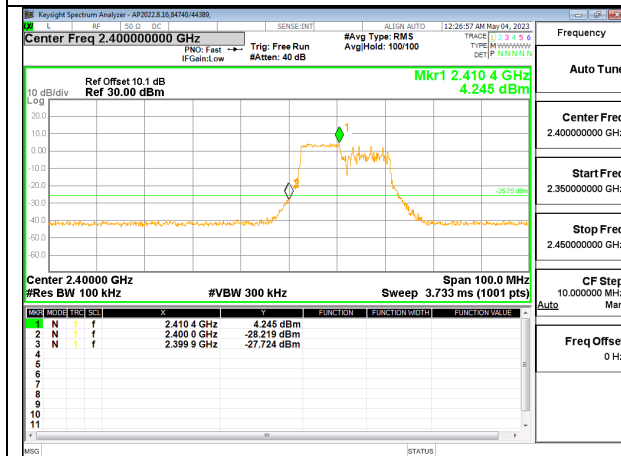
2TX Chain 0 + Chain 1 CDD OFDMA MODE: 106-Tones, RU Index 53
LOW CHANNEL 1



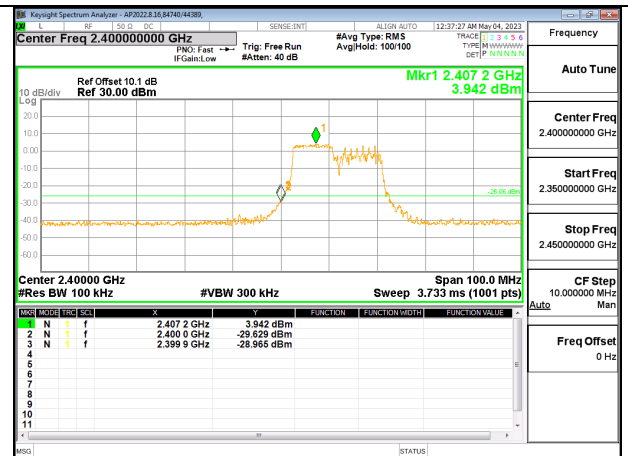
LOW CHANNEL 1 Chain 0



LOW CHANNEL 1 Chain 1

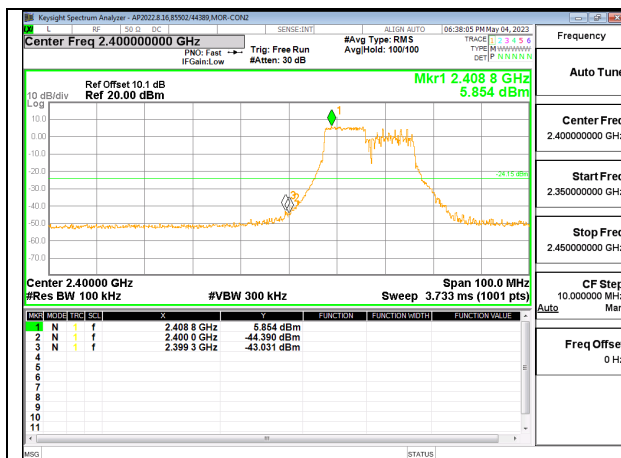


LOW CHANNEL 1 Chain 0

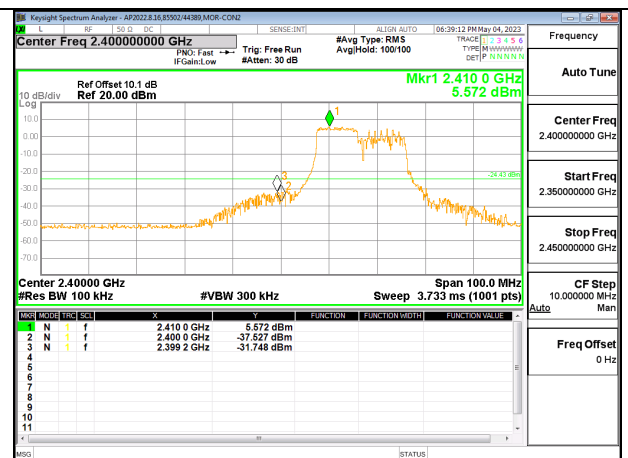


LOW CHANNEL 1 Chain 1

LOW CHANNEL 2

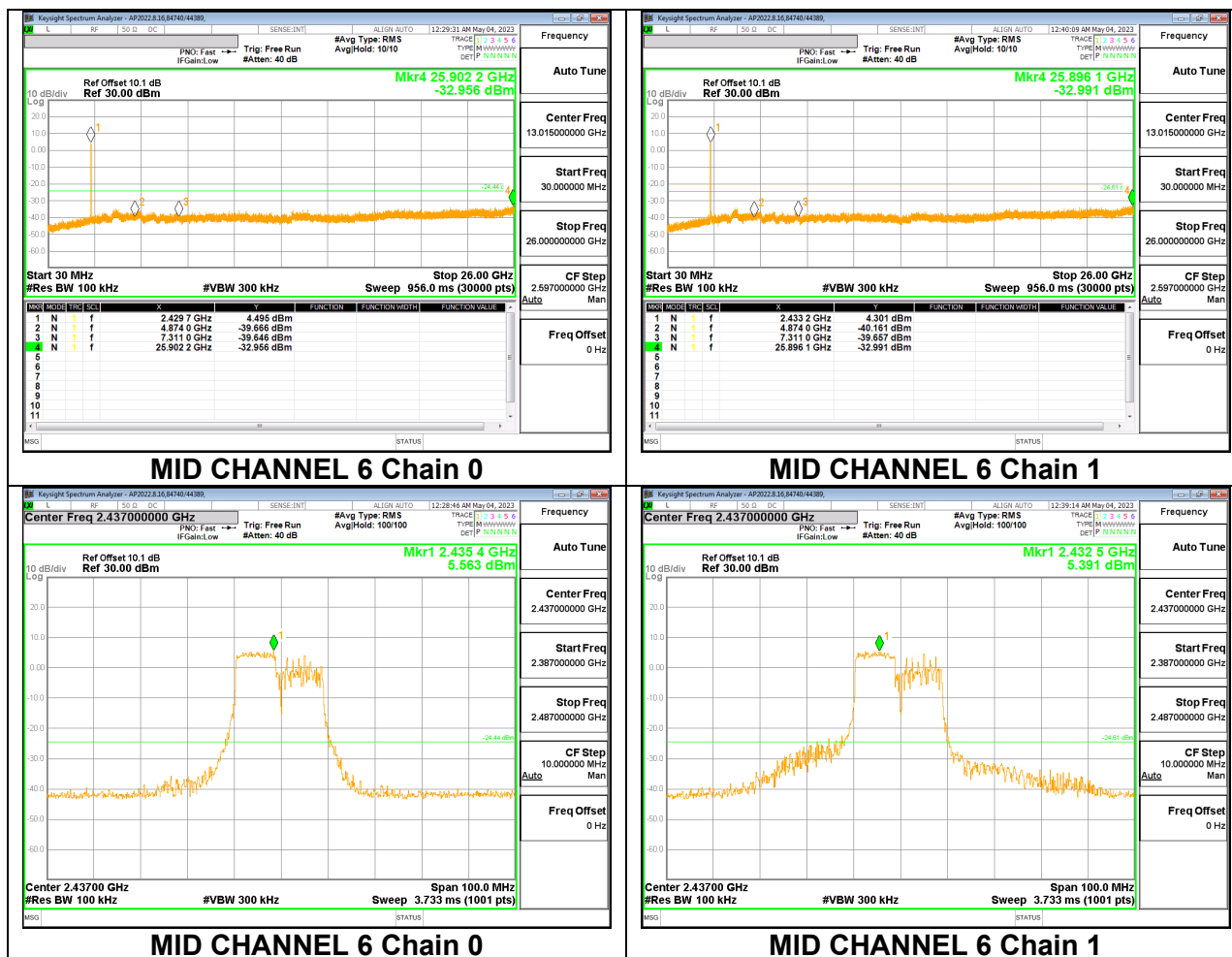


LOW CHANNEL 2 Chain 0

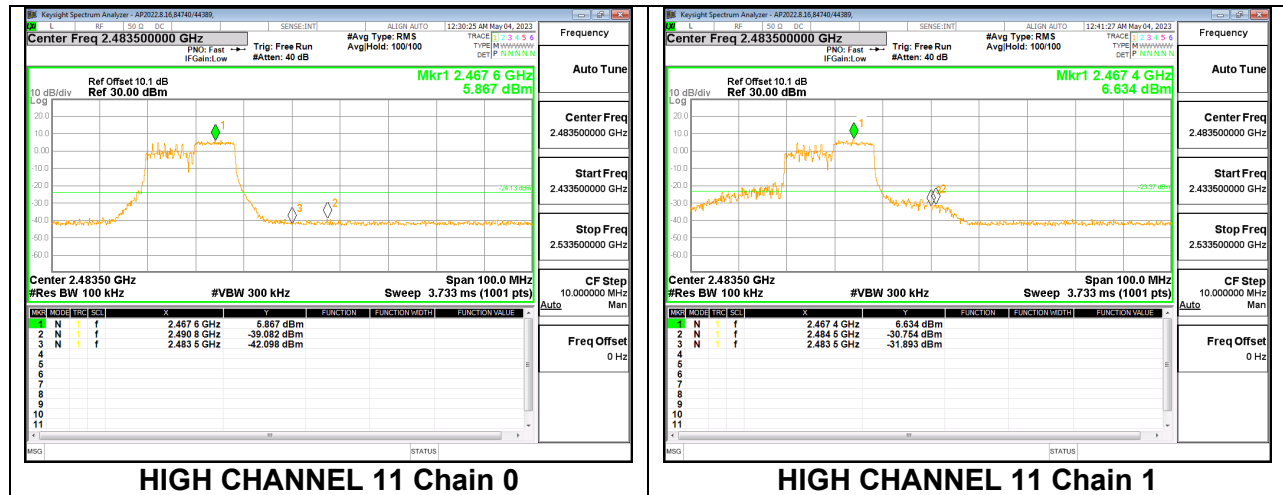


LOW CHANNEL 2 Chain 1

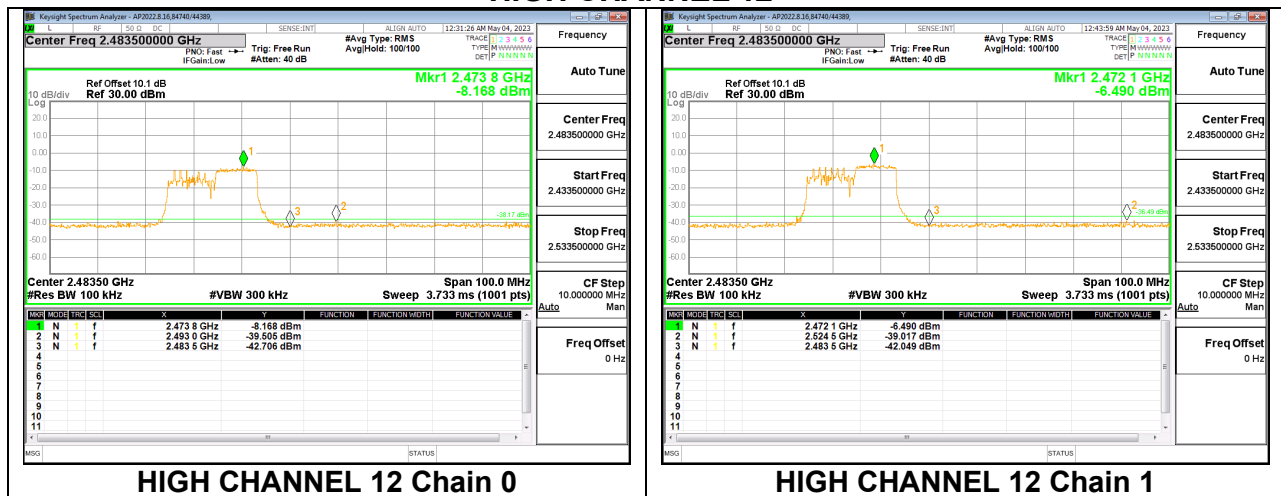
MID CHANNEL 6



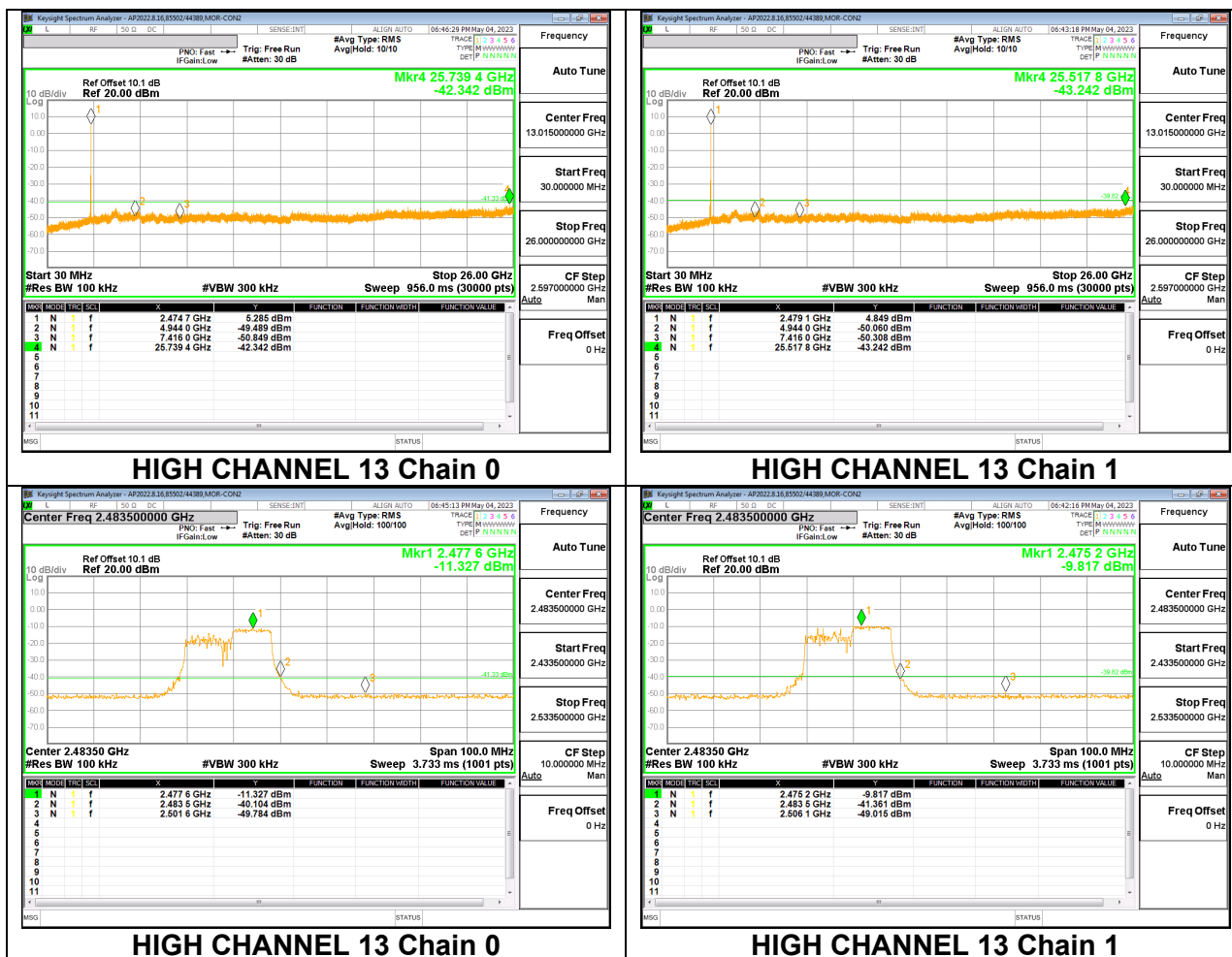
2TX Chain 0 + Chain 1 CDD OFDMA MODE: 106-Tones, RU Index 54
HIGH CHANNEL 11



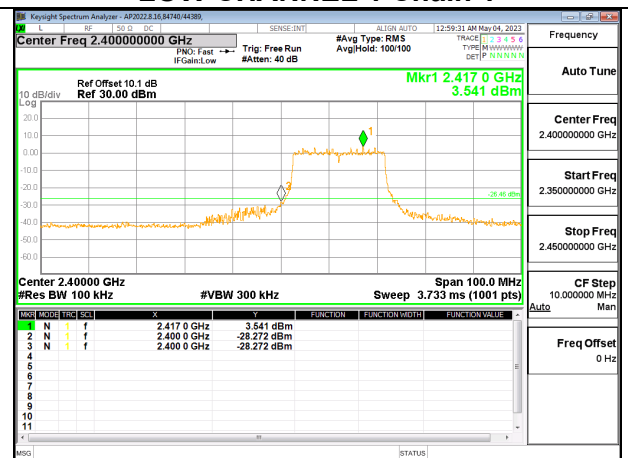
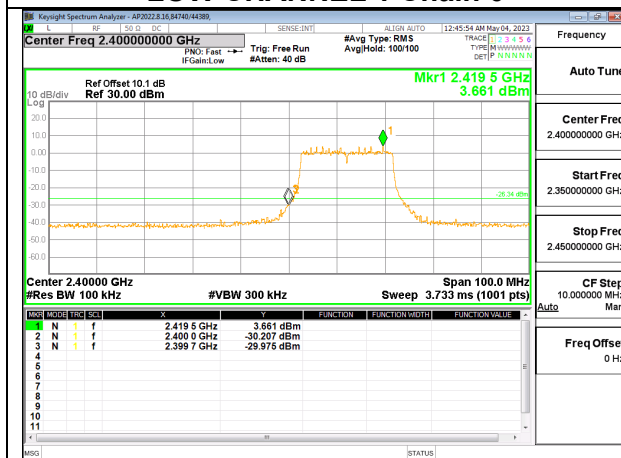
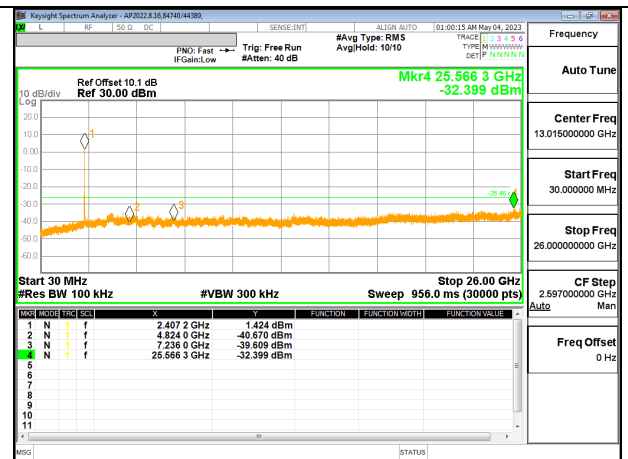
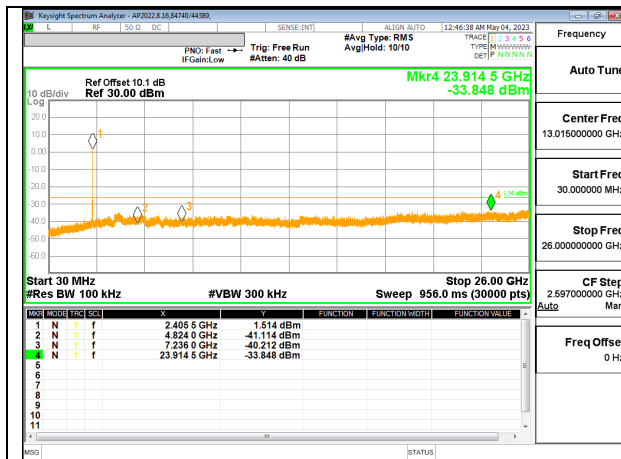
HIGH CHANNEL 12



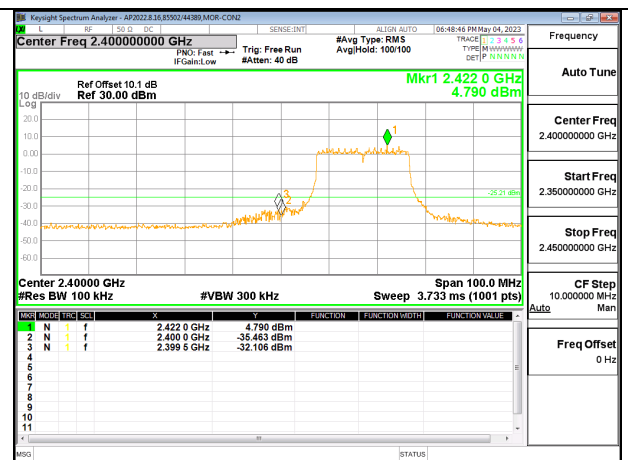
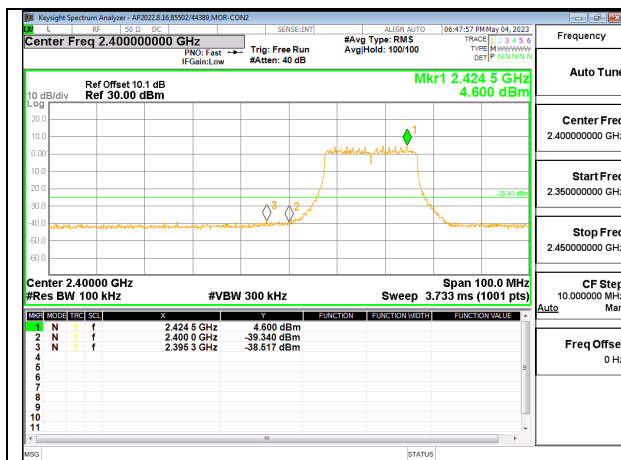
HIGH CHANNEL 13



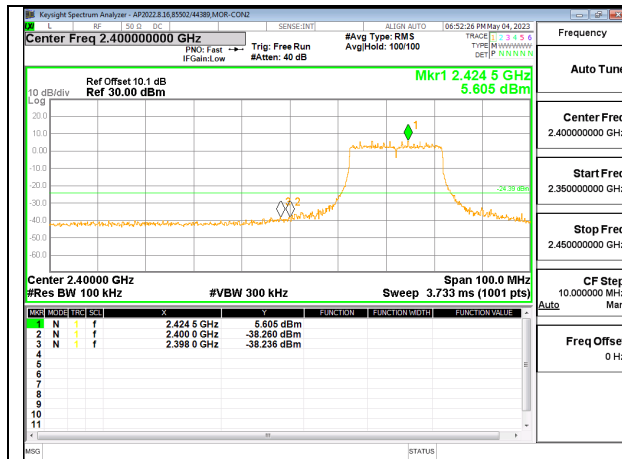
2TX Chain 0 + Chain 1 CDD OFDMA MODE: 242-Tones, RU Index 61
LOW CHANNEL 1



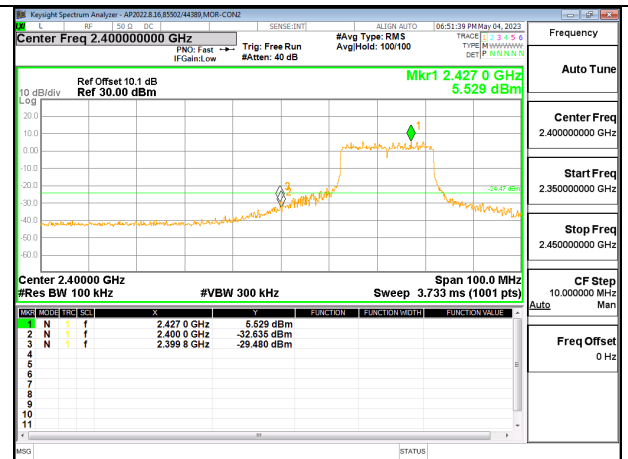
LOW CHANNEL 2



LOW CHANNEL 3

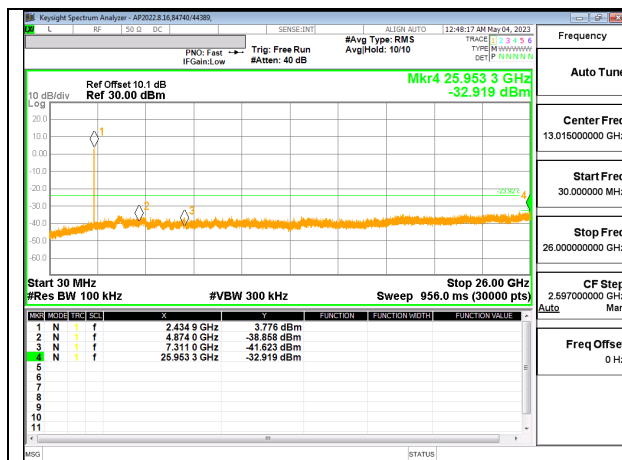


LOW CHANNEL 3 Chain 0

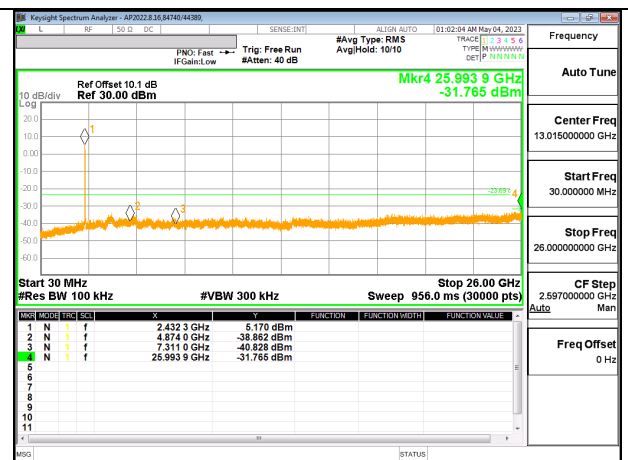


LOW CHANNEL 3 Chain 1

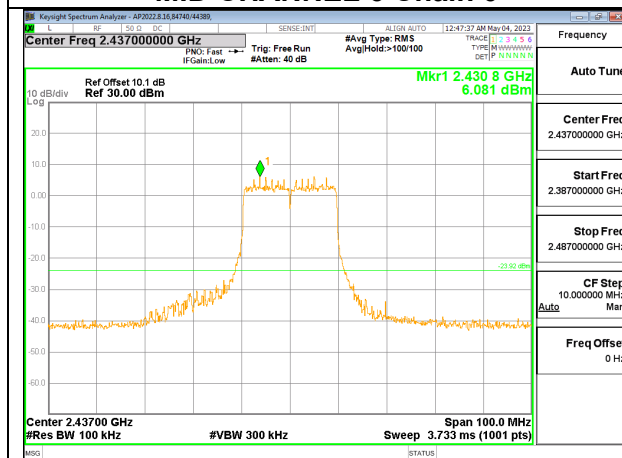
MID CHANNEL 6



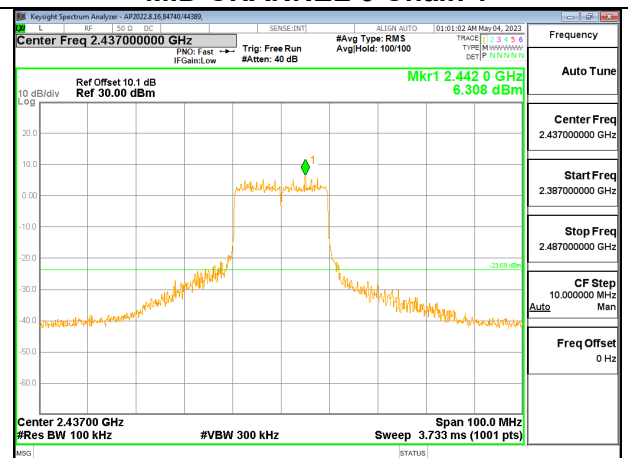
MID CHANNEL 6 Chain 0



MID CHANNEL 6 Chain 1

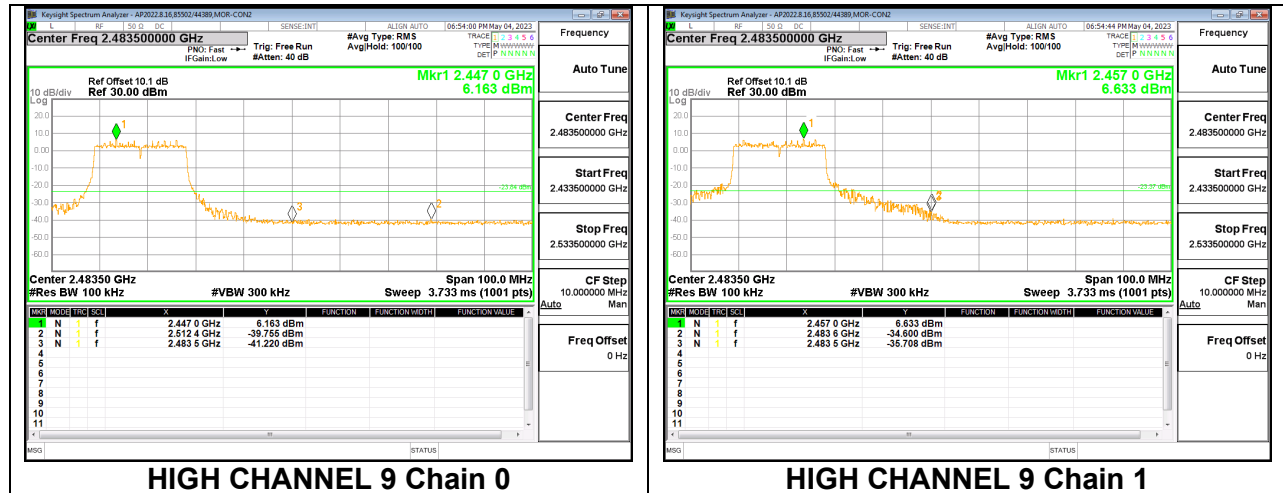


MID CHANNEL 6 Chain 0

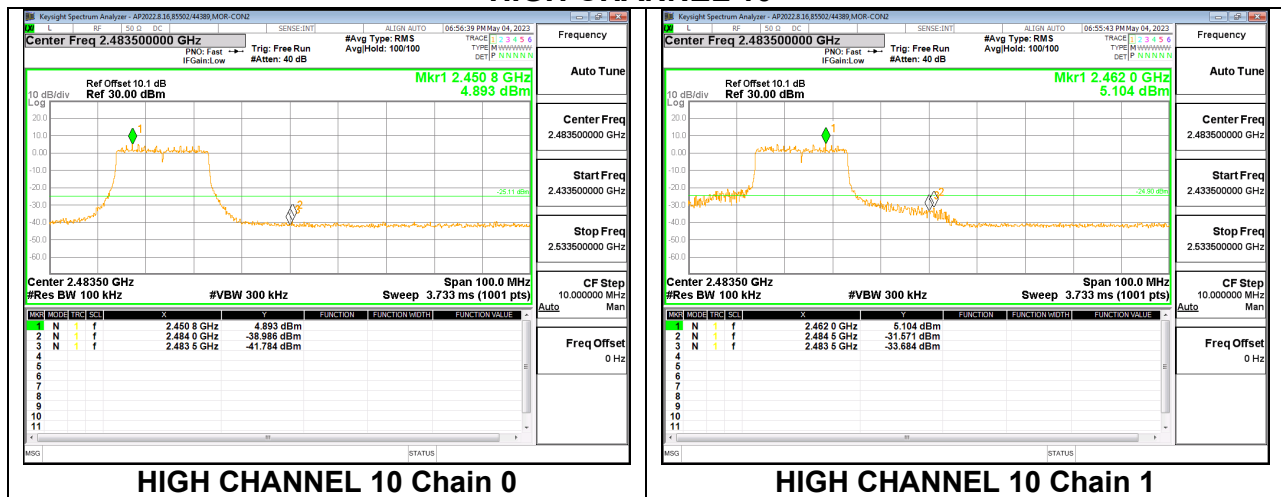


MID CHANNEL 6 Chain 1

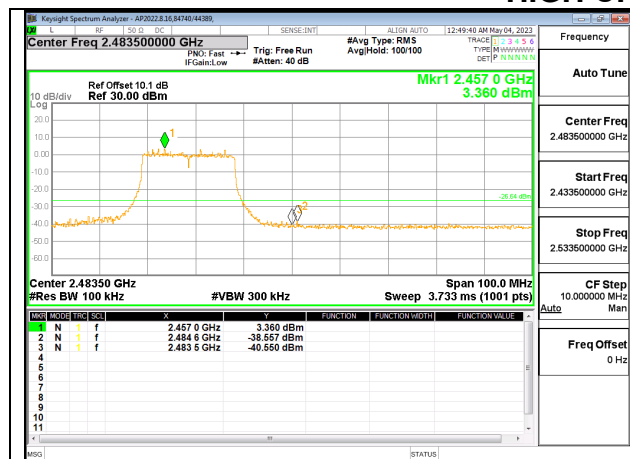
HIGH CHANNEL 9



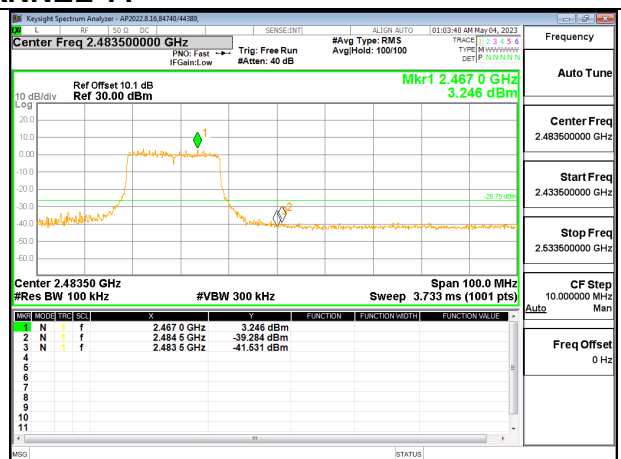
HIGH CHANNEL 10



HIGH CHANNEL 11

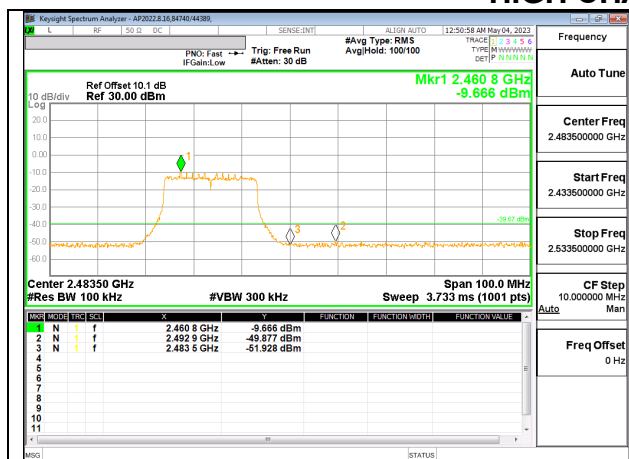


HIGH CHANNEL 11 Chain 0

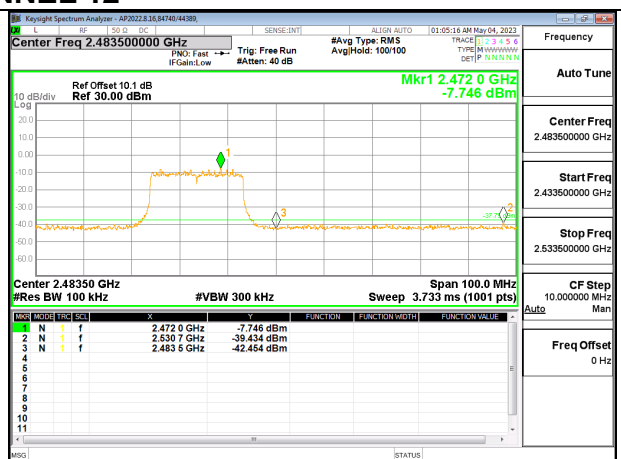


HIGH CHANNEL 11 Chain 1

HIGH CHANNEL 12

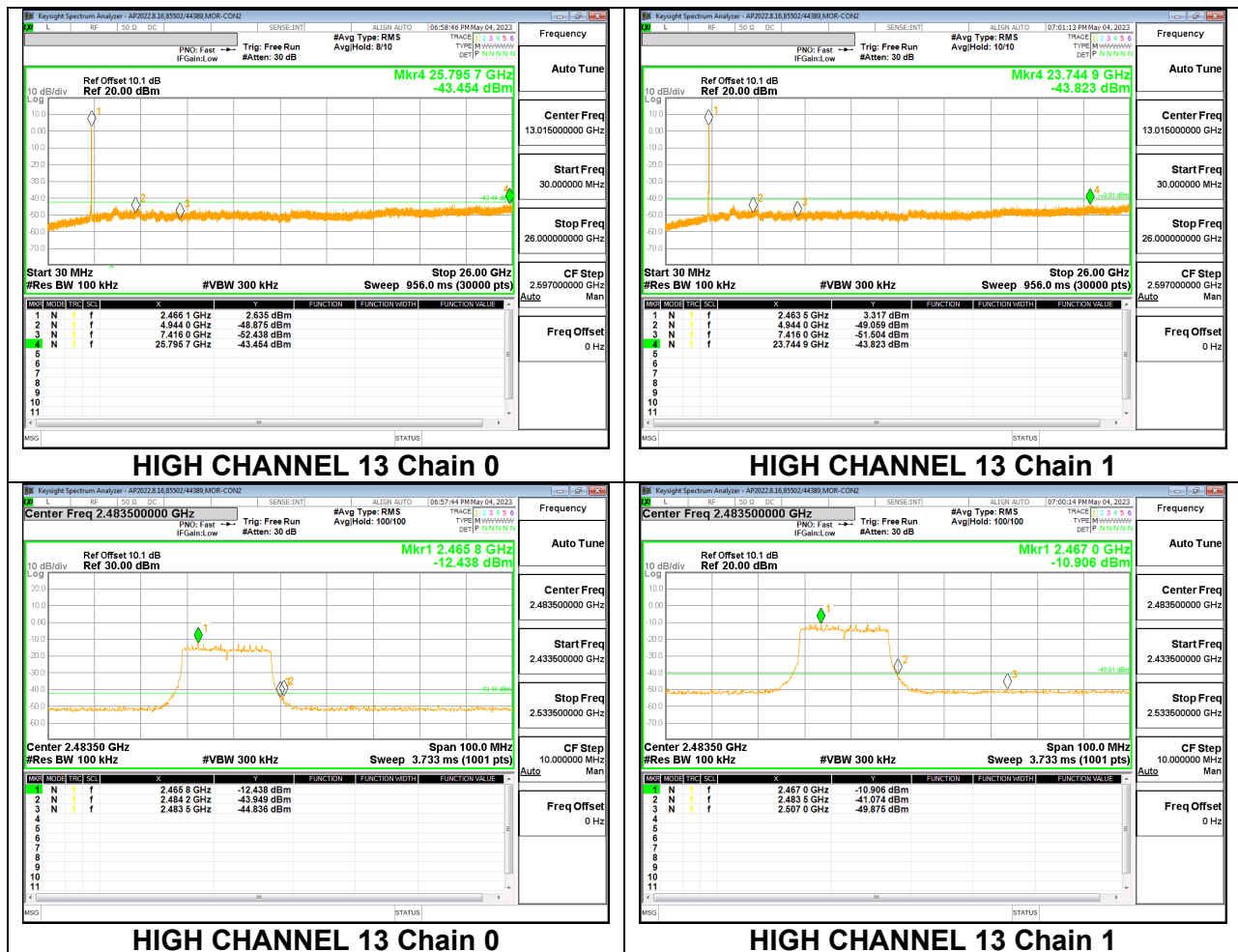


HIGH CHANNEL 12 Chain 0



HIGH CHANNEL 12 Chain 1

HIGH CHANNEL 13



9.6. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a gated average power meter.

The cable assembly insertion loss of 9.70 dB (including 9.28 dB pad and 0.42 dB EUT cable) for Chain 0 and 10.14 dB (including 9.72 dB pad and 0.42 dB EUT cable) for Chain 1, was entered as an offset in the power meter to allow for an average reading of power.

DIRECTIONAL ANTENNA GAIN

2 TX

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. 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)
2.4	0.43	0.64	0.54	3.55

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 = $10\log(10^{0.43/20} + 10^{0.64/20})^2 / 2) = 3.55\text{dBi}$

Uncorrelated gain = $10\log(10^{0.43/10} + 10^{0.64/10}) / 2) = 0.54\text{dBi}$

RESULT

9.6.1. 802.11ax HE20 MODE 2TX

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 26-Tones, RU Index 0

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	12.91	12.61	15.77	30.00	-14.23

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 26-Tones, RU Index 4

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Mid 6	2437	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Mid 6	2437	12.94	12.94	15.95	30.00	-14.05

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 26-Tones, RU Index 8

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
High 11	2462	0.54	30.00	36	30.00
High 12	2467	0.54	30.00	36	30.00
High 13	2472	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
High 11	2462	12.81	12.68	15.76	30.00	-14.24
High 12	2467	1.54	3.41	5.59	30.00	-24.41
High 13	2472	-1.01	0.53	2.84	30.00	-27.16

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 52-Tones, RU Index 37

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	0.54	30.00	36	30.00
Low 2	2417	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	14.55	14.45	17.51	30.00	-12.49
Low 2	2417	16.05	15.86	18.97	30.00	-11.03

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 52-Tones, RU Index 38

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Mid 6	2437	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
---------------------------	------	---

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Mid 6	2437	15.53	15.73	18.64	30.00	-11.36

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 52-Tones, RU Index 40

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
High 11	2462	0.54	30.00	36	30.00
High 12	2467	0.54	30.00	36	30.00
High 13	2472	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
High 11	2462	14.67	14.42	17.56	30.00	-12.44
High 12	2467	1.58	3.33	5.55	30.00	-24.45
High 13	2472	-0.96	0.49	2.84	30.00	-27.16

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 106-Tones, RU Index 53

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	0.54	30.00	36	30.00
Low 2	2417	0.54	30.00	36	30.00
Mid 6	2437	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	14.67	14.42	17.56	30.00	-12.44
Low 2	2417	16.06	15.96	19.02	30.00	-10.98
Mid 6	2437	16.06	16.39	19.24	30.00	-10.76

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 106-Tones, RU Index 54

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
High 11	2462	0.54	30.00	36	30.00
High 12	2467	0.54	30.00	36	30.00
High 13	2472	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
High 11	2462	16.25	16.27	19.27	30.00	-10.73
High 12	2467	1.58	3.33	5.55	30.00	-24.45
High 13	2472	-0.96	0.49	2.84	30.00	-27.16

2TX Chain 0 + Chain 1 CDD OFDMA MODE: 242-Tones, RU Index 61

Test Engineer:	84740/44389, 85502/44389
Test Date:	2023-04-07 TO 2023-04-11

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	0.54	30.00	36	30.00
Low 2	2417	0.54	30.00	36	30.00
Low 3	2422	0.54	30.00	36	30.00
Mid 6	2437	0.54	30.00	36	30.00
High 9	2452	0.54	30.00	36	30.00
High 10	2457	0.54	30.00	36	30.00
High 11	2462	0.54	30.00	36	30.00
High 12	2467	0.54	30.00	36	30.00
High 13	2472	0.54	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	15.17	14.91	18.05	30.00	-11.95
Low 2	2417	15.98	15.90	18.95	30.00	-11.05
Low 3	2422	17.42	17.17	20.31	30.00	-9.69
Mid 6	2437	17.80	17.95	20.89	30.00	-9.11
High 9	2452	17.49	17.90	20.71	30.00	-9.29
High 10	2457	16.13	16.43	19.29	30.00	-10.71
High 11	2462	14.75	14.69	17.73	30.00	-12.27
High 12	2467	1.75	3.45	5.69	30.00	-24.31
High 13	2472	-1.16	0.39	2.69	30.00	-27.31

10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209
RSS-GEN, Section 8.9 and 8.10

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
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 3 MHz 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 linear voltage averaging measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power and power spectral density was tested. This was found to be a non-ax test mode and therefore is not included in this report. This data can be found in report R14720550-E1a.

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.

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

The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table), using the free space impedance of 377 Ohms. For example the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y - 51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

Based 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

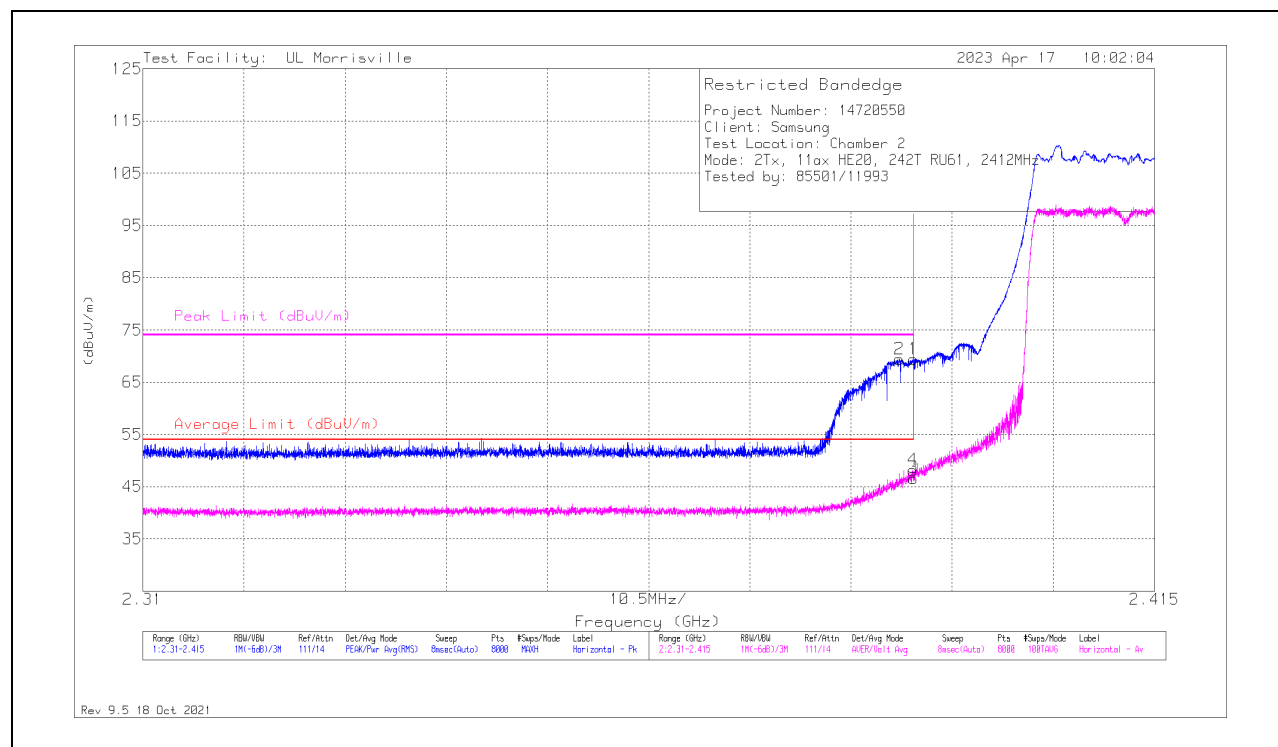
OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. TX ABOVE 1 GHz 802.11ax HE20 MODE IN THE 2.4GHz BAND 2TX Chain 0 + Chain 1 OFDMA MODE: 242-Tones, RU Index 61

BANDEDGE (LOW CHANNEL 1)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	51.43	Pk	31.8	-23.8	10	69.43	-	-	74	-4.57	154	117	H
2	* ** 2.38851	51.41	Pk	31.8	-23.8	10	69.41	-	-	74	-4.59	154	117	H
3	* ** 2.39	28.63	ADV	31.8	-23.8	10	46.63	54	-7.37	-	-	154	117	H
4	* ** 2.38989	30.19	ADV	31.8	-23.8	10	48.19	54	-5.81	-	-	154	117	H

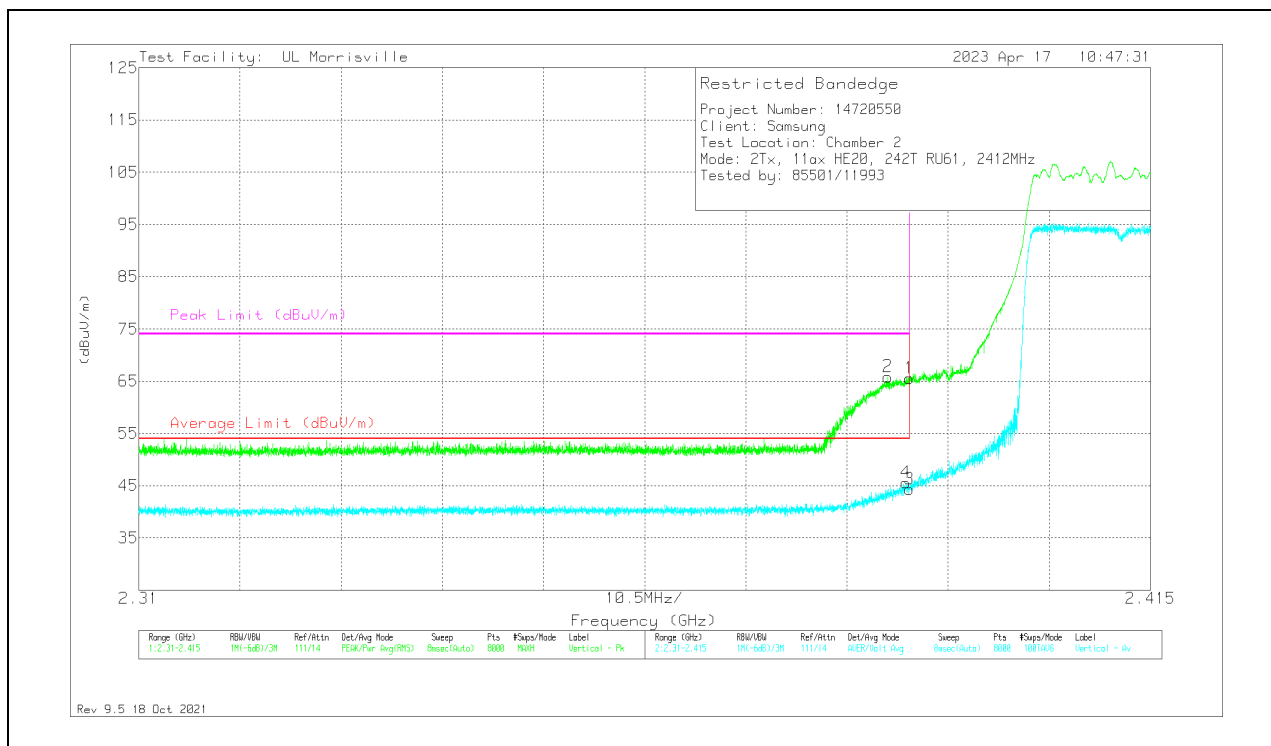
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* * * 2.39	47.58	Pk	31.8	-23.8	10	65.58	-	-	74	-8.42	109	343	V
2	* * * 2.38771	47.87	Pk	31.8	-23.8	10	65.87	-	-	74	-8.13	109	343	V
3	* * * 2.39	26.3	ADV	31.8	-23.8	10	44.3	54	-9.7	-	-	109	343	V
4	* * * 2.38963	27.59	ADV	31.8	-23.8	10	45.59	54	-8.41	-	-	109	343	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

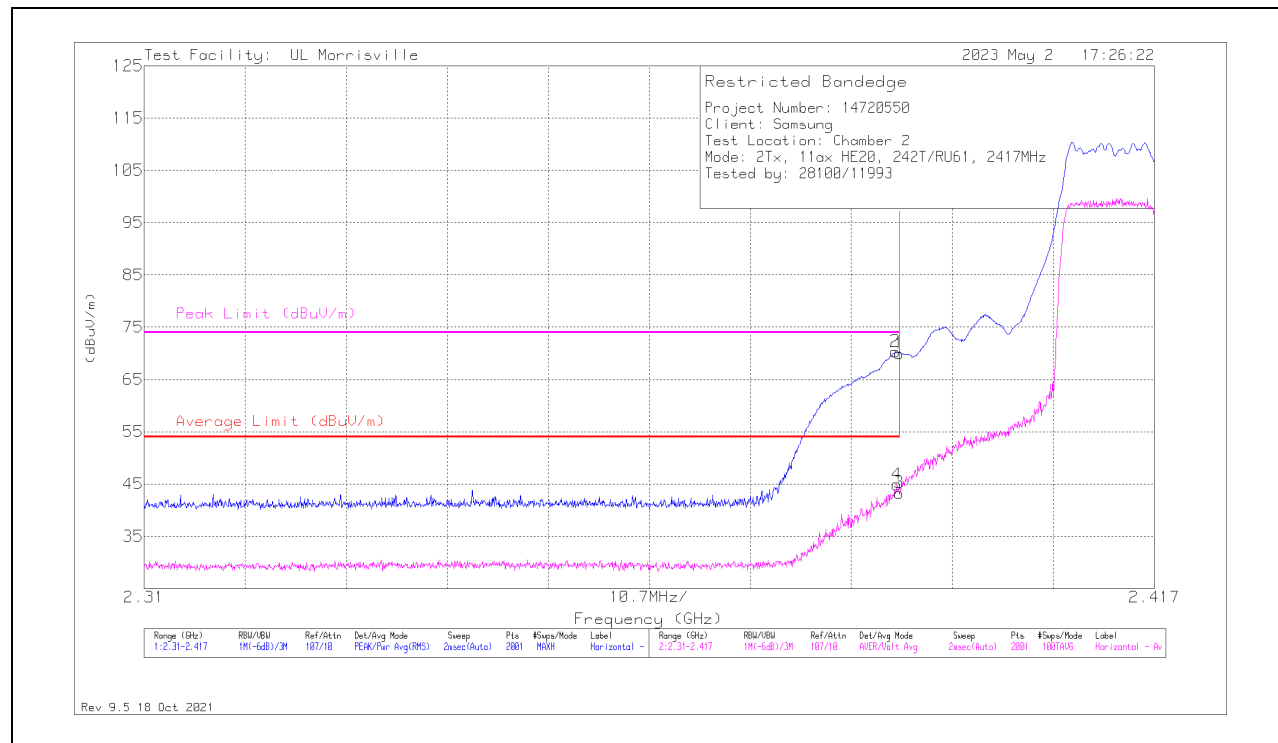
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (LOW CHANNEL 2)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38998	61.98	Pk	31.8	-23.8	69.98	-	-	74	-4.02	241	136	H
2	* ** 2.38955	62.34	Pk	31.8	-23.8	70.34	-	-	74	-3.66	241	136	H
3	* ** 2.38998	35.31	ADV	31.8	-23.8	43.31	54	-10.69	-	-	241	136	H
4	* ** 2.38972	36.92	ADV	31.8	-23.8	44.92	54	-9.08	-	-	241	136	H

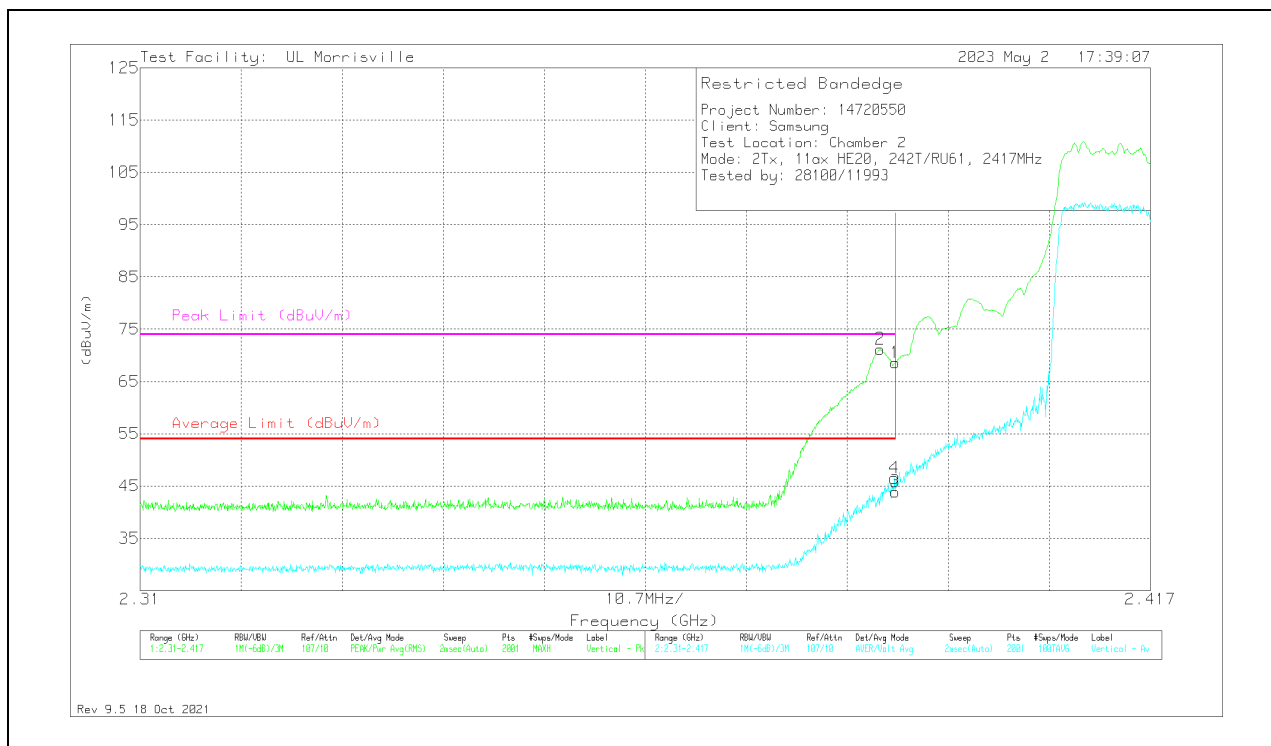
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38998	60.58	Pk	31.8	-23.8	68.58	-	-	74	-5.42	215	332	V
2	* ** 2.38838	63.18	Pk	31.8	-23.8	71.18	-	-	74	-2.82	215	332	V
3	* ** 2.38998	35.91	ADV	31.8	-23.8	43.91	54	-10.09	-	-	215	332	V
4	* ** 2.38988	38.51	ADV	31.8	-23.8	46.51	54	-7.49	-	-	215	332	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

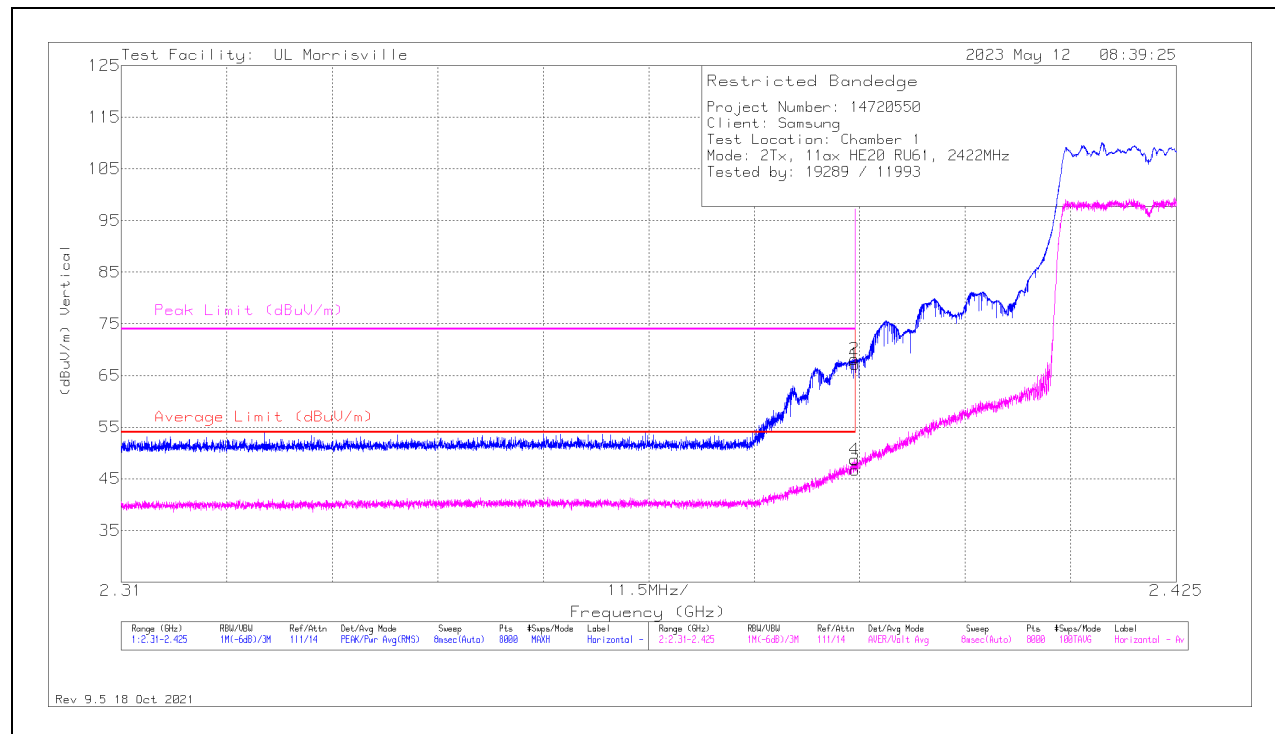
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANEDGE (LOW CHANNEL 3)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38999	49.3	Pk	32.1	-24.1	9.9	67.2	-	-	74	-6.8	13	111	H
2	* ** 2.38994	50.27	Pk	32.1	-24.1	9.9	68.17	-	-	74	-5.83	13	111	H
3	* ** 2.38999	28.81	ADV	32.1	-24.1	9.9	46.71	54	-7.29	-	-	13	111	H
4	* ** 2.38995	30.83	ADV	32.1	-24.1	9.9	48.73	54	-5.27	-	-	13	111	H

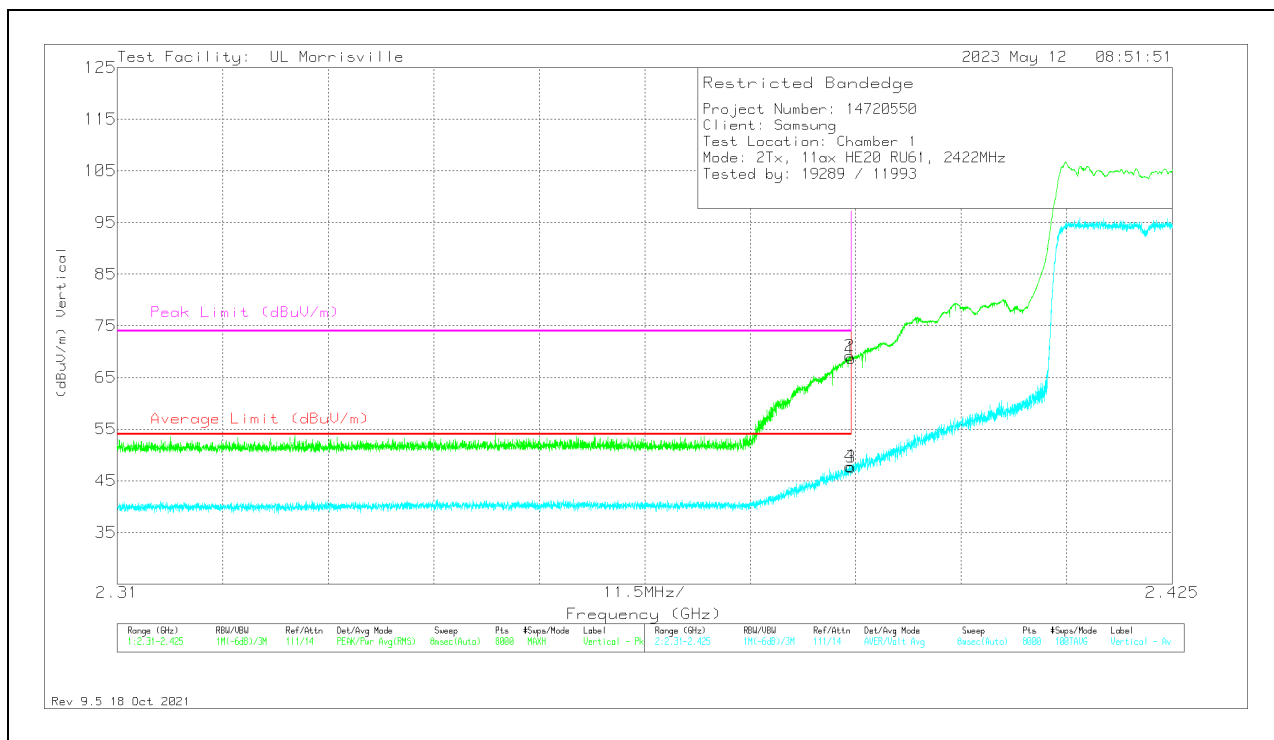
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38999	50.85	Pk	32.1	-24.1	9.9	68.75	-	-	74	-5.25	50	349	V
2	*** 2.38984	51.27	Pk	32.1	-24.1	9.9	69.17	-	-	74	-4.83	50	349	V
3	*** 2.38999	29.74	ADV	32.1	-24.1	9.9	47.64	54	-6.36	-	-	50	349	V
4	*** 2.38988	29.89	ADV	32.1	-24.1	9.9	47.79	54	-6.21	-	-	50	349	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

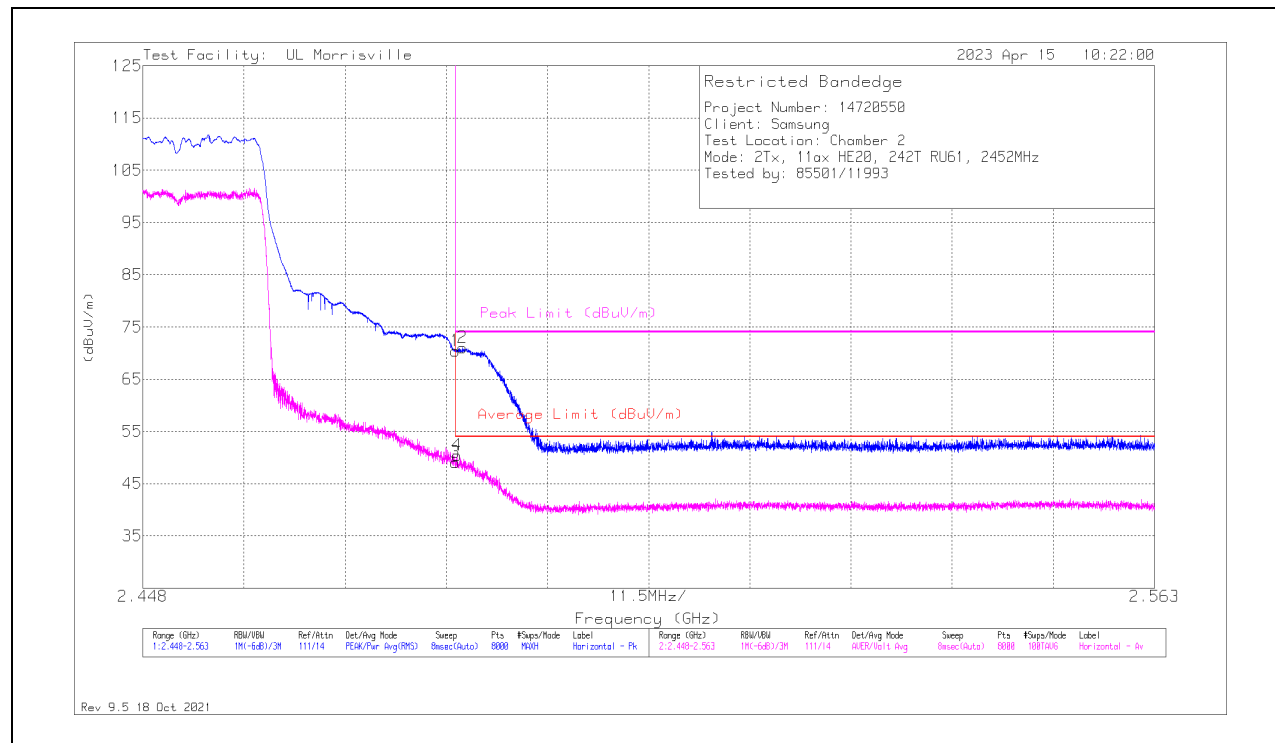
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL 9)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.48351	52.45	Pk	32.3	-24.3	10	70.45	-	-	74	-3.55	150	146	H
2	*** 2.48433	53.13	Pk	32.3	-24.4	10	71.03	-	-	74	-2.97	150	146	H
3	*** 2.48351	31.07	ADV	32.3	-24.3	10	49.07	54	-4.93	-	-	150	146	H
4	*** 2.48371	32.36	ADV	32.3	-24.3	10	50.36	54	-3.64	-	-	150	146	H

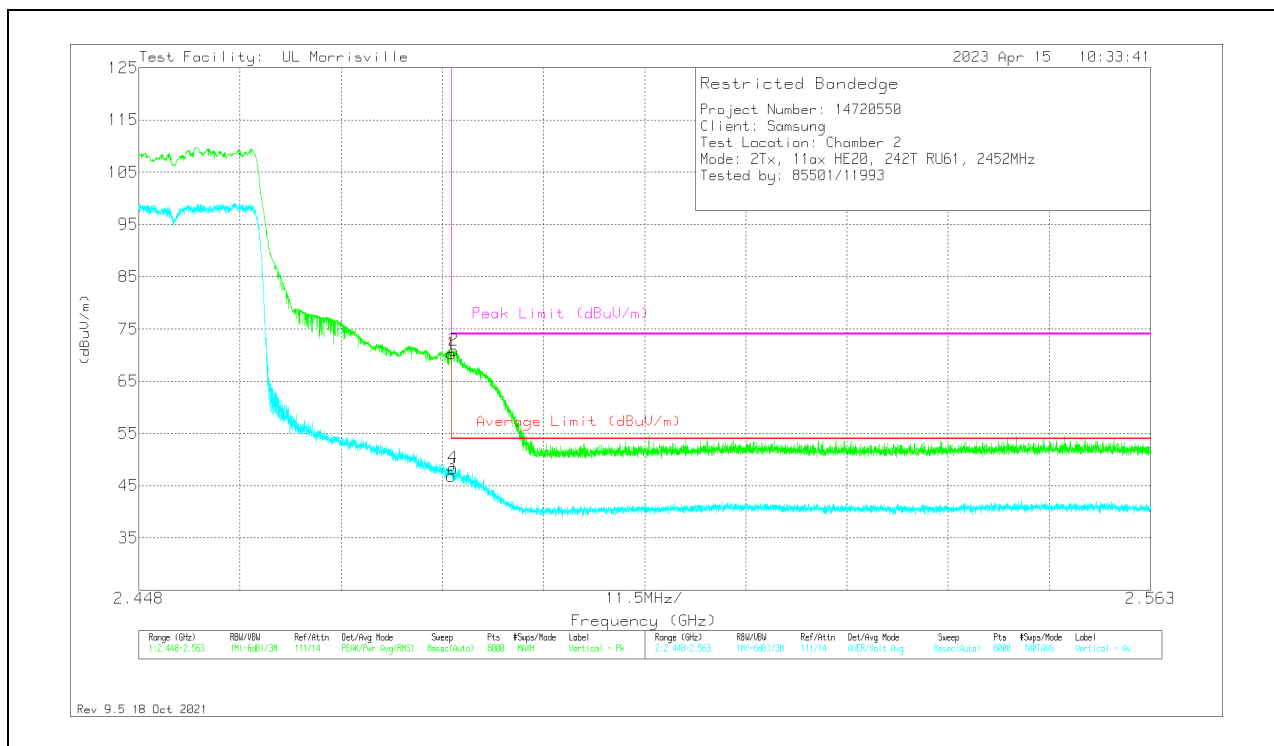
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.48351	52.24	Pk	32.3	-24.3	10	70.24	-	-	74	-3.76	110	170	V
2	*** 2.48383	53.03	Pk	32.3	-24.4	10	70.93	-	-	74	-3.07	110	170	V
3	*** 2.48351	28.88	ADV	32.3	-24.3	10	46.88	54	-7.12	-	-	110	169	V
4	*** 2.48373	30.37	ADV	32.3	-24.3	10	48.37	54	-5.63	-	-	110	169	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

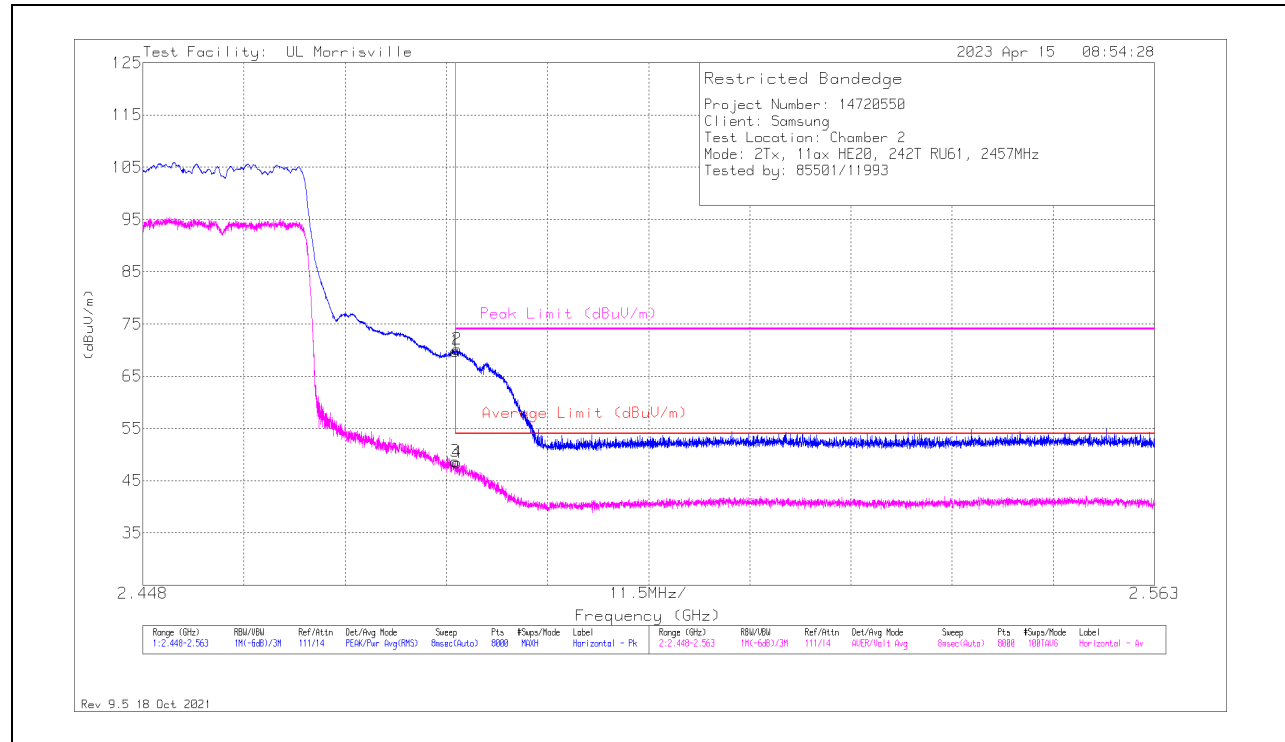
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL 10)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48351	51.74	Pk	32.3	-24.3	10	69.74	-	-	74	-4.26	49	292	H
2	* ** 2.4837	52.13	Pk	32.3	-24.3	10	70.13	-	-	74	-3.87	49	292	H
3	* ** 2.48351	30.72	ADV	32.3	-24.3	10	48.72	54	-5.28	-	-	49	291	H
4	* ** 2.48374	30.38	ADV	32.3	-24.3	10	48.38	54	-5.62	-	-	49	291	H

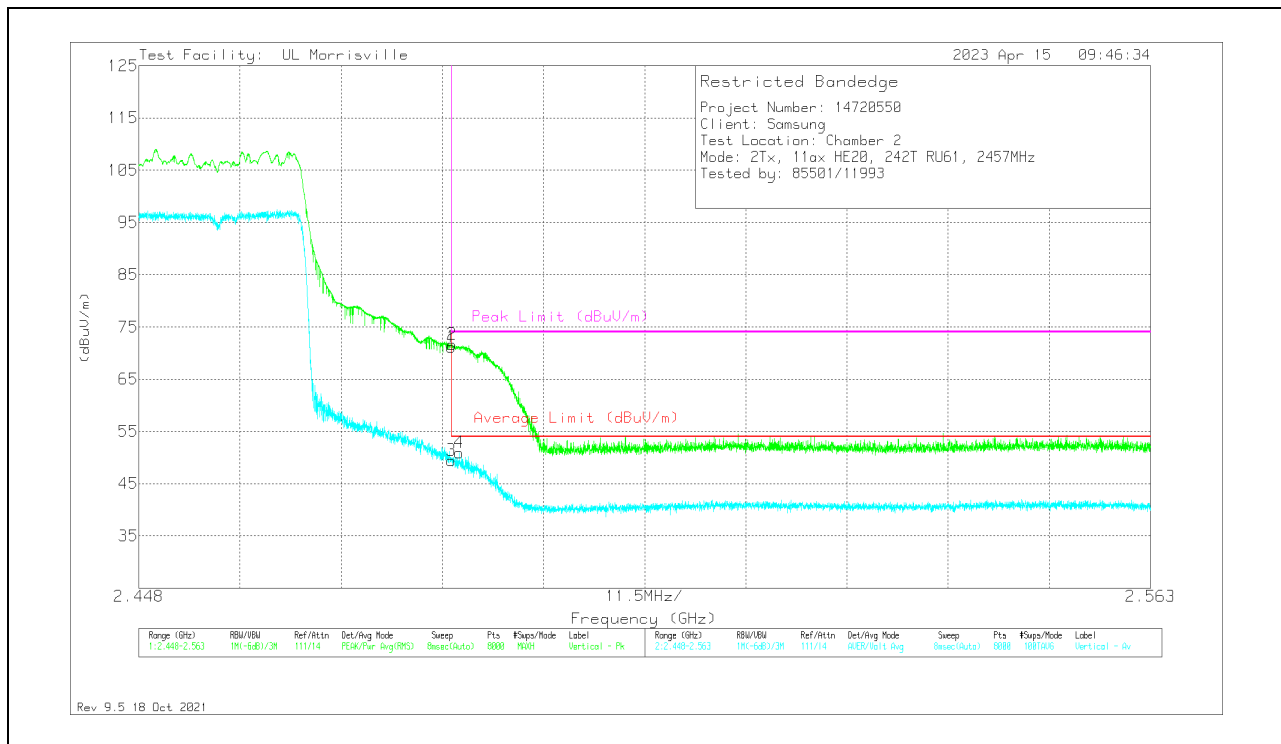
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48351	53.1	Pk	32.3	-24.3	10	71.1	-	-	74	-2.9	122	293	V
2	* ** 2.48361	53.66	Pk	32.3	-24.3	10	71.66	-	-	74	-2.34	122	293	V
3	* ** 2.48351	31.37	ADV	32.3	-24.3	10	49.37	54	-4.63	-	-	122	293	V
4	* ** 2.48443	33.03	ADV	32.3	-24.4	10	50.93	54	-3.07	-	-	122	293	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

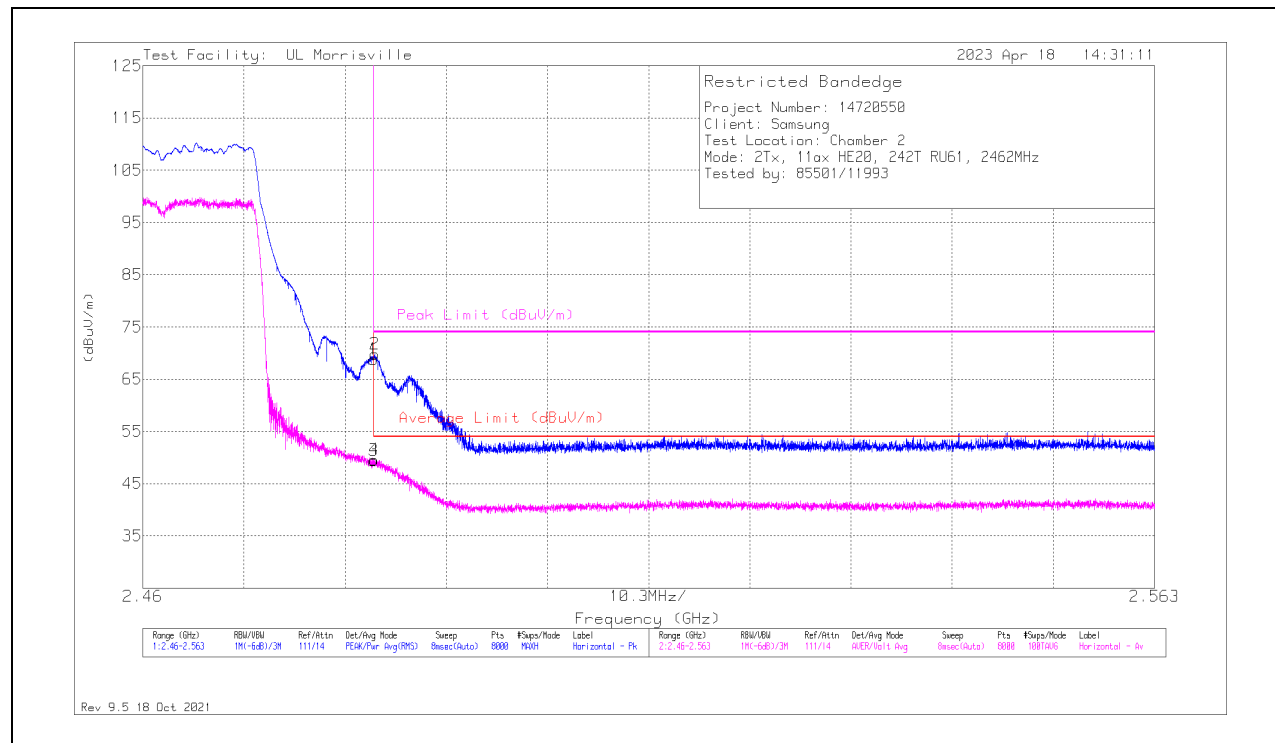
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV -Linear Voltage Average

BANDEDGE (HIGH CHANNEL 11)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	50.81	Pk	32.3	-24.3	10	68.81	-	-	74	-5.19	158	109	H
2	* ** 2.48362	51.84	Pk	32.3	-24.3	10	69.84	-	-	74	-4.16	158	109	H
3	* ** 2.4835	31.45	ADV	32.3	-24.3	10	49.45	54	-4.55	-	-	158	109	H
4	* ** 2.48358	31.56	ADV	32.3	-24.3	10	49.56	54	-4.44	-	-	158	109	H

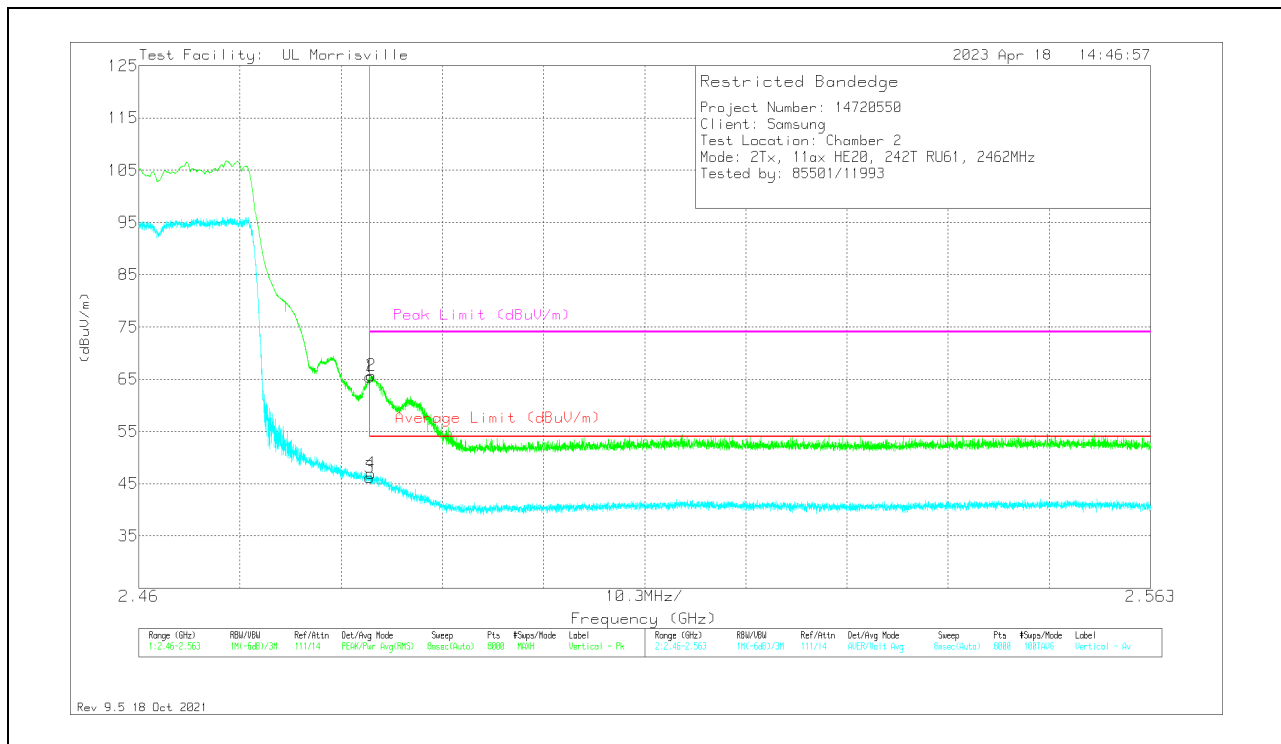
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	47.41	Pk	32.3	-24.3	10	65.41	-	-	74	-8.59	129	201	V
2	* ** 2.48367	47.67	Pk	32.3	-24.3	10	65.67	-	-	74	-8.33	129	201	V
3	* ** 2.4835	28.18	ADV	32.3	-24.3	10	46.18	54	-7.82	-	-	129	201	V
4	* ** 2.48359	28.97	ADV	32.3	-24.3	10	46.97	54	-7.03	-	-	129	201	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

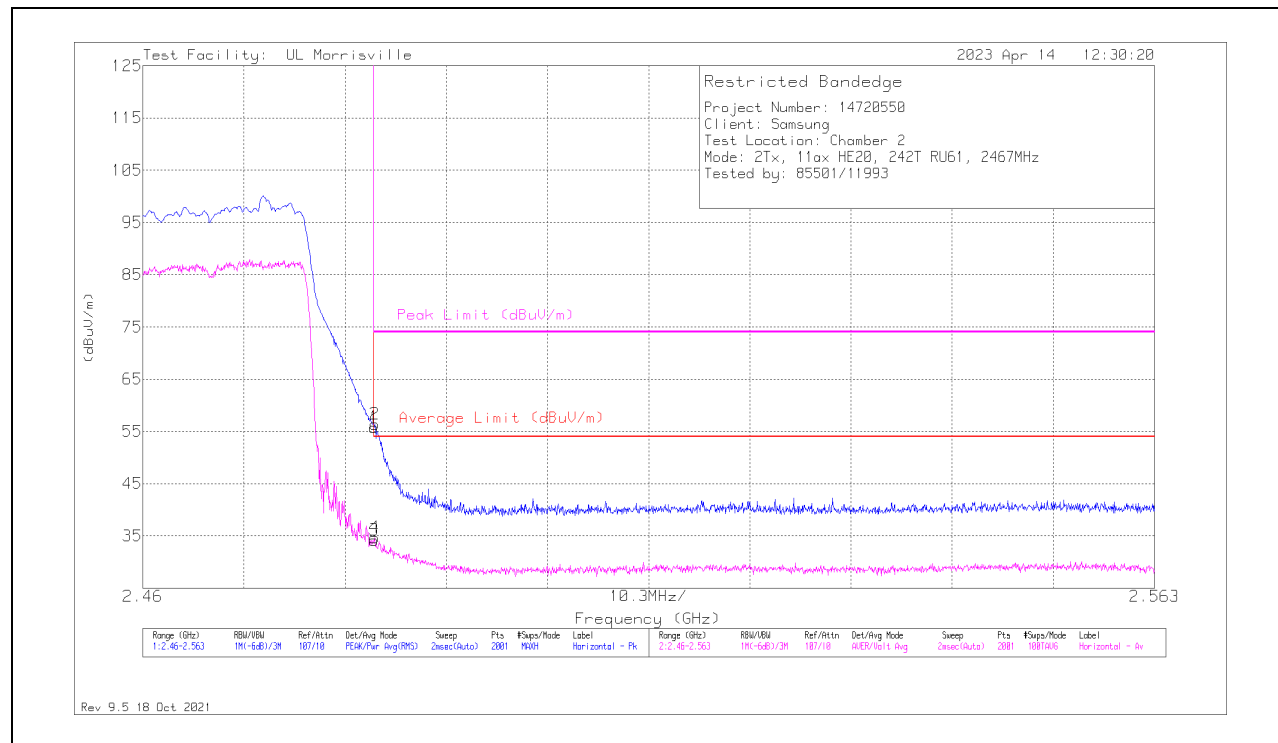
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANEDGE (HIGH CHANNEL 12)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	47.79	Pk	32.3	-24.3	55.79	-	-	74	-18.21	87	104	H
2	* ** 2.48364	48.32	Pk	32.3	-24.3	56.32	-	-	74	-17.68	87	104	H
3	* ** 2.48354	26.1	ADV	32.3	-24.3	34.1	54	-19.9	-	-	87	103	H
4	* ** 2.48359	26.63	ADV	32.3	-24.3	34.63	54	-19.37	-	-	87	103	H

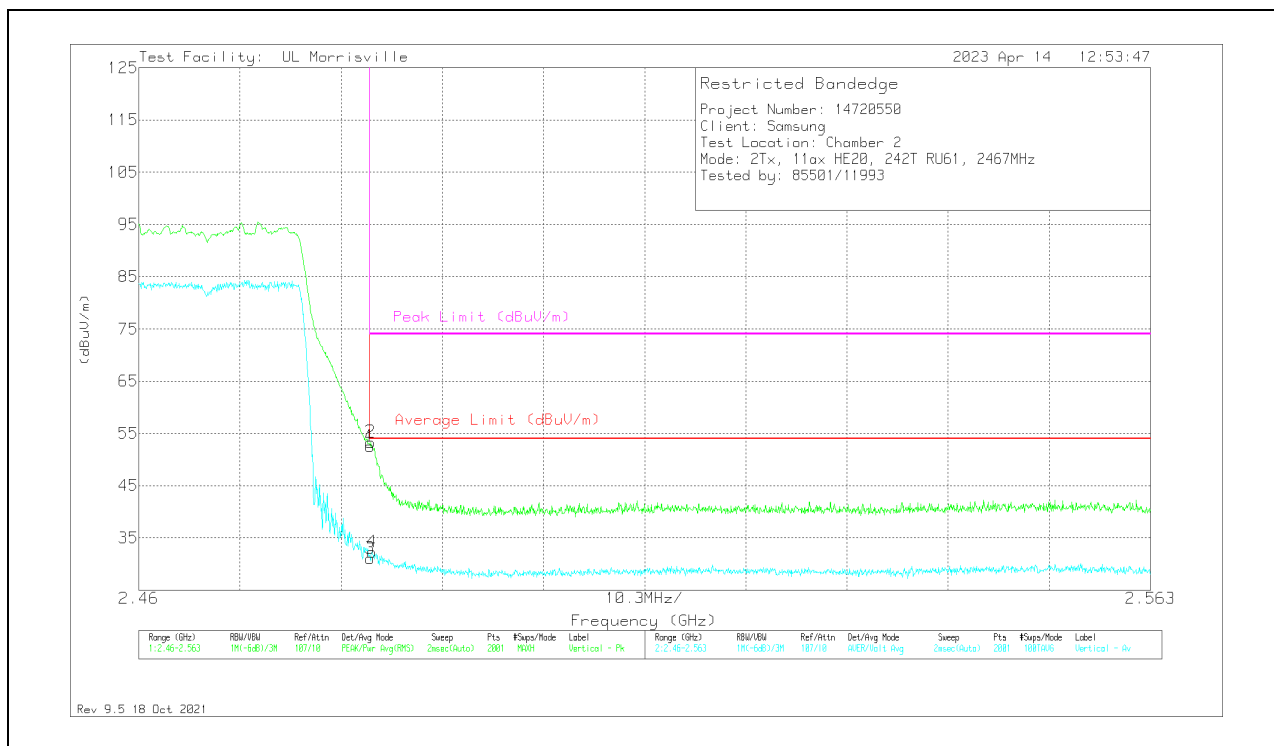
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	44.58	Pk	32.3	-24.3	52.58	-	-	74	-21.42	119	230	V
2	* ** 2.48359	45.33	Pk	32.3	-24.3	53.33	-	-	74	-20.67	119	230	V
3	* ** 2.48354	23.07	ADV	32.3	-24.3	31.07	54	-22.93	-	-	119	230	V
4	* ** 2.48374	24.29	ADV	32.3	-24.3	32.29	54	-21.71	-	-	119	230	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

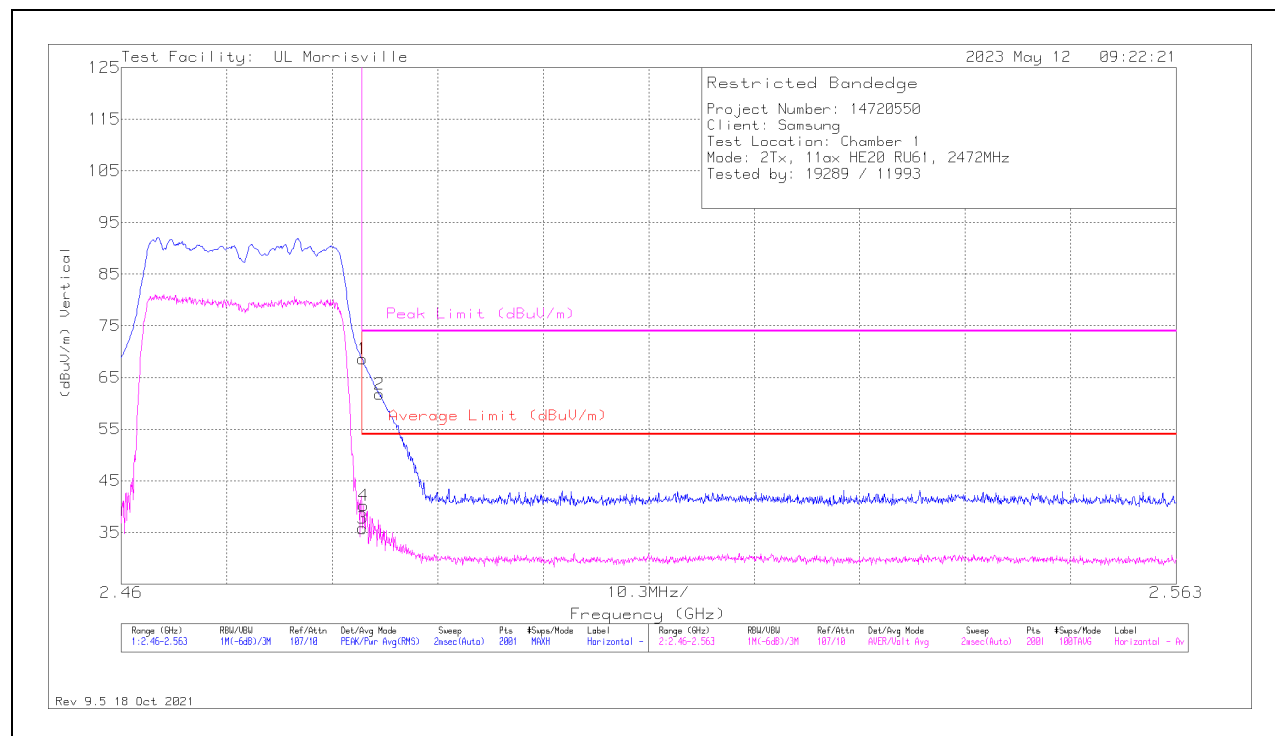
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL 13)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBUV/m)	Average Limit (dBUV/m)	Margin (dB)	Peak Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	60.27	Pk	32.3	-24	68.57	-	-	74	-5.43	19	186	H
2	* ** 2.48518	53.46	Pk	32.3	-24	61.76	-	-	74	-12.24	19	186	H
3	* ** 2.48354	27.49	ADV	32.3	-24	35.79	54	-18.21	-	-	19	186	H
4	* ** 2.48369	31.91	ADV	32.3	-24	40.21	54	-13.79	-	-	19	186	H

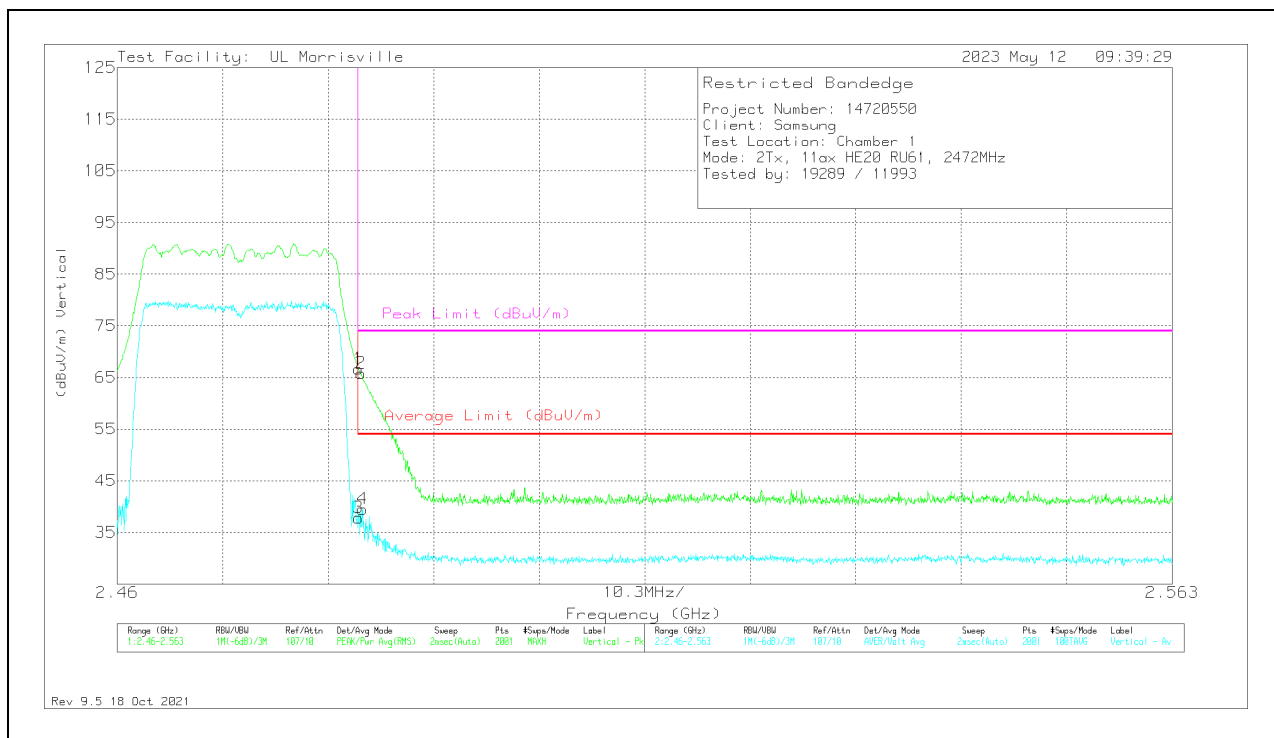
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206211 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.48354	58.39	Pk	32.3	-24	66.69	-	-	74	-7.31	40	109	V
2	*** 2.48379	57.52	Pk	32.3	-24	65.82	-	-	74	-8.18	40	109	V
3	*** 2.48354	29.54	ADV	32.3	-24	37.84	54	-16.16	-	-	40	109	V
4	*** 2.48395	31.23	ADV	32.3	-24	39.53	54	-14.47	-	-	40	109	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

See UL Report Number: R14720550-E1a for AC Power Line Conducted Emissions

12. SETUP PHOTOS

Please refer to R14720550-EP1 for setup photos

END OF TEST REPORT