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:

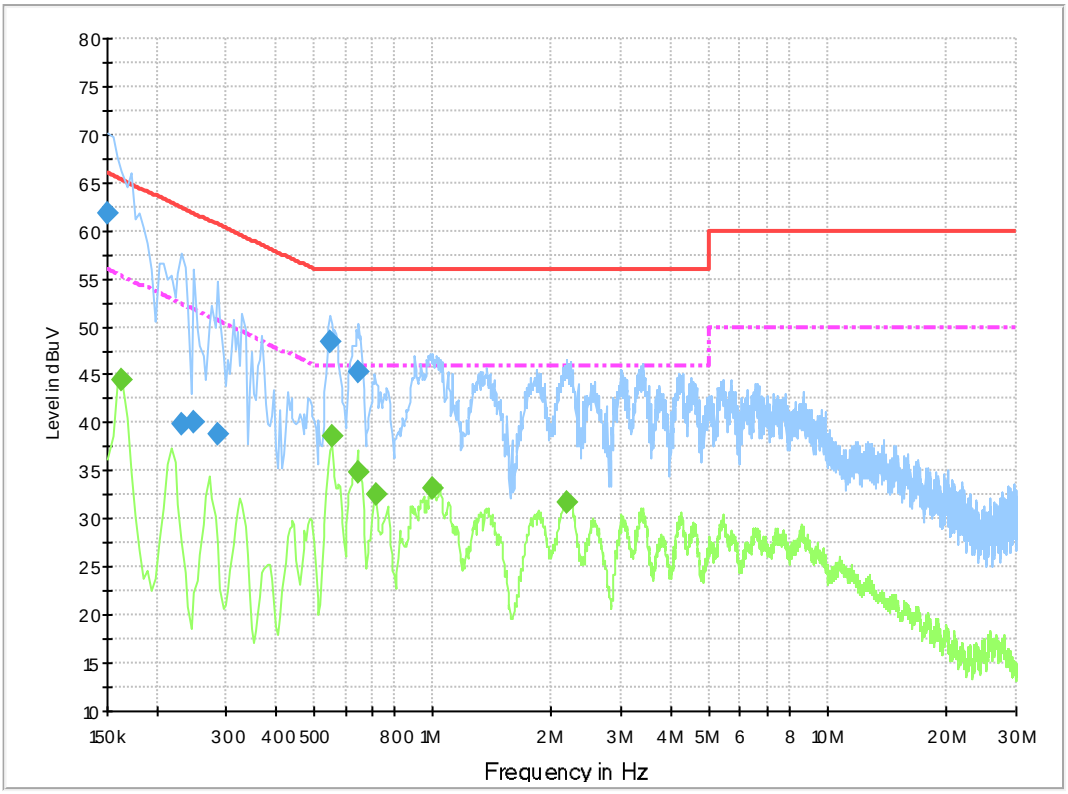

Fig.75 Conducted Emission(802.11a, Ch40, TX)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Margin (dB)	Limit (dBµV)
0.150000	61.9	L1	4.1	66.0
0.231000	39.9	N	22.5	62.4
0.249000	40.2	N	21.6	61.8
0.285000	38.9	N	21.8	60.7
0.550500	48.4	L1	7.6	56.0
0.649500	45.4	L1	10.6	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Line	Margin (dB)	Limit (dBµV)
0.163500	44.5	N	10.8	55.3
0.555000	38.6	N	7.4	46.0
0.645000	34.9	N	11.1	46.0
0.717000	32.6	L1	13.4	46.0
1.000500	33.3	L1	12.7	46.0
2.184000	31.8	L1	14.2	46.0

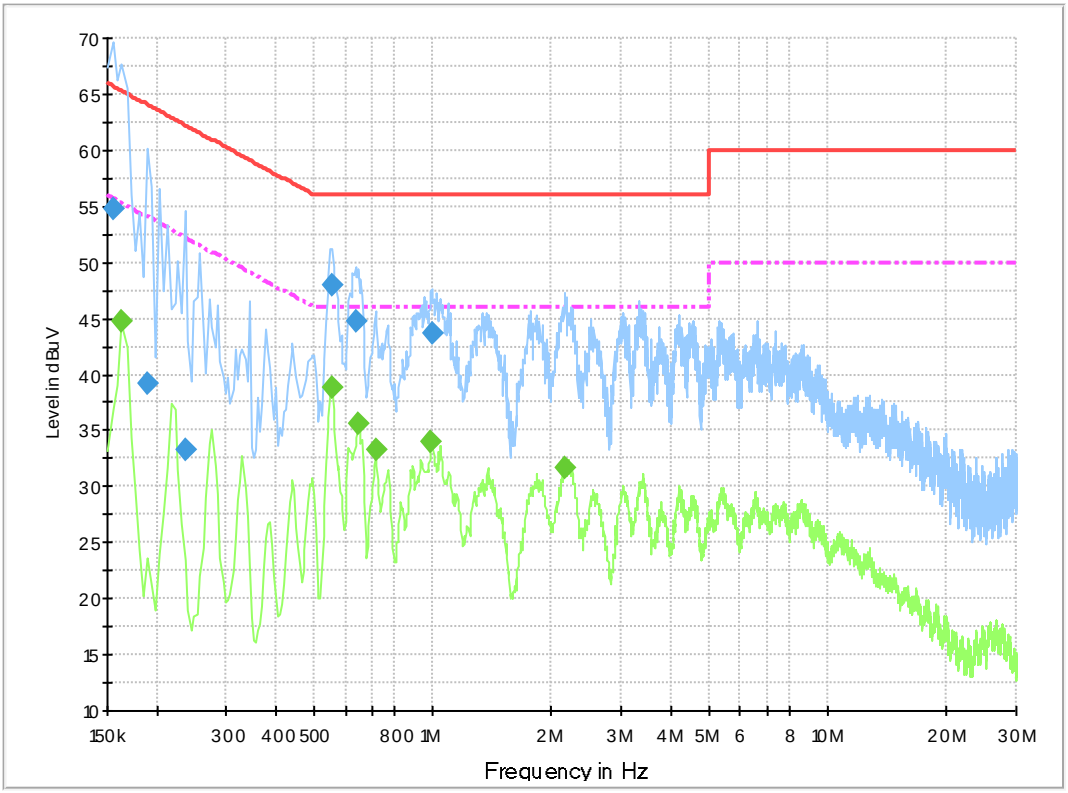

Fig.76 Conducted Emission(802.11a, IDLE)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Margin (dB)	Limit (dBµV)
0.154500	54.8	N	11.0	65.8
0.190500	39.1	N	24.9	64.0
0.235500	33.3	N	29.0	62.3
0.555000	47.9	L1	8.1	56.0
0.636000	44.7	L1	11.3	56.0
0.996000	43.8	L1	12.2	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Line	Margin (dB)	Limit (dBµV)
0.163500	44.7	N	10.6	55.3
0.555000	38.8	N	7.2	46.0
0.649500	35.6	N	10.4	46.0
0.717000	33.2	L1	12.8	46.0
0.991500	34.1	L1	11.9	46.0
2.161500	31.7	L1	14.3	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% ofthe 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.77	17.12	P
	5200 MHz	Fig.78	17.12	P
	5240 MHz	Fig.79	17.11	P
802.11n HT20	5180 MHz	Fig.80	18.29	P
	5200 MHz	Fig.81	18.25	P
	5240 MHz	Fig.82	18.30	P
802.11ac HT20	5180 MHz	Fig.83	18.32	P
	5200 MHz	Fig.84	18.27	P
	5240 MHz	Fig.85	18.32	P
802.11n HT40	5190 MHz	Fig.86	36.28	P
	5230 MHz	Fig.87	36.36	P
802.11ac	5190 MHz	Fig.88	36.28	P

HT40	5230 MHz	Fig.89	36.36	P
802.11ac HT80	5210 MHz	Fig.90	75.66	P

Conclusion: PASS

Test graphs as below:

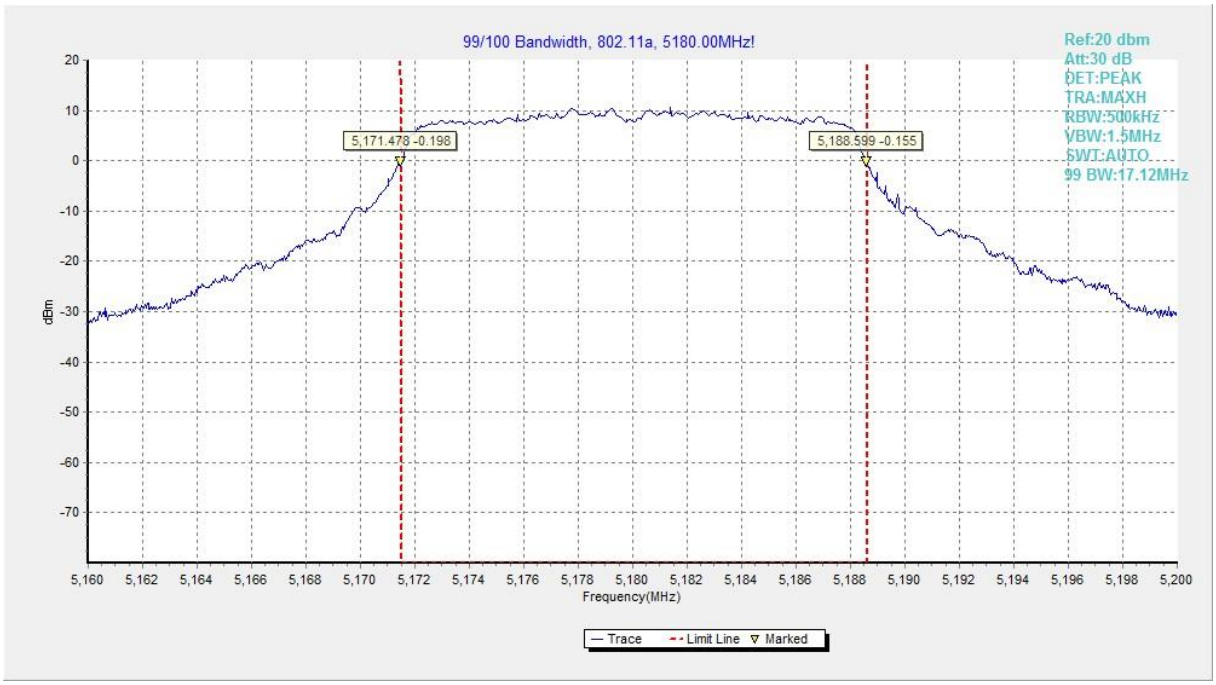

Fig.77 99% Occupied bandwidth (802.11a, 5180MHz)

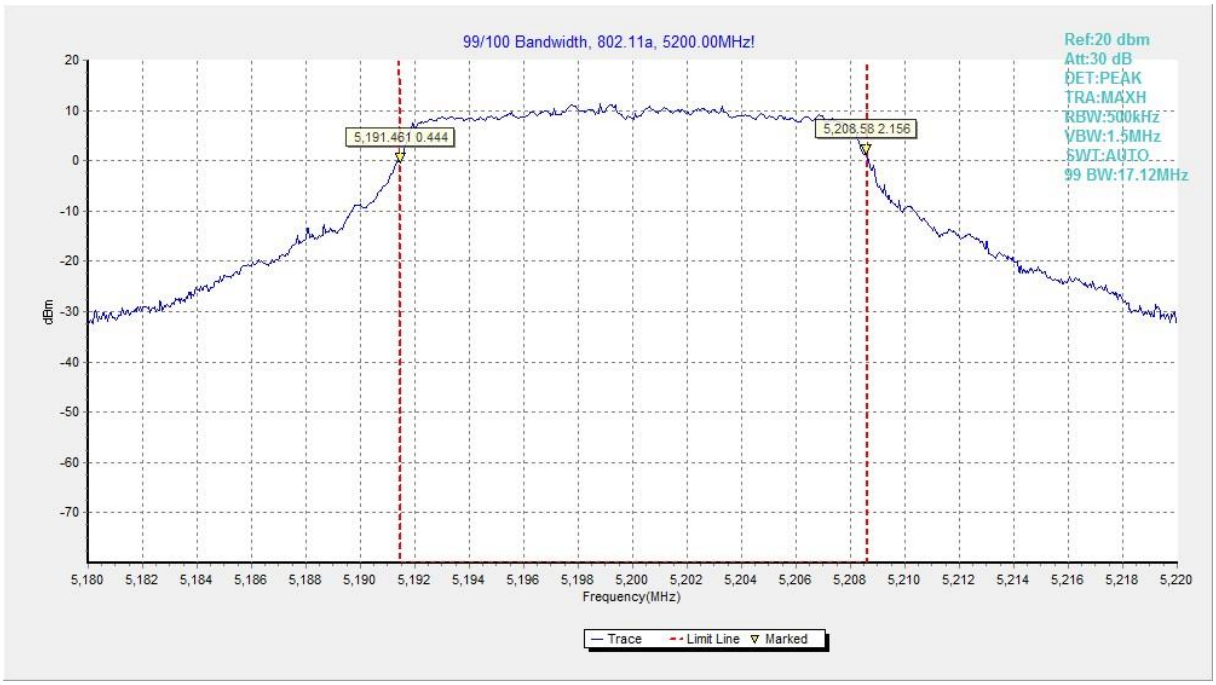

Fig.78 99% Occupied bandwidth (802.11a, 5200MHz)

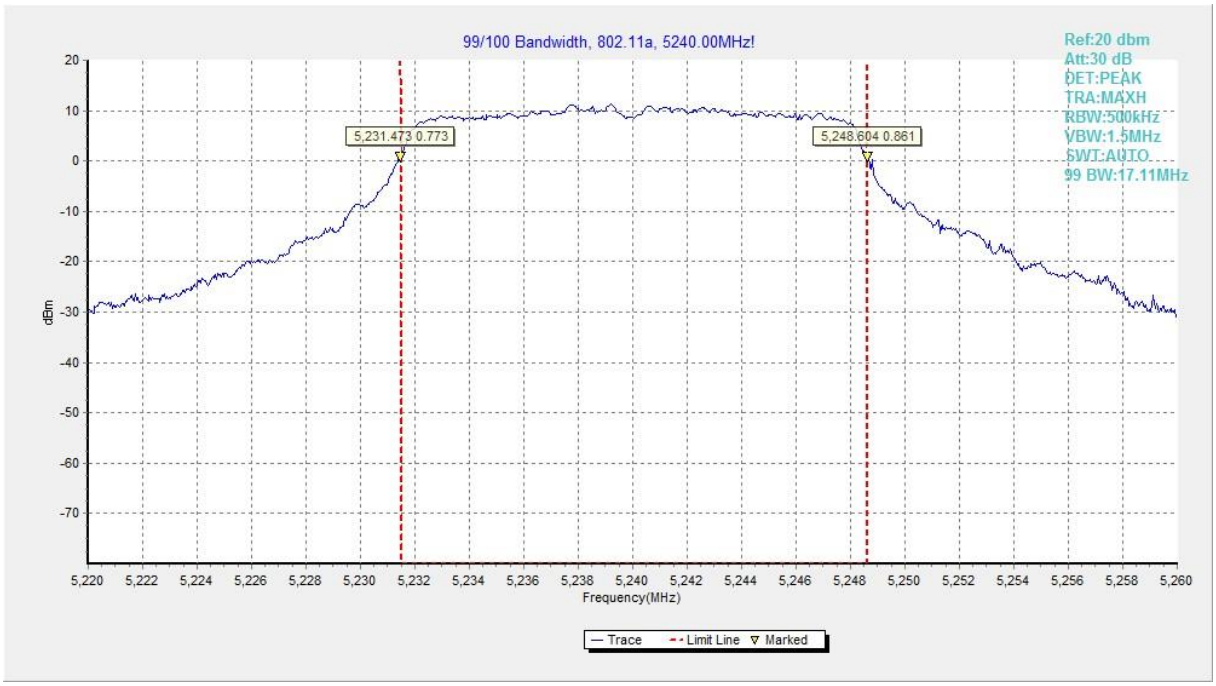

Fig.79 99% Occupied bandwidth (802.11a, 5240MHz)

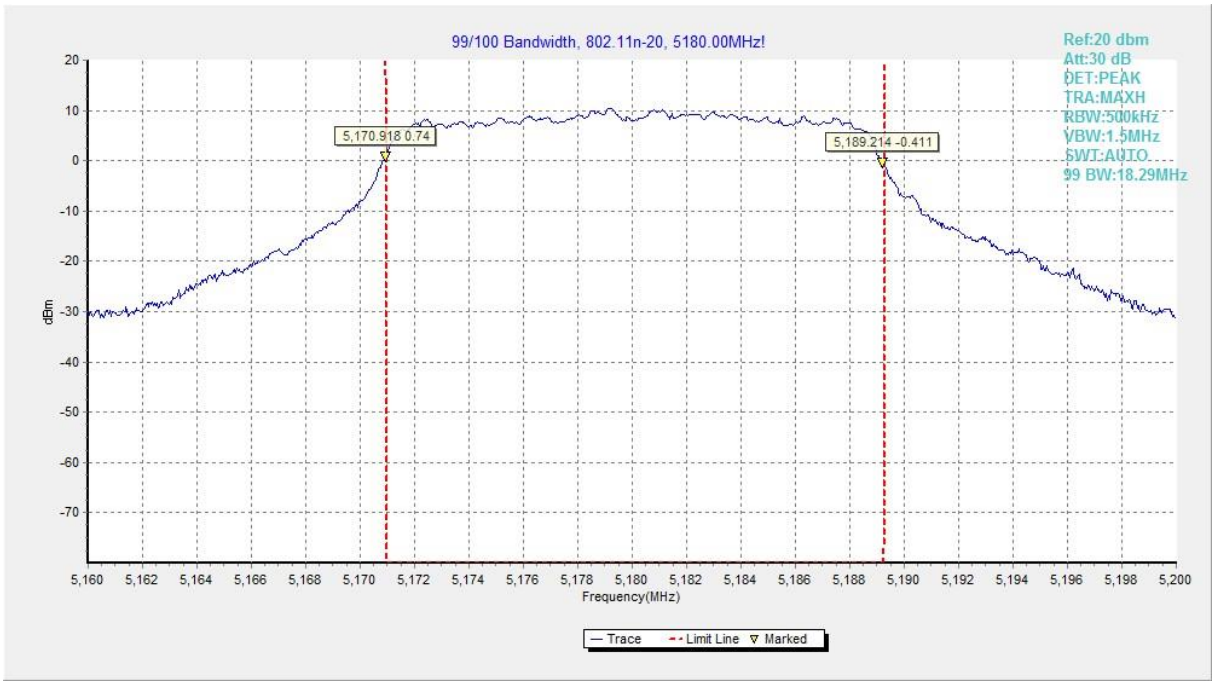

Fig.80 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

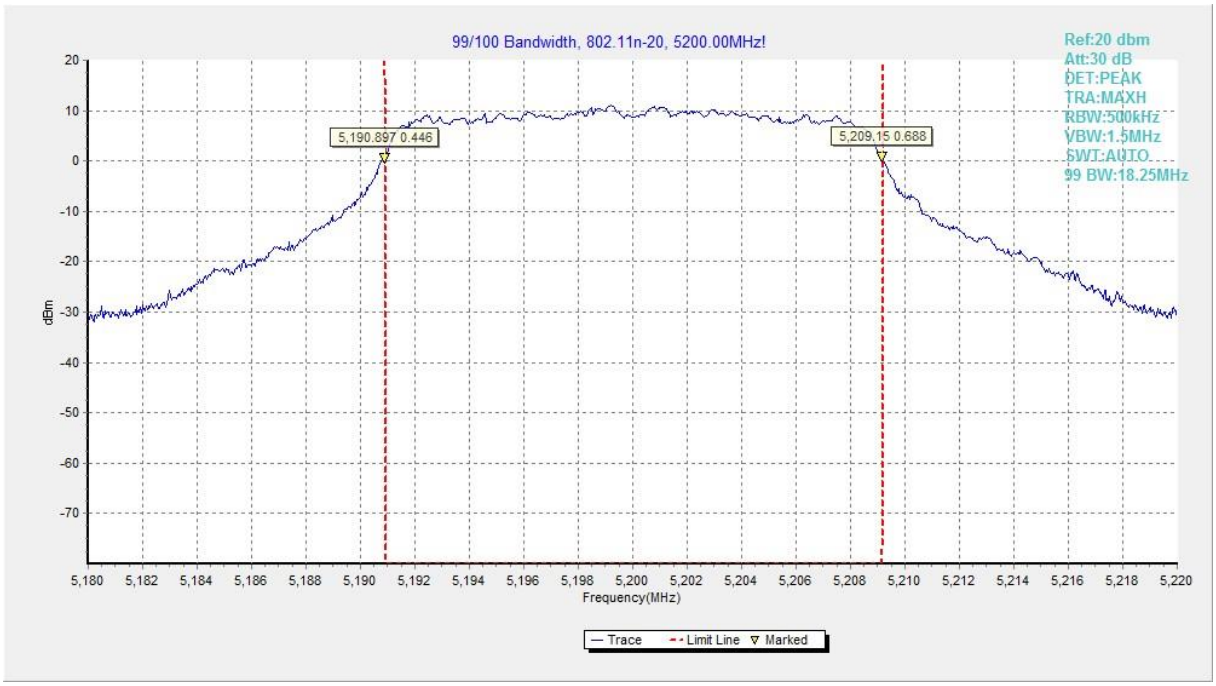

Fig.81 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

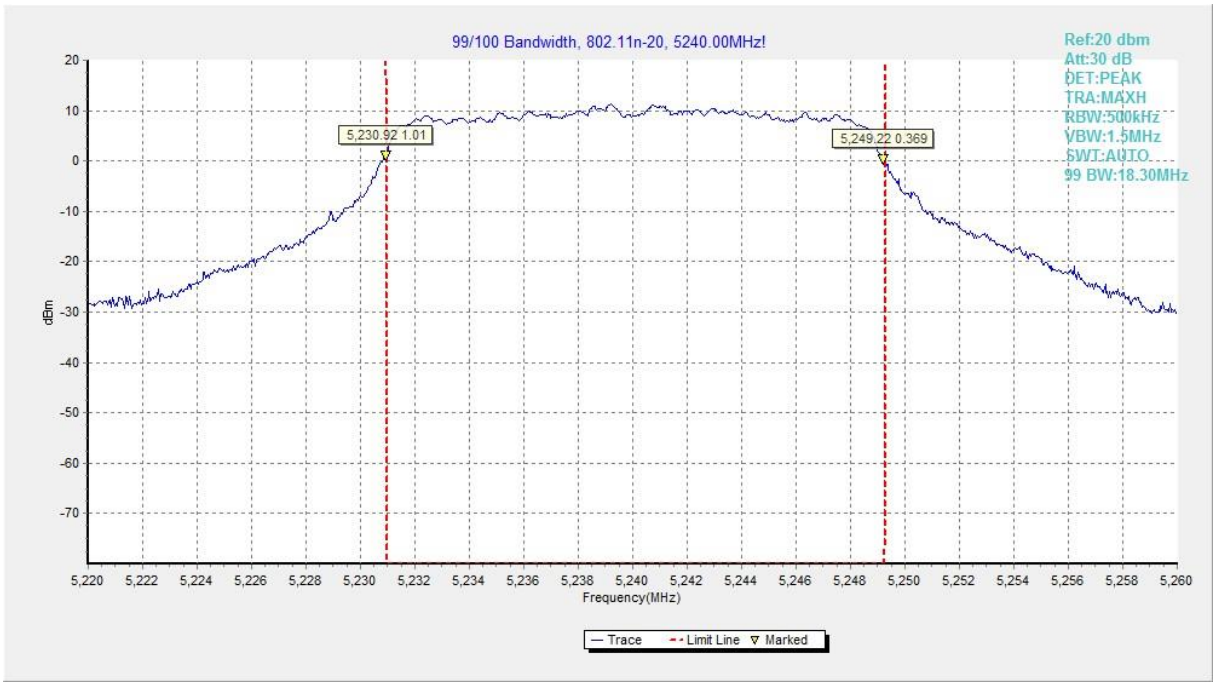

Fig.82 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

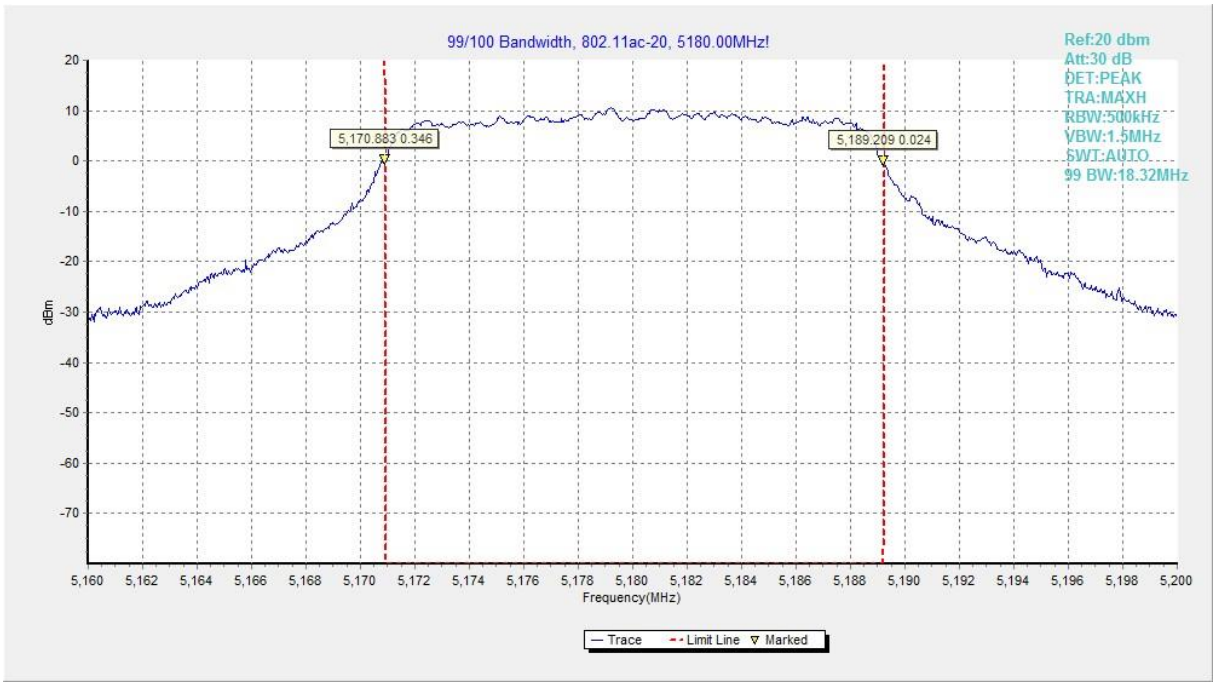

Fig.83 99% Occupied bandwidth (802.11ac-HT20, 5180MHz)

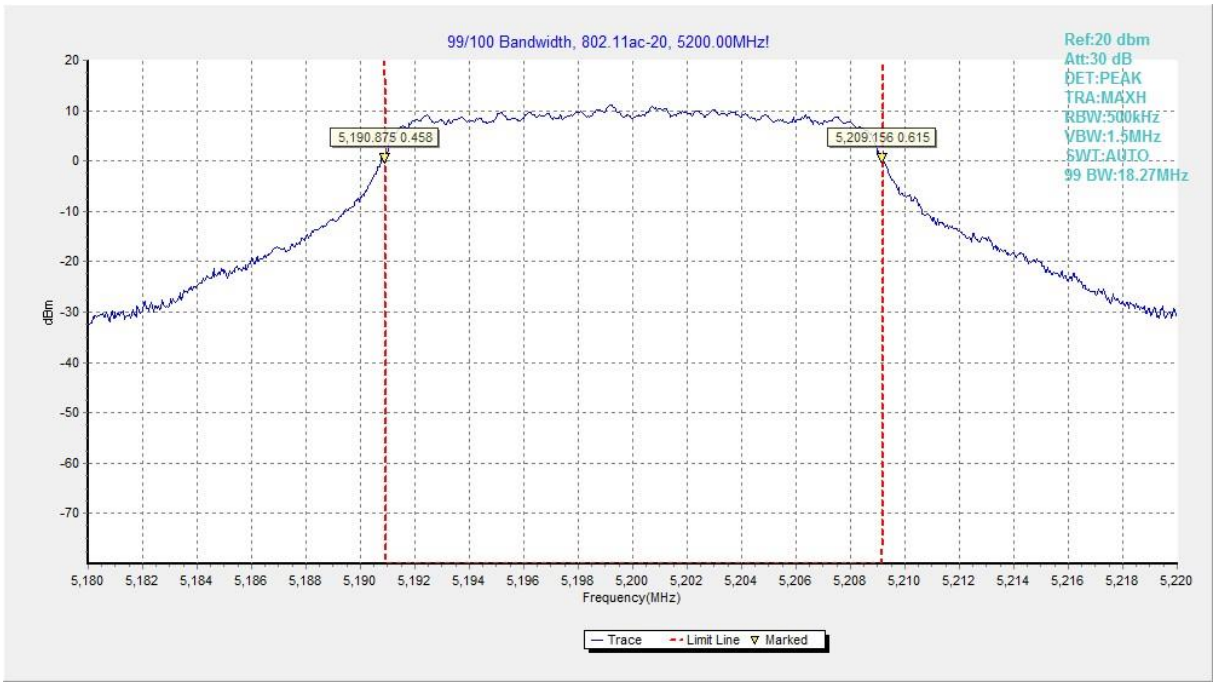

Fig.84 99% Occupied bandwidth (802.11ac-HT20, 5200MHz)

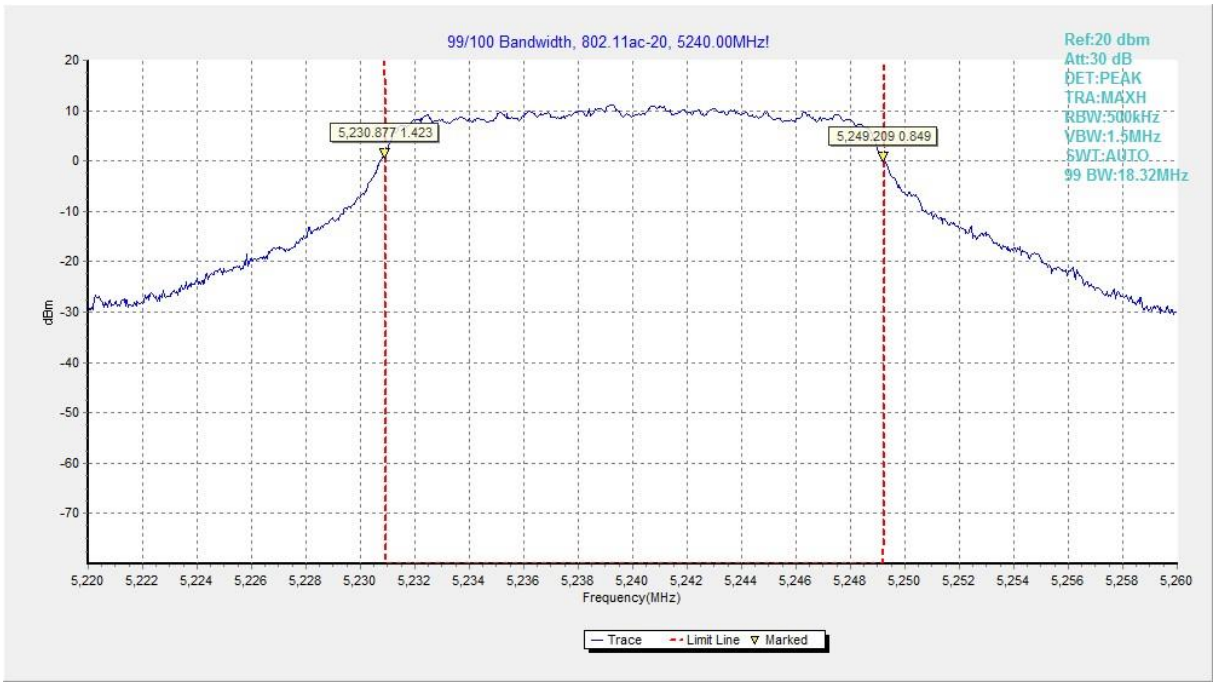

Fig.85 99% Occupied bandwidth (802.11ac-HT20, 5240MHz)

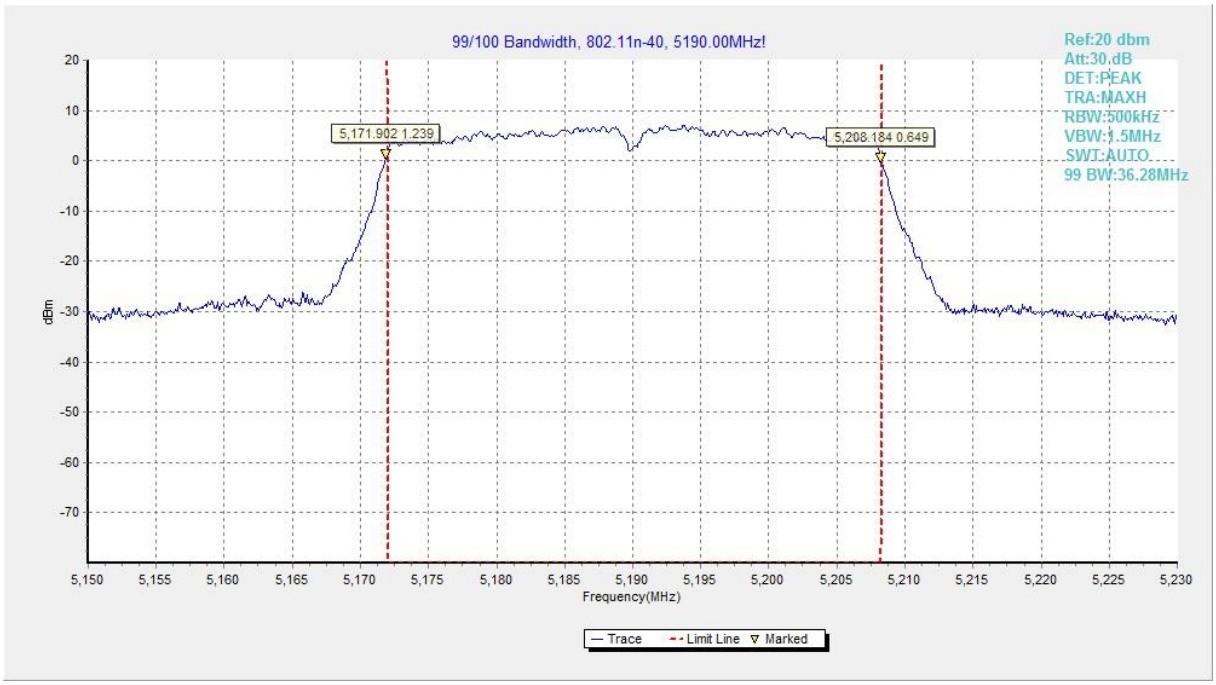

Fig.86 99% Occupied bandwidth (802.11n-HT40, 5190MHz)

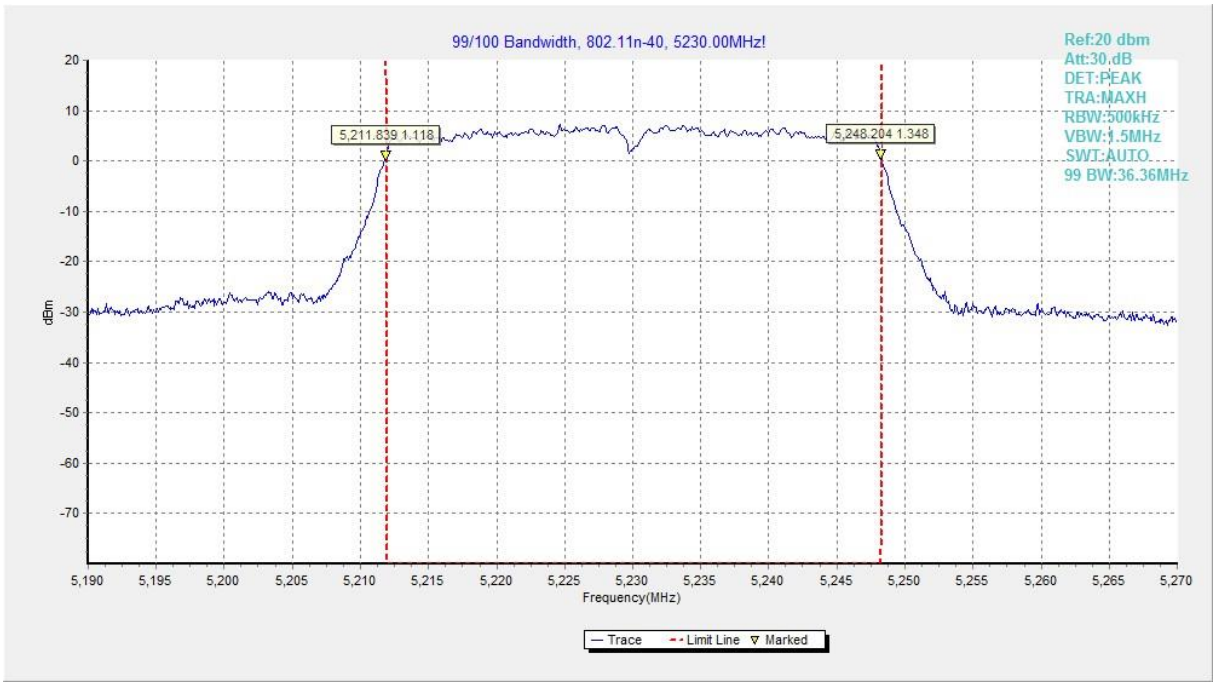

Fig.87 99% Occupied bandwidth (802.11n-HT40, 5230MHz)

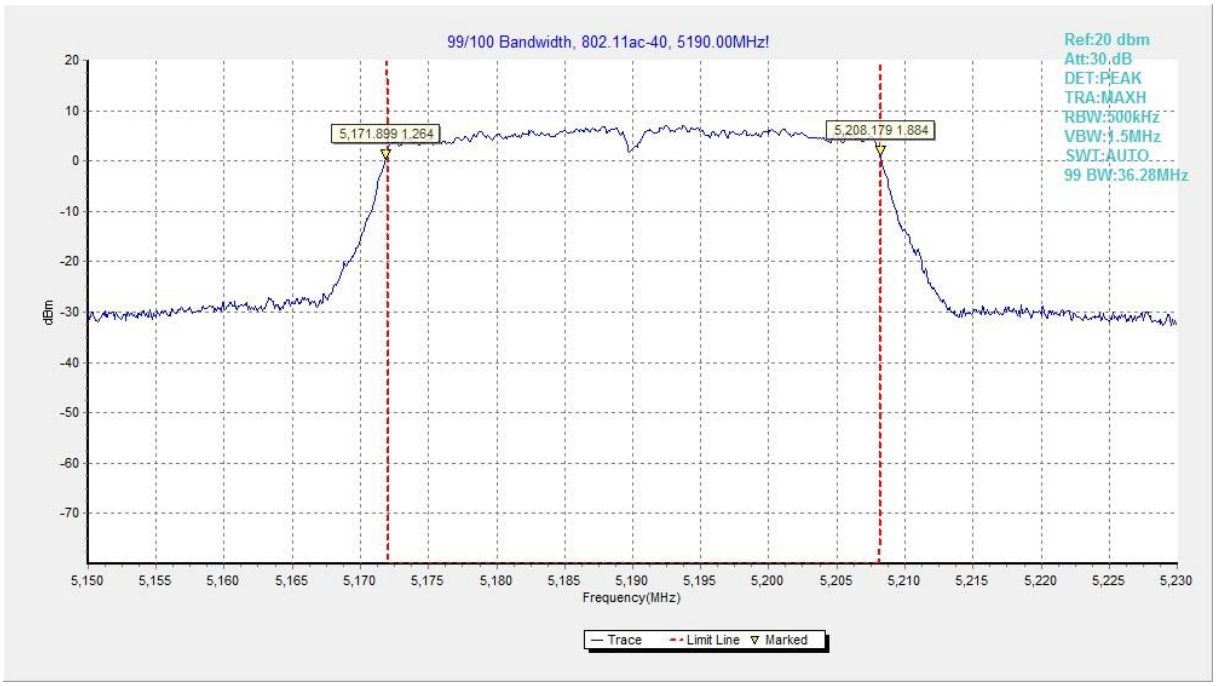

Fig.88 99% Occupied bandwidth (802.11ac-HT40, 5190MHz)

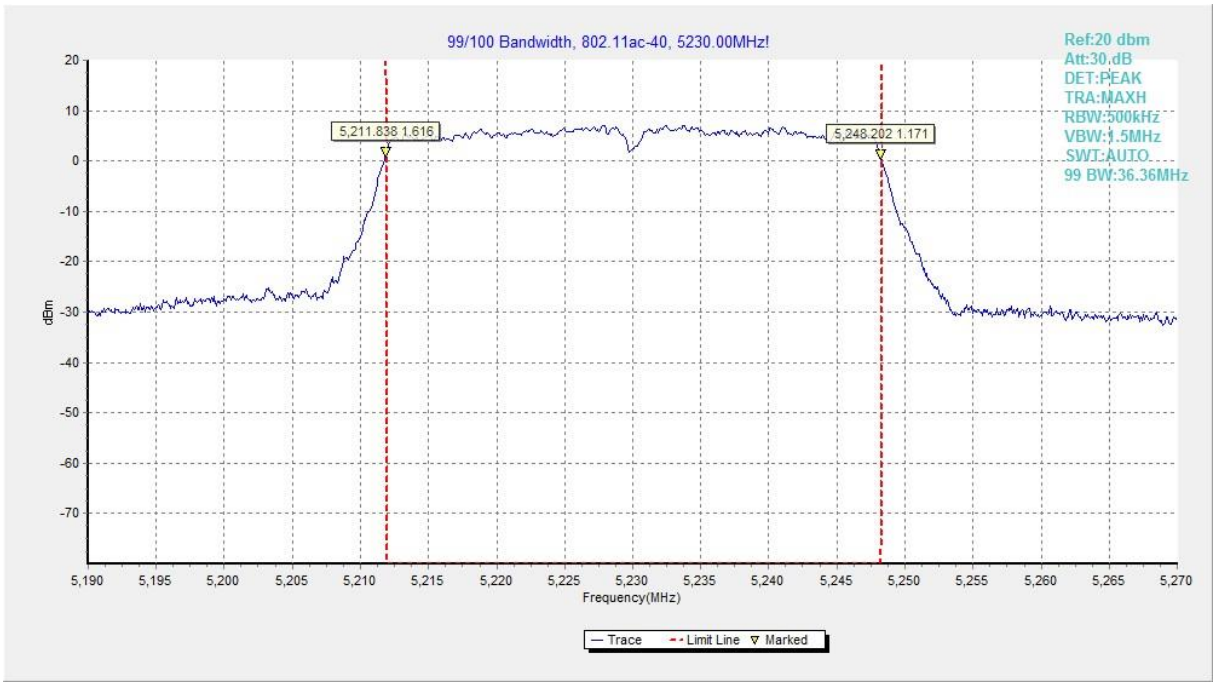

Fig.89 99% Occupied bandwidth (802.11ac-HT40, 5230MHz)

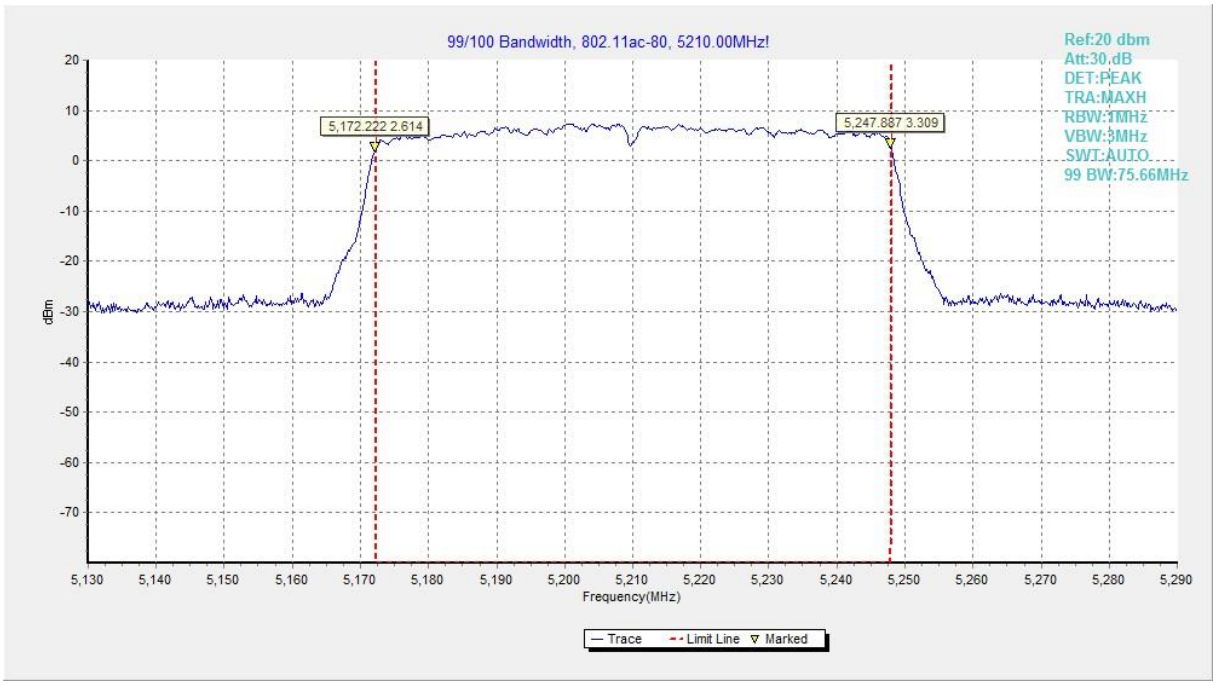

Fig.90 99% Occupied bandwidth (802.11ac-HT80, 5210MHz)

A.9. Frequency Stability

Manufacturers ensured the EUT meet the requirement of frequency stability, such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Measurement Result:

Mode	Frequency	Test Condition		Result(MHz)
802.11a	5200MHz	Tnom	Vnom	0.03
		Tmax	Vnom	
		Tmin	Vnom	
		Vmax	Tnom	
		Vmin	Tnom	

A.10. 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

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

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).

2019-09-26 through 2020-09-30
Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

*** END OF REPORT BODY ***