9.4 POWER SPECTRAL DENSITY

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies. The maximum permissible peak power spectral density is 11 dBm/ MHz for UNII 1,2A, 2C and 30 dBm/500 kHz for UNII 3.

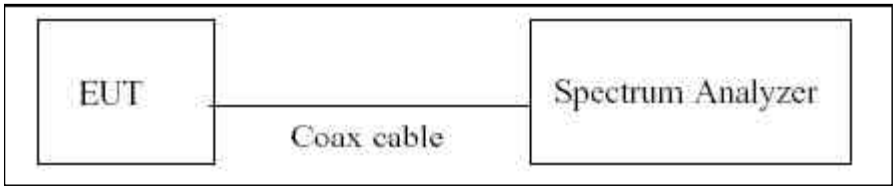
▣ Limit

Power Spectral Density

Band	Mode	Limit
UNII 1	802.11 a,n,ac	11 dBm/MHz
UNII 2A	802.11a,n,ac	11 dBm/MHz
UNII 2C	802.11a,n,ac	11 dBm/MHz
UNII 3	802.11a,n,ac	30 dBm/500 kHz

Note : Note : According to KDB644545 D03 v01, emission for straddle channels in each band shall comply with the PSD limits applicable to that band under the appropriate rule section.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

We tested according to Method in KDB 789033 D02 v01r03.

The spectrum analyzer is set to :

1. Set span to encompass the entire emission bandwidth(EBW) of the signal.
2. RBW = 1 MHz(510 kHz for UNII 3)
3. VBW ≥ 3 MHz
4. Number of points in sweep ≥ 2*span/RBW.
5. Sweep time = auto.
6. Detector = RMS(i.e., power averaging), if available. Otherwise, use sample detector mode.
7. Do not use sweep triggering. Allow the sweep to “free run”.
8. Trace average at least 100 traces in power averaging(RMS) mode
9. Use the peak search function on the spectrum analyzer to find the peak of the spectrum.
10. If Method SA-2 was used, add 10 log(1/x), where x is the duty cycle, to the peak of the spectrum.

▣ Sample Calculation

PSD = Reading Value + ATT loss + Cable loss(1 ea) + Duty Cycle Factor

Output Power = 5 dBm + 10 dB + 0.8 dB + 0.21 dB = 16.01 dBm

Note :

1. Spectrum reading values are not plot data. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the 5.2 GHz, 5.3 GHz and 5.6 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is below table.

Band	Loss(dB)
UNII 1, 2A , 2C, 3	11.1

(Actual value of loss for the attenuator and cable combination)

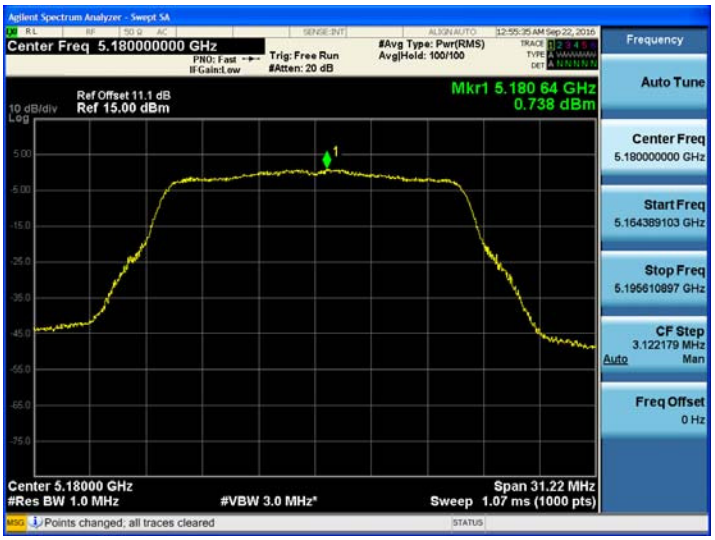
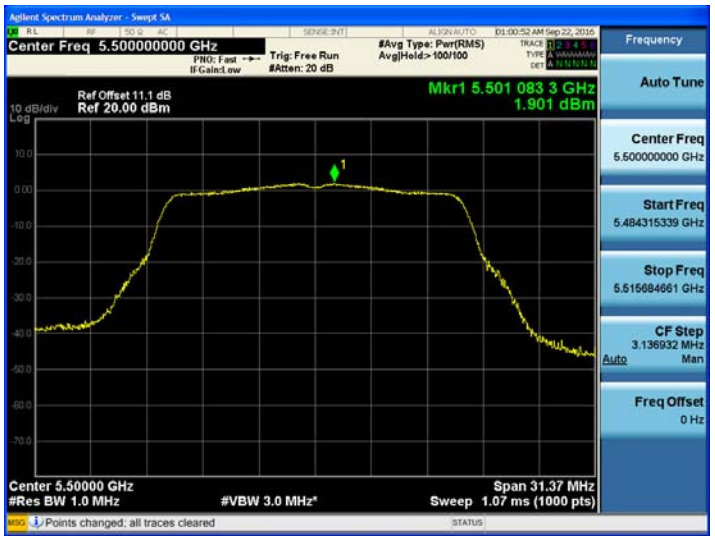
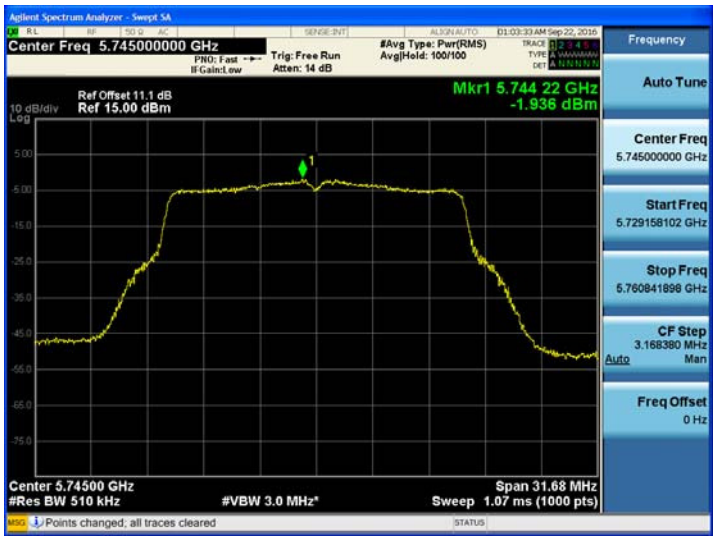
▣ 802.11a

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11a	0.738	0.211	0.949	11	Pass
5200	40		0.677	0.073	0.750		Pass
5240	48		0.805	0.058	0.863		Pass
5260	52		1.631	0.122	1.753	11	Pass
5300	60		1.827	0.122	1.949		Pass
5320	64		1.126	0.073	1.199		Pass
5500	100		1.901	0.054	1.955	11	Pass
5580	116		1.452	0.122	1.574		
5720	144		1.085	0.161	1.246		Pass
5745	149		-1.936	0.161	-1.775	30	Pass
5785	157		-2.224	0.054	-2.170		Pass
5825	165		-2.126	0.161	-1.965		Pass

▣ TEST Plot for 802.11a

802.11a UNII 1 BAND PSD CH 36	802.11a UNII 2A BAND PSD CH 60
	
802.11a UNII 2C BAND PSD CH 100	**802.11a UNII 3 BAND PSD CH 149**
	

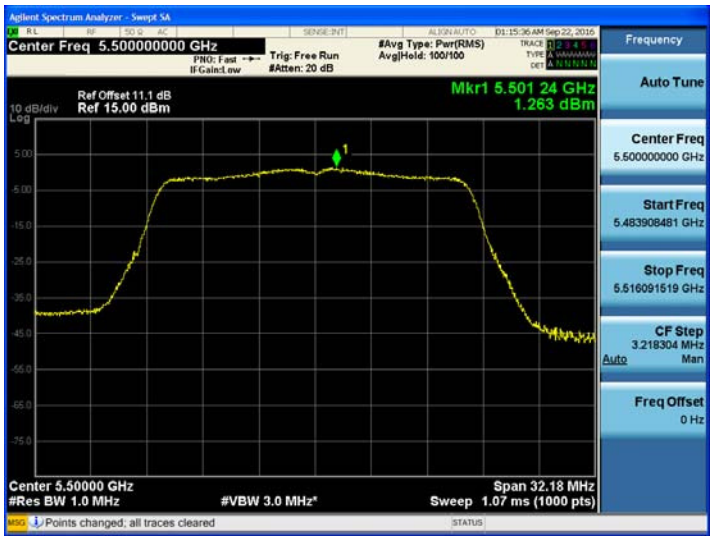
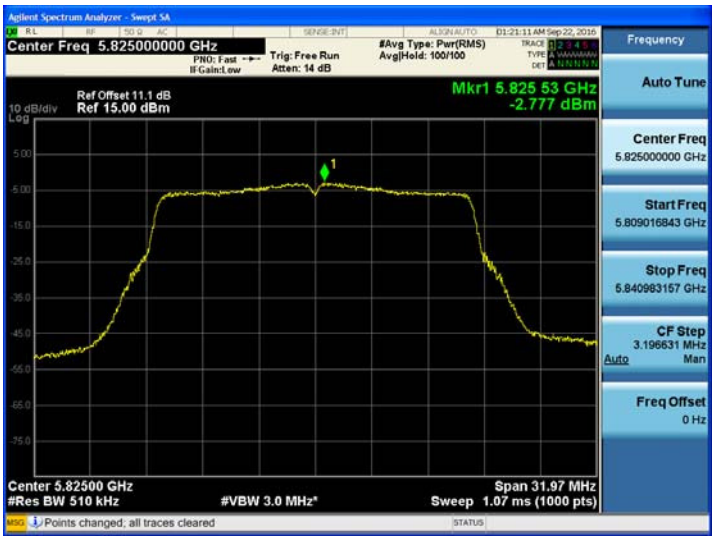
▣802.11n_HT20

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11n _HT20	0.478	0.238	0.716	11	Pass
5200	40		0.030	0.238	0.268		Pass
5240	48		0.223	0.130	0.353		Pass
5260	52		0.963	0.238	1.201	11	Pass
5300	60		1.186	0.238	1.424		Pass
5320	64		0.578	0.238	0.816		Pass
5500	100		1.263	0.238	1.501	11	Pass
5580	116		0.874	0.050	0.924		
5720	144		0.519	0.238	0.757		Pass
5745	149		-2.995	0.238	-2.757	30	Pass
5785	157		-3.095	0.238	-2.857		Pass
5825	165		-2.777	0.152	-2.625		Pass

▣ TEST Plot for 802.11n_HT20

802.11n_HT20 UNII 1 BAND PSD CH 36	802.11n_HT20 UNII 2A BAND PSD CH 60
	
802.11n_HT20 UNII 2C BAND PSD CH 100	**802.11n_HT20 UNII 3 BAND PSD CH 165**
	

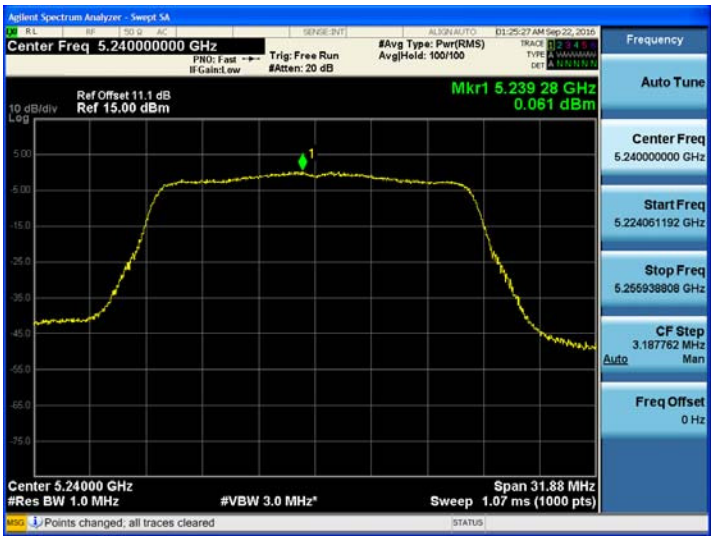
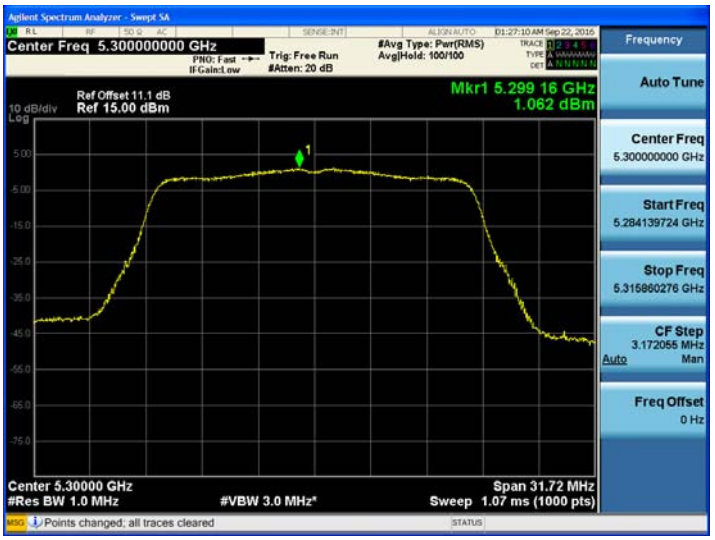
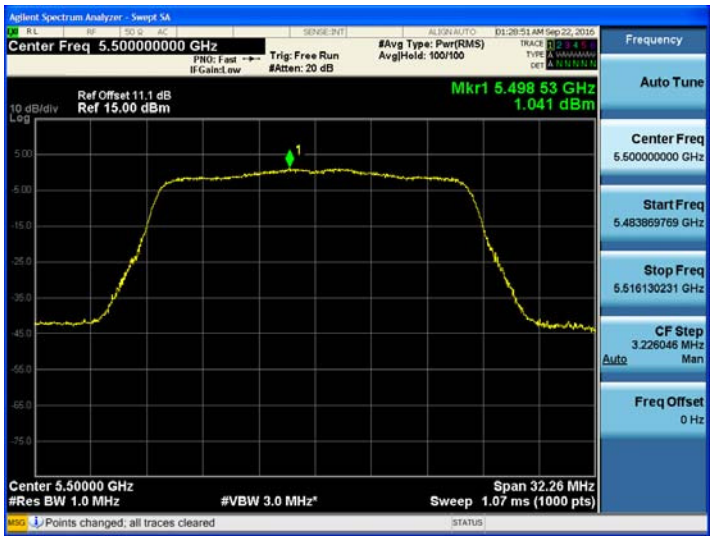
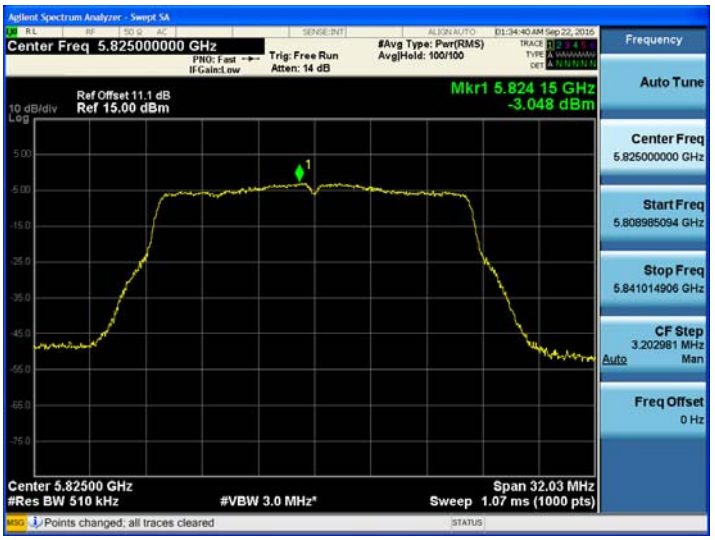
▣802.11ac_VHT20

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11ac _VHT20	-0.029	0.219	0.190	11	Pass
5200	40		0.011	0.115	0.126		Pass
5240	48		0.061	0.219	0.280		Pass
5260	52		0.826	0.219	1.045	11	Pass
5300	60		1.062	0.098	1.160		Pass
5320	64		0.593	0.219	0.812		Pass
5500	100		1.041	0.137	1.178	11	Pass
5580	116		0.728	0.098	0.826		
5720	144		0.499	0.219	0.718		Pass
5745	149		-3.142	0.137	-3.005	30	Pass
5785	157		-3.230	0.219	-3.011		Pass
5825	165		-3.048	0.219	-2.829		Pass

▣ TEST Plot for 802.11ac_VHT20

802.11ac_VHT20 UNII 1 BAND PSD CH 48	802.11ac_VHT20 UNII 2A BAND PSD CH 60
	
802.11ac_VHT20 UNII 2C BAND PSD CH 100	**802.11ac_VHT20 UNII 3 BAND PSD CH 165**
	

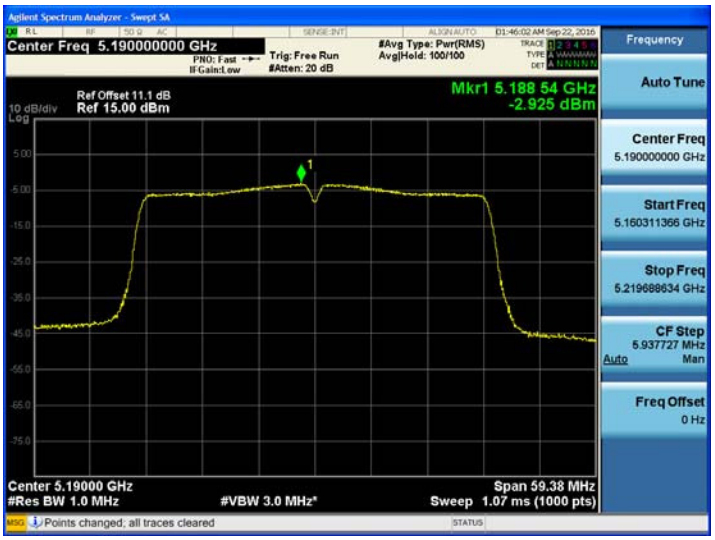
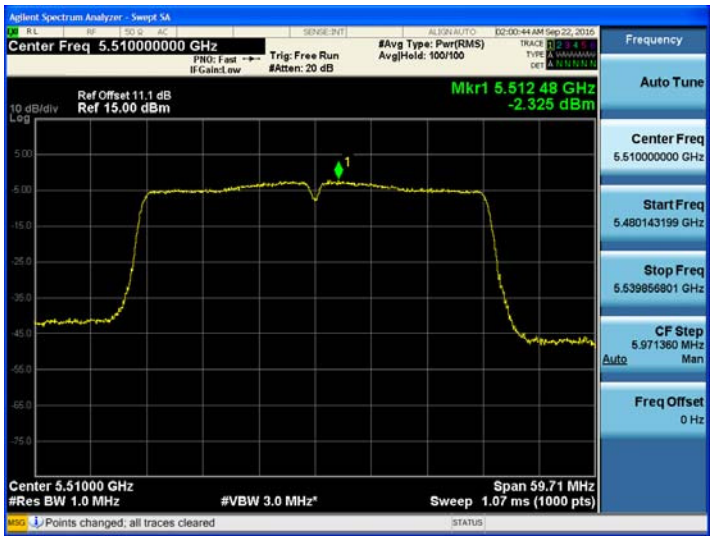
▣ 802.11n_HT40

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11n _HT40	-2.925	0.044	-2.881	11	Pass
5230	46		-3.124	0.044	-3.080		Pass
5270	54		-2.291	0.199	-2.092	11	Pass
5310	62		-2.223	0.044	-2.179		Pass
5510	102		-2.325	0.258	-2.067	11	Pass
5550	110		-2.269	0.105	-2.164		
5710	142		-2.930	0.295	-2.635		Pass
5755	151		-6.688	0.295	-6.393	30	Pass
5795	159		-6.767	0.319	-6.448		Pass

▣ TEST Plot for 802.11n_HT40

802.11n_HT40 UNII 1 BAND PSD CH 38	802.11n_HT40 UNII 2A BAND PSD CH 54
	
802.11n_HT40 UNII 2C BAND PSD CH 102	**802.11n_HT40 UNII 3 BAND PSD CH 151**
	

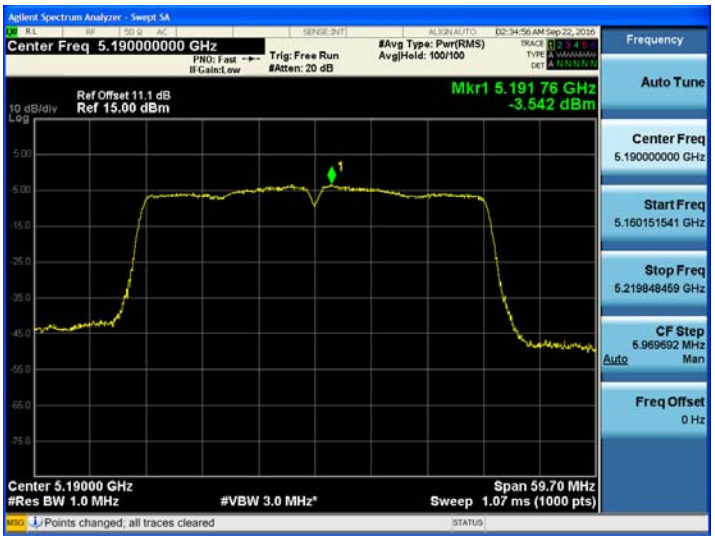
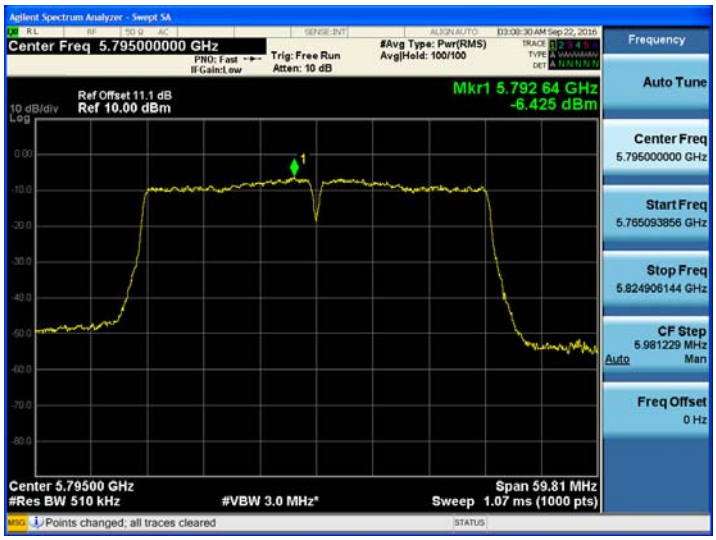
▣ 802.11ac_VHT40

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11ac _VHT40	-3.542	0.393	-3.149	11	Pass
5230	46		-3.562	0.393	-3.169		Pass
5270	54		-2.458	0.075	-2.383	11	Pass
5310	62		-2.289	0.037	-2.252		Pass
5510	102		-2.499	0.393	-2.106	11	Pass
5550	110		-2.321	0.393	-1.928		
5710	142		-3.086	0.335	-2.751		Pass
5755	151		-6.495	0.393	-6.102	30	Pass
5795	159		-6.425	0.393	-6.032		Pass

▣ TEST Plot for 802.11ac_VHT40

802.11ac_VHT40 UNII 1 BAND PSD CH 38	802.11ac_VHT40 UNII 2A BAND PSD CH 62
	
802.11ac_VHT40 UNII 2C BAND PSD CH 110	**802.11ac_VHT40 UNII 3 BAND PSD CH 159**
	

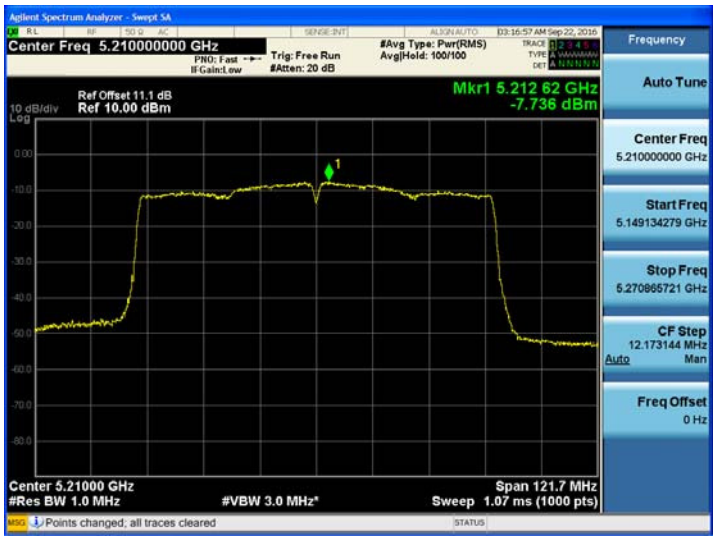
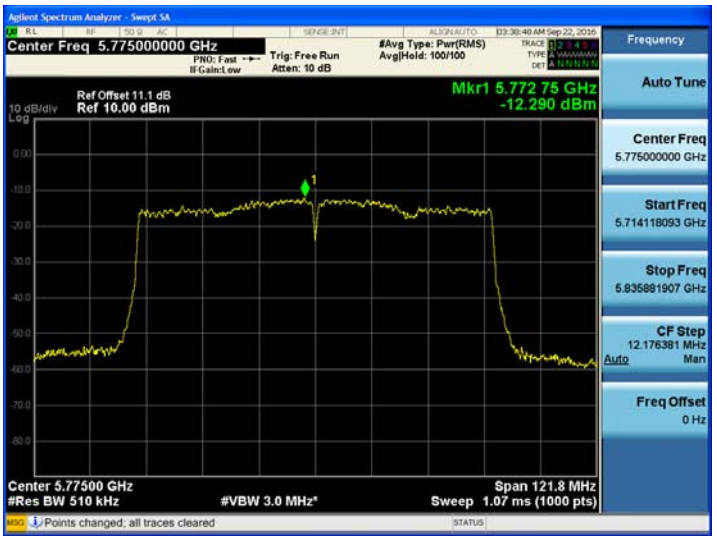
▣ 802.11ac_VHT80

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT80	-7.736	0.376	-7.360	11	Pass
5290	58		-6.271	0.376	-5.895		Pass
5530	106		-6.003	0.285	-5.718		Pass
5690	138		-6.407	0.088	-6.319		
5775	155		-12.290	0.651	-11.639	30	Pass

▣ TEST Plot for 802.11ac_VHT80

802.11ac_VHT80 UNII 1 BAND PSD CH 42	802.11ac_VHT80 UNII 2A BAND PSD CH 58
	
802.11ac_VHT80 UNII 2C BAND PSD CH 106	**802.11ac_VHT80 UNII 3 BAND PSD CH 155**
	

▣Straddle channels TEST RESULTS for 802.11a/n_HT20/ac_VHT20

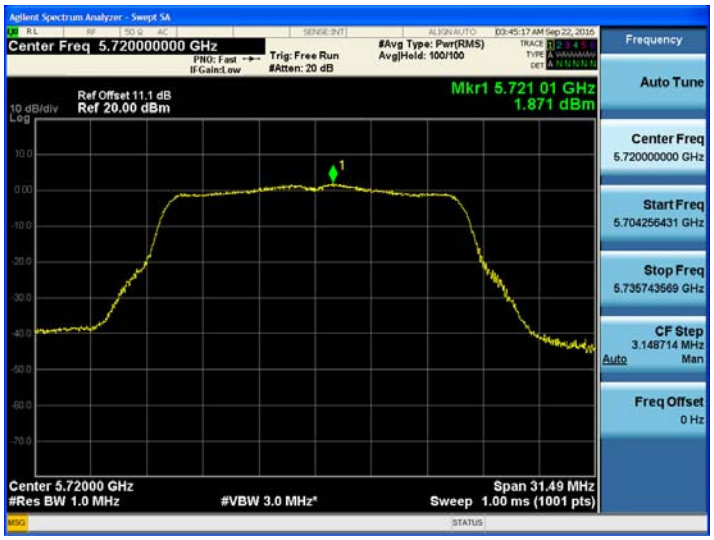
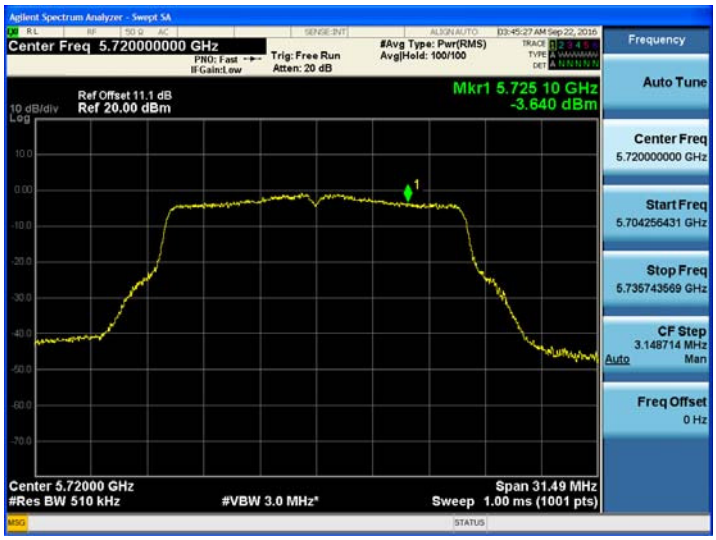
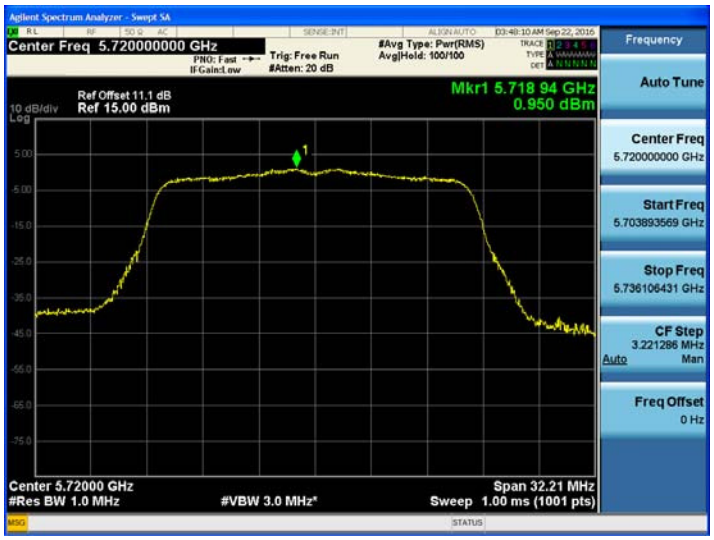
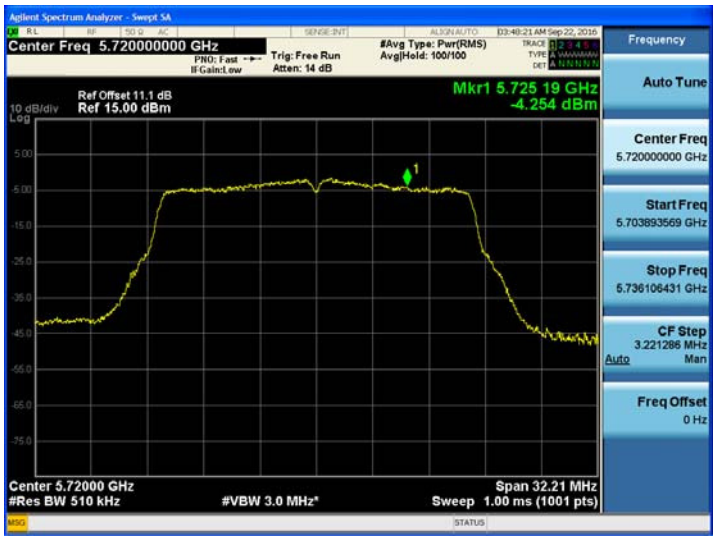
Conducted Power Density Measurements (UNII 2C Band 5720MHz)

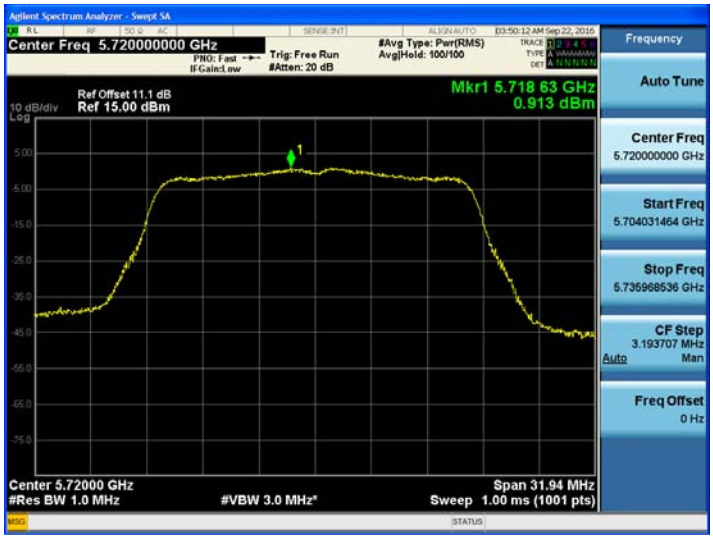
Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5720	144	802.11a	1.871	0.161	2.032	11	Pass
		802.11n	0.950	0.238	1.188	11	Pass
		802.11ac	0.913	0.219	1.132	11	Pass

Conducted Power Density Measurements (UNII 3 Band 5720MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5720	144	802.11a	-3.640	0.161	-3.479	30	Pass
		802.11n	-4.254	0.238	-4.016	30	Pass
		802.11ac	-4.213	0.219	-3.994	30	Pass

▣Straddle channels TEST Plot for 802.11a/n_HT20/ac_VHT20

802.11a UNII 2C Band PSD CH.144	802.11a UNII 3 Band PSD CH.144
	
802.11n_HT20 UNII 2C Band PSD CH.144	**802.11n_HT20 UNII 3 Band PSD CH.144**
	

802.11ac_VHT20 UNII 2C Band PSD CH.144	802.11ac_VHT20 UNII 3 Band PSD CH.144
	

▣Straddle channels TEST RESULTS for 802.11n_HT40/ac_VHT40

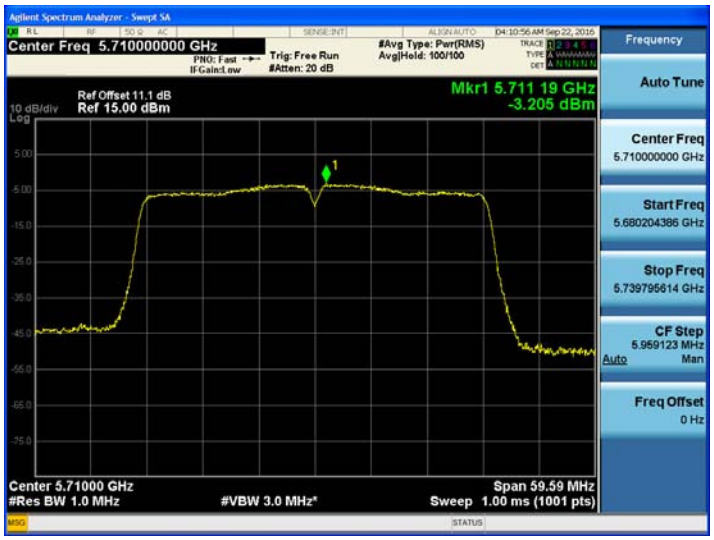
Conducted Power Density Measurements (UNII 2C Band 5710MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5710	142	802.11n	-3.205	0.295	-2.910	11	Pass
		802.11ac	-3.188	0.335	-2.853	11	Pass

Conducted Power Density Measurements (UNII 3 Band 5710MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5710	142	802.11n	-8.561	0.295	-8.266	30	Pass
		802.11ac	-8.374	0.335	-8.039	30	Pass

▣Straddle channels TEST Plot for 802.11n_HT40/ac_VHT40

802.11n_HT40 UNII 2C Band PSD CH.142	802.11n_HT40 UNII 3 Band PSD CH.142
	
802.11ac_VHT40 UNII 2C Band PSD CH.142	**802.11ac_VHT40 UNII 3 Band PSD CH.142**
	

▣Straddle channels TEST RESULTS

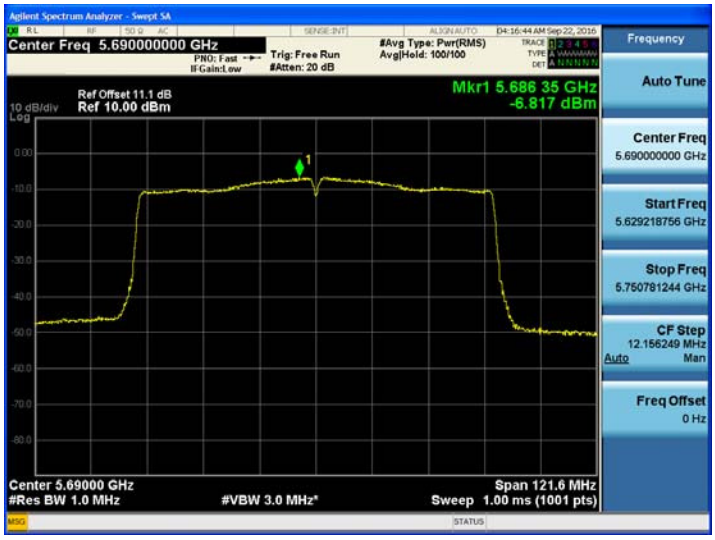
Conducted Power Density Measurements (UNII 2C Band 5690MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5690	138	802.11ac	-6.817	0.088	-6.729	11	Pass

Conducted Power Density Measurements (UNII 3 Band 5690MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5690	138	802.11ac	-12.942	0.088	-12.854	30	Pass

▣Straddle channels TEST Plot for 802.11ac_VHT80

802.11ac_VHT80 UNII 2C Band PSD CH.138	802.11ac_VHT80 UNII 3 Band PSD CH.138
	

9.5 FREQUENCY STABILITY

The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 ℃ and 50 ℃. The temperature was incremented by 10 ℃ intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

20 MHz BW

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

CHANNEL: 36

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5179977.88	-22.12
100%		-30	5179973.49	-26.51
100%		-20	5179974.56	-25.44
100%		-10	5179974.99	-25.01
100%		0	5179976.02	-23.98
100%		+10	5179976.49	-23.51
100%		+30	5179977.99	-22.01
100%		+40	5179978.52	-21.48
100%		+50	5179978.78	-21.22
115%	4.40	+20	5179977.86	-22.14
Batt. Endpoint	3.60	+20	5179978.02	-21.98

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,260,000,000 Hz

CHANNEL: 52

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5259977.90	-22.10
100%		-30	5259973.52	-26.48
100%		-20	5259973.69	-26.31
100%		-10	5259974.54	-25.46
100%		0	5259975.33	-24.67
100%		+10	5259976.52	-23.48
100%		+30	5259978.46	-21.54
100%		+40	5260021.11	21.11
100%		+50	5259979.51	-20.49
115%	4.40	+20	5259977.87	-22.13
Batt. Endpoint	3.60	+20	5259977.52	-22.48

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2C

OPERATING FREQUENCY: 5,500,000,000 Hz

CHANNEL: 100

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5499974.45	-25.55
100%		-30	5499970.05	-29.95
100%		-20	5499970.99	-29.01
100%		-10	5499971.66	-28.34
100%		0	5499972.11	-27.89
100%		+10	5499973.06	-26.94
100%		+30	5499974.69	-25.31
100%		+40	5499975.11	-24.89
100%		+50	5499975.35	-24.65
115%	4.40	+20	5499974.84	-25.16
Batt. Endpoint	3.60	+20	5499974.06	-25.94

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,745,000,000 Hz

CHANNEL: 149

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5744972.57	-27.43
100%		-30	5744968.44	-31.56
100%		-20	5744969.52	-30.48
100%		-10	5744970.33	-29.67
100%		0	5744971.55	-28.45
100%		+10	5744972.02	-27.98
100%		+30	5744972.88	-27.12
100%		+40	5744973.52	-26.48
100%		+50	5744973.98	-26.02
115%	4.40	+20	5744972.35	-27.65
Batt. Endpoint	3.60	+20	5744972.82	-27.18

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

40 MHz BW

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

CHANNEL: 38

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5189974.88	-25.12
100%		-30	5189971.52	-28.48
100%		-20	5189972.16	-27.84
100%		-10	5189972.88	-27.12
100%		0	5189973.01	-26.99
100%		+10	5189973.87	-26.13
100%		+30	5189975.35	-24.65
100%		+40	5189975.88	-24.12
100%		+50	5189976.83	-23.17
115%	4.40	+20	5189975.12	-24.88
Batt. Endpoint	3.60	+20	5189974.69	-25.31

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,270,000,000 Hz

CHANNEL: 54

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5269973.89	-26.11
100%		-30	5269970.06	-29.94
100%		-20	5269970.85	-29.15
100%		-10	5269971.49	-28.51
100%		0	5269972.11	-27.89
100%		+10	5269973.03	-26.97
100%		+30	5269974.54	-25.46
100%		+40	5269975.03	-24.97
100%		+50	5269975.85	-24.15
115%	4.40	+20	5269973.46	-26.54
Batt. Endpoint	3.60	+20	5269973.69	-26.31

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2C

OPERATING FREQUENCY: 5,510,000,000 Hz

CHANNEL: 102

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5509972.52	-27.48
100%		-30	5509968.85	-31.15
100%		-20	5509969.52	-30.48
100%		-10	5509969.89	-30.11
100%		0	5509970.52	-29.48
100%		+10	5509971.35	-28.65
100%		+30	5509973.26	-26.74
100%		+40	5509973.88	-26.12
100%		+50	5509974.52	-25.48
115%	4.40	+20	5509972.67	-27.33
Batt. Endpoint	3.60	+20	5509973.51	-26.49

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,755,000,000 Hz

CHANNEL: 151

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5754972.05	-27.95
100%		-30	5754968.74	-31.26
100%		-20	5754969.52	-30.48
100%		-10	5754970.34	-29.66
100%		0	5754970.98	-29.02
100%		+10	5754971.55	-28.45
100%		+30	5754972.78	-27.22
100%		+40	5754973.52	-26.48
100%		+50	5754974.21	-25.79
115%	4.40	+20	5754972.56	-27.44
Batt. Endpoint	3.60	+20	5754972.63	-27.37

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

80 MHz BW

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5209974.38	-25.62
100%		-30	5209971.52	-28.48
100%		-20	5209972.44	-27.56
100%		-10	5209973.01	-26.99
100%		0	5209973.88	-26.12
100%		+10	5209974.25	-25.75
100%		+30	5209974.82	-25.18
100%		+40	5209975.26	-24.74
100%		+50	5209975.65	-24.35
115%	4.40	+20	5209973.88	-26.12
Batt. Endpoint	3.60	+20	5209973.92	-26.08

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5289975.05	-24.95
100%		-30	5289972.49	-27.51
100%		-20	5289972.92	-27.08
100%		-10	5289973.51	-26.49
100%		0	5289974.11	-25.89
100%		+10	5289974.69	-25.31
100%		+30	5289975.45	-24.55
100%		+40	5289975.83	-24.17
100%		+50	5289976.41	-23.59
115%	4.40	+20	5289975.65	-24.35
Batt. Endpoint	3.60	+20	5289975.23	-24.77

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2C

OPERATING FREQUENCY: 5,530,000,000 Hz

CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5529973.38	-26.62
100%		-30	5529970.86	-29.14
100%		-20	5529971.35	-28.65
100%		-10	5529971.89	-28.11
100%		0	5529972.38	-27.62
100%		+10	5529973.19	-26.81
100%		+30	5529973.96	-26.04
100%		+40	5529974.34	-25.66
100%		+50	5529974.69	-25.31
115%	4.40	+20	5529973.52	-26.48
Batt. Endpoint	3.60	+20	5529973.01	-26.99

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5774972.38	-27.62
100%		-30	5774968.85	-31.15
100%		-20	5774969.23	-30.77
100%		-10	5774969.88	-30.12
100%		0	5774970.45	-29.55
100%		+10	5774971.66	-28.34
100%		+30	5774973.11	-26.89
100%		+40	5774973.78	-26.22
100%		+50	5774974.43	-25.57
115%	4.40	+20	5774972.45	-27.55
Batt. Endpoint	3.60	+20	5774972.32	-27.68

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

9.6 RADIATED MEASUREMENT

9.6.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209, §15.407

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

▣ §15.407, KDB 789033 D02

All harmonics that do not lie in a restricted band are subject to a peak limit of -27 dBm/MHz. At a distance of 3 meters the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2 dB to the EIRP limit of -27 dBm/MHz to obtain the limit for out of band spurious emissions of 68.2 dBμV/m.

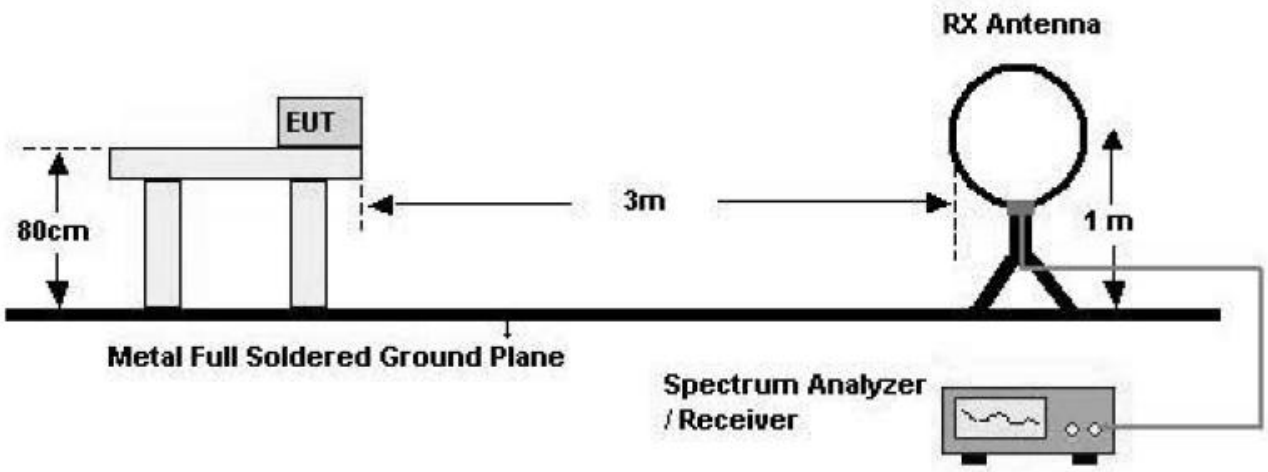
§15.407 (b)(4)(i)

(4) For transmitters operating in the 5.725-5.85 GHz band:

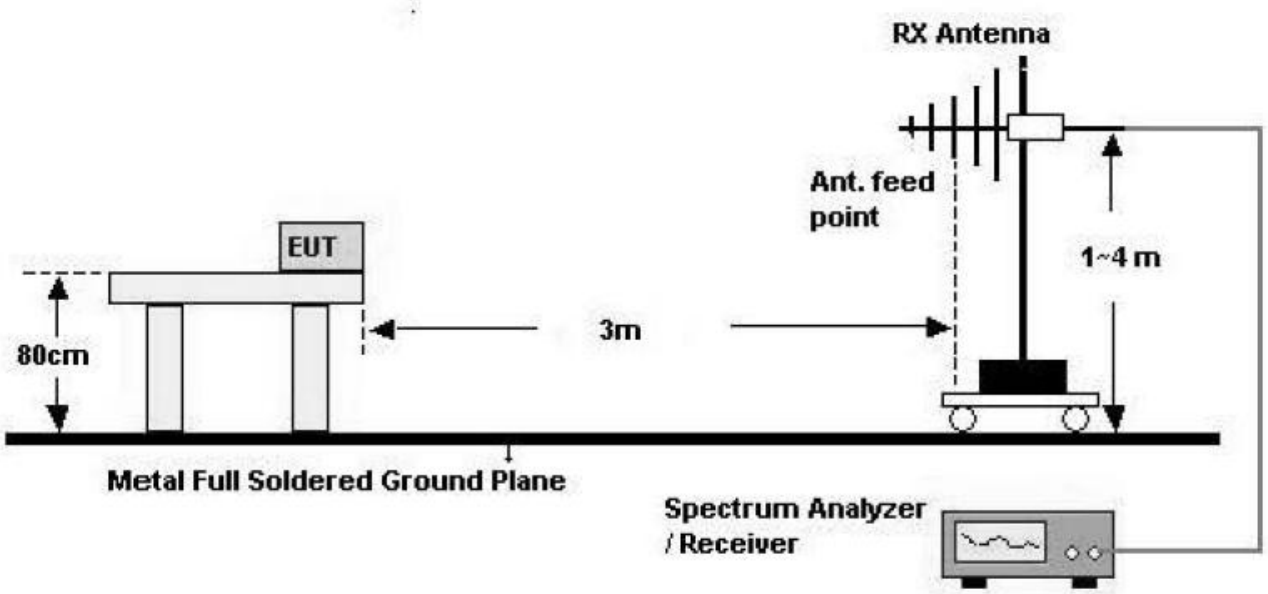
(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the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

Test Configuration

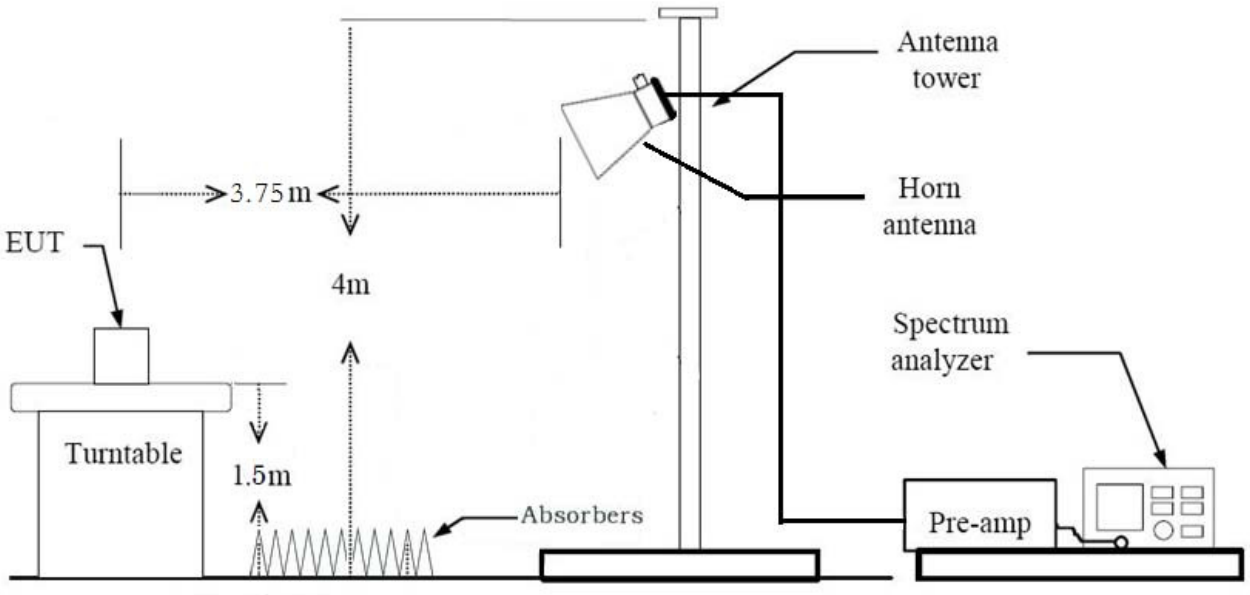
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE USED

ANSI C63.10:2013

Method G)5) in KDB 789033 D02 v01r03 (Peak)

Method G)6)d) in KDB 789033 D02 v01r03 (Average)

. Spectrum setting:

- Peak.

1. RBW = 1 MHz
2. VBW ≥ 3 MHz
3. Detector = Peak
4. Sweep Time = auto
5. Trace mode = max hold
6. Allow sweeps to continue until the trace stabilizes.
7. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle.

- Average (Method VB :Averaging using reduced video bandwidth)

1. RBW = 1 MHz
2. VBW
   2.1. If the EUT is configured to transmit with duty cycle ≥ 98 percent, set VBW ≤ RBW/100(i.e., 10 kHz) but not less than 10 Hz.
   2.2. If the EUT duty cycle is < 98 percent, set VBW ≥ 1/T, where T is the minimum transmission duration.
3. The analyzer is set to linear detector mode.
4. Detector = Peak.
5. Sweep time = auto.
6. Trace mode = max hold.
7. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimym number of traces by a factor of 1/x, where x is the duty cycle.

Note :

1. We used the Method VB for 802.11a/n_HT20, n_HT40, ac_VHT20, 40, 80 mode to perform the average filed strength measurements.
2. The actual setting value of VBW for 802.11a/n_HT20, n_HT40, ac_VHT20, 40, 80
3. According to SVSWR requirement in ANSI 63.4-2014, We performed the radiated test at 3.75 m distance from center of turn table. So, we applied the distance factor(reference distance : 3 m).
4. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Mode	Worst Data rate (Mbps)	T_{on} (ms)	T_{total} (ms)	Duty Cycle (%)	VBW(1/T) (Hz)	The actual setting value of VBW (Hz)
a	**6**	**2.785**	**2.820**	**98.76**	**359**	**1000**
n_HT20	**MCS 0**	**2.590**	**2.620**	**98.85**	**386**	**1000**
ac_VHT20	**MCS 0**	**2.600**	**2.630**	**98.86**	**385**	**1000**
n_HT40	**MCS 0**	**2.483**	**2.508**	**98.99**	**403**	**3000**
ac_VHT40	**MCS 0**	**2.488**	**2.510**	**99.14**	**402**	**3000**
ac_VHT80	**MCS 0**	**1.170**	**1.194**	**97.99**	**855**	**10000**

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dBuV) + Distance extrapolation factor
5. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Above 1 GHz

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	53.97	-2.75	V	51.22	68.20	16.98	PK
15540	53.34	-1.23	V	52.11	73.98	21.87	PK
15540	38.90	-1.23	V	37.67	53.98	16.31	AV
10360	54.48	-2.75	H	51.73	68.20	16.47	PK
15540	53.29	-1.23	H	52.06	73.98	21.92	PK
15540	39.09	-1.23	H	37.86	53.98	16.12	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	54.19	-2.60	V	51.59	68.20	16.61	PK
15600	53.04	-2.26	V	50.78	73.98	23.20	PK
15600	38.74	-2.26	V	36.48	53.98	17.50	AV
10400	54.58	-2.60	H	51.98	68.20	16.22	PK
15600	53.09	-2.26	H	50.83	73.98	23.15	PK
15600	38.83	-2.26	H	36.57	53.98	17.41	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	54.20	-3.54	V	50.66	68.20	17.54	PK
15720	53.07	-2.64	V	50.43	73.98	23.55	PK
15720	39.27	-2.64	V	36.63	53.98	17.35	AV
10480	54.79	-3.54	H	51.25	68.20	16.95	PK
15720	53.83	-2.64	H	51.19	73.98	22.79	PK
15720	39.36	-2.64	H	36.72	53.98	17.26	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	53.92	-2.75	V	51.17	68.20	17.03	PK
15540	53.34	-1.23	V	52.11	73.98	21.87	PK
15540	38.97	-1.23	V	37.74	53.98	16.24	AV
10360	54.18	-2.75	H	51.43	68.20	16.77	PK
15540	53.57	-1.23	H	52.34	73.98	21.64	PK
15540	39.21	-1.23	H	37.98	53.98	16.00	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	54.14	-2.60	V	51.54	68.20	16.66	PK
15600	53.09	-2.26	V	50.83	73.98	23.15	PK
15600	38.81	-2.26	V	36.55	53.98	17.43	AV
10400	54.47	-2.60	H	51.87	68.20	16.33	PK
15600	53.27	-2.26	H	51.01	73.98	22.97	PK
15600	38.87	-2.26	H	36.61	53.98	17.37	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	54.15	-3.54	V	50.61	68.20	17.59	PK
15720	53.12	-2.64	V	50.48	73.98	23.50	PK
15720	39.34	-2.64	V	36.70	53.98	17.28	AV
10480	54.68	-3.54	H	51.14	68.20	17.06	PK
15720	54.01	-2.64	H	51.37	73.98	22.61	PK
15720	39.40	-2.64	H	36.76	53.98	17.22	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	53.96	-2.75	V	51.21	68.20	16.99	PK
15540	53.31	-1.23	V	52.08	73.98	21.90	PK
15540	38.83	-1.23	V	37.60	53.98	16.38	AV
10360	54.25	-2.75	H	51.50	68.20	16.70	PK
15540	53.48	-1.23	H	52.25	73.98	21.73	PK
15540	39.08	-1.23	H	37.85	53.98	16.13	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	54.18	-2.60	V	51.58	68.20	16.62	PK
15600	53.06	-2.26	V	50.80	73.98	23.18	PK
15600	38.67	-2.26	V	36.41	53.98	17.57	AV
10400	54.54	-2.60	H	51.94	68.20	16.26	PK
15600	53.18	-2.26	H	50.92	73.98	23.06	PK
15600	38.74	-2.26	H	36.48	53.98	17.50	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	54.19	-3.54	V	50.65	68.20	17.55	PK
15720	53.09	-2.64	V	50.45	73.98	23.53	PK
15720	39.20	-2.64	V	36.56	53.98	17.42	AV
10480	54.75	-3.54	H	51.21	68.20	16.99	PK
15720	53.92	-2.64	H	51.28	73.98	22.70	PK
15720	39.27	-2.64	H	36.63	53.98	17.35	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10380	53.77	-2.74	V	51.03	68.20	17.17	PK
15570	51.87	-1.95	V	49.92	73.98	24.06	PK
15570	38.34	-1.95	V	36.39	53.98	17.59	AV
10380	54.22	-2.74	H	51.48	68.20	16.72	PK
15570	52.31	-1.95	H	50.36	73.98	23.62	PK
15570	38.55	-1.95	H	36.60	53.98	17.38	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5230 MHz
Channel No.	46 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10460	53.96	-3.07	V	50.89	68.20	17.31	PK
15690	52.13	-0.73	V	51.40	73.98	22.58	PK
15690	39.44	-0.73	V	38.71	53.98	15.27	AV
10460	54.53	-3.07	H	51.46	68.20	16.74	PK
15690	52.52	-0.73	H	51.79	73.98	22.19	PK
15690	39.61	-0.73	H	38.88	53.98	15.10	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10380	53.75	-2.74	V	51.01	68.20	17.19	PK
15570	51.95	-1.95	V	50.00	73.98	23.98	PK
15570	38.31	-1.95	V	36.36	53.98	17.62	AV
10380	54.37	-2.74	H	51.63	68.20	16.57	PK
15570	52.04	-1.95	H	50.09	73.98	23.89	PK
15570	38.51	-1.95	H	36.56	53.98	17.42	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5230 MHz
Channel No.	46 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10460	53.94	-3.07	V	50.87	68.20	17.33	PK
15690	52.21	-0.73	V	51.48	73.98	22.50	PK
15690	39.41	-0.73	V	38.68	53.98	15.30	AV
10460	54.68	-3.07	H	51.61	68.20	16.59	PK
15690	52.25	-0.73	H	51.52	73.98	22.46	PK
15690	39.57	-0.73	H	38.84	53.98	15.14	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 1
Operation Mode:	802.11ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10420	52.98	-2.88	V	50.10	68.20	18.10	PK
15630	52.06	-1.88	V	50.18	73.98	23.80	PK
15630	39.07	-1.88	V	37.19	53.98	16.79	AV
10420	53.77	-2.88	H	50.89	68.20	17.31	PK
15630	52.22	-1.88	H	50.34	73.98	23.64	PK
15630	39.24	-1.88	H	37.36	53.98	16.62	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT80. Worst case is MCS0 in 802.11ac_VHT80.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer MCS Index:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	54.18	-2.97	V	51.21	68.20	16.99	PK
15780	54.25	-1.86	V	52.39	73.98	21.59	PK
15780	39.46	-1.86	V	37.60	53.98	16.38	AV
10520	54.90	-2.97	H	51.93	68.20	16.27	PK
15780	53.68	-1.86	H	51.82	73.98	22.16	PK
15780	39.57	-1.86	H	37.71	53.98	16.27	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	53.63	-3.22	V	50.41	73.98	23.57	PK
10600	40.10	-3.22	V	36.88	53.98	17.10	AV
15900	53.14	-2.44	V	50.70	73.98	23.28	PK
15900	39.16	-2.44	V	36.72	53.98	17.26	AV
10600	54.14	-3.22	H	50.92	73.98	23.06	PK
10600	40.25	-3.22	H	37.03	53.98	16.95	AV
15900	53.23	-2.44	H	50.79	73.98	23.19	PK
15900	39.26	-2.44	H	36.82	53.98	17.16	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	54.13	-3.27	V	50.86	73.98	23.12	PK
10640	40.23	-3.27	V	36.96	53.98	17.02	AV
15960	52.06	-2.89	V	49.17	73.98	24.81	PK
15960	38.00	-2.89	V	35.11	53.98	18.87	AV
10640	54.27	-3.27	H	51.00	73.98	22.98	PK
10640	40.23	-3.27	H	36.96	53.98	17.02	AV
15960	52.58	-2.89	H	49.69	73.98	24.29	PK
15960	38.34	-2.89	H	35.45	53.98	18.53	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	54.13	-2.97	V	51.16	68.20	17.04	PK
15780	54.30	-1.86	V	52.44	73.98	21.54	PK
15780	39.53	-1.86	V	37.67	53.98	16.31	AV
10520	54.79	-2.97	H	51.82	68.20	16.38	PK
15780	53.86	-1.86	H	52.00	73.98	21.98	PK
15780	39.61	-1.86	H	37.75	53.98	16.23	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	53.58	-3.22	V	50.36	73.98	23.62	PK
10600	40.15	-3.22	V	36.93	53.98	17.05	AV
15900	53.19	-2.44	V	50.75	73.98	23.23	PK
15900	39.23	-2.44	V	36.79	53.98	17.19	AV
10600	54.03	-3.22	H	50.81	73.98	23.17	PK
10600	40.33	-3.22	H	37.11	53.98	16.87	AV
15900	53.41	-2.44	H	50.97	73.98	23.01	PK
15900	39.30	-2.44	H	36.86	53.98	17.12	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	54.08	-3.27	V	50.81	73.98	23.17	PK
10640	40.28	-3.27	V	37.01	53.98	16.97	AV
15960	52.11	-2.89	V	49.22	73.98	24.76	PK
15960	38.07	-2.89	V	35.18	53.98	18.80	AV
10640	54.16	-3.27	H	50.89	73.98	23.09	PK
10640	40.31	-3.27	H	37.04	53.98	16.94	AV
15960	52.76	-2.89	H	49.87	73.98	24.11	PK
15960	38.38	-2.89	H	35.49	53.98	18.49	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5260MHz
Channel No.	52 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	54.17	-2.97	V	51.20	68.20	17.00	PK
15780	54.27	-1.86	V	52.41	73.98	21.57	PK
15780	39.39	-1.86	V	37.53	53.98	16.45	AV
10520	54.86	-2.97	H	51.89	68.20	16.31	PK
15780	53.77	-1.86	H	51.91	73.98	22.07	PK
15780	39.48	-1.86	H	37.62	53.98	16.36	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	53.62	-3.22	V	50.40	73.98	23.58	PK
10600	40.03	-3.22	V	36.81	53.98	17.17	AV
15900	53.16	-2.44	V	50.72	73.98	23.26	PK
15900	39.09	-2.44	V	36.65	53.98	17.33	AV
10600	54.10	-3.22	H	50.88	73.98	23.10	PK
10600	40.21	-3.22	H	36.99	53.98	16.99	AV
15900	53.32	-2.44	H	50.88	73.98	23.10	PK
15900	39.17	-2.44	H	36.73	53.98	17.25	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	54.12	-3.27	V	50.85	73.98	23.13	PK
10640	40.16	-3.27	V	36.89	53.98	17.09	AV
15960	52.08	-2.89	V	49.19	73.98	24.79	PK
15960	37.93	-2.89	V	35.04	53.98	18.94	AV
10640	54.23	-3.27	H	50.96	73.98	23.02	PK
10640	40.19	-3.27	H	36.92	53.98	17.06	AV
15960	52.67	-2.89	H	49.78	73.98	24.20	PK
15960	38.25	-2.89	H	35.36	53.98	18.62	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10540	53.81	-2.73	V	51.08	68.20	17.12	PK
15810	52.38	-2.52	V	49.86	73.98	24.12	PK
15810	39.16	-2.52	V	36.64	53.98	17.34	AV
10540	54.11	-2.73	H	51.38	68.20	16.82	PK
15810	52.93	-2.52	H	50.41	73.98	23.57	PK
15810	39.37	-2.52	H	36.85	53.98	17.13	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10620	53.53	-3.38	V	50.15	73.98	23.83	PK
10620	40.08	-3.38	V	36.70	53.98	17.28	AV
15930	50.97	-2.78	V	48.19	73.98	25.79	PK
15930	38.00	-2.78	V	35.22	53.98	18.76	AV
10620	53.84	-3.38	H	50.46	73.98	23.52	PK
10620	40.39	-3.38	H	37.01	53.98	16.97	AV
15930	51.99	-2.78	H	49.21	73.98	24.77	PK
15930	38.15	-2.78	H	35.37	53.98	18.61	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10540	53.79	-2.73	V	51.06	68.20	17.14	PK
15810	52.46	-2.52	V	49.94	73.98	24.04	PK
15810	39.13	-2.52	V	36.61	53.98	17.37	AV
10540	54.26	-2.73	H	51.53	68.20	16.67	PK
15810	52.66	-2.52	H	50.14	73.98	23.84	PK
15810	39.33	-2.52	H	36.81	53.98	17.17	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10620	53.51	-3.38	V	50.13	73.98	23.85	PK
10620	40.00	-3.38	V	36.62	53.98	17.36	AV
15930	51.05	-2.78	V	48.27	73.98	25.71	PK
15930	37.97	-2.78	V	35.19	53.98	18.79	AV
10620	53.99	-3.38	H	50.61	73.98	23.37	PK
10620	40.34	-3.38	H	36.96	53.98	17.02	AV
15930	51.72	-2.78	H	48.94	73.98	25.04	PK
15930	38.11	-2.78	H	35.33	53.98	18.65	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2A
Operation Mode:	802.11ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10580	52.56	-3.21	V	49.35	68.20	18.85	PK
15870	51.91	-2.62	V	49.29	73.98	24.69	PK
15870	38.83	-2.62	V	36.21	53.98	17.77	AV
10580	53.16	-3.21	H	49.95	68.20	18.25	PK
15870	52.12	-2.62	H	49.50	73.98	24.48	PK
15870	39.10	-2.62	H	36.48	53.98	17.50	AV

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT80. Worst case is MCS0 in 802.11ac_VHT80.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	53.67	-1.60	V	52.07	73.98	21.91	PK
11000	39.73	-1.60	V	38.13	53.98	15.85	AV
16500	52.37	-0.86	V	51.51	68.20	16.69	PK
11000	53.97	-1.60	H	52.37	73.98	21.61	PK
11000	39.80	-1.60	H	38.20	53.98	15.78	AV
16500	52.86	-0.86	H	52.00	68.20	16.20	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	53.09	-2.03	V	51.06	73.98	22.92	PK
11160	39.04	-2.03	V	37.01	53.98	16.97	AV
16740	52.77	0.18	V	52.95	68.20	15.25	PK
11160	54.03	-2.03	H	52.00	73.98	21.98	PK
11160	39.15	-2.03	H	37.12	53.98	16.86	AV
16740	53.27	0.18	H	53.45	68.20	14.75	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11440	53.64	-1.92	V	51.72	73.98	22.26	PK
11440	39.65	-1.92	V	37.73	53.98	16.25	AV
17160	52.00	2.19	V	54.19	68.20	14.01	PK
11440	54.06	-1.92	H	52.14	73.98	21.84	PK
11440	39.69	-1.92	H	37.77	53.98	16.21	AV
17160	52.43	2.19	H	54.62	68.20	13.58	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	53.62	-1.60	V	52.02	73.98	21.96	PK
11000	39.78	-1.60	V	38.18	53.98	15.80	AV
16500	52.42	-0.86	V	51.56	68.20	16.64	PK
11000	53.86	-1.60	H	52.26	73.98	21.72	PK
11000	39.88	-1.60	H	38.28	53.98	15.70	AV
16500	53.04	-0.86	H	52.18	68.20	16.02	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	53.04	-2.03	V	51.01	73.98	22.97	PK
11160	39.09	-2.03	V	37.06	53.98	16.92	AV
16740	52.82	0.18	V	53.00	68.20	15.20	PK
11160	53.92	-2.03	H	51.89	73.98	22.09	PK
11160	39.23	-2.03	H	37.20	53.98	16.78	AV
16740	53.45	0.18	H	53.63	68.20	14.57	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11440	53.59	-1.92	V	51.67	73.98	22.31	PK
11440	39.70	-1.92	V	37.78	53.98	16.20	AV
17160	52.05	2.19	V	54.24	68.20	13.96	PK
11440	53.95	-1.92	H	52.03	73.98	21.95	PK
11440	39.77	-1.92	H	37.85	53.98	16.13	AV
17160	52.61	2.19	H	54.80	68.20	13.40	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5500MHz
Channel No.	100 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	53.66	-1.60	V	52.06	73.98	21.92	PK
11000	39.66	-1.60	V	38.06	53.98	15.92	AV
16500	52.39	-0.86	V	51.53	68.20	16.67	PK
11000	53.93	-1.60	H	52.33	73.98	21.65	PK
11000	39.76	-1.60	H	38.16	53.98	15.82	AV
16500	52.95	-0.86	H	52.09	68.20	16.11	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	53.08	-2.03	V	51.05	73.98	22.93	PK
11160	38.97	-2.03	V	36.94	53.98	17.04	AV
16740	52.79	0.18	V	52.97	68.20	15.23	PK
11160	53.99	-2.03	H	51.96	73.98	22.02	PK
11160	39.11	-2.03	H	37.08	53.98	16.90	AV
16740	53.36	0.18	H	53.54	68.20	14.66	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11440	53.63	-1.92	V	51.71	73.98	22.27	PK
11440	39.58	-1.92	V	37.66	53.98	16.32	AV
17160	52.02	2.19	V	54.21	68.20	13.99	PK
11440	54.02	-1.92	H	52.10	73.98	21.88	PK
11440	39.65	-1.92	H	37.73	53.98	16.25	AV
17160	52.52	2.19	H	54.71	68.20	13.49	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11020	53.13	-1.98	V	51.15	73.98	22.83	PK
11020	40.03	-1.98	V	38.05	53.98	15.93	AV
16530	51.41	-1.57	V	49.84	68.20	18.36	PK
11020	53.62	-1.98	H	51.64	73.98	22.34	PK
11020	40.13	-1.98	H	38.15	53.98	15.83	AV
16530	52.16	-1.57	H	50.59	68.20	17.61	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5550 MHz
Channel No.	110 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11100	53.07	-2.32	V	50.75	73.98	23.23	PK
11100	39.58	-2.32	V	37.26	53.98	16.72	AV
16650	52.20	-1.17	V	51.03	68.20	17.17	PK
11100	53.57	-2.32	H	51.25	73.98	22.73	PK
11100	39.79	-2.32	H	37.47	53.98	16.51	AV
16650	52.72	-1.17	H	51.55	68.20	16.65	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5710 MHz
Channel No.	142 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11420	53.23	-2.23	V	51.00	73.98	22.98	PK
11420	39.95	-2.23	V	37.72	53.98	16.26	AV
17130	51.93	1.75	V	53.68	68.20	14.52	PK
11420	53.76	-2.23	H	51.53	73.98	22.45	PK
11420	40.12	-2.23	H	37.89	53.98	16.09	AV
17130	52.08	1.75	H	53.83	68.20	14.37	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11020	53.11	-1.98	V	51.13	73.98	22.85	PK
11020	39.95	-1.98	V	37.97	53.98	16.01	AV
16530	51.49	-1.57	V	49.92	68.20	18.28	PK
11020	53.77	-1.98	H	51.79	73.98	22.19	PK
11020	40.08	-1.98	H	38.10	53.98	15.88	AV
16530	51.89	-1.57	H	50.32	68.20	17.88	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5550 MHz
Channel No.	110 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11100	53.05	-2.32	V	50.73	73.98	23.25	PK
11100	39.50	-2.32	V	37.18	53.98	16.80	AV
16650	52.28	-1.17	V	51.11	68.20	17.09	PK
11100	53.72	-2.32	H	51.40	73.98	22.58	PK
11100	39.74	-2.32	H	37.42	53.98	16.56	AV
16650	52.45	-1.17	H	51.28	68.20	16.92	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5710 MHz
Channel No.	142 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11420	53.21	-2.23	V	50.98	73.98	23.00	PK
11420	39.87	-2.23	V	37.64	53.98	16.34	AV
17130	52.01	1.75	V	53.76	68.20	14.44	PK
11420	53.91	-2.23	H	51.68	73.98	22.30	PK
11420	40.07	-2.23	H	37.84	53.98	16.14	AV
17130	51.81	1.75	H	53.56	68.20	14.64	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11060	52.03	-2.21	V	49.82	73.98	24.16	PK
11060	38.94	-2.21	V	36.73	53.98	17.25	AV
16590	50.96	-0.60	V	50.36	68.20	17.84	PK
11060	53.01	-2.21	H	50.80	73.98	23.18	PK
11060	39.14	-2.21	H	36.93	53.98	17.05	AV
16590	51.33	-0.60	H	50.73	68.20	17.47	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT80. Worst case is MCS0 in 802.11ac_VHT80.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 2C
Operation Mode:	802.11ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5690 MHz
Channel No.	138 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11380	52.80	-2.08	V	50.72	73.98	23.26	PK
11380	39.46	-2.08	V	37.38	53.98	16.60	AV
17070	50.44	1.67	V	52.11	68.20	16.09	PK
11380	53.35	-2.08	H	51.27	73.98	22.71	PK
11380	39.60	-2.08	H	37.52	53.98	16.46	AV
17070	50.62	1.67	H	52.29	68.20	15.91	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT80. Worst case is MCS0 in 802.11ac_VHT80.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5745MHz
Channel No.	149 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	54.24	-2.50	V	51.74	73.98	22.24	PK
11490	40.17	-2.50	V	37.67	53.98	16.31	AV
17235	52.36	3.09	V	55.45	68.20	12.75	PK
11490	54.46	-2.50	H	51.96	73.98	22.02	PK
11490	40.24	-2.50	H	37.74	53.98	16.24	AV
17235	52.86	3.09	H	55.95	68.20	12.25	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	53.62	-2.87	V	50.75	73.98	23.23	PK
11570	39.92	-2.87	V	37.05	53.98	16.93	AV
17355	50.81	3.45	V	54.26	68.20	13.94	PK
11570	54.57	-2.87	H	51.70	73.98	22.28	PK
11570	40.03	-2.87	H	37.16	53.98	16.82	AV
17355	52.07	3.45	H	55.52	68.20	12.68	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	53.65	-2.84	V	50.81	73.98	23.17	PK
11650	39.89	-2.84	V	37.05	53.98	16.93	AV
17475	51.84	5.68	V	57.52	68.20	10.68	PK
11650	54.40	-2.84	H	51.56	73.98	22.42	PK
11650	40.26	-2.84	H	37.42	53.98	16.56	AV
17475	52.15	5.68	H	57.83	68.20	10.37	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	54.19	-2.50	V	51.69	73.98	22.29	PK
11490	40.22	-2.50	V	37.72	53.98	16.26	AV
17235	52.41	3.09	V	55.50	68.20	12.70	PK
11490	54.35	-2.50	H	51.85	73.98	22.13	PK
11490	40.32	-2.50	H	37.82	53.98	16.16	AV
17235	53.04	3.09	H	56.13	68.20	12.07	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	53.57	-2.87	V	50.70	73.98	23.28	PK
11570	39.97	-2.87	V	37.10	53.98	16.88	AV
17355	50.86	3.45	V	54.31	68.20	13.89	PK
11570	54.46	-2.87	H	51.59	73.98	22.39	PK
11570	40.11	-2.87	H	37.24	53.98	16.74	AV
17355	52.25	3.45	H	55.70	68.20	12.50	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	53.60	-2.84	V	50.76	73.98	23.22	PK
11650	39.94	-2.84	V	37.10	53.98	16.88	AV
17475	51.21	5.68	V	56.89	68.20	11.31	PK
11650	54.29	-2.84	H	51.45	73.98	22.53	PK
11650	40.34	-2.84	H	37.50	53.98	16.48	AV
17475	51.73	5.68	H	57.41	68.20	10.79	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT20. Worst case is MCS0 in 802.11n_HT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	54.23	-2.50	V	51.73	73.98	22.25	PK
11490	40.10	-2.50	V	37.60	53.98	16.38	AV
17235	52.38	3.09	V	55.47	68.20	12.73	PK
11490	54.42	-2.50	H	51.92	73.98	22.06	PK
11490	40.20	-2.50	H	37.70	53.98	16.28	AV
17235	52.95	3.09	H	56.04	68.20	12.16	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	53.61	-2.87	V	50.74	73.98	23.24	PK
11570	39.85	-2.87	V	36.98	53.98	17.00	AV
17355	50.83	3.45	V	54.28	68.20	13.92	PK
11570	54.53	-2.87	H	51.66	73.98	22.32	PK
11570	39.99	-2.87	H	37.12	53.98	16.86	AV
17355	52.16	3.45	H	55.61	68.20	12.59	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	53.64	-2.84	V	50.80	73.98	23.18	PK
11650	39.82	-2.84	V	36.98	53.98	17.00	AV
17475	51.57	5.68	V	57.25	68.20	10.95	PK
11650	54.36	-2.84	H	51.52	73.98	22.46	PK
11650	40.22	-2.84	H	37.38	53.98	16.60	AV
17475	51.79	5.68	H	57.47	68.20	10.73	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT20. Worst case is MCS0 in 802.11ac_VHT20.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII3
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5755 MHz
Channel No.	151 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11510	53.72	-2.55	V	51.17	73.98	22.81	PK
11510	40.01	-2.55	V	37.46	53.98	16.52	AV
17265	50.72	3.10	V	53.82	68.20	14.38	PK
11510	53.86	-2.55	H	51.31	73.98	22.67	PK
11510	40.15	-2.55	H	37.60	53.98	16.38	AV
17265	51.23	3.10	H	54.33	68.20	13.87	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11n_HT40
Transfer MCS Index:	0
Operating Frequency	5795 MHz
Channel No.	159 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11590	53.72	-3.29	V	50.43	73.98	23.55	PK
11590	40.21	-3.29	V	36.92	53.98	17.06	AV
17385	51.25	4.19	V	55.44	68.20	12.76	PK
11590	53.85	-3.29	H	50.56	73.98	23.42	PK
11590	40.35	-3.29	H	37.06	53.98	16.92	AV
17385	51.48	4.19	H	55.67	68.20	12.53	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11n_HT40. Worst case is MCS0 in 802.11n_HT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5755 MHz
Channel No.	151 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11510	53.70	-2.55	V	51.15	73.98	22.83	PK
11510	39.93	-2.55	V	37.38	53.98	16.60	AV
17265	50.80	3.10	V	53.90	68.20	14.30	PK
11510	54.01	-2.55	H	51.46	73.98	22.52	PK
11510	40.10	-2.55	H	37.55	53.98	16.43	AV
17265	50.96	3.10	H	54.06	68.20	14.14	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5795 MHz
Channel No.	159 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11590	53.70	-3.29	V	50.41	73.98	23.57	PK
11590	40.13	-3.29	V	36.84	53.98	17.14	AV
17385	50.98	4.19	V	55.17	68.20	13.03	PK
11590	54.00	-3.29	H	50.71	73.98	23.27	PK
11590	40.30	-3.29	H	37.01	53.98	16.97	AV
17385	51.61	4.19	H	55.80	68.20	12.40	PK

*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT40. Worst case is MCS0 in 802.11ac_VHT40.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

Band :	UNII 3
Operation Mode:	802.11ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5775 MHz
Channel No.	155 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11550	52.23	-2.71	V	49.52	73.98	24.46	PK
11550	39.31	-2.71	V	36.60	53.98	17.38	AV
17325	51.92	3.44	V	55.36	68.20	12.84	PK
11550	53.13	-2.71	H	50.42	73.98	23.56	PK
11550	39.48	-2.71	H	36.77	53.98	17.21	AV
17325	52.66	3.44	H	56.10	68.20	12.10	PK

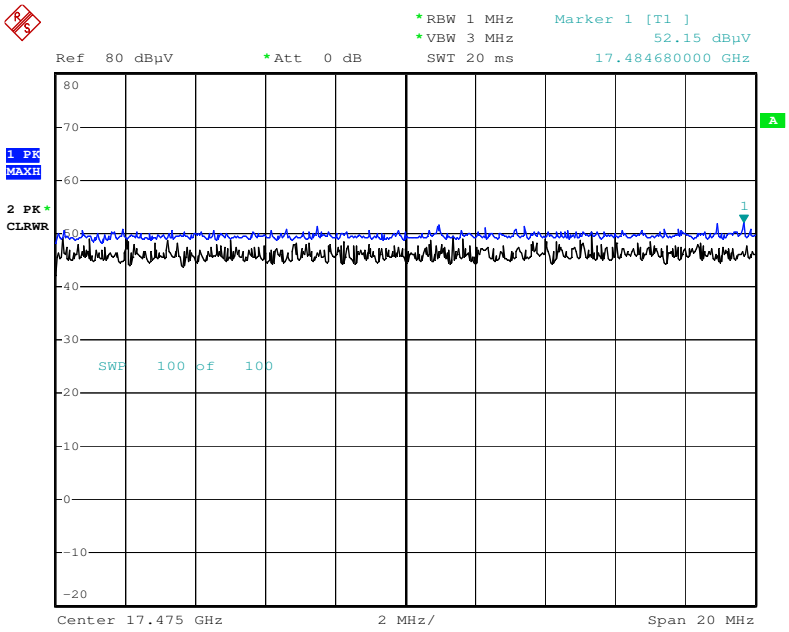
*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distansce Factor
5. We have done all data rate in 802.11ac_VHT80. Worst case is MCS0 in 802.11ac_VHT80.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. Distance extrapolation factor = 20 log (test distance / specific distance) (dB)

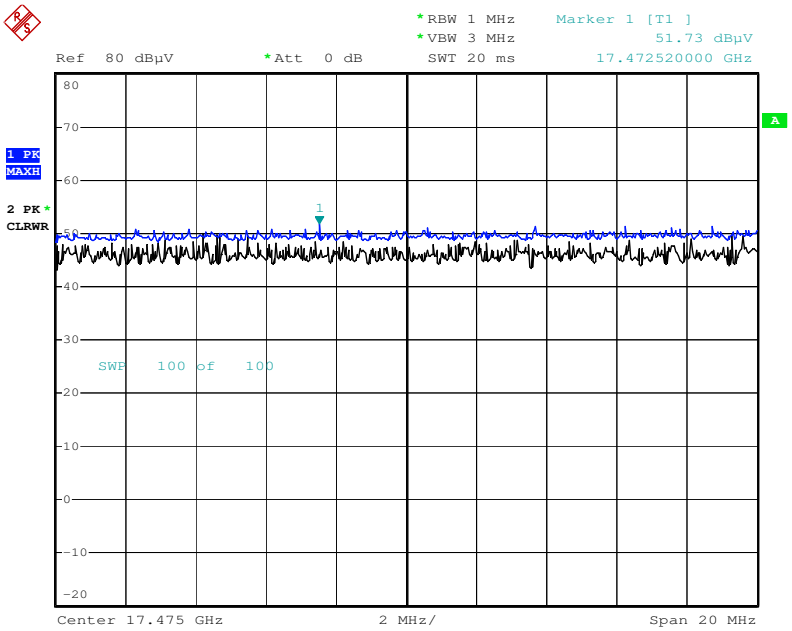
▣ RESULT PLOTS

Radiated Spurious Emissions plot –Peak Reading (802.11a, Ch.165 3rd Harmonic, X-H)



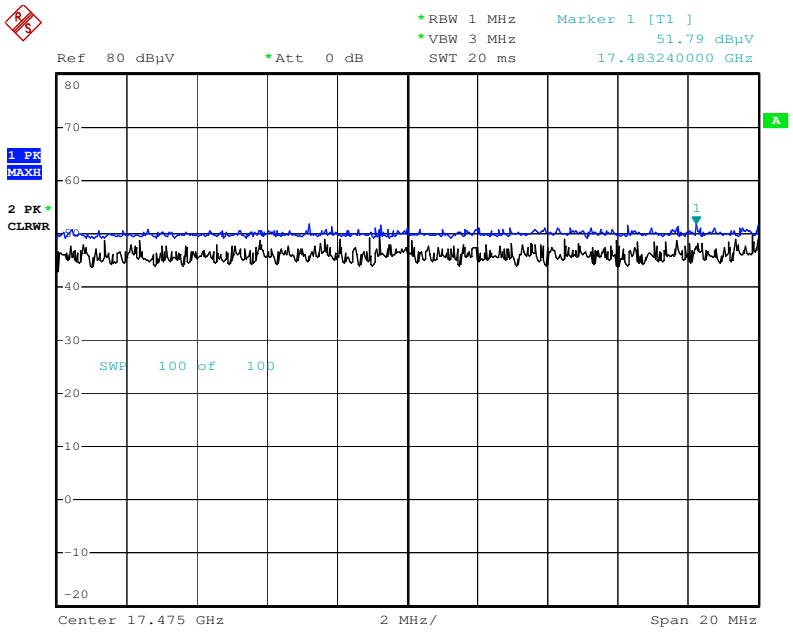
Date: 6.SEP.2016 16:10:38

Radiated Spurious Emissions plot – Peak Reading(802.11n_HT20, Ch.165 3rd Harmonic, X-H)



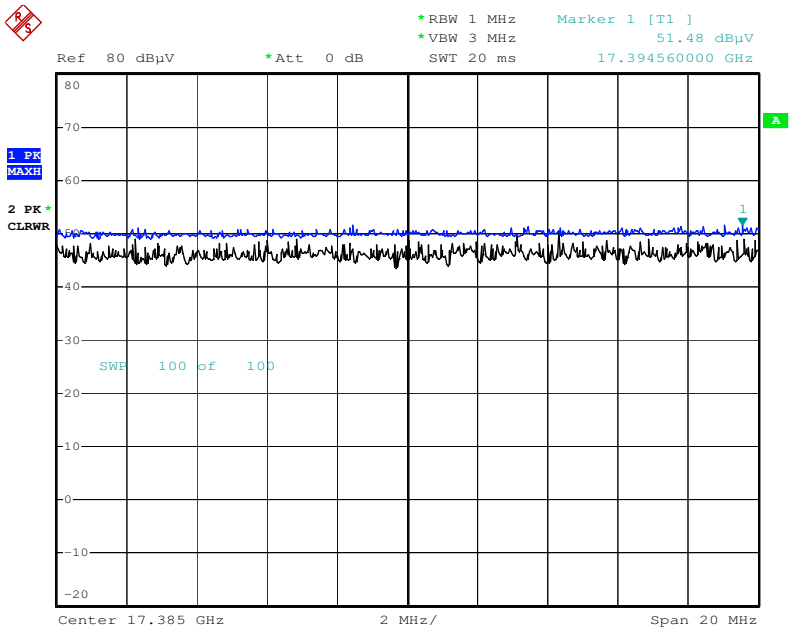
Date: 6.SEP.2016 16:11:30

Radiated Spurious Emissions plot –Peak Reading (802.11ac_VHT20, Ch.165 3rd Harmonic, X-H)



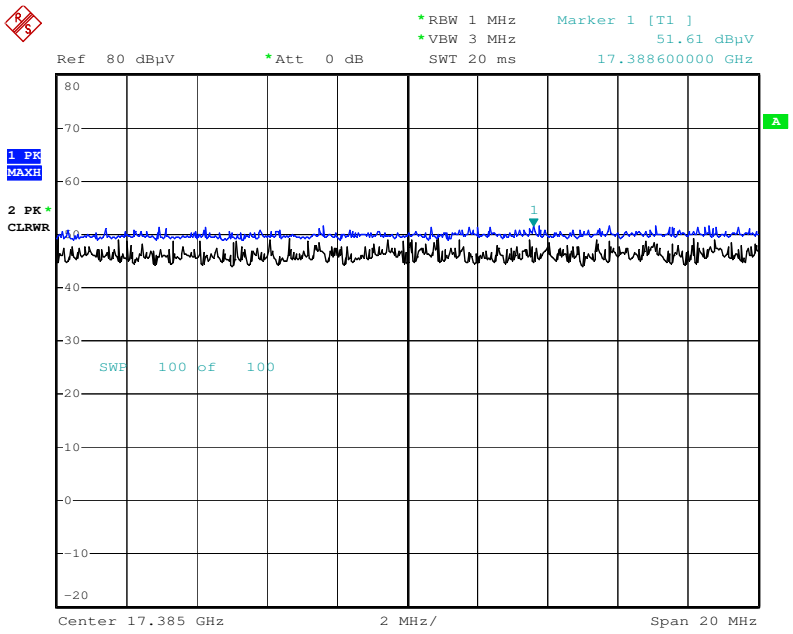
Date: 6.SEP.2016 16:12:29

Radiated Spurious Emissions plot – Peak Reading (802.11n_HT40, Ch.159 3rd Harmonic, X-H)



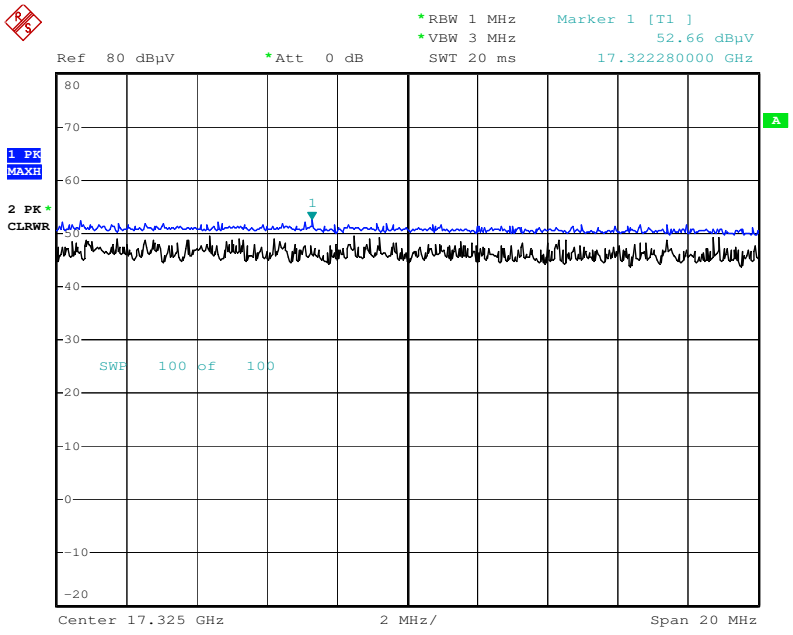
Date: 6.SEP.2016 16:13:11

Radiated Spurious Emissions plot –Peak Reading (802.11ac_VHT40, Ch.159 3rd Harmonic, X-H)



Date: 6.SEP.2016 16:13:43

Radiated Spurious Emissions plot –Peak Reading (802.11ac_VHT80, Ch.155 3rd Harmonic, X-H)



Date: 6.SEP.2016 16:17:57

Note : Only the worst case plots for Radiated Spurious Emissions.

9.6.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

Test Requirements and limit, §15.407, §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	52.87	2.81	H	55.68	73.98	18.30	PK
5150	37.89	2.81	H	40.7	53.98	13.28	AV
5150	52.24	2.81	V	55.05	73.98	18.93	PK
5150	37.45	2.81	V	40.26	53.98	13.72	AV

Band :	UNII 1
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	53.40	2.81	H	56.21	73.98	17.77	PK
5150	38.53	2.81	H	41.34	53.98	12.64	AV
5150	52.88	2.81	V	55.69	73.98	18.29	PK
5150	38.16	2.81	V	40.97	53.98	13.01	AV

Band :	UNII 1
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	53.57	2.81	H	56.38	73.98	17.60	PK
5150	38.60	2.81	H	41.41	53.98	12.57	AV
5150	53.06	2.81	V	55.87	73.98	18.11	PK
5150	38.29	2.81	V	41.1	53.98	12.88	AV

Band :	UNII 1
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	58.54	2.81	H	61.35	73.98	12.63	PK
5150	43.03	2.81	H	45.84	53.98	8.14	AV
5150	58.11	2.81	V	60.92	73.98	13.06	PK
5150	42.67	2.81	V	45.48	53.98	8.50	AV

Band :	UNII 1
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	58.08	2.81	H	60.89	73.98	13.09	PK
5150	43.31	2.81	H	46.12	53.98	7.86	AV
5150	57.65	2.81	V	60.46	73.98	13.52	PK
5150	42.93	2.81	V	45.74	53.98	8.24	AV

Band :	UNII 1
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	58.63	2.81	H	61.44	73.98	12.54	PK
5150	44.76	2.81	H	47.57	53.98	6.41	AV
5150	58.14	2.81	V	60.95	73.98	13.03	PK
5150	44.43	2.81	V	47.24	53.98	6.74	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	51.44	3.86	H	55.30	73.98	18.68	PK
5350	37.35	3.86	H	41.21	53.98	12.77	AV
5350	50.38	3.86	V	54.24	73.98	19.74	PK
5350	36.52	3.86	V	40.38	53.98	13.60	AV

Band :	UNII 2A
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	53.92	3.86	H	57.78	73.98	16.20	PK
5350	37.87	3.86	H	41.73	53.98	12.25	AV
5350	53.24	3.86	V	57.1	73.98	16.88	PK
5350	37.06	3.86	V	40.92	53.98	13.06	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	52.70	3.86	H	56.56	73.98	17.42	PK
5350	37.65	3.86	H	41.51	53.98	12.47	AV
5350	52.20	3.86	V	56.06	73.98	17.92	PK
5350	36.93	3.86	V	40.79	53.98	13.19	AV

Band :	UNII 2A
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	58.70	3.86	H	62.56	73.98	11.42	PK
5350	41.30	3.86	H	45.16	53.98	8.82	AV
5350	57.93	3.86	V	61.79	73.98	12.19	PK
5350	40.45	3.86	V	44.31	53.98	9.67	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	58.37	3.86	H	62.23	73.98	11.75	PK
5350	41.37	3.86	H	45.23	53.98	8.75	AV
5350	57.44	3.86	V	61.3	73.98	12.68	PK
5350	40.45	3.86	V	44.31	53.98	9.67	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	57.47	3.86	H	61.33	73.98	12.65	PK
5350	42.23	3.86	H	46.09	53.98	7.89	AV
5350	57.06	3.86	V	60.92	73.98	13.06	PK
5350	41.28	3.86	V	45.14	53.98	8.84	AV

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	49.92	5.10	H	55.02	73.98	18.96	PK
5460	35.89	5.10	H	40.99	53.98	12.99	AV
*5470	56.98	5.18	H	62.16	68.20	6.04	PK
5460	49.67	5.10	V	54.77	73.98	19.21	PK
5460	35.75	5.10	V	40.85	53.98	13.13	AV
*5470	56.23	5.18	V	61.41	68.20	6.79	PK

Band :	UNII 2C
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	49.57	5.10	H	54.67	73.98	19.31	PK
5460	35.76	5.10	H	40.86	53.98	13.12	AV
*5470	57.85	5.18	H	63.03	68.20	5.17	PK
5460	49.49	5.10	V	54.59	73.98	19.39	PK
5460	35.68	5.10	V	40.78	53.98	13.20	AV
*5470	57.41	5.18	V	62.59	68.20	5.61	PK

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	50.87	5.10	H	55.97	73.98	18.01	PK
5460	35.83	5.10	H	40.93	53.98	13.05	AV
*5470	58.79	5.18	H	63.97	68.20	4.23	PK
5460	50.24	5.10	V	55.34	73.98	18.64	PK
5460	35.71	5.10	V	40.81	53.98	13.17	AV
*5470	58.06	5.18	V	63.24	68.20	4.96	PK

Band :	UNII 2C
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	54.07	5.10	H	59.17	73.98	14.81	PK
5460	39.03	5.10	H	44.13	53.98	9.85	AV
*5470	60.59	5.18	H	65.77	73.98	8.21	PK
*5470	44.07	5.18	H	49.25	53.98	4.73	AV
5460	53.43	5.10	V	58.53	73.98	15.45	PK
5460	38.56	5.10	V	43.66	53.98	10.32	AV
*5470	60.11	5.18	V	65.29	73.98	8.69	PK
*5470	43.60	5.18	V	48.78	53.98	5.20	AV

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	55.86	5.10	H	60.96	73.98	13.02	PK
5460	39.13	5.10	H	44.23	53.98	9.75	AV
*5470	60.51	5.18	H	65.69	73.98	8.29	PK
*5470	44.26	5.18	H	49.44	53.98	4.54	AV
5460	55.28	5.10	V	60.38	73.98	13.60	PK
5460	38.54	5.10	V	43.64	53.98	10.34	AV
*5470	59.89	5.18	V	65.07	73.98	8.91	PK
*5470	43.73	5.18	V	48.91	53.98	5.07	AV

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

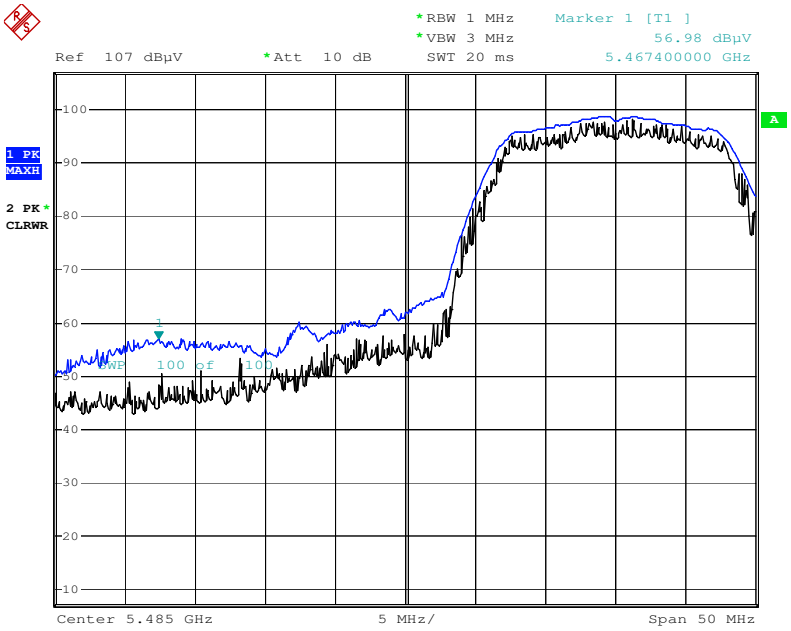
Frequency [MHz]	Reading [dBuV]	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	58.12	5.10	H	63.22	73.98	10.76	PK
5460	42.26	5.10	H	47.36	53.98	6.62	AV
*5470	59.03	5.18	H	64.21	68.20	3.99	PK
5460	57.58	5.10	V	62.68	73.98	11.30	PK
5460	41.64	5.10	V	46.74	53.98	7.24	AV
*5470	58.39	5.18	V	63.57	68.20	4.63	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT + Distance Factor
2. We have done all data rate in 802.11a/n/ac mode test. . Worst case of EUT is lowest data rate in 802.11a/n/ac.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. '*' is radiated band edge test frequency.(not restricted band emissions)

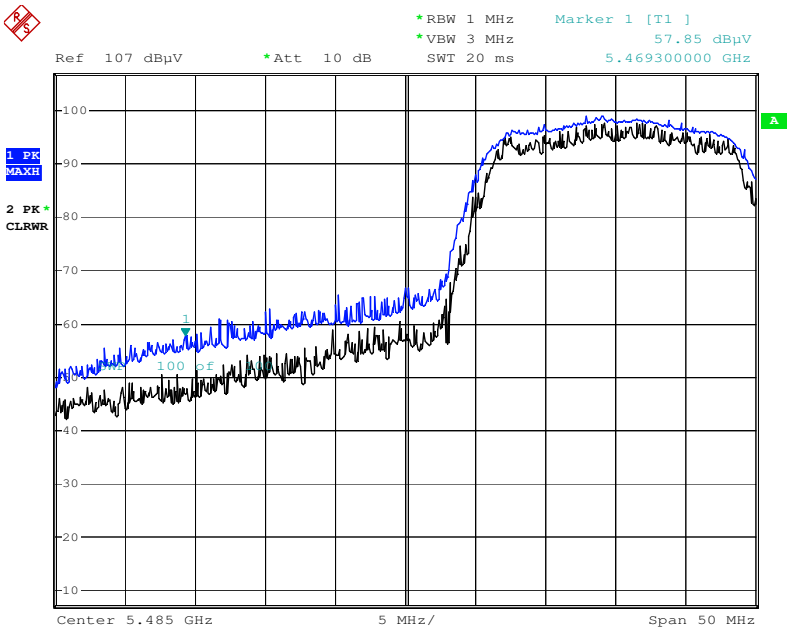
▣ RESULT PLOTS

Radiated Restricted Band Edges plot – Peak Reading (802.11a, Ch.100, X-H)



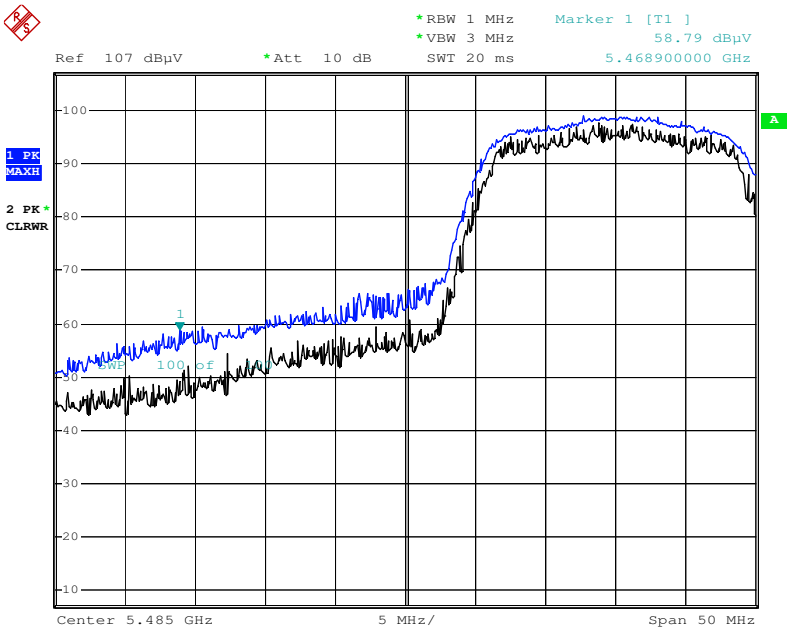
Date: 20.SEP.2016 17:40:53

Radiated Restricted Band Edges plot – Peak Reading (802.11n_HT20, Ch.100, X-H)



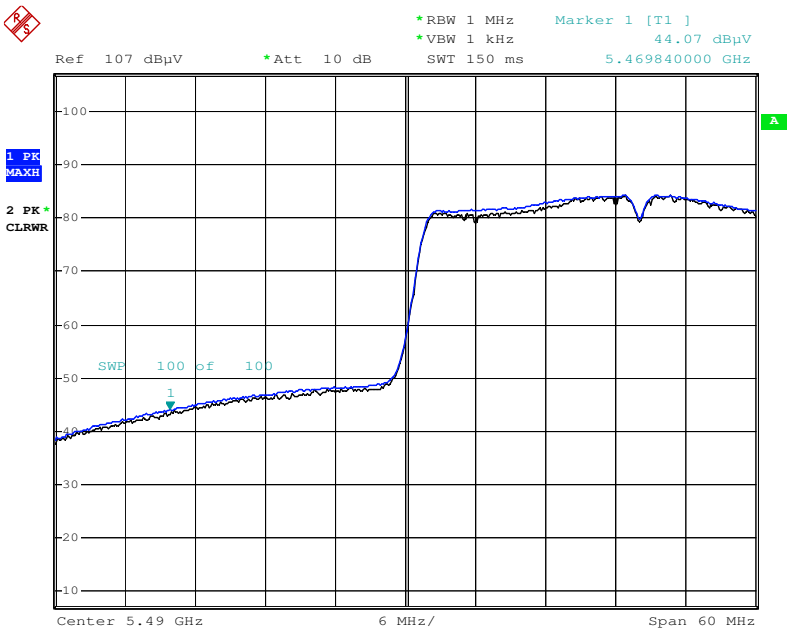
Date: 20.SEP.2016 17:42:25

Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT20, Ch.100, X-H)



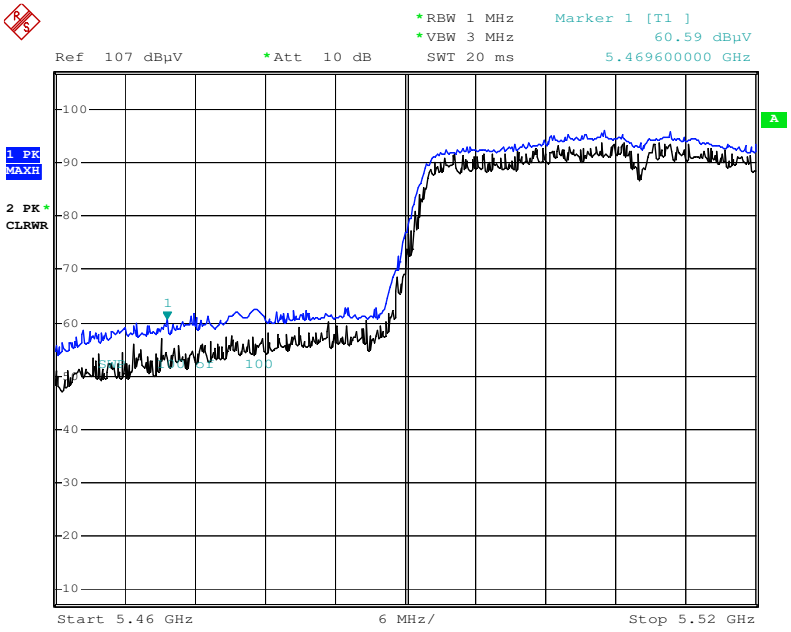
Date: 20.SEP.2016 17:46:04

Radiated Restricted Band Edges plot –Average Reading (802.11n_HT40, Ch.102, X-H)



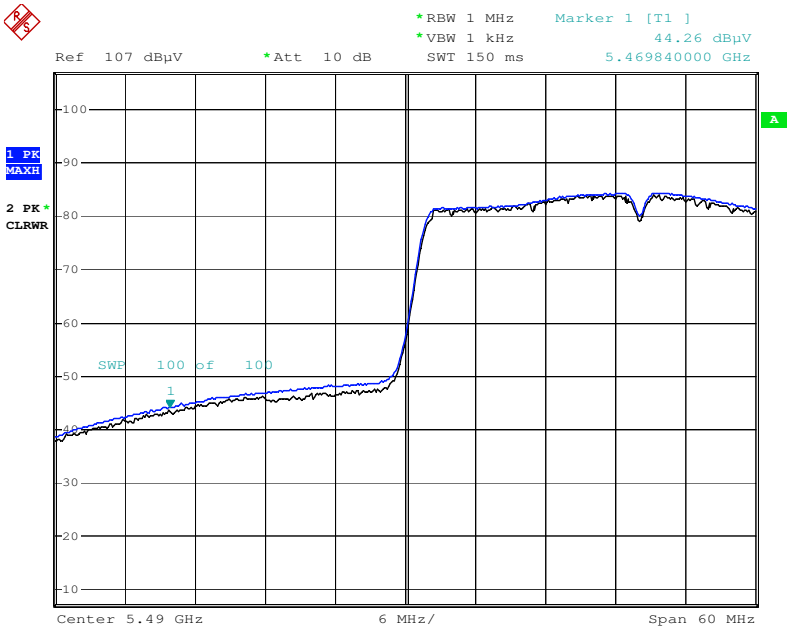
Date: 20.SEP.2016 17:52:11

Radiated Restricted Band Edges plot – Peak Reading (802.11n_HT40, Ch.102, X-H)



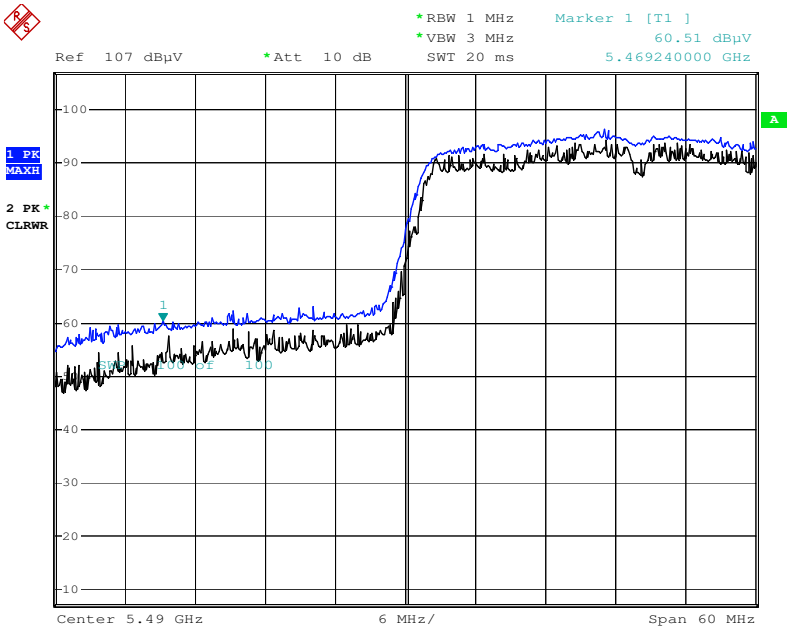
Date: 20.SEP.2016 17:51:12

Radiated Restricted Band Edges plot –Average Reading (802.11ac_VHT40, Ch.102, X-H)



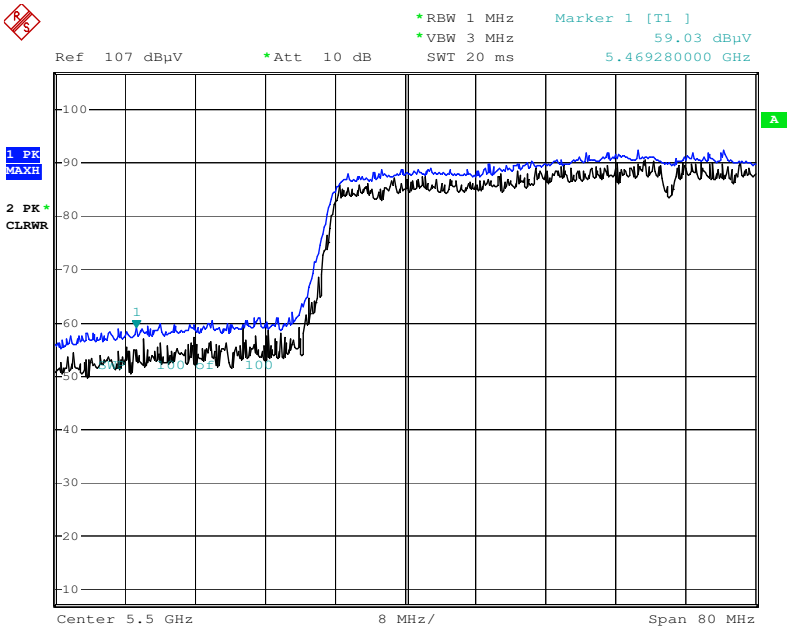
Date: 20.SEP.2016 17:54:47

Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT40, Ch.102, X-H)



Date: 20.SEP.2016 17:57:31

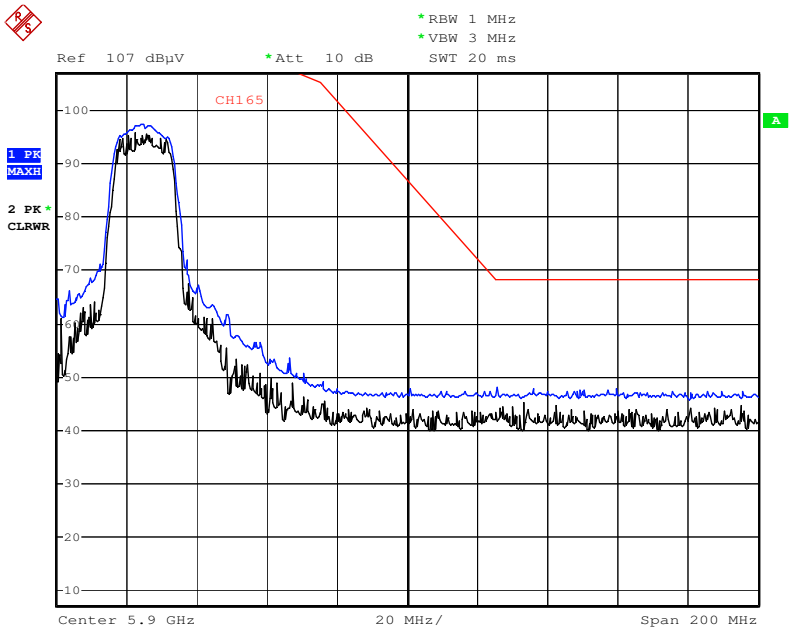
Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT80, Ch.106, X-H)



Date: 20.SEP.2016 18:02:39

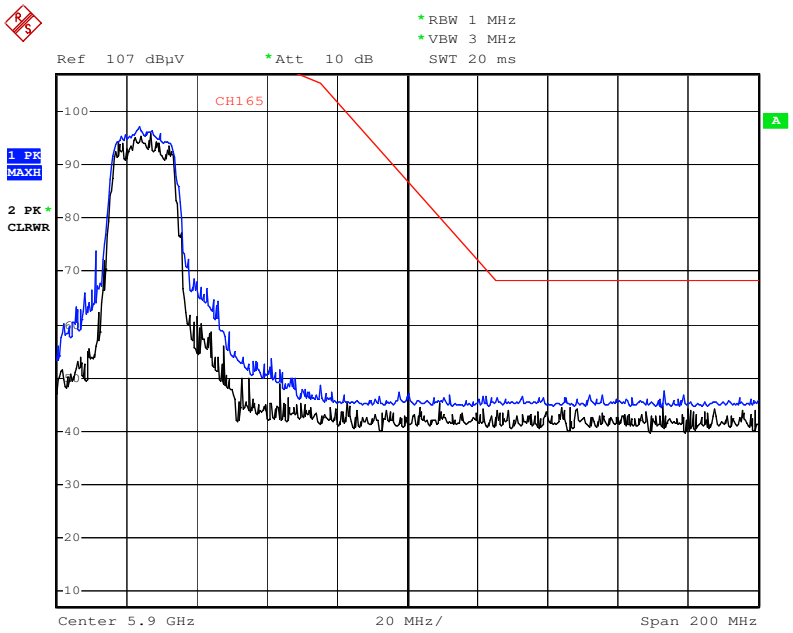
▣ RESULT PLOTS(UNII 3)

Radiated Restricted Band Edges plot – Peak Reading (802.11a)



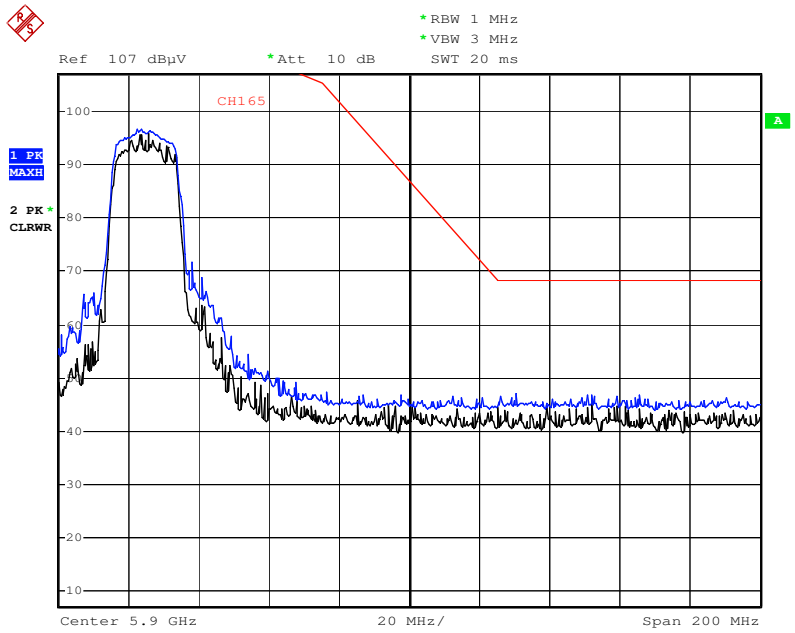
Date: 7.SEP.2016 12:00:09

Radiated Restricted Band Edges plot – Peak Reading (802.11n_HT20)



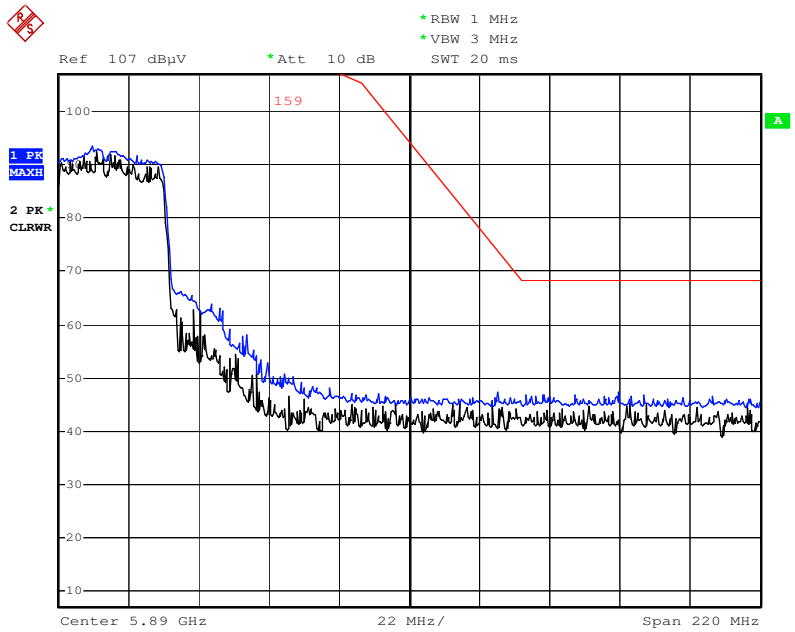
Date: 7.SEP.2016 12:01:09

Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT20)



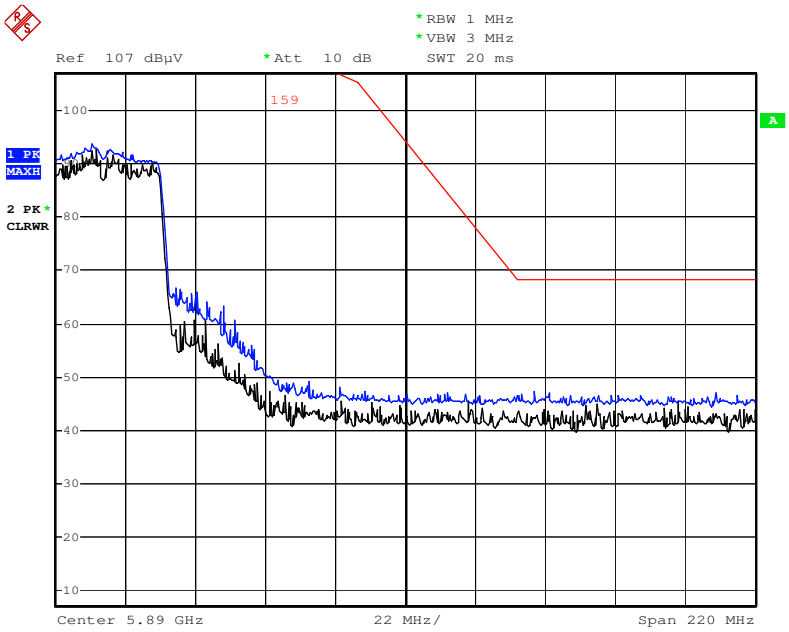
Date: 7.SEP.2016 12:04:34

Radiated Restricted Band Edges plot – Peak Reading (802.11n_HT40)



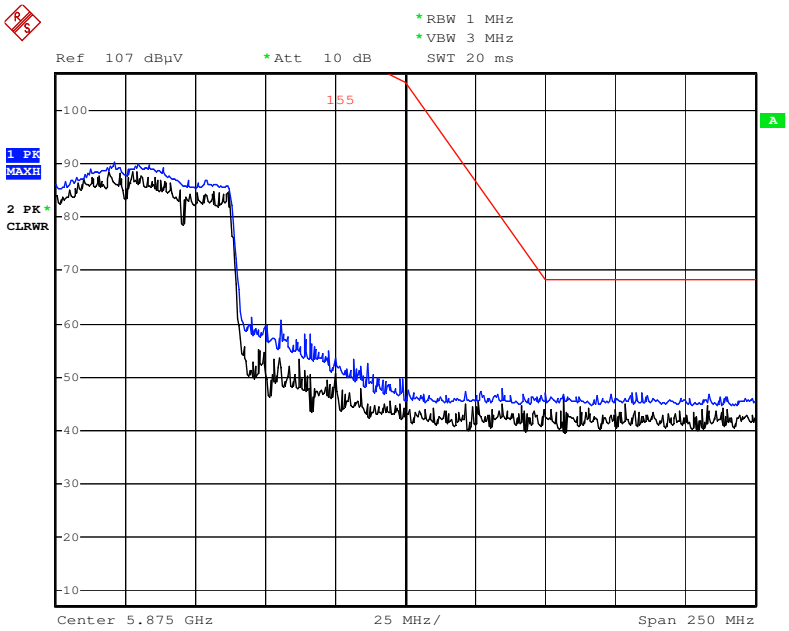
Date: 7.SEP.2016 12:03:35

Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT40)



Date: 7.SEP.2016 12:05:43

Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT80)



Date: 7.SEP.2016 12:06:56

Note : Only the worst case plots for Radiated Spurious Emissions.

9.7 POWERLINE CONDUCTED EMISSIONS

Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference groundplane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

Sample Calculation

Quasi-peak(Final Result) = Reading Value + Correction Factor

▣ RESULT PLOTS

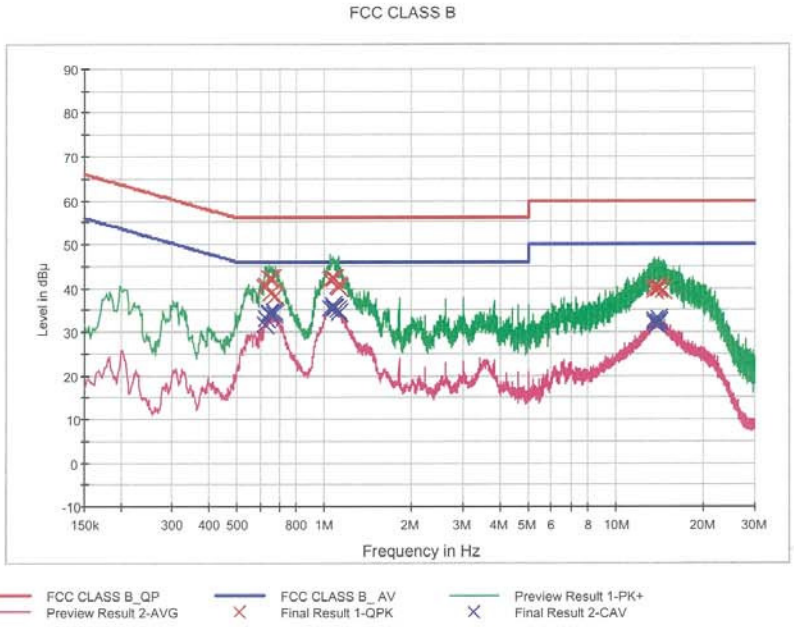
Conducted Emissions (Line 1)

WLAN MODE 5G L1 1 / 2

HCT TEST Report

Common Information

EUT:	LGV34
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE 5G



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.626000	40.0	9.000	Off	L1	9.7	16.0	56.0
0.634000	40.6	9.000	Off	L1	9.7	15.4	56.0
0.650000	42.1	9.000	Off	L1	9.7	13.9	56.0
0.654000	38.8	9.000	Off	L1	9.7	17.2	56.0
0.660000	42.1	9.000	Off	L1	9.7	13.9	56.0
0.678000	38.3	9.000	Off	L1	9.7	17.7	56.0
1.048000	42.0	9.000	Off	L1	9.8	14.0	56.0
1.064000	42.0	9.000	Off	L1	9.8	14.0	56.0
1.072000	42.2	9.000	Off	L1	9.8	13.8	56.0
1.088000	42.2	9.000	Off	L1	9.8	13.8	56.0
1.112000	40.6	9.000	Off	L1	9.8	15.4	56.0
1.124000	40.3	9.000	Off	L1	9.8	15.7	56.0
13.482000	39.6	9.000	Off	L1	10.2	20.4	60.0
13.582000	40.0	9.000	Off	L1	10.2	20.0	60.0
13.984000	39.9	9.000	Off	L1	10.2	20.1	60.0
14.000000	40.3	9.000	Off	L1	10.2	19.7	60.0
14.008000	40.2	9.000	Off	L1	10.2	19.8	60.0
14.492000	39.6	9.000	Off	L1	10.2	20.4	60.0

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WLAN MODE 5G L1 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.626000	31.7	9.000	Off	L1	9.7	14.3	46.0
0.634000	33.0	9.000	Off	L1	9.7	13.0	46.0
0.646000	34.1	9.000	Off	L1	9.7	11.9	46.0
0.650000	34.4	9.000	Off	L1	9.7	11.6	46.0
0.670000	34.7	9.000	Off	L1	9.7	11.3	46.0
0.674000	34.1	9.000	Off	L1	9.7	11.9	46.0
1.050000	35.4	9.000	Off	L1	9.8	10.6	46.0
1.064000	35.4	9.000	Off	L1	9.8	10.6	46.0
1.072000	36.0	9.000	Off	L1	9.8	10.0	46.0
1.088000	35.5	9.000	Off	L1	9.8	10.5	46.0
1.112000	35.1	9.000	Off	L1	9.8	10.9	46.0
1.124000	34.5	9.000	Off	L1	9.8	11.5	46.0
13.480000	32.1	9.000	Off	L1	10.2	17.9	50.0
13.582000	32.9	9.000	Off	L1	10.2	17.1	50.0
13.944000	31.6	9.000	Off	L1	10.2	18.4	50.0
13.984000	32.3	9.000	Off	L1	10.2	17.7	50.0
14.000000	33.1	9.000	Off	L1	10.2	16.9	50.0
14.008000	32.5	9.000	Off	L1	10.2	17.5	50.0

2016-09-22 오전 10:00:37

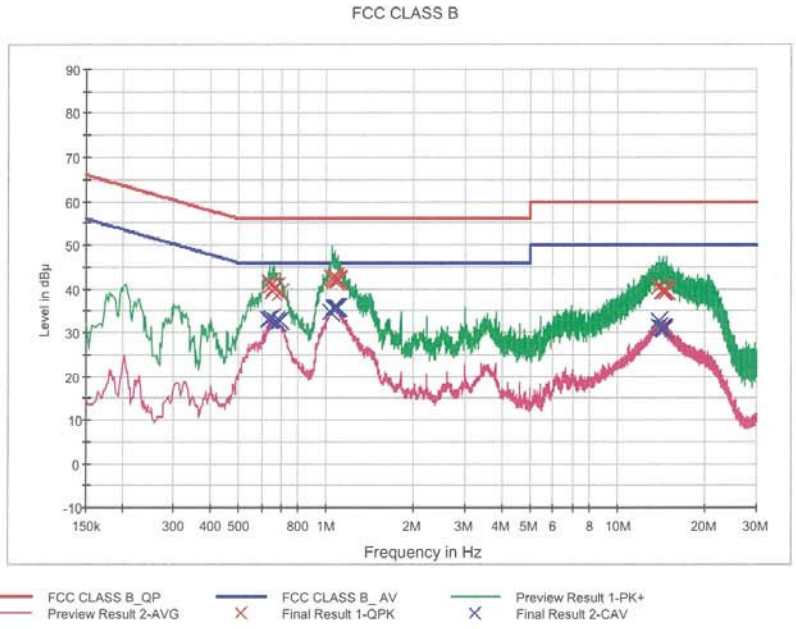
Conducted Emissions (Line 2)

WLAN MODE 5G N 1 / 2

HCT TEST Report

Common Information

EUT:	LGV34
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE 5G



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.638000	41.5	9.000	Off	N	9.7	14.5	56.0
0.650000	40.9	9.000	Off	N	9.7	15.1	56.0
0.656000	39.6	9.000	Off	N	9.7	16.4	56.0
0.660000	40.3	9.000	Off	N	9.7	15.7	56.0
0.674000	40.5	9.000	Off	N	9.7	15.5	56.0
0.696000	39.2	9.000	Off	N	9.7	16.8	56.0
1.048000	42.7	9.000	Off	N	9.7	13.3	56.0
1.062000	42.4	9.000	Off	N	9.7	13.6	56.0
1.066000	42.7	9.000	Off	N	9.7	13.3	56.0
1.074000	42.0	9.000	Off	N	9.7	14.0	56.0
1.092000	42.3	9.000	Off	N	9.7	13.7	56.0
1.096000	41.9	9.000	Off	N	9.7	14.1	56.0
13.904000	40.4	9.000	Off	N	10.2	19.6	60.0
14.230000	39.6	9.000	Off	N	10.2	20.4	60.0
14.376000	39.4	9.000	Off	N	10.2	20.6	60.0
14.386000	39.8	9.000	Off	N	10.2	20.2	60.0
14.614000	39.6	9.000	Off	N	10.2	20.4	60.0
14.618000	39.5	9.000	Off	N	10.2	20.5	60.0

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.634000	33.1	9.000	Off	N	9.7	12.9	46.0
0.638000	33.0	9.000	Off	N	9.7	13.0	46.0
0.650000	33.6	9.000	Off	N	9.7	12.4	46.0
0.672000	32.6	9.000	Off	N	9.7	13.4	46.0
0.676000	32.5	9.000	Off	N	9.7	13.5	46.0
0.696000	32.9	9.000	Off	N	9.7	13.2	46.0
1.036000	34.9	9.000	Off	N	9.7	11.1	46.0
1.052000	35.9	9.000	Off	N	9.7	10.1	46.0
1.066000	35.7	9.000	Off	N	9.7	10.3	46.0
1.074000	35.7	9.000	Off	N	9.7	10.3	46.0
1.082000	35.7	9.000	Off	N	9.7	10.3	46.0
1.092000	35.7	9.000	Off	N	9.7	10.3	46.0
13.830000	31.3	9.000	Off	N	10.2	18.7	50.0
13.904000	32.7	9.000	Off	N	10.2	17.3	50.0
14.230000	31.0	9.000	Off	N	10.2	19.0	50.0
14.376000	31.0	9.000	Off	N	10.2	19.0	50.0
14.412000	30.9	9.000	Off	N	10.2	19.1	50.0
14.436000	30.6	9.000	Off	N	10.2	19.4	50.0

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10. LIST OF TEST EQUIPMENT

10.1 LIST OF TEST EQUIPMENT(Conducted Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	12/28/2015	Annual	100073
Rohde & Schwarz	ESCI / Test Receiver	12/28/2015	Annual	100584
Agilent	N9020A / Signal Analyzer	06/24/2016	Annual	MY51110085
Agilent	N9030A / Signal Analyzer	11/24/2015	Annual	MY49431210
Agilent	N1911A / Power Meter	03/11/2016	Annual	MY45100523
Agilent	N1921A / Power Sensor	03/11/2016	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/30/2015	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	06/14/2016	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	03/09/2016	Annual	KR75303962
Agilent	8493C / Attenuator(10 dB)	07/15/2016	Annual	07560

10.2 LIST OF TEST EQUIPMENT(Radiated Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Audix	AM4000 / Antenna Position Tower	N/A	N/A	N/A
Audix	Turn Table	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Rohde & Schwarz	Loop Antenna	02/23/2016	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	04/15/2015	Biennial	255
Schwarzbeck	BBHA 9120D / Horn Antenna	05/07/2015	Biennial	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	09/03/2015	Biennial	BBHA9170541
Rohde & Schwarz	FSP / Spectrum Analyzer	09/10/2016	Annual	100688
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/23/2016	Annual	101068-SZ
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	06/24/2016	Annual	8
Wainwright Instruments	WHFX7.0/18G-8SS / High Pass Filter	05/13/2016	Annual	29
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	07/06/2016	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/26/2016	Annual	2
Agilent	8493C-10 / Attenuator(10 dB)	08/11/2016	Annual	76649
CERNEX	CBLU1183540 / Power Amplifier	07/15/2016	Annual	22964
CERNEX	CBL06185030 / Power Amplifier	07/15/2016	Annual	22965
CERNEX	CBL18265035 / Power Amplifier	07/11/2016	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	07/11/2016	Annual	25956