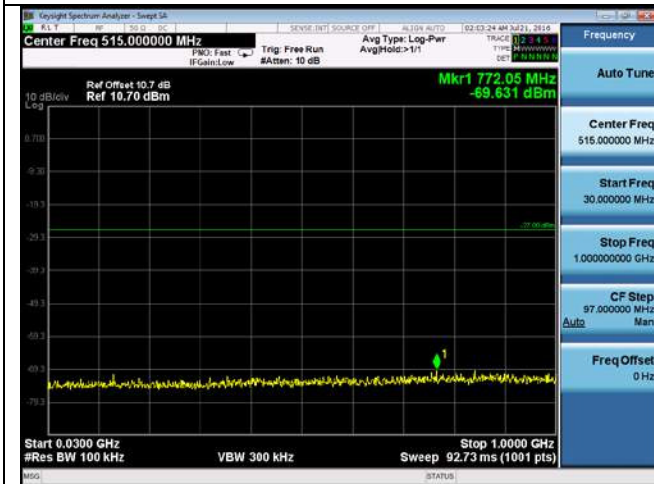


CUE-802.11n-20-5700M -chain 3(5GHz-6GHz)



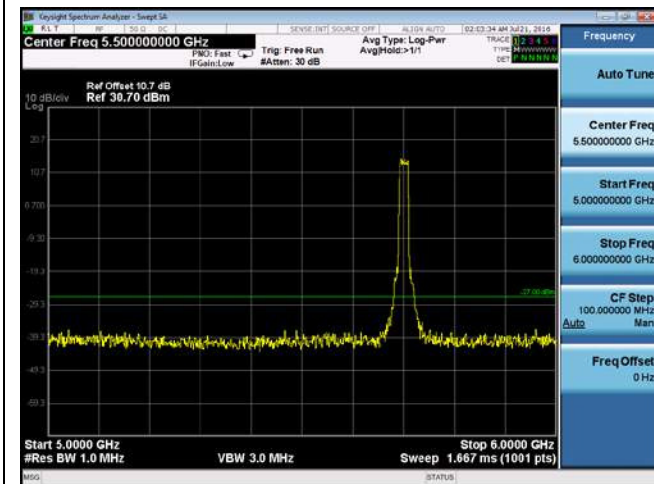
CUE-802.11n-20-5700M -chain 3(6GHz-40GHz)



CUE-802.11n-20-5700M -chain 4(30MHz-1GHz)



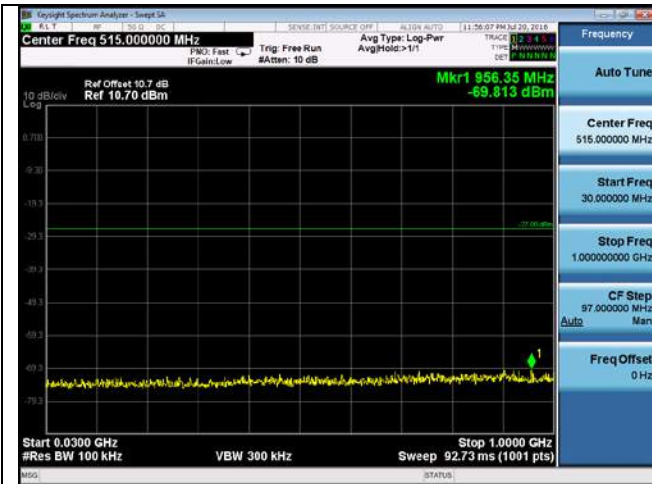
CUE-802.11n-20-5700M -chain 4(1GHz-5GHz)



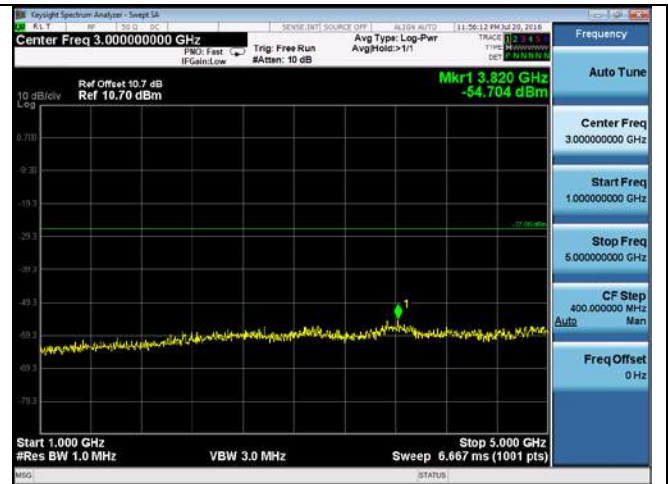
CUE-802.11n-20-5700M -chain 4(5GHz-6GHz)



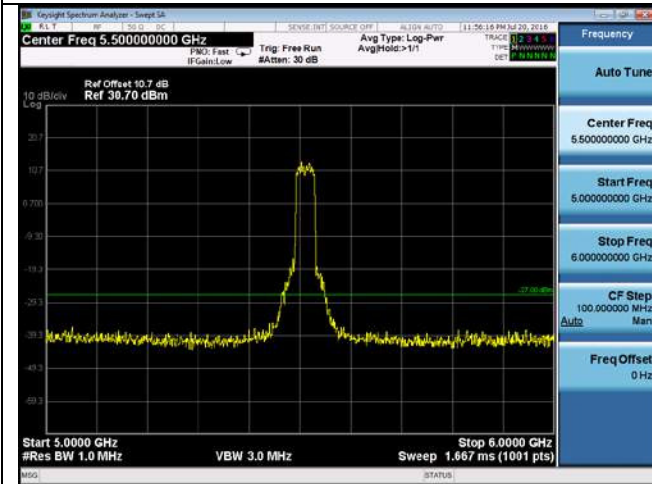
CUE-802.11n-20-5700M -chain 4(6GHz-40GHz)



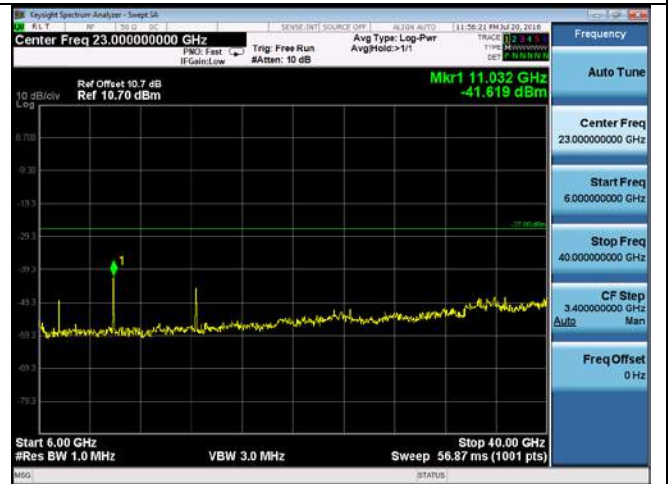
CUE-802.11n-40-5510M-chain1(30MHz-1GHz)



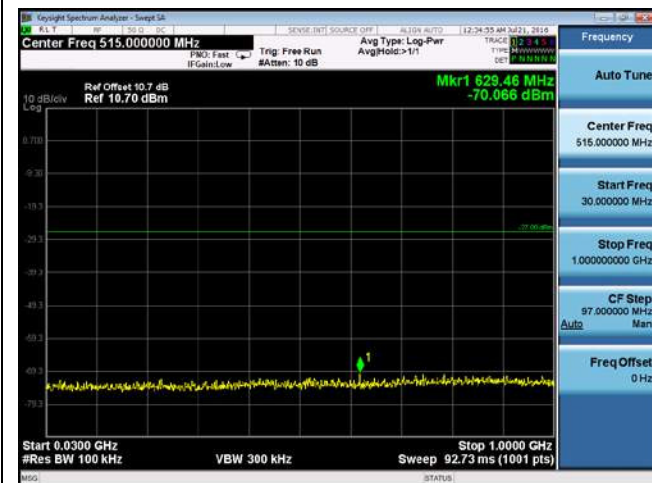
CUE-802.11n-40-5510M-chain1(1GHz-5GHz)



CUE-802.11n-40-5510M-chain1(5GHz-6GHz)



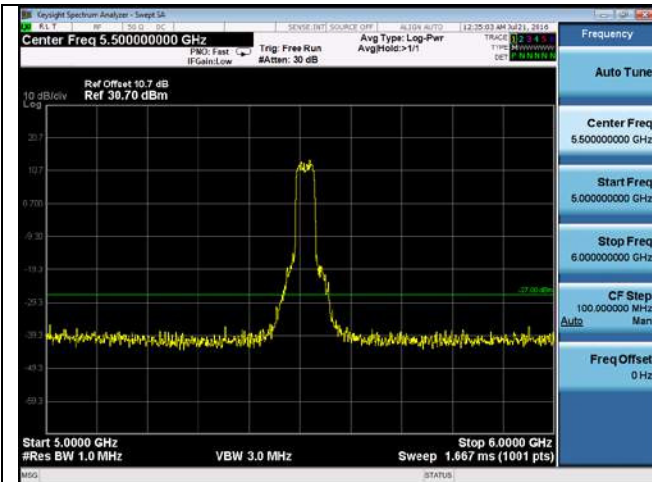
CUE-802.11n-40-5510M-chain1(6GHz-40GHz)



CUE-802.11n-40-5510M-chain2(30MHz-1GHz)



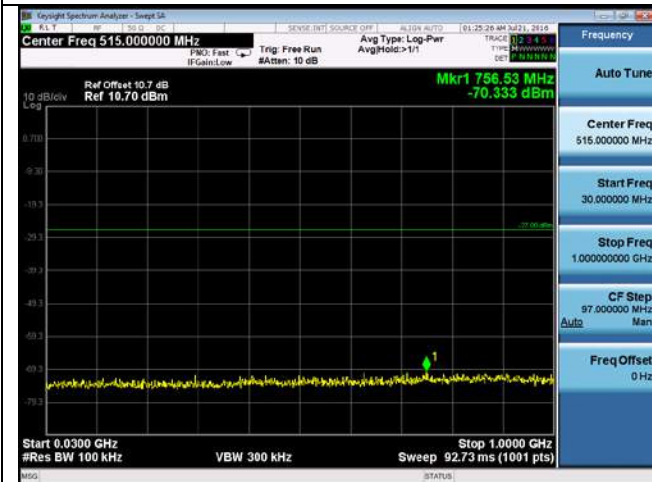
CUE-802.11n-40-5510M-chain2(1GHz-5GHz)



CUE-802.11n-40-5510M-chain2(5GHz-6GHz)



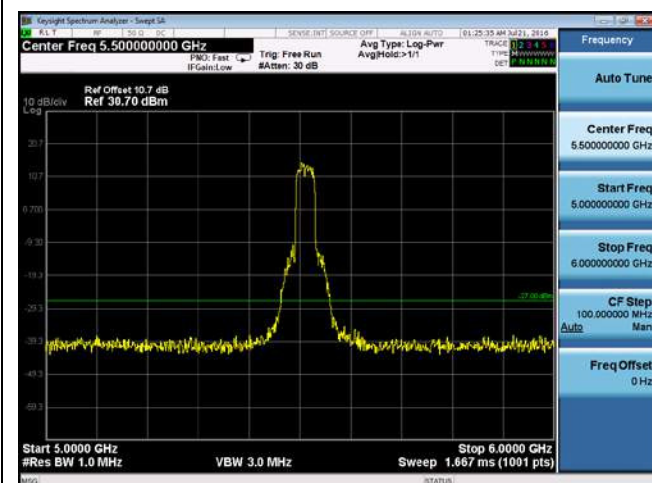
CUE-802.11n-40-5510M-chain2(6GHz-40GHz)



CUE-802.11n-40-5510M-chain3(30MHz-1GHz)



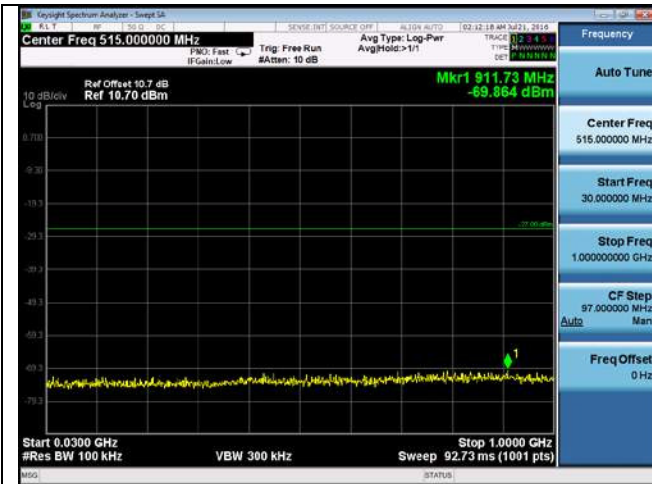
CUE-802.11n-40-5510M-chain3(1GHz-5GHz)



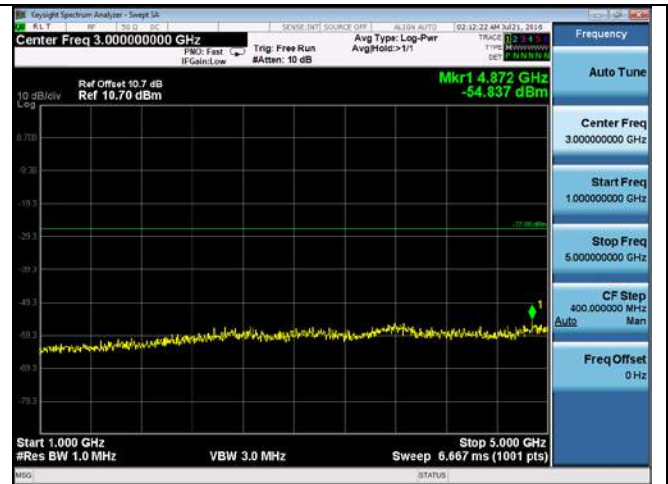
CUE-802.11n-40-5510M-chain3(5GHz-6GHz)



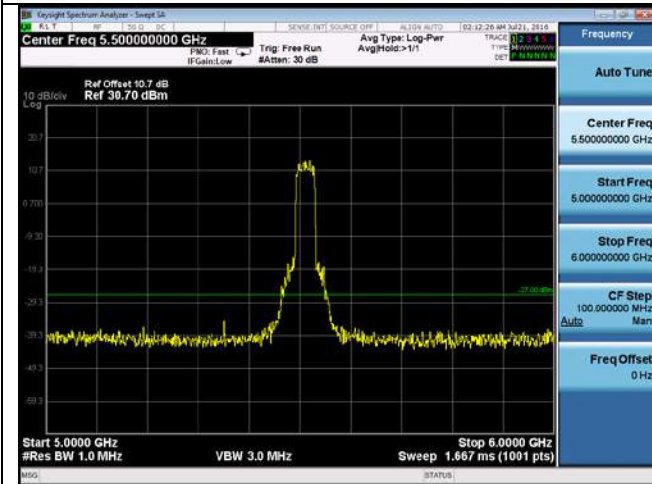
CUE-802.11n-40-5510M-chain3(6GHz-40GHz)



CUE-802.11n-40-5510M-chain4(30MHz-1GHz)



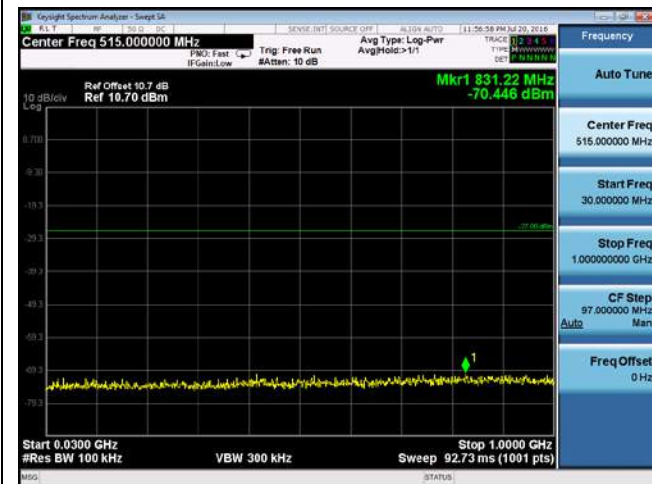
CUE-802.11n-40-5510M-chain4(1GHz-5GHz)



CUE-802.11n-40-5510M-chain4(5GHz-6GHz)



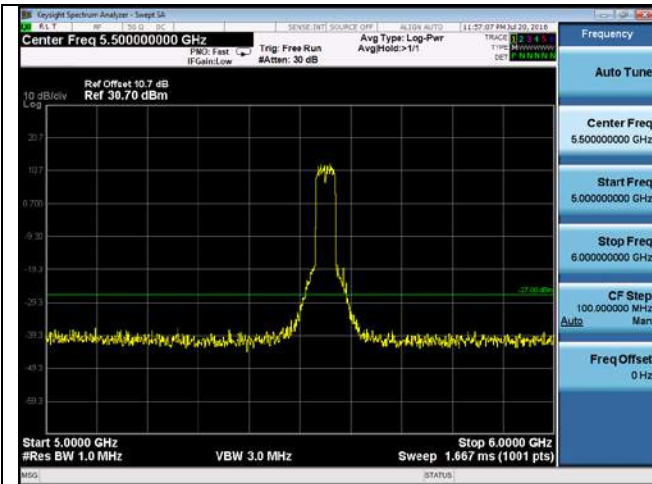
CUE-802.11n-40-5510M-chain4(6GHz-40GHz)



CUE-802.11n-40-5550M-chain1(30MHz-1GHz)



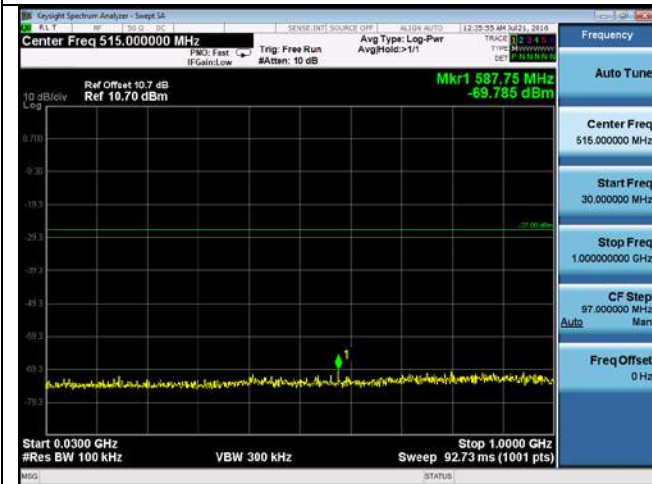
CUE-802.11n-40-5550M-chain1(1GHz-5GHz)



CUE-802.11n-40-5550M-chain1(5GHz-6GHz)



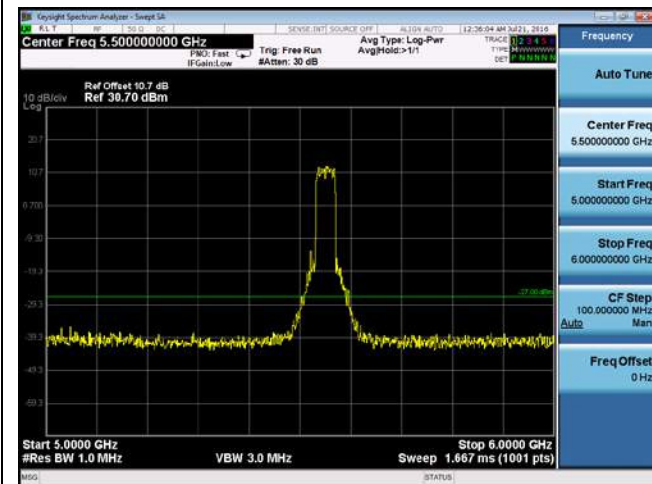
CUE-802.11n-40-5550M-chain1(6GHz-40GHz)



CUE-802.11n-40-5550M-chain2(30MHz-1GHz)



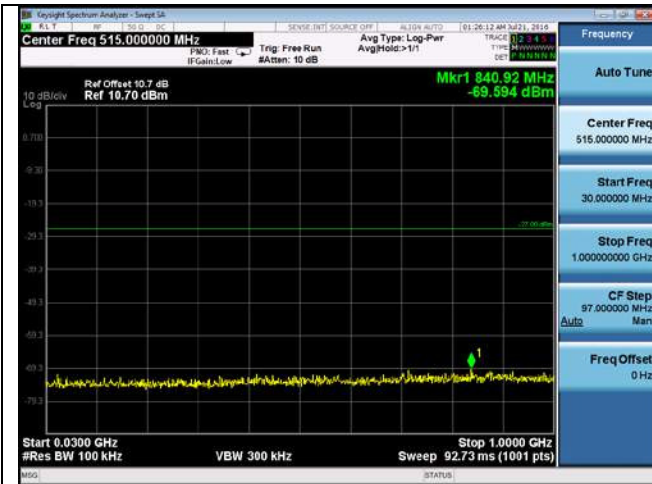
CUE-802.11n-40-5550M-chain2(1GHz-5GHz)



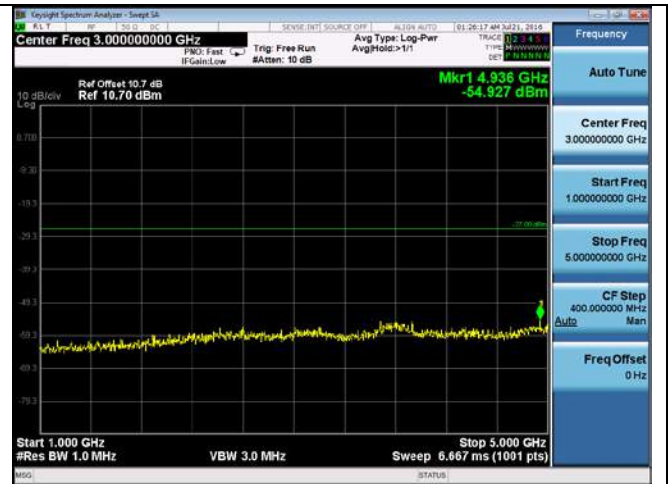
CUE-802.11n-40-5550M-chain2(5GHz-6GHz)



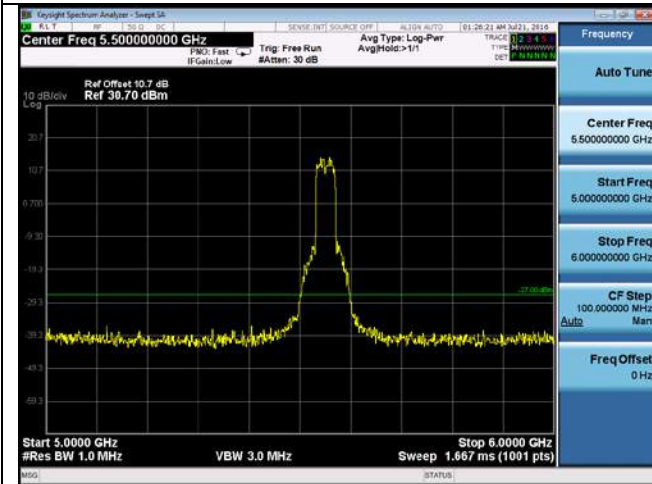
CUE-802.11n-40-5550M-chain2(6GHz-40GHz)



CUE-802.11n-40-5550M-chain3(30MHz-1GHz)



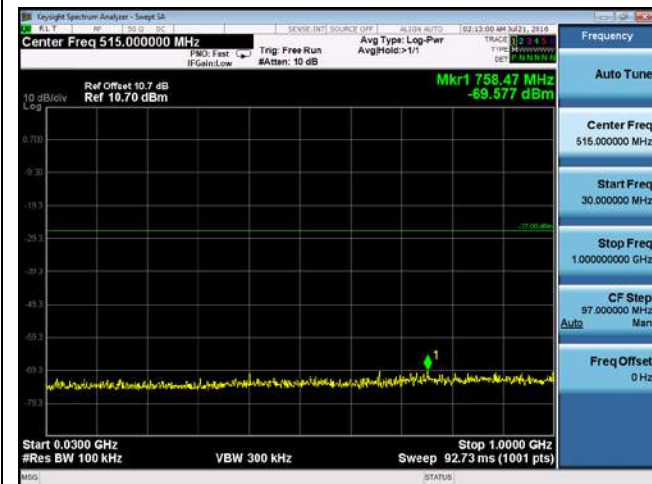
CUE-802.11n-40-5550M-chain3(1GHz-5GHz)



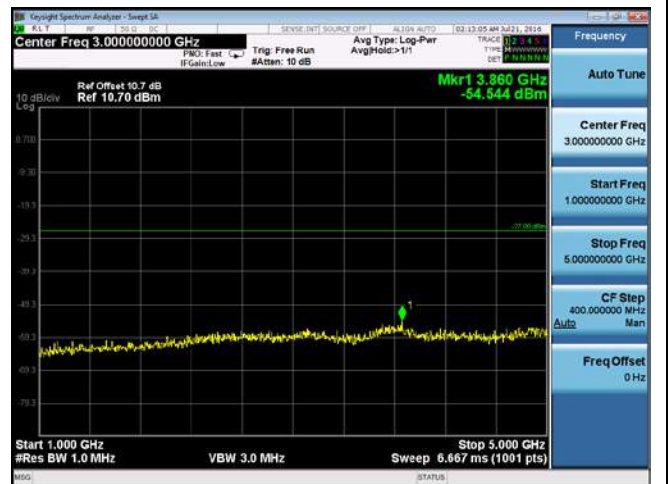
CUE-802.11n-40-5550M-chain3(5GHz-6GHz)



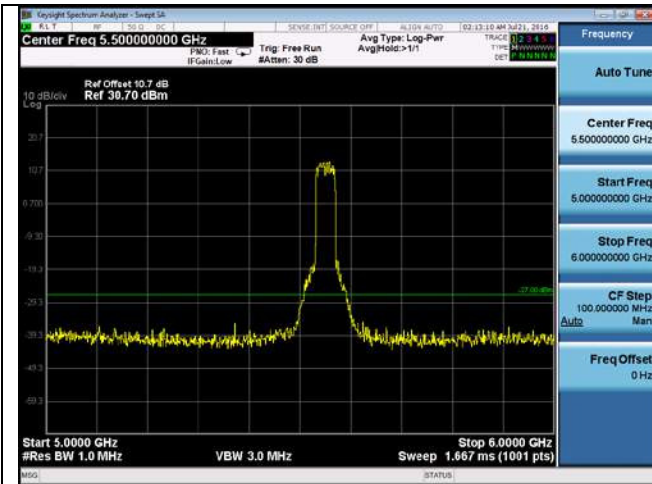
CUE-802.11n-40-5550M-chain3(6GHz-40GHz)



CUE-802.11n-40-5550M-chain4(30MHz-1GHz)



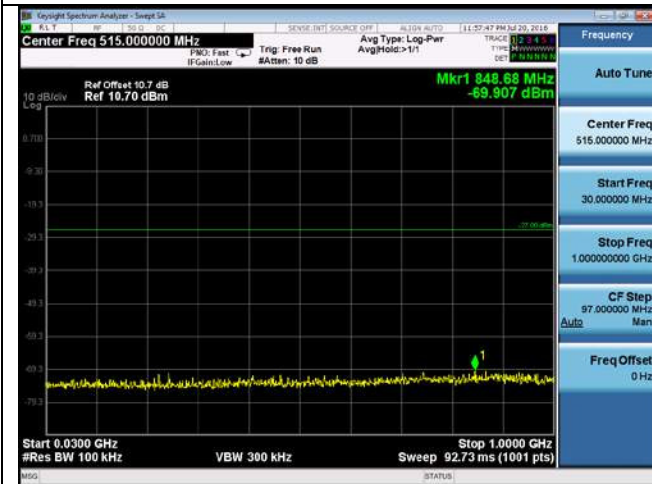
CUE-802.11n-40-5550M-chain4(1GHz-5GHz)



CUE-802.11n-40-5550M-chain 4(5GHz-6GHz)



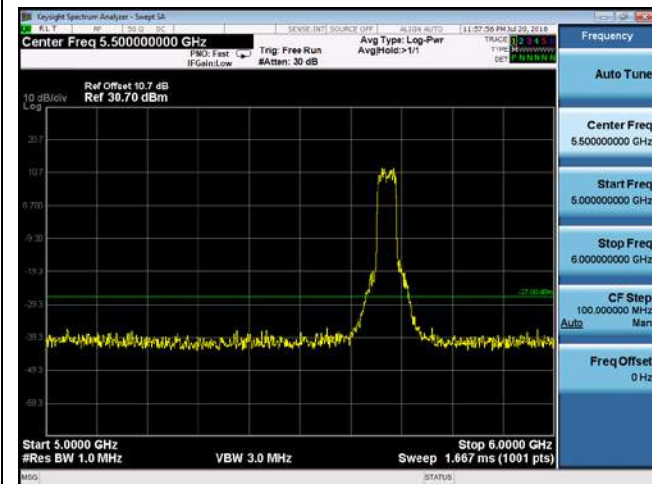
CUE-802.11n-40-5550M-chain 4(6GHz-40GHz)



CUE-802.11n-40-5670M-chain 1(30MHz-1GHz)



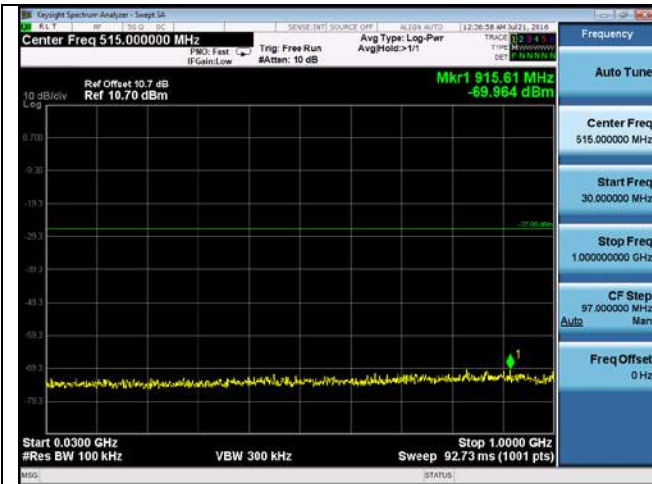
CUE-802.11n-40-5670M-chain 1(1GHz-5GHz)



CUE-802.11n-40-5670M-chain 1(5GHz-6GHz)



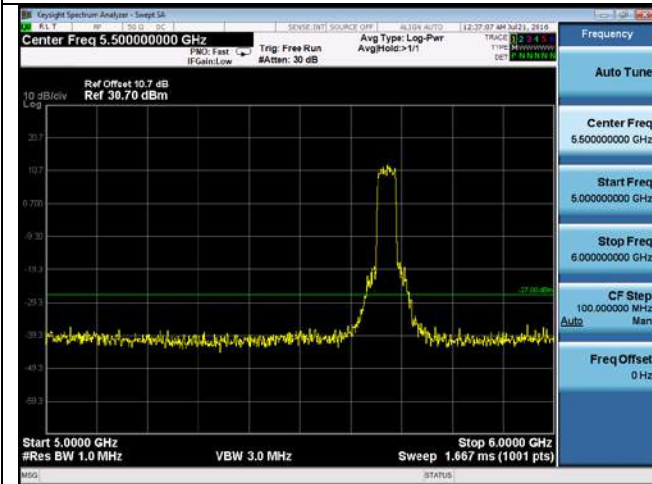
CUE-802.11n-40-5670M-chain 1(6GHz-40GHz)



**CUE-802.11n-40-5670M -chain 2(30MHz-1GHz)**



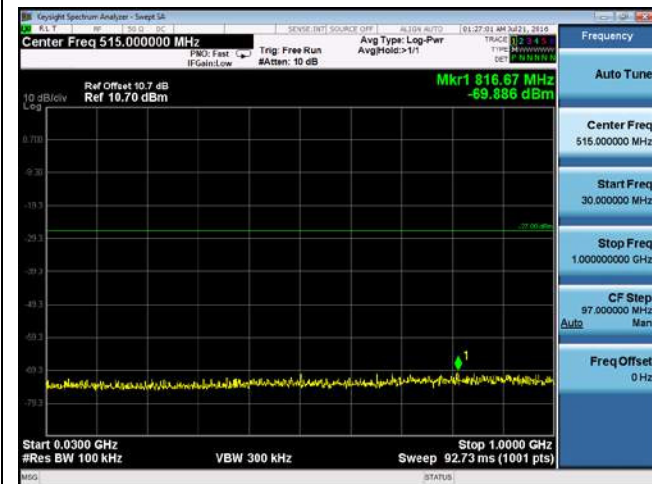
**CUE-802.11n-40-5670M -chain 2(1GHz-5GHz)**



**CUE-802.11n-40-5670M -chain 2(5GHz-6GHz)**



**CUE-802.11n-40-5670M -chain 2(6GHz-40GHz)**

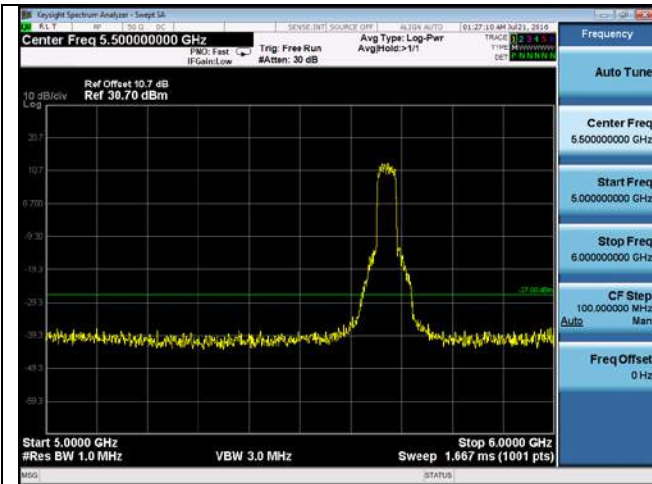


**CUE-802.11n-40-5670M -chain 3(30MHz-1GHz)**



**CUE-802.11n-40-5670M -chain 3(1GHz-5GHz)**

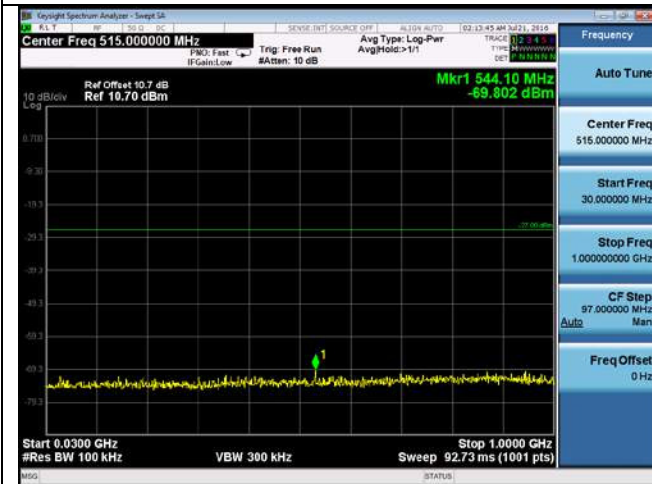




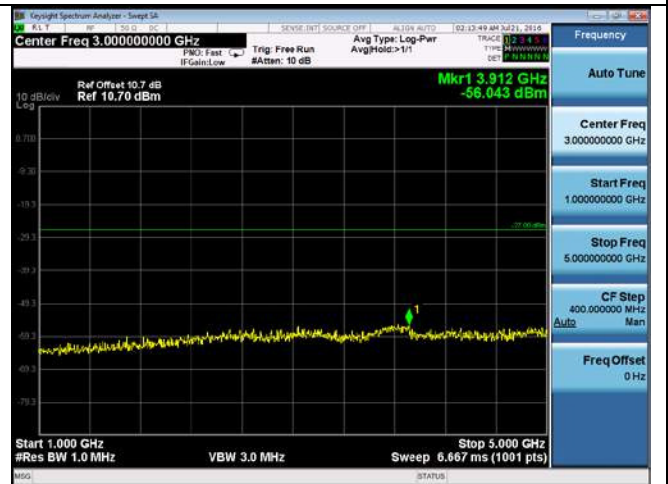
**CUE-802.11n-40-5670M -chain 3(5GHz-6GHz)**



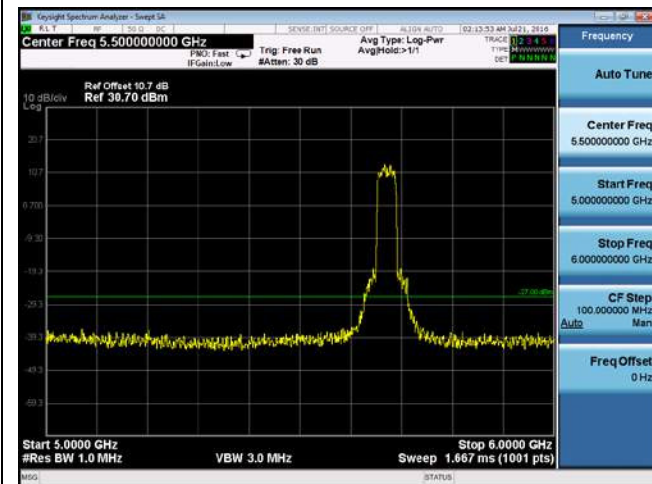
**CUE-802.11n-40-5670M chain 3(6GHz-40GHz)**



**CUE-802.11n-40-5670M -chain 4(30MHz-1GHz)**



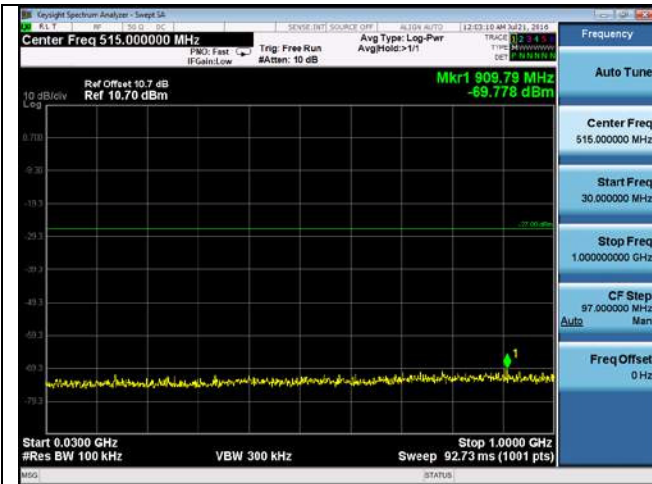
**CUE-802.11n-40-5670M -chain 4(1GHz-5GHz)**



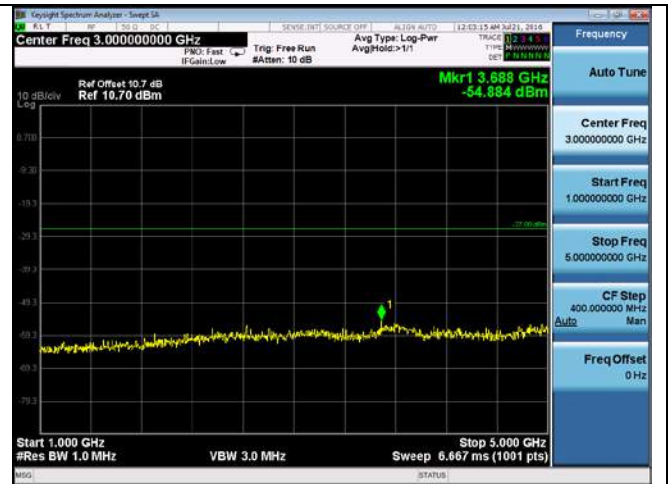
**CUE-802.11n-40-5670M -chain 4(5GHz-6GHz)**



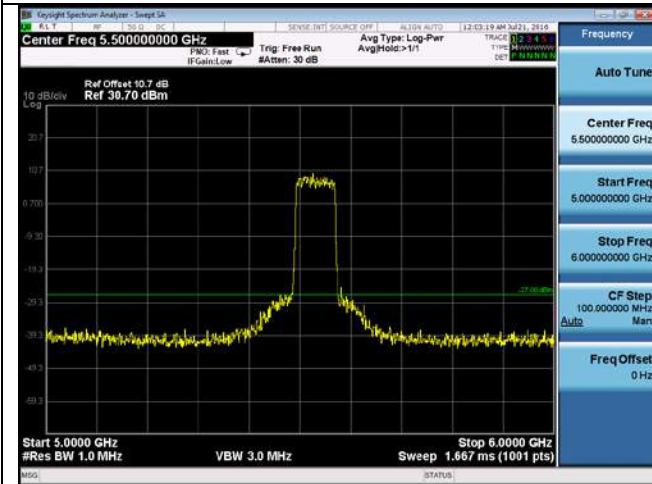
**CUE-802.11n-40-5670M-chain 4 (6GHz-40GHz)**



CUE-802.11ac-80-5530M-chain1(30MHz-1GHz)



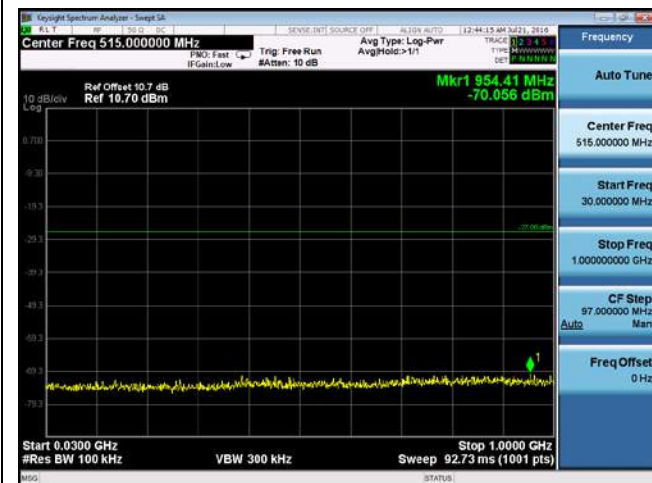
CUE-802.11ac-80-5530M-chain1(1GHz-5GHz)



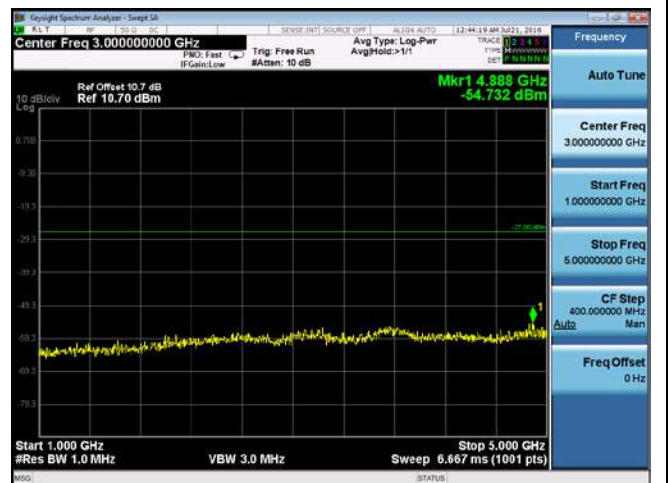
CUE-802.11ac-80-5530M-chain1(5GHz-6GHz)



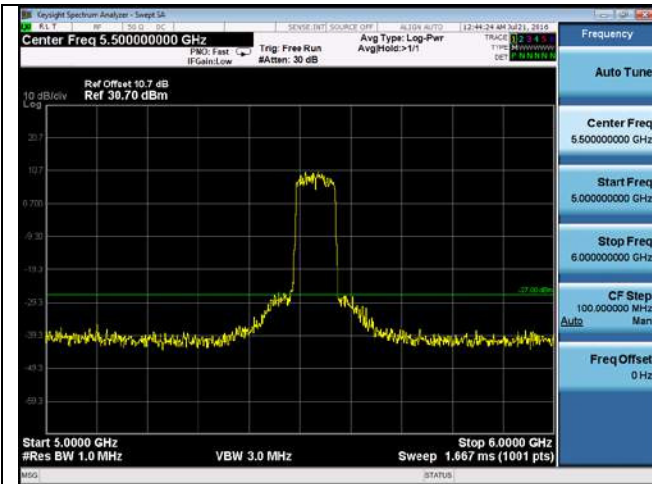
CUE-802.11ac-80-5530M-chain1(6GHz-40GHz)



CUE-802.11ac-80-5530M-chain2(30MHz-1GHz)



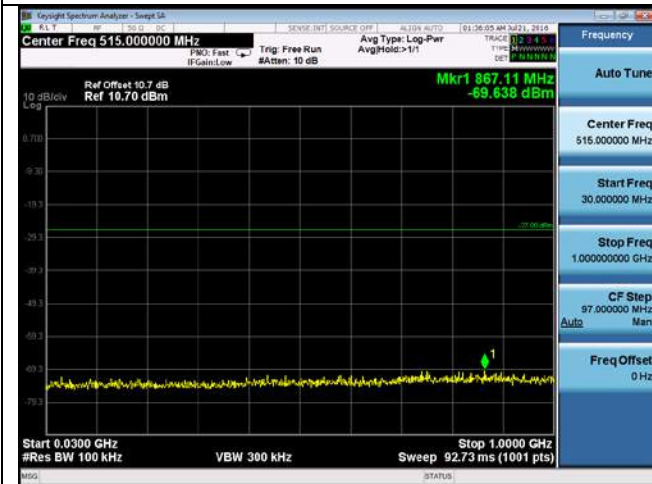
CUE-802.11ac-80-5530M-chain2(1GHz-5GHz)



**CUE-802.11ac-80-5530M -chain2(5GHz-6GHz)**



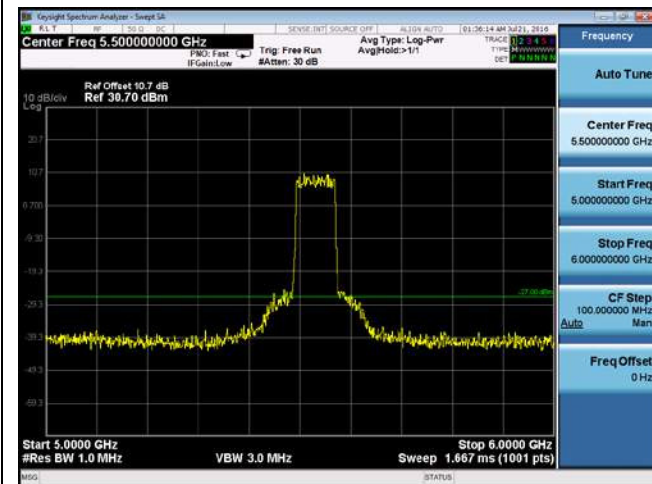
**CUE-802.11ac-80-5530M -chain2(6GHz-40GHz)**



**CUE-802.11ac-80-5530M -chain3(30MHz-1GHz)**



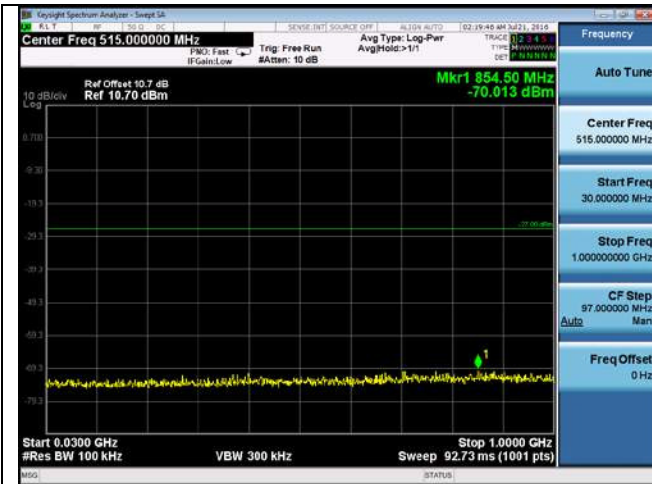
**CUE-802.11ac-80-5530M -chain3(1GHz-5GHz)**



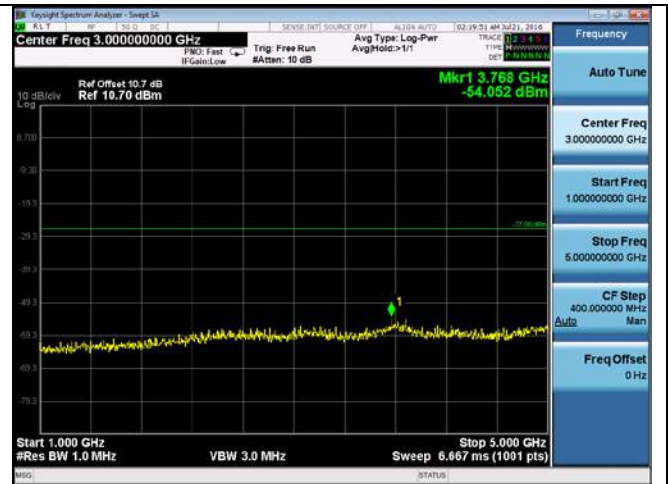
**CUE-802.11ac-80-5530M -chain3(5GHz-6GHz)**



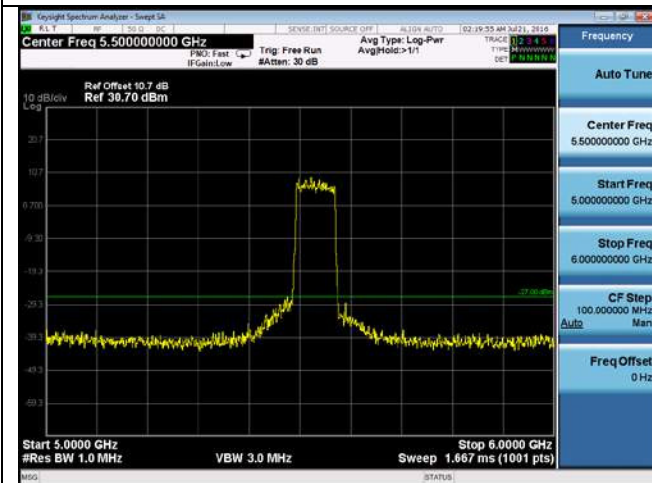
**CUE-802.11ac-80-5530M -chain3(6GHz-40GHz)**



**CUE-802.11ac-80-5530M-chain4(30MHz-1GHz)**



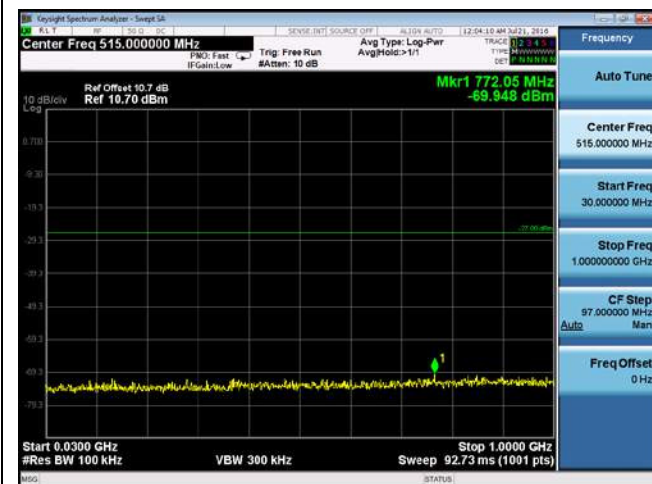
**CUE-802.11ac-80-5530M chain4(1GHz-5GHz)**



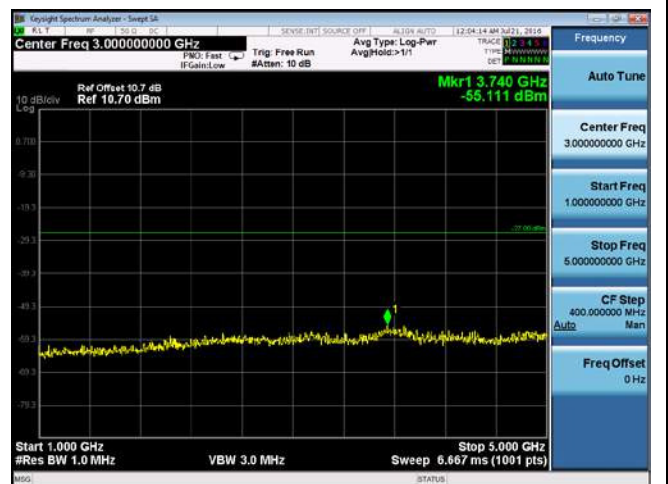
**CUE-802.11ac-80-5530M-chain4(5GHz-6GHz)**



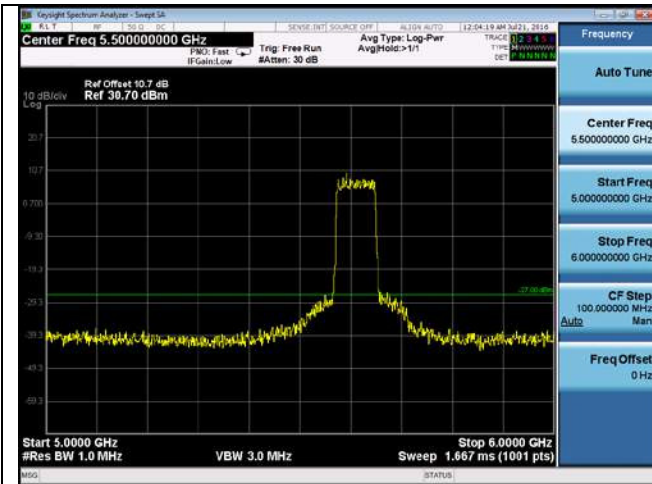
**CUE-802.11ac-80-5530M-chain4(6GHz-40GHz)**



**CUE-802.11ac-80-5610M-chain1(30MHz-1GHz)**



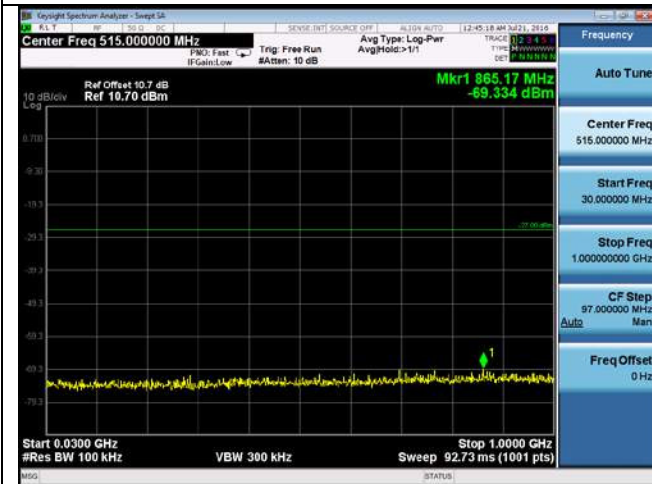
**CUE-802.11ac-80-5610M-chain1(1GHz-5GHz)**



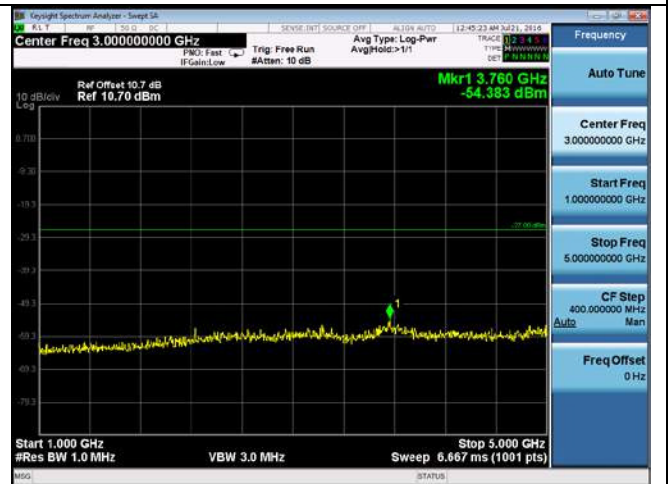
CUE-802.11ac-80-5610M-chain1(5GHz-6GHz)



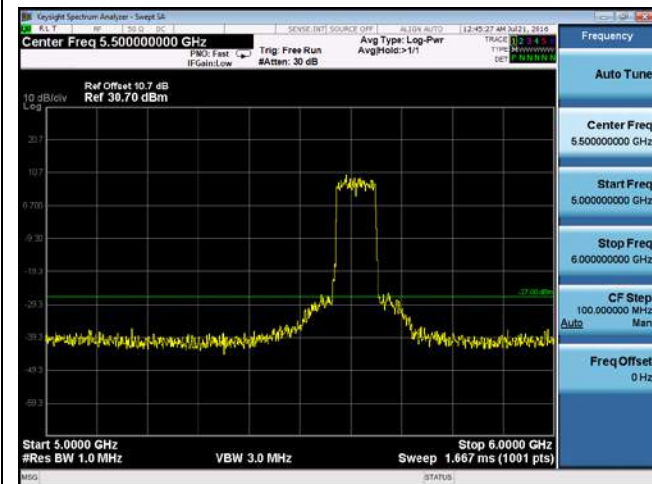
CUE-802.11ac-80-5610M-chain1(6GHz-40GHz)



CUE-802.11ac-80-5610M-chain2(30MHz-1GHz)



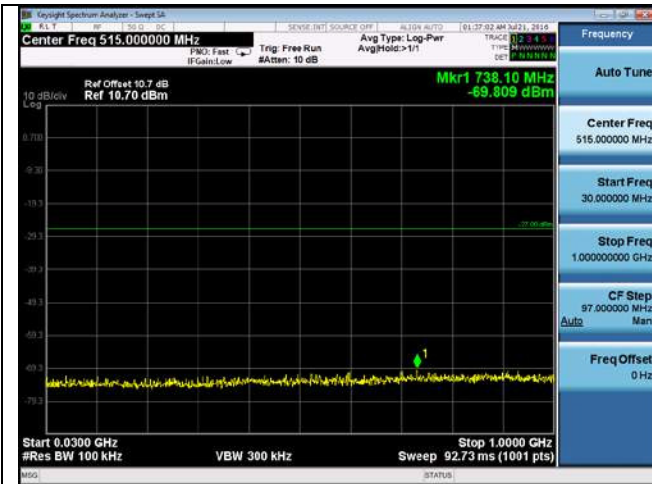
CUE-802.11ac-80-5610M-chain2(1GHz-5GHz)



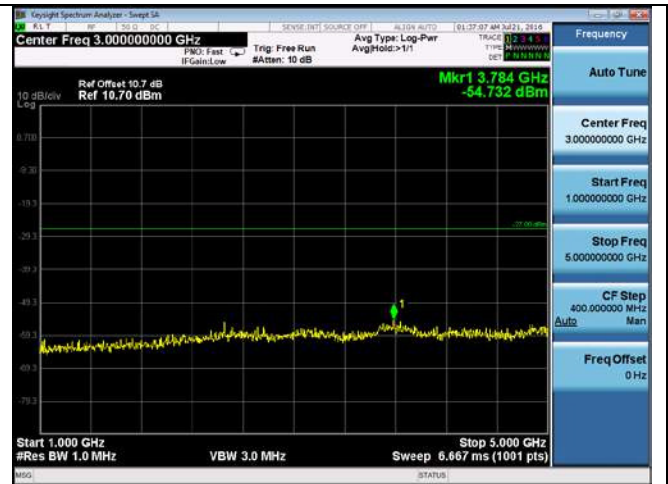
CUE-802.11ac-80-5610M-chain2(5GHz-6GHz)



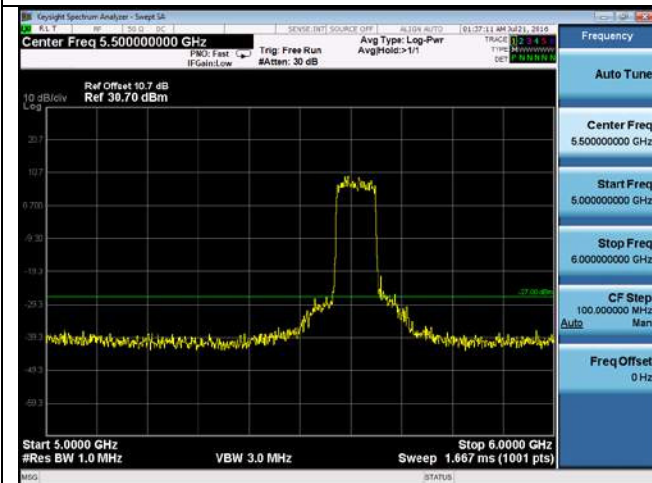
CUE-802.11ac-80-5610M-chain2(6GHz-40GHz)



CUE-802.11ac-80-5610M-chain3(30MHz-1GHz)



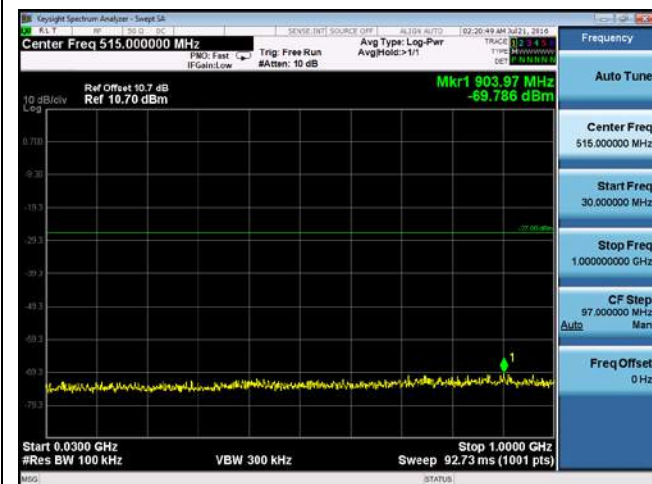
CUE-802.11ac-80-5610M-chain3(1GHz-5GHz)



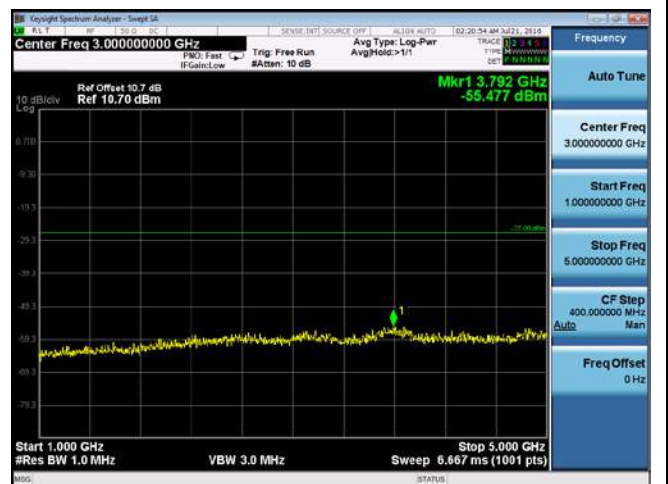
CUE-802.11ac-80-5610M-chain3(5GHz-6GHz)



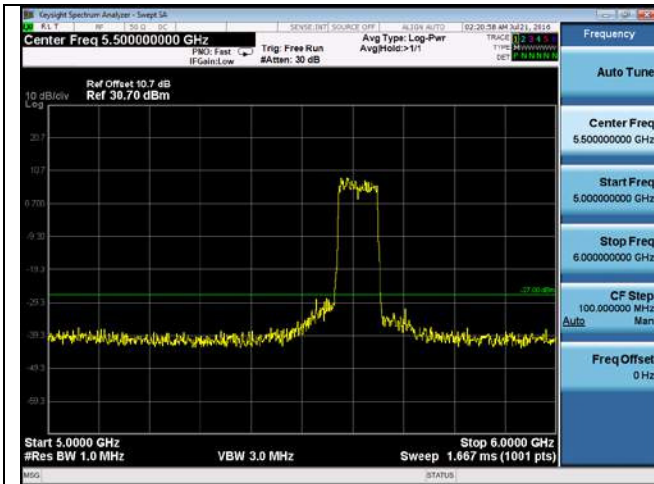
CUE-802.11ac-80-5610M-chain3(6GHz-40GHz)



CUE-802.11ac-80-5610M-chain4(30MHz-1GHz)



CUE-802.11ac-80-5610M-chain4(1GHz-5GHz)

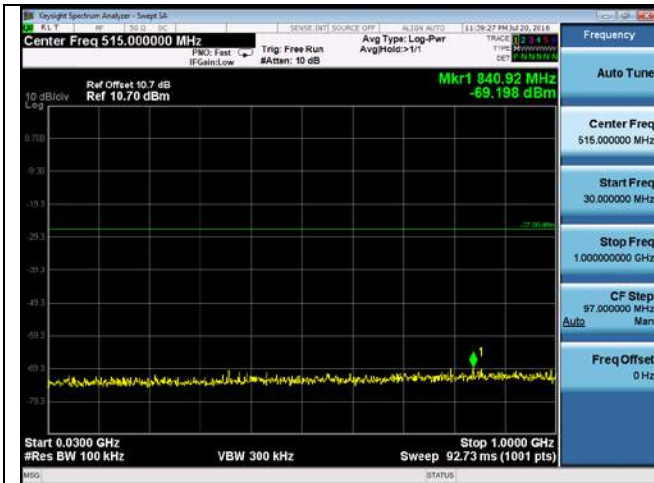


CUE-802.11ac-80-5610M chain 4(5GHz-6GHz)



CUE-802.11ac-80-5610M -chain 4(6GHz-40GHz)

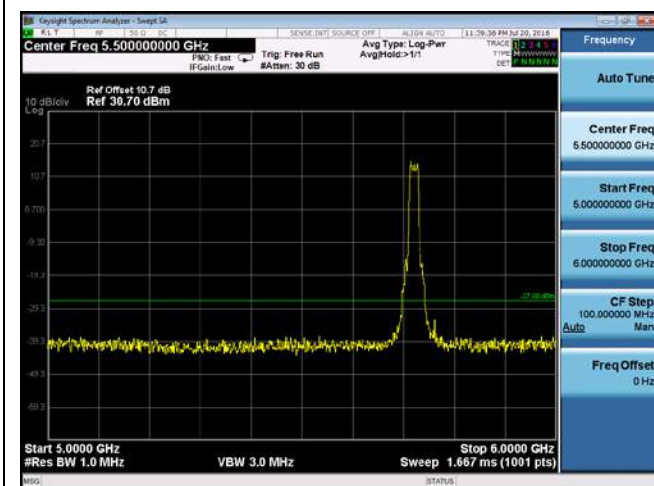
Conducted Unwanted Emission Test Result for CROSS Channels



CUE-802.11a-5720M -chain1(30MHz-1GHz)



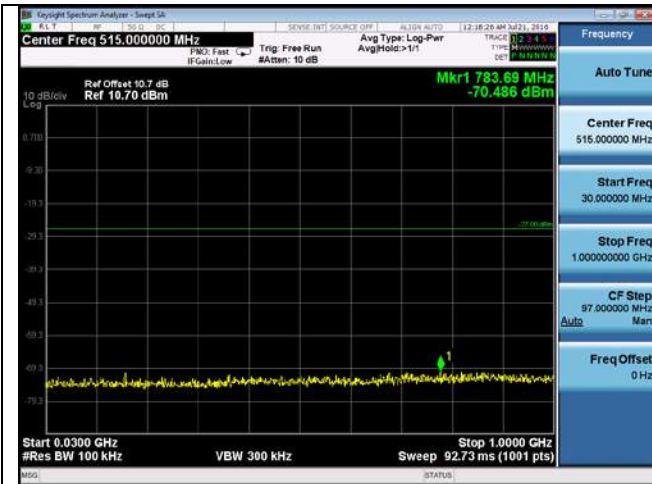
CUE-802.11a-5720M -chain1(1GHz-5GHz)



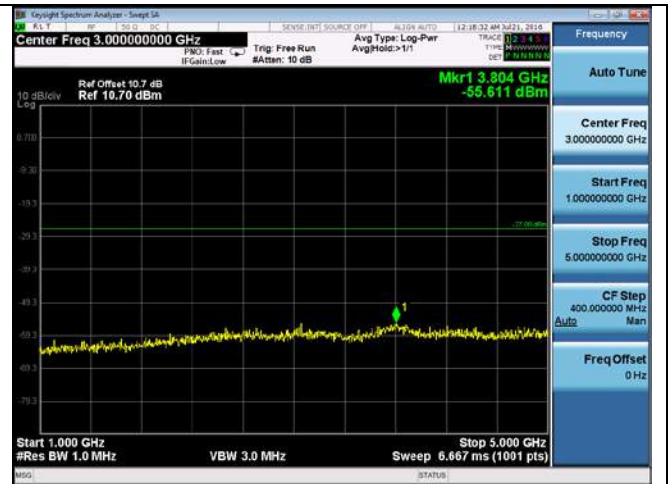
CUE-802.11a-5720M -chain1(5GHz-6GHz)



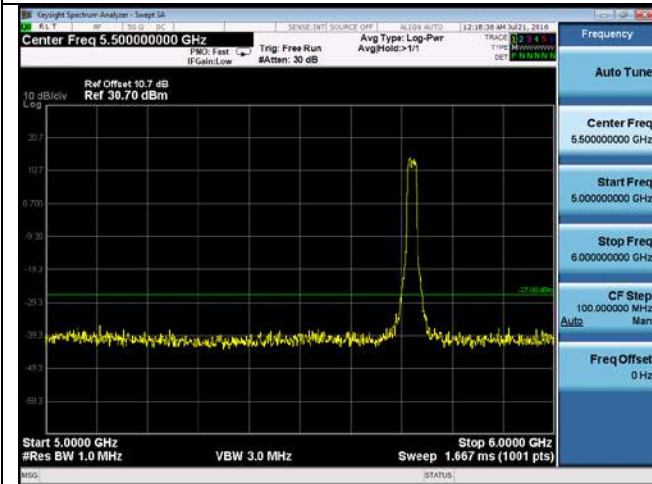
CUE-802.11a-5720M -chain1(6GHz-40GHz)



CUE-802.11a-5720M -chain2(30MHz-1GHz)



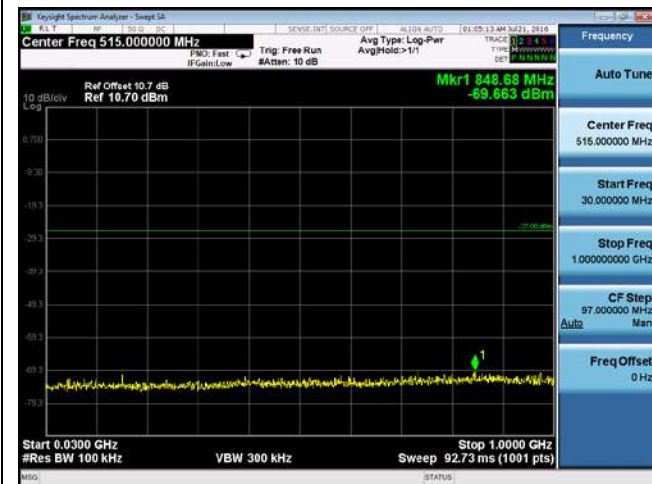
CUE-802.11a-5720M -chain2 (1GHz-5GHz)



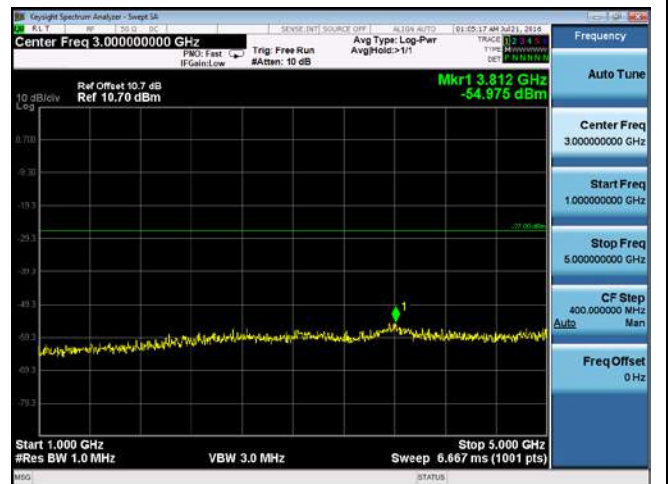
CUE-802.11a-5720M -chain2 (5GHz-6GHz)



CUE-802.11a-5720M -chain2(6GHz-40GHz)

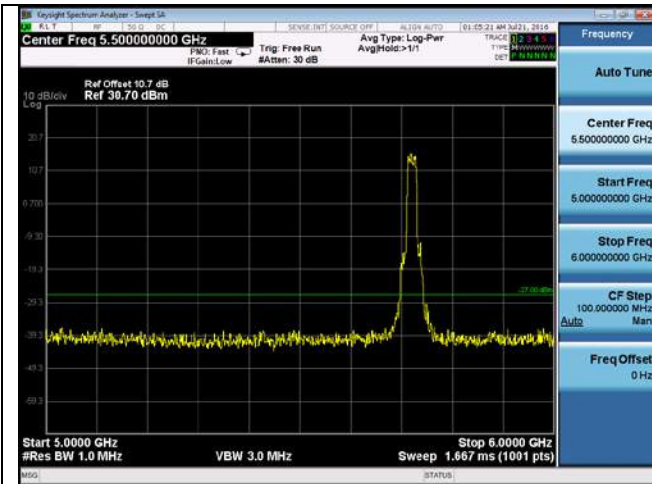


CUE-802.11a-5720M -chain3 (30MHz-1GHz)

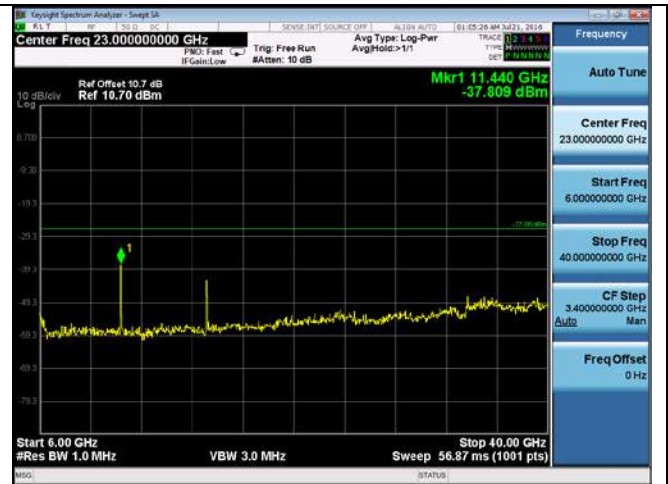


CUE-802.11a-5720M -chain3 (1GHz-5GHz)

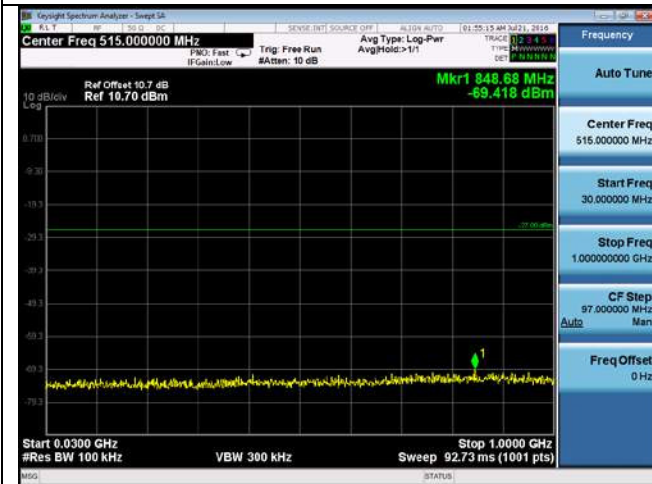




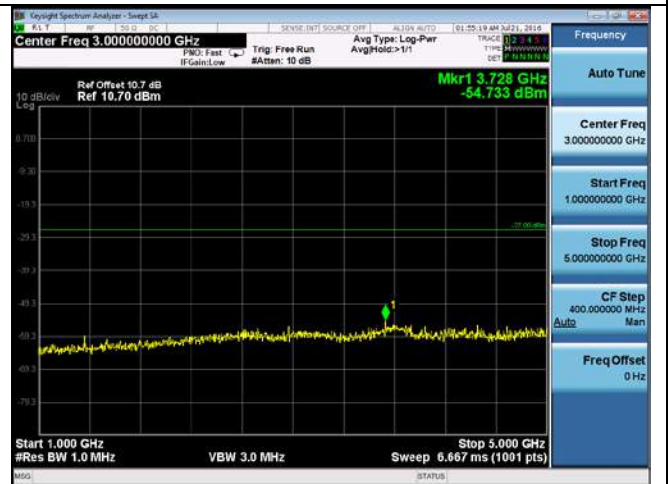
**CUE-802.11a-5720M –chain3 (5GHz-6GHz)**



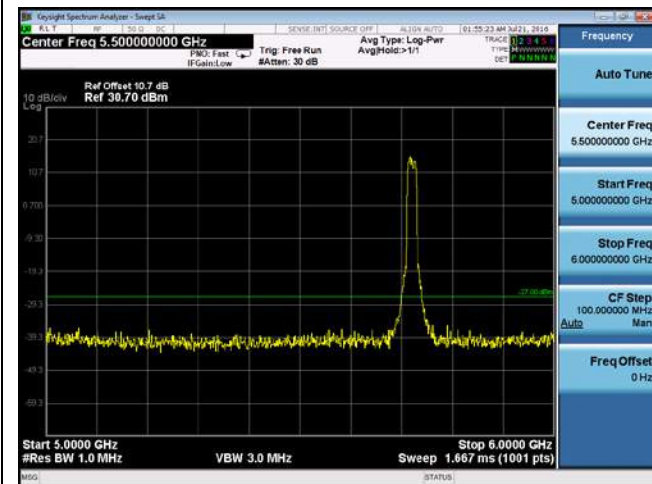
**CUE-802.11a-5720M –chain3 (6GHz-40GHz)**



**CUE-802.11a-5720M –chain4 (30MHz-1GHz)**



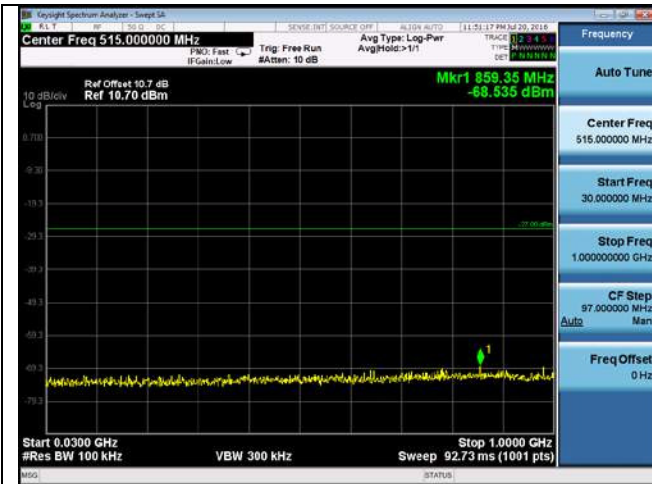
**CUE-802.11a-5720M –chain4 (1GHz-5GHz)**



**CUE-802.11a-5720M –chain4 (5GHz-6GHz)**



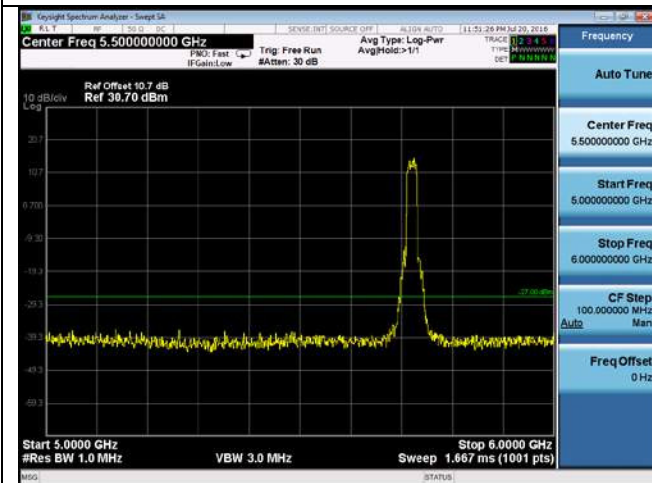
**CUE-802.11a-5720M –chain4 (6GHz-40GHz)**



**CUE-802.11n20-5720M -chain1(30MHz-1GHz)**



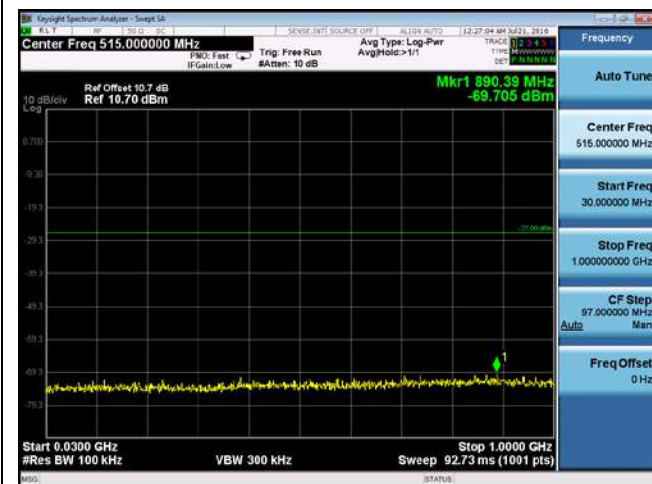
**CUE-802.11n20-5720M -chain1(1GHz-5GHz)**



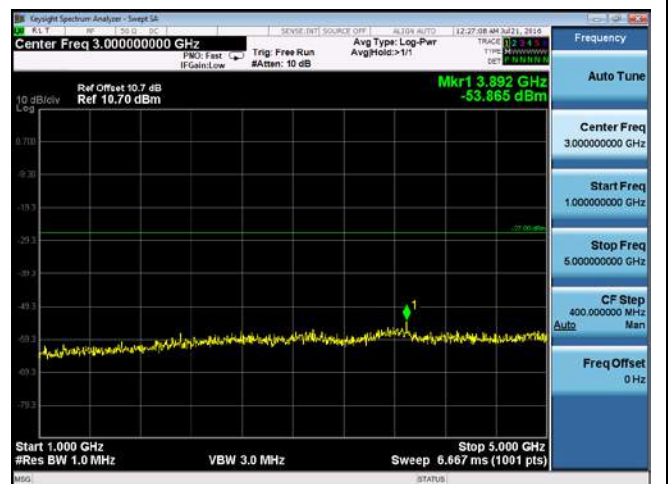
**CUE-802.11n20-5720M -chain1(5GHz-6GHz)**



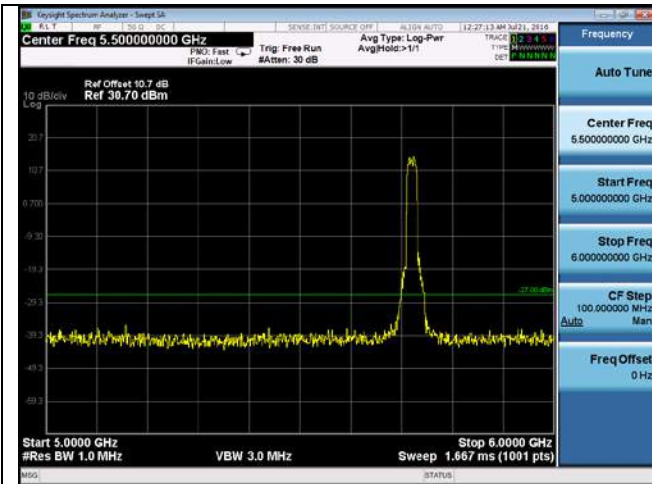
**CUE-802.11n20-5720M -chain1(6GHz-40GHz)**



**CUE-802.11n20-5720M -chain2(30MHz-1GHz)**



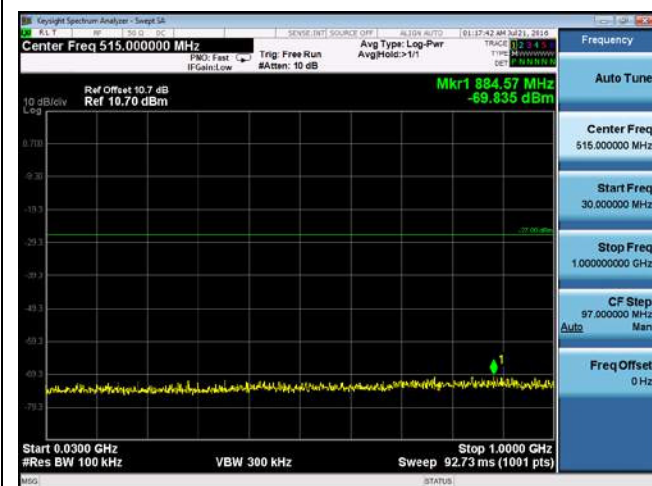
**CUE-802.11n20-5720M -chain2(1GHz-5GHz)**



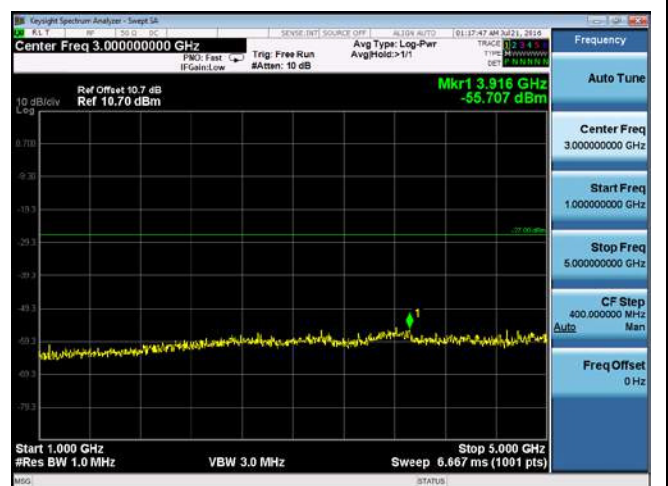
**CUE-802.11n20-5720M -chain2 (5GHz-6GHz)**



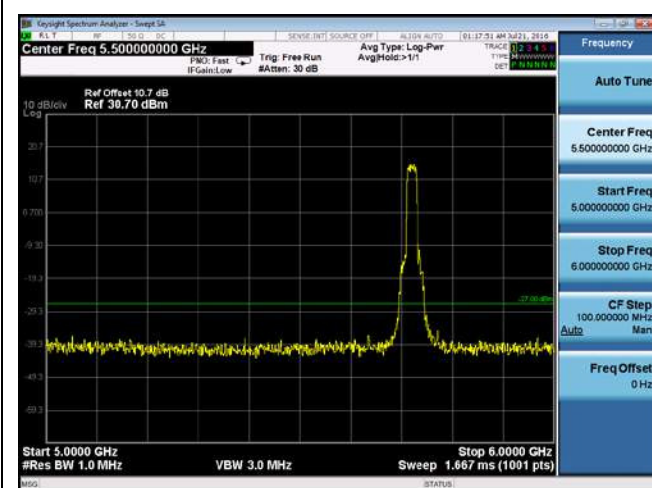
**CUE-802.11n20-5720M -chain2 (6GHz-40GHz)**



**CUE-802.11n20-5720M -chain3(30MHz-1GHz)**



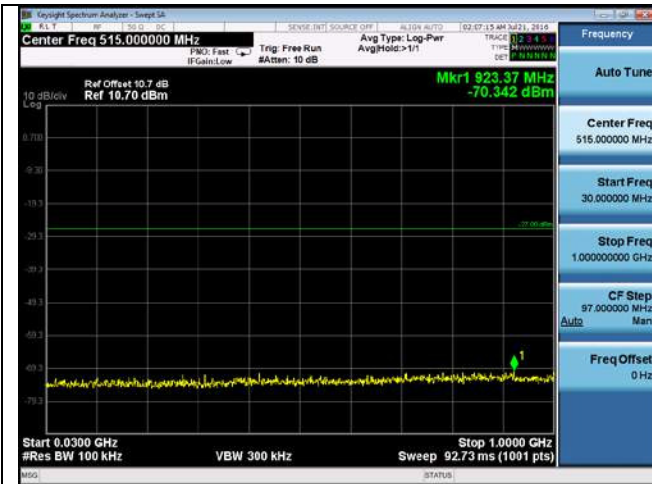
**CUE-802.11n20-5720M -chain3(1GHz-5GHz)**



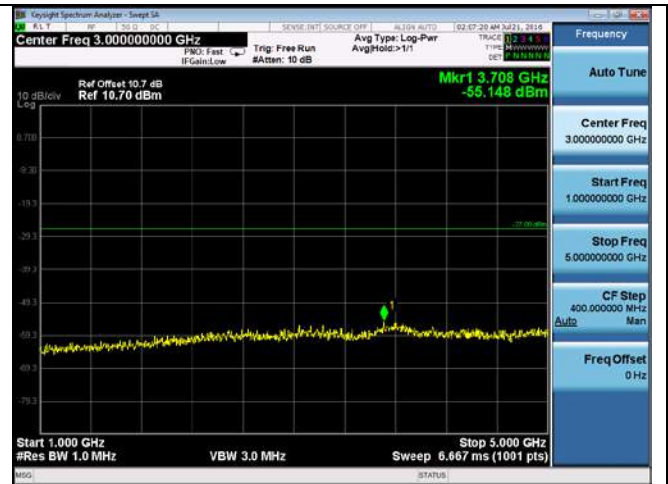
**CUE-802.11n20-5720M -chain3 (5GHz-6GHz)**



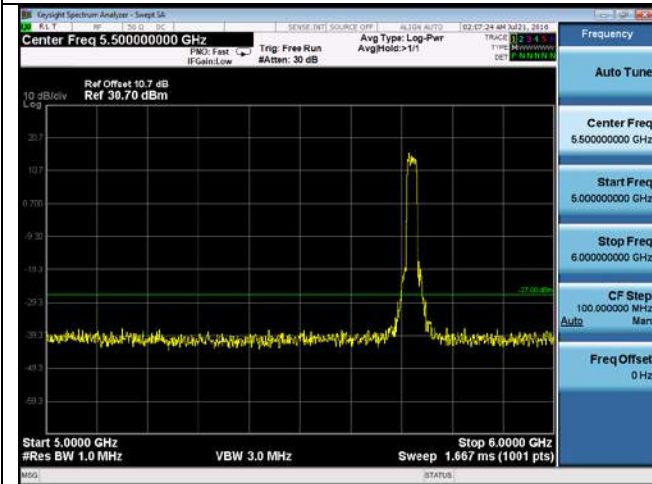
**CUE-802.11n20-5720M -chain3 (6GHz-40GHz)**



**CUE-802.11n20-5720M -chain4(30MHz-1GHz)**



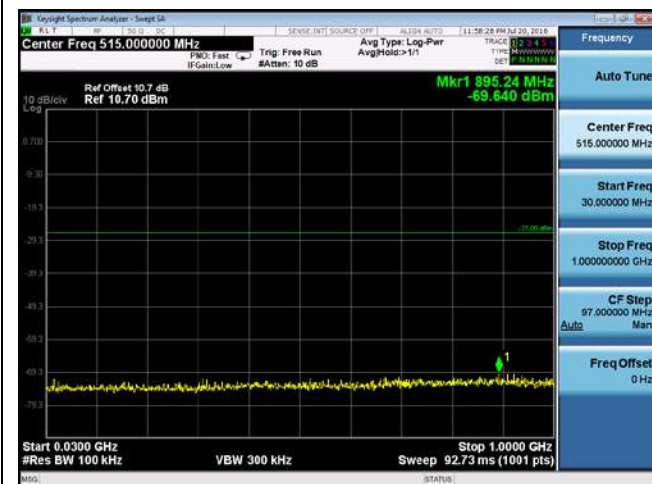
**CUE-802.11n20-5720M -chain4 (1GHz-5GHz)**



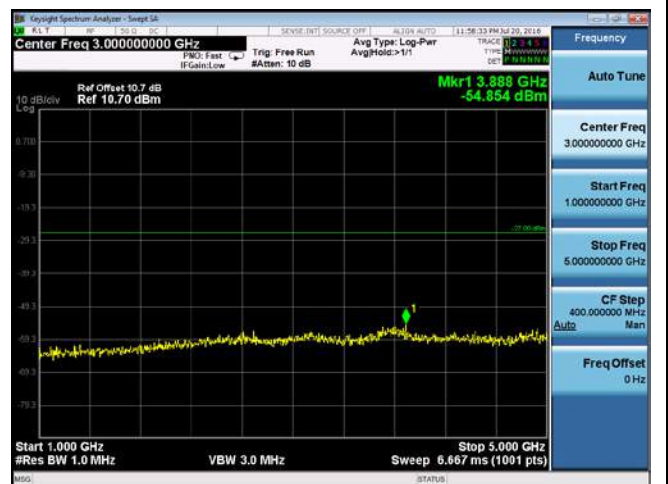
**CUE-802.11n20-5720M -chain4 (5GHz-6GHz)**



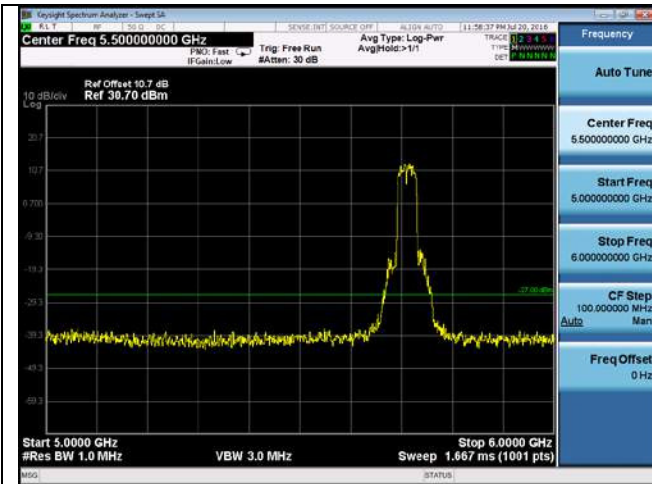
**CUE-802.11n20-5720M -chain4 (6GHz-40GHz)**



**CUE-802.11n40-5710M -chain1(30MHz-1GHz)**



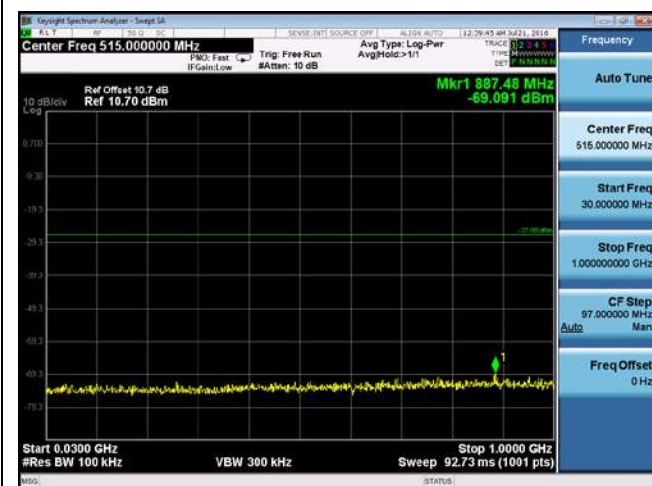
**CUE-802.11n40-5710M -chain1(1GHz-5GHz)**



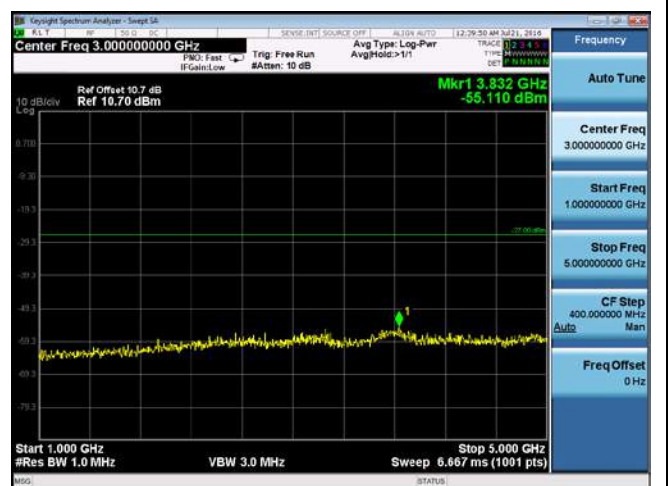
CUE-802.11n40-5710M -chain1 (5GHz-6GHz)



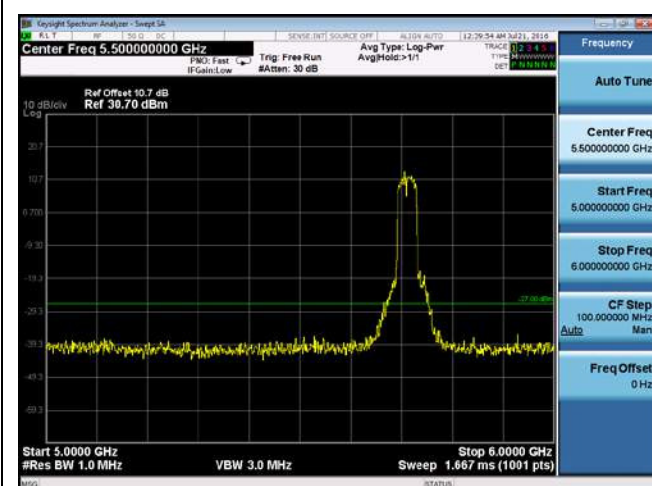
CUE-802.11n40-5710M -chain1 (6GHz-40GHz)



CUE-802.11n40-5710M -chain2(30MHz-1GHz)



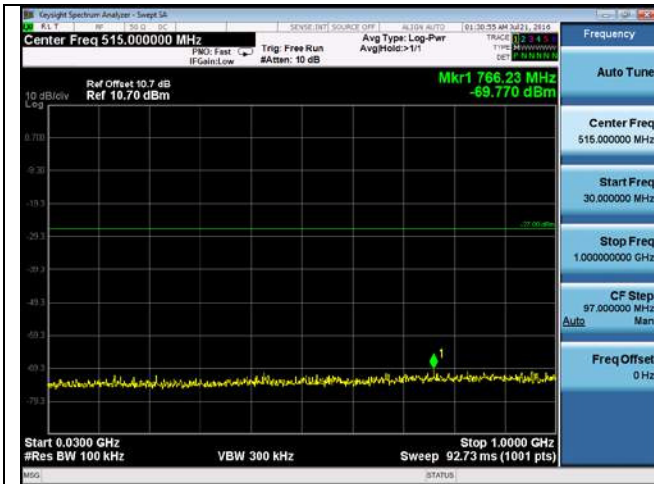
CUE-802.11n40-5710M -chain2 (1GHz-5GHz)



CUE-802.11n40-5710M -chain2 (5GHz-6GHz)



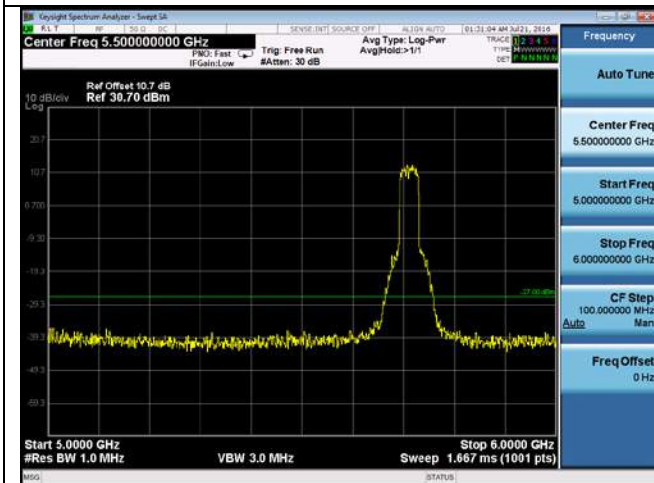
CUE-802.11n40-5710M -chain2 (6GHz-40GHz)



**CUE-802.11n40-5710M -chain3(30MHz-1GHz)**



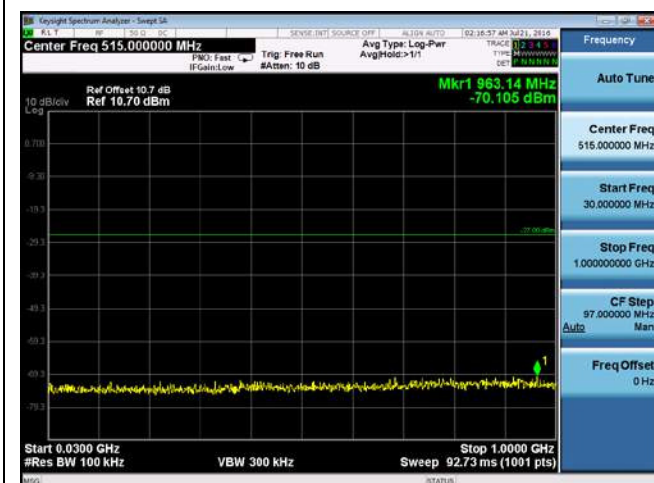
**CUE-802.11n40-5710M -chain3 (1GHz-5GHz)**



**CUE-802.11n40-5710M -chain3 (5GHz-6GHz)**



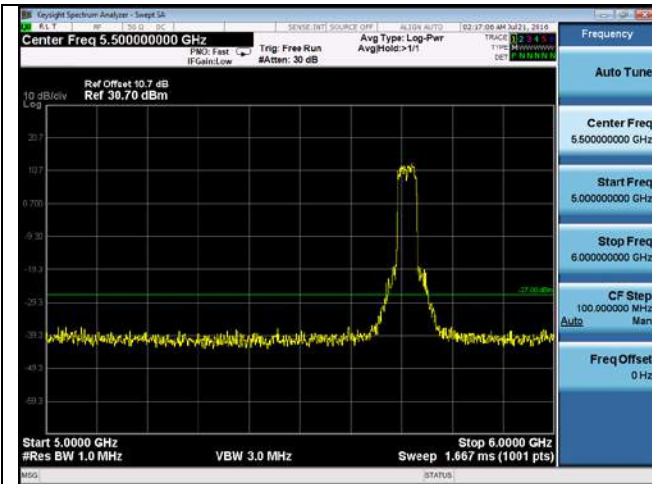
**CUE-802.11n40-5710M -chain3 (6GHz-40GHz)**



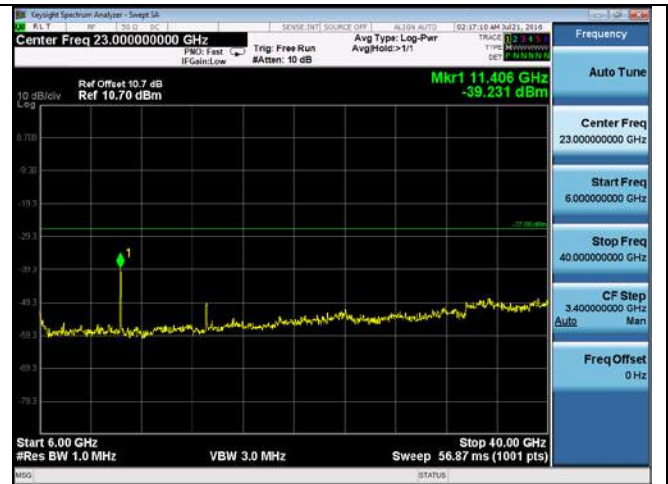
**CUE-802.11n40-5710M -chain4(30MHz-1GHz)**



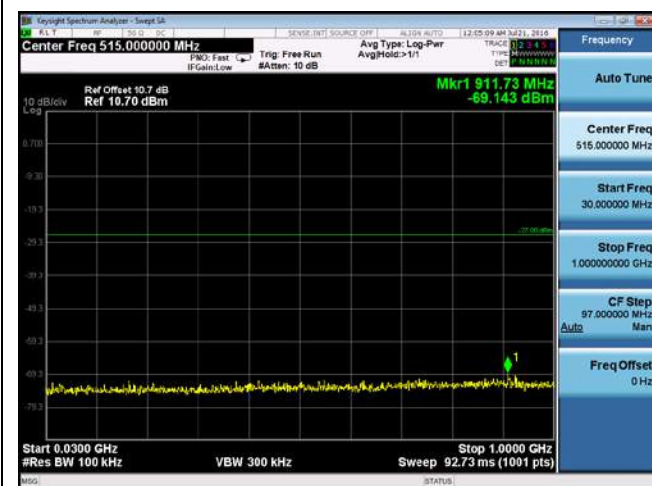
**CUE-802.11n40-5710M -chain4(1GHz-5GHz)**



**CUE-802.11n40-5710M -chain4 (5GHz-6GHz)**



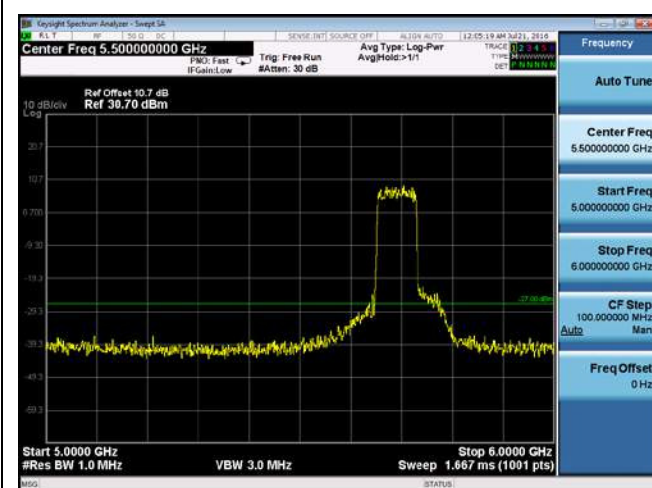
**CUE-802.11n40-5710M -chain4 (6GHz-40GHz)**



**CUE-802.11ac80-5690M -chain1(30MHz-1GHz)**



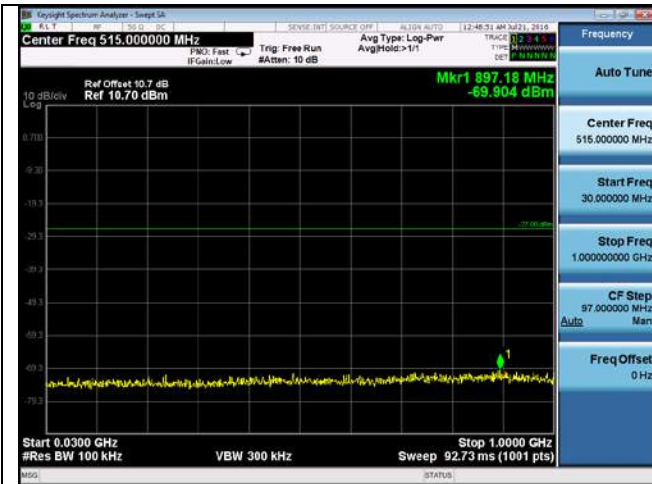
**CUE-802.11ac80-5690M -chain1 (1GHz-5GHz)**



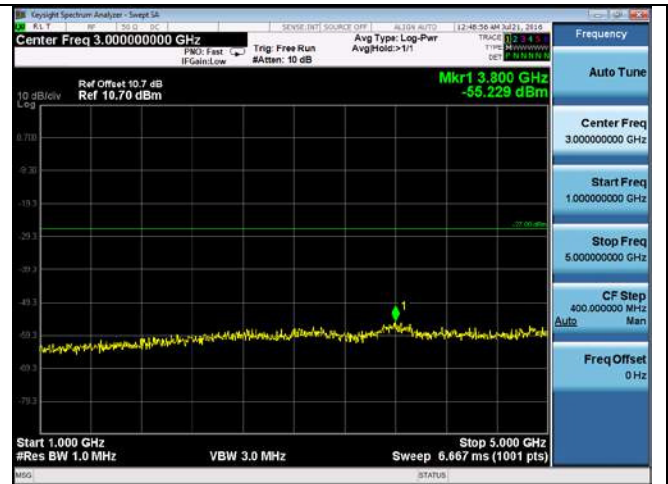
**CUE-802.11ac80-5690M -chain1 (5GHz-6GHz)**



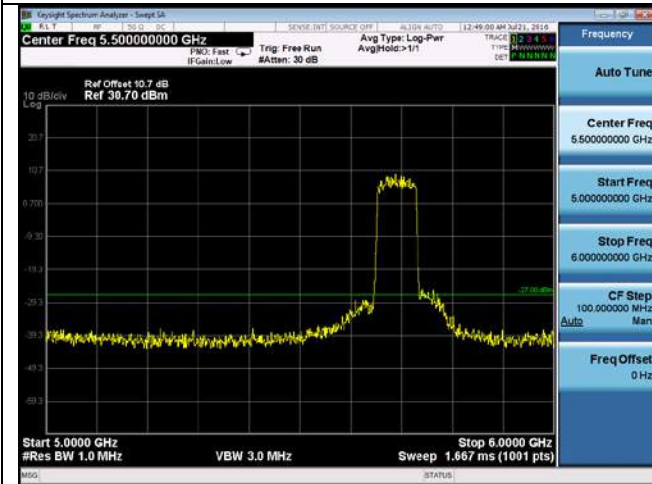
**CUE-802.11ac80-5690M -chain1 (6GHz-40GHz)**



**CUE-802.11ac80-5690M -chain2 (30MHz-1GHz)**



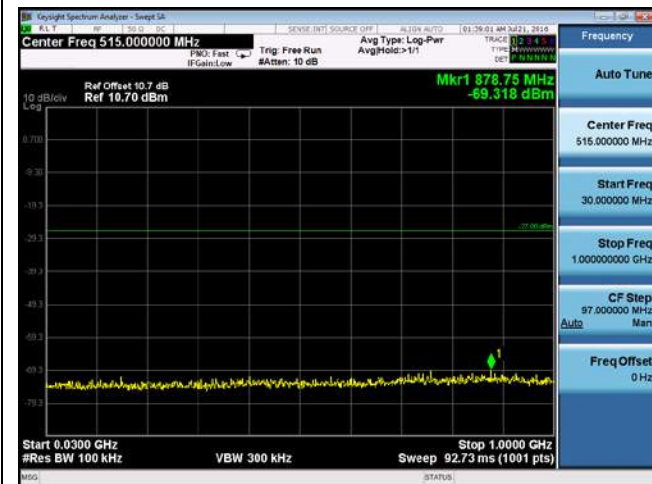
**CUE-802.11ac80-5690M -chain2 (1GHz-5GHz)**



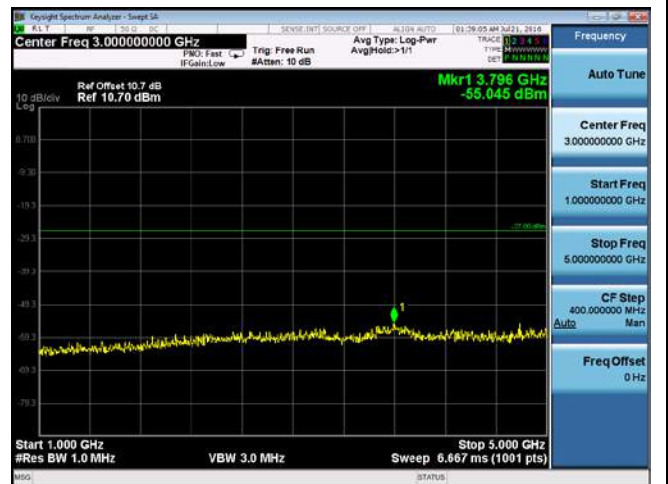
**CUE-802.11ac80-5690M -chain2 (5GHz-6GHz)**



**CUE-802.11ac80-5690M -chain2 (6GHz-40GHz)**

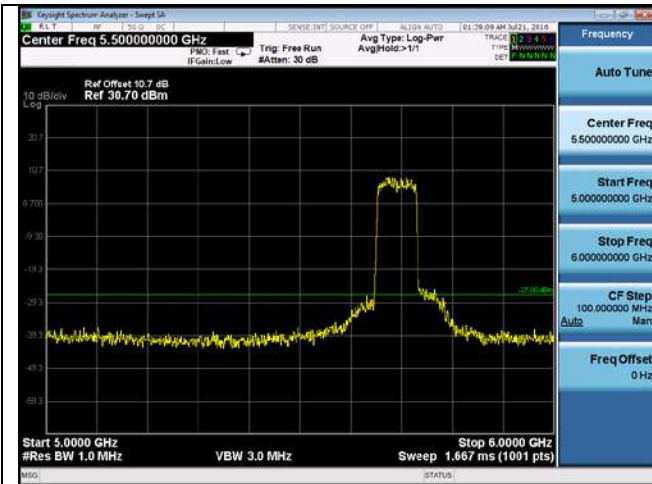


**CUE-802.11ac80-5690M -chain3 (30MHz-1GHz)**



**CUE-802.11ac80-5690M -chain3 (1GHz-5GHz)**

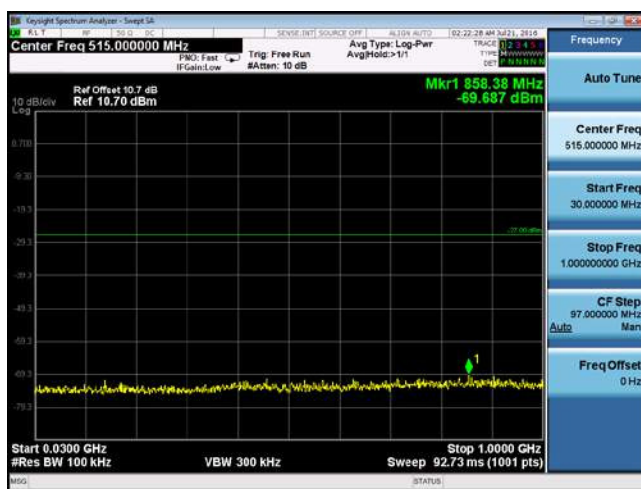




**CUE-802.11ac80-5690M -chain3 (5GHz-6GHz)**



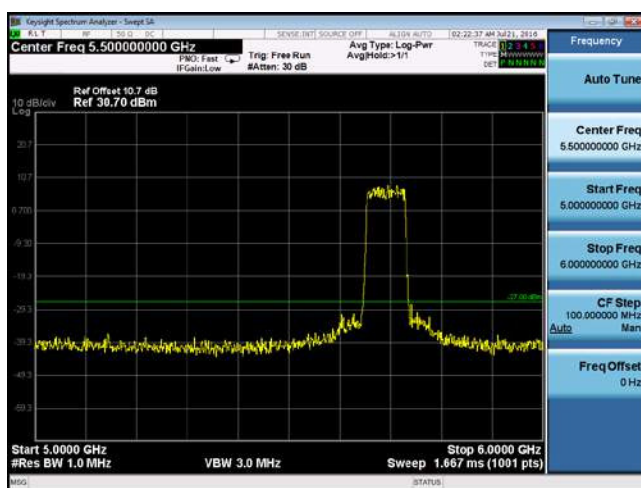
**CUE-802.11ac80-5690M -chain3 (6GHz-40GHz)**



**CUE-802.11ac80-5690M -chain4 (30MHz-1GHz)**



**CUE-802.11ac80-5690M -chain4 (1GHz-5GHz)**



**CUE-802.11ac80-5690M -chain4 (5GHz-6GHz)**



**CUE-802.11ac80-5690M -chain4 (6GHz-40GHz)**

### 10.7 Radiated Spurious Emissions below 1GHz

**Requirement(s):**

Spec	Requirement	Applicable										
47CFR§ 15.407(b) 15.209 (a)	<p>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</p> <table border="1"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Field Strength (uV/m)</th> </tr> </thead> <tbody> <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> </tbody> </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	<ol style="list-style-type: none"> <li>The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>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: <ol style="list-style-type: none"> <li>Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.</li> <li>The EUT was then rotated to the direction that gave the maximum emission.</li> <li>Finally, the antenna height was adjusted to the height that gave the maximum emission.</li> </ol> </li> <li>A Quasi-peak measurement was then made for that frequency point.</li> <li>Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</li> </ol>											
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											

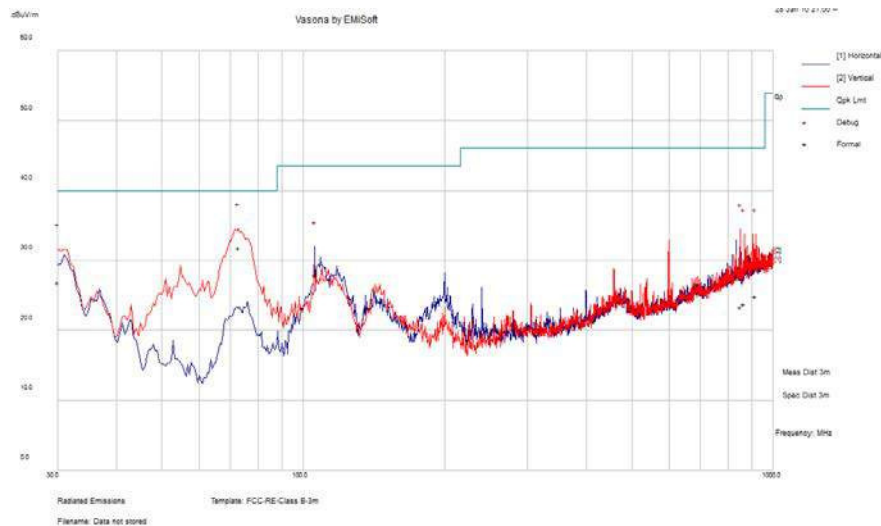
**Test Data**    ☒ Yes (See below)      ☐ N/A

**Test Plot**    ☒ Yes (See below)      ☐ N/A

**Test was done by Gary Chou at 10m Chamber.**

### Radiated Emission Test Results (Below 1GHz)

Test specification	Below 1GHz			Result	Pass
Environmental Conditions:	Temp (°C):	25			
	Humidity (%)	45			
	Atmospheric (mbar):	1016			
Mains Power:	120VAC, 60Hz				
Tested by:	Gary Chou				
Test Date:	01/29/2016				
Remarks:	N/A				



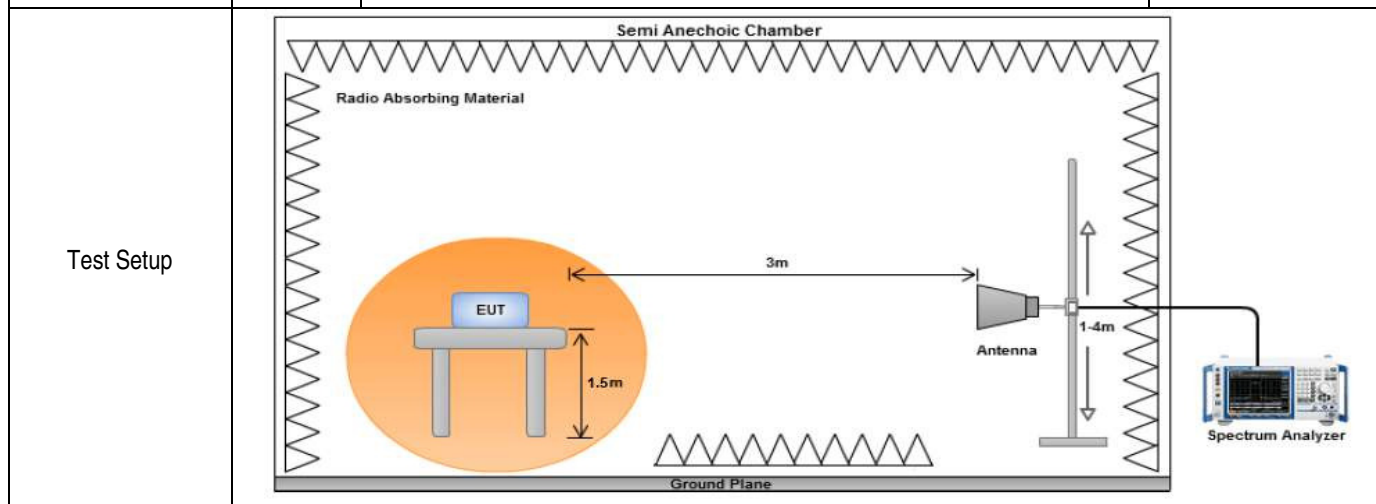
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
72.82	60.71	1.37	-30.22	31.86	Quasi Max	V	101	231	40	-8.14	Pass
30.00	40.48	0.81	-14.38	26.91	Quasi Max	V	101	86	40	-13.09	Pass
105.69	53.06	1.7	-26.86	27.9	Quasi Max	H	284	349	43.52	-15.62	Pass
851.39	34.97	5.18	-16.77	23.38	Quasi Max	V	147	197	46.02	-22.64	Pass
866.86	35.12	5.19	-16.52	23.79	Quasi Max	V	149	242	46.02	-22.23	Pass
916.44	35.03	5.61	-15.74	24.9	Quasi Max	V	133	286	46.02	-21.12	Pass

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

### 10.8 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.	<input type="checkbox"/>
	(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.	<input checked="" type="checkbox"/>
	(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.	<input checked="" type="checkbox"/>
	(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.	<input type="checkbox"/>
	(5)	Restricted band, emission must also comply with the radiated emission limits specified in 15.209	<input checked="" type="checkbox"/>



Procedure	Requirement
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. An average 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 40GHz. Both horizontal and vertical polarities were investigated. The results show only the worst case.

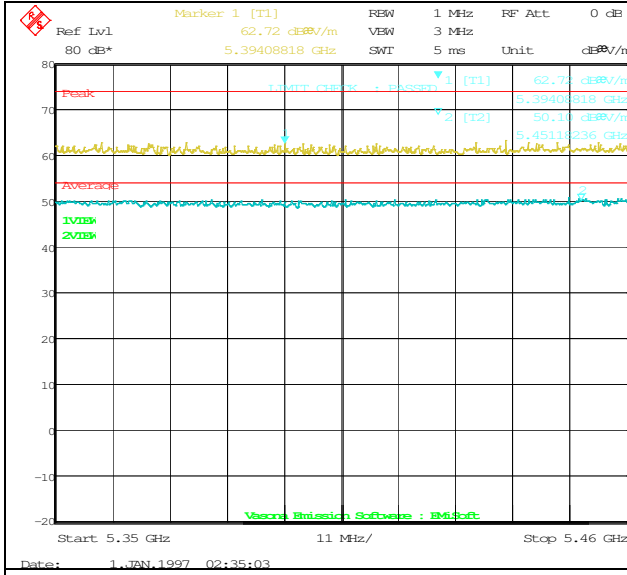
**Result**  Pass  Fail

**Test Data**  Yes (See below)  N/A

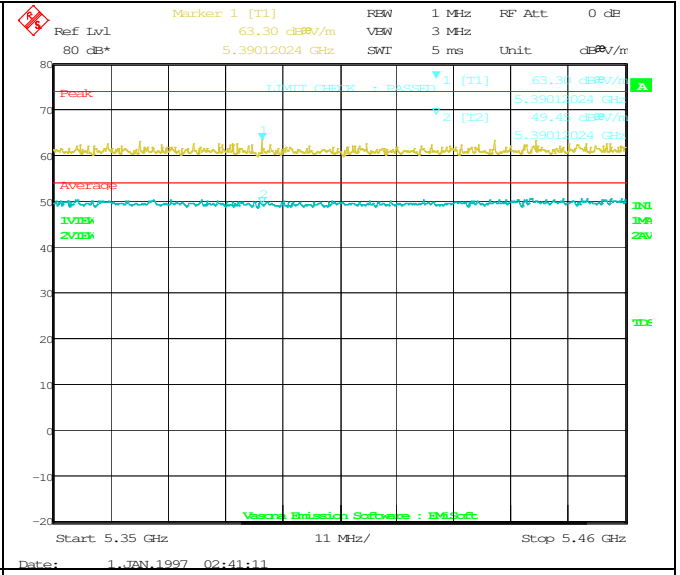
**Test Plot**  Yes (See below)  N/A

**Test was done by Gary Chou at 3m Chamber.**

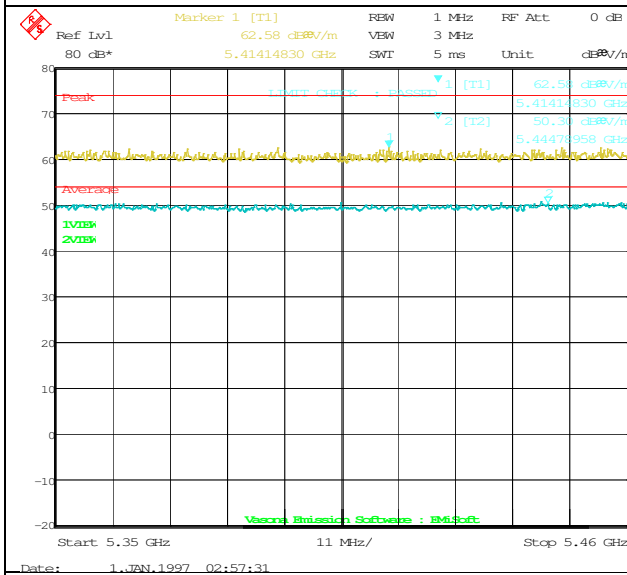
**Radiated Restricted band Measurement Plots:**



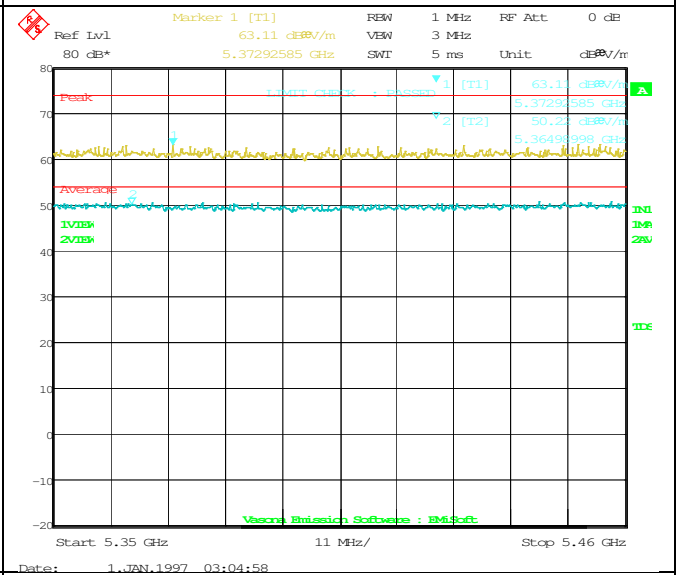
**802.11a 5320M(5350-5460MHz)**



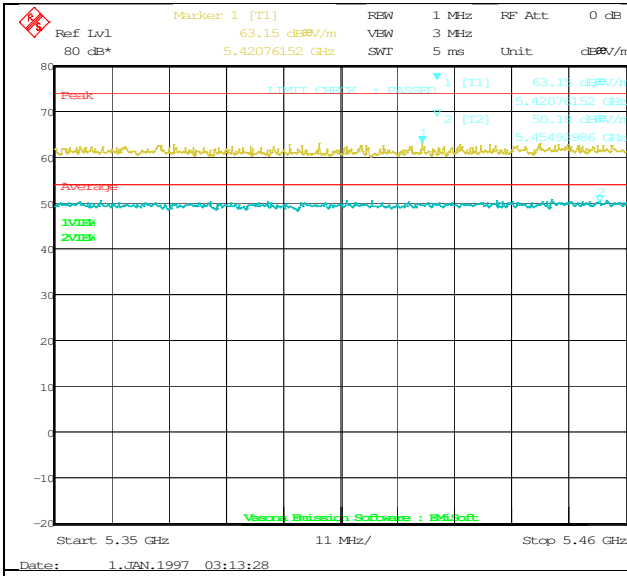
**802.11n-HT20 5320M(5350-5460MHz)**



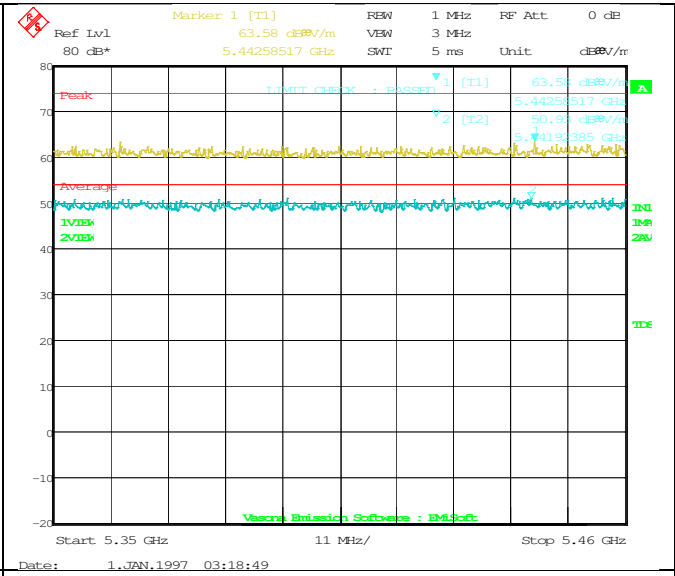
**802.11n-HT40 5310M(5350-5460MHz)**



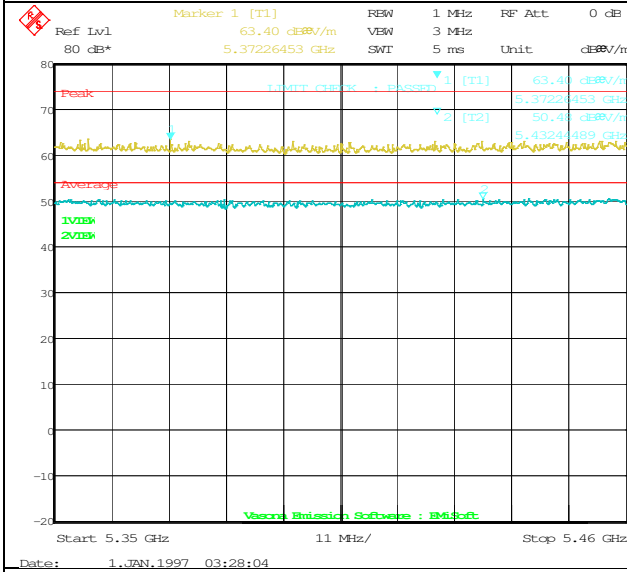
**802.11ac 5290M(5350-5460MHz)**



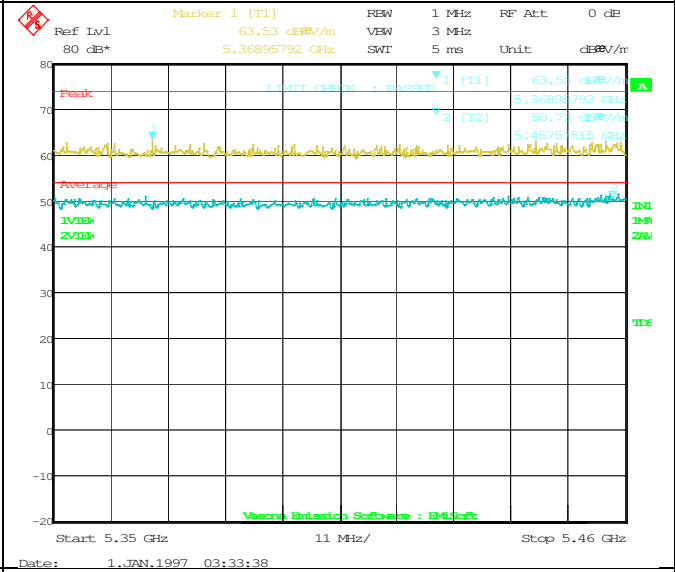
**802.11a 5500M(5350-5460MHz)**



**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
4070.66	37.14	8.68	11.92	57.73	Peak Max	H	179	193	74	-16.27	Pass
10604.04	38.26	11.7	8.46	58.42	Peak Max	V	198	35	74	-15.58	Pass
6289.34	36.24	10.84	10.38	57.45	Peak Max	V	188	49	74	-16.55	Pass
4070.66	25.69	8.68	11.92	46.28	Average Max	H	179	193	54	-7.72	Pass
10604.04	26.57	11.7	8.46	46.74	Average Max	V	198	35	54	-7.27	Pass
6289.34	24.48	10.84	10.38	45.69	Average Max	V	188	49	54	-8.31	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
4081.20	37.57	8.71	11.87	58.14	Peak Max	H	193	60	74	-15.86	Pass
6257.46	36.06	10.8	10.45	57.31	Peak Max	H	215	155	74	-16.69	Pass
10604.78	37.49	11.7	8.46	57.66	Peak Max	V	222	218	74	-16.34	Pass
4081.20	25.86	8.71	11.87	46.44	Average Max	H	193	60	54	-7.56	Pass
6257.46	24.55	10.8	10.45	45.8	Average Max	H	215	155	54	-8.20	Pass
10604.78	25.44	11.7	8.46	45.61	Average Max	V	222	218	54	-8.39	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
4070.63	38.84	8.68	11.92	59.44	Peak Max	H	129	349	74	-14.56	Pass
6098.92	35.98	10.6	10.83	57.41	Peak Max	V	134	101	74	-16.59	Pass
10729.94	36.33	12.11	8.39	56.84	Peak Max	V	246	326	74	-17.16	Pass
4070.63	25.73	8.68	11.92	46.32	Average Max	H	129	349	54	-7.68	Pass
6098.92	24.81	10.6	10.83	46.24	Average Max	V	134	101	54	-7.76	Pass
10729.94	24.43	12.11	8.39	44.94	Average Max	V	246	326	54	-9.06	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
4188.53	37.91	8.97	11.41	58.29	Peak Max	H	238	96	74	-15.71	Pass
6343.27	36.06	10.9	10.25	57.21	Peak Max	H	211	359	74	-16.79	Pass
10636.27	37.31	11.81	8.45	57.56	Peak Max	V	202	175	74	-16.44	Pass
4188.53	25.88	8.97	11.41	46.26	Average Max	H	238	96	54	-7.74	Pass
6343.27	24.32	10.9	10.25	45.47	Average Max	H	211	359	54	-8.53	Pass
10636.27	25.54	11.81	8.45	45.8	Average Max	V	202	175	54	-8.21	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
4189.37	38.05	8.98	11.4	58.43	Peak Max	H	146	349	74	-15.57	Pass
6069.88	36.04	10.57	10.9	57.51	Peak Max	V	166	217	74	-16.49	Pass
10562.35	39.31	11.56	8.49	59.36	Peak Max	V	158	40	74	-14.64	Pass
4189.37	25.86	8.98	11.4	46.23	Average Max	H	146	349	54	-7.77	Pass
6069.88	24.85	10.57	10.9	46.31	Average Max	V	166	217	54	-7.69	Pass
10562.35	27.38	11.56	8.49	47.44	Average Max	V	158	40	54	-6.56	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
4251.96	37.76	9.13	11.14	58.02	Peak Max	V	119	282	74	-15.98	Pass
6098.31	36.5	10.6	10.83	57.94	Peak Max	V	242	357	74	-16.06	Pass
10561.36	42.4	11.56	8.49	62.45	Peak Max	V	171	41	74	-11.55	Pass
4251.96	25.75	9.13	11.14	46.02	Average Max	V	119	282	54	-7.98	Pass
6098.31	24.85	10.6	10.83	46.29	Average Max	V	242	357	54	-7.71	Pass
<b>10561.36</b>	<b>29.75</b>	<b>11.56</b>	<b>8.49</b>	<b>49.8</b>	<b>Average Max</b>	<b>V</b>	<b>171</b>	<b>41</b>	<b>54</b>	<b>-4.20</b>	<b>Pass*</b>

Pass\*: The margin is within the measurement uncertainty.



**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
4074.66	37.34	8.69	11.9	57.93	Peak Max	V	111	73	74	-16.08	Pass
4128.87	38.14	8.83	11.66	58.63	Peak Max	V	192	329	74	-15.37	Pass
2064.57	40.2	4.34	11.27	55.81	Peak Max	V	191	294	74	-18.19	Pass
4074.66	25.94	8.69	11.9	46.53	Average Max	V	111	73	54	-7.47	Pass
4128.87	25.88	8.83	11.66	46.36	Average Max	V	192	329	54	-7.64	Pass
2064.57	28.64	4.34	11.27	44.25	Average Max	V	191	294	54	-9.76	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
5150.87	36.84	10.14	9.58	56.57	Peak Max	V	246	231	74	-17.43	Pass
2181.05	40.65	4.42	10.91	55.99	Peak Max	V	169	17	74	-18.01	Pass
5416.90	37.64	8.82	9.75	56.2	Peak Max	V	153	243	74	-17.80	Pass
5150.87	24.98	10.14	9.58	44.71	Average Max	V	246	231	54	-9.29	Pass
2181.05	28.18	4.42	10.91	43.51	Average Max	V	169	17	54	-10.49	Pass
5416.90	25.47	8.82	9.75	44.03	Average Max	V	153	243	54	-9.97	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
10729.41	35.87	12.11	8.39	56.37	Peak Max	V	139	317	74	-17.63	Pass
11058.49	35.14	12.88	8.22	56.24	Peak Max	V	214	81	74	-17.76	Pass
2144.30	40.35	4.4	11.02	55.78	Peak Max	V	237	194	74	-18.22	Pass
10729.41	24.4	12.11	8.39	44.9	Average Max	V	139	317	54	-9.10	Pass
11058.49	23.69	12.88	8.22	44.79	Average Max	V	214	81	54	-9.21	Pass
2144.30	28.45	4.4	11.02	43.87	Average Max	V	237	194	54	-10.13	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
4058.30	37.24	8.65	11.97	57.86	Peak Max	V	218	47	74	-16.14	Pass
6130.27	36.75	10.64	10.75	58.15	Peak Max	H	126	325	74	-15.85	Pass
4128.78	38.09	8.83	11.66	58.58	Peak Max	V	171	108	74	-15.42	Pass
4058.30	25.59	8.65	11.97	46.21	Average Max	V	218	47	54	-7.79	Pass
6130.27	25.03	10.64	10.75	46.43	Average Max	H	126	325	54	-7.57	Pass
4128.78	25.86	8.83	11.66	46.35	Average Max	V	171	108	54	-7.65	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
4308.81	37.42	9.26	10.9	57.59	Peak Max	V	161	284	74	-16.41	Pass
6238.63	36.3	10.78	10.49	57.57	Peak Max	V	229	81	74	-16.43	Pass
2029.62	40.12	4.31	11.38	55.81	Peak Max	H	195	91	74	-18.20	Pass
4308.81	25.27	9.26	10.9	45.43	Average Max	V	161	284	54	-8.57	Pass
6238.63	24.68	10.78	10.49	45.96	Average Max	V	229	81	54	-8.04	Pass
2029.62	28.64	4.31	11.38	44.33	Average Max	H	195	91	54	-9.67	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
17841.22	35.47	16.2	10.75	62.41	Peak Max	H	243	0	74	-11.59	Pass
6140.65	37.84	10.66	10.73	59.23	Peak Max	V	246	94	74	-14.77	Pass
1009.73	43.58	3.37	9.66	56.6	Peak Max	V	228	210	74	-17.40	Pass
<b>17841.22</b>	<b>23.41</b>	<b>16.2</b>	<b>10.75</b>	<b>50.36</b>	<b>Average Max</b>	<b>H</b>	<b>243</b>	<b>0</b>	<b>54</b>	<b>-3.64</b>	<b>Pass*</b>
6140.65	24.92	10.66	10.73	46.3	Average Max	V	246	94	54	-7.70	Pass
1009.73	31.88	3.37	9.66	44.91	Average Max	V	228	210	54	-9.10	Pass

Pass\*: The margin is within the measurement uncertainty.

**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
4113.85	38.42	8.79	11.73	58.93	Peak Max	V	126	104	74	-15.07	Pass
1999.42	39.8	4.28	11.47	55.56	Peak Max	V	197	125	74	-18.44	Pass
2083.40	40.06	4.36	11.21	55.62	Peak Max	V	235	165	74	-18.38	Pass
4113.85	25.6	8.79	11.73	46.12	Average Max	V	126	104	54	-7.88	Pass
1999.42	28.56	4.28	11.47	44.31	Average Max	V	197	125	54	-9.69	Pass
2083.40	28.73	4.36	11.21	44.3	Average Max	V	235	165	54	-9.71	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
6287.37	36.2	10.84	10.38	57.41	Peak Max	V	145	110	74	-16.59	Pass
10727.77	36.73	12.1	8.4	57.22	Peak Max	V	246	345	74	-16.78	Pass
2036.95	40.45	4.31	11.36	56.12	Peak Max	V	218	236	74	-17.88	Pass
6287.37	24.46	10.84	10.38	45.68	Average Max	V	145	110	54	-8.32	Pass
10727.77	24.37	12.1	8.4	44.87	Average Max	V	246	345	54	-9.14	Pass
2036.95	28.72	4.31	11.36	44.39	Average Max	V	218	236	54	-9.61	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
6205.11	36.8	10.74	10.57	58.11	Peak Max	V	109	227	74	-15.89	Pass
10809.14	35.37	12.36	8.35	56.08	Peak Max	V	227	190	74	-17.92	Pass
11059.70	35.08	12.88	8.22	56.18	Peak Max	V	170	80	74	-17.83	Pass
6205.11	24.6	10.74	10.57	45.92	Average Max	V	109	227	54	-8.09	Pass
10809.14	23.86	12.36	8.35	44.58	Average Max	V	227	190	54	-9.42	Pass
11059.70	23.63	12.88	8.22	44.72	Average Max	V	170	80	54	-9.28	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
4071.89	37.41	8.68	11.91	58.01	Peak Max	H	132	358	74	-16.00	Pass
6079.99	36.4	10.58	10.87	57.86	Peak Max	V	159	4	74	-16.14	Pass
6238.76	36.41	10.78	10.49	57.68	Peak Max	V	114	123	74	-16.32	Pass
4071.89	25.66	8.68	11.91	46.26	Average Max	H	132	358	54	-7.74	Pass
6079.99	24.79	10.58	10.87	46.25	Average Max	V	159	4	54	-7.75	Pass
6238.76	24.64	10.78	10.49	45.91	Average Max	V	114	123	54	-8.09	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
4127.02	37.1	8.82	11.67	57.59	Peak Max	V	107	184	74	-16.41	Pass
1032.49	43.06	3.4	9.63	56.09	Peak Max	H	224	214	74	-17.91	Pass
2009.62	40.38	4.29	11.45	56.12	Peak Max	V	202	117	74	-17.88	Pass
4127.02	25.78	8.82	11.67	46.27	Average Max	V	107	184	54	-7.73	Pass
1032.49	31.58	3.4	9.63	44.6	Average Max	H	224	214	54	-9.40	Pass
2009.62	28.62	4.29	11.45	44.36	Average Max	V	202	117	54	-9.64	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
4239.02	37.16	9.1	11.19	57.45	Peak Max	H	190	70	74	-16.55	Pass
6087.82	36.12	10.59	10.85	57.56	Peak Max	V	141	326	74	-16.44	Pass
10561.46	40.84	11.56	8.49	60.89	Peak Max	V	186	217	74	-13.11	Pass
4239.02	25.77	9.1	11.19	46.06	Average Max	H	190	70	54	-7.94	Pass
6087.82	24.76	10.59	10.85	46.21	Average Max	V	141	326	54	-7.80	Pass
10561.46	28.44	11.56	8.49	48.49	Average Max	V	186	217	54	-5.51	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
1012.28	43.58	3.37	9.66	56.61	Peak Max	V	160	313	74	-17.39	Pass
3969.95	37.28	8.34	12.12	57.74	Peak Max	V	156	242	74	-16.26	Pass
6305.03	36.31	10.86	10.34	57.51	Peak Max	V	108	274	74	-16.49	Pass
1012.28	31.82	3.37	9.66	44.85	Average Max	V	160	313	54	-9.15	Pass
3969.95	25.31	8.34	12.12	45.77	Average Max	V	156	242	54	-8.23	Pass
6305.03	24.46	10.86	10.34	45.65	Average Max	V	108	274	54	-8.35	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
2001.13	40.1	4.28	11.47	55.86	Peak Max	V	133	63	74	-18.14	Pass
3134.89	39.23	5.35	10.11	54.69	Peak Max	V	213	293	74	-19.31	Pass
1932.03	40.11	4.25	10.94	55.3	Peak Max	V	145	53	74	-18.70	Pass
2001.13	28.6	4.28	11.47	44.35	Average Max	V	133	63	54	-9.65	Pass
3134.89	27.91	5.35	10.11	43.37	Average Max	V	213	293	54	-10.63	Pass
1932.03	28.01	4.25	10.94	43.2	Average Max	V	145	53	54	-10.80	Pass

















**Above 1GHz - 40GHz- Collocation testing (2.4GHz WLAN & 5GHz WLAN on the main-board transmitting simultaneously)**







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
4873.06	36.78	14.89	2.46	54.13	Peak Max	V	118	301	74	-19.87	Pass
3134.88	39.23	5.35	10.11	54.69	Peak Max	V	213	293	74	-19.31	Pass
4873.06	23.59	14.89	2.46	40.94	Average Max	V	118	301	54	-13.06	Pass
3134.88	27.91	5.35	10.11	43.37	Average Max	V	213	293	54	-10.63	Pass

## Annex A. TEST INSTRUMENT

Instrument	Model	Manufacturer	Serial #	Cal Date	Cal Cycle	Cal Due	In use
<b>Conducted Emissions</b>							
R & S Receiver	ESIB 40	Rohde & Schwarz	100179	06/08/2016	1 Year	06/08/2017	<input checked="" type="checkbox"/>
CHASE LISN (9k-30MHz)	MN2050B	Chase	1018	08/16/2016	1 Year	08/16/2017	<input checked="" type="checkbox"/>
<b>Radiated Emissions</b>							
R & S Receiver	ESIB 40	Rohde & Schwarz	100179	06/08/2016	1 Year	06/08/2017	<input checked="" type="checkbox"/>
Spectrum Analyzer	N9010A	Keysight	10SL0219	08/02/2016	1 Year	08/02/2017	<input checked="" type="checkbox"/>
Pre-Amplifier (1-26.5GHz)	8449B	Hewlett Packard	3008A00715	03/30/2016	1 Year	03/30/2017	<input checked="" type="checkbox"/>
Preamplifier (100KHz-7GHz)	LPA-6-30	RF Bay, Inc.	11140711	02/10/2016	1 Year	02/10/2017	<input checked="" type="checkbox"/>
ETS-Lingren Loop Antenna	6512	ETS-Lingren	00049120	07/14/2016	1 Year	07/14/2017	<input type="checkbox"/>
Bi-Log antenna (30MHz~2GHz)	JB1	Sunol Sciences	A030702	07/08/2016	1 Year	07/08/2017	<input checked="" type="checkbox"/>
Horn Antenna (1-26.5GHz)	3115	EMCO	10SL0059	08/25/2015	1 Year	08/25/2016	<input checked="" type="checkbox"/>
3 Meters SAC	3M	ETS-Lingren	N/A	06/09/2016	1 Year	06/09/2017	<input checked="" type="checkbox"/>
10 Meters SAC	10M	ETS-Lingren	N/A	07/06/2016	1 Year	07/06/2017	<input checked="" type="checkbox"/>
<b>RF Conducted Measurement</b>							
Spectrum Analyzer	N9010A	Keysight	10SL0219	08/02/2016	1 Year	08/02/2016	<input checked="" type="checkbox"/>
RF Cable	FXC-0B1F0B-24	Applied Interconnect	NSN	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Attenuator - 10dB (SMA)	50HF-010 SMA	JFW Industries, Inc	803	N/A	N/A	N/A	<input checked="" type="checkbox"/>
USB RF Power Sensor	7002-006	ETS-Lingren	10SL0190	09/03/2015	1 Year	09/03/2016	<input type="checkbox"/>

## 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		<b>Radio &amp; Telecommunications Terminal Equipment:</b> EN45001 – EN ISO/IEC 17025
		<b>Electromagnetic Compatibility:</b> 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		<b>(Phase II)</b> OFCA Foreign Certification Body for Radio and Telecom
		<b>(Phase I)</b> Conformity Assessment Body for Radio and Telecom
Industry Canada CAB		<b>Radio:</b> Scope A – All Radio Standard Specification in Category I
		<b>Telecom:</b> CS-03 Part I, II, V, VI, VII, VIII

Japan Recognized Certification Body Designation		<p><b>Radio:</b> A1. Terminal equipment for purpose of calling</p> <p><b>Telecom:</b> B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law</p>
Korea CAB Accreditation		<p><b>EMI:</b> KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI</p> <p><b>EMS:</b> 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</p> <p><b>Radio:</b> 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</p> <p><b>Telecom:</b> 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</p>
Taiwan NCC CAB Recognition		LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08
Taiwan BSMI CAB Recognition		CNS 13438
Japan VCCI		<p>R-3083: Radiation 3 meter site</p> <p>C-3421: Main Ports Conducted Interference Measurement</p> <p>T-1597: Telecommunication Ports Conducted Interference Measurement</p>
Australia CAB Recognition		<p><b>EMC:</b> AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4</p> <p><b>Radio communications:</b> 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</p> <p><b>Telecommunications:</b> 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</p>
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