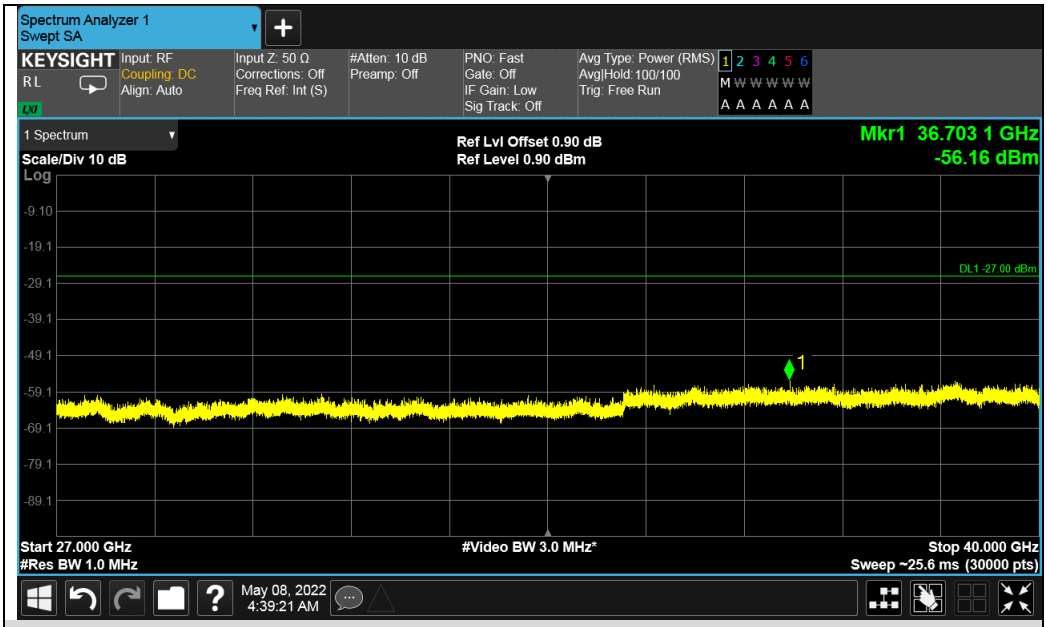
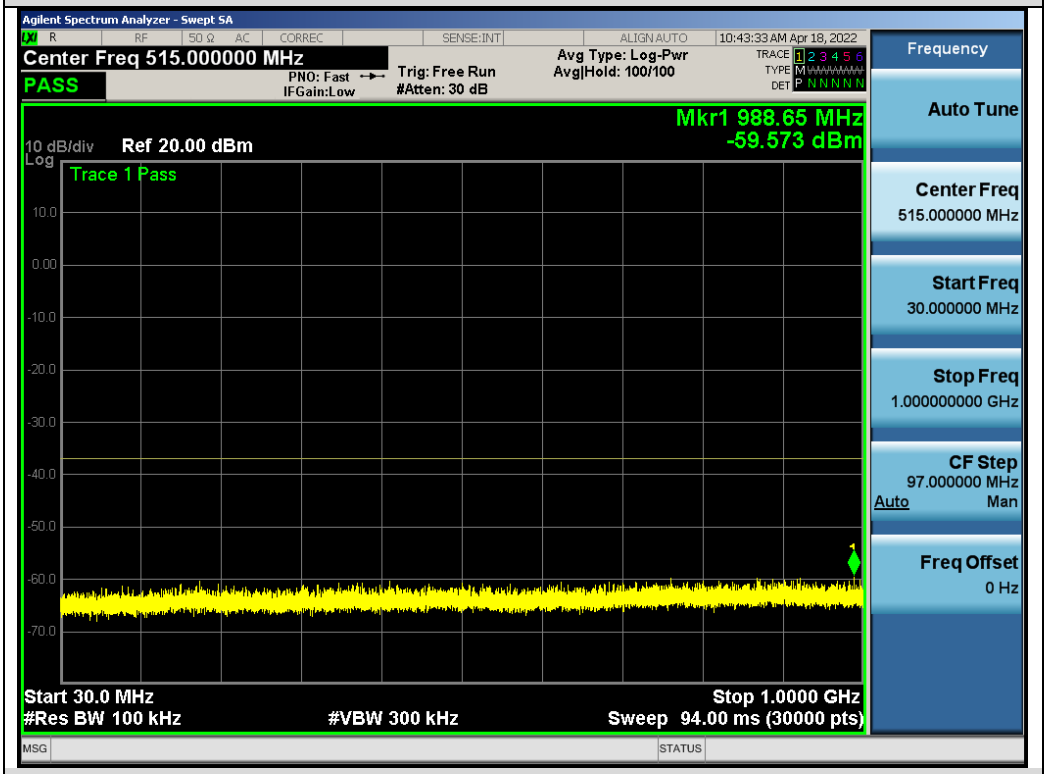
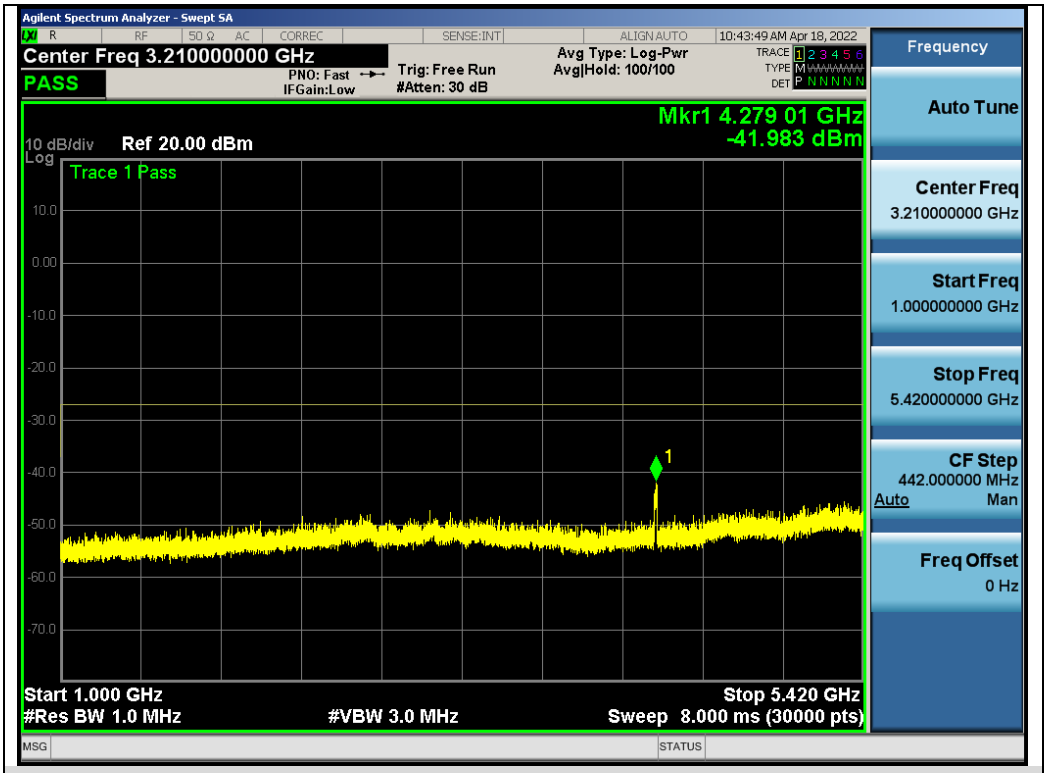


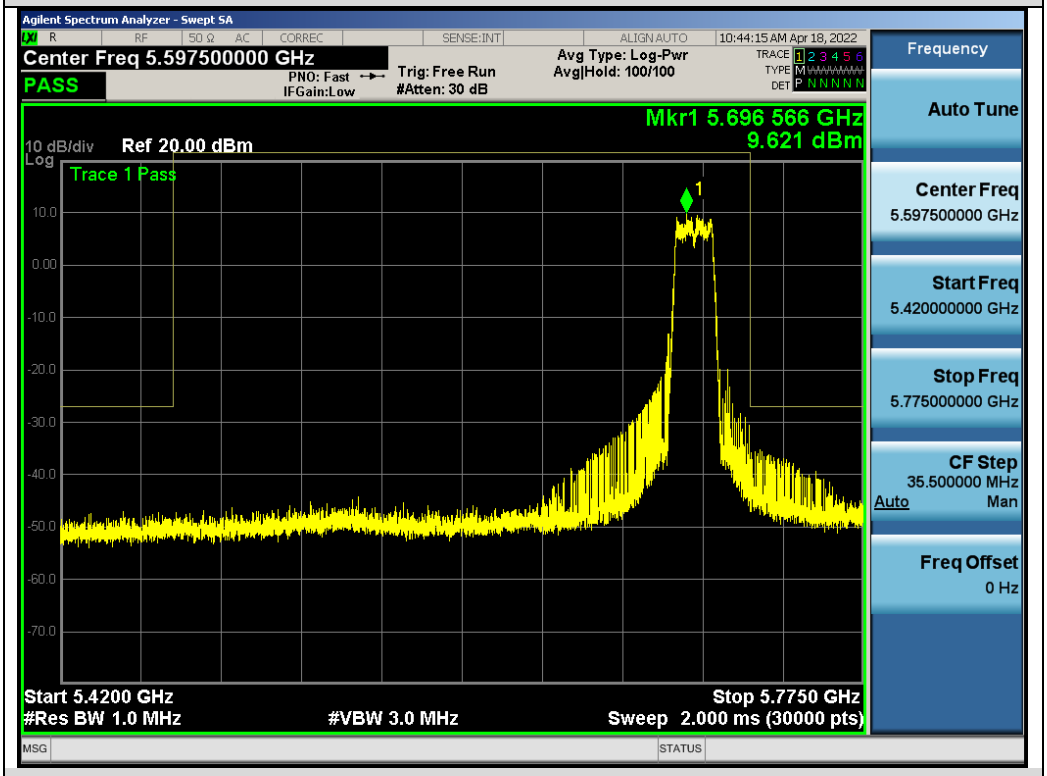
Test_Graph_802.11a_ANT1_5500_6Mbps_Frequency Band 5



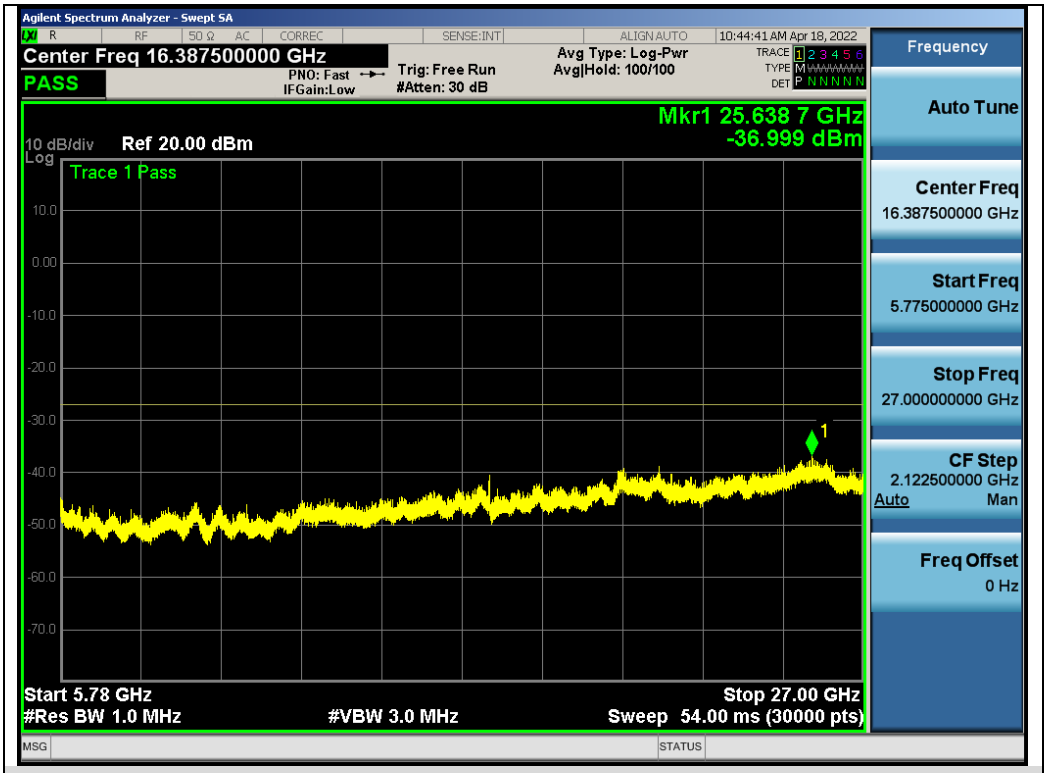
Test_Graph_802.11a_ANT1_5700_6Mbps_Frequency Band 1



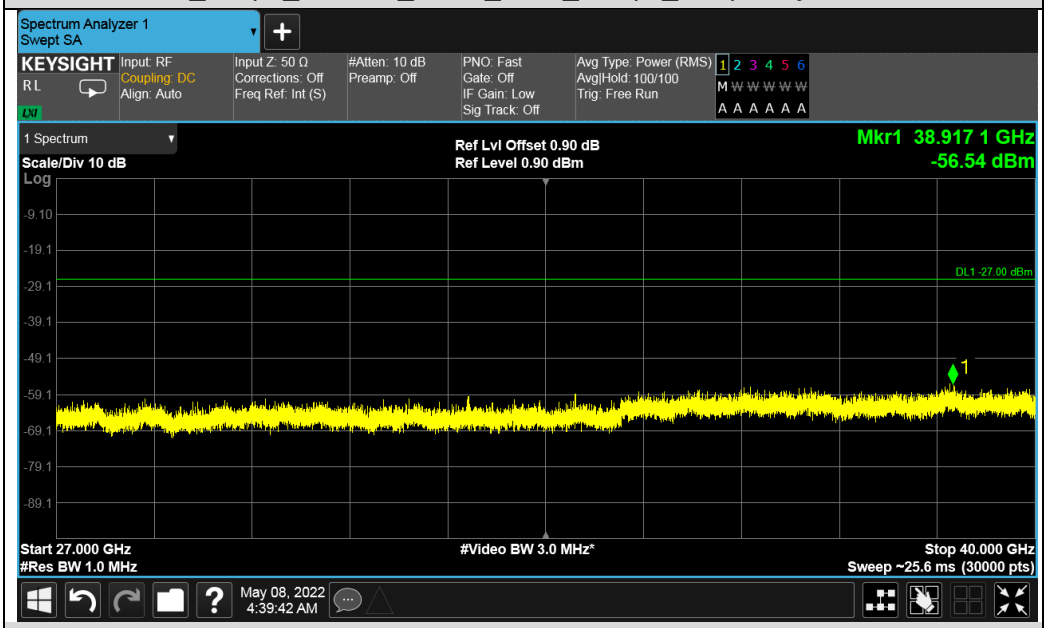
Test_Graph_802.11a_ANT1_5700_6Mbps_Frequency Band 2



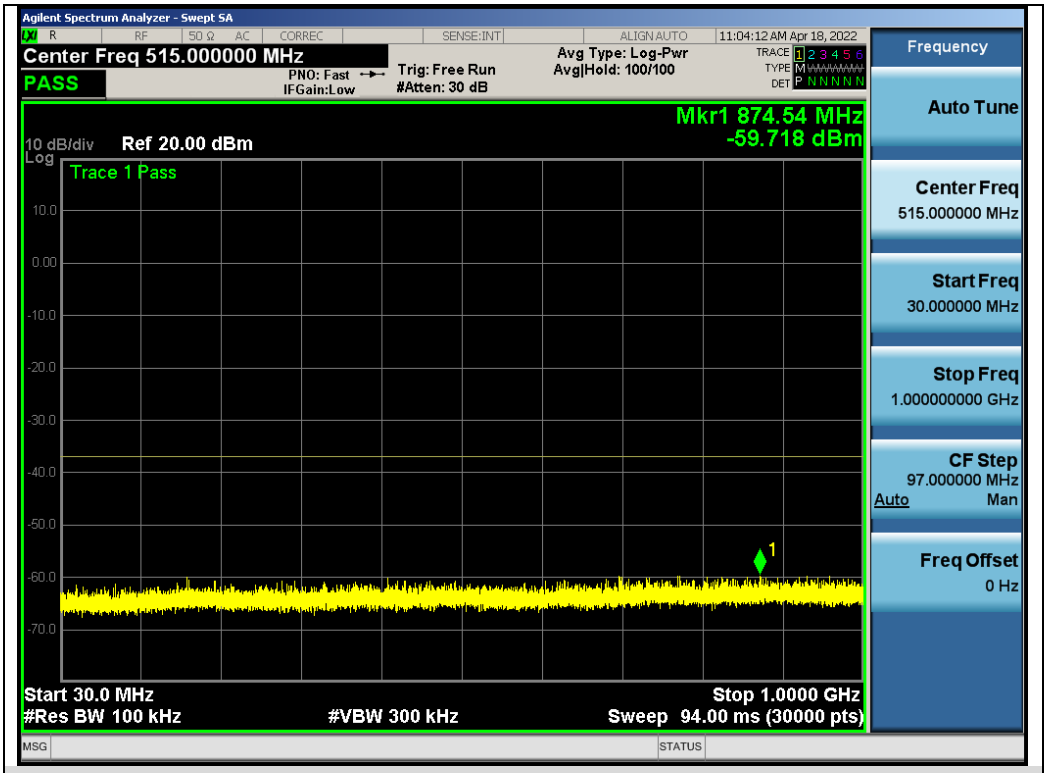
Test_Graph_802.11a_ANT1_5700_6Mbps_Frequency Band 3



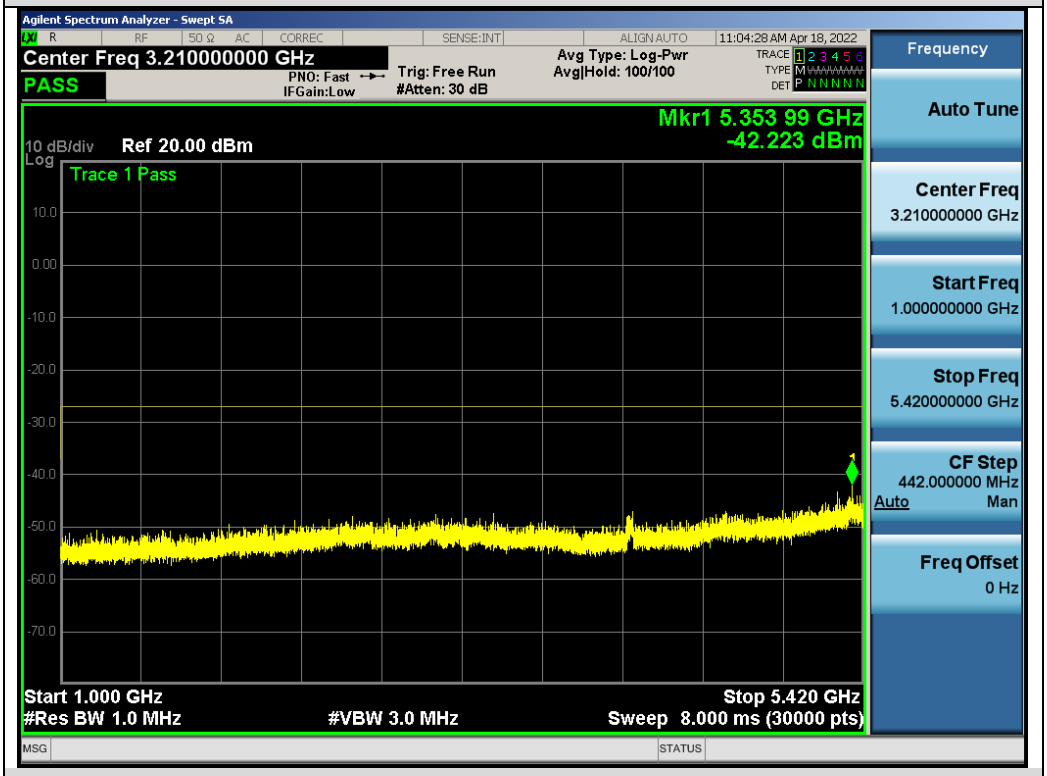
Test_Graph_802.11a_ANT1_5700_6Mbps_Frequency Band 4



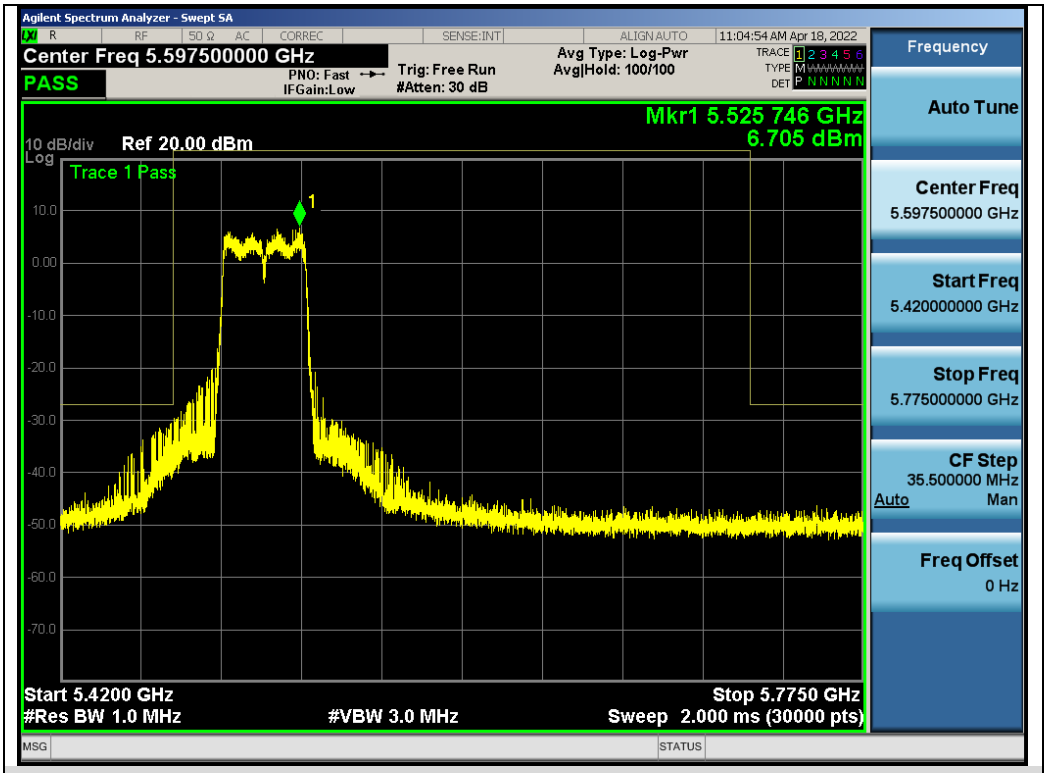
Test_Graph_802.11a_ANT1_5700_6MbpsS_Frequency Band 5



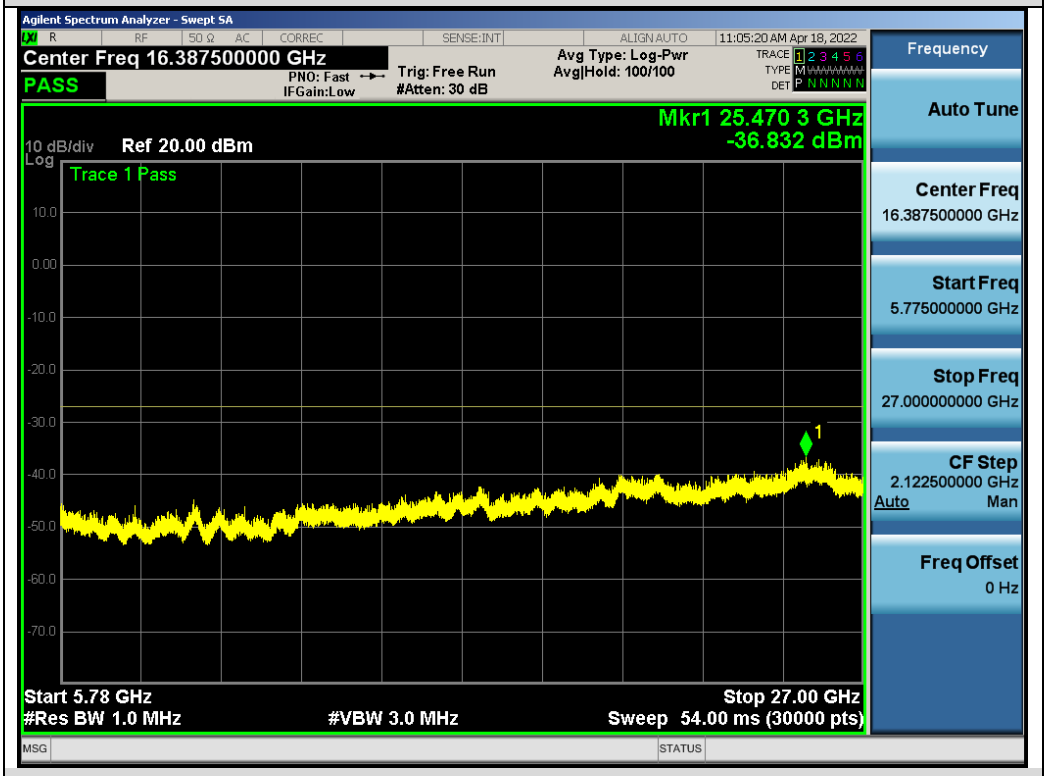
Test_Graph_802.11n40_ANT1_5510_MCS0_Frequency Band 1



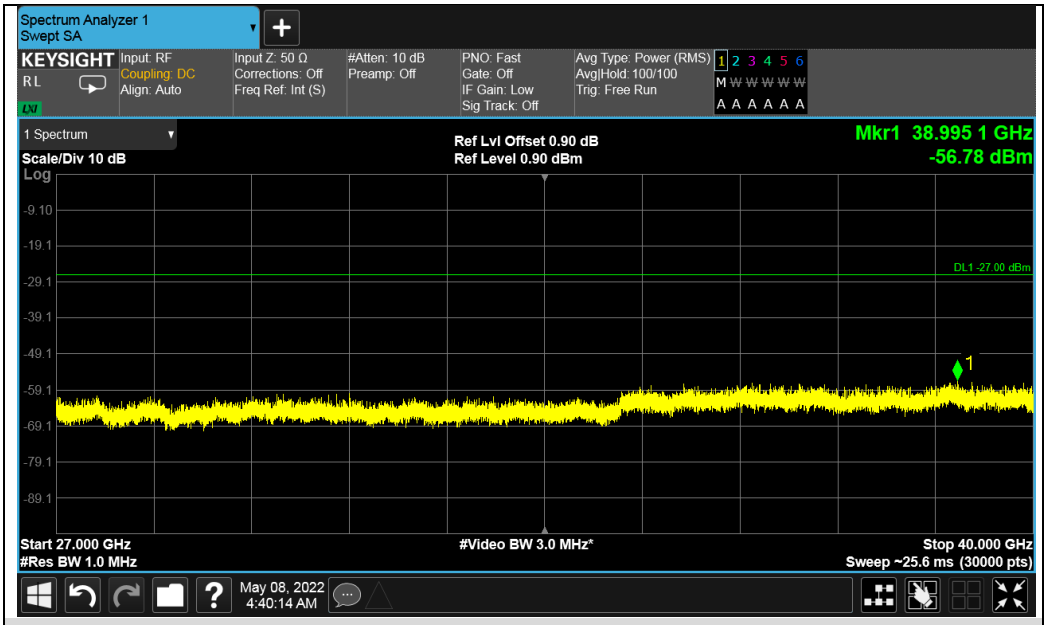
Test_Graph_802.11n40_ANT1_5510_MCS0_Frequency Band 2



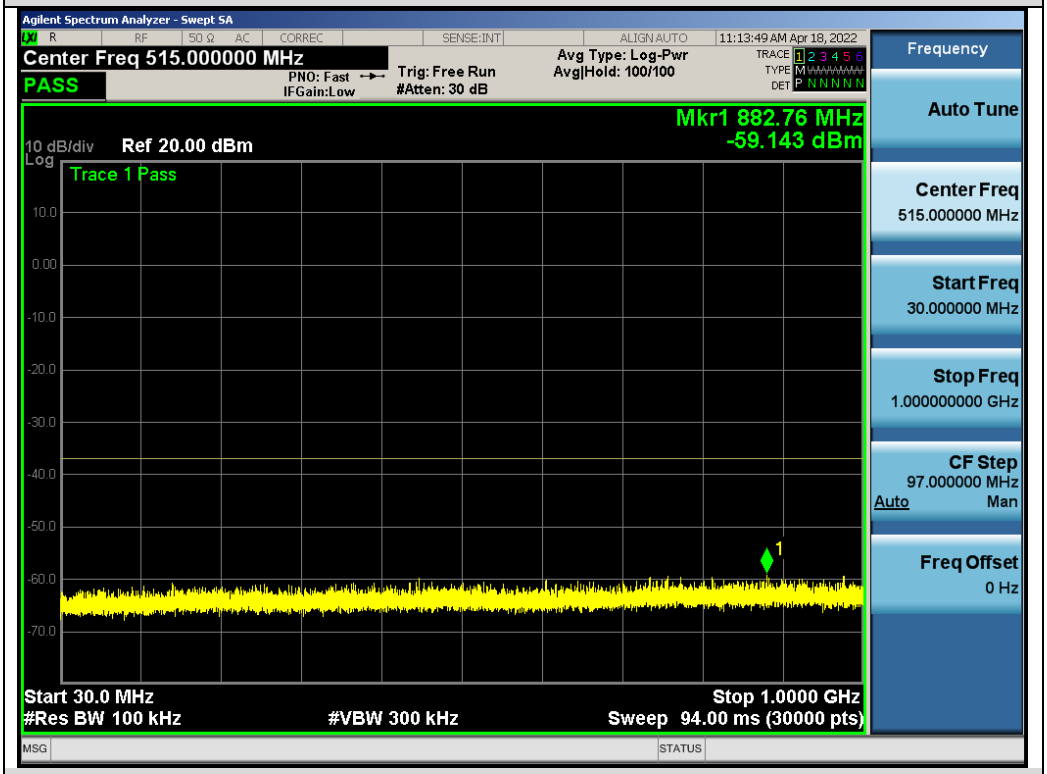
Test_Graph_802.11n40_ANT1_5510_MCS0_Frequency Band 3



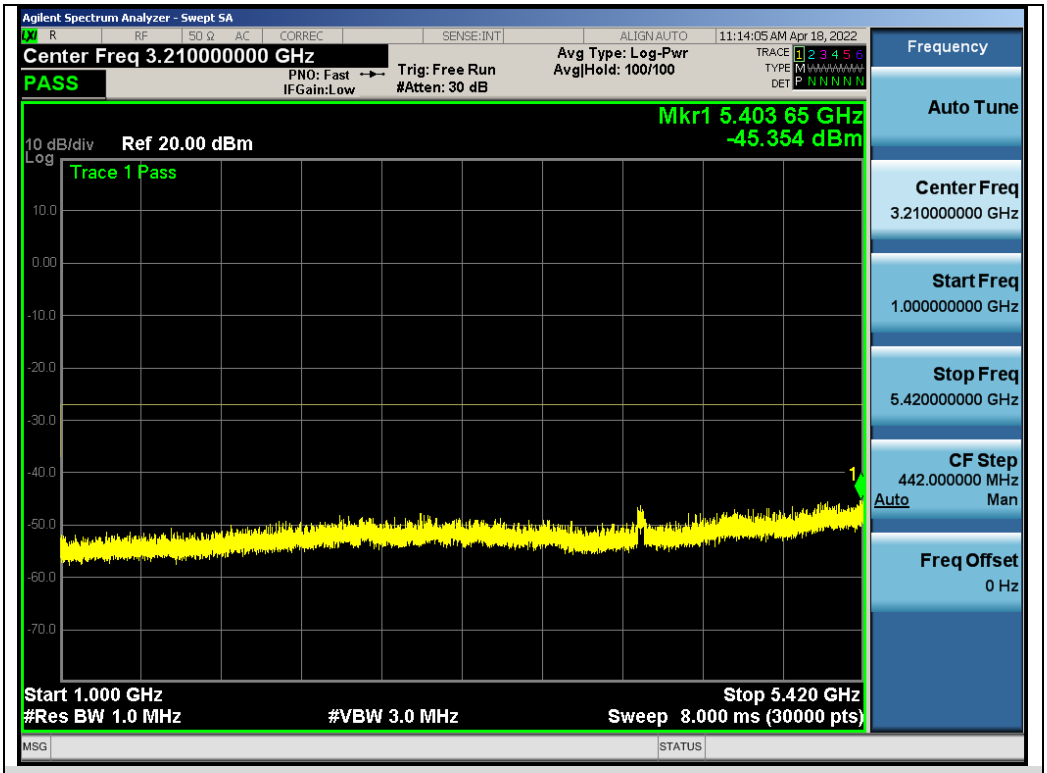
Test_Graph_802.11n40_ANT1_5510_MCS0_Frequency Band 4



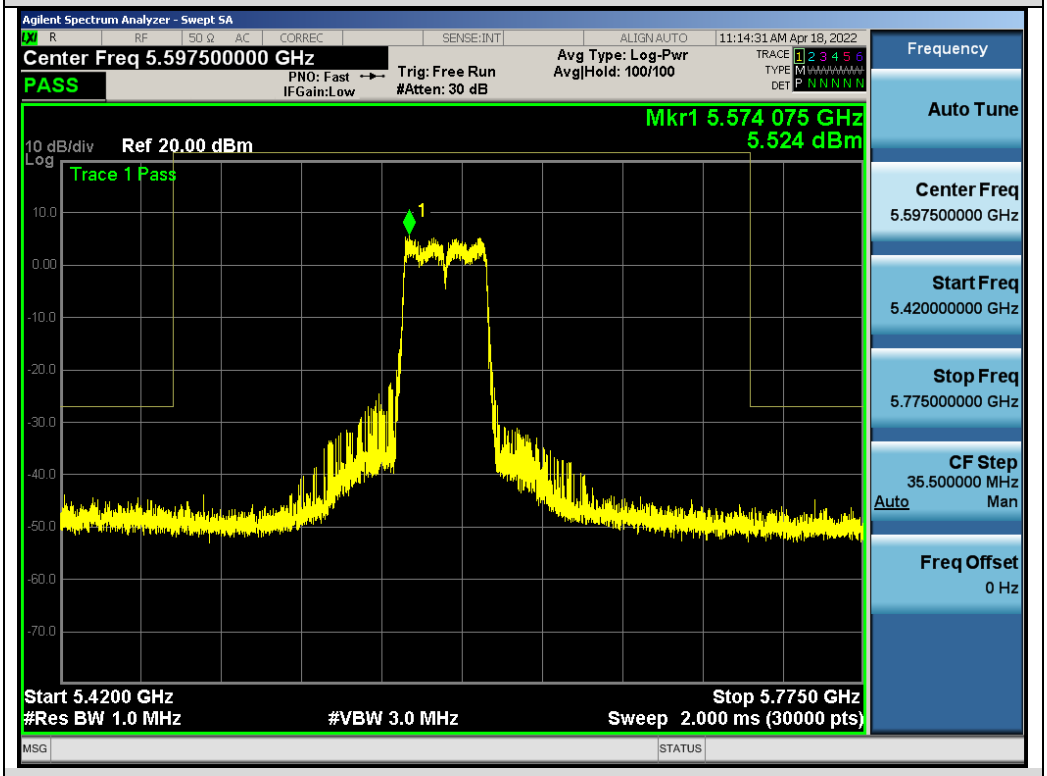
Test_Graph_802.11n40_ANT1_5510_MCS0_Frequency Band 5



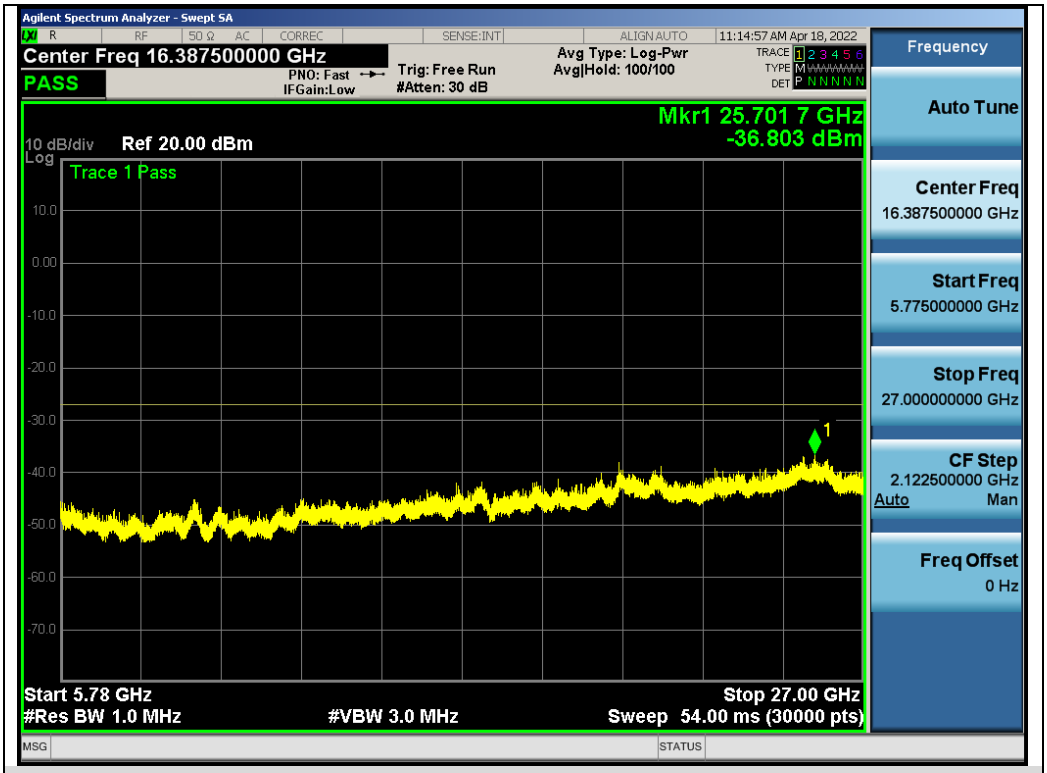
Test_Graph_802.11n40_ANT1_5590_MCS0_Frequency Band 1



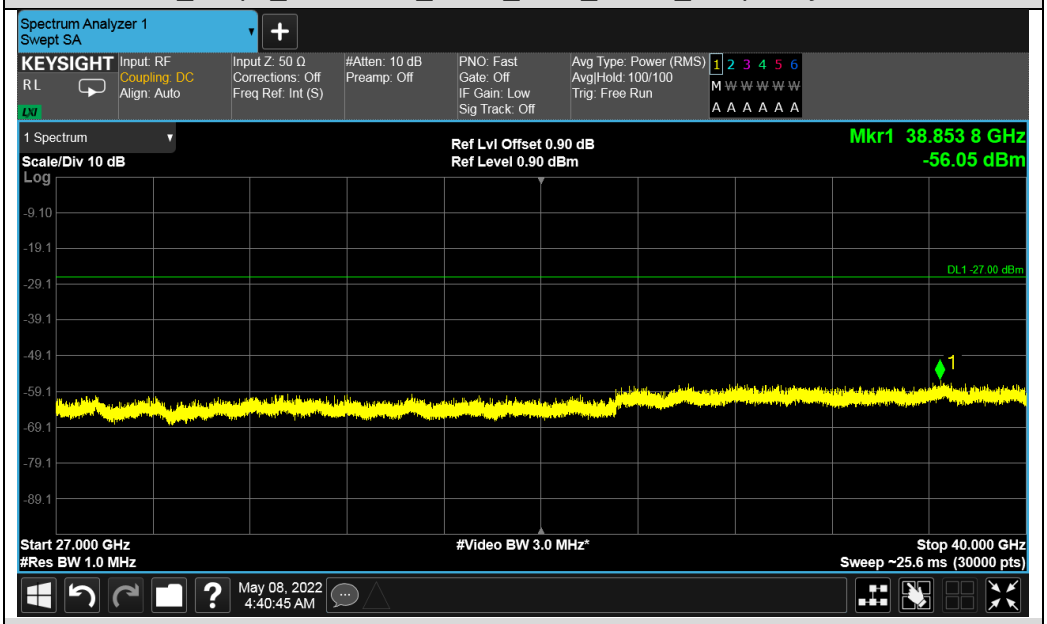
Test_Graph_802.11n40_ANT1_5590_MCS0_Frequency Band 2



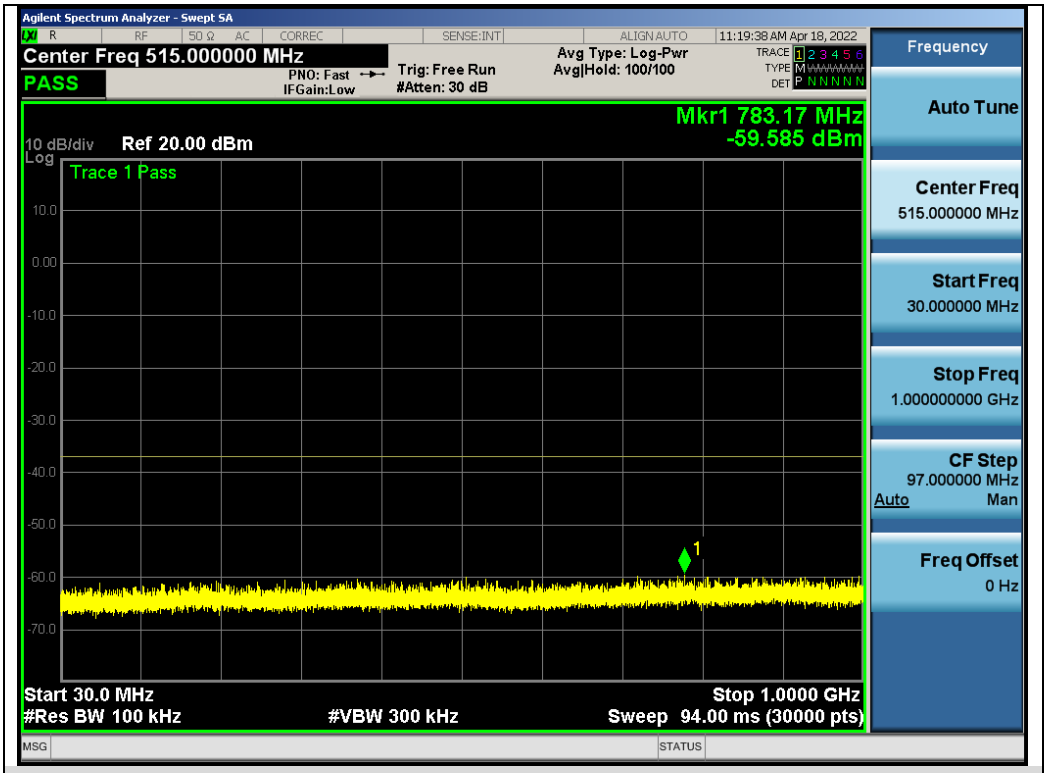
Test_Graph_802.11n40_ANT1_5590_MCS0_Frequency Band 3



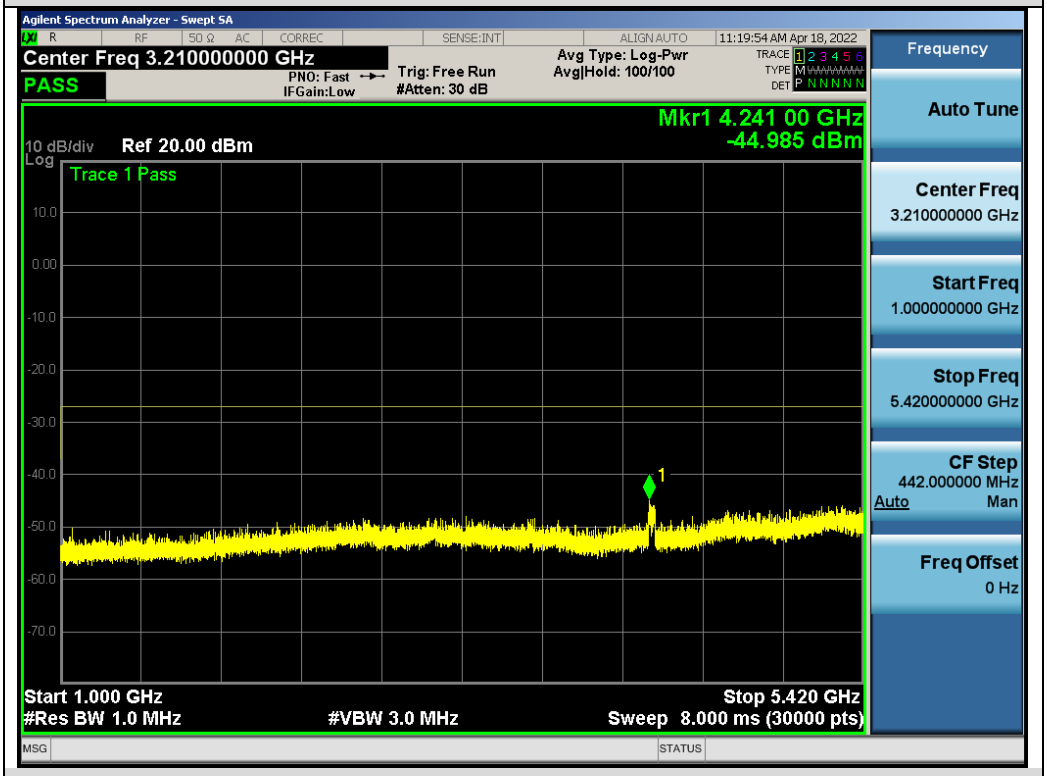
Test_Graph_802.11n40_ANT1_5590_MCS0_Frequency Band 4



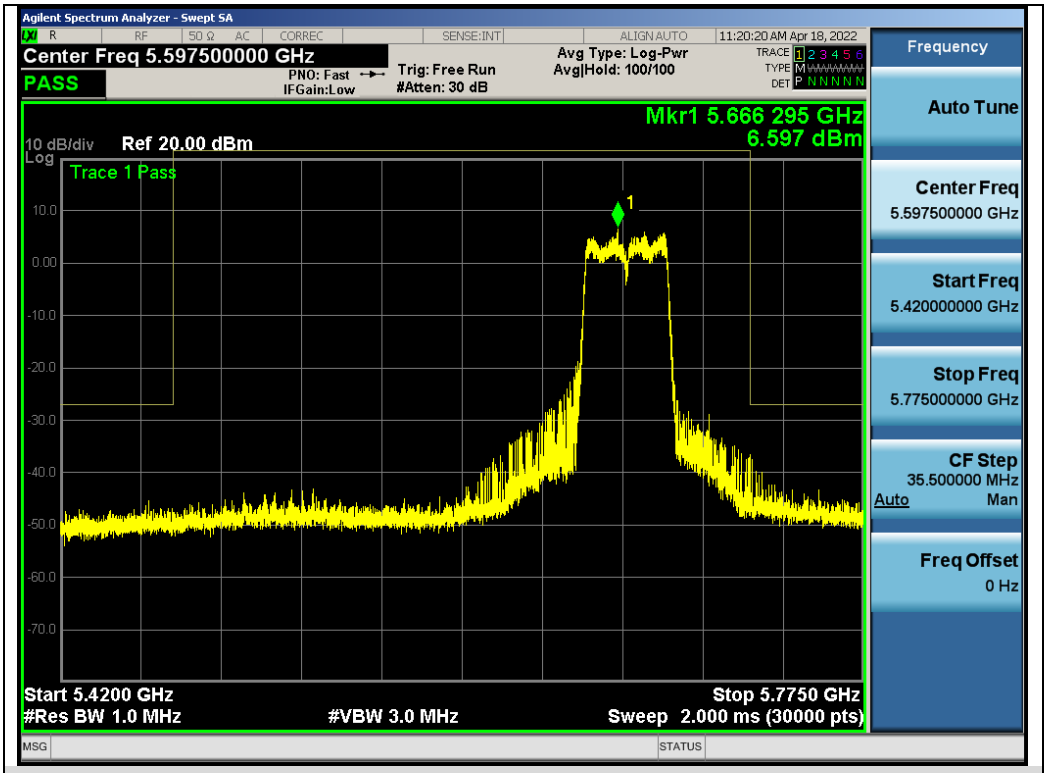
Test_Graph_802.11n40_ANT1_5590_MCS0_Frequency Band 5



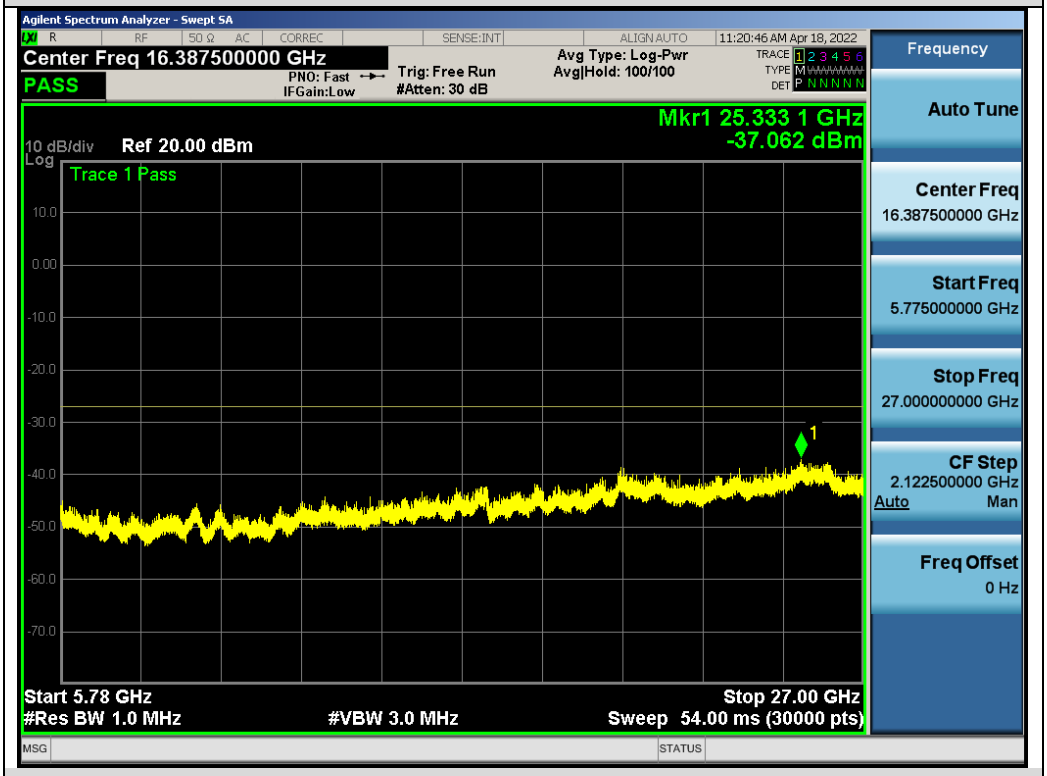
Test_Graph_802.11n40_ANT1_5670_MCS0_Frequency Band 1



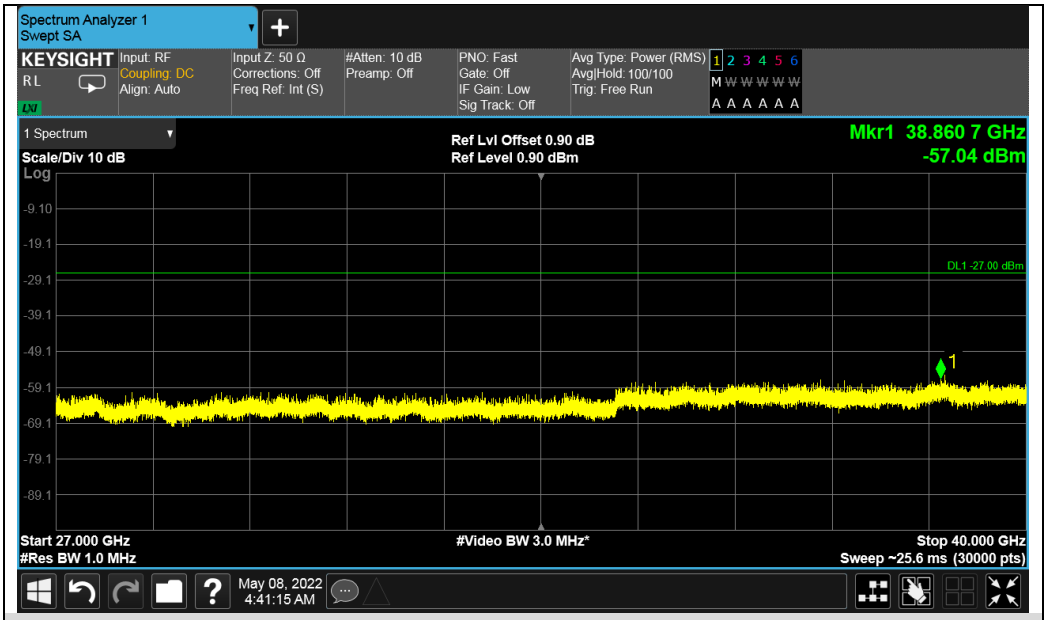
Test_Graph_802.11n40_ANT1_5670_MCS0_Frequency Band 2



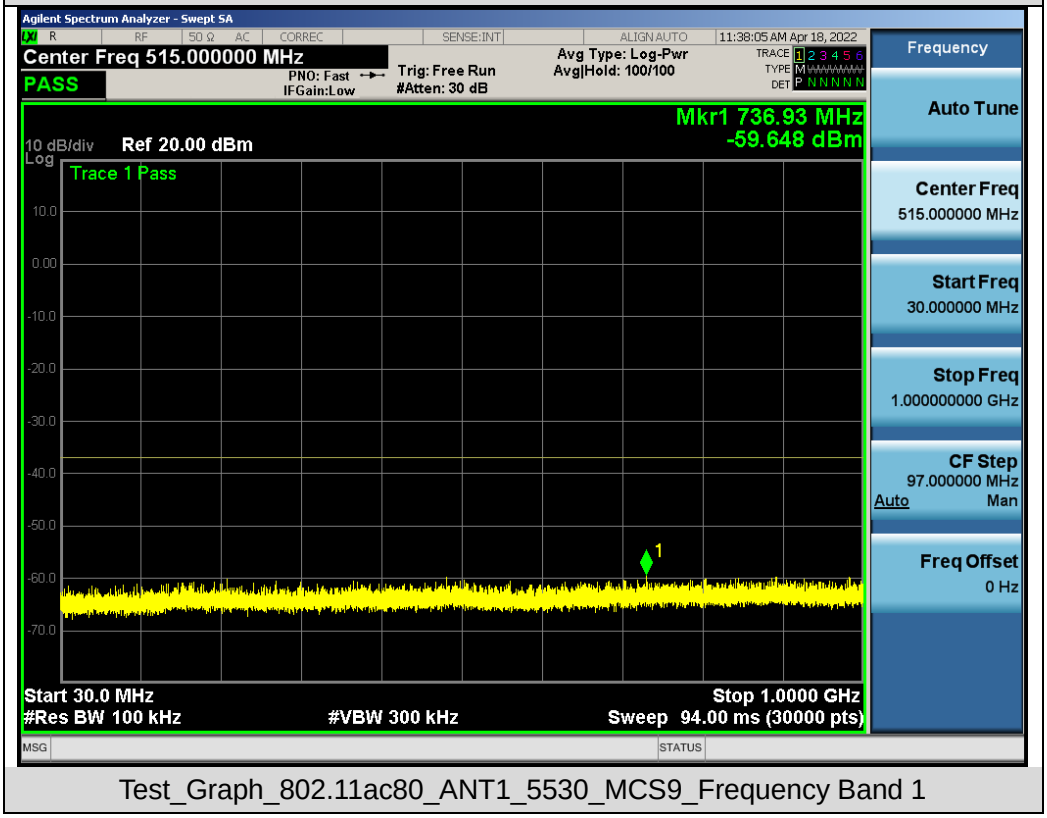
Test_Graph_802.11n40_ANT1_5670_MCS0_Frequency Band 3



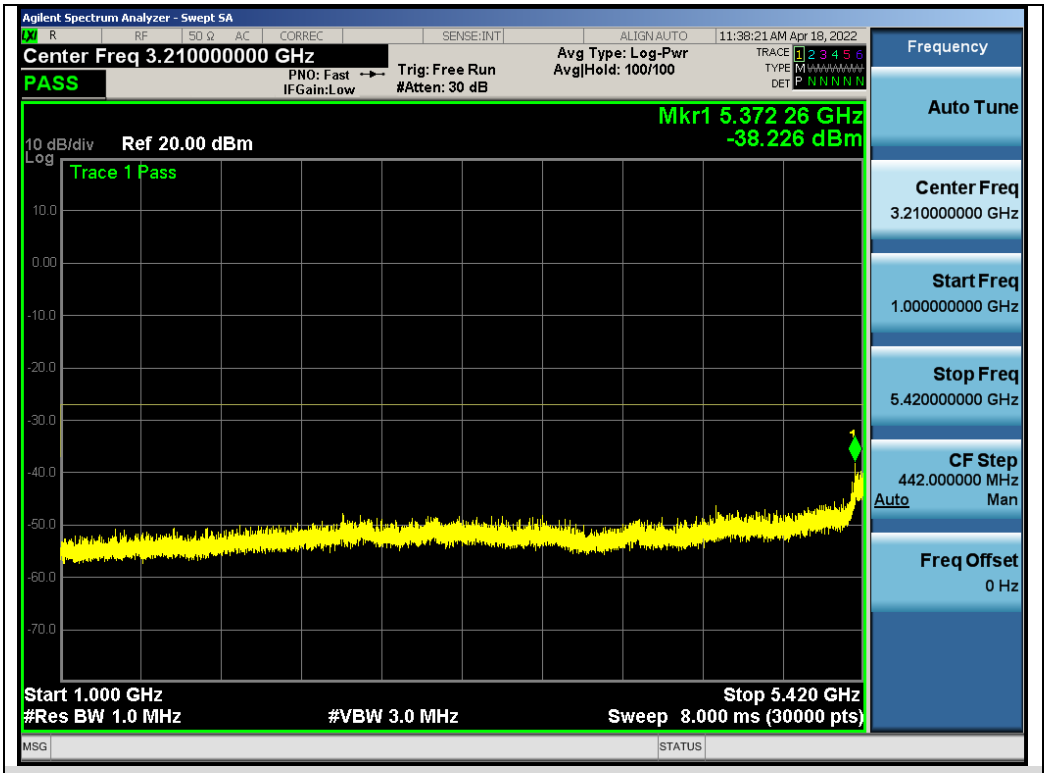
Test_Graph_802.11n40_ANT1_5670_MCS0_Frequency Band 4



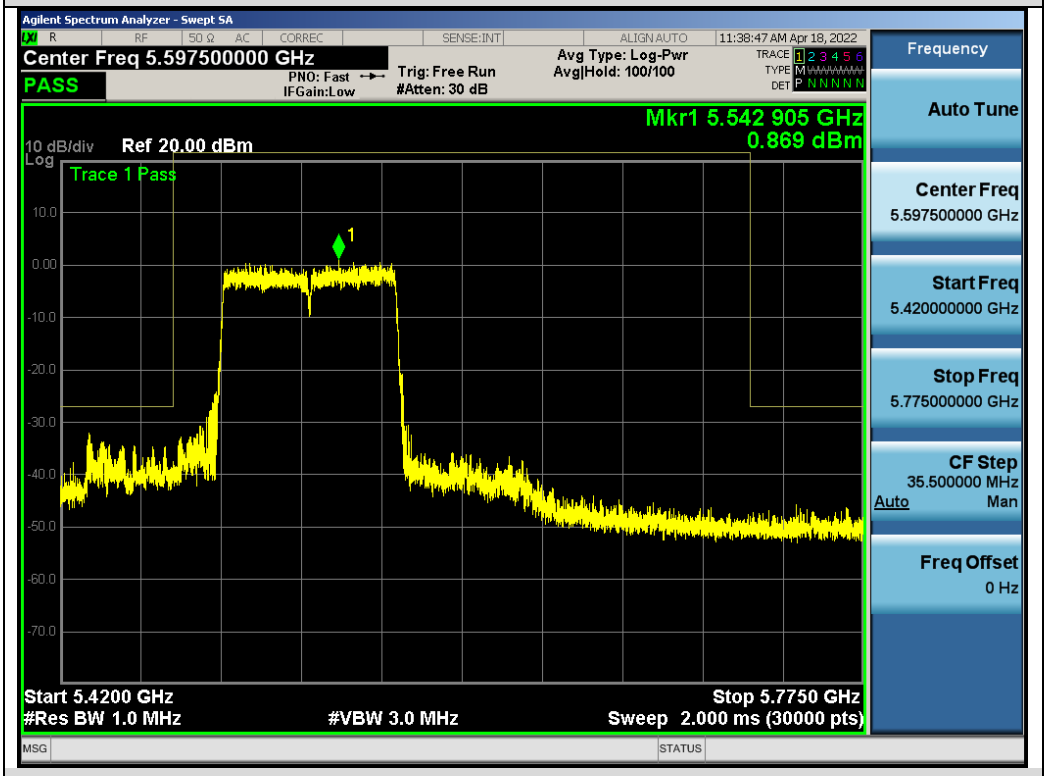
Test_Graph_802.11n40_ANT1_5670_MCS0_Frequency Band 5



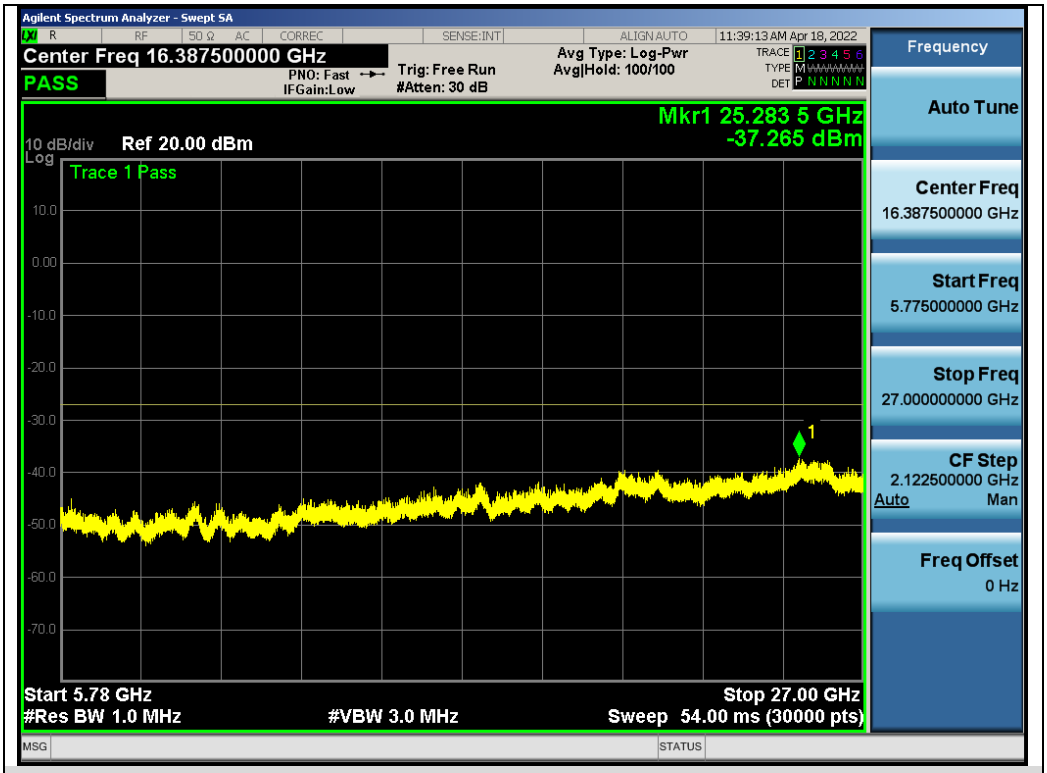
Test_Graph_802.11ac80_ANT1_5530_MCS9_Frequency Band 1



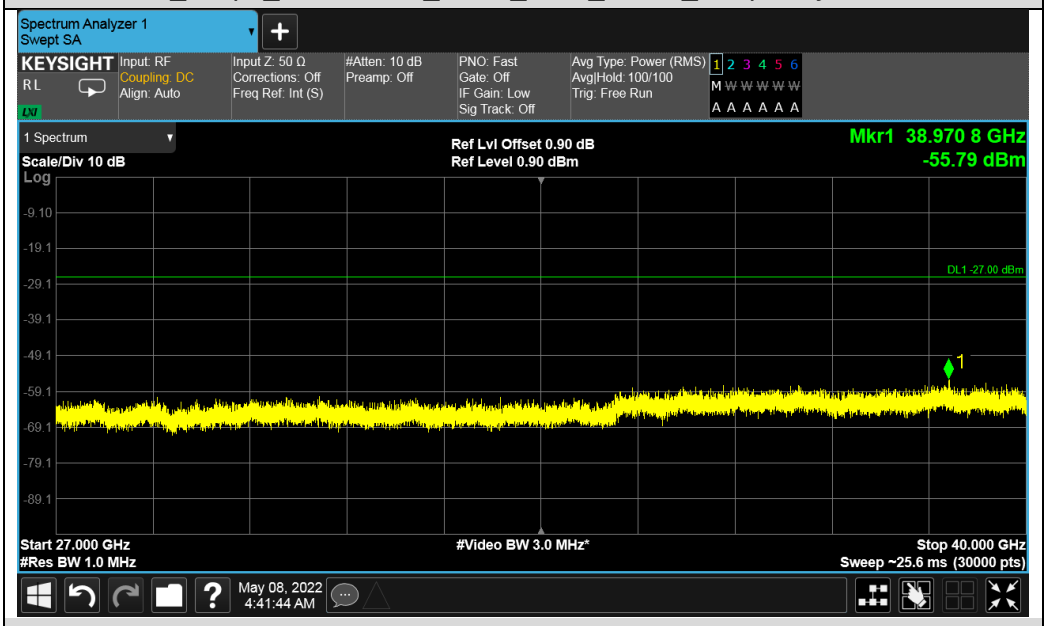
Test_Graph_802.11ac80_ANT1_5530_MCS9_Frequency Band 2



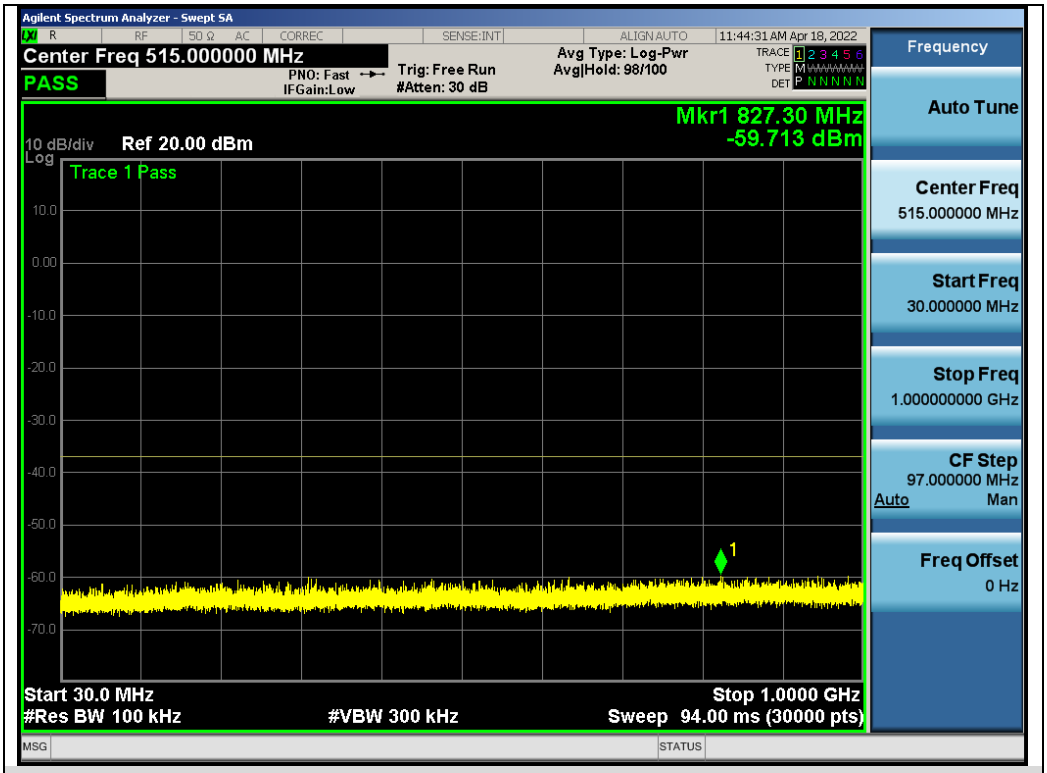
Test_Graph_802.11ac80_ANT1_5530_MCS9_Frequency Band 3



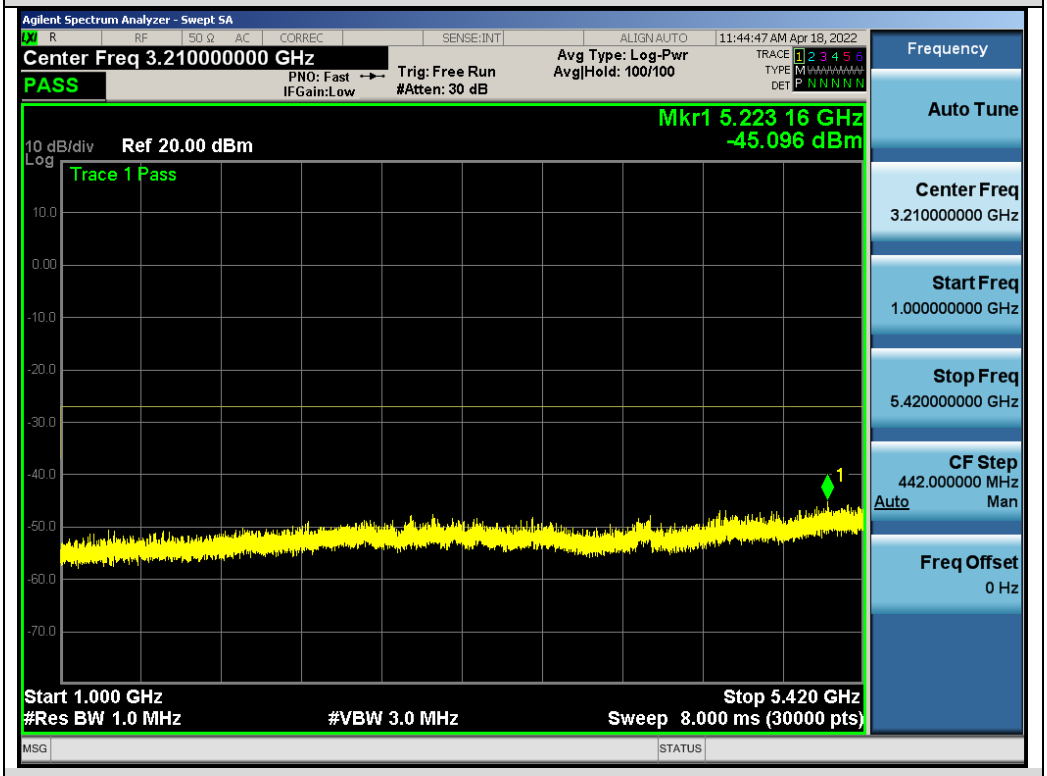
Test_Graph_802.11ac80_ANT1_5530_MCS9_Frequency Band 4



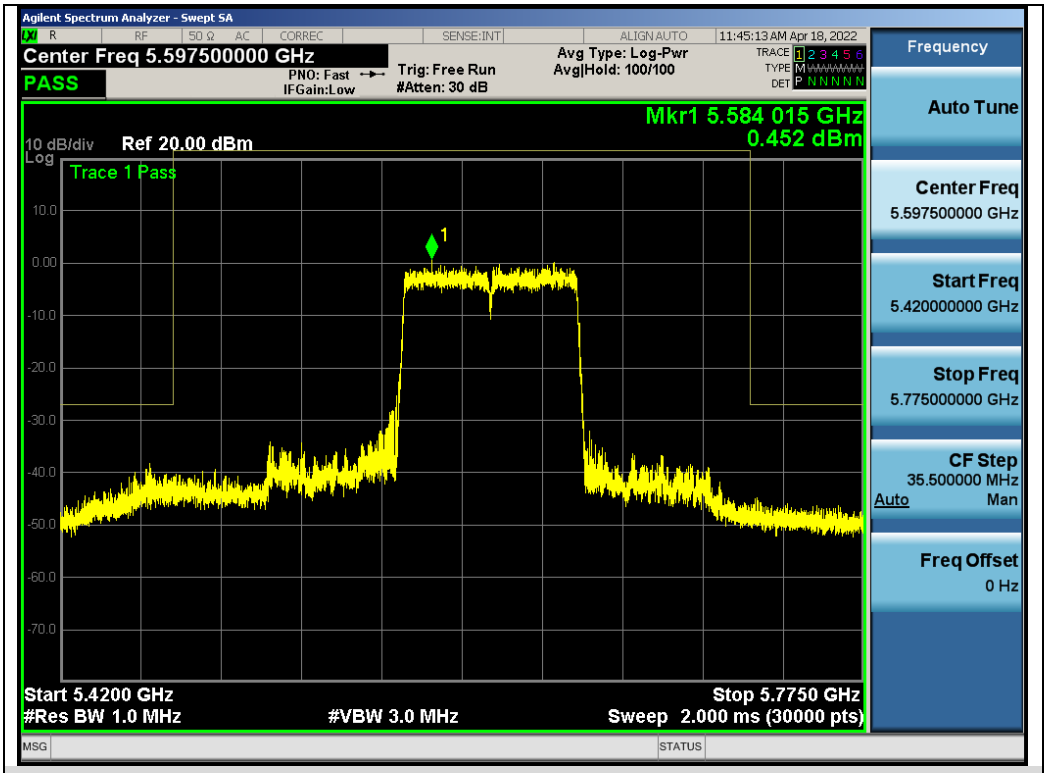
Test_Graph_802.11ac80_ANT1_5530_MCS9_Frequency Band 5



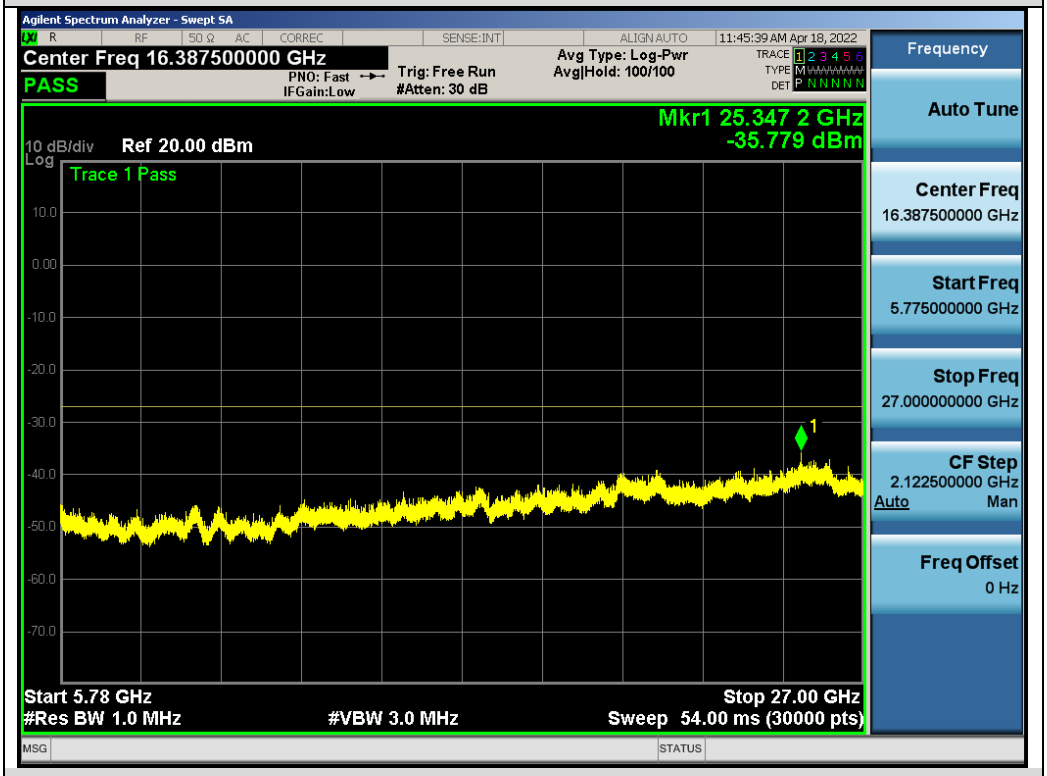
Test_Graph_802.11ac80_ANT1_5610_MCS9_Frequency Band 1



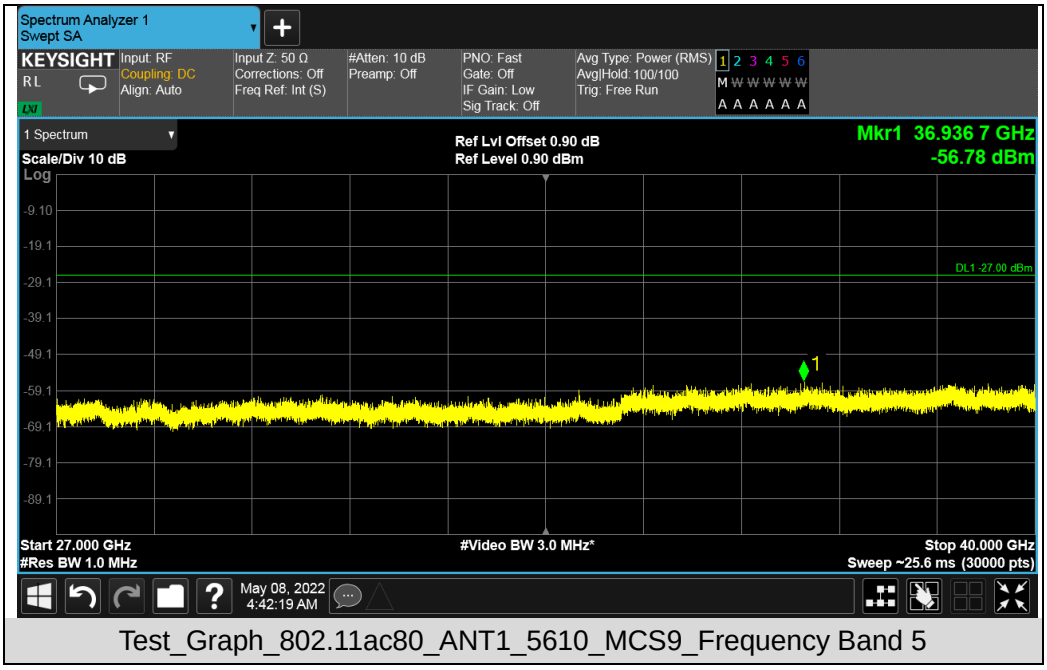
Test_Graph_802.11ac80_ANT1_5610_MCS9_Frequency Band 2



Test_Graph_802.11ac80_ANT1_5610_MCS9_Frequency Band 3

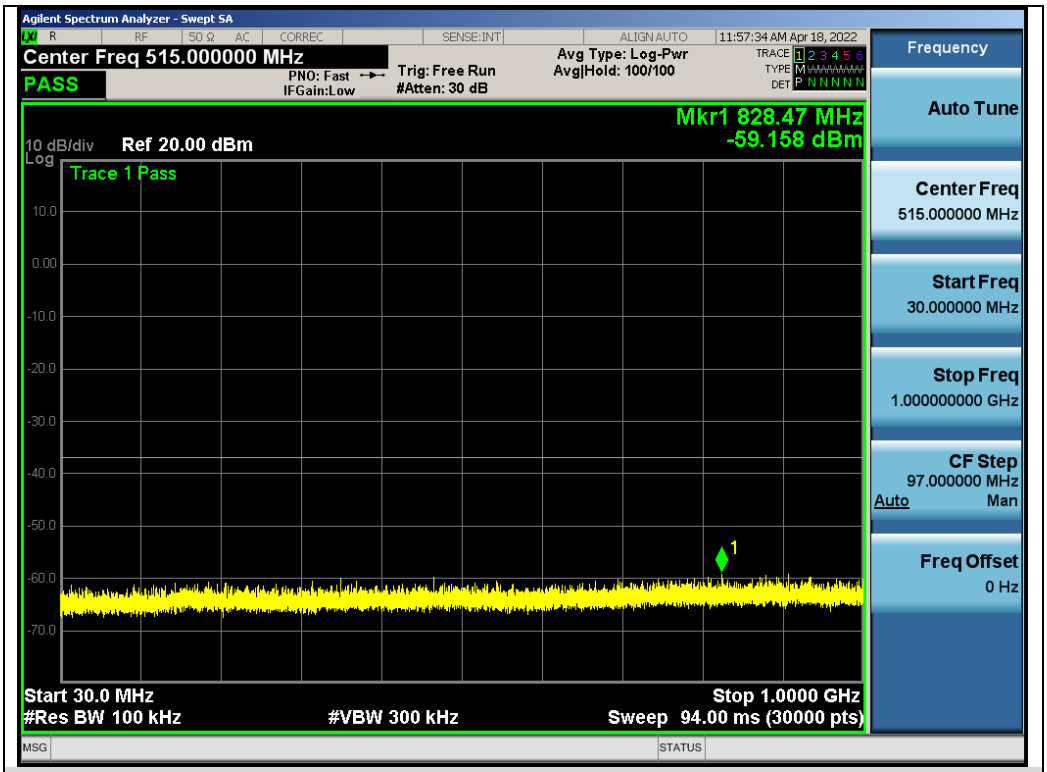


Test_Graph_802.11ac80_ANT1_5610_MCS9_Frequency Band 4

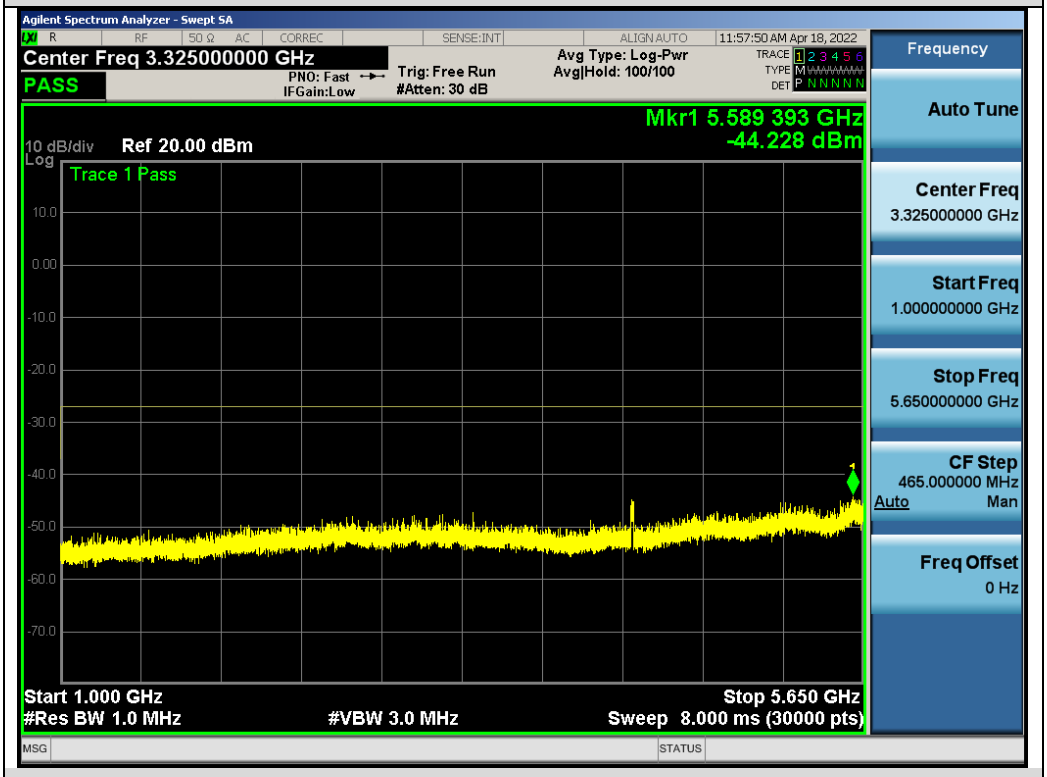


Test_Graph_802.11ac80_ANT1_5610_MCS9_Frequency Band 5

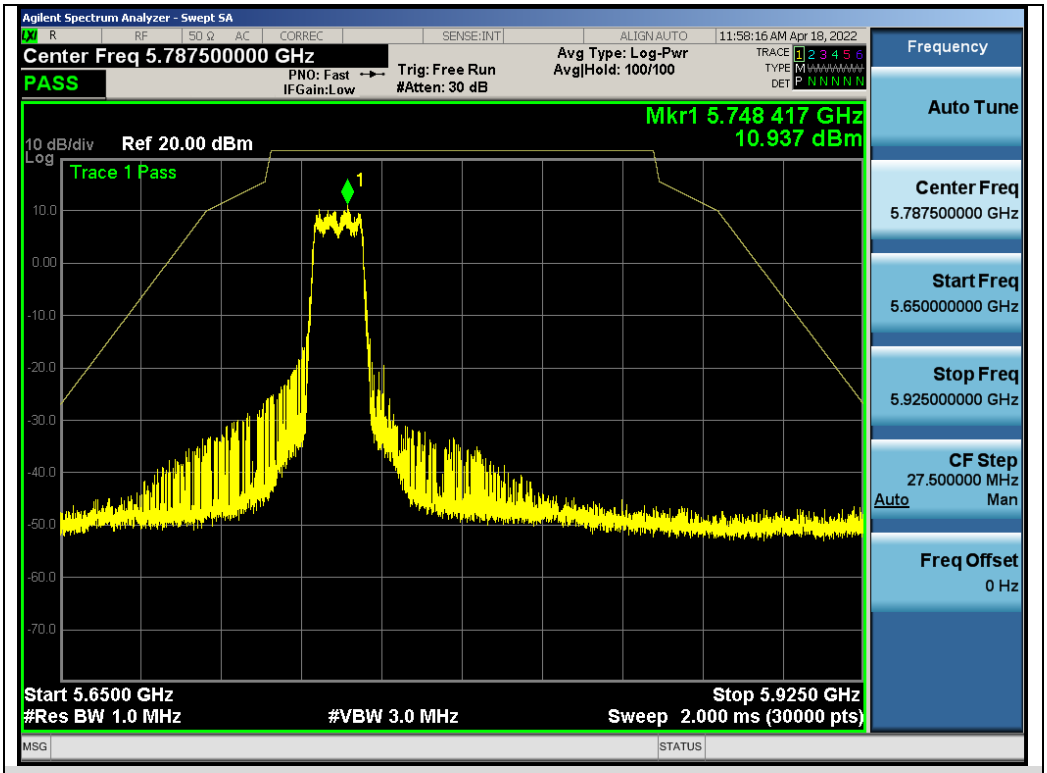
Test Graphs of Spurious Emissions outside of the 5.725-5.85 GHz band for transmitters operating in the 5.725-5.85 GHz band



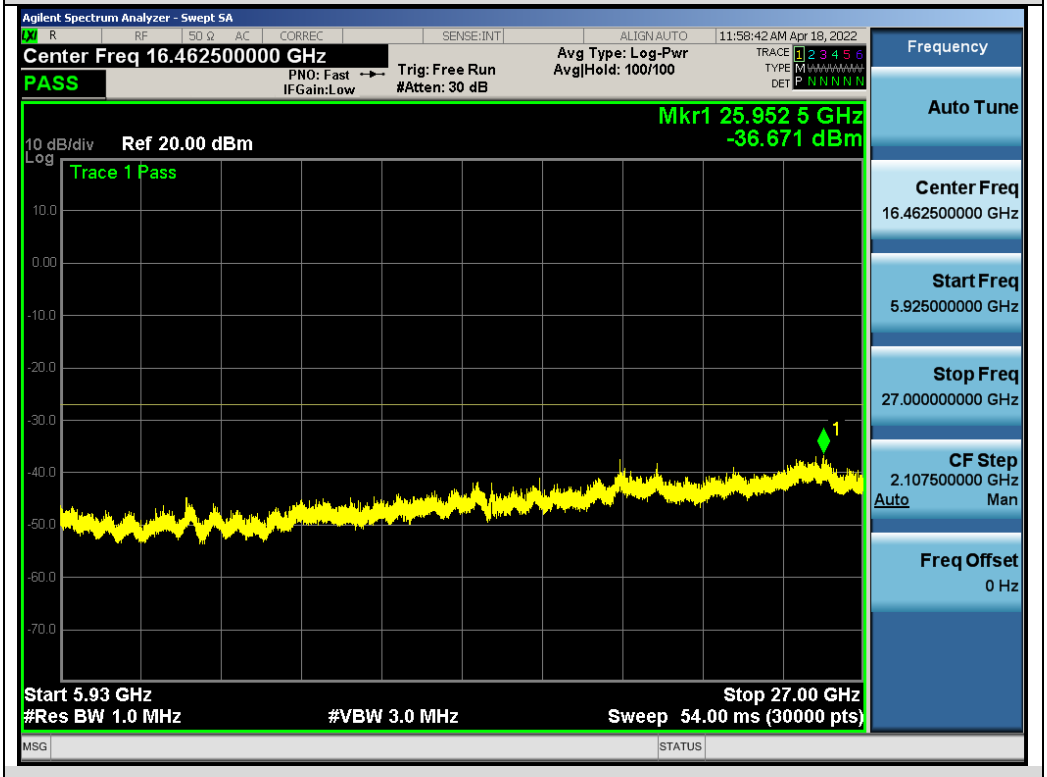
Test_Graph_802.11a_ANT1_5745_6Mbps_Frequency Band1



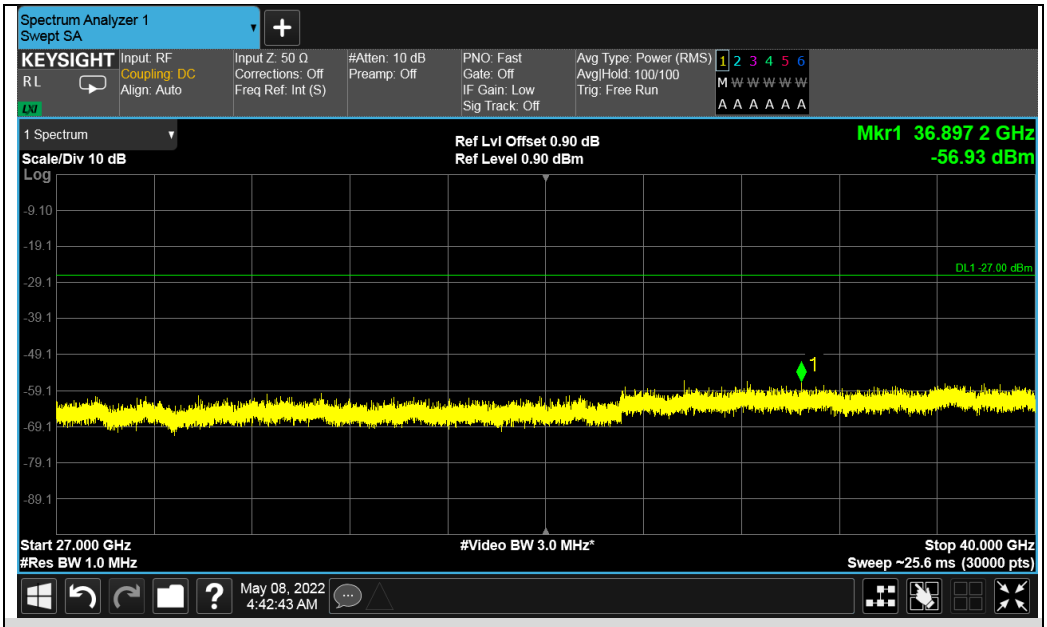
Test_Graph_802.11a_ANT1_5745_6Mbps_Frequency Band2



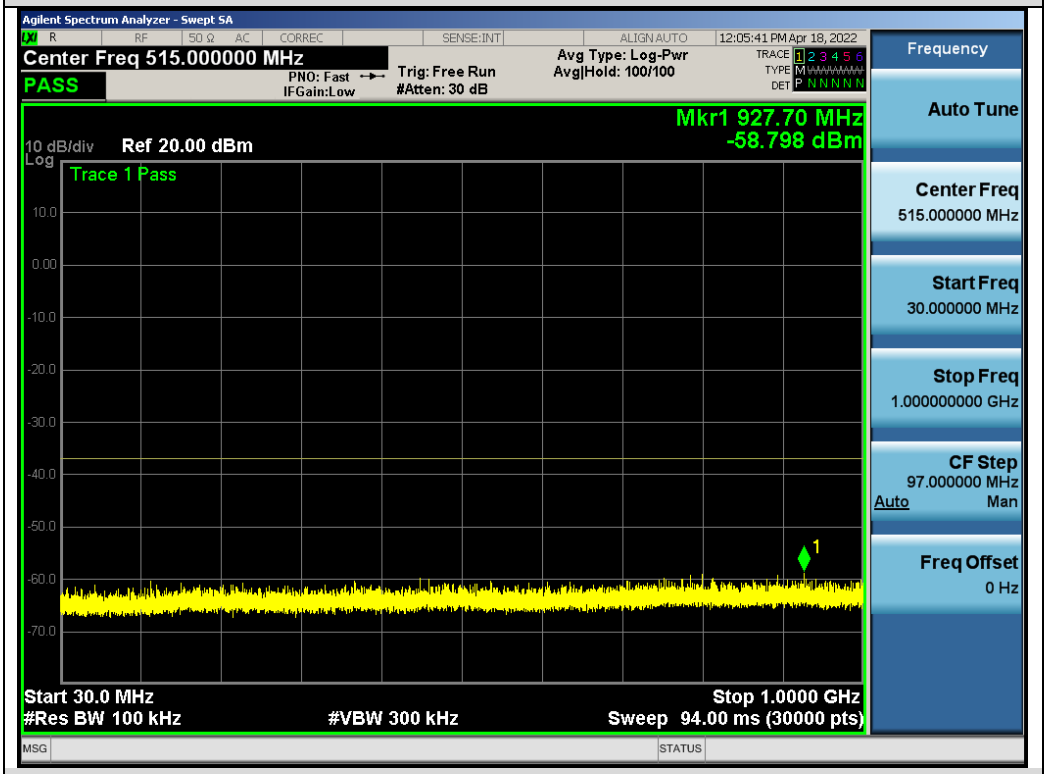
Test_Graph_802.11a_ANT1_5745_6Mbps_Frequency Band3



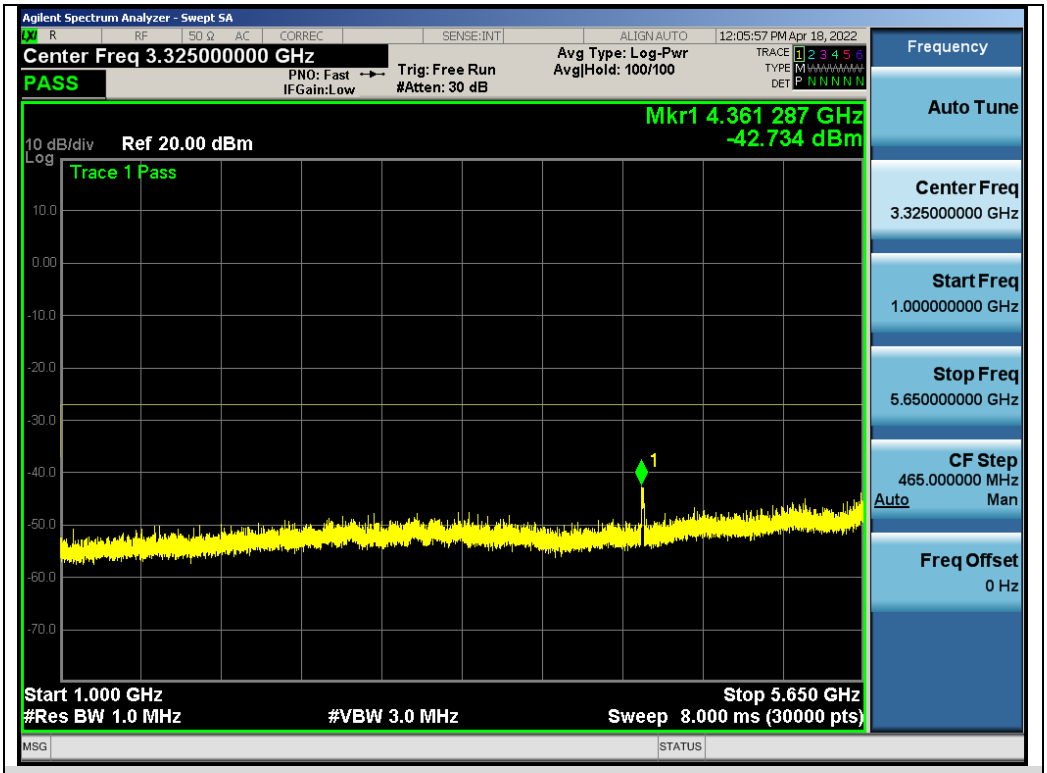
Test_Graph_802.11a_ANT1_5745_6Mbps_Frequency Band4



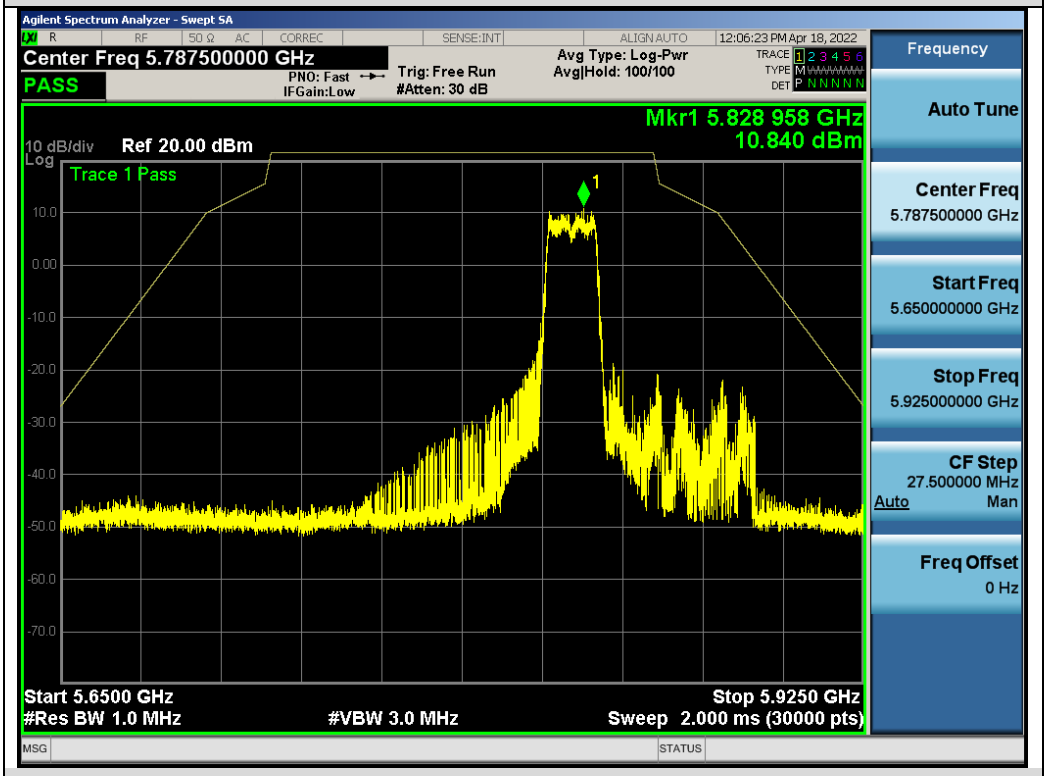
Test_Graph_802.11a_ANT1_5745_6Mbps_Frequency Band5



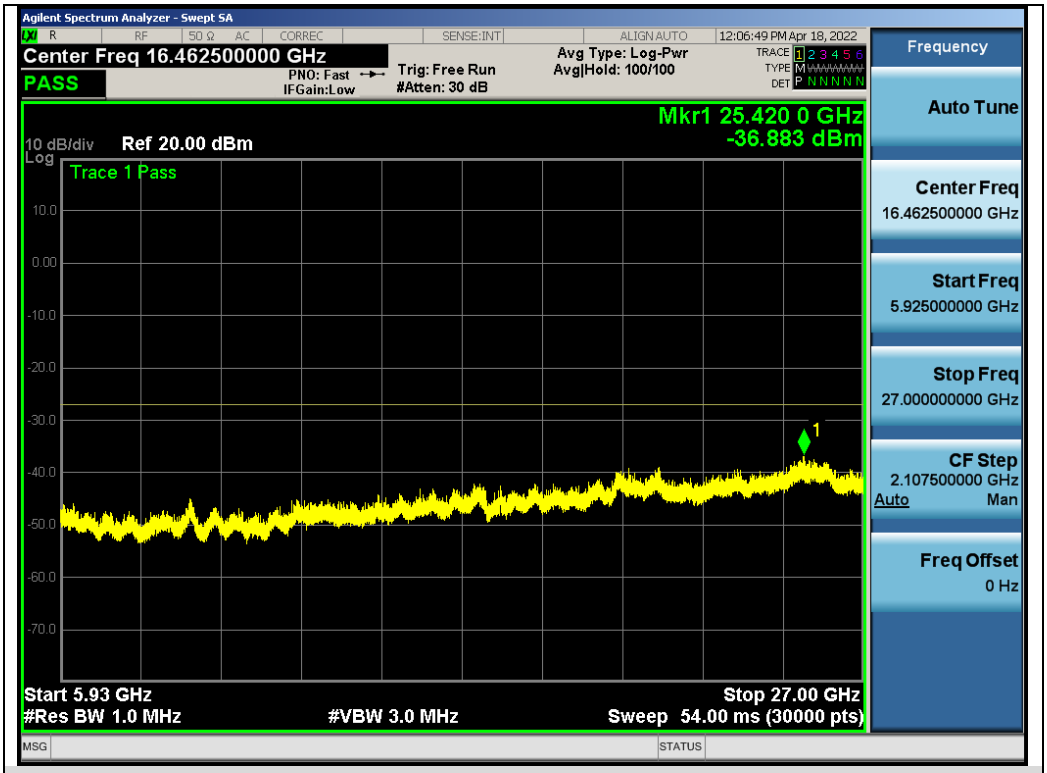
Test_Graph_802.11a_ANT1_5825_6Mbps_Frequency Band1



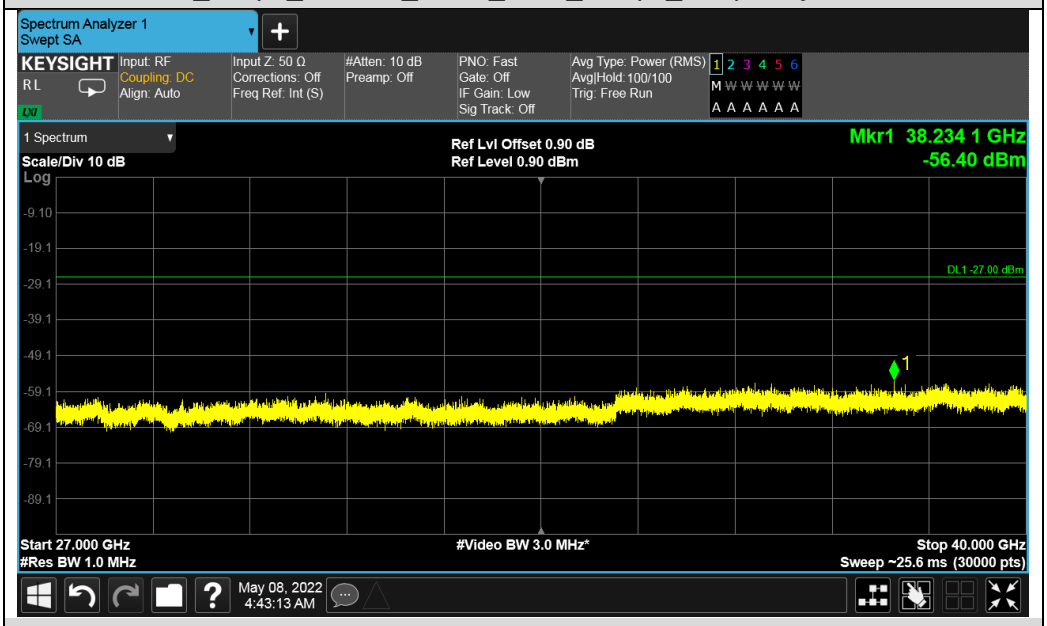
Test_Graph_802.11a_ANT1_5825_6Mbps_Frequency Band2



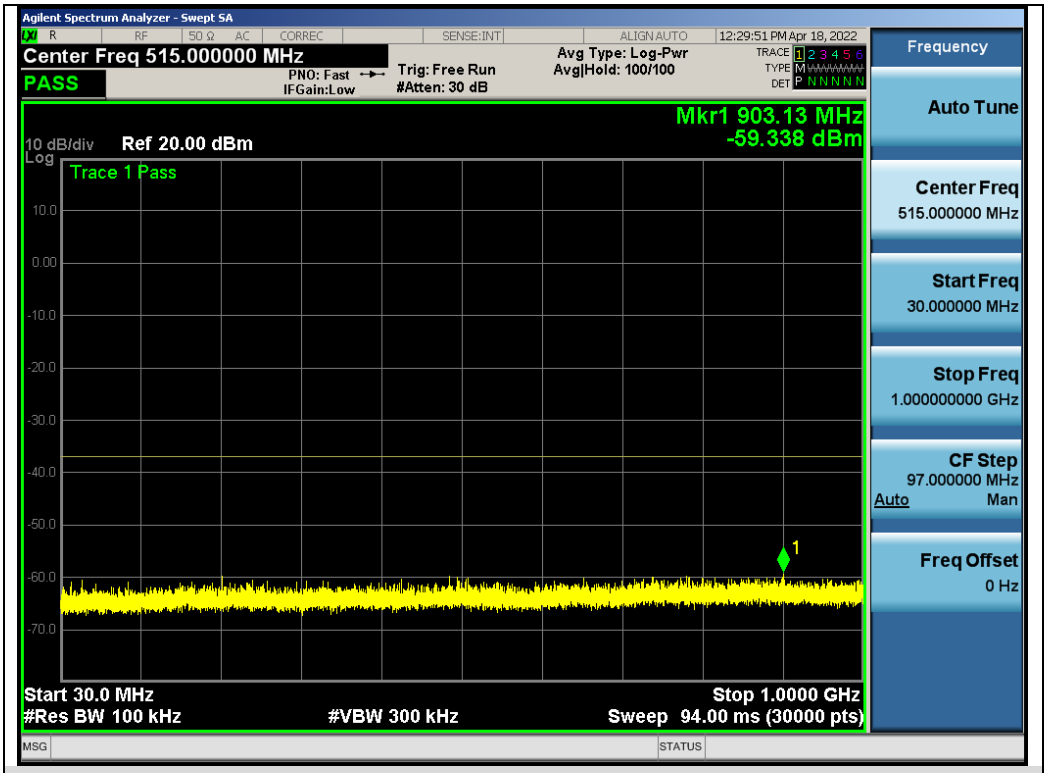
Test_Graph_802.11a_ANT1_5825_6Mbps_Frequency Band3



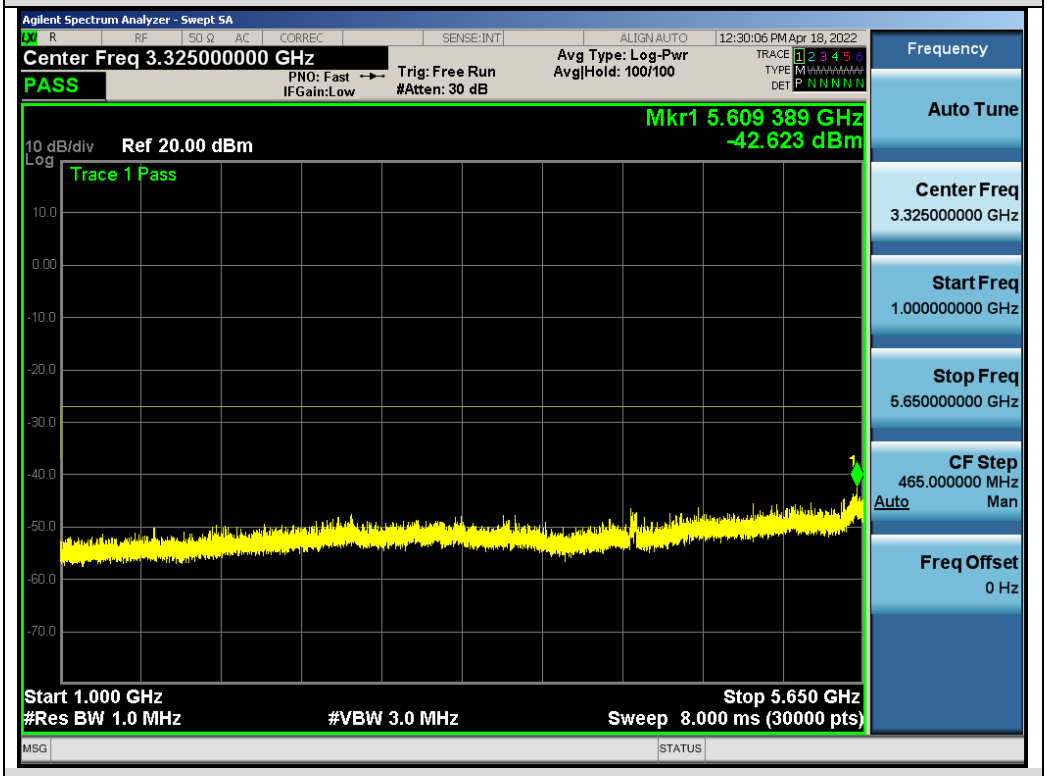
Test_Graph_802.11a_ANT1_5825_6Mbps_Frequency Band4



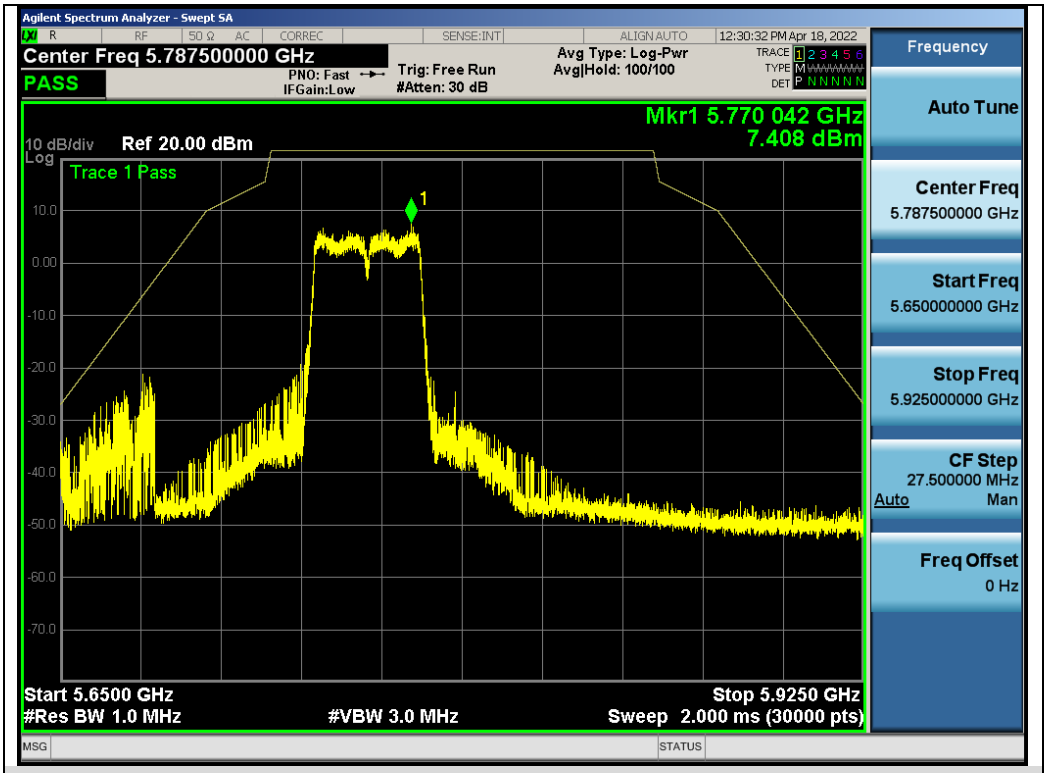
Test_Graph_802.11a_ANT1_5825_6Mbps_Frequency Band5



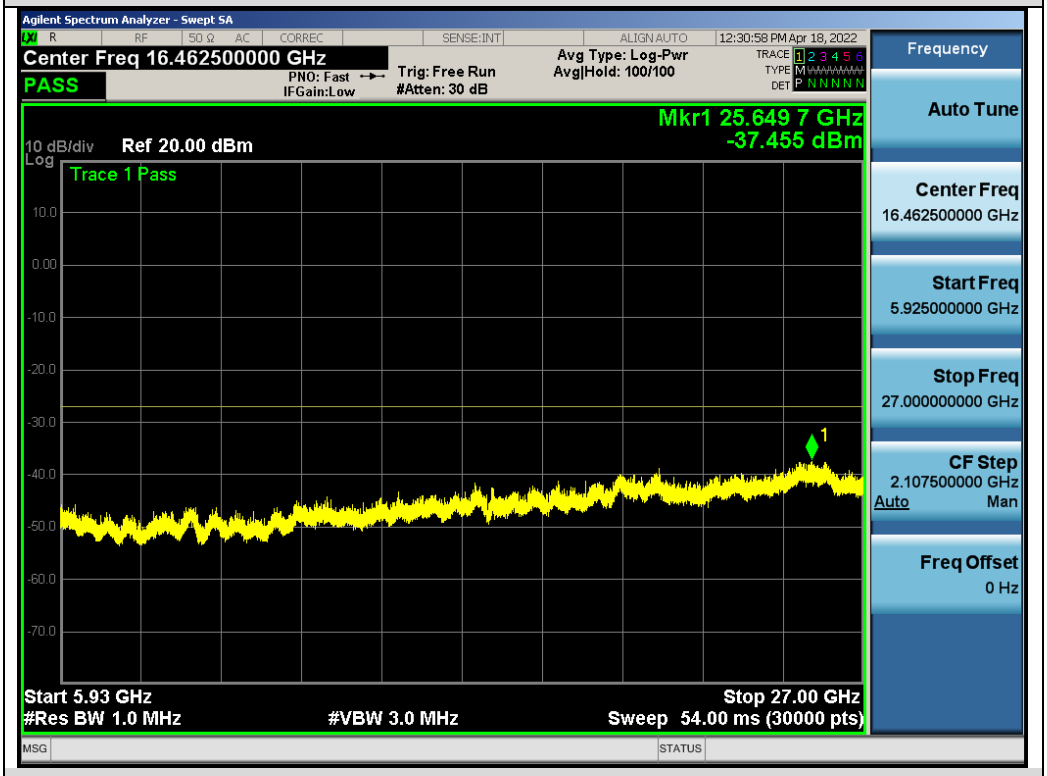
Test_Graph_802.11n40_ANT1_5755_MCS0_Frequency Band1



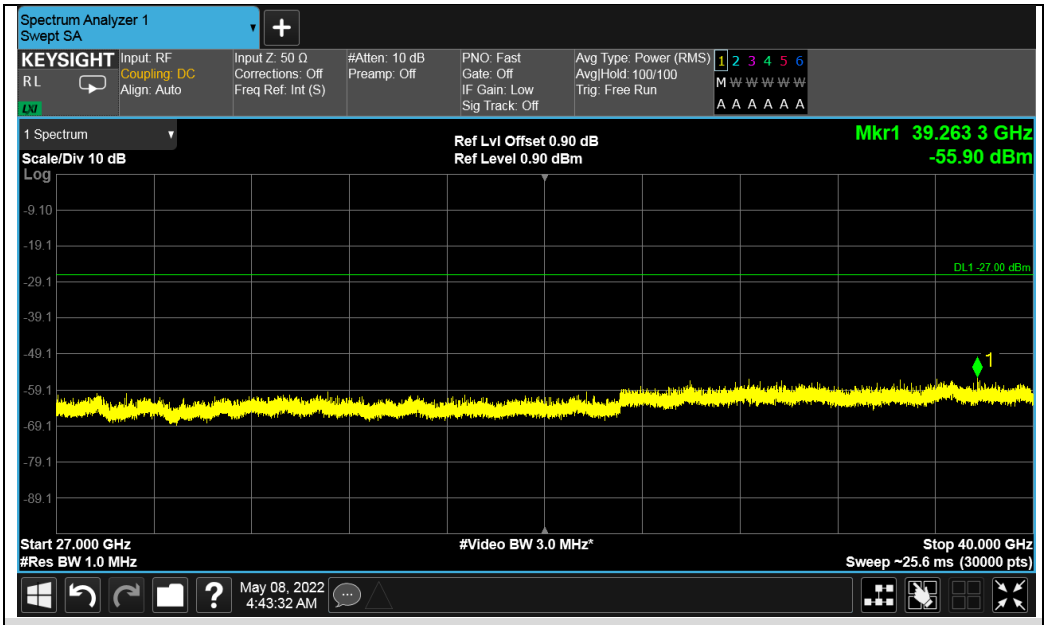
Test_Graph_802.11n40_ANT1_5755_MCS0_Frequency Band2



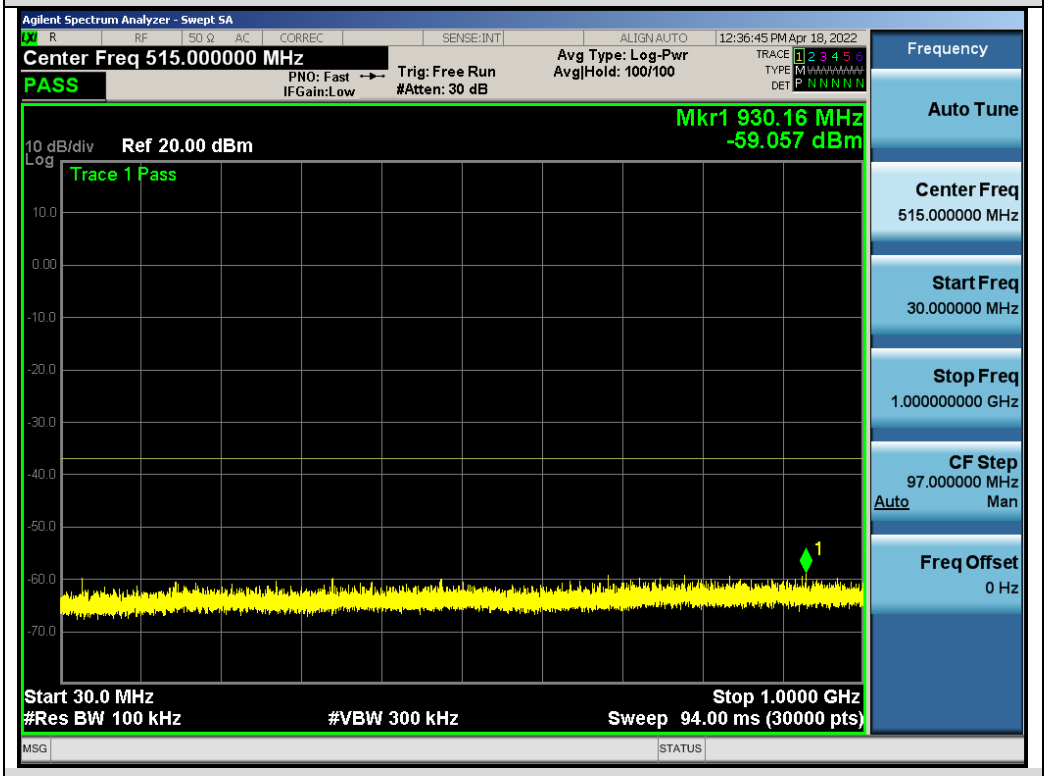
Test_Graph_802.11n40_ANT1_5755_MCS0_Frequency Band3



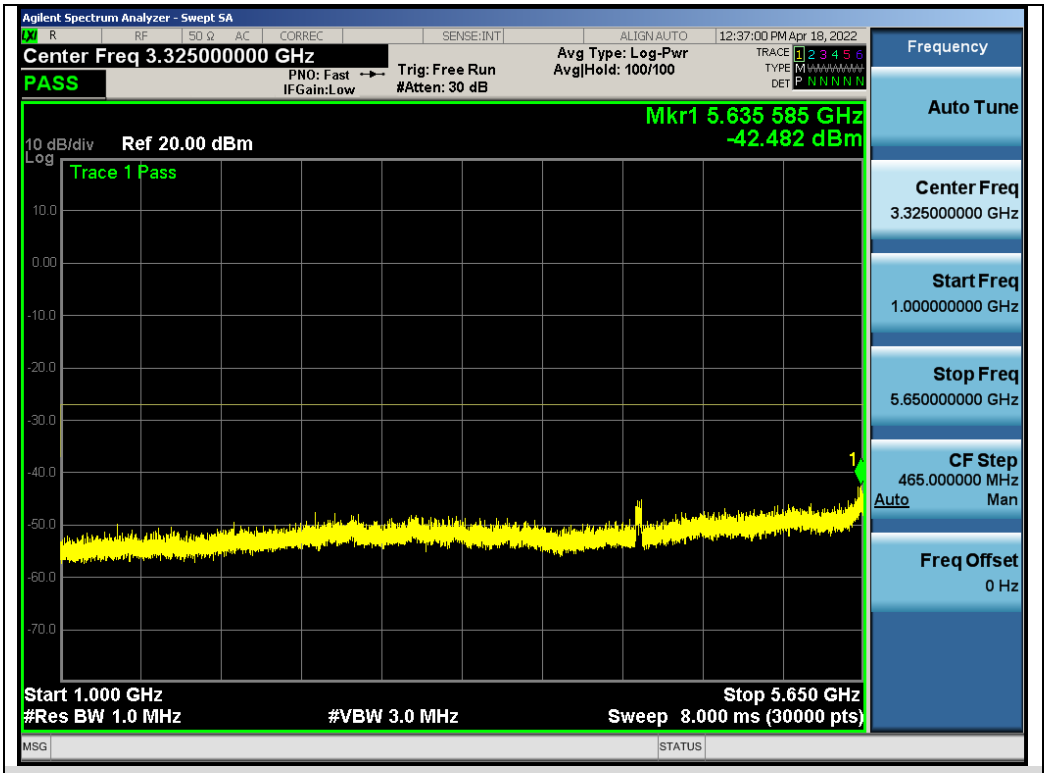
Test_Graph_802.11n40_ANT1_5755_MCS0_Frequency Band4



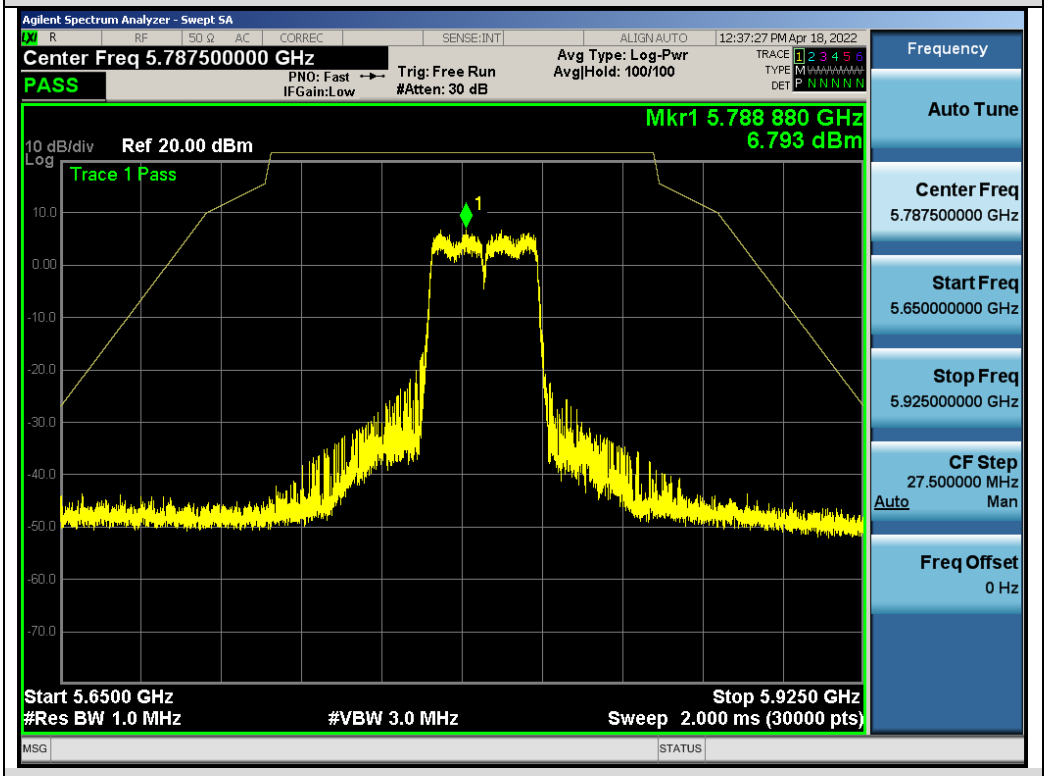
Test_Graph_802.11n40_ANT1_5755_MCS0_Frequency Band5



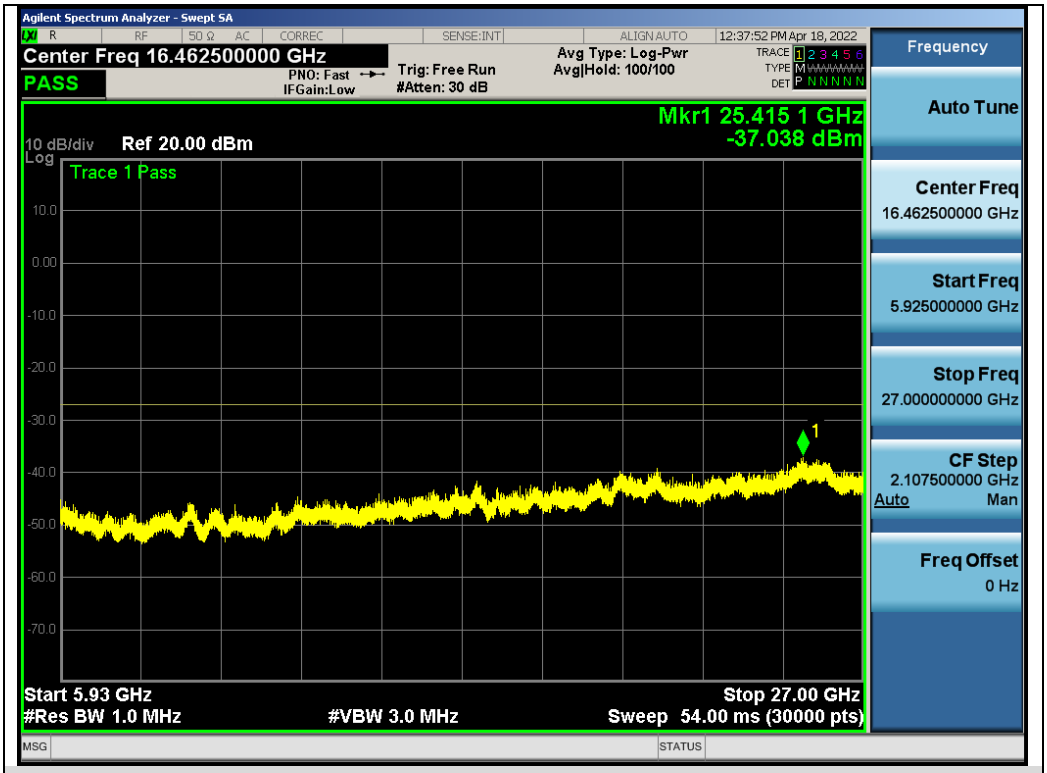
Test_Graph_802.11n40_ANT1_5795_MCS0_Frequency Band1



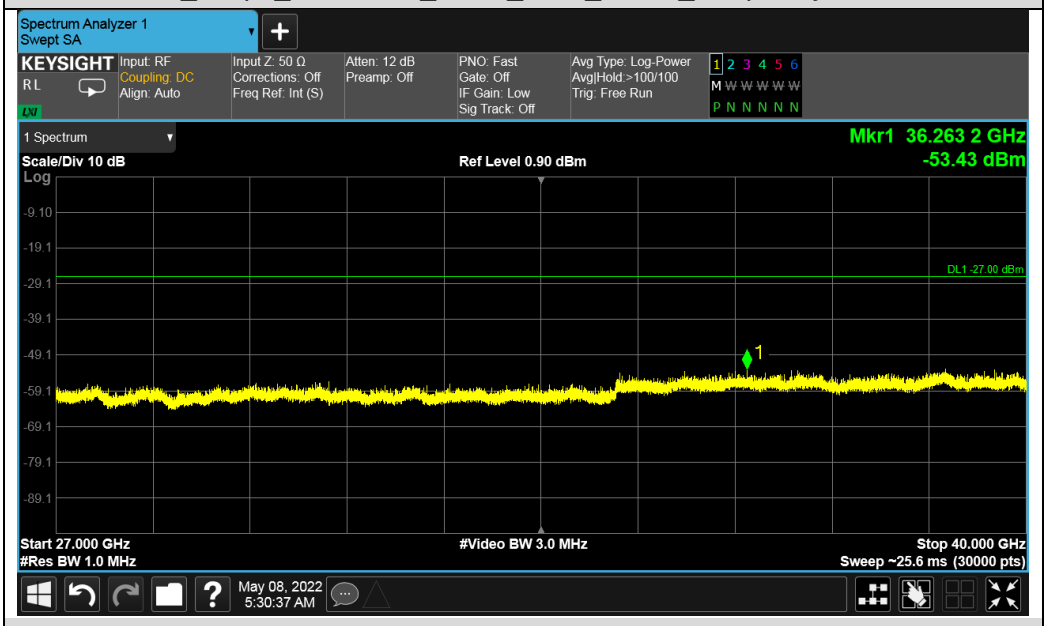
Test_Graph_802.11n40_ANT1_5795_MCS0_Frequency Band2



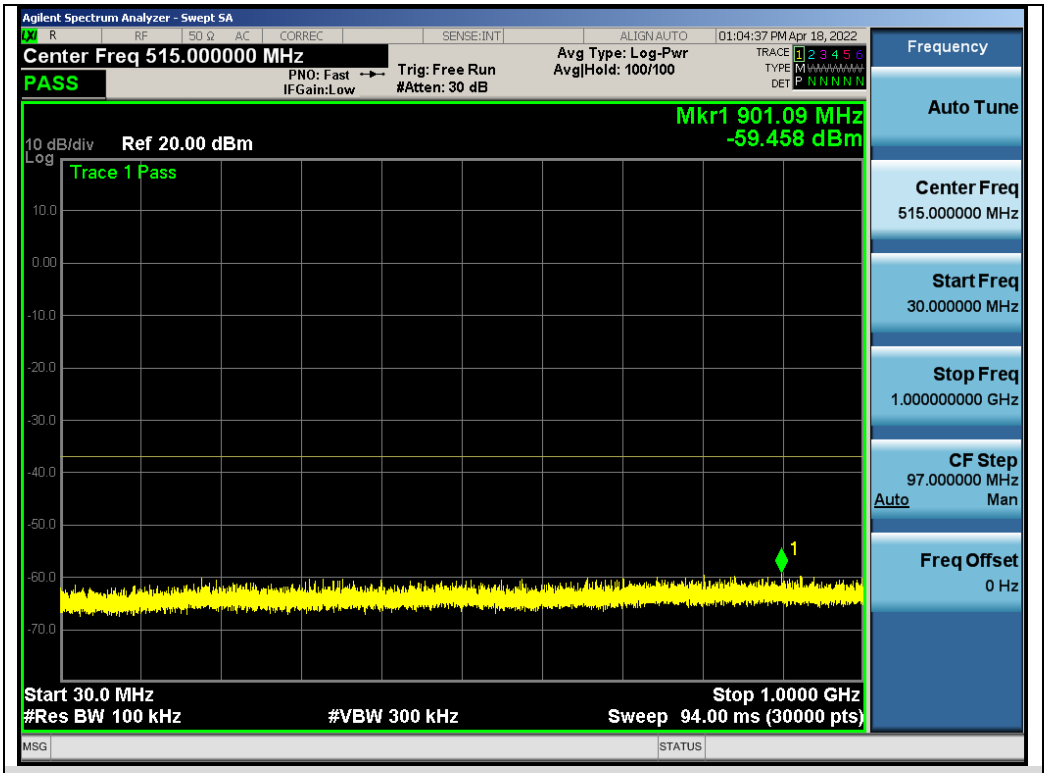
Test_Graph_802.11n40_ANT1_5795_MCS0_Frequency Band3



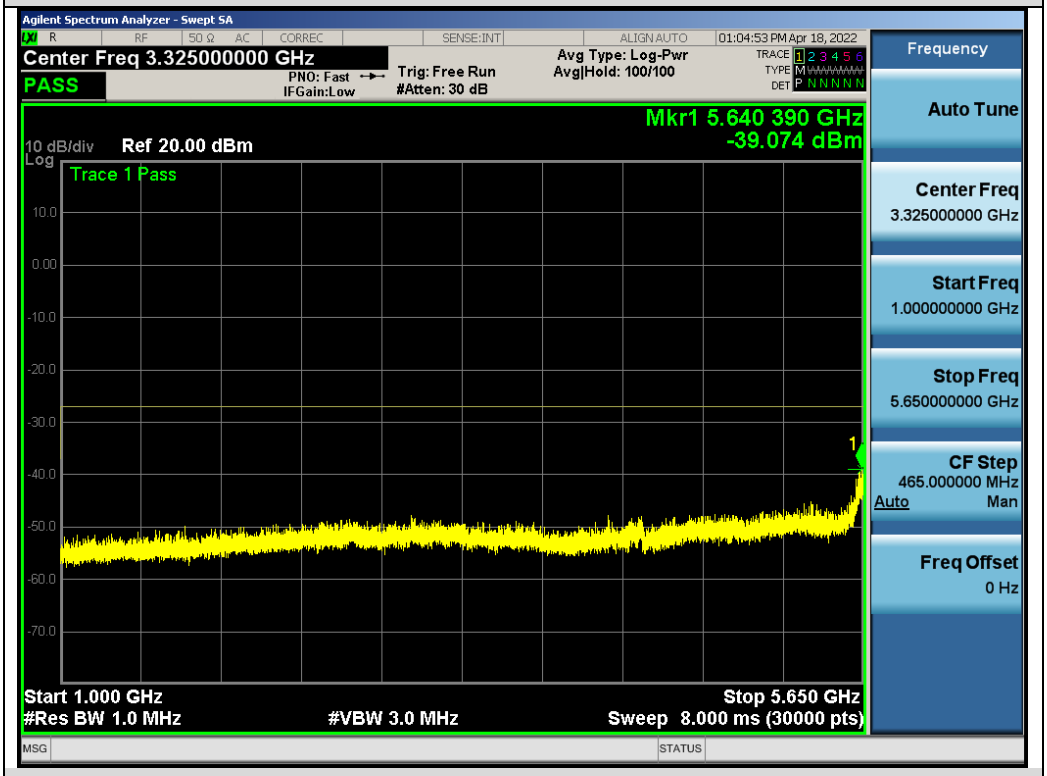
Test_Graph_802.11n40_ANT1_5795_MCS0_Frequency Band4



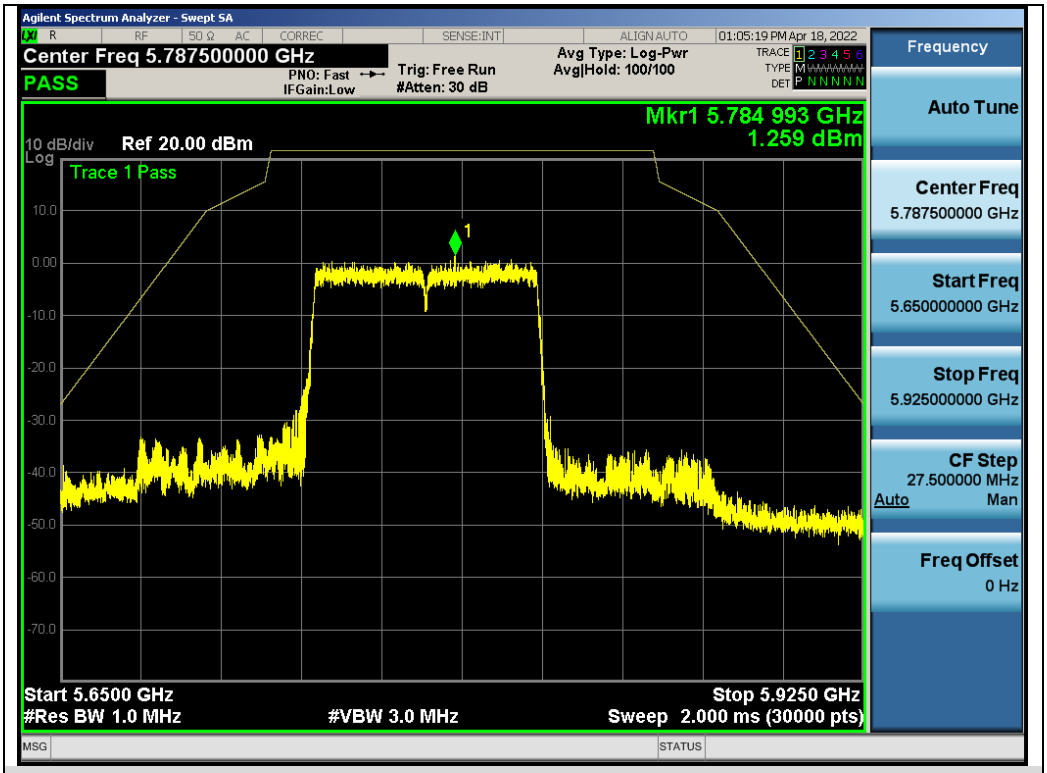
Test_Graph_802.11n40_ANT1_5795_MCS0_Frequency Band5



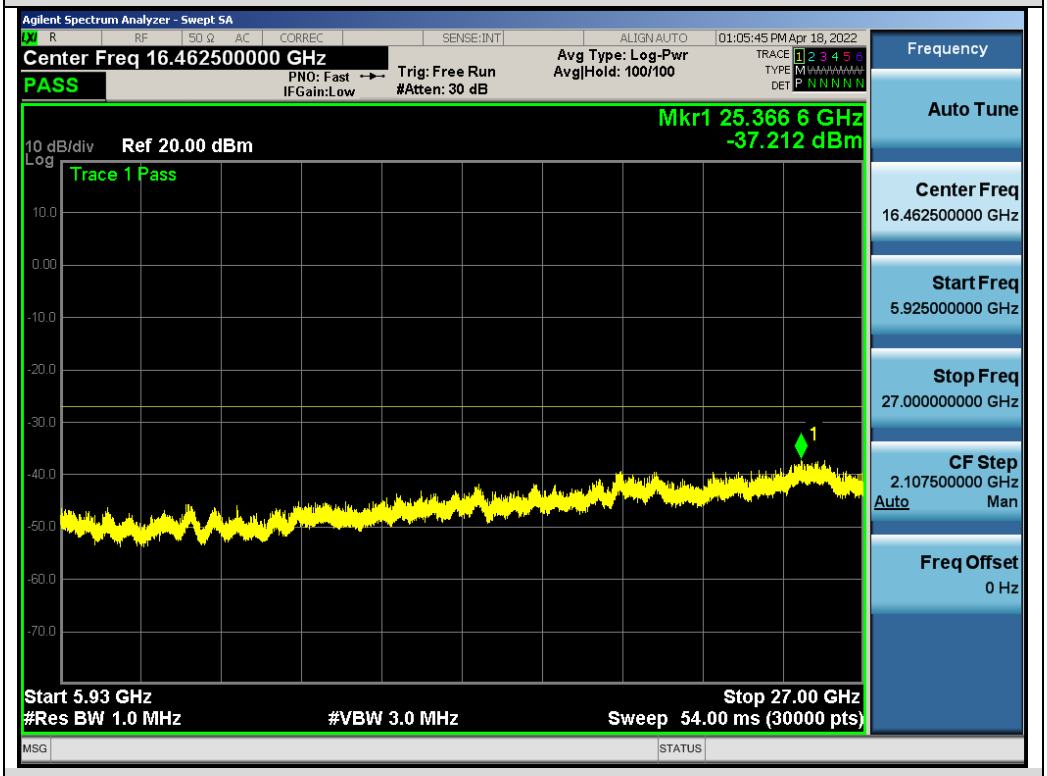
Test_Graph_802.11ac80_ANT1_5775_MCS9_Frequency Band1



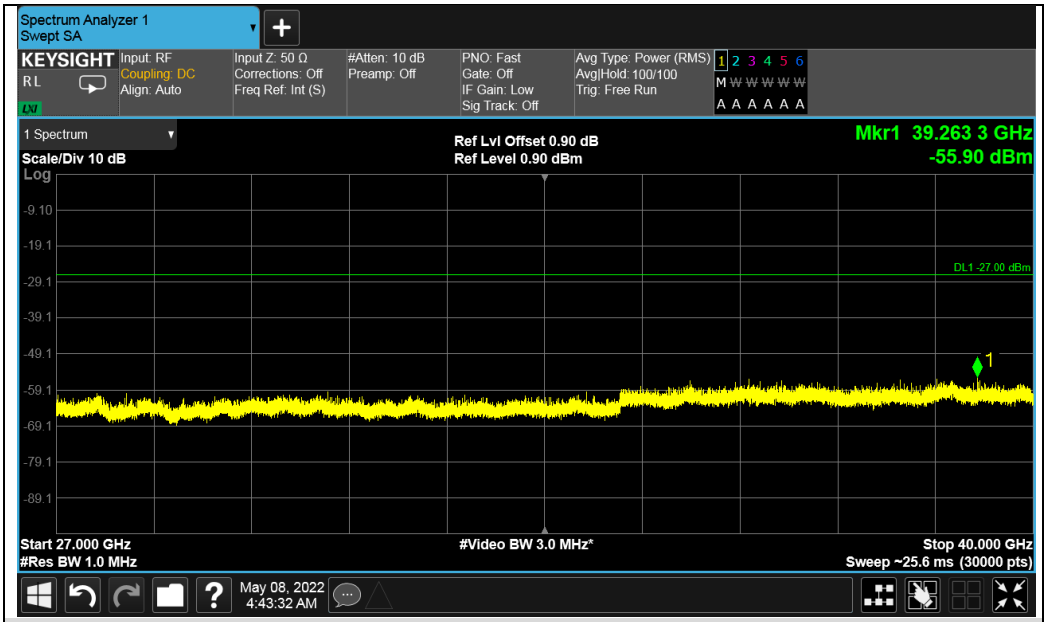
Test_Graph_802.11ac80_ANT1_5775_MCS9_Frequency Band2



Test_Graph_802.11ac80_ANT1_5775_MCS9_Frequency Band3



Test_Graph_802.11ac80_ANT1_5775_MCS9_Frequency Band4



Test_Graph_802.11ac80_ANT1_5775_MCS9_Frequency Band5

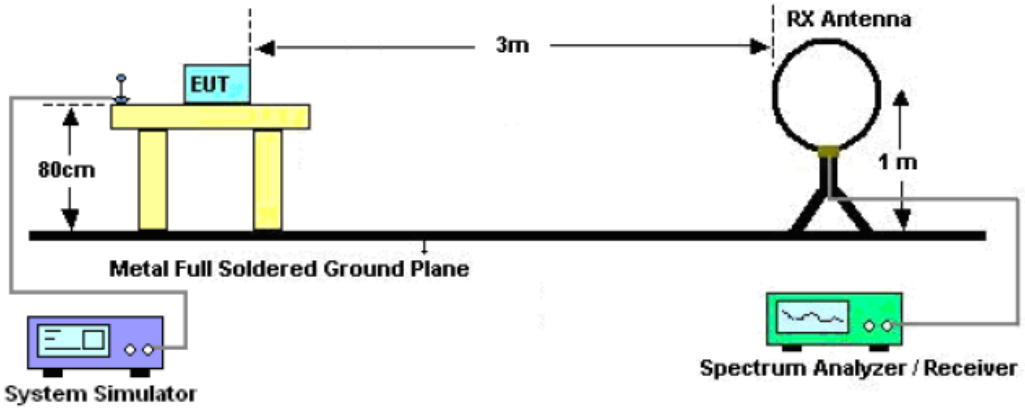
11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

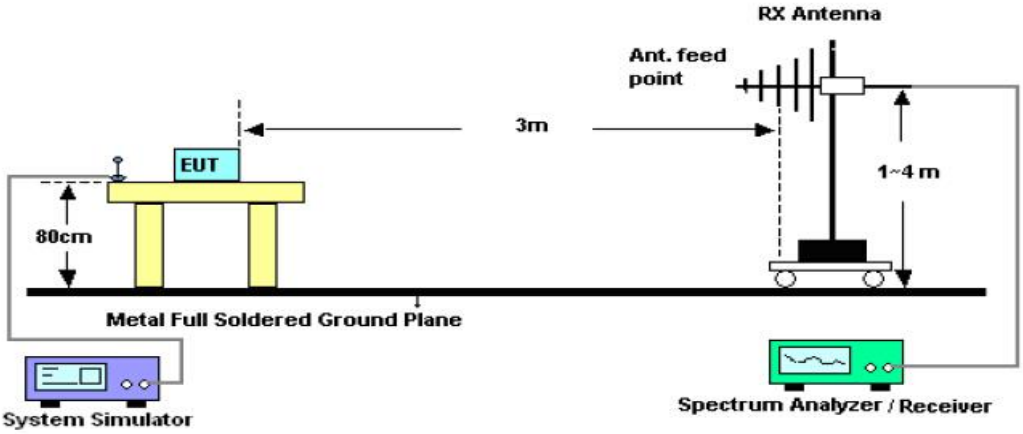
1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz RBW and 3M VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

11.2. TEST SETUP

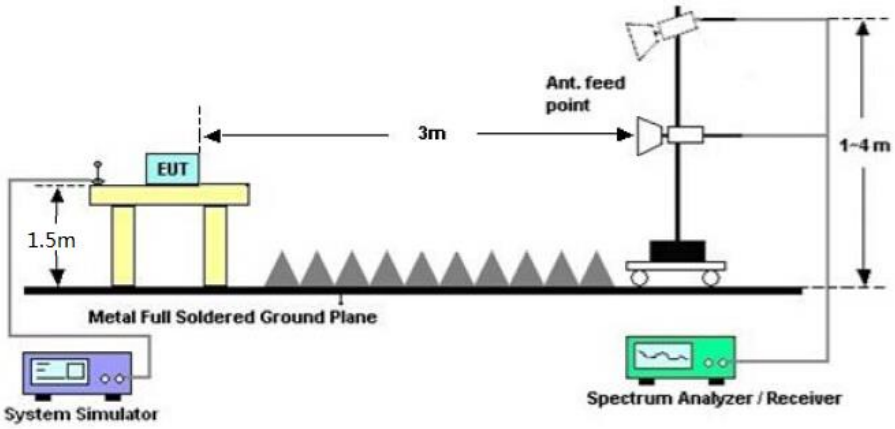
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



11.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested for restricted band radiated emission,
the test records reported below are the worst result compared to other modes.

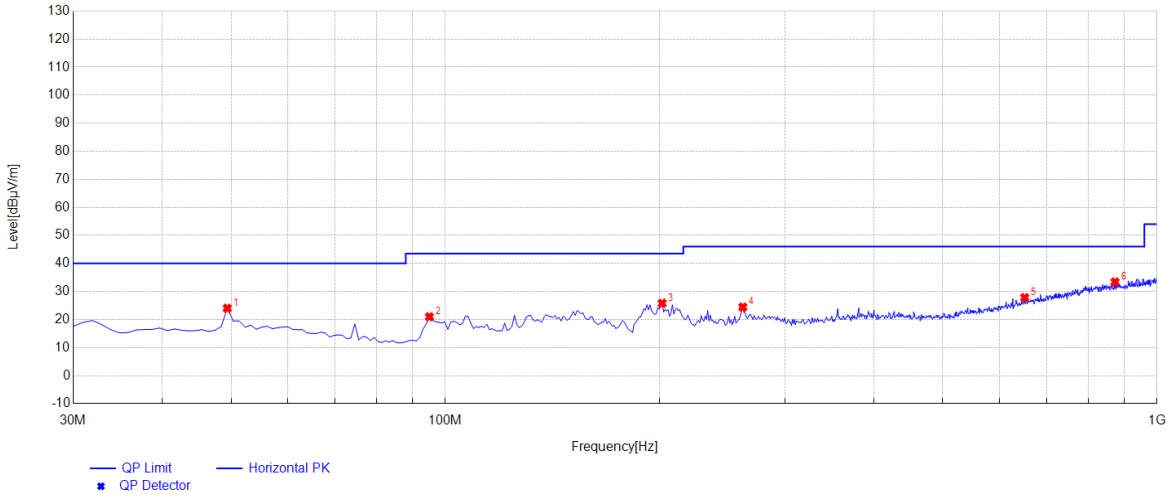
11.4. TEST RESULT

Radiated emission below 30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

Radiated emission from 30MHz to 1000MHz

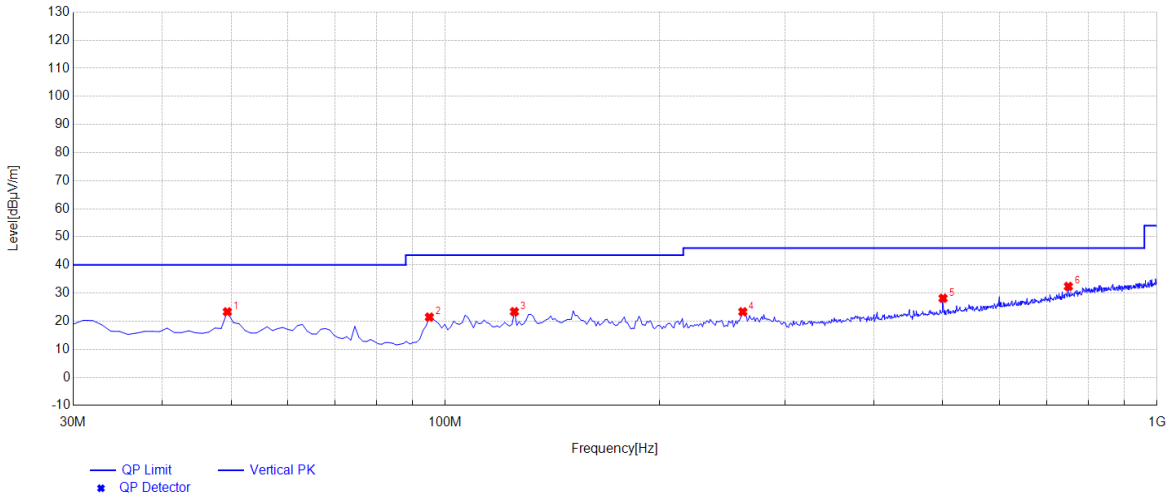
EUT	RODECASTER PRO II (Integrated Audio Production Studio)	**Model Name**	RODECASTER PRO II
Temperature	25°C	**Relative Humidity**	60%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a20 5300MHz	**Antenna**	Horizontal



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	49.4	24.01	11.61	40.00	15.99	100	140	Horizontal
2	94.99	20.99	9.32	43.50	22.51	100	211	Horizontal
3	201.69	25.78	12.00	43.50	17.72	100	241	Horizontal
4	261.83	24.42	14.71	46.00	21.58	100	28	Horizontal
5	651.77	27.81	21.47	46.00	18.19	100	313	Horizontal
6	872.93	33.39	27.19	46.00	12.61	100	54	Horizontal

RESULT: PASS

EUT	RODECASTER PRO II (Integrated Audio Production Studio)	Model Name	RODECASTER PRO II
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5300MHz	Antenna	Vertical



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	49.4	23.33	11.61	40.00	16.67	100	119	Vertical
2	94.99	21.44	9.32	43.50	22.06	100	207	Vertical
3	125.06	23.38	13.81	43.50	20.12	100	210	Vertical
4	261.83	23.33	14.71	46.00	22.67	100	345	Vertical
5	500.45	28.15	18.89	46.00	17.85	100	210	Vertical
6	750.71	32.37	24.80	46.00	13.63	100	21	Vertical

RESULT: PASS

Note: All test channels had been tested. The 802.11a20 at 5300MHz is the worst case and recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

The “Factor” value can be calculated automatically by software of measurement system.

Radiated emission above 1GHz

EUT	RODECASTER PRO II (Integrated Audio Production Studio)	**Model Name**	RODECASTER PRO II
Temperature	25°C	**Relative Humidity**	60%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a20 5180MHz	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10360.042	46.53	9.14	55.67	68.20	-12.53	peak
15540.063	40.15	10.22	50.37	74.00	-23.63	peak
15540.063	31.97	10.22	42.19	54.00	-11.81	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10360.042	47.52	9.14	56.66	68.20	-11.54	peak
15540.063	41.36	10.22	51.58	74.00	-22.42	peak
15540.063	30.49	10.22	40.71	54.00	-13.29	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	RODECASTER PRO II (Integrated Audio Production Studio)	Model Name	RODECASTER PRO II
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5200MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.042	47.53	9.14	56.67	68.20	-11.53	peak
15600.063	42.16	10.22	52.38	74.00	-21.62	peak
15600.063	32.49	10.22	42.71	54.00	-11.29	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.042	46.58	9.14	55.72	68.20	-12.48	peak
15600.063	40.23	10.22	50.45	74.00	-23.55	peak
15600.063	31.57	10.22	41.79	54.00	-12.21	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	RODECASTER PRO II (Integrated Audio Production Studio)	Model Name	RODECASTER PRO II
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5240MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.042	49.64	9.27	58.91	68.20	-9.29	peak
15720.063	42.15	10.38	52.53	74.00	-21.47	peak
15720.063	31.16	10.38	41.54	54.00	-12.46	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.042	46.38	9.27	55.65	68.20	-12.55	peak
15720.063	41.25	10.38	51.63	74.00	-22.37	peak
15720.063	32.49	10.38	42.87	54.00	-11.13	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	RODECASTER PRO II (Integrated Audio Production Studio)	Model Name	RODECASTER PRO II
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5260MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10520.044	47.56	9.29	56.85	68.20	-11.35	peak
15780.066	42.38	10.42	52.80	74.00	-21.20	peak
15780.066	31.42	10.42	41.84	54.00	-12.16	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10520.044	48.51	9.29	57.80	68.20	-10.40	peak
15780.066	42.16	10.42	52.58	74.00	-21.42	peak
15780.066	32.57	10.42	42.99	54.00	-11.01	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	RODECASTER PRO II (Integrated Audio Production Studio)	Model Name	RODECASTER PRO II
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5300MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10600.044	47.53	9.31	56.84	74.00	-17.16	peak
10600.044	38.64	9.31	47.95	54.00	-6.05	AVG
15900.066	42.19	10.44	52.63	74.00	-21.37	peak
15900.066	31.58	10.44	42.02	54.00	-11.98	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10600.044	49.64	9.31	58.95	74.00	-15.05	peak
10600.044	38.64	9.31	47.95	54.00	-6.05	AVG
15780.066	43.15	10.44	53.59	74.00	-20.41	peak
15780.066	32.48	10.44	42.92	54.00	-11.08	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	RODECASTER PRO II (Integrated Audio Production Studio)	Model Name	RODECASTER PRO II
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5320MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10640.044	46.29	9.35	55.64	74.00	-18.36	peak
10640.044	37.84	9.35	47.19	54.00	-6.81	AVG
15960.066	42.16	10.46	52.62	74.00	-21.38	peak
15960.066	31.25	10.46	41.71	54.00	-12.29	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10640.044	48.42	9.35	57.77	74.00	-16.23	peak
10640.044	39.64	9.35	48.99	54.00	-5.01	AVG
15960.066	42.15	10.46	52.61	74.00	-21.39	peak
15960.066	31.58	10.46	42.04	54.00	-11.96	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						