9.4 POWER SPECTRAL DENSITY

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

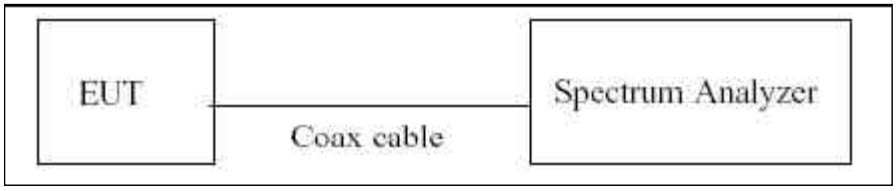
▣ Limit

Power Spectral Density

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

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

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

We tested according to Method in KDB 789033 D02 v01r02.

The spectrum analyzer is set to :

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

▣ Sample Calculation

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

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

Note :

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

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

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

▣ 802.11a

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11a	1.019	0.241	1.260	11	Pass
5200	40		1.103	0.059	1.162		Pass
5240	48		1.131	0.039	1.170		Pass
5260	52		1.471	0.070	1.541	11	Pass
5300	60		1.393	0.241	1.634		Pass
5320	64		1.766	0.241	2.007		Pass
5500	100		1.380	0.241	1.621	11	Pass
5580	116		0.927	0.241	1.168		Pass
5745	149		-1.567	0.135	-1.432	30	Pass
5785	157		-1.322	0.070	-1.252		Pass
5825	165		-1.798	0.241	-1.557		Pass

▣ TEST Plot for 802.11a

802.11a UNII 1 BAND PSD CH 36	802.11a UNII 2A BAND PSD CH 64
	
802.11a UNII 2C BAND PSD CH 100	**802.11a UNII 3 BAND PSD CH 157**
	

▣802.11n_HT20

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11n _HT20	0.156	0.197	0.353	11	Pass
5200	40		0.305	0.247	0.552		Pass
5240	48		0.609	0.197	0.806		Pass
5260	52		0.765	0.136	0.901	11	Pass
5300	60		0.681	0.247	0.928		Pass
5320	64		1.055	0.247	1.302		Pass
5500	100		0.807	0.136	0.943	11	Pass
5580	116		0.367	0.247	0.614		Pass
5745	149		-2.104	0.197	-1.907	30	Pass
5785	157		-2.391	0.197	-2.194		Pass
5825	165		-2.338	0.197	-2.141		Pass

▣ TEST Plot for 802.11n_HT20

802.11n_HT20 UNII 1 BAND PSD CH 48	802.11n_HT20 UNII 2A BAND PSD CH 64
	
802.11n_HT20 UNII 2C BAND PSD CH 100	**802.11n_HT20 UNII 3 BAND PSD CH 149**
	

▣802.11ac_VHT20

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11ac _VHT20	0.244	0.042	0.286	11	Pass
5200	40		0.251	0.251	0.502		Pass
5240	48		0.592	0.251	0.843		Pass
5260	52		0.677	0.251	0.928	11	Pass
5300	60		0.723	0.197	0.920		Pass
5320	64		1.041	0.251	1.292		Pass
5500	100		0.446	0.251	0.697	11	Pass
5580	116		0.033	0.197	0.230		Pass
5745	149		-2.211	0.074	-2.137	30	Pass
5785	157		-2.410	0.251	-2.159		Pass
5825	165		-2.273	0.042	-2.231		Pass

▣ TEST Plot for 802.11ac_VHT20

802.11ac_VHT20 UNII 1 BAND PSD CH 48	802.11ac_VHT20 UNII 2A BAND PSD CH 64
	
802.11ac_VHT20 UNII 2C BAND PSD CH 100	**802.11ac_VHT20 UNII 3 BAND PSD CH 149**
	

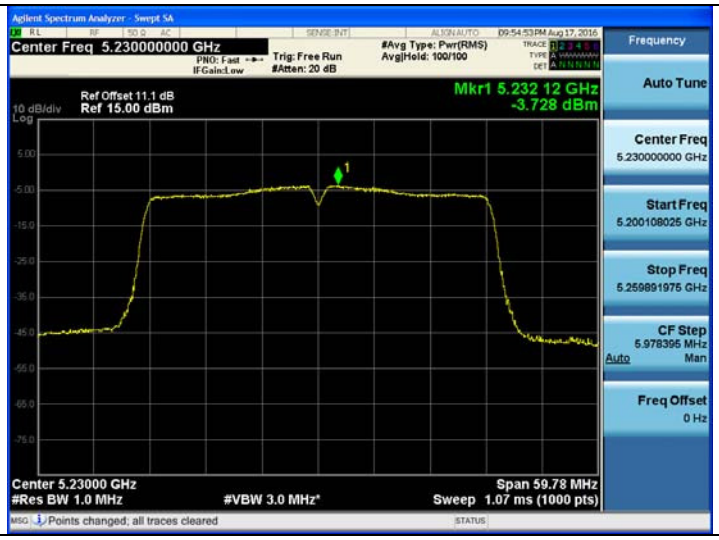
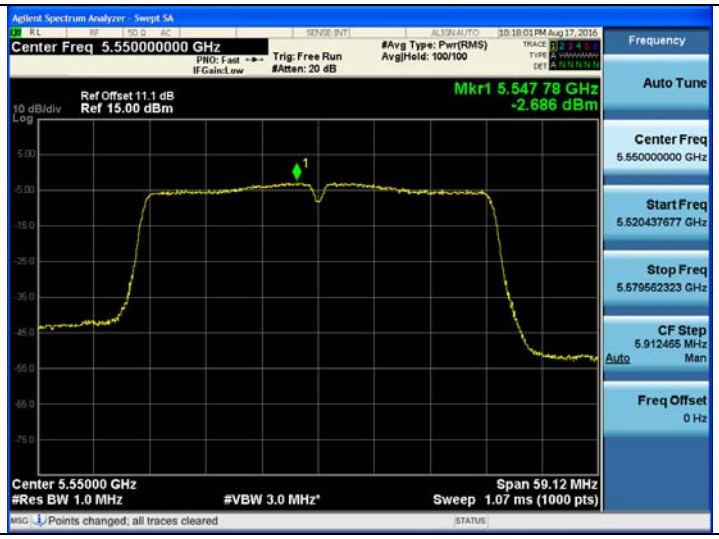
▣ 802.11n_HT40

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11n _HT40	-3.823	0.142	-3.681	11	Pass
5230	46		-3.728	0.142	-3.586		Pass
5270	54		-3.402	0.258	-3.144	11	Pass
5310	62		-3.203	0.069	-3.134		Pass
5510	102		-2.727	0.258	-2.469	11	Pass
5550	110		-2.686	0.258	-2.428		Pass
5755	151		-6.044	0.102	-5.942	30	Pass
5795	159		-6.765	0.258	-6.507		Pass

▣ TEST Plot for 802.11n_HT40

802.11n_HT40 UNII 1 BAND PSD CH 46	802.11n_HT40 UNII 2A BAND PSD CH 62
	
802.11n_HT40 UNII 2C BAND PSD CH 110	**802.11n_HT40 UNII 3 BAND PSD CH 151**
	

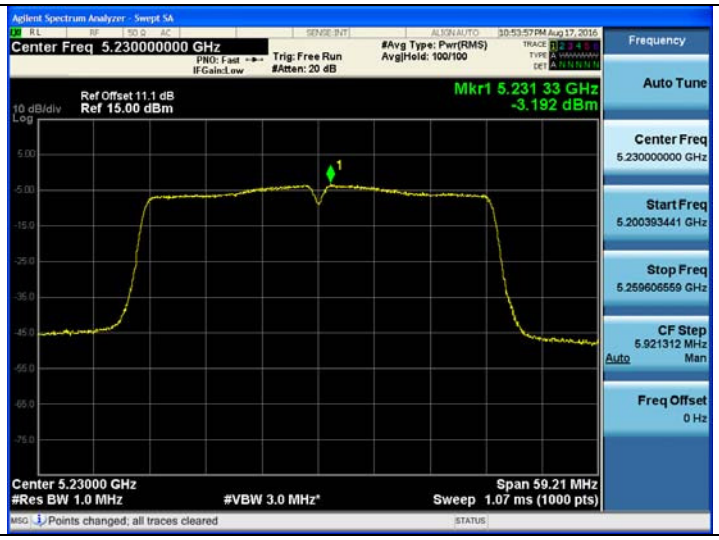
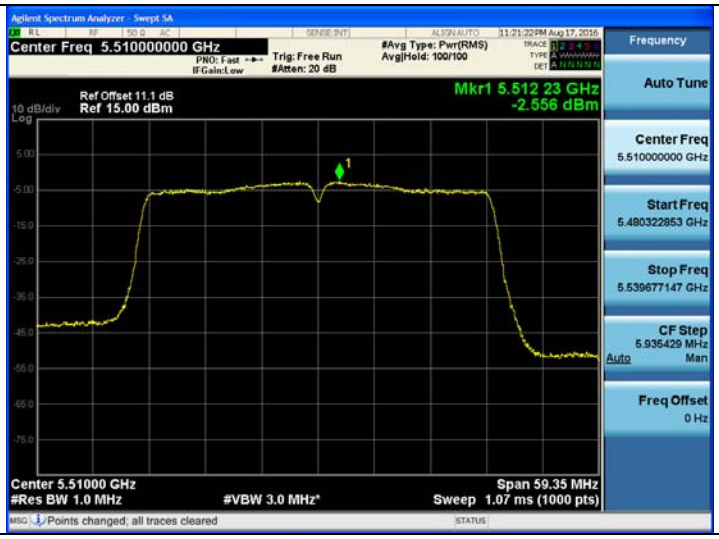
▣ **802.11ac_VHT40**

▣ **TEST RESULTS**

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11ac _VHT40	-3.972	0.262	-3.710	11	Pass
5230	46		-3.192	0.035	-3.157		Pass
5270	54		-3.226	0.035	-3.191	11	Pass
5310	62		-2.942	0.035	-2.907		Pass
5510	102		-2.556	0.262	-2.294	11	Pass
5550	110		-3.673	0.262	-3.411		Pass
5755	151		-6.436	0.035	-6.401	30	Pass
5795	159		-6.440	0.035	-6.405		Pass

▣ TEST Plot for 802.11ac_VHT40

802.11ac_VHT40 UNII 1 BAND PSD CH 46	802.11ac_VHT40 UNII 2A BAND PSD CH 62
	
802.11ac_VHT40 UNII 2C BAND PSD CH 102	**802.11ac_VHT40 UNII 3 BAND PSD CH 151**
	

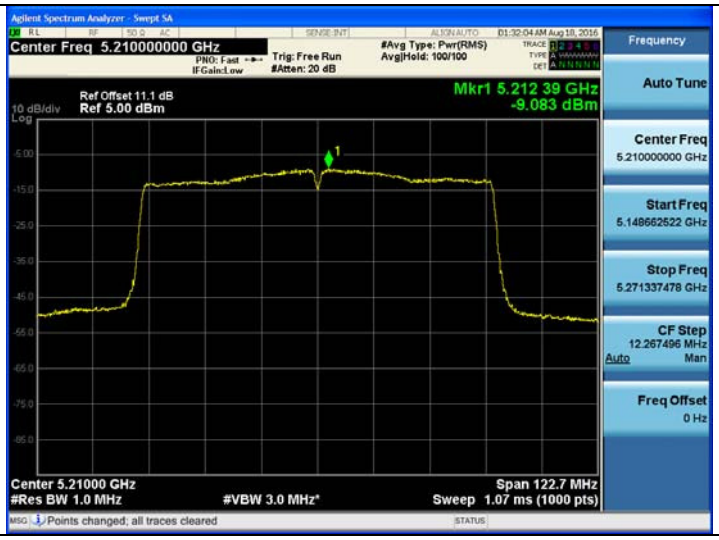
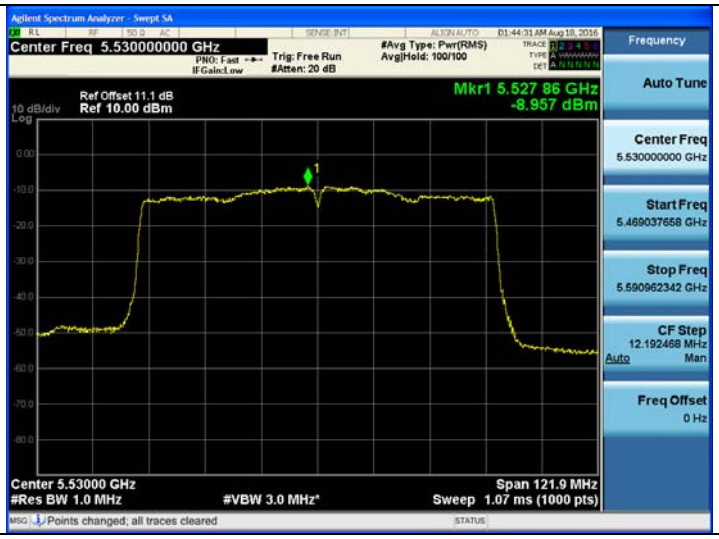
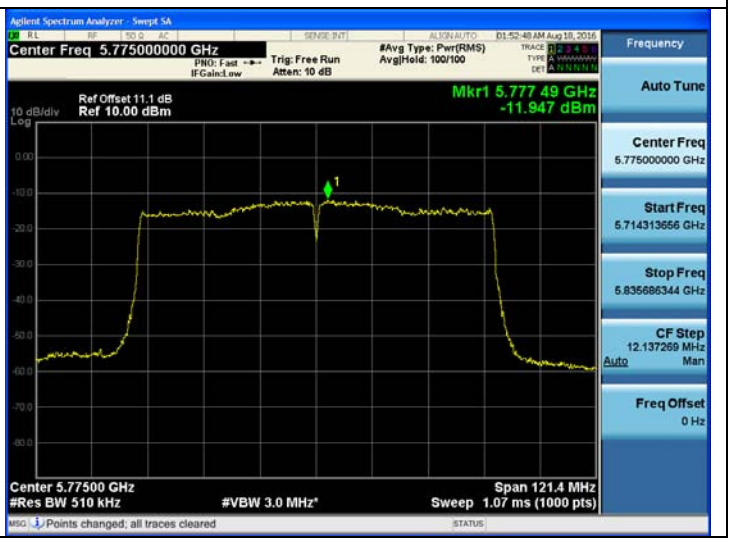
▣ **802.11ac_VHT80**

▣ **TEST RESULTS**

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT80	-9.083	0.285	-8.798	11	Pass
5290	58		-8.777	0.490	-8.287		Pass
5530	106		-8.957	0.490	-8.467		Pass
5775	155		-11.947	0.376	-11.571	30	Pass

▣ TEST Plot for 802.11ac_VHT80

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

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

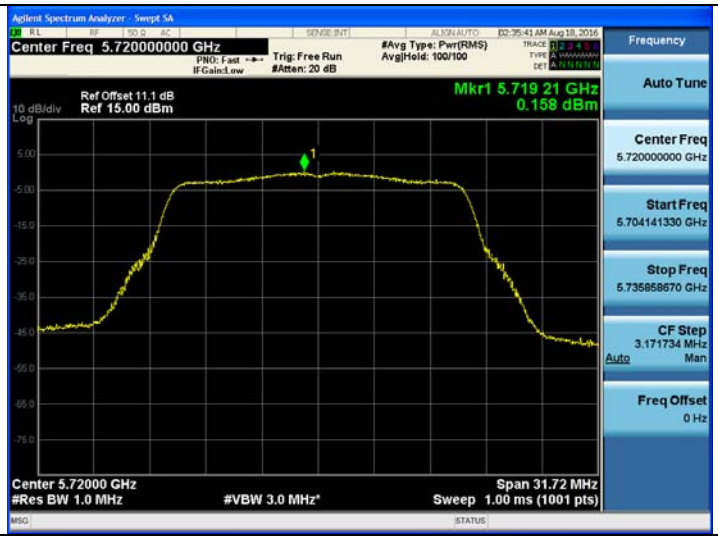
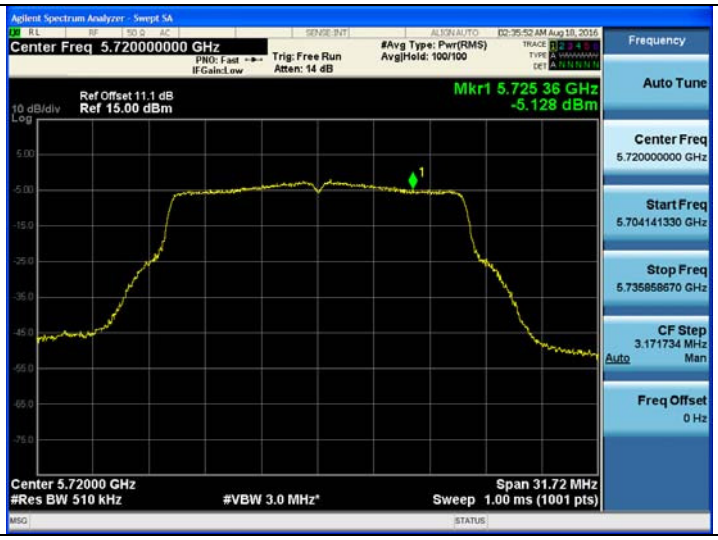
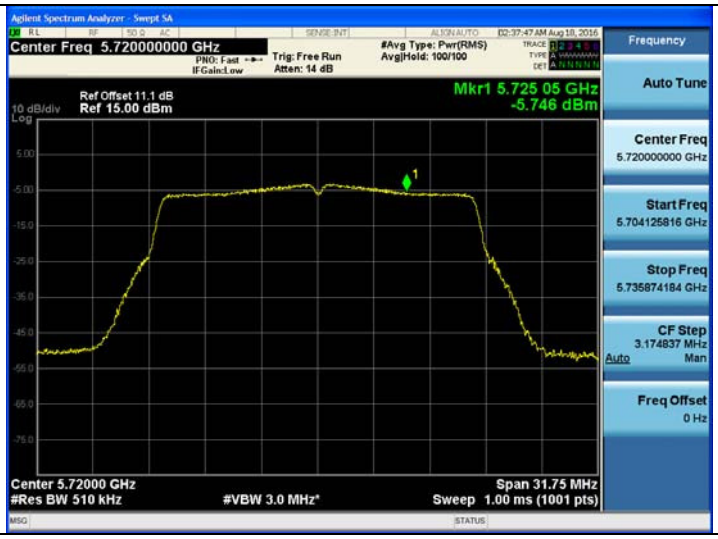
Conducted Power Density Measurements (UNII 2C Band 5720MHz)

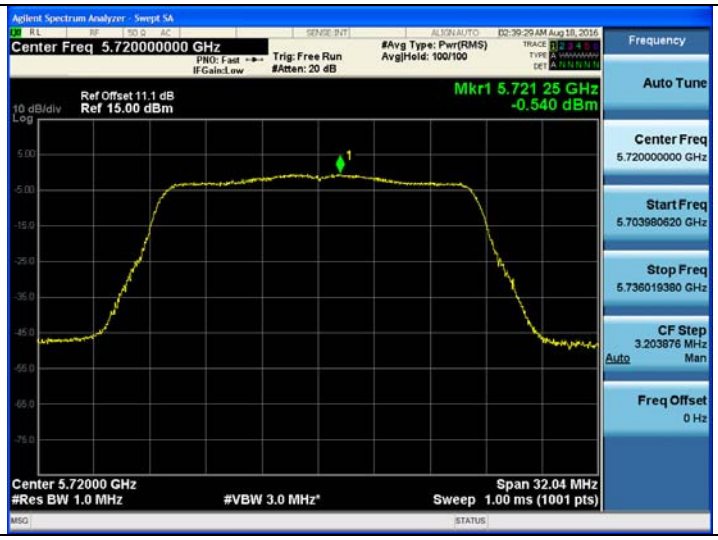
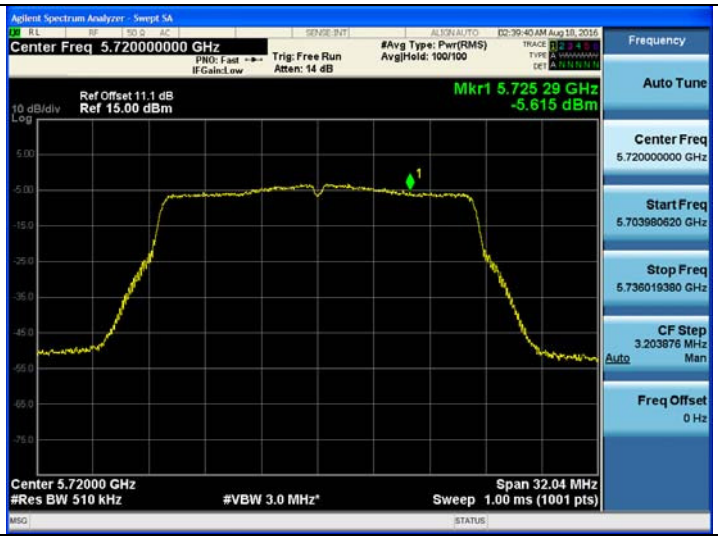
Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5720	144	802.11a	0.158	0.092	0.250	11	Pass
		802.11n	-0.529	0.136	-0.393	11	Pass
		802.11ac	-0.540	0.130	-0.410	11	Pass

Conducted Power Density Measurements (UNII 3 Band 5720MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5720	144	802.11a	-5.128	0.092	-5.036	30	Pass
		802.11n	-5.746	0.136	-5.610	30	Pass
		802.11ac	-5.615	0.130	-5.485	30	Pass

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

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

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

▣Straddle channels TEST RESULTS for 802.11n_HT40/ac_VHT40

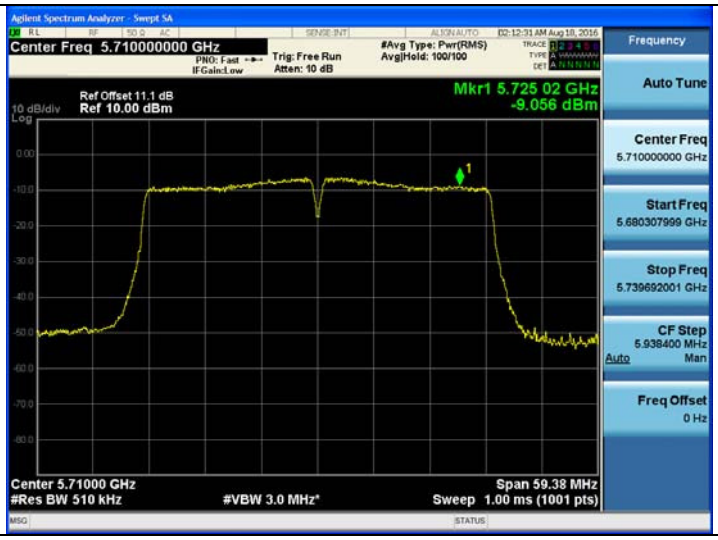
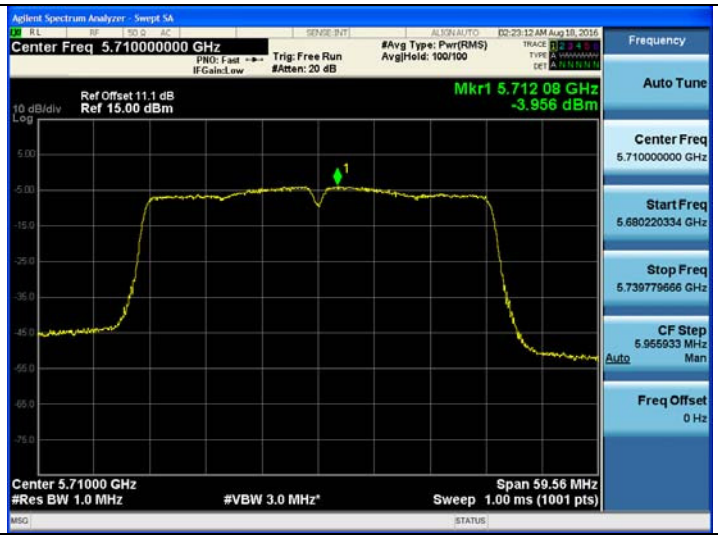
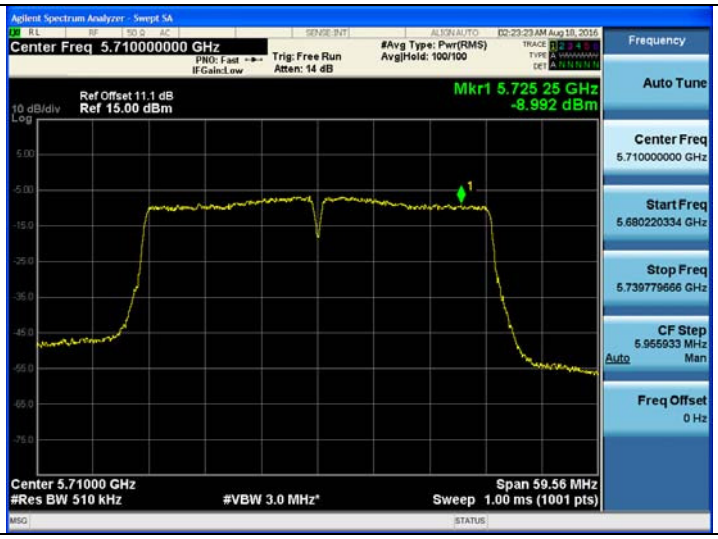
Conducted Power Density Measurements (UNII 2C Band 5710MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5710	142	802.11n	-3.929	0.142	-3.787	11	Pass
		802.11ac	-3.956	0.262	-3.694	11	Pass

Conducted Power Density Measurements (UNII 3 Band 5710MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5710	142	802.11n	-9.056	0.142	-8.914	30	Pass
		802.11ac	-8.992	0.262	-8.730	30	Pass

▣Straddle channels TEST Plot for 802.11n_HT40/ac_VHT40

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

▣Straddle channels TEST RESULTS

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

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5690	138	802.11ac	-9.126	0.490	-8.636	11	Pass

Conducted Power Density Measurements (UNII 3 Band 5690MHz)

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5690	138	802.11ac	-14.804	0.490	-14.314	30	Pass

▣Straddle channels TEST Plot for 802.11ac_VHT80

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

9.5 FREQUENCY STABILITY.

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

20 MHz BW

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

CHANNEL: 36

REFERENCE VOLTAGE: 3.85 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.85	+20(Ref)	5179993.53	-6.47
100%		-30	5179992.17	-7.83
100%		-20	5179992.46	-7.54
100%		-10	5179992.90	-7.10
100%		0	5179993.22	-6.78
100%		+10	5179993.35	-6.65
100%		+30	5179993.65	-6.35
100%		+40	5179993.82	-6.18
100%		+50	5179993.98	-6.02
115%	4.30	+20	5179993.67	-6.33
Batt. Endpoint	3.60	+20	5179993.43	-6.57

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)	5259991.85	-8.15
100%		-30	5259991.07	-8.93
100%		-20	5259991.23	-8.77
100%		-10	5259991.37	-8.63
100%		0	5259991.49	-8.51
100%		+10	5259991.66	-8.34
100%		+30	5259992.12	-7.88
100%		+40	5259992.31	-7.69
100%		+50	5259992.49	-7.51
115%	4.30	+20	5259991.77	-8.23
Batt. Endpoint	3.60	+20	5259991.59	-8.41

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)	5499995.48	-4.52
100%		-30	5499994.51	-5.49
100%		-20	5499994.72	-5.28
100%		-10	5499994.89	-5.11
100%		0	5499995.05	-4.95
100%		+10	5499995.27	-4.73
100%		+30	5499995.61	-4.39
100%		+40	5499995.78	-4.22
100%		+50	5499995.93	-4.07
115%	4.30	+20	5499995.18	-4.82
Batt. Endpoint	3.60	+20	5499994.89	-5.11

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)	5744998.15	-1.85
100%		-30	5744997.07	-2.93
100%		-20	5744997.23	-2.77
100%		-10	5744997.49	-2.51
100%		0	5744997.76	-2.24
100%		+10	5744997.97	-2.03
100%		+30	5744998.42	-1.58
100%		+40	5744998.61	-1.39
100%		+50	5744998.89	-1.11
115%	4.30	+20	5744997.52	-2.48
Batt. Endpoint	3.60	+20	5744997.31	-2.69

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)	5190002.34	2.34
100%		-30	5190004.55	4.55
100%		-20	5190004.24	4.24
100%		-10	5190003.98	3.98
100%		0	5190003.76	3.76
100%		+10	5190003.58	3.58
100%		+30	5190002.11	2.11
100%		+40	5190001.84	1.84
100%		+50	5190001.59	1.59
115%	4.30	+20	5190002.54	2.54
Batt. Endpoint	3.60	+20	5190002.88	2.88

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)	5270005.40	5.40
100%		-30	5270007.02	7.02
100%		-20	5270006.55	6.55
100%		-10	5270006.22	6.22
100%		0	5270005.97	5.97
100%		+10	5270005.68	5.68
100%		+30	5270005.11	5.11
100%		+40	5270004.78	4.78
100%		+50	5270004.40	4.40
115%	4.30	+20	5270005.88	5.88
Batt. Endpoint	3.60	+20	5270006.28	6.28

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)	5509998.20	-1.80
100%		-30	5509999.62	-0.38
100%		-20	5509999.33	-0.67
100%		-10	5509999.11	-0.89
100%		0	5509998.89	-1.11
100%		+10	5509998.55	-1.45
100%		+30	5509997.79	-2.21
100%		+40	5509997.42	-2.58
100%		+50	5509997.09	-2.91
115%	4.30	+20	5509997.67	-2.33
Batt. Endpoint	3.60	+20	5509997.86	-2.14

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)	5755007.41	7.41
100%		-30	5755009.03	9.03
100%		-20	5755008.57	8.57
100%		-10	5755008.31	8.31
100%		0	5755007.91	7.91
100%		+10	5755007.65	7.65
100%		+30	5755007.18	7.18
100%		+40	5755006.94	6.94
100%		+50	5755006.55	6.55
115%	4.30	+20	5755008.25	8.25
Batt. Endpoint	3.60	+20	5755008.57	8.57

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)	5210010.57	10.57
100%		-30	5210012.21	12.21
100%		-20	5210011.74	11.74
100%		-10	5210011.34	11.34
100%		0	5210011.05	11.05
100%		+10	5210010.71	10.71
100%		+30	5210010.18	10.18
100%		+40	5210009.77	9.77
100%		+50	5210009.53	9.53
115%	4.30	+20	5210010.67	10.67
Batt. Endpoint	3.60	+20	5210010.88	10.88

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)	5290008.41	8.41
100%		-30	5290009.88	9.88
100%		-20	5290009.57	9.57
100%		-10	5290009.31	9.31
100%		0	5290008.97	8.97
100%		+10	5290008.65	8.65
100%		+30	5290008.10	8.1
100%		+40	5290007.78	7.78
100%		+50	5290007.38	7.38
115%	4.30	+20	5290008.68	8.68
Batt. Endpoint	3.60	+20	5290009.01	9.01

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)	5529993.44	-6.56
100%		-30	5529994.80	-5.20
100%		-20	5529994.29	-5.71
100%		-10	5529994.02	-5.98
100%		0	5529993.73	-6.27
100%		+10	5529993.56	-6.44
100%		+30	5529993.19	-6.81
100%		+40	5529992.79	-7.21
100%		+50	5529992.32	-7.68
115%	4.30	+20	5529993.56	-6.44
Batt. Endpoint	3.60	+20	5529993.13	-6.87

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.

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)	5775002.76	2.76
100%		-30	5775003.91	3.91
100%		-20	5775003.67	3.67
100%		-10	5775003.48	3.48
100%		0	5775003.21	3.21
100%		+10	5775002.97	2.97
100%		+30	5775002.47	2.47
100%		+40	5775002.19	2.19
100%		+50	5775001.78	1.78
115%	4.30	+20	5775002.49	2.49
Batt. Endpoint	3.60	+20	5775002.93	2.93

Note:

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

9.6 RADIATED MEASUREMENT

9.6.1 RADIATED SPURIOUS EMISSIONS.

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

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

▣ §15.407, KDB 789033 D02

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

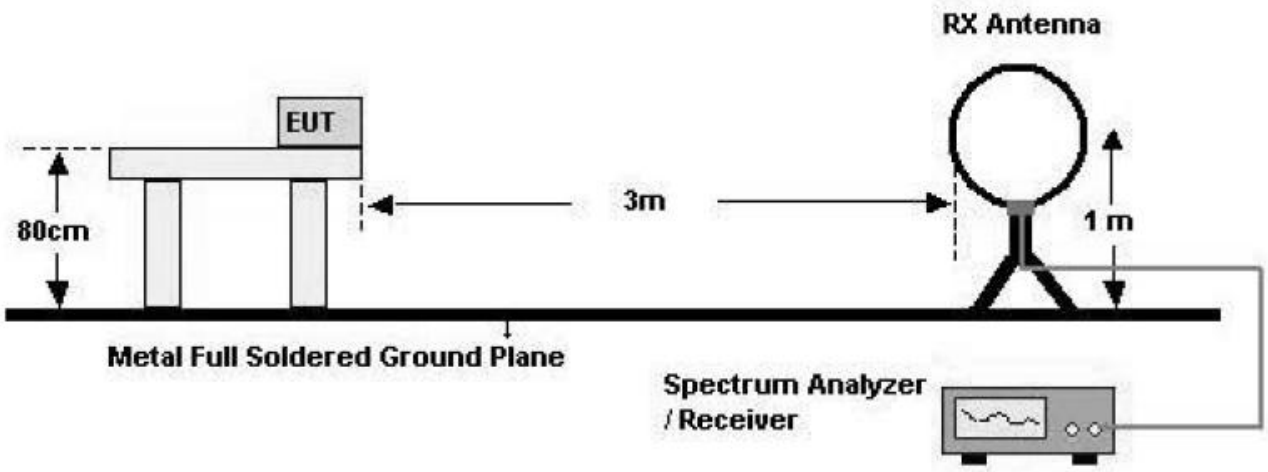
§15.407 (5)(b)(4)(i)

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

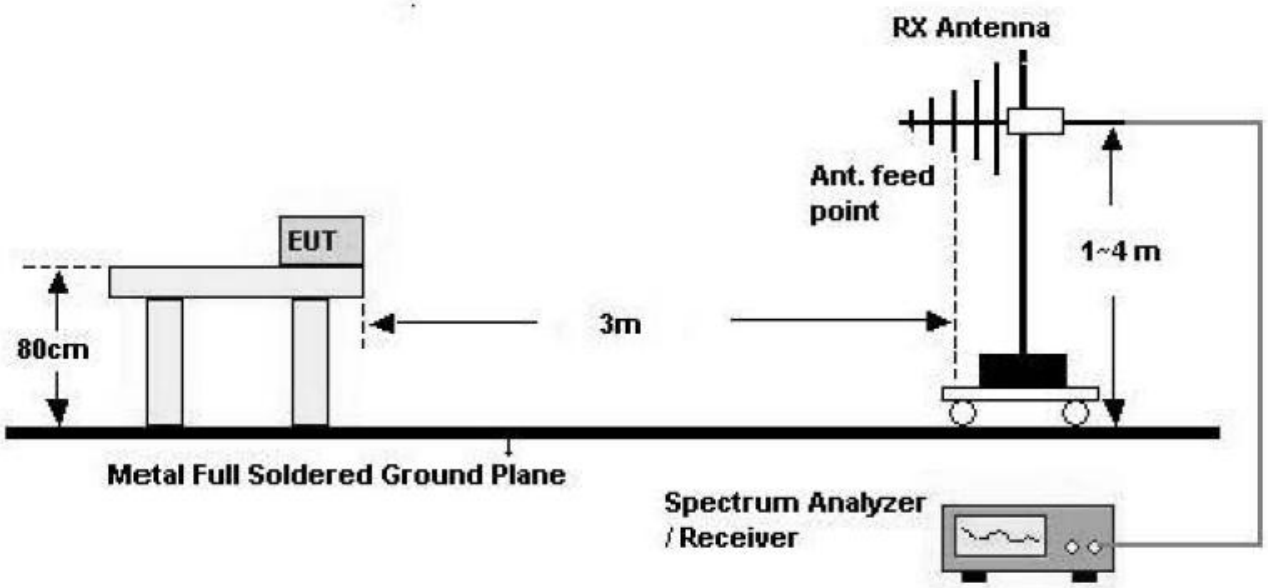
(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the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

Test Configuration

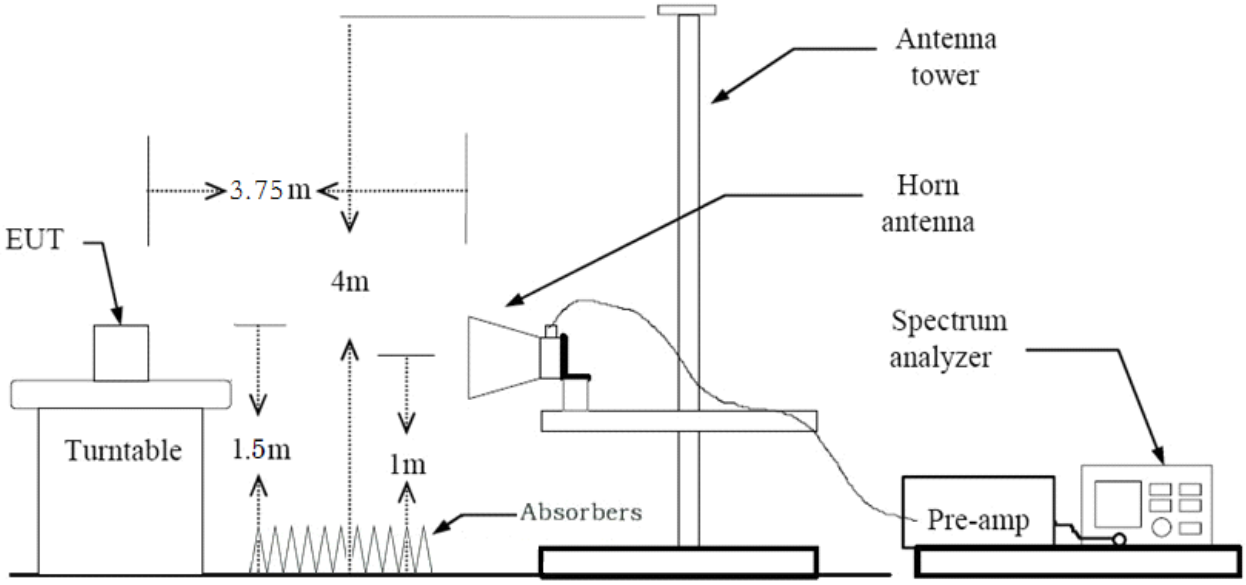
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE USED

ANSI C63.10:2013

Method G)5) in KDB 789033 D02 v01r02 (Peak)

Method G)6)d) in KDB 789033 D02 v01r02 (Average)

. Spectrum setting:

- Peak.

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

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

1. RBW = 1 MHz
2. VBW

2.1. If the EUT is configured to transmit with duty cycle ≥ 98 percent, set VBW ≤ RBW/100(i.e., 10 kHz)

but not less than 10 Hz.

2.2. If the EUT duty cycle is < 98 percent, set VBW ≥ 1/T, where T is the minimum transmission duration.

3. The analyzer is set to linear detector mode.
4. Detector = Peak.
5. Sweep time = auto.
6. Trace mode = max hold.
7. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimym number of traces by a factor of 1/x, where x is the duty cycle.

Note :

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

Mode	Worst Data rate (Mbps)	T_{on} (ms)	T_{total} (ms)	Duty Cycle (%)	VBW(1/T) (Hz)	The actual setting value of VBW (Hz)
a	**6**	**2.792**	**2.817**	**99.10**	**358**	**1000**
n_HT20	**MCS 0**	**2.594**	**2.614**	**99.22**	**385**	**1000**
ac_VHT20	**MCS 0**	**2.599**	**2.625**	**99.03**	**385**	**1000**
n_HT40	**MCS 0**	**2.483**	**2.503**	**99.19**	**403**	**3000**
ac_VHT40	**MCS 0**	**2.488**	**2.508**	**99.19**	**402**	**3000**
ac_VHT80	**MCS 0**	**1.173**	**1.193**	**98.30**	**853**	**10000**

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

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

Notes:

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

TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

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

Notes:

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

Above 1 GHz

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	54.73	-2.75	V	51.98	68.20	16.22	PK
15540	54.00	-1.23	V	52.77	73.98	21.21	PK
15540	39.18	-1.23	V	37.95	53.98	16.03	AV
10360	55.20	-2.75	H	52.45	68.20	15.75	PK
15540	54.20	-1.23	H	52.97	73.98	21.01	PK
15540	39.53	-1.23	H	38.30	53.98	15.68	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	54.95	-2.60	V	52.35	68.20	15.85	PK
15600	53.75	-2.26	V	51.49	73.98	22.49	PK
15600	39.02	-2.26	V	36.76	53.98	17.22	AV
10400	55.49	-2.60	H	52.89	68.20	15.31	PK
15600	53.90	-2.26	H	51.64	73.98	22.34	PK
15600	39.19	-2.26	H	36.93	53.98	17.05	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	54.96	-3.54	V	51.42	68.20	16.78	PK
15720	53.78	-2.64	V	51.14	73.98	22.84	PK
15720	39.55	-2.64	V	36.91	53.98	17.07	AV
10480	55.70	-3.54	H	52.16	68.20	16.04	PK
15720	54.64	-2.64	H	52.00	73.98	21.98	PK
15720	39.72	-2.64	H	37.08	53.98	16.90	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	54.60	-2.75	V	51.85	68.20	16.35	PK
15540	53.90	-1.23	V	52.67	73.98	21.31	PK
15540	39.14	-1.23	V	37.91	53.98	16.07	AV
10360	55.00	-2.75	H	52.25	68.20	15.95	PK
15540	54.04	-1.23	H	52.81	73.98	21.17	PK
15540	39.47	-1.23	H	38.24	53.98	15.74	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	54.82	-2.60	V	52.22	68.20	15.98	PK
15600	53.65	-2.26	V	51.39	73.98	22.59	PK
15600	38.98	-2.26	V	36.72	53.98	17.26	AV
10400	55.29	-2.60	H	52.69	68.20	15.51	PK
15600	53.74	-2.26	H	51.48	73.98	22.50	PK
15600	39.13	-2.26	H	36.87	53.98	17.11	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	54.83	-3.54	V	51.29	68.20	16.91	PK
15720	53.68	-2.64	V	51.04	73.98	22.94	PK
15720	39.51	-2.64	V	36.87	53.98	17.11	AV
10480	55.50	-3.54	H	51.96	68.20	16.24	PK
15720	54.48	-2.64	H	51.84	73.98	22.14	PK
15720	39.66	-2.64	H	37.02	53.98	16.96	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	54.50	-2.75	V	51.75	68.20	16.45	PK
15540	53.93	-1.23	V	52.70	73.98	21.28	PK
15540	39.16	-1.23	V	37.93	53.98	16.05	AV
10360	54.94	-2.75	H	52.19	68.20	16.01	PK
15540	54.08	-1.23	H	52.85	73.98	21.13	PK
15540	39.47	-1.23	H	38.24	53.98	15.74	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	54.72	-2.60	V	52.12	68.20	16.08	PK
15600	53.68	-2.26	V	51.42	73.98	22.56	PK
15600	39.00	-2.26	V	36.74	53.98	17.24	AV
10400	55.23	-2.60	H	52.63	68.20	15.57	PK
15600	53.78	-2.26	H	51.52	73.98	22.46	PK
15600	39.13	-2.26	H	36.87	53.98	17.11	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	54.73	-3.54	V	51.19	68.20	17.01	PK
15720	53.71	-2.64	V	51.07	73.98	22.91	PK
15720	39.53	-2.64	V	36.89	53.98	17.09	AV
10480	55.44	-3.54	H	51.90	68.20	16.30	PK
15720	54.52	-2.64	H	51.88	73.98	22.10	PK
15720	39.66	-2.64	H	37.02	53.98	16.96	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10380	54.40	-2.74	V	51.66	68.20	16.54	PK
15570	52.91	-1.95	V	50.96	73.98	23.02	PK
15570	39.31	-1.95	V	37.36	53.98	16.62	AV
10380	55.02	-2.74	H	52.28	68.20	15.92	PK
15570	53.48	-1.95	H	51.53	73.98	22.45	PK
15570	39.48	-1.95	H	37.53	53.98	16.45	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10460	54.59	-3.07	V	51.52	68.20	16.68	PK
15690	53.17	-0.73	V	52.44	73.98	21.54	PK
15690	40.41	-0.73	V	39.68	53.98	14.30	AV
10460	55.33	-3.07	H	52.26	68.20	15.94	PK
15690	53.69	-0.73	H	52.96	73.98	21.02	PK
15690	40.54	-0.73	H	39.81	53.98	14.17	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10380	54.49	-2.74	V	51.75	68.20	16.45	PK
15570	53.13	-1.95	V	51.18	73.98	22.80	PK
15570	39.28	-1.95	V	37.33	53.98	16.65	AV
10380	55.11	-2.74	H	52.37	68.20	15.83	PK
15570	53.67	-1.95	H	51.72	73.98	22.26	PK
15570	39.40	-1.95	H	37.45	53.98	16.53	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10460	54.68	-3.07	V	51.61	68.20	16.59	PK
15690	53.39	-0.73	V	52.66	73.98	21.32	PK
15690	40.38	-0.73	V	39.65	53.98	14.33	AV
10460	55.42	-3.07	H	52.35	68.20	15.85	PK
15690	53.88	-0.73	H	53.15	73.98	20.83	PK
15690	40.46	-0.73	H	39.73	53.98	14.25	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10420	54.03	-2.88	V	51.15	68.20	17.05	PK
15630	53.11	-1.88	V	51.23	73.98	22.75	PK
15630	39.88	-1.88	V	38.00	53.98	15.98	AV
10420	55.07	-2.88	H	52.19	68.20	16.01	PK
15630	53.52	-1.88	H	51.64	73.98	22.34	PK
15630	39.98	-1.88	H	38.10	53.98	15.88	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	54.94	-2.97	V	51.97	68.20	16.23	PK
15780	54.96	-1.86	V	53.10	73.98	20.88	PK
15780	39.74	-1.86	V	37.88	53.98	16.10	AV
10520	55.81	-2.97	H	52.84	68.20	15.36	PK
15780	54.49	-1.86	H	52.63	73.98	21.35	PK
15780	39.93	-1.86	H	38.07	53.98	15.91	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	54.39	-3.22	V	51.17	73.98	22.81	PK
10600	40.53	-3.22	V	37.31	53.98	16.67	AV
15900	53.85	-2.44	V	51.41	73.98	22.57	PK
15900	39.44	-2.44	V	37.00	53.98	16.98	AV
10600	55.05	-3.22	H	51.83	73.98	22.15	PK
10600	40.74	-3.22	H	37.52	53.98	16.46	AV
15900	54.04	-2.44	H	51.60	73.98	22.38	PK
15900	39.62	-2.44	H	37.18	53.98	16.80	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	54.89	-3.27	V	51.62	73.98	22.36	PK
10640	40.66	-3.27	V	37.39	53.98	16.59	AV
15960	52.77	-2.89	V	49.88	73.98	24.10	PK
15960	38.28	-2.89	V	35.39	53.98	18.59	AV
10640	55.18	-3.27	H	51.91	73.98	22.07	PK
10640	40.72	-3.27	H	37.45	53.98	16.53	AV
15960	53.39	-2.89	H	50.50	73.98	23.48	PK
15960	38.70	-2.89	H	35.81	53.98	18.17	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	54.81	-2.97	V	51.84	68.20	16.36	PK
15780	54.86	-1.86	V	53.00	73.98	20.98	PK
15780	39.70	-1.86	V	37.84	53.98	16.14	AV
10520	55.61	-2.97	H	52.64	68.20	15.56	PK
15780	54.33	-1.86	H	52.47	73.98	21.51	PK
15780	39.87	-1.86	H	38.01	53.98	15.97	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	54.26	-3.22	V	51.04	73.98	22.94	PK
10600	40.58	-3.22	V	37.36	53.98	16.62	AV
15900	53.75	-2.44	V	51.31	73.98	22.67	PK
15900	39.40	-2.44	V	36.96	53.98	17.02	AV
10600	54.85	-3.22	H	51.63	73.98	22.35	PK
10600	40.72	-3.22	H	37.50	53.98	16.48	AV
15900	53.88	-2.44	H	51.44	73.98	22.54	PK
15900	39.56	-2.44	H	37.12	53.98	16.86	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	54.76	-3.27	V	51.49	73.98	22.49	PK
10640	40.71	-3.27	V	37.44	53.98	16.54	AV
15960	52.67	-2.89	V	49.78	73.98	24.20	PK
15960	38.24	-2.89	V	35.35	53.98	18.63	AV
10640	54.98	-3.27	H	51.71	73.98	22.27	PK
10640	40.70	-3.27	H	37.43	53.98	16.55	AV
15960	53.23	-2.89	H	50.34	73.98	23.64	PK
15960	38.64	-2.89	H	35.75	53.98	18.23	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	54.71	-2.97	V	51.74	68.20	16.46	PK
15780	54.89	-1.86	V	53.03	73.98	20.95	PK
15780	39.72	-1.86	V	37.86	53.98	16.12	AV
10520	55.55	-2.97	H	52.58	68.20	15.62	PK
15780	54.37	-1.86	H	52.51	73.98	21.47	PK
15780	39.87	-1.86	H	38.01	53.98	15.97	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	54.16	-3.22	V	50.94	73.98	23.04	PK
10600	40.59	-3.22	V	37.37	53.98	16.61	AV
15900	53.78	-2.44	V	51.34	73.98	22.64	PK
15900	39.42	-2.44	V	36.98	53.98	17.00	AV
10600	54.79	-3.22	H	51.57	73.98	22.41	PK
10600	40.69	-3.22	H	37.47	53.98	16.51	AV
15900	53.92	-2.44	H	51.48	73.98	22.50	PK
15900	39.56	-2.44	H	37.12	53.98	16.86	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	54.66	-3.27	V	51.39	73.98	22.59	PK
10640	40.72	-3.27	V	37.45	53.98	16.53	AV
15960	52.70	-2.89	V	49.81	73.98	24.17	PK
15960	38.26	-2.89	V	35.37	53.98	18.61	AV
10640	54.92	-3.27	H	51.65	73.98	22.33	PK
10640	40.67	-3.27	H	37.40	53.98	16.58	AV
15960	53.27	-2.89	H	50.38	73.98	23.60	PK
15960	38.64	-2.89	H	35.75	53.98	18.23	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10540	54.44	-2.73	V	51.71	68.20	16.49	PK
15810	53.42	-2.52	V	50.90	73.98	23.08	PK
15810	40.13	-2.52	V	37.61	53.98	16.37	AV
10540	54.91	-2.73	H	52.18	68.20	16.02	PK
15810	54.10	-2.52	H	51.58	73.98	22.40	PK
15810	40.30	-2.52	H	37.78	53.98	16.20	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10620	54.16	-3.38	V	50.78	73.98	23.20	PK
10620	40.47	-3.38	V	37.09	53.98	16.89	AV
15930	52.01	-2.78	V	49.23	73.98	24.75	PK
15930	38.97	-2.78	V	36.19	53.98	17.79	AV
10620	54.64	-3.38	H	51.26	73.98	22.72	PK
10620	40.79	-3.38	H	37.41	53.98	16.57	AV
15930	53.16	-2.78	H	50.38	73.98	23.60	PK
15930	39.08	-2.78	H	36.30	53.98	17.68	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10540	54.53	-2.73	V	51.80	68.20	16.40	PK
15810	53.64	-2.52	V	51.12	73.98	22.86	PK
15810	40.10	-2.52	V	37.58	53.98	16.40	AV
10540	55.00	-2.73	H	52.27	68.20	15.93	PK
15810	54.29	-2.52	H	51.77	73.98	22.21	PK
15810	40.22	-2.52	H	37.70	53.98	16.28	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10620	54.25	-3.38	V	50.87	73.98	23.11	PK
10620	40.40	-3.38	V	37.02	53.98	16.96	AV
15930	52.23	-2.78	V	49.45	73.98	24.53	PK
15930	38.94	-2.78	V	36.16	53.98	17.82	AV
10620	54.73	-3.38	H	51.35	73.98	22.63	PK
10620	40.69	-3.38	H	37.31	53.98	16.67	AV
15930	53.35	-2.78	H	50.57	73.98	23.41	PK
15930	39.00	-2.78	H	36.22	53.98	17.76	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10580	53.61	-3.21	V	50.40	68.20	17.80	PK
15870	52.96	-2.62	V	50.34	73.98	23.64	PK
15870	39.64	-2.62	V	37.02	53.98	16.96	AV
10580	54.46	-3.21	H	51.25	68.20	16.95	PK
15870	53.42	-2.62	H	50.80	73.98	23.18	PK
15870	39.84	-2.62	H	37.22	53.98	16.76	AV

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	54.43	-1.60	V	52.83	73.98	21.15	PK
11000	40.16	-1.60	V	38.56	53.98	15.42	AV
16500	53.08	-0.86	V	52.22	68.20	15.98	PK
11000	54.88	-1.60	H	53.28	73.98	20.70	PK
11000	40.29	-1.60	H	38.69	53.98	15.29	AV
16500	53.67	-0.86	H	52.81	68.20	15.39	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	53.85	-2.03	V	51.82	73.98	22.16	PK
11160	39.47	-2.03	V	37.44	53.98	16.54	AV
16740	53.48	0.18	V	53.66	68.20	14.54	PK
11160	54.94	-2.03	H	52.91	73.98	21.07	PK
11160	39.64	-2.03	H	37.61	53.98	16.37	AV
16740	54.08	0.18	H	54.26	68.20	13.94	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11440	54.40	-1.92	V	52.48	73.98	21.50	PK
11440	40.08	-1.92	V	38.16	53.98	15.82	AV
17160	52.71	2.19	V	54.90	68.20	13.30	PK
11440	54.97	-1.92	H	53.05	73.98	20.93	PK
11440	40.18	-1.92	H	38.26	53.98	15.72	AV
17160	53.24	2.19	H	55.43	68.20	12.77	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	54.30	-1.60	V	52.70	73.98	21.28	PK
11000	40.21	-1.60	V	38.61	53.98	15.37	AV
16500	52.98	-0.86	V	52.12	68.20	16.08	PK
11000	54.68	-1.60	H	53.08	73.98	20.90	PK
11000	40.27	-1.60	H	38.67	53.98	15.31	AV
16500	53.51	-0.86	H	52.65	68.20	15.55	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	53.72	-2.03	V	51.69	73.98	22.29	PK
11160	39.52	-2.03	V	37.49	53.98	16.49	AV
16740	53.38	0.18	V	53.56	68.20	14.64	PK
11160	54.74	-2.03	H	52.71	73.98	21.27	PK
11160	39.62	-2.03	H	37.59	53.98	16.39	AV
16740	53.92	0.18	H	54.10	68.20	14.10	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11440	54.27	-1.92	V	52.35	73.98	21.63	PK
11440	40.13	-1.92	V	38.21	53.98	15.77	AV
17160	52.61	2.19	V	54.80	68.20	13.40	PK
11440	54.77	-1.92	H	52.85	73.98	21.13	PK
11440	40.16	-1.92	H	38.24	53.98	15.74	AV
17160	53.08	2.19	H	55.27	68.20	12.93	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	54.20	-1.60	V	52.60	73.98	21.38	PK
11000	40.22	-1.60	V	38.62	53.98	15.36	AV
16500	53.01	-0.86	V	52.15	68.20	16.05	PK
11000	54.62	-1.60	H	53.02	73.98	20.96	PK
11000	40.24	-1.60	H	38.64	53.98	15.34	AV
16500	53.55	-0.86	H	52.69	68.20	15.51	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11160	53.62	-2.03	V	51.59	73.98	22.39	PK
11160	39.53	-2.03	V	37.50	53.98	16.48	AV
16740	53.41	0.18	V	53.59	68.20	14.61	PK
11160	54.68	-2.03	H	52.65	73.98	21.33	PK
11160	39.59	-2.03	H	37.56	53.98	16.42	AV
16740	53.96	0.18	H	54.14	68.20	14.06	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11440	54.17	-1.92	V	52.25	73.98	21.73	PK
11440	40.14	-1.92	V	38.22	53.98	15.76	AV
17160	52.64	2.19	V	54.83	68.20	13.37	PK
11440	54.71	-1.92	H	52.79	73.98	21.19	PK
11440	40.13	-1.92	H	38.21	53.98	15.77	AV
17160	53.12	2.19	H	55.31	68.20	12.89	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11020	53.76	-1.98	V	51.78	73.98	22.20	PK
11020	40.42	-1.98	V	38.44	53.98	15.54	AV
16530	52.45	-1.57	V	50.88	68.20	17.32	PK
11020	54.42	-1.98	H	52.44	73.98	21.54	PK
11020	40.53	-1.98	H	38.55	53.98	15.43	AV
16530	53.33	-1.57	H	51.76	68.20	16.44	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11100	53.70	-2.32	V	51.38	73.98	22.60	PK
11100	39.97	-2.32	V	37.65	53.98	16.33	AV
16650	53.24	-1.17	V	52.07	68.20	16.13	PK
11100	54.37	-2.32	H	52.05	73.98	21.93	PK
11100	40.19	-2.32	H	37.87	53.98	16.11	AV
16650	53.89	-1.17	H	52.72	68.20	15.48	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11420	53.86	-2.23	V	51.63	73.98	22.35	PK
11420	40.34	-2.23	V	38.11	53.98	15.87	AV
17130	52.97	1.75	V	54.72	68.20	13.48	PK
11420	54.56	-2.23	H	52.33	73.98	21.65	PK
11420	40.52	-2.23	H	38.29	53.98	15.69	AV
17130	53.25	1.75	H	55.00	68.20	13.20	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11020	53.85	-1.98	V	51.87	73.98	22.11	PK
11020	40.35	-1.98	V	38.37	53.98	15.61	AV
16530	52.67	-1.57	V	51.10	68.20	17.10	PK
11020	54.51	-1.98	H	52.53	73.98	21.45	PK
11020	40.43	-1.98	H	38.45	53.98	15.53	AV
16530	53.52	-1.57	H	51.95	68.20	16.25	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11100	53.79	-2.32	V	51.47	73.98	22.51	PK
11100	39.90	-2.32	V	37.58	53.98	16.40	AV
16650	53.46	-1.17	V	52.29	68.20	15.91	PK
11100	54.46	-2.32	H	52.14	73.98	21.84	PK
11100	40.09	-2.32	H	37.77	53.98	16.21	AV
16650	54.08	-1.17	H	52.91	68.20	15.29	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11420	53.95	-2.23	V	51.72	73.98	22.26	PK
11420	40.27	-2.23	V	38.04	53.98	15.94	AV
17130	53.19	1.75	V	54.94	68.20	13.26	PK
11420	54.65	-2.23	H	52.42	73.98	21.56	PK
11420	40.42	-2.23	H	38.19	53.98	15.79	AV
17130	53.44	1.75	H	55.19	68.20	13.01	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11060	53.08	-2.21	V	50.87	73.98	23.11	PK
11060	39.75	-2.21	V	37.54	53.98	16.44	AV
16590	52.01	-0.60	V	51.41	68.20	16.79	PK
11060	54.31	-2.21	H	52.10	73.98	21.88	PK
11060	39.88	-2.21	H	37.67	53.98	16.31	AV
16590	52.62	-0.60	H	52.02	68.20	16.18	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11380	53.89	-2.08	V	51.81	73.98	22.17	PK
11380	40.27	-2.08	V	38.19	53.98	15.79	AV
17070	53.24	1.67	V	54.91	68.20	13.29	PK
11380	54.65	-2.08	H	52.57	73.98	21.41	PK
11380	40.34	-2.08	H	38.26	53.98	15.72	AV
17070	53.80	1.67	H	55.47	68.20	12.73	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	55.00	-2.50	V	52.50	73.98	21.48	PK
11490	40.60	-2.50	V	38.10	53.98	15.88	AV
17235	53.07	3.09	V	56.16	68.20	12.04	PK
11490	55.37	-2.50	H	52.87	73.98	21.11	PK
11490	40.73	-2.50	H	38.23	53.98	15.75	AV
17235	53.67	3.09	H	56.76	68.20	11.44	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	54.38	-2.87	V	51.51	73.98	22.47	PK
11570	40.35	-2.87	V	37.48	53.98	16.50	AV
17355	51.52	3.45	V	54.97	68.20	13.23	PK
11570	55.48	-2.87	H	52.61	73.98	21.37	PK
11570	40.52	-2.87	H	37.65	53.98	16.33	AV
17355	52.88	3.45	H	56.33	68.20	11.87	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	54.41	-2.84	V	51.57	73.98	22.41	PK
11650	40.32	-2.84	V	37.48	53.98	16.50	AV
17475	52.58	5.68	V	58.26	68.20	9.94	PK
11650	55.31	-2.84	H	52.47	73.98	21.51	PK
11650	40.75	-2.84	H	37.91	53.98	16.07	AV
17475	52.99	5.68	H	58.67	68.20	9.53	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	54.87	-2.50	V	52.37	73.98	21.61	PK
11490	40.65	-2.50	V	38.15	53.98	15.83	AV
17235	52.97	3.09	V	56.06	68.20	12.14	PK
11490	55.17	-2.50	H	52.67	73.98	21.31	PK
11490	40.71	-2.50	H	38.21	53.98	15.77	AV
17235	53.51	3.09	H	56.60	68.20	11.60	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	54.25	-2.87	V	51.38	73.98	22.60	PK
11570	40.40	-2.87	V	37.53	53.98	16.45	AV
17355	51.42	3.45	V	54.87	68.20	13.33	PK
11570	55.28	-2.87	H	52.41	73.98	21.57	PK
11570	40.50	-2.87	H	37.63	53.98	16.35	AV
17355	52.72	3.45	H	56.17	68.20	12.03	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	54.28	-2.84	V	51.44	73.98	22.54	PK
11650	40.37	-2.84	V	37.53	53.98	16.45	AV
17475	51.88	5.68	V	57.56	68.20	10.64	PK
11650	55.11	-2.84	H	52.27	73.98	21.71	PK
11650	40.73	-2.84	H	37.89	53.98	16.09	AV
17475	52.55	5.68	H	58.23	68.20	9.97	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	54.77	-2.50	V	52.27	73.98	21.71	PK
11490	40.66	-2.50	V	38.16	53.98	15.82	AV
17235	53.00	3.09	V	56.09	68.20	12.11	PK
11490	55.11	-2.50	H	52.61	73.98	21.37	PK
11490	40.68	-2.50	H	38.18	53.98	15.80	AV
17235	53.55	3.09	H	56.64	68.20	11.56	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	54.15	-2.87	V	51.28	73.98	22.70	PK
11570	40.41	-2.87	V	37.54	53.98	16.44	AV
17355	51.45	3.45	V	54.90	68.20	13.30	PK
11570	55.22	-2.87	H	52.35	73.98	21.63	PK
11570	40.47	-2.87	H	37.60	53.98	16.38	AV
17355	52.76	3.45	H	56.21	68.20	11.99	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	54.18	-2.84	V	51.34	73.98	22.64	PK
11650	40.38	-2.84	V	37.54	53.98	16.44	AV
17475	52.68	5.68	V	58.36	68.20	9.84	PK
11650	55.05	-2.84	H	52.21	73.98	21.77	PK
11650	40.70	-2.84	H	37.86	53.98	16.12	AV
17475	53.05	5.68	H	58.73	68.20	9.47	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11510	54.35	-2.55	V	51.80	73.98	22.18	PK
11510	40.40	-2.55	V	37.85	53.98	16.13	AV
17265	51.76	3.10	V	54.86	68.20	13.34	PK
11510	54.66	-2.55	H	52.11	73.98	21.87	PK
11510	40.55	-2.55	H	38.00	53.98	15.98	AV
17265	52.40	3.10	H	55.50	68.20	12.70	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11590	54.35	-3.29	V	51.06	73.98	22.92	PK
11590	40.60	-3.29	V	37.31	53.98	16.67	AV
17385	52.67	4.19	V	56.86	68.20	11.34	PK
11590	54.65	-3.29	H	51.36	73.98	22.62	PK
11590	40.75	-3.29	H	37.46	53.98	16.52	AV
17385	53.00	4.19	H	57.19	68.20	11.01	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11510	54.44	-2.55	V	51.89	73.98	22.09	PK
11510	40.33	-2.55	V	37.78	53.98	16.20	AV
17265	51.98	3.10	V	55.08	68.20	13.12	PK
11510	54.75	-2.55	H	52.20	73.98	21.78	PK
11510	40.45	-2.55	H	37.90	53.98	16.08	AV
17265	52.59	3.10	H	55.69	68.20	12.51	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11590	54.44	-3.29	V	51.15	73.98	22.83	PK
11590	40.53	-3.29	V	37.24	53.98	16.74	AV
17385	51.88	4.19	V	56.07	68.20	12.13	PK
11590	54.74	-3.29	H	51.45	73.98	22.53	PK
11590	40.65	-3.29	H	37.36	53.98	16.62	AV
17385	52.64	4.19	H	56.83	68.20	11.37	PK

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

Notes:

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

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

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11550	53.28	-2.71	V	50.57	73.98	23.41	PK
11550	40.12	-2.71	V	37.41	53.98	16.57	AV
17325	52.61	3.44	V	56.05	68.20	12.15	PK
11550	54.34	-2.71	H	51.63	73.98	22.35	PK
11550	40.22	-2.71	H	37.51	53.98	16.47	AV
17325	52.94	3.44	H	56.38	68.20	11.82	PK

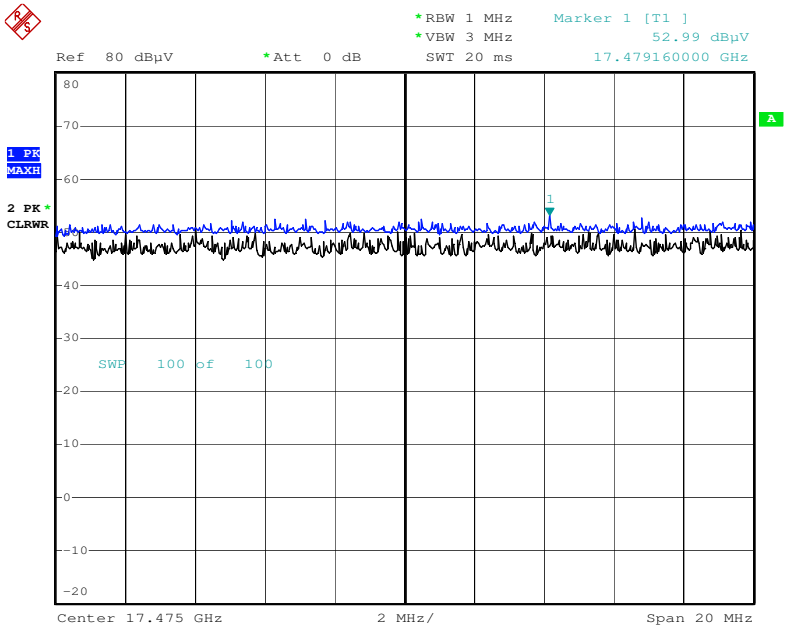
*AN. : Antenna Factor / CL : Cable Loss / Amp.G. : Amplifier Gain / D.F. : Distance Factor

Notes:

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

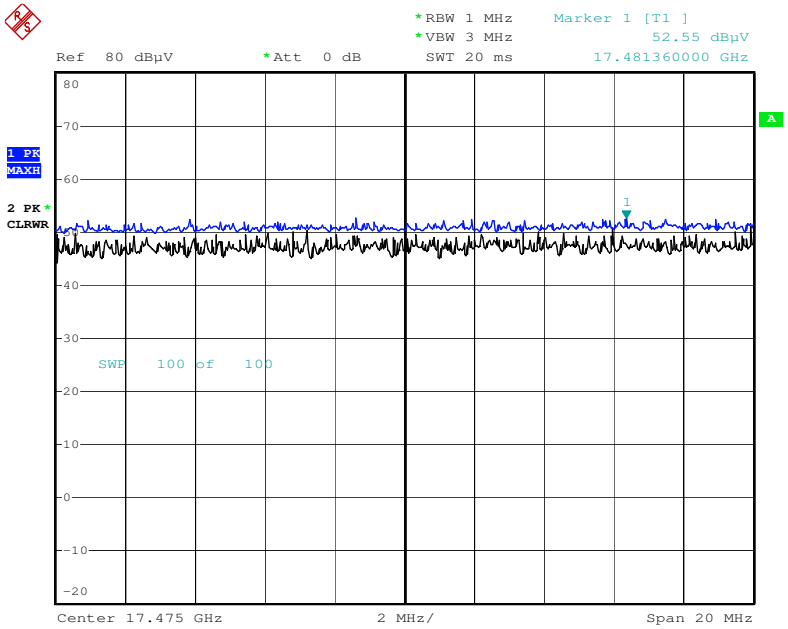
▣ RESULT PLOTS

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



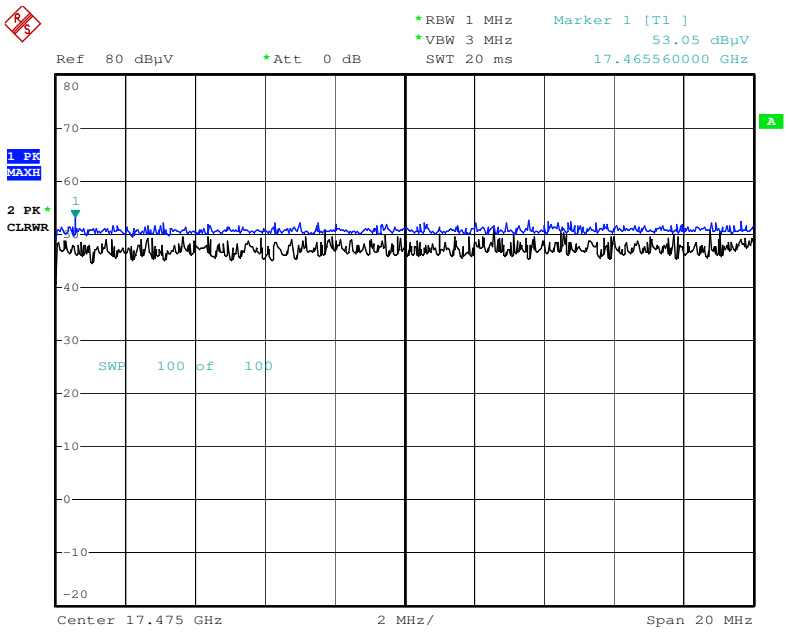
Date: 9.AUG.2016 16:22:37

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



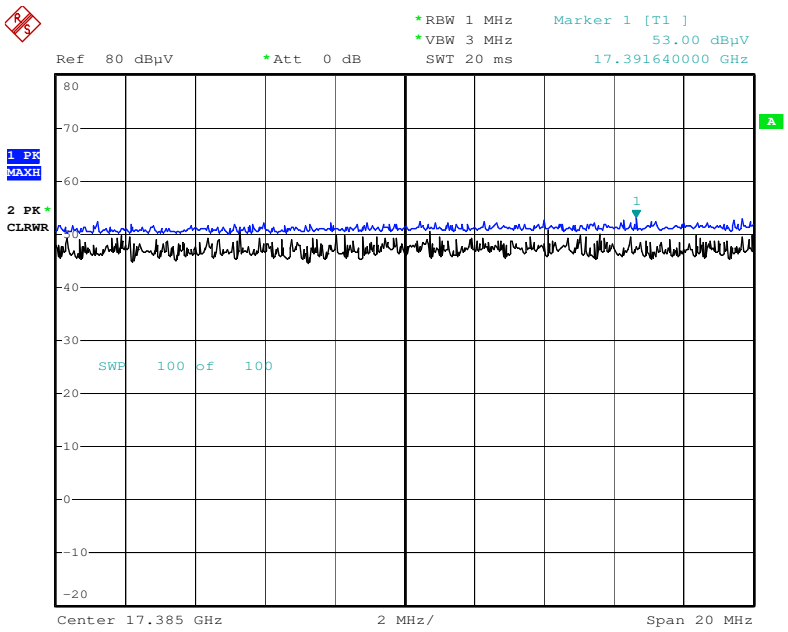
Date: 9.AUG.2016 16:23:08

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



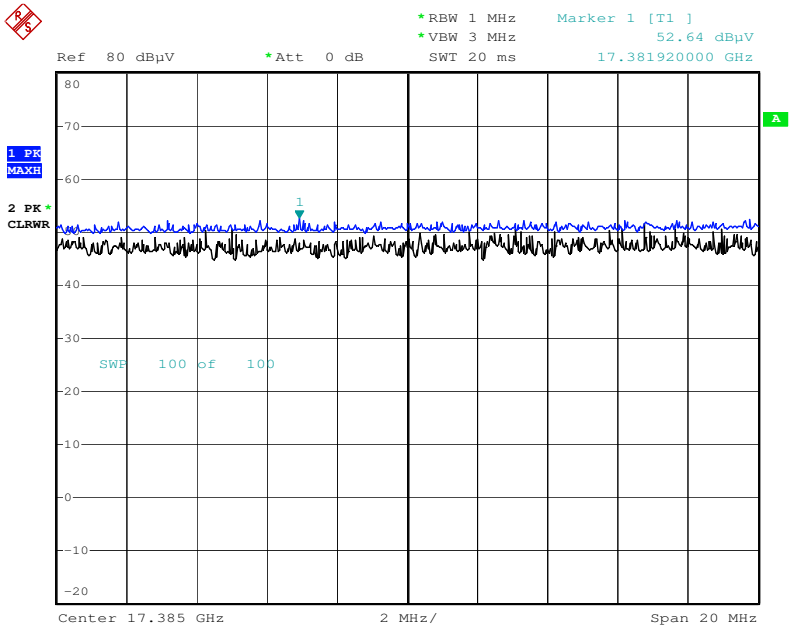
Date: 9.AUG.2016 16:23:32

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



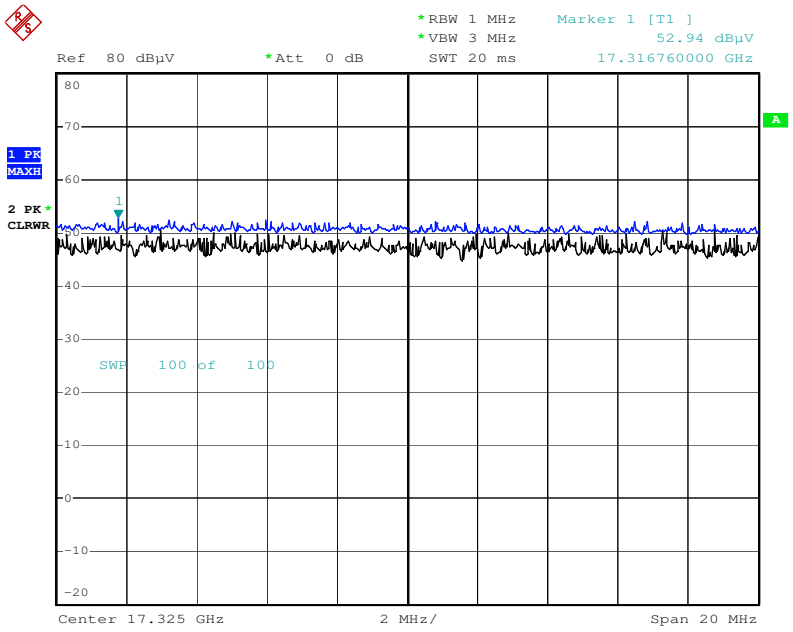
Date: 9.AUG.2016 16:24:27

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



Date: 9.AUG.2016 16:24:52

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



Date: 9.AUG.2016 16:25:40

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

9.6.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

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

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

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	65.06	2.81	H	67.87	73.98	6.11	PK
5150	38.04	2.81	H	40.85	53.98	13.13	AV
5150	60.94	2.81	V	63.75	73.98	10.23	PK
5150	37.61	2.81	V	40.42	53.98	13.56	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	62.22	2.81	H	65.03	73.98	8.95	PK
5150	38.15	2.81	H	40.96	53.98	13.02	AV
5150	64.21	2.81	V	67.02	73.98	6.96	PK
5150	37.58	2.81	V	40.39	53.98	13.59	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	65.32	2.81	H	68.13	73.98	5.85	PK
5150	38.17	2.81	H	40.98	53.98	13.00	AV
5150	63.65	2.81	V	66.46	73.98	7.52	PK
5150	37.93	2.81	V	40.74	53.98	13.24	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	59.52	2.81	H	62.33	73.98	11.65	PK
5150	39.59	2.81	H	42.4	53.98	11.58	AV
5150	59.77	2.81	V	62.58	73.98	11.40	PK
5150	39.31	2.81	V	42.12	53.98	11.86	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	59.13	2.81	H	61.94	73.98	12.04	PK
5150	39.96	2.81	H	42.77	53.98	11.21	AV
5150	60.13	2.81	V	62.94	73.98	11.04	PK
5150	38.84	2.81	V	41.65	53.98	12.33	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	54.85	2.81	H	57.66	73.98	16.32	PK
5150	41.60	2.81	H	44.41	53.98	9.57	AV
5150	53.20	2.81	V	56.01	73.98	17.97	PK
5150	40.54	2.81	V	43.35	53.98	10.63	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	59.72	3.86	H	63.58	73.98	10.40	PK
5350	39.70	3.86	H	43.56	53.98	10.42	AV
5350	56.01	3.86	V	59.87	73.98	14.11	PK
5350	38.02	3.86	V	41.88	53.98	12.10	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	59.59	3.86	H	63.45	73.98	10.53	PK
5350	39.62	3.86	H	43.48	53.98	10.50	AV
5350	56.33	3.86	V	60.19	73.98	13.79	PK
5350	37.45	3.86	V	41.31	53.98	12.67	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	59.66	3.86	H	63.52	73.98	10.46	PK
5350	39.64	3.86	H	43.5	53.98	10.48	AV
5350	55.98	3.86	V	59.84	73.98	14.14	PK
5350	37.57	3.86	V	41.43	53.98	12.55	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	63.28	3.86	H	67.14	73.98	6.84	PK
5350	42.96	3.86	H	46.82	53.98	7.16	AV
5350	60.64	3.86	V	64.5	73.98	9.48	PK
5350	39.64	3.86	V	43.5	53.98	10.48	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	63.23	3.86	H	67.09	73.98	6.89	PK
5350	42.92	3.86	H	46.78	53.98	7.20	AV
5350	59.68	3.86	V	63.54	73.98	10.44	PK
5350	39.55	3.86	V	43.41	53.98	10.57	AV

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

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	60.27	3.86	H	64.13	73.98	9.85	PK
5350	42.74	3.86	H	46.6	53.98	7.38	AV
5350	55.47	3.86	V	59.33	73.98	14.65	PK
5350	39.83	3.86	V	43.69	53.98	10.29	AV

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

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	53.75	5.10	H	58.85	73.98	15.13	PK
5460	37.76	5.10	H	42.86	53.98	11.12	AV
*5470	63.79	5.18	H	68.97	73.98	5.01	PK
*5470	39.56	5.18	H	44.74	53.98	9.24	AV
5460	51.36	5.10	V	56.46	73.98	17.52	PK
5460	36.15	5.10	V	41.25	53.98	12.73	AV
*5470	55.96	5.18	V	61.14	73.98	12.84	PK
*5470	37.09	5.18	V	42.27	53.98	11.71	AV

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

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	54.16	5.10	H	59.26	73.98	14.72	PK
5460	37.30	5.10	H	42.4	53.98	11.58	AV
*5470	58.36	5.18	H	63.54	68.20	4.66	PK
*5470	40.02	5.18	H	45.2	53.98	8.78	AV
5460	51.83	5.10	V	56.93	73.98	17.05	PK
5460	36.05	5.10	V	41.15	53.98	12.83	AV
*5470	56.78	5.18	V	61.96	73.98	12.02	PK
*5470	37.75	5.18	V	42.93	53.98	11.05	AV

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

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	56.39	5.10	H	61.49	73.98	12.49	PK
5460	37.57	5.10	H	42.67	53.98	11.31	AV
*5470	59.63	5.18	H	64.81	68.20	3.39	PK
5460	51.74	5.10	V	56.84	73.98	17.14	PK
5460	36.07	5.10	V	41.17	53.98	12.81	AV
*5470	55.09	5.18	V	60.27	68.20	7.93	PK

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

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	55.78	5.10	H	60.88	73.98	13.10	PK
5460	39.58	5.10	H	44.68	53.98	9.30	AV
*5470	61.91	5.18	H	67.09	73.98	6.89	PK
*5470	44.32	5.18	H	49.5	53.98	4.48	AV
5460	51.85	5.10	V	56.95	73.98	17.03	PK
5460	37.17	5.10	V	42.27	53.98	11.71	AV
*5470	56.24	5.18	V	61.42	73.98	12.56	PK
*5470	40.02	5.18	V	45.2	53.98	8.78	AV

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

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	56.41	5.10	H	61.51	73.98	12.47	PK
5460	39.88	5.10	H	44.98	53.98	9.00	AV
*5470	60.94	5.18	H	66.12	73.98	7.86	PK
*5470	44.20	5.18	H	49.38	53.98	4.60	AV
5460	51.67	5.10	V	56.77	73.98	17.21	PK
5460	37.02	5.10	V	42.12	53.98	11.86	AV
*5470	56.70	5.18	V	61.88	73.98	12.10	PK
*5470	40.13	5.18	V	45.31	53.98	8.67	AV

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

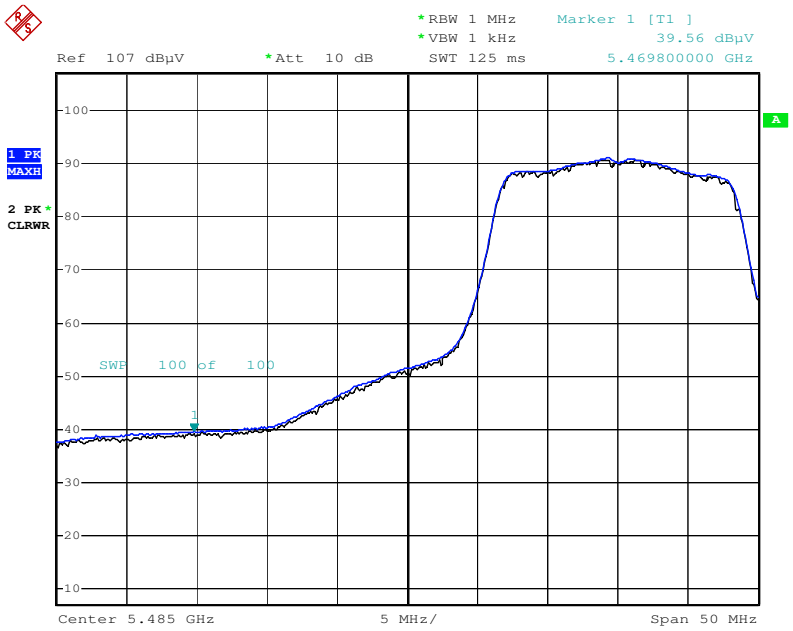
Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. +D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	57.09	5.10	H	62.19	73.98	11.79	PK
5460	42.18	5.10	H	47.28	53.98	6.70	AV
*5470	58.44	5.18	H	63.62	73.98	10.36	PK
*5470	43.30	5.18	H	48.48	53.98	5.50	AV
5460	53.03	5.10	V	58.13	73.98	15.85	PK
5460	38.79	5.10	V	43.89	53.98	10.09	AV
*5470	54.75	5.18	V	59.93	73.98	14.05	PK
*5470	40.12	5.18	V	45.3	53.98	8.68	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT + D.F.
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)
5. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor

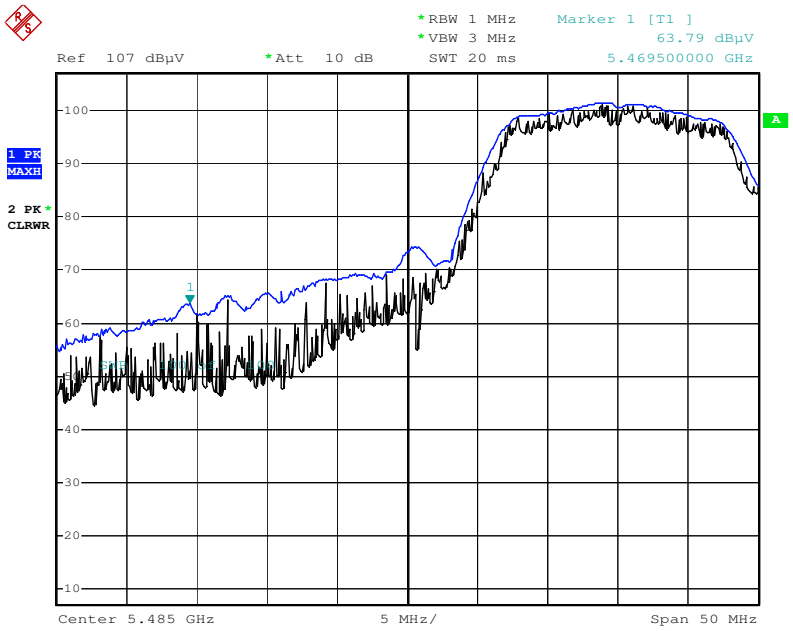
▣ RESULT PLOTS

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



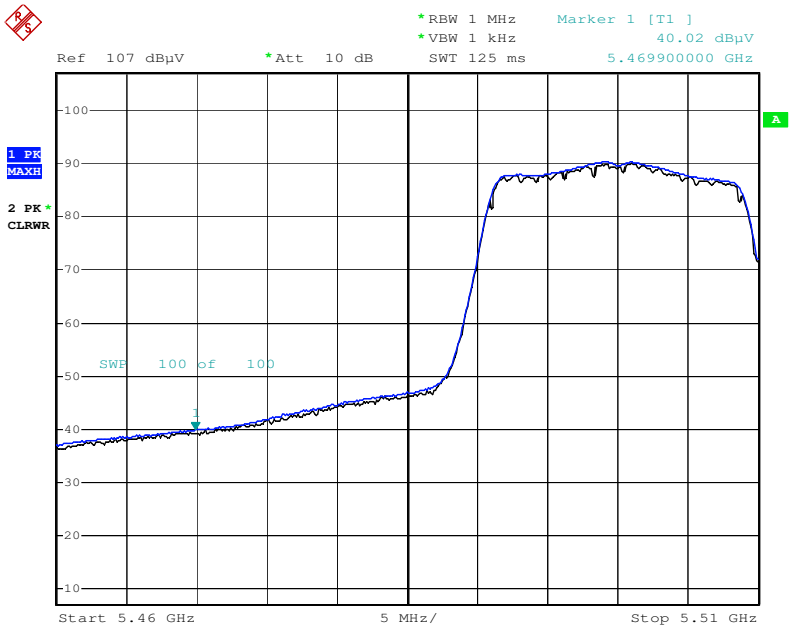
Date: 3.AUG.2016 14:43:57

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



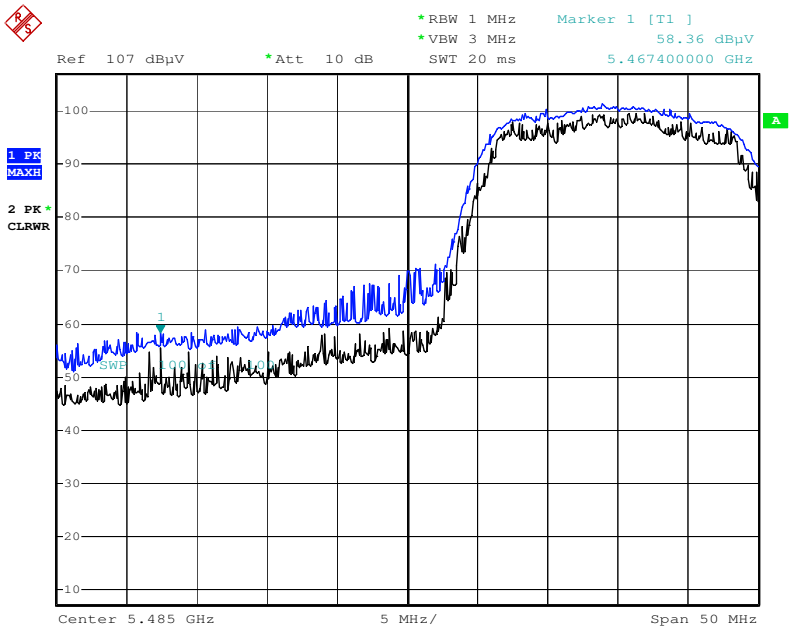
Date: 3.AUG.2016 14:42:07

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



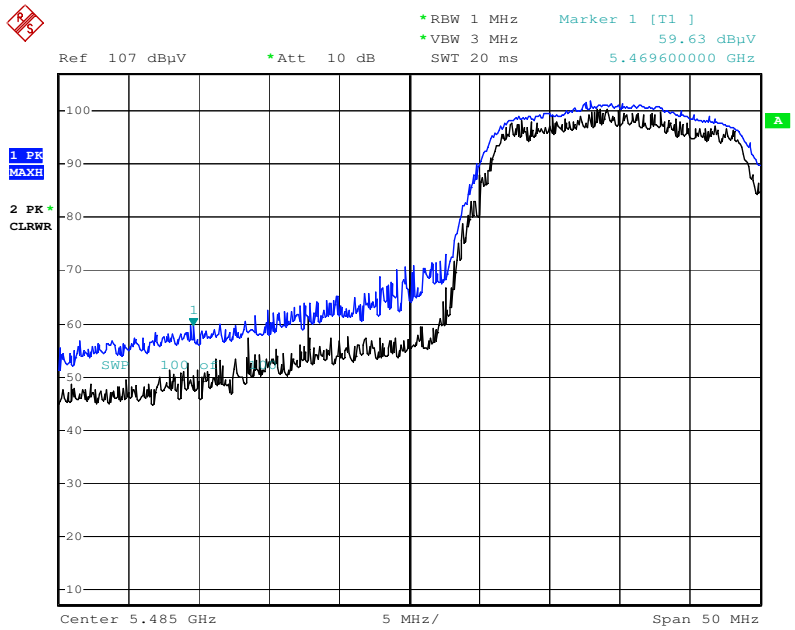
Date: 3.AUG.2016 14:45:33

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



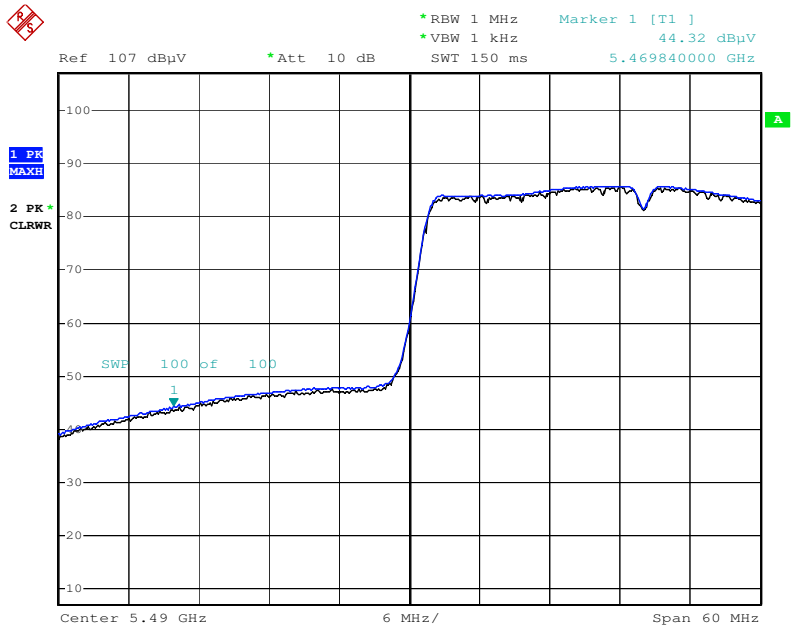
Date: 3.AUG.2016 14:47:07

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



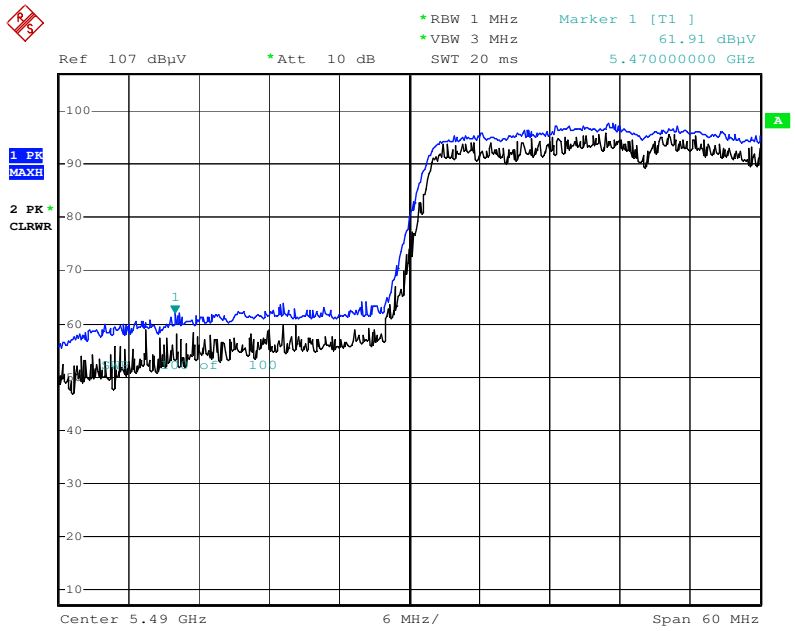
Date: 3.AUG.2016 14:50:19

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



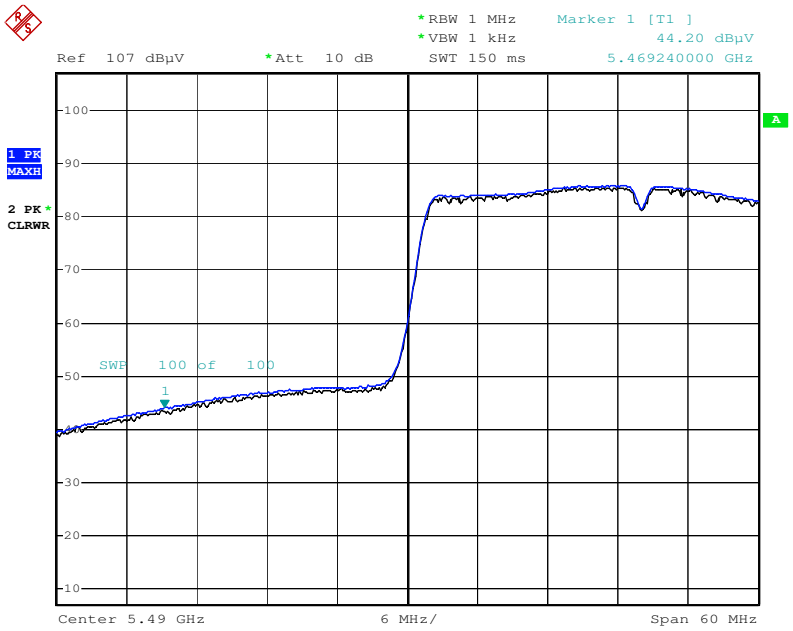
Date: 3.AUG.2016 14:55:14

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



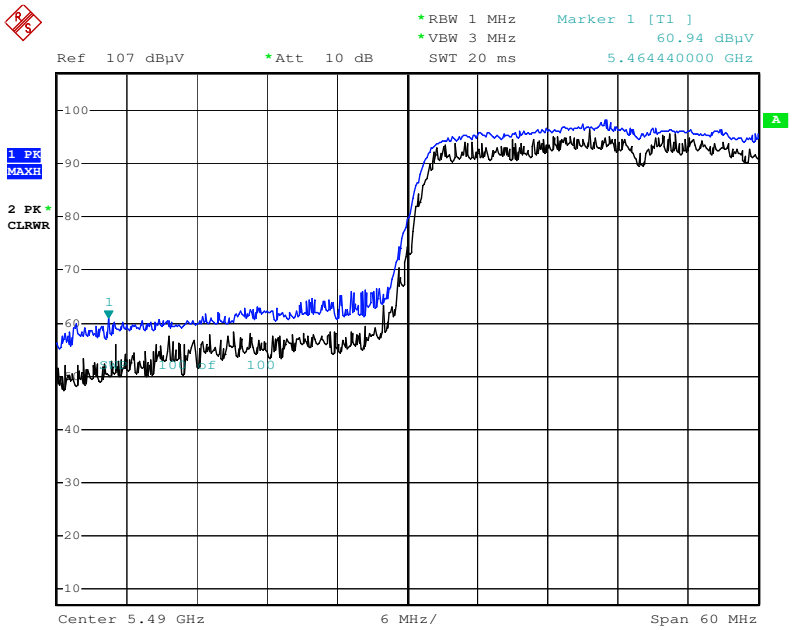
Date: 3.AUG.2016 14:54:22

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



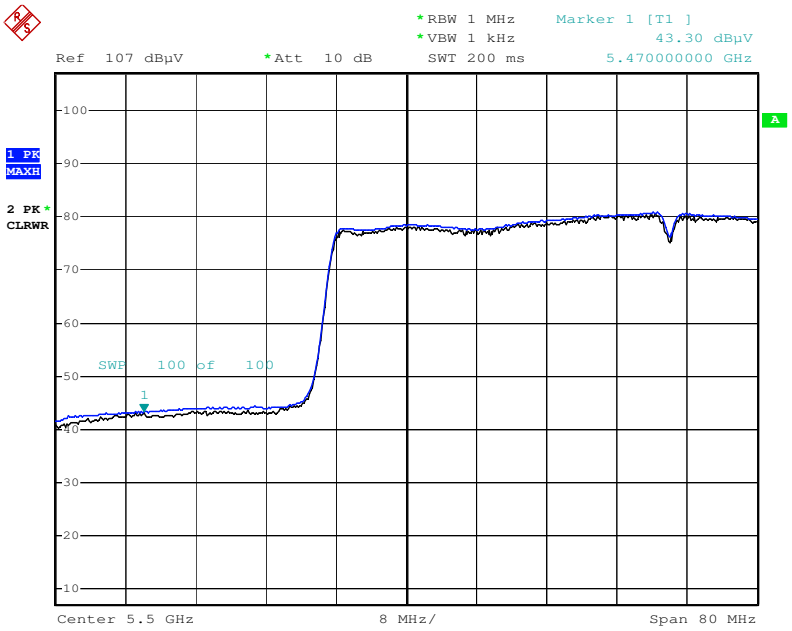
Date: 3.AUG.2016 14:57:46

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



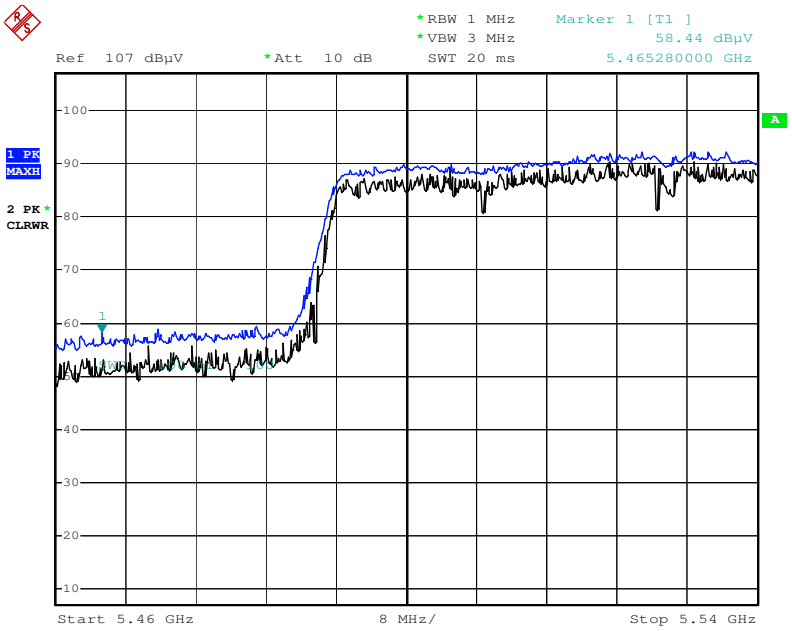
Date: 3.AUG.2016 15:00:14

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



Date: 3.AUG.2016 12:26:26

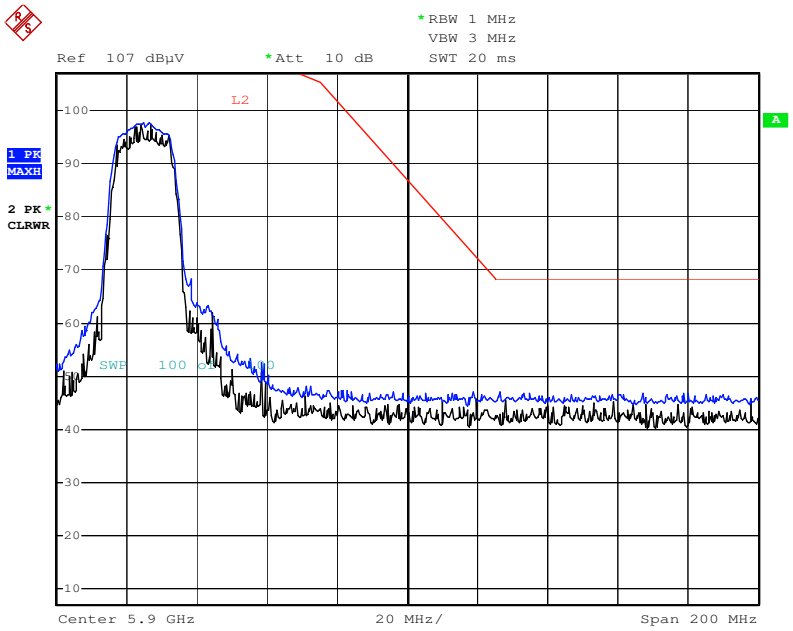
Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT80, Ch.106, Z-H)



Date: 3.AUG.2016 12:21:54

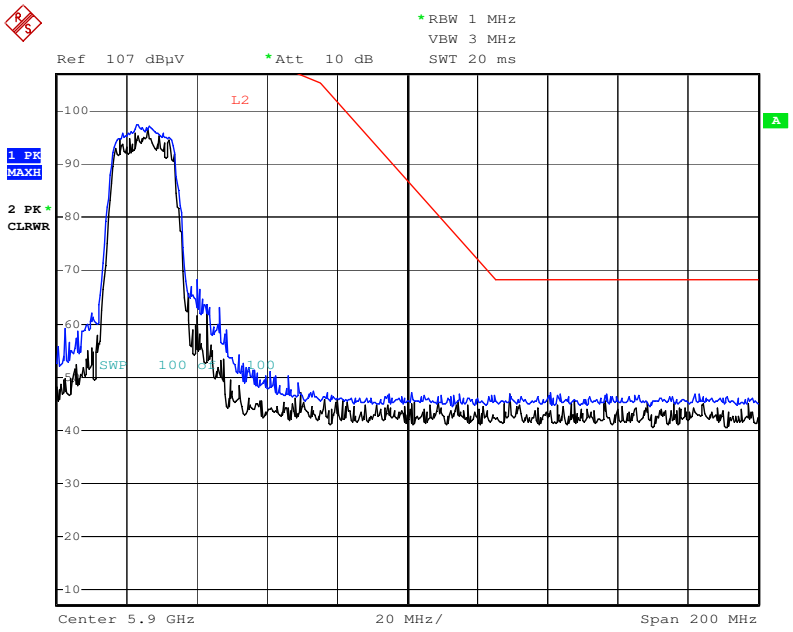
▣ RESULT PLOTS(UNII 3)

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



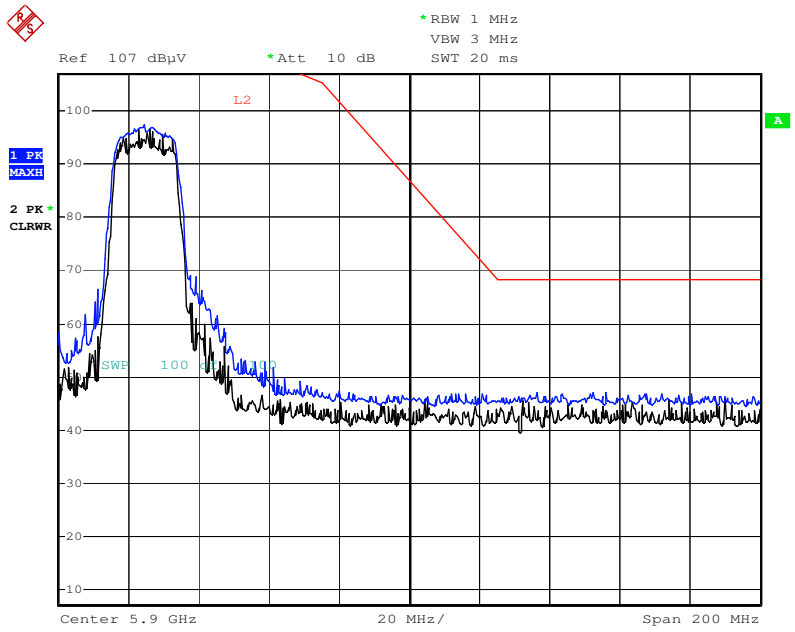
Date: 18.AUG.2016 12:39:11

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



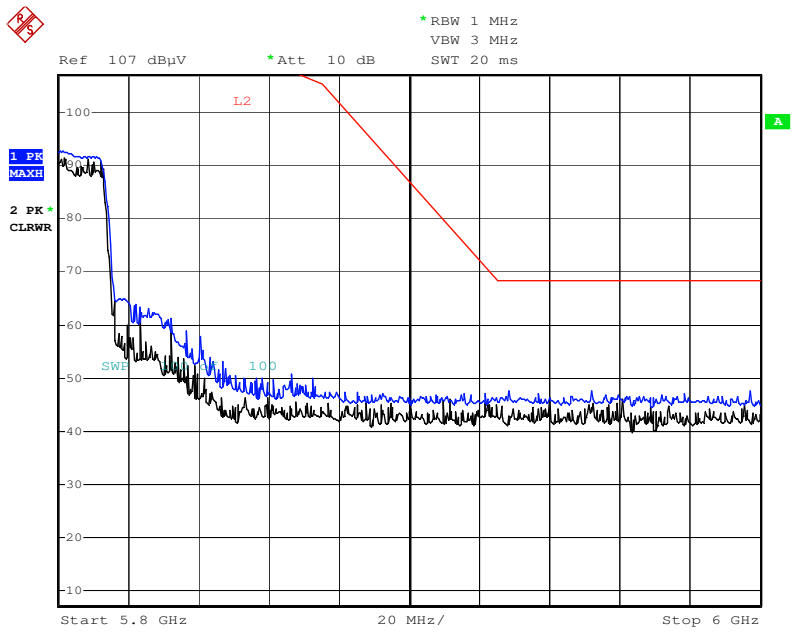
Date: 18.AUG.2016 12:39:47

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



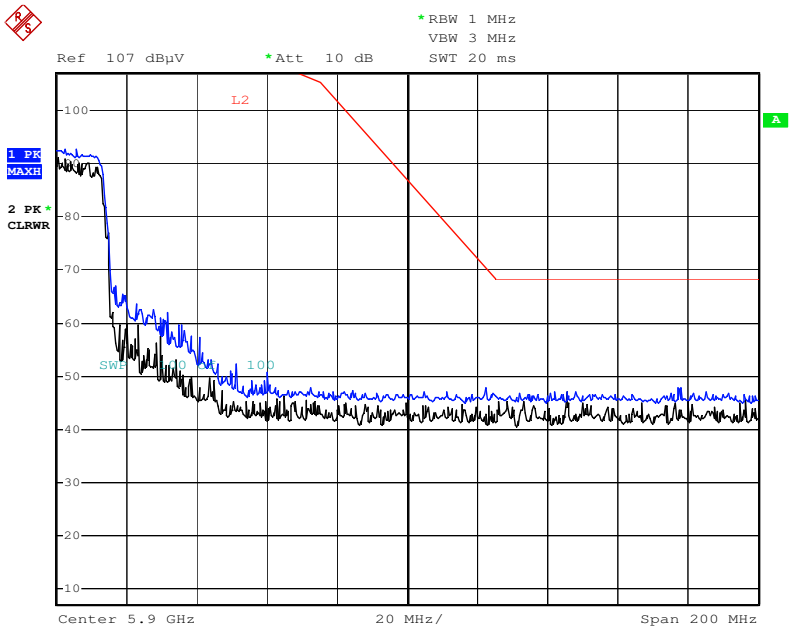
Date: 18.AUG.2016 12:40:21

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



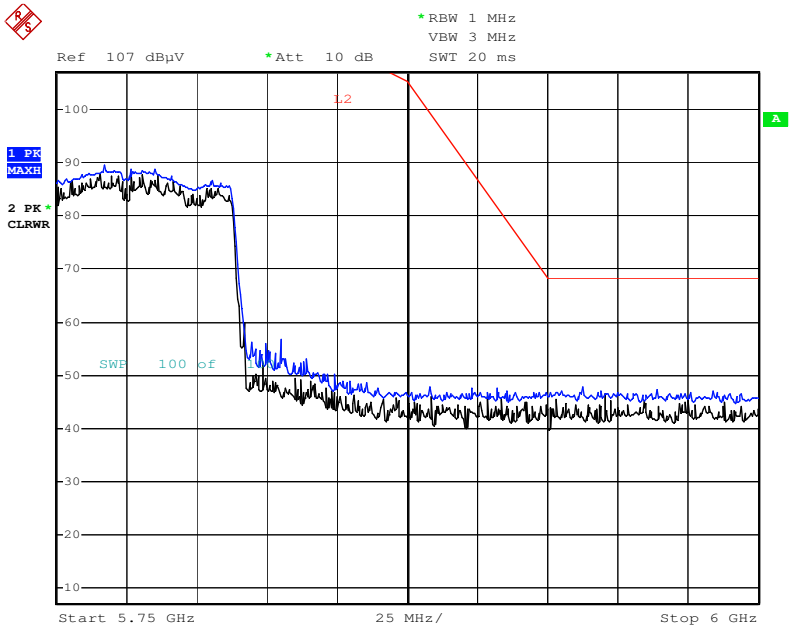
Date: 18.AUG.2016 12:40:57

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



Date: 18.AUG.2016 12:41:41

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



Date: 18.AUG.2016 12:42:56

9.7 POWERLINE CONDUCTED EMISSIONS

Test Requirements and limit, §15.207

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

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

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

Test Configuration

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

TEST PROCEDURE

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

Sample Calculation

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

▣ RESULT PLOTS

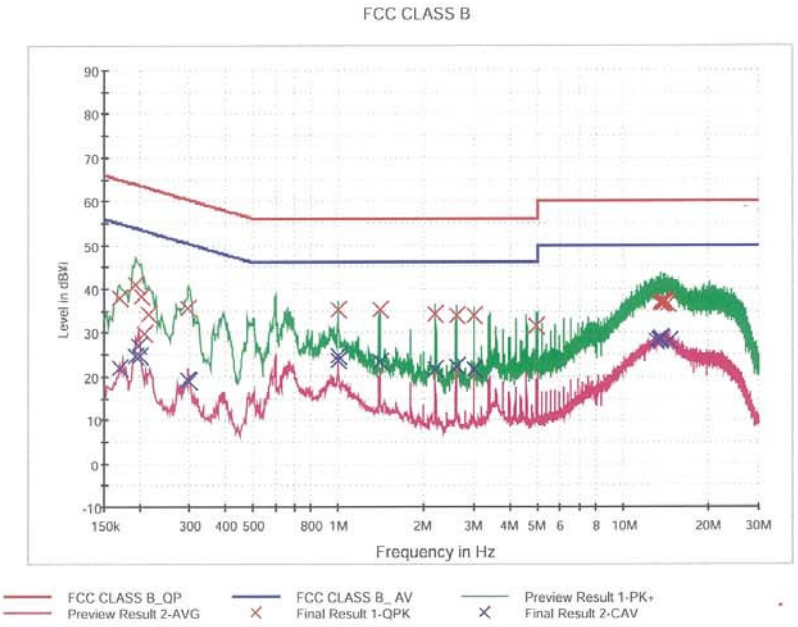
Conducted Emissions (Line 1)

WLAN MODE 5G L1 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H990
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE _ 5G



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.170000	38.0	9.000	Off	L1	9.7	27.0	65.0
0.194000	41.0	9.000	Off	L1	9.7	22.9	63.9
0.204000	38.3	9.000	Off	L1	9.7	25.2	63.4
0.208000	29.8	9.000	Off	L1	9.7	33.5	63.3
0.216000	34.1	9.000	Off	L1	9.7	28.9	63.0
0.296000	35.4	9.000	Off	L1	9.7	24.9	60.4
0.996000	35.3	9.000	Off	L1	9.8	20.7	56.0
1.396000	35.3	9.000	Off	L1	9.8	20.7	56.0
2.192000	34.3	9.000	Off	L1	9.8	21.7	56.0
2.590000	33.8	9.000	Off	L1	9.8	22.2	56.0
2.990000	33.9	9.000	Off	L1	9.8	22.1	56.0
4.982000	31.6	9.000	Off	L1	9.9	24.4	56.0
13.470000	36.7	9.000	Off	L1	10.2	23.3	60.0
13.542000	37.1	9.000	Off	L1	10.2	22.9	60.0
13.794000	36.9	9.000	Off	L1	10.2	23.1	60.0
13.806000	36.4	9.000	Off	L1	10.2	23.6	60.0
14.020000	37.1	9.000	Off	L1	10.2	22.9	60.0
14.374000	36.6	9.000	Off	L1	10.2	23.4	60.0

Final Result 2

2016-08-12

WLAN MODE 5G L1 2 / 2

Frequency (MHz)	CAverage (dB¥ìV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB¥ìV)
0.170000	22.1	9.000	Off	L1	9.7	32.9	55.0
0.194000	24.5	9.000	Off	L1	9.7	29.3	53.9
0.198000	26.9	9.000	Off	L1	9.7	26.8	53.7
0.202000	24.6	9.000	Off	L1	9.7	28.9	53.5
0.296000	19.1	9.000	Off	L1	9.7	31.2	50.4
0.300000	18.7	9.000	Off	L1	9.7	31.5	50.2
0.994000	23.8	9.000	Off	L1	9.8	22.2	46.0
0.998000	24.7	9.000	Off	L1	9.8	21.3	46.0
1.396000	23.4	9.000	Off	L1	9.8	22.6	46.0
2.192000	21.6	9.000	Off	L1	9.8	24.4	46.0
2.592000	22.3	9.000	Off	L1	9.8	23.7	46.0
2.992000	21.7	9.000	Off	L1	9.8	24.3	46.0
13.070000	28.0	9.000	Off	L1	10.2	22.0	50.0
13.412000	28.3	9.000	Off	L1	10.2	21.7	50.0
13.468000	28.6	9.000	Off	L1	10.2	21.4	50.0
13.500000	28.5	9.000	Off	L1	10.2	21.5	50.0
13.596000	28.6	9.000	Off	L1	10.2	21.4	50.0
14.598000	28.2	9.000	Off	L1	10.2	21.8	50.0

2016-08-12

Conducted Emissions (Line 2)

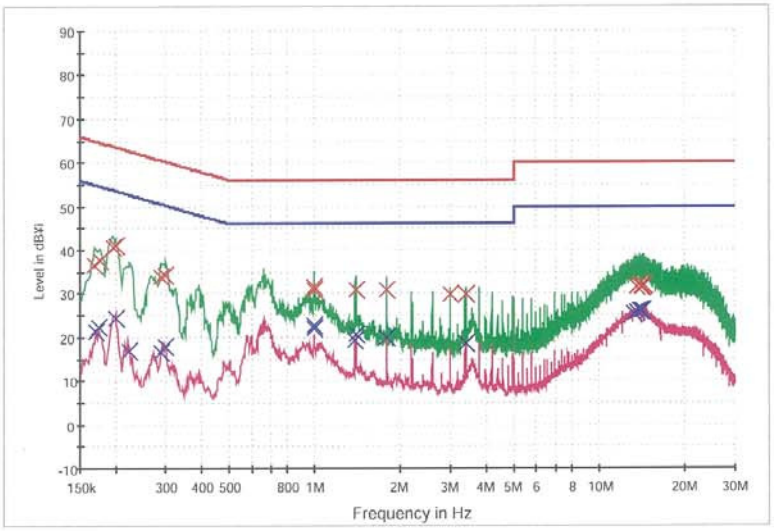
WLAN MODE 5G N 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H990
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE _ 5G

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.168000	36.6	9.000	Off	N	9.7	28.5	65.1
0.176000	37.7	9.000	Off	N	9.7	26.9	64.7
0.196000	40.7	9.000	Off	N	9.7	23.1	63.8
0.200000	41.1	9.000	Off	N	9.7	22.6	63.6
0.288000	34.0	9.000	Off	N	9.7	26.6	60.6
0.300000	34.2	9.000	Off	N	9.7	26.1	60.2
0.994000	30.6	9.000	Off	N	9.7	25.4	56.0
0.998000	31.5	9.000	Off	N	9.7	24.5	56.0
1.394000	30.9	9.000	Off	N	9.7	25.1	56.0
1.794000	30.9	9.000	Off	N	9.8	25.1	56.0
2.990000	29.9	9.000	Off	N	9.8	26.1	56.0
3.388000	29.8	9.000	Off	N	9.8	26.2	56.0
13.488000	31.3	9.000	Off	N	10.1	28.7	60.0
13.600000	31.5	9.000	Off	N	10.2	28.5	60.0
13.864000	32.1	9.000	Off	N	10.2	27.9	60.0
14.024000	31.6	9.000	Off	N	10.2	28.4	60.0
14.168000	31.6	9.000	Off	N	10.2	28.4	60.0
14.426000	31.7	9.000	Off	N	10.2	28.3	60.0

Final Result 2

2016-08-12

WLAN MODE 5G N 2 / 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.170000	21.2	9.000	Off	N	9.7	33.7	55.0
0.174000	22.3	9.000	Off	N	9.7	32.4	54.8
0.200000	24.5	9.000	Off	N	9.7	29.1	53.6
0.224000	17.0	9.000	Off	N	9.7	35.6	52.7
0.288000	16.4	9.000	Off	N	9.7	34.1	50.6
0.300000	17.9	9.000	Off	N	9.7	32.3	50.2
0.994000	21.9	9.000	Off	N	9.7	24.1	46.0
0.998000	22.6	9.000	Off	N	9.7	23.4	46.0
1.392000	19.4	9.000	Off	N	9.7	26.6	46.0
1.396000	20.5	9.000	Off	N	9.7	25.5	46.0
1.794000	20.1	9.000	Off	N	9.8	26.0	46.0
3.388000	18.7	9.000	Off	N	9.8	27.3	46.0
13.264000	25.5	9.000	Off	N	10.1	24.5	50.0
13.552000	25.8	9.000	Off	N	10.1	24.2	50.0
13.600000	25.7	9.000	Off	N	10.2	24.3	50.0
13.864000	26.2	9.000	Off	N	10.2	23.8	50.0
14.024000	26.2	9.000	Off	N	10.2	23.8	50.0
14.164000	26.0	9.000	Off	N	10.2	24.0	50.0

2016-08-12

10. LIST OF TEST EQUIPMENT

10.1 LIST OF TEST EQUIPMENT(Conducted Test)

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

10.2 LIST OF TEST EQUIPMENT(Radiated Test)

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