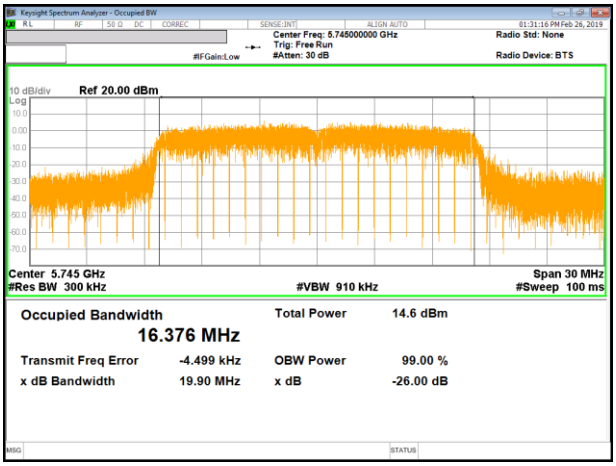
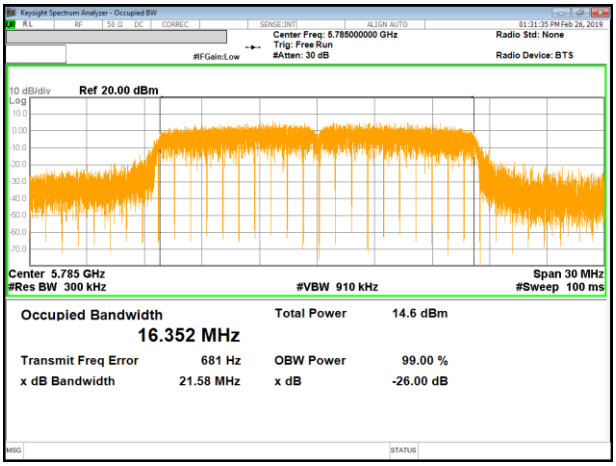
UNII 5.8 GHz IEEE 802.11a mode

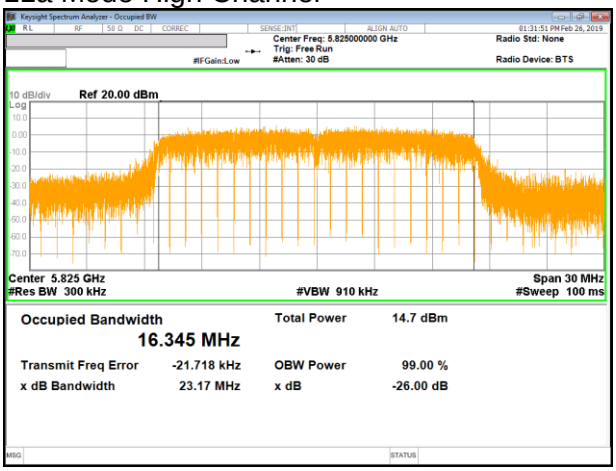
11a Mode Low Channel



11a Mode Middle Channel

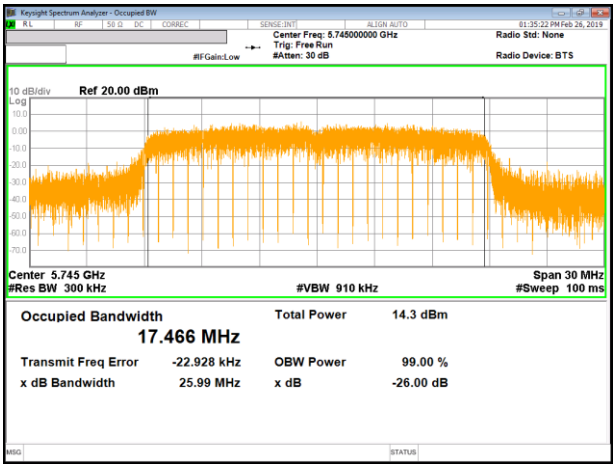


11a Mode High Channel

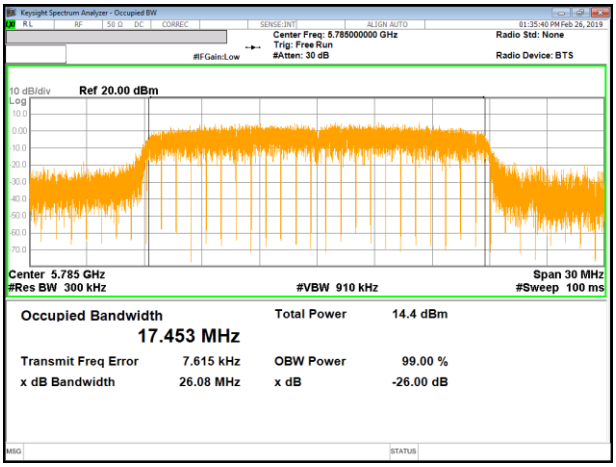


UNII 5.8 GHz IEEE 802.11n HT20 mode

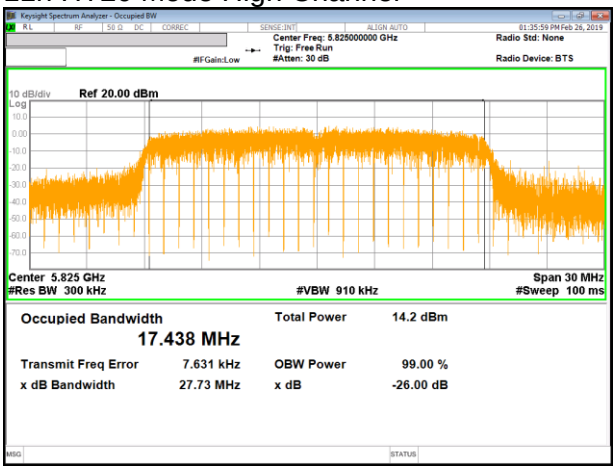
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

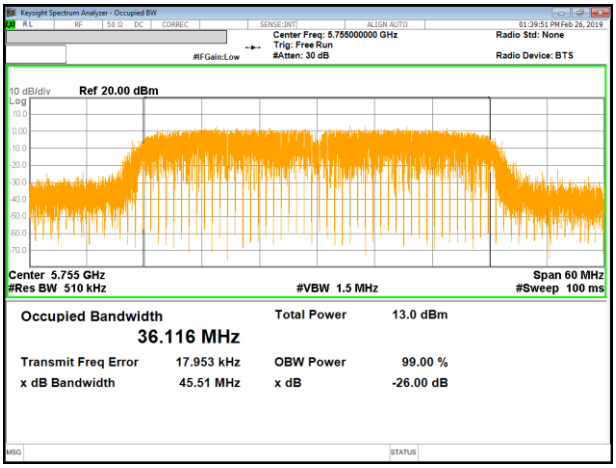


11n HT20 Mode High Channel

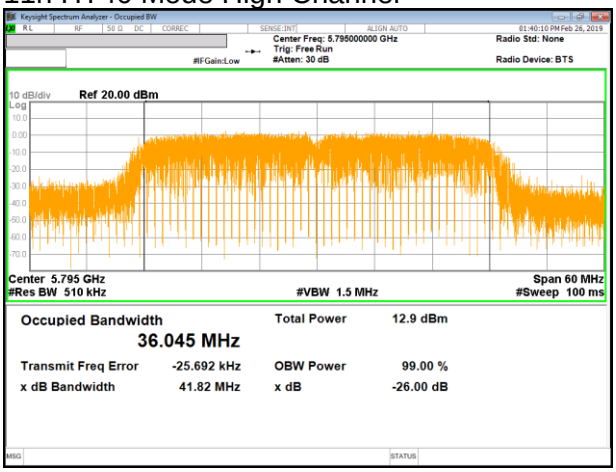


UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel



11n HT40 Mode High Channel



UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel

10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v01r03: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

10.1.1. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5720	2.90	0.5
Low	5745	15.30	0.5
Mid	5785	15.75	0.5
High	5825	15.50	0.5
Worst		2.90	

10.1.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5720	2.65	0.5
Low	5745	16.27	0.5
Mid	5785	15.05	0.5
High	5825	16.03	0.5
Worst		2.65	

10.1.3. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5710	2.41	0.5
Low	5755	35.08	0.5
High	5795	34.06	0.5
Worst		2.41	

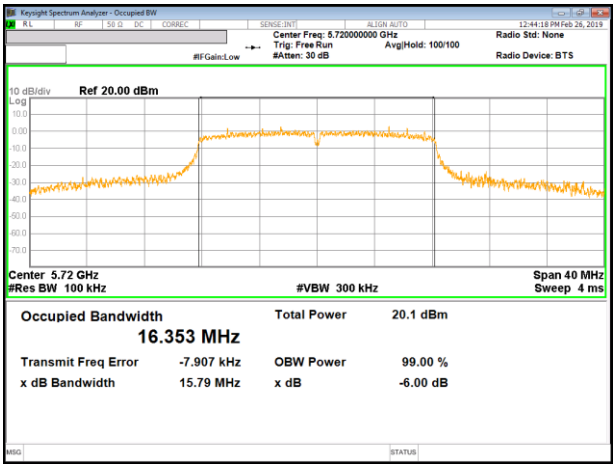
10.1.4. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5690	2.55	0.5
Middle	5775	75.11	0.5
Worst		2.55	

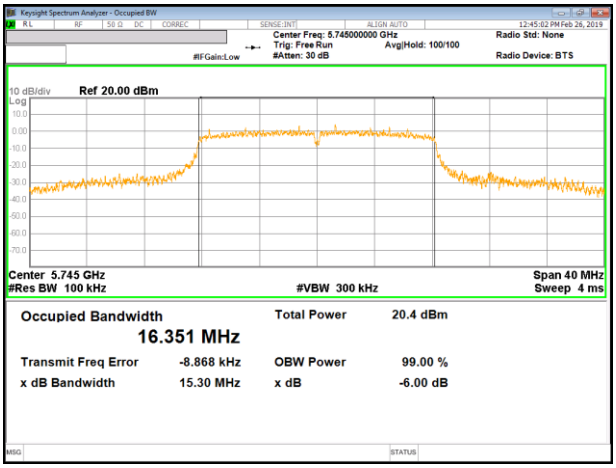
10.1.5. 6 dB BANDWIDTH PLOTS

UNII 5.8 GHz IEEE 802.11a mode

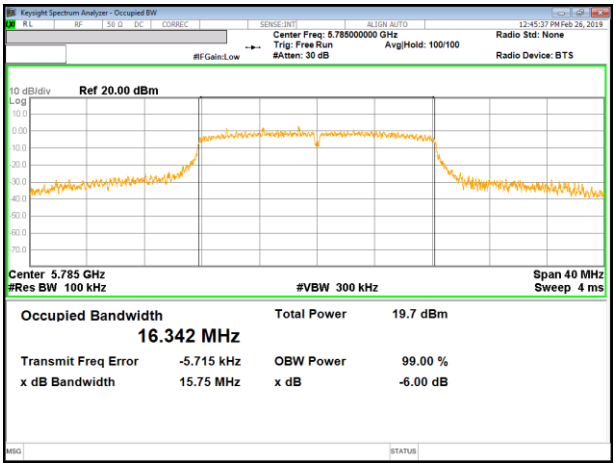
11a Mode Straddle Channel



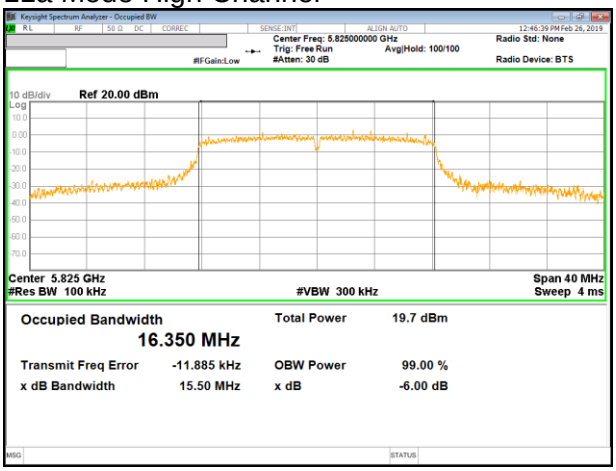
11a Mode Low Channel



11a Mode Middle Channel

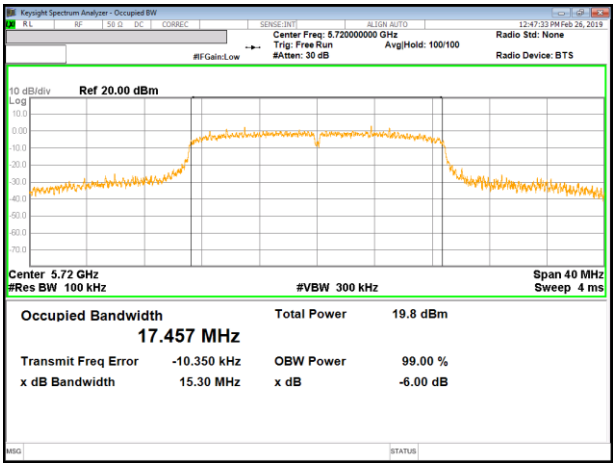


11a Mode High Channel

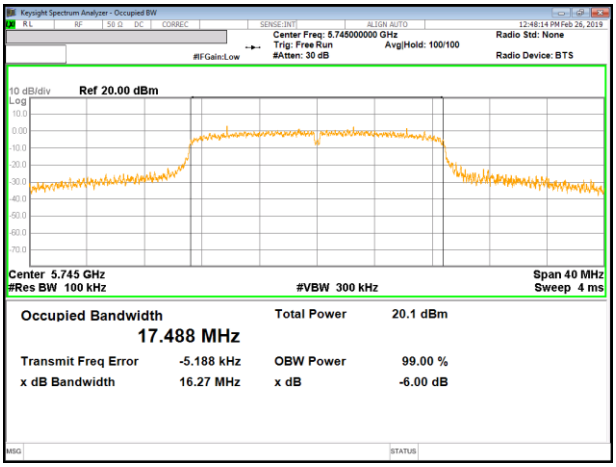


UNII 5.8 GHz IEEE 802.11n HT20 mode

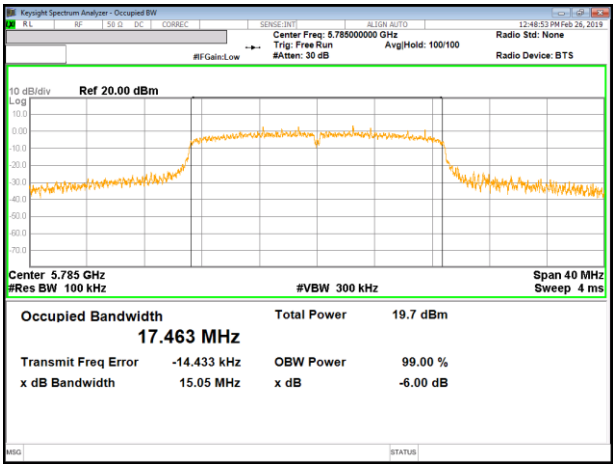
11n HT20 Mode Straddle Channel



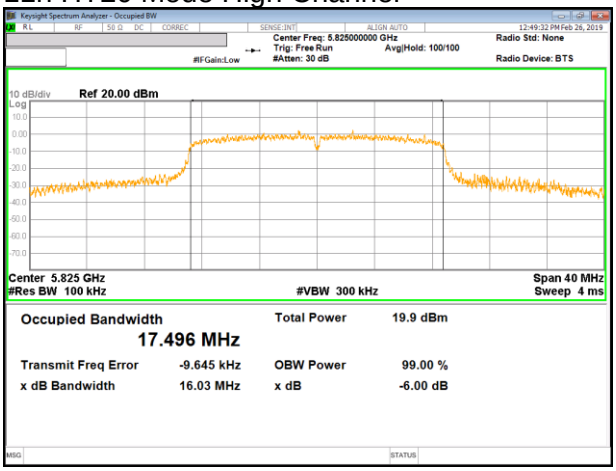
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

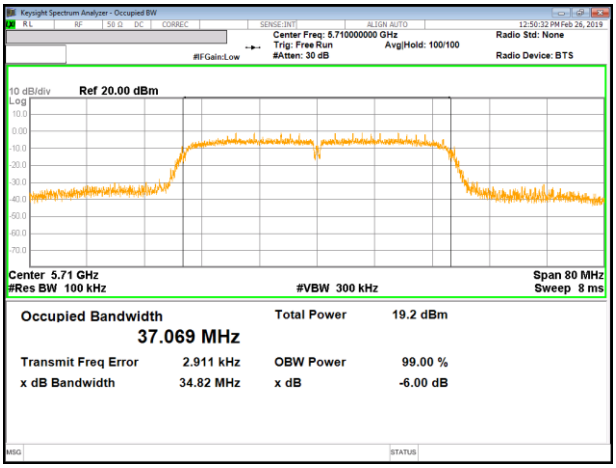


11n HT20 Mode High Channel

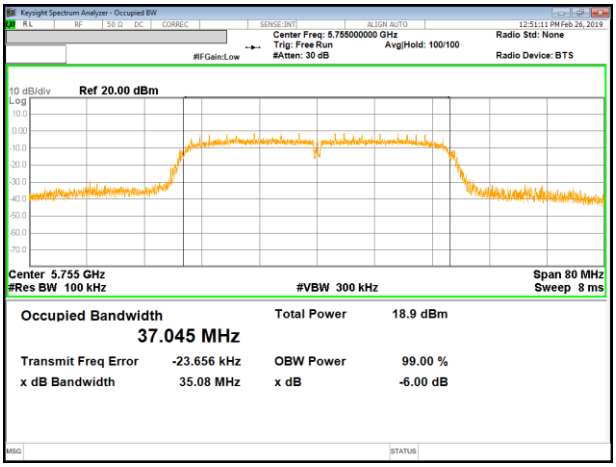


UNII 5.8 GHz IEEE 802.11n HT40 mode

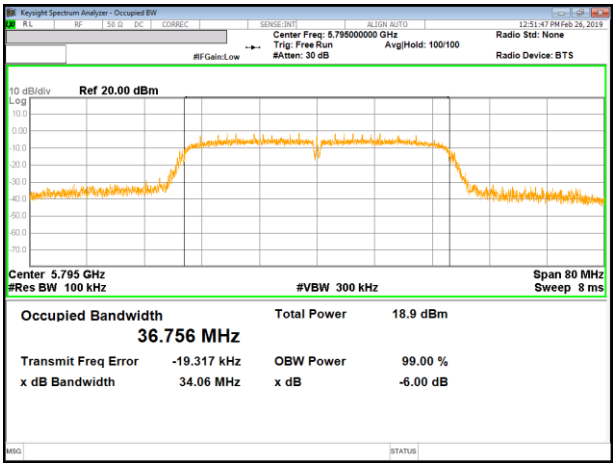
11n HT40 Mode Straddle Channel



11n HT40 Mode Low Channel

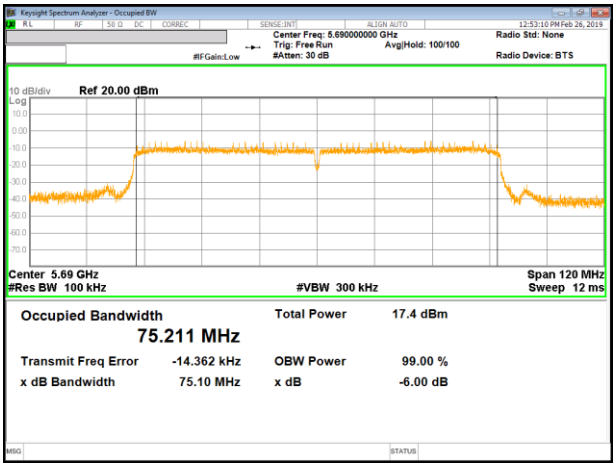


11n HT40 Mode Middle Channel

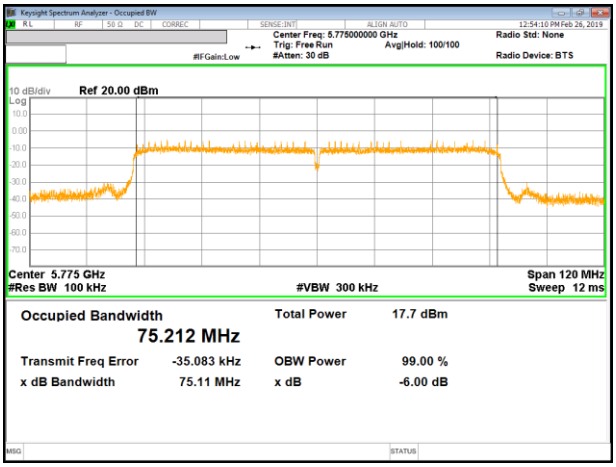


UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Straddle Channel



11ac VHT80 Mode Middle Channel



10.2. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)

For the band 5.15–5.25 GHz, 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.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, 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.

For the 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.

TEST PROCEDURE

KDB 789033 Method SA-1 and SA-2 are used for PPSD. RBW set to1MHz(500kHz for the band 5.725-5.85 GHz, the VBW >= 3 x RBW, RMS detector and trace averaging). Peak marker value of the spectrum is used for PSD. Add duty cycle correction factor for all mode.

KDB 789033 Method PM is used for output power.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

5 GHz

Frequency Band [MHz]	Antenna Gain [dBi]
5150 - 5250	-2.38
5250 - 5350	-2.96
5470 - 5725	-4.00
5725 - 5850	-2.51

RESULTS

10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5180	19.44	-2.38	-2.38
Mid	5200	23.57	-2.38	-2.38
High	5240	23.60	-2.38	-2.38

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5180	23.89	23.89	11.00
Mid	5200	24.00	24.00	11.00
High	5240	24.00	24.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5180	14.81	14.93	23.89	-8.96
Mid	5200	14.77	14.89	24.00	-9.11
High	5240	15.07	15.19	24.00	-8.81

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5180	5.50	5.62	11.00	-5.38
Mid	5200	4.46	4.59	11.00	-6.41
High	5240	4.97	5.09	11.00	-5.91

10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5180	24.70	-2.38	-2.38
Mid	5200	22.78	-2.38	-2.38
High	5240	27.91	-2.38	-2.38

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5180	24.00	24.00	11.00
Mid	5200	24.00	24.00	11.00
High	5240	24.00	24.00	11.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5180	14.55	14.68	24.00	-9.32
Mid	5200	14.49	14.62	24.00	-9.38
High	5240	14.91	15.04	24.00	-8.96

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5180	4.06	4.19	11.00	-6.81
Mid	5200	4.29	4.42	11.00	-6.58
High	5240	4.32	4.45	11.00	-6.55

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5190	58.59	-2.38	-2.38
High	5230	48.76	-2.38	-2.38

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5190	24.00	24.00	11.00
High	5230	24.00	24.00	11.00

Duty Cycle CF [dB]	0.36	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5190	13.66	14.02	24.00	-9.98
High	5230	13.25	13.61	24.00	-10.39

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5190	-0.10	0.25	11.00	-10.75
High	5230	-0.14	0.22	11.00	-10.78

10.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5210	112.70	-2.38	-2.38

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Middle	5210	24.00	24.00	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5210	11.78	12.02	24.00	-11.98

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Middle	5210	-4.89	-4.65	11.00	-15.65

10.2.5. 802.11a MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5260	24.42	-2.96	-2.96
Mid	5300	22.61	-2.96	-2.96
High	5320	20.30	-2.96	-2.96

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5260	24.00	24.00	11.00
Mid	5300	24.00	24.00	11.00
High	5320	24.00	24.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	15.18	15.30	24.00	-8.70
Mid	5300	14.94	15.06	24.00	-8.94
High	5320	15.00	15.12	24.00	-8.88

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5260	4.93	5.06	11.00	-5.94
Mid	5300	4.73	4.86	11.00	-6.14
High	5320	4.64	4.76	11.00	-6.24

10.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5260	24.58	-2.96	-2.96
Mid	5300	25.36	-2.96	-2.96
High	5320	24.83	-2.96	-2.96

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5260	24.00	24.00	11.00
Mid	5300	24.00	24.00	11.00
High	5320	24.00	24.00	11.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	14.88	15.01	24.00	-8.99
Mid	5300	14.75	14.88	24.00	-9.12
High	5320	14.89	15.02	24.00	-8.98

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5260	4.24	4.37	11.00	-6.63
Mid	5300	4.42	4.55	11.00	-6.45
High	5320	4.31	4.44	11.00	-6.56

10.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5270	42.98	-2.96	-2.96
High	5310	58.51	-2.96	-2.96

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5270	24.00	24.00	11.00
High	5310	24.00	24.00	11.00

Duty Cycle CF [dB]	0.36	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5270	13.17	13.53	24.00	-10.47
High	5310	13.36	13.72	24.00	-10.28

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5270	-0.26	0.10	11.00	-10.90
High	5310	-0.36	0.00	11.00	-11.00

10.2.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5290	108.40	-2.96	-2.96

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	PPSD Limit [dBm/MHz]
Middle	5290	24.00	24.00	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5290	11.76	12.00	24.00	-12.00

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Middle	5290	-5.08	-4.84	11.00	-15.84

10.2.9. 802.11a MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5500	23.02	-4.00	-4.00
Mid	5580	22.02	-4.00	-4.00
High	5700	22.44	-4.00	-4.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5500	24.00	24.00	11.00
Mid	5580	24.00	24.00	11.00
High	5700	24.00	24.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	15.00	15.12	24.00	-8.88
Mid	5580	14.39	14.51	24.00	-9.49
High	5700	14.88	15.00	24.00	-9.00

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5500	4.81	4.93	11.00	-6.07
Mid	5580	4.51	4.63	11.00	-6.37
High	5700	4.26	4.38	11.00	-6.62

10.2.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5500	24.49	-4.00	-4.00
Mid	5580	23.44	-4.00	-4.00
High	5700	21.65	-4.00	-4.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5500	24.00	24.00	11.00
Mid	5580	24.00	24.00	11.00
High	5700	24.00	24.00	11.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	14.69	14.82	24.00	-9.18
Mid	5580	14.68	14.81	24.00	-9.19
High	5700	14.49	14.62	24.00	-9.38

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5500	4.16	4.30	11.00	-6.70
Mid	5580	3.97	4.11	11.00	-6.89
High	5700	4.40	4.53	11.00	-6.47

10.2.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5510	42.47	-4.00	-4.00
Mid	5590	43.04	-4.00	-4.00
High	5670	41.80	-4.00	-4.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5510	24.00	24.00	11.00
Mid	5590	24.00	24.00	11.00
High	5670	24.00	24.00	11.00

Duty Cycle CF [dB]	0.36	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5510	13.39	13.75	24.00	-10.25
Mid	5590	13.15	13.51	24.00	-10.49
High	5670	12.85	13.21	24.00	-10.79

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5510	-0.62	-0.27	11.00	-11.27
Mid	5590	-0.80	-0.44	11.00	-11.44
High	5670	0.04	0.39	11.00	-10.61

10.2.12. 802.11ac VHT80 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5530	89.12	-4.00	-4.00
High	5610	113.70	-4.00	-4.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
Low	5530	24.00	24.00	11.00
High	5610	24.00	24.00	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5530	11.92	12.16	24.00	-11.84
High	5610	11.56	11.80	24.00	-12.20

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
Low	5530	-4.93	-4.69	11.00	-15.69
High	5610	-4.92	-4.68	11.00	-15.68

10.2.13. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5745	21.69	-2.51	-2.51
Mid	5785	19.59	-2.51	-2.51
High	5825	20.95	-2.51	-2.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/500kHz]
Low	5745	30.00	30.00	30.00
Mid	5785	30.00	30.00	30.00
High	5825	30.00	30.00	30.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	15.10	15.22	30.00	-14.78
Mid	5785	14.60	14.72	30.00	-15.28
High	5825	14.89	15.01	30.00	-14.99

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/500kHz]	Total Corr'd PPSD [dBm/500kHz]	PPSD Limit [dBm/500kHz]	PPSD Margin [dB]
Low	5745	2.10	2.22	30.00	-27.78
Mid	5785	1.78	1.91	30.00	-28.09
High	5825	1.48	1.60	30.00	-28.40

10.2.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5745	26.53	-2.51	-2.51
Mid	5785	26.05	-2.51	-2.51
High	5825	22.74	-2.51	-2.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/500kHz]
Low	5745	30.00	30.00	30.00
Mid	5785	30.00	30.00	30.00
High	5825	30.00	30.00	30.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	14.33	14.46	30.00	-15.54
Mid	5785	14.57	14.70	30.00	-15.30
High	5825	14.63	14.76	30.00	-15.24

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/500kHz]	Total Corr'd PPSD [dBm/500kHz]	PPSD Limit [dBm/500kHz]	PPSD Margin [dB]
Low	5745	1.24	1.37	30.00	-28.63
Mid	5785	1.28	1.41	30.00	-28.59
High	5825	1.38	1.51	30.00	-28.49

10.2.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5745	26.53	-2.51	-2.51
Mid	5785	26.05	-2.51	-2.51
High	5825	22.74	-2.51	-2.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/500kHz]
Low	5745	30.00	30.00	30.00
Mid	5785	30.00	30.00	30.00
High	5825	30.00	30.00	30.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	14.33	14.46	30.00	-15.54
Mid	5785	14.57	14.70	30.00	-15.30
High	5825	14.63	14.76	30.00	-15.24

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/500kHz]	Total Corr'd PPSD [dBm/500kHz]	PPSD Limit [dBm/500kHz]	PPSD Margin [dB]
Low	5745	1.24	1.37	30.00	-28.63
Mid	5785	1.28	1.41	30.00	-28.59
High	5825	1.38	1.51	30.00	-28.49

10.2.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5775	117.70	-2.51	-2.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Middle	5775	24.00	24.00	30.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5775	11.67	11.91	24.00	-12.09

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5775	-7.58	-7.34	30.00	-37.34

10.2.17. 802.11a MODE IN THE Straddle Channel

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5720	15.67	-4.00	-4.00
UNII-3	5720	5.67	-2.51	-2.51

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
UNII-2C	5720	22.95	22.95	11.00
UNII-3	5720	30.00	30.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5720	13.86	13.98	22.95	-8.97
UNII-3	5720	6.78	6.90	30.00	-23.10

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
UNII-2C	5720	4.60	4.72	11.00	-6.28
UNII-3*	5720	0.41	0.53	11.00	-10.47

* For UNII-3, the unit of PPSD is [dBm/500kHz].

10.2.18. 802.11n HT20 MODE IN THE Straddle Channel

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5720	16.52	-4.00	-4.00
UNII-3	5720	6.52	-2.51	-2.51

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
UNII-2C	5720	23.18	23.18	11.00
UNII-3	5720	19.14	19.14	11.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5720	13.63	13.76	23.18	-9.42
UNII-3	5720	6.91	7.04	19.14	-12.10

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
UNII-2C	5720	4.40	4.53	11.00	-6.47
UNII-3	5720	0.50	0.63	11.00	-10.37

* For UNII-3, the unit of PPSD is [dBm/500kHz].

10.2.19. 802.11n HT40 MODE IN THE Straddle Channel

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5710	36.53	-4.00	-4.00
UNII-3	5710	6.53	-2.51	-2.51

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
UNII-2C	5710	24.00	24.00	11.00
UNII-3	5710	19.15	19.15	11.00

Duty Cycle CF [dB]	0.36	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5710	12.83	13.18	24.00	-10.82
UNII-3	5710	1.18	1.54	19.15	-17.62

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
UNII-2C	5710	-0.54	-0.18	11.00	-11.18
UNII-3	5710	-5.81	-5.46	11.00	-16.46

* For UNII-3, the unit of PPSD is [dBm/500kHz].

10.2.20. 802.11ac VHT80 MODE IN THE Straddle Channel

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5690	93.85	-4.00	-4.00
UNII-3	5690	23.85	-2.51	-2.51

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm/MHz]
UNII-2C	5690	24.00	24.00	11.00
UNII-3	5690	24.00	19.29	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5690	11.37	11.60	24.00	-12.40
UNII-3	5690	-2.72	-2.48	19.29	-21.77

PPSD Results

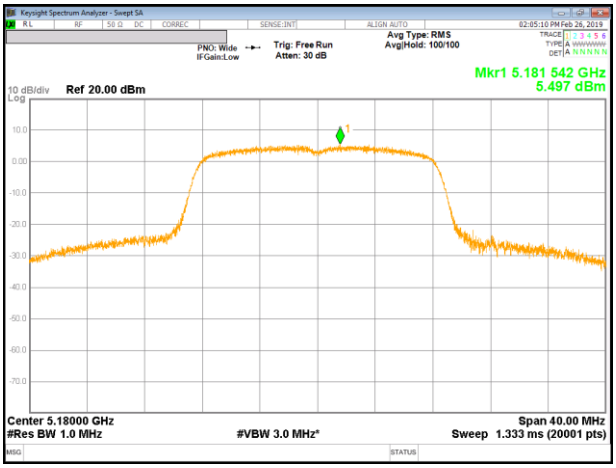
Channel	Frequency [MHz]	Meas PPSD [dBm/MHz]	Total Corr'd PPSD [dBm/MHz]	PPSD Limit [dBm/MHz]	PPSD Margin [dB]
UNII-2C	5690	-5.11	-4.88	11.00	-15.88
UNII-3	5690	-8.88	-8.64	11.00	-19.64

* For UNII-3, the unit of PPSD is [dBm/500kHz].

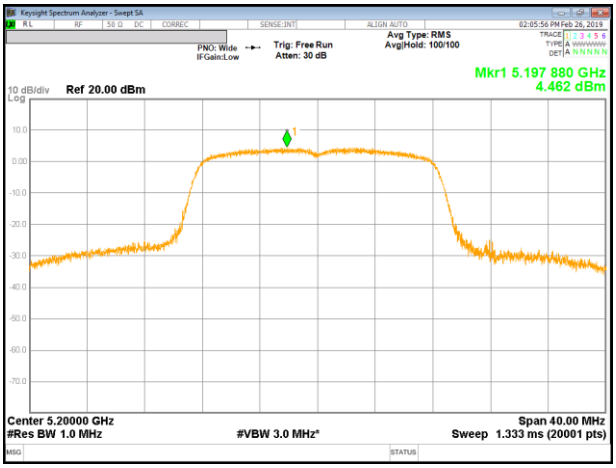
10.2.21. OUTPUT POWER AND PPSD PLOTS

UNII 5.2 GHz IEEE 802.11a mode

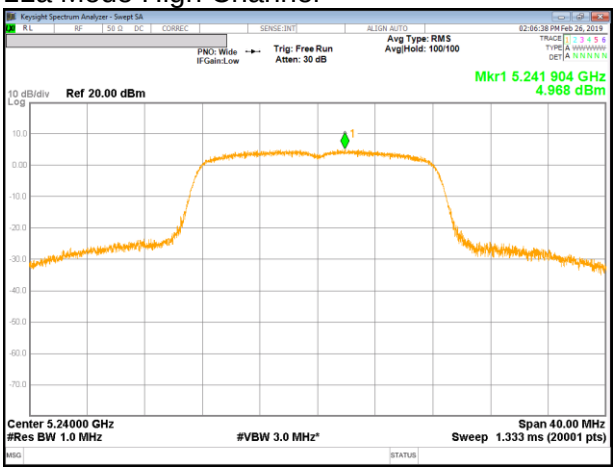
11a Mode Low Channel



11a Mode Middle Channel

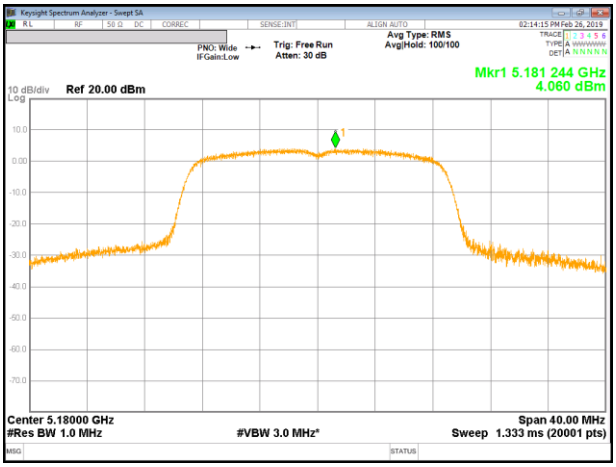


11a Mode High Channel

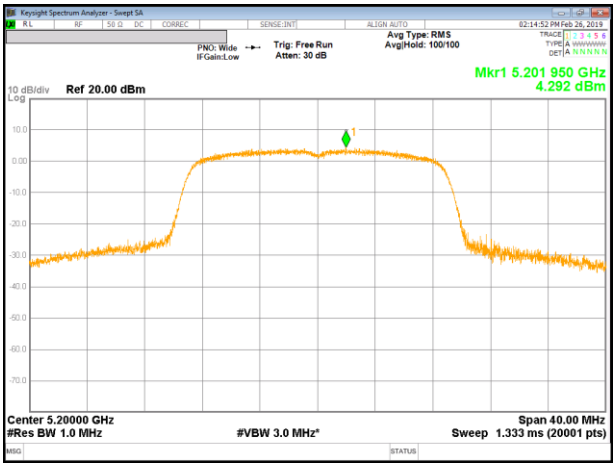


UNII 5.2 GHz IEEE 802.11n HT20 mode

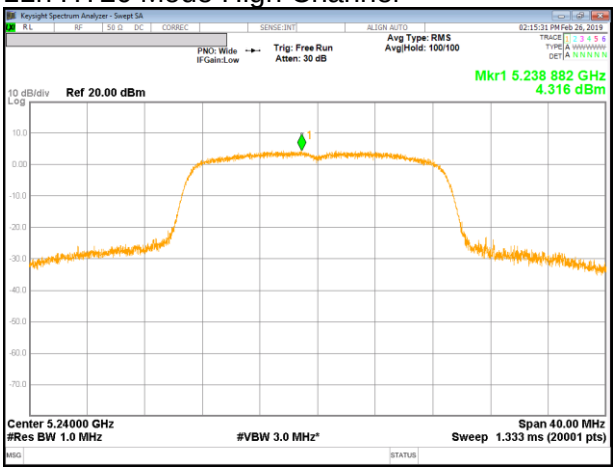
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

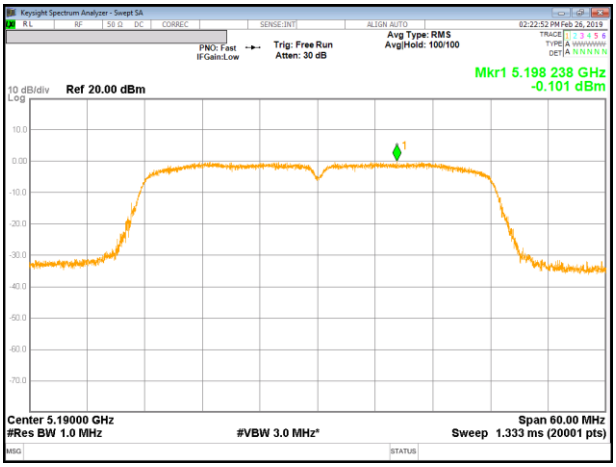


11n HT20 Mode High Channel

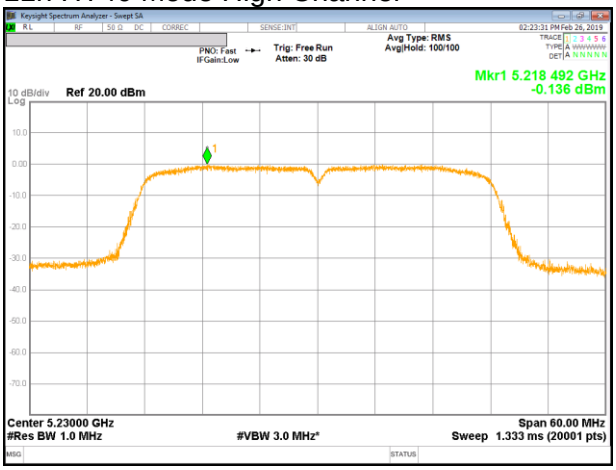


UNII 5.2 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

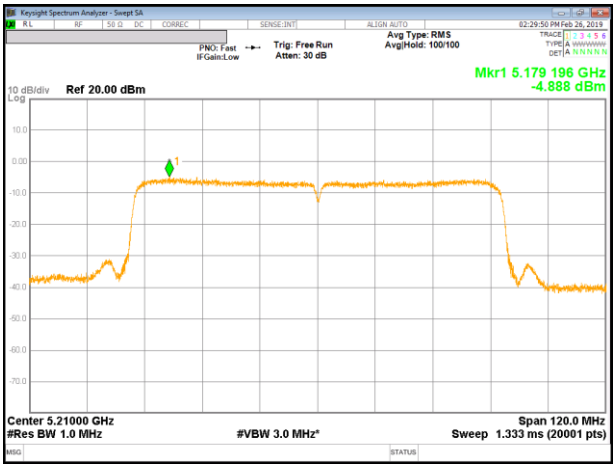


11n HT40 Mode High Channel



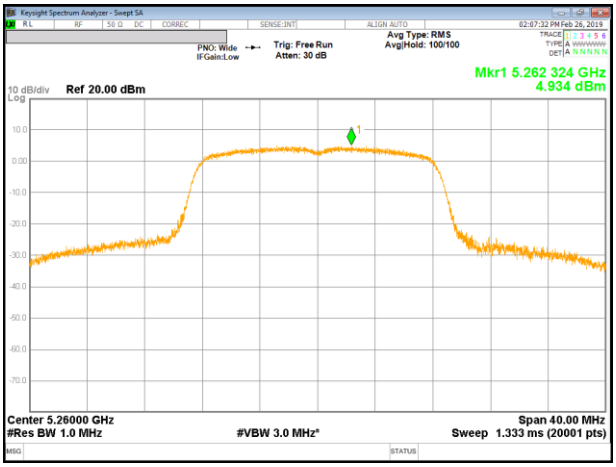
UNII 5.2 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel

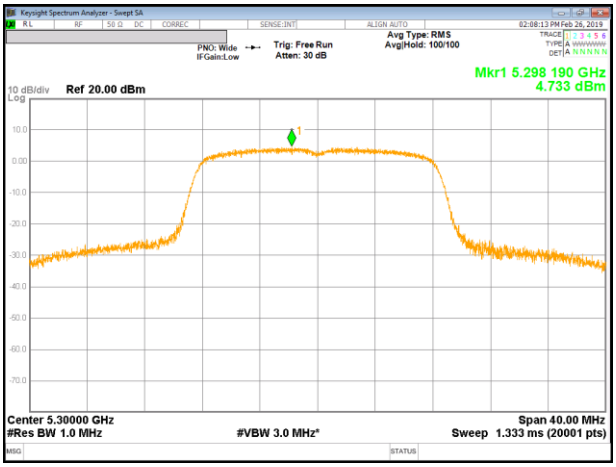


UNII 5.3 GHz IEEE 802.11a mode

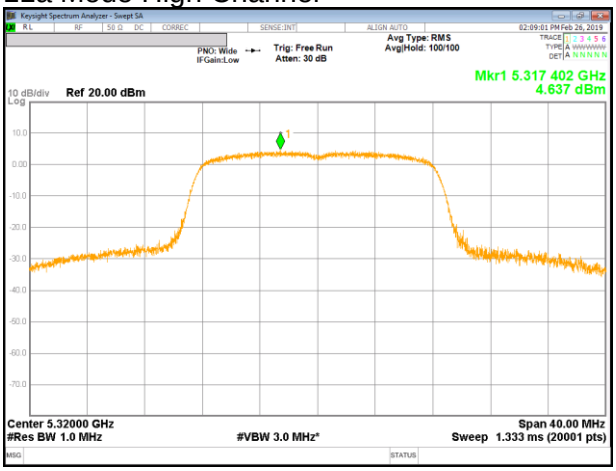
11a Mode Low Channel



11a Mode Middle Channel

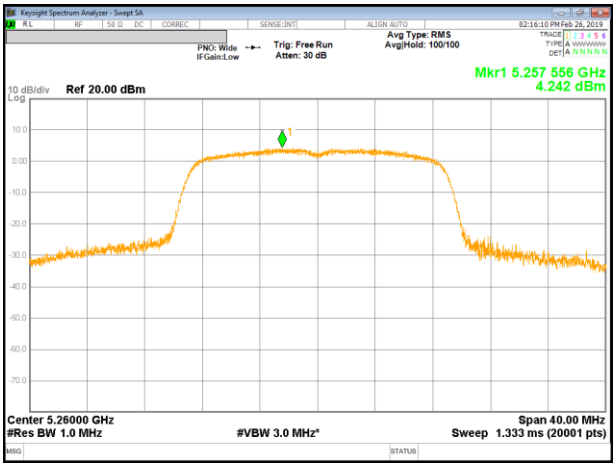


11a Mode High Channel

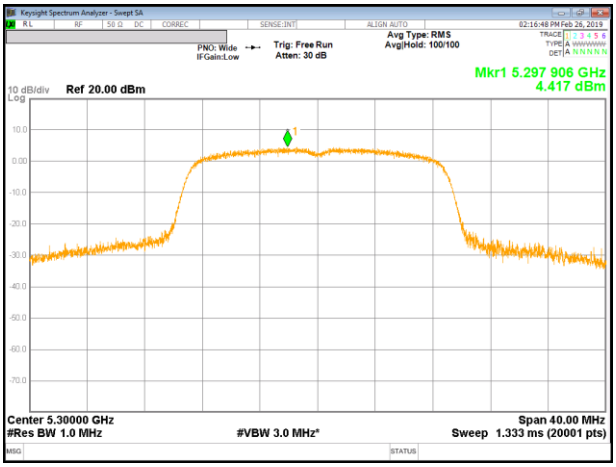


UNII 5.3 GHz IEEE 802.11n HT20 mode

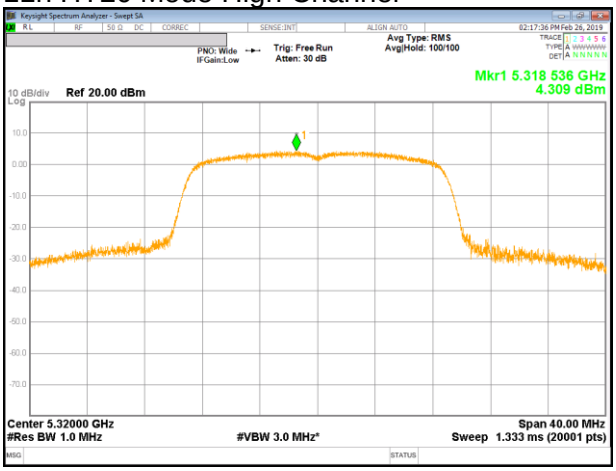
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

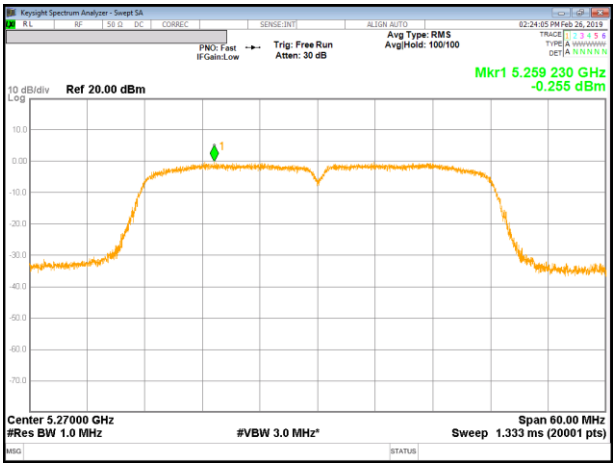


11n HT20 Mode High Channel

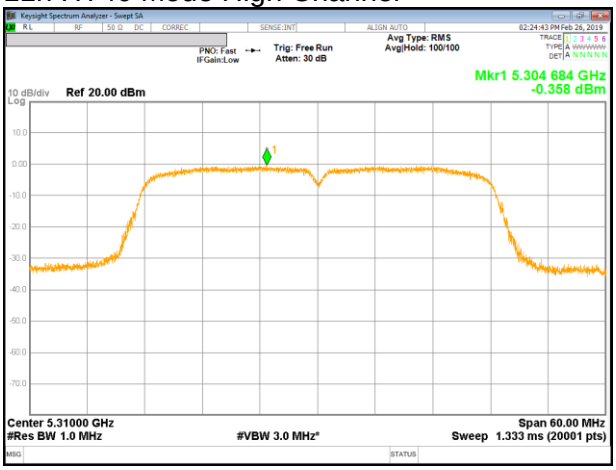


UNII 5.3 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

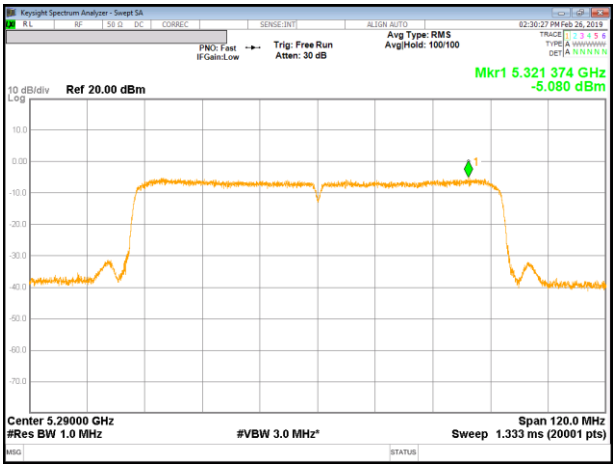


11n HT40 Mode High Channel



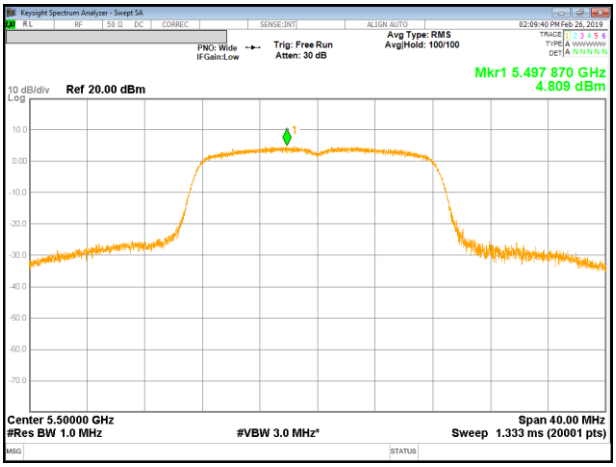
UNII 5.3 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel

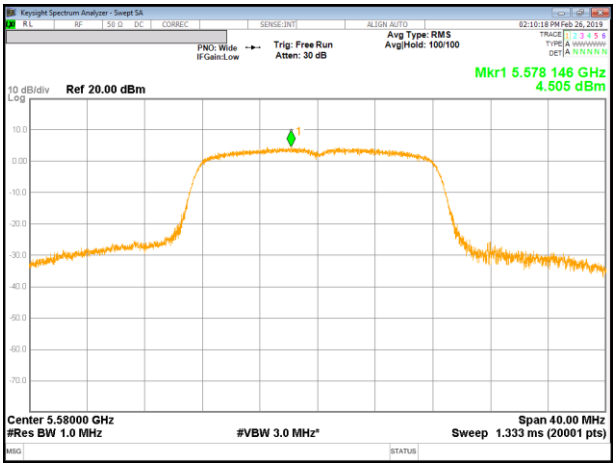


UNII 5.5 GHz IEEE 802.11a mode

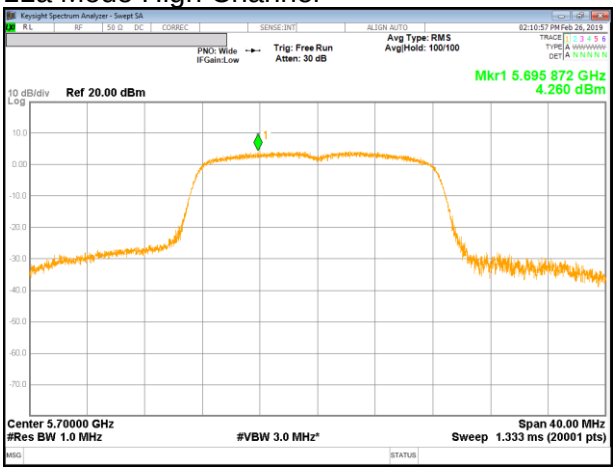
11a Mode Low Channel



11a Mode Middle Channel

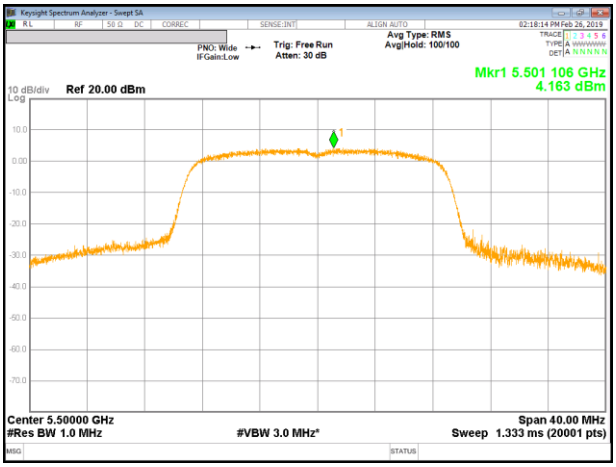


11a Mode High Channel

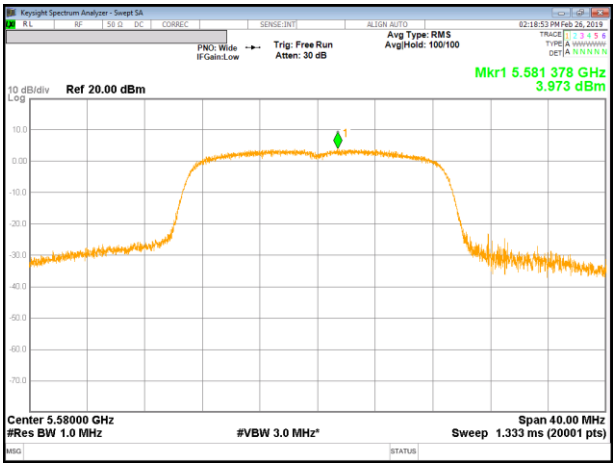


UNII 5.5 GHz IEEE 802.11n HT20 mode

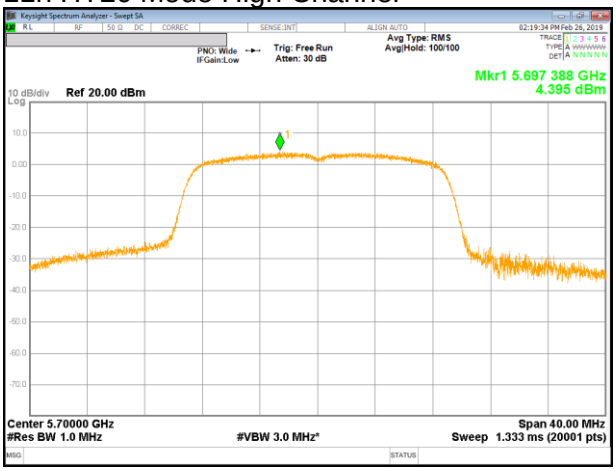
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

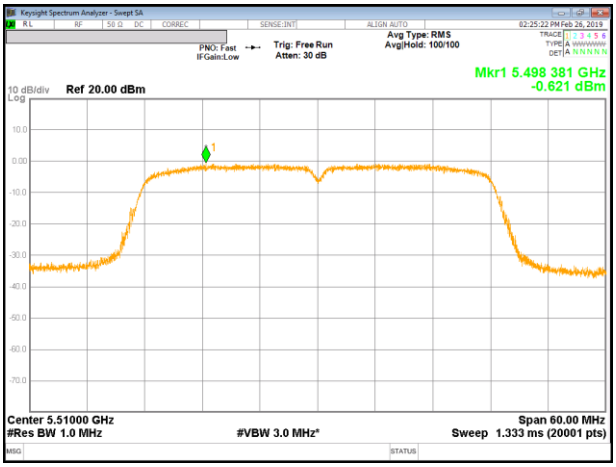


11n HT20 Mode High Channel

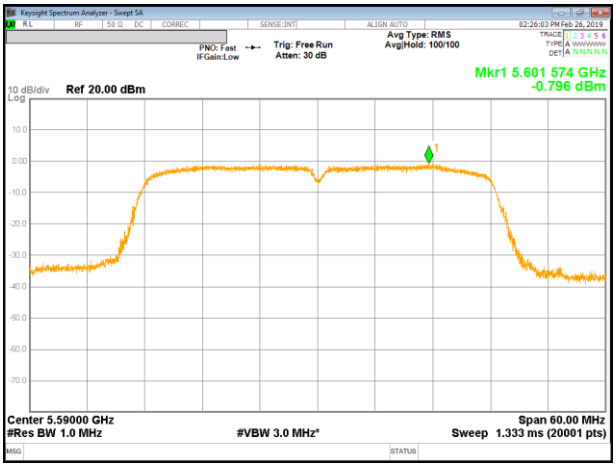


UNII 5.5 GHz IEEE 802.11n HT40 mode

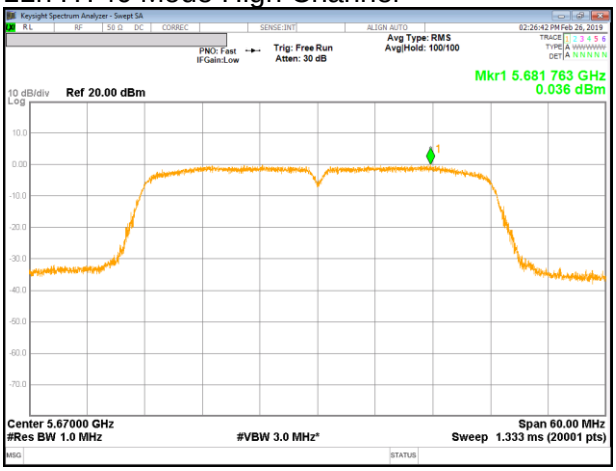
11n HT40 Mode Low Channel



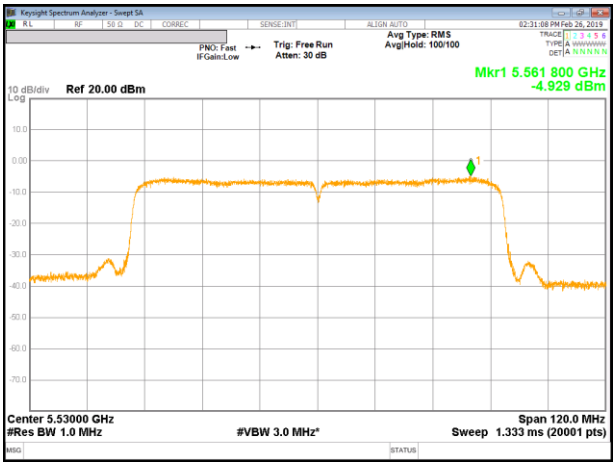
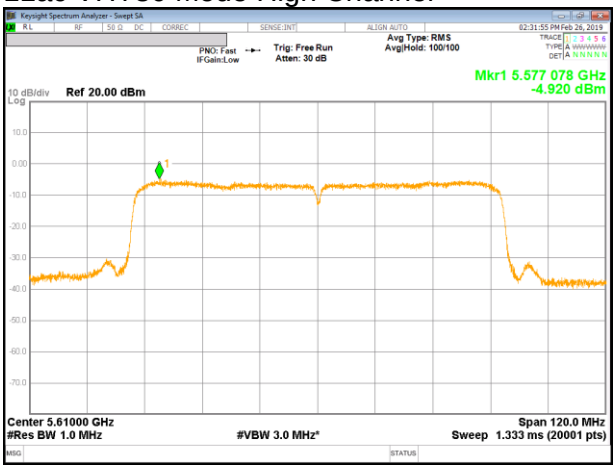
11n HT40 Mode Middle Channel



11n HT40 Mode High Channel

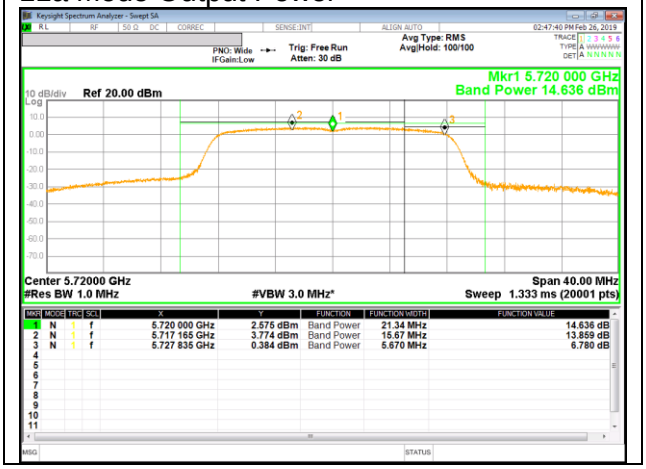


UNII 5.5 GHz IEEE 802.11ac VHT80 mode

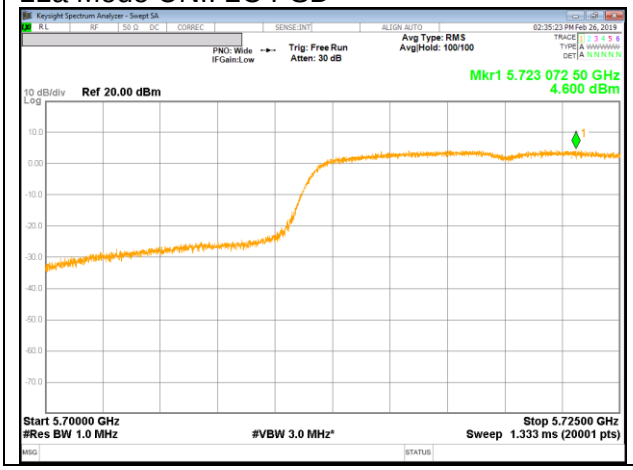
11ac VHT80 Mode Low Channel	11ac VHT80 Mode High Channel
	

UNII Straddle Ch. IEEE 802.11a mode Ourput Power and PSD

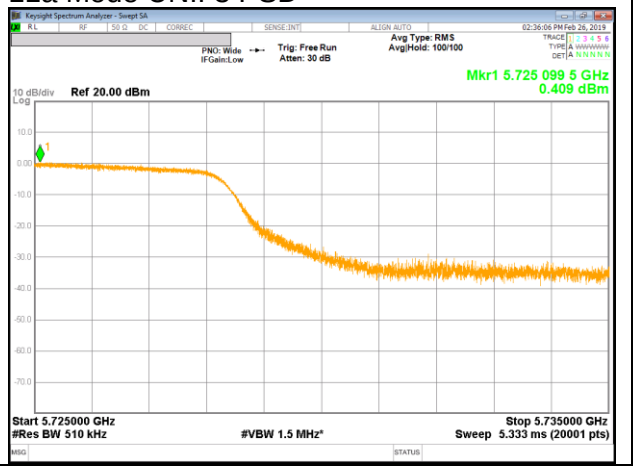
11a Mode Output Power



11a Mode UNII 2C PSD

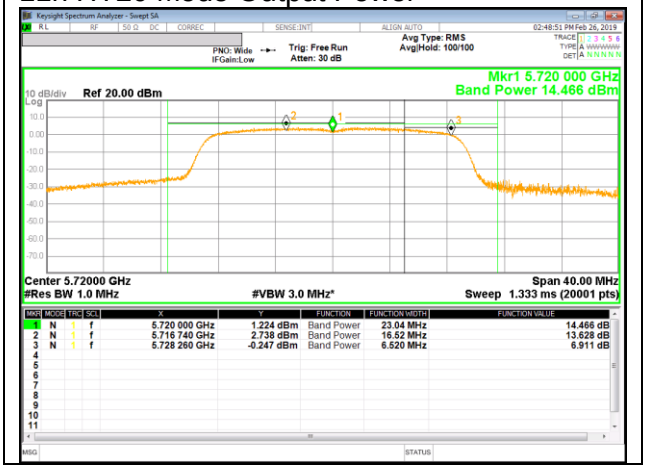


11a Mode UNII 3 PSD

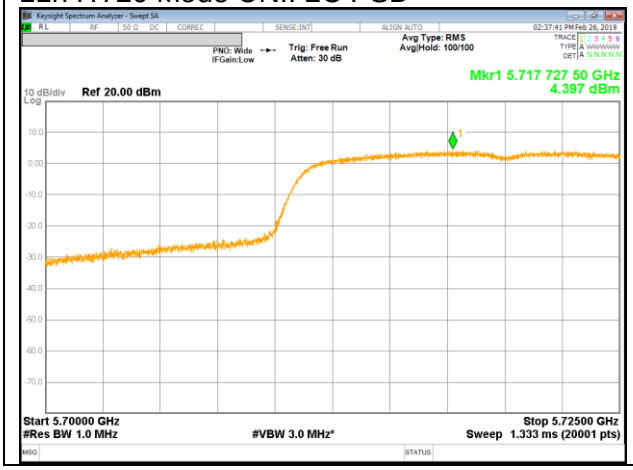


UNII Straddle Ch. IEEE 802.11n HT20 mode Ourput Power and PSD

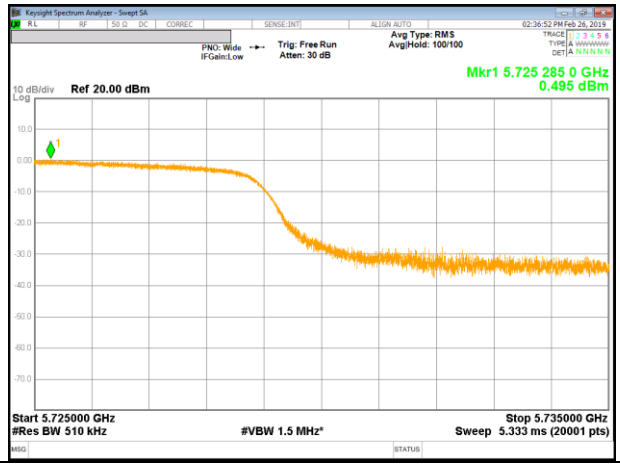
11n HT20 Mode Output Power



11n HT20 Mode UNII 2C PSD

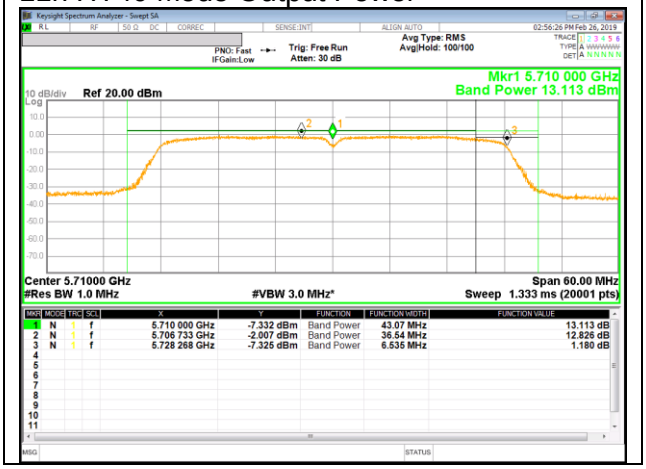


11n HT20 Mode UNII 3 PSD

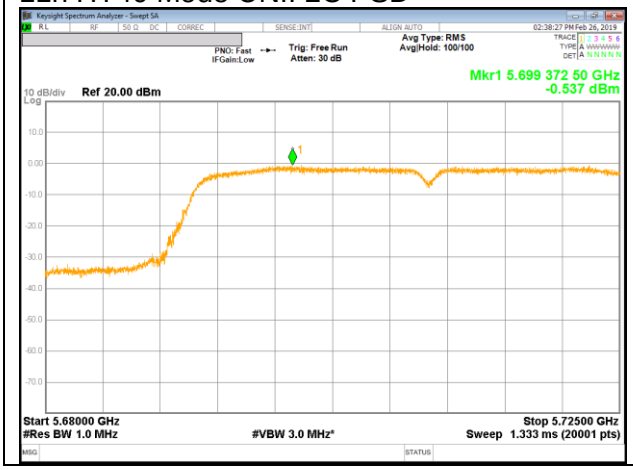


UNII Straddle Ch. IEEE 802.11n HT40 mode Ourput Power and PSD

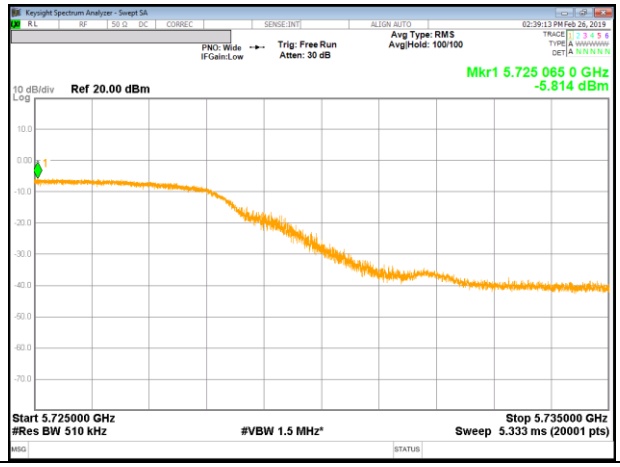
11n HT40 Mode Output Power



11n HT40 Mode UNII 2C PSD

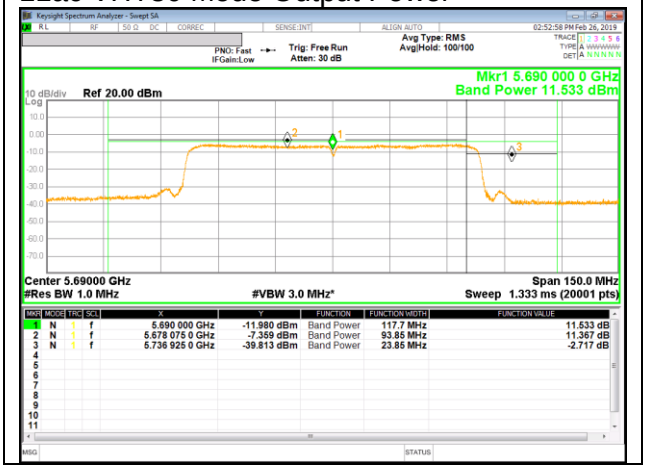


11n HT40 Mode UNII 3 PSD

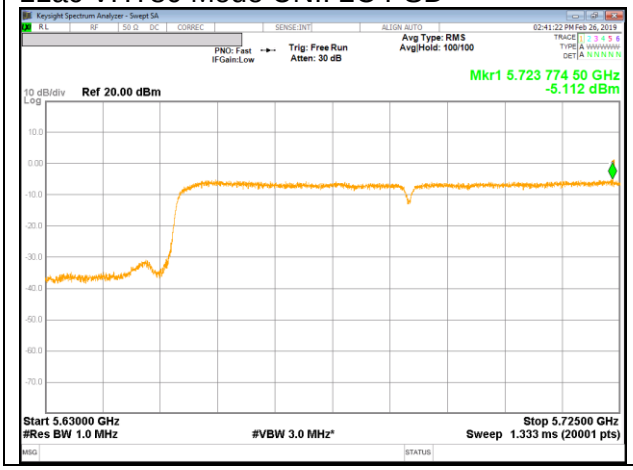


UNII Straddle Ch. IEEE 802.11ac VHT80 mode Ourput Power and PSD

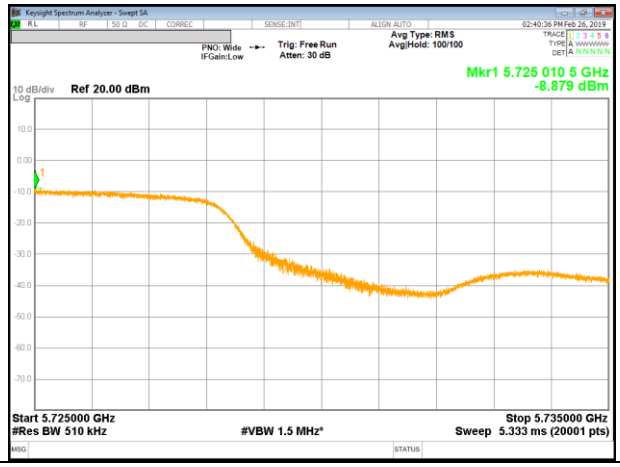
11ac VHT80 Mode Output Power



11ac VHT80 Mode UNII 2C PSD

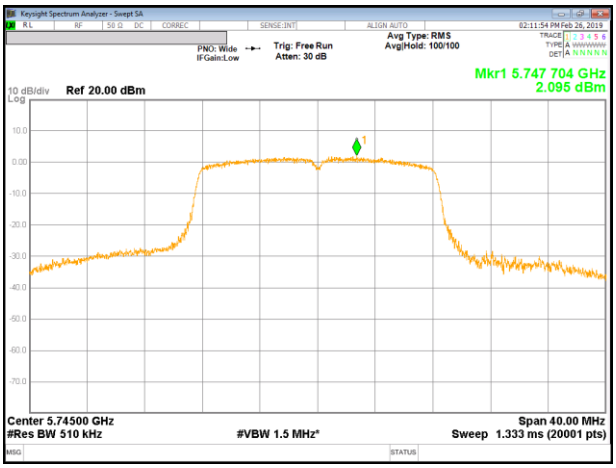


11ac VHT80 Mode UNII 3 PSD

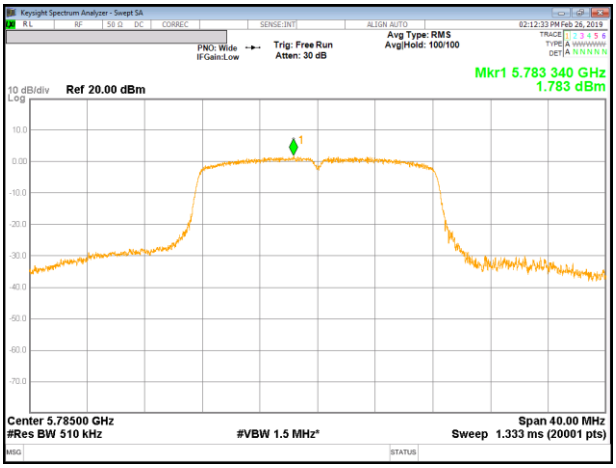


UNII 5.8 GHz IEEE 802.11a mode

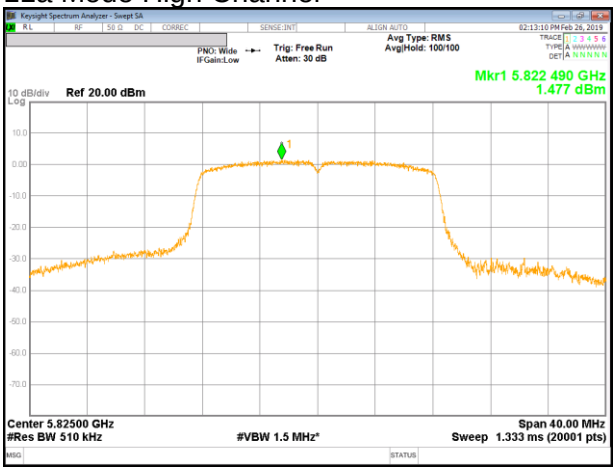
11a Mode Low Channel



11a Mode Middle Channel

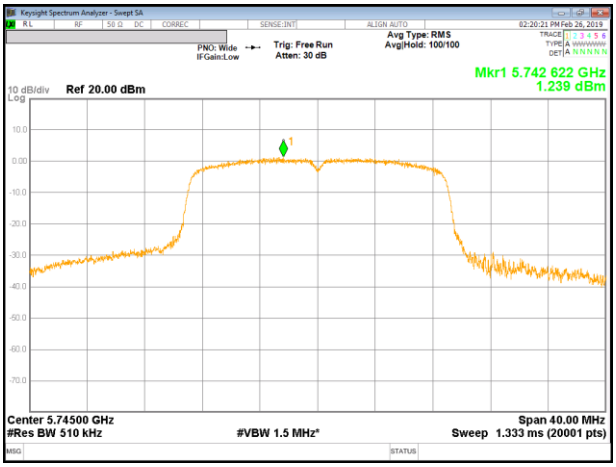


11a Mode High Channel

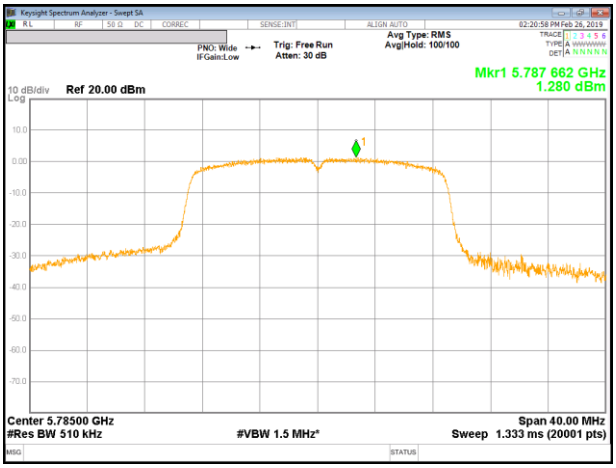


UNII 5.8 GHz IEEE 802.11n HT20 mode

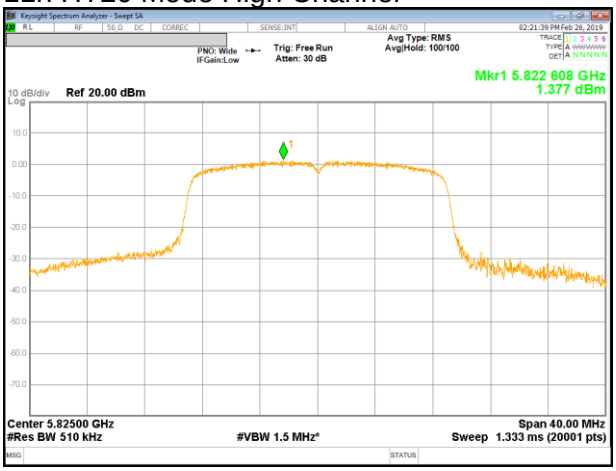
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

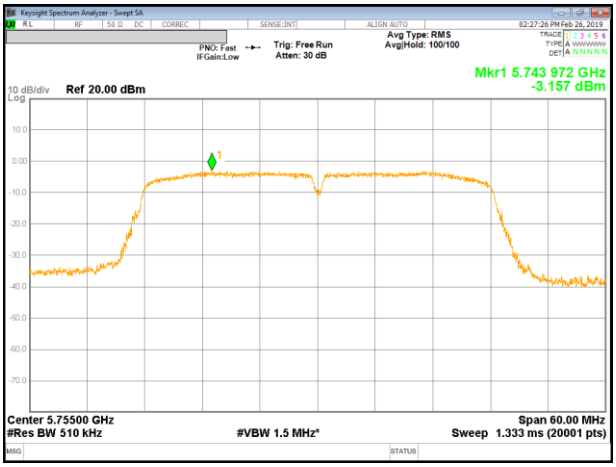


11n HT20 Mode High Channel

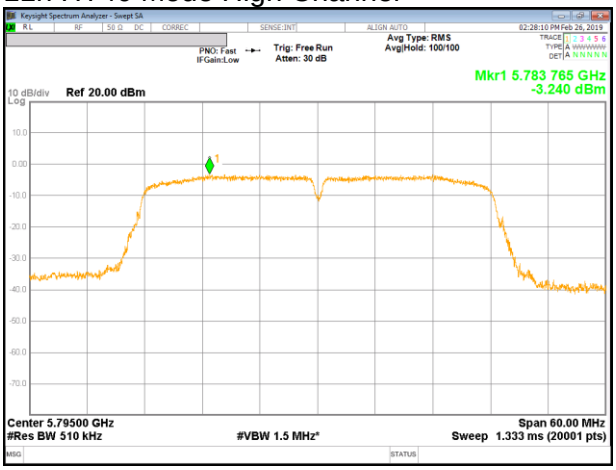


UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

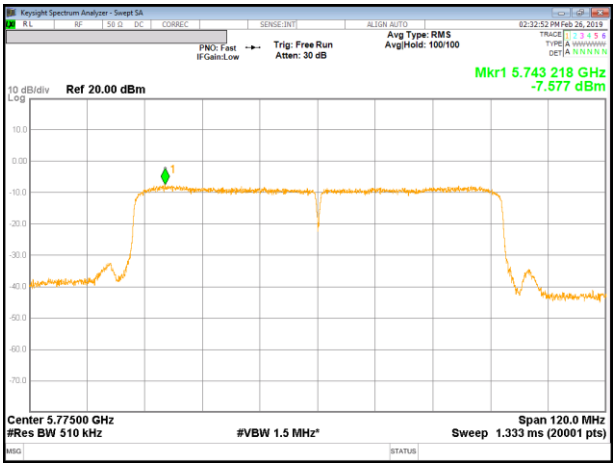


11n HT40 Mode High Channel



UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Low Channel



11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (μV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

FCC §15.407 (b)

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary,

provided the measured energy is integrated to show the total power over 1 MHz.
(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.
(7) The provisions of §15.205 apply to intentional radiators operating under this section.
(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Note

- Limit translation to field strength level (FCC §15.407)

E[dBuV/m] = EIRP[dBm] + 95.2 = -27dBm + 95.2 = 68.2dBuV/m
E[dBuV/m] = EIRP[dBm] + 95.2 = -17dBm + 95.2 = 78.2dBuV/m

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150 cm for 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. Peak detection is used unless otherwise noted as quasi-peak.

Reference to KDB 789033 D02 v02r01 UNII part G) 6) c) Method AD:
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.
Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

The spectrum from 1 GHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.
(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

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.

Note : Emission was pre-scanned from 9KHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

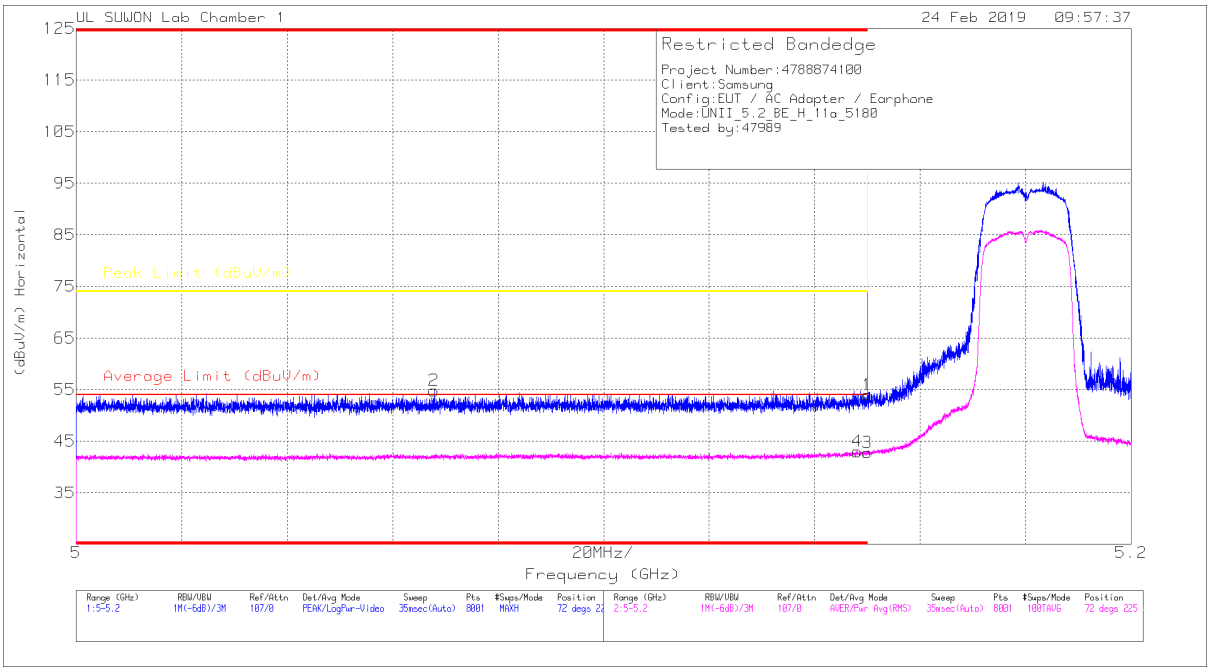
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field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

11.1. 5.2 GHz

11.1.1. TX Above 1GHz 802.11a MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

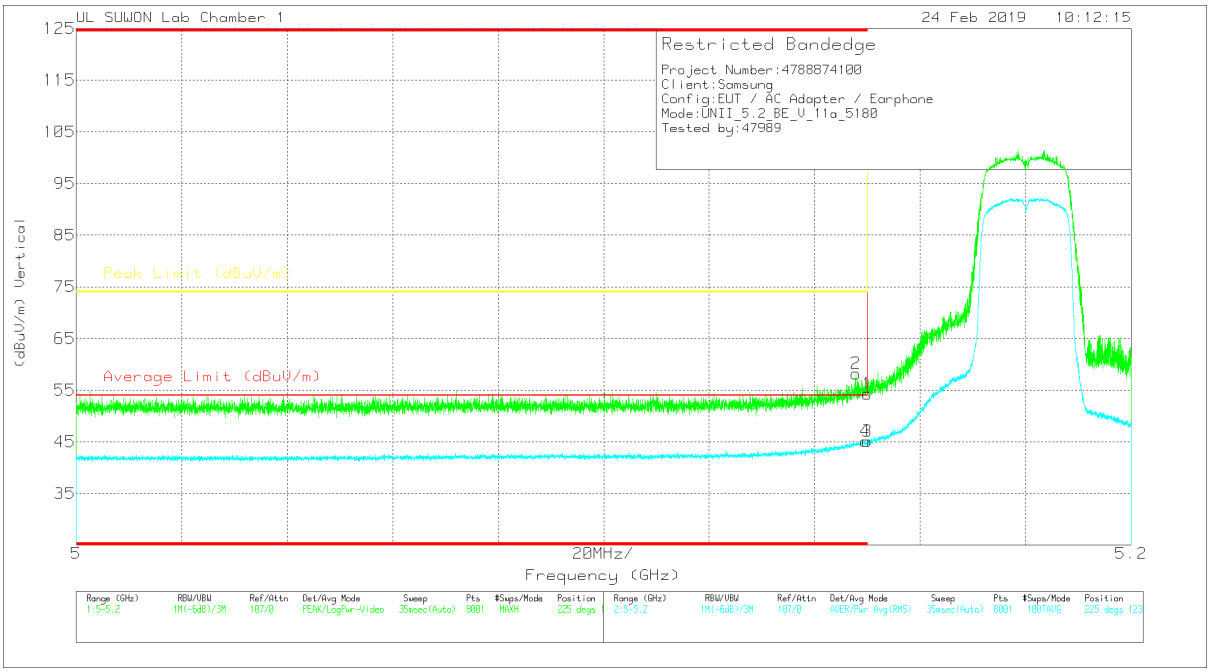


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	41.28	Pk	34.5	-21.8	0	53.98	-	-	74	-20.02	72	225	H
2	* 5.068	42.22	Pk	34.3	-21.7	0	54.82	-	-	74	-19.18	72	225	H
3	5.15	30.2	RMS	34.5	-22	.12	42.82	54	-11.18	-	-	72	225	H
4	* 5.148	30.49	RMS	34.4	-22	.12	43.01	54	-10.99	-	-	72	225	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



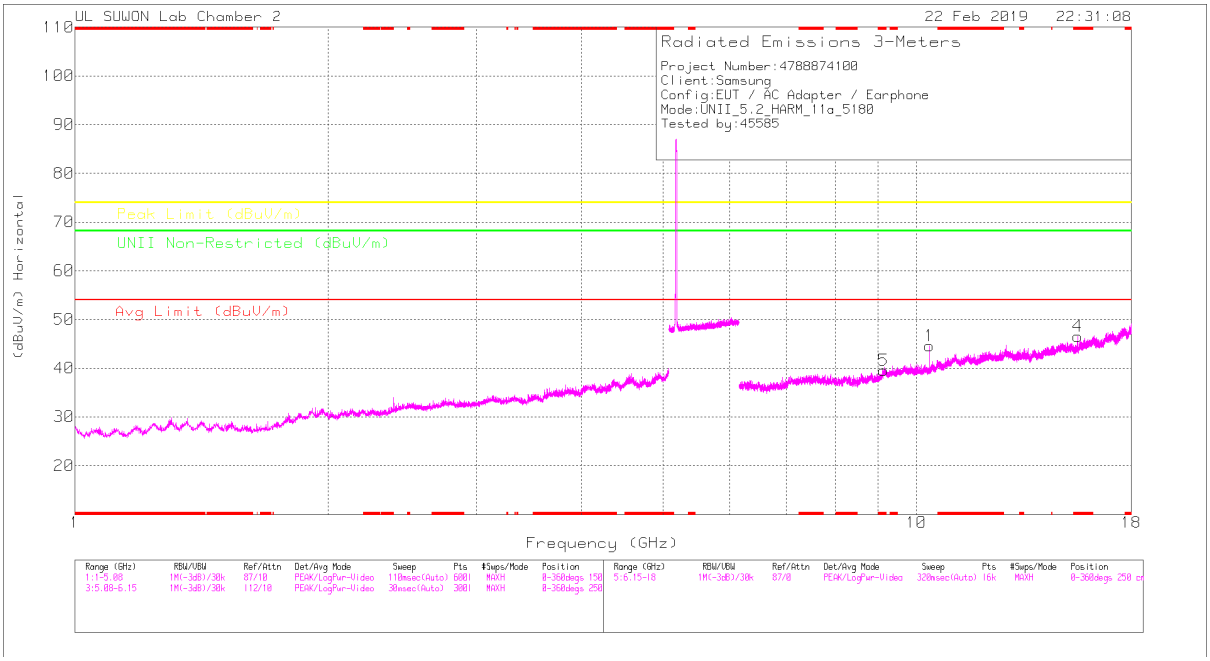
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	41.64	Pk	34.5	-21.8	0	54.34	-	-	74	-19.66	225	123	V
2	* 5.148	45.62	Pk	34.4	-21.8	0	58.22	-	-	74	-15.78	225	123	V
3	5.15	32.49	RMS	34.5	-22	.12	45.11	54	-8.89	-	-	225	123	V
4	* 5.15	32.64	RMS	34.4	-22	.12	45.16	54	-8.84	-	-	225	123	V

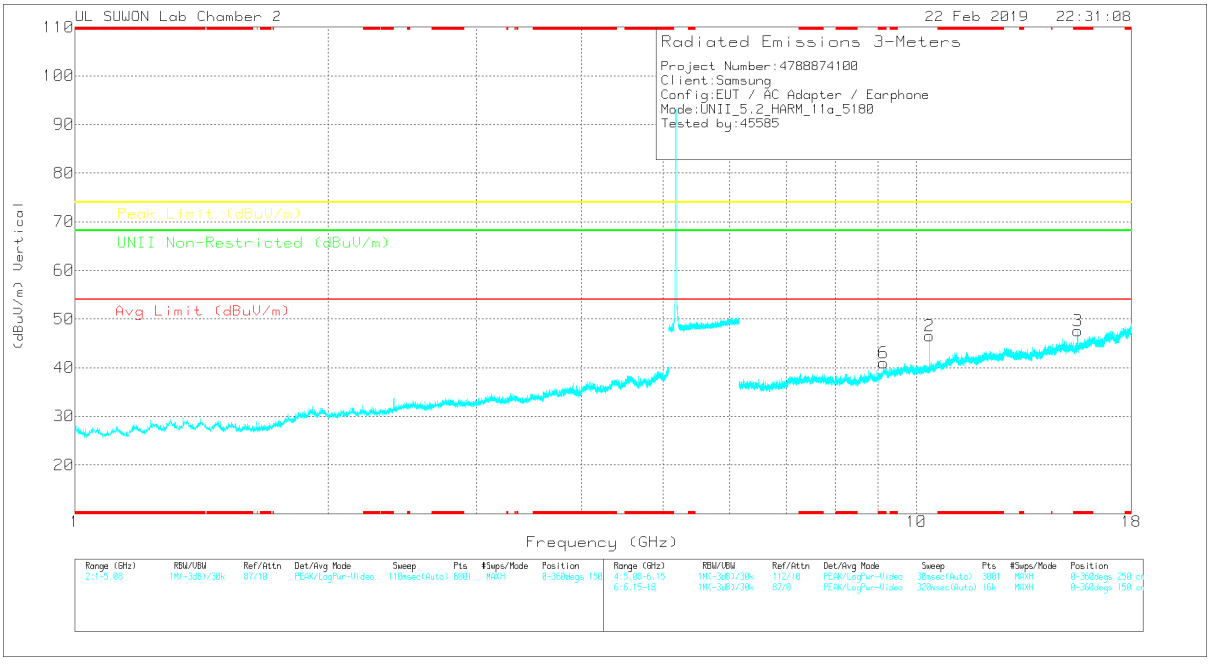
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.36	28.11	PK	37.5	-21	0	44.61	-	-	-	-	68.2	-23.59	0-360	150	H
4	* 15.536	26.28	PK	39.9	-19.6	0	46.58	-	-	74	-27.42	-	-	0-360	250	H
5	* 9.145	24.41	PK	36.6	-21.5	0	39.51	-	-	74	-34.49	-	-	0-360	150	H
2	10.359	29.98	PK	37.5	-21	0	46.48	-	-	-	-	68.2	-21.72	0-360	150	V
3	* 15.541	27.42	PK	39.9	-19.7	0	47.62	-	-	74	-26.38	-	-	0-360	150	V
6	* 9.142	25.92	PK	36.6	-21.5	0	41.02	-	-	74	-32.98	-	-	0-360	150	V

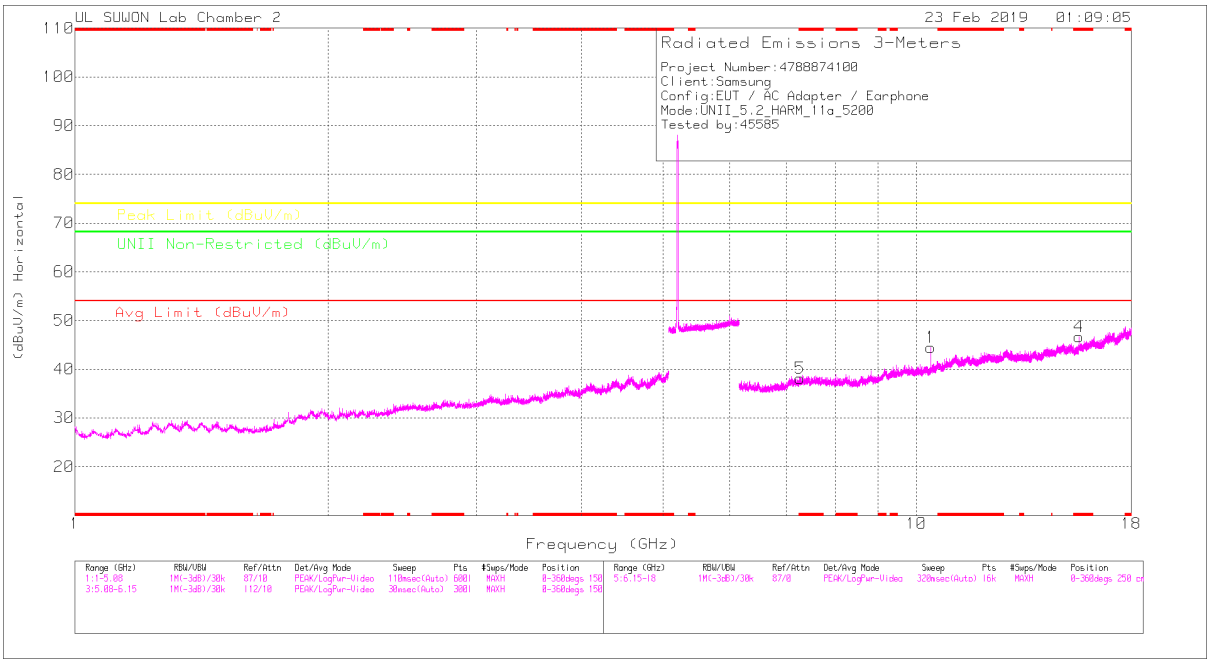
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

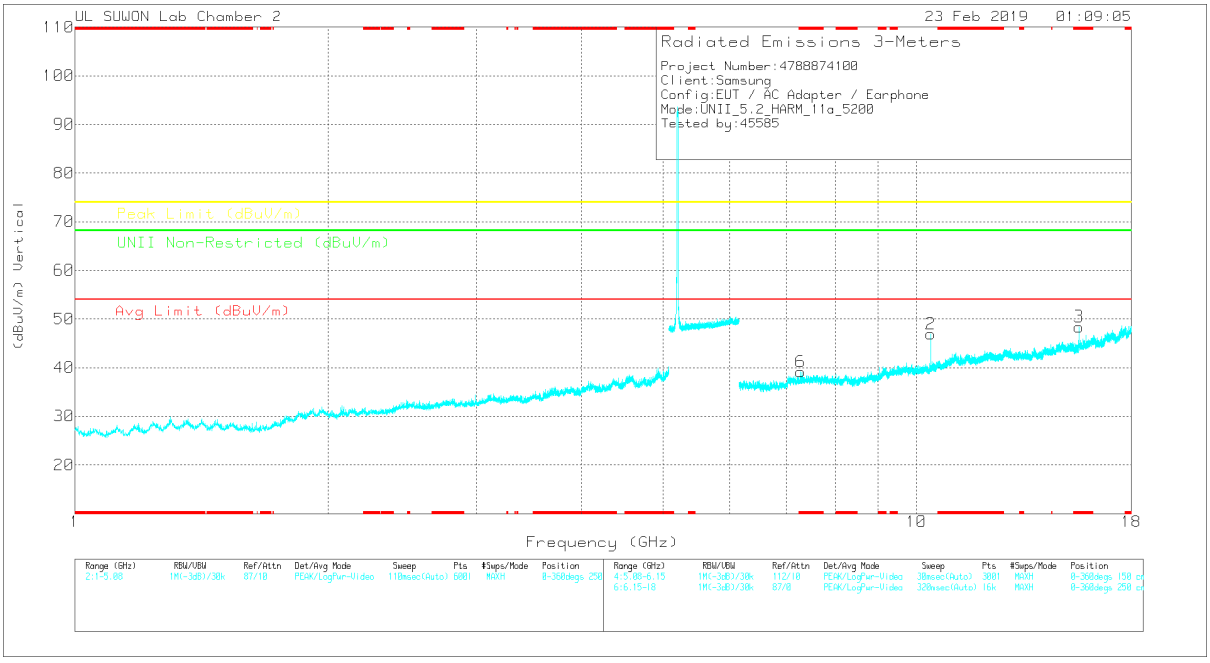
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.36	36.31	PK-U	37.5	-21	0	52.81	-	-	-	-	68.2	-15.39	245	194	H
10.36	36.27	PK-U	37.5	-21	0	52.77	-	-	-	-	68.2	-15.43	222	147	V
* 15.545	41.44	PK-U	39.9	-19.7	0	61.64	-	-	74	-12.36	-	-	165	121	V
* 15.541	27.28	ADR	39.9	-19.7	.12	47.6	54	-6.4	-	-	-	-	165	121	V
* 15.544	39.56	PK-U	39.9	-19.7	0	59.76	-	-	74	-14.24	-	-	83	120	H
* 15.54	25.86	ADR	39.9	-19.8	.12	46.08	54	-7.92	-	-	-	-	83	120	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.399	27.77	PK	37.6	-20.9	0	44.47	-	-	-	-	68.2	-23.73	0-360	150	H
4	* 15.595	26.43	PK	40	-19.8	0	46.63	-	-	74	-27.37	-	-	0-360	150	H
5	* 7.275	27.17	PK	36.2	-25.2	0	38.17	-	-	74	-35.83	-	-	0-360	250	H
2	10.399	30.19	PK	37.6	-20.9	0	46.89	-	-	-	-	68.2	-21.31	0-360	250	V
3	* 15.598	28.21	PK	40	-19.8	0	48.41	-	-	74	-25.59	-	-	0-360	150	V
6	* 7.28	28.18	PK	36.2	-25.2	0	39.18	-	-	74	-34.82	-	-	0-360	150	V

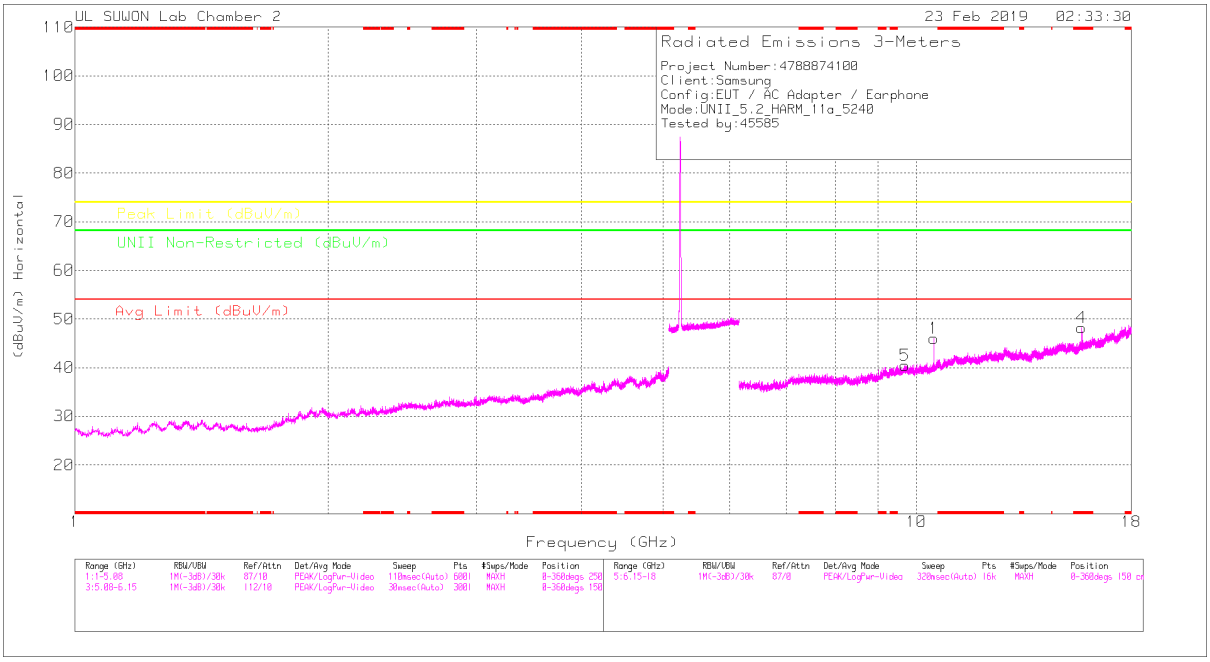
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

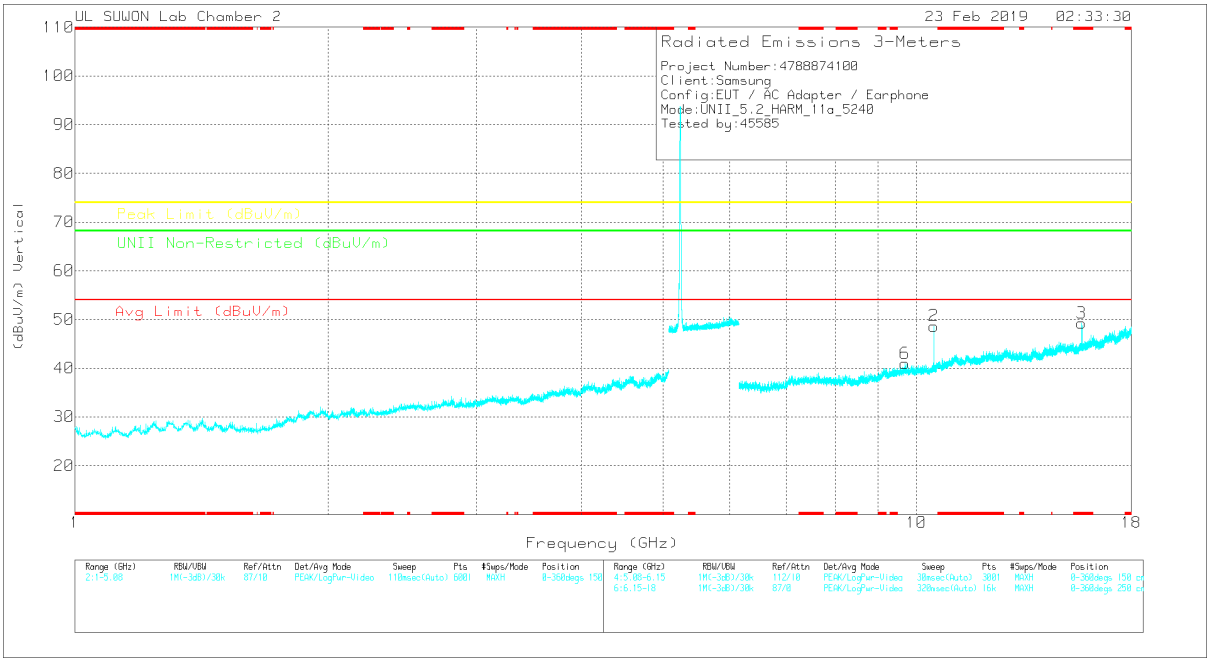
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.4	35.94	PK-U	37.6	-21	0	52.54	-	-	-	-	68.2	-15.66	241	150	H
10.4	36.81	PK-U	37.6	-21	0	53.41	-	-	-	-	68.2	-14.79	223	168	V
* 15.605	41.31	PK-U	40	-19.8	0	61.51	-	-	74	-12.49	-	-	167	150	V
* 15.6	27.01	ADR	40	-19.8	.12	47.33	54	-6.67	-	-	-	-	167	150	V
* 15.605	40.44	PK-U	40	-19.8	0	60.64	-	-	74	-13.36	-	-	89	120	H
* 15.6	26.41	ADR	40	-19.8	.12	46.73	54	-7.27	-	-	-	-	89	120	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.48	29.1	PK	37.7	-20.8	0	46	-	-	-	-	68.2	-22.2	0-360	150	H
4	* 15.721	27.62	PK	40.2	-19.6	0	48.22	-	-	74	-25.78	-	-	0-360	150	H
5	9.691	24.6	PK	37.1	-21.3	0	40.4	-	-	-	-	68.2	-27.8	0-360	250	H
2	10.48	31.77	PK	37.7	-20.8	0	48.67	-	-	-	-	68.2	-19.53	0-360	150	V
3	* 15.721	28.63	PK	40.2	-19.6	0	49.23	-	-	74	-24.77	-	-	0-360	150	V
6	9.688	25.24	PK	37.1	-21.4	0	40.94	-	-	-	-	68.2	-27.26	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

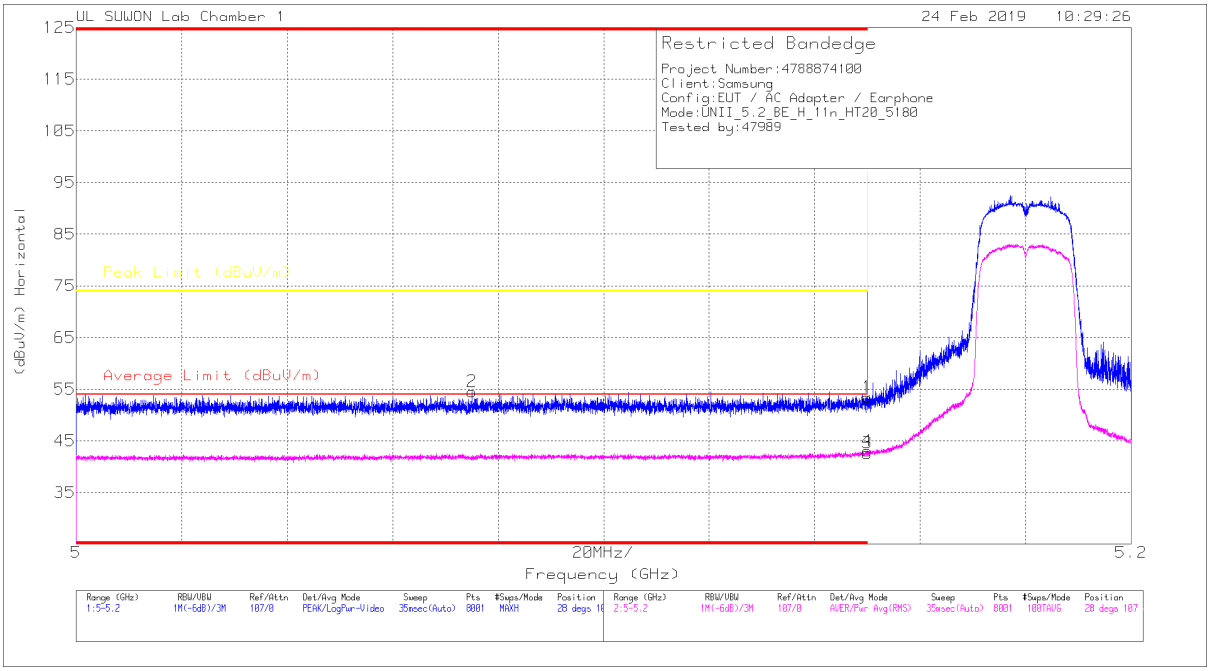
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.48	35.87	PK-U	37.7	-20.8	0	52.77	-	-	-	-	68.2	-15.43	213	100	H
10.48	37.21	PK-U	37.7	-20.8	0	54.11	-	-	-	-	68.2	-14.09	223	154	V
* 15.725	41.85	PK-U	40.2	-19.6	0	62.45	-	-	74	-11.55	-	-	172	100	V
* 15.719	28.25	ADR	40.2	-19.6	.12	48.97	54	-5.03	-	-	-	-	172	100	V
* 15.724	41.04	PK-U	40.2	-19.6	0	61.64	-	-	74	-12.36	-	-	86	130	H
* 15.719	26.84	ADR	40.2	-19.6	.12	47.56	54	-6.44	-	-	-	-	86	130	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

11.1.2.TX Above 1GHz 802.11n HT20 MODE IN THE 5.2GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

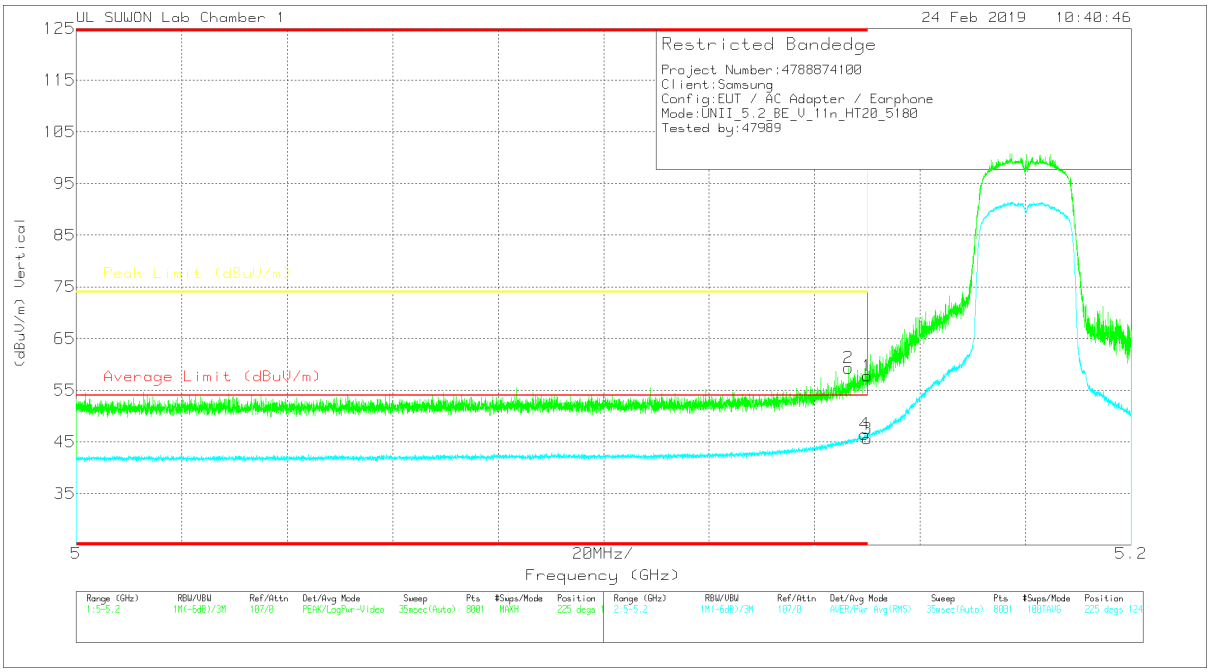


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	40.74	Pk	34.5	-21.8	0	53.44	-	-	74	-20.56	28	107	H
2	* 5.075	41.93	Pk	34.3	-21.7	0	54.53	-	-	74	-19.47	28	107	H
3	5.15	30.02	RMS	34.5	-22	.13	42.65	54	-11.35	-	-	28	107	H
4	* 5.15	30.52	RMS	34.4	-22	.13	43.05	54	-10.95	-	-	28	107	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



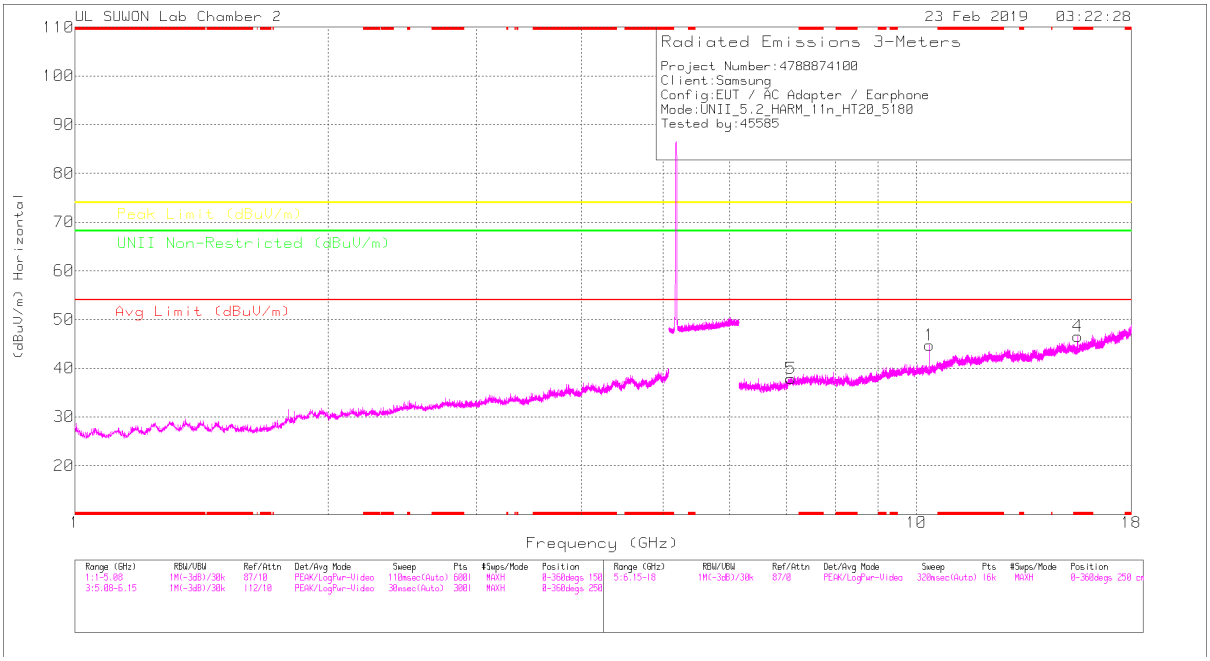
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	45.09	Pk	34.5	-21.8	0	57.79	-	-	74	-16.21	225	124	V
2	* 5.146	46.73	Pk	34.4	-21.8	0	59.33	-	-	74	-14.67	225	124	V
3	5.15	32.99	RMS	34.5	-22	.13	45.62	54	-8.38	-	-	225	124	V
4	* 5.149	33.96	RMS	34.4	-22	.13	46.49	54	-7.51	-	-	225	124	V

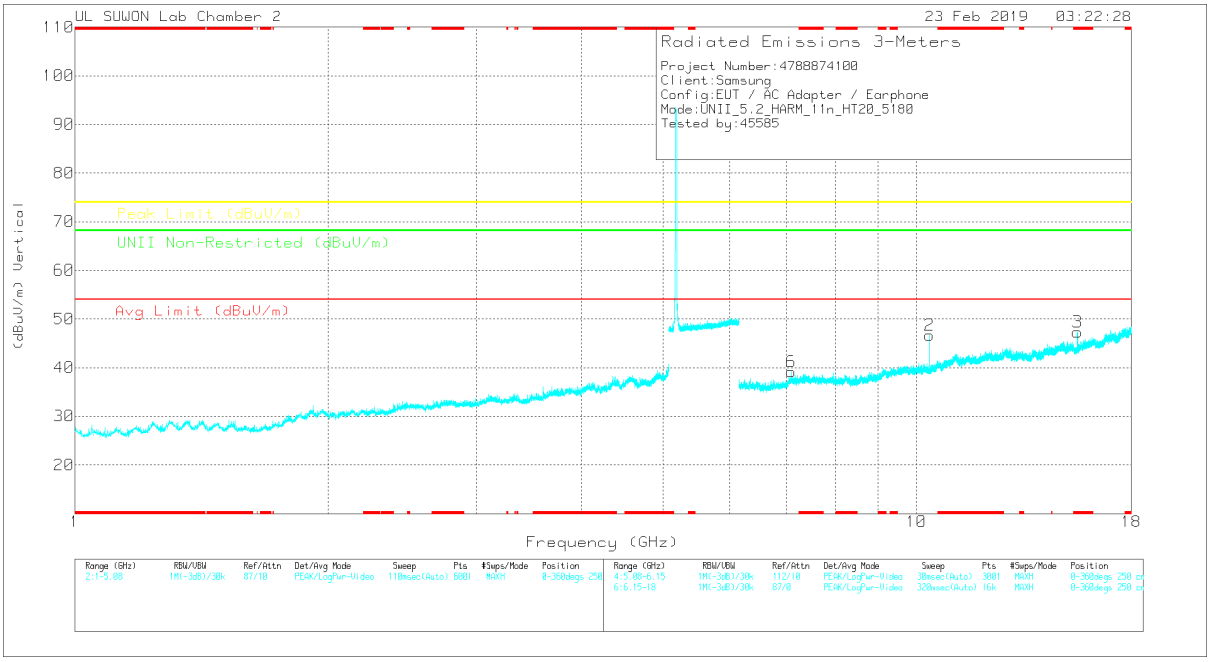
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.359	28.21	PK	37.5	-21	0	44.71	-	-	-	-	68.2	-23.49	0-360	150	H
4	* 15.537	26.33	PK	39.9	-19.7	0	46.53	-	-	74	-27.47	-	-	0-360	250	H
5	7.093	25.67	PK	36	-23.8	0	37.87	-	-	-	-	68.2	-30.33	0-360	250	H
2	10.36	30.13	PK	37.5	-21	0	46.63	-	-	-	-	68.2	-21.57	0-360	150	V
3	* 15.535	27.11	PK	39.9	-19.7	0	47.31	-	-	74	-26.69	-	-	0-360	150	V
6	7.098	26.98	PK	36	-23.8	0	39.18	-	-	-	-	68.2	-29.02	0-360	150	V

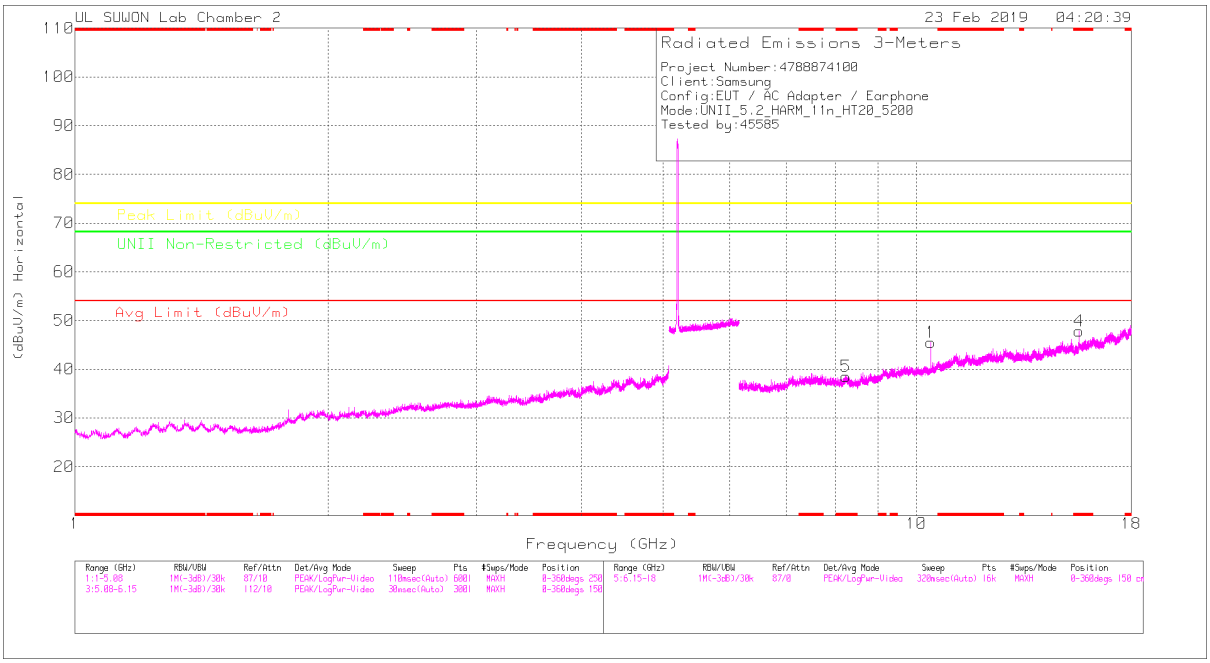
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

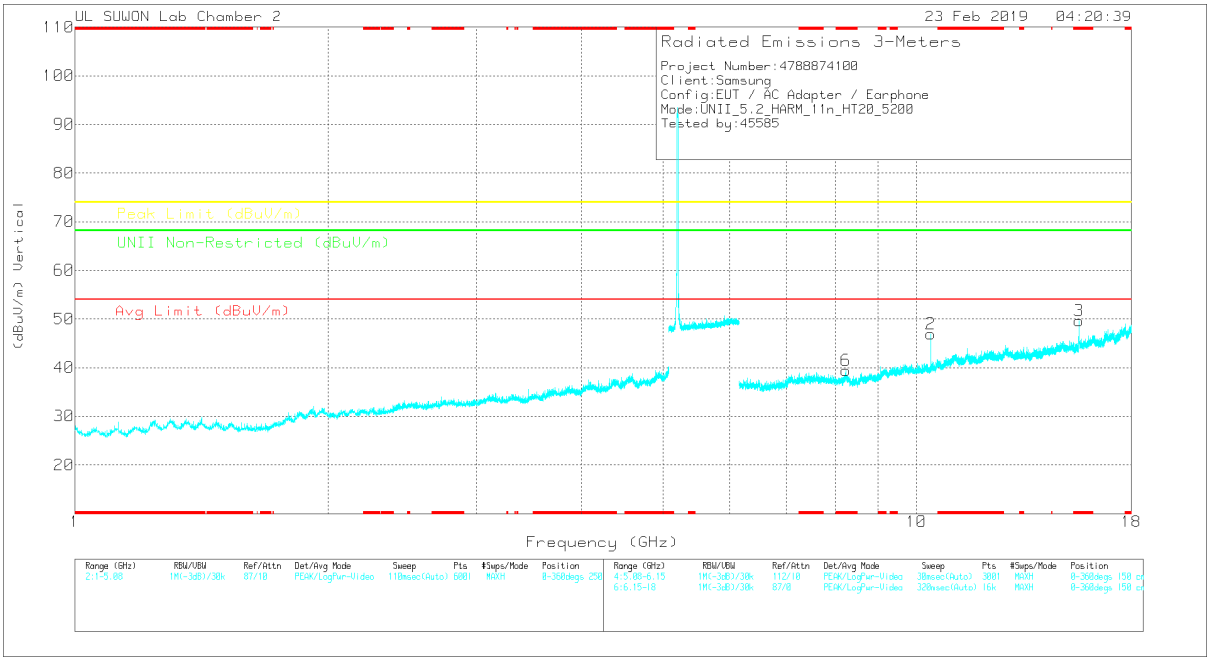
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.36	36.2	PK-U	37.5	-21	0	52.7	-	-	-	-	68.2	-15.5	247	204	H
10.36	36.56	PK-U	37.5	-21	0	53.06	-	-	-	-	68.2	-15.14	222	154	V
* 15.543	40.99	PK-U	39.9	-19.7	0	61.19	-	-	74	-12.81	-	-	169	130	V
* 15.543	26.35	ADR	39.9	-19.7	.13	46.68	54	-7.32	-	-	-	-	169	130	V
* 15.53	40.55	PK-U	39.9	-19.7	0	60.75	-	-	74	-13.25	-	-	89	124	H
* 15.541	26.37	ADR	39.9	-19.7	.13	46.7	54	-7.3	-	-	-	-	89	124	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.4	28.87	PK	37.6	-21	0	45.47	-	-	-	-	68.2	-22.73	0-360	150	H
4	* 15.604	27.62	PK	40	-19.8	0	47.82	-	-	74	-26.18	-	-	0-360	150	H
5	* 8.238	25.69	PK	36	-23.2	0	38.49	-	-	74	-35.51	-	-	0-360	150	H
2	10.4	30.35	PK	37.6	-21	0	46.95	-	-	-	-	68.2	-21.25	0-360	150	V
3	* 15.601	29.39	PK	40	-19.8	0	49.59	-	-	74	-24.41	-	-	0-360	150	V
6	* 8.238	26.64	PK	36	-23.2	0	39.44	-	-	74	-34.56	-	-	0-360	250	V

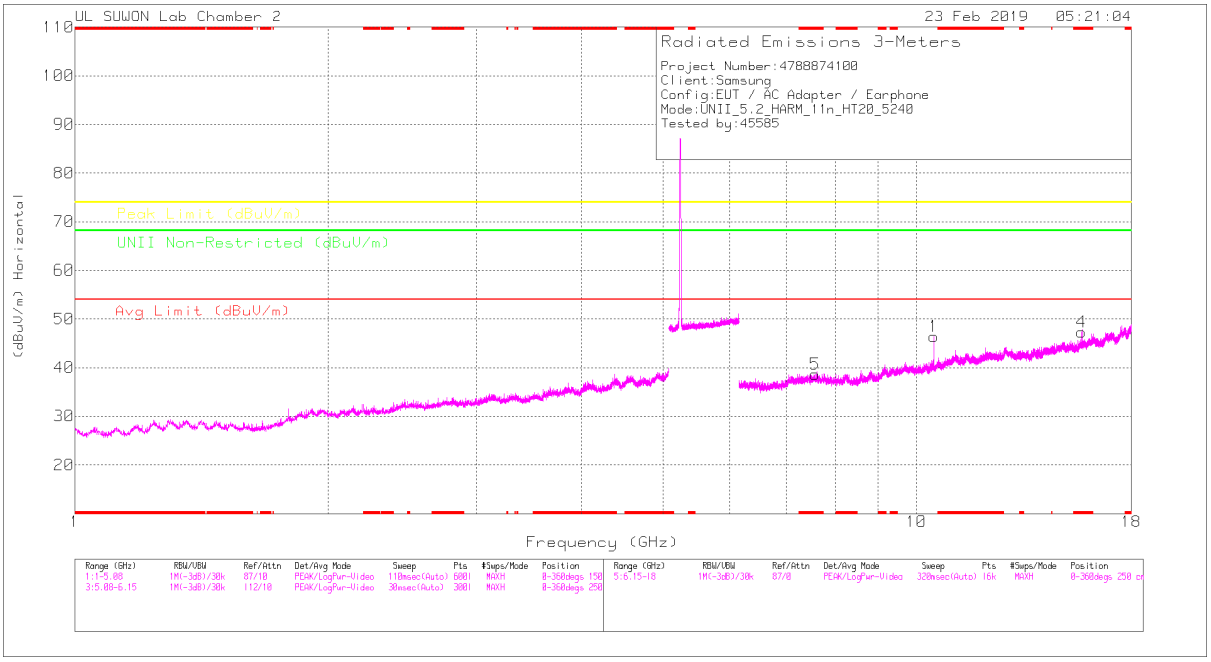
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

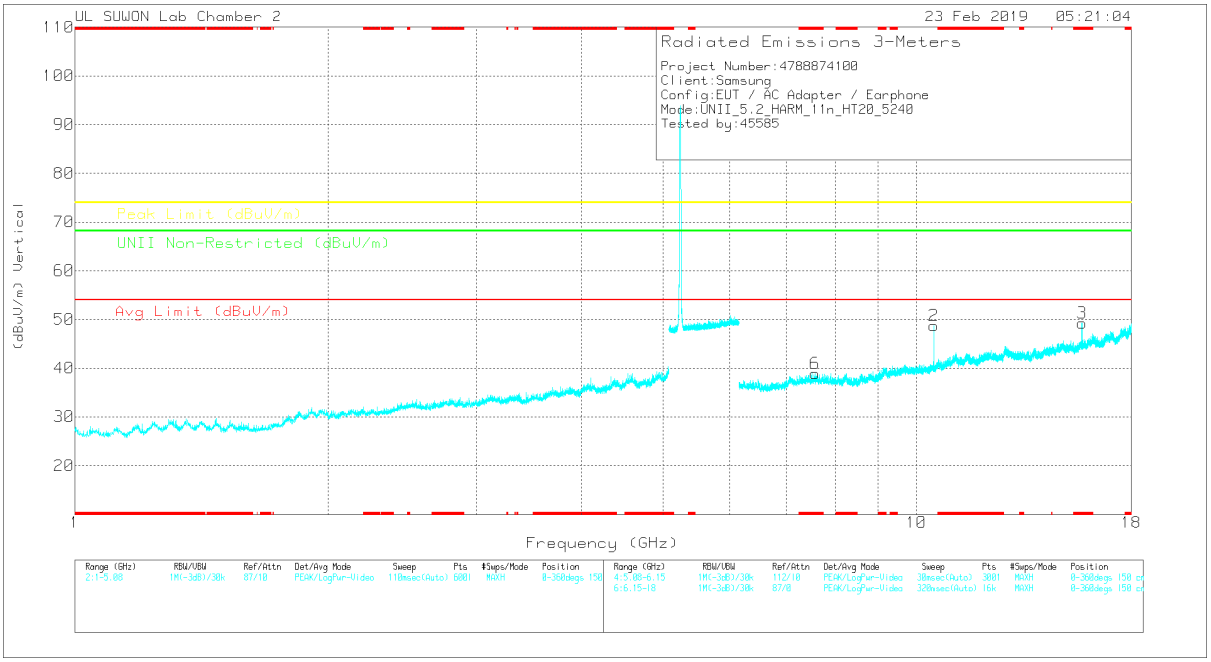
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.4	36.7	PK-U	37.6	-21	0	53.3	-	-	-	-	68.2	-14.9	246	202	H
10.4	36.55	PK-U	37.6	-21	0	53.15	-	-	-	-	68.2	-15.05	221	160	V
* 15.602	42.19	PK-U	40	-19.8	0	62.39	-	-	74	-11.61	-	-	166	132	V
* 15.602	27.75	ADR	40	-19.8	.13	48.08	54	-5.92	-	-	-	-	166	132	V
* 15.603	41.37	PK-U	40	-19.8	0	61.57	-	-	74	-12.43	-	-	88	120	H
* 15.6	27.08	ADR	40	-19.8	.13	47.41	54	-6.59	-	-	-	-	88	120	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.48	29.46	PK	37.7	-20.8	0	46.36	-	-	-	-	68.2	-21.84	0-360	150	H
4	* 15.718	26.69	PK	40.2	-19.6	0	47.29	-	-	74	-26.71	-	-	0-360	150	H
5	* 7.577	26.56	PK	36.1	-24	0	38.66	-	-	74	-35.34	-	-	0-360	150	H
2	10.48	31.89	PK	37.7	-20.8	0	48.79	-	-	-	-	68.2	-19.41	0-360	150	V
3	* 15.724	28.68	PK	40.2	-19.6	0	49.28	-	-	74	-24.72	-	-	0-360	150	V
6	* 7.572	26.94	PK	36.1	-24.1	0	38.94	-	-	74	-35.06	-	-	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

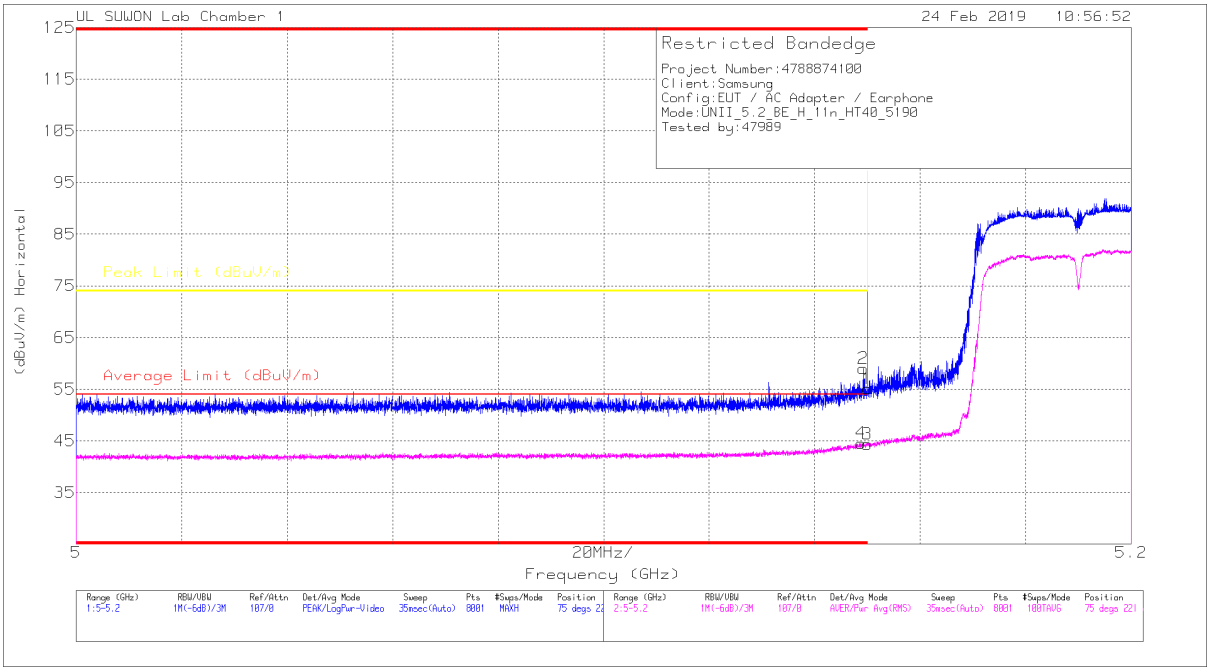
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.48	36.05	PK-U	37.7	-20.8	0	52.95	-	-	-	-	68.2	-15.25	133	145	H
10.48	37.61	PK-U	37.7	-20.8	0	54.51	-	-	-	-	68.2	-13.69	222	152	V
* 15.719	43.14	PK-U	40.2	-19.6	0	63.74	-	-	74	-10.26	-	-	163	114	V
* 15.721	28.34	ADR	40.2	-19.6	.13	49.07	54	-4.93	-	-	-	-	163	114	V
* 15.723	41.21	PK-U	40.2	-19.6	0	61.81	-	-	74	-12.19	-	-	86	119	H
* 15.718	26.73	ADR	40.2	-19.6	.13	47.46	54	-6.54	-	-	-	-	86	119	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

11.1.3.TX Above 1GHz 802.11n HT40 MODE IN THE 5.2GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

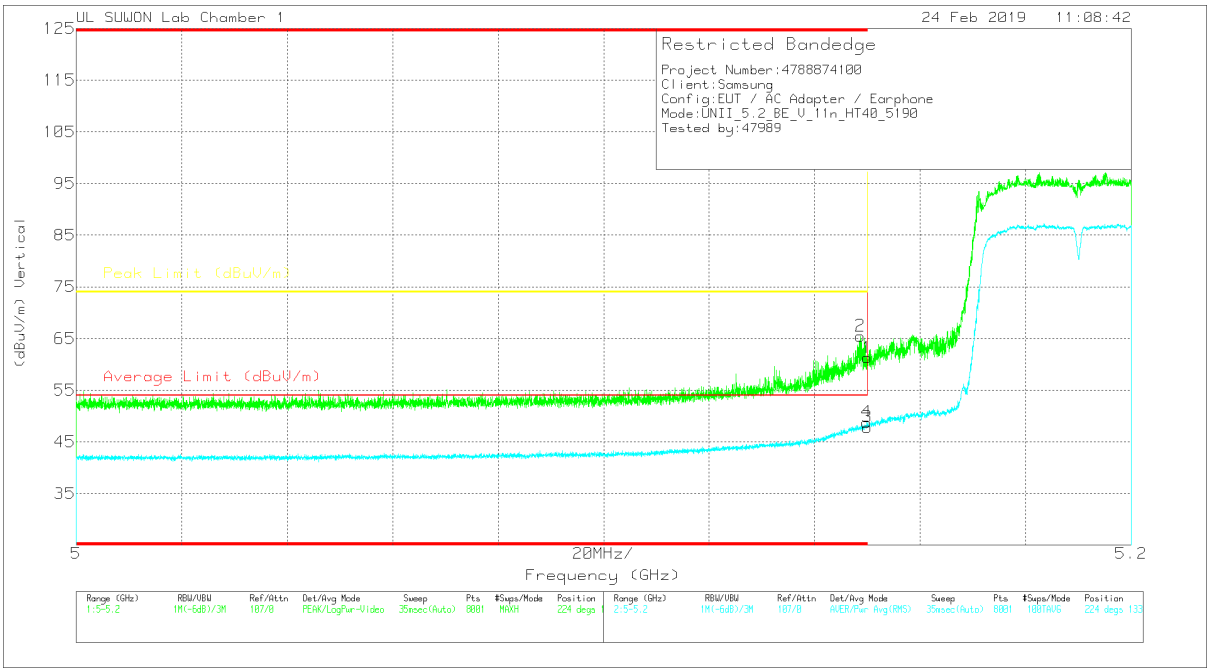


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	42.41	Pk	34.5	-21.8	0	55.11	-	-	74	-18.89	75	221	H
2	* 5.149	46.42	Pk	34.4	-21.8	0	59.02	-	-	74	-14.98	75	221	H
3	5.15	31.49	RMS	34.5	-22	.36	44.35	54	-9.65	-	-	75	221	H
4	* 5.149	31.81	RMS	34.4	-22	.36	44.57	54	-9.43	-	-	75	221	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



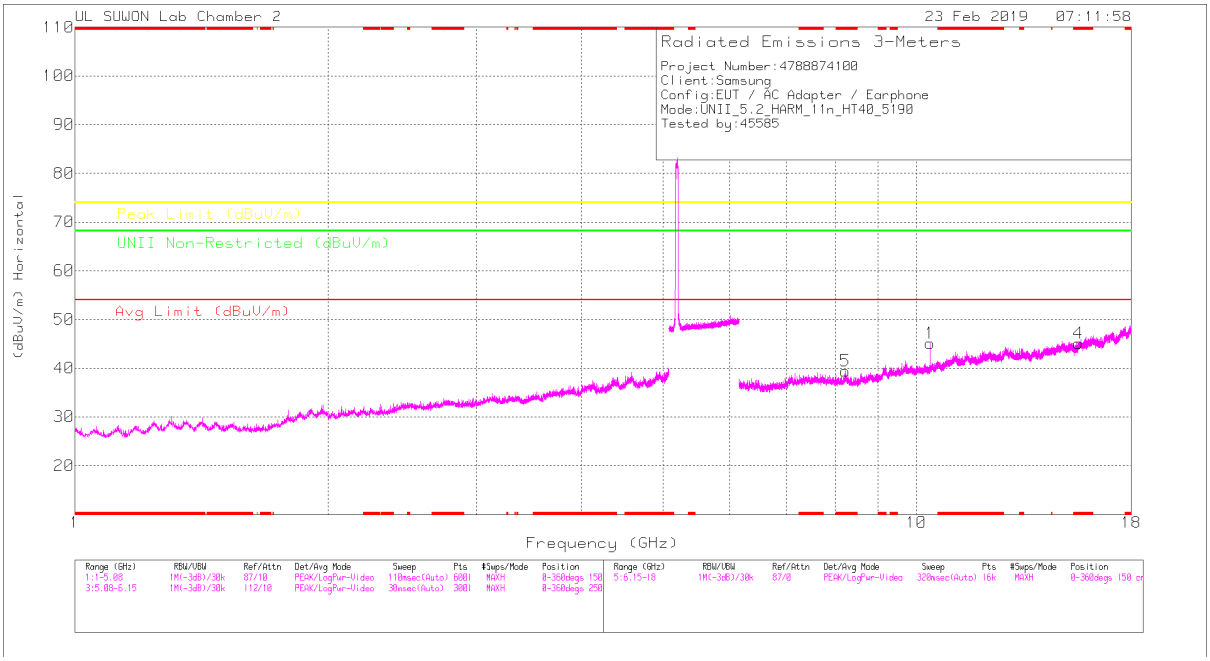
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	48.6	Pk	34.5	-21.8	0	61.3	-	-	74	-12.7	224	133	V
2	* 5.149	52.9	Pk	34.4	-21.8	0	65.5	-	-	74	-8.5	224	133	V
3	5.15	35.01	RMS	34.5	-22	.36	47.87	54	-6.13	-	-	224	133	V
4	* 5.15	36.08	RMS	34.4	-22	.36	48.84	54	-5.16	-	-	224	133	V

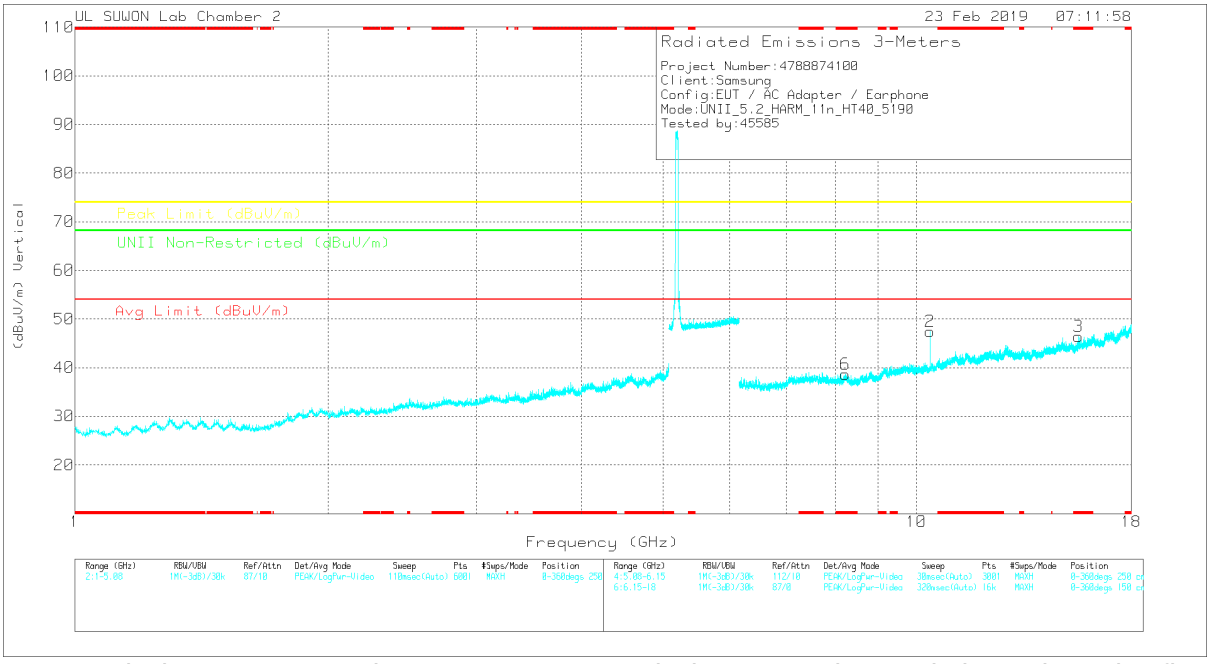
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.38	28.48	PK	37.6	-21	0	45.08	-	-	-	-	68.2	-23.12	0-360	150	H
4	* 15.568	24.86	PK	40	-19.7	0	45.16	-	-	74	-28.84	-	-	0-360	250	H
5	* 8.233	26.75	PK	36	-23.3	0	39.45	-	-	74	-34.55	-	-	0-360	150	H
2	10.379	30.86	PK	37.6	-21	0	47.46	-	-	-	-	68.2	-20.74	0-360	150	V
3	* 15.576	26.06	PK	40	-19.7	0	46.36	-	-	74	-27.64	-	-	0-360	150	V
6	* 8.232	25.89	PK	36	-23.3	0	38.59	-	-	74	-35.41	-	-	0-360	150	V

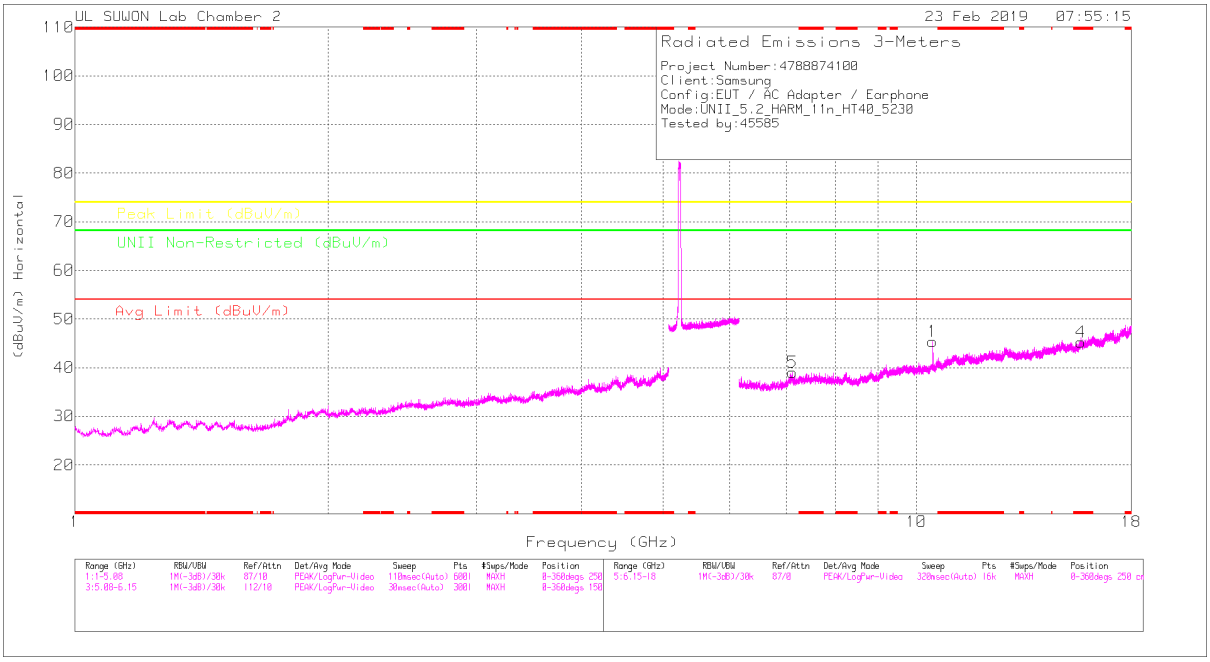
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

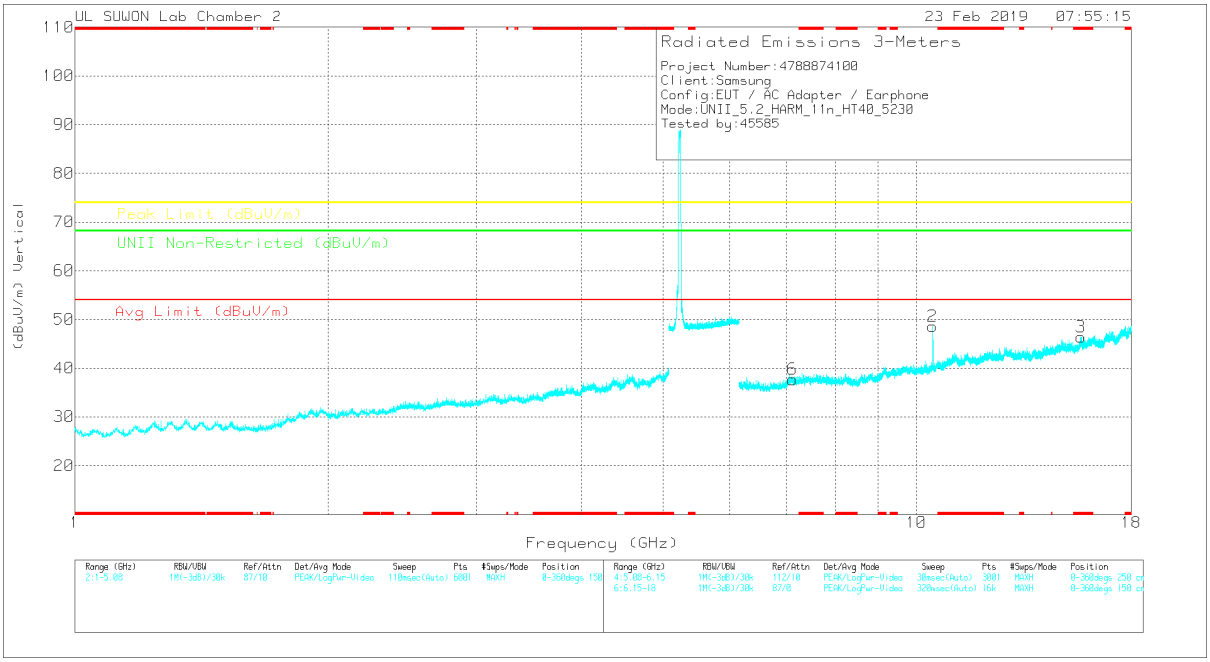
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.38	36.86	PK-U	37.6	-21	0	53.46	-	-	-	-	68.2	-14.74	245	207	H
10.38	38.06	PK-U	37.6	-21	0	54.66	-	-	-	-	68.2	-13.54	165	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.46	28.46	PK	37.6	-20.7	0	45.36	-	-	-	-	68.2	-22.84	0-360	250	H
4	* 15.692	24.88	PK	40.2	-19.8	0	45.28	-	-	74	-28.72	-	-	0-360	250	H
5	7.124	26.81	PK	36	-23.8	0	39.01	-	-	-	-	68.2	-29.19	0-360	250	H
2	10.46	31.7	PK	37.6	-20.7	0	48.6	-	-	-	-	68.2	-19.6	0-360	150	V
3	* 15.686	25.99	PK	40.2	-19.8	0	46.39	-	-	74	-27.61	-	-	0-360	150	V
6	7.123	25.48	PK	36	-23.8	0	37.68	-	-	-	-	68.2	-30.52	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

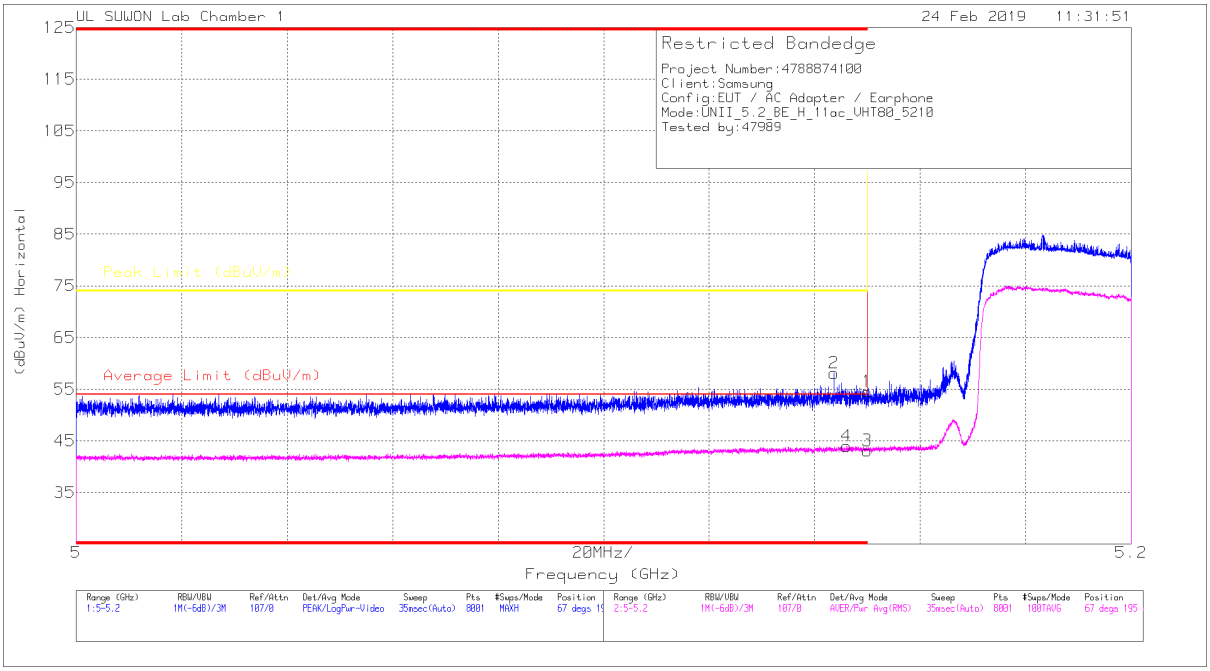
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.46	35.24	PK-U	37.6	-20.7	0	52.14	-	-	-	-	68.2	-16.06	222	148	H
10.46	37.47	PK-U	37.6	-20.7	0	54.37	-	-	-	-	68.2	-13.83	219	161	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

11.1.4.TX Above 1GHz 802.11ac VHT80 MODE IN THE 5.2GHz BAND RESTRICTED BANDEDGE (MID CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

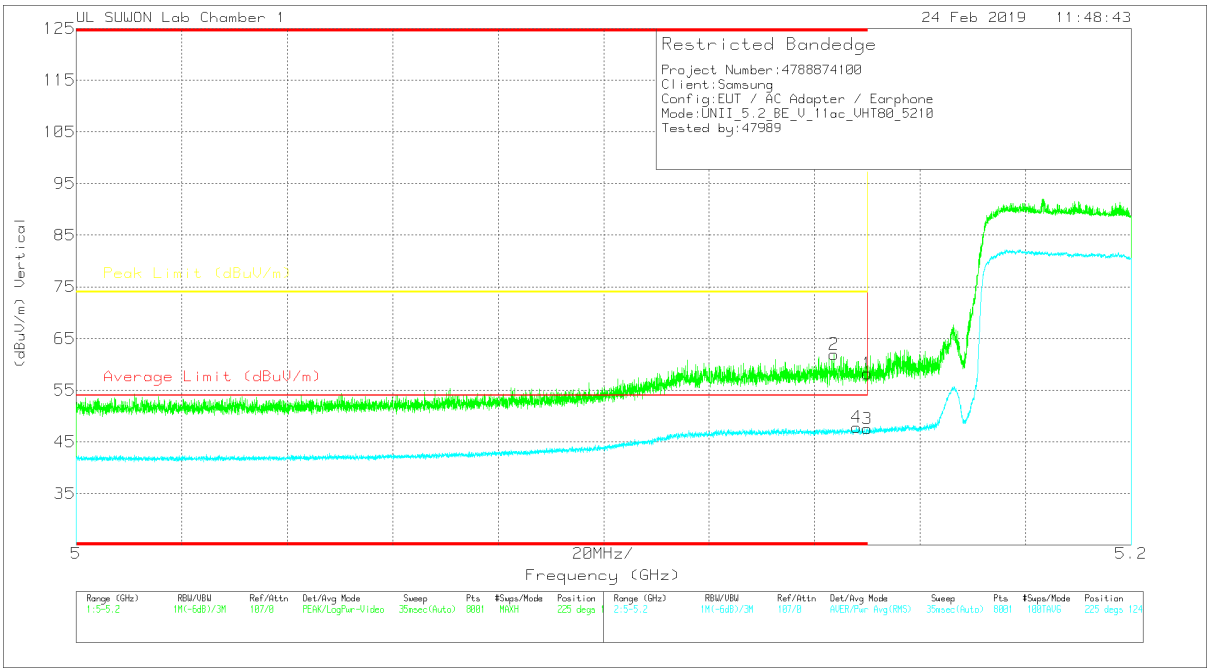


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	41.84	Pk	34.5	-21.8	0	54.54	-	-	74	-19.46	67	195	H
2	* 5.144	45.5	Pk	34.4	-21.8	0	58.1	-	-	74	-15.9	67	195	H
3	5.15	30.37	RMS	34.5	-22	.24	43.11	54	-10.89	-	-	67	195	H
4	* 5.146	31.34	RMS	34.4	-22	.24	43.98	54	-10.02	-	-	67	195	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



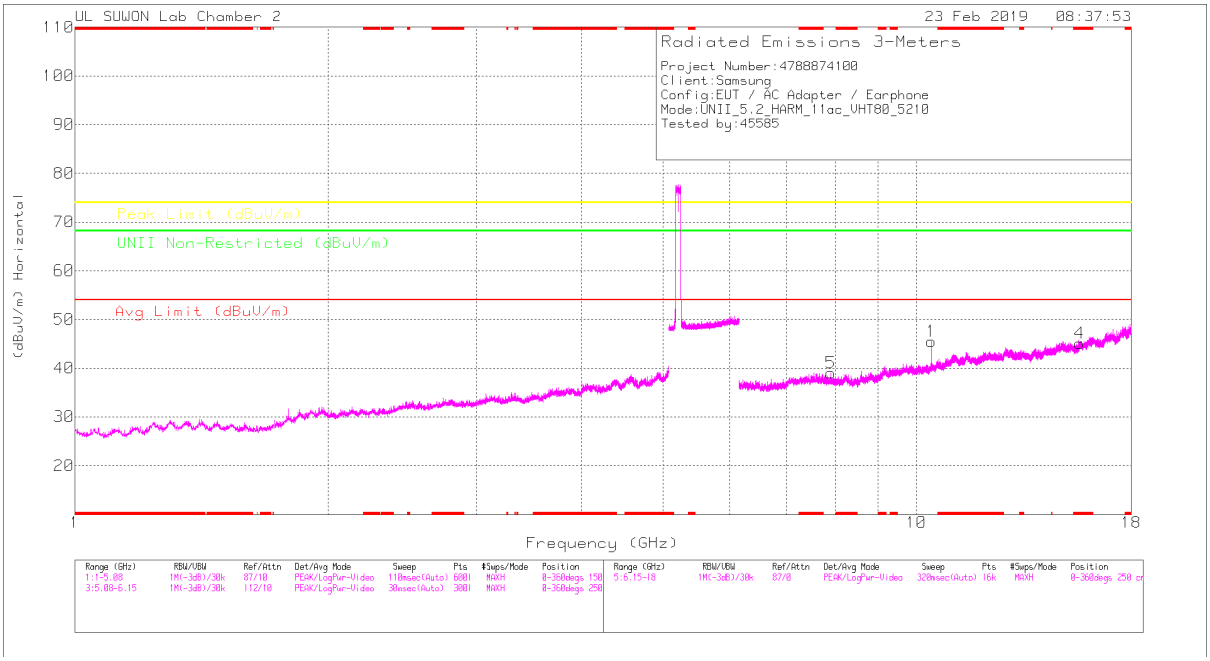
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	45.53	Pk	34.5	-21.8	0	58.23	-	-	74	-15.77	225	124	V
2	* 5.144	49.35	Pk	34.4	-21.8	0	61.95	-	-	74	-12.05	225	124	V
3	5.15	34.83	RMS	34.5	-22	.24	47.57	54	-6.43	-	-	225	124	V
4	* 5.148	35.19	RMS	34.4	-22	.24	47.83	54	-6.17	-	-	225	124	V

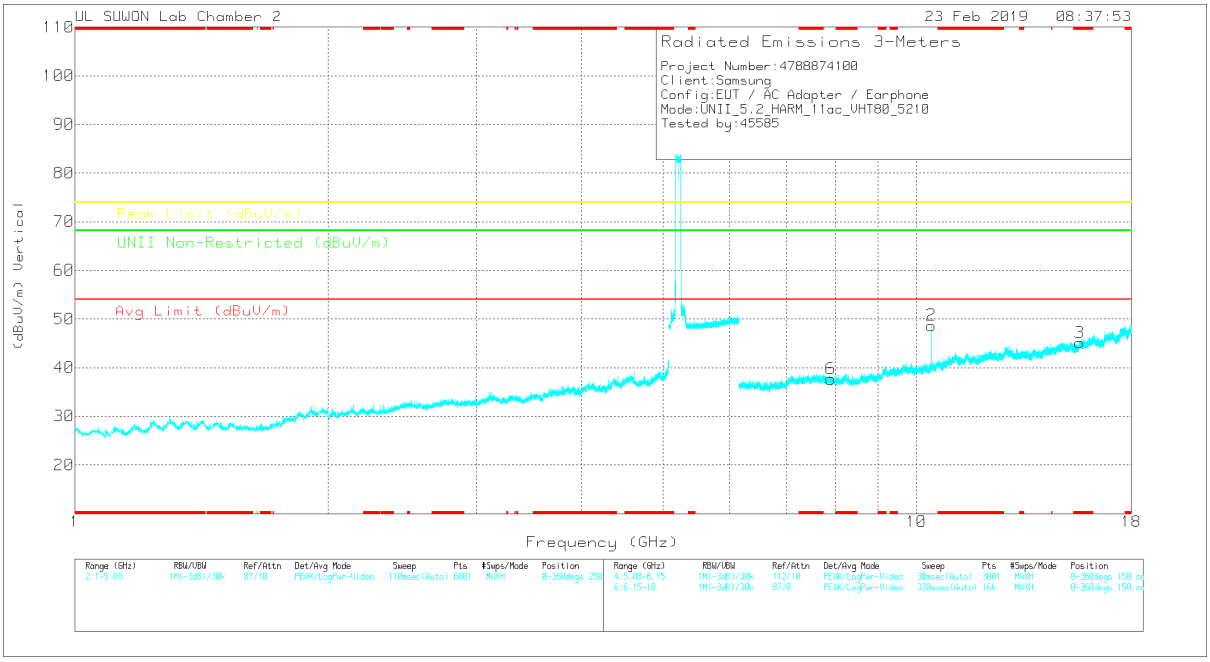
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.42	28.78	PK	37.6	-20.9	0	45.48	-	-	-	-	68.2	-22.72	0-360	250	H
4	* 15.631	24.94	PK	40.1	-19.9	0	45.14	-	-	74	-28.86	-	-	0-360	150	H
5	7.904	27.43	PK	35.9	-24.3	0	39.03	-	-	-	-	68.2	-29.17	0-360	150	H
2	10.419	31.97	PK	37.6	-20.9	0	48.67	-	-	-	-	68.2	-19.53	0-360	150	V
3	* 15.633	24.86	PK	40.1	-19.9	0	45.06	-	-	74	-28.94	-	-	0-360	150	V
6	7.908	25.98	PK	35.9	-24.2	0	37.68	-	-	-	-	68.2	-30.52	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak Detector

Radiated Emissions

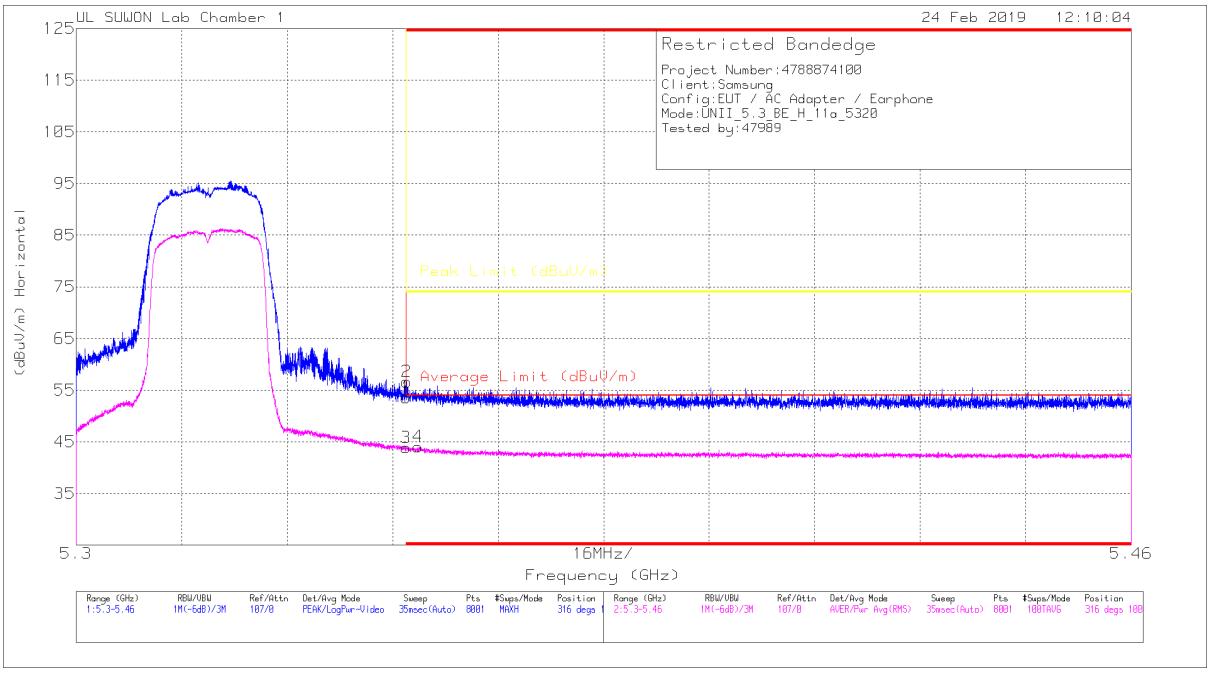
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.42	35.88	PK-U	37.6	-20.9	0	52.58	-	-	-	-	68.2	-15.62	245	172	H
10.42	37.31	PK-U	37.6	-20.9	0	54.01	-	-	-	-	68.2	-14.19	221	159	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

11.2. 5.3 GHz

11.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA

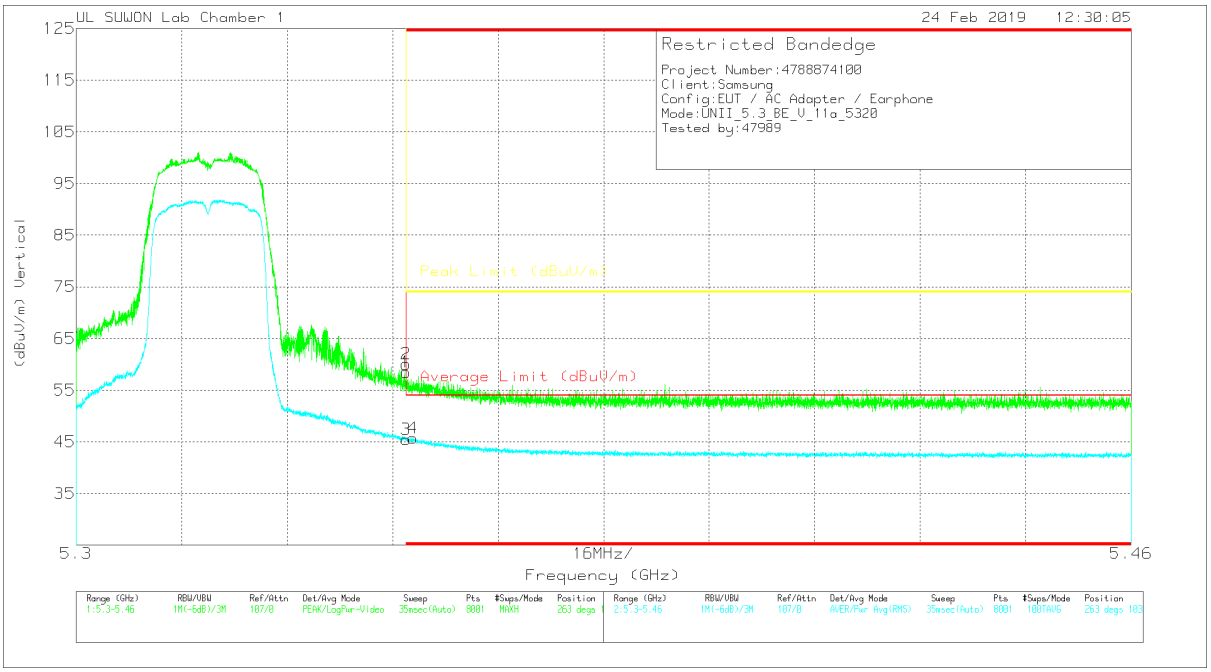


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	* 5.35	40.51	Pk	34.7	-21.6	0	53.61	-	-	74	-20.39	316	100	H
2	* 5.35	43.55	Pk	34.7	-21.6	0	56.65	-	-	74	-17.35	316	100	H
3	* 5.35	30.77	RMS	34.7	-21.7	.12	43.89	54	-10.11	-	-	316	100	H
4	* 5.352	30.94	RMS	34.7	-21.7	.12	44.06	54	-9.94	-	-	316	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



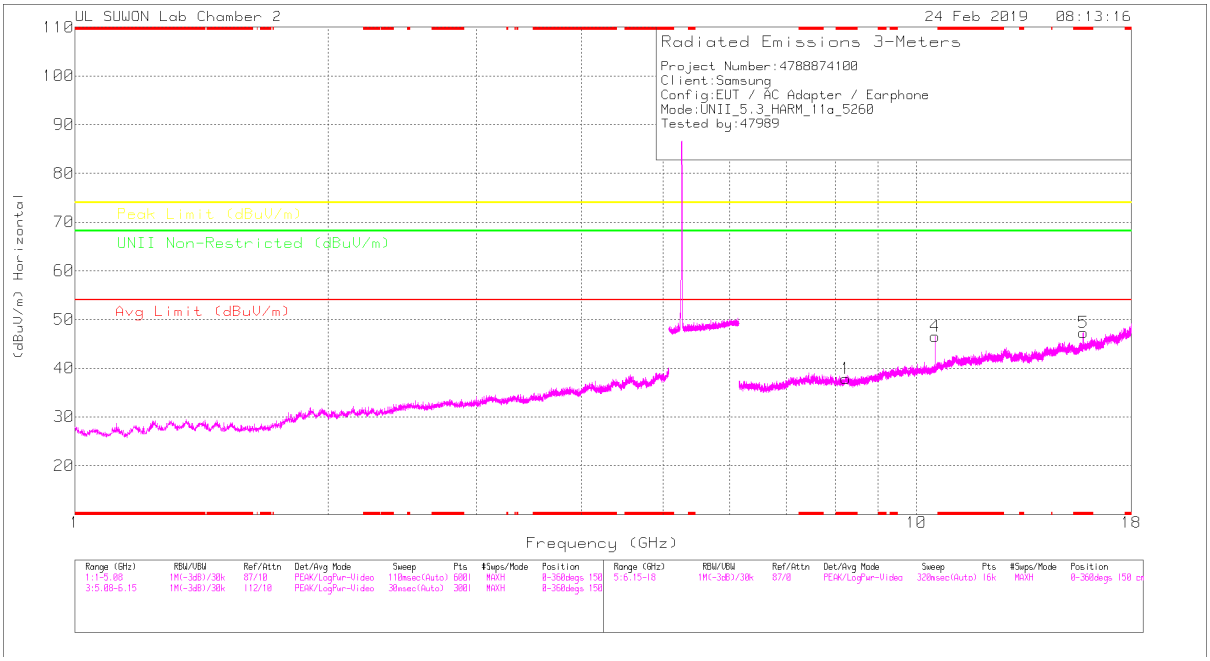
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	* 5.35	45.38	Pk	34.7	-21.6	0	58.48	-	-	74	-15.52	263	103	V
2	* 5.35	46.96	Pk	34.7	-21.6	0	60.06	-	-	74	-13.94	263	103	V
3	* 5.35	32.34	RMS	34.7	-21.7	.12	45.46	54	-8.54	-	-	263	103	V
4	* 5.351	32.62	RMS	34.7	-21.7	.12	45.74	54	-8.26	-	-	263	103	V

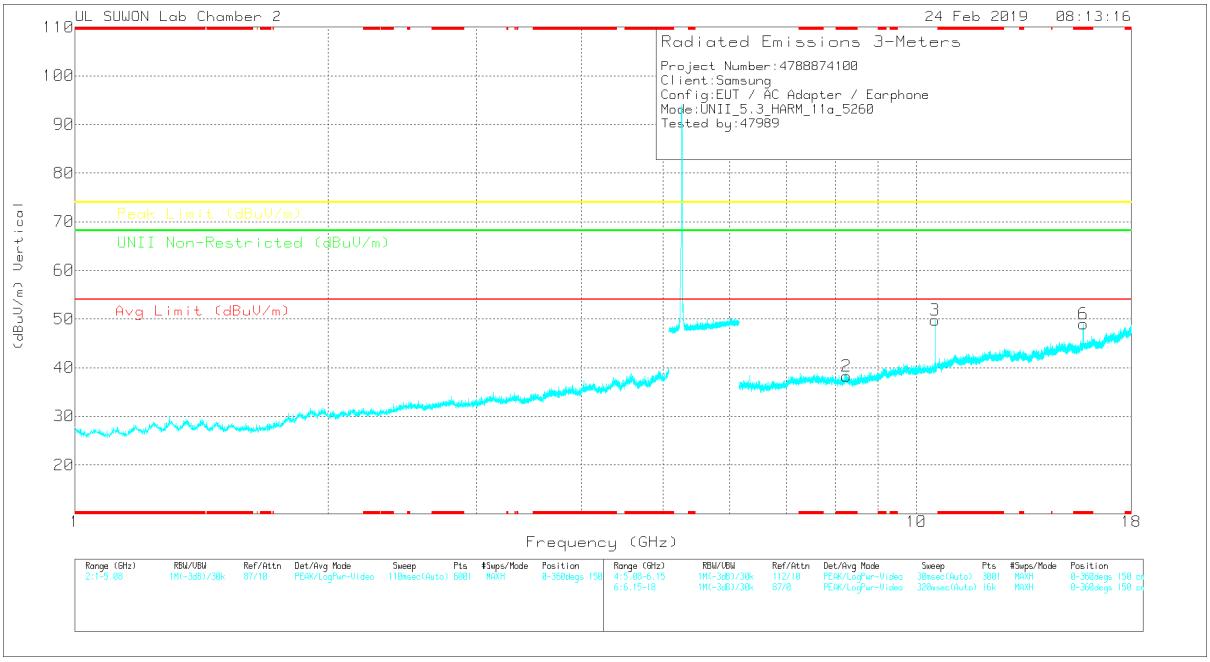
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 8.25	25.03	PK	36	-23.1	0	37.93	-	-	74	-36.07	-	-	0-360	250	H
4	10.52	29.55	PK	37.7	-20.7	0	46.55	-	-	-	-	68.2	-21.65	0-360	250	H
5	* 15.78	26.91	PK	40.3	-19.9	0	47.31	-	-	74	-26.69	-	-	0-360	250	H
2	* 8.255	25.27	PK	36	-23	0	38.27	-	-	74	-35.73	-	-	0-360	250	V
3	10.52	32.77	PK	37.7	-20.7	0	49.77	-	-	-	-	68.2	-18.43	0-360	150	V
6	* 15.781	28.6	PK	40.3	-19.9	0	49	-	-	74	-25	-	-	0-360	150	V

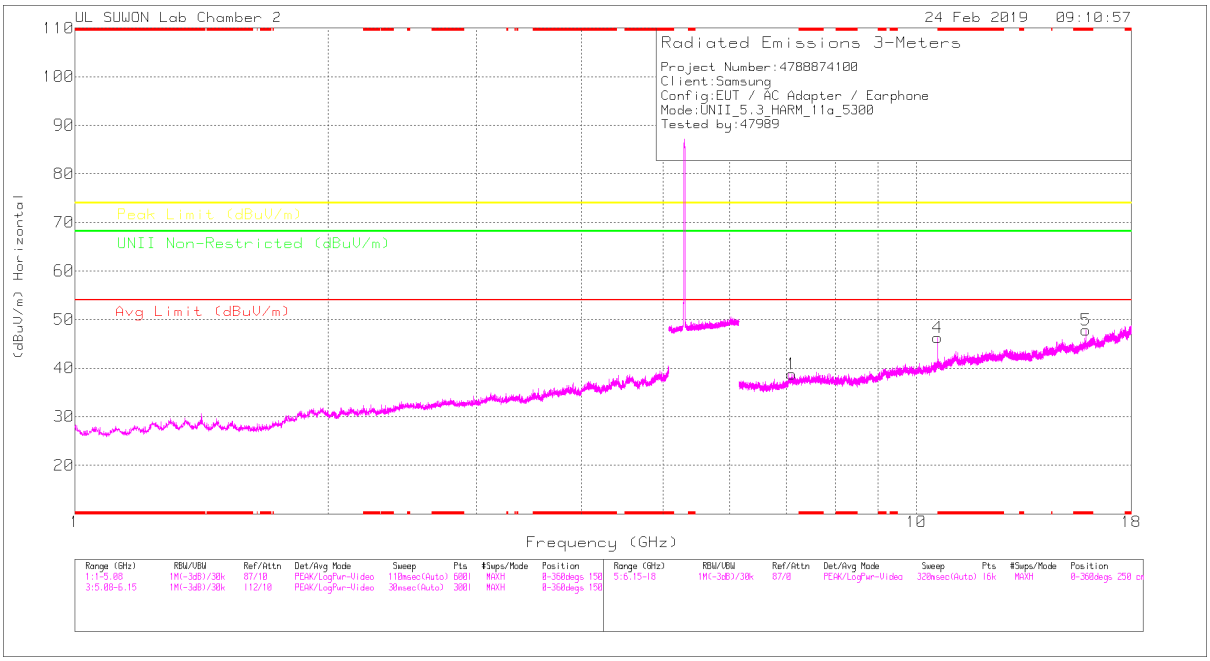
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak detector

Radiated Emissions

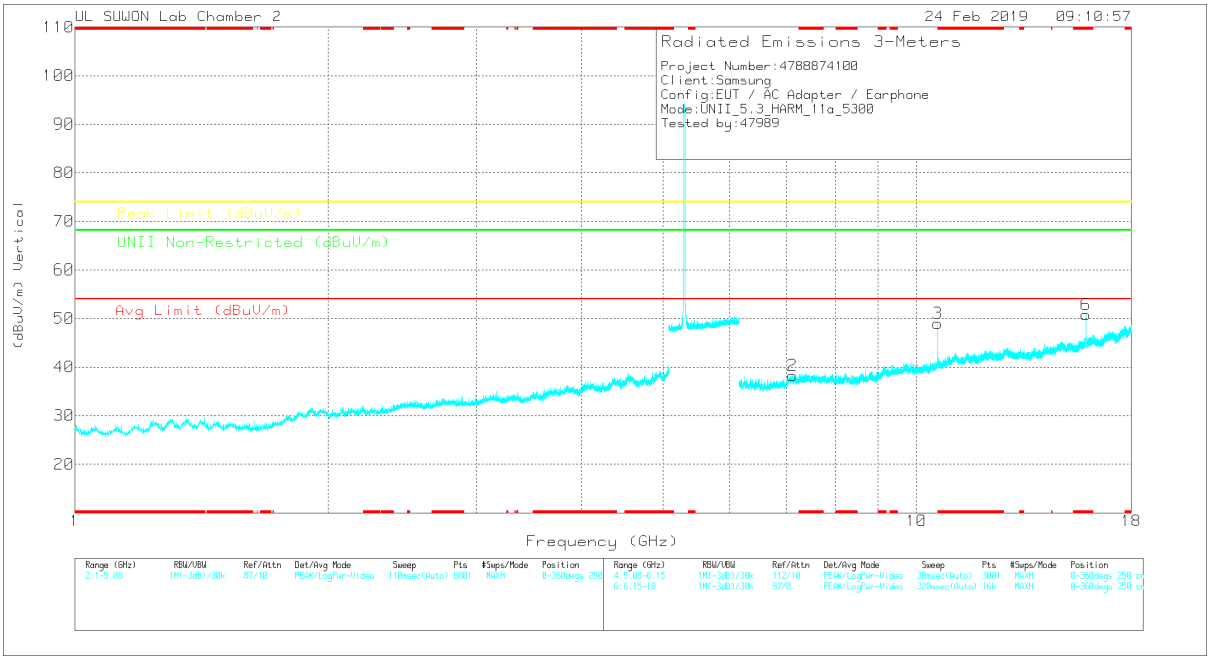
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.52	35.58	PK-U	37.7	-20.7	0	52.58	-	-	-	-	68.2	-15.62	100	326	H
10.52	38.75	PK-U	37.7	-20.7	0	55.75	-	-	-	-	68.2	-12.45	175	124	V
* 15.785	42.02	PK-U	40.3	-19.9	0	62.42	-	-	74	-11.58	-	-	166	125	V
* 15.78	27.96	ADR	40.3	-19.9	.12	48.48	54	-5.52	-	-	-	-	166	125	V
* 15.785	40.46	PK-U	40.3	-19.9	0	60.86	-	-	74	-13.14	-	-	128	111	H
* 15.78	26.6	ADR	40.3	-19.9	.12	47.12	54	-6.88	-	-	-	-	128	111	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.116	26.54	PK	36	-23.8	0	38.74	-	-	-	-	68.2	-29.46	0-360	250	H
4	* 10.6	28.21	PK	37.8	-19.7	0	46.31	-	-	74	-27.69	-	-	0-360	250	H
5	* 15.901	26.85	PK	40.5	-19.5	0	47.85	-	-	74	-26.15	-	-	0-360	150	H
2	7.119	26	PK	36	-23.8	0	38.2	-	-	-	-	68.2	-30	0-360	250	V
3	* 10.6	30.84	PK	37.8	-19.7	0	48.94	-	-	74	-25.06	-	-	0-360	150	V
6	* 15.896	29.86	PK	40.5	-19.5	0	50.86	-	-	74	-23.14	-	-	0-360	150	V

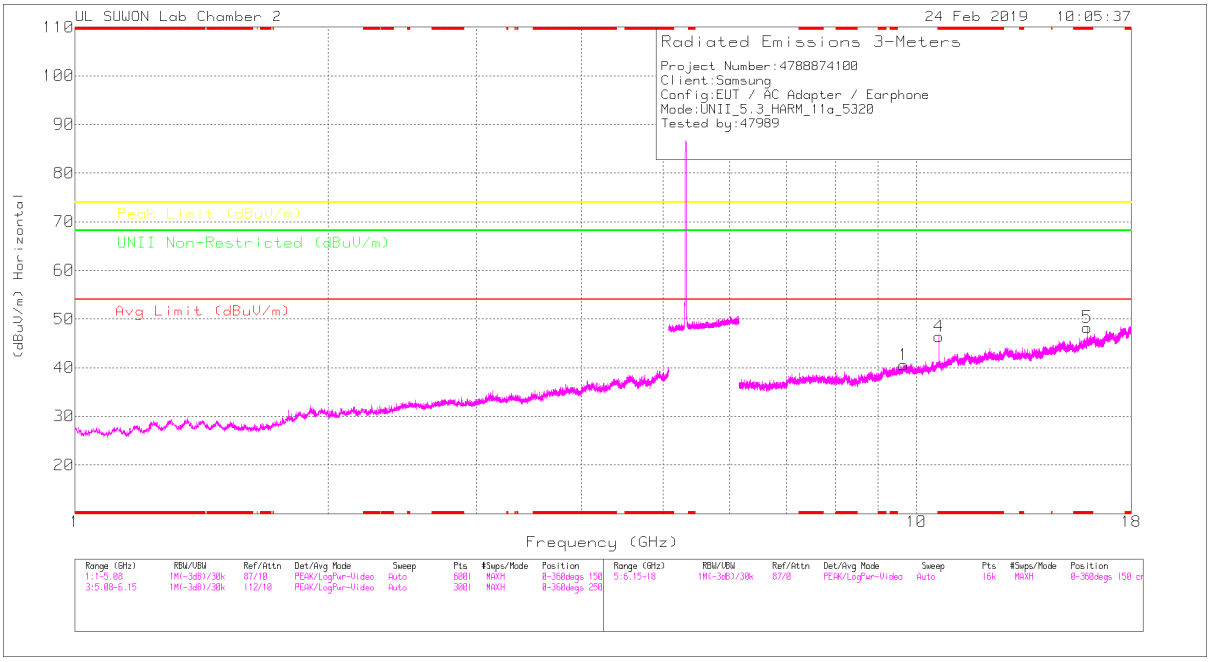
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak detector

Radiated Emissions

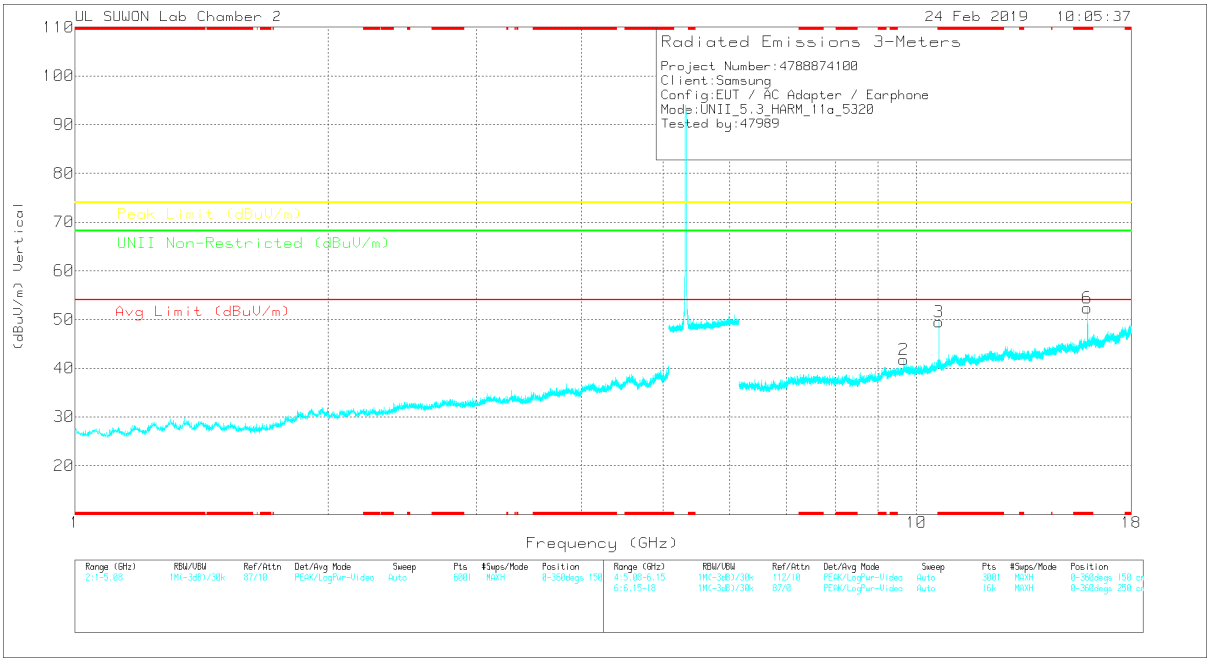
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.6	35.44	PK-U	37.8	-19.7	0	53.54	-	-	74	-20.46	-	-	234	371	H
* 10.6	27.15	ADR	37.8	-19.7	.12	45.37	54	-8.63	-	-	-	-	234	371	H
* 10.6	36.74	PK-U	37.8	-19.7	0	54.84	-	-	74	-19.16	-	-	166	111	V
* 10.6	30.3	ADR	37.8	-19.7	.12	48.52	54	-5.48	-	-	-	-	166	111	V
* 15.904	40.96	PK-U	40.5	-19.5	0	61.96	-	-	74	-12.04	-	-	185	128	V
* 15.9	26.96	ADR	40.5	-19.5	.12	48.08	54	-5.92	-	-	-	-	185	128	V
* 15.905	39.08	PK-U	40.5	-19.5	0	60.08	-	-	74	-13.92	-	-	161	137	H
* 15.9	25.36	ADR	40.5	-19.5	.12	46.48	54	-7.52	-	-	-	-	161	137	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	9.66	25.14	PK	37.1	-21.7	0	40.54	-	-	-	-	68.2	-27.66	0-360	250	H
4	* 10.64	28.2	PK	37.8	-19.6	0	46.4	-	-	74	-27.6	-	-	0-360	250	H
5	* 15.96	27.38	PK	40.5	-19.6	0	48.28	-	-	74	-25.72	-	-	0-360	250	H
2	9.658	26.31	PK	37.1	-21.7	0	41.71	-	-	-	-	68.2	-26.49	0-360	150	V
3	* 10.64	31.26	PK	37.8	-19.6	0	49.46	-	-	74	-24.54	-	-	0-360	150	V
6	* 15.962	31.5	PK	40.5	-19.6	0	52.4	-	-	74	-21.6	-	-	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK – Peak detector

Radiated Emissions

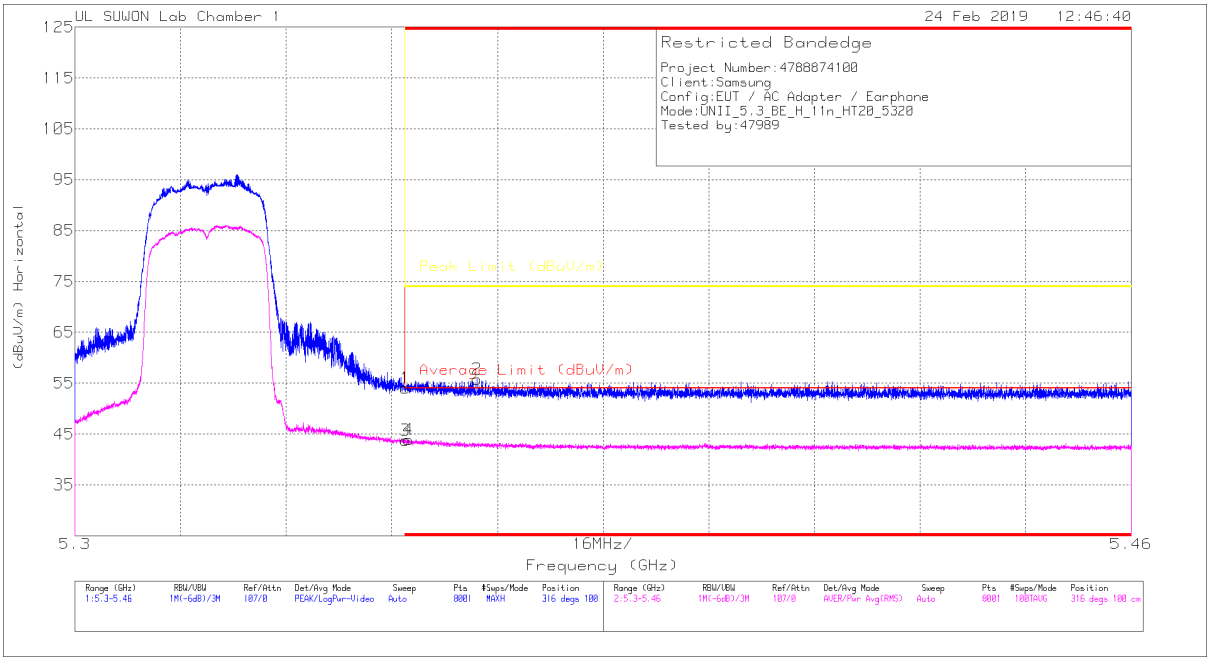
Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168724	6GHz_HP[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.64	35.05	PK-U	37.8	-19.6	0	53.25	-	-	74	-20.75	-	-	242	193	H
* 10.64	26.75	ADR	37.8	-19.6	.12	45.07	54	-8.93	-	-	-	-	242	193	H
* 10.64	35.36	PK-U	37.8	-19.6	0	53.56	-	-	74	-20.44	-	-	242	193	H
* 10.64	27.07	ADR	37.8	-19.6	.12	45.39	54	-8.61	-	-	-	-	242	193	H
* 10.64	37.67	PK-U	37.8	-19.6	0	55.87	-	-	74	-18.13	-	-	172	116	V
* 10.64	32.04	ADR	37.8	-19.6	.12	50.36	54	-3.64	-	-	-	-	172	116	V
* 10.64	35.29	PK-U	37.8	-19.6	0	53.49	-	-	74	-20.51	-	-	100	180	H
* 10.64	26.46	ADR	37.8	-19.6	.12	44.78	54	-9.22	-	-	-	-	100	180	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE DATA



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00168717	10dB[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	* 5.35	40.98	Pk	34.7	-21.6	0	54.08	-	-	74	-19.92	316	100	H
2	* 5.361	42.66	Pk	34.7	-21.6	0	55.76	-	-	74	-18.24	316	100	H
3	* 5.35	30.66	RMS	34.7	-21.7	.13	43.79	54	-10.21	-	-	316	100	H
4	* 5.351	30.82	RMS	34.7	-21.7	.13	43.95	54	-10.05	-	-	316	100	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection