

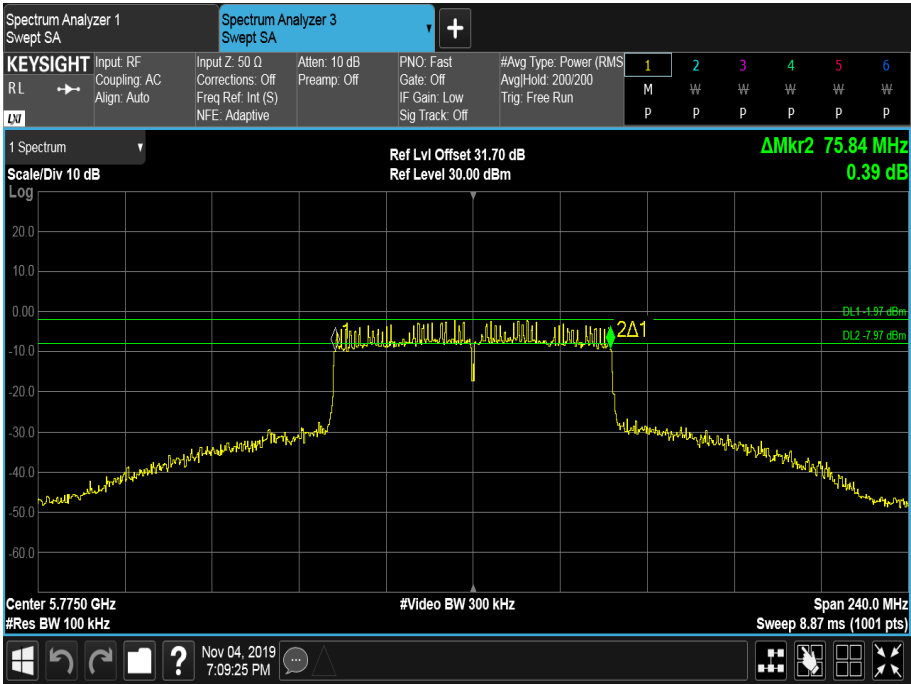


Figure 712 - 5775 MHz - 6 dB DTS Bandwidth

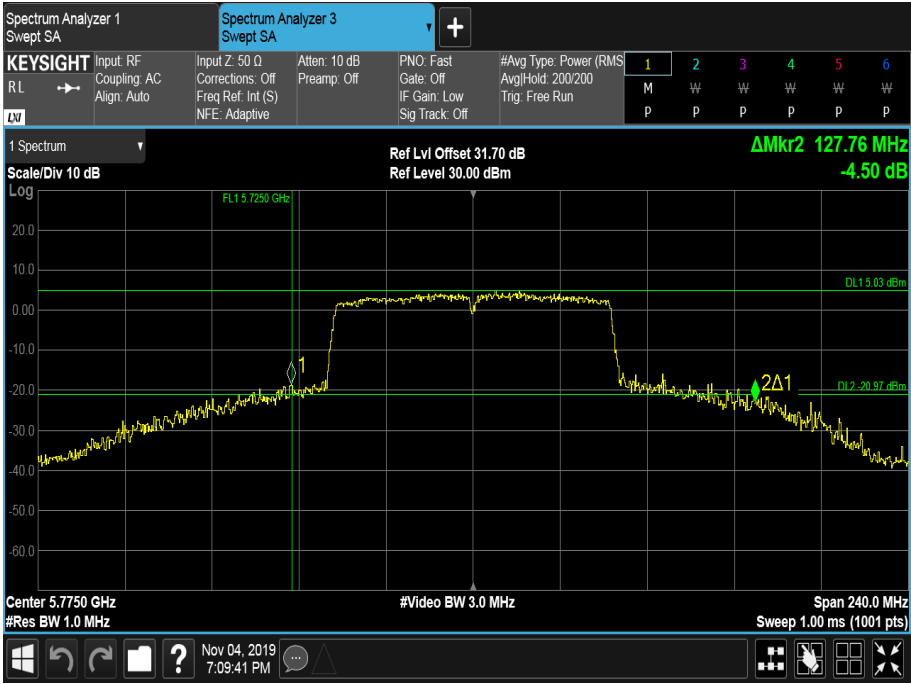


Figure 713 - 5775 MHz - 26 dB Emission Bandwidth

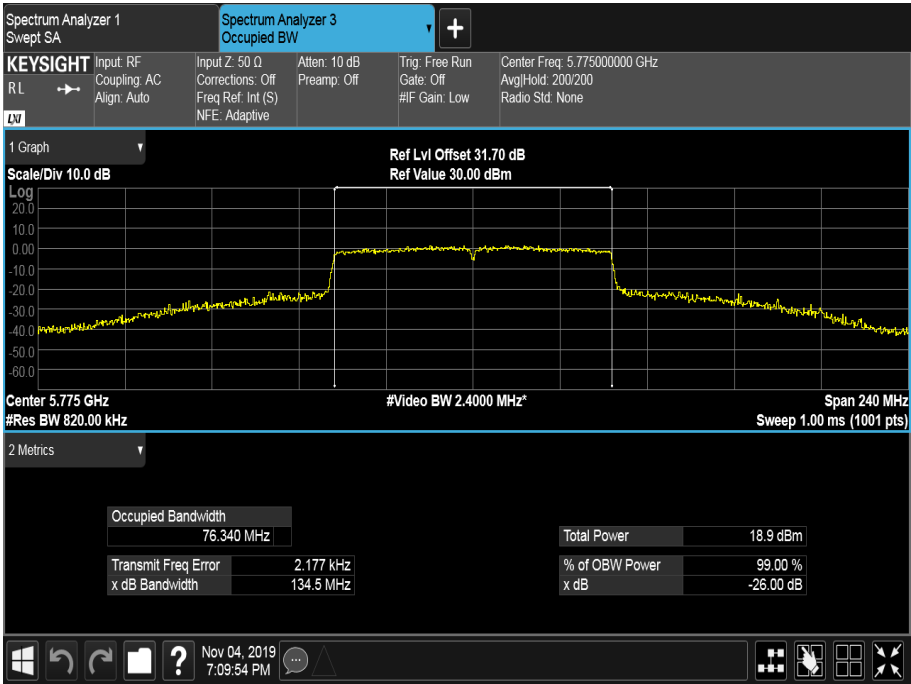


Figure 714 - 5775 MHz - 99% Occupied Bandwidth



Channel	Straddle	Middle
Frequency (MHz)	5690	5775
6 dB Bandwidth (MHz)	2.680	75.600
26 dB Bandwidth (MHz)	50.680	96.320
99% Bandwidth (MHz)	78.741	75.877

Table 397 - 802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 1+2

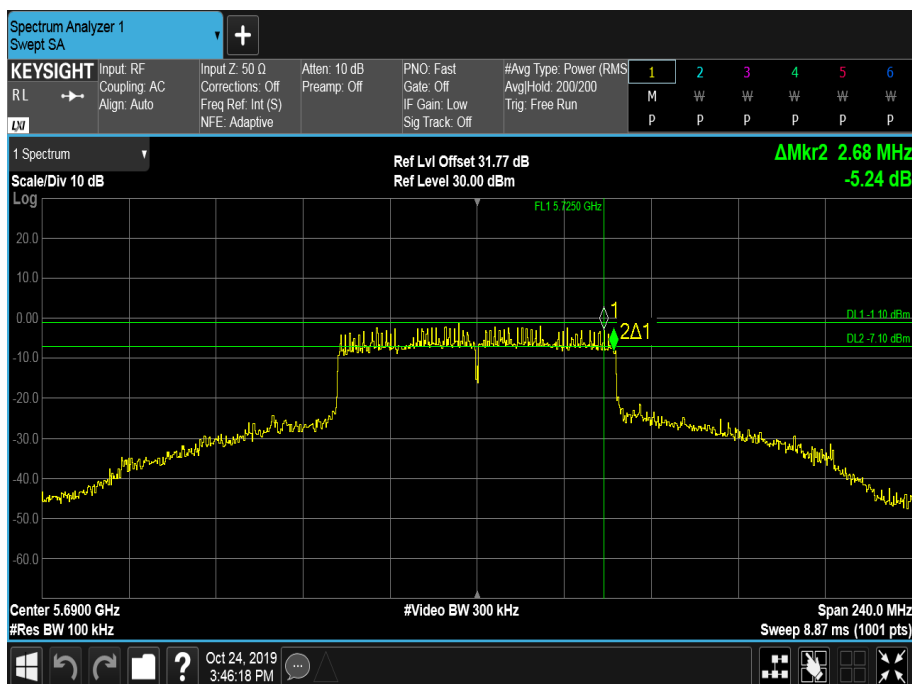


Figure 715 - 5690 MHz - 6 dB DTS Bandwidth

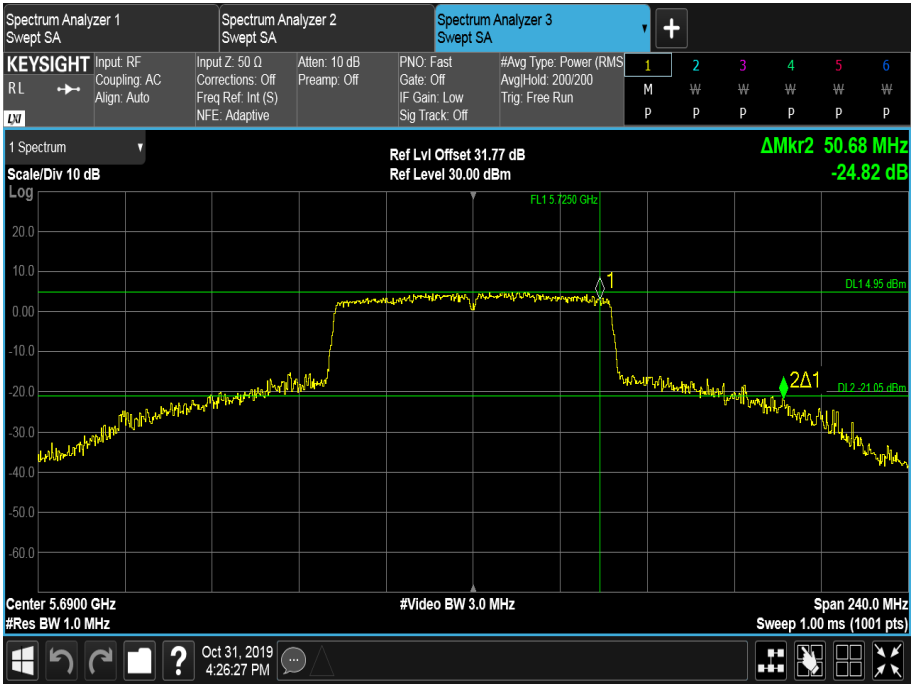


Figure 716 - 5690 MHz - 26 dB Emission Bandwidth

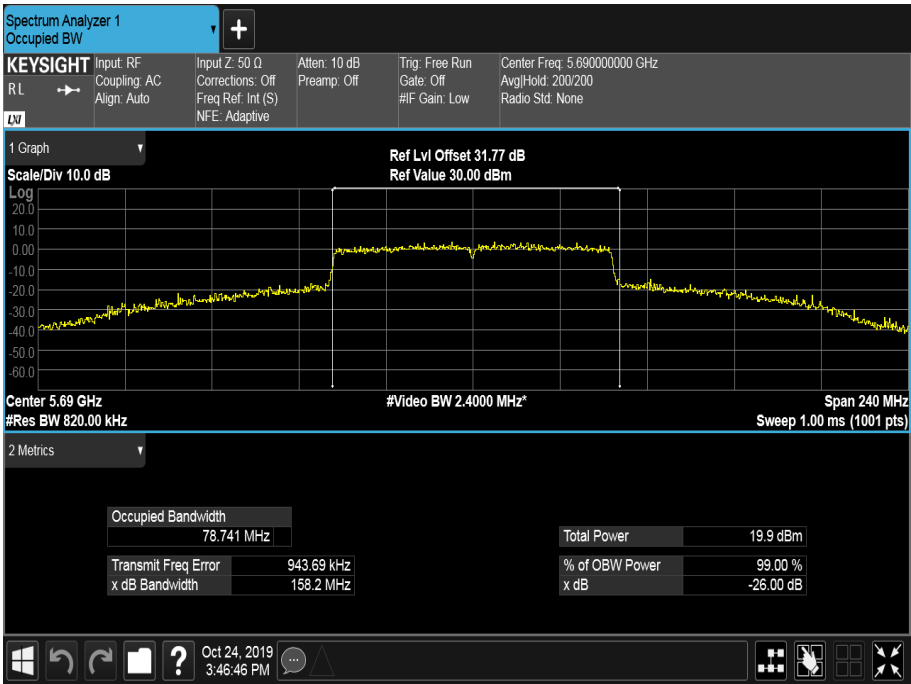


Figure 717 - 5690 MHz - 99% Occupied Bandwidth

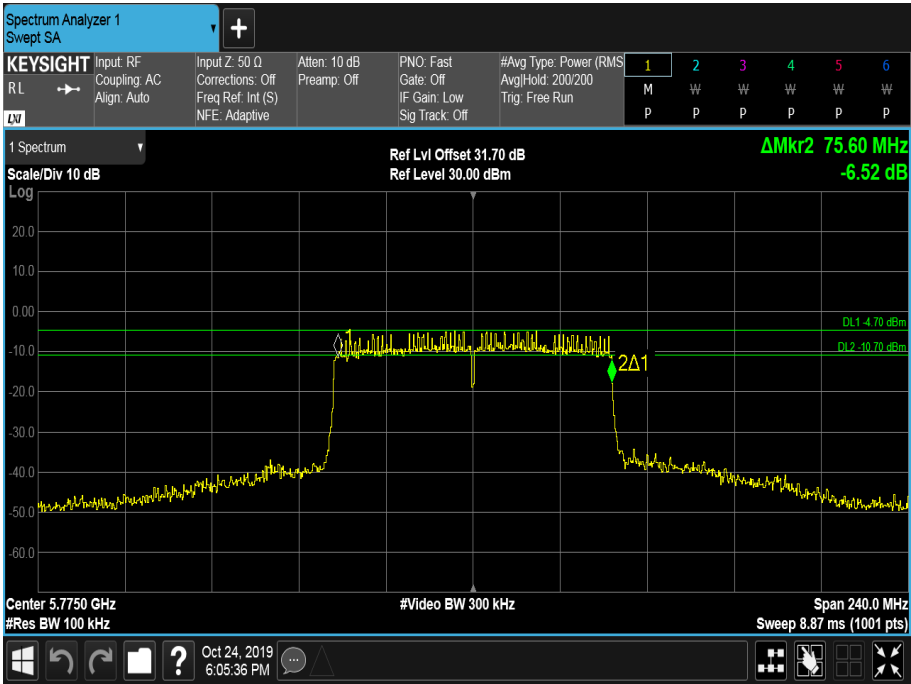


Figure 718 - 5775 MHz - 6 dB DTS Bandwidth

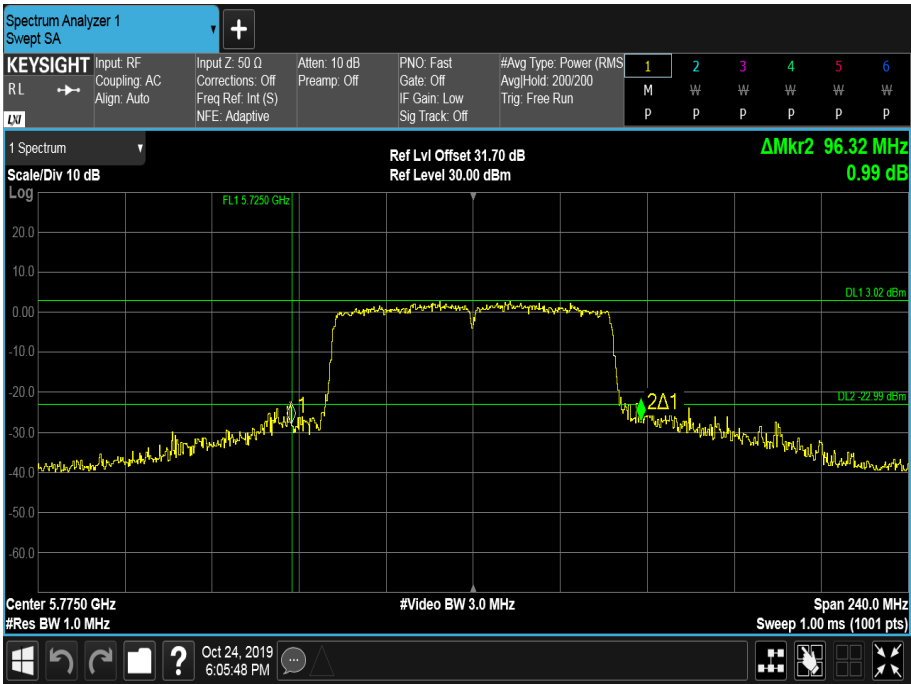


Figure 719 - 5775 MHz - 26 dB Emission Bandwidth

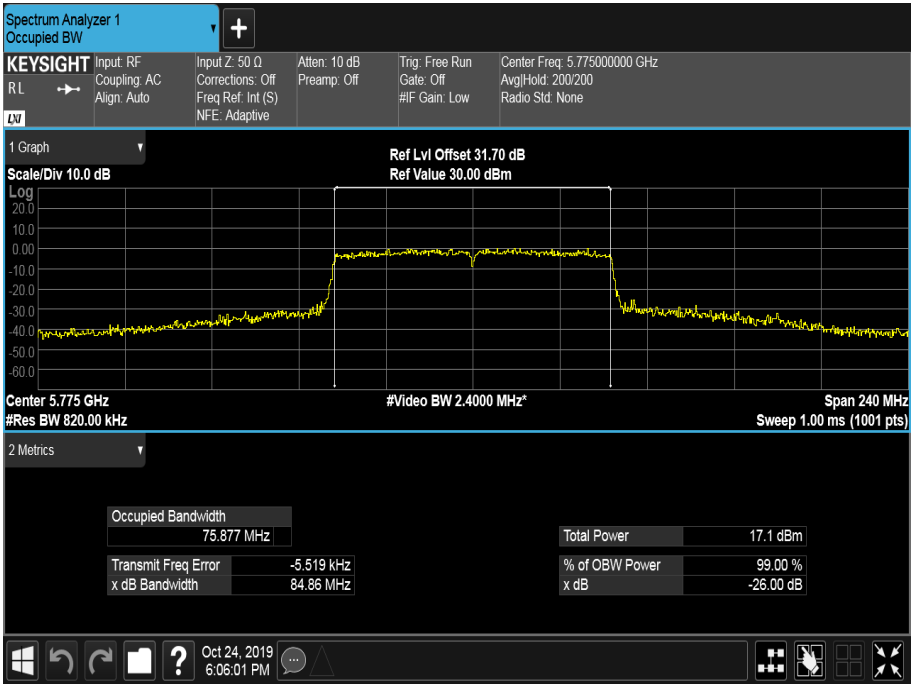


Figure 720 - 5775 MHz - 99% Occupied Bandwidth



Channel	Straddle	Middle
Frequency (MHz)	5690	5775
6 dB Bandwidth (MHz)	2.920	75.600
26 dB Bandwidth (MHz)	48.040	111.440
99% Bandwidth (MHz)	84.260	75.912

Table 398 - 802.11ac / VHT80 MCS0x2 / MIMO SDM / Cores 1+2

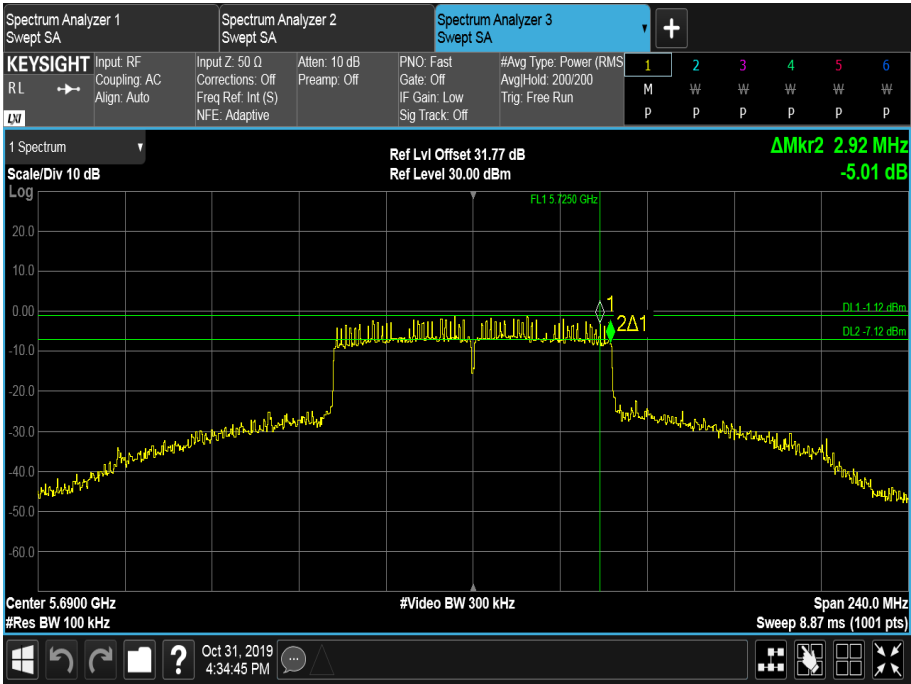


Figure 721 - 5690 MHz - 6 dB DTS Bandwidth

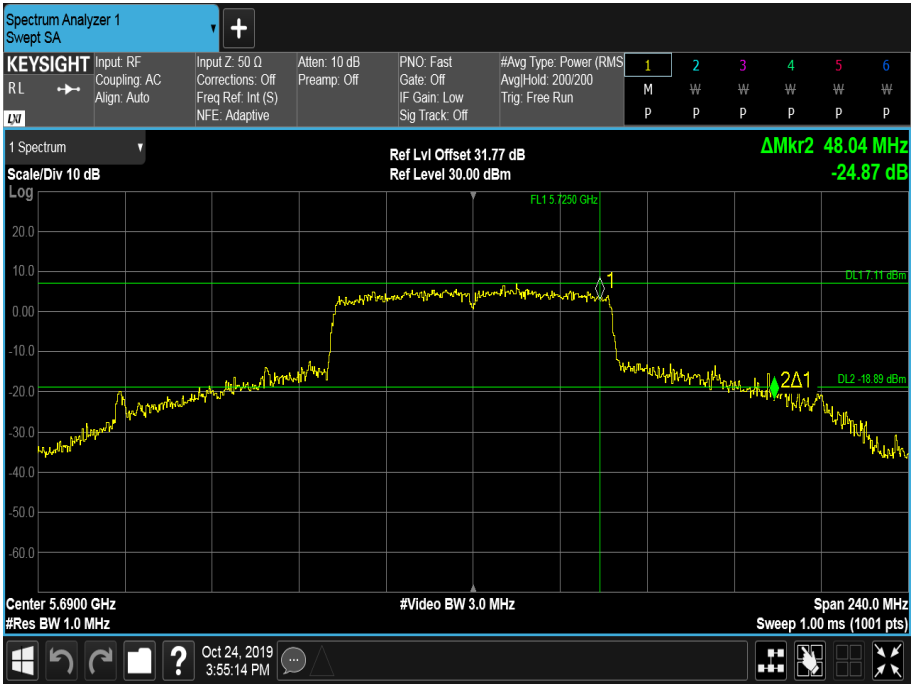


Figure 722 - 5690 MHz - 26 dB Emission Bandwidth



Figure 723 - 5690 MHz - 99% Occupied Bandwidth

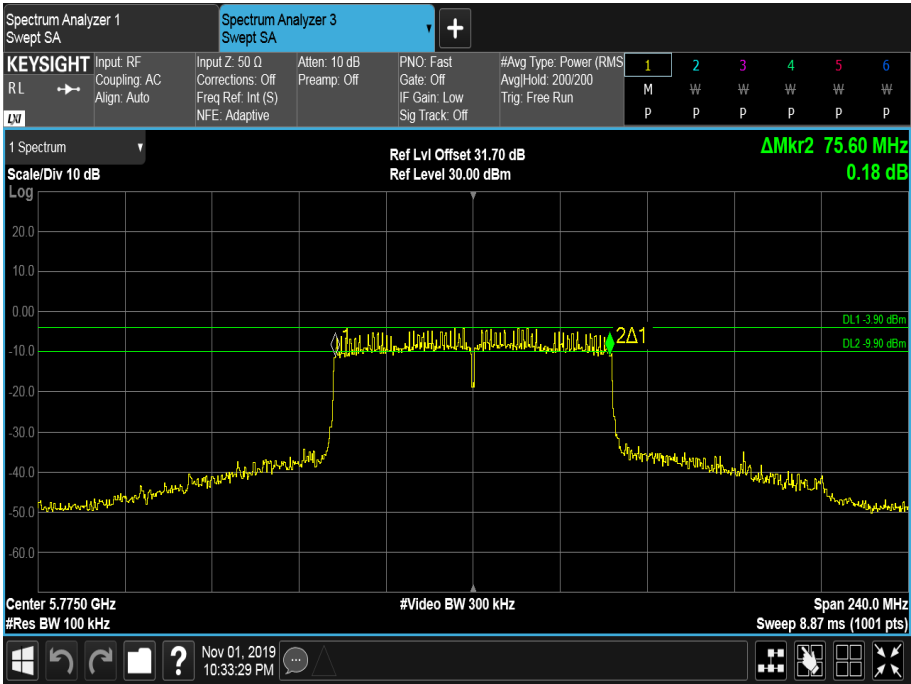


Figure 724 - 5775 MHz - 6 dB DTS Bandwidth

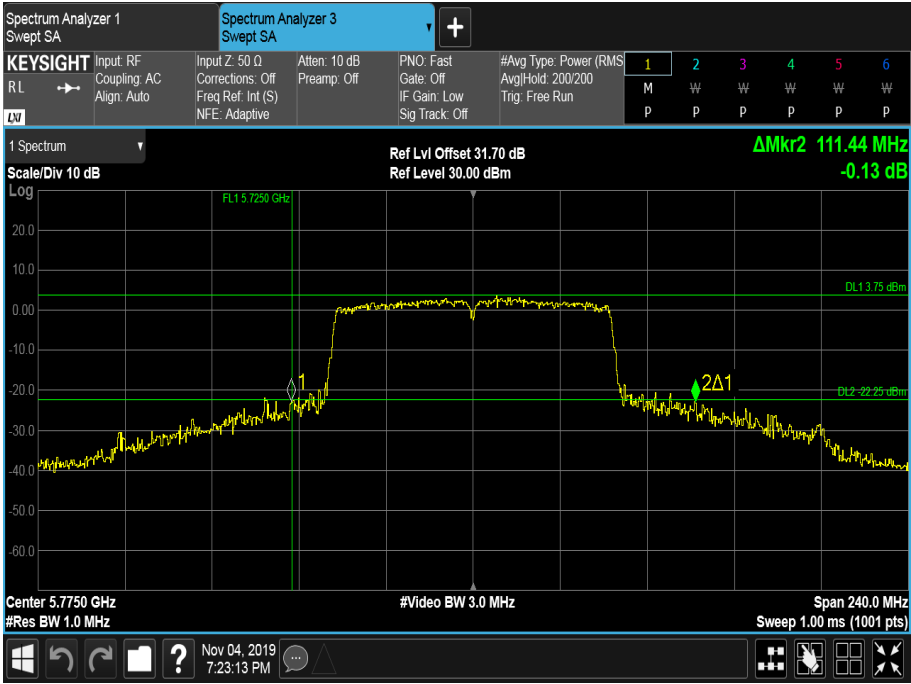


Figure 725 - 5775 MHz - 26 dB Emission Bandwidth

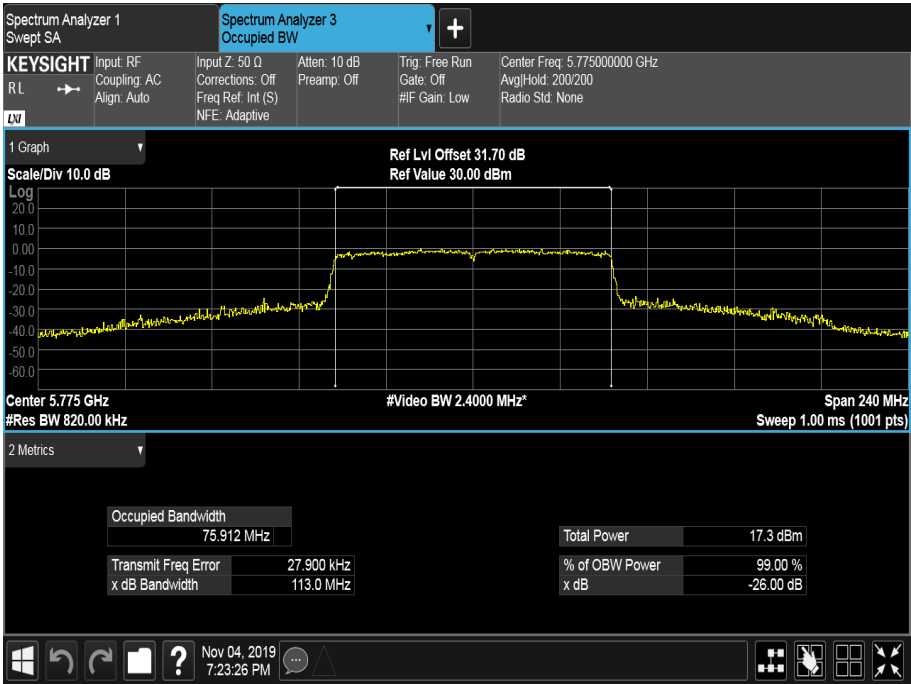


Figure 726 - 5775 MHz - 99% Occupied Bandwidth



Channel	Straddle	Middle
Frequency (MHz)	5690	5775
6 dB Bandwidth (MHz)	0.280	75.600
26 dB Bandwidth (MHz)	37.960	81.840
99% Bandwidth (MHz)	76.063	75.793

Table 399 - 802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 1+2

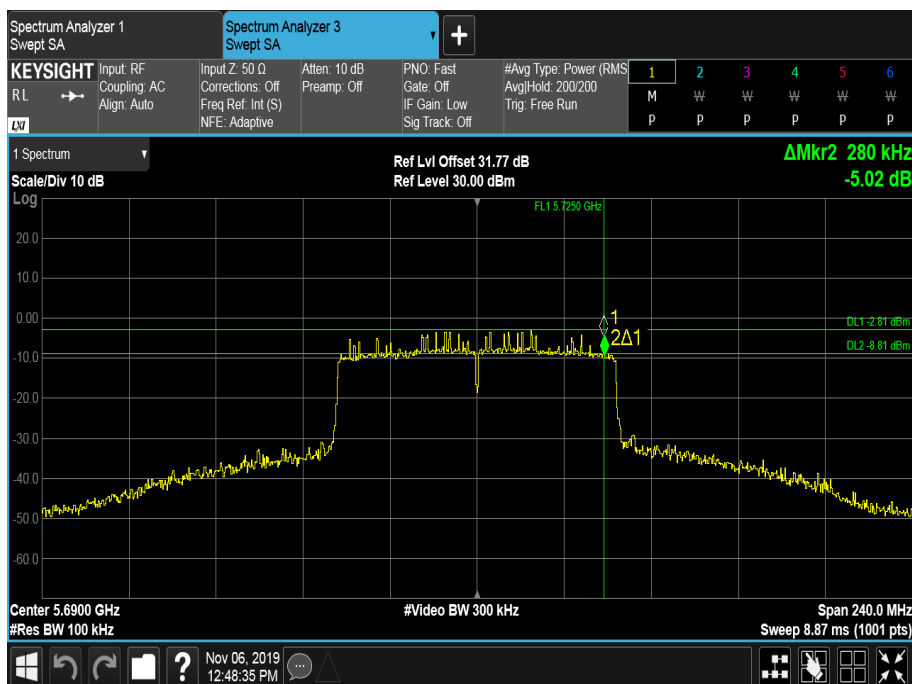
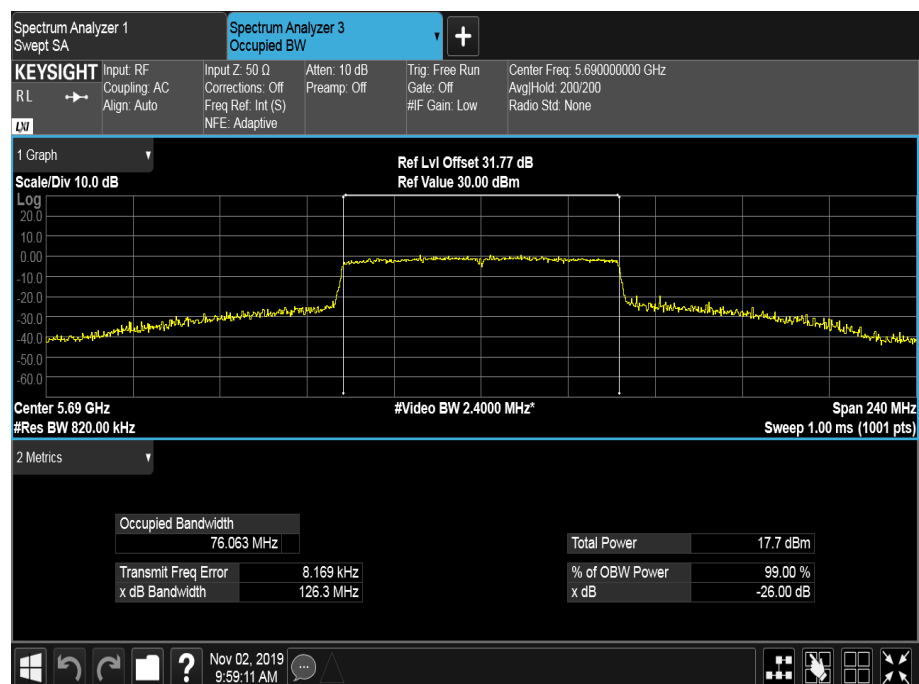
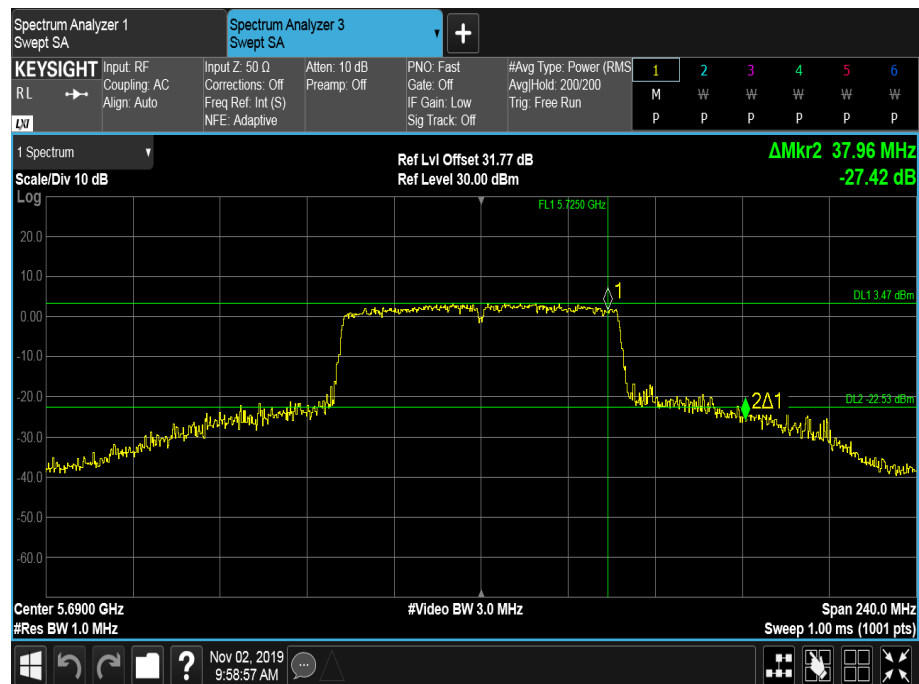


Figure 727 - 5690 MHz - 6 dB DTS Bandwidth



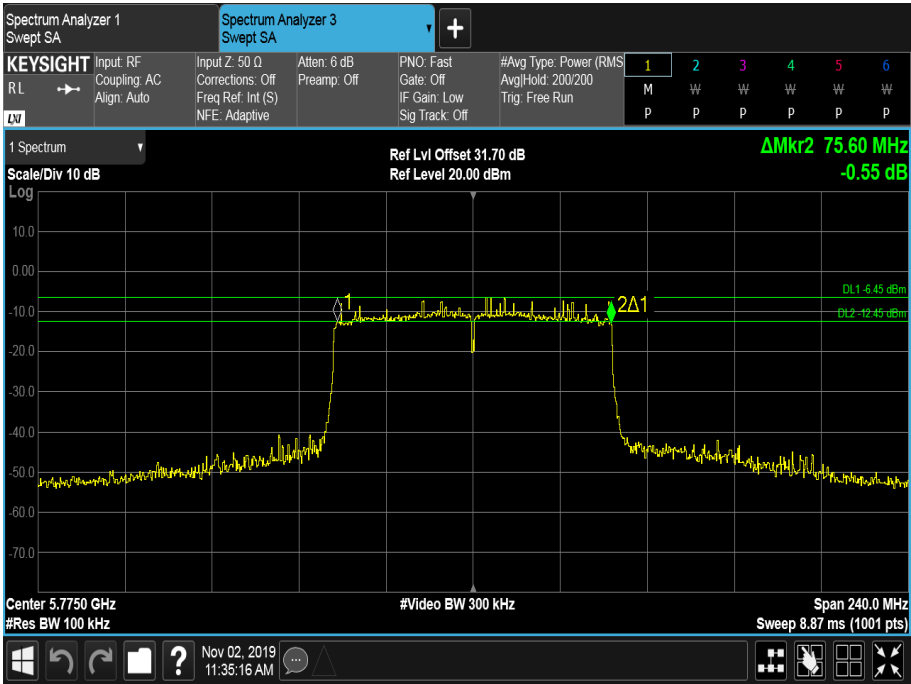


Figure 730 - 5775 MHz - 6 dB DTS Bandwidth

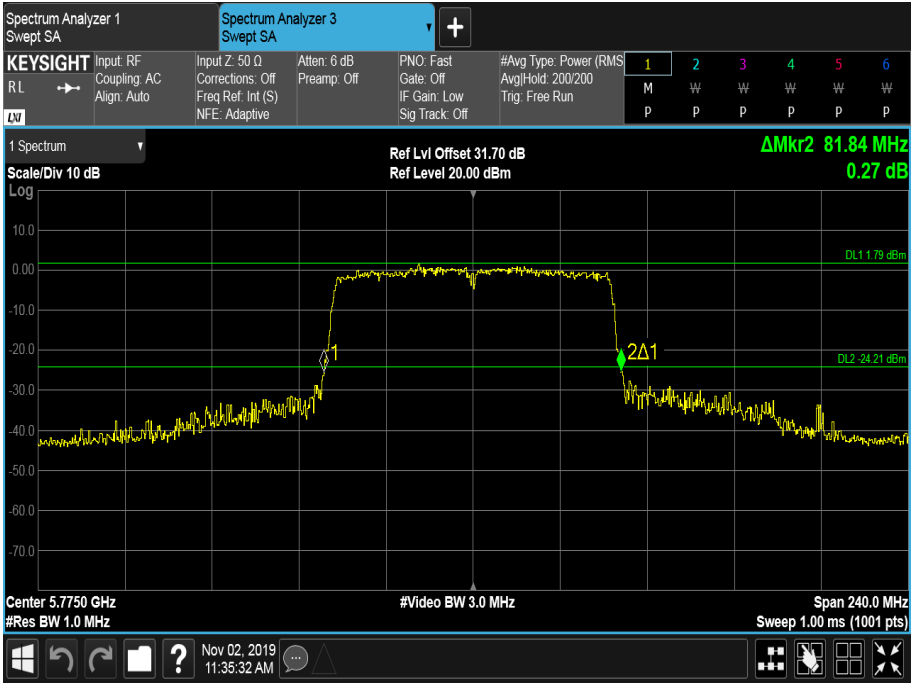


Figure 731 - 5775 MHz - 26 dB Emission Bandwidth

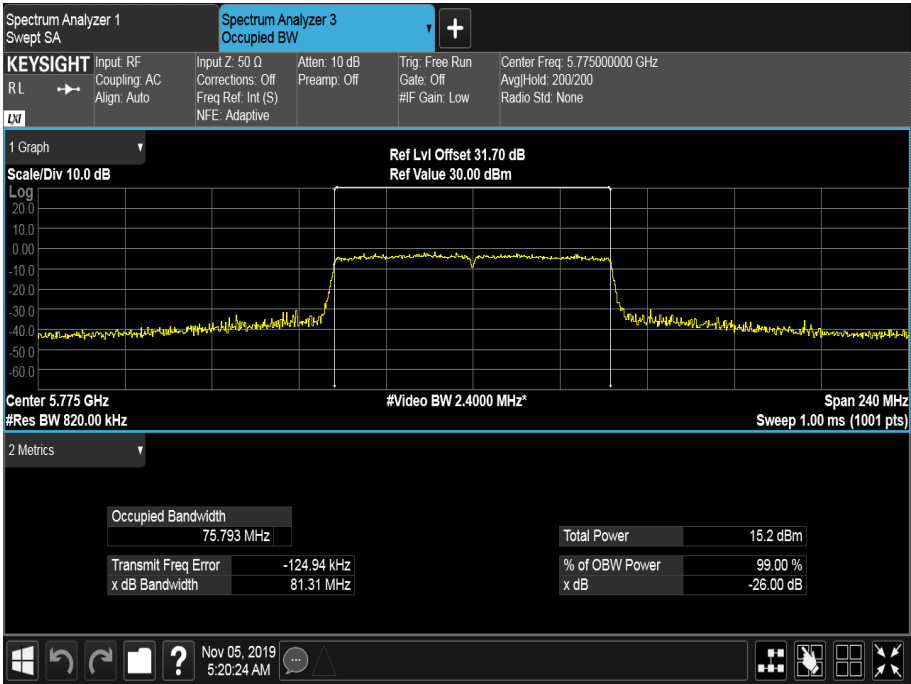


Figure 732 - 5775 MHz - 99% Occupied Bandwidth



Channel	Straddle	Middle
Frequency (MHz)	5690	5775
6 dB Bandwidth (MHz)	2.680	74.160
26 dB Bandwidth (MHz)	55.000	90.240
99% Bandwidth (MHz)	86.209	75.823

Table 400 - 802.11ac / VHT80 MCS0x1 / MIMO CDD / Cores 0+1+2

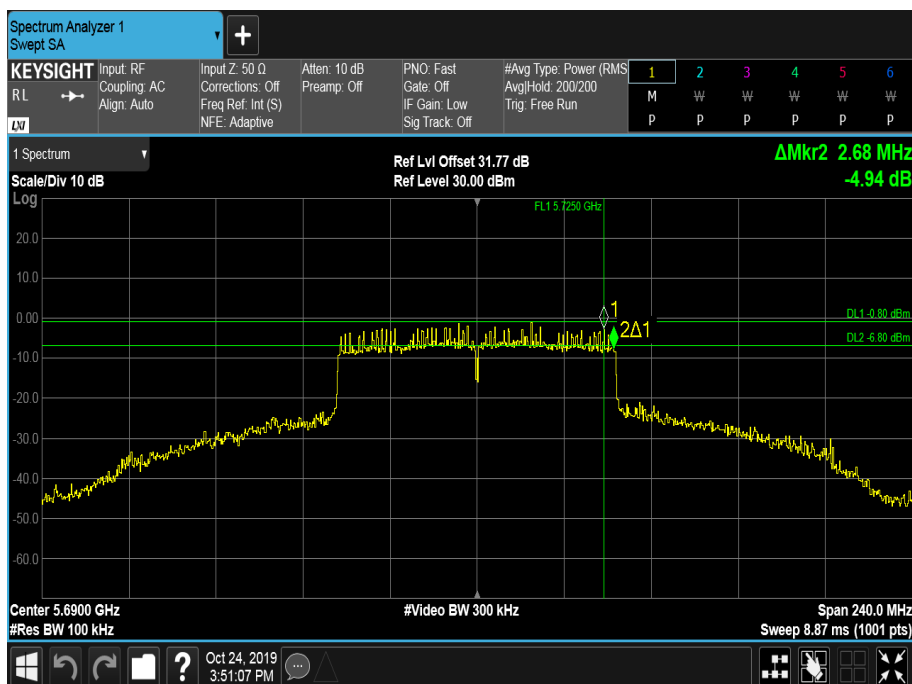


Figure 733 - 5690 MHz - 6 dB DTS Bandwidth

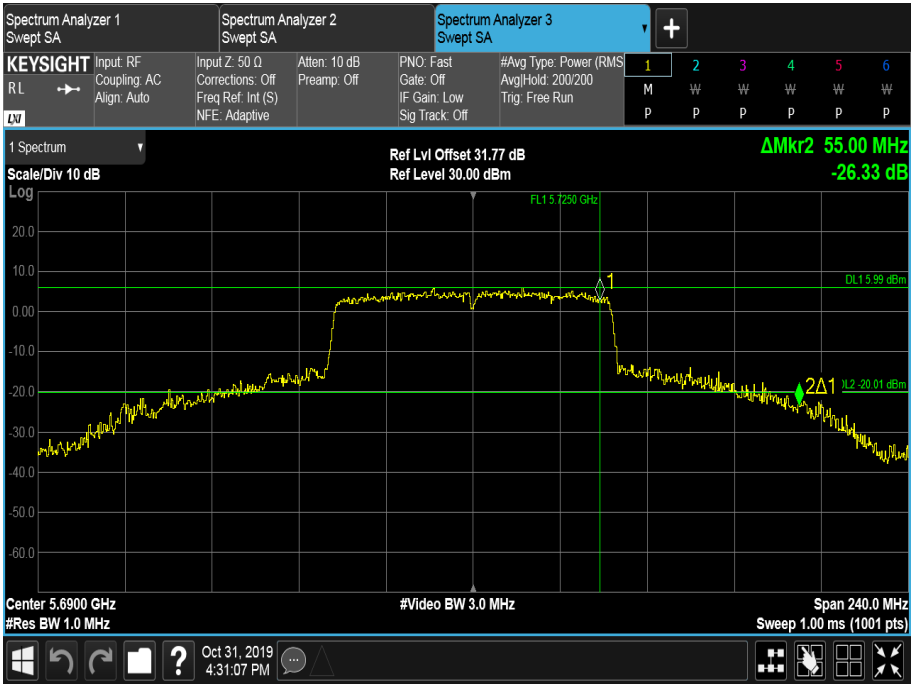


Figure 734 - 5690 MHz - 26 dB Emission Bandwidth

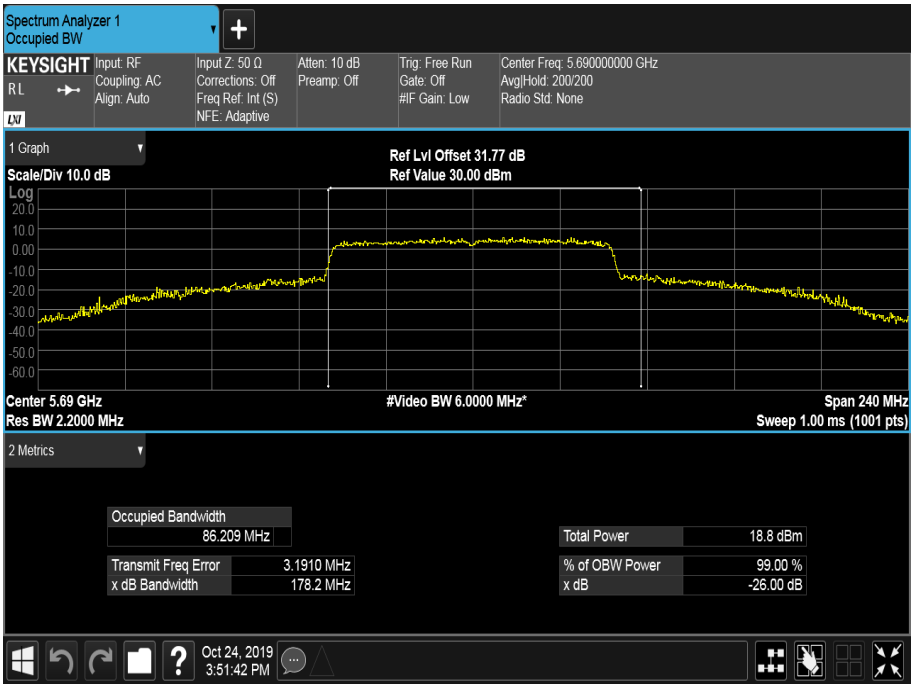


Figure 735 - 5690 MHz - 99% Occupied Bandwidth

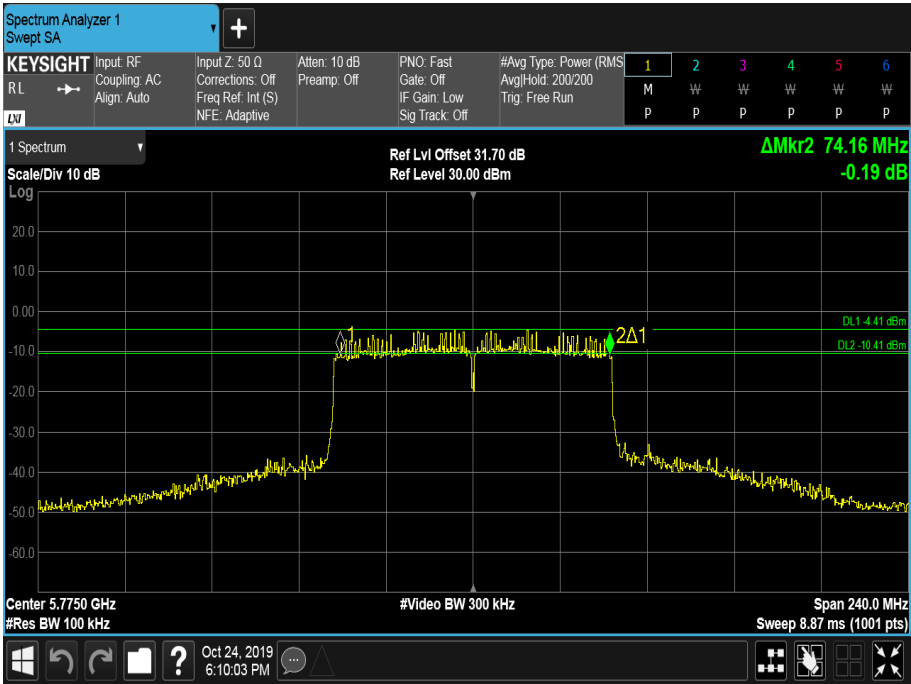


Figure 736 - 5775 MHz - 6 dB DTS Bandwidth

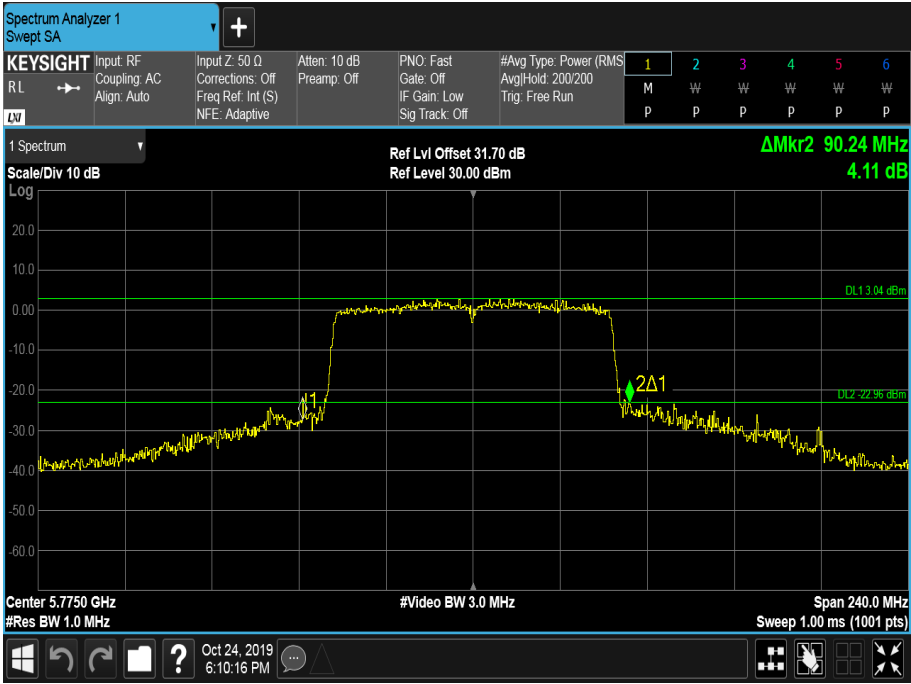


Figure 737 - 5775 MHz - 26 dB Emission Bandwidth

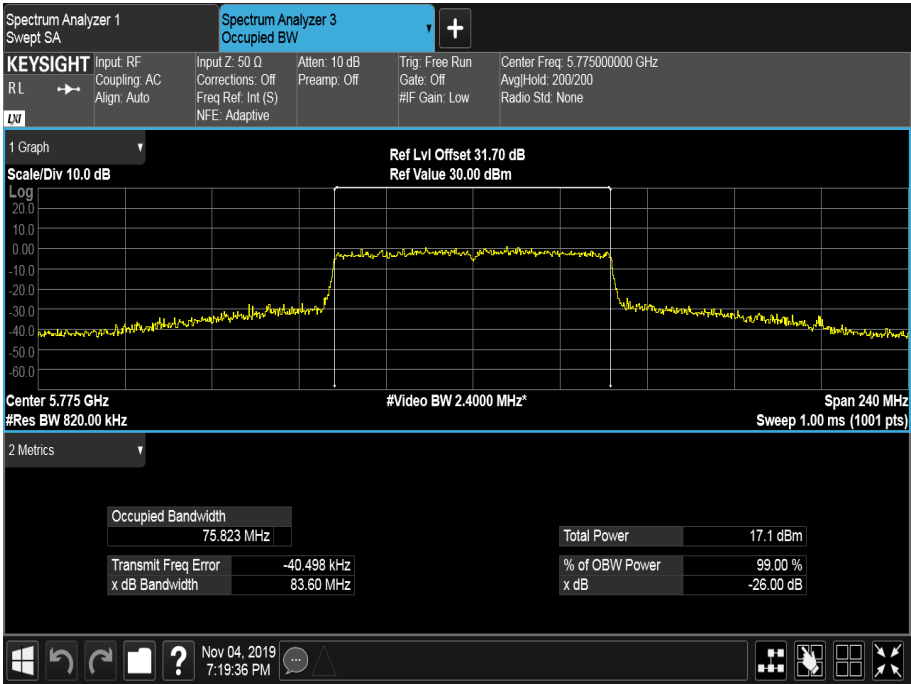


Figure 738 - 5775 MHz - 99% Occupied Bandwidth



Channel	Straddle	Middle
Frequency (MHz)	5690	5775
6 dB Bandwidth (MHz)	2.680	75.600
26 dB Bandwidth (MHz)	58.840	103.520
99% Bandwidth (MHz)	94.672	75.906

Table 401 - 802.11ac / VHT80 MCS0x3 / MIMO SDM / Cores 0+1+2

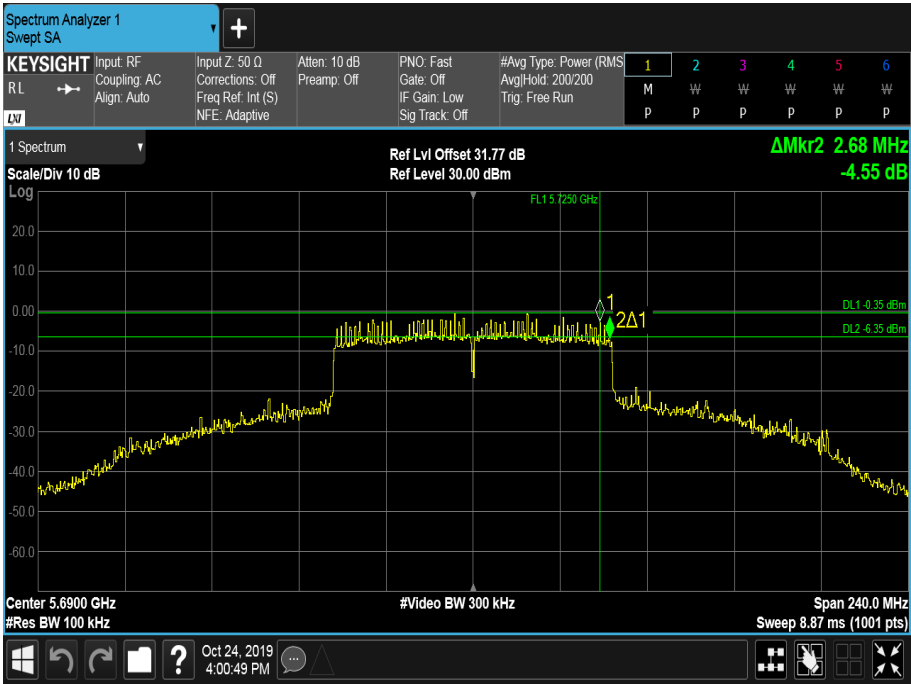


Figure 739 - 5690 MHz - 6 dB DTS Bandwidth

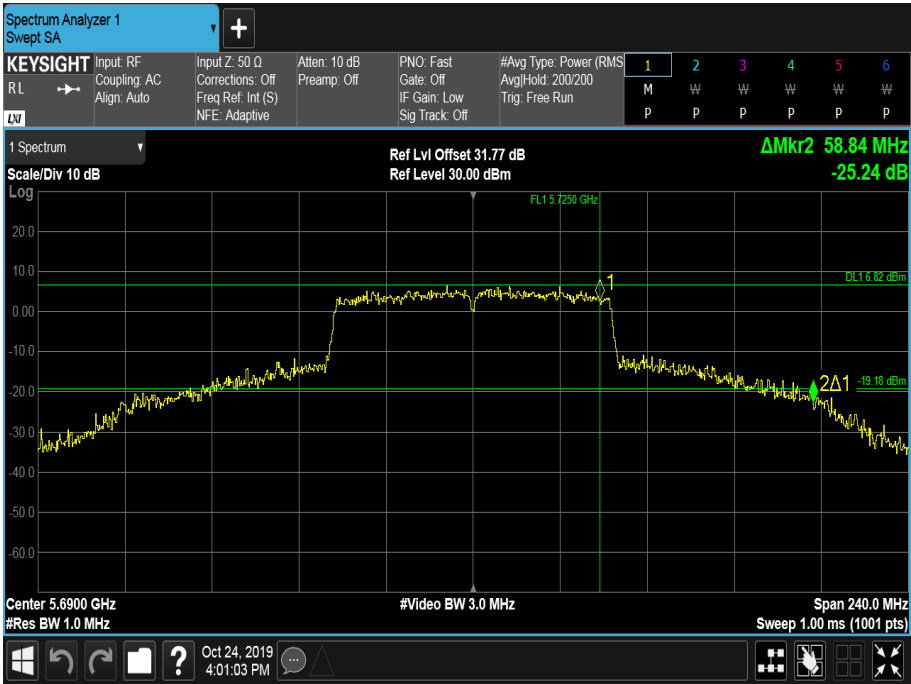


Figure 740 - 5690 MHz - 26 dB Emission Bandwidth

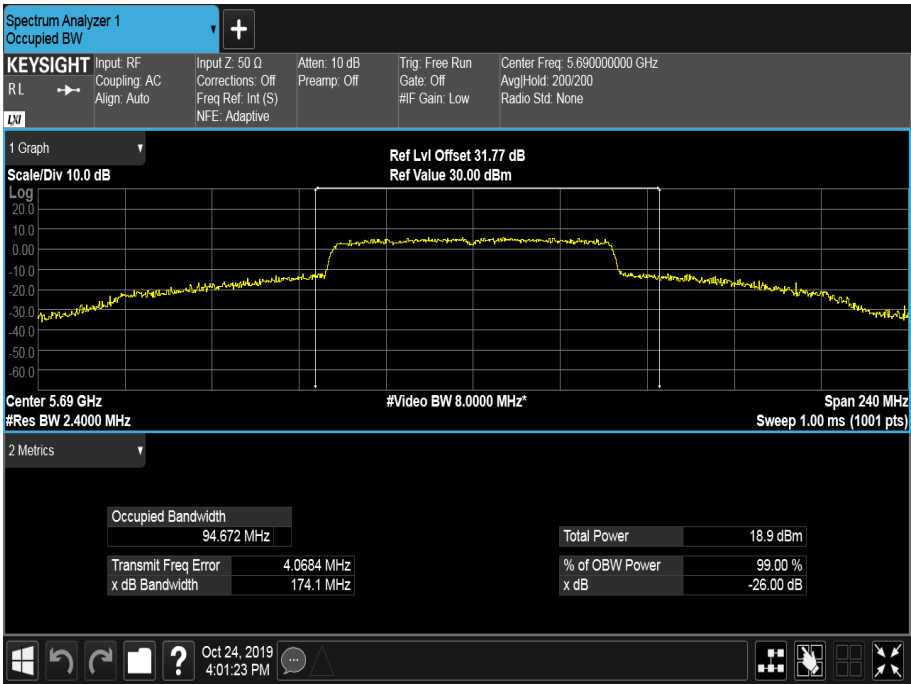


Figure 741 - 5690 MHz - 99% Occupied Bandwidth

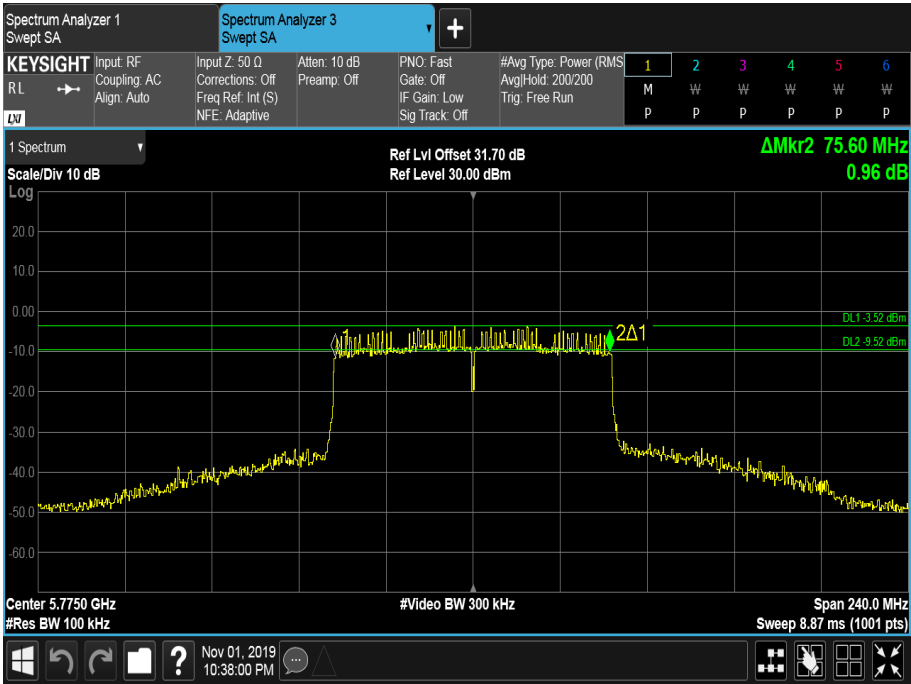


Figure 742 - 5775 MHz - 6 dB DTS Bandwidth



Figure 743 - 5775 MHz - 26 dB Emission Bandwidth

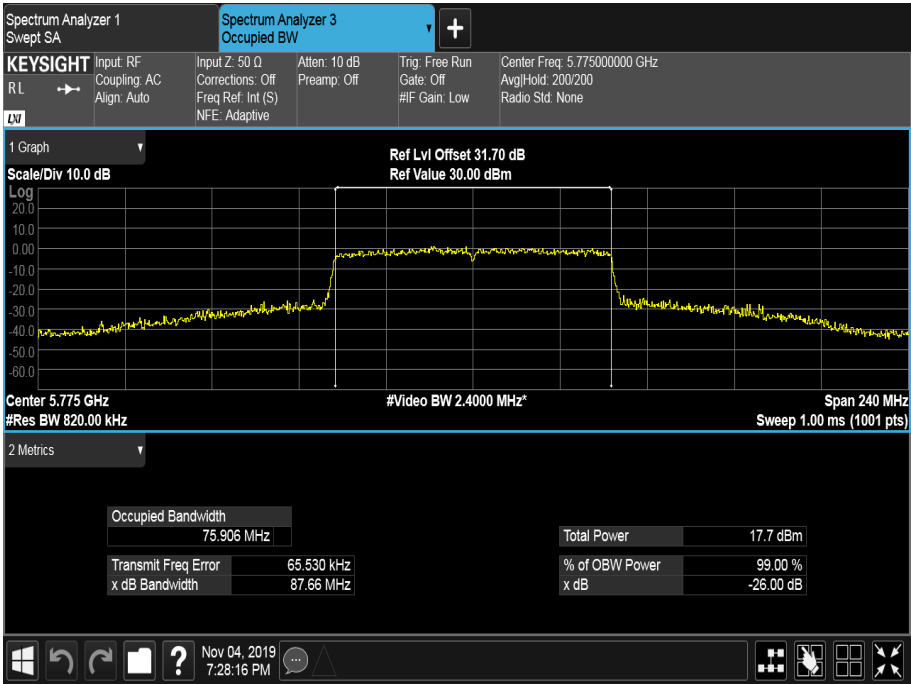


Figure 744 - 5775 MHz - 99% Occupied Bandwidth



Channel	Straddle	Middle
Frequency (MHz)	5690	5775
6 dB Bandwidth (MHz)	2.680	74.640
26 dB Bandwidth (MHz)	40.600	82.560
99% Bandwidth (MHz)	75.994	75.775

Table 402 - 802.11ac / VHT80 MCS0x1 / MIMO TxBF / Cores 0+1+2

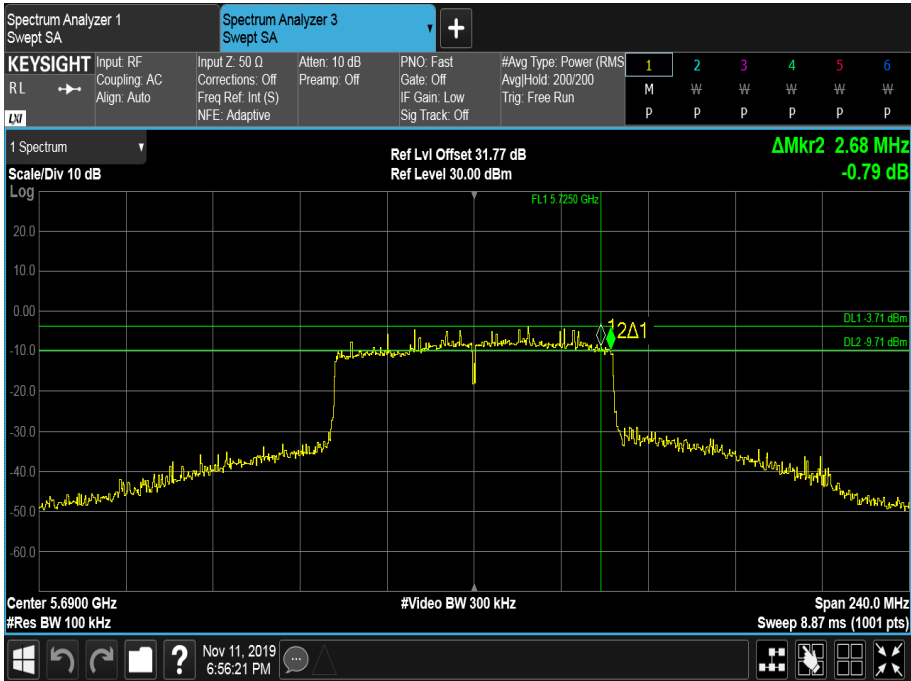


Figure 745 - 5690 MHz - 6 dB DTS Bandwidth

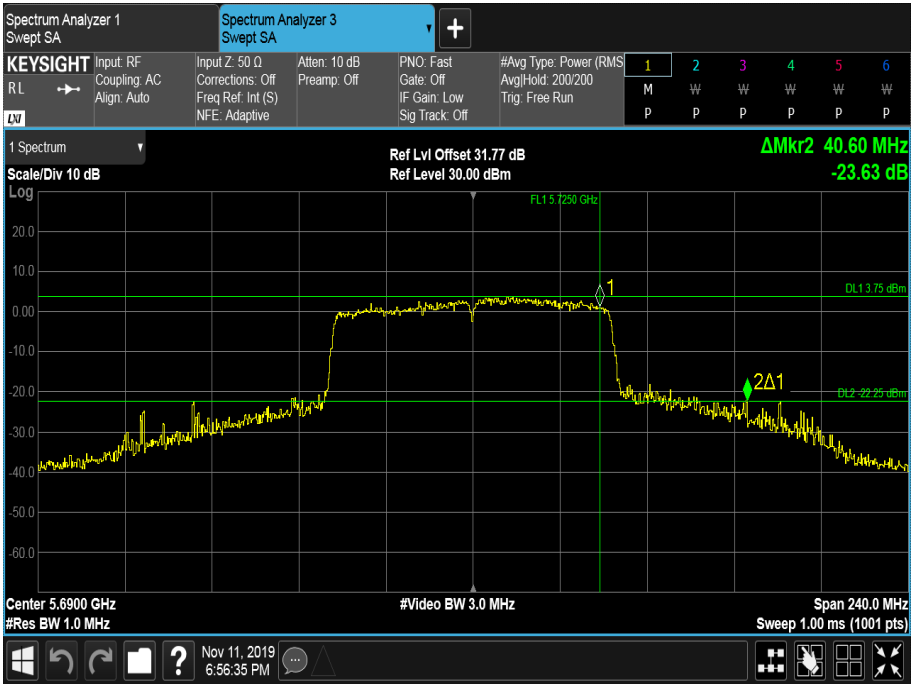


Figure 746 - 5690 MHz - 26 dB Emission Bandwidth

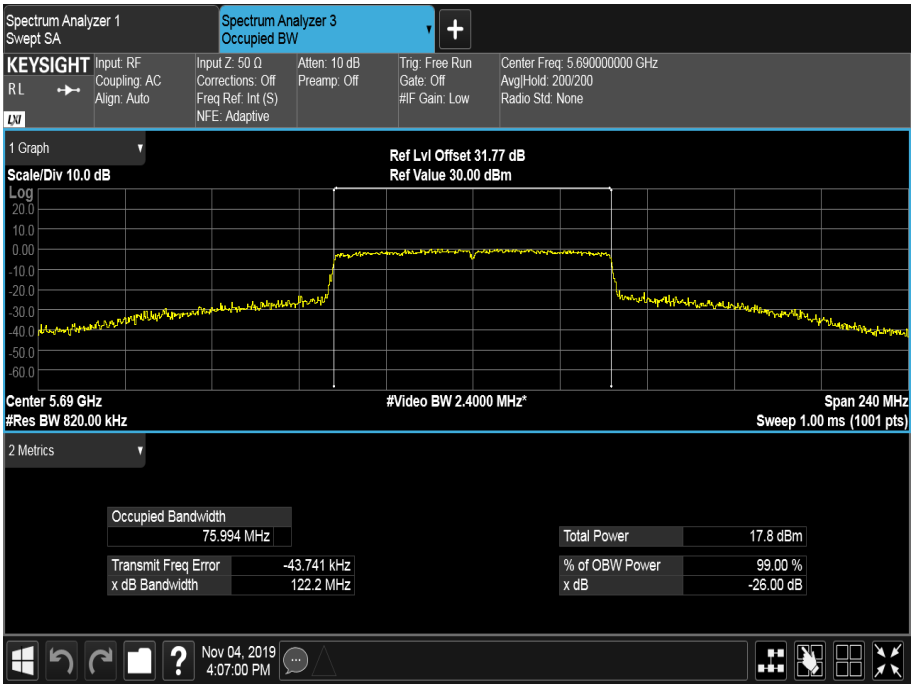


Figure 747 - 5690 MHz - 99% Occupied Bandwidth

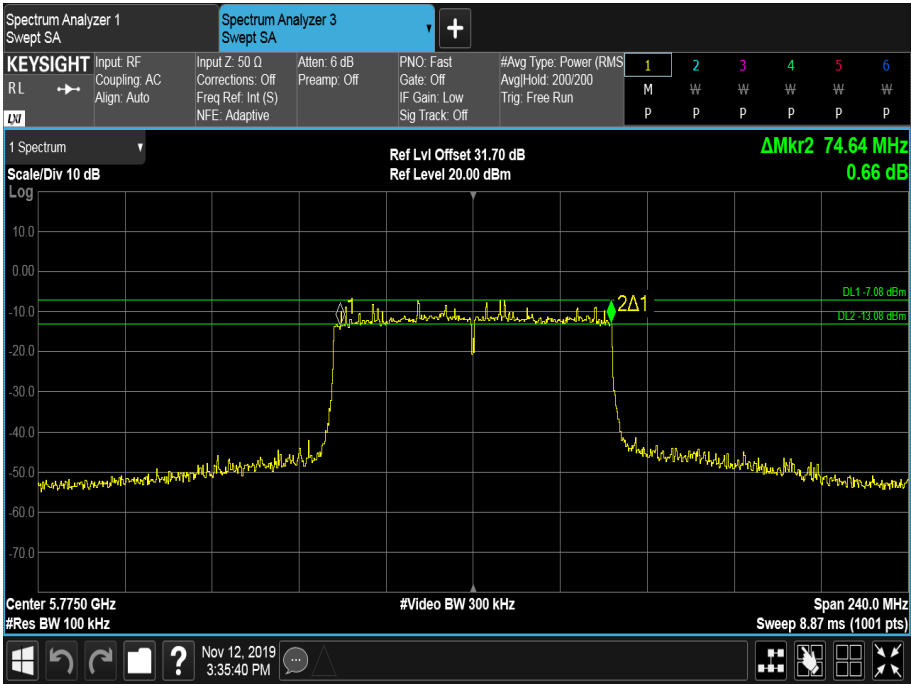


Figure 748 - 5775 MHz - 6 dB DTS Bandwidth

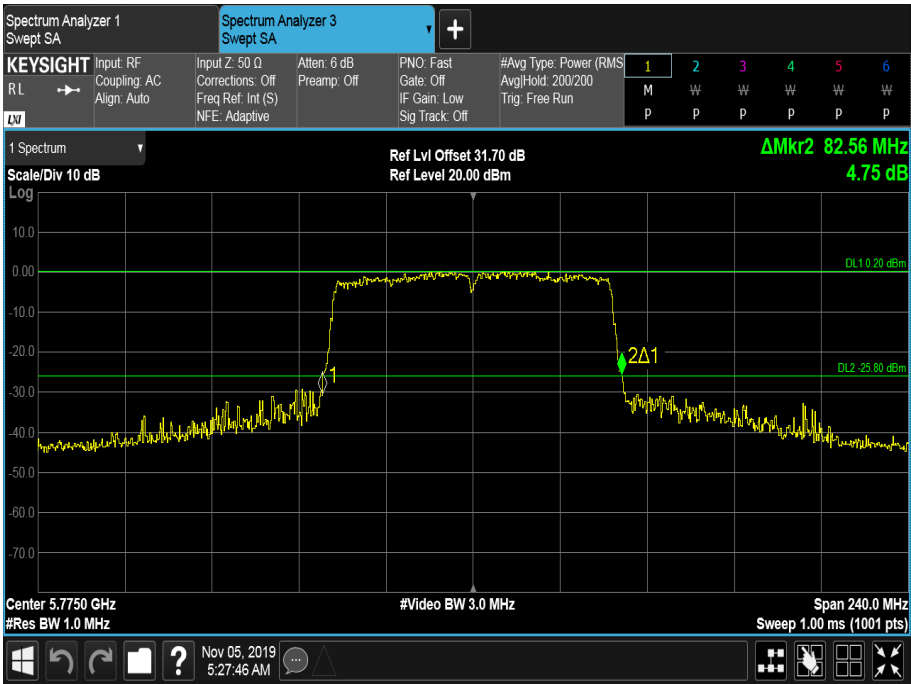


Figure 749 - 5775 MHz - 26 dB Emission Bandwidth

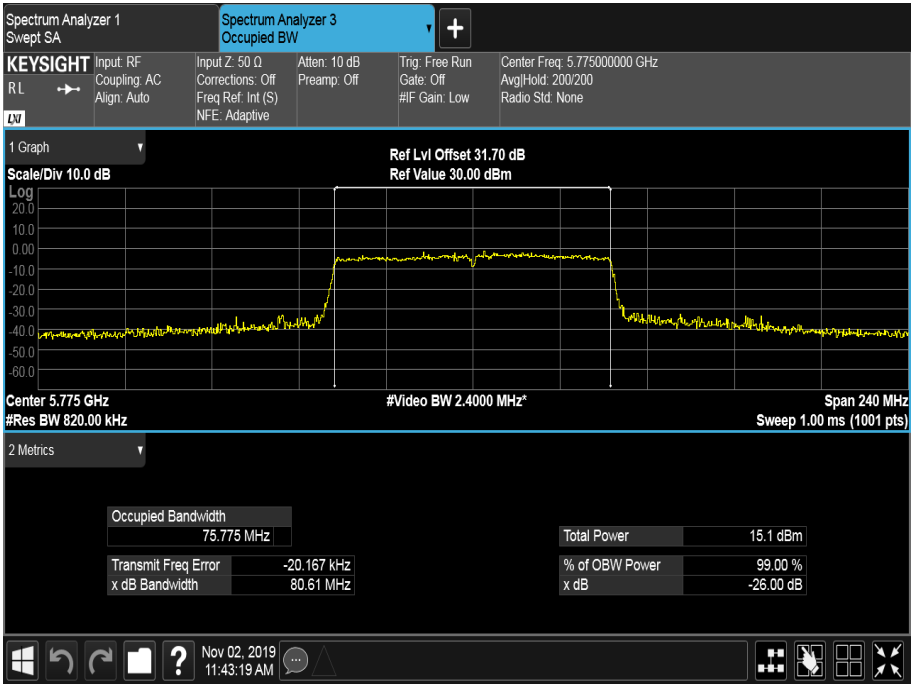


Figure 750 - 5775 MHz - 99% Occupied Bandwidth



Channel	Straddle	Middle
Frequency (MHz)	5690	5775
6 dB Bandwidth (MHz)	2.920	75.600
26 dB Bandwidth (MHz)	59.560	130.160
99% Bandwidth (MHz)	106.490	77.253

Table 403 - 802.11ac / VHT80 MCS0x1 / Aux Core

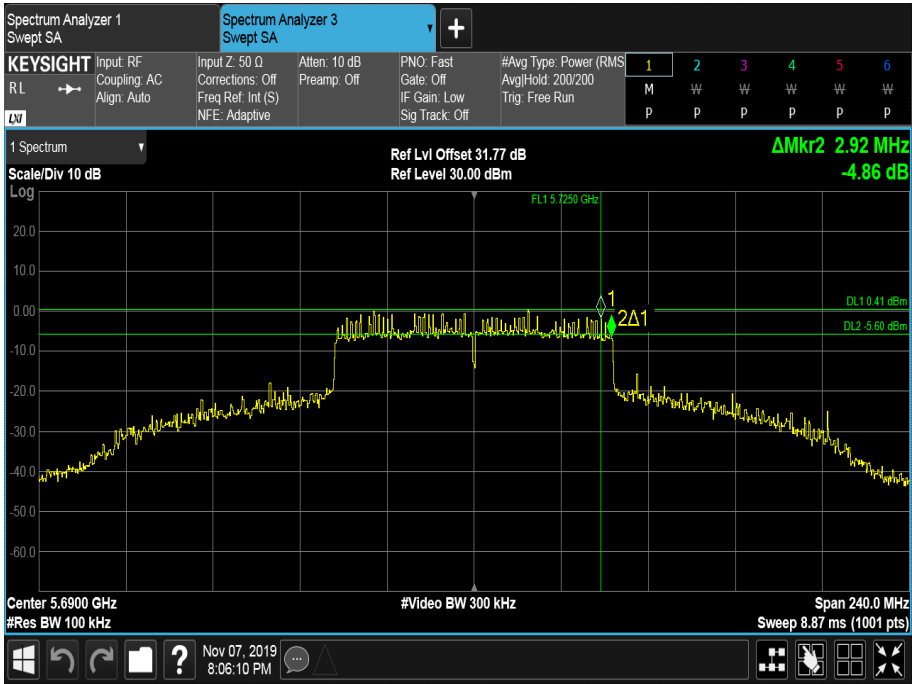


Figure 751 - 5690 MHz - 6 dB DTS Bandwidth

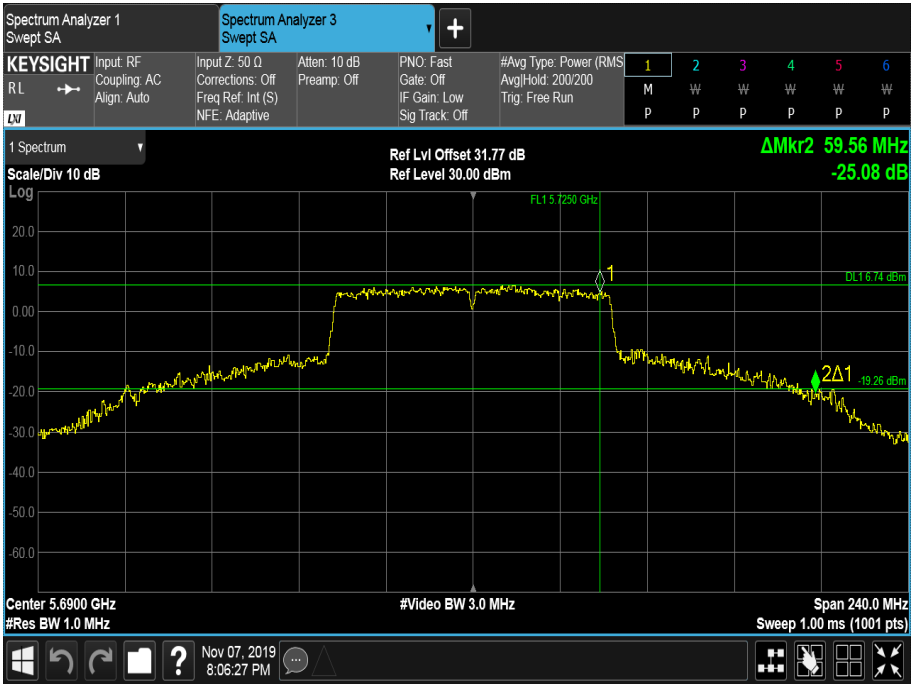


Figure 752 - 5690 MHz - 26 dB Emission Bandwidth

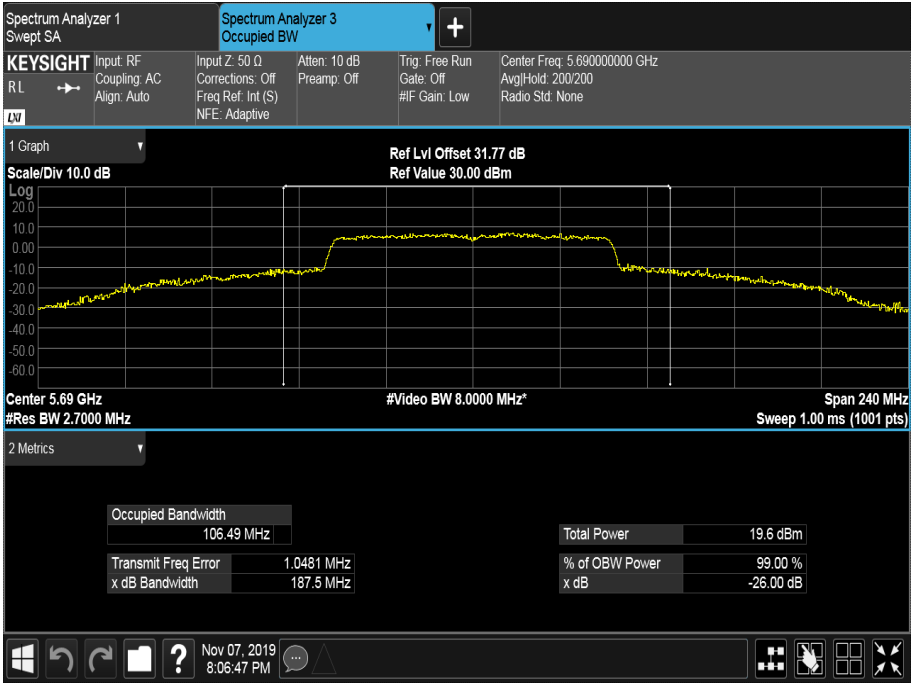


Figure 753 - 5690 MHz - 99% Occupied Bandwidth

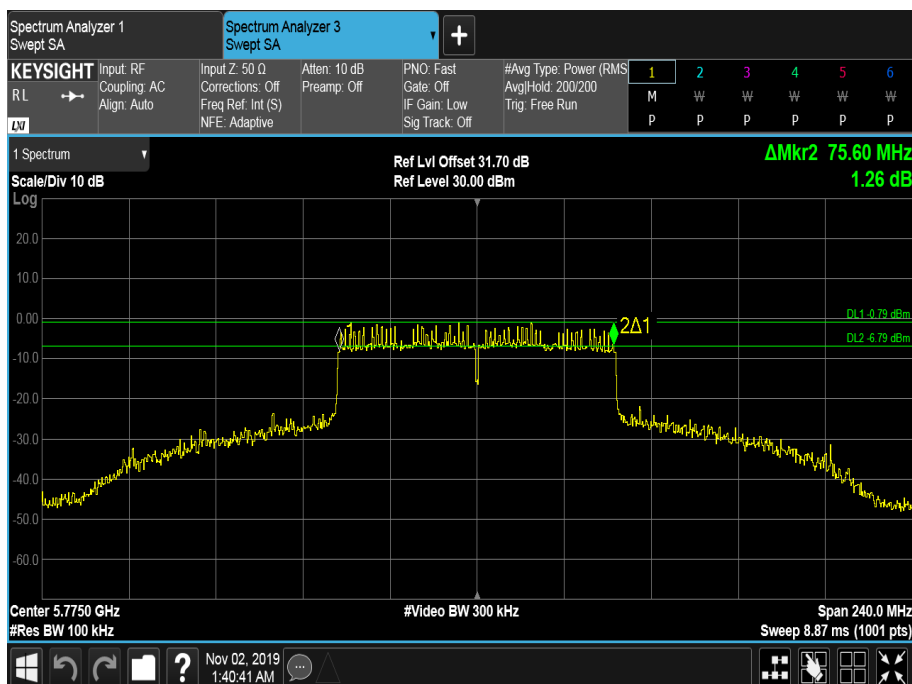


Figure 754 - 5775 MHz - 6 dB DTS Bandwidth

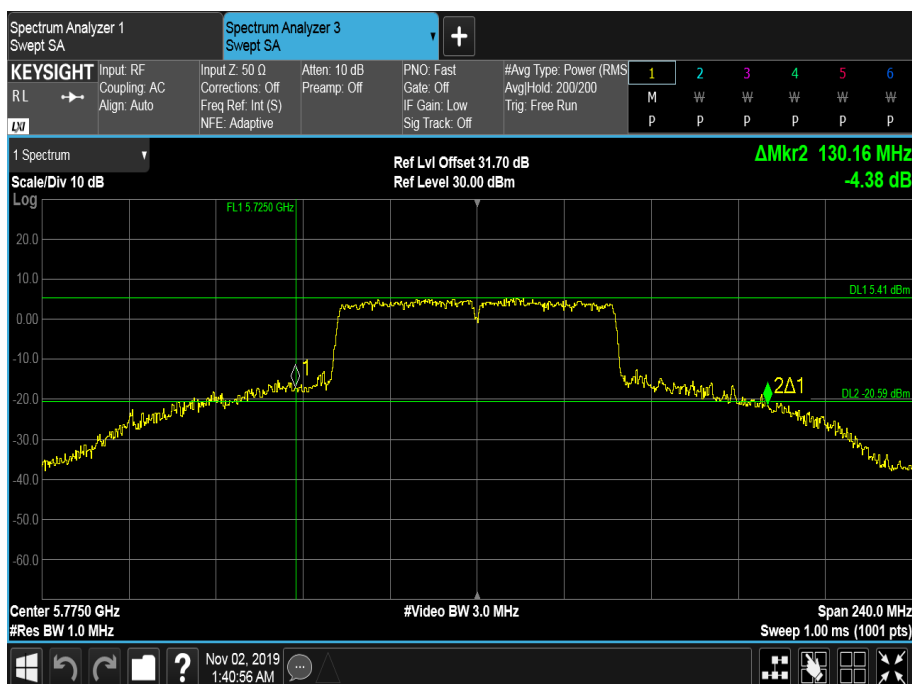


Figure 755 - 5775 MHz - 26 dB Emission Bandwidth



Figure 756 - 5775 MHz - 99% Occupied Bandwidth



2.3.10 Limits

FCC Part 15E, Limit Clause 15.407 and ISED RSS-247, Limit Clause 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.1

5150 MHz to 5250 MHz: None specified.
5250 MHz to 5350 MHz: None specified.
5470 MHz to 5725 MHz: None specified.
5725 MHz to 5850 MHz: > 500 kHz.

ISED RSS-247, Limit Clause 6.2.1.1, 6.2.2.1, 6.2.3.1 and 6.2.4.1

5150 MHz to 5250 MHz: None specified.
5250 MHz to 5350 MHz: None specified.
5470 MHz to 5725 MHz: None specified.
5725 MHz to 5850 MHz: The minimum 6 dB bandwidth shall be at least 500 kHz.



2.3.11 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Hygrometer	Rotronic	I-1000	3220	12	25-Sep-2020
Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	16-Apr-2020
EXA	Keysight Technologies	N9010B	4969	24	21-Dec-2019
Network Analyser	Keysight Technologies	E5063A	5018	12	20-May-2020
Cable (40 GHz)	Rosenberger	LU1-001-2000	5024	-	O/P Mon
Electronic Calibration Module	Keysight Technologies	85093C	5188	12	21-May-2020
AC Programmable Power Supply	iTech	IT7324	5227	-	O/P Mon
10 dB Attenuator	Telegartner	J01156A0031	Not Serialised	-	O/P Mon
10 dB Attenuator	Telegartner	J01156A0031	Not Serialised	-	O/P Mon
10 dB Attenuator	Telegartner	J01156A0031	Not Serialised	-	O/P Mon
10 dB Attenuator	Telegartner	J01156A0031	Not Serialised	-	O/P Mon

Table 404

O/P Mon – Output Monitored using calibrated equipment



2.4 Authorised Band Edges

2.4.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (b)
ISED RSS-247, Clause 6.2

2.4.2 Equipment Under Test and Modification State

A2304, S/N: C02Z1006N5VL - Modification State 0
A2304, S/N: C02Z1007N5VN - Modification State 0

2.4.3 Date of Test

12-August-2019 to 06-November-2019

2.4.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.6.

For U-NII-2C channels, the limit line on the following plots equated to -27 dBm/MHz. EIRP and was converted to field strength at 3 m using the following formula:

Field Strength (dBμV/m at 3 m) = EIRP (dBm) + 95.2 dB

Authorised band edge measurements were performed, with the device operating in SISO and MIMO configurations, across the various modes supported by the device.

The measurements displayed within this report, have been limited to those modes which have been shown to be worst case.

Further measurements are held on file by TÜV SÜD and are available if required.

2.4.5 Environmental Conditions

Ambient Temperature	15.8 - 27.0 °C
Relative Humidity	35.0 - 40.3 %



2.4.6 Test Results

5 GHz WLAN

Main - 20 MHz Bandwidth (SISO)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11a, Core 1	6 Mbps	5500	5470	60.11
802.11n, Core 1	MCS0	5500	5470	63.01
802.11a, Core 1	6 Mbps	5700	5725	60.22
802.11n, Core 1	MCS0	5700	5725	63.69
802.11a, Core 1	6 Mbps	5745	5725	58.81
802.11n, Core 1	MCS0	5745	5725	63.24
802.11a, Core 1	6 Mbps	5850	5850	58.9
802.11n, Core 1	MCS0	5850	5850	63.03

Table 405

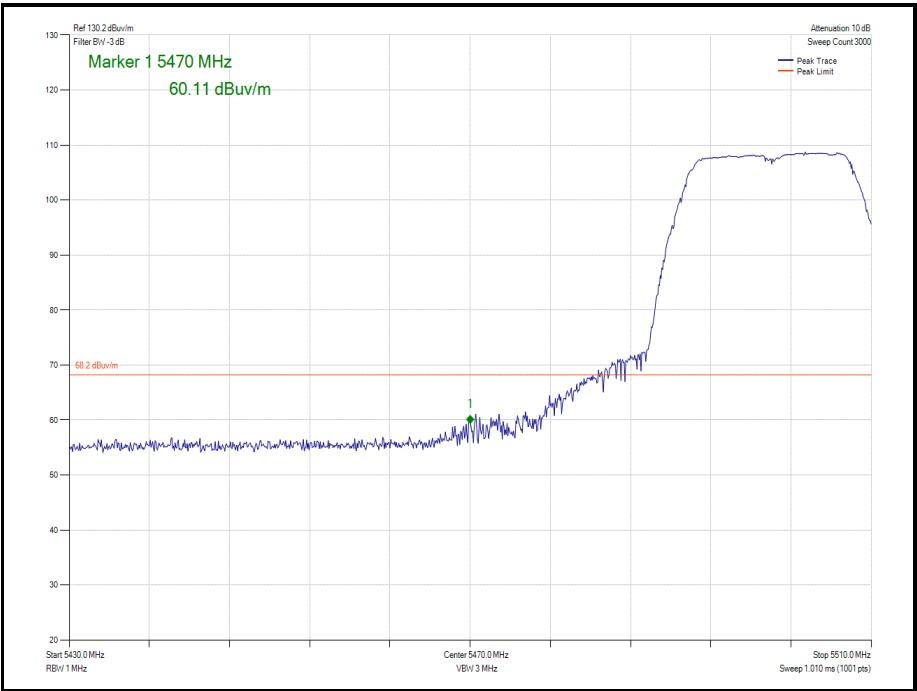


Figure 757 - 802.11a Core 1 - 5500 MHz
Band Edge Frequency 5490 MHz

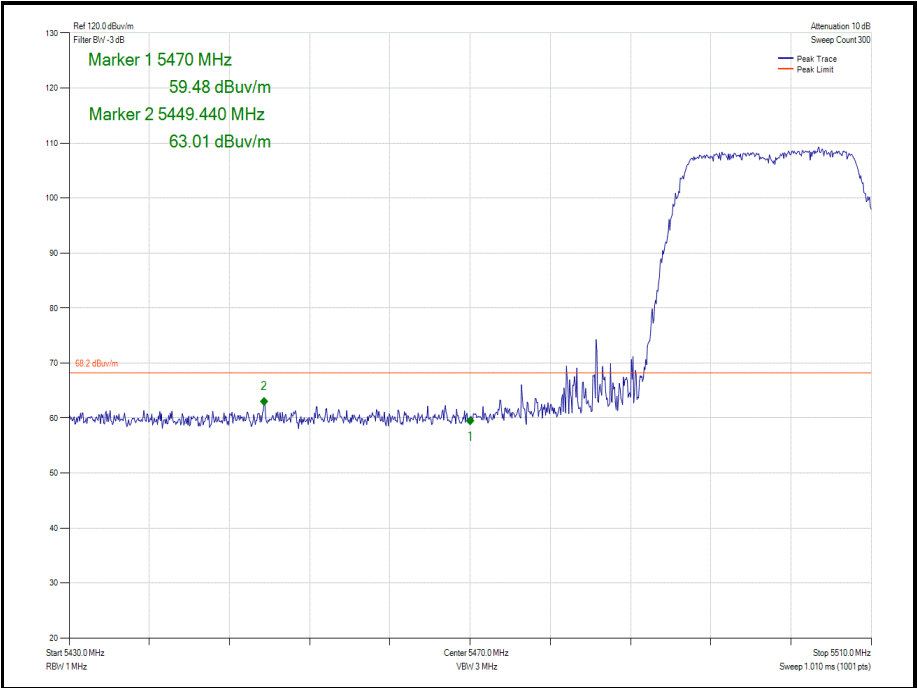


Figure 758 - 802.11n Core 1 - 5500 MHz
Band Edge Frequency 5490 MHz

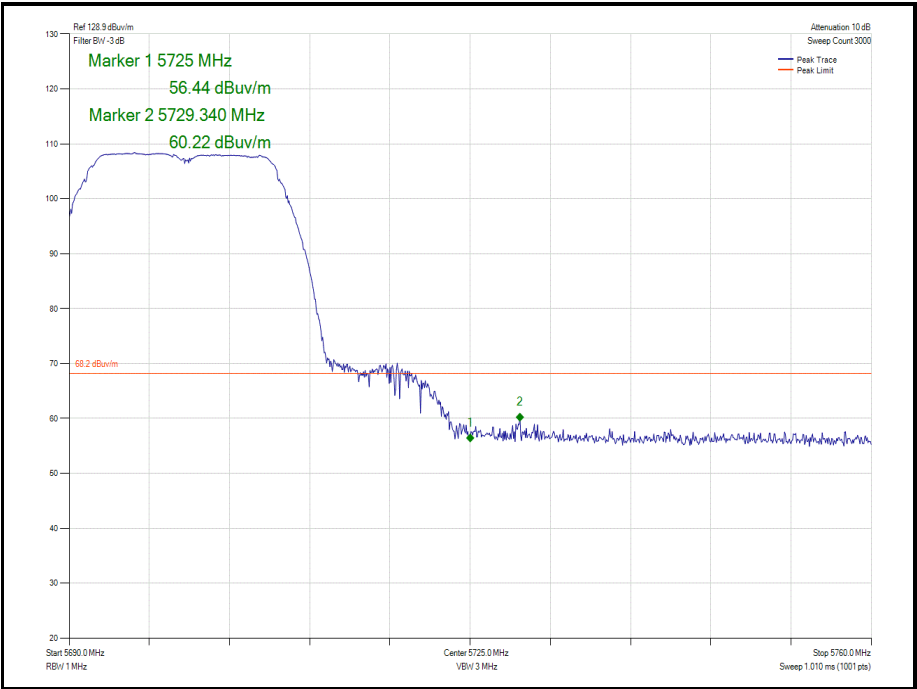


Figure 759 - 802.11a Core 1 - 5700 MHz
Band Edge Frequency 5730 MHz

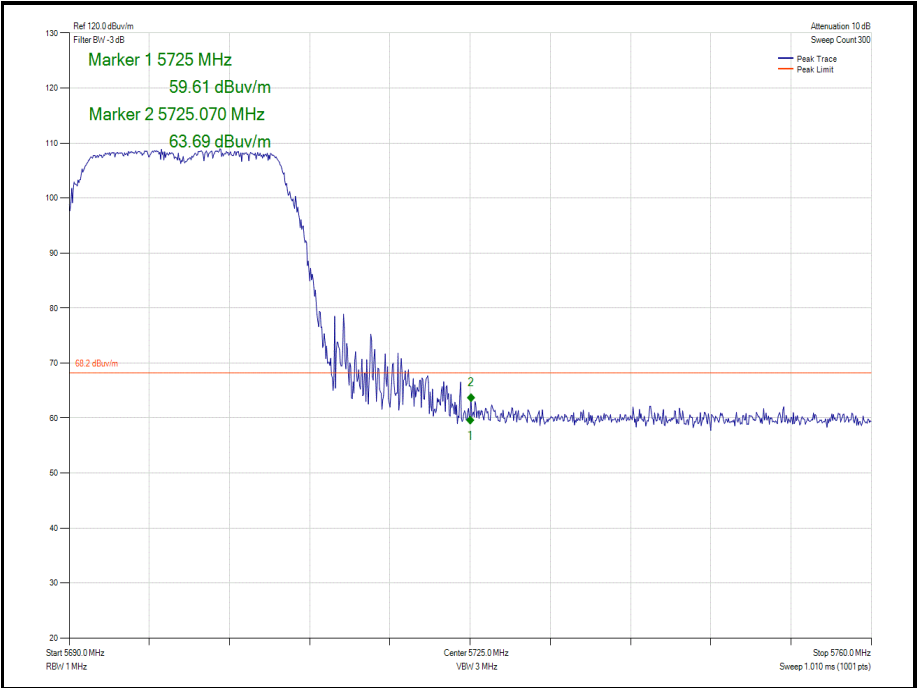


Figure 760 - 802.11n Core 1 - 5700 MHz
Band Edge Frequency 5730 MHz

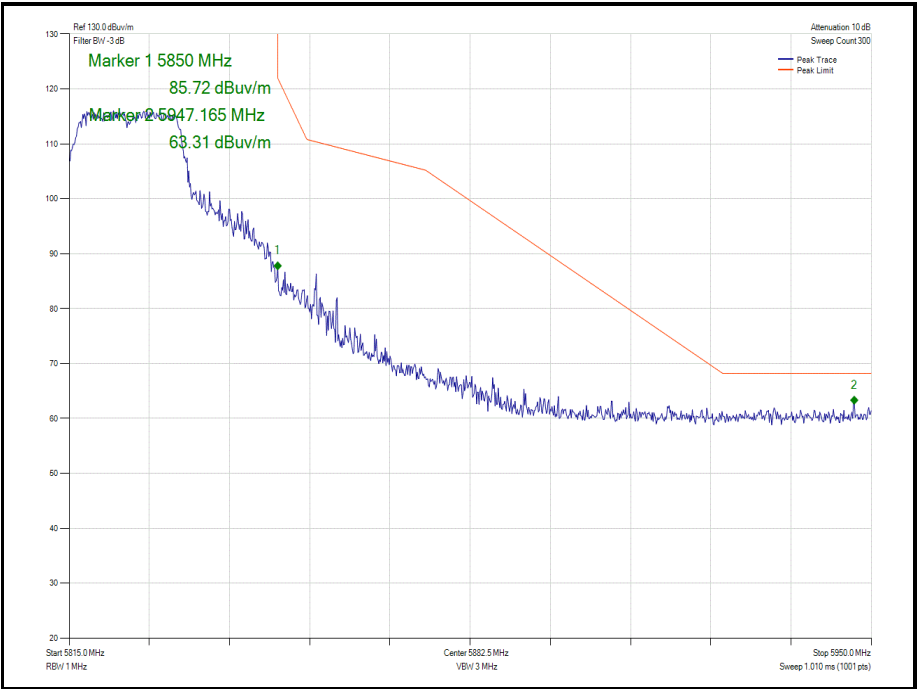


Figure 761 - 802.11a Core 1 - 5745 MHz
Band Edge Frequency 5735 MHz

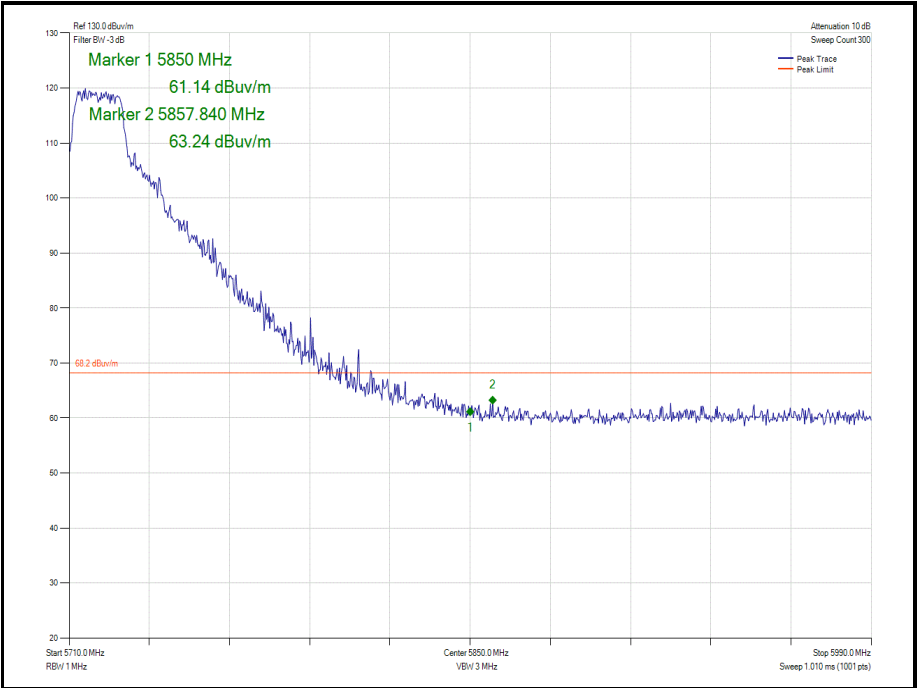


Figure 762 - 802.11n Core 1 - 5745 MHz
Band Edge Frequency 5735 MHz

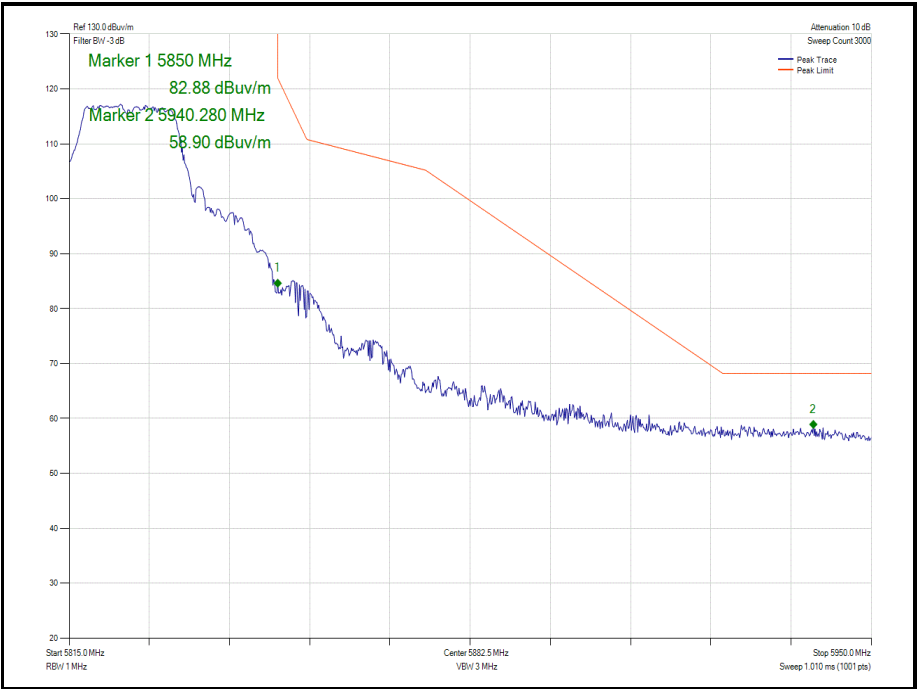


Figure 763 - 802.11a Core 1 - 5825 MHz
Band Edge Frequency 5835 MHz

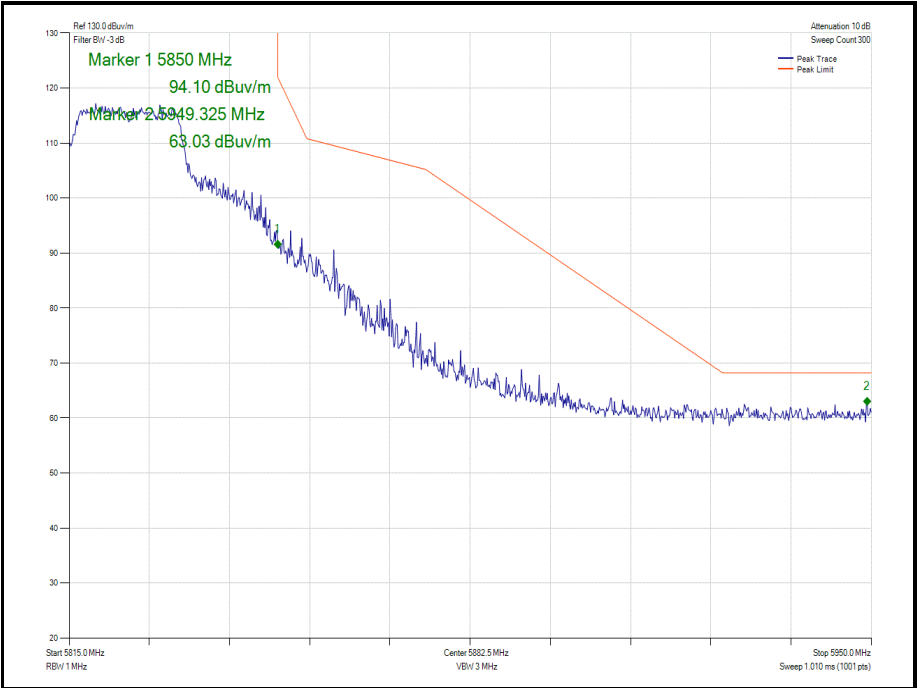


Figure 764 - 802.11n Core 1 - 5825 MHz
Band Edge Frequency 5835 MHz



Aux - 20 MHz Bandwidth

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11a, Core Aux	6 Mbps	5500	5470	63.64
802.11n, Core Aux	MCS0	5500	5470	63.25
802.11a, Core Aux	6 Mbps	5700	5725	64.05
802.11n, Core Aux	MCS0	5700	5725	63.03
802.11a, Core Aux	6 Mbps	5745	5725	63.78
802.11n, Core Aux	MCS0	5745	5725	63.37
802.11a, Core Aux	6 Mbps	5825	5850	58.77
802.11n, Core Aux	MCS0	5825	5850	60.26

Table 406

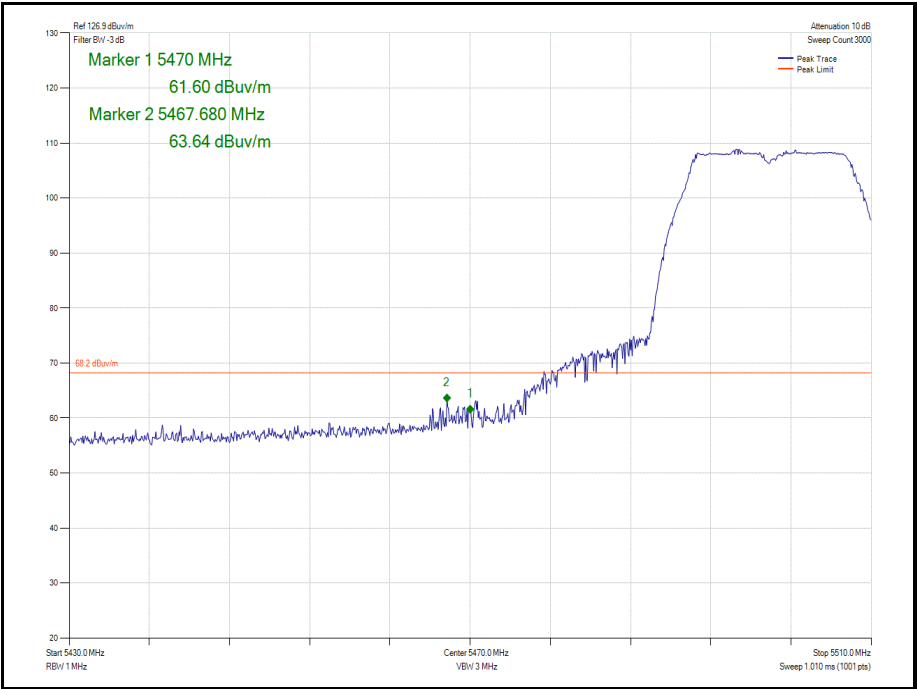


Figure 765 - 802.11a Core Aux - 5500 MHz
Band Edge Frequency 5490 MHz

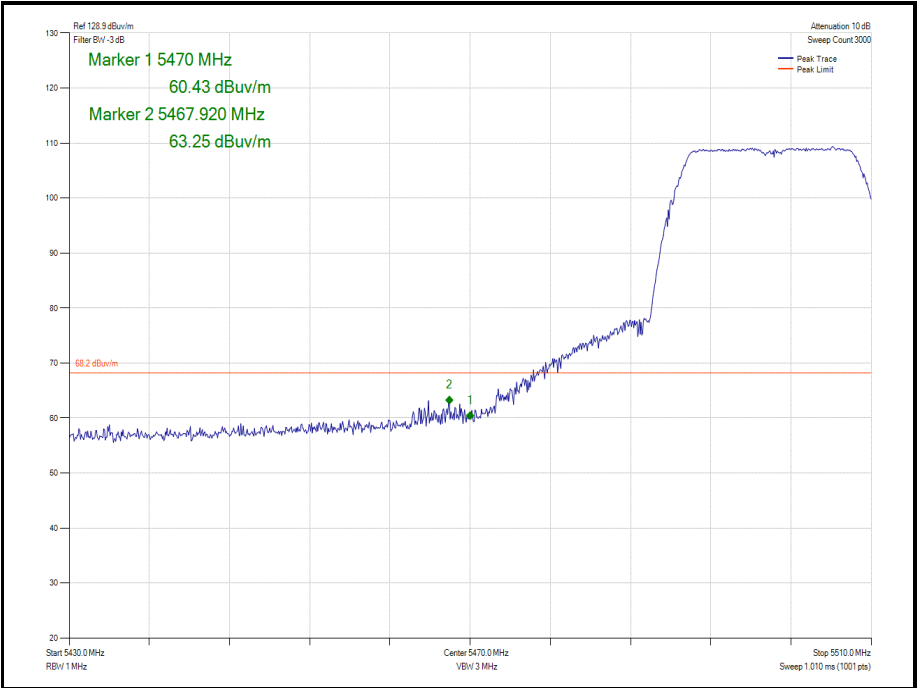


Figure 766 - 802.11n Core Aux - 5500 MHz
Band Edge Frequency 5490 MHz

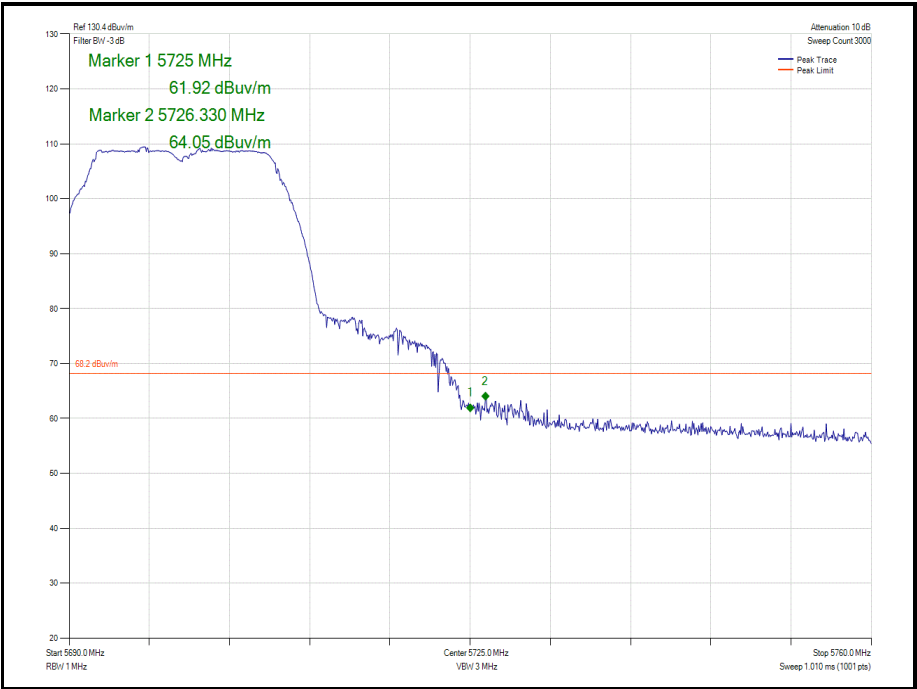


Figure 767 - 802.11a Core Aux - 5700 MHz
Band Edge Frequency 5730 MHz

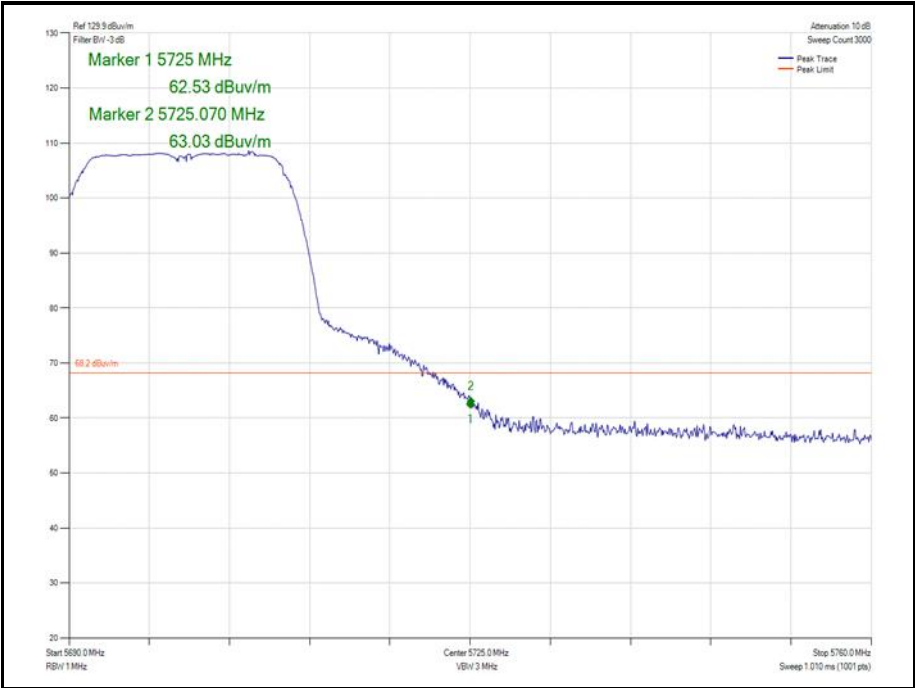


Figure 768 - 802.11n Core Aux - 5700 MHz
Band Edge Frequency 5730 MHz

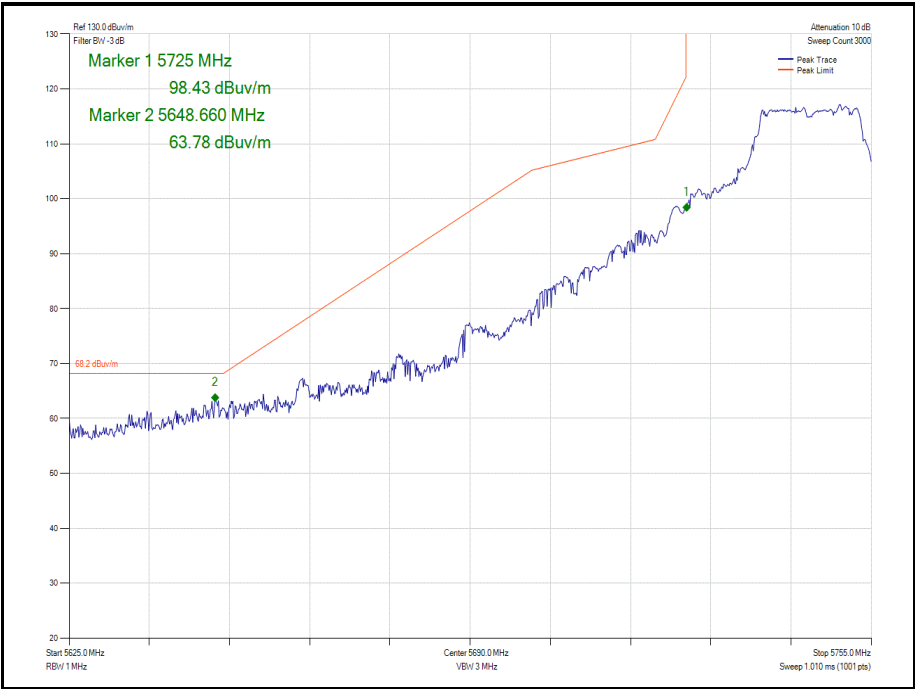


Figure 769 - 802.11a Core Aux - 5745 MHz
Band Edge Frequency 5735 MHz

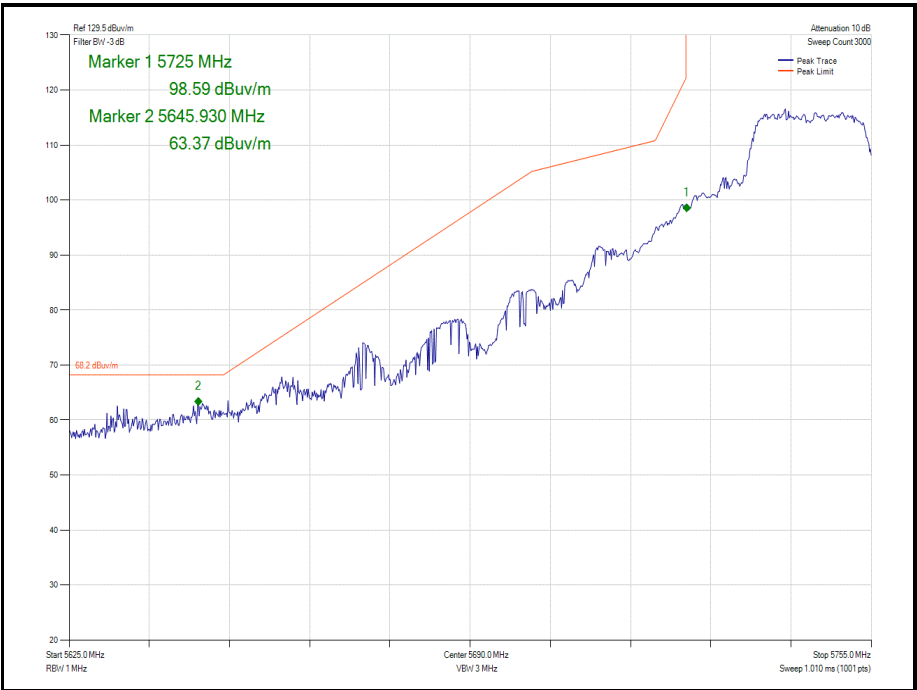


Figure 770 - 802.11n Core Aux - 5745 MHz
Measured Frequency 5735 MHz

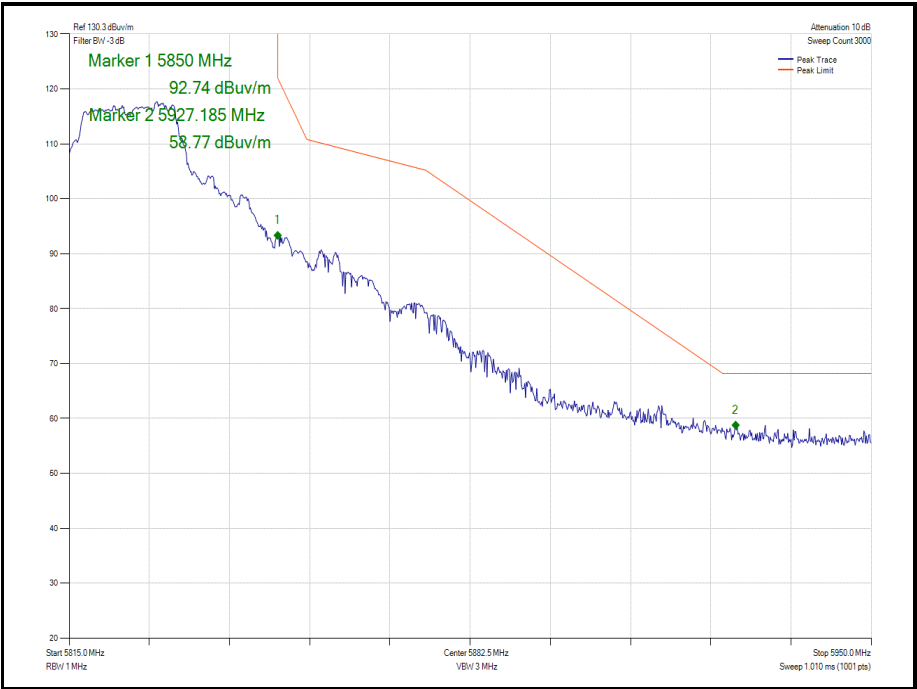


Figure 771 - 802.11a Core Aux - 5825 MHz
Band Edge Frequency 5835 MHz

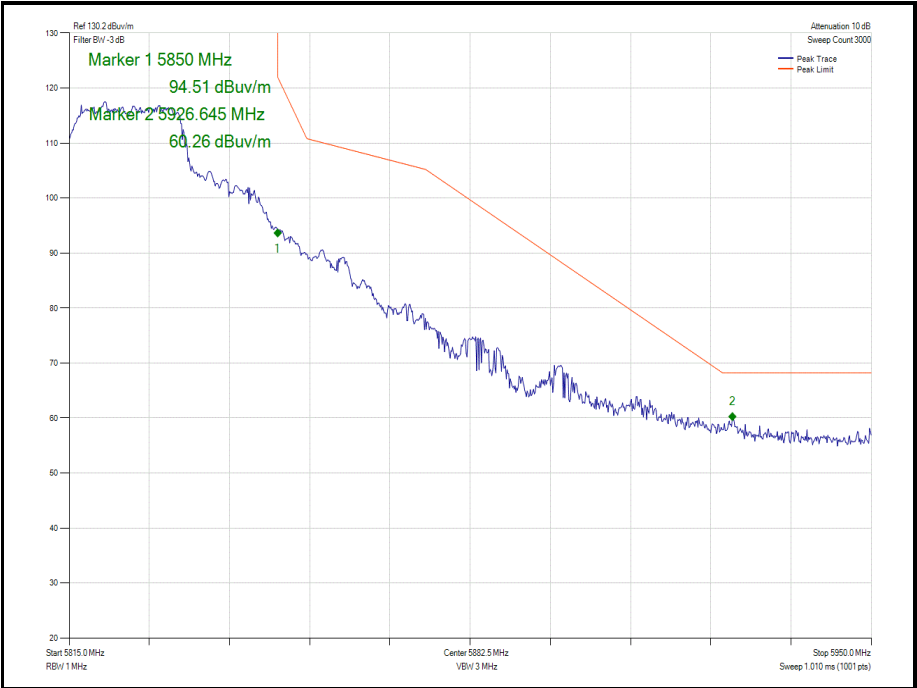
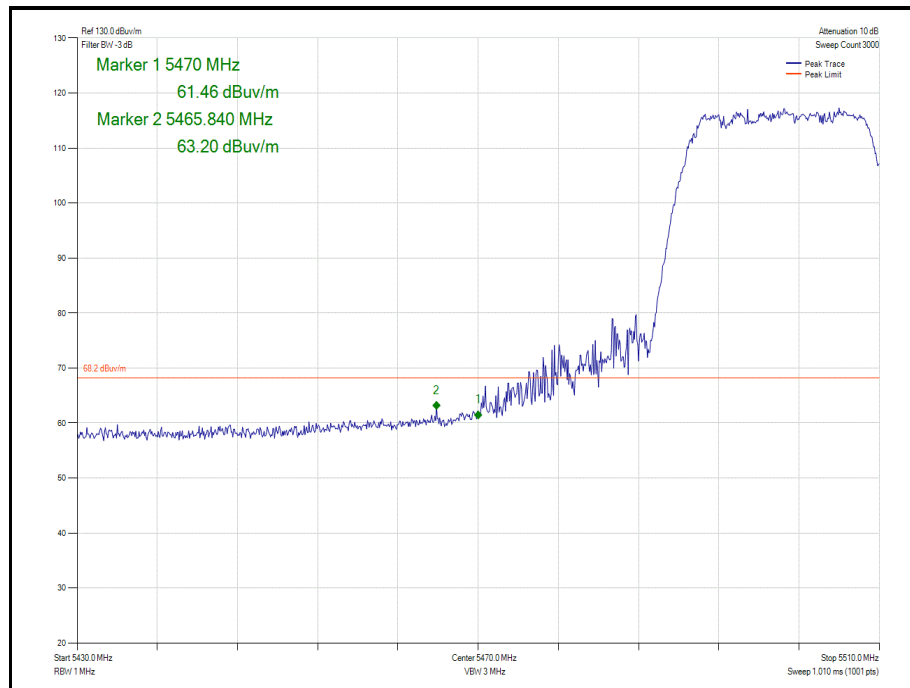


Figure 772 - 802.11n Core Aux - 5825 MHz
Band Edge Frequency 5835 MHz

Main - 20 MHz Bandwidth (2TX)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11n HT20 CDD Cores 1-2	MCS0	5500	5470	61.46
802.11n HT20 SDM Cores 1-2	MCS0	5500	5470	63.27
802.11n HT20 CDD Cores 1-2	MCS0	5700	5725	62.75
802.11n HT20 SDM Cores 1-2	MCS0	5700	5725	62.38
802.11n HT20 CDD Cores 1-2	MCS0	5745	5725	63.14
802.11n HT20 SDM Cores 1-2	MCS0	5745	5725	62.73
802.11n HT20 CDD Cores 1-2	MCS0	5825	5850	62.39
802.11n HT20 SDM Cores 1-2	MCS0	5825	5850	63.44

Table 407



**Figure 773 - 802.11n HT20 CDD Cores 1-2 - 5500 MHz
Band Edge Frequency 5490 MHz**

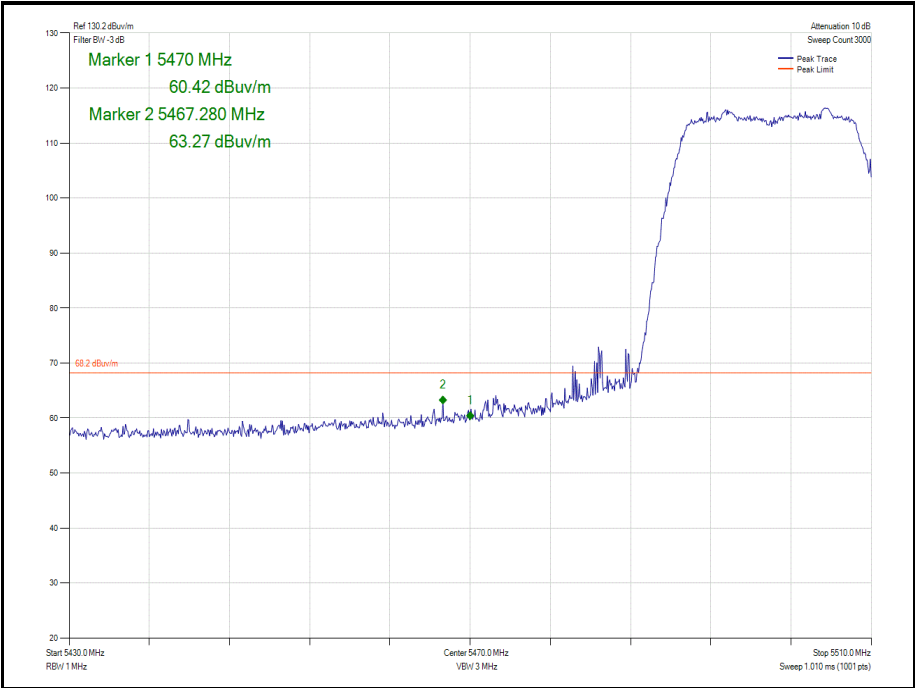


Figure 774 - 802.11n HT20 SDM Cores 1-2 - 5500 MHz
Band Edge Frequency 5490 MHz

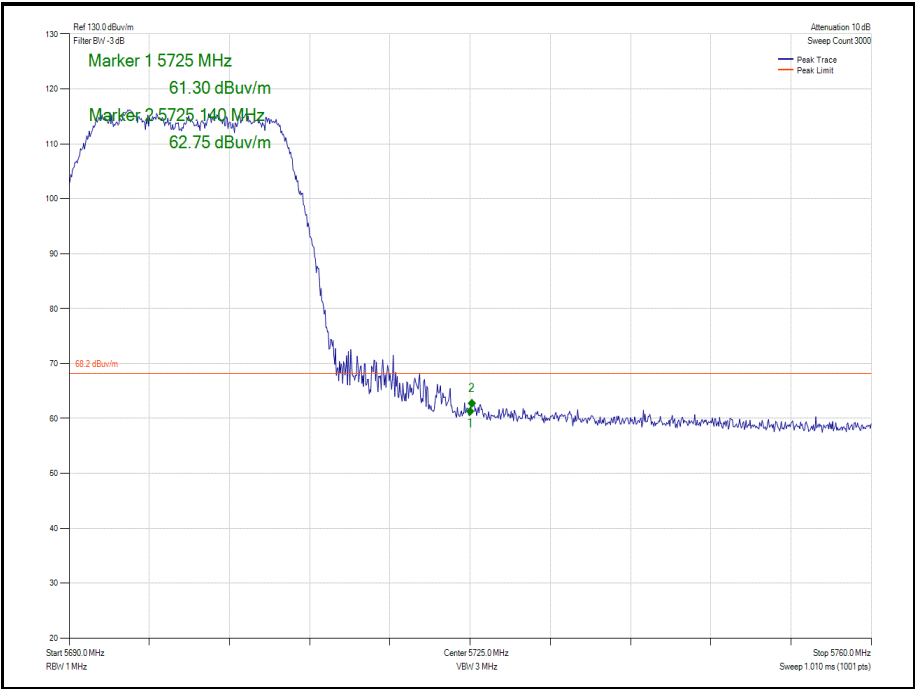


Figure 775 - 802.11n HT20 CDD Cores 1-2 - 5700 MHz
Band Edge Frequency 5730 MHz

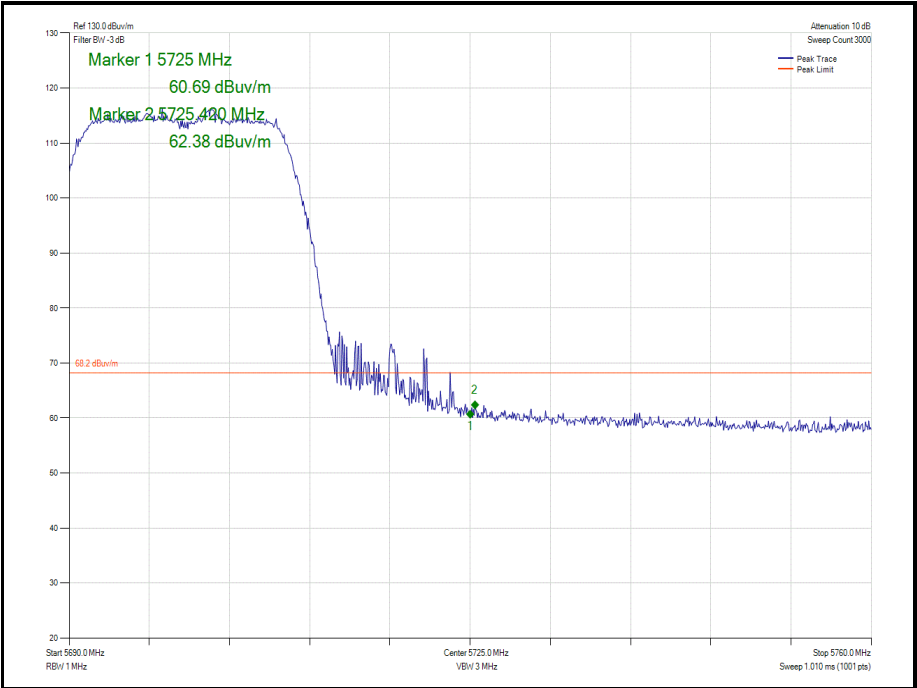


Figure 776 - 802.11n HT20 SDM Cores 1-2 - 5700 MHz
Band Edge Frequency 5730 MHz

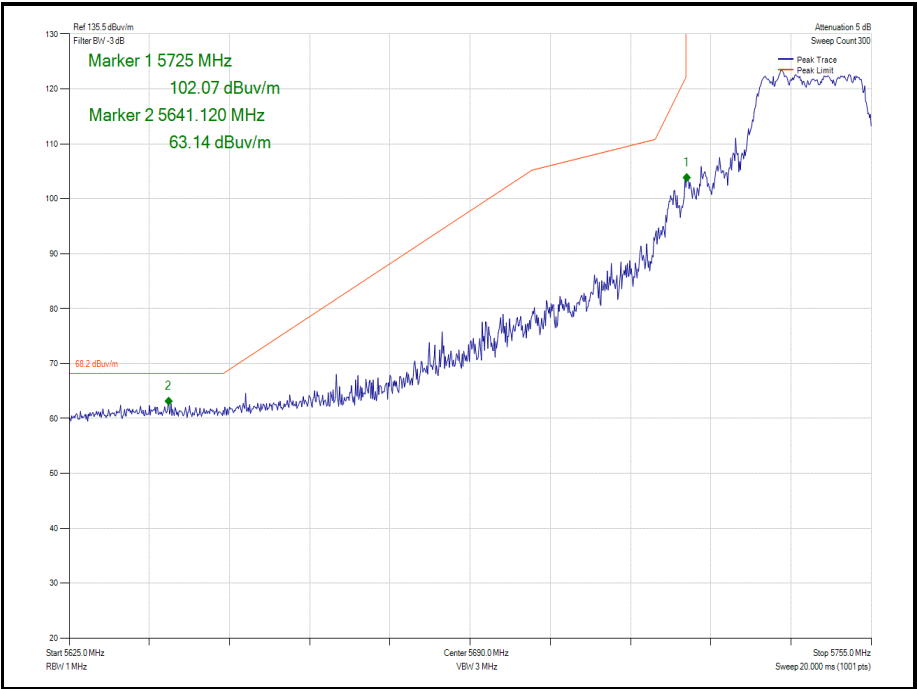


Figure 777 - 802.11n HT20 CDD Cores 1-2 - 5745 MHz
Band Edge Frequency 5735 MHz

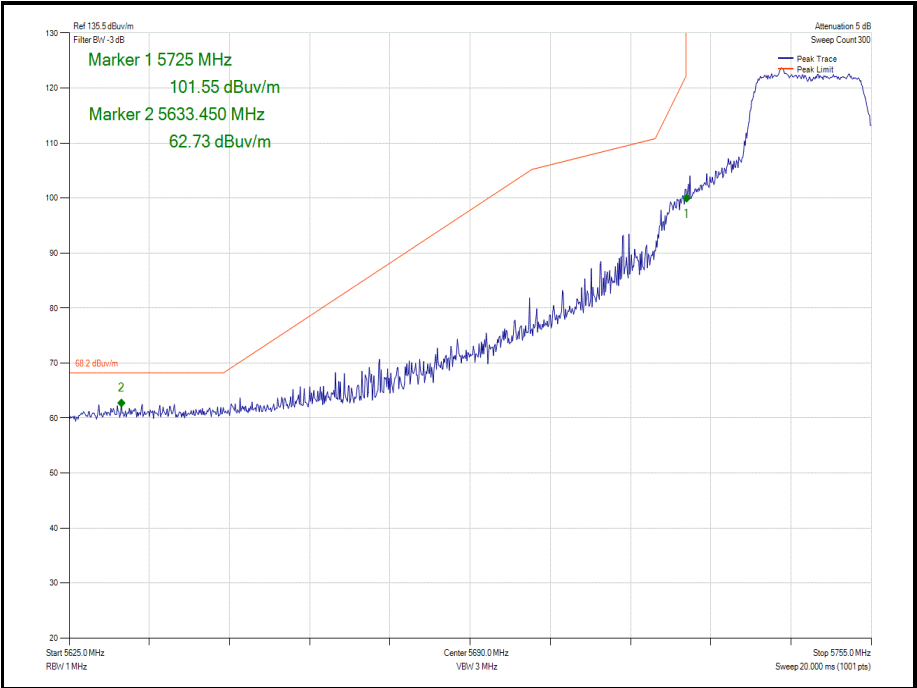


Figure 778 - 802.11n HT20 SDM Cores 1-2 - 5745 MHz
Band Edge Frequency 5735 MHz

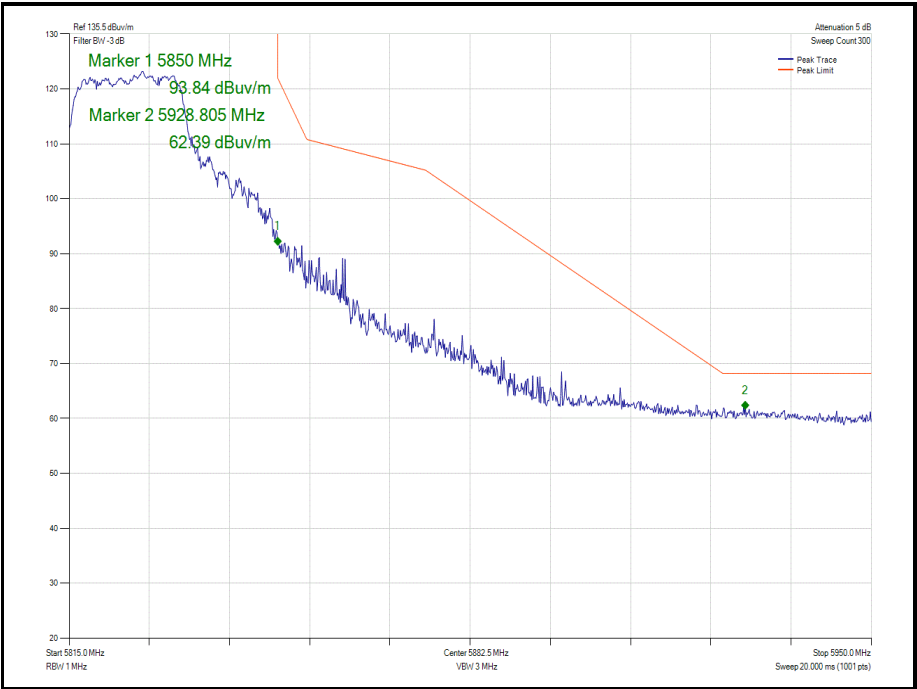
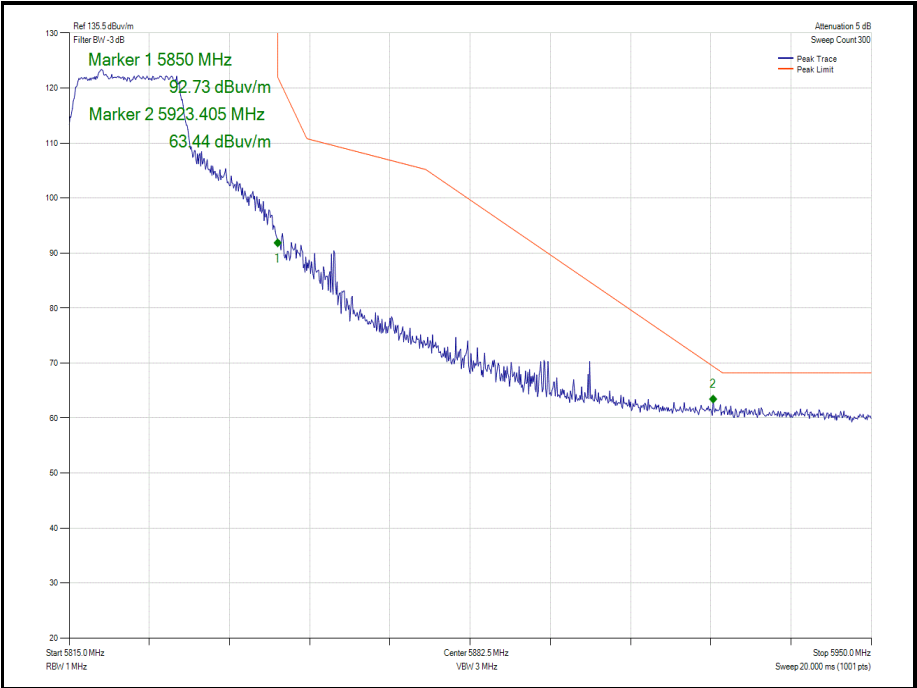


Figure 779 - 802.11n HT20 CDD Cores 1-2 - 5825 MHz
Band Edge Frequency 5835 MHz

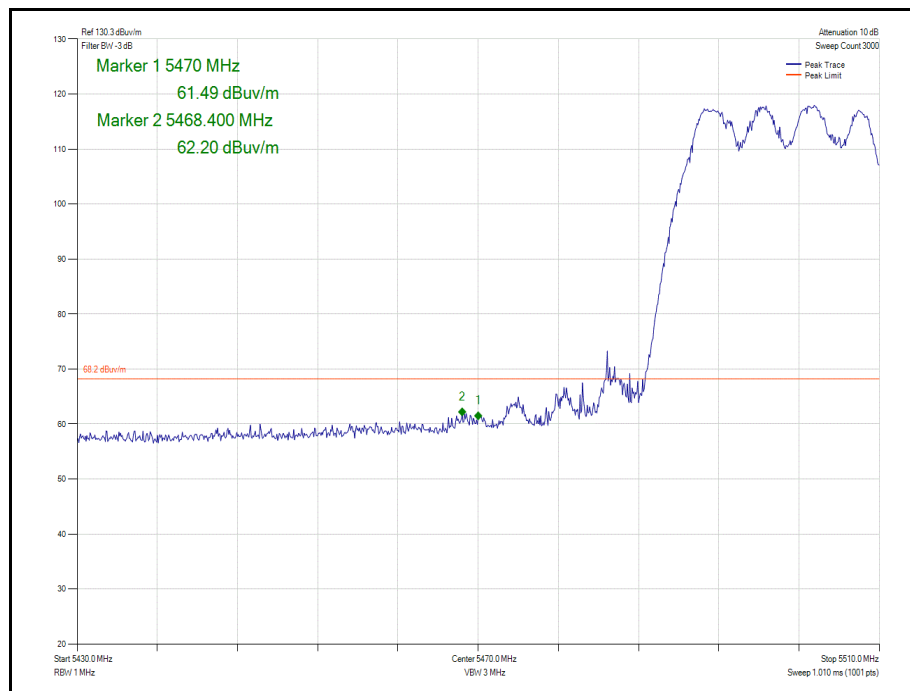


**Figure 780 - 802.11n HT20 SDM Cores 1-2 - 5825 MHz
Band Edge Frequency 5835 MHz**

Main - 20 MHz Bandwidth (3TX)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11n HT20 CDD Cores 0-1-2	MCS0	5500	5470	62.20
802.11n HT20 SDM Cores 0-1-2	MCS0	5500	5470	62.58
802.11n HT20 CDD Cores 0-1-2	MCS0	5700	5725	63.54
802.11n HT20 SDM Cores 0-1-2	MCS0	5700	5725	63.34
802.11n HT20 CDD Cores 0-1-2	MCS0	5745	5725	63.62
802.11n HT20 SDM Cores 0-1-2	MCS0	5745	5725	63.47
802.11n HT20 CDD Cores 0-1-2	MCS0	5825	5850	63.56
802.11n HT20 SDM Cores 0-1-2	MCS0	5825	5850	63.45

Table 408



**Figure 781 - 802.11n HT20 CDD Cores 0-1-2 - 5500 MHz
Band Edge Frequency 5490 MHz**

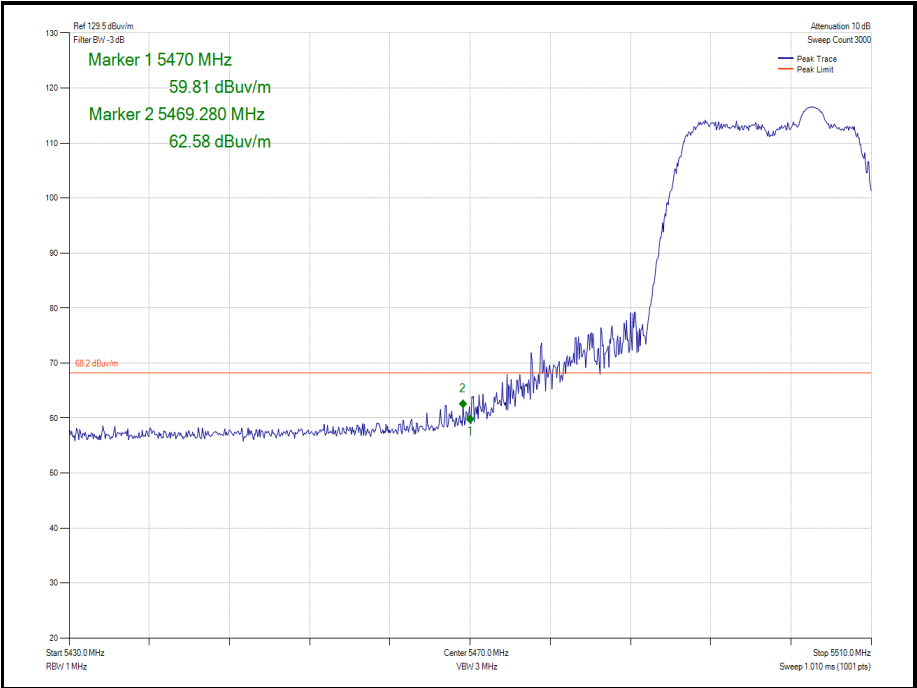


Figure 782 - 802.11n HT20 SDM Cores 0-1-2 - 5500 MHz
Band Edge Frequency 5490 MHz

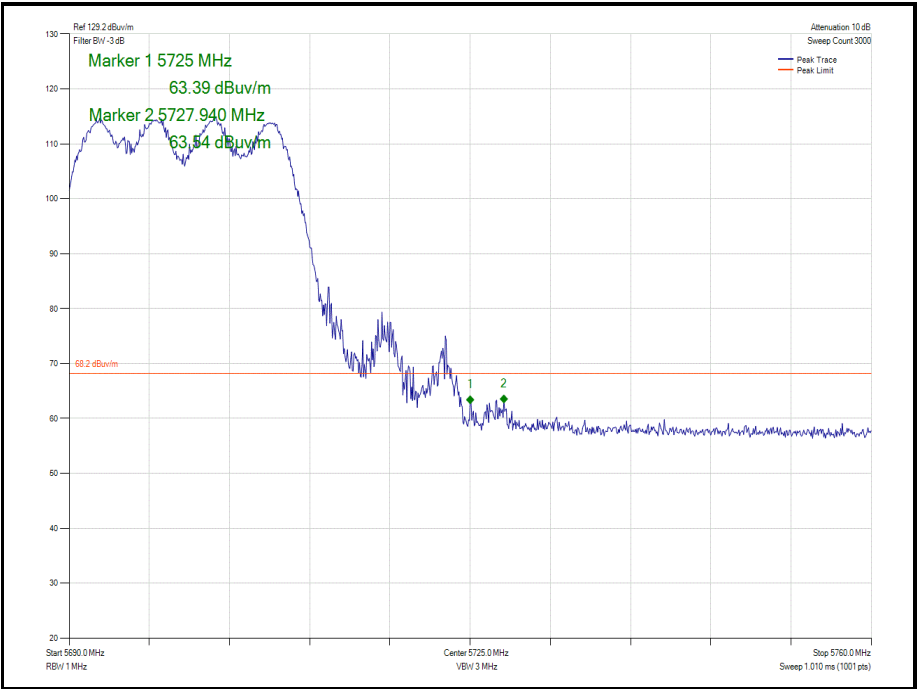


Figure 783 - 802.11n HT20 CDD Cores 0-1-2 - 5700 MHz
Band Edge Frequency 5730 MHz

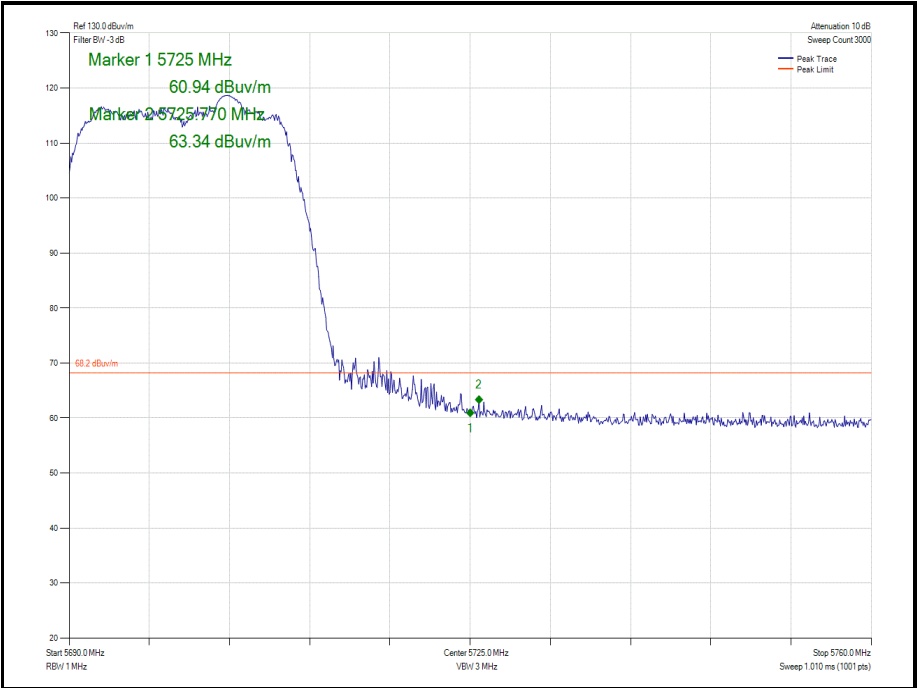


Figure 784 - 802.11n HT20 SDM Cores 0-1-2 - 5700 MHz
Band Edge Frequency 5730 MHz

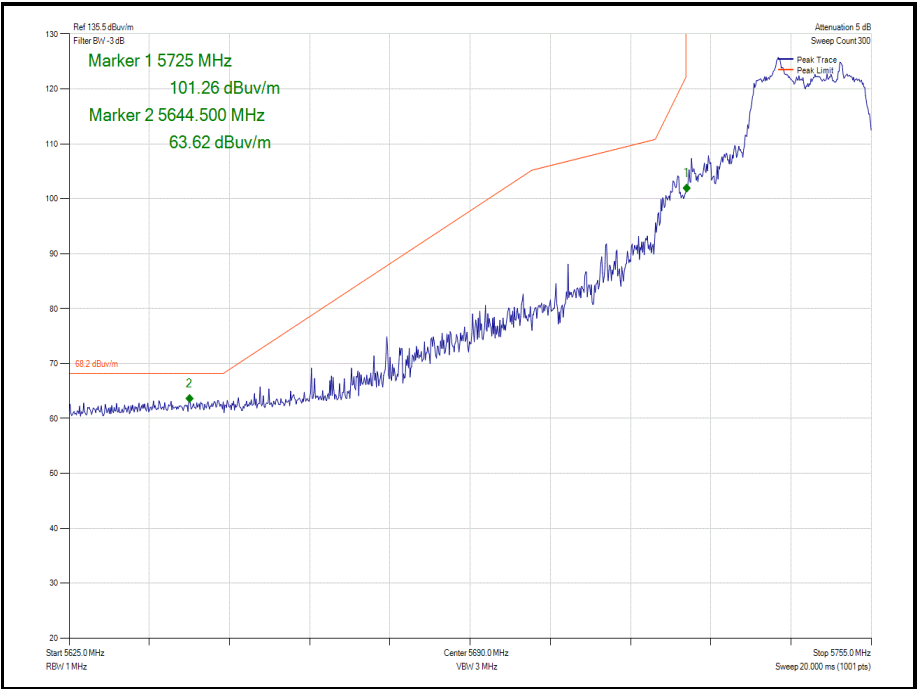


Figure 785 - 802.11n HT20 CDD Cores 0-1-2 - 5745 MHz
Band Edge Frequency 5735 MHz

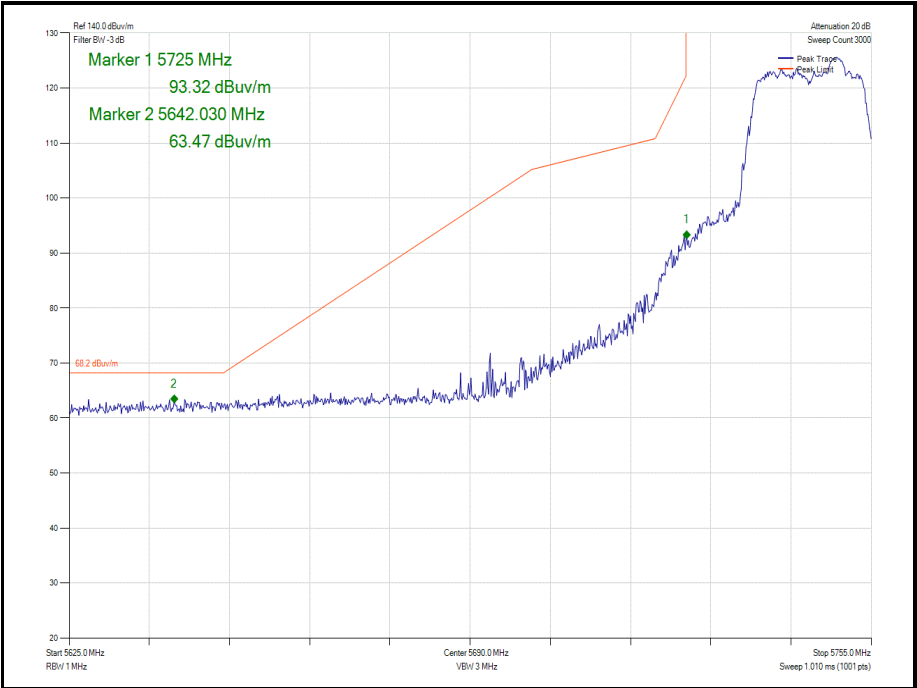


Figure 786 - 802.11n HT20 SDM Cores 0-1-2 - 5745 MHz
Band Edge Frequency 5735 MHz

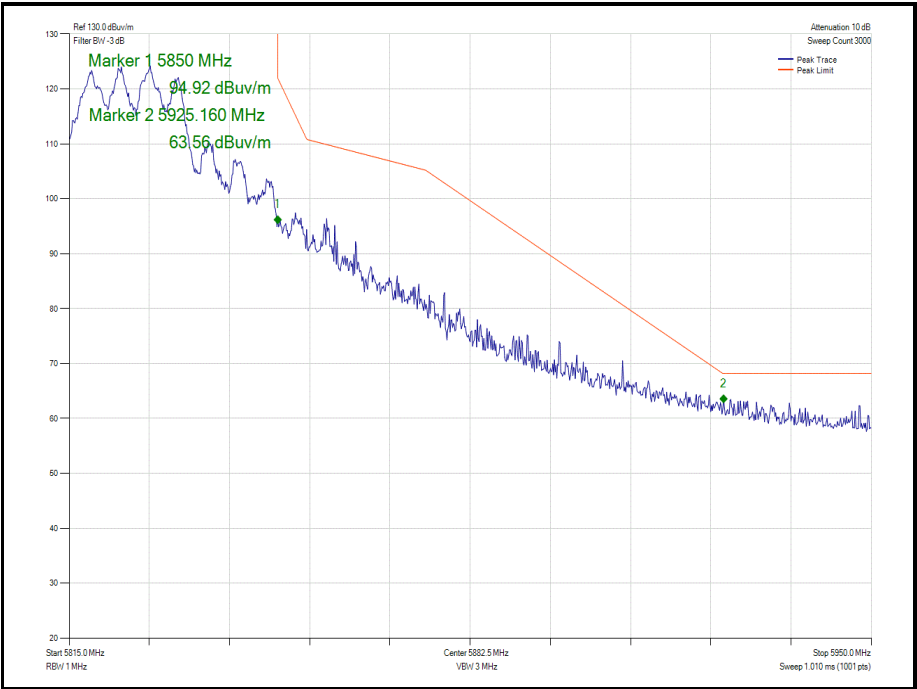
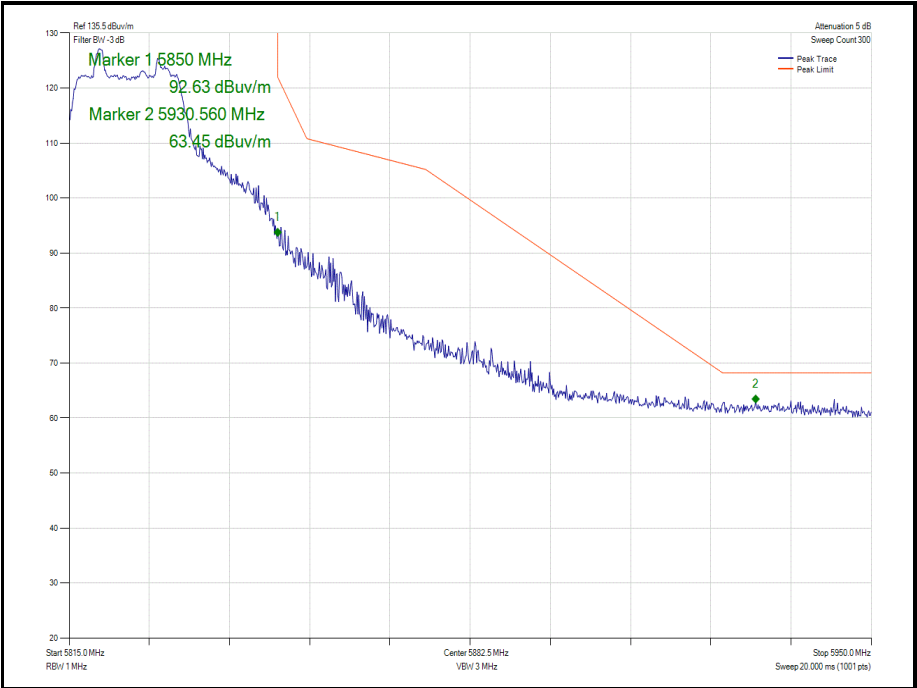


Figure 787 - 802.11n HT20 CDD Cores 0-1-2 - 5825 MHz
Band Edge Frequency 5835 MHz



**Figure 788 - 802.11n HT20 SDM Cores 0-1-2 - 5825 MHz
Band Edge Frequency 5835 MHz**



Main - 40 MHz Bandwidth (SISO)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11n, Core 1	MCS0	5510	5470	58.58
802.11n, Core 1	MCS0	5670	5725	62.68
802.11n, Core 1	MCS0	5755	5725	62.80
802.11n, Core 1	MCS0	5795	5825	62.97

Table 409

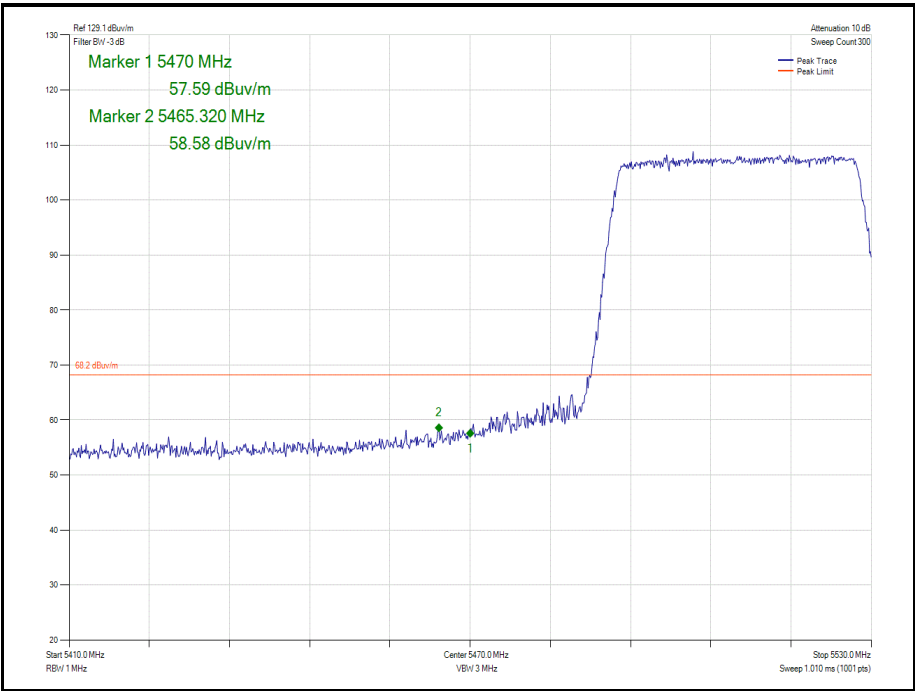
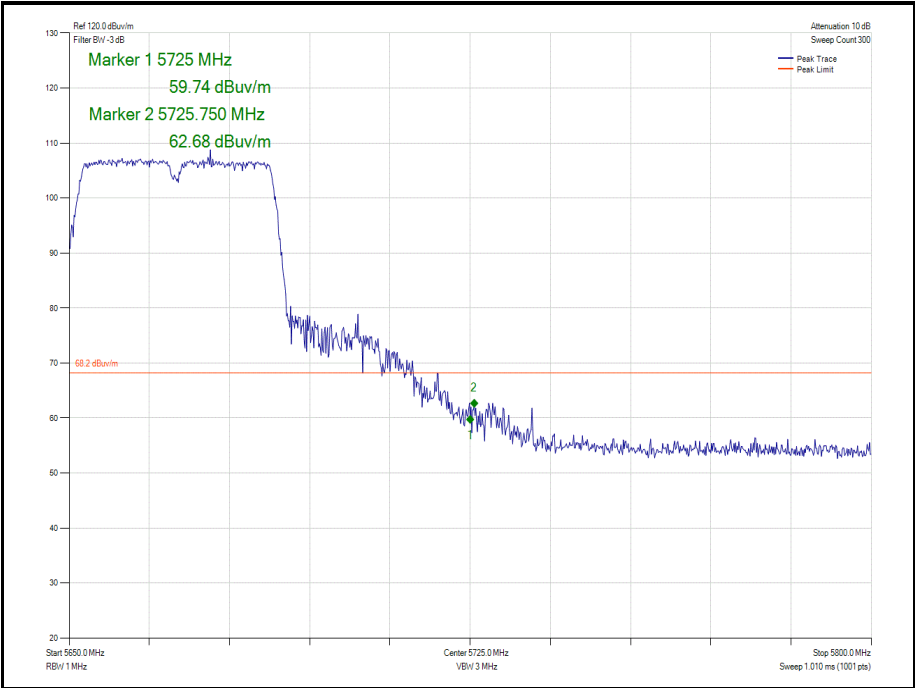
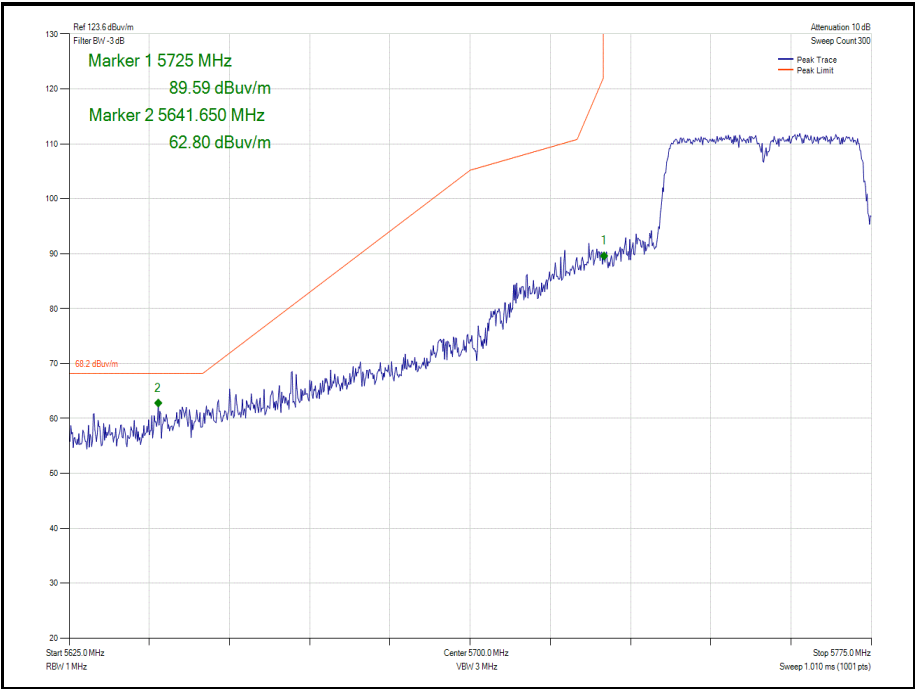


Figure 789 - 802.11n Core 1 - 5510 MHz
Band Edge Frequency 5490 MHz



**Figure 790 - 802.11n Core 1 - 5670 MHz
Band Edge Frequency 5730 MHz**



**Figure 791 - 802.11a Core 1 - 5755 MHz
Band Edge Frequency 5735 MHz**

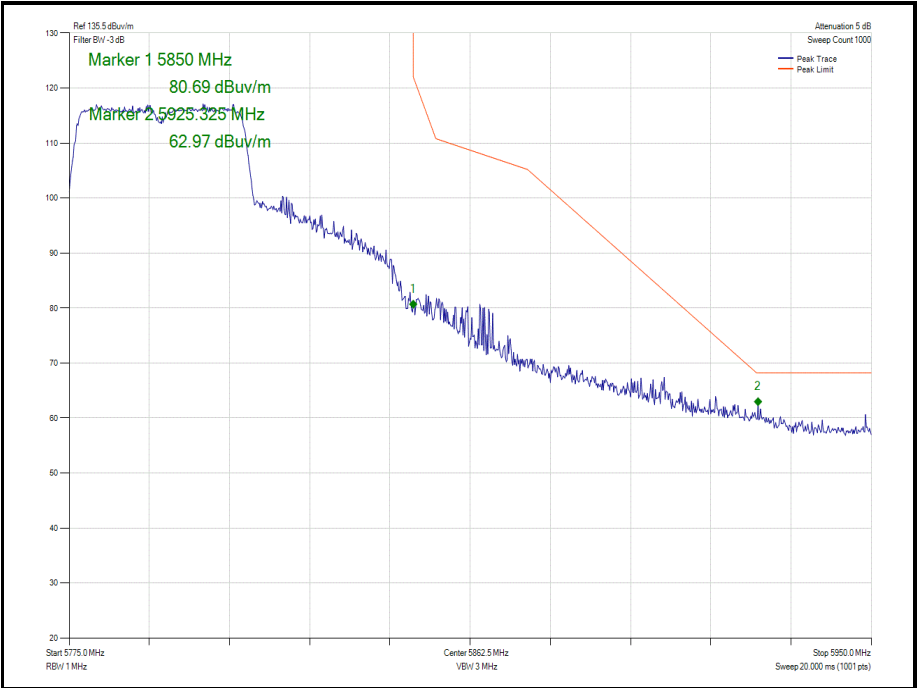


Figure 792 - 802.11a Core 1 - 5795 MHz
Band Edge Frequency 5835 MHz



Aux - 40 MHz Bandwidth

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11n, Core Aux	MCS0	5510	5470	62.34
802.11n, Core Aux	MCS0	5670	5725	63.42
802.11n, Core Aux x	MCS0	5755	5725	63.08
802.11n, Core Aux	MCS0	5795	5825	61.48

Table 410

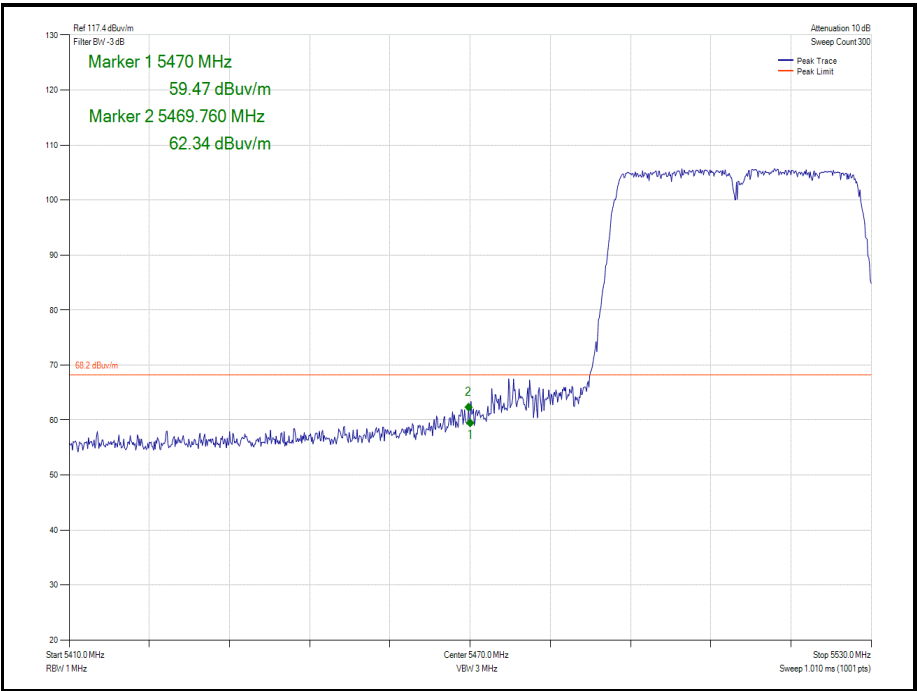


Figure 793 - 802.11n Core Aux - 5510 MHz
Band Edge Frequency 5490 MHz

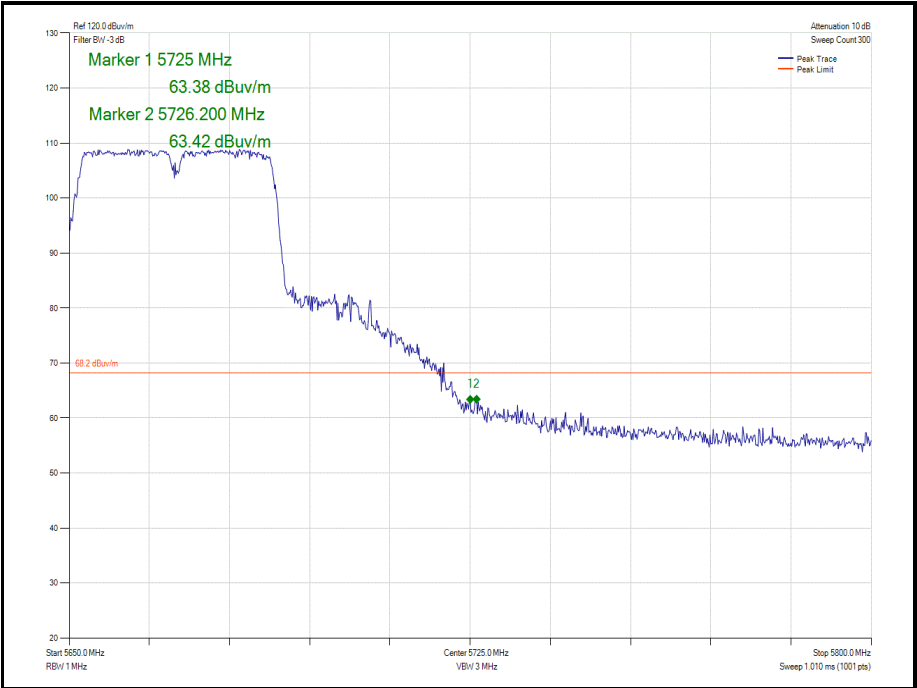


Figure 794 - 802.11n Core Aux - 5670 MHz
Band Edge Frequency 5730 MHz

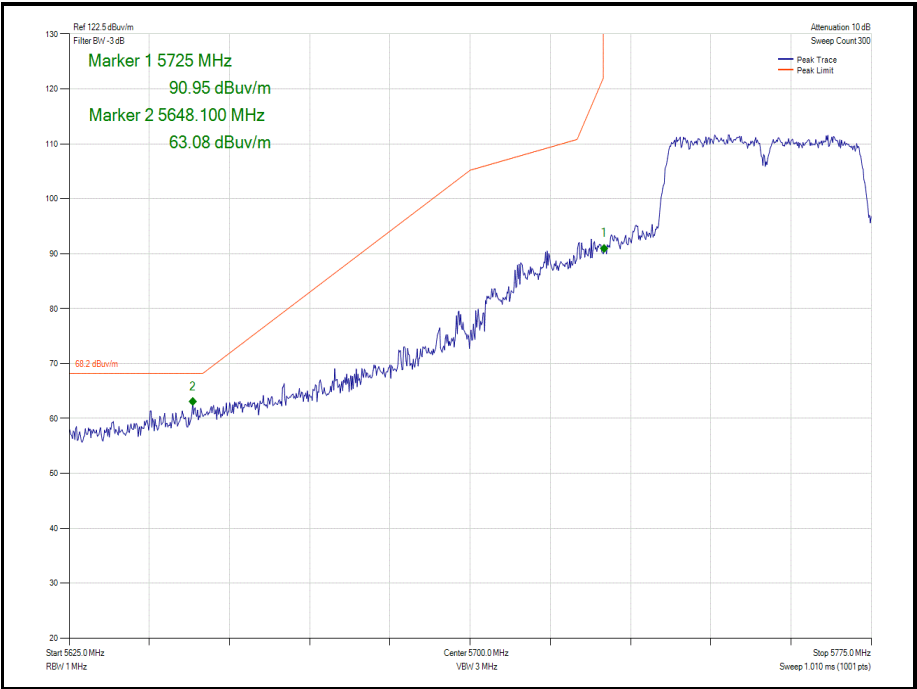


Figure 795 - 802.11n Core Aux - 5755 MHz
Measured Frequency 5735 MHz

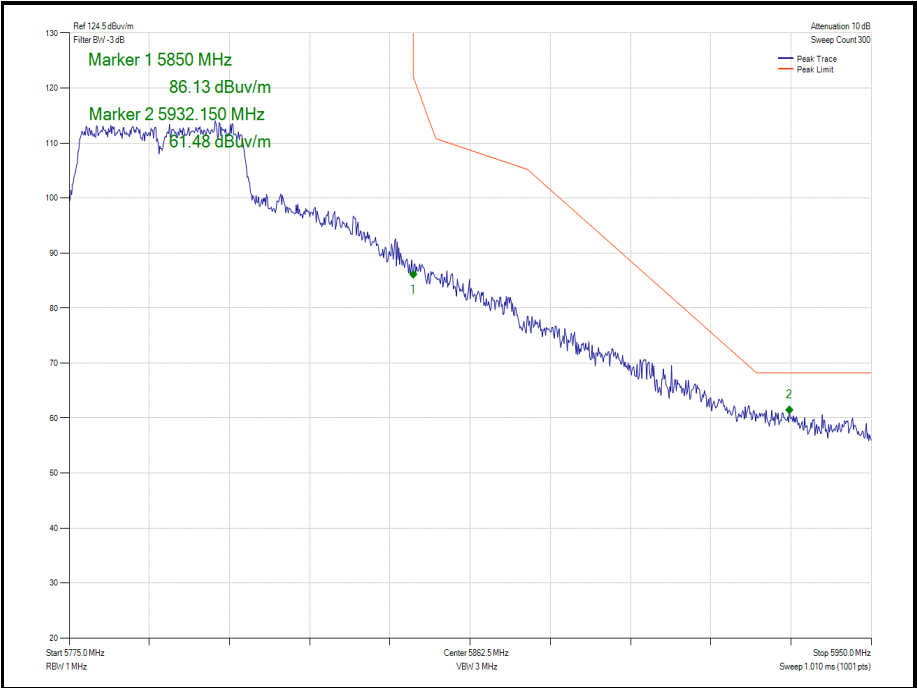
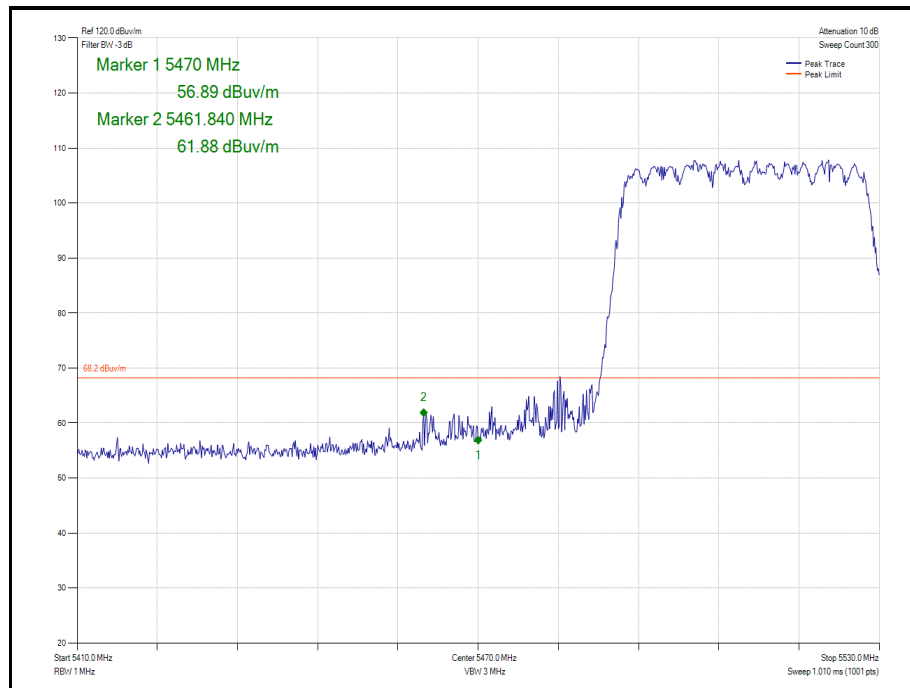


Figure 796 - 802.11n Core Aux - 5795 MHz
Band Edge Frequency 5835 MHz

Main - 40 MHz Bandwidth (2TX)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11n HT40 CDD Cores 1-2	MCS0	5510	5470	61.88
802.11n HT40 SDM Cores 1-2	MCS0	5510	5470	59.16
802.11n HT40 CDD Cores 1-2	MCS0	5670	5725	62.05
802.11n HT40 SDM Cores 1-2	MCS0	5670	5725	63.65
802.11n HT40 CDD Cores 1-2	MCS0	5755	5725	63.69
802.11n HT40 SDM Cores 1-2	MCS0	5755	5725	62.27
802.11n HT40 CDD Cores 1-2	MCS0	5795	5825	62.22
802.11n HT40 SDM Cores 1-2	MCS0	5795	5825	59.93

Table 411



**Figure 797 - 802.11n HT40 CDD Cores 1-2 - 5510 MHz
Band Edge Frequency 5490 MHz**

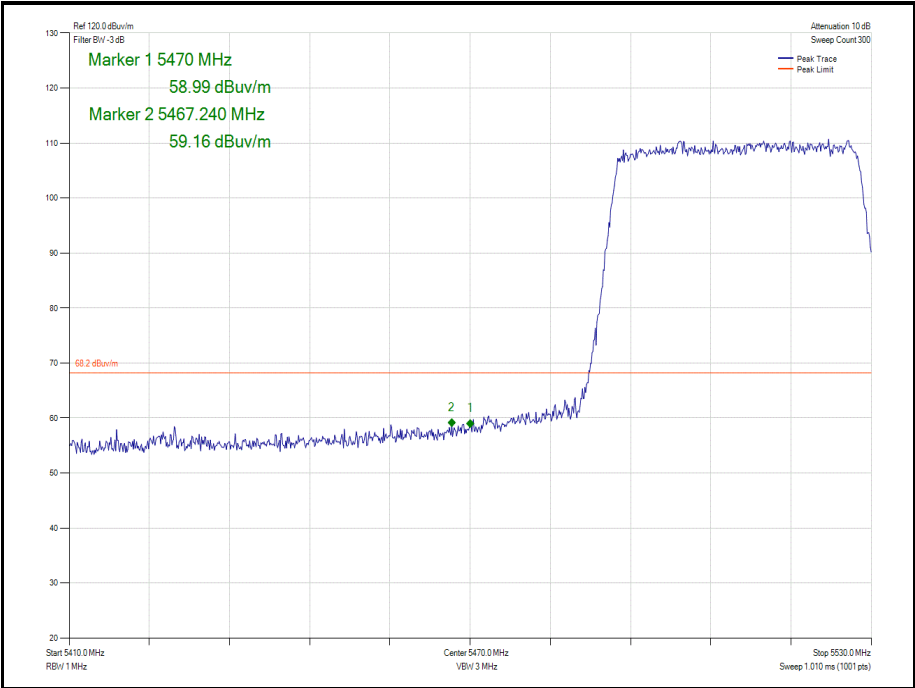


Figure 798 - 802.11n HT40 SDM Cores 1-2 - 5510 MHz
Band Edge Frequency 5490 MHz

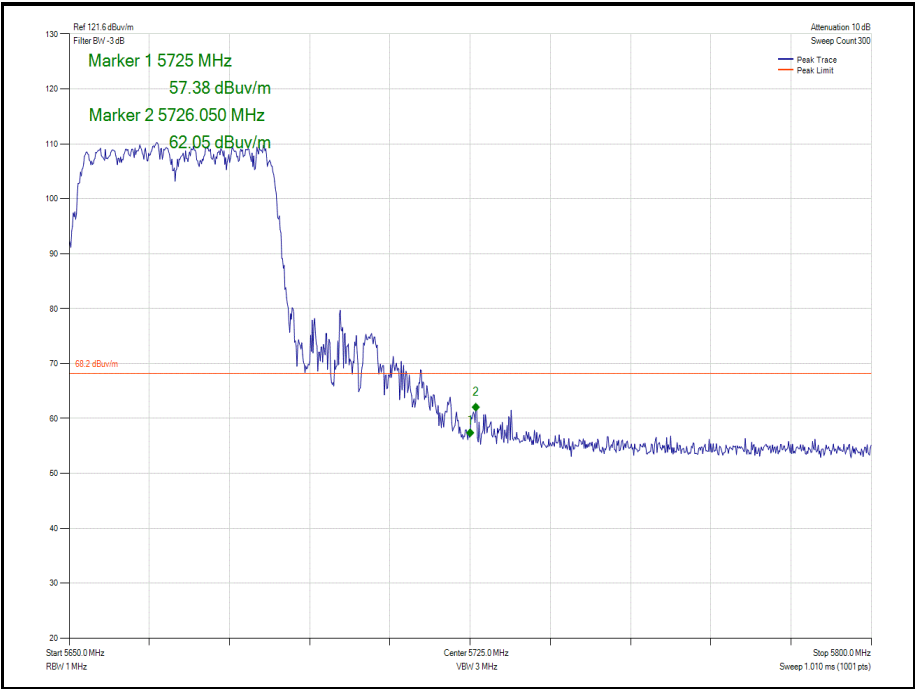


Figure 799 - 802.11n HT40 CDD Cores 1-2 - 5670 MHz
Band Edge Frequency 5730 MHz

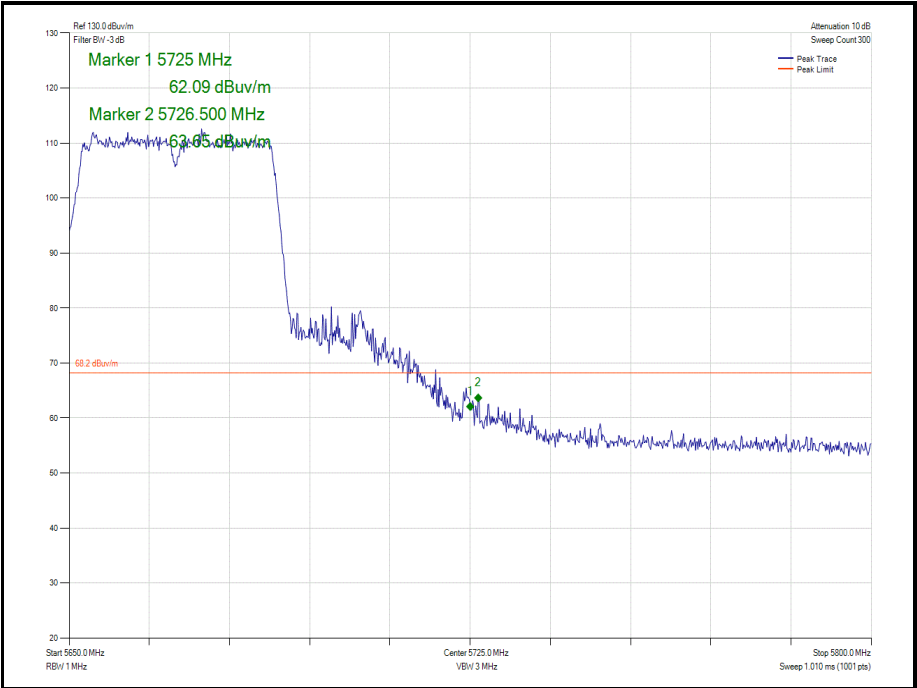


Figure 800 - 802.11n HT40 SDM Cores 1-2 - 5670 MHz
Band Edge Frequency 5730 MHz

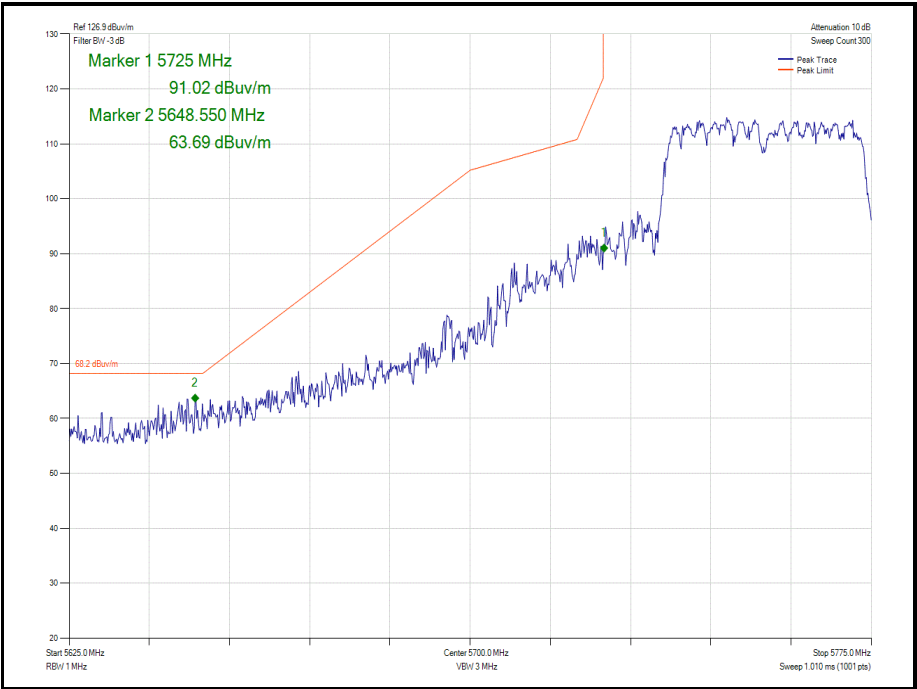


Figure 801 - 802.11n HT40 CDD Cores 1-2 - 5755 MHz
Band Edge Frequency 5735 MHz

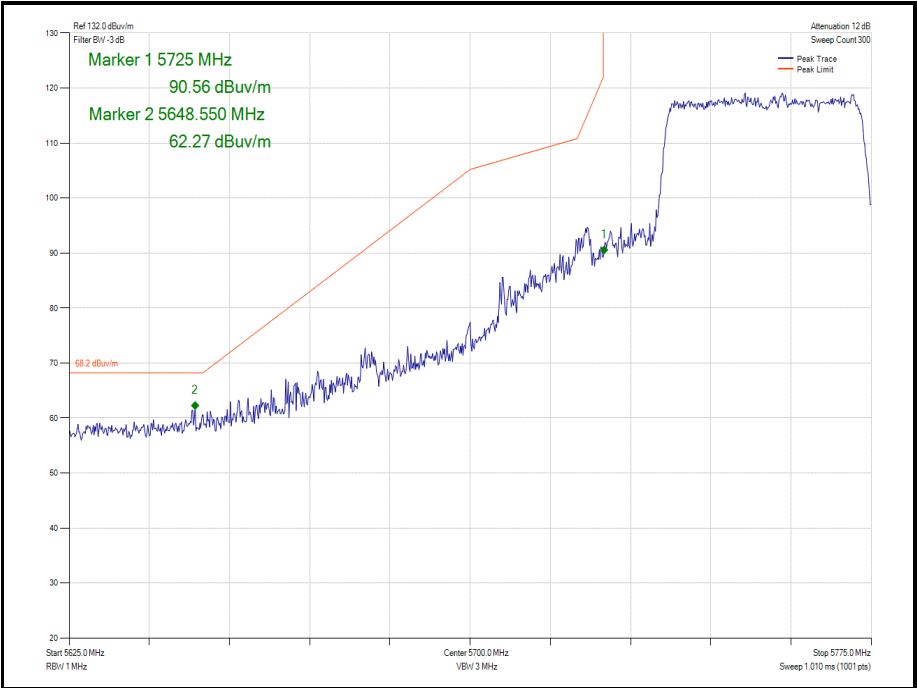


Figure 802 - 802.11n HT40 SDM Cores 1-2 - 5755 MHz
Band Edge Frequency 5735 MHz

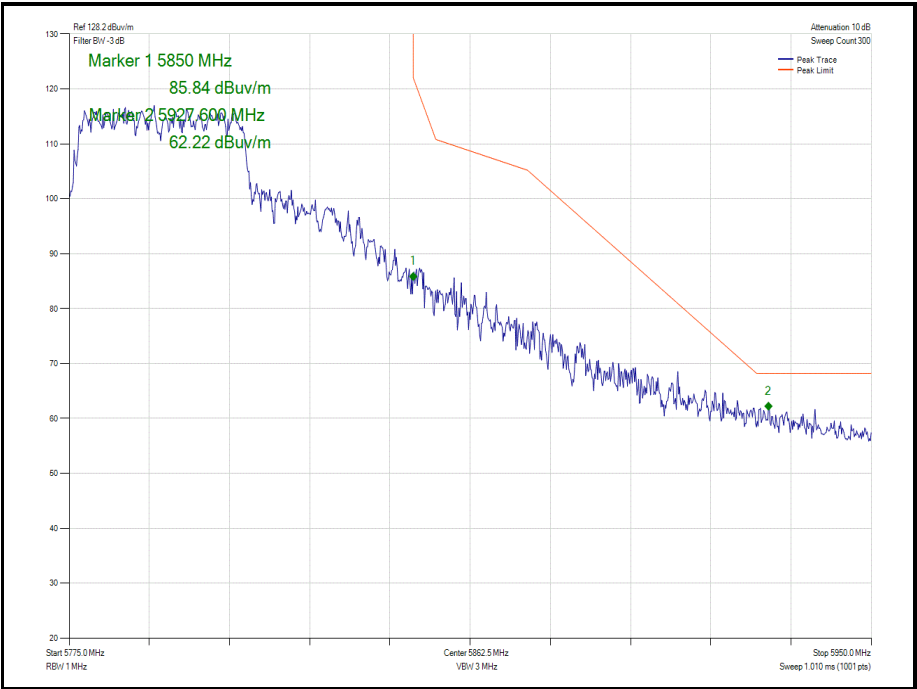
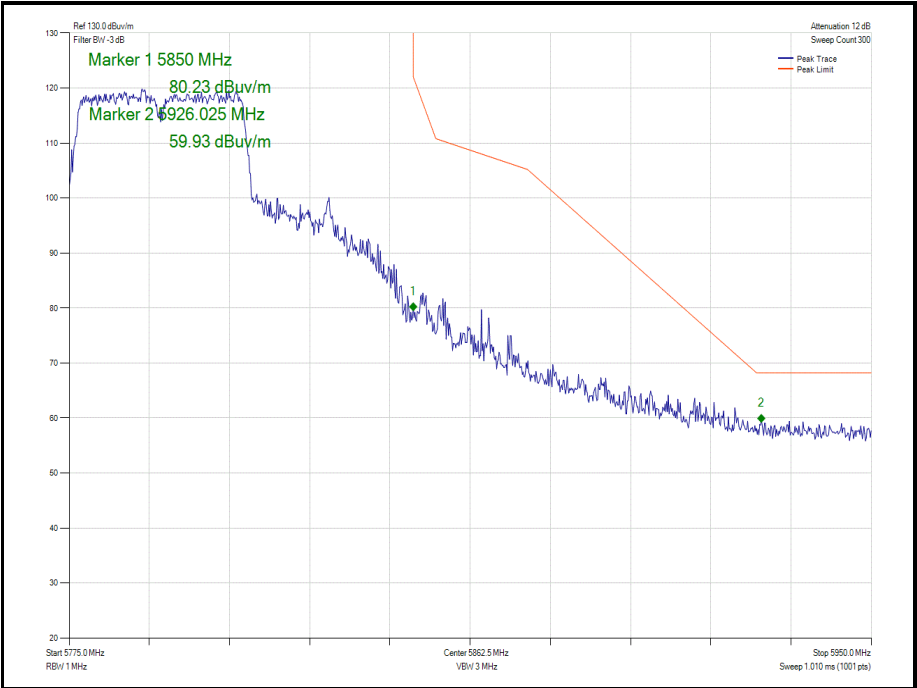


Figure 803 - 802.11n HT40 CDD Cores 1-2 - 5795 MHz
Band Edge Frequency 5835 MHz

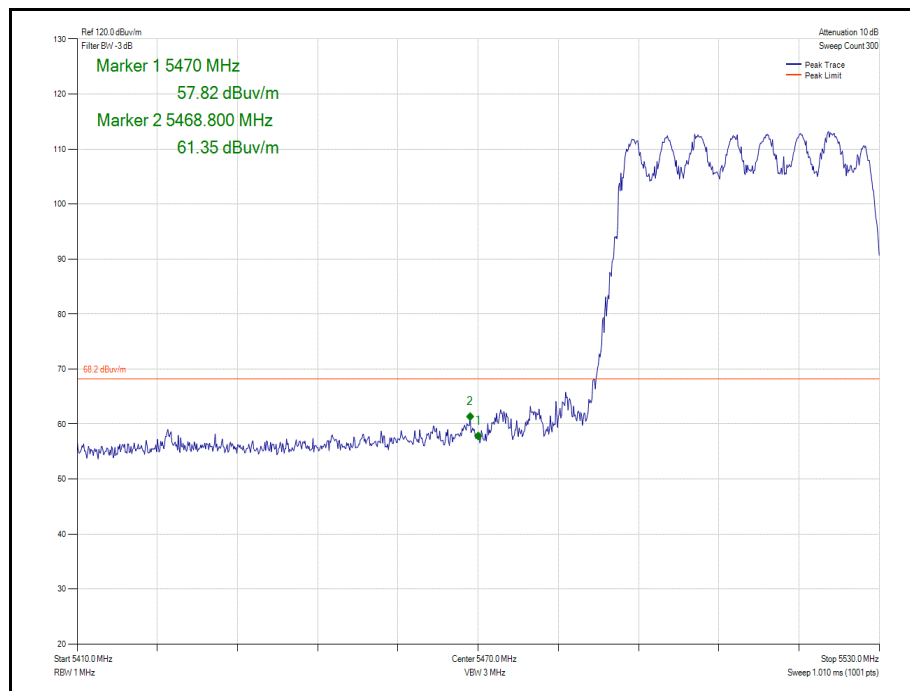


**Figure 804 - 802.11n HT40 SDM Cores 1-2 - 5795 MHz
Band Edge Frequency 5835 MHz**

Main - 40 MHz Bandwidth (3TX)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11n HT40 CDD Cores 0-1-2	MCS0	5510	5470	61.35
802.11n HT40 SDM Cores 0-1-2	MCS0	5510	5470	60.05
802.11n HT40 CDD Cores 0-1-2	MCS0	5670	5725	63.13
802.11n HT40 SDM Cores 0-1-2	MCS0	5670	5725	62.24
802.11n HT40 CDD Cores 0-1-2	MCS0	5755	5725	63.38
802.11n HT40 SDM Cores 0-1-2	MCS0	5755	5725	63.59
802.11n HT40 CDD Cores 0-1-2	MCS0	5795	5825	63.44
802.11n HT40 SDM Cores 0-1-2	MCS0	5795	5825	61.91

Table 412



**Figure 805 - 802.11n HT40 CDD Cores 0-1-2 - 5510 MHz
Band Edge Frequency 5490 MHz**

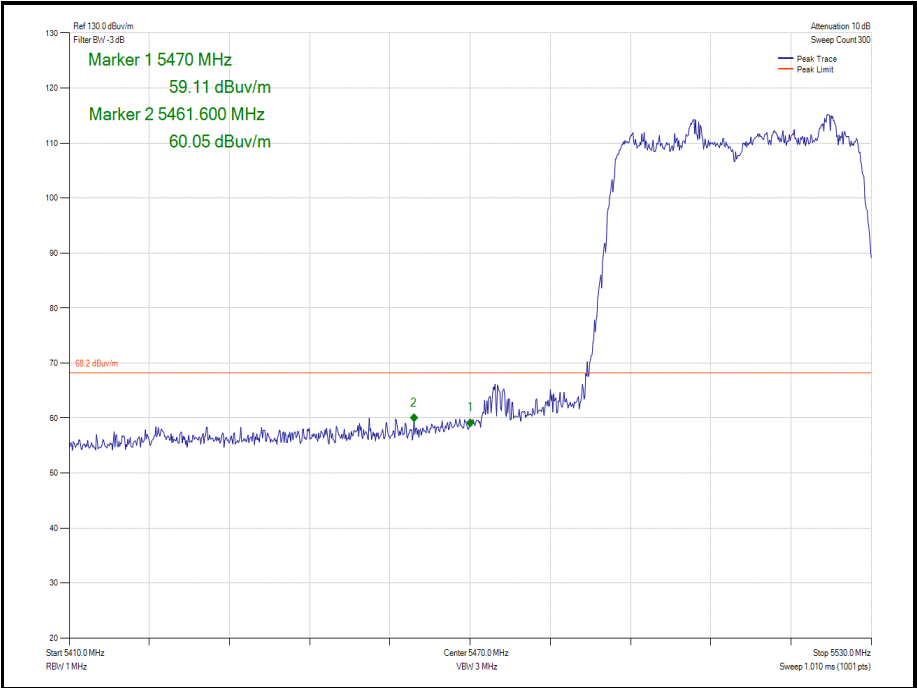


Figure 806 - 802.11n HT40 SDM Cores 0-1-2 - 5510 MHz
Band Edge Frequency 5490 MHz

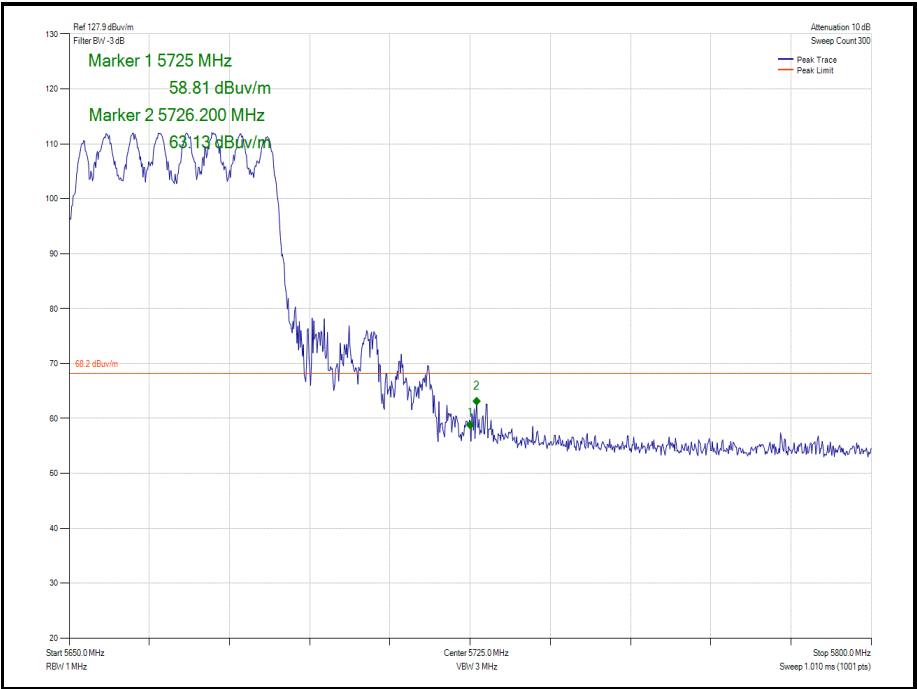


Figure 807 - 802.11n HT40 CDD Cores 0-1-2 - 5670 MHz
Band Edge Frequency 5730 MHz

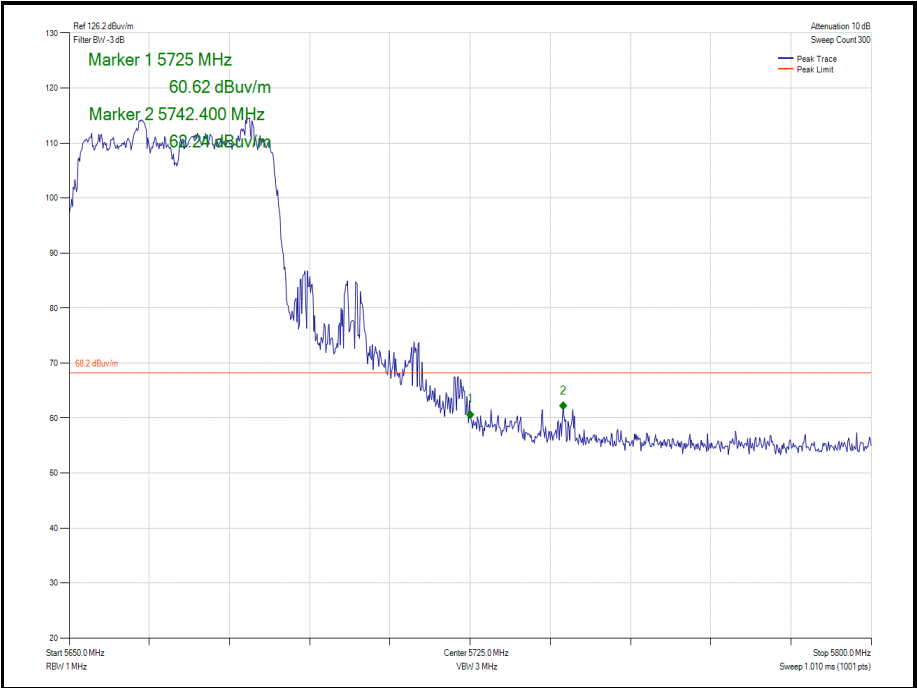


Figure 808 - 802.11n HT40 SDM Cores 0-1-2 - 5670 MHz
Band Edge Frequency 5730 MHz

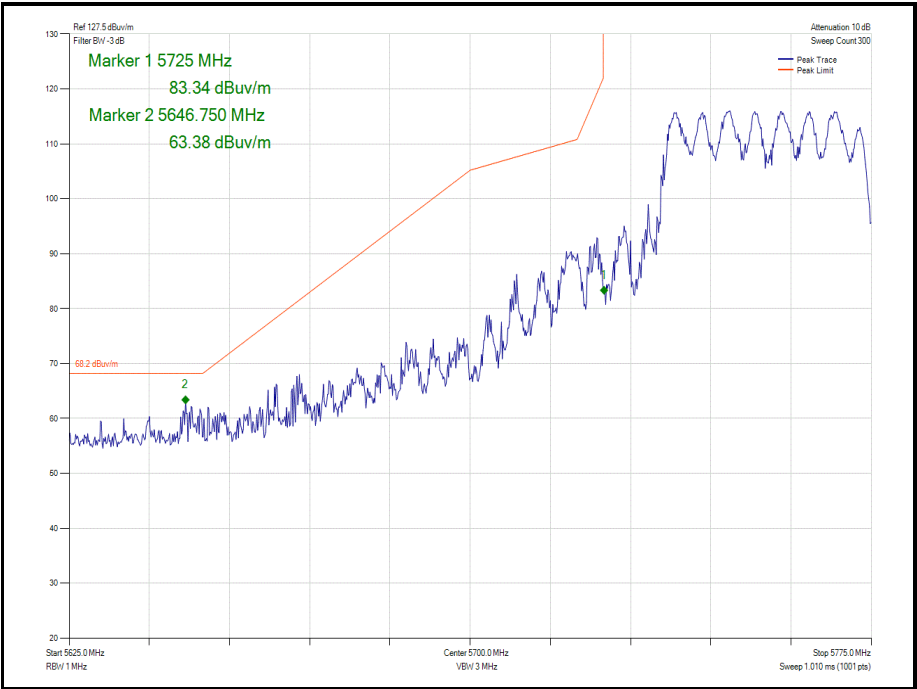


Figure 809 - 802.11n HT40 CDD Cores 0-1-2 - 5755 MHz
Band Edge Frequency 5735 MHz

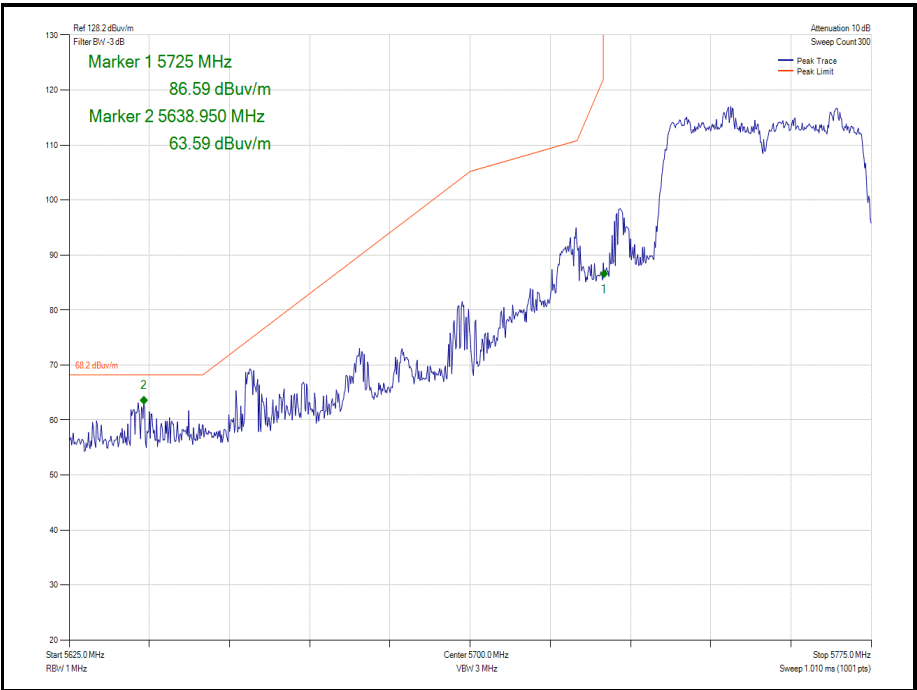


Figure 810 - 802.11n HT40 SDM Cores 0-1-2 - 5755 MHz
Band Edge Frequency 5735 MHz

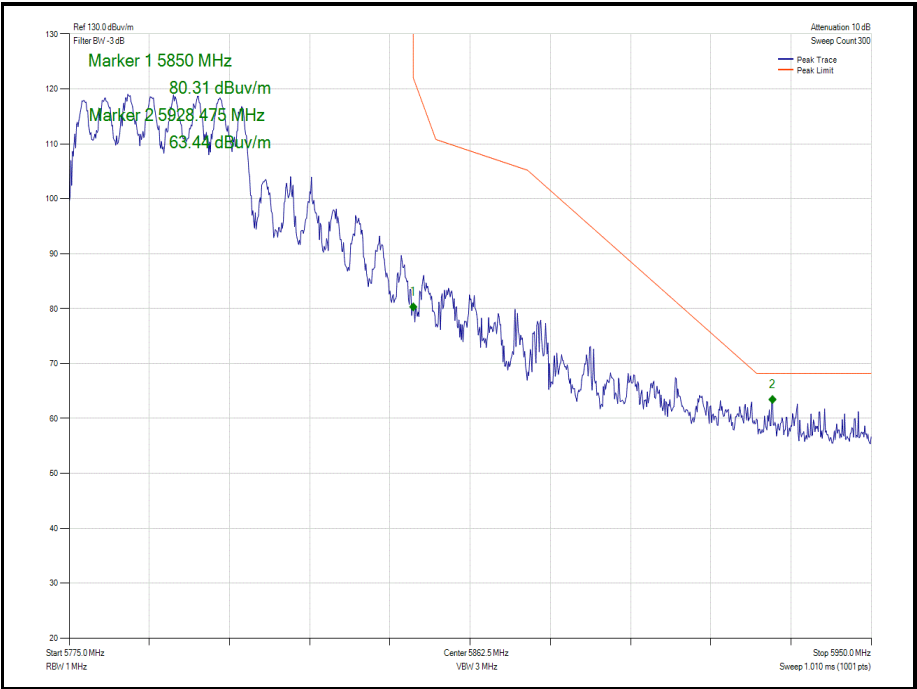


Figure 811 - 802.11n HT40 CDD Cores 0-1-2 - 5795 MHz
Band Edge Frequency 5835 MHz

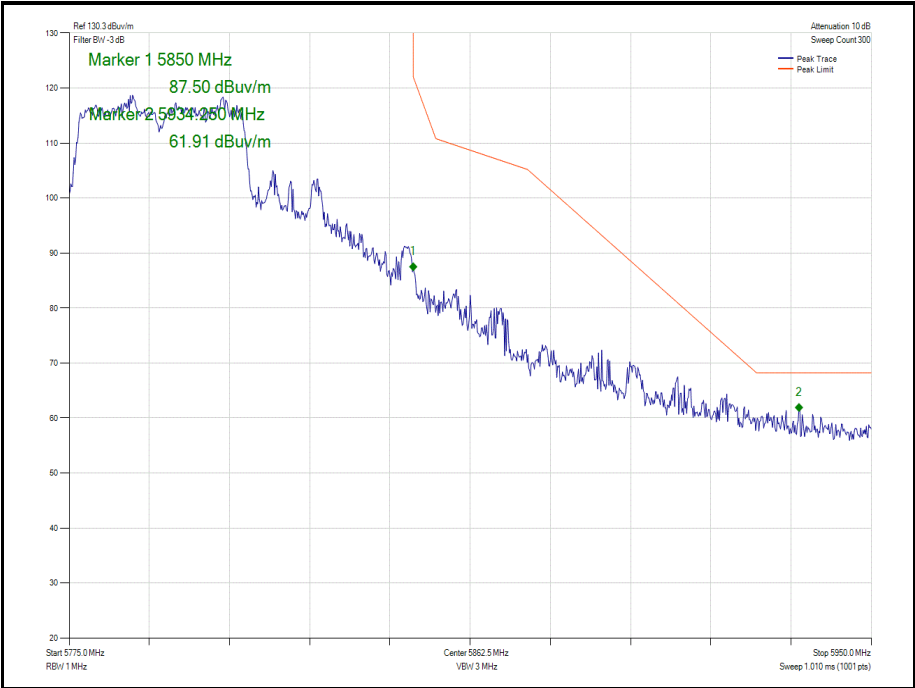


Figure 812 - 802.11n HT40 SDM Cores 0-1-2 - 5795 MHz
Band Edge Frequency 5835 MHz



Main - 80 MHz Bandwidth (SISO)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11ac, Core 1	MCS0x1	5530	5470	63.69
802.11ac, Core 1	MCS0x1	5610	5725	62.99
802.11ac, Core 1	MCS0x1	5775	5725	63.05
802.11ac, Core 1	MCS0x1	5775	5825	63.7

Table 413

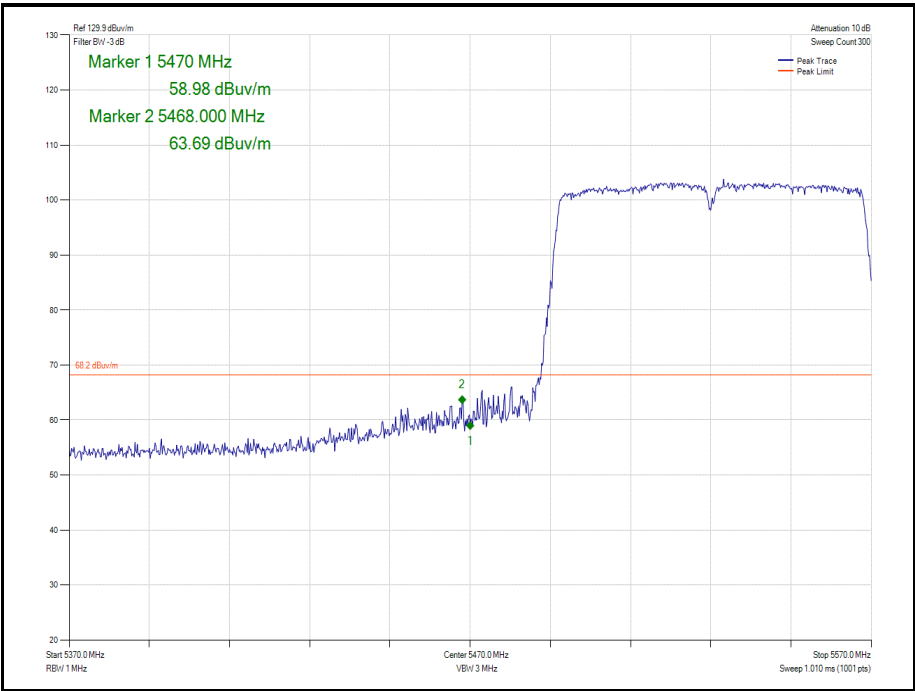


Figure 813 - 802.11ac Core 1 - 5530 MHz
Band Edge Frequency 5490 MHz

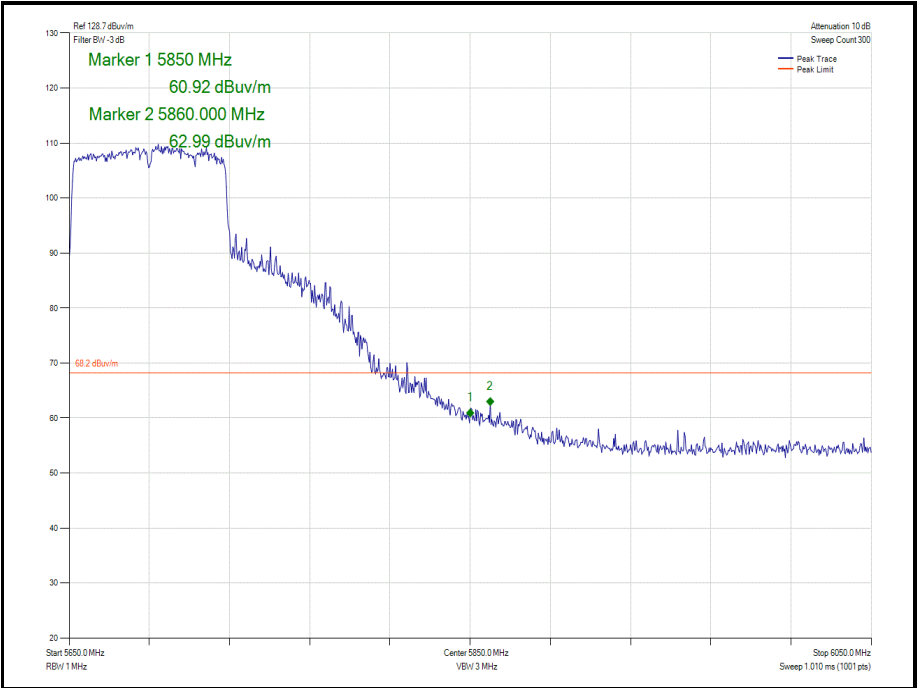


Figure 814 - 802.11ac Core 1 - 5610 MHz
Band Edge Frequency 5730 MHz

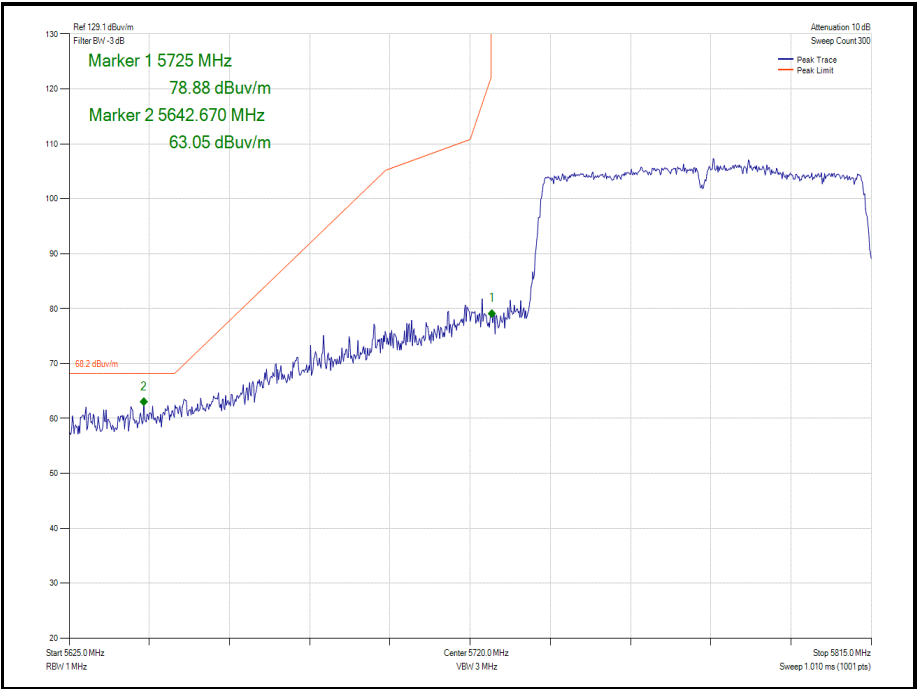
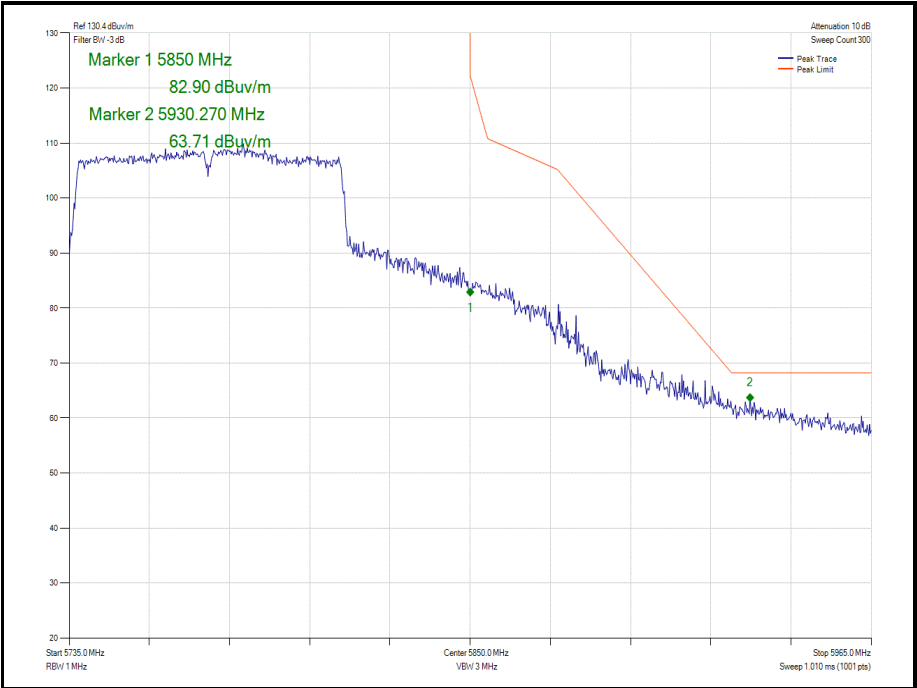


Figure 815 - 802.11ac Core 1 - 5775 MHz
Band Edge Frequency 5735 MHz



**Figure 816 - 802.11ac Core 1 - 5775 MHz
Band Edge Frequency 5835 MHz**



Aux - 80 MHz Bandwidth

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11ac, Core Aux	6 Mbps	5530	5470	63.05
802.11ac, Core Aux	MCS0	5610	5725	63.61
802.11ac, Core Aux	6 Mbps	5775	5725	63.64
802.11ac, Core Aux	MCS0	5775	5825	63.55

Table 414

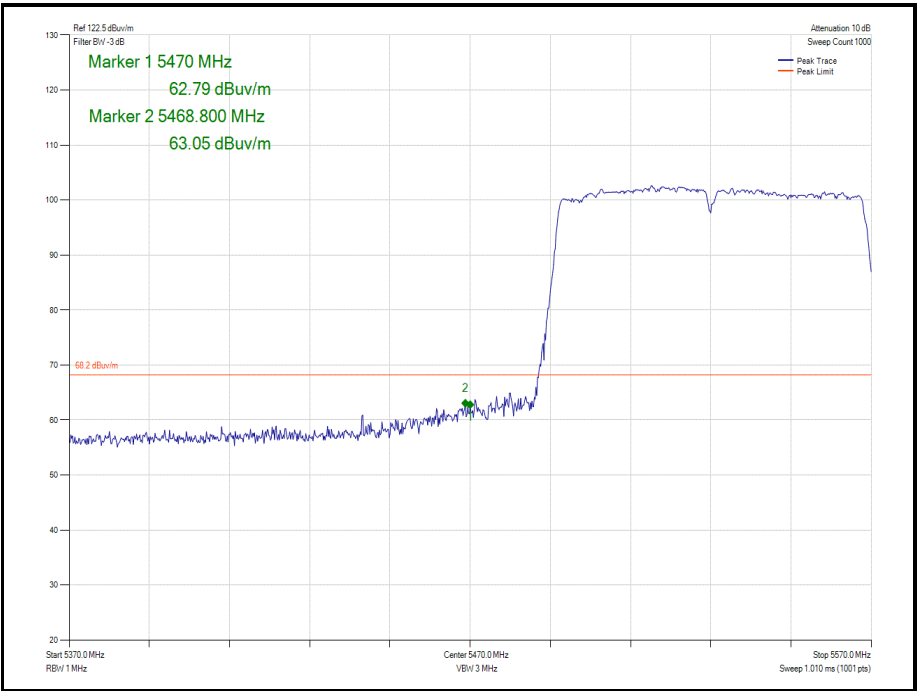


Figure 817 - 802.11ac Core Aux - 5530 MHz
Band Edge Frequency 5490 MHz

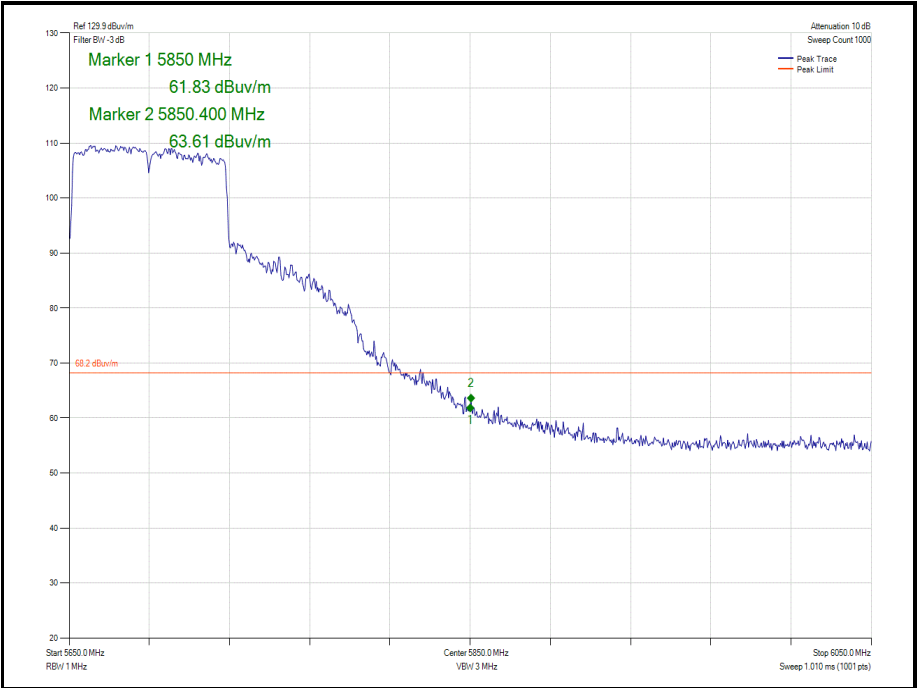


Figure 818 - 802.11ac Core Aux - 5610 MHz
Band Edge Frequency 5730 MHz

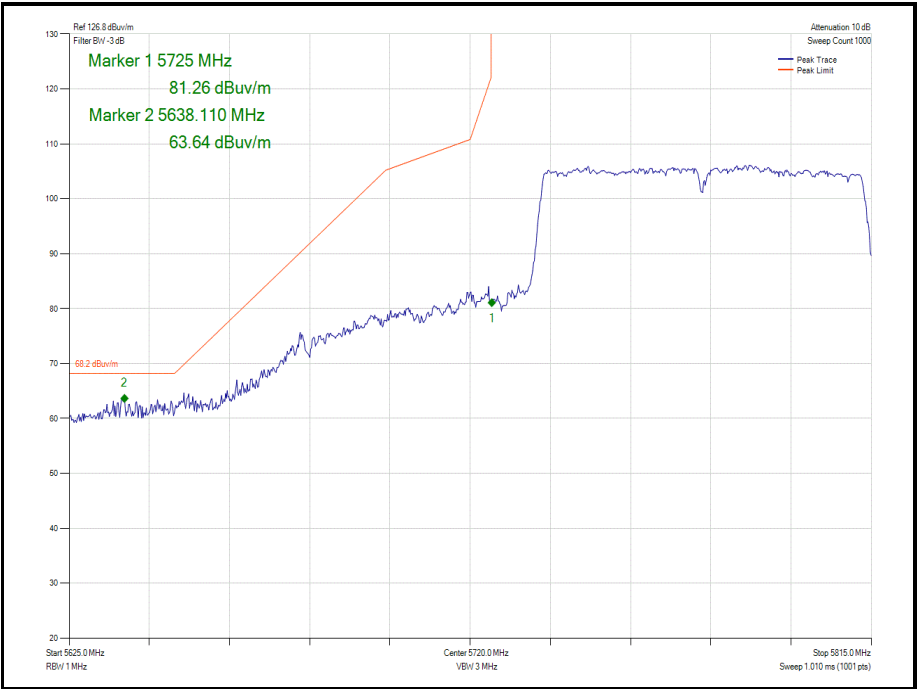


Figure 819 - 802.11ac Core Aux - 5775 MHz
Band Edge Frequency 5735 MHz

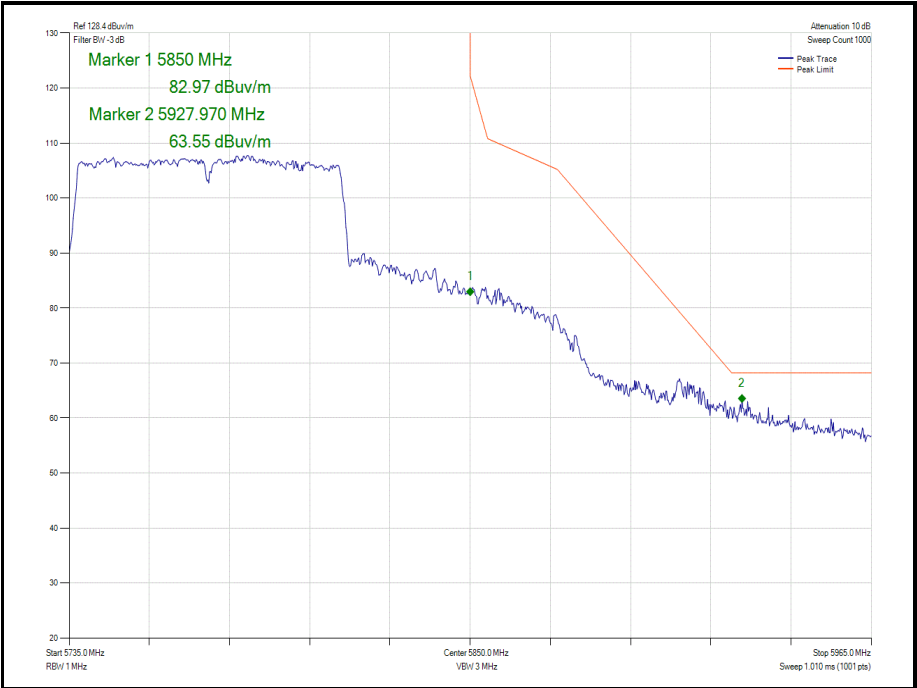


Figure 820 - 802.11ac Core Aux - 5775 MHz
Band Edge Frequency 5835 MHz



Main - 80 MHz Bandwidth (2TX)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11ac VHT80 CDD Cores 1-2	MCS0x1	5530	5470	63.03
802.11ac VHT80 SDM Cores 1-2	MCS0x1	5530	5470	63.10
802.11ac VHT80 CDD Cores 1-2	MCS0x1	5610	5725	63.02
802.11ac VHT80 SDM Cores 1-2	MCS0x1	5610	5725	63.29
802.11ac VHT80 CDD Cores 1-2	MCS0x1	5775	5725	61.36
802.11ac VHT80 SDM Cores 1-2	MCS0x1	5775	5725	63.09
802.11ac VHT80 CDD Cores 1-2	MCS0x1	5775	5825	63.40
802.11ac VHT80 SDM Cores 1-2	MCS0x1	5775	5825	63.56

Table 415

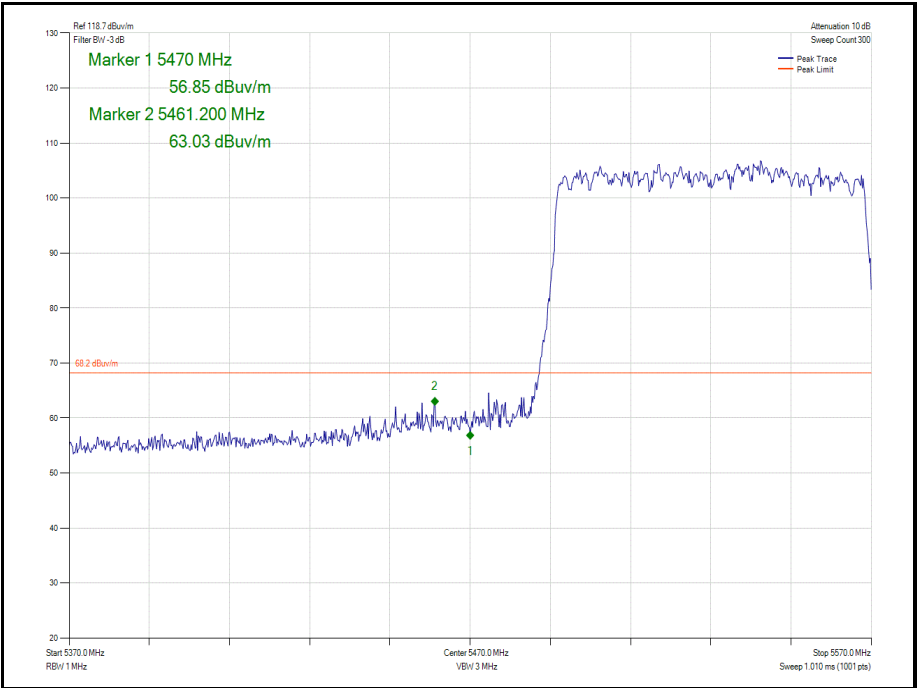


Figure 821 - 802.11ac VHT80 CDD Cores 1-2 - 5530 MHz
Band Edge Frequency 5490 MHz

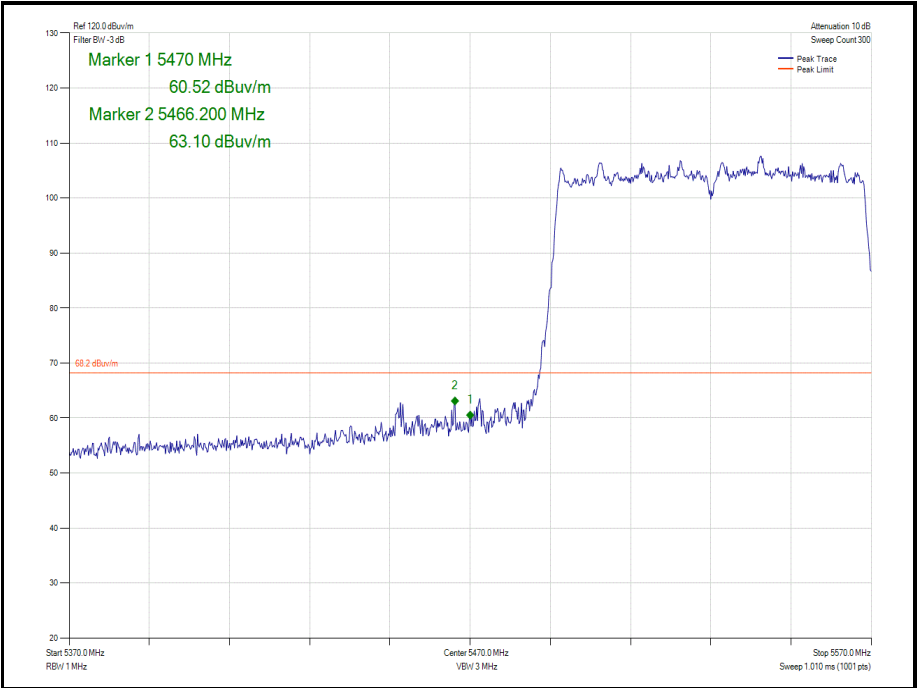


Figure 822 - 802.11ac VHT80 SDM Cores 1-2 - 5530 MHz
Band Edge Frequency 5490 MHz

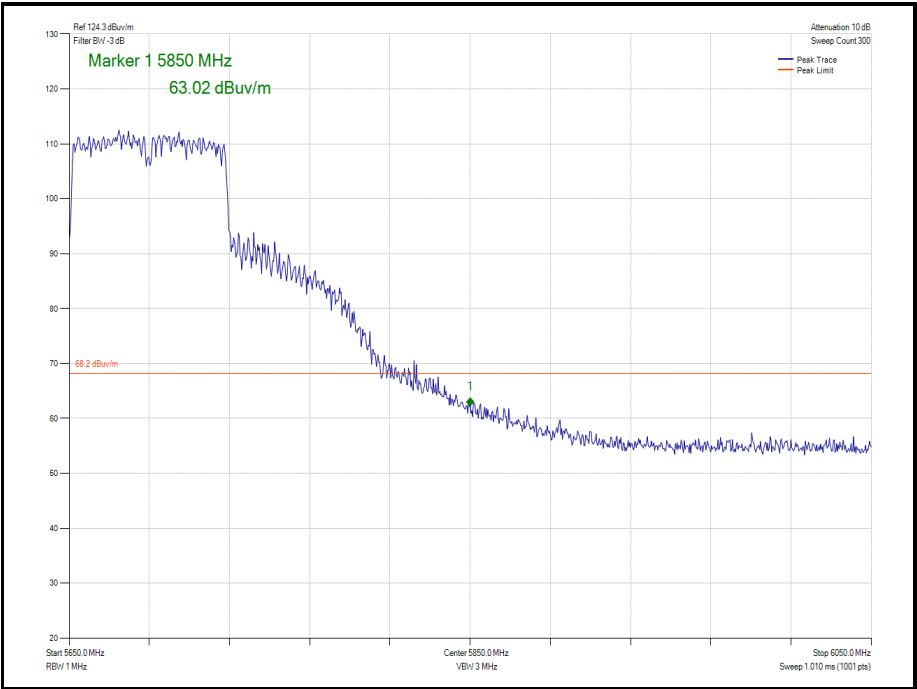


Figure 823 - 802.11ac VHT80 CDD Cores 1-2 - 5610 MHz
Band Edge Frequency 5730 MHz

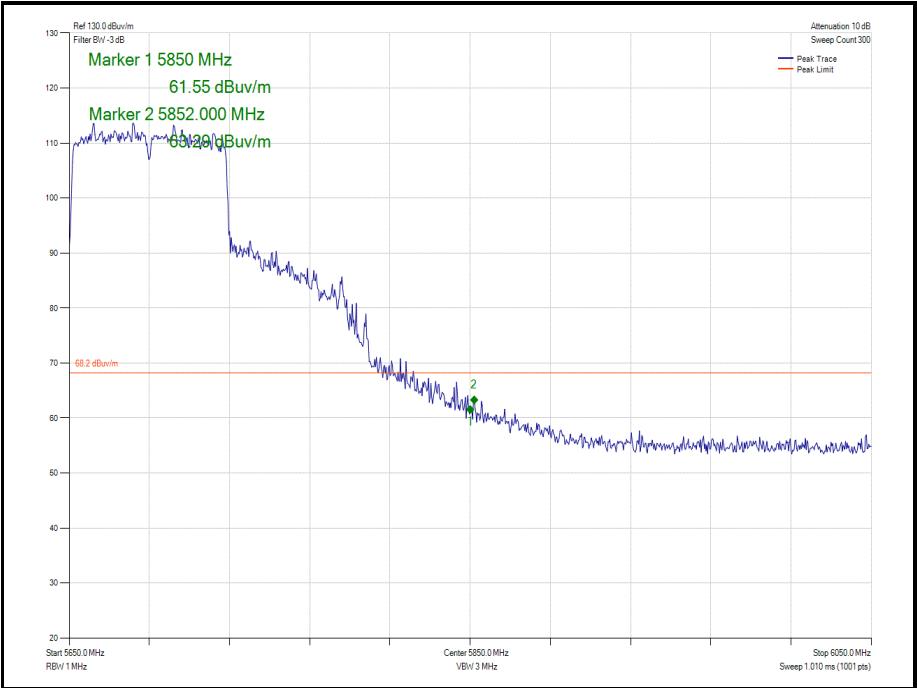


Figure 824 - 802.11ac VHT80 SDM Cores 1-2 - 5610 MHz
Band Edge Frequency 5730 MHz

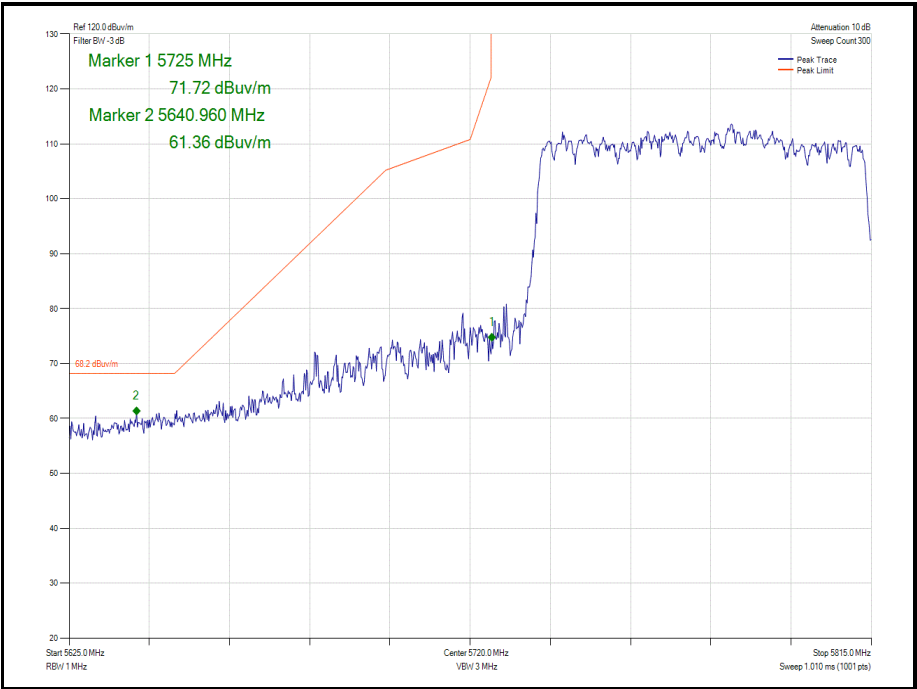


Figure 825 - 802.11ac VHT80 CDD Cores 1-2 - 5775 MHz
Band Edge Frequency 5735 MHz

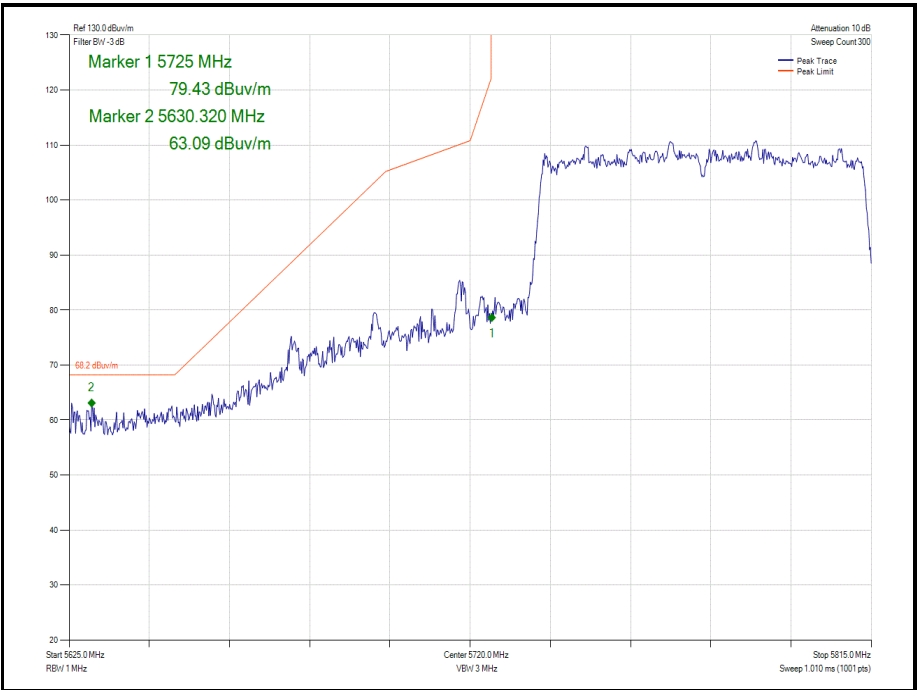


Figure 826 - 802.11ac VHT80 SDM Cores 1-2 - 5775 MHz
Band Edge Frequency 5735 MHz

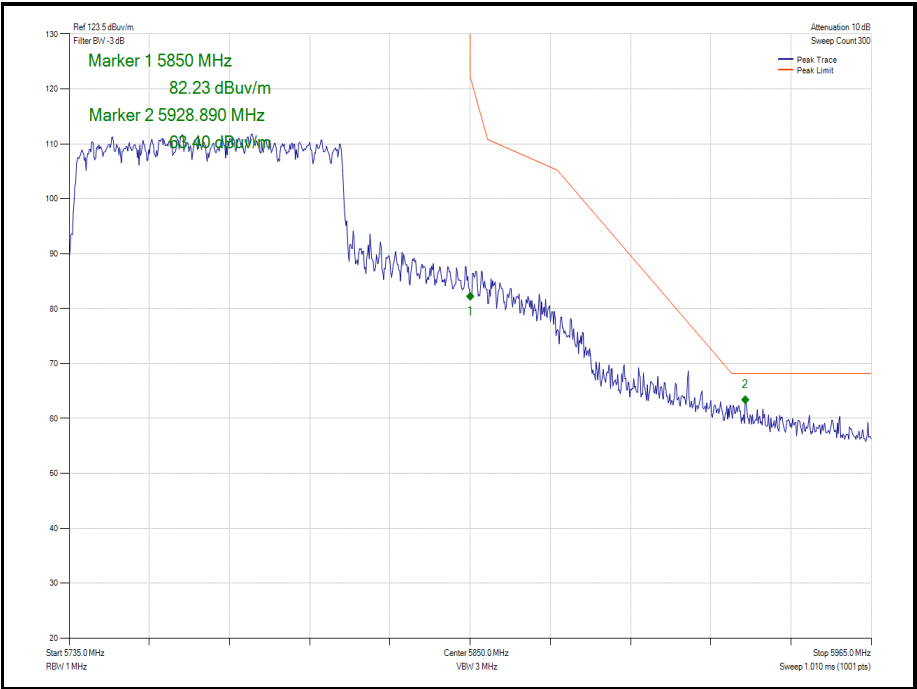


Figure 827 - 802.11ac VHT80 CDD Cores 1-2 - 5775 MHz
Band Edge Frequency 5835 MHz

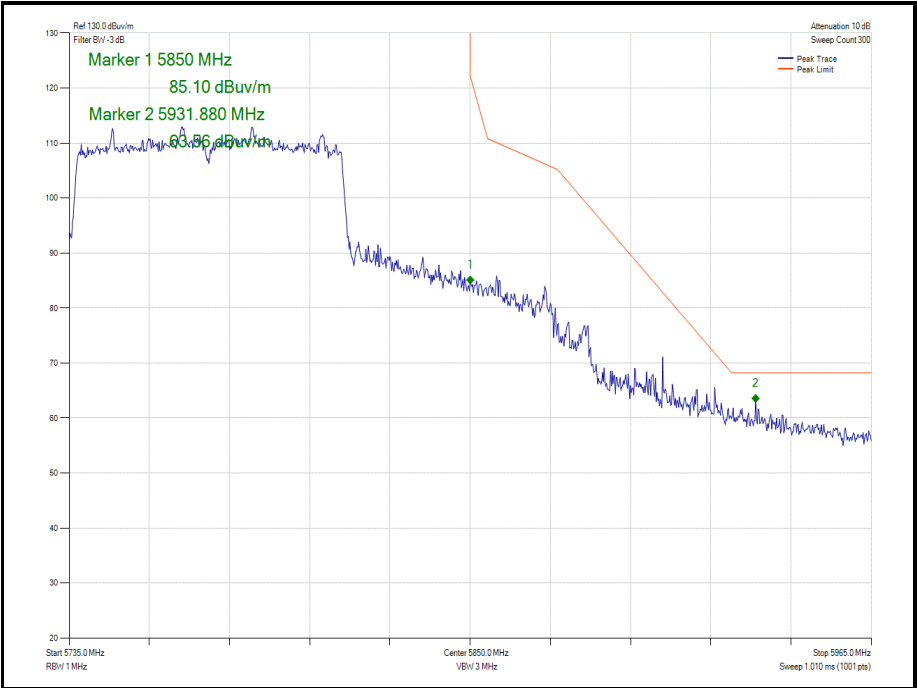


Figure 828 - 802.11ac VHT80 SDM Cores 1-2 - 5775 MHz
Band Edge Frequency 5835 MHz



Main - 80 MHz Bandwidth (3TX)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBuV/m)
802.11ac VHT80 CDD Cores 0-1-2	MCS0x1	5530	5470	63.08
802.11ac VHT80 SDM Cores 0-1-2	MCS0x1	5530	5470	63.12
802.11ac VHT80 CDD Cores 0-1-2	MCS0x1	5610	5725	63.0
802.11ac VHT80 SDM Cores 0-1-2	MCS0x1	5610	5725	63.13
802.11ac VHT80 CDD Cores 0-1-2	MCS0x1	5775	5725	63.12
802.11ac VHT80 SDM Cores 0-1-2	MCS0x1	5775	5725	63.21
802.11ac VHT80 CDD Cores 0-1-2	MCS0x1	5775	5825	63.41
802.11ac VHT80 SDM Cores 0-1-2	MCS0x1	5775	5825	63.17

Table 416

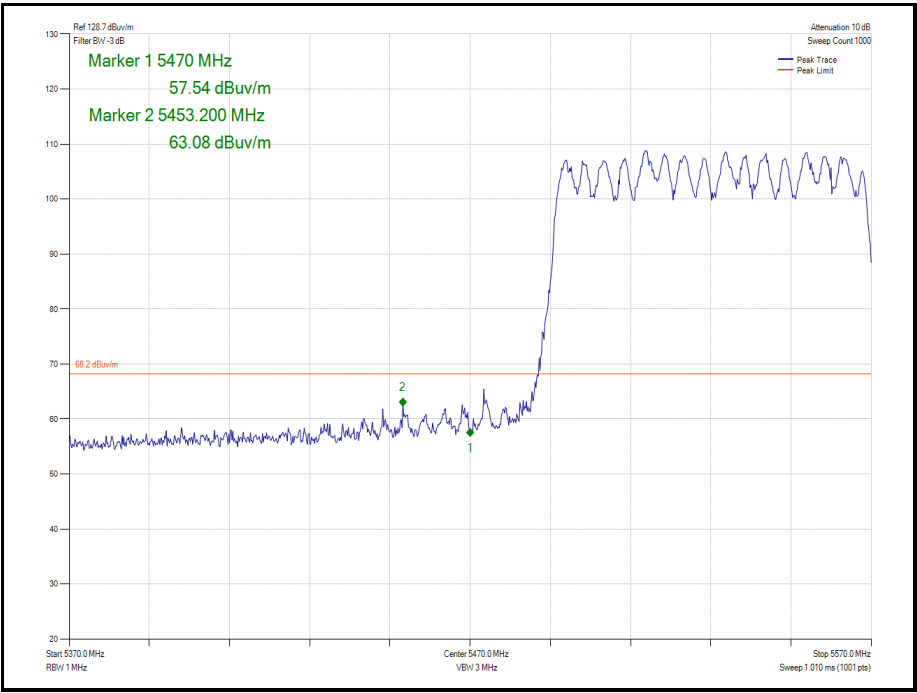
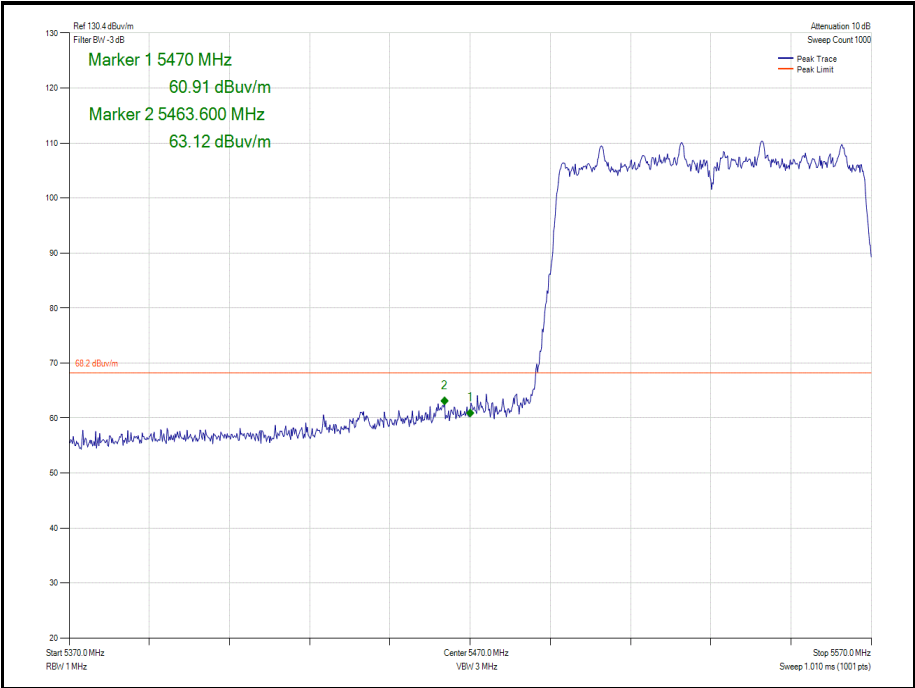
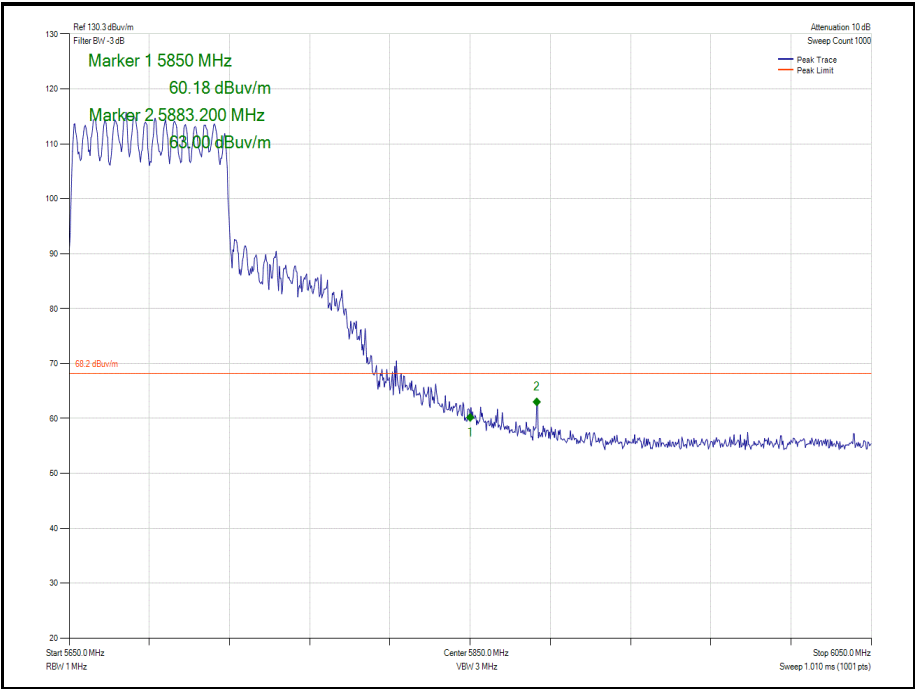


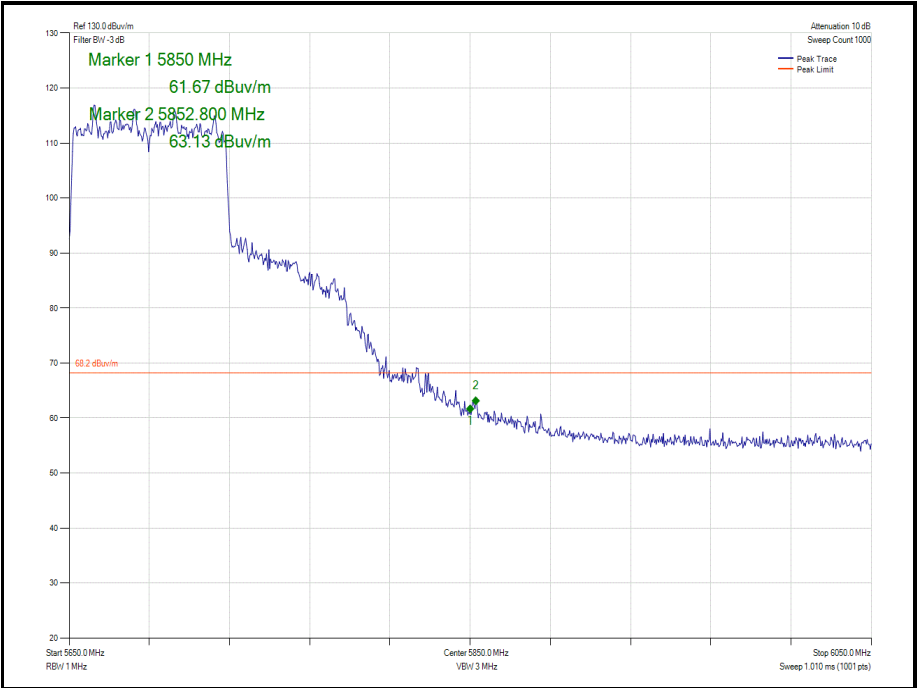
Figure 829 - 802.11ac VHT80 CDD Cores 0-1-2 - 5530 MHz
Band Edge Frequency 5490 MHz



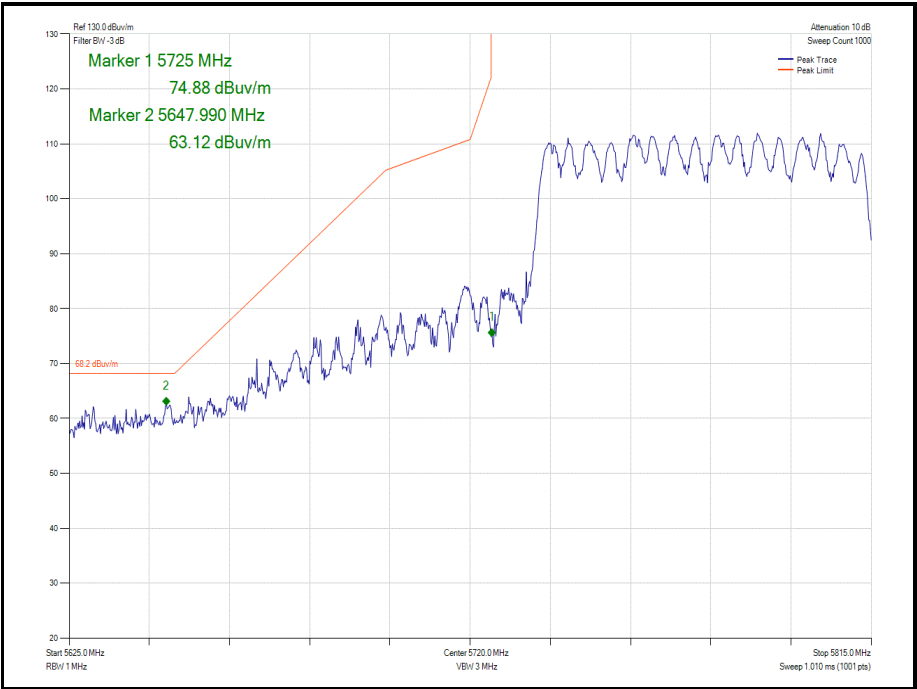
**Figure 830 - 802.11ac VHT80 SDM Cores 0-1-2 - 5530 MHz
Band Edge Frequency 5490 MHz**



**Figure 831 - 802.11ac VHT80 CDD Cores 0-1-2 - 5610 MHz
Band Edge Frequency 5730 MHz**



**Figure 832 - 802.11ac VHT80 SDM Cores 0-1-2 - 5610 MHz
Band Edge Frequency 5730 MHz**



**Figure 833 - 802.11ac VHT80 CDD Cores 0-1-2 - 5775 MHz
Band Edge Frequency 5735 MHz**

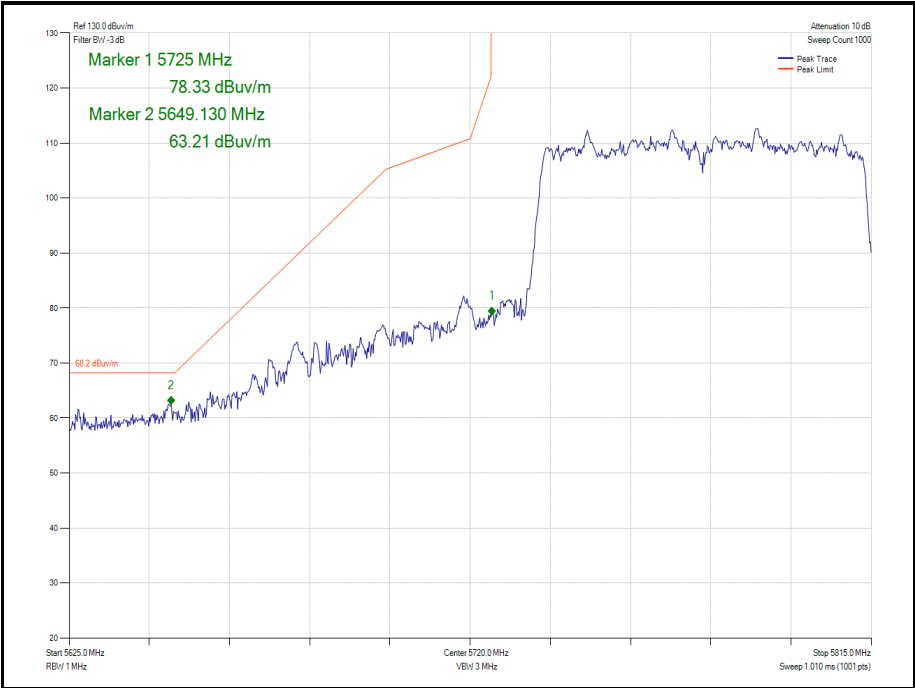


Figure 834 - 802.11ac VHT80 SDM Cores 0-1-2 - 5775 MHz
Band Edge Frequency 5735 MHz

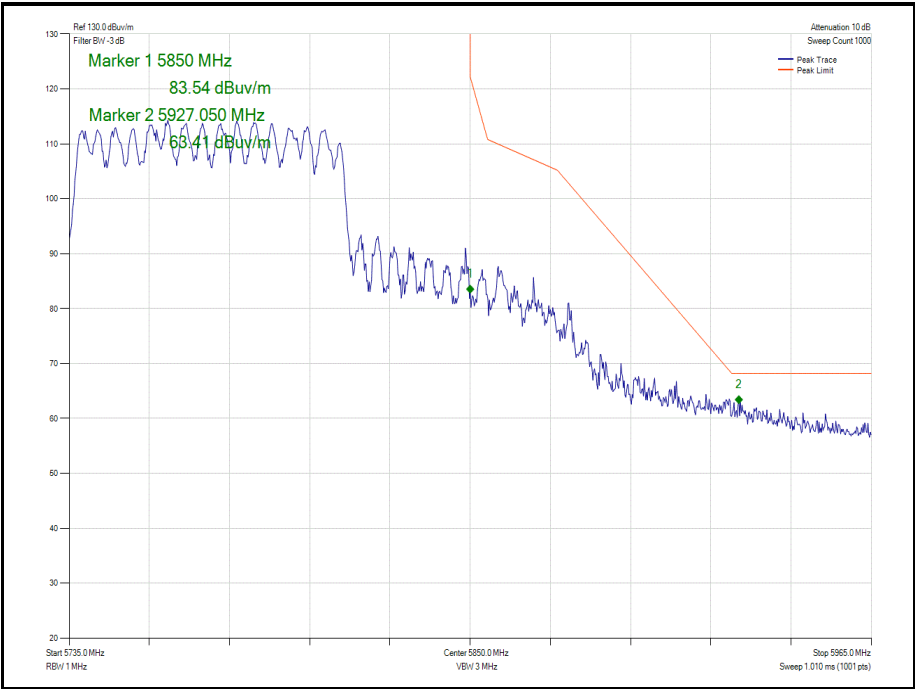
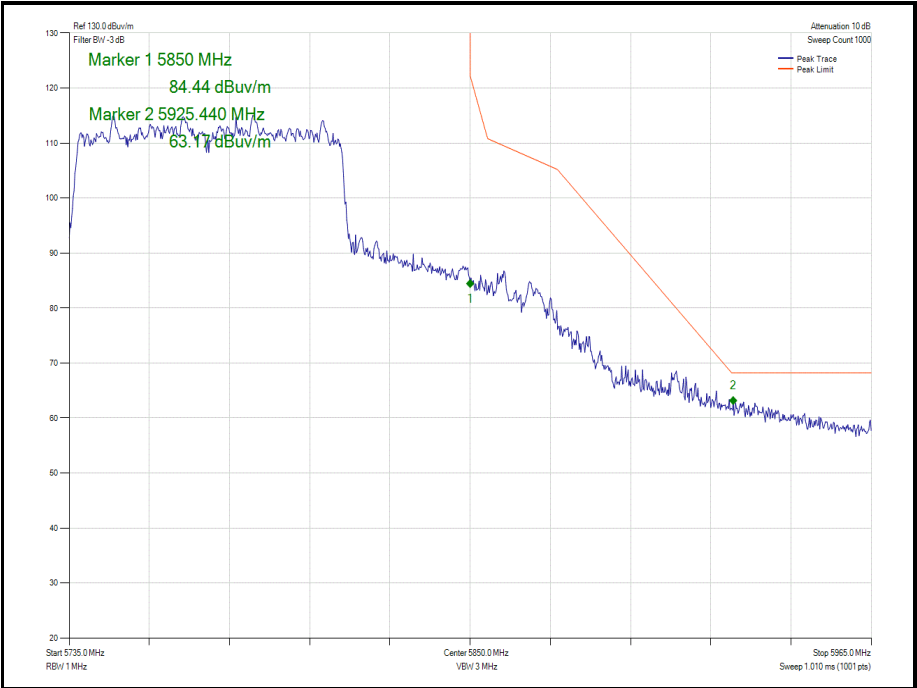


Figure 835 - 802.11ac VHT80 CDD Cores 0-1-2 - 5775 MHz
Band Edge Frequency 5835 MHz



**Figure 836 - 802.11ac VHT80 SDM Cores 0-1-2 - 5775 MHz
Band Edge Frequency 5835 MHz**



FCC 47 CFR Part 15E, Limit Clause 15.407(b)(1)(2)(3)(4)

For transmitters operating in the 5.15-5.25 GHz band: ≤ -27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.25-5.35 GHz band: ≤ -27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.47-5.725 GHz band: ≤ -27 dBm/MHz outside 5470-5725 MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

ISED RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB.

For transmitters with operating frequencies in the bands 5250-5350 MHz and 5470-5725 MHz, all emissions outside the band 5250-5350 MHz and 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

- a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.



2.4.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 5 and RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
10dB/1W SMA Attenuator dc - 18GHz	Sealectro	60-674-1010-89	395	-	Op Mon
Screened Room (5)	Rainford	Rainford	1545	36	23-Jan-2021
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygrometer	Rotronic	HYGROPALM 1	2338	12	15-Nov-2019
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	17-Dec-2019
1GHz to 8GHz Low Noise Amplifier	Wright Technologies	APS04-0085	4365	12	25-Oct-2019
Cable (Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4526	6	11-Dec-2019
Mast Controller	Maturo GmbH	NCD	4810	-	TU
Tilt Antenna Mast	Maturo GmbH	TAM 4.0-P	4811	-	TU
Double Ridge Broadband Horn Antenna	Schwarzbeck	BBHA 9120 B	4848	12	11-Mar-2020
EMI Test Receiver	Rohde & Schwarz	ESW44	5084	12	11-Nov-2019
8m N-Type RF Cable	Teledyne	PR90-088-8MTR	5095	12	04-Dec-2019
Cable (18 GHz)	Rosenberger	LU7-071-1000	5103	12	06-Oct-2020
Cable (18 GHz)	Rosenberger	LU7-071-1000	5104	12	05-Dec-2019
Cable (18 GHz)	Rosenberger	LU7-071-2000	5107	12	06-Oct-2020
EmX Emissions Software	TUV SUD	EmX	5125	-	Software
1.5m 40GHz RF Cable	Scott Cables	KPS-1501-2000-KPS	5127	6	11-Dec-2019
Screened Room (11)	Rainford	Rainford	5136	36	01-Nov-2021
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU

Table 417



Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Turntable	Maturo	TT 15WF	5160	-	TU
8 Meter Cable	Teledyne	PR90-088-8MTR	5212	12	30-Aug-2020
Horn Antenna (1-10GHz)	Schwarzbeck	BBHA 9120 B	5215	12	11-Mar-2020
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5216	12	11-Mar-2020
3 GHz High pass filter	Wainwright	WHKX12-2580-3000-18000-80SS	5219	12	15-Feb-2020

Table 418

TU – Traceability Unscheduled



2.5 Restricted Band Edges

2.5.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.20
ISED RSS-GEN, Clause 8.10

2.5.2 Equipment Under Test and Modification State

A2304, S/N: C02Z1006N5VL - Modification State 0
A2304, S/N: C02Z1007N5VN - Modification State 0

2.5.3 Date of Test

12-August-2019 to 06-November-2019

2.5.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.10.5.

Restricted band edge measurements were performed, with the device operating in SISO, MIMO and TxBF set-up's, across the various mode

The measurements displayed within this report, have been limited to those modes which have been shown to be worst case.

Where duty cycle corrections were required for average results, these are included in the result tables, but are not included in the plots.

Further measurements are held on file by TÜV SÜD and are available if required.

2.5.5 Environmental Conditions

Ambient Temperature	15.8 - 27.0 °C
Relative Humidity	35.0 - 40.3 %



2.5.6 Test Results

5 GHz WLAN

Main - 20 MHz Bandwidth (SISO)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBμV/m)
802.11a Core 1	6 Mbps	5180	5150	62.29	45.96
802.11n HT20 Core 1	MCS0	5180	5150	64.08	49.35
802.11a Core 1	6 Mbps	5320	5350	63.45	47.63
802.11n HT20 Core 1	MCS0	5320	5350	64.19	51.24
802.11a Core 1	6 Mbps	5500	5460	58.13	45.68
802.11n HT20 Core 1	MCS0	5500	5460	58.26	45.67

Table 419

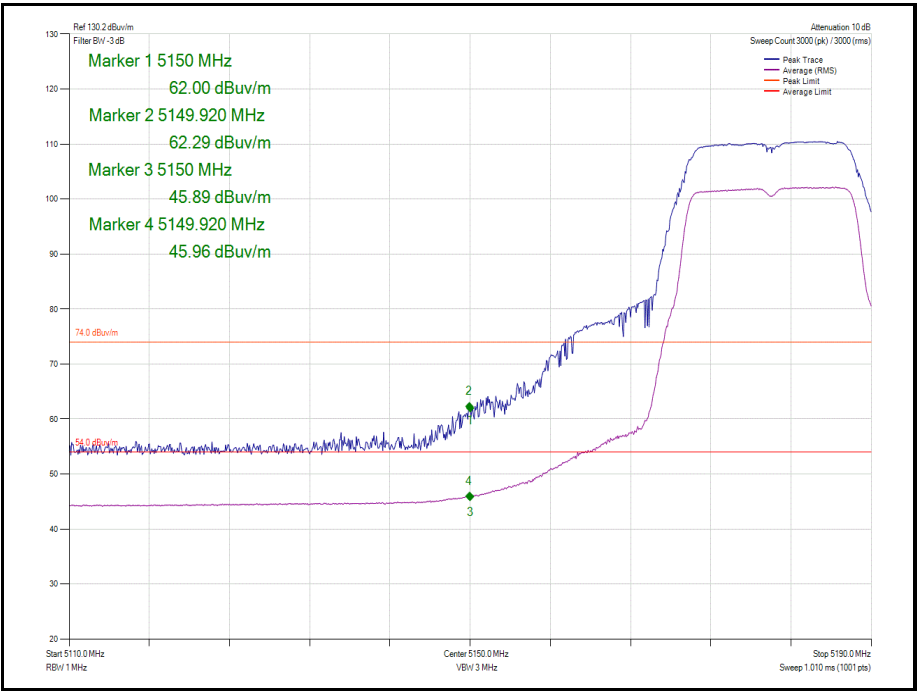


Figure 837 - 802.11a Core 1 - 5180 MHz
Band Edge Frequency 5150 MHz

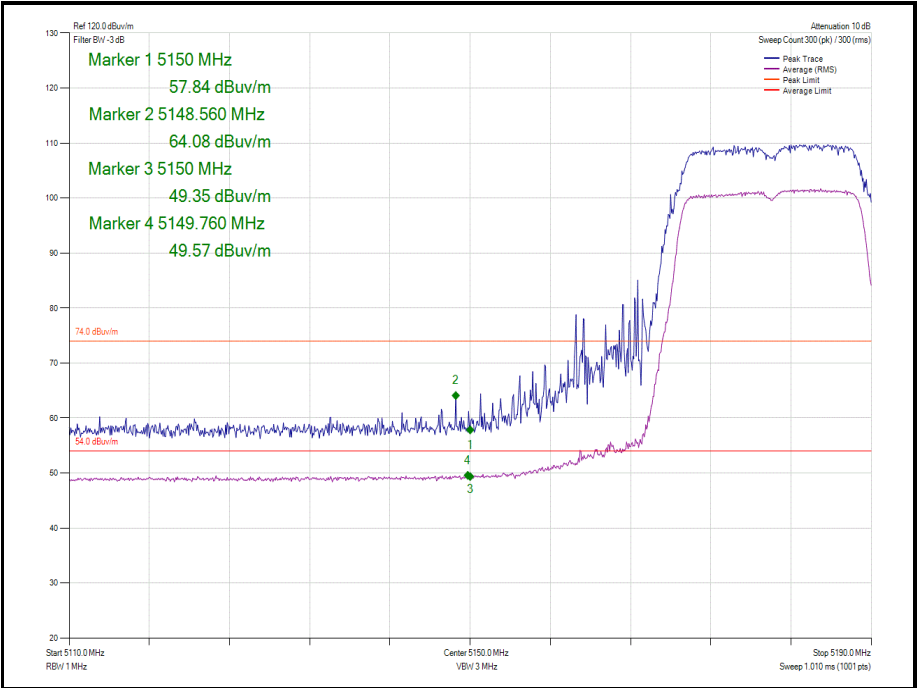


Figure 838 - 802.11n HT20 Core 1 - 5180 MHz
Band Edge Frequency 5150 MHz

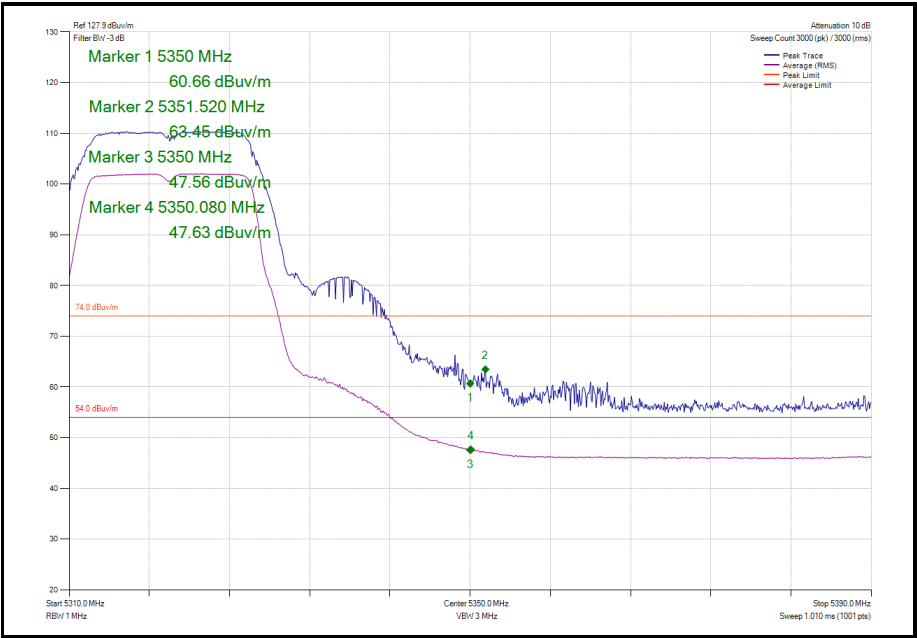


Figure 839 - 802.11a Core 1 - 5320 MHz
Band Edge Frequency 5350 MHz

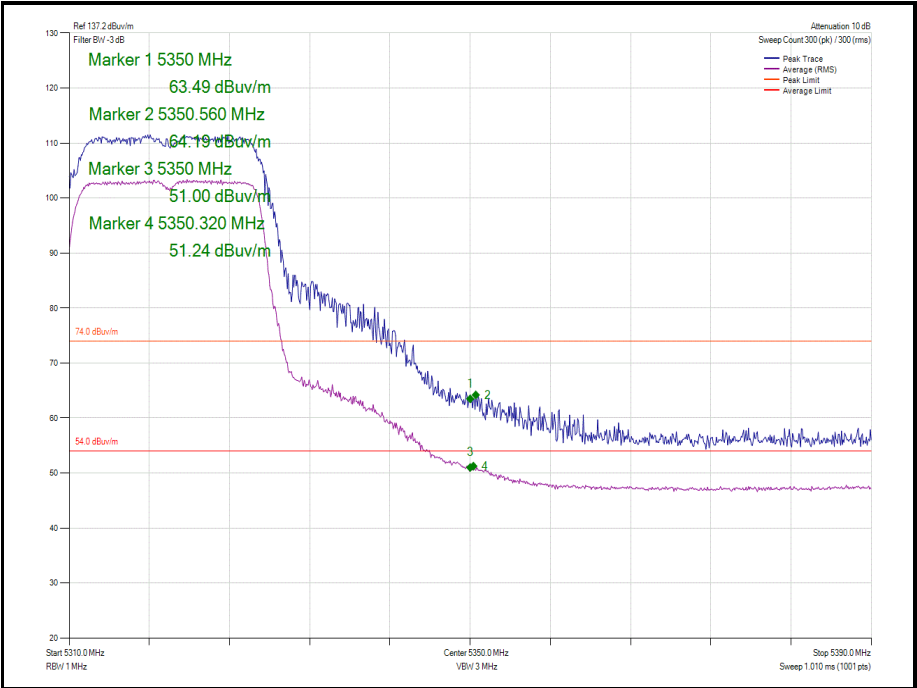


Figure 840 - 802.11n HT20 Core 1 - 5320 MHz
Band Edge Frequency 5350 MHz

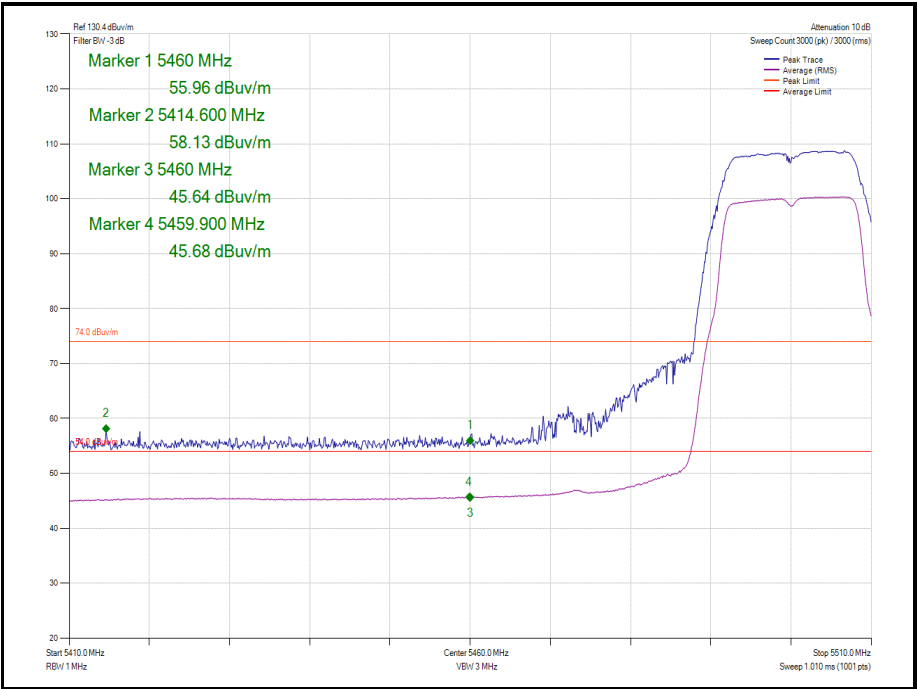


Figure 841 - 802.11a Core 1 - 5500 MHz
Band Edge Frequency 5460 MHz

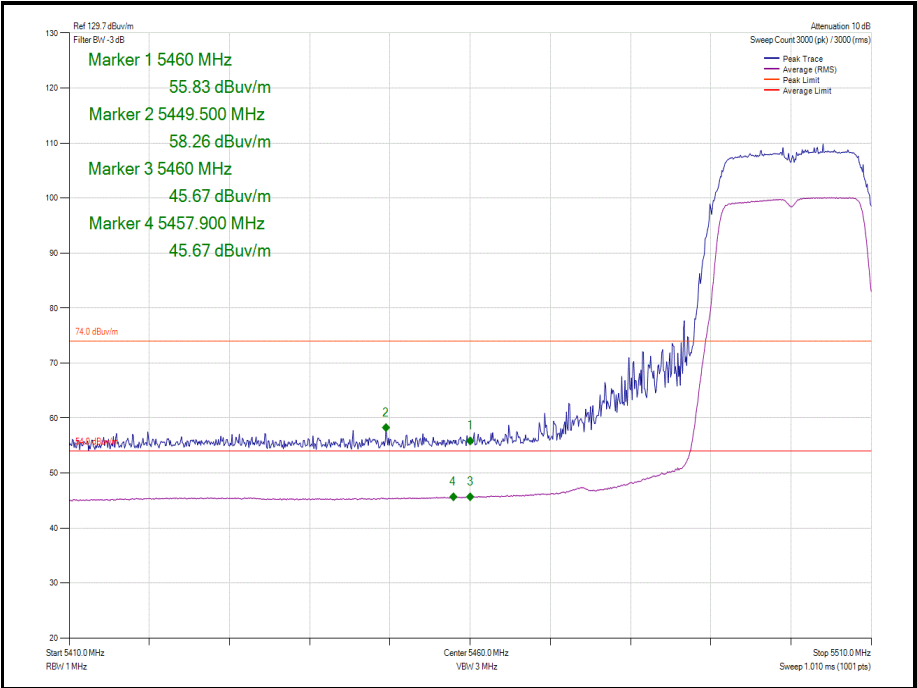


Figure 842 - 802.11n HT20 Core 1 - 5500 MHz
Band Edge Frequency 5460 MHz



Aux - 20 MHz Bandwidth (SISO)

Mode	Data Rate	Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBμV/m)
802.11a Core Aux	6 Mbps	5180	5150	63.12	50.38
802.11n HT20 Core Aux	MCS0	5180	5150	63.4	50.96
802.11a Core Aux	6 Mbps	5320	5350	63.31	51.31
802.11n HT20 Core Aux	MCS0	5320	5350	61.85	51.47
802.11a Core Aux	6 Mbps	5500	5460	58.16	47.10
802.11n HT20 Core Aux	MCS0	5500	5460	58.29	47.06

Table 420

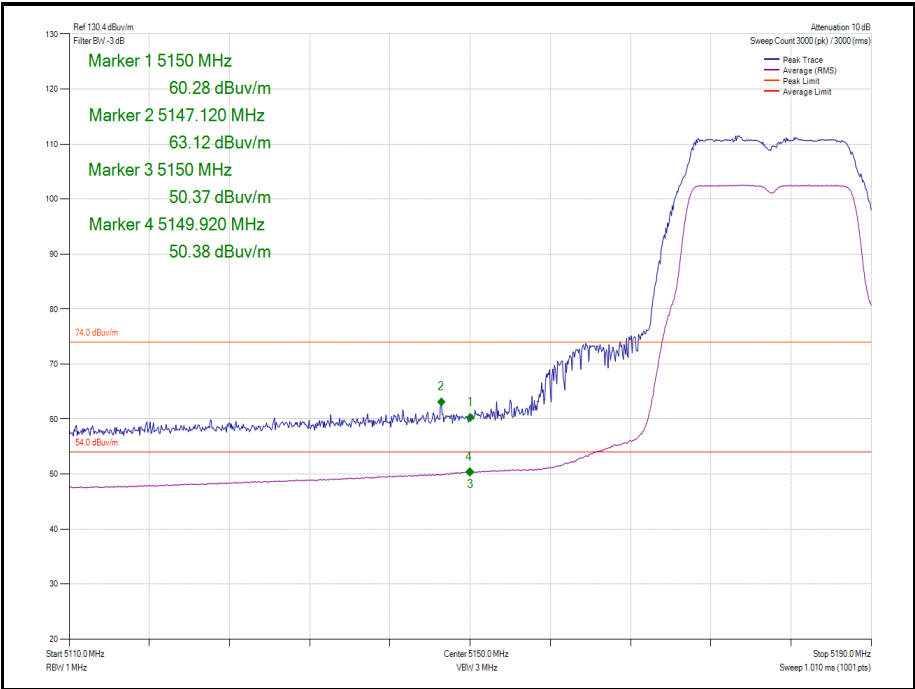


Figure 843 - 802.11a Core Aux - 5180 MHz
Band Edge Frequency 5150 MHz