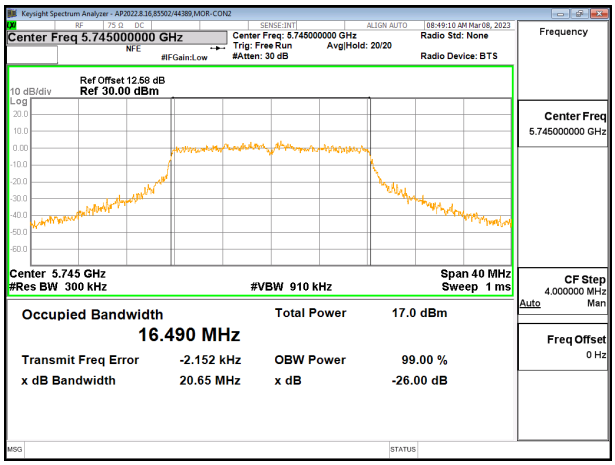
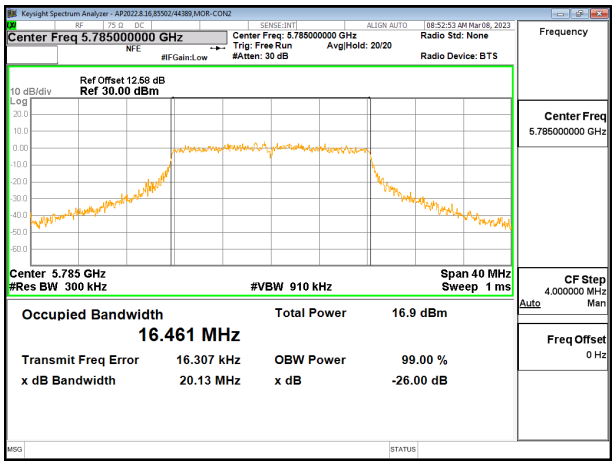
9.3.13. 802.11a MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

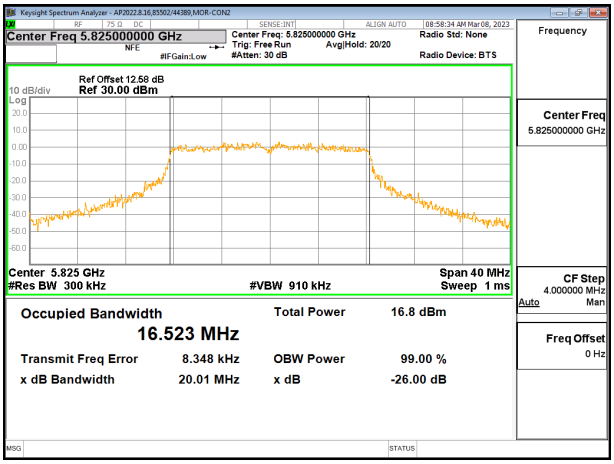
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.490
Mid	5785	16.461
High	5825	16.523



LOW CHANNEL



MID CHANNEL

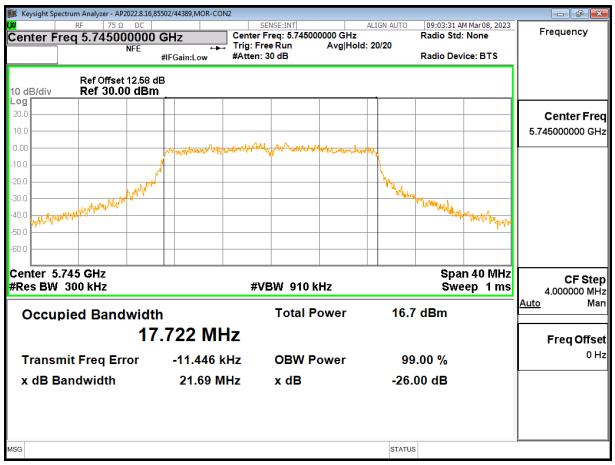


HIGH CHANNEL

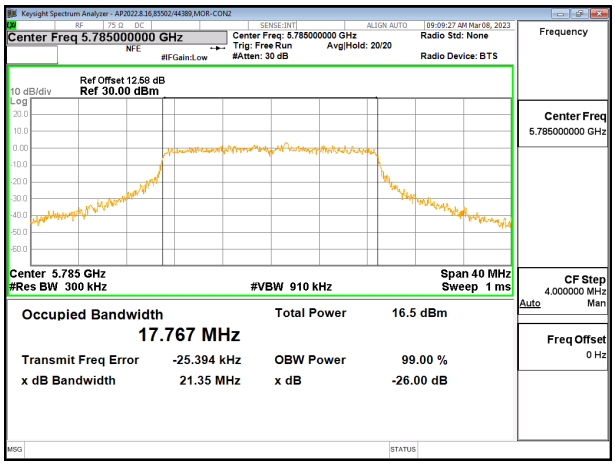
9.3.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

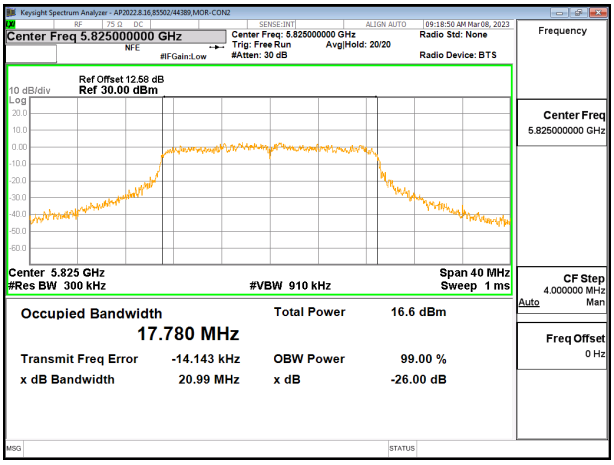
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.722
Mid	5785	17.767
High	5825	17.780



LOW CHANNEL



MID CHANNEL

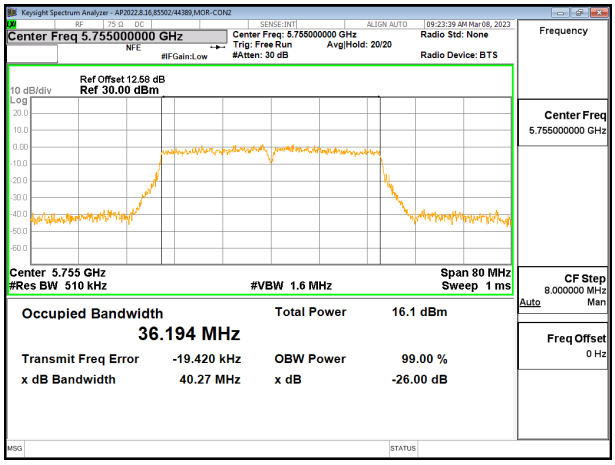


HIGH CHANNEL

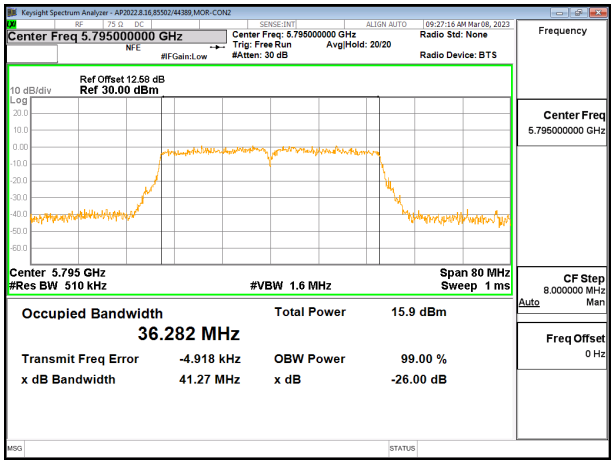
9.3.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.194
High	5795	36.282



LOW CHANNEL

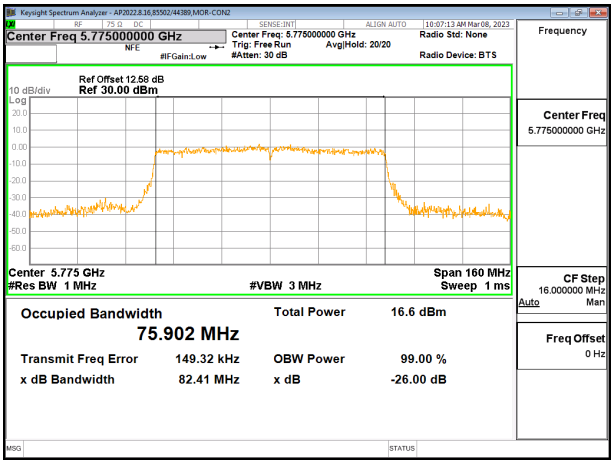


HIGH CHANNEL

9.3.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.902



MID CHANNEL

9.4. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)
RSS-247 6.2.4.1

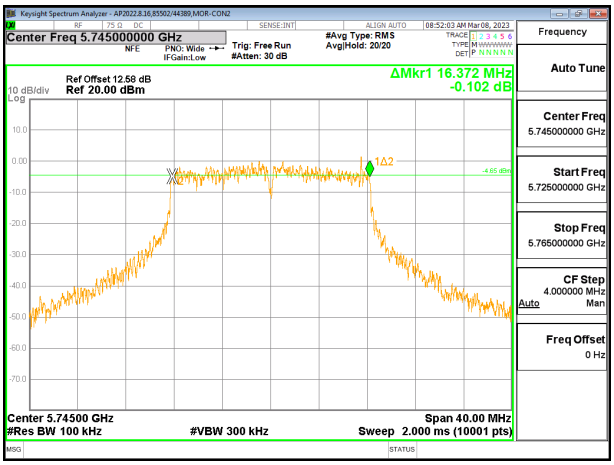
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

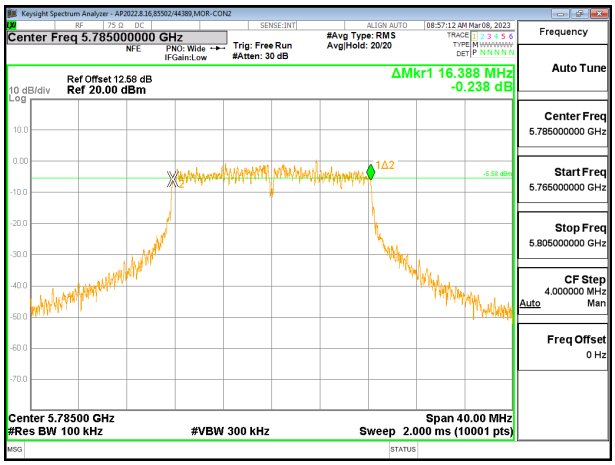
9.4.1. 802.11a MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

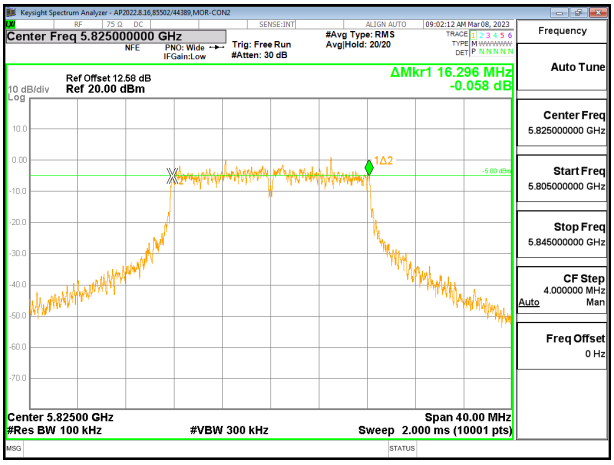
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.372	0.5
Mid	5785	16.388	0.5
High	5825	16.296	0.5
144	5720	3.244	0.5



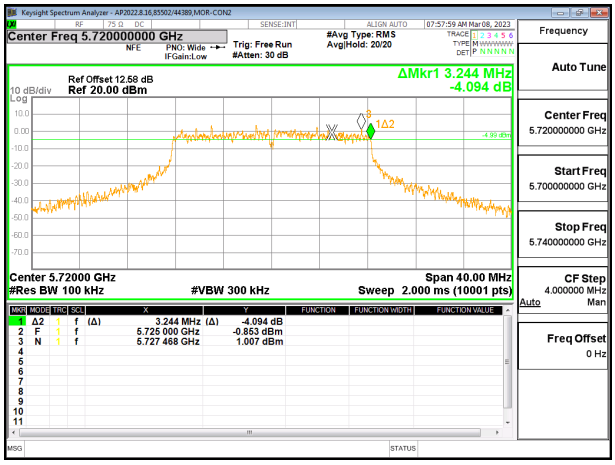
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

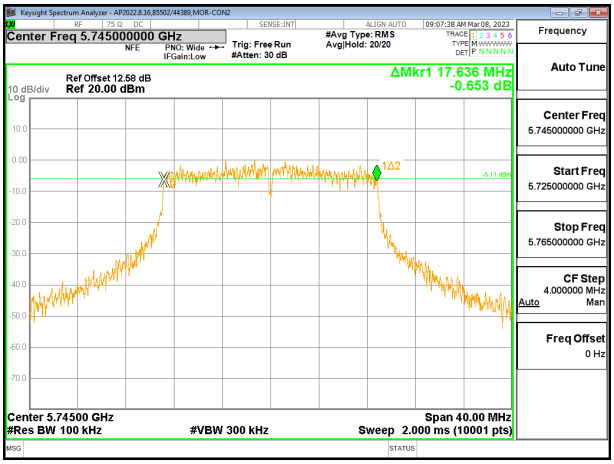


CHANNEL 144

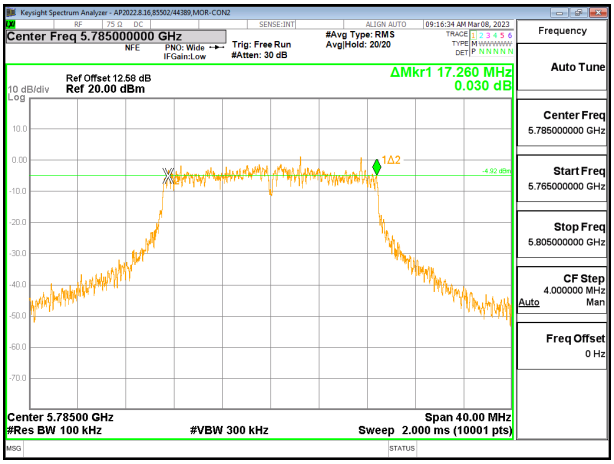
9.4.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

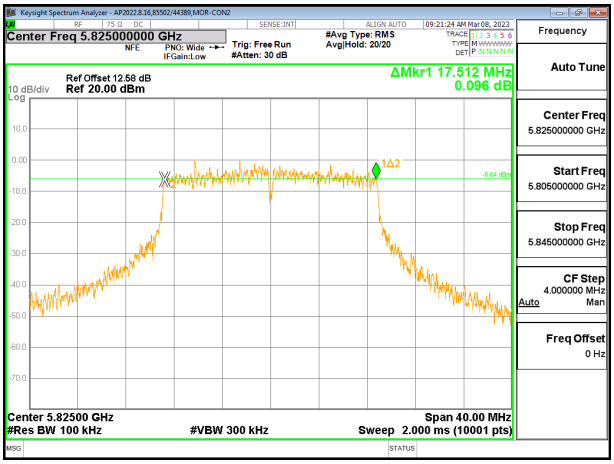
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.636	0.5
Mid	5785	17.260	0.5
High	5825	17.512	0.5
144	5720	3.808	0.5



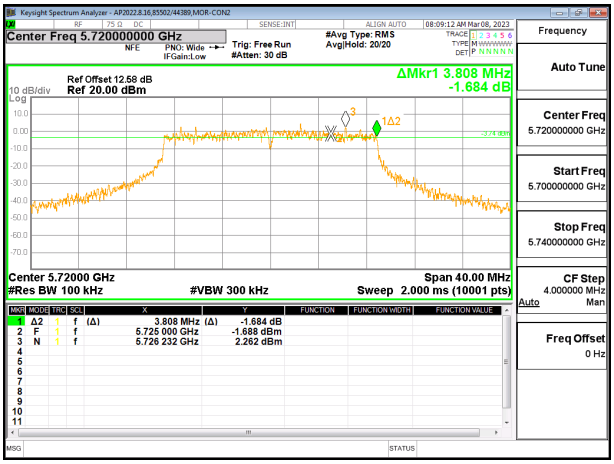
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

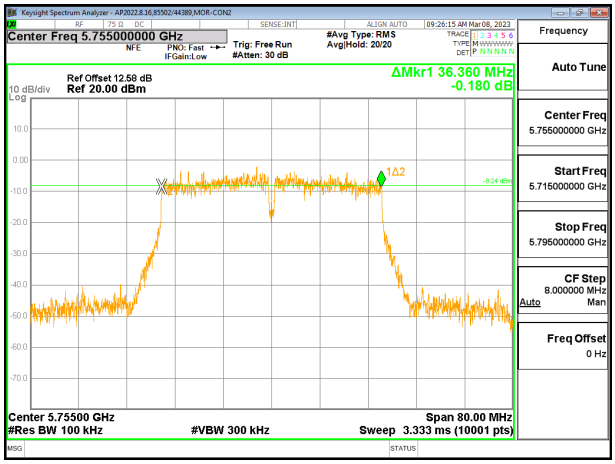


CHANNEL 144

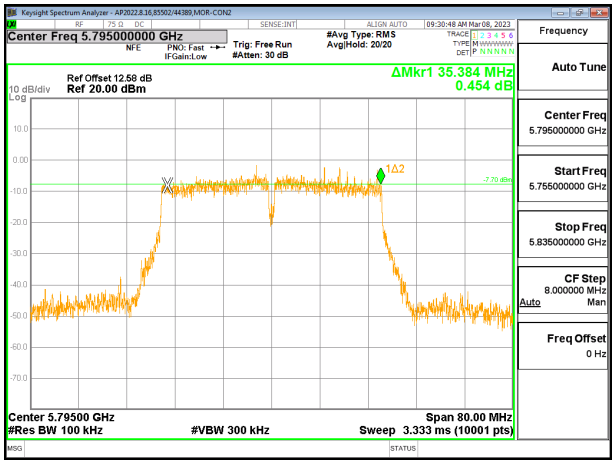
9.4.3. 802.11n HT40 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

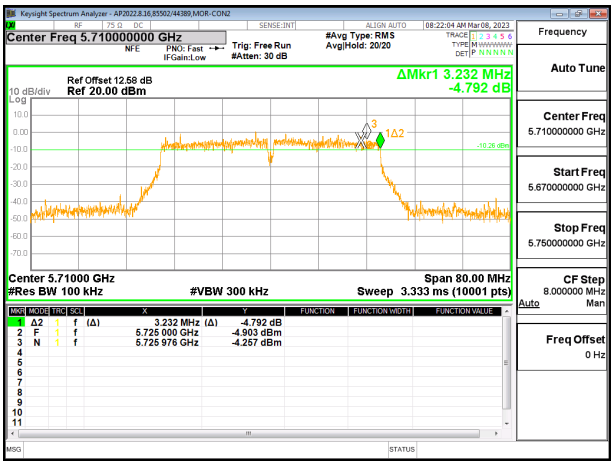
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	36.360	0.5
High	5795	35.384	0.5
142	5710	3.232	0.5



LOW CHANNEL



HIGH CHANNEL

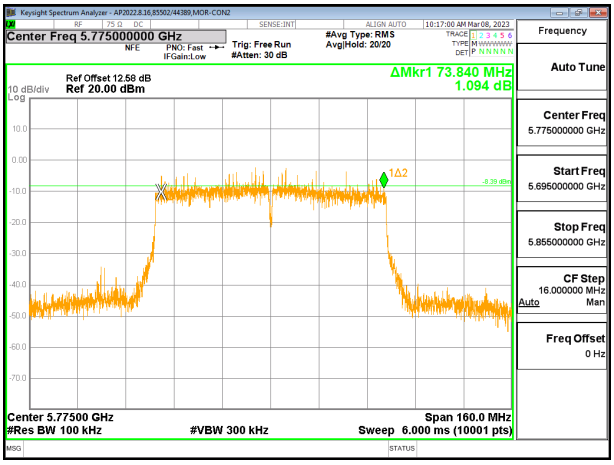


CHANNEL 142

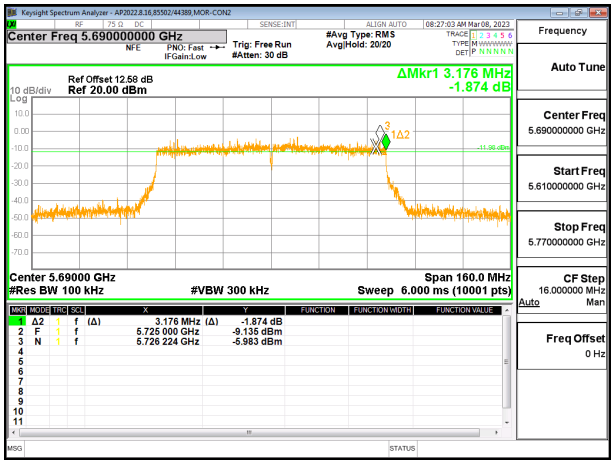
9.4.4. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	73.840	0.5
138	5690	3.176	0.5



MID CHANNEL



CHANNEL 138

9.5. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

(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
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

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.

RSS-247

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.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r02, Section E.3.b (Method PM-G) and for straddles channels KDB 789033 D02 v02r02.

The measurement method used for power spectral density is KDB 789033 D02 v02r02, 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.

DIRECTIONAL ANTENNA GAIN

For 1 TX:There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

9.5.1. 802.11a MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE (FCC+IC) MOBILE

Test Engineer:	85502/44389, 84740/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	16.559	1.64
Mid	5200	16.552	1.64
High	5240	16.535	1.64

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/1MHz)	ISED eirp PSD Limit (dBm/1MHz)	PSD Limit (dBm/1MHz)
Low	5180	24.00	22.19	20.55	20.55	11.00	10.00	8.36
Mid	5200	24.00	22.19	20.55	20.55	11.00	10.00	8.36
High	5240	24.00	22.18	20.54	20.54	11.00	10.00	8.36

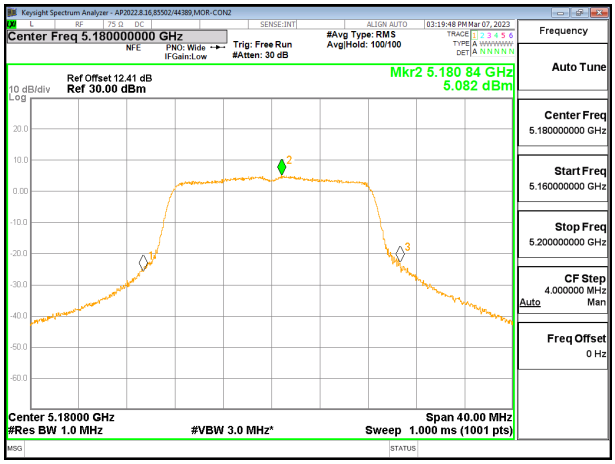
Duty Cycle CF (dB)	0.23	**Included in Calculations of Corr'd PSD**

Output Power Results

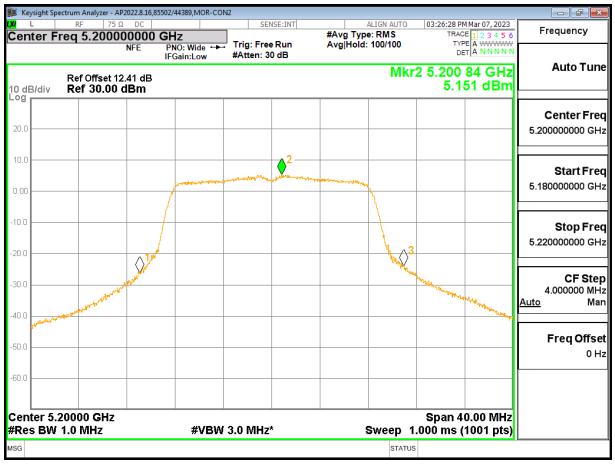
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	16.49	16.49	20.55	-4.06
Mid	5200	16.77	16.77	20.55	-3.78
High	5240	16.64	16.64	20.54	-3.90

PSD Results

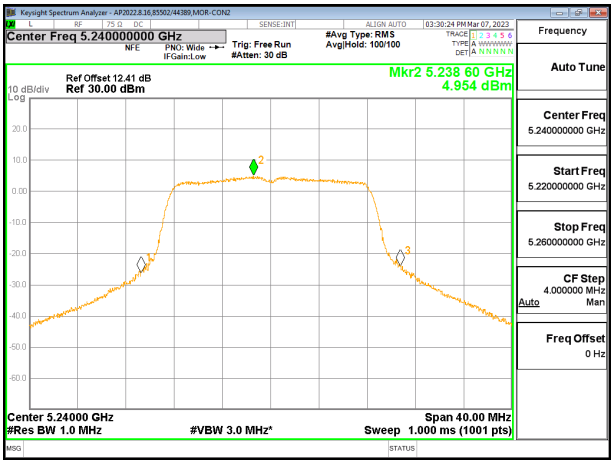
Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5180	5.082	5.31	8.36	-3.05
Mid	5200	5.151	5.38	8.36	-2.98
High	5240	4.954	5.18	8.36	-3.18



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

9.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE (FCC+IC) MOBILE

Test Engineer:	85502/44389, 84470/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	17.677	1.64
Mid	5200	17.743	1.64
High	5240	17.747	1.64

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED eirp PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5180	24.00	22.47	20.83	20.83	11.00	10.00	8.36
Mid	5200	24.00	22.49	20.85	20.85	11.00	10.00	8.36
High	5240	24.00	22.49	20.85	20.85	11.00	10.00	8.36

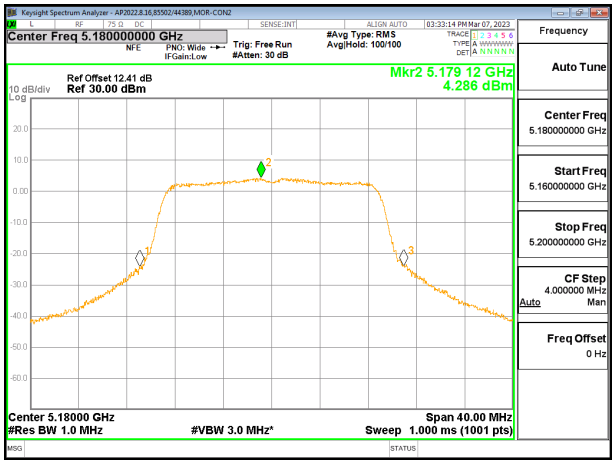
Duty Cycle CF (dB)	0.31	**Included in Calculations of Corr'd PSD**

Output Power Results

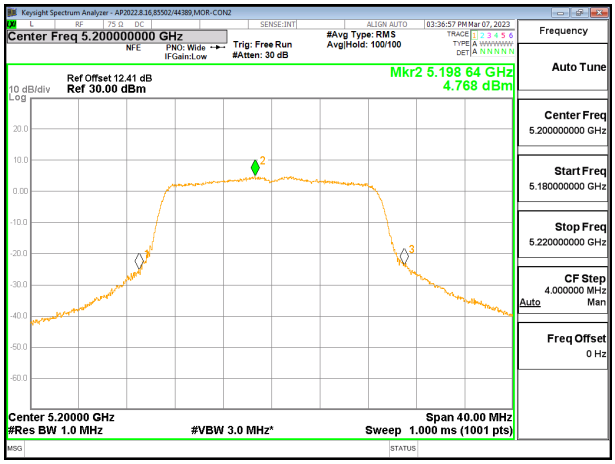
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	16.33	16.33	20.83	-4.50
Mid	5200	16.62	16.62	20.85	-4.23
High	5240	16.55	16.55	20.85	-4.30

PSD Results

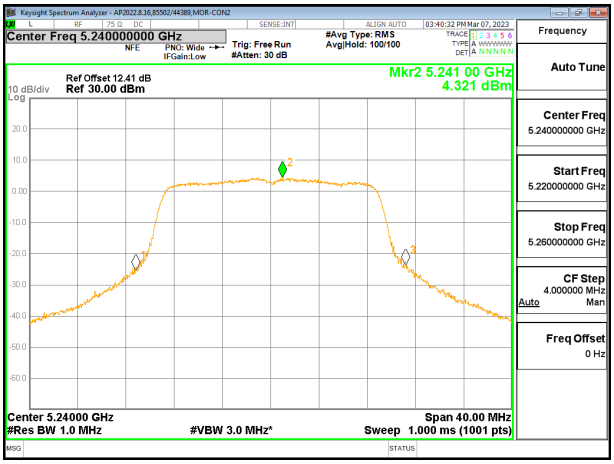
Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5180	4.286	4.60	8.36	-3.76
Mid	5200	4.768	5.08	8.36	-3.28
High	5240	4.321	4.63	8.36	-3.73



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

9.5.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE (FCC+IC) MOBILE

Test Engineer:	85502/44389, 84740/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	36.213	1.64
High	5230	36.202	1.64

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED eirp PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5190	24.00	23.00	21.36	21.36	11.00	10.00	8.36
High	5230	24.00	23.00	21.36	21.36	11.00	10.00	8.36

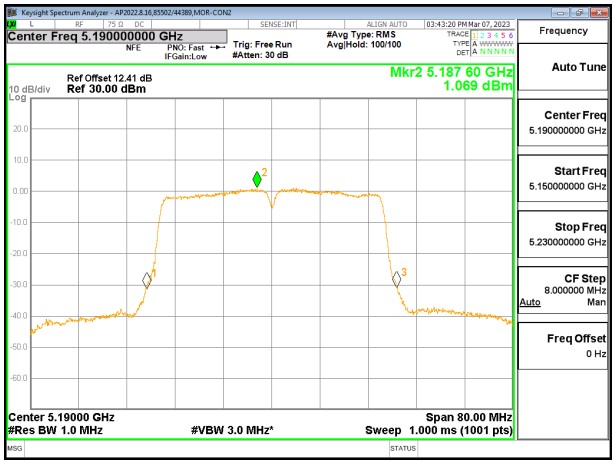
Duty Cycle CF (dB)	0.44	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

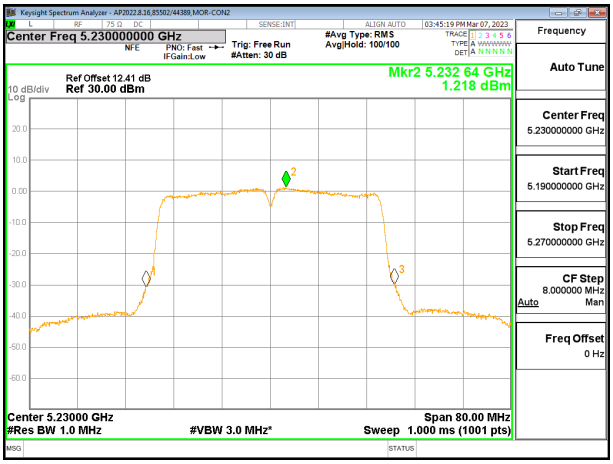
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	16.08	16.08	21.36	-5.28
High	5230	16.32	16.32	21.36	-5.04

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5190	1.069	1.51	8.36	-6.85
High	5230	1.218	1.66	8.36	-6.70



LOW CHANNEL



HIGH CHANNEL

9.5.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE (FCC+IC) MOBILE

Test Engineer:	85502/44389, 84740/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Mid	5210	75.597	1.64

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED eirp PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Mid	5210	24.00	23.00	21.36	21.36	11.00	10.00	8.36

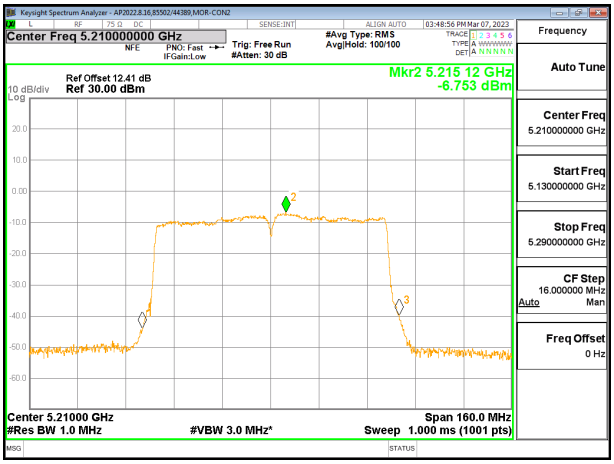
Duty Cycle CF (dB)	0.79	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	10.530	10.53	21.36	-10.83

PPSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Mid	5210	-6.753	-5.96	8.36	-14.32



MID CHANNEL

9.5.5. 802.11a MODE IN THE 5.3 GHz BAND

1TX Antenna 1 MODE (FCC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	21.32	3.22	24.00	11.00
Mid	5300	21.24	3.22	24.00	11.00
High	5320	21.36	3.22	24.00	11.00

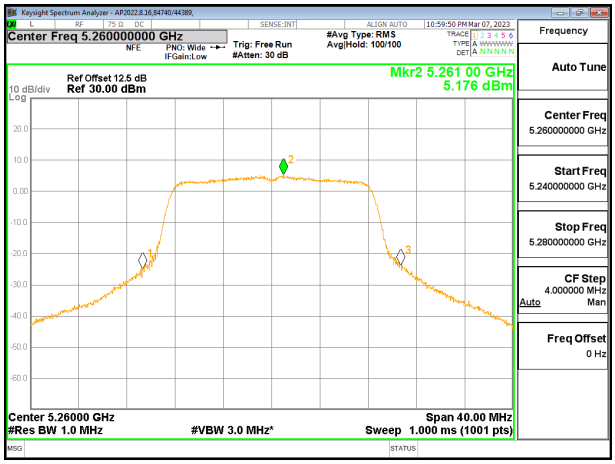
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

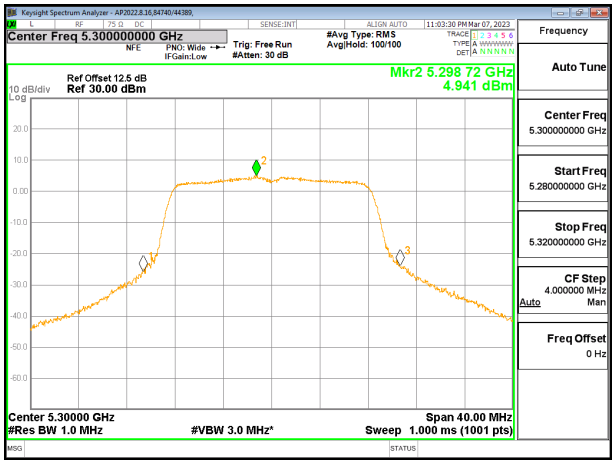
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	16.87	16.87	24.00	-7.13
Mid	5300	16.74	16.74	24.00	-7.26
High	5320	16.37	16.37	24.00	-7.63

PSD Results

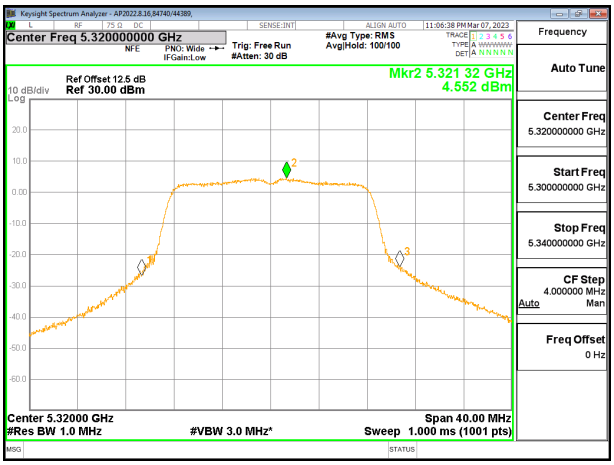
Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	5.176	5.18	11.00	-5.82
Mid	5300	4.941	4.94	11.00	-6.06
High	5320	4.552	4.55	11.00	-6.45



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

1TX Antenna 1 MODE (IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	16.513	3.22	23.18	11.00
Mid	5300	16.531	3.22	23.18	11.00
High	5320	16.510	3.22	23.18	11.00

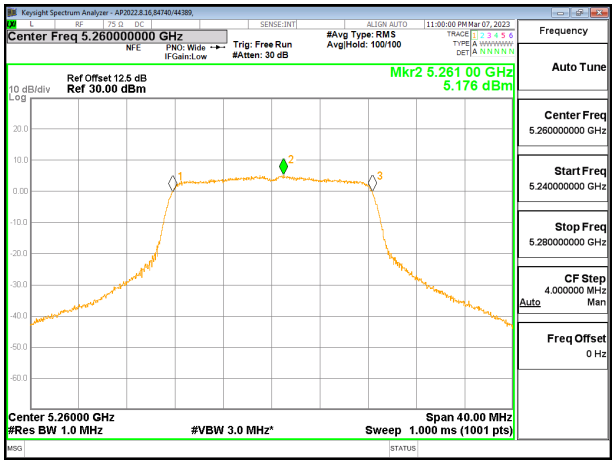
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	16.87	16.87	23.18	-6.31
Mid	5300	16.74	16.74	23.18	-6.44
High	5320	16.37	16.37	23.18	-6.81

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	5.176	5.18	11.00	-5.82
Mid	5300	4.941	4.94	11.00	-6.06
High	5320	4.552	4.55	11.00	-6.45



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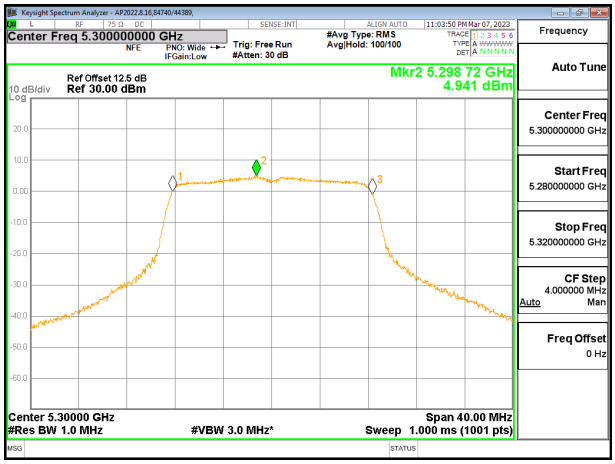

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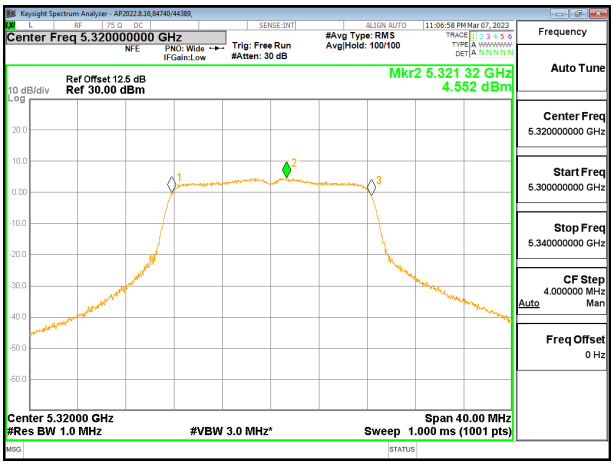


HIGH CHANNEL

9.5.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

1TX Antenna 1 MODE (FCC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	22.88	3.22	24.00	11.00
Mid	5300	23.00	3.22	24.00	11.00
High	5320	23.08	3.22	24.00	11.00

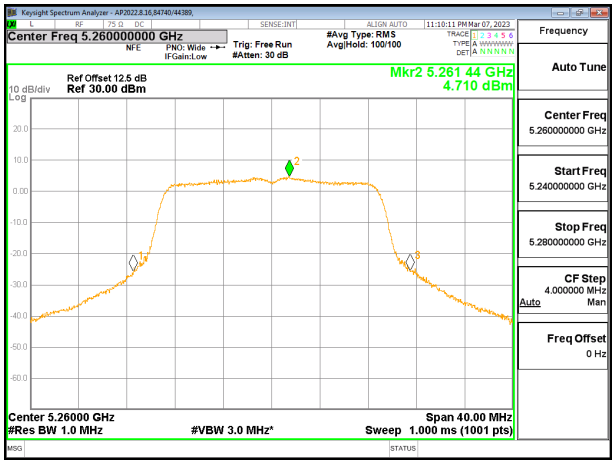
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

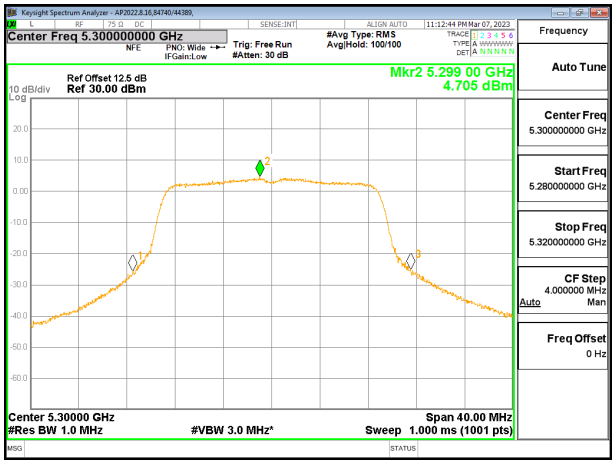
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	16.69	16.69	24.00	-7.31
Mid	5300	16.52	16.52	24.00	-7.48
High	5320	16.48	16.48	24.00	-7.52

PSD Results

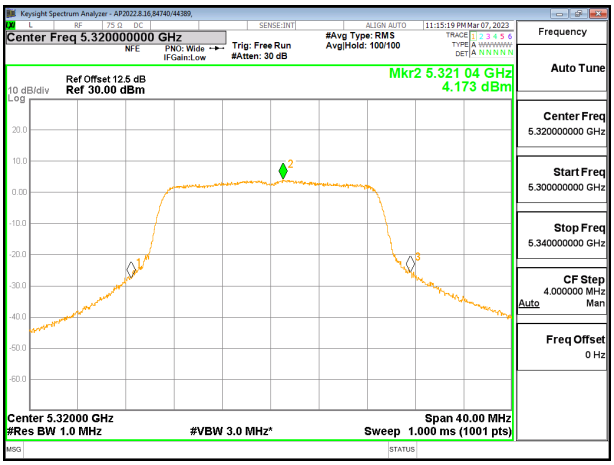
Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	4.710	4.71	11.00	-6.29
Mid	5300	4.705	4.71	11.00	-6.30
High	5320	4.173	4.17	11.00	-6.83



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

1TX Antenna 1 MODE (IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	17.764	3.22	23.50	11.00
Mid	5300	17.738	3.22	23.49	11.00
High	5320	17.673	3.22	23.47	11.00

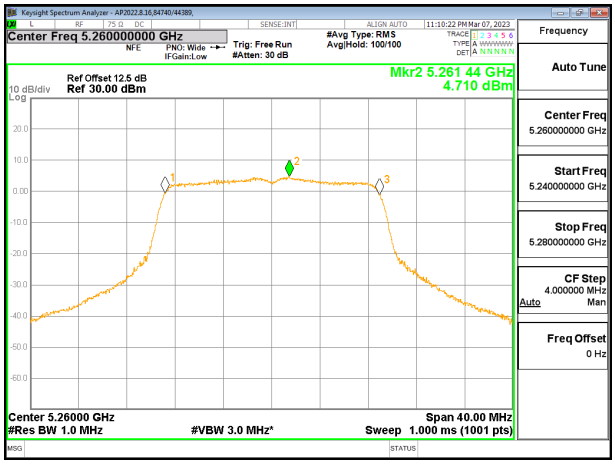
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

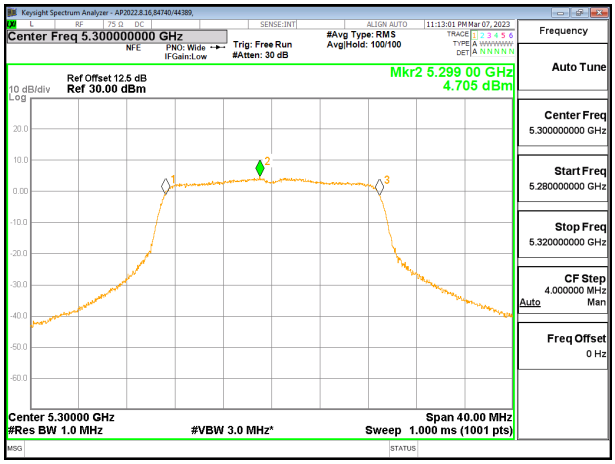
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	16.69	16.69	23.50	-6.81
Mid	5300	16.52	16.52	23.49	-6.97
High	5320	16.48	16.48	23.47	-6.99

PSD Results

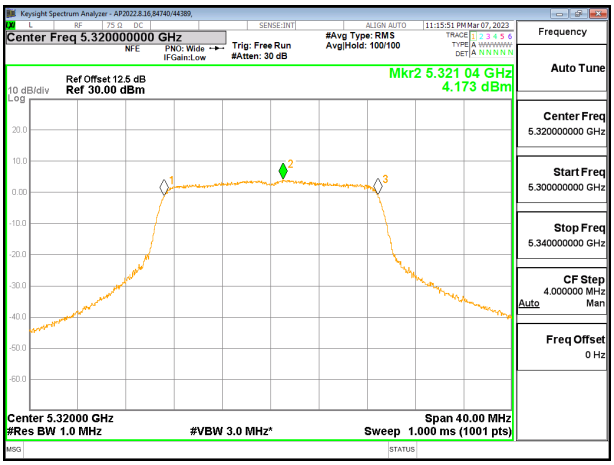
Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	4.710	4.71	11.00	-6.29
Mid	5300	4.705	4.71	11.00	-6.30
High	5320	4.173	4.17	11.00	-6.83



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

9.5.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

1TX Antenna 1 MODE (FCC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5270	41.84	3.22	24.00	11.00
High	5310	41.76	3.22	24.00	11.00

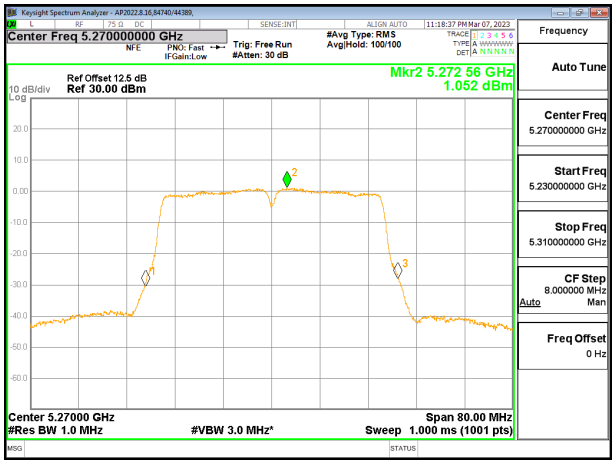
Duty Cycle CF (dB)	0.17	**Included in Calculations of Corr'd PSD**

Output Power Results

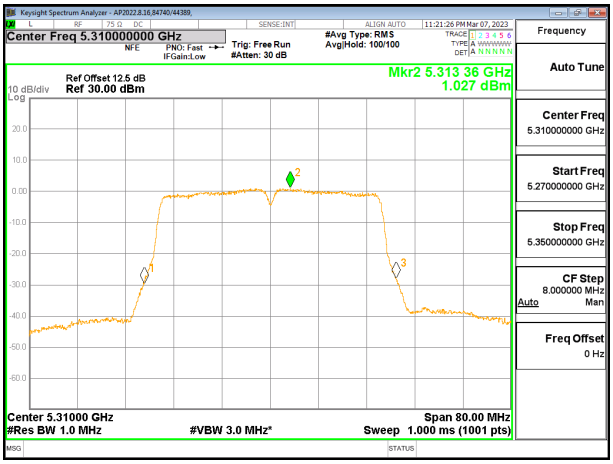
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	16.29	16.29	24.00	-7.71
High	5310	14.48	14.48	24.00	-9.52

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5270	1.052	1.22	11.00	-9.78
High	5310	1.027	1.20	11.00	-9.80



LOW CHANNEL



HIGH CHANNEL

1TX Antenna 1 MODE (IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5270	36.192	3.22	24.00	11.00
High	5310	36.176	3.22	24.00	11.00

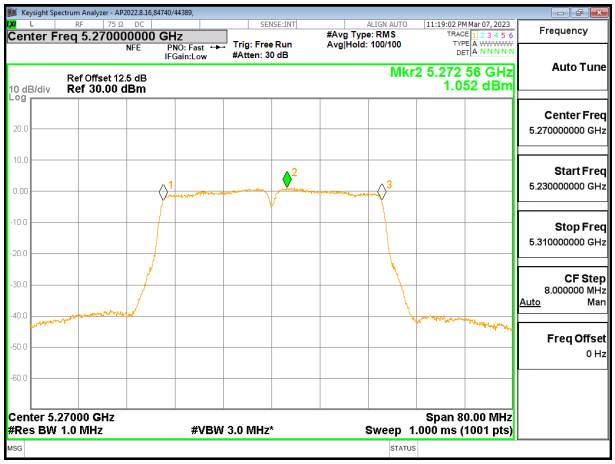
Duty Cycle CF (dB)	0.17	**Included in Calculations of Corr'd PSD**

Output Power Results

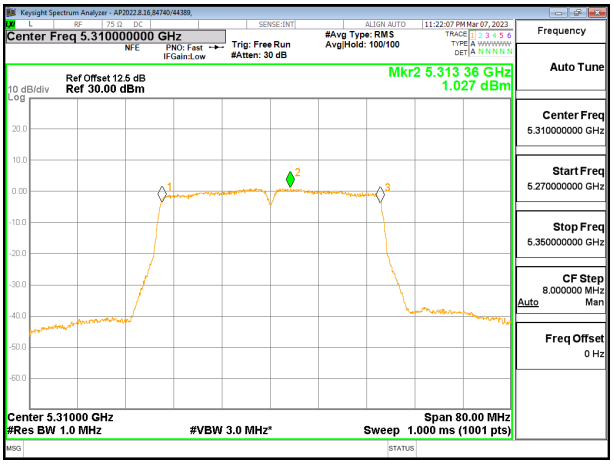
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	16.29	16.29	24.00	-7.71
High	5310	14.48	14.48	24.00	-9.52

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5270	1.052	1.22	11.00	-9.78
High	5310	1.027	1.20	11.00	-9.80



LOW CHANNEL



HIGH CHANNEL

9.5.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

1TX Antenna 1 MODE (FCC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Mid	5290	85.12	3.22	24.00	11.00

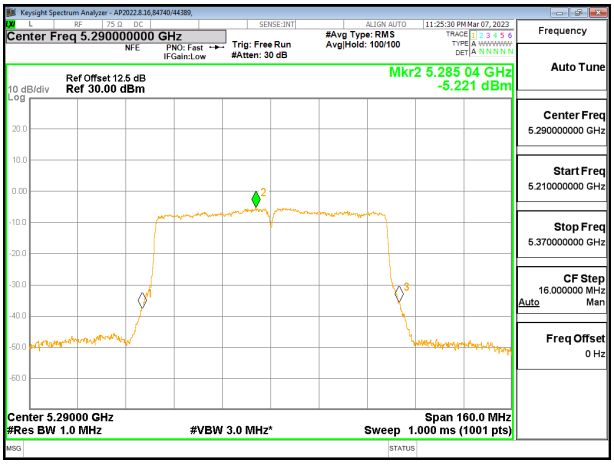
Duty Cycle CF (dB)	0.33	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	13.21	13.21	24.00	-10.79

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Mid	5290	-5.221	-4.89	11.00	-15.89



MID CHANNEL

1TX Antenna 1 MODE (IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Mid	5290	75.782	3.22	24.00	11.00

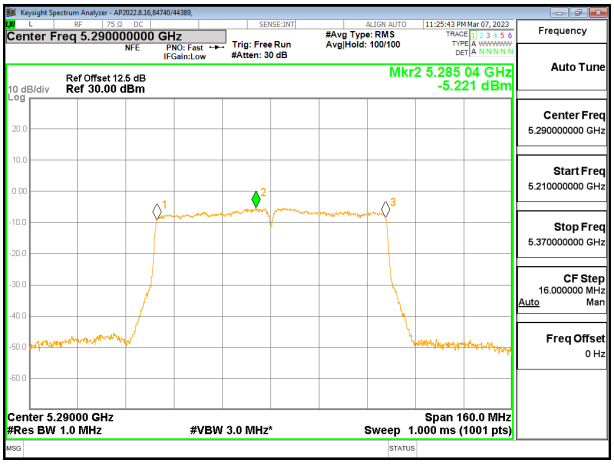
Duty Cycle CF (dB)	0.33	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	13.21	13.21	24.00	-10.79

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Mid	5290	-5.221	-4.89	11.00	-15.89



MID CHANNEL

9.5.9. 802.11a MODE IN THE 5.6 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	21.48	16.485	4.53
Low	5520	21.36	16.488	4.53
Mid	5580	21.44	16.525	4.53
High	5680	21.48	16.539	4.53
High	5700	21.56	16.492	4.53
144	5720	15.64	16.528	4.53

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	5500	24.00	23.17	29.17	23.17	11.00	11.00	11.00
Low	5520	24.00	23.17	23.17	18.64	11.00	11.00	11.00
Mid	5580	24.00	23.18	23.18	18.65	11.00	11.00	11.00
High	5680	24.00	23.19	29.19	23.19	11.00	11.00	11.00
High	5700	24.00	23.17	29.17	23.17	11.00	11.00	11.00
144	5720	22.94	23.18	29.18	22.94	11.00	11.00	11.00

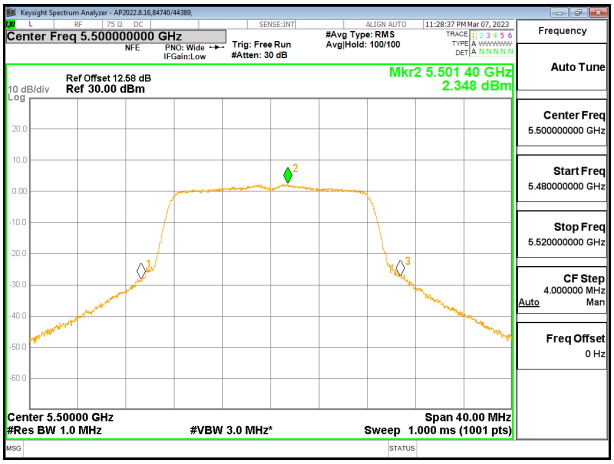
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

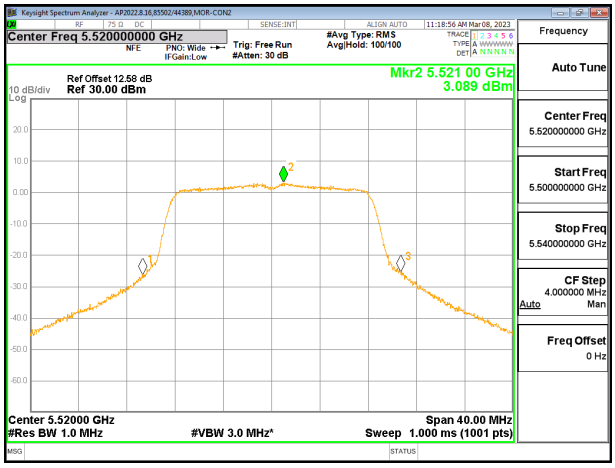
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	15.06	15.06	23.17	-8.11
Low	5520	16.07	16.07	18.64	-2.57
Mid	5580	15.11	15.11	18.65	-3.54
High	5680	15.50	15.50	23.19	-7.69
High	5700	15.13	15.13	23.17	-8.04
144	5720	15.95	15.95	22.94	-6.99

PSD Results

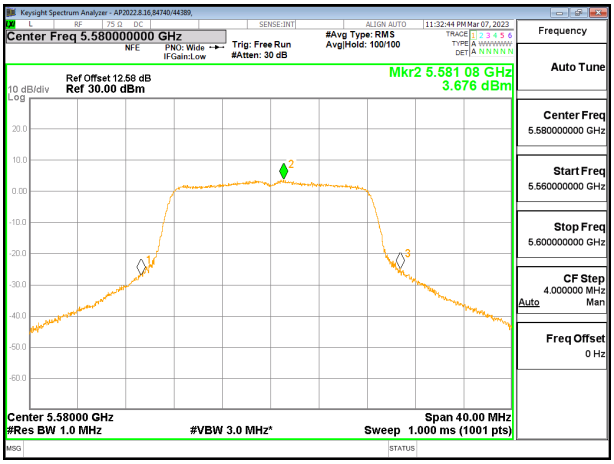
Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	2.348	2.348	11.00	-8.65
Low	5520	3.089	3.089	11.00	-7.91
Mid	5580	3.676	3.676	11.00	-7.32
High	5680	3.238	3.238	11.00	-7.76
High	5700	2.801	2.801	11.00	-8.20
144	5720	3.533	3.533	11.00	-7.47



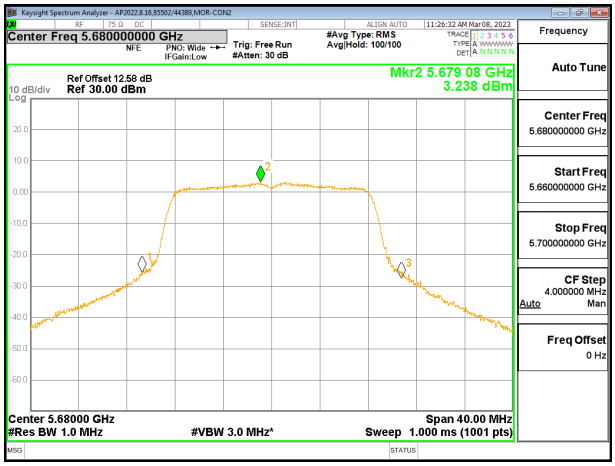
LOW CHANNEL



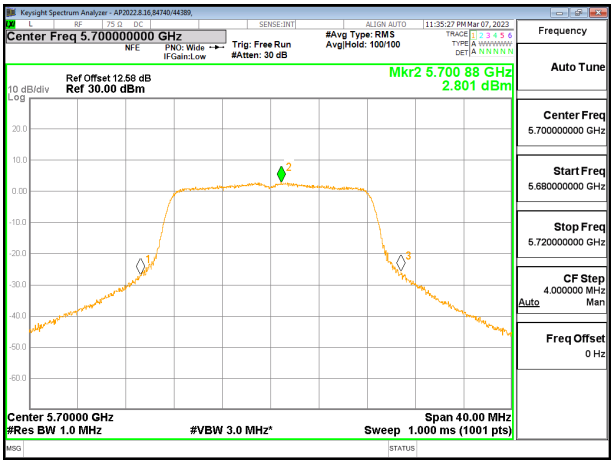
LOW CHANNEL



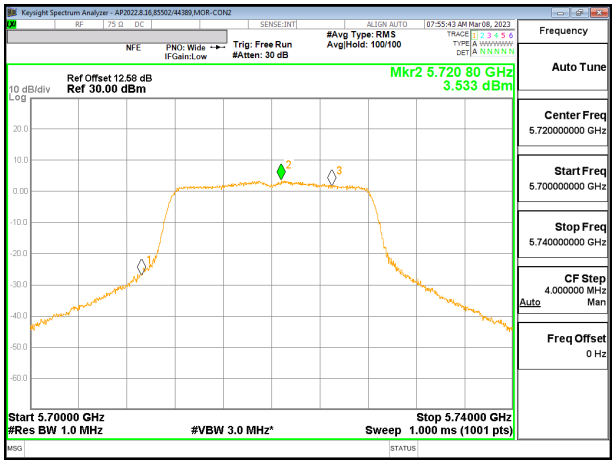
MID CHANNEL



HIGH CHANNEL



HIGH CHANNEL



CHANNEL 144

9.5.10. 802.11n HT20 MODE IN THE 5.6 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	23.6400	17.7070	4.53
Low	5520	22.4800	17.7430	4.53
Mid	5580	23.1600	17.6980	4.53
High	5680	22.5200	17.6980	4.53
High	5700	22.8400	17.7460	4.53
144	5720	16.3600	17.6960	4.53

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	5500	24.00	23.48	29.48	23.48	11.00	11.00	11.00
Low	5520	24.00	23.49	29.49	23.49	11.00	11.00	11.00
Mid	5580	24.00	23.48	29.48	23.48	11.00	11.00	11.00
High	5680	24.00	23.49	29.49	23.49	11.00	11.00	11.00
High	5700	24.00	23.48	29.48	23.48	11.00	11.00	11.00
144	5720	23.14	23.48	29.48	23.14	11.00	11.00	11.00

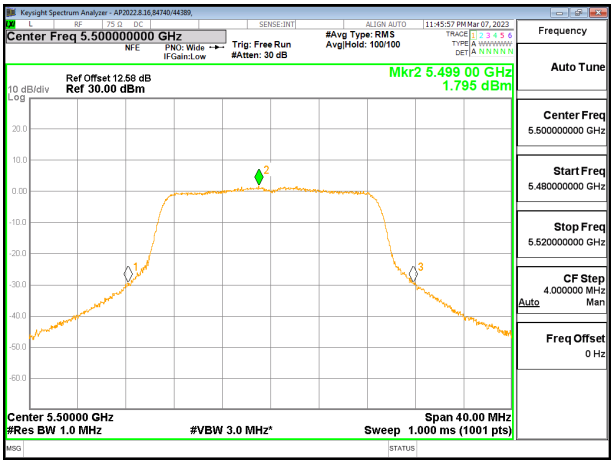
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

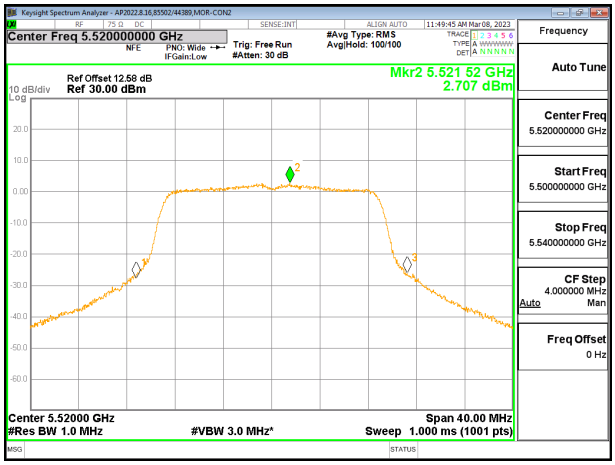
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	14.570	14.57	23.48	-8.91
Low	5520	15.910	15.91	23.49	-7.58
Mid	5580	15.500	15.50	23.48	-7.98
High	5680	15.620	15.62	23.48	-7.86
High	5700	15.000	15.00	23.49	-8.49
144	5720	15.890	15.89	23.14	-7.25

PSD Results

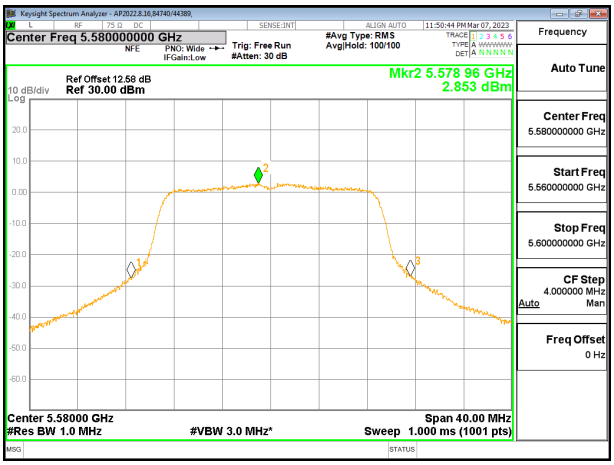
Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	1.795	1.795	11.00	-9.21
Low	5520	2.707	2.707	11.00	-8.29
Mid	5580	2.853	2.853	11.00	-8.15
High	5680	2.814	2.814	11.00	-8.19
High	5700	2.317	2.317	11.00	-8.68
144	5720	3.500	3.500	11.00	-7.50



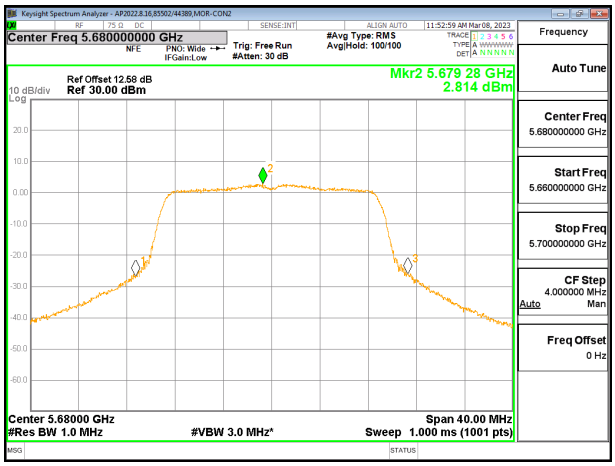
LOW CHANNEL



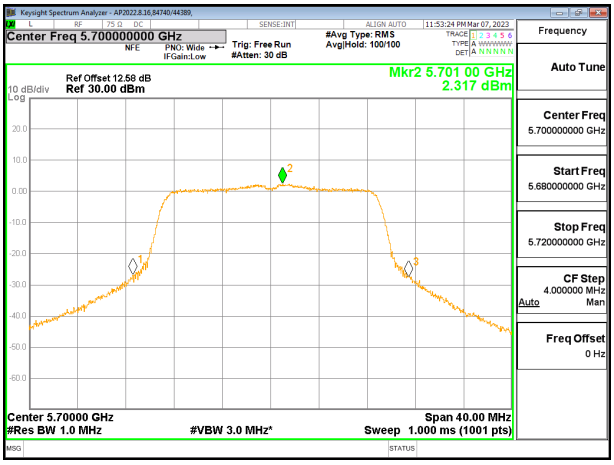
LOW CHANNEL



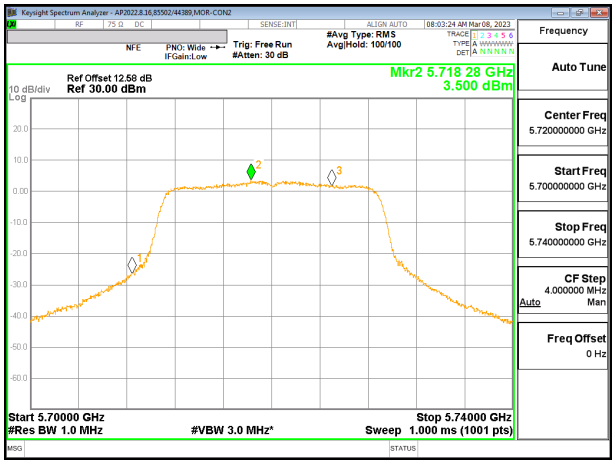
MID CHANNEL



HIGH CHANNEL



HIGH CHANNEL



CHANNEL 144

9.5.11. 802.11n HT40 MODE IN THE 5.6 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	41.9200	36.1770	4.53
Mid	5550	42.0000	36.2290	4.53
High	5670	41.7600	36.2780	4.53
142	5710	36.1200	36.2120	4.53

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	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00
142	5710	24.00	24.00	30.00	24.00	11.00	11.00	11.00

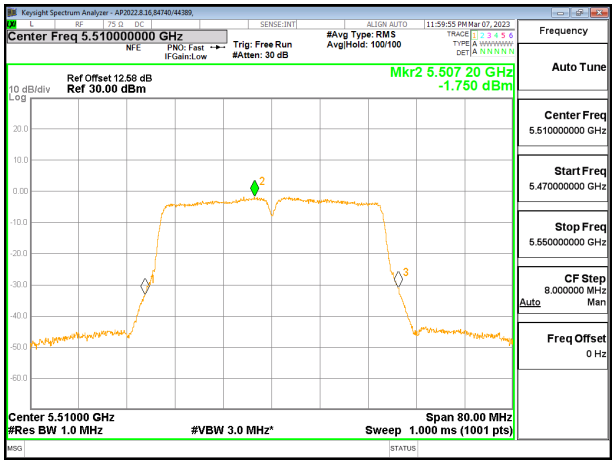
Duty Cycle CF (dB)	0.16	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

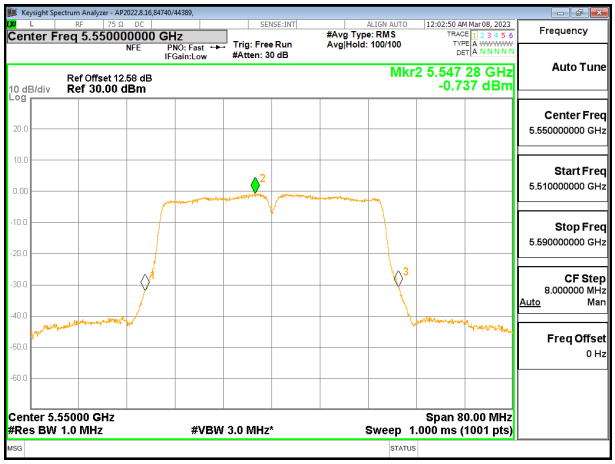
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	14.17	14.17	24.00	-9.83
Mid	5550	15.53	15.53	24.00	-8.47
High	5670	15.28	15.28	24.00	-8.72
142	5710	14.73	14.73	24.00	-9.27

PSD Results

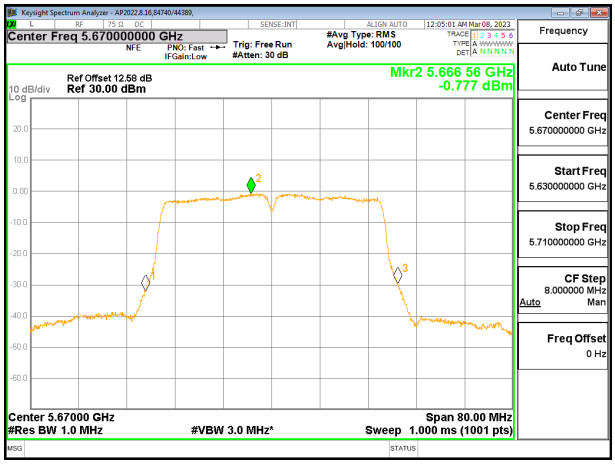
Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5510	-1.750	-1.59	11.00	-12.59
Mid	5550	-0.737	-0.58	11.00	-11.58
High	5670	-0.777	-0.62	11.00	-11.62
142	5710	-0.854	-0.69	11.00	-11.69



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

CHANNEL 142

9.5.12. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	84740/44389
Test Date:	2023-03-06

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5530	85.28	75.850	4.53
High	5610	84.00	75.785	4.53
138	5690	77.24	75.992	4.53

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	5530	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5610	24.00	24.00	30.00	24.00	11.00	11.00	11.00
138	5690	24.00	24.00	30.00	24.00	11.00	11.00	11.00

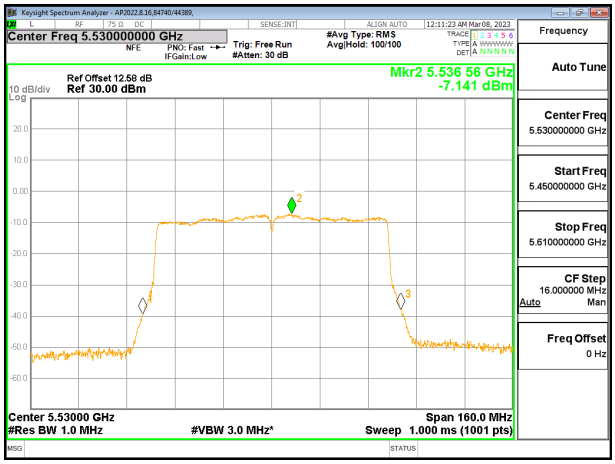
Duty Cycle CF (dB)	0.33	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

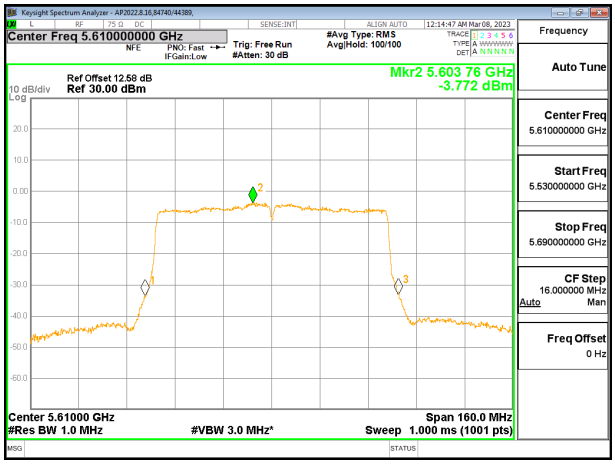
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	11.78	11.78	24.00	-12.22
High	5610	15.04	15.04	24.00	-8.96
138	5690	14.03	14.03	24.00	-9.97

PSD Results

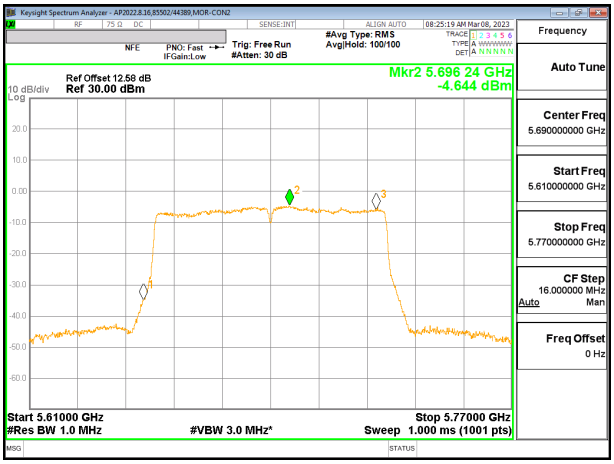
Channel	Frequency (MHz)	Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5530	-7.141	-6.811	11.00	-17.81
High	5610	-3.772	-3.442	11.00	-14.44
138	5690	-4.644	-4.314	11.00	-15.31



LOW CHANNEL



HIGH CHANNEL



CHANNEL 138

9.5.13. 802.11a MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	85502/44389, 84740/44389
Test Date:	2023-03-06, 2023-03-27

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low	5745	1.98	30.00	30.00
Mid	5785	1.98	30.00	30.00
High	5825	1.98	30.00	30.00
144	5720	1.98	30.00	30.00

Duty Cycle CF (dB)	0.22	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	14.34	14.34	30.00	-15.66
Mid	5785	14.23	14.23	30.00	-15.77
High	5825	14.09	14.09	30.00	-15.91
144	5720	13.67	13.67	30.00	-16.33

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low	5745	-0.564	-0.344	30.00	-30.34
Mid	5785	-0.367	-0.147	30.00	-30.15
High	5825	-0.495	-0.275	30.00	-30.28
144	5720	-0.951	-0.731	30.00	-30.73

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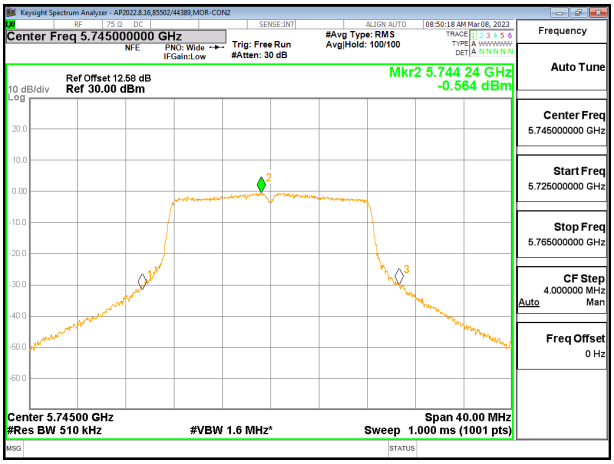
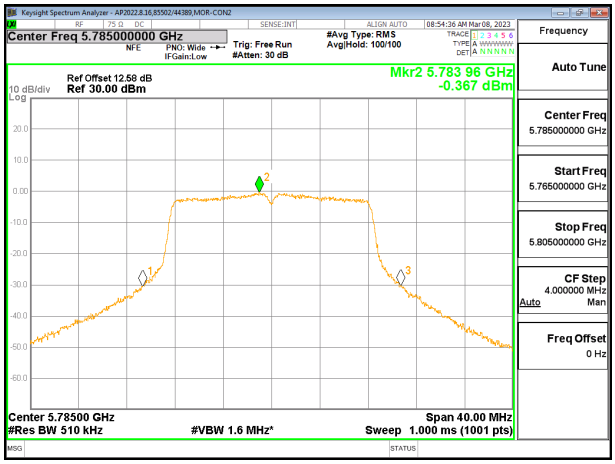
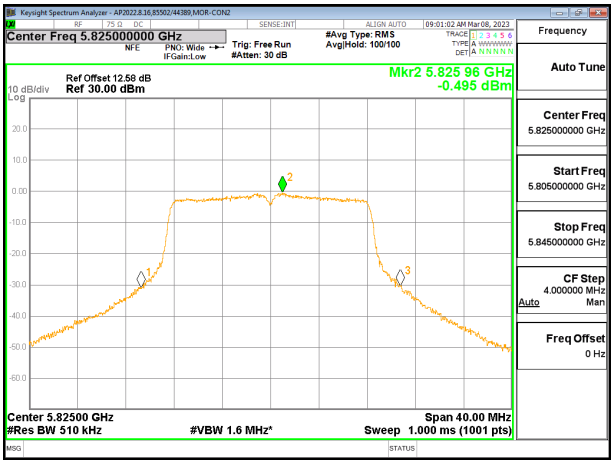


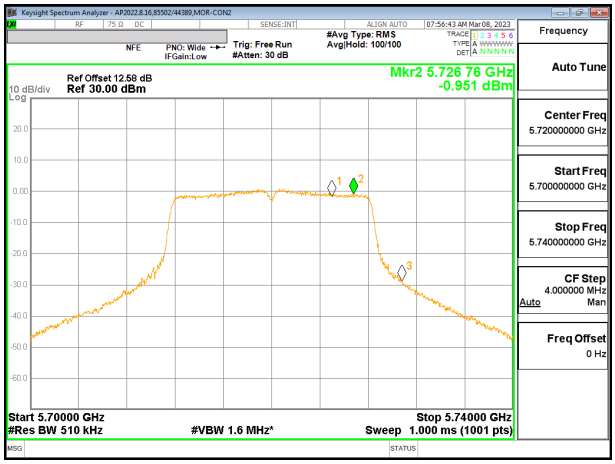
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



CHANNEL 144

9.5.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	85502/44389, 84740/44389
Test Date:	2023-03-06, 2023-03-27

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low	5745	1.98	30.00	30.00
Mid	5785	1.98	30.00	30.00
High	5825	1.98	30.00	30.00
144	5720	1.98	30.00	30.00

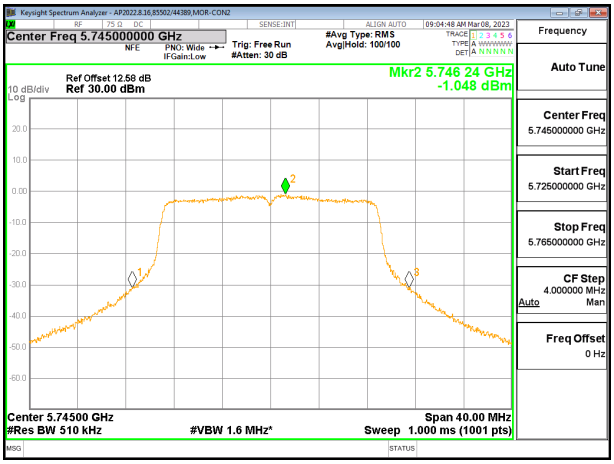
Duty Cycle CF (dB)	0.24	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

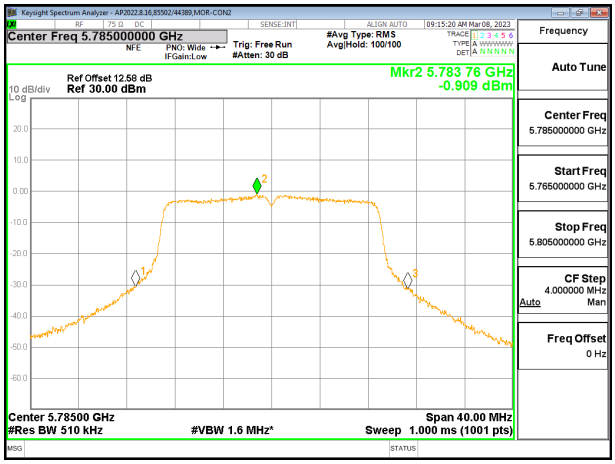
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	14.12	14.12	30.00	-15.88
Mid	5785	14.07	14.07	30.00	-15.93
High	5825	14.00	14.00	30.00	-16.00
144	5720	13.74	13.74	30.00	-16.26

PSD Results

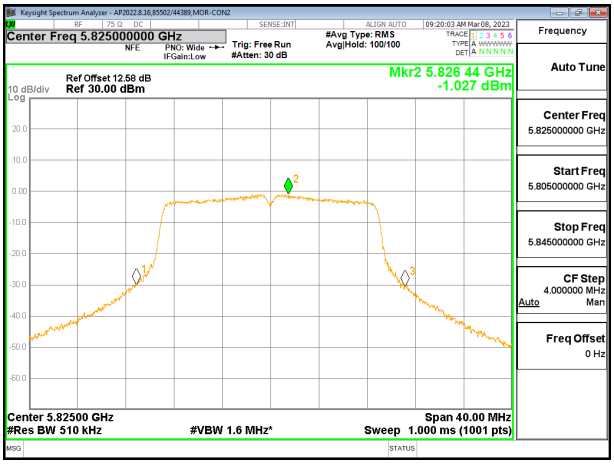
Channel	Frequency (MHz)	Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low	5745	-1.048	-0.808	30.00	-30.81
Mid	5785	-0.909	-0.669	30.00	-30.67
High	5825	-1.027	-0.787	30.00	-30.79
144	5720	-0.656	-0.416	30.00	-30.42



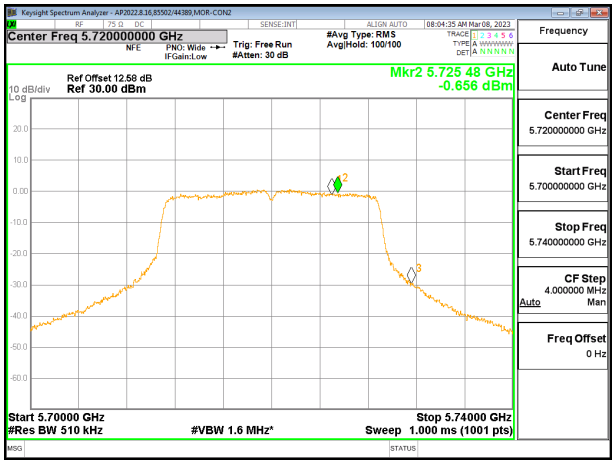
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



CHANNEL 144

9.5.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	85502/44389, 84740/44389
Test Date:	2023-03-06, 2023-03-27

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISE Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Low	5755	1.98	30.00	30.00
High	5795	1.98	30.00	30.00
142	5710	1.98	30.00	30.00

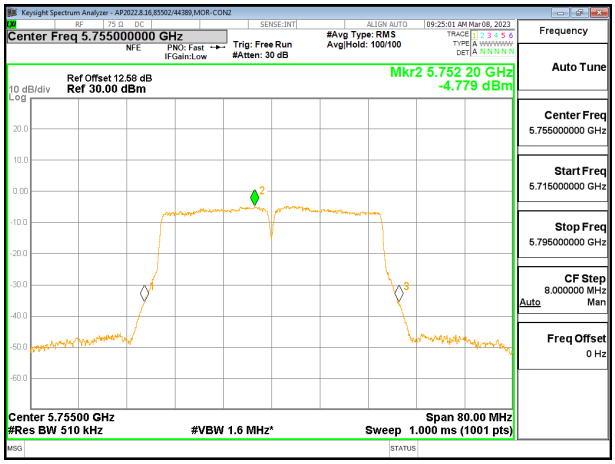
Duty Cycle CF (dB)	0.31	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

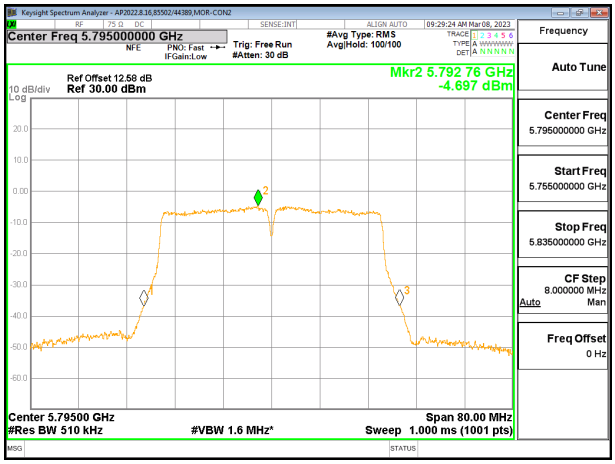
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	13.94	13.94	30.00	-16.06
High	5795	13.72	13.72	30.00	-16.28
142	5710	13.09	13.09	30.00	-16.91

PSD Results

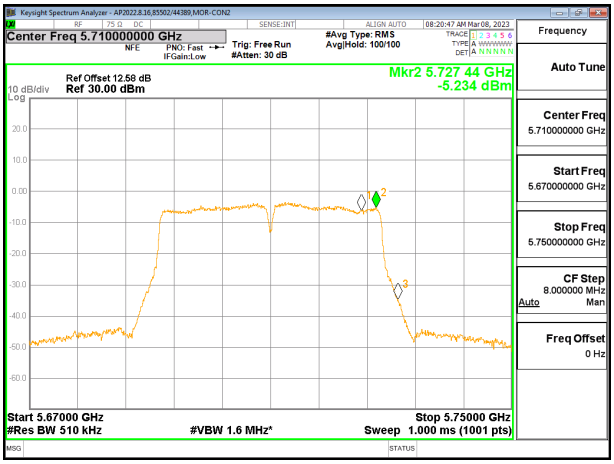
Channel	Frequency (MHz)	Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz)	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Low	5755	-4.779	-4.469	30.00	-34.47
High	5795	-4.697	-4.387	30.00	-34.39
142	5710	-5.234	-4.924	30.00	-34.92



LOW CHANNEL



HIGH CHANNEL



CHANNEL 142

9.5.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

1TX Antenna 1 MODE (FCC+IC)

Test Engineer:	85502/44389, 84740/44389
Test Date:	2023-03-06, 2023-03-27, 2023-05-12

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISE Power Limit (dBm)	FCC/ISED PSD Limit (dBm/ 500KHz)
Mid	5775	1.98	30.00	30.00
138	5690	1.98	30.00	30.00

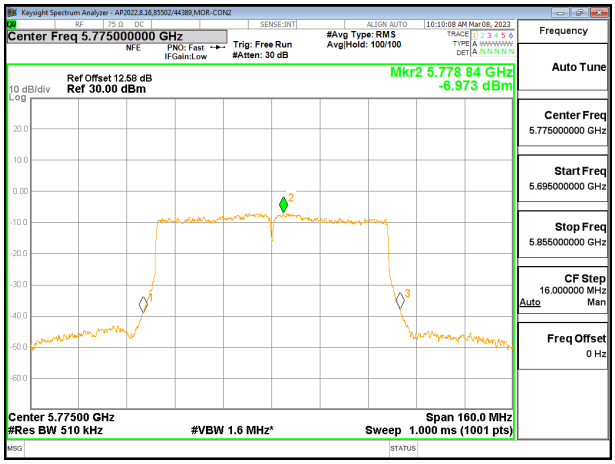
Duty Cycle CF (dB)	0.59	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

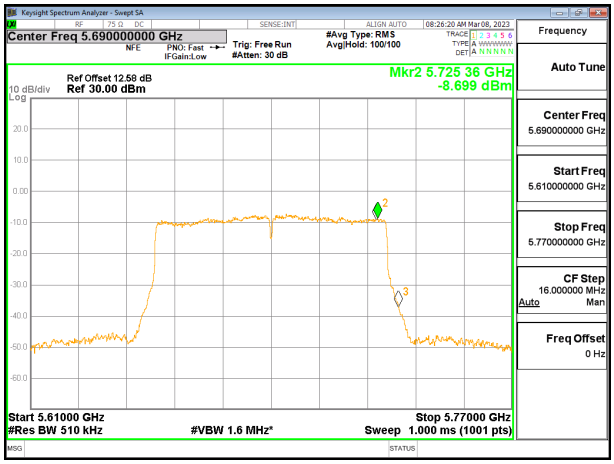
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	13.27	13.27	30.00	-16.73
138	5690	13.21	13.21	30.00	-16.79

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm/ 500KHz)	Total Corr'd PSD (dBm/ 500KHz	PSD Limit (dBm/ 500KHz)	PSD Margin (dB)
Mid	5775	-6.973	-6.383	30.00	-36.38
138	5690	-8.699	-8.109	30.00	-38.11



MID CHANNEL



CHANNEL 138

10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 -Restriced bands

FCC §15.407(b)(1-3) -Un-Restriced 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 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 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 average 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.

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.

NOTE: 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.

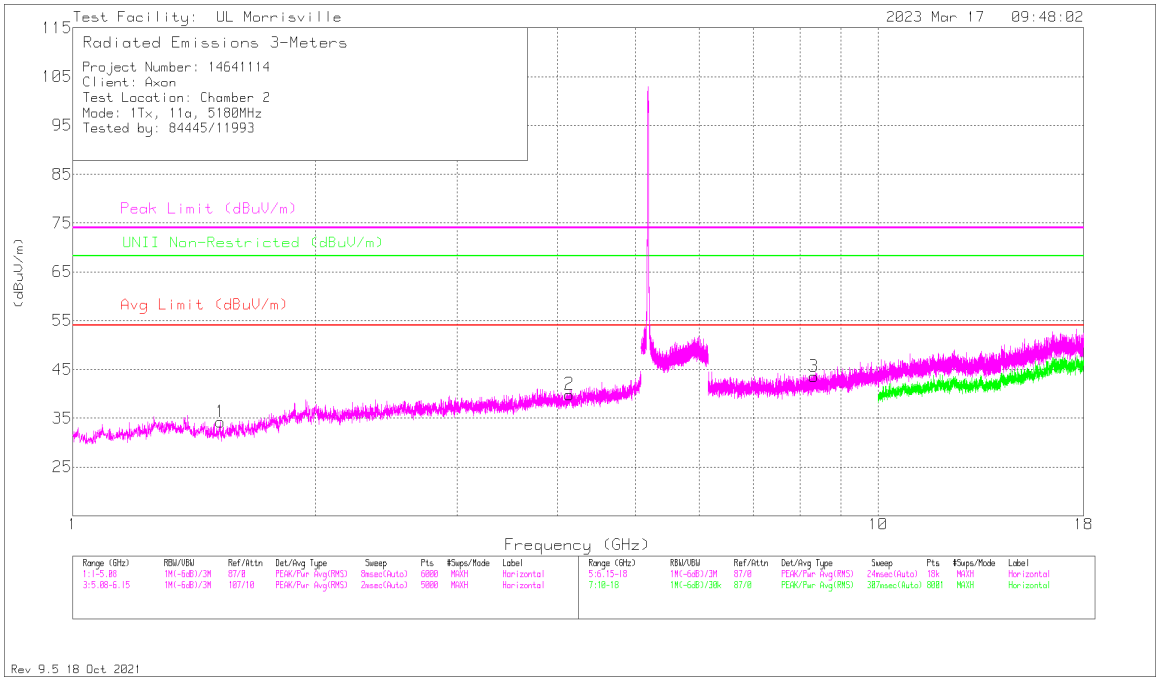
10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

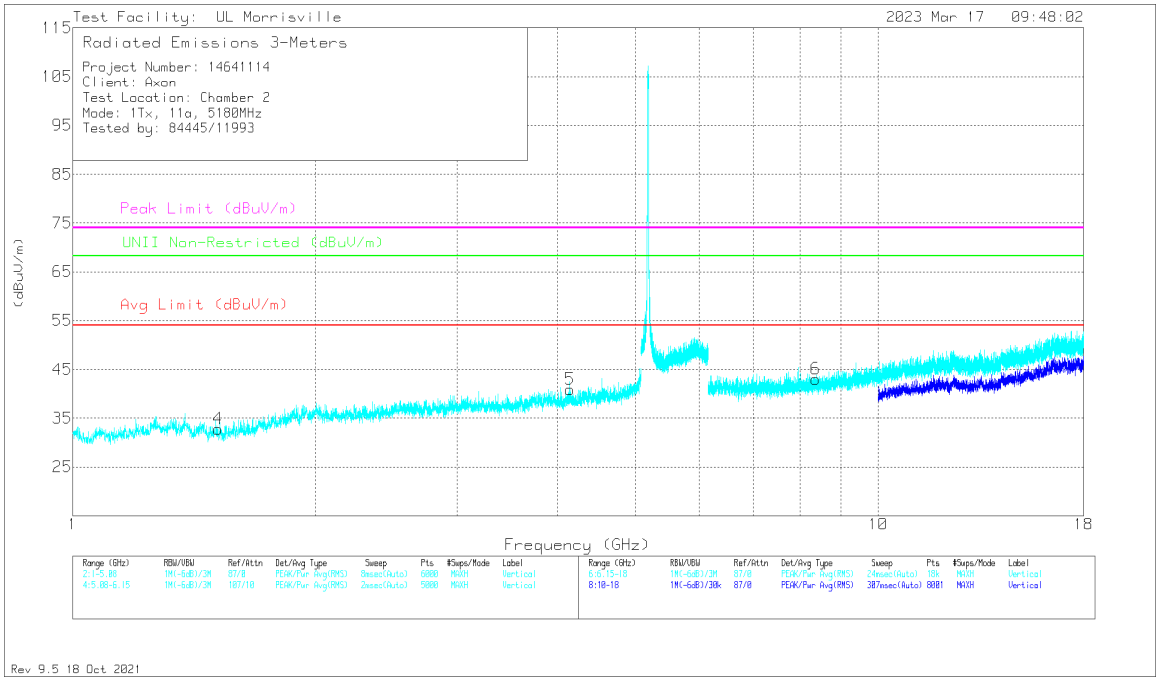
1TX Antenna 1 MODE

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



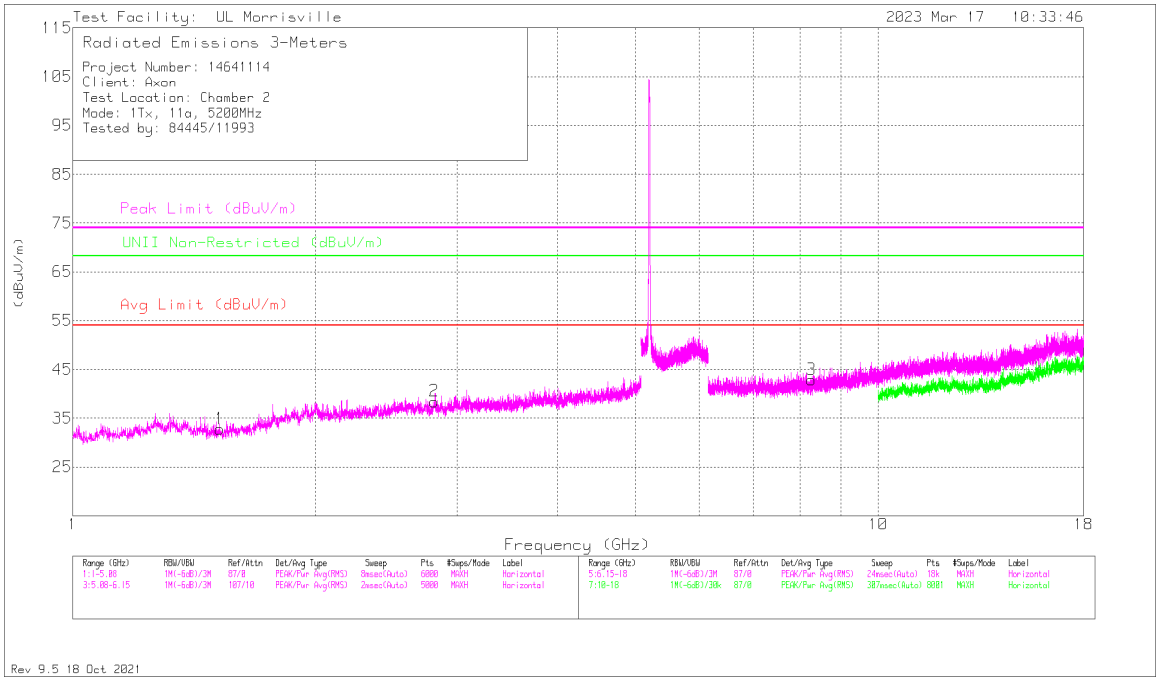
VERTICAL

RADIATED EMISSIONS

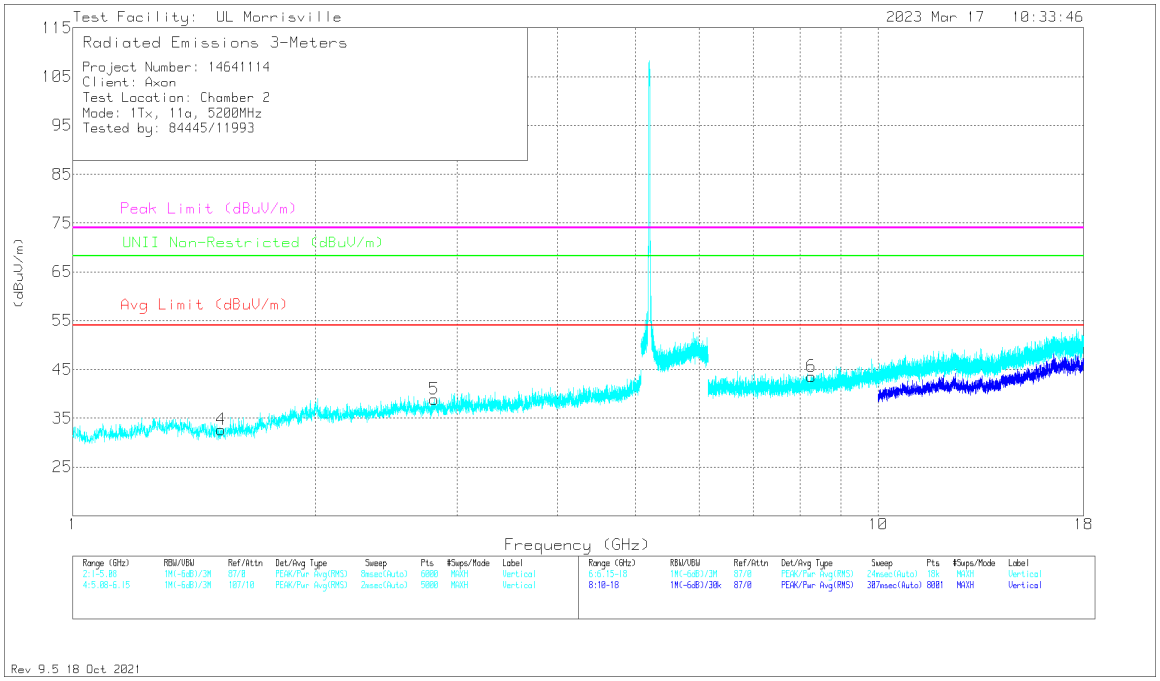
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.52437	40.86	Pk	28	-34.6	34.26	54	-19.74	74	-39.74	-	-	0-360	100	H
2	* ** 4.13872	37.49	Pk	33.4	-31	39.89	54	-14.11	74	-34.11	-	-	0-360	200	H
4	* ** 1.51621	39.51	Pk	28.1	-34.8	32.81	54	-21.19	74	-41.19	-	-	0-360	200	V
5	* ** 4.14484	38.54	Pk	33.4	-31.1	40.84	54	-13.16	74	-33.16	-	-	0-360	101	V
3	* ** 8.32723	34.89	Pk	35.8	-27.1	43.59	54	-10.41	74	-30.41	-	-	0-360	101	H
6	* ** 8.372	33.97	Pk	35.8	-26.7	43.07	54	-10.93	74	-30.93	-	-	0-360	200	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

MID CHANNEL RESULTS



HORIZONTAL



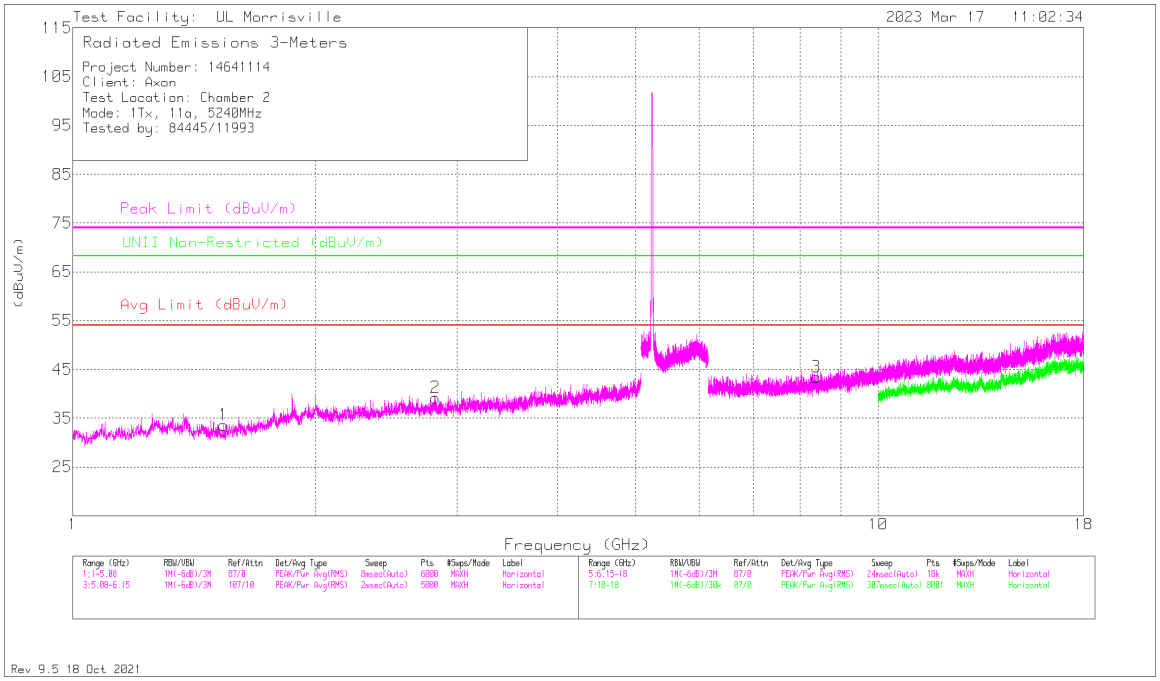
VERTICAL

RADIATED EMISSIONS

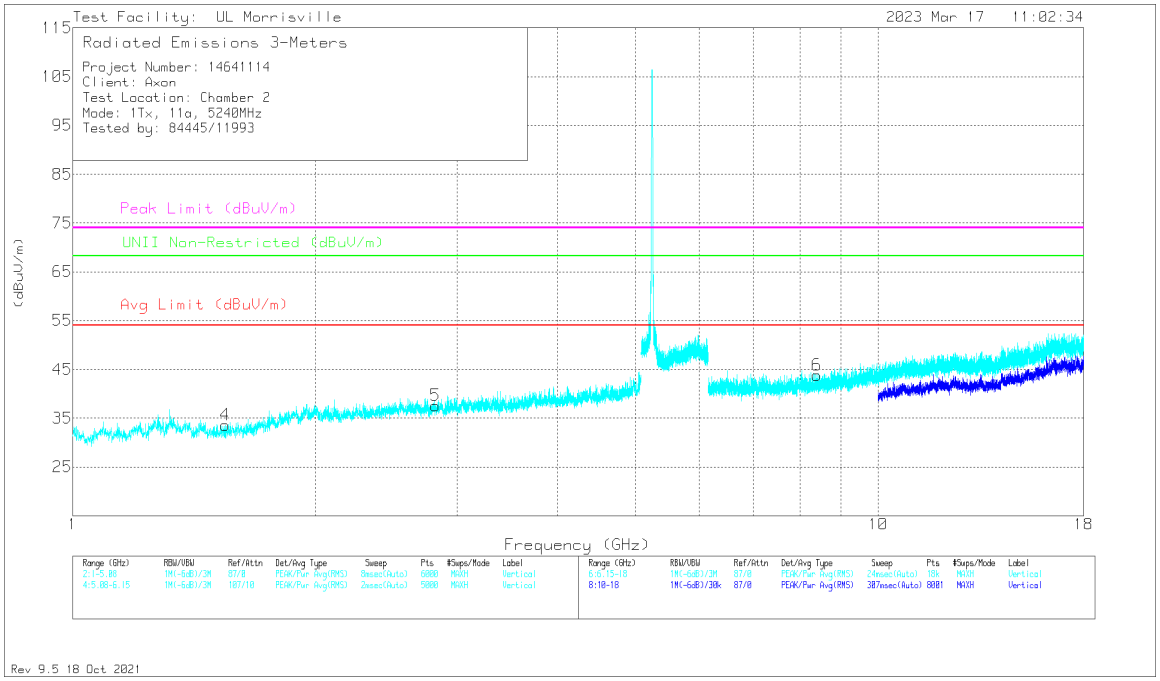
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.52301	39.39	Pk	28	-34.6	32.79	54	-21.21	74	-41.21	-	-	0-360	101	H
2	* ** 2.81318	39.23	Pk	32.6	-33.4	38.43	54	-15.57	74	-35.57	-	-	0-360	101	H
4	* ** 1.52709	39.25	Pk	28	-34.6	32.65	54	-21.35	74	-41.35	-	-	0-360	101	V
5	* ** 2.81114	39.75	Pk	32.6	-33.4	38.95	54	-15.05	74	-35.05	-	-	0-360	101	V
3	* ** 8.27324	34.44	Pk	35.8	-27.4	42.84	54	-11.16	74	-31.16	-	-	0-360	101	H
6	* ** 8.26666	35.3	Pk	35.8	-27.6	43.5	54	-10.5	74	-30.5	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.53865	40.32	Pk	28	-34.7	33.62	54	-20.38	74	-40.38	-	-	0-360	101	H
2	* ** 2.82338	39.83	Pk	32.6	-33.3	39.13	54	-14.87	74	-34.87	-	-	0-360	101	H
4	* ** 1.54681	40.41	Pk	28	-34.8	33.61	54	-20.39	74	-40.39	-	-	0-360	101	V
5	* ** 2.82202	38.26	Pk	32.6	-33.3	37.56	54	-16.44	74	-36.44	-	-	0-360	101	V
3	* ** 8.37463	34.31	Pk	35.8	-26.7	43.41	54	-10.59	74	-30.59	-	-	0-360	101	H
6	* ** 8.39307	34.74	Pk	35.8	-26.7	43.84	54	-10.16	74	-30.16	-	-	0-360	200	V

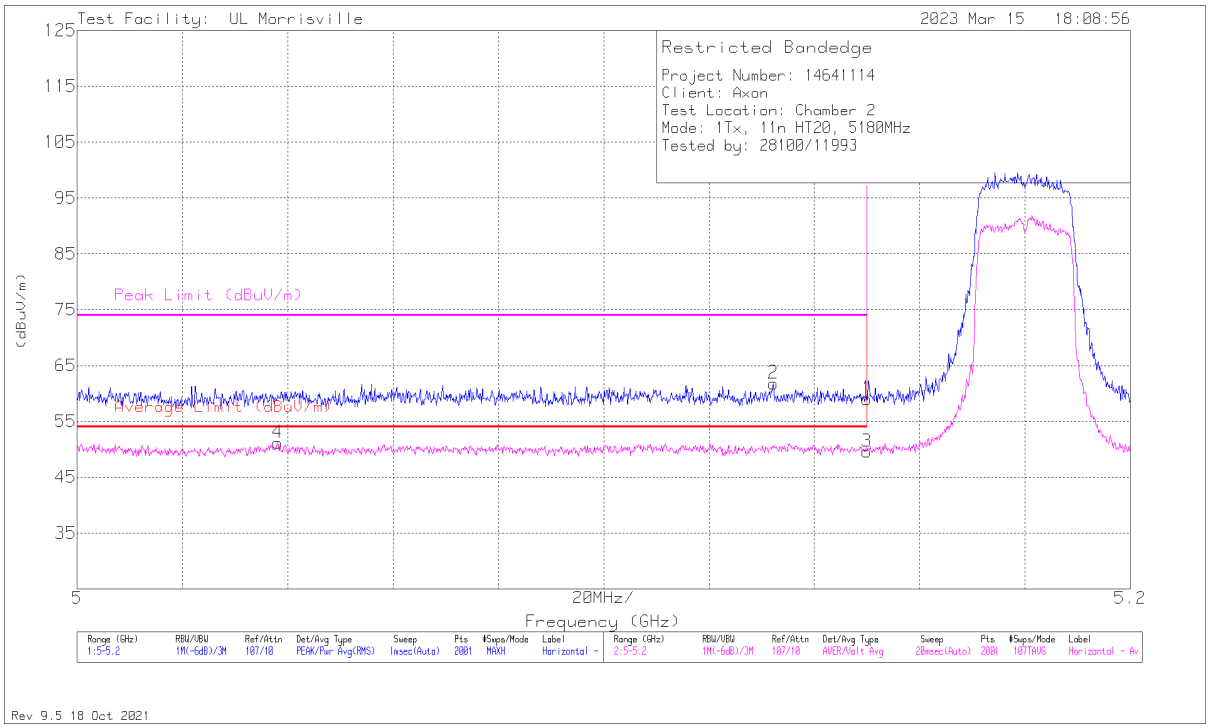
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

10.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (LOW CHANNEL)

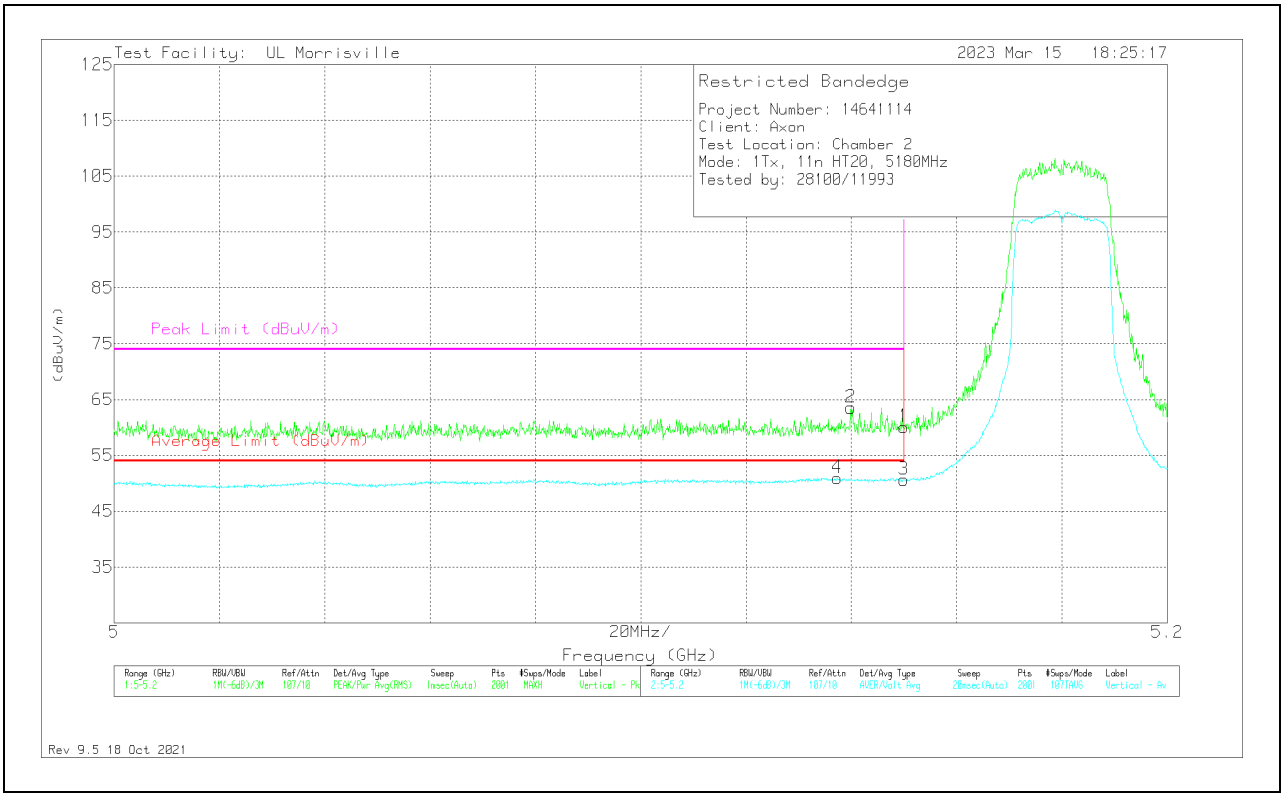
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.15	37.25	Pk	34.3	-22.6	10.1	0	59.05	-	-	74	-14.95	36	399	H
2	* ** 5.1322	39.99	Pk	34.2	-22.4	10	0	61.79	-	-	74	-12.21	36	399	H
3	* ** 5.15	27.15	ADV	34.3	-22.6	10.1	.62	49.57	54	-4.43	-	-	36	399	H
4	* ** 5.0381	28.74	ADV	34.1	-22.3	10	.62	51.16	54	-2.84	-	-	36	399	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	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.15	38.31	Pk	34.3	-22.6	10.1	0	60.11	-	-	74	-13.89	296	315	V
2	* ** 5.1399	41.56	Pk	34.3	-22.4	10.1	0	63.56	-	-	74	-10.44	296	315	V
3	* ** 5.15	28.23	ADV	34.3	-22.6	10.1	.62	50.65	54	-3.35	-	-	296	315	V
4	* ** 5.1373	28.44	ADV	34.2	-22.4	10.1	.62	50.96	54	-3.04	-	-	296	315	V

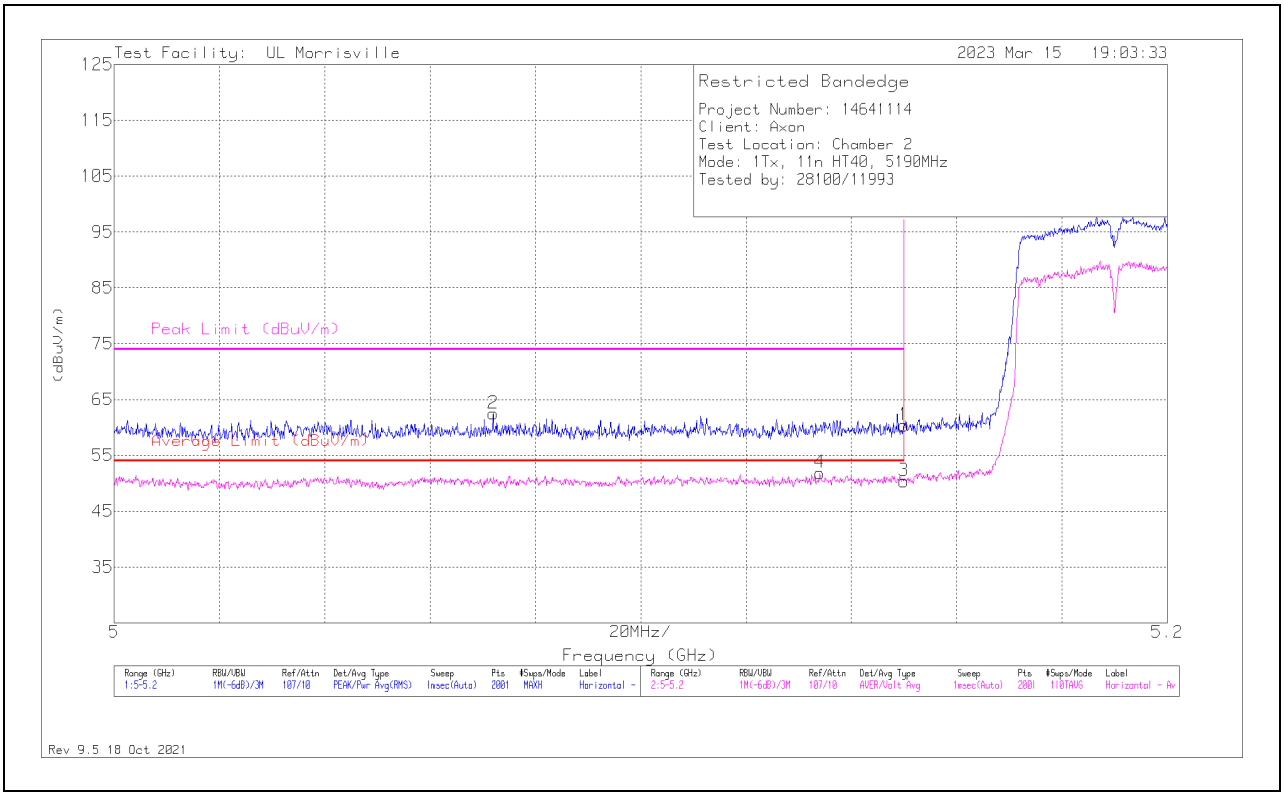
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

10.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (LOW CHANNEL)

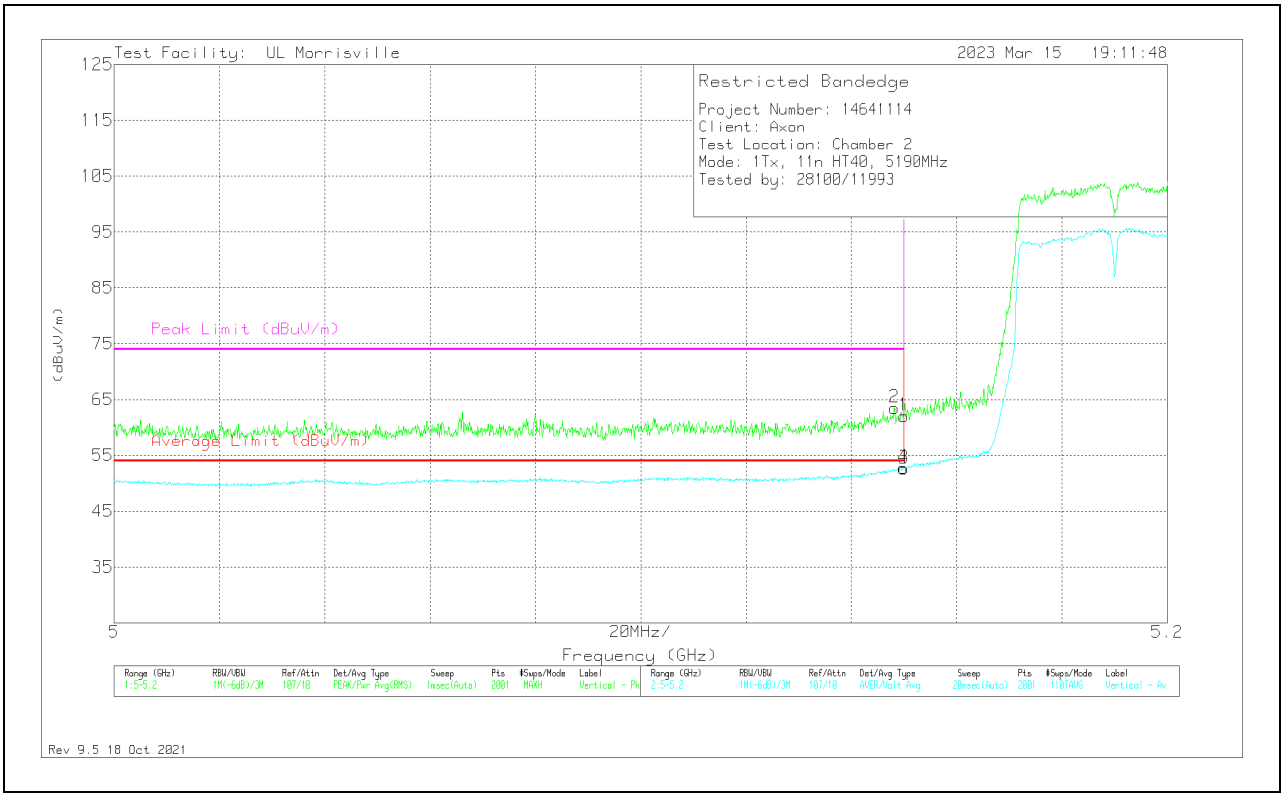
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.15	38.59	Pk	34.3	-22.6	10.1	0	60.39	-	-	74	-13.61	348	371	H
2	* ** 5.072	40.89	Pk	34.1	-22.4	9.9	0	62.49	-	-	74	-11.51	348	371	H
3	* ** 5.15	27.71	ADV	34.3	-22.6	10.1	.89	50.4	54	-3.6	-	-	348	371	H
4	* ** 5.134	29.06	ADV	34.2	-22.3	10	.89	51.85	54	-2.15	-	-	348	371	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	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.15	40.27	Pk	34.3	-22.6	10.1	0	62.07	-	-	74	-11.93	301	295	V
2	* ** 5.1482	41.73	Pk	34.3	-22.6	10.1	0	63.53	-	-	74	-10.47	301	295	V
3	* ** 5.15	29.99	ADV	34.3	-22.6	10.1	.89	52.68	54	-1.32	-	-	301	295	V
4	* ** 5.1498	30.07	ADV	34.3	-22.6	10.1	.89	52.76	54	-1.24	-	-	301	295	V

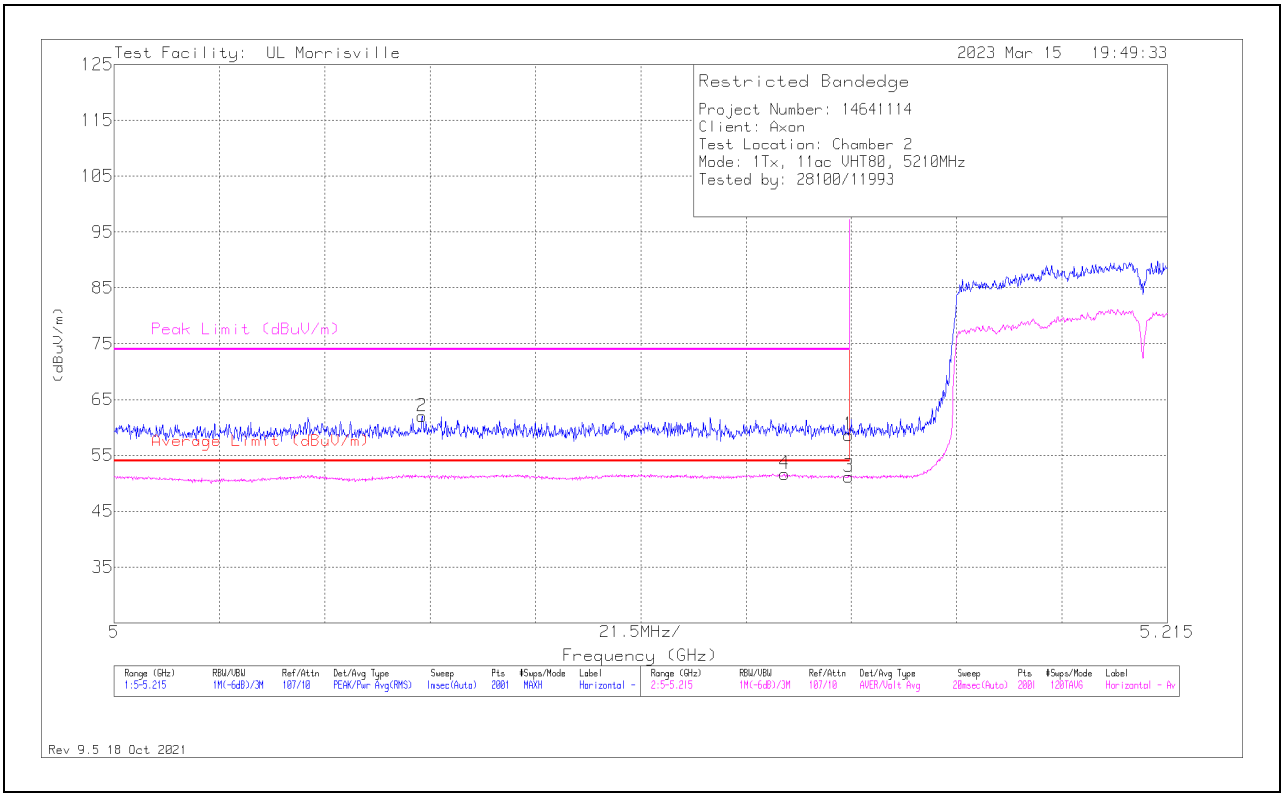
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

10.1.4. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (MID CHANNEL)

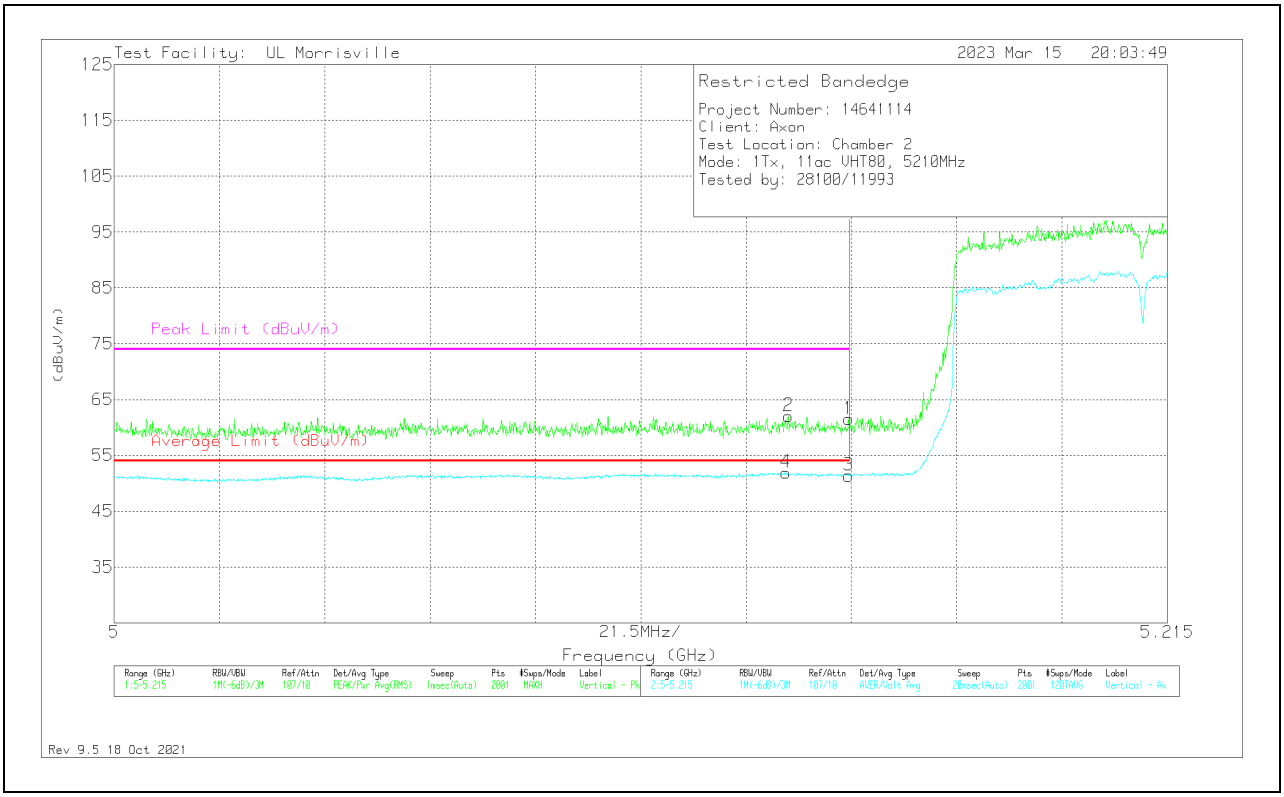
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.14996	36.86	Pk	34.3	-22.6	10.1	0	58.66	-	-	74	-15.34	341	367	H
2	* ** 5.06289	40.2	Pk	34.1	-22.3	10	0	62	-	-	74	-12	341	367	H
3	* ** 5.14996	27.82	ADV	34.3	-22.6	10.1	1.59	51.21	54	-2.79	-	-	341	367	H
4	* ** 5.13685	28.21	ADV	34.2	-22.3	10	1.59	51.7	54	-2.3	-	-	341	367	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



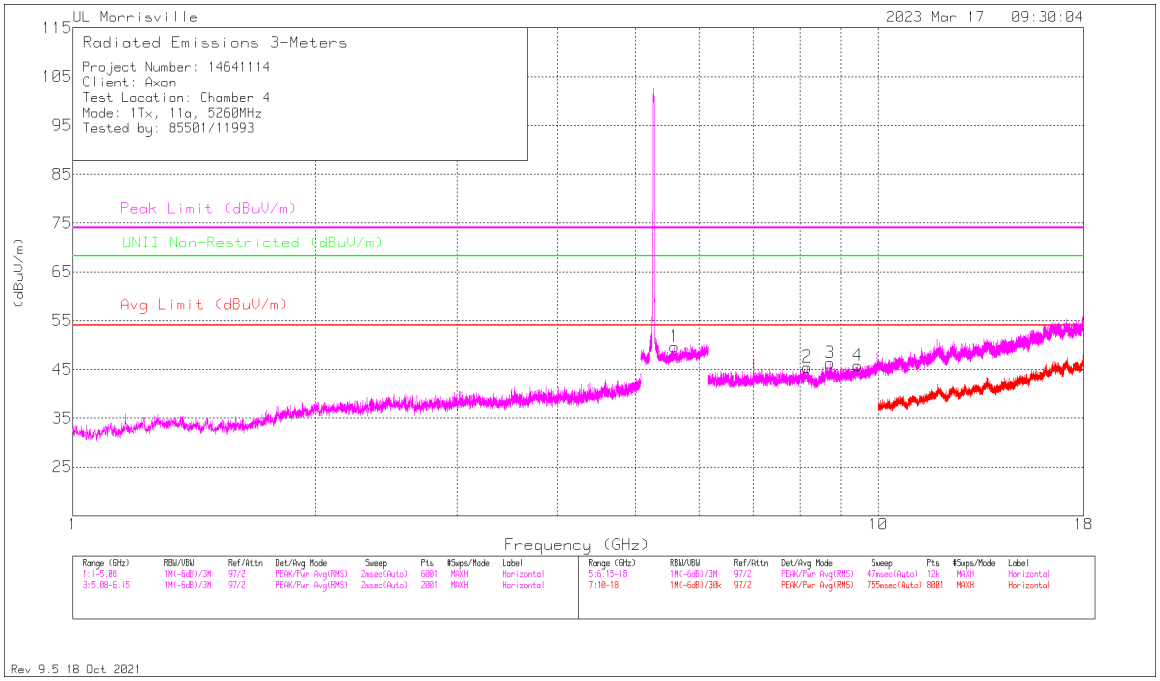
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.14996	39.7	Pk	34.3	-22.6	10.1	0	61.5	-	-	74	-12.5	292	331	V
2	* ** 5.1376	40.12	Pk	34.2	-22.4	10.1	0	62.02	-	-	74	-11.98	292	331	V
3	* ** 5.14996	27.98	ADV	34.3	-22.6	10.1	1.59	51.37	54	-2.63	-	-	292	331	V
4	* ** 5.13717	28.52	ADV	34.2	-22.4	10	1.59	51.91	54	-2.09	-	-	292	331	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

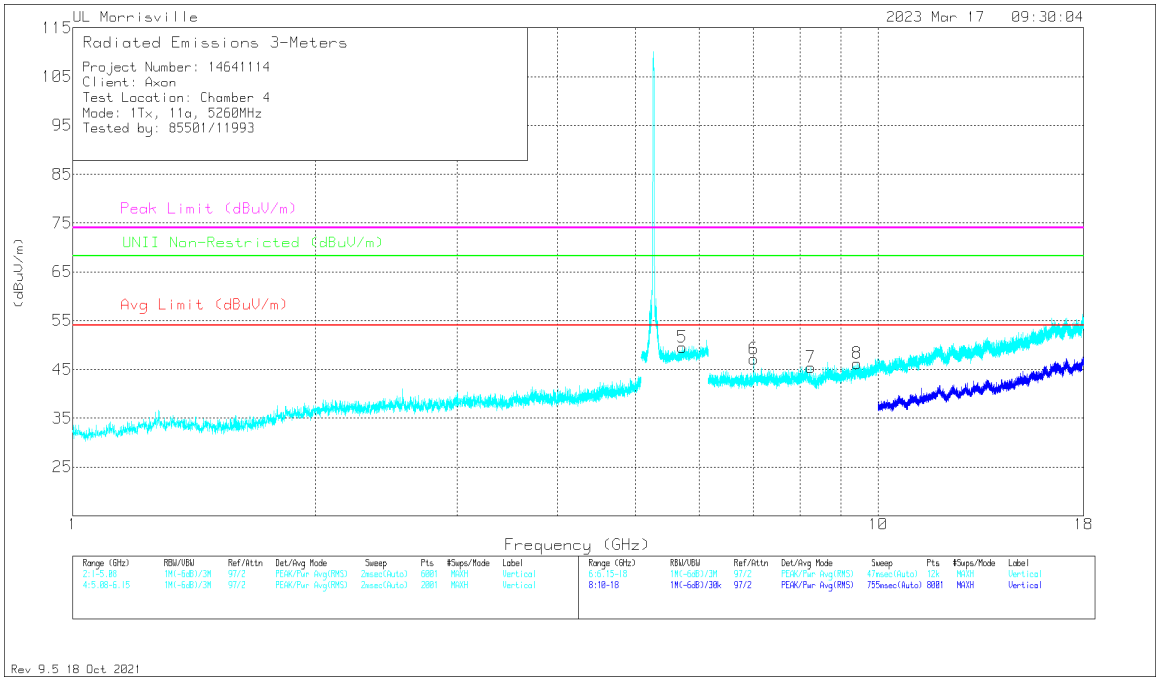
10.1.5. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



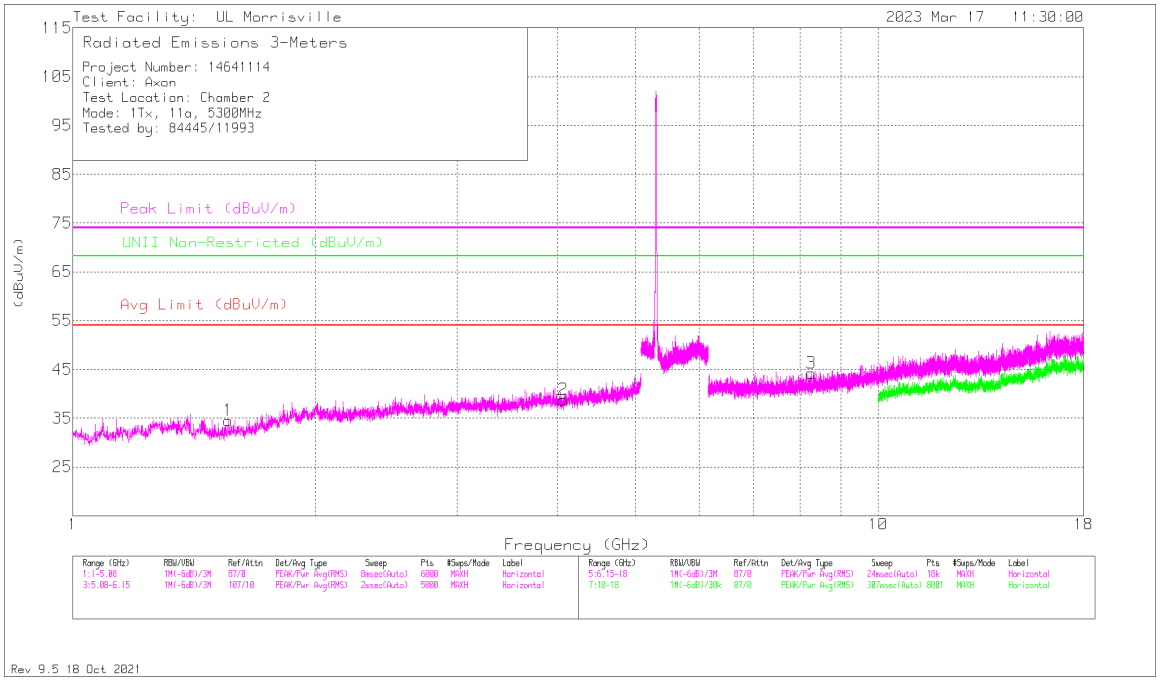
VERTICAL

RADIATED EMISSIONS

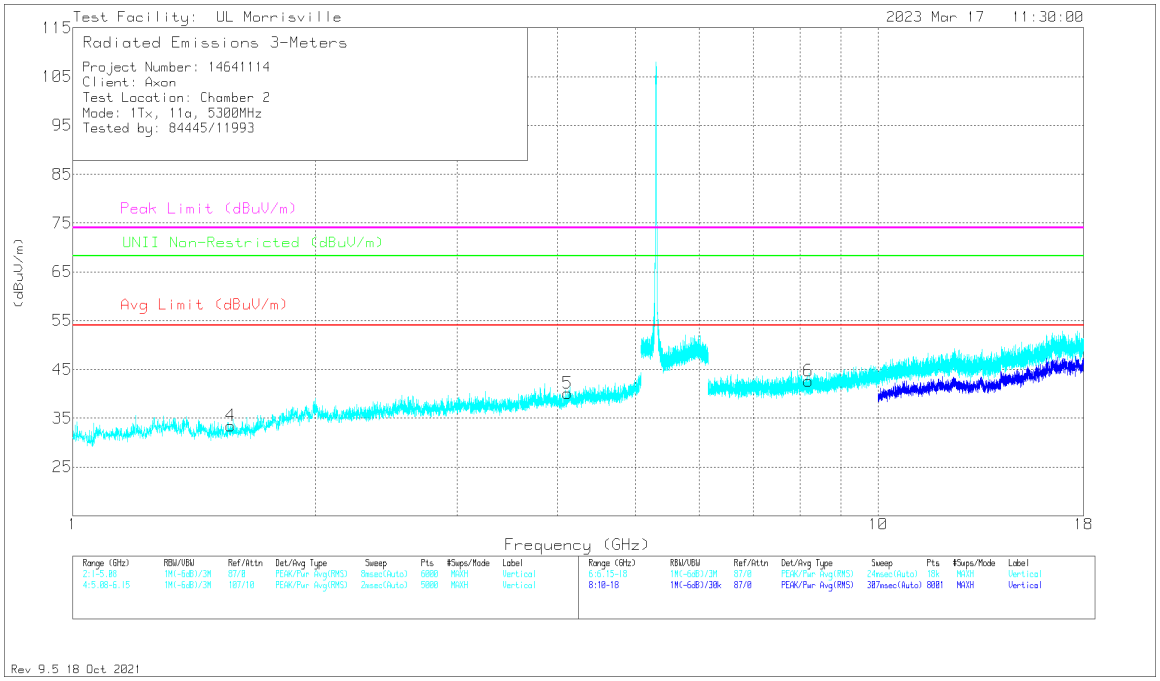
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* ** 8.1645	36.87	Pk	35.7	-27.1	0	45.47	54	-8.53	74	-28.53	-	-	0-360	100	H
4	* ** 9.43739	35.06	Pk	36.5	-25.7	0	45.86	54	-8.14	74	-28.14	-	-	0-360	100	H
7	* ** 8.25436	36.99	Pk	35.7	-27.3	0	45.39	54	-8.61	74	-28.61	-	-	0-360	200	V
8	* ** 9.42653	35.55	Pk	36.5	-25.8	0	46.25	54	-7.75	74	-27.75	-	-	0-360	200	V
1	5.59002	24.26	PK2	34.8	-9.3	0	49.76	-	-	74	-24.24	68.2	-18.44	360	100	H
	5.59255	11.8	ADV	34.8	-9.2	0	37.4	54	-16.6	-	-	-	-	360	100	H
5	5.71457	24.41	PK2	34.8	-9.2	0	50.01	-	-	74	-23.99	68.2	-18.19	256	131	V
	5.71264	11.72	ADV	34.8	-9.2	0	37.32	54	-16.68	-	-	-	-	256	131	V
6	7.01308	39.69	Pk	35.7	-28.3	0	47.09	54	-6.91	74	-26.91	68.2	-21.11	0-360	200	V
3	8.72046	36.73	Pk	35.9	-26.3	0	46.33	54	-7.67	74	-27.67	68.2	-21.87	0-360	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak
ADV - Linear Voltage Average

MID CHANNEL RESULTS



HORIZONTAL



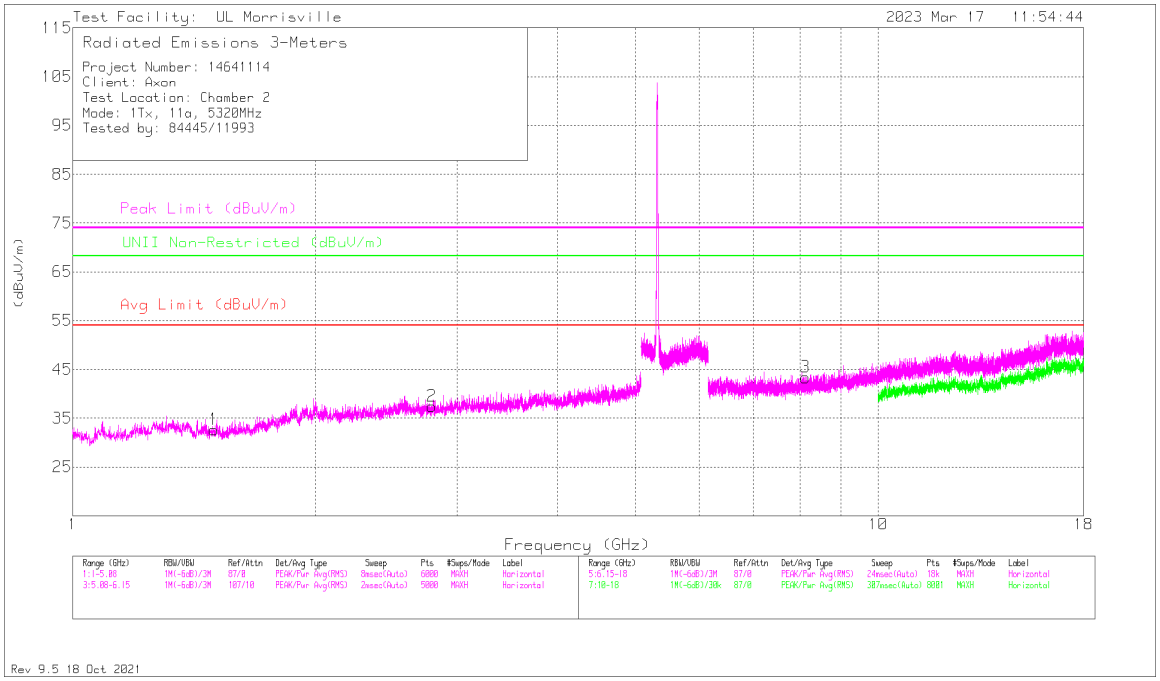
VERTICAL

RADIATED EMISSIONS

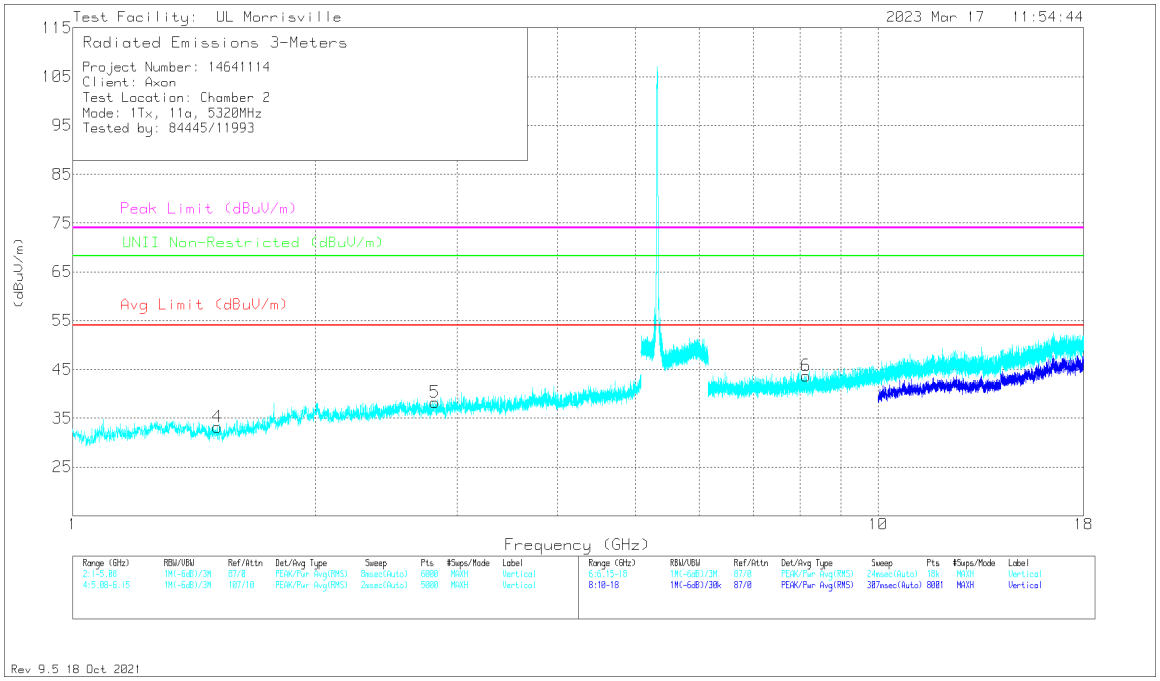
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.56041	41.05	Pk	28	-34.6	34.45	54	-19.55	74	-39.55	-	-	0-360	200	H
2	* ** 4.06391	37.68	Pk	33.4	-32.3	38.78	54	-15.22	74	-35.22	-	-	0-360	200	H
4	* ** 1.57061	39.8	Pk	28.1	-34.4	33.5	54	-20.5	74	-40.5	-	-	0-360	101	V
5	* ** 4.11764	37.55	Pk	33.4	-30.9	40.05	54	-13.95	74	-33.95	-	-	0-360	200	V
3	* ** 8.26008	35.56	Pk	35.8	-27.1	44.26	54	-9.74	74	-29.74	-	-	0-360	101	H
6	* ** 8.19621	34.04	Pk	35.8	-27.2	42.64	54	-11.36	74	-31.36	-	-	0-360	199	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.4958	39.31	Pk	28.3	-34.9	32.71	54	-21.29	74	-41.29	-	-	0-360	101	H
2	* ** 2.79142	38.4	Pk	32.6	-33.6	37.4	54	-16.6	74	-36.6	-	-	0-360	199	H
4	* ** 1.51213	39.98	Pk	28.1	-34.9	33.18	54	-20.82	74	-40.82	-	-	0-360	101	V
5	* ** 2.8159	39.05	Pk	32.6	-33.4	38.25	54	-15.75	74	-35.75	-	-	0-360	101	V
3	* ** 8.13169	34.65	Pk	35.8	-27.1	43.35	54	-10.65	74	-30.65	-	-	0-360	101	H
6	* ** 8.14157	35.08	Pk	35.8	-27.2	43.68	54	-10.32	74	-30.32	-	-	0-360	199	V

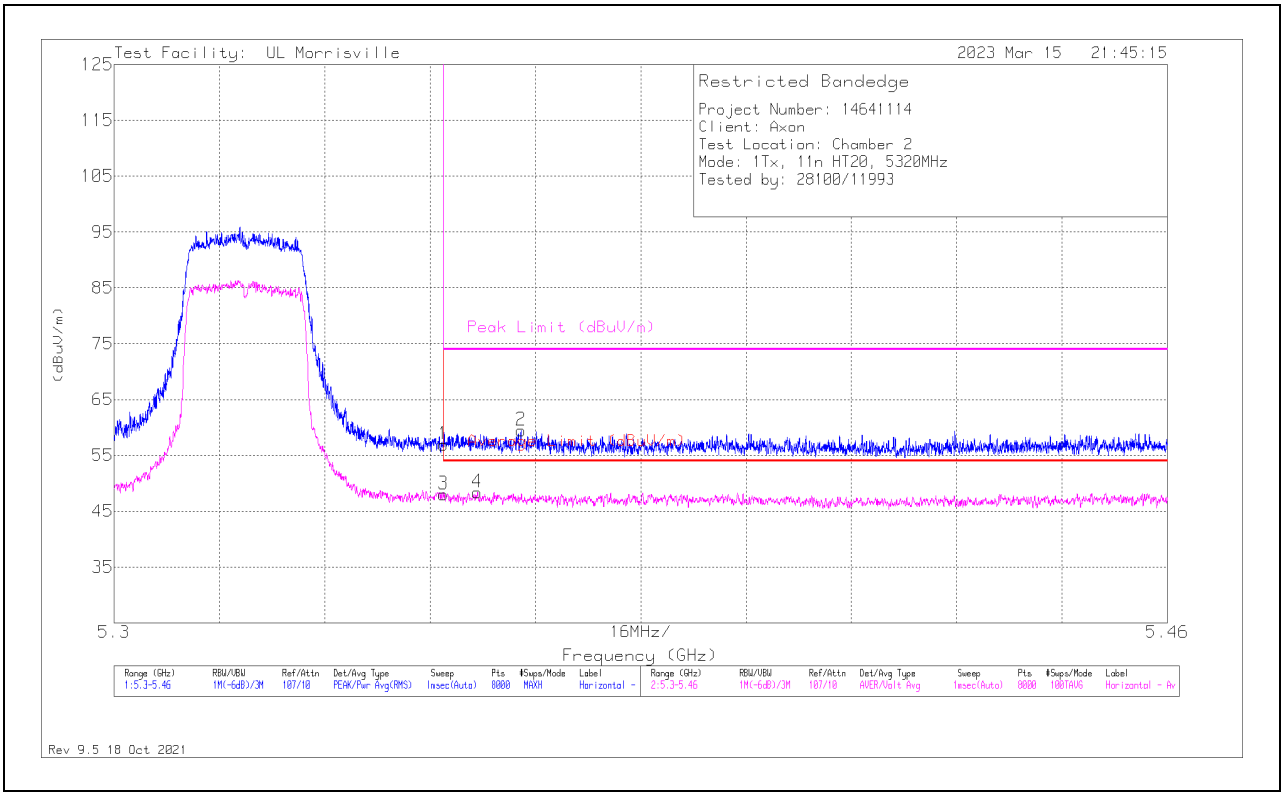
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

10.1.6. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (HIGH CHANNEL)

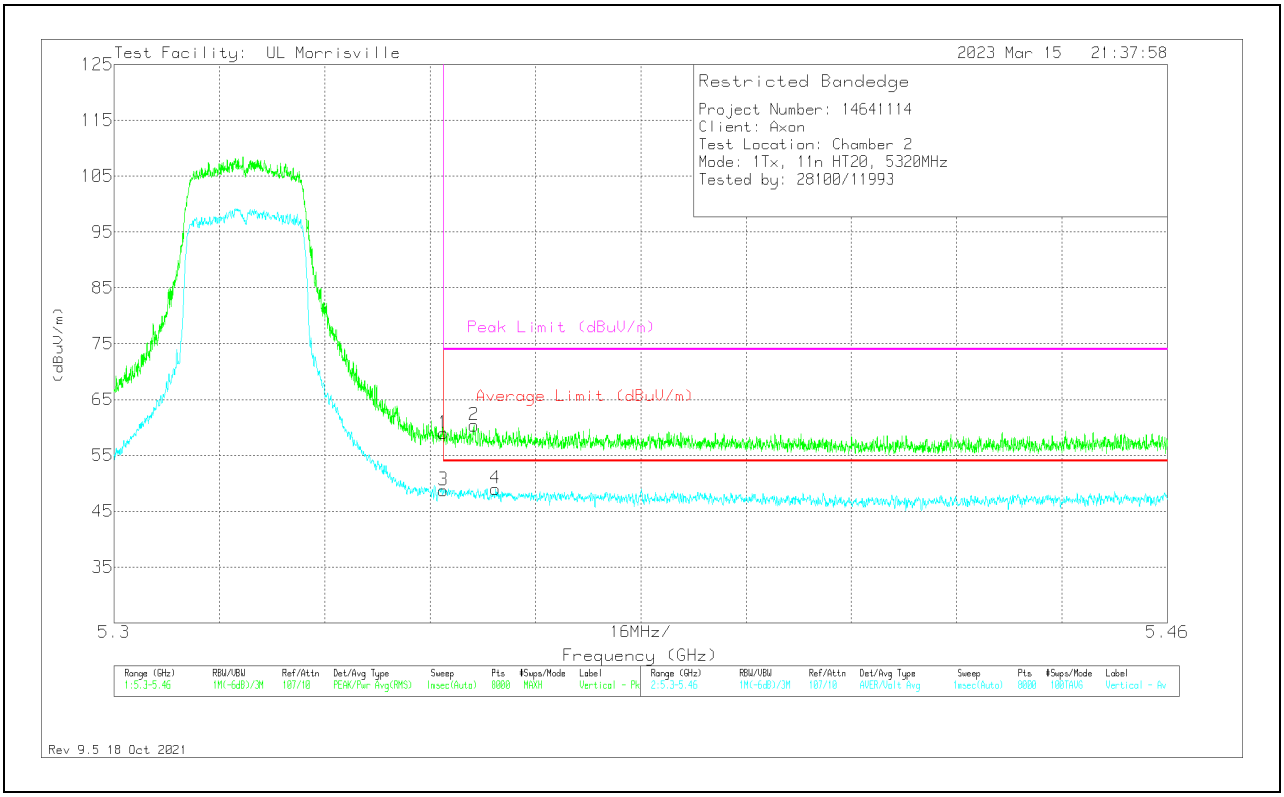
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.35001	35.35	Pk	34.4	-22.7	9.9	0	56.95	-	-	74	-17.05	306	100	H
2	* ** 5.36181	38.2	Pk	34.4	-22.9	9.8	0	59.5	-	-	74	-14.5	306	100	H
3	* ** 5.35001	26.45	ADV	34.4	-22.7	9.9	0	48.05	54	-5.95	-	-	306	100	H
4	* ** 5.35519	26.98	ADV	34.4	-22.8	9.8	0	48.38	54	-5.62	-	-	306	100	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	AT0072 (dB/m)	Gain/Loss (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.35001	37.35	Pk	34.4	-22.7	9.9	0	58.95	-	-	74	-15.05	306	100	V
2	* ** 5.35467	38.98	Pk	34.4	-22.8	9.8	0	60.38	-	-	74	-13.62	306	100	V
3	* ** 5.35001	27.15	ADV	34.4	-22.7	9.9	0	48.75	54	-5.25	-	-	306	100	V
4	* ** 5.35795	27.64	ADV	34.4	-22.8	9.8	0	49.04	54	-4.96	-	-	306	100	V

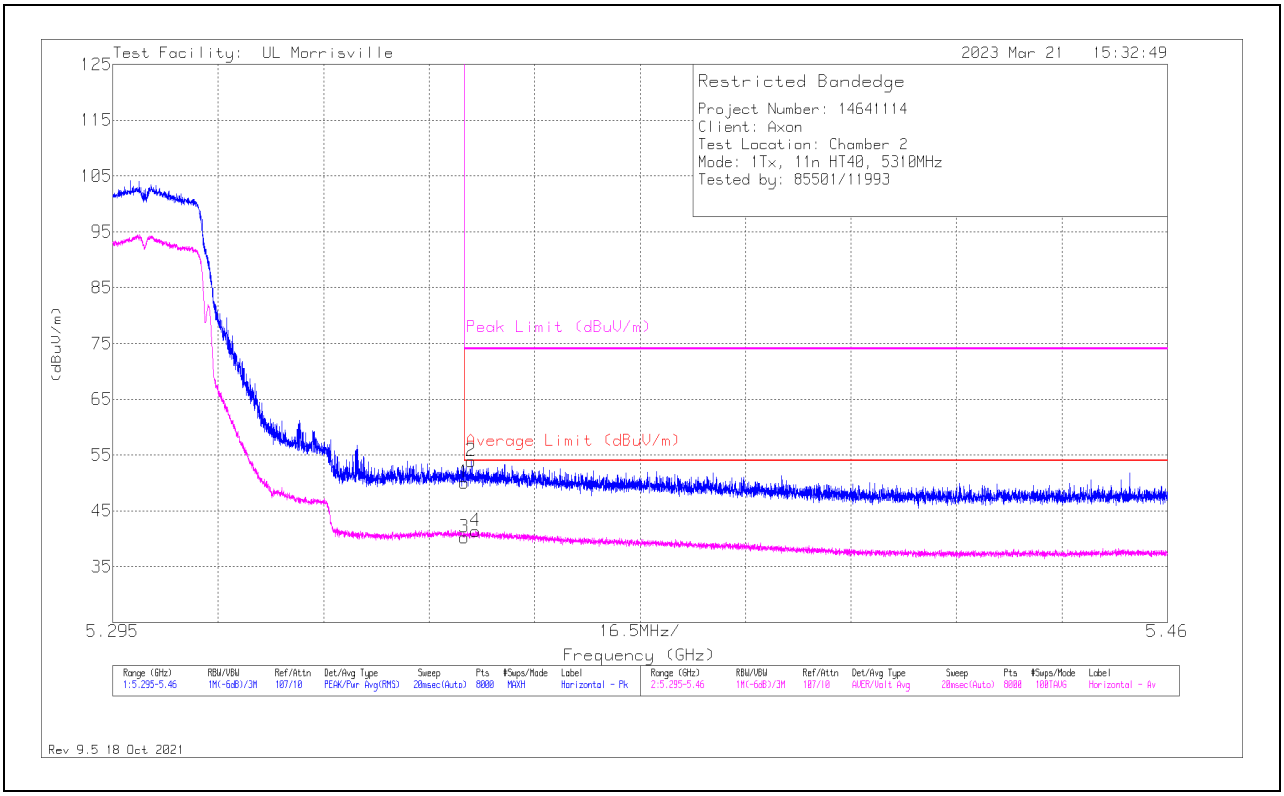
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

10.1.7. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND

1TX Antenna 1 MODE

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.35001	38.36	Pk	34.4	-22.7	0	50.06	-	-	74	-23.94	99	106	H
2	* ** 5.35103	42.24	Pk	34.4	-22.7	0	53.94	-	-	74	-20.06	99	106	H
3	* ** 5.35001	28.58	ADV	34.4	-22.7	0.33	40.61	54	-13.39	-	-	99	106	H
4	* ** 5.35175	29.65	ADV	34.4	-22.7	0.33	41.68	54	-12.32	-	-	99	106	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