9. MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY

9.1. MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer to Section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

Refer to Section 6.

9.4. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5180	1.870	11	Pass
	5200	1.445	11	Pass
	5240	1.856	11	Pass
802.11n20	5180	1.822	11	Pass
	5200	1.856	11	Pass
	5240	2.019	11	Pass
802.11n40	5190	-2.065	11	Pass
	5230	-2.983	11	Pass
802.11ac20	5180	0.566	11	Pass
	5200	-0.003	11	Pass
	5240	0.041	11	Pass
802.11ac40	5190	-2.124	11	Pass
	5230	-3.041	11	Pass
802.11ac80	5210	-6.221	11	Pass

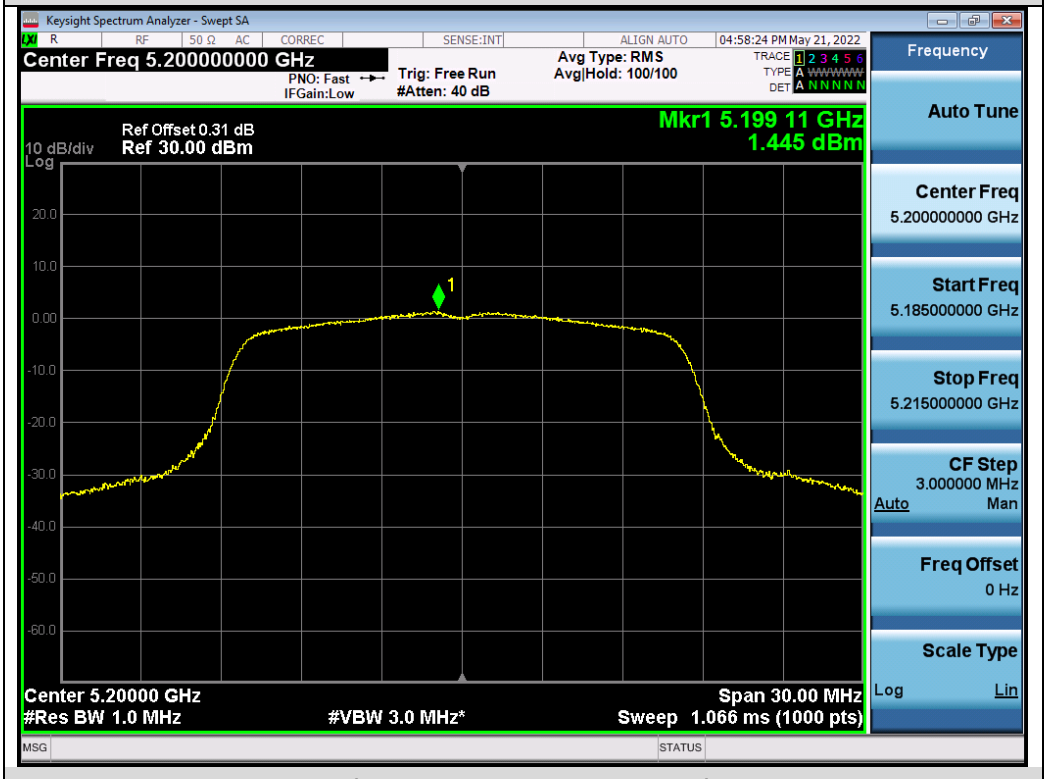
Test Data of Conducted Output Power Density for band 5.25-5.35 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5260	1.395	11	Pass
	5300	1.008	11	Pass
	5320	1.064	11	Pass
802.11n20	5260	1.628	11	Pass
	5300	0.817	11	Pass
	5320	0.948	11	Pass
802.11n40	5270	-2.004	11	Pass
	5310	-2.408	11	Pass
802.11ac20	5260	0.769	11	Pass
	5300	-0.116	11	Pass
	5320	0.019	11	Pass
802.11ac40	5270	-2.090	11	Pass
	5310	-2.857	11	Pass
802.11ac80	5290	-6.568	11	Pass

Test Data of Conducted Output Power Density for band 5.47-5.725 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5500	1.204	11	Pass
	5600	1.823	11	Pass
	5700	0.701	11	Pass
802.11n20	5500	0.535	11	Pass
	5600	0.974	11	Pass
	5700	0.614	11	Pass
802.11n40	5510	-2.457	11	Pass
	5590	-1.852	11	Pass
802.11ac20	5670	-1.047	11	Pass
	5500	0.466	11	Pass
	5600	1.045	11	Pass
802.11ac40	5700	1.166	11	Pass
	5510	-2.732	11	Pass
802.11ac80	5610	-5.965	11	Pass

Test Data of Conducted Output Power Density for band 5.725-5.85 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-0.773	30	Pass
	5785	-1.067	30	Pass
	5825	-1.643	30	Pass
802.11n20	5745	-1.016	30	Pass
	5785	-1.662	30	Pass
	5825	-1.982	30	Pass
802.11n40	5755	-4.828	30	Pass
	5795	-4.485	30	Pass
802.11ac20	5745	-1.694	30	Pass
	5785	-1.590	30	Pass
	5825	-3.092	30	Pass
802.11ac40	5755	-4.916	30	Pass
	5795	-4.908	30	Pass
802.11ac80	5775	-8.910	30	Pass

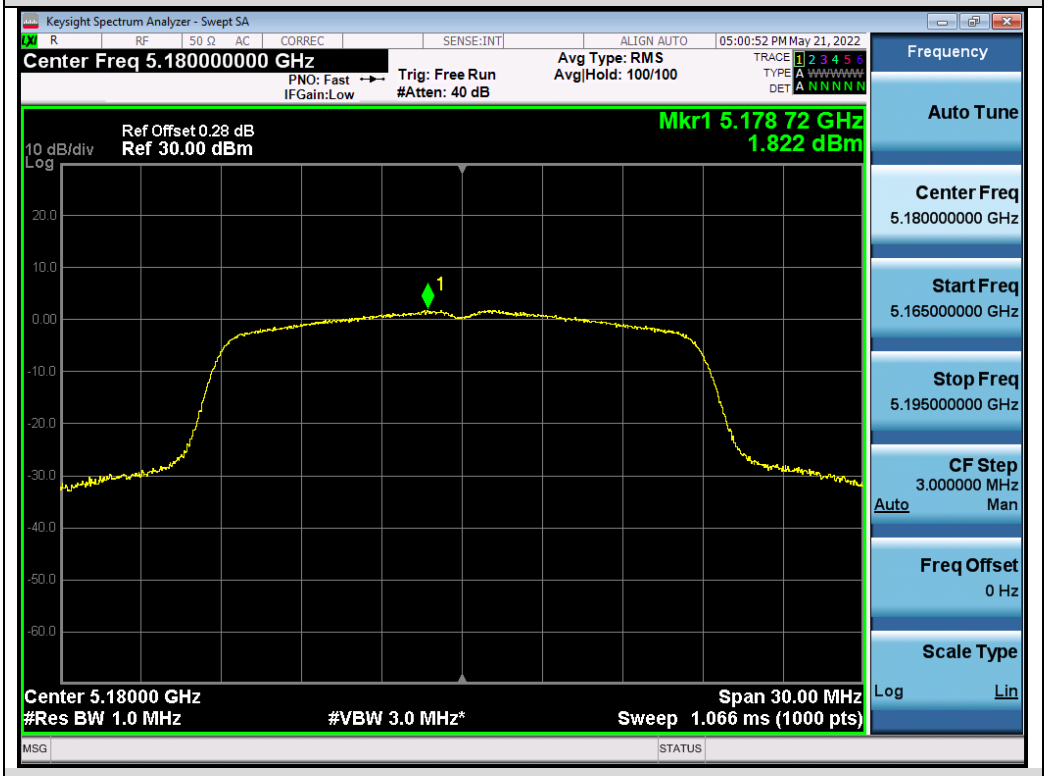
Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz

Test_Graph_802.11a_ANT1_5180_6Mbps_PSD



Test_Graph_802.11a_ANT1_5200_6Mbps_PSD

Test_Graph_802.11a_ANT1_5240_6Mbps_PSD



Test_Graph_802.11n20_ANT1_5180_MCS0_PSD

Test_Graph_802.11n20_ANT1_5200_MCS0_PSD

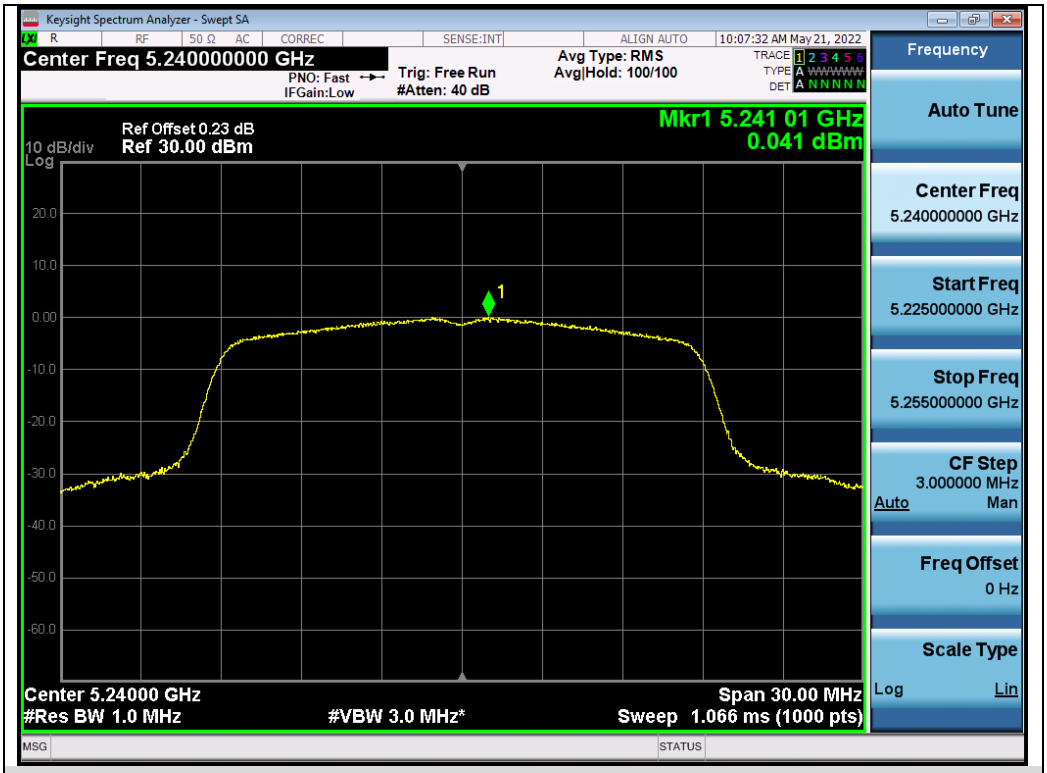
Test_Graph_802.11n20_ANT1_5240_MCS0_PSD

Test_Graph_802.11n40_ANT1_5190_MCS0_PSD

Test_Graph_802.11n40_ANT1_5230_MCS0_PSD

Test_Graph_802.11ac20_ANT1_5180_MCS0_PSD

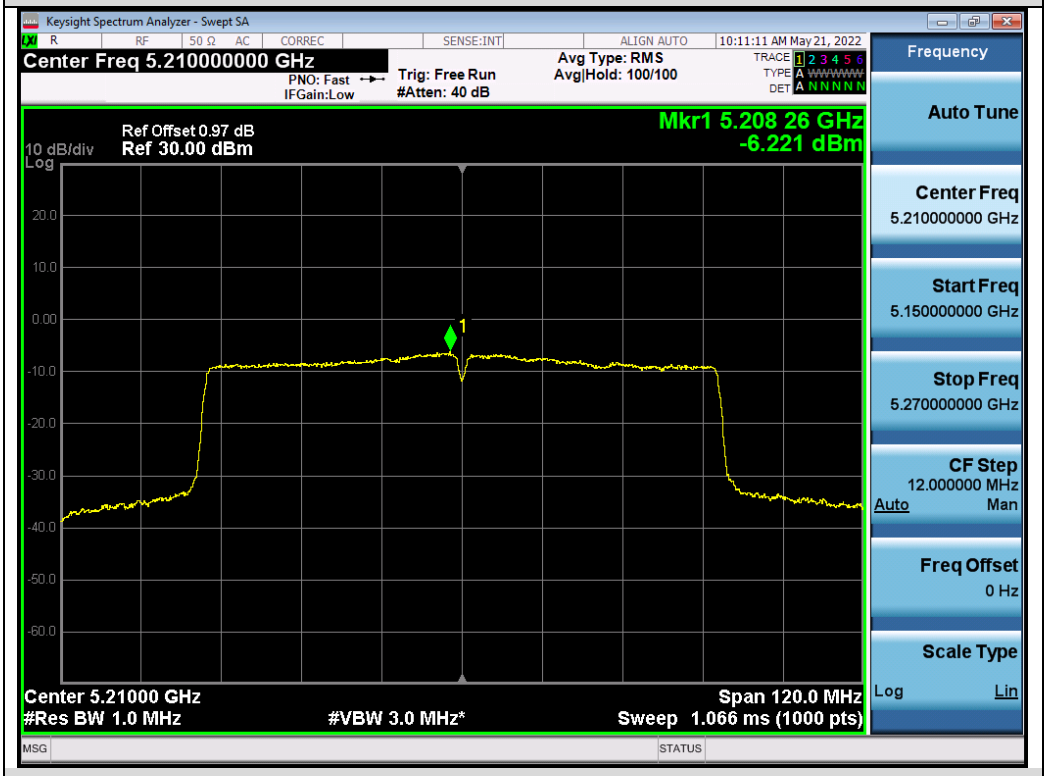
Test_Graph_802.11ac20_ANT1_5200_MCS0_PSD



Test_Graph_802.11ac20_ANT1_5240_MCS9_PSD

Test_Graph_802.11ac40_ANT1_5190_MCS9_PSD

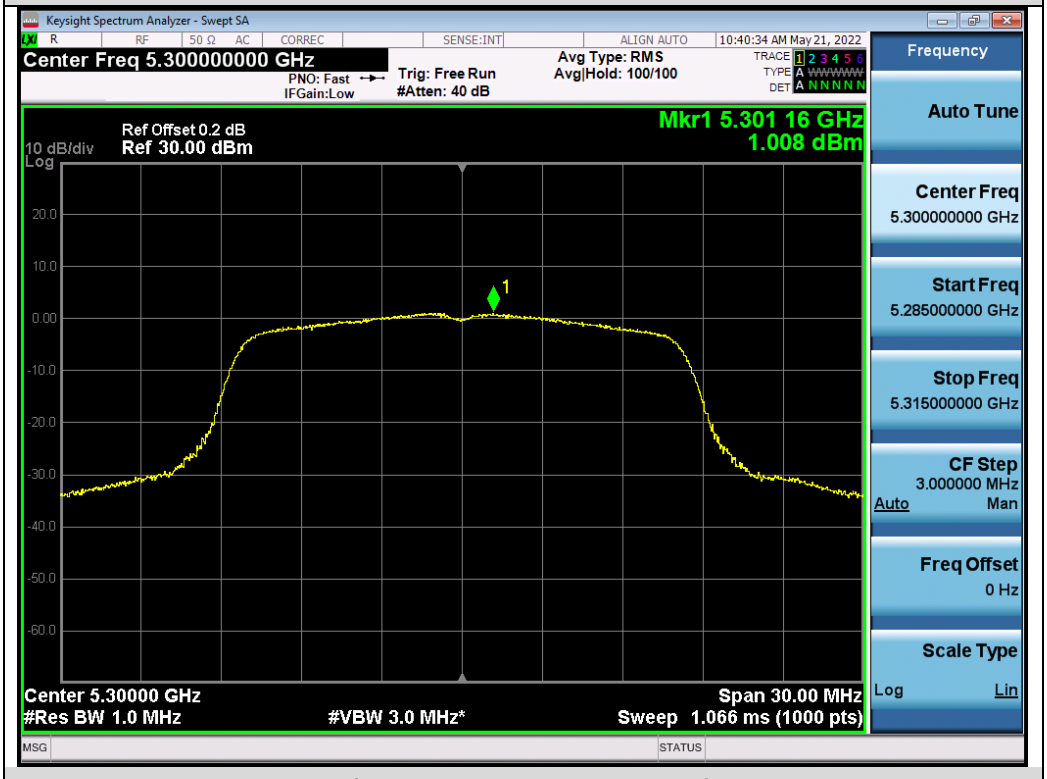
Test_Graph_802.11ac40_ANT1_5230_MCS9_PSD



Test_Graph_802.11ac80_ANT1_5210_MCS9_PSD

Test Graphs of Conducted Output Power Spectral Density for band 5.25-5.35 GHz

Test_Graph_802.11a_ANT1_5260_6Mbps_PSD



Test_Graph_802.11a_ANT1_5300_6Mbps_PSD

Test_Graph_802.11a_ANT1_5320_6Mbps_PSD

Test_Graph_802.11n20_ANT1_5260_MCS0_PSD

Test_Graph_802.11n20_ANT1_5300_MCS0_PSD

Test_Graph_802.11n20_ANT1_5320_MCS0_PSD

Test_Graph_802.11n40_ANT1_5270_MCS0_PSD

Test_Graph_802.11n40_ANT1_5310_MCS0_PSD

Test_Graph_802.11ac20_ANT1_5260_MCS0_PSD

Test_Graph_802.11ac20_ANT1_5300_MCS0_PSD

Test_Graph_802.11ac20_ANT1_5320_MCS9_PSD

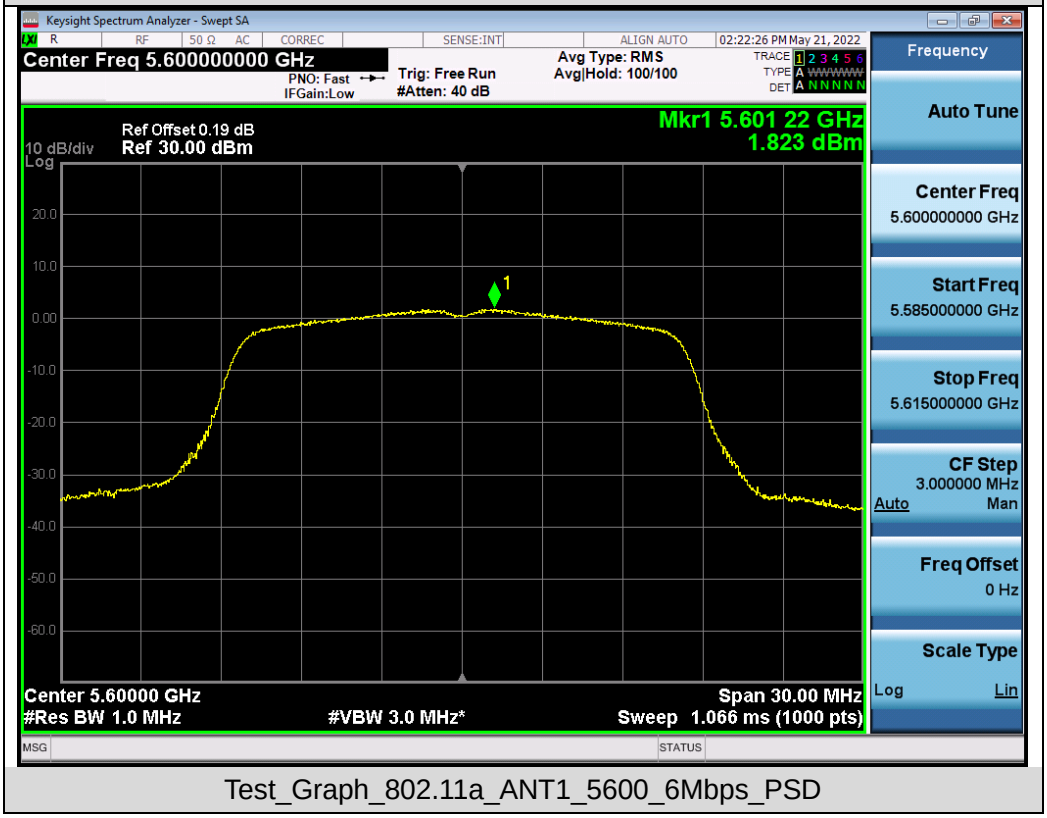
Test_Graph_802.11ac40_ANT1_5270_MCS9_PSD

Test_Graph_802.11ac40_ANT1_5310_MCS9_PSD

Test_Graph_802.11ac80_ANT1_5290_MCS9_PSD

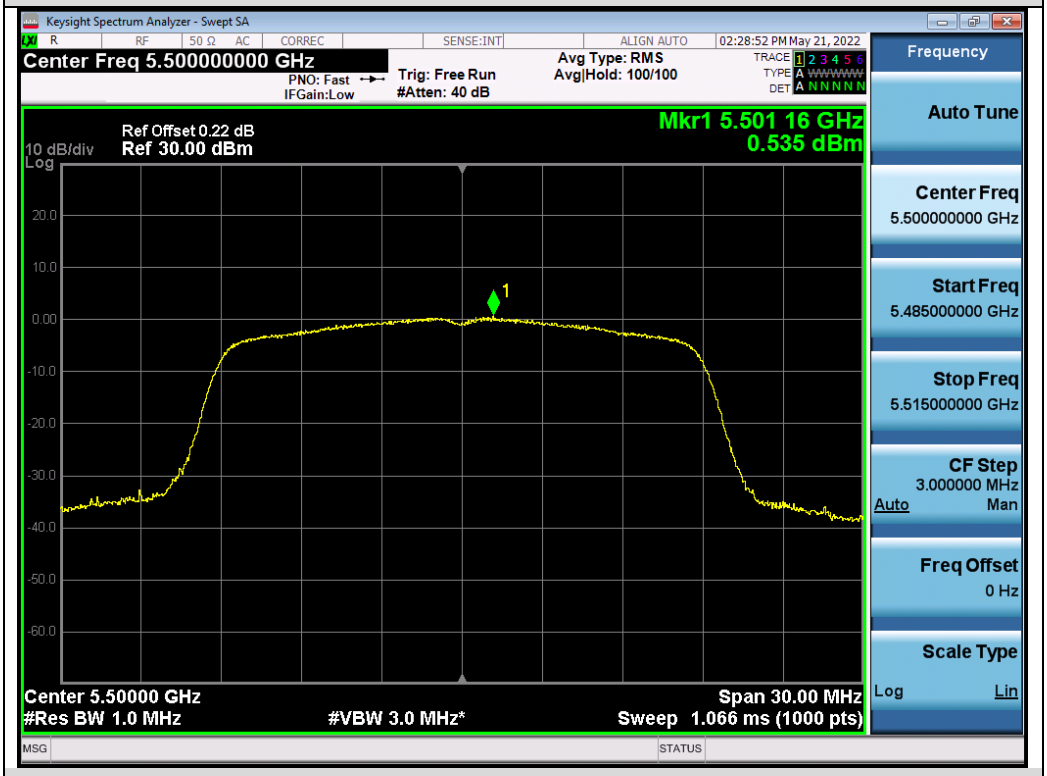
Test Graphs of Conducted Output Power Spectral Density for band 5.47-5.725 GHz

Test_Graph_802.11a_ANT1_5500_6Mbps_PSD



Test_Graph_802.11a_ANT1_5600_6Mbps_PSD

Test_Graph_802.11a_ANT1_5700_6Mbps_PSD



Test_Graph_802.11n20_ANT1_5500_MCS0_PSD

Test_Graph_802.11n20_ANT1_5600_MCS0_PSD

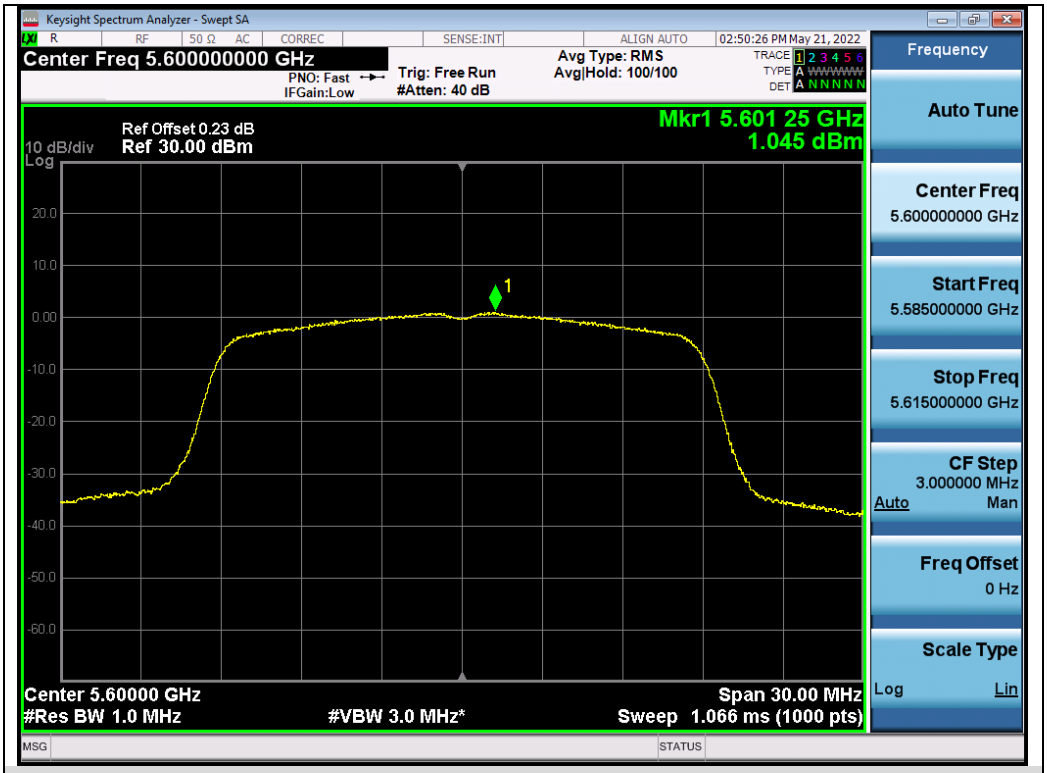
Test_Graph_802.11n20_ANT1_5700_MCS0_PSD

Test_Graph_802.11n40_ANT1_5510_MCS0_PSD

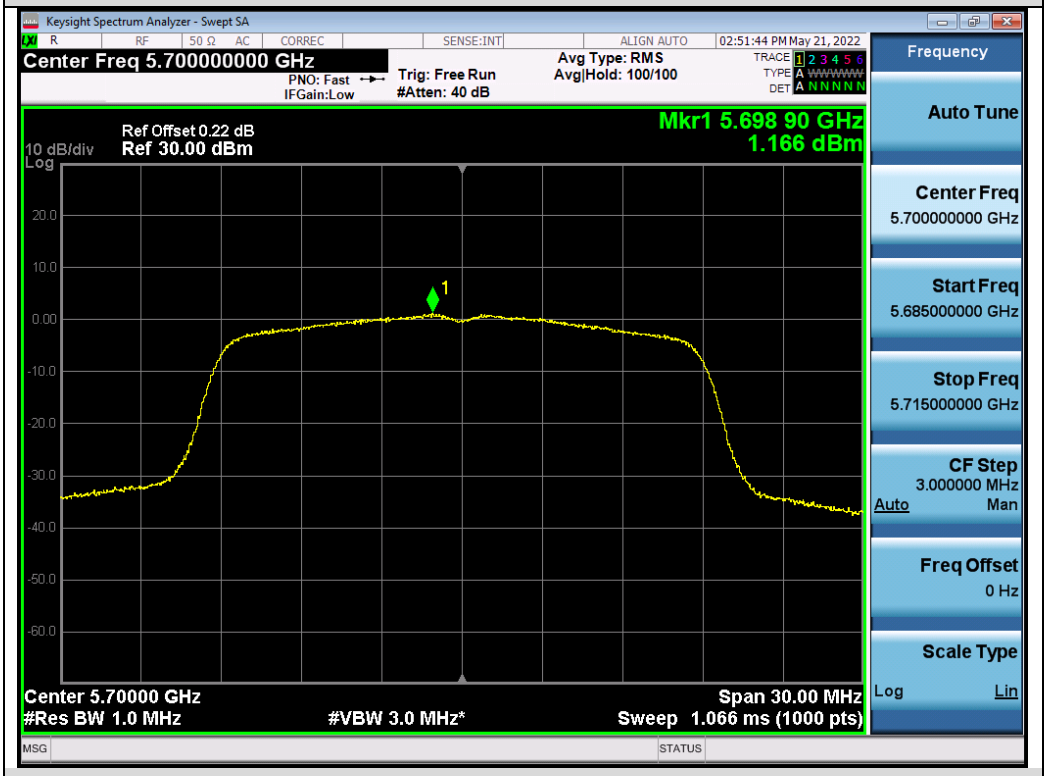
Test_Graph_802.11n40_ANT1_5590_MCS0_PSD

Test_Graph_802.11n40_ANT1_5670_MCS0_PSD

Test_Graph_802.11ac20_ANT1_5500_MCS0_PSD



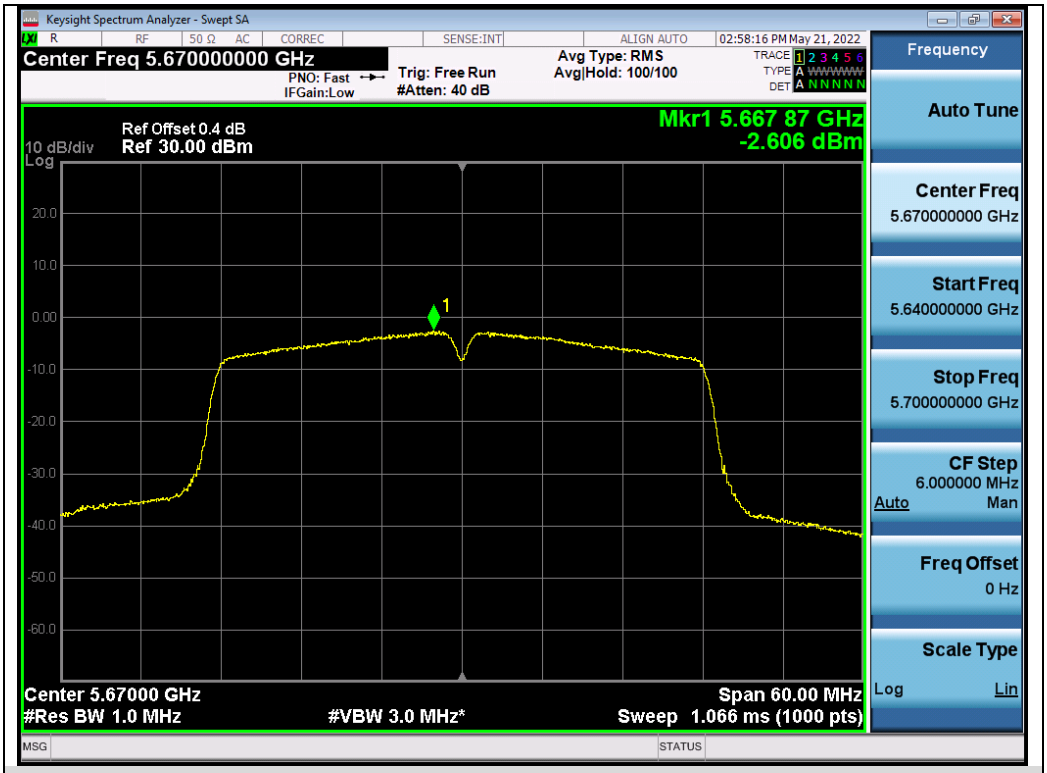
Test_Graph_802.11ac20_ANT1_5600_MCS0_PSD



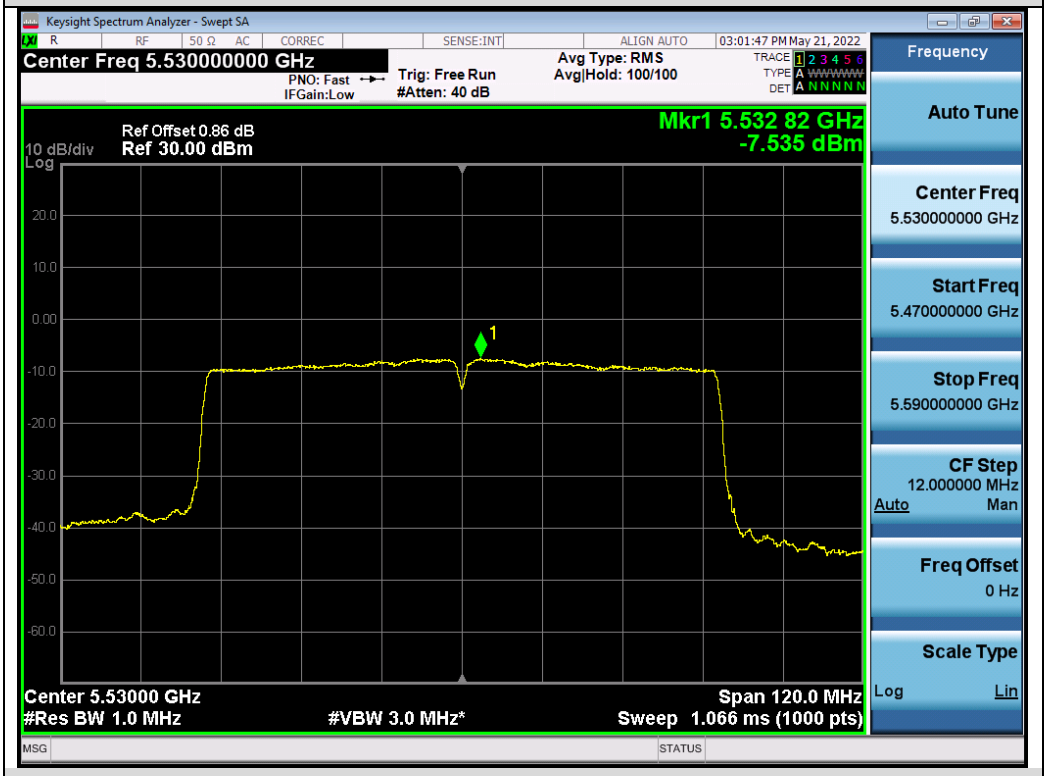
Test_Graph_802.11ac20_ANT1_5700_MCS9_PSD

Test_Graph_802.11ac40_ANT1_5510_MCS9_PSD

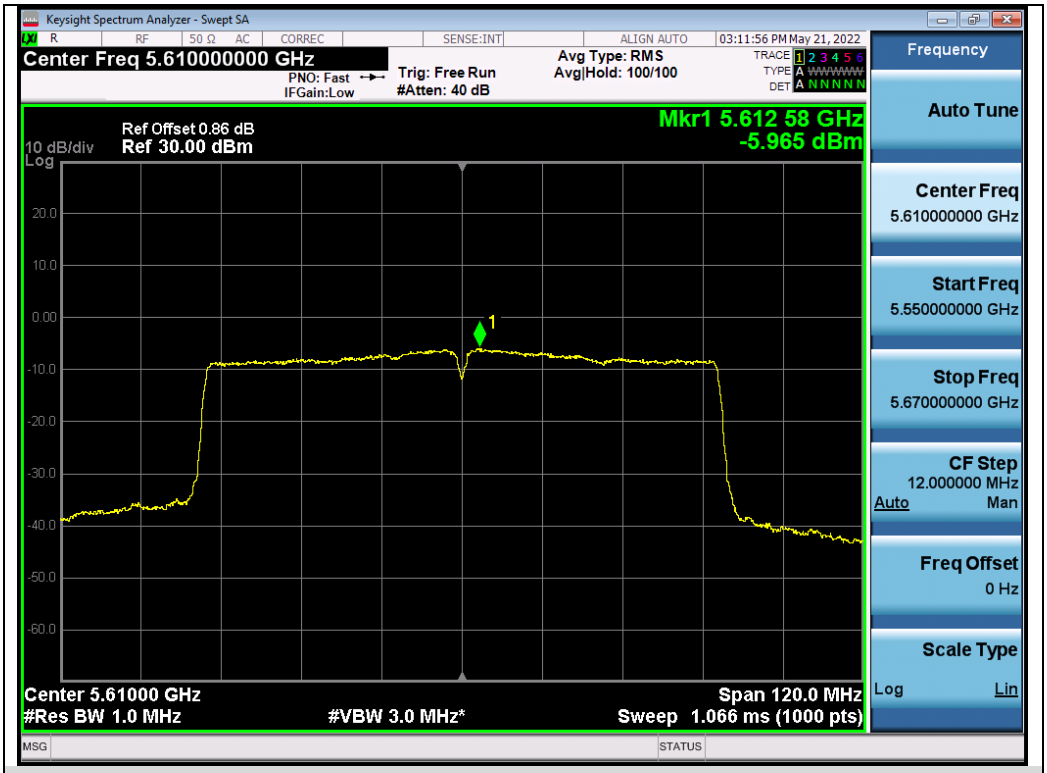
Test_Graph_802.11ac40_ANT1_5590_MCS9_PSD



Test_Graph_802.11ac40_ANT1_5670_MCS9_PSD

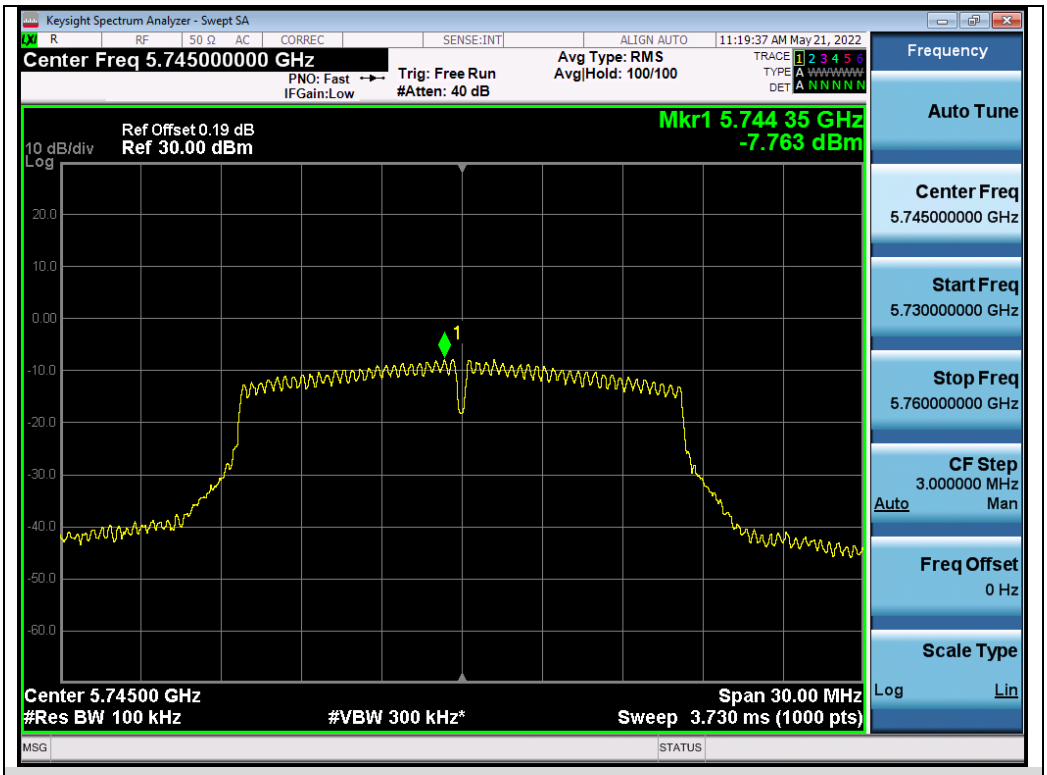


Test_Graph_802.11ac80_ANT1_5530_MCS9_PSD

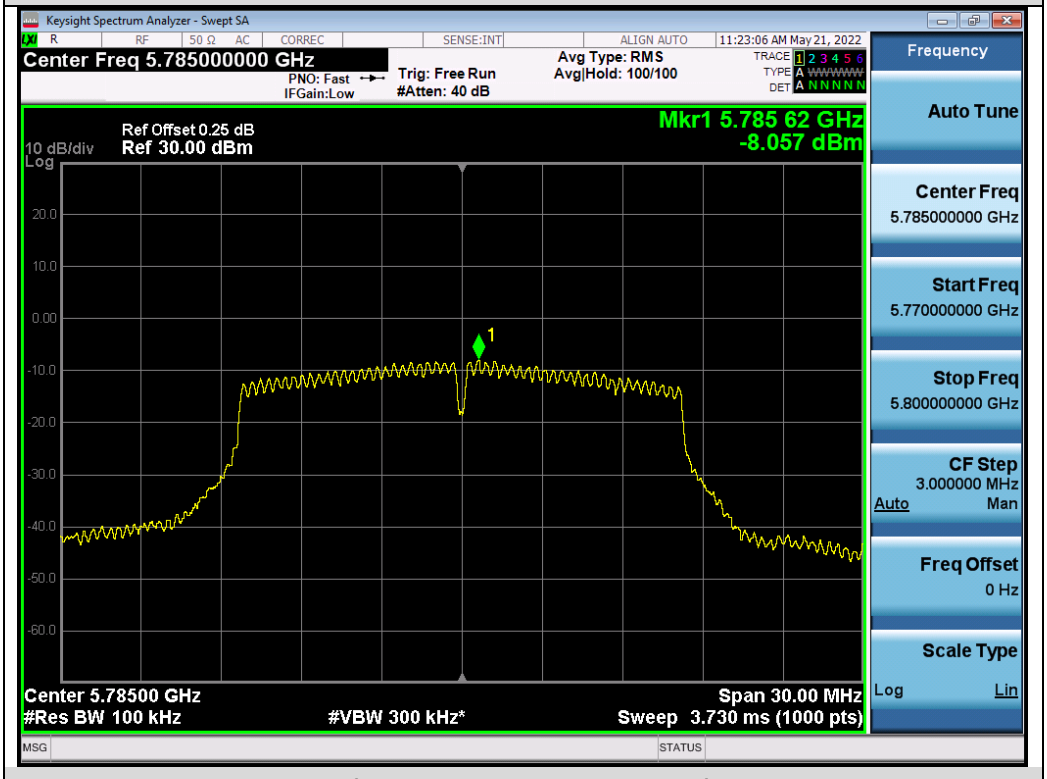


Test_Graph_802.11ac80_ANT1_5610_MCS9_PSD

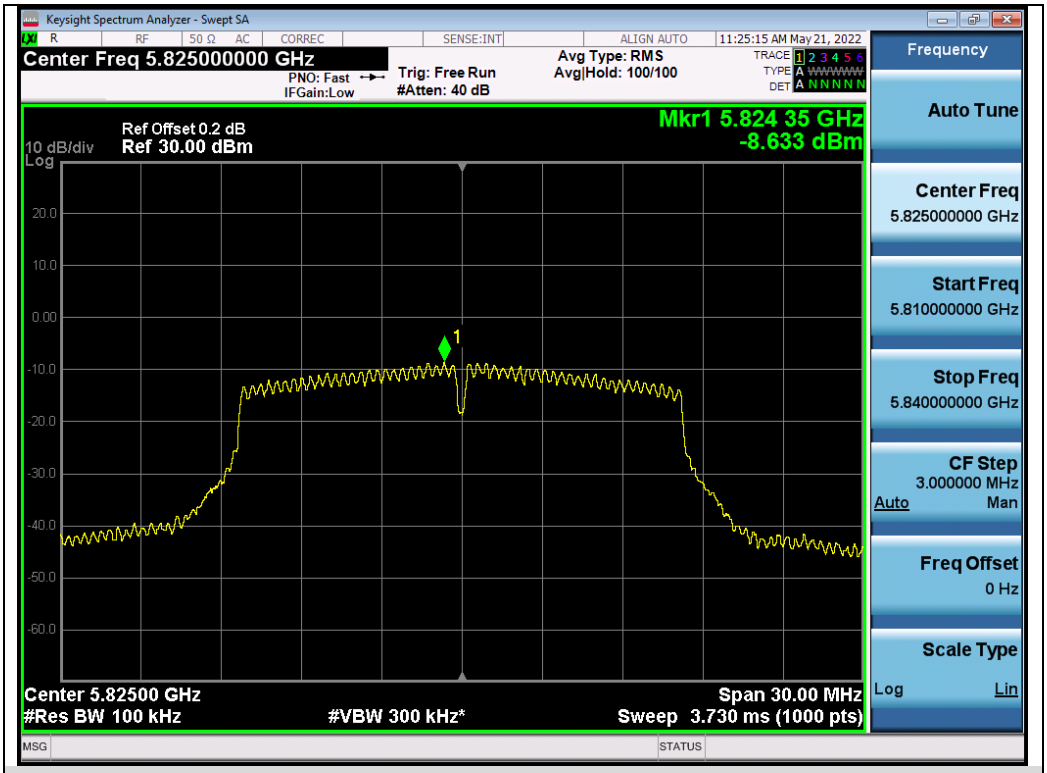
Test Graphs of Conducted Output Power Spectral Density for band 5.725-5.85 GHz



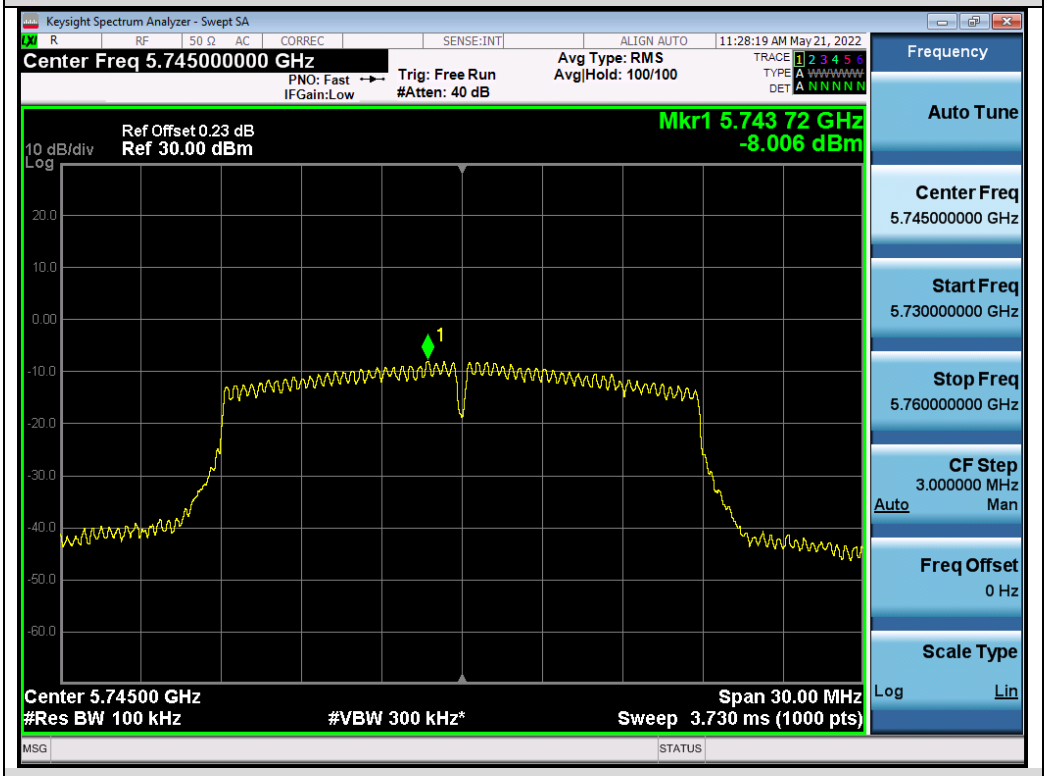
Test_Graph_802.11a_ANT1_5745_6Mbps_PSD



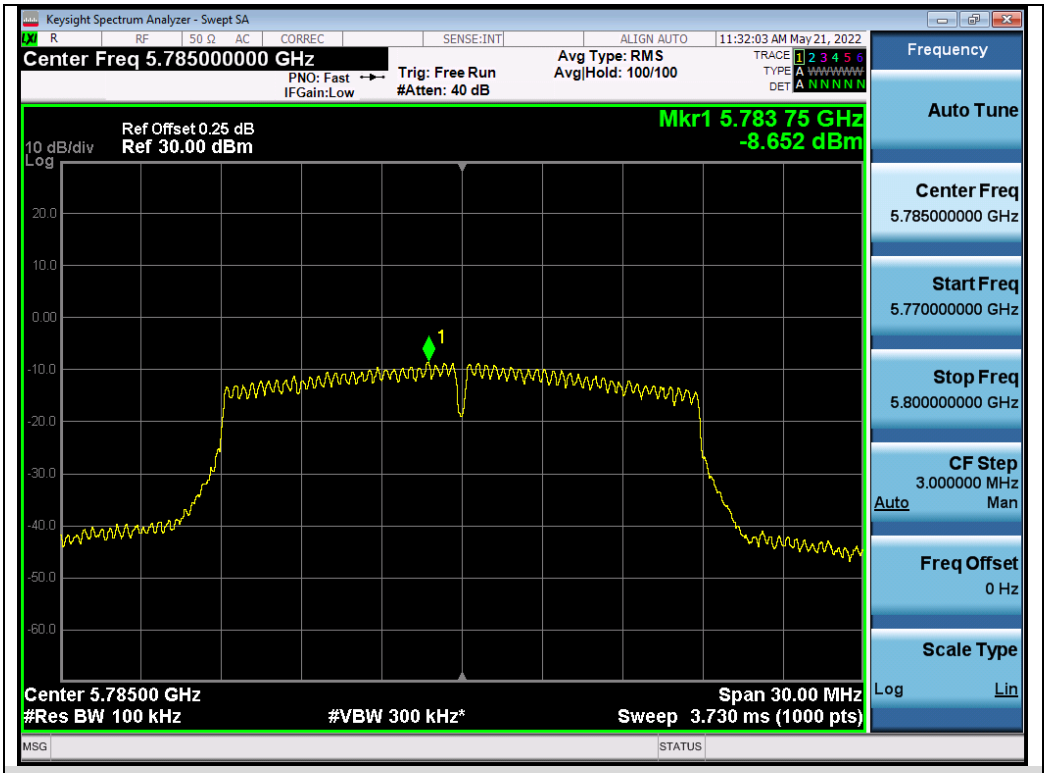
Test_Graph_802.11a_ANT1_5785_6Mbps_PSD



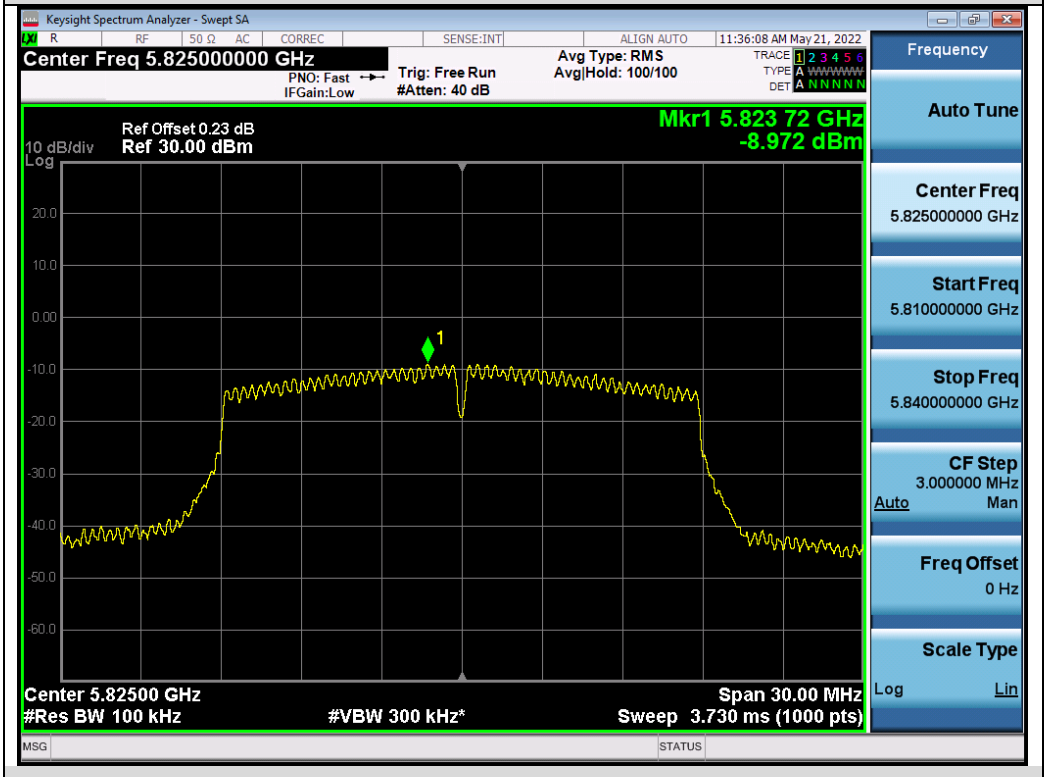
Test_Graph_802.11a_ANT1_5825_6Mbps_PSD



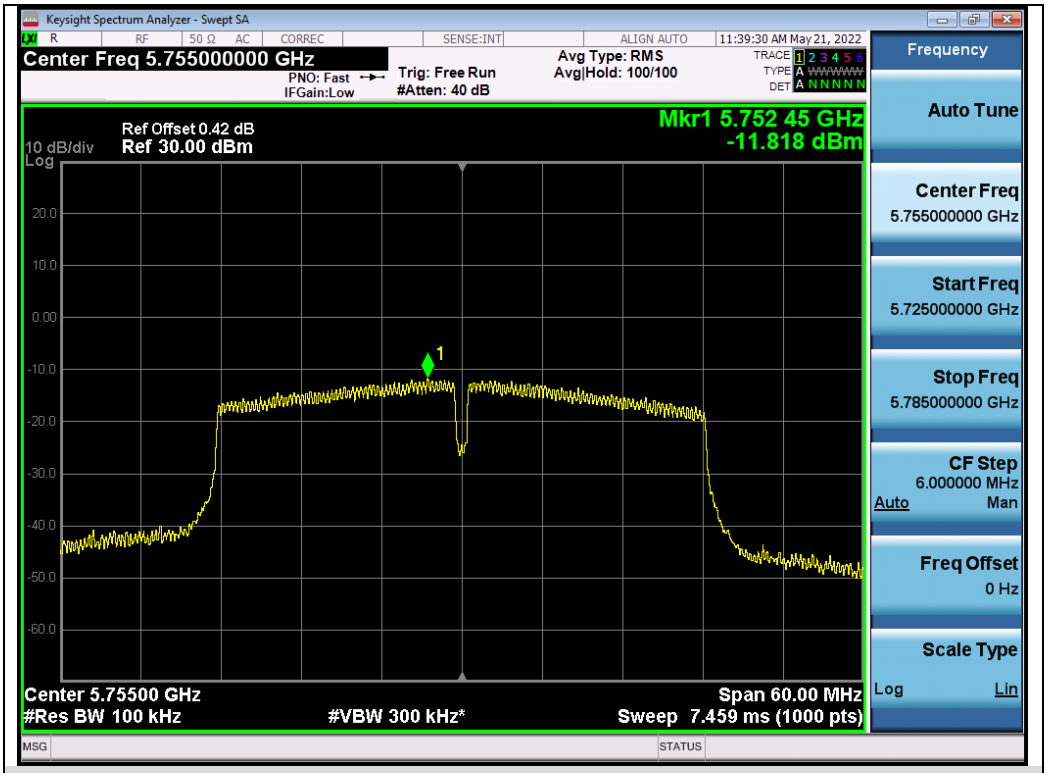
Test_Graph_802.11n20_ANT1_5745_MCS0_PSD



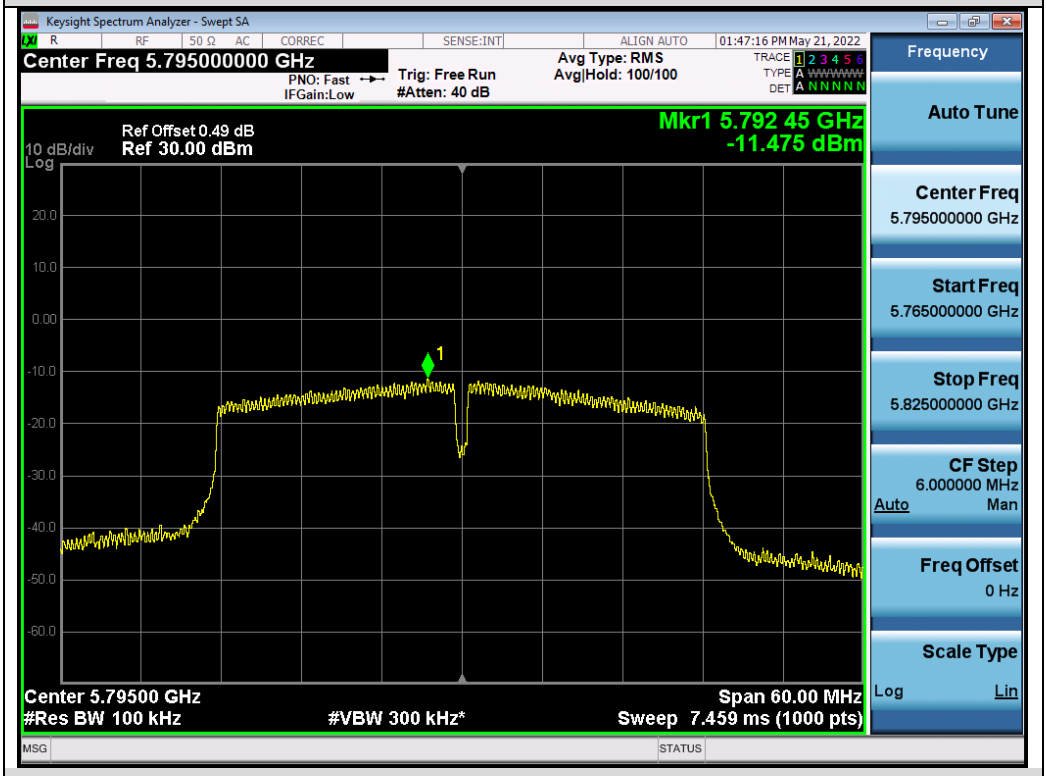
Test_Graph_802.11n20_ANT1_5785_MCS0_PSD



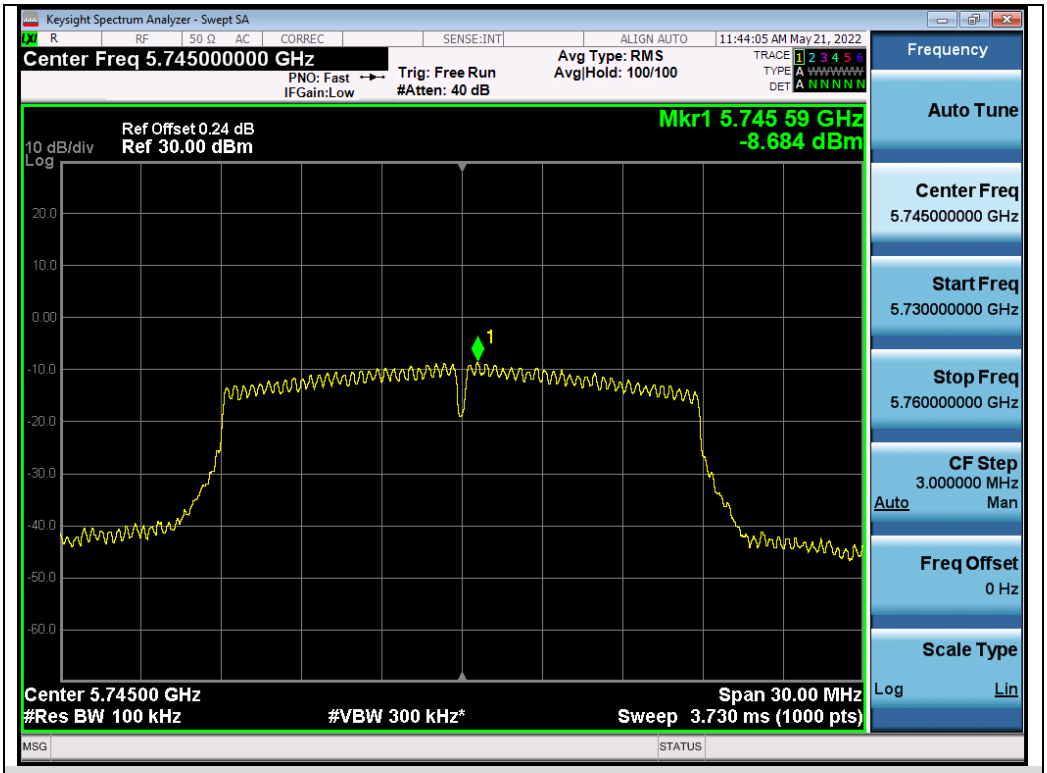
Test_Graph_802.11n20_ANT1_5825_MCS0_PSD



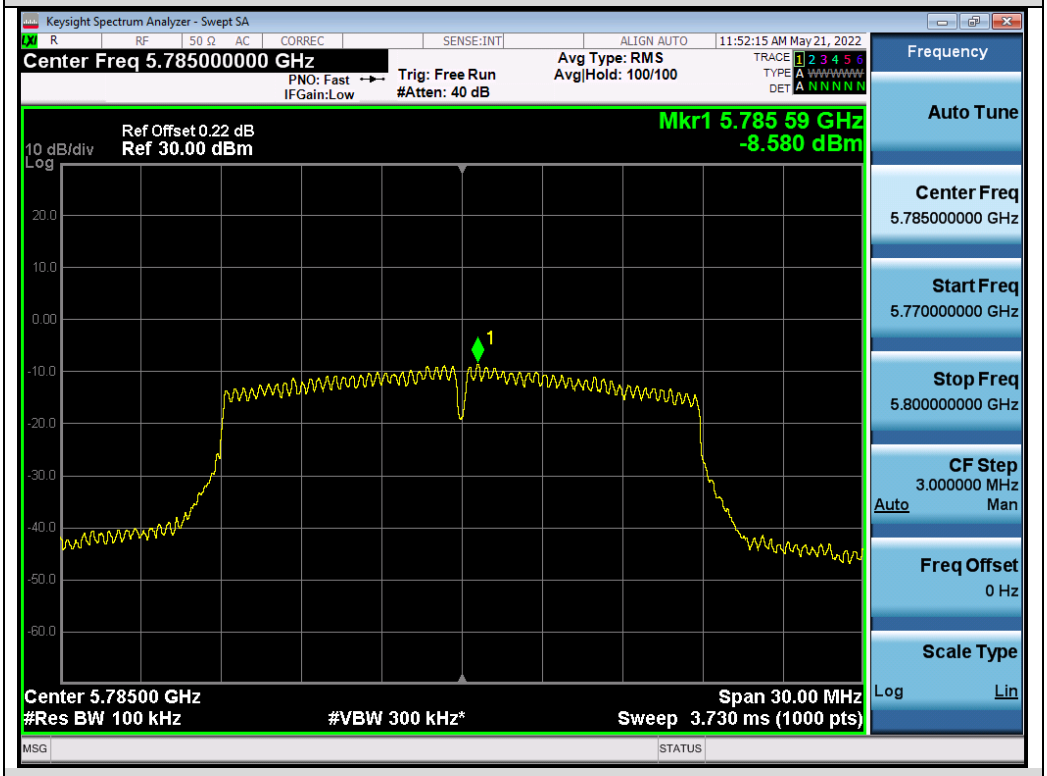
Test_Graph_802.11n40_ANT1_5755_MCS0_PSD



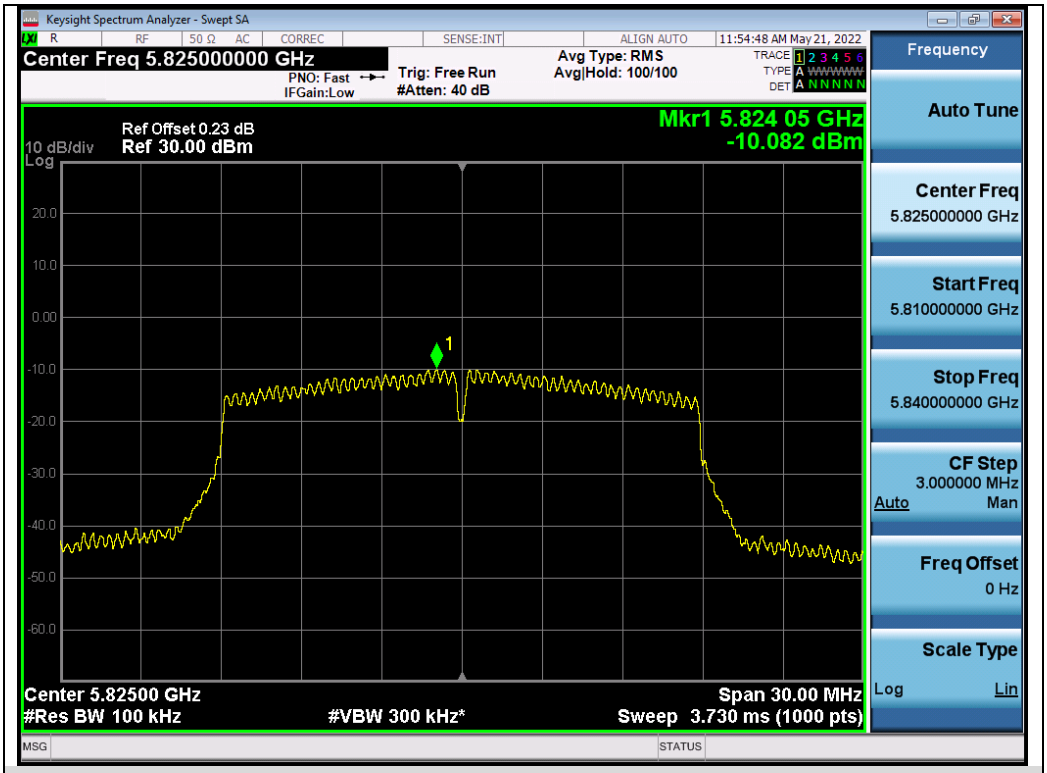
Test_Graph_802.11n40_ANT1_5795_MCS0_PSD



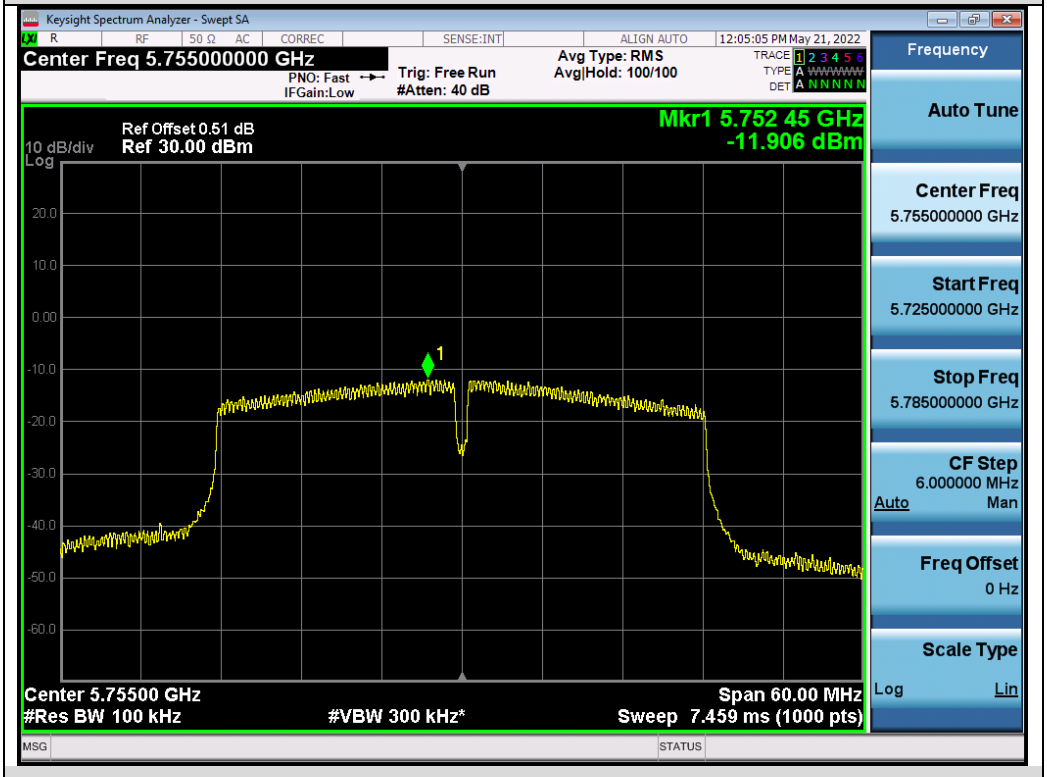
Test_Graph_802.11ac20_ANT1_5745_MCS0_PSD



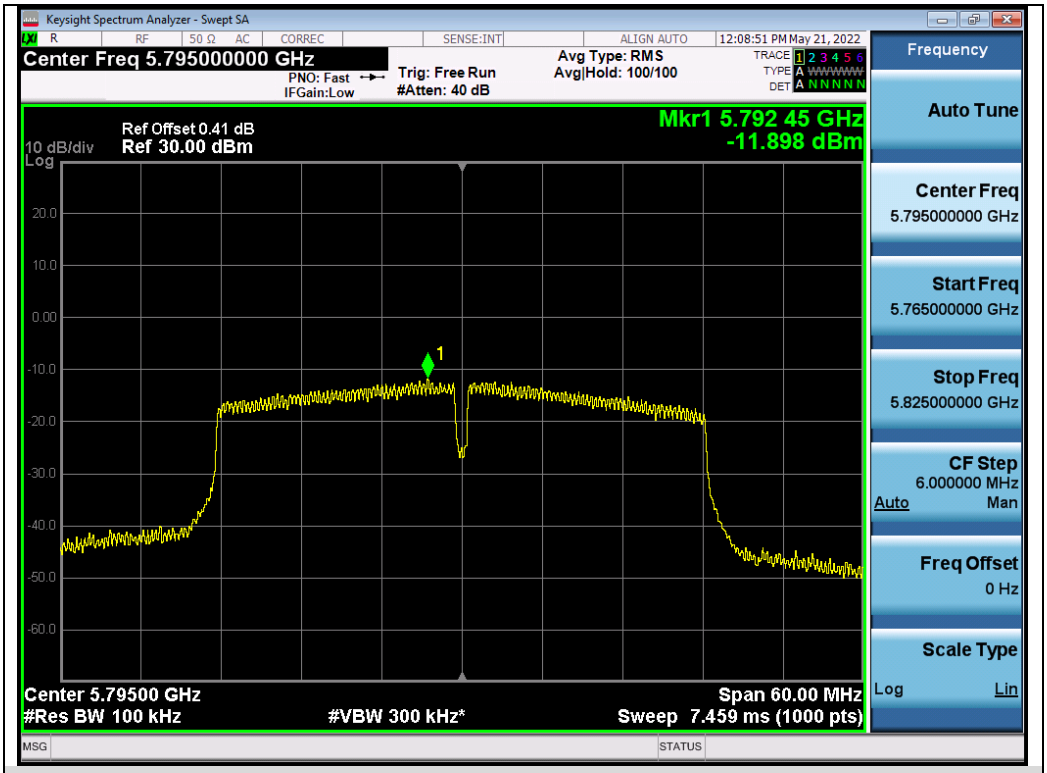
Test_Graph_802.11ac20_ANT1_5785_MCS0_PSD



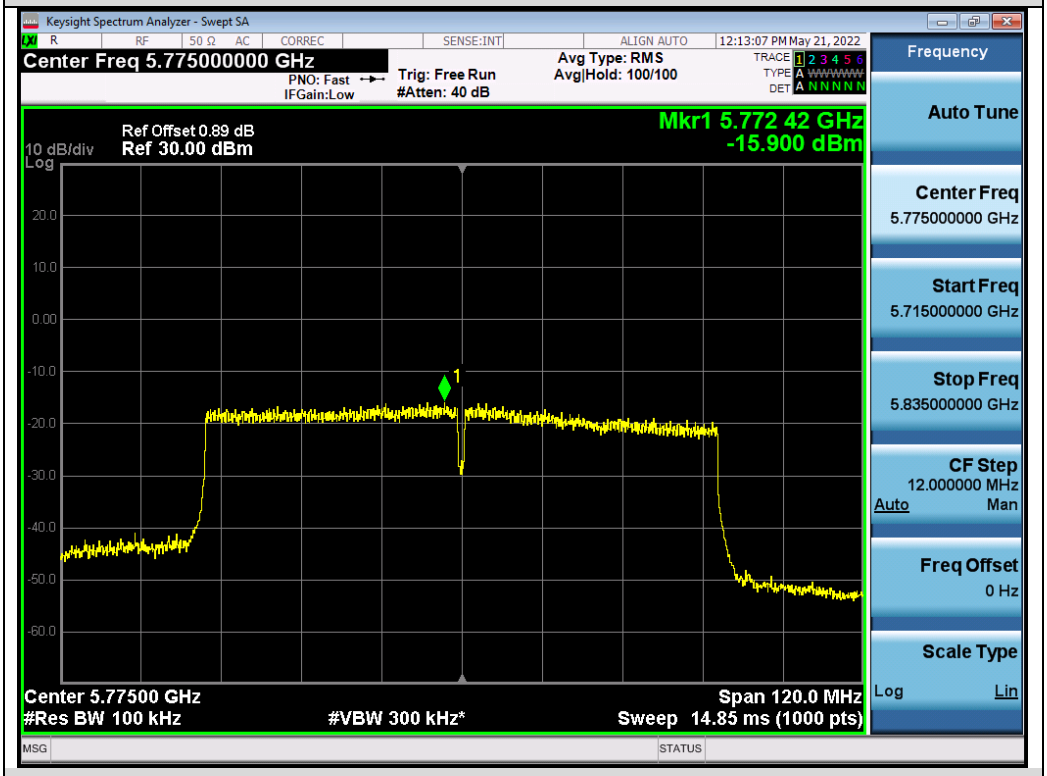
Test_Graph_802.11ac20_ANT1_5825_MCS9_PSD



Test_Graph_802.11ac40_ANT1_5755_MCS9_PSD



Test_Graph_802.11ac40_ANT1_5795_MCS9_PSD



Test_Graph_802.11ac80_ANT1_5775_MCS9_PSD

10. CONDUCTED SPURIOUS EMISSION

10.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 8.2.

10.3. MEASUREMENT EQUIPMENT USED

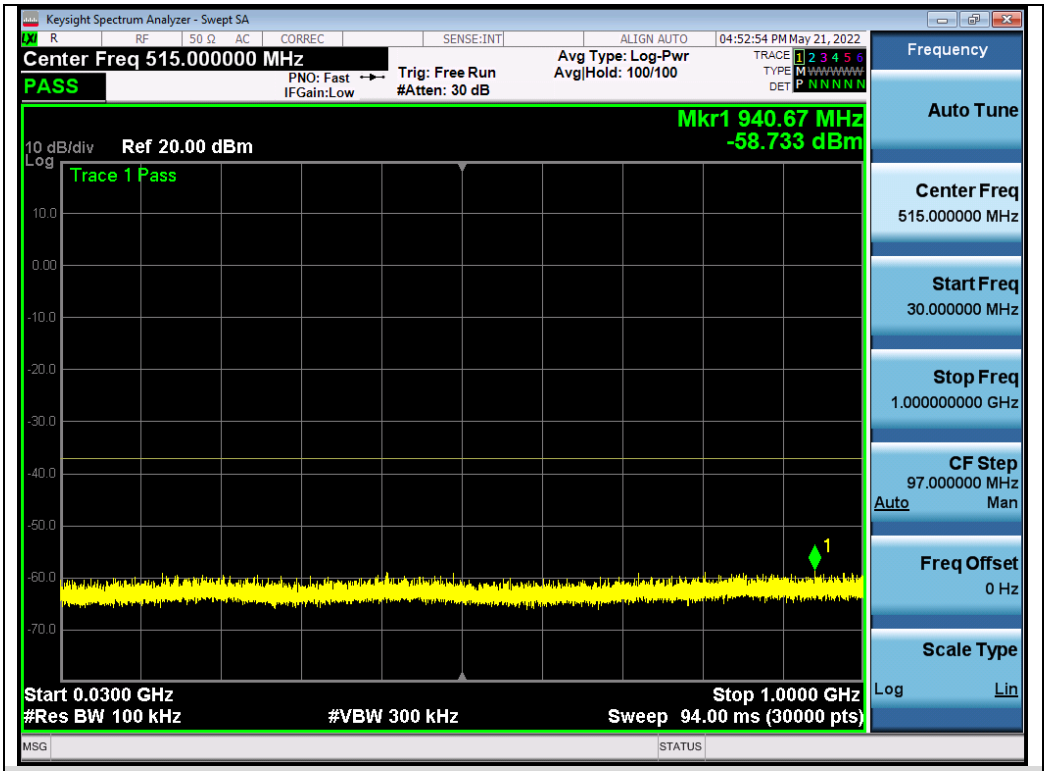
The same as described in section 6.

10.4. LIMITS AND MEASUREMENT RESULT

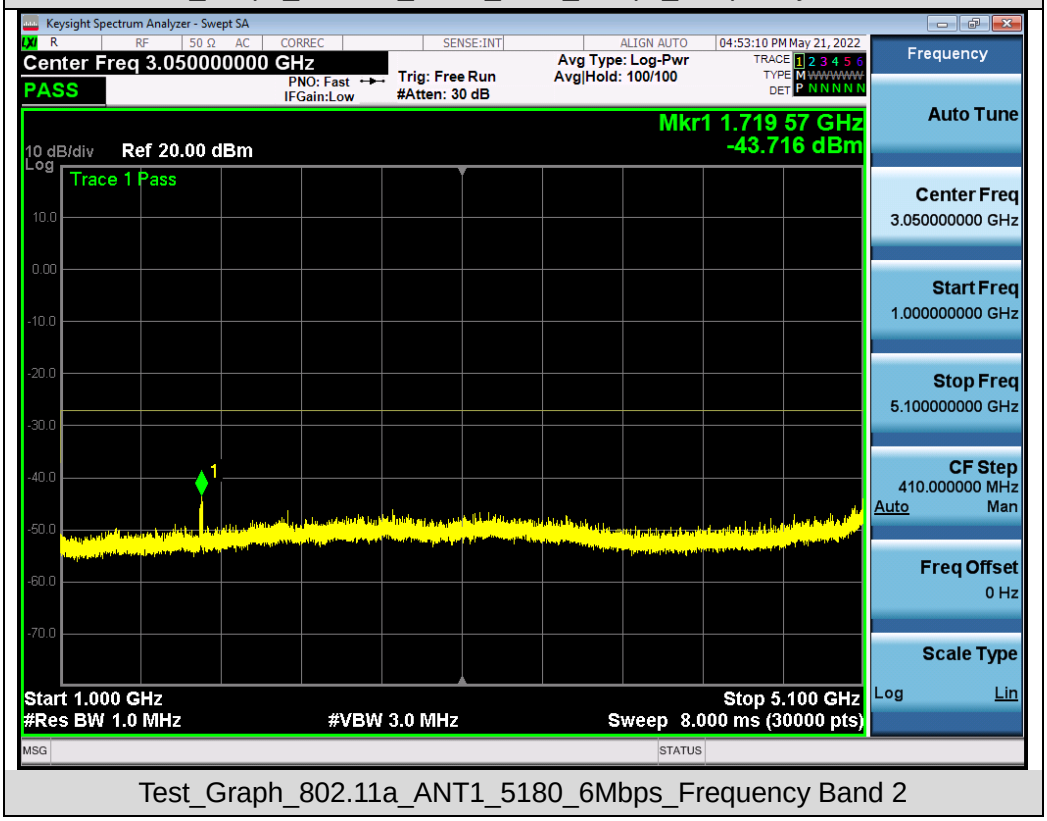
LIMITS AND MEASUREMENT RESULT		
Applicable Limits	**Measurement Result**	
	Test channel	**Criteria**
-27dBm/MHz	5150MHz-5250MHz	PASS
All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band 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.	5725MHz-5850MHz	PASS

Note: All the 20MHz bandwidth modulation had been tested, the 802.11a20 was the worst case and record in his test report. All the 40MHz bandwidth modulation had been tested, the 802.11N40 was the worst case and record in his test report. All the 80MHz bandwidth modulation had been tested, the 802.11AC80 was the worst case and record in his test report.

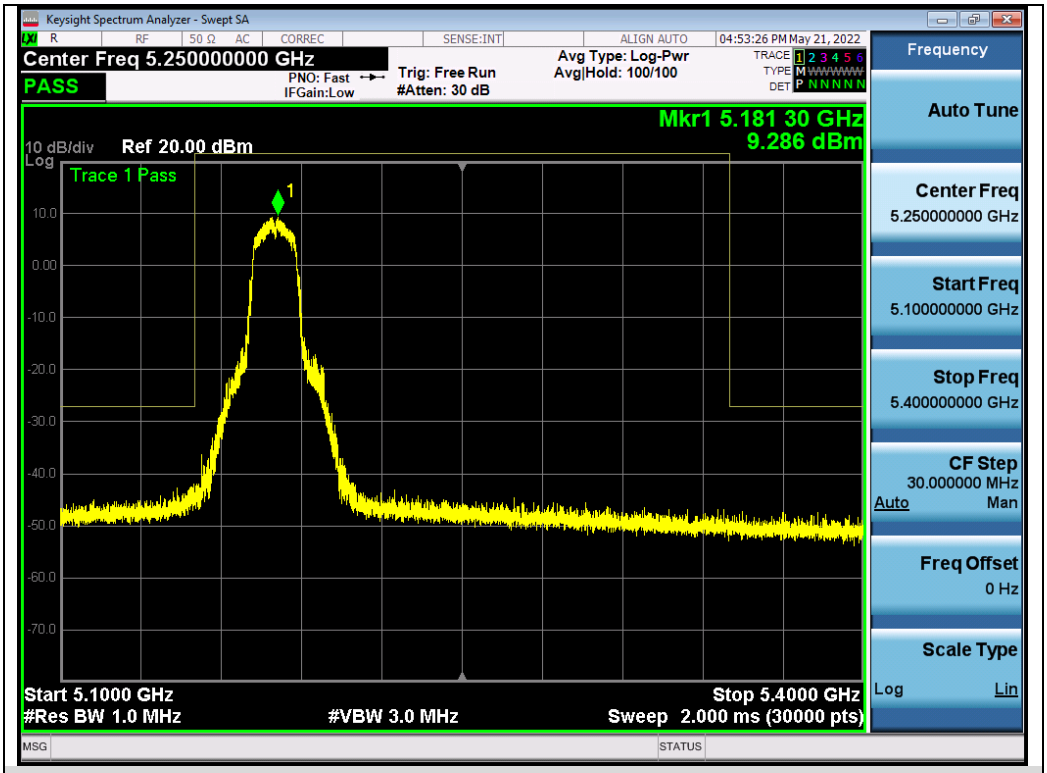
Test Graphs of Spurious Emissions outside of the 5.15-5.35 GHz band for transmitters operating in the 5.15-5.25 GHz band



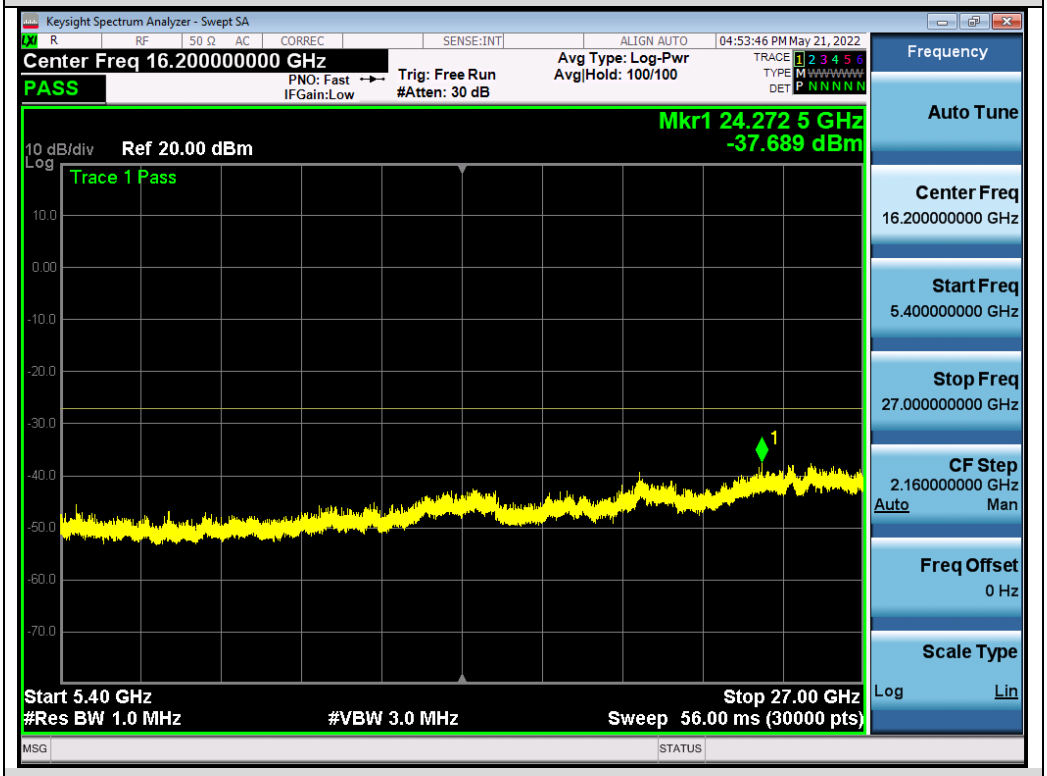
Test_Graph_802.11a_ANT1_5180_6Mbps_Frequency Band 1



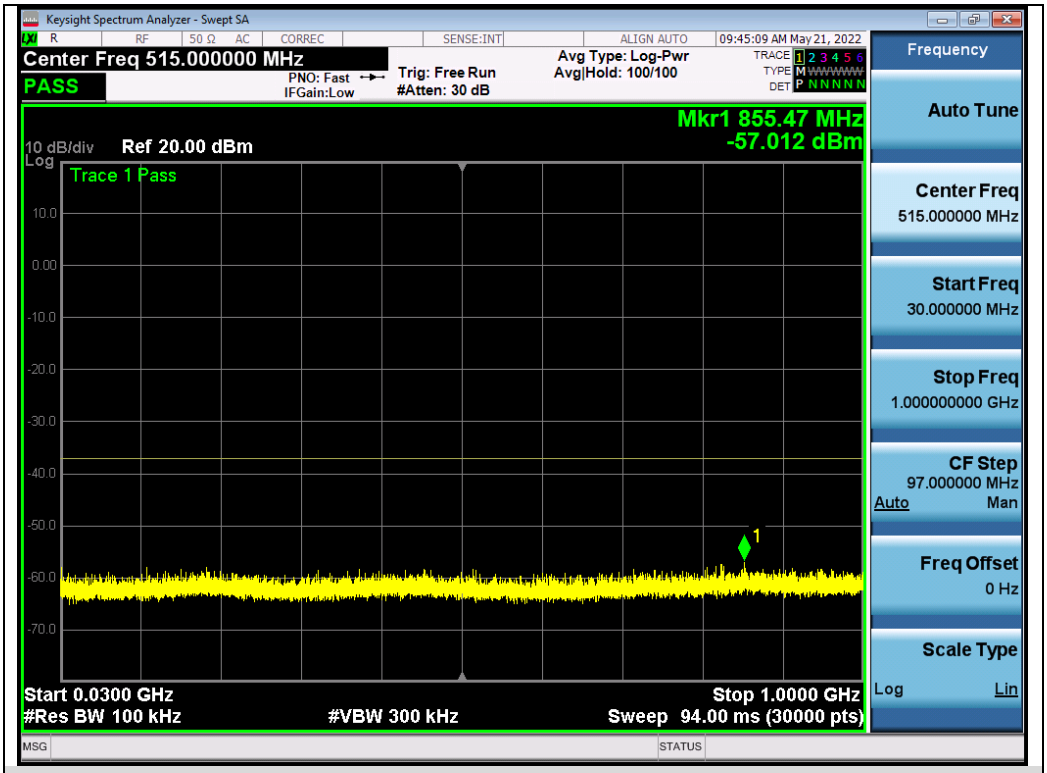
Test_Graph_802.11a_ANT1_5180_6Mbps_Frequency Band 2



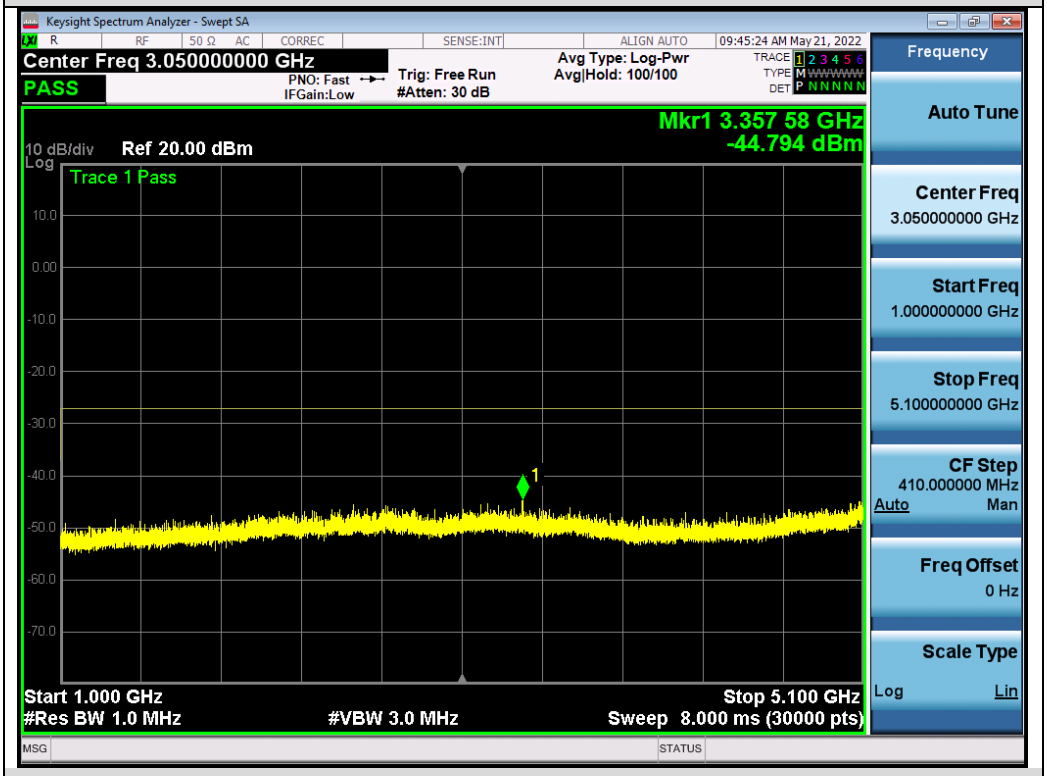
Test_Graph_802.11a_ANT1_5180_6Mbps_Frequency Band 3



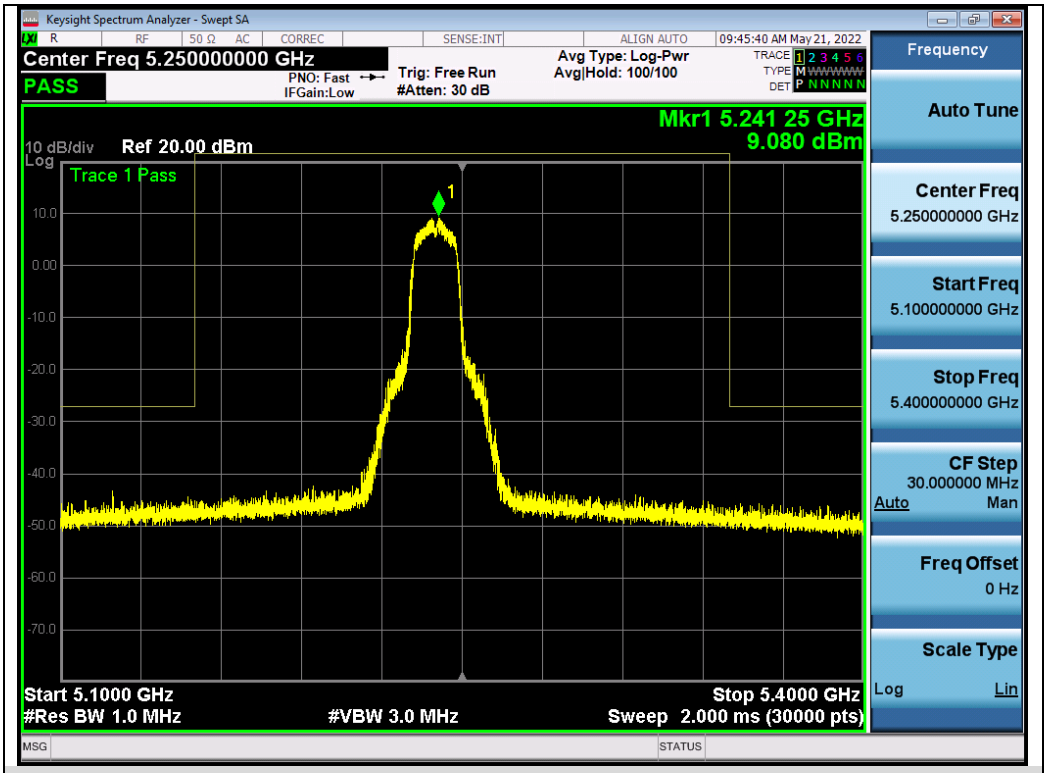
Test_Graph_802.11a_ANT1_5180_6Mbps_Frequency Band 4



Test_Graph_802.11a_ANT1_5240_6Mbps_Frequency Band 1

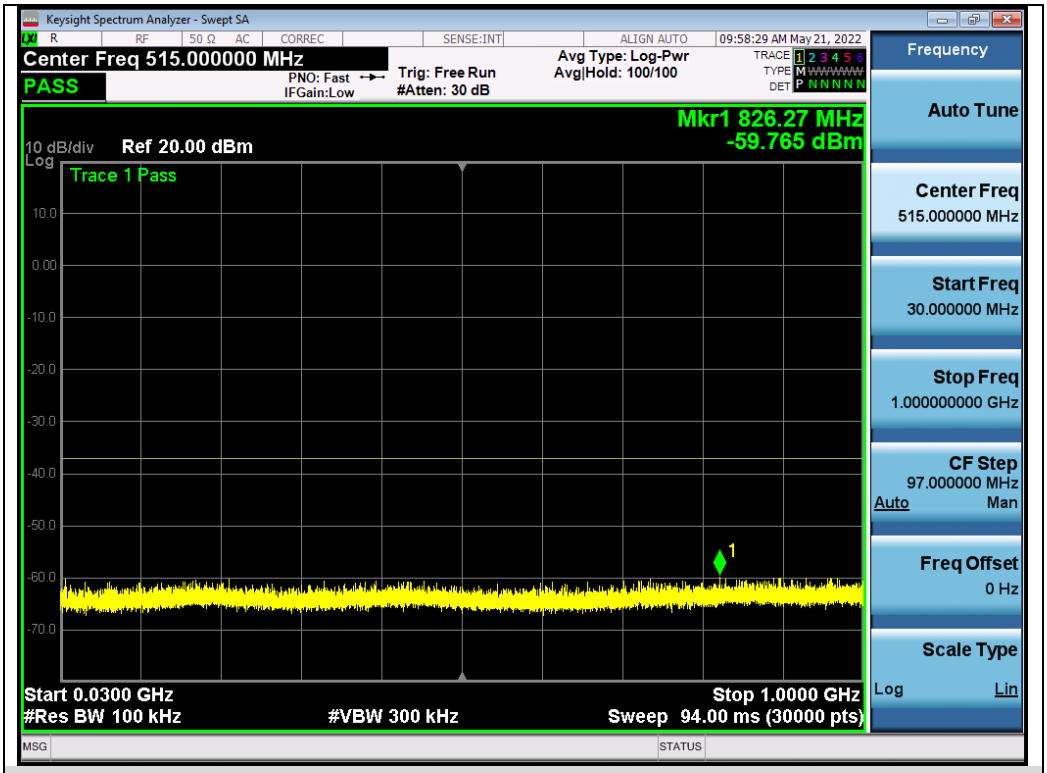


Test_Graph_802.11a_ANT1_5240_6Mbps_Frequency Band 2

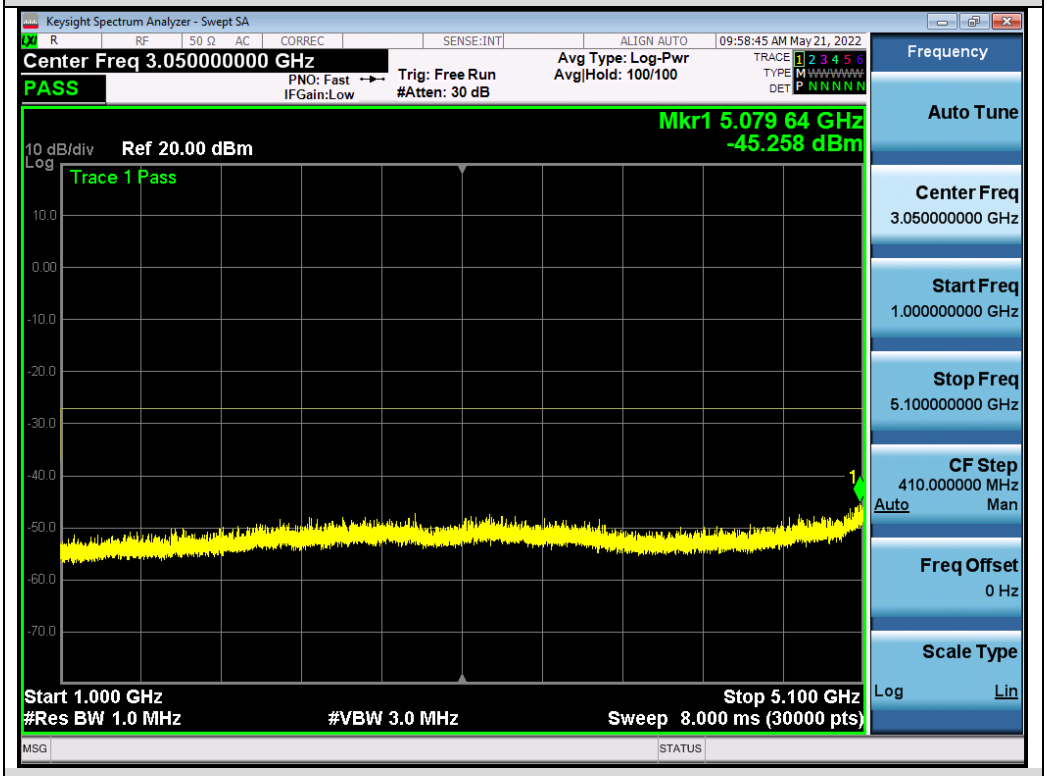


Test_Graph_802.11a_ANT1_5240_6Mbps_Frequency Band 3

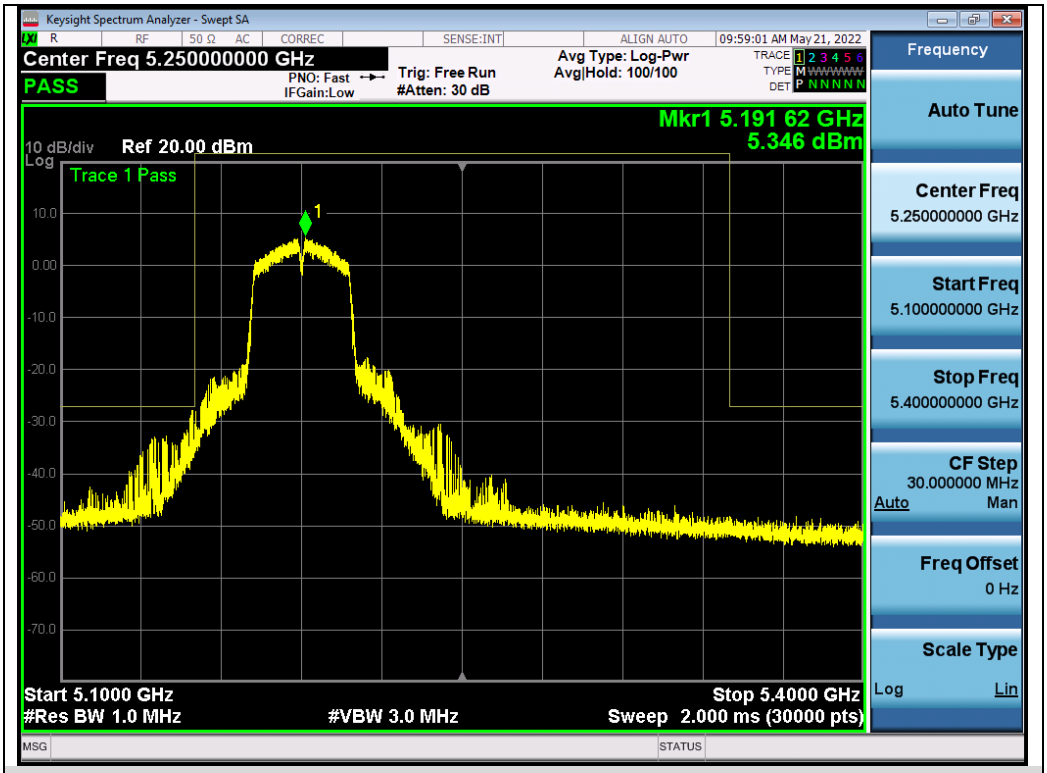
Test_Graph_802.11a_ANT1_5240_6Mbps_Frequency Band 4



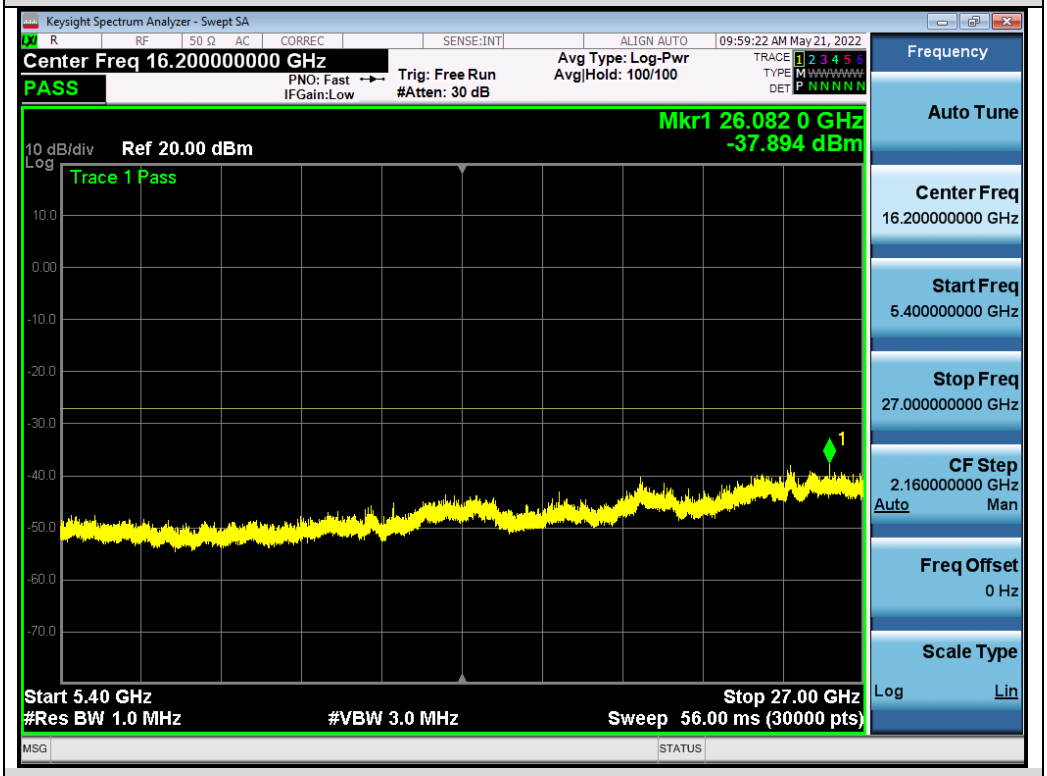
Test_Graph_802.11n40_ANT1_5190_MCS0_Frequency Band 1



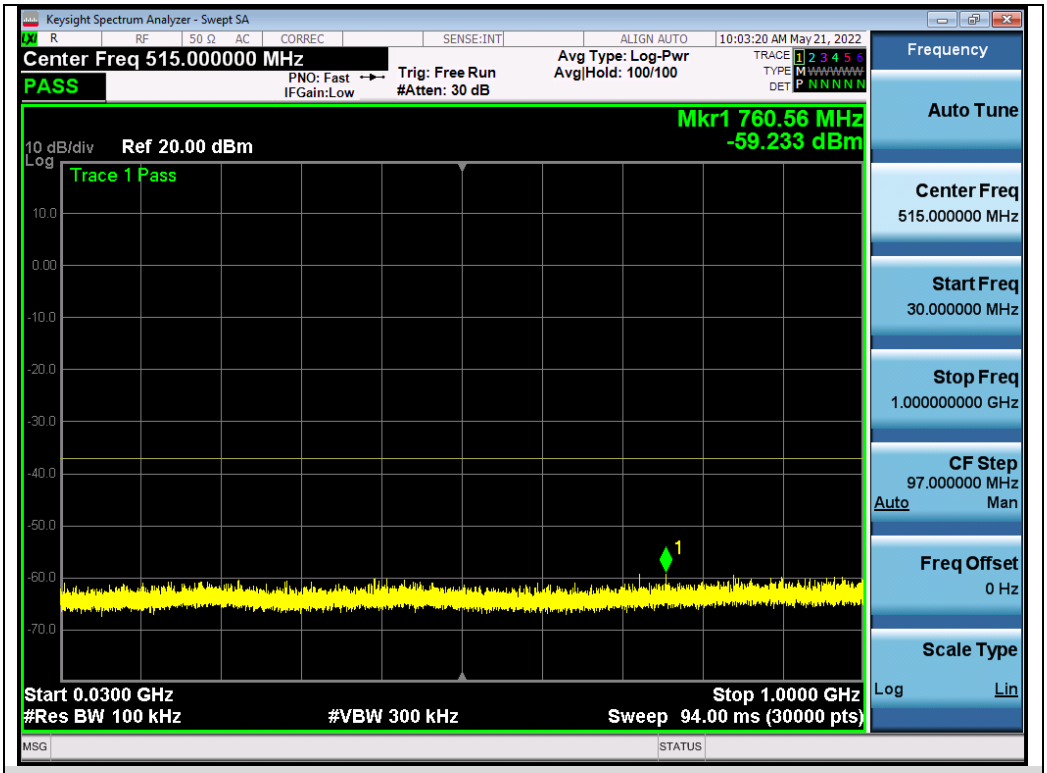
Test_Graph_802.11n40_ANT1_5190_MCS0_Frequency Band 2



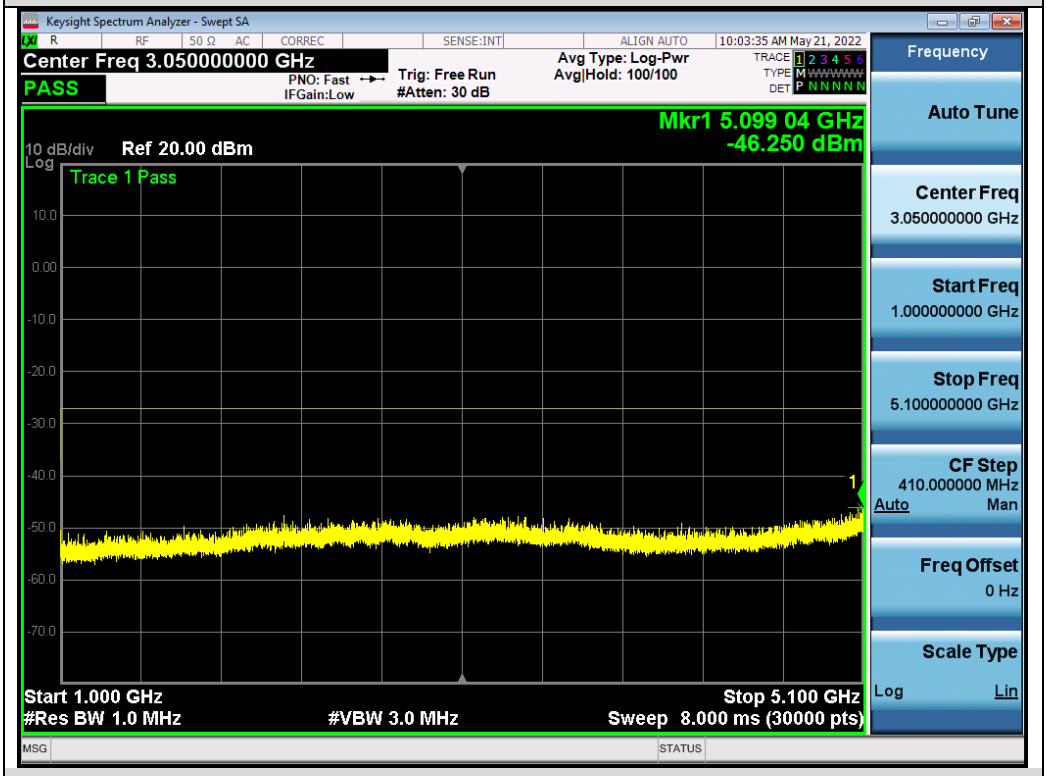
Test_Graph_802.11n40_ANT1_5190_MCS0_Frequency Band 3



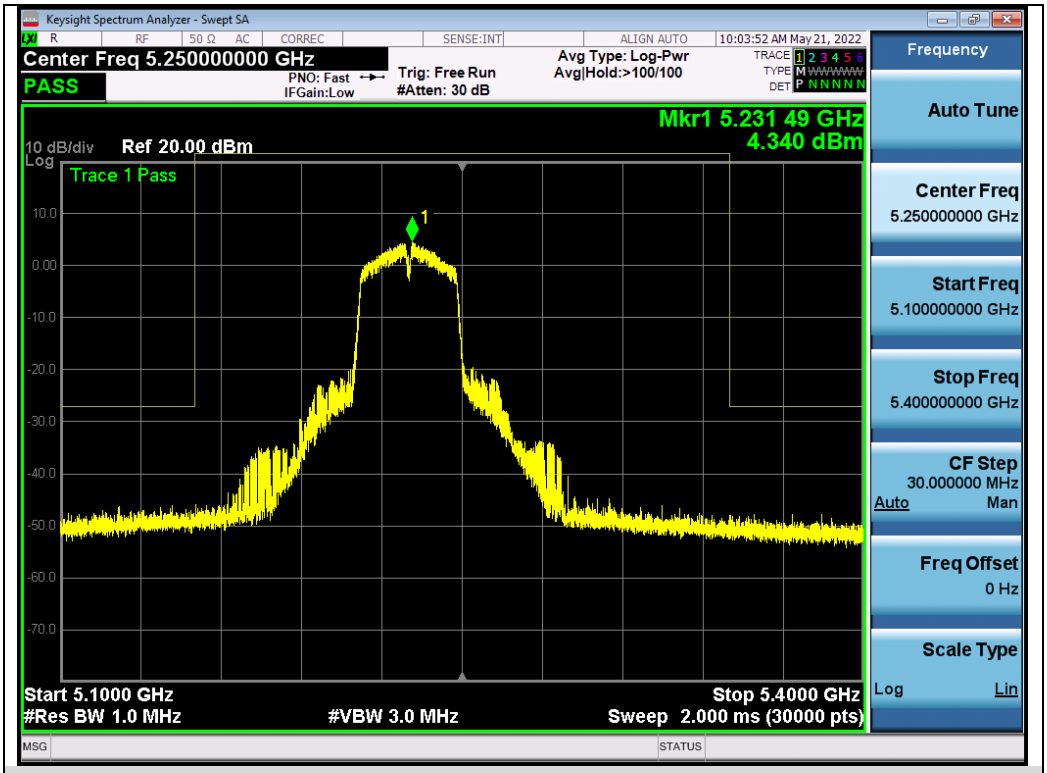
Test_Graph_802.11n40_ANT1_5190_MCS0_Frequency Band 4



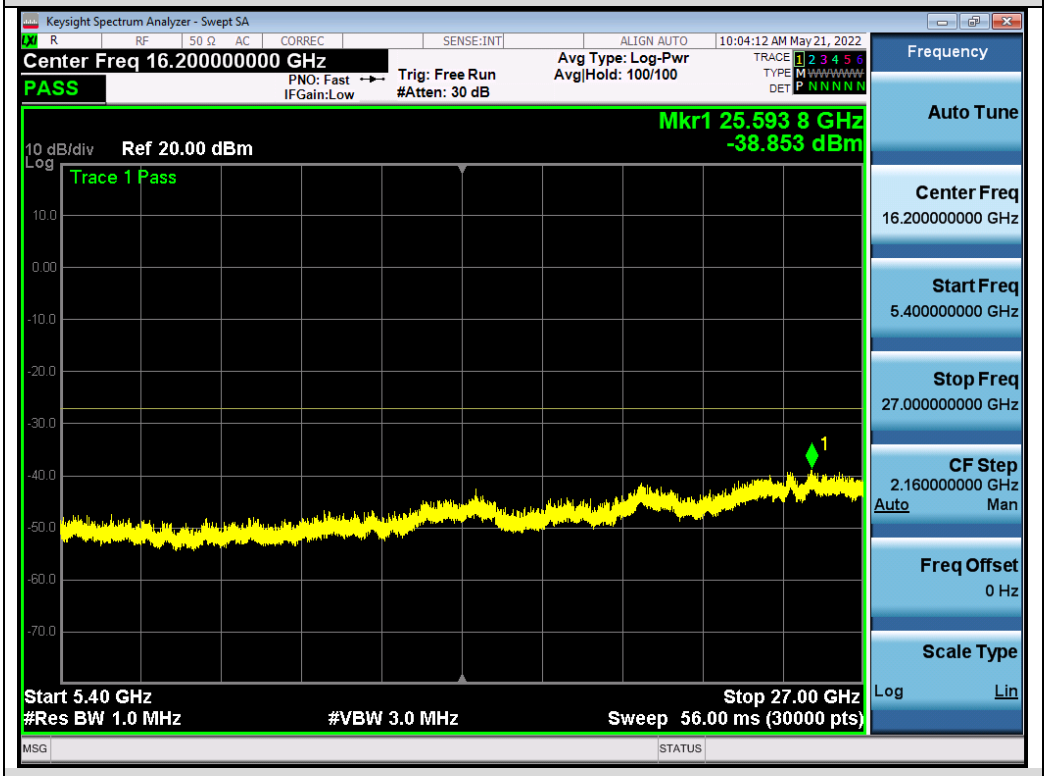
Test_Graph_802.11n40_ANT1_5230_MCS0_Frequency Band 1



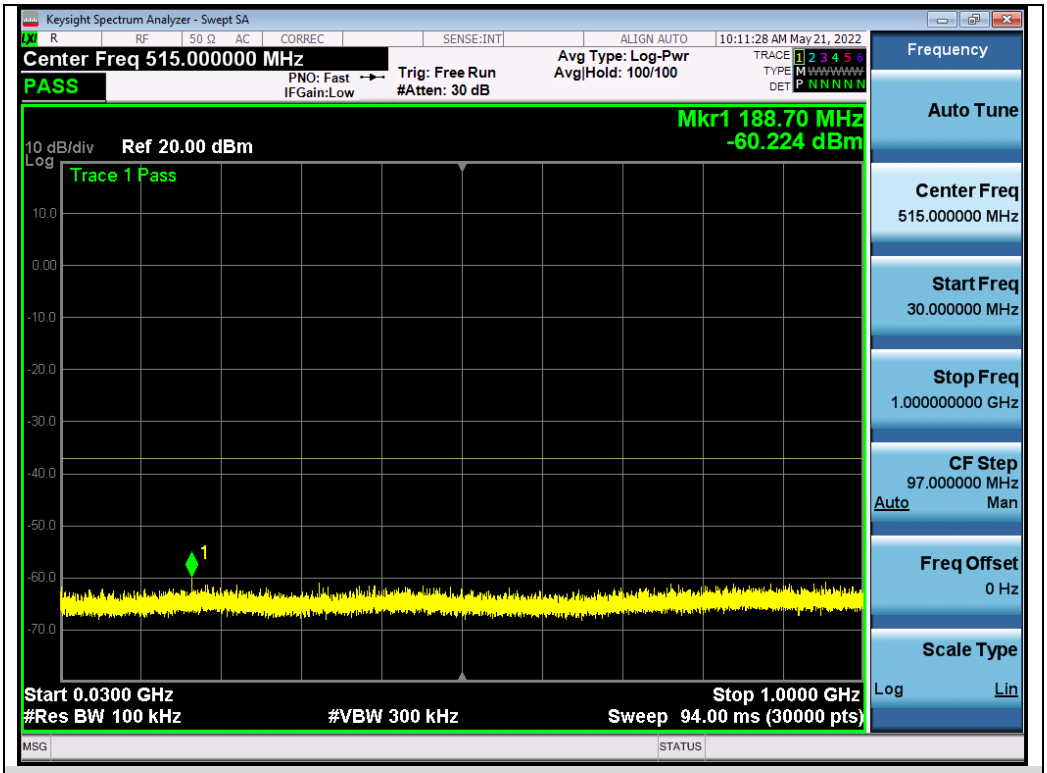
Test_Graph_802.11n40_ANT1_5230_MCS0_Frequency Band 2



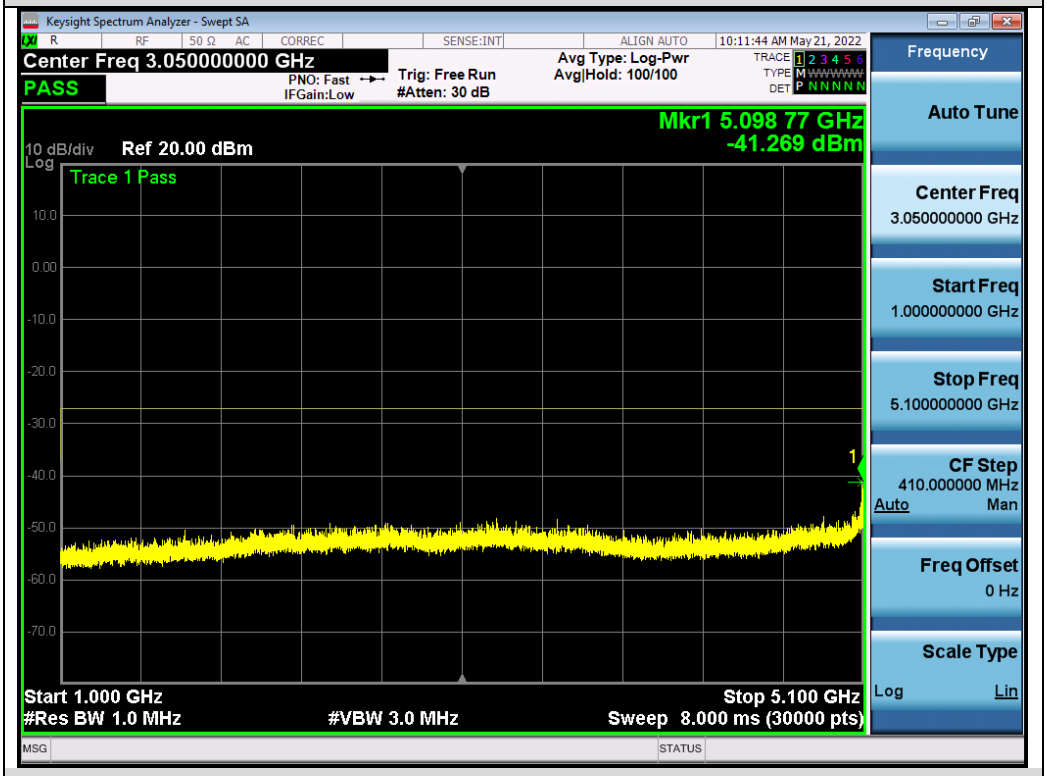
Test_Graph_802.11n40_ANT1_5230_MCS0_Frequency Band 3



Test_Graph_802.11n40_ANT1_5230_MCS0_Frequency Band 4

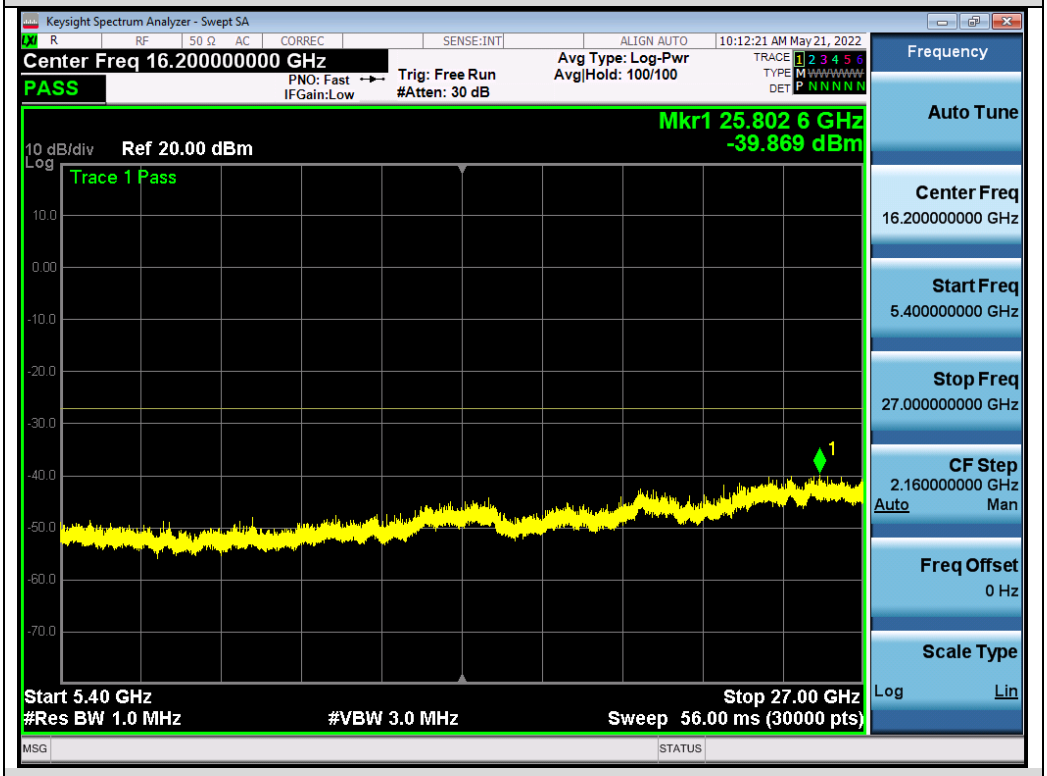


Test_Graph_802.11ac80_ANT1_5210_MCS9_Frequency Band 1



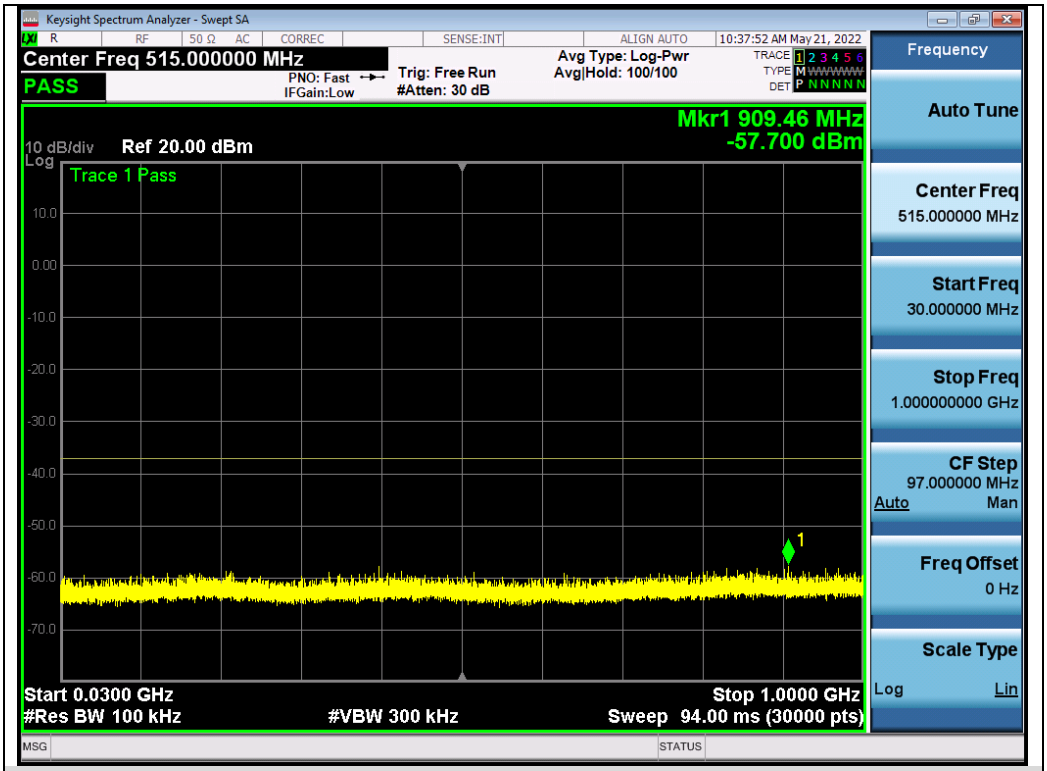
Test_Graph_802.11ac80_ANT1_5210_MCS9_Frequency Band 2

Test_Graph_802.11ac80_ANT1_5210_MCS9_Frequency Band 3

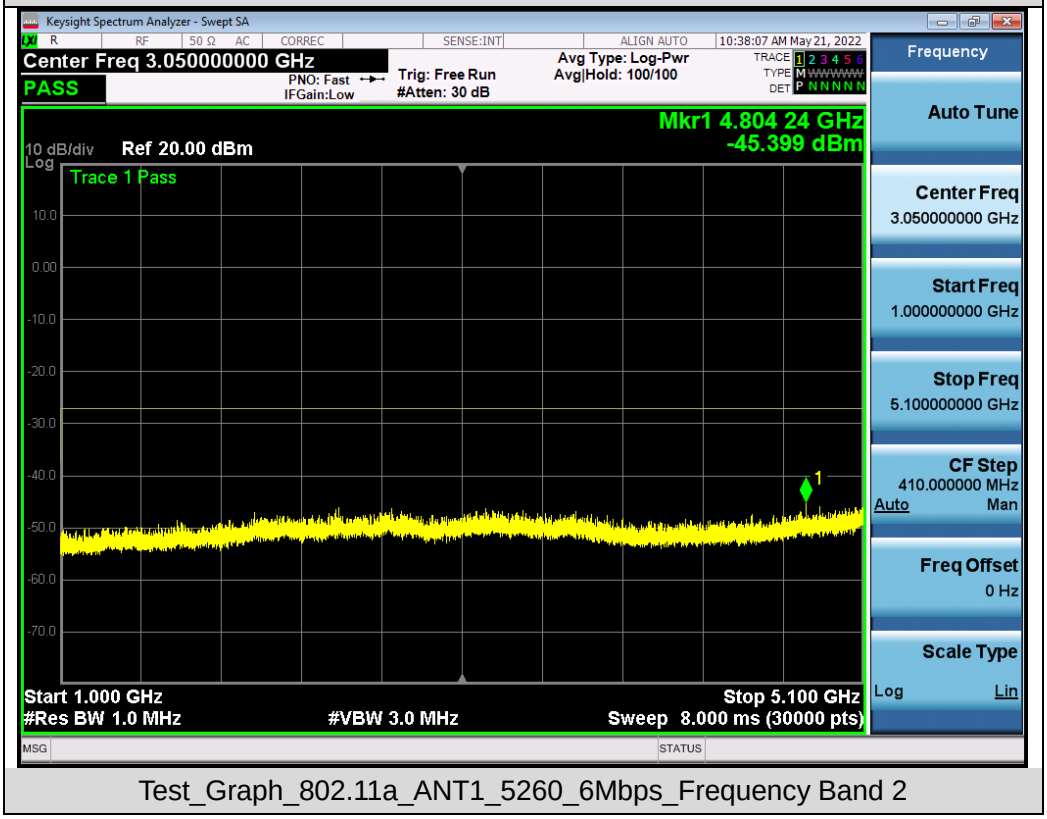


Test_Graph_802.11ac80_ANT1_5210_MCS9_Frequency Band 4

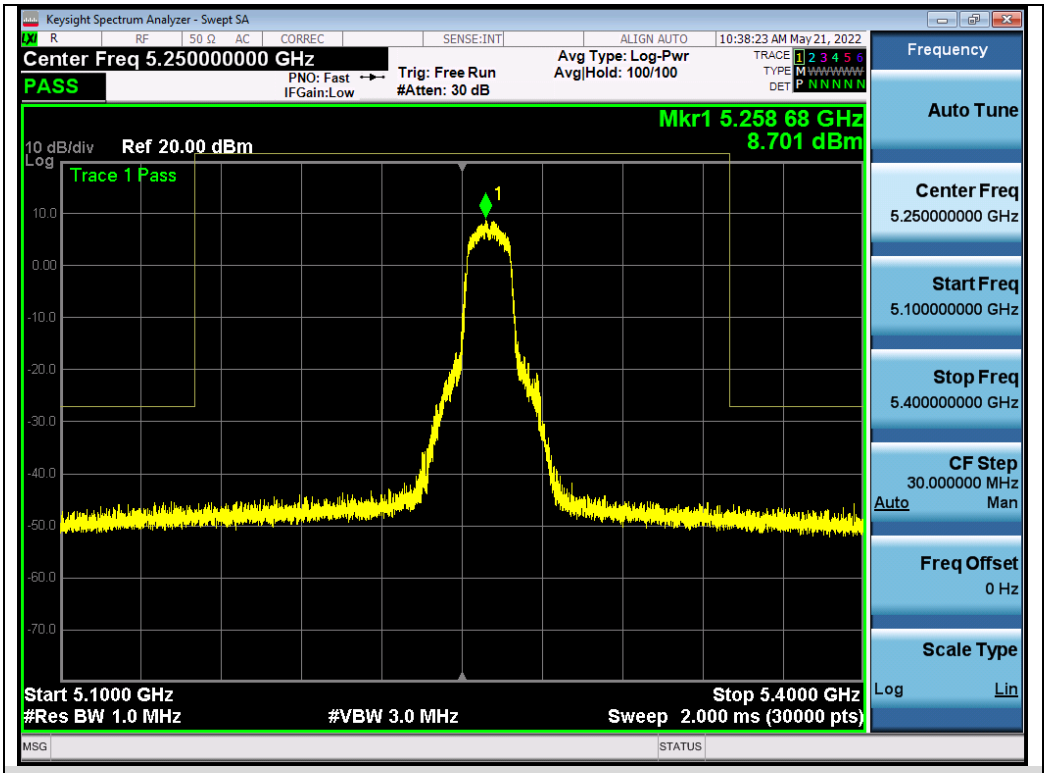
Test Graphs of Spurious Emissions outside of the 5.15-5.35 GHz band for transmitters operating in the 5.25-5.35 GHz band



Test_Graph_802.11a_ANT1_5260_6Mbps_Frequency Band 1

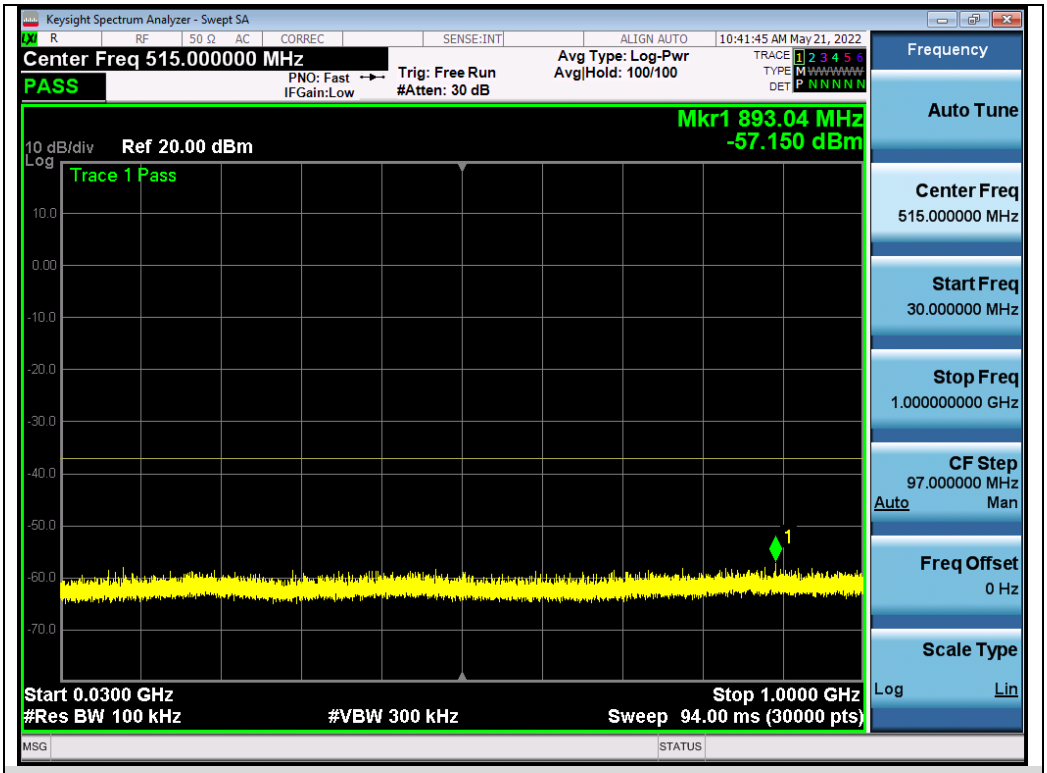


Test_Graph_802.11a_ANT1_5260_6Mbps_Frequency Band 2

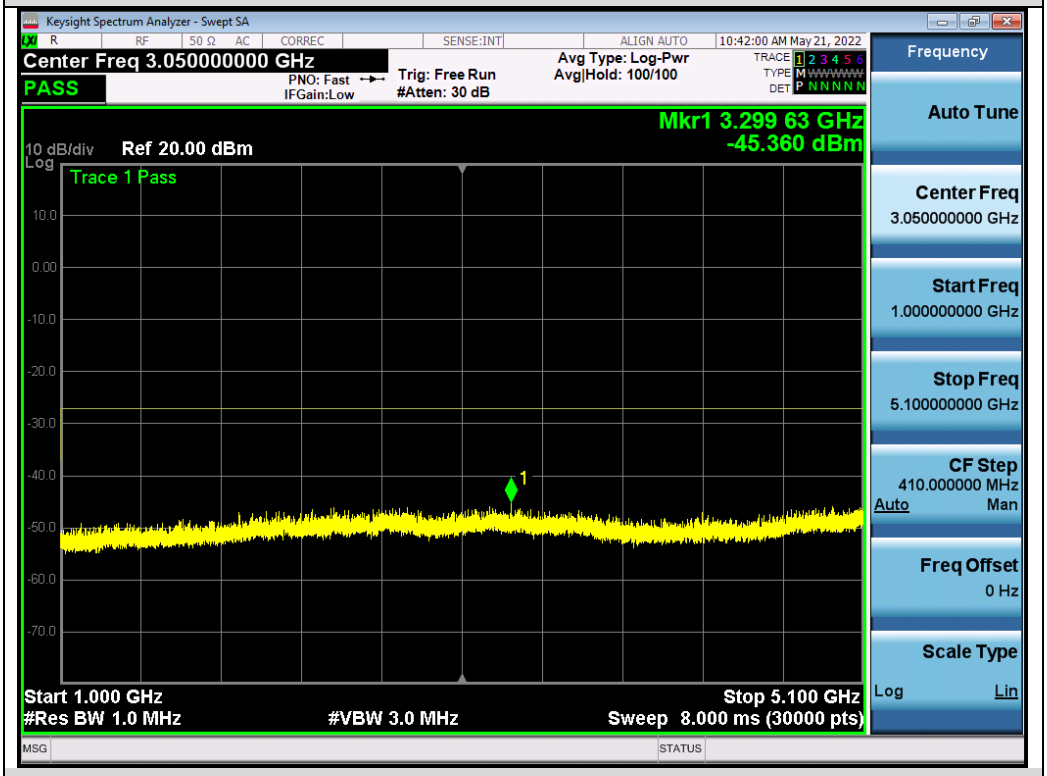


Test_Graph_802.11a_ANT1_5260_6Mbps_Frequency Band 3

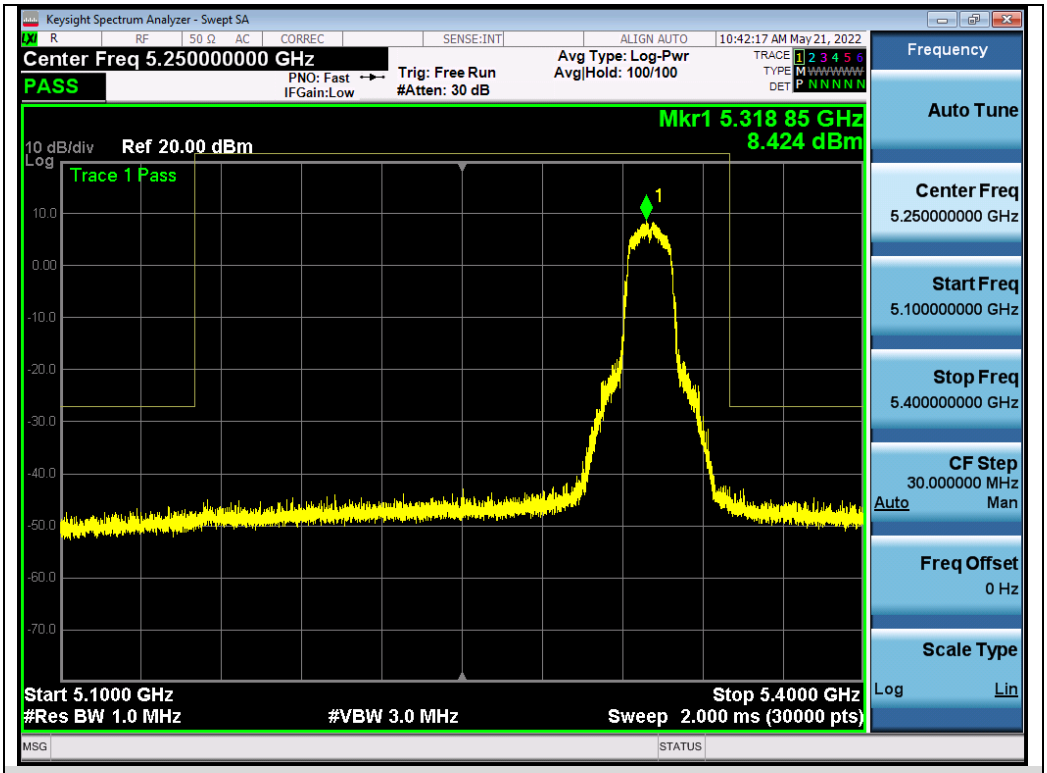
Test_Graph_802.11a_ANT1_5260_6Mbps_Frequency Band 4



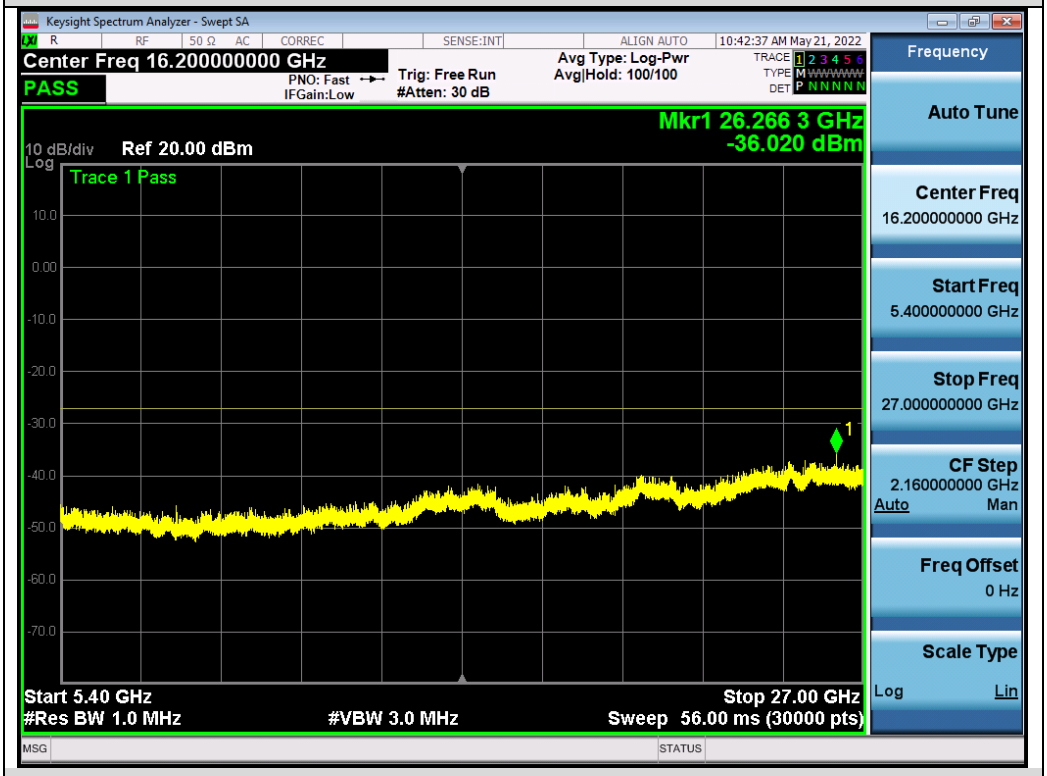
Test_Graph_802.11a_ANT1_5320_6Mbps_Frequency Band 1



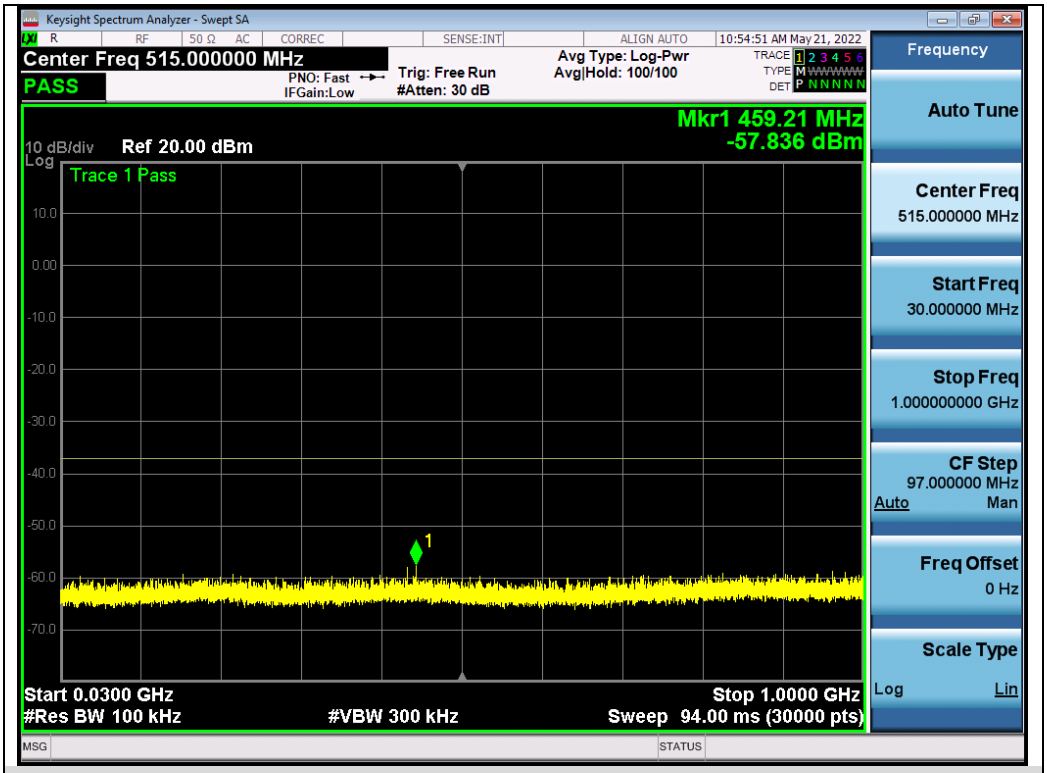
Test_Graph_802.11a_ANT1_5320_6Mbps_Frequency Band 2



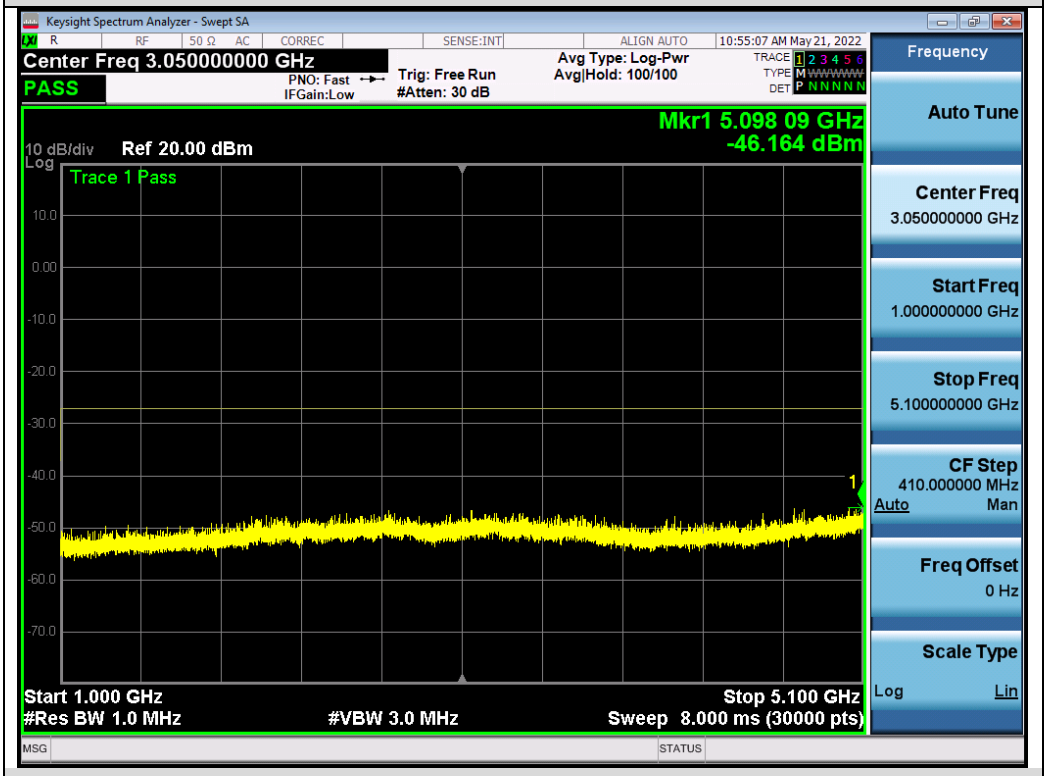
Test_Graph_802.11a_ANT1_5320_6Mbps_Frequency Band 3



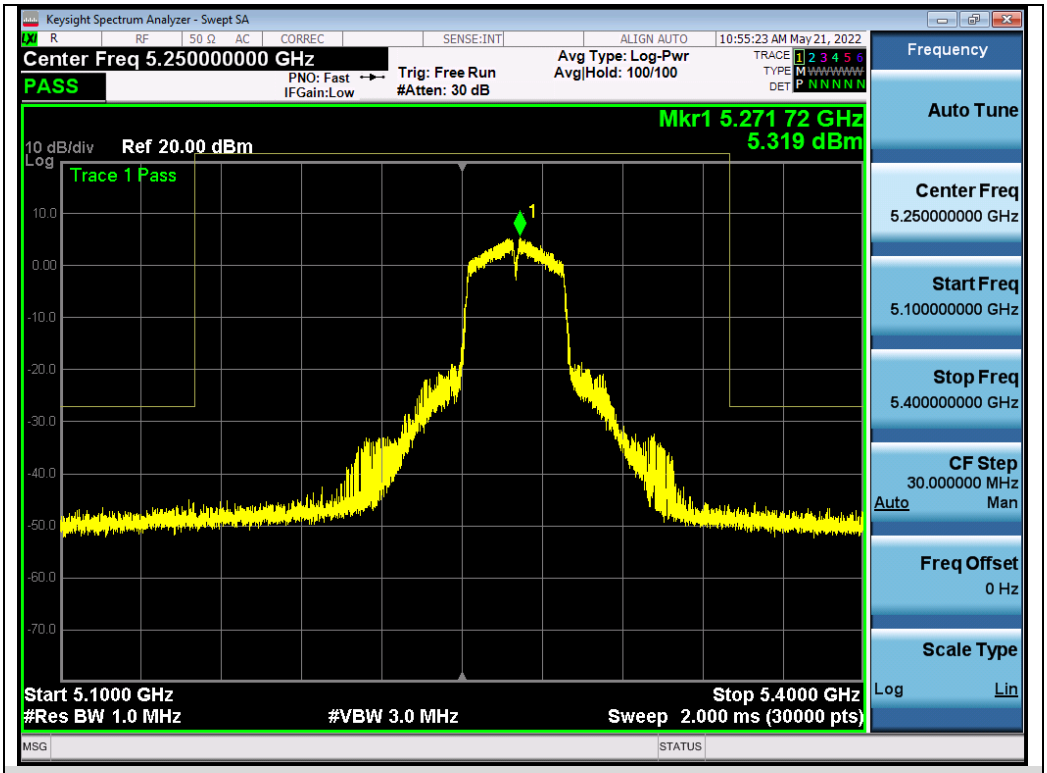
Test_Graph_802.11a_ANT1_5320_6Mbps_Frequency Band 4



Test_Graph_802.11n40_ANT1_5270_MCS0_Frequency Band 1

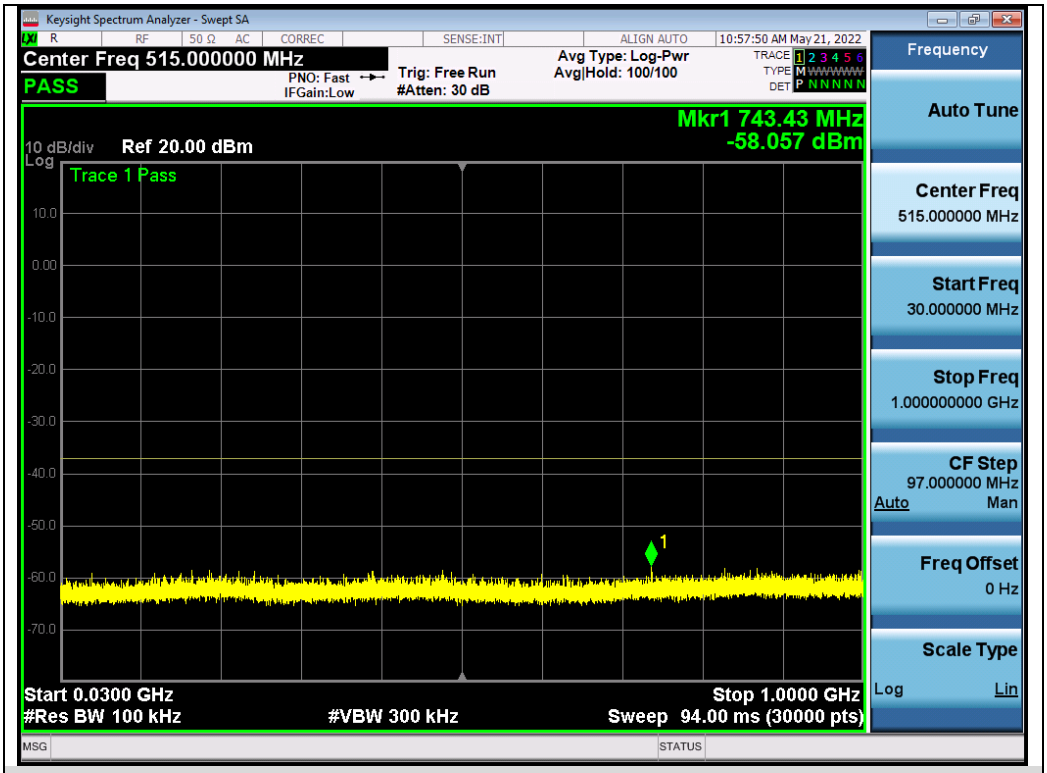


Test_Graph_802.11n40_ANT1_5270_MCS0_Frequency Band 2

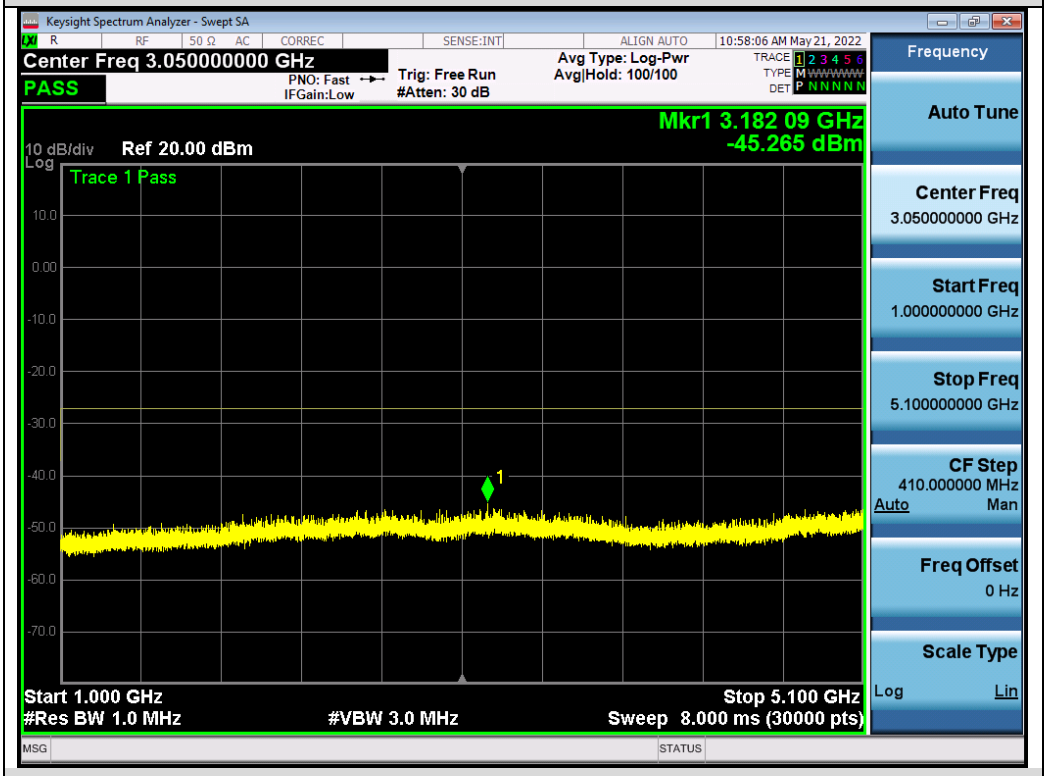


Test_Graph_802.11n40_ANT1_5270_MCS0_Frequency Band 3

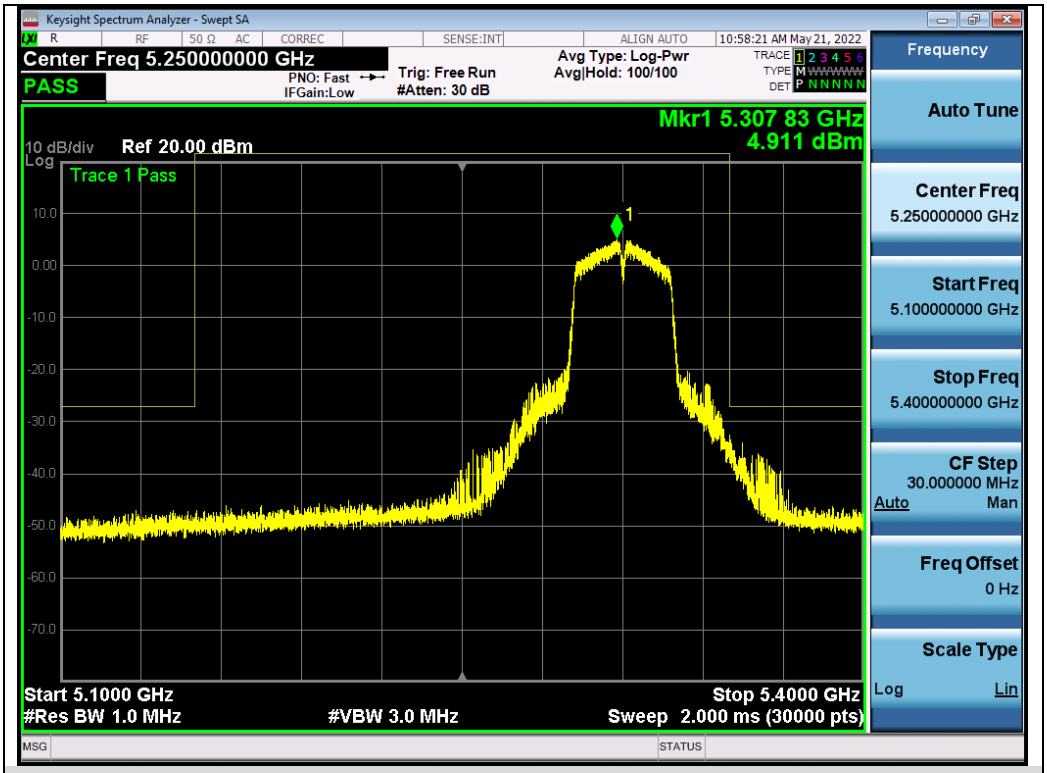
Test_Graph_802.11n40_ANT1_5270_MCS0_Frequency Band 4



Test_Graph_802.11n40_ANT1_5310_MCS0_Frequency Band 1

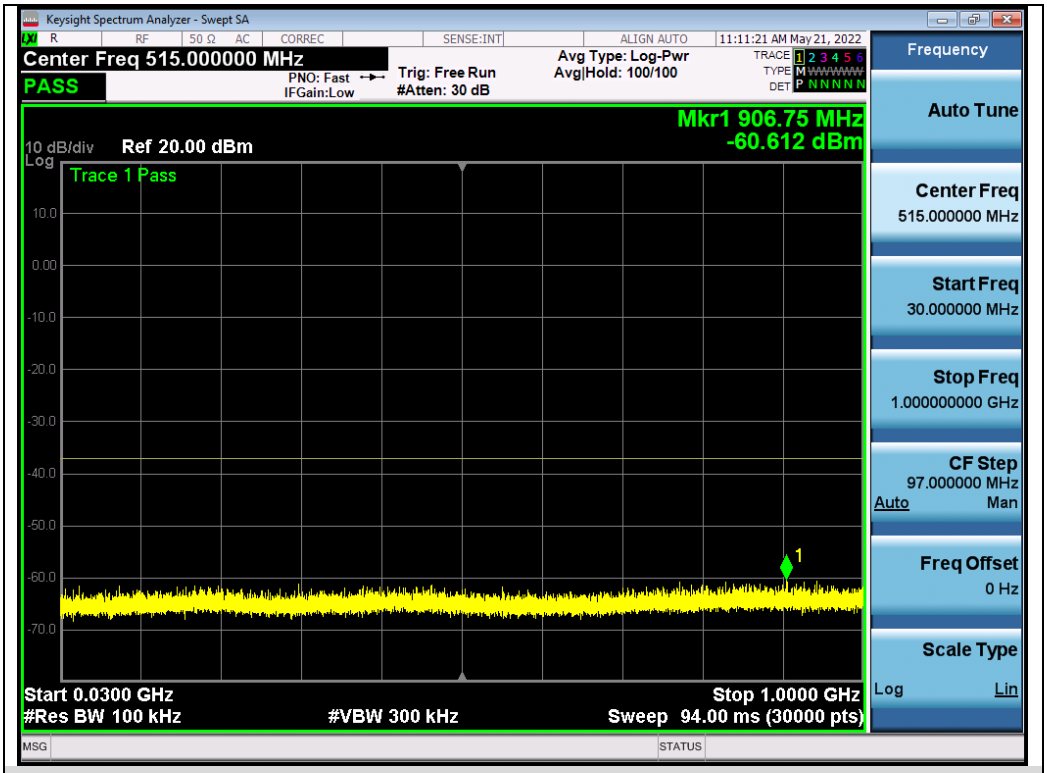


Test_Graph_802.11n40_ANT1_5310_MCS0_Frequency Band 2

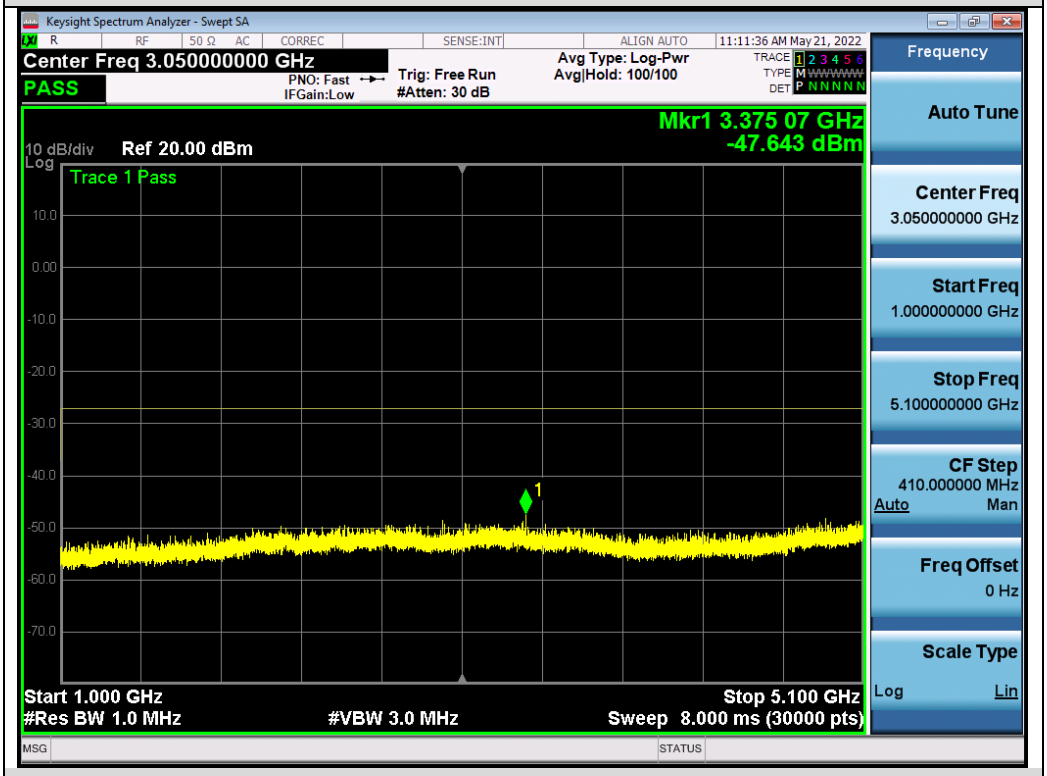


Test_Graph_802.11n40_ANT1_5310_MCS0_Frequency Band 3

Test_Graph_802.11n40_ANT1_5310_MCS0_Frequency Band 4



Test_Graph_802.11ac80_ANT1_5290_MCS9_Frequency Band 1

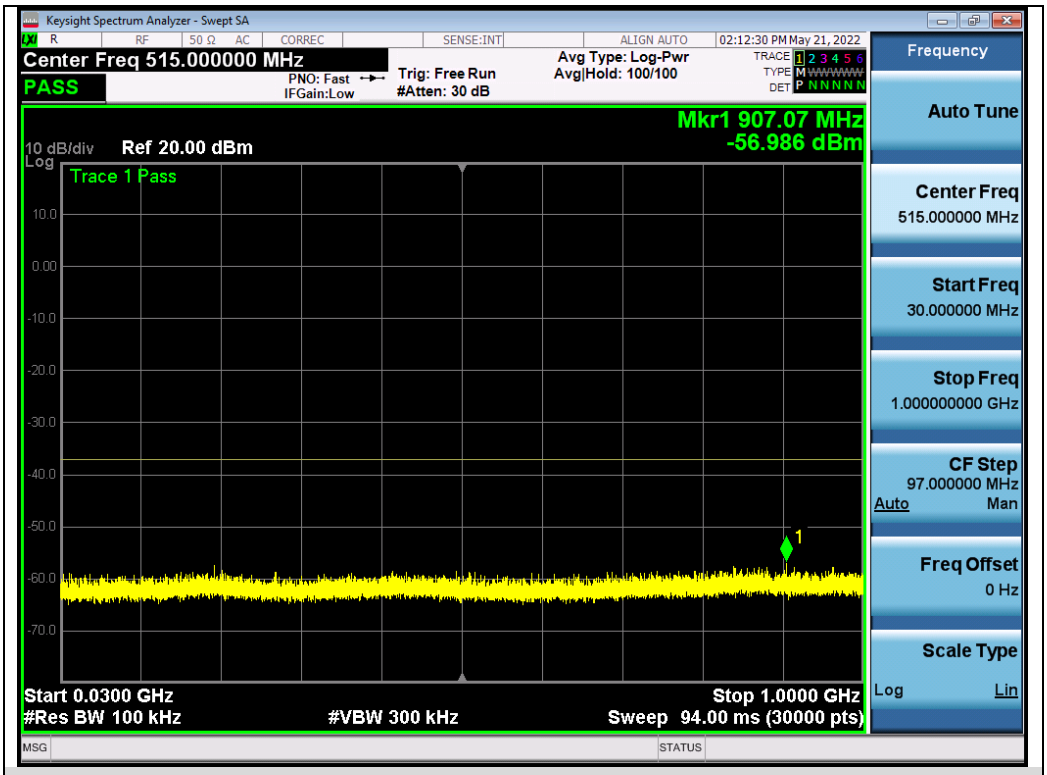


Test_Graph_802.11ac80_ANT1_5290_MCS9_Frequency Band 2

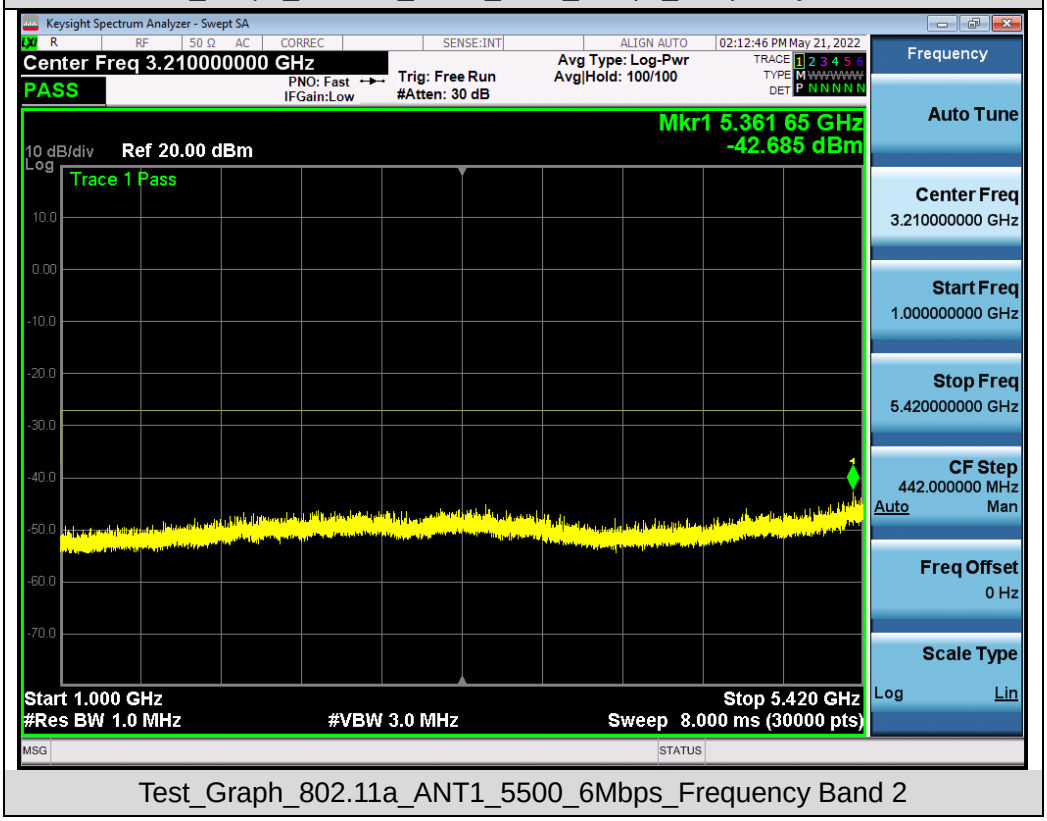
Test_Graph_802.11ac80_ANT1_5290_MCS9_Frequency Band 3

Test_Graph_802.11ac80_ANT1_5290_MCS9_Frequency Band 4

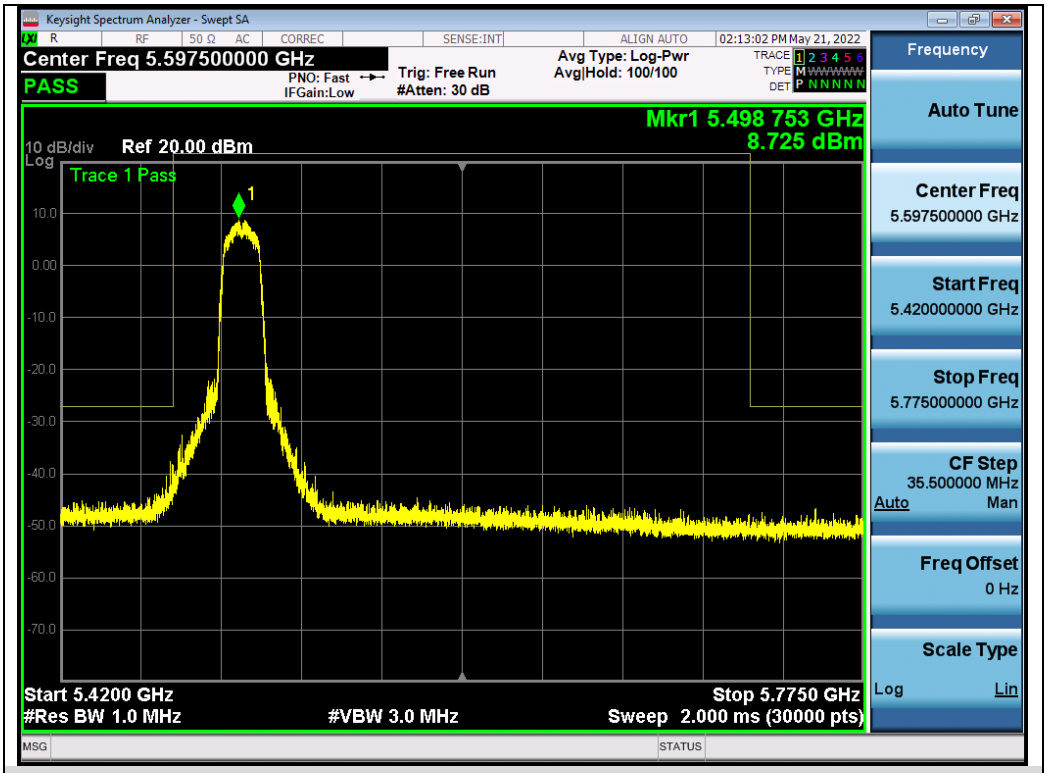
Test Graphs of Spurious Emissions outside of the 5.15-5.35 GHz band for transmitters operating in the 5.47-5.725 GHz band



Test_Graph_802.11a_ANT1_5500_6Mbps_Frequency Band 1



Test_Graph_802.11a_ANT1_5500_6Mbps_Frequency Band 2



Test_Graph_802.11a_ANT1_5500_6Mbps_Frequency Band 3

Test_Graph_802.11a_ANT1_5500_6Mbps_Frequency Band 4