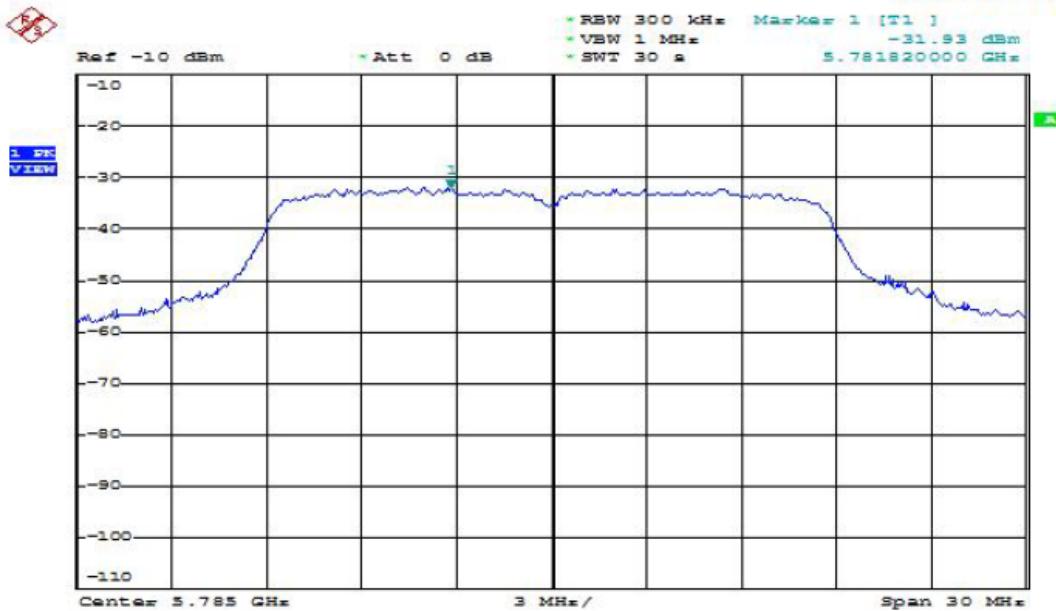


802.11n HT20

Channel: 157

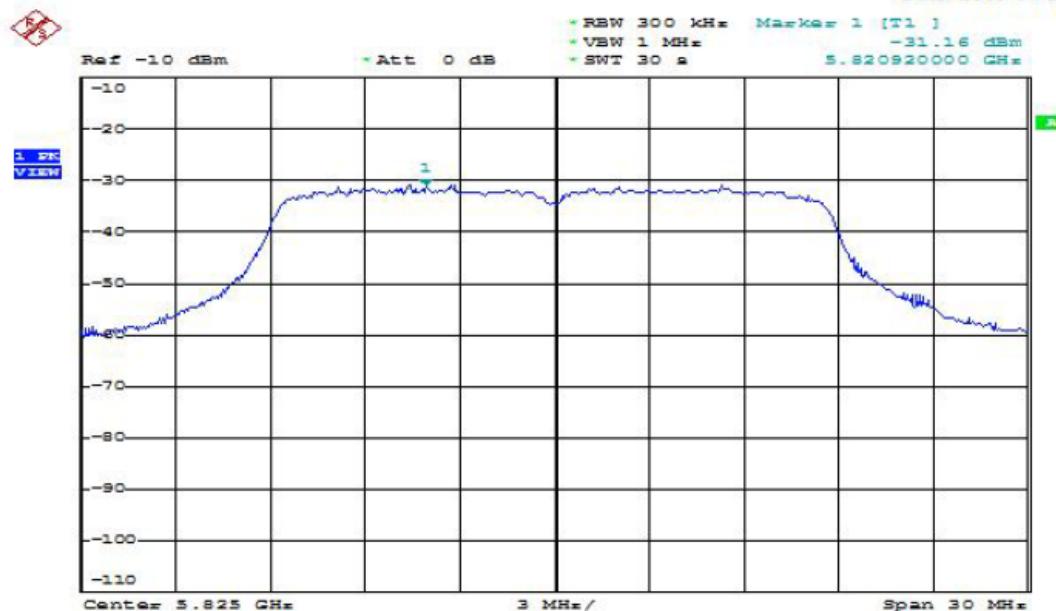
Date: 2019-04-23



802.11n HT20

Channel: 165

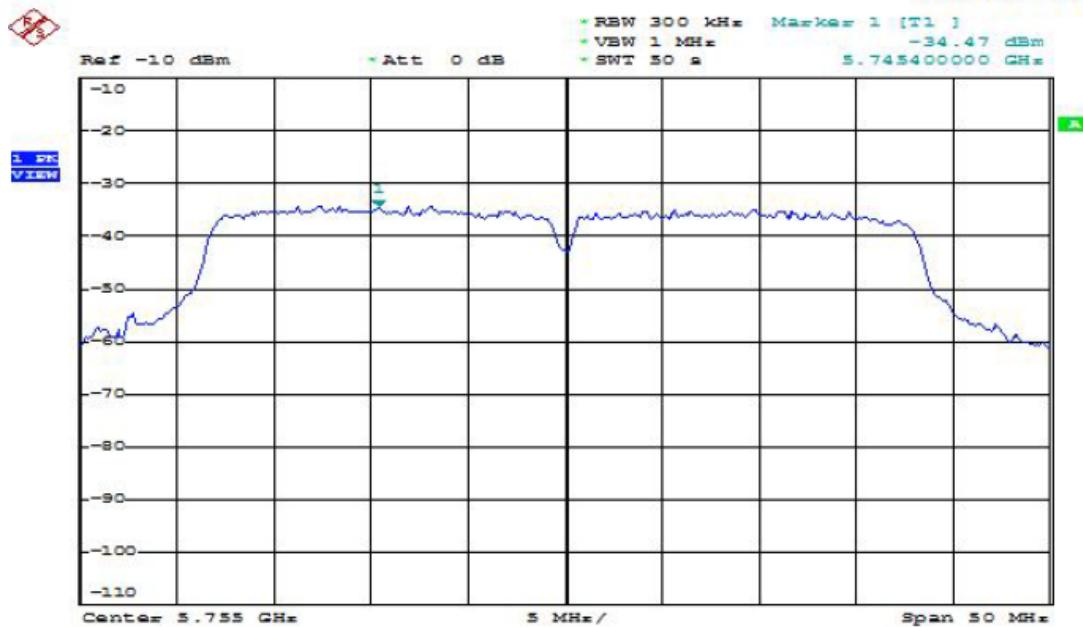
Date: 2019-04-23



802.11n HT40

Channel: 151

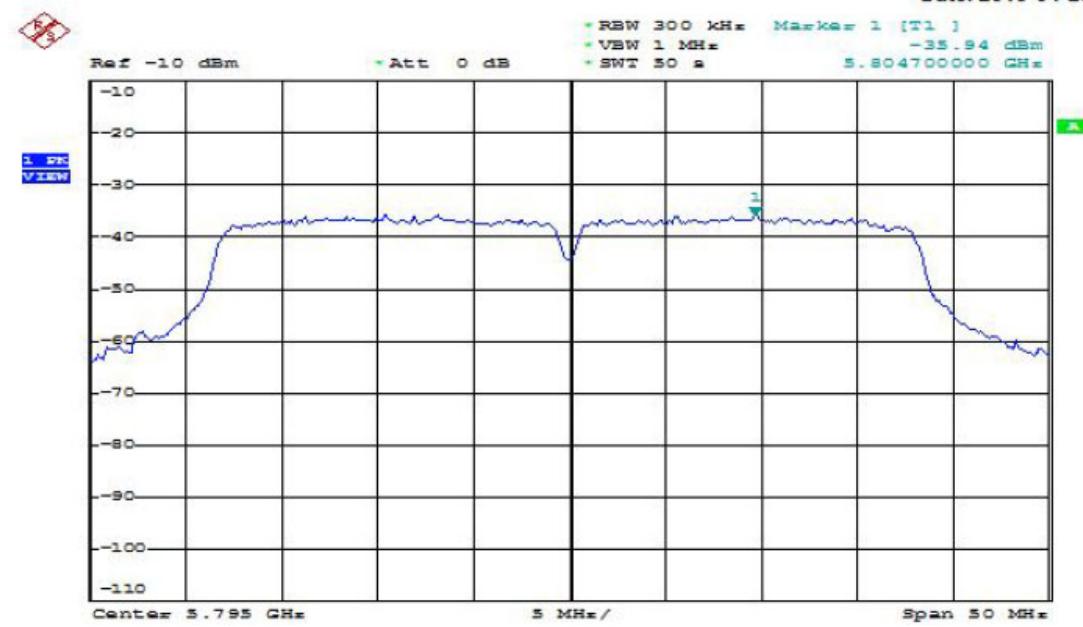
Date: 2019-04-23



802.11n HT40

Channel: 159

Date: 2019-04-23



11. Band Edges Measurement

Test Requirement:	FCC Part15 E Section 15.407 and 15.205																								
Test Method:	ANSI C63.10:2013																								
Test site:	Measurement Distance: 3m																								
Receiver setup:	<table border="1"><thead><tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr></thead><tbody><tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr><tr><td>Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr><tr><td></td><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr></tbody></table>					Frequency	Detector	RBW	VBW	Remark	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value	Above 1GHz	Peak	1MHz	3MHz	Peak Value		AV	1MHz	3MHz	Average Value
Frequency	Detector	RBW	VBW	Remark																					
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value																					
Above 1GHz	Peak	1MHz	3MHz	Peak Value																					
	AV	1MHz	3MHz	Average Value																					
Limit:	<table border="1"><thead><tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr></thead><tbody><tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr><tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr><tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr><tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr><tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr><tr><td>74.0</td><td>Peak Value</td></tr></tbody></table>					Frequency	Limit (dBuV/m @3m)	Remark	30MHz-88MHz	40.0	Quasi-peak Value	88MHz-216MHz	43.5	Quasi-peak Value	216MHz-960MHz	46.0	Quasi-peak Value	960MHz-1GHz	54.0	Quasi-peak Value	Above 1GHz	54.0	Average Value	74.0	Peak Value
Frequency	Limit (dBuV/m @3m)	Remark																							
30MHz-88MHz	40.0	Quasi-peak Value																							
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960MHz-1GHz	54.0	Quasi-peak Value																							
Above 1GHz	54.0	Average Value																							
	74.0	Peak Value																							
	<p>Undesirable emission limits:</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(4) For transmitters operating in the 5.725-5.85 GHz band:</p> <p>All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz</p>																								

	<p>or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</p>
Test Procedure:	<ol style="list-style-type: none">a. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test setup:	Above 1GHz

	<p>Semi-Anechoic 3m Chamber</p> <p>ANTENNA ELEVATION VARIES FROM 1 TO 4 METER</p> <p>3m</p> <p>1.5m(L)*1.0m(W)*1.5m(H)</p> <p>ABSORBER</p> <p>EUT</p> <p>TURN TABLE (FIBRE GLASS)</p> <p>1.5m</p> <p>AMP — Spectrum Analyzer — PC System</p>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Remark:

According to KDB 789033 D02V02 section G) 1) (d), for For measurements above 1000 MHz @ 3m distance, the limit of field strength is computed as follows:

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2;$$

For example, if EIRP = -27dBm

$$E[\text{dBuV/m}] = -27 + 95.2 = 68.2 \text{dBuV/m.}$$

11.1 Test Result and Data

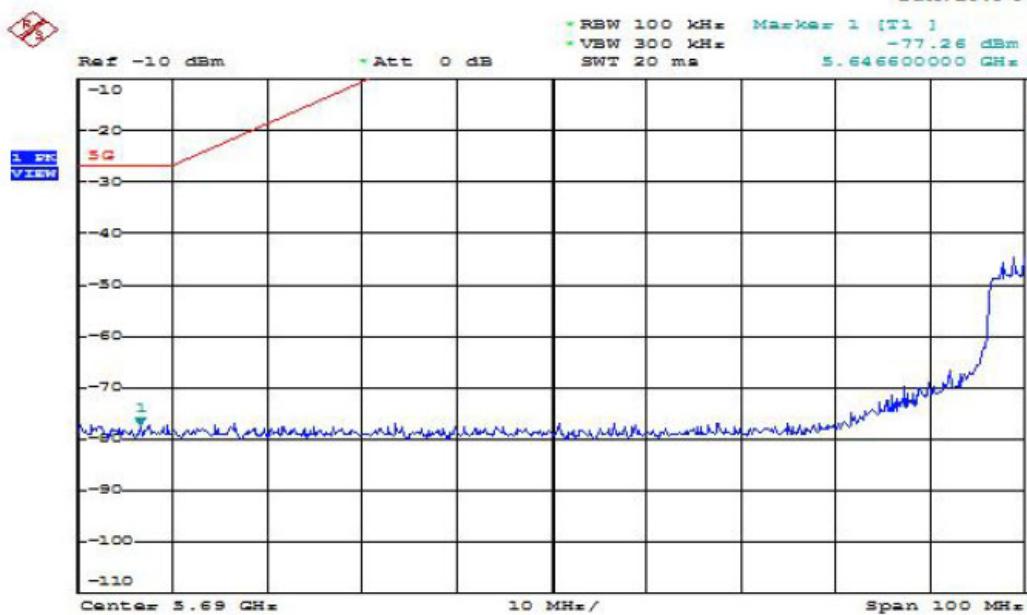
U-NII-3

Modulation Type	Channel	Frequency (MHz)	Maximum value in frequency (MHz)		Maximum value (dBm)	
			ANT R	ANT L	ANT R	ANT L
IEEE 802.11a	149	5745	5646.6	5642.2	-77.26	-77.08
	165	5825	5928.6	5928.6	-78.21	-78.11
IEEE 802.11n,HT20	149	5745	5642.31	5643	-76.47	-77.49
	165	5825	5926	5926	-76.82	-77.73
IEEE 802.11n,HT40	151	5755	5643.4	5647.11	-77.33	-76.87
	159	5795	5965.6	5936	-77.67	-77.57

Antenna R

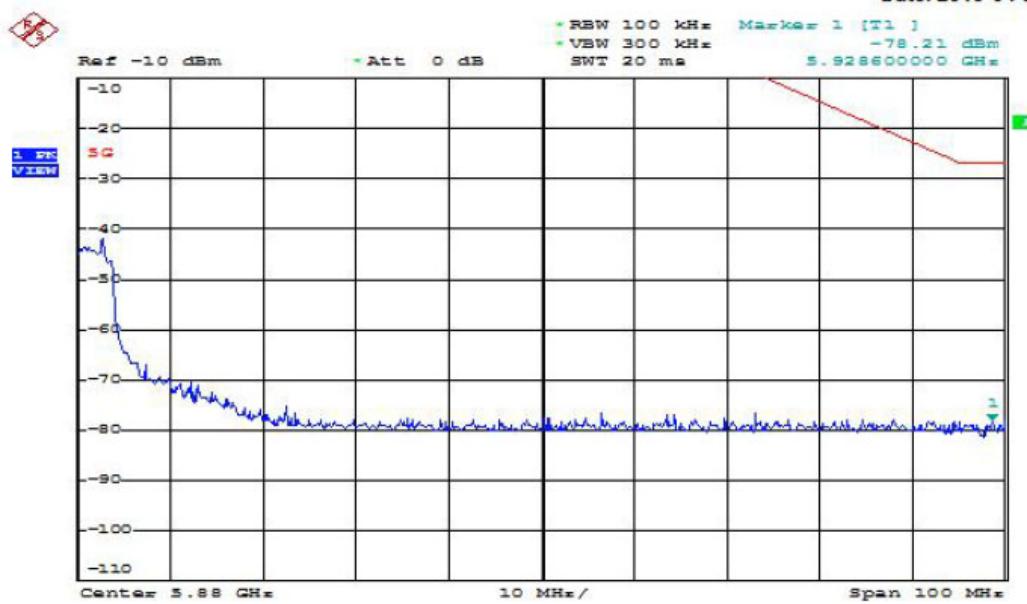
802.11a
Channel: 149

Date: 2019-04-22



802.11a
Channel: 165

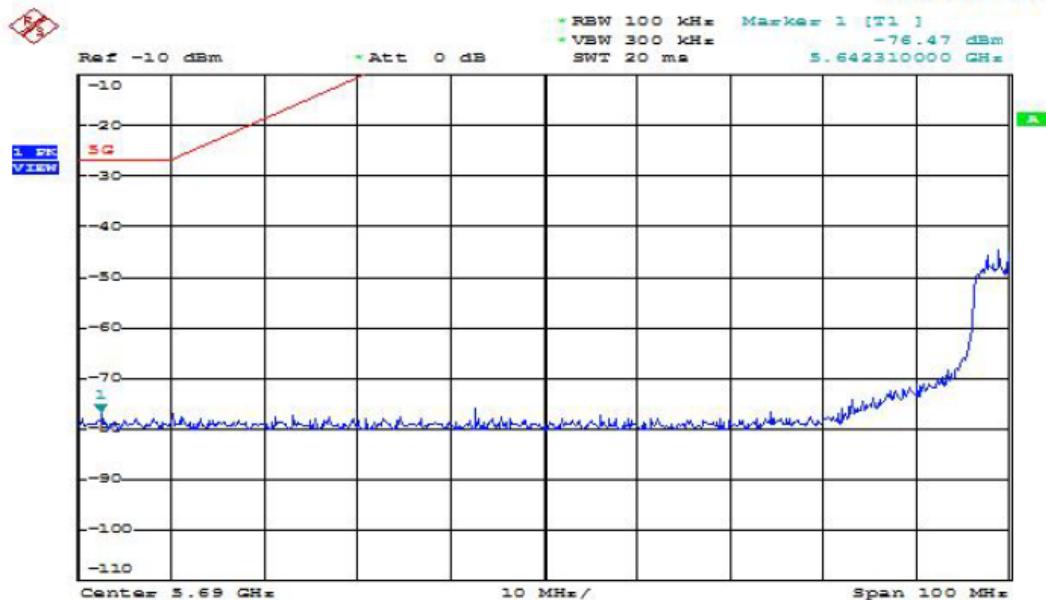
Date: 2019-04-22



802.11n HT20

Channel: 149

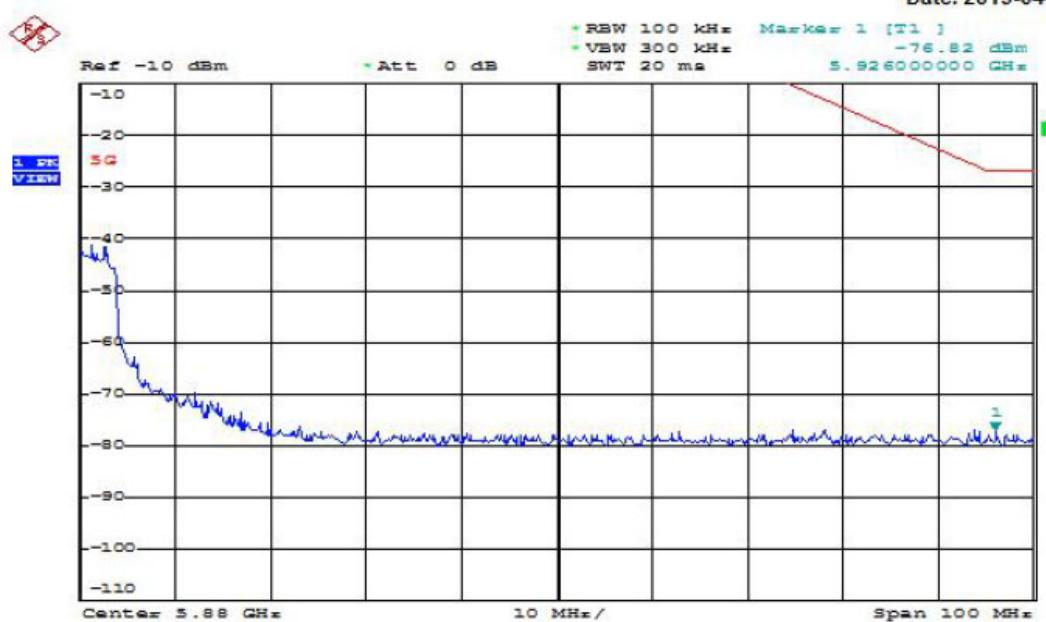
Date: 2019-04-22



802.11n HT20

Channel: 165

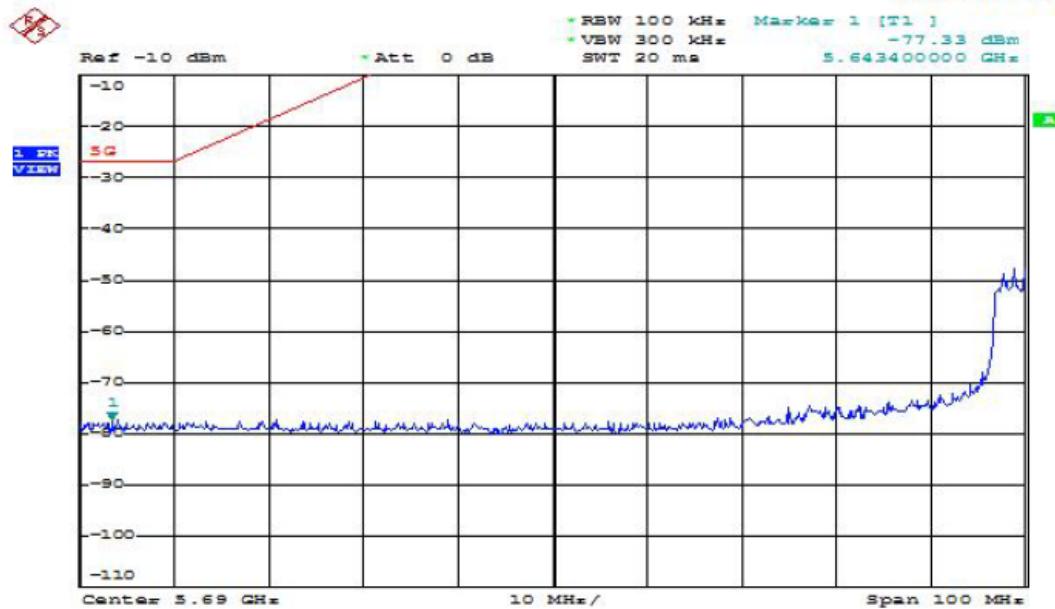
Date: 2019-04-22



802.11n HT40

Channel: 151

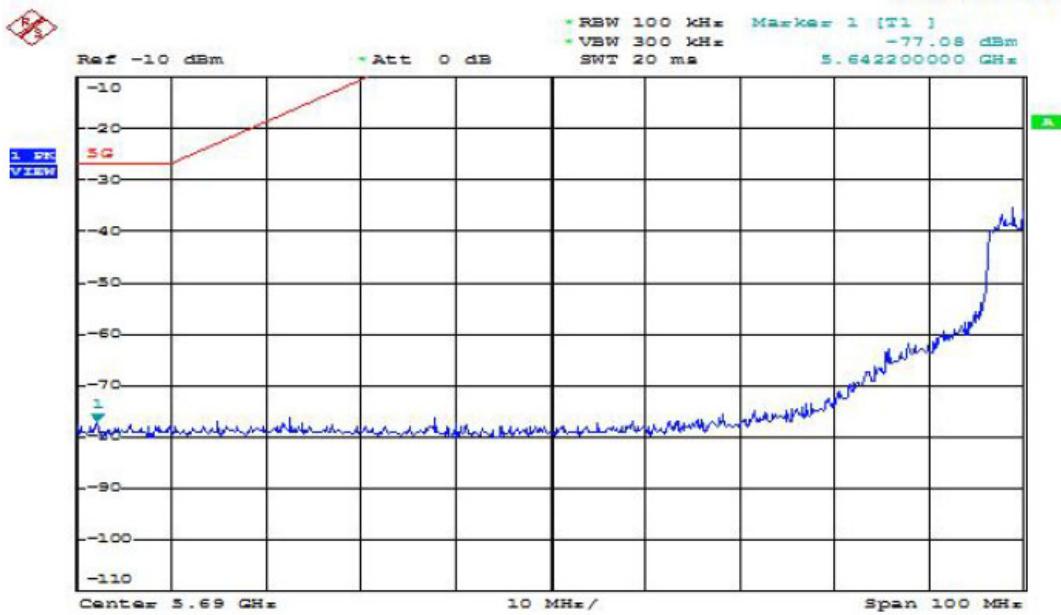
Date: 2019-04-22



Antenna L

802.11a
Channel: 149

Date: 2019-04-22



802.11a
Channel: 165

Date: 2019-04-22

