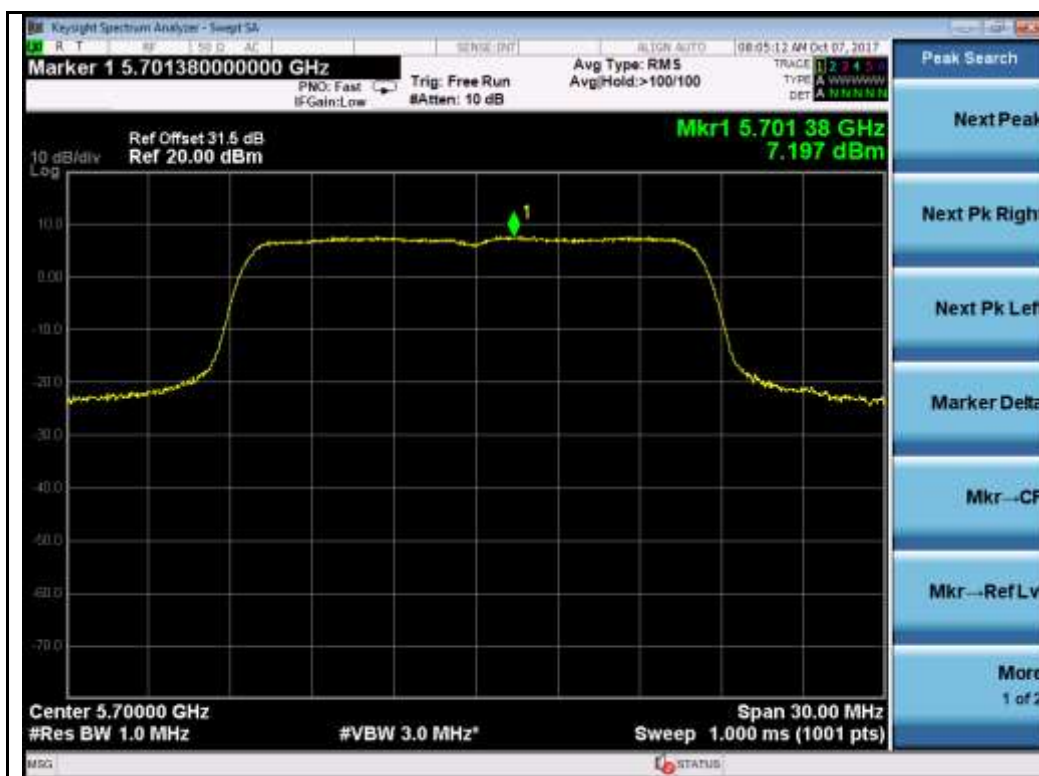
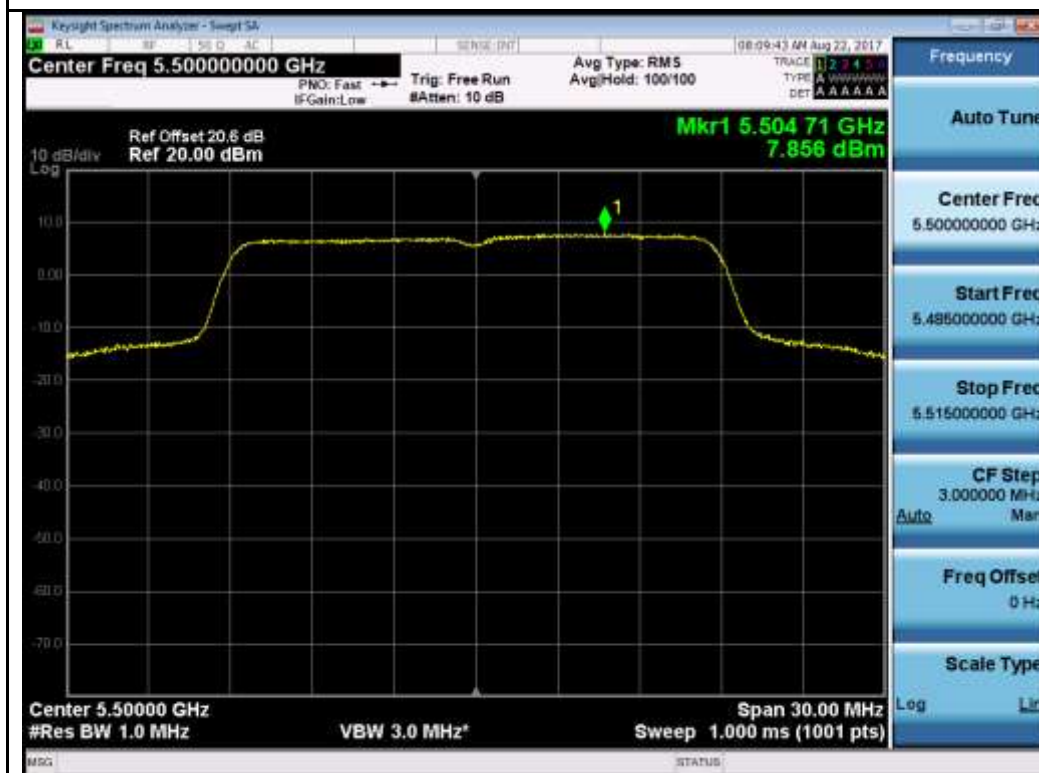
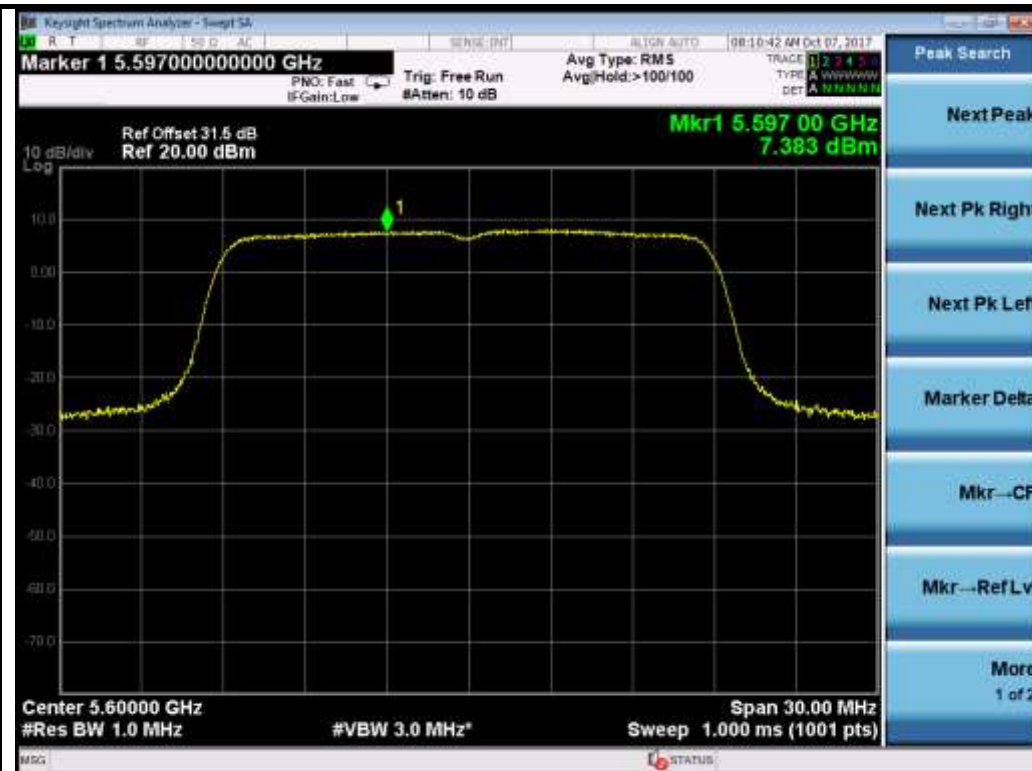




802.11a-5700M



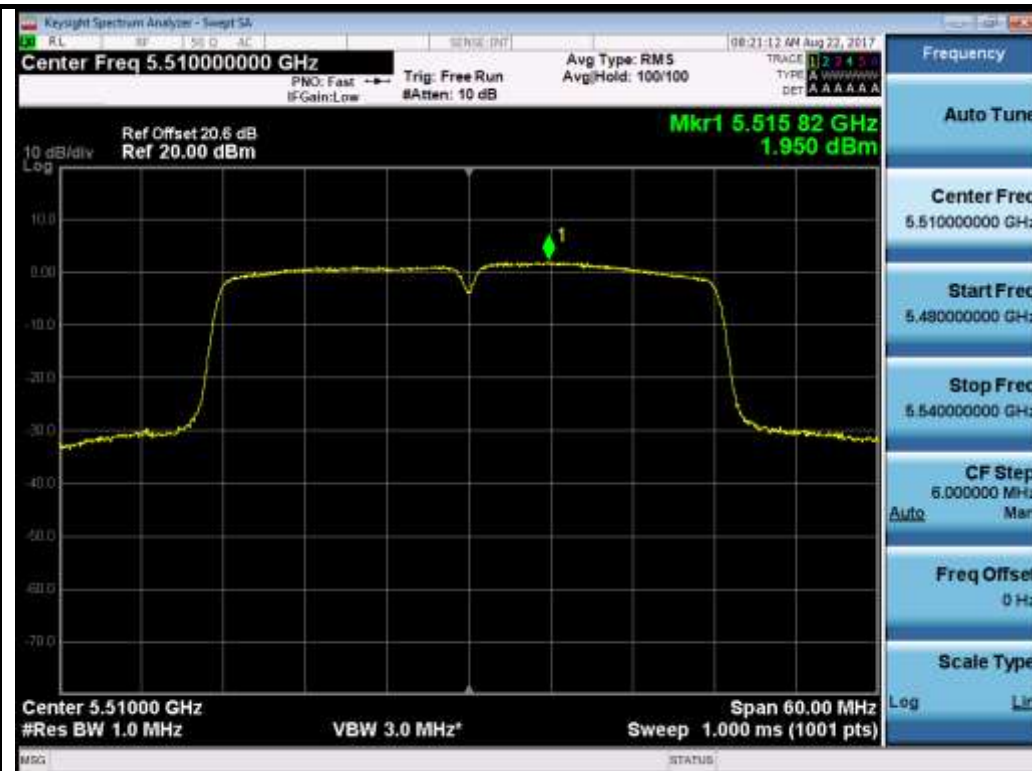
802.11n-HT20 5500M



802.11n-HT20 5580M



802.11n-HT20 5700M



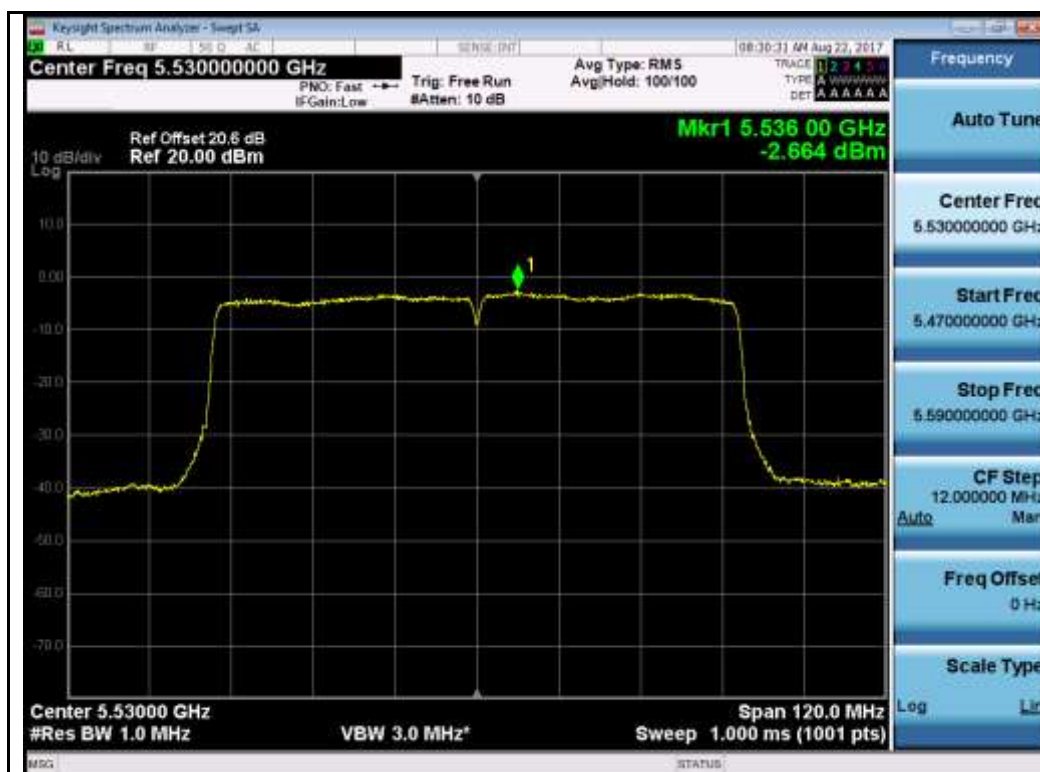
802.11n-HT40 5510M



802.11n-HT40 5550M



802.11n-HT40 5670M



802.11ac-VHT80 5530M

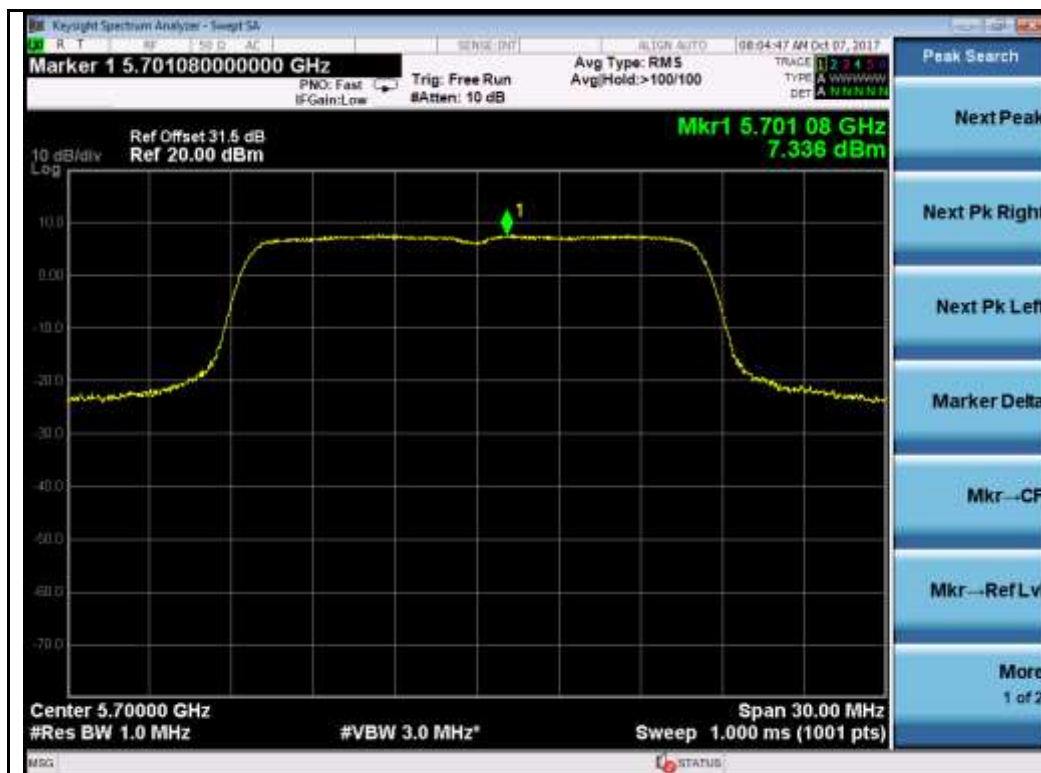


Chain 1:





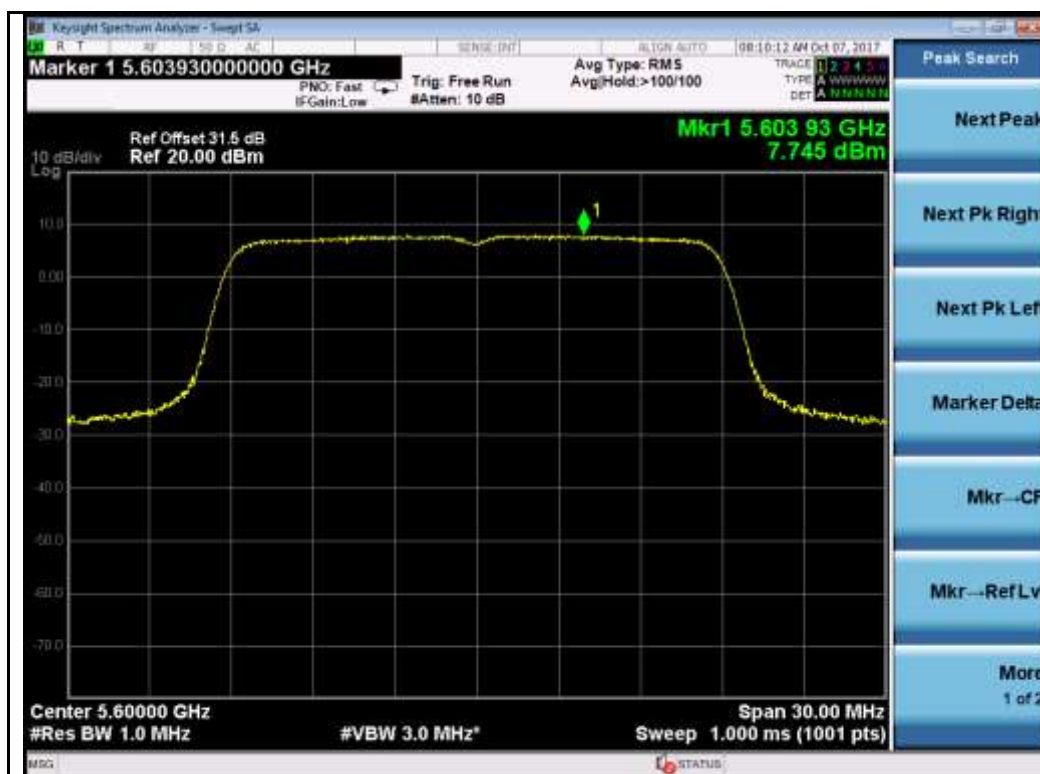
802.11a-5580M



802.11a-5700M



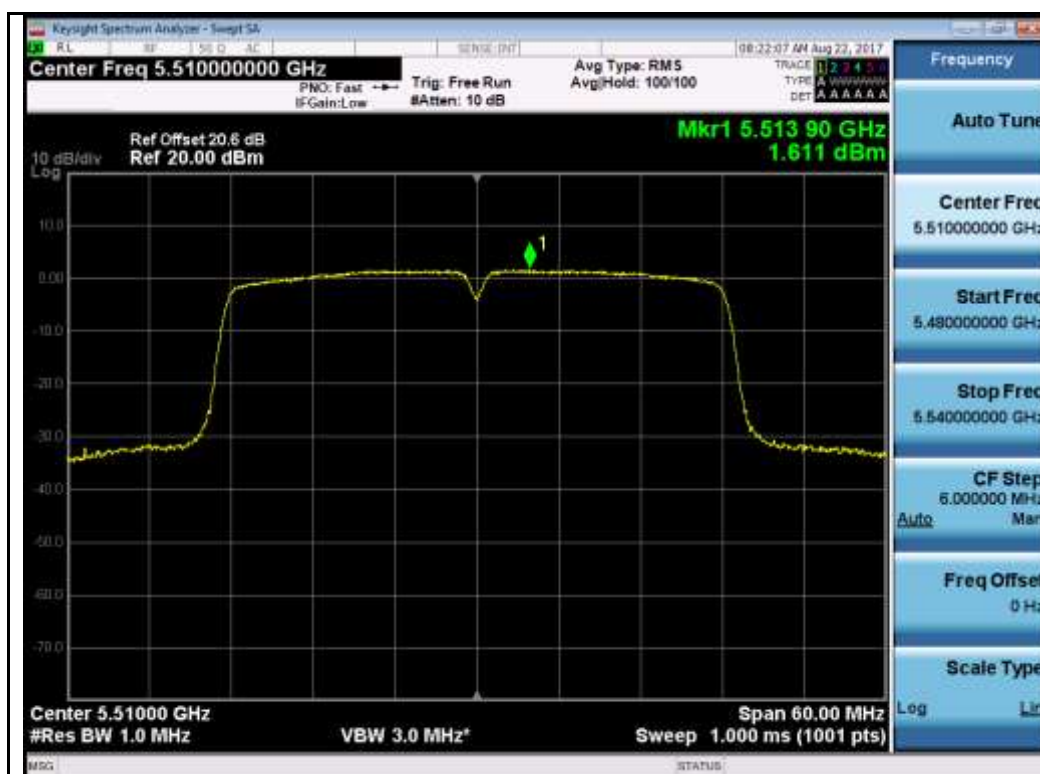
802.11n-HT20 5500M



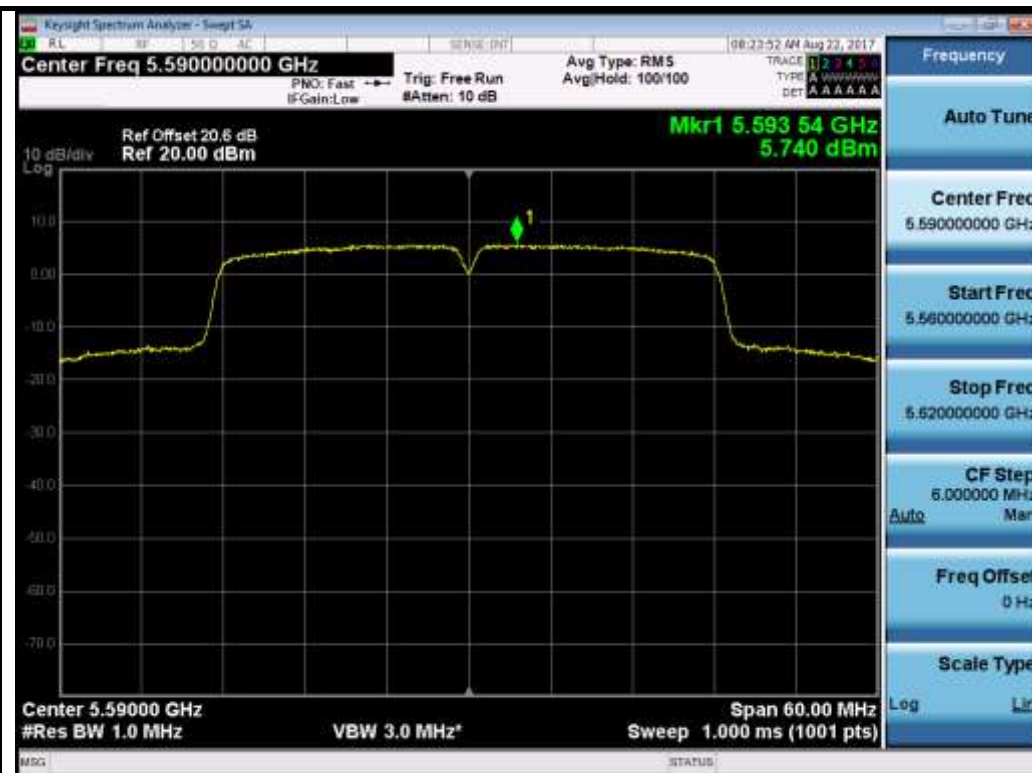
802.11n-HT20 5580M



802.11n-HT20 5700M



802.11n-HT40 5510M



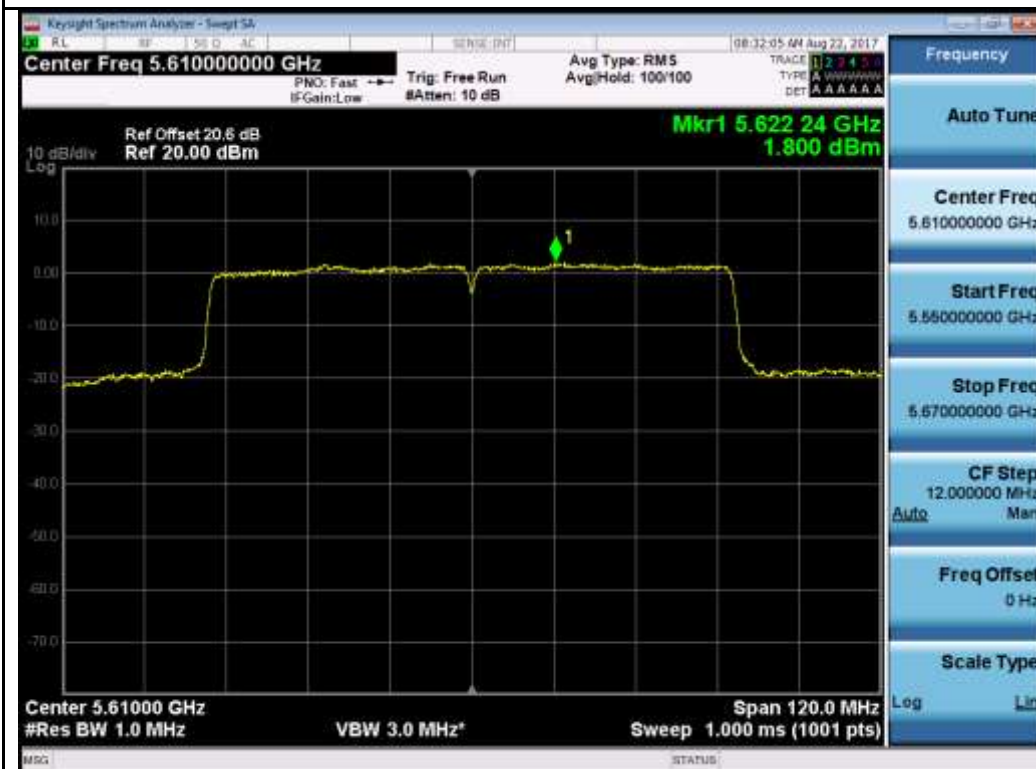
802.11n-HT40 5550M



802.11n-HT40 5670M



802.11ac-VHT80 5530M



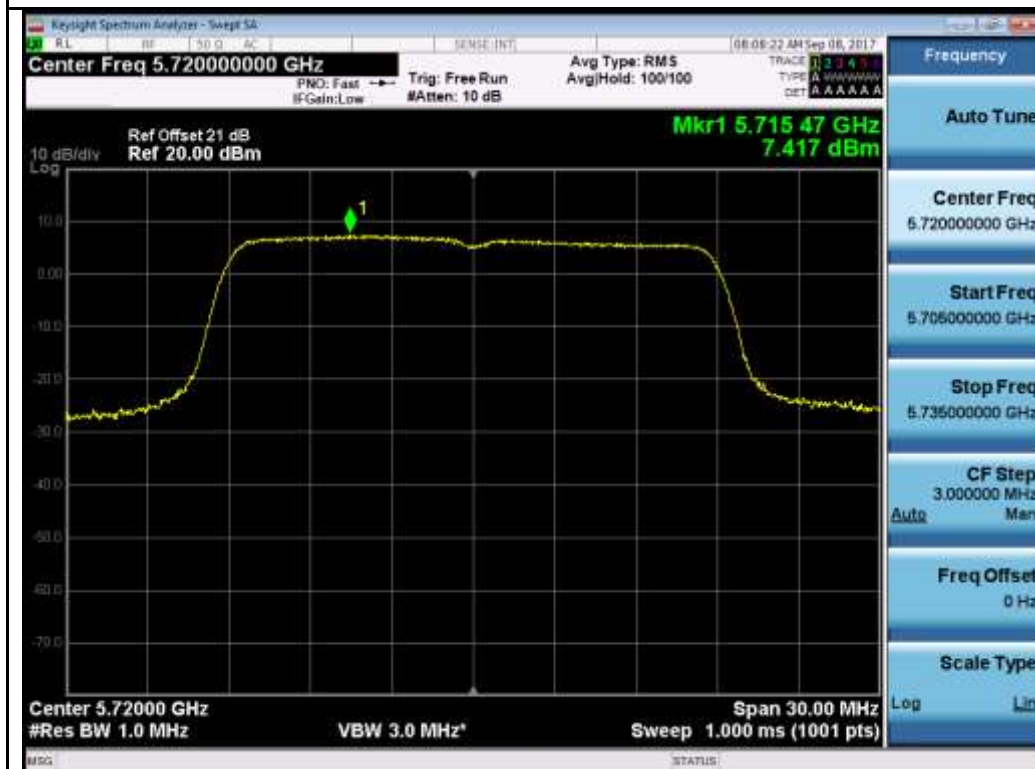
802.11ac-VHT80 5610M

Test Plot for Crossband (W56 procedure):

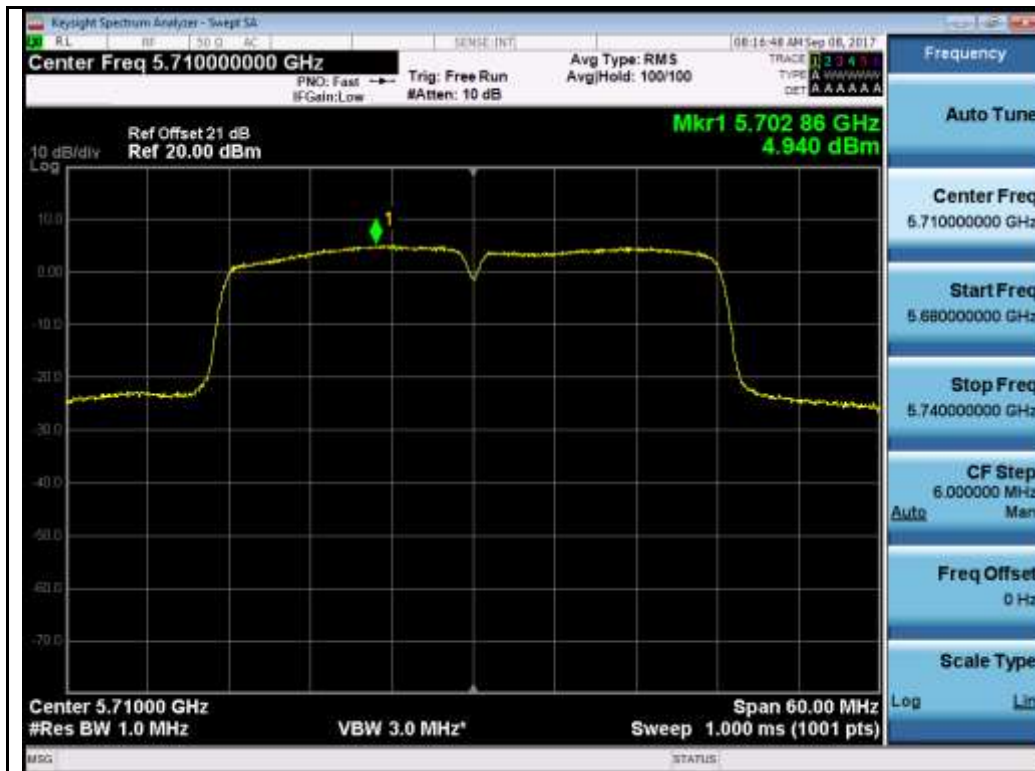
Chain 0:



802.11a-5720M



802.11n-HT20 5720M

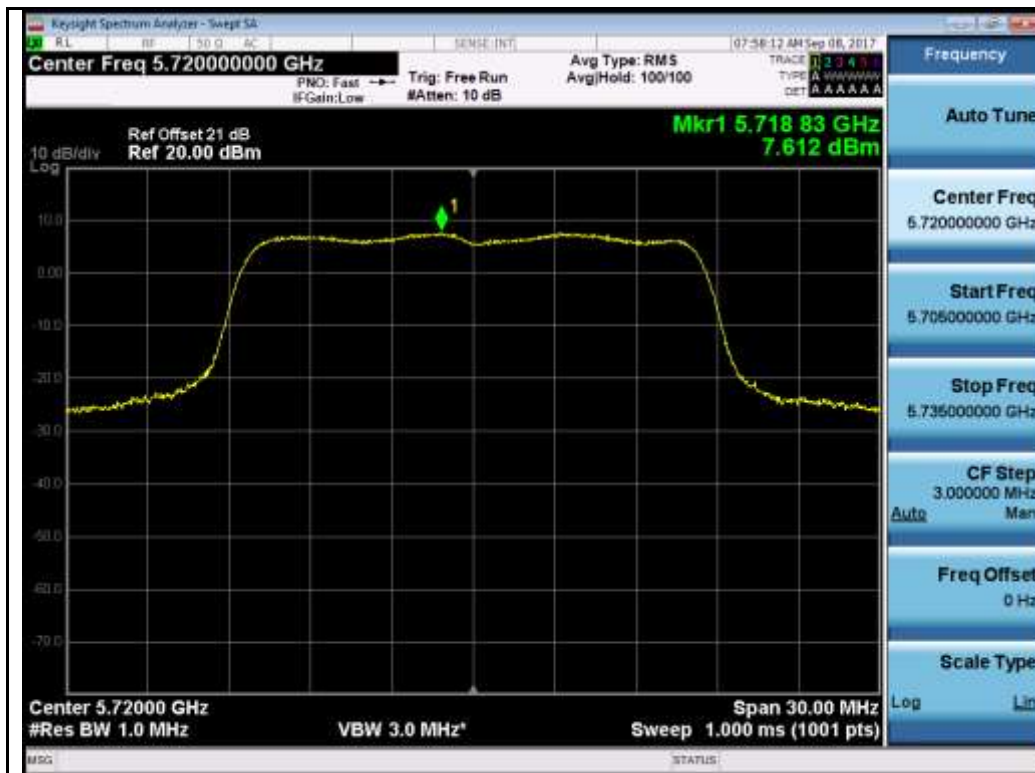


802.11n-HT40 5710M

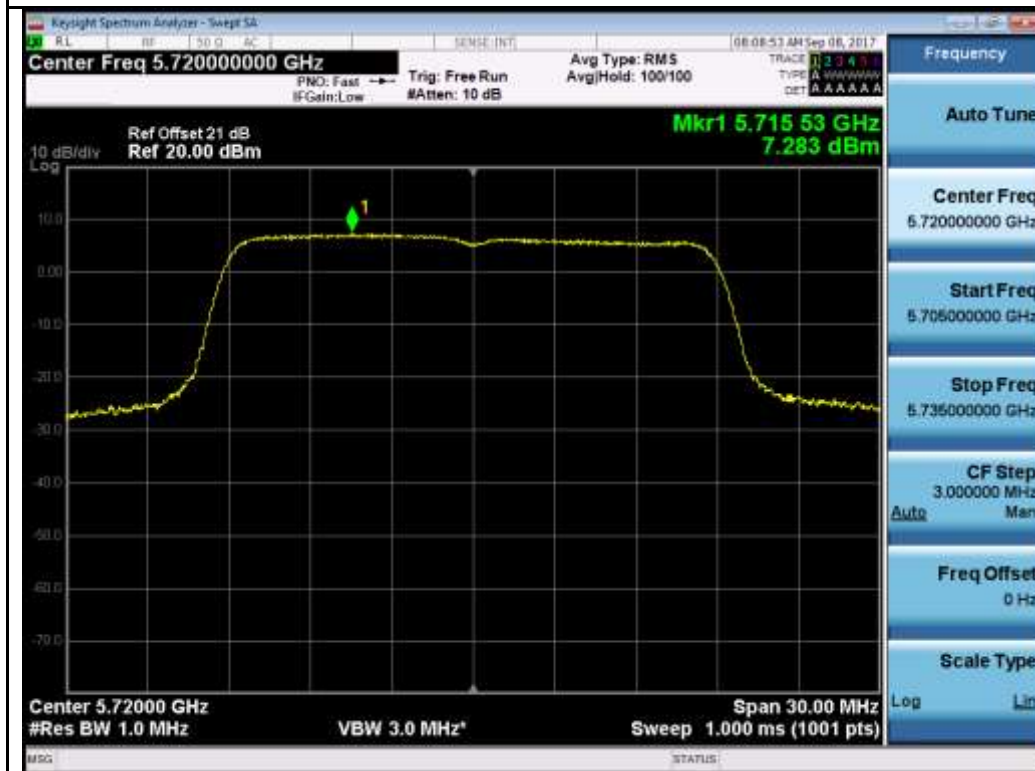


802.11ac-VHT80 5690M

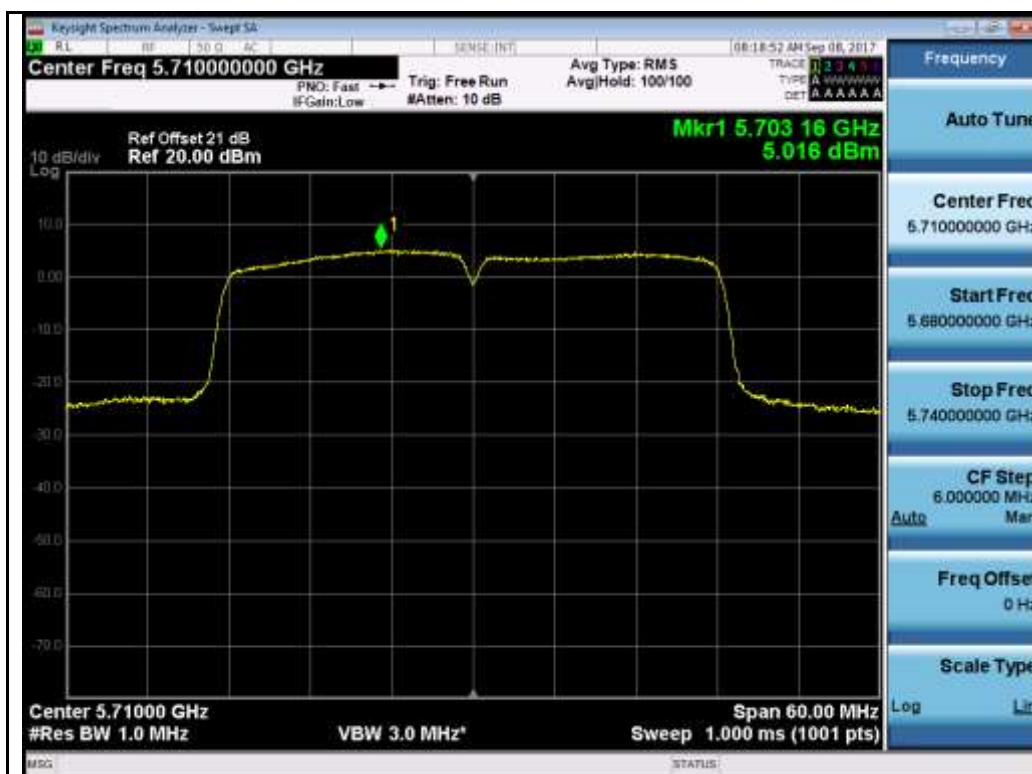
Chain 1:



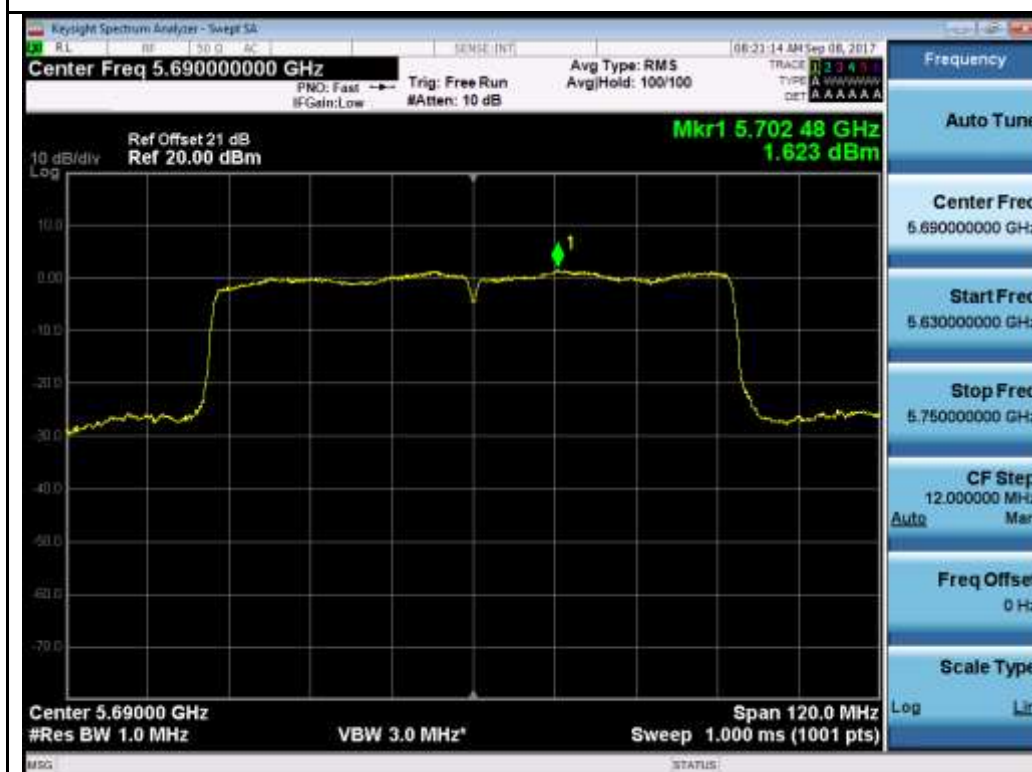
802.11a-5720M



802.11n-HT20 5720M



802.11n-HT40 5710M



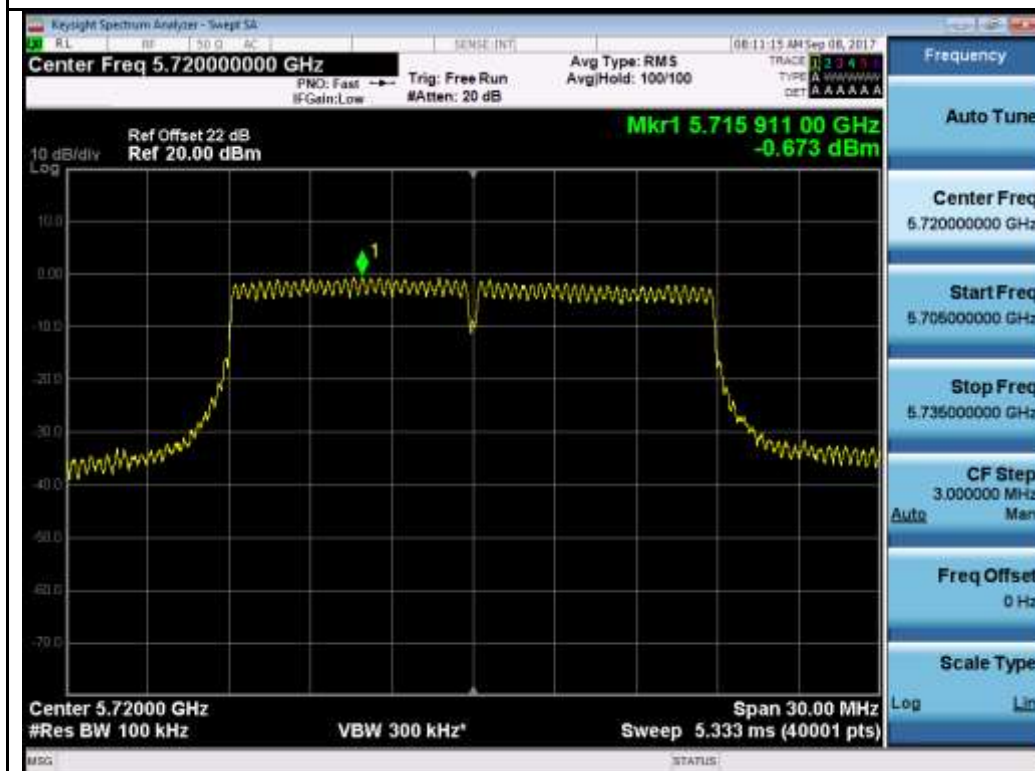
802.11ac-VHT80 5690M

Test Plot for Crossband (W58 procedure):

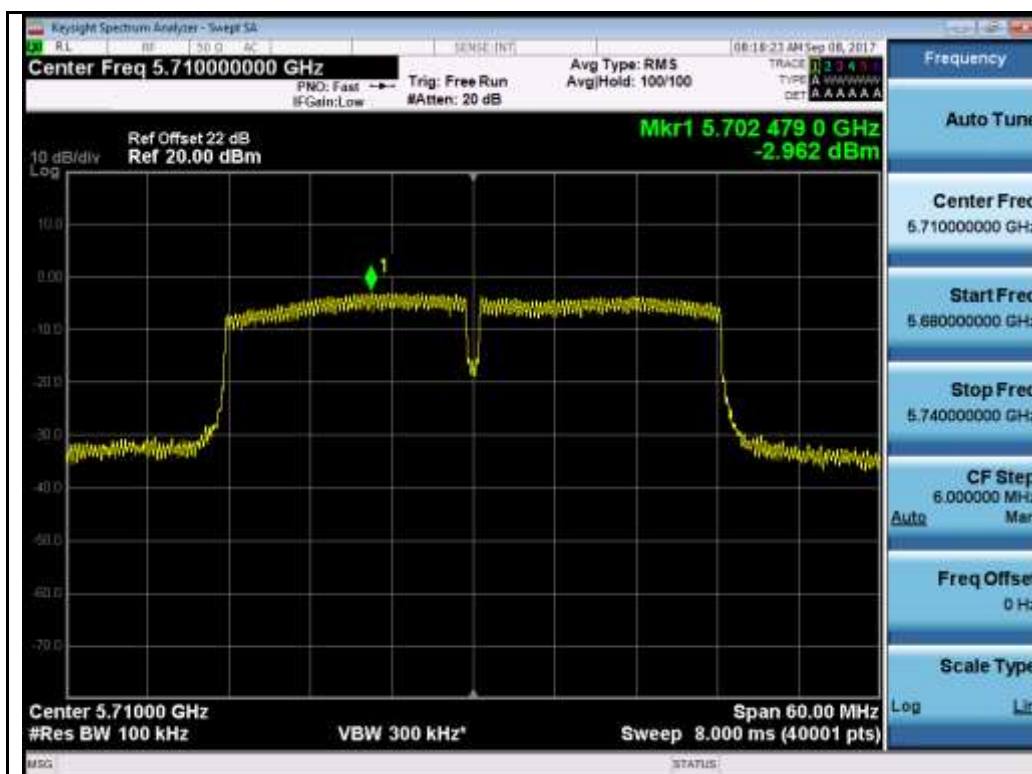
Chain 0:



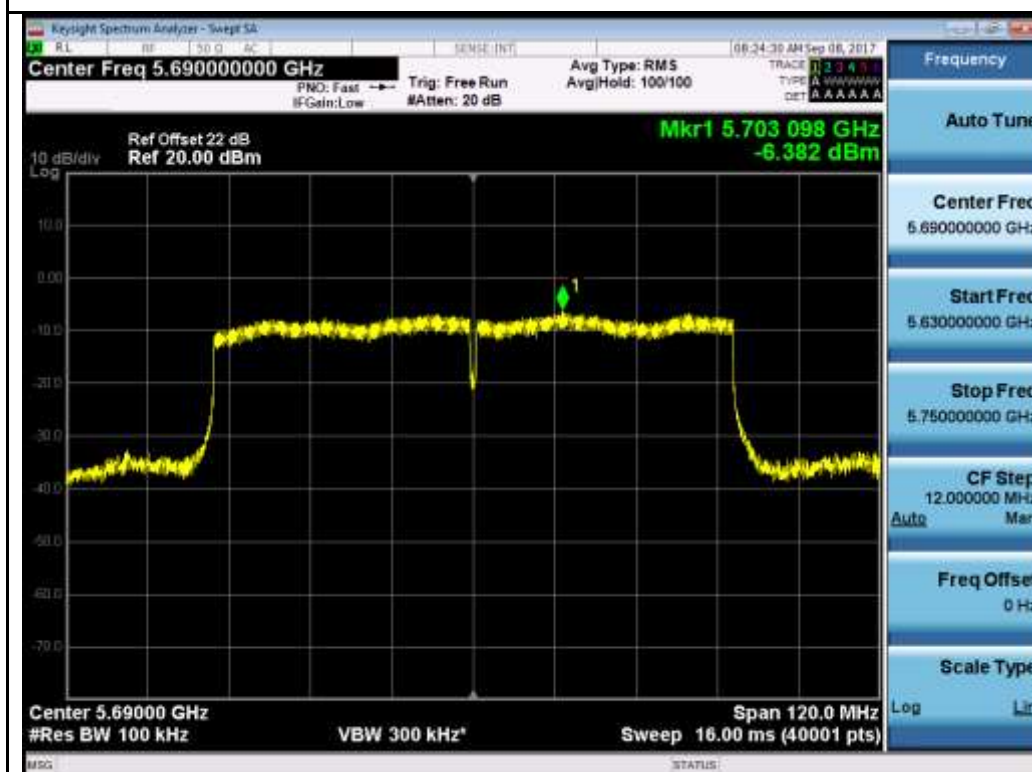
802.11a-5720M



802.11n-HT20 5720M

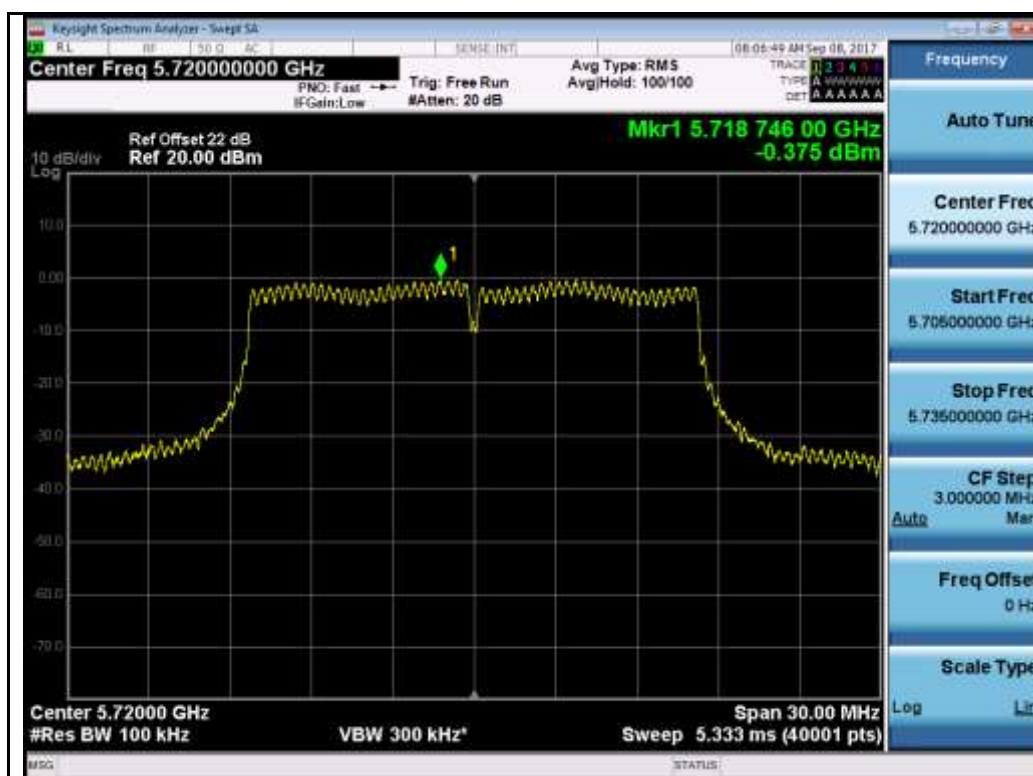


802.11n-HT40 5710M

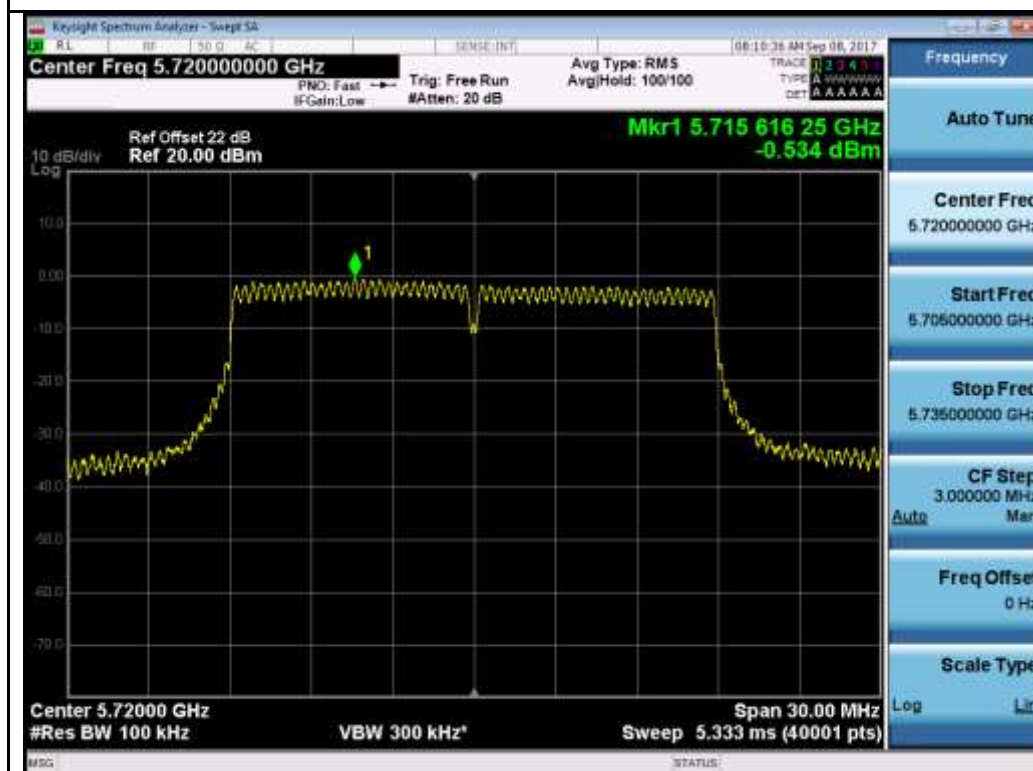


802.11ac-VHT80 5690M

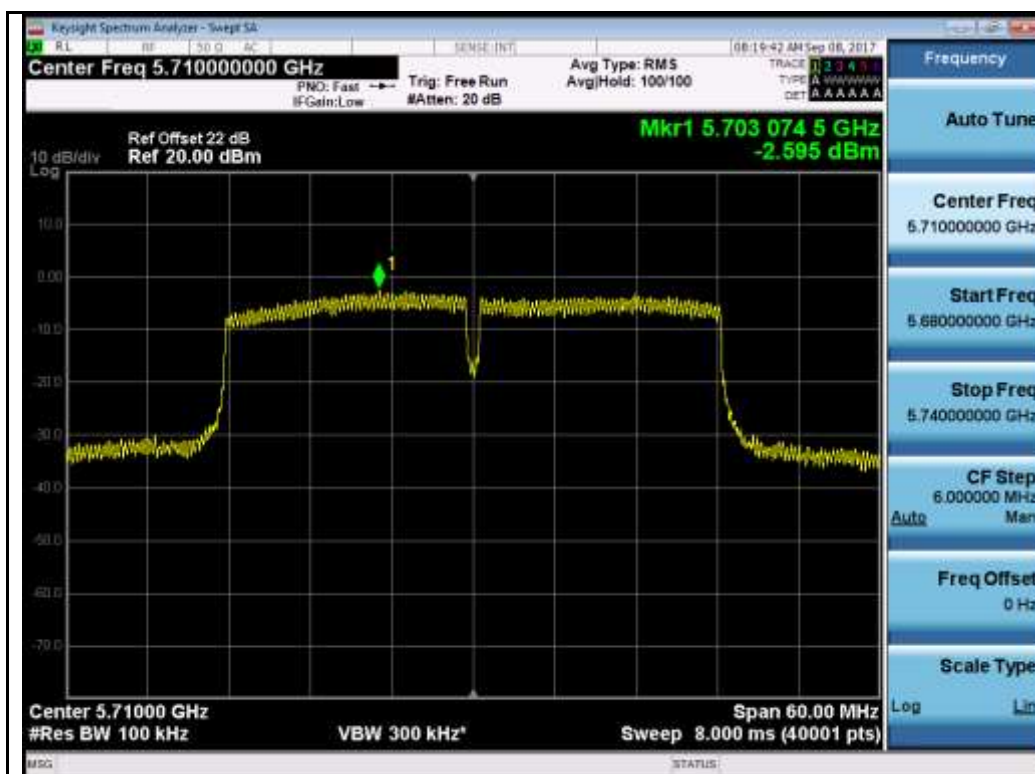
Chain 1:



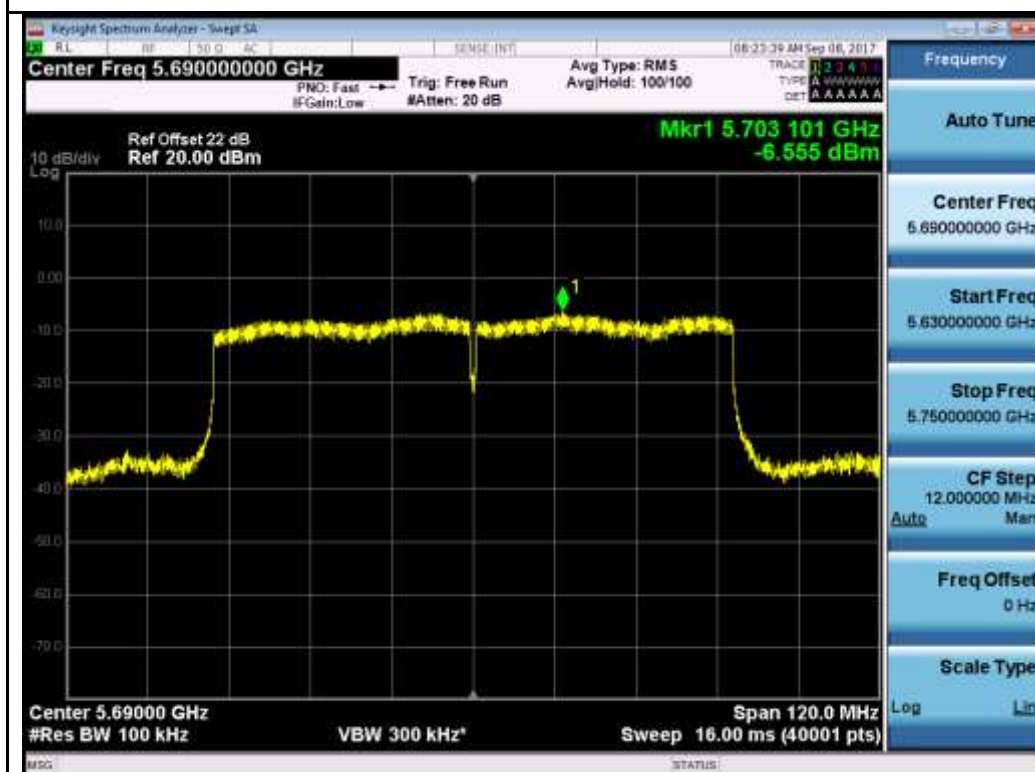
802.11a-5720M



802.11n-HT20 5720M



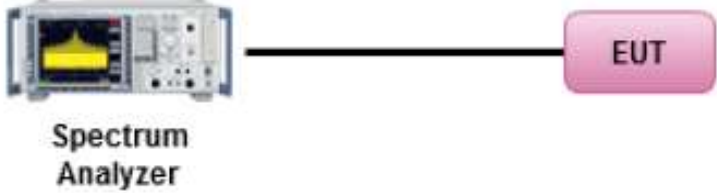
802.11n-HT40 5710M



802.11ac-VHT80 5690M

10.5 Band Edge Measurement

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§ 15.407(b)(2), 15.407(b)(6)	(1)	For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.	☐
	(2)	For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.	☒
	(3)	For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.	☒
	(4)	For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.	☐
Test Setup	 Spectrum Analyzer		
Procedure	789033 D02 General UNII Test Procedures New Rules v01, II.F. Method SA-1 <u>Band Edge measurement:</u> - For average emissions measurements, follow the procedures described in section II.G.6., "Procedures for Average Unwanted Emissions Measurements above 1000 MHz", except for the following changes: - Set RBW=100kHz - Set VBW=300kHz - Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured.		
Remark	Antenna gain was added to the offset.		
Result	☒ Pass ☐ Fail		

Test Data ☐ Yes (See below) ☒ N/A

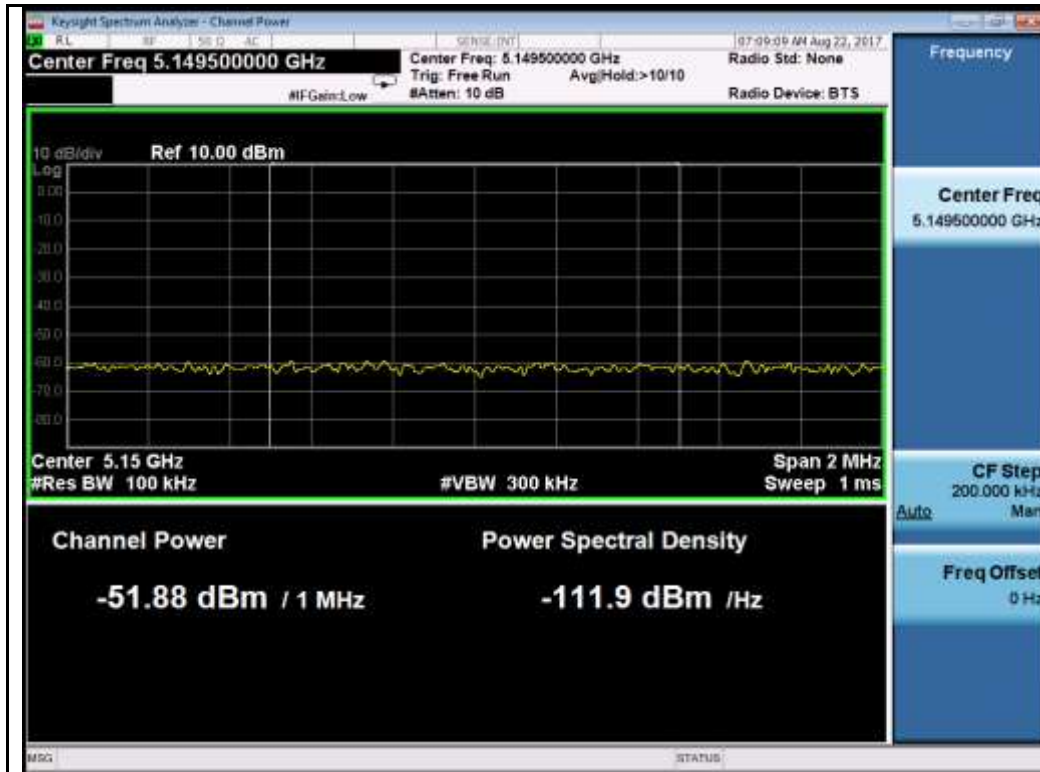
Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Cipher at RF test site.

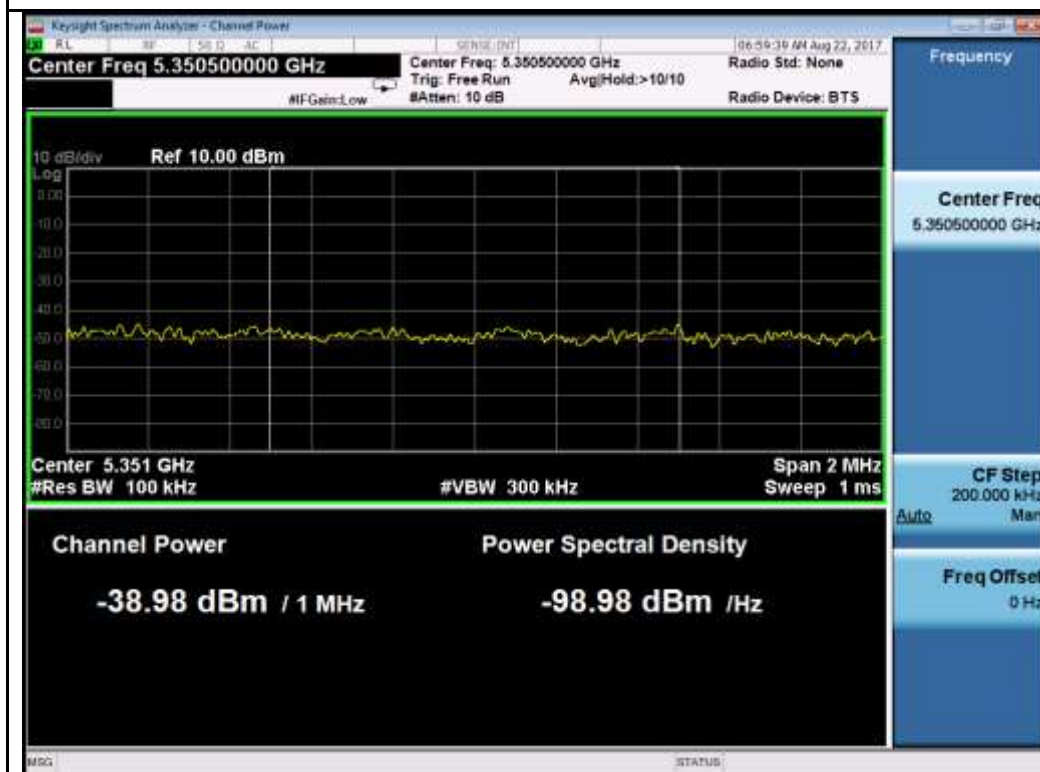
Test Plots for W53:

Chain 0:

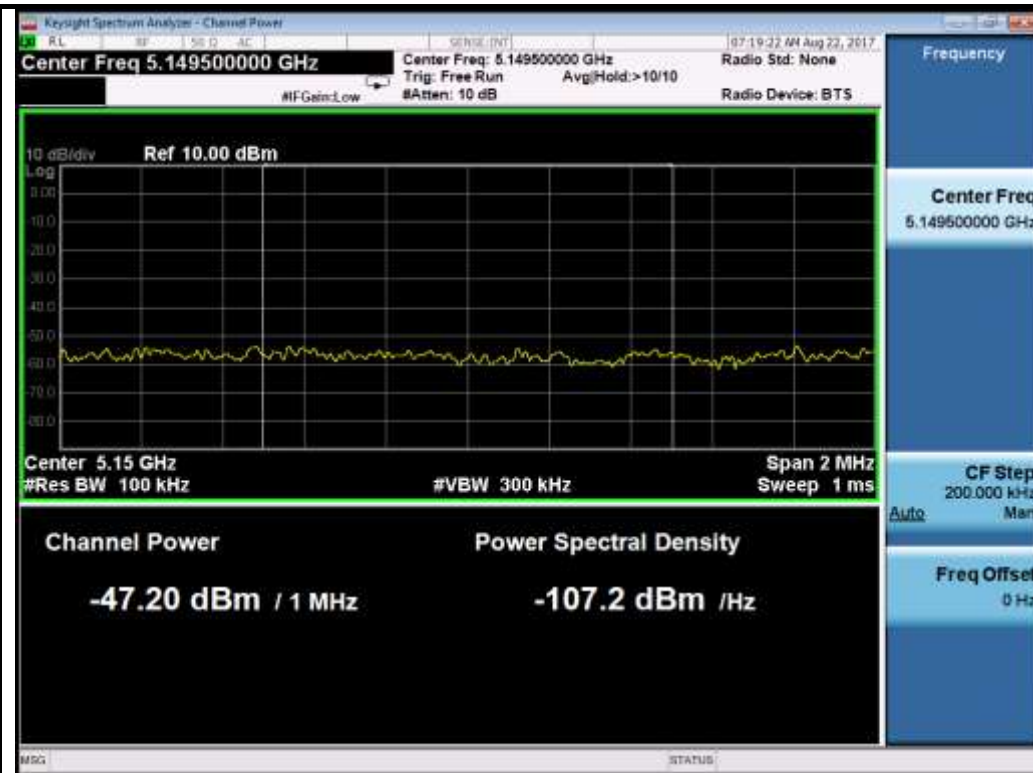




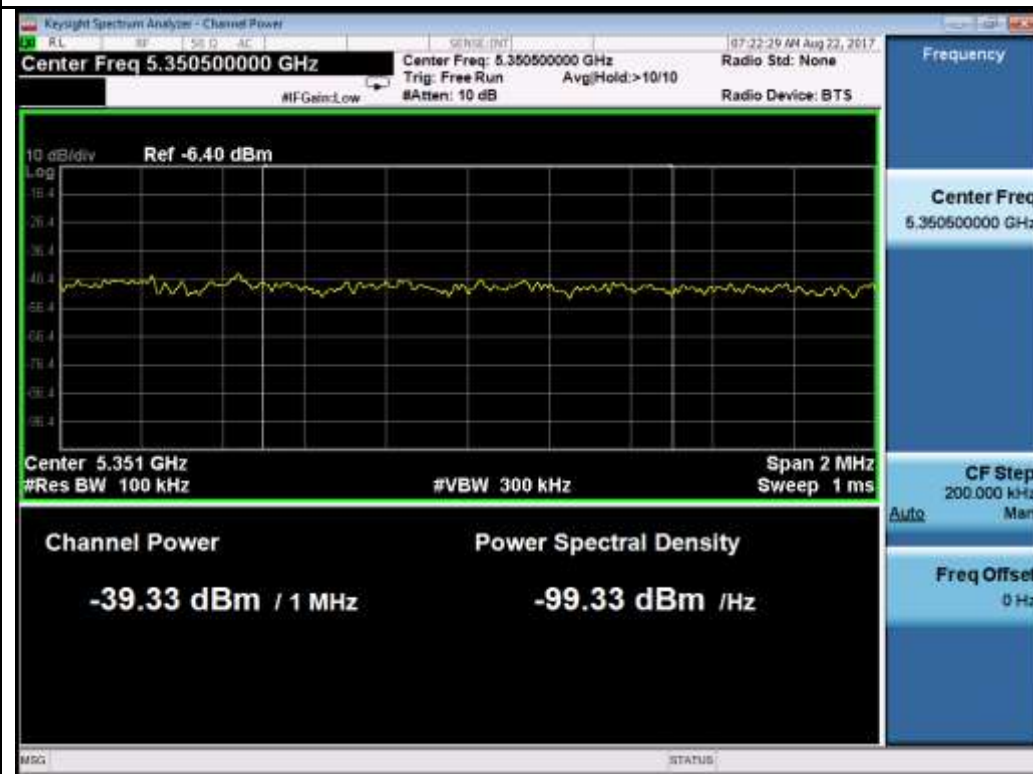
802.11n-HT20-5260MHz



802.11n-HT20-5320MHz



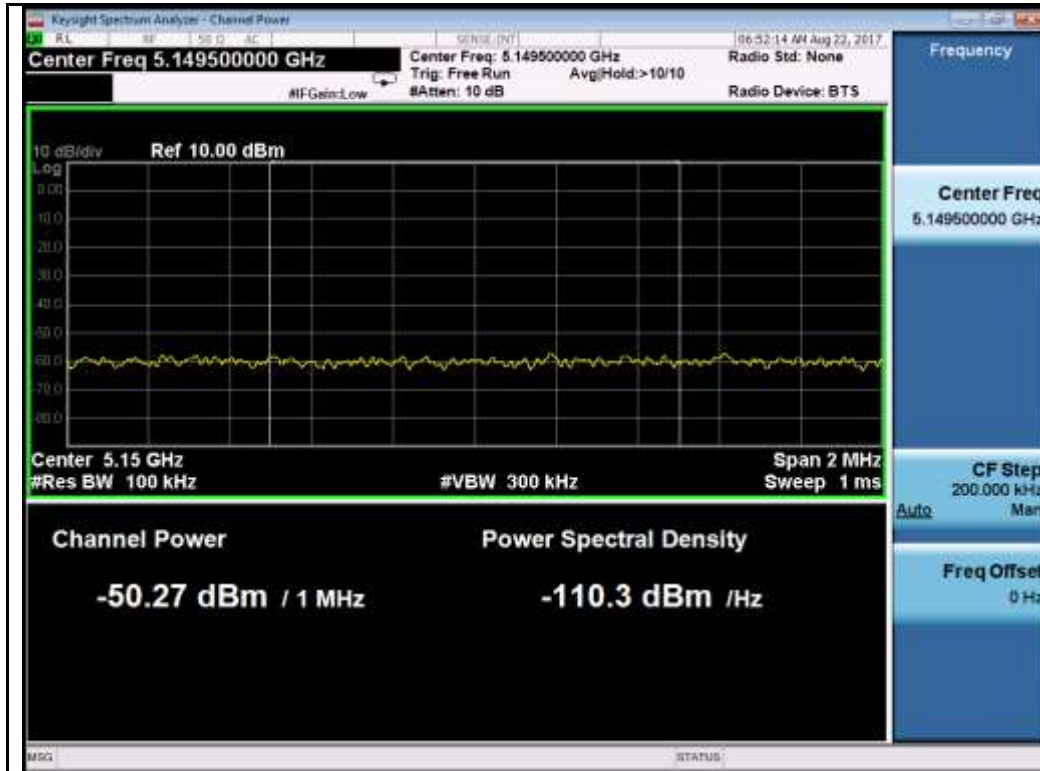
802.11n-HT40-5270MHz



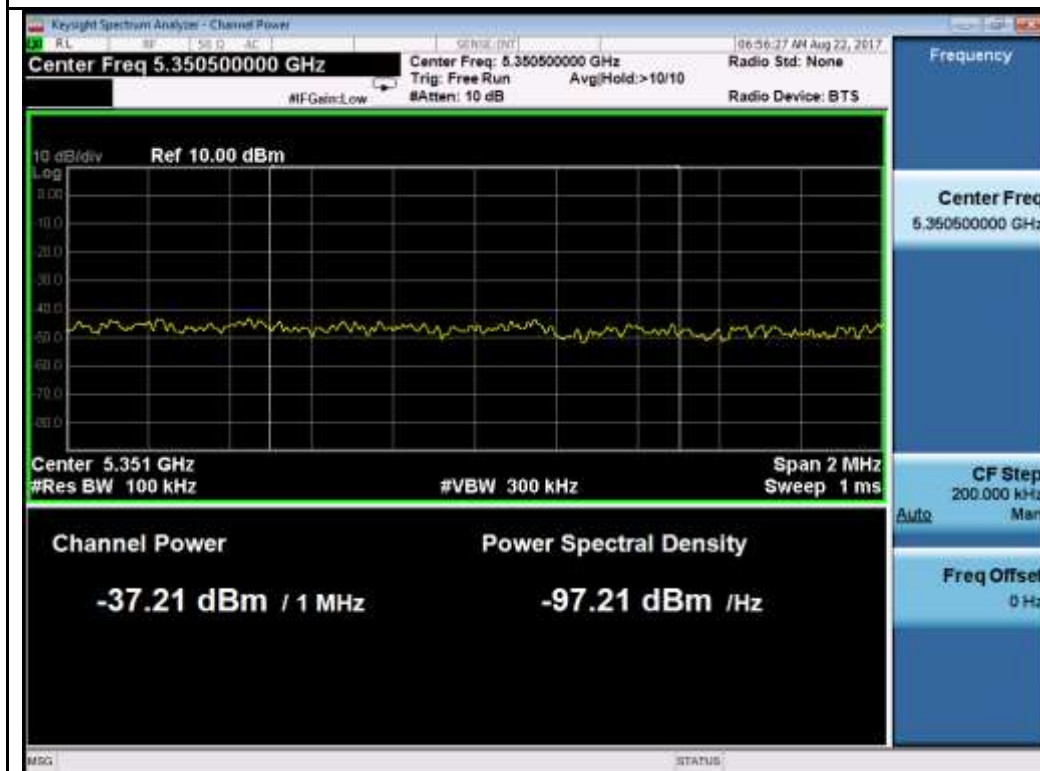
802.11n-HT40-5310MHz



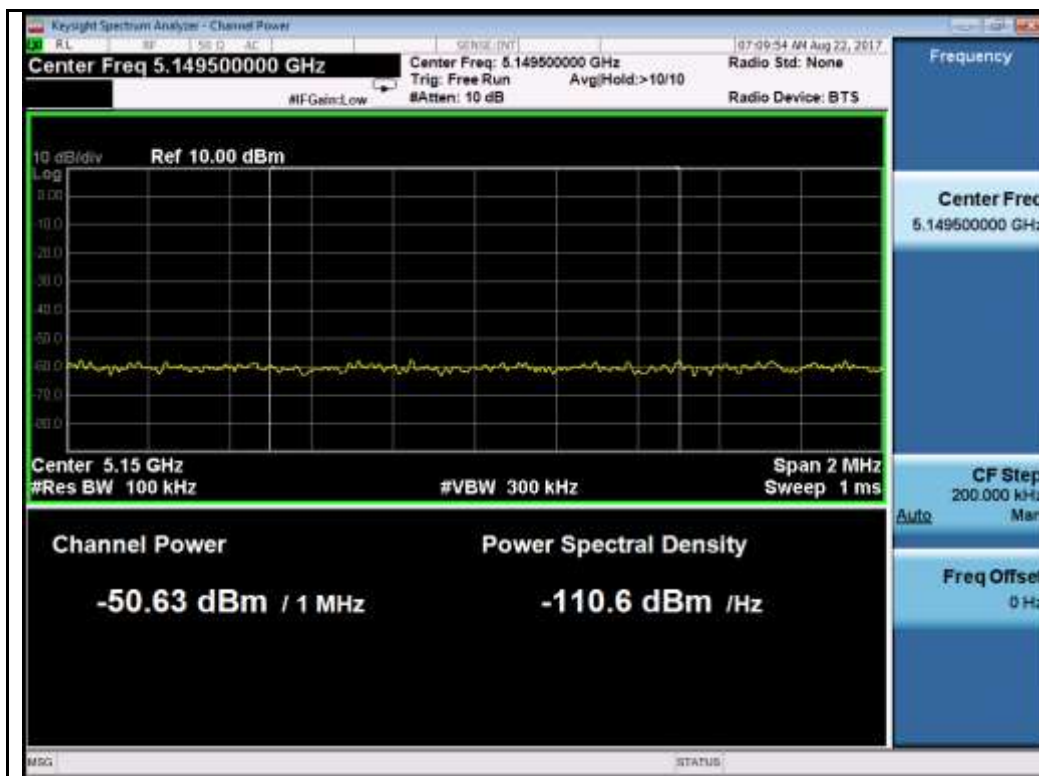
Chain 1:



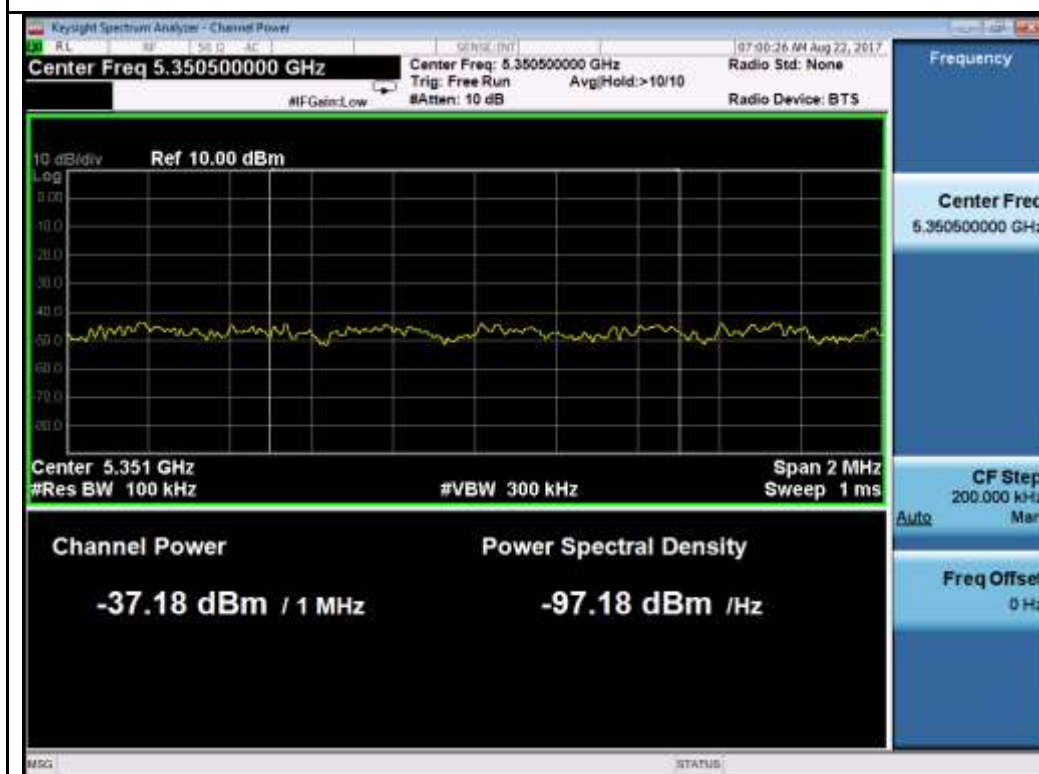
802.11a-5260MHz



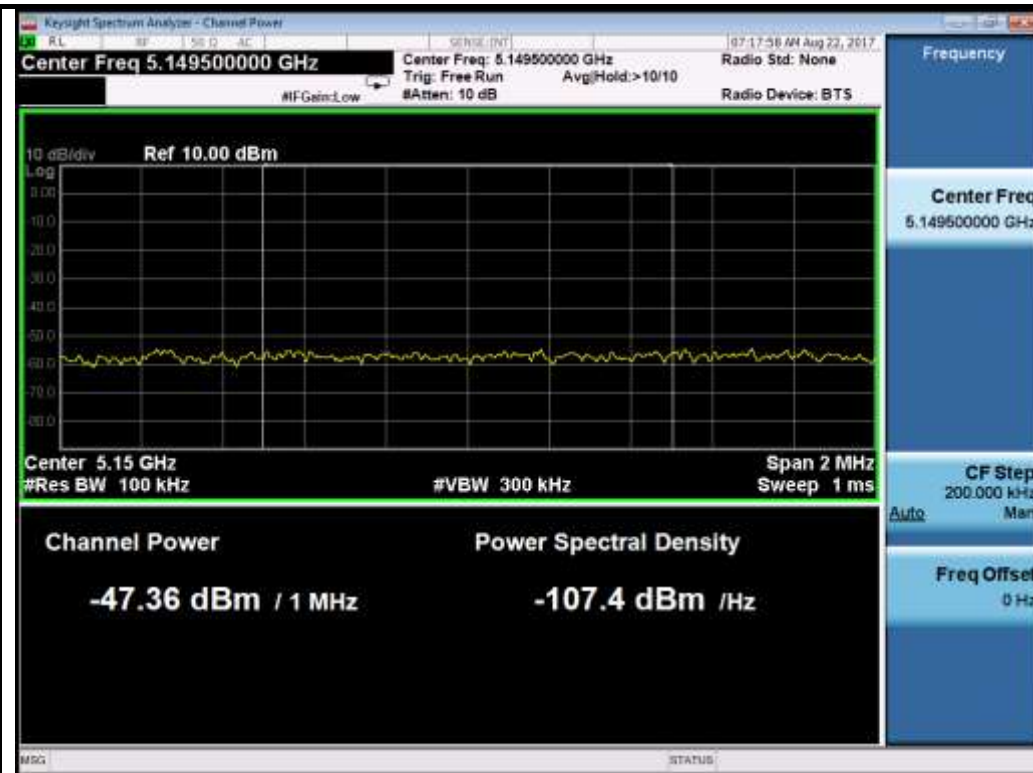
802.11a-5320MHz



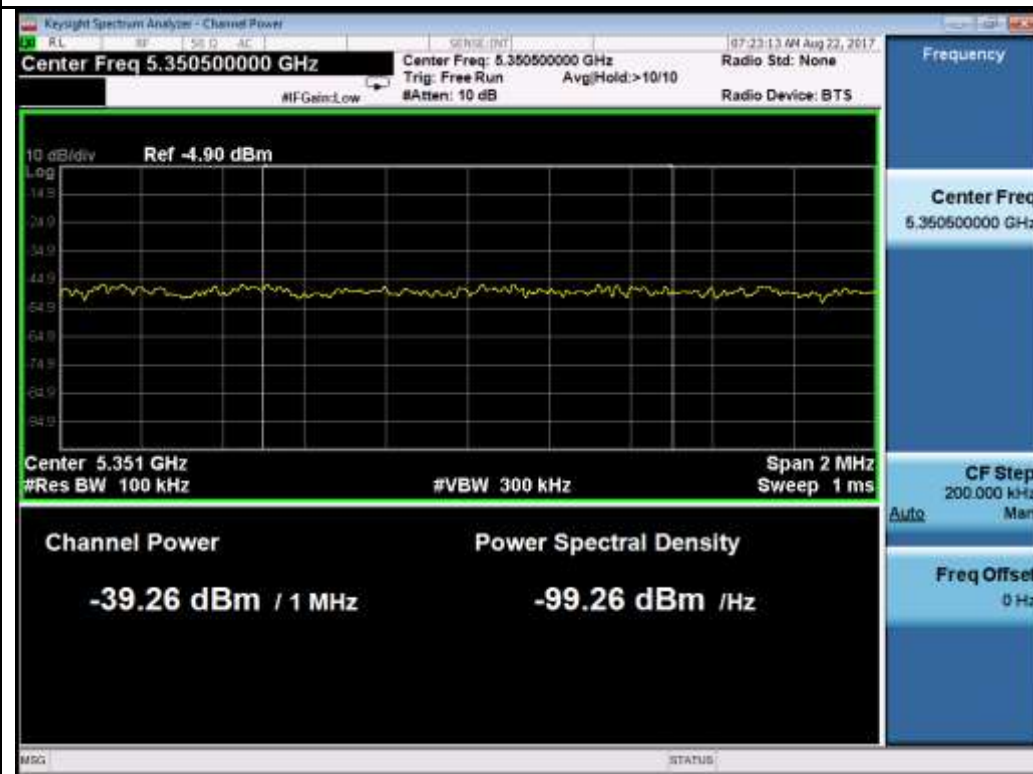
802.11n-HT20-5260MHz



802.11n-HT20-5320MHz



802.11n-HT40-5270MHz

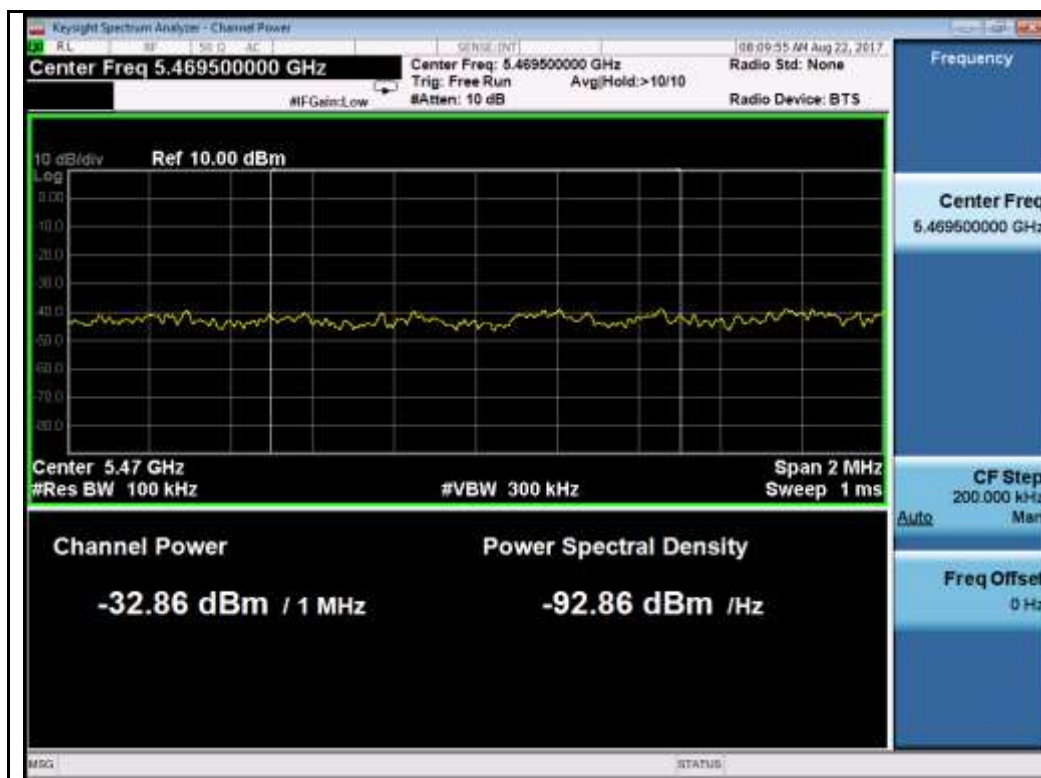


802.11n-HT40-5310MHz

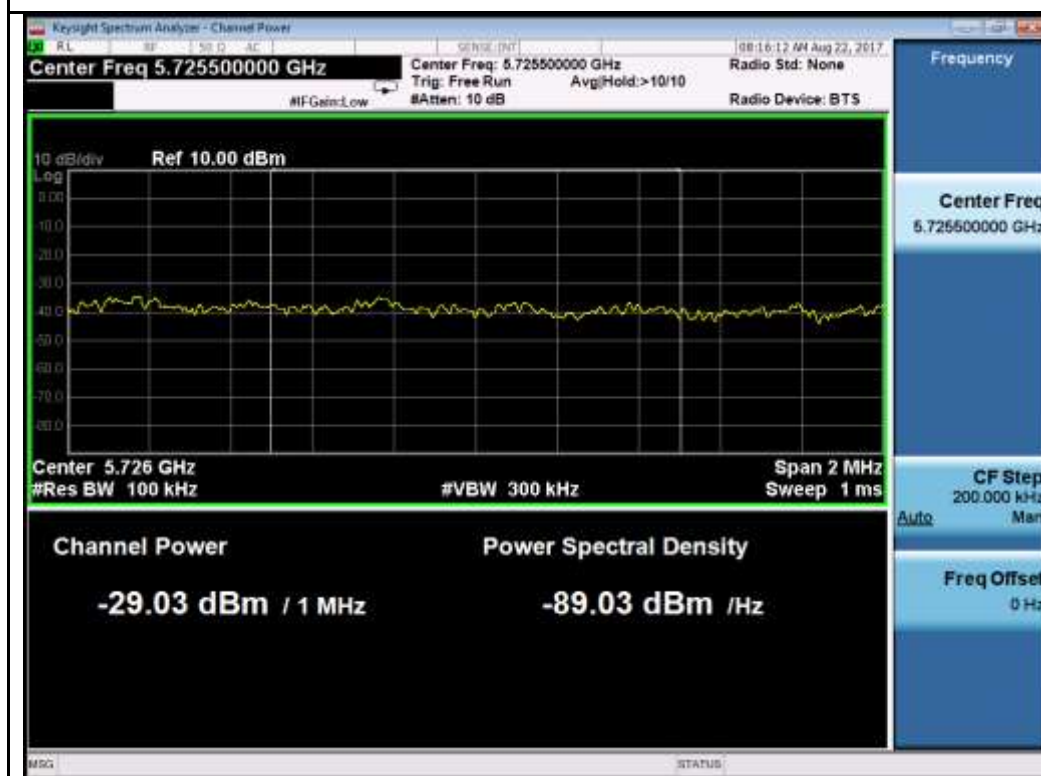


**Test Plots for W56:
Chain 0:**

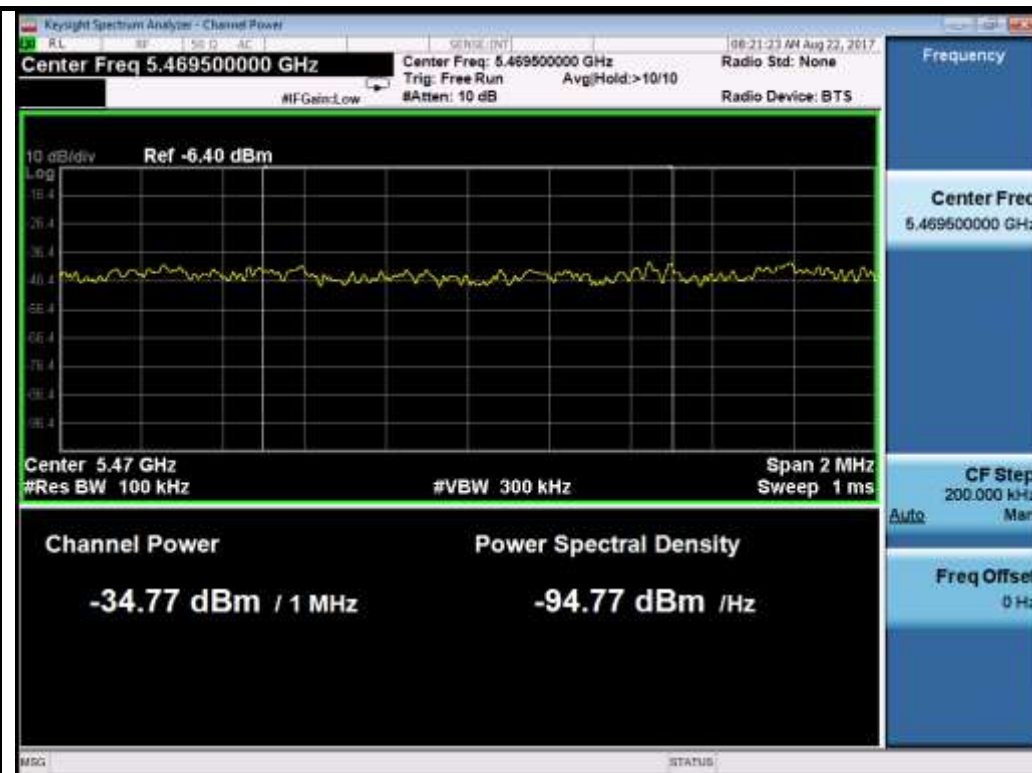




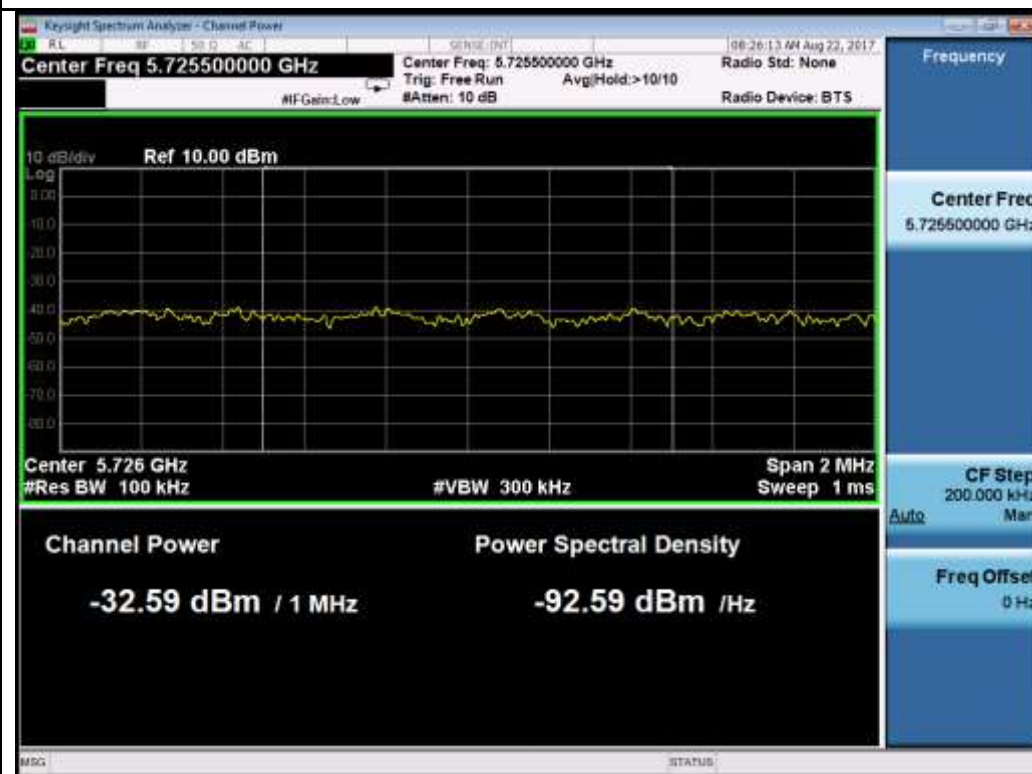
802.11n-HT20-5500MHz



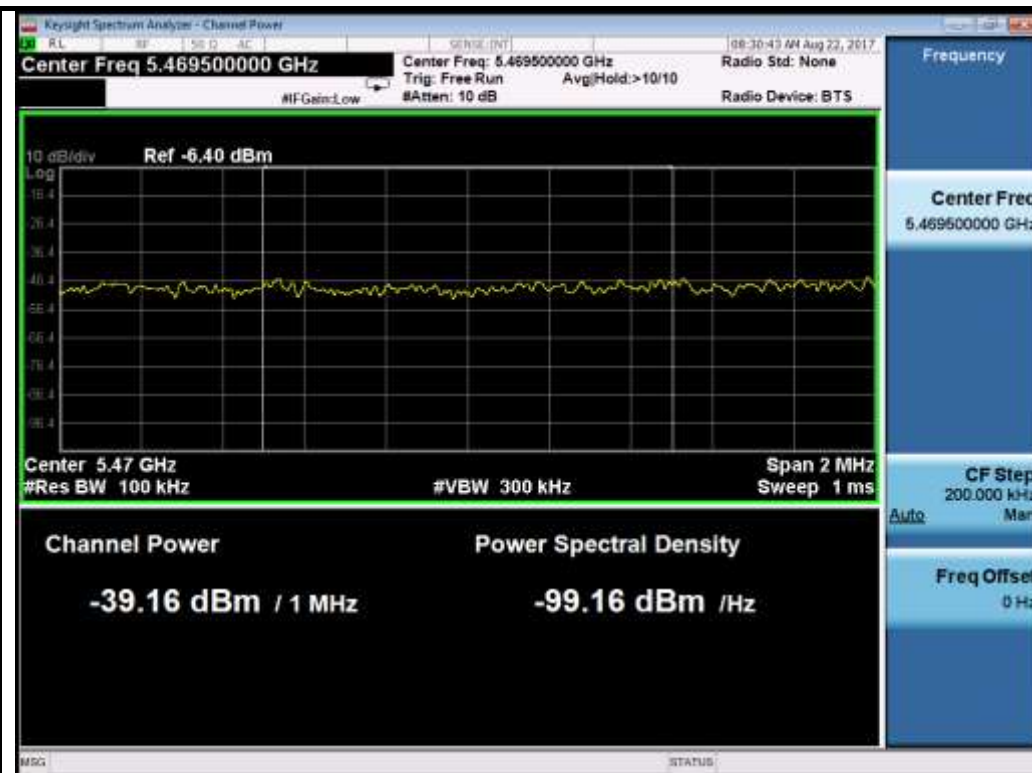
802.11n-HT20-5700MHz



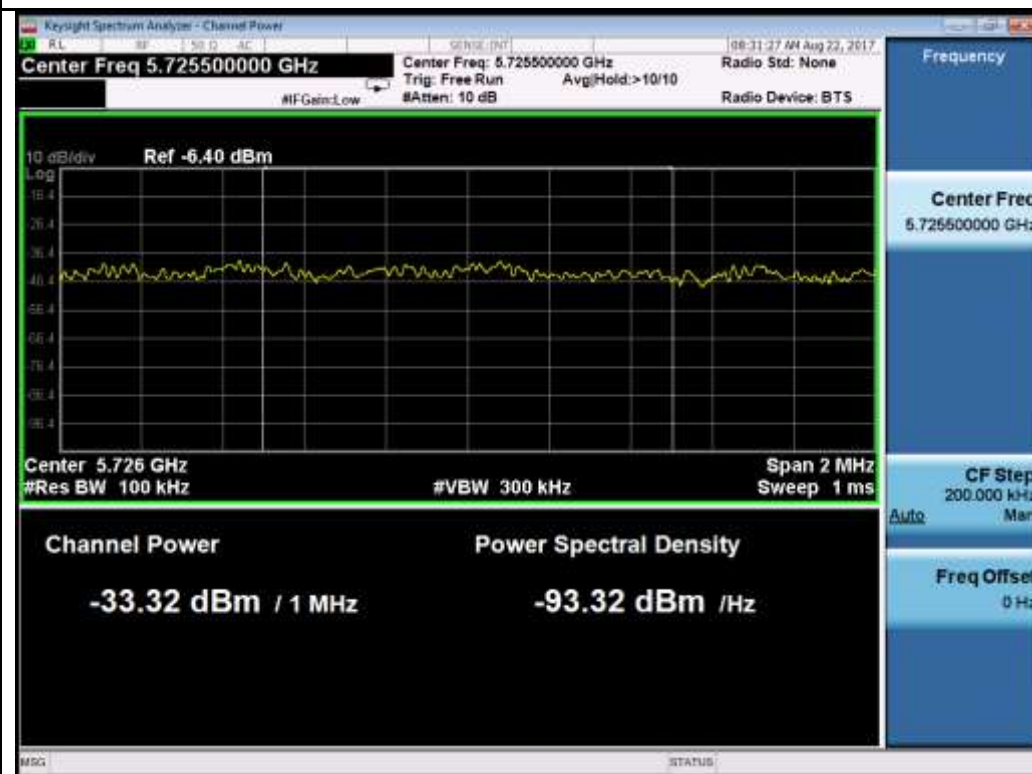
802.11n-HT40-5510MHz



802.11n-HT40-5670MHz

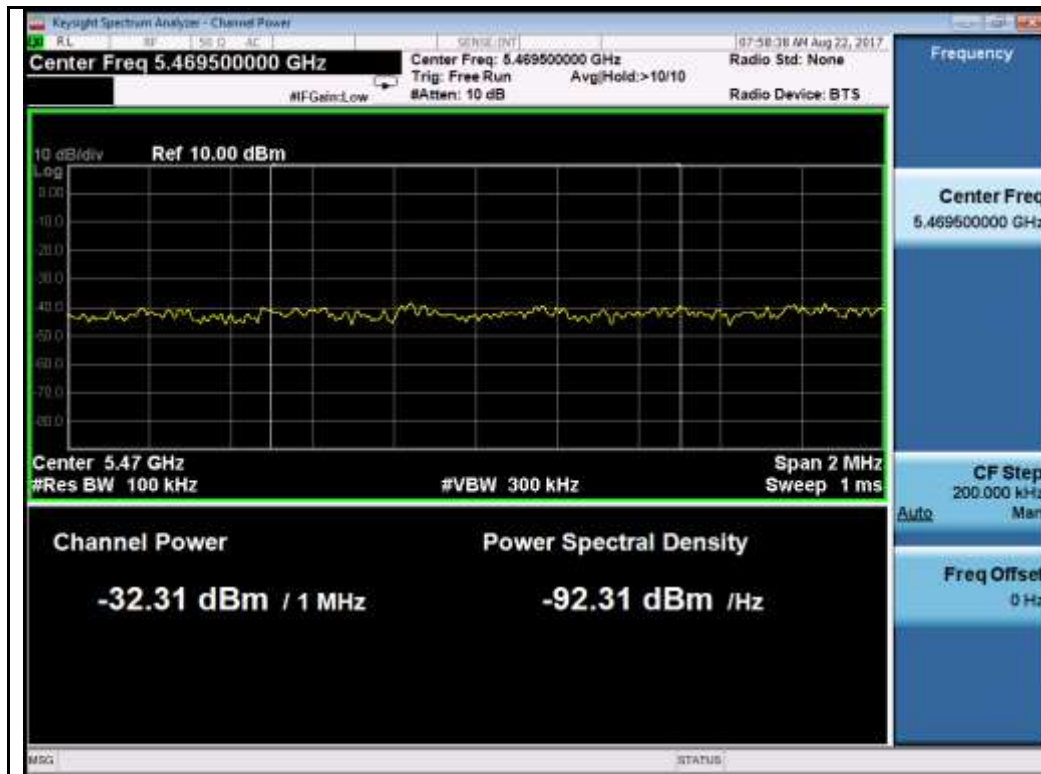


802.11ac-VHT80-5530MHz

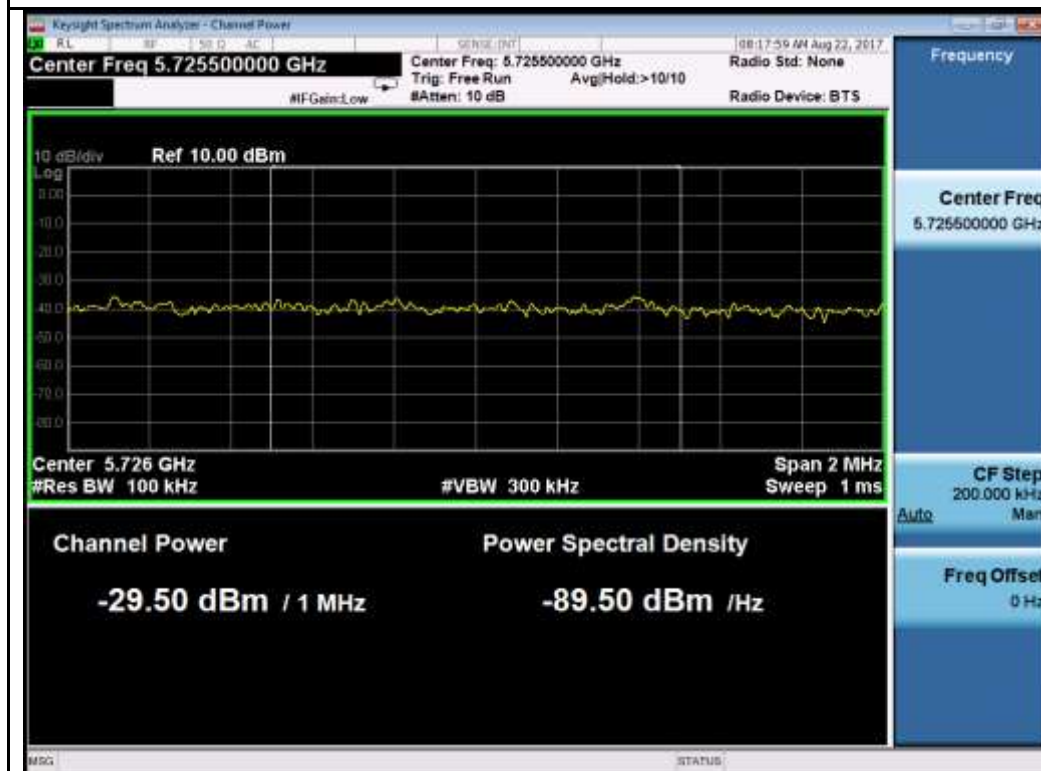


802.11ac-VHT80-5610MHz

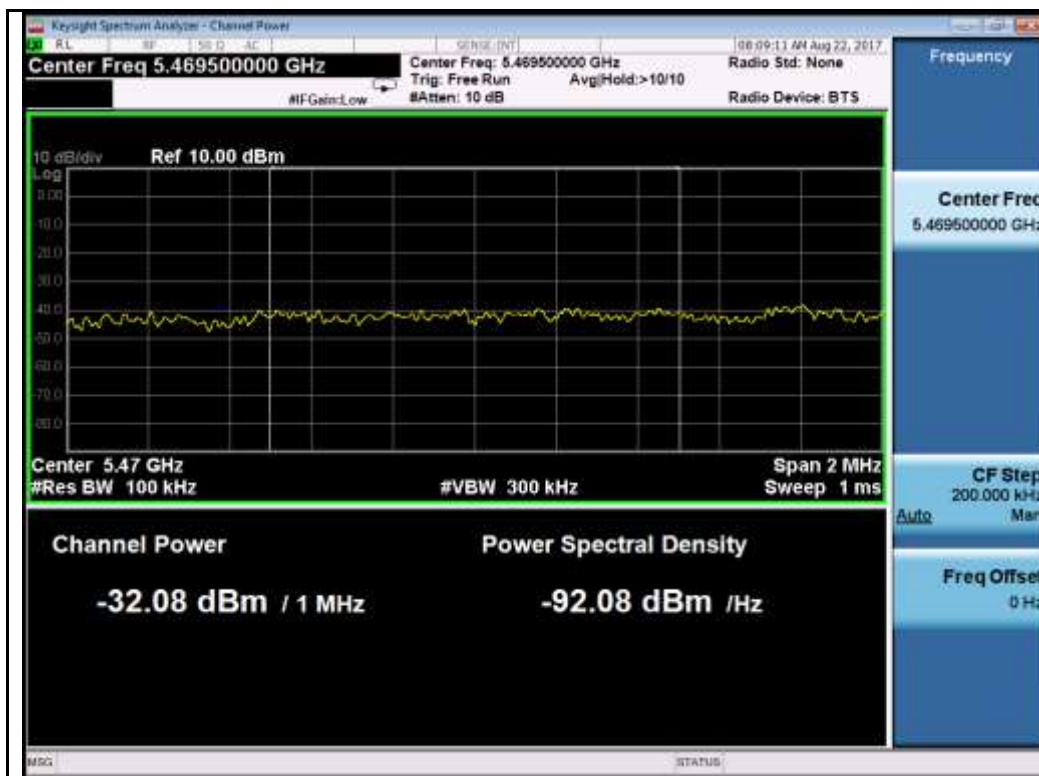
Chain 1:



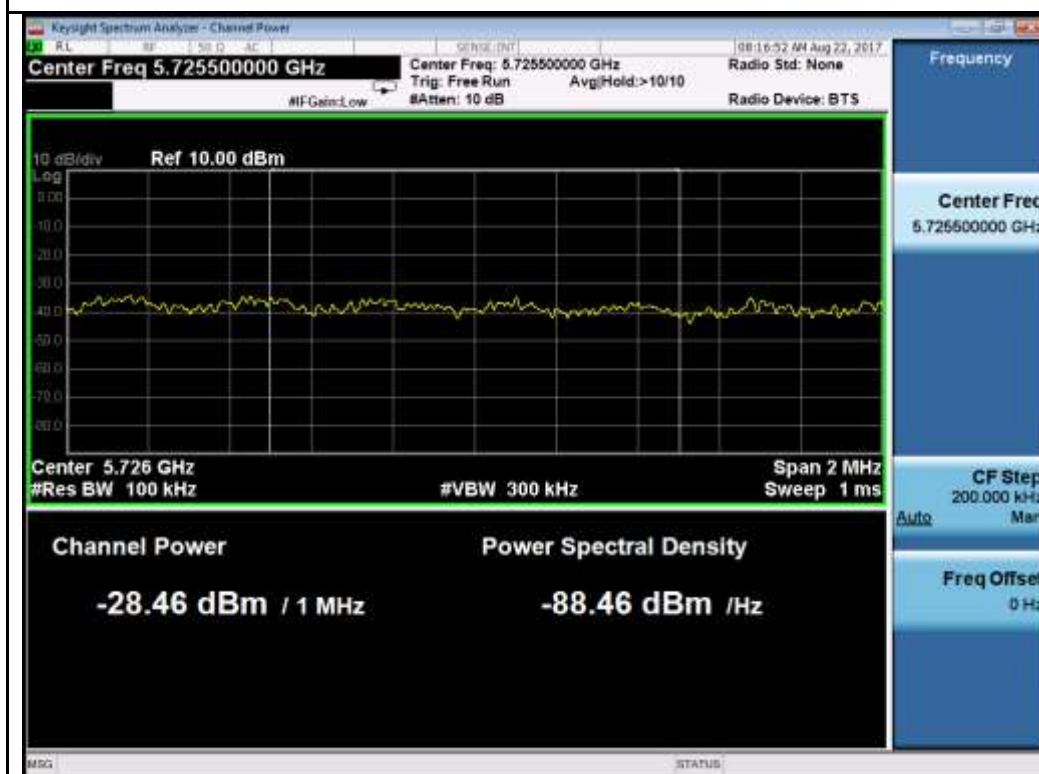
802.11a-5500MHz



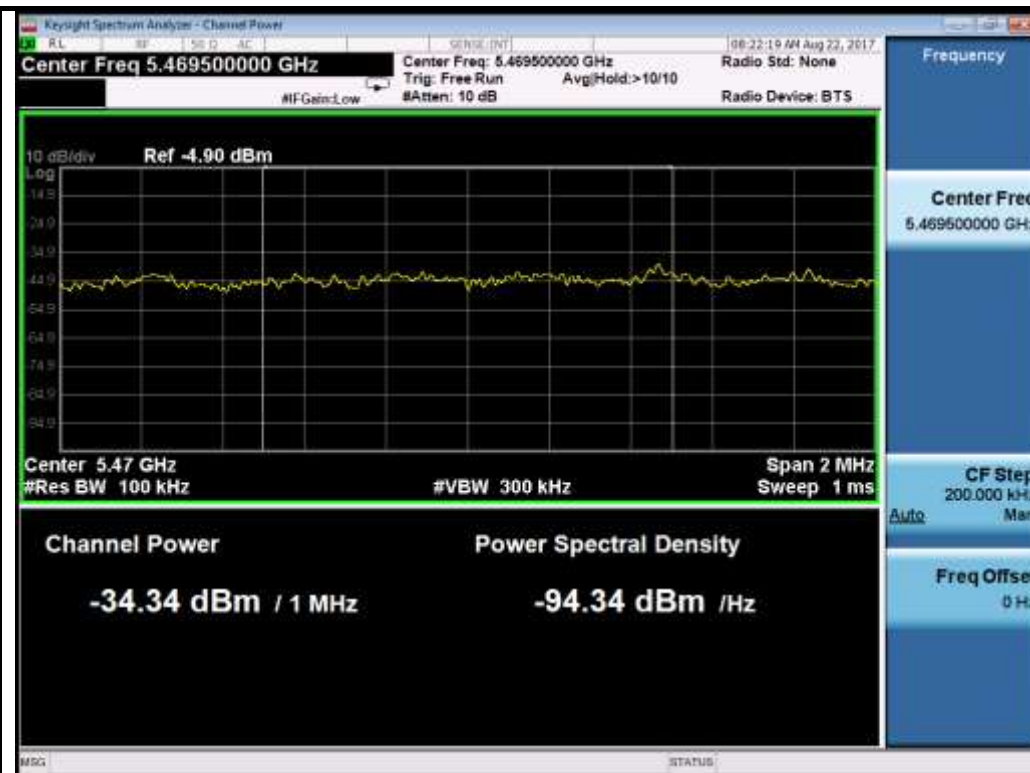
802.11a-5700MHz



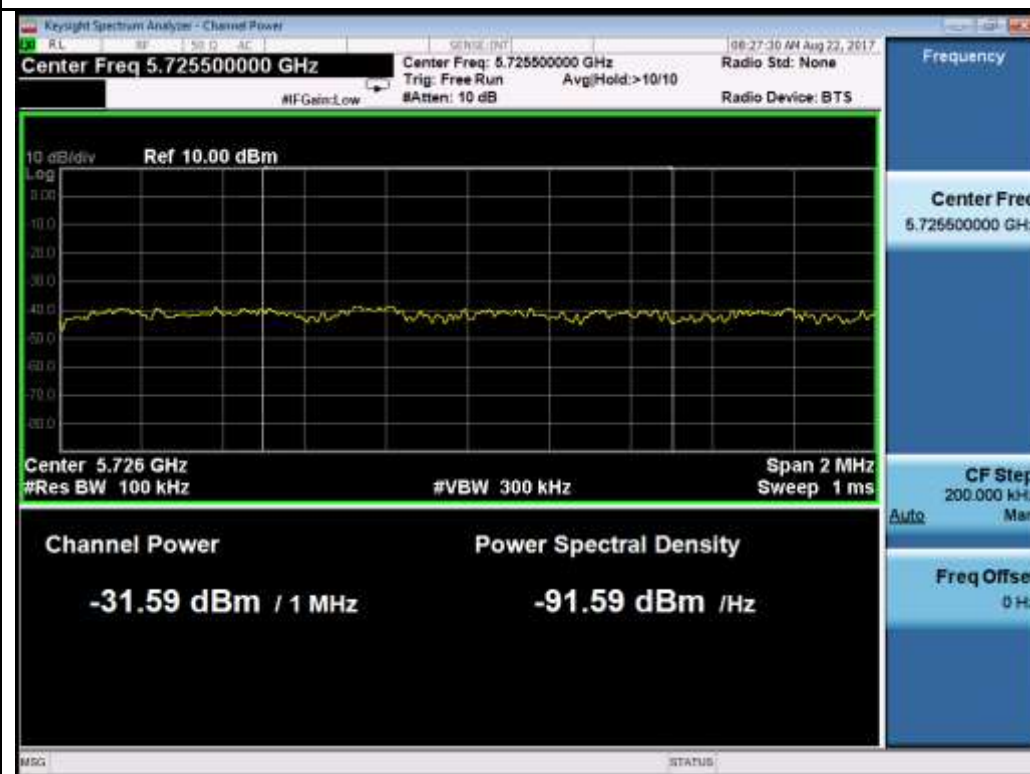
802.11n-HT20-5500MHz



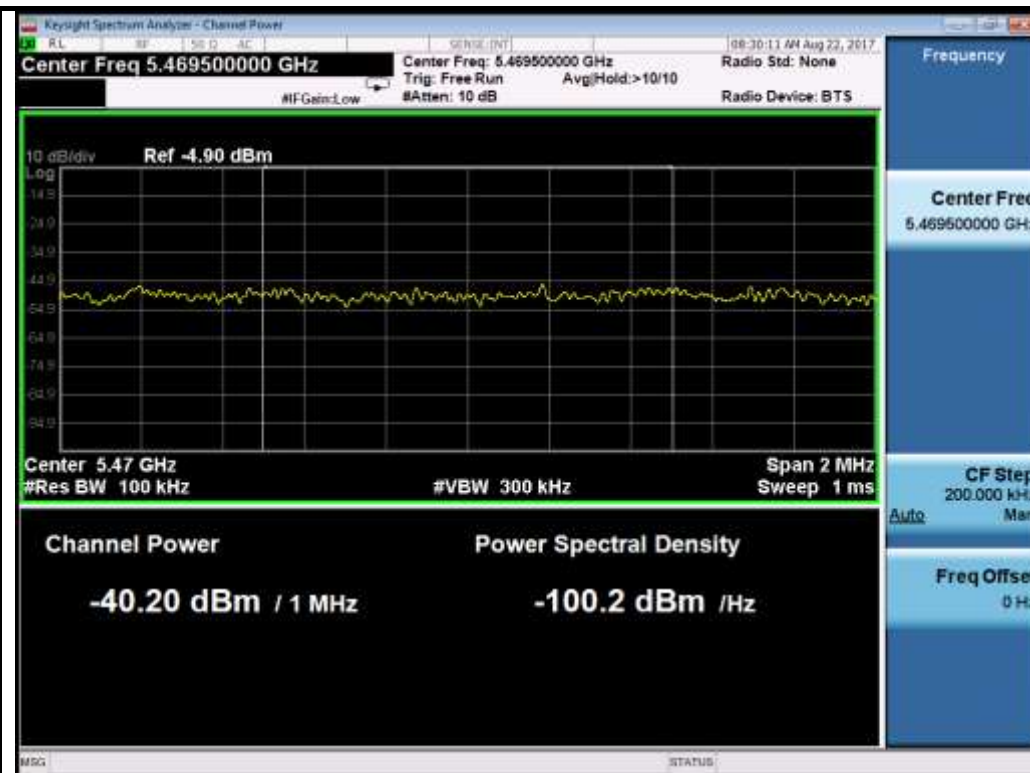
802.11n-HT20-5700MHz



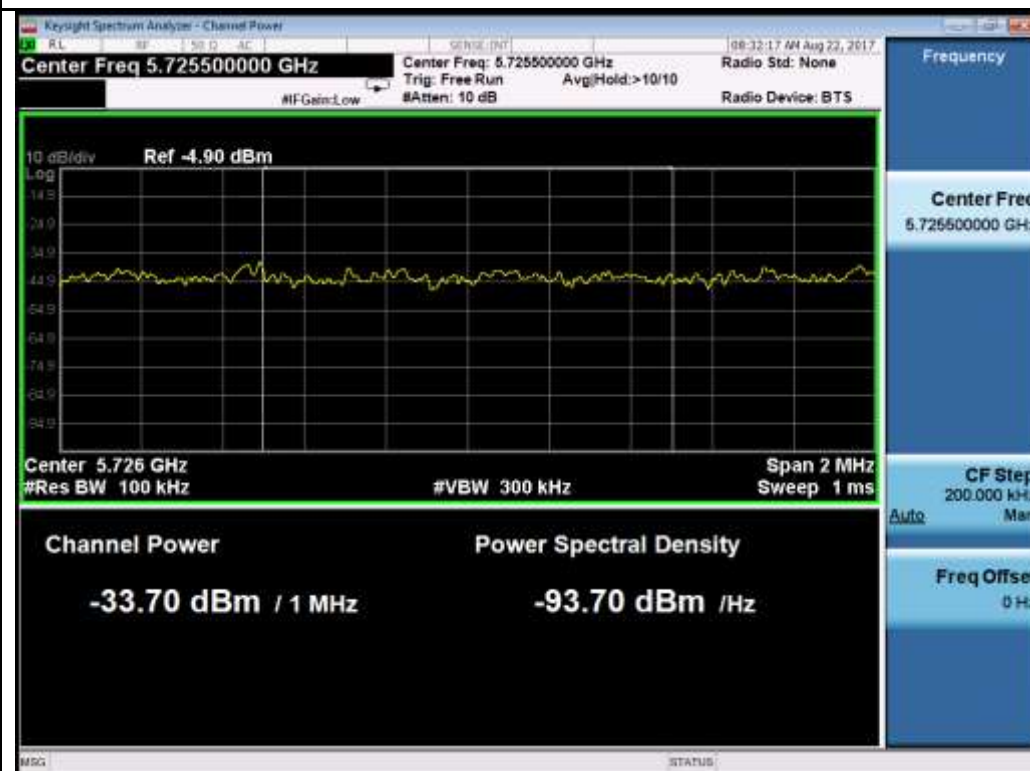
802.11n-HT40-5510MHz



802.11n-HT40-5670MHz



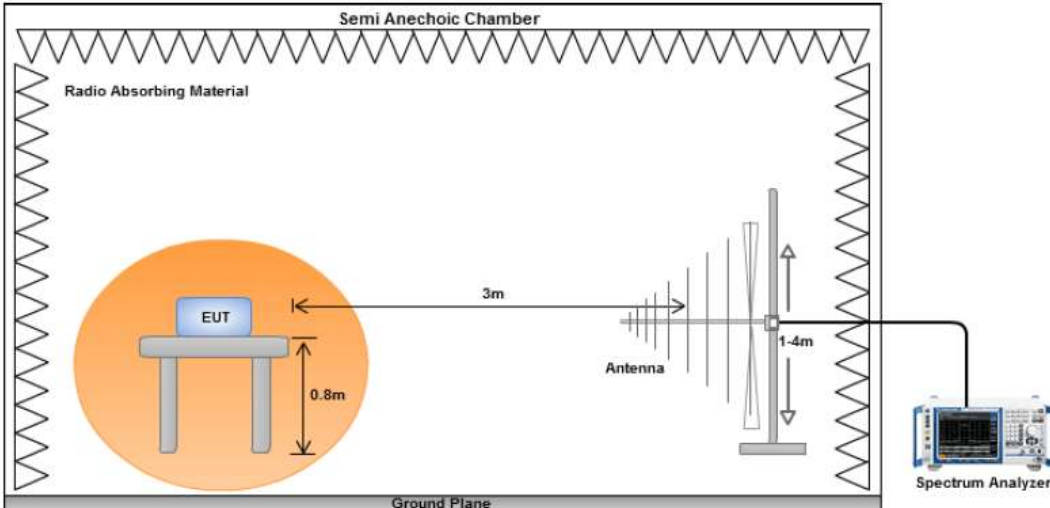
802.11ac-VHT80-5530MHz



802.11ac-VHT80-5610MHz

10.6 Radiated Spurious Emissions below 1GHz

Requirement(s):

Spec	Requirement	Applicable										
47CFR§ 15.407(b) 15.209 (a)	Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges <table><tr><th>Frequency range (MHz)</th><th>Field Strength (uV/m)</th></tr><tr><td>30 – 88</td><td>100</td></tr><tr><td>88 – 216</td><td>150</td></tr><tr><td>216 960</td><td>200</td></tr><tr><td>Above 960</td><td>500</td></tr></table>	Frequency range (MHz)	Field Strength (uV/m)	30 – 88	100	88 – 216	150	216 960	200	Above 960	500	⊠
Frequency range (MHz)	Field Strength (uV/m)											
30 – 88	100											
88 – 216	150											
216 960	200											
Above 960	500											
Test Setup												
Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. A Quasi-peak measurement was then made for that frequency point. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.											
Remark	The EUT was scanned up to 1GHz. Both horizontal and vertical polarities were investigated. The results show only the worst case.											
Result	⊠ Pass □ Fail											

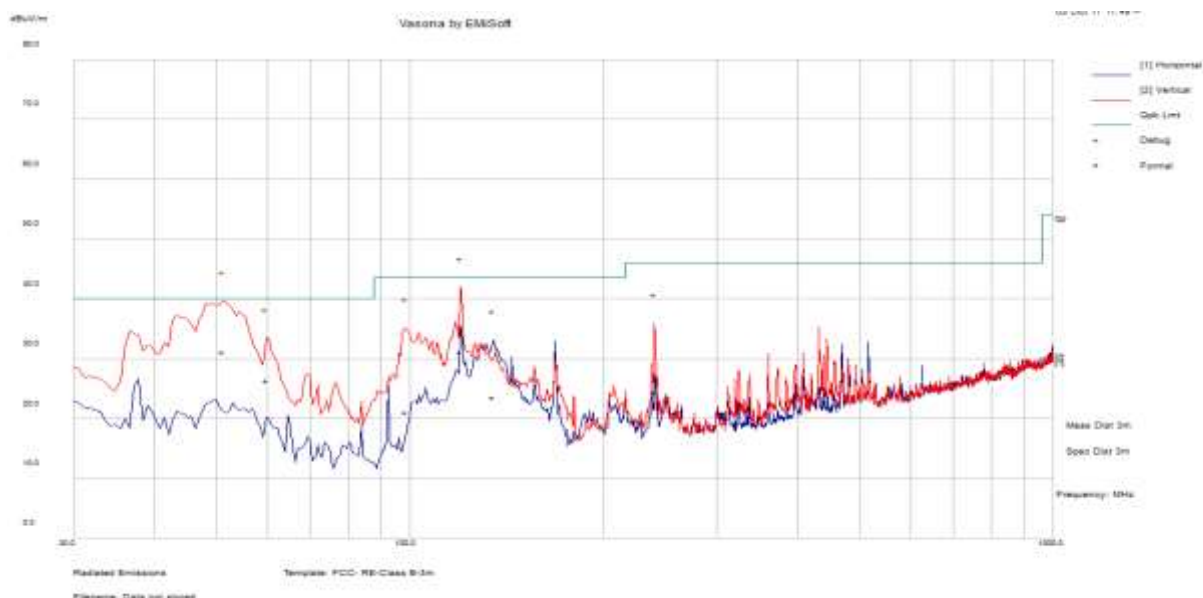
Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Shuo Zhang at 10m chamber.

Radiated Emission Test Results (Below 1GHz)

Test specification	below 1GHz			
Environmental Conditions:	Temp (°C):	23	Result	Pass
	Humidity (%)	46		
	Atmospheric (mbar):	1017		
Mains Power:	120VAC, 60Hz			
Tested by:	Shuo Zhang			
Test Date:	08/21/2017-10/05/2017			
Remarks:	802.11a – 5320MHz			

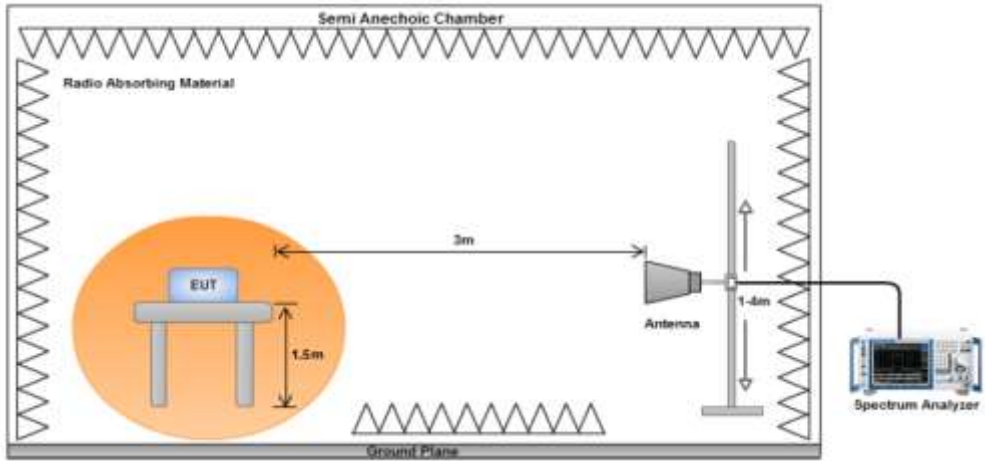


Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
51.25	46.89	11.59	-27.26	31.22	Quasi Max	V	111	112	40	-8.78	Pass
119.9734	41.83	12.25	-22.86	31.23	Quasi Max	V	136	110	43.5	-12.27	Pass
59.95094	43.15	11.66	-28.35	26.46	Quasi Max	V	218	220	40	-13.54	Pass
98.63781	35.47	12.02	-26.41	21.09	Quasi Max	V	130	330	43.5	-22.41	Pass
239.9888	36.23	13.08	-24.87	24.44	Quasi Max	V	131	162	46	-21.56	Pass
134.7913	34.3	12.34	-23.1	23.55	Quasi Max	H	239	111	43.5	-19.96	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

10.7 Radiated Spurious Emissions above 1GHz

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§ 15.407(b)(2), 15.407(b)(6)	(1)	For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.	☐
	(2)	For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.	☒
	(3)	For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.	☒
	(4)	For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.	☐
	(5)	Restricted band, emission must also comply with the radiated emission limits specified in 15.209	☒
Test Setup			
Procedure	- The EUT was switched on and allowed to warm up to its normal operating condition. - The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: - Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. - The EUT was then rotated to the direction that gave the maximum emission. - Finally, the antenna height was adjusted to the height that gave the maximum emission. - An average measurement was then made for that frequency point. - Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.		
Remark	The EUT was scanned up to 40GHz. Both horizontal and vertical polarities were investigated. The results show only the worst case.		
Result	☒ Pass ☐ Fail		

Test Data ☐ Yes (See below) ☒ N/A

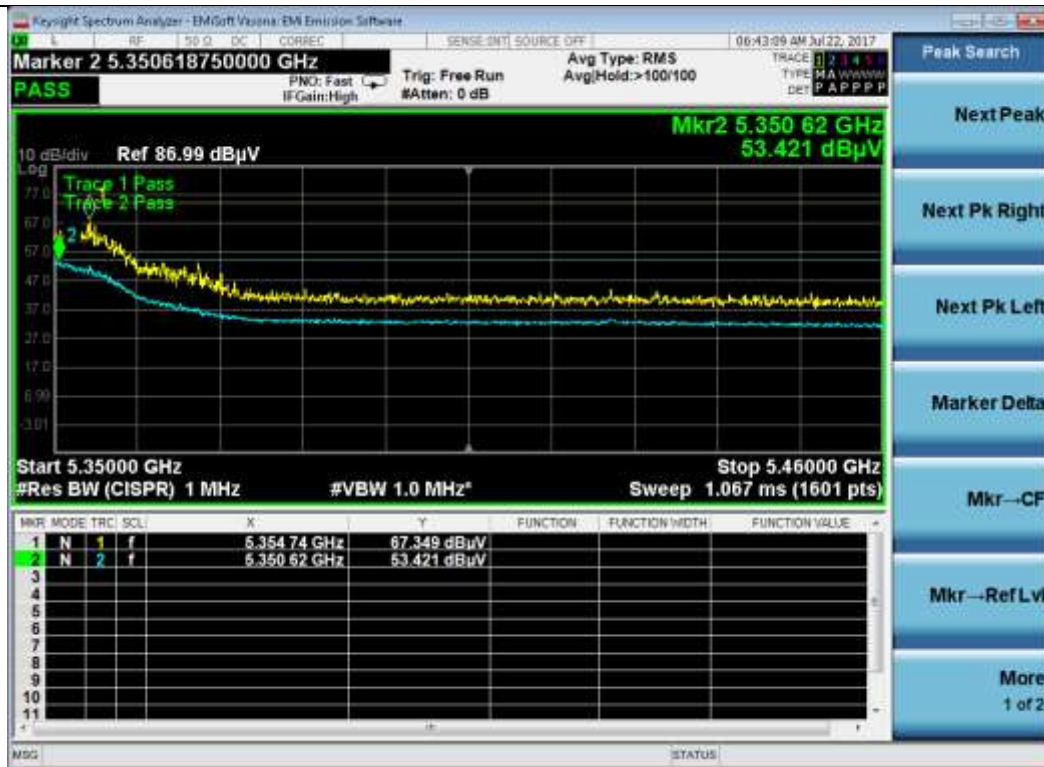
Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Shuo Zhang at 10m chamber.

Radiated Restricted band and Band Edge Measurement Plots:



802.11a 5320M(5350-5460MHz)



802.11n-HT20 5320M(5350-5460MHz)



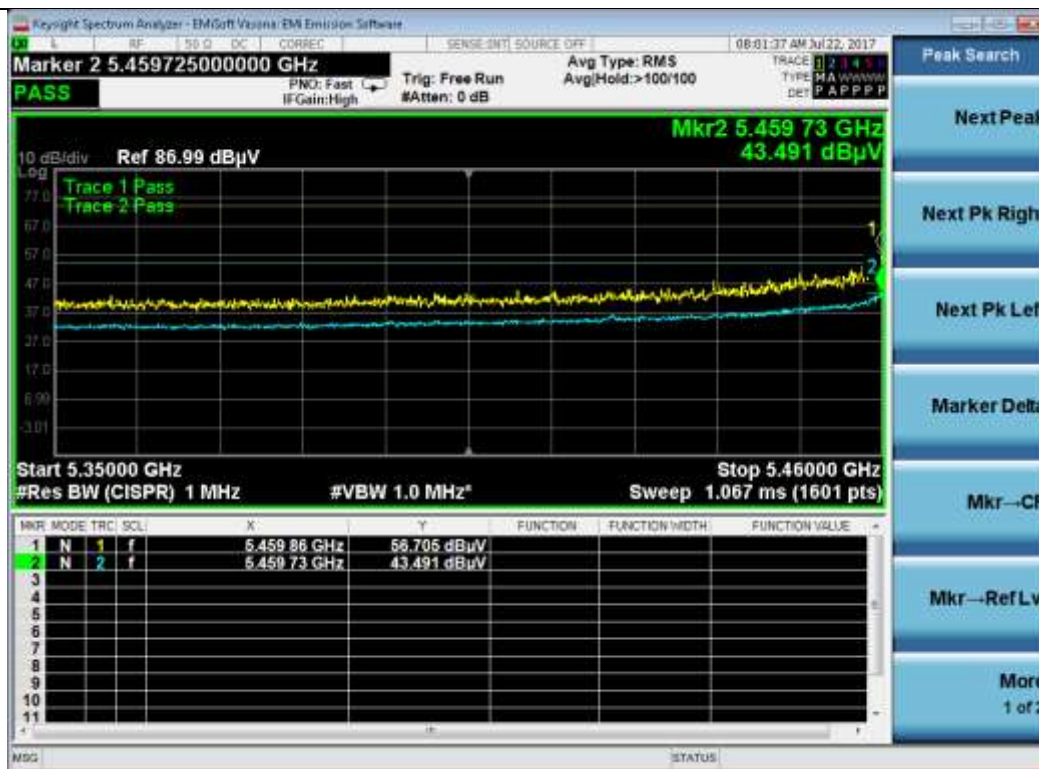
802.11n-HT40 5310M(5350-5460MHz)



802.11ac 5290M(5350-5460MHz)



802.11a 5500M(5350-5460MHz)



802.11n-HT20 5500M(5350-5460MHz)



802.11n-HT40 5510M(5350-5460MHz)



802.11ac 5530M(5350-5460MHz)

Radiated Emission Test Results (Above 1GHz)

W53 band:

Above 1GHz-40GHz – 802.11a – 5260MHz

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
10525.92	46.78	6.77	2.4	55.96	Peak Max	V	189	88	74	-18.04	Pass
7013.33	48.48	5.24	0.93	54.65	Peak Max	H	278	231	74	-19.35	Pass
13827.61	37.89	8.36	6.54	52.79	Peak Max	H	278	92	74	-21.21	Pass
10525.92	33.2	6.77	2.4	42.38	Average Max	V	189	88	54	-11.62	Pass
7013.33	43.31	5.24	0.93	49.48	Average Max	H	278	231	54	-4.52	Pass
13827.61	25.25	8.36	6.54	40.15	Average Max	H	278	92	54	-13.85	Pass

Above 1GHz-40GHz – 802.11a – 5280MHz

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
10571.23	48.05	6.8	2.19	57.05	Peak Max	V	141	262	74	-16.95	Pass
7040.01	48.66	5.25	0.77	54.68	Peak Max	H	269	232	74	-19.32	Pass
13375.95	37.18	8.34	6.04	51.56	Peak Max	V	298	137	74	-22.44	Pass
10571.23	29.24	6.8	2.19	38.24	Average Max	V	141	262	54	-15.76	Pass
7040.01	44	5.25	0.77	50.01	Average Max	H	269	232	54	-3.99	Pass
13375.95	24.92	8.34	6.04	39.3	Average Max	V	298	137	54	-14.71	Pass

Above 1GHz-40GHz – 802.11a – 5320MHz

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
10641.34	48.7	6.84	2.13	57.67	Peak Max	V	214	262	74	-16.34	Pass
7093.21	52.03	5.27	0.45	57.74	Peak Max	H	287	223	74	-16.26	Pass
13555.67	36.73	8.82	6.25	51.8	Peak Max	H	342	159	74	-22.2	Pass
10641.34	29.84	6.84	2.13	38.8	Average Max	V	214	262	54	-15.2	Pass
7093.21	43.64	5.27	0.45	49.36	Average Max	H	287	223	54	-4.64	Pass
13555.67	24.82	8.82	6.25	39.89	Average Max	H	342	159	54	-14.11	Pass

Above 1GHz-40GHz – 802.11n-20M – 5260MHz

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
10521.29	48.92	6.77	2.42	58.12	Peak Max	V	116	238	74	-15.88	Pass
13926.98	37.28	8.19	6.32	51.79	Peak Max	H	119	335	74	-22.21	Pass
7013.34	46.7	5.24	0.93	52.86	Peak Max	H	220	263	74	-21.14	Pass
10521.29	28.07	6.77	2.42	37.26	Average Max	V	116	238	54	-16.74	Pass
13926.98	25.78	8.19	6.32	40.29	Average Max	H	119	335	54	-13.71	Pass
7013.34	40.84	5.24	0.93	47.01	Average Max	H	220	263	54	-6.99	Pass

Above 1GHz-40GHz – 802.11n-20M – 5280MHz

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
7096.64	54.25	5.34	0.46	60.05	Peak Max	H	272	226	74	-13.95	Pass
10635.59	41.12	6.93	2.12	50.17	Peak Max	V	158	236	74	-23.83	Pass
13648.18	40.21	8.74	6.08	55.04	Peak Max	H	144	349	74	-18.96	Pass
7096.64	42.92	5.28	0.46	48.66	Average Max	H	274	225	54	-5.34	Pass
10635.59	28.47	6.93	2.12	37.51	Average Max	V	159	236	54	-16.49	Pass
13648.18	26.73	8.77	6.07	41.57	Average Max	H	145	347	54	-12.43	Pass

Above 1GHz-40GHz – 802.11n-20M – 5320MHz

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
7093.29	52.27	5.27	0.45	57.99	Peak Max	H	272	225	74	-16.01	Pass
10632.80	41.1	6.84	2.11	50.05	Peak Max	V	157	234	74	-23.95	Pass
13638.29	38.56	8.68	6.07	53.31	Peak Max	H	143	347	74	-20.69	Pass
7093.29	45.31	5.27	0.45	51.03	Average Max	H	272	225	54	-2.97	Pass
10632.80	28.22	6.84	2.11	37.17	Average Max	V	157	234	54	-16.83	Pass
13638.29	25.7	8.68	6.07	40.46	Average Max	H	143	347	54	-13.54	Pass

Above 1GHz-40GHz – 802.11n-40M – 5270MHz

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
7102.84	52.29	5.35	0.46	58.10	Peak Max	H	272	226	74	-15.90	Pass
10637.10	42.98	6.84	2.12	51.95	Peak Max	V	158	235	74	-22.05	Pass
13642.81	38.96	8.78	6.08	53.82	Peak Max	H	144	349	74	-20.18	Pass
7102.84	44.02	5.31	0.45	49.78	Average Max	H	272	226	54	-4.22	Pass
10637.10	29.55	6.86	2.12	38.52	Average Max	V	158	235	54	-15.48	Pass
13642.81	27.54	8.70	6.08	42.32	Average Max	H	144	347	54	-11.68	Pass

Above 1GHz-40GHz – 802.11n-40M – 5310MHz

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
7099.12	53.72	5.35	0.45	59.53	Peak Max	H	274	226	74	-14.47	Pass
10637.98	42.27	6.88	2.11	51.26	Peak Max	V	158	235	74	-22.74	Pass
13639.96	39.80	8.70	6.07	54.57	Peak Max	H	144	348	74	-19.43	Pass
7099.12	43.31	5.36	0.46	49.13	Average Max	H	272	226	54	-4.87	Pass
10637.98	29.93	6.84	2.12	38.89	Average Max	V	159	235	54	-15.11	Pass
13639.96	25.78	8.71	6.08	40.57	Average Max	H	143	349	54	-13.43	Pass

Above 1GHz-40GHz – 802.11ac-80M – 5290MHz

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
7100.53	53.91	5.27	0.45	59.64	Peak Max	H	273	227	74	-14.36	Pass
10642.71	42.58	6.93	2.12	51.63	Peak Max	V	159	234	74	-22.37	Pass
13640.27	39.15	8.74	6.07	53.96	Peak Max	H	144	348	74	-20.04	Pass
7100.53	43.06	5.36	0.45	48.88	Average Max	H	274	226	54	-5.12	Pass
10642.71	29.49	6.85	2.11	38.46	Average Max	V	159	235	54	-15.54	Pass
13640.27	26.32	8.72	6.08	41.12	Average Max	H	143	348	54	-12.88	Pass

W56 band:

Above 1GHz-40GHz – 802.11a – 5500MHz

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
7095.55	54.04	5.35	0.46	59.85	Peak Max	H	274	227	74	-14.15	Pass
10637.54	42.35	6.92	2.12	51.39	Peak Max	V	159	234	74	-22.61	Pass
13643.12	38.58	8.72	6.07	53.37	Peak Max	H	145	348	74	-20.63	Pass
7095.55	43.68	5.29	0.45	49.42	Average Max	H	274	227	54	-4.58	Pass
10637.54	29.47	6.92	2.12	38.51	Average Max	V	158	234	54	-15.49	Pass
13643.12	27.28	8.76	6.07	42.11	Average Max	H	143	348	54	-11.89	Pass

Above 1GHz-40GHz – 802.11a – 5580MHz

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
7101.85	53.72	5.36	0.46	59.54	Peak Max	H	273	226	74	-14.46	Pass
10640.43	42.46	6.85	2.11	51.42	Peak Max	V	158	235	74	-22.58	Pass
13643.43	40.30	8.76	6.07	55.13	Peak Max	H	145	347	74	-18.87	Pass
7101.85	43.71	5.32	0.46	49.49	Average Max	H	273	226	54	-4.51	Pass
10640.43	30.17	6.85	2.12	39.14	Average Max	V	158	235	54	-14.86	Pass
13643.43	26.38	8.72	6.08	41.17	Average Max	H	145	347	54	-12.83	Pass

Above 1GHz-40GHz – 802.11a – 5700MHz

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
7095.11	53.76	5.32	0.46	59.54	Peak Max	H	273	226	74	-14.46	Pass
10636.06	41.47	6.93	2.12	50.52	Peak Max	V	159	235	74	-23.48	Pass
13648.21	39.20	8.78	6.08	54.06	Peak Max	H	143	347	74	-19.94	Pass
7095.11	44.02	5.35	0.45	49.83	Average Max	H	273	226	54	-4.17	Pass
10636.06	29.97	6.88	2.11	38.96	Average Max	V	159	235	54	-15.04	Pass
13648.21	26.22	8.74	6.07	41.03	Average Max	H	143	347	54	-12.97	Pass

Above 1GHz-40GHz – 802.11n-20M – 5500MHz

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
7093.35	54.14	5.33	0.46	59.93	Peak Max	H	273	227	74	-14.07	Pass
10636.44	42.01	6.89	2.11	51.01	Peak Max	V	158	235	74	-22.99	Pass
13642.42	39.67	8.75	6.08	54.49	Peak Max	H	145	349	74	-19.51	Pass
7093.35	43.01	5.28	0.45	48.74	Average Max	H	273	227	54	-5.26	Pass
10636.44	29.56	6.92	2.12	38.59	Average Max	V	158	235	54	-15.41	Pass
13642.42	26.93	8.76	6.07	41.76	Average Max	H	145	349	54	-12.24	Pass

Above 1GHz-40GHz – 802.11n-20M – 5580MHz

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
7096.09	54.21	5.29	0.45	59.95	Peak Max	H	273	226	74	-14.05	Pass
10636.44	41.72	6.87	2.12	50.71	Peak Max	V	159	235	74	-23.29	Pass
13642.00	38.78	8.73	6.07	53.58	Peak Max	H	145	349	74	-20.42	Pass
7096.09	43.37	5.33	0.45	49.15	Average Max	H	273	226	54	-4.85	Pass
10636.44	29.12	6.85	2.11	38.09	Average Max	V	159	235	54	-15.91	Pass
13642.00	27.30	8.76	6.07	42.14	Average Max	H	145	349	54	-11.86	Pass

Above 1GHz-40GHz – 802.11n-20M – 5700MHz

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
7098.11	53.67	5.29	0.46	59.42	Peak Max	H	272	226	74	-14.58	Pass
10638.49	41.19	6.85	2.12	50.15	Peak Max	V	159	235	74	-23.85	Pass
13646.18	38.92	8.70	6.08	53.70	Peak Max	H	145	349	74	-20.30	Pass
7098.11	42.90	5.34	0.45	48.69	Average Max	H	272	226	54	-5.31	Pass
10638.49	29.80	6.89	2.12	38.81	Average Max	V	159	235	54	-15.19	Pass
13646.18	26.33	8.68	6.07	41.08	Average Max	H	145	349	54	-12.92	Pass

Above 1GHz-40GHz – 802.11n-40M – 5510MHz

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
7094.04	52.91	5.35	0.46	58.71	Peak Max	H	273	227	74	-15.29	Pass
10635.58	42.55	6.89	2.12	51.56	Peak Max	V	159	235	74	-22.44	Pass
13645.39	40.03	8.77	6.08	54.88	Peak Max	H	145	348	74	-19.12	Pass
7094.04	42.59	5.32	0.46	48.36	Average Max	H	273	227	54	-5.64	Pass
10635.58	28.53	6.86	2.12	37.51	Average Max	V	159	235	54	-16.49	Pass
13645.39	27.34	8.76	6.08	42.18	Average Max	H	145	348	54	-11.82	Pass

Above 1GHz-40GHz – 802.11n-40M – 5550MHz

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
7100.02	53.10	5.35	0.45	58.90	Peak Max	H	272	226	74	-15.10	Pass
10641.68	41.56	6.90	2.11	50.57	Peak Max	V	158	234	74	-23.43	Pass
13644.70	39.44	8.73	6.08	54.24	Peak Max	H	144	347	74	-19.76	Pass
7100.02	42.72	5.28	0.46	48.46	Average Max	H	272	226	54	-5.54	Pass
10641.68	29.62	6.89	2.12	38.62	Average Max	V	158	234	54	-15.38	Pass
13644.70	27.23	8.71	6.07	42.02	Average Max	H	144	347	54	-11.98	Pass

Above 1GHz-40GHz – 802.11n-40M – 5670MHz

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
7100.28	53.31	5.32	0.46	59.08	Peak Max	H	272	226	74	-14.92	Pass
10633.35	41.62	6.90	2.12	50.64	Peak Max	V	158	235	74	-23.36	Pass
13646.76	39.71	8.72	6.07	54.50	Peak Max	H	144	349	74	-19.50	Pass
7100.28	42.87	5.36	0.45	48.69	Average Max	H	272	226	54	-5.31	Pass
10633.35	29.68	6.86	2.11	38.65	Average Max	V	158	235	54	-15.35	Pass
13646.76	26.17	8.72	6.08	40.96	Average Max	H	144	349	54	-13.04	Pass

Above 1GHz-40GHz – 802.11ac-80M – 5530MHz

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
7096.03	52.76	5.33	0.46	58.54	Peak Max	H	273	225	74	-15.46	Pass
10639.95	42.44	6.86	2.12	51.42	Peak Max	V	158	235	74	-22.58	Pass
13645.68	39.38	8.69	6.08	54.15	Peak Max	H	144	349	74	-19.85	Pass
7096.03	42.76	5.34	0.45	48.56	Average Max	H	273	225	54	-5.44	Pass
10639.95	30.03	6.92	2.12	39.06	Average Max	V	158	235	54	-14.94	Pass
13645.68	26.77	8.72	6.07	41.56	Average Max	H	144	349	54	-12.44	Pass

Above 1GHz-40GHz – 802.11ac-80M – 5610MHz

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
7102.52	53.33	5.31	0.45	59.10	Peak Max	H	272	226	74	-14.90	Pass
10638.66	41.56	6.88	2.12	50.56	Peak Max	V	159	235	74	-23.44	Pass
13643.97	39.61	8.77	6.08	54.46	Peak Max	H	144	348	74	-19.54	Pass
7102.52	42.79	5.33	0.45	48.57	Average Max	H	272	226	54	-5.43	Pass
10638.66	28.66	6.87	2.11	37.65	Average Max	V	159	235	54	-16.35	Pass
13643.97	26.20	8.76	6.08	41.04	Average Max	H	144	348	54	-12.96	Pass

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Conducted Emissions						
R & S Receiver	ESIB 40	100179	06/08/2017	1 Year	06/08/2018	☒
CHASE LISN	MN2050B	1018	08/07/2017	1 Year	08/07/2018	☒
Radiated Emissions						
R & S Receiver	ESIB 40	1018	08/07/2017	1 Year	08/07/2018	☒
Bi-Log antenna (30MHz~2GHz)	JB1	A030702	08/12/2017	1 Year	08/12/2018	☒
Horn Antenna (1GHz~26GHz)	3115	100059	08/25/2017	1 Year	08/25/2018	☒
3 Meters SAC	3M	N/A	08/08/2017	1 Year	08/08/2018	☒
10 Meters SAC	10M	N/A	09/05/2017	1 Year	09/05/2018	☒
RF Conducted Measurement						
Spectrum Analyzer	N9010A	10SL0219	08/20/2017	1 Year	08/20/2018	☒
R & S Receiver	ESIB 40	100179	06/08/2017	1 Year	06/08/2018	☒
ETS-Lingren USB RF Power Sensor	7002-006	10SL0190	09/03/2017	1 Year	09/03/2018	☒

Annex B. SIEMIC Accreditation

Accreditations	Document	Scope / Remark
ISO 17025 (A2LA)		Please see the documents for the detailed scope
ISO Guide 65 (A2LA)		Please see the documents for the detailed scope
TCB Designation		A1 , A2 , A3 , A4 , B1 , B2 , B3 , B4 , C
FCC DoC Accreditation		FCC Declaration of Conformity Accreditation
FCC Site Registration		3 meter site
FCC Site Registration		10 meter site
IC Site Registration		3 meter site
IC Site Registration		10 meter site
EU NB		Radio & Telecommunications Terminal Equipment: EN45001 – EN ISO/IEC 17025
		Electromagnetic Compatibility: EN45001 – EN ISO/IEC 17025
Singapore iDA CB(Certification Body)	 	Phase I , Phase II
Vietnam MIC CAB Accreditation		Please see the document for the detailed scope
Hong Kong OFCA		(Phase II) OFCA Foreign Certification Body for Radio and Telecom
		(Phase I) Conformity Assessment Body for Radio and Telecom
Industry Canada CAB		Radio: Scope A – All Radio Standard Specification in Category I
		Telecom: CS-03 Part I, II, V, VI, VII, VIII

Japan Recognized Certification Body Designation		Radio: A1. Terminal equipment for purpose of calling Telecom: B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law
Korea CAB Accreditation		EMI: KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI EMS: KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS Radio: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68 Telecom: President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4
Taiwan NCC CAB Recognition		LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08
Taiwan BSMI CAB Recognition		CNS 13438
Japan VCCI		R-3083: Radiation 3 meter site C-3421: Main Ports Conducted Interference Measurement T-1597: Telecommunication Ports Conducted Interference Measurement
Australia CAB Recognition		EMC: AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4 Radio communications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771 Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06 AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1
Australia NATA Recognition		AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2