

Fig. 20 Occupied 26dB Bandwidth (802.11ac-HT20, 5200MHz)

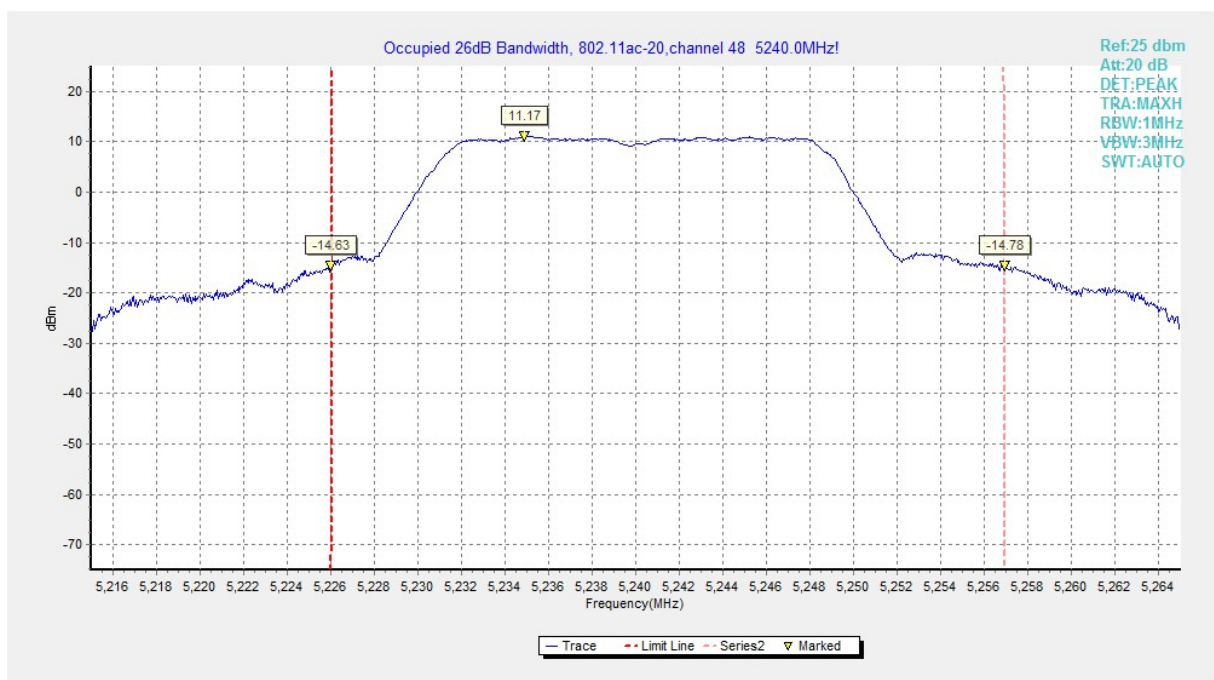


Fig. 21 Occupied 26dB Bandwidth (802.11ac-HT20, 5240MHz)

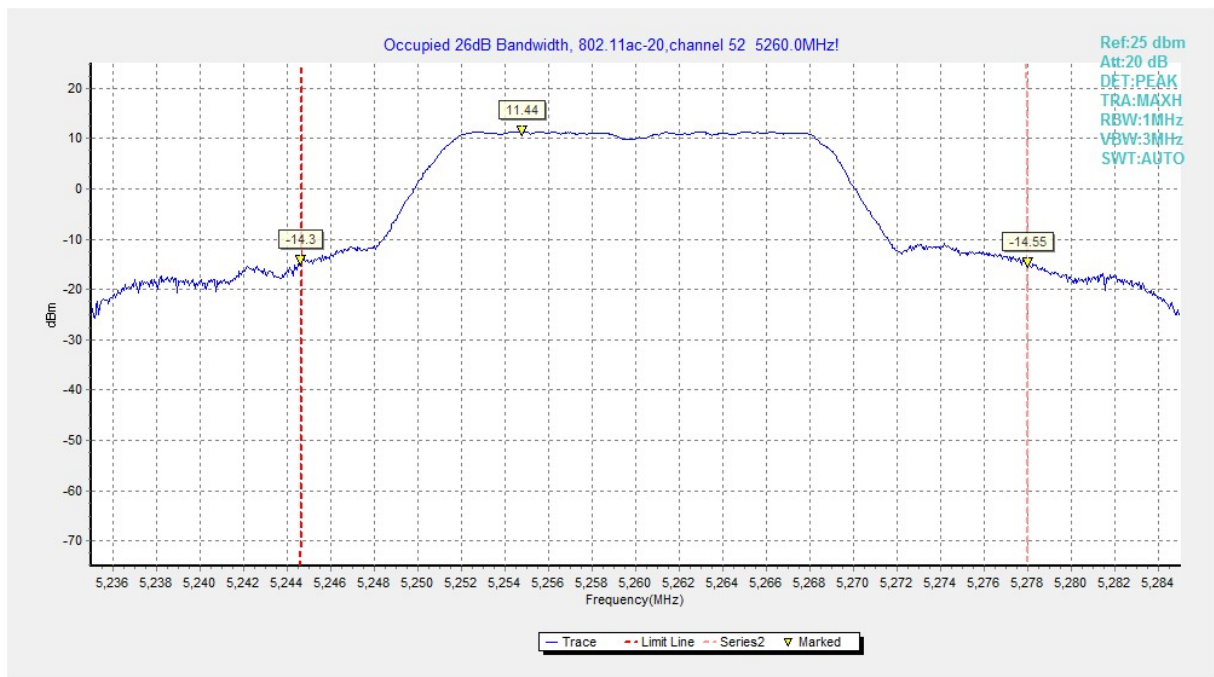


Fig. 22 Occupied 26dB Bandwidth (802.11ac-HT20, 5260MHz)

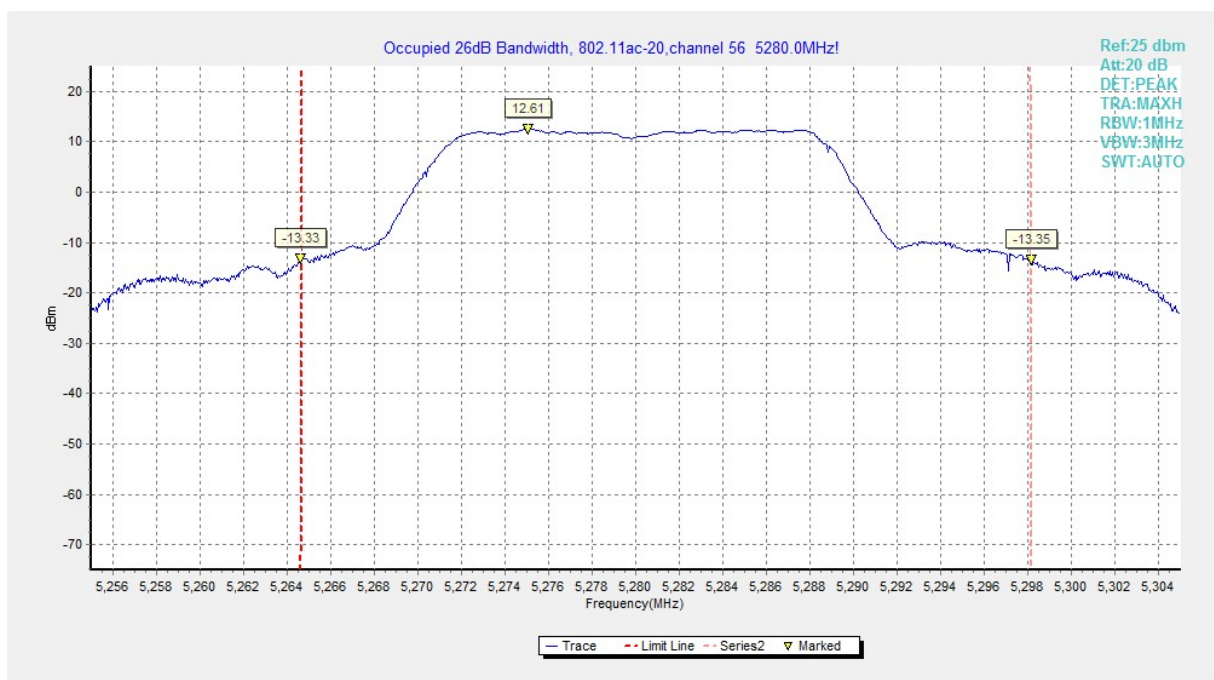


Fig. 23 Occupied 26dB Bandwidth (802.11ac-HT20, 5280MHz)

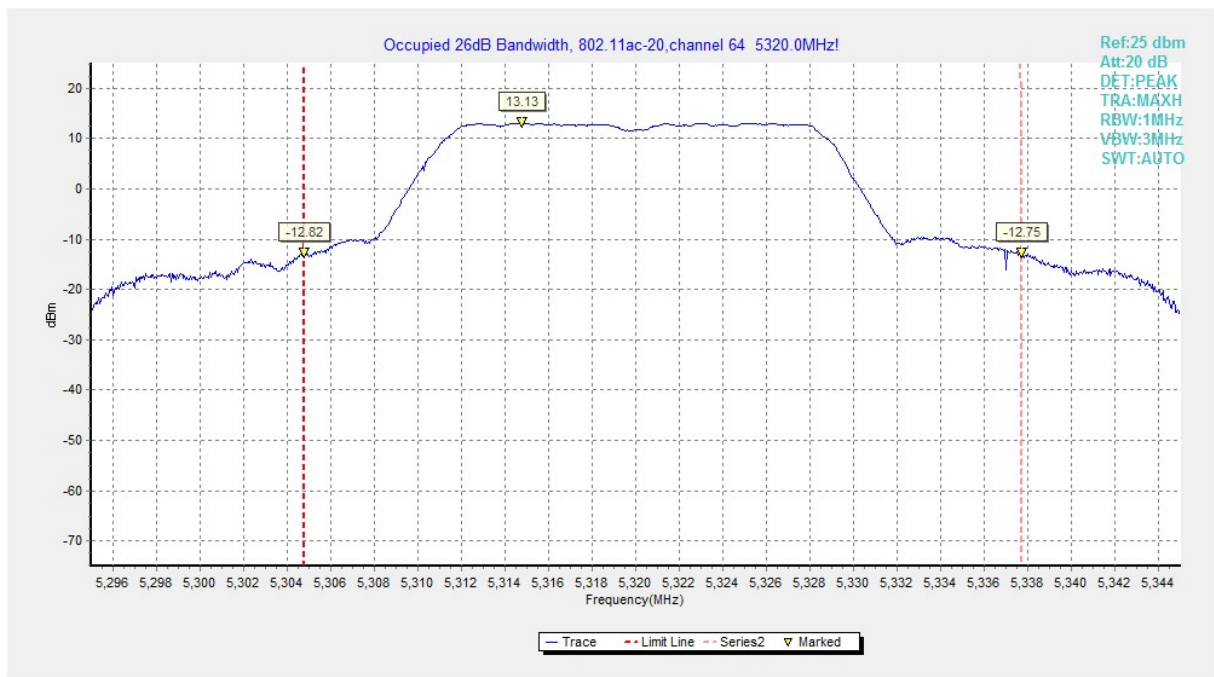


Fig. 24 Occupied 26dB Bandwidth (802.11ac-HT20, 5320MHz)

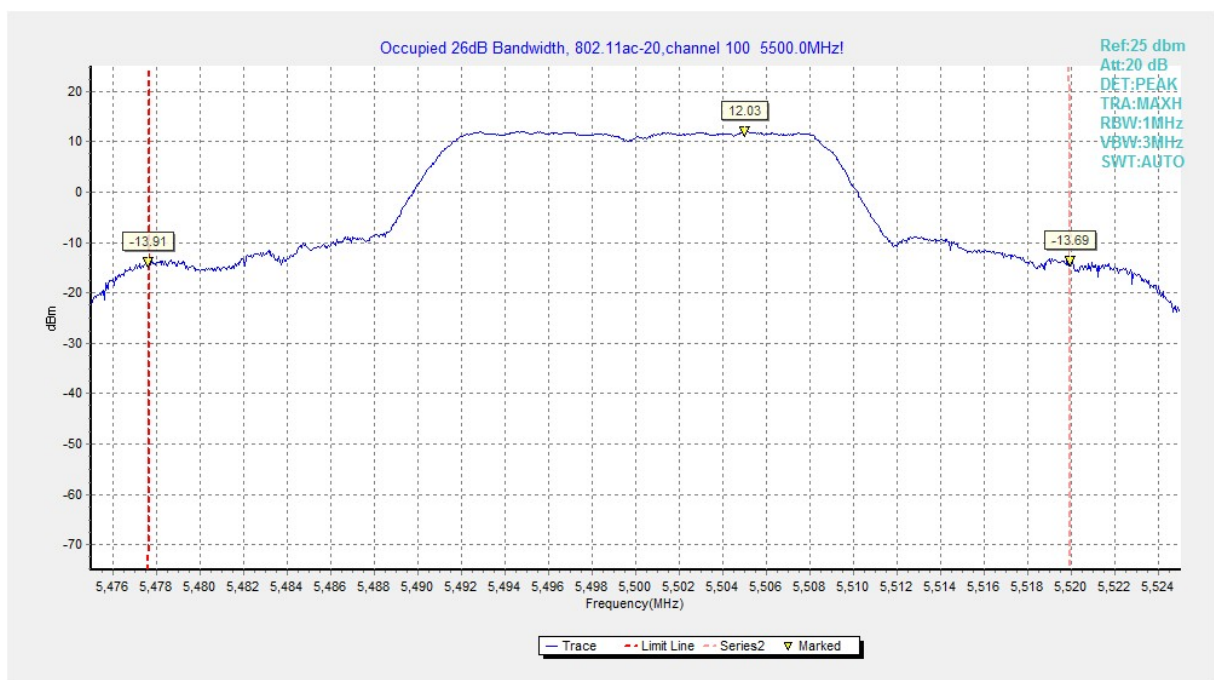


Fig. 25 Occupied 26dB Bandwidth (802.11ac-HT20, 5500MHz)

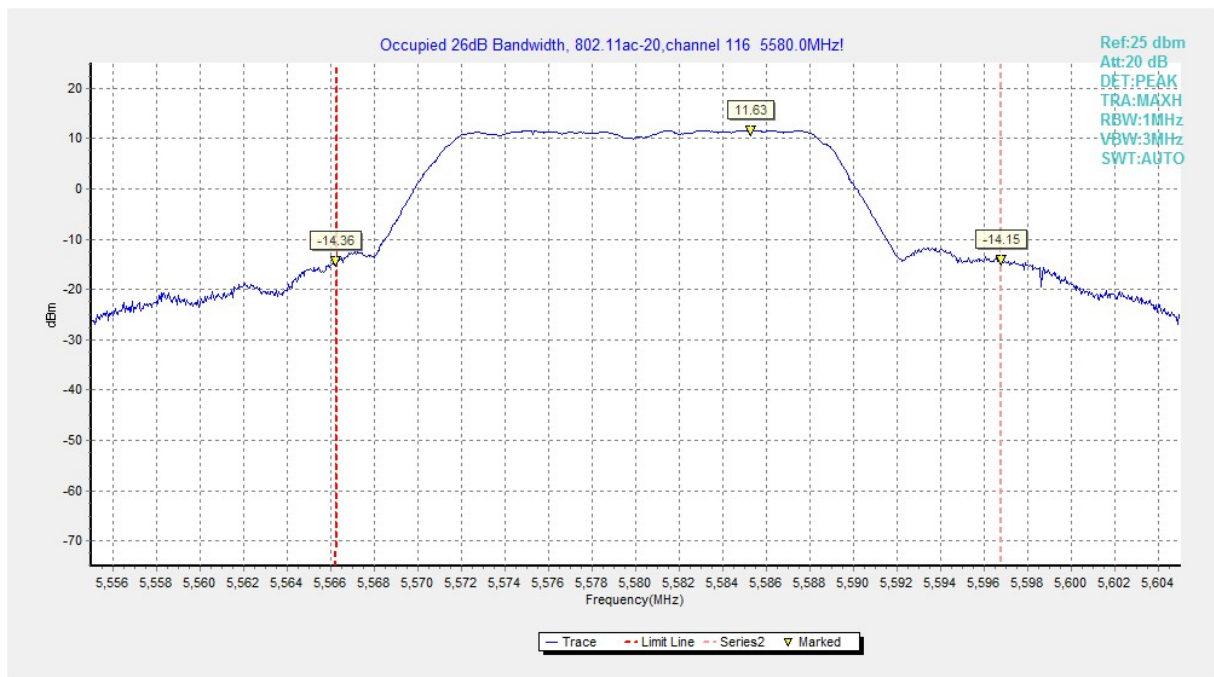


Fig. 26 Occupied 26dB Bandwidth (802. 11ac-HT20, 5580MHz)

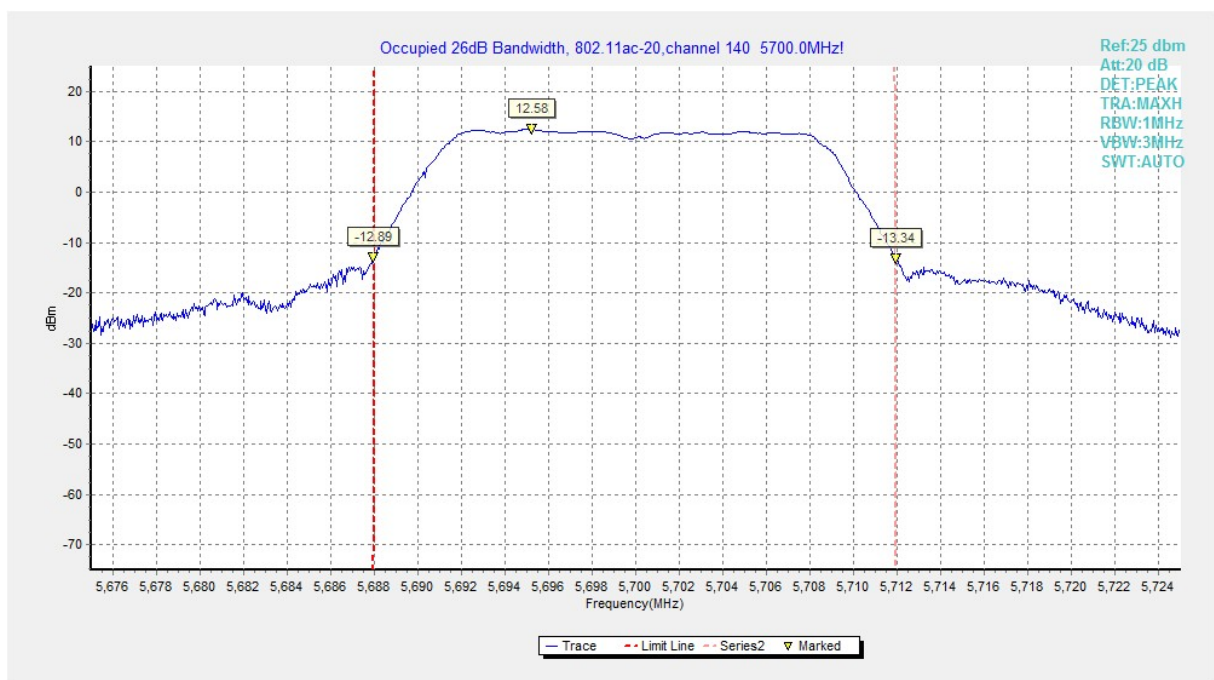


Fig. 27 Occupied 26dB Bandwidth (802. 11ac-HT20, 5700MHz)

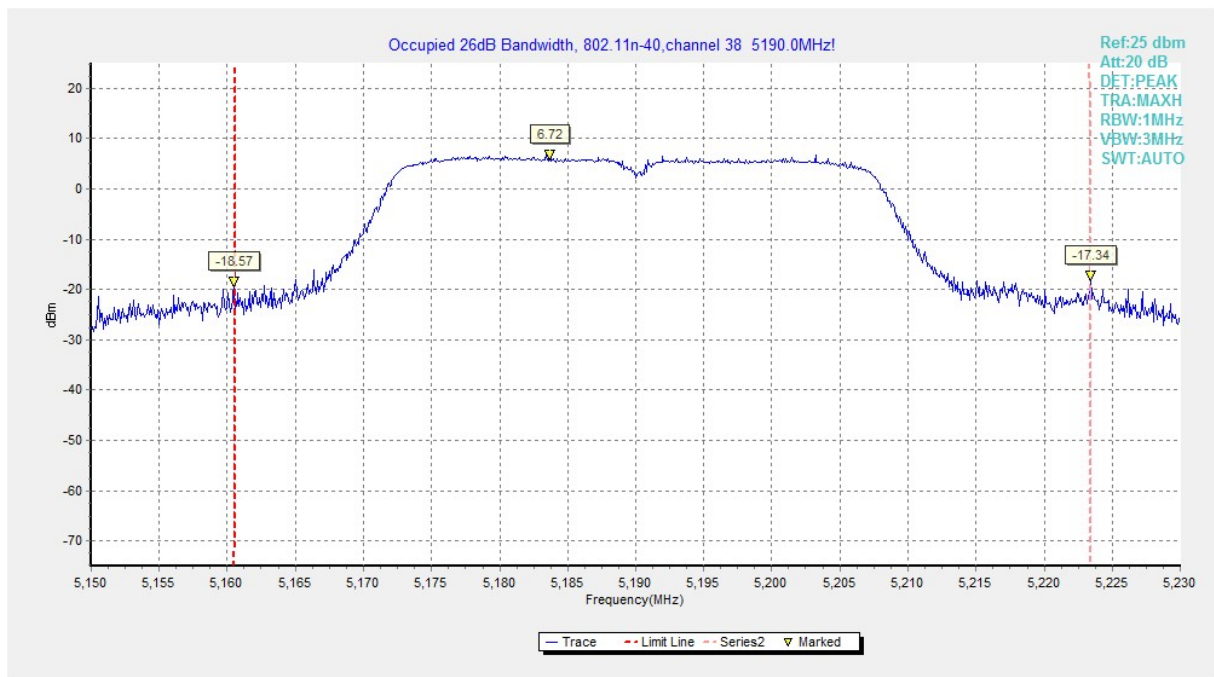


Fig. 28 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

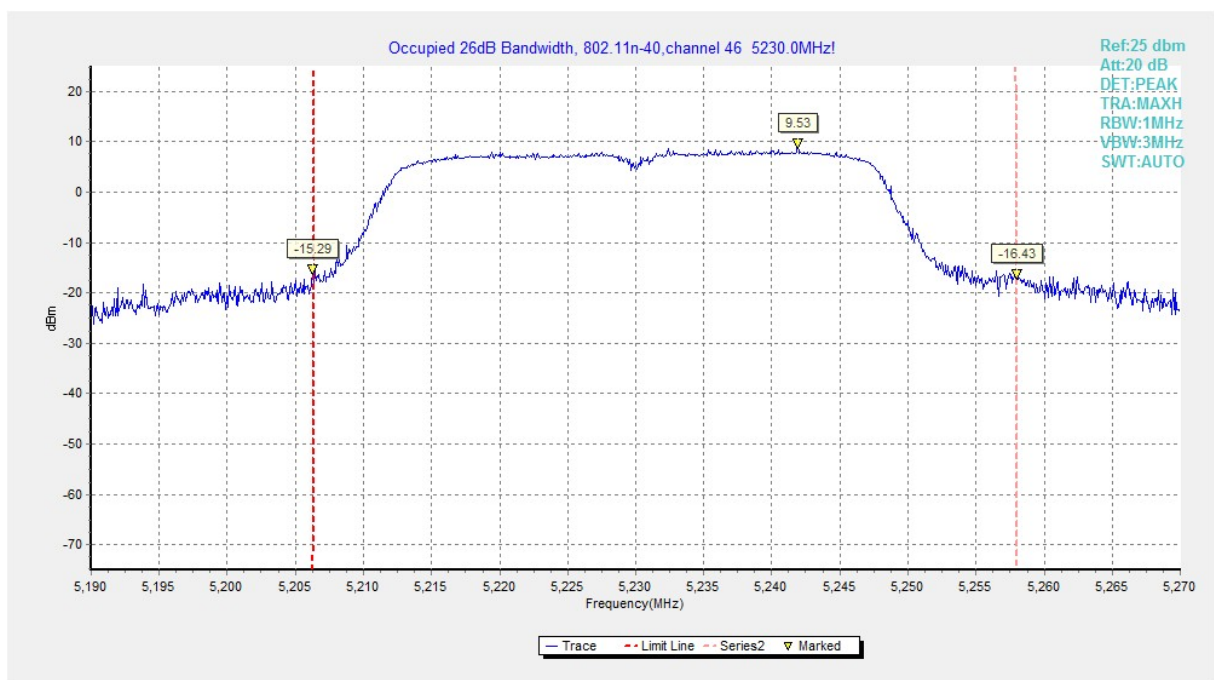


Fig. 29 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

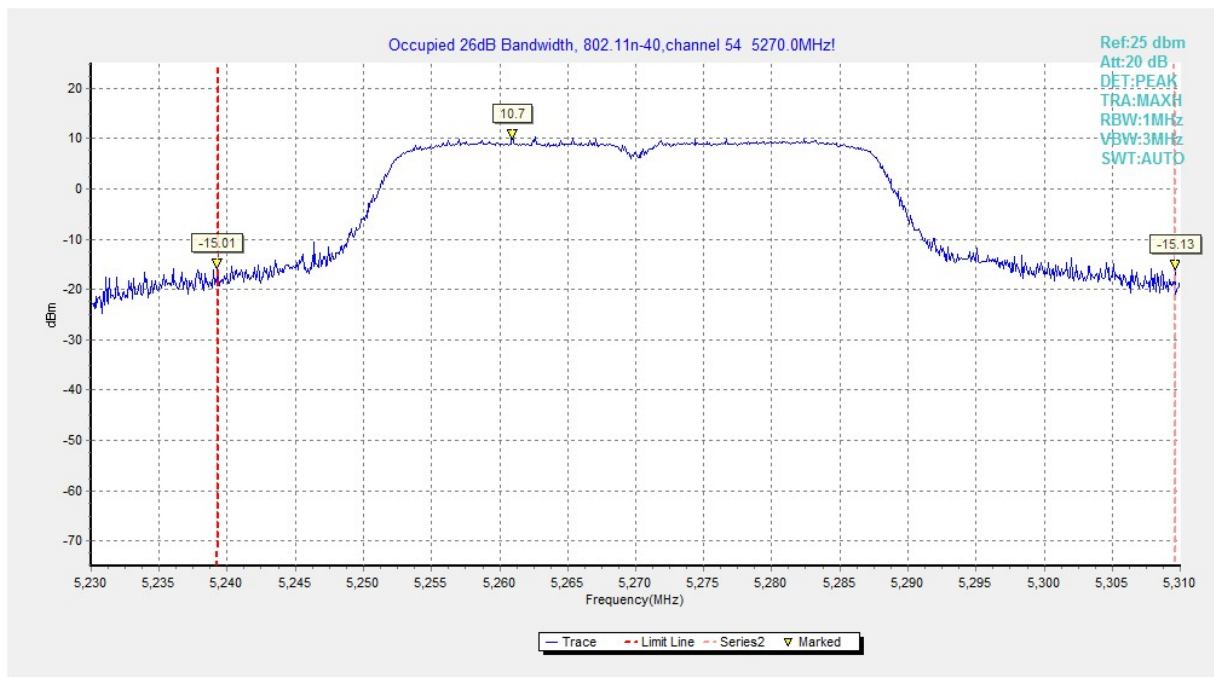


Fig. 30 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

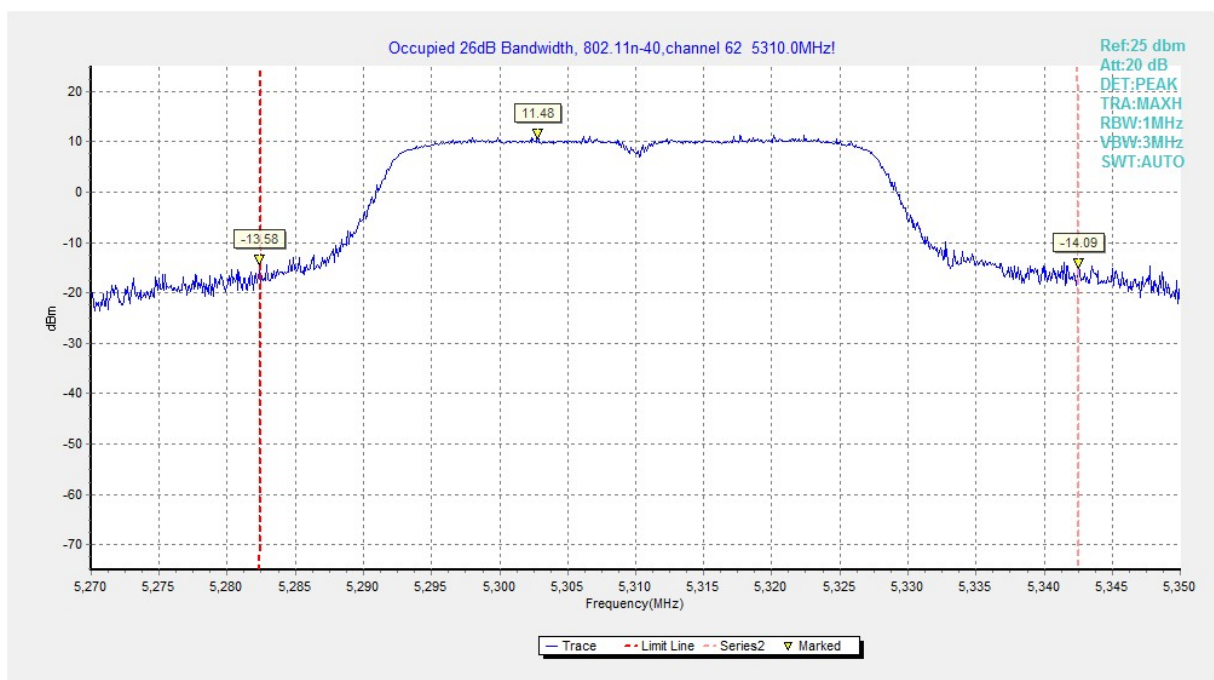


Fig. 31 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

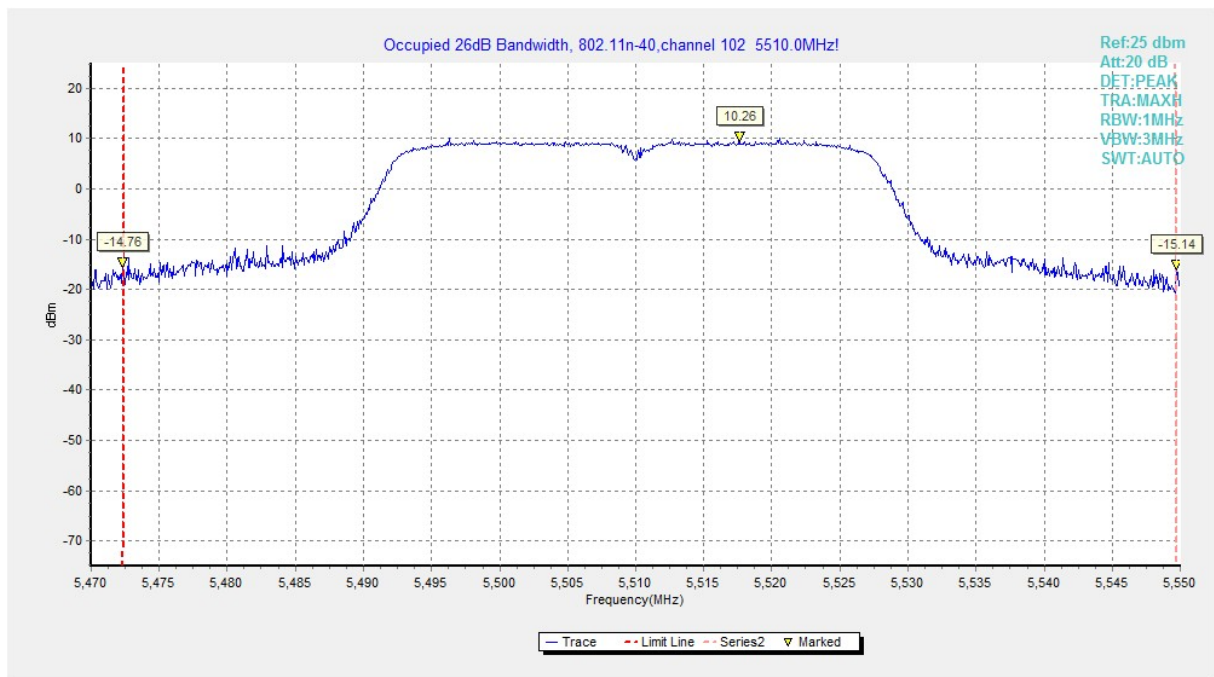


Fig. 32 Occupied 26dB Bandwidth (802. 11n-HT40, 5510MHz)

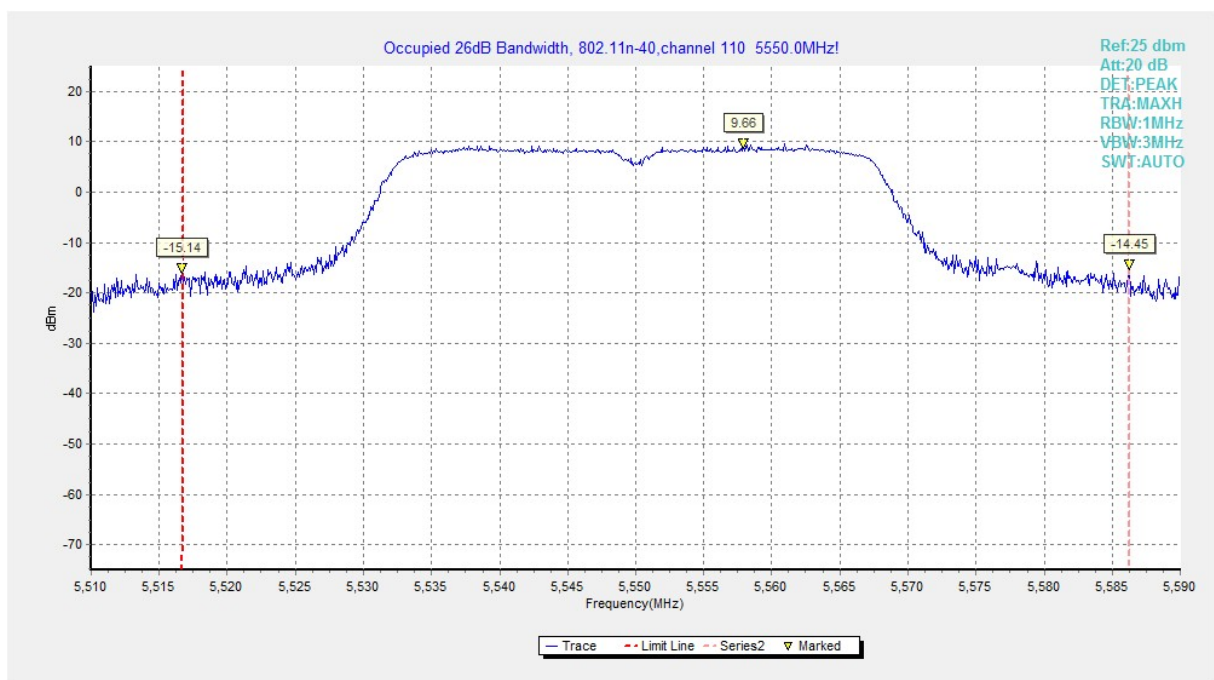


Fig. 33 Occupied 26dB Bandwidth (802. 11n-HT40, 5550MHz)

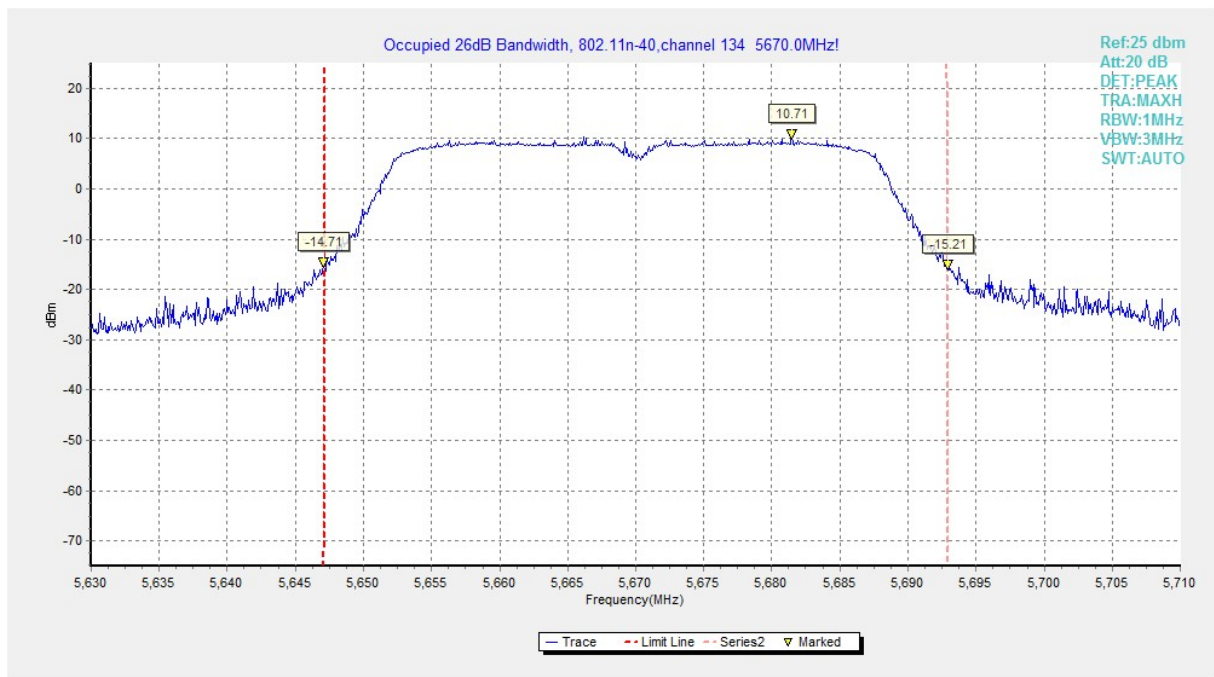


Fig. 34 Occupied 26dB Bandwidth (802.11n-HT40, 5670MHz)

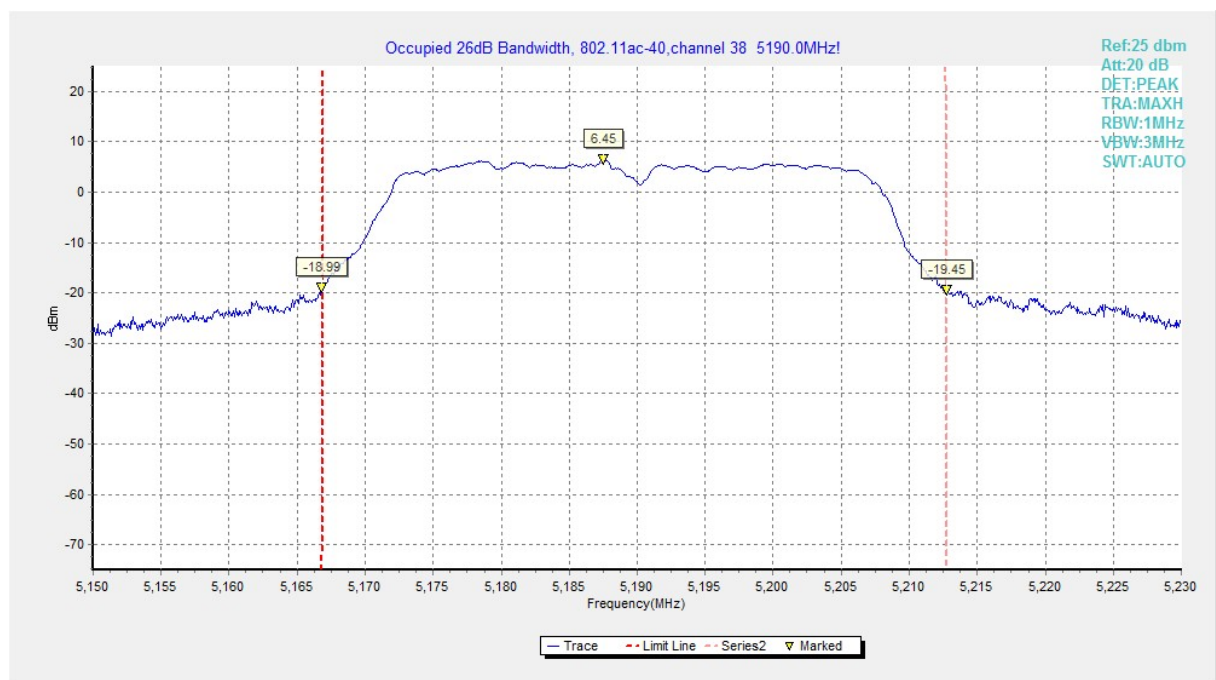


Fig. 35 Occupied 26dB Bandwidth (802.11ac-HT40, 5190MHz)

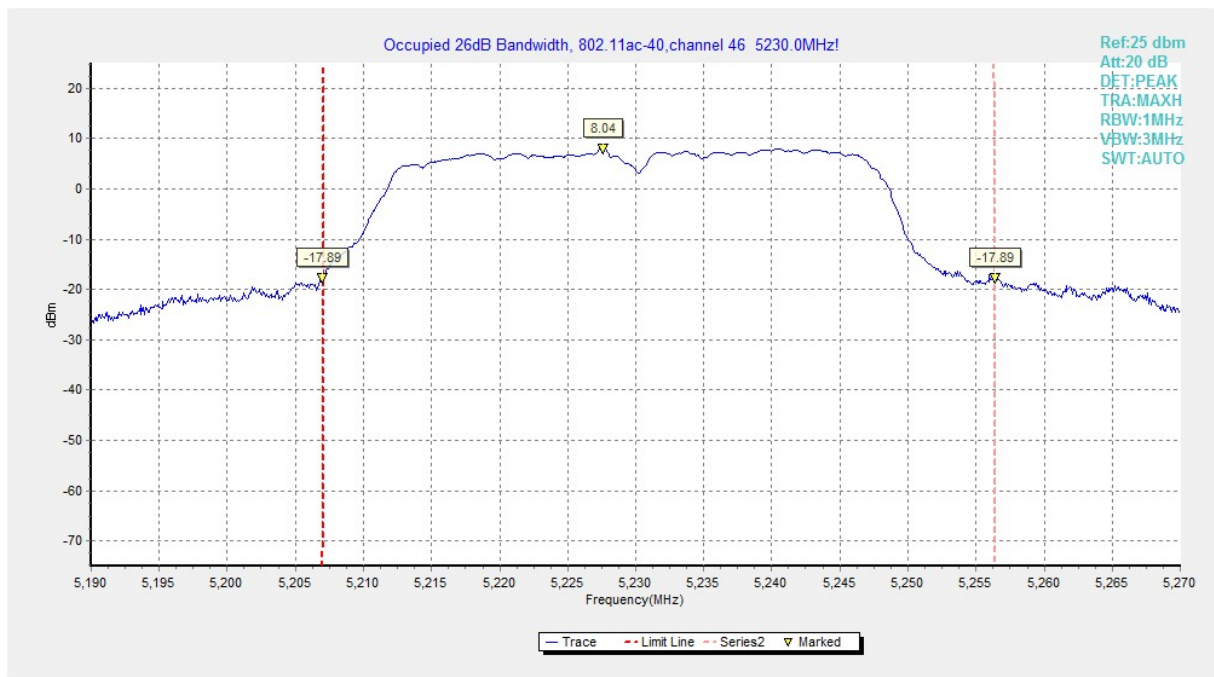


Fig. 36 Occupied 26dB Bandwidth (802.11ac-HT40, 5230MHz)

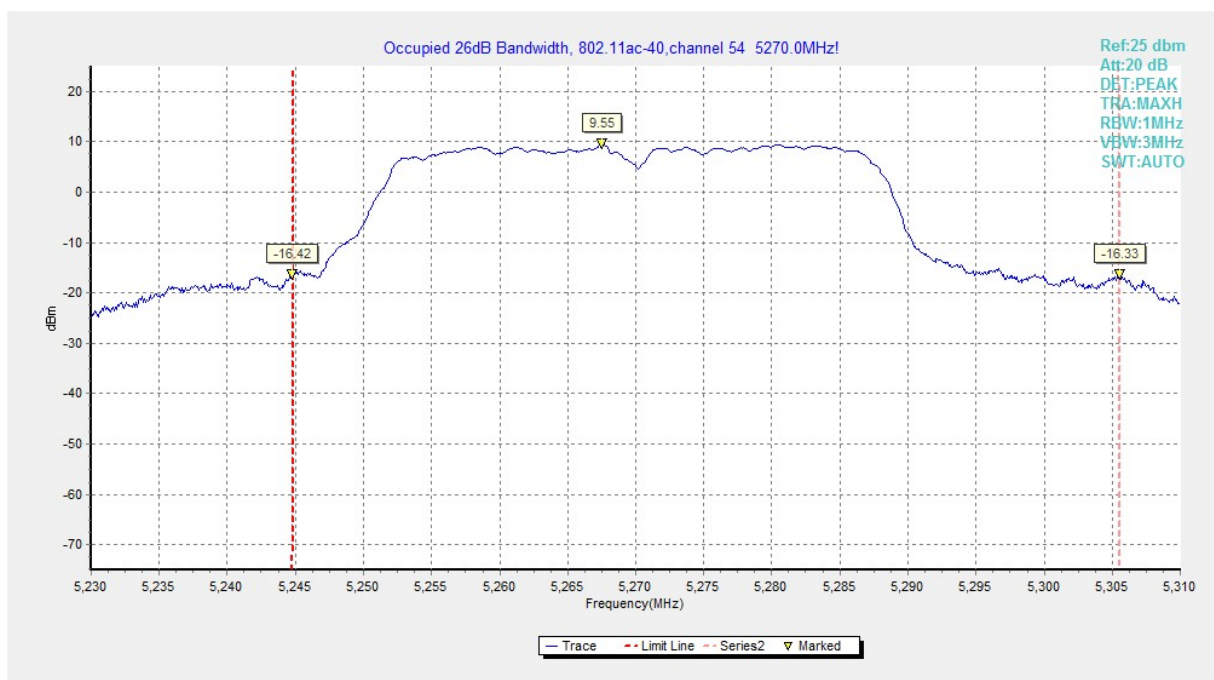


Fig. 37 Occupied 26dB Bandwidth (802.11ac-HT40, 5270MHz)

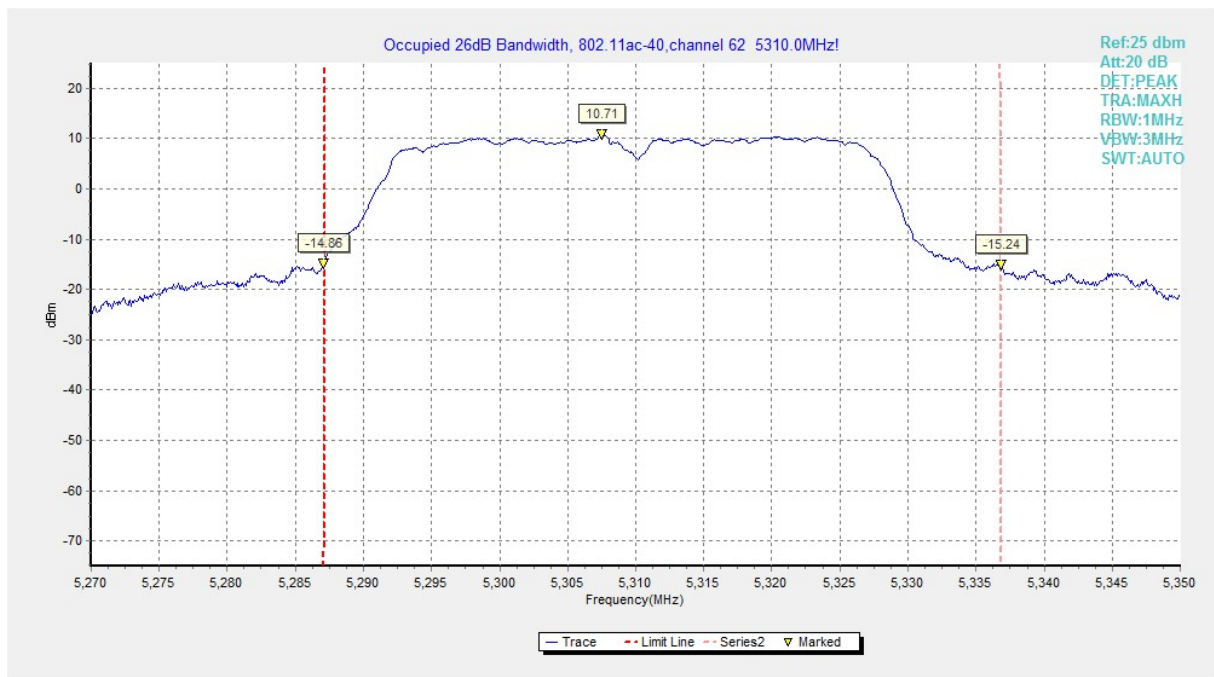


Fig. 38 Occupied 26dB Bandwidth (802.11ac-HT40, 5310MHz)

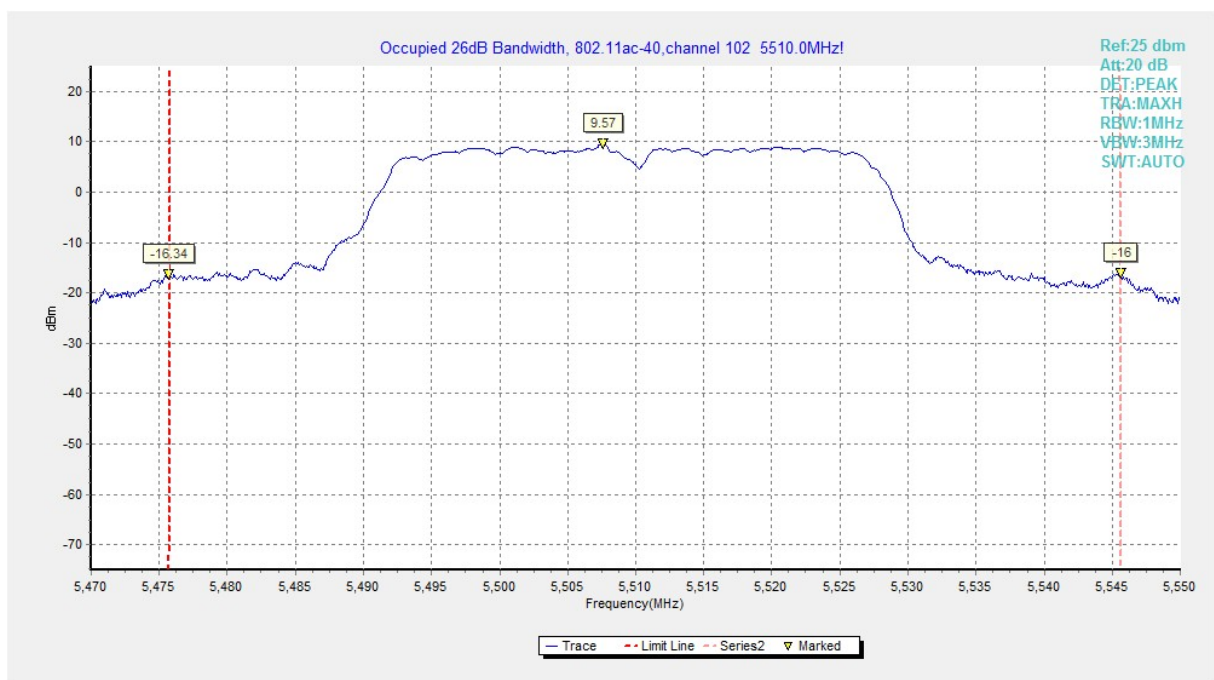


Fig. 39 Occupied 26dB Bandwidth (802.11ac-HT40, 5510MHz)

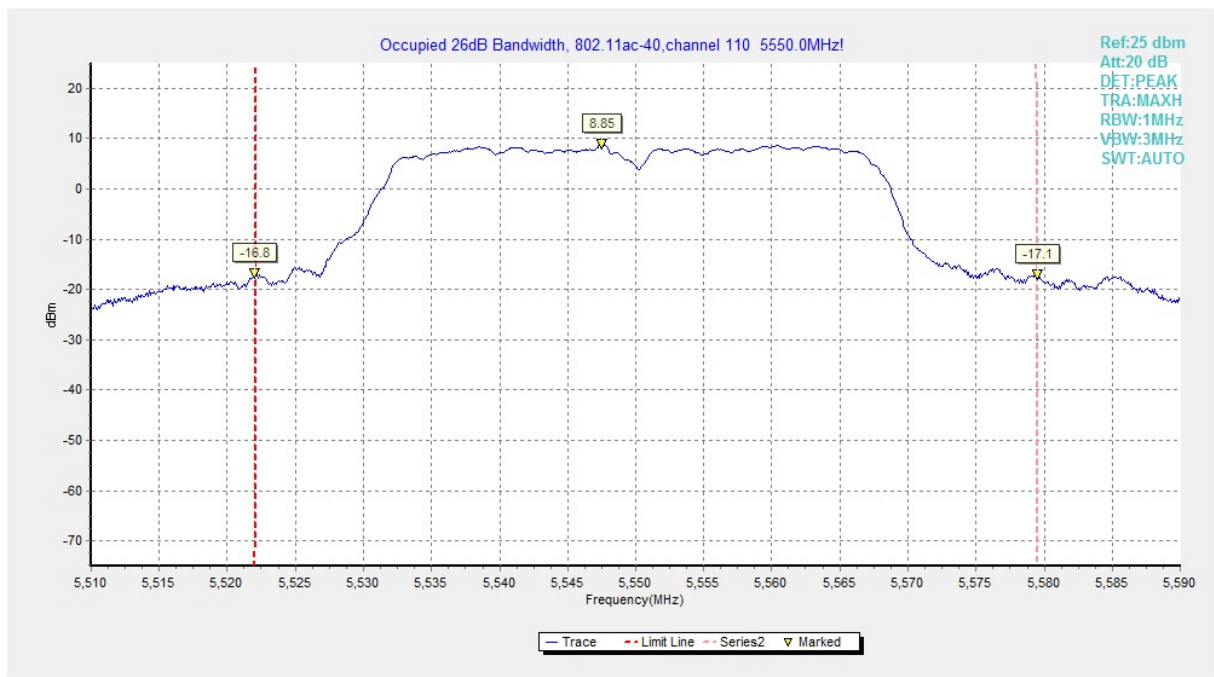


Fig. 40 Occupied 26dB Bandwidth (802. 11ac-HT40, 5550MHz)

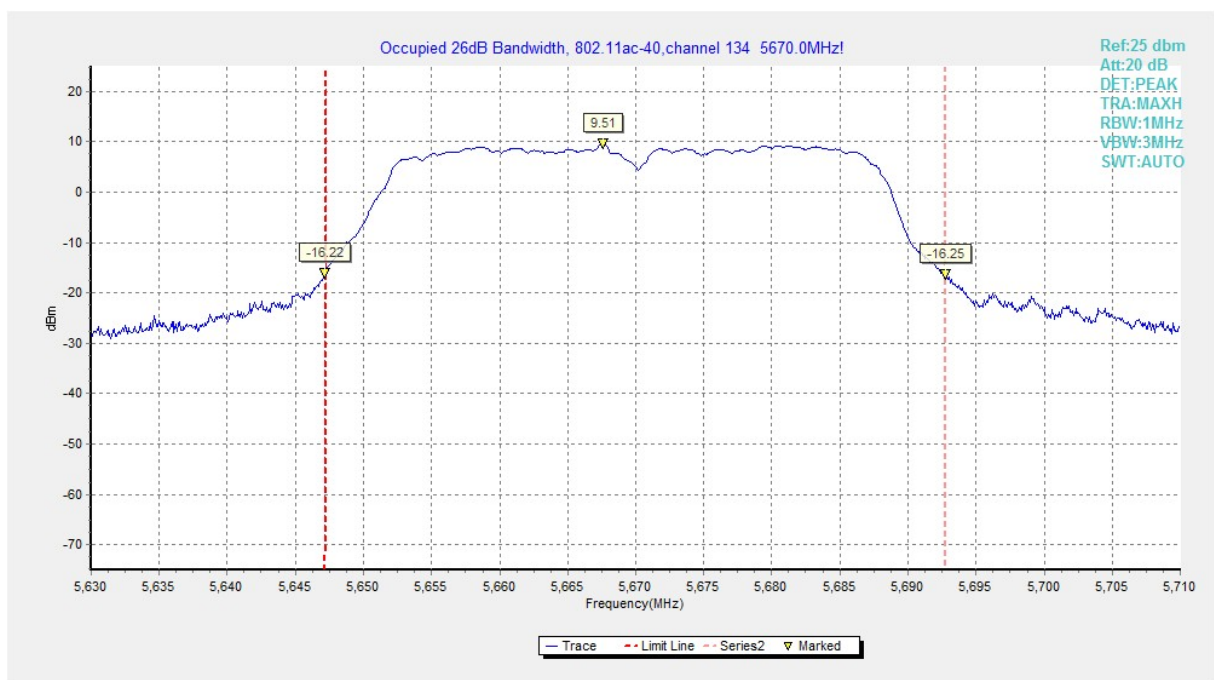


Fig. 41 Occupied 26dB Bandwidth (802. 11ac-HT40, 5670MHz)

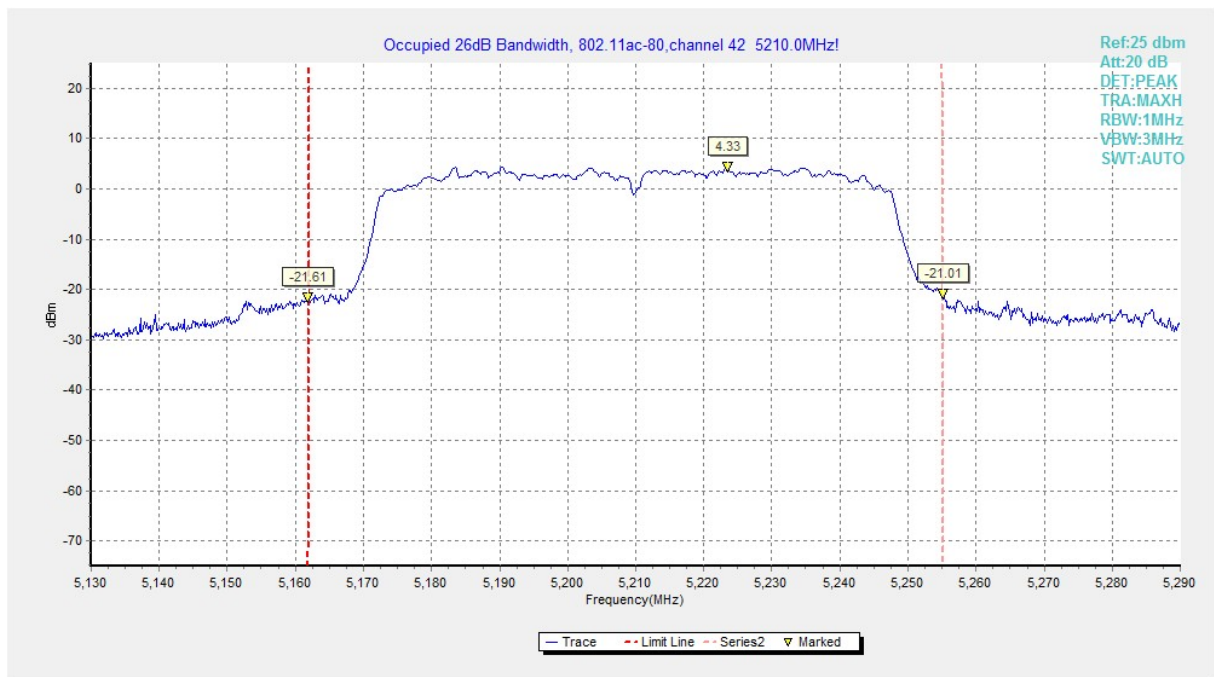


Fig. 42 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

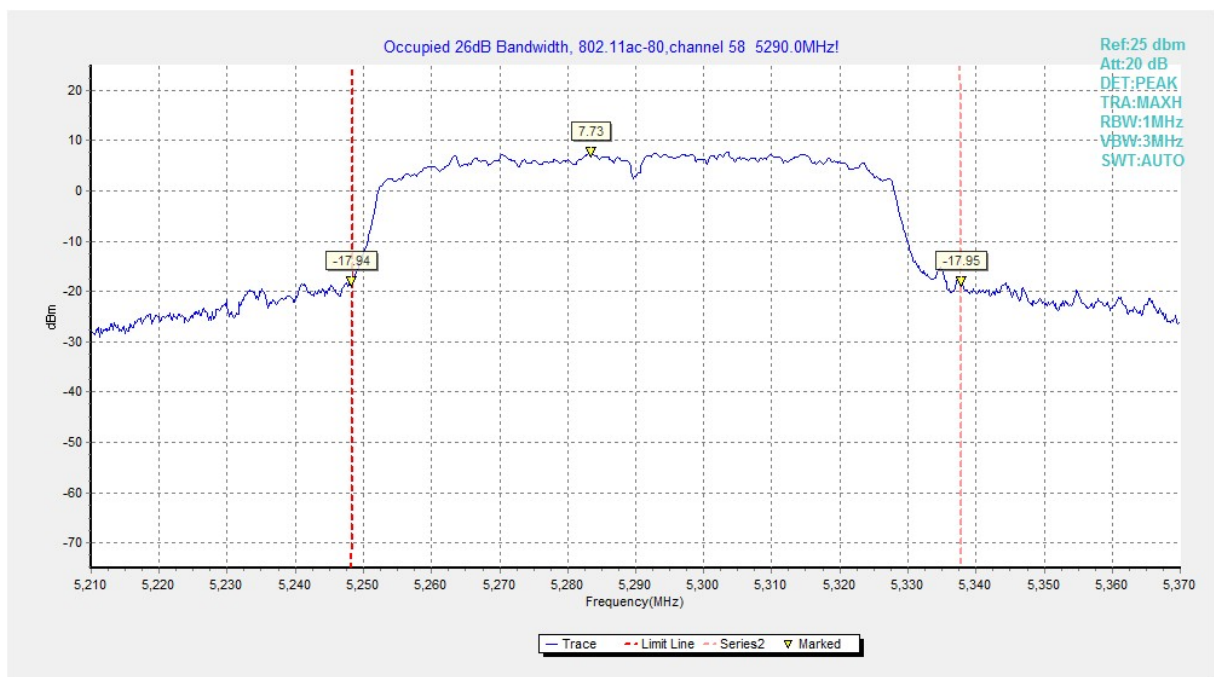


Fig. 43 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

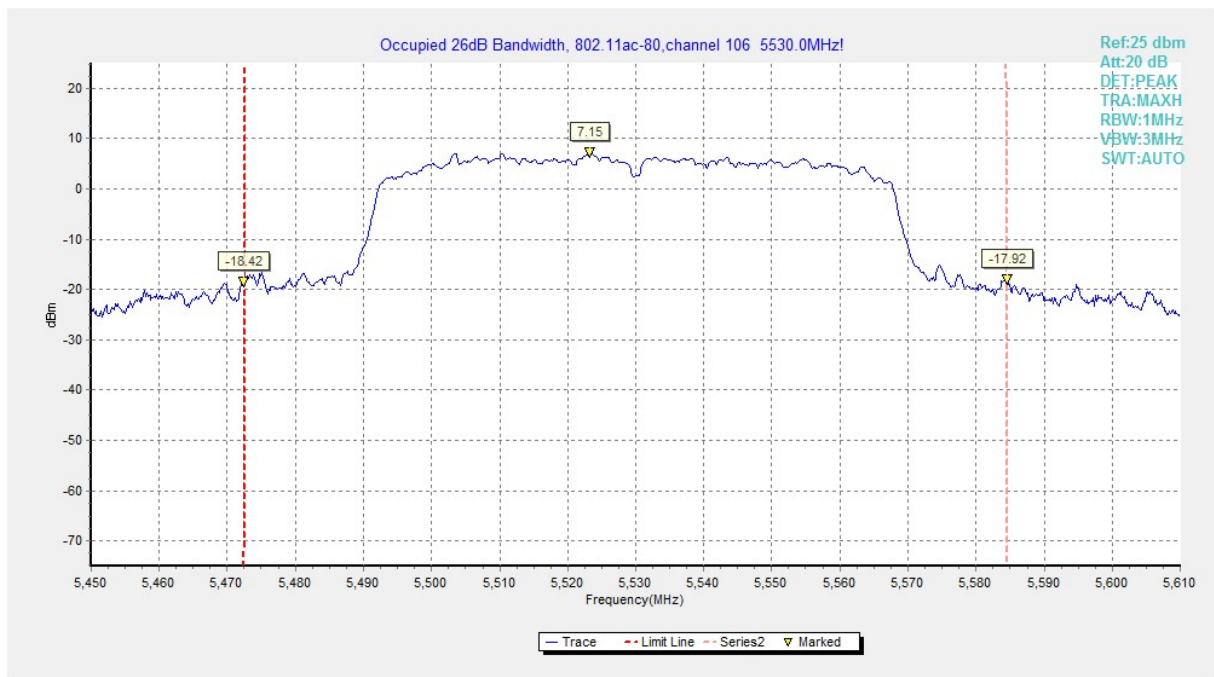


Fig. 44 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

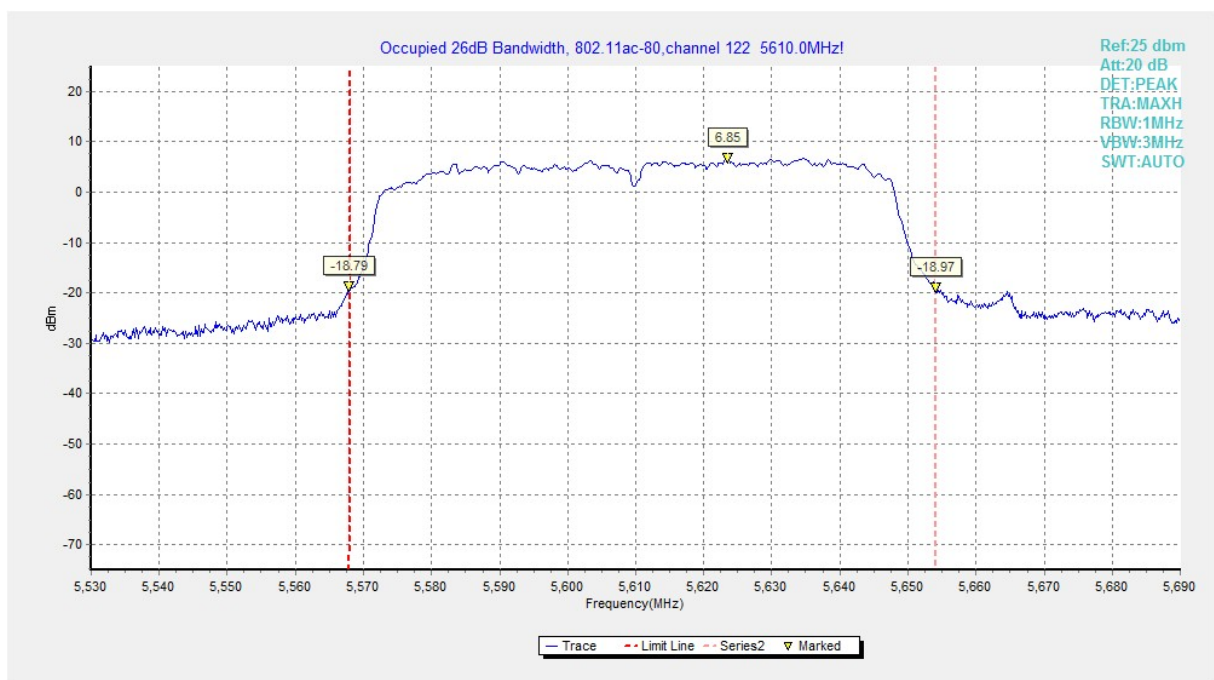


Fig. 45 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

A.5. Band Edges Compliancy

A5.1 Band Edges - Radiated

Measurement Limit:

Standard	Limit (dB μ V/m)	
FCC 47 CFR Part 15.209	Peak	74
	Average	54

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)).

Measurement Uncertainty:

Measurement Uncertainty	5.26dB
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Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.46	P
	5320 MHz	Fig.47	P
	5500 MHz	Fig.48	P
	5700 MHz	Fig.49	P
802.11n HT20	5180 MHz	Fig.50	P
	5320 MHz	Fig.51	P
	5500 MHz	Fig.52	P
	5700 MHz	Fig.53	P
802.11n HT40	5190 MHz	Fig.54	P
	5310 MHz	Fig.55	P
	5510 MHz	Fig.56	P
	5670 MHz	Fig.57	P
802.11ac HT80	5210MHz	Fig.58	P
	5290MHz	Fig.59	P
	5530MHz	Fig.60	P

Conclusion: PASS

Test graphs as below:

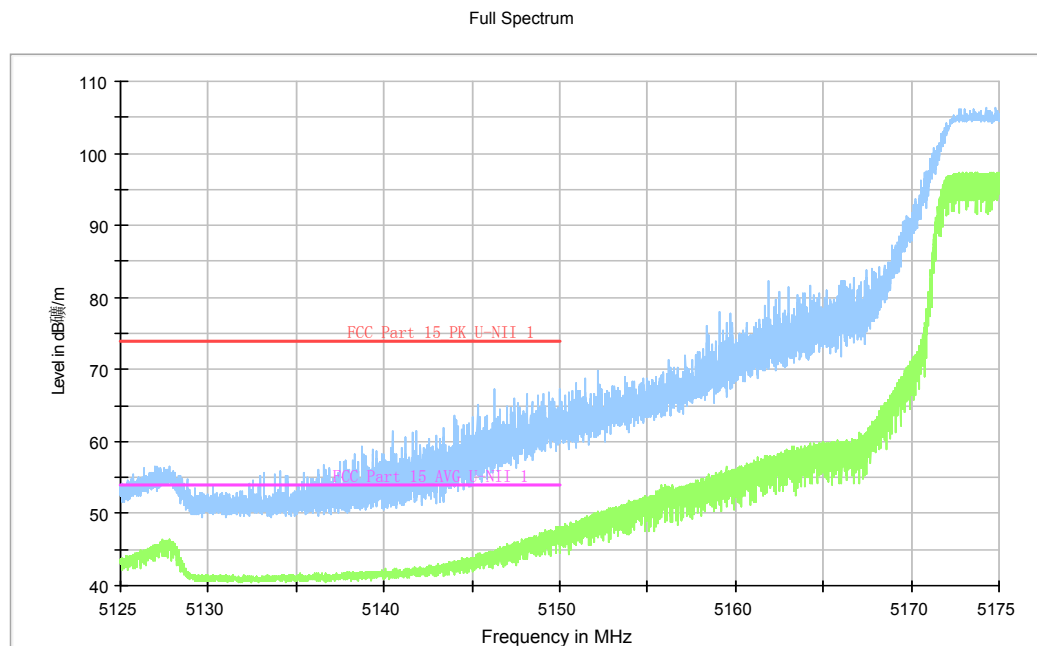


Fig. 46 Band Edges (802.11a, 5180MHz)

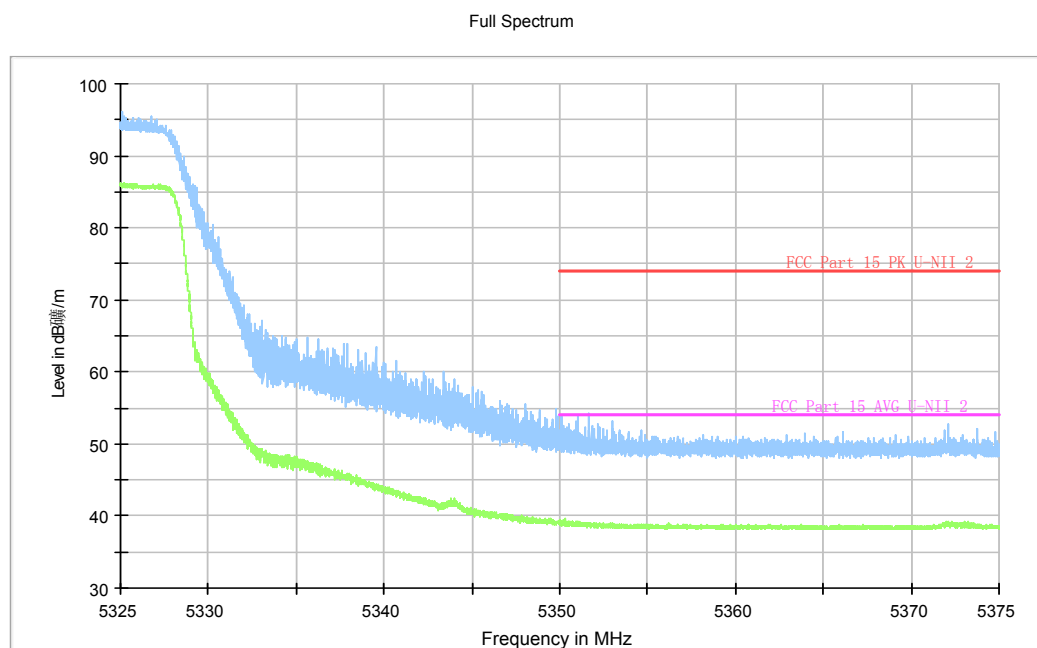


Fig. 47 Band Edges (802.11a, 5320MHz)

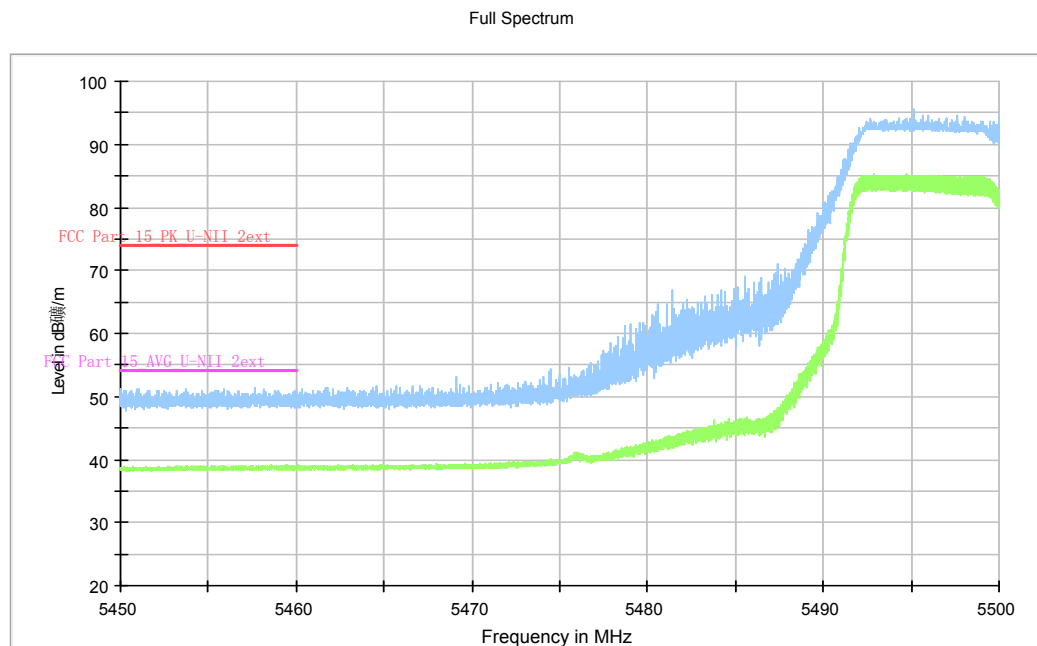


Fig. 48 Band Edges (802.11a, 5500MHz)

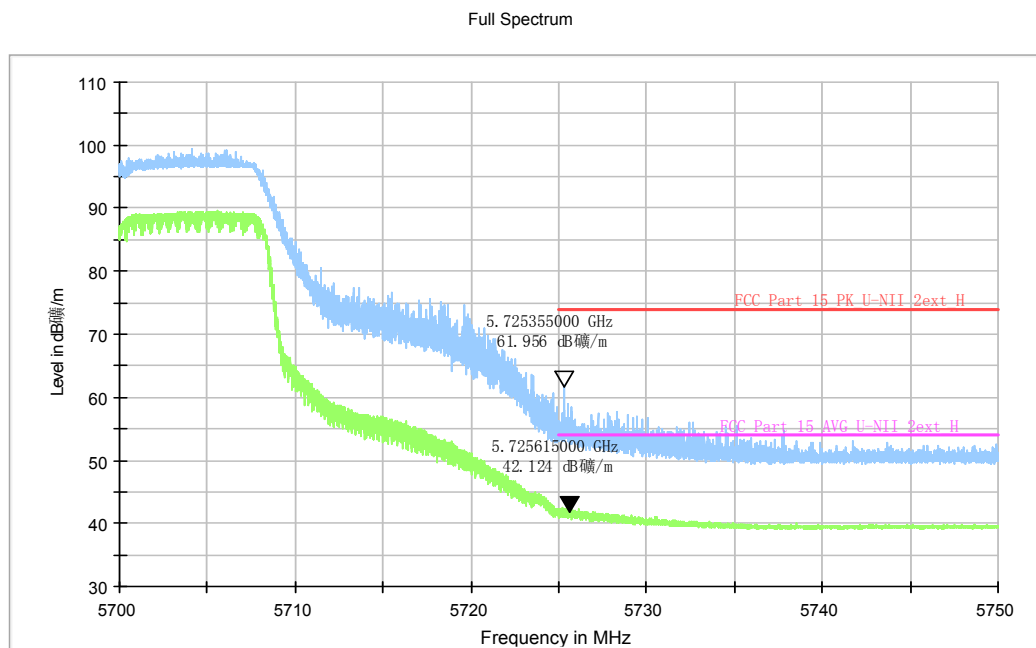


Fig. 49 Band Edges (802.11a, 5700MHz)

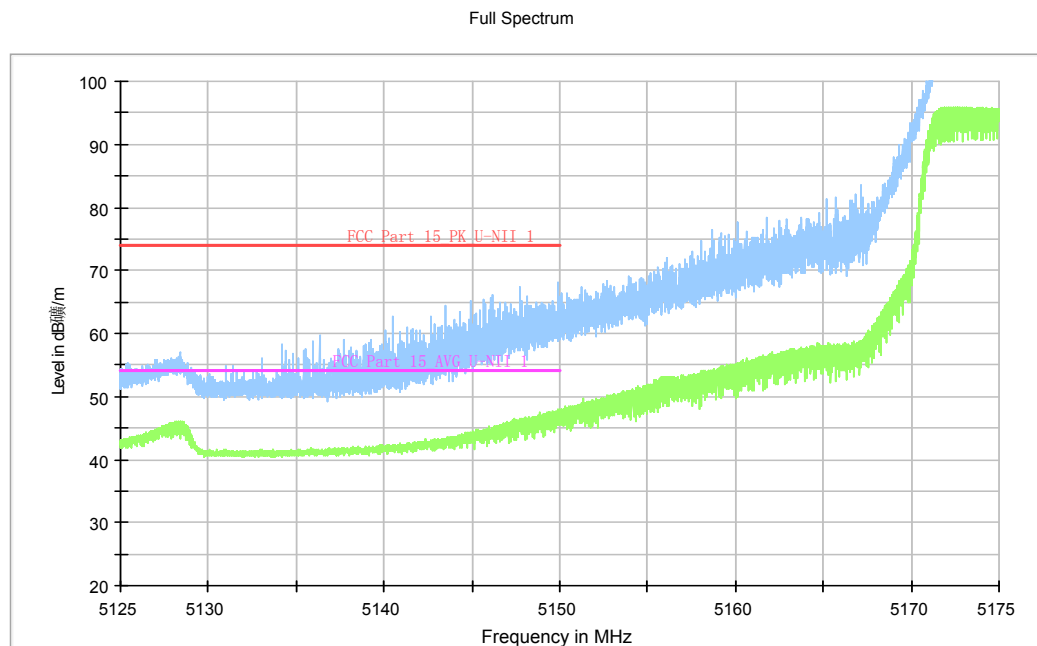


Fig. 50 Band Edges (802.11n-HT20, 5180MHz)

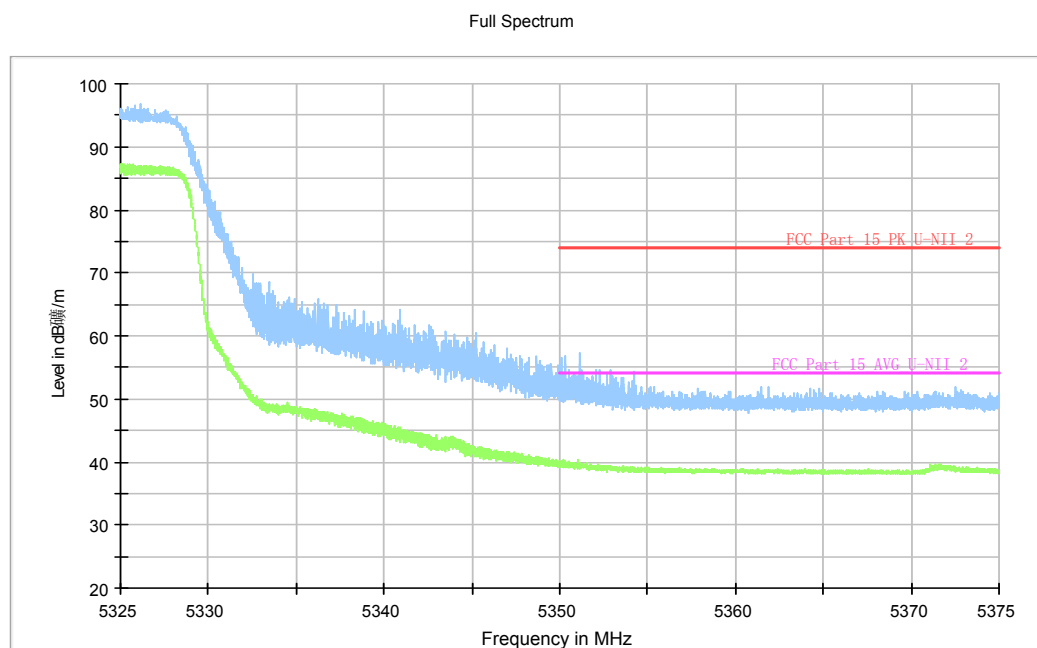


Fig. 51 Band Edges (802.11n-HT20, 5320MHz)

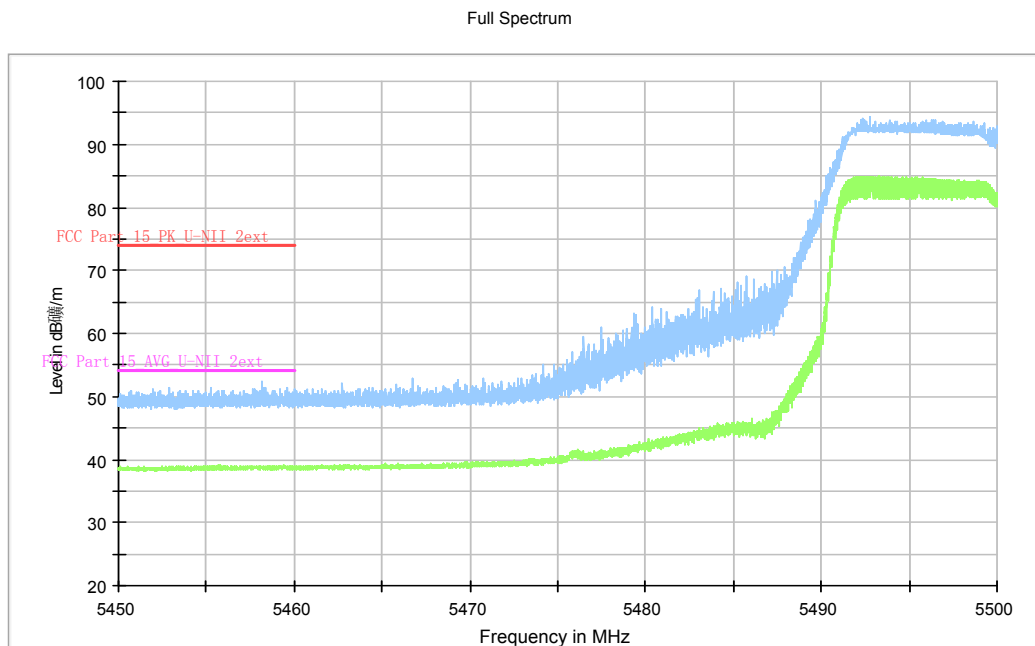


Fig. 52 Band Edges (802.11n-HT20, 5500MHz)

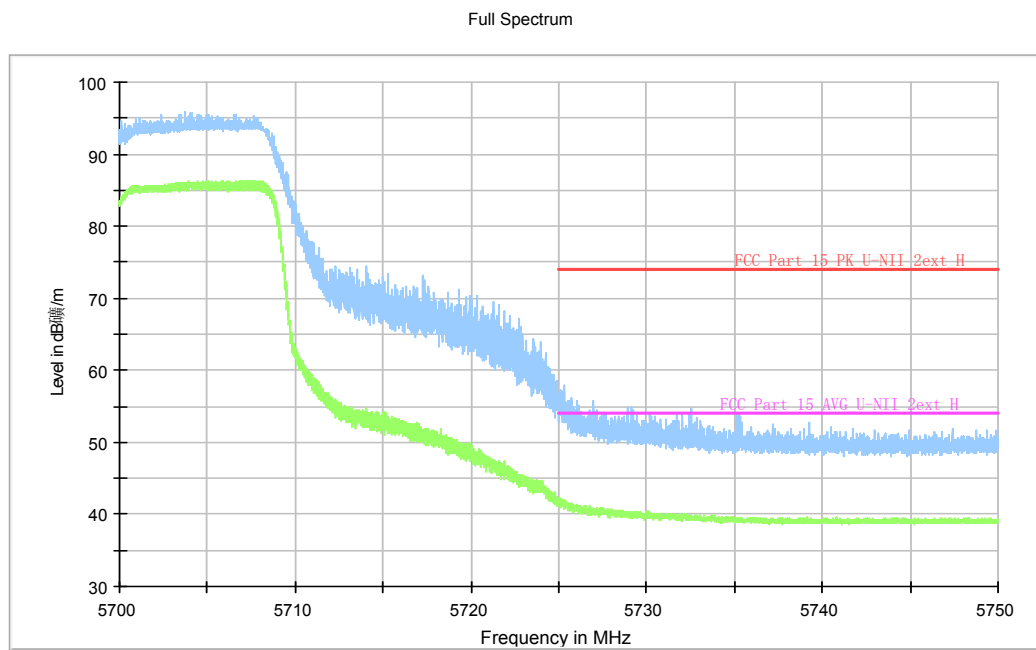


Fig. 53 Band Edges (802.11n-HT20, 5700MHz)

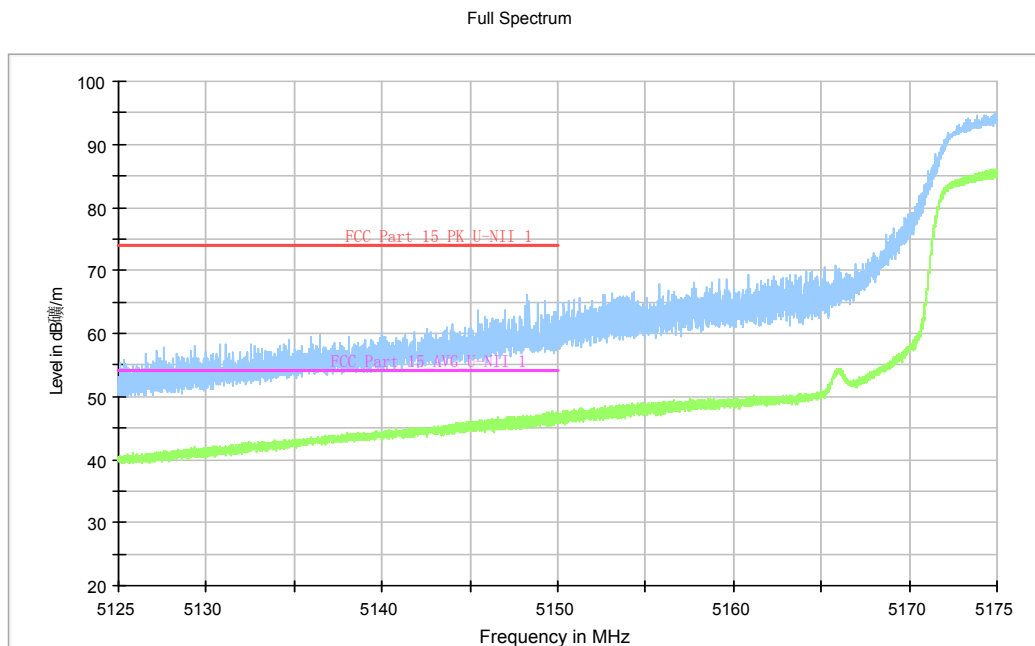


Fig. 54 Band Edges (802.11n-HT40, 5190MHz)

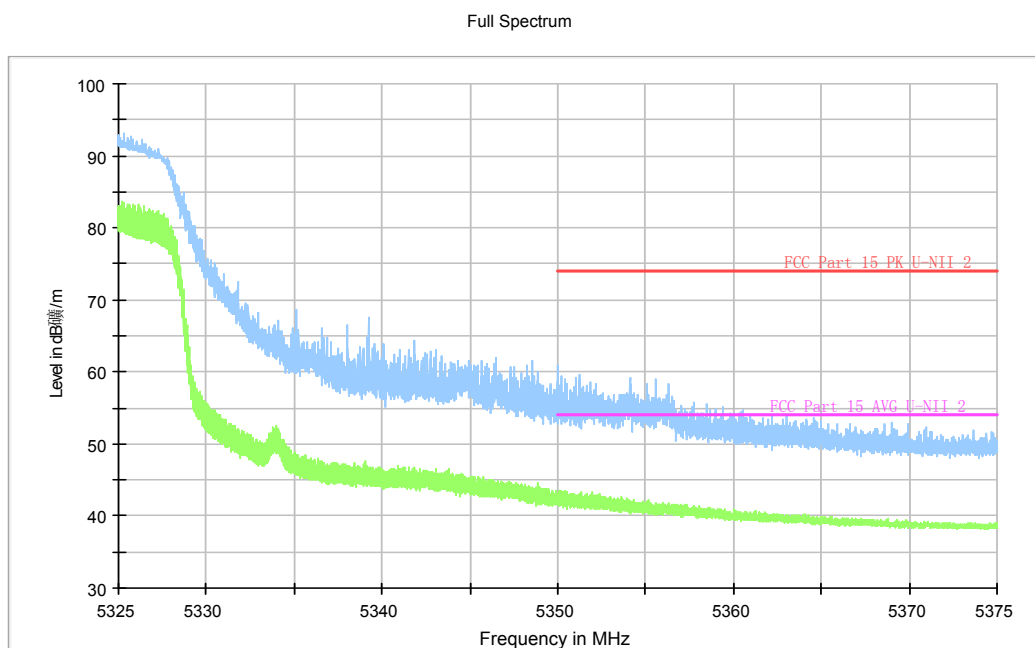


Fig. 55 Band Edges (802.11n-HT40, 5310MHz)

Full Spectrum

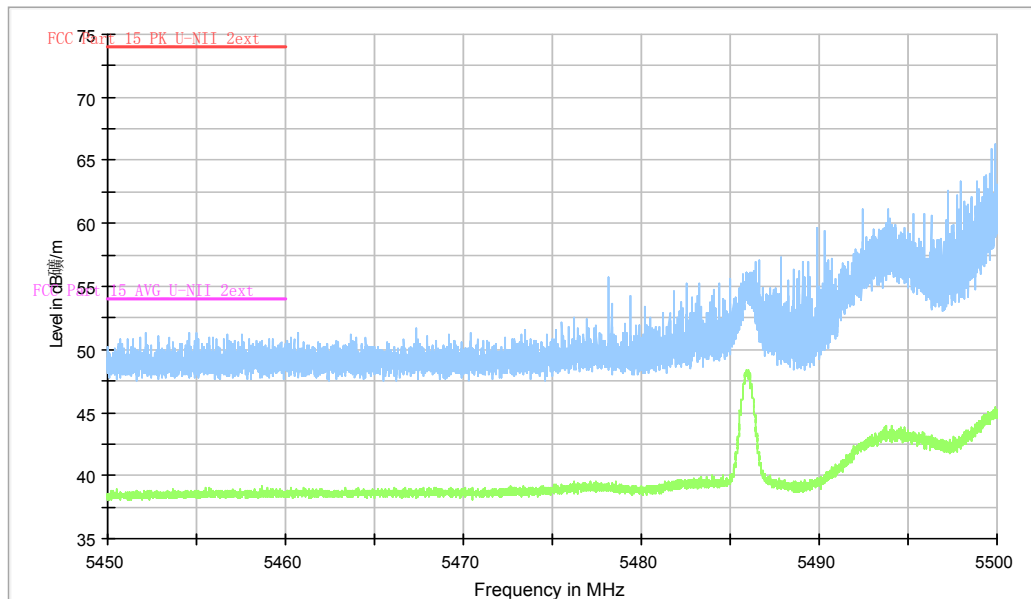


Fig. 56 Band Edges (802.11n-HT40, 5510MHz)

Full Spectrum

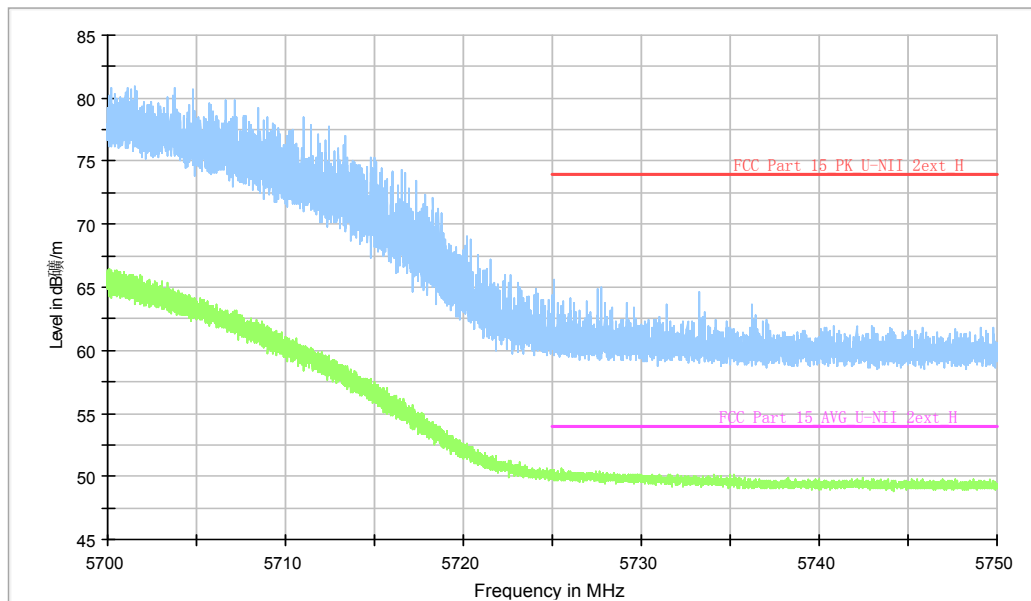


Fig. 57 Band Edges (802.11n-HT40, 5670MHz)

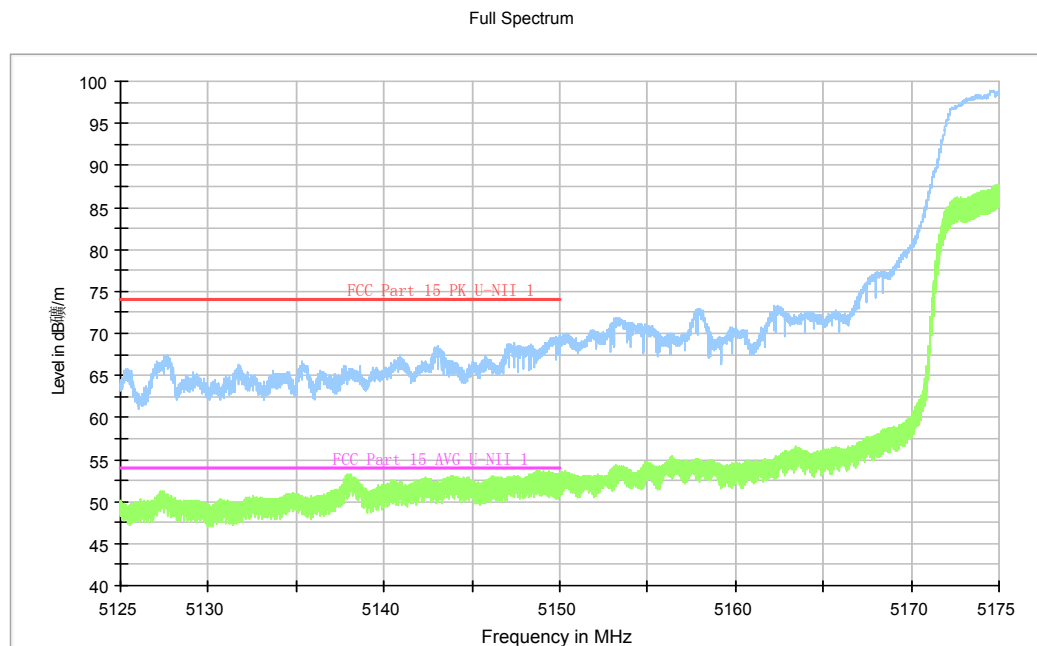


Fig. 58 Band Edges (802.11ac-HT80, 5210MHz)

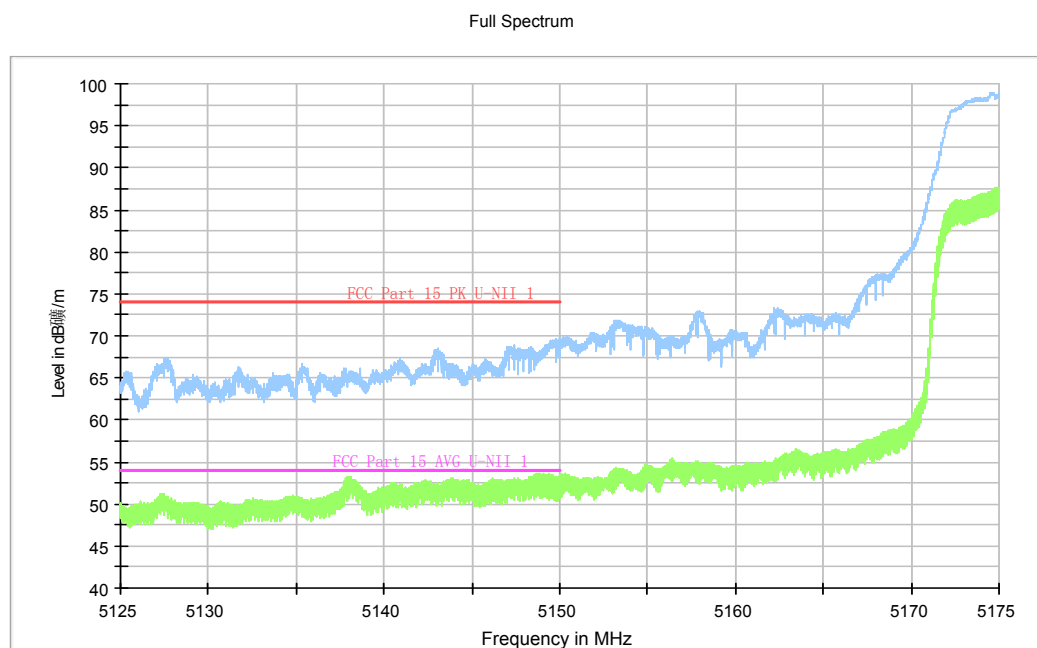


Fig. 59 Band Edges (802.11ac-HT80, 5290MHz)

Full Spectrum

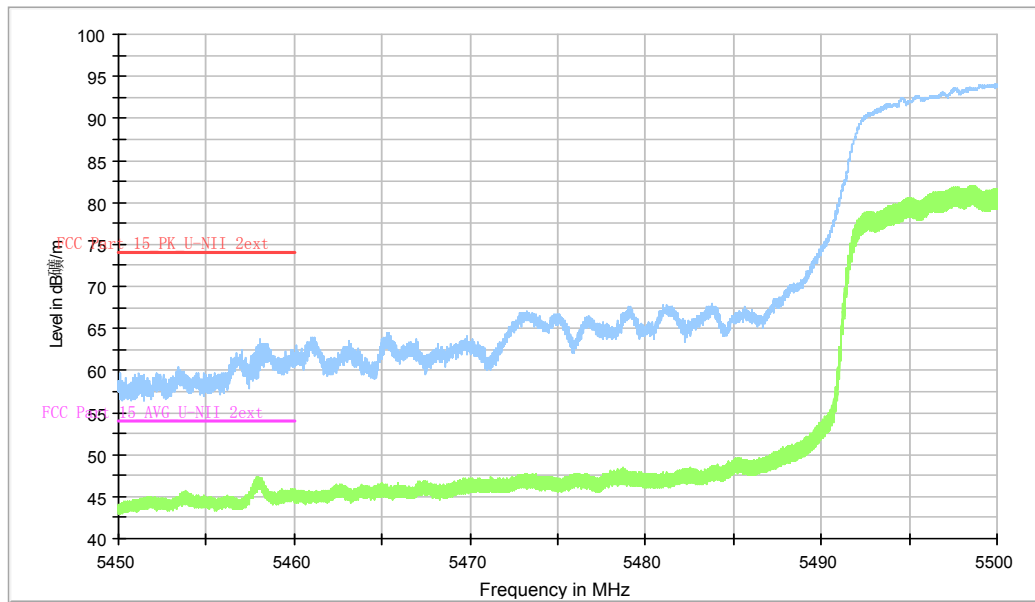


Fig. 60 Band Edges (802.11ac-HT80, 5530MHz)

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(dBμV/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:

Expanded measurement uncertainty for this test item is $U = 5.28\text{dB}$, $k=2$.

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:

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
5149.780	48.1	-35.1	34.6	48.6	H
17923.200	45.2	-17.7	45.6	17.3	H
17930.000	45.1	-17.7	45.6	17.2	V
17919.600	45.1	-17.7	45.6	17.2	H
17917.200	45.1	-17.7	45.6	17.2	H
17933.200	45.1	-17.7	45.6	17.2	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17935.200	45.2	-17.7	45.6	17.3	H
17920.400	45.1	-17.7	45.6	17.2	H
17928.800	45.1	-17.7	45.6	17.2	V
17913.200	45.1	-18.5	45.6	18.0	H
17932.800	45.1	-17.7	45.6	17.2	H
17936.800	45.1	-17.7	45.6	17.2	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17932.800	45.2	-17.7	45.6	17.3	H
17931.200	45.1	-17.7	45.6	17.2	H
17933.200	45.1	-17.7	45.6	17.2	V
17920.400	45.0	-17.7	45.6	17.1	H
17934.400	44.9	-17.7	45.6	17.0	H
17940.800	44.9	-17.7	45.6	17.0	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17936.400	45.3	-17.7	45.6	17.4	H
17937.200	45.2	-17.7	45.6	17.3	H
17926.000	45.1	-17.7	45.6	17.2	V
17944.400	45.1	-17.7	45.6	17.2	H
17935.200	45.1	-17.7	45.6	17.2	H
17924.000	45.1	-17.7	45.6	17.2	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17925.600	45.3	-17.7	45.6	17.4	H
17932.000	45.2	-17.7	45.6	17.3	H
17914.400	45.1	-17.7	45.6	17.2	V
17933.600	45.1	-17.7	45.6	17.2	H
17925.200	45.1	-17.7	45.6	17.2	H
17921.600	45.1	-17.7	45.6	17.2	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.090	39.1	-34.8	34.6	39.3	H
17929.600	45.4	-17.7	45.6	17.5	H
17928.400	45.1	-17.7	45.6	17.2	V
17930.000	45.1	-17.7	45.6	17.2	H
17924.400	45.0	-17.7	45.6	17.1	H
17916.000	45.0	-17.7	45.6	17.1	H

Channel 100

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5457.695	38.4	-34.9	34.6	38.7	H
17916.400	45.4	-17.7	45.6	17.5	H
17928.800	45.1	-17.7	45.6	17.2	V
17924.800	45.1	-17.7	45.6	17.2	H
17941.200	45.1	-17.7	45.6	17.2	H
17938.000	45.1	-17.7	45.6	17.2	H

Channel 120

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17935.200	45.5	-17.7	45.6	17.6	H
17926.400	45.3	-17.7	45.6	17.4	H
17927.600	45.2	-17.7	45.6	17.3	V
17926.000	45.2	-17.7	45.6	17.3	H
17940.800	45.2	-17.7	45.6	17.3	H
17928.400	45.1	-17.7	45.6	17.2	H

Channel 140

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17930.000	45.1	-17.7	45.6	17.2	H
17925.200	45.1	-17.7	45.6	17.2	H
17922.000	45.0	-17.7	45.6	17.1	V
17939.200	45.0	-17.7	45.6	17.1	H
17928.000	45.0	-17.7	45.6	17.1	H
17921.600	45.0	-17.7	45.6	17.1	H

802.11n-HT20

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5149.925	48.0	-35.1	34.6	48.5	H
17936.400	45.1	-17.7	45.6	17.2	H
17927.200	45.0	-17.7	45.6	17.1	V
17915.600	45.0	-17.7	45.6	17.1	H
17922.800	45.0	-17.7	45.6	17.1	H
17934.800	45.0	-17.7	45.6	17.1	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17942.800	45.3	-17.7	45.6	17.4	H
17933.200	45.3	-17.7	45.6	17.4	H
17923.600	45.1	-17.7	45.6	17.2	V
17931.200	45.1	-17.7	45.6	17.2	H
17928.800	45	-17.7	45.6	17.1	H
17934.400	45	-17.7	45.6	17.1	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17942.800	45.3	-17.7	45.6	17.4	H
17933.200	45.3	-17.7	45.6	17.4	H
17923.600	45.1	-17.7	45.6	17.2	V
17931.200	45.1	-17.7	45.6	17.2	H
17928.800	45.0	-17.7	45.6	17.1	H
17934.400	45.0	-17.7	45.6	17.1	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17930.800	45.3	-17.7	45.6	17.4	H
17915.200	45.2	-17.7	45.6	17.3	H
17927.600	45.2	-17.7	45.6	17.3	V
17930.400	45.1	-17.7	45.6	17.2	H
17918.400	45.1	-17.7	45.6	17.2	H
17929.200	45.1	-17.7	45.6	17.2	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17932.800	45.0	-17.7	45.6	17.1	H
17932.000	45.0	-17.7	45.6	17.1	H
17931.200	45.0	-17.7	45.6	17.1	V
17928.000	45.0	-17.7	45.6	17.1	H
17916.800	45.0	-17.7	45.6	17.1	H
17933.600	44.9	-17.7	45.6	17.0	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5351.145	39.3	-34.8	34.6	39.5	H
17923.600	45.2	-17.7	45.6	17.3	H
17933.200	45.2	-17.7	45.6	17.3	V
17924.800	45.1	-17.7	45.6	17.2	H
17932.400	45.1	-17.7	45.6	17.2	H
17932.800	45.0	-17.7	45.6	17.1	H

Channel 100

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5458.290	41.9	-34.9	34.6	38.6	H
17909.600	45.1	-18.5	45.6	18.0	H
17935.200	45.1	-17.7	45.6	17.2	V
17940.000	45.0	-17.7	45.6	17.1	H
17923.200	45.0	-17.7	45.6	17.1	H
17919.600	45.0	-17.7	45.6	17.1	H

Channel 120

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17916.000	45.1	-17.7	45.6	17.200	H
17930.400	45.1	-17.7	45.6	17.200	H
17918.000	45.1	-17.7	45.6	17.200	V
17925.200	45.0	-17.7	45.6	17.100	H
17925.600	45.0	-17.7	45.6	17.100	H
17913.600	45.0	-18.5	45.6	17.900	H

Channel 140

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5725.315	41.9	-33.8	35.1	40.600	H
17922.000	45.0	-17.7	45.6	17.100	H
17935.200	44.9	-17.7	45.6	17.000	V
17926.000	44.9	-17.7	45.6	17.000	H
17918.800	44.9	-17.7	45.6	17.000	H
17933.200	44.9	-17.7	45.6	17.000	H

802.11n-HT40

Channel 38

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5149.990	46.5	-35.1	34.6	47.0	H
17928.400	45.2	-17.7	45.6	17.3	H
17936.800	45.0	-17.7	45.6	17.1	V
17928.000	45.0	-17.7	45.6	17.1	H
17927.600	45.0	-17.7	45.6	17.1	H
17937.600	45.0	-17.7	45.6	17.1	H

Channel 46

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17921.200	45.2	-17.7	45.6	17.3	H
17926.400	45.0	-17.7	45.6	17.1	H
17929.600	45.0	-17.7	45.6	17.1	V
17938.400	45.0	-17.7	45.6	17.1	H
17933.200	44.9	-17.7	45.6	17.0	H
17926.800	44.9	-17.7	45.6	17.0	H

Channel 54

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17940.400	45.2	-17.7	45.6	17.3	H
17937.600	45.1	-17.7	45.6	17.2	H
17920.800	45.1	-17.7	45.6	17.2	V
17924.000	45.1	-17.7	45.6	17.2	H
17926.000	45.1	-17.7	45.6	17.2	H
17934.800	45.1	-17.7	45.6	17.2	H

Channel 62

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.250	43.6	-34.8	34.6	43.8	H
17934.000	45.2	-17.7	45.6	17.3	H
17917.200	45.1	-17.7	45.6	17.2	V
17915.600	45.1	-17.7	45.6	17.2	H
17926.400	45.0	-17.7	45.6	17.1	H
17923.600	45.0	-17.7	45.6	17.1	H

Channel 102

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5456.780	38.7	-34.9	34.6	39.0	H
17943.600	45.1	-17.7	45.6	17.2	H
17924.400	45.1	-17.7	45.6	17.2	V
17936.800	45.1	-17.7	45.6	17.2	H
17932.400	45.1	-17.7	45.6	17.2	H
17929.600	45.1	-17.7	45.6	17.2	H

Channel 118

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17932.000	45.3	-17.7	45.6	17.4	H
17914.400	45.1	-17.7	45.6	17.2	H
17924.000	45.0	-17.7	45.6	17.1	V
17935.200	45.0	-17.7	45.6	17.1	H
17936.000	45.0	-17.7	45.6	17.1	H
17934.800	45.0	-17.7	45.6	17.1	H

Channel 134

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5728.445	43.7	-33.8	35.1	42.4	H
17924.400	45.2	-17.7	45.6	17.3	H
17918.000	45.1	-17.7	45.6	17.2	V
17932.800	45.1	-17.7	45.6	17.2	H
17912.400	45.1	-18.5	45.6	18.0	H
17925.600	45.1	-17.7	45.6	17.2	H

802.11ac-HT20

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5149.680	47.8	-35.1	34.6	48.3	H
17940.400	45.0	-17.7	45.6	17.1	H
17925.200	44.9	-17.7	45.6	17.0	V
17929.600	44.9	-17.7	45.6	17.0	H
17934.800	44.9	-17.7	45.6	17.0	H
17923.200	44.9	-17.7	45.6	17.0	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17938.800	45.0	-17.7	45.6	17.1	H
17923.200	44.9	-17.7	45.6	17.0	H
17929.200	44.9	-17.7	45.6	17.0	V
17926.800	44.9	-17.7	45.6	17.0	H
17922.800	44.9	-17.7	45.6	17.0	H
17928.400	44.9	-17.7	45.6	17.0	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17939.600	45.2	-17.7	45.6	17.3	H
17943.600	45.2	-17.7	45.6	17.3	H
17924.000	45.1	-17.7	45.6	17.2	V
17928.800	45.0	-17.7	45.6	17.1	H
17932.400	45.0	-17.7	45.6	17.1	H
17936.800	45.0	-17.7	45.6	17.1	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17935.600	45.3	-17.7	45.6	17.4	H
17938.000	45.2	-17.7	45.6	17.3	H
17933.200	45.1	-17.7	45.6	17.2	V
17930.400	45.1	-17.7	45.6	17.2	H
17934.400	45.1	-17.7	45.6	17.2	H
17919.600	45.1	-17.7	45.6	17.2	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
17936.800	45.1	-17.7	45.6	17.2	H
17937.200	45.1	-17.7	45.6	17.2	H
17932.000	45	-17.7	45.6	17.1	V
17923.600	45	-17.7	45.6	17.1	H
17924.800	45	-17.7	45.6	17.1	H
17920.800	45	-17.7	45.6	17.1	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5350.880	39.4	-34.8	34.6	39.6	H
17923.600	45.2	-17.7	45.6	17.3	H
17933.200	45.2	-17.7	45.6	17.3	V
17924.800	45.1	-17.7	45.6	17.2	H
17932.400	45.1	-17.7	45.6	17.2	H
17932.800	45.0	-17.7	45.6	17.1	H

Channel 100

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
5460.675	38.6	-34.9	34.6	38.9	H
17937.200	45.3	-17.7	45.6	17.4	H
17939.600	45.0	-17.7	45.6	17.1	V
17925.600	45.0	-17.7	45.6	17.1	H
17933.200	45.0	-17.7	45.6	17.1	H
17924.400	45.0	-17.7	45.6	17.1	H