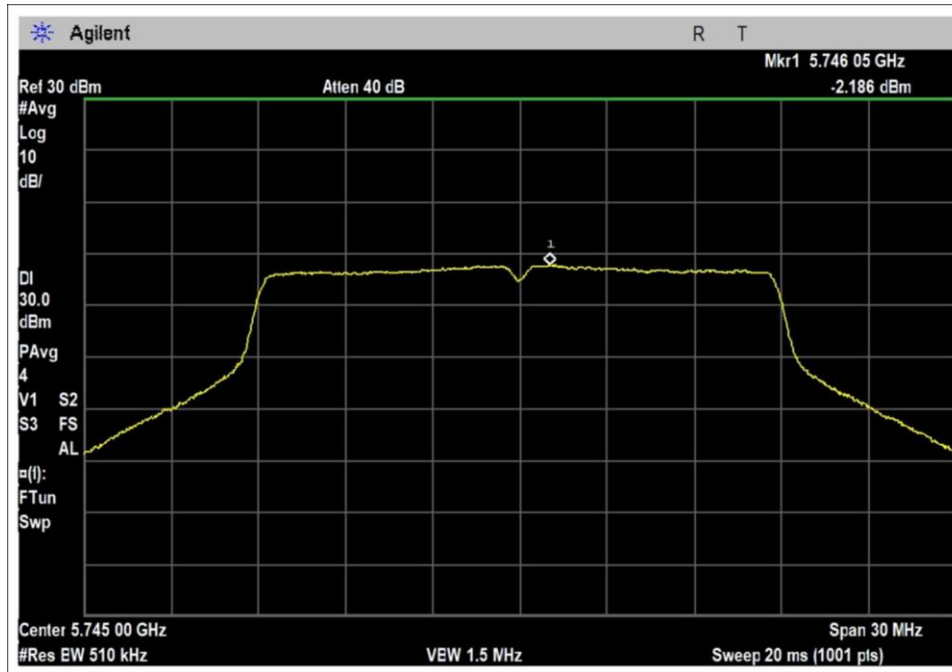
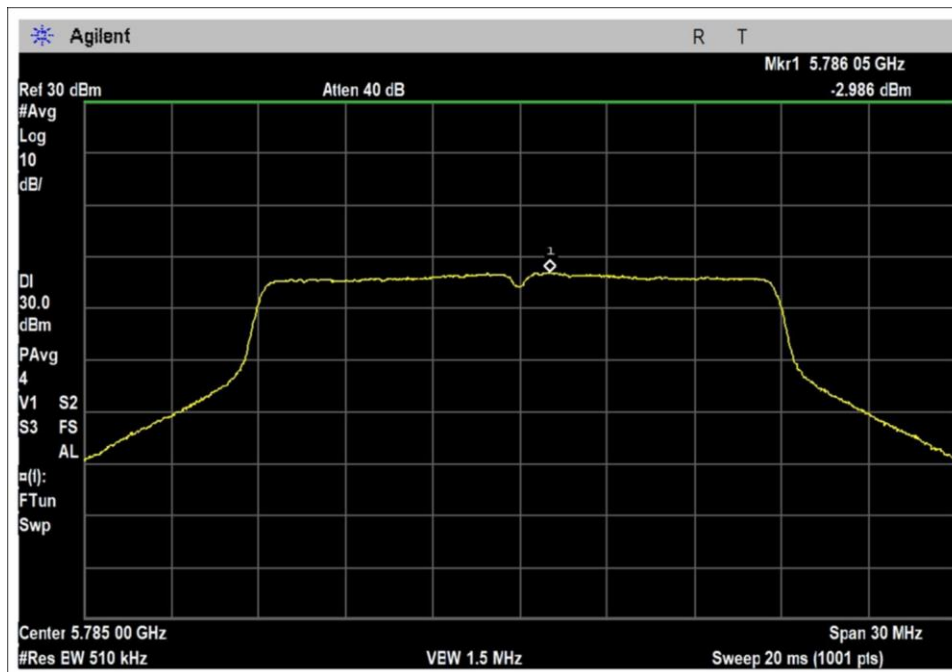


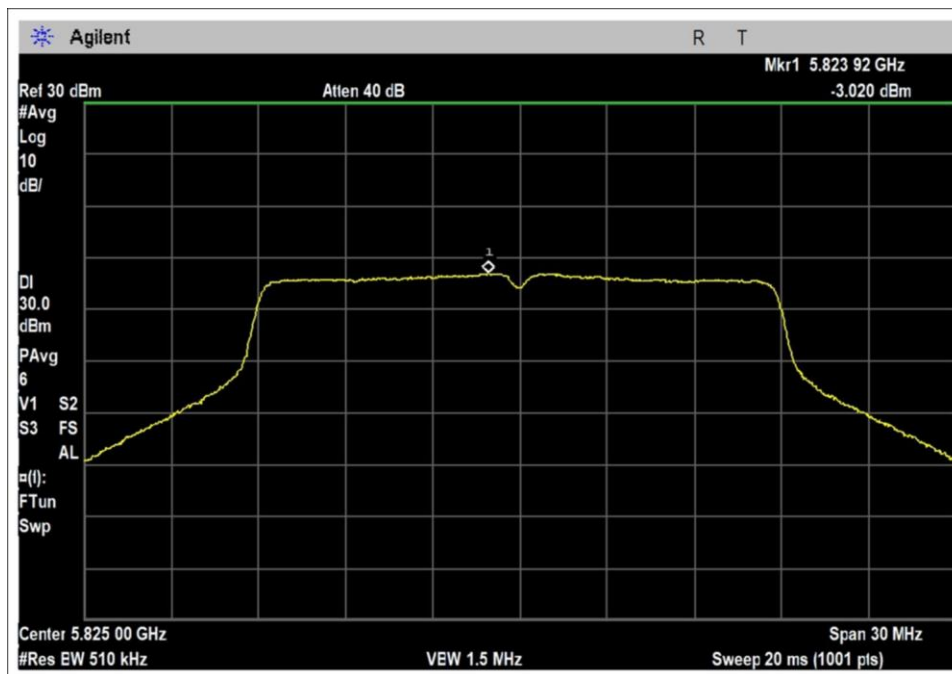
802.11ac20 Test Data



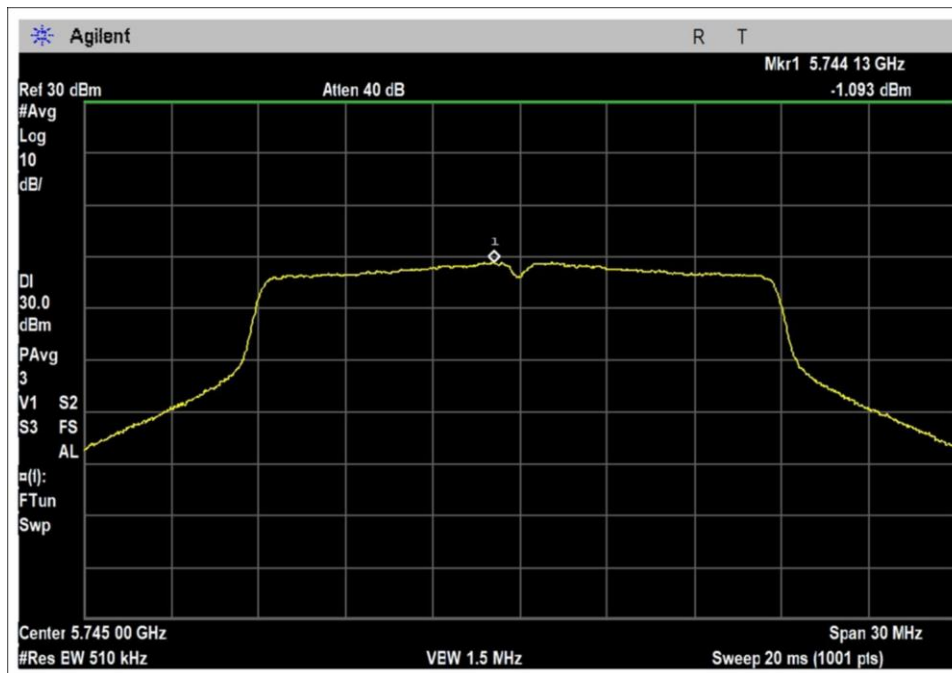
AP0 Low Channel



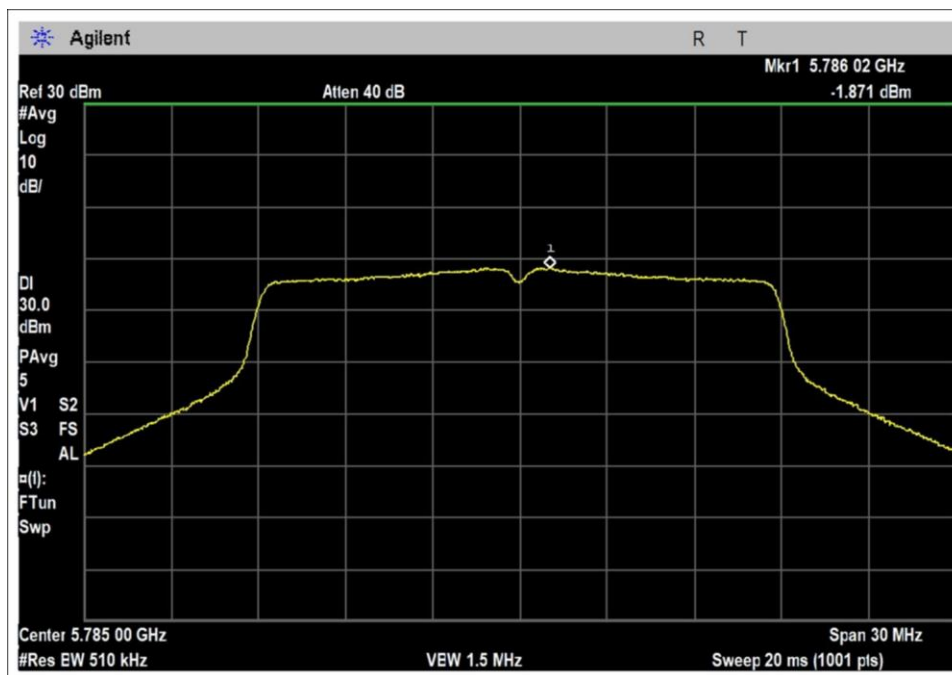
AP0 Middle Channel



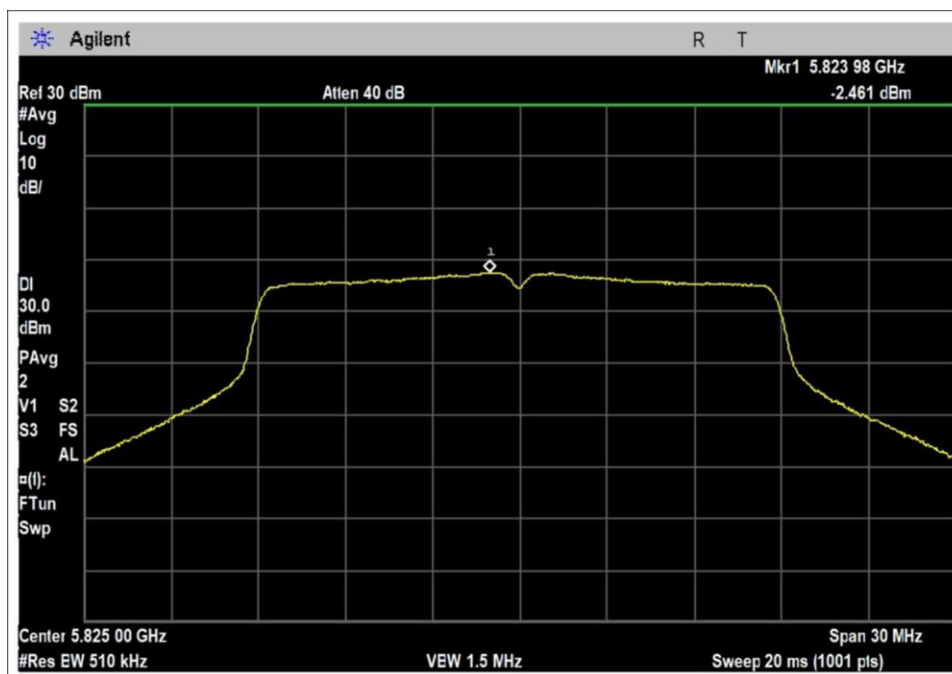
APO High Channel



AP1 Low Channel

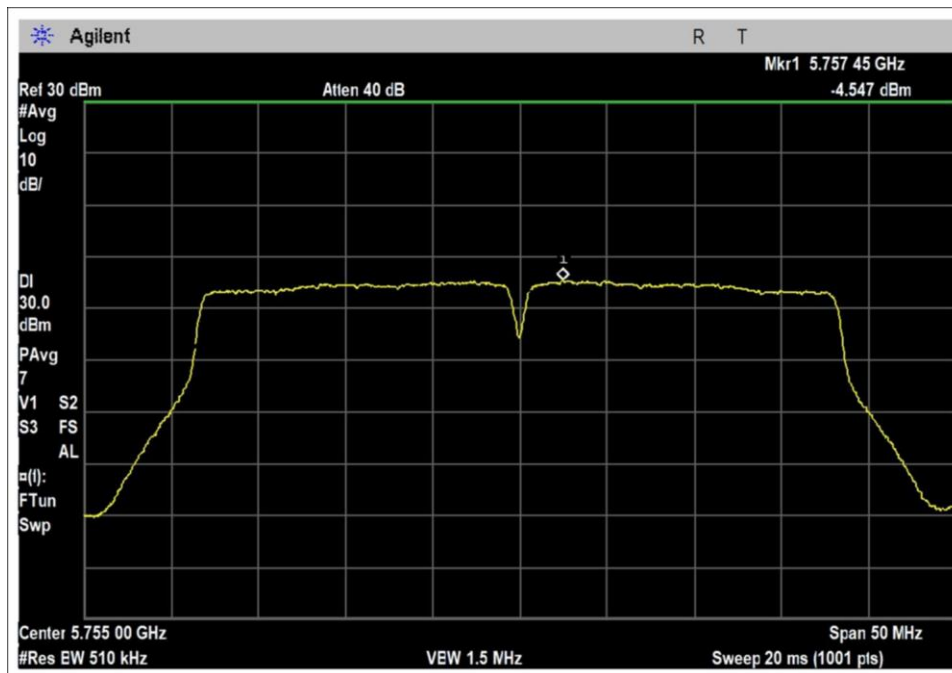


AP1 Middle Channel

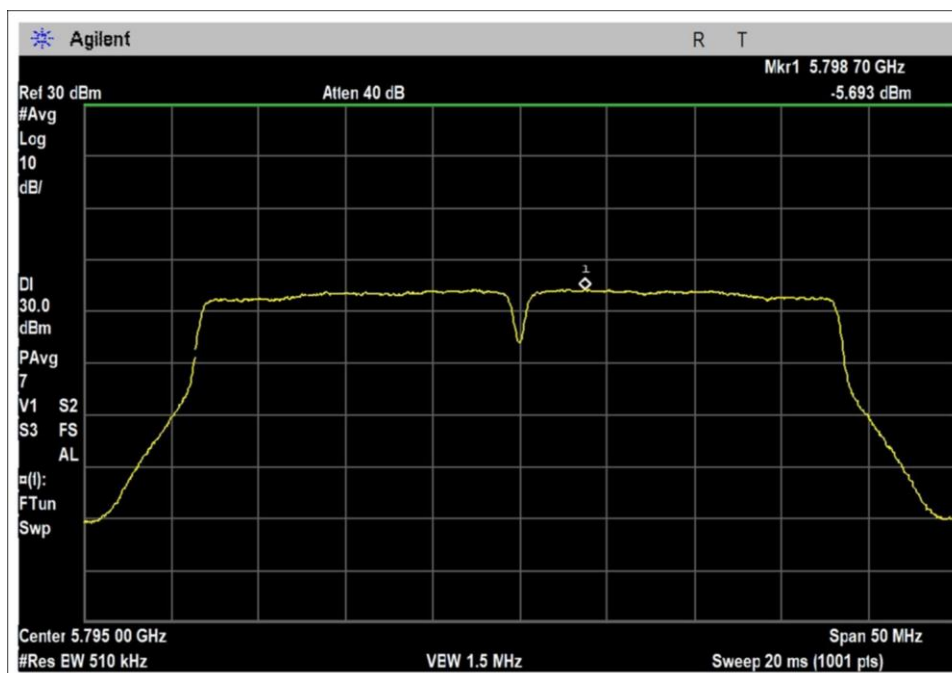


AP1 High Channel

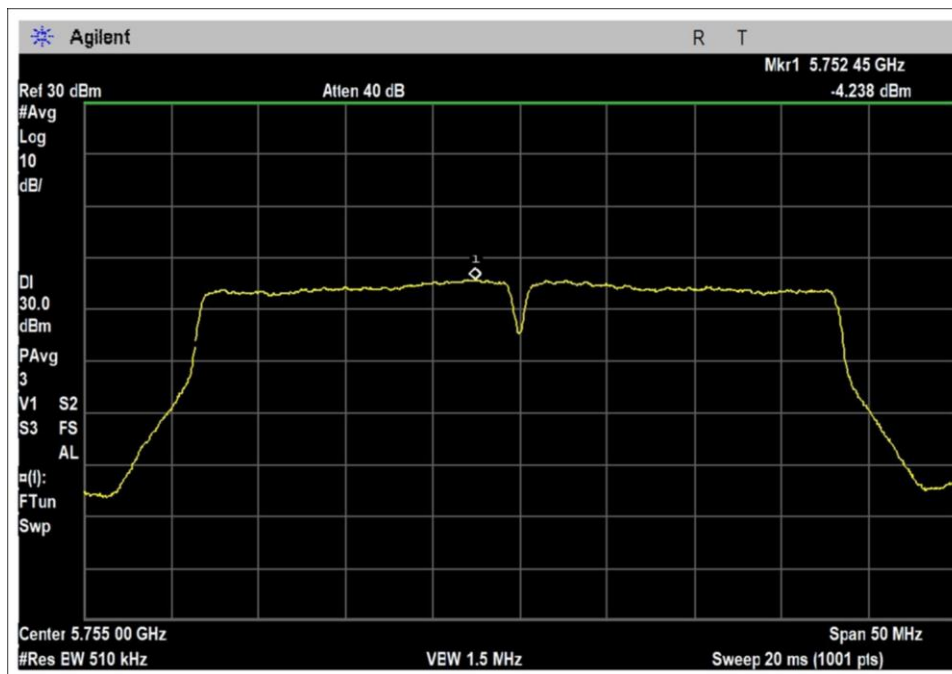
802.11ac40 Test Data



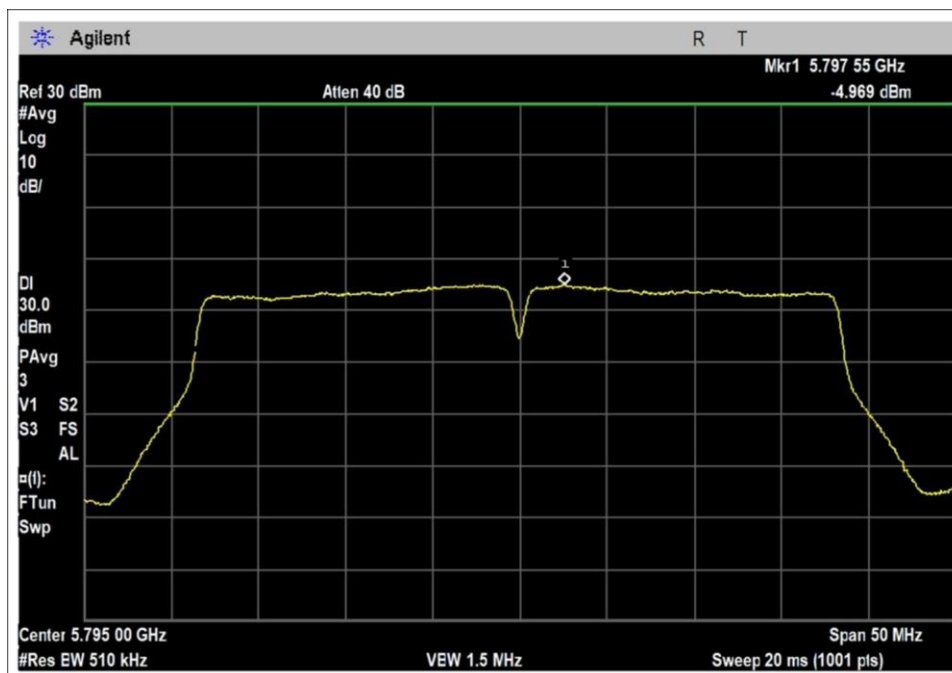
AP0 Low Channel



AP0 High Channel

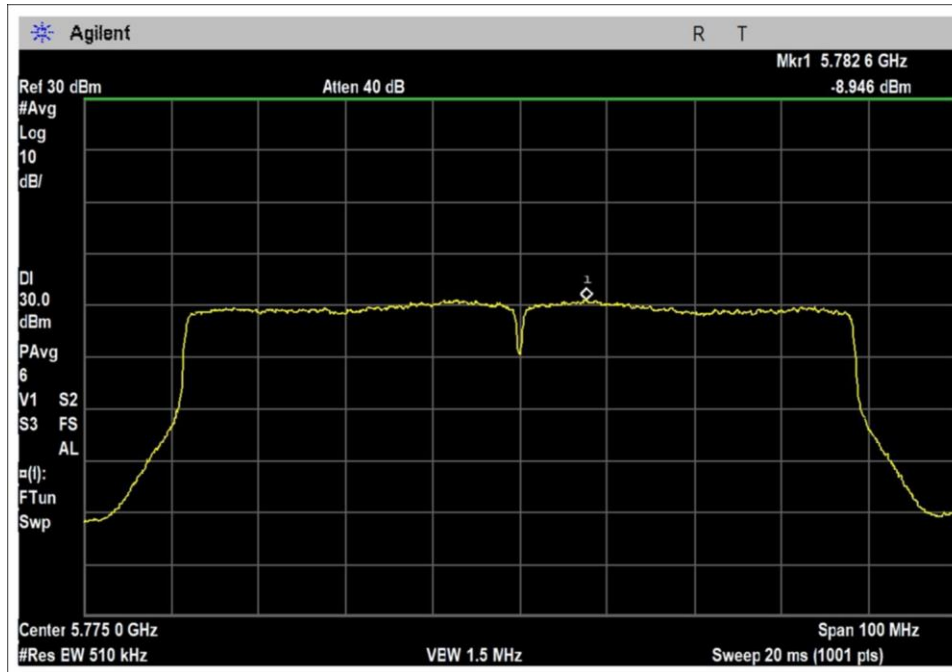


AP1 Low Channel

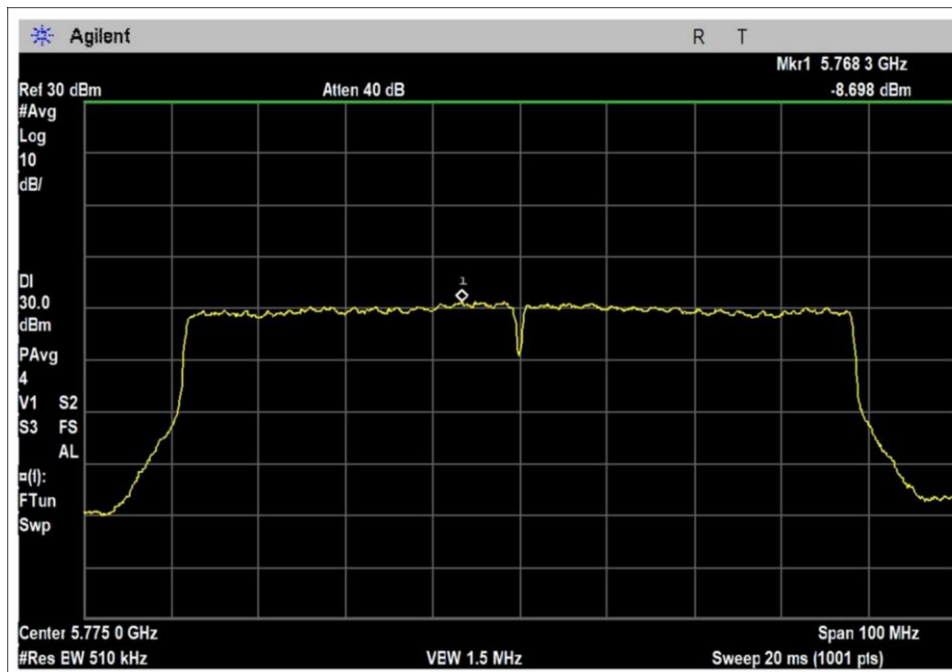


AP1 High Channel

802.11ac80 Test Data

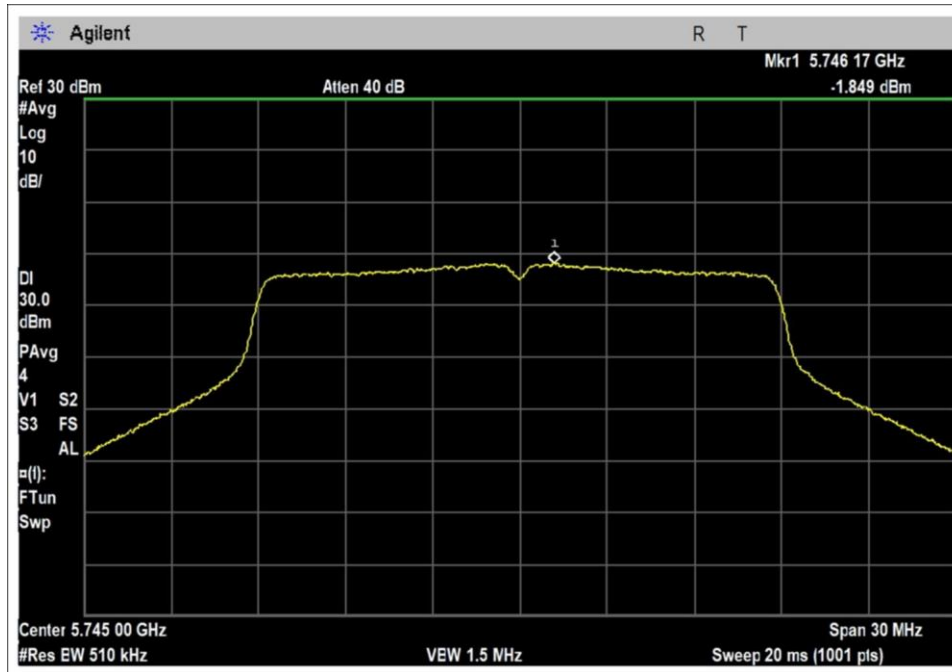


APO

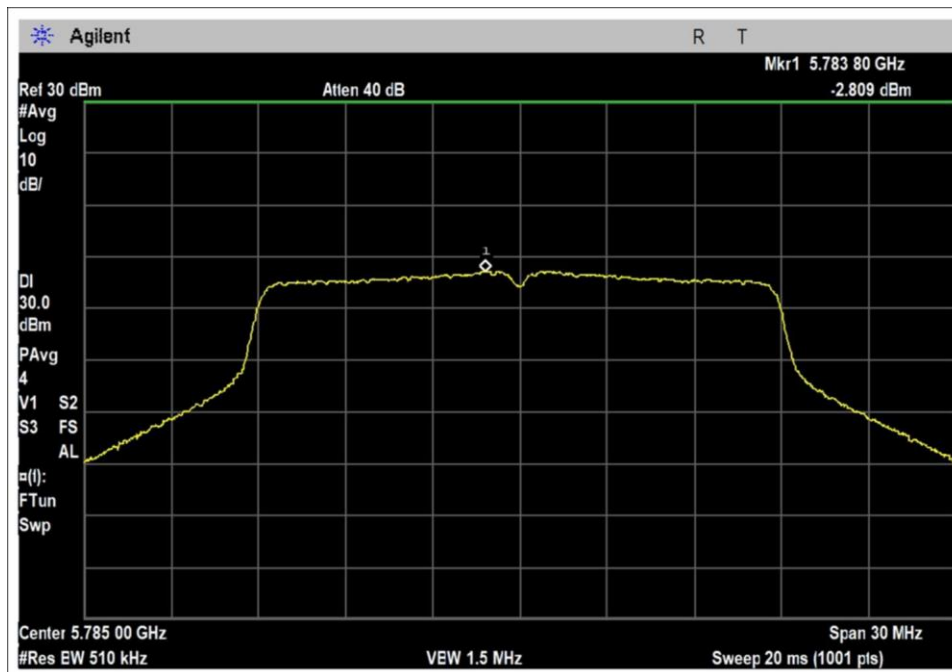


AP1

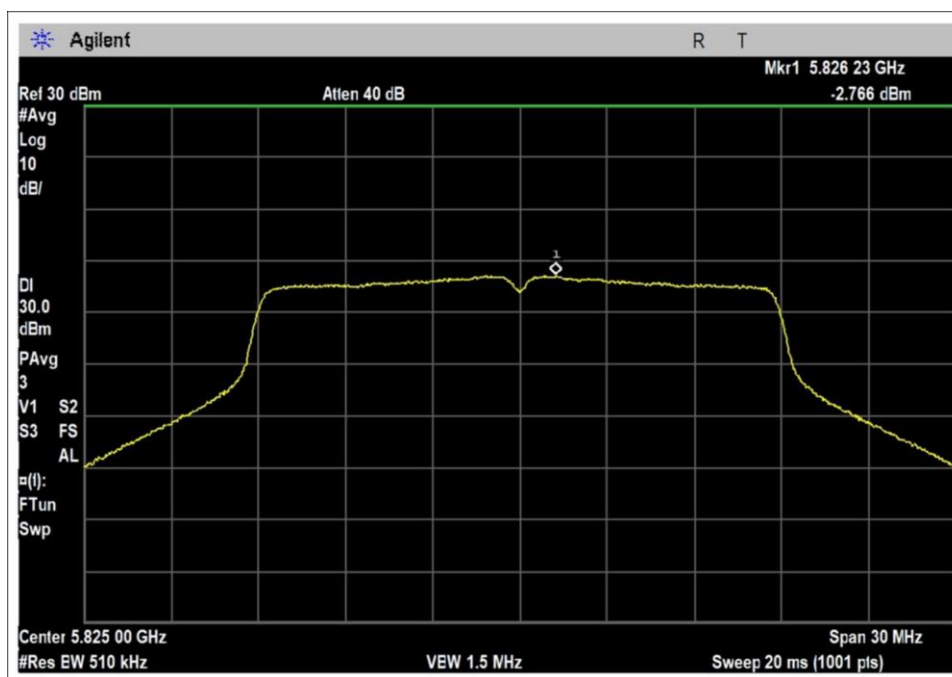
802.11n20 Test Data



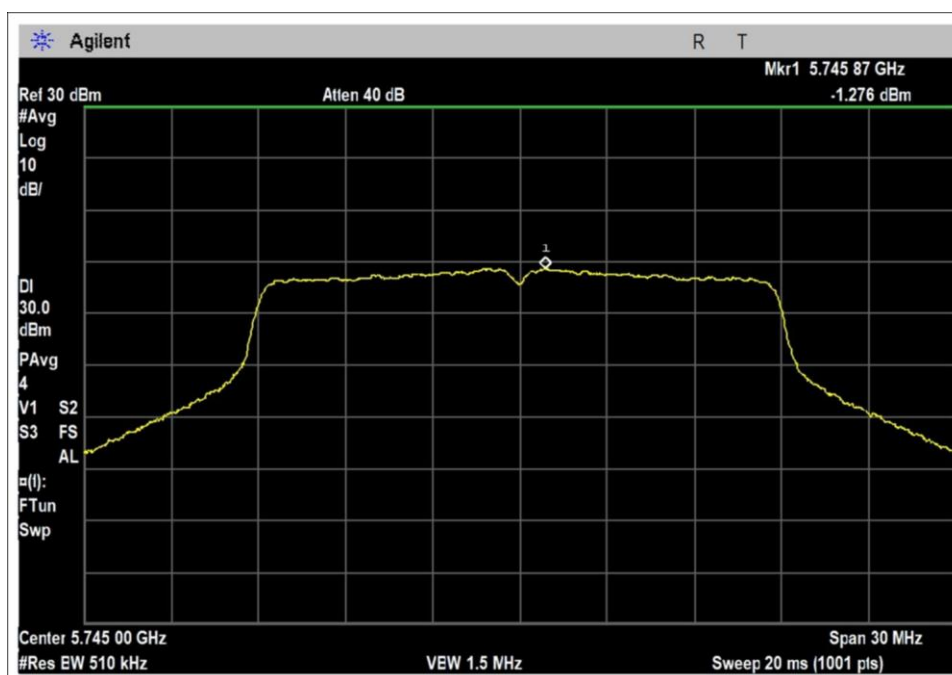
AP0 Low Channel



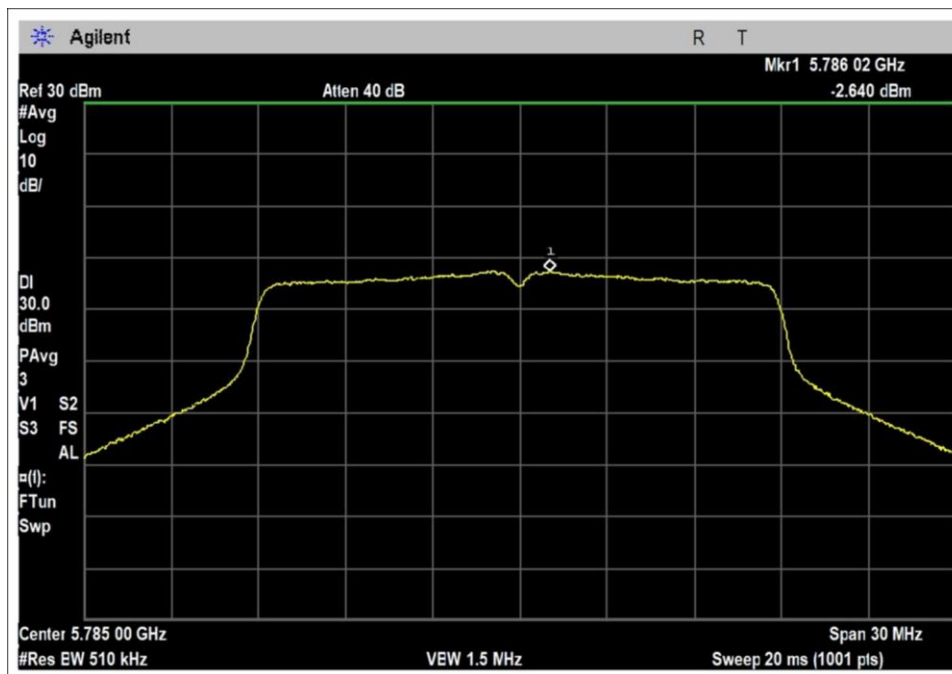
AP0 Middle Channel



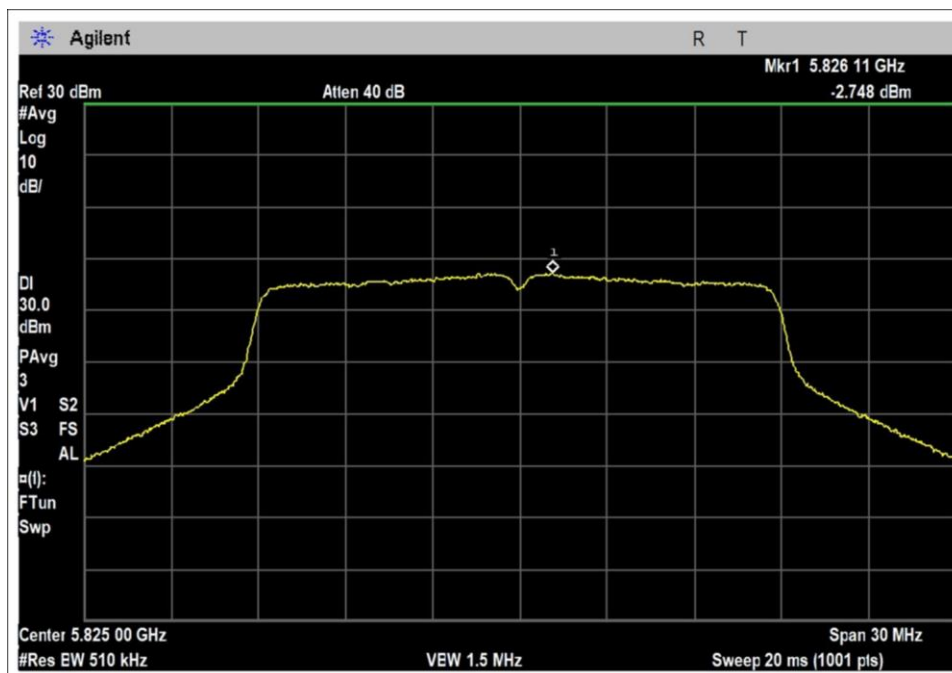
APO High Channel



AP1 Low Channel

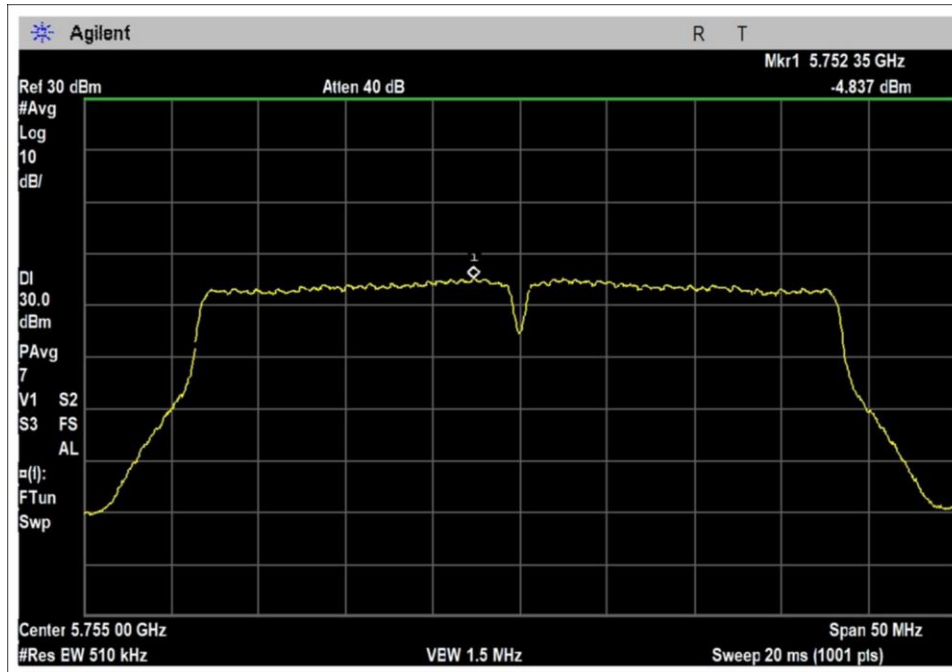


AP1 Middle Channel

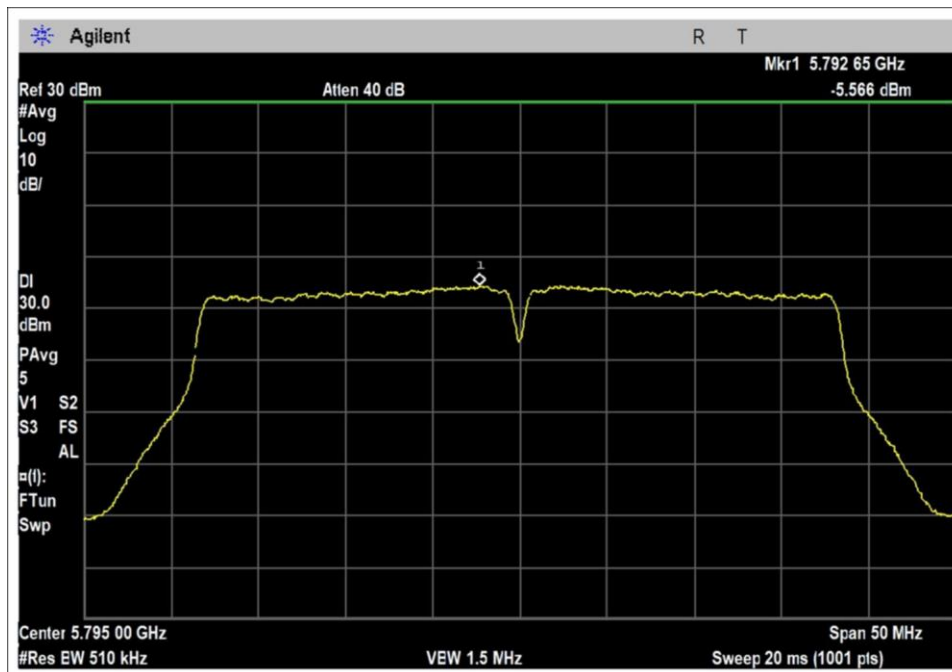


AP1 High Channel

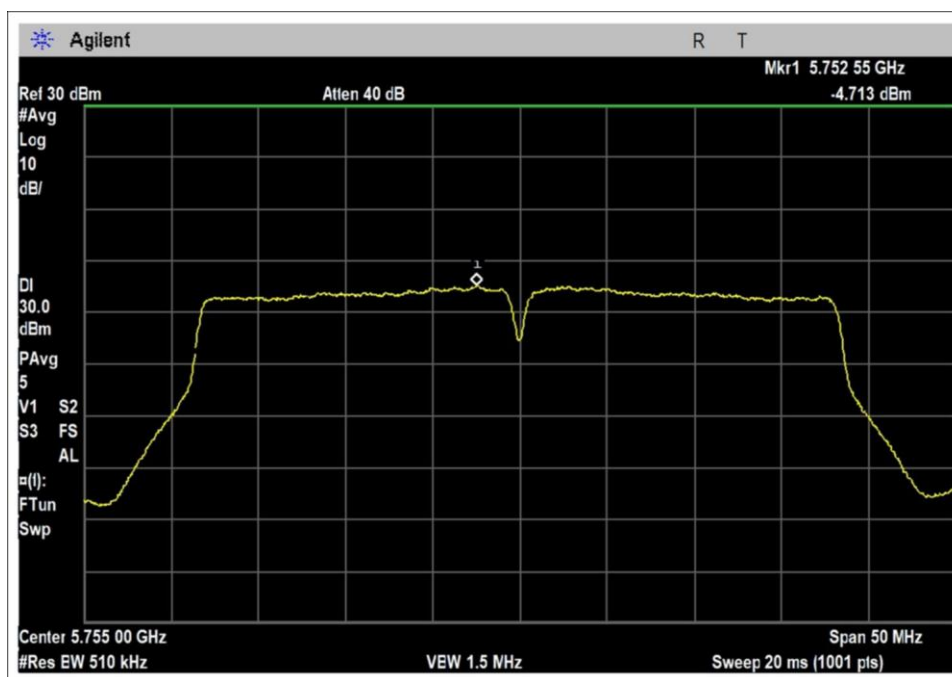
802.11n40 Test Data



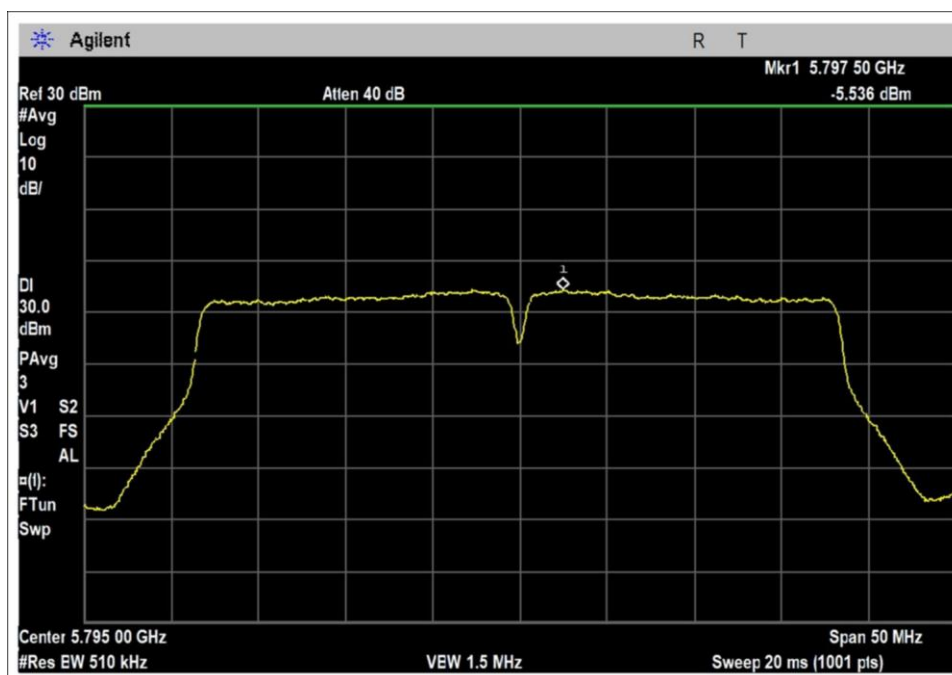
AP0 Low Channel



AP0 High Channel



AP1 Low Channel



AP1 High Channel

Test Setup Photo(s)



15.407(b) Radiated Emissions & Band Edge

Test Setup / Conditions / Data

Test Setup/Conditions			
Test Location:	Bothell Lab C3	Test Engineer:	M. Harrison
Test Method:	ANSI C63.10 (2013), KDB 789033 v02r01 December 14, 2017)	Test Date(s):	3/20/2020
Configuration:	1		
	(4) For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. $E[dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ m		

15.209 Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:45:25
 Tested By: Matthew Harrison Sequence#: 24
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

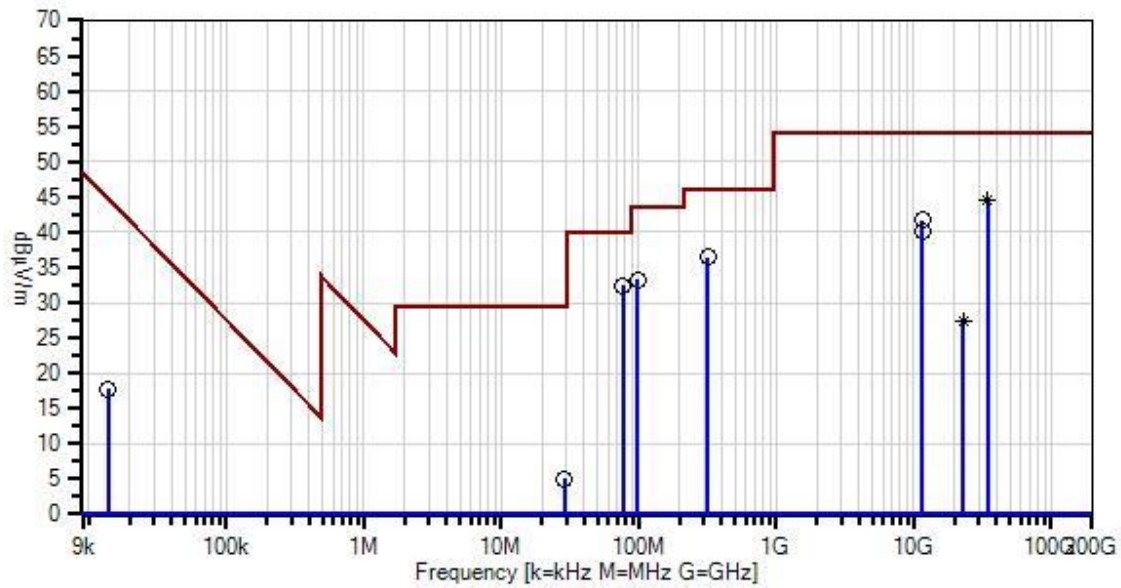
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 9kHz-40GHz Frequency tested: 5745, 5785, 5825 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11a, 20MHz BW, 6Mbps (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Nalloy, LLC. WO#: 102802 Sequence#: 24 Date: 4/2/2020
15.209 Radiated Emissions Test Distance: 3 Meters Perp



— Sweep Data
x QP Readings
Software Version: 5.03.12

— Readings
* Average Readings
— 1 - 15.209 Radiated Emissions

○ Peak Readings
▼ Ambient

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamp	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40-KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801-29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801-29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801-29801-18	8/7/2019	8/7/2021
T9	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T10	AN02743	Active Horn Antenna	AMFW-5F-260400-33-8P	4/26/2019	4/26/2021
T11	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
T12	AN02307	Preamp	8447D	1/10/2020	1/10/2022
T13	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
T14	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
T15	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
T16	ANP05360	Cable	RG214	2/3/2020	2/3/2022
T17	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9 T13 T17	T2 T6 T10 T14	T3 T7 T11 T15	T4 T8 T12 T16	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	76.400M	46.5	+0.0 +0.0 +0.0 +6.9 +0.0	+0.1 +0.0 +0.0 +5.8	+0.0 +0.0 +0.0 +0.4	+0.0 +0.0 -27.8 +0.5	+0.0	32.4	40.0	-7.6	Vert
2	34470.000 M Ave	24.4	+0.0 +0.0 +0.0 +0.0 +0.0	+0.0 +12.3 +2.1 +0.0	+0.0 +1.2 +3.1 +0.0	+0.0 +1.5 +0.0 +0.0	+0.0	44.6	54.0	-9.4	Horiz

^	34470.000 M	39.6	+0.0	+0.0	+0.0	+0.0	+0.0	59.8	54.0	+5.8	Horiz
			+0.0	+12.3	+1.2	+1.5					
			+0.0	+2.1	+3.1	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
4	317.600M	41.6	+0.0	+0.2	+0.0	+0.0	+0.0	36.5	46.0	-9.5	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	-27.1					
			+14.0	+5.8	+0.9	+1.1					
			+0.0								
5	98.500M	45.9	+0.0	+0.1	+0.0	+0.0	+0.0	33.2	43.5	-10.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	-27.7					
			+8.0	+5.8	+0.5	+0.6					
			+0.0								
6	11645.650 M	46.6	+6.7	+1.7	-13.3	+0.0	+0.0	41.7	54.0	-12.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
7	11570.240 M	46.7	+6.6	+1.6	-13.2	+0.0	+0.0	41.7	54.0	-12.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
8	11490.240 M	45.2	+6.6	+1.6	-13.2	+0.0	+0.0	40.2	54.0	-13.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
9	28.896M	18.8	+0.3	+0.1	+0.0	+0.0	-20.0	5.1	29.5	-24.4	Perp
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+5.9								

10	22980.000	29.9	+0.0	+0.0	+0.0	-15.8	+0.0	27.4	54.0	-26.6	Horiz
	M		+1.7	+9.5	+0.8	+1.3					
	Ave		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	22980.000	46.5	+0.0	+0.0	+0.0	-15.8	+0.0	44.0	54.0	-10.0	Horiz
	M		+1.7	+9.5	+0.8	+1.3					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
12	13.794k	44.6	+0.0	+0.0	+0.0	+0.0	-40.0	17.7	44.8	-27.1	Perp
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
			+13.1								

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:40:13
 Tested By: Matthew Harrison Sequence#: 23
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

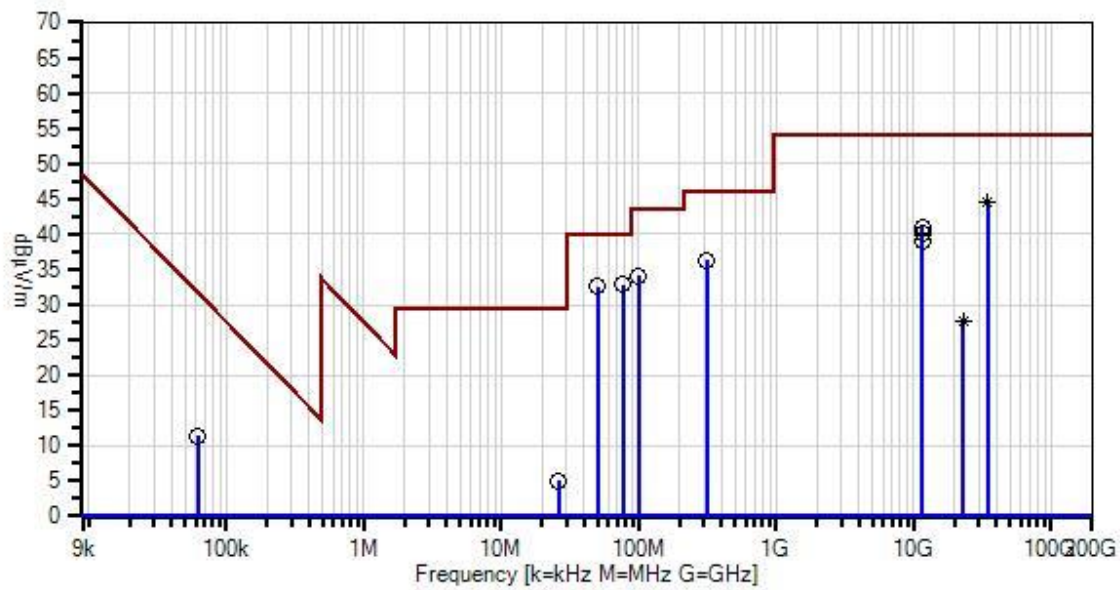
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 9kHz-40GHz Frequency tested: 5745, 5785, 5825 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 20MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Nalloy, LLC. WO#: 102802 Sequence#: 23 Date: 4/2/2020
15.209 Radiated Emissions Test Distance: 3 Meters Perp



— Sweep Data
x QP Readings
Software Version: 5.03.12

— Readings
* Average Readings
— 1 - 15.209 Radiated Emissions

○ Peak Readings
▼ Ambient

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40-KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801-29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801-29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801-29801-18	8/7/2019	8/7/2021
T9	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T10	AN02743	Active Horn Antenna	AMFW-5F-260400-33-8P	4/26/2019	4/26/2021
T11	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
T12	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
T13	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
T14	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
T15	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
T16	ANP05360	Cable	RG214	2/3/2020	2/3/2022
T17	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10	T11	T12					
			T13	T14	T15	T16					
			T17								
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	76.400M	47.0	+0.0	+0.1	+0.0	+0.0	+0.0	32.9	40.0	-7.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	-27.8					
			+6.9	+5.8	+0.4	+0.5					
			+0.0								

2	50.300M	46.5	+0.0	+0.1	+0.0	+0.0	+0.0	32.6	40.0	-7.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	-27.9					
			+7.3	+5.8	+0.4	+0.4					
			+0.0								
3	34470.000 M Ave	24.4	+0.0	+0.0	+0.0	+0.0	+0.0	44.6	54.0	-9.4	Horiz
			+0.0	+12.3	+1.2	+1.5					
			+0.0	+2.1	+3.1	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	34470.000 M	38.2	+0.0	+0.0	+0.0	+0.0	+0.0	58.4	54.0	+4.4	Horiz
			+0.0	+12.3	+1.2	+1.5					
			+0.0	+2.1	+3.1	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
5	100.500M	46.6	+0.0	+0.1	+0.0	+0.0	+0.0	34.0	43.5	-9.5	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	-27.7					
			+8.1	+5.8	+0.5	+0.6					
			+0.0								
6	314.700M	41.6	+0.0	+0.2	+0.0	+0.0	+0.0	36.3	46.0	-9.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	-27.1					
			+13.8	+5.8	+0.9	+1.1					
			+0.0								
7	11649.280 M	45.9	+6.7	+1.7	-13.3	+0.0	+0.0	41.0	54.0	-13.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
8	11570.870 M	45.1	+6.6	+1.6	-13.2	+0.0	+0.0	40.1	54.0	-13.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
9	11492.790 M	43.9	+6.6	+1.6	-13.2	+0.0	+0.0	38.9	54.0	-15.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
10	62.439k	41.7	+0.0	+0.0	+0.0	+0.0	-40.0	11.4	31.7	-20.3	Perp
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+9.7								

11	26.149M	18.0	+0.3	+0.1	+0.0	+0.0	-20.0	5.1	29.5	-24.4	Perp
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+6.7								
12	22980.000 M	30.1	+0.0	+0.0	+0.0	-15.8	+0.0	27.6	54.0	-26.4	Horiz
	Ave		+1.7	+9.5	+0.8	+1.3					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	22980.000 M	43.6	+0.0	+0.0	+0.0	-15.8	+0.0	41.1	54.0	-12.9	Horiz
			+1.7	+9.5	+0.8	+1.3					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:37:10
 Tested By: Matthew Harrison Sequence#: 22
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

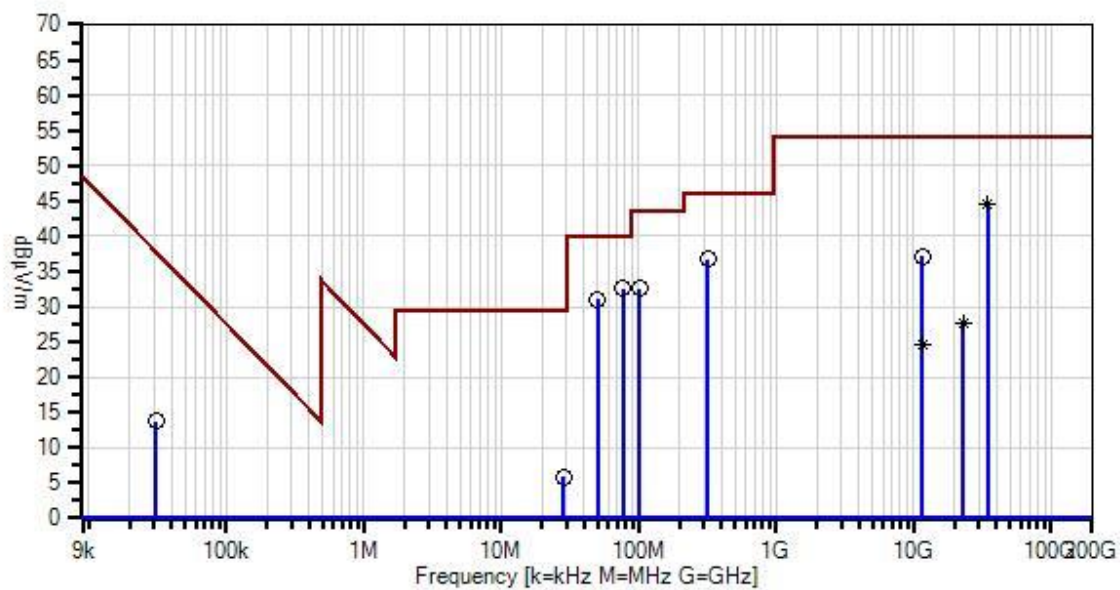
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 9kHz-40GHz Frequency tested: 5755, 5795 MHz Firmware power setting: 13 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 40MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Nalloy, LLC. WO#: 102802 Sequence#: 22 Date: 4/2/2020
15.209 Radiated Emissions Test Distance: 3 Meters Horiz



— Sweep Data
x QP Readings
Software Version: 5.03.12

— Readings
* Average Readings
— 1 - 15.209 Radiated Emissions

○ Peak Readings
▼ Ambient

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
T11	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
T12	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
T13	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
T14	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
T15	ANP05360	Cable	RG214	2/3/2020	2/3/2022
T16	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9 T13	T2 T6 T10 T14	T3 T7 T11 T15	T4 T8 T12 T16	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	76.400M	46.7	+0.0 +0.0 +0.0 +5.8	+0.1 +0.0 +0.0 +0.4	+0.0 +0.0 -27.8 +0.5	+0.0 +0.0 +6.9 +0.0	+0.0	32.6	40.0	-7.4	Vert
2	50.300M	45.0	+0.0 +0.0 +0.0 +5.8	+0.1 +0.0 +0.0 +0.4	+0.0 +0.0 -27.9 +0.4	+0.0 +0.0 +7.3 +0.0	+0.0	31.1	40.0	-8.9	Vert
3	318.600M	41.9	+0.0 +0.0 +0.0 +5.8	+0.2 +0.0 +0.0 +0.9	+0.0 +0.0 -27.1 +1.1	+0.0 +0.0 +14.0 +0.0	+0.0	36.8	46.0	-9.2	Horiz
4	34530.000 M Ave	24.5	+0.0 +0.0 +2.1 +0.0	+0.0 +12.3 +3.1 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0 +0.0	+0.0	44.7	54.0	-9.3	Horiz
^	34530.000 M	38.6	+0.0 +0.0 +2.1 +0.0	+0.0 +12.3 +3.1 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0 +0.0	+0.0	58.8	54.0	+4.8	Horiz
6	101.400M	45.2	+0.0 +0.0 +0.0 +5.8	+0.1 +0.0 +0.0 +0.5	+0.0 +0.0 -27.7 +0.6	+0.0 +0.0 +8.1 +0.0	+0.0	32.6	43.5	-10.9	Vert
7	11590.000 M	42.1	+6.6 +0.0 +0.0 +0.0	+1.6 +0.0 +0.0 +0.0	-13.2 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0	37.1	54.0	-16.9	Horiz
8	28.269M	19.4	+0.3 +0.0 +0.0 +0.0	+0.1 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +6.1	-20.0	5.9	29.5	-23.6	Horiz
9	30.996k	42.8	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +10.9	-40.0	13.7	37.8	-24.1	Horiz

10	23020.000	30.1	+0.0	+0.0	+0.0	-15.7	+0.0	27.7	54.0	-26.3	Horiz
	M		+1.7	+9.5	+0.8	+1.3					
	Ave		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
^	23020.000	45.5	+0.0	+0.0	+0.0	-15.7	+0.0	43.1	54.0	-10.9	Horiz
	M		+1.7	+9.5	+0.8	+1.3					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
12	11529.700	29.7	+6.6	+1.6	-13.2	+0.0	+0.0	24.7	54.0	-29.3	Horiz
	M		+0.0	+0.0	+0.0	+0.0					
	Ave		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
^	11529.700	40.8	+6.6	+1.6	-13.2	+0.0	+0.0	35.8	54.0	-18.2	Horiz
	M		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:34:09
 Tested By: Matthew Harrison Sequence#: 21
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

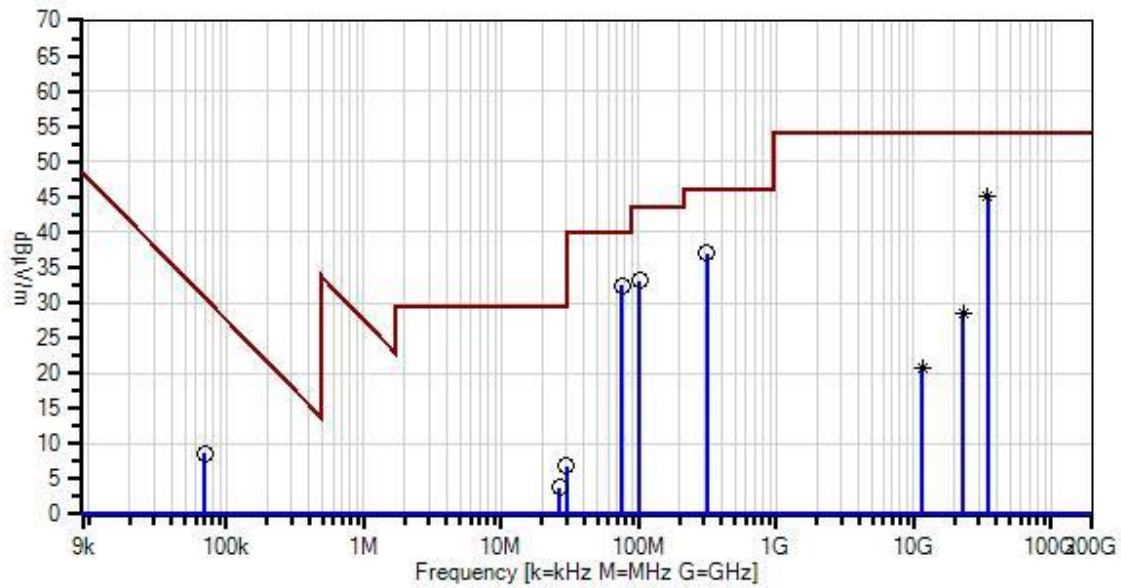
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 9kHz-40GHz Frequency tested: 5775 MHz Firmware power setting: 13 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 80MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Nalloy, LLC. WO#: 102802 Sequence#: 21 Date: 4/2/2020
15.209 Radiated Emissions Test Distance: 3 Meters Perp



— Sweep Data
x QP Readings
Software Version: 5.03.12

— Readings
* Average Readings
— 1 - 15.209 Radiated Emissions

○ Peak Readings
▼ Ambient

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamp	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
T11	AN02307	Preamp	8447D	1/10/2020	1/10/2022
T12	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
T13	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
T14	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
T15	ANP05360	Cable	RG214	2/3/2020	2/3/2022
T16	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9 T13	T2 T6 T10 T14	T3 T7 T11 T15	T4 T8 T12 T16	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	75.400M	46.4	+0.0 +0.0 +0.0 +5.8	+0.1 +0.0 +0.0 +0.4	+0.0 +0.0 -27.8 +0.5	+0.0 +0.0 +7.0 +0.0	+0.0	32.4	40.0	-7.6	Vert
2	34650.000 M Ave	24.7	+0.0 +0.0 +2.3 +0.0	+0.0 +12.4 +3.1 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0 +0.0	+0.0	45.2	54.0	-8.8	Horiz
^	34650.000 M	39.2	+0.0 +0.0 +2.3 +0.0	+0.0 +12.4 +3.1 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0 +0.0	+0.0	59.7	54.0	+5.7	Horiz
4	313.800M	42.3	+0.0 +0.0 +0.0 +5.8	+0.2 +0.0 +0.0 +0.9	+0.0 +0.0 -27.1 +1.1	+0.0 +0.0 +13.8 +0.0	+0.0	37.0	46.0	-9.0	Horiz
5	101.400M	45.8	+0.0 +0.0 +0.0 +5.8	+0.1 +0.0 +0.0 +0.5	+0.0 +0.0 -27.7 +0.6	+0.0 +0.0 +8.1 +0.0	+0.0	33.2	43.5	-10.3	Vert
6	69.771k	39.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +9.6	+0.0 +0.0 +0.0 +9.6	-40.0	8.6	30.7	-22.1	Perp
7	29.940M	20.8	+0.3 +0.0 +0.0 +0.0	+0.1 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +5.6	-20.0	6.8	29.5	-22.7	Perp
8	23100.000 M Ave	30.6	+0.0 +1.7 +0.0 +0.0	+0.0 +9.5 +0.0 +0.0	+0.0 +0.8 +0.0 +0.0	-15.5 +1.3 +0.0 +0.0	+0.0	28.4	54.0	-25.6	Horiz
^	23100.000 M	43.8	+0.0 +1.7 +0.0 +0.0	+0.0 +9.5 +0.0 +0.0	+0.0 +0.8 +0.0 +0.0	-15.5 +1.3 +0.0 +0.0	+0.0	41.6	54.0	-12.4	Horiz

10	26.448M	16.8	+0.3	+0.1	+0.0	+0.0	-20.0	3.8	29.5	-25.7	Perp
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+6.6					
11	11568.700	25.8	+6.6	+1.6	-13.2	+0.0	+0.0	20.8	54.0	-33.2	Horiz
	M		+0.0	+0.0	+0.0	+0.0					
	Ave		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
^	11568.700	40.1	+6.6	+1.6	-13.2	+0.0	+0.0	35.1	54.0	-18.9	Horiz
	M		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					



Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:48:47
 Tested By: Matthew Harrison Sequence#: 25
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

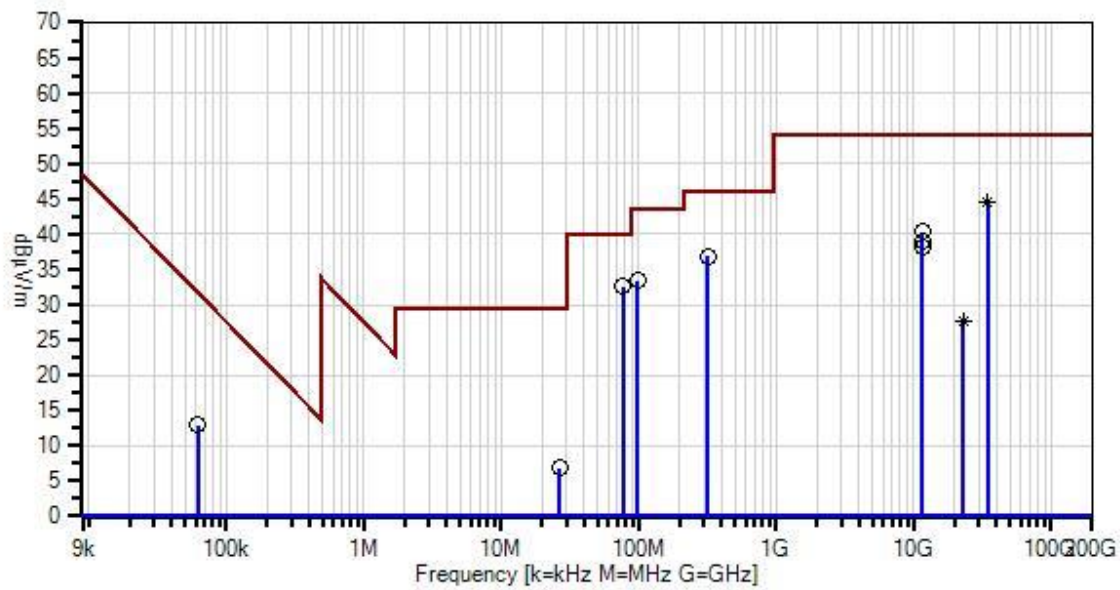
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 9kHz-40GHz Frequency tested: 5745, 5785, 5825 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11n, 20MHz BW, MCS8 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Nalloy, LLC. WO#: 102802 Sequence#: 25 Date: 4/2/2020
15.209 Radiated Emissions Test Distance: 3 Meters Perp



— Sweep Data
x QP Readings
Software Version: 5.03.12

— Readings
* Average Readings
— 1 - 15.209 Radiated Emissions

○ Peak Readings
▼ Ambient

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
T11	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
T12	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
T13	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
T14	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
T15	ANP05360	Cable	RG214	2/3/2020	2/3/2022
T16	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9 T13	T2 T6 T10 T14	T3 T7 T11 T15	T4 T8 T12 T16	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	76.400M	46.7	+0.0 +0.0 +0.0 +5.8	+0.1 +0.0 +0.0 +0.4	+0.0 +0.0 -27.8 +0.5	+0.0 +0.0 +6.9 +0.0	+0.0	32.6	40.0	-7.4	Vert
2	316.700M	42.1	+0.0 +0.0 +0.0 +5.8	+0.2 +0.0 +0.0 +0.9	+0.0 +0.0 -27.1 +1.1	+0.0 +0.0 +13.9 +0.0	+0.0	36.9	46.0	-9.1	Horiz
3	34470.000 M Ave	24.4	+0.0 +0.0 +2.1 +0.0	+0.0 +12.3 +3.1 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0 +0.0	+0.0	44.6	54.0	-9.4	Horiz
^	34470.000 M	40.1	+0.0 +0.0 +2.1 +0.0	+0.0 +12.3 +3.1 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0 +0.0	+0.0	60.3	54.0	+6.3	Horiz
5	98.500M	46.1	+0.0 +0.0 +0.0 +5.8	+0.1 +0.0 +0.0 +0.5	+0.0 +0.0 -27.7 +0.6	+0.0 +0.0 +8.0 +0.0	+0.0	33.4	43.5	-10.1	Vert
6	11652.040 M	45.2	+6.7 +0.0 +0.0 +0.0	+1.7 +0.0 +0.0 +0.0	-13.3 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0	40.3	54.0	-13.7	Horiz
7	11572.340 M	44.1	+6.6 +0.0 +0.0 +0.0	+1.6 +0.0 +0.0 +0.0	-13.2 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0	39.1	54.0	-14.9	Horiz
8	11491.830 M	43.2	+6.6 +0.0 +0.0 +0.0	+1.6 +0.0 +0.0 +0.0	-13.2 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0	38.2	54.0	-15.8	Horiz
9	62.580k	43.2	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +9.7	-40.0	12.9	31.7	-18.8	Perp

10	26.478M	19.8	+0.3	+0.1	+0.0	+0.0	-20.0	6.8	29.5	-22.7	Perp
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+6.6					
11	22980.000	30.1	+0.0	+0.0	+0.0	-15.8	+0.0	27.6	54.0	-26.4	Horiz
	M		+1.7	+9.5	+0.8	+1.3					
	Ave		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
^	22980.000	44.7	+0.0	+0.0	+0.0	-15.8	+0.0	42.2	54.0	-11.8	Horiz
	M		+1.7	+9.5	+0.8	+1.3					
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:51:58
 Tested By: Matthew Harrison Sequence#: 26
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

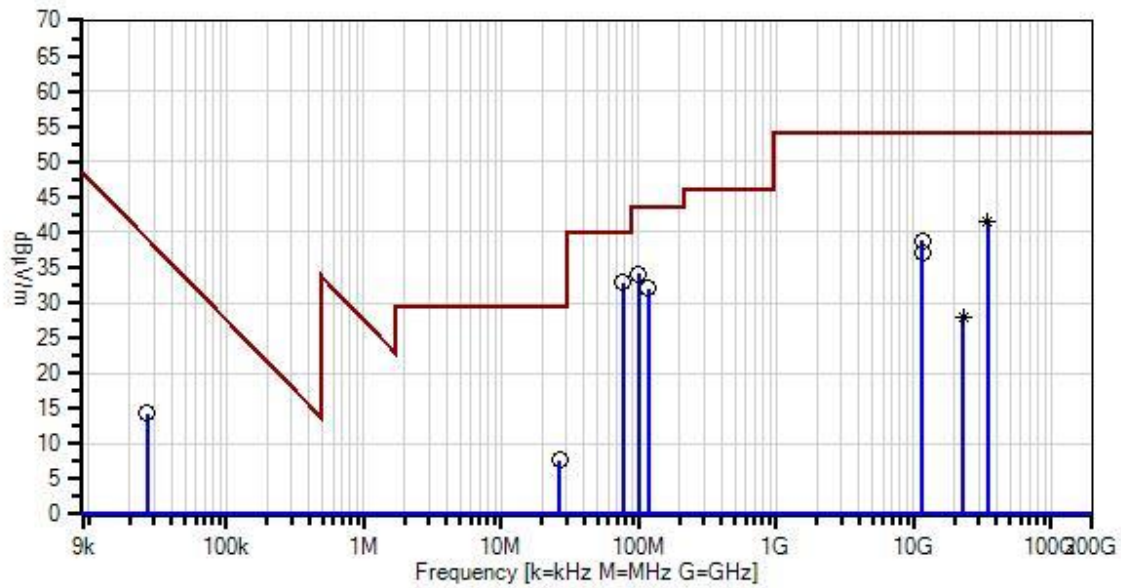
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 9kHz-40GHz Frequency tested: 5755, 5795 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11n, 40MHz BW, MCS8 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Nalloy, LLC. WO#: 102802 Sequence#: 26 Date: 4/2/2020
15.209 Radiated Emissions Test Distance: 3 Meters Perp



— Sweep Data
x QP Readings
Software Version: 5.03.12
— Readings
* Average Readings
○ Peak Readings
▼ Ambient
— 1 - 15.209 Radiated Emissions

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
T10	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
T11	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
T12	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
T13	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
T14	ANP05360	Cable	RG214	2/3/2020	2/3/2022
T15	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9 T13	T2 T6 T10 T14	T3 T7 T11 T15	T4 T8 T12	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	76.400M	46.9	+0.0 +0.0 +0.0 +0.4	+0.1 +0.0 -27.8 +0.5	+0.0 +0.0 +6.9 +0.0	+0.0 +0.0 +5.8	+0.0	32.8	40.0	-7.2	Horiz
2	100.500M	46.7	+0.0 +0.0 +0.0 +0.5	+0.1 +0.0 -27.7 +0.6	+0.0 +0.0 +8.1 +0.0	+0.0 +0.0 +5.8	+0.0	34.1	43.5	-9.4	Horiz
3	117.900M	44.6	+0.0 +0.0 +0.0 +0.5	+0.1 +0.0 -27.6 +0.6	+0.0 +0.0 +8.0 +0.0	+0.0 +0.0 +5.8	+0.0	32.0	43.5	-11.5	Horiz
4	34530.000 M Ave	24.5	+0.0 +0.0 +2.1 +0.0	+0.0 +12.3 +0.0 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0	+0.0	41.6	54.0	-12.4	Horiz
^	34530.000 M	40.3	+0.0 +0.0 +2.1 +0.0	+0.0 +12.3 +0.0 +0.0	+0.0 +1.2 +0.0 +0.0	+0.0 +1.5 +0.0	+0.0	57.4	54.0	+3.4	Horiz
6	11590.100 M	43.8	+6.6 +0.0 +0.0 +0.0	+1.6 +0.0 +0.0 +0.0	-13.2 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	38.8	54.0	-15.2	Horiz
7	11497.400 M	42.0	+6.6 +0.0 +0.0 +0.0	+1.6 +0.0 +0.0 +0.0	-13.2 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	37.0	54.0	-17.0	Horiz
8	26.657M	20.7	+0.3 +0.0 +0.0 +0.0	+0.1 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +6.5	+0.0 +0.0 +0.0	-20.0	7.6	29.5	-21.9	Perp
9	26.625k	43.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +0.0	+0.0 +0.0 +0.0 +11.3	+0.0 +0.0 +0.0	-40.0	14.3	39.1	-24.8	Perp
10	23020.000 M Ave	30.3	+0.0 +1.7 +0.0 +0.0	+0.0 +9.5 +0.0 +0.0	+0.0 +0.8 +0.0 +0.0	-15.7 +1.3 +0.0	+0.0	27.9	54.0	-26.1	Horiz
^	23020.000 M	45.3	+0.0 +1.7 +0.0 +0.0	+0.0 +9.5 +0.0 +0.0	+0.0 +0.8 +0.0 +0.0	-15.7 +1.3 +0.0	+0.0	42.9	54.0	-11.1	Horiz

15.407 Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) Radiated Spurious Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:45:25
 Tested By: Matthew Harrison Sequence#: 24
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

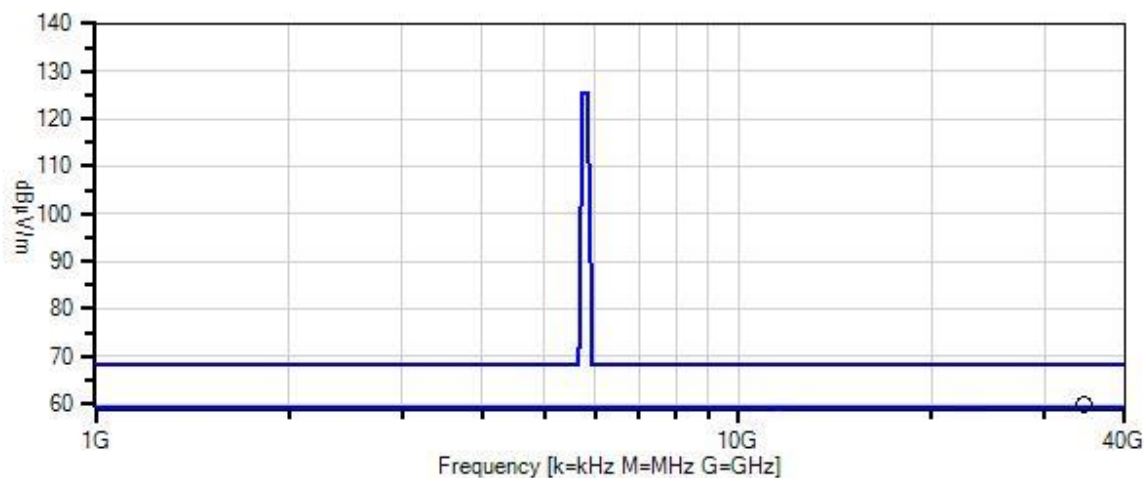
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 1-40GHz Frequency tested: 5745, 5785, 5825 MHz $E[dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ m Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11a, 20MHz BW, 6Mbps (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Nalloy, LLC. W/O#: 102802 Sequence#: 24 Date: 4/2/2020
 15.407(b)(4) Radiated Spurious Emissions - Client Devices Test Distance: 3 Meters Perp



— Sweep Data
 — Readings
 ○ Peak Readings
 × QP Readings
 * Average Readings
 ▼ Ambient
 Software Version: 5.03.12
 — 1 - 15.407(b)(4) Radiated Spurious Emissions - Client Devices

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
	ANP05360	Cable	RG214	2/3/2020	2/3/2022
	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	34470.000 M	39.6	+0.0 +0.0 +2.1	+0.0 +12.3 +3.1	+0.0 +1.2	+0.0 +1.5	+0.0	59.8	68.2	-8.4	Horiz
2	22980.000 M	46.5	+0.0 +1.7 +0.0	+0.0 +9.5 +0.0	+0.0 +0.8	-15.8 +1.3	+0.0	44.0	68.2	-24.2	Horiz
3	11645.650 M	46.6	+6.7 +0.0 +0.0	+1.7 +0.0 +0.0	-13.3 +0.0	+0.0 +0.0	+0.0	41.7	68.2	-26.5	Horiz
4	11570.240 M	46.7	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	41.7	68.2	-26.5	Horiz
5	11490.240 M	45.2	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	40.2	68.2	-28.0	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) Radiated Spurious Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:40:13
 Tested By: Matthew Harrison Sequence#: 23
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

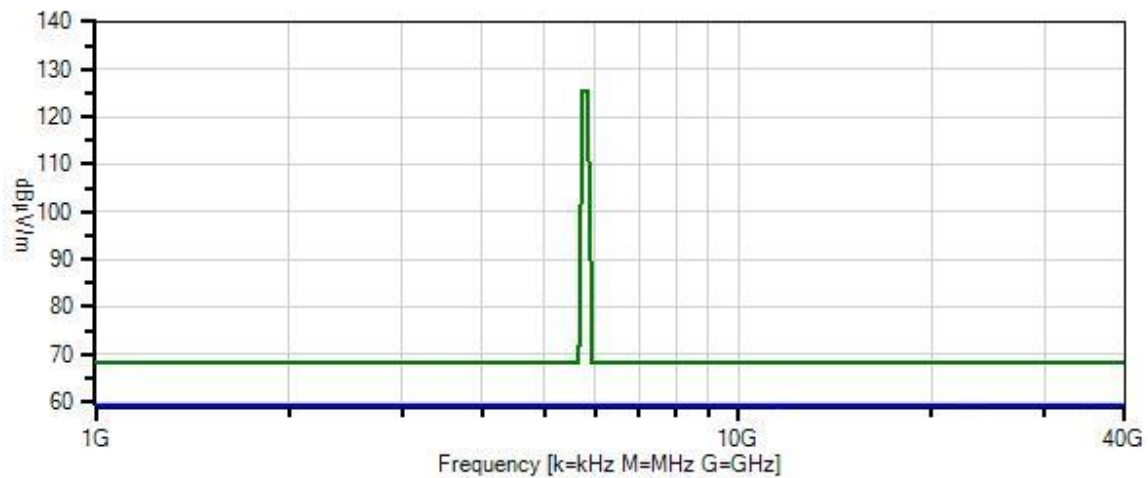
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 1-40GHz Frequency tested: 5745, 5785, 5825 MHz $E[dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ m Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 20MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Nalloy, LLC. W/O#: 102802 Sequence#: 23 Date: 4/2/2020
15.407(b)(4) Radiated Spurious Emissions - Client Devices Test Distance: 3 Meters Perp



— Sweep Data
— Readings
○ Peak Readings
× QP Readings
* Average Readings
▼ Ambient
Software Version: 5.03.12
— 1 - 15.407(b)(4) Radiated Spurious Emissions - Client Devices

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
	ANP05360	Cable	RG214	2/3/2020	2/3/2022
	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	34470.000 M	38.2	+0.0 +0.0 +2.1	+0.0 +12.3 +3.1	+0.0 +1.2	+0.0 +1.5	+0.0	58.4	68.2	-9.8	Horiz
2	22980.000 M	43.6	+0.0 +1.7 +0.0	+0.0 +9.5 +0.0	+0.0 +0.8	-15.8 +1.3	+0.0	41.1	68.2	-27.1	Horiz
3	11649.280 M	45.9	+6.7 +0.0 +0.0	+1.7 +0.0 +0.0	-13.3 +0.0	+0.0 +0.0	+0.0	41.0	68.2	-27.2	Horiz
4	11570.870 M	45.1	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	40.1	68.2	-28.1	Horiz
5	11492.790 M	43.9	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	38.9	68.2	-29.3	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) Radiated Spurious Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:37:10
 Tested By: Matthew Harrison Sequence#: 22
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

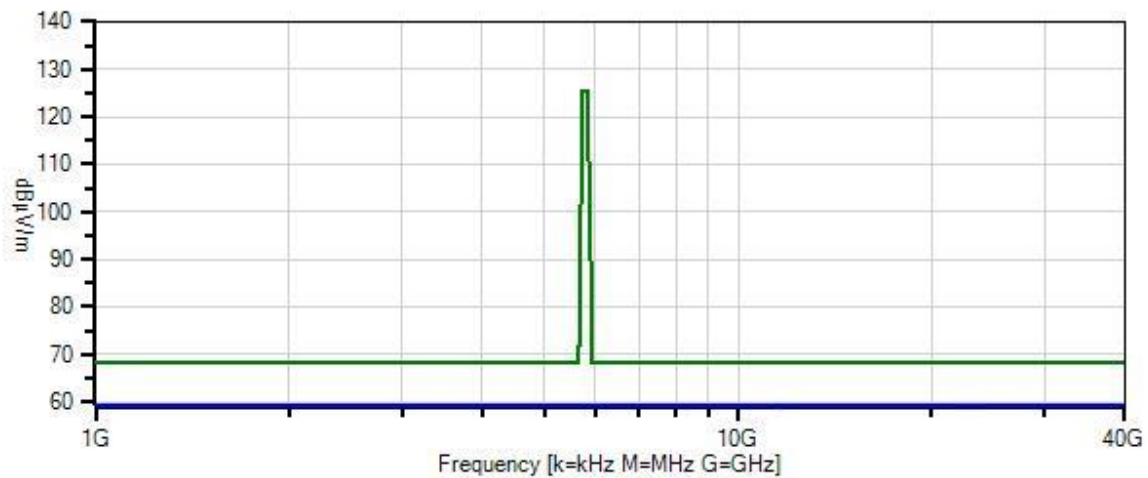
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 1-40GHz Frequency tested: 5755, 5795 MHz $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] + 95.2$, for $d = 3 \text{ m}$ Firmware power setting: 13 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 40MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Nalloy, LLC. W/O#: 102802 Sequence#: 22 Date: 4/2/2020
 15.407(b)(4) Radiated Spurious Emissions - Client Devices Test Distance: 3 Meters Horiz



— Sweep Data
 — Readings
 ○ Peak Readings
 × QP Readings
 * Average Readings
 ▼ Ambient
 Software Version: 5.03.12
 — 1 - 15.407(b)(4) Radiated Spurious Emissions - Client Devices

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
	ANP05360	Cable	RG214	2/3/2020	2/3/2022
	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	34530.000 M	38.6	+0.0 +0.0 +2.1	+0.0 +12.3 +3.1	+0.0 +1.2	+0.0 +1.5	+0.0	58.8	68.2	-9.4	Horiz
2	23020.000 M	45.5	+0.0 +1.7 +0.0	+0.0 +9.5 +0.0	+0.0 +0.8	-15.7 +1.3	+0.0	43.1	68.2	-25.1	Horiz
3	11590.000 M	42.1	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	37.1	68.2	-31.1	Horiz
4	11529.700 M	40.8	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	35.8	68.2	-32.4	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) Radiated Spurious Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:34:09
 Tested By: Matthew Harrison Sequence#: 21
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

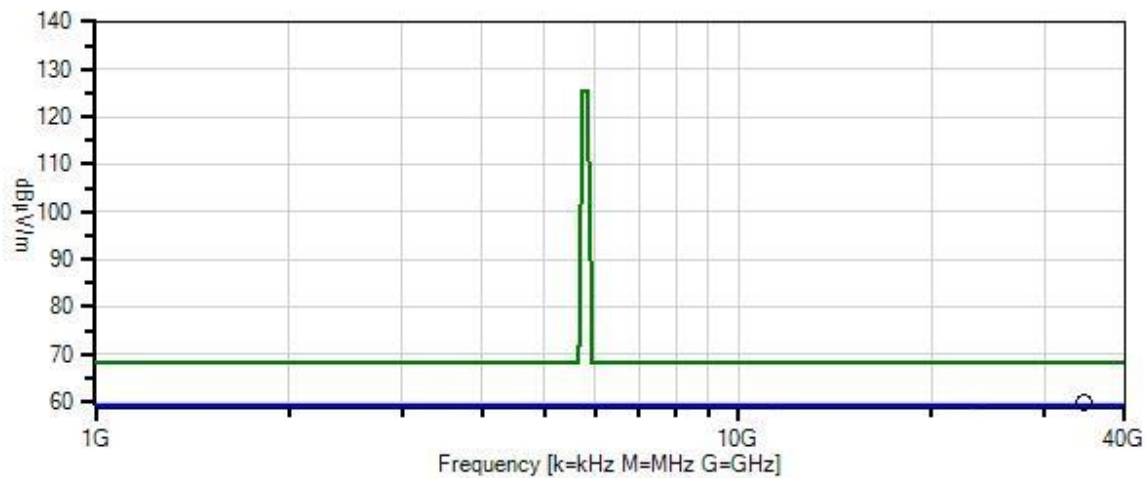
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 1-40GHz Frequency tested: 5775 MHz $E[dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ m Firmware power setting: 13 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 80MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Nalloy, LLC. W/O#: 102802 Sequence#: 21 Date: 4/2/2020
 15.407(b)(4) Radiated Spurious Emissions - Client Devices Test Distance: 3 Meters Perp



— Sweep Data
 — Readings
 ○ Peak Readings
 × QP Readings
 * Average Readings
 ▼ Ambient
 Software Version: 5.03.12
 — 1 - 15.407(b)(4) Radiated Spurious Emissions - Client Devices

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40-KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801-29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801-29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801-29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F-260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
	ANP05360	Cable	RG214	2/3/2020	2/3/2022
	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	34650.000 M	39.2	+0.0 +0.0 +2.3	+0.0 +12.4 +3.1	+0.0 +1.2	+0.0 +1.5	+0.0	59.7	68.2	-8.5	Horiz
2	23100.000 M	43.8	+0.0 +1.7 +0.0	+0.0 +9.5 +0.0	+0.0 +0.8	-15.5 +1.3	+0.0	41.6	68.2	-26.6	Horiz
3	11568.700 M	40.1	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	35.1	68.2	-33.1	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) Radiated Spurious Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:48:47
 Tested By: Matthew Harrison Sequence#: 25
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

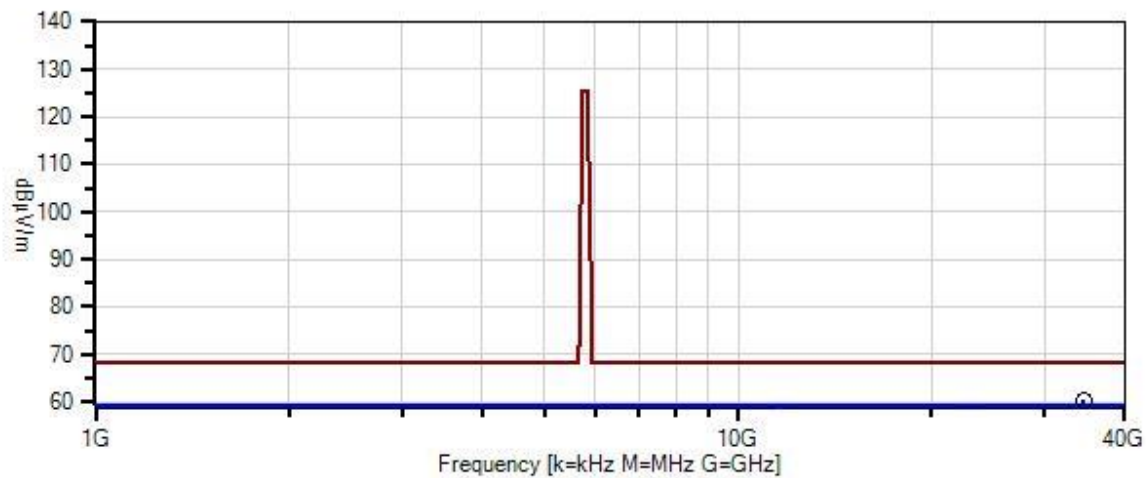
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 1-40GHz Frequency tested: 5745, 5785, 5825 MHz $E[dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ m Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11n, 20MHz BW, MCS8 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Nalloy, LLC. W/O#: 102802 Sequence#: 25 Date: 4/2/2020
 15.407(b)(4) Radiated Spurious Emissions - Client Devices Test Distance: 3 Meters Perp



— Sweep Data
 — Readings
 ○ Peak Readings
 × QP Readings
 * Average Readings
 ▼ Ambient
 Software Version: 5.03.12
 — 1 - 15.407(b)(4) Radiated Spurious Emissions - Client Devices

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
T10	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
	ANP05360	Cable	RG214	2/3/2020	2/3/2022
	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	34470.000 M	40.1	+0.0 +0.0 +2.1	+0.0 +12.3 +3.1	+0.0 +1.2	+0.0 +1.5	+0.0	60.3	68.2	-7.9	Horiz
2	22980.000 M	44.7	+0.0 +1.7 +0.0	+0.0 +9.5 +0.0	+0.0 +0.8	-15.8 +1.3	+0.0	42.2	68.2	-26.0	Horiz
3	11652.040 M	45.2	+6.7 +0.0 +0.0	+1.7 +0.0 +0.0	-13.3 +0.0	+0.0 +0.0	+0.0	40.3	68.2	-27.9	Horiz
4	11572.340 M	44.1	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	39.1	68.2	-29.1	Horiz
5	11491.830 M	43.2	+6.6 +0.0 +0.0	+1.6 +0.0 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	38.2	68.2	-30.0	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) Radiated Spurious Emissions**
 Work Order #: **102802** Date: 4/2/2020
 Test Type: **Maximized Emissions** Time: 15:51:58
 Tested By: Matthew Harrison Sequence#: 26
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

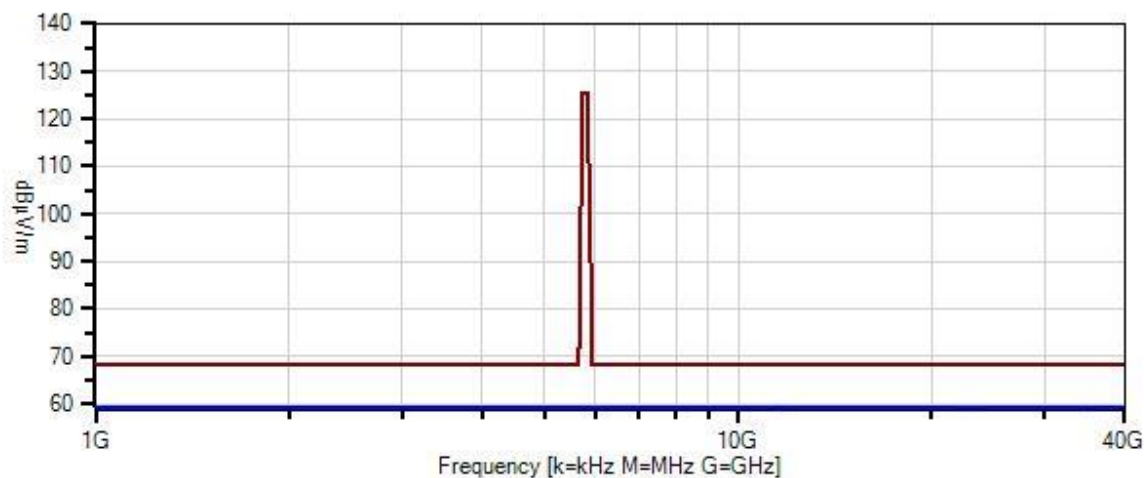
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22°C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 1-40GHz Frequency tested: 5755, 5795 MHz $E[dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ m Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11n, 40MHz BW, MCS8 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Modifications Added: None Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Nalloy, LLC. W/O#: 102802 Sequence#: 26 Date: 4/2/2020
 15.407(b)(4) Radiated Spurious Emissions - Client Devices Test Distance: 3 Meters Perp



- Sweep Data
- Readings
- Peak Readings
- × QP Readings
- * Average Readings
- ▼ Ambient
- Software Version: 5.03.12
- 1 - 15.407(b)(4) Radiated Spurious Emissions - Client Devices

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN01467	Horn Antenna- ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T1	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T2	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021
T3	AN02741	Active Horn Antenna	AMFW-5F- 12001800-20- 10P	4/26/2019	4/26/2021
T4	AN02742	Active Horn Antenna	AMFW-5F- 18002650-20- 10P	10/16/2018	10/16/2020
T5	AN02763-69	Waveguide	Multiple	4/23/2018	4/23/2020
T6	ANP06678	Cable	32026-29801- 29801-144	2/20/2020	2/20/2022
T7	ANP07211	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
T8	ANP07212	Cable	32026-29801- 29801-18	8/7/2019	8/7/2021
	AN02673	Spectrum Analyzer	E4446A	2/22/2019	2/22/2021
T9	AN02743	Active Horn Antenna	AMFW-5F- 260400-33-8P	4/26/2019	4/26/2021
	AN02764-70	Waveguide	Multiple	4/23/2018	4/23/2020
	AN02307	Preamplifier	8447D	1/10/2020	1/10/2022
	AN03628	Biconilog Antenna	3142E	6/11/2019	6/11/2021
	ANP06123	Attenuator	18N-6	4/5/2019	4/5/2021
	ANP05305	Cable	ETSI-50T	9/6/2019	9/6/2021
	ANP05360	Cable	RG214	2/3/2020	2/3/2022
	AN00052	Loop Antenna	6502	5/7/2018	5/7/2020

Measurement Data:

Reading listed by margin.

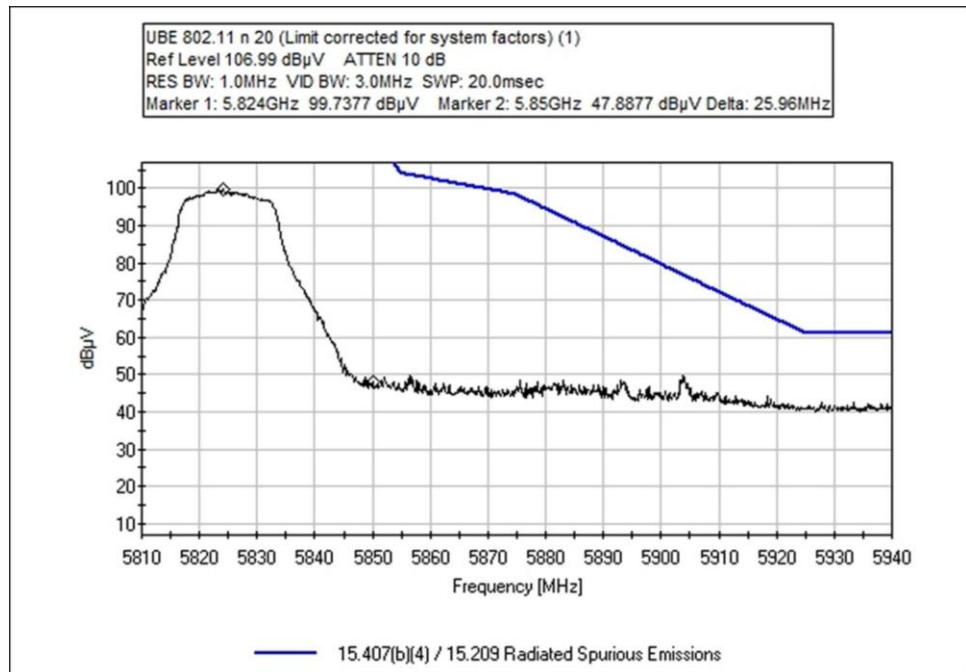
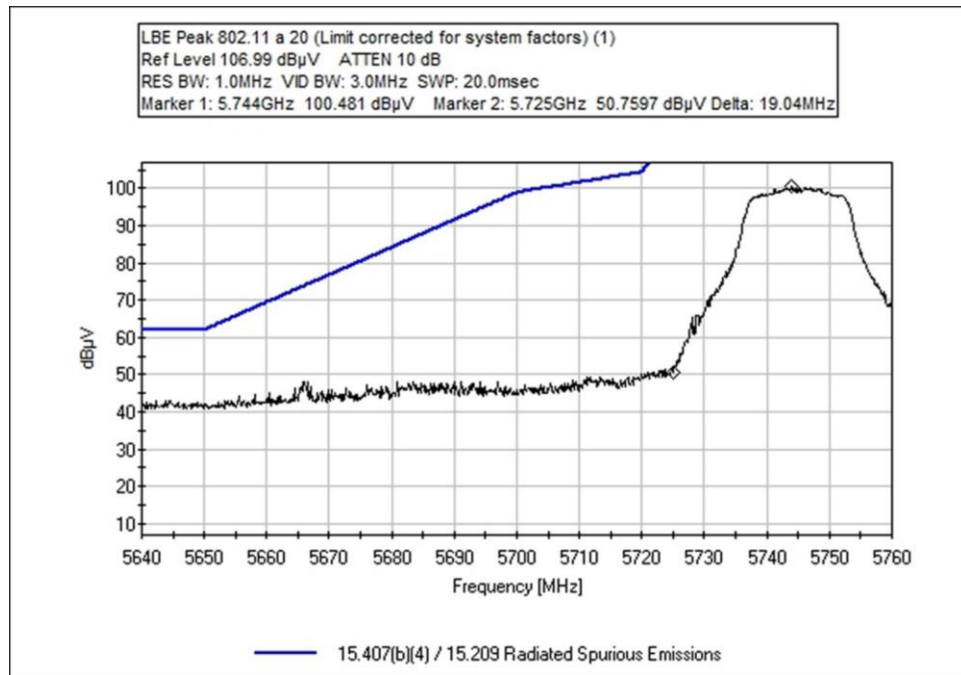
Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	34530.000 M	40.3	+0.0 +0.0 +2.1	+0.0 +12.3	+0.0 +1.2	+0.0 +1.5	+0.0	57.4	68.2	-10.8	Horiz
2	23020.000 M	45.3	+0.0 +1.7 +0.0	+0.0 +9.5	+0.0 +0.8	-15.7 +1.3	+0.0	42.9	68.2	-25.3	Horiz
3	11590.100 M	43.8	+6.6 +0.0 +0.0	+1.6 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	38.8	68.2	-29.4	Horiz
4	11497.400 M	42.0	+6.6 +0.0 +0.0	+1.6 +0.0	-13.2 +0.0	+0.0 +0.0	+0.0	37.0	68.2	-31.2	Horiz

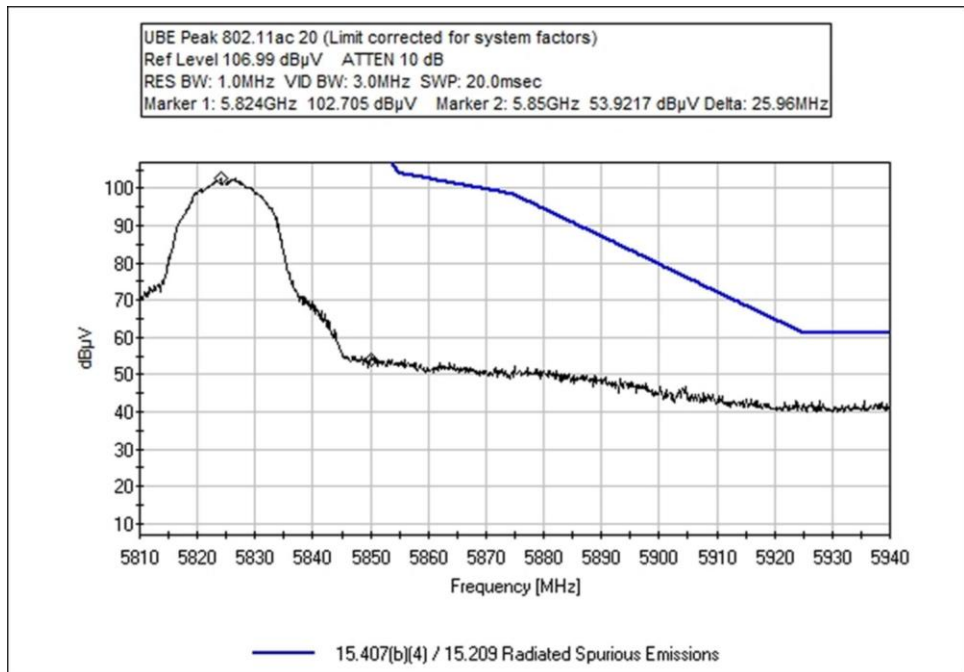
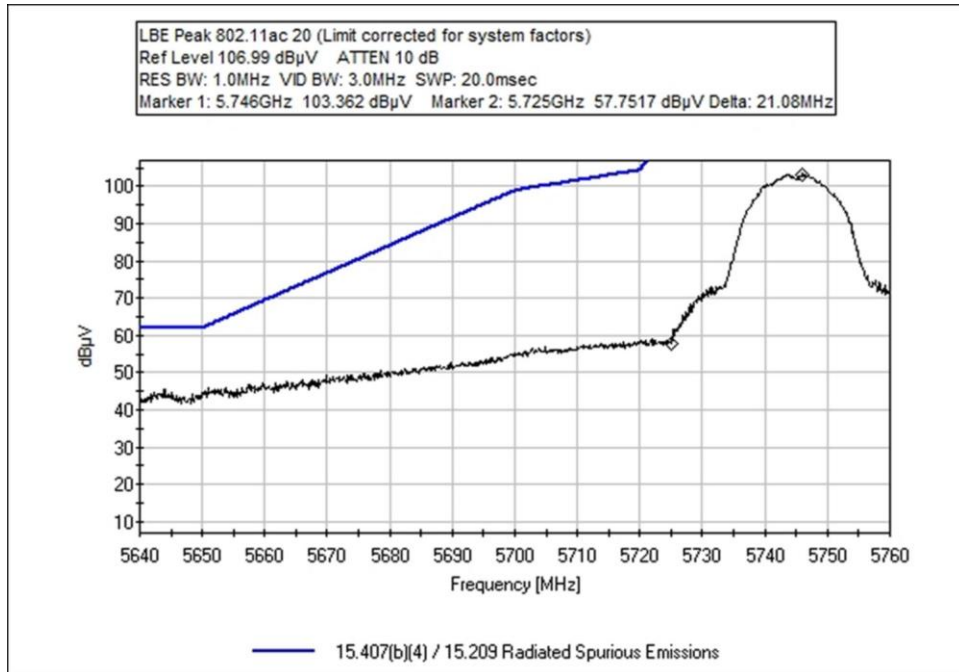
Band Edge Summary					
Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results
5725	802.11a	Linear Polarized / 5.9dBi	57.2	<122.2	Pass
5850	802.11a	Linear Polarized / 5.9dBi	54.6	<122.2	Pass
5725	802.11n20	Linear Polarized / 5.9dBi	61.9	<122.2	Pass
5850	802.11n20	Linear Polarized / 5.9dBi	59.3	<122.2	Pass
5725	802.11n40	Linear Polarized / 5.9dBi	63.7	<122.2	Pass
5850	802.11n40	Linear Polarized / 5.9dBi	61.9	<122.2	Pass
5725	802.11ac20	Linear Polarized / 5.9dBi	64.2	<122.2	Pass
5850	802.11ac20	Linear Polarized / 5.9dBi	60.6	<122.2	Pass
5725	802.11ac40	Linear Polarized / 5.9dBi	64	<122.2	Pass
5850	802.11ac40	Linear Polarized / 5.9dBi	61.3	<122.2	Pass
5725	802.11ac80	Linear Polarized / 5.9dBi	64	<122.2	Pass
5850	802.11ac80	Linear Polarized / 5.9dBi	63.6	<122.2	Pass

Band Edge

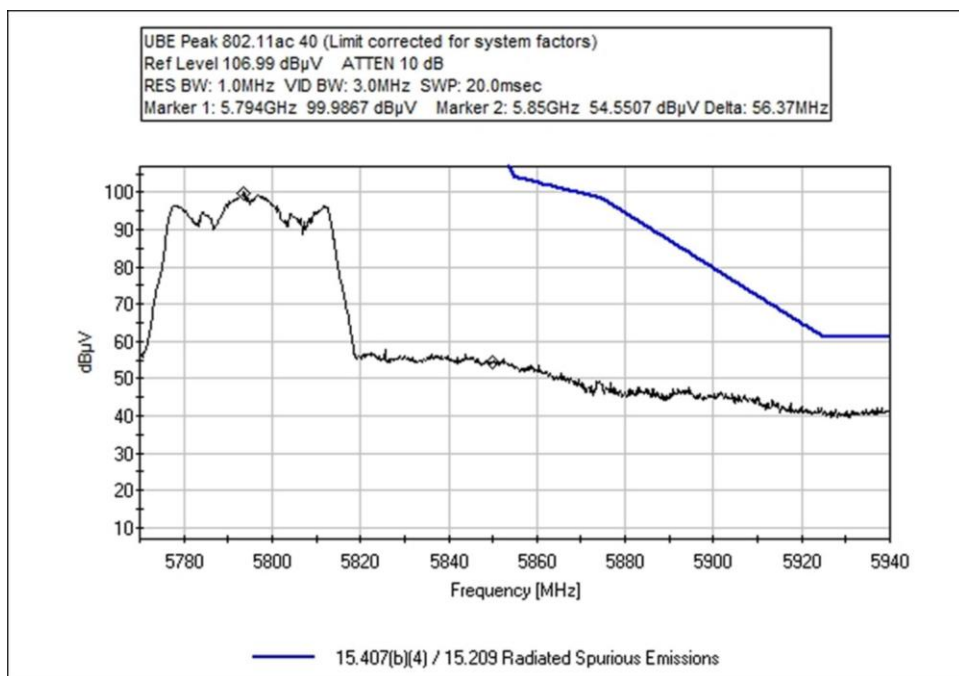
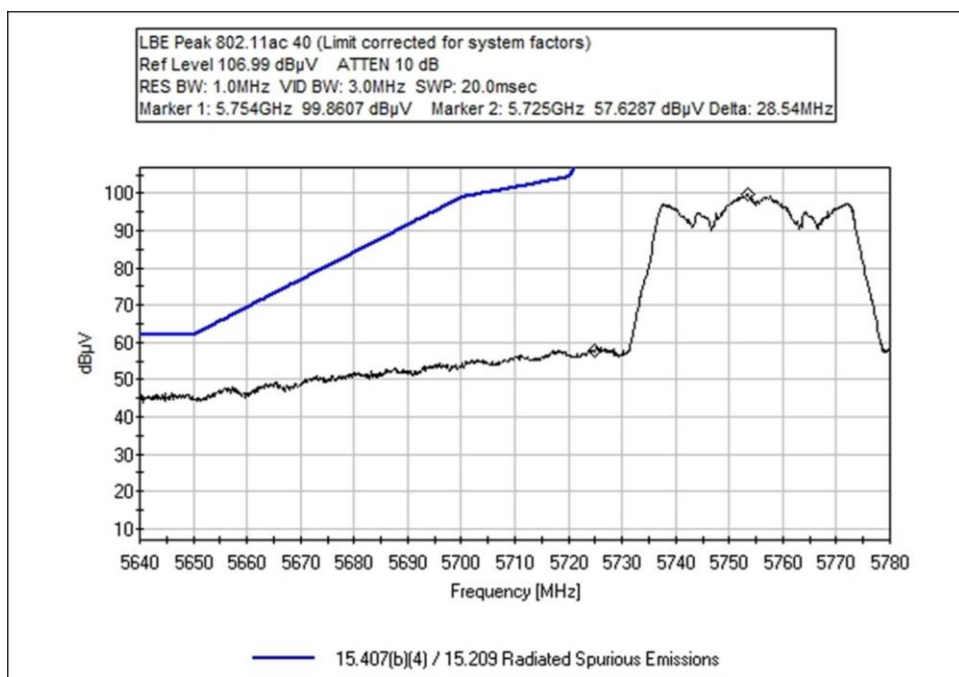
802.11a Plots



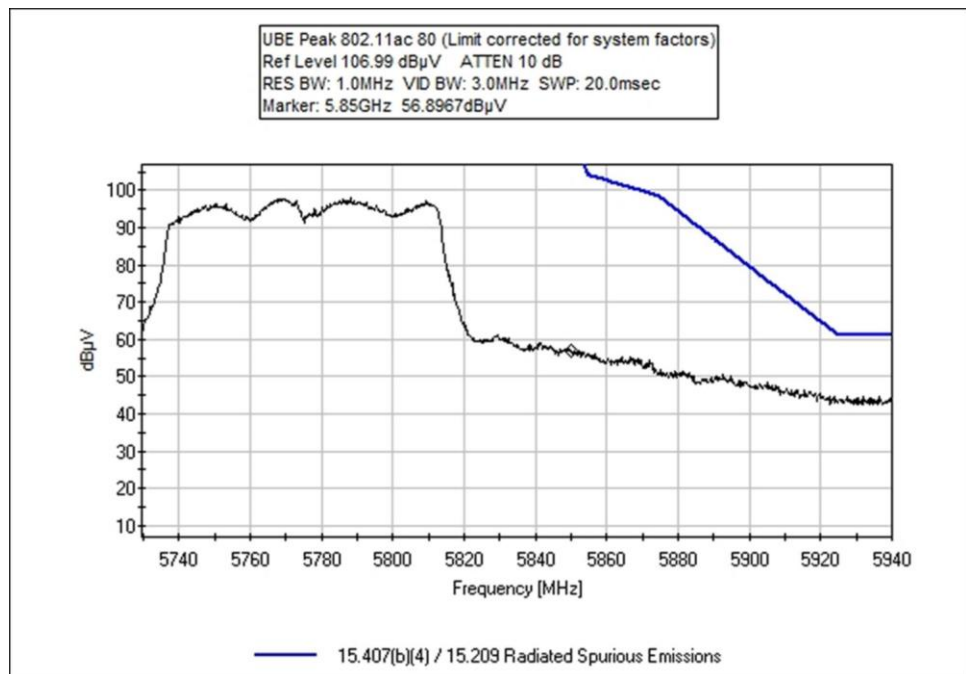
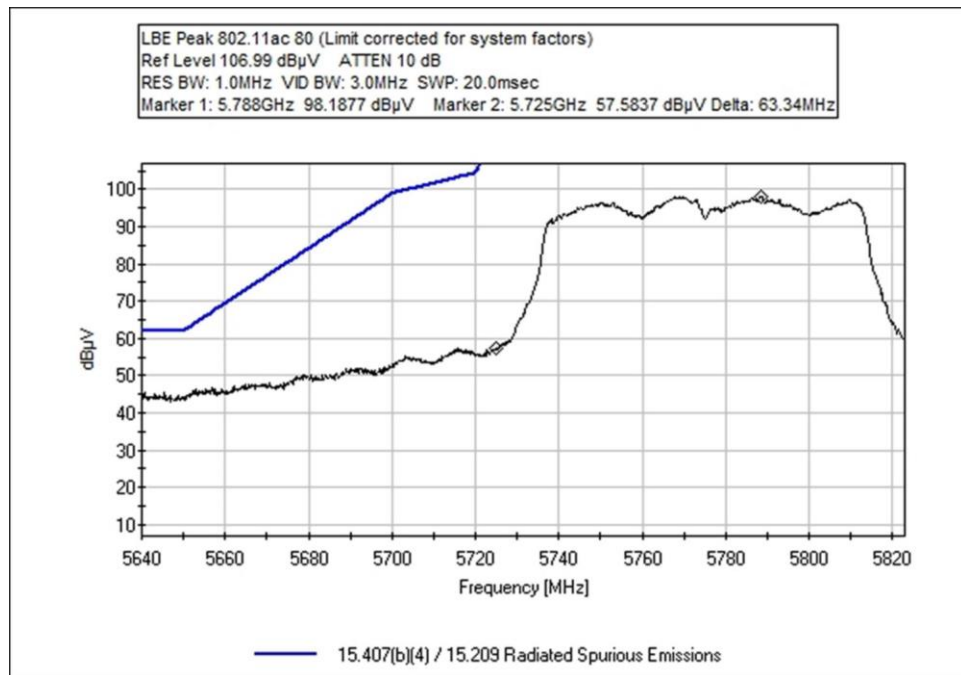
802.11ac20 Plots



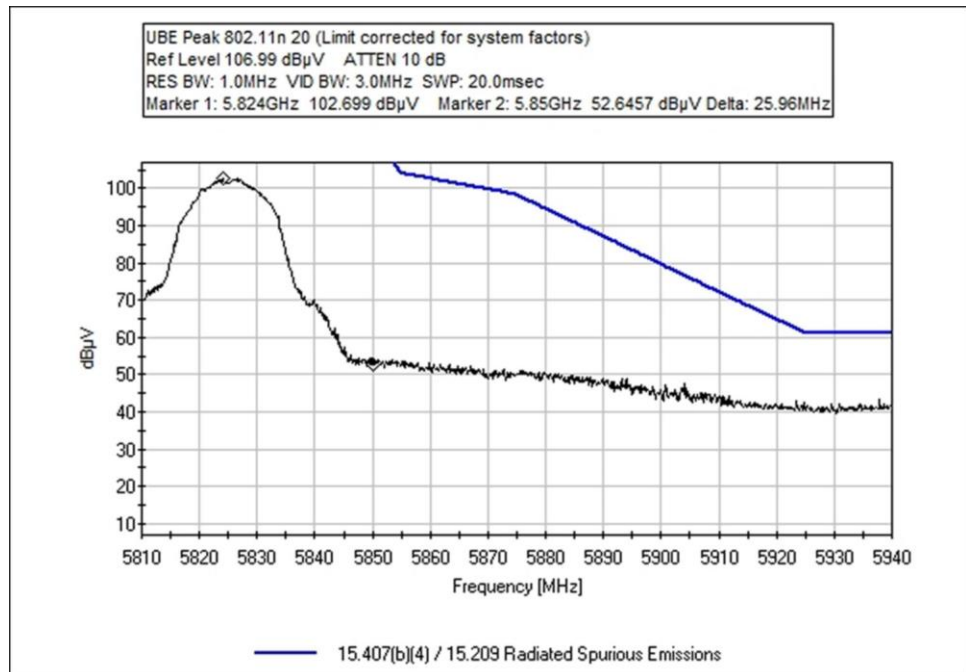
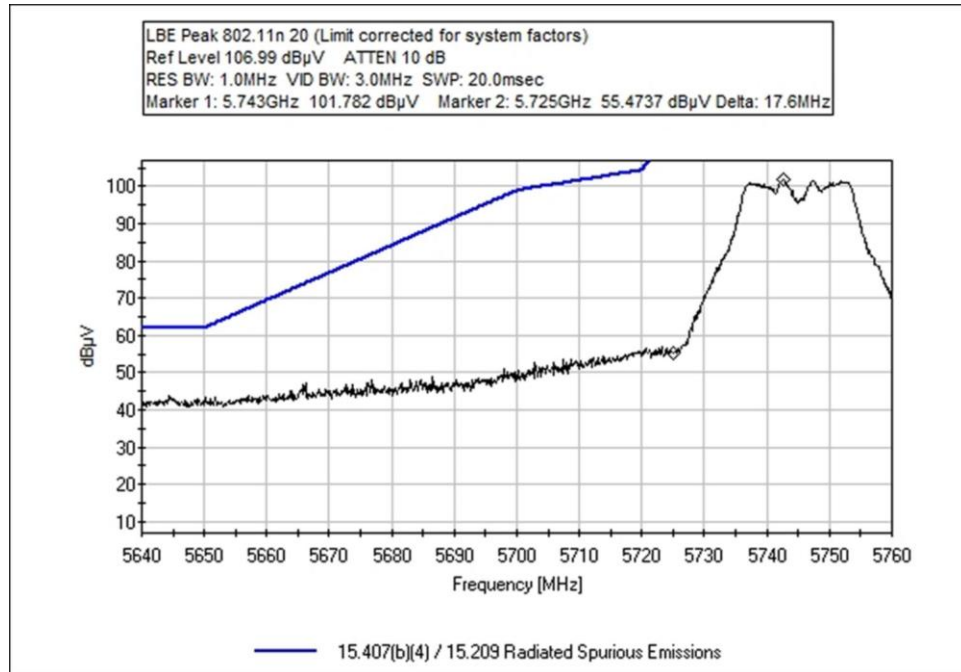
802.11ac40 Plots



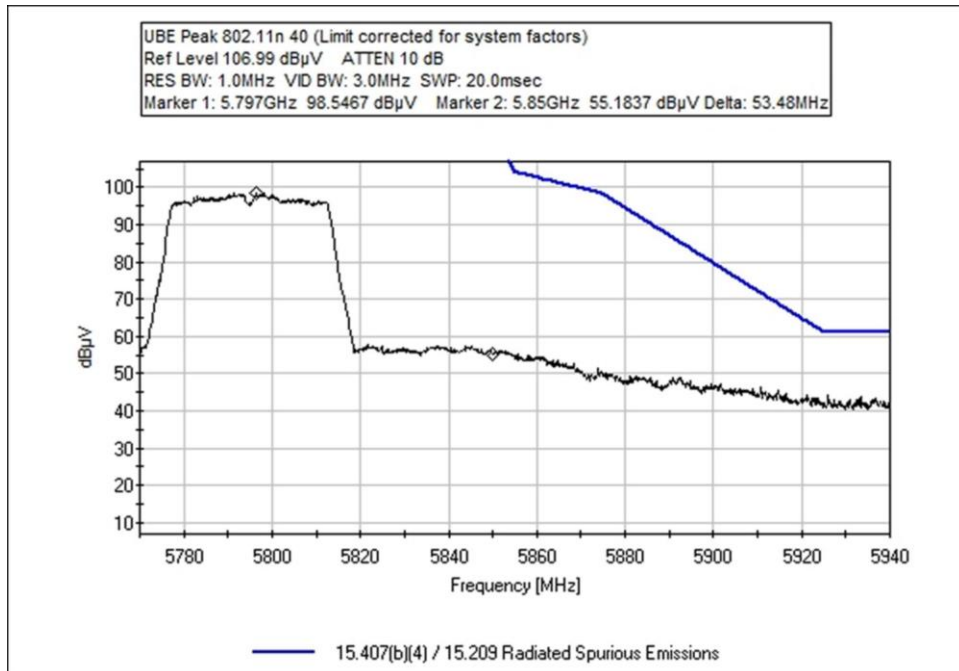
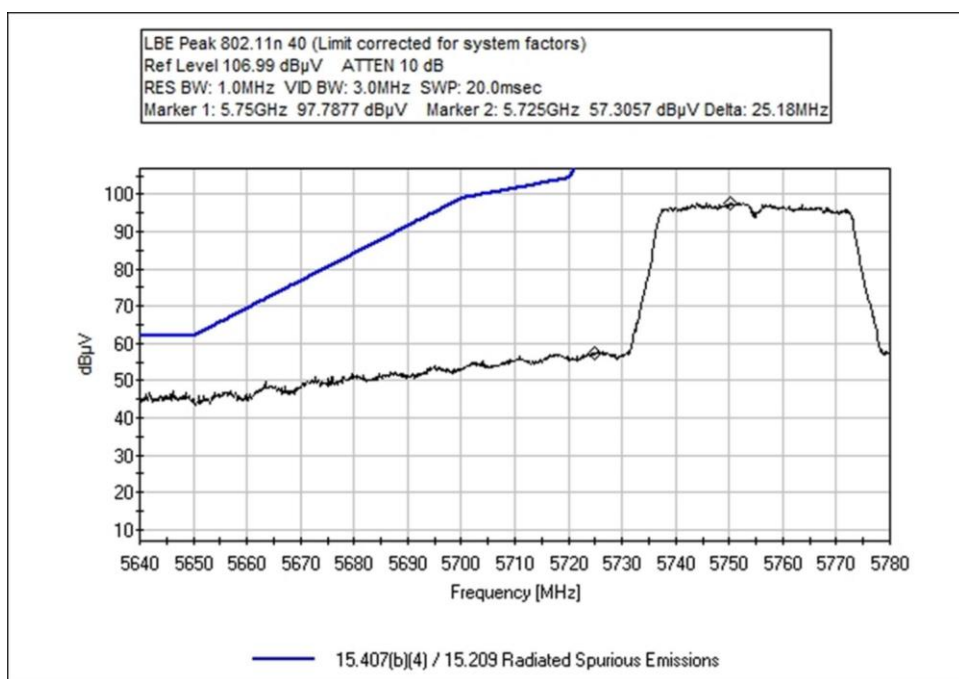
802.11ac80 Plots



802.11n20 Plots



802.11n40 Plots



Test Setup/ Conditions/ Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) / 15.209 Radiated Spurious Emissions**
 Work Order #: **102802** Date: 3/20/2020
 Test Type: **Maximized Emissions** Time: 08:16:40
 Tested By: Matthew Harrison Sequence#: 15
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22° C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 5640-5940 MHz Frequency tested: 5745, 5825 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11a, 20MHz BW, 6Mbps(worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T2	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T3	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
T4	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
T5	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
T6	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	T5 dB	T6 dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	5743.920M	100.7	+34.1 -33.7	+4.5 +0.5	+1.0	+0.0	+0.0 265	107.1	131.2	-24.1	Horiz 180
2	5824.040M	99.7	+34.4 -33.8	+4.6 +0.5	+1.0	+0.0	+0.0 260	106.4	131.2	-24.8	Horiz 180
3	5725.000M	50.8	+34.1 -33.7	+4.5 +0.5	+1.0	+0.0	+0.0	57.2	122.2	-65.0	Horiz
4	5850.000M	47.9	+34.4 -33.8	+4.6 +0.5	+1.0	+0.0	+0.0	54.6	122.2	-67.6	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) / 15.209 Radiated Spurious Emissions**
 Work Order #: **102802** Date: 3/20/2020
 Test Type: **Maximized Emissions** Time: 09:32:13
 Tested By: Matthew Harrison Sequence#: 17
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22° C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 5640-5940 MHz Frequency tested: 5745, 5825 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 20MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T2	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T3	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
T4	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
T5	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	5746.080M	103.4	+34.2 +0.5	+4.6	+1.0	-33.7	+0.0	110.0	131.2	-21.2	Horiz
2	5824.040M	102.7	+34.4 +0.5	+4.6	+1.0	-33.8	+0.0	109.4	131.2	-21.8	Horiz
3	5725.000M	57.8	+34.1 +0.5	+4.5	+1.0	-33.7	+0.0	64.2	122.2	-58.0	Horiz
4	5850.000M	53.9	+34.4 +0.5	+4.6	+1.0	-33.8	+0.0	60.6	122.2	-61.6	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) / 15.209 Radiated Spurious Emissions**
 Work Order #: **102802** Date: 3/20/2020
 Test Type: **Maximized Emissions** Time: 09:53:34
 Tested By: Matthew Harrison Sequence#: 18
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22° C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 5640-5940 MHz Frequency tested: 5755, 5795 MHz Firmware power setting: 13 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 40MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T2	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T3	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
T4	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
T5	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	5793.630M	100.0	+34.3 +0.5	+4.6	+1.0	-33.8	+0.0	106.6	131.2	-24.6	Horiz
2	5753.540M	99.9	+34.2 +0.5	+4.6	+1.0	-33.7	+0.0	106.5	131.2	-24.7	Horiz
3	5725.000M	57.6	+34.1 +0.5	+4.5	+1.0	-33.7	+0.0	64.0	122.2	-58.2	Horiz
4	5850.000M	54.6	+34.4 +0.5	+4.6	+1.0	-33.8	+0.0	61.3	122.2	-60.9	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) / 15.209 Radiated Spurious Emissions**
 Work Order #: **102802** Date: 3/20/2020
 Test Type: **Maximized Emissions** Time: 10:41:39
 Tested By: Matthew Harrison Sequence#: 20
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22° C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 5640-5940 MHz Frequency tested: 5775 MHz Firmware power setting: 13 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11ac, 80MHz BW, MCS0 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T2	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T3	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
T4	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
T5	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
T6	ANP07504	Cable	CLU40-KMKM-02.00F	1/17/2019	1/17/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	T5 dB	T6 dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	5788.340M	98.2	+34.3 -33.8	+4.6 +0.5	+1.0	+0.0	+0.0 125	104.8	131.2	-26.4	Horiz 200
2	5725.000M	57.6	+34.1 -33.7	+4.5 +0.5	+1.0	+0.0	+0.0	64.0	122.2	-58.2	Horiz
3	5850.000M	56.9	+34.4 -33.8	+4.6 +0.5	+1.0	+0.0	+0.0	63.6	122.2	-58.6	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) / 15.209 Radiated Spurious Emissions**
 Work Order #: **102802** Date: 3/20/2020
 Test Type: **Maximized Emissions** Time: 09:08:05
 Tested By: Matthew Harrison Sequence#: 16
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22° C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 5640-5940 MHz Frequency tested: 5745, 5825 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11n, 20MHz BW, MCS8 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T2	ANP06515	Cable	Heliast	6/29/2018	6/29/2020
T3	ANP06540	Cable	Heliast	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
T4	AN03540	Preamplifier	83017A	5/13/2019	5/13/2021
T5	ANP07504	Cable	CLU40- KMKM-02.00F	1/17/2019	1/17/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	5824.040M	102.7	+34.4 +0.5	+4.6	+1.0	-33.8	+0.0	109.4	131.2	-21.8	Horiz
2	5742.600M	101.8	+34.1 +0.5	+4.5	+1.0	-33.7	+0.0	108.2	131.2	-23.0	Horiz
3	5725.000M	55.5	+34.1 +0.5	+4.5	+1.0	-33.7	+0.0	61.9	122.2	-60.3	Horiz
4	5850.000M	52.6	+34.4 +0.5	+4.6	+1.0	-33.8	+0.0	59.3	122.2	-62.9	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.407(b)(4) / 15.209 Radiated Spurious Emissions**
 Work Order #: **102802** Date: 3/20/2020
 Test Type: **Maximized Emissions** Time: 10:06:43
 Tested By: Matthew Harrison Sequence#: 19
 Software: EMITest 5.03.12

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions: Temperature: 22° C Humidity: 45% Pressure: 101.3 kPa Frequency Range: 5640-5940 MHz Frequency tested: 5755, 5795 MHz Firmware power setting: 14 dBm EUT Firmware: Protocol /MCS/Modulation: 802.11n, 40MHz BW, MCS8 (worst-case) Antenna type: Linear Polarized Antenna Gain: 5.9 dBi. Duty Cycle: 100% Modulated Test Method: ANSI C63.10: 2013 KDB 789033 v02r01 December 14, 2017) Test Mode: Transmitting Test Setup: EUT is setup 1.5m high on a Styrofoam table. Setup: EUT is connected to a Laptop via USB and Audio cable. All data rates investigated, worst-case provided
--

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	7/5/2019	7/5/2021
T2	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T3	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
T4	AN03540	Preamp	83017A	5/13/2019	5/13/2021
T5	ANP07504	Cable	CLU40-KMKM-02.00F	1/17/2019	1/17/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	5796.520M	98.5	+34.3 +0.5	+4.6	+1.0	-33.8	+0.0	105.1	131.2	-26.1	Horiz
2	5750.180M	97.8	+34.2 +0.5	+4.6	+1.0	-33.7	+0.0	104.4	131.2	-26.8	Horiz
3	5725.000M	57.3	+34.1 +0.5	+4.5	+1.0	-33.7	+0.0	63.7	122.2	-58.5	Horiz
4	5850.000M	55.2	+34.4 +0.5	+4.6	+1.0	-33.8	+0.0	61.9	122.2	-60.3	Horiz

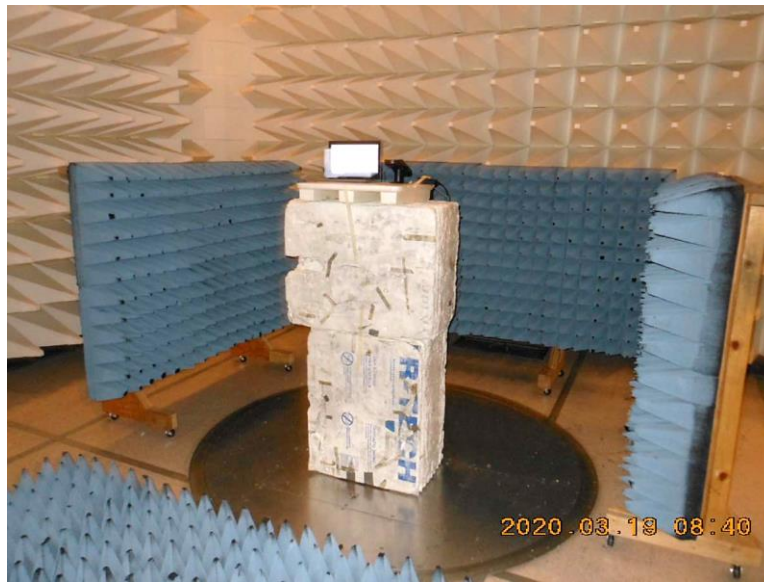
Test Setup Photo(s)



Below 1GHz



Below 1GHz



Above 1GHz



Above 1GHz

15.207 AC Conducted Emissions

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Dr SE • Bothell, WA 98021 • 800-500-4362
 Customer: **Nalloy, LLC.**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **102802** Date: 4/1/2020
 Test Type: **Conducted Emissions** Time: 08:08:31
 Tested By: Matthew Harrison Sequence#: 88
 Software: EMITest 5.03.12 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Conditions:
 Temperature: 22° C
 Humidity: 28%
 Pressure: 101.3 kPa

Frequency Range: 150kHz-30MHz
 Frequency tested: 5745 MHz
 Firmware power setting: 14 dBm
 EUT Firmware:
 Protocol /MCS/Modulation: 802.11a, 20MHz BW, 6Mbps(worst-case)

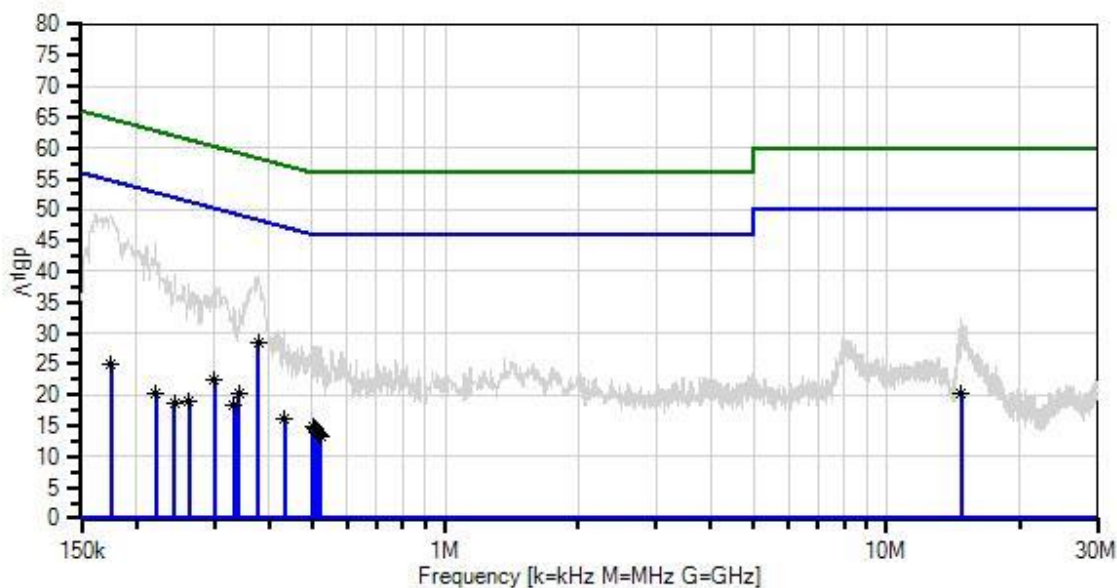
Antenna type: Linear Polarized
 Antenna Gain: 5.9 dBi.

Duty Cycle: 100% Modulated

Test Method: ANSI C63.10: 2013
 Test Mode: Transmitting
 Test Setup: EUT is setup for conducted measurements.
 Setup: EUT is connected to a Laptop via USB and Audio cable.

All modes, channels, and data rates investigated, worst-case provided.

Nalloy, LLC. WO#: 102802 Sequence#: 88 Date: 4/1/2020
15.207 AC Mains - Average Test Lead: 120V 60Hz Line



— Sweep Data
× QP Readings
Software Version: 5.03.12

— Readings
* Average Readings
— 1 - 15.207 AC Mains - Average

○ Peak Readings
▼ Ambient
— 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02872	Spectrum Analyzer	E4440A	11/18/2019	11/18/2021
T1	ANP06219	Attenuator	768-10	4/13/2018	4/13/2020
T2	ANP06515	Cable	Heliac	6/29/2018	6/29/2020
T3	ANP06540	Cable	Heliac	8/23/2019	8/23/2021
T4	AN01311	50uH LISN-Line1 (L)	3816/2	2/24/2020	2/24/2022
	AN01311	50uH LISN-Line2 (N)	3816/2	2/24/2020	2/24/2022
T5	AN02611	High Pass Filter	HE9615-150K-50-720B	1/10/2020	1/10/2022

Measurement Data:

Reading listed by margin.

Test Lead: Line

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	378.343k	19.7	+9.1	+0.0	+0.0	-0.6	+0.0	28.4	48.3	-19.9	Line
	Ave		+0.2								
^	378.342k	30.4	+9.1	+0.0	+0.0	-0.6	+0.0	39.1	48.3	-9.2	Line
			+0.2								
3	299.804k	13.9	+9.1	+0.0	+0.0	-0.7	+0.0	22.4	50.2	-27.8	Line
	Ave		+0.1								
^	299.804k	31.8	+9.1	+0.0	+0.0	-0.7	+0.0	40.3	50.2	-9.9	Line
			+0.1								
5	341.255k	11.5	+9.1	+0.0	+0.0	-0.6	+0.0	20.1	49.2	-29.1	Line
	Ave		+0.1								
^	341.255k	25.3	+9.1	+0.0	+0.0	-0.6	+0.0	33.9	49.2	-15.3	Line
			+0.1								
7	174.725k	17.0	+9.1	+0.0	+0.0	-1.5	+0.0	25.0	54.7	-29.7	Line
	Ave		+0.4								
^	174.725k	41.1	+9.1	+0.0	+0.0	-1.5	+0.0	49.1	54.7	-5.6	Line
			+0.4								
9	14.725M	11.2	+9.1	+0.2	+0.1	-0.6	+0.0	20.2	50.0	-29.8	Line
	Ave		+0.2								
^	14.725M	23.2	+9.1	+0.2	+0.1	-0.6	+0.0	32.2	50.0	-17.8	Line
			+0.2								
11	432.156k	7.3	+9.1	+0.1	+0.0	-0.5	+0.0	16.2	47.2	-31.0	Line
	Ave		+0.2								
^	432.155k	21.4	+9.1	+0.1	+0.0	-0.5	+0.0	30.3	47.2	-16.9	Line
			+0.2								
13	332.529k	9.8	+9.1	+0.0	+0.0	-0.6	+0.0	18.4	49.4	-31.0	Line
	Ave		+0.1								
^	332.528k	25.6	+9.1	+0.0	+0.0	-0.6	+0.0	34.2	49.4	-15.2	Line
			+0.1								
15	501.968k	5.9	+9.1	+0.0	+0.0	-0.4	+0.0	14.8	46.0	-31.2	Line
	Ave		+0.2								
^	501.967k	19.0	+9.1	+0.0	+0.0	-0.4	+0.0	27.9	46.0	-18.1	Line
			+0.2								
17	507.785k	5.6	+9.1	+0.0	+0.0	-0.4	+0.0	14.5	46.0	-31.5	Line
	Ave		+0.2								
^	507.785k	19.1	+9.1	+0.0	+0.0	-0.4	+0.0	28.0	46.0	-18.0	Line
			+0.2								
19	515.785k	4.9	+9.1	+0.0	+0.0	-0.4	+0.0	13.8	46.0	-32.2	Line
	Ave		+0.2								
20	262.717k	10.4	+9.1	+0.0	+0.0	-0.8	+0.0	18.9	51.3	-32.4	Line
	Ave		+0.2								
^	262.716k	29.4	+9.1	+0.0	+0.0	-0.8	+0.0	37.9	51.3	-13.4	Line
			+0.2								

22	221.266k Ave	12.0	+9.1 +0.3	+0.0	+0.0	-1.1	+0.0	20.3	52.8	-32.5	Line
^	221.266k	36.3	+9.1 +0.3	+0.0	+0.0	-1.1	+0.0	44.6	52.8	-8.2	Line
24	518.693k Ave	4.6	+9.1 +0.2	+0.0	+0.0	-0.4	+0.0	13.5	46.0	-32.5	Line
^	515.784k	19.0	+9.1 +0.2	+0.0	+0.0	-0.4	+0.0	27.9	46.0	-18.1	Line
26	522.329k Ave	4.5	+9.1 +0.2	+0.0	+0.0	-0.4	+0.0	13.4	46.0	-32.6	Line
^	522.329k	19.0	+9.1 +0.2	+0.0	+0.0	-0.4	+0.0	27.9	46.0	-18.1	Line
^	518.693k	18.6	+9.1 +0.2	+0.0	+0.0	-0.4	+0.0	27.5	46.0	-18.5	Line
29	243.810k Ave	10.1	+9.1 +0.2	+0.0	+0.0	-0.9	+0.0	18.5	52.0	-33.5	Line
^	243.809k	31.3	+9.1 +0.2	+0.0	+0.0	-0.9	+0.0	39.7	52.0	-12.3	Line