# Appendix D

## RF Test Data for 5.8G WLAN (Conducted Measurement)

**Product Name: PCSGOB1018M-Series**

**Trade Mark: PC SMART**

**Test Model: PCSGOB1018M-A**

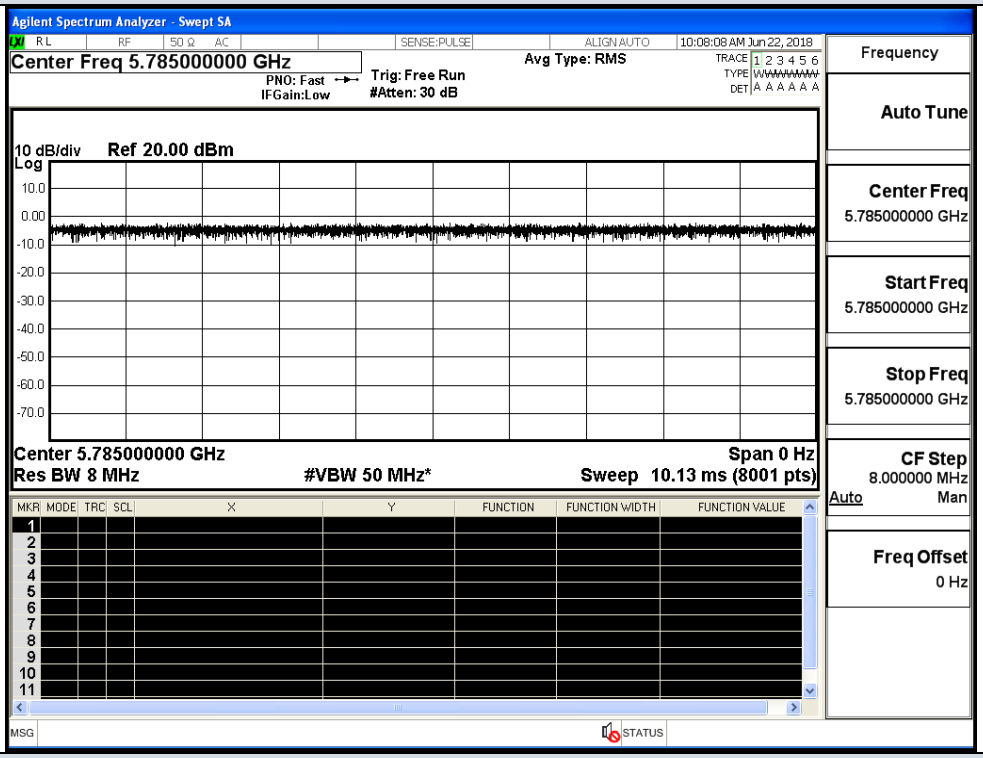
**Environmental Conditions**

| | |
|---|---|
| Temperature: | 23.2 ° C |
| Relative Humidity: | 52.5% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Wilson.Hong |
| Supervised by: | Jayden.Zhuo |

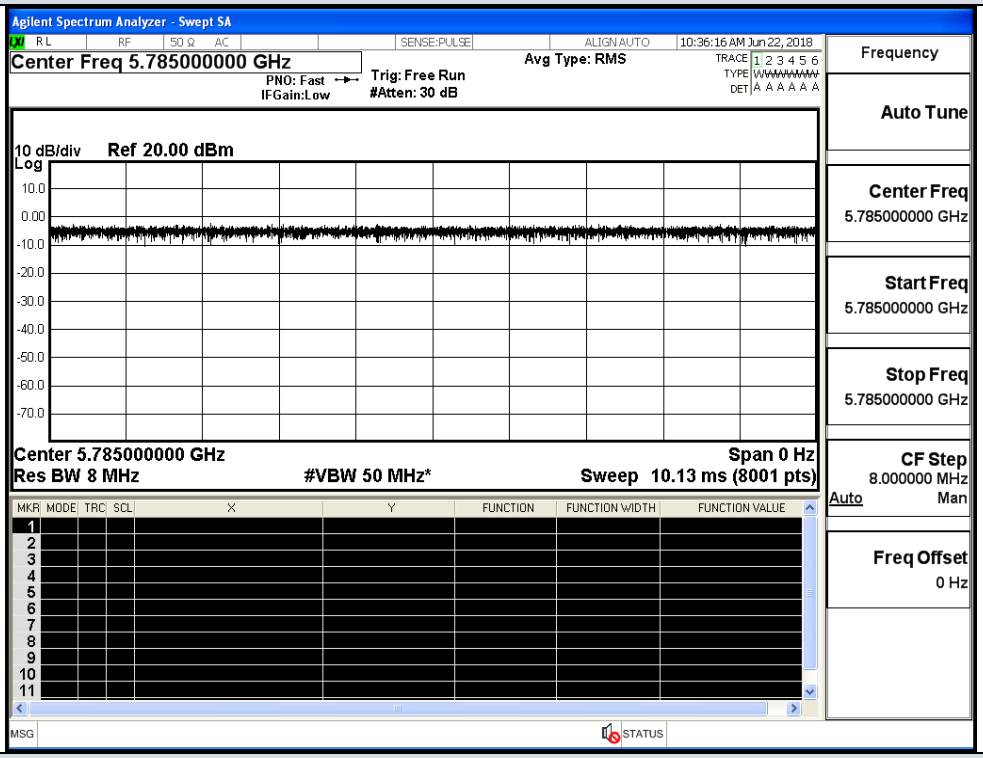
### D.1 Duty Cycle

| Test Mode | Test Frequency (MHz) | Duty Cycle (%) | 10log(1/x) Factor (dB) | 1/B Minimum VBW(KHz) |
|---|---|---|---|---|
| IEEE 802.11a | 5785 | 100 | 0.00 | 0.01 |
| IEEE 802.11n HT20 | 5785 | 100 | 0.00 | 0.01 |
| IEEE 802.11n HT40 | 5755 | 100 | 0.00 | 0.01 |
| IEEE 802.11ac VHT20 | 5785 | 100 | 0.00 | 0.01 |
| IEEE 802.11ac VHT40 | 5755 | 100 | 0.00 | 0.01 |
| IEEE 802.11ac VHT80 | 5775 | 100 | 0.00 | 0.01 |

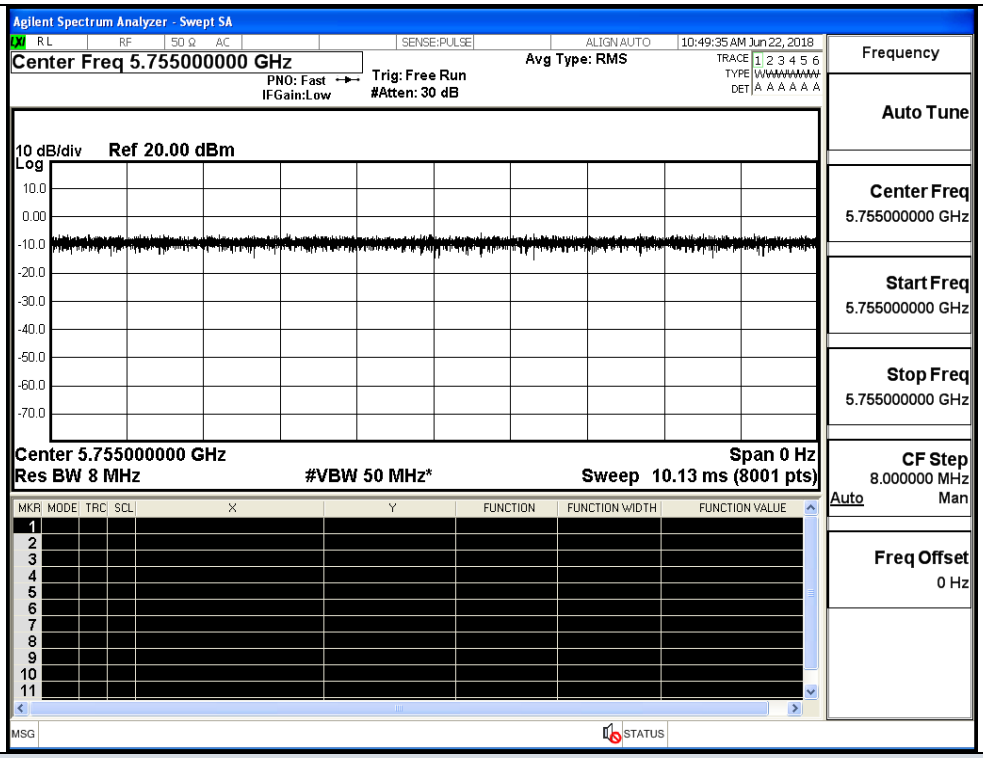
On Time and Duty Cycle



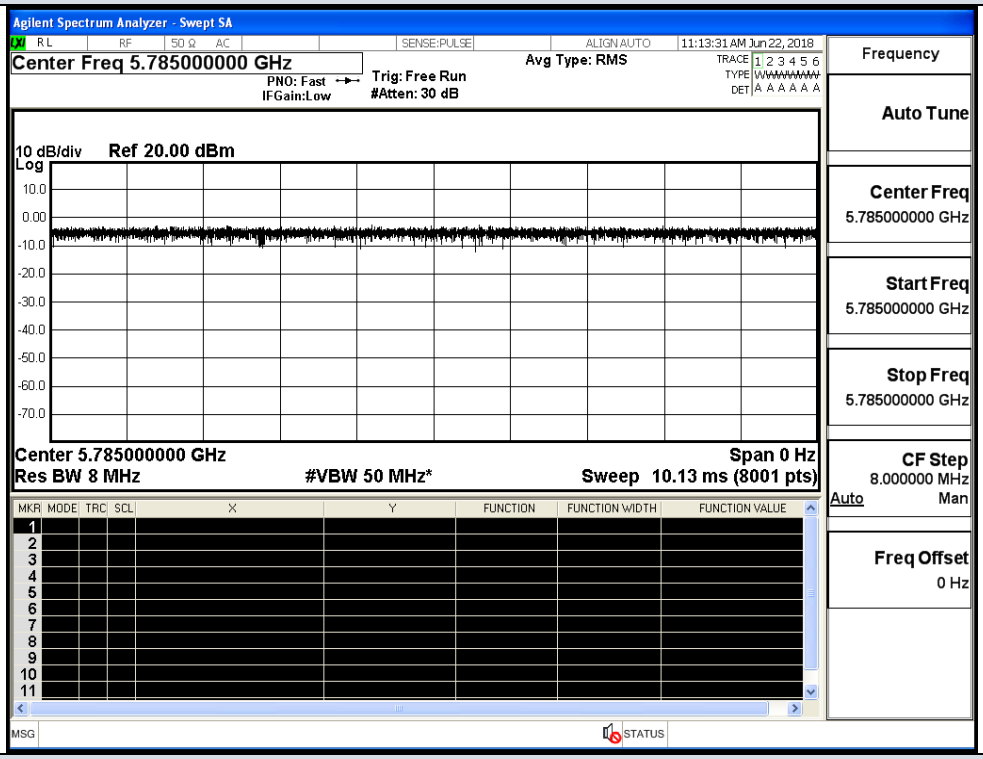

IEEE 802.11a



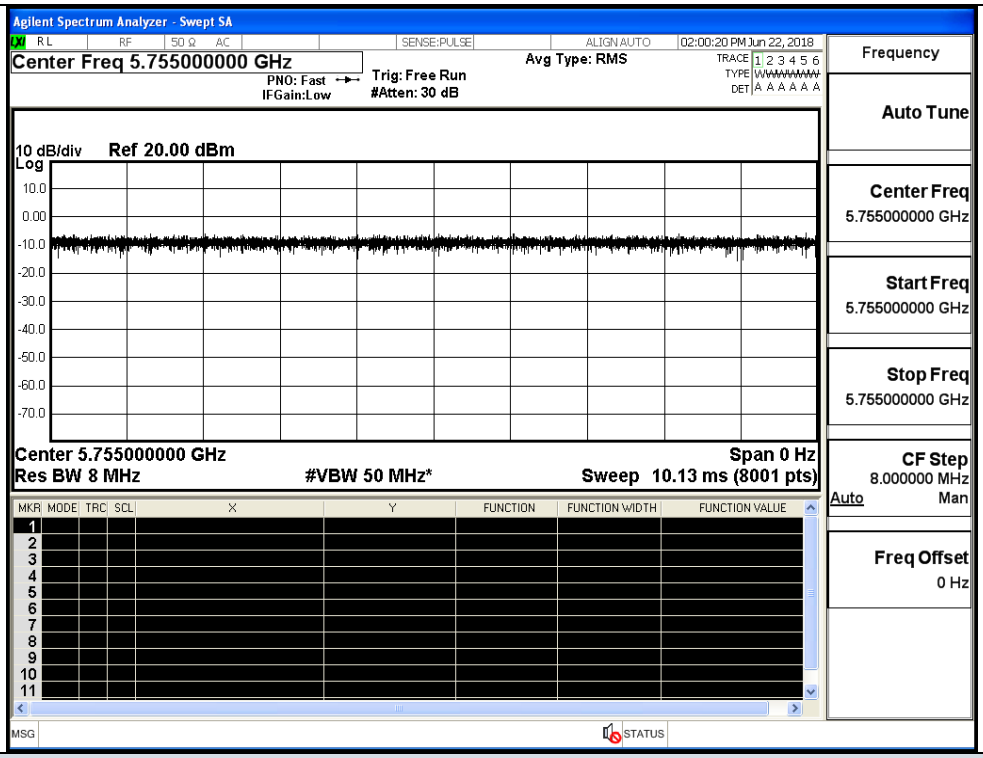

IEEE 802.11n HT20



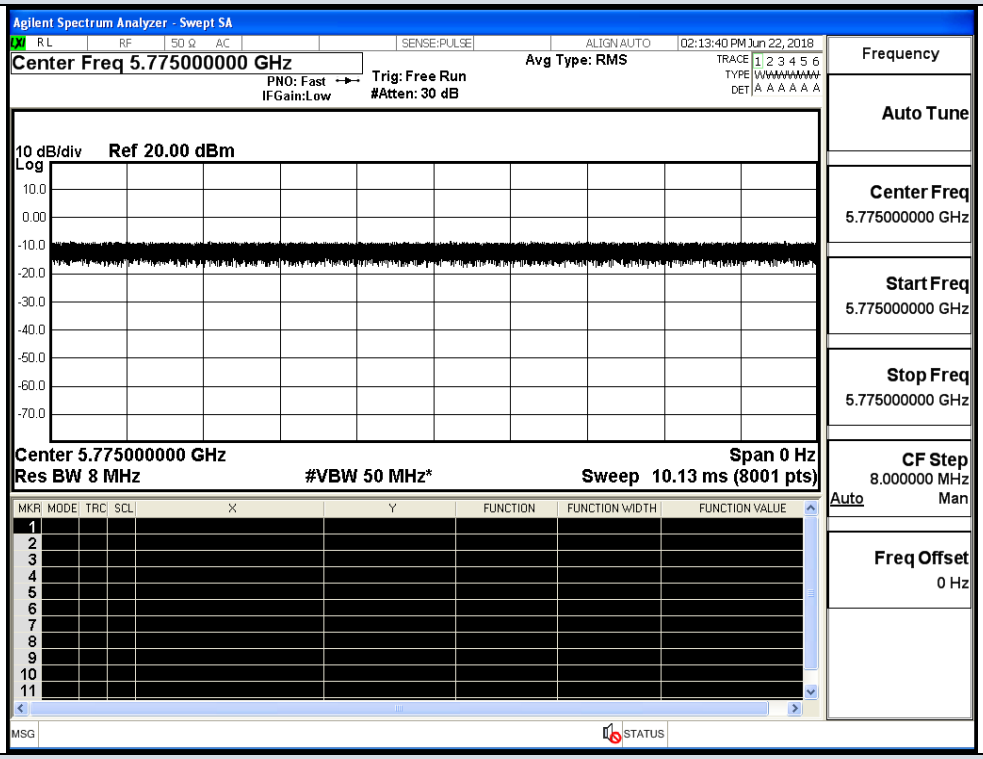

IEEE 802.11n HT40




IEEE 802.1ac VHT20




IEEE 802.11ac VHT40




IEEE 802.11ac VHT80

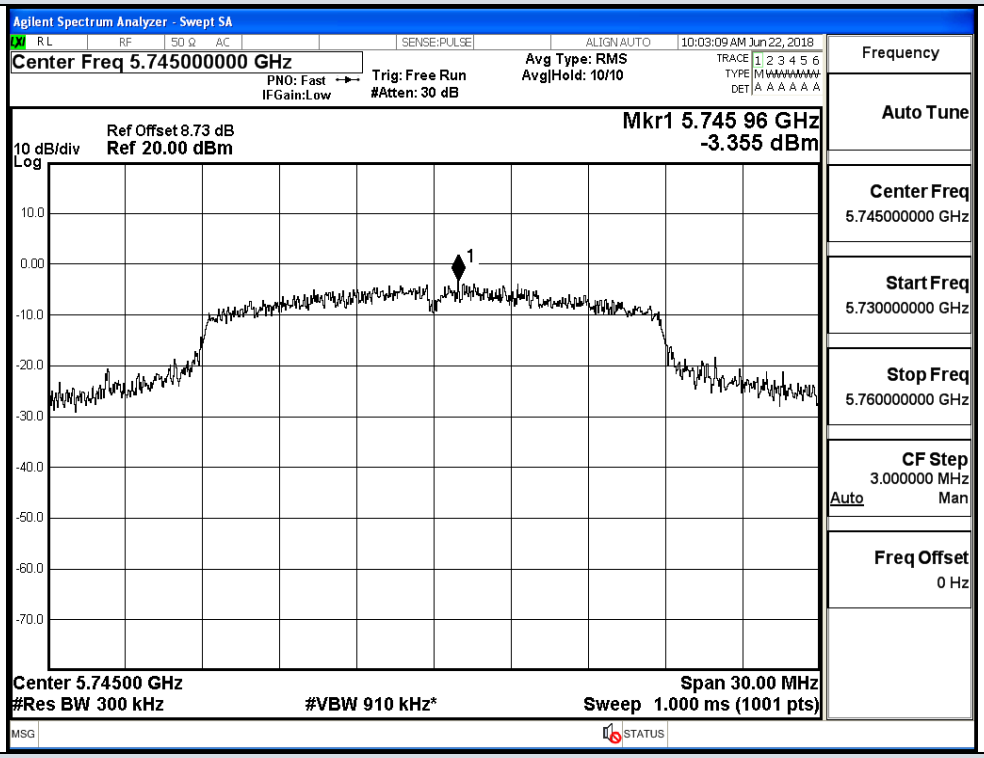
## D.2 Maximum Conduct Peak Output Power

| Test Mode | Channel | Frequency (MHz) | Burst Average Conducted Power (dBm) | Duty Cycle Factor(dB) | Report Conducted Power(dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| IEEE 802.11a | 149 | 5745 | 7.29 | 0 | 9.29 | 30 |
| | 157 | 5785 | 7.02 | 0 | 9.02 | |
| | 165 | 5825 | 7.32 | 0 | 9.32 | |
| IEEE 802.11n HT20 | 149 | 5745 | 7.05 | 0 | 8.05 | 30 |
| | 157 | 5785 | 7.14 | 0 | 8.64 | |
| | 165 | 5825 | 7.25 | 0 | 8.95 | |
| IEEE 802.11n HT40 | 151 | 5755 | 6.04 | 0 | 8.04 | 30 |
| | 159 | 5795 | 6.91 | 0 | 8.91 | |
| IEEE 802.11ac VHT20 | 149 | 5745 | 7.12 | 0 | 8.62 | 30 |
| | 157 | 5785 | 7.41 | 0 | 8.41 | |
| | 165 | 5825 | 7.16 | 0 | 8.16 | |
| IEEE 802.11ac VHT40 | 151 | 5755 | 6.88 | 0 | 8.88 | 30 |
| | 159 | 5795 | 6.52 | 0 | 8.52 | |
| IEEE 802.11ac VHT80 | 155 | 5775 | 6.27 | 0 | 8.27 | 30 |

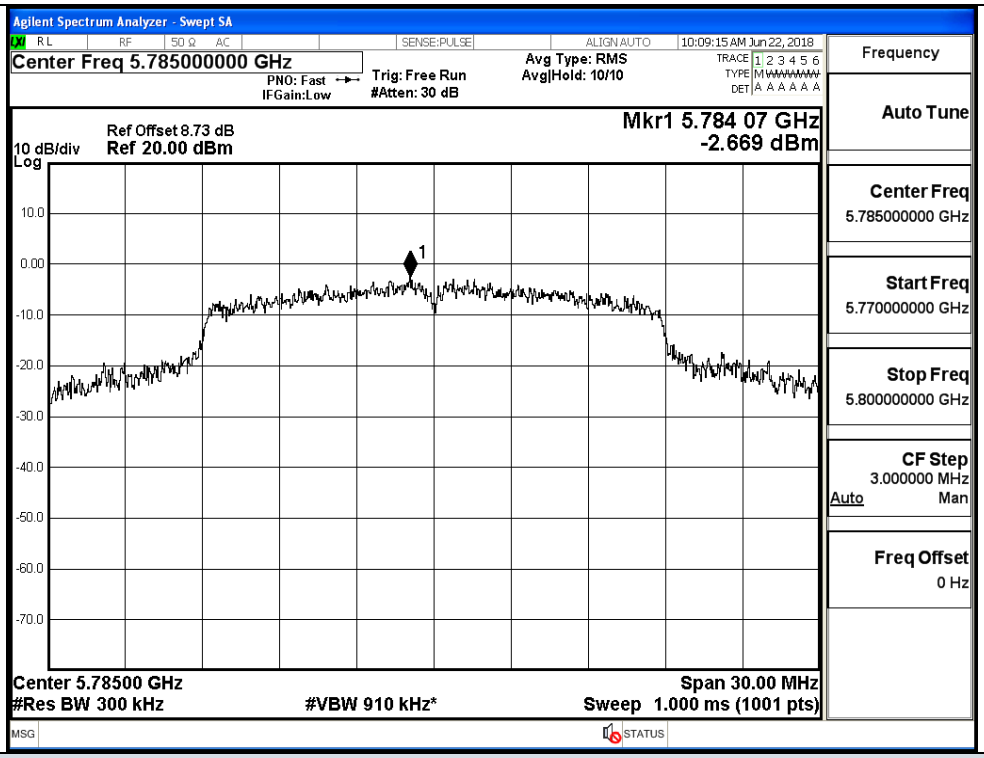
## D.3 Power Spectral Density

| Test Mode | Channel | Frequency (MHz) | Power Density (dBm/300KHz) | Duty Cycle Factor (dB) | RBW Factor (dB) | Report Power Density (dBm/500KHz) | Limit (dBm/500KHz) |
|---|---|---|---|---|---|---|---|
| IEEE 802.11a | 149 | 5745 | -3.335 | 0 | 2.218 | -1.117 | 30 |
| | 157 | 5785 | -2.669 | 0 | 2.218 | -0.451 | |
| | 165 | 5825 | -2.135 | 0 | 2.218 | 0.083 | |
| IEEE 802.11n HT20 | 149 | 5745 | -3.778 | 0 | 2.218 | -1.560 | 30 |
| | 157 | 5785 | -2.805 | 0 | 2.218 | -0.587 | |
| | 165 | 5825 | -2.927 | 0 | 2.218 | -0.709 | |
| IEEE 802.11n HT40 | 151 | 5755 | -6.178 | 0 | 2.218 | -3.960 | 30 |
| | 159 | 5795 | -5.002 | 0 | 2.218 | -2.784 | |
| IEEE 802.11ac VHT20 | 149 | 5745 | -3.968 | 0 | 2.218 | -1.750 | 30 |
| | 157 | 5785 | -3.162 | 0 | 2.218 | -0.944 | |
| | 165 | 5825 | -2.270 | 0 | 2.218 | -0.052 | |
| IEEE 802.11ac VHT40 | 151 | 5755 | -5.828 | 0 | 2.218 | -3.610 | 30 |
| | 159 | 5795 | -5.021 | 0 | 2.218 | -2.803 | |
| IEEE 802.11ac VHT80 | 155 | 5775 | -10.238 | 0 | 2.218 | -8.020 | 30 |

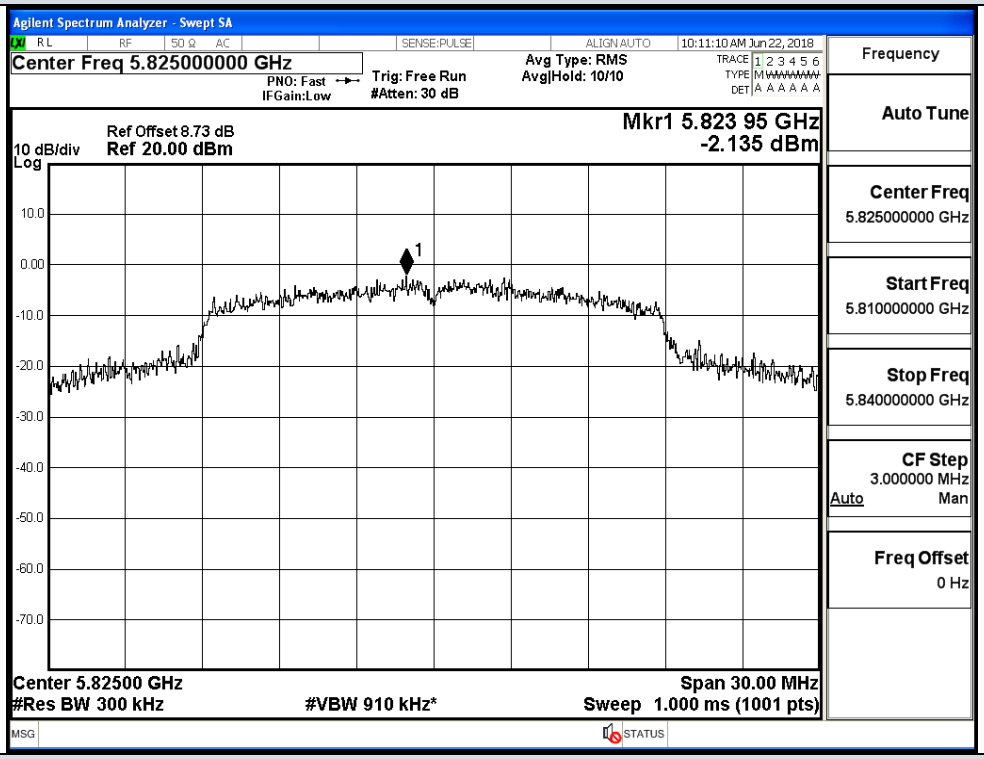
Power Spectral Density



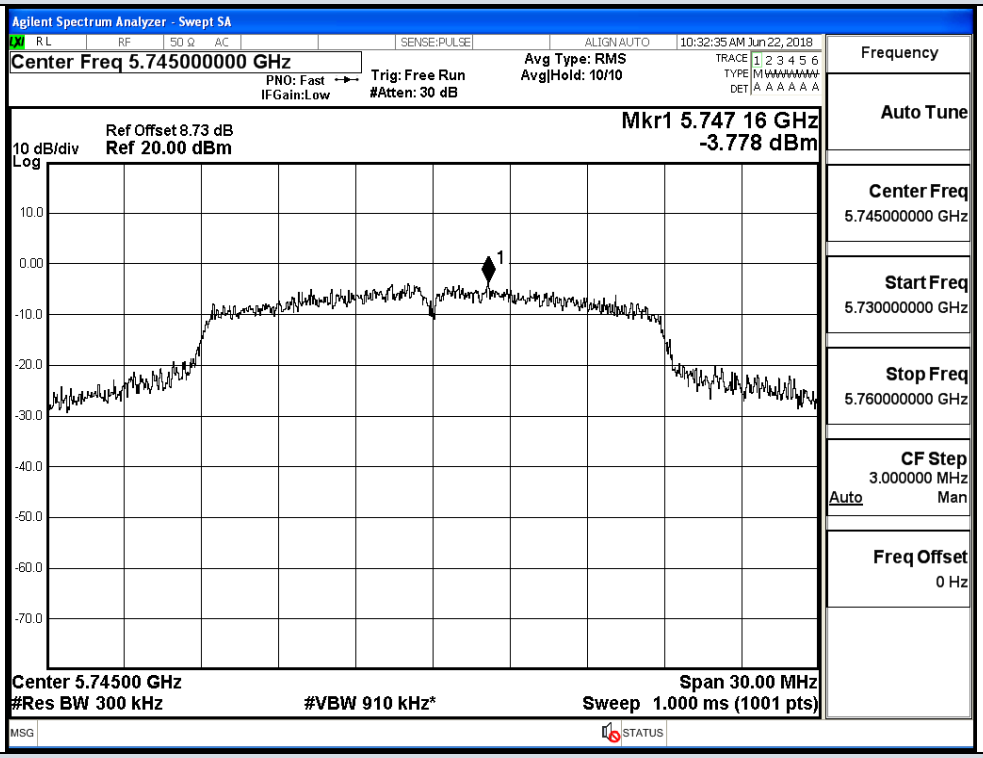
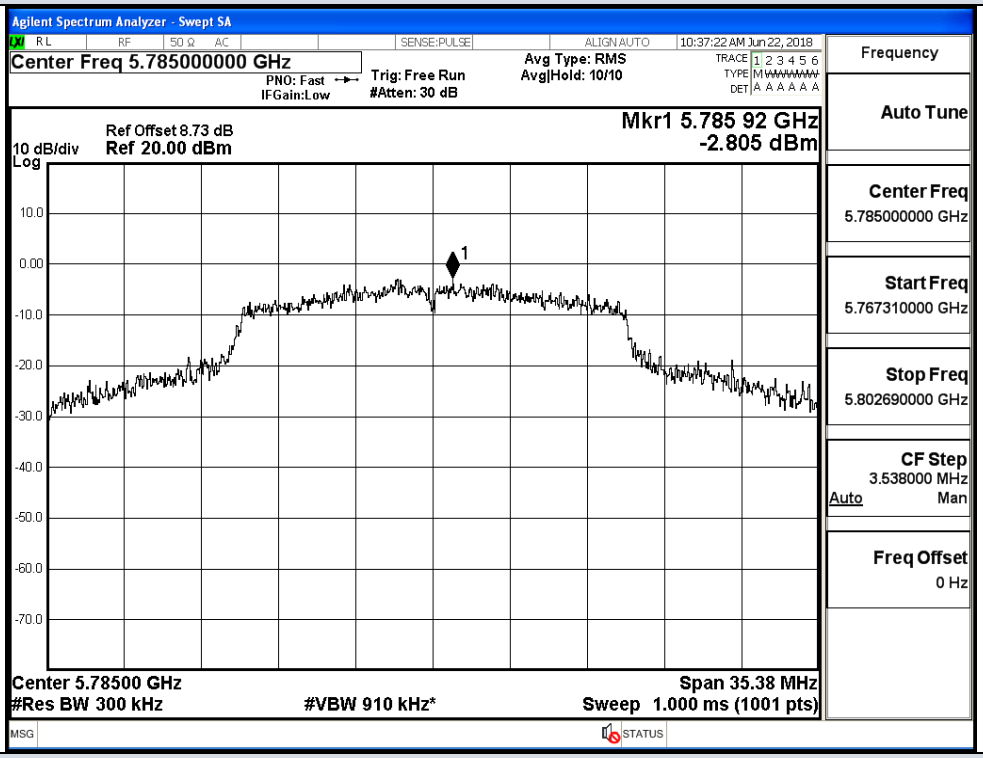

IEEE 802.11a / Channel 149 / 5745 MHz

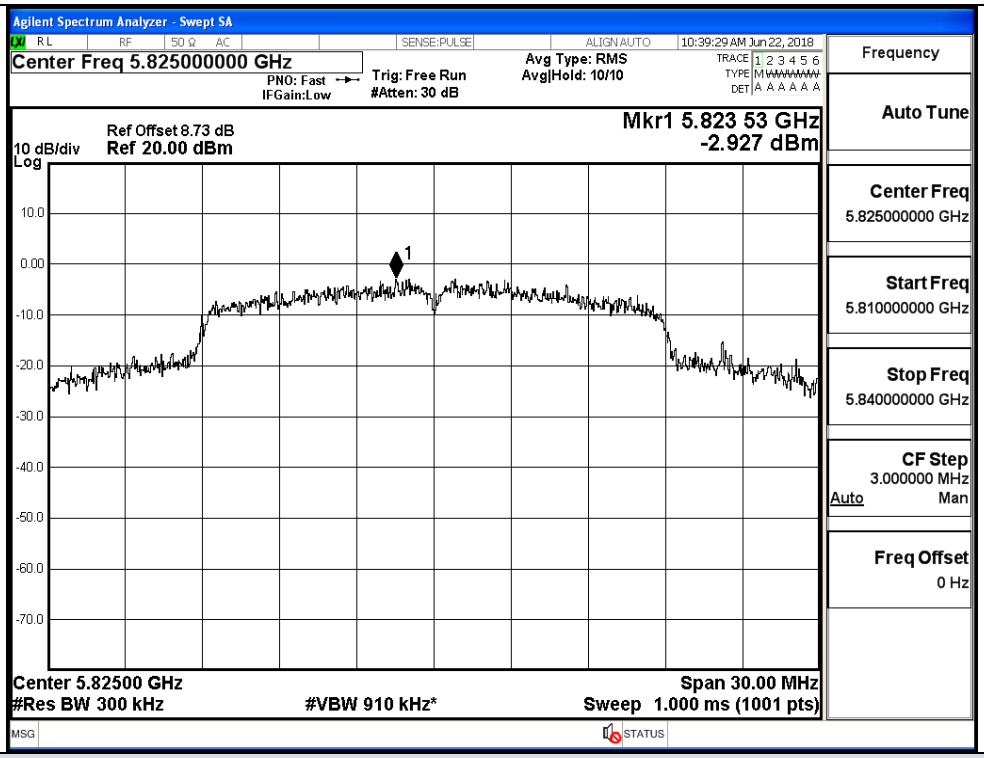



IEEE 802.11a / Channel 157 / 5785 MHz



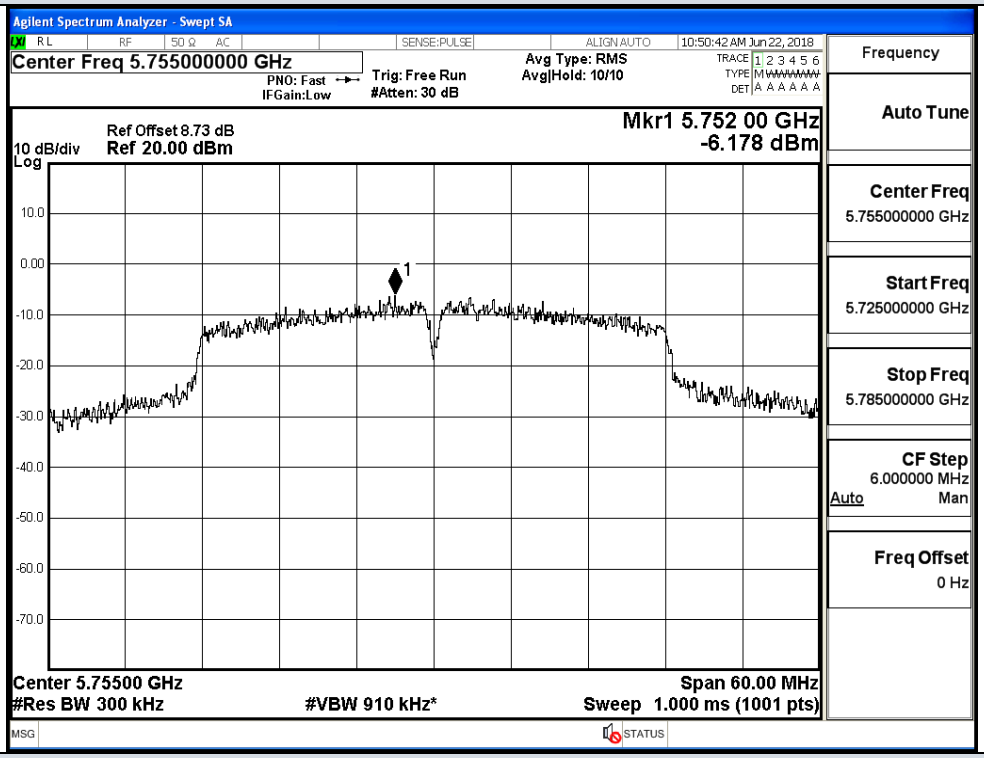

IEEE 802.11a / Channel 165 / 5825 MHz

| Power Spectral Density |
|---|
|  |
| IEEE 802.11n HT20 / Channel 149 / 5745 MHz |
|  |
| IEEE 802.11n HT20 / Channel 157 / 5785 MHz |

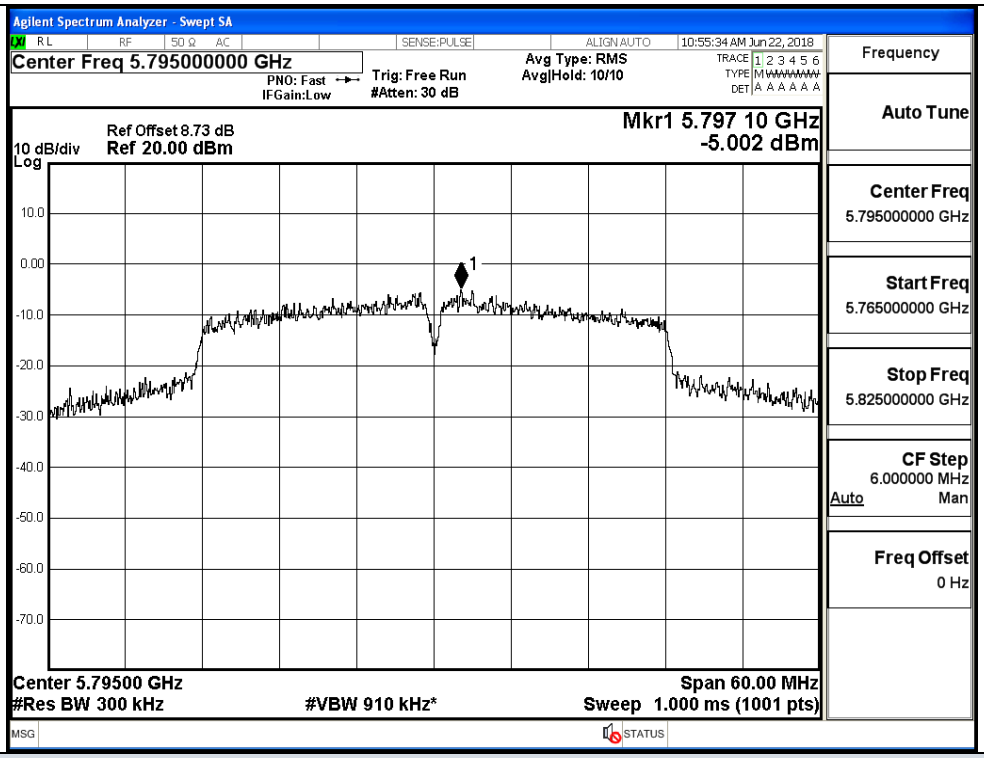



IEEE 802.11n HT20 / Channel 165 / 5825 MHz

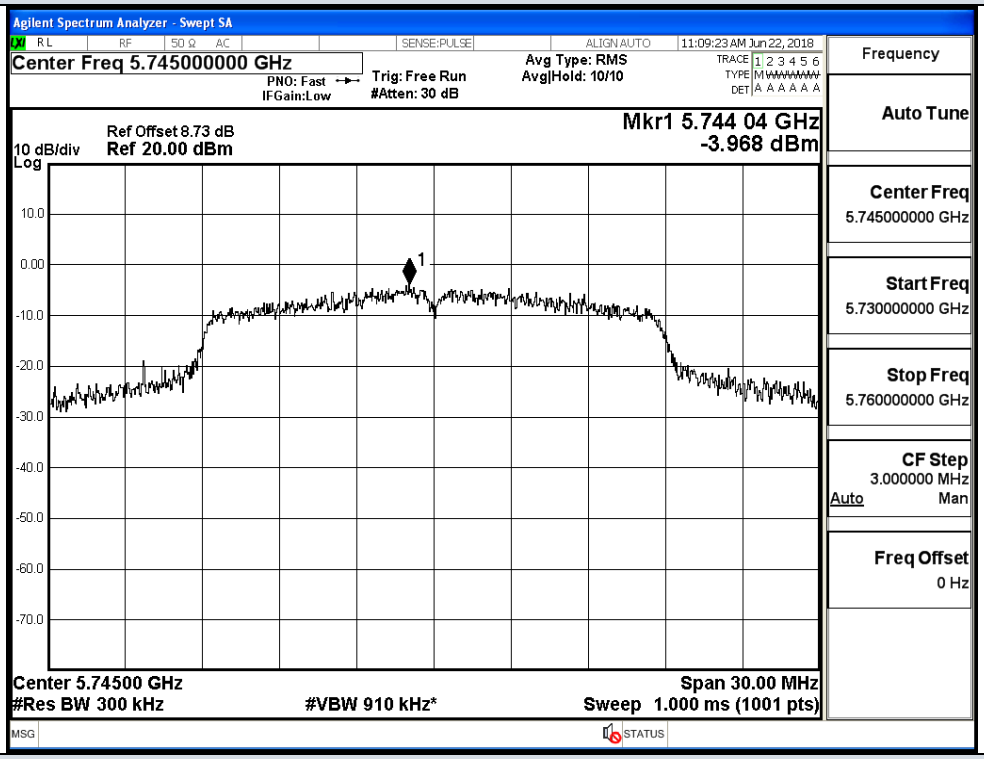
Power Spectral Density



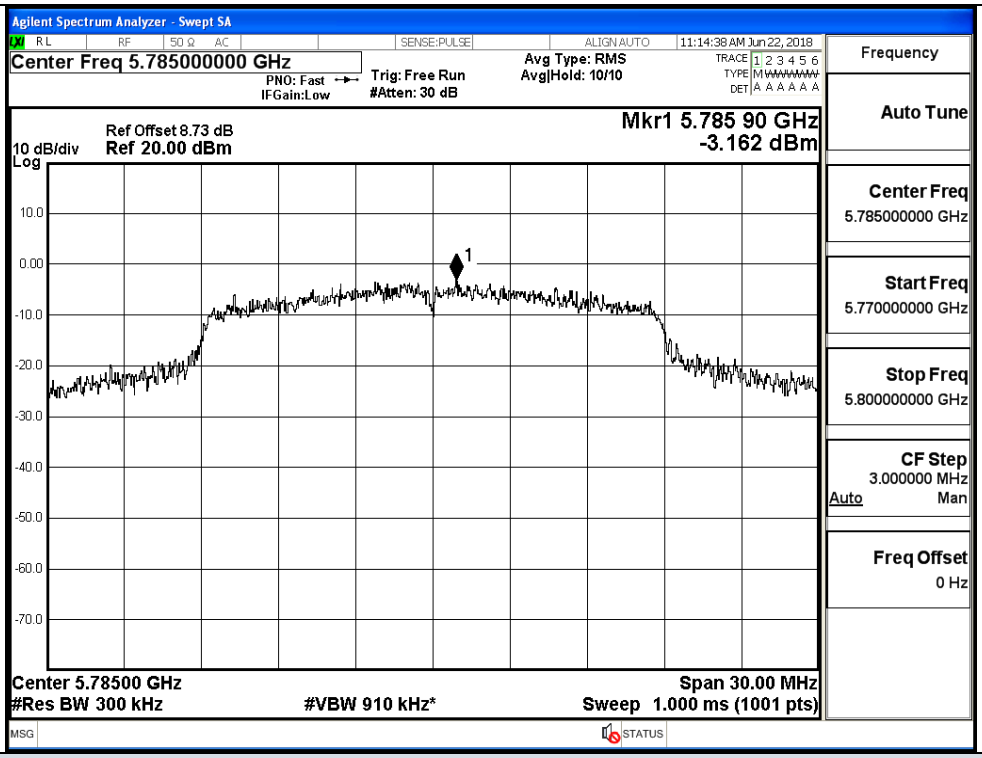

IEEE 802.11n HT40 / Channel 151 / 5755 MHz



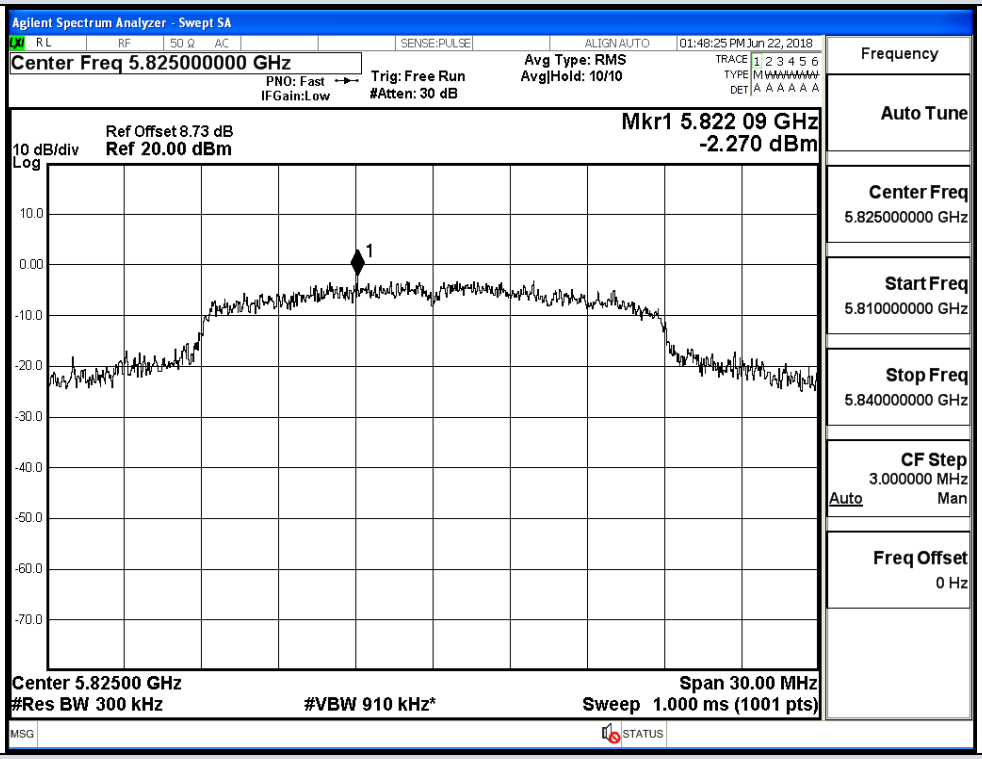

IEEE 802.11n HT40 / Channel 159 / 5795 MHz



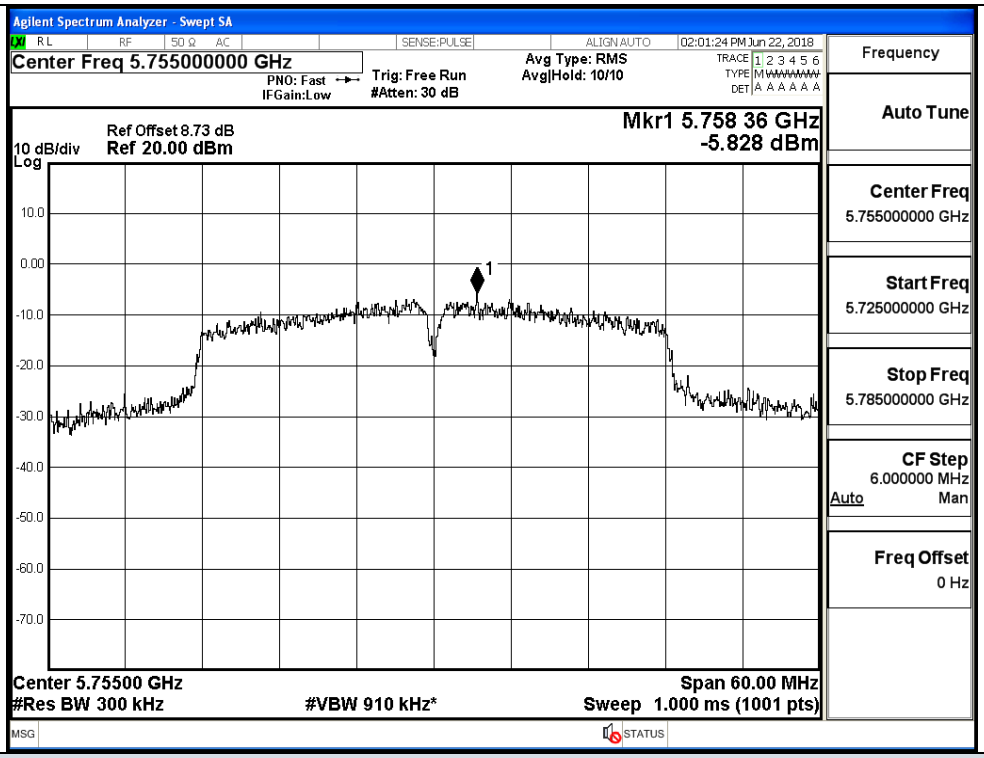

IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



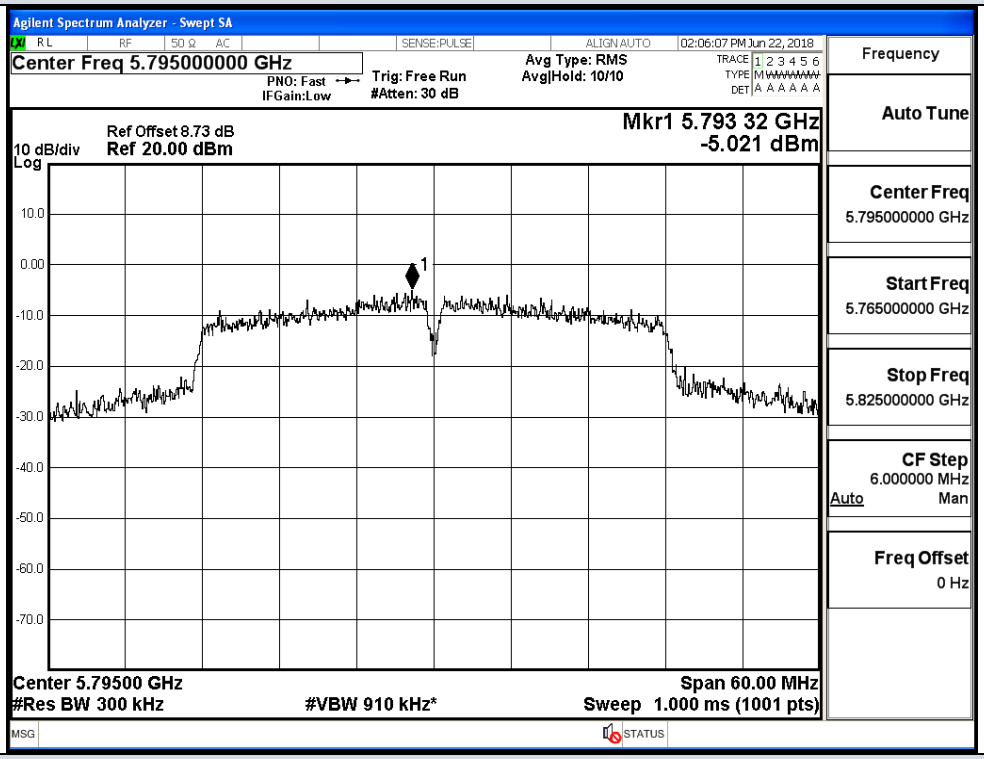

IEEE 802.11ac VHT20 / Channel 157 / 5785 MHz



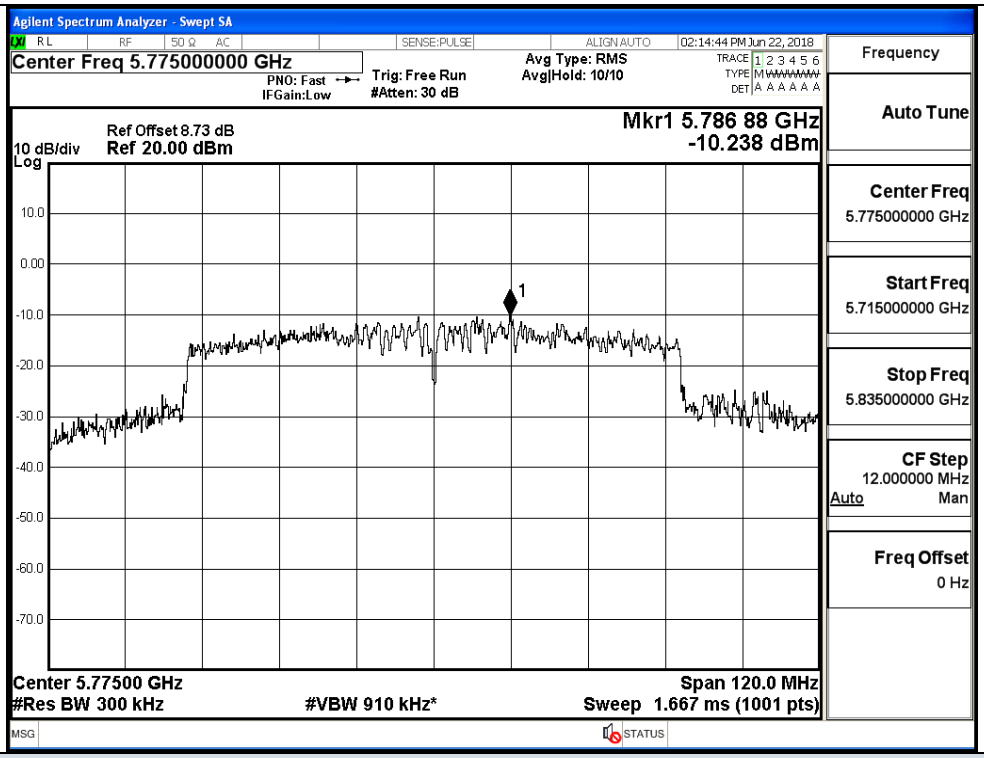

IEEE 802.11ac VHT 20 / Channel 165 / 5825 MHz




IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz




IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz

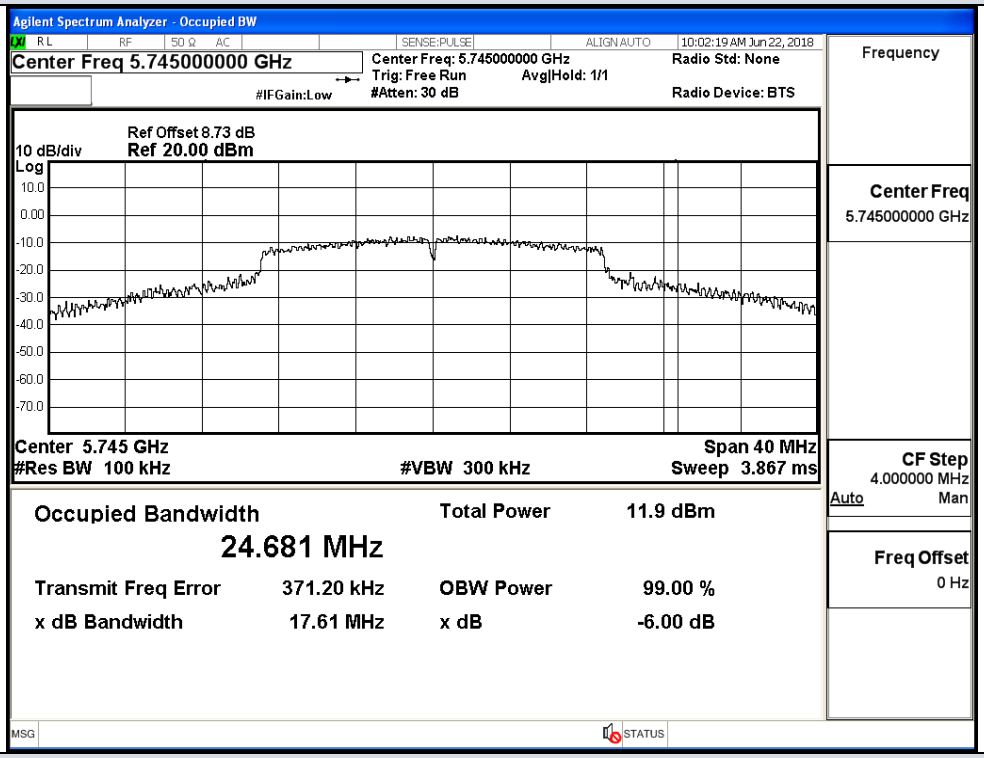



IEEE 802.11ac VHT80 / Channel 155/ 5775 MHz

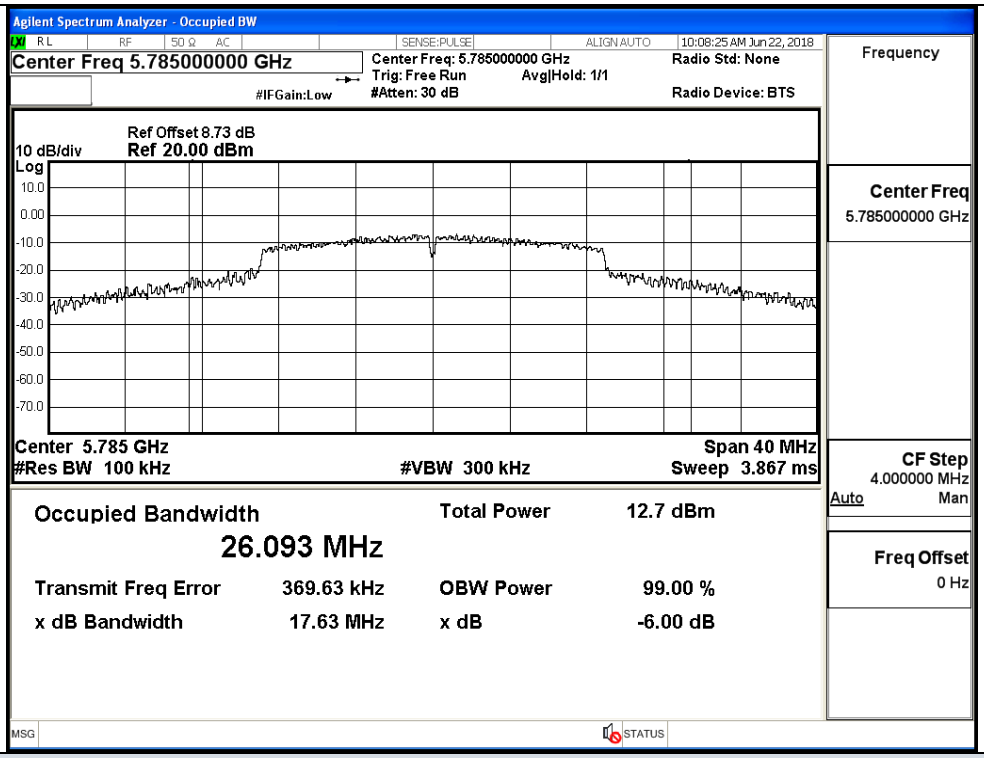
## D.4 Emission Bandwidth

| Test Mode | Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | Limit (MHz) |
|---|---|---|---|---|
| IEEE 802.11a | 149 | 5745 | 17.610 | >=0.5 |
| | 157 | 5785 | 17.630 | |
| | 165 | 5825 | 17.620 | |
| IEEE 802.11n HT20 | 149 | 5745 | 17.520 | >=0.5 |
| | 157 | 5785 | 17.690 | |
| | 165 | 5825 | 17.590 | |
| IEEE 802.11n HT40 | 151 | 5755 | 35.880 | >=0.5 |
| | 159 | 5795 | 36.030 | |
| IEEE 802.11ac VHT20 | 149 | 5745 | 17.350 | >=0.5 |
| | 157 | 5785 | 16.900 | |
| | 165 | 5825 | 17.590 | |
| IEEE 802.11ac VHT40 | 151 | 5755 | 36.340 | >=0.5 |
| | 159 | 5795 | 35.860 | |
| IEEE 802.11ac VHT80 | 155 | 5775 | 75.660 | >=0.5 |

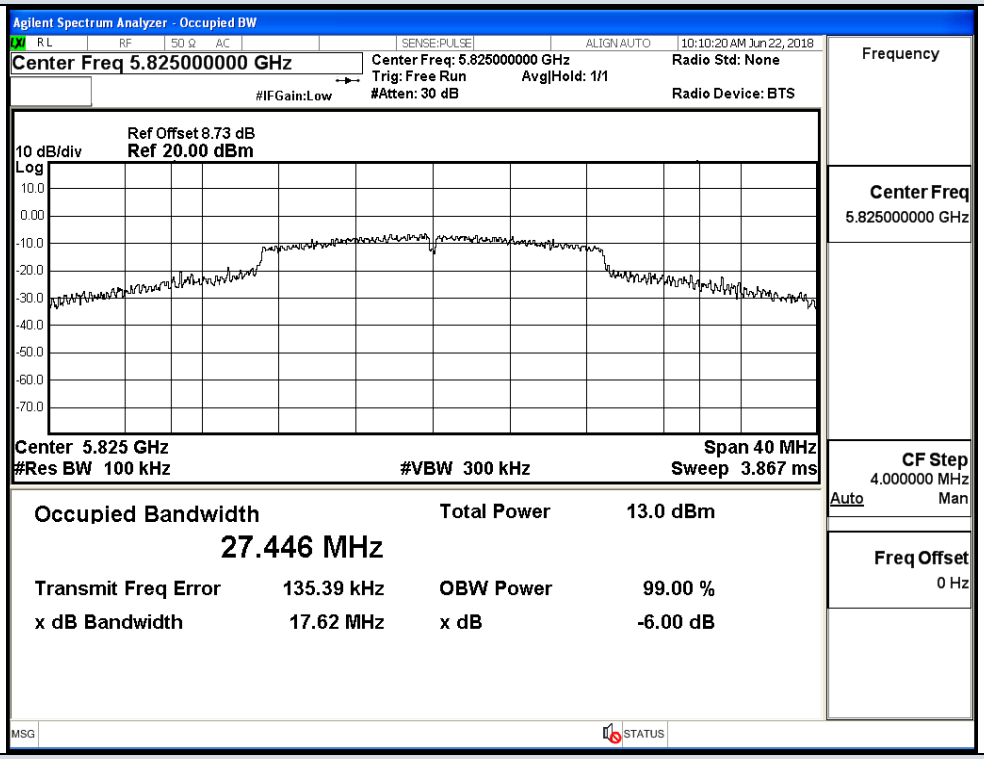
6dB Bandwidth




IEEE 802.11a / Channel 149 / 5745 MHz

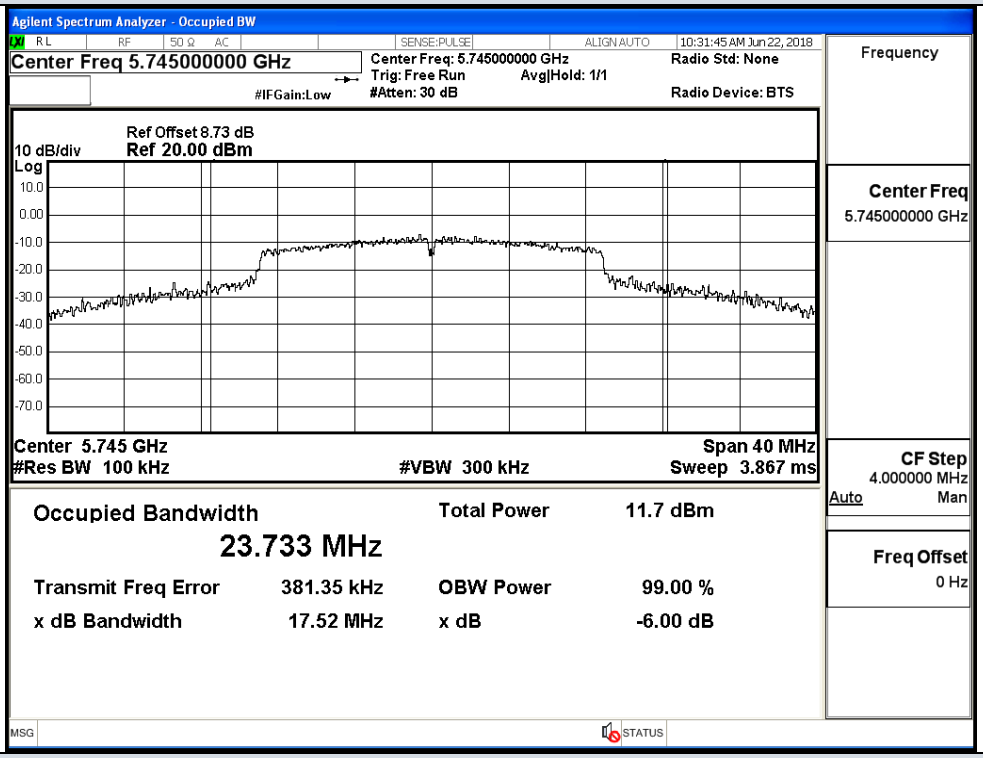



IEEE 802.11a / Channel 157 / 5785 MHz

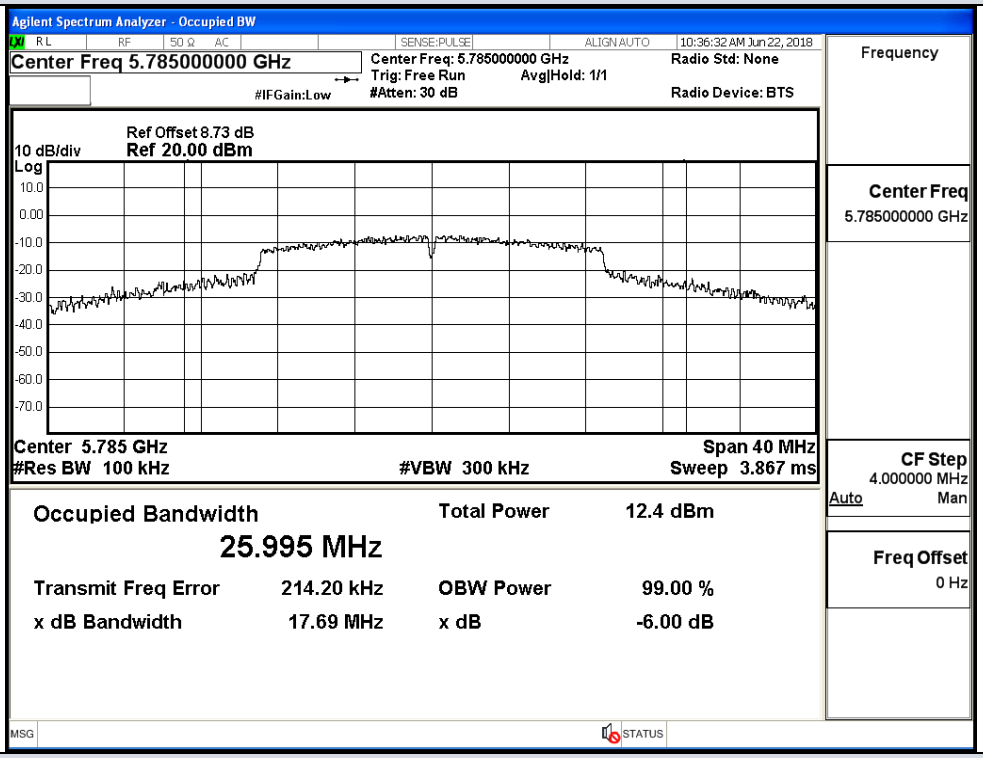



IEEE 802.11a / Channel 165 / 5825 MHz

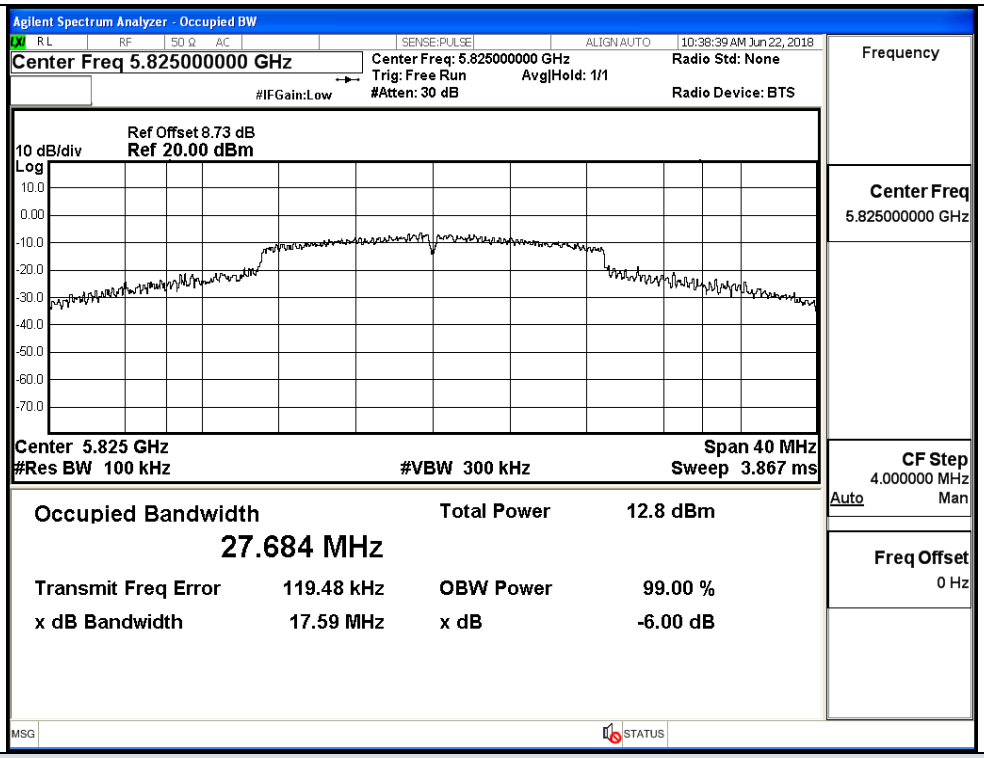
| 6dB Bandwidth |
|---|




| IEEE 802.11n HT20 / Channel 149 / 5745 MHz |
|---|

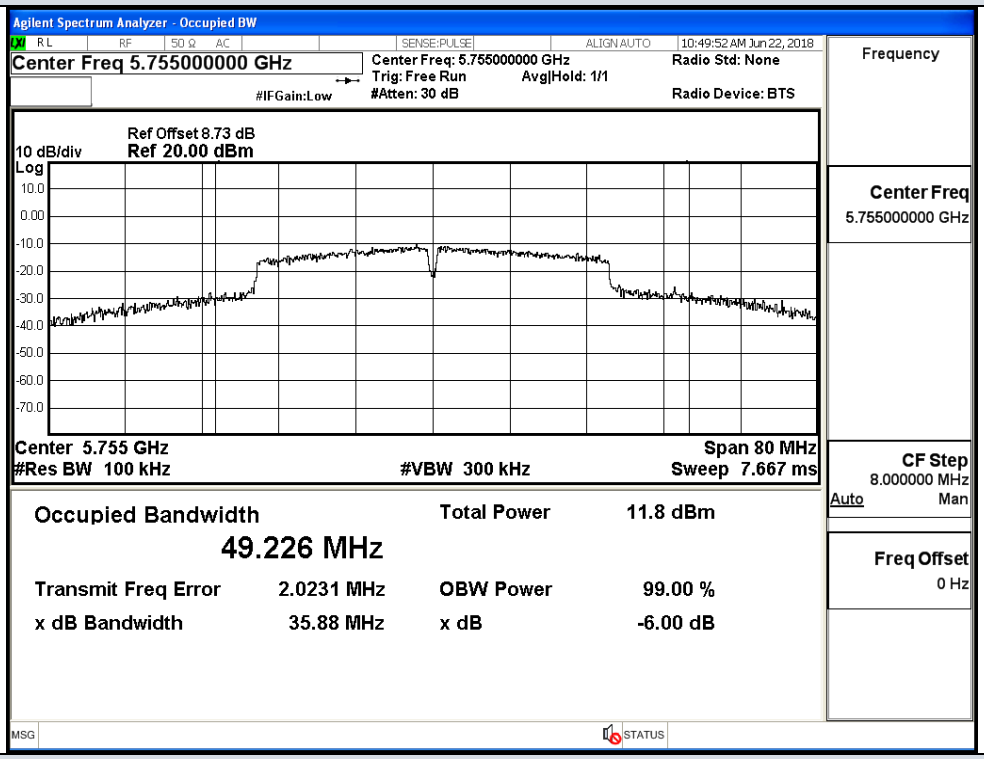



| IEEE 802.11n HT20 / Channel 157 / 5785 MHz |
|---|

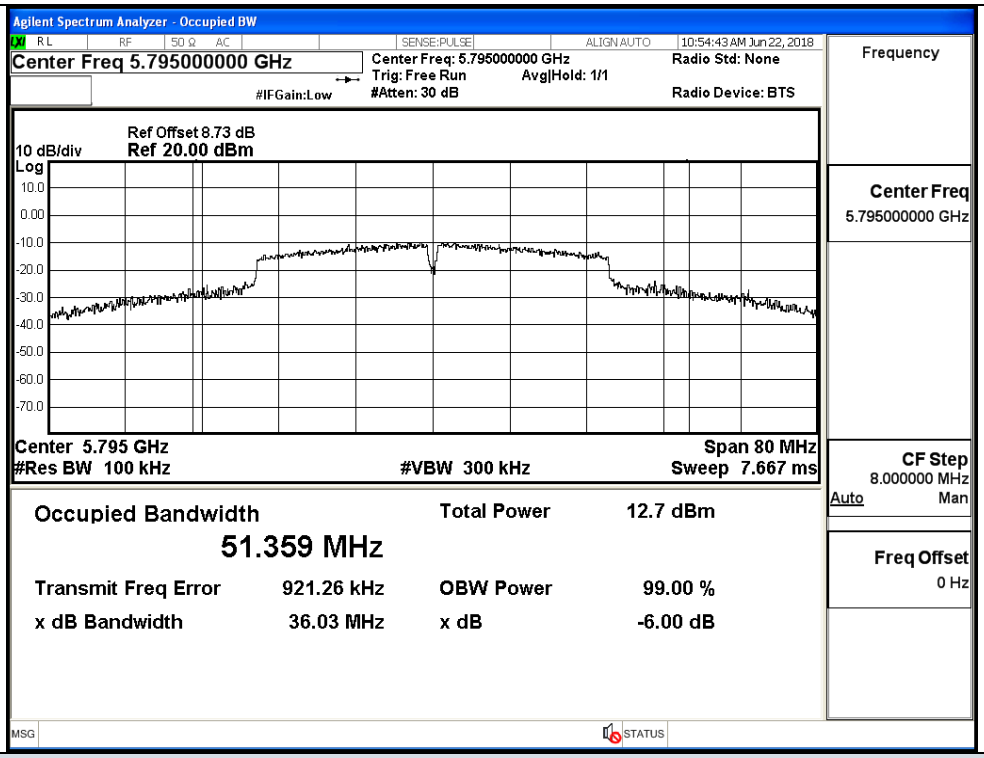



IEEE 802.11n HT20 / Channel 165 / 5825 MHz

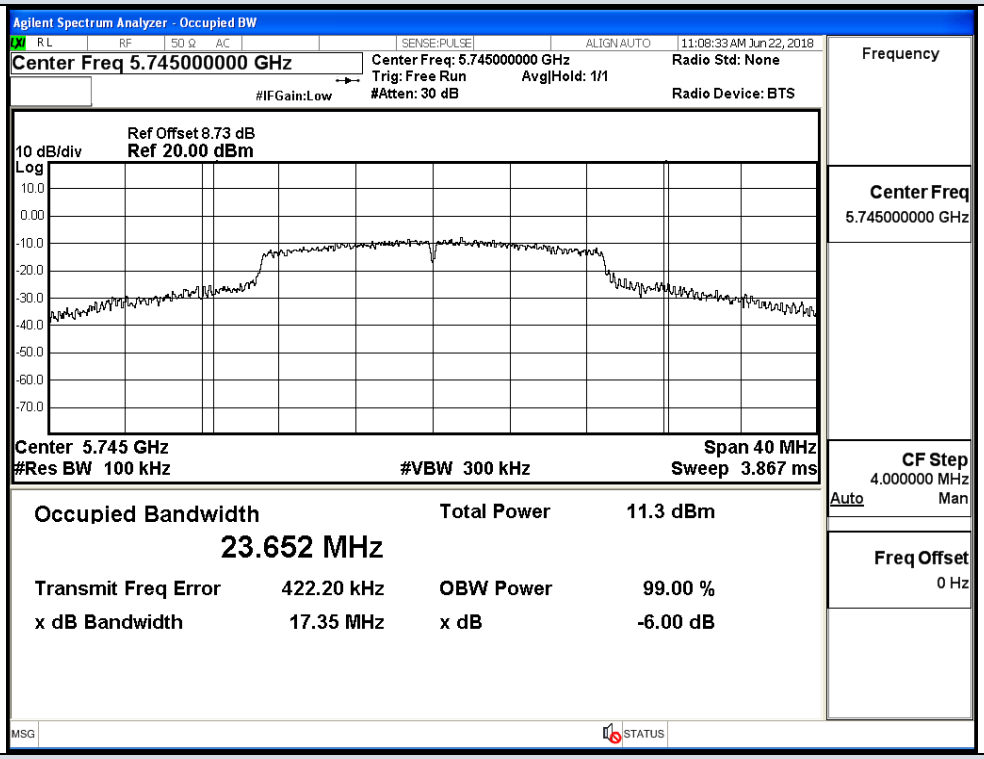
6dB Bandwidth



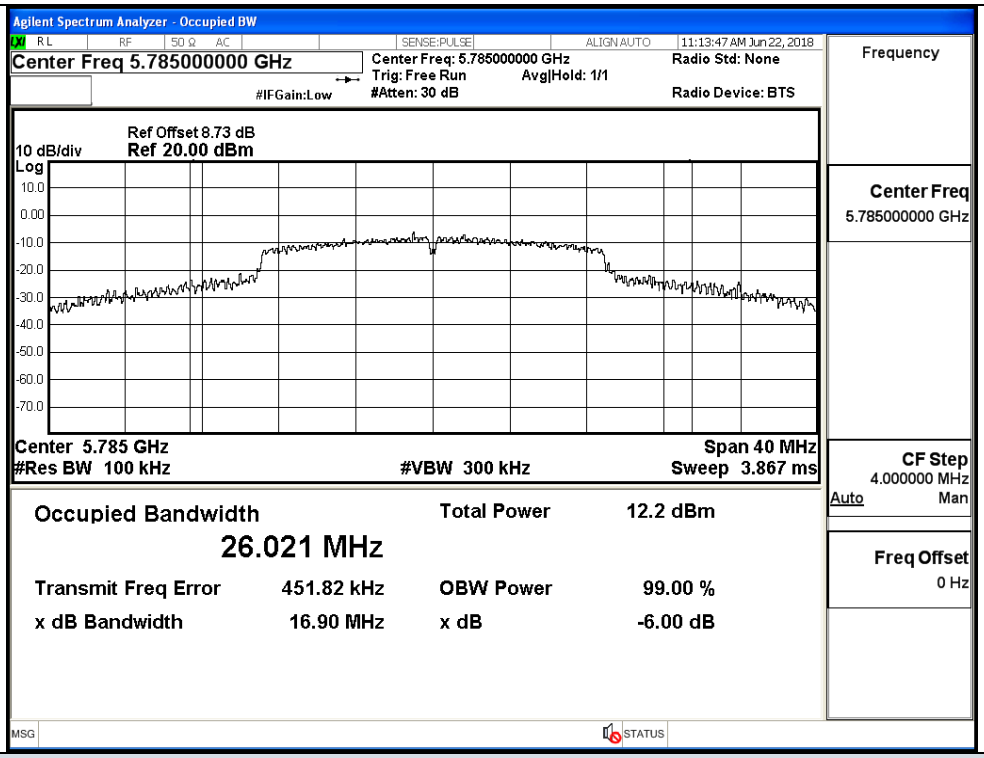

IEEE 802.11n HT40 / Channel 151 / 5755 MHz



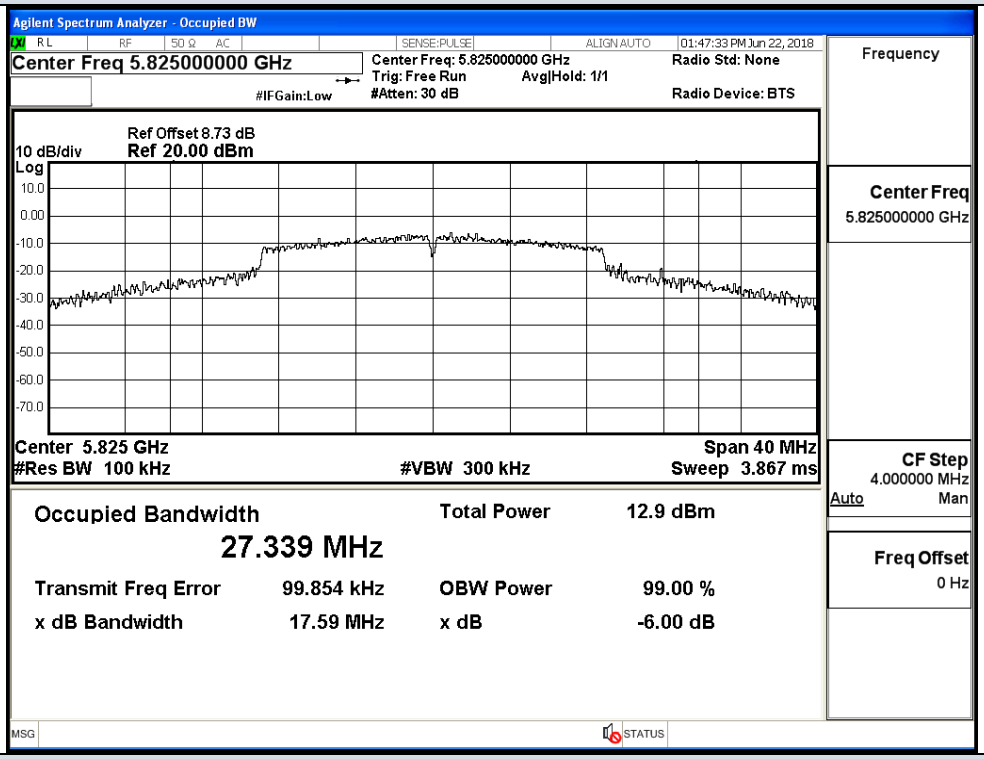

IEEE 802.11n HT40 / Channel 159 / 5795 MHz



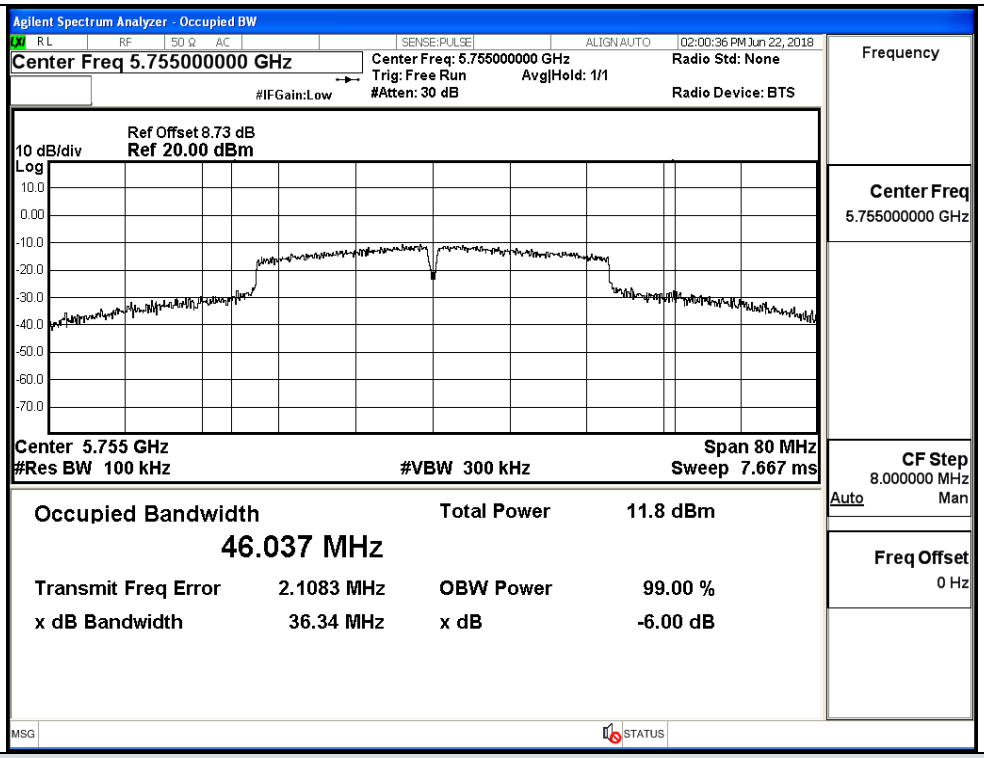

IEEE 802.11ac VHT 20 / Channel 149 / 5745 MHz



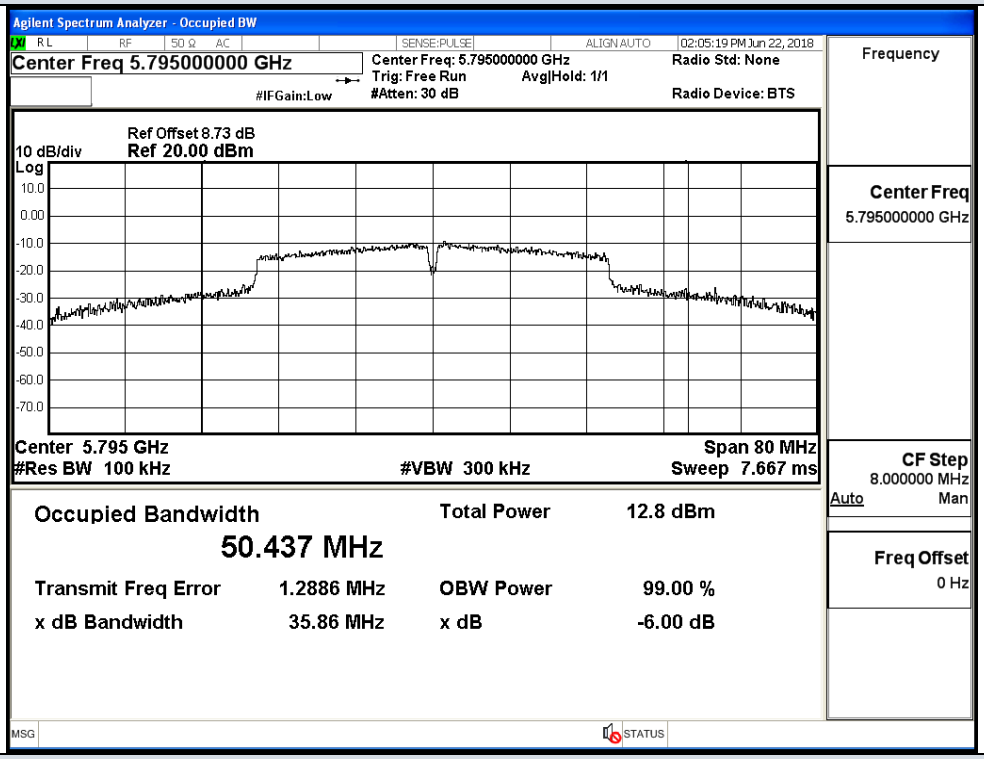

IEEE 802.11ac VHT20 / Channel 157/ 5785 MHz



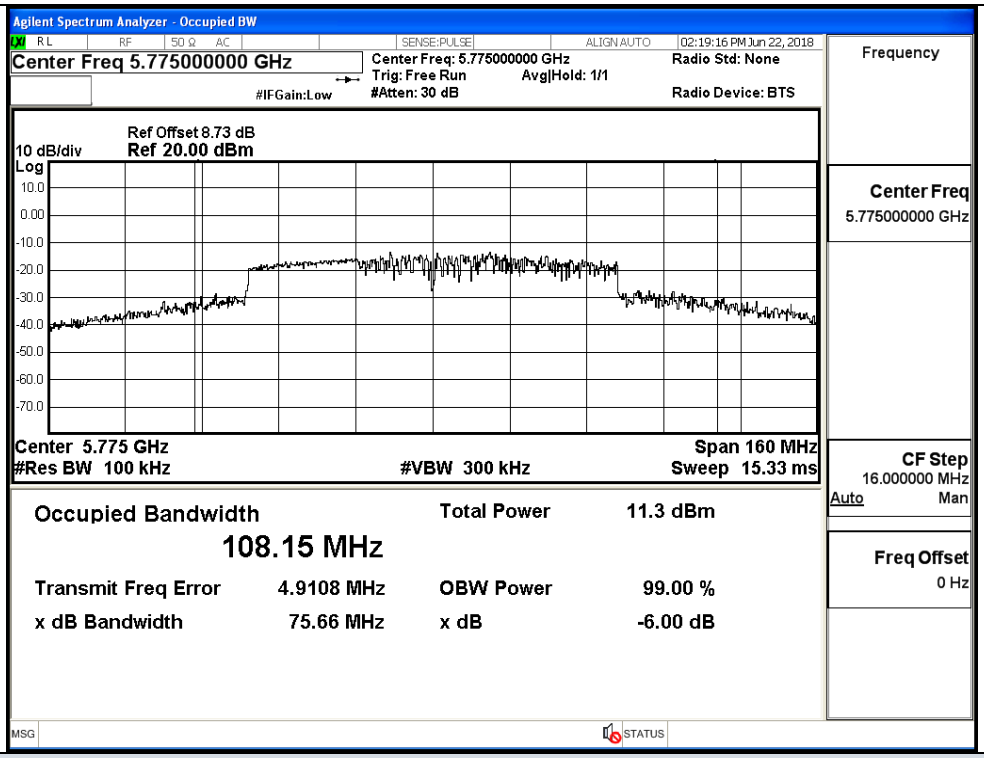

IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz




IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz




IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz

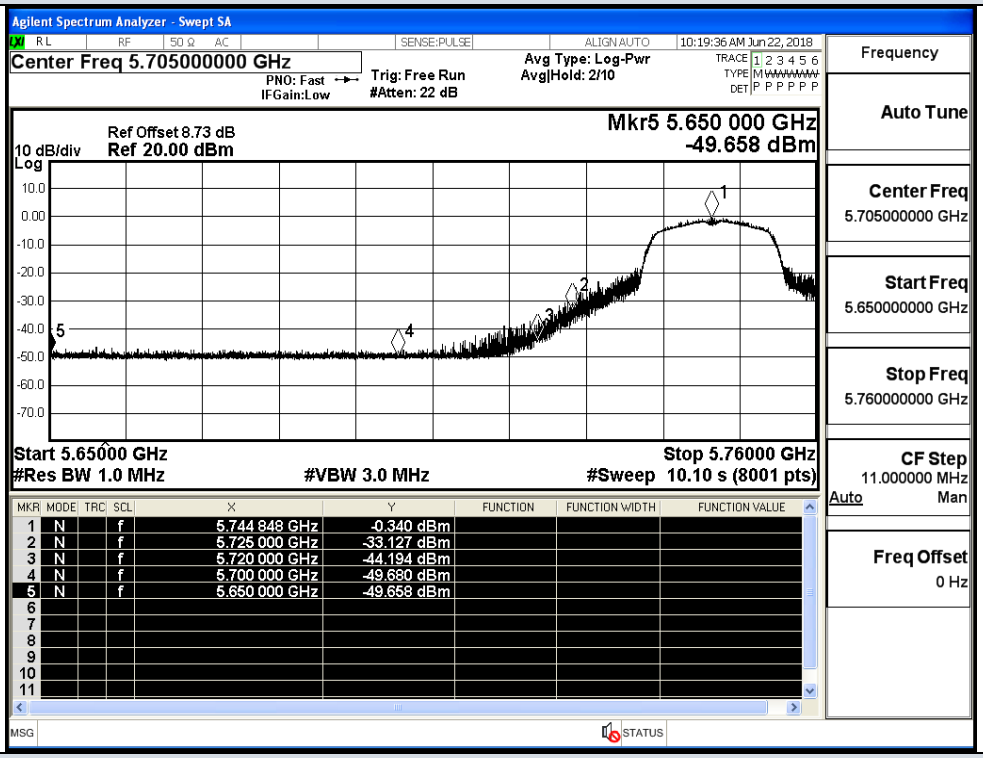



IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz

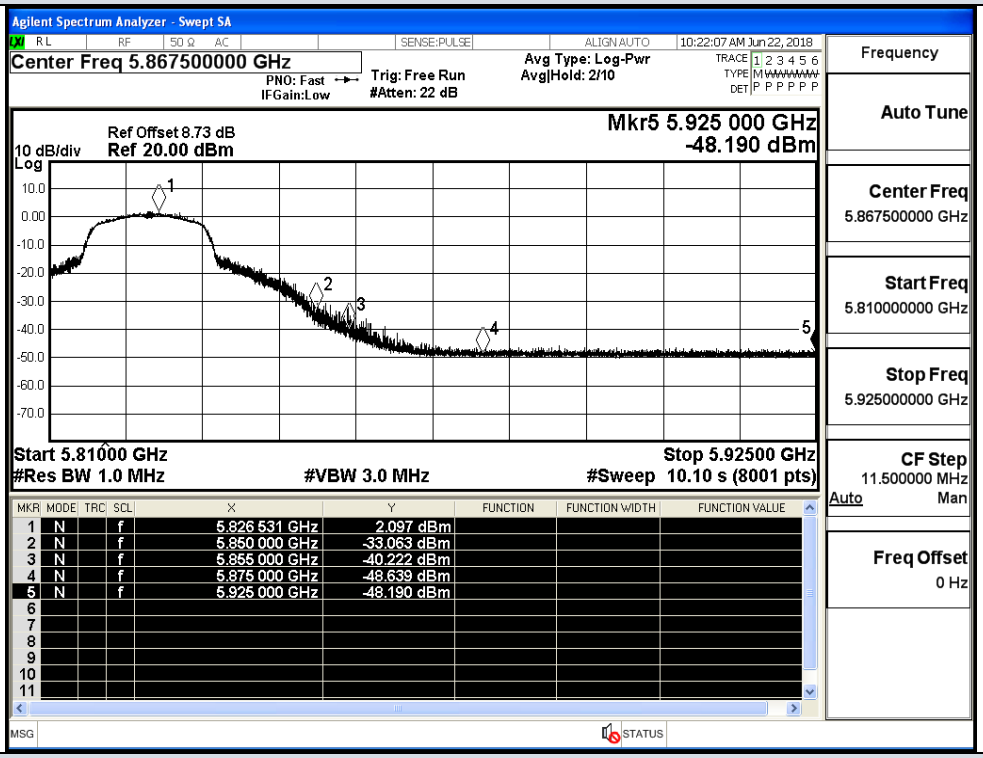
## D.5 Undesirable Emissions Measurement

| Test Mode | Channel | Frequency (MHz) | Conducted Power (dBm) | Antenna Gain (dBi) | EIRP (dBm/MHz) | Detector | Limit (dBm/MHz) |
|---|---|---|---|---|---|---|---|
| IEEE 802.11a | 149 | 5650.000 | -49.658 | 2.000 | -47.658 | Peak | -27.00 |
| | | 5700.000 | -49.680 | 2.000 | -47.680 | Peak | 10.00 |
| | | 5720.000 | -44.194 | 2.000 | -42.194 | Peak | 15.60 |
| | | 5725.000 | -33.127 | 2.000 | -31.127 | Peak | 27.00 |
| | 165 | 5850.000 | -33.063 | 2.000 | -31.063 | Peak | 27.00 |
| | | 5855.000 | -40.222 | 2.000 | -38.222 | Peak | 15.60 |
| | | 5875.000 | -48.639 | 2.000 | -46.639 | Peak | 10.00 |
| | | 5925.000 | -48.190 | 2.000 | -46.190 | Peak | -27.00 |
| IEEE 802.11n HT20 | 149 | 5650.000 | -49.124 | 2.000 | -47.124 | Peak | -27.00 |
| | | 5700.000 | -50.124 | 2.000 | -48.124 | Peak | 10.00 |
| | | 5720.000 | -44.627 | 2.000 | -42.627 | Peak | 15.60 |
| | | 5725.000 | -35.029 | 2.000 | -33.029 | Peak | 27.00 |
| | 165 | 5850.000 | -35.142 | 2.000 | -33.142 | Peak | 27.00 |
| | | 5855.000 | -39.190 | 2.000 | -37.190 | Peak | 15.60 |
| | | 5875.000 | -49.281 | 2.000 | -47.281 | Peak | 10.00 |
| | | 5925.000 | -48.974 | 2.000 | -46.974 | Peak | -27.00 |
| IEEE 802.11n HT40 | 151 | 5650.000 | -50.142 | 2.000 | -48.142 | Peak | -27.00 |
| | | 5700.000 | -48.250 | 2.000 | -46.250 | Peak | 10.00 |
| | | 5720.000 | -36.340 | 2.000 | -34.340 | Peak | 15.60 |
| | | 5725.000 | -31.390 | 2.000 | -29.390 | Peak | 27.00 |
| | 159 | 5850.000 | -32.493 | 2.000 | -30.493 | Peak | 27.00 |
| | | 5855.000 | -34.860 | 2.000 | -32.860 | Peak | 15.60 |
| | | 5875.000 | -45.176 | 2.000 | -43.176 | Peak | 10.00 |
| | | 5925.000 | -48.544 | 2.000 | -46.544 | Peak | -27.00 |
| IEEE 802.11ac VHT20 | 149 | 5650.000 | -48.870 | 2.000 | -46.870 | Peak | -27.00 |
| | | 5700.000 | -50.115 | 2.000 | -48.115 | Peak | 10.00 |
| | | 5720.000 | -45.180 | 2.000 | -43.180 | Peak | 15.60 |
| | | 5725.000 | -36.808 | 2.000 | -34.808 | Peak | 27.00 |
| | 165 | 5850.000 | -37.152 | 2.000 | -35.152 | Peak | 27.00 |
| | | 5855.000 | -41.018 | 2.000 | -39.018 | Peak | 15.60 |
| | | 5875.000 | -48.791 | 2.000 | -46.791 | Peak | 10.00 |
| | | 5925.000 | -38.335 | 2.000 | -36.335 | Peak | -27.00 |
| IEEE 802.11ac VHT40 | 149 | 5650.000 | -49.733 | 2.000 | -47.733 | Peak | -27.00 |
| | | 5700.000 | -49.563 | 2.000 | -47.563 | Peak | 10.00 |
| | | 5720.000 | -38.195 | 2.000 | -36.195 | Peak | 15.60 |
| | | 5725.000 | -34.396 | 2.000 | -32.396 | Peak | 27.00 |
| | 165 | 5850.000 | -32.089 | 2.000 | -30.089 | Peak | 27.00 |
| | | 5855.000 | -35.062 | 2.000 | -33.062 | Peak | 15.60 |
| | | 5875.000 | -44.284 | 2.000 | -42.284 | Peak | 10.00 |
| | | 5925.000 | -48.231 | 2.000 | -46.231 | Peak | -27.00 |
| IEEE 802.11ac VHT80 | 155 | 5650.000 | -51.827 | 2.000 | -49.827 | Peak | -27.00 |
| | | 5700.000 | -43.407 | 2.000 | -41.407 | Peak | 10.00 |
| | | 5720.000 | -34.744 | 2.000 | -32.744 | Peak | 15.60 |
| | | 5725.000 | -34.953 | 2.000 | -32.953 | Peak | 27.00 |
| | | 5850.000 | -35.255 | 2.000 | -33.255 | Peak | 27.00 |
| | | 5855.000 | -37.857 | 2.000 | -35.857 | Peak | 15.60 |
| | | 5875.000 | -45.811 | 2.000 | -43.811 | Peak | 10.00 |
| | | 5925.000 | -49.782 | 2.000 | -47.782 | Peak | -27.00 |

## Undesirable Emissions Measurement

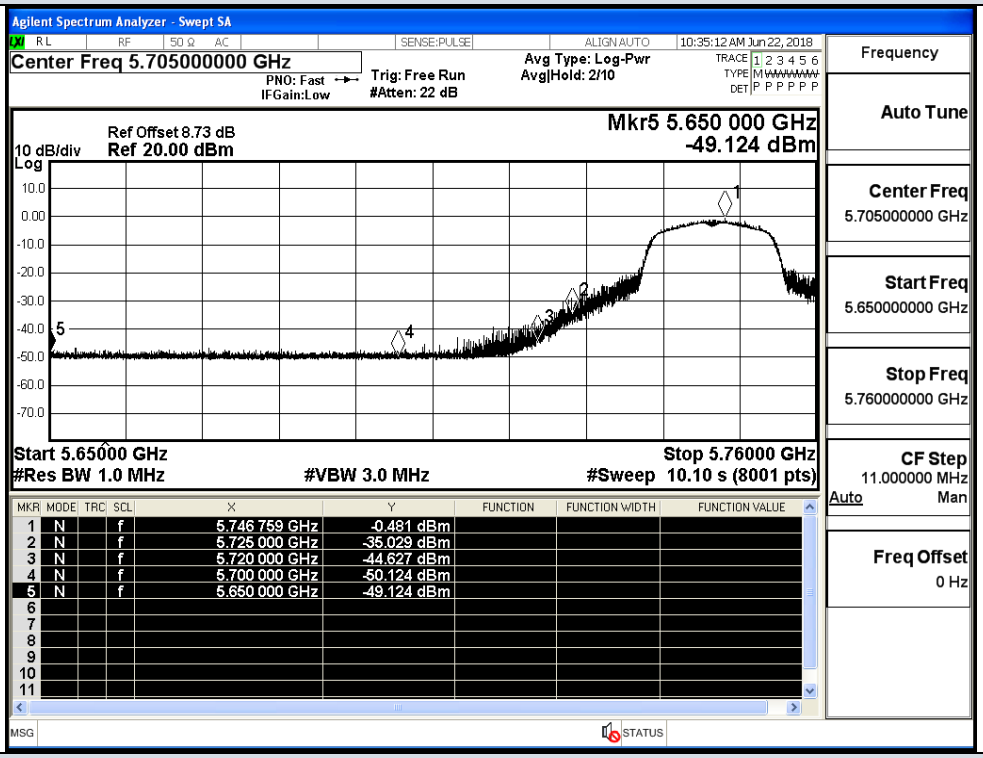



IEEE 802.11a / Channel 149 / 5745 MHz / Peak

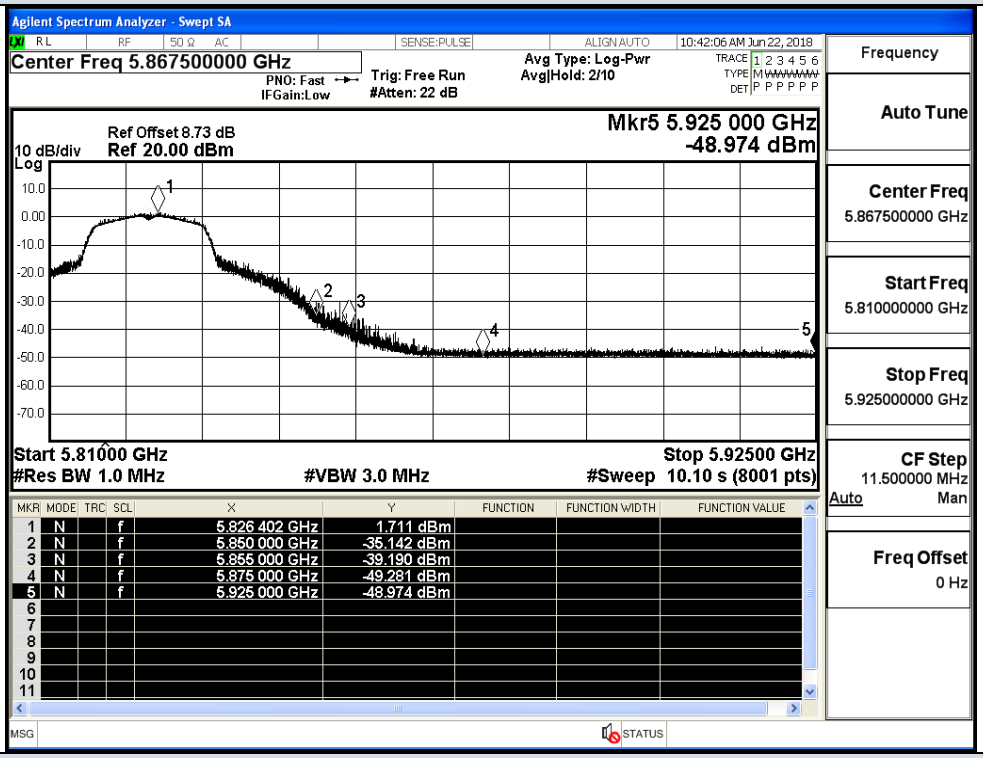



IEEE 802.11a / Channel 165 / 5825 MHz / Peak

| Undesirable Emissions Measurement |
|---|

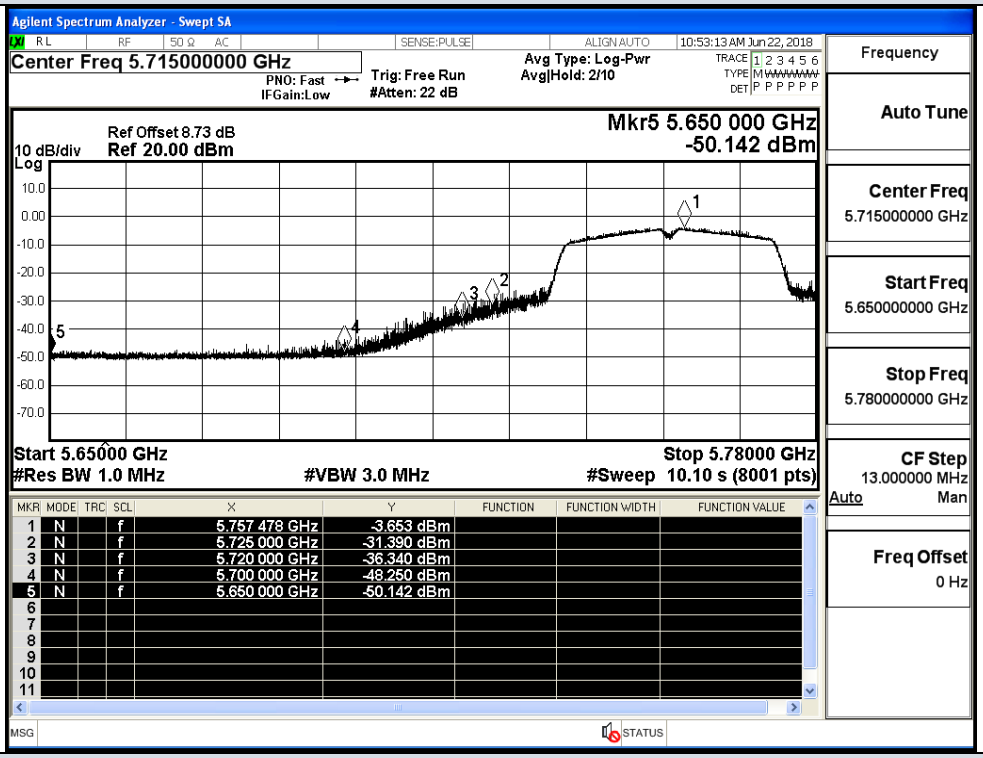



| IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak |
|---|

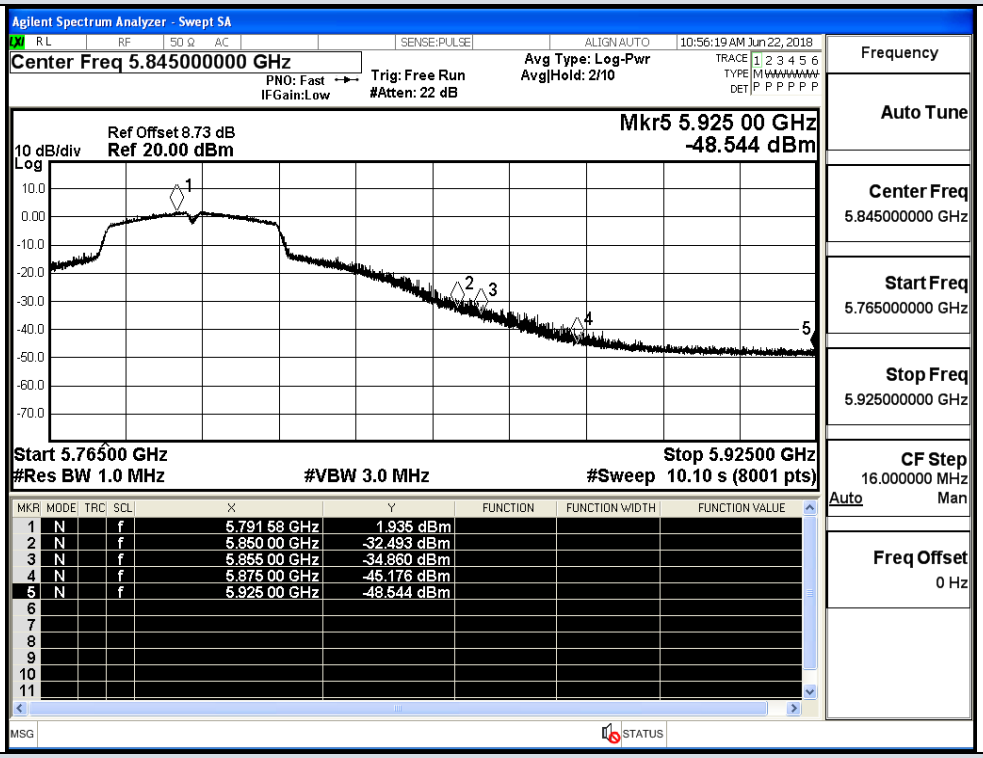



| IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak |
|---|

| Undesirable Emissions Measurement |
|---|

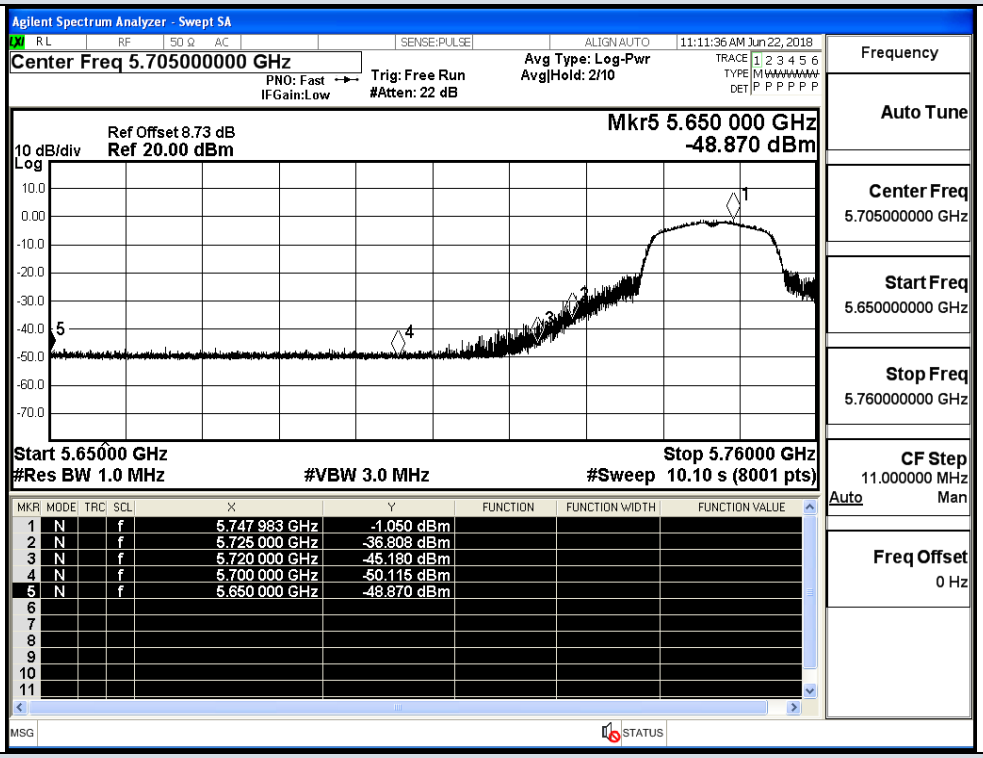



| IEEE 802.11n HT40 / Channel 151 / 575 5MHz / Peak |
|---|

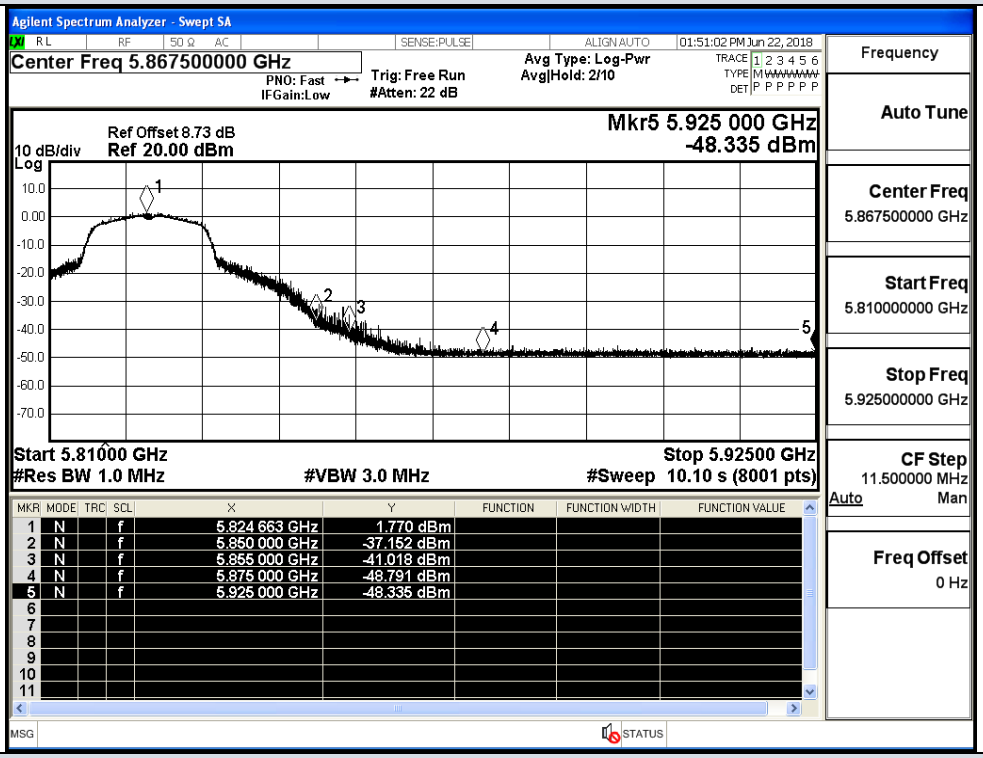



| IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak |
|---|

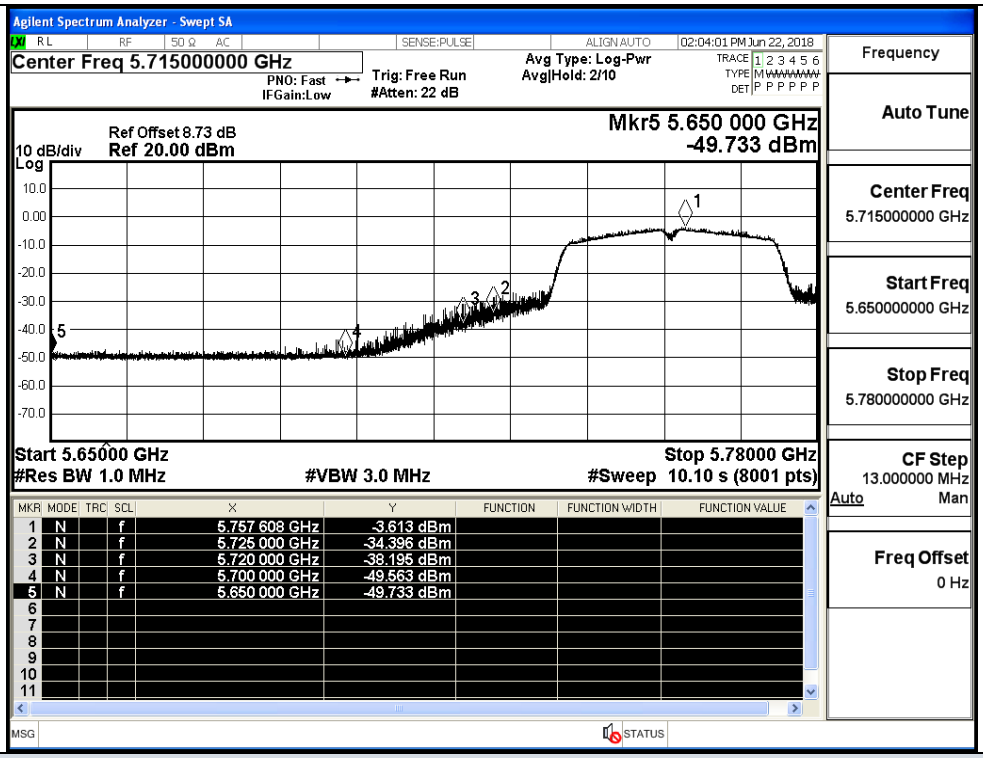
## Undesirable Emissions Measurement



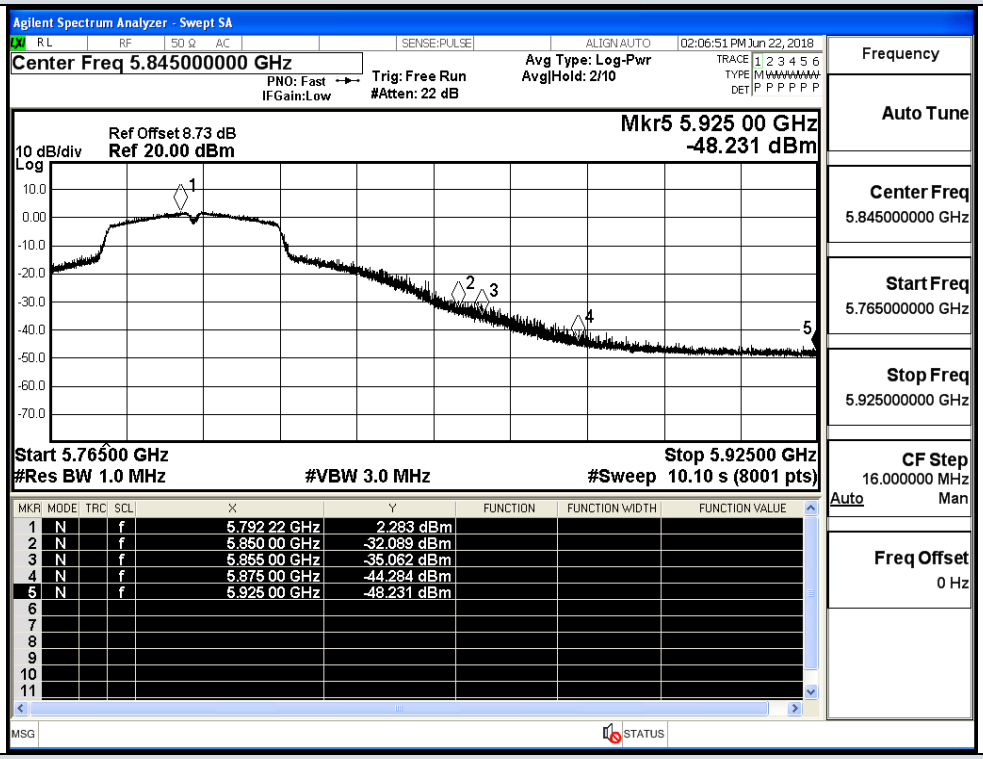

IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz / Peak



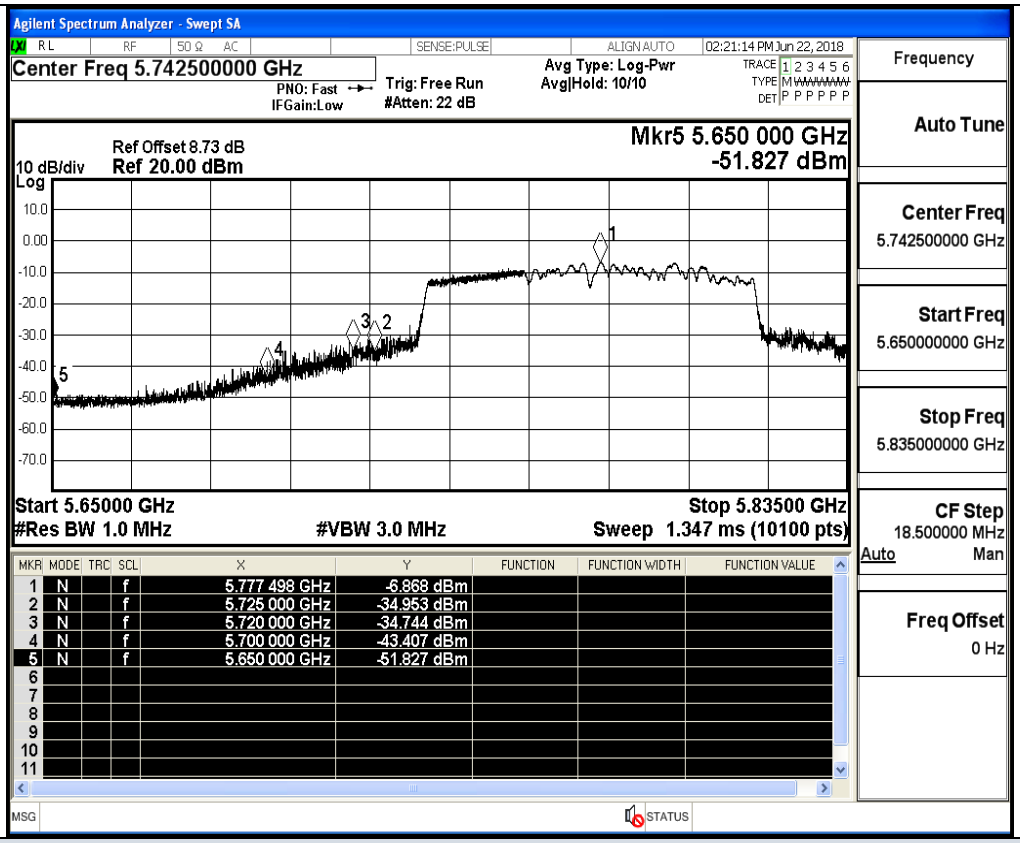

IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz / Peak



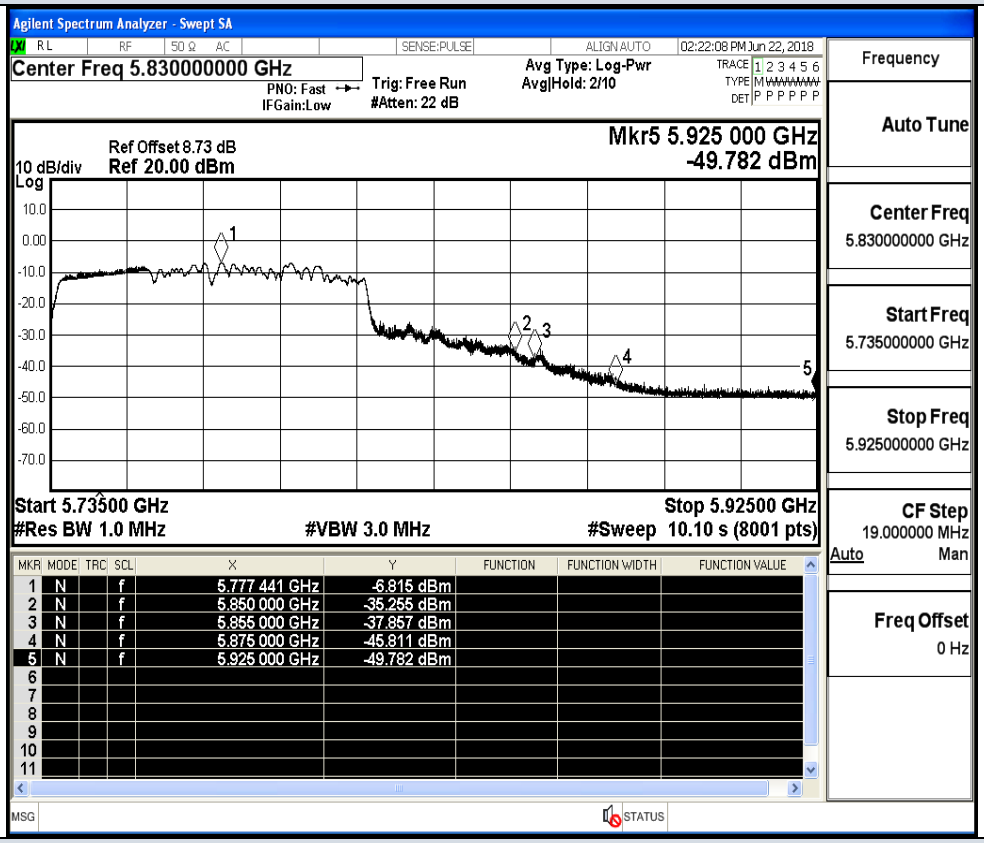

IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz / Peak




IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz / Peak




IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz / Peak




IEEE 802.11ac VHT80 / Channel 155/ 5775 MHz / Peak