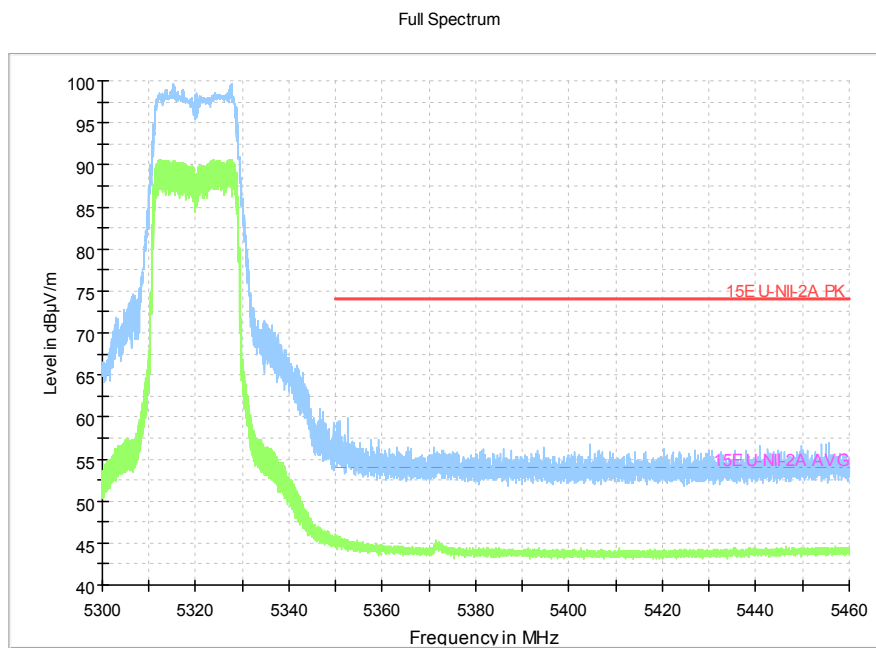
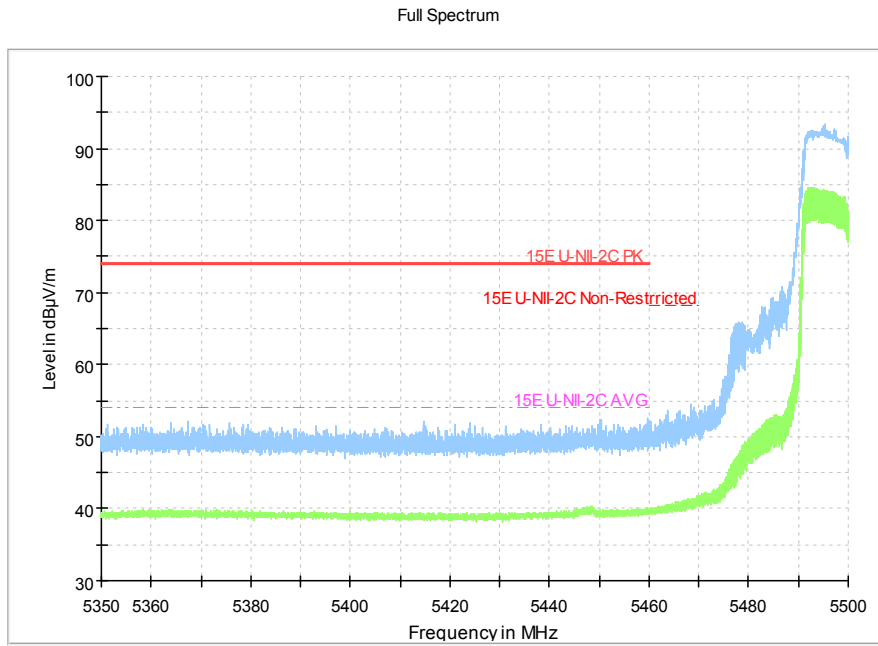


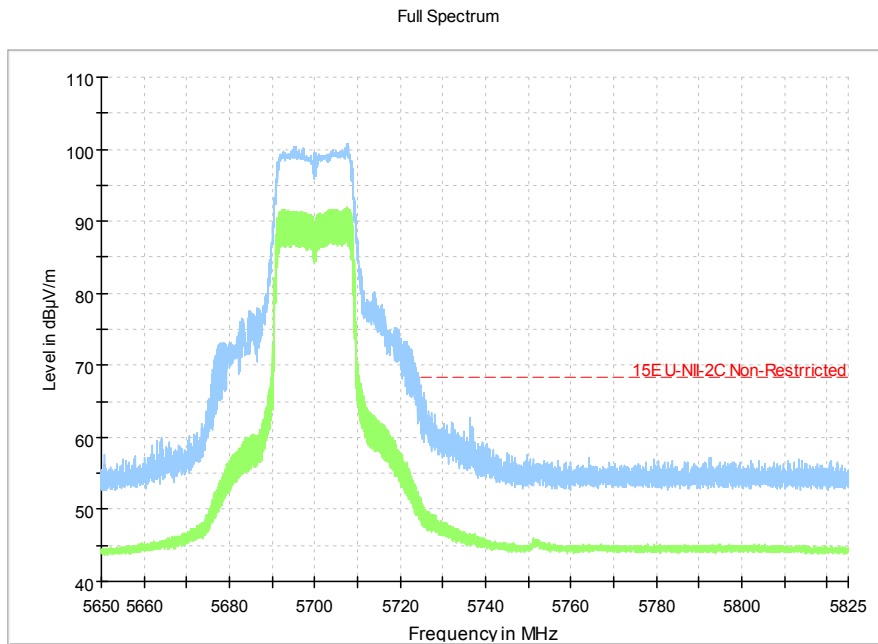
**Fig.60 Band Edges (802.11ac-HT20, 5180MHz)**



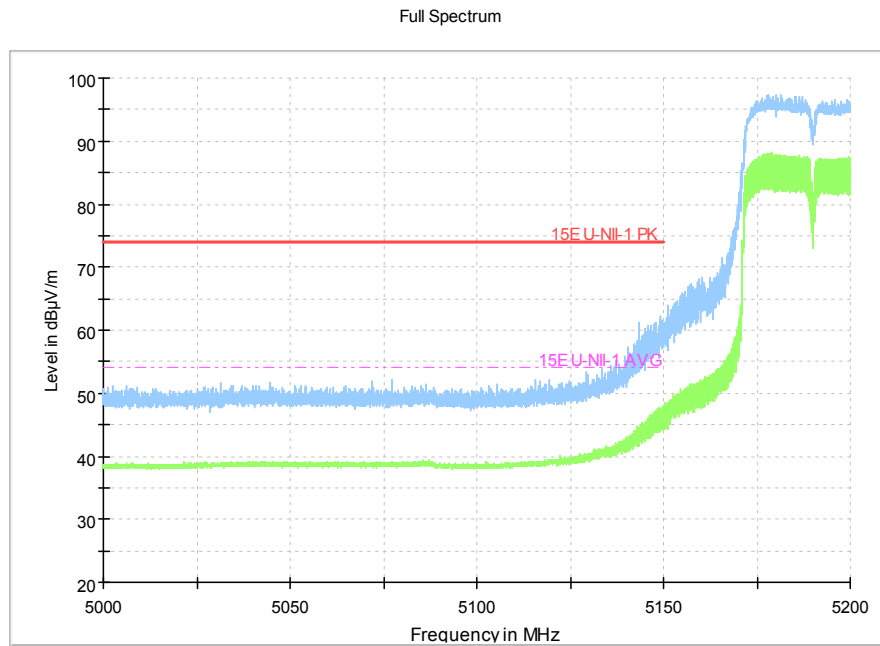
**Fig.61 Band Edges (802.11ac-HT20, 5320MHz)**



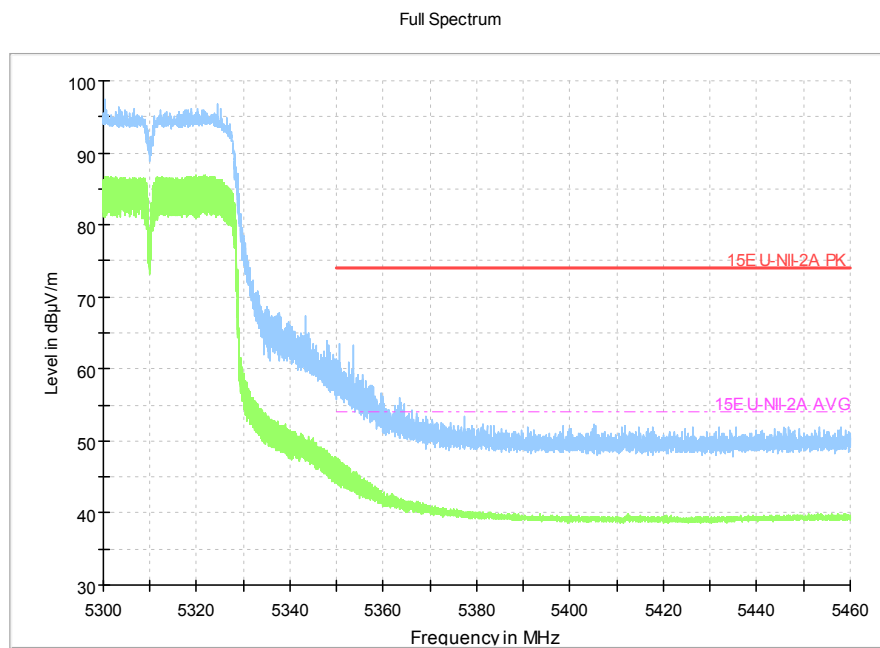
**Fig.62 Band Edges (802.11ac-HT20, 5500MHz)**



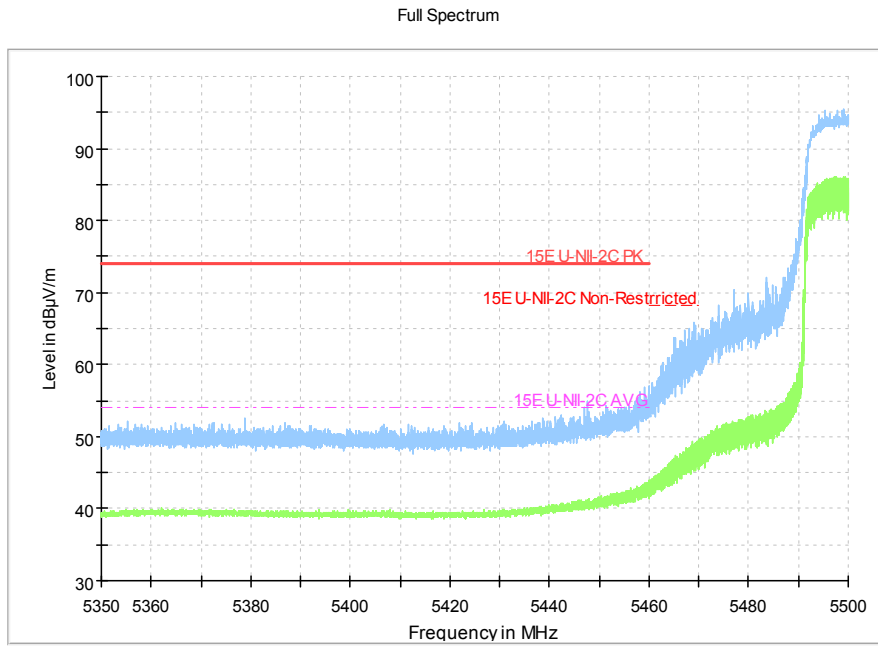
**Fig.63 Band Edges (802.11ac-HT20, 5700MHz)**



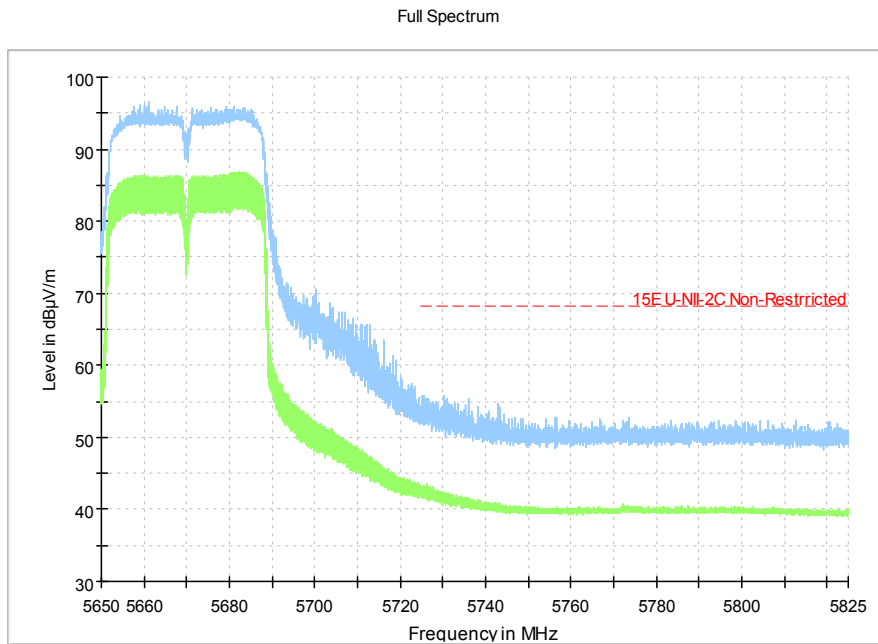
**Fig.64 Band Edges (802.11n-HT40, 5190MHz)**



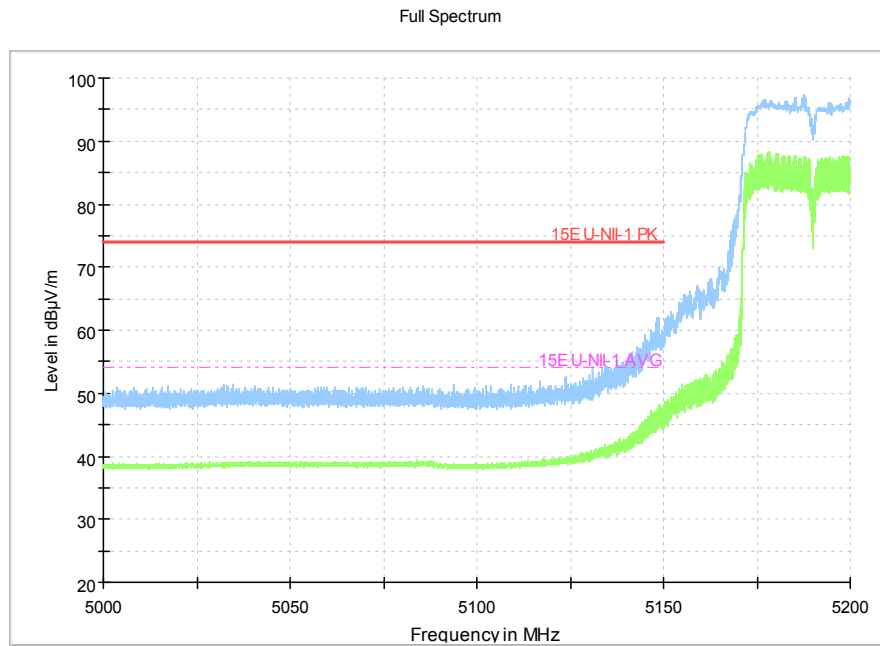
**Fig.65 Band Edges (802.11n-HT40, 5310MHz)**



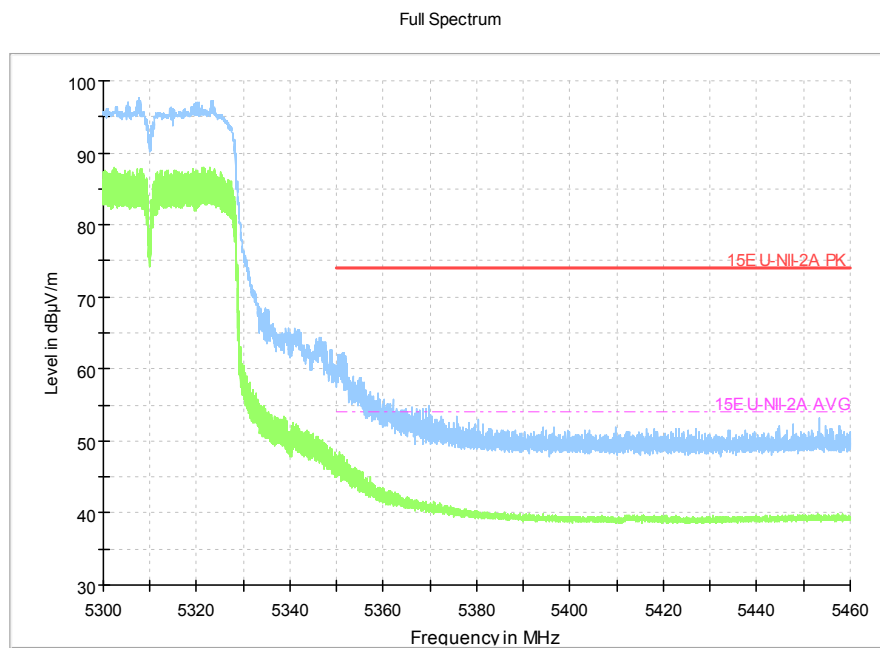
**Fig.66 Band Edges (802.11n-HT40, 5510MHz)**



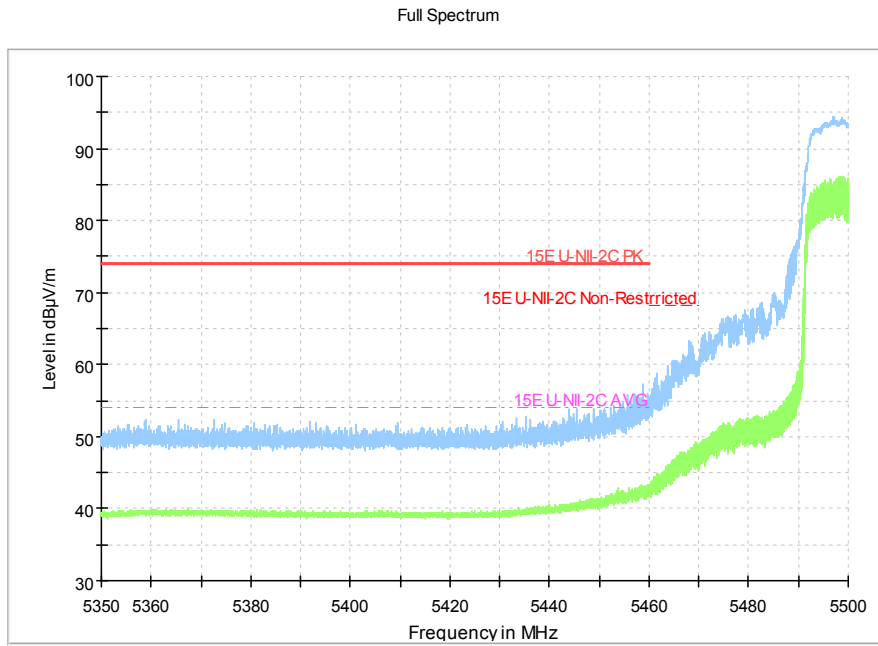
**Fig.67 Band Edges (802.11n-HT40, 5670MHz)**



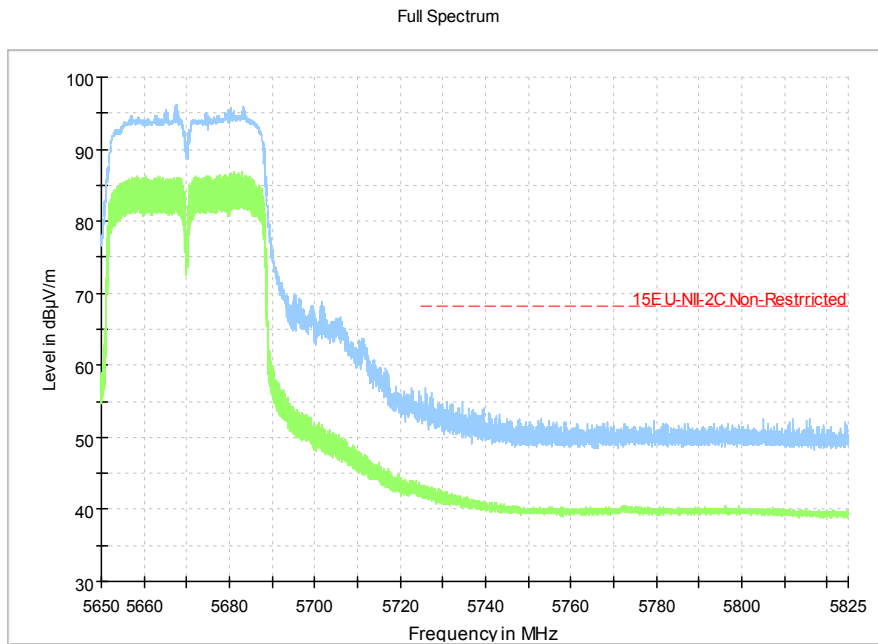
**Fig.68 Band Edges (802.11ac-HT40, 5190MHz)**



**Fig.69 Band Edges (802.11ac-HT40, 5310MHz)**

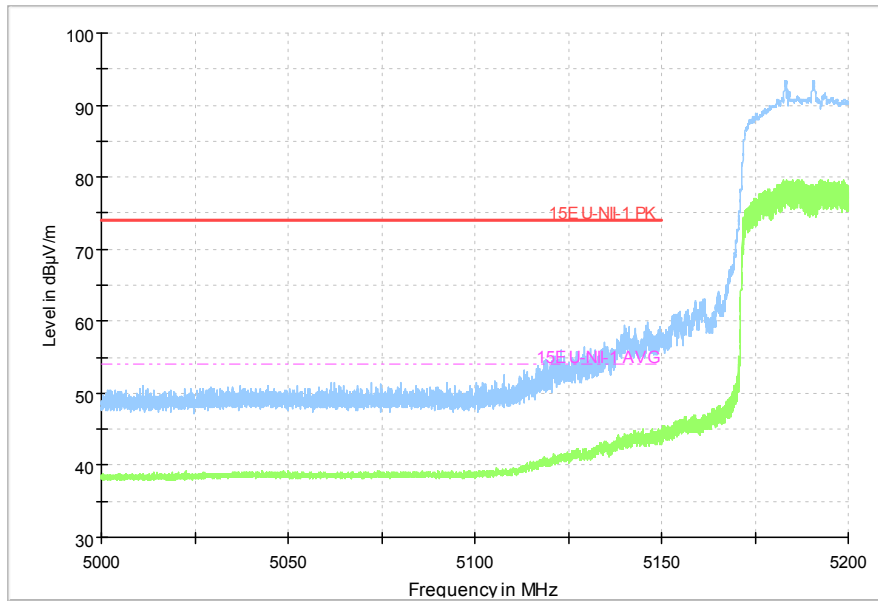


**Fig.70 Band Edges (802.11ac-HT40, 5510MHz)**



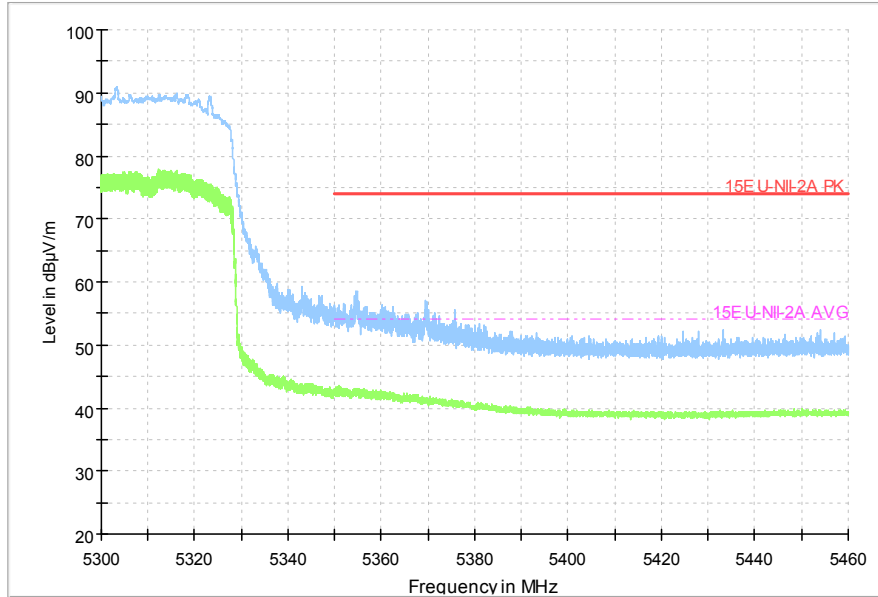
**Fig.71 Band Edges (802.11ac-HT40, 5670MHz)**

Full Spectrum



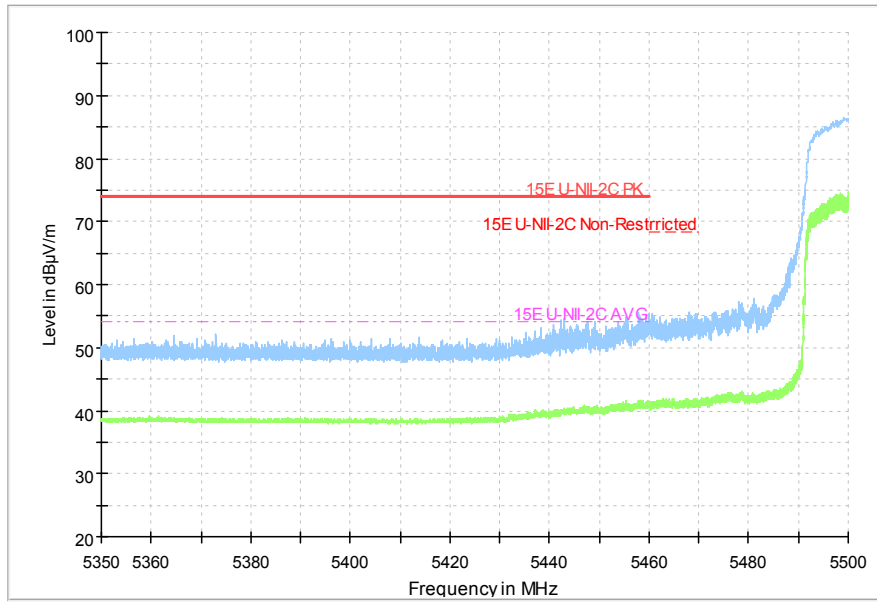
**Fig.72 Band Edges (802.11ac-HT80, 5210MHz)**

Full Spectrum



**Fig.73 Band Edges (802.11ac-HT80, 5290MHz)**

Full Spectrum

**Fig.74 Band Edges (802.11ac-HT80, 5530MHz)**



## A.6. Transmitter Spurious Emission

### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

The measurement is made according to KDB 789033

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

### Limit in restricted band:

Frequency of emission (MHz)	Field strength(dB $\mu$ V/m)	Measurement distance(m)
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

Note: for frequency range below 960MHz, the limit in 15.209 is defined in 10m test distance. The limit used above is calculated from 10m to 3m

### Measurement Results:

**Conclusion: PASS**

### Note:

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the cable loss(the gain of the preamplifier), the gain of receive antenna.

$P_{Mea}$  is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result= $P_{Mea}+A_{Rpl}= P_{Mea}+Cable Loss+Antenna Factor$

**Peak**
**802.11a**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
<b>802.11a Channel 36</b>							
17956	57.3	-25.5	46.7	36.1	H	74	16.7
17979.1	56.8	-25.5	46.7	35.6	V	74	17.2
17887.8	56.7	-25.5	46.7	35.5	V	74	17.3
17994.5	56.7	-25.5	46.7	35.5	H	74	17.3
17974.7	56.3	-25.5	46.7	35.1	H	74	17.7
5149.5	57.6	-17	33.7	40.9	H	74	16.4
<b>802.11a Channel 40</b>							
17956	57.6	-25.5	46.7	36.4	H	74	16.4
17868	57.5	-25.5	46.7	36.3	H	74	16.5
17972.5	57	-25.5	46.7	35.8	V	74	17
17985.7	56.4	-25.5	46.7	35.2	V	74	17.6
17907.6	56.2	-25.5	46.7	35	V	74	17.8
17961.5	56.2	-25.5	46.7	35	V	74	17.8
<b>802.11a Channel 48</b>							
17954.9	57	-25.5	46.7	35.8	H	74	17
17970.3	56.8	-25.5	46.7	35.6	H	74	17.2
17989	56.6	-25.5	46.7	35.4	H	74	17.4
17974.7	56.5	-25.5	46.7	35.3	H	74	17.5
17938.4	56.4	-25.5	46.7	35.2	H	74	17.6
17984.6	56.4	-25.5	46.7	35.2	V	74	17.6
<b>802.11a Channel 52</b>							
17987.9	56.8	-25.5	46.7	35.6	H	74	17.2
17945	56.7	-25.5	46.7	35.5	V	74	17.3
17982.4	56.5	-25.5	46.7	35.3	H	74	17.5
17975.8	56.4	-25.5	46.7	35.2	V	74	17.6
17981.3	56.4	-25.5	46.7	35.2	H	74	17.6
17925.2	56.2	-25.5	46.7	35	H	74	17.8
<b>802.11a Channel 56</b>							
17968.1	57.2	-25.5	46.7	36	H	74	16.8
17972.5	56.9	-25.5	46.7	35.7	V	74	17.1
17939.5	56.8	-25.5	46.7	35.6	H	74	17.2
17971.4	56.4	-25.5	46.7	35.2	H	74	17.6
17924.1	56.2	-25.5	46.7	35	H	74	17.8
17934	56.2	-25.5	46.7	35	V	74	17.8

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11a Channel 64							
17958.2	57.2	-25.5	46.7	36	H	74	16.8
17961.5	56.9	-25.5	46.7	35.7	H	74	17.1
17971.4	56.8	-25.5	46.7	35.6	H	74	17.2
17946.1	56.6	-25.5	46.7	35.4	H	74	17.4
17983.5	56.6	-25.5	46.7	35.4	H	74	17.4
5351.3	59.8	-16.9	34	42.7	H	74	14.2
802.11a Channel 100							
17936.2	57.1	-25.5	46.7	35.9	H	74	16.9
17959.3	57	-25.5	46.7	35.8	H	74	17
17986.8	57	-25.5	46.7	35.8	V	74	17
17943.9	56.8	-25.5	46.7	35.6	H	74	17.2
17980.2	56.7	-25.5	46.7	35.5	V	74	17.3
5459.1	56.7	-16.8	34.2	39.3	H	74	17.3
802.11a Channel 120							
17978	57.2	-25.5	46.7	36	H	74	16.8
17932.9	56.9	-25.5	46.7	35.7	V	74	17.1
17844.9	56.6	-25.5	46.7	35.4	H	74	17.4
17943.9	56.6	-25.5	46.7	35.4	H	74	17.4
17946.1	56.6	-25.5	46.7	35.4	V	74	17.4
17949.4	56.6	-25.5	46.7	35.4	H	74	17.4
802.11a Channel 140							
17978	57.3	-25.5	46.7	36.1	H	74	16.7
17919.7	57.1	-25.5	46.7	35.9	H	74	16.9
17947.2	56.8	-25.5	46.7	35.6	V	74	17.2
17771.2	56.6	-25.5	46.7	35.4	H	74	17.4
17858.1	56.6	-25.5	46.7	35.4	H	74	17.4
5726.1	67.8	-16.3	34.3	49.8	H	74	6.2

**802.11n-HT20**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
<b>802.11n Channel 36</b>							
17991.2	56.8	-25.5	46.7	35.6	V	74	17.2
17975.8	56.5	-25.5	46.7	35.3	V	74	17.5
17946.1	56.3	-25.5	46.7	35.1	V	74	17.7
17978	56.3	-25.5	46.7	35.1	V	74	17.7
17987.9	56.3	-25.5	46.7	35.1	V	74	17.7
5149.9	57.9	-17	33.7	41.2	H	74	16.1
<b>802.11n Channel 40</b>							
17948.3	57.2	-25.5	46.7	36	V	74	16.8
17941.7	56.8	-25.5	46.7	35.6	H	74	17.2
17935.1	56.7	-25.5	46.7	35.5	H	74	17.3
17979.1	56.7	-25.5	46.7	35.5	H	74	17.3
17949.4	56.6	-25.5	46.7	35.4	H	74	17.4
17849.3	56.5	-25.5	46.7	35.3	V	74	17.5
<b>802.11n Channel 48</b>							
17970.3	57.1	-25.5	46.7	35.9	H	74	16.9
17990.1	56.7	-25.5	46.7	35.5	V	74	17.3
17962.6	56.6	-25.5	46.7	35.4	V	74	17.4
17979.1	56.5	-25.5	46.7	35.3	V	74	17.5
17936.2	56.3	-25.5	46.7	35.1	H	74	17.7
17956	56.3	-25.5	46.7	35.1	V	74	17.7
<b>802.11n Channel 52</b>							
17973.6	56.9	-25.5	46.7	35.7	V	74	17.1
17957.1	56.7	-25.5	46.7	35.5	H	74	17.3
17987.9	56.7	-25.5	46.7	35.5	H	74	17.3
17961.5	56.6	-25.5	46.7	35.4	V	74	17.4
17931.8	56.5	-25.5	46.7	35.3	H	74	17.5
17970.3	56.3	-25.5	46.7	35.1	H	74	17.7
<b>802.11n Channel 56</b>							
17985.7	57.1	-25.5	46.7	35.9	V	74	16.9
17986.8	57	-25.5	46.7	35.8	H	74	17
17995.6	56.6	-25.5	46.7	35.4	V	74	17.4
17909.8	56.4	-25.5	46.7	35.2	V	74	17.6
17945	56.4	-25.5	46.7	35.2	V	74	17.6
17958.2	56.4	-25.5	46.7	35.2	H	74	17.6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n Channel 64							
17989	57.5	-25.5	46.7	36.3	H	74	16.5
17953.8	56.9	-25.5	46.7	35.7	V	74	17.1
17992.3	56.7	-25.5	46.7	35.5	H	74	17.3
17983.5	56.6	-25.5	46.7	35.4	H	74	17.4
17934	56.5	-25.5	46.7	35.3	V	74	17.5
5350.1	59.7	-16.9	34	42.6	H	74	14.3
802.11n Channel 100							
17952.7	57.4	-25.5	46.7	36.2	H	74	16.6
17982.4	56.9	-25.5	46.7	35.7	V	74	17.1
17996.7	56.9	-25.5	46.7	35.7	V	74	17.1
17973.6	56.6	-25.5	46.7	35.4	V	74	17.4
17995.6	56.6	-25.5	46.7	35.4	V	74	17.4
5457.7	57.2	-16.8	34.2	39.8	H	74	16.8
802.11n Channel 120							
17997.8	57	-25.5	46.7	35.8	V	74	17
17980.2	56.6	-25.5	46.7	35.4	H	74	17.4
17979.1	56.5	-25.5	46.7	35.3	H	74	17.5
17992.3	56.4	-25.5	46.7	35.2	V	74	17.6
17895.5	56.2	-25.5	46.7	35	H	74	17.8
17926.3	56.2	-25.5	46.7	35	H	74	17.8
802.11n Channel 140							
17950.5	57	-25.5	46.7	35.8	H	74	17
17869.1	56.8	-25.5	46.7	35.6	H	74	17.2
17960.4	56.7	-25.5	46.7	35.5	H	74	17.3
17910.9	56.6	-25.5	46.7	35.4	V	74	17.4
17937.3	56.5	-25.5	46.7	35.3	H	74	17.5
5725.3	66.3	-16.3	34.3	48.3	H	74	7.7

**802.11ac-HT20**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
<b>802.11ac Channel 36</b>							
17990.1	57.2	-25.5	46.7	36	H	74	16.8
17921.9	56.8	-25.5	46.7	35.6	V	74	17.2
17879	56.6	-25.5	46.7	35.4	H	74	17.4
17984.6	56.5	-25.5	46.7	35.3	H	74	17.5
17991.2	56.5	-25.5	46.7	35.3	V	74	17.5
5148	57.6	-17	33.7	40.9	H	74	16.4
<b>802.11ac Channel 40</b>							
17971.4	57.1	-25.5	46.7	35.9	H	74	16.9
17979.1	57.1	-25.5	46.7	35.9	V	74	16.9
17986.8	57.1	-25.5	46.7	35.9	V	74	16.9
17932.9	56.8	-25.5	46.7	35.6	V	74	17.2
17956	56.7	-25.5	46.7	35.5	V	74	17.3
17864.7	56.6	-25.5	46.7	35.4	H	74	17.4
<b>802.11ac Channel 48</b>							
17939.5	56.7	-25.5	46.7	35.5	H	74	17.3
17956	56.7	-25.5	46.7	35.5	V	74	17.3
17968.1	56.7	-25.5	46.7	35.5	H	74	17.3
17996.7	56.4	-25.5	46.7	35.2	V	74	17.6
17945	56.3	-25.5	46.7	35.1	H	74	17.7
17995.6	56.3	-25.5	46.7	35.1	V	74	17.7
<b>802.11ac Channel 52</b>							
17991.2	57	-25.5	46.7	35.8	V	74	17
17979.1	56.9	-25.5	46.7	35.7	V	74	17.1
17930.7	56.4	-25.5	46.7	35.2	V	74	17.6
17970.3	56.4	-25.5	46.7	35.2	V	74	17.6
17975.8	56.4	-25.5	46.7	35.2	V	74	17.6
17980.2	56.3	-25.5	46.7	35.1	V	74	17.7
<b>802.11ac Channel 56</b>							
17893.3	56.9	-25.5	46.7	35.7	H	74	17.1
17960.4	56.9	-25.5	46.7	35.7	H	74	17.1
17943.9	56.8	-25.5	46.7	35.6	H	74	17.2
17996.7	56.8	-25.5	46.7	35.6	V	74	17.2
17986.8	56.6	-25.5	46.7	35.4	V	74	17.4
17958.2	56.5	-25.5	46.7	35.3	V	74	17.5

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac Channel 64							
17981.3	57.6	-25.5	46.7	36.4	V	74	16.4
17957.1	56.7	-25.5	46.7	35.5	H	74	17.3
17862.5	56.6	-25.5	46.7	35.4	V	74	17.4
17965.9	56.6	-25.5	46.7	35.4	H	74	17.4
17993.4	56.6	-25.5	46.7	35.4	V	74	17.4
5352.5	59.8	-16.9	34	42.7	H	74	14.2
802.11ac Channel 100							
17945	57.1	-25.5	46.7	35.9	V	74	16.9
17959.3	57	-25.5	46.7	35.8	V	74	17
17991.2	57	-25.5	46.7	35.8	H	74	17
17947.2	56.9	-25.5	46.7	35.7	H	74	17.1
17994.5	56.9	-25.5	46.7	35.7	V	74	17.1
5459.6	52.5	-16.8	34.2	35.1	V	74	21.5
802.11ac Channel 120							
17961.5	57.4	-25.5	46.7	36.2	V	74	16.6
17939.5	56.9	-25.5	46.7	35.7	V	74	17.1
17987.9	56.9	-25.5	46.7	35.7	H	74	17.1
17995.6	56.8	-25.5	46.7	35.6	H	74	17.2
17934	56.6	-25.5	46.7	35.4	V	74	17.4
17984.6	56.4	-25.5	46.7	35.2	V	74	17.6
802.11ac Channel 140							
17961.5	57	-25.5	46.7	35.8	H	74	17
17967	57	-25.5	46.7	35.8	H	74	17
17974.7	56.6	-25.5	46.7	35.4	V	74	17.4
17862.5	56.5	-25.5	46.7	35.3	V	74	17.5
17957.1	56.5	-25.5	46.7	35.3	H	74	17.5
5725.6	66.2	-16.3	34.3	48.2	H	74	7.8

**802.11n-HT40**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
<b>802.11n 40MHz Channel38</b>							
17985.7	57.1	-25.5	46.7	35.9	V	74	16.9
17965.9	57	-25.5	46.7	35.8	V	74	17
17828.4	56.5	-25.5	46.7	35.3	H	74	17.5
17948.3	56.4	-25.5	46.7	35.2	V	74	17.6
17906.5	56.3	-25.5	46.7	35.1	H	74	17.7
5149.1	62.2	-17	33.7	45.5	H	74	11.8
<b>802.11n 40MHz Channel46</b>							
17973.6	57.1	-25.5	46.7	35.9	V	74	16.9
17956	56.9	-25.5	46.7	35.7	H	74	17.1
17975.8	56.8	-25.5	46.7	35.6	H	74	17.2
17954.9	56.6	-25.5	46.7	35.4	H	74	17.4
17994.5	56.6	-25.5	46.7	35.4	V	74	17.4
17831.7	56.5	-25.5	46.7	35.3	H	74	17.5
<b>802.11n 40MHz Channel54</b>							
17872.4	56.9	-25.5	46.7	35.7	H	74	17.1
17929.6	56.8	-25.5	46.7	35.6	H	74	17.2
17972.5	56.8	-25.5	46.7	35.6	V	74	17.2
17822.9	56.4	-25.5	46.7	35.2	H	74	17.6
17995.6	56.4	-25.5	46.7	35.2	V	74	17.6
17942.8	56.2	-25.5	46.7	35	V	74	17.8
<b>802.11n 40MHz Channel62</b>							
17945	56.9	-25.5	46.7	35.7	H	74	17.1
17950.5	56.7	-25.5	46.7	35.5	V	74	17.3
17964.8	56.5	-25.5	46.7	35.3	H	74	17.5
17971.4	56.4	-25.5	46.7	35.2	H	74	17.6
17976.9	56.4	-25.5	46.7	35.2	V	74	17.6
5350.5	63.5	-16.9	34	46.4	H	74	10.5
<b>802.11n 40MHz Channel102</b>							
17957.1	56.7	-25.5	46.7	35.5	H	74	17.3
17963.7	56.6	-25.5	46.7	35.4	V	74	17.4
17852.6	56.5	-25.5	46.7	35.3	H	74	17.5
17967	56.4	-25.5	46.7	35.2	H	74	17.6
17884.5	56.3	-25.5	46.7	35.1	V	74	17.7
5459.9	57.1	-16.8	34.2	39.7	H	74	16.9



Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11n 40MHz Channel118							
17975.8	57	-25.5	46.7	35.8	V	74	17
17954.9	56.8	-25.5	46.7	35.6	V	74	17.2
17967	56.8	-25.5	46.7	35.6	H	74	17.2
17945	56.6	-25.5	46.7	35.4	V	74	17.4
17968.1	56.6	-25.5	46.7	35.4	V	74	17.4
17942.8	56.5	-25.5	46.7	35.3	H	74	17.5
802.11n 40MHz Channel134							
17938.4	57	-25.5	46.7	35.8	H	74	17
17873.5	56.9	-25.5	46.7	35.7	V	74	17.1
17962.6	56.9	-25.5	46.7	35.7	V	74	17.1
17995.6	56.8	-25.5	46.7	35.6	H	74	17.2
17903.2	56.5	-25.5	46.7	35.3	H	74	17.5
5725.2	55.8	-16.3	34.3	37.8	H	74	18.2

**802.11ac-HT40**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
<b>802.11ac 40M Channel:CH38</b>							
17993.4	57.7	-25.5	46.7	36.5	H	74	16.3
17997.8	57	-25.5	46.7	35.8	H	74	17
17940.6	56.9	-25.5	46.7	35.7	V	74	17.1
17886.7	56.7	-25.5	46.7	35.5	H	74	17.3
17960.4	56.7	-25.5	46.7	35.5	V	74	17.3
5148.4	61.9	-17	33.7	45.2	H	74	12.1
<b>802.11ac 40M Channel:CH46</b>							
17965.9	56.9	-25.5	46.7	35.7	H	74	17.1
17967	56.9	-25.5	46.7	35.7	V	74	17.1
17970.3	56.8	-25.5	46.7	35.6	V	74	17.2
17932.9	56.4	-25.5	46.7	35.2	V	74	17.6
17935.1	56.4	-25.5	46.7	35.2	H	74	17.6
17989	56.4	-25.5	46.7	35.2	H	74	17.6
<b>802.11ac 40M Channel:CH54</b>							
17995.6	57.6	-25.5	46.7	36.4	V	74	16.4
17984.6	57	-25.5	46.7	35.8	V	74	17
17938.4	56.8	-25.5	46.7	35.6	H	74	17.2
17815.2	56.7	-25.5	46.7	35.5	V	74	17.3
17997.8	56.3	-25.5	46.7	35.1	H	74	17.7
17862.5	56.2	-25.5	46.7	35	V	74	17.8
<b>802.11ac 40M Channel:CH62</b>							
17939.5	56.7	-25.5	46.7	35.5	H	74	17.3
17981.3	56.7	-25.5	46.7	35.5	V	74	17.3
17954.9	56.6	-25.5	46.7	35.4	H	74	17.4
17924.1	56.5	-25.5	46.7	35.3	V	74	17.5
17895.5	56.4	-25.5	46.7	35.2	V	74	17.6
5351.2	62.2	-16.9	34	45.1	H	74	11.8
<b>802.11ac 40M Channel:CH102</b>							
17995.6	57.3	-25.5	46.7	36.1	H	74	16.7
17962.6	56.8	-25.5	46.7	35.6	H	74	17.2
17943.9	56.7	-25.5	46.7	35.5	H	74	17.3
17974.7	56.7	-25.5	46.7	35.5	H	74	17.3
17937.3	56.5	-25.5	46.7	35.3	V	74	17.5
5458.7	57.3	-16.8	34.2	39.9	H	74	16.7

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 40M Channel:CH118							
17945	56.7	-25.5	46.7	35.5	H	74	17.3
17879	56.6	-25.5	46.7	35.4	V	74	17.4
17996.7	56.6	-25.5	46.7	35.4	H	74	17.4
17805.3	56.3	-25.5	46.7	35.1	V	74	17.7
17978	56.3	-25.5	46.7	35.1	V	74	17.7
17875.7	56.2	-25.5	46.7	35	V	74	17.8
802.11ac 40M Channel:CH134							
17985.7	57.3	-25.5	46.7	36.1	H	74	16.7
17962.6	57	-25.5	46.7	35.8	V	74	17
17969.2	57	-25.5	46.7	35.8	H	74	17
17942.8	56.9	-25.5	46.7	35.7	H	74	17.1
17943.9	56.7	-25.5	46.7	35.5	V	74	17.3
5726.1	56.8	-16.3	34.3	38.8	H	74	17.2

**802.11ac-HT80**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11ac 80M Channel:CH42							
17963.7	57.2	-25.5	46.7	36	V	74	16.8
17848.2	57.1	-25.5	46.7	35.9	V	74	16.9
17983.5	57	-25.5	46.7	35.8	V	74	17
17953.8	56.9	-25.5	46.7	35.7	V	74	17.1
17991.2	56.7	-25.5	46.7	35.5	H	74	17.3
5146.1	59.9	-17	33.7	43.2	H	74	14.1
802.11ac 80M Channel:CH58							
17965.9	57.2	-25.5	46.7	36	V	74	16.8
17972.5	56.9	-25.5	46.7	35.7	H	74	17.1
17942.8	56.6	-25.5	46.7	35.4	H	74	17.4
17934	56.5	-25.5	46.7	35.3	V	74	17.5
17954.9	56.5	-25.5	46.7	35.3	H	74	17.5
5354.7	58.6	-16.9	34	41.5	H	74	15.4
802.11ac 80M Channel:CH106							
17949.4	56.8	-25.5	46.7	35.6	H	74	17.2
17963.7	56.6	-25.5	46.7	35.4	H	74	17.4
17986.8	56.6	-25.5	46.7	35.4	H	74	17.4
17910.9	56.5	-25.5	46.7	35.3	H	74	17.5
17981.3	56.5	-25.5	46.7	35.3	V	74	17.5
5458	55.5	-16.8	34.2	38.1	H	74	18.5

**Average**  
**802.11a**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11a Channel:CH36							
17978	45.1	-25.5	46.7	23.9	H	54	8.9
17952.7	45	-25.5	46.7	23.8	V	54	9
17995.6	45	-25.5	46.7	23.8	H	54	9
17945	44.9	-25.5	46.7	23.7	H	54	9.1
17960.4	44.9	-25.5	46.7	23.7	H	54	9.1
5149.6	45.5	-17	33.7	28.8	H	54	8.5
802.11a Channel:CH40							
17958.2	45.1	-25.5	46.7	23.9	H	54	8.9
17986.8	45.1	-25.5	46.7	23.9	H	54	8.9
17945	45	-25.5	46.7	23.8	H	54	9
17989	45	-25.5	46.7	23.8	V	54	9
17947.2	44.9	-25.5	46.7	23.7	V	54	9.1
17952.7	44.9	-25.5	46.7	23.7	V	54	9.1
802.11a Channel:CH48							
17983.5	45.3	-25.5	46.7	24.1	V	54	8.7
17973.6	45.2	-25.5	46.7	24	V	54	8.8
17997.8	45.1	-25.5	46.7	23.9	H	54	8.9
17950.5	45	-25.5	46.7	23.8	V	54	9
17987.9	45	-25.5	46.7	23.8	H	54	9
17943.9	44.9	-25.5	46.7	23.7	V	54	9.1
802.11a Channel:CH52							
17949.4	45	-25.5	46.7	23.8	V	54	9
17950.5	45	-25.5	46.7	23.8	H	54	9
17958.2	45	-25.5	46.7	23.8	V	54	9
17985.7	45	-25.5	46.7	23.8	V	54	9
17986.8	45	-25.5	46.7	23.8	H	54	9
17993.4	45	-25.5	46.7	23.8	H	54	9
802.11a Channel:CH56							
17982.4	45.2	-25.5	46.7	24	V	54	8.8
17981.3	45.1	-25.5	46.7	23.9	V	54	8.9
17948.3	45	-25.5	46.7	23.8	H	54	9
17975.8	45	-25.5	46.7	23.8	H	54	9
17987.9	45	-25.5	46.7	23.8	H	54	9
17990.1	45	-25.5	46.7	23.8	V	54	9

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
				(dBuV/m)			
802.11a Channel:CH64							
17963.7	45.1	-25.5	46.7	23.9	H	54	8.9
17950.5	45	-25.5	46.7	23.8	H	54	9
17953.8	45	-25.5	46.7	23.8	V	54	9
17962.6	45	-25.5	46.7	23.8	V	54	9
17981.3	45	-25.5	46.7	23.8	H	54	9
5350	45.9	-16.9	34	28.8	H	54	8.1
802.11a Channel:CH100							
17954.9	45.1	-25.5	46.7	23.9	H	54	8.9
17965.9	45.1	-25.5	46.7	23.9	H	54	8.9
17986.8	45.1	-25.5	46.7	23.9	V	54	8.9
17940.6	45	-25.5	46.7	23.8	H	54	9
17991.2	45	-25.5	46.7	23.8	H	54	9
5458.8	45	-16.8	34.2	27.6	H	54	9
802.11a Channel:CH120							
17942.8	45.2	-25.5	46.7	24	H	54	8.8
17985.7	45.2	-25.5	46.7	24	V	54	8.8
17962.6	45.1	-25.5	46.7	23.9	V	54	8.9
17963.7	45.1	-25.5	46.7	23.9	V	54	8.9
17983.5	45.1	-25.5	46.7	23.9	H	54	8.9
17961.5	45	-25.5	46.7	23.8	H	54	9
802.11a Channel:CH140							
17981.3	45.1	-25.5	46.7	23.9	V	54	8.9
17950.5	45	-25.5	46.7	23.8	V	54	9
17952.7	45	-25.5	46.7	23.8	V	54	9
17963.7	45	-25.5	46.7	23.8	H	54	9
17976.9	44.9	-25.5	46.7	23.7	H	54	9.1
17992.3	44.9	-25.5	46.7	23.7	V	54	9.1

**802.11n-HT20**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
<b>802.11n Channel:CH36</b>							
17982.4	45.2	-25.5	46.7	24	V	54	8.8
17937.3	45.1	-25.5	46.7	23.9	V	54	8.9
17987.9	45.1	-25.5	46.7	23.9	V	54	8.9
17991.2	45.1	-25.5	46.7	23.9	V	54	8.9
17997.8	45.1	-25.5	46.7	23.9	H	54	8.9
17954.9	45	-25.5	46.7	23.8	H	54	9
<b>802.11n Channel:CH40</b>							
17956	45.1	-25.5	46.7	23.9	V	54	8.9
17961.5	45.1	-25.5	46.7	23.9	V	54	8.9
17992.3	45.1	-25.5	46.7	23.9	H	54	8.9
17949.4	45	-25.5	46.7	23.8	V	54	9
17960.4	45	-25.5	46.7	23.8	V	54	9
17969.2	45	-25.5	46.7	23.8	H	54	9
<b>802.11n Channel:CH48</b>							
17950.5	45.1	-25.5	46.7	23.9	H	54	8.9
17951.6	45	-25.5	46.7	23.8	H	54	9
17976.9	45	-25.5	46.7	23.8	V	54	9
17994.5	45	-25.5	46.7	23.8	V	54	9
17997.8	45	-25.5	46.7	23.8	V	54	9
5149.9	45.2	-17	33.7	28.5	H	54	8.8
<b>802.11n Channel:CH52</b>							
17980.2	45.2	-25.5	46.7	24	H	54	8.8
17986.8	45.1	-25.5	46.7	23.9	V	54	8.9
17931.8	45	-25.5	46.7	23.8	H	54	9
17996.7	45	-25.5	46.7	23.8	V	54	9
17958.2	44.9	-25.5	46.7	23.7	H	54	9.1
17968.1	44.9	-25.5	46.7	23.7	H	54	9.1
<b>802.11n Channel:CH56</b>							
17981.3	45.1	-25.5	46.7	23.9	V	54	8.9
17982.4	45.1	-25.5	46.7	23.9	H	54	8.9
17991.2	45	-25.5	46.7	23.8	H	54	9
17995.6	45	-25.5	46.7	23.8	V	54	9
17996.7	45	-25.5	46.7	23.8	V	54	9
17946.1	44.9	-25.5	46.7	23.7	V	54	9.1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n Channel:CH64							
17972.5	45.2	-25.5	46.7	24	V	54	8.8
17991.2	45.1	-25.5	46.7	23.9	V	54	8.9
17948.3	45	-25.5	46.7	23.8	V	54	9
17978	45	-25.5	46.7	23.8	V	54	9
17983.5	45	-25.5	46.7	23.8	H	54	9
5350.5	46	-16.9	34	28.9	H	54	8
802.11n Channel:CH100							
17959.3	45.2	-25.5	46.7	24	H	54	8.8
17942.8	45.1	-25.5	46.7	23.9	H	54	8.9
17952.7	45.1	-25.5	46.7	23.9	H	54	8.9
17954.9	45.1	-25.5	46.7	23.9	V	54	8.9
17950.5	45	-25.5	46.7	23.8	V	54	9
5459.2	45.3	-16.8	34.2	27.9	H	54	8.7
802.11n Channel:CH120							
17956	45.1	-25.5	46.7	23.9	V	54	8.9
17947.2	45	-25.5	46.7	23.8	V	54	9
17980.2	45	-25.5	46.7	23.8	H	54	9
17990.1	45	-25.5	46.7	23.8	V	54	9
17997.8	45	-25.5	46.7	23.8	V	54	9
17943.9	44.9	-25.5	46.7	23.7	H	54	9.1
802.11n Channel:CH140							
17952.7	45.1	-25.5	46.7	23.9	V	54	8.9
17961.5	45.1	-25.5	46.7	23.9	V	54	8.9
17965.9	45.1	-25.5	46.7	23.9	H	54	8.9
17941.7	45	-25.5	46.7	23.8	H	54	9
17951.6	45	-25.5	46.7	23.8	H	54	9
17959.3	45	-25.5	46.7	23.8	H	54	9



**802.11n-HT40**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
<b>802.11n 40MHz Channel38</b>							
17951.6	45.2	-25.5	46.7	24	V	54	8.8
17982.4	45.1	-25.5	46.7	23.9	V	54	8.9
17995.6	45.1	-25.5	46.7	23.9	V	54	8.9
17962.6	45	-25.5	46.7	23.8	H	54	9
17986.8	45	-25.5	46.7	23.8	H	54	9
5150	47.9	-17	33.7	31.2	H	54	6.1
<b>802.11n 40MHz Channel46</b>							
17980.2	45.4	-25.5	46.7	24.2	V	54	8.6
17952.7	45.2	-25.5	46.7	24	H	54	8.8
17953.8	45.1	-25.5	46.7	23.9	H	54	8.9
17957.1	45.1	-25.5	46.7	23.9	H	54	8.9
17982.4	45.1	-25.5	46.7	23.9	H	54	8.9
17965.9	45	-25.5	46.7	23.8	H	54	9
<b>802.11n 40MHz Channel54</b>							
17963.7	45	-25.5	46.7	23.8	V	54	9
17981.3	45	-25.5	46.7	23.8	V	54	9
17943.9	44.9	-25.5	46.7	23.7	V	54	9.1
17952.7	44.9	-25.5	46.7	23.7	H	54	9.1
17961.5	44.9	-25.5	46.7	23.7	H	54	9.1
17974.7	44.9	-25.5	46.7	23.7	H	54	9.1
<b>802.11n 40MHz Channel62</b>							
17964.8	45.2	-25.5	46.7	24	H	54	8.8
17983.5	45.1	-25.5	46.7	23.9	H	54	8.9
17951.6	45	-25.5	46.7	23.8	V	54	9
17952.7	45	-25.5	46.7	23.8	H	54	9
17979.1	45	-25.5	46.7	23.8	V	54	9
5350.4	47.6	-16.9	34	30.5	H	54	6.4
<b>802.11n 40MHz Channel102</b>							
17967	45.2	-25.5	46.7	24	H	54	8.8
17961.5	45.1	-25.5	46.7	23.9	H	54	8.9
17941.7	45	-25.5	46.7	23.8	H	54	9
17986.8	45	-25.5	46.7	23.8	V	54	9
17990.1	45	-25.5	46.7	23.8	H	54	9
5459.9	43.9	-16.8	34.2	26.5	H	54	10.1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n 40MHz Channel108							
17983.5	45.5	-25.5	46.7	24.3	H	54	8.5
17951.6	45.1	-25.5	46.7	23.9	V	54	8.9
17963.7	45.1	-25.5	46.7	23.9	H	54	8.9
17964.8	45.1	-25.5	46.7	23.9	H	54	8.9
17979.1	45.1	-25.5	46.7	23.9	V	54	8.9
17978	45	-25.5	46.7	23.8	V	54	9
802.11n 40MHz Channel134							
17951.6	45.2	-25.5	46.7	24	V	54	8.8
17994.5	45.1	-25.5	46.7	23.9	V	54	8.9
17956	45	-25.5	46.7	23.8	V	54	9
17961.5	45	-25.5	46.7	23.8	H	54	9
17963.7	45	-25.5	46.7	23.8	H	54	9
17981.3	45	-25.5	46.7	23.8	V	54	9

**802.11ac-VHT20**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
<b>802.11ac Channel 36</b>							
17950.5	45.1	-25.5	46.7	23.9	H	54	8.9
17951.6	45	-25.5	46.7	23.8	H	54	9
17976.9	45	-25.5	46.7	23.8	V	54	9
17994.5	45	-25.5	46.7	23.8	V	54	9
17997.8	45	-25.5	46.7	23.8	V	54	9
5149.9	45.2	-17	33.7	28.5	H	54	8.8
<b>802.11ac Channel 40</b>							
17996.7	45.5	-25.5	46.7	24.3	V	54	8.5
17958.2	45.3	-25.5	46.7	24.1	V	54	8.7
17961.5	45.1	-25.5	46.7	23.9	H	54	8.9
17978	45.1	-25.5	46.7	23.9	V	54	8.9
17987.9	45.1	-25.5	46.7	23.9	V	54	8.9
17943.9	45	-25.5	46.7	23.8	H	54	9
<b>802.11ac Channel 48</b>							
17964.8	45.1	-25.5	46.7	23.9	V	54	8.9
17938.4	45	-25.5	46.7	23.8	H	54	9
17952.7	45	-25.5	46.7	23.8	V	54	9
17957.1	45	-25.5	46.7	23.8	H	54	9
17958.2	45	-25.5	46.7	23.8	H	54	9
17960.4	45	-25.5	46.7	23.8	V	54	9
<b>802.11ac Channel 52</b>							
17989	45.2	-25.5	46.7	24	H	54	8.8
17985.7	45.1	-25.5	46.7	23.9	H	54	8.9
17970.3	45	-25.5	46.7	23.8	V	54	9
17949.4	44.9	-25.5	46.7	23.7	H	54	9.1
17967	44.9	-25.5	46.7	23.7	V	54	9.1
17979.1	44.9	-25.5	46.7	23.7	V	54	9.1
<b>802.11ac Channel 56</b>							
17979.1	45.1	-25.5	46.7	23.9	V	54	8.9
17980.2	45.1	-25.5	46.7	23.9	V	54	8.9
17952.7	45	-25.5	46.7	23.8	V	54	9
17965.9	45	-25.5	46.7	23.8	H	54	9
17983.5	45	-25.5	46.7	23.8	H	54	9
17989	45	-25.5	46.7	23.8	V	54	9

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11ac Channel 64							
17963.7	45.3	-25.5	46.7	24.1	H	54	8.7
17953.8	45	-25.5	46.7	23.8	V	54	9
17958.2	45	-25.5	46.7	23.8	H	54	9
17959.3	45	-25.5	46.7	23.8	H	54	9
17960.4	45	-25.5	46.7	23.8	H	54	9
5350.3	45.9	-16.9	34	28.8	H	54	8.1
802.11ac Channel 100							
17943.9	45.2	-25.5	46.7	24	H	54	8.8
17940.6	45.1	-25.5	46.7	23.9	V	54	8.9
17949.4	45.1	-25.5	46.7	23.9	H	54	8.9
17951.6	45.1	-25.5	46.7	23.9	H	54	8.9
17959.3	45.1	-25.5	46.7	23.9	V	54	8.9
5457.6	40.1	-16.8	34.2	22.7	V	54	13.9
802.11ac Channel 120							
17984.6	45.2	-25.5	46.7	24	V	54	8.8
17989	45.2	-25.5	46.7	24	H	54	8.8
17978	45.1	-25.5	46.7	23.9	H	54	8.9
17983.5	45.1	-25.5	46.7	23.9	H	54	8.9
17991.2	45.1	-25.5	46.7	23.9	V	54	8.9
17994.5	45.1	-25.5	46.7	23.9	V	54	8.9
802.11ac Channel 140							
17965.9	45.1	-25.5	46.7	23.9	V	54	8.9
17970.3	45.1	-25.5	46.7	23.9	H	54	8.9
17979.1	45.1	-25.5	46.7	23.9	V	54	8.9
17947.2	45	-25.5	46.7	23.8	H	54	9
17962.6	45	-25.5	46.7	23.8	H	54	9
17964.8	45	-25.5	46.7	23.8	H	54	9

**802.11ac-HT40**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
<b>802.11ac 40M Channel:CH38</b>							
17997.8	45.3	-25.5	46.7	24.1	H	54	8.7
17950.5	45.2	-25.5	46.7	24	V	54	8.8
17979.1	45.1	-25.5	46.7	23.9	H	54	8.9
17996.7	45	-25.5	46.7	23.8	H	54	9
17936.2	44.9	-25.5	46.7	23.7	H	54	9.1
5149.9	48.2	-17	33.7	31.5	H	54	5.8
<b>802.11ac 40M Channel:CH46</b>							
17975.8	45.3	-25.5	46.7	24.1	H	54	8.7
17949.4	45	-25.5	46.7	23.8	H	54	9
17958.2	45	-25.5	46.7	23.8	V	54	9
17960.4	45	-25.5	46.7	23.8	V	54	9
17980.2	45	-25.5	46.7	23.8	V	54	9
17989	45	-25.5	46.7	23.8	H	54	9
<b>802.11ac 40M Channel:CH54</b>							
17989	45.2	-25.5	46.7	24	V	54	8.8
17941.7	45	-25.5	46.7	23.8	H	54	9
17974.7	44.9	-25.5	46.7	23.7	H	54	9.1
17986.8	44.9	-25.5	46.7	23.7	V	54	9.1
17987.9	44.9	-25.5	46.7	23.7	H	54	9.1
17994.5	44.9	-25.5	46.7	23.7	H	54	9.1
<b>802.11ac 40M Channel:CH62</b>							
17956	45.2	-25.5	46.7	24	H	54	8.8
17964.8	45.1	-25.5	46.7	23.9	V	54	8.9
17990.1	45.1	-25.5	46.7	23.9	V	54	8.9
17994.5	45.1	-25.5	46.7	23.9	V	54	8.9
17938.4	45	-25.5	46.7	23.8	V	54	9
5350.6	48.5	-16.9	34	31.4	H	54	5.5
<b>802.11ac 40M Channel:CH102</b>							
17950.5	45.3	-25.5	46.7	24.1	V	54	8.7
17994.5	45.3	-25.5	46.7	24.1	H	54	8.7
17997.8	45.3	-25.5	46.7	24.1	H	54	8.7
17960.4	45.2	-25.5	46.7	24	V	54	8.8
17958.2	45.1	-25.5	46.7	23.9	V	54	8.9
5459.8	43.3	-16.8	34.2	25.9	H	54	10.7

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 40M Channel:CH118							
17970.3	45.1	-25.5	46.7	23.9	H	54	8.9
17976.9	45.1	-25.5	46.7	23.9	H	54	8.9
17985.7	45.1	-25.5	46.7	23.9	H	54	8.9
17990.1	45.1	-25.5	46.7	23.9	H	54	8.9
17952.7	45	-25.5	46.7	23.8	H	54	9
17959.3	45	-25.5	46.7	23.8	H	54	9
802.11ac 40M Channel:CH134							
17952.7	45.2	-25.5	46.7	24	V	54	8.8
17970.3	45.2	-25.5	46.7	24	H	54	8.8
17959.3	45.1	-25.5	46.7	23.9	H	54	8.9
17962.6	45.1	-25.5	46.7	23.9	V	54	8.9
17964.8	45.1	-25.5	46.7	23.9	H	54	8.9
17979.1	45.1	-25.5	46.7	23.9	V	54	8.9

**802.11ac-HT80**

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 80M Channel:CH42							
17991.2	45.2	-25.5	46.7	24	H	54	8.8
17957.1	45.1	-25.5	46.7	23.9	H	54	8.9
17963.7	45.1	-25.5	46.7	23.9	V	54	8.9
17987.9	45.1	-25.5	46.7	23.9	H	54	8.9
17948.3	45	-25.5	46.7	23.8	V	54	9
5147.4	45	-17	33.7	28.3	H	54	9
802.11ac 80M Channel:CH58							
17942.8	45.1	-25.5	46.7	23.9	H	54	8.9
17964.8	45.1	-25.5	46.7	23.9	H	54	8.9
17979.1	45.1	-25.5	46.7	23.9	V	54	8.9
17992.3	45.1	-25.5	46.7	23.9	V	54	8.9
17963.7	45	-25.5	46.7	23.8	H	54	9
5351	43.6	-16.9	34	26.5	H	54	10.4
802.11ac 80M Channel:CH106							
17956	45.2	-25.5	46.7	24	V	54	8.8
17973.6	45.1	-25.5	46.7	23.9	H	54	8.9
17982.4	45	-25.5	46.7	23.8	H	54	9
17997.8	45	-25.5	46.7	23.8	V	54	9
17941.7	44.9	-25.5	46.7	23.7	V	54	9.1
5458.2	41.7	-16.8	34.2	24.3	H	54	12.3

Sample calculation:

802.11ac 80M CH106–AV, 5458.2MHz

Result (dBuV/m) = PMea(24.3) + Cable Loss(-16.8) + Antenna Factor(34.2) = 41.7dBuV/m

### A.7. AC Powerline Conducted Emission (150kHz- 30MHz)

**Test Condition:**

Voltage (V)	Frequency (Hz)
110	60

**Measurement Result and limit:**

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		11a mode		
0.15 to 0.5	66 to 56	Fig.75		P
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		11a mode		
0.15 to 0.5	56 to 46	Fig.75		P
0.5 to 5	46			
5 to 30	50			

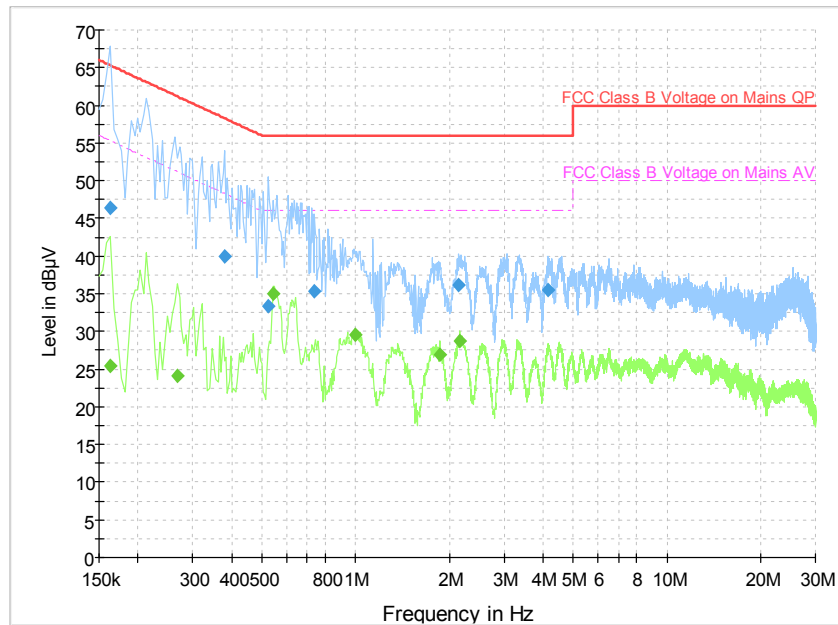
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

**Conclusion: PASS**

Test graphs as below:

Result for Traffic:





**Fig.75 Conducted Emission (802.11a, Ch40, TX)**

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	46.4	L1	20.2	18.9	65.3
0.379500	39.9	L1	20.1	18.4	58.3
0.523500	33.4	L1	20.1	22.6	56.0
0.739500	35.4	L1	20.1	20.6	56.0
2.148000	36.1	L1	20.1	19.9	56.0
4.164000	35.5	L1	20.6	20.5	56.0

**Final Result 2**

Frequency (MHz)	Average (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	25.4	L1	20.2	29.9	55.3
0.267000	24.1	L1	20.0	27.1	51.2
0.546000	35.0	L1	20.1	11.0	46.0
0.996000	29.6	L1	19.8	16.4	46.0
1.864500	27.0	L1	20.0	19.0	46.0
2.166000	28.7	L1	20.1	17.3	46.0

### A.8. 99% Occupied bandwidth

Method of Measurement: See ANSI C63.10-2013-clause 12.4.2.

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (OBW/RBW)]$  below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

#### Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
-------------------------	---------

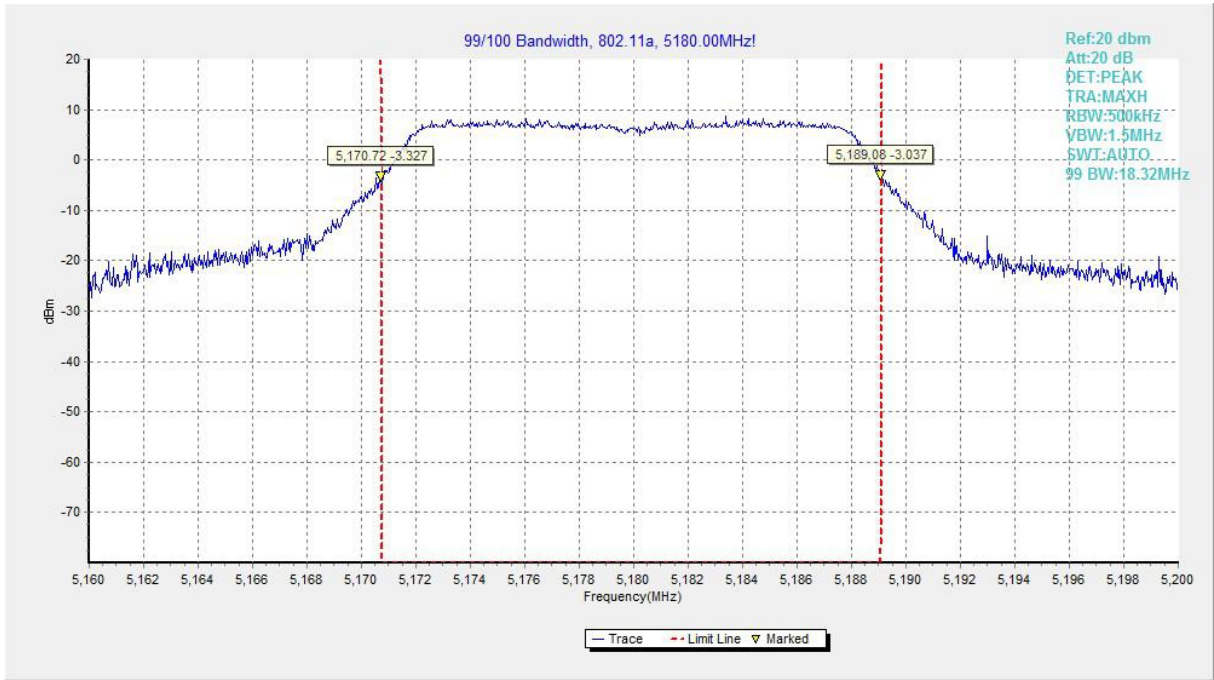
#### Measurement Result:

Mode	Frequency	99% Occupied bandwidth ( MHz)		conclusion
802.11a	5180 MHz	Fig.76	18.32	P
	5200 MHz	Fig.77	18.44	P
	5240 MHz	Fig.78	18.28	P
802.11n HT20	5180 MHz	Fig.79	18.96	P
	5200 MHz	Fig.80	19.04	P
	5240 MHz	Fig.81	19.00	P
802.11ac HT20	5180 MHz	Fig.82	18.84	P
	5200 MHz	Fig.83	18.84	P
	5240 MHz	Fig.84	18.84	P
802.11n HT40	5190 MHz	Fig.85	36.56	P
	5230 MHz	Fig.86	36.64	P

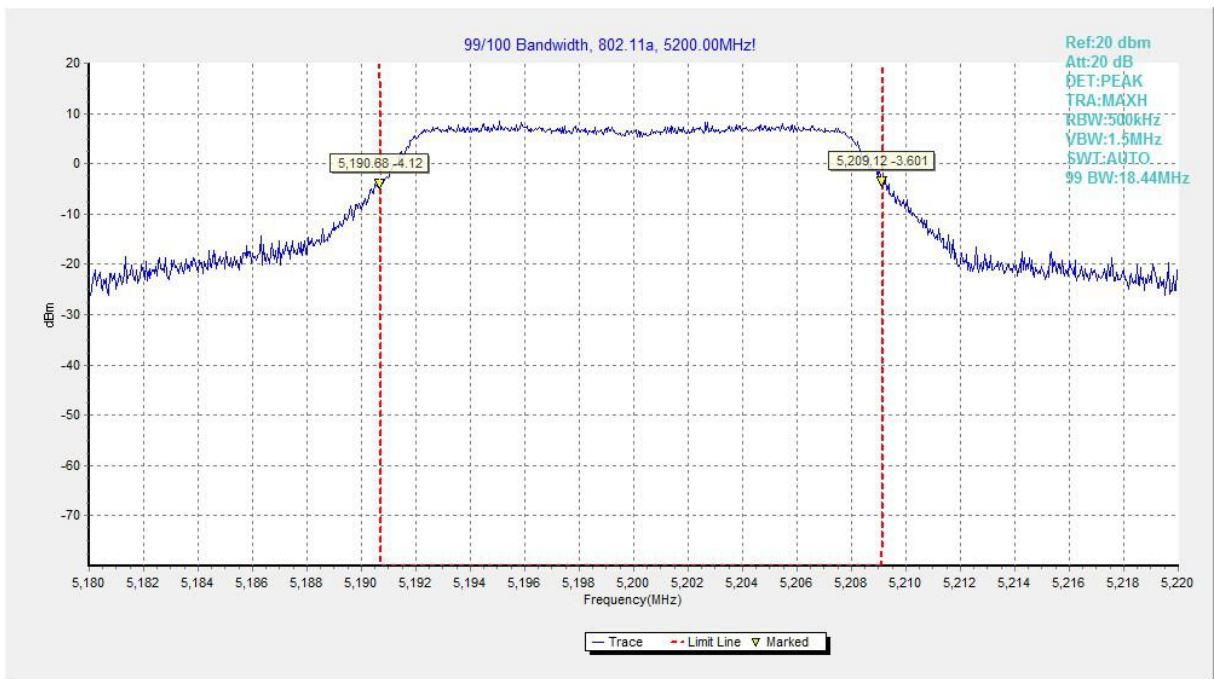
802.11ac HT40	5190 MHz	Fig.87	36.64	P
	5230 MHz	Fig.88	36.56	P
802.11ac HT80	5210 MHz	Fig.89	75.04	P

**Conclusion: PASS**

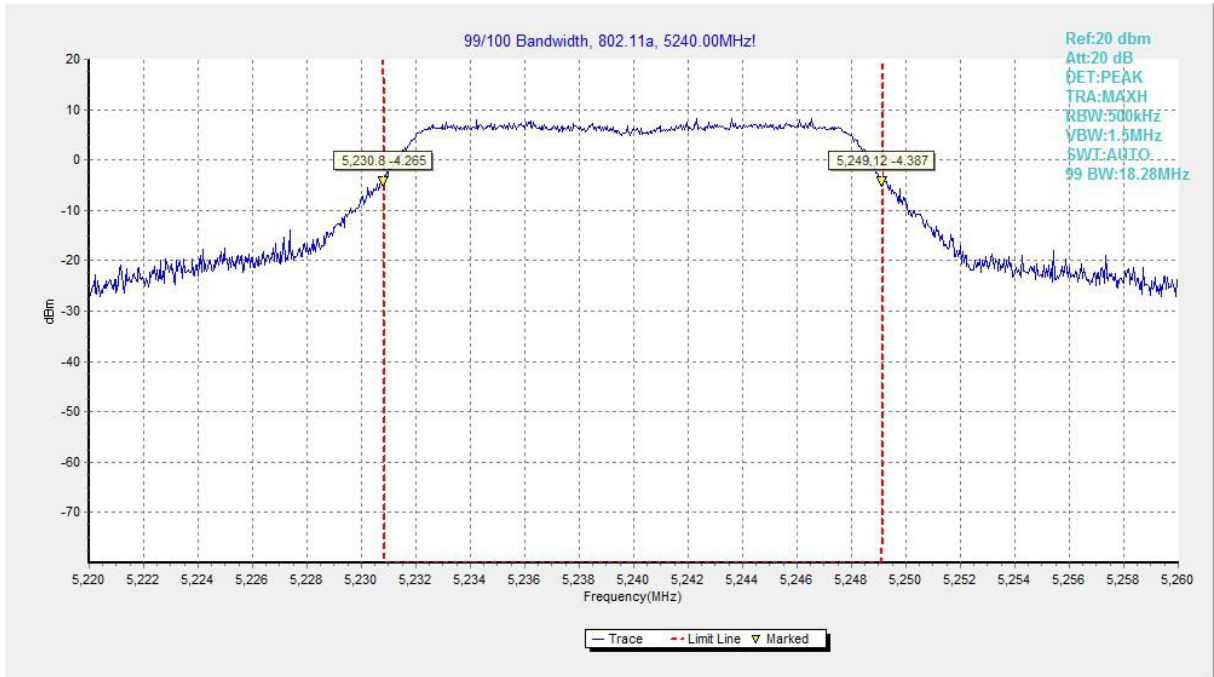
**Test graphs as below:**



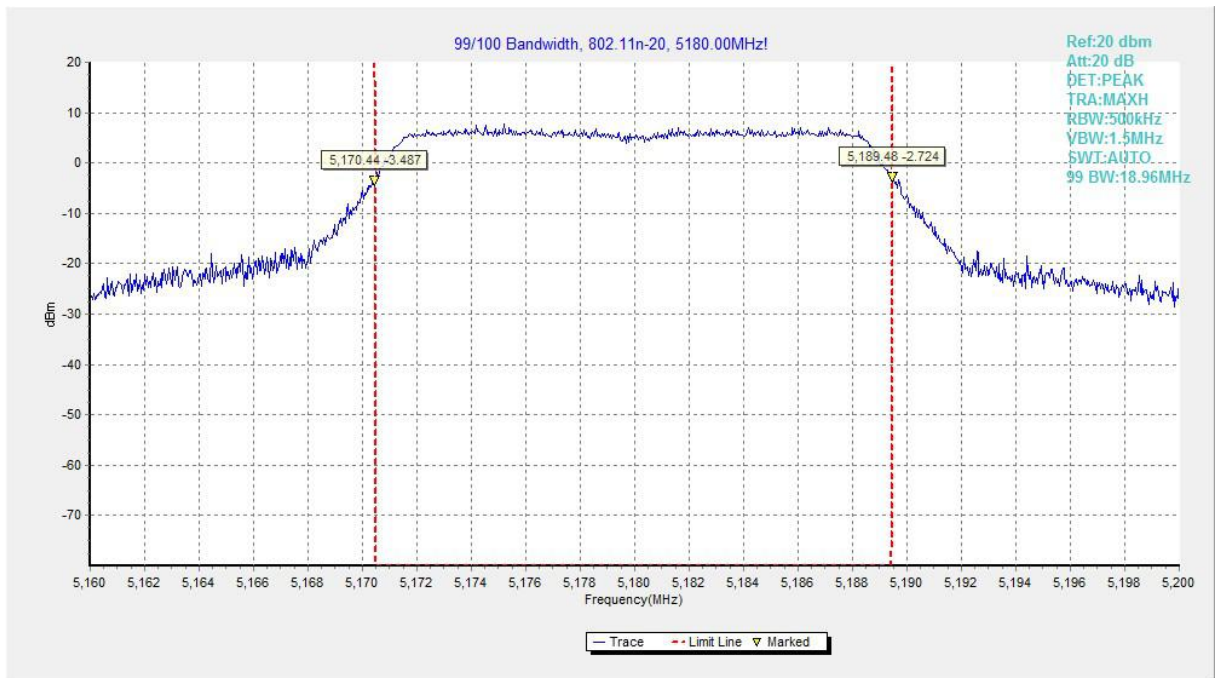
**Fig.76 99% Occupied bandwidth (802.11a, 5180MHz)**



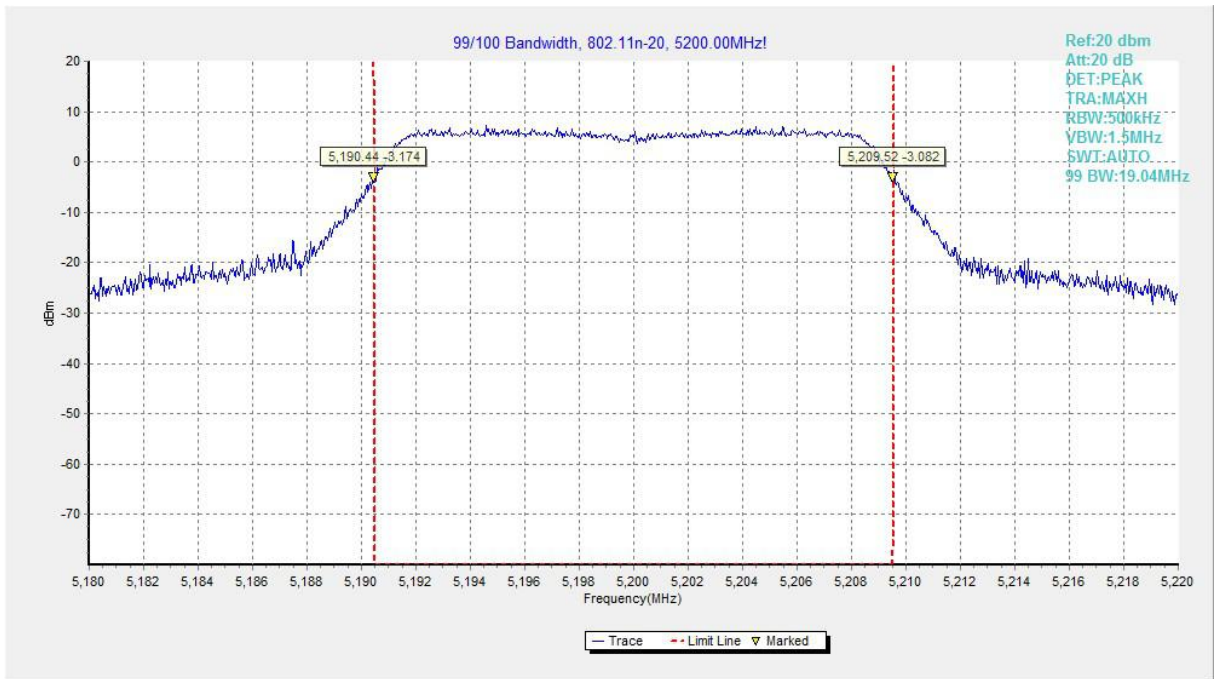
**Fig.77 99% Occupied bandwidth (802.11a, 5200MHz)**



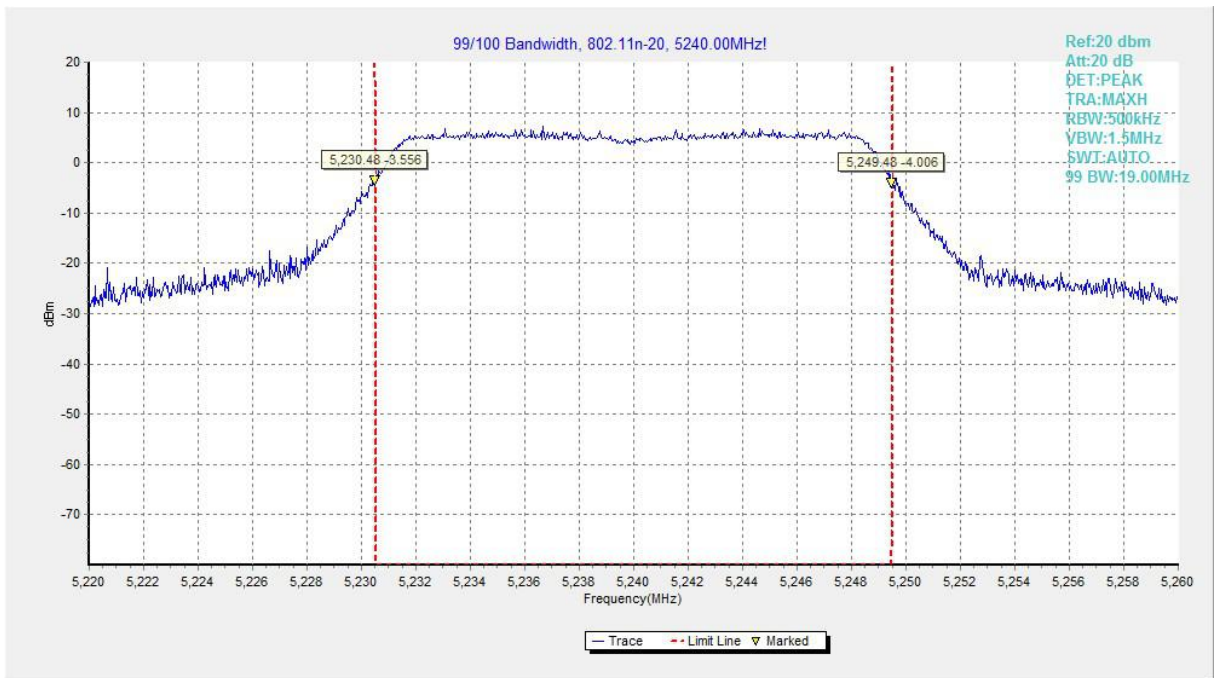
**Fig.78 99% Occupied bandwidth (802.11a, 5240MHz)**



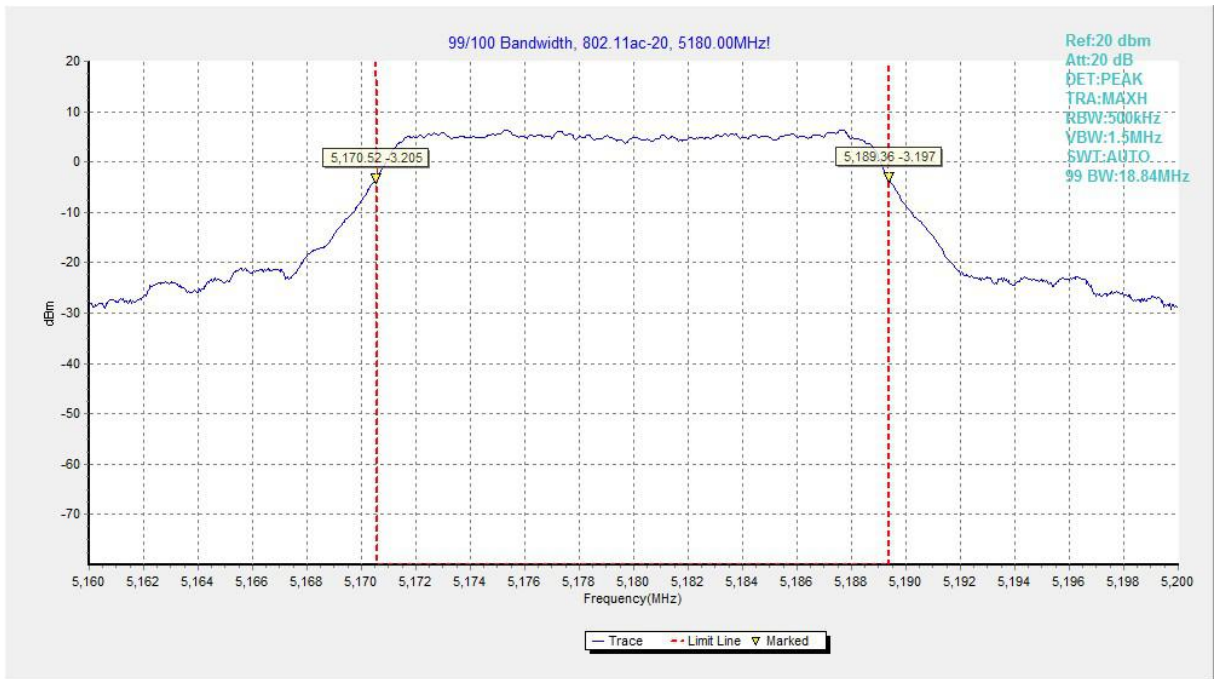
**Fig.79 99% Occupied bandwidth (802.11n-HT20, 5180MHz)**



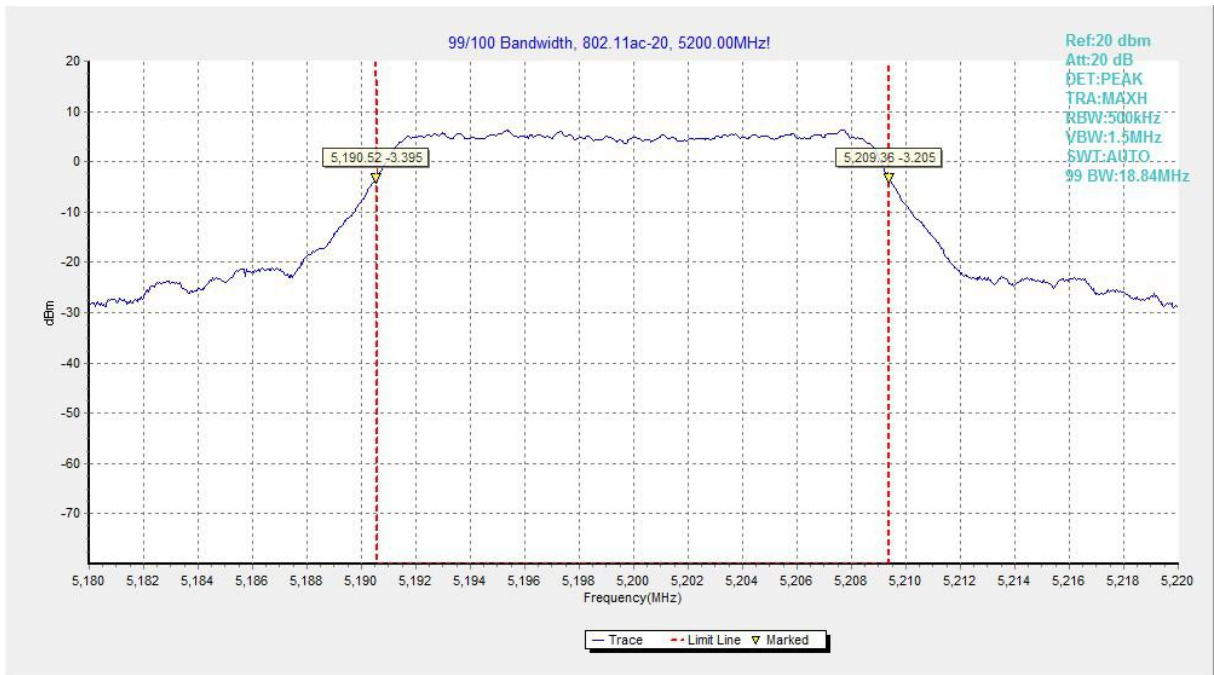
**Fig.80 99% Occupied bandwidth (802.11n-HT20, 5200MHz)**



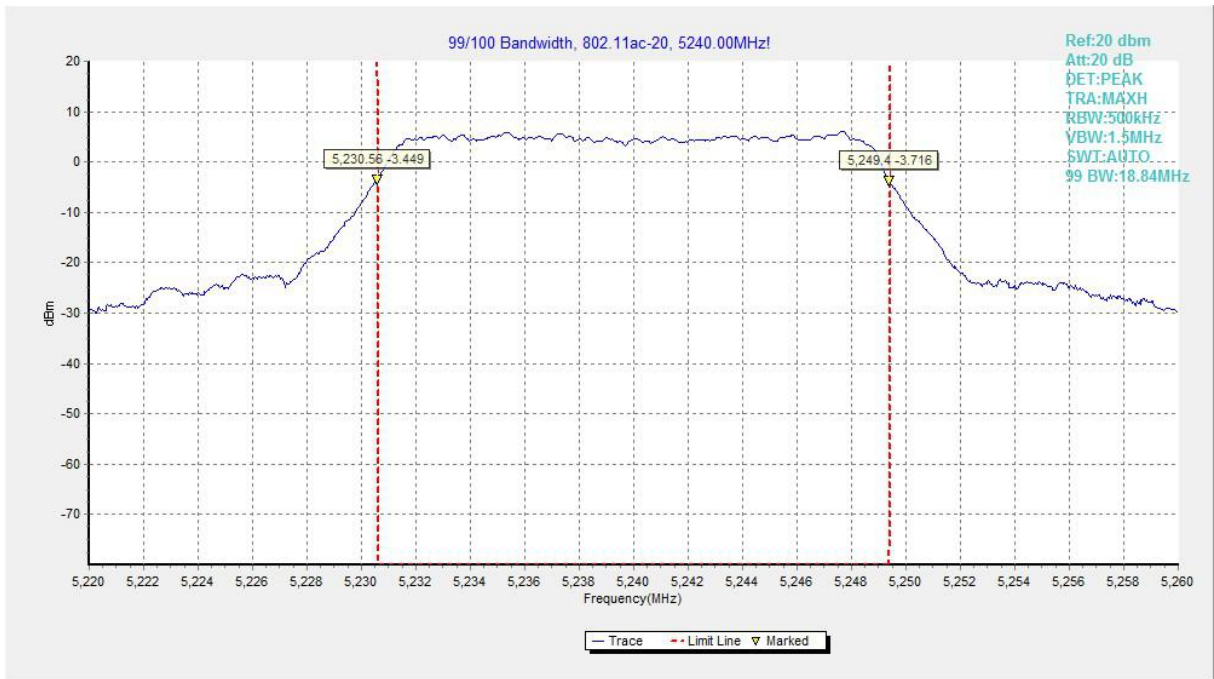
**Fig.81 99% Occupied bandwidth (802.11n-HT20, 5240MHz)**



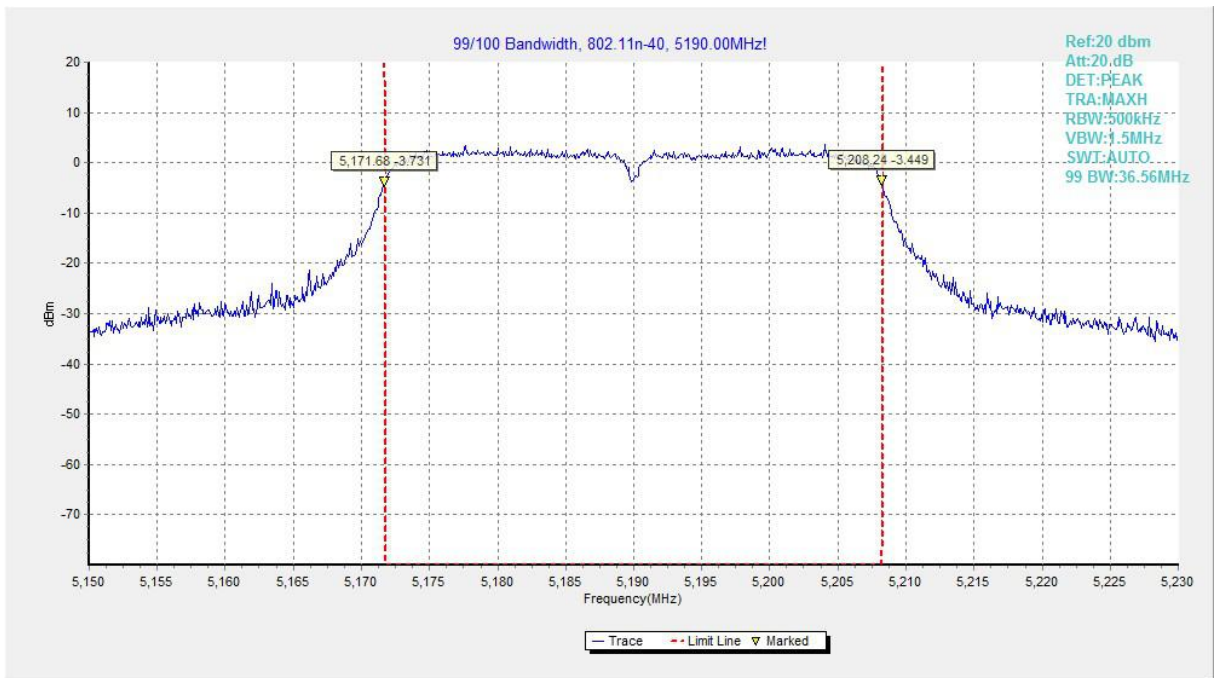
**Fig.82 99% Occupied bandwidth (802.11ac-HT20, 5180MHz)**



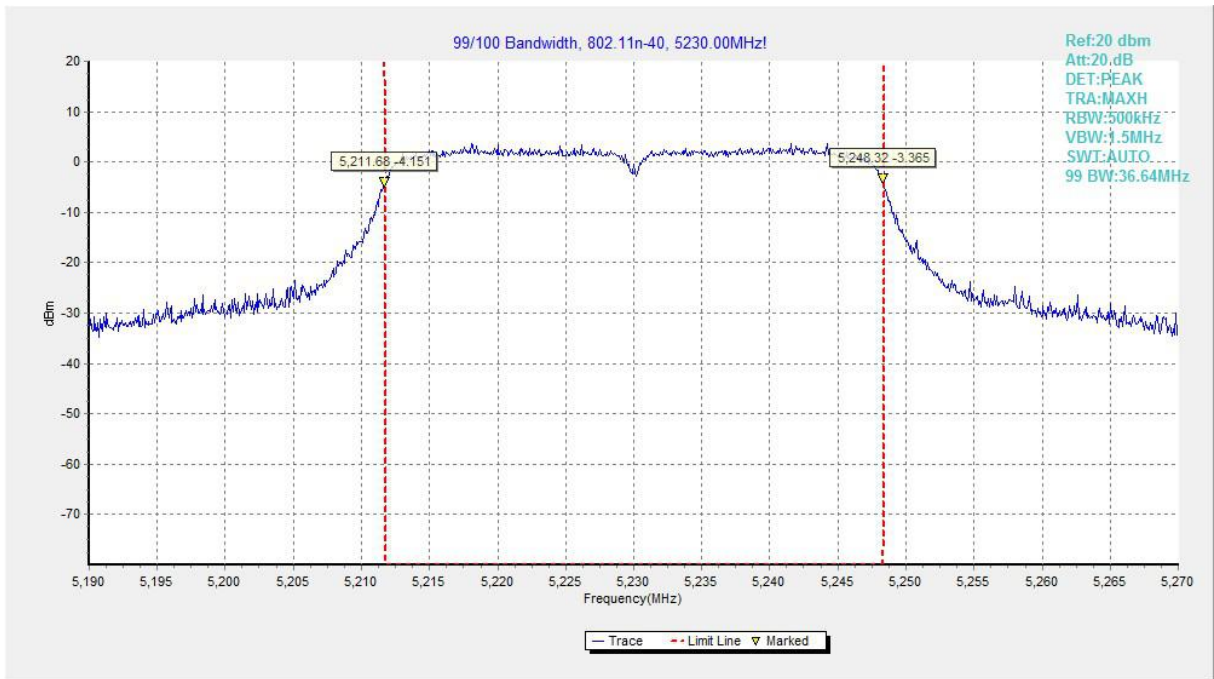
**Fig.83 99% Occupied bandwidth (802.11ac-HT20, 5200MHz)**



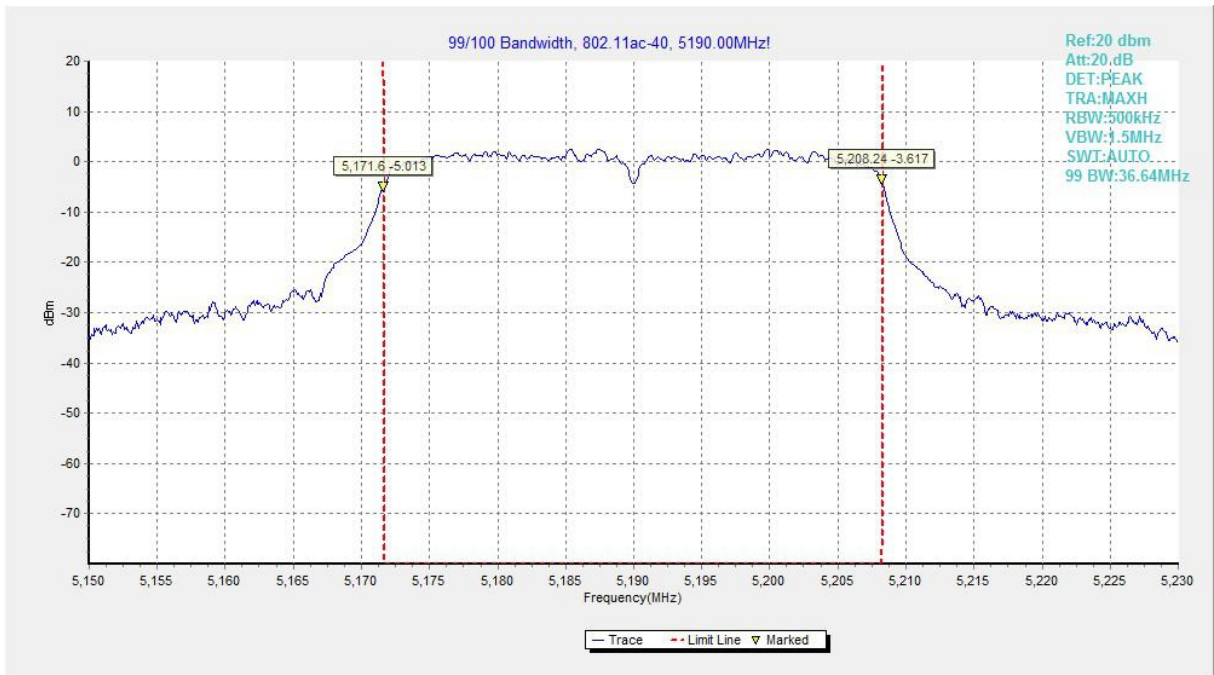
**Fig.84 99% Occupied bandwidth (802.11ac-HT20, 5240MHz)**



**Fig.85 99% Occupied bandwidth (802.11n-HT40, 5190MHz)**

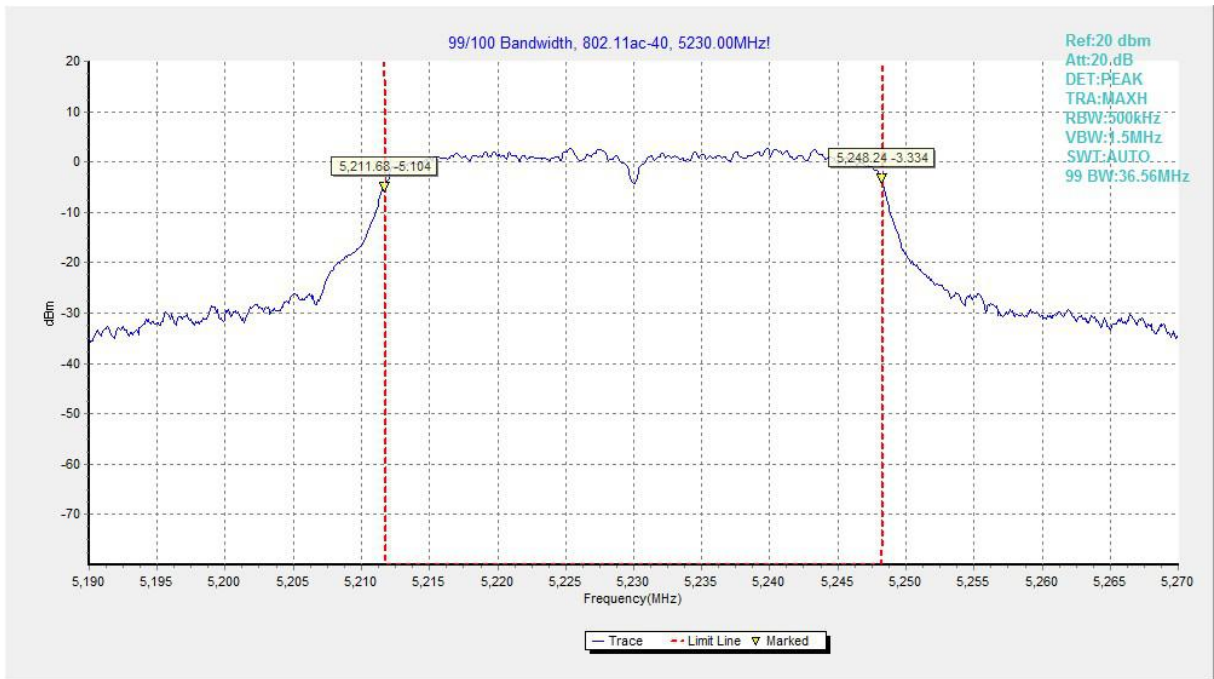


**Fig.86 99% Occupied bandwidth (802.11n-HT40, 5230MHz)**

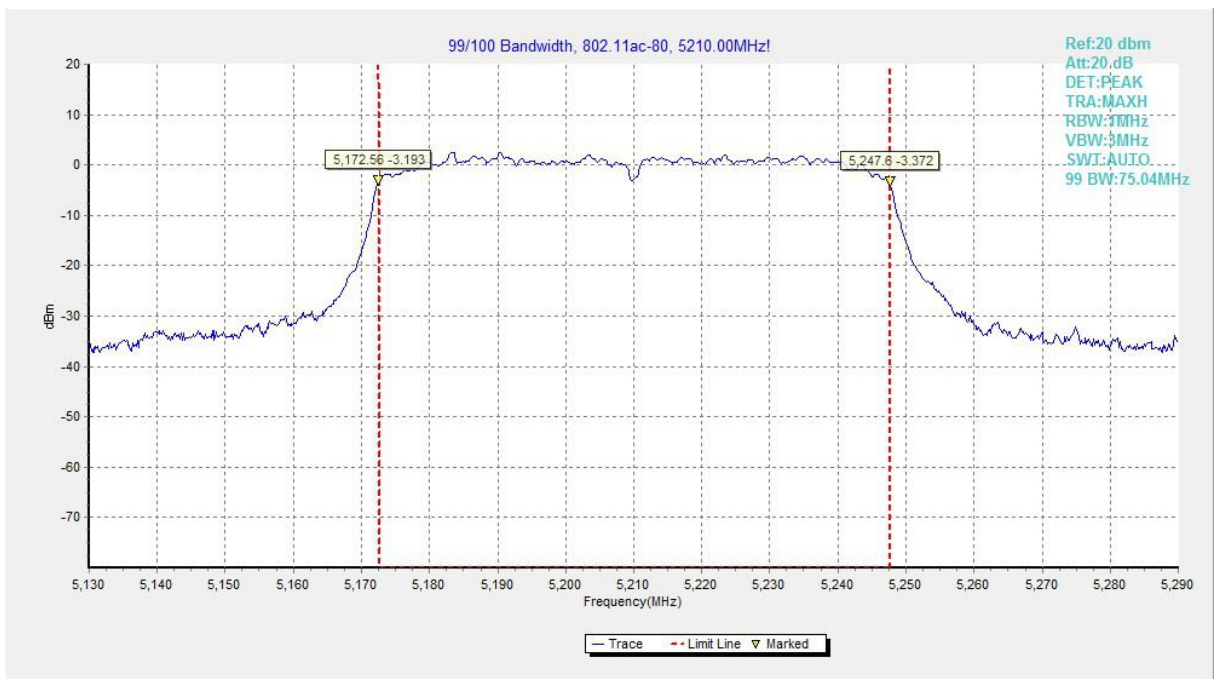


**Fig.87 99% Occupied bandwidth (802.11ac-HT40, 5190MHz)**





**Fig.88 99% Occupied bandwidth (802.11ac-HT40, 5230MHz)**



**Fig.89 99% Occupied bandwidth (802.11ac-HT80, 5210MHz)**

### A.9. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500 mW).

## ANNEX B: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p> 	
<hr/> <p><b>Certificate of Accreditation to ISO/IEC 17025:2005</b></p> <hr/>	
<p>NVLAP LAB CODE: 600118-0</p>	
<p><b>Telecommunication Technology Labs, CAICT</b> Beijing China</p>	
<p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p>	
<p><b>Electromagnetic Compatibility &amp; Telecommunications</b></p>	
<p><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i></p>	
<hr/> <p>2019-09-26 through 2020-09-30 <i>Effective Dates</i></p>	 <hr/> <p><i>[Signature]</i> For the National Voluntary Laboratory Accreditation Program</p>

\*\*\* END OF REPORT BODY \*\*\*