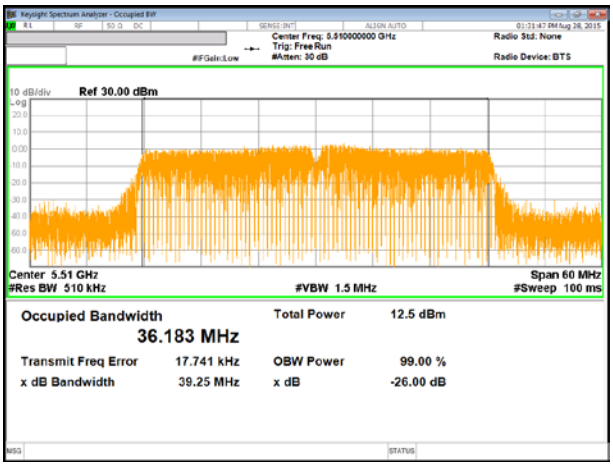
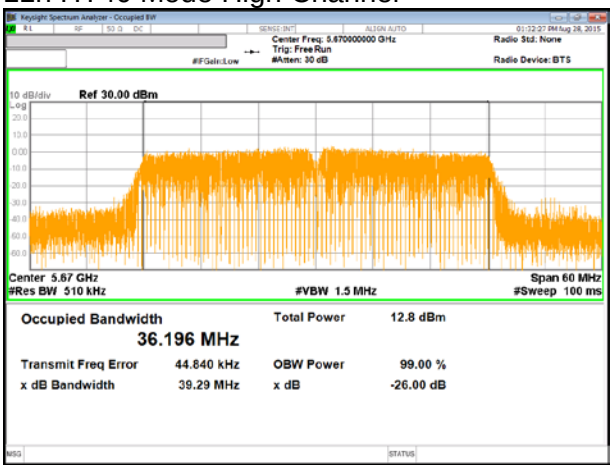
UNII 5.5 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel



11n HT40 Mode Middle Channel

11n HT40 Mode High Channel



11n HT40 Mode Straddle Channel

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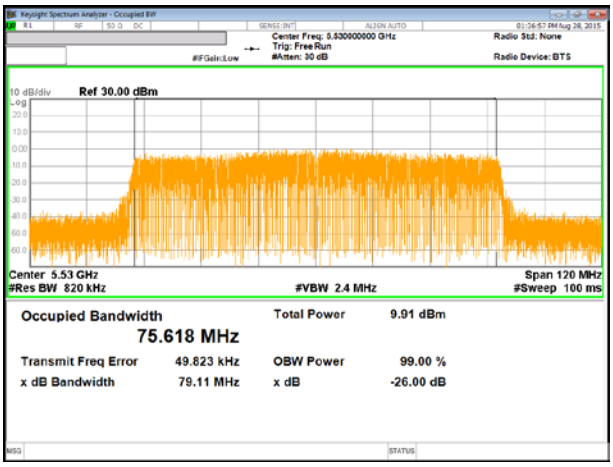
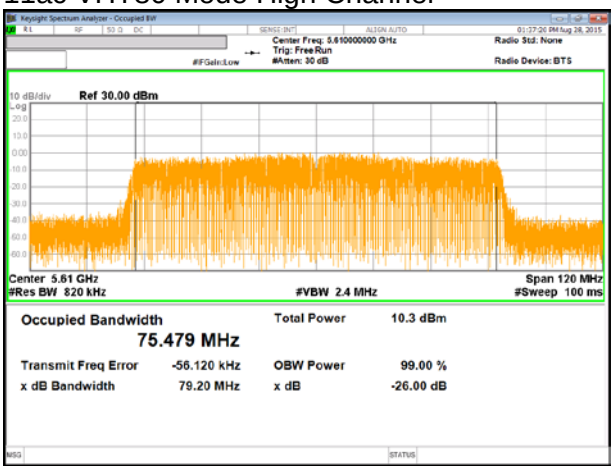
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Low Channel



11ac VHT80 Mode High Channel



11ac VHT80 Mode Straddle Channel

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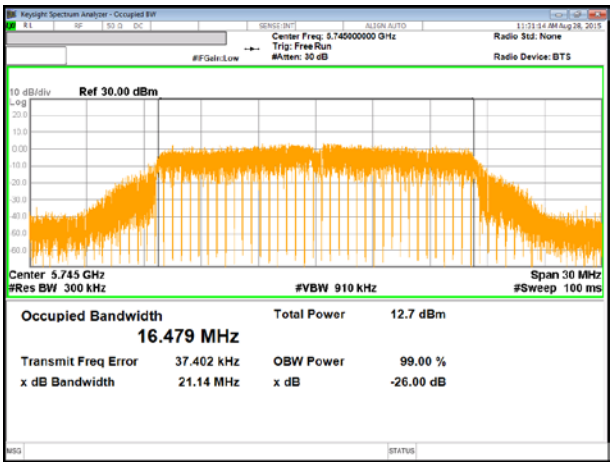
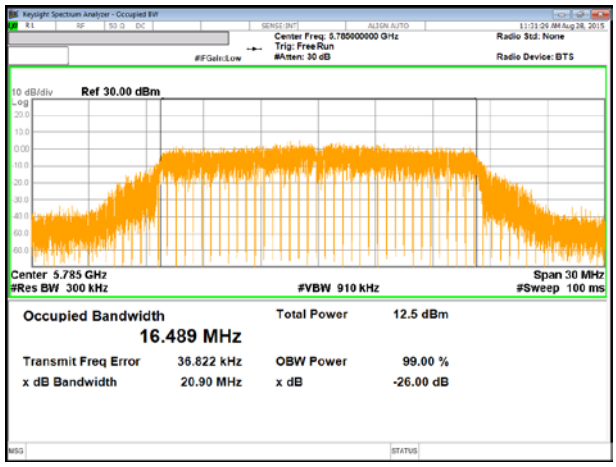
UNII 5.8 GHz IEEE 802.11a mode

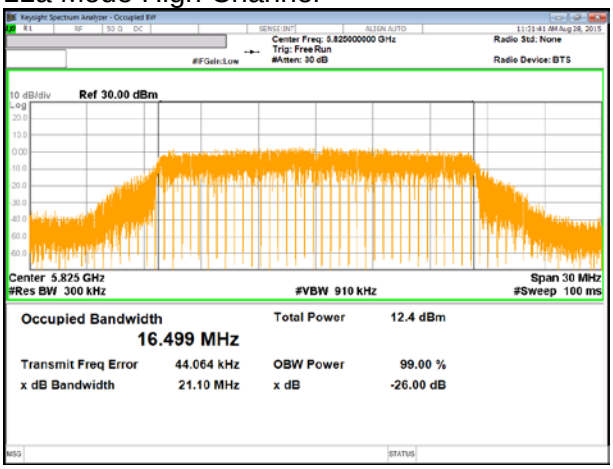
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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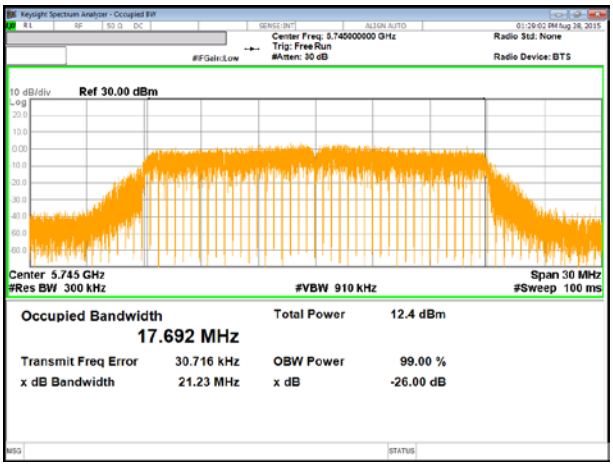
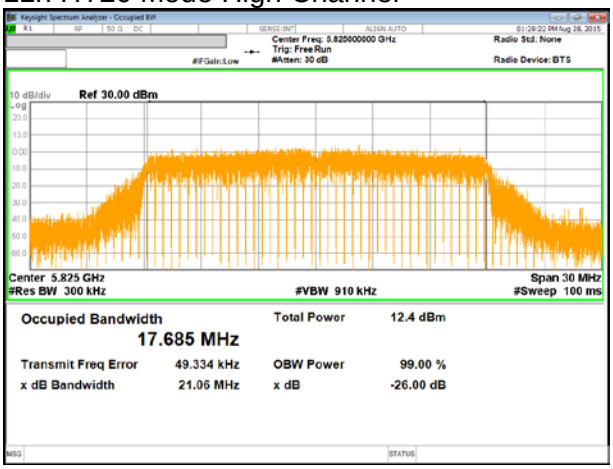
UNII 5.8 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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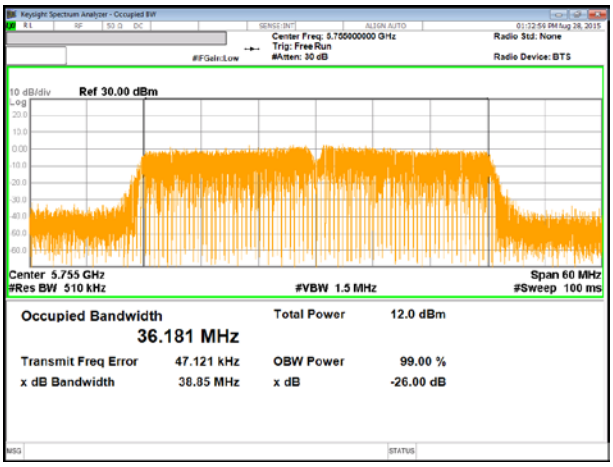
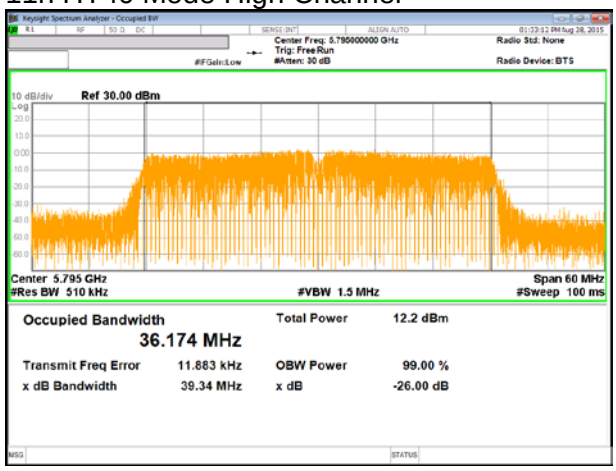
UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

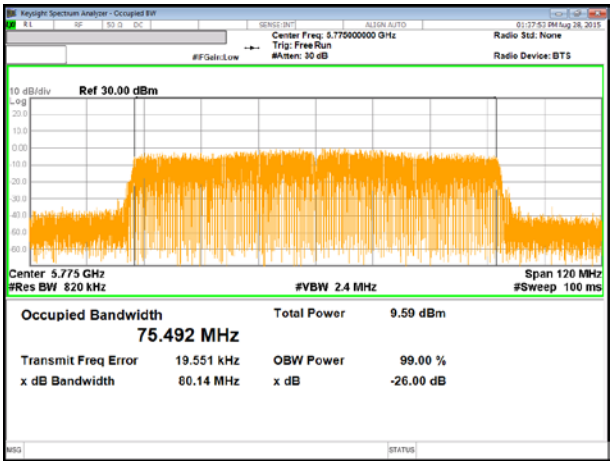


11n HT40 Mode High Channel



UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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10.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)
RSS-247 §6.2.1 (2), §6.2.2 (2), §6.2.3 (2), §6.2.4 (2)

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 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 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 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.

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	-1.52
5250 - 5350	-0.08
5470 - 5725	-1.23
5725 - 5850	-2.00

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RESULTS

10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5180	20.79	16.49	-1.52	-1.52
Mid	5200	20.74	16.43	-1.52	-1.52
High	5240	20.99	16.48	-1.52	-1.52

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5180	24.00	22.17	25.52	24.00	11.00	10.00	10.00
Mid	5200	24.00	22.16	25.52	24.00	11.00	10.00	10.00
High	5240	24.00	22.17	25.52	24.00	11.00	10.00	10.00

Duty Cycle CF [dB]	0.30	**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	10.55	10.85	24.00	-13.15
Mid	5200	10.26	10.56	24.00	-13.44
High	5240	10.03	10.33	24.00	-13.67

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	0.62	0.92	10.00	-9.08
Mid	5200	0.50	0.80	10.00	-9.20
High	5240	0.19	0.49	10.00	-9.51

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10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5180	21.30	17.68	-1.52	-1.52
Mid	5200	21.12	17.68	-1.52	-1.52
High	5240	21.17	17.68	-1.52	-1.52

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5180	24.00	22.47	25.52	24.00	11.00	10.00	10.00
Mid	5200	24.00	22.48	25.52	24.00	11.00	10.00	10.00
High	5240	24.00	22.48	25.52	24.00	11.00	10.00	10.00

Duty Cycle CF [dB]	0.32	**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	10.89	11.21	24.00	-12.79
Mid	5200	10.61	10.93	24.00	-13.07
High	5240	10.95	11.28	24.00	-12.72

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	0.74	1.06	10.00	-8.94
Mid	5200	0.38	0.71	10.00	-9.29
High	5240	0.87	1.20	10.00	-8.80

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10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5190	39.80	36.20	-1.52	-1.52
High	5230	39.17	36.11	-1.52	-1.52

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5190	24.00	23.00	25.52	24.00	11.00	10.00	10.00
High	5230	24.00	23.00	25.52	24.00	11.00	10.00	10.00

Duty Cycle CF [dB]	0.62	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	9.66	10.28	24.00	-13.72
High	5230	9.56	10.18	24.00	-13.82

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5190	-3.23	-2.61	10.00	-12.61
High	5230	-3.54	-2.92	10.00	-12.92

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10.4.4. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5210	80.93	75.47	-1.52	-1.52

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Middle	5210	24.00	23.00	25.52	24.00	11.00	10.00	10.00

Duty Cycle CF [dB]	1.16	**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	8.287	9.44	24.00	-14.56

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5210	-7.59	-6.43	10.00	-16.43

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10.4.5. 802.11a MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5260	21.10	16.44	-0.08	-0.08
Mid	5300	20.92	16.49	-0.08	-0.08
High	5320	20.88	16.48	-0.08	-0.08

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5260	24.00	22.16	24.08	24.00	11.00	11.00	11.00
Mid	5300	24.00	22.17	24.08	24.00	11.00	11.00	11.00
High	5320	24.00	22.17	24.08	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.30	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	10.44	10.74	24.00	-13.26
Mid	5300	10.37	10.67	24.00	-13.33
High	5320	10.34	10.64	24.00	-13.36

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	0.50	0.80	11.00	-10.20
Mid	5300	0.26	0.56	11.00	-10.44
High	5320	0.46	0.76	11.00	-10.24

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10.4.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5260	21.07	17.66	-0.08	-0.08
Mid	5300	21.27	17.67	-0.08	-0.08
High	5320	21.40	17.69	-0.08	-0.08

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5260	24.00	22.47	24.08	24.00	11.00	11.00	11.00
Mid	5300	24.00	22.47	24.08	24.00	11.00	11.00	11.00
High	5320	24.00	22.48	24.08	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.32	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	10.77	11.10	24.00	-12.90
Mid	5300	10.75	11.07	24.00	-12.93
High	5320	10.84	11.16	24.00	-12.84

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	0.57	0.89	11.00	-10.11
Mid	5300	0.50	0.82	11.00	-10.18
High	5320	0.60	0.92	11.00	-10.08

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10.4.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5270	39.51	36.14	-0.08	-0.08
High	5310	39.32	36.10	-0.08	-0.08

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5270	24.00	23.00	24.08	24.00	11.00	11.00	11.00
High	5310	24.00	23.00	24.08	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.62	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5270	9.76	10.38	24.00	-13.62
High	5310	9.58	10.20	24.00	-13.80

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5270	-3.18	-2.56	11.00	-13.56
High	5310	-3.31	-2.69	11.00	-13.69

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10.4.8. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5290	80.66	75.44	-0.08	-0.08

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Middle	5290	24.00	23.00	24.08	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	1.16	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5290	8.06	9.21	24.00	-14.79

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5290	-7.70	-6.54	11.00	-17.54

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10.4.9. 802.11a MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5500	20.90	16.49	-1.23	-1.23
Mid	5580	20.90	16.43	-1.23	-1.23
High	5700	20.97	16.49	-1.23	-1.23

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5500	24.00	22.17	25.23	24.00	11.00	11.00	11.00
Mid	5580	24.00	22.16	25.23	24.00	11.00	11.00	11.00
High	5700	24.00	22.17	25.23	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.30	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	10.55	10.85	24.00	-13.15
Mid	5580	10.10	10.40	24.00	-13.60
High	5700	10.85	11.15	24.00	-12.85

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	0.47	0.76	11.00	-10.24
Mid	5580	0.54	0.84	11.00	-10.16
High	5700	1.04	1.34	11.00	-9.66

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10.4.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5500	21.08	17.67	-1.23	-1.23
Mid	5580	21.29	17.70	-1.23	-1.23
High	5700	21.22	17.70	-1.23	-1.23

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5500	24.00	22.47	25.23	24.00	11.00	11.00	11.00
Mid	5580	24.00	22.48	25.23	24.00	11.00	11.00	11.00
High	5700	24.00	22.48	25.23	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.32	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	10.89	11.21	24.00	-12.79
Mid	5580	10.93	11.25	24.00	-12.75
High	5700	10.41	10.73	24.00	-13.27

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	0.81	1.13	11.00	-9.87
Mid	5580	0.78	1.10	11.00	-9.90
High	5700	0.28	0.61	11.00	-10.39

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10.4.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5510	39.51	36.18	-1.23	-1.23
Mid	5550	39.54	36.17	-1.23	-1.23
High	5670	39.55	36.20	-1.23	-1.23

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5510	24.00	23.00	25.23	24.00	11.00	11.00	11.00
Mid	5550	24.00	23.00	25.23	24.00	11.00	11.00	11.00
High	5670	24.00	23.00	25.23	24.00	11.00	11.00	11.00
Duty Cycle CF [dB]		0.62	**Included in Calculations of Corr'd Power & PPSD**					

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5510	9.80	10.42	24.00	-13.58
Mid	5550	9.35	9.97	24.00	-14.03
High	5670	9.34	9.96	24.00	-14.04

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5510	-3.15	-2.53	11.00	-13.53
Mid	5550	-3.53	-2.91	11.00	-13.91
High	5670	-3.79	-3.17	11.00	-14.17

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10.4.12. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5530	80.58	75.62	-1.23	-1.23
High	5610	81.08	75.48	-1.23	-1.23

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5530	24.00	23.00	25.23	24.00	11.00	11.00	11.00
High	5610	24.00	23.00	25.23	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	1.16	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5530	8.31	9.46	24.00	-14.54
High	5610	7.70	8.86	24.00	-15.14

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5530	-7.43	-6.27	11.00	-17.27
High	5610	-8.44	-7.28	11.00	-18.28

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10.4.13. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5745	20.90	16.48	-2.00	-2.00
Mid	5785	21.01	16.49	-2.00	-2.00
High	5825	20.89	16.50	-2.00	-2.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5745	24.00	22.17	26.00	24.00	11.00	11.00	11.00
Mid	5785	24.00	22.17	26.00	24.00	11.00	11.00	11.00
High	5825	24.00	22.17	26.00	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.30	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	10.87	11.17	24.00	-12.83
Mid	5785	11.04	11.34	24.00	-12.66
High	5825	10.83	11.12	24.00	-12.88

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5745	1.01	1.31	11.00	-9.69
Mid	5785	1.17	1.47	11.00	-9.53
High	5825	1.04	1.34	11.00	-9.66

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10.4.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5745	21.21	17.69	-2.00	-2.00
Mid	5785	21.01	17.68	-2.00	-2.00
High	5825	21.06	17.69	-2.00	-2.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5745	24.00	22.48	26.00	24.00	11.00	11.00	11.00
Mid	5785	24.00	22.48	26.00	24.00	11.00	11.00	11.00
High	5825	24.00	22.48	26.00	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.32	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	10.64	10.96	24.00	-13.04
Mid	5785	10.77	11.10	24.00	-12.90
High	5825	10.33	10.65	24.00	-13.35

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5745	0.40	0.72	11.00	-10.28
Mid	5785	0.96	1.28	11.00	-9.72
High	5825	0.22	0.54	11.00	-10.46

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10.4.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5755	39.41	36.18	-2.00	-2.00
High	5795	39.41	36.17	-2.00	-2.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Low	5755	24.00	23.00	26.00	24.00	11.00	11.00	11.00
High	5795	24.00	23.00	26.00	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.62	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5755	9.45	10.07	24.00	-13.93
High	5795	9.46	10.08	24.00	-13.92

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5755	-3.42	-2.80	11.00	-13.80
High	5795	-3.50	-2.88	11.00	-13.88

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10.4.16. 802.11ac HT80 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5775	81.66	75.55	-2.00	-2.00

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
Middle	5775	24.00	23.00	26.00	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	1.16	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5775	7.94	9.10	24.00	-14.90

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5775	-8.21	-7.05	11.00	-18.05

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10.4.17. 802.11a MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5720	15.55	13.24	-1.23	-1.23
UNII-3	5720	5.55	3.24	-1.23	-1.23
Whole	5720	21.10	16.49	-1.23	-1.23

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
UNII-2C	5720	22.92	21.22	24.15	22.92	11.00	11.00	11.00
UNII-3	5720	18.44	15.11	19.67	18.44	11.00	11.00	11.00
Whole	5720	24.00	22.17	25.23	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.30	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Portion	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5720	10.06	10.36	22.92	-12.56
UNII-3	5720	2.73	3.03	18.44	-15.41
Whole	5720	10.79	11.09	24.00	-12.91

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
144	5720	1.01	1.31	11.00	-9.69

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10.4.18. 802.11n HT20 MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5720	15.55	13.84	-1.23	-1.23
UNII-3	5720	5.55	3.84	-1.23	-1.23
Whole	5720	21.10	17.69	-1.23	-1.23

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
UNII-2C	5720	22.92	21.41	24.15	22.92	11.00	11.00	11.00
UNII-3	5720	18.44	15.85	19.67	18.44	11.00	11.00	11.00
Whole	5720	24.00	22.48	25.23	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.32	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Portion	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5720	9.65	9.97	22.92	-12.95
UNII-3	5720	2.74	3.07	18.44	-15.38
Whole	5720	10.45	10.78	24.00	-13.22

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
144	5720	0.32	0.64	11.00	-10.36

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10.4.19. 802.11n HT40 MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5710	34.86	33.10	-1.23	-1.23
UNII-3	5710	4.86	3.10	-1.23	-1.23
Whole	5710	39.72	36.19	-1.23	-1.23

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
UNII-2C	5710	24.00	23.00	25.23	24.00	11.00	11.00	11.00
UNII-3	5710	17.87	14.91	19.10	17.87	11.00	11.00	11.00
Whole	5710	24.00	23.00	25.23	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	0.62	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Portion	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5710	9.00	9.62	24.00	-14.38
UNII-3	5710	-2.17	-1.55	17.87	-19.42
Whole	5710	9.32	9.94	24.00	-14.06

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
142	5710	-3.62	-3.00	11.00	-14.00

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10.4.20. 802.11ac VHT80 MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Min 99% BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5690	75.83	72.77	-1.23	-1.23
UNII-3	5690	5.83	2.77	-1.23	-1.23
Whole	5690	81.66	75.55	-1.23	-1.23

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	IC EIRP Limit [dBm]	Max IC Power [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]	IC eirp PSD Limit [dBm]	PPSD Limit [dBm]
UNII-2C	5690	24.00	23.00	25.23	24.00	11.00	11.00	11.00
UNII-3	5690	18.66	14.43	19.89	18.66	11.00	11.00	11.00
Whole	5690	24.00	23.00	25.23	24.00	11.00	11.00	11.00

Duty Cycle CF [dB]	1.16	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Portion	Frequency [MHz]	Total Corr'd Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5690	7.46	8.61	24.00	-15.39
UNII-3	5690	-7.42	-6.26	18.66	-24.92
Whole	5690	7.60	8.75	24.00	-15.25

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
138	5690	-8.03	-6.87	11.00	-17.87

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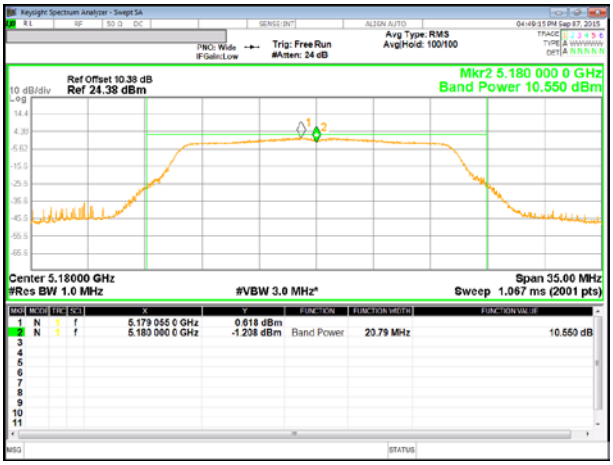
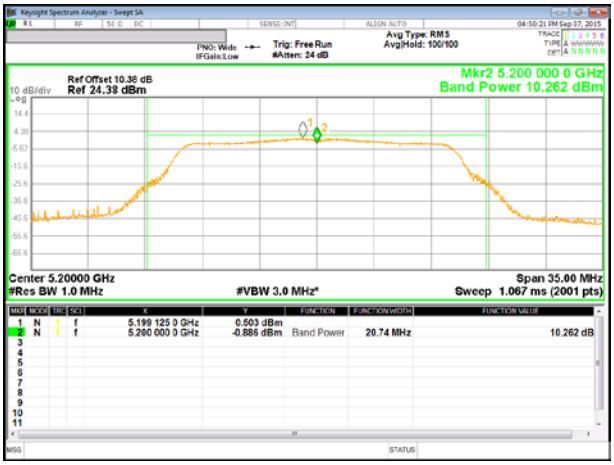
10.4.21. OUTPUT POWER AND PPSD PLOTS

UNII 5.2 GHz IEEE 802.11a mode

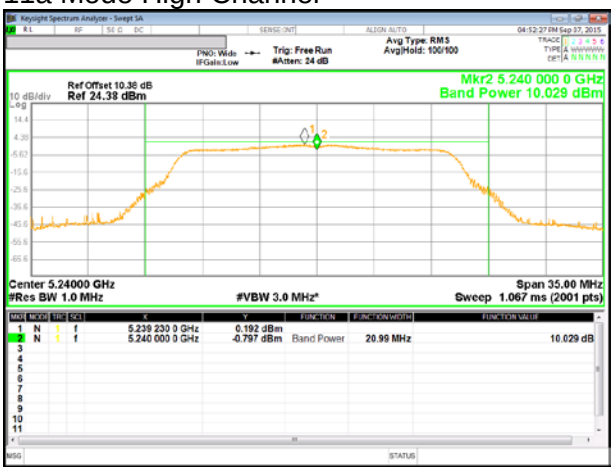
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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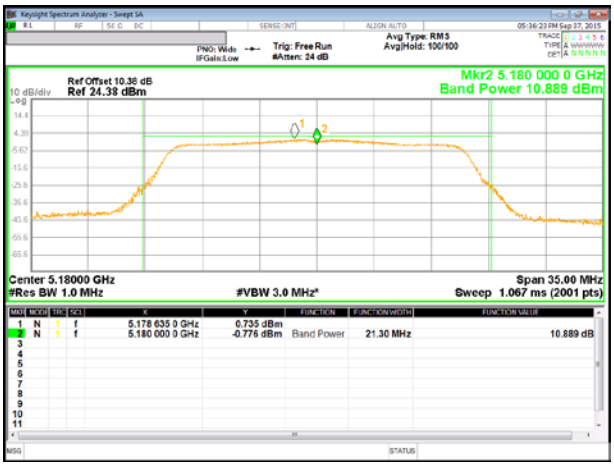
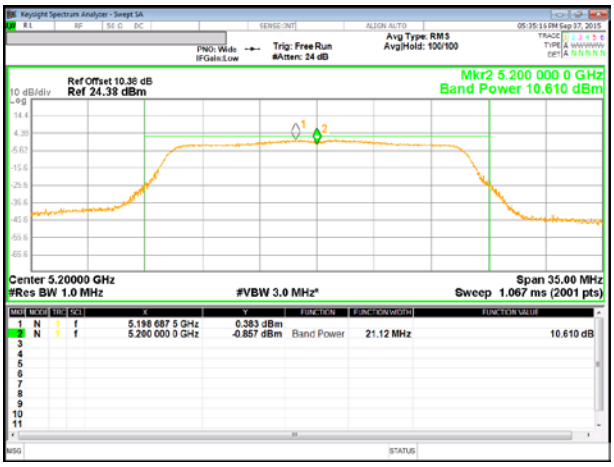
UNII 5.2 GHz IEEE 802.11n HT20 mode

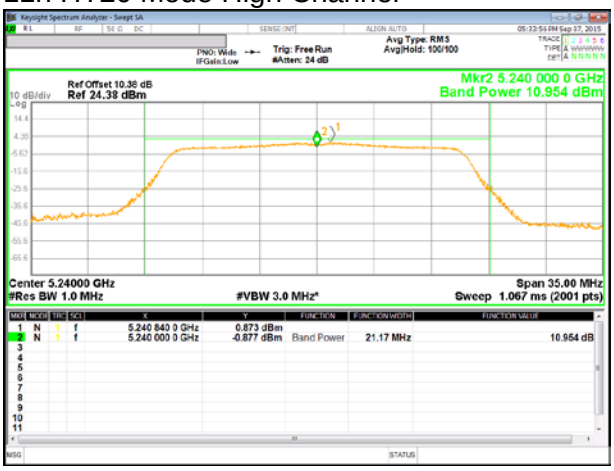
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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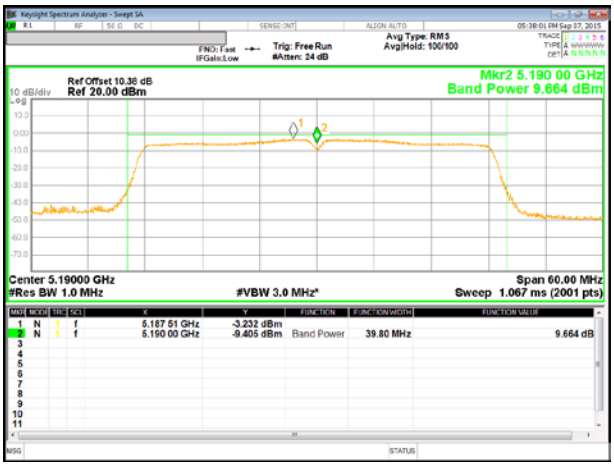
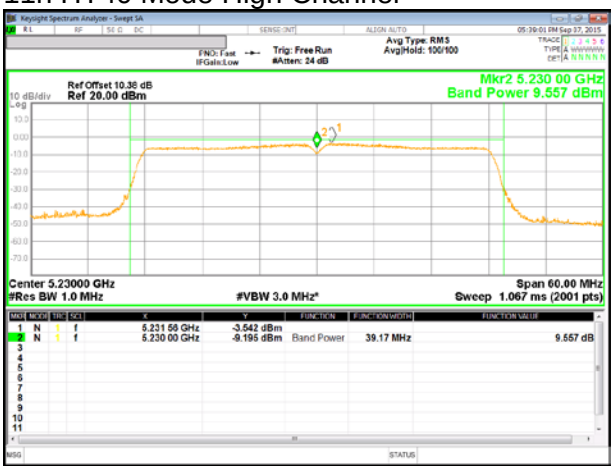
UNII 5.2 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

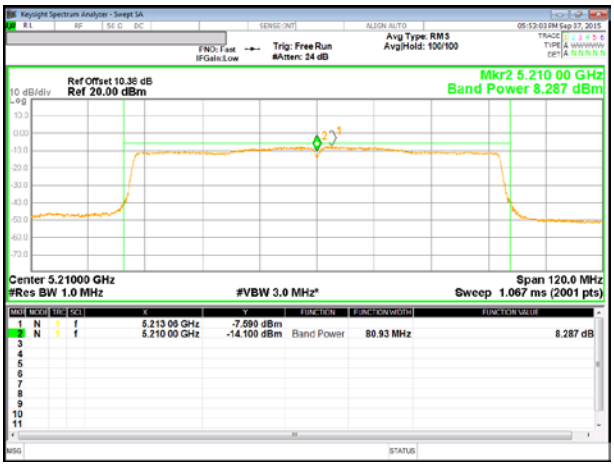


11n HT40 Mode High Channel



UNII 5.2 GHz IEEE 802.11ac VHT80 mode

11ac HT80 Mode Middle Channel



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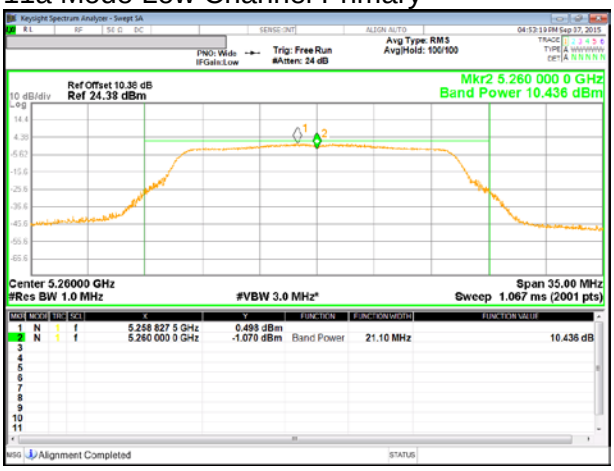
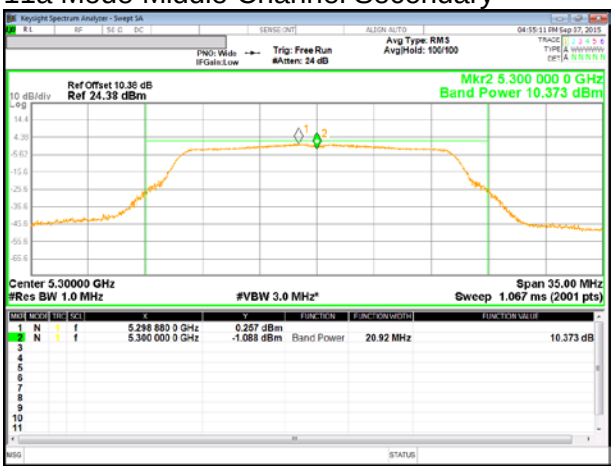
UNII 5.3 GHz IEEE 802.11a mode

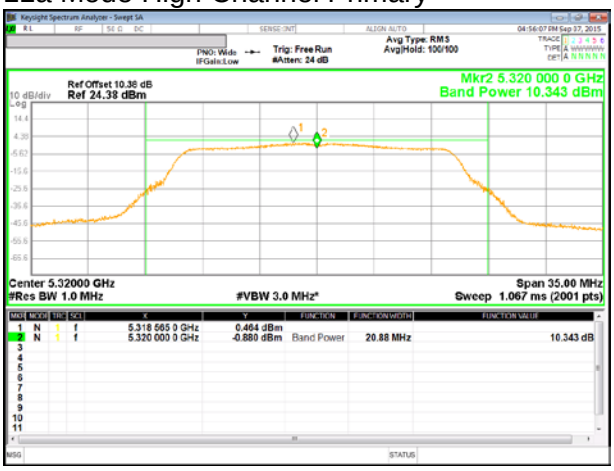
11a Mode Low Channel Primary



11a Mode Middle Channel Secondary



11a Mode High Channel Primary



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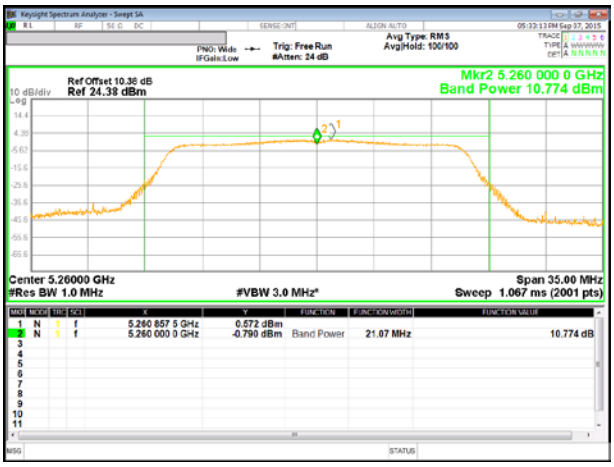
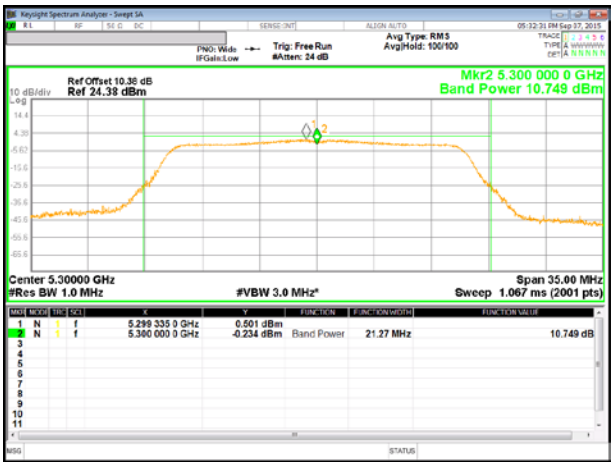
UNII 5.3 GHz IEEE 802.11n HT20 mode

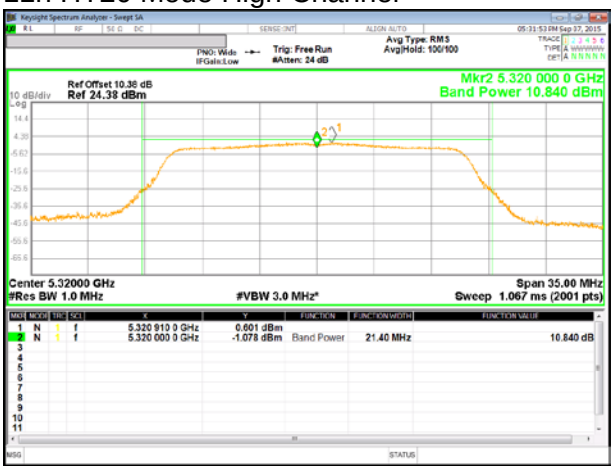
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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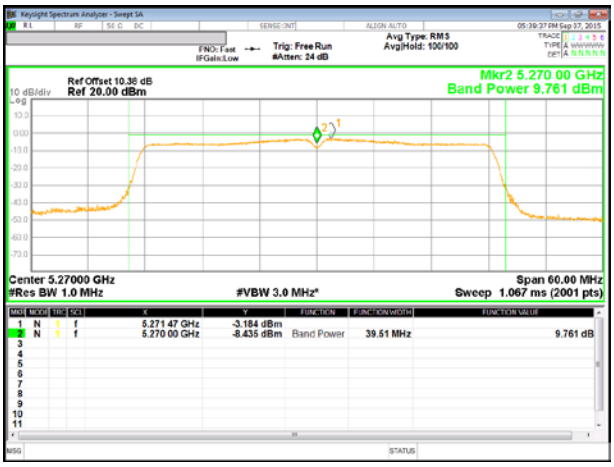
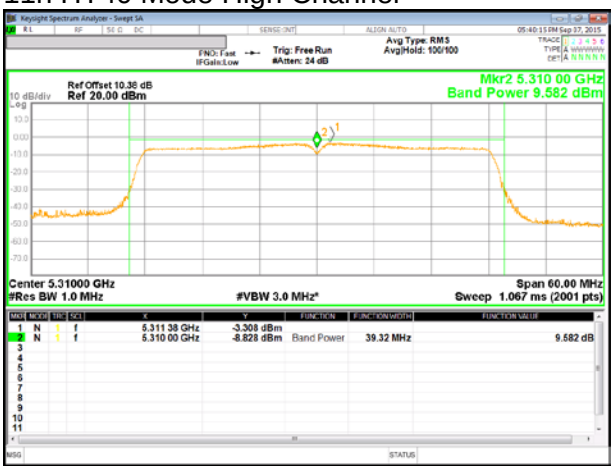
UNII 5.3 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

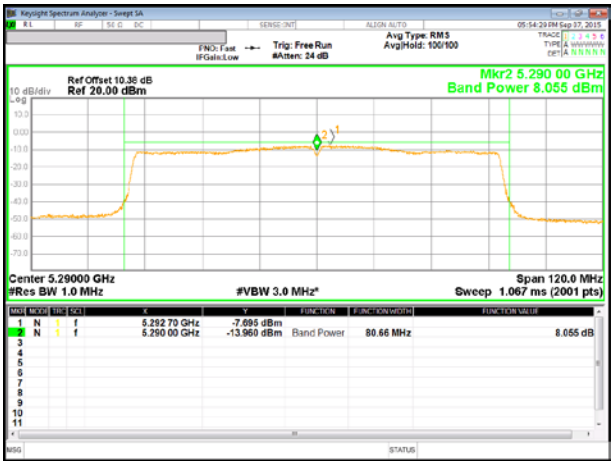


11n HT40 Mode High Channel



UNII 5.3 GHz IEEE 802.11ac VHT80 mode

11ac HT80 Mode Middle Channel



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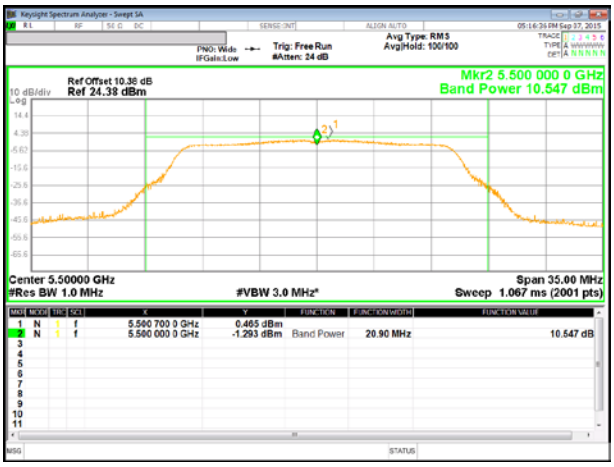
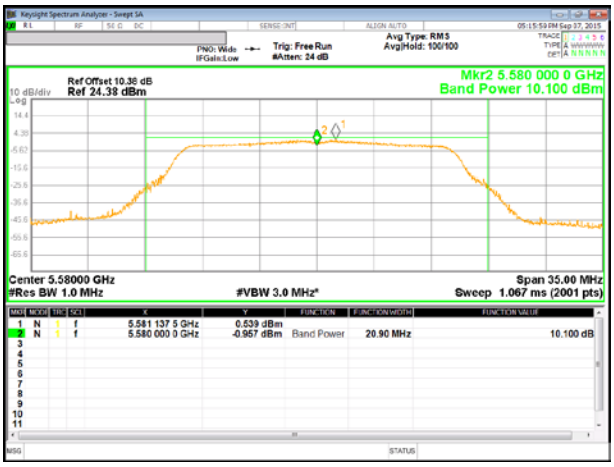
UNII 5.5 GHz IEEE 802.11a mode

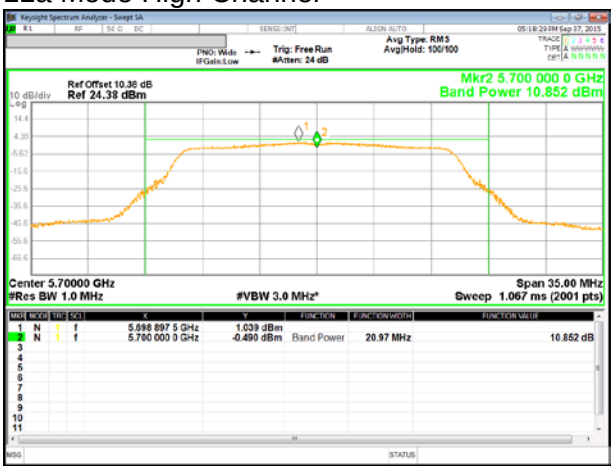
11a Mode Low Channel



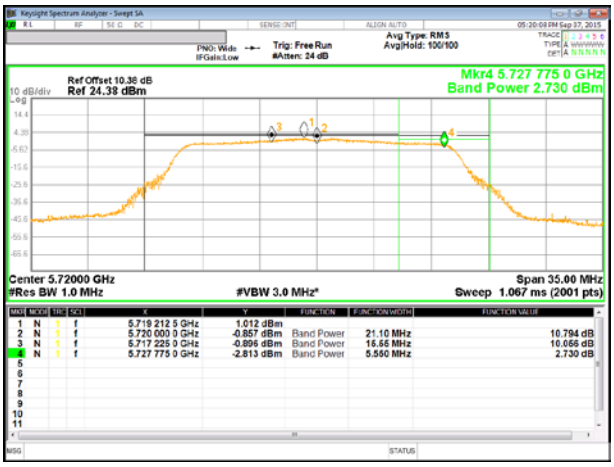
11a Mode Middle Channel



11a Mode High Channel



11a Mode Straddle Channel



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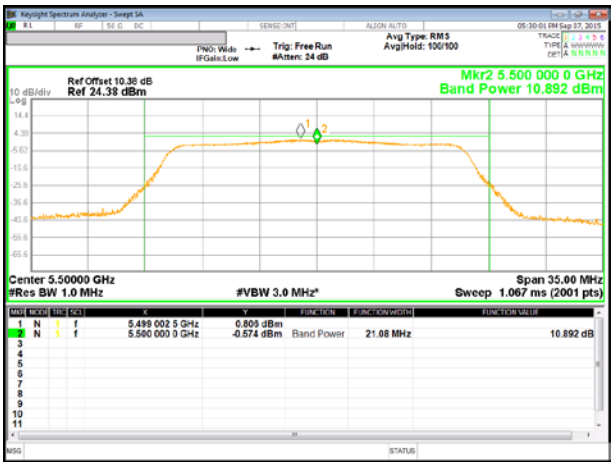
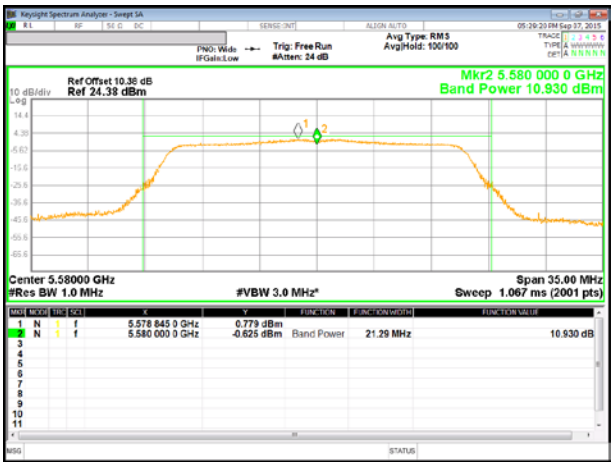
UNII 5.5 GHz IEEE 802.11n HT20 mode

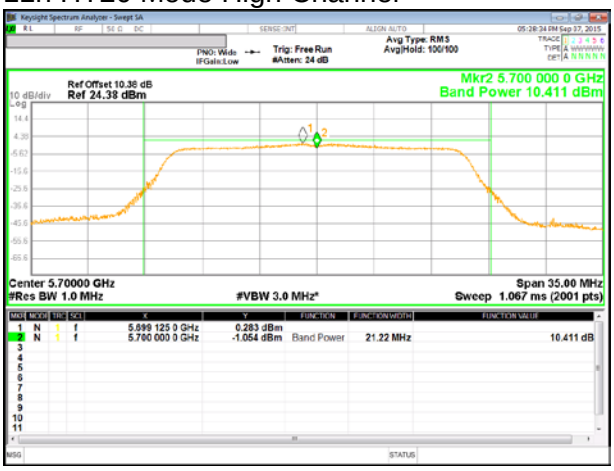
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



11n HT20 Mode Straddle Channel

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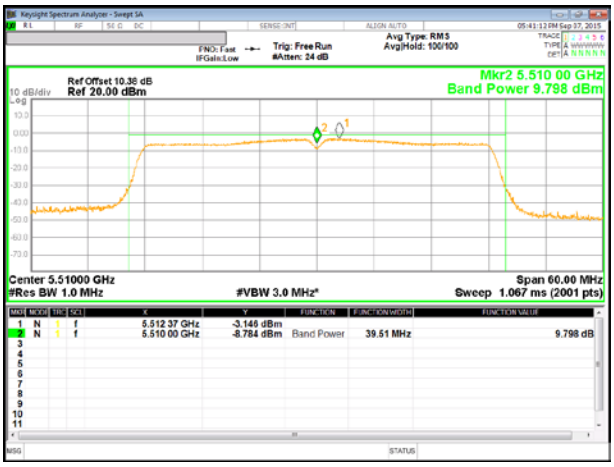
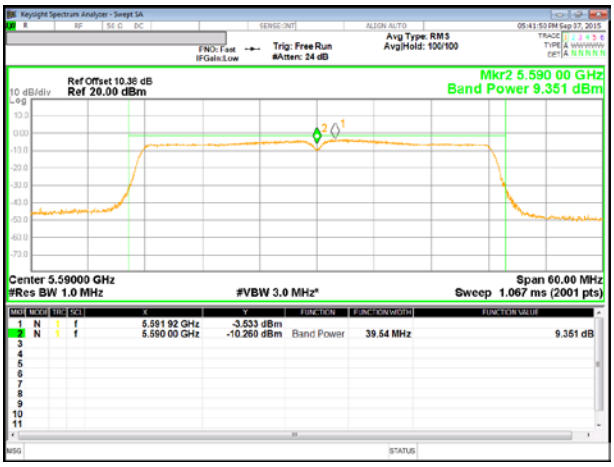
UNII 5.5 GHz IEEE 802.11n HT40 mode

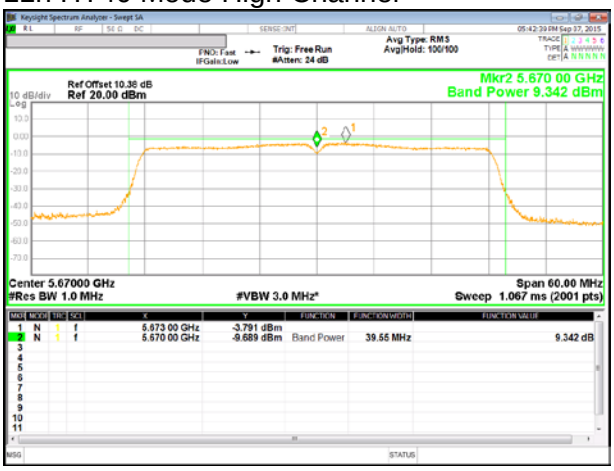
11n HT40 Mode Low Channel



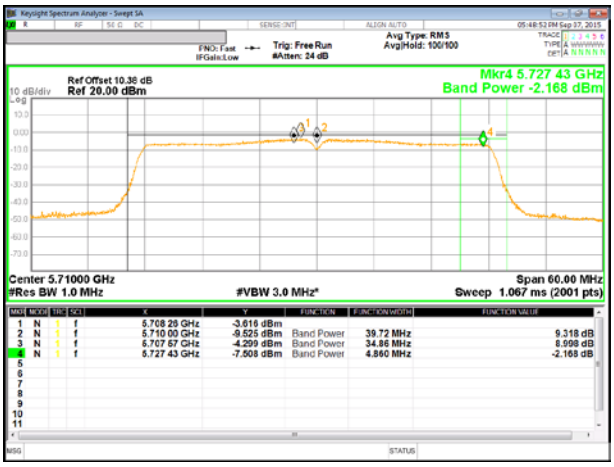
11n HT40 Mode Middle Channel



11n HT40 Mode High Channel



11n HT40 Mode Straddle Channel



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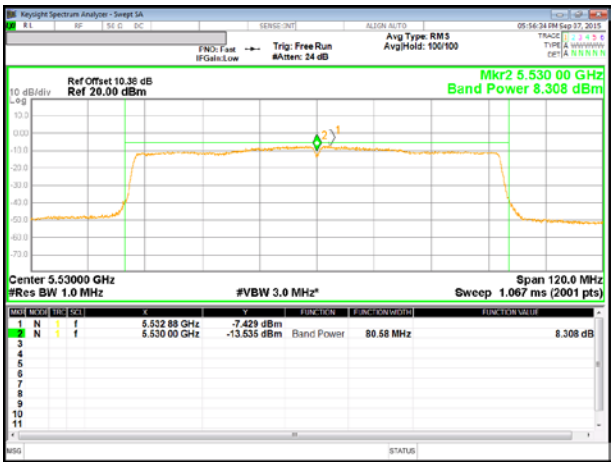
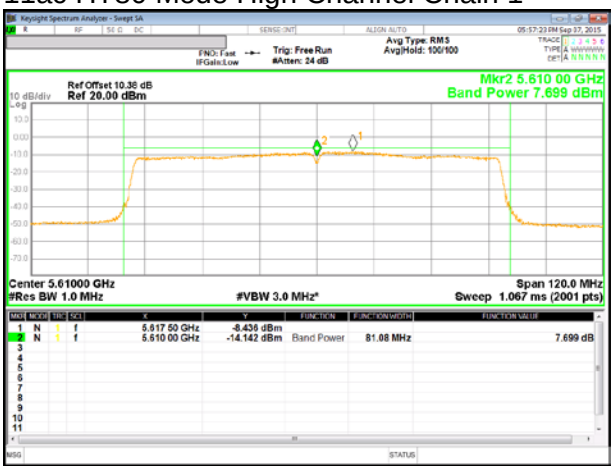
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

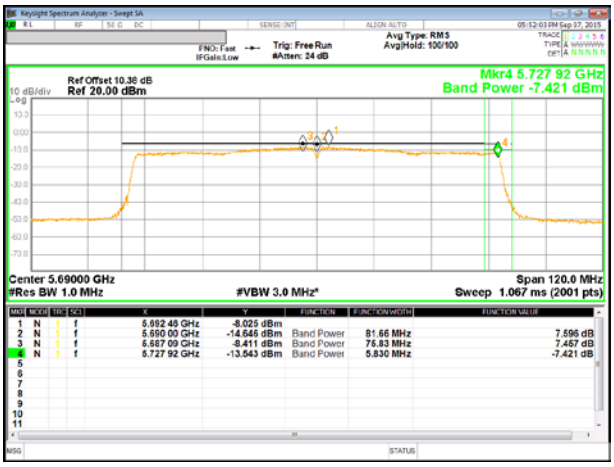
11ac HT80 Mode Low Channel



11ac HT80 Mode High Channel Chain 1



11ac HT80 Mode Straddle Channel



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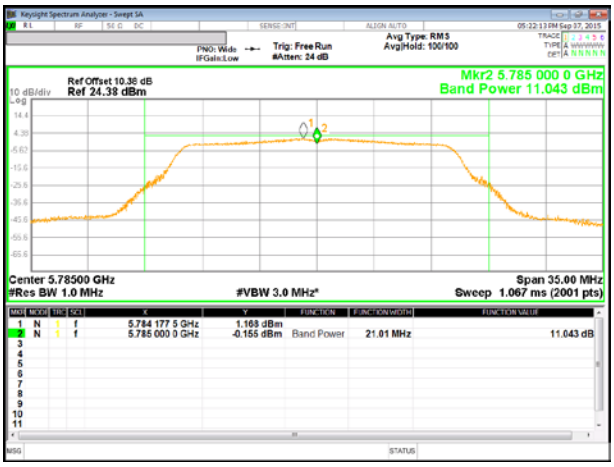
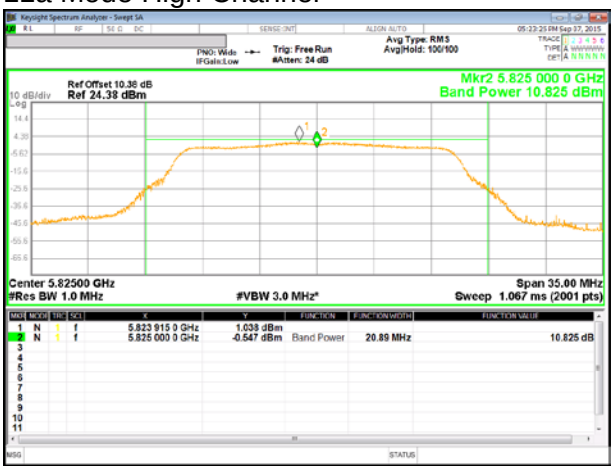
UNII 5.8 GHz IEEE 802.11a mode

11a Mode Low Channel

11a Mode Middle Channel



11a Mode High Channel



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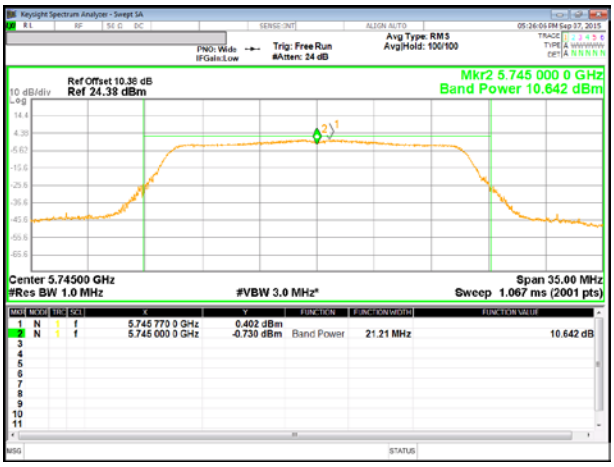
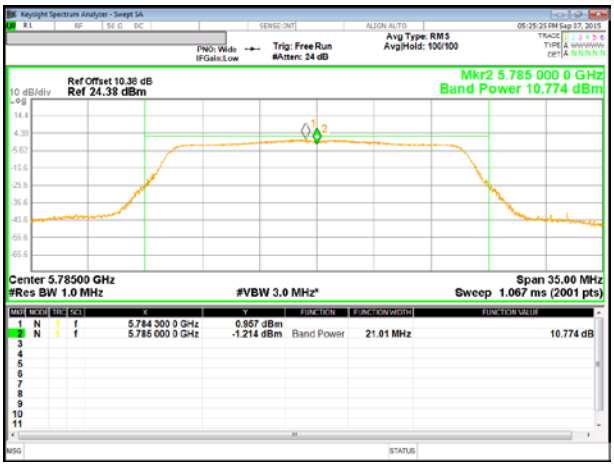
UNII 5.8 GHz IEEE 802.11n HT20 mode

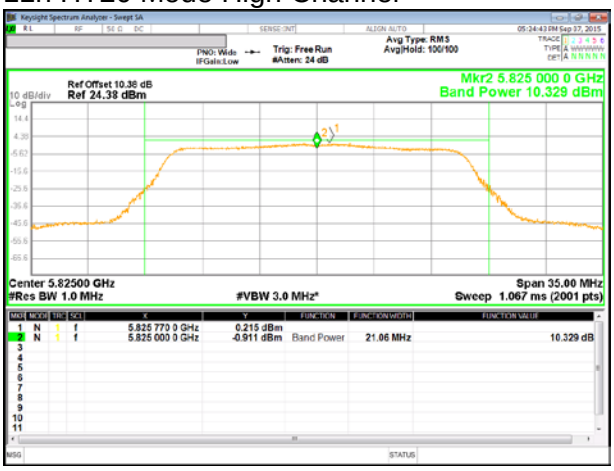
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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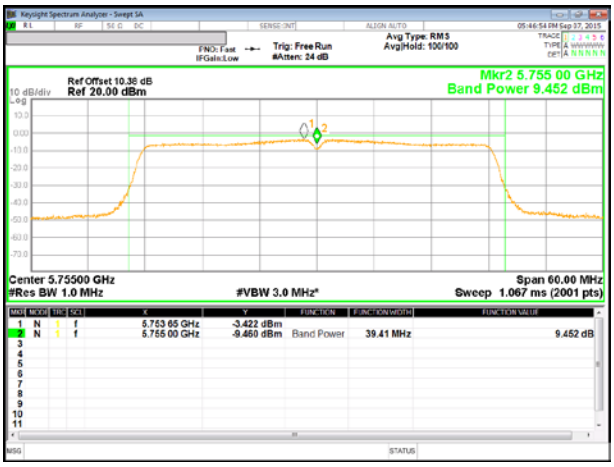
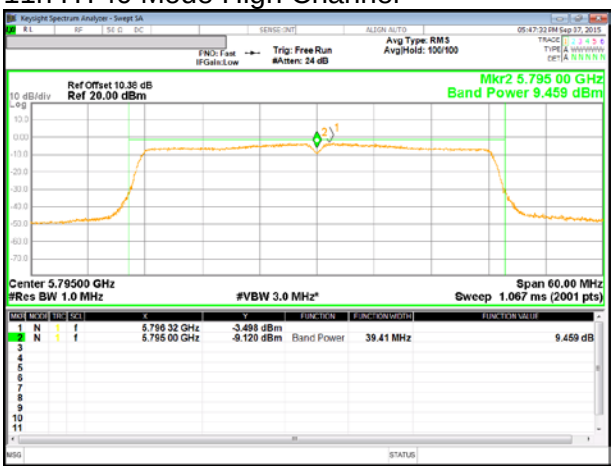
UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

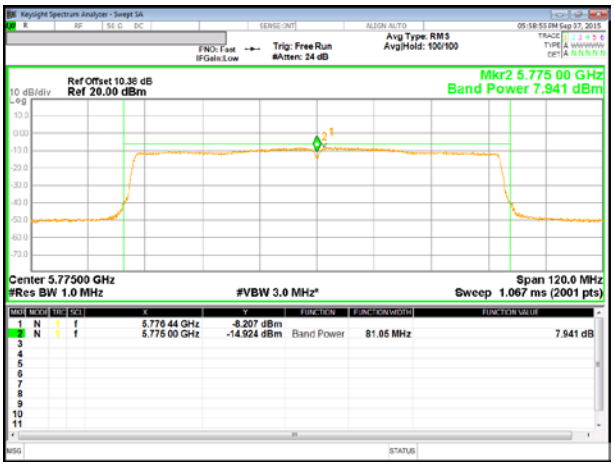


11n HT40 Mode High Channel



UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac HT80 Mode Middle Channel



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11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209
IC RSS-GEN Clause 8.9 (Transmitter)
IC RSS-GEN Clause 7 (Receiver)

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

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 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.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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

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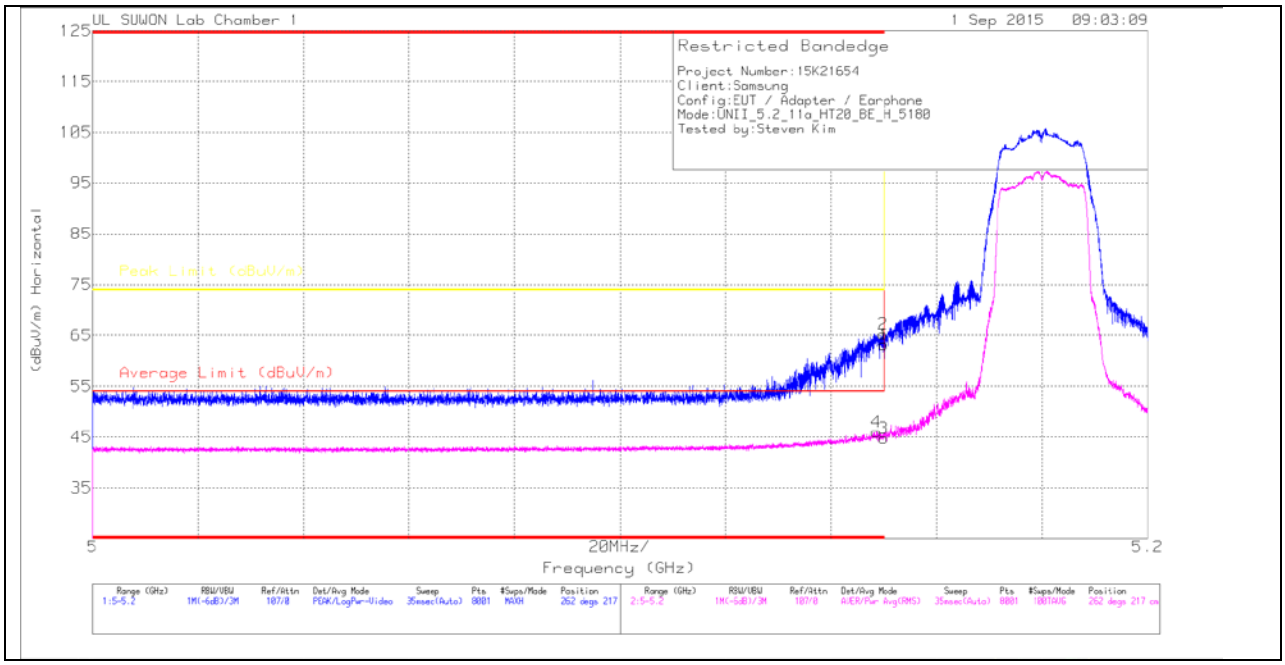
11.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	48.37	Pk	34.2	-19.4	0	63.17	-	-	74	-10.83	262	217	H
2	* 5.15	50.54	Pk	34.2	-19.4	0	65.34	-	-	74	-8.66	262	217	H
3	* 5.15	29.68	RMS	34.2	-19.4	.3	44.78	54	-9.22	-	-	262	217	H
4	* 5.149	30.94	RMS	34.2	-19.4	.3	46.04	54	-7.96	-	-	262	217	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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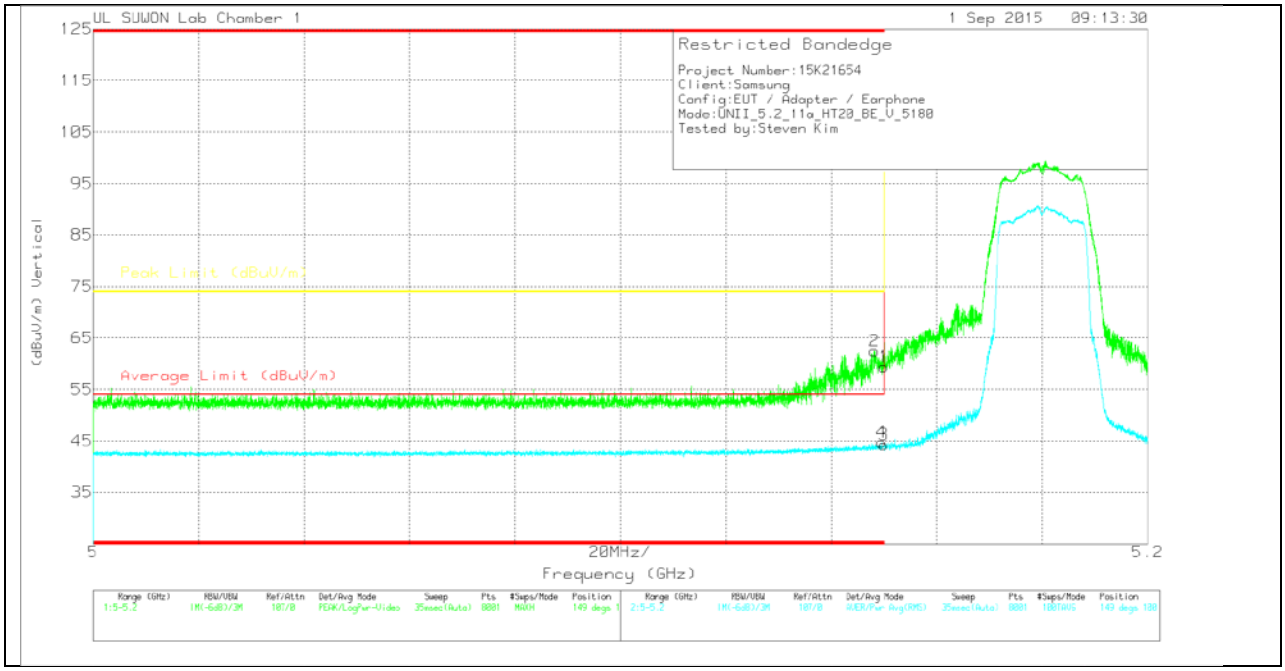
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	44.63	Pk	34.2	-19.4	0	59.43	-	-	74	-14.57	149	100	V
2	* 5.148	47.7	Pk	34.2	-19.4	0	62.5	-	-	74	-11.5	149	100	V
3	* 5.15	29.2	RMS	34.2	-19.4	.3	44.3	54	-9.7	-	-	149	100	V
4	* 5.149	29.62	RMS	34.2	-19.4	.3	44.72	54	-9.28	-	-	149	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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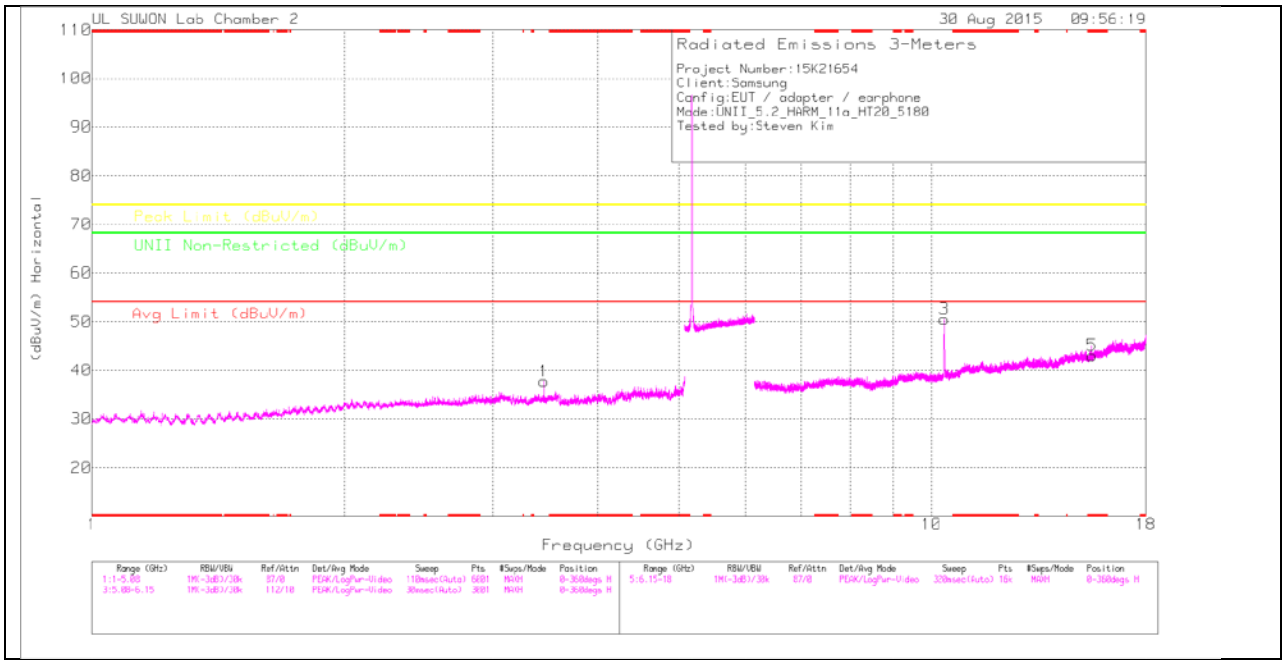
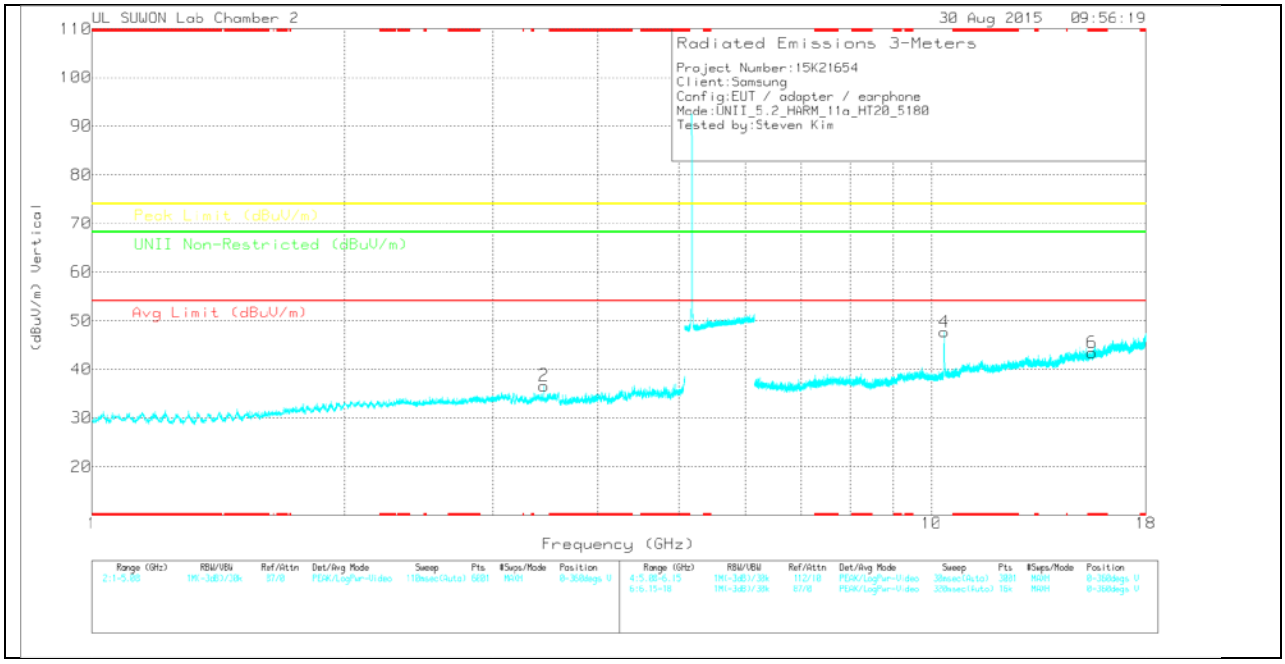
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.453	30.96	PK	32.7	-25.9	0	37.76	-	-	-	-	68.2	-30.44	0-360	100	H
2	3.453	29.84	PK	32.7	-25.9	0	36.64	-	-	-	-	68.2	-31.56	0-360	200	V
3	10.359	31.2	PK	37.6	-18.2	0	50.6	-	-	-	-	68.2	-17.6	0-360	200	H
5	* 15.524	19.27	PK	39.9	-16.1	0	43.07	-	-	74	-30.93	-	-	0-360	200	H
4	10.361	28.21	PK	37.6	-18.1	0	47.71	-	-	-	-	68.2	-20.49	0-360	200	V
6	* 15.526	19.59	PK	39.9	-16.1	0	43.39	-	-	74	-30.61	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.453	39.31	PK-U	32.7	-25.9	0	46.11	-	-	-	-	68.2	-22.09	331	305	H
3.453	38.82	PK-U	32.7	-25.9	0	45.62	-	-	-	-	68.2	-22.58	197	175	V
10.361	43.94	PK-U	37.6	-18.2	0	63.34	-	-	-	-	68.2	-4.86	232	317	H
10.36	42.5	PK-U	37.6	-18.2	0	61.9	-	-	-	-	68.2	-6.3	19	374	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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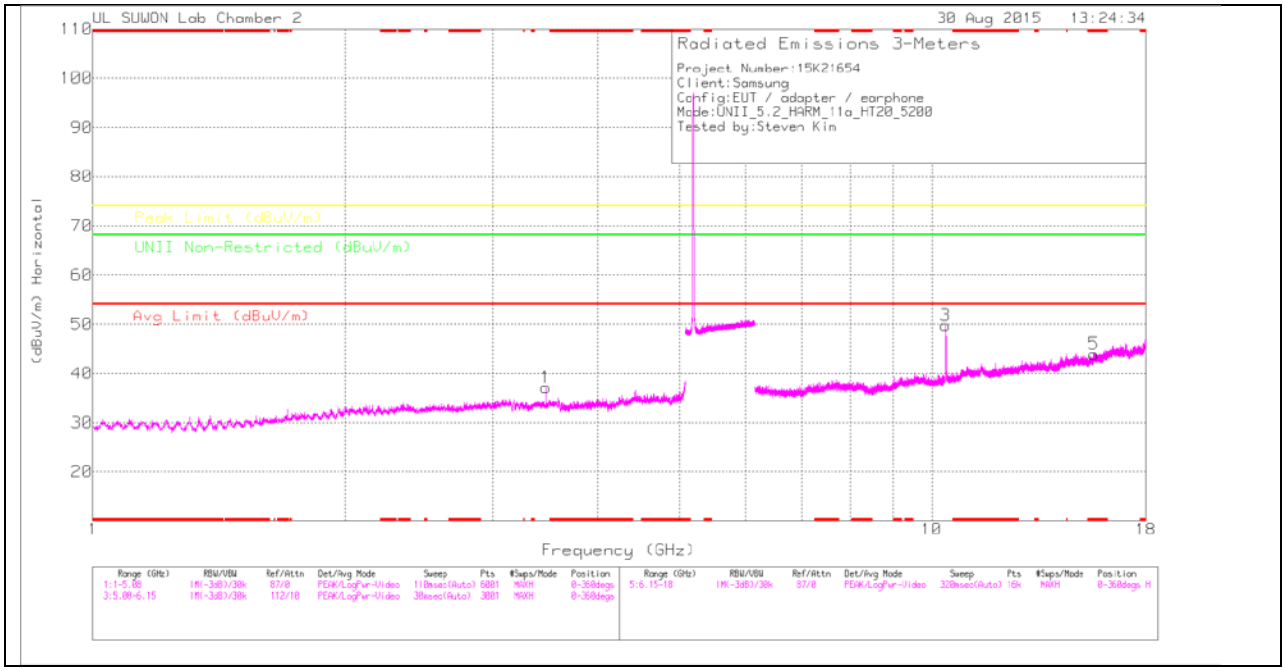
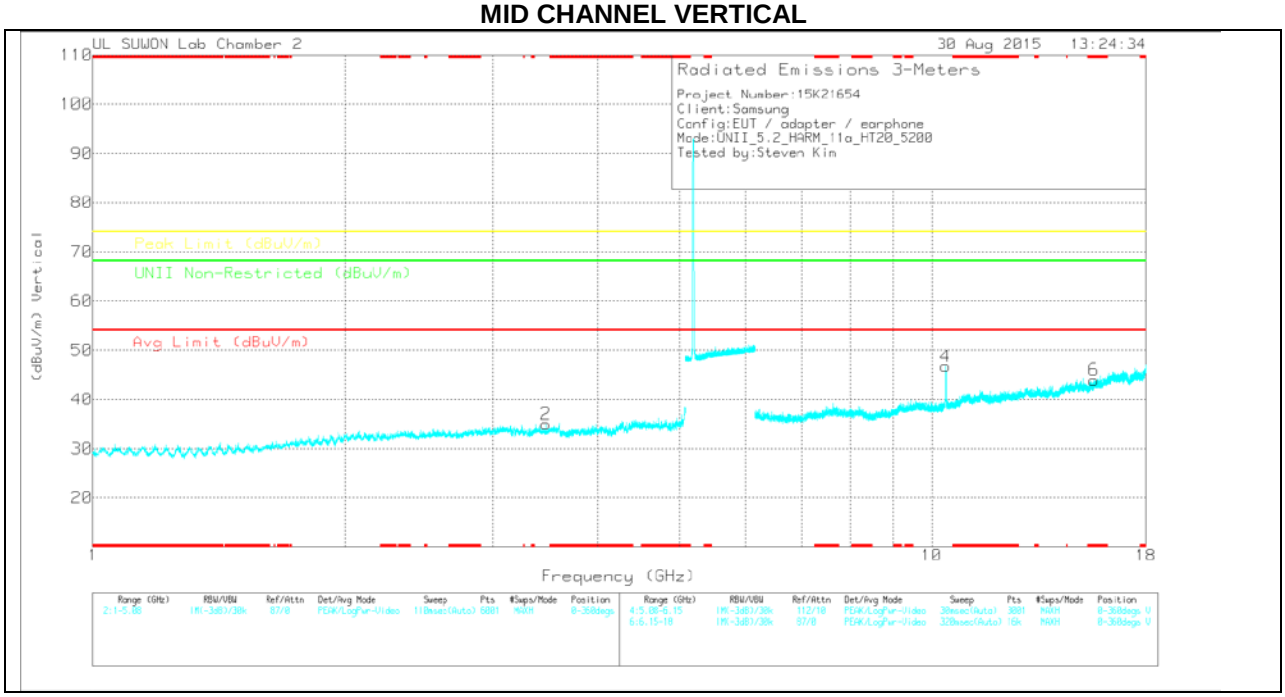
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.466	30.23	PK	32.7	-25.8	0	37.13	-	-	-	-	68.2	-31.07	0-360	200	H
2	3.467	27.99	PK	32.7	-25.7	0	34.99	-	-	-	-	68.2	-33.21	0-360	200	V
3	10.399	30.09	PK	37.6	-17.9	0	49.79	-	-	-	-	68.2	-18.41	0-360	200	H
5	* 15.606	20.24	PK	40	-16.3	0	43.94	-	-	74	-30.06	-	-	0-360	200	H
4	10.401	26.99	PK	37.6	-17.9	0	46.69	-	-	-	-	68.2	-21.51	0-360	200	V
6	* 15.606	20.23	PK	40	-16.3	0	43.93	-	-	74	-30.07	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.467	38.29	PK-U	32.7	-25.8	0	45.19	-	-	-	-	68.2	-23.01	255	230	H
3.467	37.81	PK-U	32.7	-25.8	0	44.71	-	-	-	-	68.2	-23.49	197	290	V
10.401	41.76	PK-U	37.6	-17.9	0	61.46	-	-	-	-	68.2	-6.74	207	148	H
10.4	40.02	PK-U	37.6	-17.9	0	59.72	-	-	-	-	68.2	-8.48	17	140	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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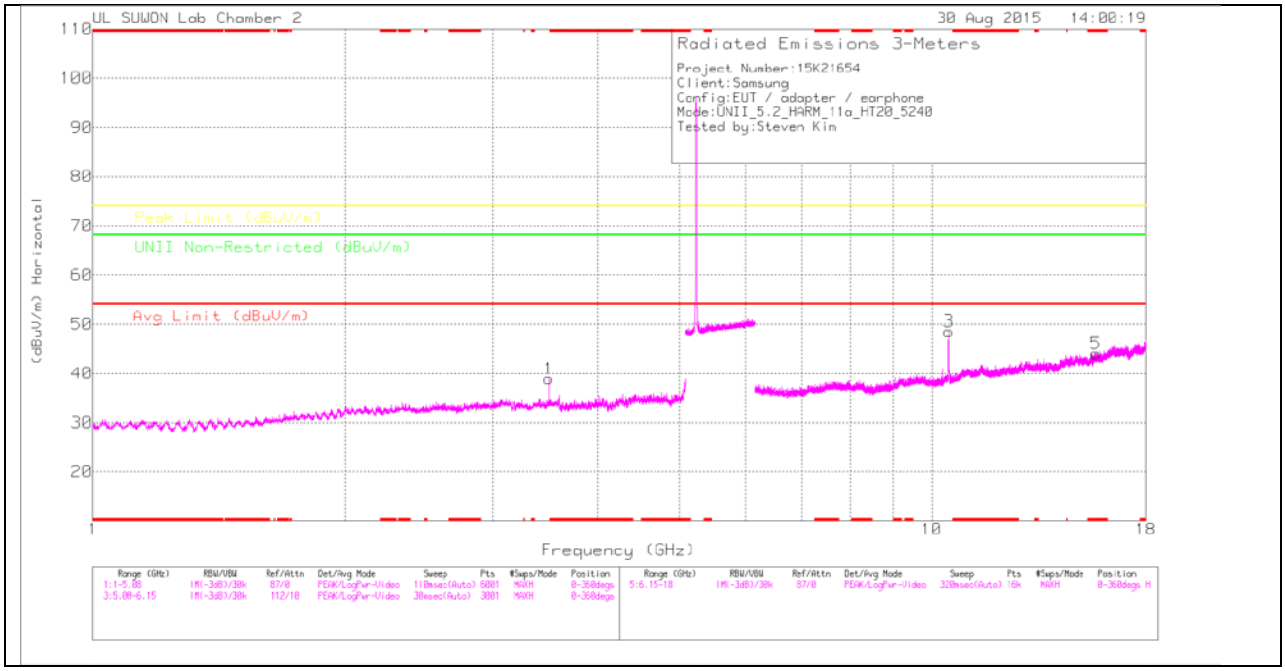
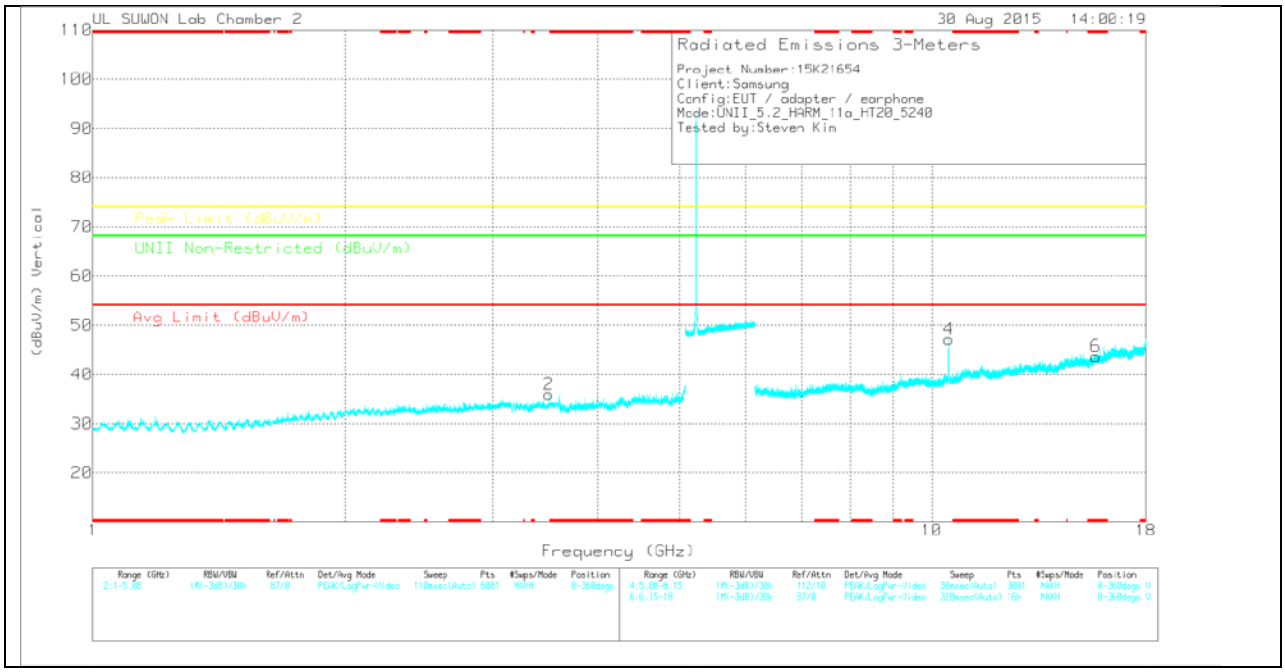
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.494	31.73	PK	32.7	-25.5	0	38.93	-	-	-	-	68.2	-29.27	0-360	200	H
2	3.494	28.76	PK	32.7	-25.5	0	35.96	-	-	-	-	68.2	-32.24	0-360	200	V
3	10.483	28.75	PK	37.7	-17.9	0	48.55	-	-	-	-	68.2	-19.65	0-360	200	H
5	* 15.703	20.42	PK	40.1	-16.5	0	44.02	-	-	74	-29.98	-	-	0-360	200	H
4	10.48	27.35	PK	37.7	-17.9	0	47.15	-	-	-	-	68.2	-21.05	0-360	200	V
6	* 15.706	20.07	PK	40.1	-16.5	0	43.67	-	-	74	-30.33	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.493	39.47	PK-U	32.7	-25.5	0	46.67	-	-	-	-	68.2	-21.53	330	205	H
3.493	39.23	PK-U	32.7	-25.5	0	46.43	-	-	-	-	68.2	-21.77	185	181	V
10.48	42.39	PK-U	37.7	-17.9	0	62.19	-	-	-	-	68.2	-6.01	238	327	H
10.482	39.51	PK-U	37.7	-17.9	0	59.31	-	-	-	-	68.2	-8.89	19	355	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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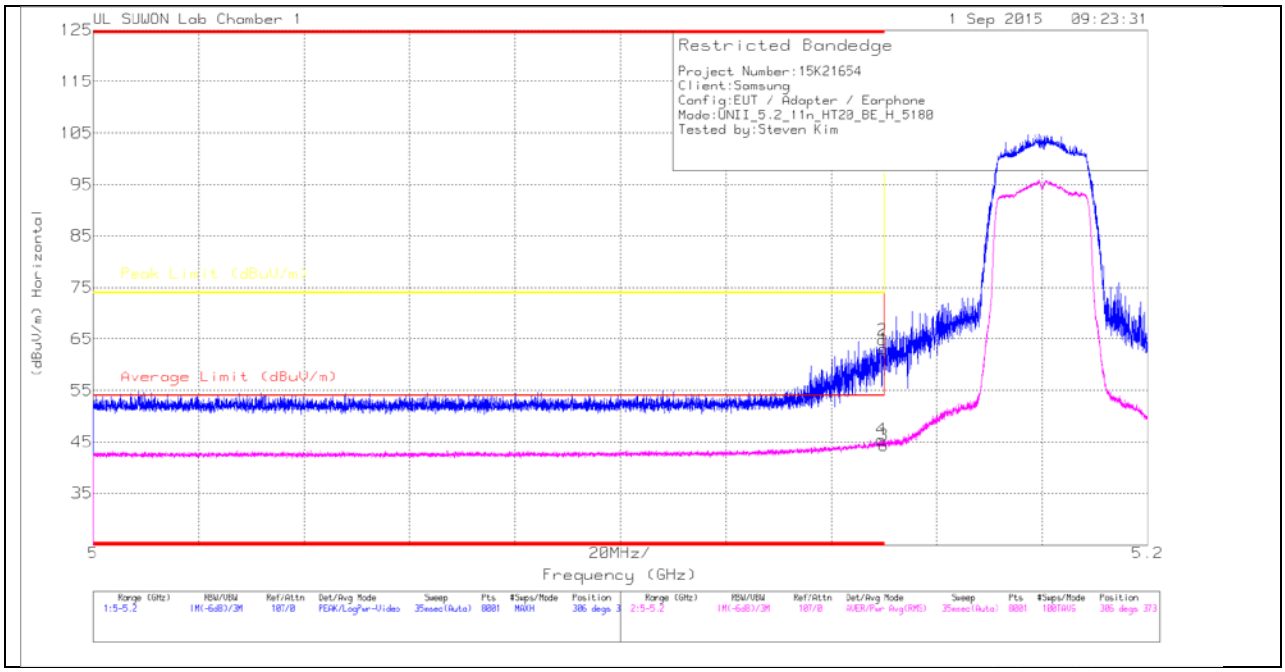
11.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	48.25	Pk	34.2	-19.4	0	63.05	-	-	74	-10.95	306	373	H
2	* 5.15	50.01	Pk	34.2	-19.4	0	64.81	-	-	74	-9.19	306	373	H
3	* 5.15	29.2	RMS	34.2	-19.4	.32	44.32	54	-9.68	-	-	306	373	H
4	* 5.149	30.35	RMS	34.2	-19.4	.32	45.47	54	-8.53	-	-	306	373	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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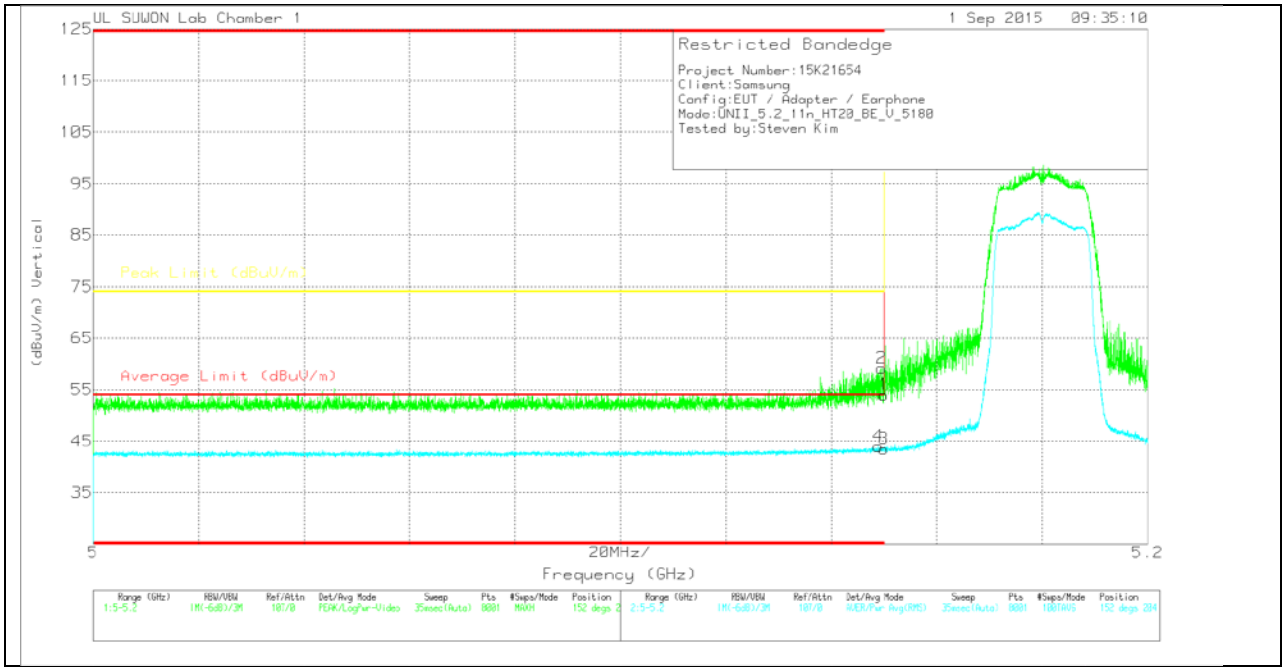
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	39.22	Pk	34.2	-19.4	0	54.02	-	-	74	-19.98	152	204	V
2	* 5.15	44.36	Pk	34.2	-19.4	0	59.16	-	-	74	-14.84	152	204	V
3	* 5.15	28.39	RMS	34.2	-19.4	.32	43.51	54	-10.49	-	-	152	204	V
4	* 5.149	28.89	RMS	34.2	-19.4	.32	44.01	54	-9.99	-	-	152	204	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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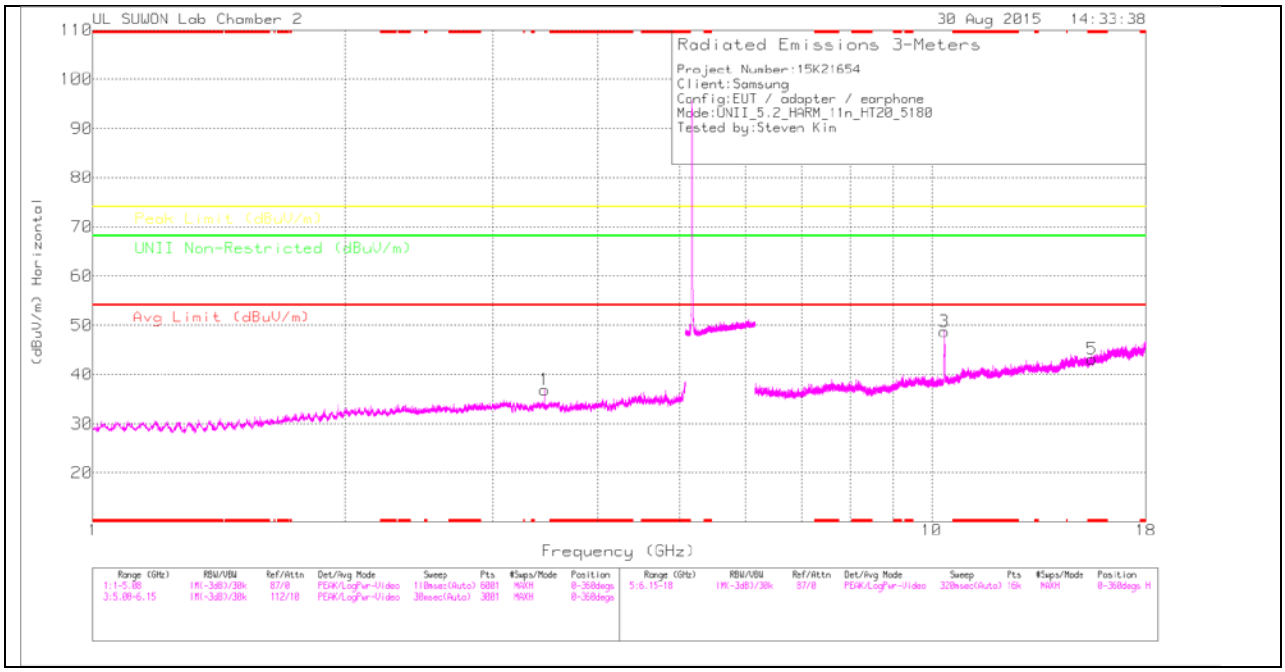
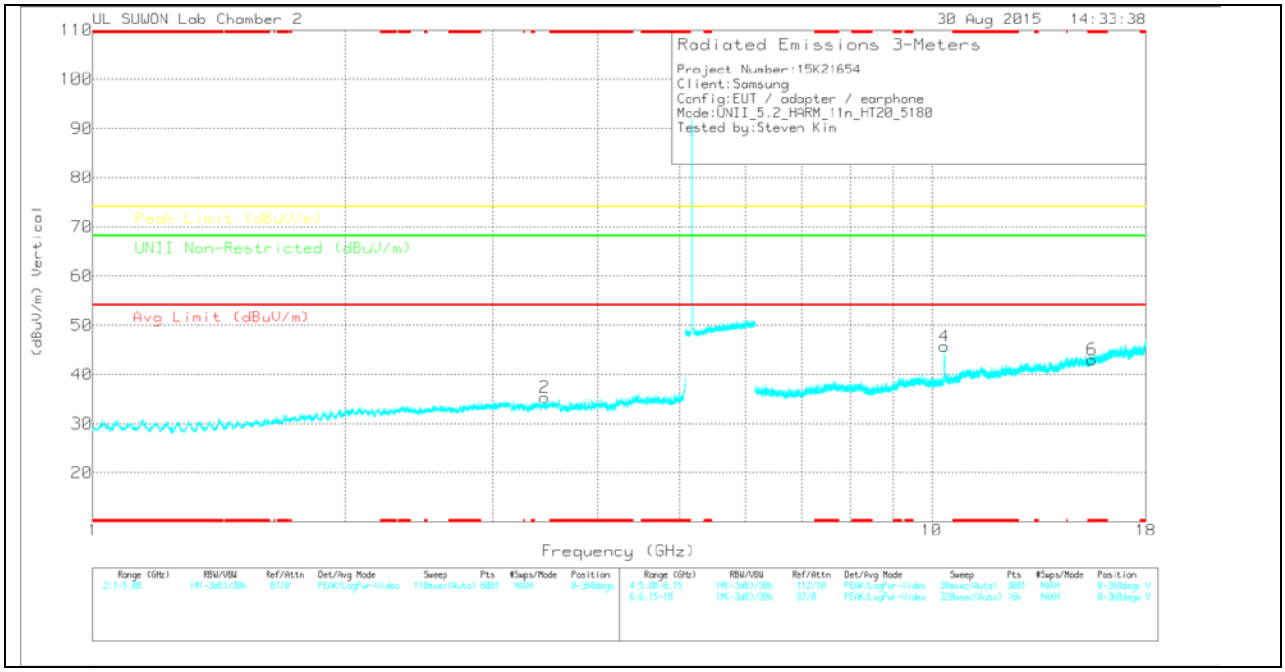
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.453	30.06	PK	32.7	-25.9	0	36.86	-	-	-	-	68.2	-31.34	0-360	200	H
2	3.453	28.51	PK	32.7	-25.9	0	35.31	-	-	-	-	68.2	-32.89	0-360	200	V
3	10.36	29.34	PK	37.6	-18.2	0	48.74	-	-	-	-	68.2	-19.46	0-360	200	H
5	* 15.54	19.33	PK	39.9	-16.1	0	43.13	-	-	74	-30.87	-	-	0-360	100	H
4	10.36	26.29	PK	37.6	-18.2	0	45.69	-	-	-	-	68.2	-22.51	0-360	200	V
6	* 15.541	19.18	PK	39.9	-16.1	0	42.98	-	-	74	-31.02	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.453	28.17	PK-U	32.7	-25.9	0	34.97	-	-	-	-	68.2	-33.23	256	275	H
10.362	45	PK-U	37.6	-18.1	0	64.5	-	-	-	-	68.2	-3.7	246	205	H
10.362	44.33	PK-U	37.6	-18.1	0	63.83	-	-	-	-	68.2	-4.37	19	347	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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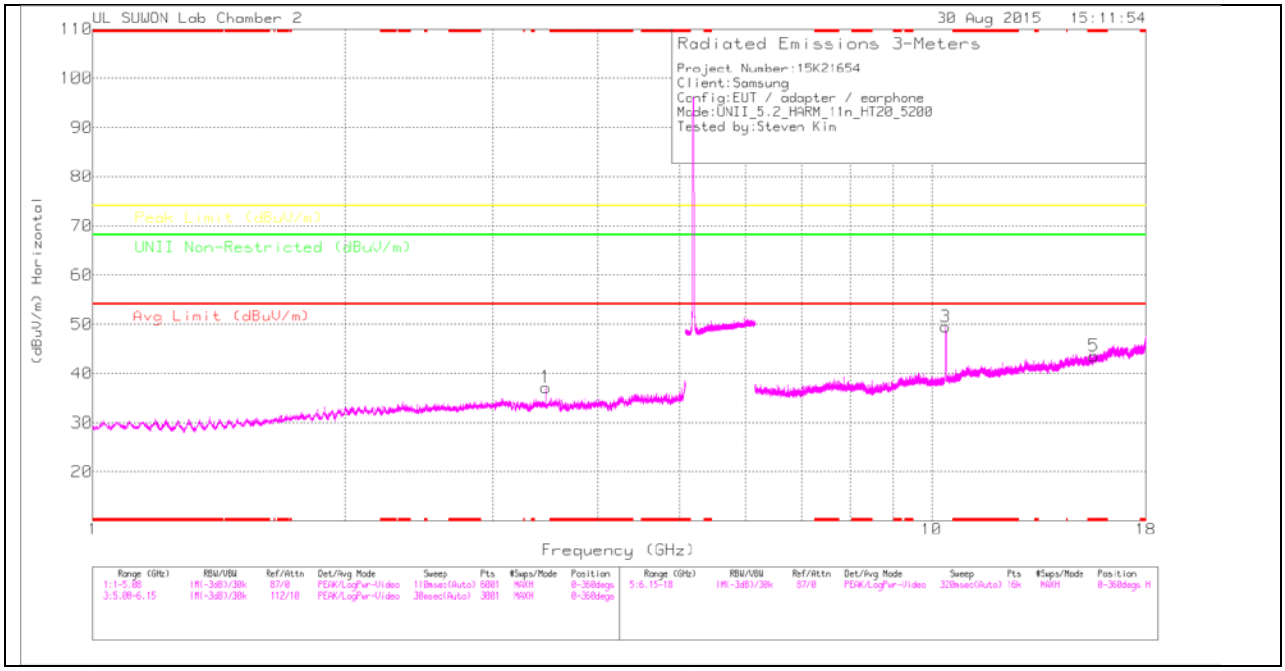
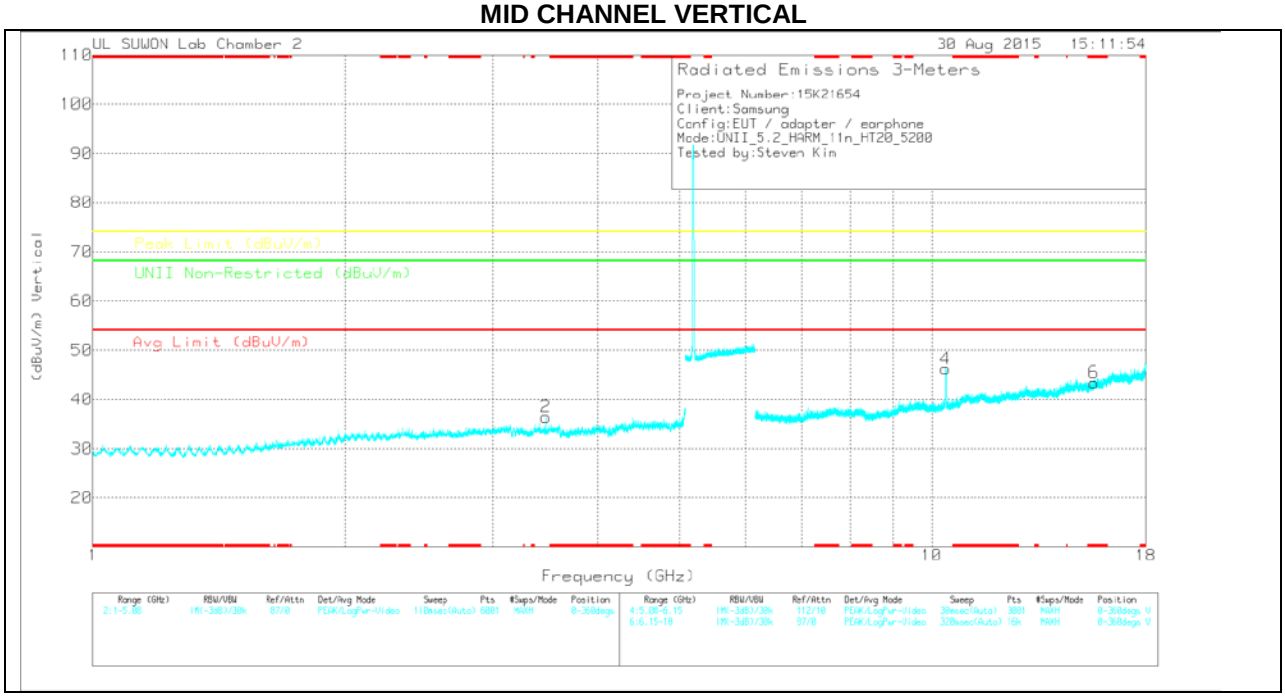
MID CHANNEL HORIZONTAL



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.

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.467	30.18	PK	32.7	-25.7	0	37.18	-	-	-	-	68.2	-31.02	0-360	200	H
2	3.466	29.53	PK	32.7	-25.8	0	36.43	-	-	-	-	68.2	-31.77	0-360	200	V
3	10.398	29.79	PK	37.6	-17.9	0	49.49	-	-	-	-	68.2	-18.71	0-360	200	H
5	* 15.606	19.85	PK	40	-16.3	0	43.55	-	-	74	-30.45	-	-	0-360	200	H
4	10.398	26.53	PK	37.6	-17.9	0	46.23	-	-	-	-	68.2	-21.97	0-360	200	V
6	* 15.606	19.72	PK	40	-16.3	0	43.42	-	-	74	-30.58	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.466	38.9	PK-U	32.7	-25.8	0	45.8	-	-	-	-	68.2	-22.4	327	287	H
3.467	38.28	PK-U	32.7	-25.8	0	45.18	-	-	-	-	68.2	-23.02	185	129	V
10.402	41.15	PK-U	37.6	-17.9	0	60.85	-	-	-	-	68.2	-7.35	17	109	V
10.402	44.58	PK-U	37.6	-17.9	0	64.28	-	-	-	-	68.2	-3.92	230	138	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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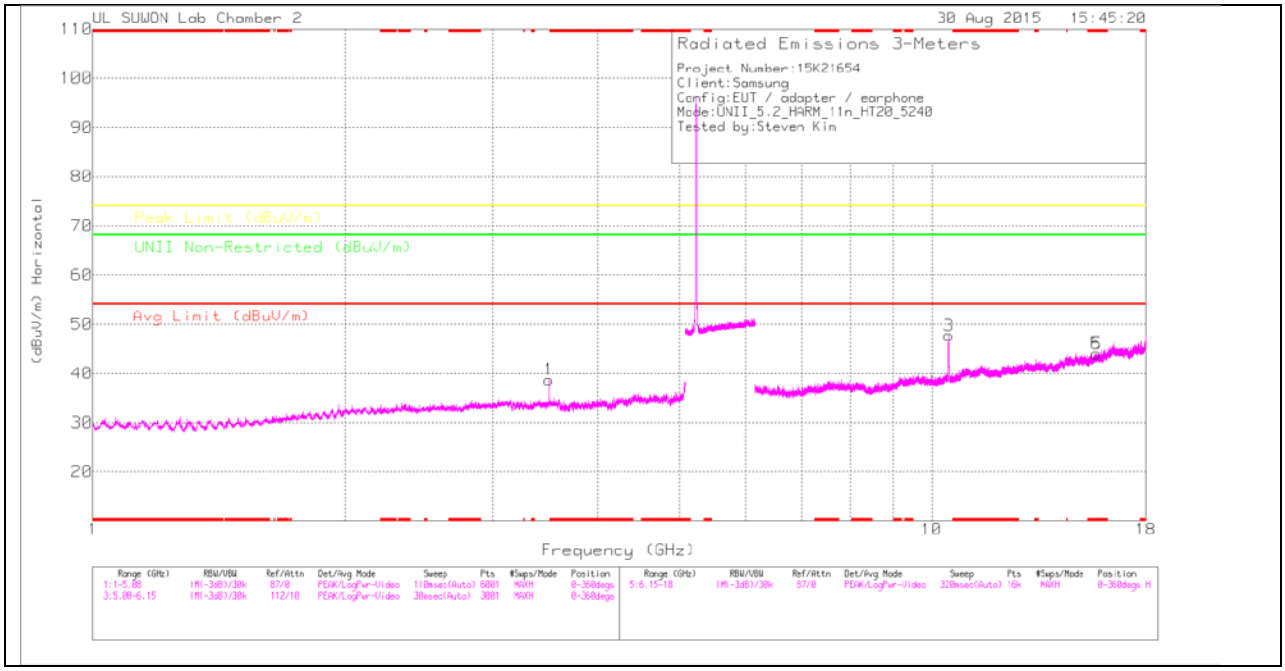
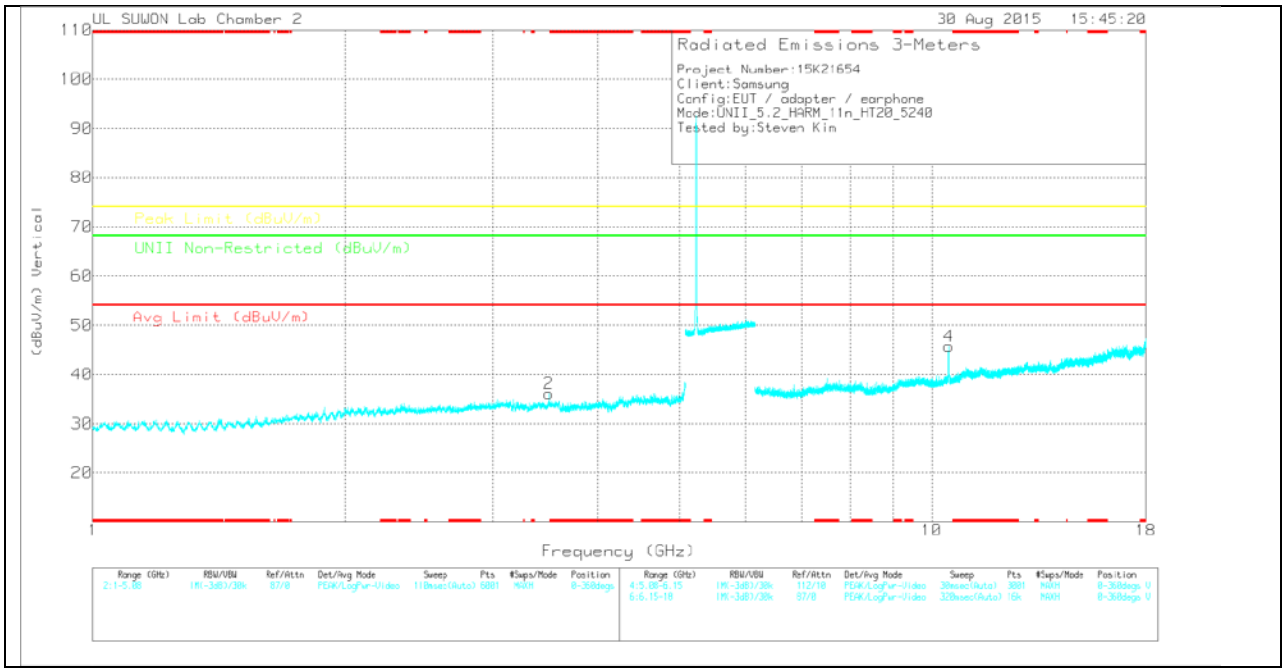
HIGH CHANNEL HORIZONTAL



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.

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.494	31.52	PK	32.7	-25.5	0	38.72	-	-	-	-	68.2	-29.48	0-360	200	H
2	3.494	28.9	PK	32.7	-25.5	0	36.1	-	-	-	-	68.2	-32.1	0-360	200	V
3	10.478	27.95	PK	37.7	-17.9	0	47.75	-	-	-	-	68.2	-20.45	0-360	200	H
5	* 15.726	20.44	PK	40.2	-16.6	0	44.04	-	-	74	-29.96	-	-	0-360	200	H
6	* 15.726	20.44	PK	40.2	-16.6	0	44.04	-	-	74	-29.96	-	-	0-360	200	H
4	10.48	25.88	PK	37.7	-17.9	0	45.68	-	-	-	-	68.2	-22.52	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.494	38.62	PK-U	32.7	-25.5	0	45.82	-	-	-	-	68.2	-22.38	335	166	H
3.493	38.16	PK-U	32.7	-25.5	0	45.36	-	-	-	-	68.2	-22.84	201	184	V
10.483	40.87	PK-U	37.7	-17.9	0	60.67	-	-	-	-	68.2	-7.53	19	158	V
10.482	43.33	PK-U	37.7	-17.9	0	63.13	-	-	-	-	68.2	-5.07	206	146	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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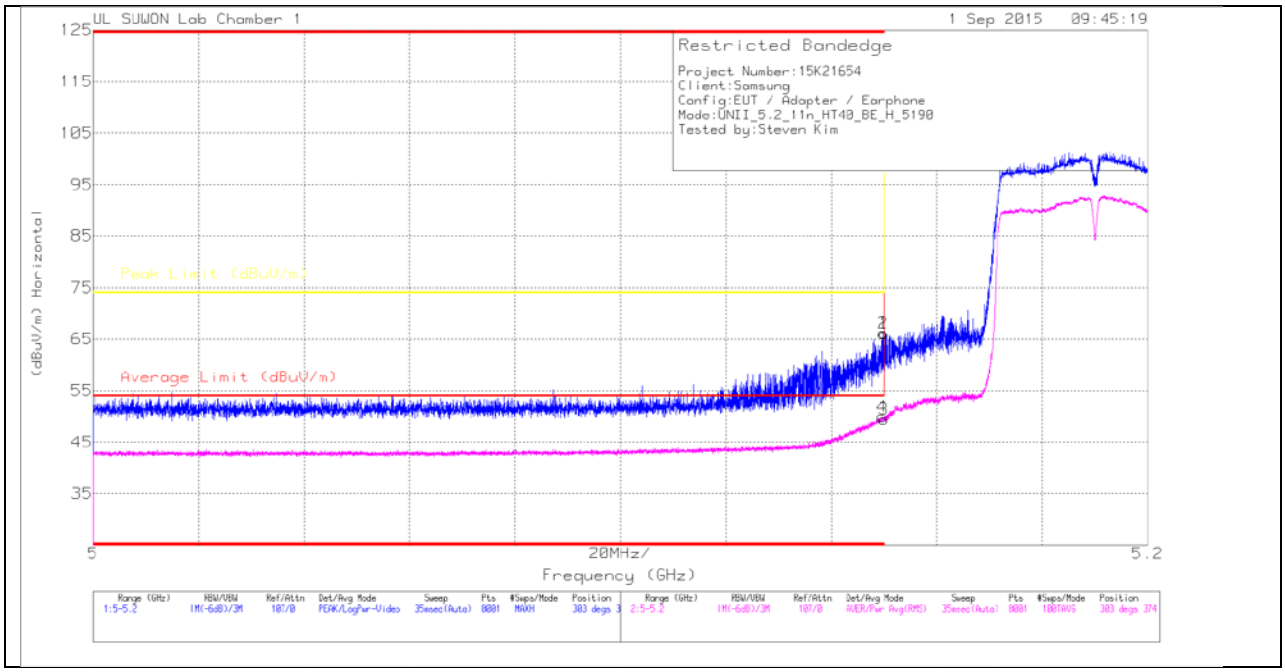
11.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	51.3	Pk	34.2	-19.4	0	66.1	-	-	74	-7.9	303	374	H
2	* 5.15	51.35	Pk	34.2	-19.4	0	66.15	-	-	74	-7.85	303	374	H
3	* 5.15	34.04	RMS	34.2	-19.4	.62	49.46	54	-4.54	-	-	303	374	H
4	* 5.15	34.48	RMS	34.2	-19.4	.62	49.9	54	-4.1	-	-	303	374	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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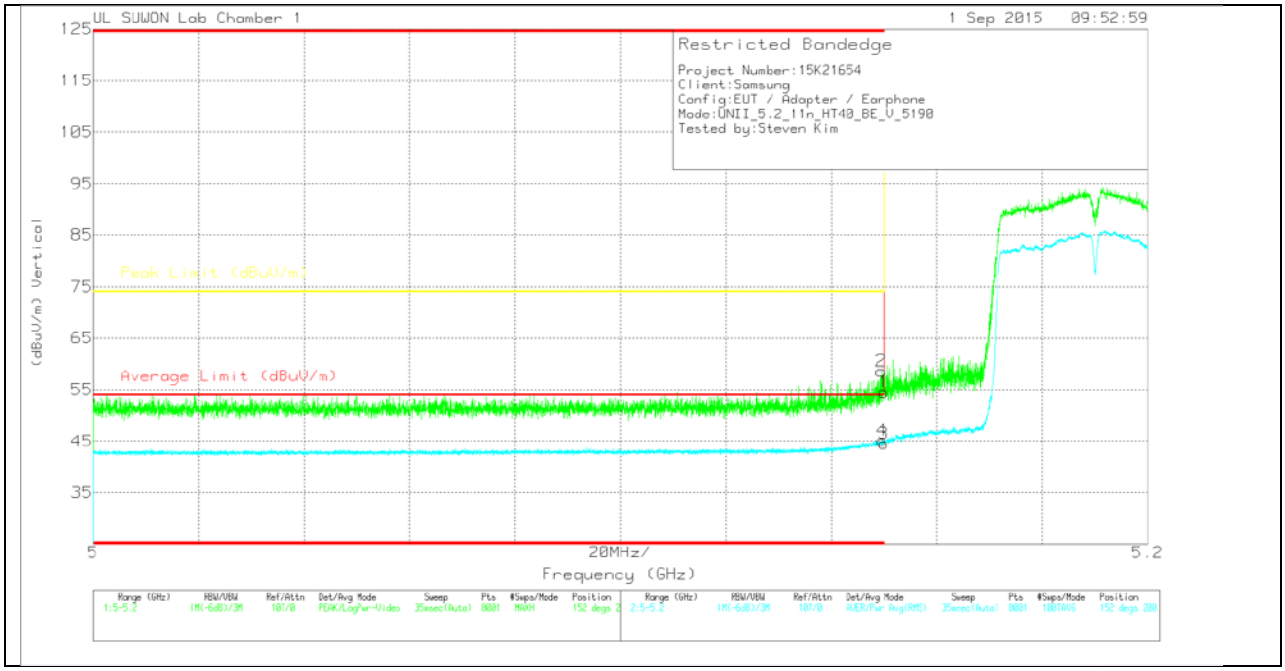
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168717)_150619	Path_2_10dB	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	39.72	Pk	34.2	-19.4	0	54.52	-	-	74	-19.48	152	200	V
2	* 5.149	43.84	Pk	34.2	-19.4	0	58.64	-	-	74	-15.36	152	200	V
3	* 5.15	29.12	RMS	34.2	-19.4	.62	44.54	54	-9.46	-	-	152	200	V
4	* 5.15	29.75	RMS	34.2	-19.4	.62	45.17	54	-8.83	-	-	152	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

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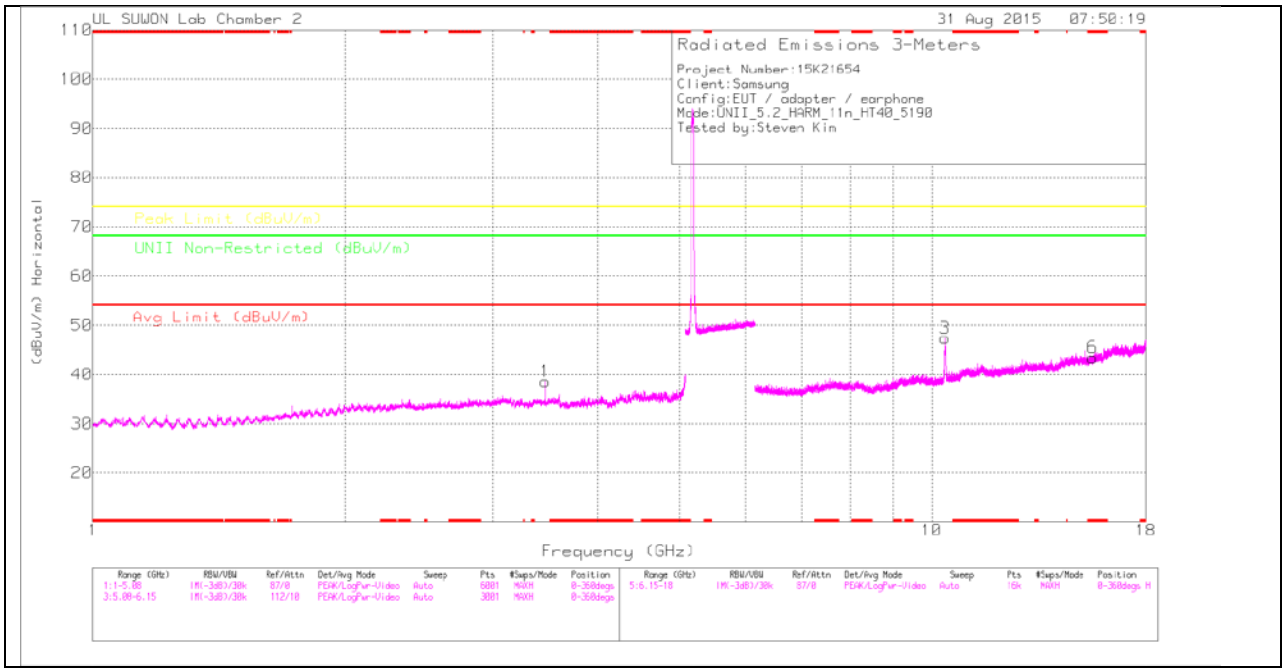
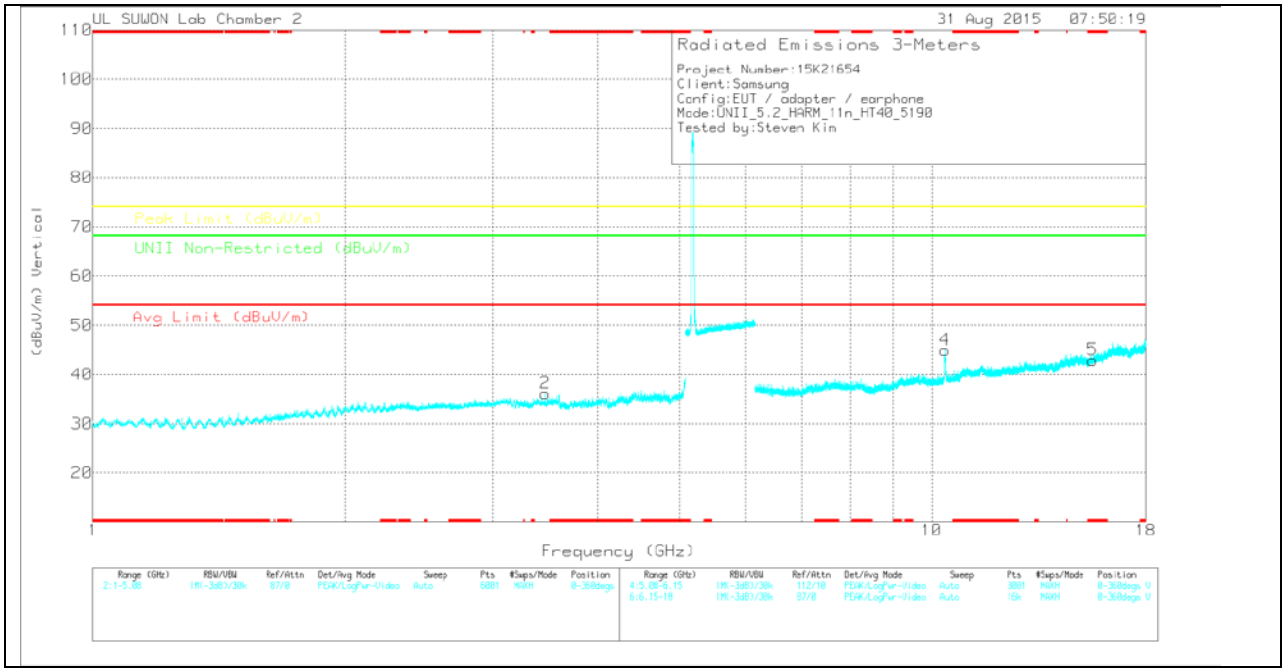
HARMONICS AND SPURIOUS EMISSIONS

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.

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.46	31.67	PK	32.7	-25.8	0	38.57	-	-	-	-	68.2	-29.63	0-360	200	H
2	3.46	29.27	PK	32.7	-25.8	0	36.17	-	-	-	-	68.2	-32.03	0-360	200	V
3	10.377	27.79	PK	37.6	-18	0	47.39	-	-	-	-	68.2	-20.81	0-360	200	H
6	* 15.57	19.64	PK	40	-16.2	0	43.44	-	-	74	-30.56	-	-	0-360	200	H
4	10.382	25.37	PK	37.6	-18	0	44.97	-	-	-	-	68.2	-23.23	0-360	200	V
5	* 15.571	19.14	PK	40	-16.2	0	42.94	-	-	74	-31.06	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.46	38.54	PK-U	32.7	-25.8	0	45.44	-	-	-	-	68.2	-22.76	254	376	H
3.46	39.18	PK-U	32.7	-25.8	0	46.08	-	-	-	-	68.2	-22.12	162	307	V
10.384	40.48	PK-U	37.6	-18	0	60.08	-	-	-	-	68.2	-8.12	208	321	H
10.388	38.15	PK-U	37.6	-18	0	57.75	-	-	-	-	68.2	-10.45	16	154	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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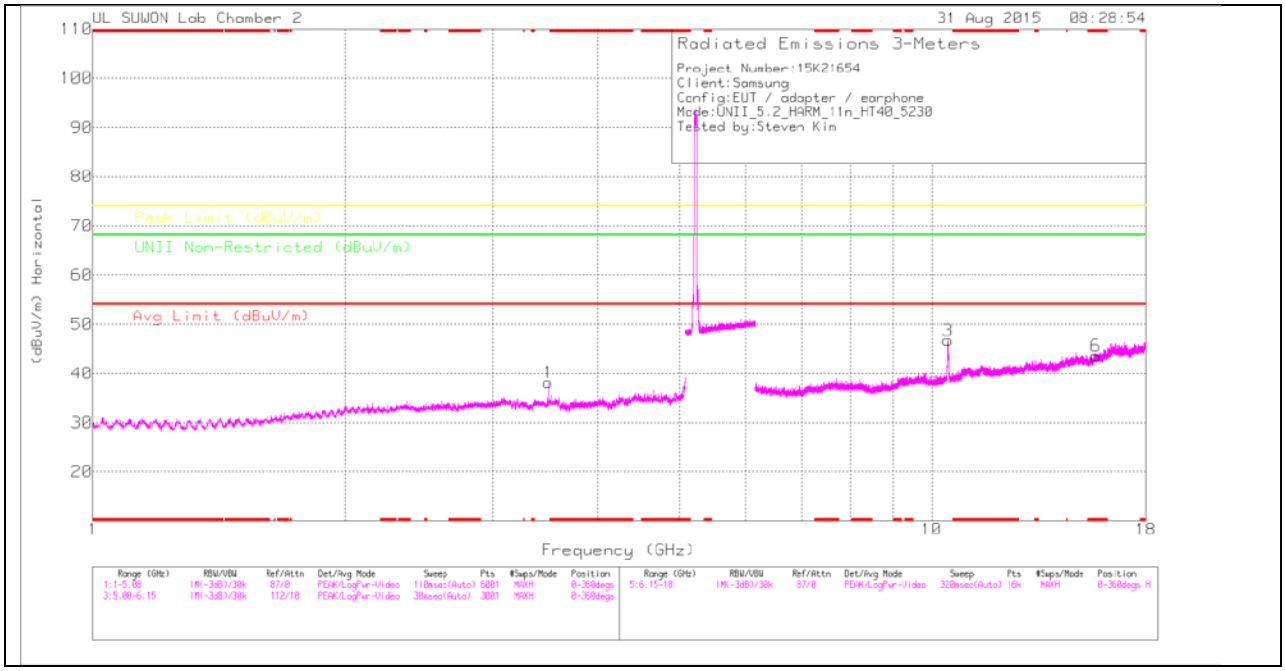
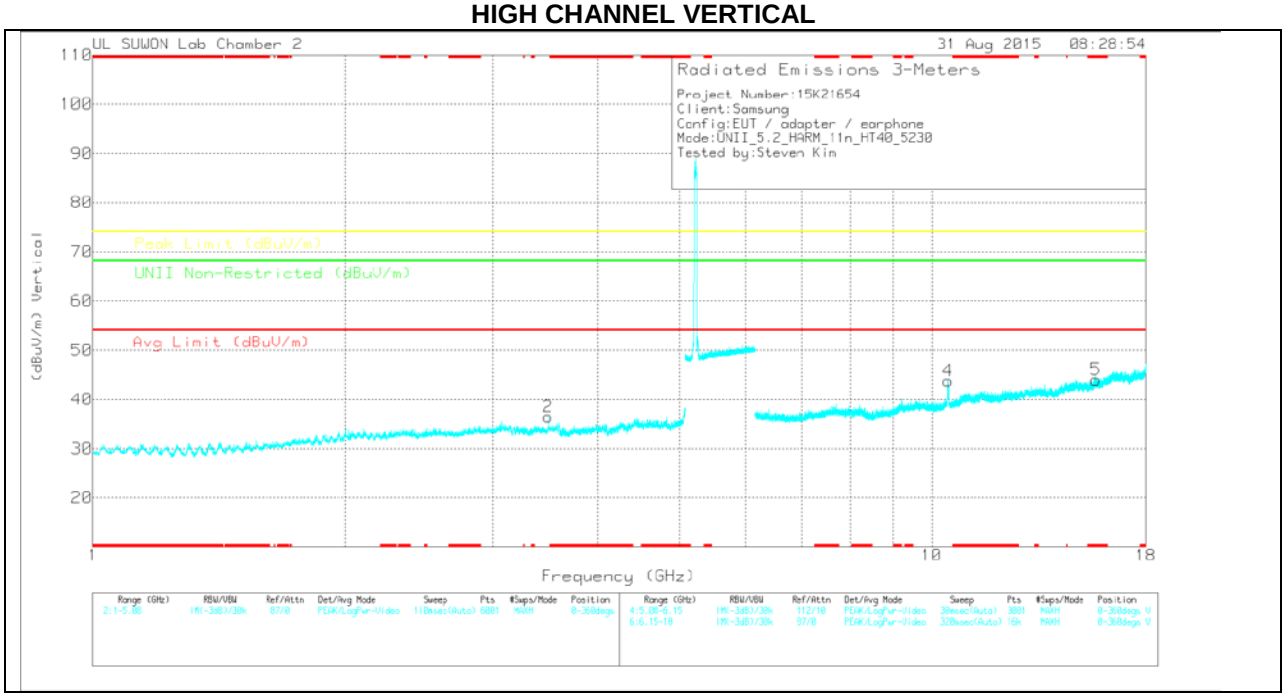
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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	3.487	31.05	PK	32.7	-25.6	0	38.15	-	-	-	-	68.2	-30.05	0-360	200	H
2	3.487	29.4	PK	32.7	-25.6	0	36.5	-	-	-	-	68.2	-31.7	0-360	200	V
3	10.458	26.79	PK	37.7	-17.8	0	46.69	-	-	-	-	68.2	-21.51	0-360	200	H
6	* 15.689	19.94	PK	40.1	-16.5	0	43.54	-	-	74	-30.46	-	-	0-360	100	H
4	10.461	23.83	PK	37.7	-17.8	0	43.73	-	-	-	-	68.2	-24.47	0-360	200	V
5	* 15.689	20.38	PK	40.1	-16.5	0	43.98	-	-	74	-30.02	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168724)_150619	Path_4	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
3.487	39.48	PK-U	32.7	-25.6	0	46.58	-	-	-	-	68.2	-21.62	326	100	H
3.487	38.09	PK-U	32.7	-25.6	0	45.19	-	-	-	-	68.2	-23.01	191	179	V
10.468	39.83	PK-U	37.7	-17.8	0	59.73	-	-	-	-	68.2	-8.47	207	157	H
10.468	37.15	PK-U	37.7	-17.8	0	57.05	-	-	-	-	68.2	-11.15	16	123	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

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