



Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
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A. APPENDIX - GRAPHICAL IMAGES

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A.1. Radiated Emissions

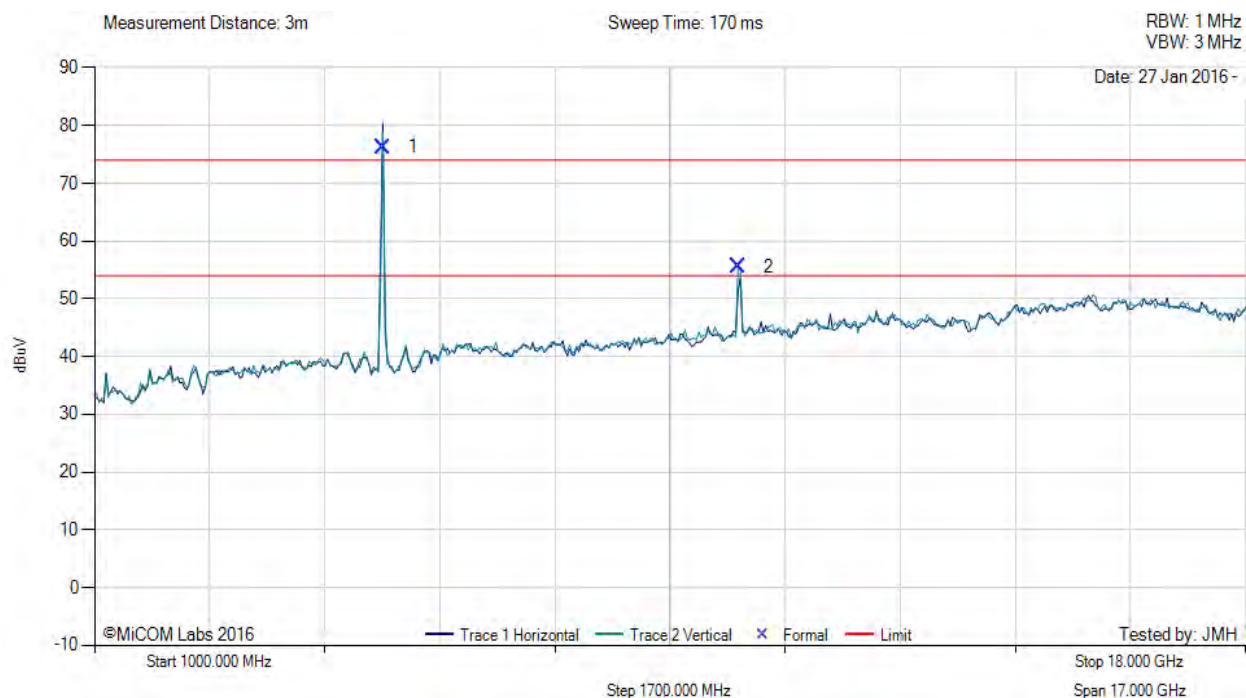
A.1.1. Restricted Band Emissions

A.1.1.1. AP-ANT-13B



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5257.28	83.91	3.64	-11.30	76.25	Fundamental	Horizontal	151	1	--	--	
2	10511.46	54.34	5.48	-4.26	55.56	Peak (NRB)	Vertical	200	1	--	--	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

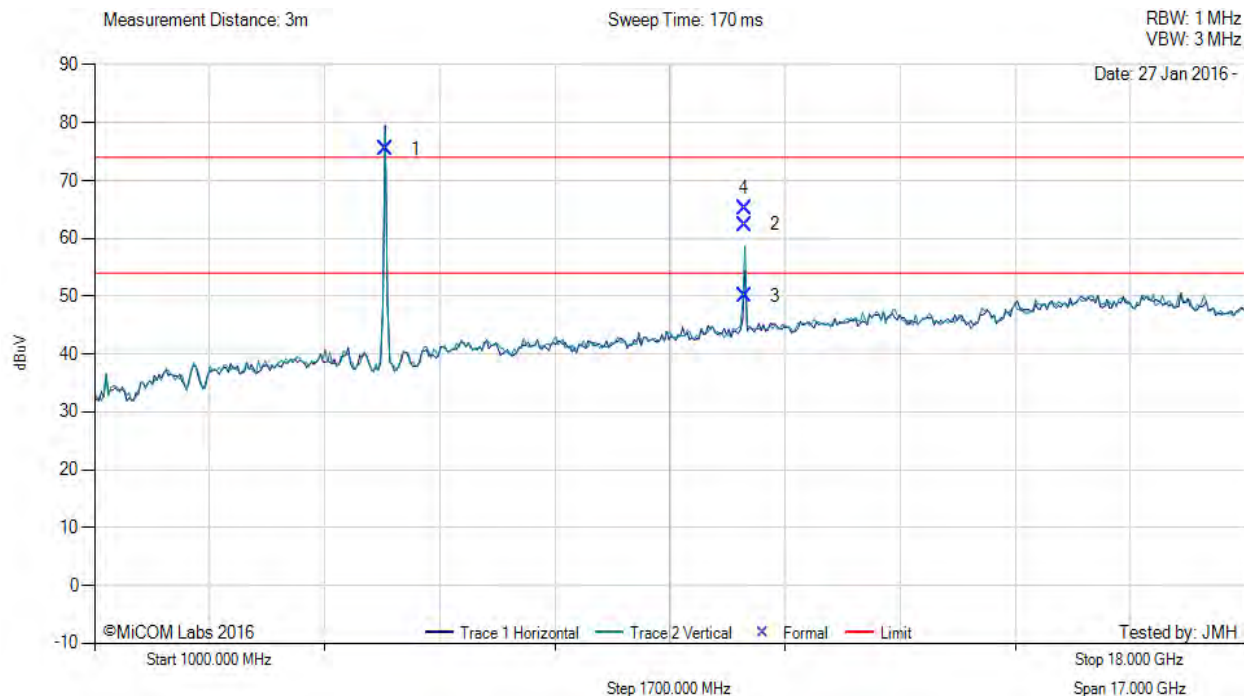
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5295.76	82.83	3.79	-11.11	75.51	Fundamental	Horizontal	101	1	--	--	
2	10598.43	60.71	5.59	-3.93	62.37	Peak (NRB)	Vertical	200	360	--	--	Pass
3	10600.52	48.47	5.58	-3.93	50.12	Max Avg	Vertical	196	223	54.0	-3.9	Pass
4	10600.52	63.50	5.58	-3.93	65.15	Max Peak	Vertical	196	223	74.0	-8.9	Pass

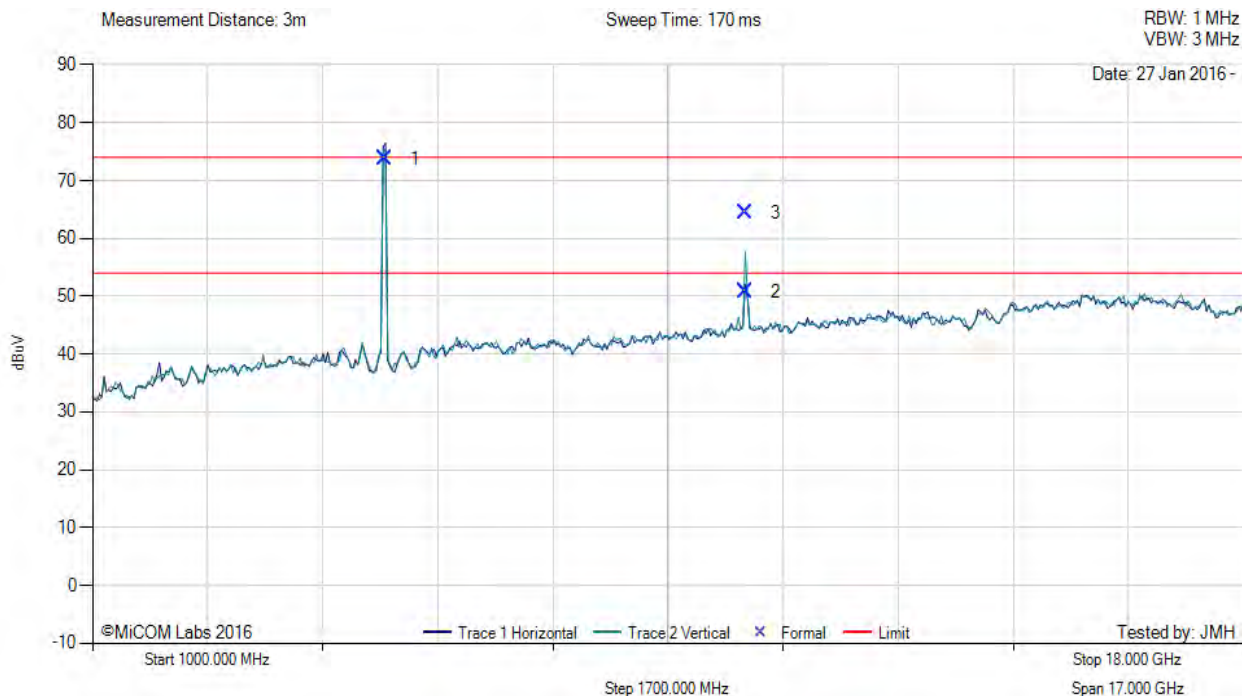
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5322.28	81.01	3.75	-11.06	73.70	Fundamental	Horizontal	101	1	--	--	
2	10637.55	49.18	5.43	-3.89	50.72	Max Avg	Vertical	186	221	54.0	-3.3	Pass
3	10637.55	62.94	5.43	-3.89	64.48	Max Peak	Vertical	186	221	74.0	-9.5	Pass

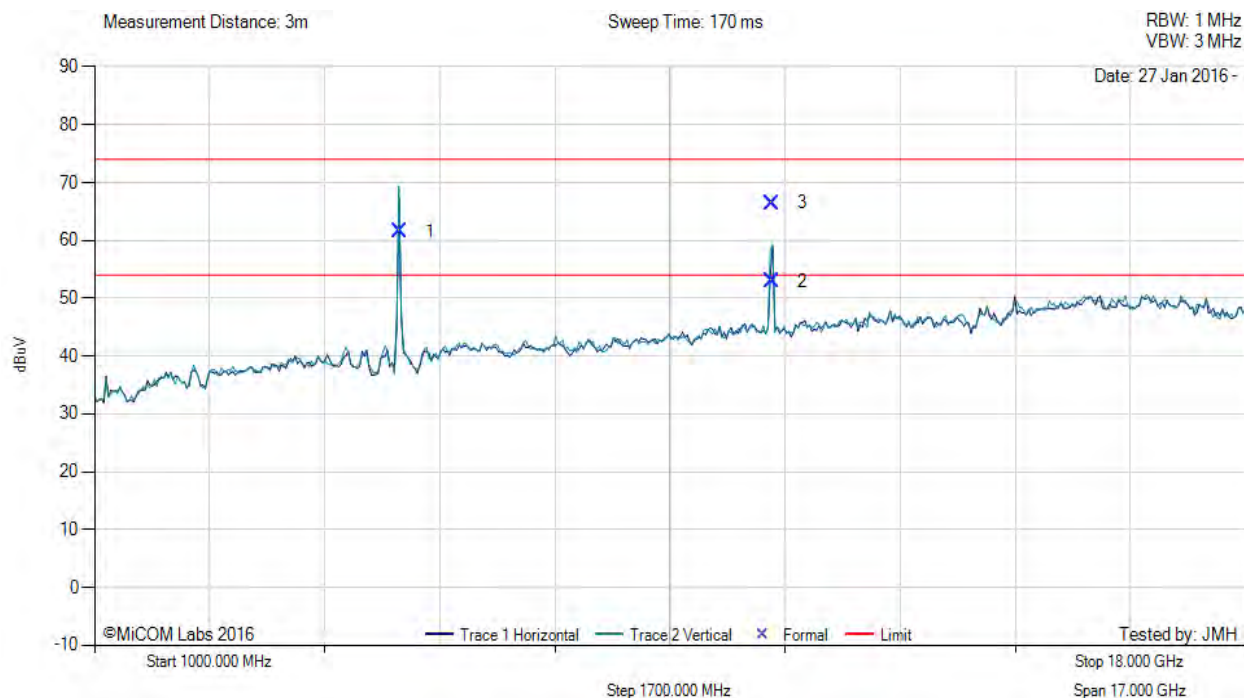
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5503.84	69.02	3.75	-11.18	61.59	Fundamental	Vertical	101	0	--	--	
2	11002.28	51.61	5.59	-4.24	52.96	Max Avg	Vertical	186	278	54.0	-1.0	Pass
3	11002.28	65.13	5.59	-4.24	66.48	Max Peak	Vertical	186	278	74.0	-7.5	Pass

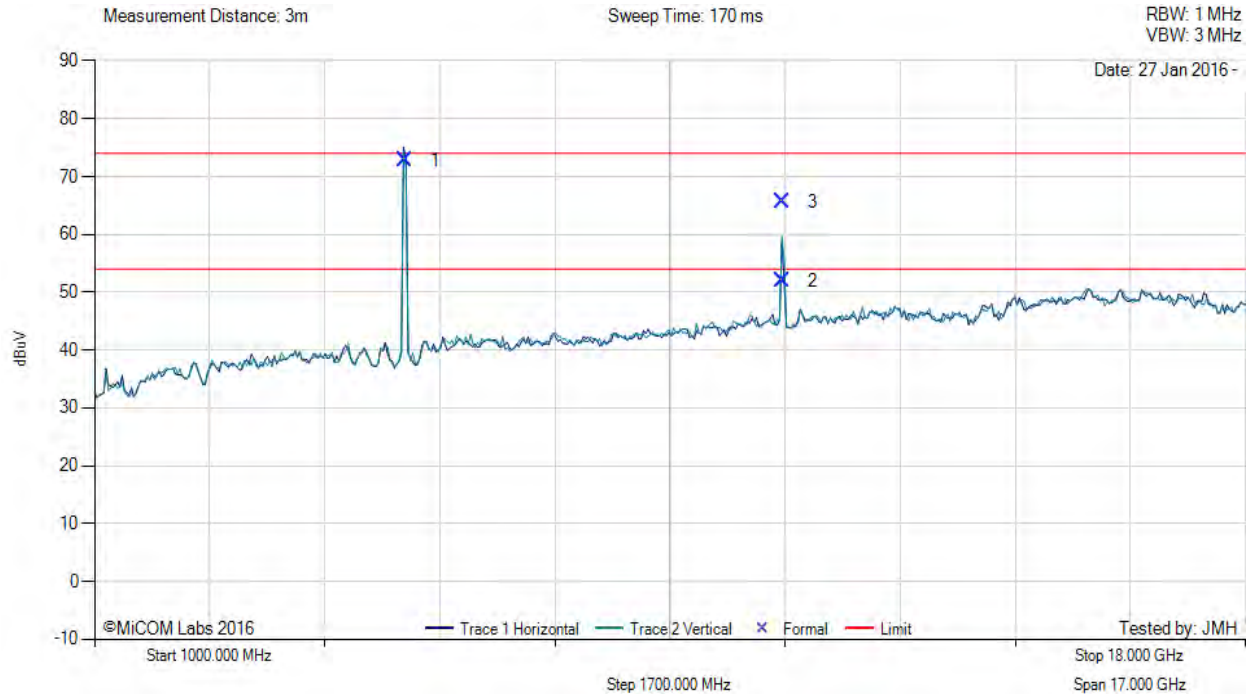
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5583.69	80.16	3.79	-11.19	72.76	Fundamental	Horizontal	101	1	--	--	
2	11162.28	50.27	5.76	-4.06	51.97	Max Avg	Vertical	192	229	54.0	-2.0	Pass
3	11162.28	63.89	5.76	-4.06	65.59	Max Peak	Vertical	192	229	74.0	-8.4	Pass

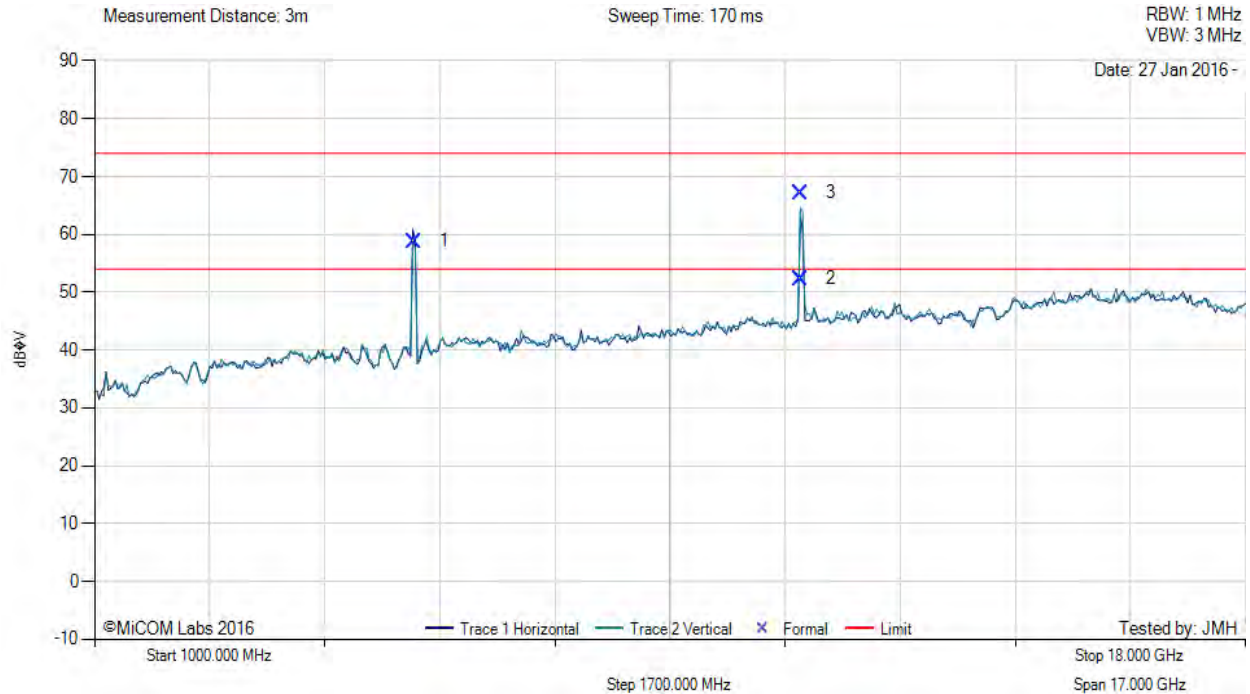
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-13B, Power Setting: 14, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5723.84	65.75	3.79	-10.72	58.82	Fundamental	Horizontal	101	0	--	--	
2	11430.90	51.78	5.48	-4.92	52.34	Max Avg	Vertical	161	248	54.0	-1.7	Pass
3	11430.90	66.65	5.48	-4.92	67.21	Max Peak	Vertical	161	248	74.0	-6.8	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR. Power reduced to 14 due to 11.4 GHz harmonic

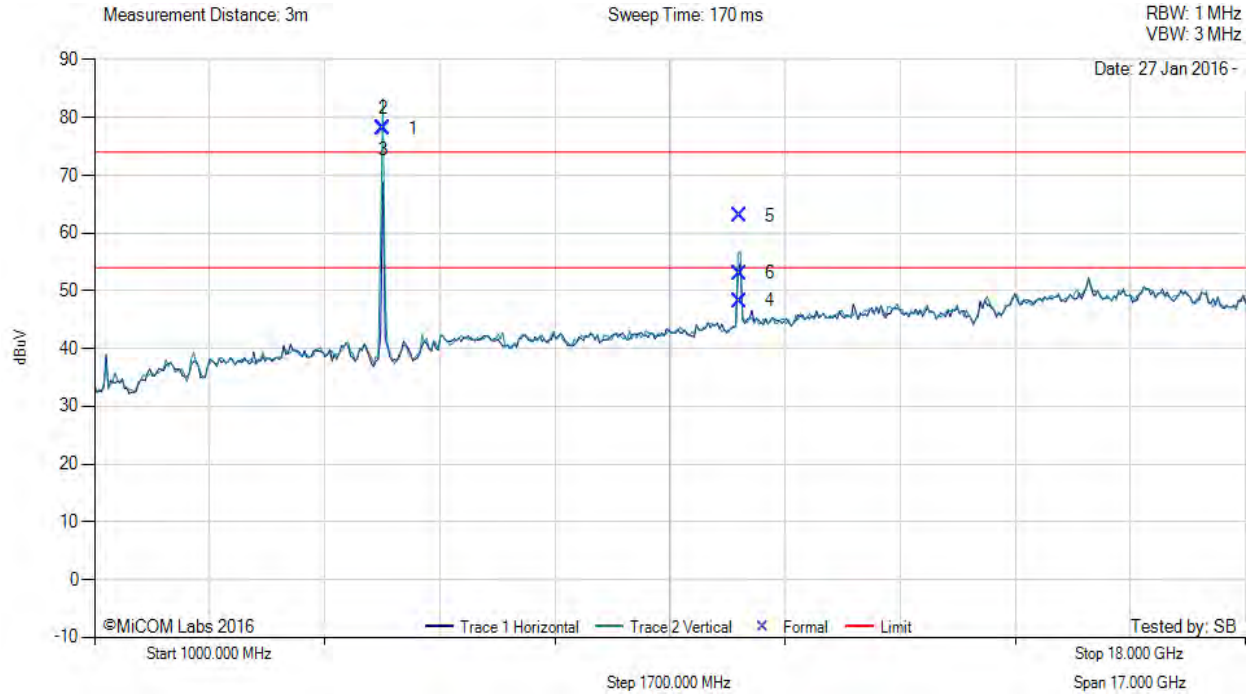
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A.1.1.2. AP-ANT-19



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: AP-ANT-19, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5266.42	85.70	3.68	-11.26	78.12	Fundamental	Vertical	101	1	--	--	
2	5266.42	85.70	3.68	-11.26	78.12	Peak (NRB)	Vertical	101	1	--	--	Pass
3	5266.42	85.70	3.68	-11.26	78.12	Peak (NRB)	Vertical	101	1	--	--	Pass
4	10520.56	47.06	5.43	-4.21	48.28	Max Avg	Vertical	189	232	54.0	-5.7	Pass
5	10520.56	61.78	5.43	-4.21	63.00	Max Peak	Vertical	189	232	74.0	-11.0	Pass
6	10520.56	51.84	5.43	-4.21	53.06	Peak (NRB)	Vertical	101	59	--	--	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

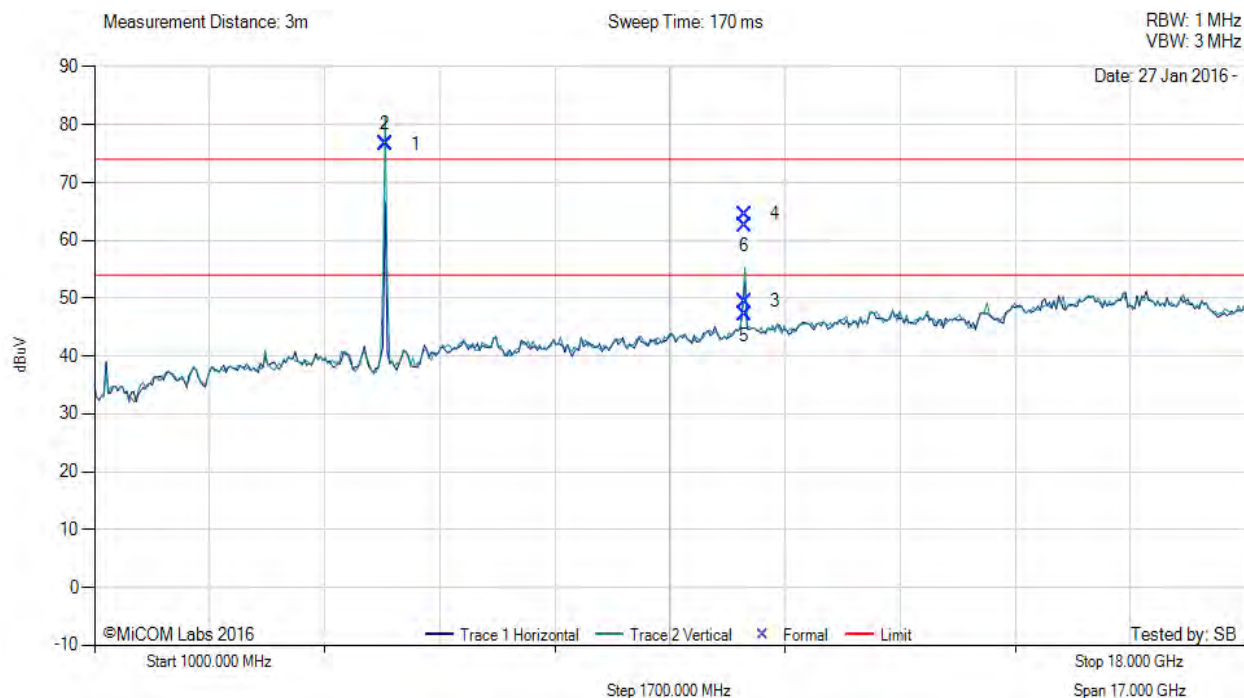
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-19, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5293.67	83.99	3.78	-11.12	76.65	Fundamental	Vertical	101	1	--	--	
2	5293.67	83.99	3.78	-11.12	76.65	Peak (NRB)	Vertical	101	1	--	--	Pass
3	10600.52	47.81	5.58	-3.93	49.46	Max Avg	Vertical	187	276	54.0	-4.5	Pass
4	10600.52	62.87	5.58	-3.93	64.52	Max Peak	Vertical	187	276	74.0	-9.5	Pass
5	10600.52	45.49	5.58	-3.93	47.14	Max Avg	Horizontal	141	228	54.0	-6.9	Pass
6	10600.52	61.00	5.58	-3.93	62.65	Max Peak	Horizontal	141	228	74.0	-11.4	Pass

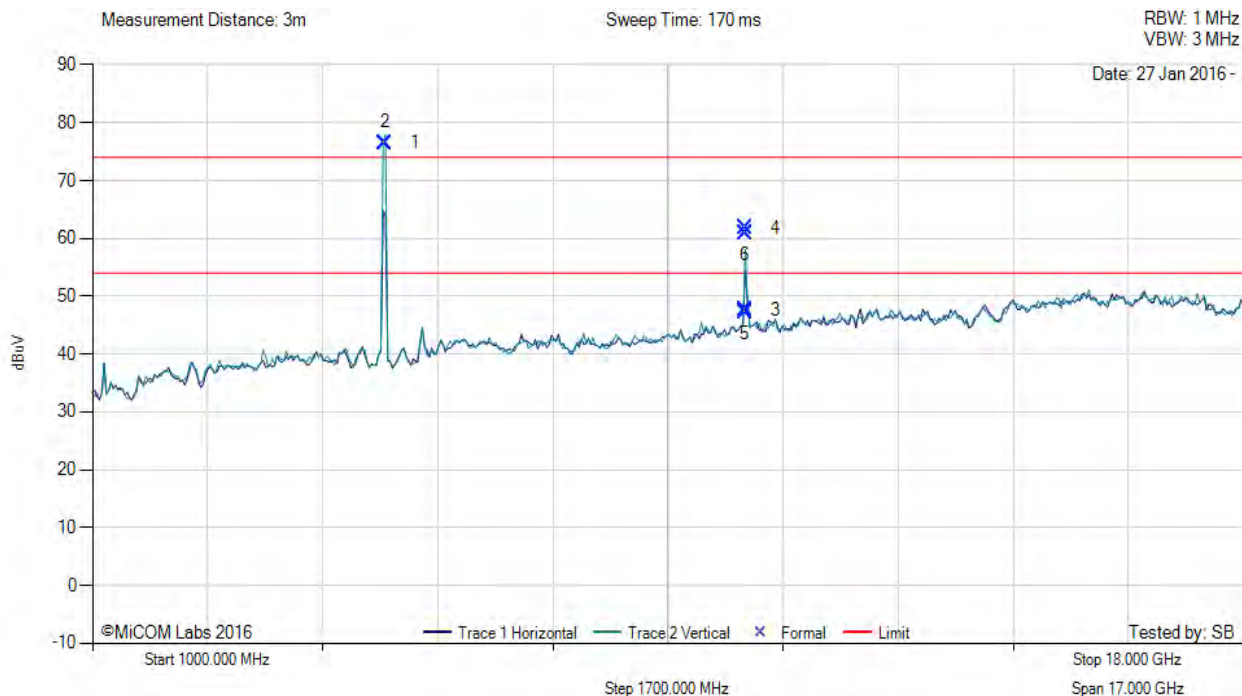
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-19, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5321.45	83.83	3.75	-11.06	76.52	Fundamental	Vertical	101	1	--	--	
2	5321.45	83.83	3.75	-11.06	76.52	Peak (NRB)	Vertical	101	1	--	--	Pass
3	10638.35	46.16	5.43	-3.89	47.70	Max Avg	Vertical	169	222	54.0	-6.3	Pass
4	10638.35	60.23	5.43	-3.89	61.77	Max Peak	Vertical	169	222	74.0	-12.2	Pass
5	10638.35	45.61	5.43	-3.89	47.15	Max Avg	Horizontal	168	228	54.0	-6.9	Pass
6	10638.35	59.31	5.43	-3.89	60.85	Max Peak	Horizontal	168	228	74.0	-13.2	Pass

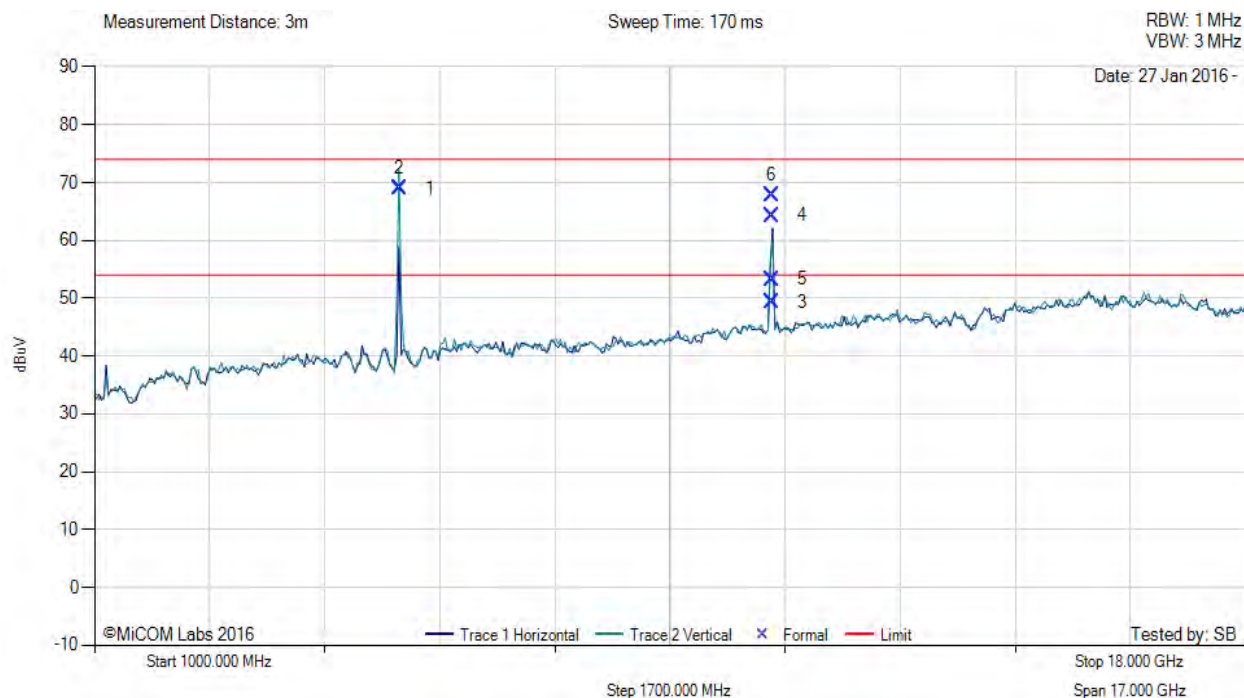
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-19, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5502.24	76.46	3.75	-11.17	69.04	Fundamental	Vertical	101	1	--	--	
2	5502.24	76.46	3.75	-11.17	69.04	Peak (NRB)	Vertical	101	1	--	--	Pass
3	11000.56	47.97	5.59	-4.24	49.32	Max Avg	Horizontal	121	231	54.0	-4.7	Pass
4	11000.56	62.93	5.59	-4.24	64.28	Max Peak	Horizontal	121	231	74.0	-9.7	Pass
5	11000.56	51.92	5.59	-4.24	53.27	Max Avg	Vertical	198	269	54.0	-0.7	Pass
6	11000.56	66.39	5.59	-4.24	67.74	Max Peak	Vertical	198	269	74.0	-6.3	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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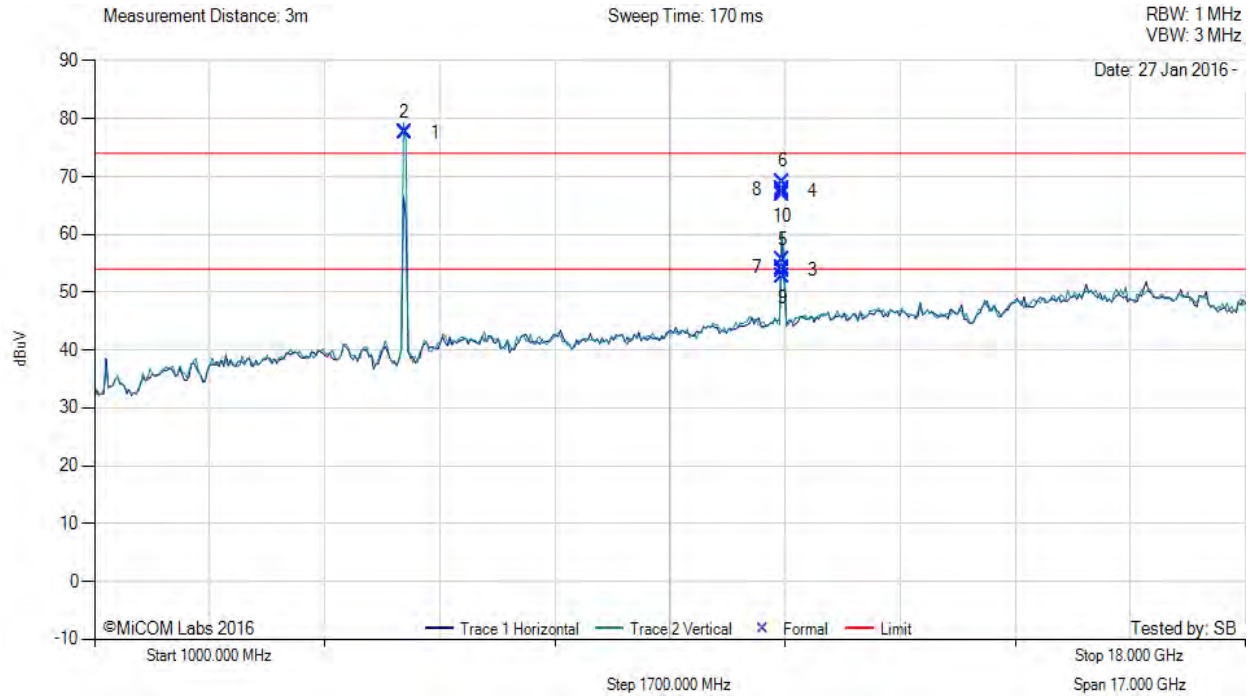


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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-19, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5580.68	84.96	3.80	-11.20	77.56	Fundamental	Vertical	101	1	--	--	
2	5580.68	84.96	3.80	-11.20	77.56	Peak (NRB)	Vertical	101	1	--	--	Pass
3	11162.40	52.06	5.76	-4.06	53.76	Max Avg	Vertical	178	250	54.0	-0.2	Pass
4	11162.40	65.72	5.76	-4.06	67.42	Max Peak	Vertical	178	250	74.0	-6.6	Pass
5	11162.40	51.88	5.76	-4.06	53.58	Max Avg	Horizontal	134	247	54	-0.42	Pass
6	11162.40	67.43	5.76	-4.06	69.13	Max Peak	Horizontal	134	247	74.0	-4.9	Pass
7	11162.41	51.56	5.76	-4.06	53.26	Max Avg	Vertical	176	251	54	-0.74	Pass
8	11162.41	66.10	5.76	-4.06	67.80	Max Peak	Vertical	176	251	74.0	-6.2	Pass
9	11162.41	50.99	5.76	-4.06	52.69	Max Avg	Horizontal	128	250	54.0	-1.3	Pass
10	11162.41	65.07	5.76	-4.06	66.77	Max Peak	Horizontal	128	250	74.0	-7.2	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

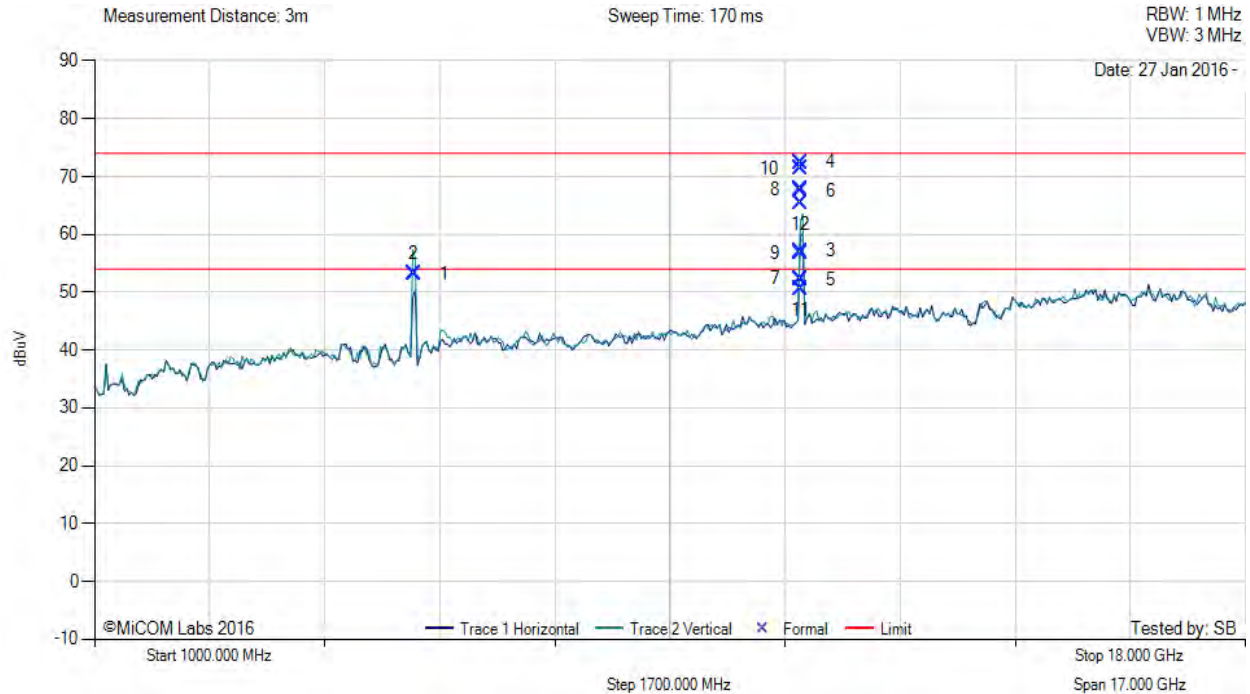
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-19, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5714.15	60.05	3.82	-10.76	53.11	Fundamental	Vertical	101	1	--	--	
2	5714.15	60.05	3.82	-10.76	53.11	Peak (NRB)	Vertical	101	1	--	--	Pass
3	11431.10	52.57	5.48	-4.92	53.13	Max Avg	Vertical	184	253	54	-0.87	Pass
4	11431.10	71.90	5.48	-4.92	72.46	Max Peak	Vertical	184	253	74.0	-1.5	Pass
5	11431.10	51.60	5.48	-4.92	52.16	Max Avg	Horizontal	128	247	54.0	-1.8	Pass
6	11431.10	67.02	5.48	-4.92	67.58	Max Peak	Horizontal	128	247	74.0	-6.4	Pass
7	11431.11	51.72	5.48	-4.92	52.28	Max Avg	Horizontal	148	247	54.0	-1.7	Pass
8	11431.11	67.14	5.48	-4.92	67.70	Max Peak	Horizontal	148	247	74.0	-6.3	Pass
9	11431.11	52.78	5.48	-4.92	53.34	Max Avg	Vertical	191	250	54	-0.66	Pass
10	11431.11	70.87	5.48	-4.92	71.43	Max Peak	Vertical	191	250	74.0	-2.6	Pass
11	11431.12	49.92	5.48	-4.92	50.48	Max Avg	Vertical	100	76	54.0	-3.5	Pass
12	11431.12	64.86	5.48	-4.92	65.42	Max Peak	Vertical	100	76	74.0	-8.6	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

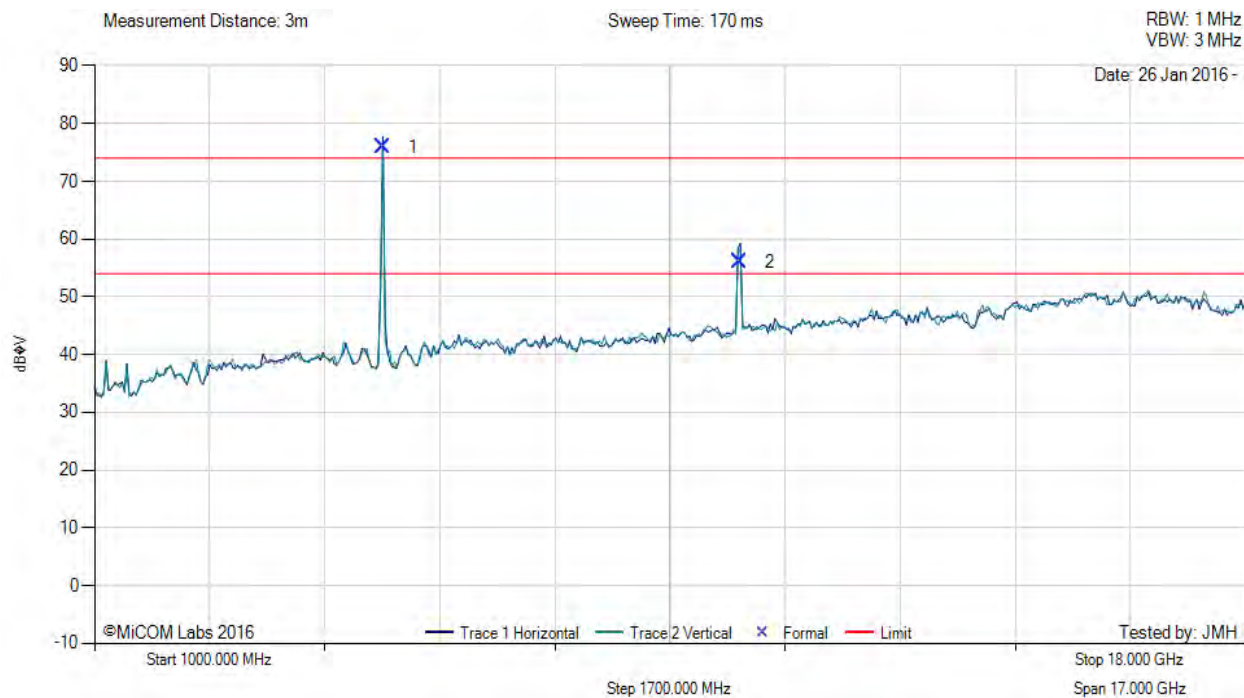
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A.1.1.3. AP-ANT-1W



Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: 1W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5257.12	83.60	3.64	-11.30	75.94	Fundamental	Horizontal	101	1	--	--	
2	10522.12	54.83	5.43	-4.20	56.06	Peak (NRB)	Horizontal	101	1	--	--	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

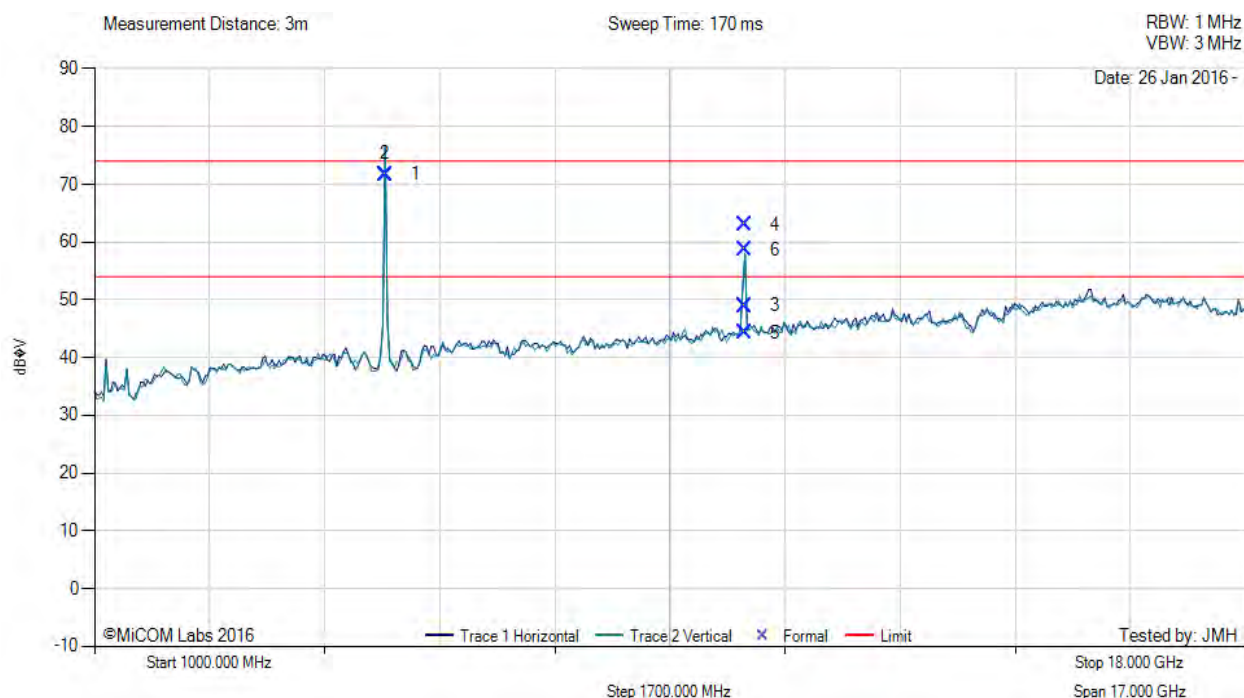
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Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: 1W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5293.99	79.09	3.78	-11.12	71.75	Fundamental	Horizontal	200	1	--	--	
2	5293.99	79.09	3.78	-11.12	71.75	Peak (NRB)	Horizontal	200	1	--	--	Pass
3	10604.08	47.30	5.56	-3.92	48.94	Max Avg	Horizontal	192	284	54.0	-5.1	Pass
4	10604.08	61.41	5.56	-3.92	63.05	Max Peak	Horizontal	192	284	74.0	-11.0	Pass
5	10604.08	42.63	5.56	-3.92	44.27	Max Avg	Vertical	118	342	54.0	-9.7	Pass
6	10604.08	56.98	5.56	-3.92	58.62	Max Peak	Vertical	118	342	74.0	-15.4	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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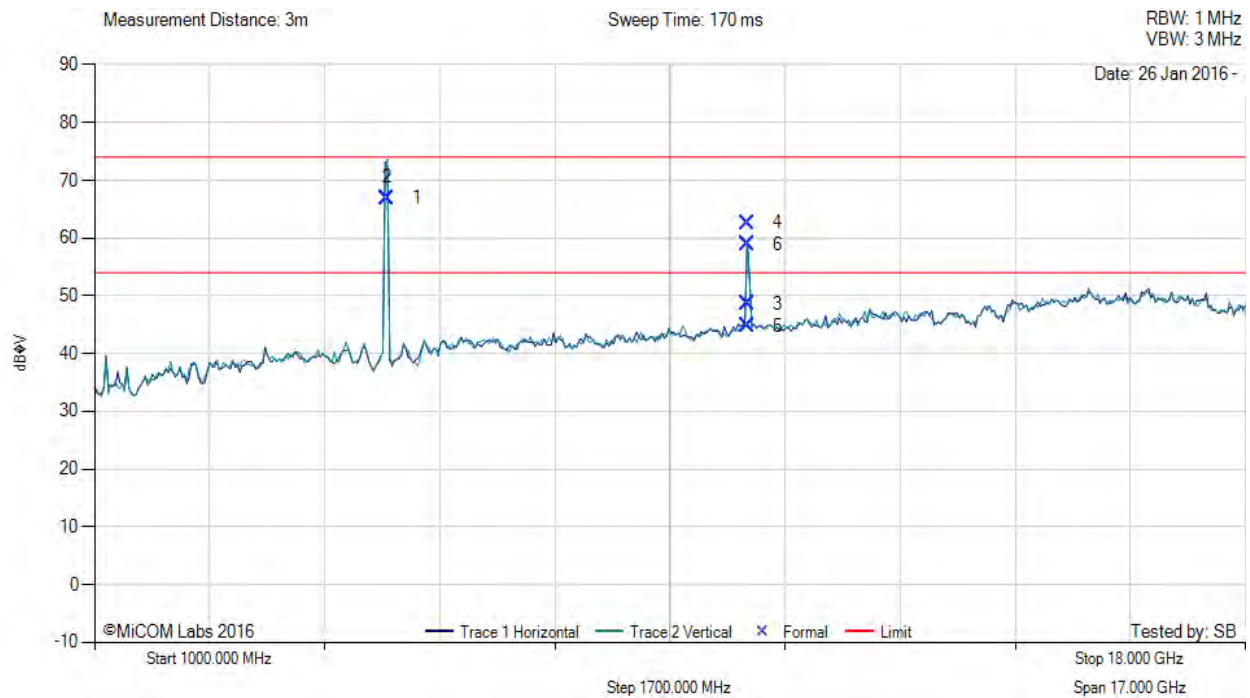
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Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: 1W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5321.96	74.25	3.75	-11.06	66.94	Fundamental	Horizontal	200	1	--	--	
2	5321.96	74.25	3.75	-11.06	66.94	Peak (NRB)	Horizontal	200	1	--	--	Pass
3	10644.97	47.12	5.32	-3.89	48.55	Max Avg	Horizontal	190	286	54.0	-5.5	Pass
4	10644.97	61.15	5.32	-3.89	62.58	Max Peak	Horizontal	190	286	74.0	-11.4	Pass
5	10644.97	43.34	5.32	-3.89	44.77	Max Avg	Vertical	151	339	54.0	-9.2	Pass
6	10644.97	57.49	5.32	-3.89	58.92	Max Peak	Vertical	151	339	74.0	-15.1	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

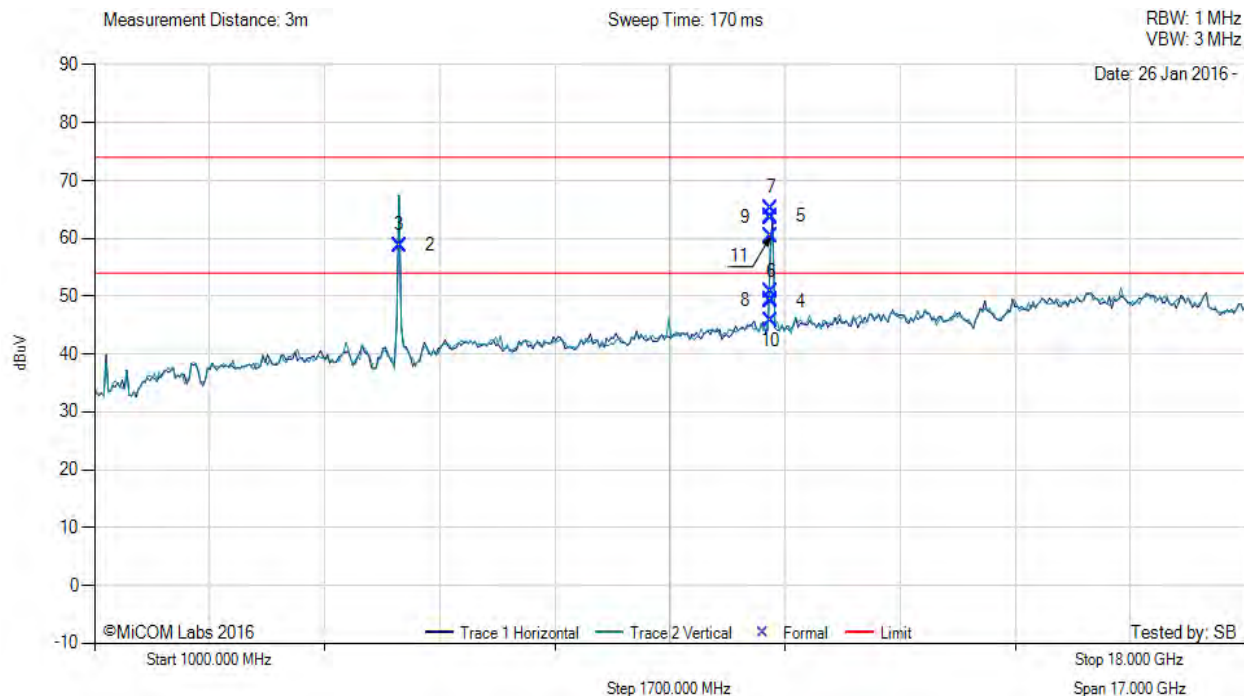
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-1W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	0.00	60.90	0.00	0.00	60.90	Peak (NRB)	Vertical	138	336	--	--	Pass
2	5503.92	66.24	3.75	-11.18	58.81	Fundamental	Horizontal	200	0	--	--	
3	5503.92	66.24	3.75	-11.18	58.81	Peak (NRB)	Horizontal	200	0	--	--	Pass
8	10991.43	47.93	5.61	-4.27	49.27	Max Avg	Horizontal	141	38	54.0	-4.7	Pass
9	10991.43	62.22	5.61	-4.27	63.56	Max Peak	Horizontal	141	38	74.0	-10.4	Pass
10	10991.43	44.47	5.61	-4.27	45.81	Max Avg	Vertical	110	333	54.0	-8.2	Pass
11	10991.43	59.12	5.61	-4.27	60.46	Max Peak	Vertical	110	333	74.0	-13.5	Pass

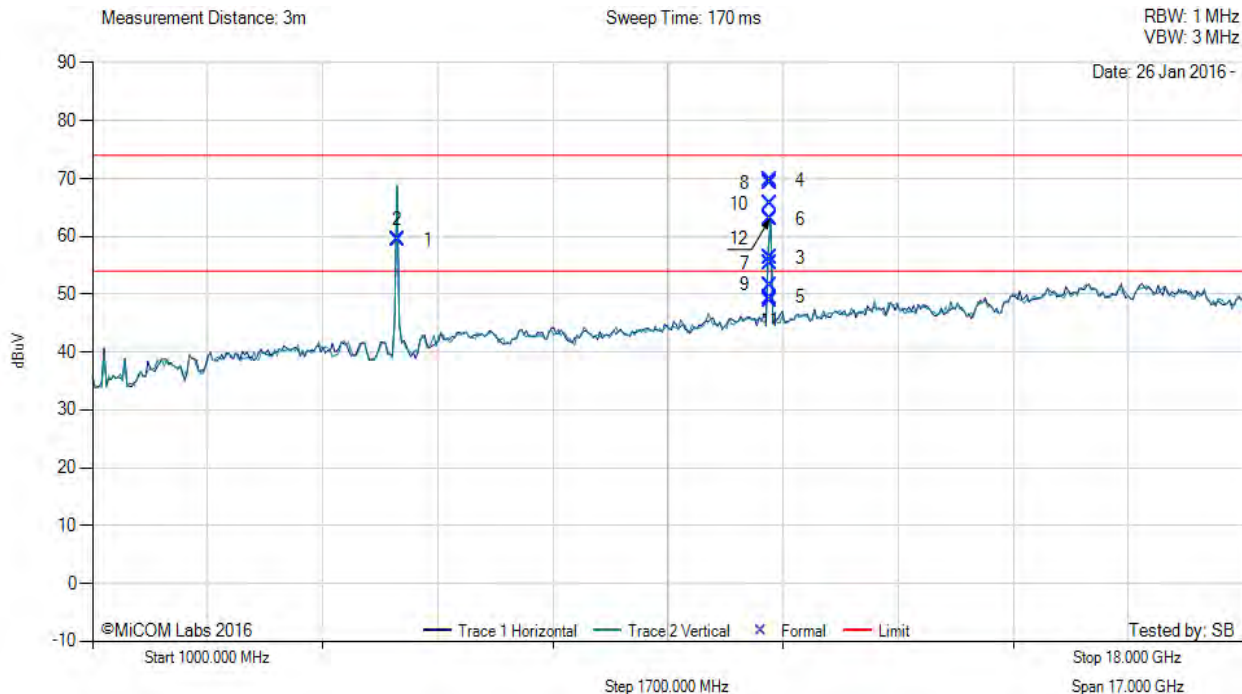
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-1W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5502.88	66.84	3.75	-11.17	59.42	Fundamental	Horizontal	200	1	--	--	
2	5502.88	66.84	3.75	-11.17	59.42	Peak (NRB)	Horizontal	200	1	--	--	Pass
9	11005.09	50.29	5.58	-4.23	51.64	Max Avg	Vertical	105	328	54.0	-2.4	Pass
10	11005.09	64.23	5.58	-4.23	65.58	Max Peak	Vertical	105	328	74.0	-8.4	Pass
11	11009.22	47.57	5.57	-4.22	48.92	Max Avg	Horizontal	198	284	54.0	-5.1	Pass
12	11009.22	61.79	5.57	-4.22	63.14	Max Peak	Horizontal	198	284	74.0	-10.9	Pass

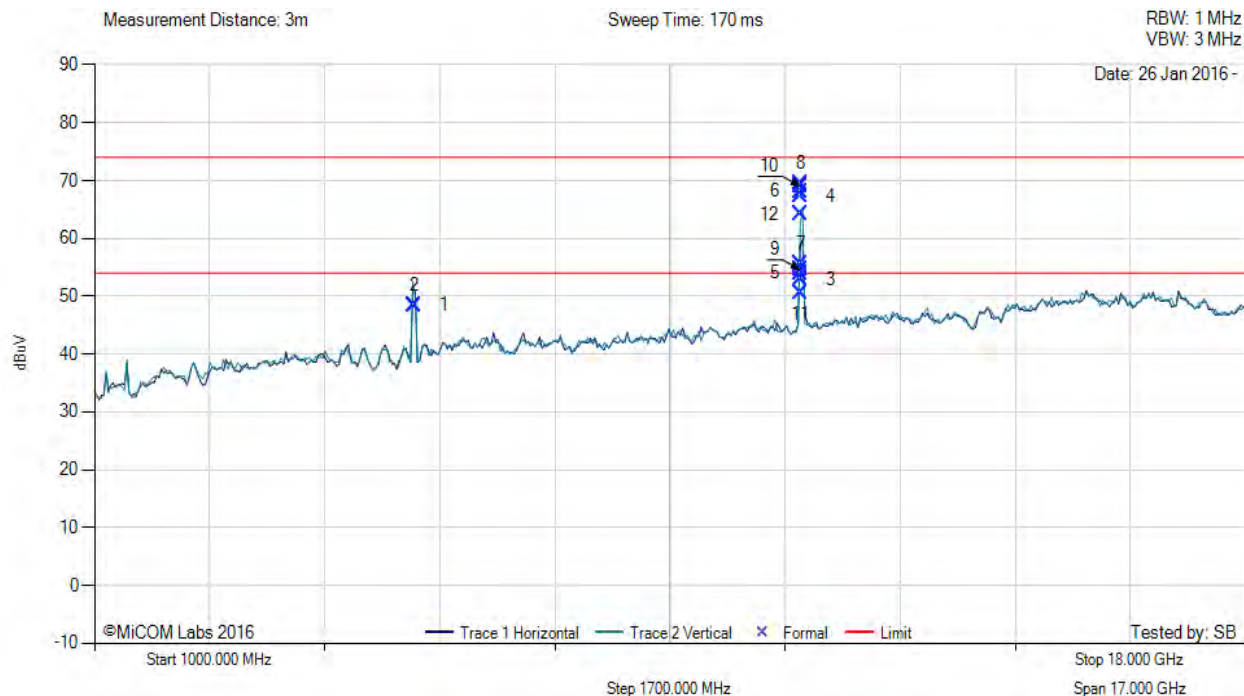
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-1W, Power Setting: 20, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5723.93	55.38	3.79	-10.72	48.45	Fundamental	Horizontal	200	1	--	--	
2	5723.93	55.38	3.79	-10.72	48.45	Peak (NRB)	Horizontal	200	1	--	--	Pass
9	11434.07	52.05	5.41	-4.92	52.54	Max Avg	Vertical	194	259	54.0	-1.46	Pass
10	11434.07	68.48	5.41	-4.92	68.97	Max Peak	Vertical	194	259	74.0	-5.0	Pass
11	11434.07	50.09	5.41	-4.92	50.58	Max Avg	Horizontal	137	252	54.0	-3.4	Pass
12	11434.07	63.70	5.41	-4.92	64.19	Max Peak	Horizontal	137	252	74.0	-9.8	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

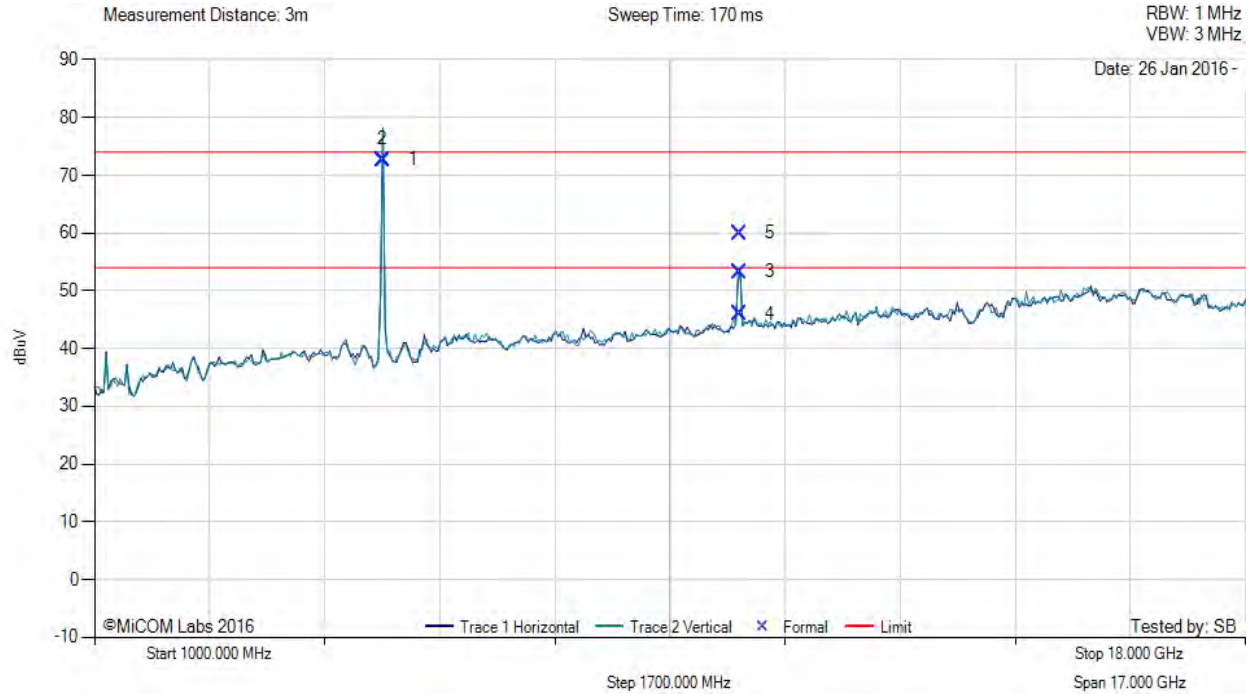
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A.1.1.4. AP-ANT-20W



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: AP-ANT-20W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5255.35	80.33	3.64	-11.32	72.65	Fundamental	Horizontal	101	1	--	--	
2	5255.35	80.33	3.64	-11.32	72.65	Peak (NRB)	Horizontal	101	1	--	--	Pass
3	10524.01	52.01	5.43	-4.19	53.25	Peak (NRB)	Horizontal	100	29	--	--	Pass
4	10524.01	44.77	5.43	-4.19	46.01	Max Avg	Horizontal	104	277	54.0	-8.0	Pass
5	10524.01	58.71	5.43	-4.19	59.95	Max Peak	Horizontal	104	277	74.0	-14.1	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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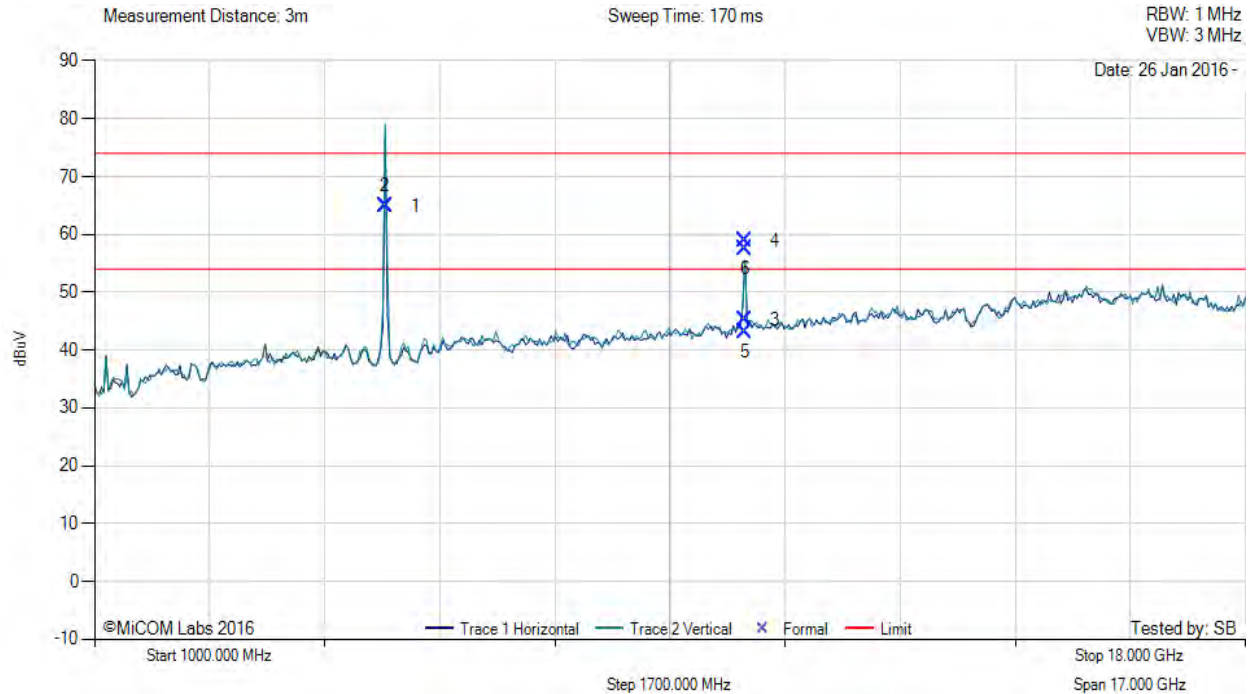


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-20W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5292.87	72.21	3.77	-11.13	64.85	Fundamental	Vertical	200	1	--	--	
2	5292.87	72.21	3.77	-11.13	64.85	Peak (NRB)	Vertical	200	1	--	--	Pass
3	10603.44	43.60	5.57	-3.93	45.24	Max Avg	Horizontal	196	296	54.0	-8.8	Pass
4	10603.44	57.23	5.57	-3.93	58.87	Max Peak	Horizontal	196	296	74.0	-15.1	Pass
5	10603.44	41.62	5.57	-3.93	43.26	Max Avg	Vertical	119	340	54.0	-10.7	Pass
6	10603.44	55.97	5.57	-3.93	57.61	Max Peak	Vertical	119	340	74.0	-16.4	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

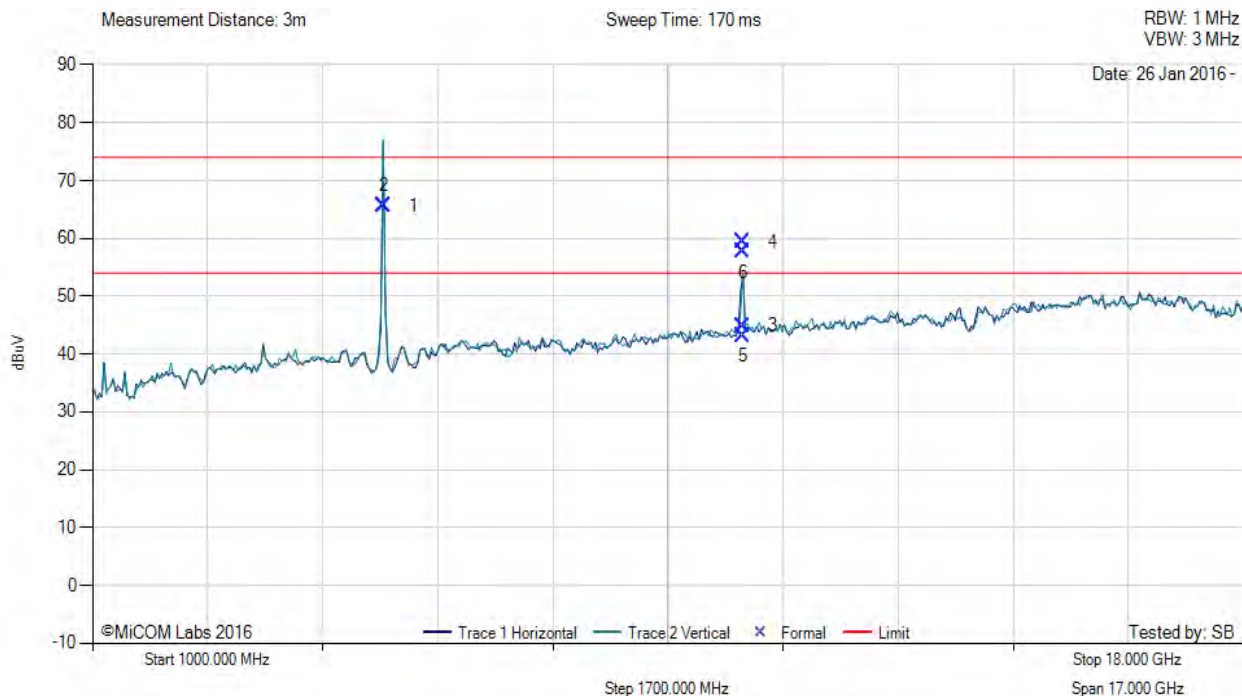
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-20W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5301.21	72.91	3.81	-11.09	65.63	Fundamental	Horizontal	200	1	--	--	
2	5301.21	72.91	3.81	-11.09	65.63	Peak (NRB)	Horizontal	200	1	--	--	Pass
3	10605.69	43.23	5.55	-3.92	44.86	Max Avg	Horizontal	162	280	54.0	-9.1	Pass
4	10605.69	57.74	5.55	-3.92	59.37	Max Peak	Horizontal	162	280	74.0	-14.6	Pass
5	10605.69	41.61	5.55	-3.92	43.24	Max Avg	Vertical	117	340	54.0	-10.8	Pass
6	10605.69	56.10	5.55	-3.92	57.73	Max Peak	Vertical	117	340	74.0	-16.3	Pass

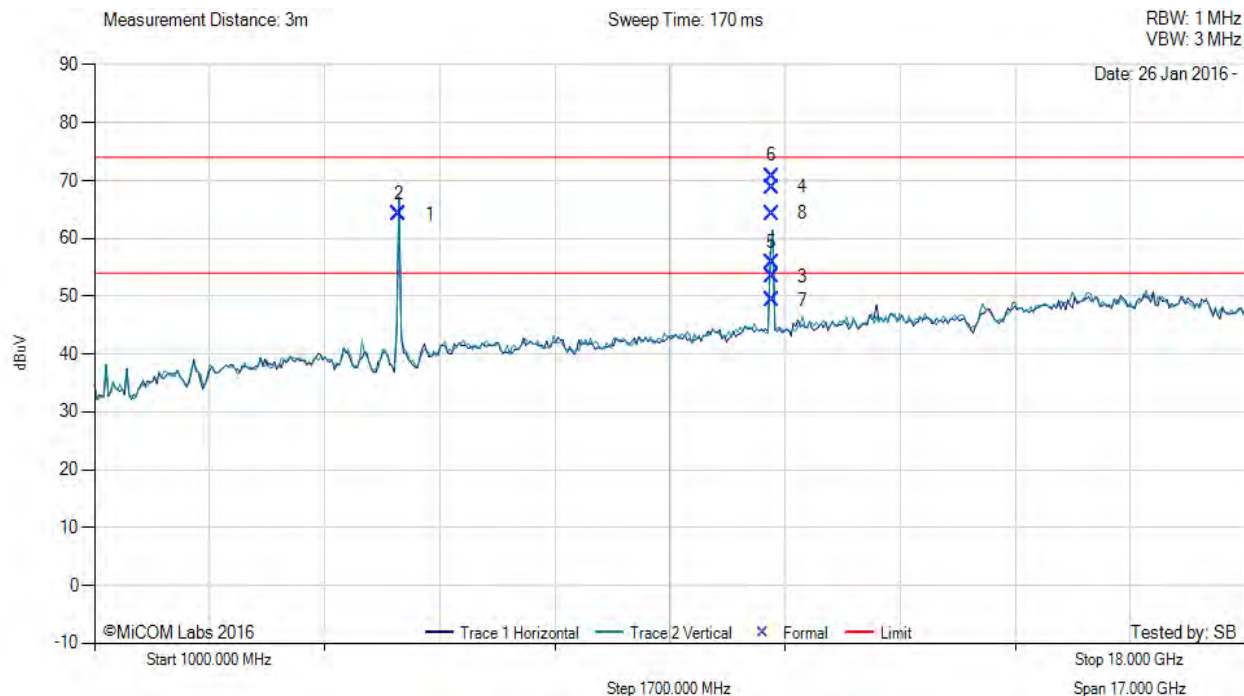
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-20W, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5497.99	71.68	3.74	-11.17	64.25	Fundamental	Horizontal	101	0	--	--	
2	5497.99	71.68	3.74	-11.17	64.25	Peak (NRB)	Horizontal	101	0	--	--	Pass
5	11000.32	52.47	5.59	-4.24	53.82	Max Avg	Horizontal	116	300	54.0	-0.18	Pass
6	11000.32	69.39	5.59	-4.24	70.74	Max Peak	Horizontal	116	300	74.0	-3.3	Pass
7	11000.32	47.92	5.59	-4.24	49.27	Max Avg	Vertical	120	315	54.0	-4.7	Pass
8	11000.32	62.92	5.59	-4.24	64.27	Max Peak	Vertical	120	315	74.0	-9.7	Pass

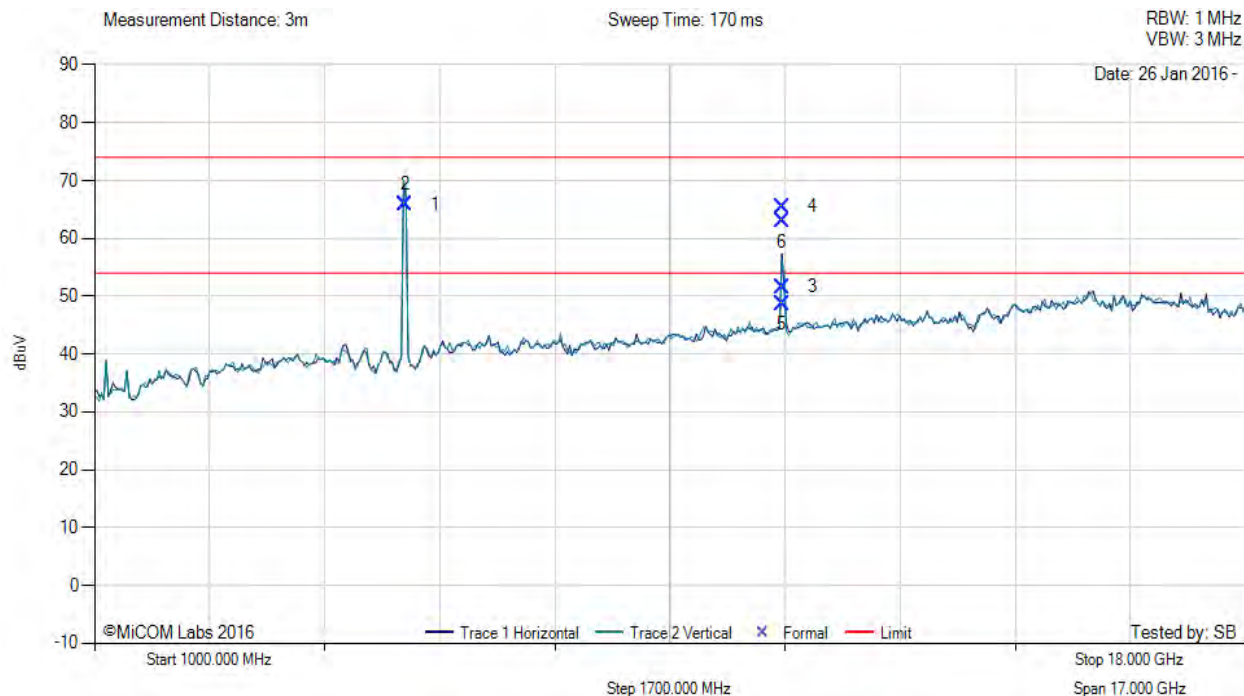
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5584.29	73.26	3.79	-11.19	65.86	Fundamental	Horizontal	101	0	--	--	
2	5584.29	73.26	3.79	-11.19	65.86	Peak (NRB)	Horizontal	101	0	--	--	Pass
3	11156.07	49.68	5.96	-4.05	51.59	Max Avg	Horizontal	115	298	54.0	-2.4	Pass
4	11156.07	63.55	5.96	-4.05	65.46	Max Peak	Horizontal	115	298	74.0	-8.5	Pass
5	11156.07	46.78	5.96	-4.05	48.69	Max Avg	Vertical	115	26	54.0	-5.3	Pass
6	11156.07	61.07	5.96	-4.05	62.98	Max Peak	Vertical	115	26	74.0	-11.0	Pass

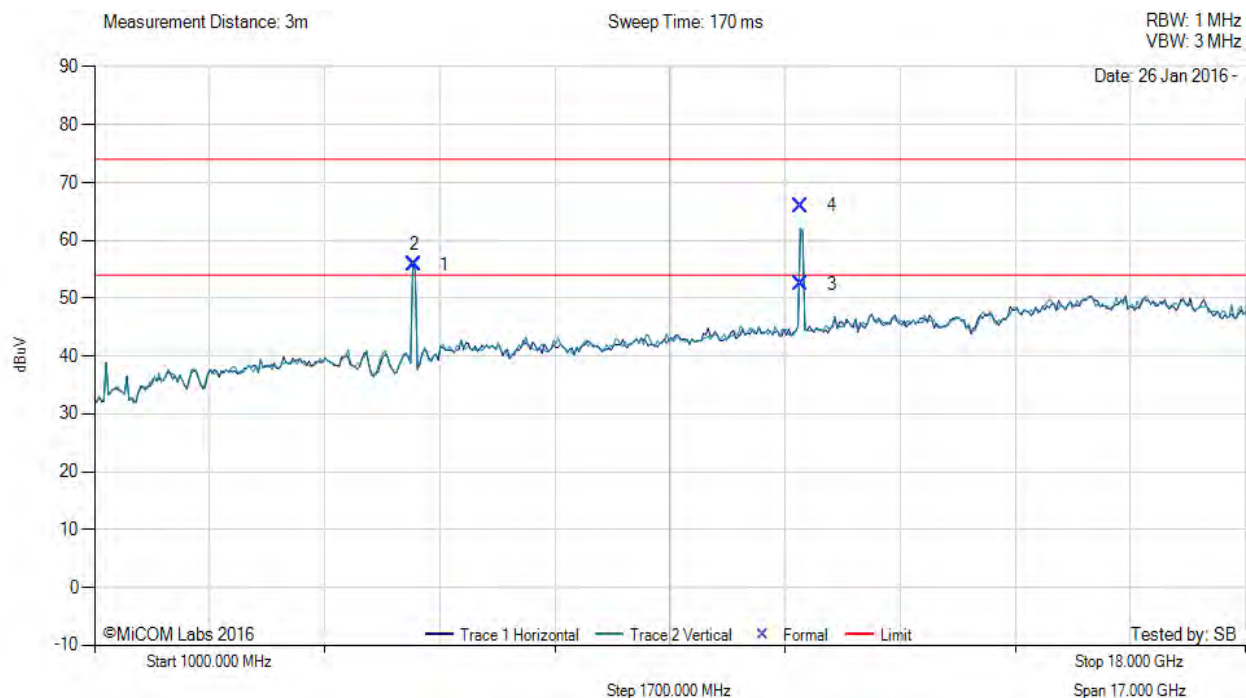
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5726.09	62.72	3.79	-10.72	55.79	Fundamental	Horizontal	101	1	--	--	
2	5726.09	62.72	3.79	-10.72	55.79	Peak (NRB)	Horizontal	101	1	--	--	Pass
3	11437.52	52.09	5.34	-4.92	52.51	Max Avg	Horizontal	114	267	54.0	-1.5	Pass
4	11437.52	65.54	5.34	-4.92	65.96	Max Peak	Horizontal	114	267	74.0	-8.0	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

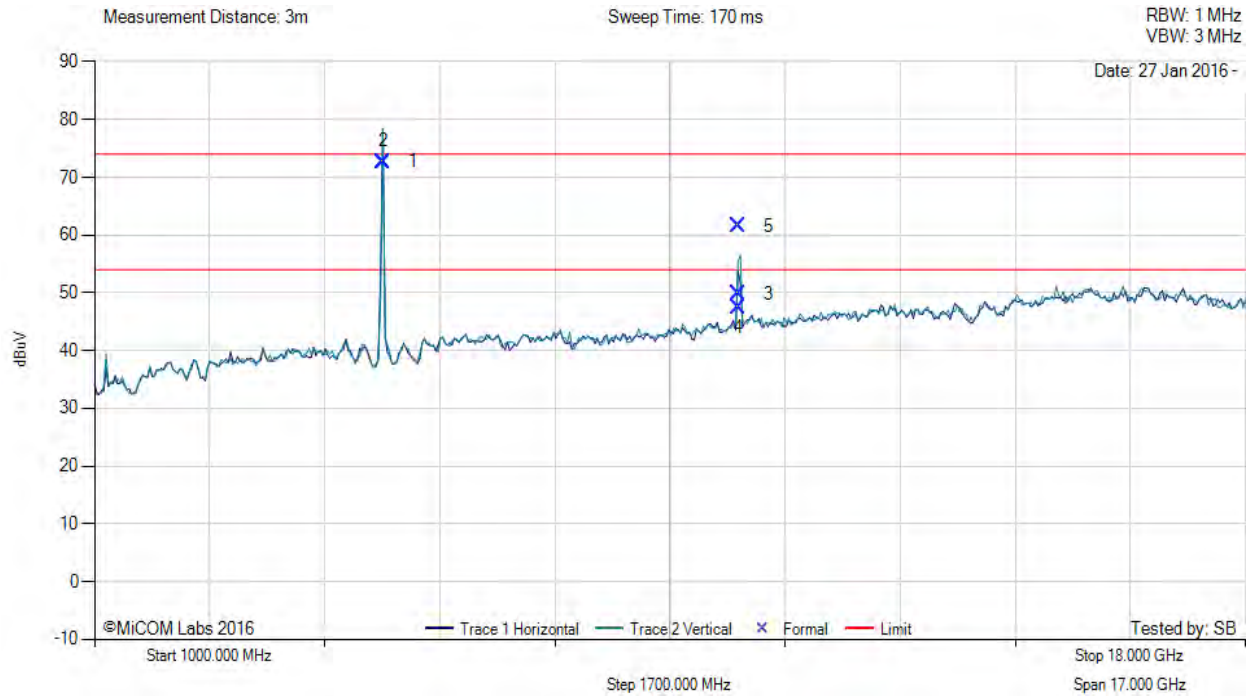
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A.1.1.5. AP-ANT-40



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: AP-ANT-40, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5259.04	80.33	3.65	-11.29	72.69	Fundamental	Horizontal	101	1	--	--	
2	5259.04	80.33	3.65	-11.29	72.69	Peak (NRB)	Horizontal	101	1	--	--	Pass
3	10514.55	48.53	5.45	-4.23	49.75	Peak (NRB)	Vertical	101	82	--	--	Pass
4	10514.55	46.29	5.45	-4.23	47.51	Max Avg	Vertical	170	243	54.0	-6.5	Pass
5	10514.55	60.38	5.45	-4.23	61.60	Max Peak	Vertical	170	243	74.0	-12.4	Pass

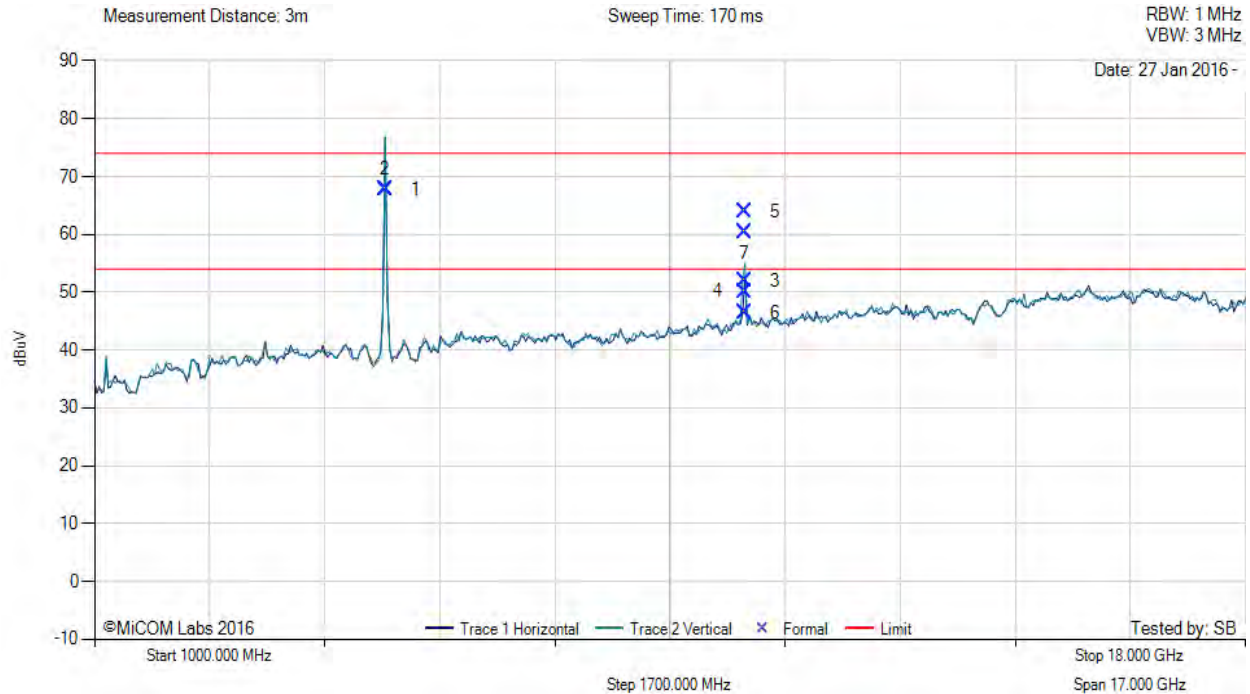
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-40, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5292.47	75.21	3.76	-11.13	67.84	Fundamental	Horizontal	200	1	--	--	
2	5292.47	75.21	3.76	-11.13	67.84	Peak (NRB)	Horizontal	200	1	--	--	Pass
3	10596.71	50.35	5.60	-3.93	52.02	Peak (NRB)	Vertical	198	55	--	--	Pass
4	10596.71	48.49	5.60	-3.93	50.16	Max Avg	Vertical	190	300	54.0	-3.8	Pass
5	10596.71	62.33	5.60	-3.93	64.00	Max Peak	Vertical	190	300	74.0	-10.0	Pass
6	10596.71	44.79	5.60	-3.93	46.46	Max Avg	Horizontal	191	224	54.0	-7.5	Pass
7	10596.71	58.72	5.60	-3.93	60.39	Max Peak	Horizontal	191	224	74.0	-13.6	Pass

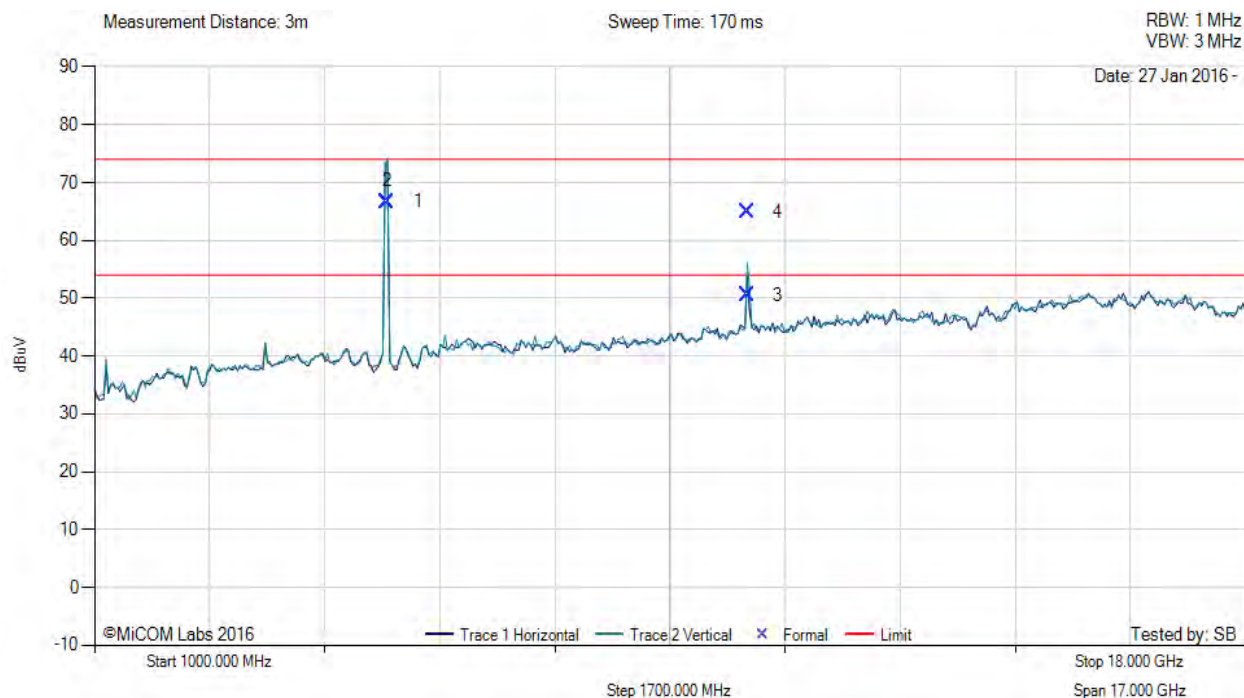
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-40, Power Setting: 21, Duty Cycle (%): 100



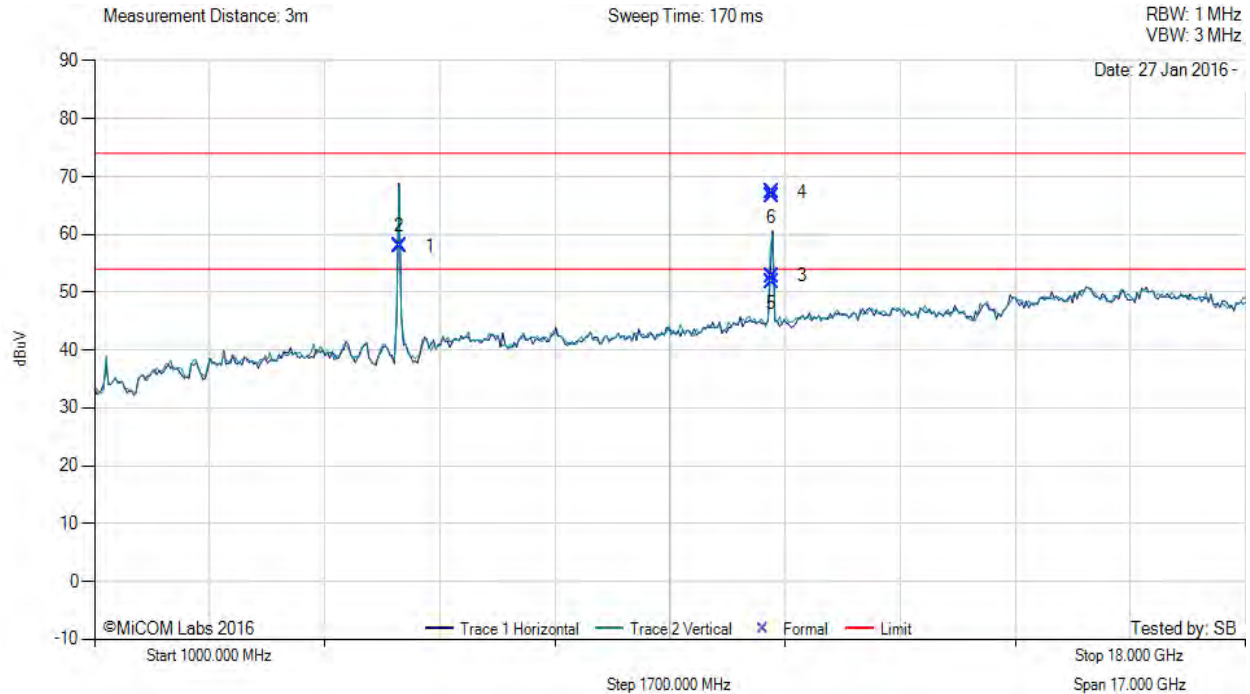
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5325.46	74.01	3.73	-11.06	66.68	Fundamental	Horizontal	200	110	--	--	
2	5325.46	74.01	3.73	-11.06	66.68	Peak (NRB)	Horizontal	200	110	--	--	Pass
3	10636.75	48.97	5.45	-3.89	50.53	Max Avg	Vertical	147	100	54.0	-3.5	Pass
4	10636.75	63.30	5.45	-3.89	64.86	Max Peak	Vertical	147	100	74.0	-9.1	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-40, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5504.97	65.38	3.75	-11.18	57.95	Fundamental	Horizontal	151	1	--	--	
2	5504.97	65.38	3.75	-11.18	57.95	Peak (NRB)	Horizontal	151	1	--	--	Pass
3	11000.32	51.46	5.59	-4.24	52.81	Max Avg	Horizontal	137	240	54.0	-1.2	Pass
4	11000.32	66.02	5.59	-4.24	67.37	Max Peak	Horizontal	137	240	74.0	-6.6	Pass
5	11000.32	50.38	5.59	-4.24	51.73	Max Avg	Vertical	195	260	54.0	-2.3	Pass
6	11000.32	65.25	5.59	-4.24	66.60	Max Peak	Vertical	195	260	74.0	-7.4	Pass

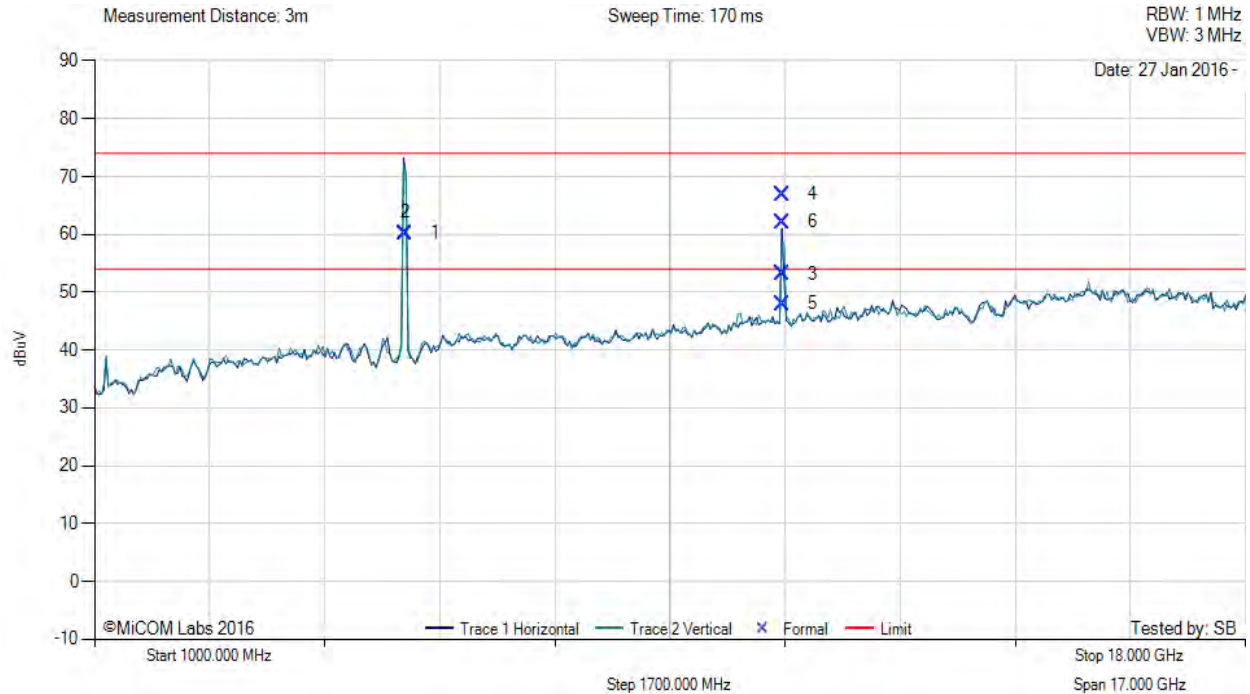
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-40, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5584.85	67.62	3.79	-11.19	60.22	Fundamental	Horizontal	101	1	--	--	
2	5584.85	67.62	3.79	-11.19	60.22	Peak (NRB)	Horizontal	101	1	--	--	Pass
3	11159.75	51.39	5.85	-4.07	53.17	Max Avg	Horizontal	134	242	54.0	-0.8	Pass
4	11159.75	65.12	5.85	-4.07	66.90	Max Peak	Horizontal	134	242	74.0	-7.1	Pass
5	11159.75	46.27	5.85	-4.07	48.05	Max Avg	Vertical	114	257	54.0	-6.0	Pass
6	11159.75	60.38	5.85	-4.07	62.16	Max Peak	Vertical	114	257	74.0	-11.8	Pass

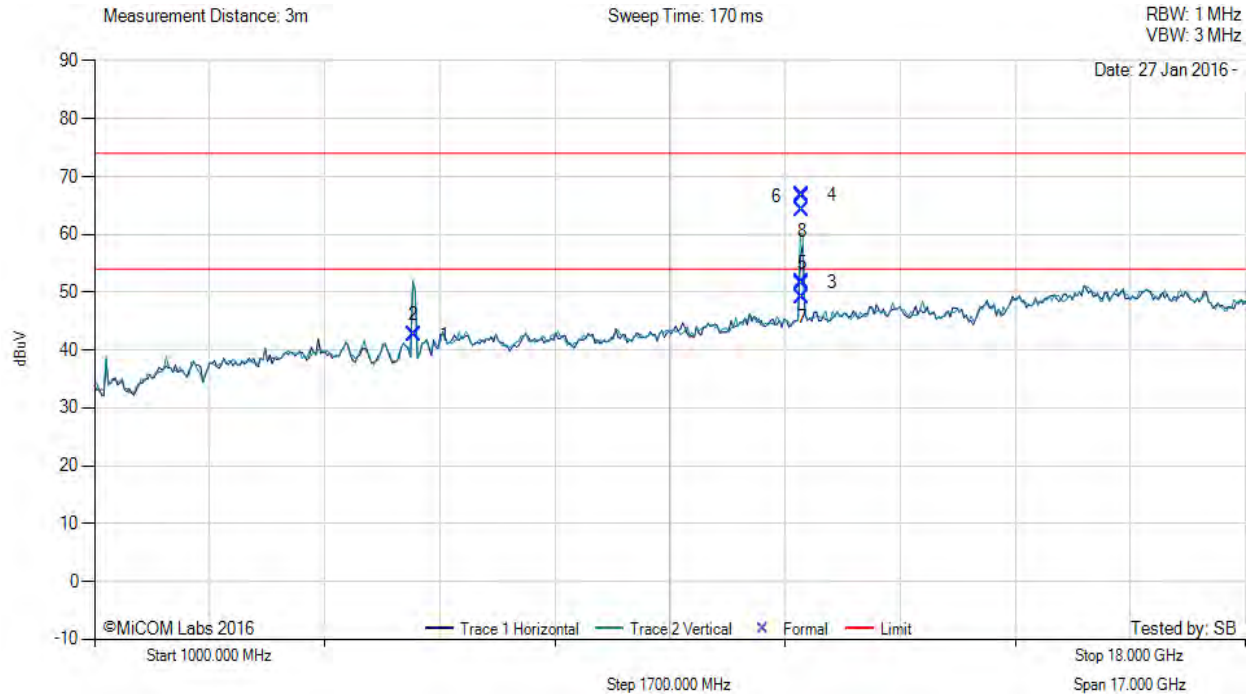
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-40, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5713.99	49.50	3.82	-10.76	42.56	Fundamental	Horizontal	101	1	--	--	
2	5713.99	49.50	3.82	-10.76	42.56	Peak (NRB)	Horizontal	101	1	--	--	Pass
5	11447.46	51.05	5.41	-4.92	51.54	Max Avg	Vertical	156	272	54.0	-2.5	Pass
6	11447.46	66.09	5.41	-4.92	66.58	Max Peak	Vertical	156	272	74.0	-7.4	Pass
7	11447.46	48.69	5.41	-4.92	49.18	Max Avg	Horizontal	128	238	54.0	-4.8	Pass
8	11447.46	63.63	5.41	-4.92	64.12	Max Peak	Horizontal	128	238	74.0	-9.9	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

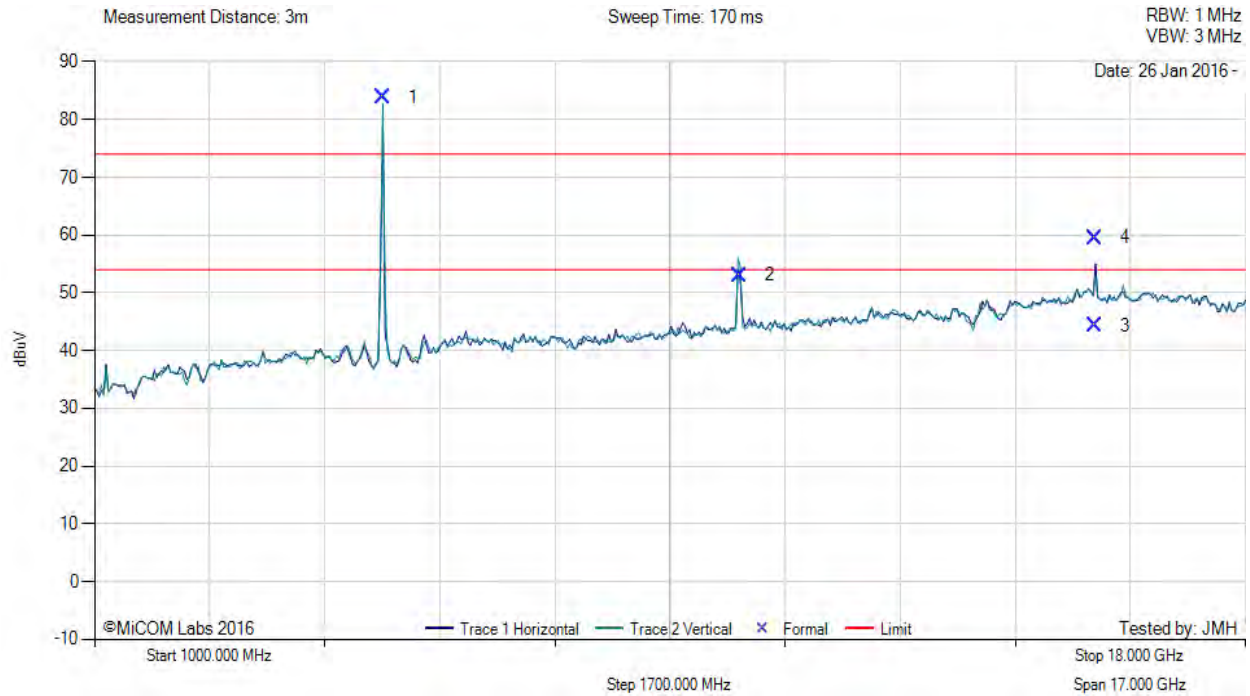
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A.1.1.6. AP-ANT-45



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: AP-ANT-45, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5262.49	91.50	3.66	-11.28	83.88	Fundamental	Vertical	101	0	--	--	
2	10526.57	51.84	5.42	-4.18	53.08	Peak (NRB)	Vertical	200	0	--	--	Pass
3	15776.51	38.27	5.98	0.10	44.35	Max Avg	Horizontal	160	23	54.0	-9.7	Pass
4	15776.51	53.43	5.98	0.10	59.51	Max Peak	Horizontal	160	23	74.0	-14.5	Pass

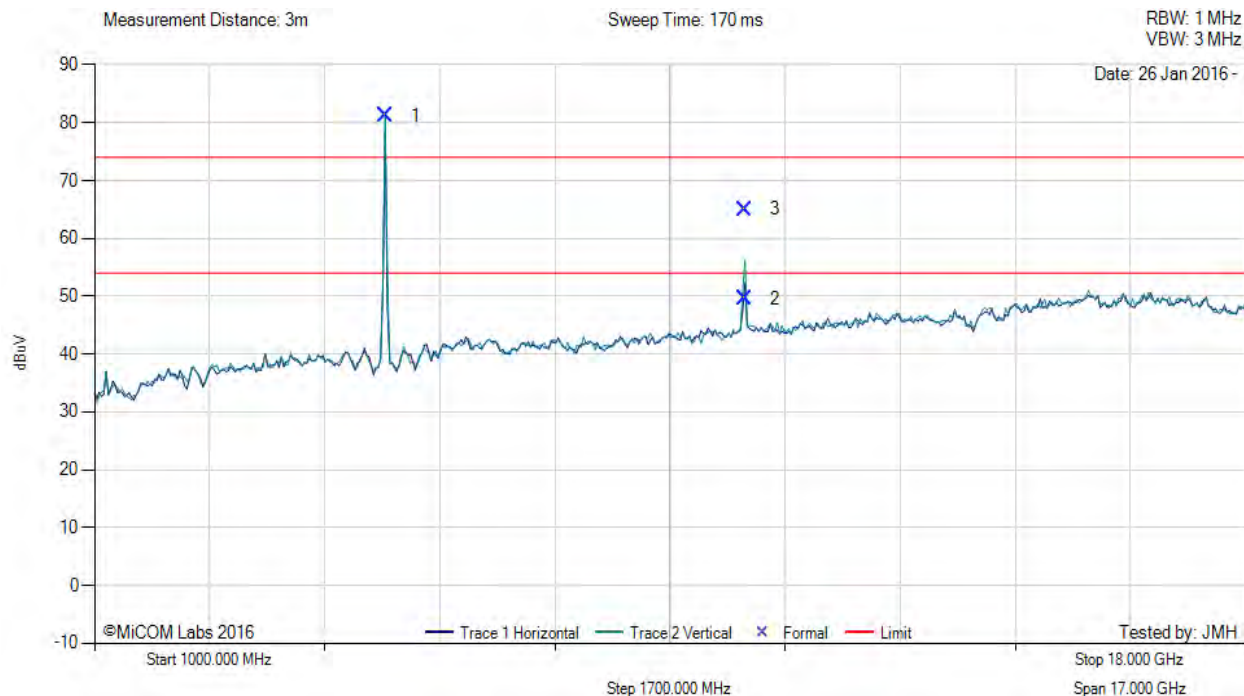
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-45, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5294.07	88.54	3.78	-11.12	81.20	Fundamental	Vertical	101	1	--	--	
2	10600.28	47.95	5.58	-3.94	49.59	Max Avg	Vertical	198	217	54.0	-4.4	Pass
3	10600.28	63.39	5.58	-3.94	65.03	Max Peak	Vertical	198	217	74.0	-9.0	Pass

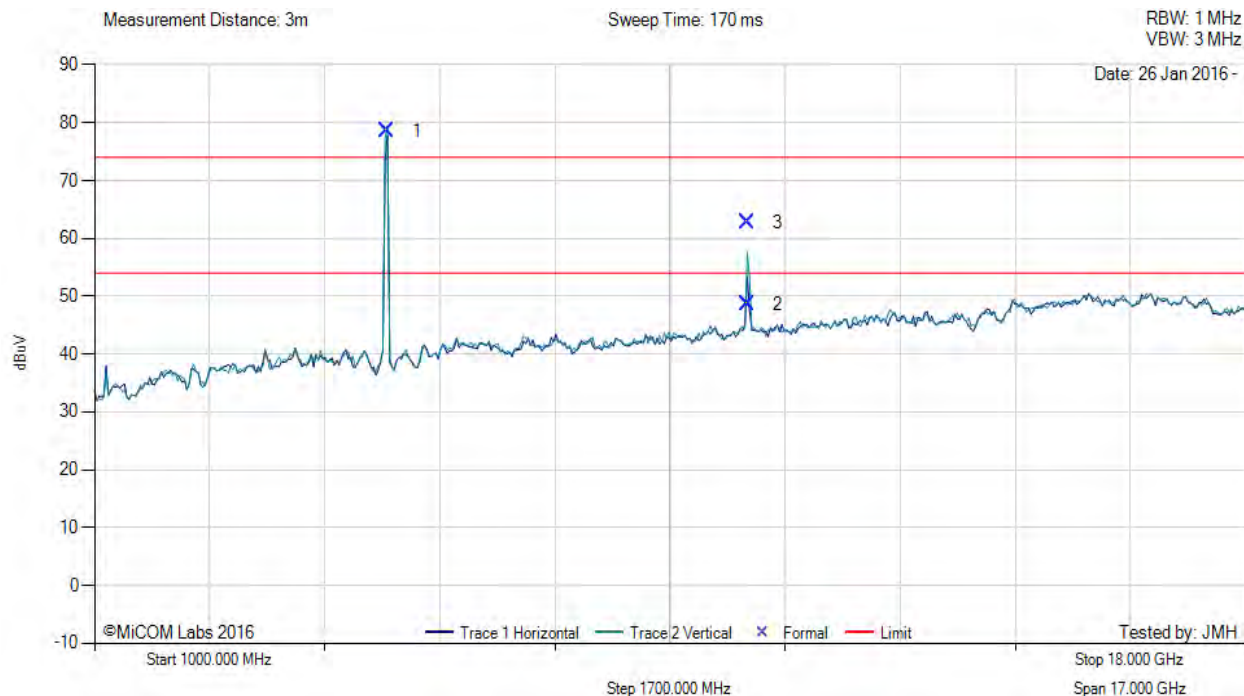
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-45, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5321.72	85.92	3.75	-11.06	78.61	Fundamental	Vertical	151	1	--	--	
2	10639.08	47.12	5.42	-3.90	48.64	Max Avg	Vertical	152	103	54.0	-5.4	Pass
3	10639.08	61.21	5.42	-3.90	62.73	Max Peak	Vertical	152	103	74.0	-11.3	Pass

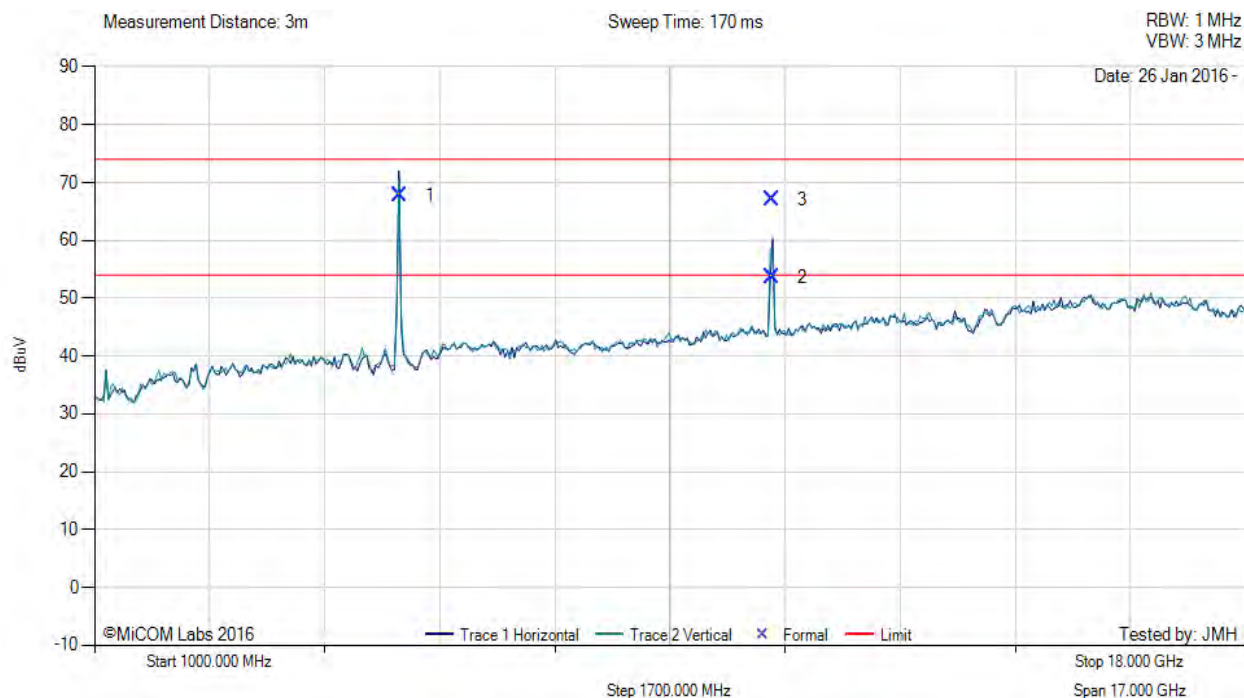
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-45, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5503.92	75.26	3.75	-11.18	67.83	Fundamental	Horizontal	101	1	--	--	
2	11001.72	52.29	5.59	-4.24	53.64	Max Avg	Horizontal	157	237	54.0	-0.4	Pass
3	11001.72	65.77	5.59	-4.24	67.12	Max Peak	Horizontal	157	237	74.0	-6.9	Pass

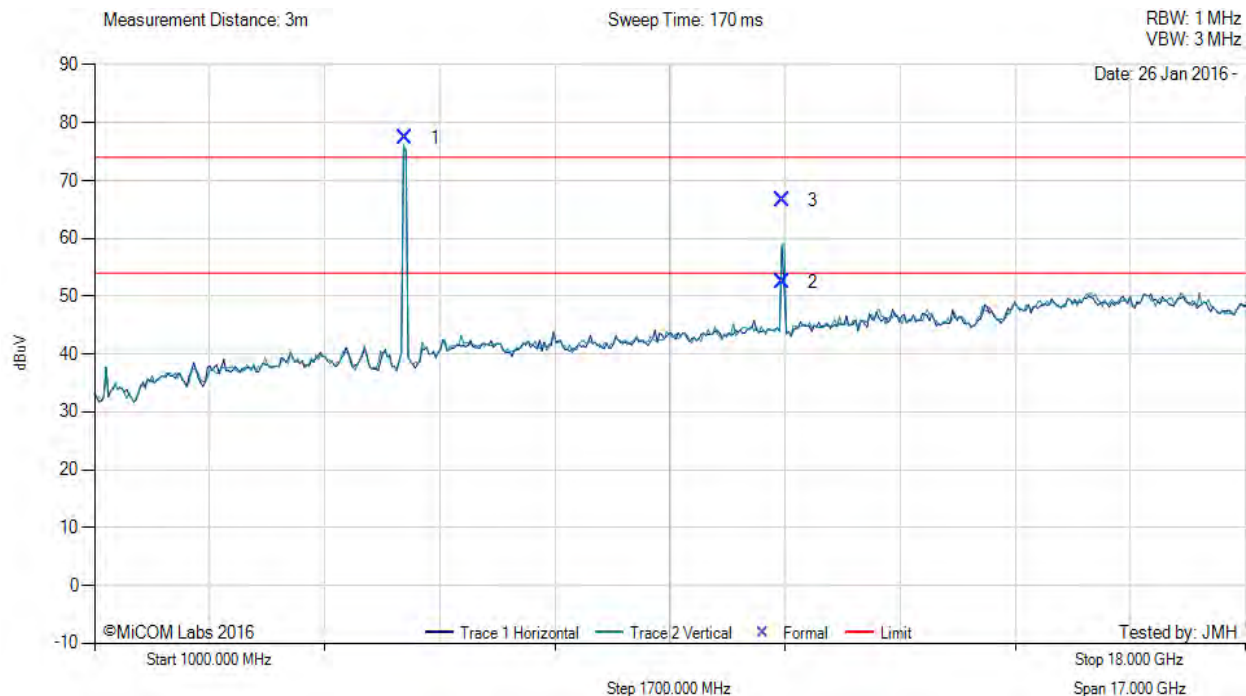
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-45, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5581.84	84.80	3.80	-11.20	77.40	Fundamental	Vertical	101	1	--	--	
2	11159.07	50.62	5.89	-4.06	52.45	Max Avg	Vertical	168	245	54.0	-1.6	Pass
3	11159.07	64.68	5.89	-4.06	66.51	Max Peak	Vertical	168	245	74.0	-7.5	Pass

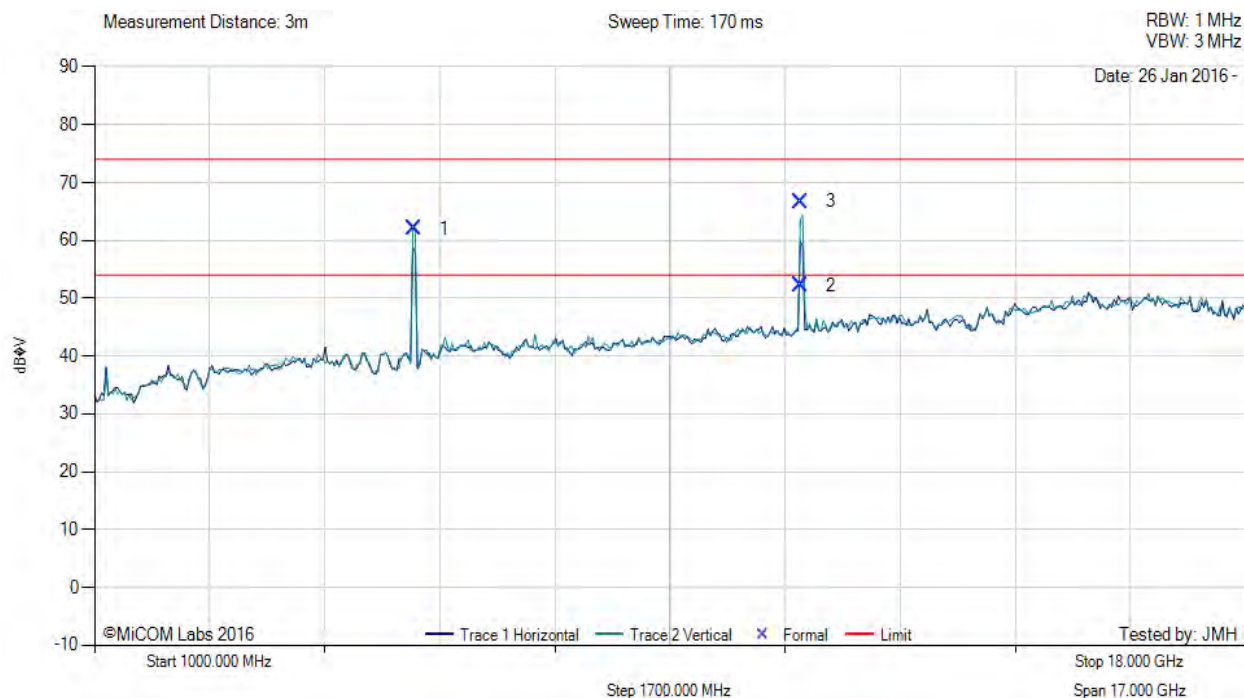
Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-45, Power Setting: 16, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5721.32	68.92	3.80	-10.73	61.99	Fundamental	Vertical	101	1	--	--	
2	11433.22	51.76	5.43	-4.92	52.27	Max Avg	Vertical	196	239	54.0	-1.7	Pass
3	11433.22	66.16	5.43	-4.92	66.67	Max Peak	Vertical	196	239	74.0	-7.3	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR. Power reduced to 16 due to 11.4 GHz harmonic

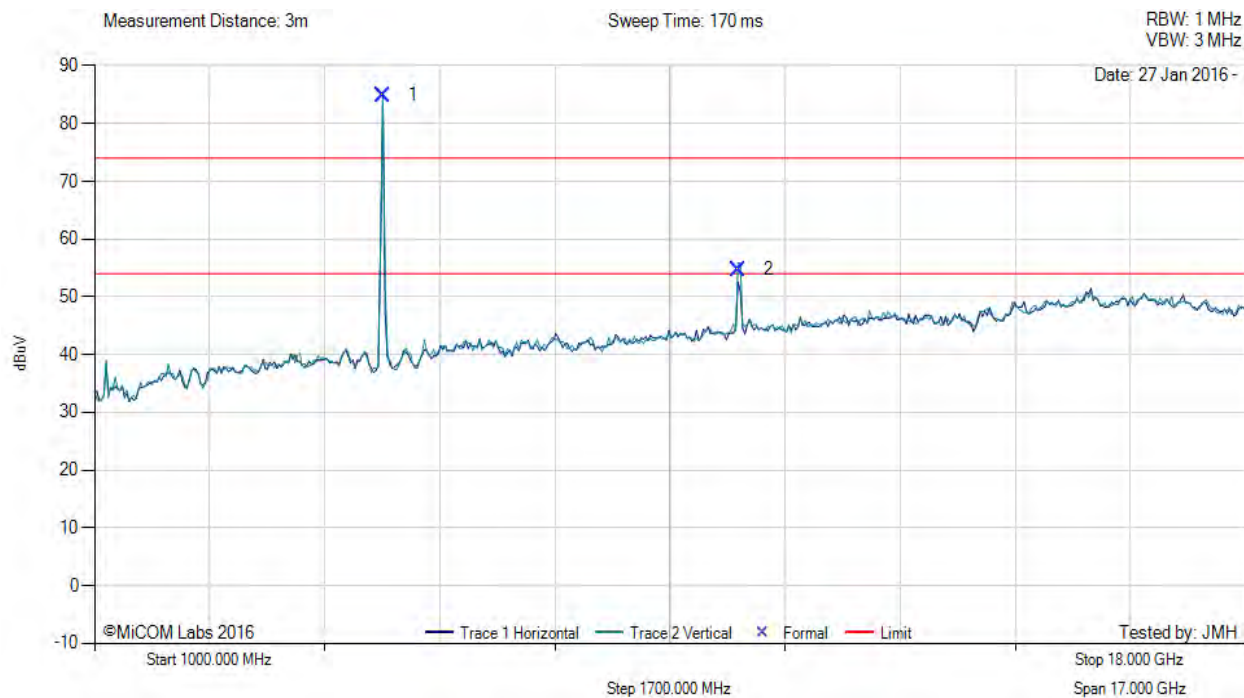
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A.1.1.7. AP-ANT-48



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: AP-ANT-48, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5266.82	92.45	3.68	-11.25	84.88	Fundamental	Vertical	101	1	--	--	
2	10512.55	53.51	5.47	-4.24	54.74	Peak (NRB)	Vertical	101	32	--	--	Pass

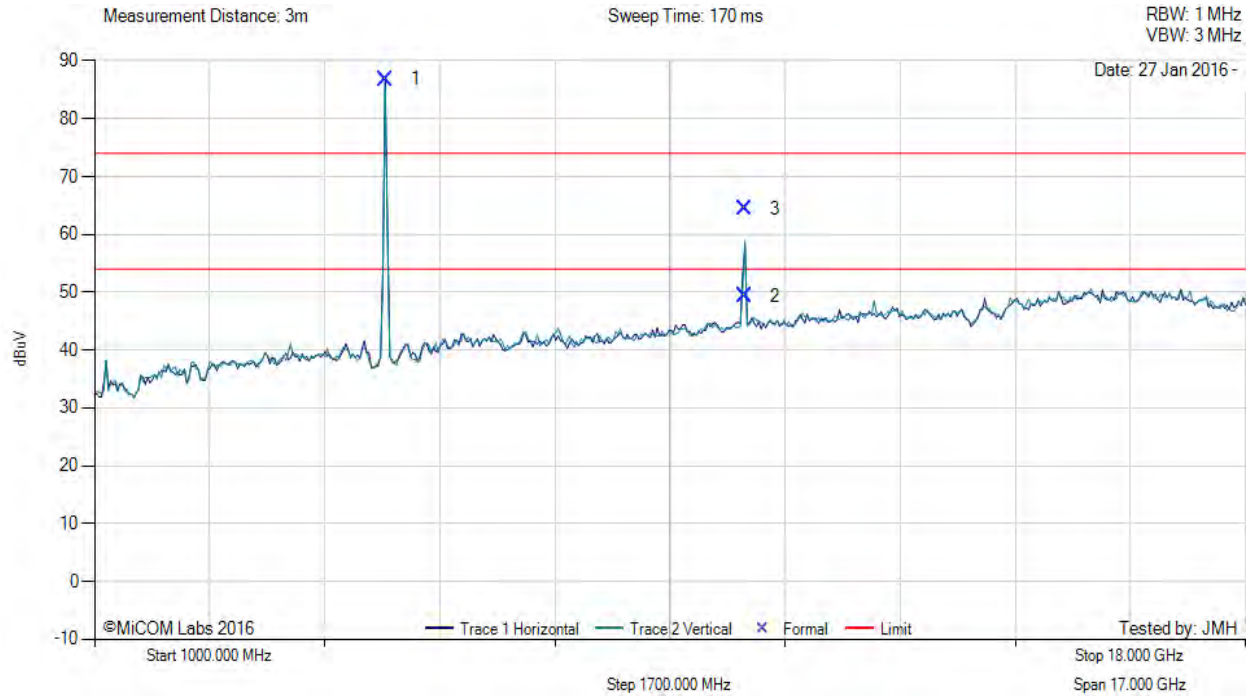
Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-48, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5298.80	94.08	3.81	-11.09	86.80	Fundamental	Horizontal	100	0	--	--	
2	10600.52	47.61	5.58	-3.93	49.26	Max Avg	Vertical	196	283	54.0	-4.7	Pass
3	10600.52	62.74	5.58	-3.93	64.39	Max Peak	Vertical	196	283	74.0	-9.6	Pass

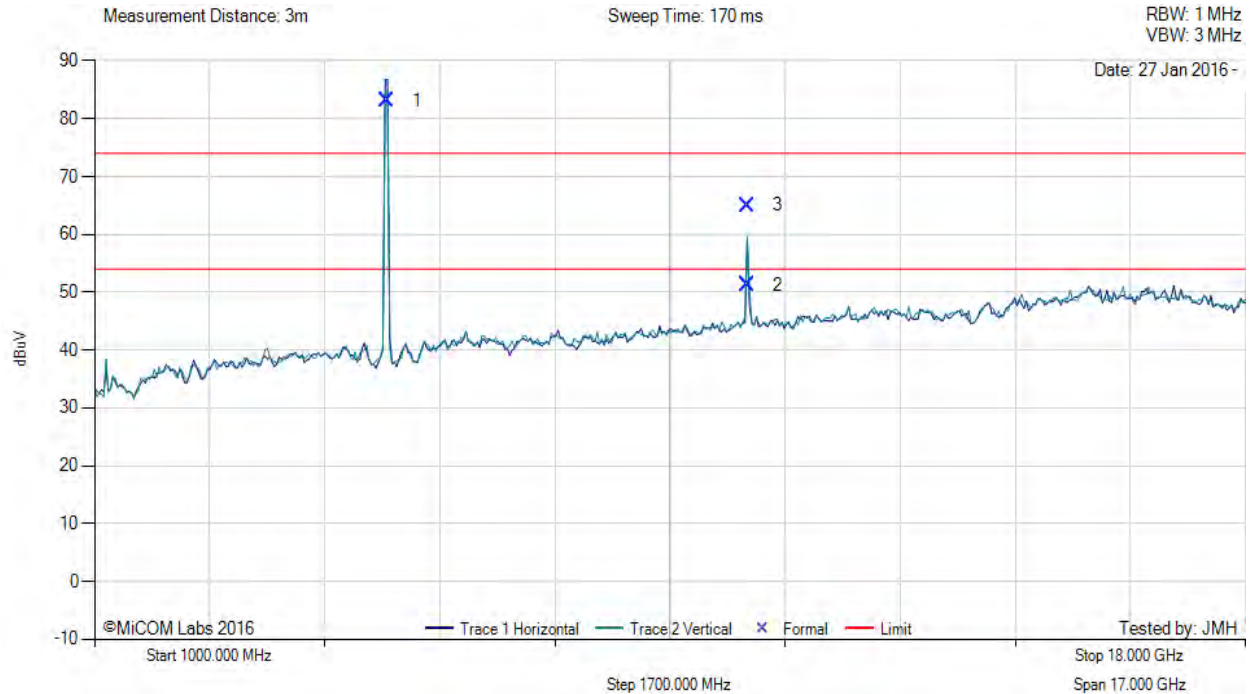
Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-48, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5318.16	90.36	3.75	-11.07	83.04	Fundamental	Horizontal	101	1	--	--	
2	10637.35	49.74	5.45	-3.89	51.30	Max Avg	Vertical	177	315	54.0	-2.7	Pass
3	10637.35	63.42	5.45	-3.89	64.98	Max Peak	Vertical	177	315	74.0	-9.0	Pass

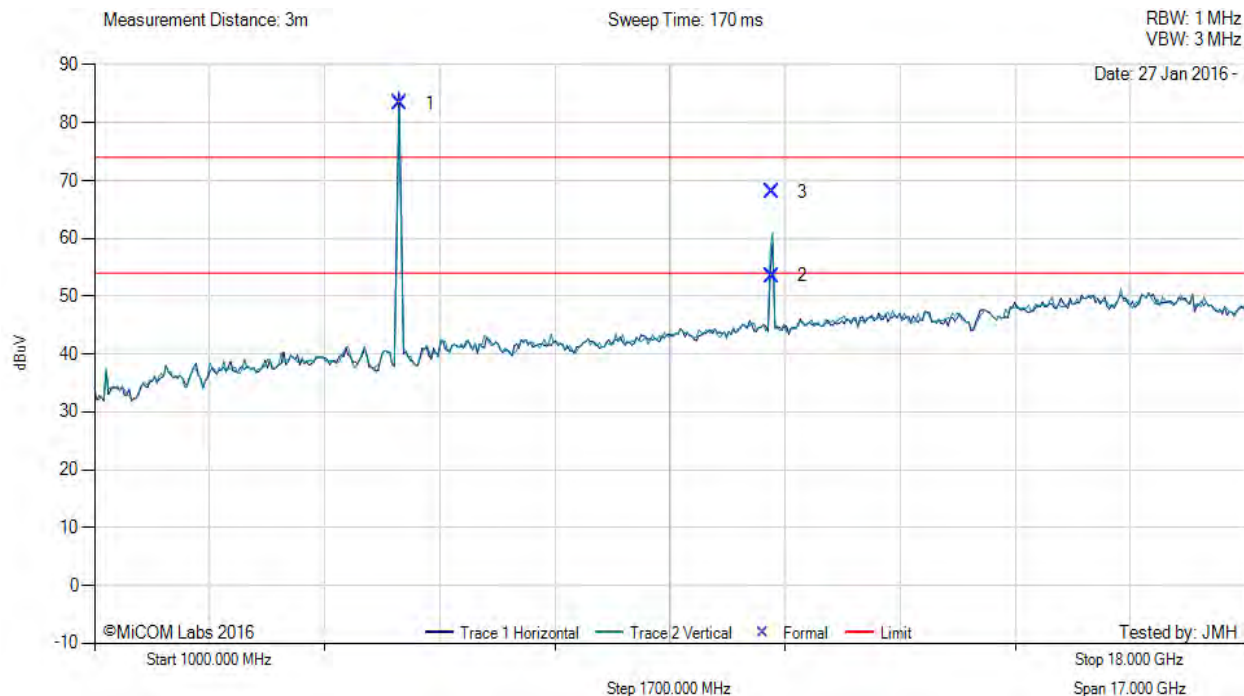
Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-48, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5501.68	90.78	3.75	-11.17	83.36	Fundamental	Horizontal	101	1	--	--	
2	11000.52	52.16	5.59	-4.24	53.51	Max Avg	Vertical	188	315	54.0	-0.5	Pass
3	11000.52	66.64	5.59	-4.24	67.99	Max Peak	Vertical	188	315	74.0	-6.0	Pass

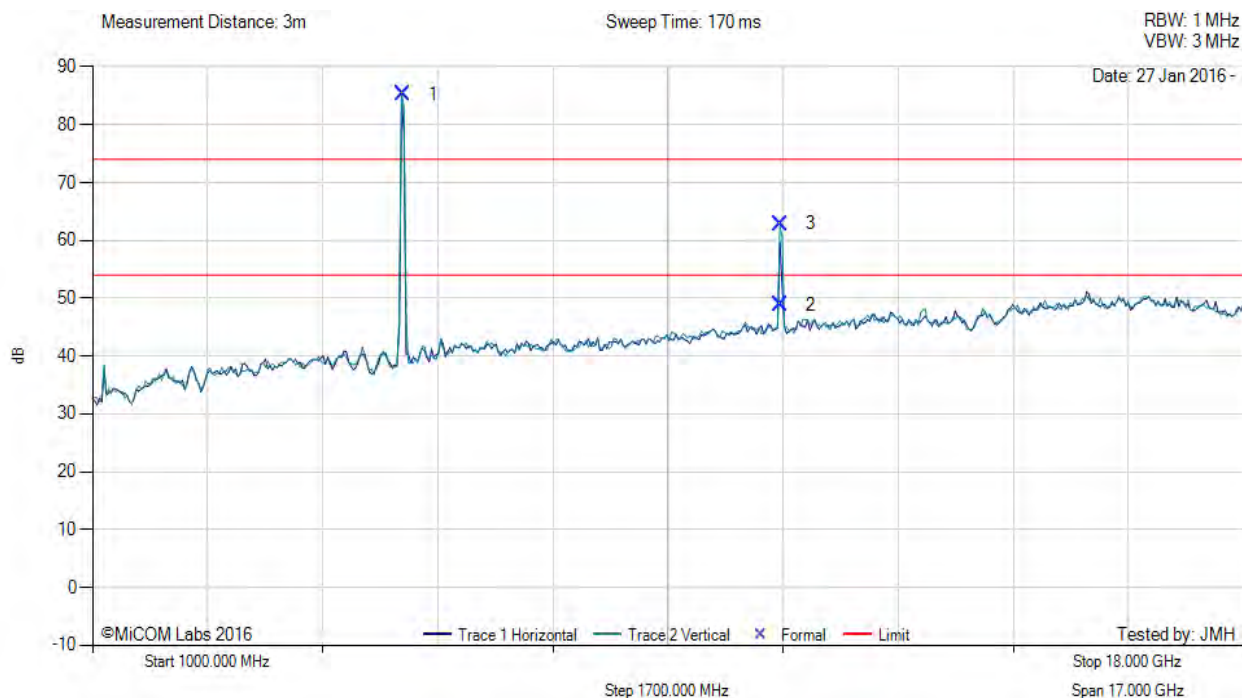
Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-48, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5578.48	92.68	3.81	-11.20	85.29	Fundamental	Vertical	101	1	--	--	
2	11154.99	46.94	5.93	-4.05	48.82	Max Avg	Vertical	158	246	54.0	-5.2	Pass
3	11154.99	60.96	5.93	-4.05	62.84	Max Peak	Vertical	158	246	74.0	-11.2	Pass

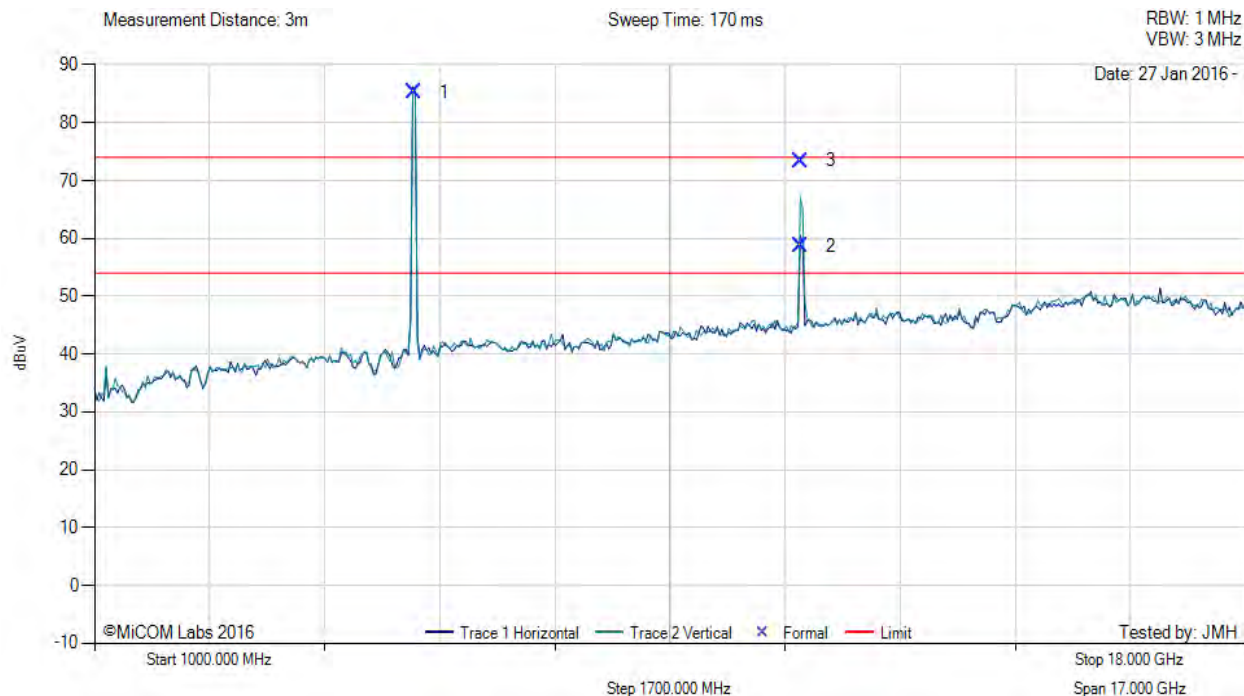
Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-48, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5718.67	92.22	3.80	-10.75	85.27	Fundamental	Horizontal	101	1	--	--	
2	11431.02	53.18	5.48	-4.92	53.74	Max Avg	Vertical	171	263	54	-0.26	Pass
3	11431.02	72.82	5.48	-4.92	73.38	Max Peak	Vertical	171	263	74.0	-0.6	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

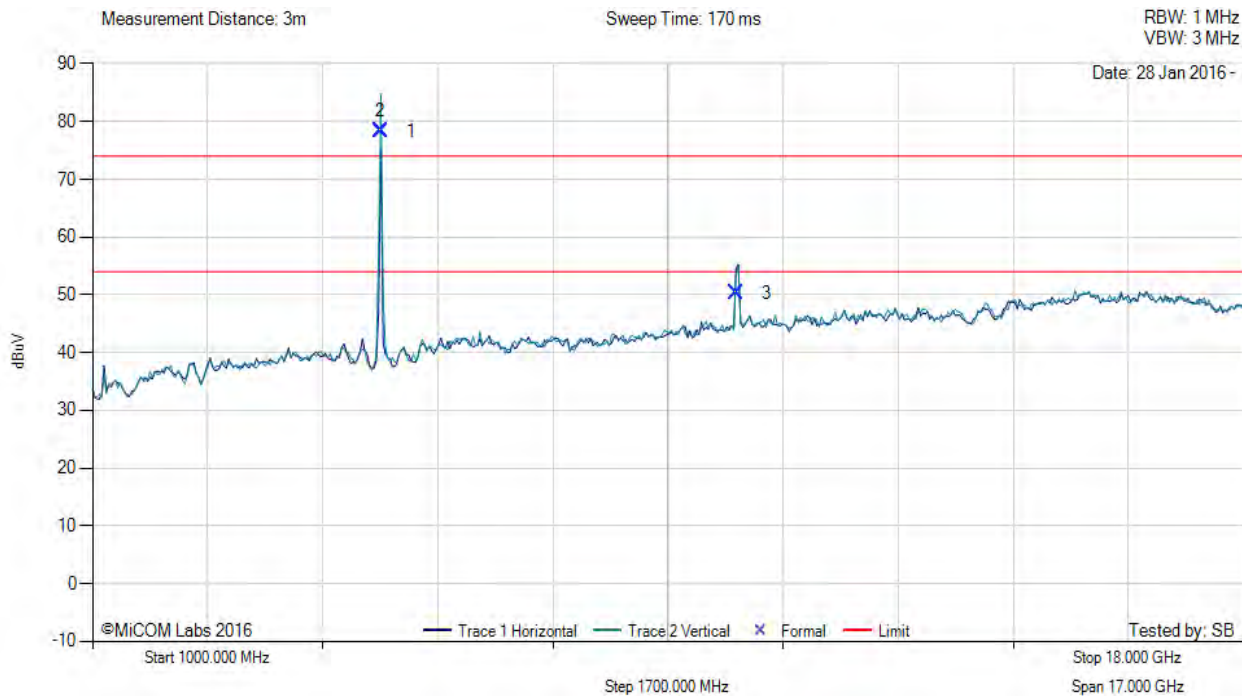
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A.1.1.8. Metal Sheet



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: Metal Sheet, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5255.83	86.01	3.64	-11.31	78.34	Fundamental	Vertical	101	0	--	--	
2	5255.83	86.01	3.64	-11.31	78.34	Peak (NRB)	Vertical	101	0	--	--	Pass
3	10510.90	48.99	5.48	-4.26	50.21	Peak (NRB)	Horizontal	101	0	--	--	Pass

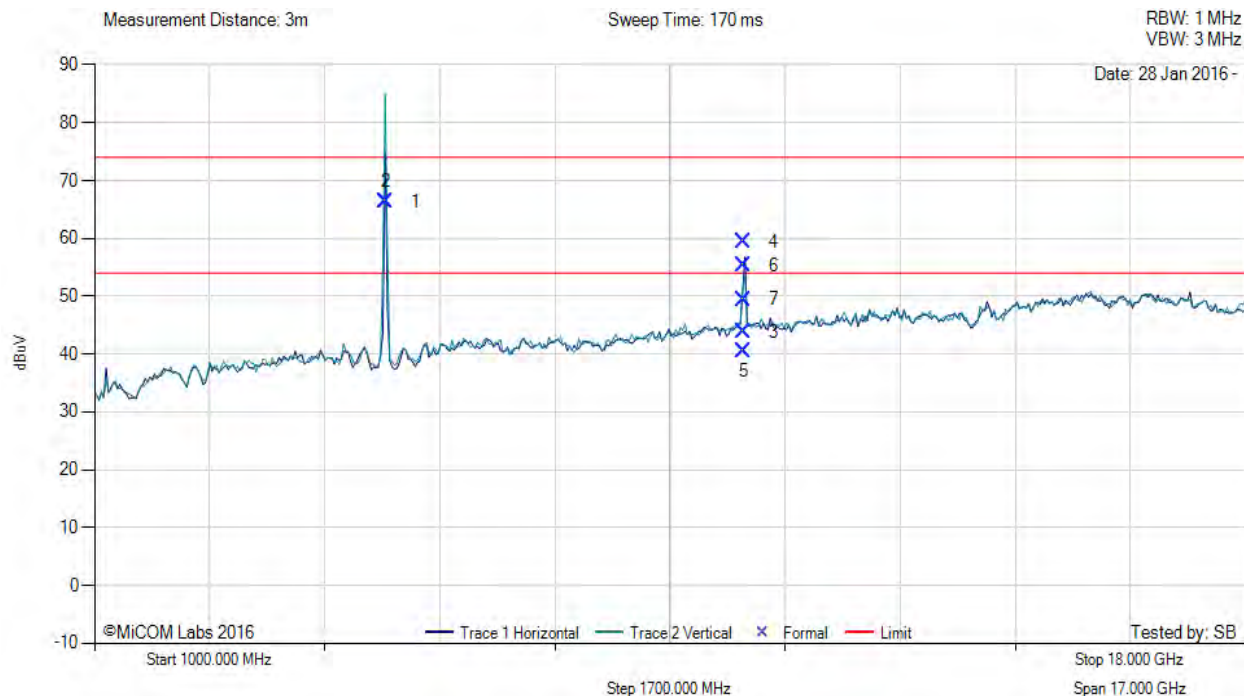
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: Metal Sheet, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5299.44	73.60	3.81	-11.09	66.32	Fundamental	Vertical	101	1	--	--	
2	5299.44	73.60	3.81	-11.09	66.32	Peak (NRB)	Vertical	101	1	--	--	Pass
3	10587.81	42.05	5.71	-3.95	43.81	Max Avg	Horizontal	166	78	54.0	-10.2	Pass
4	10587.81	57.61	5.71	-3.95	59.37	Max Peak	Horizontal	166	78	74.0	-14.6	Pass
5	10587.81	38.80	5.71	-3.95	40.56	Max Avg	Vertical	111	0	54.0	-13.4	Pass
6	10587.81	53.55	5.71	-3.95	55.31	Max Peak	Vertical	111	0	74.0	-18.7	Pass
7	10587.81	47.67	5.71	-3.95	49.43	Peak (NRB)	Horizontal	101	1	--	--	Pass

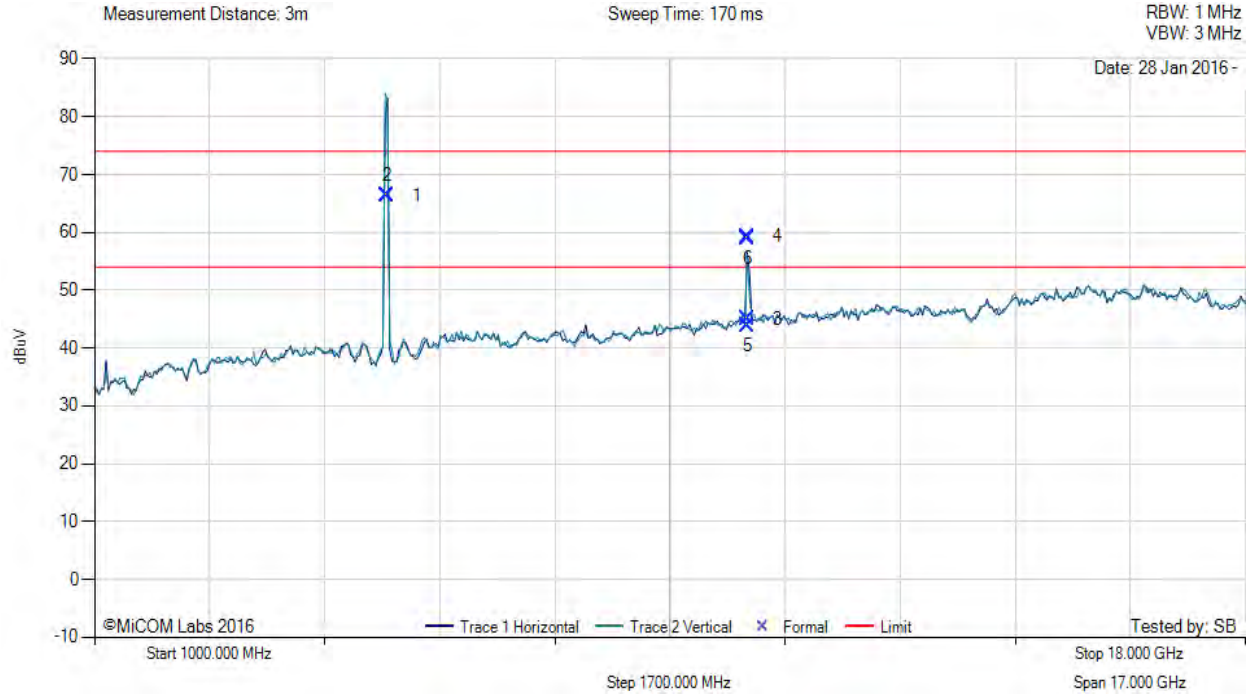
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: Metal Sheet, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5323.77	73.63	3.74	-11.06	66.31	Fundamental	Vertical	101	1	--	--	
2	5323.77	73.63	3.74	-11.06	66.31	Peak (NRB)	Vertical	101	1	--	--	Pass
3	10645.89	43.55	5.30	-3.90	44.95	Max Avg	Horizontal	122	48	54.0	-9.1	Pass
4	10645.89	57.89	5.30	-3.90	59.29	Max Peak	Horizontal	122	48	74.0	-14.7	Pass
5	10645.89	42.55	5.30	-3.90	43.95	Max Avg	Vertical	122	65	54.0	-10.1	Pass
6	10645.89	57.64	5.30	-3.90	59.04	Max Peak	Vertical	122	65	74.0	-15.0	Pass

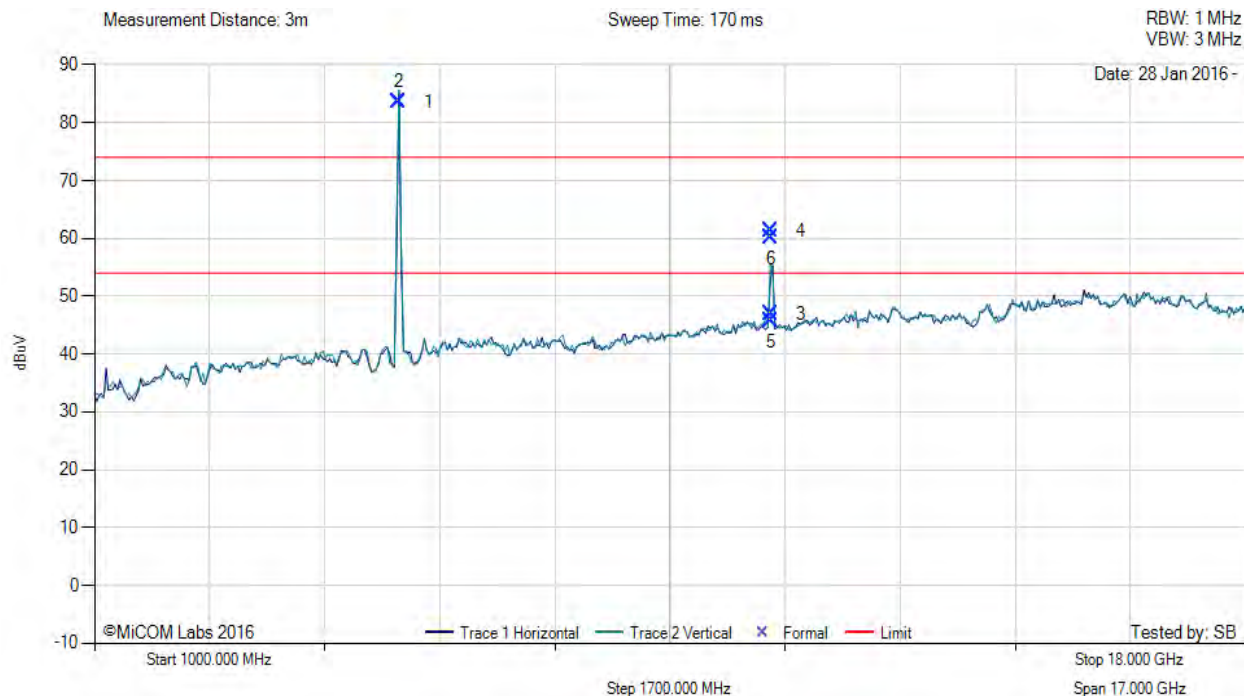
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: Metal Sheet, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5492.46	91.04	3.71	-11.18	83.57	Fundamental	Horizontal	101	1	--	--	
2	5492.46	91.04	3.71	-11.18	83.57	Peak (NRB)	Horizontal	101	1	--	--	Pass
3	10993.18	45.66	5.60	-4.26	47.00	Max Avg	Horizontal	100	50	54.0	-7.0	Pass
4	10993.18	59.91	5.60	-4.26	61.25	Max Peak	Horizontal	100	50	74.0	-12.8	Pass
5	10993.18	44.42	5.60	-4.26	45.76	Max Avg	Vertical	100	19	54.0	-8.2	Pass
6	10993.18	58.75	5.60	-4.26	60.09	Max Peak	Vertical	100	19	74.0	-13.9	Pass

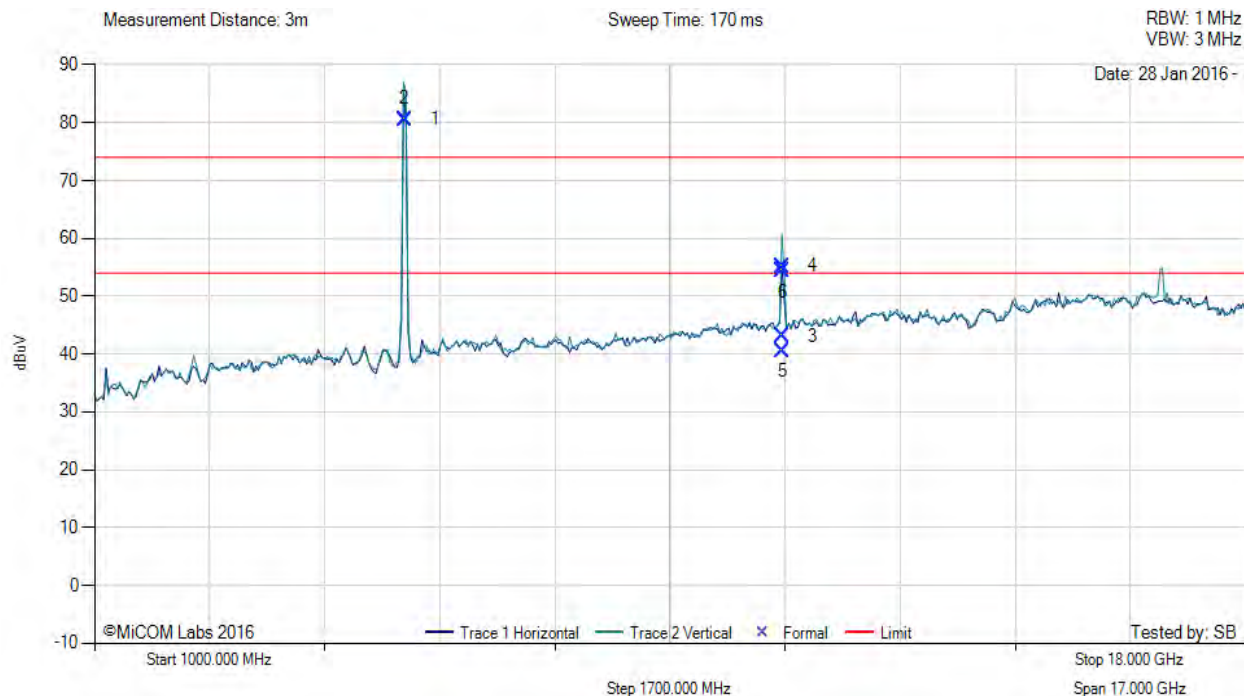
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: Metal Sheet, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	5578.28	87.99	3.81	-11.20	80.60	Fundamental	Horizontal	101	1	--	--	
2	5578.28	87.99	3.81	-11.20	80.60	Peak (NRB)	Horizontal	101	1	--	--	Pass
3	11159.51	41.38	5.85	-4.07	43.16	Max Avg	Vertical	144	20	54.0	-10.8	Pass
4	11159.51	53.46	5.85	-4.07	55.24	Max Peak	Vertical	144	20	74.0	-18.8	Pass
5	11159.51	38.83	5.85	-4.07	40.61	Max Avg	Horizontal	190	351	54.0	-13.4	Pass
6	11159.51	52.55	5.85	-4.07	54.33	Max Peak	Horizontal	190	351	74.0	-19.7	Pass

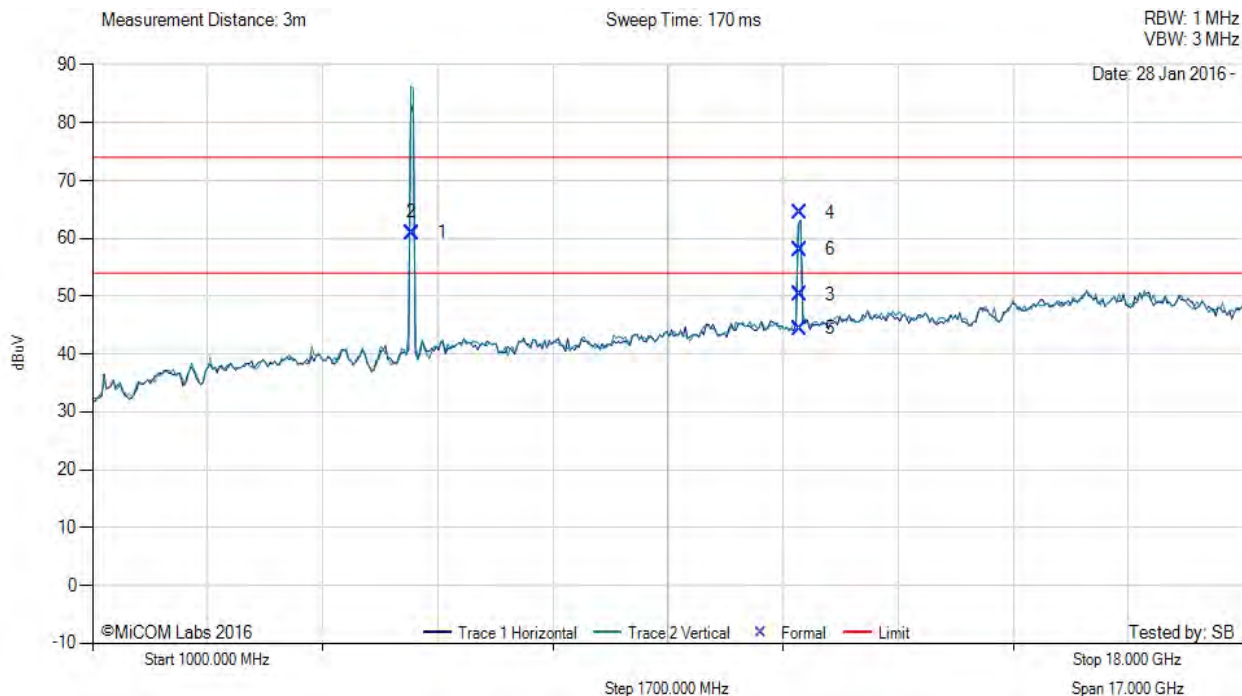
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: Metal Sheet, Power Setting: 21, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5715.75	67.90	3.81	-10.76	60.95	Fundamental	Vertical	101	1	--	--	
2	5715.75	67.90	3.81	-10.76	60.95	Peak (NRB)	Vertical	101	1	--	--	Pass
3	11445.21	49.83	5.40	-4.92	50.31	Max Avg	Horizontal	166	75	54.0	-3.7	Pass
4	11445.21	64.01	5.40	-4.92	64.49	Max Peak	Horizontal	166	75	74.0	-9.5	Pass
5	11445.21	43.96	5.40	-4.92	44.44	Max Avg	Vertical	100	355	54.0	-9.6	Pass
6	11445.21	57.60	5.40	-4.92	58.08	Max Peak	Vertical	100	355	74.0	-15.9	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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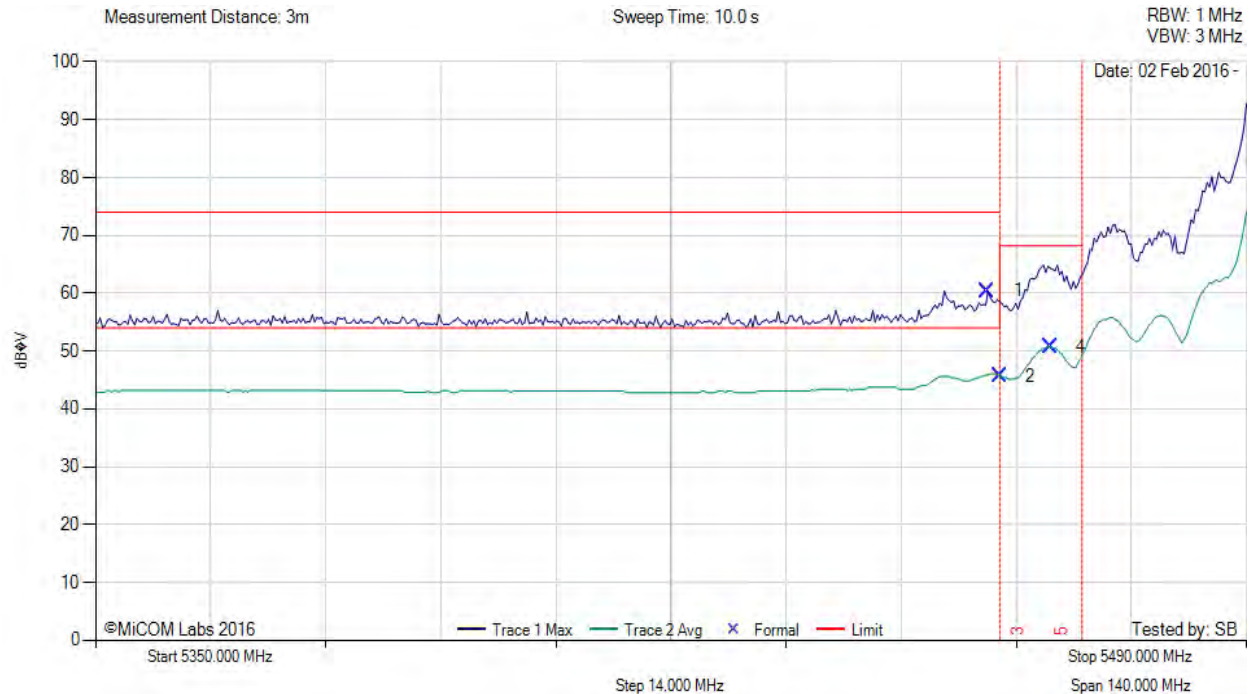
A.1.2. Restricted Band and Band-Edge Emissions

A.1.2.9. AP-ANT-13B



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-13B, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.52	22.29	3.79	34.31	60.39	Max Peak	Vertical	147	17	74.0	-13.6	Pass
2	5460.00	7.53	3.79	34.31	45.63	Max Avg	Vertical	147	17	54.0	-8.4	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5466.15	12.67	3.79	34.31	50.77	Max Avg	Horizontal	153	30	68.2*	-17.5	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

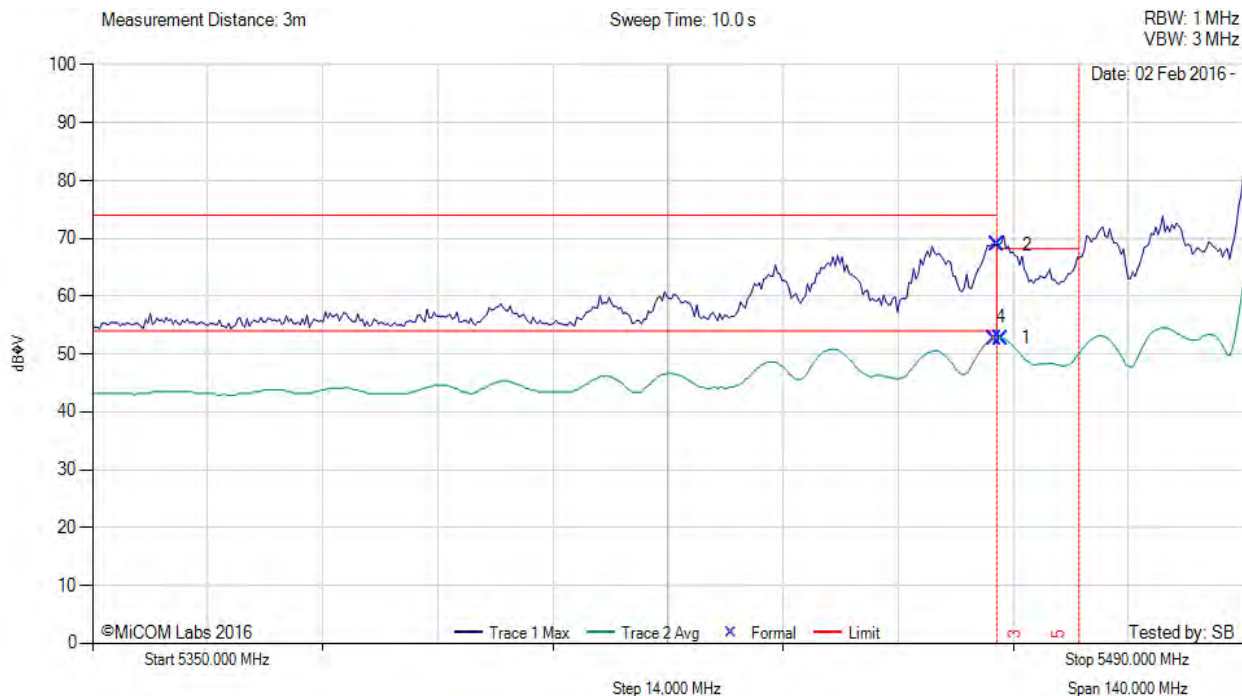
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-13B, Power Setting: 15.5, Duty Cycle (%): 100



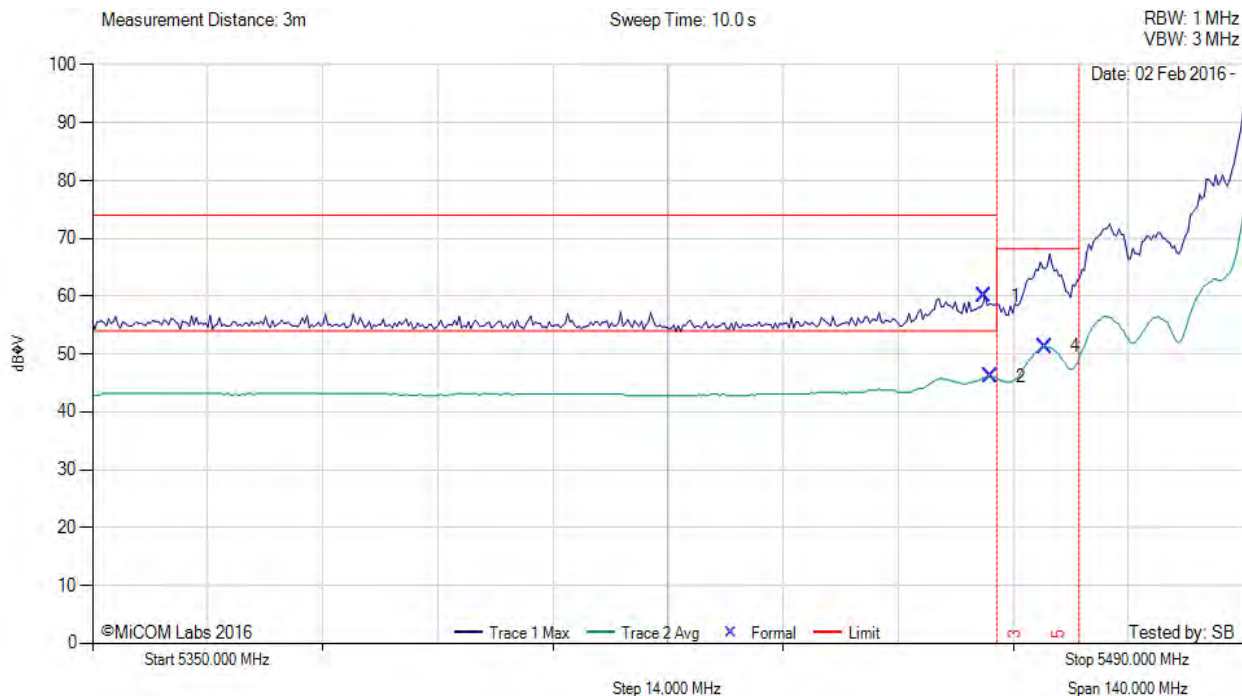
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5459.78	14.68	3.79	34.31	52.78	Max Avg	Vertical	147	17	54.0	-1.2	Pass
2	5460.00	30.79	3.79	34.31	68.89	Max Peak	Vertical	147	17	74.0	-5.1	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5460.54	14.68	3.79	34.31	52.78	Max Avg	Horizontal	153	30	68.2*	-15.5	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-13B, Power Setting: 18, Duty Cycle (%): 100



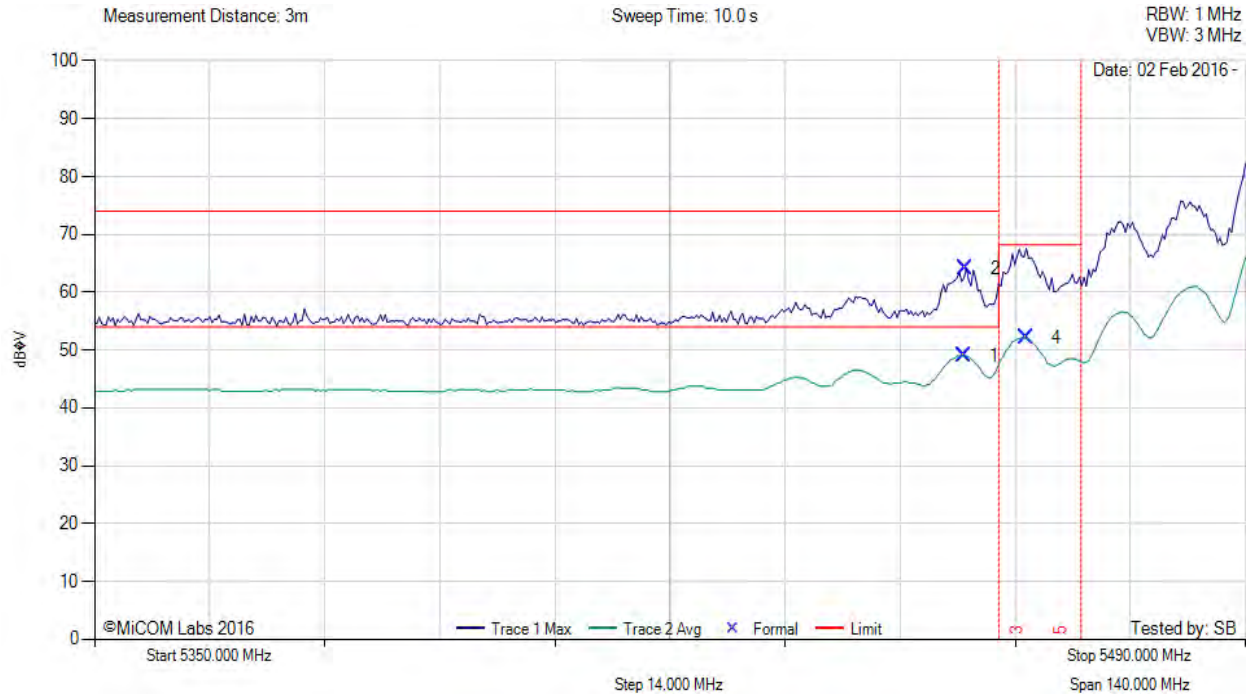
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.50	21.89	3.80	34.30	59.99	Max Peak	Vertical	147	17	74.0	-14.0	Pass
2	5459.24	8.00	3.79	34.31	46.10	Max Avg	Vertical	147	17	54.0	-7.9	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5465.87	13.19	3.79	34.31	51.29	Max Avg	--	--	--	68.2*	-16.9	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-13B, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5455.75	10.89	3.80	34.30	48.99	Max Avg	Vertical	147	17	54.0	-5.0	Pass
2	5455.93	26.03	3.80	34.30	64.13	Max Peak	Vertical	147	17	74.0	-9.9	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5463.35	14.02	3.79	34.31	52.12	Max Avg	Horizontal	153	30	68.2	-16.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED UPPER BAND-EDGE EMISSIONS

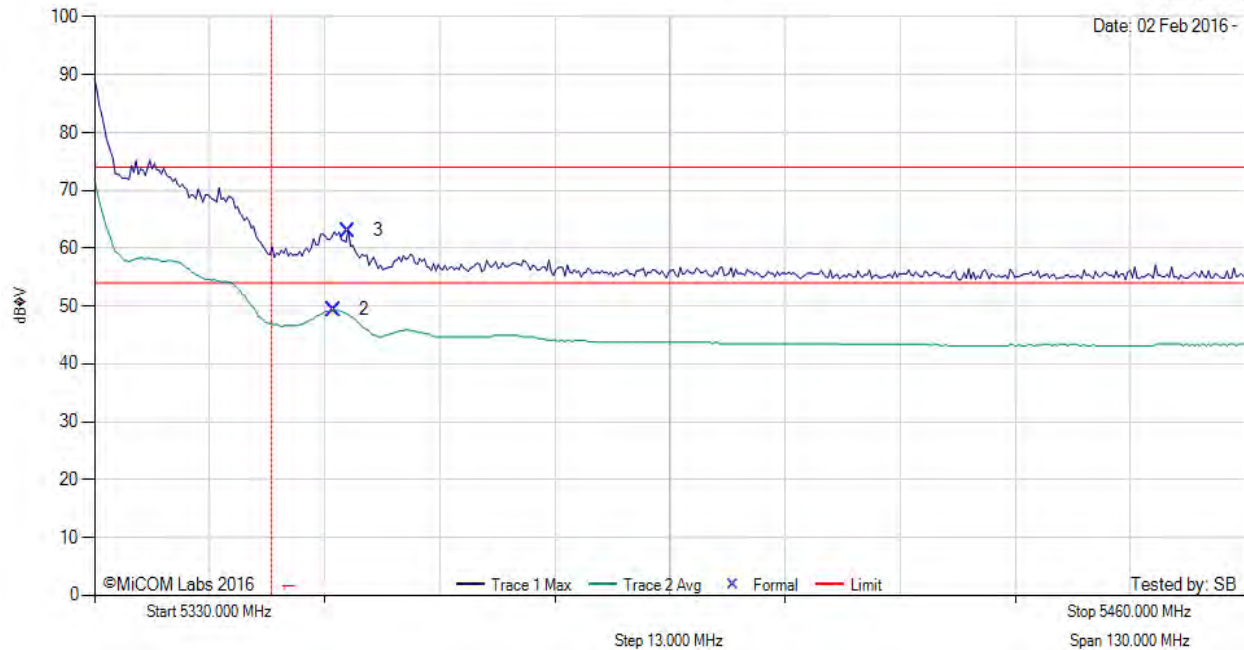
Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-13B, Power Setting: 18, Duty Cycle (%): 100

Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz
VBW: 3 MHz

Date: 02 Feb 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
2	5356.97	11.20	3.71	34.49	49.40	Max Avg	Vertical	155	6	54.0	-4.6	Pass
3	5358.60	24.83	3.71	34.49	63.03	Max Peak	Vertical	155	6	74.0	-11.0	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

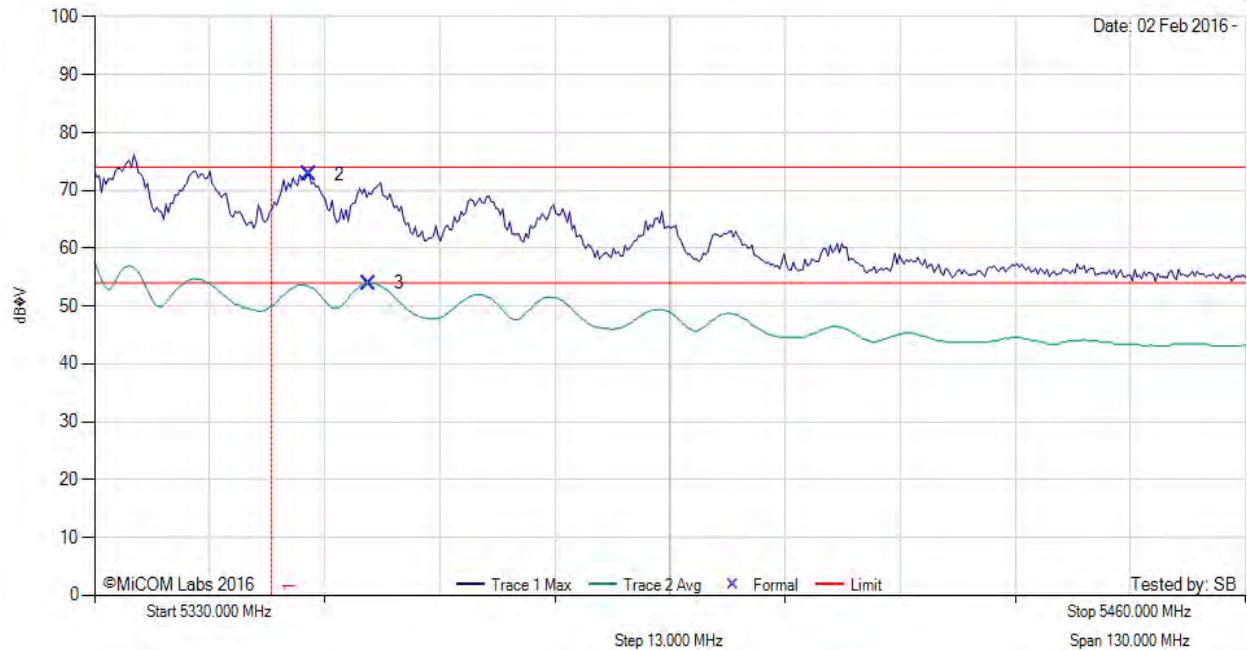
Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-13B, Power Setting: 15, Duty Cycle (%): 100

Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz
VBW: 3 MHz

Date: 02 Feb 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
2	5354.27	34.59	3.71	34.50	72.80	Max Peak	Vertical	147	17	74.0	-1.2	Pass
3	5360.98	15.78	3.70	34.48	53.96	Max Avg	Vertical	147	17	54.0	0.0	Pass

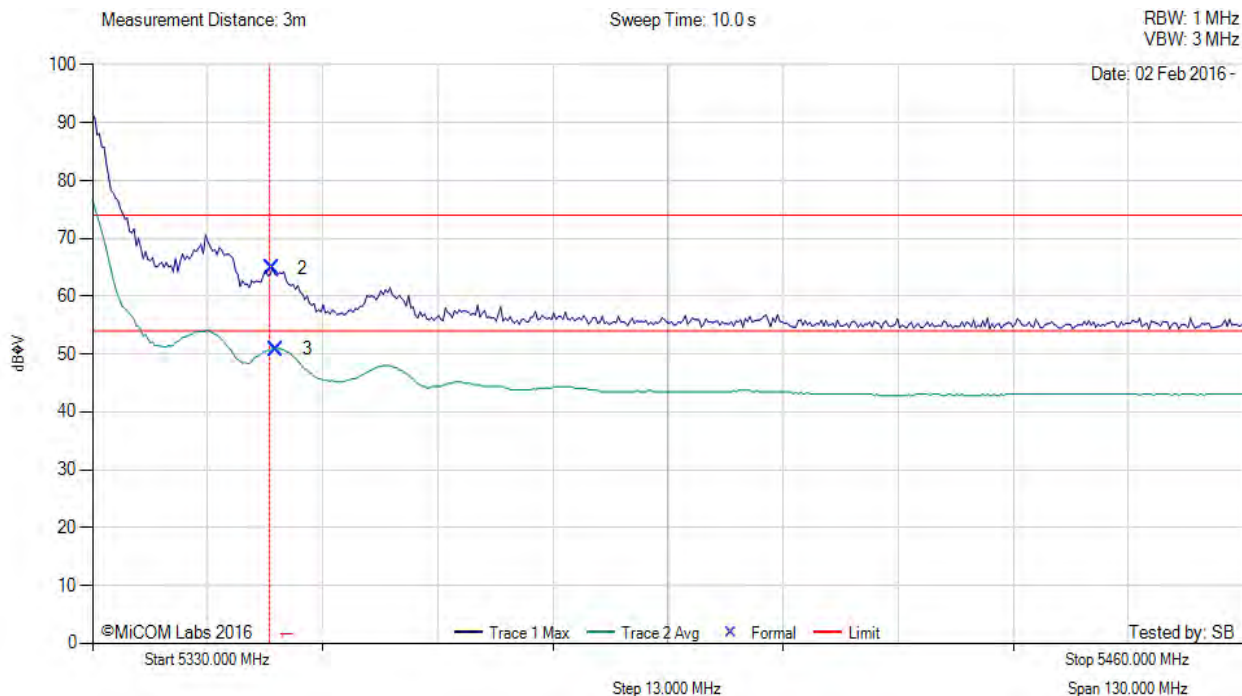
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-13B, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
2	5350.26	26.65	3.70	34.51	64.86	Max Peak	Vertical	147	17	74.0	-9.1	Pass
3	5350.78	12.63	3.71	34.51	50.85	Max Avg	Vertical	147	17	54.0	-3.2	Pass

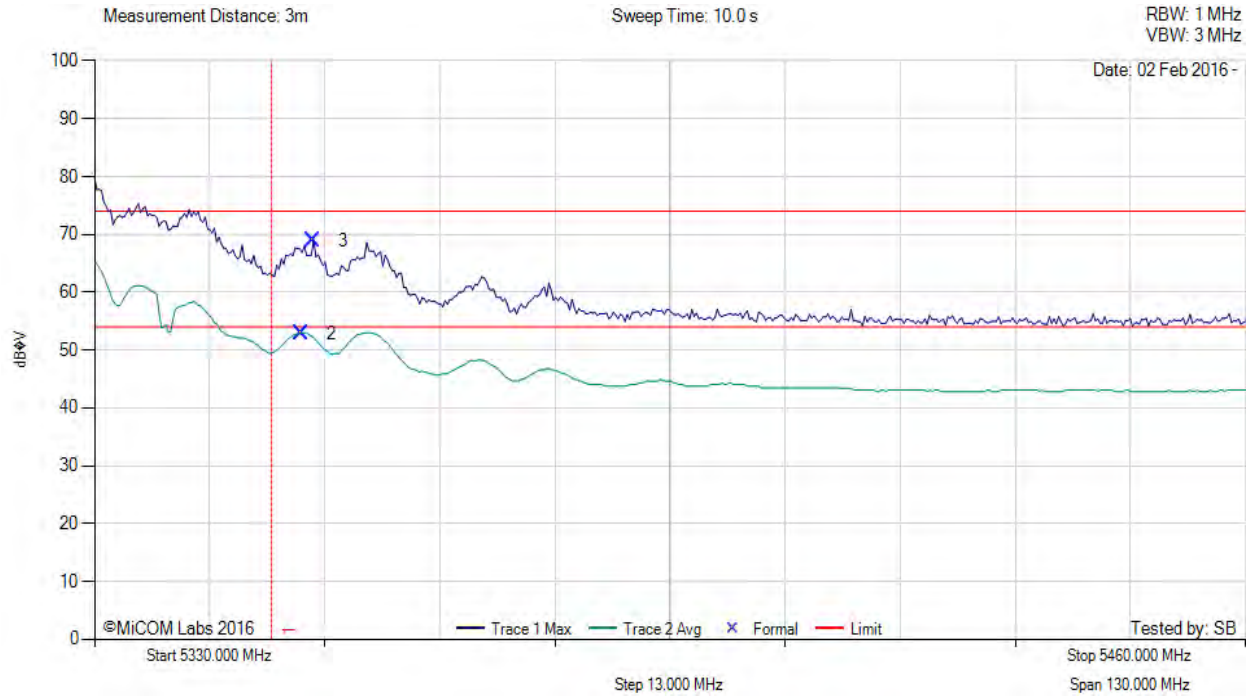
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-13B, Power Setting: 17, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
2	5353.31	14.66	3.71	34.50	52.87	Max Avg	Vertical	147	17	54.0	-1.1	Pass
3	5354.65	30.77	3.71	34.50	68.98	Max Peak	Vertical	147	17	74.0	-5.0	Pass

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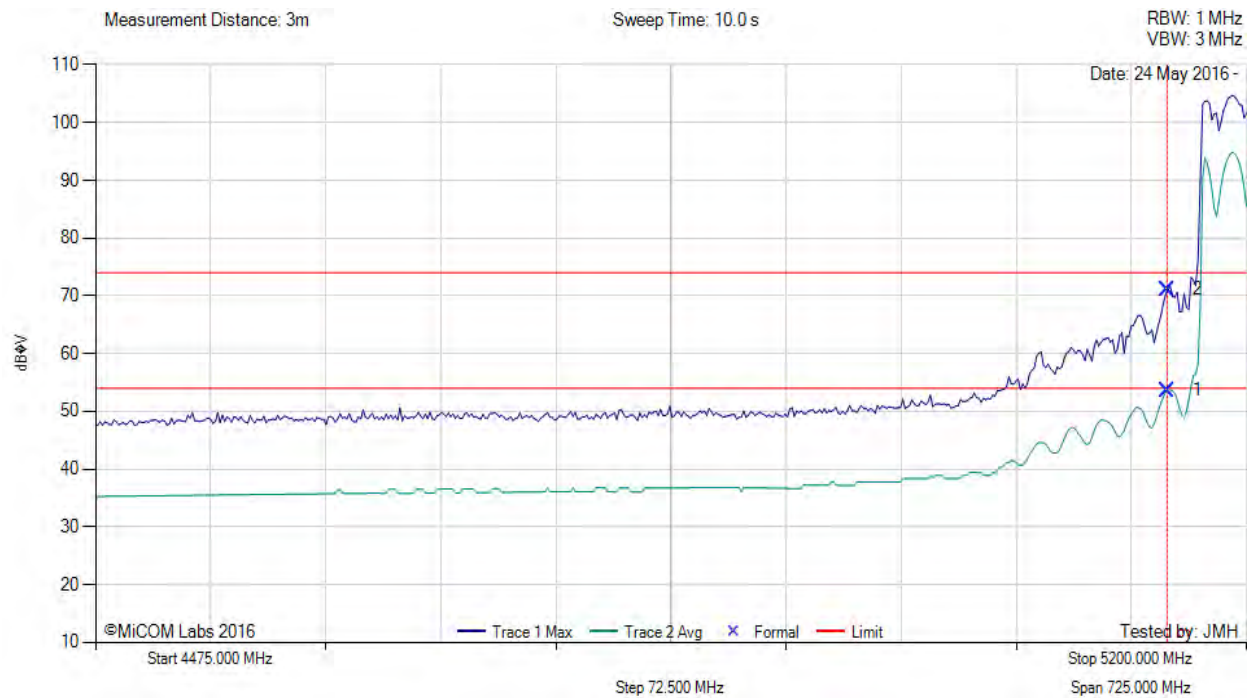


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5210.00 MHz, Antenna: AP-ANT-13B, Power Setting: 16, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5150.00	15.85	3.67	34.11	53.63	Max Avg	Vertical	200	-2	54.0	-0.4	Pass
2	5150.00	33.30	3.67	34.11	71.08	Max Peak	Vertical	200	-2	74.0	-2.9	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

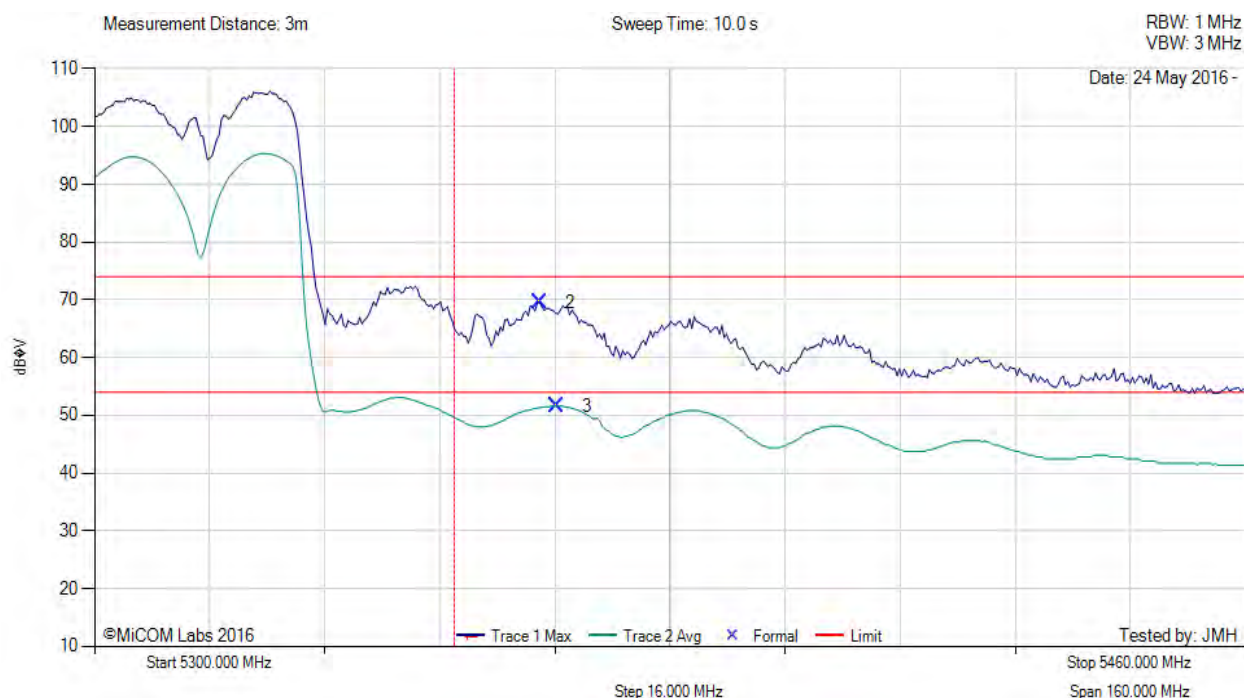
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5290.00 MHz, Antenna: AP-ANT-13B, Power Setting: 16, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
2	5361.84	31.38	3.70	34.48	69.56	Max Peak	Vertical	200	-2	74.0	-4.4	Pass
3	5364.19	13.44	3.70	34.48	51.62	Max Avg	Vertical	200	-2	54.0	-2.4	Pass
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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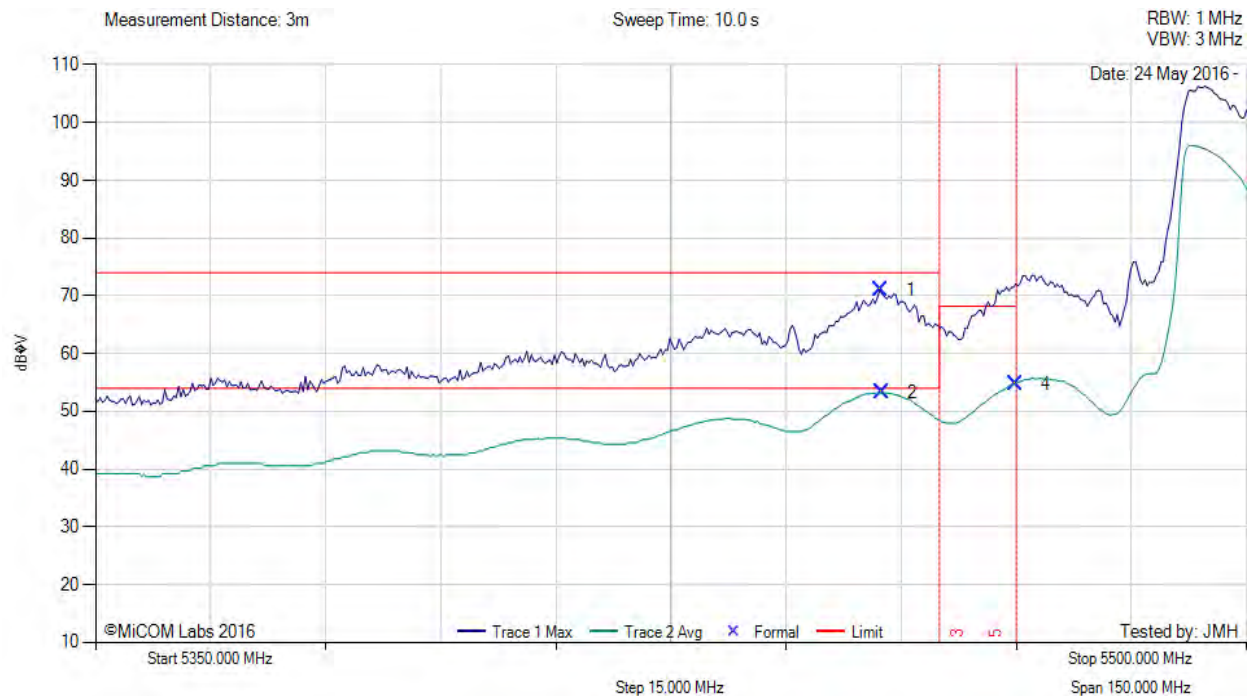


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5530.00 MHz, Antenna: AP-ANT-13B, Power Setting: 15.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5452.26	32.95	3.78	34.30	71.03	Max Peak	Vertical	199	-3	74.0	-3.0	Pass
2	5452.48	15.21	3.78	34.30	53.29	Max Avg	Vertical	199	-3	54.0	-0.7	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.94	16.66	3.79	34.32	54.77	Max Avg	Horizontal	153	30	68.2*	-13.5	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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A.1.2.10. AP-ANT-19



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-19, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5456.07	10.38	3.80	34.30	48.48	Max Avg	Vertical	166	118	54.0	-5.5	Pass
2	5456.35	24.64	3.80	34.30	62.74	Max Peak	Vertical	166	118	74.0	-11.3	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.52	14.35	3.79	34.32	52.46	Max Avg	Horizontal	153	30	68.2*	-15.8	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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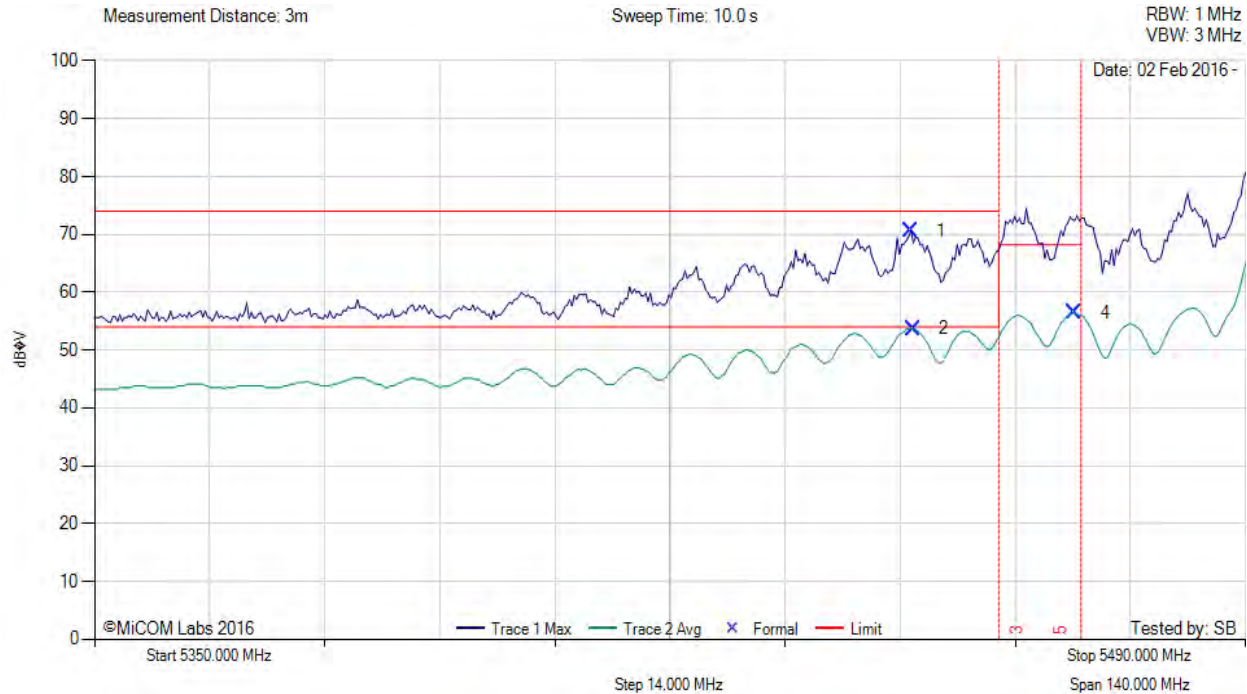


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-19, Power Setting: 15.5, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5449.34	32.55	3.77	34.30	70.62	Max Peak	Vertical	166	118	74.0	-3.4	Pass
2	5449.62	15.61	3.77	34.30	53.68	Max Avg	Vertical	166	118	54.0	-0.3	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.24	18.27	3.79	34.32	56.38	Max Avg	Horizontal	153	30	68.2	-11.9	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

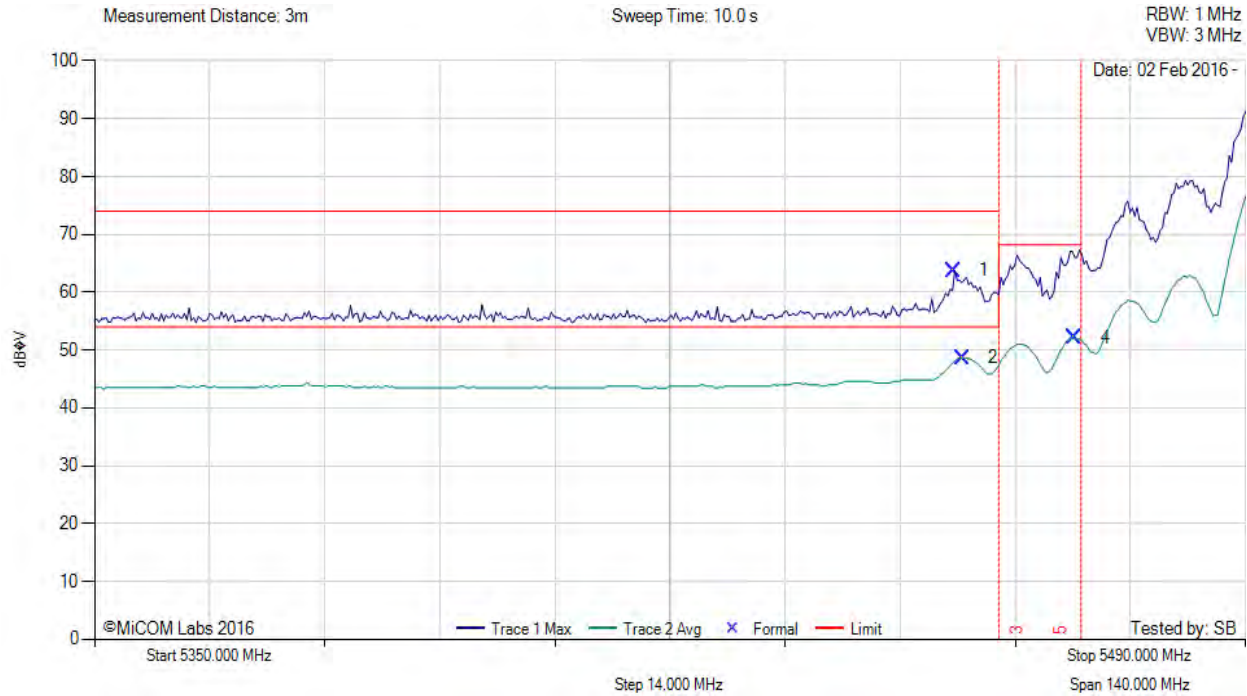
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-19, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5454.53	25.63	3.79	34.30	63.72	Max Peak	Vertical	166	118	74.0	-10.3	Pass
2	5455.65	10.55	3.80	34.30	48.65	Max Avg	Vertical	166	118	54.0	-5.4	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.24	14.01	3.79	34.32	52.12	Max Avg	Horizontal	153	30	68.2	-16.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

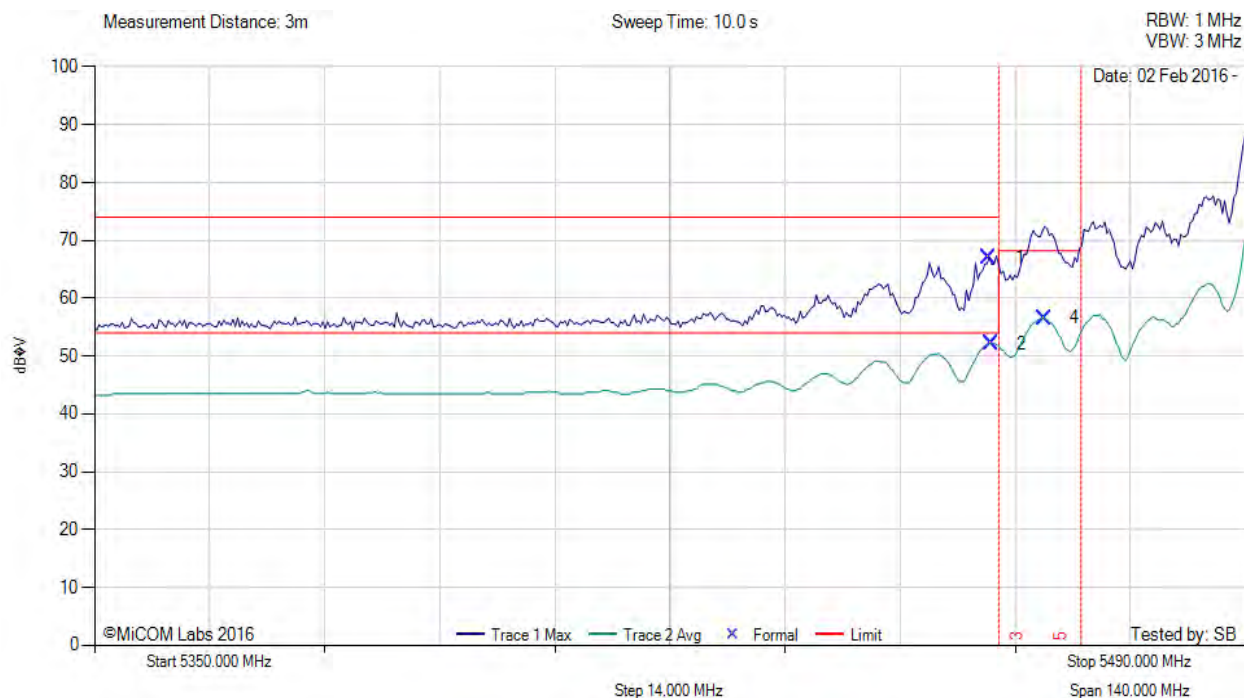
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-19, Power Setting: 17, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.84	28.91	3.79	34.31	67.01	Max Peak	Vertical	166	118	74.0	-7.0	Pass
2	5459.02	14.02	3.79	34.31	52.12	Max Avg	Vertical	166	118	54.0	-1.9	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5465.59	18.48	3.79	34.32	56.58	Max Avg	Horizontal	153	30	68.2	-11.7	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

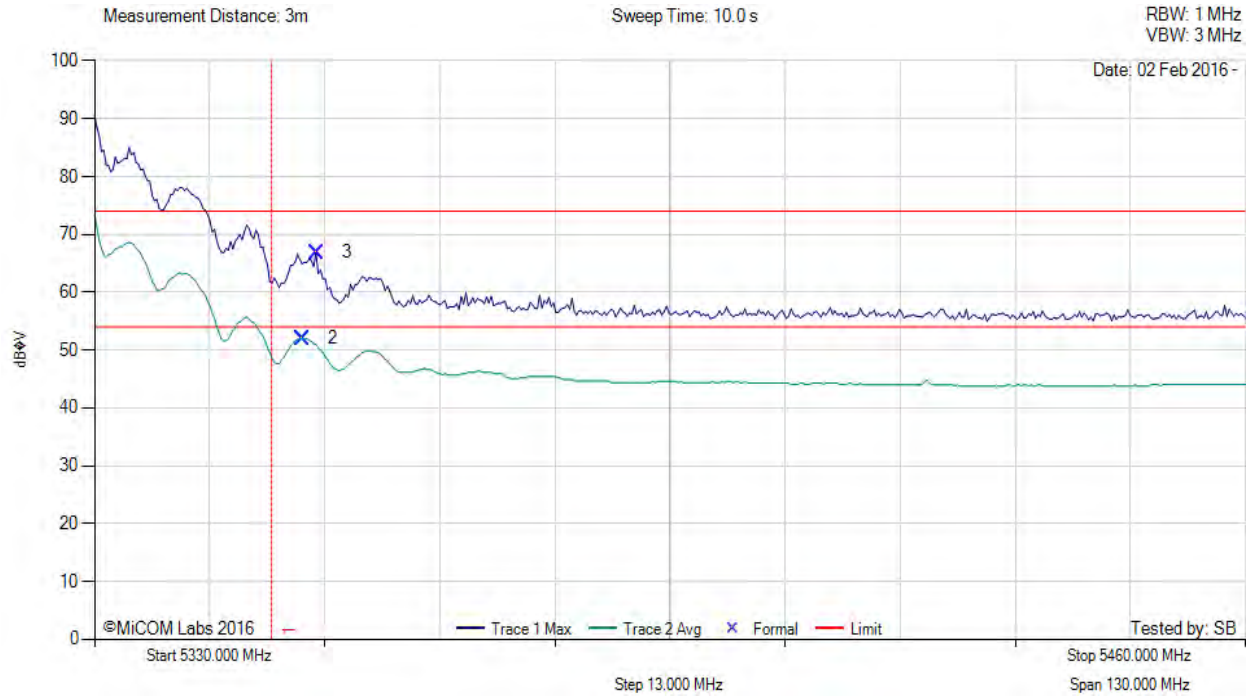
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-19, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5353.53	13.77	3.71	34.50	51.98	Max Avg	Vertical	166	102	54.0	-2.0	Pass
2	5355.05	28.62	3.71	34.50	66.83	Max Peak	Vertical	166	102	74.0	-7.2	Pass
3	--	--	--	--	--	Band Edge	--	--	--	--	--	--

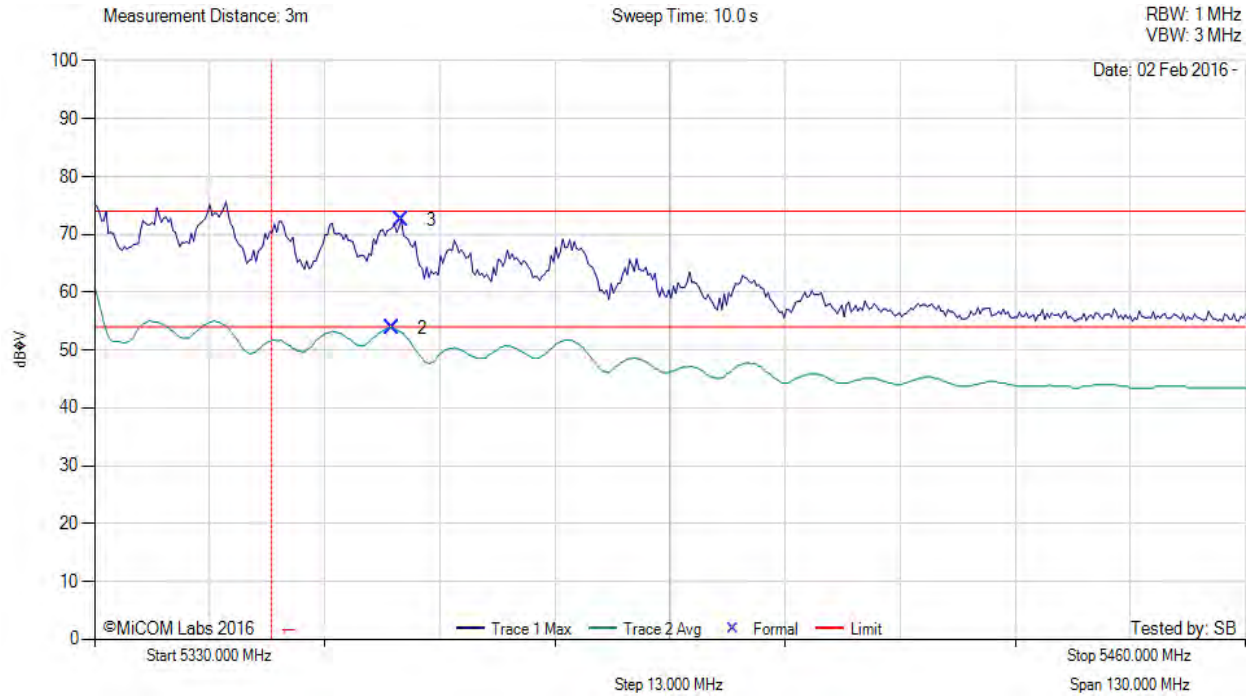
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-19, Power Setting: 14, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5363.65	15.69	3.70	34.48	53.87	Max Avg	Vertical	166	118	54.0	-0.1	Pass
3	5364.65	34.28	3.69	34.47	72.44	Max Peak	Vertical	166	118	74.0	-1.6	Pass

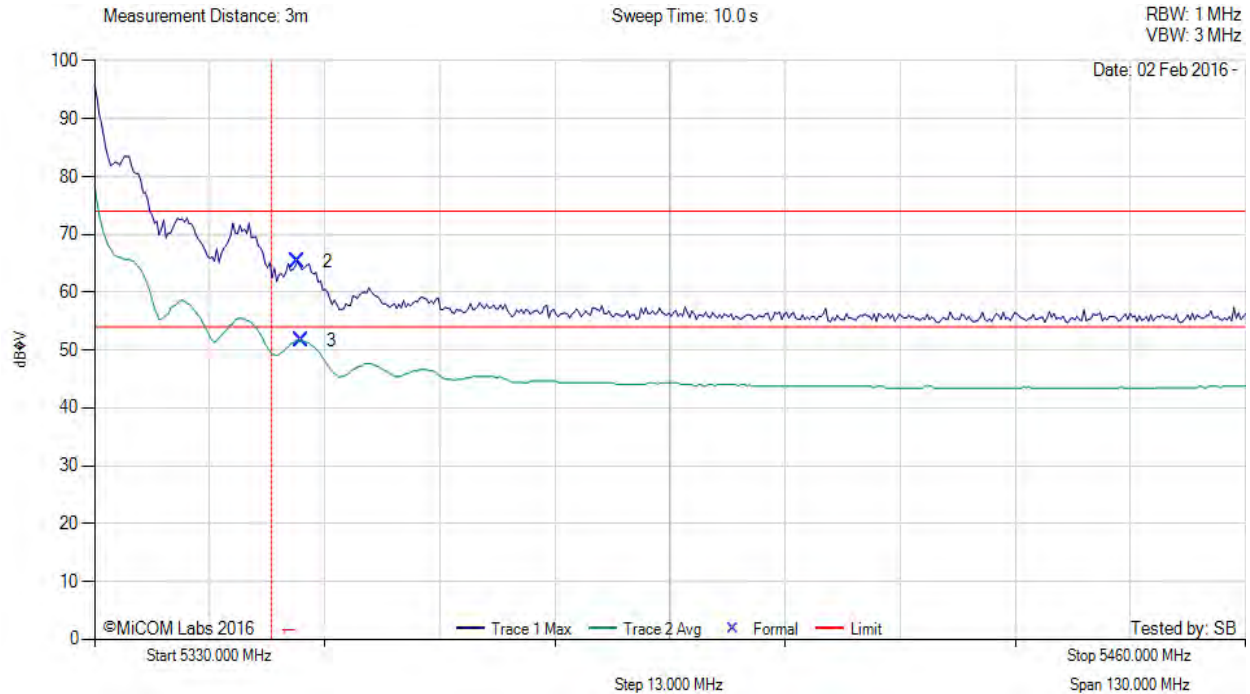
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-19, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5352.95	27.07	3.71	34.50	65.28	Max Peak	Vertical	166	118	74.0	-8.7	Pass
2	5353.31	13.41	3.71	34.50	51.62	Max Avg	Vertical	166	118	54.0	-2.4	Pass
3	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	

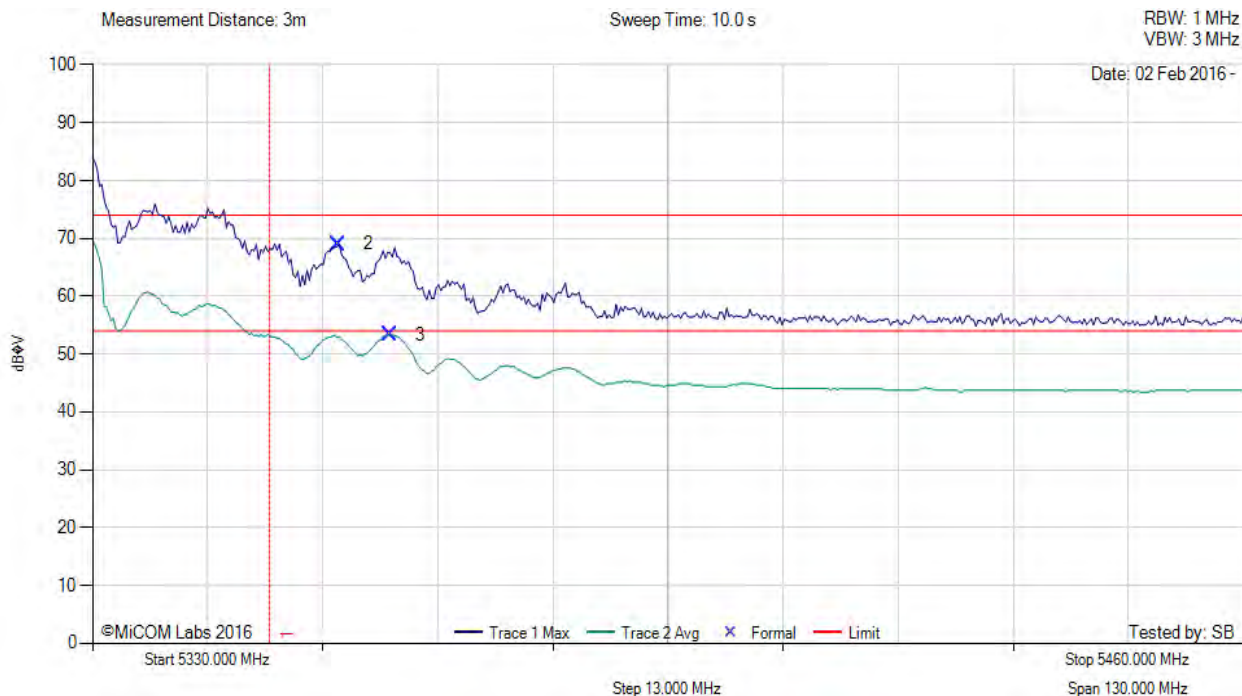
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-19, Power Setting: 17, Duty Cycle (%): 100

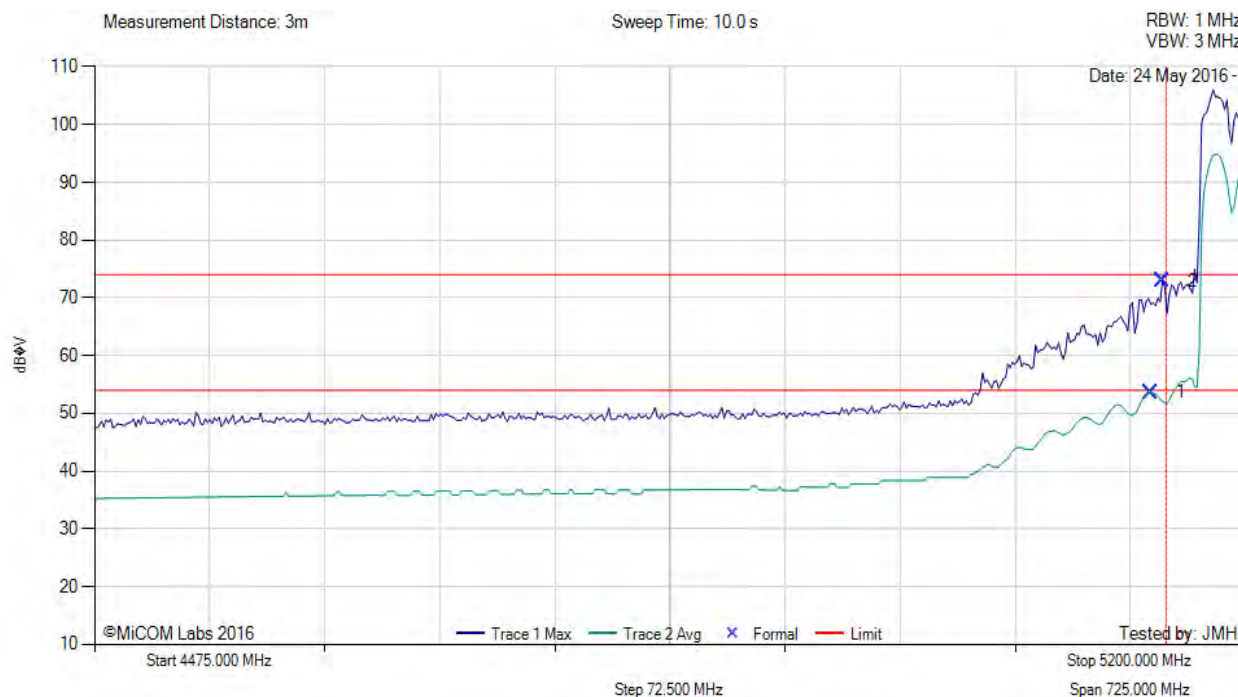


Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5357.78	30.86	3.71	34.49	69.06	Max Peak	Vertical	166	118	74.0	-4.9	Pass
3	5363.57	15.10	3.70	34.48	53.28	Max Avg	Vertical	166	118	54.0	-0.7	Pass

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-19, Power Setting: 12.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5140.13	15.80	3.70	34.12	53.62	Max Avg	Vertical	153	346	54.0	-0.4	Pass
2	5147.39	35.10	3.68	34.11	72.89	Max Peak	Vertical	153	346	74.0	-1.1	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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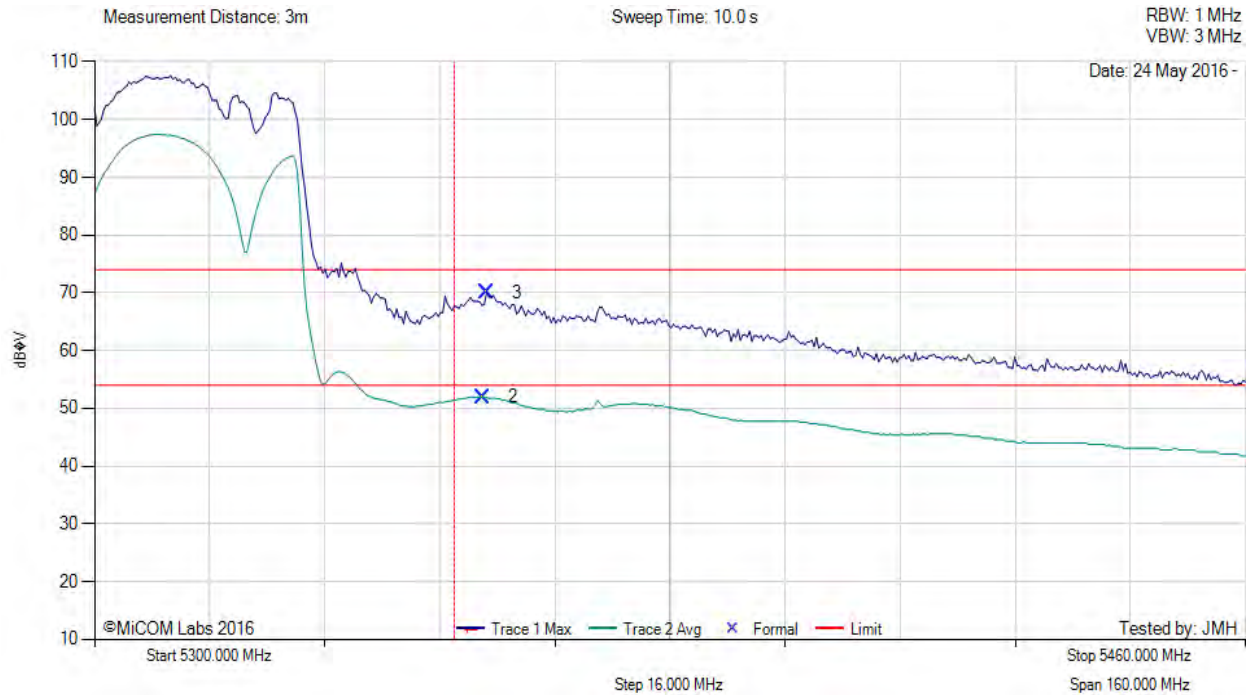


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-19, Power Setting: 11.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
2	5353.91	13.77	3.71	34.50	51.98	Max Avg	Vertical	153	346	54.0	-2.0	Pass
3	5354.55	31.90	3.71	34.50	70.11	Max Peak	Vertical	153	346	74.0	-3.9	Pass
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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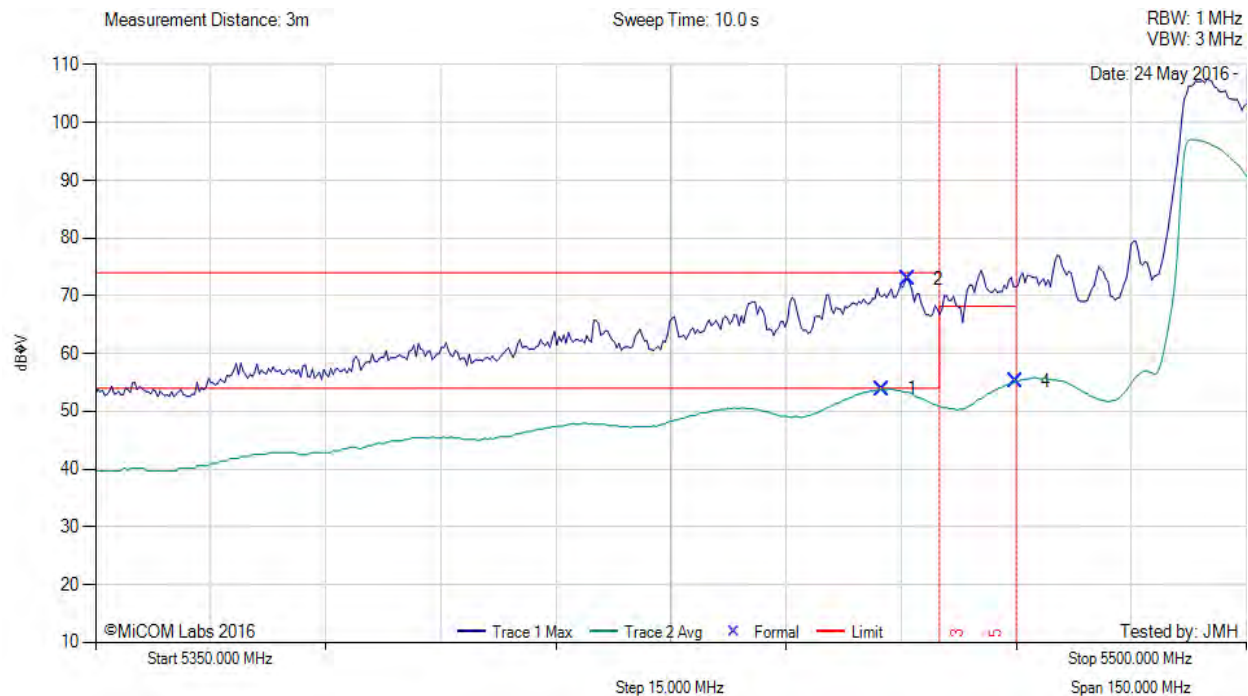


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5570.00 MHz, Antenna: AP-ANT-19, Power Setting: 12.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5452.51	15.78	3.79	34.30	53.87	Max Avg	Vertical	144	312	54.0	-0.1	Pass
2	5455.81	34.78	3.80	34.30	72.88	Max Peak	Vertical	144	312	74.0	-1.1	Pass
4	5469.94	17.07	3.79	34.32	55.18	Max Avg	Horizontal	153	30	68.2*	-13.1	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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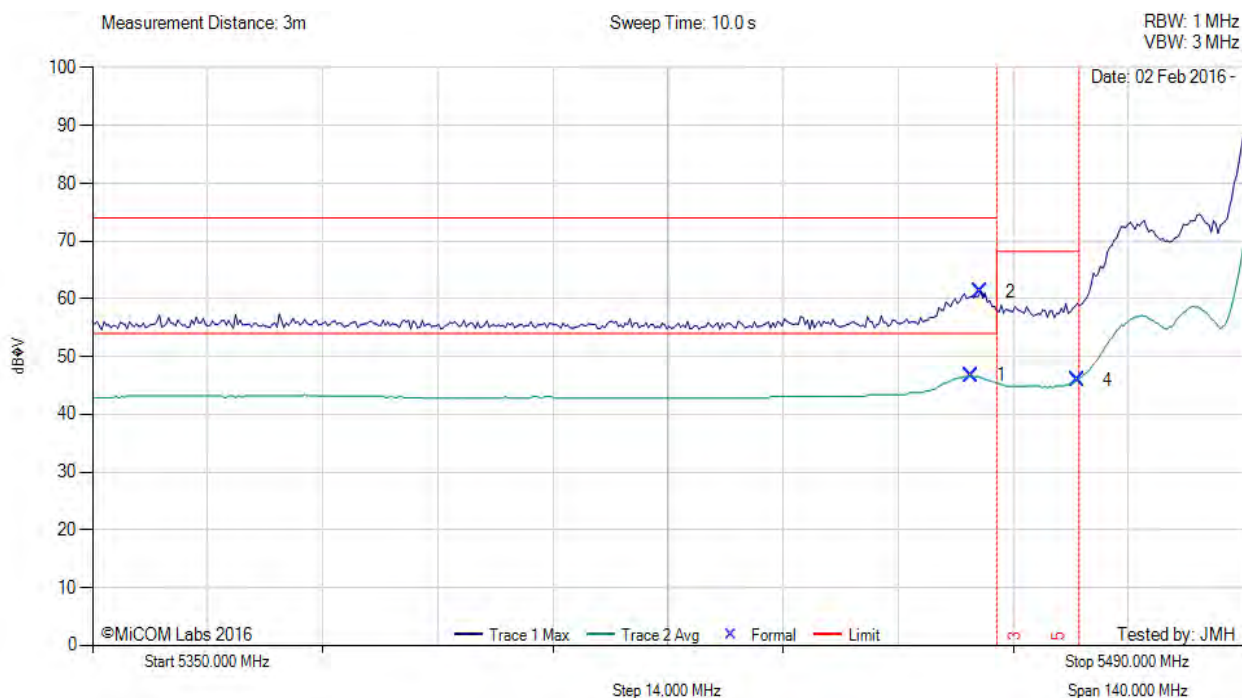
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A.1.2.11. AP-ANT-1W



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-1W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5456.89	8.66	3.80	34.30	46.76	Max Avg	Vertical	148	44	54.0	-7.2	Pass
2	5458.02	23.21	3.80	34.30	61.31	Max Peak	Vertical	148	44	74.0	-12.7	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.79	7.76	3.79	34.32	45.87	Max Avg	Horizontal	153	30	68.2	-22.4	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

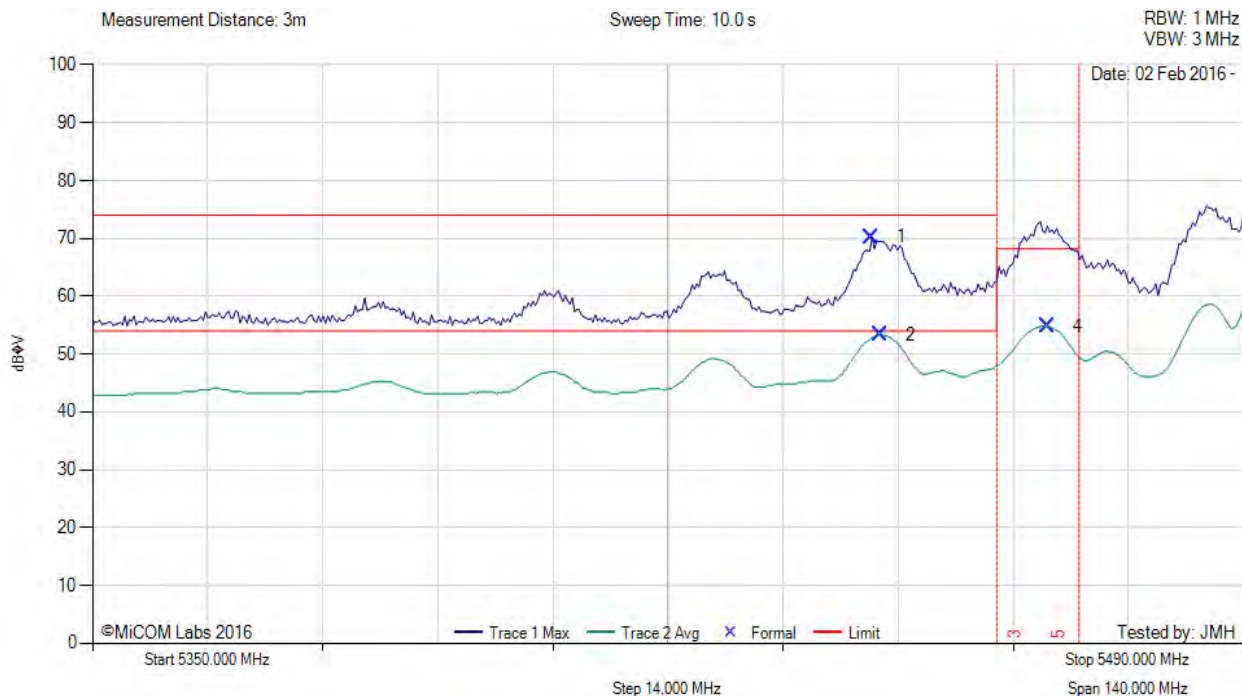
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-1W, Power Setting: 16, Duty Cycle (%): 100



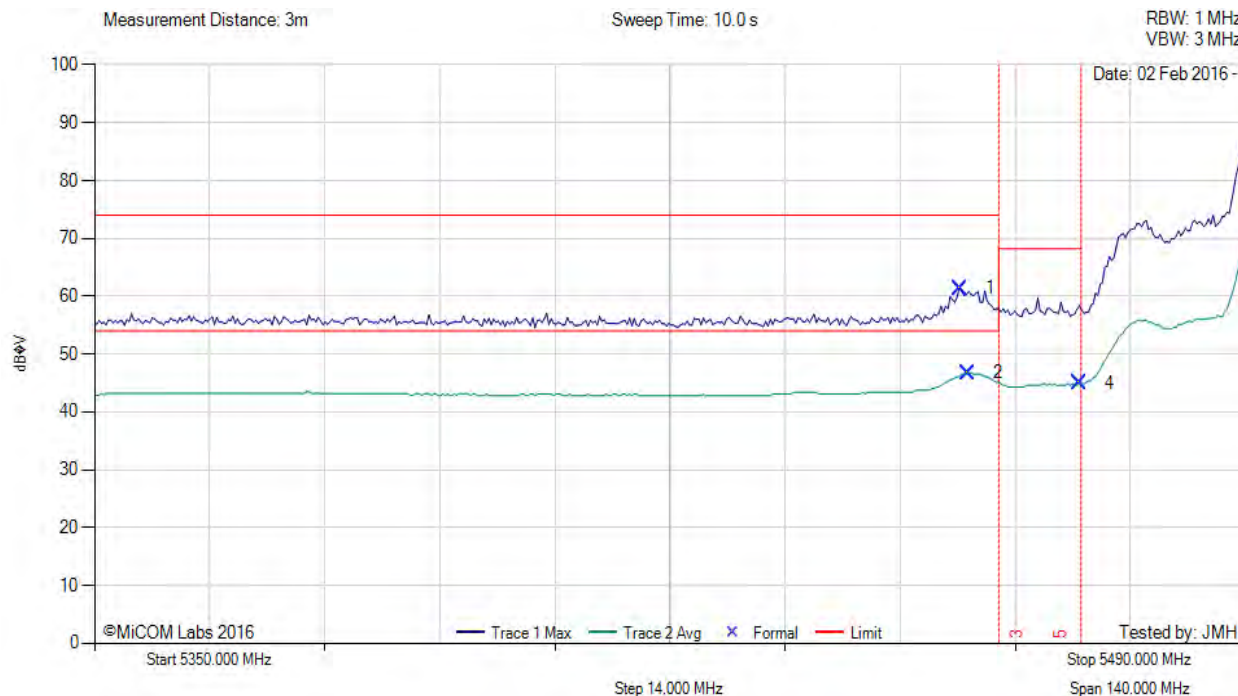
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5444.77	32.16	3.76	34.30	70.22	Max Peak	Vertical	148	44	74.0	-3.8	Pass
2	5445.77	15.33	3.76	34.30	53.39	Max Avg	Vertical	148	44	54.0	-0.6	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5466.15	16.75	3.79	34.31	54.85	Max Avg	Horizontal	153	30	68.2*	-13.4	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-1W, Power Setting: 18, Duty Cycle (%): 100



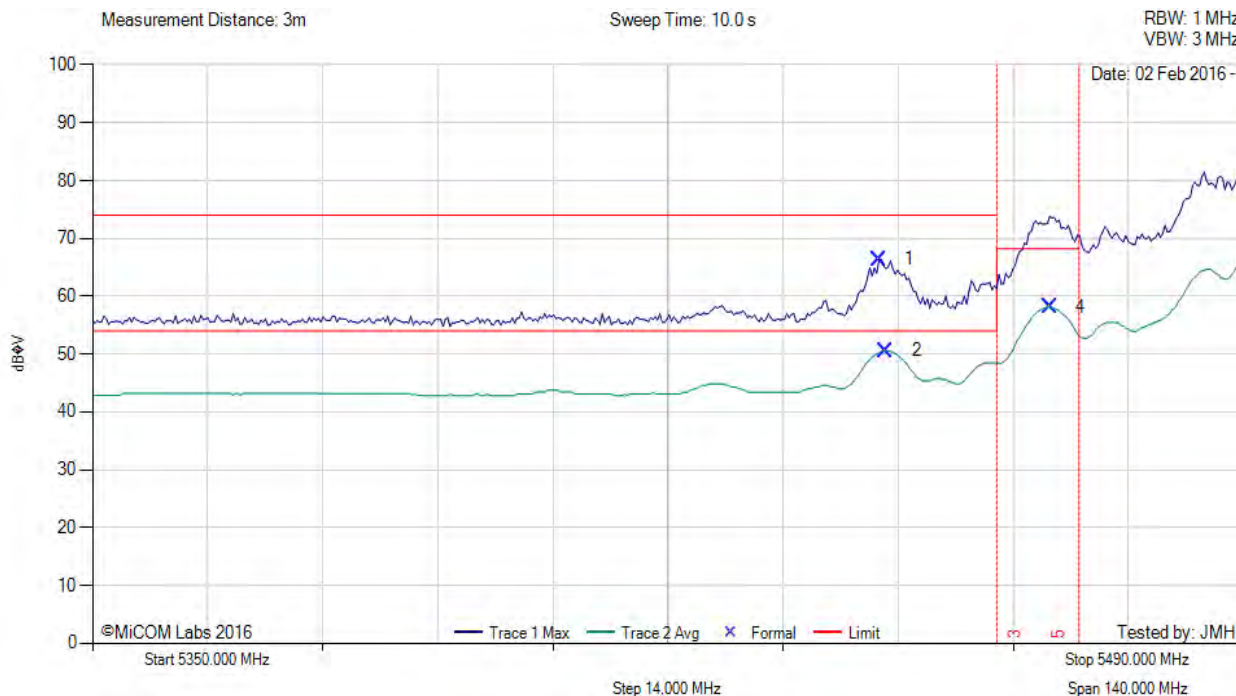
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5455.27	23.30	3.79	34.30	61.39	Max Peak	Vertical	148	44	74.0	-12.6	Pass
2	5456.21	8.66	3.80	34.30	46.76	Max Avg	Vertical	148	44	54.0	-7.2	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.80	6.77	3.79	34.32	44.88	Max Avg	Horizontal	153	30	68.2	-23.4	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-1W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5445.67	28.30	3.76	34.30	66.36	Max Peak	Vertical	148	44	74.0	-7.6	Pass
2	5446.51	12.56	3.76	34.30	50.62	Max Avg	Vertical	148	44	54.0	-3.4	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5466.43	20.05	3.79	34.32	58.15	Max Avg	Horizontal	153	30	68.2	-10.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

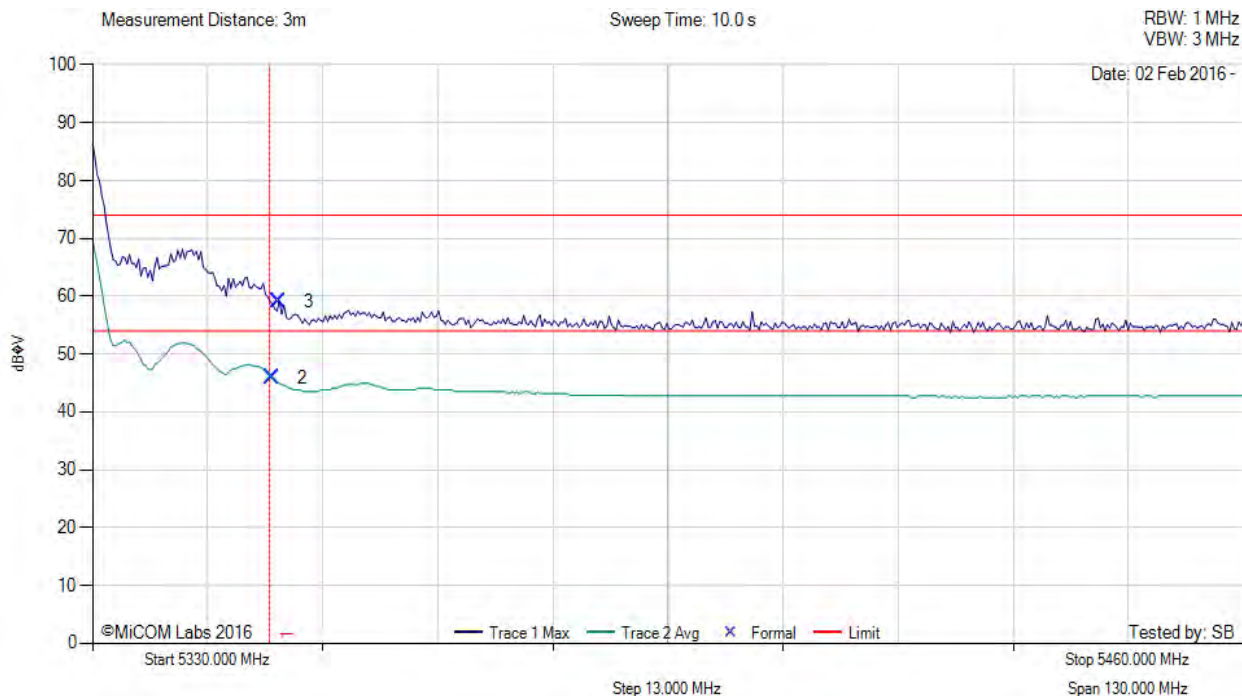
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-1W, Power Setting: 18, Duty Cycle (%): 100



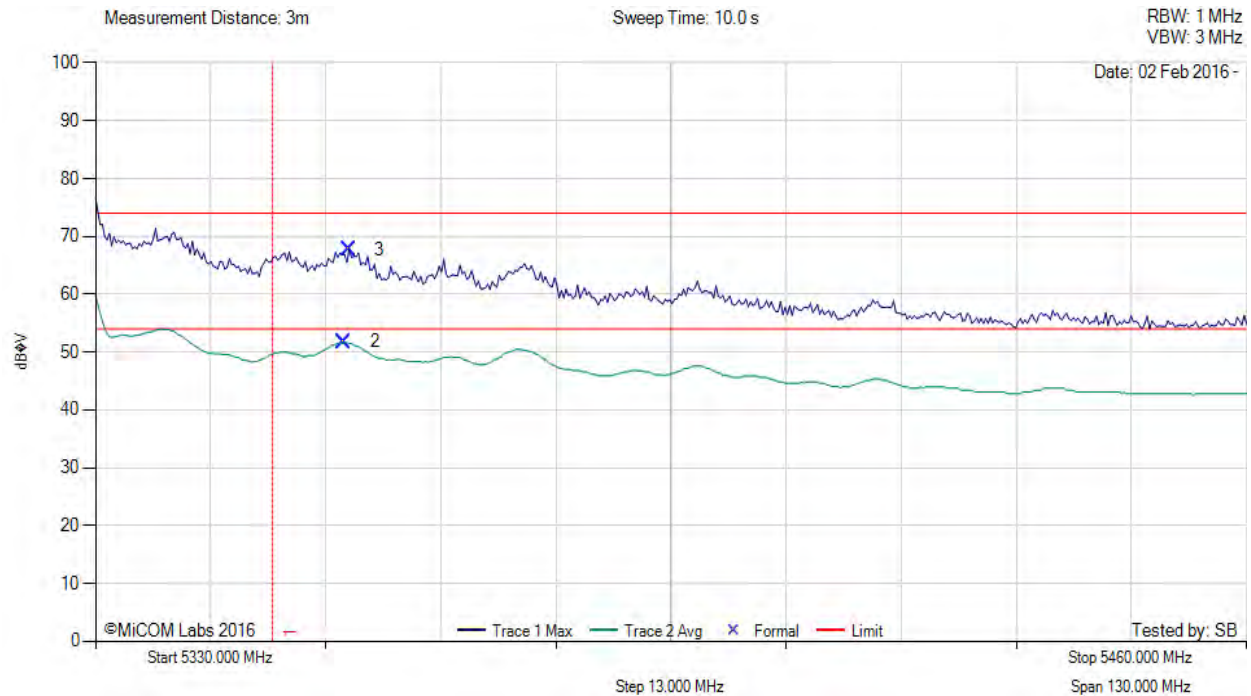
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
2	5350.22	7.75	3.70	34.51	45.96	Max Avg	Vertical	150	54	54.0	-8.0	Pass
3	5351.00	20.93	3.71	34.51	59.15	Max Peak	Vertical	150	54	74.0	-14.9	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-1W, Power Setting: 16.5, Duty Cycle (%): 100



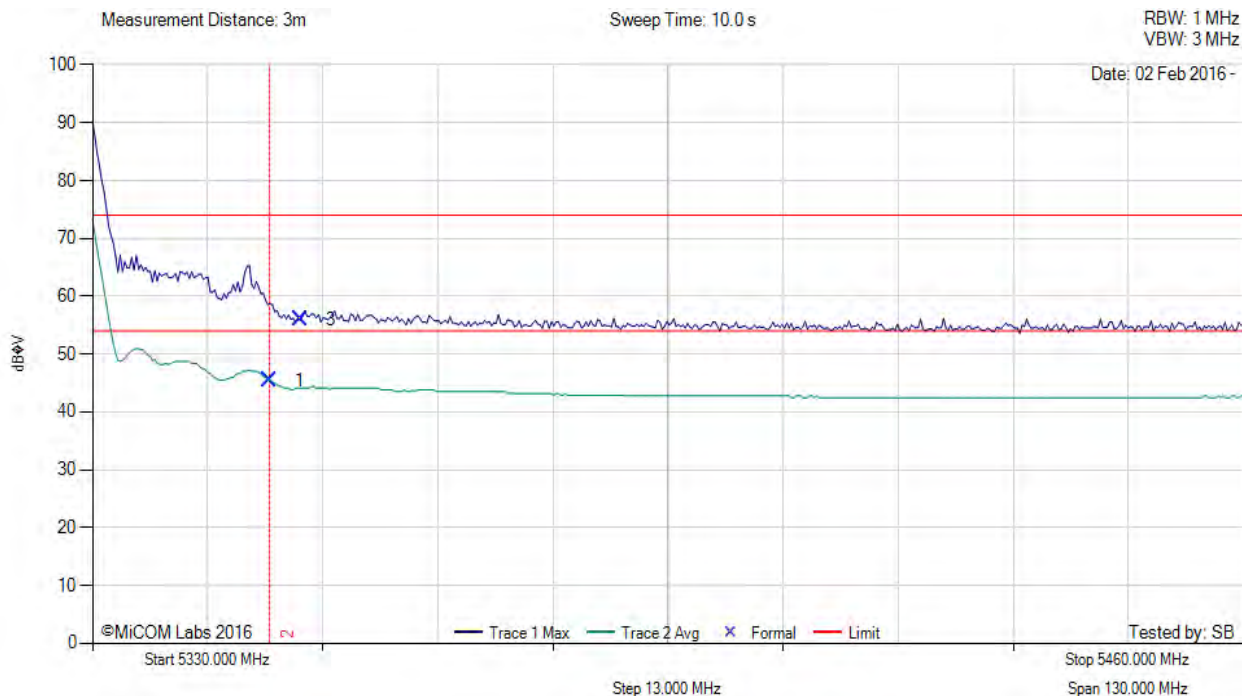
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
2	5358.10	13.54	3.71	34.49	51.74	Max Avg	Vertical	150	57	54.0	-2.3	Pass
3	5358.66	29.57	3.71	34.49	67.77	Max Peak	Vertical	150	57	74.0	-6.2	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-1W, Power Setting: 18, Duty Cycle (%): 100



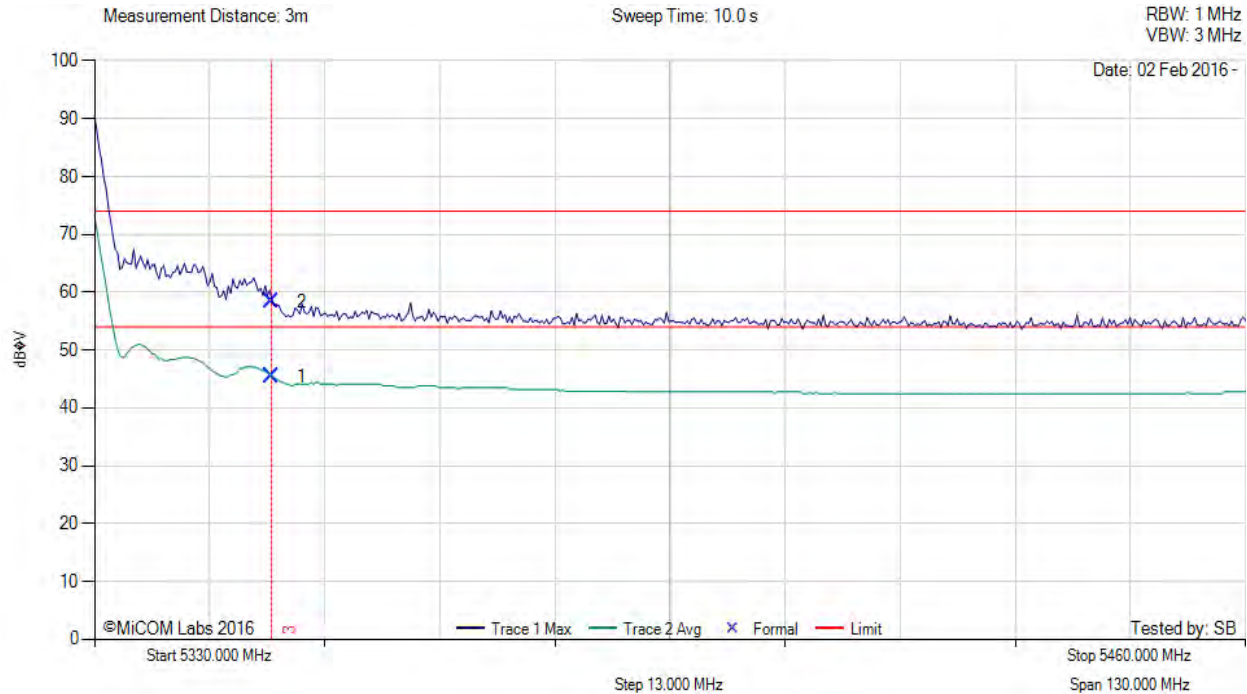
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	7.27	3.70	34.51	45.48	Max Avg	Vertical	150	57	54.0	-8.5	Pass
2	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
3	5353.53	17.75	3.71	34.50	55.96	Max Peak	Vertical	150	57	74.0	-18.0	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-1W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	7.27	3.70	34.51	45.48	Max Avg	Vertical	150	57	54.0	-8.5	Pass
2	5350.00	20.19	3.70	34.51	58.40	Max Peak	Vertical	150	57	74.0	-15.6	Pass
3	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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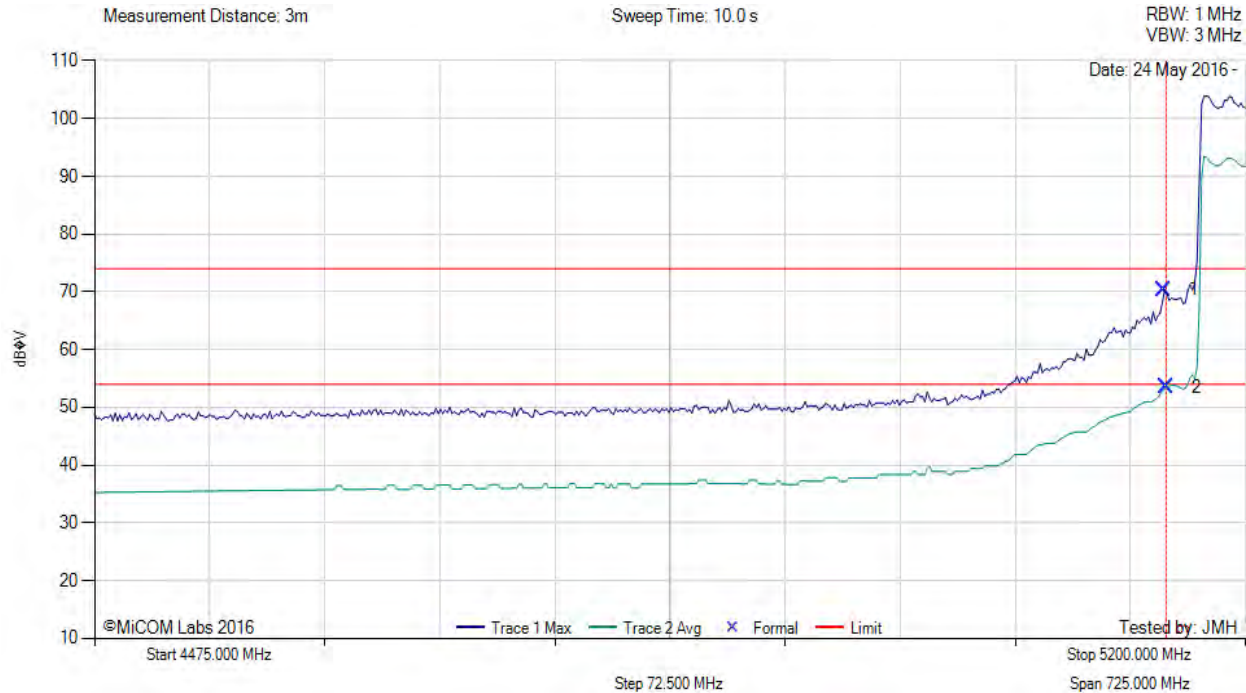


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-1W, Power Setting: 14.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5148.55	32.62	3.67	34.11	70.40	Max Peak	Horizontal	158	31	74.0	-3.6	Pass
2	5150.00	15.67	3.67	34.11	53.45	Max Avg	Horizontal	158	31	54.0	-0.6	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

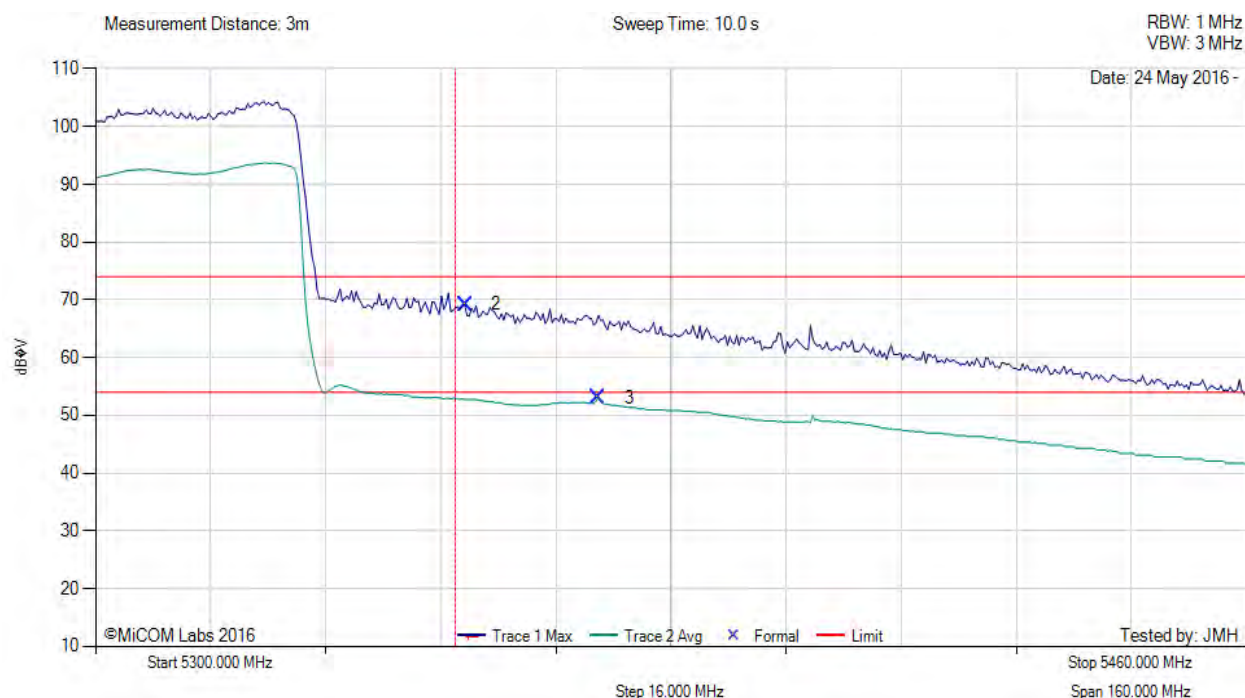
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-1W, Power Setting: 16, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
2	5351.44	30.99	3.71	34.51	69.21	Max Peak	Horizontal	158	31	74.0	-4.8	Pass
3	5369.94	14.92	3.69	34.46	53.07	Max Avg	Horizontal	158	31	54.0	-0.9	Pass
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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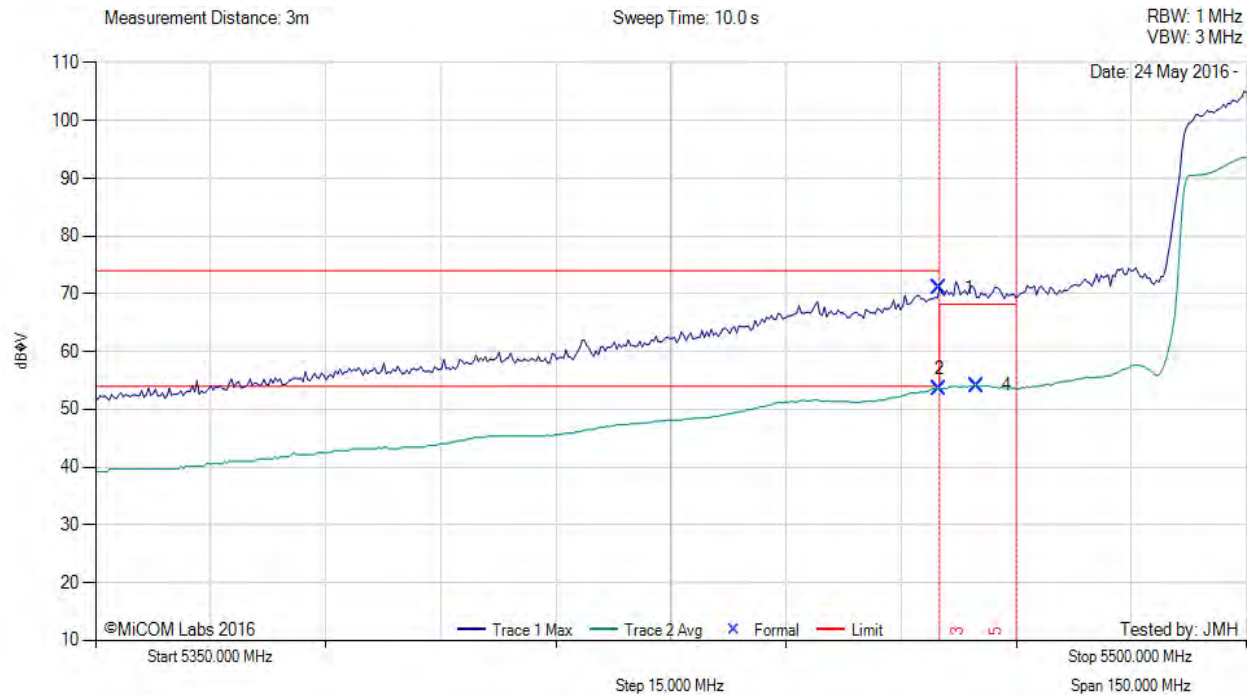


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5570.00 MHz, Antenna: AP-ANT-1W, Power Setting: 16, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5459.96	32.90	3.79	34.31	71.00	Max Peak	Horizontal	170	304	74.0	-3.0	Pass
2	5460.00	15.49	3.79	34.31	53.59	Max Avg	Horizontal	170	304	54.0	-0.4	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5464.83	16.05	3.79	34.31	54.15	Max Avg	Horizontal	153	30	68.2	-14.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

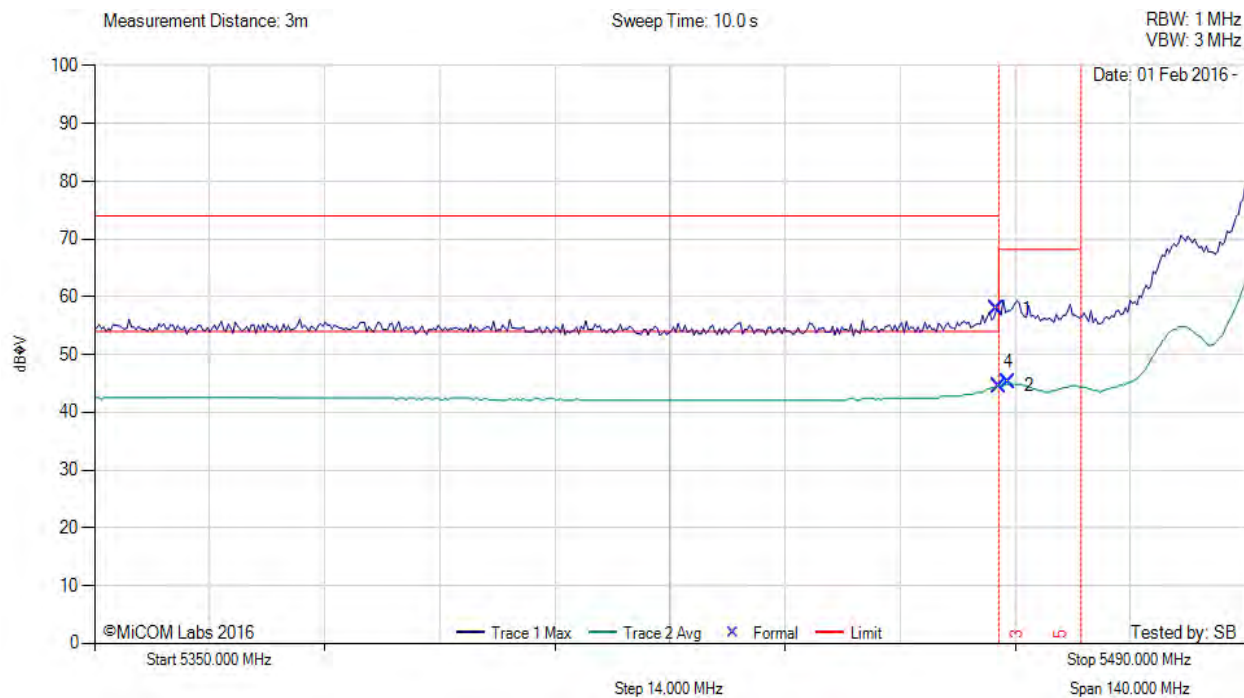
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A.1.2.12. AP-ANT-20W



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5459.72	19.75	3.79	34.31	57.85	Max Peak	Horizontal	141	51	74.0	-16.2	Pass
2	5460.00	6.51	3.79	34.31	44.61	Max Avg	Horizontal	141	51	54.0	-9.4	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5461.14	7.04	3.79	34.31	45.14	Max Avg	Horizontal	153	30	68.2	-23.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

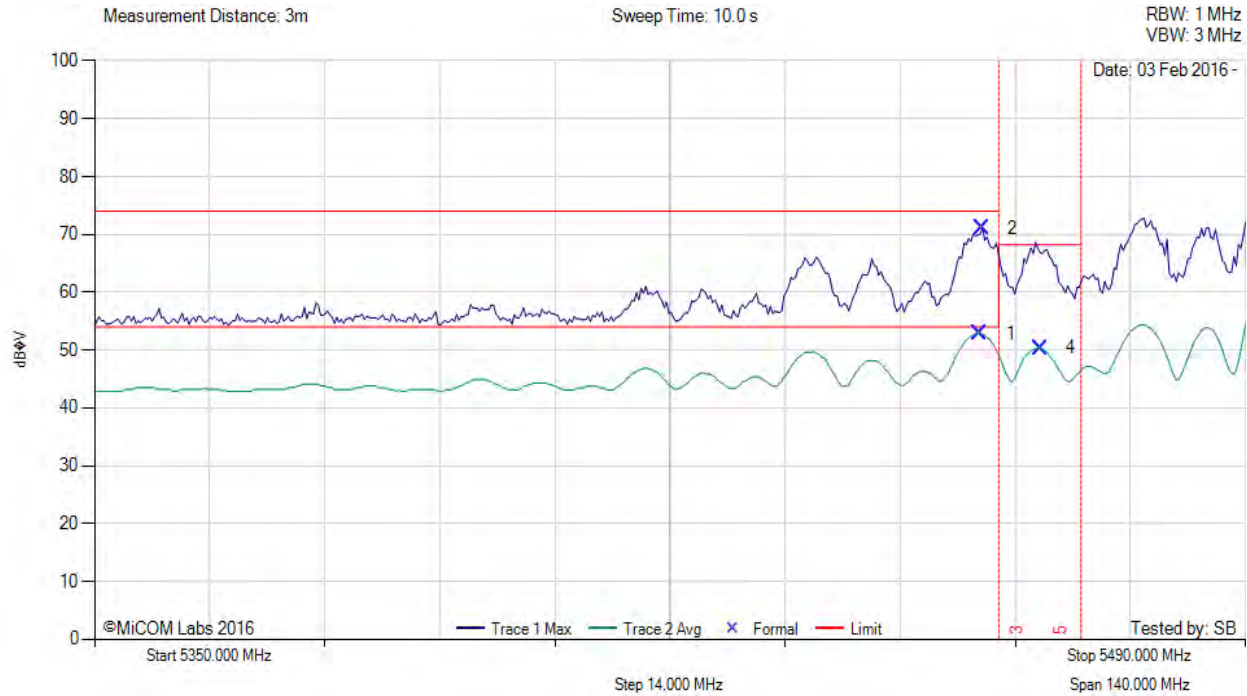
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16.5, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5457.74	14.79	3.80	34.30	52.89	Max Avg	Horizontal	141	298	54.0	-1.1	Pass
2	5458.02	32.93	3.80	34.30	71.03	Max Peak	Horizontal	141	298	74.0	-3.0	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5465.03	12.26	3.79	34.31	50.36	Max Avg	Horizontal	153	30	68.2	-17.9	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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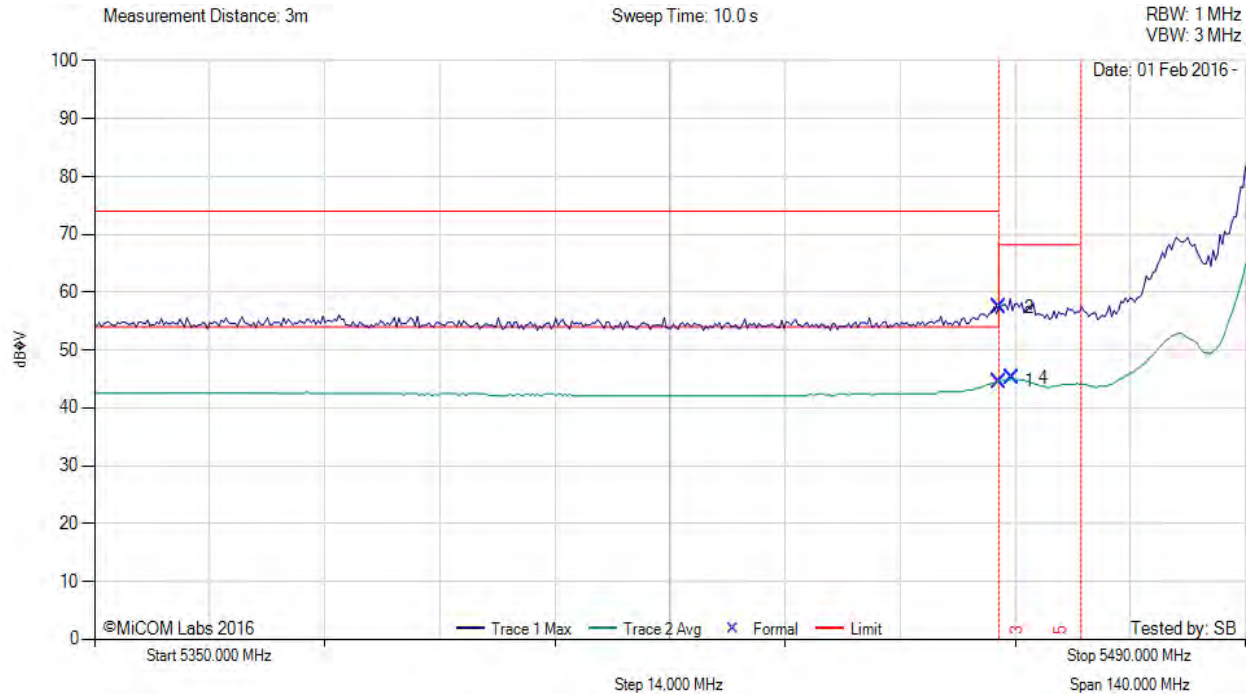


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	6.51	3.79	34.31	44.61	Max Avg	Horizontal	141	51	54.0	-9.4	Pass
2	5460.00	19.33	3.79	34.31	57.43	Max Peak	Horizontal	141	51	74.0	-16.6	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5461.66	7.04	3.79	34.31	45.14	Max Avg	Horizontal	153	30	68.2*	-23.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

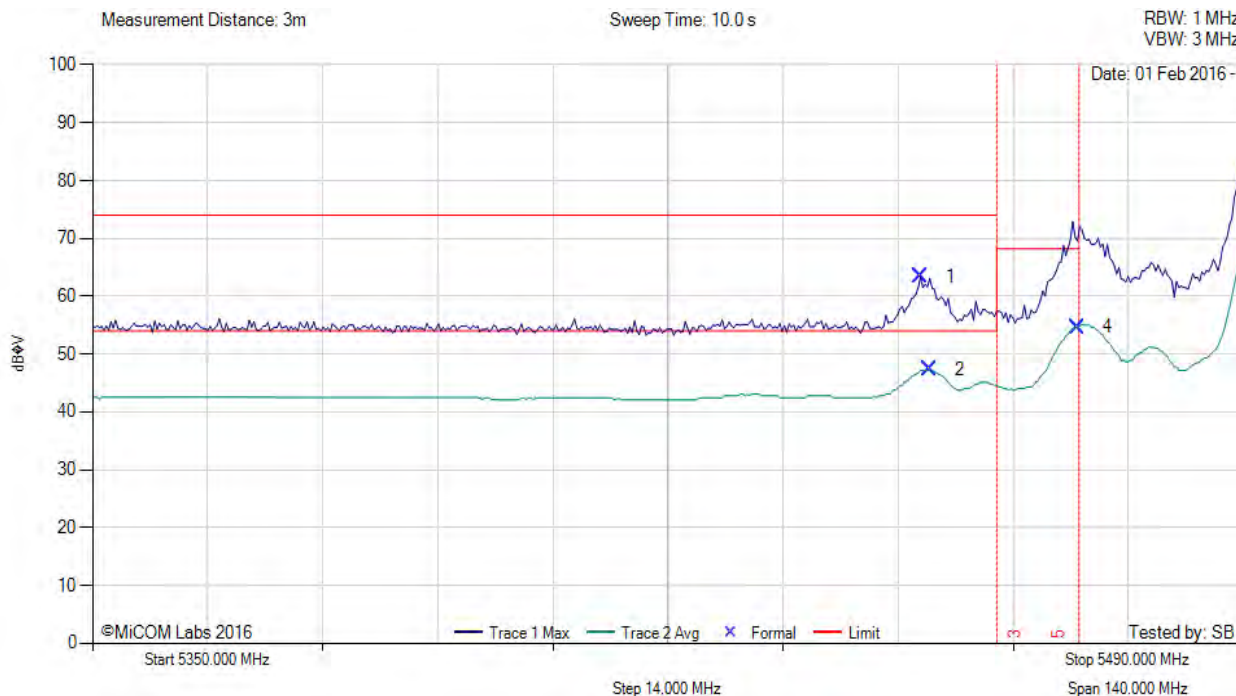
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5450.72	25.33	3.78	34.30	63.41	Max Peak	Horizontal	141	51	74.0	-10.6	Pass
2	5451.84	9.29	3.78	34.30	47.37	Max Avg	Horizontal	141	51	54.0	-6.6	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.80	16.57	3.79	34.32	54.68	Max Avg	Horizontal	153	30	68.2	-13.6	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100

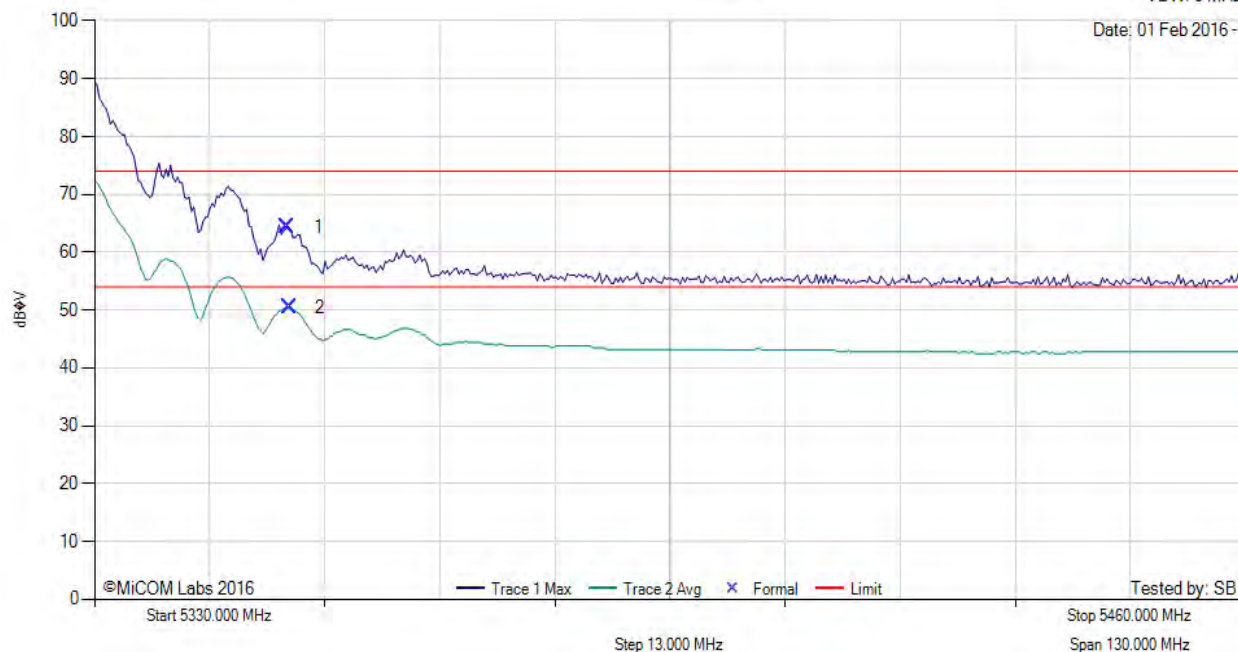
Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz

VBW: 3 MHz

Date: 01 Feb 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5351.82	26.17	3.71	34.51	64.39	Max Peak	Horizontal	141	297	74.0	-9.6	Pass
2	5351.98	12.22	3.71	34.51	50.44	Max Avg	Horizontal	141	297	54.0	-3.6	Pass
3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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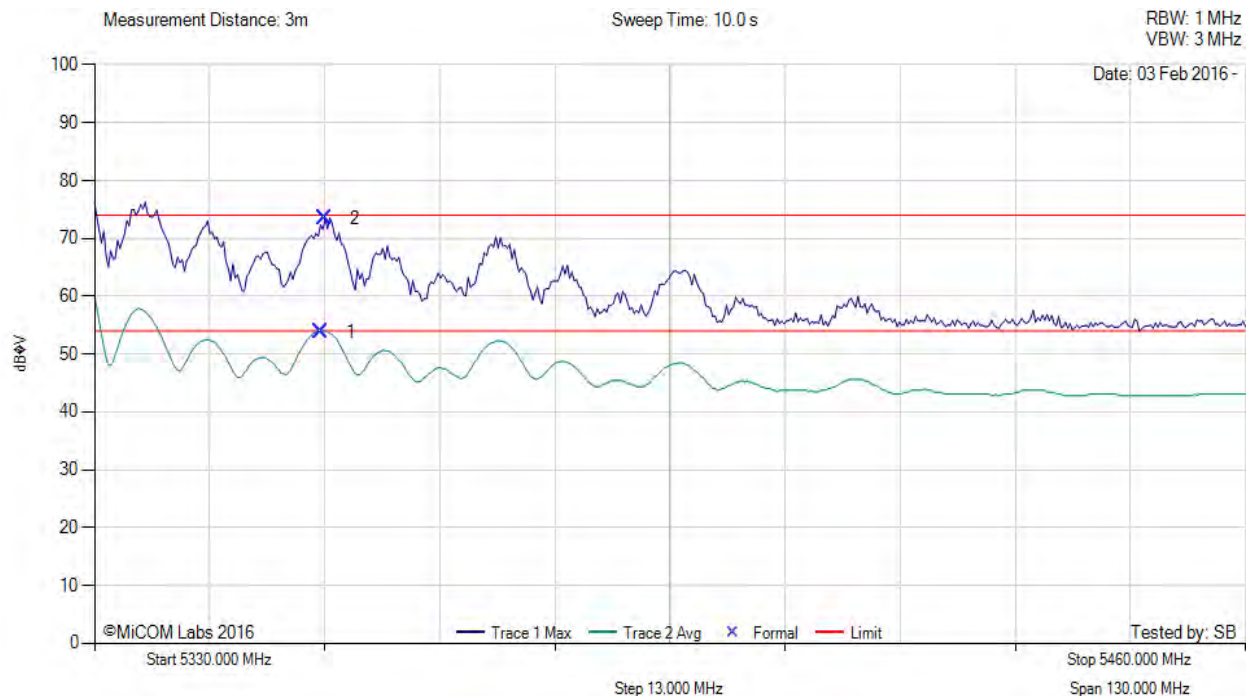


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-20W, Power Setting: 15, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5355.51	15.66	3.71	34.50	53.87	Max Avg	Horizontal	141	298	54.0	-0.1	Pass
2	5355.95	35.26	3.71	34.50	73.47	Max Peak	Horizontal	141	298	74.0	-0.5	Pass
3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

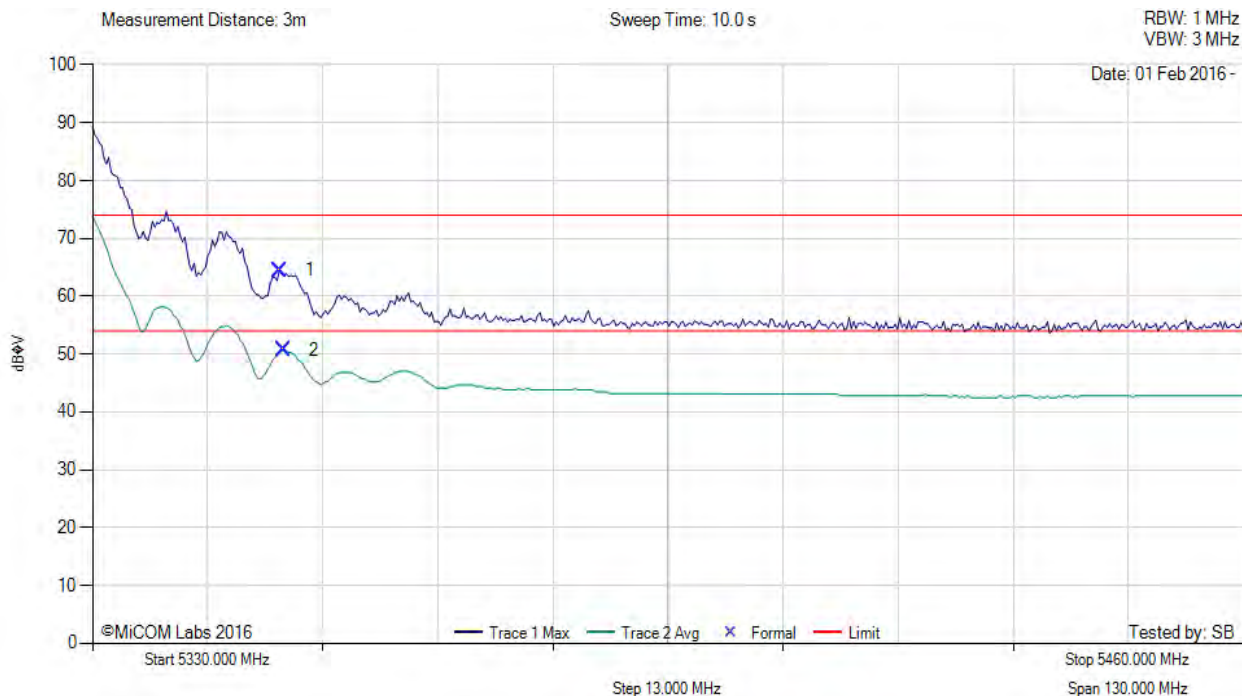
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100



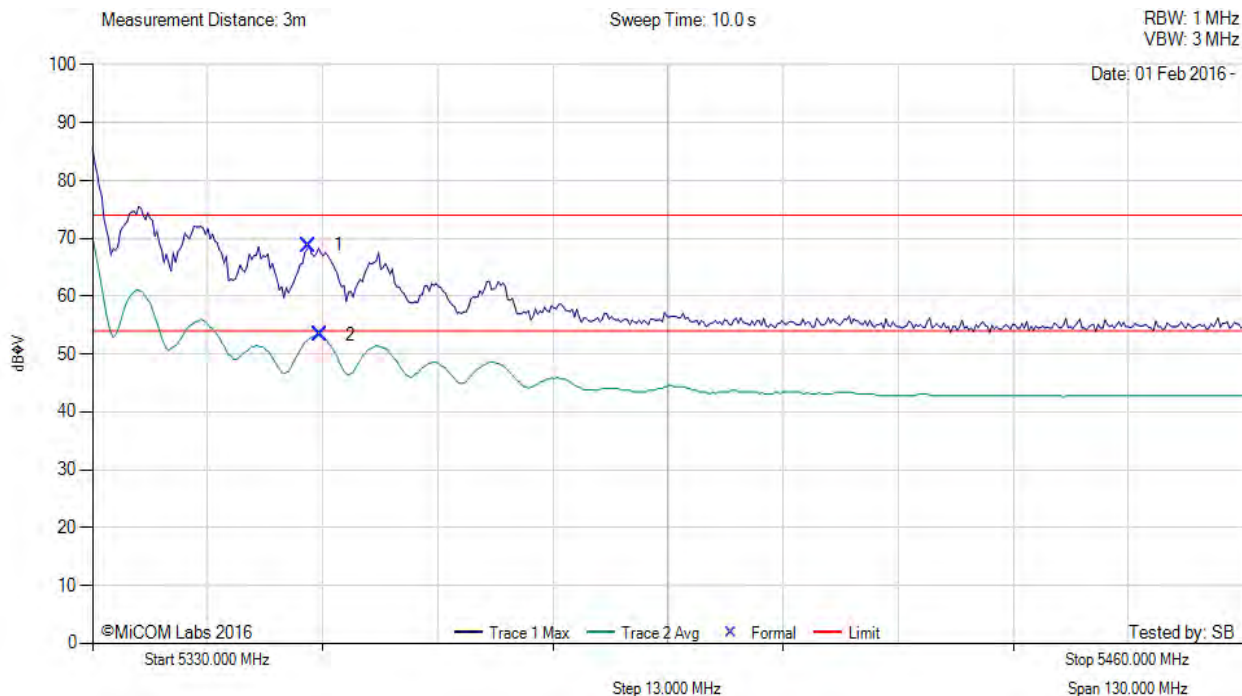
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5351.16	26.23	3.71	34.51	64.45	Max Peak	Horizontal	141	297	74.0	-9.6	Pass
2	5351.62	12.50	3.71	34.51	50.72	Max Avg	Horizontal	141	297	54.0	-3.3	Pass
3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-20W, Power Setting: 17, Duty Cycle (%): 100

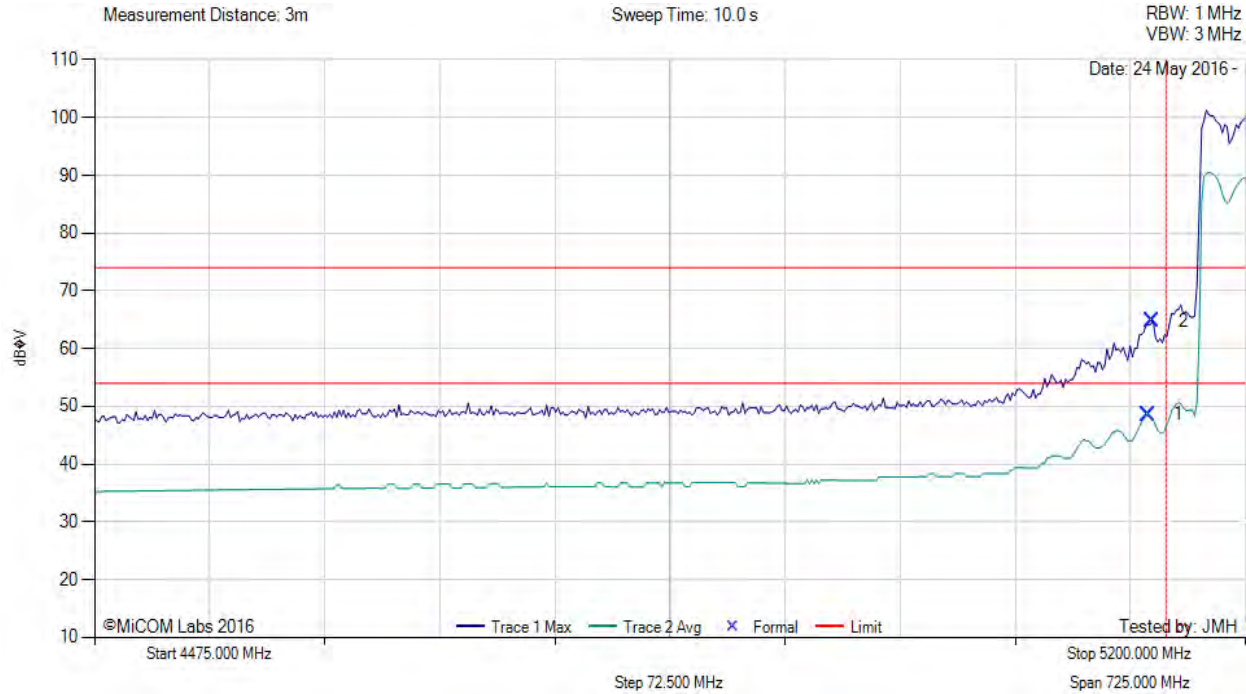


Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5354.39	30.60	3.71	34.50	68.81	Max Peak	Horizontal	141	297	74.0	-5.2	Pass
2	5355.65	15.07	3.71	34.50	53.28	Max Avg	Horizontal	141	297	54.0	-0.7	Pass
3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16, Duty Cycle (%): 95



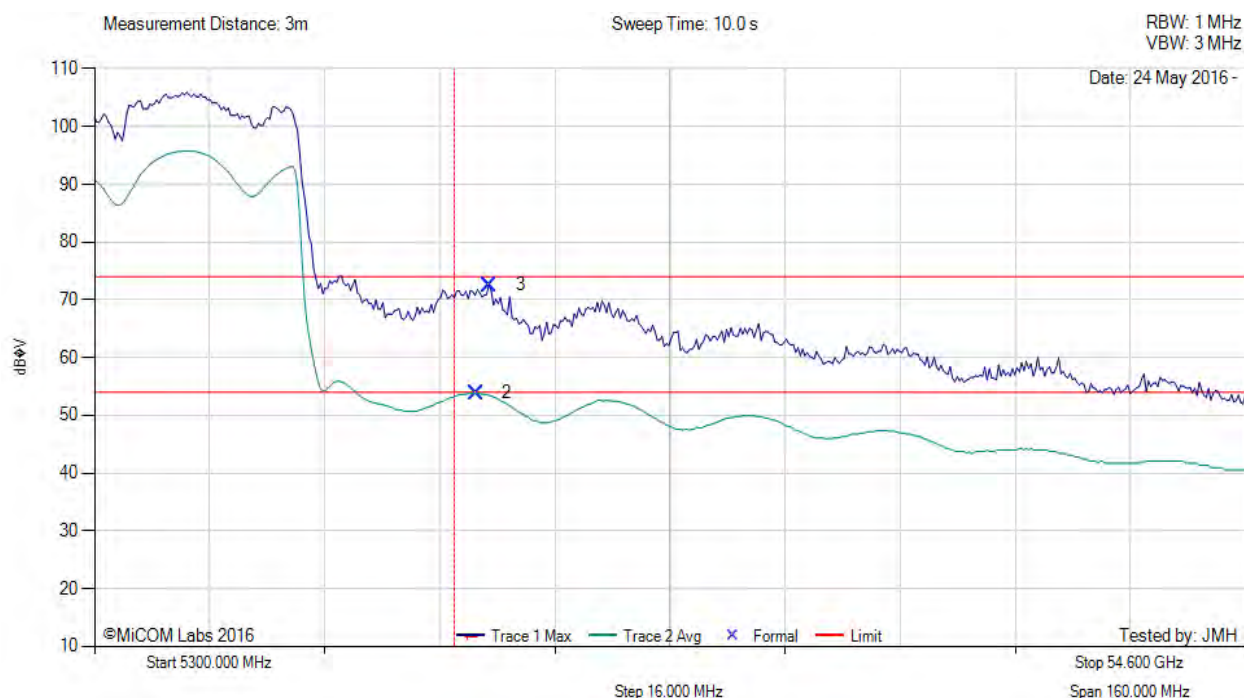
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5138.68	10.75	3.70	34.12	48.57	Max Avg	Horizontal	150	323	54.0	-5.4	Pass
2	5141.58	26.99	3.70	34.12	64.81	Max Peak	Horizontal	150	323	74.0	-9.2	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5290.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16, Duty Cycle (%): 95



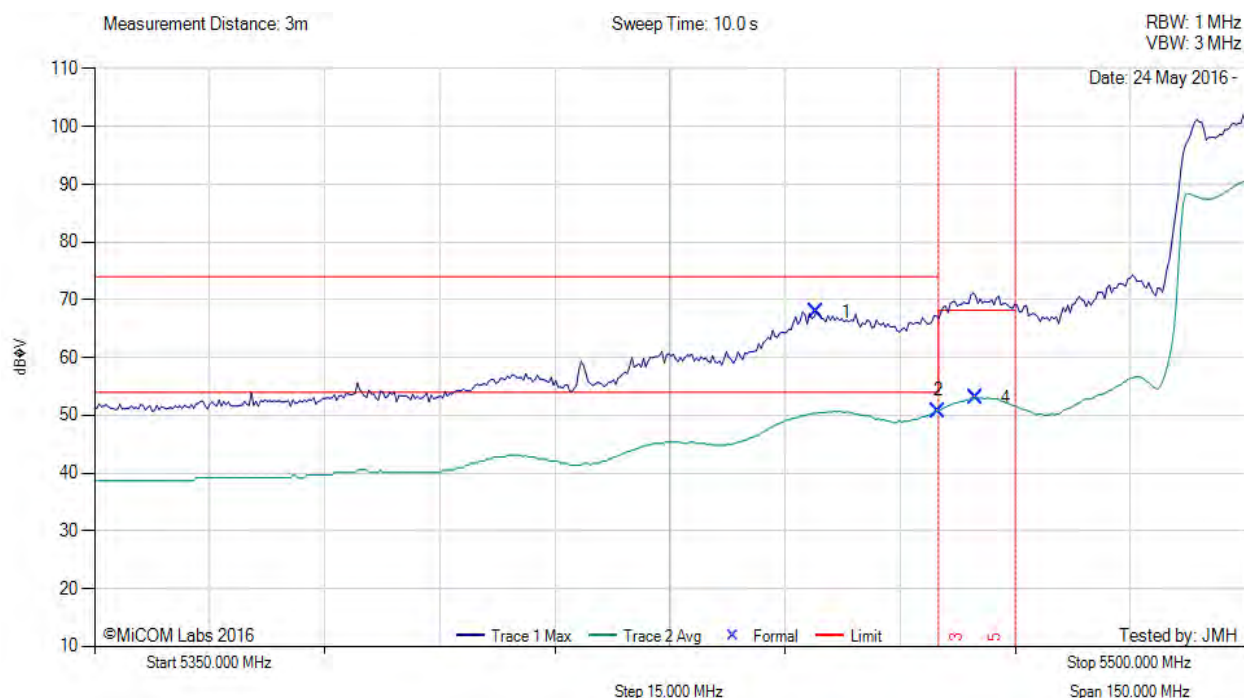
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5353.11	15.66	3.71	34.50	53.87	Max Avg	Horizontal	150	323	54.0	-0.1	Pass
3	5354.97	34.36	3.71	34.50	72.57	Max Peak	Horizontal	150	323	74.0	-1.4	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5530.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5444.07	29.84	3.75	34.31	67.90	Max Peak	Horizontal	150	312	74.0	-6.1	Pass
2	5460.00	12.66	3.79	34.31	50.76	Max Avg	Horizontal	150	312	54.0	-3.2	Pass
4	5464.83	14.99	3.79	34.31	53.09	Max Avg	Horizontal	153	30	68.2	-15.1	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

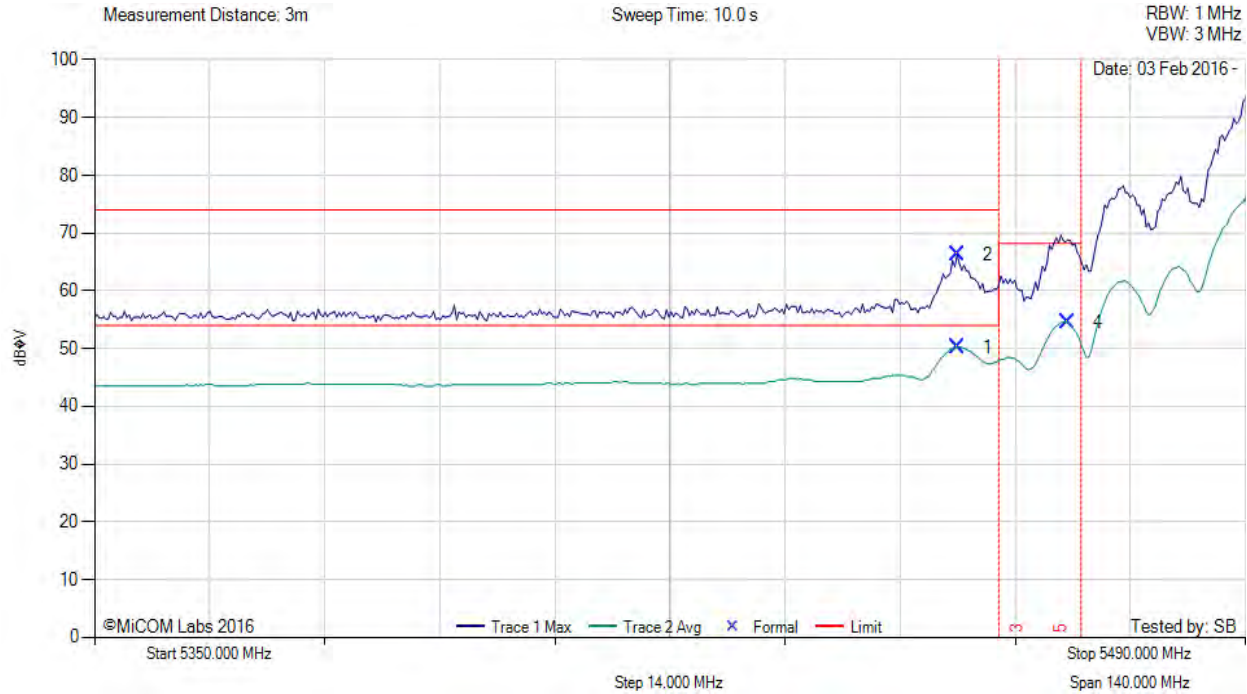
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A.1.2.13. AP-ANT-40



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-40, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5454.97	12.12	3.79	34.30	50.21	Max Avg	Horizontal	153	330	54.0	-3.8	Pass
2	5454.97	28.17	3.79	34.30	66.26	Max Peak	Horizontal	153	330	74.0	-7.7	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5468.40	16.40	3.79	34.32	54.51	Max Avg	Horizontal	153	30	68.2*	-13.7	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

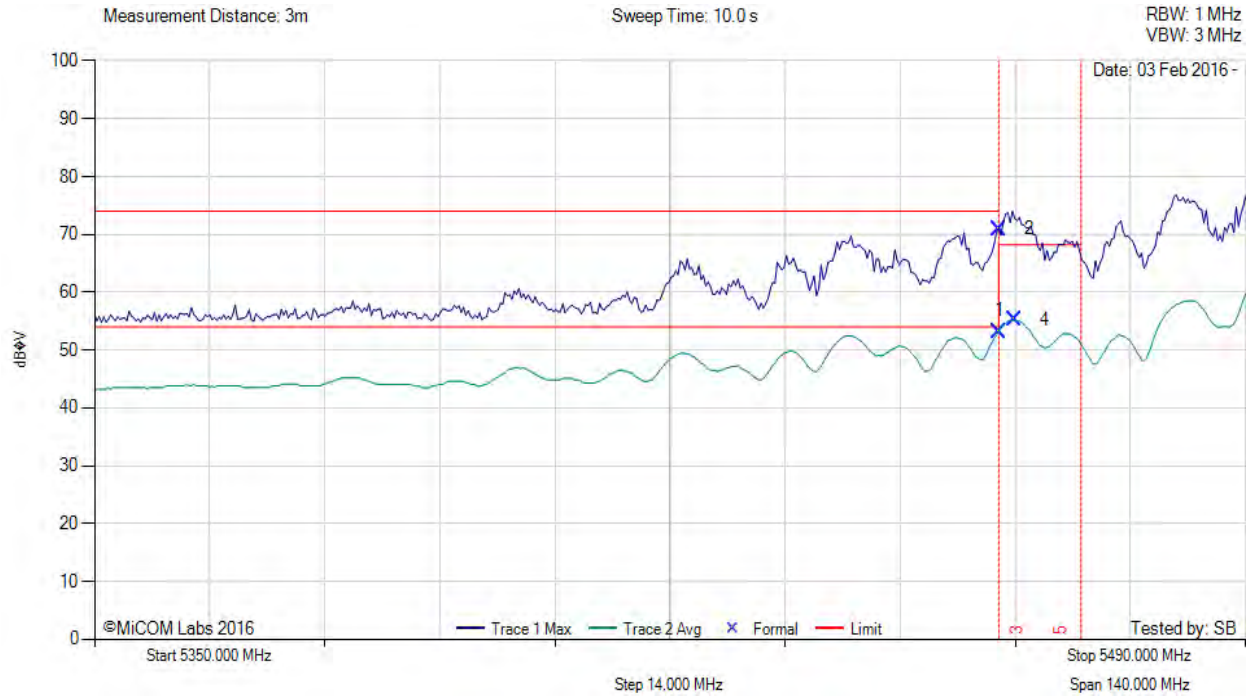
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-40, Power Setting: 14.5, Duty Cycle (%): 100



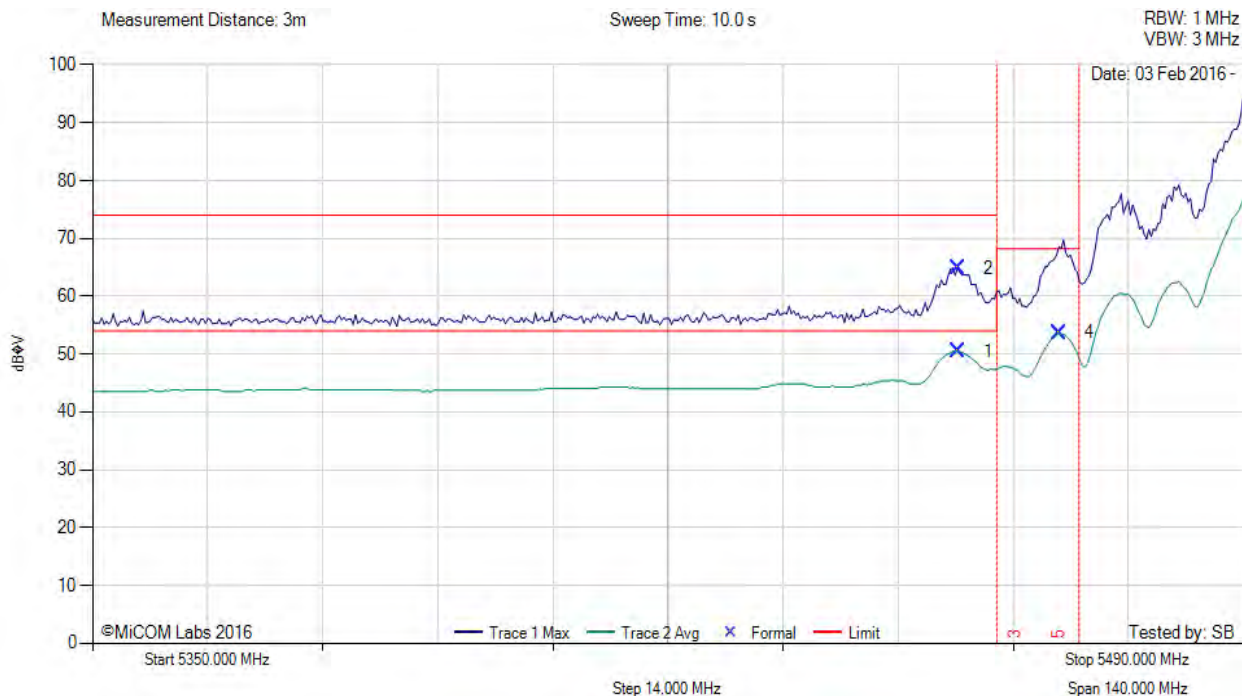
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	15.10	3.79	34.31	53.20	Max Avg	Horizontal	153	330	54.0	-0.8	Pass
2	5460.00	32.89	3.79	34.31	70.99	Max Peak	Horizontal	153	330	74.0	-3.0	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5461.94	17.08	3.79	34.31	55.18	Max Avg	Horizontal	153	30	68.2	-13.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-40, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5455.23	12.40	3.79	34.30	50.49	Max Avg	Horizontal	153	330	54.0	-3.5	Pass
2	5455.23	26.68	3.79	34.30	64.77	Max Peak	Horizontal	153	330	74.0	-9.2	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5467.55	15.58	3.79	34.32	53.69	Max Avg	Horizontal	153	30	68.2	-14.5	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

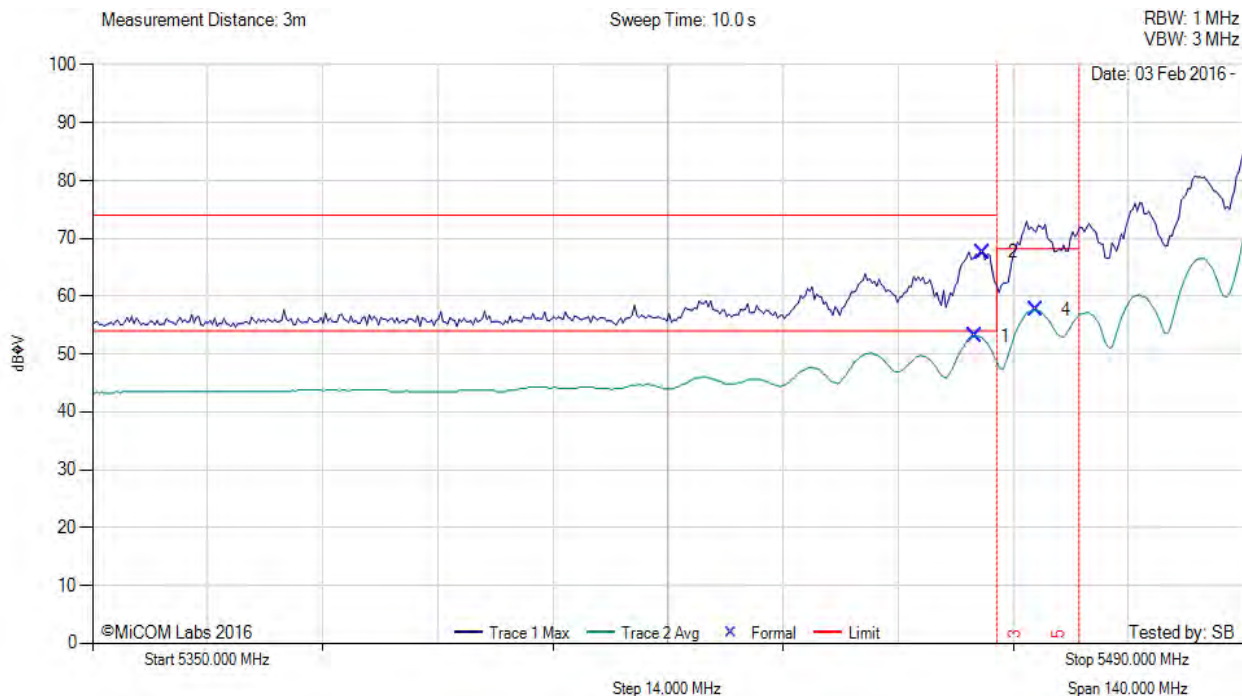
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-40, Power Setting: 17, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5457.39	14.99	3.80	34.30	53.09	Max Avg	Horizontal	153	330	54.0	-0.9	Pass
2	5458.24	29.47	3.80	34.30	67.57	Max Peak	Horizontal	153	330	74.0	-6.4	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5464.75	19.57	3.79	34.31	57.67	Max Avg	Horizontal	153	30	68.2	-10.6	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-40, Power Setting: 17.5, Duty Cycle (%): 100

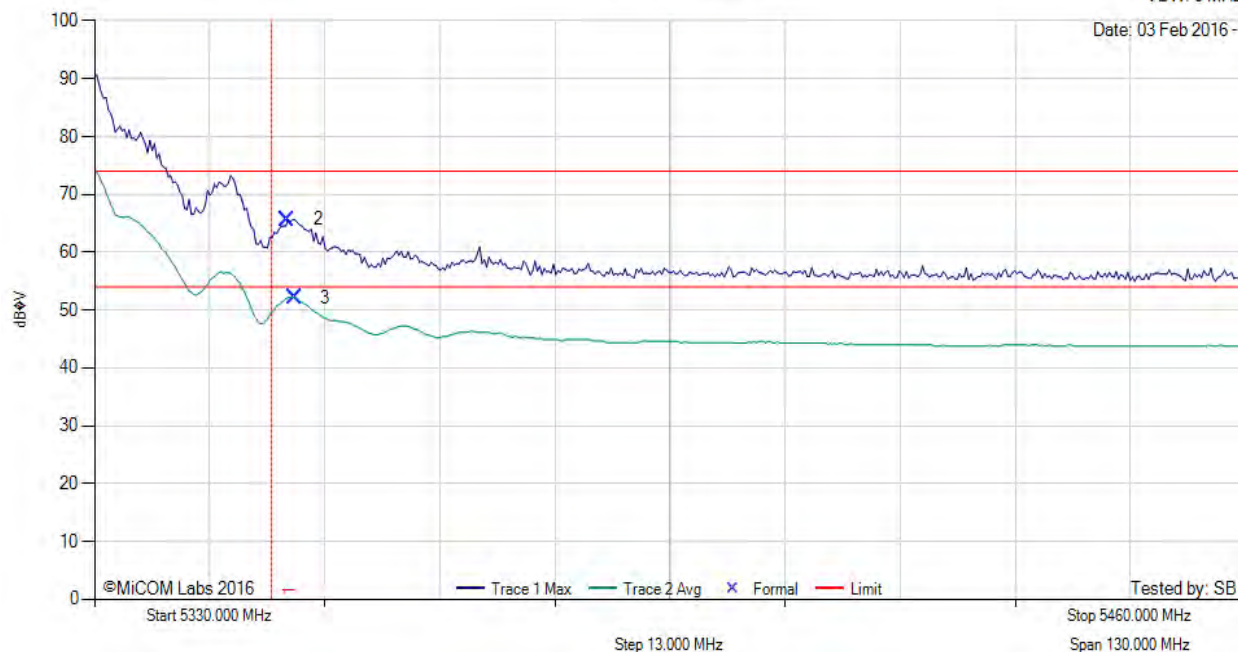
Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz

VBW: 3 MHz

Date: 03 Feb 2016 -



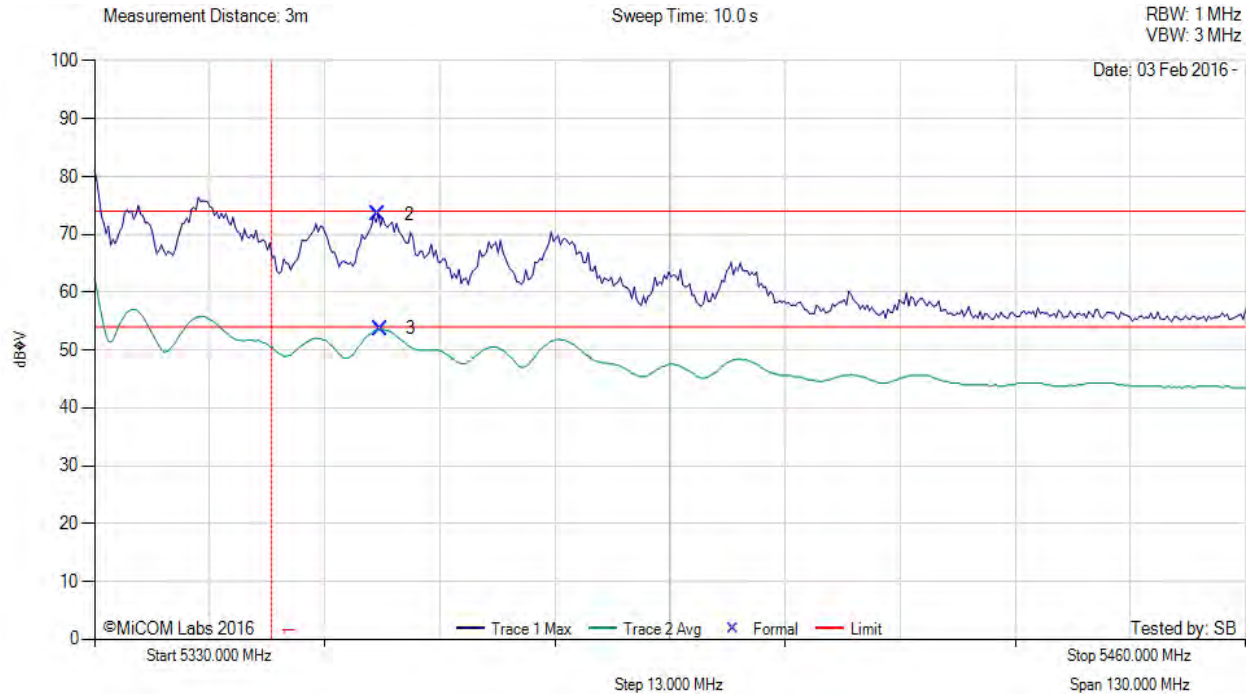
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5351.82	27.43	3.71	34.51	65.65	Max Peak	Horizontal	153	331	74.0	-8.4	Pass
3	5352.61	14.00	3.71	34.50	52.21	Max Avg	Horizontal	153	331	54.0	-1.8	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-40, Power Setting: 13, Duty Cycle (%): 100



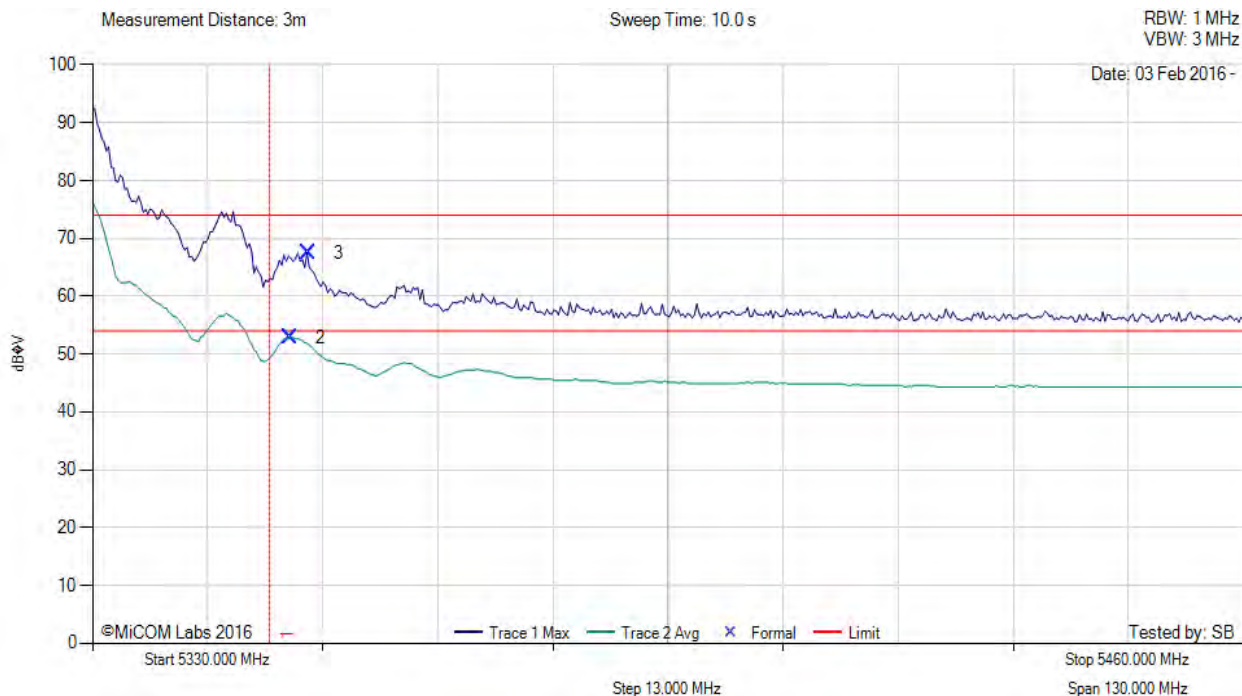
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5362.06	35.28	3.70	34.48	73.46	Max Peak	Horizontal	153	331	74.0	-0.5	Pass
3	5362.32	15.50	3.70	34.48	53.68	Max Avg	Horizontal	153	331	54.0	-0.3	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-40, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5352.30	14.65	3.71	34.51	52.87	Max Avg	Horizontal	153	331	54.0	-1.1	Pass
3	5354.35	29.21	3.71	34.50	67.42	Max Peak	Horizontal	153	331	74.0	-6.6	Pass

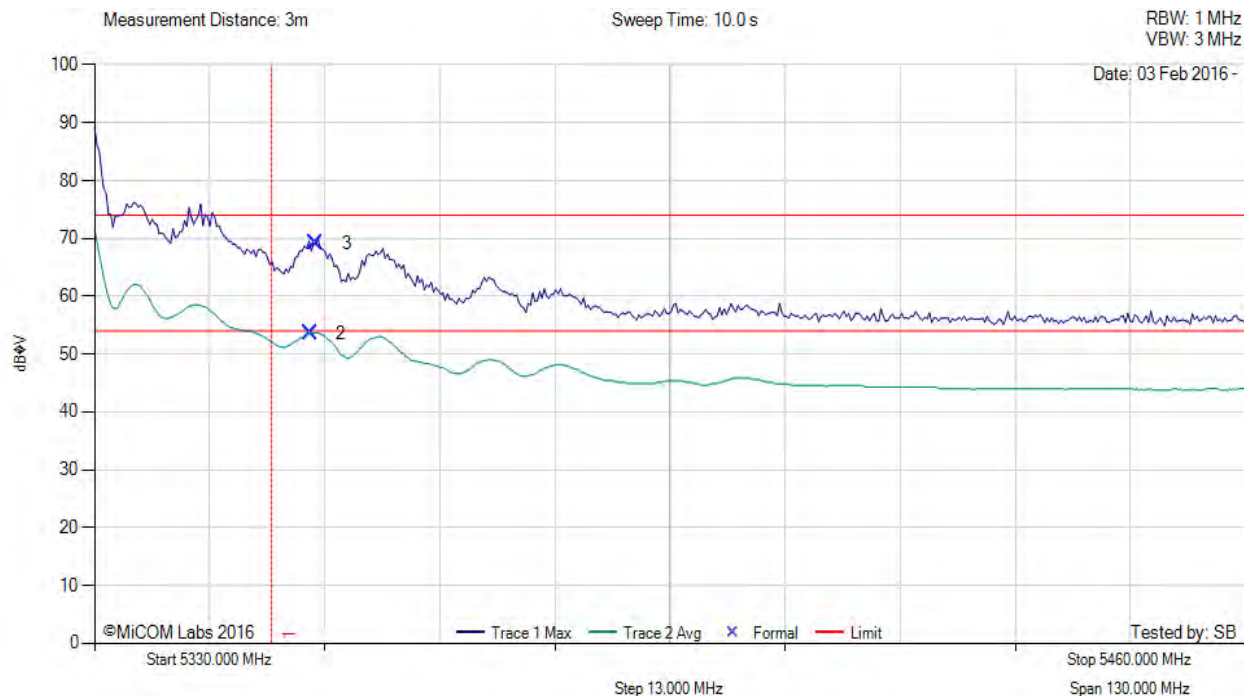
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-40, Power Setting: 16.5, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5354.39	15.37	3.71	34.50	53.58	Max Avg	Horizontal	153	331	54.0	-0.4	Pass
3	5355.03	30.98	3.71	34.50	69.19	Max Peak	Horizontal	153	331	74.0	-4.8	Pass

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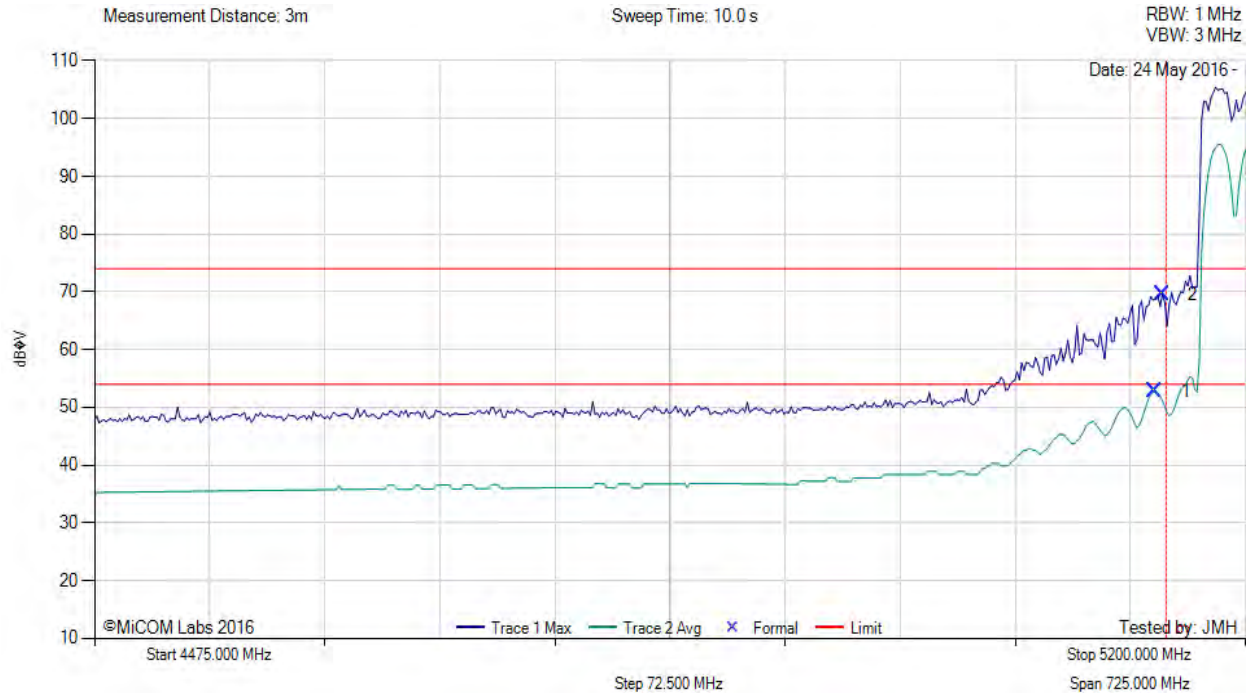


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-40, Power Setting: 12.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5143.09	15.02	3.70	34.12	52.84	Max Avg	Horizontal	199	41	54.0	-1.2	Pass
2	5147.44	31.77	3.68	34.11	69.56	Max Peak	Horizontal	199	41	74.0	-4.4	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

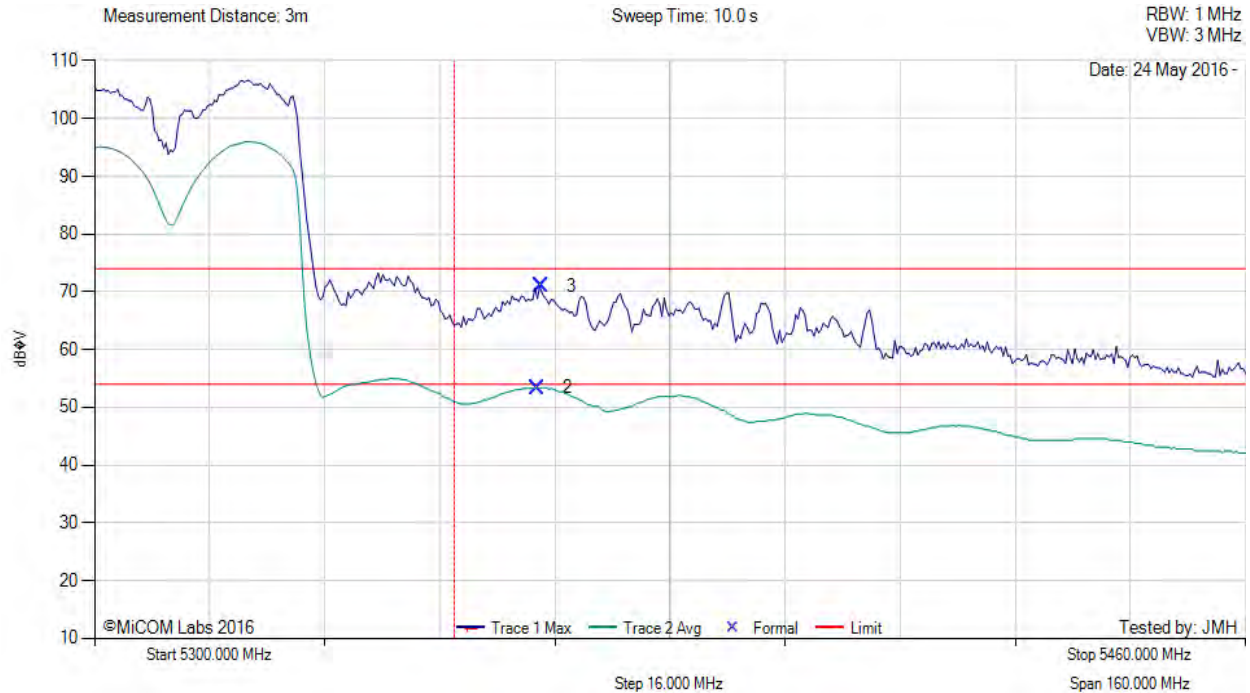
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-40, Power Setting: 14, Duty Cycle (%): 95



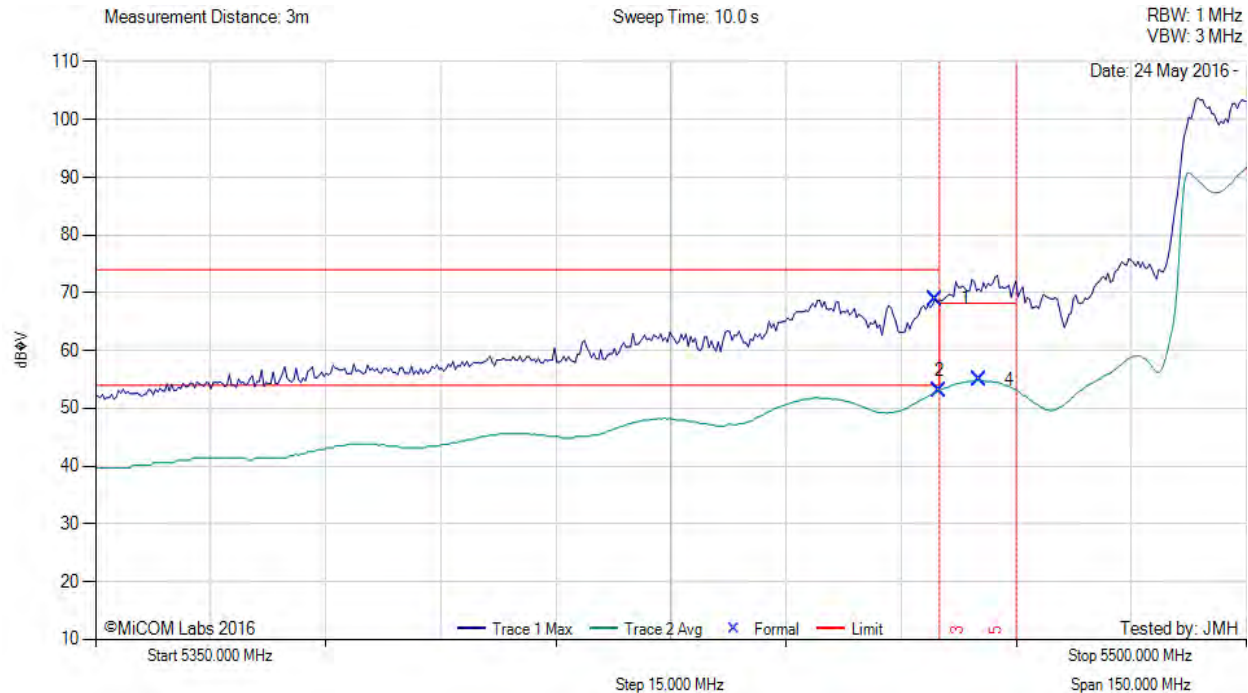
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5361.58	15.20	3.70	34.48	53.38	Max Avg	Horizontal	199	41	54.0	-0.6	Pass
3	5362.04	32.76	3.70	34.48	70.94	Max Peak	Horizontal	199	41	74.0	-3.1	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5570.00 MHz, Antenna: AP-ANT-40, Power Setting: 15, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5459.40	30.83	3.79	34.31	68.93	Max Peak	Horizontal	200	41	74.0	-5.1	Pass
2	5460.00	14.99	3.79	34.31	53.09	Max Avg	Horizontal	200	41	54.0	-0.9	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5465.13	16.82	3.79	34.32	54.93	Max Avg	Horizontal	153	30	68.2	-13.3	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

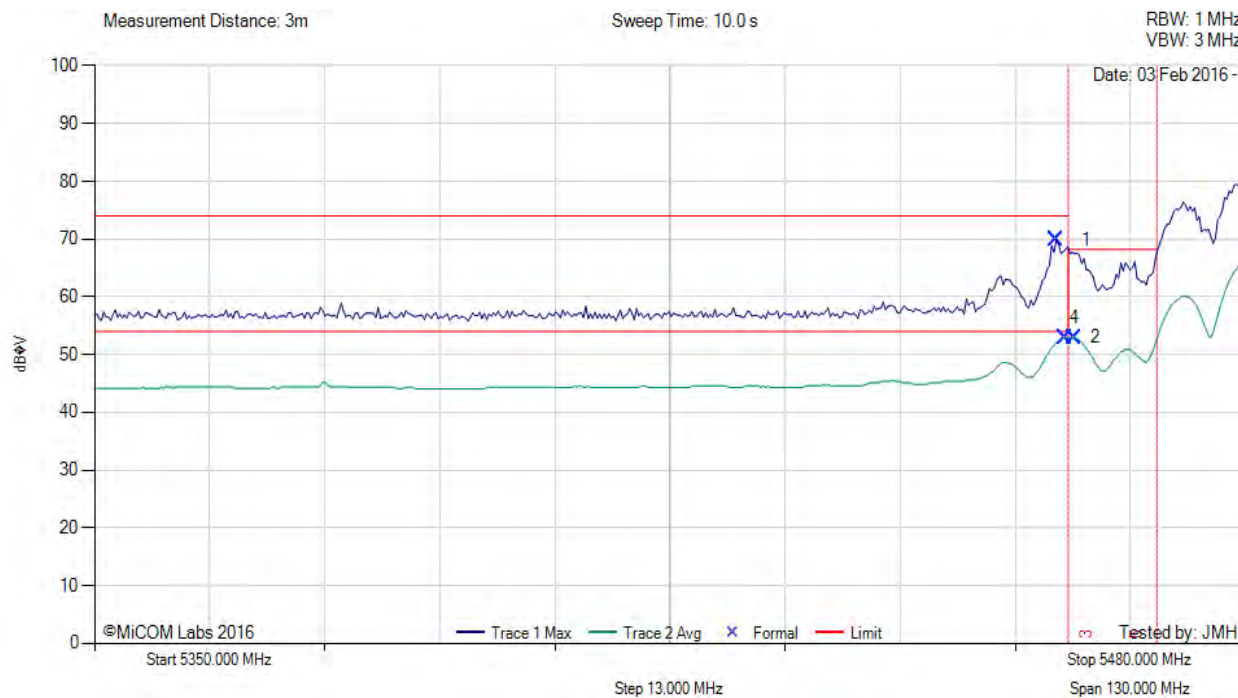
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A.1.2.14. AP-ANT-45



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-45, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.64	31.82	3.79	34.31	69.92	Max Peak	Horizontal	160	42	74.0	-4.1	Pass
2	5459.68	14.89	3.79	34.31	52.99	Max Avg	Horizontal	160	42	54.0	-1.0	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5460.72	14.79	3.79	34.31	52.89	Max Avg	Horizontal	153	30	68.2	-15.3	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

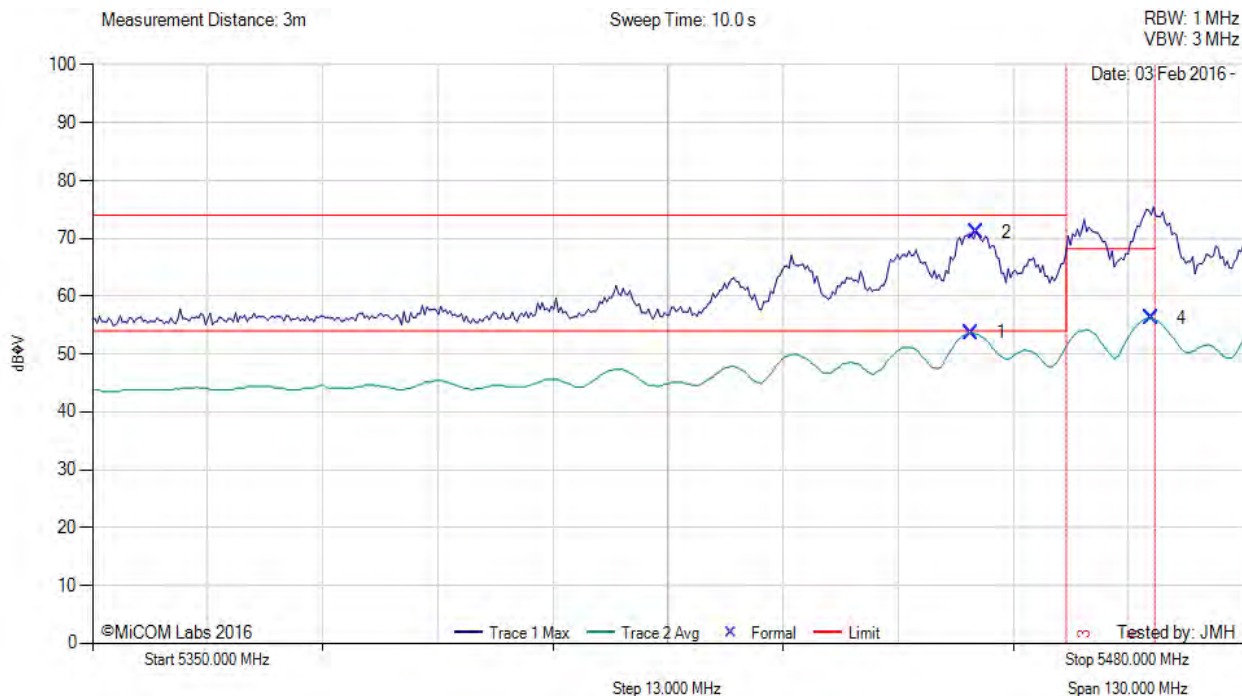
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-45, Power Setting: 14, Duty Cycle (%): 100



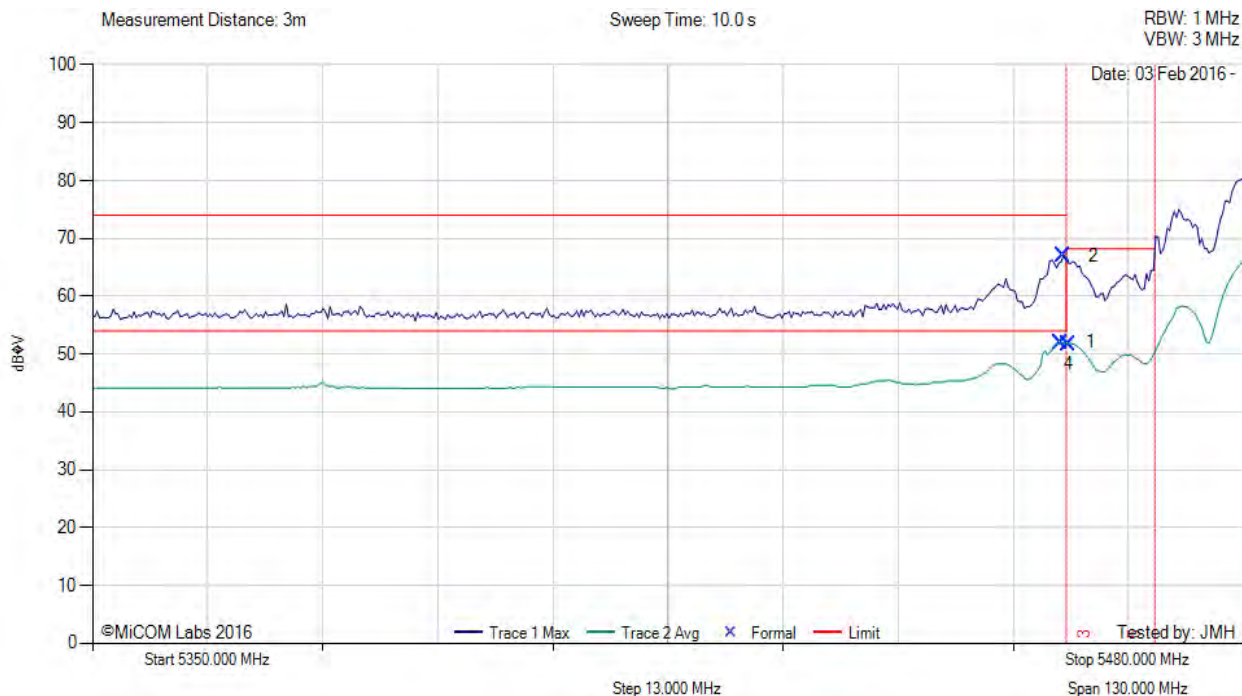
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5449.24	15.61	3.77	34.30	53.68	Max Avg	Horizontal	160	42	54.0	-0.3	Pass
2	5449.76	32.96	3.77	34.30	71.03	Max Peak	Horizontal	160	42	74.0	-3.0	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.58	18.05	3.79	34.32	56.16	Max Avg	Horizontal	153	30	68.2	-12.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-45, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5459.38	13.91	3.79	34.31	52.01	Max Avg	Horizontal	160	42	54.0	-2.0	Pass
2	5459.64	28.93	3.79	34.31	67.03	Max Peak	Horizontal	160	42	74.0	-7.0	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5460.20	13.67	3.79	34.31	51.77	Max Avg	Horizontal	153	30	68.2	-16.5	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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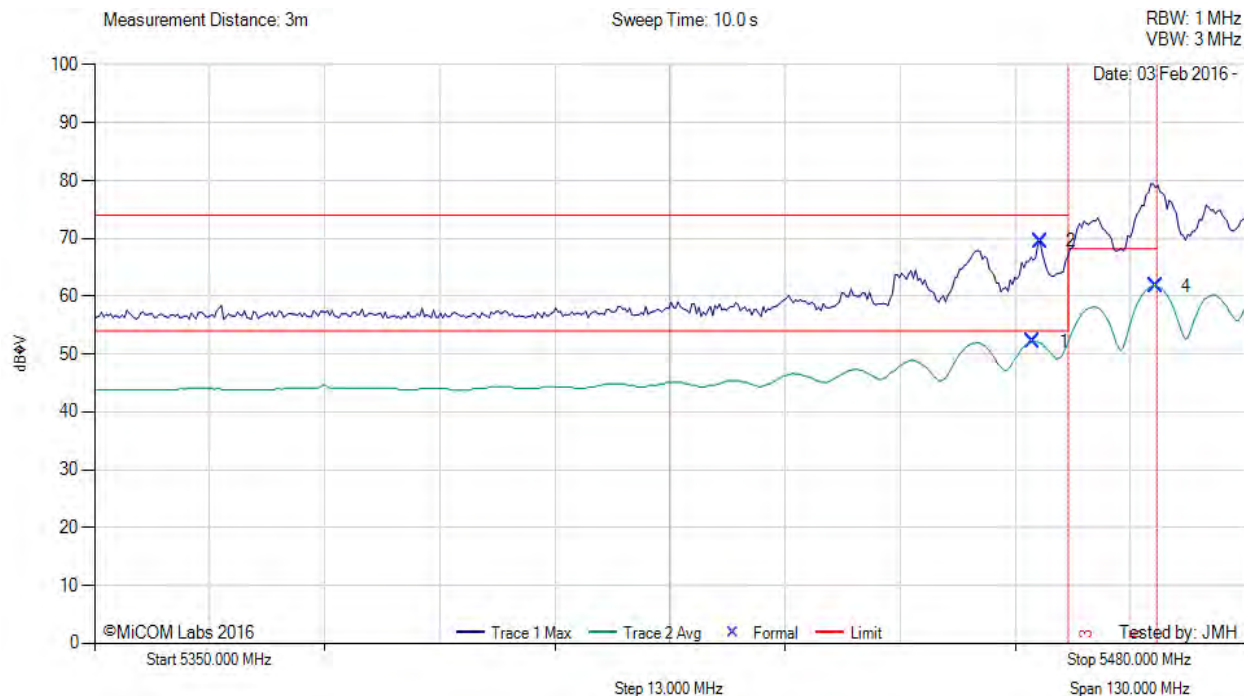


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-45, Power Setting: 17, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5456.03	14.02	3.80	34.30	52.12	Max Avg	Horizontal	160	42	54.0	-1.9	Pass
2	5456.87	31.40	3.80	34.30	69.50	Max Peak	Horizontal	160	42	74.0	-4.5	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.84	23.67	3.79	34.32	61.78	Max Avg	Horizontal	153	30	68.2	-6.5	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

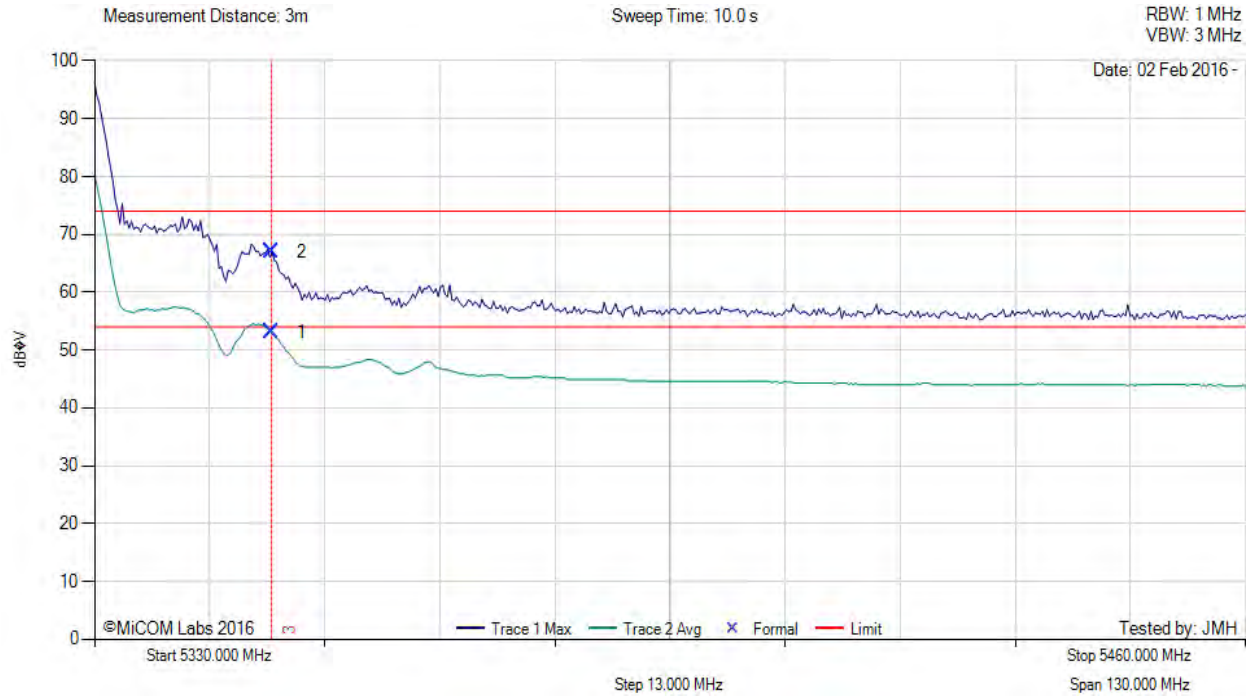
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-45, Power Setting: 17, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	14.87	3.70	34.51	53.08	Max Avg	Vertical	161	5	54.0	-0.9	Pass
2	5350.00	28.73	3.70	34.51	66.94	Max Peak	Vertical	161	5	74.0	-7.1	Pass
3	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-45, Power Setting: 10.5, Duty Cycle (%): 100

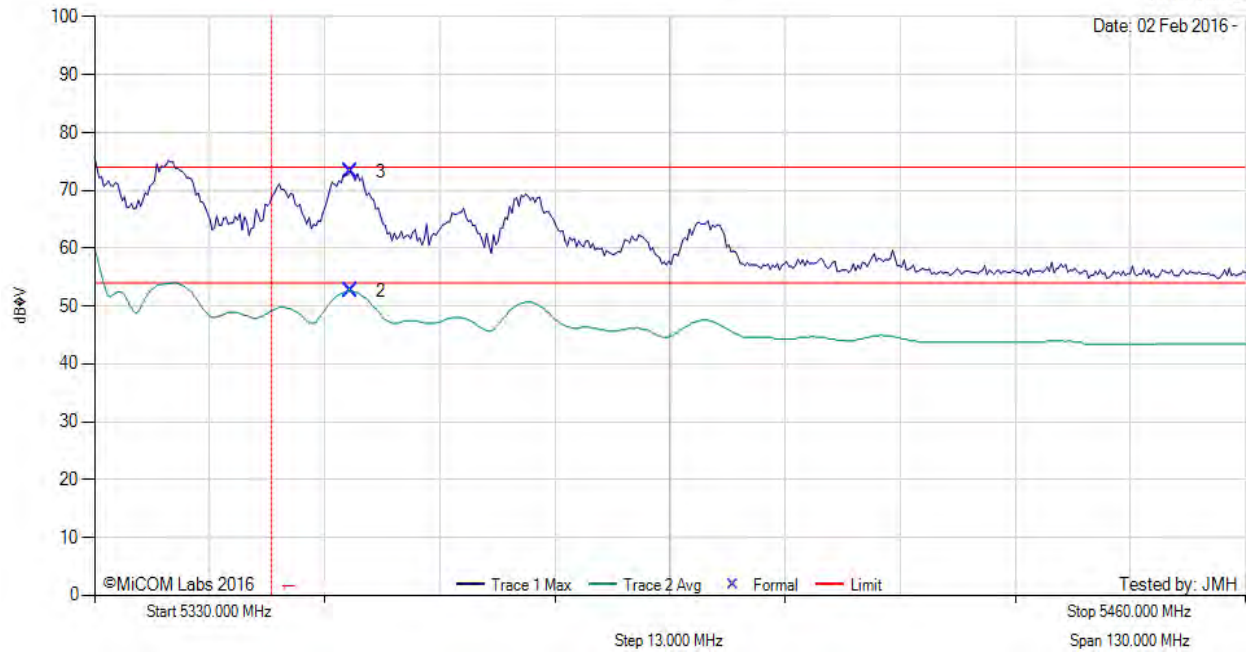
Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz

VBW: 3 MHz

Date: 02 Feb 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5358.92	14.46	3.71	34.49	52.66	Max Avg	Vertical	161	5	54.0	-1.3	Pass
3	5358.92	35.08	3.71	34.49	73.28	Max Peak	Vertical	161	5	74.0	-0.7	Pass

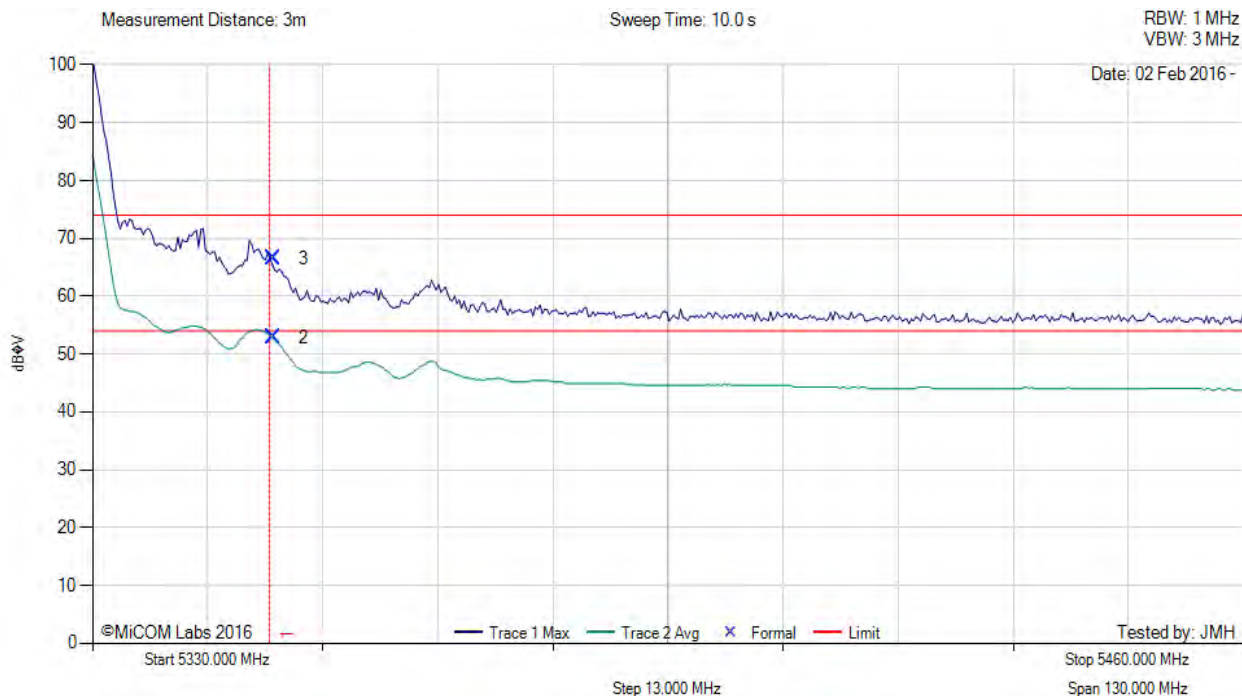
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-45, Power Setting: 17, Duty Cycle (%): 100

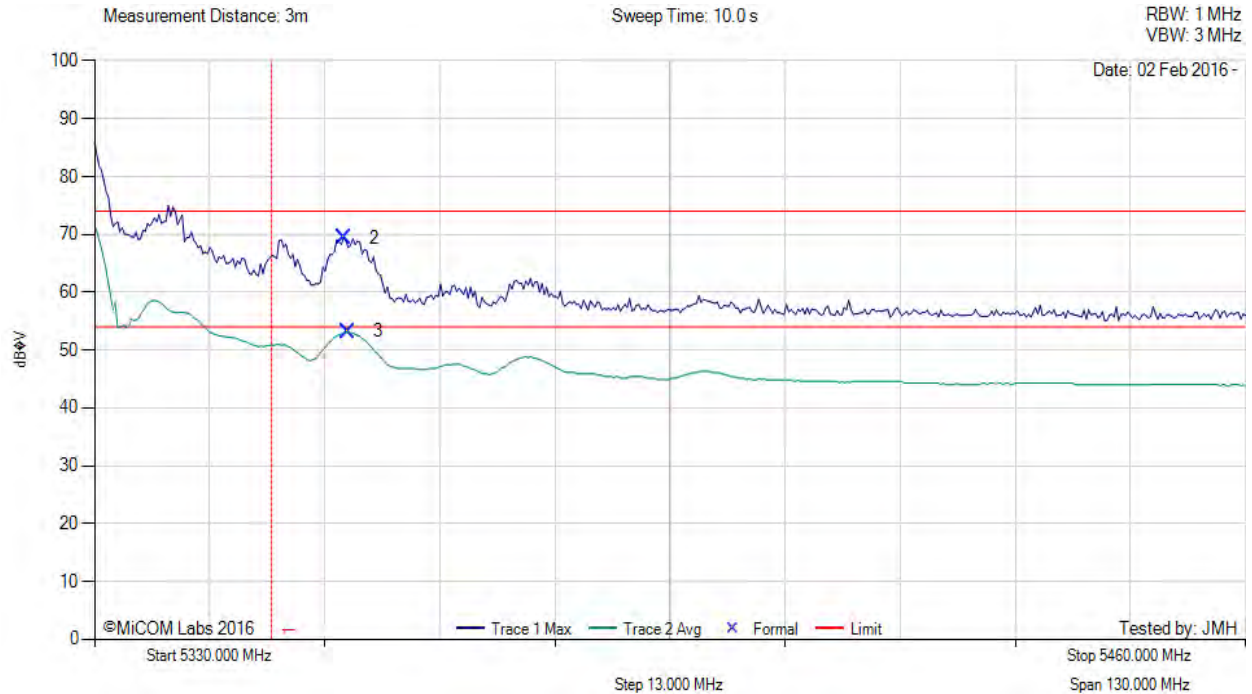


Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5350.44	14.66	3.70	34.51	52.87	Max Avg	Vertical	161	5	54.0	-1.1	Pass
3	5350.44	28.25	3.70	34.51	66.46	Max Peak	Vertical	161	5	74.0	-7.5	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-45, Power Setting: 15.5, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5358.14	31.15	3.71	34.49	69.35	Max Peak	Vertical	161	5	74.0	-4.7	Pass
3	5358.66	14.98	3.71	34.49	53.18	Max Avg	Vertical	161	5	54.0	-0.8	Pass

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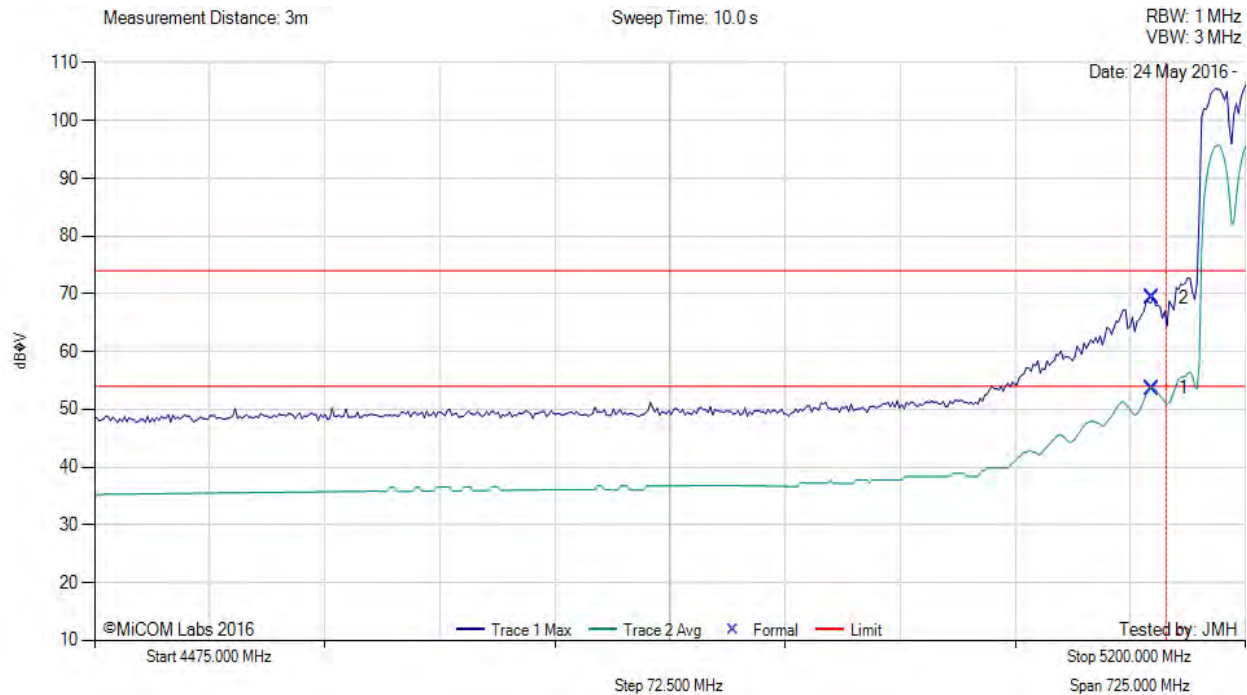


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-45, Power Setting: 15, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5141.58	15.80	3.70	34.12	53.62	Max Avg	Horizontal	162	8	54.0	-0.4	Pass
2	5141.58	31.58	3.70	34.12	69.40	Max Peak	Horizontal	162	8	74.0	-4.6	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

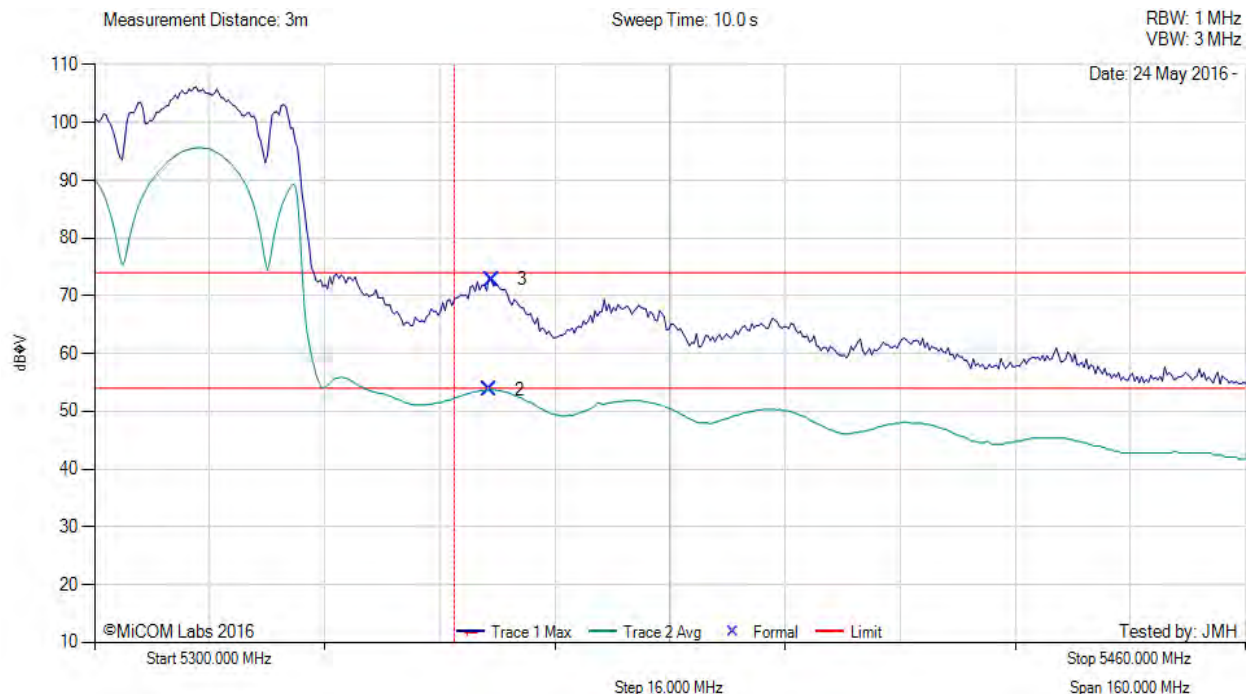
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5290.00 MHz, Antenna: AP-ANT-45, Power Setting: 15.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5354.93	15.57	3.71	34.50	53.78	Max Avg	Horizontal	162	8	54.0	-0.2	Pass
3	5355.25	34.58	3.71	34.50	72.79	Max Peak	Horizontal	162	8	74.0	-1.2	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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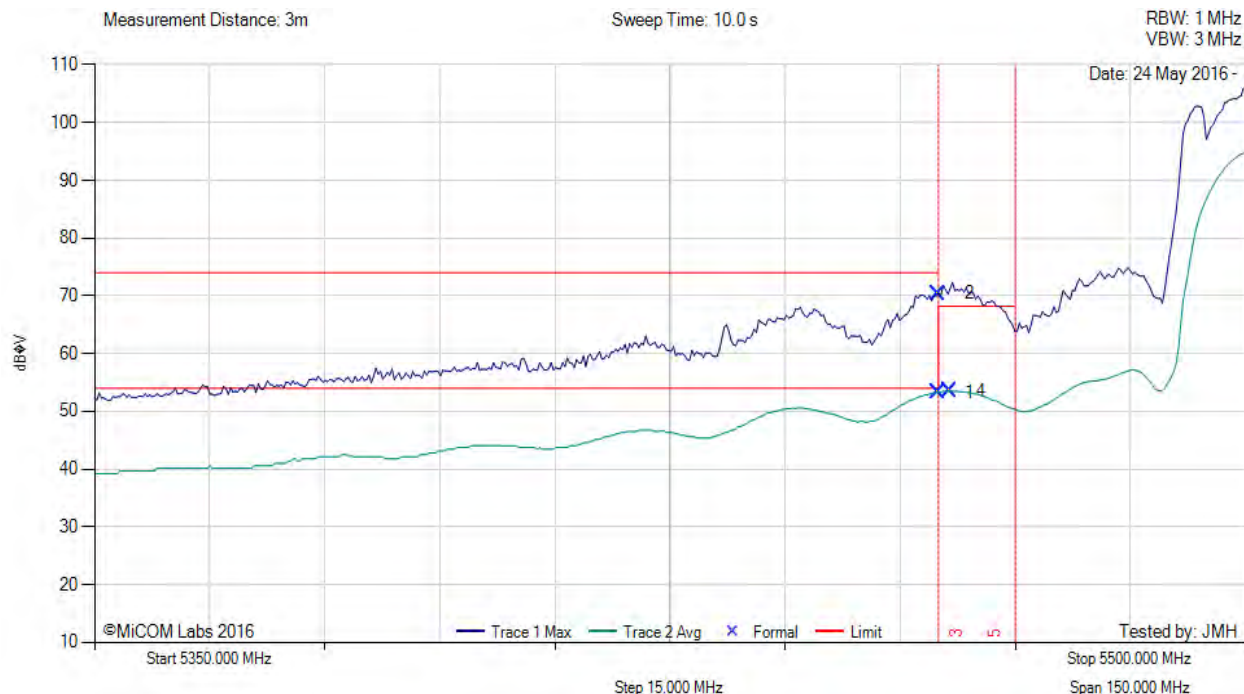


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5530.00 MHz, Antenna: AP-ANT-45, Power Setting: 14.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	15.20	3.79	34.31	53.30	Max Avg	Horizontal	162	8	54.0	-0.7	Pass
2	5460.00	32.32	3.79	34.31	70.42	Max Peak	Horizontal	162	8	74.0	-3.6	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5461.52	15.49	3.79	34.32	53.59	Max Avg	Horizontal	153	30	68.2*	-14.6	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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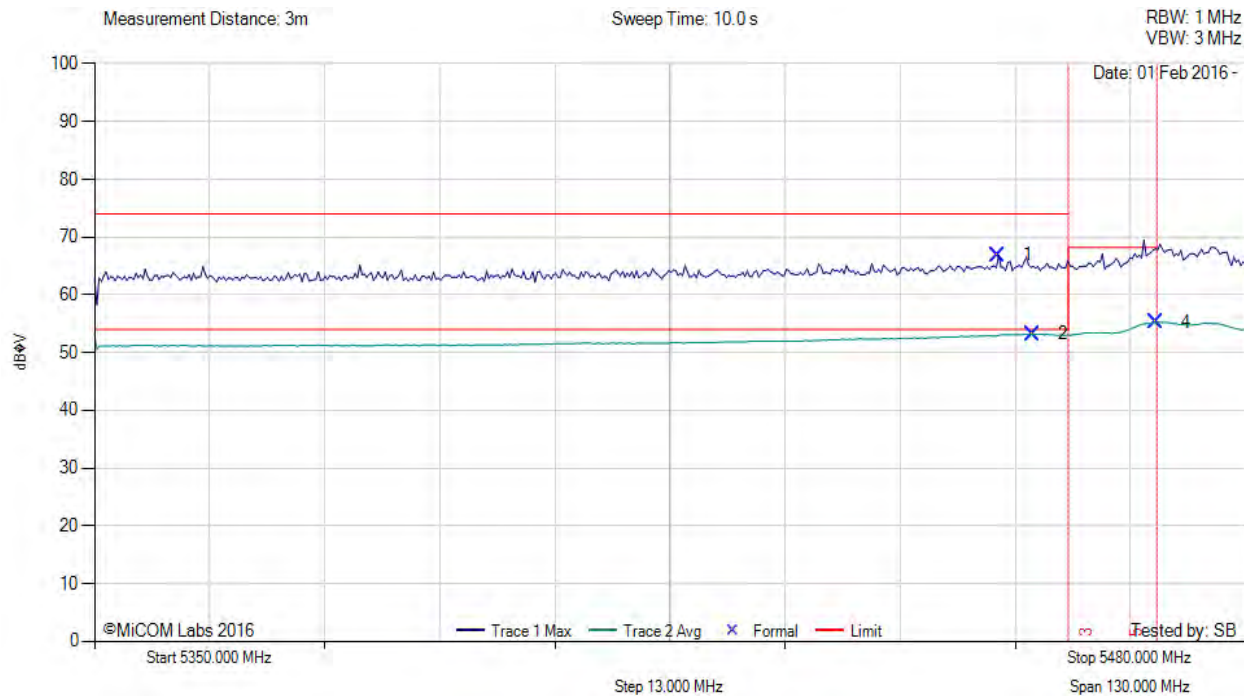
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A.1.2.15. AP-ANT-48



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-48, Power Setting: 16, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5452.00	28.80	3.78	34.30	66.88	Max Peak	Horizontal	162	362	74.0	-7.1	Pass
2	5455.95	15.09	3.80	34.30	53.19	Max Avg	Horizontal	162	362	54.0	-0.8	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.84	17.07	3.79	34.32	55.18	Max Avg	Horizontal	153	30	68.2	-13.1	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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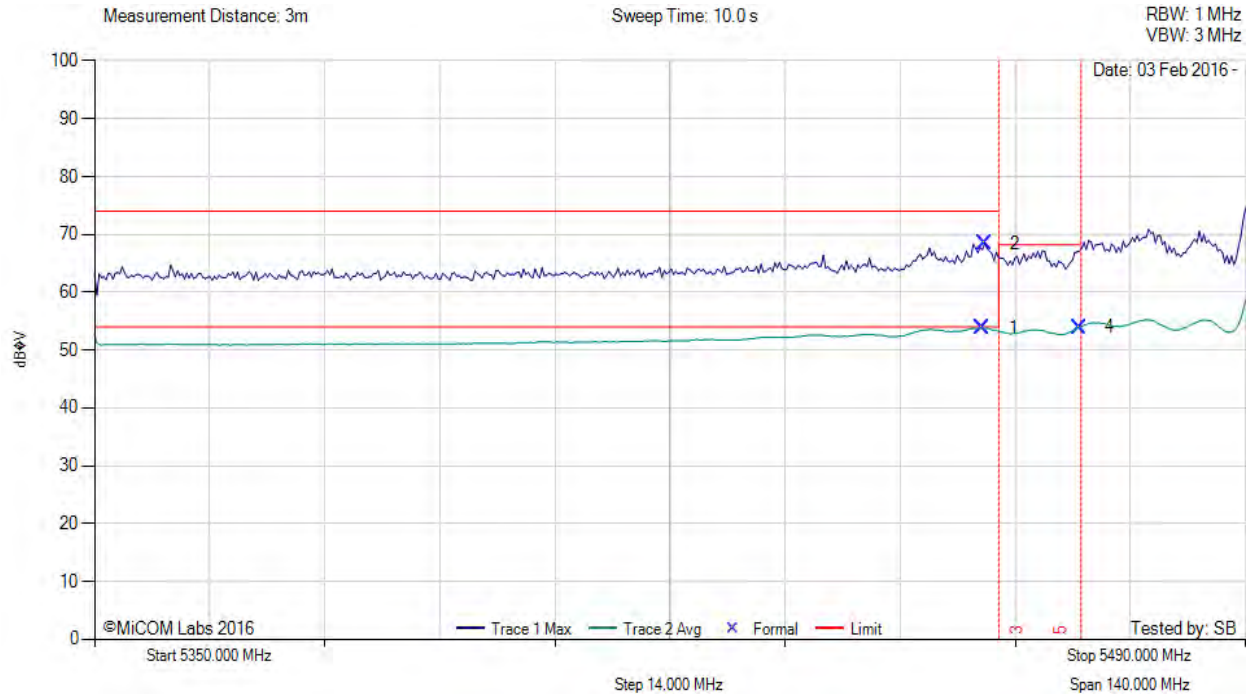


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-48, Power Setting: 8, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.04	15.68	3.80	34.30	53.78	Max Avg	Horizontal	149	368	54.0	-0.2	Pass
2	5458.32	30.40	3.80	34.30	68.50	Max Peak	Horizontal	149	368	74.0	-5.5	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.80	15.87	3.79	34.32	53.98	Max Avg	Horizontal	153	30	68.2	-14.3	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

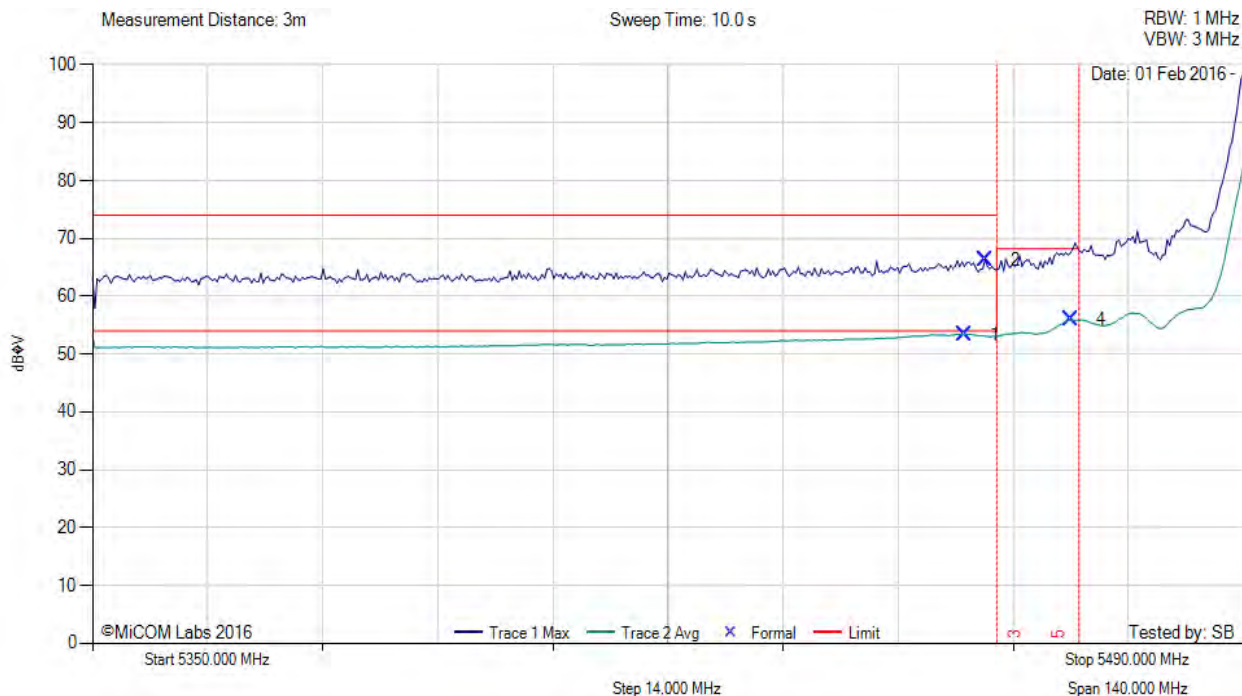
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-48, Power Setting: 17, Duty Cycle (%): 100



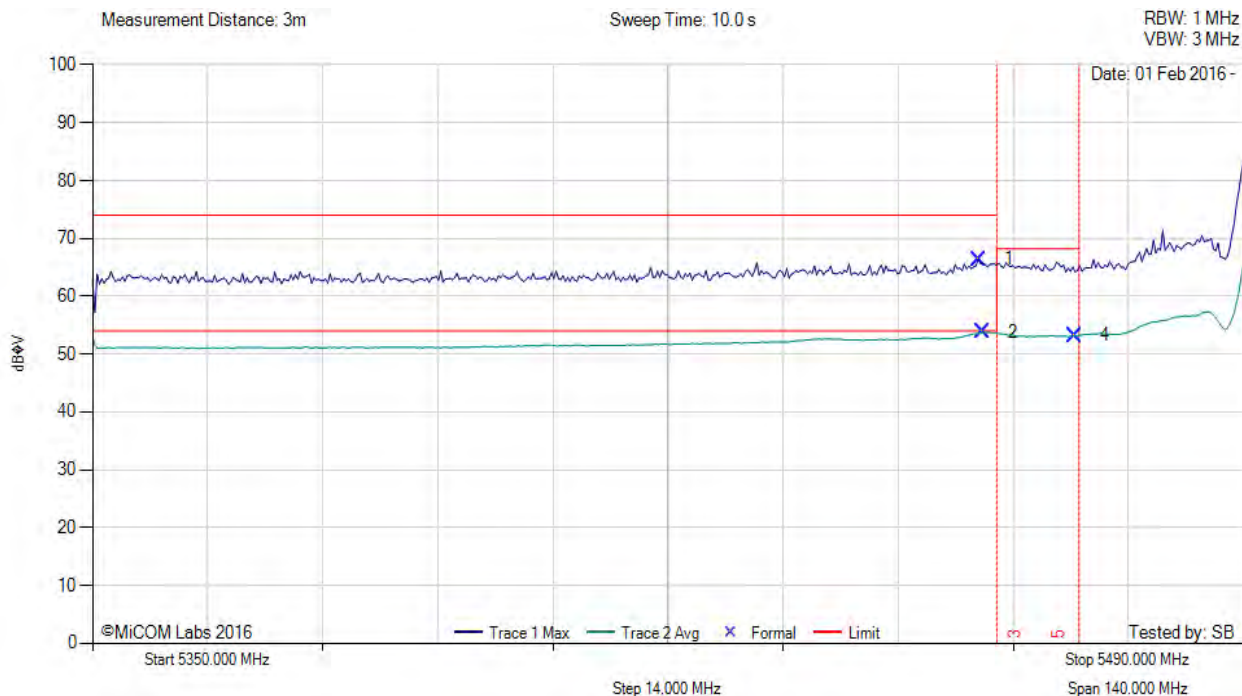
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5456.07	15.29	3.80	34.30	53.39	Max Avg	Horizontal	162	362	54.0	-0.6	Pass
2	5458.60	28.16	3.79	34.31	66.26	Max Peak	Horizontal	162	362	74.0	-7.7	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5468.96	17.84	3.79	34.32	55.95	Max Avg	Horizontal	153	30	68.2	-12.3	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-48, Power Setting: 13, Duty Cycle (%): 100



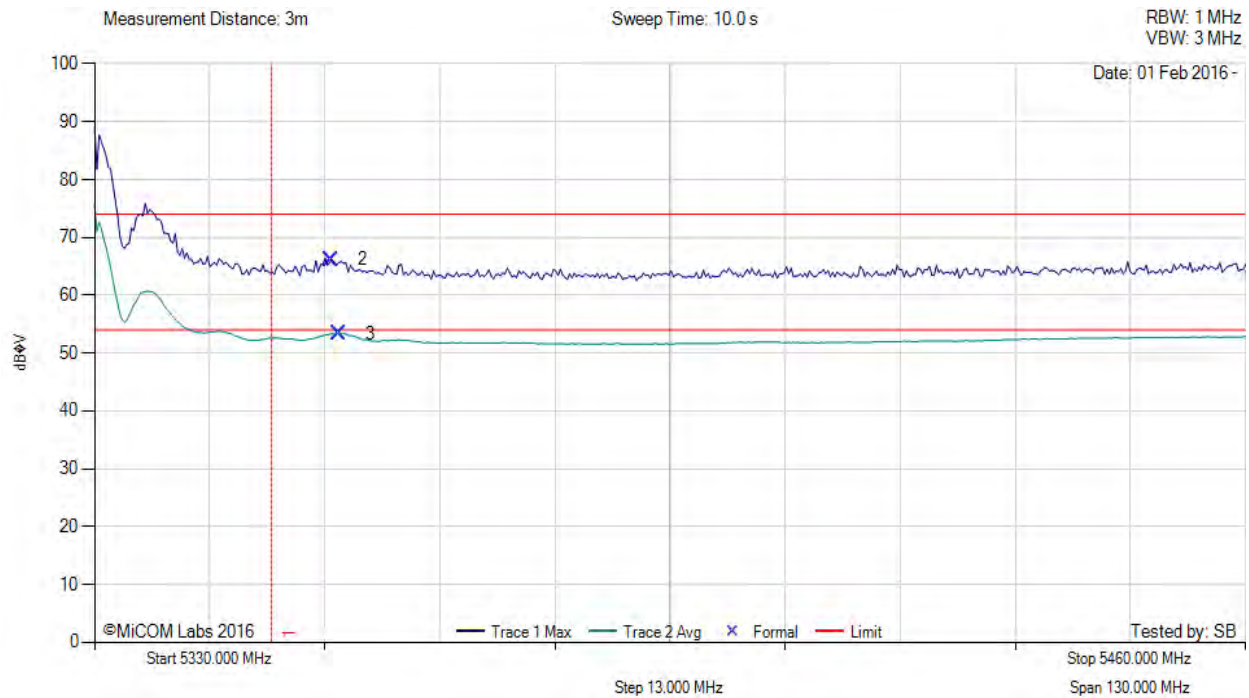
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5457.76	28.29	3.80	34.30	66.39	Max Peak	Horizontal	162	362	74.0	-7.6	Pass
2	5458.32	15.68	3.80	34.30	53.78	Max Avg	Horizontal	162	362	54.0	-0.2	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5469.52	15.09	3.79	34.32	53.20	Max Avg	Horizontal	153	30	68.2	-15.0	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
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RESTRICTED
UPPER
BAND-EDGE
EMISSIONS

Variant:
802.11a, Test
Freq: 5320.00
MHz,
Antenna: AP-
ANT-48,
Power
Setting: 16,
Duty Cycle
(%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5356.77	27.92	3.71	34.49	66.12	Max Peak	Vertical	152	361	74.0	-7.9	Pass
3	5357.66	15.18	3.71	34.49	53.38	Max Avg	Vertical	152	361	54.0	-0.6	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

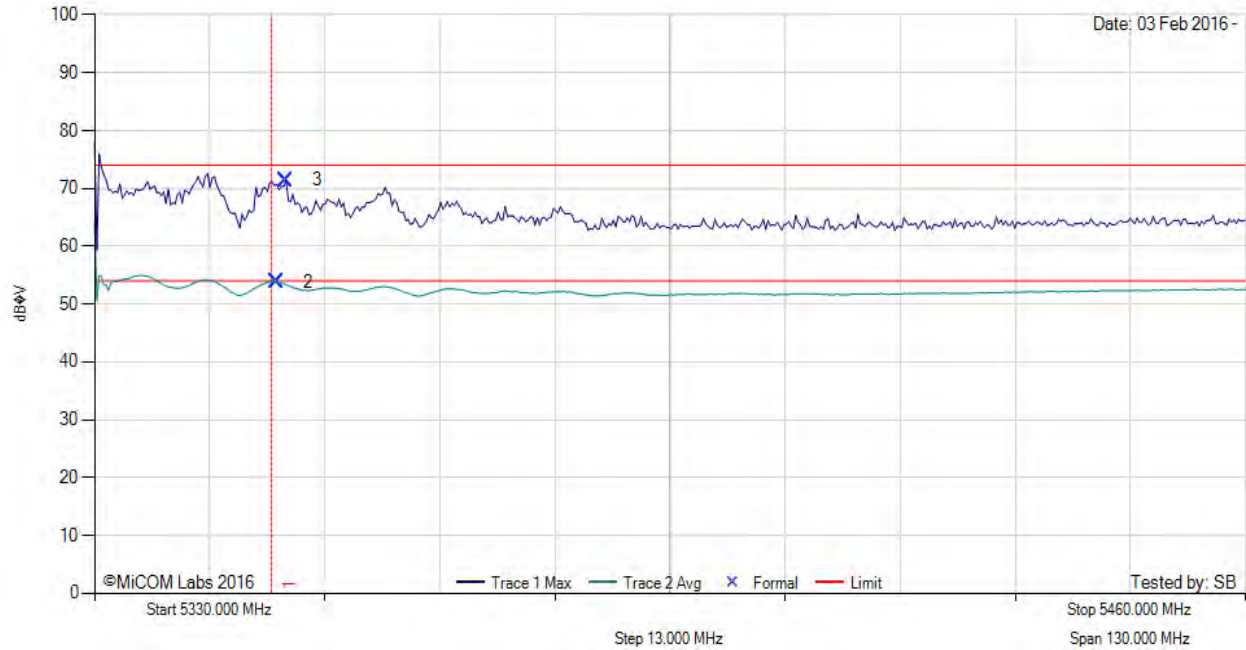
Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-48, Power Setting: 9.5, Duty Cycle (%): 100

Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz
VBW: 3 MHz

Date: 03 Feb 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5350.62	15.56	3.71	34.51	53.78	Max Avg	Horizontal	149	368	54.0	-0.2	Pass
3	5351.66	33.23	3.71	34.51	71.45	Max Peak	Horizontal	149	368	74.0	-2.6	Pass

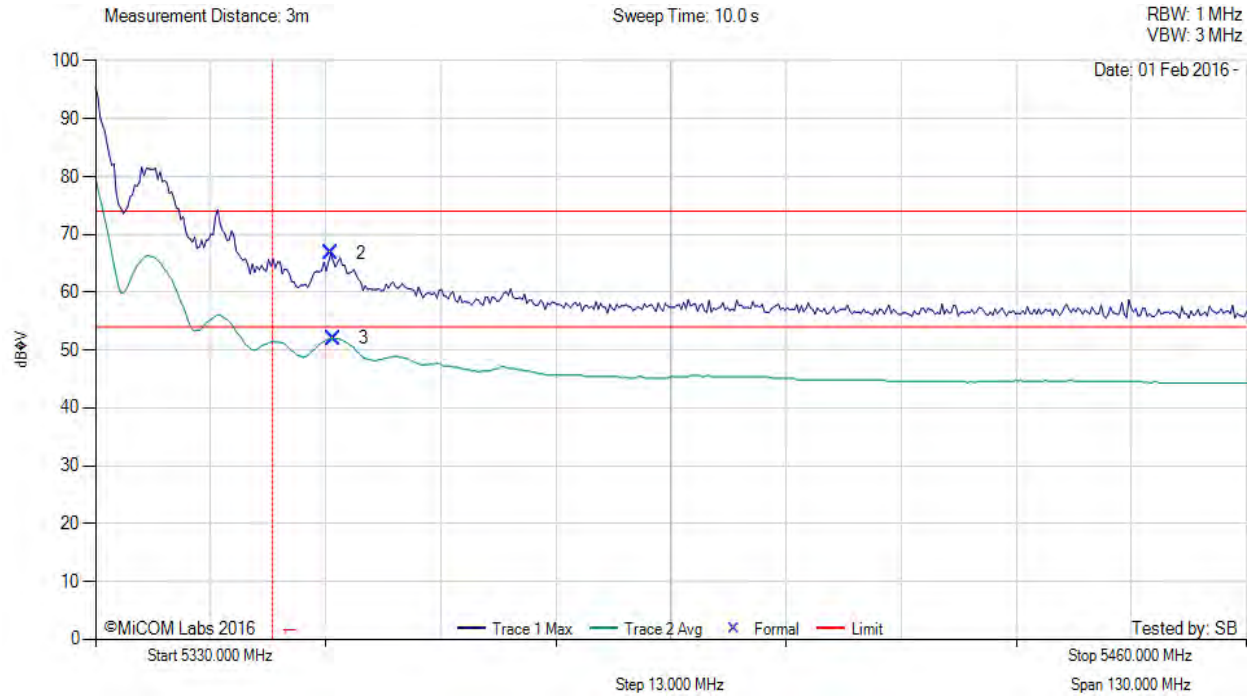
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-48, Power Setting: 18, Duty Cycle (%): 100



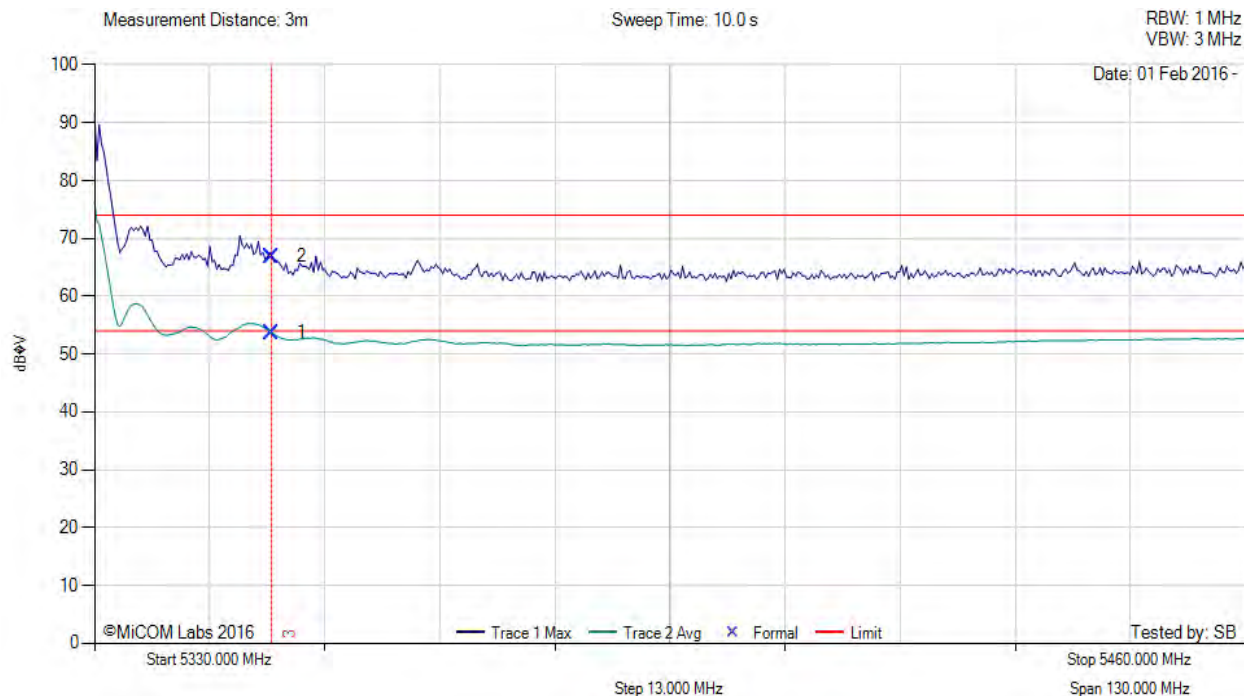
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5356.57	28.48	3.71	34.49	66.68	Max Peak	Vertical	152	361	74.0	-7.3	Pass
3	5356.81	13.78	3.71	34.49	51.98	Max Avg	Vertical	152	361	54.0	-2.0	Pass

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-48, Power Setting: 14, Duty Cycle (%): 100



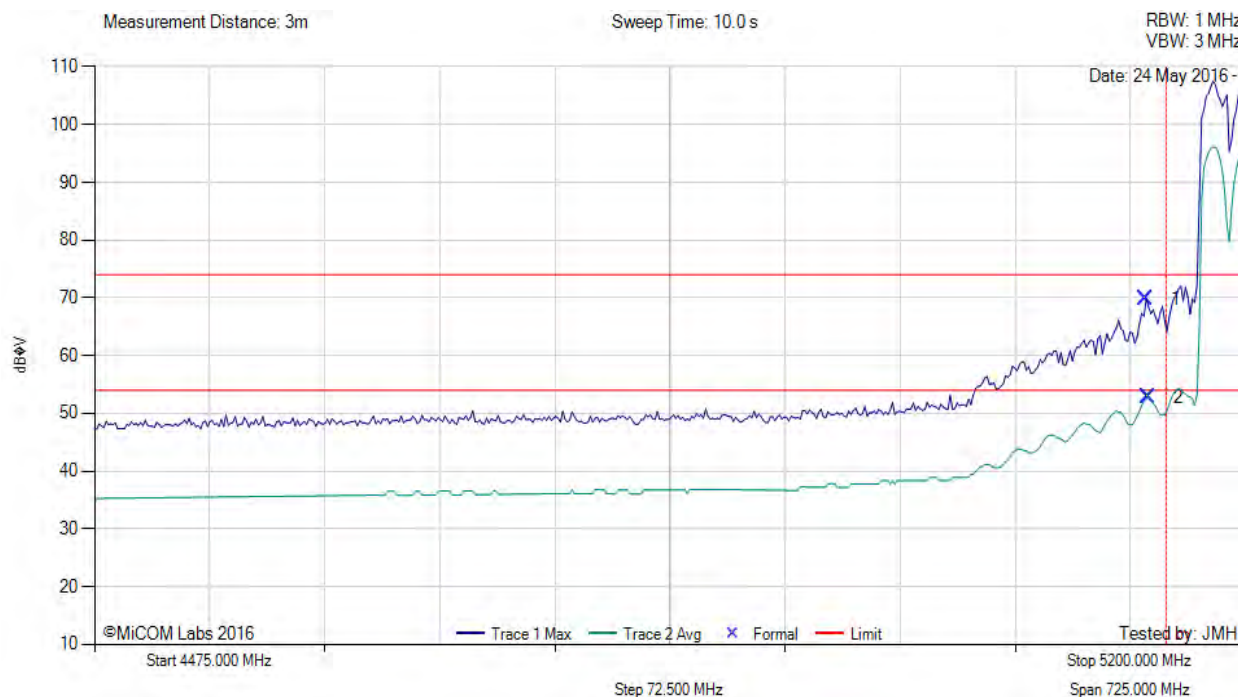
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	15.47	3.70	34.51	53.68	Max Avg	Vertical	152	361	54.0	-0.3	Pass
2	5350.00	28.62	3.70	34.51	66.83	Max Peak	Vertical	152	361	74.0	-7.2	Pass
3	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-48, Power Setting: 12, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5137.22	31.94	3.69	34.12	69.75	Max Peak	Horizontal	180	-6	74.0	-4.3	Pass
2	5138.73	14.92	3.70	34.12	52.74	Max Avg	Horizontal	180	-6	54.0	-1.3	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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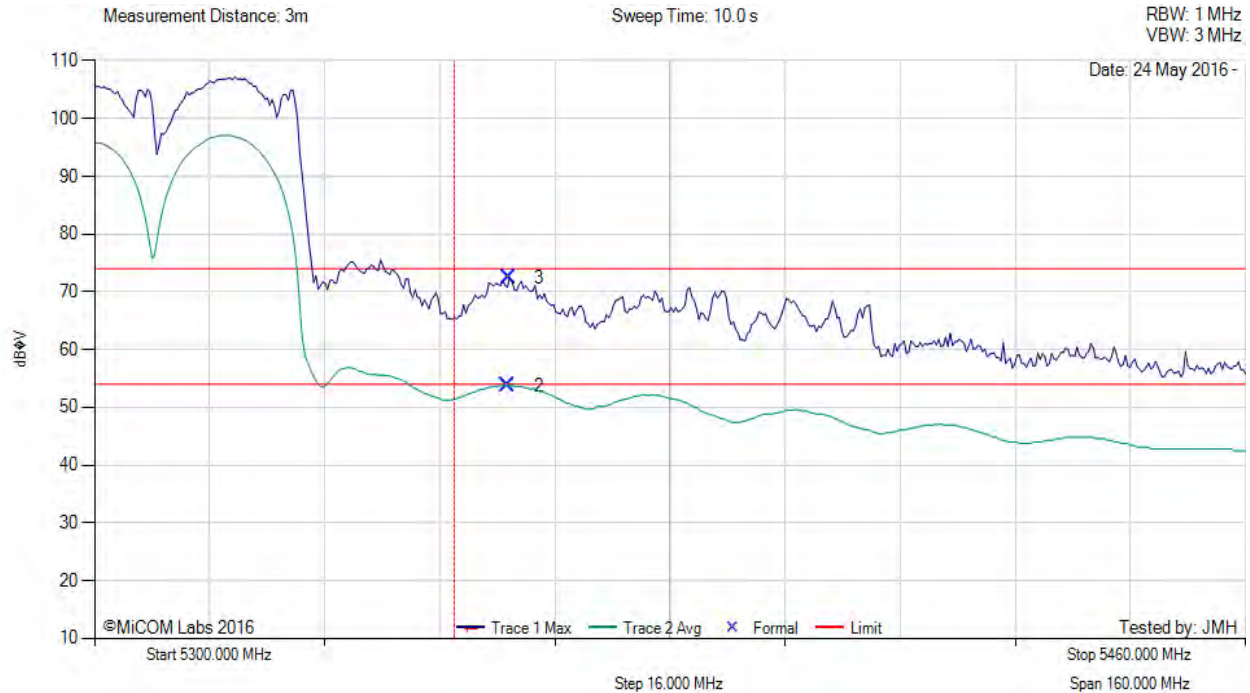


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
Serial #: ARUB196-U10 Rev A
Issue Date: 17th June 2016
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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: AP-ANT-48, Power Setting: 13, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5357.47	15.58	3.71	34.49	53.78	Max Avg	Horizontal	180	-6	54.0	-0.2	Pass
3	5357.60	34.23	3.71	34.49	72.43	Max Peak	Horizontal	180	-6	74.0	-1.6	Pass

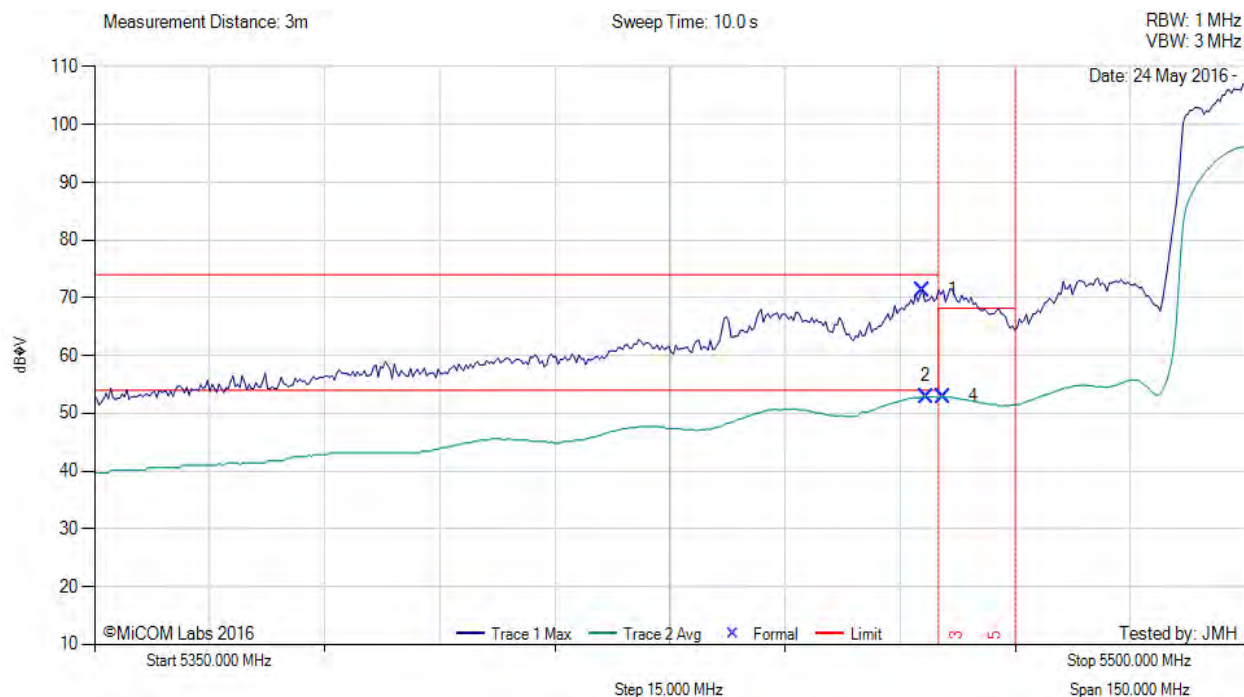
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5570.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5457.84	33.22	3.80	34.30	71.32	Max Peak	Horizontal	183	-6	74.0	-2.7	Pass
2	5458.38	14.79	3.80	34.30	52.89	Max Avg	Horizontal	183	-6	54.0	-1.1	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5460.62	14.78	3.79	34.31	52.88	Max Avg	Horizontal	153	30	68.2*	-15.4	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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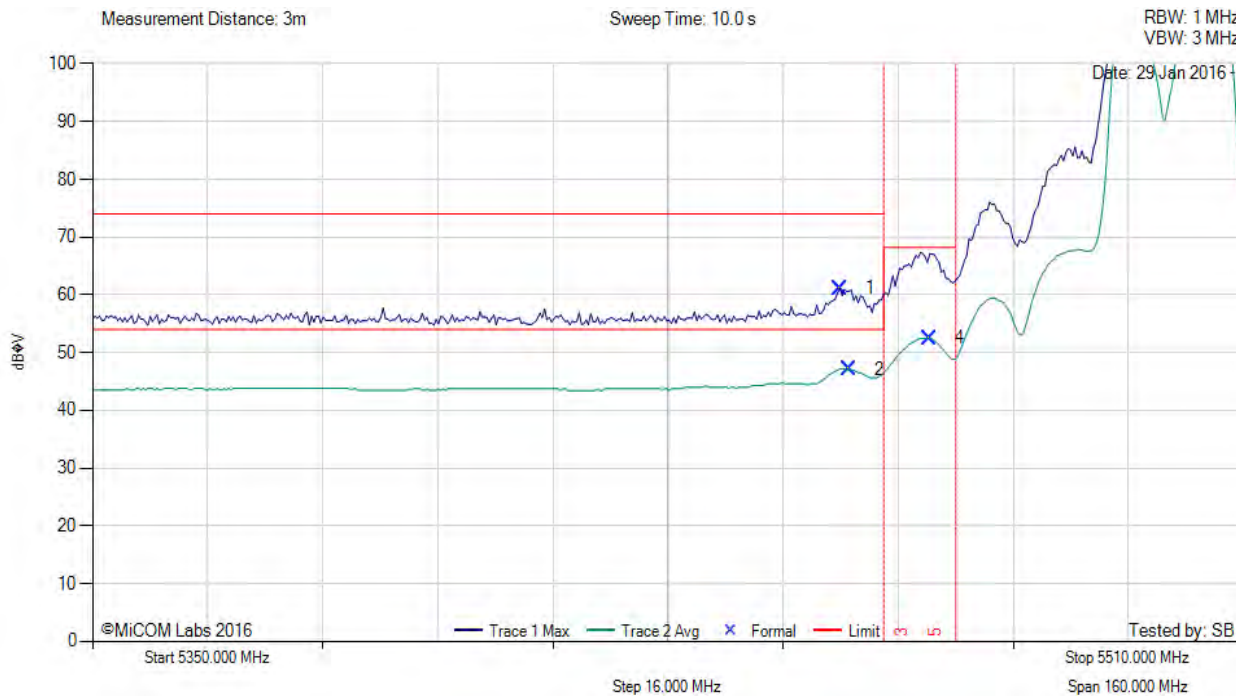
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

A.1.2.16. Metal Sheet



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: Metal Sheet, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5453.91	23.02	3.79	34.30	61.11	Max Peak	Vertical	179	313	74.0	-12.9	Pass
2	5455.19	9.08	3.79	34.30	47.17	Max Avg	Vertical	179	313	54.0	-6.8	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5466.39	14.36	3.79	34.31	52.46	Max Avg	Horizontal	153	30	68.2	-15.8	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

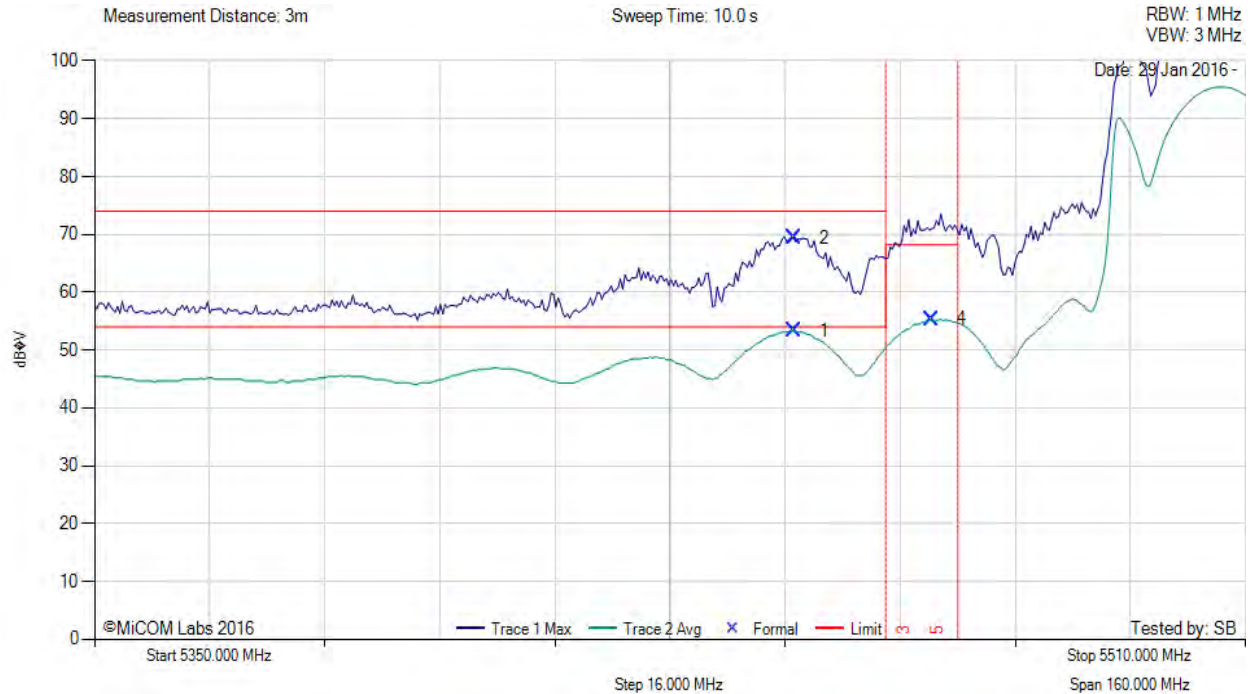
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: Metal Sheet, Power Setting: 15.5, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5447.21	15.33	3.76	34.30	53.39	Max Avg	Vertical	173	329	54.0	-0.6	Pass
2	5447.25	31.38	3.76	34.30	69.44	Max Peak	Vertical	173	329	74.0	-4.6	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5466.39	17.22	3.79	34.32	55.33	Max Avg	Horizontal	153	30	68.2	-12.9	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

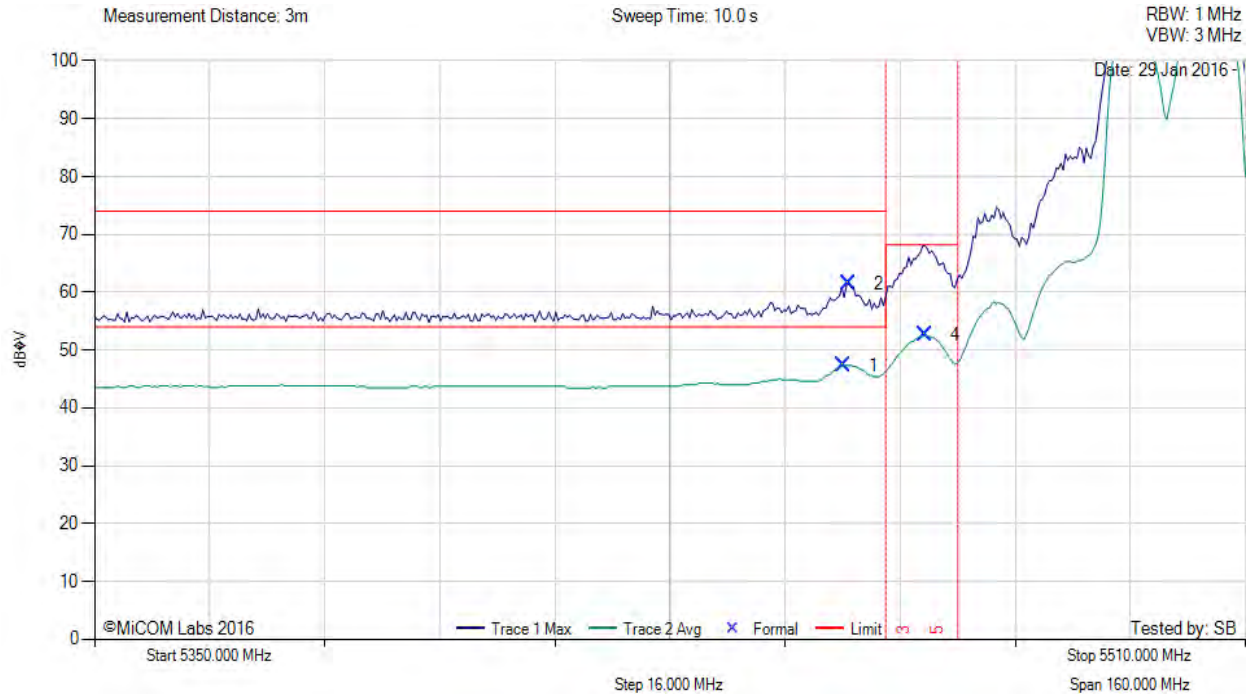
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: Metal Sheet, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5454.15	9.28	3.79	34.30	47.37	Max Avg	Vertical	179	313	54.0	-6.6	Pass
2	5454.75	23.34	3.79	34.30	61.43	Max Peak	Vertical	179	313	74.0	-12.6	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5465.43	14.46	3.79	34.32	52.57	Max Avg	Horizontal	153	30	68.2	-15.7	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

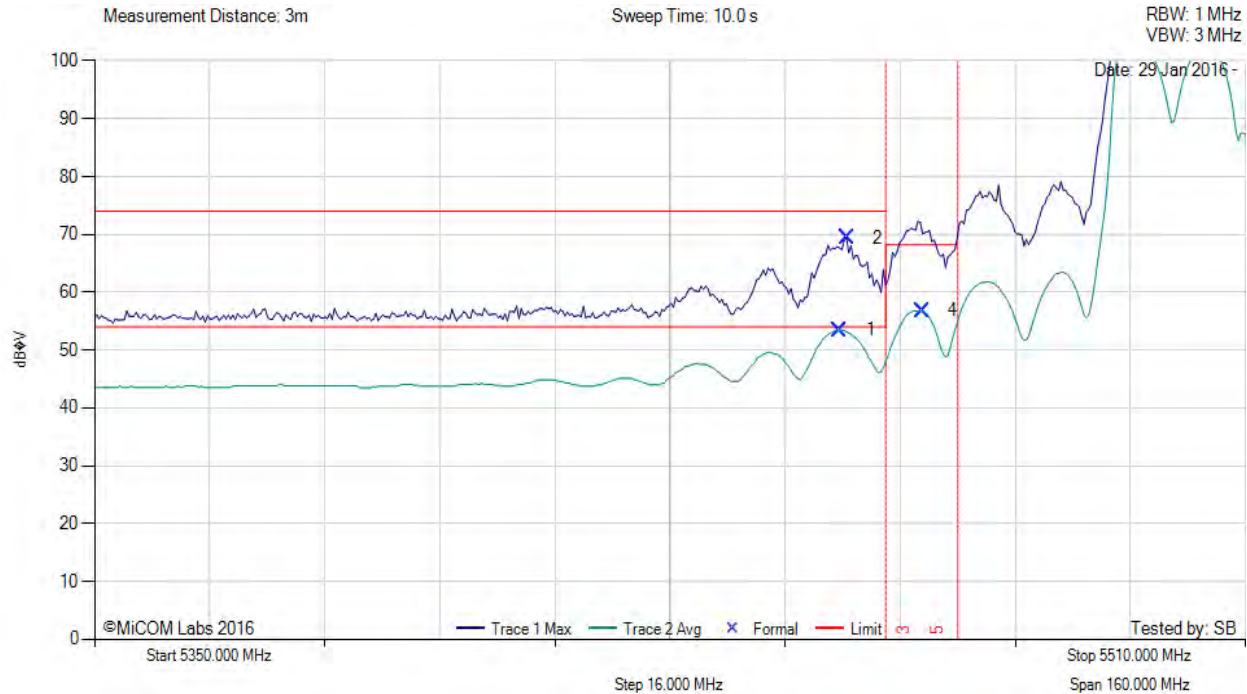
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: Metal Sheet, Power Setting: 17.5, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5453.65	15.40	3.79	34.30	53.49	Max Avg	Vertical	179	313	54.0	-0.5	Pass
2	5454.67	31.27	3.79	34.30	69.36	Max Peak	Vertical	179	313	74.0	-4.6	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5465.11	18.68	3.79	34.32	56.79	Max Avg	Horizontal	153	30	68.2	-11.4	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: Metal Sheet, Power Setting: 18.5, Duty Cycle (%): 100

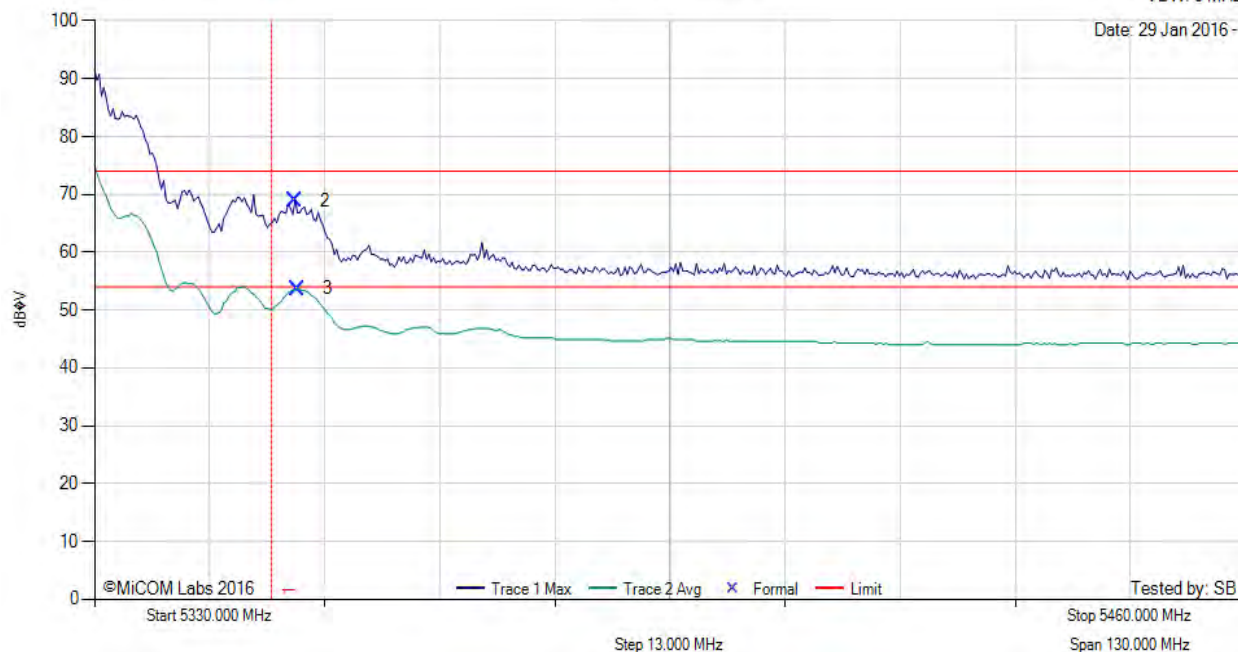
Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz

VBW: 3 MHz

Date: 29 Jan 2016 -



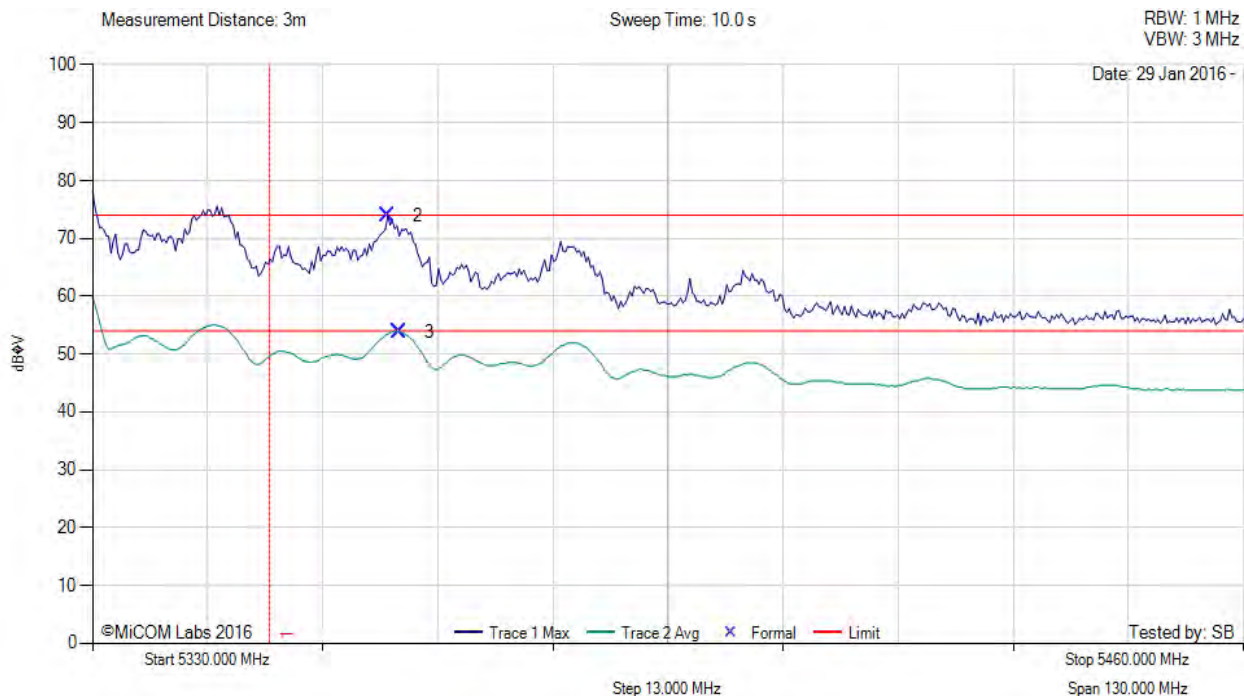
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5352.61	30.77	3.71	34.50	68.98	Max Peak	Vertical	179	330	74.0	-5.0	Pass
3	5352.85	15.47	3.71	34.50	53.68	Max Avg	Vertical	179	330	54.0	-0.3	Pass

Test Notes: reduced power setting from 21 to 18.5

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: Metal Sheet, Power Setting: 14, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5363.35	35.79	3.70	34.48	73.97	Max Peak	Vertical	179	330	74.0	0.0	Pass
3	5364.65	15.71	3.69	34.47	53.87	Max Avg	Vertical	179	330	54.0	-0.1	Pass

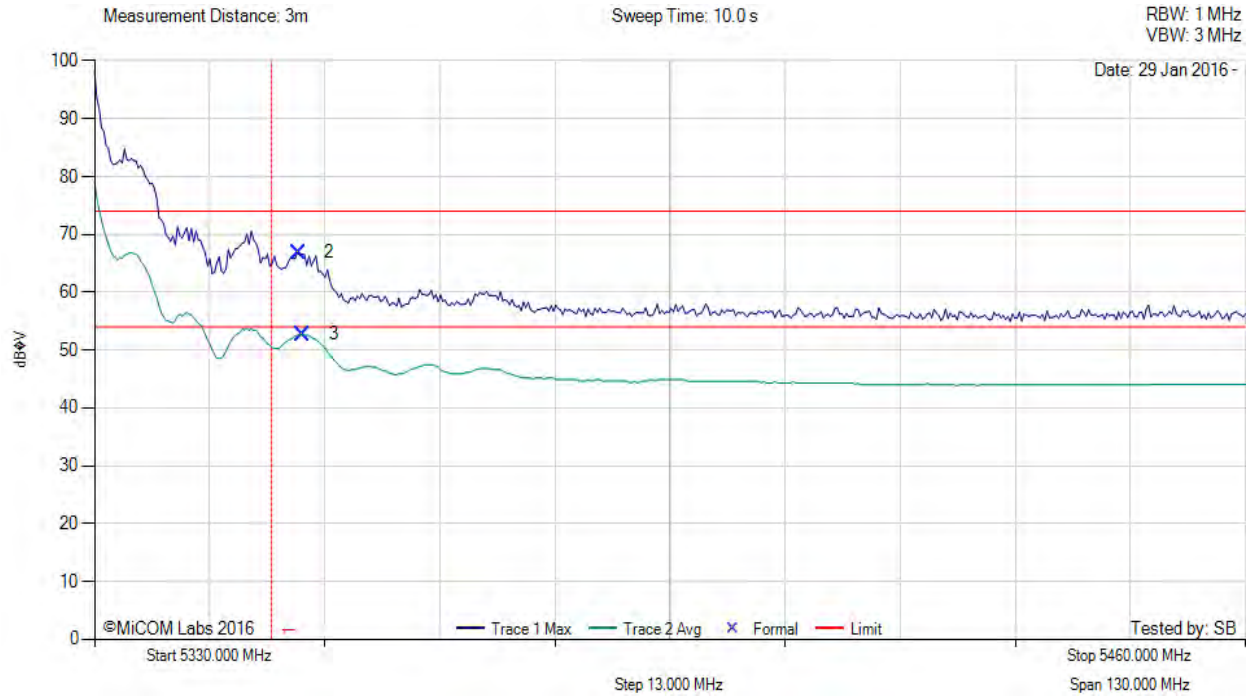
Test Notes: reduced power setting from 21 to 14

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: Metal Sheet, Power Setting: 18.5, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5353.05	28.70	3.71	34.50	66.91	Max Peak	Vertical	179	330	74.0	-7.1	Pass
3	5353.57	14.55	3.71	34.50	52.76	Max Avg	Vertical	179	330	54.0	-1.2	Pass

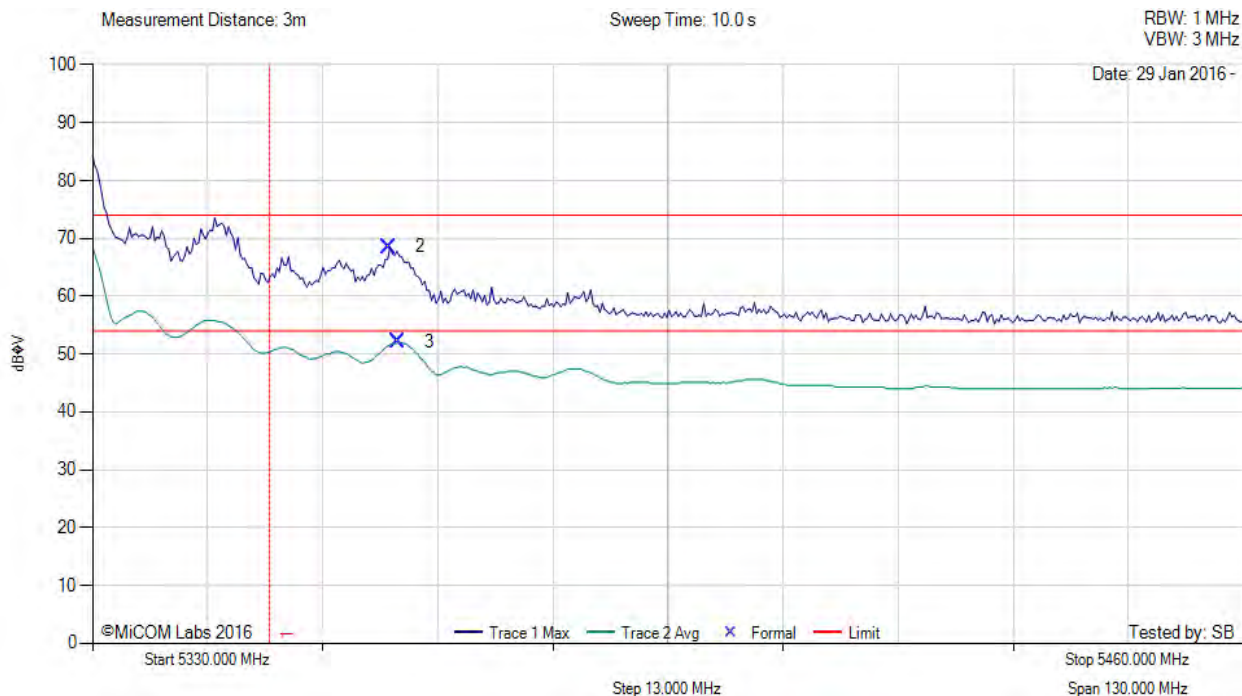
Test Notes: reduced power setting from 21 to 18.5

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: Metal Sheet, Power Setting: 17, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5363.51	30.37	3.70	34.48	68.55	Max Peak	Vertical	179	330	74.0	-5.5	Pass
3	5364.55	13.93	3.69	34.47	52.09	Max Avg	Vertical	179	330	54.0	-1.9	Pass

Test Notes: reduced power setting from 21 to 17

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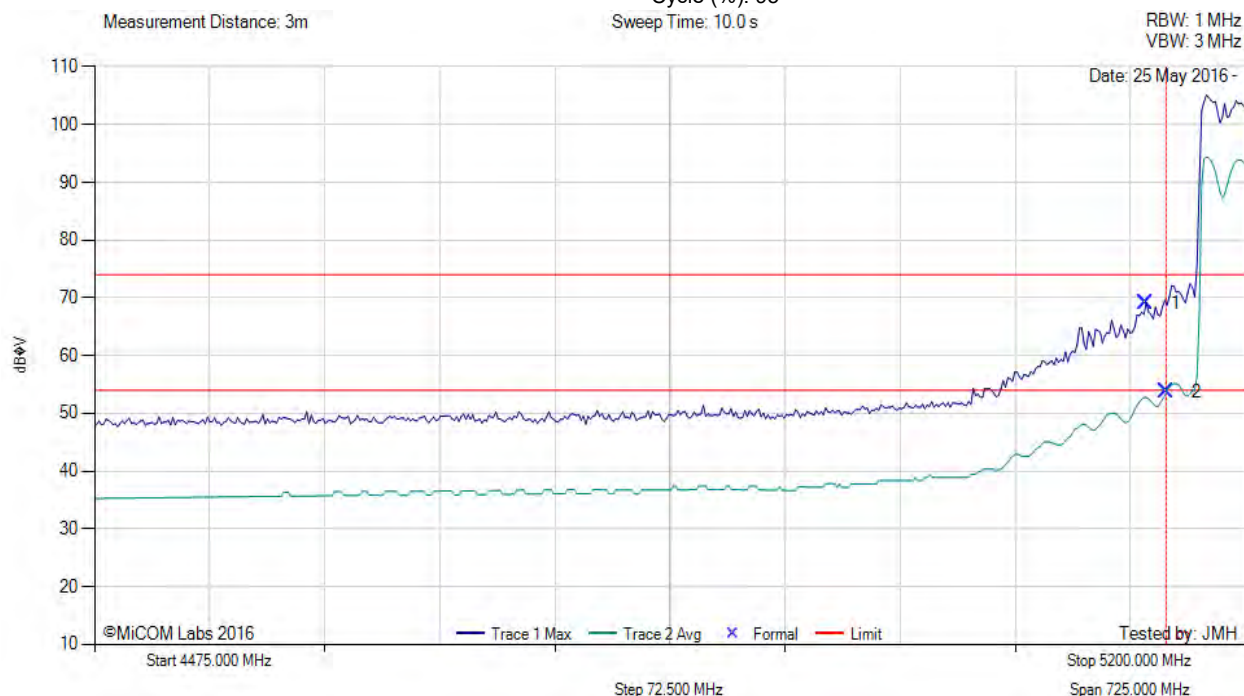


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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5250.00 MHz, Antenna: Aruba Networks Metal Sheet, Power Setting: 15.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5136.92	31.32	3.69	34.12	69.13	Max Peak	Vertical	159	305	74.0	-4.9	Pass
2	5150.00	16.04	3.67	34.11	53.82	Max Avg	Vertical	159	305	54.0	-0.2	Pass
3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

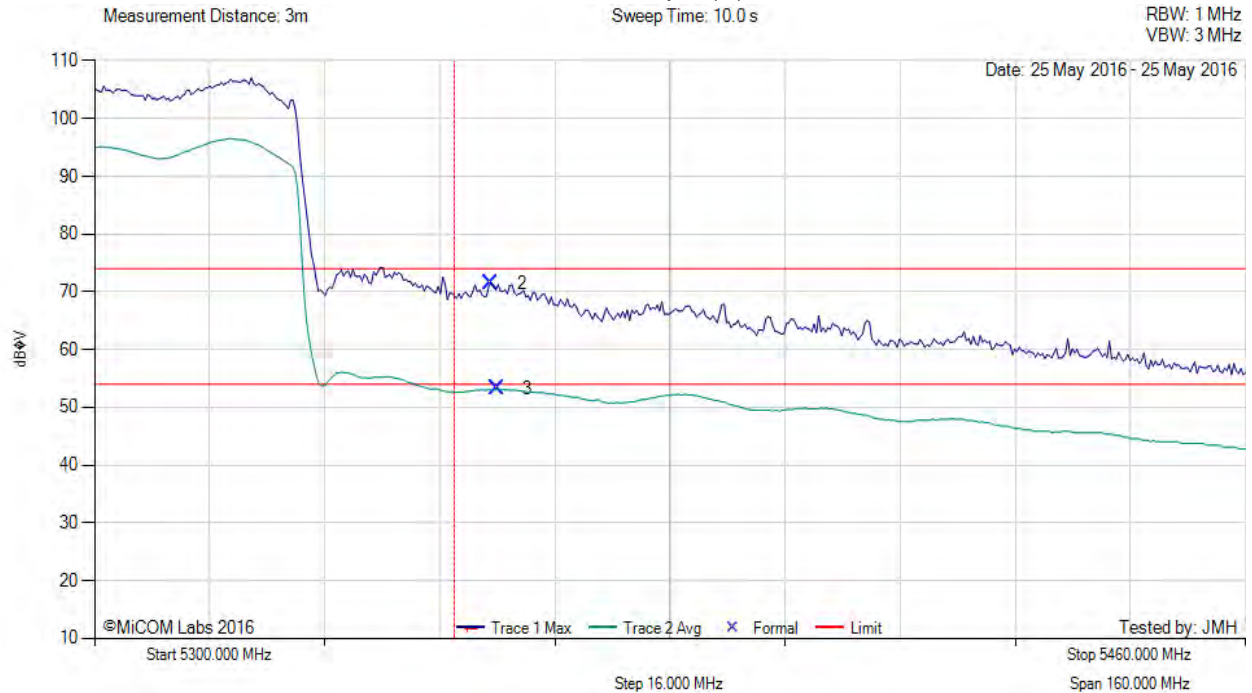
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RESTRICTED UPPER BAND-EDGE EMISSIONS



Variant: 802.11ac-160, Test Freq: 5290.00 MHz, Antenna: Aruba Networks Metal Sheet, Power Setting: 16, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
2	5355.13	33.22	3.71	34.50	71.43	Max Peak	Vertical	159	305	74.0	-2.6	Pass
3	5356.01	15.07	3.71	34.50	53.28	Max Avg	Vertical	159	305	54.0	-0.7	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. .

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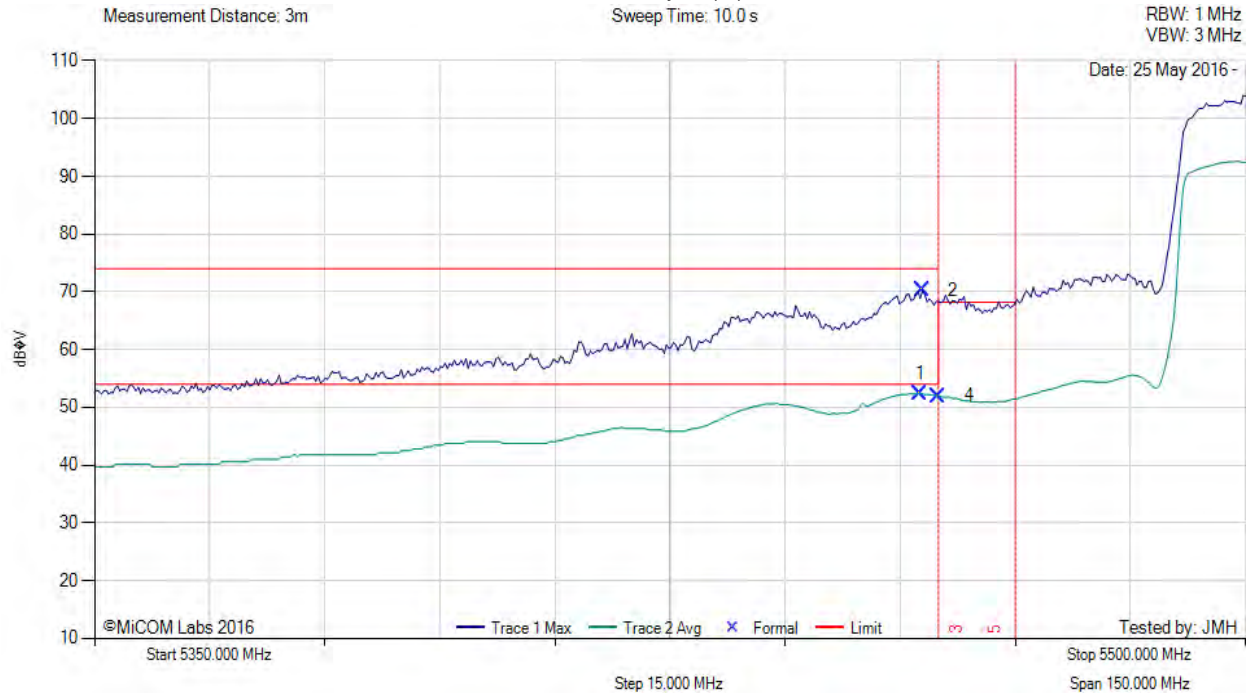


Title: APIN0334, APIN0335
To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)
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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-160, Test Freq: 5530.00 MHz, Antenna: Aruba Networks Metal Sheet, Power Setting: 15.5, Duty Cycle (%): 95



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5457.56	14.25	3.80	34.30	52.35	Max Avg	Vertical	160	305	54.0	-1.7	Pass
2	5457.84	32.13	3.80	34.30	70.23	Max Peak	Vertical	160	305	74.0	-3.8	Pass
3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
4	5460.02	27.72	3.79	34.31	52.00	Max Avg	Horizontal	153	30	68.2	-16.2	Pass
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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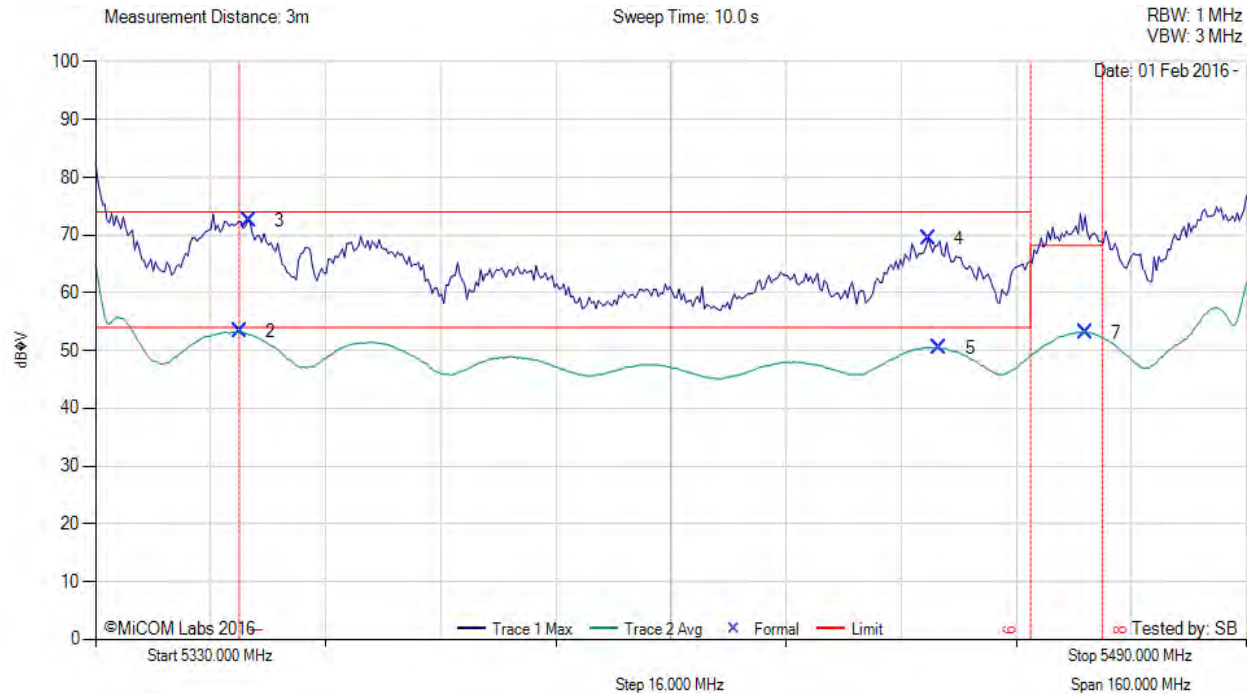
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A.1.2.17. AP-ANT-48/20W AC80+80



RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-48, Power Setting: 16, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
2	5350.11	15.08	3.70	34.51	53.29	Max Avg	Vertical	162	362	54.0	-0.7	Pass
3	5351.28	34.28	3.71	34.51	72.50	Max Peak	Vertical	162	362	74.0	-1.5	Pass
4	5445.75	31.34	3.78	34.30	69.42	Max Peak	Vertical	162	362	74.0	-4.6	Pass
5	5447.35	12.39	3.78	34.30	50.48	Max Avg	Vertical	162	362	54.0	-3.5	Pass
6	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
7	5467.56	14.99	3.79	34.32	53.10	Max Avg	Horizontal	153	30	68.2*	-15.1	Pass
8	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

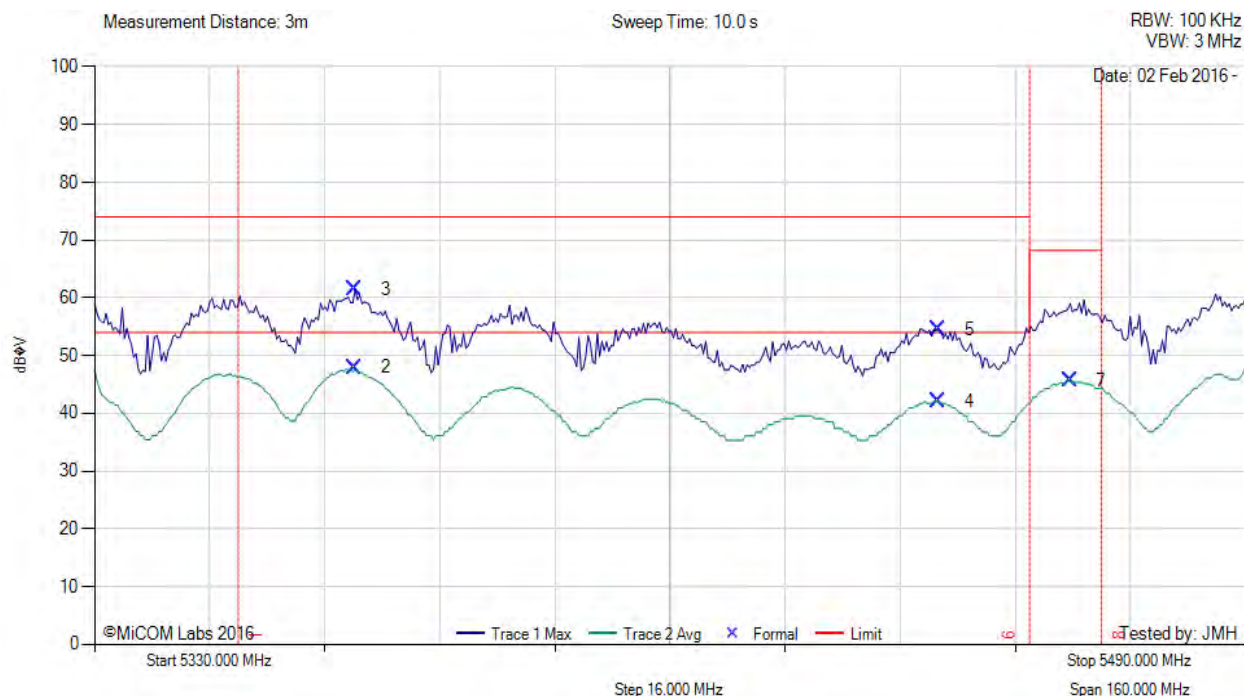
*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-20W, Power Setting: 18, Duty Cycle (%): 100



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
2	5366.23	9.91	3.71	34.34	47.96	Max Avg	Vertical	160	0	54.0	-6.0	Pass
3	5366.23	23.32	3.69	34.47	61.48	Max Peak	Vertical	160	0	74.0	-12.5	Pass
4	5447.35	4.03	3.77	34.30	42.10	Max Avg	Vertical	160	0	54.0	-11.9	Pass
5	5447.35	16.51	3.77	34.30	54.58	Max Peak	Vertical	160	0	74.0	-19.4	Pass
6	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
7	5465.63	7.54	3.79	34.31	45.64	Max Avg	Horizontal	153	30	68.2*	-22.6	Pass
8	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBμV/m is band edge average limit for 5470 MHz per FCC 407

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