8.4 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(CDD)

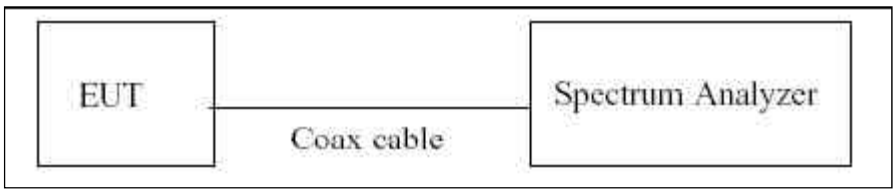
Power Spectral Density

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 :

1. The limits of conducted power spectral density were applied the antenna gain. Therefore, if conducted power is pass, e.i.r.p. is also pass. So, we attached only conducted power spectral density table.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

We tested according to Method in KDB 789033(issued 01/08/2016).

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)

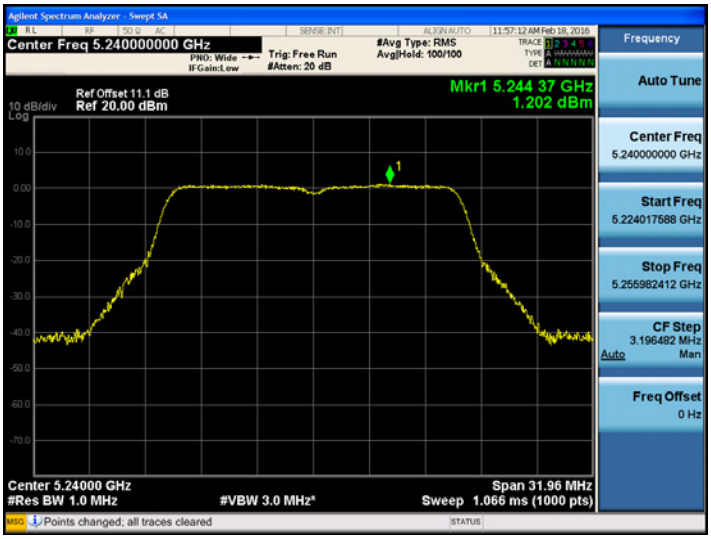
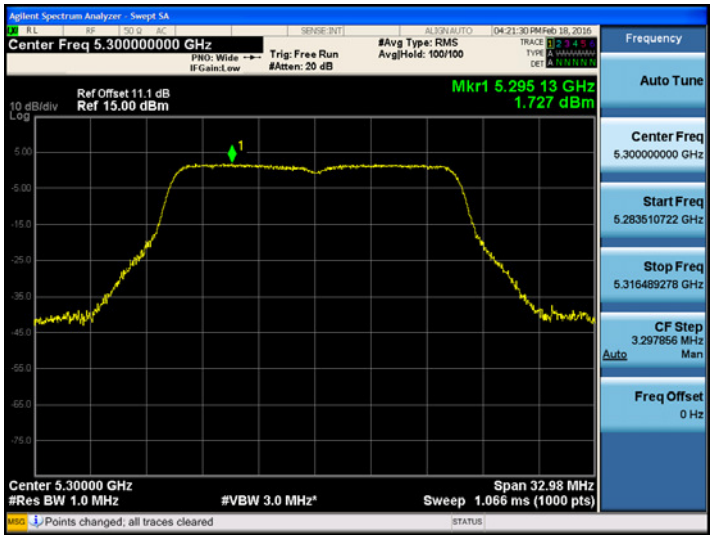
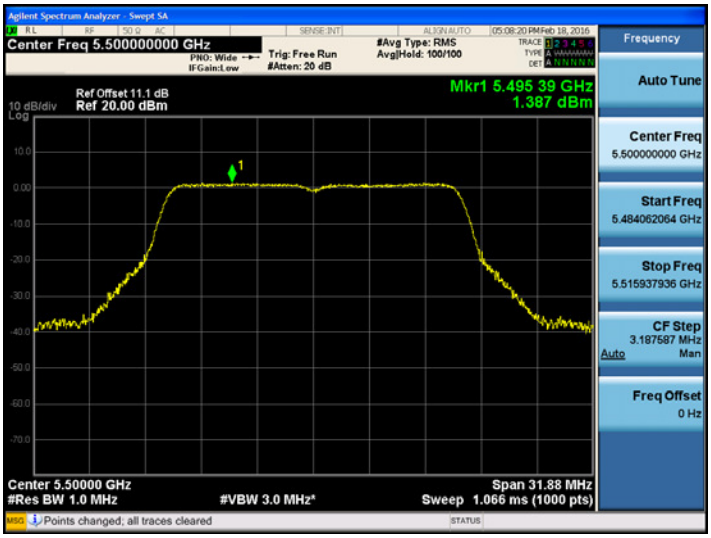
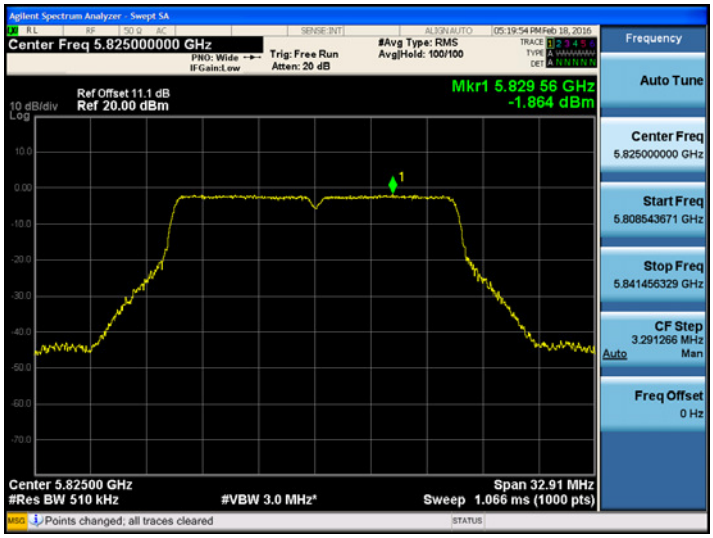
▣ 802.11a_20MHz BW

▣ 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	0.852	0.757	1.609	11	Pass
5200	40		1.032	0.588	1.620		Pass
5240	48		1.202	0.757	1.959		Pass
5260	52		1.534	0.404	1.938	11	Pass
5300	60		1.727	0.404	2.131		Pass
5320	64		1.530	0.588	2.118		Pass
5500	100		1.387	0.588	1.975	11	Pass
5580	116		1.686	0.209	1.895		Pass
5700	140		1.181	0.588	1.769		Pass
5745	149		-2.340	0.588	-1.752	30	Pass
5785	157		-1.969	0.308	-1.661		Pass
5825	165		-1.864	0.209	-1.655		Pass

▣ TEST Plot for 802.11a 20MHz BW

802.11a_20MHz BW UNII 1 BAND PSD CH 48	802.11a_20MHz BW UNII 2A BAND PSD CH 60
	
802.11a_20MHz BW UNII 2C BAND PSD CH 100	**802.11a_20MHz BW UNII 3 BAND PSD CH 165**
	

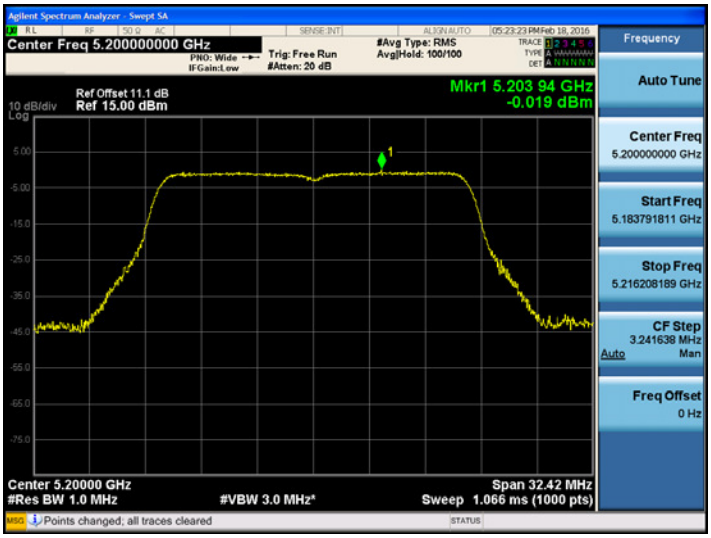
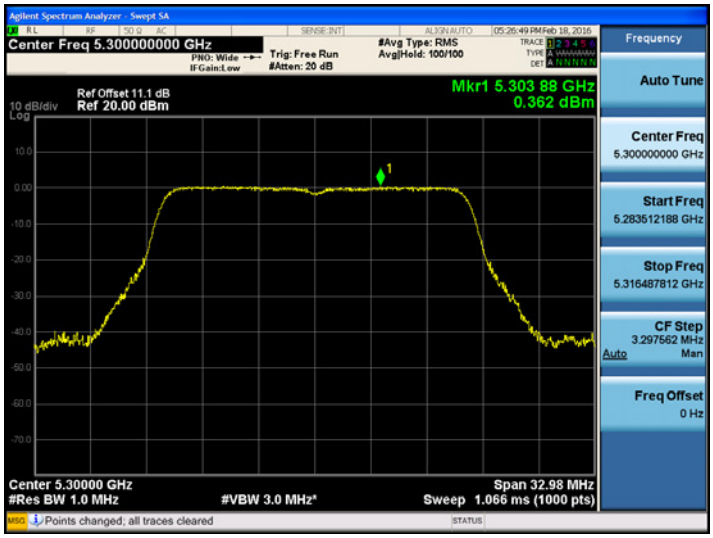
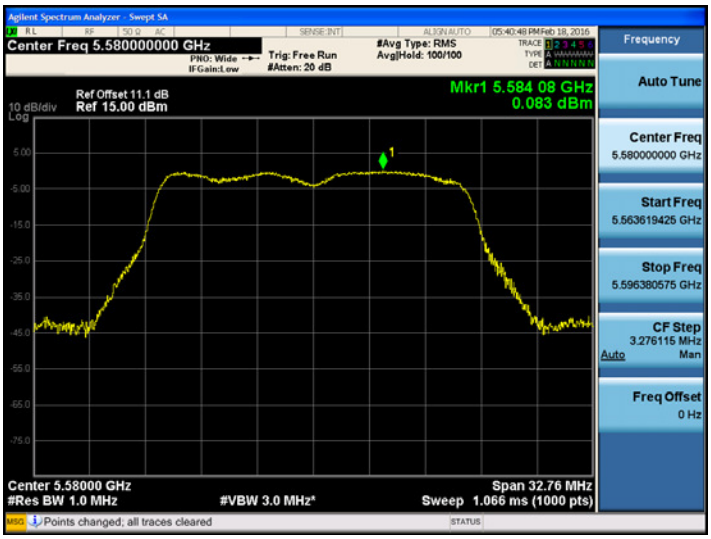
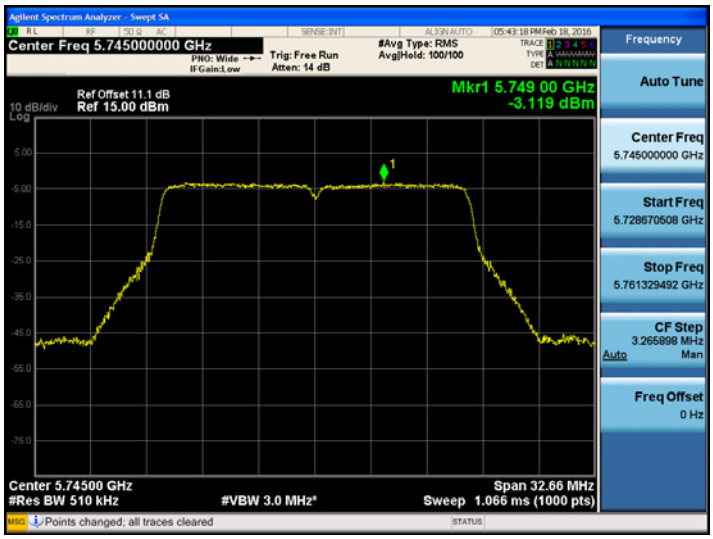
▣802.11n_20MHz BW

▣ 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 20M BW	-0.757	0.225	-0.532	11	Pass
5200	40		-0.019	0.225	0.206		Pass
5240	48		-0.050	0.225	0.175		Pass
5260	52		0.197	0.225	0.422	11	Pass
5300	60		0.362	0.225	0.587		Pass
5320	64		-0.045	0.597	0.552		Pass
5500	100		0.191	0.597	0.788	11	Pass
5580	116		0.083	1.134	1.217		Pass
5700	140		-0.006	0.225	0.219		Pass
5745	149		-3.119	0.814	-2.305	30	Pass
5785	157		-2.965	0.225	-2.740		Pass
5825	165		-2.846	0.225	-2.621		Pass

▣ TEST Plot for 802.11n 20MHz BW

802.11n_20MHz BW UNII 1 BAND PSD CH 40	802.11n_20MHz BW UNII 2A BAND PSD CH 60
	
802.11n_20MHz BW UNII 2C BAND PSD CH 116	**802.11n_20MHz BW UNII 3 BAND PSD CH 149**
	

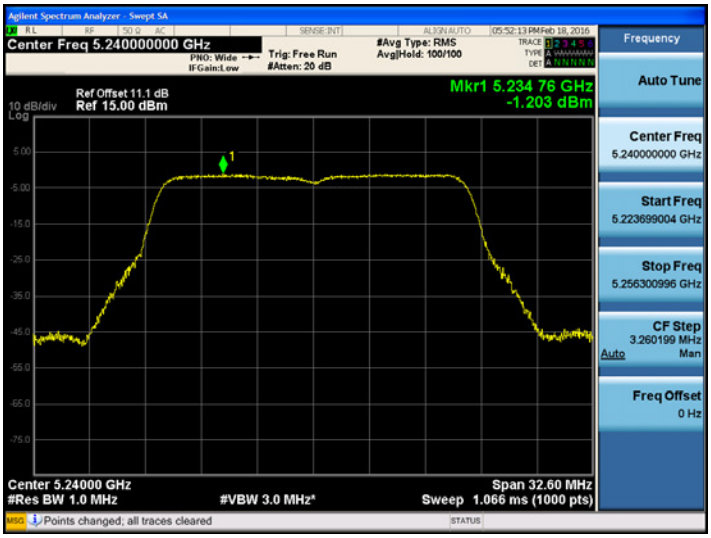
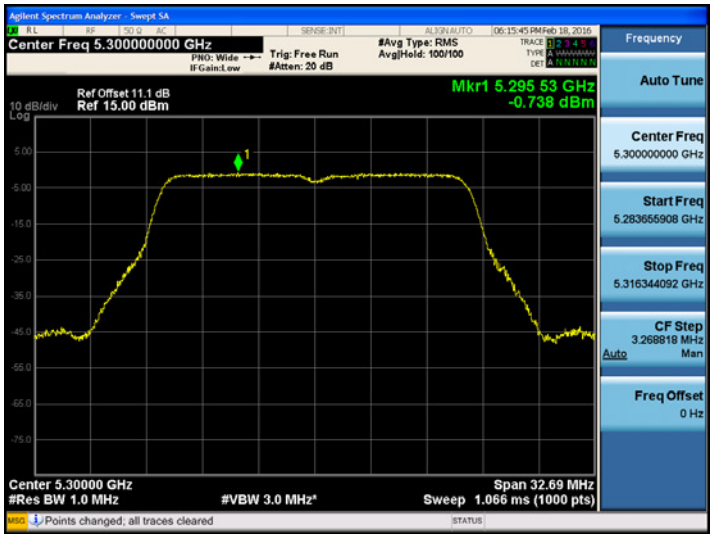
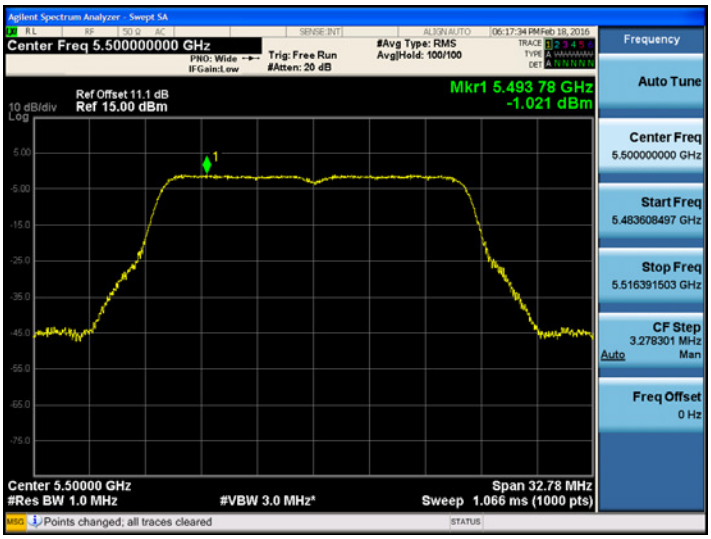
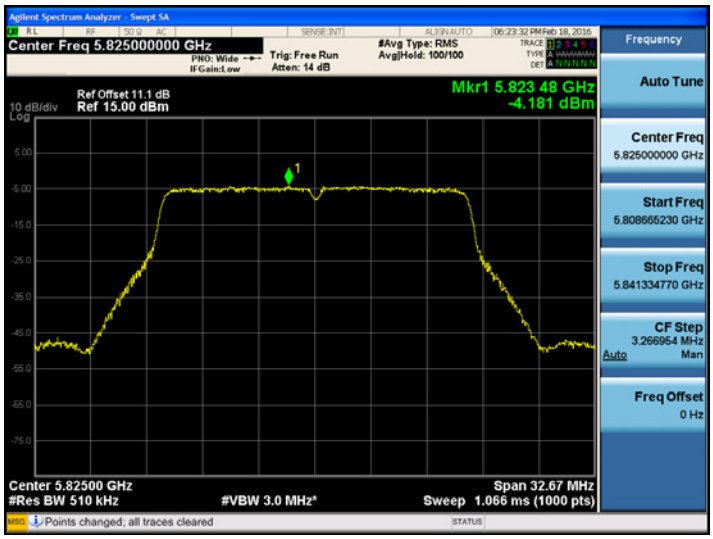
▣ 802.11ac_20MHz BW

▣ 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 _20MHz BW	-1.610	0.420	-1.190	11	Pass
5200	40		-1.551	0.420	-1.131		Pass
5240	48		-1.203	0.420	-0.783		Pass
5260	52		-0.898	0.775	-0.123	11	Pass
5300	60		-0.738	0.775	0.037		Pass
5320	64		-0.806	0.775	-0.031		Pass
5500	100		-1.021	0.775	-0.246	11	Pass
5580	116		-1.450	1.079	-0.371		Pass
5700	140		-0.980	0.420	-0.560		Pass
5745	149		-4.288	0.775	-3.513	30	Pass
5785	157		-3.996	0.420	-3.576		Pass
5825	165		-4.181	0.775	-3.406		Pass

▣ TEST Plot for 802.11ac 20MHz BW

802.11ac_20MHz BW UNII 1 BAND PSD CH 48	802.11ac _20MHz BW UNII 2A BAND PSD CH 60
	
802.11ac _20MHz BW UNII 2C BAND PSD CH 100	**802.11ac _20MHz BW UNII 3 BAND PSD CH 165**
	

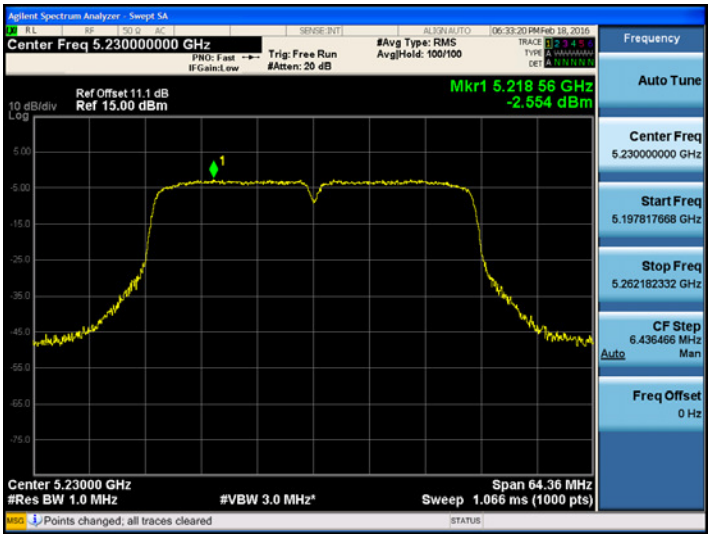
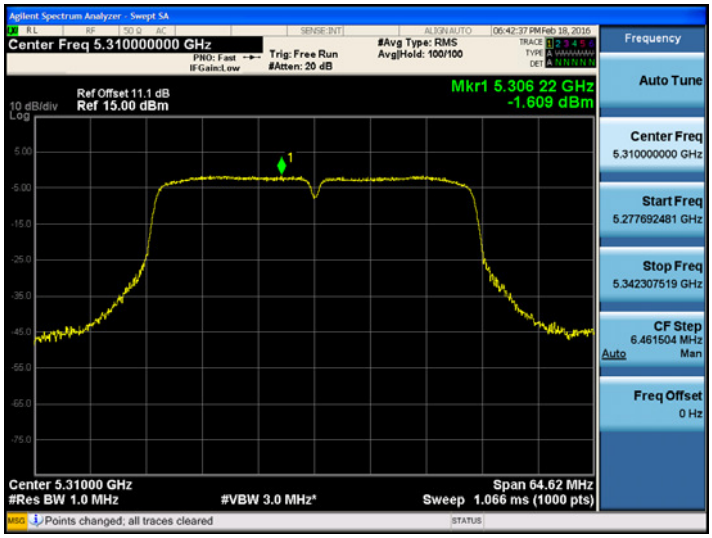
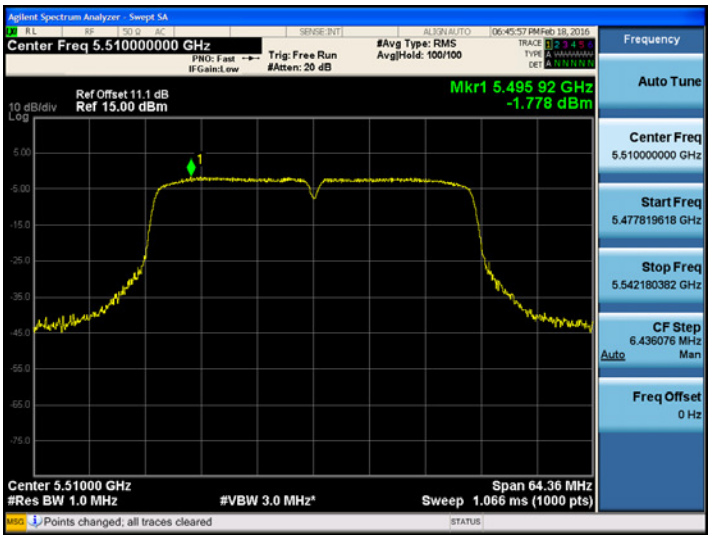
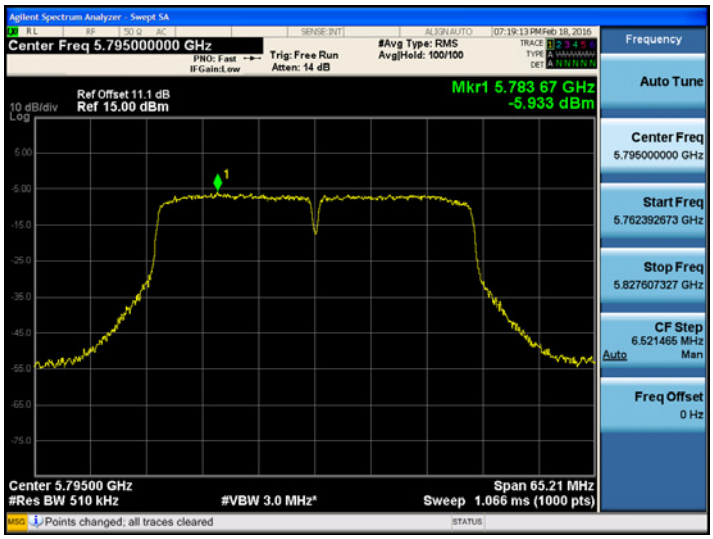
▣ 802.11n_40MHz BW

▣ 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 40MHz BW	-2.286	0.448	-1.838	11	Pass
5230	46		-2.554	1.471	-1.083		Pass
5270	54		-2.346	0.835	-1.511	11	Pass
5310	62		-1.609	0.448	-1.161		Pass
5510	102		-1.778	0.448	-1.330	11	Pass
5550	110		-1.910	0.448	-1.462		Pass
5670	134		-2.832	1.168	-1.664		Pass
5755	151		-5.598	0.835	-4.763	30	Pass
5795	159		-5.933	1.471	-4.462		Pass

▣ TEST Plot for 802.11n 40MHz BW

802.11n_40MHz BW UNII 1 BAND PSD CH 46	802.11n_40MHz BW UNII 2A BAND PSD CH 62
	
802.11n_40MHz BW UNII 2C BAND PSD CH 102	**802.11n_40MHz BW UNII 3 BAND PSD CH 159**
	

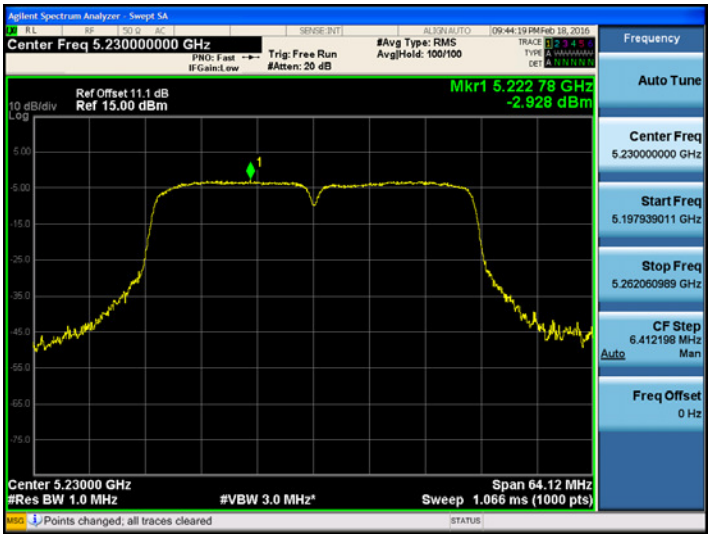
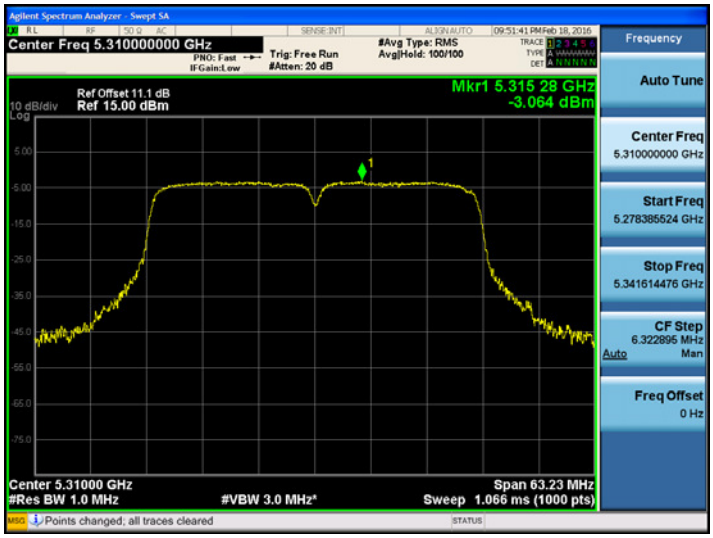
▣ 802.11ac_40MHz BW

▣ 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 40MHz BW	-2.533	0.796	-1.737	11	Pass
5230	46		-2.928	1.365	-1.563		Pass
5270	54		-2.698	0.796	-1.902	11	Pass
5310	62		-3.064	1.365	-1.699		Pass
5510	102		-3.387	1.365	-2.022	11	Pass
5550	110		-4.738	3.622	-1.116		Pass
5670	134		-3.811	1.806	-2.005		Pass
5755	151		-5.964	0.796	-5.168	30	Pass
5795	159		-6.205	1.365	-4.840		Pass

▣ TEST Plot for 802.11ac_ 40MHz BW

802.11ac_40MHz BW UNII 1 BAND PSD CH 46	802.11ac_40MHz BW UNII 2A BAND PSD CH 62
	
802.11ac_40MHz BW UNII 2C BAND PSD CH 110	**802.11ac_40MHz BW UNII 3 BAND PSD CH 159**
	

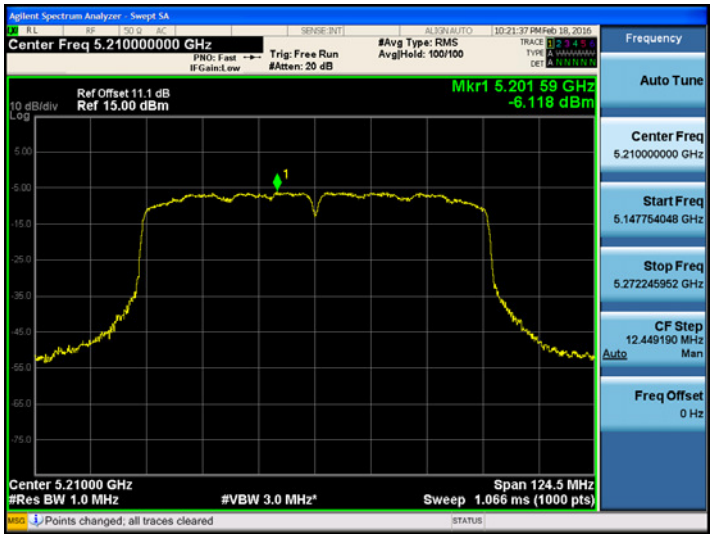
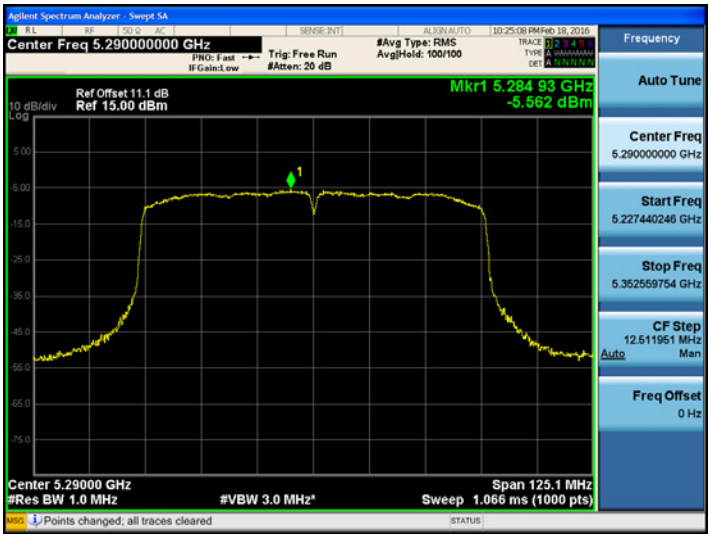
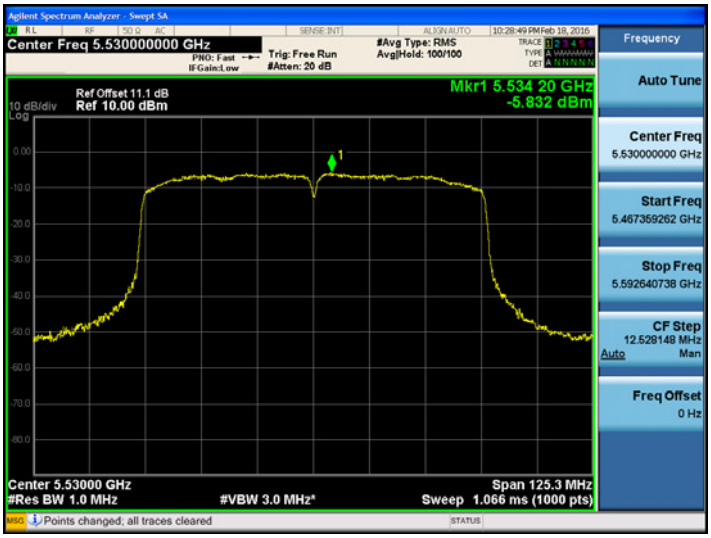
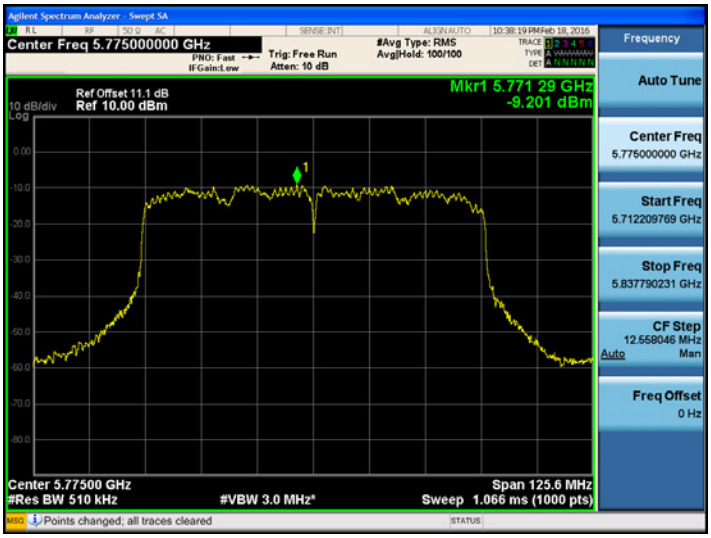
▣ **802.11ac_80MHz BW**

▣ **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 80MHz BW	-6.118	1.065	-5.053	11	Pass
5290	58		-5.562	0.632	-4.930	11	Pass
5530	106		-5.832	0.632	-5.200	11	Pass
5775	155		-9.201	1.568	-7.633	30	Pass

▣ TEST Plot for 802.11ac_80MHz BW

802.11ac_80MHz BW UNII 1 BAND PSD CH 42	802.11ac_80MHz BW UNII 2A BAND PSD CH 58
	
802.11ac_80MHz BW UNII 2C BAND PSD CH 106	**802.11ac_80MHz BW UNII 3 BAND PSD CH 155**
	

8.5 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.

a) Temperature: The temperature is varied from -30°C to + 50°C using an environmental chamber.

b) For battery operated equipment, the equipment tests shall be performed using a new battery.

c) Test Procedure

- Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
- Set the temperature control on the chamber to the highest specified in the regulatoryrequirements for the type of device and allow the oscillator heater and the chamber temperatureto stabilize.
- While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

d) The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.

Note : Below the measurement result is worst value of the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes afterthe EUT is energized

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)	5180016.23	16.23
100%		-30	5179996.94	-3.06
100%		-20	5180001.09	1.09
100%		-10	5180004.60	4.60
100%		0	5180008.95	8.95
100%		+10	5180012.78	12.78
100%		+30	5180021.28	21.28
100%		+40	5180024.09	24.09
100%		+50	5180025.11	25.11
115%	4.4	+20	5180019.04	19.04
Batt. Endpoint	3.6	+20	5180016.23	16.23

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)	5260016.33	16.33
100%		-30	5259994.94	-5.06
100%		-20	5259998.97	-1.03
100%		-10	5260002.84	2.84
100%		0	5260007.64	7.64
100%		+10	5260012.19	12.19
100%		+30	5260020.09	20.09
100%		+40	5260024.63	24.63
100%		+50	5260027.84	27.84
115%	4.4	+20	5260019.87	19.87
Batt. Endpoint	3.6	+20	5260016.33	16.33

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)	5500017.07	17.07
100%		-30	5499995.84	-4.16
100%		-20	5499997.97	-2.03
100%		-10	5500003.79	3.79
100%		0	5500009.98	9.98
100%		+10	5500013.26	13.26
100%		+30	5500021.19	21.19
100%		+40	5500026.30	26.3
100%		+50	5500029.04	29.04
115%	4.4	+20	5500022.08	22.08
Batt. Endpoint	3.6	+20	5500017.07	17.07

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)	5745017.87	17.87
100%		-30	5744993.23	-6.77
100%		-20	5744998.51	-1.49
100%		-10	5745004.65	4.65
100%		0	5745009.78	9.78
100%		+10	5745015.25	15.25
100%		+30	5745023.37	23.37
100%		+40	5745026.89	26.89
100%		+50	5745029.90	29.90
115%	4.4	+20	5745020.07	20.07
Batt. Endpoint	3.6	+20	5745017.87	17.87

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)	5190015.99	15.99
100%		-30	5189992.40	-7.60
100%		-20	5189995.11	-4.89
100%		-10	5190001.19	1.19
100%		0	5190006.48	6.48
100%		+10	5190011.54	11.54
100%		+30	5190019.49	19.49
100%		+40	5190026.16	26.16
100%		+50	5190028.76	28.76
115%	4.4	+20	5190016.89	16.89
Batt. Endpoint	3.6	+20	5190015.99	15.99

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 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)	5270016.18	16.18
100%		-30	5269992.84	-7.16
100%		-20	5269997.51	-2.49
100%		-10	5270003.06	3.06
100%		0	5270007.59	7.59
100%		+10	5270011.26	11.26
100%		+30	5270020.18	20.18
100%		+40	5270024.57	24.57
100%		+50	5270029.84	29.84
115%	4.4	+20	5270020.16	20.16
Batt. Endpoint	3.6	+20	5270016.18	16.18

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.

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)	5510016.92	16.92
100%		-30	5509994.94	-5.06
100%		-20	5509996.89	-3.11
100%		-10	5510001.82	1.82
100%		0	5510006.79	6.79
100%		+10	5510011.64	11.64
100%		+30	5510021.19	21.19
100%		+40	5510024.57	24.57
100%		+50	5510029.94	29.94
115%	4.4	+20	5510018.82	18.82
Batt. Endpoint	3.6	+20	5510016.92	16.92

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)	5755017.78	17.78
100%		-30	5754993.34	-6.66
100%		-20	5754995.71	-4.29
100%		-10	5754998.90	-1.1
100%		0	5755006.79	6.79
100%		+10	5755011.67	11.67
100%		+30	5755021.64	21.64
100%		+40	5755026.49	26.49
100%		+50	5755029.19	29.19
115%	4.4	+20	5755020.13	20.13
Batt. Endpoint	3.6	+20	5755017.78	17.78

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)	5210016.04	16.04
100%		-30	5209991.74	-8.26
100%		-20	5209996.56	-3.44
100%		-10	5210002.09	2.09
100%		0	5210007.84	7.84
100%		+10	5210013.64	13.64
100%		+30	5210021.16	21.16
100%		+40	5210025.95	25.95
100%		+50	5210027.94	27.94
115%	4.4	+20	5210023.34	23.34
Batt. Endpoint	3.6	+20	5210016.04	16.04

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)	5290016.26	16.26
100%		-30	5289992.39	-7.61
100%		-20	5289995.74	-4.26
100%		-10	5290001.33	1.33
100%		0	5290005.58	5.58
100%		+10	5290012.51	12.51
100%		+30	5290019.48	19.48
100%		+40	5290026.45	26.45
100%		+50	5290030.12	30.12
115%	4.4	+20	5290020.31	20.31
Batt. Endpoint	3.6	+20	5290016.26	16.26

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)	5530017.05	17.05
100%		-30	5529991.54	-8.46
100%		-20	5529995.84	-4.16
100%		-10	5530002.08	2.08
100%		0	5530009.46	9.46
100%		+10	5530013.57	13.57
100%		+30	5530021.64	21.64
100%		+40	5530025.35	25.35
100%		+50	5530028.81	28.81
115%	4.4	+20	5530020.13	20.13
Batt. Endpoint	3.6	+20	5530017.05	17.05

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)	5775017.70	17.70
100%		-30	5774993.11	-6.89
100%		-20	5774998.87	-1.13
100%		-10	5775003.36	3.36
100%		0	5775009.48	9.48
100%		+10	5775015.64	15.64
100%		+30	5775021.13	21.13
100%		+40	5775023.51	23.51
100%		+50	5775026.15	26.15
115%	4.4	+20	5775018.46	18.46
Batt. Endpoint	3.6	+20	5775017.70	17.70

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.

8.6 RADIATED MEASUREMENT

8.6.1 RADIATED SPURIOUS EMISSIONS.

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

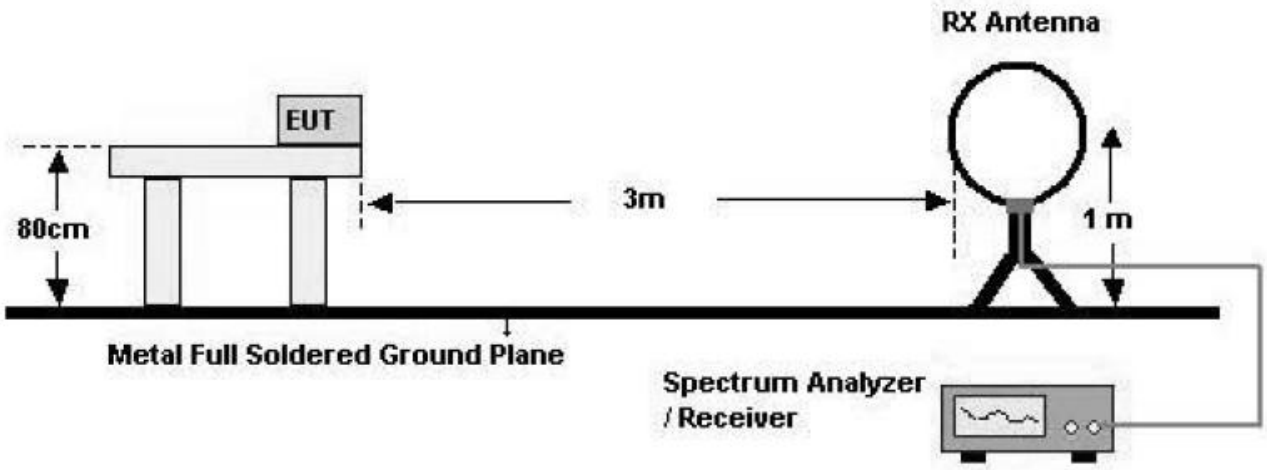
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

▣ §15.407, KDB 789033 D02

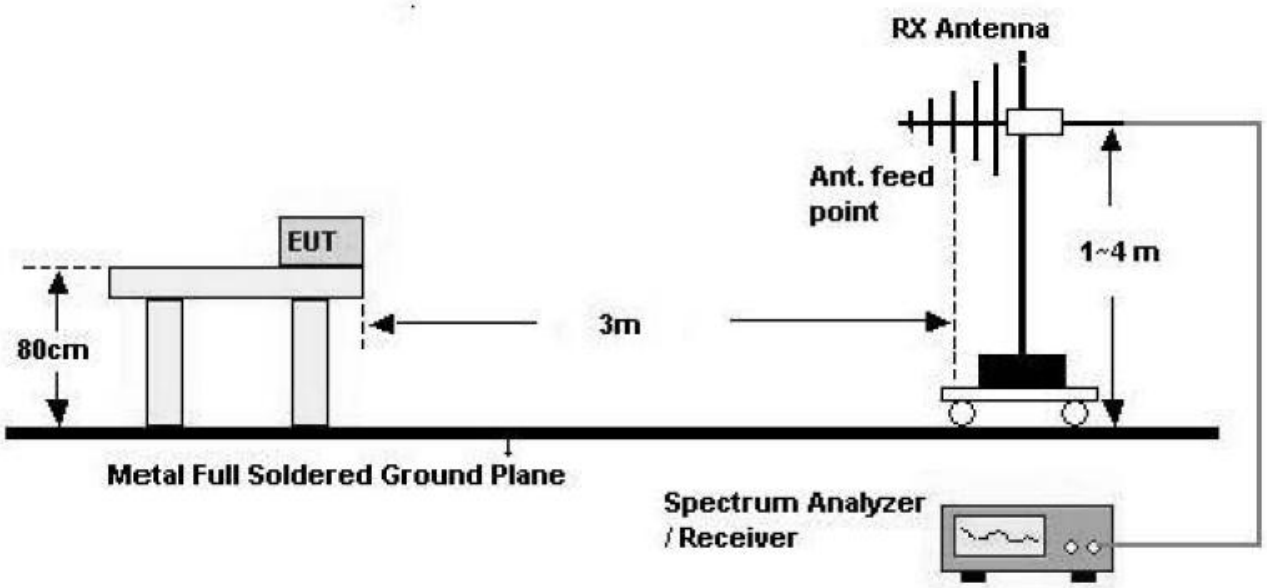
All harmonics that do not lie in a restricted band are subject to a peak limit of -27 dBm/MHz. At a distance of 3 meters the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2 dB to the EIRP limit of -27 dBm/MHz to obtain the limit for out of band spurious emissions of 68.2 dBμV/m. Espectally, for transmitter operating in the 5725 Mhz – 5850 MHz : all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequency 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

Test Configuration

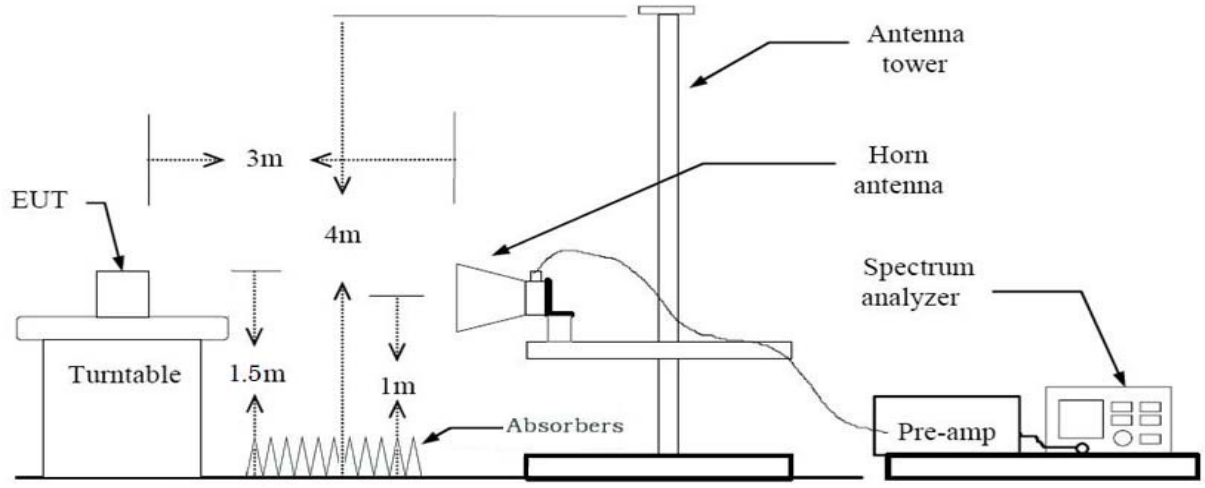
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE USED

ANSI C63.10:2013

Method G)5) in KDB 789033, issued 01/08/2016 (Peak)

Method G)6)d) in KDB 789033, issued 01/08/2016 (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 (Average Detection)

1. RBW = 1 MHz
2. VBW ≥ 3 MHz
3. Detector = power averaging(rms), if span(# of points in sweep) ≤ RBW/2. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, the detector mode shall be set to peak.
4. Aveageing type = power averaging(rms)

instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.

5. Sweep time = auto.
6. Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, the number of traces shall be increased by a factor of 1/x, where x is the duty cycle.

Note :

1. We used the Method VB for 802.11a/n/ac_20, n/ac_40, ac_80 mode to perform the average filed strength measurements.
2. The actual setting value of VBW for 802.11a/n/ac_20, n/ac_40, ac_80

Mode	Worst Data rate (Mbps)	T_{on} (ms)	T_{total} (ms)	Duty Cycle (%)	Duty Cycle Factor
a	**6**	**2.030**	**2.130**	**95.31**	**0.209**
n_20	**MCS 0**	**1.880**	**1.980**	**94.95**	**0.225**
n_40	**MCS 0**	**0.920**	**1.020**	**90.20**	**0.448**
ac_20	**MCS 0**	**0.975**	**1.074**	**90.78**	**0.420**
ac_40	**MCS 0**	**0.492**	**0.591**	**83.25**	**0.796**
ac_80	**MCS 0**	**0.249**	**0.288**	**86.46**	**0.632**

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_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	42.31	7.23	V	49.54	68.20	18.66	PK
15540	45.41	11.95	V	57.36	73.98	16.62	PK
15540	33.48	11.95	V	45.43	53.98	8.55	AV
10360	42.35	7.23	H	49.58	68.20	18.62	PK
15540	45.53	11.95	H	57.48	73.98	16.50	PK
15540	33.65	11.95	H	45.60	53.98	8.38	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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.

Band :	UNII 1
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	41.33	7.24	V	48.57	68.20	19.63	PK
15600	45.24	11.32	V	56.56	73.98	17.42	PK
15600	33.74	11.32	V	45.06	53.98	8.92	AV
10400	41.35	7.24	H	48.59	68.20	19.61	PK
15600	45.28	11.32	H	56.60	73.98	17.38	PK
15600	33.91	11.32	H	45.23	53.98	8.75	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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.

Band :	UNII 1
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	41.81	7.25	V	49.06	68.20	19.14	PK
15720	47.89	12.06	V	59.95	73.98	14.03	PK
15720	34.77	12.06	V	46.83	53.98	7.15	AV
10480	41.85	7.25	H	49.10	68.20	19.10	PK
15720	47.95	12.06	H	60.01	73.98	13.97	PK
15720	34.95	12.06	H	47.01	53.98	6.97	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	42.26	7.23	V	49.49	68.20	18.71	PK
15540	45.36	11.95	V	57.31	73.98	16.67	PK
15540	33.45	11.95	V	45.40	53.98	8.58	AV
10360	42.31	7.23	H	49.54	68.20	18.66	PK
15540	45.49	11.95	H	57.44	73.98	16.54	PK
15540	33.61	11.95	H	45.56	53.98	8.42	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	41.28	7.24	V	48.52	68.20	19.68	PK
15600	45.19	11.32	V	56.51	73.98	17.47	PK
15600	33.71	11.32	V	45.03	53.98	8.95	AV
10400	41.31	7.24	H	48.55	68.20	19.65	PK
15600	45.24	11.32	H	56.56	73.98	17.42	PK
15600	33.87	11.32	H	45.19	53.98	8.79	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	41.76	7.25	V	49.01	68.20	19.19	PK
15720	47.84	12.06	V	59.90	73.98	14.08	PK
15720	34.74	12.06	V	46.80	53.98	7.18	AV
10480	41.81	7.25	H	49.06	68.20	19.14	PK
15720	47.91	12.06	H	59.97	73.98	14.01	PK
15720	34.91	12.06	H	46.97	53.98	7.01	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	42.22	7.23	V	49.45	68.20	18.75	PK
15540	45.32	11.95	V	57.27	73.98	16.71	PK
15540	33.39	11.95	V	45.34	53.98	8.64	AV
10360	42.24	7.23	H	49.47	68.20	18.73	PK
15540	45.42	11.95	H	57.37	73.98	16.61	PK
15540	33.58	11.95	H	45.53	53.98	8.45	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	41.24	7.24	V	48.48	68.20	19.72	PK
15600	45.15	11.32	V	56.47	73.98	17.51	PK
15600	33.65	11.32	V	44.97	53.98	9.01	AV
10400	41.24	7.24	H	48.48	68.20	19.72	PK
15600	45.17	11.32	H	56.49	73.98	17.49	PK
15600	33.84	11.32	H	45.16	53.98	8.82	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	41.72	7.25	V	48.97	68.20	19.23	PK
15720	47.80	12.06	V	59.86	73.98	14.12	PK
15720	34.68	12.06	V	46.74	53.98	7.24	AV
10480	41.74	7.25	H	48.99	68.20	19.21	PK
15720	47.84	12.06	H	59.90	73.98	14.08	PK
15720	34.88	12.06	H	46.94	53.98	7.04	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10380	42.03	7.34	V	49.37	68.20	18.83	PK
15570	45.49	11.66	V	57.15	73.98	16.83	PK
15570	33.51	11.66	V	45.17	53.98	8.81	AV
10380	42.09	7.34	H	49.43	68.20	18.77	PK
15570	45.55	11.66	H	57.21	73.98	16.77	PK
15570	33.60	11.66	H	45.26	53.98	8.72	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5230 MHz
Channel No.	46 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10460	46.12	7.24	V	53.36	68.20	14.84	PK
15690	46.62	11.69	V	58.31	73.98	15.67	PK
15690	34.62	11.69	V	46.31	53.98	7.67	AV
10460	46.19	7.24	H	53.43	68.20	14.77	PK
15690	46.68	11.69	H	58.37	73.98	15.61	PK
15690	34.69	11.69	H	46.38	53.98	7.60	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10380	41.97	7.34	V	49.31	68.20	18.89	PK
15570	45.43	11.66	V	57.09	73.98	16.89	PK
15570	33.46	11.66	V	45.12	53.98	8.86	AV
10380	42.03	7.34	H	49.37	68.20	18.83	PK
15570	45.49	11.66	H	57.15	73.98	16.83	PK
15570	33.56	11.66	H	45.22	53.98	8.76	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5230 MHz
Channel No.	46 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10460	46.06	7.24	V	53.30	68.20	14.90	PK
15690	46.56	11.69	V	58.25	73.98	15.73	PK
15690	34.57	11.69	V	46.26	53.98	7.72	AV
10460	46.13	7.24	H	53.37	68.20	14.83	PK
15690	46.62	11.69	H	58.31	73.98	15.67	PK
15690	34.65	11.69	H	46.34	53.98	7.64	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10420	41.95	7.29	V	49.24	68.20	18.96	PK
15630	45.54	11.80	V	57.34	73.98	16.64	PK
15630	33.80	11.80	V	45.60	53.98	8.38	AV
10420	42.10	7.29	H	49.39	68.20	18.81	PK
15630	45.67	11.80	H	57.47	73.98	16.51	PK
15630	33.91	11.80	H	45.71	53.98	8.27	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_80 MHz BW. Worst case is MCS 0 in 802.11ac_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	43.21	7.45	V	50.66	68.20	17.54	PK
15780	46.04	11.52	V	57.56	73.98	16.42	PK
15780	34.62	11.52	V	46.14	53.98	7.84	AV
10520	43.24	7.45	H	50.69	68.20	17.51	PK
15780	46.08	11.52	H	57.60	73.98	16.38	PK
15780	34.80	11.52	H	46.32	53.98	7.66	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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.

Band :	UNII 2A
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	42.11	7.78	V	49.89	73.98	24.09	PK
10600	30.36	7.78	V	38.14	53.98	15.84	AV
15900	44.78	11.62	V	56.40	73.98	17.58	PK
15900	33.19	11.62	V	44.81	53.98	9.17	AV
10600	42.15	7.78	H	49.93	73.98	24.05	PK
10600	30.54	7.78	H	38.32	53.98	15.66	AV
15900	44.81	11.62	H	56.43	73.98	17.55	PK
15900	33.37	11.62	H	44.99	53.98	8.99	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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.

Band :	UNII 2A
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	42.21	7.66	V	49.87	73.98	24.11	PK
10640	30.58	7.66	V	38.24	53.98	15.74	AV
15960	44.77	11.84	V	56.61	73.98	17.37	PK
15960	32.85	11.84	V	44.69	53.98	9.29	AV
10640	42.24	7.66	H	49.90	73.98	24.08	PK
10640	30.76	7.66	H	38.42	53.98	15.56	AV
15960	44.80	11.84	H	56.64	73.98	17.34	PK
15960	33.03	11.84	H	44.87	53.98	9.11	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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

Band :	UNII 2A
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	43.16	7.45	V	50.61	68.20	17.59	PK
15780	45.99	11.52	V	57.51	73.98	16.47	PK
15780	34.59	11.52	V	46.11	53.98	7.87	AV
10520	43.20	7.45	H	50.65	68.20	17.55	PK
15780	46.04	11.52	H	57.56	73.98	16.42	PK
15780	34.76	11.52	H	46.28	53.98	7.70	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	42.06	7.78	V	49.84	73.98	24.14	PK
10600	30.33	7.78	V	38.11	53.98	15.87	AV
15900	44.73	11.62	V	56.35	73.98	17.63	PK
15900	33.16	11.62	V	44.78	53.98	9.20	AV
10600	42.11	7.78	H	49.89	73.98	24.09	PK
10600	30.50	7.78	H	38.28	53.98	15.70	AV
15900	44.77	11.62	H	56.39	73.98	17.59	PK
15900	33.33	11.62	H	44.95	53.98	9.03	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	42.16	7.66	V	49.82	73.98	24.16	PK
10640	30.55	7.66	V	38.21	53.98	15.77	AV
15960	44.72	11.84	V	56.56	73.98	17.42	PK
15960	32.82	11.84	V	44.66	53.98	9.32	AV
10640	42.20	7.66	H	49.86	73.98	24.12	PK
10640	30.72	7.66	H	38.38	53.98	15.60	AV
15960	44.76	11.84	H	56.60	73.98	17.38	PK
15960	32.99	11.84	H	44.83	53.98	9.15	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	43.12	7.45	V	50.57	68.20	17.63	PK
15780	45.95	11.52	V	57.47	73.98	16.51	PK
15780	34.53	11.52	V	46.05	53.98	7.93	AV
10520	43.13	7.45	H	50.58	68.20	17.62	PK
15780	45.97	11.52	H	57.49	73.98	16.49	PK
15780	34.73	11.52	H	46.25	53.98	7.73	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	42.02	7.78	V	49.80	73.98	24.18	PK
10600	30.27	7.78	V	38.05	53.98	15.93	AV
15900	44.69	11.62	V	56.31	73.98	17.67	PK
15900	33.10	11.62	V	44.72	53.98	9.26	AV
10600	42.04	7.78	H	49.82	73.98	24.16	PK
10600	30.47	7.78	H	38.25	53.98	15.73	AV
15900	44.70	11.62	H	56.32	73.98	17.66	PK
15900	33.30	11.62	H	44.92	53.98	9.06	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	42.12	7.66	V	49.78	73.98	24.20	PK
10640	30.49	7.66	V	38.15	53.98	15.83	AV
15960	44.68	11.84	V	56.52	73.98	17.46	PK
15960	32.76	11.84	V	44.60	53.98	9.38	AV
10640	42.13	7.66	H	49.79	73.98	24.19	PK
10640	30.69	7.66	H	38.35	53.98	15.63	AV
15960	44.69	11.84	H	56.53	73.98	17.45	PK
15960	32.96	11.84	H	44.80	53.98	9.18	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10540	42.44	7.54	V	49.98	68.20	18.22	PK
15810	45.64	11.91	V	57.55	73.98	16.43	PK
15810	34.13	11.91	V	46.04	53.98	7.94	AV
10540	42.49	7.54	H	50.03	68.20	18.17	PK
15810	45.71	11.91	H	57.62	73.98	16.36	PK
15810	34.20	11.91	H	46.11	53.98	7.87	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10620	42.58	7.60	V	50.18	73.98	23.80	PK
10620	30.37	7.60	V	37.97	53.98	16.01	AV
15930	44.80	11.68	V	56.48	73.98	17.50	PK
15930	32.80	11.68	V	44.48	53.98	9.50	AV
10620	42.63	7.60	H	50.23	73.98	23.75	PK
10620	30.45	7.60	H	38.05	53.98	15.93	AV
15930	44.87	11.68	H	56.55	73.98	17.43	PK
15930	32.88	11.68	H	44.56	53.98	9.42	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10540	42.38	7.54	V	49.92	68.20	18.28	PK
15810	45.58	11.91	V	57.49	73.98	16.49	PK
15810	34.08	11.91	V	45.99	53.98	7.99	AV
10540	42.43	7.54	H	49.97	68.20	18.23	PK
15810	45.65	11.91	H	57.56	73.98	16.42	PK
15810	34.16	11.91	H	46.07	53.98	7.91	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10620	42.52	7.60	V	50.12	73.98	23.86	PK
10620	30.32	7.60	V	37.92	53.98	16.06	AV
15930	44.74	11.68	V	56.42	73.98	17.56	PK
15930	32.75	11.68	V	44.43	53.98	9.55	AV
10620	42.57	7.60	H	50.17	73.98	23.81	PK
10620	30.41	7.60	H	38.01	53.98	15.97	AV
15930	44.81	11.68	H	56.49	73.98	17.49	PK
15930	32.84	11.68	H	44.52	53.98	9.46	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2A
Operation Mode:	802.11ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10580	42.15	7.67	V	49.82	68.20	18.38	PK
15870	45.29	11.43	V	56.72	73.98	17.26	PK
15870	33.35	11.43	V	44.78	53.98	9.20	AV
10580	42.29	7.67	H	49.96	68.20	18.24	PK
15870	45.46	11.43	H	56.89	73.98	17.09	PK
15870	33.46	11.43	H	44.89	53.98	9.09	AV

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_80 MHz BW. Worst case is MCS 0 in 802.11ac_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	41.52	8.24	V	49.76	73.98	24.22	PK
11000	30.03	8.24	V	38.27	53.98	15.71	AV
16500	45.90	12.79	V	58.69	68.20	9.51	PK
11000	41.56	8.24	H	49.80	73.98	24.18	PK
11000	30.21	8.24	H	38.45	53.98	15.53	AV
16500	45.94	12.79	H	58.73	68.20	9.47	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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.

Band :	UNII 2C
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	40.71	8.27	V	48.98	73.98	25.00	PK
11160	28.97	8.27	V	37.24	53.98	16.74	AV
16740	46.14	13.03	V	59.17	68.20	9.03	PK
11160	40.75	8.27	H	49.02	73.98	24.96	PK
11160	29.15	8.27	H	37.42	53.98	16.56	AV
16740	46.20	13.03	H	59.23	68.20	8.97	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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

Band :	UNII 2C
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11400	40.88	8.23	V	49.11	73.98	24.87	PK
11400	28.98	8.23	V	37.21	53.98	16.77	AV
17100	45.61	15.14	V	60.75	68.20	7.45	PK
11400	40.92	8.23	H	49.15	73.98	24.83	PK
11400	29.17	8.23	H	37.40	53.98	16.58	AV
17100	45.63	15.14	H	60.77	68.20	7.43	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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

Band :	UNII 2C
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	41.47	8.24	V	49.71	73.98	24.27	PK
11000	30.00	8.24	V	38.24	53.98	15.74	AV
16500	45.85	12.79	V	58.64	68.20	9.56	PK
11000	41.52	8.24	H	49.76	73.98	24.22	PK
11000	30.17	8.24	H	38.41	53.98	15.57	AV
16500	45.90	12.79	H	58.69	68.20	9.51	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	40.66	8.27	V	48.93	73.98	25.05	PK
11160	28.94	8.27	V	37.21	53.98	16.77	AV
16740	46.09	13.03	V	59.12	68.20	9.08	PK
11160	40.71	8.27	H	48.98	73.98	25.00	PK
11160	29.11	8.27	H	37.38	53.98	16.60	AV
16740	46.16	13.03	H	59.19	68.20	9.01	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11400	40.83	8.23	V	49.06	73.98	24.92	PK
11400	28.95	8.23	V	37.18	53.98	16.80	AV
17100	45.56	15.14	V	60.70	68.20	7.50	PK
11400	40.88	8.23	H	49.11	73.98	24.87	PK
11400	29.13	8.23	H	37.36	53.98	16.62	AV
17100	45.59	15.14	H	60.73	68.20	7.47	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	41.43	8.24	V	49.67	73.98	24.31	PK
11000	29.94	8.24	V	38.18	53.98	15.80	AV
16500	45.81	12.79	V	58.60	68.20	9.60	PK
11000	41.45	8.24	H	49.69	73.98	24.29	PK
11000	30.14	8.24	H	38.38	53.98	15.60	AV
16500	45.83	12.79	H	58.62	68.20	9.58	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	40.62	8.27	V	48.89	73.98	25.09	PK
11160	28.88	8.27	V	37.15	53.98	16.83	AV
16740	46.05	13.03	V	59.08	68.20	9.12	PK
11160	40.64	8.27	H	48.91	73.98	25.07	PK
11160	29.08	8.27	H	37.35	53.98	16.63	AV
16740	46.09	13.03	H	59.12	68.20	9.08	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11400	40.79	8.23	V	49.02	73.98	24.96	PK
11400	28.89	8.23	V	37.12	53.98	16.86	AV
17100	45.52	15.14	V	60.66	68.20	7.54	PK
11400	40.81	8.23	H	49.04	73.98	24.94	PK
11400	29.10	8.23	H	37.33	53.98	16.65	AV
17100	45.52	15.14	H	60.66	68.20	7.54	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11020	42.12	8.49	V	50.61	73.98	23.37	PK
11020	29.63	8.49	V	38.12	53.98	15.86	AV
16530	45.67	12.78	V	58.45	68.20	9.75	PK
11020	42.20	8.49	H	50.69	73.98	23.29	PK
11020	29.70	8.49	H	38.19	53.98	15.79	AV
16530	45.74	12.78	H	58.52	68.20	9.68	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5590 MHz
Channel No.	118 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11180	40.95	8.23	V	49.18	73.98	24.80	PK
11180	29.26	8.23	V	37.49	53.98	16.49	AV
16770	46.17	13.41	V	59.58	68.20	8.62	PK
11180	41.01	8.23	H	49.24	73.98	24.74	PK
11180	29.35	8.23	H	37.58	53.98	16.40	AV
16770	46.21	13.41	H	59.62	68.20	8.58	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11340	40.41	8.24	V	48.65	73.98	25.33	PK
11340	28.53	8.24	V	36.77	53.98	17.21	AV
17010	45.58	15.44	V	61.02	68.20	7.18	PK
11340	40.48	8.24	H	48.72	73.98	25.26	PK
11340	28.61	8.24	H	36.85	53.98	17.13	AV
17010	45.71	15.44	H	61.15	68.20	7.05	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11020	42.06	8.49	V	50.55	73.98	23.43	PK
11020	29.58	8.49	V	38.07	53.98	15.91	AV
16530	45.61	12.78	V	58.39	68.20	9.81	PK
11020	42.14	8.49	H	50.63	73.98	23.35	PK
11020	29.66	8.49	H	38.15	53.98	15.83	AV
16530	45.68	12.78	H	58.46	68.20	9.74	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5590 MHz
Channel No.	118 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11180	40.89	8.23	V	49.12	73.98	24.86	PK
11180	29.21	8.23	V	37.44	53.98	16.54	AV
16770	46.11	13.41	V	59.52	68.20	8.68	PK
11180	40.95	8.23	H	49.18	73.98	24.80	PK
11180	29.31	8.23	H	37.54	53.98	16.44	AV
16770	46.15	13.41	H	59.56	68.20	8.64	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11340	40.35	8.24	V	48.59	73.98	25.39	PK
11340	28.48	8.24	V	36.72	53.98	17.26	AV
17010	45.52	15.44	V	60.96	68.20	7.24	PK
11340	40.42	8.24	H	48.66	73.98	25.32	PK
11340	28.57	8.24	H	36.81	53.98	17.17	AV
17010	45.65	15.44	H	61.09	68.20	7.11	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2C
Operation Mode:	802.11ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11060	40.95	8.47	V	49.42	73.98	24.56	PK
11060	29.32	8.47	V	37.79	53.98	16.19	AV
16590	45.30	13.05	V	58.35	68.20	9.85	PK
11060	41.10	8.47	H	49.57	73.98	24.41	PK
11060	29.46	8.47	H	37.93	53.98	16.05	AV
16590	45.45	13.05	H	58.50	68.20	9.70	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_80 MHz BW. Worst case is MCS 0 in 802.11ac_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5745MHz
Channel No.	149 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	41.31	8.17	V	49.48	73.98	24.50	PK
11490	29.24	8.17	V	37.41	53.98	16.57	AV
17235	45.68	15.31	V	60.99	68.20	7.21	PK
11490	41.34	8.17	H	49.51	73.98	24.47	PK
11490	29.42	8.17	H	37.59	53.98	16.39	AV
17235	45.71	15.31	H	61.02	68.20	7.18	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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.

Band :	UNII 3
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	40.55	8.29	V	48.84	73.98	25.14	PK
11570	28.90	8.29	V	37.19	53.98	16.79	AV
17355	44.76	16.47	V	61.23	68.20	6.97	PK
11570	40.59	8.29	H	48.88	73.98	25.10	PK
11570	29.07	8.29	H	37.36	53.98	16.62	AV
17355	44.98	16.47	H	61.45	68.20	6.75	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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.

Band :	UNII 3
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	40.97	8.32	V	49.29	73.98	24.69	PK
11650	28.98	8.32	V	37.30	53.98	16.68	AV
17475	45.47	16.43	V	61.90	68.20	6.30	PK
11650	41.00	8.32	H	49.32	73.98	24.66	PK
11650	29.15	8.32	H	37.47	53.98	16.51	AV
17475	46.95	16.43	H	63.38	68.20	4.82	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle 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

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	41.26	8.17	V	49.43	73.98	24.55	PK
11490	29.21	8.17	V	37.38	53.98	16.60	AV
17235	45.63	15.31	V	60.94	68.20	7.26	PK
11490	41.30	8.17	H	49.47	73.98	24.51	PK
11490	29.38	8.17	H	37.55	53.98	16.43	AV
17235	45.67	15.31	H	60.98	68.20	7.22	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	40.50	8.29	V	48.79	73.98	25.19	PK
11570	28.87	8.29	V	37.16	53.98	16.82	AV
17355	44.71	16.47	V	61.18	68.20	7.02	PK
11570	40.55	8.29	H	48.84	73.98	25.14	PK
11570	29.03	8.29	H	37.32	53.98	16.66	AV
17355	44.94	16.47	H	61.41	68.20	6.79	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	40.92	8.32	V	49.24	73.98	24.74	PK
11650	28.95	8.32	V	37.27	53.98	16.71	AV
17475	45.42	16.43	V	61.85	68.20	6.35	PK
11650	40.96	8.32	H	49.28	73.98	24.70	PK
11650	29.11	8.32	H	37.43	53.98	16.55	AV
17475	46.02	16.43	H	62.45	68.20	5.75	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is MCS 0 in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	41.22	8.17	V	49.39	73.98	24.59	PK
11490	29.15	8.17	V	37.32	53.98	16.66	AV
17235	45.59	15.31	V	60.90	68.20	7.30	PK
11490	41.23	8.17	H	49.40	73.98	24.58	PK
11490	29.35	8.17	H	37.52	53.98	16.46	AV
17235	45.60	15.31	H	60.91	68.20	7.29	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	40.46	8.29	V	48.75	73.98	25.23	PK
11570	28.81	8.29	V	37.10	53.98	16.88	AV
17355	44.67	16.47	V	61.14	68.20	7.06	PK
11570	40.48	8.29	H	48.77	73.98	25.21	PK
11570	29.00	8.29	H	37.29	53.98	16.69	AV
17355	44.87	16.47	H	61.34	68.20	6.86	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	40.88	8.32	V	49.20	73.98	24.78	PK
11650	28.89	8.32	V	37.21	53.98	16.77	AV
17475	45.38	16.43	V	61.81	68.20	6.39	PK
11650	40.89	8.32	H	49.21	73.98	24.77	PK
11650	29.08	8.32	H	37.40	53.98	16.58	AV
17475	46.61	16.43	H	63.04	68.20	5.16	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_20 MHz BW. Worst case is MCS 0 in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII3
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5755 MHz
Channel No.	151 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11510	40.39	8.05	V	48.44	73.98	25.54	PK
11510	28.75	8.05	V	36.80	53.98	17.18	AV
17265	45.79	15.32	V	61.11	68.20	7.09	PK
11510	40.56	8.05	H	48.61	73.98	25.37	PK
11510	28.85	8.05	H	36.90	53.98	17.08	AV
17265	45.89	15.32	H	61.21	68.20	6.99	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5795 MHz
Channel No.	159 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11590	41.95	8.31	V	50.26	73.98	23.72	PK
11590	29.14	8.31	V	37.45	53.98	16.53	AV
17385	44.98	16.47	V	61.45	68.20	6.75	PK
11590	42.11	8.31	H	50.42	73.98	23.56	PK
11590	29.25	8.31	H	37.56	53.98	16.42	AV
17385	45.07	16.47	H	61.54	68.20	6.66	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is MCS 0 in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII3
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5755 MHz
Channel No.	151 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11510	40.33	8.05	V	48.38	73.98	25.60	PK
11510	28.70	8.05	V	36.75	53.98	17.23	AV
17265	45.73	15.32	V	61.05	68.20	7.15	PK
11510	40.50	8.05	H	48.55	73.98	25.43	PK
11510	28.81	8.05	H	36.86	53.98	17.12	AV
17265	45.83	15.32	H	61.15	68.20	7.05	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5795 MHz
Channel No.	159 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11590	41.89	8.31	V	50.20	73.98	23.78	PK
11590	29.09	8.31	V	37.40	53.98	16.58	AV
17385	44.92	16.47	V	61.39	68.20	6.81	PK
11590	42.05	8.31	H	50.36	73.98	23.62	PK
11590	29.21	8.31	H	37.52	53.98	16.46	AV
17385	45.10	16.47	H	61.57	68.20	6.63	PK

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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is MCS 0 in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5775 MHz
Channel No.	155 Ch

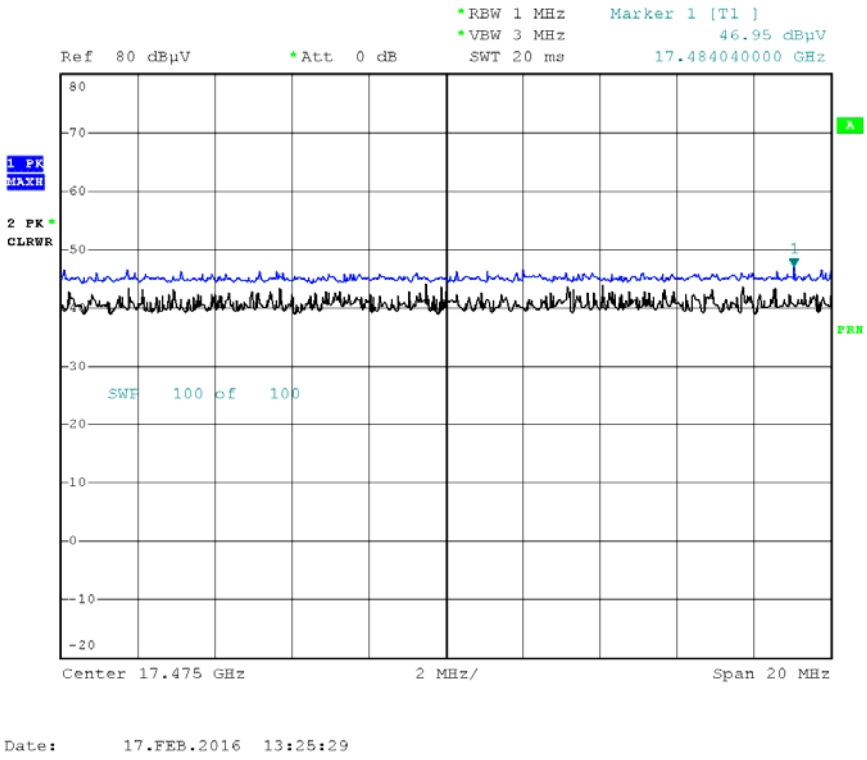
Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11550	40.12	8.29	V	48.41	73.98	25.57	PK
11550	28.60	8.29	V	36.89	53.98	17.09	AV
17325	44.68	16.67	V	61.35	68.20	6.85	PK
11550	40.27	8.29	H	48.56	73.98	25.42	PK
11550	28.72	8.29	H	37.01	53.98	16.97	AV
17325	45.42	16.67	H	62.09	68.20	6.11	PK

Notes:

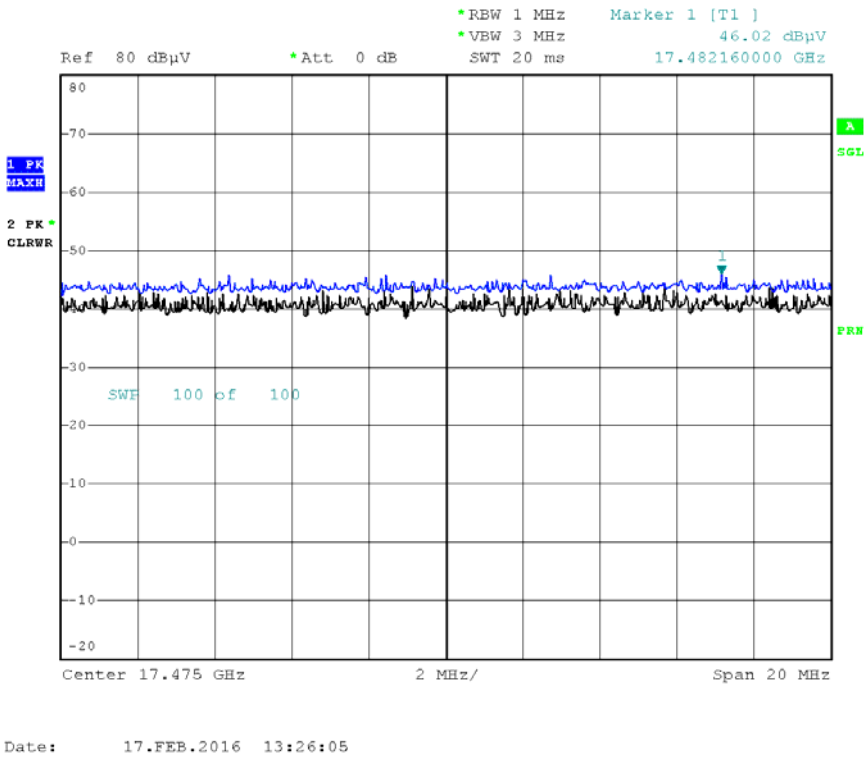
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already 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 + Duty Cycle Factor (802.11a/n/ac)
   In case of harmonic for 802.11a/n/ac, it is no emission. So, we did not apply duty cycle factor.
5. We have done all data rate in 802.11ac_80 MHz BW. Worst case is MCS 0 in 802.11ac_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

▣ RESULT PLOTS (Worst case : x-H)

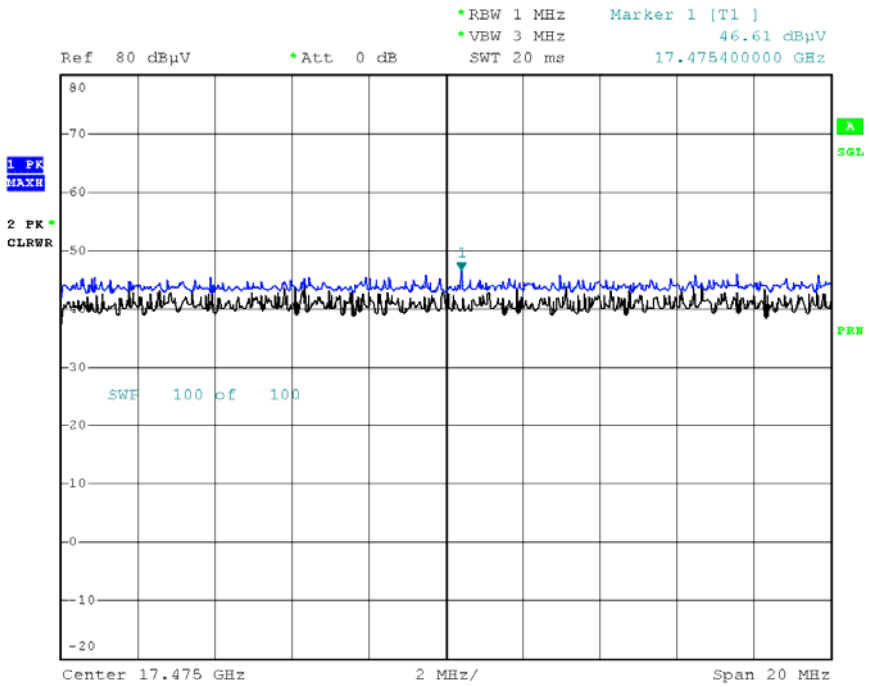
Radiated Spurious Emissions plot – Peak Reading (802.11a_20M, Ch.157 3rd Harmonic)



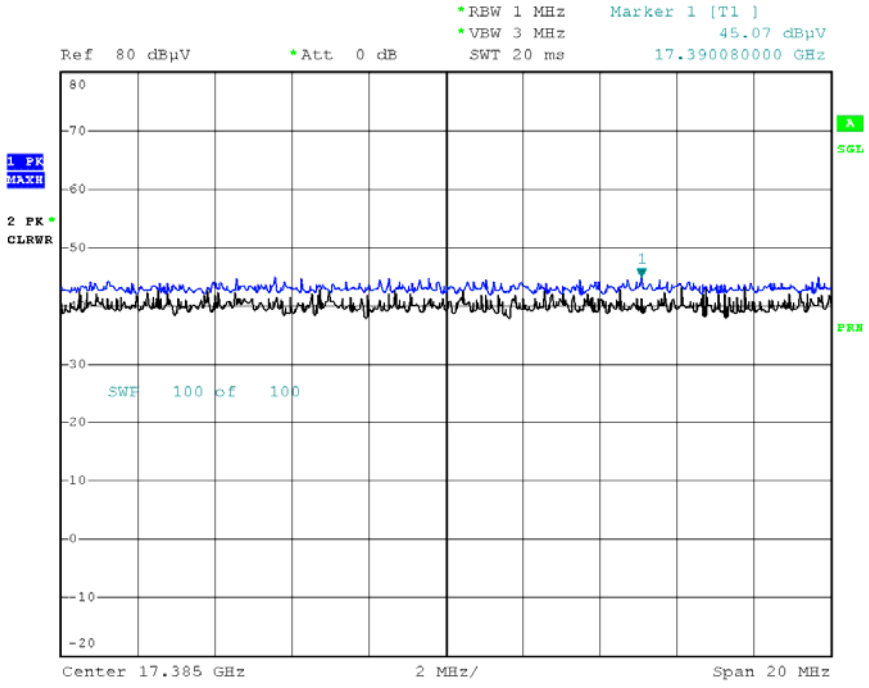
Radiated Spurious Emissions plot – Peak Reading (802.11n_20M, Ch.157 3rd Harmonic)



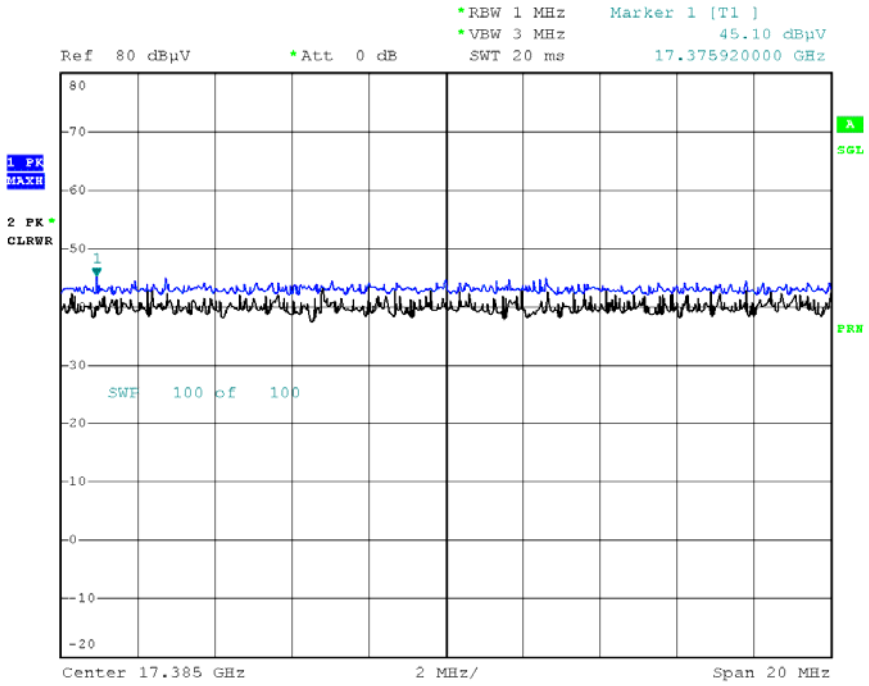
Radiated Spurious Emissions plot – Peak Reading (802.11ac_20M, Ch.157 3rd Harmonic)



Radiated Spurious Emissions plot – Peak Reading (802.11n_40M, Ch.159 3rd Harmonic)

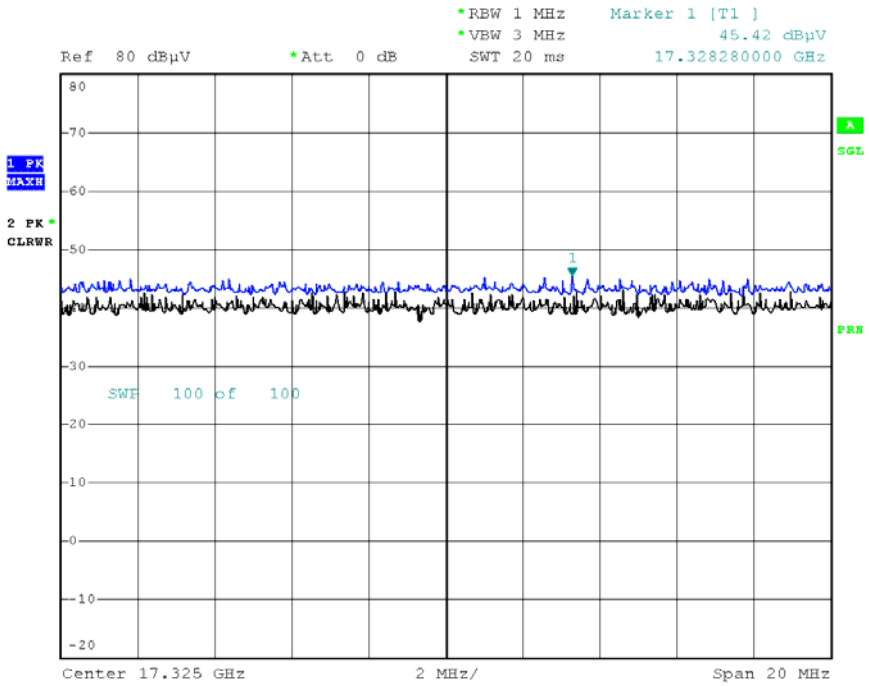


Radiated Spurious Emissions plot – Peak Reading (802.11ac_40M, Ch.159 3rd Harmonic)



Date: 17.FEB.2016 13:28:36

Radiated Spurious Emissions plot – Peak Reading (802.11ac_80M, Ch.159 3rd Harmonic)



Date: 17.FEB.2016 13:29:32

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

8.6.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

Test Requirements and limit, §15.247(d) §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_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	49.87	3.78	H	53.65	73.98	20.33	PK
5150	38.76	3.78	H	42.539	53.98	11.44	AV
5150	49.54	3.78	V	53.32	73.98	20.66	PK
5150	38.44	3.78	V	42.219	53.98	11.76	AV

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	50.23	3.78	H	54.01	73.98	19.97	PK
5150	38.92	3.78	H	42.695	53.98	11.29	AV
5150	50.10	3.78	V	53.88	73.98	20.10	PK
5150	38.38	3.78	V	42.155	53.98	11.83	AV

Band :	UNII 1
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	50.45	3.78	H	54.23	73.98	19.75	PK
5150	38.97	3.78	H	42.75	53.98	11.23	AV
5150	50.33	3.78	V	54.11	73.98	19.87	PK
5150	38.83	3.78	V	42.61	53.98	11.37	AV

Band :	UNII 1
Operation Mode:	802.11 n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	51.17	3.78	H	54.95	73.98	19.03	PK
5150	39.25	3.78	H	43.028	53.98	10.95	AV
5150	51.02	3.78	V	54.8	73.98	19.18	PK
5150	39.02	3.78	V	42.798	53.98	11.18	AV

Band :	UNII 1
Operation Mode:	802.11 ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	50.08	3.78	H	53.86	73.98	20.12	PK
5150	39.56	3.78	H	43.336	53.98	10.64	AV
5150	49.81	3.78	V	53.59	73.98	20.39	PK
5150	39.29	3.78	V	43.066	53.98	10.91	AV

Band :	UNII 1
Operation Mode:	802.11 ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	51.14	3.78	H	54.92	73.98	19.06	PK
5150	39.33	3.78	H	43.112	53.98	10.87	AV
5150	50.87	3.78	V	54.65	73.98	19.33	PK
5150	39.07	3.78	V	42.852	53.98	11.13	AV

Band :	UNII 2A
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	49.40	3.89	H	53.29	73.98	20.69	PK
5350	38.64	3.89	H	42.529	53.98	11.45	AV
5350	49.21	3.89	V	53.1	73.98	20.88	PK
5350	38.43	3.89	V	42.319	53.98	11.66	AV

Band :	UNII 2A
Operation Mode:	802.11 n_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	49.21	3.89	H	53.10	73.98	20.88	PK
5350	38.75	3.89	H	42.635	53.98	11.35	AV
5350	49.03	3.89	V	52.92	73.98	21.06	PK
5350	38.46	3.89	V	42.345	53.98	11.64	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_20 MHz BW
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	49.16	3.89	H	53.05	73.98	20.93	PK
5350	38.72	3.89	H	42.61	53.98	11.37	AV
5350	49.07	3.89	V	52.96	73.98	21.02	PK
5350	38.60	3.89	V	42.49	53.98	11.49	AV

Band :	UNII 2A
Operation Mode:	802.11 n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	60.21	3.89	H	64.10	73.98	9.88	PK
5350	39.52	3.89	H	43.408	53.98	10.57	AV
5350	59.88	3.89	V	63.77	73.98	10.21	PK
5350	38.99	3.89	V	42.878	53.98	11.10	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	52.90	3.89	H	56.79	73.98	17.19	PK
5350	39.60	3.89	H	43.486	53.98	10.49	AV
5350	52.74	3.89	V	56.63	73.98	17.35	PK
5350	39.45	3.89	V	43.336	53.98	10.64	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	53.46	3.89	H	57.35	73.98	16.63	PK
5350	39.36	3.89	H	43.252	53.98	10.73	AV
5350	53.19	3.89	V	57.08	73.98	16.90	PK
5350	39.19	3.89	V	43.082	53.98	10.90	AV

Band :	UNII 2C
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	50.05	4.04	H	54.09	73.98	19.89	PK
5460	38.35	4.04	H	42.389	53.98	11.59	AV
5470	51.83	3.96	H	55.79	68.20	12.41	PK
5460	49.88	4.04	V	53.92	73.98	20.06	PK
5460	38.23	4.04	V	42.269	53.98	11.71	AV
5470	51.54	3.96	V	55.5	68.20	12.70	PK

Band :	UNII 2C
Operation Mode:	802.11 n_20MHz BW
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	49.33	4.04	H	53.37	73.98	20.61	PK
5460	38.43	4.04	H	42.465	53.98	11.52	AV
5470	49.85	3.96	H	53.81	68.20	14.39	PK
5460	49.18	4.04	V	53.22	73.98	20.76	PK
5460	38.37	4.04	V	42.405	53.98	11.58	AV
5470	49.74	3.96	V	53.7	68.20	14.50	PK

Band :	UNII 2C
Operation Mode:	802.11 ac_20MHz BW
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	49.21	4.04	H	53.25	73.98	20.73	PK
5460	38.38	4.04	H	42.42	53.98	11.56	AV
5470	49.92	3.96	H	53.88	68.20	14.32	PK
5460	49.05	4.04	V	53.09	73.98	20.89	PK
5460	38.23	4.04	V	42.27	53.98	11.71	AV
5470	49.77	3.96	V	53.73	68.20	14.47	PK

Band :	UNII 2C
Operation Mode:	802.11 n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	50.48	4.04	H	54.52	73.98	19.46	PK
5460	38.15	4.04	H	42.188	53.98	11.79	AV
5470	57.16	3.96	H	61.12	68.20	7.08	PK
5460	50.22	4.04	V	54.26	73.98	19.72	PK
5460	37.87	4.04	V	41.908	53.98	12.07	AV
5470	56.89	3.96	V	60.85	68.20	7.35	PK

Band :	UNII 2C
Operation Mode:	802.11 ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	49.90	4.04	H	53.94	73.98	20.04	PK
5460	38.55	4.04	H	42.586	53.98	11.39	AV
5470	51.91	3.96	H	55.87	68.20	12.33	PK
5460	49.73	4.04	V	53.77	73.98	20.21	PK
5460	38.28	4.04	V	42.316	53.98	11.66	AV
5470	51.77	3.96	V	55.73	68.20	12.47	PK

Band :	UNII 2C
Operation Mode:	802.11 ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	49.00	4.04	H	53.04	73.98	20.94	PK
5460	38.43	4.04	H	42.472	53.98	11.51	AV
5470	50.81	3.96	H	54.77	68.20	13.43	PK
5460	48.58	4.04	V	52.62	73.98	21.36	PK
5460	38.09	4.04	V	42.132	53.98	11.85	AV
5470	50.55	3.96	V	54.51	68.20	13.69	PK

Notes: The mark '#' is tested according to Ⅱ.G.2.c in KDB 789033 D02, issued 01/08/2016

II. MEASUREMENT PROCEDURES

G. Unwanted Emission Measurement

2. Unwanted Emissions that fall Outside of the Restricted Bands

c) At frequencies above 1000 MHz, use the procedure for maximum emissions described in section II.G.5., "Procedure for Unwanted Maximum Unwanted Emissions Measurements Above 1000 MHz".

As specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

Band :	UNII 3
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5745MHz
Channel No.	149 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5725	62.88	4.36	H	67.24	78.20	10.96	PK
5725	63.18	4.36	V	67.54	78.20	10.66	PK
5715	51.88	4.38	H	56.26	68.20	11.94	PK
5715	51.54	4.38	V	55.92	68.20	12.28	PK

Band :	UNII 3
Operation Mode:	802.11 n_20MHz BW
Transfer MCS Index:	0
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5725	61.18	4.36	H	65.54	78.20	12.66	PK
5725	61.05	4.36	V	65.41	78.20	12.79	PK
5715	50.85	4.38	H	55.23	68.20	12.97	PK
5715	50.77	4.38	V	55.15	68.20	13.05	PK

Band :	UNII 3
Operation Mode:	802.11 ac_20MHz BW
Transfer MCS Index:	0
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5725	52.69	4.36	H	57.05	78.20	21.15	PK
5725	52.54	4.36	V	56.90	78.20	21.30	PK
5715	50.88	4.38	H	55.26	68.20	12.94	PK
5715	50.71	4.38	V	55.09	68.20	13.11	PK

Band :	UNII 3
Operation Mode:	802.11 a_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5825MHz
Channel No.	165 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5850	50.82	4.63	H	55.45	78.20	22.75	PK
5850	50.70	4.63	V	55.33	78.20	22.87	PK
5860	50.45	4.66	H	55.11	68.20	13.09	PK
5860	50.33	4.66	V	54.99	68.20	13.21	PK

Band :	UNII 3
Operation Mode:	802.11 n_20MHz BW
Transfer MCS Index:	0
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5850	50.79	4.63	H	55.42	78.20	22.78	PK
5850	50.65	4.63	V	55.28	78.20	22.92	PK
5860	50.30	4.66	H	54.96	68.20	13.24	PK
5860	50.21	4.66	V	54.87	68.20	13.33	PK

Band :	UNII 3
Operation Mode:	802.11 ac_20MHz BW
Transfer MCS Index:	0
Operating Frequency	5825MHz
Channel No.	165 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5850	50.83	4.63	H	55.46	78.20	22.74	PK
5850	50.71	4.63	V	55.34	78.20	22.86	PK
5860	50.32	4.66	H	54.98	68.20	13.22	PK
5860	50.19	4.66	V	54.85	68.20	13.35	PK

Band :	UNII 3
Operation Mode:	802.11 n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5755 MHz
Channel No.	151 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5725	66.18	4.36	H	70.54	78.20	7.66	PK
5725	66.40	4.36	V	70.76	78.20	7.44	PK
5715	59.34	4.38	H	63.72	68.20	4.48	PK
5715	59.14	4.38	V	63.52	68.20	4.68	PK

Band :	UNII 3
Operation Mode:	802.11 n_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5795 MHz
Channel No.	159 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5850	50.90	4.63	H	55.53	78.20	22.67	PK
5850	50.74	4.63	V	55.37	78.20	22.83	PK
5860	49.97	4.66	H	54.63	68.20	13.57	PK
5860	49.82	4.66	V	54.48	68.20	13.72	PK

Band :	UNII 3
Operation Mode:	802.11 ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5755 MHz
Channel No.	151 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5725	57.83	4.36	H	62.19	78.20	16.01	PK
5725	57.49	4.36	V	61.85	78.20	16.35	PK
5715	53.18	4.38	H	57.56	68.20	10.64	PK
5715	52.84	4.38	V	57.22	68.20	10.98	PK

Band :	UNII 3
Operation Mode:	802.11 ac_40 MHz BW
Transfer MCS Index:	0
Operating Frequency	5795 MHz
Channel No.	159 Ch

Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5850	50.84	4.63	H	55.47	78.20	22.73	PK
5850	50.66	4.63	V	55.29	78.20	22.91	PK
5860	50.03	4.66	H	54.69	68.20	13.51	PK
5860	49.76	4.66	V	54.42	68.20	13.78	PK

Band :	UNII 3
Operation Mode:	802.11 ac_80 MHz BW
Transfer MCS Index:	0
Operating Frequency	5755 MHz
Channel No.	155 Ch

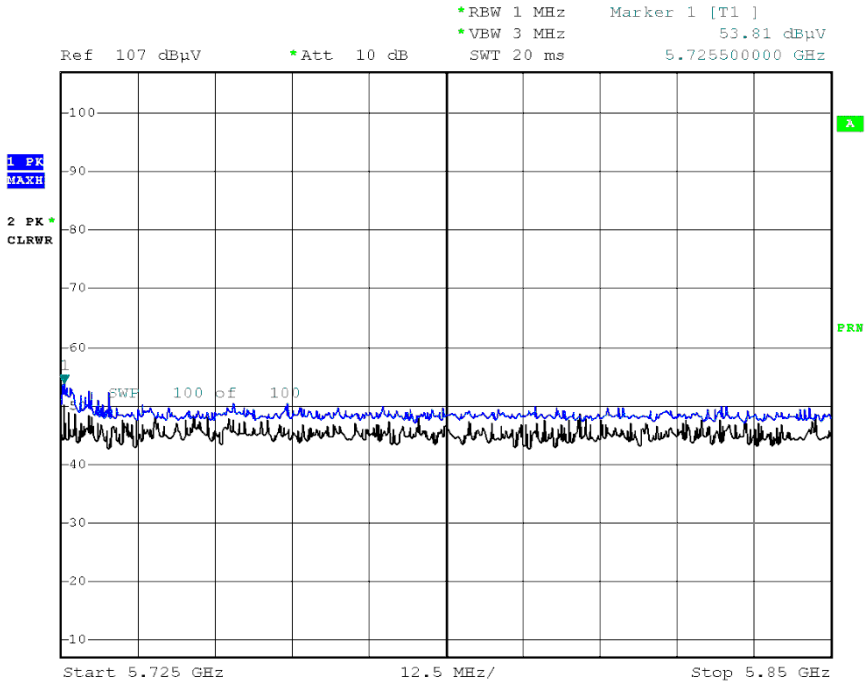
Frequency [MHz]	Reading DBuV	AN.+CL-AMP+ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5725	53.51	4.36	H	57.87	78.20	20.33	PK
5725	53.44	4.36	V	57.8	78.20	20.40	PK
5715	51.16	4.38	H	55.54	68.20	12.66	PK
5715	51.08	4.38	V	55.46	68.20	12.74	PK
5850	52.19	4.63	H	56.82	78.20	21.38	PK
5850	51.88	4.63	V	56.51	78.20	21.69	PK
5860	51.88	4.66	H	56.54	68.20	11.66	PK
5860	51.67	4.66	V	56.33	68.20	11.87	PK

Notes:

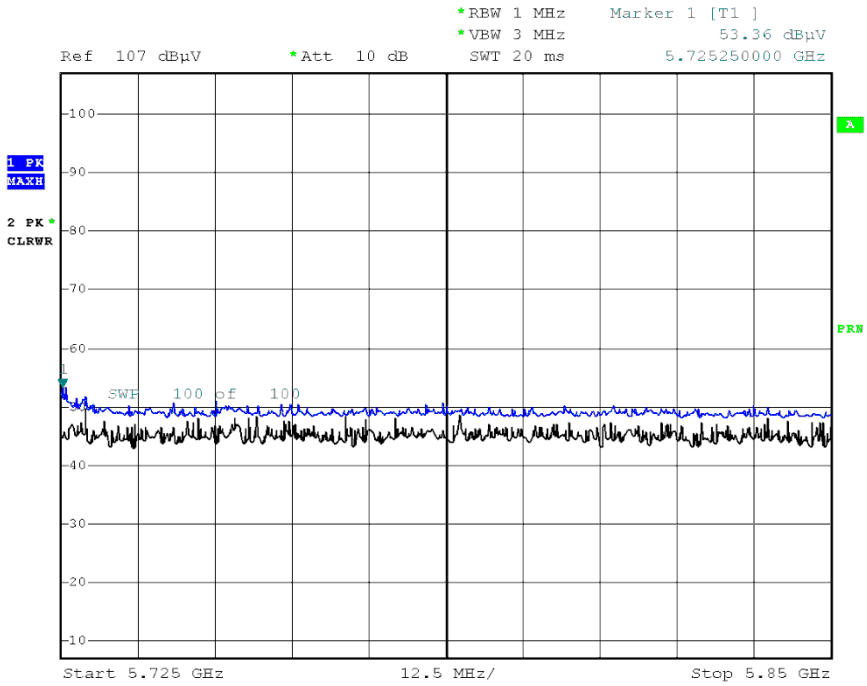
1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT + Duty Cycle Factor (802.11a/n/ac)
   In case of band edge for 802.11a/n/ac, reading value is included already duty cycle factor.
2. We have done all data rate in 802.11a/n/ac mode test. . Worst case of EUT is lowest data rate in 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 (Worst case : y-H)

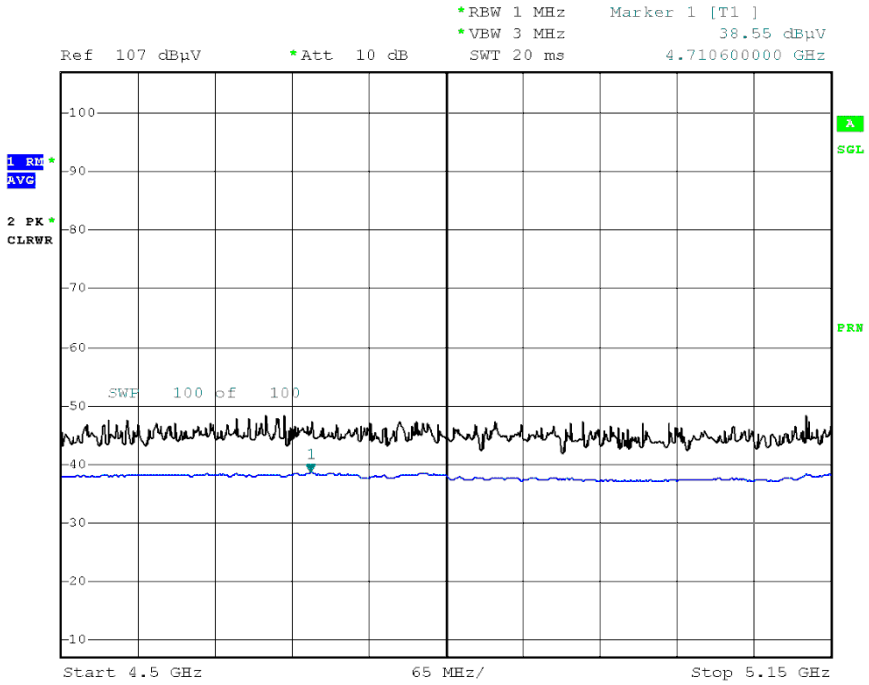
Radiated Restricted Band Edges plot – Peak Reading (802.11a_20M, Ch.140)



Radiated Restricted Band Edges plot – Peak Reading (802.11n_20M, Ch.140)

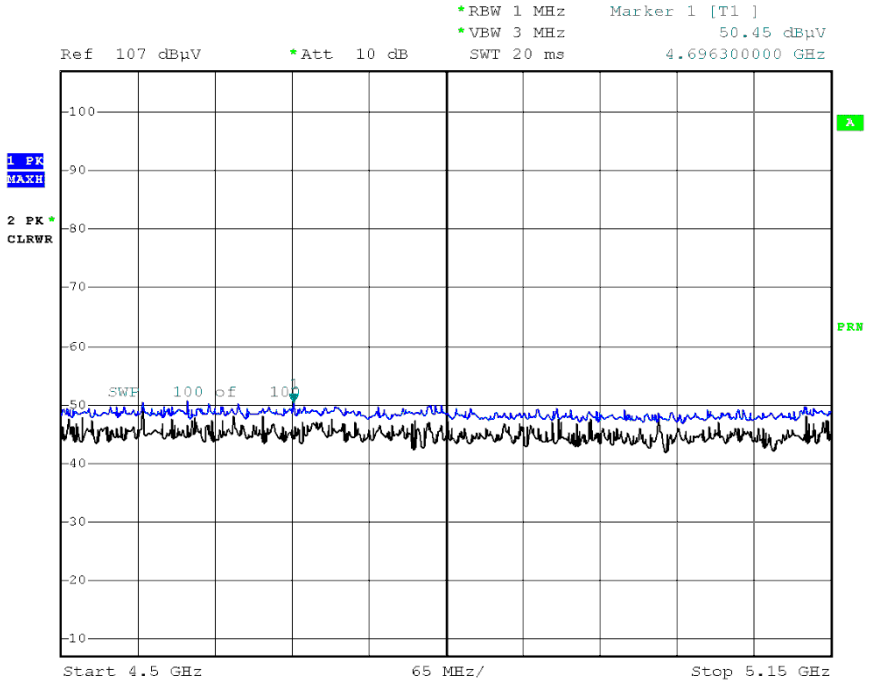


Radiated Restricted Band Edges plot – Average Reading (802.11ac_20M, Ch.36)



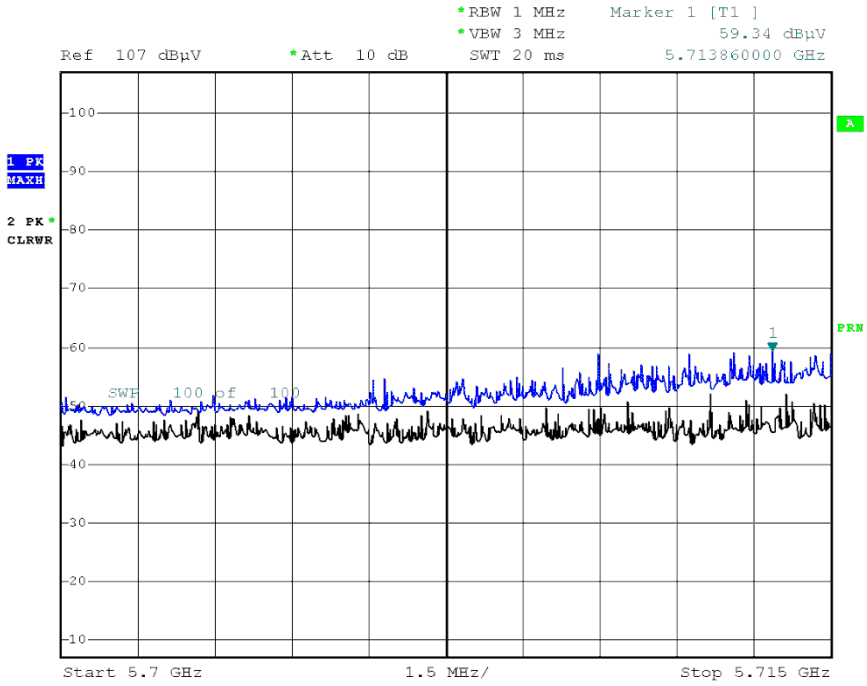
Date: 15.FEB.2016 19:22:53

Radiated Restricted Band Edges plot – Peak Reading (802.11ac_20M, Ch.36)



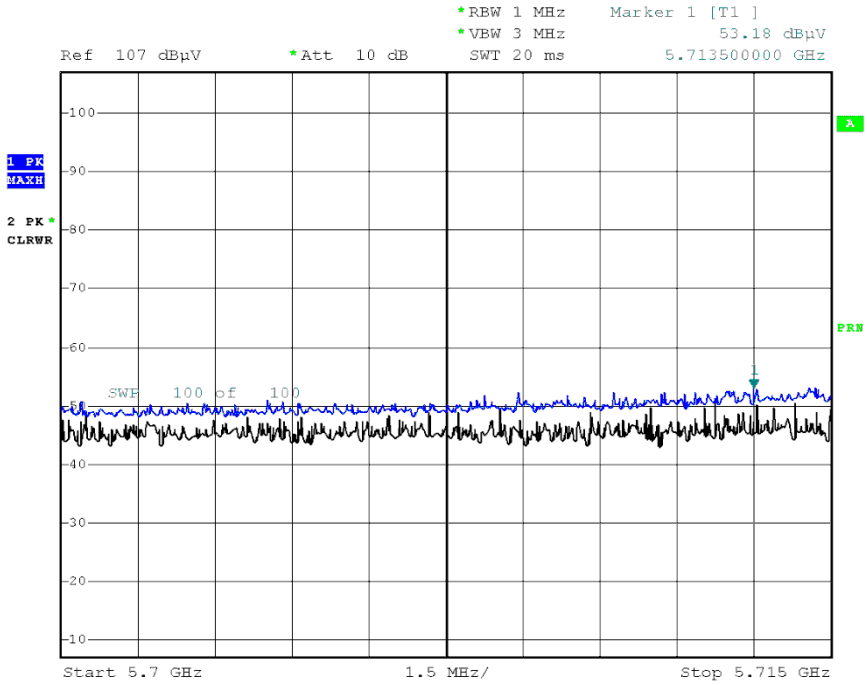
Date: 15.FEB.2016 19:24:09

Radiated Restricted Band Edges plot – Peak Reading (802.11n_40M, Ch.151)



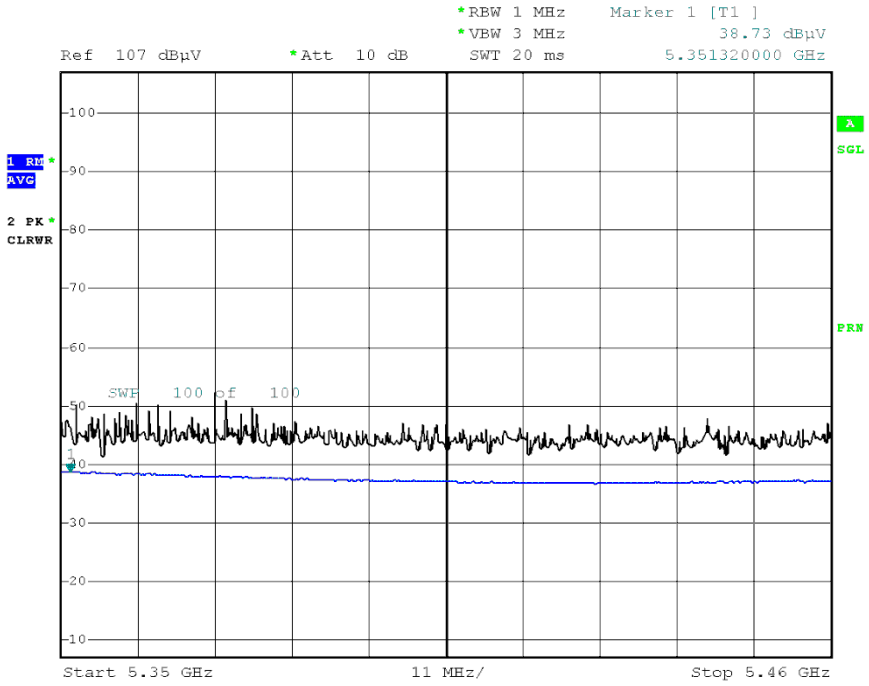
Date: 15.FEB.2016 19:04:20

Radiated Restricted Band Edges plot – Peak Reading (802.11ac_40M, Ch.151)

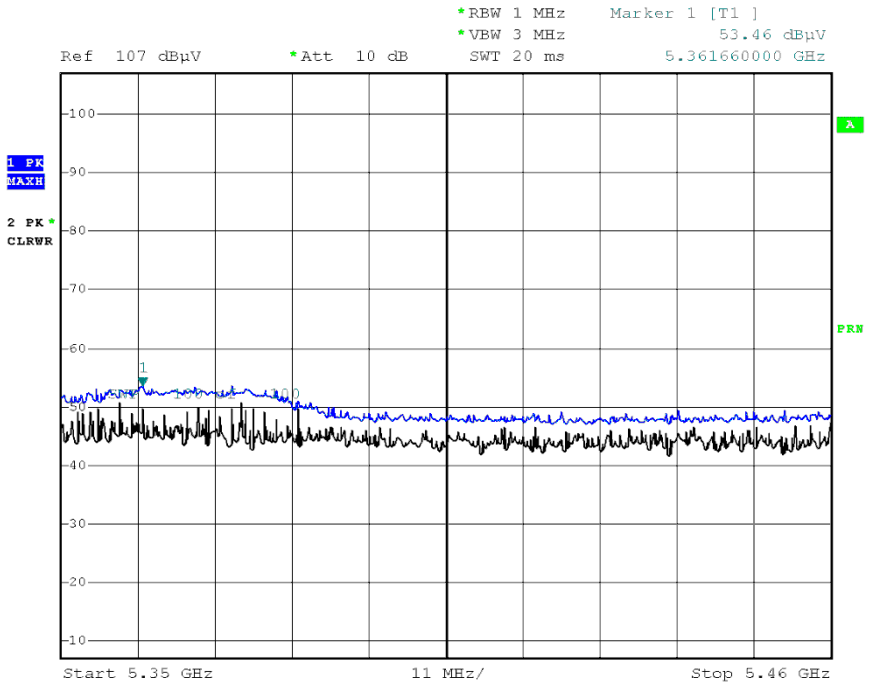


Date: 15.FEB.2016 18:56:59

Radiated Restricted Band Edges plot – Average Reading (802.11ac_80M, Ch.58)



Radiated Restricted Band Edges plot – Peak Reading (802.11ac_80M, Ch.58)



Note : Only the worst case plots for Radiated Restricted Band Edges.

8.7 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

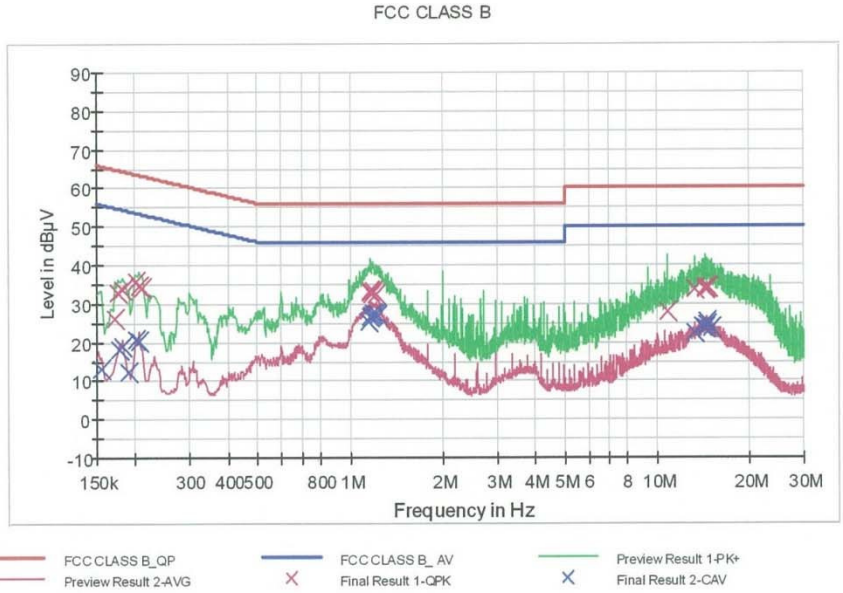
Conducted Emissions (Line 1)

EMI Auto Test(16) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H840
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN 5G



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.172000	26.3	9.000	Off	N	9.6	38.6	64.9
0.176000	32.9	9.000	Off	N	9.6	31.8	64.7
0.182000	33.6	9.000	Off	N	9.6	30.8	64.4
0.202000	35.7	9.000	Off	N	9.6	27.8	63.5
0.206000	34.6	9.000	Off	N	9.6	28.8	63.4
0.210000	34.1	9.000	Off	N	9.6	29.1	63.2
1.162000	33.0	9.000	Off	N	9.7	23.0	56.0
1.170000	33.2	9.000	Off	N	9.7	22.8	56.0
1.178000	32.5	9.000	Off	N	9.7	23.5	56.0
1.190000	33.1	9.000	Off	N	9.7	22.9	56.0
1.196000	33.3	9.000	Off	N	9.7	22.7	56.0
1.224000	32.3	9.000	Off	N	9.7	23.7	56.0
10.880000	27.6	9.000	Off	N	10.0	32.4	60.0
13.276000	33.7	9.000	Off	N	10.1	26.3	60.0
14.398000	34.2	9.000	Off	N	10.1	25.8	60.0
14.404000	33.9	9.000	Off	N	10.1	26.1	60.0
14.566000	34.0	9.000	Off	N	10.1	26.0	60.0
14.654000	34.1	9.000	Off	N	10.1	25.9	60.0

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EMI Auto Test(16) 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.156000	13.2	9.000	Off	N	9.6	42.5	55.7
0.178000	18.2	9.000	Off	N	9.6	36.4	54.6
0.182000	19.2	9.000	Off	N	9.6	35.2	54.4
0.190000	12.2	9.000	Off	N	9.6	41.8	54.0
0.202000	20.9	9.000	Off	N	9.6	32.6	53.5
0.206000	20.3	9.000	Off	N	9.6	33.1	53.4
1.146000	25.5	9.000	Off	N	9.7	20.5	46.0
1.170000	26.4	9.000	Off	N	9.7	19.6	46.0
1.184000	27.0	9.000	Off	N	9.7	19.0	46.0
1.192000	27.3	9.000	Off	N	9.7	18.7	46.0
1.216000	27.3	9.000	Off	N	9.7	18.7	46.0
1.230000	26.9	9.000	Off	N	9.7	19.1	46.0
13.276000	22.4	9.000	Off	N	10.1	27.6	50.0
14.082000	24.1	9.000	Off	N	10.1	25.9	50.0
14.398000	23.7	9.000	Off	N	10.1	26.3	50.0
14.562000	24.3	9.000	Off	N	10.1	25.7	50.0
14.566000	25.3	9.000	Off	N	10.1	24.7	50.0
15.090000	23.7	9.000	Off	N	10.1	26.3	50.0

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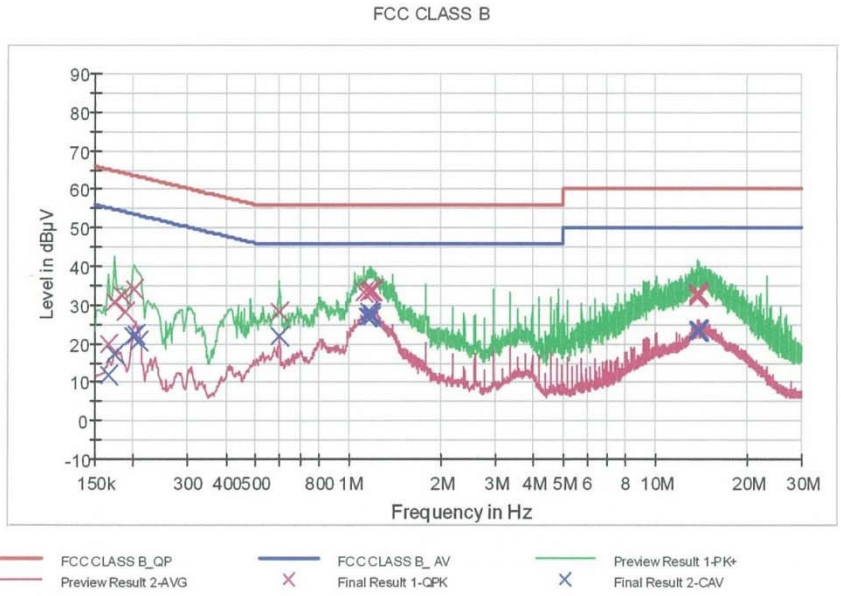
Conducted Emissions (Line 2)

EMI Auto Test(16) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H840
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN 5G



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	20.0	9.000	Off	L1	9.6	45.2	65.2
0.174000	30.8	9.000	Off	L1	9.6	34.0	64.8
0.184000	32.3	9.000	Off	L1	9.6	32.0	64.3
0.188000	28.3	9.000	Off	L1	9.6	35.8	64.1
0.202000	34.3	9.000	Off	L1	9.6	29.2	63.5
0.598000	28.3	9.000	Off	L1	9.7	27.7	56.0
1.128000	33.4	9.000	Off	L1	9.7	22.6	56.0
1.158000	33.3	9.000	Off	L1	9.7	22.7	56.0
1.182000	33.5	9.000	Off	L1	9.7	22.5	56.0
1.186000	33.7	9.000	Off	L1	9.7	22.3	56.0
1.196000	34.1	9.000	Off	L1	9.7	21.9	56.0
1.202000	33.7	9.000	Off	L1	9.7	22.3	56.0
13.688000	32.3	9.000	Off	L1	10.1	27.7	60.0
13.706000	32.1	9.000	Off	L1	10.1	27.9	60.0
13.788000	32.7	9.000	Off	L1	10.1	27.3	60.0
13.812000	33.4	9.000	Off	L1	10.1	26.6	60.0
13.882000	32.2	9.000	Off	L1	10.1	27.8	60.0
13.888000	32.7	9.000	Off	L1	10.1	27.3	60.0

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Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	11.7	9.000	Off	L1	9.6	43.5	55.2
0.174000	17.1	9.000	Off	L1	9.6	37.7	54.8
0.200000	22.1	9.000	Off	L1	9.6	31.5	53.6
0.204000	22.3	9.000	Off	L1	9.6	31.1	53.4
0.208000	20.8	9.000	Off	L1	9.6	32.5	53.3
0.596000	22.0	9.000	Off	L1	9.7	24.0	46.0
1.148000	27.0	9.000	Off	L1	9.7	19.0	46.0
1.158000	26.9	9.000	Off	L1	9.7	19.1	46.0
1.162000	28.3	9.000	Off	L1	9.7	17.7	46.0
1.180000	27.6	9.000	Off	L1	9.7	18.4	46.0
1.186000	27.1	9.000	Off	L1	9.7	18.9	46.0
1.196000	27.8	9.000	Off	L1	9.7	18.2	46.0
13.688000	23.3	9.000	Off	L1	10.1	26.7	50.0
13.788000	23.5	9.000	Off	L1	10.1	26.5	50.0
13.812000	23.8	9.000	Off	L1	10.1	26.2	50.0
13.840000	23.8	9.000	Off	L1	10.1	26.2	50.0
13.884000	23.2	9.000	Off	L1	10.1	26.8	50.0
13.888000	23.6	9.000	Off	L1	10.1	26.4	50.0

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9. LIST OF TEST EQUIPMENT

9.1 LIST OF TEST EQUIPMENT(Conducted Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216/ LISN	12/28/2015	Annual	100073
Agilent	E4440A/ Spectrum Analyzer	03/18/2015	Annual	US45303008
Agilent	N9020A / SIGNAL ANALYZER	06/30/2015	Annual	MY51110085
Agilent	N9020A / SIGNAL ANALYZER	07/02/2015	Annual	MY50510304
Agilent	N1911A/Power Meter	07/09/2015	Annual	MY45100523
Agilent	N1921A /POWER SENSOR	07/09/2015	Annual	MY45241059
Agilent	87300B/Directional Coupler	11/30/2015	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	06/15/2015	Annual	5001
Hewlett Packard	E3632A / DC POWER SUPPLY	03/11/2015	Annual	KR75303962
Agilent	8493C / Attenuator(10 dB)	07/21/2015	Annual	07560
Rohde & Schwarz	CBT / BLUETOOTH TESTER	05/11/2015	Annual	100422
ESPAC.	SH-642 / Temp & Humidity Chamber	07/23/2015	Annual	93000717

9.2 LIST OF TEST EQUIPMENT(Radiated Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Schwarzbeck	VULB 9160/ TRILOG Antenna	10/10/2014	Biennial	3368
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
Schwarzbeck	BBHA 9120D/ Horn Antenna	05/07/2015	Biennial	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	04/30/2015	Biennial	BBHA9170124
Rohde & Schwarz	FSP / Spectrum Analyzer	01/15/2016	Annual	839117/011
Wainwright Instrument	WHF3.0/18G-10EF / High Pass Filter	06/29/2015	Annual	8
Wainwright Instrument	WHKX8-6090-7000-18000-40SS / High Pass Filter	08/05/2015	Annual	5
Wainwright Instrument	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/16/2016	Annual	2
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	06/15/2015	Annual	1
Rohde & Schwarz	LOOP ANTENNA	02/04/2016	Biennial	100179
CERNEX	CBL26405040 / POWER AMP	07/21/2015	Annual	19660
CERNEX	CBL18265035 / POWER AMP	07/27/2015	Annual	22966
CERNEX	CBL06185030 / POWER AMP	07/21/2015	Annual	22965
CERNEX	CBLU1183540 / POWER AMP	07/21/2015	Annual	22964