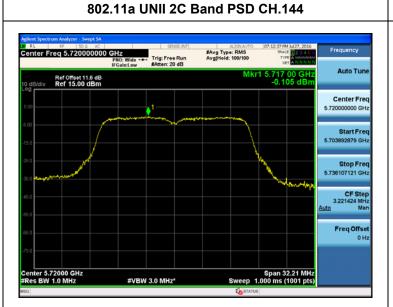
■Straddle channels TEST Plot for 802.11a/n_HT20/ac_VHT20





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

#VBW 3.0 MHz*



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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)

			Test Result					
Frequency (MHz)	Channel No.	Mode	Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle	Limit (dBm)	Pass/Fail	
		202.44	0.700	2 222	Factor	4.4	D	
5710	142	802.11n	-8.522	2.302	-6.220	11	Pass	
	· · -	802.11ac	-9.016	2.955	-6.061	11	Pass	

Conducted Power Density Measurements (UNII 3 Band 5710MHz)

			Test Result						
Frequency (MHz)	Channel No.	Mode	Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail		
					i actor				
5710	142	802.11n	-11.529	2.302	-9.227	30	Pass		
5/10	142	802.11ac	-12.701	2.955	-9.746	30	Pass		

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■Straddle channels TEST Plot for 802.11n_HT40/ac_VHT40

802.11n_HT40 UNII 2C Band PSD CH.142



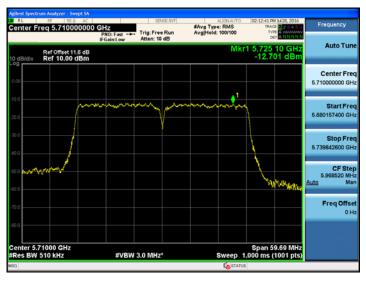
802.11n_HT40 UNII 3 Band PSD CH.142



802.11ac_VHT40 UNII 2C Band PSD CH.142



802.11ac_VHT40 UNII 3 Band PSD CH.142



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■Straddle channels TEST RESULTS

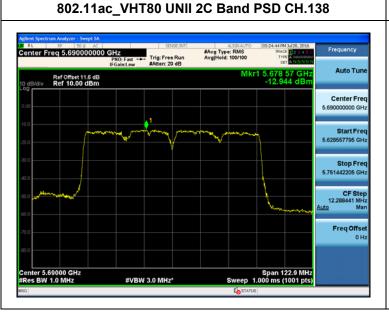
Conducted Power Density Measurements (UNII 2C Band 5690MHz)

			Test Result					
Frequency (MHz)	Channel No.	Mode	Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail	
5690	138	802.11ac	-12.944	3.658	-9.286	11	Pass	

Conducted Power Density Measurements (UNII 3 Band 5690MHz)

				Test Result			
Frequency (MHz)	Channel No.	Mode	Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5690	138	802.11ac	-18.417	3.658	-14.759	30	Pass

■Straddle channels TEST Plot for 802.11ac_VHT80



802.11ac_VHT80 UNII 3 Band PSD CH.138



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9.5 FREQUENCY STABILITY.

The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 $^{\circ}$ C and 50 $^{\circ}$ C. The temperature was incremented by 10 $^{\circ}$ C 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: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5179999.05	-0.95
100%		-30	5179999.76	-0.24
100%		-20	5179999.67	-0.33
100%		-10	5179999.43	-0.57
100%	12.00	0	5179999.36	-0.64
100%		+10	5179999.18	-0.82
100%		+30	5179998.89	-1.11
100%		+40	5179998.63	-1.37
100%		+50	5179998.32	-1.68
115%	13.80	+20	5179998.73	-1.27
Batt. Endpoint	10.20	+20	5179998.87	-1.13

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.

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OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,260,000,000 Hz

CHANNEL: 52

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5259998.89	-1.11
100%		-30	5259999.55	-0.45
100%		-20	5259999.46	-0.54
100%		-10	5259999.32	-0.68
100%	12.00	0	5259999.22	-0.78
100%		+10	5259999.03	-0.97
100%		+30	5259998.68	-1.32
100%		+40	5259998.52	-1.48
100%		+50	5259998.22	-1.78
115%	13.80	+20	5259998.57	-1.43
Batt. Endpoint	10.20	+20	5259998.78	-1.22

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.

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OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,500,000,000 Hz

CHANNEL: 100

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5499999.03	-0.97
100%		-30	5499999.68	-0.32
100%		-20	5499999.59	-0.41
100%		-10	5499999.43	-0.57
100%	12.00	0	5499999.34	-0.66
100%		+10	5499999.18	-0.82
100%		+30	5499998.83	-1.17
100%		+40	5499998.72	-1.28
100%		+50	5499998.66	-1.34
115%	13.80	+20	5499999.03	-0.97
Batt. Endpoint	10.20	+20	5499999.18	-0.82

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.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,745,000,000 Hz

CHANNEL: 149

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5744998.69	-1.31
100%		-30	5744999.38	-0.62
100%		-20	5744999.29	-0.71
100%		-10	5744999.12	-0.88
100%	12.00	0	5744999.07	-0.93
100%		+10	5744998.95	-1.05
100%		+30	5744998.67	-1.33
100%		+40	5744998.57	-1.43
100%		+50	5744998.42	-1.58
115%	13.80	+20	5744998.87	-1.13
Batt. Endpoint	10.20	+20	5744998.99	-1.01

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.

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40 MHz BW

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

CHANNEL: 38

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5189999.46	-0.54
100%		-30	5190000.28	0.28
100%		-20	5189999.93	-0.07
100%		-10	5189999.78	-0.22
100%	12	0	5189999.69	-0.31
100%		+10	5189999.41	-0.59
100%		+30	5189999.22	-0.78
100%		+40	5189998.97	-1.03
100%		+50	5189998.72	-1.28
115%	13.8	+20	5189999.13	-0.87
Batt. Endpoint	10.2	+20	5189999.32	-0.68

Note:

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

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OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,270,000,000 Hz

CHANNEL: 54

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5269999.39	-0.61
100%		-30	5270000.24	0.24
100%		-20	5269999.99	-0.01
100%		-10	5269999.82	-0.18
100%	12	0	5269999.71	-0.29
100%		+10	5269999.45	-0.55
100%		+30	5269999.31	-0.69
100%		+40	5269999.13	-0.87
100%		+50	5269998.86	-1.14
115%	13.8	+20	5269999.23	-0.77
Batt. Endpoint	10.2	+20	5269999.41	-0.59

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.

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 OPERATING BAND:
 UNII Band 2C

 OPERATING FREQUENCY:
 5,510,000,000 Hz

CHANNEL: 102

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5509999.32	-0.68
100%		-30	5509999.98	-0.02
100%		-20	5509999.90	-0.10
100%		-10	5509999.78	-0.22
100%	12	0	5509999.66	-0.34
100%		+10	5509999.46	-0.54
100%		+30	5509999.16	-0.84
100%		+40	5509998.98	-1.02
100%		+50	5509998.89	-1.11
115%	13.8	+20	5509999.26	-0.74
Batt. Endpoint	10.2	+20	5509999.41	-0.59

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.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,755,000,000 Hz

CHANNEL: 151

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5754998.98	-1.02
100%		-30	5754999.66	-0.34
100%		-20	5754999.57	-0.43
100%		-10	5754999.42	-0.58
100%	12	0	5754999.38	-0.62
100%		+10	5754999.25	-0.75
100%		+30	5754998.99	-1.01
100%		+40	5754998.89	-1.11
100%		+50	5754998.79	-1.21
115%	13.8	+20	5754999.12	-0.88
Batt. Endpoint	10.2	+20	5754999.31	-0.69

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.



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80 MHz BW

OPERATING BAND: UNII Band 1 **OPERATING FREQUENCY:** 5,210,000,000 Hz CHANNEL: 42 REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210000.51	0.51
100%		-30	5210000.77	0.77
100%		-20	5210000.42	0.42
100%		-10	5210000.31	0.31
100%	12	0	5210000.23	0.23
100%		+10	5209999.89	-0.11
100%		+30	5209999.76	-0.24
100%		+40	5209999.51	-0.49
100%		+50	5209999.35	-0.65
115%	13.8	+20	5209999.62	-0.38
Batt. Endpoint	10.2	+20	5209999.79	-0.21

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.

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OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290000.48	0.48
100%		-30	5290000.77	0.77
100%		-20	5290000.38	0.38
100%		-10	5290000.29	0.29
100%	12	0	5290000.20	0.20
100%		+10	5289999.92	-0.08
100%		+30	5289999.82	-0.18
100%		+40	5289999.56	-0.44
100%		+50	5289999.42	-0.58
115%	13.8	+20	5289999.67	-0.33
Batt. Endpoint	10.2	+20	5289999.82	-0.18

Note:

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

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OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz

CHANNEL: 106

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530000.41	0.41
100%		-30	5530000.72	0.72
100%		-20	5530000.34	0.34
100%		-10	5530000.27	0.27
100%	12	0	5530000.18	0.18
100%		+10	5529999.89	-0.11
100%		+30	5529999.79	-0.21
100%		+40	5529999.49	-0.51
100%		+50	5529999.37	-0.63
115%	13.8	+20	5529999.62	-0.38
Batt. Endpoint	10.2	+20	5529999.78	-0.22

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.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 12 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775000.53	0.53
100%		-30	5775000.69	0.69
100%		-20	5775000.37	0.37
100%		-10	5775000.31	0.31
100%	12	0	5775000.22	0.22
100%		+10	5774999.86	-0.14
100%		+30	5774999.75	-0.25
100%		+40	5774999.45	-0.55
100%		+50	5774999.31	-0.69
115%	13.8	+20	5774999.58	-0.42
Batt. Endpoint	10.2	+20	5774999.67	-0.33

Note:

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



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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. Espectally, for transmitter operating in the 5725 Mhz – 5850 MHz : all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequency 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

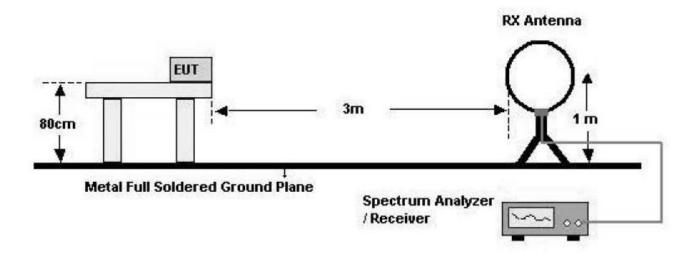
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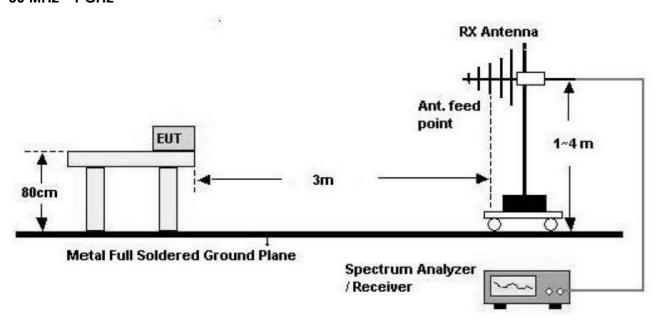


Test Configuration

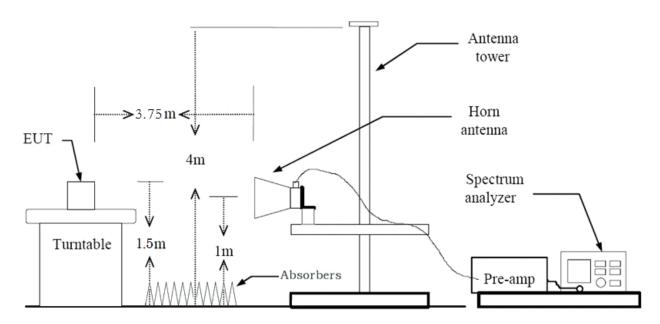
Below 30 MHz



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.

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- 2.2. If the EUT duty cycle is < 98 percent, set VBW ≥ 1/T, where T is the minimum transmission
- 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_VHT80 mode to perform the average filed strength measurements.
- 2. The actual setting value of VBW for 802.11a/n_HT20, n_HT40, ac_VHT80
- 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)
а	6	1.430	1.530	93.46	699	1000
n_HT20	MCS 0	1.340	1.440	93.06	746	1000
ac_VHT20	MCS 0	1.344	1.445	93.05	744	1000
n_HT40	MCS 0	0.664	0.765	86.82	1506	3000
ac_VHT40	MCS 0	0.667	0.768	86.88	1499	3000
ac_VHT80	MCS 0	0.332	0.432	76.75	3013	10000

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TEST RESULTS

9 kHz - 30MHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin		
MHz	dBμV	dB /m	dB	(H/V)	dB <i>μ</i> V/m	dB <i>μ</i> V/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.

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TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin		
MHz	dBμV	dB /m	dB	(H/V)	dB <i>μ</i> V/m	dB <i>μ</i> V/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.

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Above 1 GHz

Band:

Operation Mode:

Transfer Rate:

Operating Frequency

Channel No.

UNII 1

802.11 a

6 Mbps

5180 MHz

36 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10360	52.45	-2.75	V	49.70	68.20	18.50	PK
15540	51.73	-1.23	V	50.50	73.98	23.48	PK
15540	37.79	-1.23	V	36.56	53.98	17.42	AV
10360	52.80	-2.75	Н	50.05	68.20	18.15	PK
15540	51.85	-1.23	Н	50.62	73.98	23.36	PK
15540	38.05	-1.23	Н	36.82	53.98	17.16	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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Band:

Operation Mode:

Transfer Rate:

Operating Frequency

Channel No.

UNII 1

802.11 a

6 Mbps

5200 MHz

40 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10400	52.67	-2.60	V	50.07	68.20	18.13	PK
15600	51.48	-2.26	V	49.22	73.98	24.76	PK
15600	37.63	-2.26	V	35.37	53.98	18.61	AV
10400	53.09	-2.60	Н	50.49	68.20	17.71	PK
15600	51.55	-2.26	Н	49.29	73.98	24.69	PK
15600	37.71	-2.26	Н	35.45	53.98	18.53	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

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

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10480	52.68	-3.54	V	49.14	68.20	19.06	PK
15720	51.51	-2.64	V	48.87	73.98	25.11	PK
15720	38.16	-2.64	V	35.52	53.98	18.46	AV
10480	53.30	-3.54	Н	49.76	68.20	18.44	PK
15720	52.29	-2.64	Н	49.65	73.98	24.33	PK
15720	38.24	-2.64	Н	35.60	53.98	18.38	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

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Band:

Operation Mode:

Transfer MCS Index:

Operating Frequency

Channel No.

UNII 1

802.11 n_HT20

0

5180 MHz

36 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10360	52.57	-2.75	V	49.82	68.20	18.38	PK
15540	51.53	-1.23	V	50.30	73.98	23.68	PK
15540	37.71	-1.23	V	36.48	53.98	17.50	AV
10360	53.04	-2.75	Н	50.29	68.20	17.91	PK
15540	52.02	-1.23	Н	50.79	73.98	23.19	PK
15540	38.00	-1.23	Н	36.77	53.98	17.21	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.
- 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)

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 Band :
 UNII 1

 Operation Mode:
 802.11 n_ HT20

 Transfer MCS Index:
 0

 Operating Frequency
 5200 MHz

 Channel No.
 40 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10400	52.79	-2.60	V	50.19	68.20	18.01	PK
15600	51.28	-2.26	V	49.02	73.98	24.96	PK
15600	37.55	-2.26	V	35.29	53.98	18.69	AV
10400	53.33	-2.60	Н	50.73	68.20	17.47	PK
15600	51.72	-2.26	Н	49.46	73.98	24.52	PK
15600	37.66	-2.26	Н	35.40	53.98	18.58	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)

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 Band :
 UNII 1

 Operation Mode:
 802.11 n_ HT20

 Transfer MCS Index:
 0

 Operating Frequency
 5240 MHz

 Channel No.
 48 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10480	52.80	-3.54	V	49.26	68.20	18.94	PK
15720	51.31	-2.64	V	48.67	73.98	25.31	PK
15720	38.08	-2.64	V	35.44	53.98	18.54	AV
10480	53.54	-3.54	Н	50.00	68.20	18.20	PK
15720	52.46	-2.64	Н	49.82	73.98	24.16	PK
15720	38.19	-2.64	Н	35.55	53.98	18.43	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)

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 Band :
 UNII 1

 Operation Mode:
 802.11 ac_VHT20

 Transfer MCS Index:
 0

 Operating Frequency
 5180 MHz

 Channel No.
 36 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10360	52.76	-2.75	V	50.01	68.20	18.19	PK
15540	51.86	-1.23	V	50.63	73.98	23.35	PK
15540	37.84	-1.23	V	36.61	53.98	17.37	AV
10360	52.66	-2.75	Н	49.91	68.20	18.29	PK
15540	51.73	-1.23	Н	50.50	73.98	23.48	PK
15540	38.11	-1.23	Н	36.88	53.98	17.10	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

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 Band :
 UNII 1

 Operation Mode:
 802.11 ac_ VHT20

 Transfer MCS Index:
 0

 Operating Frequency
 5200 MHz

 Channel No.
 40 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10400	52.98	-2.60	V	50.38	68.20	17.82	PK
15600	51.61	-2.26	V	49.35	73.98	24.63	PK
15600	37.68	-2.26	V	35.42	53.98	18.56	AV
10400	52.95	-2.60	Н	50.35	68.20	17.85	PK
15600	51.43	-2.26	Н	49.17	73.98	24.81	PK
15600	37.77	-2.26	Н	35.51	53.98	18.47	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)

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Band: UNII 1

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5240 MHz

Channel No. 48 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10480	52.99	-3.54	V	49.45	68.20	18.75	PK
15720	51.64	-2.64	V	49.00	73.98	24.98	PK
15720	38.21	-2.64	V	35.57	53.98	18.41	AV
10480	53.16	-3.54	Н	49.62	68.20	18.58	PK
15720	52.17	-2.64	Н	49.53	73.98	24.45	PK
15720	38.30	-2.64	Н	35.66	53.98	18.32	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)

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 Band :
 UNII 1

 Operation Mode:
 802.11n_HT40

 Transfer MCS Index:
 0

 Operating Frequency
 5190 MHz

 Channel No.
 38 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10380	52.44	-2.74	V	49.70	68.20	18.50	PK
15570	51.03	-1.95	V	49.08	73.98	24.90	PK
15570	38.04	-1.95	V	36.09	53.98	17.89	AV
10380	52.97	-2.74	Н	50.23	68.20	17.97	PK
15570	51.43	-1.95	Н	49.48	73.98	24.50	PK
15570	38.21	-1.95	Н	36.26	53.98	17.72	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.
- 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)

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 Band :
 UNII 1

 Operation Mode:
 802.11n_ HT40

 Transfer MCS Index:
 0

 Operating Frequency
 5230 MHz

 Channel No.
 46 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10460	52.63	-3.07	V	49.56	68.20	18.64	PK
15690	51.29	-0.73	V	50.56	73.98	23.42	PK
15690	38.30	-0.73	V	37.57	53.98	16.41	AV
10460	53.28	-3.07	Н	50.21	68.20	17.99	PK
15690	51.64	-0.73	Н	50.91	73.98	23.07	PK
15690	38.56	-0.73	Н	37.83	53.98	16.15	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.
- 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)

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 Band :
 UNII 1

 Operation Mode:
 802.11ac_VHT40

 Transfer MCS Index:
 0

 Operating Frequency
 5190 MHz

 Channel No.
 38 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10380	52.66	-2.74	V	49.92	68.20	18.28	PK
15570	50.83	-1.95	V	48.88	73.98	25.10	PK
15570	37.96	-1.95	V	36.01	53.98	17.97	AV
10380	53.21	-2.74	Н	50.47	68.20	17.73	PK
15570	51.60	-1.95	Н	49.65	73.98	24.33	PK
15570	38.16	-1.95	Н	36.21	53.98	17.77	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.
- 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)

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 Band :
 UNII 1

 Operation Mode:
 802.11ac_VHT40

 Transfer MCS Index:
 0

 Operating Frequency
 5230 MHz

 Channel No.
 46 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10460	52.75	-3.07	V	49.68	68.20	18.52	PK
15690	51.09	-0.73	V	50.36	73.98	23.62	PK
15690	38.22	-0.73	V	37.49	53.98	16.49	AV
10460	53.52	-3.07	Н	50.45	68.20	17.75	PK
15690	51.81	-0.73	Н	51.08	73.98	22.90	PK
15690	38.51	-0.73	Н	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.
- 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)

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 Band :
 UNII 1

 Operation Mode:
 802.11ac_VHT80

 Transfer MCS Index:
 0

 Operating Frequency
 5210 MHz

 Channel No.
 42 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10420	52.08	-2.88	V	49.20	68.20	19.00	PK
15630	51.16	-1.88	V	49.28	73.98	24.70	PK
15630	39.36	-1.88	V	37.48	53.98	16.50	AV
10420	52.93	-2.88	Н	50.05	68.20	18.15	PK
15630	51.38	-1.88	Н	49.50	73.98	24.48	PK
15630	39.57	-1.88	Н	37.69	53.98	16.29	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.
- 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)

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Report No.: HCT-R-1608-F003 Model: AVBB0H9AN Page 1 2 3 of 191

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

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10520	52.66	-2.97	V	49.69	68.20	18.51	PK
15780	52.69	-1.86	V	50.83	73.98	23.15	PK
15780	38.35	-1.86	V	36.49	53.98	17.49	AV
10520	53.41	-2.97	Н	50.44	68.20	17.76	PK
15780	52.14	-1.86	Н	50.28	73.98	23.70	PK
15780	38.45	-1.86	Н	36.59	53.98	17.39	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)

F-TP22-03 (Rev.00) HCT CO.,LTD.



Report No.: HCT-R-1608-F003 Model: AVBB0H9AN Page 1 2 4 of 191

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

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10600	52.11	-3.22	V	48.89	73.98	25.09	PK
10600	39.08	-3.22	٧	35.86	53.98	18.12	AV
15900	51.58	-2.44	V	49.14	73.98	24.84	PK
15900	38.05	-2.44	٧	35.61	53.98	18.37	AV
10600	52.65	-3.22	Н	49.43	73.98	24.55	PK
10600	39.24	-3.22	Н	36.02	53.98	17.96	AV
15900	51.69	-2.44	Н	49.25	73.98	24.73	PK
15900	38.14	-2.44	Н	35.70	53.98	18.28	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 802.11a. 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)

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

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10640	52.61	-3.27	V	49.34	73.98	24.64	PK
10640	39.21	-3.27	٧	35.94	53.98	18.04	AV
15960	50.50	-2.89	V	47.61	73.98	26.37	PK
15960	36.89	-2.89	٧	34.00	53.98	19.98	AV
10640	52.78	-3.27	Н	49.51	73.98	24.47	PK
10640	39.22	-3.27	Н	35.95	53.98	18.03	AV
15960	51.04	-2.89	Н	48.15	73.98	25.83	PK
15960	37.22	-2.89	Н	34.33	53.98	19.65	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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Report No.: HCT-R-1608-F003 Model: AVBB0H9AN Page 1 2 6 of 191

Band: UNII 2A

Operation Mode: 802.11 n_HT20

Transfer MCS Index: 0

Operating Frequency 5260 MHz

Channel No. 52 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10520	52.78	-2.97	V	49.81	68.20	18.39	PK
15780	52.49	-1.86	V	50.63	73.98	23.35	PK
15780	38.27	-1.86	V	36.41	53.98	17.57	AV
10520	53.65	-2.97	Н	50.68	68.20	17.52	PK
15780	52.31	-1.86	Н	50.45	73.98	23.53	PK
15780	38.40	-1.86	Н	36.54	53.98	17.44	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)

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 Band :
 UNII 2A

 Operation Mode:
 802.11 n_ HT20

 Transfer MCS Index:
 0

 Operating Frequency
 5300 MHz

 Channel No.
 60 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10600	52.23	-3.22	V	49.01	73.98	24.97	PK
10600	38.95	-3.22	٧	35.73	53.98	18.25	AV
15900	51.38	-2.44	V	48.94	73.98	25.04	PK
15900	37.97	-2.44	V	35.53	53.98	18.45	AV
10600	52.89	-3.22	Н	49.67	73.98	24.31	PK
10600	39.14	-3.22	Н	35.92	53.98	18.06	AV
15900	51.86	-2.44	Н	49.42	73.98	24.56	PK
15900	38.09	-2.44	Н	35.65	53.98	18.33	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)

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Band: UNII 2A

Operation Mode: 802.11 n_ HT20

Transfer MCS Index: 0

Operating Frequency 5320 MHz

Channel No. 64 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10640	52.73	-3.27	V	49.46	73.98	24.52	PK
10640	39.08	-3.27	٧	35.81	53.98	18.17	AV
15960	50.30	-2.89	V	47.41	73.98	26.57	PK
15960	36.81	-2.89	٧	33.92	53.98	20.06	AV
10640	53.02	-3.27	Н	49.75	73.98	24.23	PK
10640	39.12	-3.27	Н	35.85	53.98	18.13	AV
15960	51.21	-2.89	Н	48.32	73.98	25.66	PK
15960	37.17	-2.89	Н	34.28	53.98	19.70	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)

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Band: UNII 2A

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5260MHz

Channel No. 52 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10520	52.97	-2.97	V	50.00	68.20	18.20	PK
15780	52.82	-1.86	V	50.96	73.98	23.02	PK
15780	38.40	-1.86	V	36.54	53.98	17.44	AV
10520	53.27	-2.97	Н	50.30	68.20	17.90	PK
15780	52.02	-1.86	Н	50.16	73.98	23.82	PK
15780	38.51	-1.86	Н	36.65	53.98	17.33	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.
- 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)

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Band: UNII 2A

Operation Mode: 802.11 ac_ VHT20

Transfer MCS Index: 0

Operating Frequency 5300 MHz

Channel No. 60 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10600	52.42	-3.22	V	49.20	73.98	24.78	PK
10600	39.15	-3.22	V	35.93	53.98	18.05	AV
15900	51.71	-2.44	V	49.27	73.98	24.71	PK
15900	38.10	-2.44	V	35.66	53.98	18.32	AV
10600	52.51	-3.22	Н	49.29	73.98	24.69	PK
10600	39.32	-3.22	Н	36.10	53.98	17.88	AV
15900	51.57	-2.44	Н	49.13	73.98	24.85	PK
15900	38.20	-2.44	Н	35.76	53.98	18.22	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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Band:

Operation Mode:

Transfer MCS Index:

Operating Frequency

Channel No.

UNII 2A

802.11 ac_ VHT20

0

5320 MHz

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10640	52.92	-3.27	V	49.65	73.98	24.33	PK
10640	39.28	-3.27	٧	36.01	53.98	17.97	AV
15960	50.63	-2.89	V	47.74	73.98	26.24	PK
15960	36.94	-2.89	V	34.05	53.98	19.93	AV
10640	52.64	-3.27	Н	49.37	73.98	24.61	PK
10640	39.30	-3.27	Н	36.03	53.98	17.95	AV
15960	50.92	-2.89	Н	48.03	73.98	25.95	PK
15960	37.28	-2.89	Н	34.39	53.98	19.59	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)

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Report No.: HCT-R-1608-F003 Model: AVBB0H9AN Page 1 3 2 of 191

 Band :
 UNII 2A

 Operation Mode:
 802.11n_HT40

 Transfer MCS Index:
 0

 Operating Frequency
 5270 MHz

 Channel No.
 54 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10540	52.48	-2.73	V	49.75	68.20	18.45	PK
15810	51.54	-2.52	V	49.02	73.98	24.96	PK
15810	38.53	-2.52	V	36.01	53.98	17.97	AV
10540	52.86	-2.73	Н	50.13	68.20	18.07	PK
15810	52.05	-2.52	Н	49.53	73.98	24.45	PK
15810	38.79	-2.52	Н	36.27	53.98	17.71	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.
- 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)

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Band: UNII 2A

Operation Mode: 802.11n_ HT40

Transfer MCS Index: 0

Operating Frequency 5310 MHz

Channel No. 62 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10620	52.20	-3.38	V	48.82	73.98	25.16	PK
10620	39.59	-3.38	٧	36.21	53.98	17.77	AV
15930	50.13	-2.78	V	47.35	73.98	26.63	PK
15930	37.05	-2.78	V	34.27	53.98	19.71	AV
10620	52.59	-3.38	Н	49.21	73.98	24.77	PK
10620	39.80	-3.38	Н	36.42	53.98	17.56	AV
15930	51.11	-2.78	Н	48.33	73.98	25.65	PK
15930	37.41	-2.78	Н	34.63	53.98	19.35	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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Band: UNII 2A

Operation Mode: 802.11ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5270 MHz

Channel No. 54 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10540	52.60	-2.73	V	49.87	68.20	18.33	PK
15810	51.34	-2.52	V	48.82	73.98	25.16	PK
15810	38.45	-2.52	V	35.93	53.98	18.05	AV
10540	53.10	-2.73	Н	50.37	68.20	17.83	PK
15810	52.22	-2.52	Н	49.70	73.98	24.28	PK
15810	38.74	-2.52	Н	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)

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Band: UNII 2A

Operation Mode: 802.11ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5310 MHz

Channel No. 62 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10620	52.34	-3.38	V	48.96	73.98	25.02	PK
10620	39.49	-3.38	٧	36.11	53.98	17.87	AV
15930	49.93	-2.78	V	47.15	73.98	26.83	PK
15930	36.97	-2.78	٧	34.19	53.98	19.79	AV
10620	52.64	-3.38	Н	49.26	73.98	24.72	PK
10620	39.73	-3.38	Н	36.35	53.98	17.63	AV
15930	51.28	-2.78	Н	48.50	73.98	25.48	PK
15930	37.36	-2.78	Н	34.58	53.98	19.40	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)

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Band: UNII 2A

Operation Mode: 802.11ac_VHT80

Transfer MCS Index: 0

Operating Frequency 5290 MHz

Channel No. 58 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
10580	51.66	-3.21	V	48.45	68.20	19.75	PK
15870	51.01	-2.62	V	48.39	73.98	25.59	PK
15870	39.14	-2.62	V	36.52	53.98	17.46	AV
10580	52.32	-3.21	Н	49.11	68.20	19.09	PK
15870	51.28	-2.62	Н	48.66	73.98	25.32	PK
15870	39.43	-2.62	Н	36.81	53.98	17.17	AV

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11000	52.15	-1.60	V	50.55	73.98	23.43	PK
11000	38.71	-1.60	V	37.11	53.98	16.87	AV
16500	50.81	-0.86	V	49.95	68.20	18.25	PK
11000	52.48	-1.60	Н	50.88	73.98	23.10	PK
11000	38.79	-1.60	Н	37.19	53.98	16.79	AV
16500	51.32	-0.86	Н	50.46	68.20	17.74	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)

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

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11160	51.57	-2.03	V	49.54	73.98	24.44	PK
11160	38.02	-2.03	V	35.99	53.98	17.99	AV
16740	51.21	0.18	V	51.39	68.20	16.81	PK
11160	52.54	-2.03	Н	50.51	73.98	23.47	PK
11160	38.14	-2.03	Н	36.11	53.98	17.87	AV
16740	51.73	0.18	Н	51.91	68.20	16.29	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.
- 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)

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

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11440	52.12	-1.92	V	50.20	73.98	23.78	PK
11440	38.63	-1.92	V	36.71	53.98	17.27	AV
17160	50.44	2.19	V	52.63	68.20	15.57	PK
11440	52.57	-1.92	Н	50.65	73.98	23.33	PK
11440	38.68	-1.92	Н	36.76	53.98	17.22	AV
17160	50.89	2.19	Н	53.08	68.20	15.12	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.
- 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)

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Band: UNII 2C

Operation Mode: 802.11 n_HT20

Transfer MCS Index: 0

Operating Frequency 5500 MHz

Channel No. 100 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11000	52.27	-1.60	V	50.67	73.98	23.31	PK
11000	38.58	-1.60	V	36.98	53.98	17.00	AV
16500	50.61	-0.86	V	49.75	68.20	18.45	PK
11000	52.72	-1.60	Н	51.12	73.98	22.86	PK
11000	38.69	-1.60	Н	37.09	53.98	16.89	AV
16500	51.49	-0.86	Н	50.63	68.20	17.57	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

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 Band :
 UNII 2C

 Operation Mode:
 802.11 n_ HT20

 Transfer MCS Index:
 0

 Operating Frequency
 5580 MHz

 Channel No.
 116 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11160	51.69	-2.03	V	49.66	73.98	24.32	PK
11160	37.89	-2.03	V	35.86	53.98	18.12	AV
16740	51.01	0.18	V	51.19	68.20	17.01	PK
11160	52.78	-2.03	Н	50.75	73.98	23.23	PK
11160	38.04	-2.03	Н	36.01	53.98	17.97	AV
16740	51.90	0.18	Н	52.08	68.20	16.12	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.
- 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)

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Band: UNII 2C

Operation Mode: 802.11 n_ HT20

Transfer MCS Index: 0

Operating Frequency 5720 MHz

Channel No. 144 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11440	52.24	-1.92	V	50.32	73.98	23.66	PK
11440	38.50	-1.92	V	36.58	53.98	17.40	AV
17160	50.24	2.19	V	52.43	68.20	15.77	PK
11440	52.81	-1.92	Н	50.89	73.98	23.09	PK
11440	38.58	-1.92	Н	36.66	53.98	17.32	AV
17160	51.06	2.19	Н	53.25	68.20	14.95	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)

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Band: UNII 2C

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5500MHz

Channel No. 100 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11000	52.46	-1.60	V	50.86	73.98	23.12	PK
11000	38.78	-1.60	V	37.18	53.98	16.80	AV
16500	50.94	-0.86	V	50.08	68.20	18.12	PK
11000	52.34	-1.60	Н	50.74	73.98	23.24	PK
11000	38.87	-1.60	Н	37.27	53.98	16.71	AV
16500	51.20	-0.86	Н	50.34	68.20	17.86	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)

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Band: UNII 2C

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5580 MHz

Channel No. 116 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11160	51.88	-2.03	V	49.85	73.98	24.13	PK
11160	38.09	-2.03	V	36.06	53.98	17.92	AV
16740	51.34	0.18	V	51.52	68.20	16.68	PK
11160	52.40	-2.03	Н	50.37	73.98	23.61	PK
11160	38.22	-2.03	Н	36.19	53.98	17.79	AV
16740	51.61	0.18	Н	51.79	68.20	16.41	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.
- 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)

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Band: UNII 2C

Operation Mode: 802.11 ac_ VHT20

Transfer MCS Index: 0

Operating Frequency 5720 MHz

Channel No. 144 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11440	52.43	-1.92	V	50.51	73.98	23.47	PK
11440	38.70	-1.92	V	36.78	53.98	17.20	AV
17160	50.57	2.19	V	52.76	68.20	15.44	PK
11440	52.43	-1.92	Н	50.51	73.98	23.47	PK
11440	38.76	-1.92	Н	36.84	53.98	17.14	AV
17160	50.77	2.19	Н	52.96	68.20	15.24	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)

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Band: UNII 2C

Operation Mode: 802.11n_HT40

Transfer MCS Index: 0

Operating Frequency 5510 MHz

Channel No. 102 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11020	51.80	-1.98	V	49.82	73.98	24.16	PK
11020	39.65	-1.98	V	37.67	53.98	16.31	AV
16530	50.57	-1.57	V	49.00	68.20	19.20	PK
11020	52.37	-1.98	Н	50.39	73.98	23.59	PK
11020	40.05	-1.98	Н	38.07	53.98	15.91	AV
16530	51.28	-1.57	Н	49.71	68.20	18.49	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

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 Band :
 UNII 2C

 Operation Mode:
 802.11n_ HT40

 Transfer MCS Index:
 0

 Operating Frequency
 5550 MHz

 Channel No.
 110 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11100	51.74	-2.32	V	49.42	73.98	24.56	PK
11100	38.99	-2.32	V	36.67	53.98	17.31	AV
16650	51.36	-1.17	V	50.19	68.20	18.01	PK
11100	52.32	-2.32	Н	50.00	73.98	23.98	PK
11100	39.18	-2.32	Н	36.86	53.98	17.12	AV
16650	51.84	-1.17	Н	50.67	68.20	17.53	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.
- 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)

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Band: UNII 2C

Operation Mode: 802.11n_ HT40

Transfer MCS Index: 0

Operating Frequency 5710 MHz

Channel No. 142 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11420	51.90	-2.23	V	49.67	73.98	24.31	PK
11420	39.64	-2.23	V	37.41	53.98	16.57	AV
17130	51.09	1.75	V	52.84	68.20	15.36	PK
11420	52.51	-2.23	Н	50.28	73.98	23.70	PK
11420	39.75	-2.23	Н	37.52	53.98	16.46	AV
17130	51.20	1.75	Н	52.95	68.20	15.25	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.
- 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)

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Band: UNII 2C

Operation Mode: 802.11ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5510 MHz

Channel No. 102 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11020	51.92	-1.98	V	49.94	73.98	24.04	PK
11020	39.52	-1.98	V	37.54	53.98	16.44	AV
16530	50.37	-1.57	V	48.80	68.20	19.40	PK
11020	52.61	-1.98	Н	50.63	73.98	23.35	PK
11020	39.95	-1.98	Н	37.97	53.98	16.01	AV
16530	51.45	-1.57	Н	49.88	68.20	18.32	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.
- 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)

F-TP22-03 (Rev.00) HCT CO.,LTD.



Report No.: HCT-R-1608-F003 Model: AVBB0H9AN Page 1 5 0 of 191

Band: UNII 2C

Operation Mode: 802.11ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5550 MHz

Channel No. 110 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11100	51.86	-2.32	V	49.54	73.98	24.44	PK
11100	38.86	-2.32	V	36.54	53.98	17.44	AV
16650	51.16	-1.17	V	49.99	68.20	18.21	PK
11100	52.56	-2.32	Н	50.24	73.98	23.74	PK
11100	39.08	-2.32	Н	36.76	53.98	17.22	AV
16650	52.01	-1.17	Н	50.84	68.20	17.36	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.
- 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)

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Report No.: HCT-R-1608-F003 Model: AVBB0H9AN Page 1 5 1 of 191

Band: UNII 2C

Operation Mode: 802.11ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5710 MHz

Channel No. 142 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11420	52.02	-2.23	V	49.79	73.98	24.19	PK
11420	39.51	-2.23	V	37.28	53.98	16.70	AV
17130	50.89	1.75	V	52.64	68.20	15.56	PK
11420	52.75	-2.23	Н	50.52	73.98	23.46	PK
11420	39.65	-2.23	Н	37.42	53.98	16.56	AV
17130	51.37	1.75	Н	53.12	68.20	15.08	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)

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Band: UNII 2C

Operation Mode: 802.11ac_VHT80

Transfer MCS Index: 0

Operating Frequency 5530 MHz

Channel No. 106 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11060	51.13	-2.21	V	48.92	73.98	25.06	PK
11060	40.20	-2.21	V	37.99	53.98	15.99	AV
16590	50.06	-0.60	V	49.46	68.20	18.74	PK
11060	52.17	-2.21	Н	49.96	73.98	24.02	PK
11060	40.58	-2.21	Н	38.37	53.98	15.61	AV
16590	50.49	-0.60	Н	49.89	68.20	18.31	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.
- 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)

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 Band :
 UNII 2C

 Operation Mode:
 802.11ac_VHT80

 Transfer MCS Index:
 0

 Operating Frequency
 5690 MHz

 Channel No.
 138 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11380	51.90	-2.08	V	49.82	73.98	24.16	PK
11380	40.66	-2.08	V	38.58	53.98	15.40	AV
17070	49.54	1.67	V	51.21	68.20	16.99	PK
11380	52.51	-2.08	Н	50.43	73.98	23.55	PK
11380	40.82	-2.08	Н	38.74	53.98	15.24	AV
17070	49.78	1.67	Н	51.45	68.20	16.75	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

F-TP22-03 (Rev.00) HCT CO.,LTD.



Band: UNII 3

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5745MHz

Channel No. 149 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11490	52.72	-2.50	V	50.22	73.98	23.76	PK
11490	39.15	-2.50	V	36.65	53.98	17.33	AV
17235	50.80	3.09	V	53.89	68.20	14.31	PK
11490	52.97	-2.50	Н	50.47	73.98	23.51	PK
11490	39.23	-2.50	Н	36.73	53.98	17.25	AV
17235	51.32	3.09	Н	54.41	68.20	13.79	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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Band:

Operation Mode:

Transfer Rate:

Operating Frequency

Channel No.

UNII 3

802.11 a

6 Mbps

5785 MHz

157 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11570	52.10	-2.87	V	49.23	73.98	24.75	PK
11570	38.90	-2.87	V	36.03	53.98	17.95	AV
17355	49.25	3.45	V	52.70	68.20	15.50	PK
11570	53.08	-2.87	Н	50.21	73.98	23.77	PK
11570	39.02	-2.87	Н	36.15	53.98	17.83	AV
17355	50.53	3.45	Н	53.98	68.20	14.22	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.
- 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)

F-TP22-03 (Rev.00) HCT CO.,LTD.



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Band:

Operation Mode:

Transfer Rate:

Operating Frequency

Channel No.

UNII 3

802.11 a

6 Mbps

5825 MHz

165 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11650	52.13	-2.84	V	49.29	73.98	24.69	PK
11650	38.87	-2.84	V	36.03	53.98	17.95	AV
17475	49.60	5.68	V	55.28	68.20	12.92	PK
11650	52.91	-2.84	Н	50.07	73.98	23.91	PK
11650	39.25	-2.84	Н	36.41	53.98	17.57	AV
17475	50.37	5.68	Н	56.05	68.20	12.15	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.
- 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)

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 Band :
 UNII 3

 Operation Mode:
 802.11 n_HT20

 Transfer MCS Index:
 0

 Operating Frequency
 5745 MHz

 Channel No.
 149 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11490	52.84	-2.50	V	50.34	73.98	23.64	PK
11490	39.02	-2.50	V	36.52	53.98	17.46	AV
17235	50.60	3.09	V	53.69	68.20	14.51	PK
11490	53.21	-2.50	Н	50.71	73.98	23.27	PK
11490	39.13	-2.50	Н	36.63	53.98	17.35	AV
17235	51.49	3.09	Н	54.58	68.20	13.62	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)

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 Band :
 UNII 3

 Operation Mode:
 802.11 n_ HT20

 Transfer MCS Index:
 0

 Operating Frequency
 5785 MHz

 Channel No.
 157 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11570	52.22	-2.87	V	49.35	73.98	24.63	PK
11570	38.77	-2.87	V	35.90	53.98	18.08	AV
17355	49.05	3.45	V	52.50	68.20	15.70	PK
11570	53.32	-2.87	Н	50.45	73.98	23.53	PK
11570	38.92	-2.87	Н	36.05	53.98	17.93	AV
17355	50.70	3.45	Н	54.15	68.20	14.05	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)

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 Band :
 UNII 3

 Operation Mode:
 802.11 n_ HT20

 Transfer MCS Index:
 0

 Operating Frequency
 5825 MHz

 Channel No.
 165 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11650	52.25	-2.84	V	49.41	73.98	24.57	PK
11650	38.74	-2.84	V	35.90	53.98	18.08	AV
17475	49.61	5.68	V	55.29	68.20	12.91	PK
11650	53.15	-2.84	Н	50.31	73.98	23.67	PK
11650	39.15	-2.84	Н	36.31	53.98	17.67	AV
17475	50.49	5.68	Н	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)

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 Band :
 UNII 3

 Operation Mode:
 802.11 ac_VHT20

 Transfer MCS Index:
 0

 Operating Frequency
 5745 MHz

 Channel No.
 149 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11490	53.03	-2.50	V	50.53	73.98	23.45	PK
11490	39.22	-2.50	V	36.72	53.98	17.26	AV
17235	50.93	3.09	V	54.02	68.20	14.18	PK
11490	52.83	-2.50	Н	50.33	73.98	23.65	PK
11490	39.31	-2.50	Н	36.81	53.98	17.17	AV
17235	51.20	3.09	Н	54.29	68.20	13.91	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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 Band :
 UNII 3

 Operation Mode:
 802.11 ac_ VHT20

 Transfer MCS Index:
 0

 Operating Frequency
 5785 MHz

 Channel No.
 157 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11570	52.41	-2.87	V	49.54	73.98	24.44	PK
11570	38.97	-2.87	V	36.10	53.98	17.88	AV
17355	49.38	3.45	V	52.83	68.20	15.37	PK
11570	52.94	-2.87	Н	50.07	73.98	23.91	PK
11570	39.10	-2.87	Н	36.23	53.98	17.75	AV
17355	50.41	3.45	Н	53.86	68.20	14.34	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.
- 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)

F-TP22-03 (Rev.00) HCT CO.,LTD.



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Band:

Operation Mode:

Transfer MCS Index:

Operating Frequency

Channel No.

UNII 3

802.11 ac_ VHT20

0

5825 MHz

165 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11650	52.44	-2.84	V	49.60	73.98	24.38	PK
11650	38.94	-2.84	V	36.10	53.98	17.88	AV
17475	49.97	5.68	V	55.65	68.20	12.55	PK
11650	52.77	-2.84	Н	49.93	73.98	24.05	PK
11650	39.33	-2.84	Н	36.49	53.98	17.49	AV
17475	50.70	5.68	Н	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.
- 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)

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Band: UNII3
Operation Mode: 802.11n_ HT40
Transfer MCS Index: 0
Operating Frequency 5755 MHz
Channel No. 151 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11510	52.39	-2.55	V	49.84	73.98	24.14	PK
11510	39.32	-2.55	V	36.77	53.98	17.21	AV
17265	49.88	3.10	V	52.98	68.20	15.22	PK
11510	52.61	-2.55	Н	50.06	73.98	23.92	PK
11510	39.55	-2.55	Н	37.00	53.98	16.98	AV
17265	50.35	3.10	Н	53.45	68.20	14.75	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

F-TP22-03 (Rev.00) HCT CO.,LTD.



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 Band :
 UNII 3

 Operation Mode:
 802.11n_ HT40

 Transfer MCS Index:
 0

 Operating Frequency
 5795 MHz

 Channel No.
 159 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11590	52.39	-3.29	V	49.10	73.98	24.88	PK
11590	39.63	-3.29	V	36.34	53.98	17.64	AV
17385	49.78	4.19	V	53.97	68.20	14.23	PK
11590	52.60	-3.29	Н	49.31	73.98	24.67	PK
11590	39.85	-3.29	Н	36.56	53.98	17.42	AV
17385	50.37	4.19	Н	54.56	68.20	13.64	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

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 Band :
 UNII 3

 Operation Mode:
 802.11ac_VHT40

 Transfer MCS Index:
 0

 Operating Frequency
 5755 MHz

 Channel No.
 151 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11510	52.51	-2.55	V	49.96	73.98	24.02	PK
11510	39.19	-2.55	٧	36.64	53.98	17.34	AV
17265	49.68	3.10	V	52.78	68.20	15.42	PK
11510	52.85	-2.55	Н	50.30	73.98	23.68	PK
11510	39.45	-2.55	Н	36.90	53.98	17.08	AV
17265	50.52	3.10	Н	53.62	68.20	14.58	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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 Band :
 UNII 3

 Operation Mode:
 802.11ac_VHT40

 Transfer MCS Index:
 0

 Operating Frequency
 5795 MHz

 Channel No.
 159 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11590	52.51	-3.29	V	49.22	73.98	24.76	PK
11590	39.50	-3.29	V	36.21	53.98	17.77	AV
17385	49.85	4.19	V	54.04	68.20	14.16	PK
11590	52.84	-3.29	Н	49.55	73.98	24.43	PK
11590	39.75	-3.29	Н	36.46	53.98	17.52	AV
17385	50.42	4.19	Н	54.61	68.20	13.59	PK

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

Notes:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 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)

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 Band :
 UNII 3

 Operation Mode:
 802.11ac_VHT80

 Transfer MCS Index:
 0

 Operating Frequency
 5775 MHz

 Channel No.
 155 Ch

		AN.+CL-Amp					
Frequency	Reading	G.+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
11550	51.33	-2.71	V	48.62	73.98	25.36	PK
11550	40.41	-2.71	V	37.70	53.98	16.28	AV
17325	49.86	3.44	V	53.30	68.20	14.90	PK
11550	52.29	-2.71	Н	49.58	73.98	24.40	PK
11550	40.83	-2.71	Н	38.12	53.98	15.86	AV
17325	50.88	3.44	Н	54.32	68.20	13.88	PK

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

Notes:

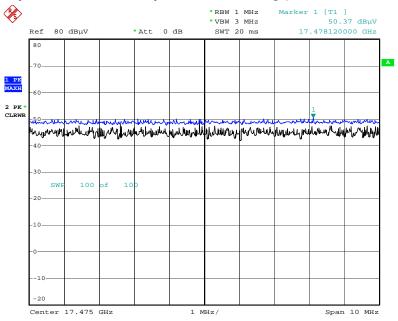
- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain
- 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)

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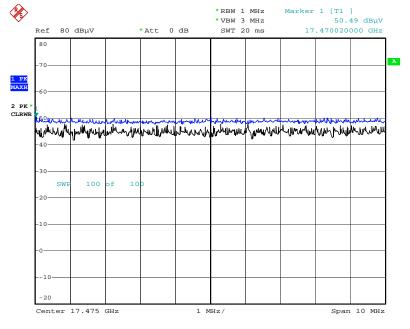
■ RESULT PLOTS

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



Date: 21.JUL.2016 17:57:58

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

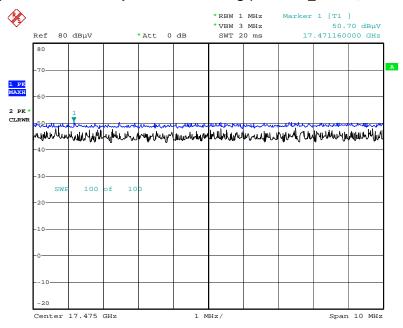


Date: 21.JUL.2016 17:58:32

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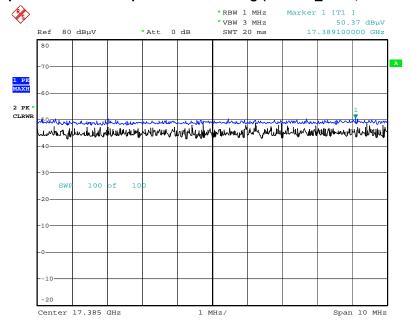


Radiated Spurious Emissions plot -Peak Reading (802.11ac_VHT20, Ch.165 3rd Harmonic, X-H)



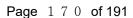
Date: 21.JUL.2016 17:59:24

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



Date: 21.JUL.2016 18:00:07

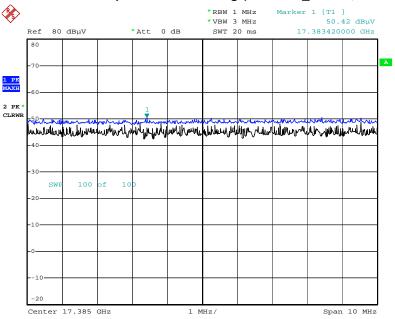
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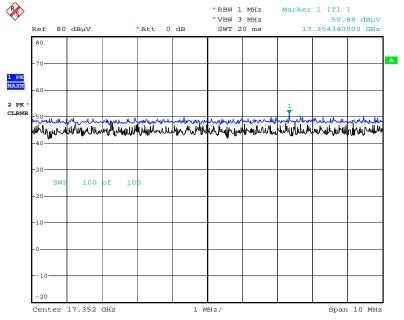
НСТСО, LTDReport No.: HCT-R-1608-F003

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



Date: 21.JUL.2016 18:00:29

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



Date: 21.JUL.2016 18:01:03

FCC ID: TQ8-AVBB0H9AN

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



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9.6.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

Test Requirements and limit, §15.247(d) §15.205, §15.209

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

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

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5150	50.76	2.81	Н	53.57	73.98	20.41	PK
5150	36.75	2.81	Н	39.56	53.98	14.42	AV
5150	49.81	2.81	V	52.62	73.98	21.36	PK
5150	36.62	2.81	V	39.43	53.98	14.55	AV

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Band: UNII 1

Operation Mode: 802.11 n HT20

Transfer MCS Index: 0

Operating Frequency 5180 MHz

Channel No. 36 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5150	50.36	2.81	Н	53.17	73.98	20.81	PK
5150	36.64	2.81	Н	39.45	53.98	14.53	AV
5150	49.79	2.81	V	52.6	73.98	21.38	PK
5150	36.58	2.81	V	39.39	53.98	14.59	AV

Band: UNII 1

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5180 MHz

Channel No. 36 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5150	51.11	2.81	Н	53.92	73.98	20.06	PK
5150	36.89	2.81	Н	39.7	53.98	14.28	AV
5150	50.66	2.81	V	53.47	73.98	20.51	PK
5150	36.81	2.81	V	39.62	53.98	14.36	AV

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Band: UNII 1

Operation Mode: 802.11 n HT40

Transfer MCS Index: 0

Operating Frequency 5190 MHz

Channel No. 38 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5150	49.98	2.81	Н	52.79	73.98	21.19	PK
5150	37.14	2.81	Н	39.95	53.98	14.03	AV
5150	49.67	2.81	V	52.48	73.98	21.50	PK
5150	37.07	2.81	V	39.88	53.98	14.10	AV

Band: UNII 1

Operation Mode: 802.11 ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5190 MHz

Channel No. 38 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5150	49.90	2.81	Н	52.71	73.98	21.27	PK
5150	37.08	2.81	Н	39.89	53.98	14.09	AV
5150	49.38	2.81	V	52.19	73.98	21.79	PK
5150	36.96	2.81	V	39.77	53.98	14.21	AV

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Band: UNII 1

Operation Mode: 802.11 ac VHT80

Transfer MCS Index: 0

Operating Frequency 5210 MHz

Channel No. 42 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5150	50.40	2.81	Н	53.21	73.98	20.77	PK
5150	38.46	2.81	Н	41.27	53.98	12.71	AV
5150	49.48	2.81	V	52.29	73.98	21.69	PK
5150	38.09	2.81	V	40.9	53.98	13.08	AV

Band: UNII 2A

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5320 MHz

Channel No. 64 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5350	49.86	3.86	Н	53.72	73.98	20.26	PK
5350	37.05	3.86	Н	40.91	53.98	13.07	AV
5350	50.30	3.86	V	54.16	73.98	19.82	PK
5350	37.56	3.86	V	41.42	53.98	12.56	AV

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Band: UNII 2A

Operation Mode: 802.11 n HT20

Transfer MCS Index: 0

Operating Frequency 5320 MHz

Channel No. 64 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5350	49.75	3.86	Н	53.61	73.98	20.37	PK
5350	36.98	3.86	Н	40.84	53.98	13.14	AV
5350	50.03	3.86	V	53.89	73.98	20.09	PK
5350	37.39	3.86	V	41.25	53.98	12.73	AV

Band: UNII 2A

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5320 MHz

Channel No. 64 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5350	49.54	3.86	Н	53.40	73.98	20.58	PK
5350	36.29	3.86	Н	40.15	53.98	13.83	AV
5350	49.98	3.86	V	53.84	73.98	20.14	PK
5350	36.47	3.86	V	40.33	53.98	13.65	AV

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Band: UNII 2A

Operation Mode: 802.11 n HT40

Transfer MCS Index: 0

Operating Frequency 5310 MHz

Channel No. 62 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5350	51.81	3.86	Н	55.67	73.98	18.31	PK
5350	38.30	3.86	Н	42.16	53.98	11.82	AV
5350	52.98	3.86	V	56.84	73.98	17.14	PK
5350	38.65	3.86	V	42.51	53.98	11.47	AV

Band: UNII 2A

Operation Mode: 802.11 ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5310 MHz

Channel No. 62 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5350	51.11	3.86	Н	54.97	73.98	19.01	PK
5350	38.34	3.86	Н	42.2	53.98	11.78	AV
5350	51.86	3.86	V	55.72	73.98	18.26	PK
5350	38.86	3.86	V	42.72	53.98	11.26	AV

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Band: UNII 2A

Operation Mode: 802.11 ac VHT80

Transfer MCS Index: 0

Operating Frequency 5290 MHz

Channel No. 58 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5350	49.34	3.86	Н	53.20	73.98	20.78	PK
5350	39.28	3.86	Н	43.14	53.98	10.84	AV
5350	50.96	3.86	V	54.82	73.98	19.16	PK
5350	39.77	3.86	V	43.63	53.98	10.35	AV

Band: UNII 2C

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5500 MHz

Channel No. 100 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5460	49.49	5.10	Н	54.59	73.98	19.39	PK
5460	36.27	5.10	Н	41.37	53.98	12.61	AV
*5470	50.67	5.18	Н	55.85	68.20	12.35	PK
5460	48.92	5.10	V	54.02	73.98	19.96	PK
5460	36.09	5.10	V	41.19	53.98	12.79	AV
*5470	50.34	5.18	V	55.52	68.20	12.68	PK

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Band: UNII 2C

Operation Mode: 802.11 n HT20

Transfer MCS Index: 0

Operating Frequency 5500 MHz

Channel No. 100 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5460	49.24	5.10	Н	54.34	73.98	19.64	PK
5460	36.16	5.10	Н	41.26	53.98	12.72	AV
*5470	51.10	5.18	Н	56.28	68.20	11.92	PK
5460	48.53	5.10	V	53.63	73.98	20.35	PK
5460	35.87	5.10	V	40.97	53.98	13.01	AV
*5470	50.64	5.18	V	55.82	68.20	12.38	PK

Band: UNII 2C

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5500 MHz

Channel No. 100 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5460	49.15	5.10	Н	54.25	73.98	19.73	PK
5460	36.17	5.10	Н	41.27	53.98	12.71	AV
*5470	51.03	5.18	Н	56.21	68.20	11.99	PK
5460	48.64	5.10	V	53.74	73.98	20.24	PK
5460	36.06	5.10	V	41.16	53.98	12.82	AV
*5470	50.57	5.18	V	55.75	68.20	12.45	PK

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Band: UNII 2C

Operation Mode: 802.11 n HT40

Transfer MCS Index: 0

Operating Frequency 5510 MHz

Channel No. 102 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5460	54.90	5.10	Н	60.00	73.98	13.98	PK
5460	37.99	5.10	Н	43.09	53.98	10.89	AV
*5470	57.25	5.18	Н	62.43	68.20	5.77	PK
5460	53.72	5.10	V	58.82	73.98	15.16	PK
5460	37.56	5.10	V	42.66	53.98	11.32	AV
*5470	56.17	5.18	V	61.35	68.20	6.85	PK

Band: UNII 2C

Operation Mode: 802.11 ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5510 MHz

Channel No. 102 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5460	54.78	5.10	Н	59.88	73.98	14.10	PK
5460	38.14	5.10	Н	43.24	53.98	10.74	AV
*5470	58.93	5.18	Н	64.11	68.20	4.09	PK
5460	53.16	5.10	V	58.26	73.98	15.72	PK
5460	37.64	5.10	V	42.74	53.98	11.24	AV
*5470	57.42	5.18	V	62.6	68.20	5.60	PK

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Band: UNII 2C

Operation Mode: 802.11 ac VHT80

Transfer MCS Index: 0

Operating Frequency 5530 MHz

Channel No. 106 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
5460	52.17	5.10	Н	57.27	73.98	16.71	PK
5460	40.53	5.10	Н	45.63	53.98	8.35	AV
*5470	53.62	5.18	Н	58.8	68.20	9.40	PK
5460	51.62	5.10	V	56.72	73.98	17.26	PK
5460	40.10	5.10	V	45.2	53.98	8.78	AV
*5470	52.36	5.18	V	57.54	68.20	10.66	PK

Band: UNII 3

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5825 MHz

Channel No. 165 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
*5850	50.94	7.02	Н	57.96	68.20	10.24	PK
*5850	50.16	7.02	V	57.18	68.20	11.02	PK

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Band: UNII 3

Operation Mode: 802.11 n_ HT20

Transfer MCS Index: 0

Operating Frequency 5825 MHz

Channel No. 165 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
*5850	51.54	7.02	Н	58.56	68.20	9.64	PK
*5850	50.89	7.02	V	57.91	68.20	10.29	PK

Band: UNII 3

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5825 MHz

Channel No. 165 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
*5850	51.17	7.02	Н	58.19	68.20	10.01	PK
*5850	50.93	7.02	V	57.95	68.20	10.25	AV

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Band: UNII 3

Operation Mode: 802.11 n HT40

Transfer MCS Index: 0

Operating Frequency 5795 MHz

Channel No. 159 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
*5850	48.89	7.02	Н	55.91	68.20	12.29	PK
*5850	48.35	7.02	V	55.37	68.20	12.83	PK

Band: UNII 3

Operation Mode: 802.11 ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5795 MHz

Channel No. 159 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
*5850	48.52	7.02	Н	55.54	68.20	12.66	PK
*5850	48.23	7.02	V	55.25	68.20	12.95	AV

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 Band :
 UNII 3

 Operation Mode:
 802.11 ac_VHT80

 Transfer MCS Index:
 0

 Operating Frequency
 5755 MHz

 Channel No.
 155 Ch

		AN.+CL+AMP+ATT.					
Frequency	Reading	+D.F.	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBuV]	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	Туре
*5850	48.82	7.02	Н	55.84	68.20	12.36	PK
*5850	48.43	7.02	V	55.45	68.20	12.75	PK

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. The mark '#' is tested according to $\, \Pi.G.2.c \,$ in KDB 789033 D02 v01r02
- 6. Total = Reading Value + Antenna Factor + Cable Loss Amp Gain + Distance Factor
- 7. The worst limit for UNII 3 according to 15.407(4)(i) is -27 dBm(68.2 dBuV/m). The band edge results at 5850 MHz comply to the worst limit.

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II. MEASUREMENT PROCEDURES

- G. Unwanted Emission Measurement
 - 2. Unwanted Emissions that fall Outside of the Restricted Bands
 - c) At frequencies above 1000 MHz, use the procedure for maximum emissions described in sectionII.G.5., "Procedure for Unwanted Maximum Unwanted Emissions Measurements Above 1000 MHz".

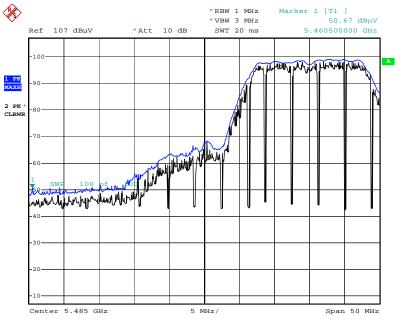
As specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not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

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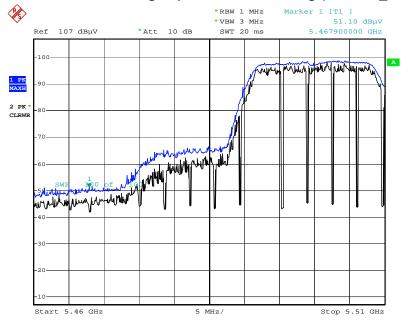
■ RESULT PLOTS

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



Date: 29.JUL.2016 10:09:40

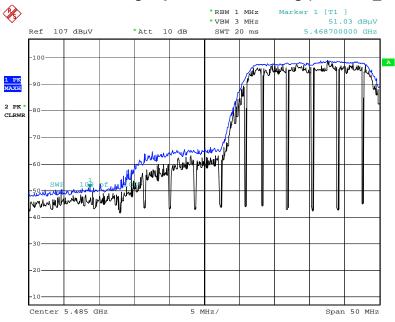
Radiated Restricted Band Edges plot - Peak Reading (802.11n_HT20, Ch.100, X-H)



Date: 29.JUL.2016 10:11:38

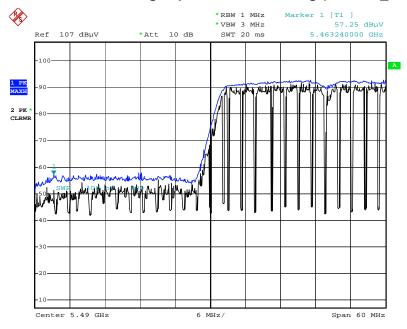
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Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT20, Ch.100, X-H)



Date: 29.JUL.2016 10:12:21

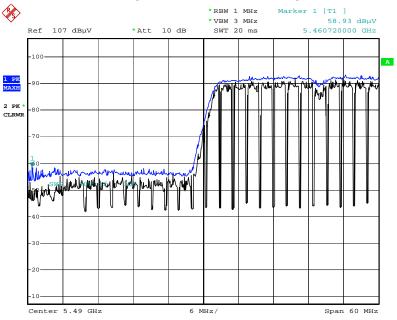
Radiated Restricted Band Edges plot - Peak Reading (802.11n_HT40, Ch.102, X-H)



Date: 29.JUL.2016 09:49:00

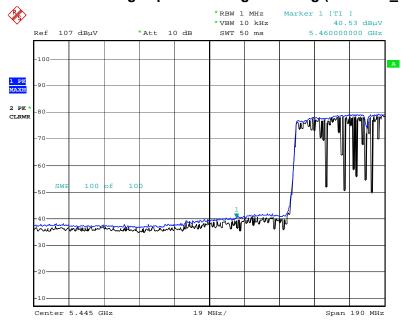
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Radiated Restricted Band Edges plot – Peak Reading (802.11ac_VHT40, Ch.102, X-H)



Date: 29.JUL.2016 09:50:22

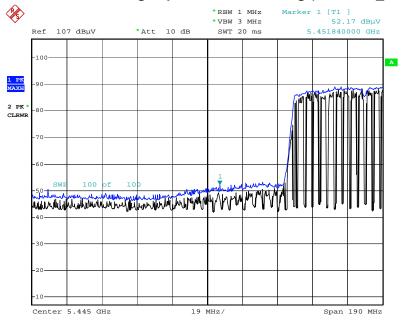
Radiated Restricted Band Edges plot – Average Reading (802.11ac_VHT80, Ch.106, X-H)



Date: 29.JUL.2016 09:55:18

Report No.: HCT-R-1608-F003 Model: AVBB0H9AN

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



Date: 29.JUL.2016 09:54:40

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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:

Francisco Paras (MIII-)	Limits (dBμV)					
Frequency Range (MHz)	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

Note: We don't perform powerline conducted emission test. Because this EUT is used with vehicle.

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10. LIST OF TEST EQUIPMENT

10.1 LIST OF TEST EQUIPMENT(Conducted Test)

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

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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)	08/20/2015	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

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