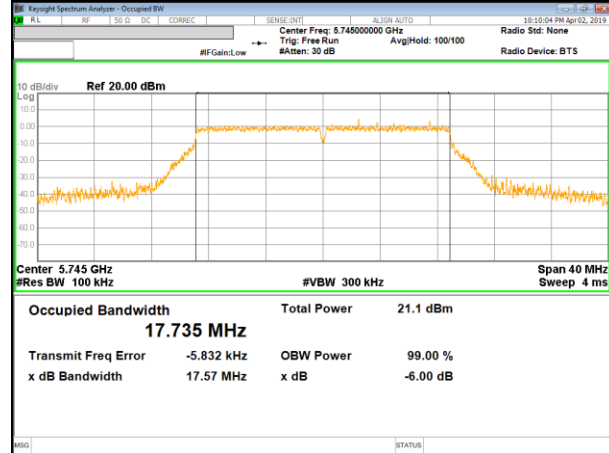
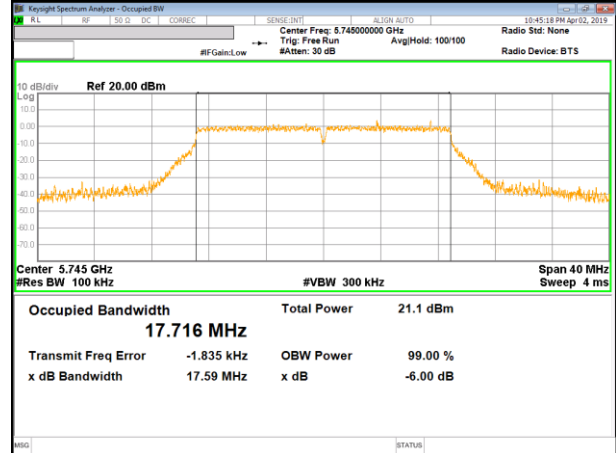


IEEE 802.11n HT20 mode

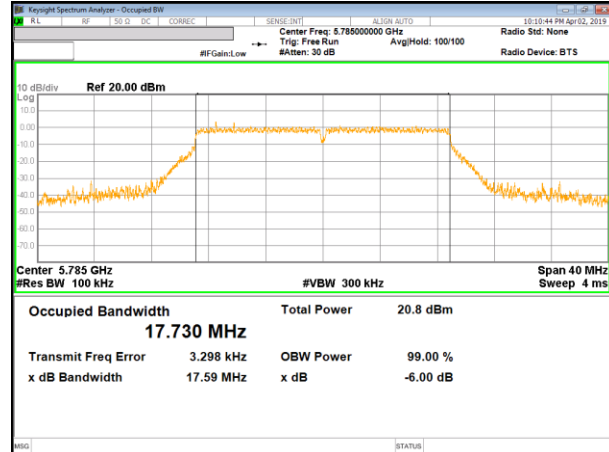
11n HT20 Mode Low Channel Antenna 1



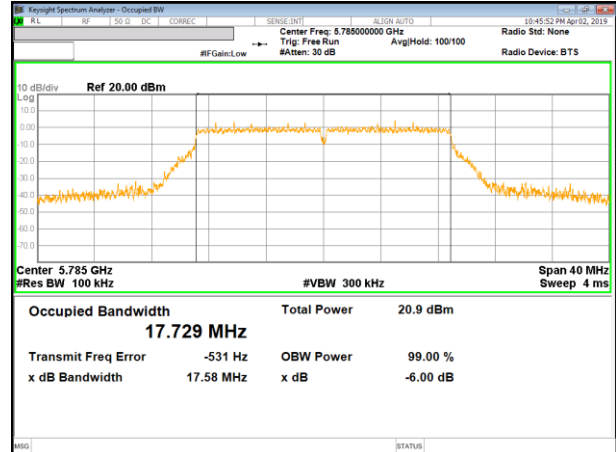
11n HT20 Mode Low Channel Antenna 2



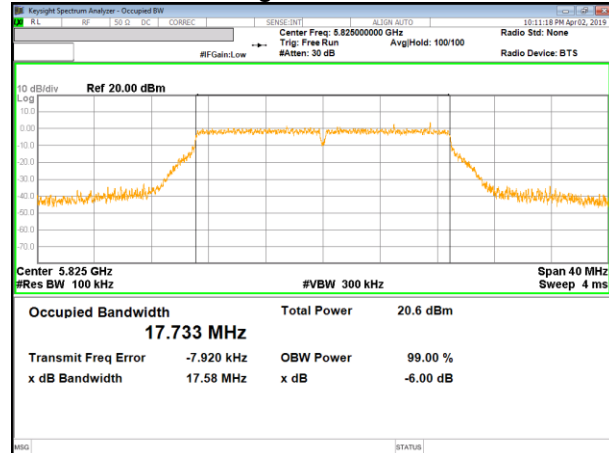
11n HT20 Mode Middle Channel Antenna 1



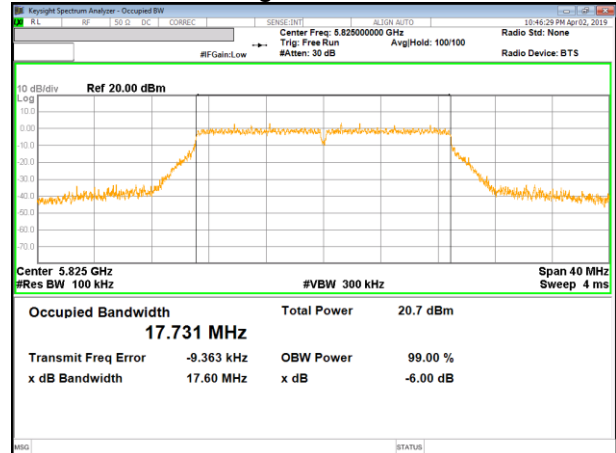
11n HT20 Mode Middle Channel Antenna 2



11n HT20 Mode High Channel Antenna 1

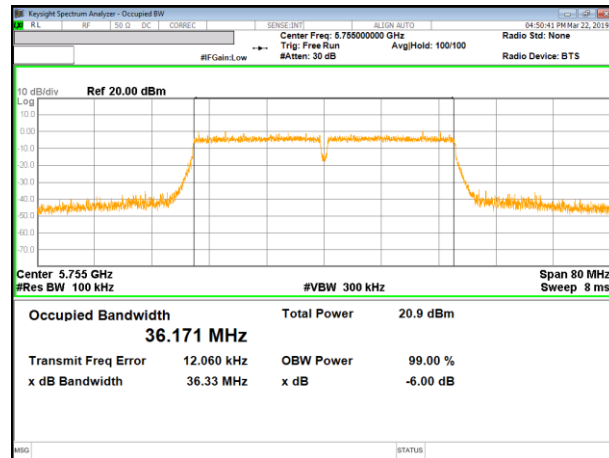


11n HT20 Mode High Channel Antenna 2

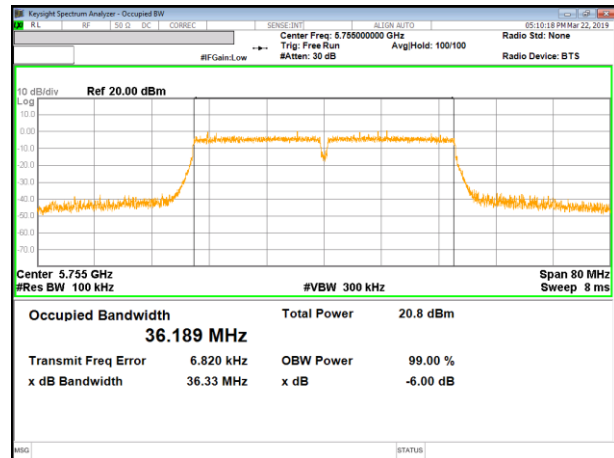


IEEE 802.11n HT40 mode

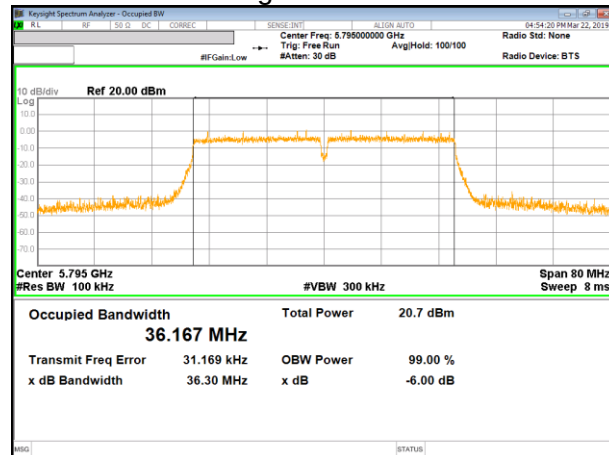
11n HT40 Mode Low Channel Antenna 1



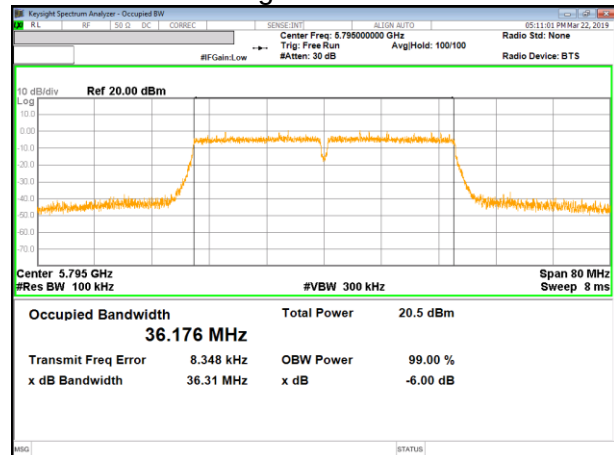
11n HT40 Mode Low Channel Antenna 2



11n HT40 Mode High Channel Antenna 1

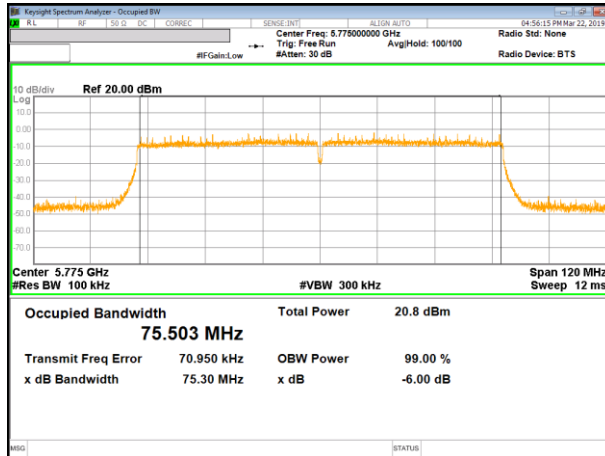


11n HT40 Mode High Channel Antenna 2

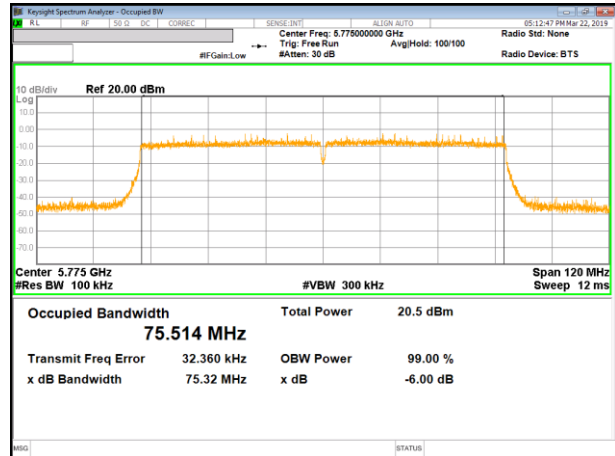


IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel Antenna 1



11ac VHT80 Mode Middle Channel Antenna 2



10.2. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)

FCC

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak 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 $11 \text{ dBm} + 10 \log B$, 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 PM is used for output power.

KDB 789033 Method SA-2 is used for PPSD. RBW set to 1MHz(500kHz for the band 5.725-5.85 GHz, the VBW $\geq 3 \times \text{RBW}$, RMS detector and trace averaging). Band power function used for power and peak marker value of the spectrum is used for PSD. Add duty cycle correction factor.

DIRECTIONAL ANTENNA GAIN

For OUTPUT POWER and PSD: The TX chains are correlated and the antenna gains are unequal among the chains. The directional gain is:

Frequency Band [MHz]	Antenna1 Gain [dBi]	Antenna2 Gain [dBi]	Correlated Chains Directional Gain [dBi]
5150 - 5250	-3.58	-4.17	-0.86
5250 - 5350	-4.42	-4.17	-1.28
5470 - 5725	-3.99	-3.55	-0.76
5725 - 5850	-3.84	-3.93	-0.87

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]
Low	5180	21.65	-0.86
Mid	5200	21.56	-0.86
High	5240	21.46	-0.86

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.00	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5180	17.72	17.76	20.75	24.00	-3.25
Mid	5200	17.71	17.70	20.72	24.00	-3.28
High	5240	17.57	17.65	20.62	24.00	-3.38

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	6.85	6.88	9.87	11.00	-1.13
Mid	5200	6.80	6.75	9.79	11.00	-1.21
High	5240	6.99	6.84	9.92	11.00	-1.08

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]
Low	5180	24.05	-0.86
Mid	5200	23.31	-0.86
High	5240	21.87	-0.86

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.09	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5180	17.54	17.63	20.69	24.00	-3.31
Mid	5200	17.52	17.57	20.65	24.00	-3.35
High	5240	17.47	17.52	20.60	24.00	-3.40

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	6.67	6.54	9.71	11.00	-1.29
Mid	5200	6.73	6.51	9.73	11.00	-1.27
High	5240	6.68	6.62	9.75	11.00	-1.25

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]
Low	5190	39.66	-0.86
High	5230	39.55	-0.86

Limits

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

Duty Cycle CF [dB]	0.19	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5190	15.47	15.17	18.52	24.00	-5.48
High	5230	15.41	15.10	18.46	24.00	-5.54

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5190	1.62	2.16	5.10	11.00	-5.90
High	5230	1.89	1.55	4.92	11.00	-6.08

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]
Middle	5210	81.31	-0.86

Limits

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

Duty Cycle CF [dB]	0.39	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5210	14.93	14.56	18.15	24.00	-5.85

PPSP Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSP [dBm]	Antenna 2 Meas PPSP [dBm]	Total Corr'd PPSP [dBm]	PPSP Limit [dBm]	PPSP Margin [dB]
Middle	5210	-1.27	-1.60	1.97	11.00	-9.03

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]
Low	5260	21.51	-1.28
Mid	5300	21.46	-1.28
High	5320	21.46	-1.28

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.00	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	17.86	17.92	20.90	24.00	-3.10
Mid	5300	17.72	17.85	20.80	24.00	-3.20
High	5320	17.70	17.84	20.78	24.00	-3.22

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	6.97	6.95	9.97	11.00	-1.03
Mid	5300	6.85	6.99	9.93	11.00	-1.07
High	5320	6.94	6.99	9.98	11.00	-1.02

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]
Low	5260	21.98	-1.28
Mid	5300	22.67	-1.28
High	5320	21.52	-1.28

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.09	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	17.61	17.72	20.77	24.00	-3.23
Mid	5300	17.60	17.69	20.75	24.00	-3.25
High	5320	17.54	17.63	20.69	24.00	-3.31

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	6.77	6.70	9.84	11.00	-1.16
Mid	5300	6.68	6.67	9.78	11.00	-1.22
High	5320	6.85	6.66	9.86	11.00	-1.14

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]
Low	5270	39.72	-1.28
High	5310	39.90	-1.28

Limits

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

Duty Cycle CF [dB]	0.19	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5270	15.21	15.31	18.46	24.00	-5.54
High	5310	15.22	15.32	18.47	24.00	-5.53

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5270	1.73	1.36	4.75	11.00	-6.25
High	5310	1.22	1.27	4.45	11.00	-6.55

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]
Middle	5290	81.23	-1.28

Limits

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

Duty Cycle CF [dB]	0.39	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5290	14.75	14.65	18.10	24.00	-5.90

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5290	-1.91	-1.88	1.50	11.00	-9.50

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]
Low	5500	21.72	-0.76
Mid	5580	21.50	-0.76
High	5700	21.30	-0.76

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.00	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	17.77	17.80	20.80	24.00	-3.20
Mid	5580	17.70	17.77	20.75	24.00	-3.25
High	5700	17.59	17.42	20.52	24.00	-3.48

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	6.95	6.99	9.98	11.00	-1.02
Mid	5580	6.91	6.96	9.94	11.00	-1.06
High	5700	6.95	6.96	9.97	11.00	-1.03

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]
Low	5500	21.56	-0.76
Mid	5580	21.69	-0.76
High	5700	21.52	-0.76

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.09	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	15.74	15.75	18.85	24.00	-5.15
Mid	5580	17.51	17.53	20.63	24.00	-3.37
High	5700	17.29	17.31	20.41	24.00	-3.59

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	6.86	6.69	9.88	11.00	-1.12
Mid	5580	6.78	6.64	9.81	11.00	-1.19
High	5700	6.75	6.52	9.74	11.00	-1.26

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]
Low	5510	39.73	-0.76
Mid	5590	39.65	-0.76
High	5670	39.92	-0.76

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.19	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5510	15.41	15.34	18.58	24.00	-5.42
Mid	5590	15.37	15.26	18.52	24.00	-5.48
High	5670	15.14	15.04	18.29	24.00	-5.71

PPSP Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSP [dBm]	Antenna 2 Meas PPSP [dBm]	Total Corr'd PPSP [dBm]	PPSP Limit [dBm]	PPSP Margin [dB]
Low	5510	1.14	1.32	4.43	11.00	-6.57
Mid	5590	1.81	1.43	4.82	11.00	-6.18
High	5670	2.19	2.14	5.36	11.00	-5.64

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]
Low	5530	82.25	-0.76
High	5610	81.69	-0.76

Limits

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

Duty Cycle CF [dB]	0.39	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5530	14.96	14.77	18.27	24.00	-5.73
High	5610	14.80	14.71	18.16	24.00	-5.84

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm]	Antenna 2 Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5530	-1.58	-2.06	1.59	11.00	-9.41
High	5610	-1.48	-1.83	1.75	11.00	-9.25

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]
Low	5745	21.31	-0.87
Mid	5785	21.34	-0.87
High	5825	21.32	-0.87

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.00	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	16.09	15.81	18.96	30.00	-11.04
Mid	5785	16.02	15.55	18.80	30.00	-11.20
High	5825	16.01	15.48	18.76	30.00	-11.24

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm/500kHz]	Antenna 2 Meas PPSD [dBm/500kHz]	Total Corr'd PPSD [dBm/500kHz]	PPSD Limit [dBm/500kHz]	PPSD Margin [dB]
Low	5745	2.16	2.12	5.15	30.00	-24.85
Mid	5785	2.29	1.87	5.09	30.00	-24.91
High	5825	2.09	1.94	5.03	30.00	-24.97

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]
Low	5745	21.68	-0.87
Mid	5785	21.63	-0.87
High	5825	21.52	-0.87

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
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]	0.09	Included in Calculations of Corr'd Power & PPSP
--------------------	------	---

Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	15.99	16.19	19.19	30.00	-10.81
Mid	5785	15.92	15.78	18.95	30.00	-11.05
High	5825	15.94	15.76	18.95	30.00	-11.05

PPSP Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSP [dBm/500kHz]	Antenna 2 Meas PPSP [dBm/500kHz]	Total Corr'd PPSP [dBm/500kHz]	PPSP Limit [dBm/500kHz]	PPSP Margin [dB]
Low	5745	1.69	1.89	4.90	30.00	-25.10
Mid	5785	1.80	1.61	4.82	30.00	-25.18
High	5825	1.87	1.54	4.81	30.00	-25.19

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]
Low	5755	39.82	-0.87
High	5795	39.71	-0.87

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5755	30.00	30.00	30.00
High	5795	30.00	30.00	30.00

Duty Cycle CF [dB]	0.19	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5755	15.50	15.39	18.65	30.00	-11.35
High	5795	15.44	15.31	18.58	30.00	-11.42

PPSD Results

Channel	Frequency [MHz]	Antenna 1 Meas PPSD [dBm/500kHz]	Antenna 2 Meas PPSD [dBm/500kHz]	Total Corr'd PPSD [dBm/500kHz]	PPSD Limit [dBm/500kHz]	PPSD Margin [dB]
Low	5755	-0.84	-1.05	2.26	30.00	-27.74
High	5795	-0.98	-1.31	2.06	30.00	-27.94

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]
Middle	5775	82.16	-0.87

Limits

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

Duty Cycle CF [dB]	0.39	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

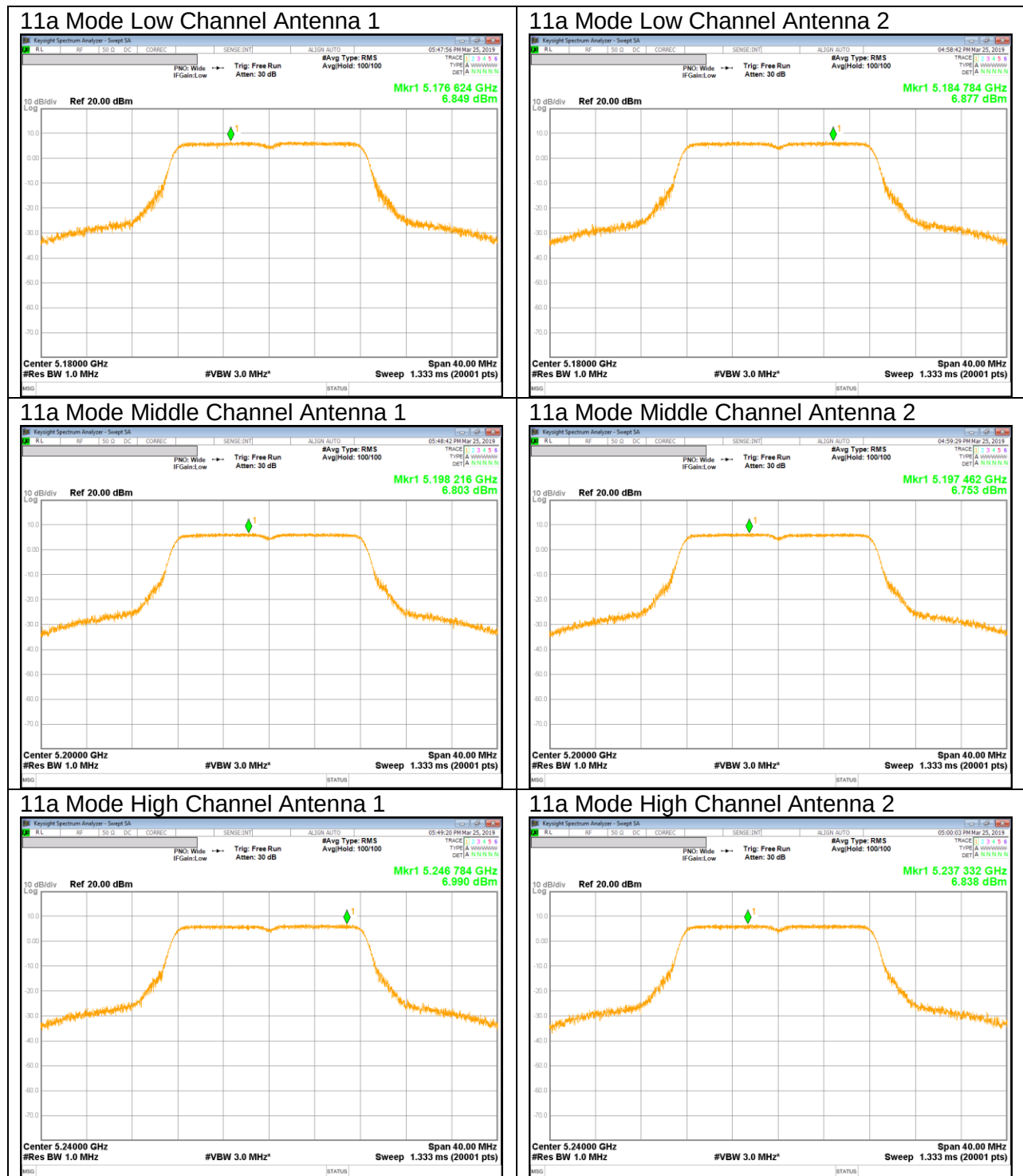
Channel	Frequency [MHz]	Antenna 1 Meas Power [dBm]	Antenna 2 Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5775	15.09	14.82	18.36	30.00	-11.64

PPSP Results

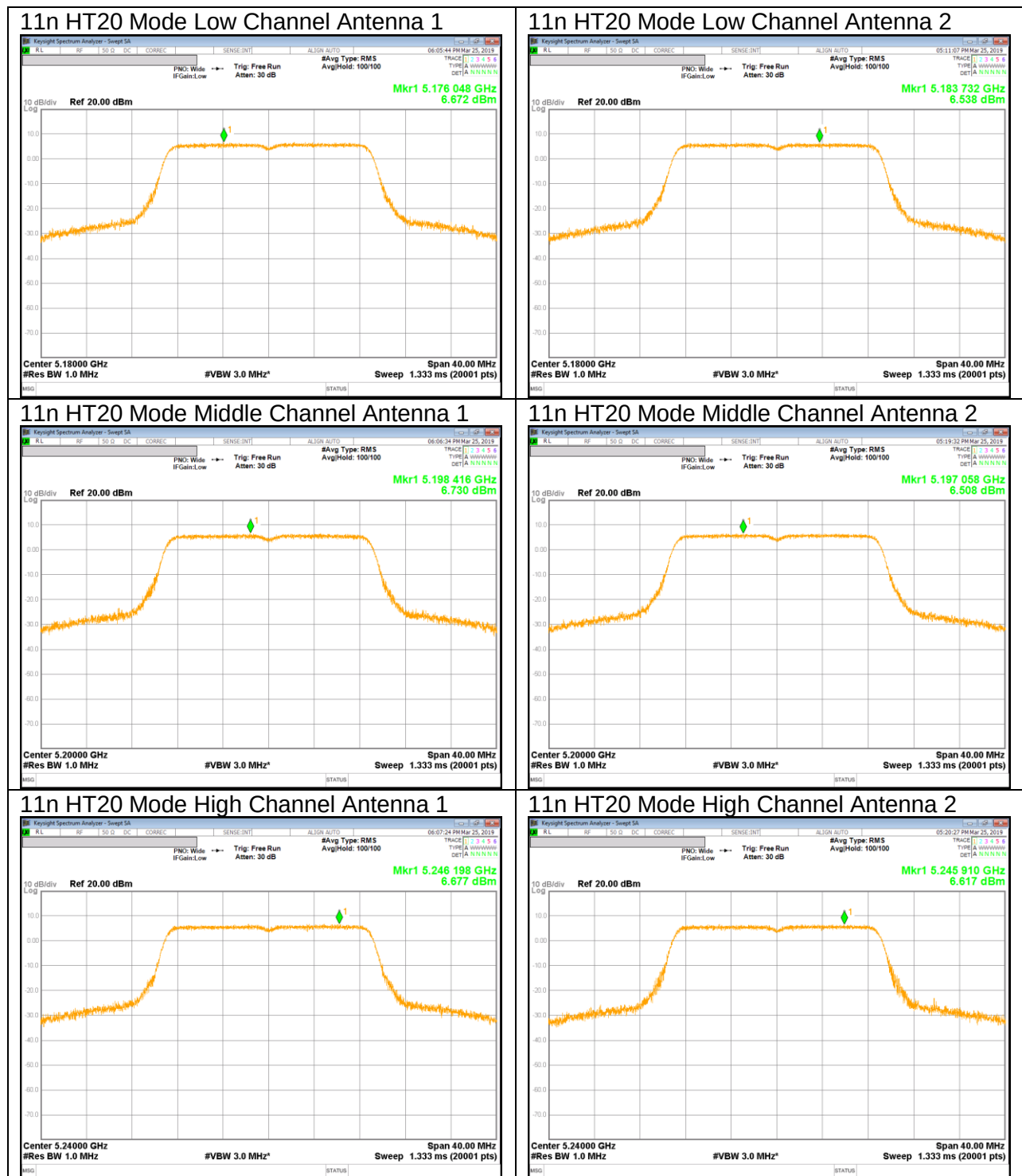
Channel	Frequency [MHz]	Antenna 1 Meas PPSP [dBm/500kHz]	Antenna 2 Meas PPSP [dBm/500kHz]	Total Corr'd PPSP [dBm/500kHz]	PPSP Limit [dBm/500kHz]	PPSP Margin [dB]
Middle	5775	-4.34	-4.41	-0.98	30.00	-30.98

10.2.17. PPSP PLOTS

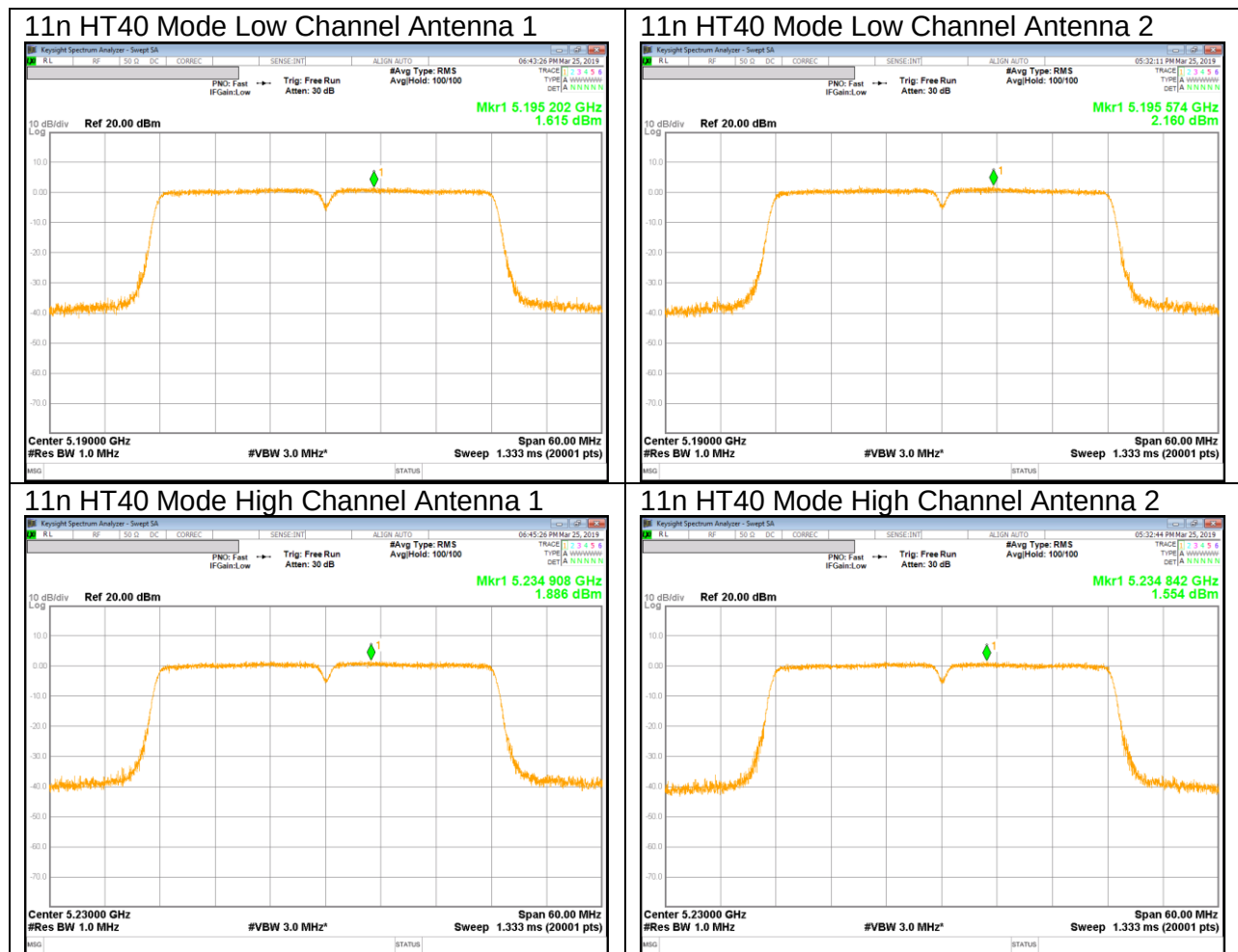
UNII 5.2 GHz IEEE 802.11a mode PSD



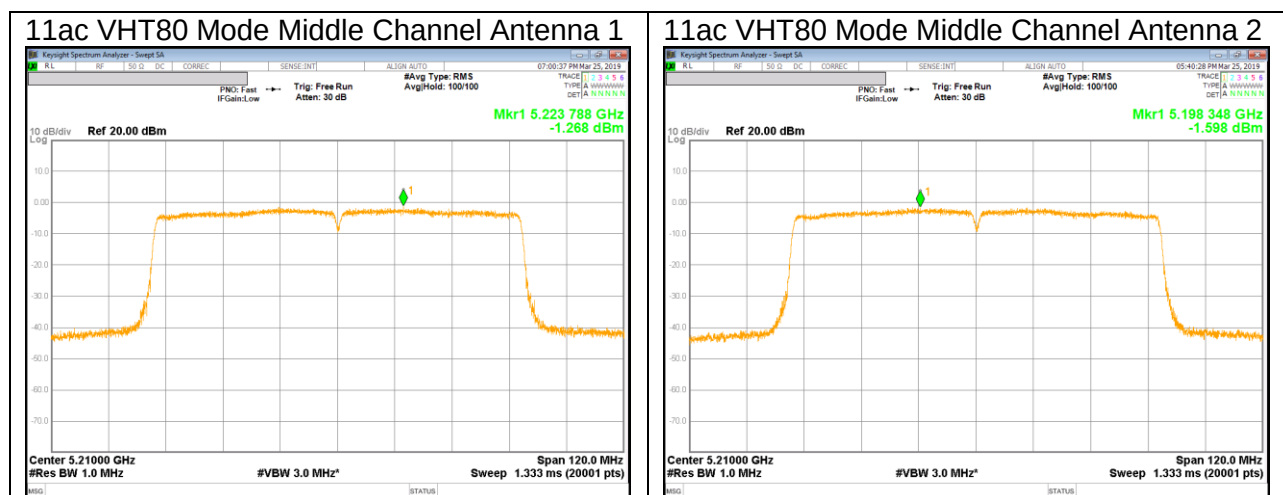
UNII 5.2 GHz IEEE 802.11n HT20 mode PSD



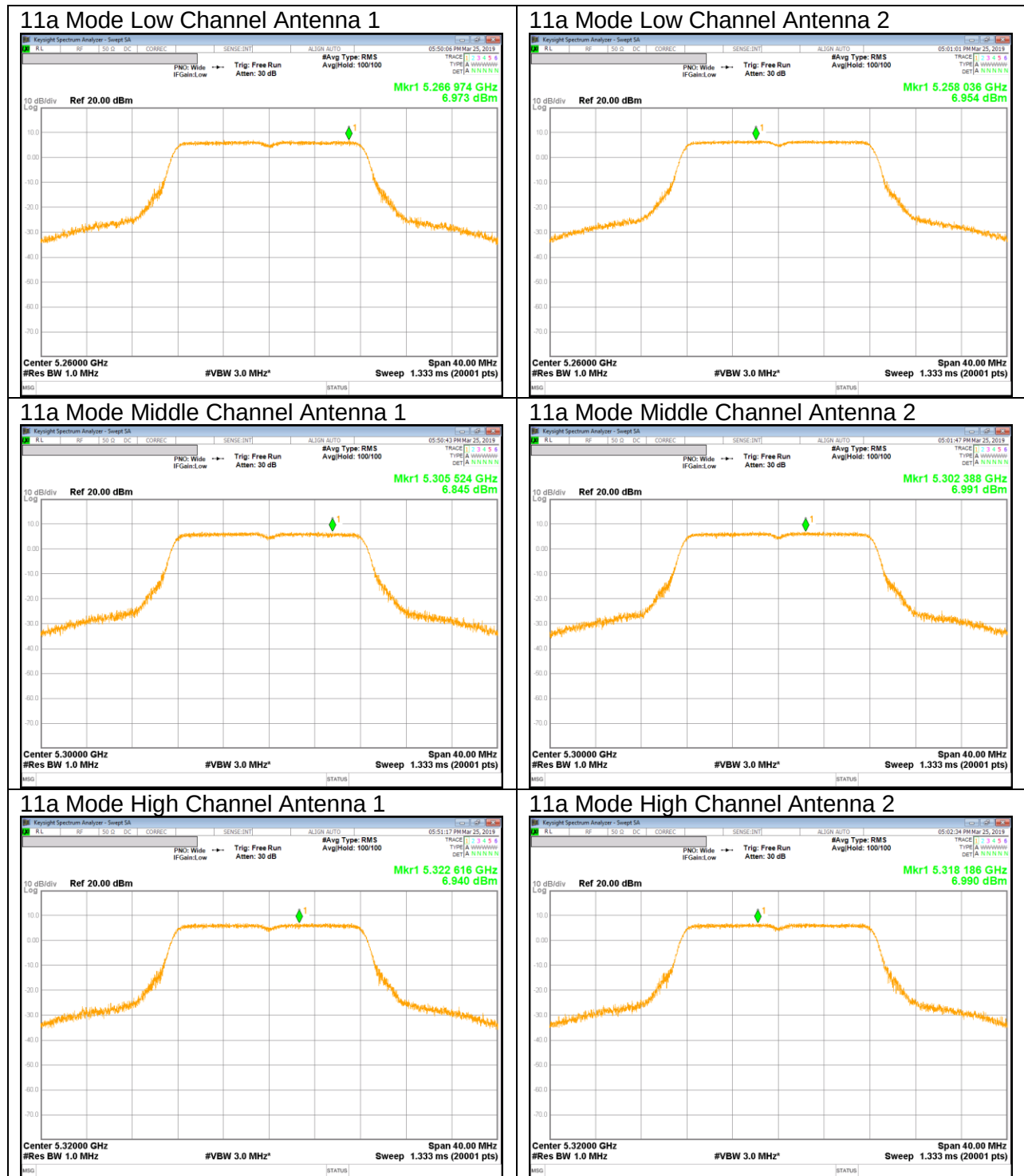
UNII 5.2 GHz IEEE 802.11n HT40 mode PSD



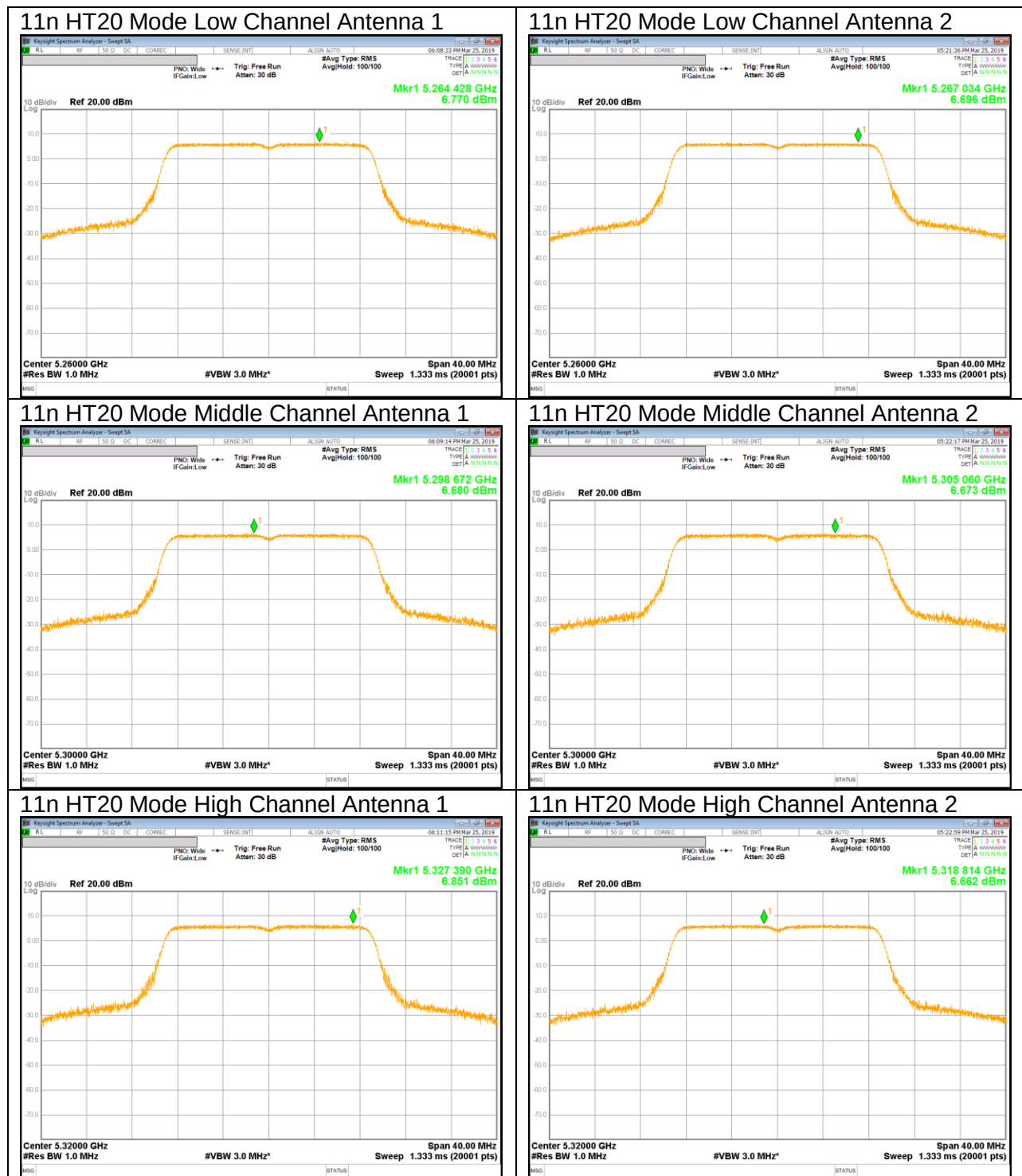
UNII 5.2 GHz IEEE 802.11ac VHT80 mode PSD



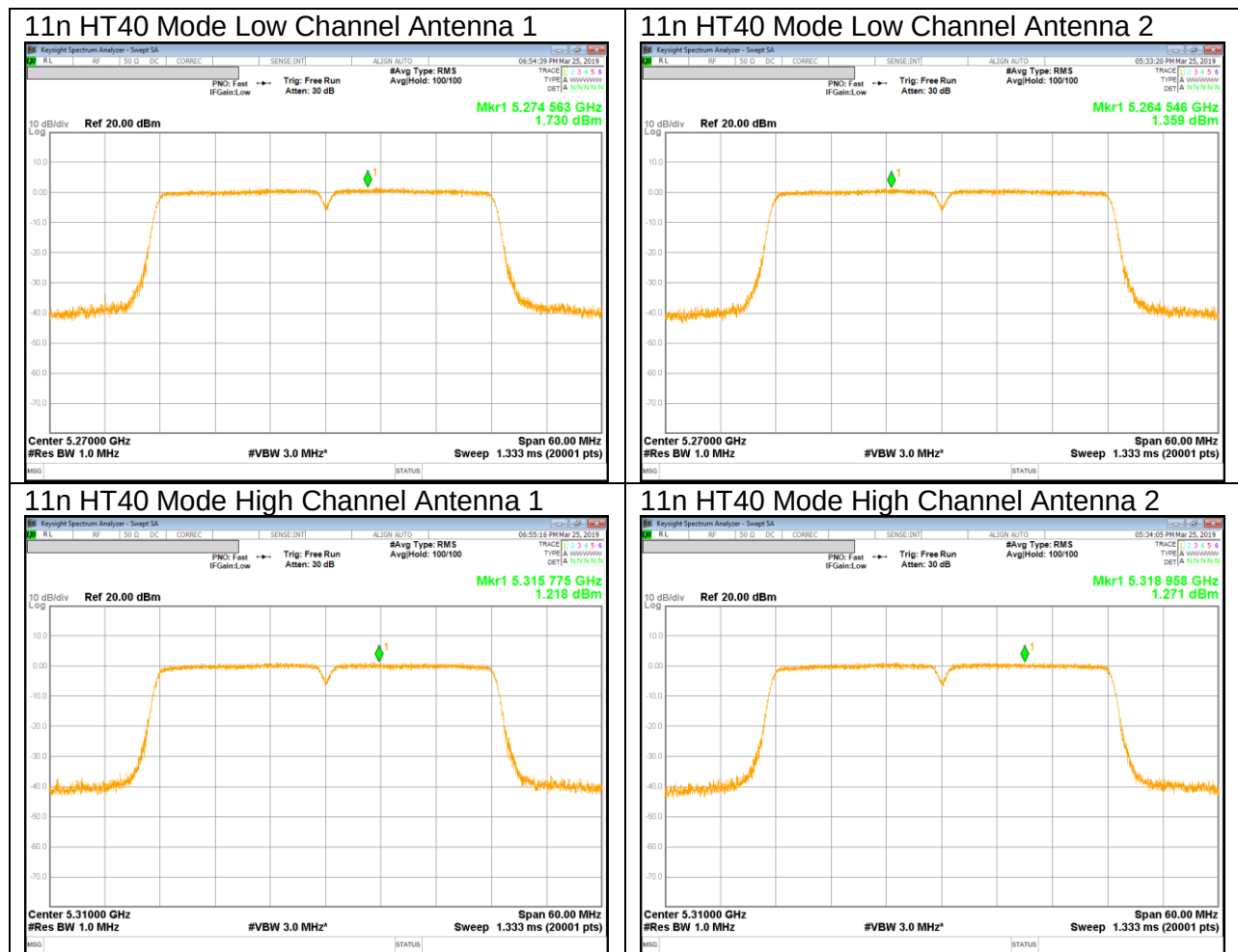
UNII 5.3 GHz IEEE 802.11a mode PSD



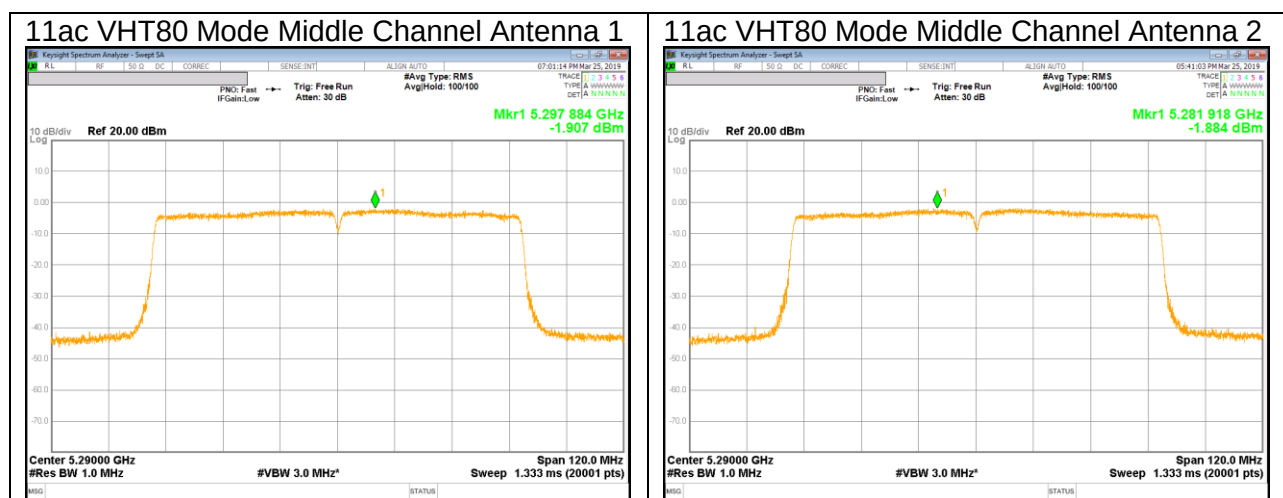
UNII 5.3 GHz IEEE 802.11n HT20 mode PSD



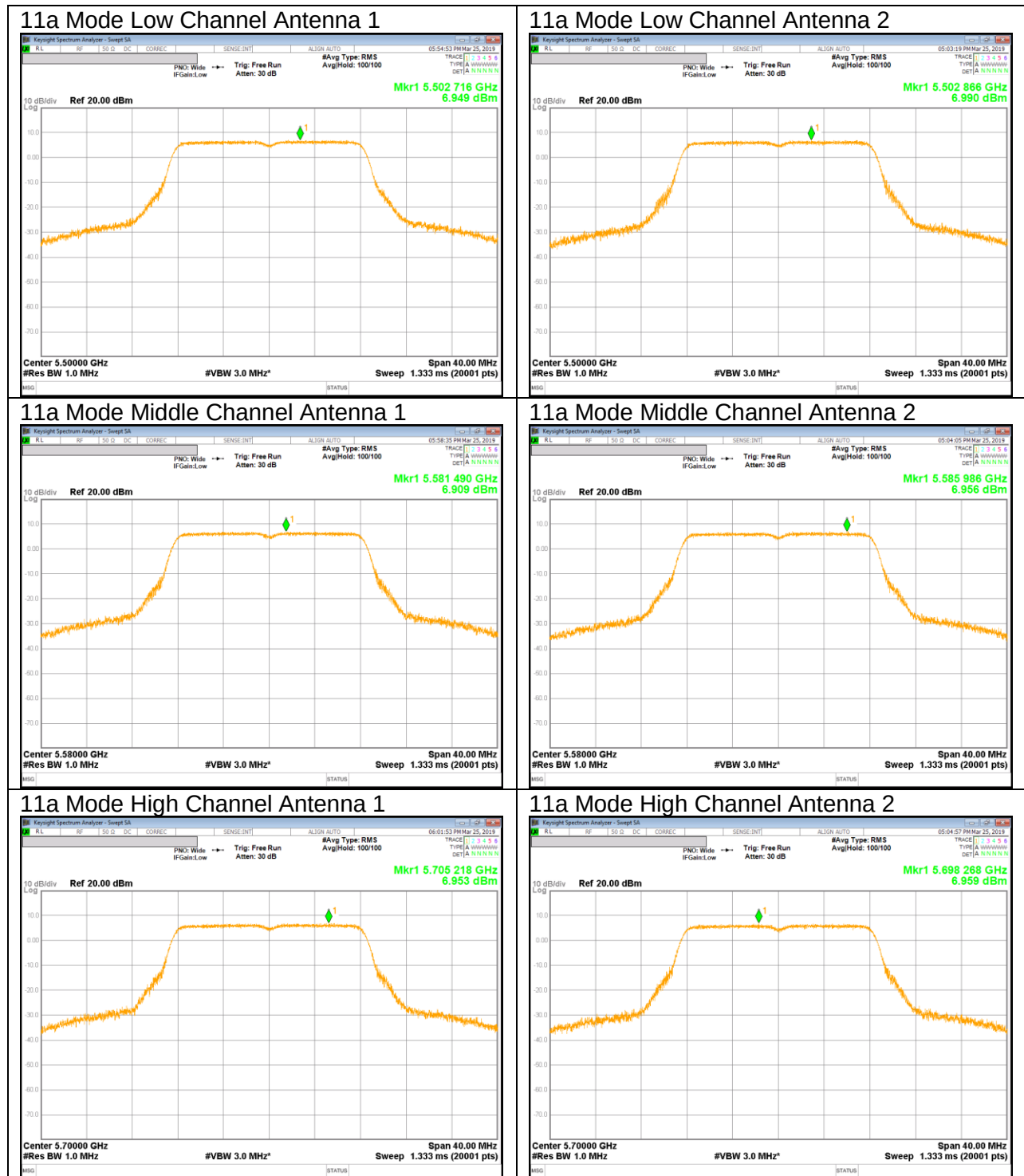
UNII 5.3 GHz IEEE 802.11n HT40 mode PSD



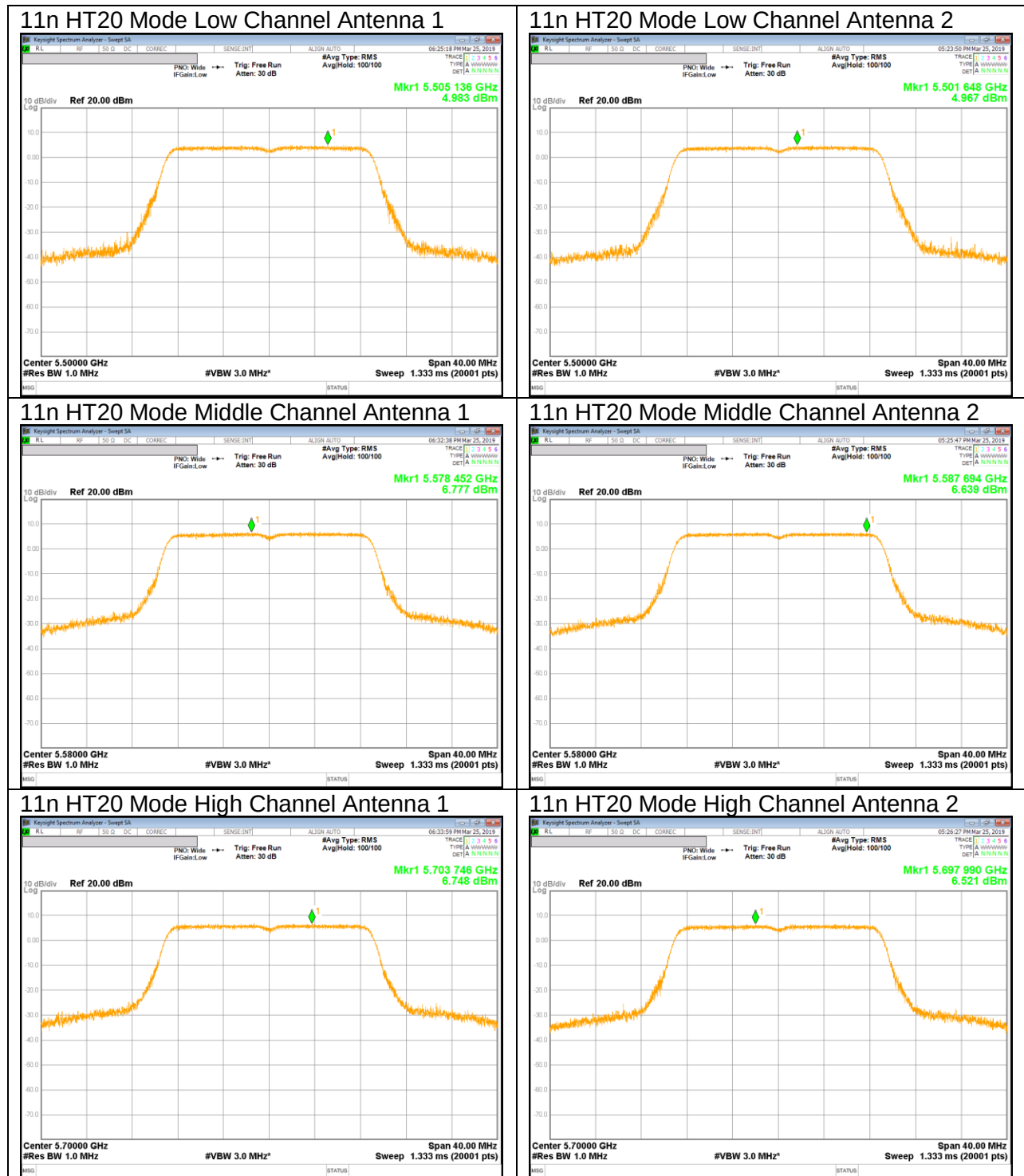
UNII 5.3 GHz IEEE 802.11ac VHT80 mode PSD



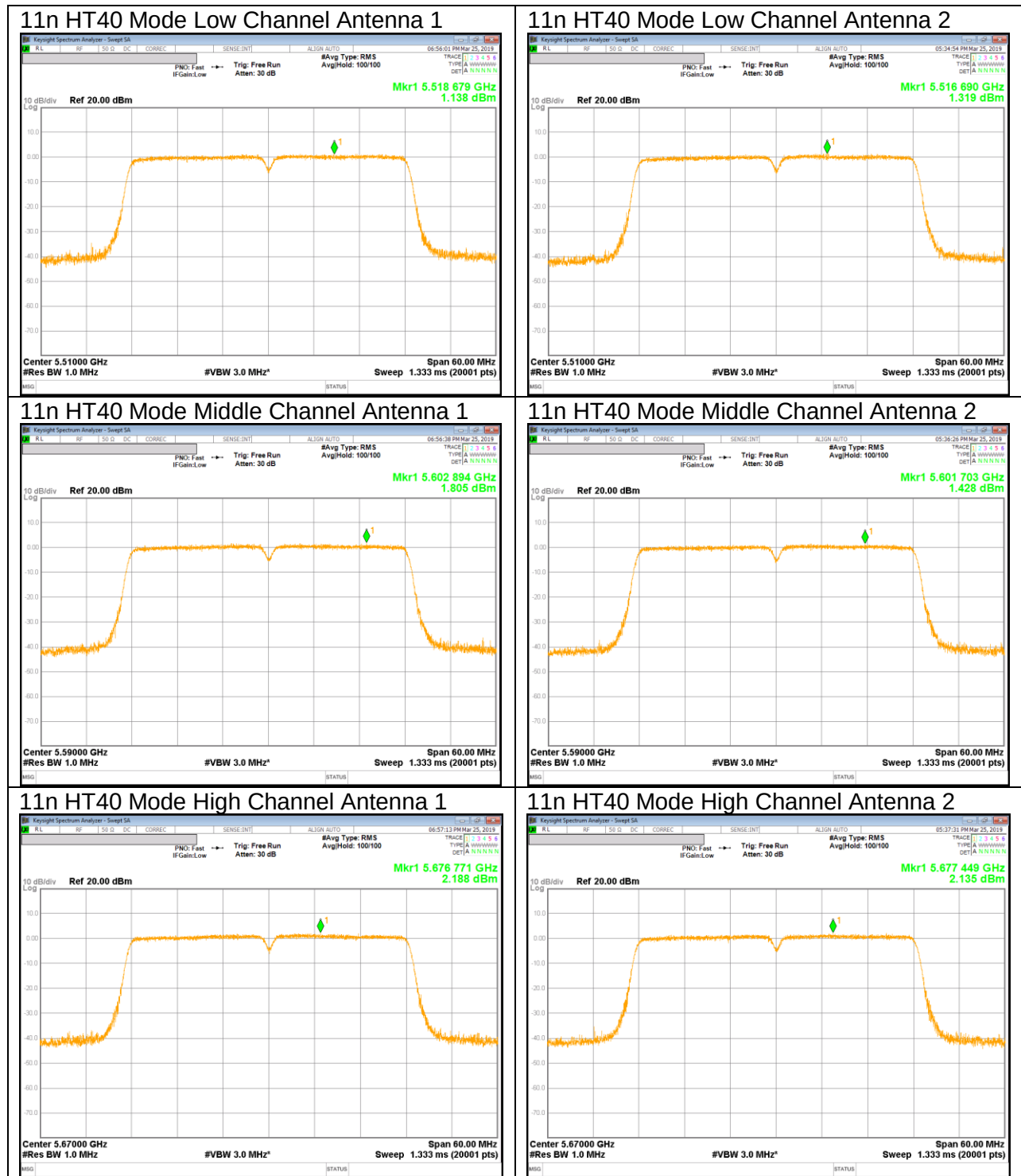
UNII 5.5 GHz IEEE 802.11a mode PSD



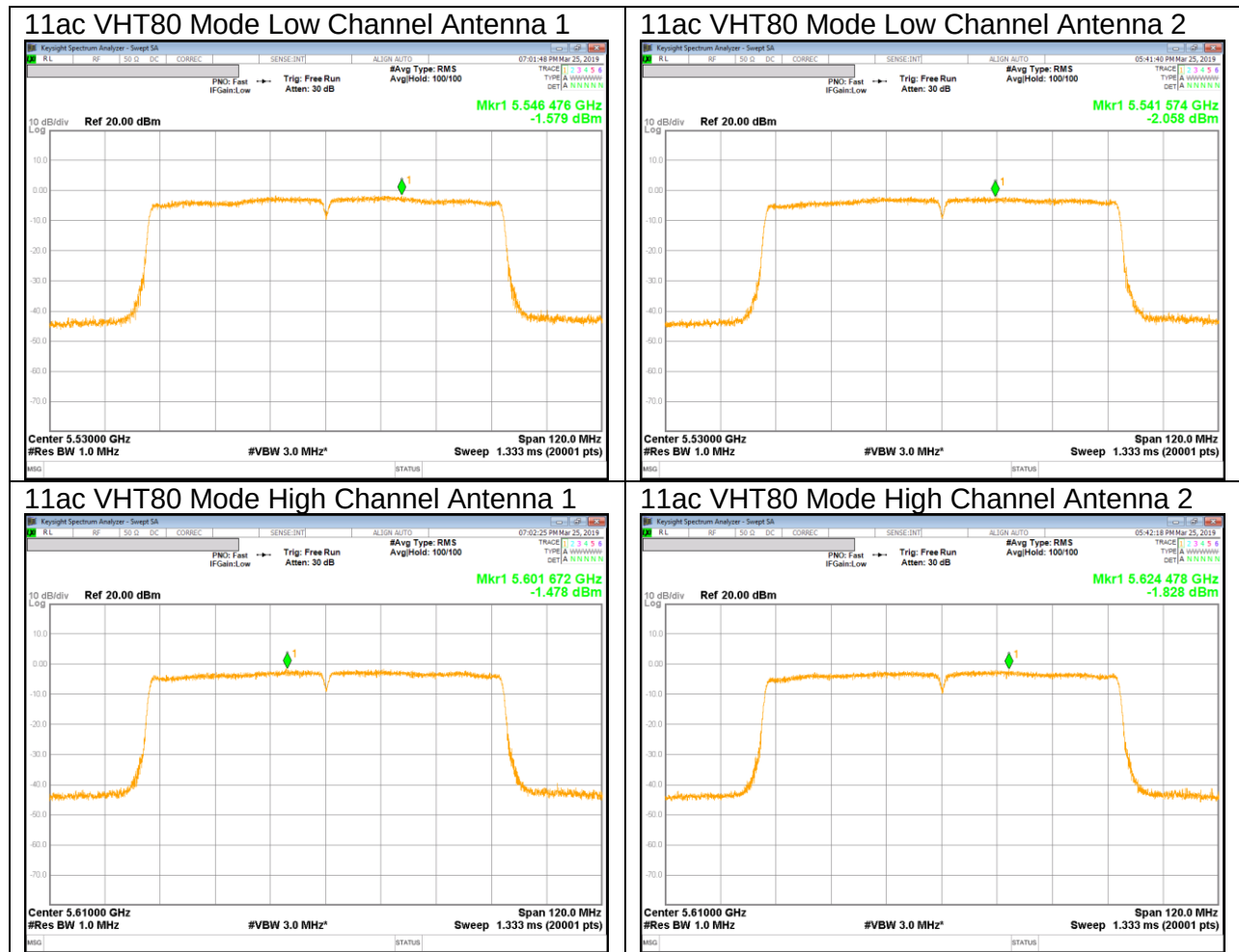
UNII 5.5 GHz IEEE 802.11n HT20 mode PSD



UNII 5.5 GHz IEEE 802.11n HT40 mode PSD



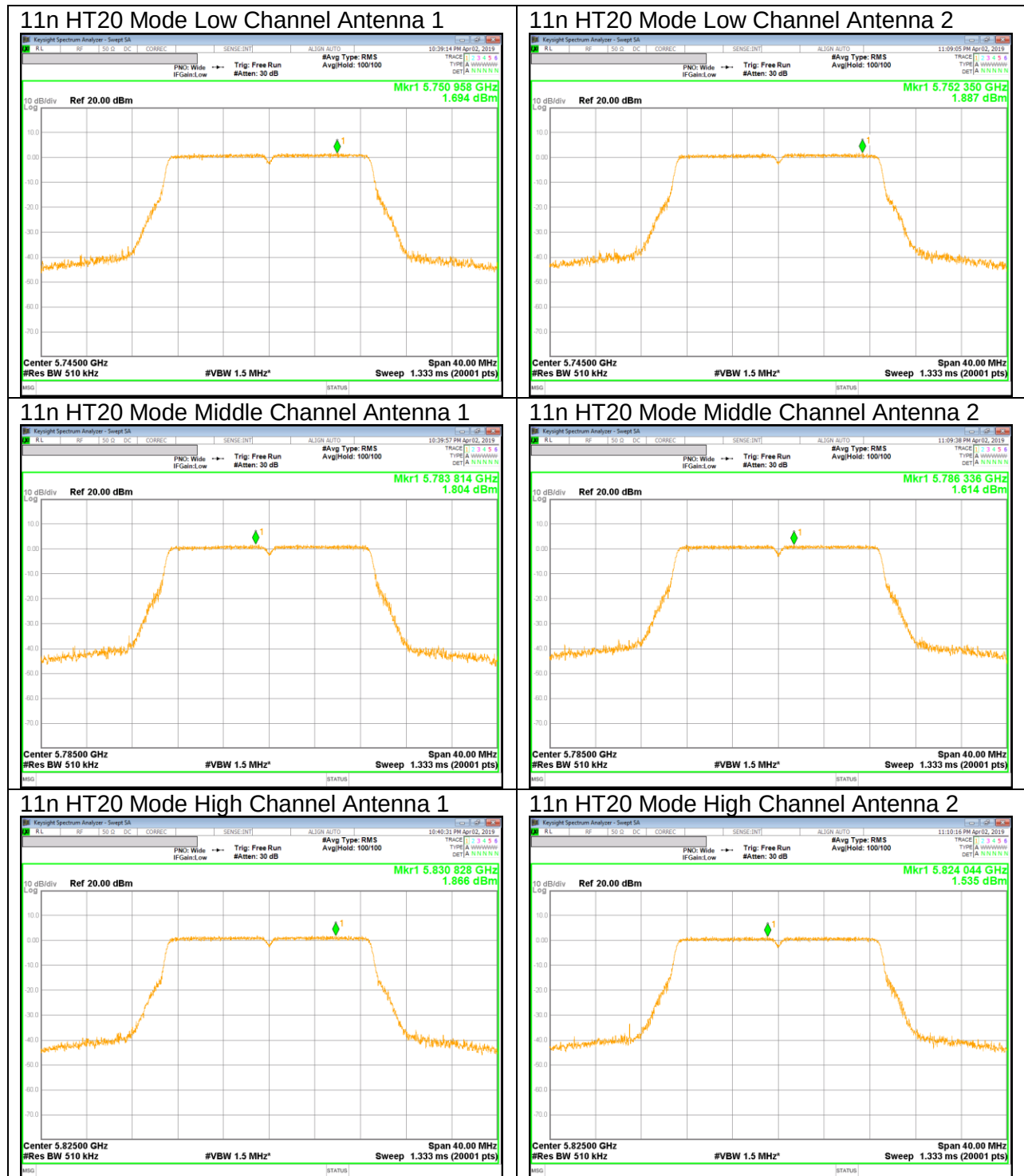
UNII 5.5 GHz IEEE 802.11ac VHT80 mode PSD



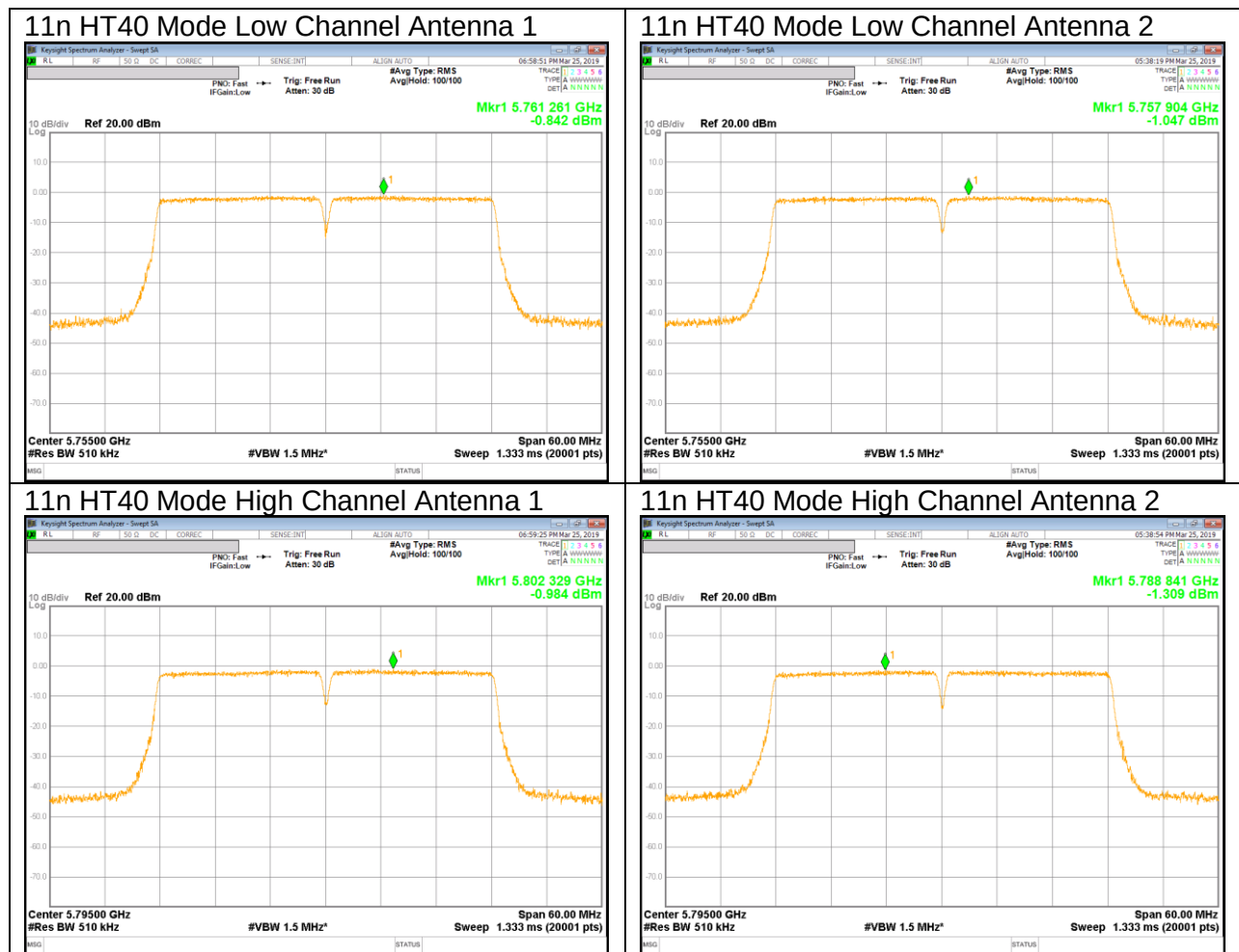
UNII 5.8 GHz IEEE 802.11a mode PSD



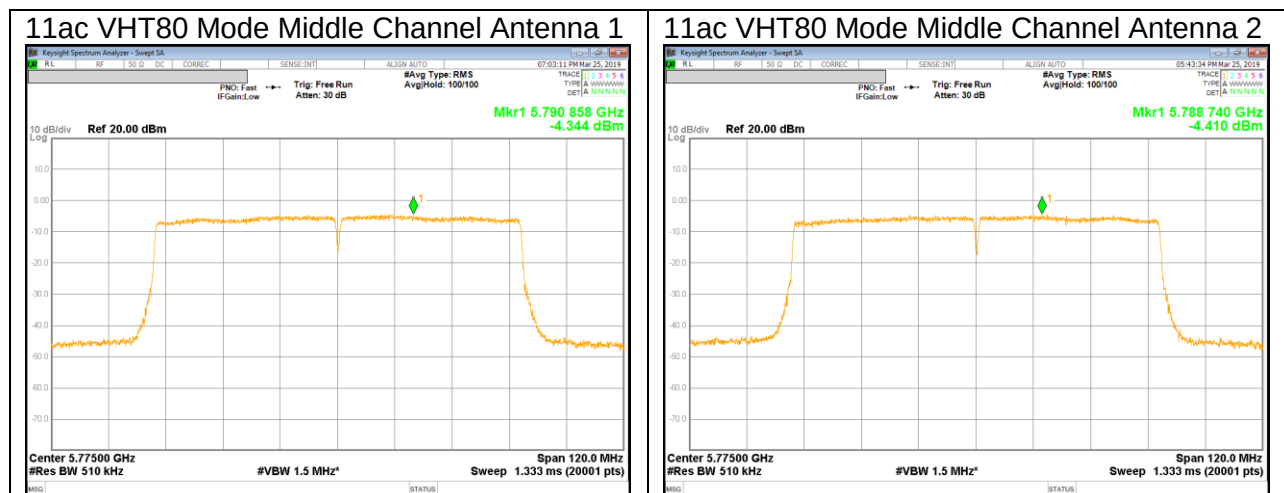
UNII 5.8 GHz IEEE 802.11n HT20 mode mode PSD



UNII 5.8 GHz IEEE 802.11n HT40 mode mode PSD



UNII 5.8 GHz IEEE 802.11ac VHT80 mode mode PSD



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)

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = -27\text{dBm} + 95.2 = 68.2\text{dBuV/m}$$

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = -17\text{dBm} + 95.2 = 78.2\text{dBuV/m}$$

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 1GHz 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.

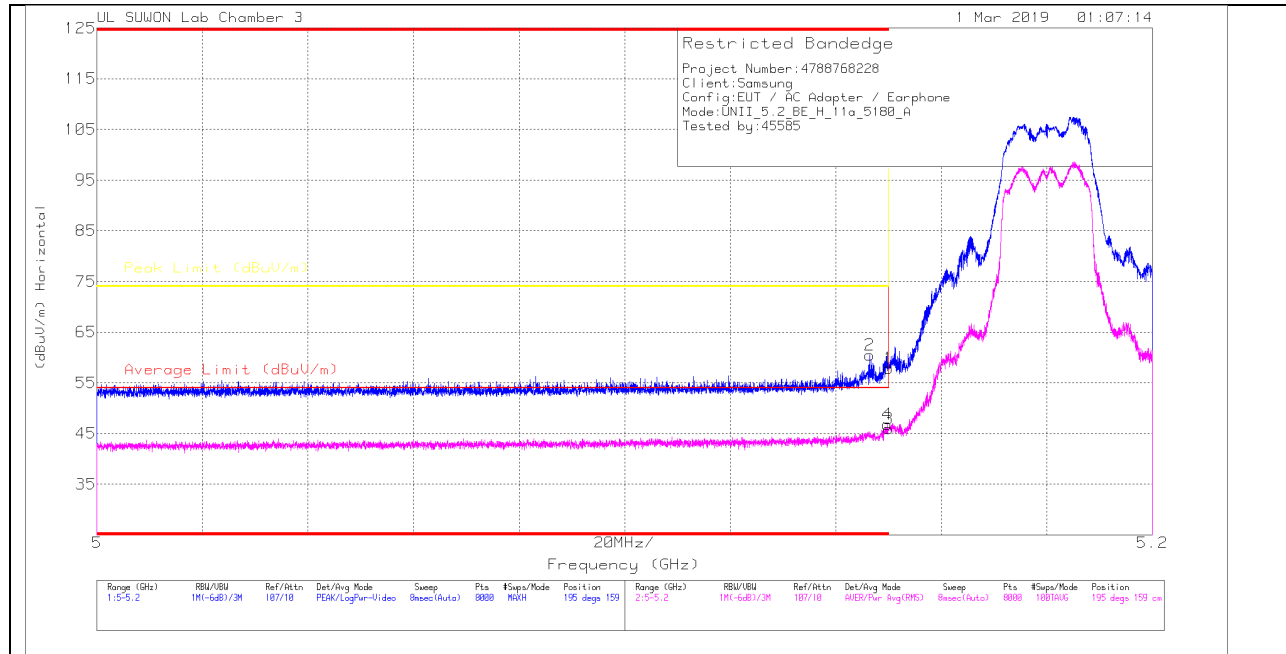
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field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

11.1. 5.2 GHz

11.1.1. TX Above 1GHz 802.11a 2Tx CDD MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

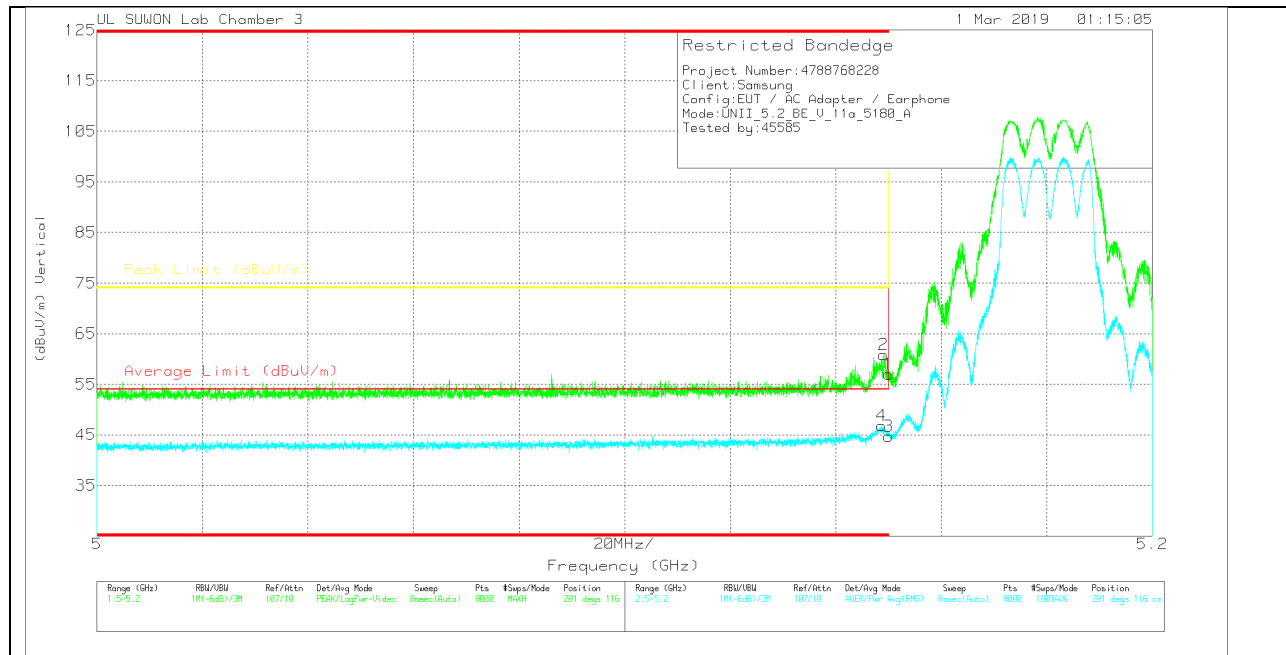
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	10dB(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 5.15	42.47	Pk	34.4	-19	0	57.87	-	-	74	-16.13	195	159	H
2	* 5.146	45.19	Pk	34.4	-19.1	0	60.49	-	-	74	-13.51	195	159	H
3	* 5.15	30.97	RMS	34.4	-19.4	0	45.97	54	-8.03	-	-	195	159	H
4	* 5.15	31.79	RMS	34.4	-19.4	0	46.79	54	-7.21	-	-	195	159	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00209959	10dB(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Pk Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 5.15	41.59	Pk		34.4	-19	56.99	-	-	74	-17.01	201	116	V
2	* 5.149	45.57	Pk		34.4	-19.1	60.87	-	-	74	-13.13	201	116	V
3	* 5.15	29.74	RMS		34.4	-19.4	44.74	54	-9.26	-	-	201	116	V
4	* 5.149	31.86	RMS		34.4	-19.4	46.86	54	-7.14	-	-	201	116	V

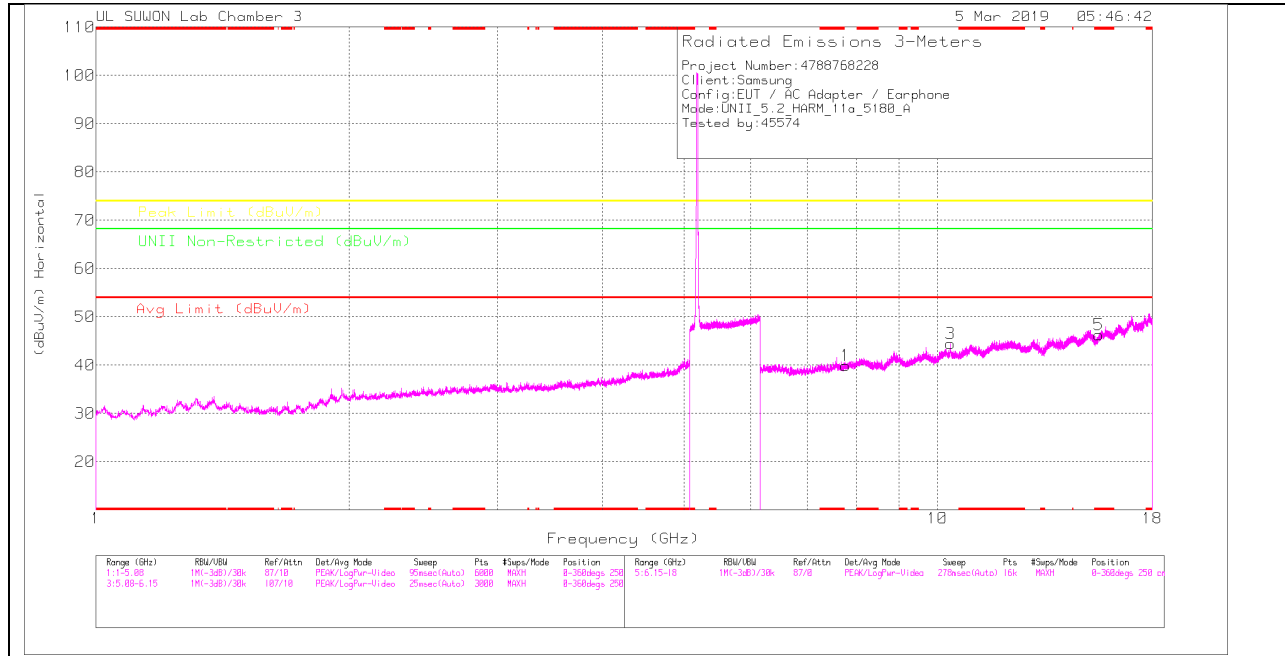
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

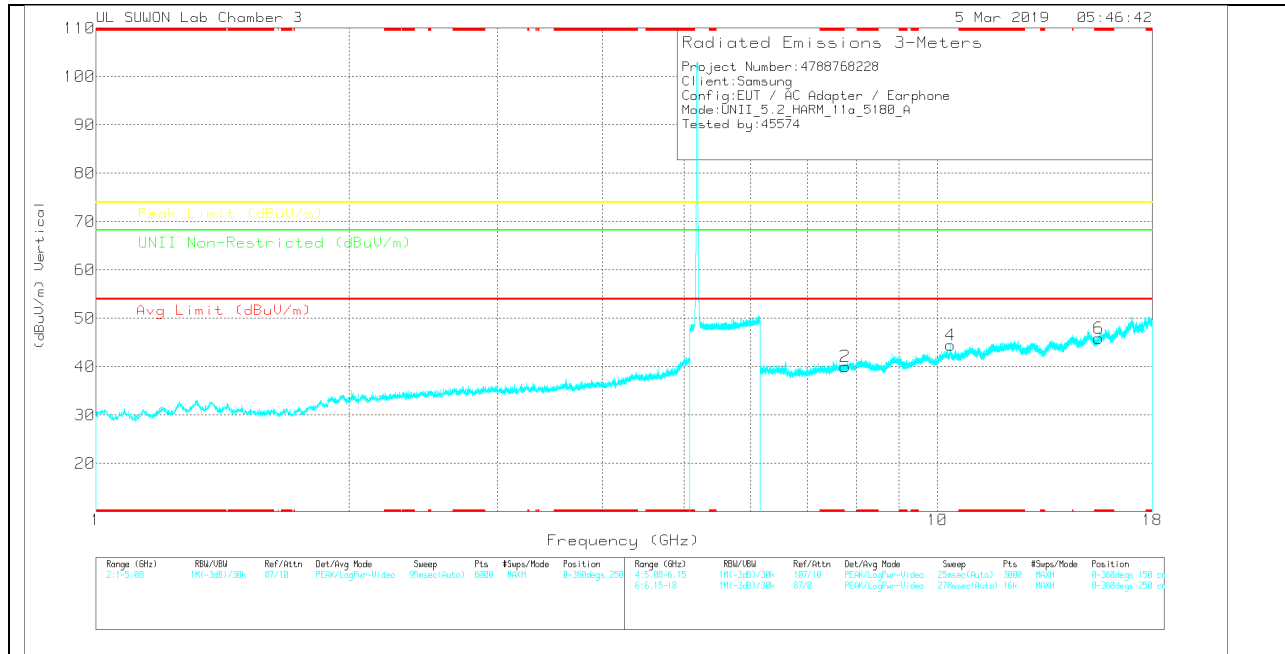
RMS - RMS detection

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_00205959	60Hz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNI Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.772	27.08	PK	35.9	-23	0	39.98	-	-	-	-	68.2	-28.22	0-360	150	H
3	10.358	26.07	PK	37.6	-19.2	0	44.47	-	-	-	-	68.2	-23.73	0-360	250	H
5	* 15.539	25.71	PK	40.2	-19.6	0	46.31	-	-	74	-27.69	-	-	0-360	250	H
2	7.769	27.16	PK	35.9	-23	0	40.06	-	-	-	-	68.2	-28.14	0-360	150	V
4	10.36	26.03	PK	37.6	-19.2	0	44.43	-	-	-	-	68.2	-23.77	0-360	150	V
6	* 15.539	25.35	PK	40.2	-19.6	0	45.95	-	-	74	-28.05	-	-	0-360	250	V

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

PK – Peak Detector

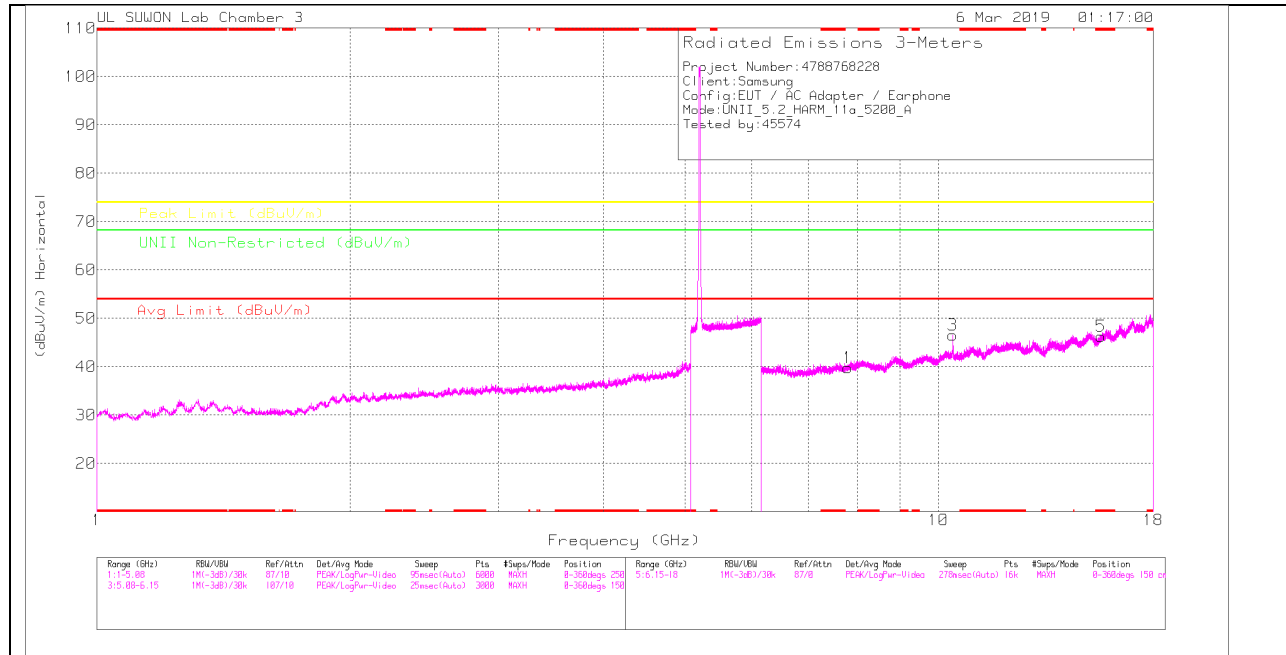
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	60Hz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNI Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.359	34.92	PK-U	37.6	-19.2	0	53.32	-	-	-	-	68.2	-14.88	142	100	H
10.374	35.71	PK-U	37.6	-19.1	0	54.21	-	-	-	-	68.2	-13.99	97	103	V

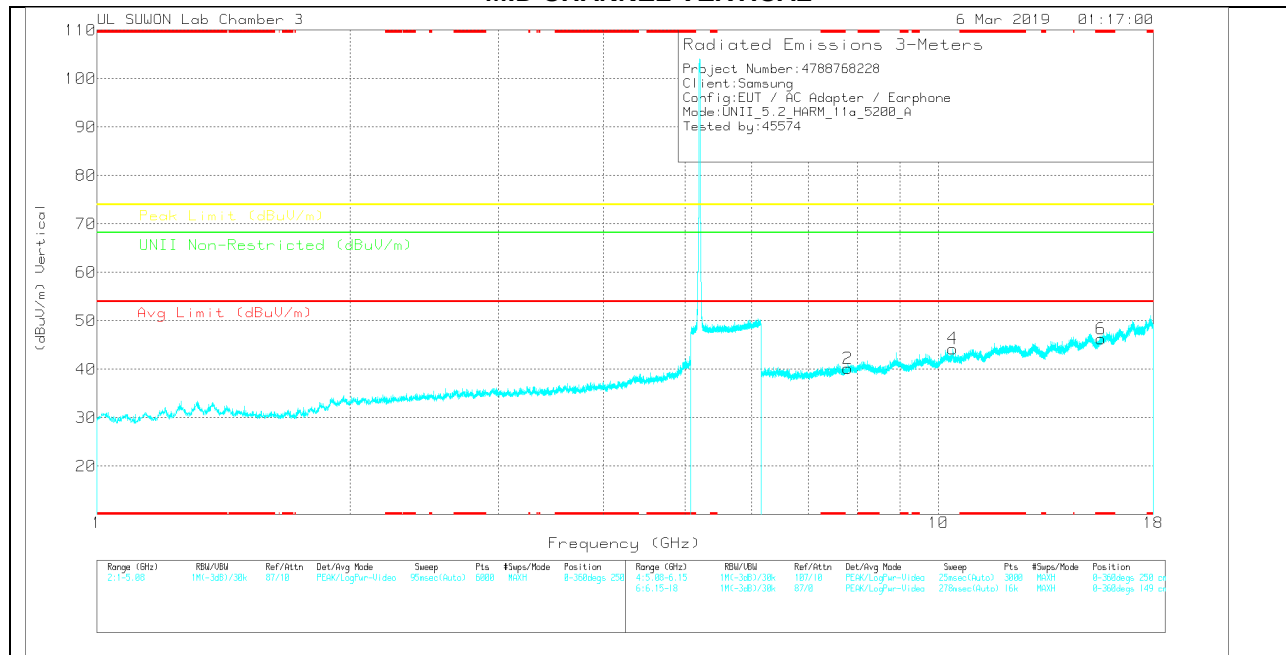
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

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_0000999	6GHz_HF[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Unl Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.799	26.82	PK	35.9	-22.9	0	39.82	-	-	-	-	68.2	-28.38	0-360	150	H
3	10.402	28.28	PK	37.6	-19.3	0	46.58	-	-	-	-	68.2	-21.62	0-360	250	H
5	* 15.6	25.53	PK	40.2	-19.5	0	46.23	-	-	74	-27.77	-	-	0-360	250	H
2	7.799	27.13	PK	35.9	-22.9	0	40.13	-	-	-	-	68.2	-28.07	0-360	149	V
4	10.399	25.97	PK	37.6	-19.3	0	44.27	-	-	-	-	68.2	-23.93	0-360	250	V
6	* 15.6	25.54	PK	40.2	-19.5	0	46.24	-	-	74	-27.76	-	-	0-360	250	V

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

PK – Peak Detector

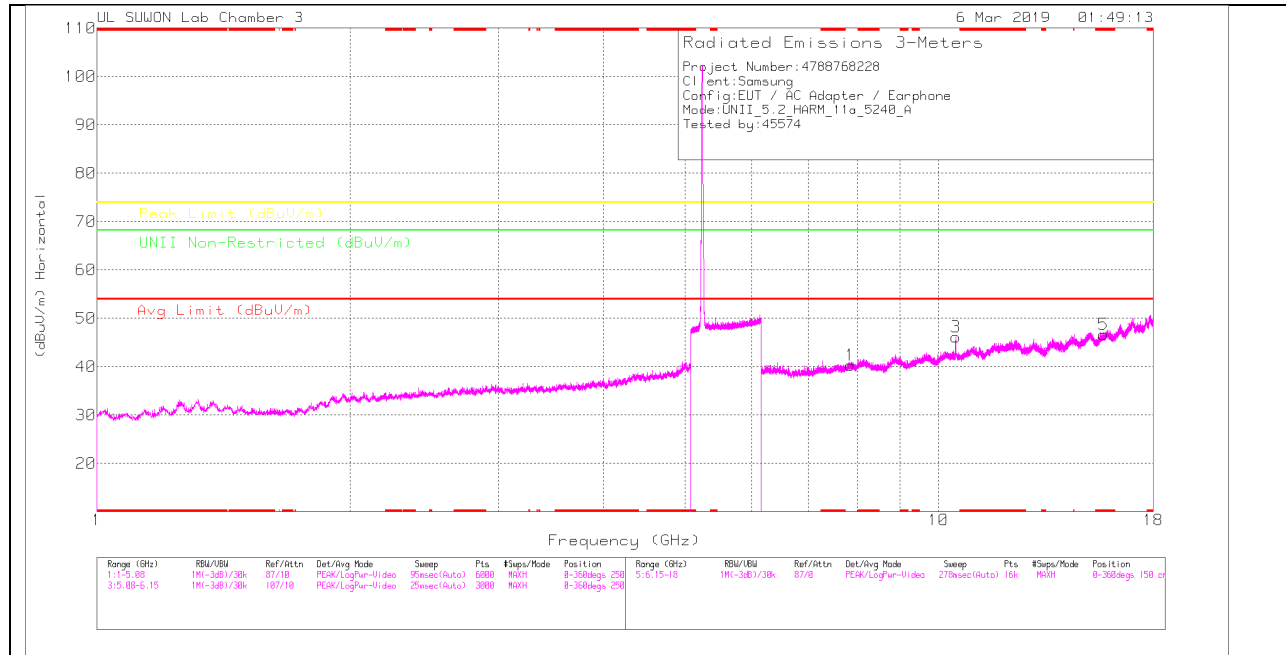
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_0000999	6GHz_HF[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Unl Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.402	34.77	PK-U	37.6	-19.3	0	53.07	-	-	-	-	68.2	-15.13	184	244	H
10.392	31.78	PK-U	37.6	-19.3	0	50.08	-	-	-	-	68.2	-18.12	103	127	V

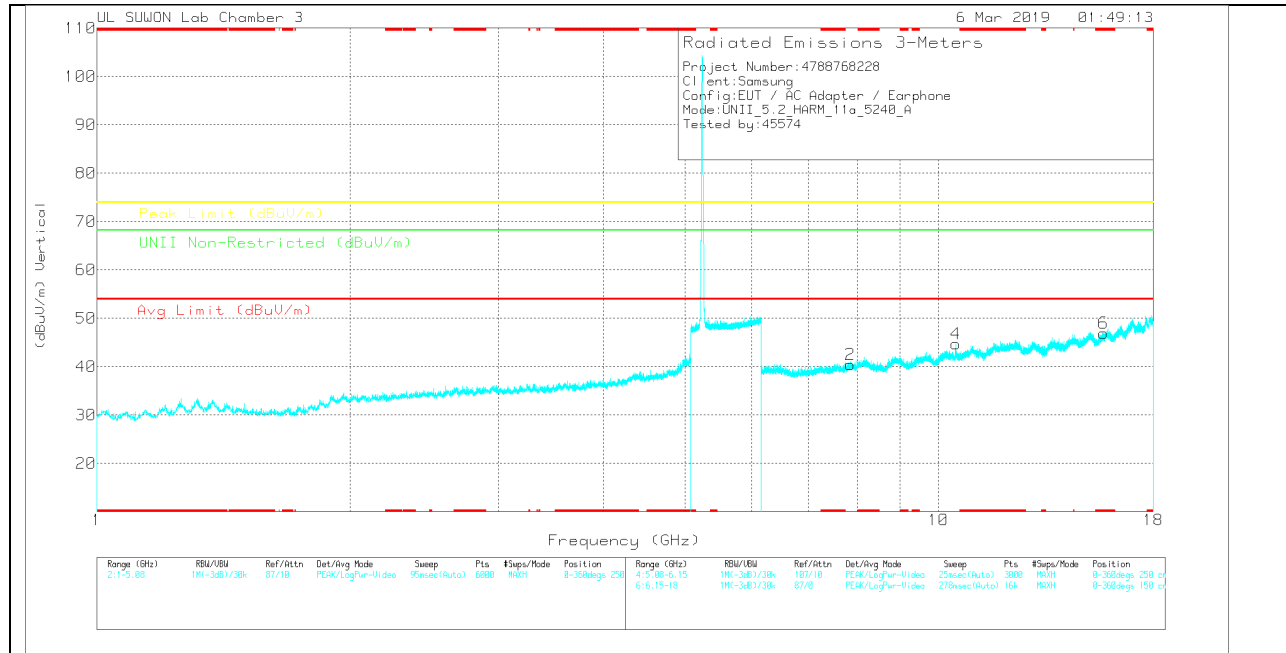
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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_00205959	6GHz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Limit Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	7.86	26.85	PK	35.9	-22.4	0	40.35	-	-	-	-	68.2	-27.85	0-360	250	H
3	10.482	27.74	PK	37.7	-19.3	0	46.14	-	-	-	-	68.2	-22.06	0-360	250	H
5	* 15.722	25.32	PK	40.4	-19.1	0	46.62	-	-	74	-27.38	-	-	0-360	150	H
2	7.861	26.92	PK	35.9	-22.4	0	40.42	-	-	-	-	68.2	-27.78	0-360	150	V
4	10.483	26.28	PK	37.7	-19.3	0	44.68	-	-	-	-	68.2	-23.52	0-360	250	V
6	* 15.72	25.71	PK	40.4	-19.2	0	46.91	-	-	74	-27.09	-	-	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_00205959	6GHz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Limit Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
10.488	35.29	PK-U	37.7	-19.2	0	53.79	-	-	-	-	68.2	-14.41	183	244	H
10.489	31.74	PK-U	37.7	-19.2	0	50.24	-	-	-	-	68.2	-17.96	104	127	V

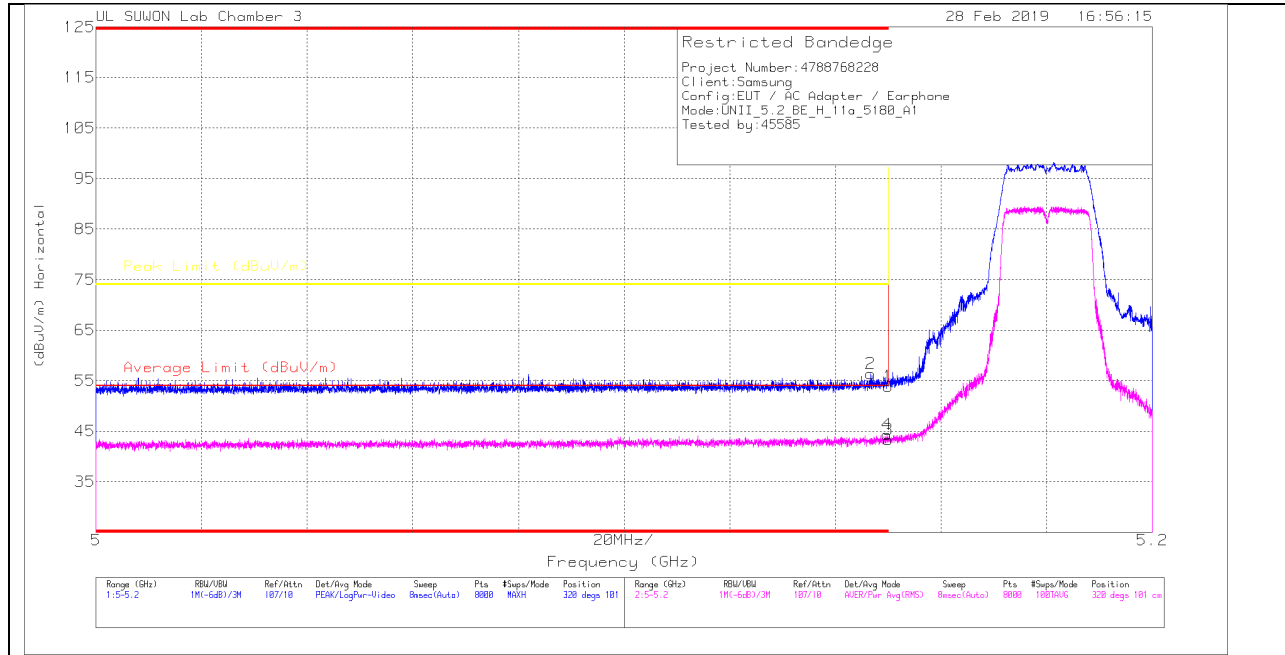
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

11.1.2.TX Above 1GHz 802.11a 1Tx ANT1 IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

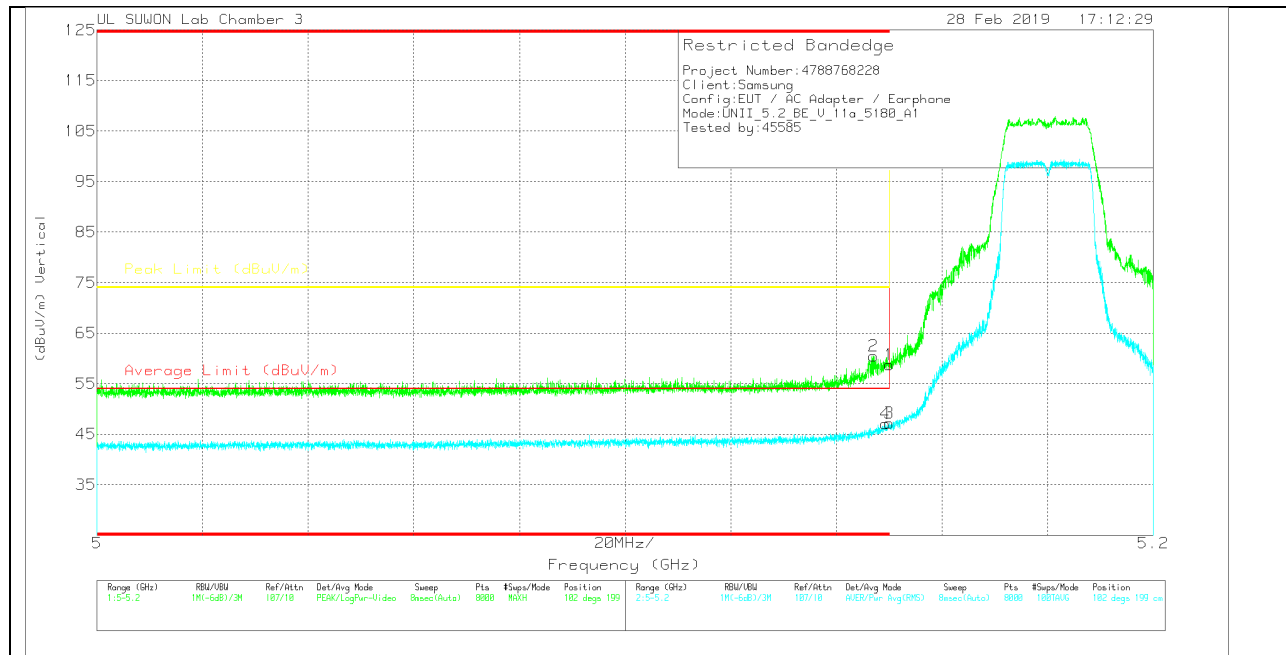
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	10dB(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 5.15	38.45	Pk	34.4	-19	0	53.85	-	-	74	-20.15	320	101	H
2	* 5.147	41.13	Pk	34.4	-19.1	0	56.43	-	-	74	-17.57	320	101	H
3	* 5.15	28.35	RMS	34.4	-19.4	0	43.35	54	-10.65	-	-	320	101	H
4	* 5.15	29.33	RMS	34.4	-19.4	0	44.33	54	-9.67	-	-	320	101	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00209959	10dB(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Pk Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 5.15	43.31	Pk		34.4	-19	58.71	-	-	74	-15.29	102	199	V
2	* 5.147	45.21	Pk		34.4	-19.1	60.51	-	-	74	-13.49	102	199	V
3	* 5.15	32.18	RMS		34.4	-19.4	47.18	54	-6.82	-	-	102	199	V
4	* 5.149	32.07	RMS		34.4	-19.4	47.07	54	-6.93	-	-	102	199	V

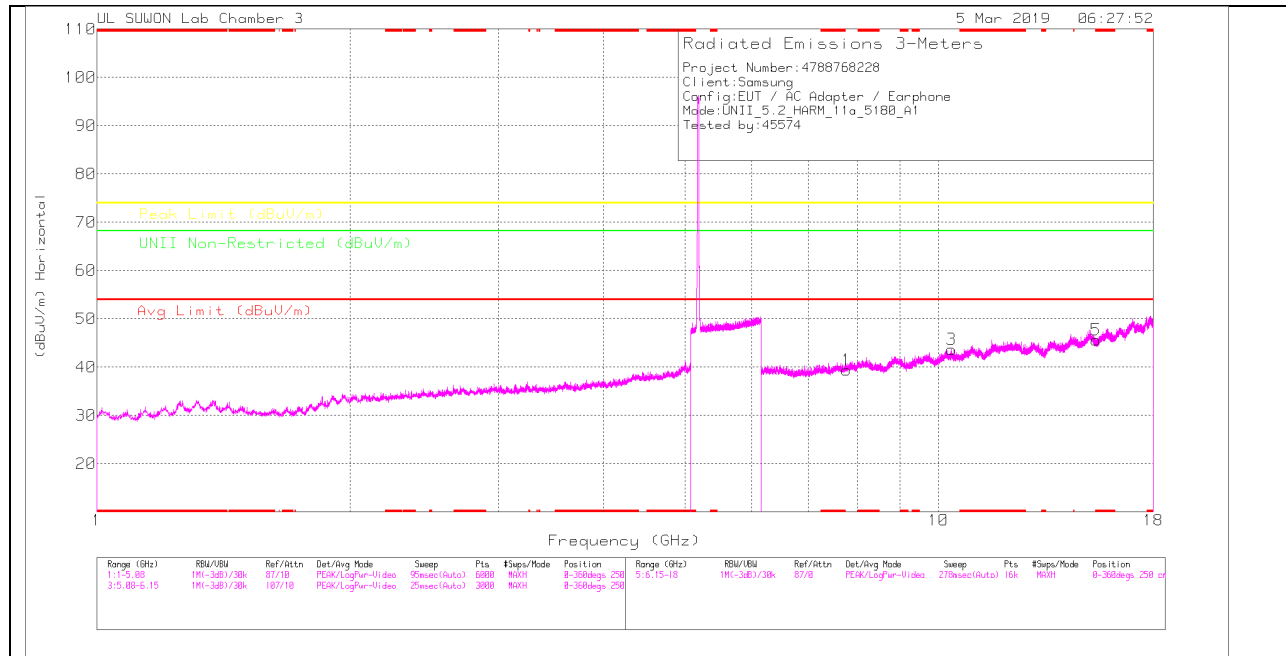
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

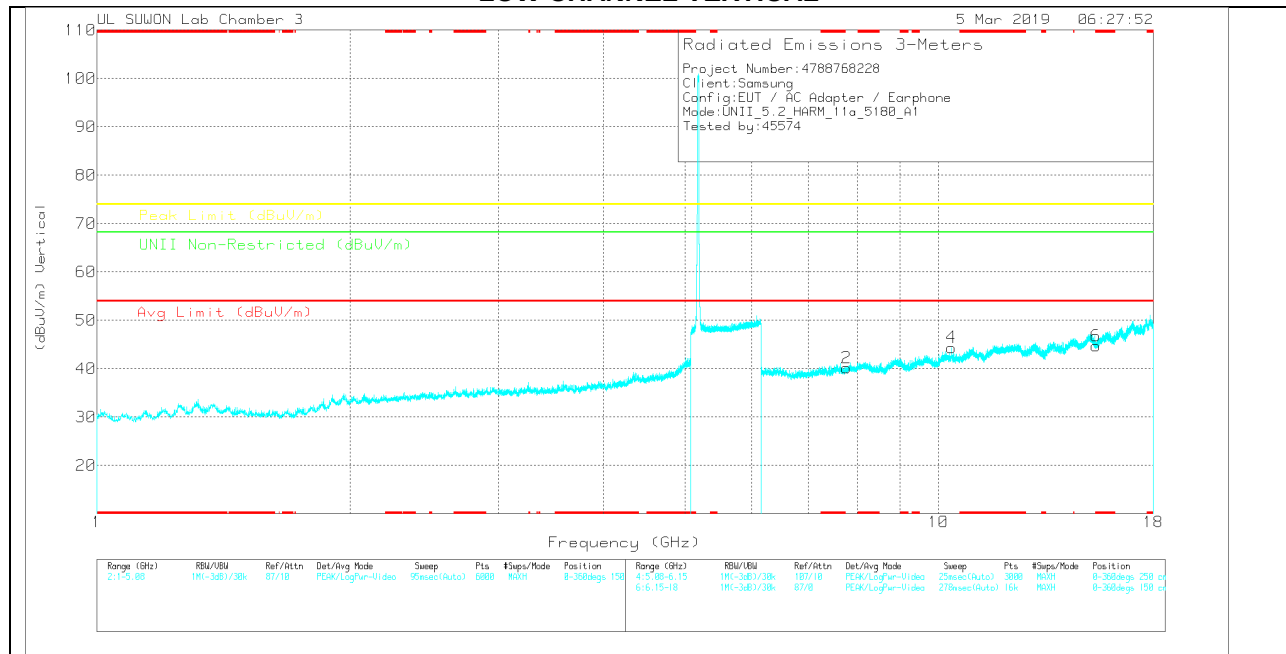
RMS - RMS detection

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_00205959	60Hz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNI Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.771	26.53	PK	35.9	-23	0	39.43	-	-	-	-	68.2	-28.77	0-360	150	H
3	10.358	25.25	PK	37.6	-19.2	0	43.65	-	-	-	-	68.2	-24.55	0-360	250	H
5	* 15.399	25.27	PK	40.1	-19.7	0	45.67	-	-	74	-28.33	-	-	0-360	150	H
2	7.771	27.27	PK	35.9	-23	0	40.17	-	-	-	-	68.2	-28.03	0-360	150	V
4	10.358	26	PK	37.6	-19.2	0	44.4	-	-	-	-	68.2	-23.8	0-360	150	V
6	* 15.401	24.34	PK	40.1	-19.7	0	44.74	-	-	74	-29.26	-	-	0-360	150	V

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

PK – Peak Detector

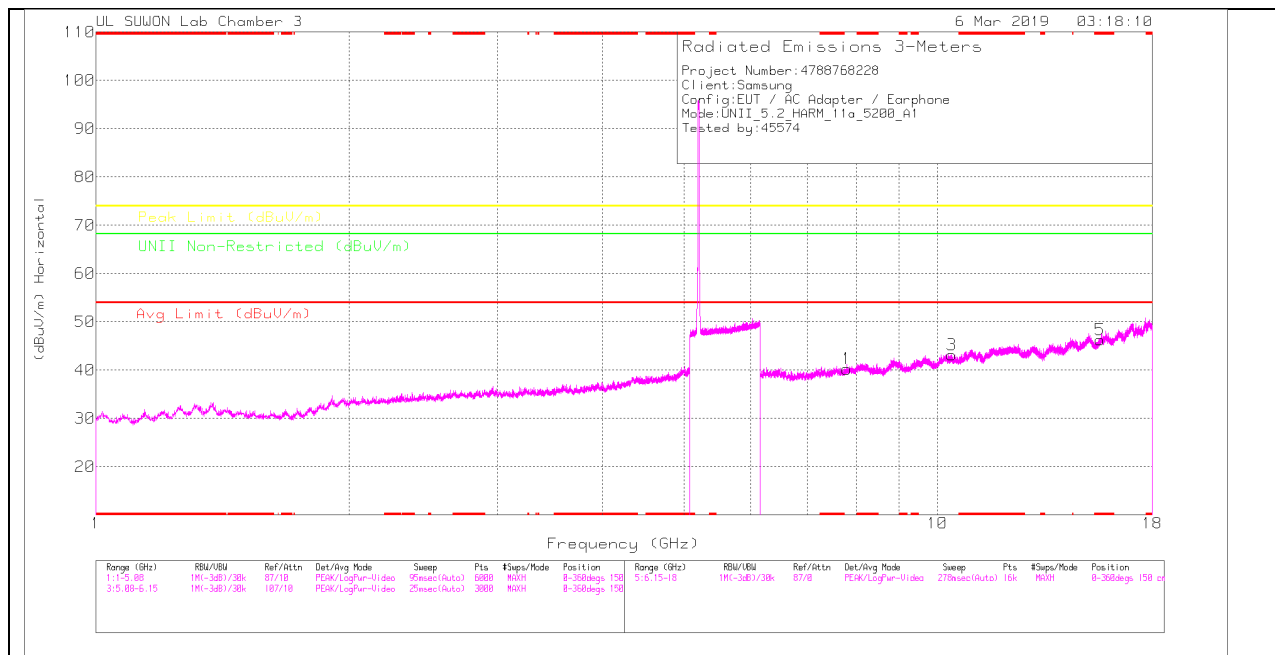
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	60Hz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNI Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.352	35.8	PK-U	37.6	-19.3	0	54.1	-	-	-	-	68.2	-14.1	153	103	H
10.357	35.87	PK-U	37.6	-19.2	0	54.27	-	-	-	-	68.2	-13.93	91	100	V

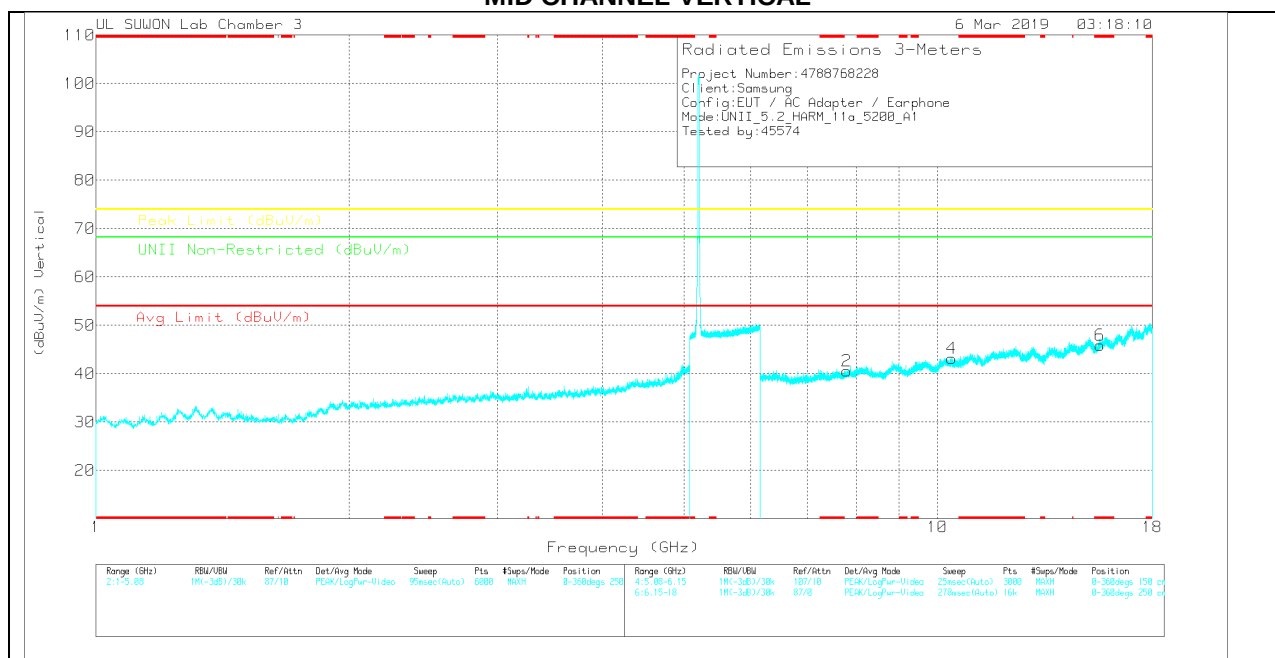
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

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

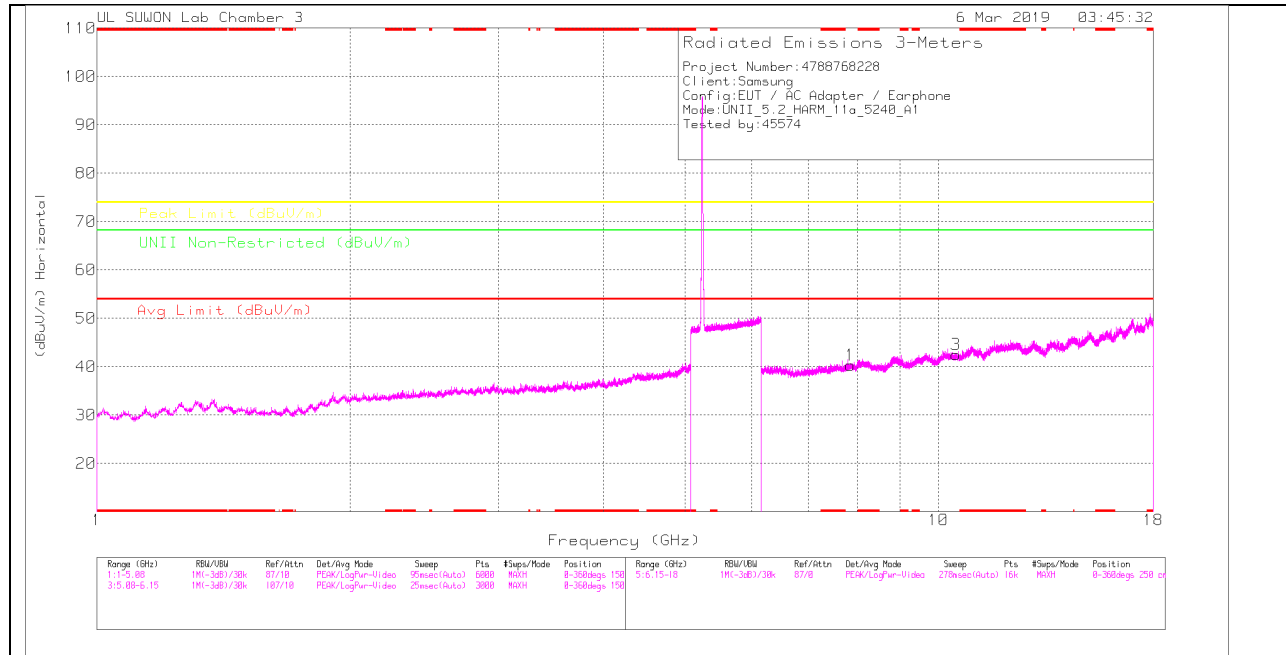
Marker	Frequency (GHz)	Motor Reading (dBuV)	Det	3117_0000999	6GHz_HF[dB]	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Unit Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.805	27.25	PK	35.9	-22.9	0	40.25	-	-	-	-	68.2	-27.95	0-360	150	H
3	10.4	24.91	PK	37.6	-19.3	0	43.21	-	-	-	-	68.2	-24.99	0-360	250	H
5	* 15.6	25.53	PK	40.2	-19.5	0	46.23	-	-	74	-27.77	-	-	0-360	250	H
2	7.805	27.59	PK	35.9	-22.9	0	40.59	-	-	-	-	68.2	-27.61	0-360	150	V
4	10.402	24.91	PK	37.6	-19.3	0	43.21	-	-	-	-	68.2	-24.99	0-360	150	V
6	* 15.6	25.24	PK	40.2	-19.5	0	45.94	-	-	74	-28.06	-	-	0-360	250	V

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

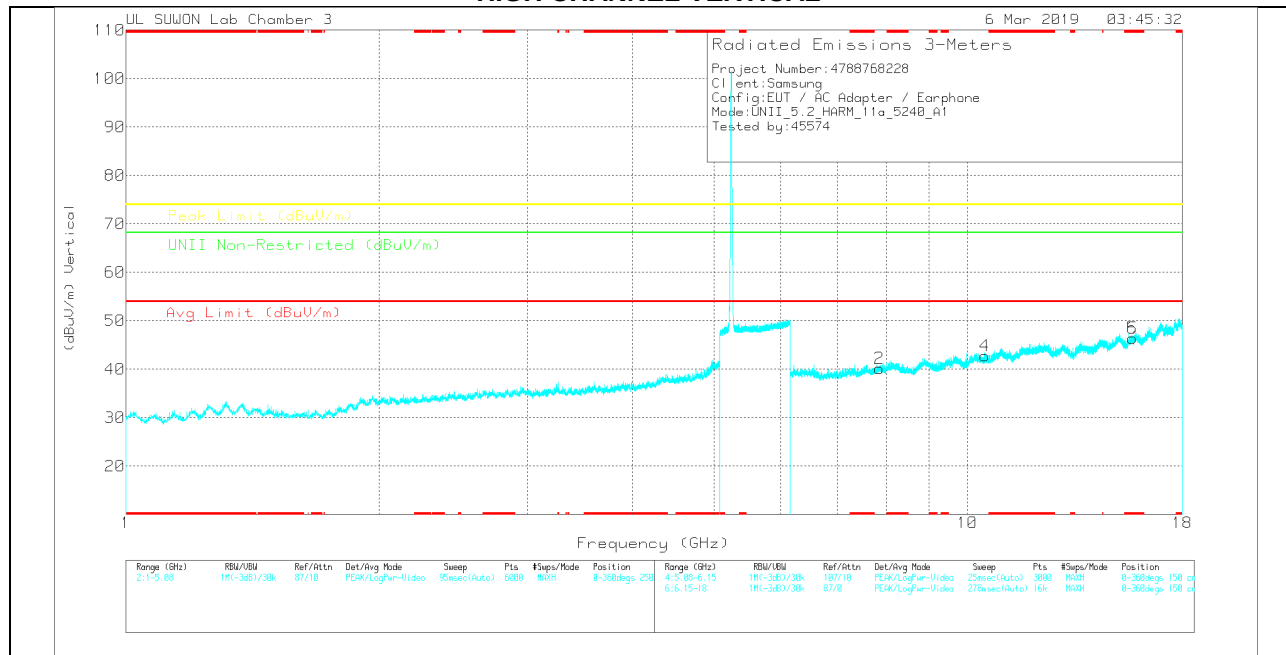
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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)	Marker Reading (dBuV)	Det	3117_00305959	60Hz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Unid Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	7.86	26.82	PK	35.9	-22.4	0	40.32	-	-	-	-	68.2	-27.88	0-360	250	H
3	10.48	24.11	PK	37.7	-19.3	0	42.51	-	-	-	-	68.2	-25.69	0-360	150	H
2	7.86	26.65	PK	35.9	-22.4	0	40.15	-	-	-	-	68.2	-28.05	0-360	250	V
4	10.481	24.36	PK	37.7	-19.3	0	42.76	-	-	-	-	68.2	-25.44	0-360	150	V
5	* 15.721	25.19	PK	40.4	-19.2	0	46.39	-	-	74	-27.61	-	-	0-360	250	V
6	* 15.721	25.19	PK	40.4	-19.2	0	46.39	-	-	74	-27.61	-	-	0-360	250	V

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

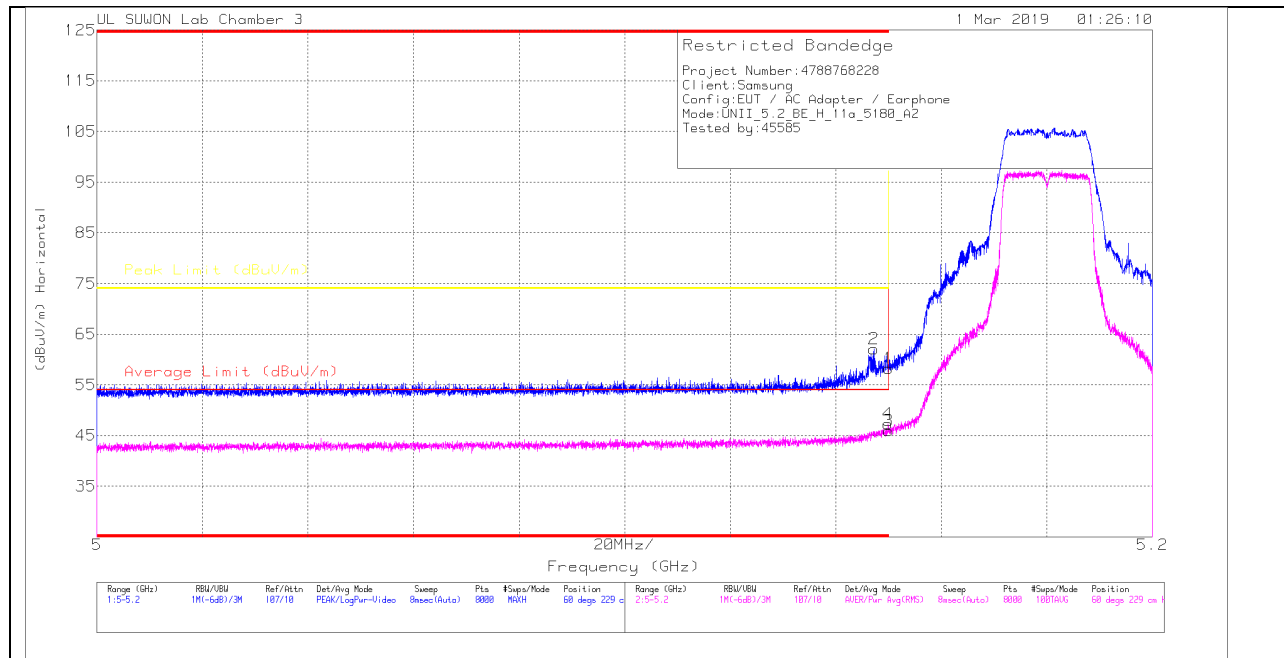
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

11.1.3.TX Above 1GHz 802.11a 1Tx ANT2 IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

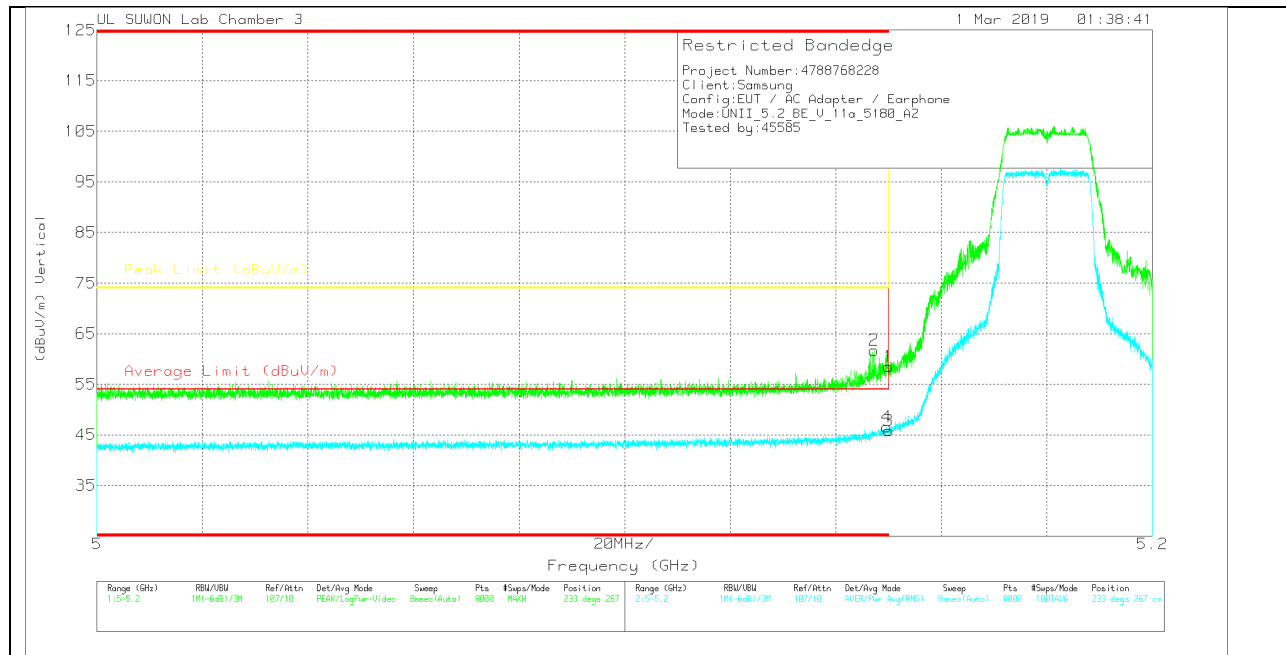
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00205959	10dB(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 5.15	42.87	Pk	34.4	-19	0	58.27	-	-	74	-15.73	60	229	H
2	* 5.147	46.81	Pk	34.4	-19.1	0	62.11	-	-	74	-11.89	60	229	H
3	* 5.15	30.92	RMS	34.4	-19.4	0	45.92	54	-8.08	-	-	60	229	H
4	* 5.15	32.27	RMS	34.4	-19.4	0	47.27	54	-6.73	-	-	60	229	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00209959	10dB(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Pk Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 5.15	43.04	Pk		-19	0	58.44	-	-	74	-15.56	233	267	V
2	* 5.147	46.41	Pk		-19.1	0	61.71	-	-	74	-12.29	233	267	V
3	* 5.15	30.86	RMS		-19.4	0	45.86	54	-8.14	-	-	233	267	V
4	* 5.15	31.52	RMS		-19.4	0	46.52	54	-7.48	-	-	233	267	V

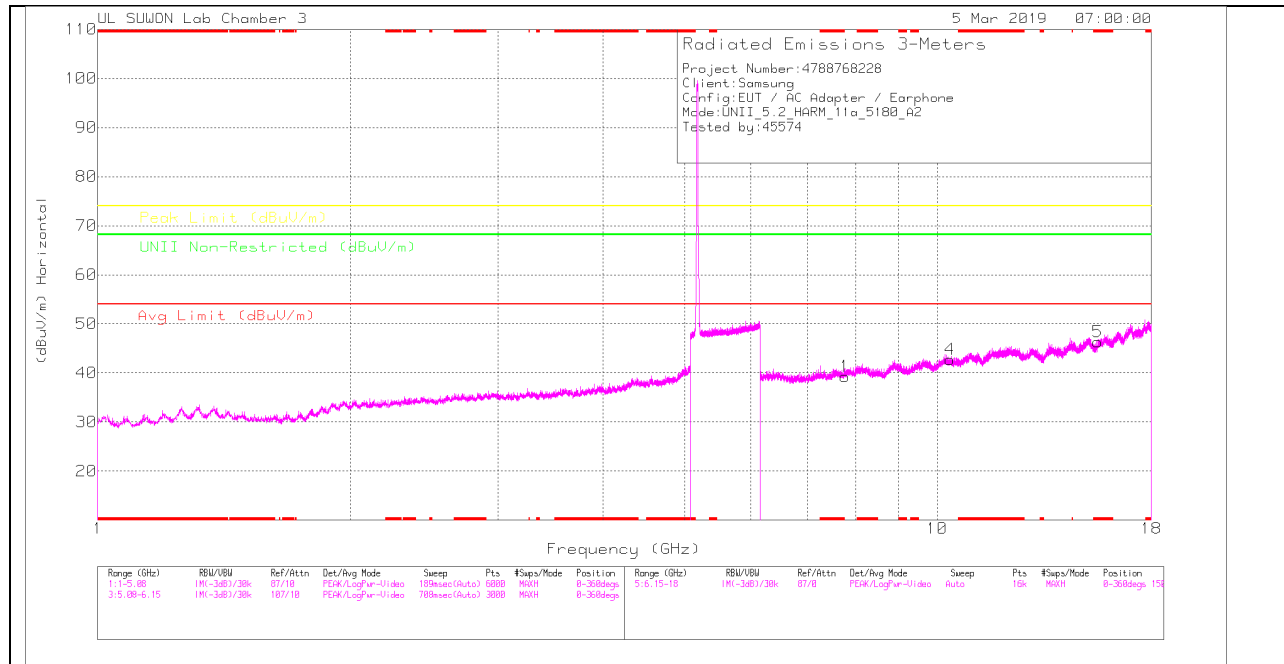
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

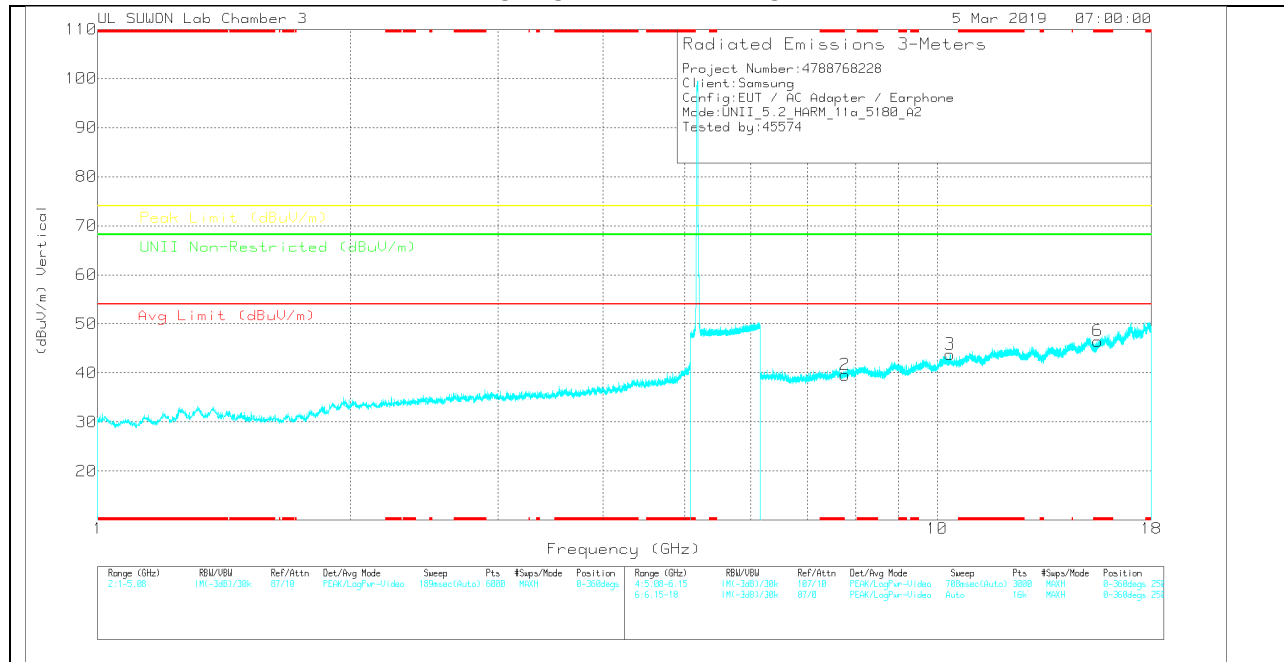
RMS - RMS detection

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

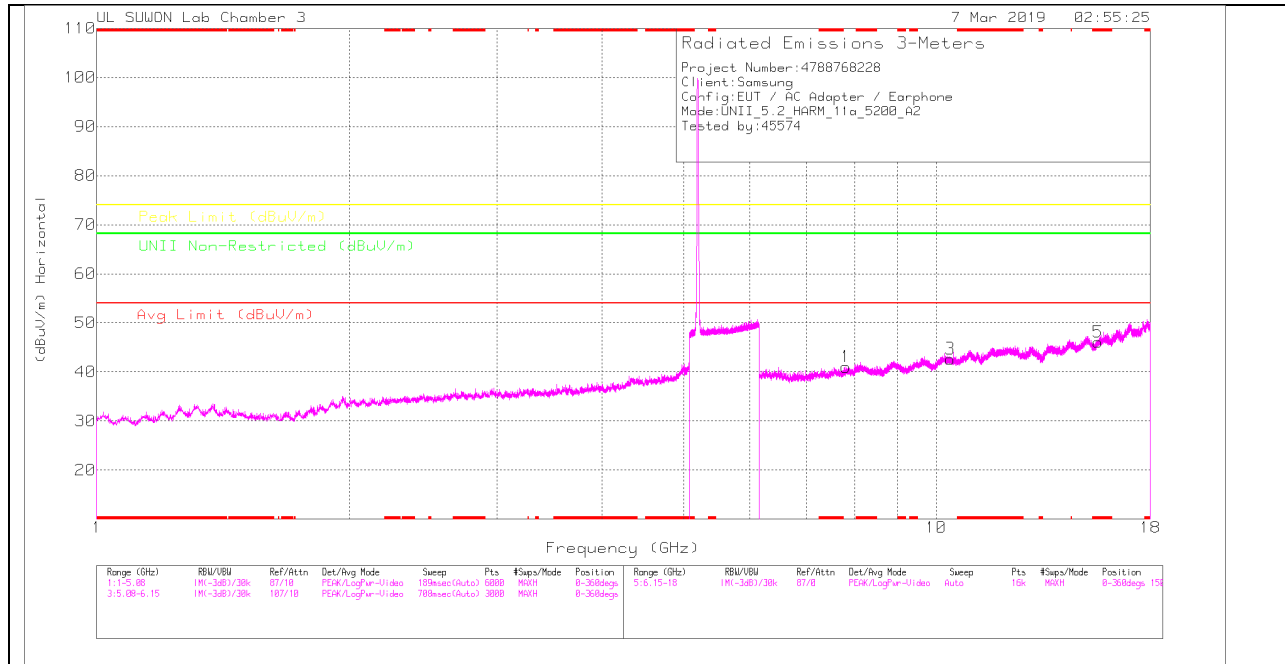
Marker	Frequency (GHz)	Motor Reading (dBuV)	Det	3117_00205959	60Hz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Unit Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	7.771	26.39	PK	35.9	-23	0	39.29	-	-	-	-	68.2	-28.91	0-360	250	H
4	10.361	24.3	PK	37.6	-19.2	0	42.7	-	-	-	-	68.2	-25.5	0-360	250	H
5	* 15.543	25.94	PK	40.2	-19.8	0	46.34	-	-	74	-27.66	-	-	0-360	150	H
2	7.771	26.71	PK	35.9	-23	0	39.61	-	-	-	-	68.2	-28.59	0-360	150	V
3	10.361	25.41	PK	37.6	-19.2	0	43.81	-	-	-	-	68.2	-24.39	0-360	250	V
6	* 15.534	26.02	PK	40.2	-19.7	0	46.52	-	-	74	-27.48	-	-	0-360	250	V

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

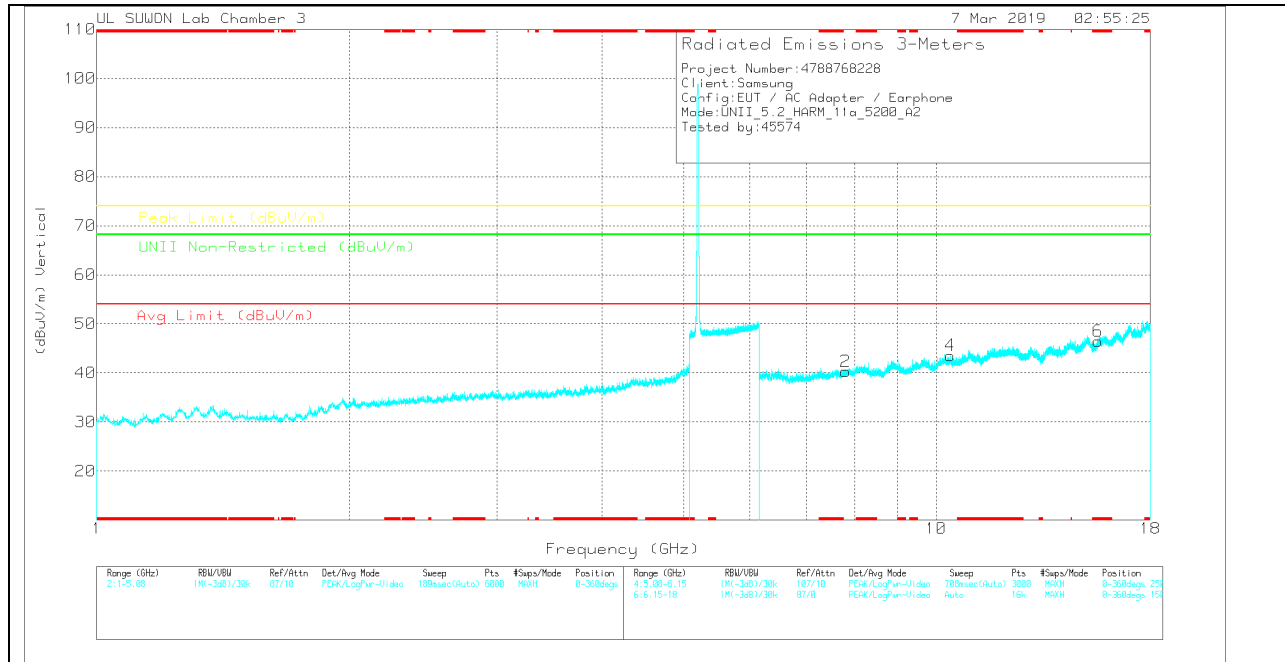
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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

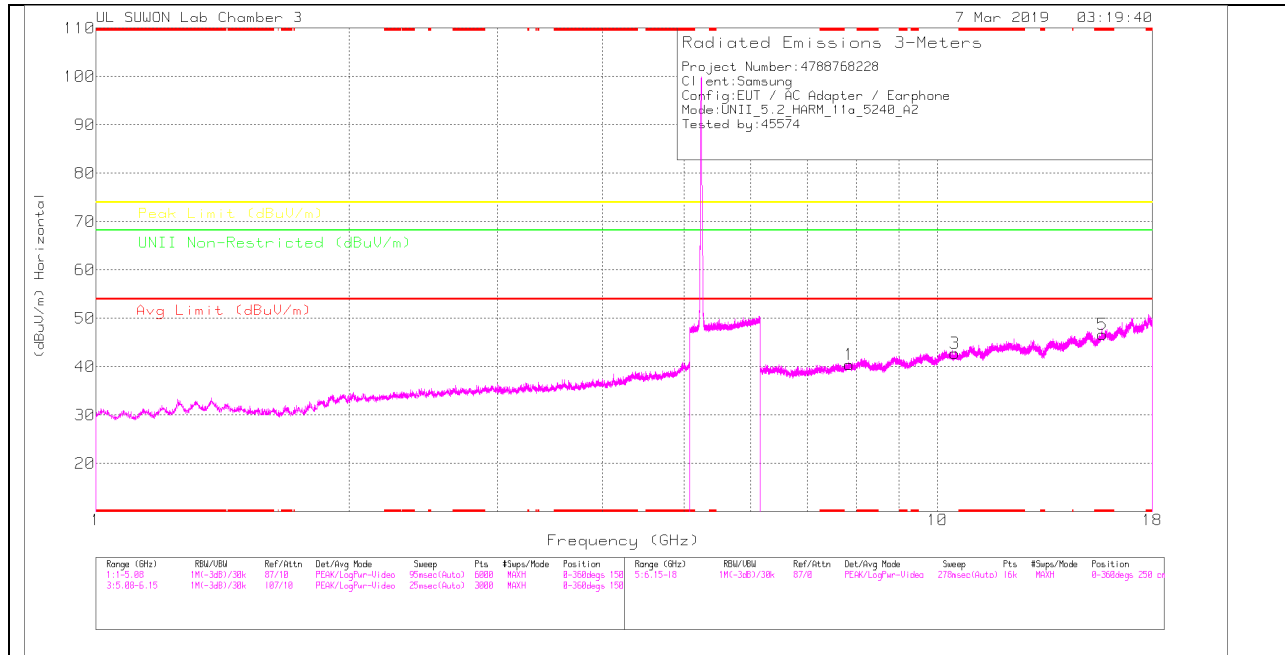
Marker	Frequency (GHz)	Marker Reading (dBuV)	Det	3117_00205959	60Hz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Unit Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	7.802	27.93	PK	35.9	-22.8	0	41.03	-	-	-	-	68.2	-27.17	0-360	150	H
3	10.401	24.35	PK	37.6	-19.3	0	42.65	-	-	-	-	68.2	-25.55	0-360	250	H
5	* 15.6	25.36	PK	40.2	-19.5	0	46.06	-	-	74	-27.94	-	-	0-360	250	H
2	7.8	27.17	PK	35.9	-22.8	0	40.27	-	-	-	-	68.2	-27.93	0-360	150	V
4	10.4	25.25	PK	37.6	-19.3	0	43.55	-	-	-	-	68.2	-24.65	0-360	250	V
6	* 15.597	25.72	PK	40.2	-19.5	0	46.42	-	-	74	-27.58	-	-	0-360	150	V

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

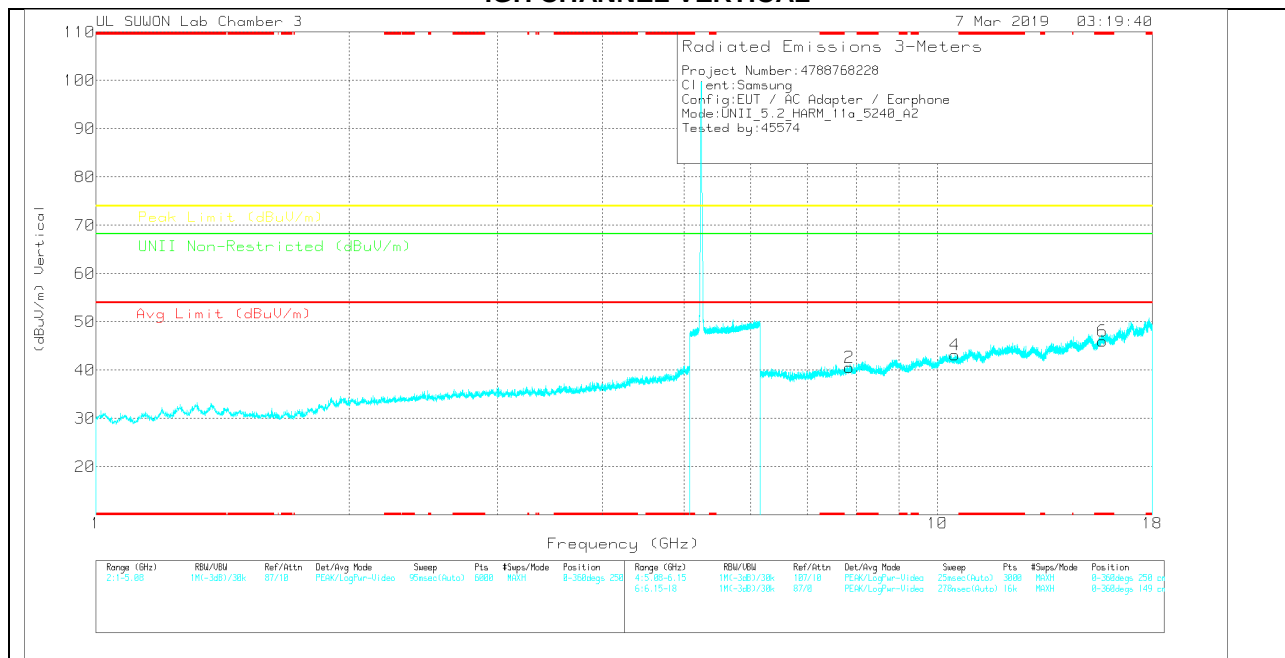
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

HIGH CHANNEL HORIZONTAL



IGH 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.