

Plot 9-4. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 52)



Plot 9-5. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 60)



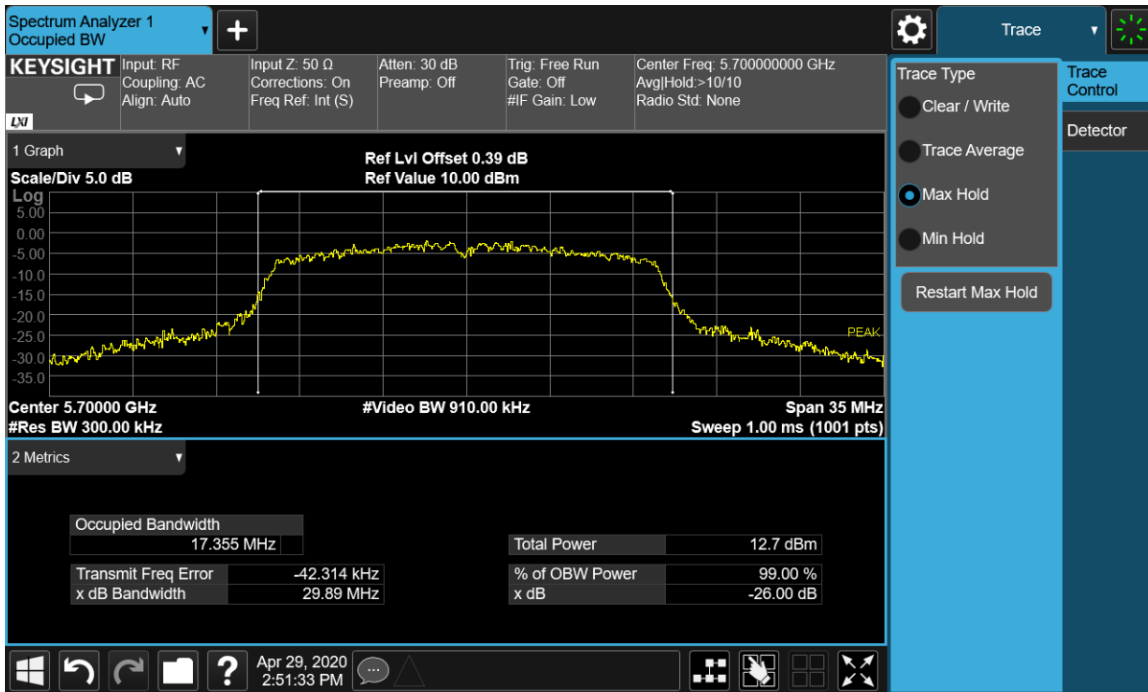
Plot 9-6. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 64)



Plot 9-7 . 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 100)

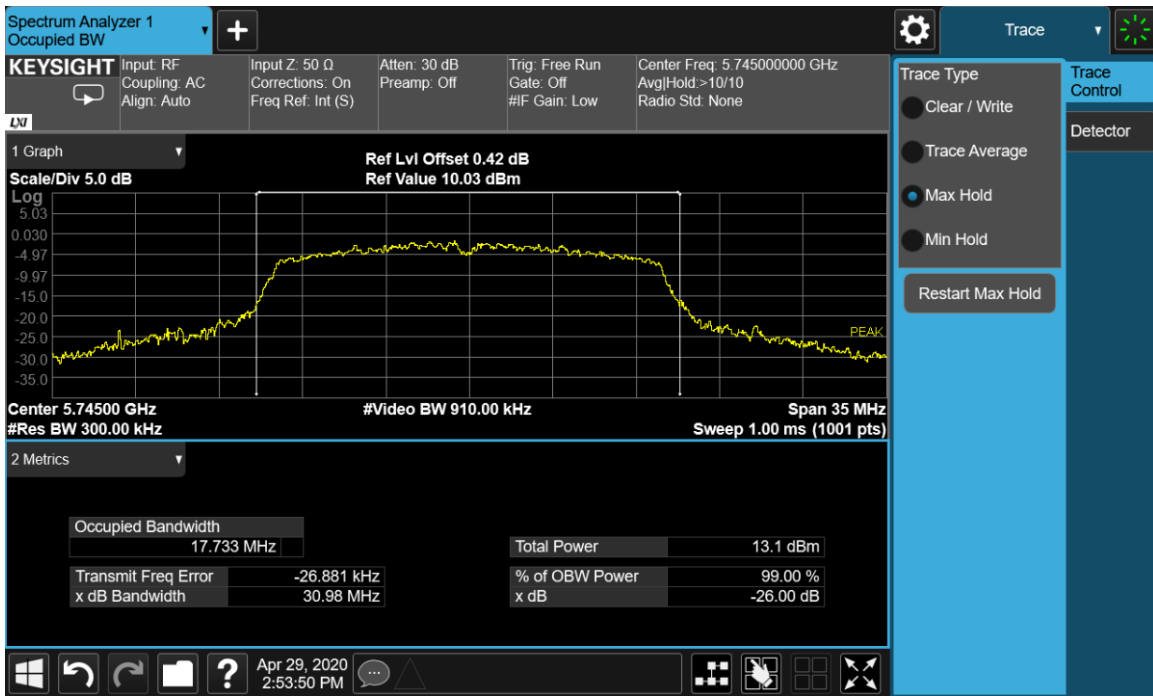


Plot 9-8. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 116)



Plot 9-9. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 140)

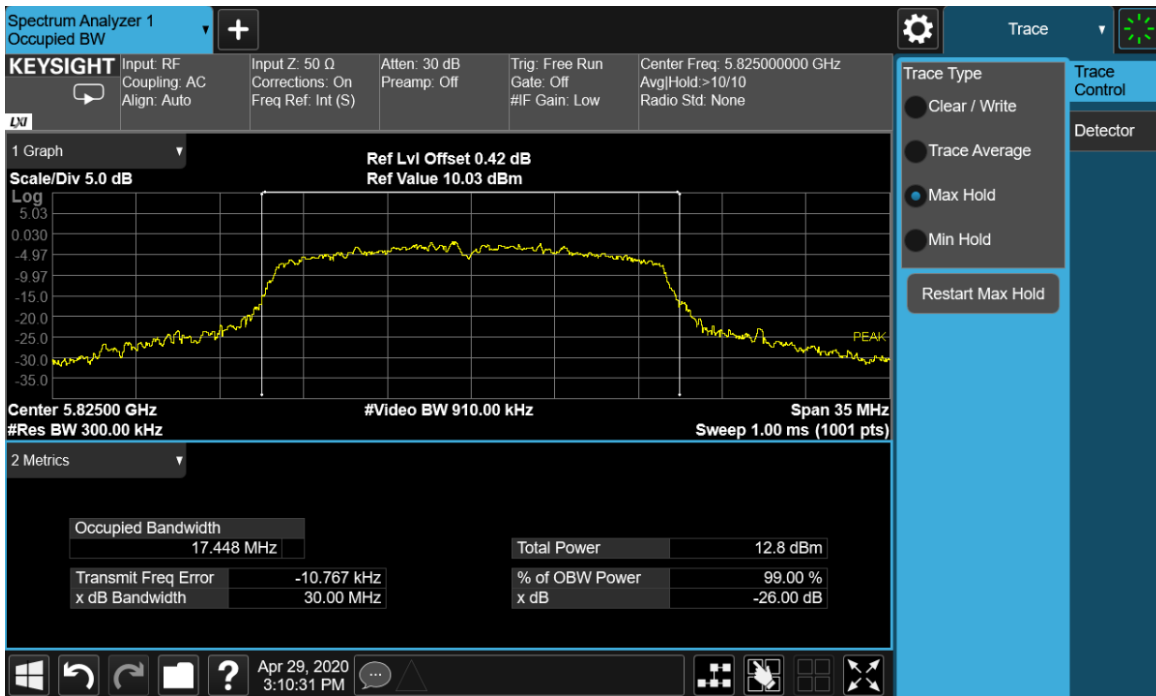
0



Plot 9-10. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 149)



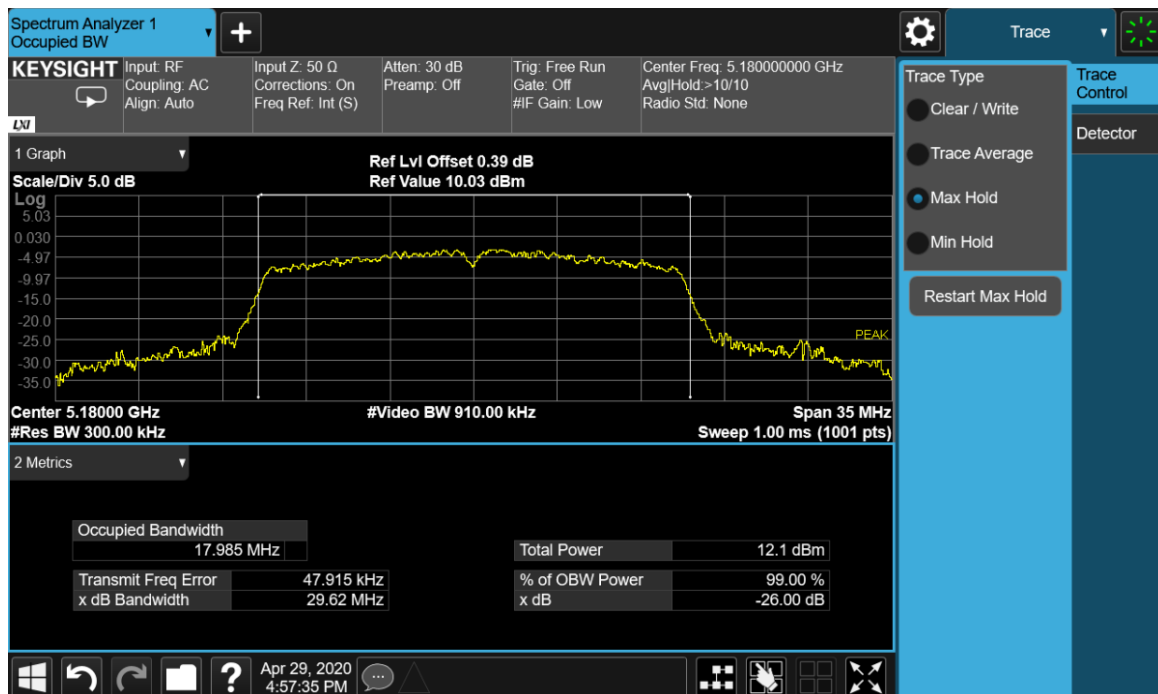
Plot 9-11. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 157)



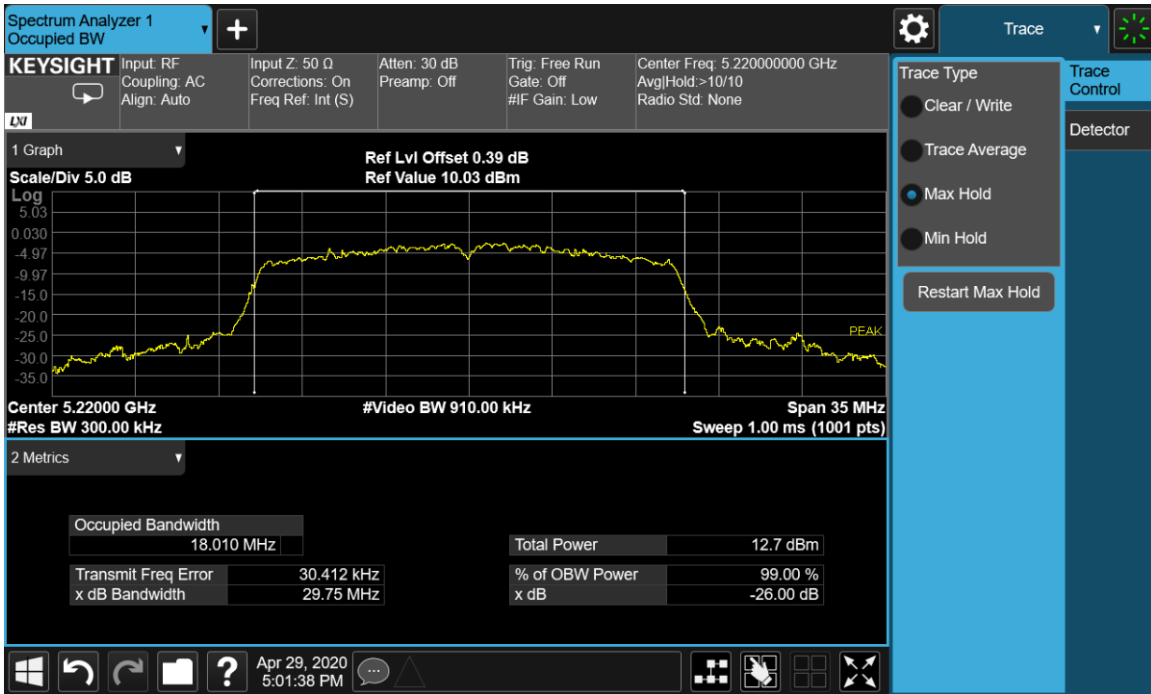
Plot 9-12. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11a (Ch. 165)

9.2.5.2 Chain A 802.11n HT20 26-dB Emission Bandwidth

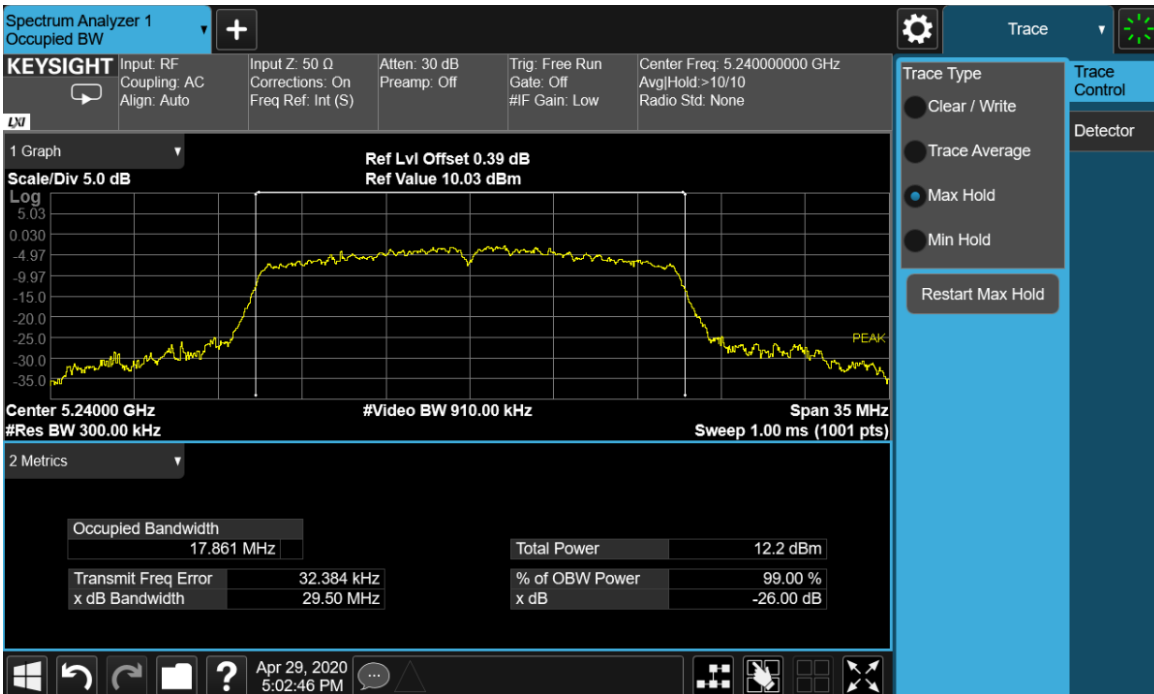
Chain A 802.11n HT20 26-dB Emission Bandwidth				
Band	Channel No.	Frequency (MHz)	26-dB Emission Bandwidth (MHz)	99% Occupied BW (MHz)
UNII-1	36	5180	29.62	17.99
	44	5220	29.75	18.01
	48	5240	29.50	17.86
UNII-2A	52	5260	27.34	17.87
	60	5300	29.42	17.91
	64	5320	29.32	17.90
UNII-2C	100	5500	29.71	17.97
	116	5580	29.67	17.98
	140	5700	28.22	17.90
UNII-3	149	5745	29.60	17.90
	157	5785	29.40	17.85
	165	5825	29.55	17.96



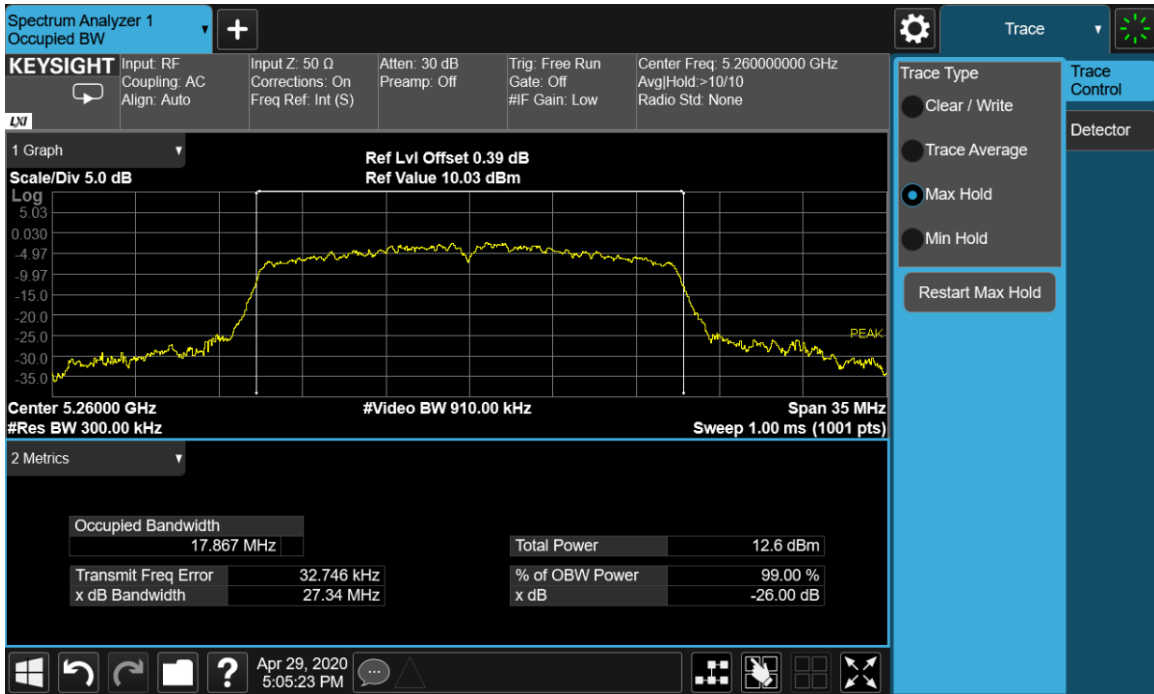
Plot 9-13. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 36)



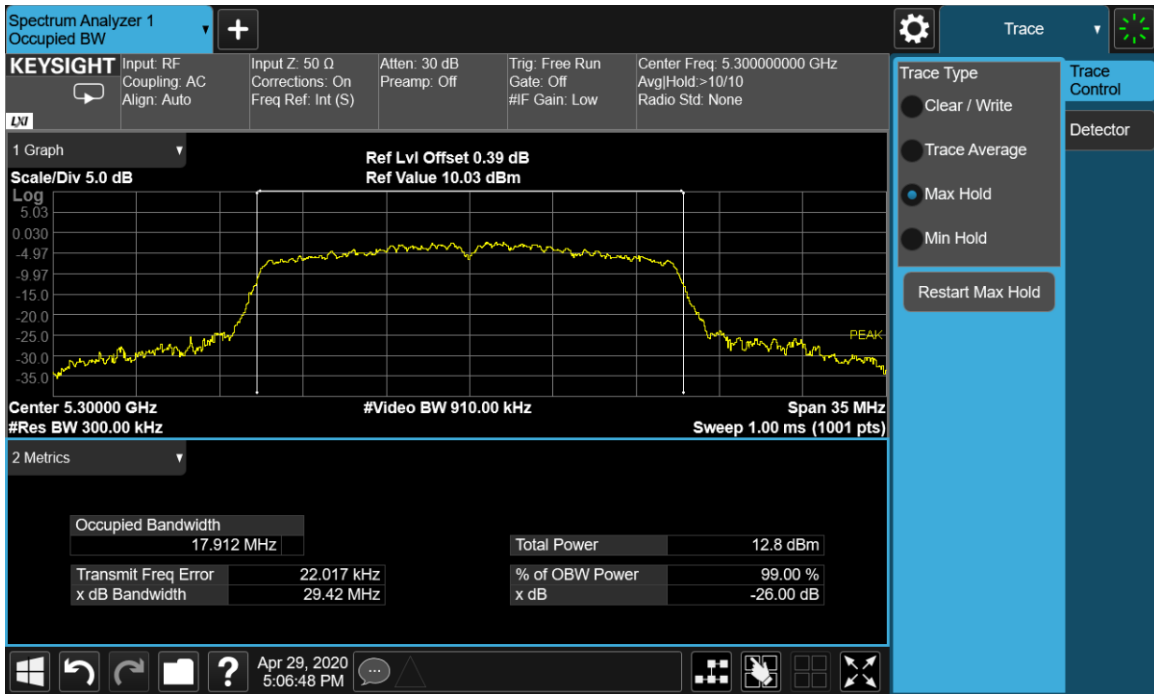
Plot 9-14. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 44)



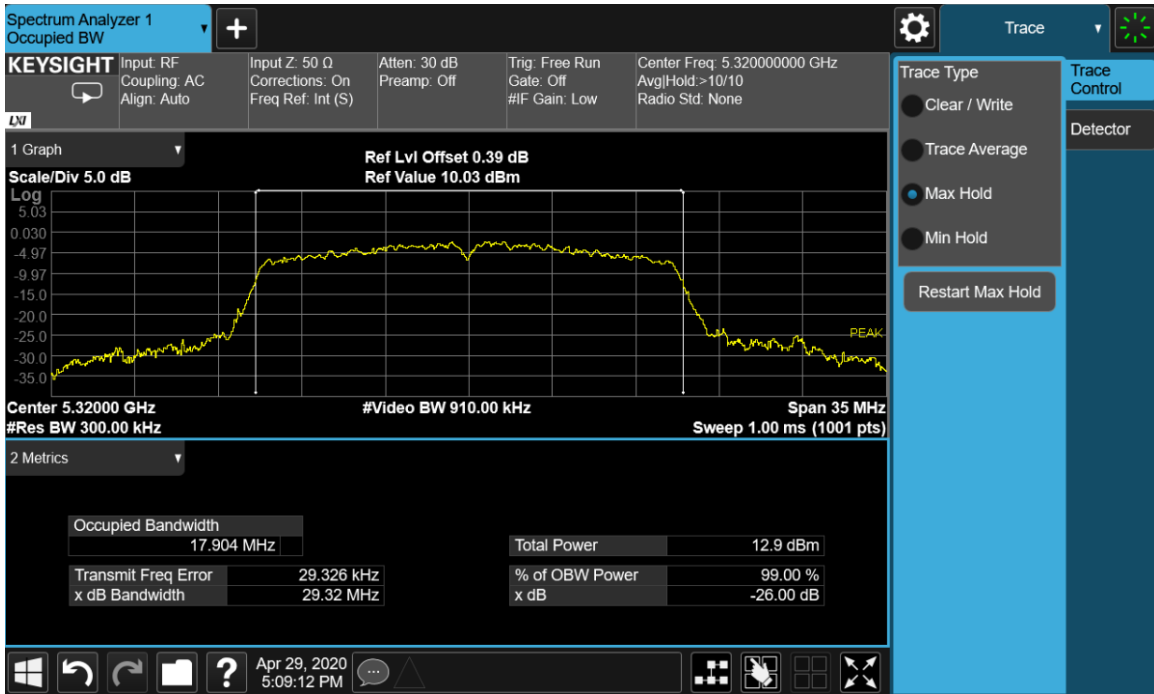
Plot 9-15. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 48)



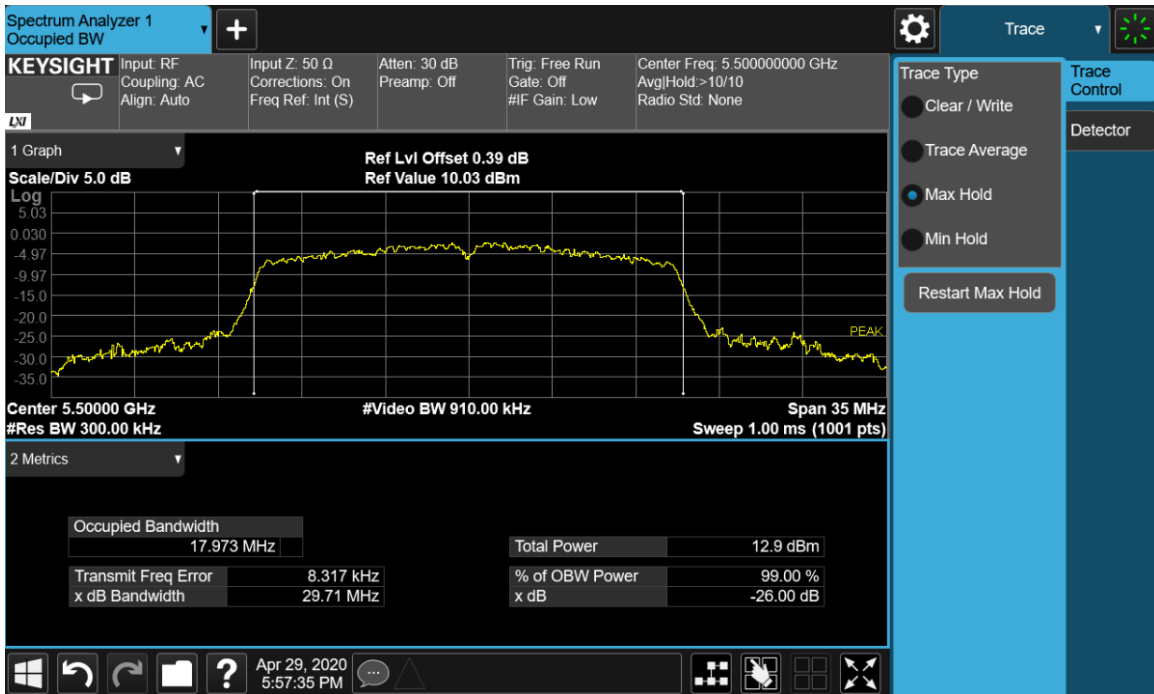
Plot 9-16. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 52)



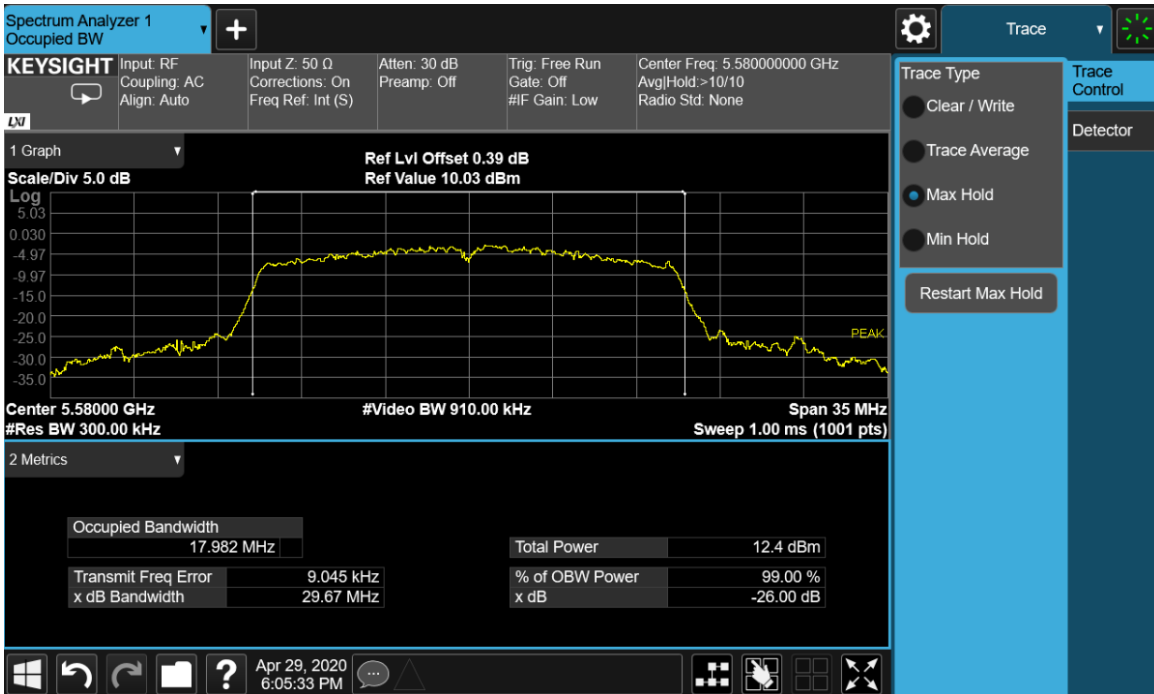
Plot 9-17. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 60)



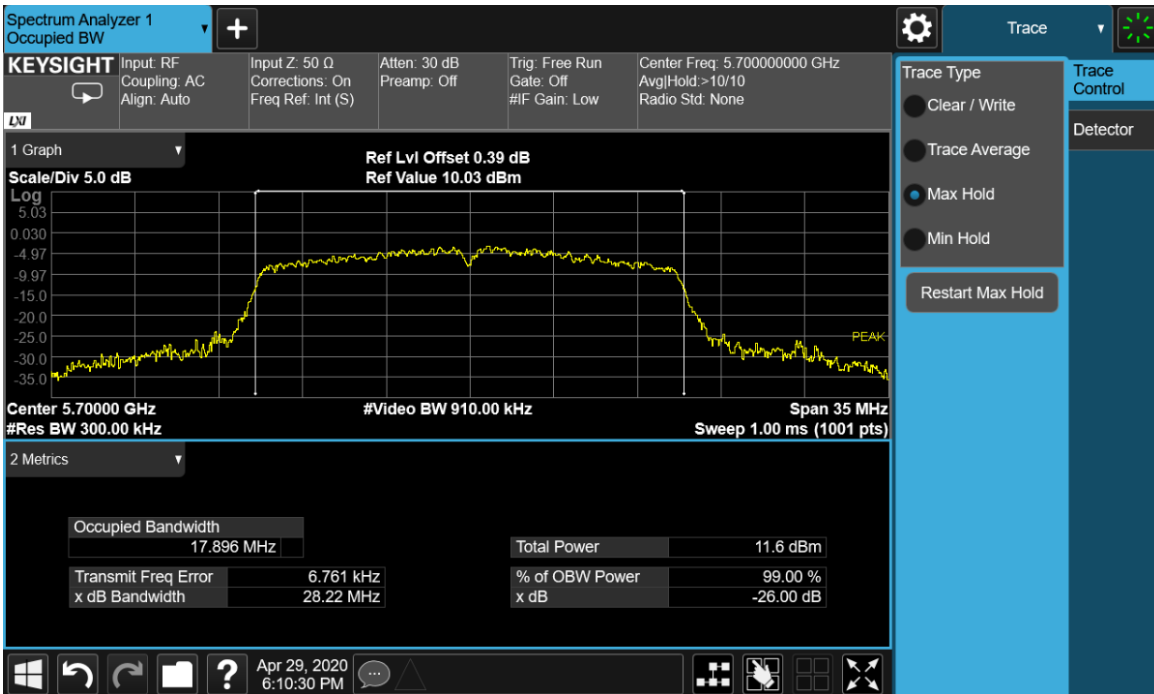
Plot 9-18. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 64)



Plot 9-19. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 100)



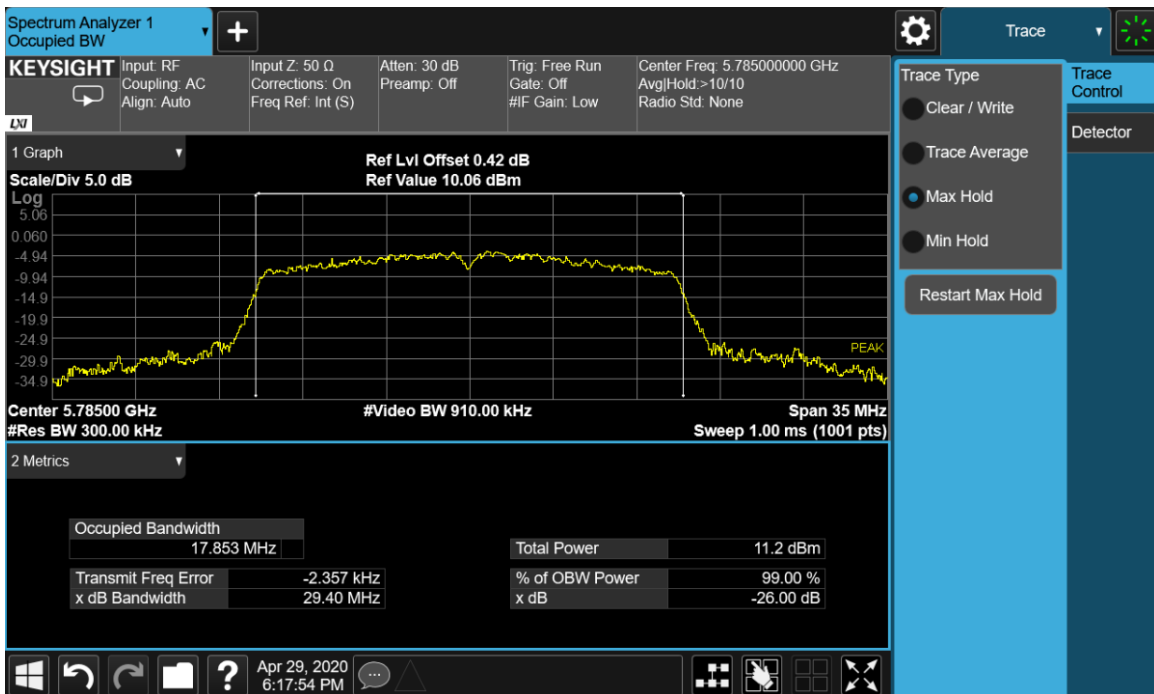
Plot 9-20. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 116)



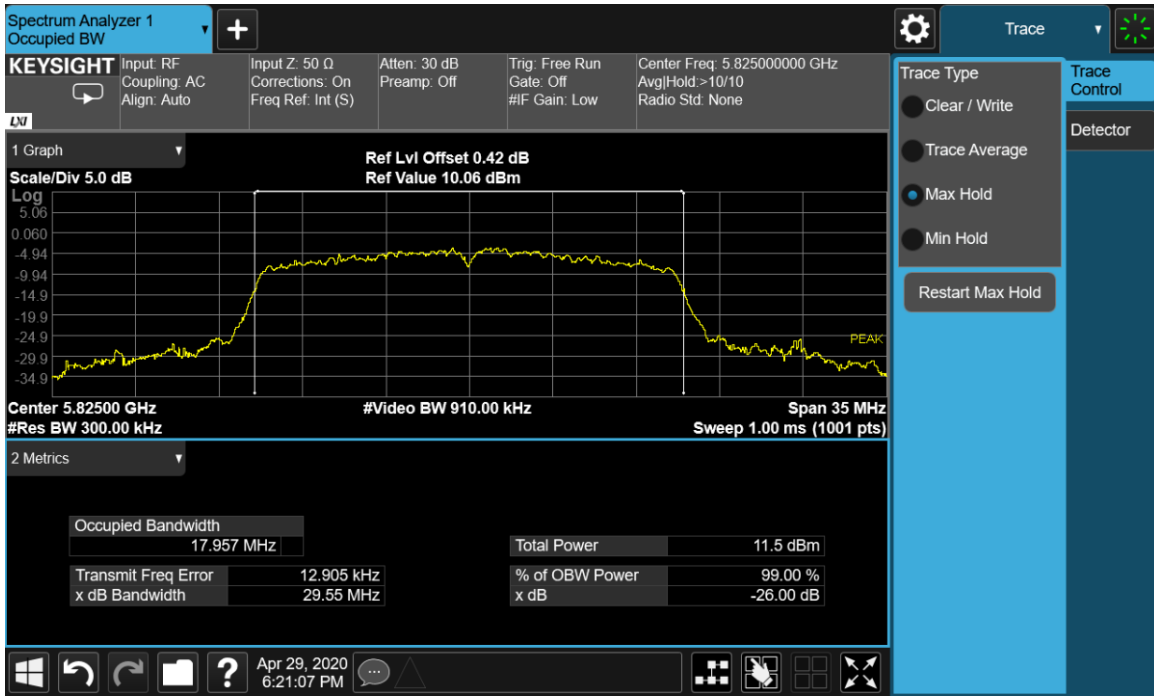
Plot 9-21. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 140)



Plot 9-22. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 149)



Plot 9-23. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 157)



Plot 9-24. 26-dB Emission Bandwidth and 99% OBW Chain A 802.11n HT20 (Ch. 165)

9.3 6-dB Bandwidth

9.3.1 Test Requirement:

FCC CFR 47 Rule Part 15.407 (e)
ISED RSS-247 [6.2.4]

9.3.2 Test Method:

Measurements were performed according to the procedures defined in KDB 789033- General UNII Test Procedures New Rules v02r01 and ANSI C63.10:2013.

Spectrum Analyzer settings:

RBW = 100 kHz

VBW \geq 3xRBW

Trace Mode= Peak Detector (Max Hold)

Sweep time= Auto

The in-built functionality of the Spectrum Analyzer is used to measure the 6-dB bandwidth.

9.3.3 Limits:

The 6-dB Bandwidth shall be \geq 500 kHz.

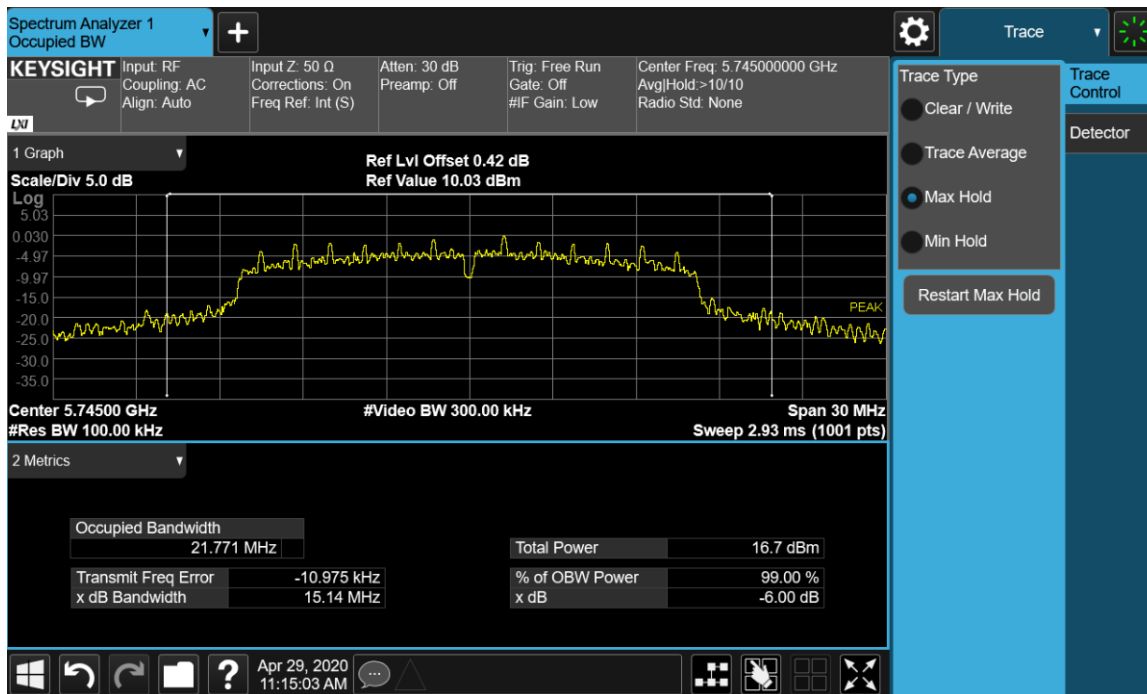
9.3.4 Test Results:

Pass

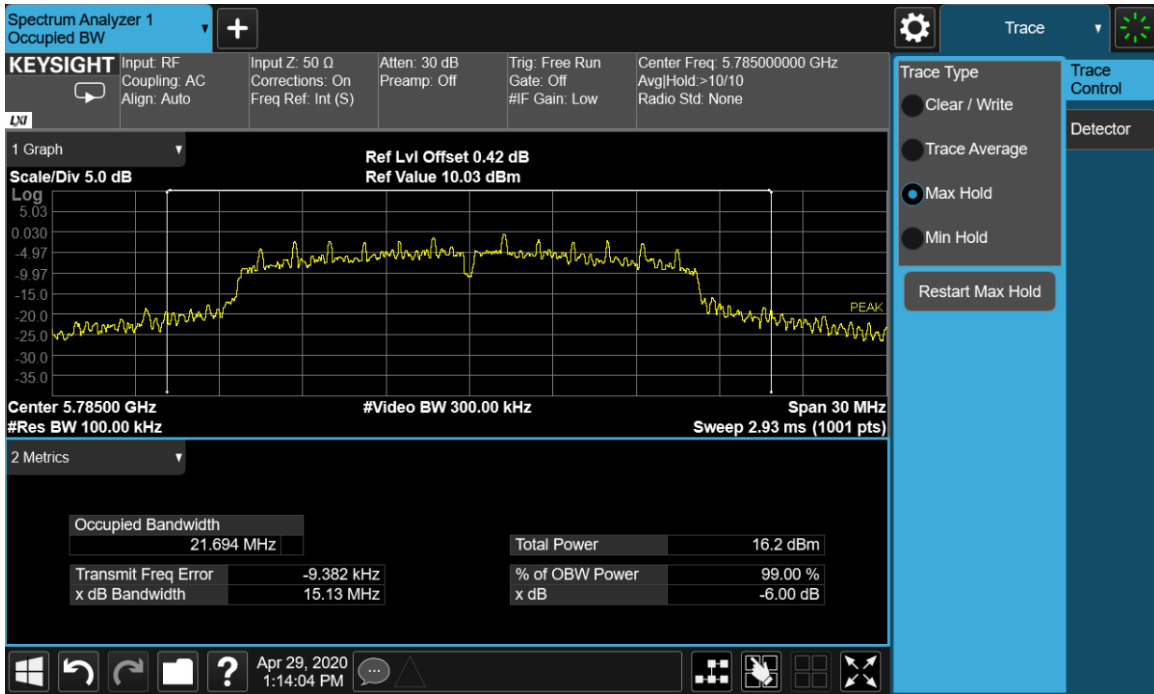
9.3.5 Test Data:

9.3.5.1 Chain A 802.11a 6-dB Bandwidth

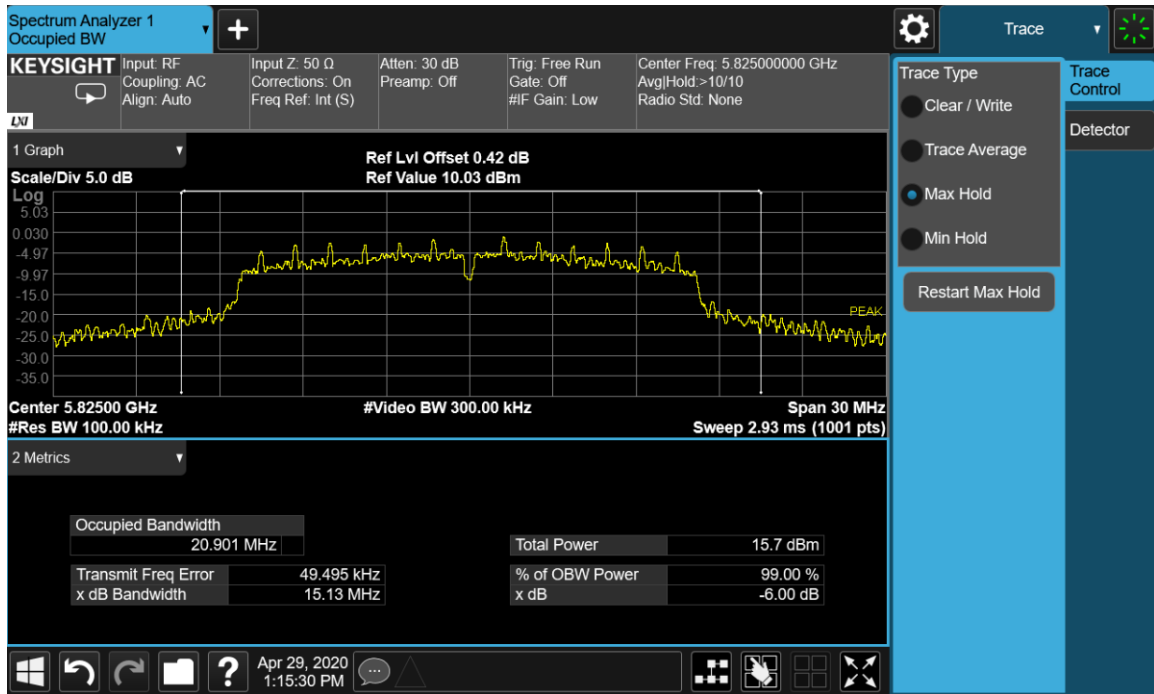
Chain A 802.11a 6-dB Bandwidth		
Channel No.	Frequency (MHz)	6-dB Bandwidth (MHz)
149	5745	15.14
157	5785	15.13
165	5825	15.13



Plot 9-25. 6-dB Bandwidth Chain A 802.11a (Ch. 149)



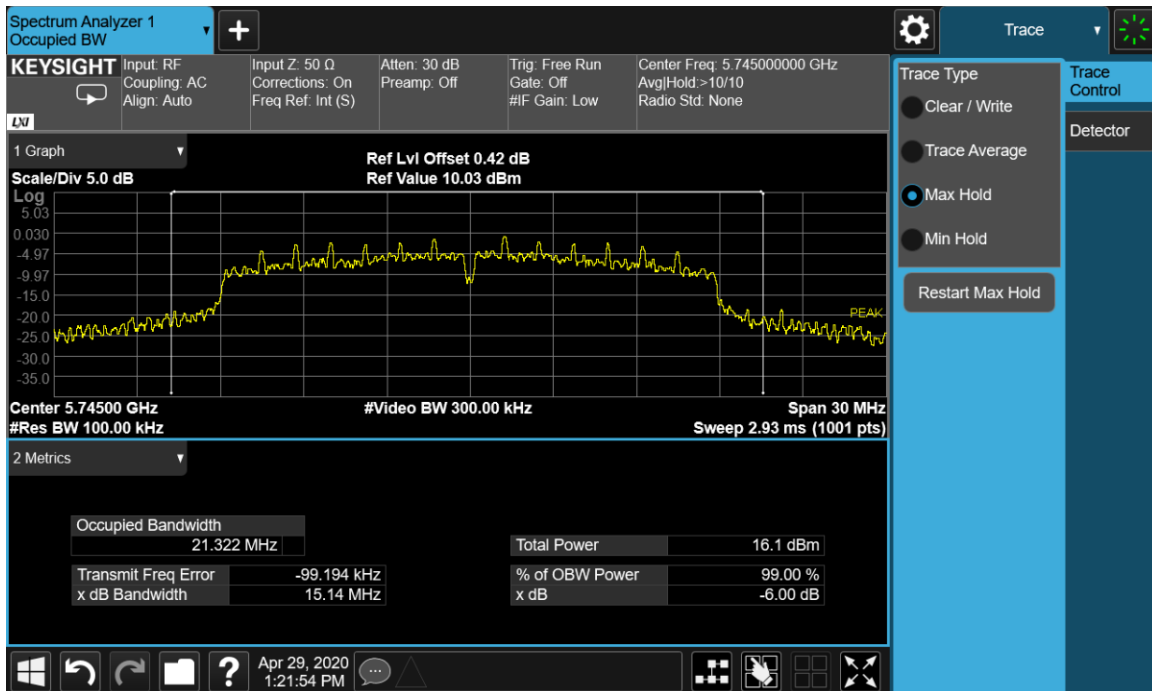
Plot 9-26. 6-dB Bandwidth Chain A 802.11a (Ch. 157)



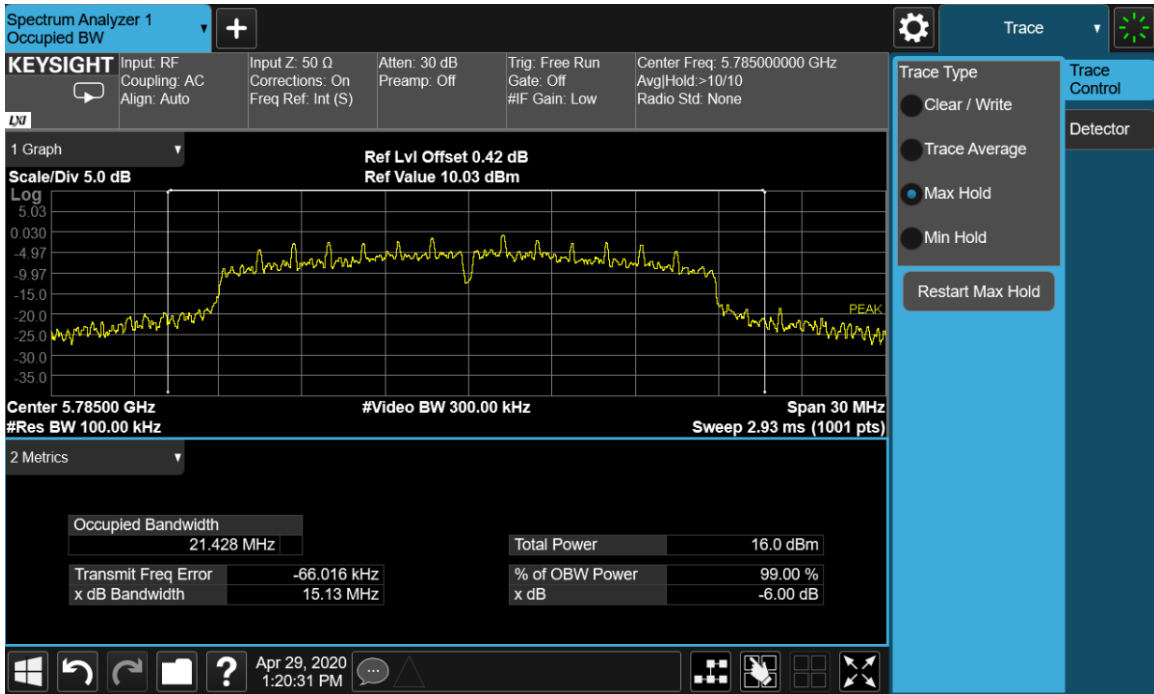
Plot 9-27. 6-dB Bandwidth Chain A 802.11a (Ch. 165)

9.3.5.2 Chain A 802.11n HT20 6-dB Bandwidth

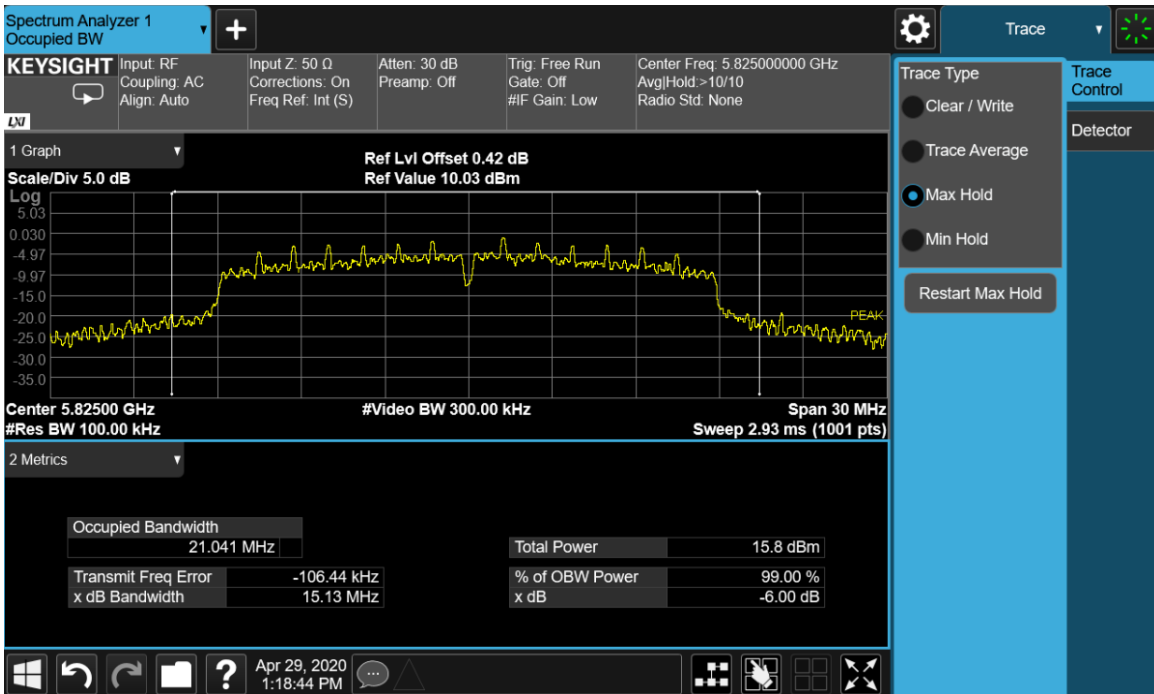
Chain A 802.11n HT20 6-dB Bandwidth		
Channel No.	Frequency (MHz)	6-dB Bandwidth (MHz)
149	5745	15.14
157	5785	15.13
165	5825	15.13



Plot 9-10. 6-dB Bandwidth Chain A 802.11n HT20 (Ch. 149)



Plot 9-29. 6-dB Bandwidth Chain A 802.11n HT20 (Ch. 157)



Plot 9-30. 6-dB Bandwidth Chain A 802.11n HT20 (Ch. 165)

9.4 Maximum Conducted Output Power

9.4.1 Test Requirement:

FCC CFR 47 Rule Part 15.407 (a)
ISED RSS-247 [6.2]

9.4.2 Test Method:

Measurements were performed according to the procedures defined in KDBs 789033- General UNII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01, and ANSI C63.10 2013.

Spectrum Analyzer settings:

Average Power:

RBW= 1 MHz

VBW= 3 MHz

Detector = RMS

Trace Mode= Average over 100 traces

Sweep time= Auto

Sweep Point $\geq 2 \times \text{Span} / \text{RBW}$

Span= large enough to encompass the 26-dB Emission Bandwidth or alternatively the 99% Occupied Bandwidth.

Use the band power measurement function to integrate the power over the 26-dB Emission Bandwidth or 99% Occupied Bandwidth.

9.4.3 Limits:

15.407: The maximum conducted output power shall not exceed the limits given the following table for antennas that do not exceed a directional gain > 6dBi:

Band of Operation (MHz)	15.407 Limit
5150 – 5250	24 dBm
5250 – 5350	24dBm or $11 \text{ dBm} + 10 \log (B)^{(1)}$
5470 – 5725	24dBm or $11 \text{ dBm} + 10 \log (B)^{(1)}$
5725 – 5825	30 dBm

Note(1): B is the 26-dB Emission bandwidth of signal in MHz.

RSS-247: The maximum conducted output power and/or EIRP shall not exceed the limits given the following table:

Band of Operation (MHz)	RSS-247 Conducted Output Power Limit	RSS-247 E.I.R.P Limit
5150 – 5250	--	23 dBm or $10 + 10 \log (B)^{(1)}$
5250 – 5350	24 dBm or $11 + 10 \log (B)^{(1)}$	30 dBm or $17 + 10 \log (B)^{(1)}$
5470 – 5725	24 dBm or $11 + 10 \log (B)^{(1)}$	30 dBm or $17 + 10 \log (B)^{(1)}$
5725 – 5825	30 dBm	--

Note(1): B is the 99% Occupied Bandwidth of the signal in MHz.

9.4.4 Test Results:

Pass. See Section 9.5.5 for test data.

9.5 Power Spectral Density

9.5.1 Test Requirement:

FCC CFR 47 Rule Part 15.407 (a)
ISED RSS-247 [6.2]

9.5.2 Test Method:

Measurements were performed according to the procedures defined in KDBs 789033- General UNII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01, and ANSI C63.10 2013.

Spectrum Analyzer settings for devices operating in the bands 5.15 – 5.25 GHz, 5.25 – 5.35GHz, and 5.47 – 5.725GHz:

RBW= 1 MHz

VBW= 3 MHz

Detector = RMS

Trace Mode= Average over 100 traces

Sweep time= Auto

Sweep Point $\geq 2 * \text{Span} / \text{RBW}$

Span= large enough to encompass the 26-dB Emission Bandwidth or alternatively the 99% Occupied Bandwidth. Use the peak marker function to identify the Maximum Power Spectral Density

Spectrum Analyzer settings for devices operating in the bands 5.725 – 5.85 GHz:

RBW= 100 kHz

VBW= 300 kHz

Detector = RMS

Trace Mode= Average over 100 traces

Sweep time= Auto

Sweep Point $\geq 2 * \text{Span} / \text{RBW}$

Span= large enough to encompass the 26-dB Emission Bandwidth or alternatively the 99% Occupied Bandwidth. Use the peak marker function to identify the Maximum Power Spectral Density

Offset is added if measurements are performed using a reduced resolution bandwidth 100 kHz, add $10 * \log(500\text{KHz} / \text{RBW USED})$ to the measured result.