

RE - Power-5.125GHz-5.175GHz

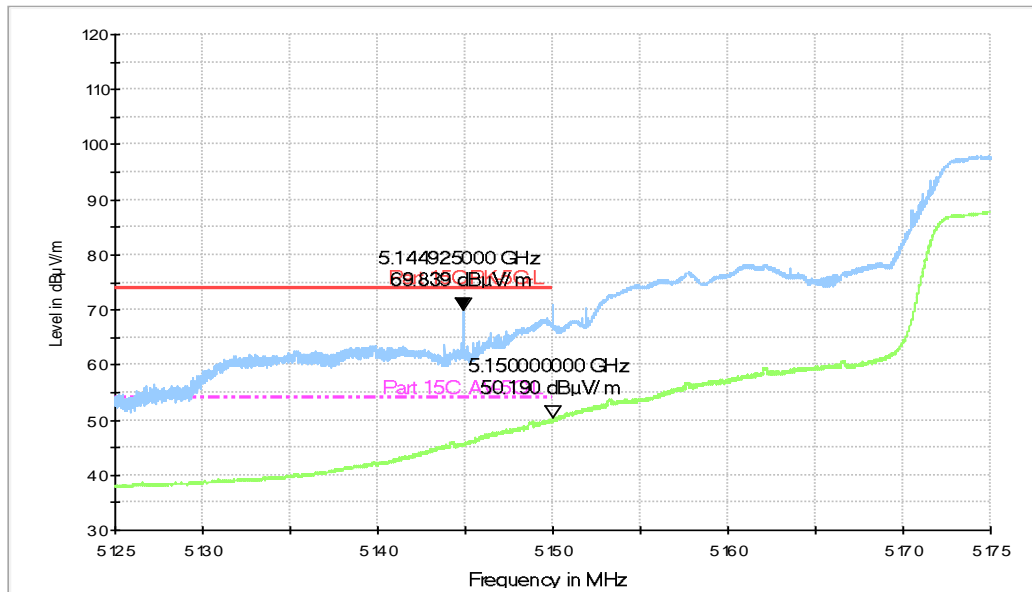


Fig. 33 Band Edges (802.11n-HT40, 5190MHz)

RE - Power-5.325GHz-5.375GHz

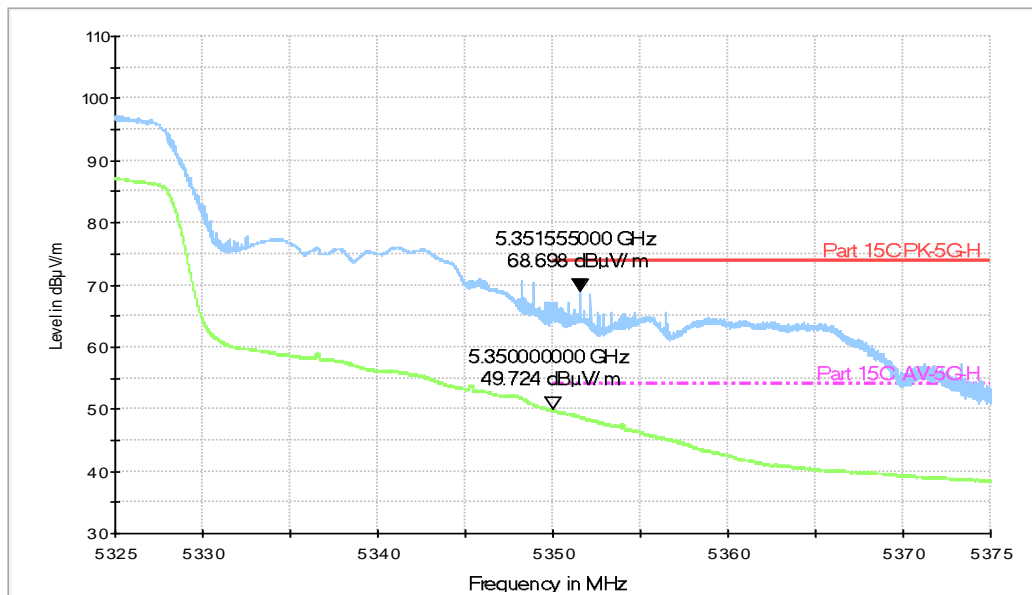


Fig. 34 Band Edges (802.11n-HT40, 5310MHz)

RE - Power-5.125GHz-5.175GHz

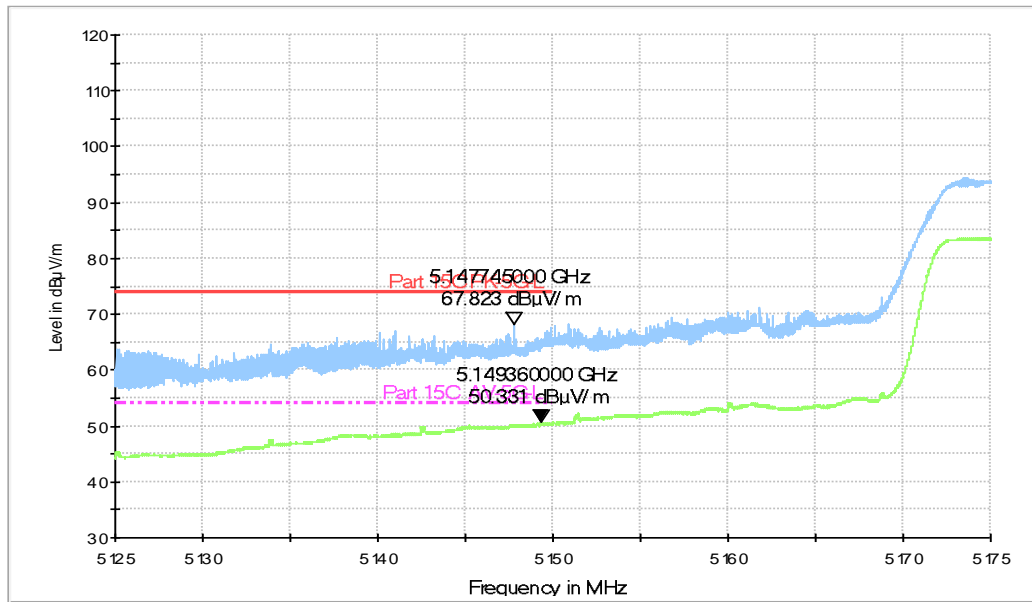


Fig. 35 Band Edges (802.11ac-HT80, 5210MHz)

RE - Power-5.325GHz-5.375GHz

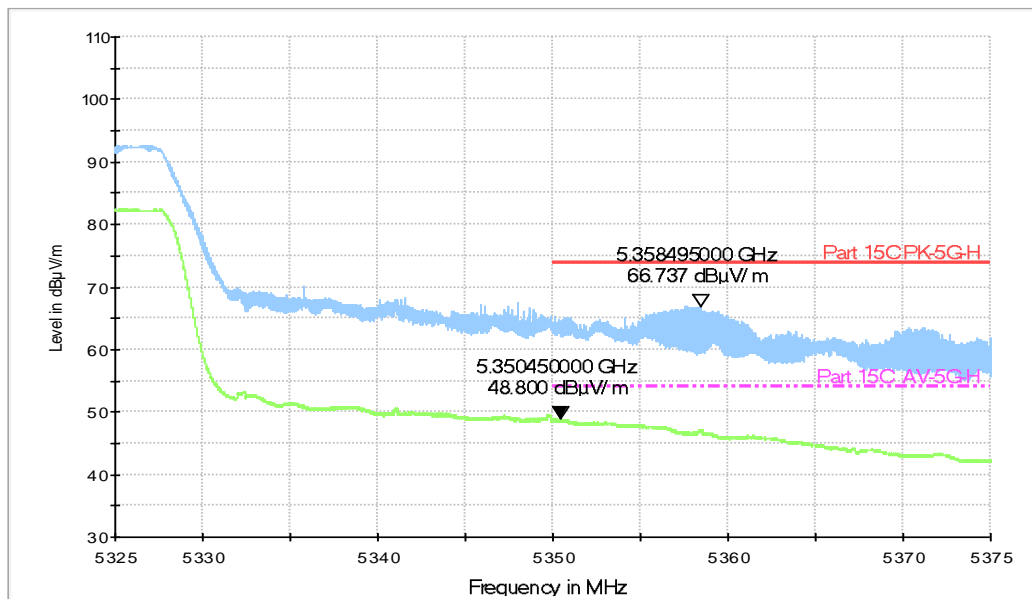


Fig. 36 Band Edges (802.11ac-HT80, 5290MHz)

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 μ 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 uncertainty:

Max expanded measurement uncertainty for this test item is $U = 5.28$ dB, $k=2$.

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 gain of receive antenna, the gain of the preamplifier, the cable loss.

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

The measurement results are obtained as described below:

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

Average

802.11a

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5125.500	37.8	-33.2	34.4	36.55	H
5150.000	38.2	-32.9	34.4	36.68	H
10360.500	40.2	-29.8	37.9	32.08	H
15540.400	48.0	-26.3	40.1	34.18	H
16955.000	49.8	-25.7	41.4	34.00	H
17496.200	50.0	-25.3	41.2	34.10	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5147.700	40.0	-33.0	34.4	38.51	H
5252.400	39.4	-32.4	34.4	37.43	H
10400.100	40.2	-29.6	38.0	31.85	H
15599.800	47.5	-26.4	40.1	33.75	H
16887.900	49.6	-25.9	41.4	34.06	H
17632.600	50.1	-25.9	41.1	34.86	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5187.600	40.6	-32.4	34.4	38.59	H
5292.600	39.0	-32.1	34.5	36.66	H
10480.400	40.5	-30.7	38.1	33.09	H
15719.700	47.6	-26.4	40.2	33.81	H
16759.200	49.4	-26.2	41.5	34.07	H
17541.300	50.0	-25.5	41.2	34.31	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5217.600	40.8	-32.5	34.4	38.92	H
5322.800	38.7	-31.9	34.5	36.12	H
10520.000	40.7	-30.9	38.1	33.45	H
15780.200	48.0	-26.3	40.2	34.11	H
16929.700	49.7	-25.7	41.4	34.02	H
17468.700	49.9	-25.2	41.2	33.90	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5227.600	40.6	-32.5	34.4	38.72	H
5332.400	39.4	-31.9	34.5	36.74	H
10559.600	41.1	-30.2	38.1	33.17	H
15839.600	48.4	-26.2	40.3	34.27	H
16962.700	49.7	-25.6	41.4	33.97	H
17539.100	49.9	-25.5	41.2	34.25	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.000	37.5	-31.9	34.6	34.83	H
5370.000	37.3	-32.0	34.6	34.72	H
10639.900	41.3	-29.3	38.2	32.46	H
15959.500	48.4	-25.8	40.5	33.74	H
17005.600	49.6	-25.6	41.4	33.81	H
17615.000	50.0	-25.8	41.1	34.72	H

802.11n-HT20

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5145.500	38.7	-33.0	34.4	37.25	H
5150.000	39.6	-32.9	34.4	38.07	H
10360.500	40.3	-29.8	37.9	32.13	H
15540.400	48.0	-26.3	40.1	34.19	H
16930.800	49.7	-25.7	41.4	34.00	H
17465.400	49.8	-25.2	41.2	33.85	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.300	39.9	-33.0	34.4	38.46	H
5251.800	40.3	-32.4	34.4	38.29	H
10400.100	40.2	-29.6	38.0	31.83	H
15599.800	47.6	-26.4	40.1	33.82	H
16951.700	49.8	-25.7	41.4	34.07	H
17547.900	50.0	-25.5	41.2	34.34	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5188.200	41.9	-32.4	34.4	39.96	H
5291.700	40.3	-32.1	34.5	37.94	H
10480.400	40.5	-30.7	38.1	33.07	H
15719.700	47.7	-26.4	40.2	33.90	H
16962.700	49.7	-25.6	41.4	33.96	H
17615.000	50.1	-25.8	41.1	34.79	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5208.604	42.8	-32.5	34.4	40.89	H
5312.456	44.9	-32.0	34.5	42.36	H
10520.000	40.8	-30.9	38.1	33.61	H
15780.200	48.1	-26.3	40.2	34.17	H
16929.700	49.8	-25.7	41.4	34.04	H
17475.300	49.8	-25.2	41.2	33.87	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5228.320	39.2	-32.5	34.4	37.28	H
5332.450	40.6	-31.9	34.5	37.92	H
10559.600	41.2	-30.2	38.1	33.24	H
15839.600	48.5	-26.2	40.3	34.37	H
16947.300	49.9	-25.7	41.4	34.10	H
17540.200	50.0	-25.5	41.2	34.37	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.000	38.2	-31.9	34.6	35.54	H
5353.000	37.9	-31.9	34.6	35.25	H
10639.900	41.3	-29.3	38.2	32.46	H
15959.500	48.3	-25.8	40.5	33.71	H
17005.600	49.6	-25.6	41.4	33.79	H
17657.900	49.8	-25.5	41.1	34.25	H

802.11n-HT40

Channel 38

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.892	45.4	-33.0	34.4	43.88	H
5146.814	44.5	-33.0	34.4	43.00	H
10380.300	40.2	-29.7	38.0	31.94	H
15570.100	47.7	-26.3	40.1	33.96	H
16938.500	49.8	-25.7	41.4	34.11	H
17486.300	50.0	-25.3	41.2	34.05	H

Channel 46

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5126.430	37.5	-33.2	34.4	36.23	H
5332.452	38.1	-31.9	34.5	35.44	H
10459.500	40.5	-30.4	38.1	32.81	H
15690.000	47.6	-26.4	40.2	33.76	H
16989.100	49.6	-25.6	41.4	33.83	H
17564.400	49.9	-25.6	41.1	34.40	H

Channel 54

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5166.345	37.4	-32.7	34.4	35.66	H
5372.846	37.4	-32.0	34.6	34.79	H
10539.800	40.9	-30.5	38.1	33.32	H
15809.900	48.3	-26.3	40.3	34.37	H
16929.700	49.7	-25.7	41.4	33.99	H
17501.700	49.9	-25.4	41.2	34.10	H

Channel 62

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.000	44.3	-31.9	34.6	41.64	H
5355.500	41.2	-31.9	34.6	38.56	H
10620.100	41.4	-29.2	38.1	32.45	H
15929.800	48.3	-25.9	40.4	33.83	H
16955.000	49.8	-25.7	41.4	34.02	H
17594.100	50.1	-25.7	41.1	34.72	H

802.11ac-HT20

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5140.000	37.6	-33.1	34.4	36.23	H
5150.000	37.6	-32.9	34.4	36.14	H
10360.500	40.2	-29.8	37.9	32.09	H
15540.400	47.9	-26.3	40.1	34.16	H
16937.400	49.8	-25.7	41.4	34.07	H
17479.700	50.0	-25.3	41.2	34.03	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.600	39.4	-33.0	34.4	37.95	H
5251.800	39.9	-32.4	34.4	37.90	H
10400.100	40.2	-29.6	38.0	31.85	H
15599.800	47.6	-26.4	40.1	33.82	H
16977.000	49.8	-25.6	41.4	33.98	H
17567.700	50.0	-25.6	41.1	34.44	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5188.500	40.4	-32.4	34.4	38.42	H
5291.700	39.4	-32.1	34.5	37.00	H
10480.400	40.5	-30.7	38.1	33.11	H
15719.700	47.6	-26.4	40.2	33.82	H
17017.700	49.6	-25.6	41.4	33.78	H
17632.600	50.0	-25.9	41.1	34.80	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5208.632	40.7	-32.5	34.4	38.79	H
5312.462	42.7	-32.0	34.5	40.21	H
10520.000	40.7	-30.9	38.1	33.53	H
15780.200	48.0	-26.3	40.2	34.11	H
16937.400	49.8	-25.7	41.4	34.06	H
17470.900	49.9	-25.2	41.2	33.89	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5228.022	40.1	-32.5	34.4	38.22	H
5331.625	42.6	-31.9	34.5	39.91	H
10559.600	41.2	-30.2	38.1	33.21	H
15839.600	48.3	-26.2	40.3	34.26	H
16990.200	49.6	-25.6	41.4	33.83	H
17530.300	50.0	-25.5	41.2	34.25	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.000	38.3	-31.9	34.6	35.56	H
5359.000	37.9	-31.9	34.6	35.24	H
10639.900	41.3	-29.3	38.2	32.43	H
15959.500	48.4	-25.8	40.5	33.76	H
17032.000	49.6	-25.6	41.4	33.79	H
17623.800	50.0	-25.9	41.1	34.77	H

802.11ac-HT40

Channel 38

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5146.000	40.6	-33.0	34.4	39.11	H
5150.000	42.4	-32.9	34.4	40.89	H
10380.300	40.2	-29.7	38.0	31.99	H
15570.100	47.8	-26.3	40.1	34.01	H
16936.300	49.8	-25.7	41.4	34.11	H
17485.200	50.0	-25.3	41.2	34.05	H

Channel 46

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5146.500	43.7	-33.0	34.4	42.26	H
5149.800	45.4	-32.9	34.4	43.89	H
10459.500	40.4	-30.4	38.1	32.68	H
15690.000	47.5	-26.4	40.2	33.69	H
16962.700	49.7	-25.6	41.4	33.90	H
17640.300	50.0	-25.8	41.1	34.68	H

Channel 54

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5167.231	38.8	-32.7	34.4	37.06	H
5363.670	39.0	-31.9	34.6	36.35	H
10539.800	40.9	-30.5	38.1	33.33	H
15809.900	48.3	-26.3	40.3	34.35	H
16937.400	49.8	-25.7	41.4	34.08	H
17494.000	50.0	-25.3	41.2	34.12	H

Channel 62

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.000	41.5	-31.9	34.6	38.81	H
5353.000	40.3	-31.9	34.6	37.59	H
10620.100	41.4	-29.2	38.1	32.47	H
15929.800	48.3	-25.9	40.4	33.80	H
16982.500	49.6	-25.6	41.4	33.83	H
17615.000	50.1	-25.8	41.1	34.77	H

802.11ac-HT80

Channel 42

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5147.600	52.8	-33.0	34.4	51.33	H
5150.000	52.9	-32.9	34.4	51.43	H
10419.900	40.3	-29.8	38.0	32.12	H
15629.500	47.3	-26.4	40.2	33.51	H
16907.700	49.6	-25.8	41.4	33.95	H
17470.900	49.7	-25.2	41.2	33.77	H

Channel 58

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.000	42.9	-31.9	34.6	40.24	H
5362.800	41.8	-31.9	34.6	39.17	H
10580.500	41.4	-29.8	38.1	33.06	H
15870.400	48.2	-26.1	40.3	34.01	H
16973.700	49.6	-25.6	41.4	33.80	H
17549.000	49.8	-25.6	41.2	34.24	H

Peak

802.11a

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5147.445	54.8	-33.0	34.4	53.29	H
5148.485	54.5	-33.0	34.4	53.06	H
10359.950	44.6	-29.8	37.9	36.49	H
15539.850	50.6	-26.3	40.1	36.86	H
16570.000	54.9	-25.9	41.2	39.58	V
17612.800	54.8	-25.8	41.1	39.50	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5147.200	52.8	-33.0	34.4	51.30	H
5252.200	50.8	-32.4	34.4	48.77	H
10400.100	45.4	-29.6	38.0	37.07	V
15599.800	51.6	-26.4	40.1	37.78	V
16806.500	54.8	-26.1	41.5	39.45	H
17716.750	55.1	-24.5	41.0	38.60	V

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5187.600	52.3	-32.4	34.4	50.36	H
5292.400	50.6	-32.1	34.5	48.27	H
10479.850	45.8	-30.6	38.1	38.37	H
15720.250	50.8	-26.4	40.2	36.94	V
16950.600	55.4	-25.7	41.4	39.64	H
17530.300	55.4	-25.5	41.2	39.69	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5207.400	52.9	-32.5	34.4	50.96	H
5307.200	51.8	-32.0	34.5	49.35	H
10520.000	44.9	-30.9	38.1	37.71	V
15780.200	50.6	-26.3	40.2	36.76	V
17456.600	54.9	-25.2	41.2	38.90	H
17900.450	54.7	-24.2	40.9	38.02	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5227.800	53.2	-32.5	34.4	51.33	H
5331.800	52.5	-31.9	34.5	49.85	V
10560.150	46.5	-30.2	38.1	38.51	H
15840.150	52.3	-26.2	40.3	38.25	H
16659.100	54.8	-26.0	41.4	39.43	H
17978.000	55.2	-25.2	40.8	39.68	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.930	55.9	-31.9	34.6	53.24	H
5351.290	56.4	-31.9	34.6	53.72	H
10639.900	46.0	-29.3	38.2	37.12	V
15960.050	51.5	-25.8	40.5	36.82	V
16777.900	54.7	-26.2	41.5	39.42	V
17564.950	54.9	-25.6	41.1	39.40	V

802.11n-HT20

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5138.570	56.2	-33.1	34.4	54.85	H
5150.000	58.6	-32.9	34.4	57.10	H
10359.950	45.8	-29.8	37.9	37.69	V
15539.850	51.8	-26.3	40.1	38.05	H
16797.700	54.8	-26.2	41.5	39.47	H
17582.000	54.7	-25.7	41.1	39.27	V

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5148.200	52.0	-33.0	34.4	50.50	H
5251.600	51.8	-32.4	34.4	49.80	H
10400.100	46.3	-29.6	38.0	37.93	H
15599.800	50.1	-26.4	40.1	36.28	H
17576.500	54.8	-25.7	41.1	39.36	H
17886.150	54.8	-24.0	40.9	37.95	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5187.600	54.0	-32.4	34.4	52.00	H
5292.000	52.2	-32.1	34.5	49.82	H
10479.850	45.4	-30.6	38.1	38.00	H
15720.250	50.6	-26.4	40.2	36.78	V
16458.900	54.8	-26.0	41.0	39.77	H
17575.950	54.9	-25.7	41.1	39.45	V

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5160.678	49.2	-32.8	34.4	47.59	H
5339.860	51.1	-31.8	34.5	48.40	H
10520.000	45.2	-30.9	38.1	38.04	H
15780.200	53.5	-26.3	40.2	39.57	H
17432.400	55.0	-25.3	41.2	39.05	H
17959.300	55.8	-25.0	40.8	39.95	V

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
4818.023	49.8	-32.8	34.5	48.13	H
5441.823	50.7	-32.0	34.7	47.96	H
10560.150	46.9	-30.2	38.1	38.93	V
15840.150	51.3	-26.2	40.3	37.20	V
17056.200	54.7	-25.5	41.4	38.86	V
17727.750	54.9	-24.3	41.0	38.25	V

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5351.515	58.2	-31.9	34.6	55.51	H
5352.020	58.4	-31.9	34.6	55.75	H
10639.900	45.4	-29.3	38.2	36.52	V
15960.050	50.8	-25.8	40.5	36.17	H
16485.300	55.0	-26.0	41.1	39.96	H
16561.750	55.6	-25.9	41.2	40.31	H

802.11n-HT40

Channel 38

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5144.925	69.8	-33.0	34.4	68.41	H
5149.465	68.3	-32.9	34.4	66.82	H
10379.750	45.8	-29.7	38.0	37.55	V
15570.100	50.8	-26.3	40.1	37.03	V
16629.950	55.2	-25.9	41.3	39.83	V
17632.050	55.0	-25.9	41.1	39.83	H

Channel 46

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5138.890	55.3	-33.1	34.4	53.91	H
5325.246	55.8	-31.9	34.5	53.18	H
10460.050	44.8	-30.4	38.1	37.10	V
15690.000	51.5	-26.4	40.2	37.69	H
16390.150	54.5	-25.8	40.9	39.43	V
16909.900	54.6	-25.8	41.4	38.94	V

Channel 54

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5179.560	52.5	-32.5	34.4	50.59	V
5354.658	52.6	-31.9	34.6	49.91	H
10539.800	45.0	-30.5	38.1	37.43	V
15809.900	51.4	-26.3	40.3	37.43	H
16100.300	55.0	-25.8	40.5	40.21	H
17420.300	54.7	-25.3	41.2	38.81	V

Channel 62

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5351.555	68.7	-31.9	34.6	66.01	V
5352.165	68.6	-31.9	34.6	65.90	H
10620.100	45.9	-29.2	38.1	36.94	H
15929.800	52.5	-25.9	40.4	37.98	V
17665.600	55.0	-25.4	41.1	39.24	V
17987.900	55.0	-25.4	40.8	39.57	H

802.11ac-HT20

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5146.870	51.2	-33.0	34.4	49.70	H
5148.505	51.6	-33.0	34.4	50.09	H
10359.950	44.8	-29.8	37.9	36.69	V
15539.850	51.6	-26.3	40.1	37.84	V
16952.250	54.8	-25.7	41.4	39.07	H
17952.150	55.2	-24.9	40.8	39.23	V

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5149.200	53.4	-32.9	34.4	51.96	H
5252.200	52.5	-32.4	34.4	50.53	H
10400.100	44.5	-29.6	38.0	36.11	V
15599.800	52.0	-26.4	40.1	38.22	H
16567.250	55.2	-25.9	41.2	39.96	V
16914.850	55.0	-25.8	41.4	39.34	V

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5188.800	53.9	-32.4	34.4	51.92	H
5292.000	52.5	-32.1	34.5	50.18	H
10479.850	44.6	-30.6	38.1	37.12	H
15720.250	51.3	-26.4	40.2	37.48	V
16915.950	54.5	-25.8	41.4	38.88	V
17521.500	54.8	-25.4	41.2	39.05	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5198.234	50.5	-32.5	34.4	48.55	H
5435.623	50.3	-32.0	34.7	47.61	H
10520.000	45.6	-30.9	38.1	38.43	V
15780.200	51.6	-26.3	40.2	37.70	H
16408.850	54.7	-25.8	40.9	39.62	V
17397.750	54.9	-25.4	41.2	39.18	V

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
4947.245	49.5	-33.3	34.5	48.31	H
5576.428	52.0	-32.6	34.8	49.74	H
10560.150	45.7	-30.2	38.1	37.75	H
15840.500	41.6	-26.2	40.3	27.52	V
15906.150	54.4	-26.0	40.4	40.03	V
17111.200	54.7	-25.5	41.3	38.87	V

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.015	56.1	-31.9	34.6	53.38	V
5351.315	52.9	-31.9	34.6	50.24	H
10639.900	45.8	-29.3	38.2	36.97	V
15960.050	51.1	-25.8	40.5	36.41	H
16868.650	54.7	-25.9	41.5	39.12	V
17586.950	54.5	-25.7	41.1	39.10	V

802.11ac-HT40

Channel 38

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5147.005	61.0	-33.0	34.4	59.55	H
5148.005	61.5	-33.0	34.4	60.00	H
10379.750	44.6	-29.7	38.0	36.34	V
15570.100	50.4	-26.3	40.1	36.63	H
17573.750	55.3	-25.7	41.1	39.85	V
17630.950	55.4	-25.9	41.1	40.21	V

Channel 46

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5154.200	50.6	-32.9	34.4	49.06	H
5292.200	50.8	-32.1	34.5	48.45	H
10460.050	45.6	-30.4	38.1	37.91	H
15690.000	50.7	-26.4	40.2	36.91	H
16557.900	55.1	-25.9	41.2	39.89	H
16942.900	55.2	-25.7	41.4	39.48	H

Channel 54

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5163.023	50.2	-32.8	34.4	48.56	H
5377.800	50.6	-32.0	34.6	48.03	H
10539.800	46.2	-30.5	38.1	38.60	V
15809.900	51.4	-26.3	40.3	37.44	V
16664.600	54.5	-26.0	41.4	39.20	V
17940.600	54.9	-24.8	40.8	38.85	H

Channel 62

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.720	65.1	-31.9	34.6	62.38	H
5351.785	63.5	-31.9	34.6	60.80	H
10620.100	46.2	-29.2	38.1	37.27	H
15929.800	51.2	-25.9	40.4	36.66	V
16922.000	56.0	-25.7	41.4	40.34	V
17727.200	54.7	-24.3	41.0	37.98	V

802.11ac-HT80

Channel 42

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5147.745	67.8	-33.0	34.4	66.35	H
5149.906	67.6	-32.9	34.4	66.09	H
10419.900	45.2	-29.8	38.0	36.96	H
15630.000	50.9	-26.4	40.2	37.07	H
16913.750	55.5	-25.8	41.4	39.79	H
17725.000	55.6	-24.4	41.0	39.01	H



Channel 58

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5354.940	60.7	-31.9	34.6	58.06	H
5354.510	61.5	-31.9	34.6	58.80	H
10579.950	46.5	-29.8	38.1	38.19	H
15869.850	50.7	-26.1	40.3	36.52	H
17073.800	54.9	-25.5	41.3	39.04	H
17536.900	54.9	-25.5	41.2	39.27	H

Sample calculation: 802.11ac 80MHz CH106–Peak, 5459.562 MHz

$$\text{Peak ERP(dBm)} = P_{\text{Mea}}(60.1 \text{ dBuV/m}) + \text{Cable Loss}(-32.0) + \text{Antenna Factor}(34.7) = 62.8 \text{ dBuV/m}$$

A.7. Spurious Emissions Radiated (150kHz- 30MHz)

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is U =3.2dB, k=2.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		With charger	
		11a mode	
0.15 to 0.5	66 to 56	Fig.37	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 μ V)	Result (dB μ V)	Conclusion
		With charger	
		11a mode	
0.15 to 0.5	56 o 46	Fig.37	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:

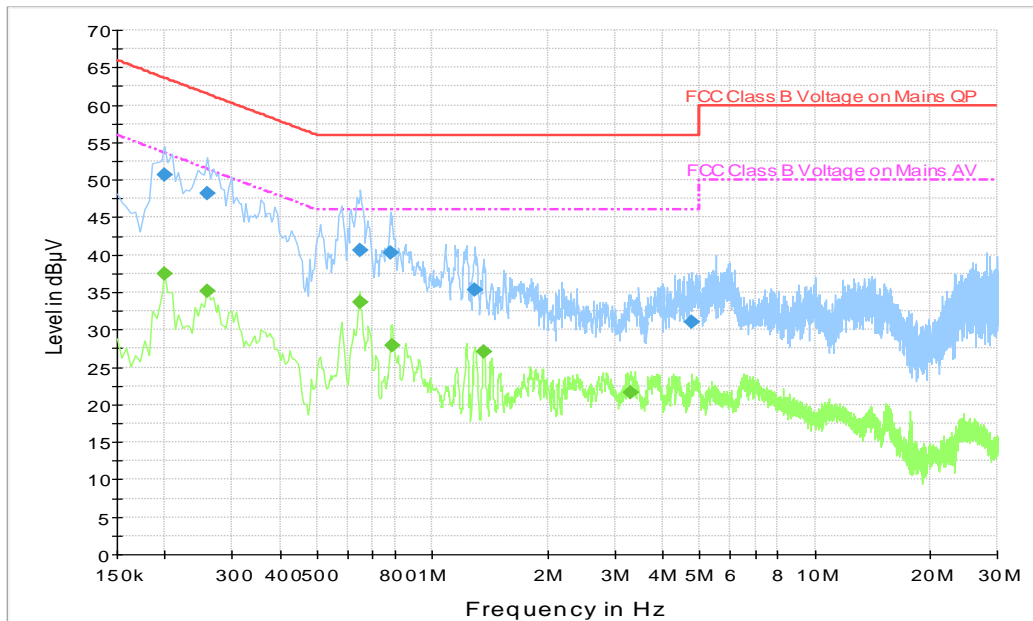


Fig. 37 AC Powerline Conducted Emission-802.11a

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.199500	50.7	L1	19.8	12.9	63.6
0.258000	48.1	L1	19.9	13.4	61.5
0.649500	40.6	N	19.9	15.4	56.0
0.775500	40.2	N	19.8	15.8	56.0
1.293000	35.3	L1	19.8	20.7	56.0
4.758000	31.0	N	19.7	25.0	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.199500	37.5	L1	19.8	16.1	53.6
0.258000	35.1	L1	19.9	16.4	51.5
0.645000	33.8	L1	19.9	12.2	46.0
0.784500	27.9	L1	19.8	18.1	46.0
1.360500	27.1	L1	19.8	18.9	46.0
3.295500	21.6	L1	19.7	24.4	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	Channel	99% Occupied bandwidth (MHz)		conclusion
		Lower	Upper	
802.11a	5180 MHz	Fig. 45	16.82	P
	5200 MHz	Fig. 46	16.87	P
	5240 MHz	Fig. 47	17.02	P
802.11n HT20	5180 MHz	Fig. 48	18.09	P
	5200 MHz	Fig. 49	18.27	P
	5240 MHz	Fig. 50	18.59	P
802.11ac HT20	5180 MHz	Fig. 51	18.19	P
	5200 MHz	Fig. 52	18.19	P
	5240 MHz	Fig. 53	18.57	P
802.11n HT40	5190 MHz	Fig. 54	36.20	P
	5230 MHz	Fig. 55	36.30	P
802.11ac	5190 MHz	Fig. 56	36.04	P

HT40	5230 MHz	Fig. 57	36.40	P
802.11ac HT80	5210 MHz	Fig. 58	76.02	P

Conclusion: PASS

Test graphs as below:

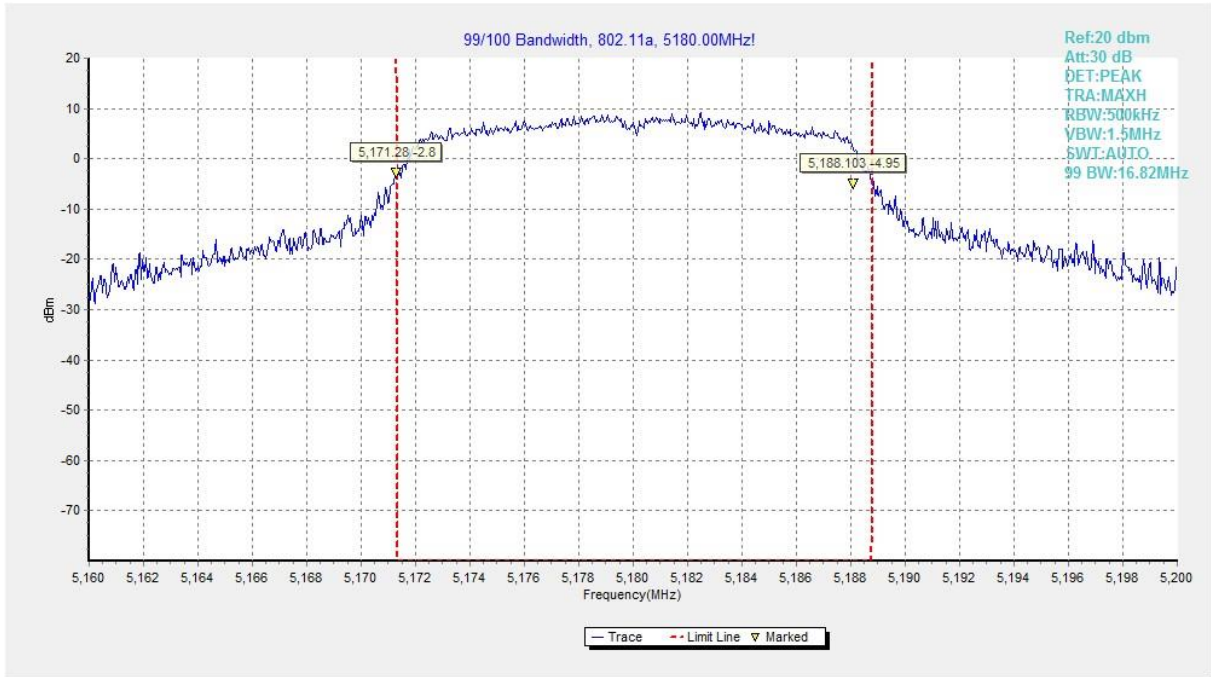


Fig. 45 99% Occupied bandwidth (802.11a, 5180MHz)

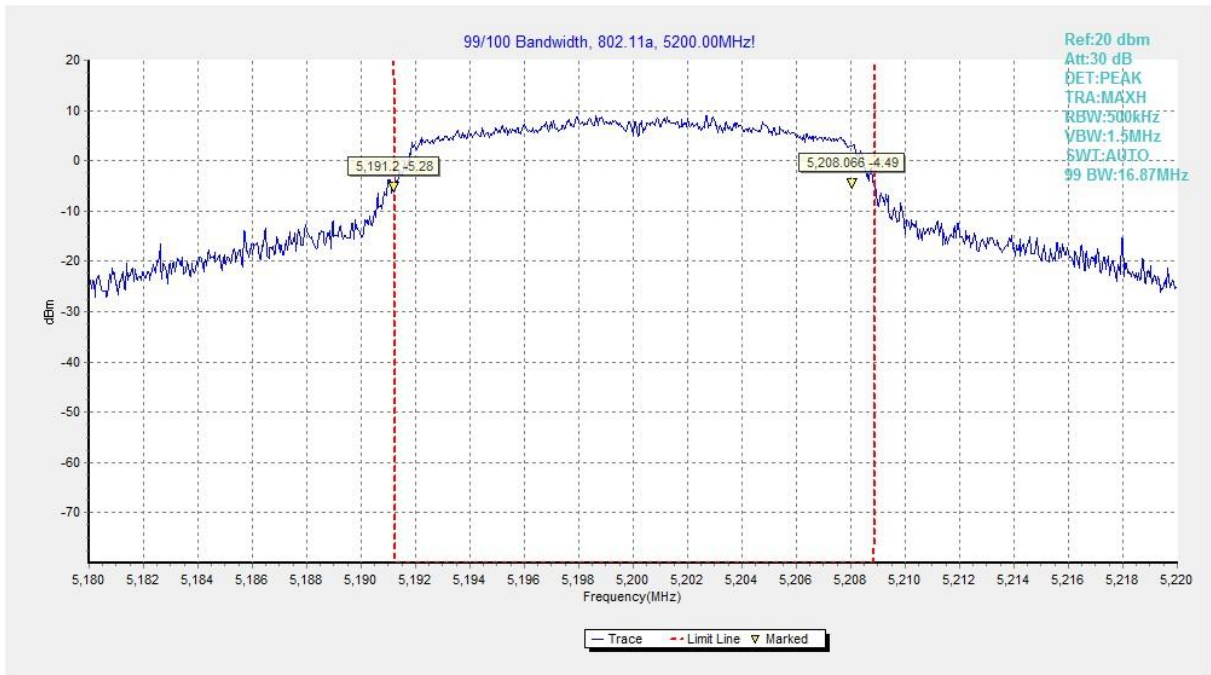


Fig. 46 99% Occupied bandwidth (802.11a, 5200MHz)

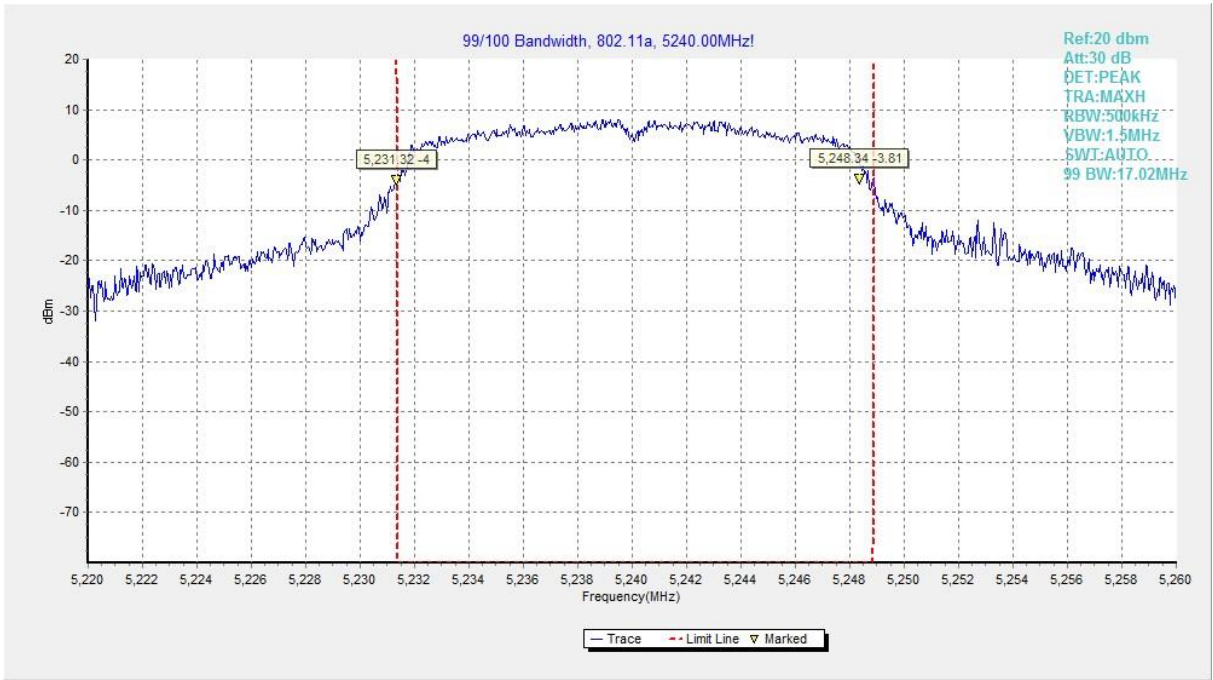


Fig. 47 99% Occupied bandwidth (802.11a, 5240MHz)



Fig. 48 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

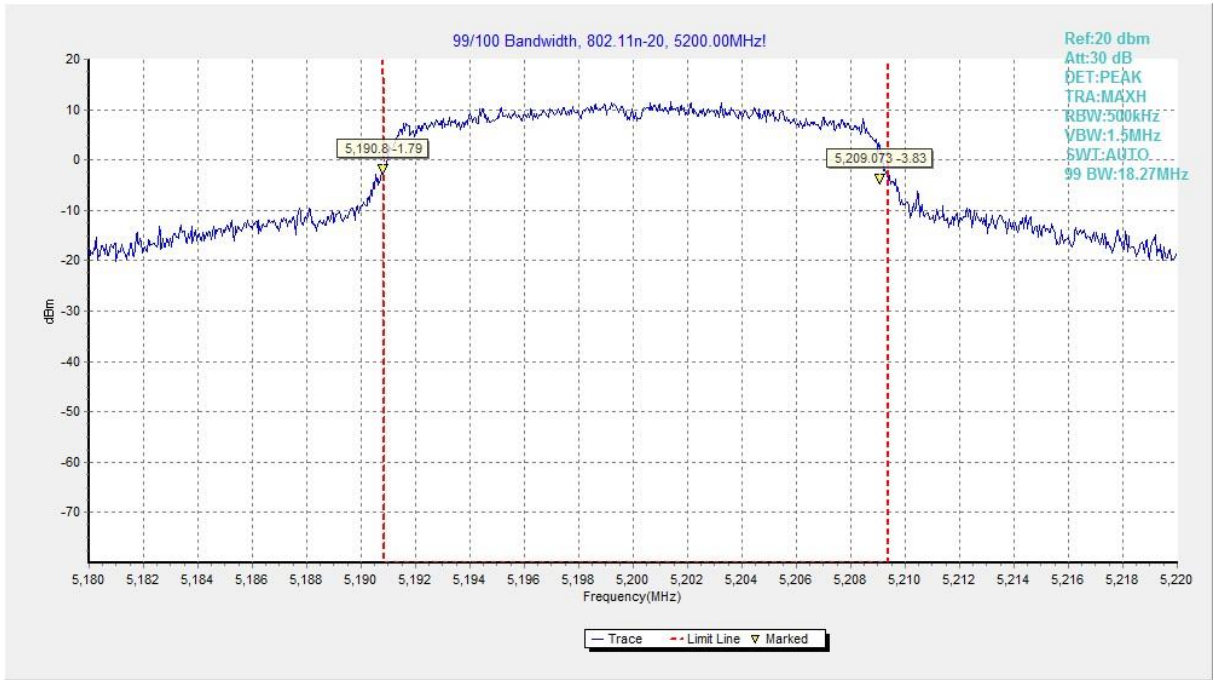


Fig. 49 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

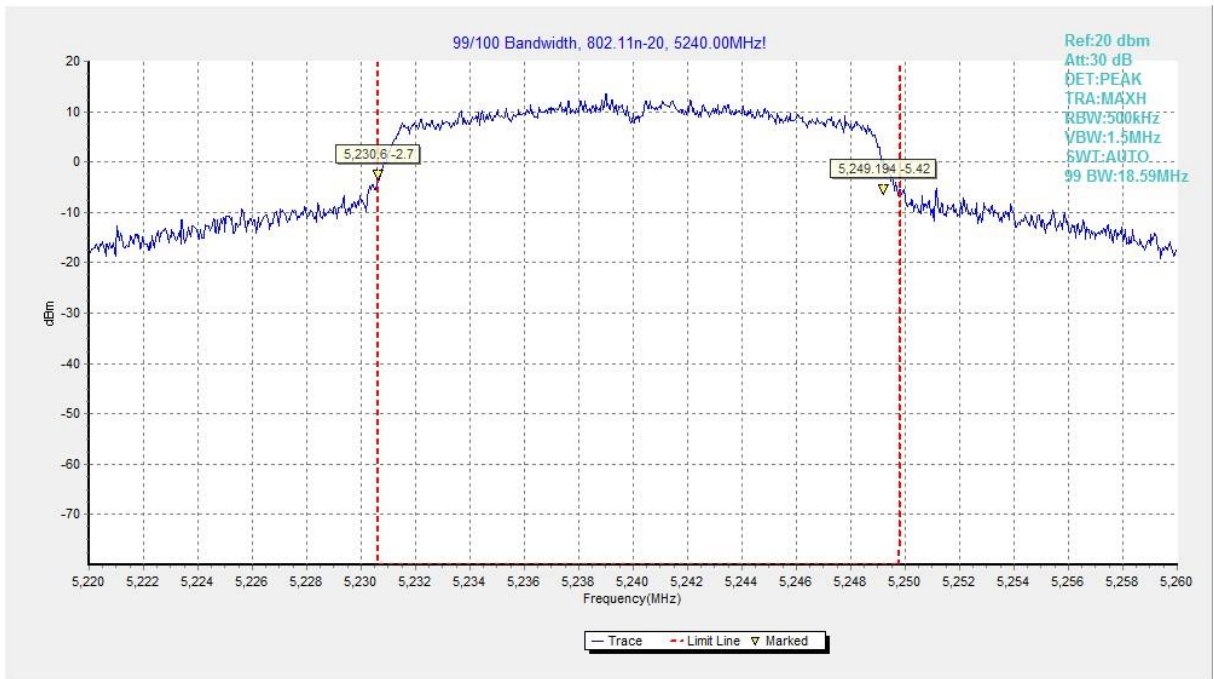


Fig. 50 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

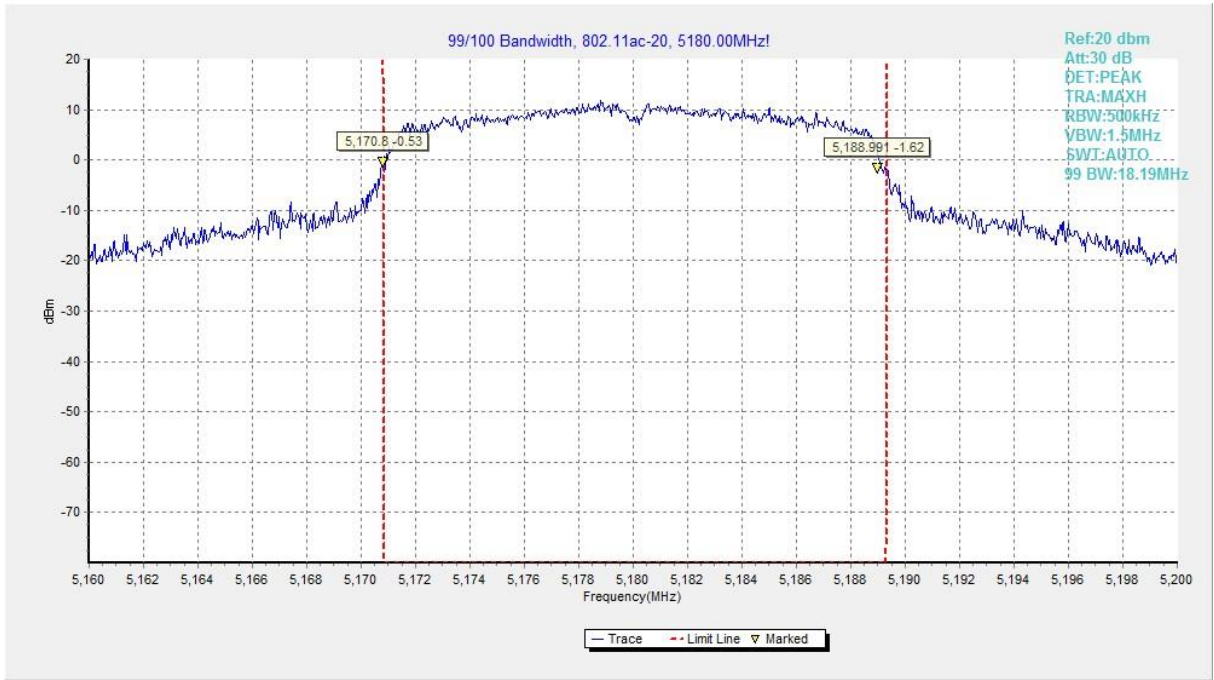


Fig. 51 99% Occupied bandwidth (802.11ac-HT20, 5180MHz)

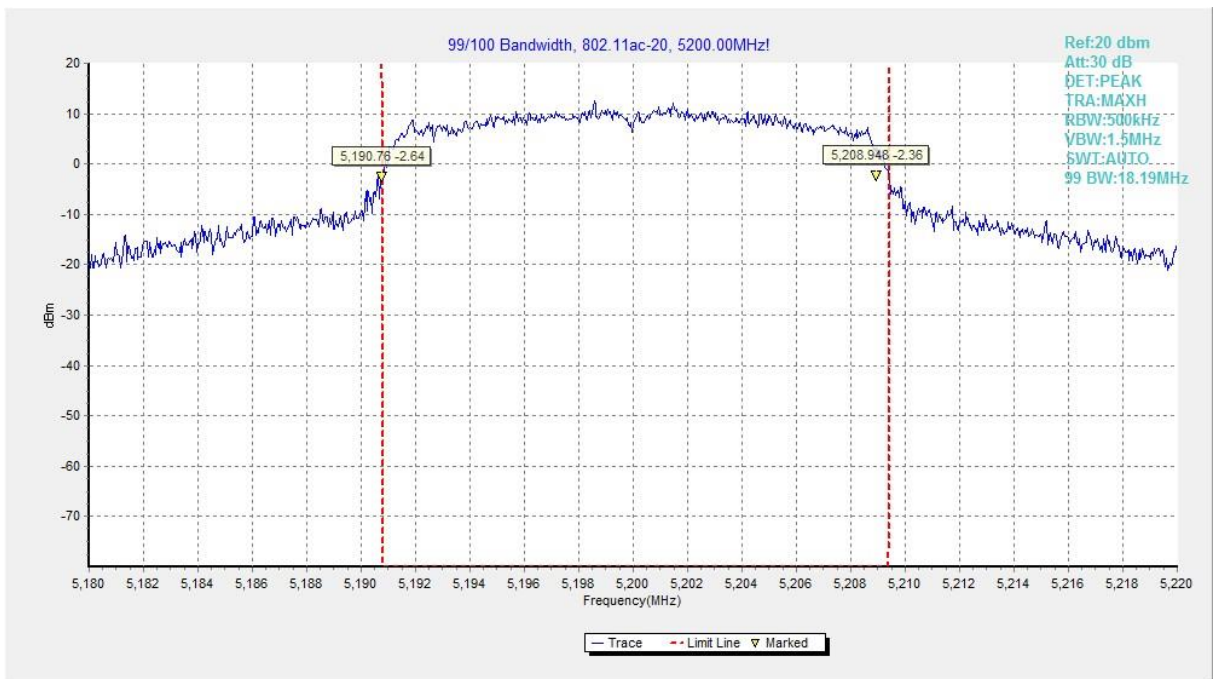


Fig. 52 99% Occupied bandwidth (802.11ac-HT20, 5200MHz)

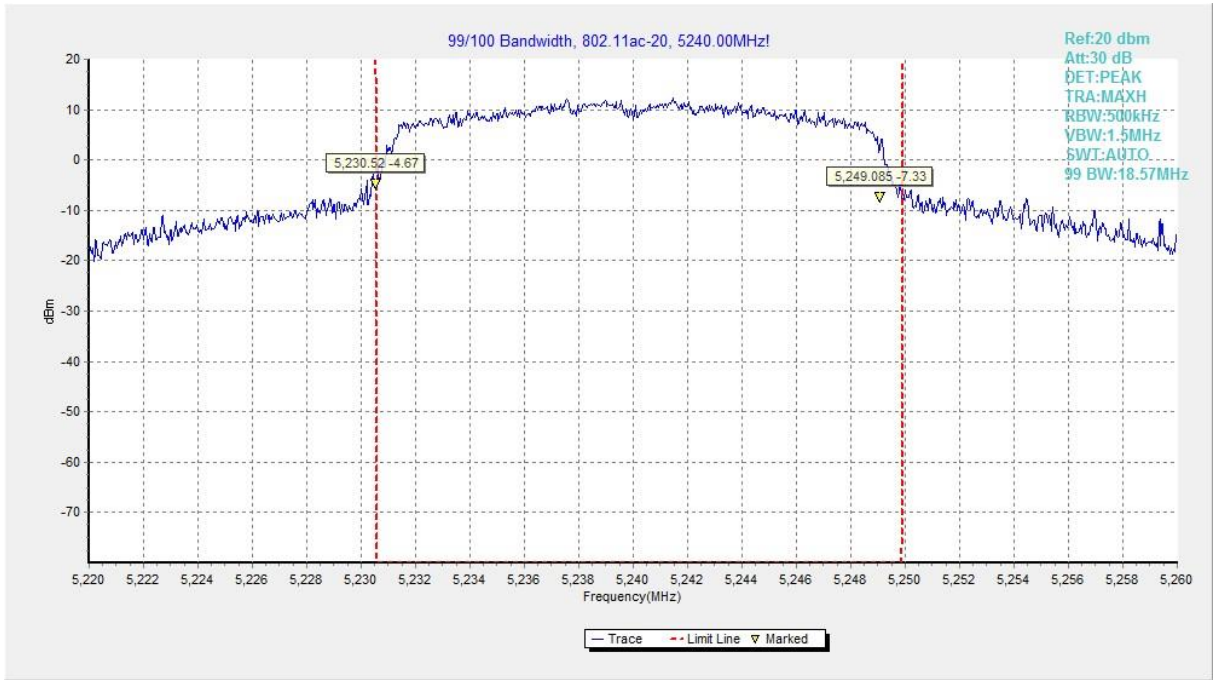


Fig. 53 99% Occupied bandwidth (802.11ac-HT20, 5240MHz)

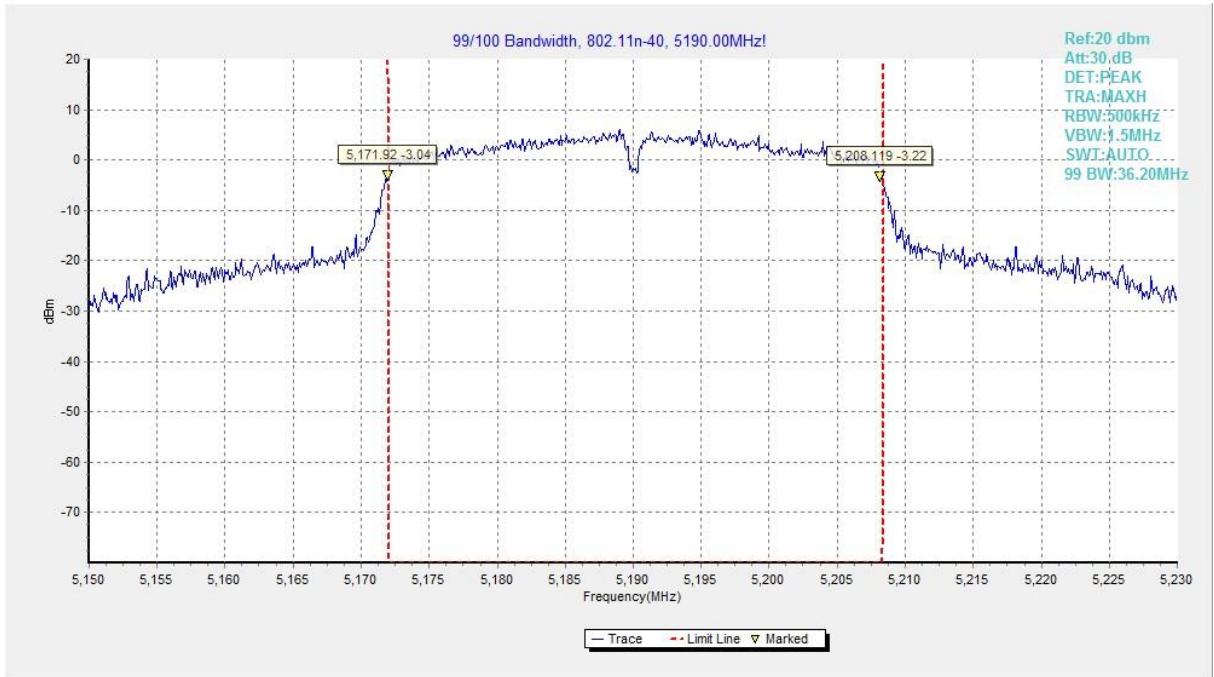


Fig. 54 99% Occupied bandwidth (802.11n-HT40, 5190MHz)

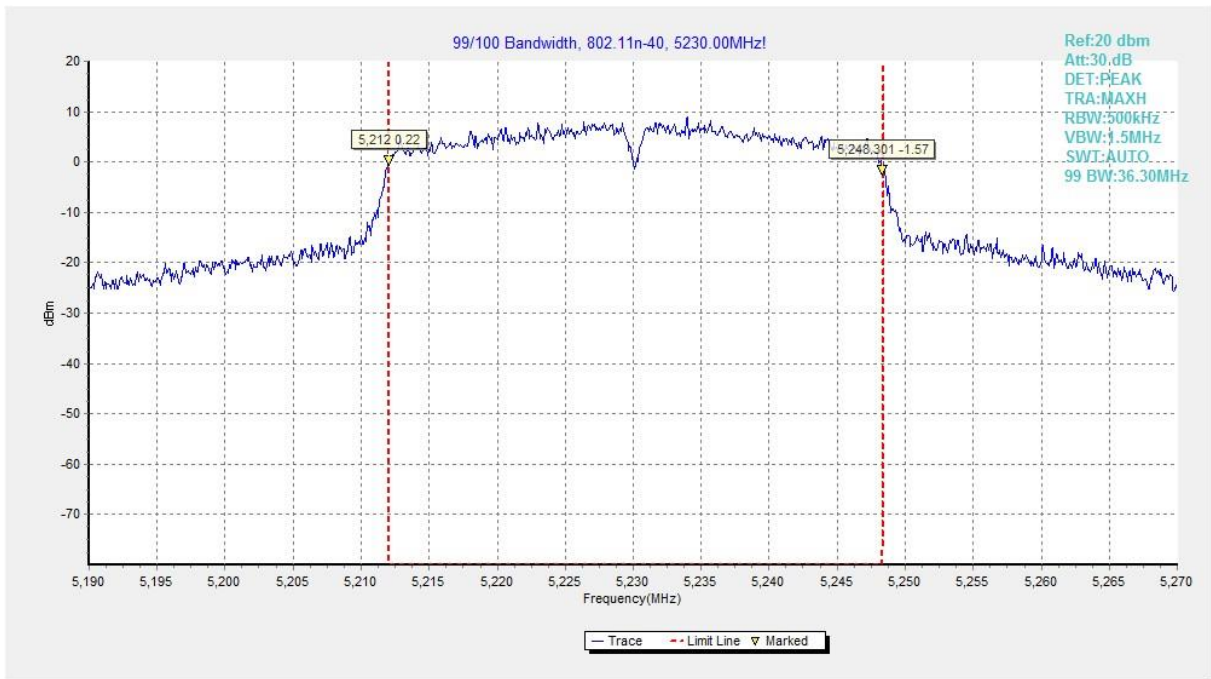


Fig. 55 99% Occupied bandwidth (802.11n-HT40, 5230MHz)

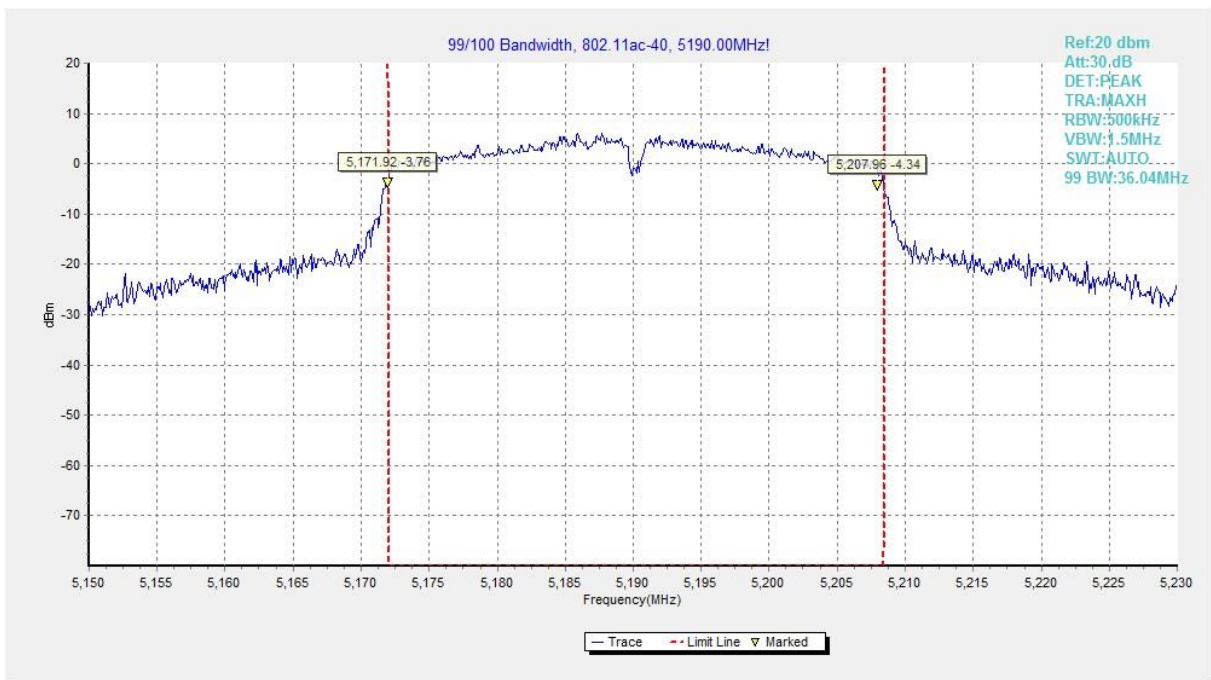


Fig. 56 9% Occupied bandwidth (802.11ac-HT40, 5190MHz)

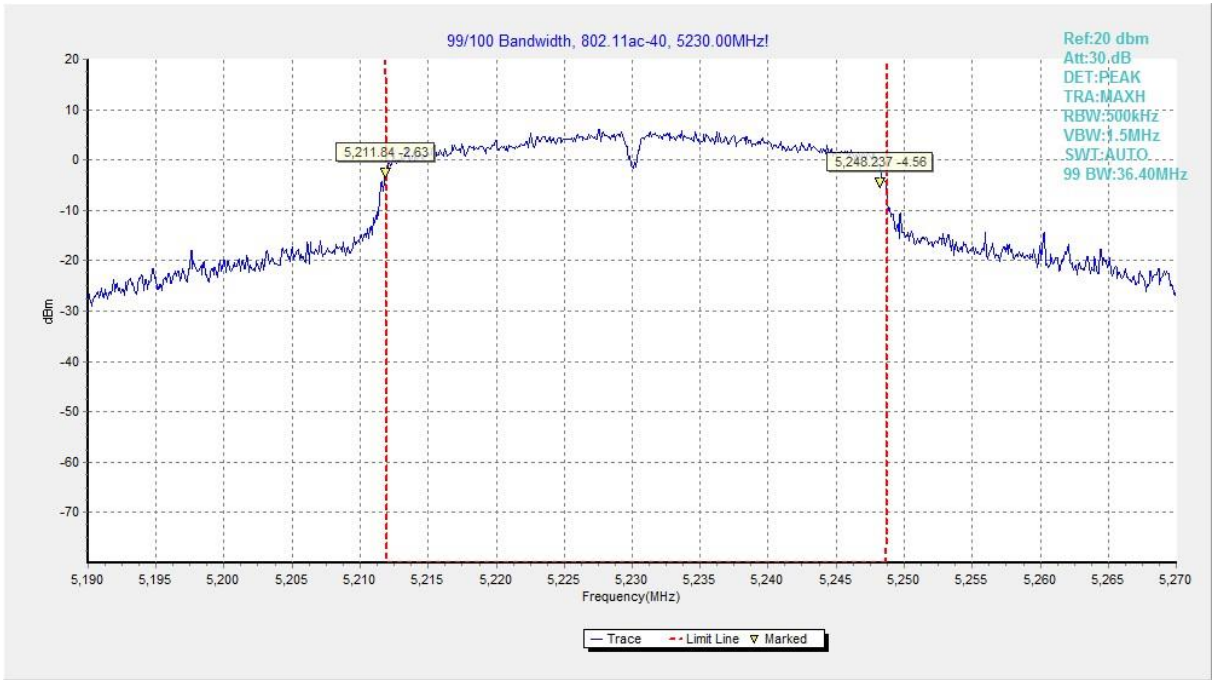


Fig. 57 99% Occupied bandwidth (802.11ac-HT40, 5230MHz)

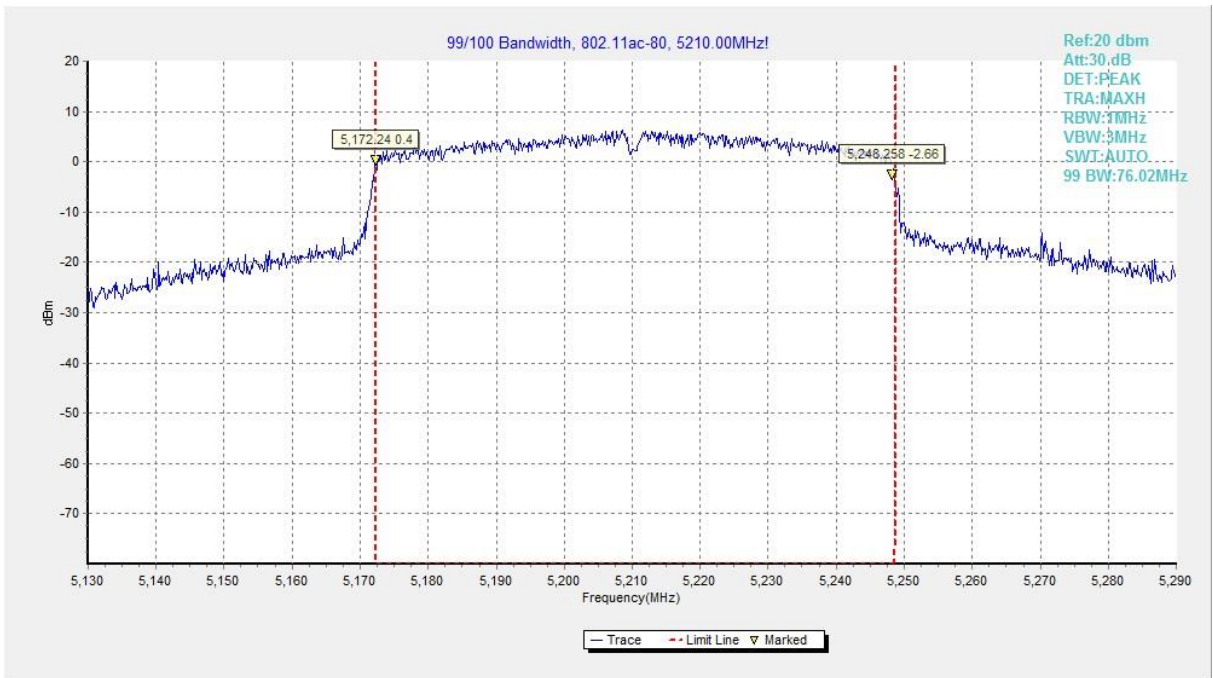


Fig. 58 99% Occupied bandwidth (802.11ac-HT80, 5210MHz)

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	Channel	Test Condition		Result(MHz)
		Tnom	Vnom	
802.11n-HT40	5190 MHz (5150-5250)	Tnom	Vnom	0.02
		Tmax	Vnom	
		Tmin	Vnom	
		Vmax	Tnom	
		Vmin	Tnom	
802.11ac-HT40	5320 MHz (5250-5350)	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



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).*

2016-09-29 through 2017-09-30
Effective Dates




For the National Voluntary Laboratory Accreditation Program

*** END OF REPORT BODY ***