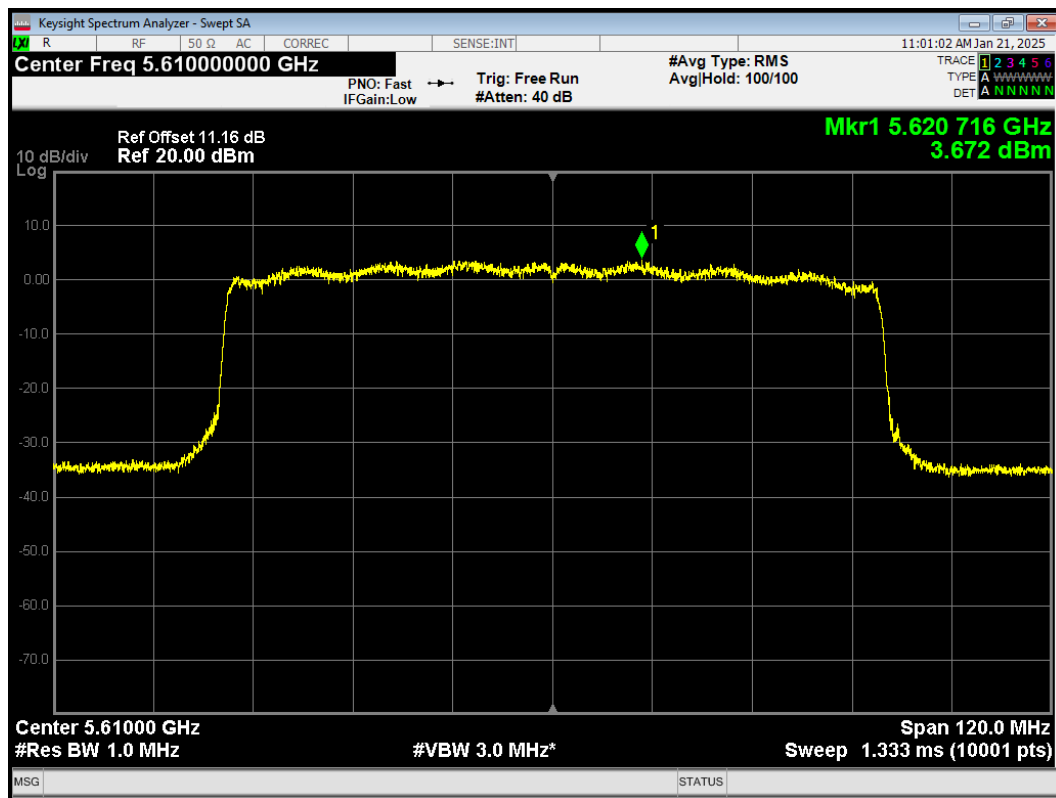
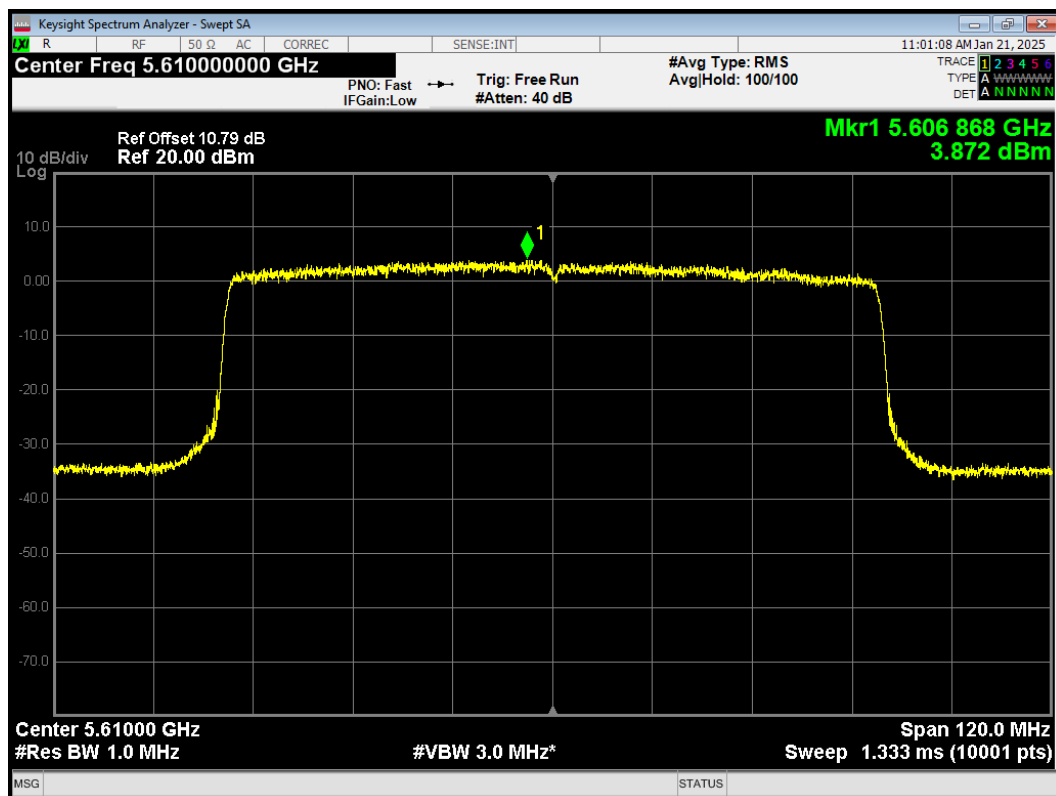


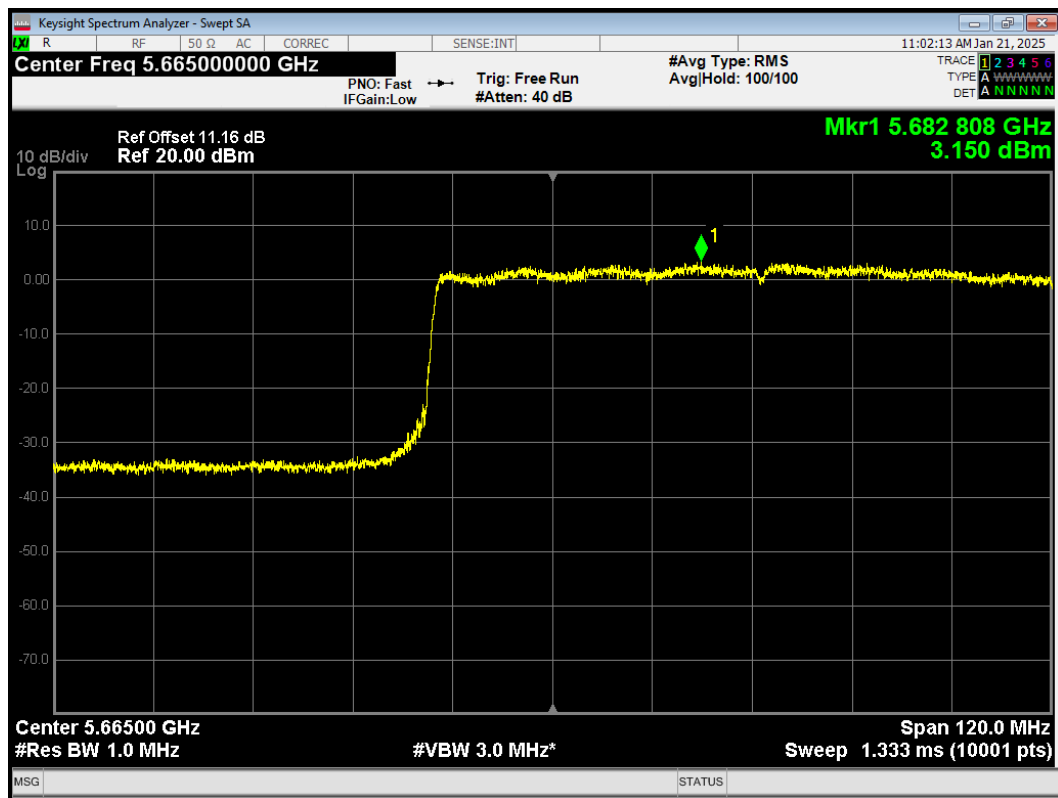
PSD 802.11ax(HE80) 5610MHz Ant1



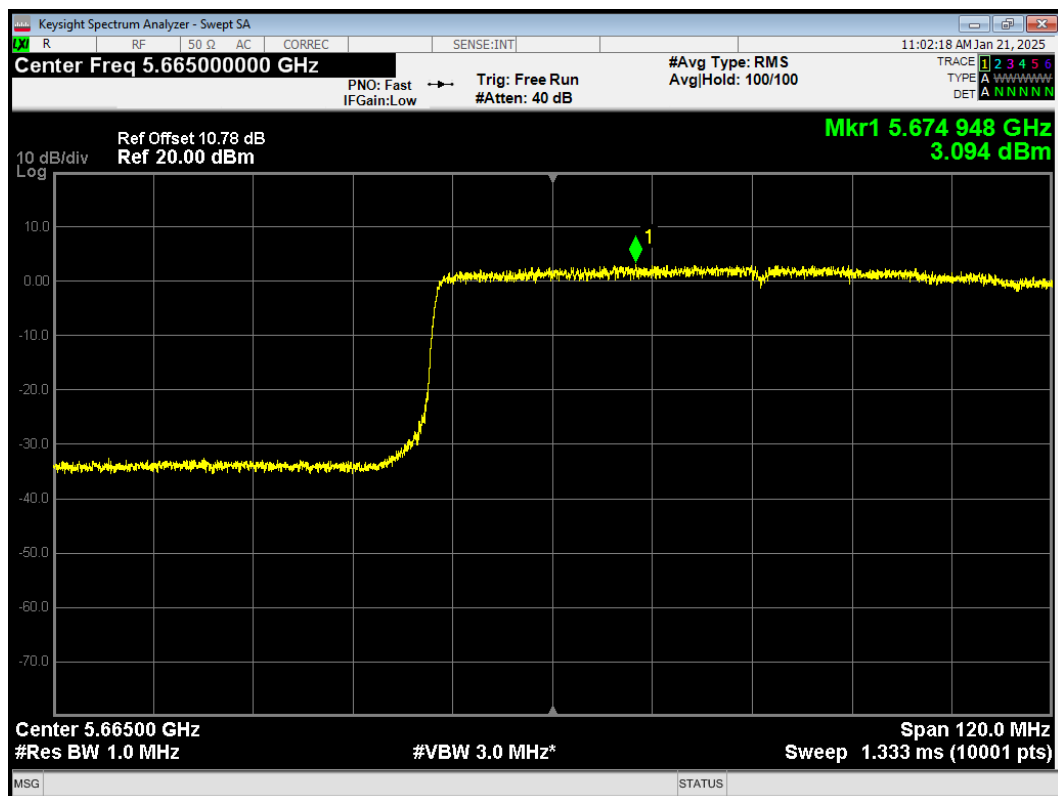
PSD 802.11ax(HE80) 5610MHz Ant2



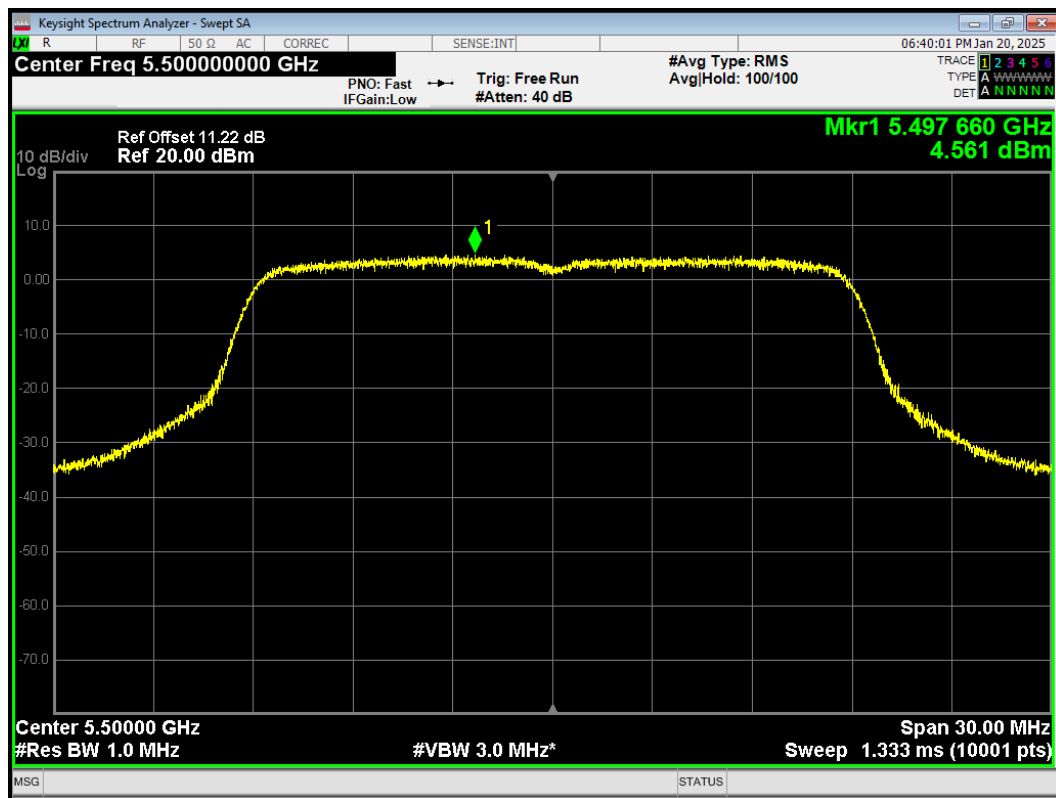
PSD 802.11ax(HE80) 5690MHz Ant1



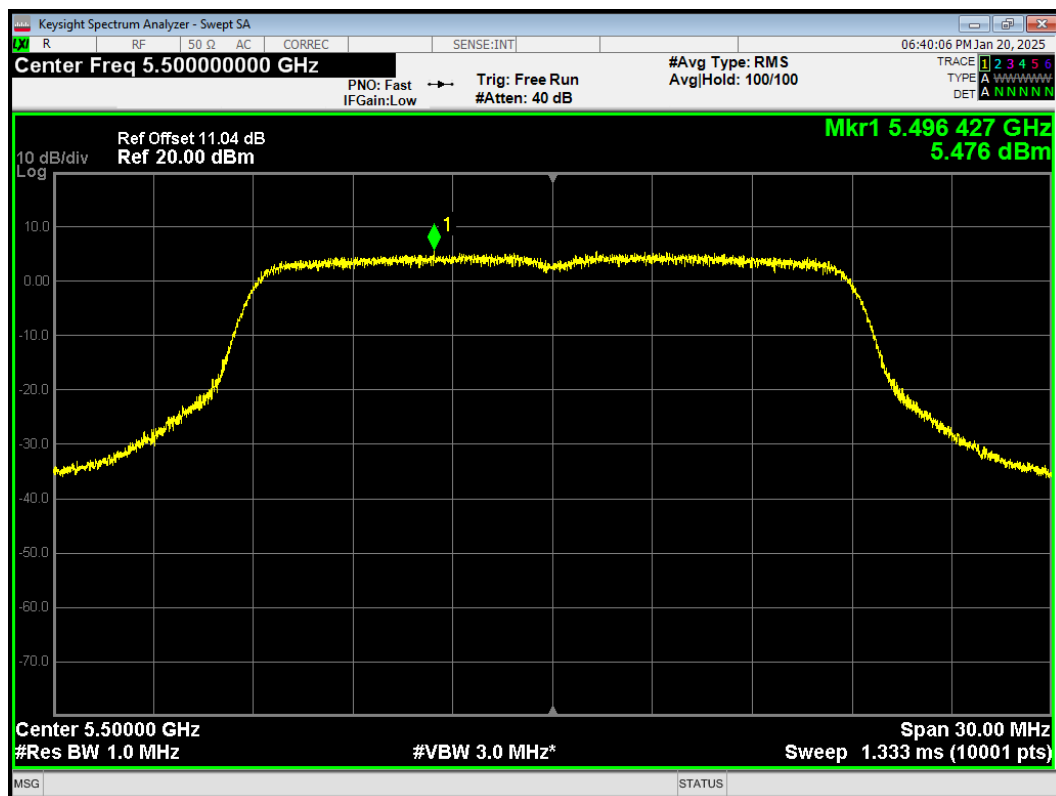
PSD 802.11ax(HE80) 5690MHz Ant2



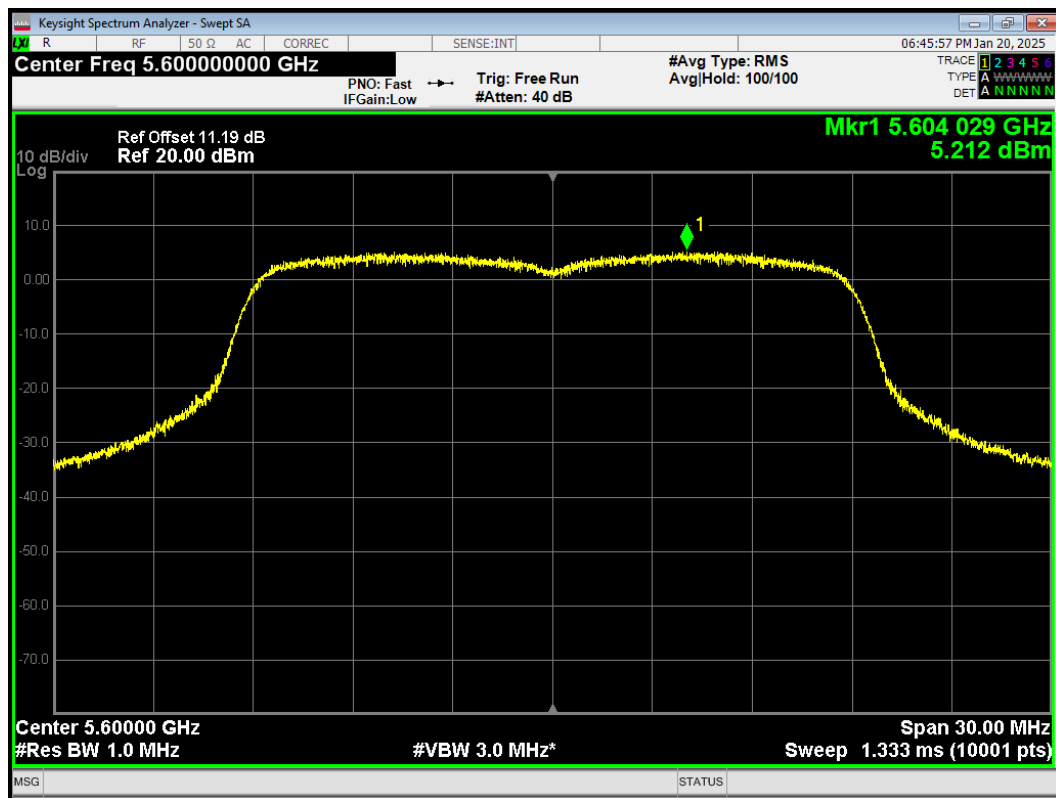
PSD 802.11n(HT20) 5500MHz Ant1



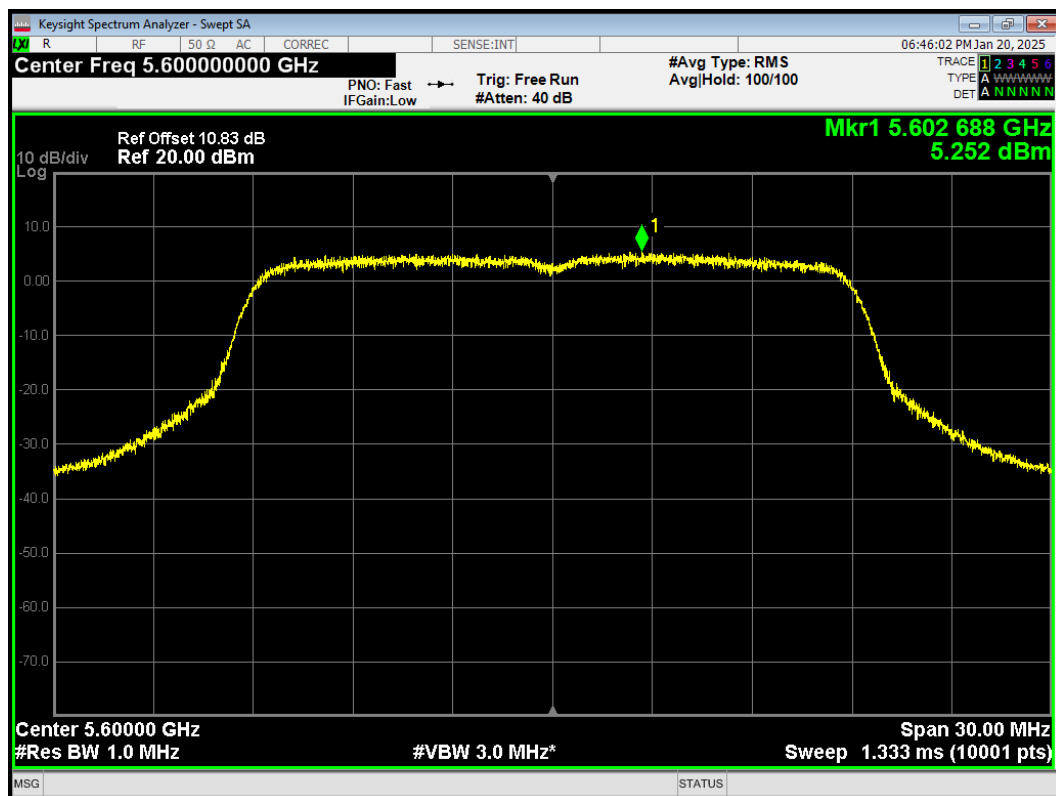
PSD 802.11n(HT20) 5500MHz Ant2



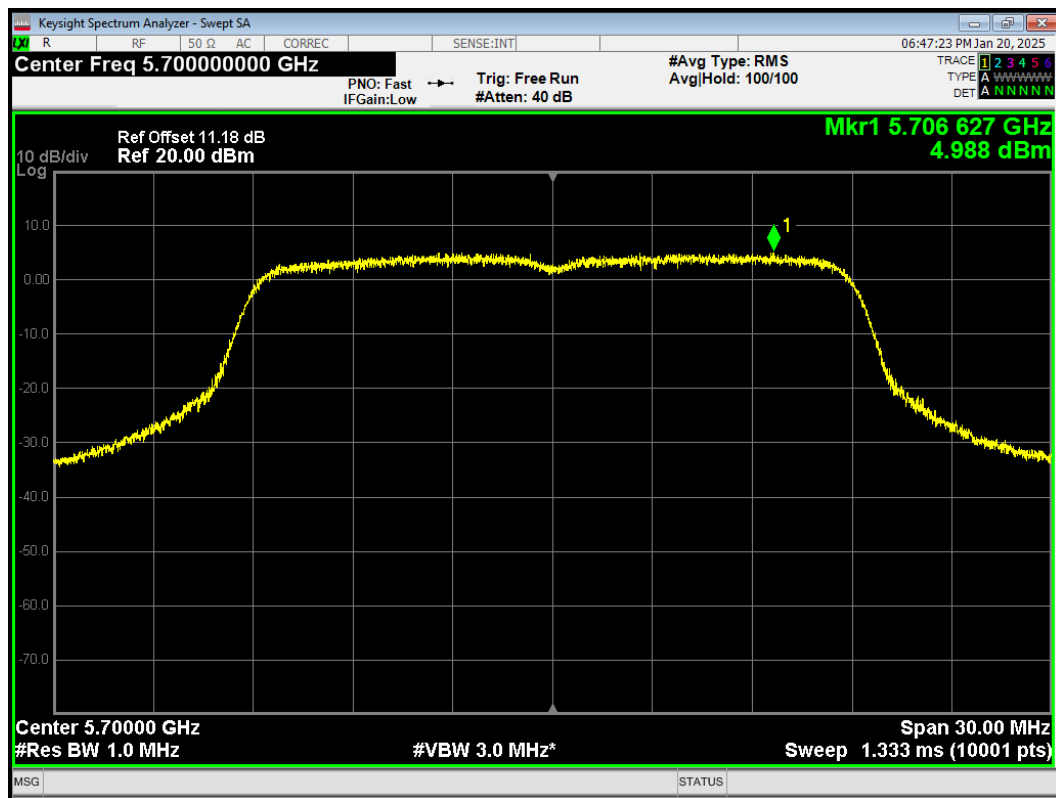
PSD 802.11n(HT20) 5600MHz Ant1



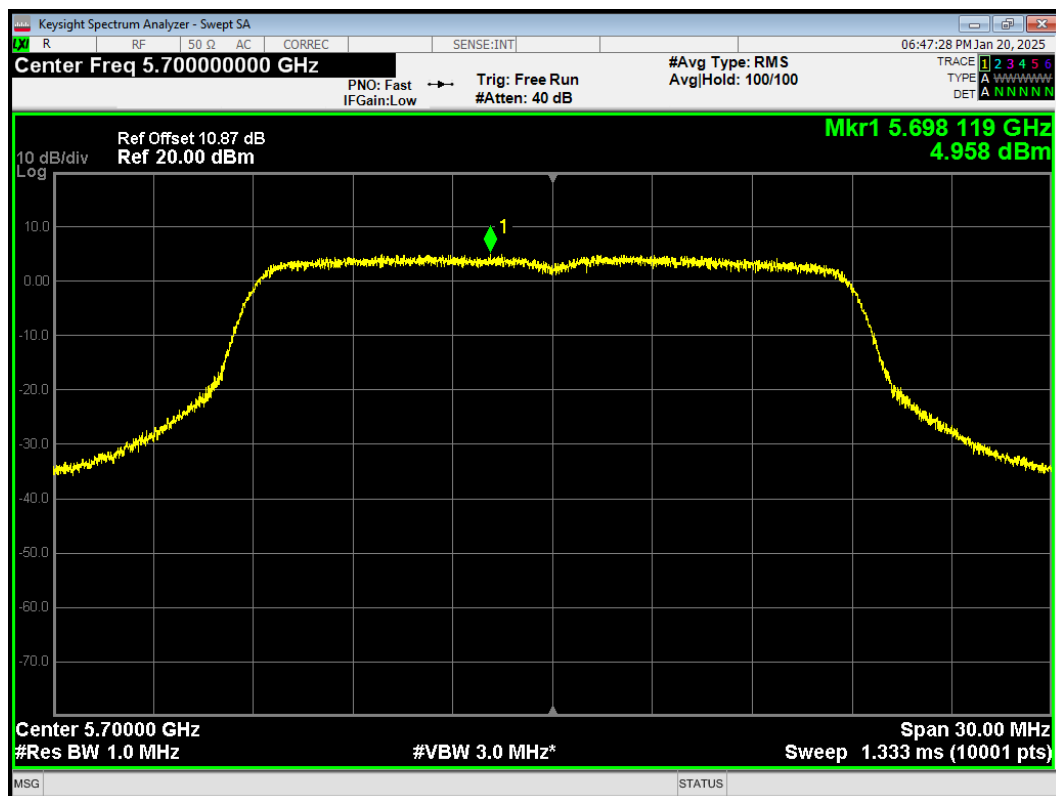
PSD 802.11n(HT20) 5600MHz Ant2



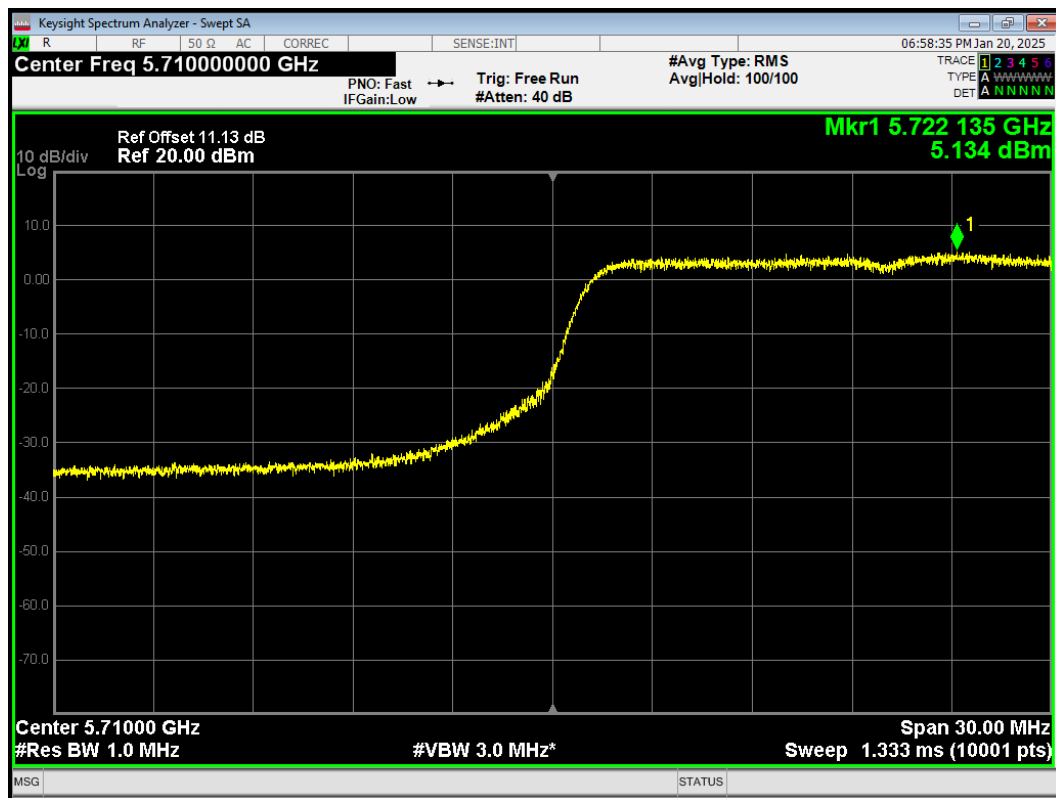
PSD 802.11n(HT20) 5700MHz Ant1



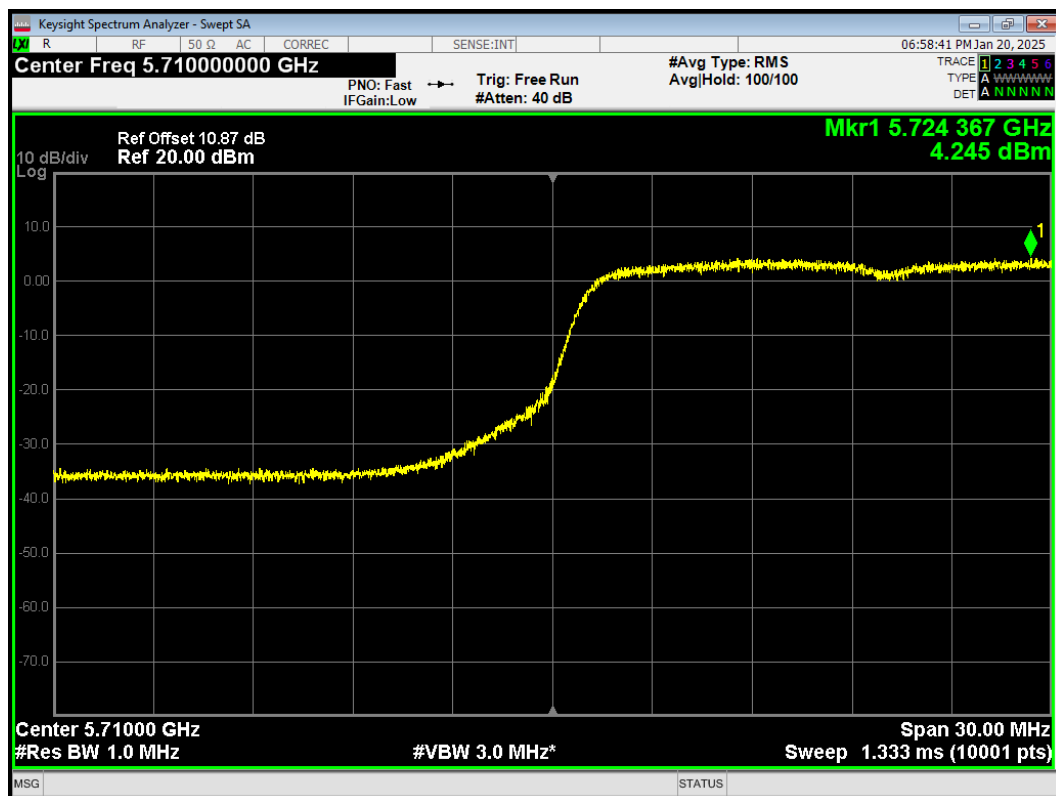
PSD 802.11n(HT20) 5700MHz Ant2



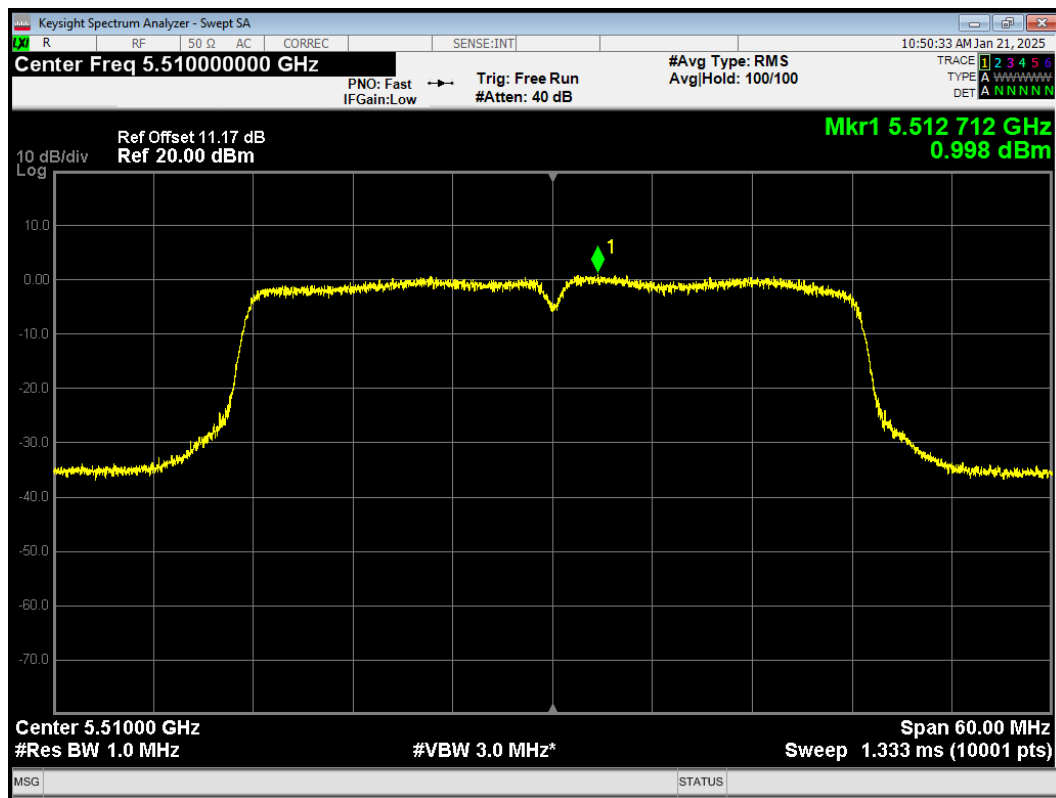
PSD 802.11n(HT20) 5720MHz Ant1



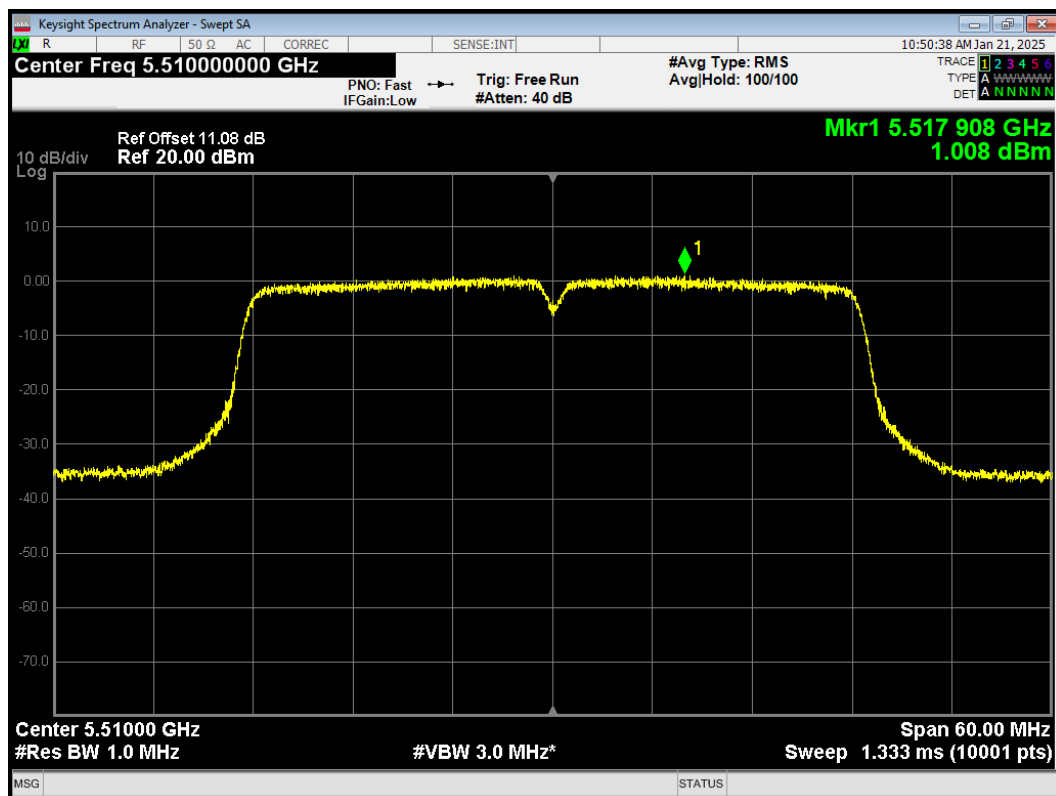
PSD 802.11n(HT20) 5720MHz Ant2



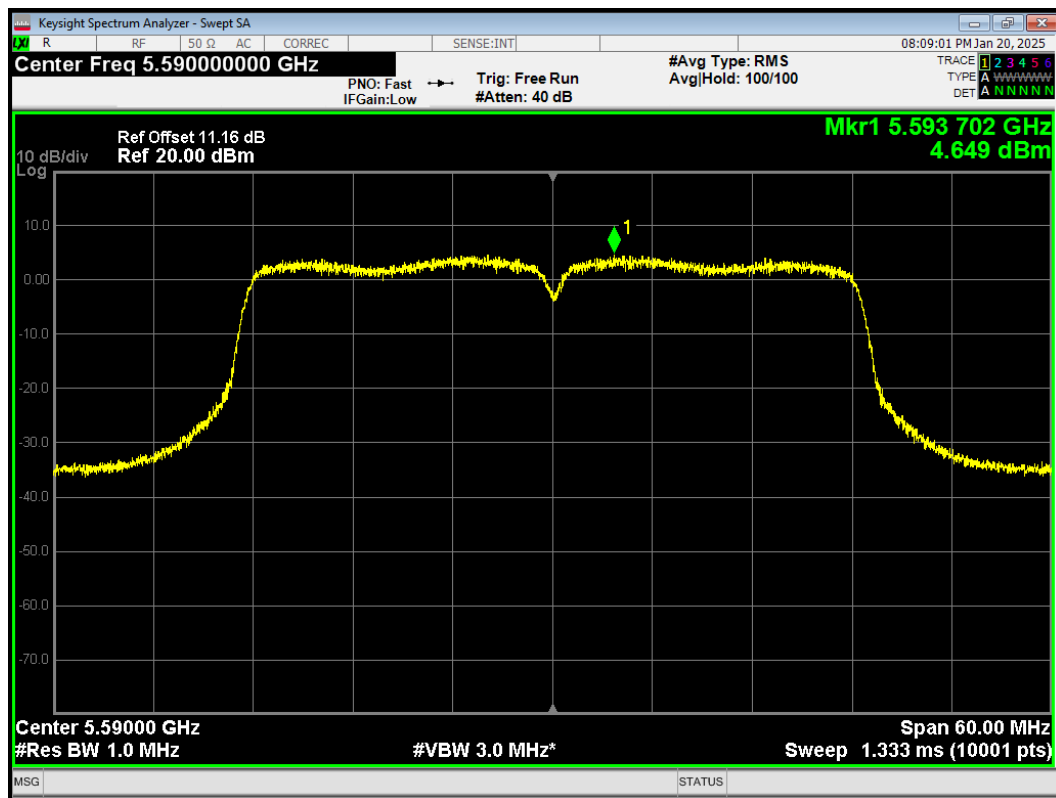
PSD 802.11n(HT40) 5510MHz Ant1



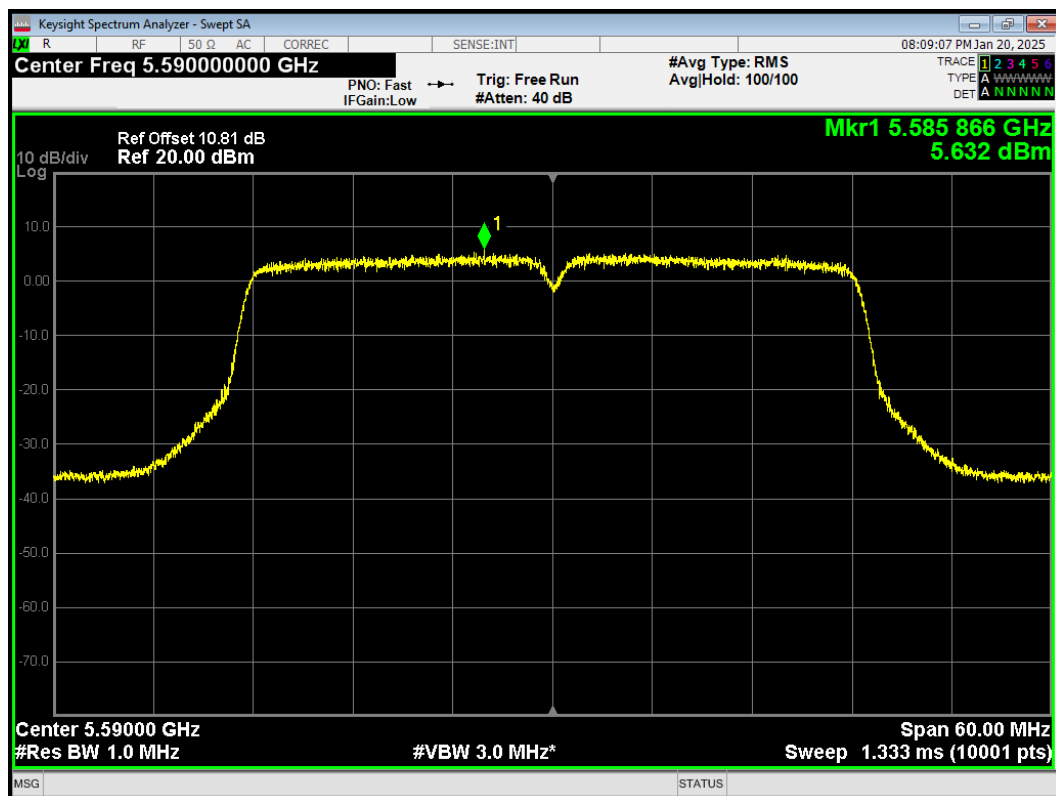
PSD 802.11n(HT40) 5510MHz Ant2



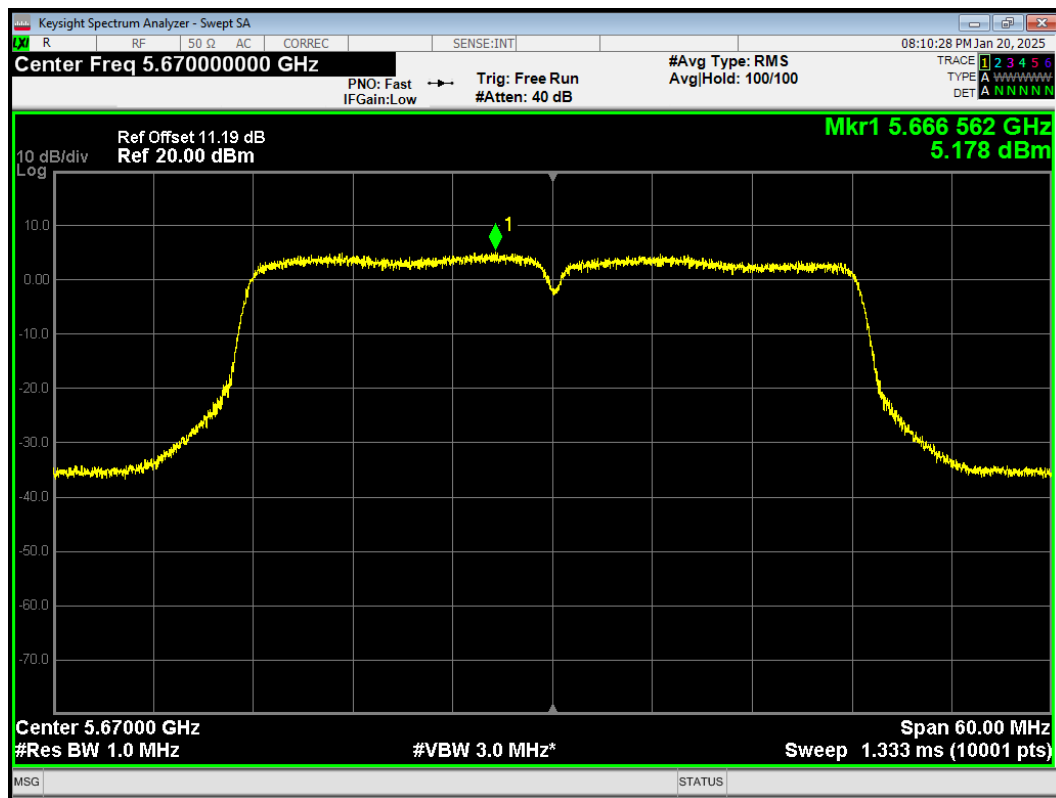
PSD 802.11n(HT40) 5590MHz Ant1



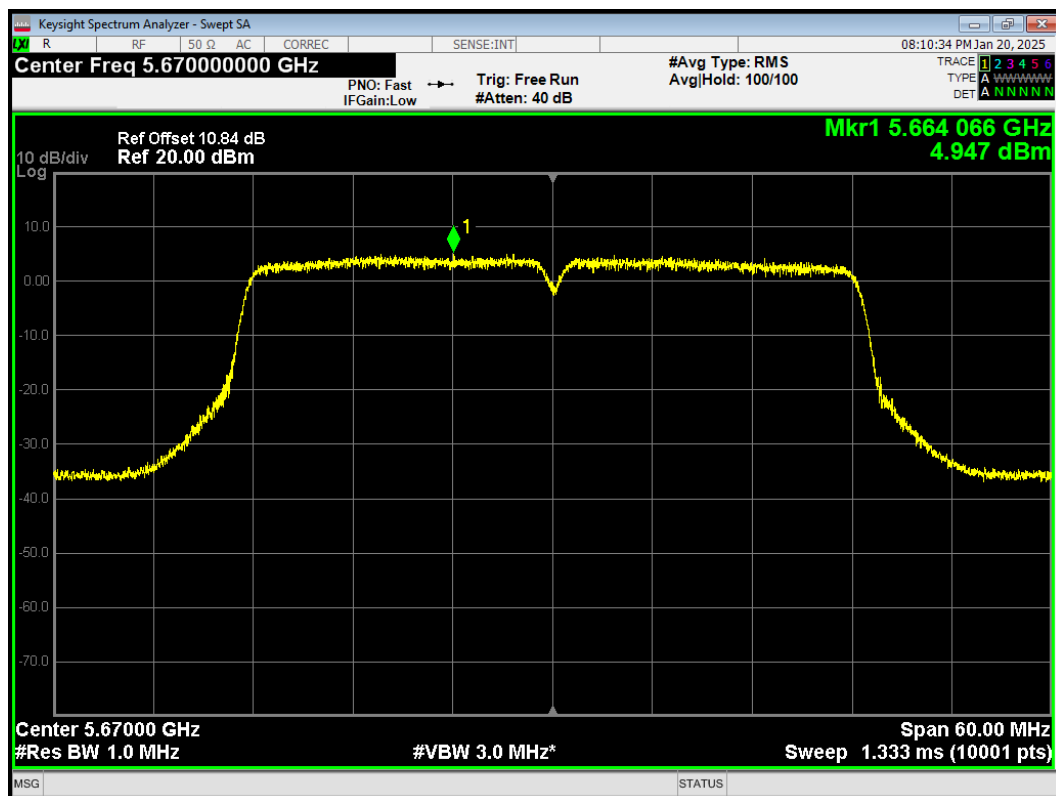
PSD 802.11n(HT40) 5590MHz Ant2



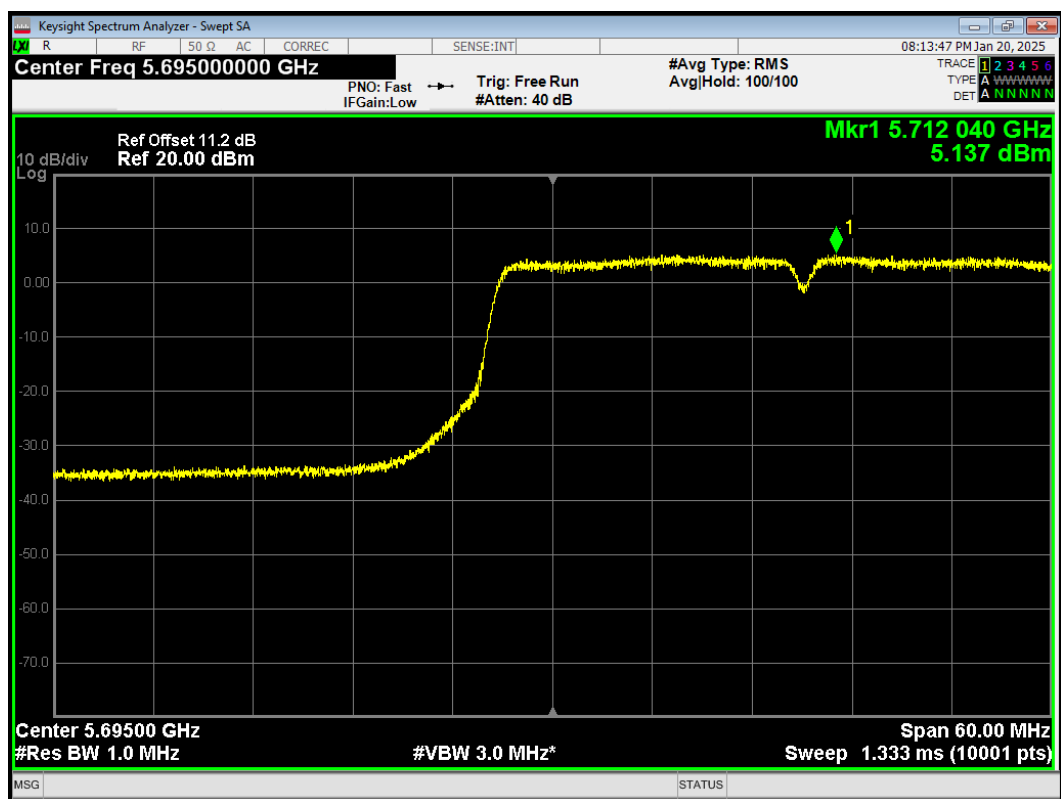
PSD 802.11n(HT40) 5670MHz Ant1



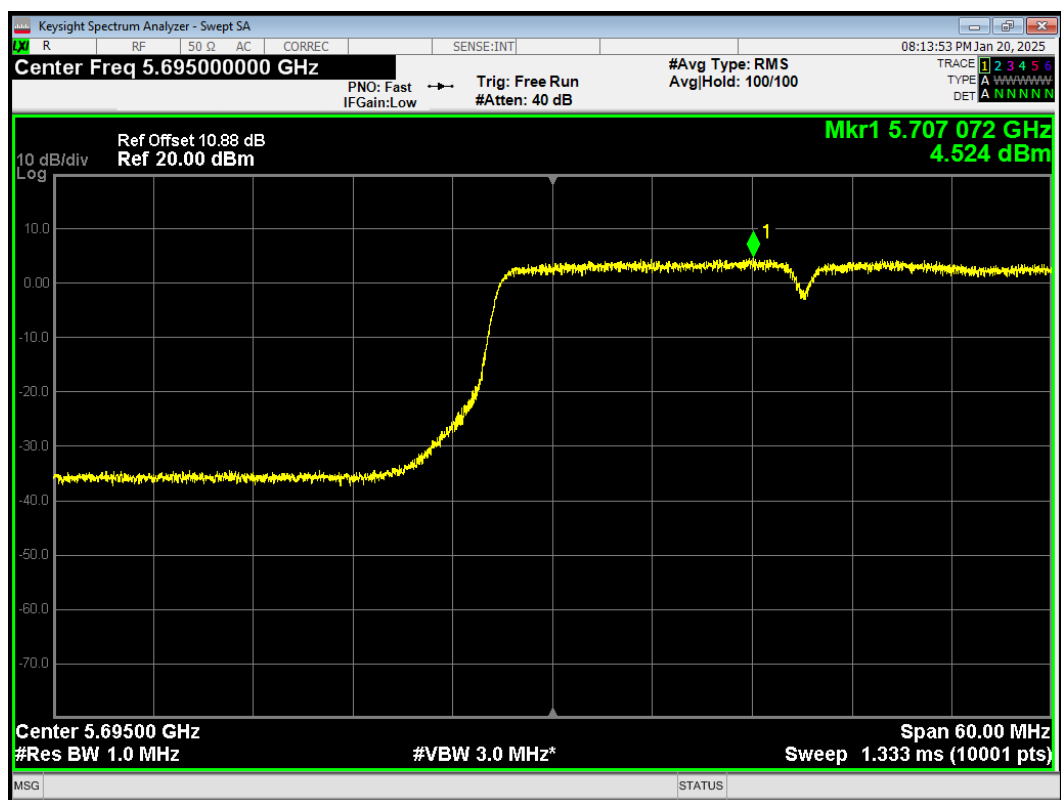
PSD 802.11n(HT40) 5670MHz Ant2



PSD 802.11n(HT40) 5695MHz Ant1

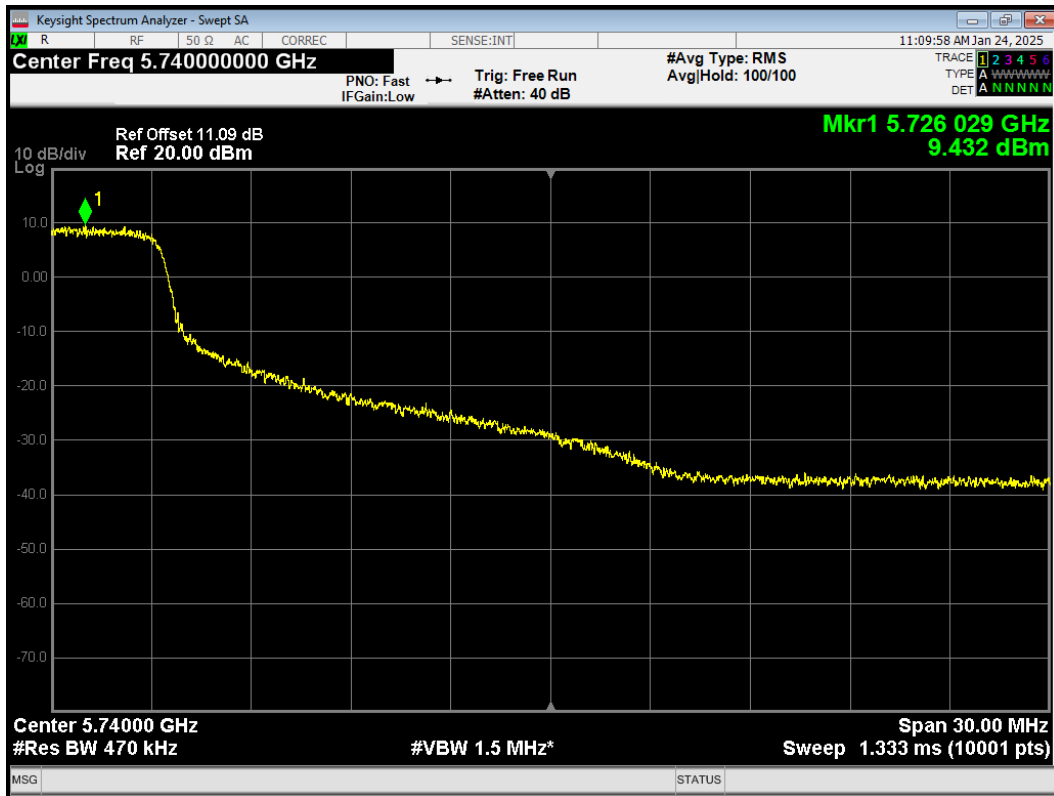


PSD 802.11n(HT40) 5695MHz Ant2

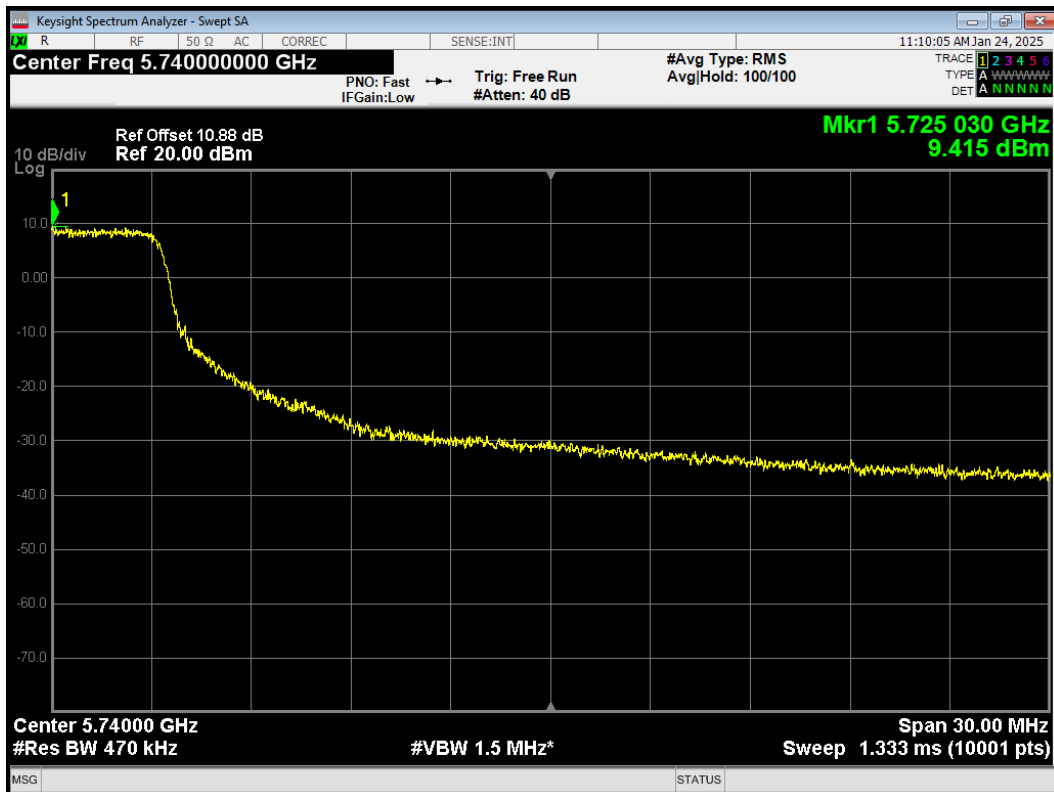


U-NII-3

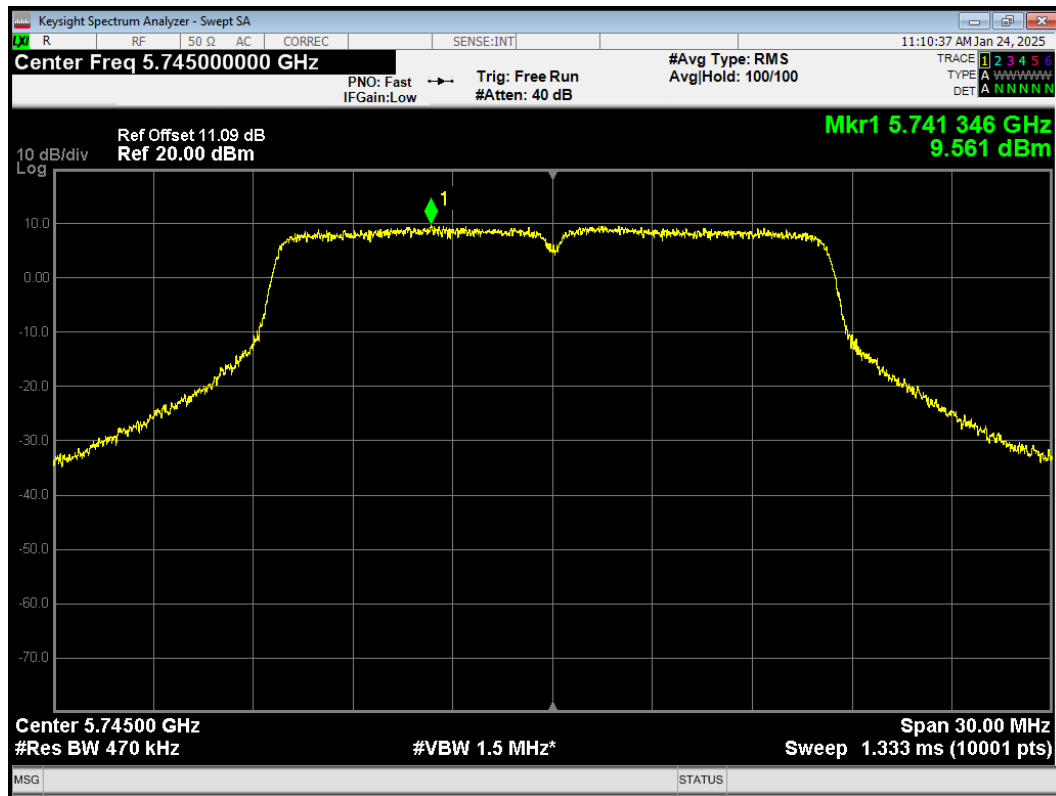
PSD 802.11a 5720MHz Ant1



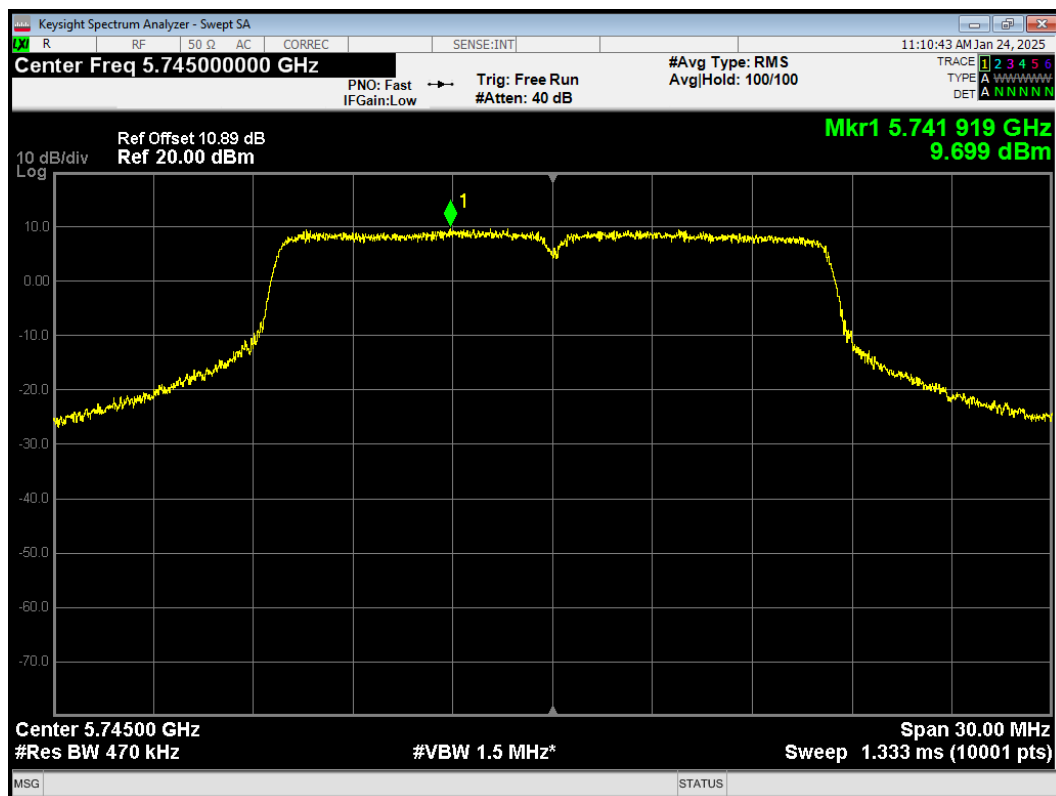
PSD 802.11a 5720MHz Ant2



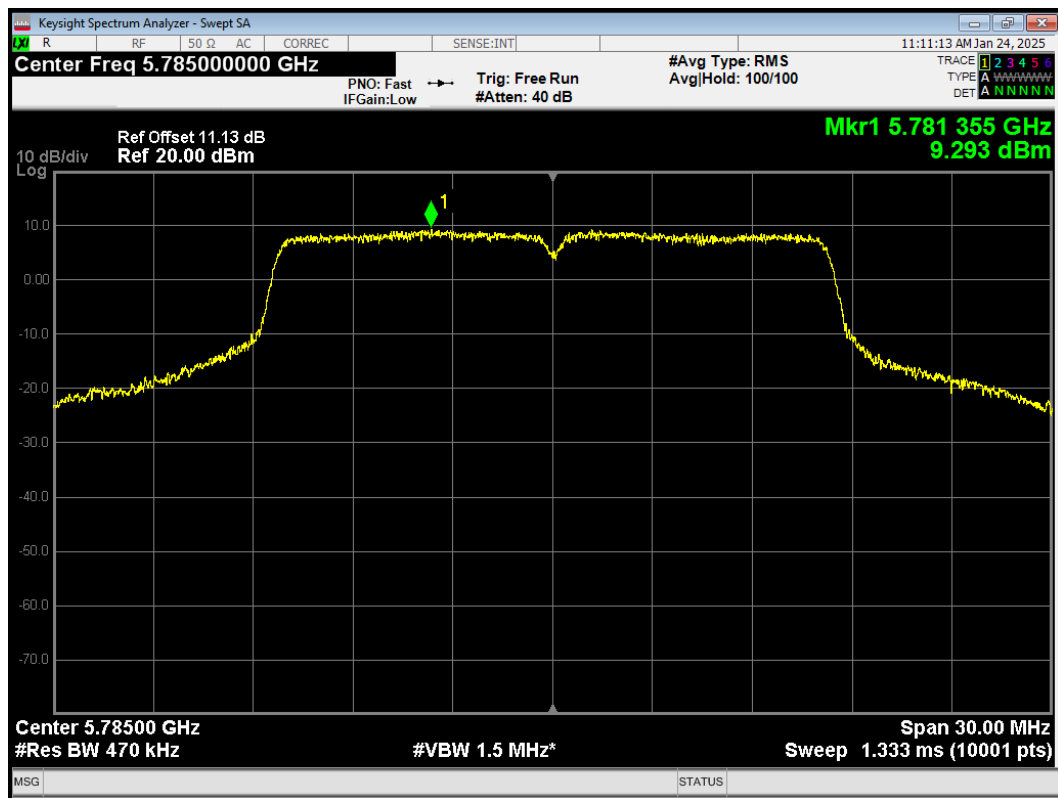
PSD 802.11a 5745MHz Ant1



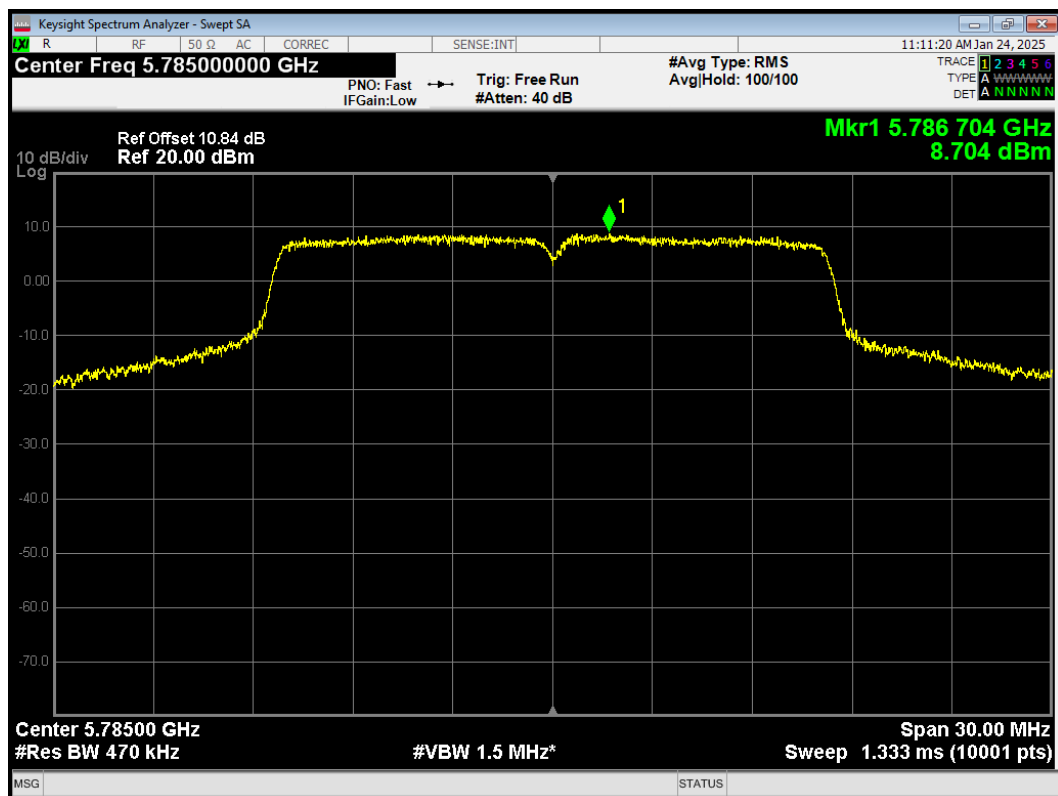
PSD 802.11a 5745MHz Ant2



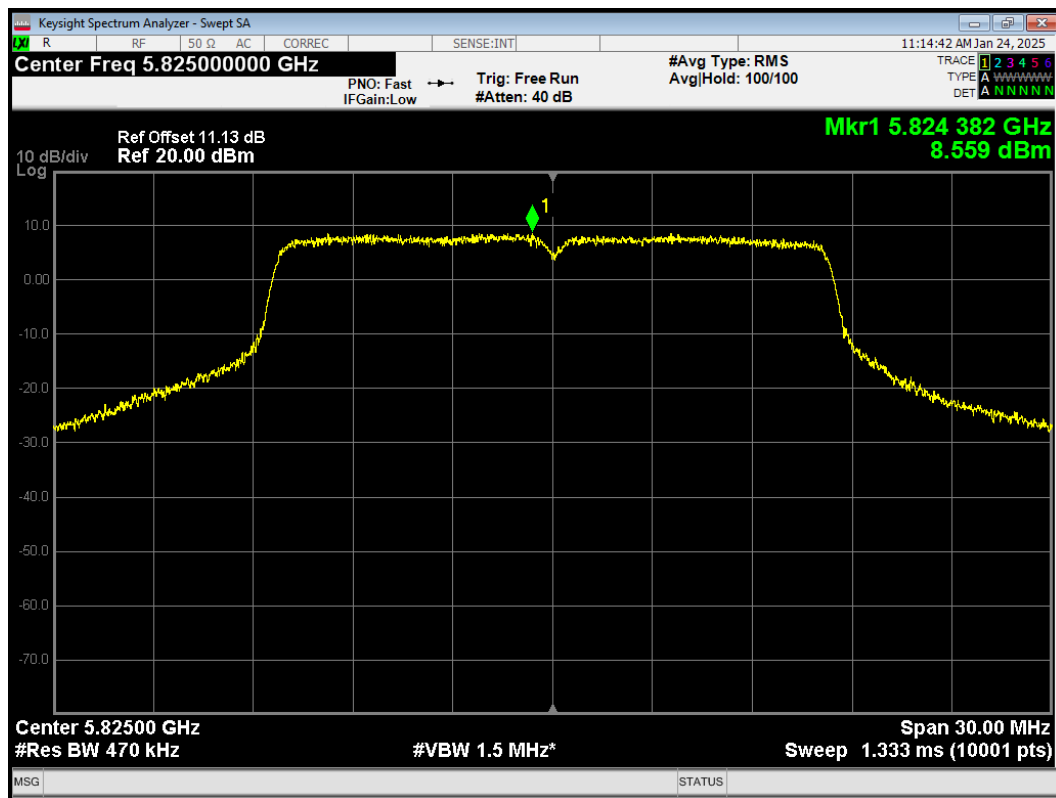
PSD 802.11a 5785MHz Ant1



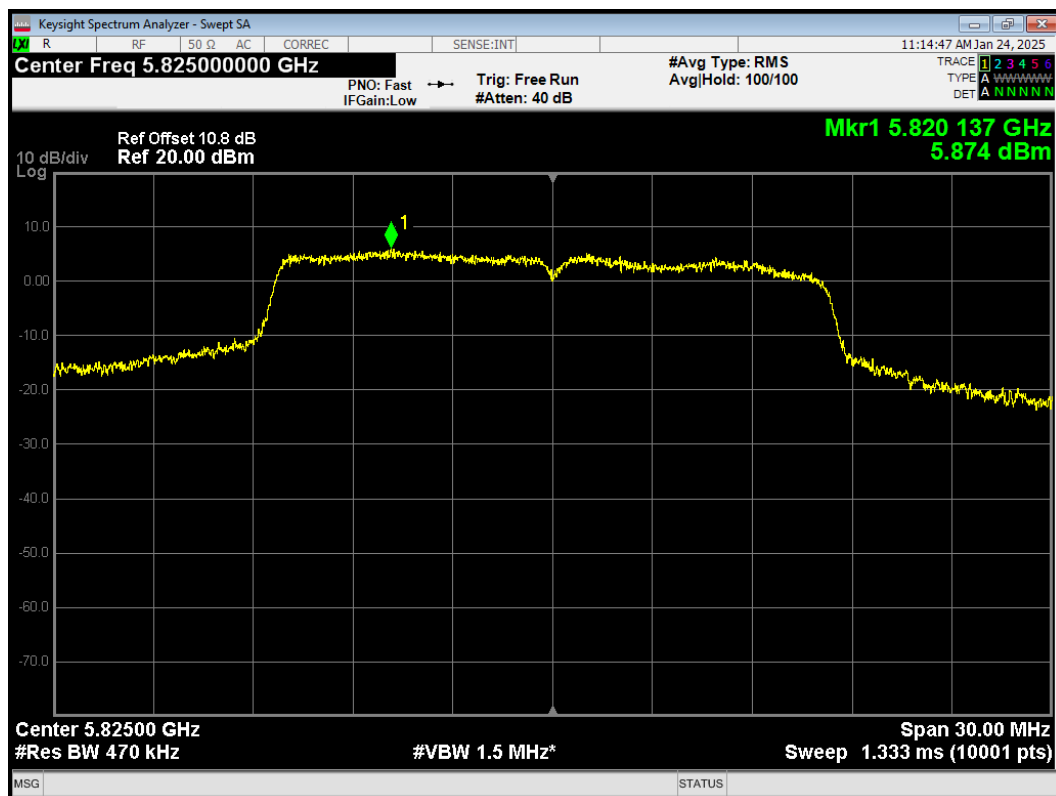
PSD 802.11a 5785MHz Ant2



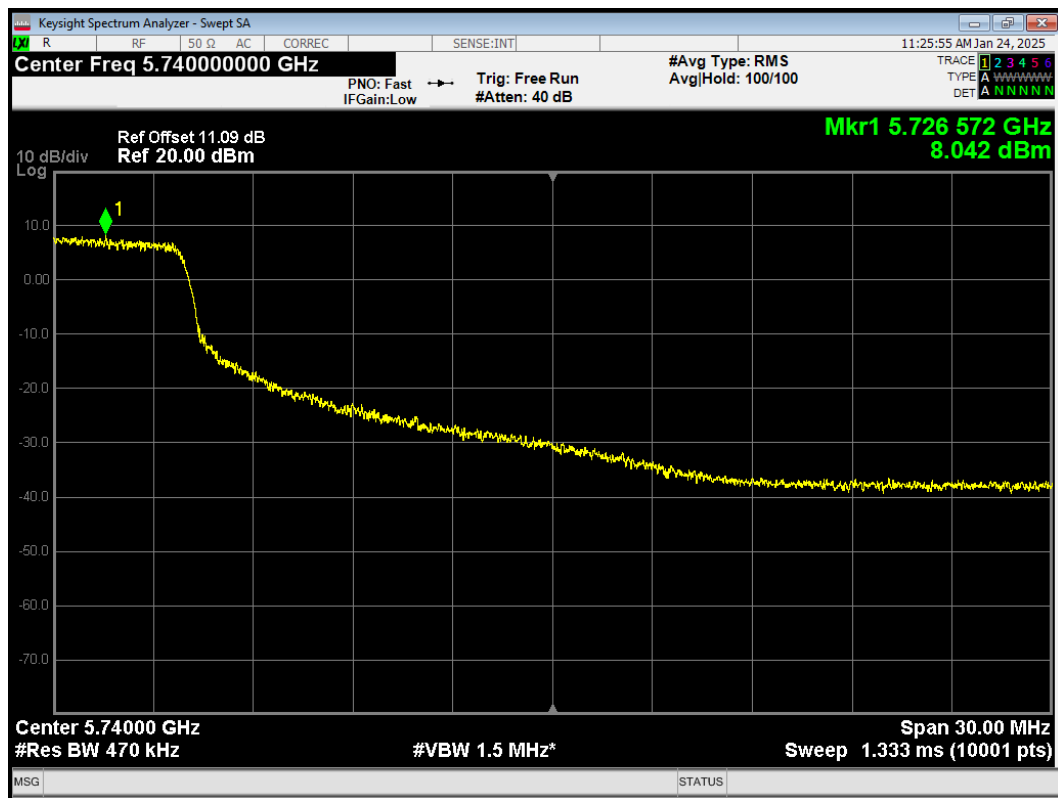
PSD 802.11a 5825MHz Ant1



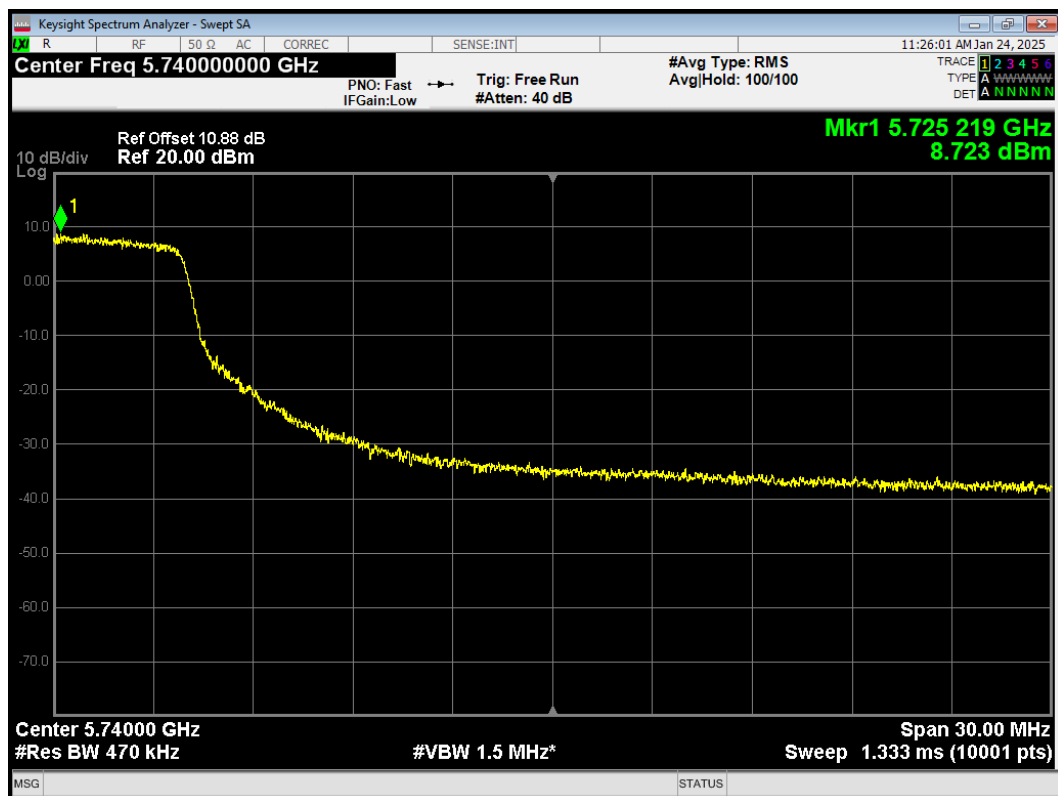
PSD 802.11a 5825MHz Ant2



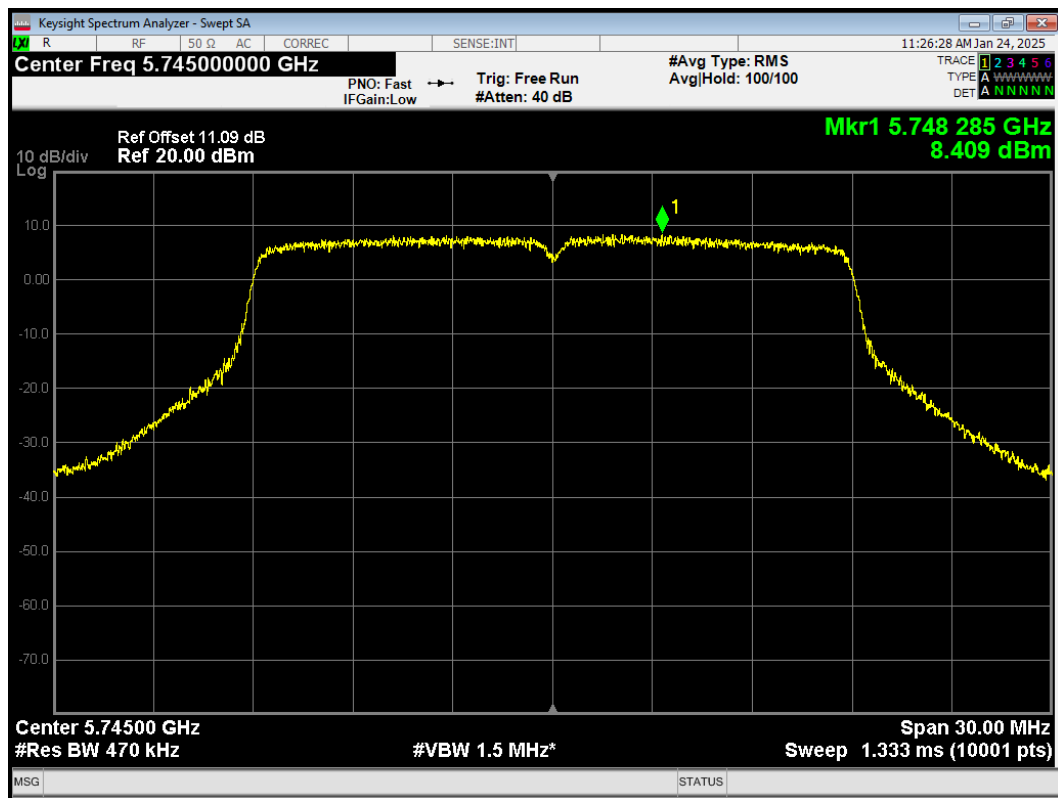
PSD 802.11ac(VHT20) 5720MHz Ant1



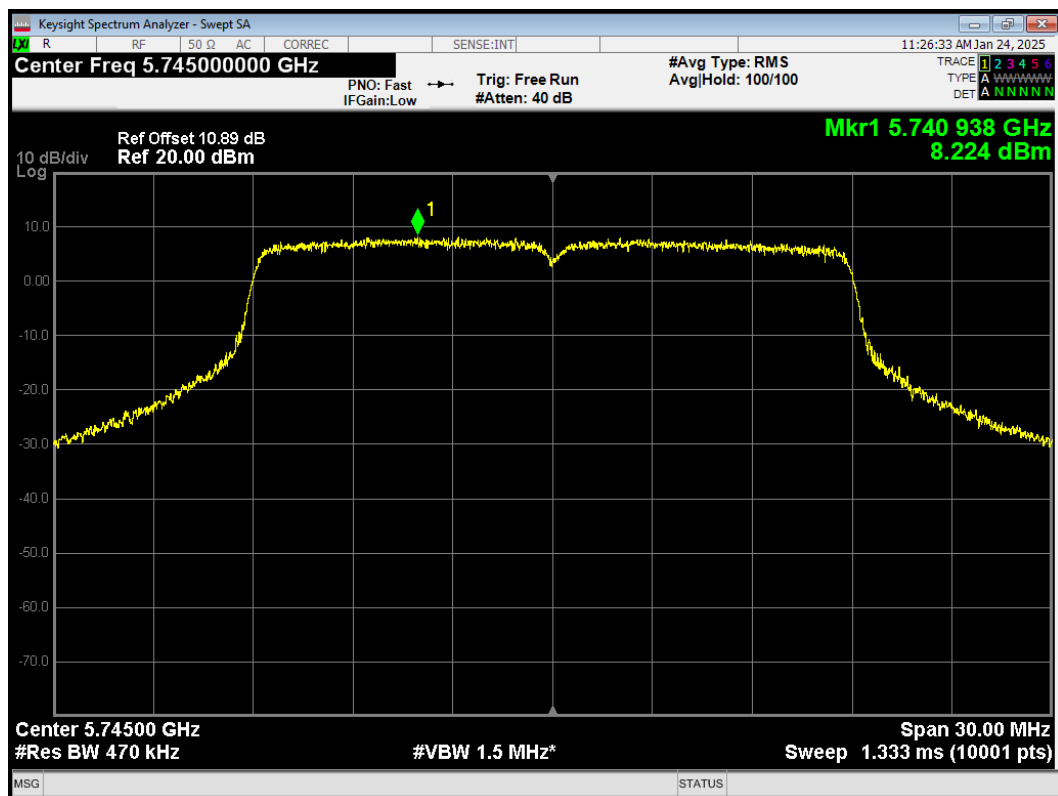
PSD 802.11ac(VHT20) 5720MHz Ant2



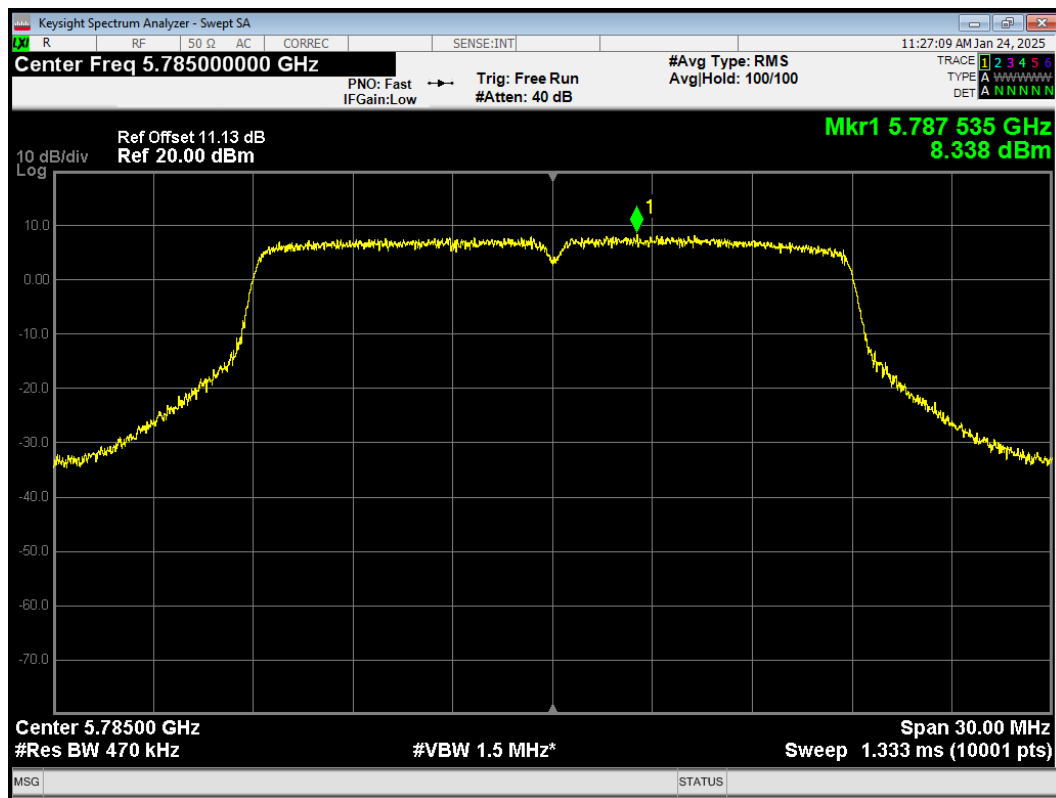
PSD 802.11ac(VHT20) 5745MHz Ant1



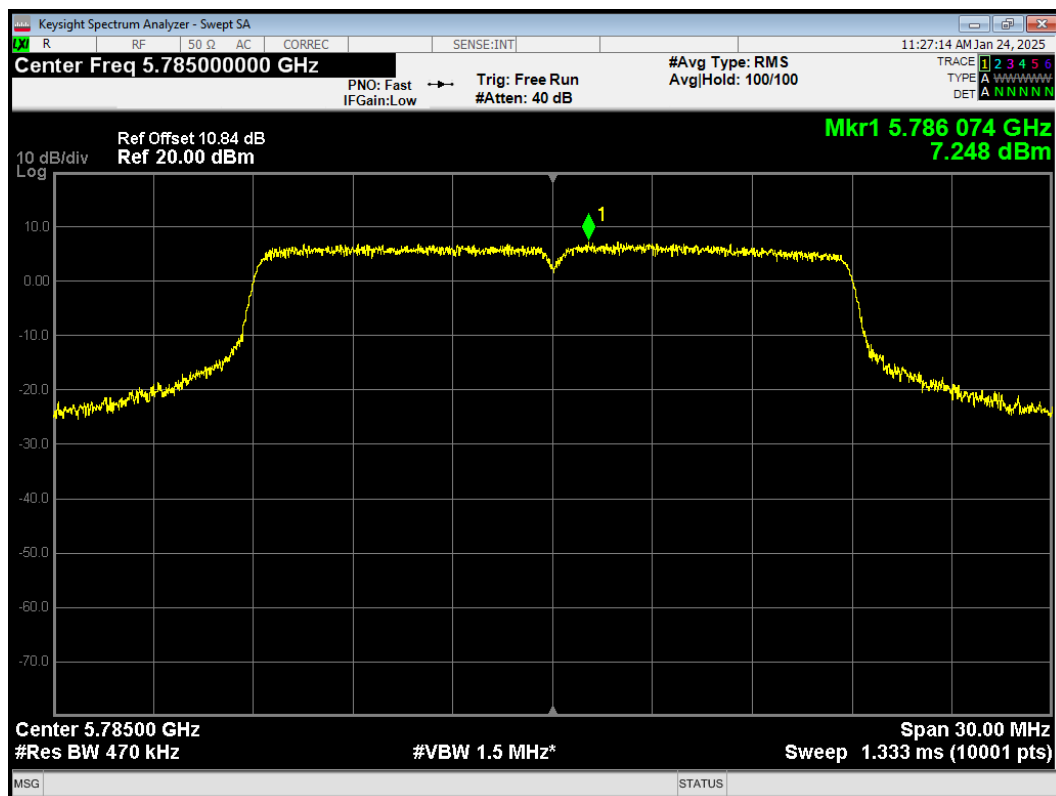
PSD 802.11ac(VHT20) 5745MHz Ant2



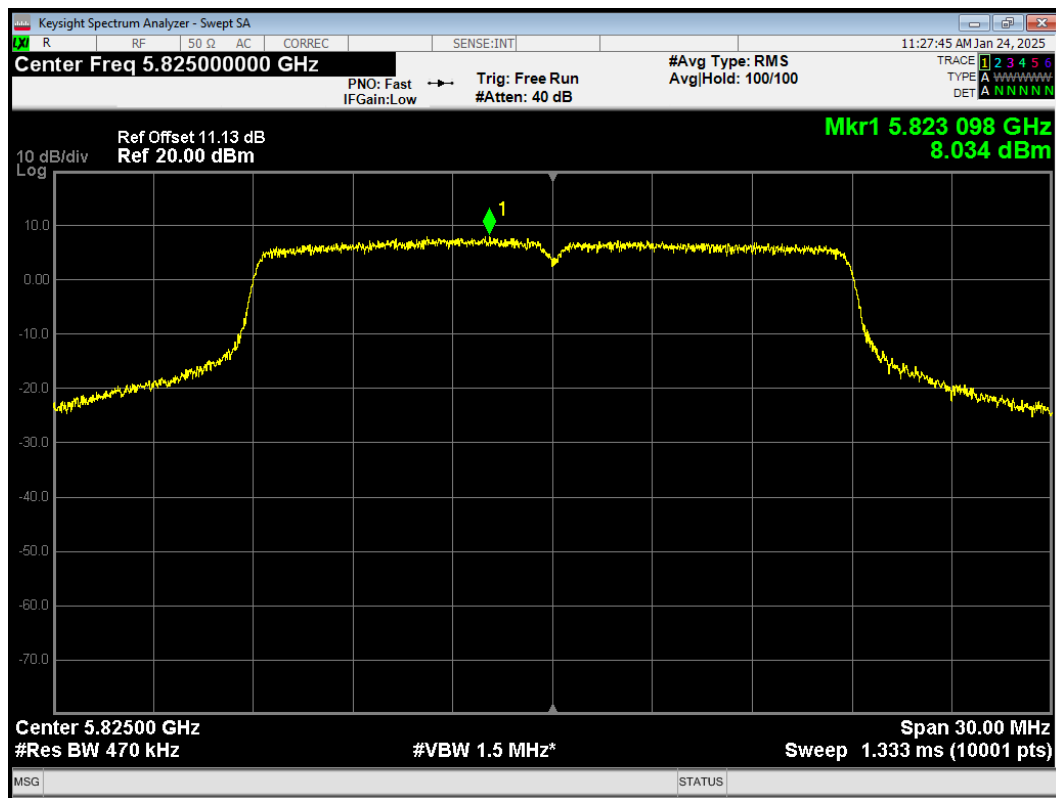
PSD 802.11ac(VHT20) 5785MHz Ant1



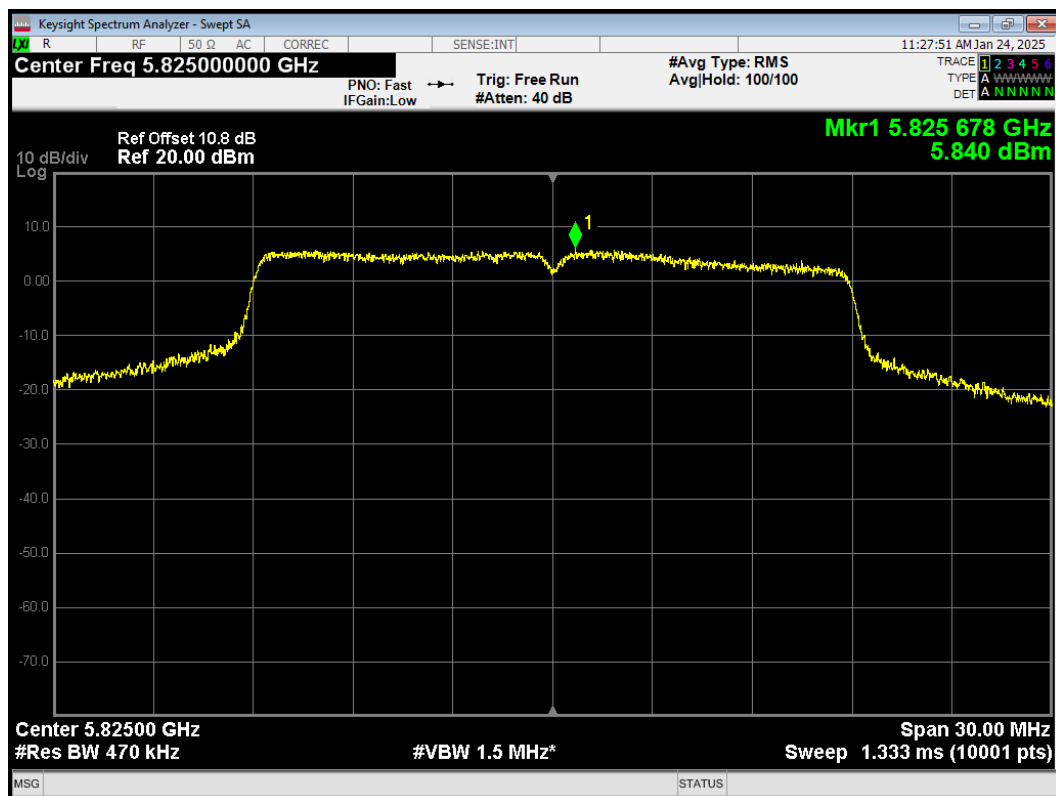
PSD 802.11ac(VHT20) 5785MHz Ant2



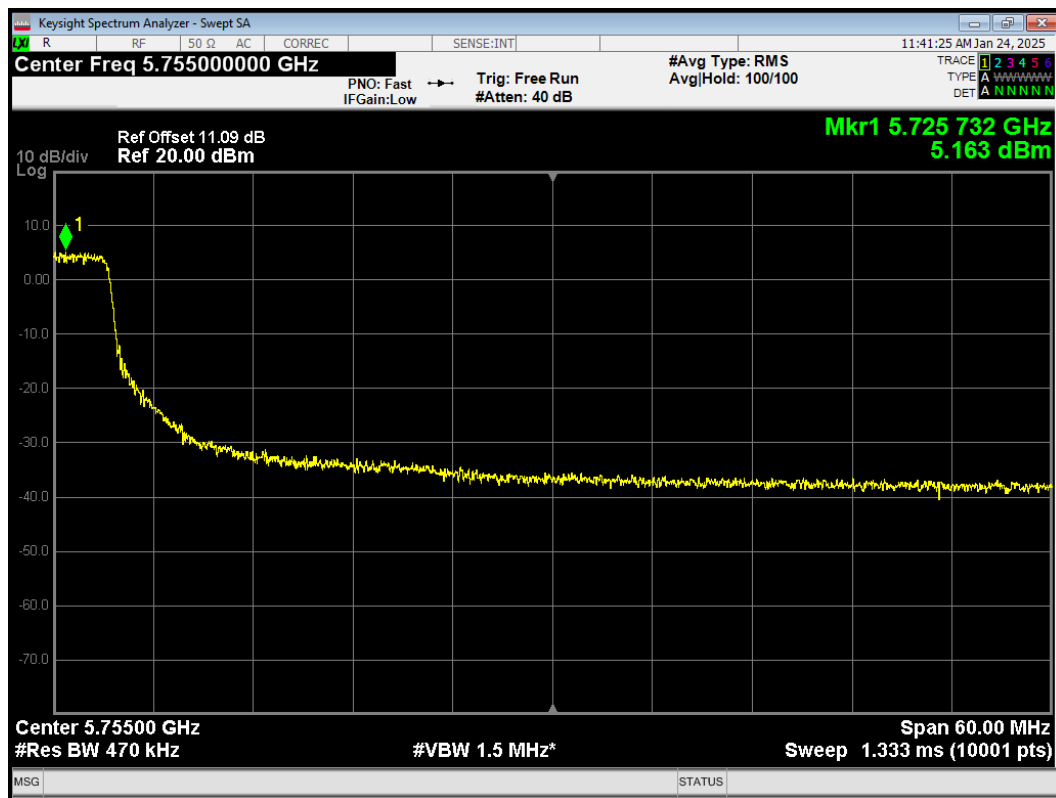
PSD 802.11ac(VHT20) 5825MHz Ant1



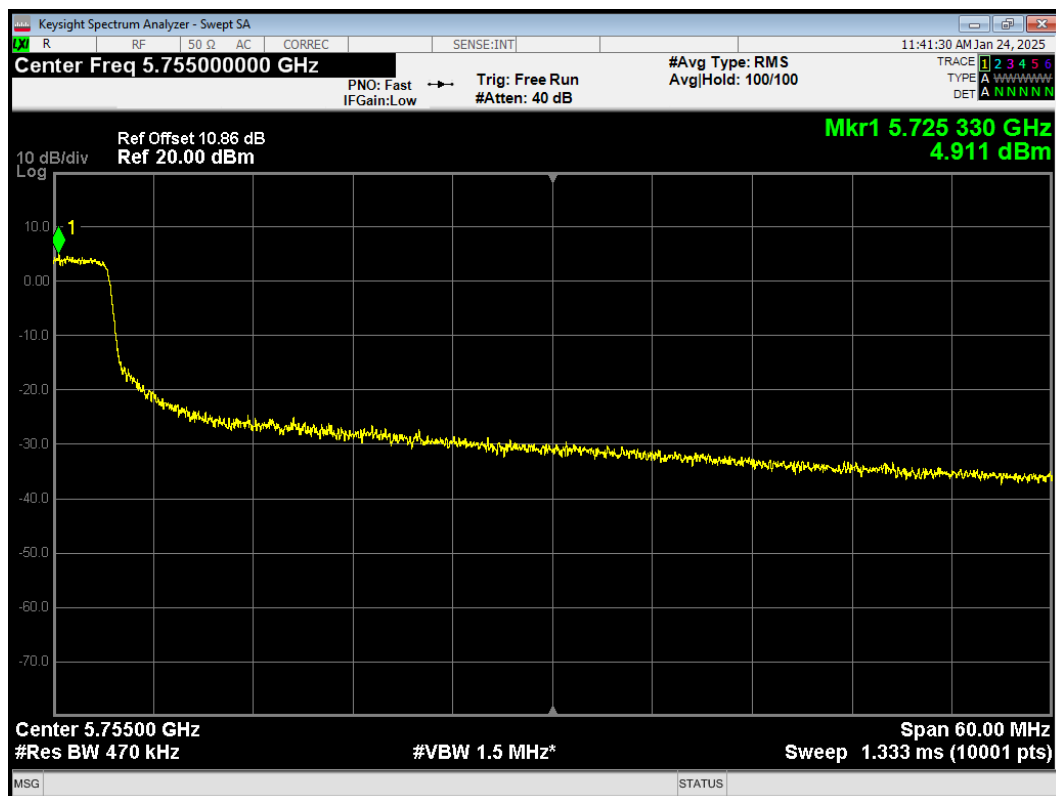
PSD 802.11ac(VHT20) 5825MHz Ant2



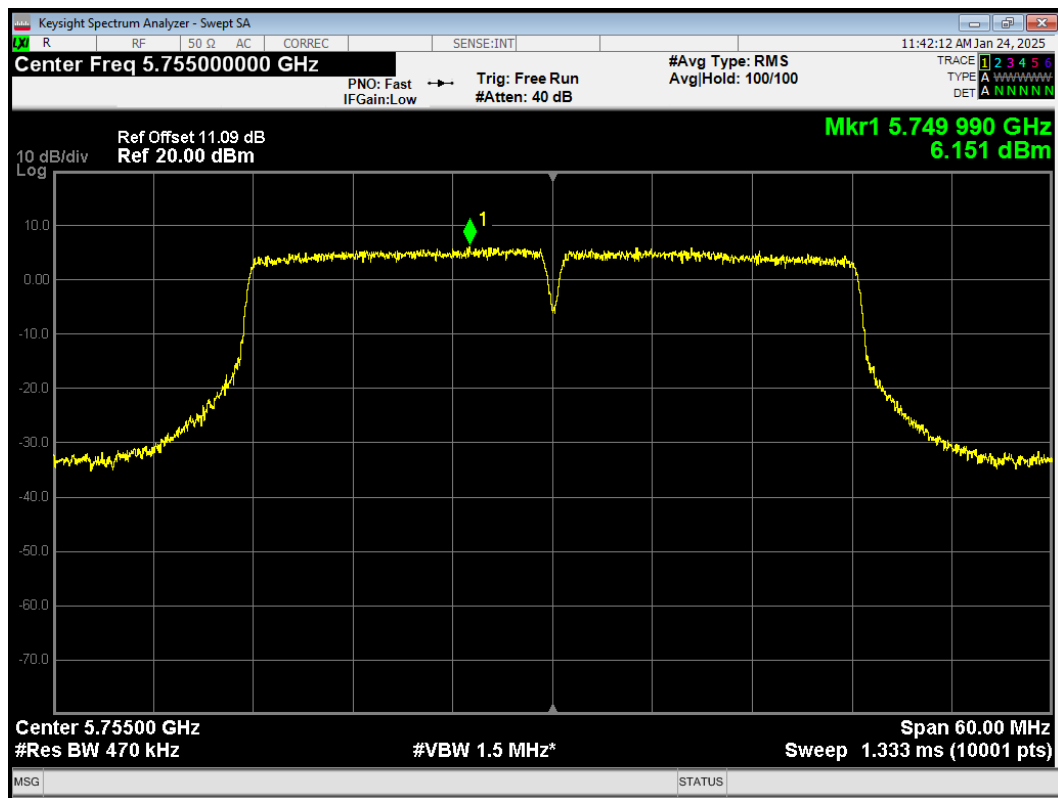
PSD 802.11ac(VHT40) 5710MHz Ant1



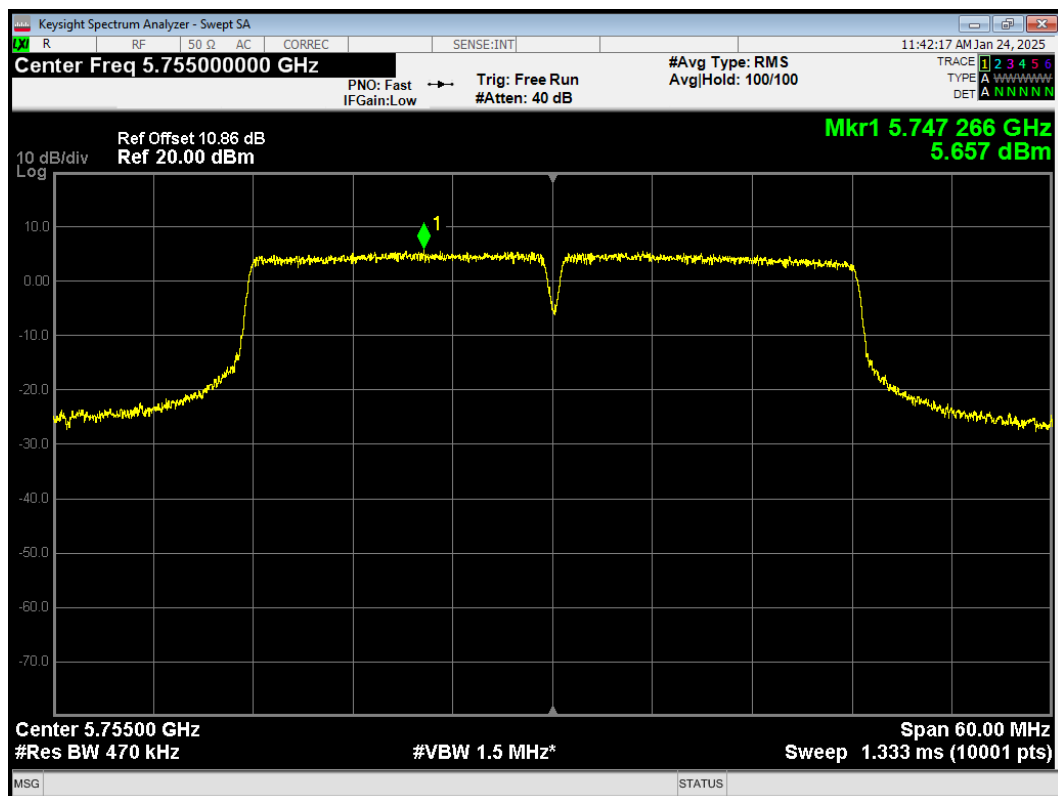
PSD 802.11ac(VHT40) 5710MHz Ant2



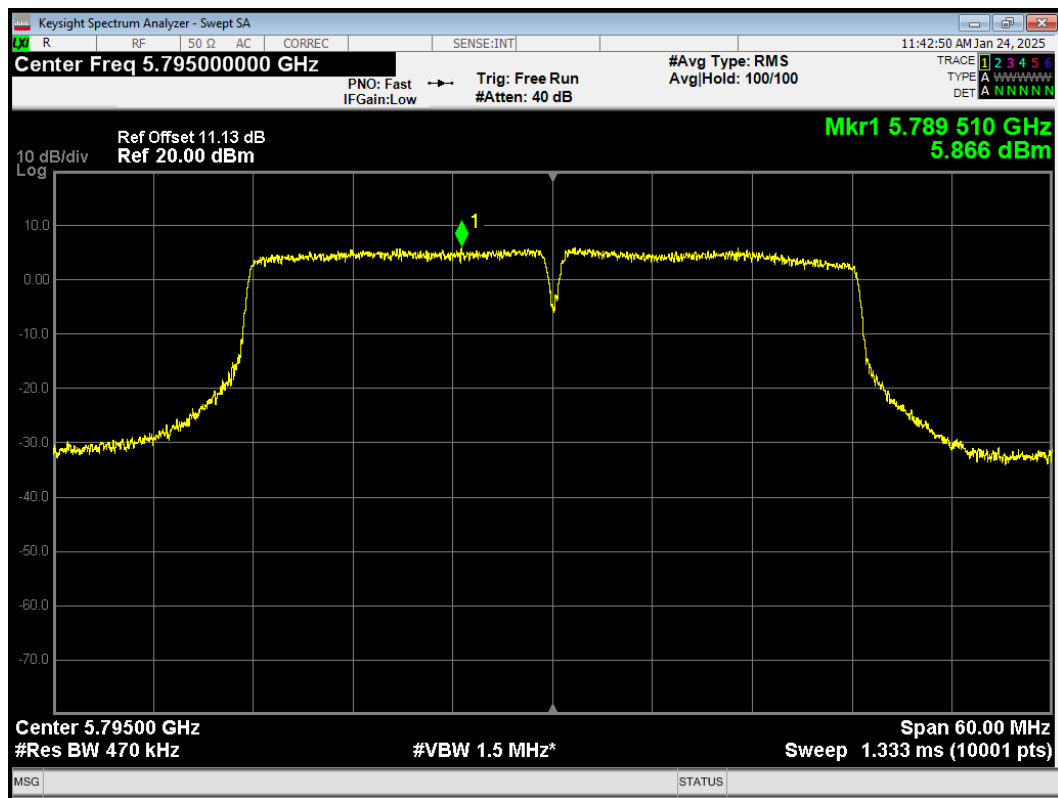
PSD 802.11ac(VHT40) 5755MHz Ant1



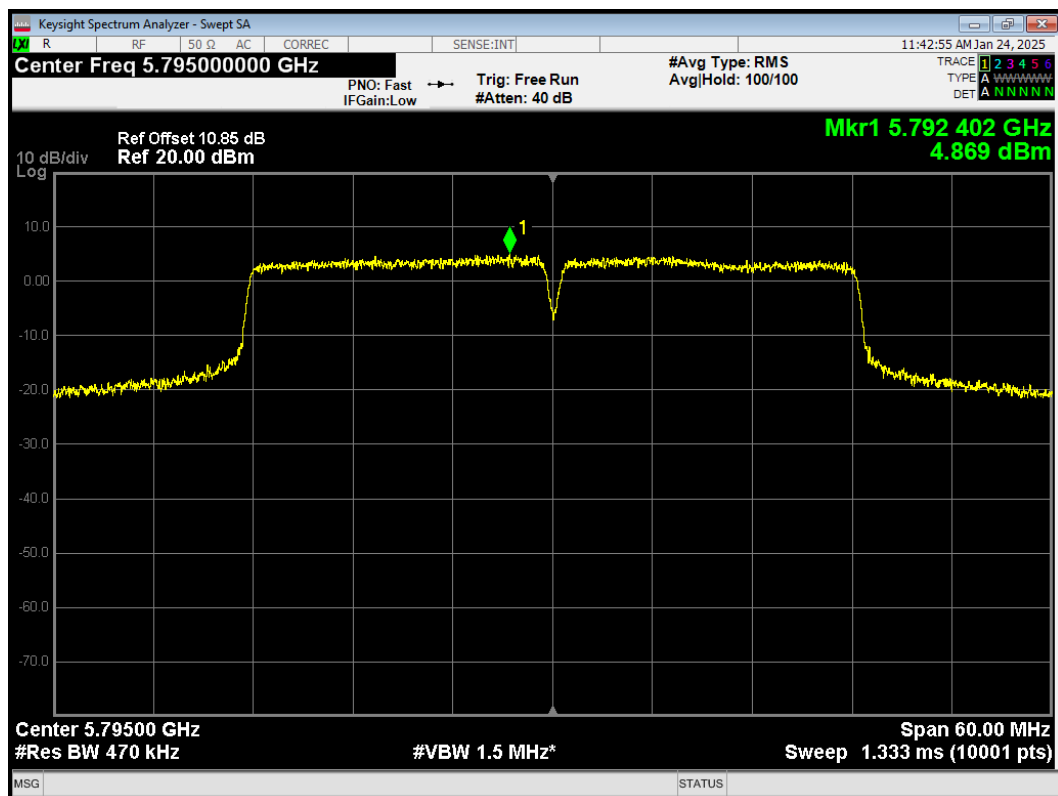
PSD 802.11ac(VHT40) 5755MHz Ant2



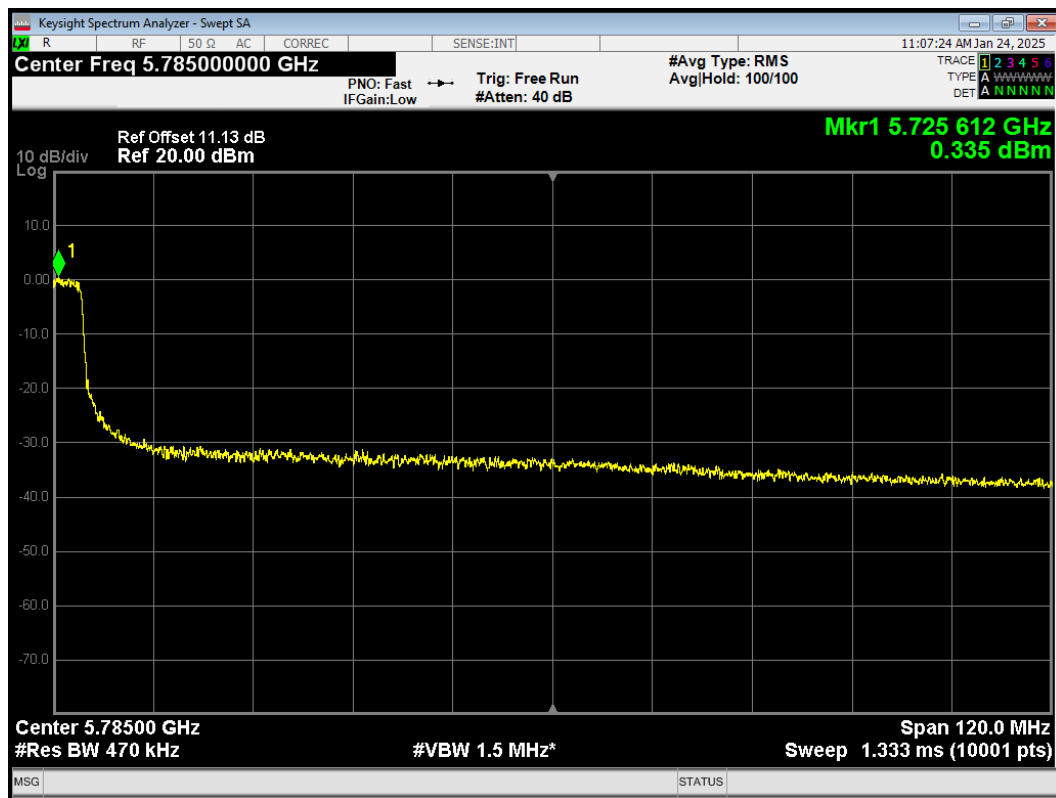
PSD 802.11ac(VHT40) 5795MHz Ant1



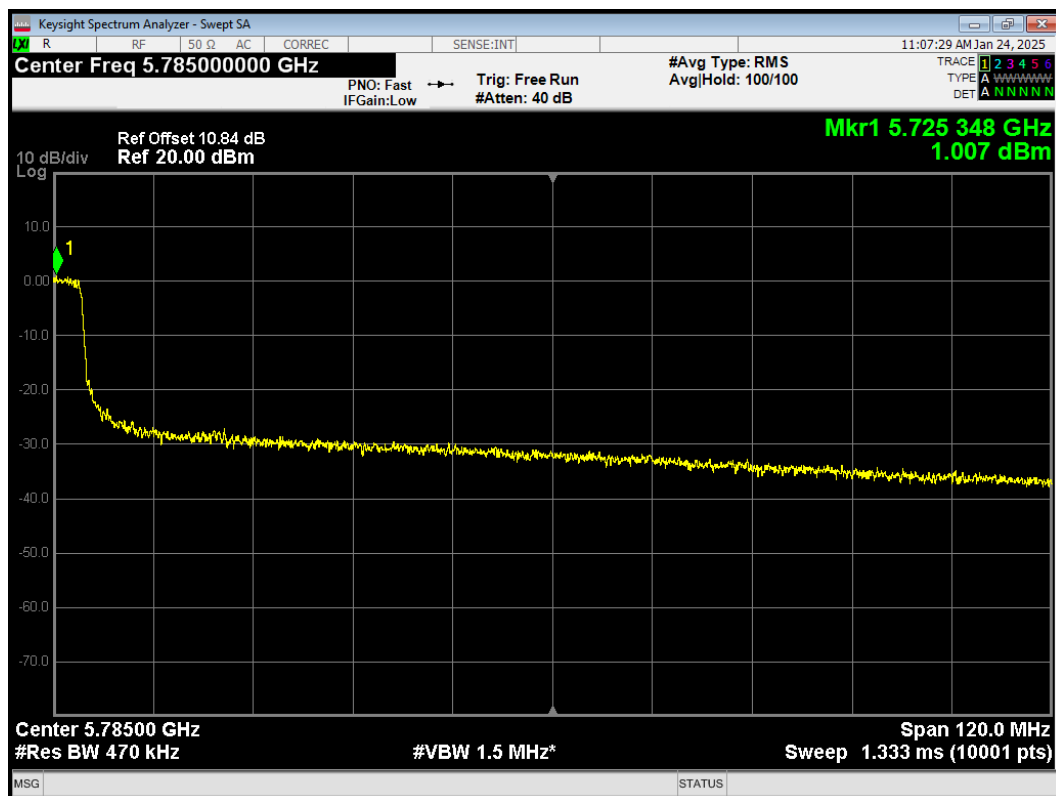
PSD 802.11ac(VHT40) 5795MHz Ant2



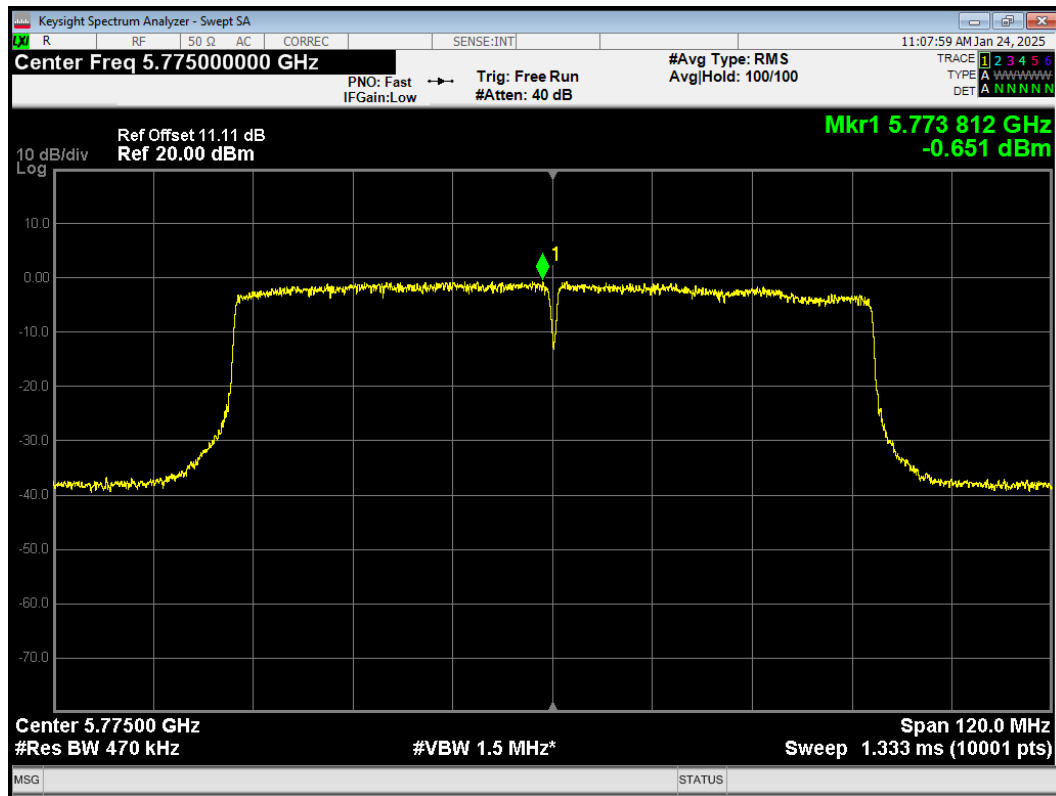
PSD 802.11ac(VHT80) 5690MHz Ant1



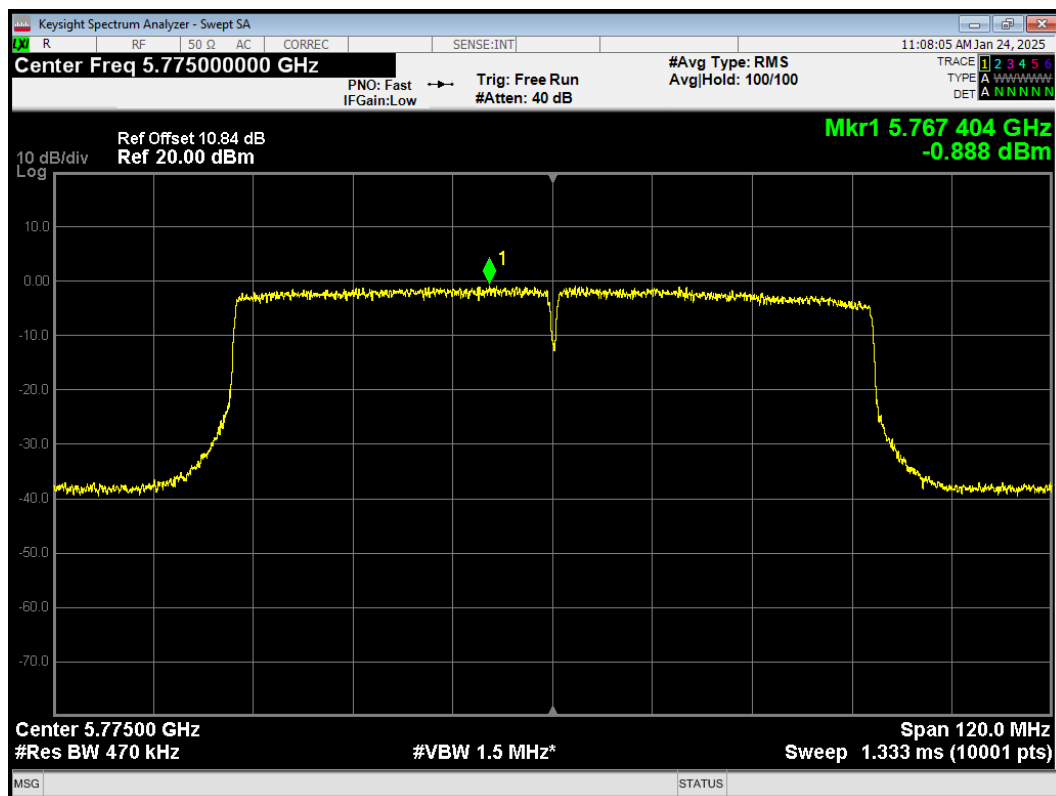
PSD 802.11ac(VHT80) 5690MHz Ant2



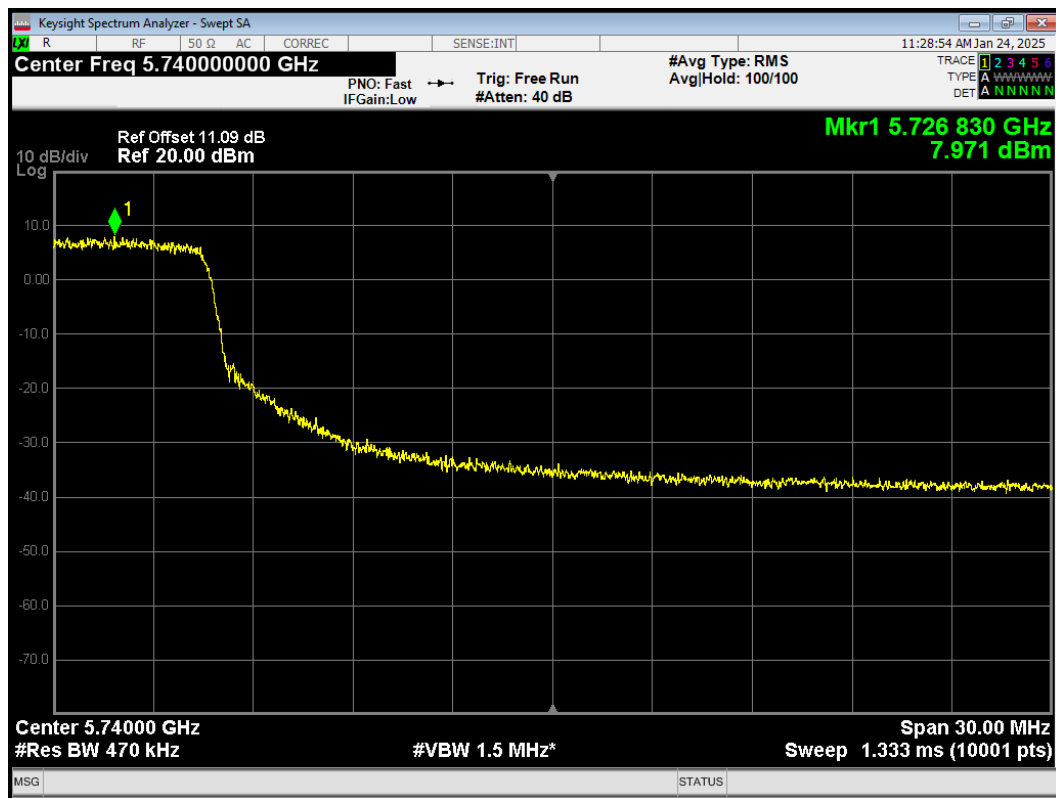
PSD 802.11ac(VHT80) 5775MHz Ant1



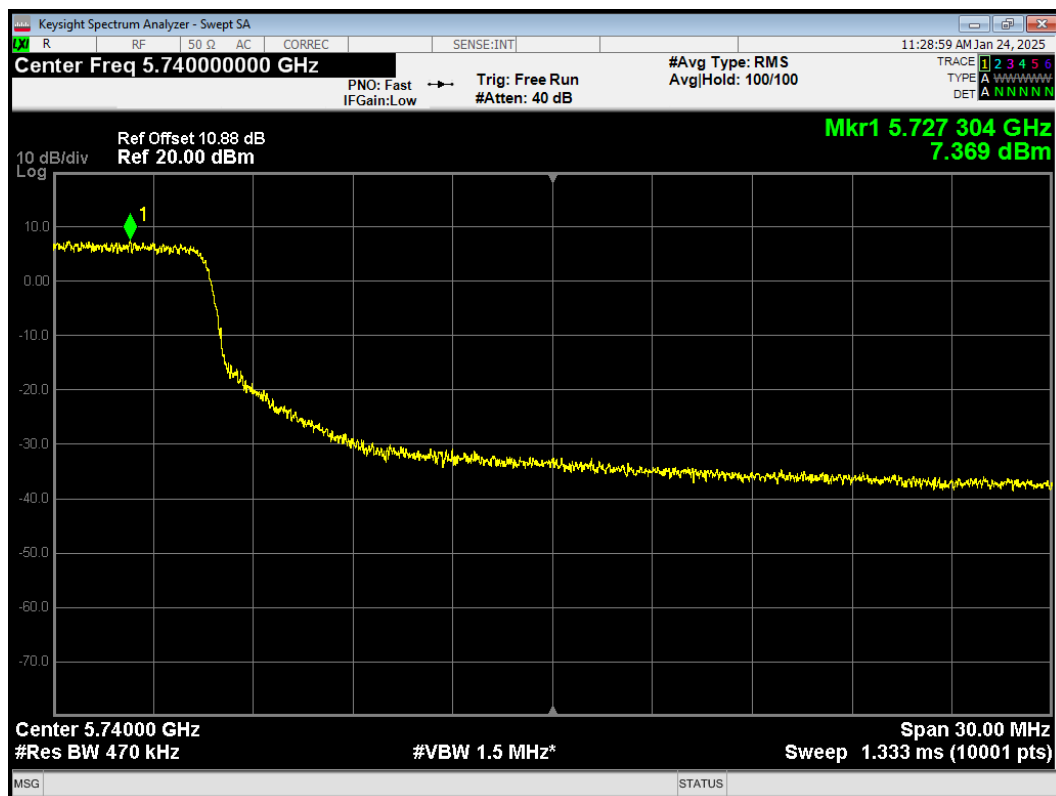
PSD 802.11ac(VHT80) 5775MHz Ant2



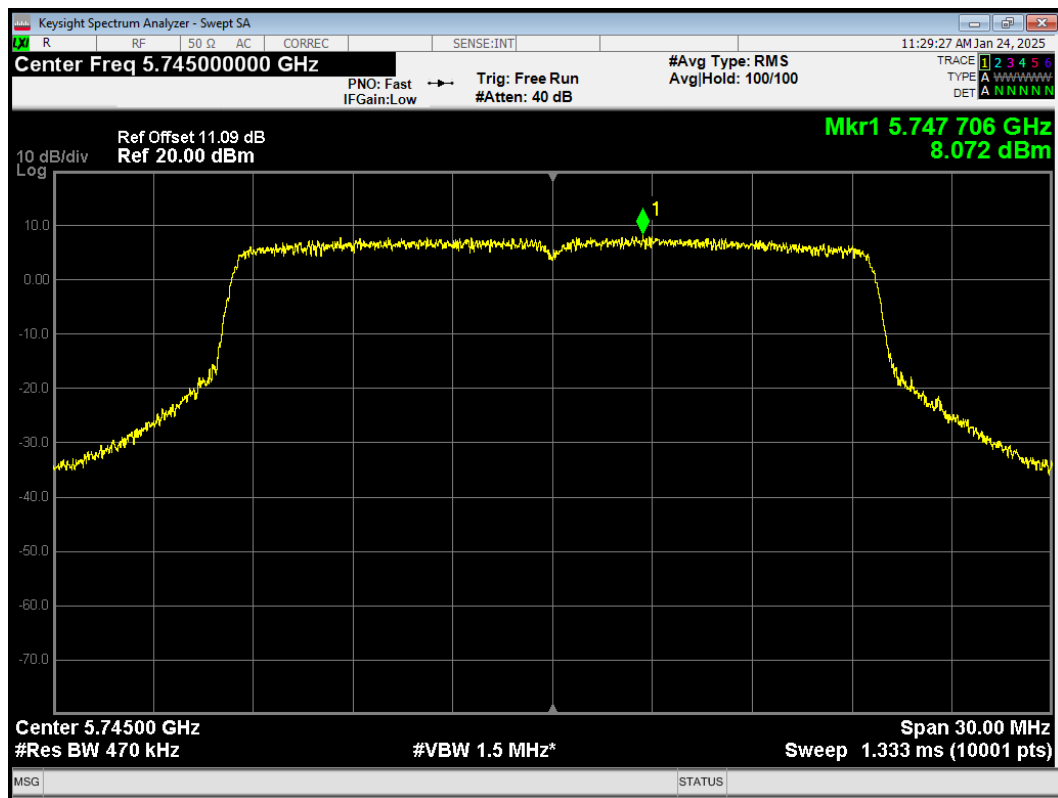
PSD 802.11ax(HE20) 5720MHz Ant1



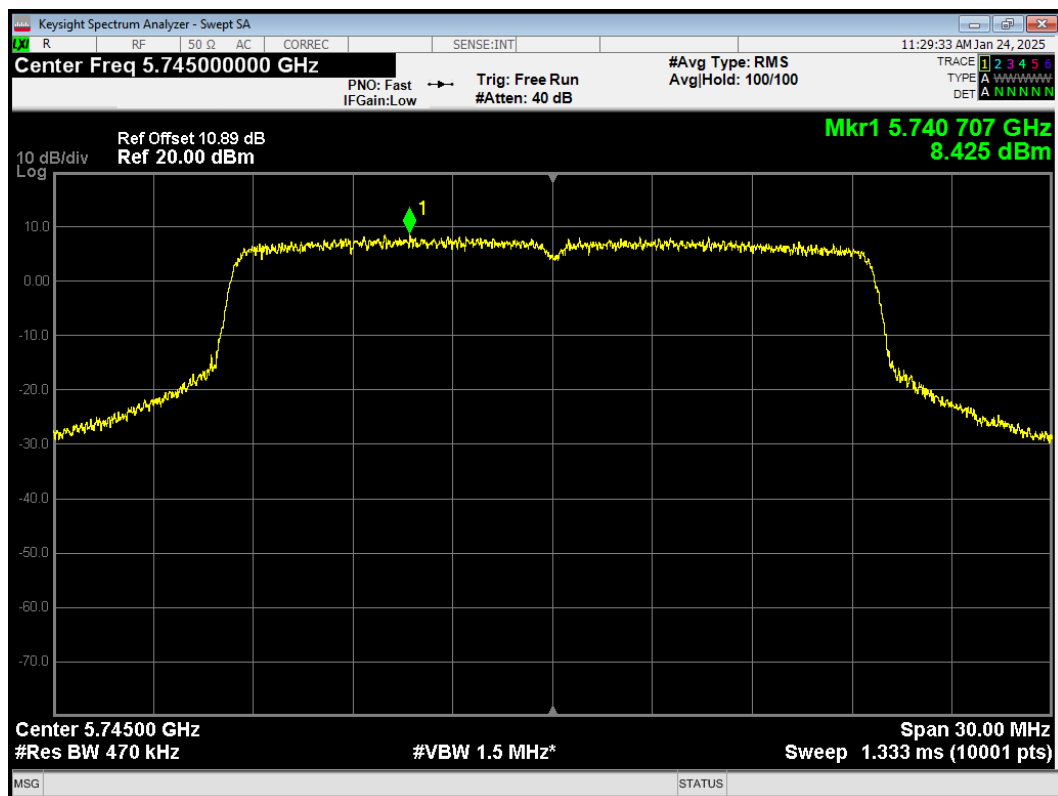
PSD 802.11ax(HE20) 5720MHz Ant2



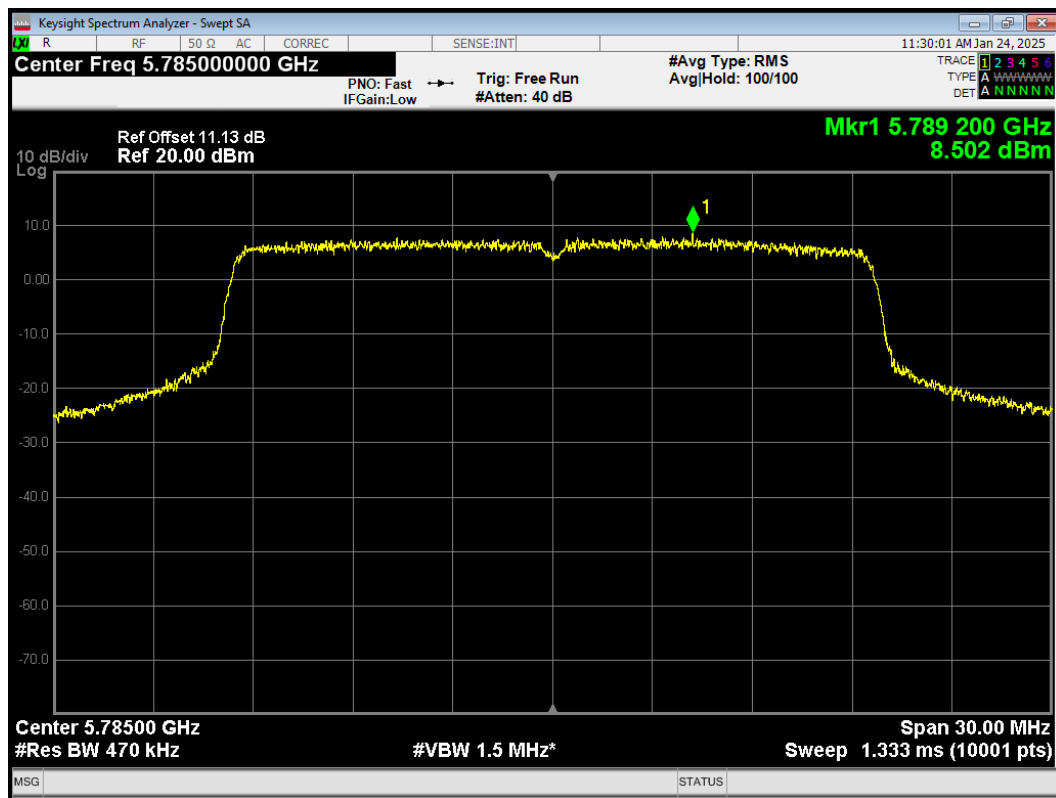
PSD 802.11ax(HE20) 5745MHz Ant1



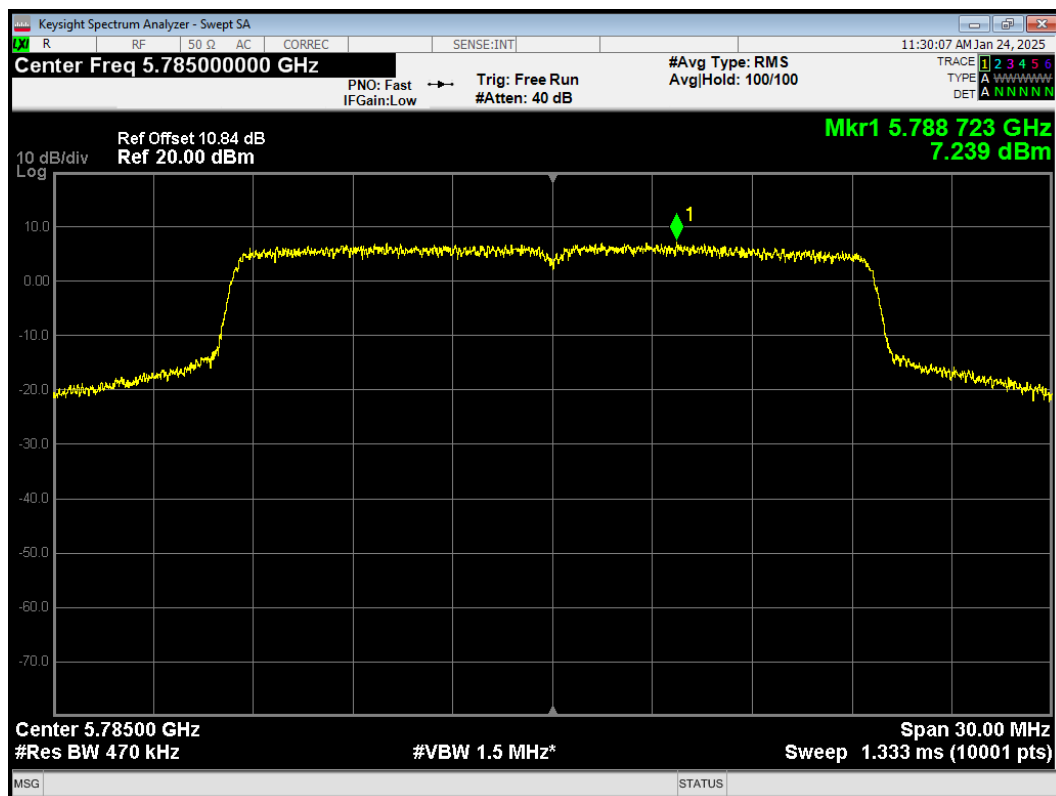
PSD 802.11ax(HE20) 5745MHz Ant2



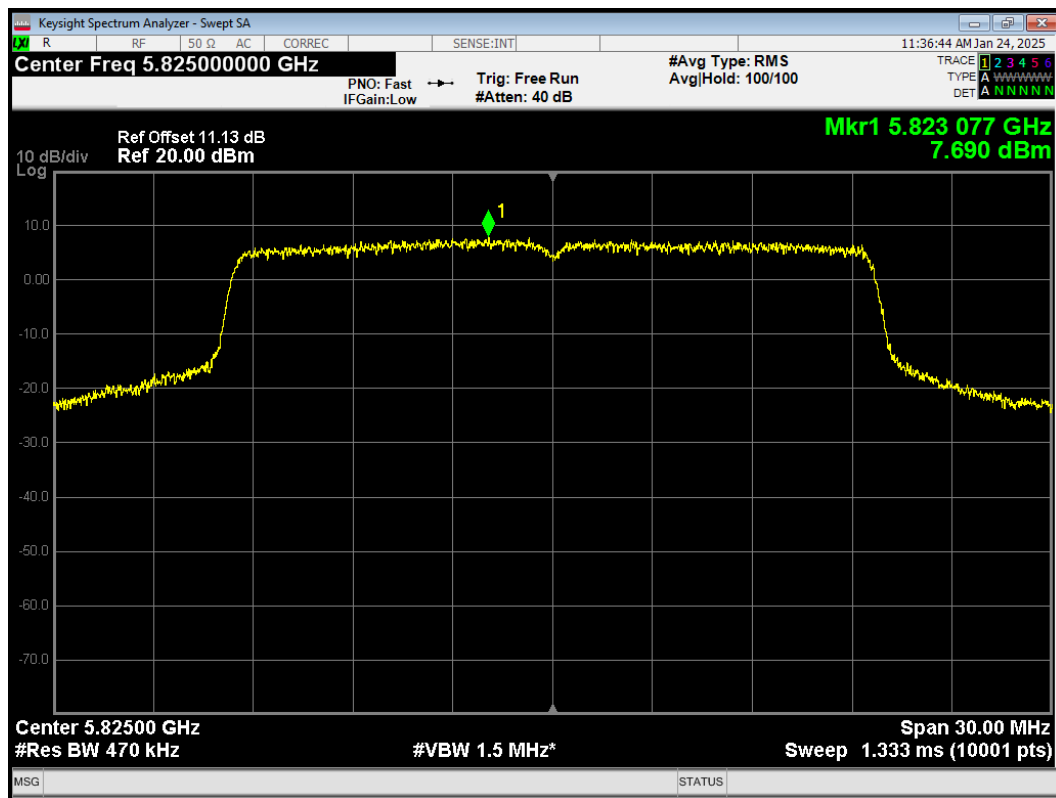
PSD 802.11ax(HE20) 5785MHz Ant1



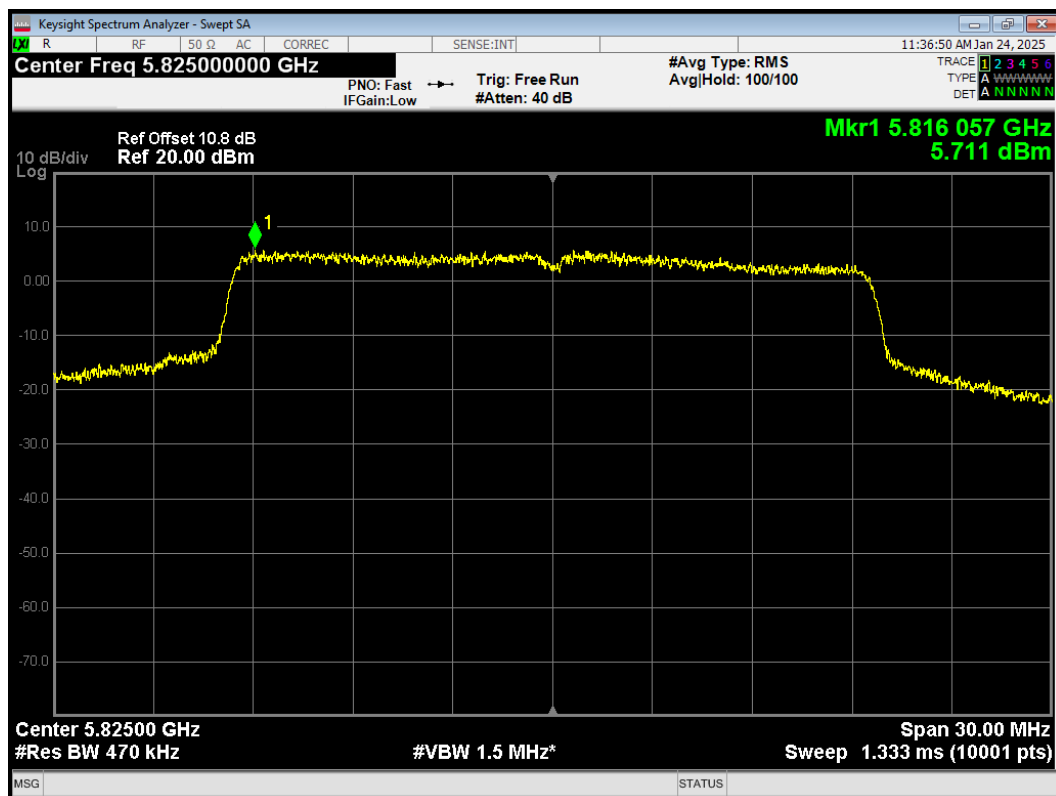
PSD 802.11ax(HE20) 5785MHz Ant2



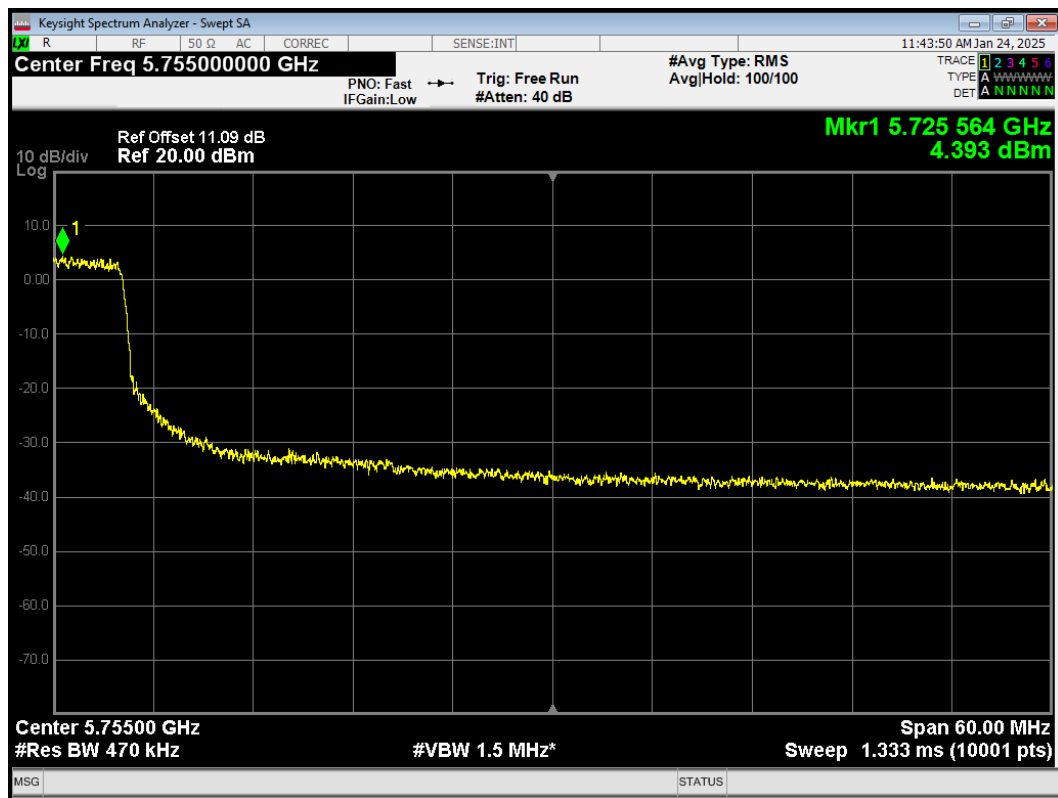
PSD 802.11ax(HE20) 5825MHz Ant1



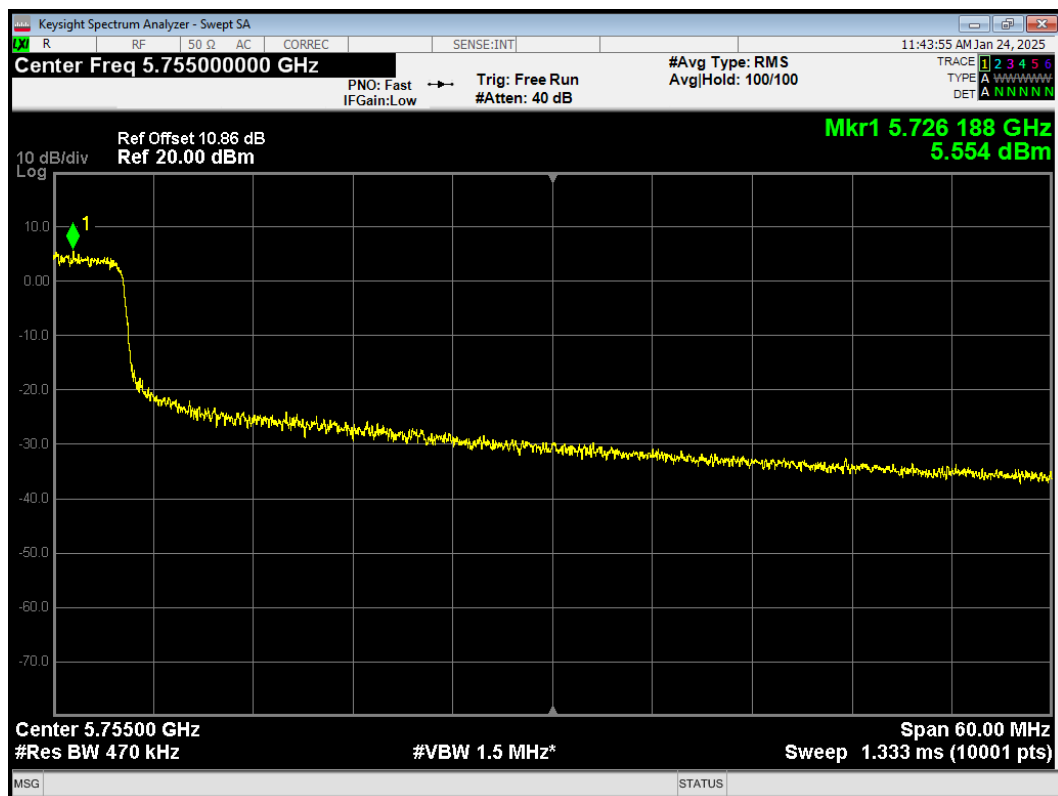
PSD 802.11ax(HE20) 5825MHz Ant2



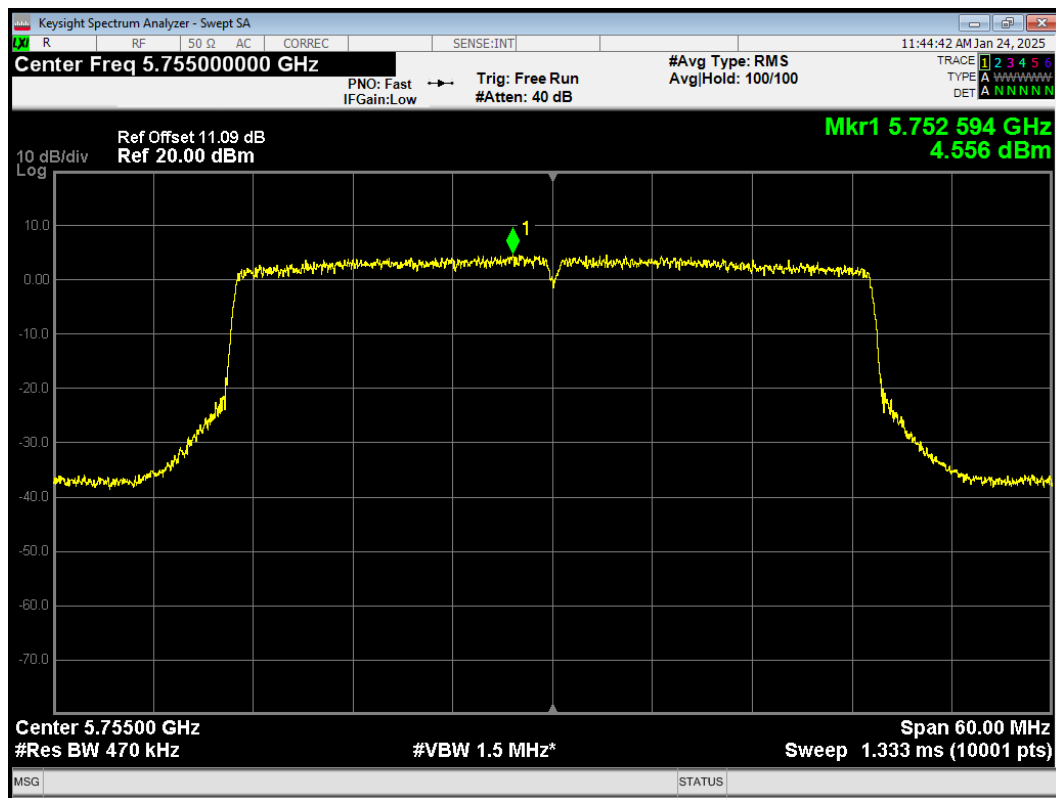
PSD 802.11ax(HE40) 5710MHz Ant1



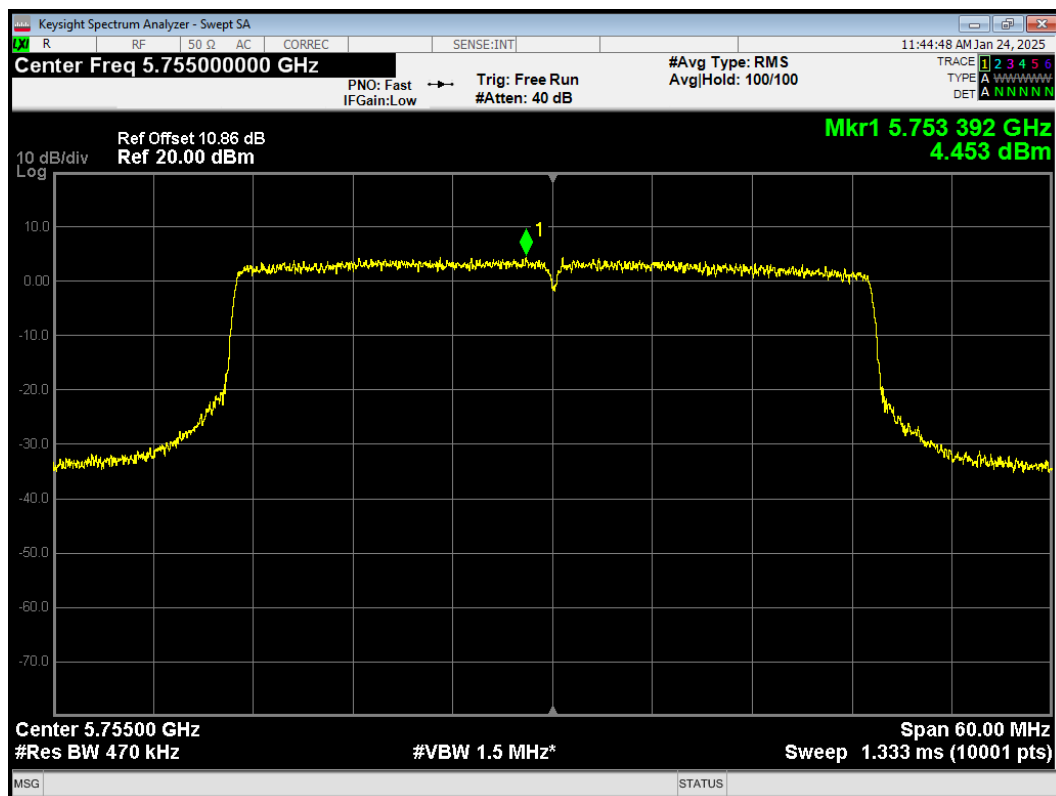
PSD 802.11ax(HE40) 5710MHz Ant2



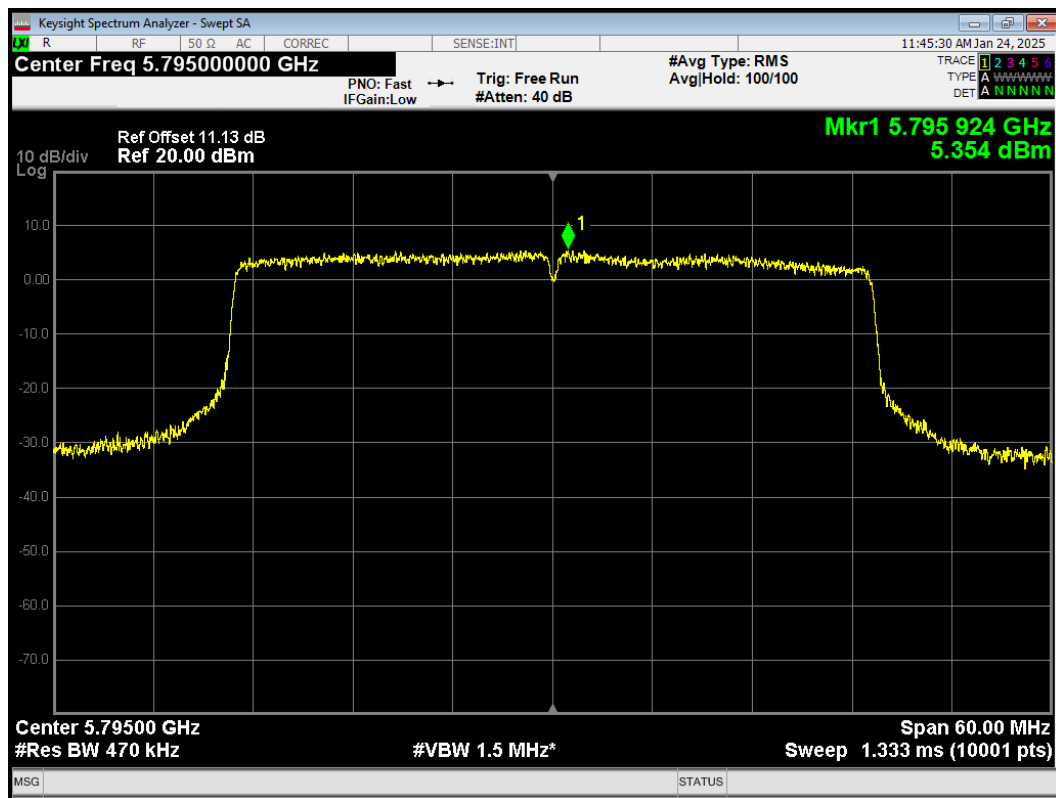
PSD 802.11ax(HE40) 5755MHz Ant1



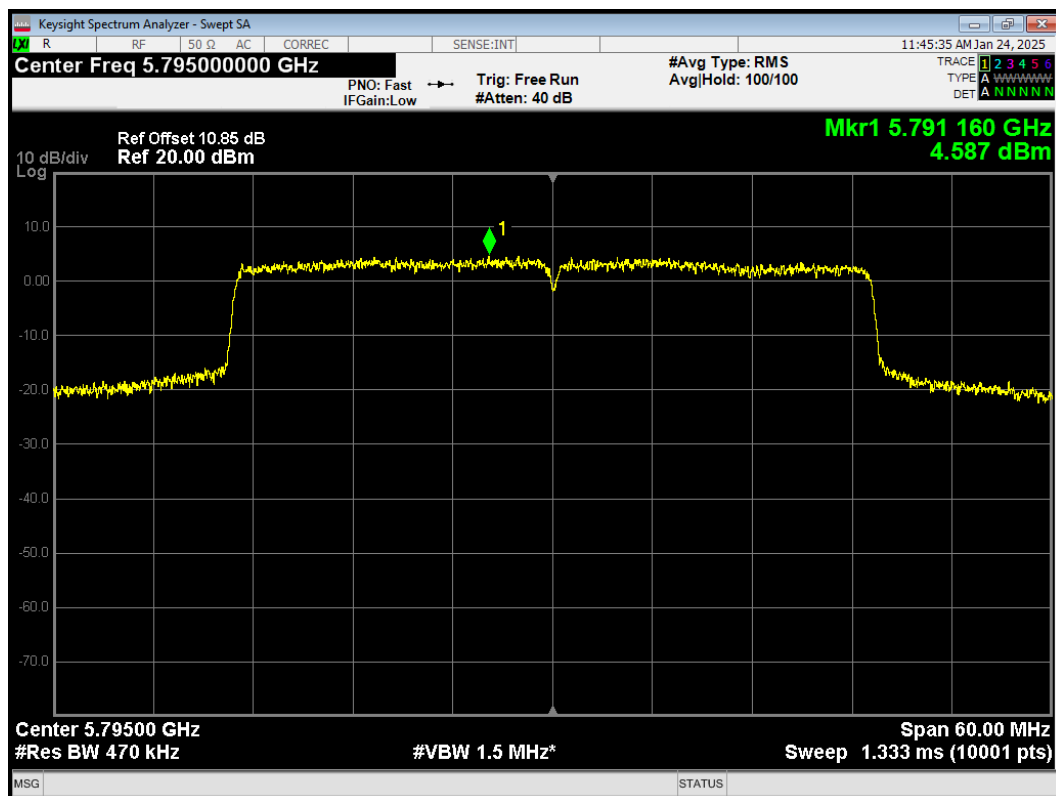
PSD 802.11ax(HE40) 5755MHz Ant2



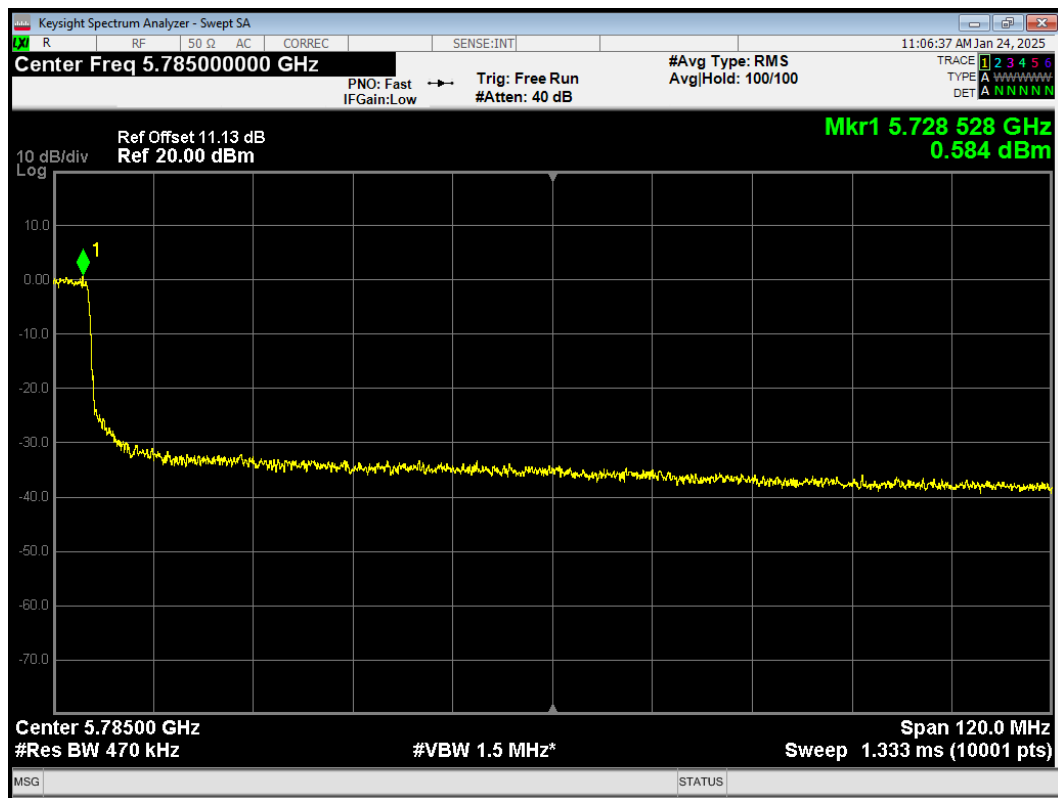
PSD 802.11ax(HE40) 5795MHz Ant1



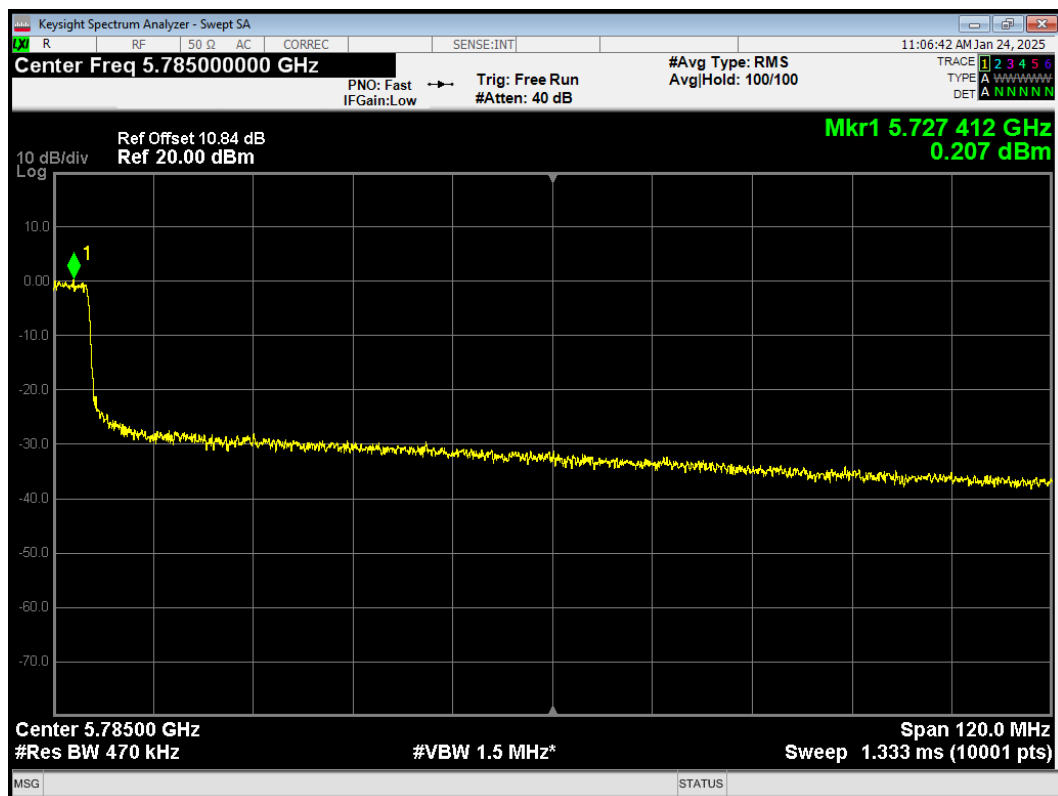
PSD 802.11ax(HE40) 5795MHz Ant2



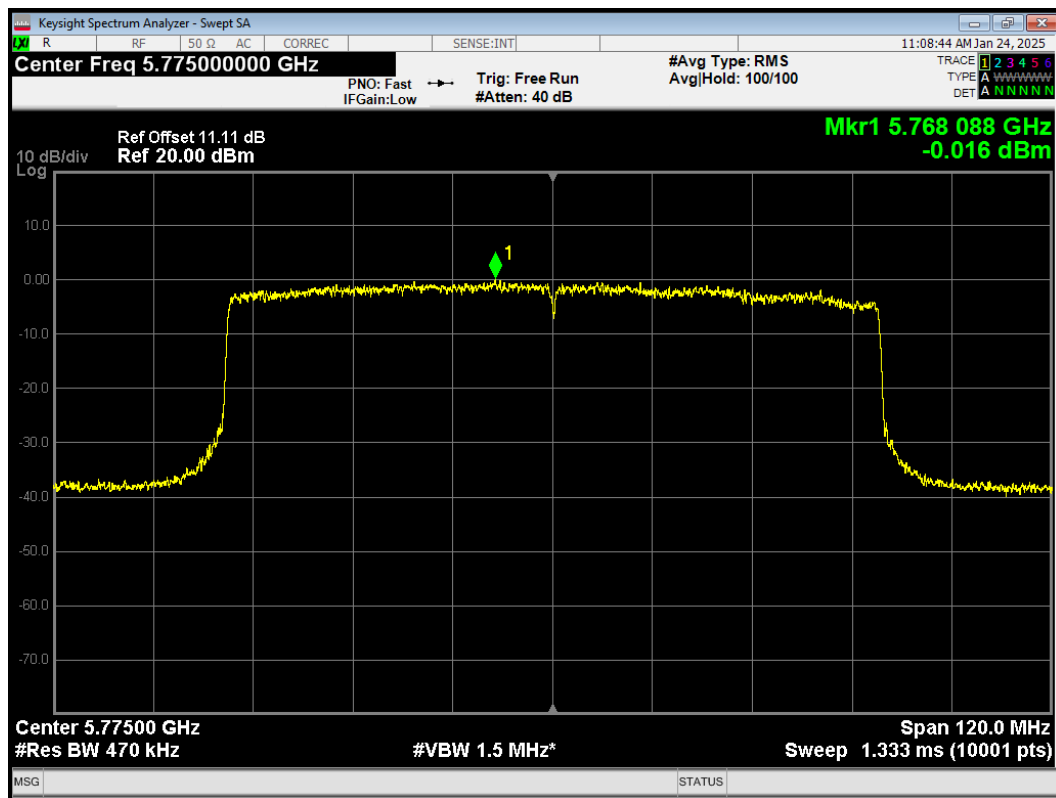
PSD 802.11ax(HE80) 5690MHz Ant1



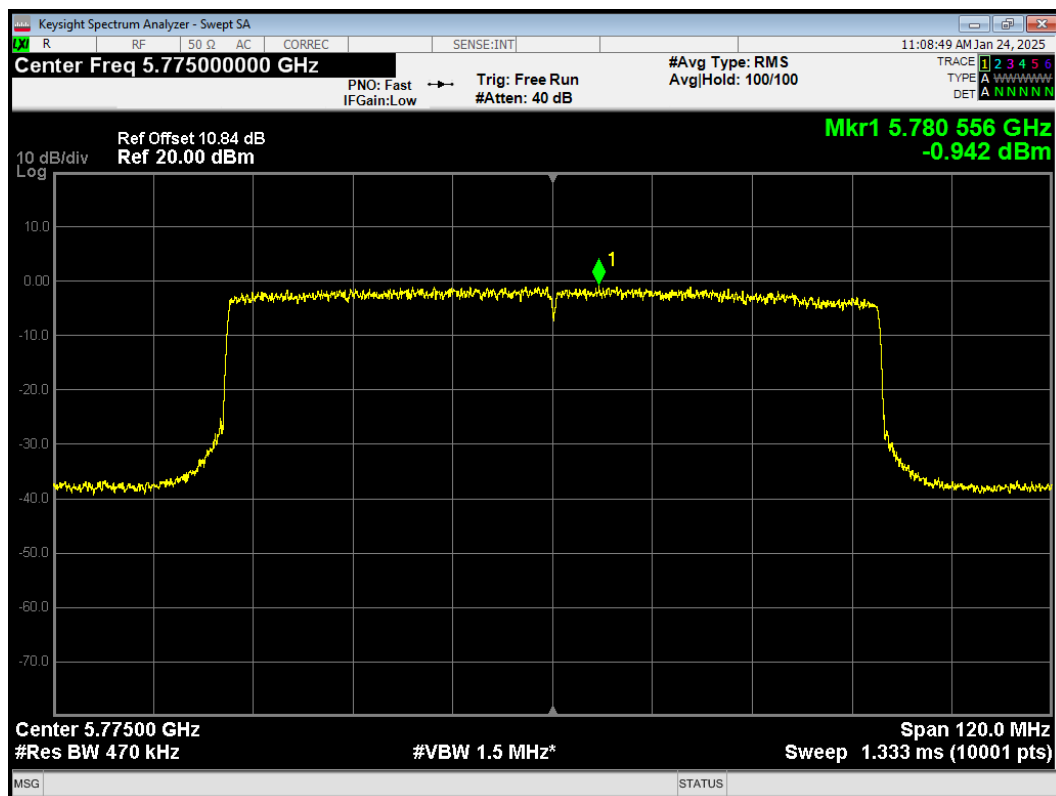
PSD 802.11ax(HE80) 5690MHz Ant2



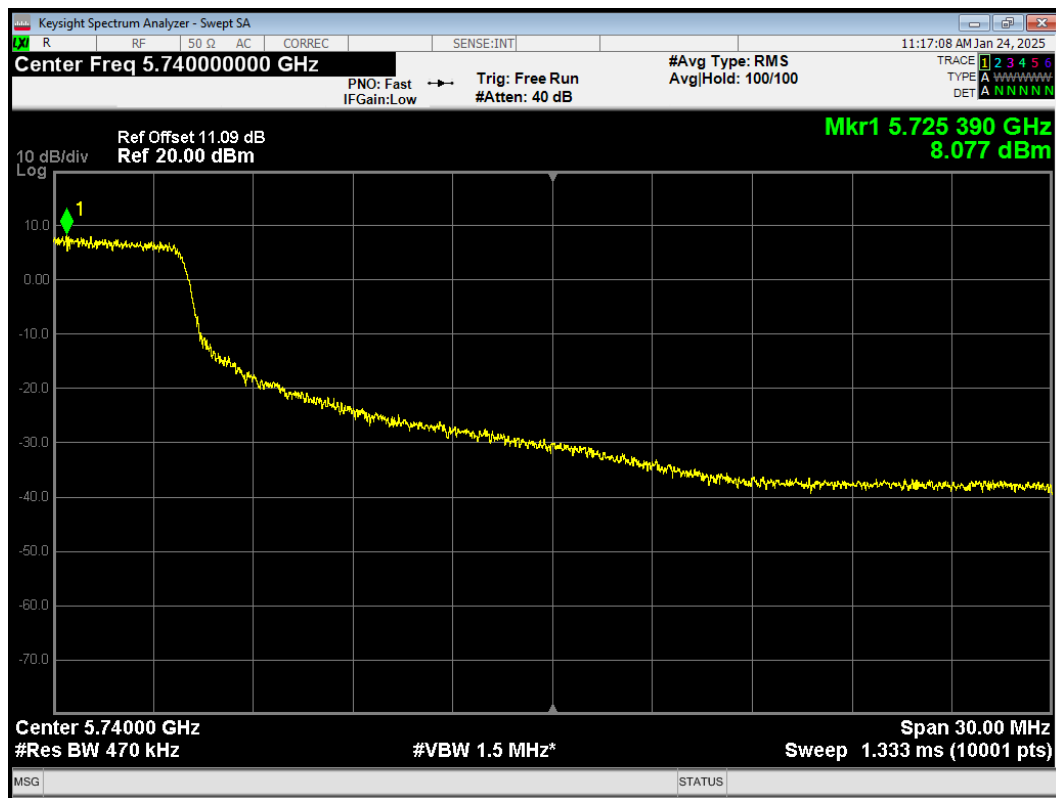
PSD 802.11ax(HE80) 5775MHz Ant1



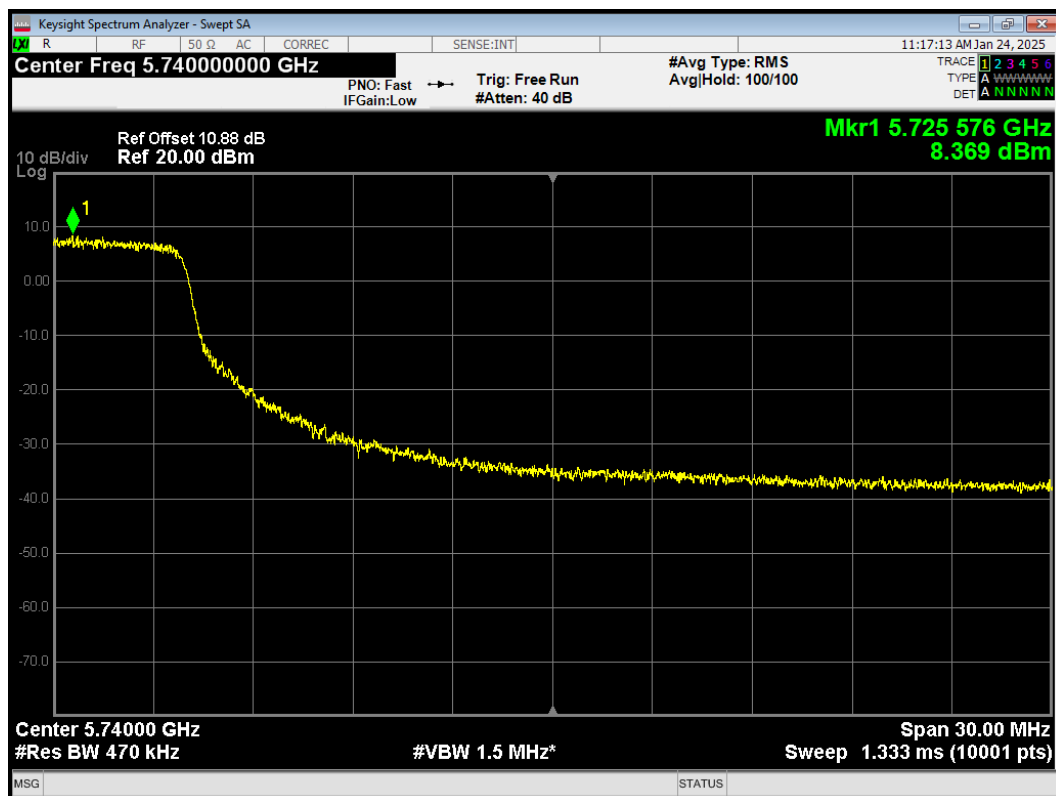
PSD 802.11ax(HE80) 5775MHz Ant2



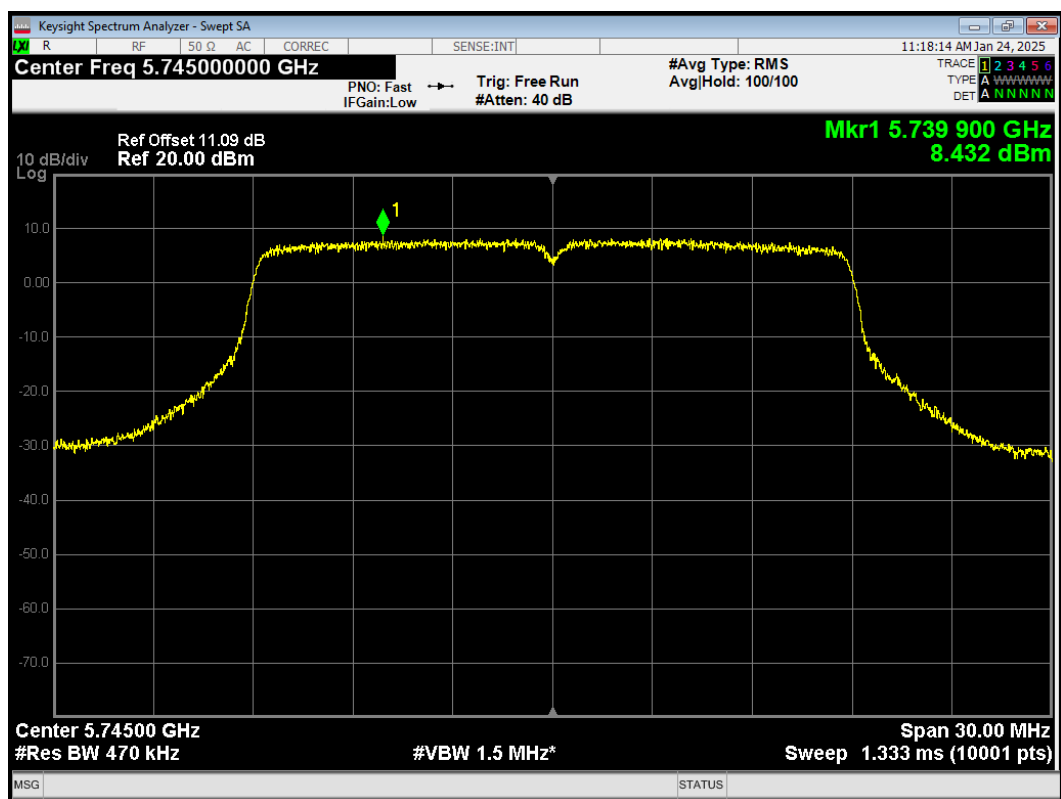
PSD 802.11n(HT20) 5720MHz Ant1



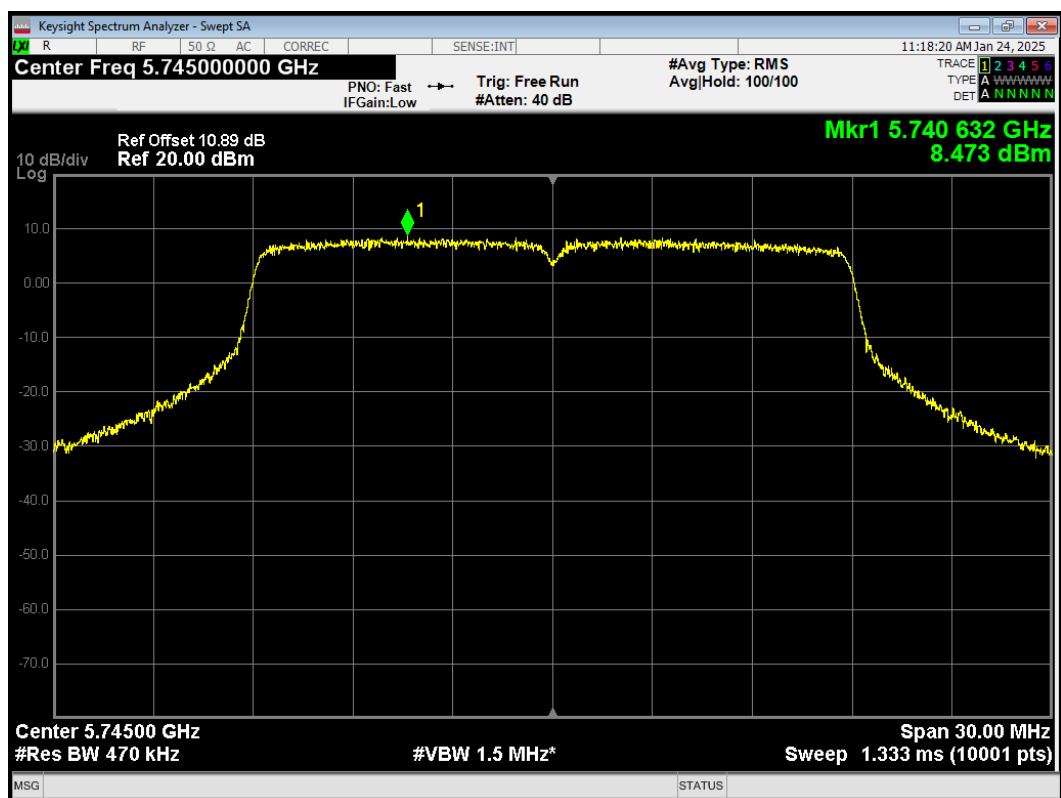
PSD 802.11n(HT20) 5720MHz Ant2



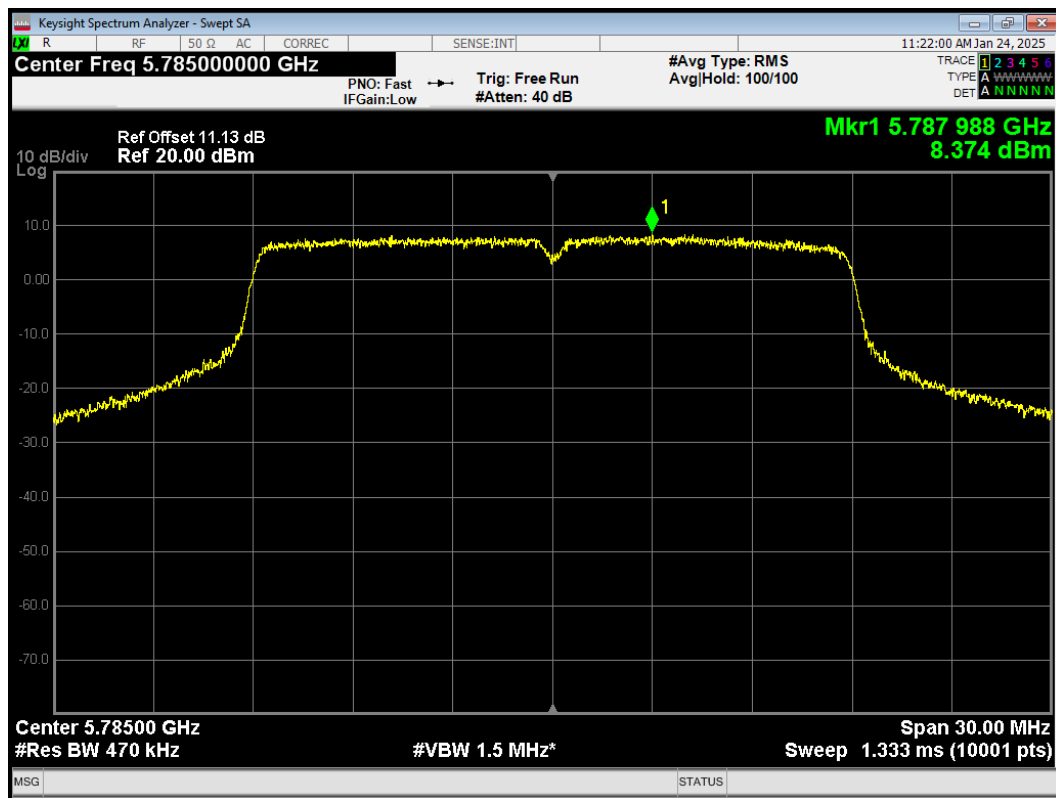
PSD 802.11n(HT20) 5745MHz Ant1



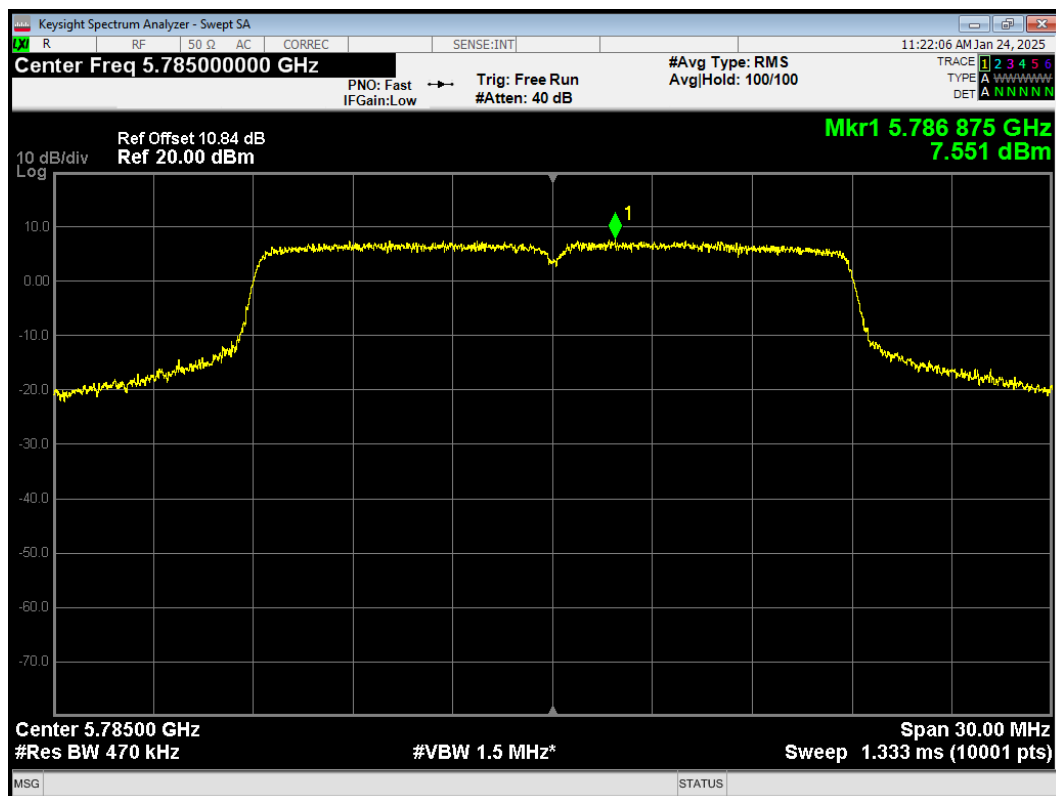
PSD 802.11n(HT20) 5745MHz Ant2



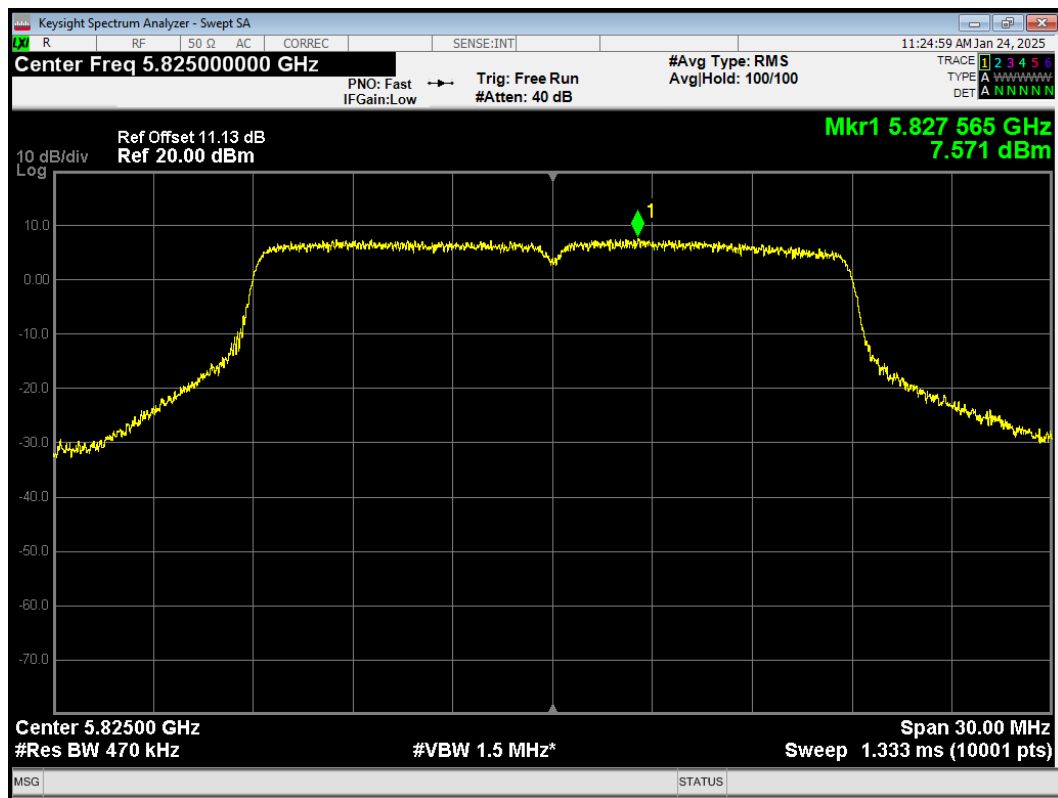
PSD 802.11n(HT20) 5785MHz Ant1



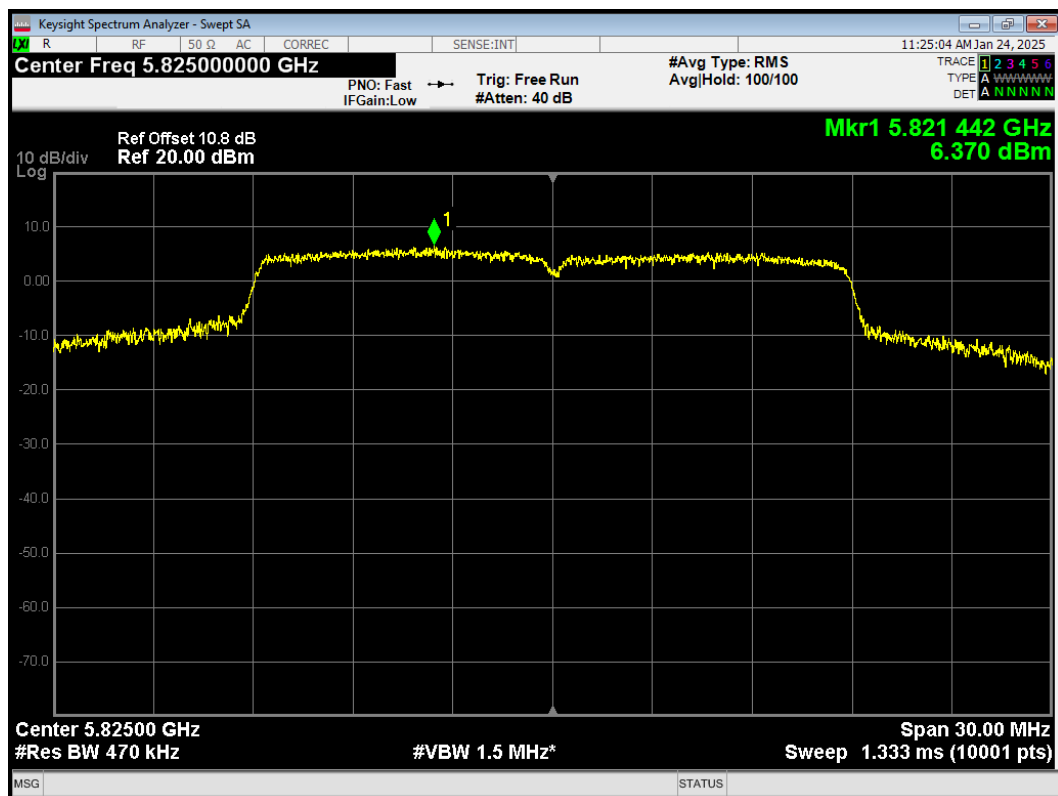
PSD 802.11n(HT20) 5785MHz Ant2



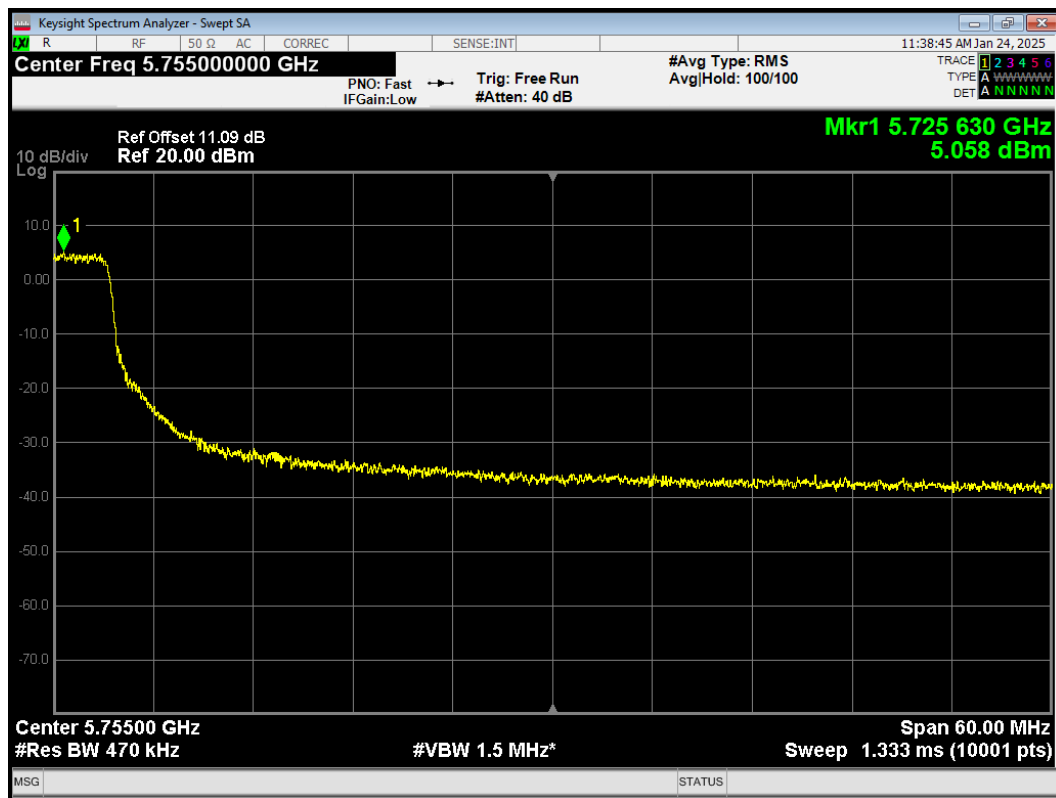
PSD 802.11n(HT20) 5825MHz Ant1



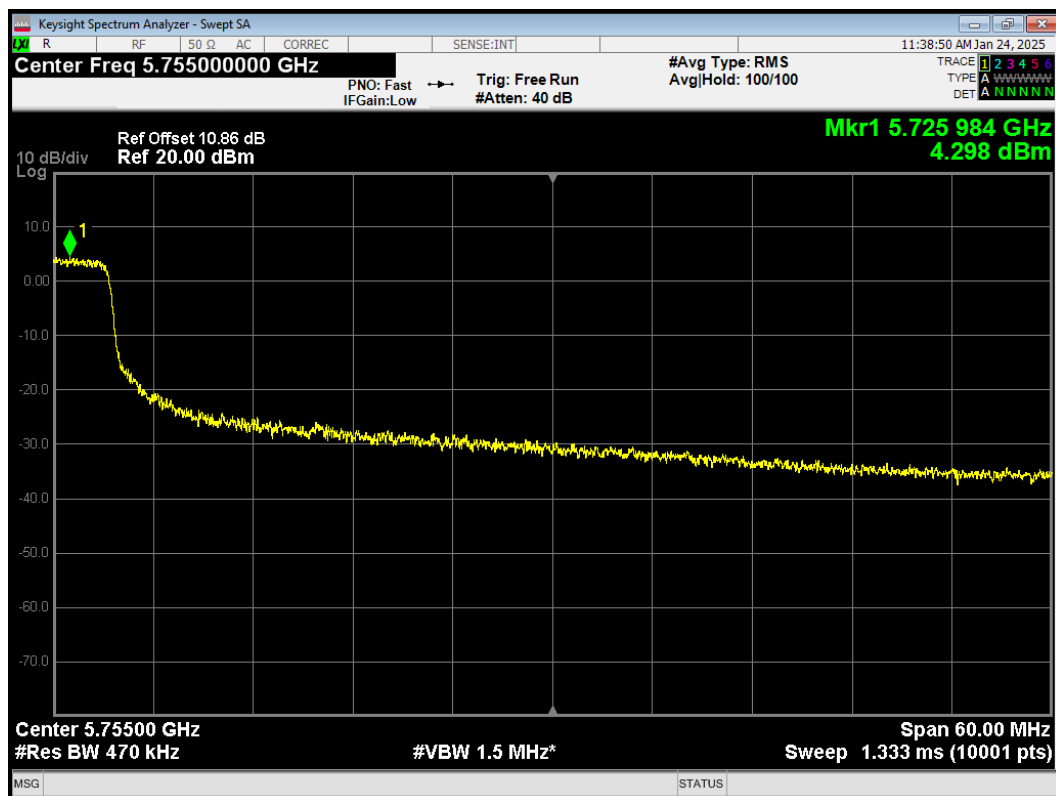
PSD 802.11n(HT20) 5825MHz Ant2



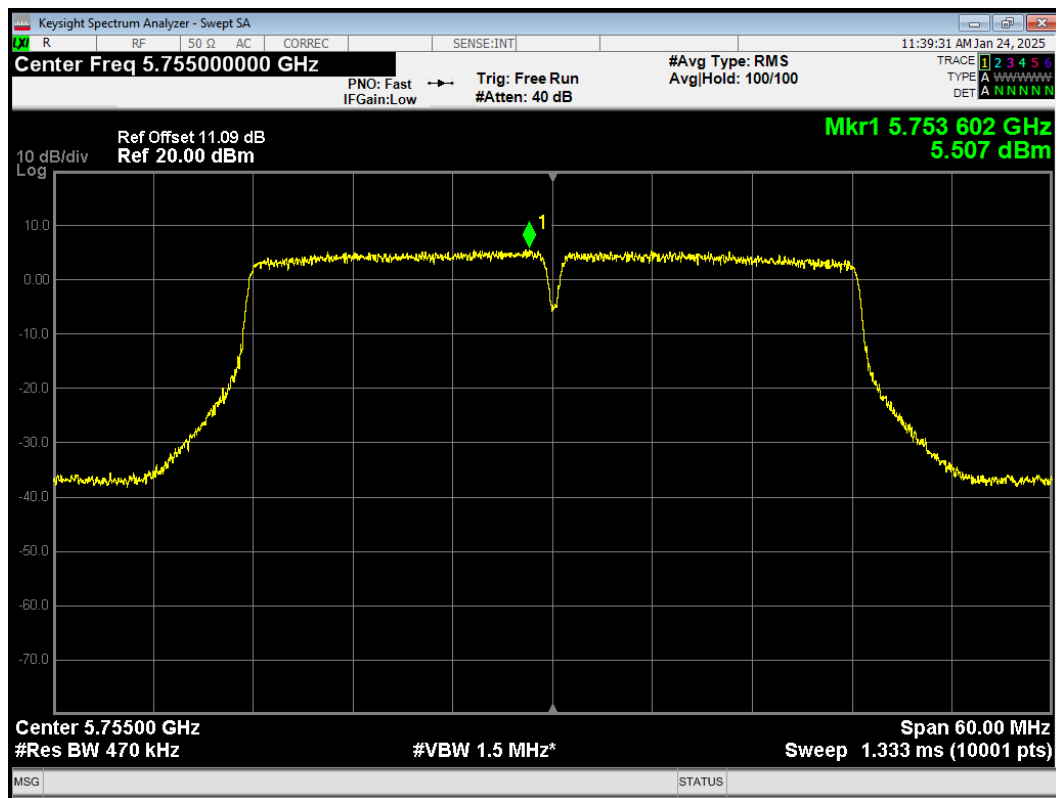
PSD 802.11n(HT40) 5710MHz Ant1



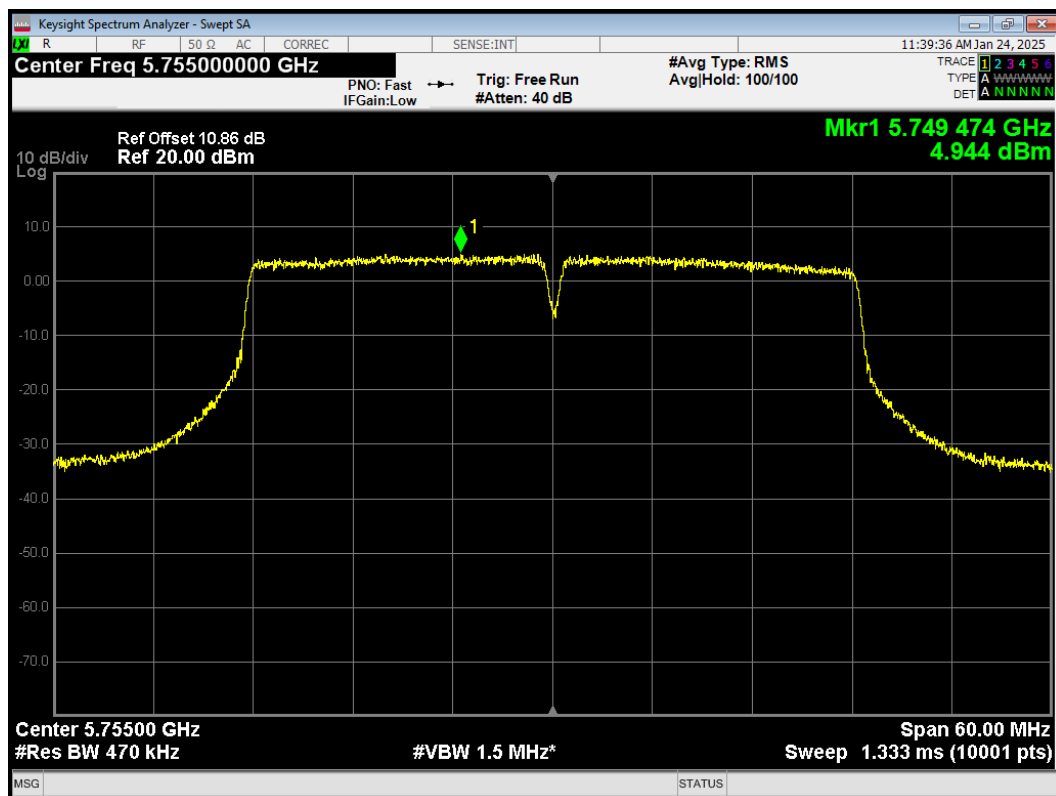
PSD 802.11n(HT40) 5710MHz Ant2



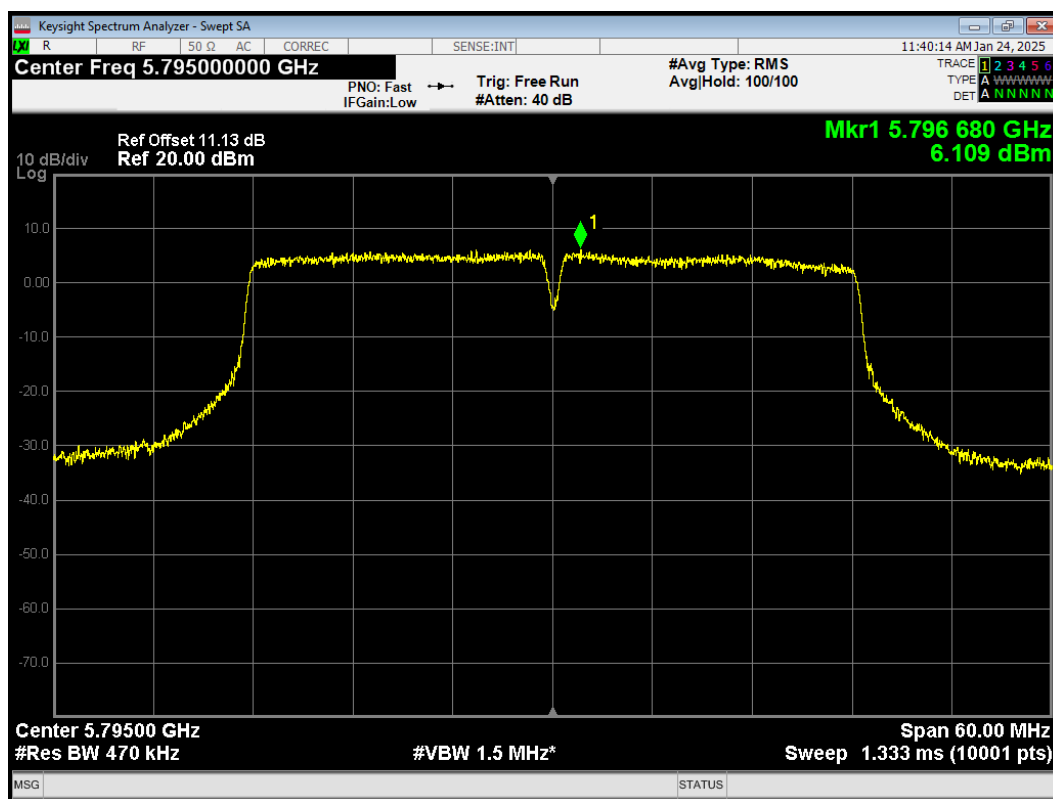
PSD 802.11n(HT40) 5755MHz Ant1



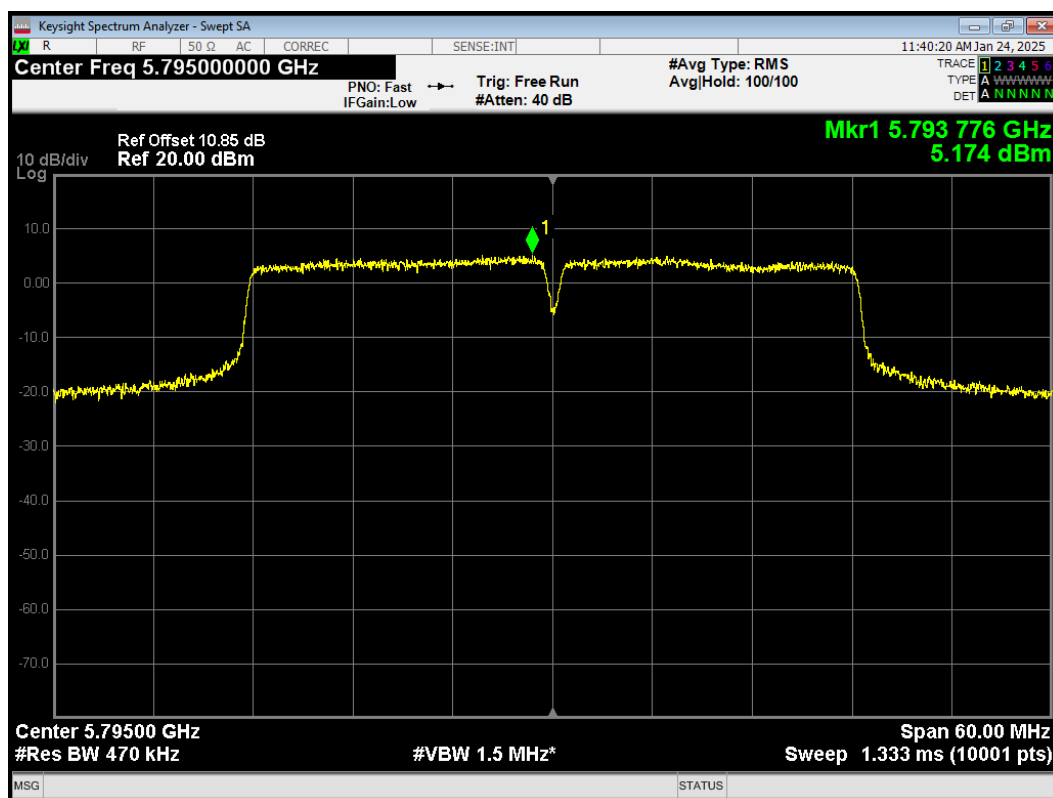
PSD 802.11n(HT40) 5755MHz Ant2



PSD 802.11n(HT40) 5795MHz Ant1



PSD 802.11n(HT40) 5795MHz Ant2



5.5. Unwanted Emission

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

The test set-up was made in accordance to the general provisions of ANSI C63.10. The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration.

Sweep the whole frequency band range from 9kHz to the 10th harmonic of the carrier, and the emissions less than 20 dB below the permissible value are reported.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

9kHz~150 kHz

RBW=200Hz, VBW=1kHz/ Sweep=AUTO

150 kHz~30MHz

RBW=9kHz, VBW=30kHz,/ Sweep=AUTO

Below 1GHz

RBW=100kHz / VBW=300kHz / Sweep=AUTO

a) Peak emission levels are measured by setting the instrument as follows:

Above 1GHz

PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO

b) Average emission levels are measured by setting the instrument as follows:

Above 1GHz

AVERAGE: RBW=1MHz / VBW=3MHz / Sweep=AUTO

c) Detector: The measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)

e) Sweep time = auto.

f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and

OFF with the transmit cycle, at least 100 traces shall be averaged.)

g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is $[10 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.

2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is $[20 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.

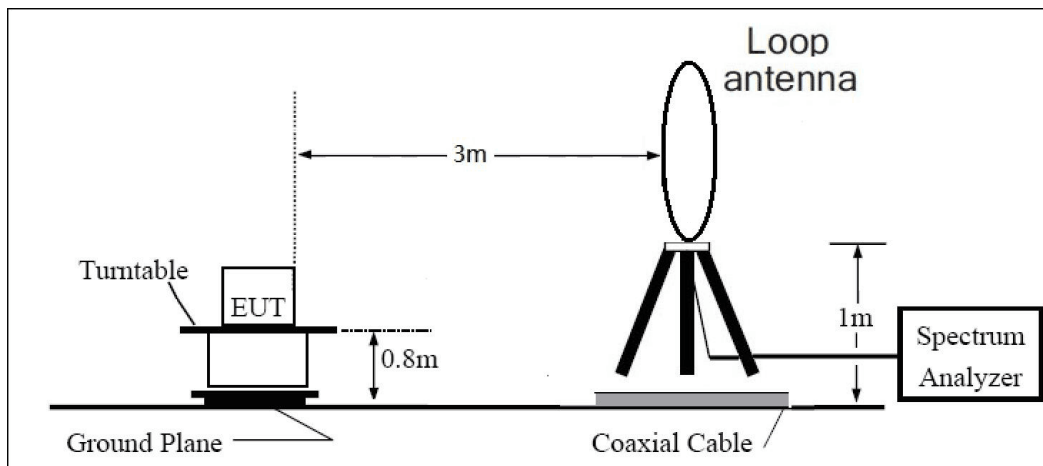
Reduce the video bandwidth until no significant variations in the displayed signal are observed in subsequent traces, provided the video bandwidth is no less than 1 Hz. For regulatory requirements that specify averaging only over the transmit duration (e.g., digital transmission system [DTS] and Unlicensed National Information Infrastructure [U-NII]), the video bandwidth shall be greater than $[1 / (\text{minimum transmitter on time})]$ and no less than 1 Hz.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the loop antenna is vertical, others antenna are vertical and horizontal.

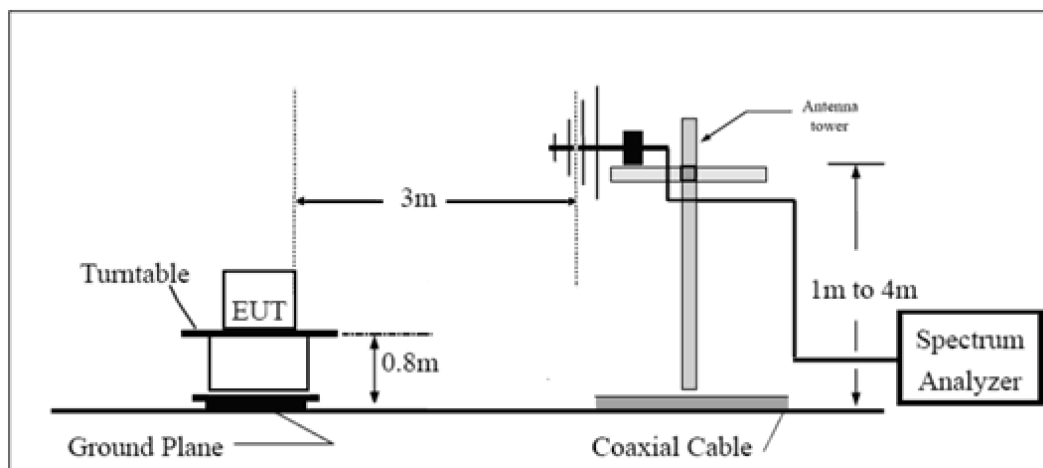
The test is in transmitting mode.

Test setup

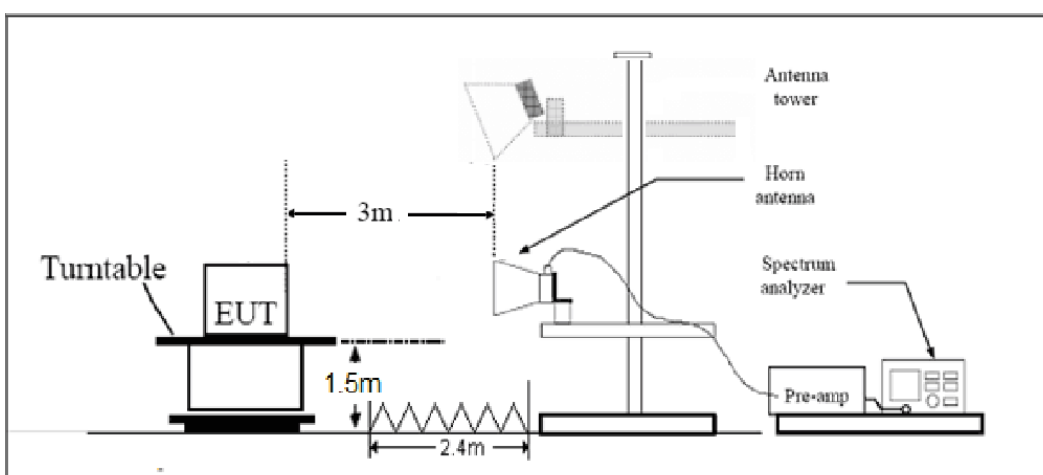
9kHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Limits

- (1) For transmitters operating in the 5725-5850 MHz 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.
- (2) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).
- (3) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).
- (4) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).

Note: the following formula is used to convert the EIRP to field strength

§1、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{meters}]) + 104.77$, where E = field strength and

d = distance at which field strength limit is specified in the rules;

§2、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] + 95.2$, for d = 3 meters

- (5) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table.

Frequency of emission (MHz)	Field strength(μV/m)	Field strength(dBμV/m)
0.009–0.490	2400/F(kHz)	/
0.490–1.705	24000/F(kHz)	/
1.705–30.0	30	/
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

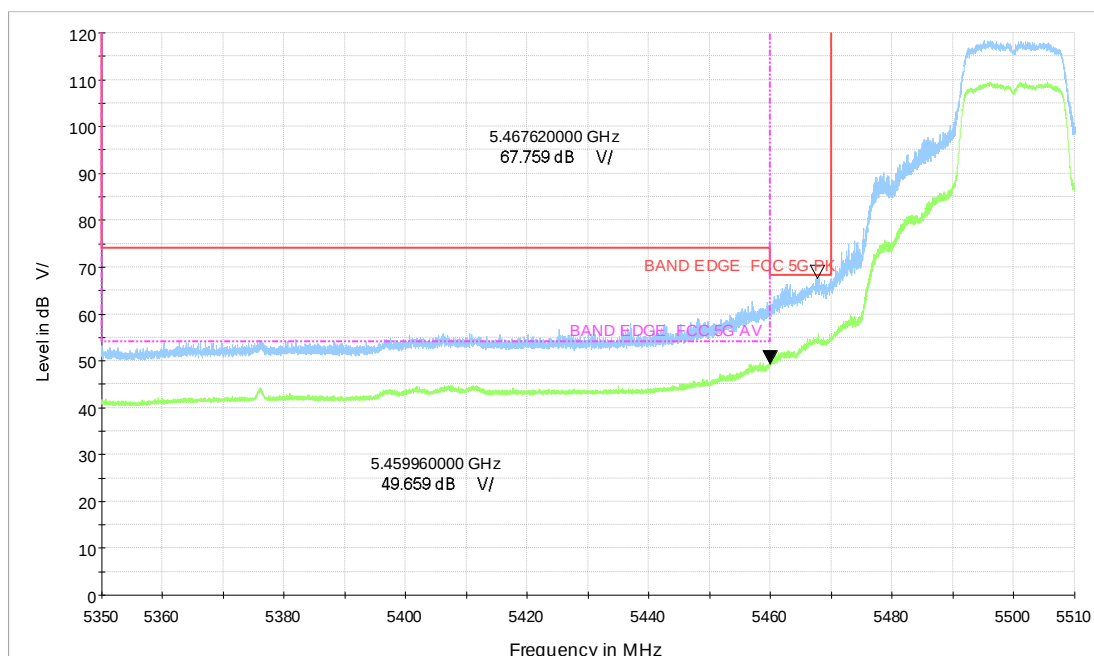
Frequency	Uncertainty
9kHz-30MHz	3.55 dB
30MHz-200MHz	4.17 dB
200MHz-1GHz	4.84 dB
1-18GHz	4.35 dB
18-26.5GHz	5.90 dB
26.5GHz~40GHz	5.92 dB

Test Results:

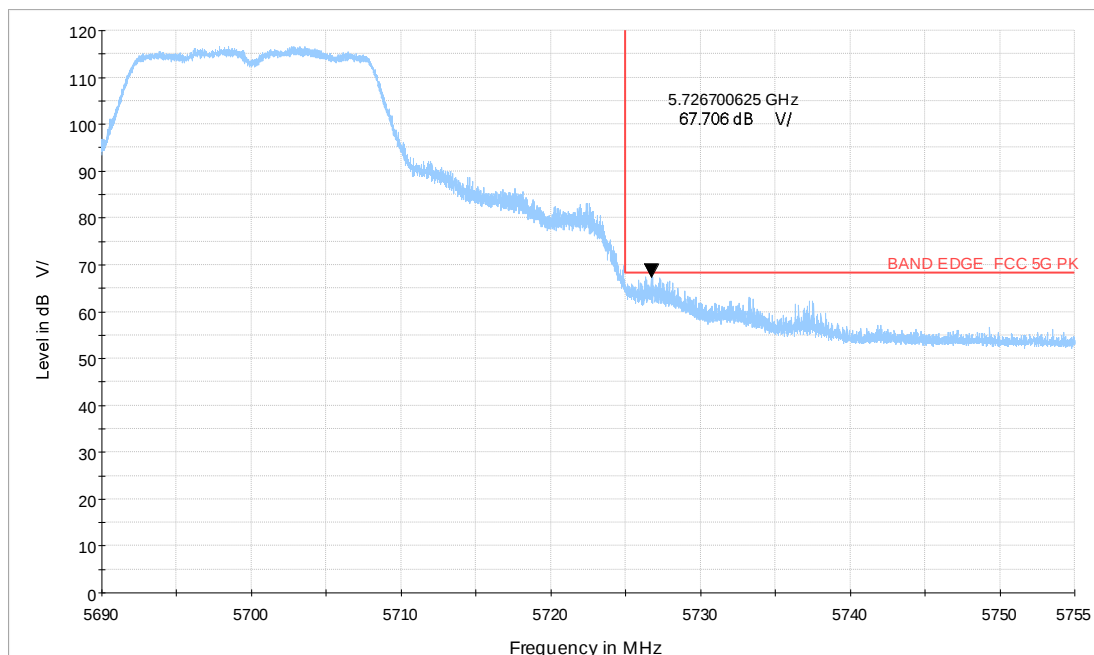
The following graphs display the maximum values of horizontal and vertical by software.
Blue trace uses the peak detection, Green trace uses the average detection.

A symbol (dB V/) in the test plot below means ($\text{dB}\mu\text{V/m}$)

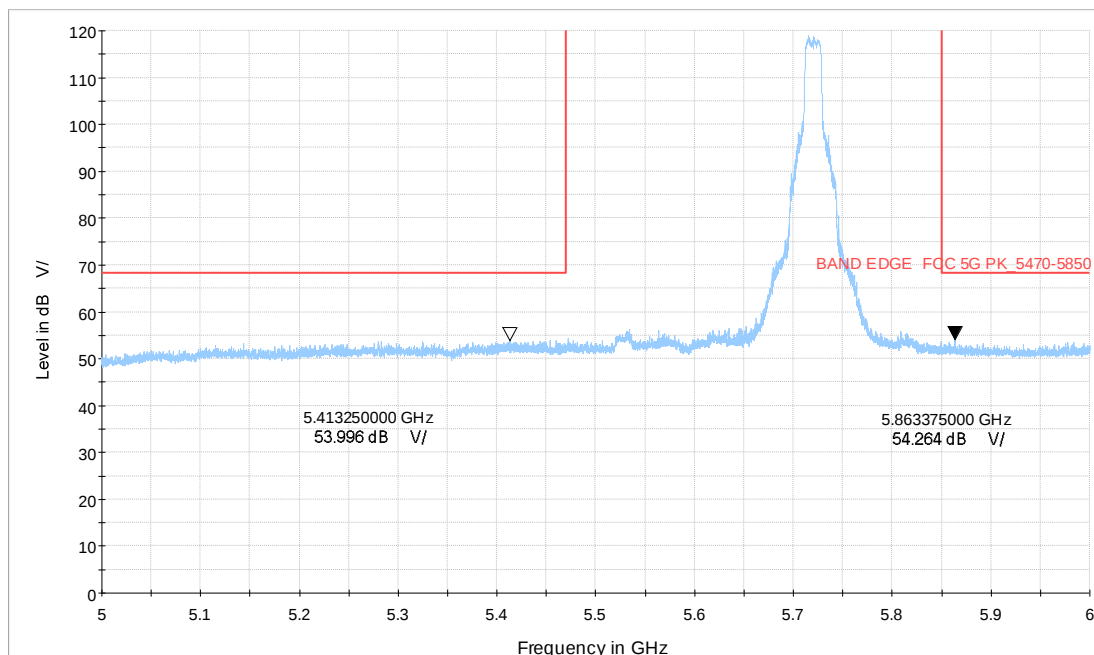
The signal beyond the limit is carrier.



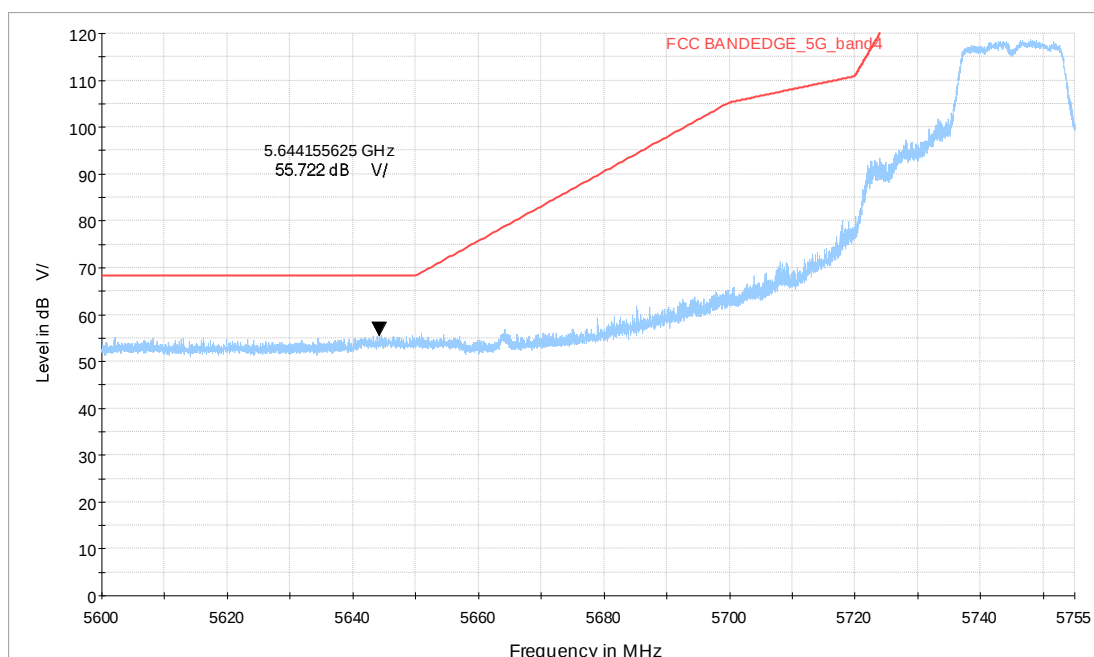
Wi-Fi 5G_a CH100_5.35-5.51GHz_6M_MIMO_V_TP23



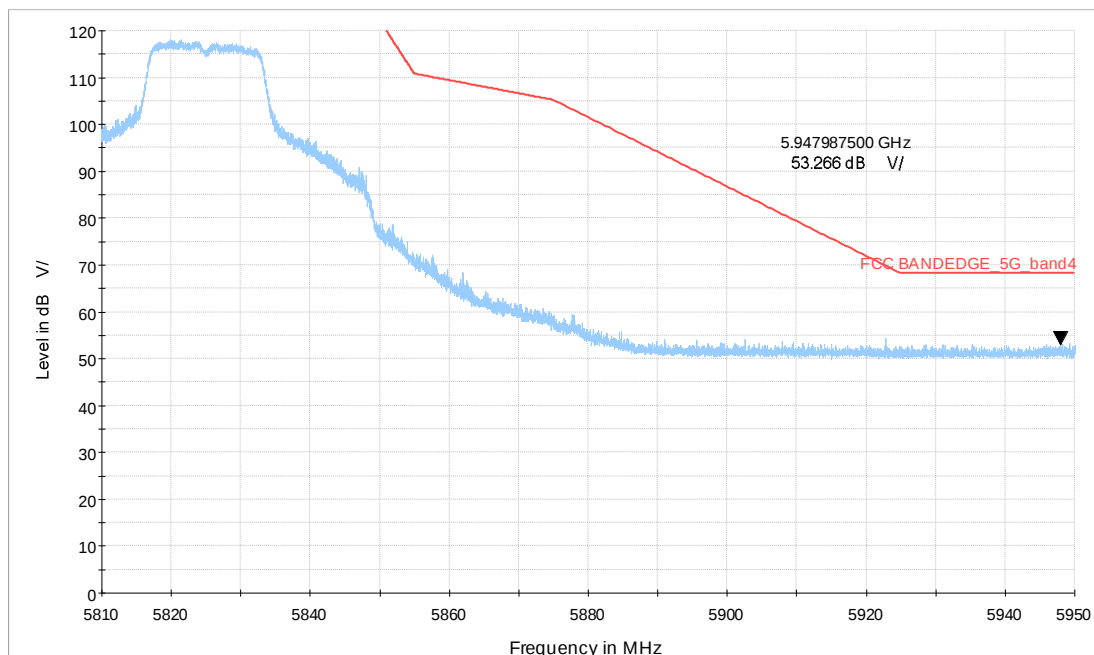
Wi-Fi 5G_a CH140_5.69-5.755GHz_6M_MIMO_V_TP20



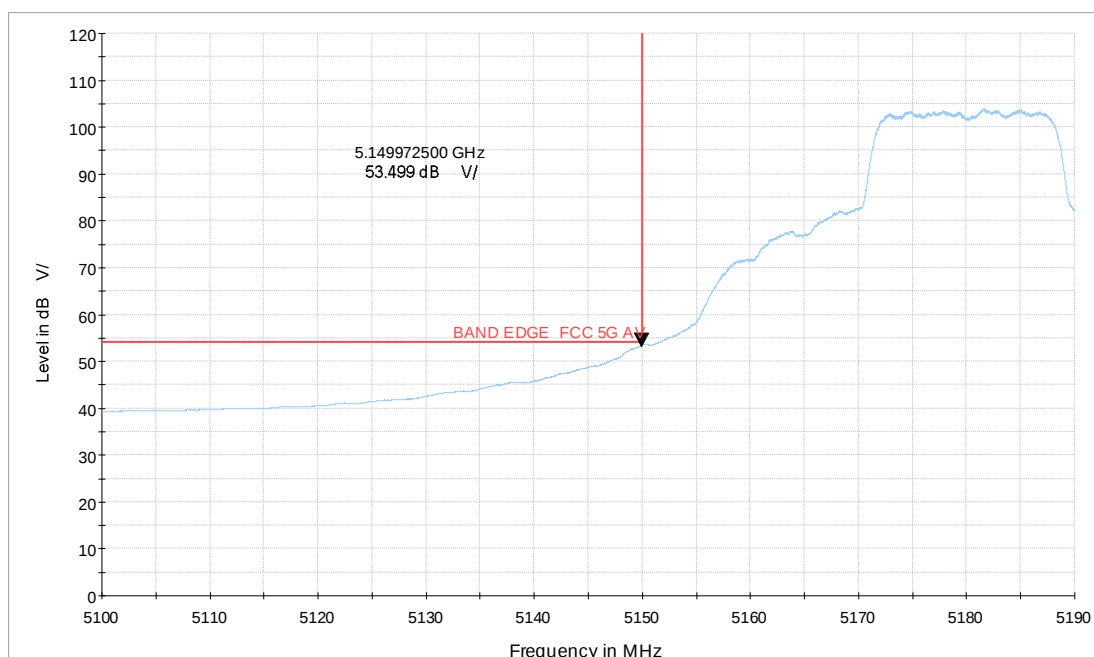
Wi-Fi 5G_a CH144_5-6GHz_6M_MIMO_V_TP24



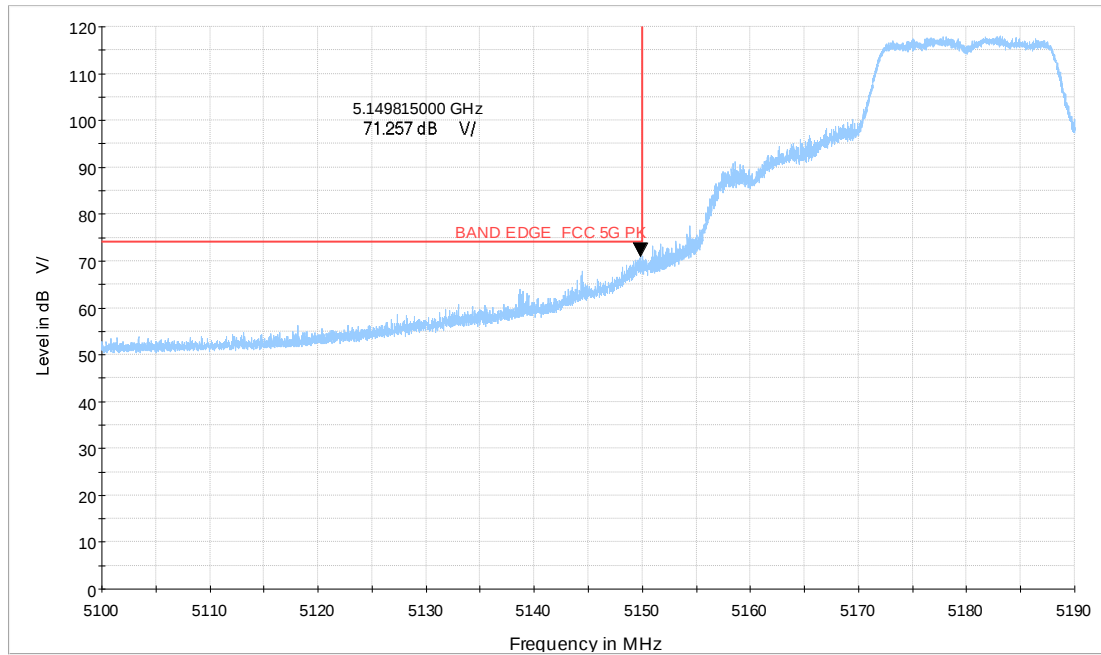
Wi-Fi 5G_a CH149_5.6-5.755GHz_6M_MIMO_V_TP24



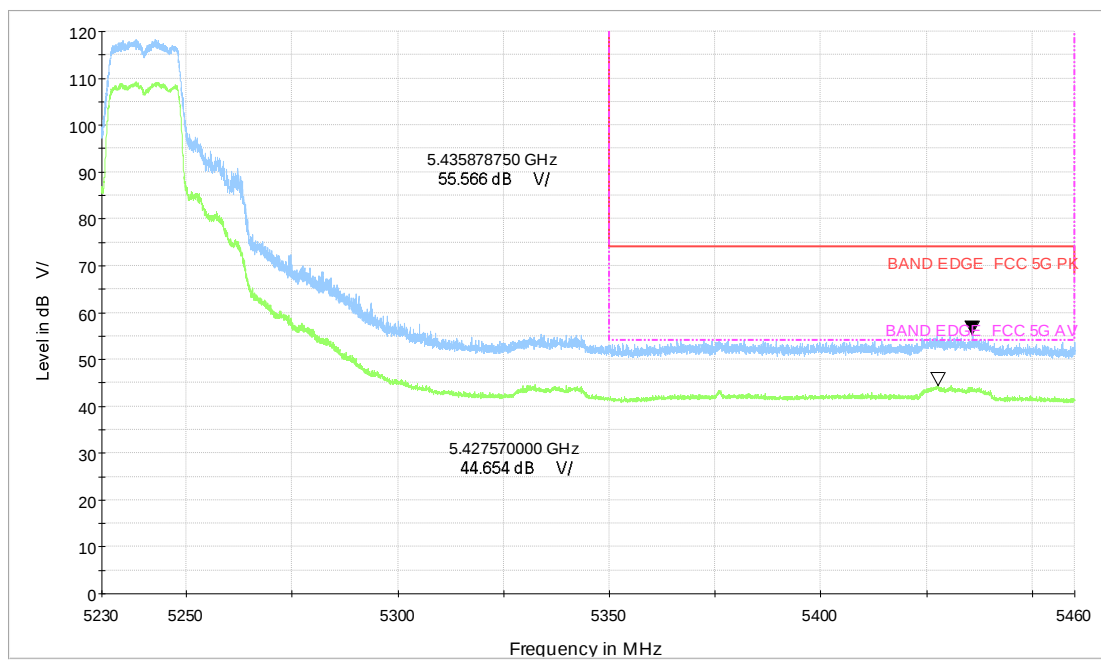
Wi-Fi 5G_a CH165_5.81-5.95GHz_6M_MIMO_V_TP24



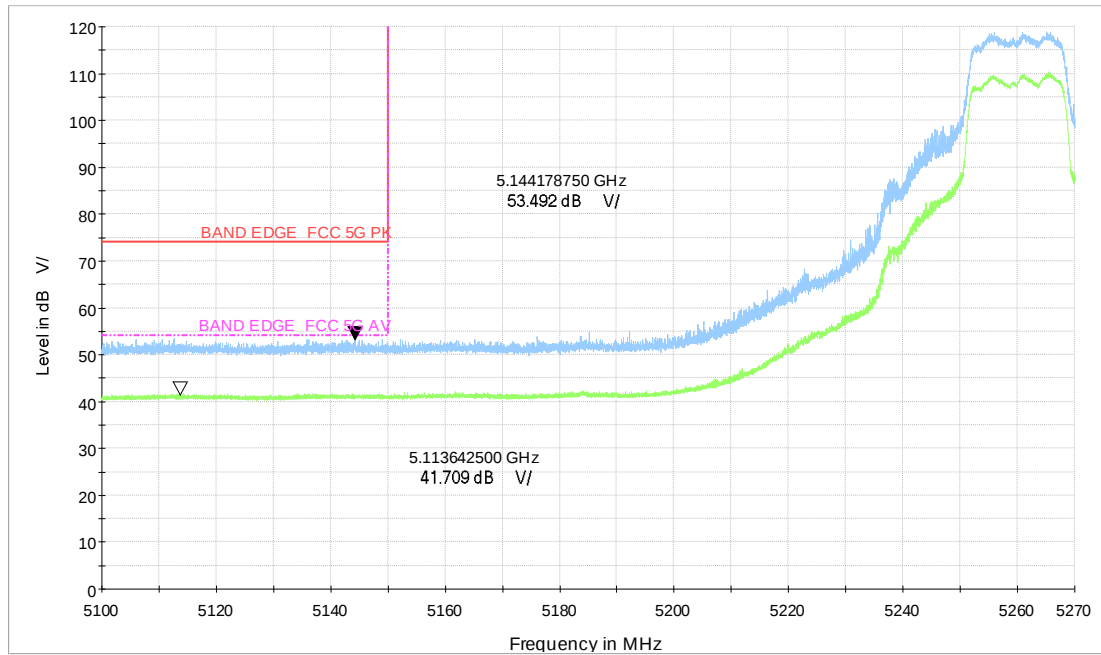
Wi-Fi 5G_a CH36_5.1-5.19GHz_6M_MIMO_V_TP23_AV



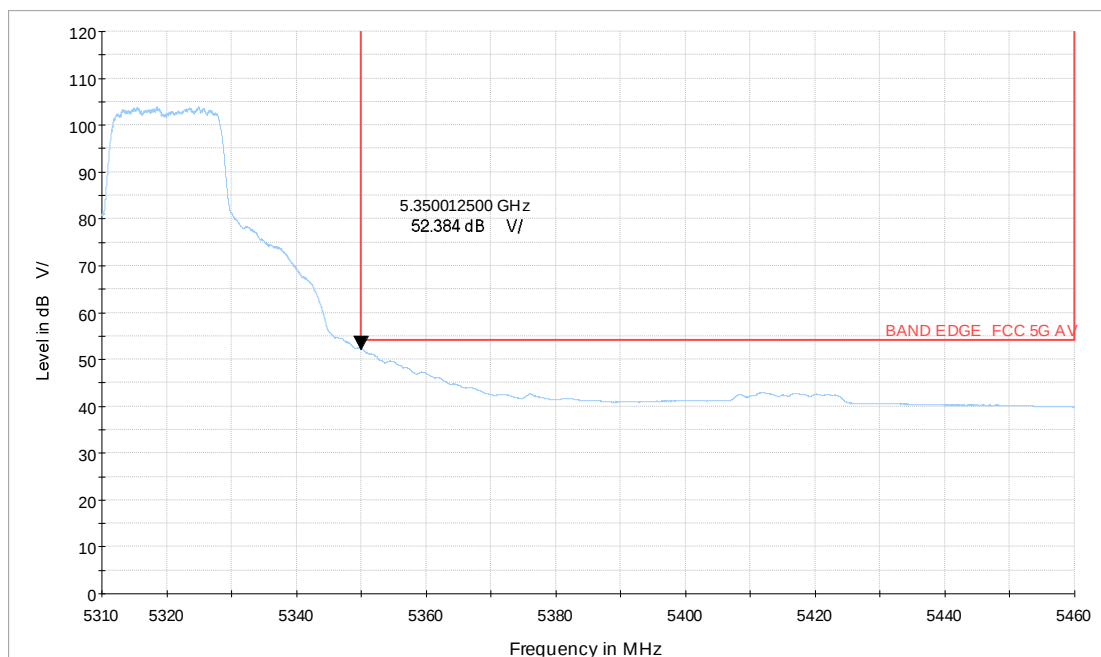
Wi-Fi 5G_a CH36_5.1-5.19GHz_6M_MIMO_V_TP23_PK



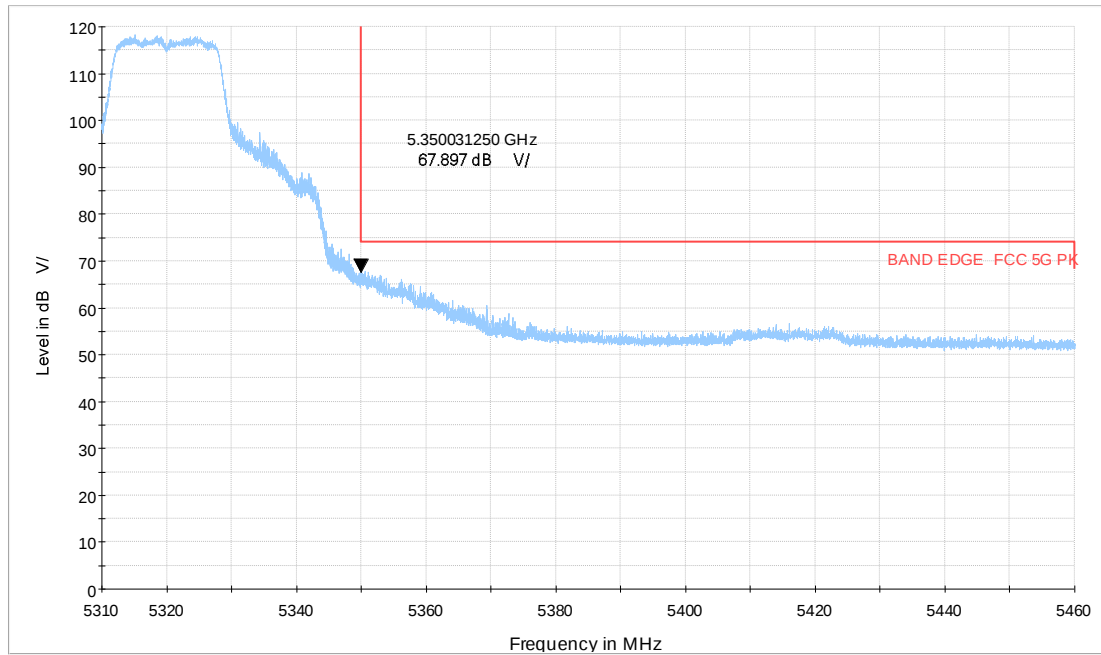
Wi-Fi 5G_a CH48_5.23-5.46GHz_6M_MIMO_V_TP24



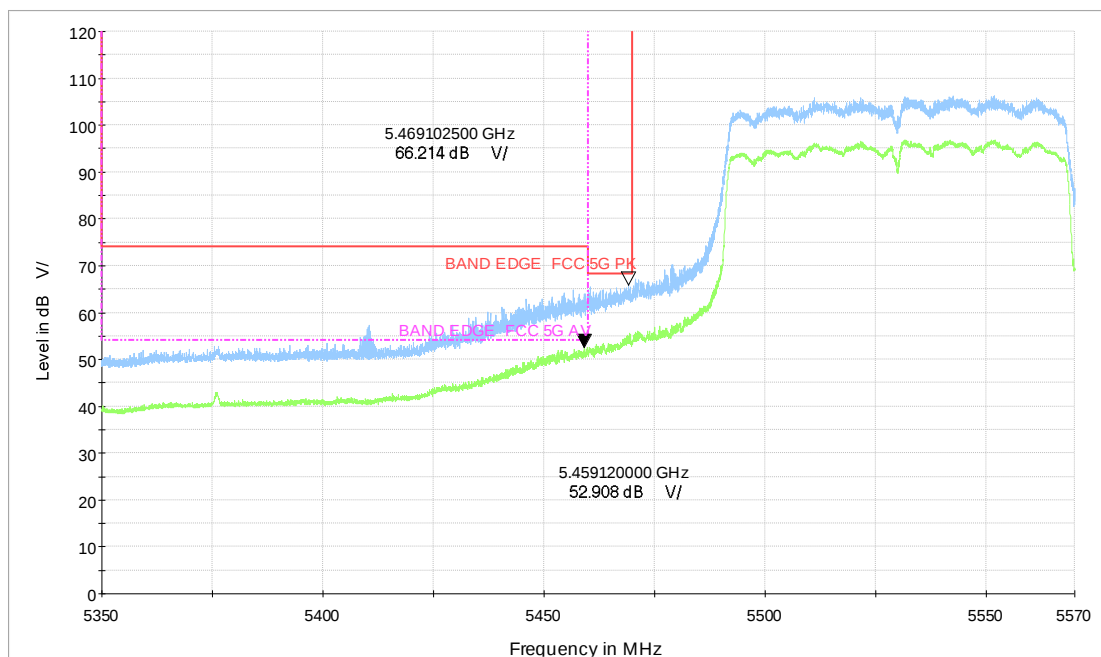
Wi-Fi 5G_a CH52_5.1-5.27GHz_6M_MIMO_V_TP24



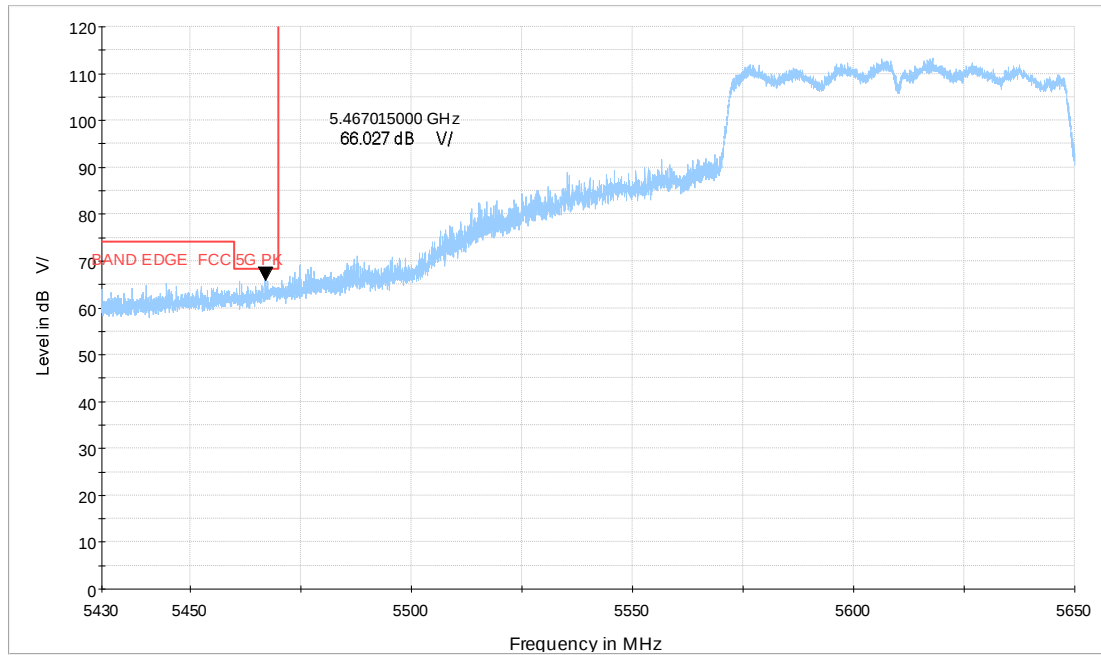
Wi-Fi 5G_a CH64_5.31-5.46GHz_6M_MIMO_V_TP23_AV



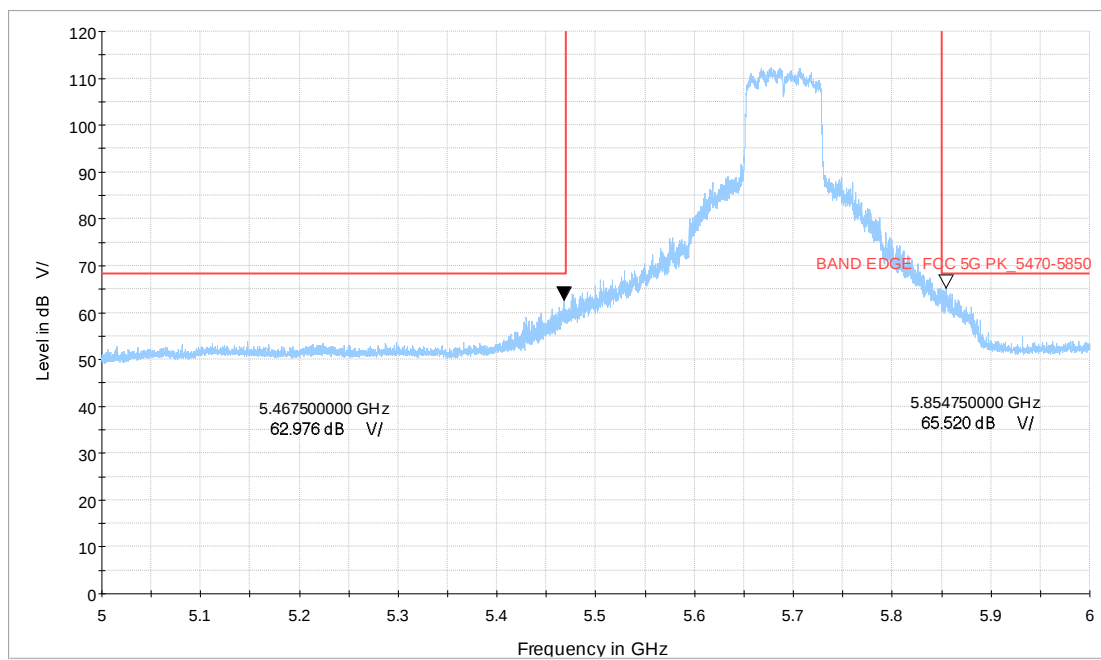
Wi-Fi 5G_a CH64_5.31-5.46GHz_6M_MIMO_V_TP23_PK



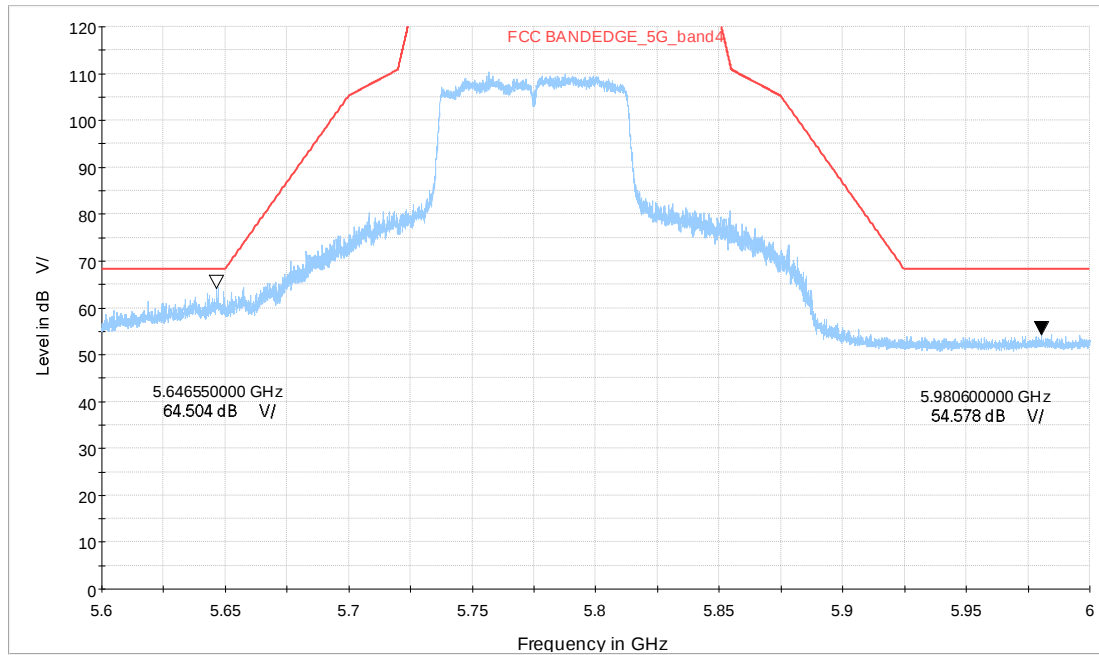
Wi-Fi 5G_ac80 CH106_5.35-5.57GHz_MCS0_MIMO_V_TP15



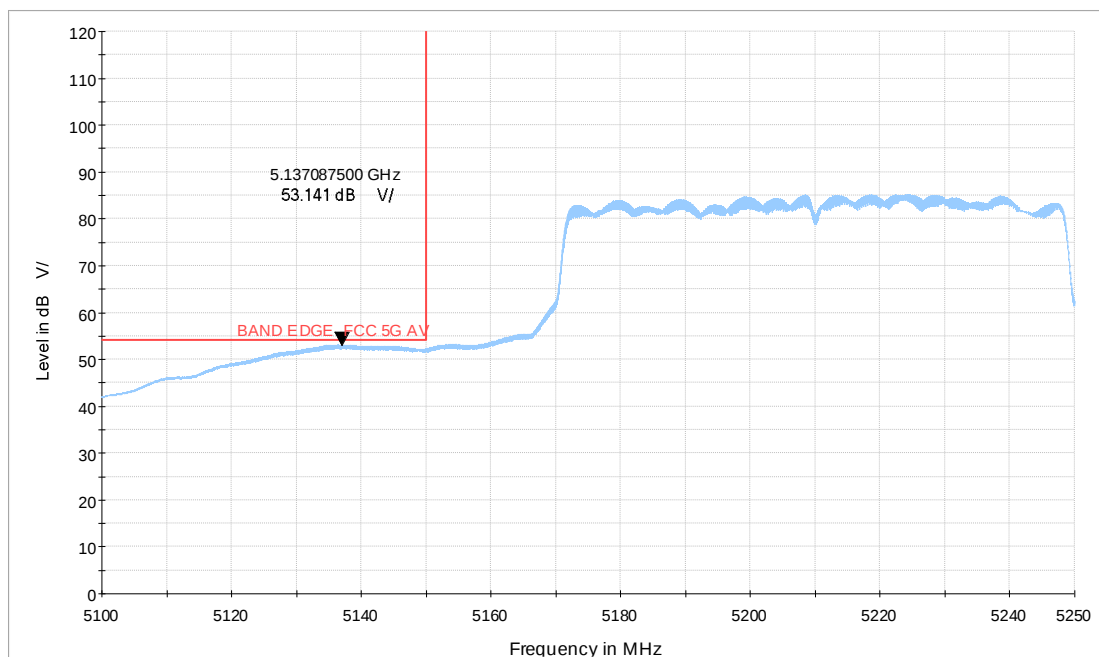
Wi-Fi 5G_ac80 CH122_5.43-5.65GHz_MCS0_MIMO_V_TP23



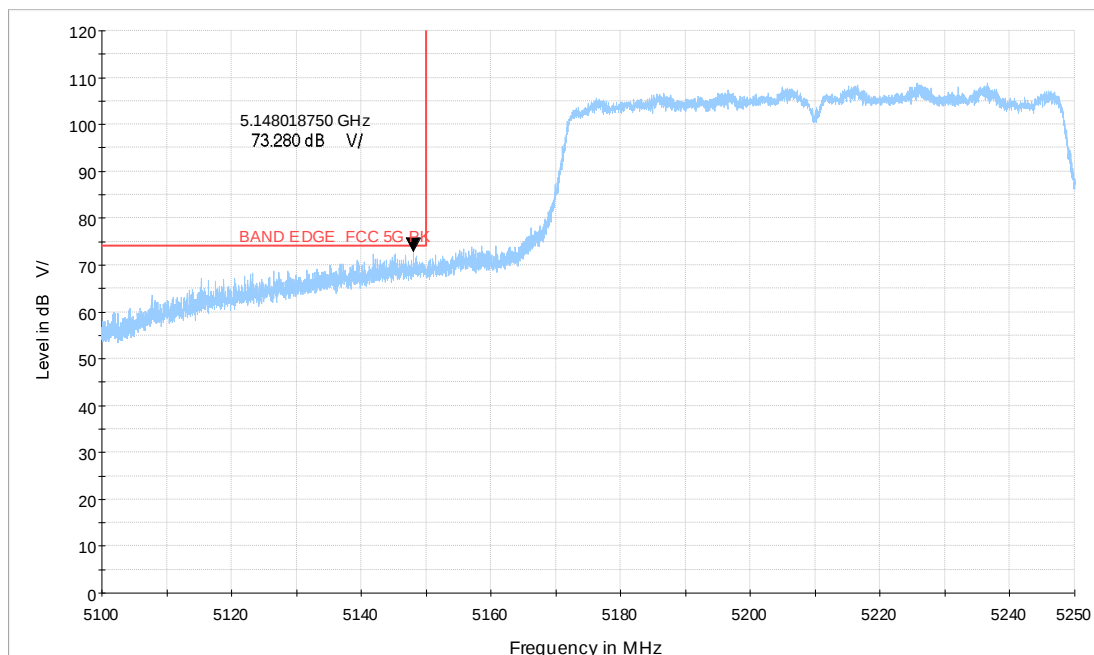
Wi-Fi 5G_ac80 CH138_5-6GHz_MCS0_MIMO_V_TP24



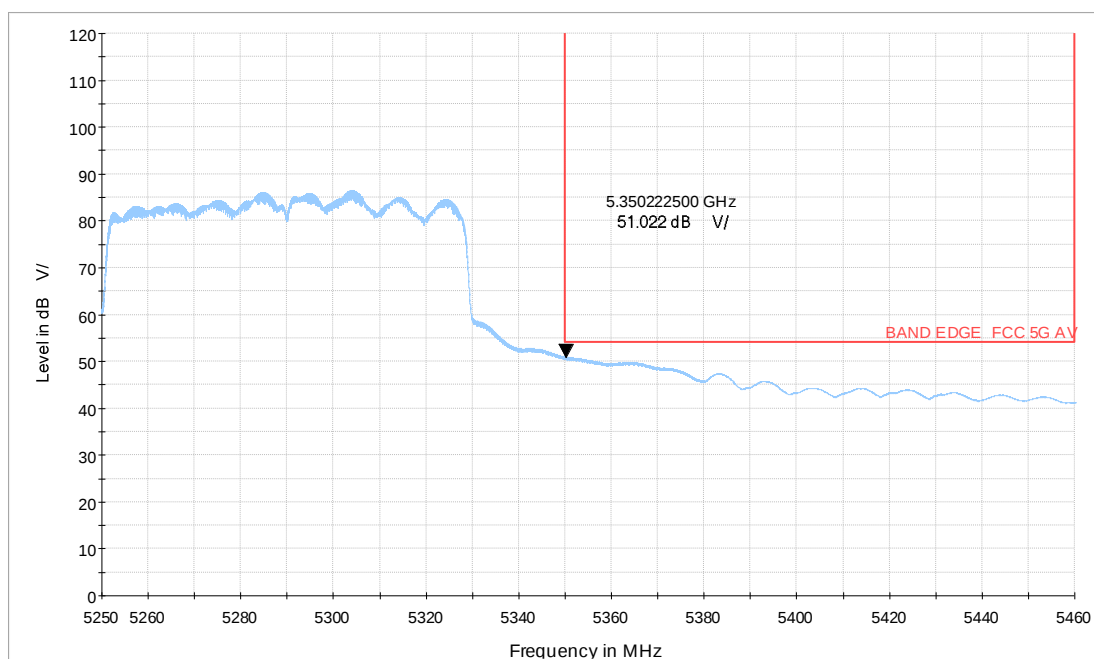
Wi-Fi 5G_ac80 CH155_5.6-6GHz_MCS0_MIMO_V_TP21



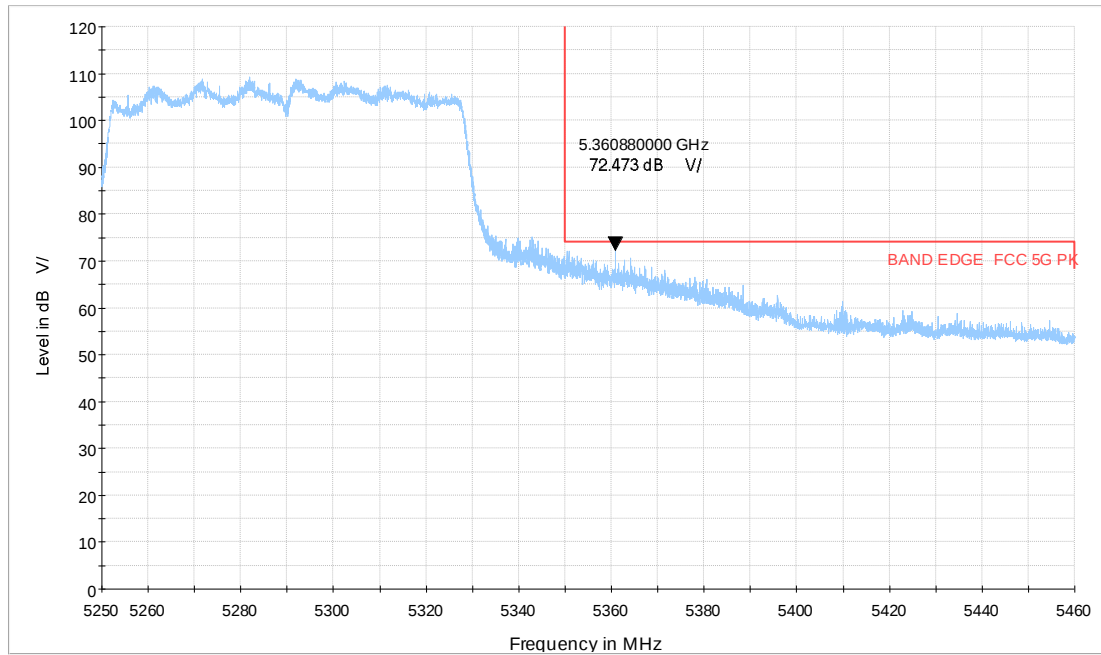
Wi-Fi 5G_ac80 CH42_5.1-5.25GHz_MCS0_MIMO_V_TP19_AV



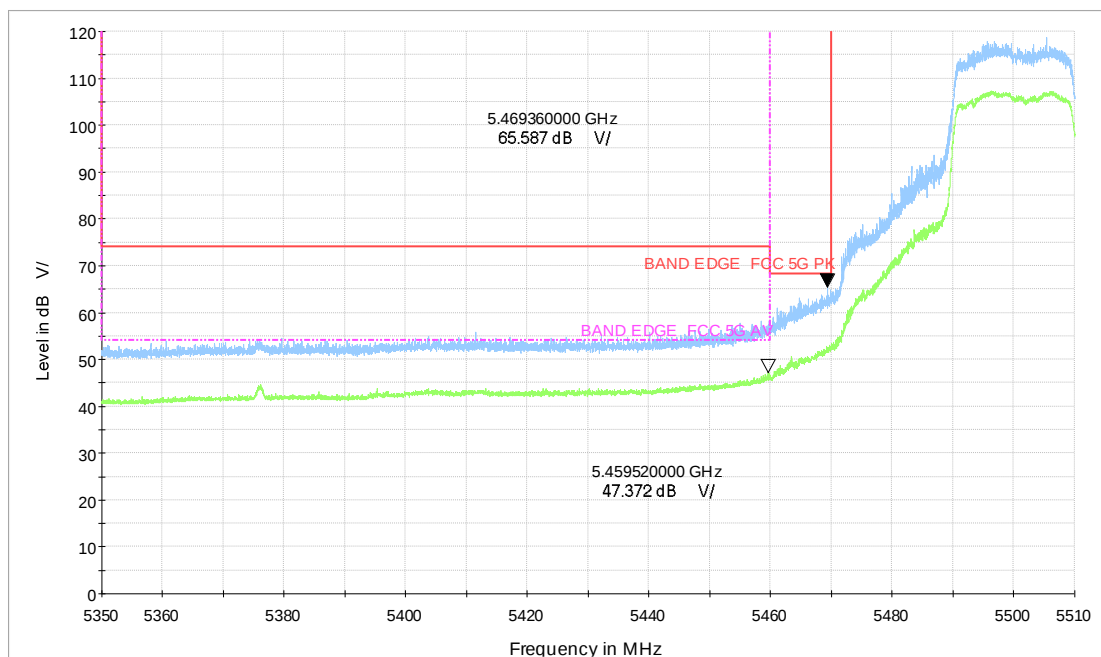
Wi-Fi 5G_ac80 CH42_5.1-5.25GHz_MCS0_MIMO_V_TP19_PK



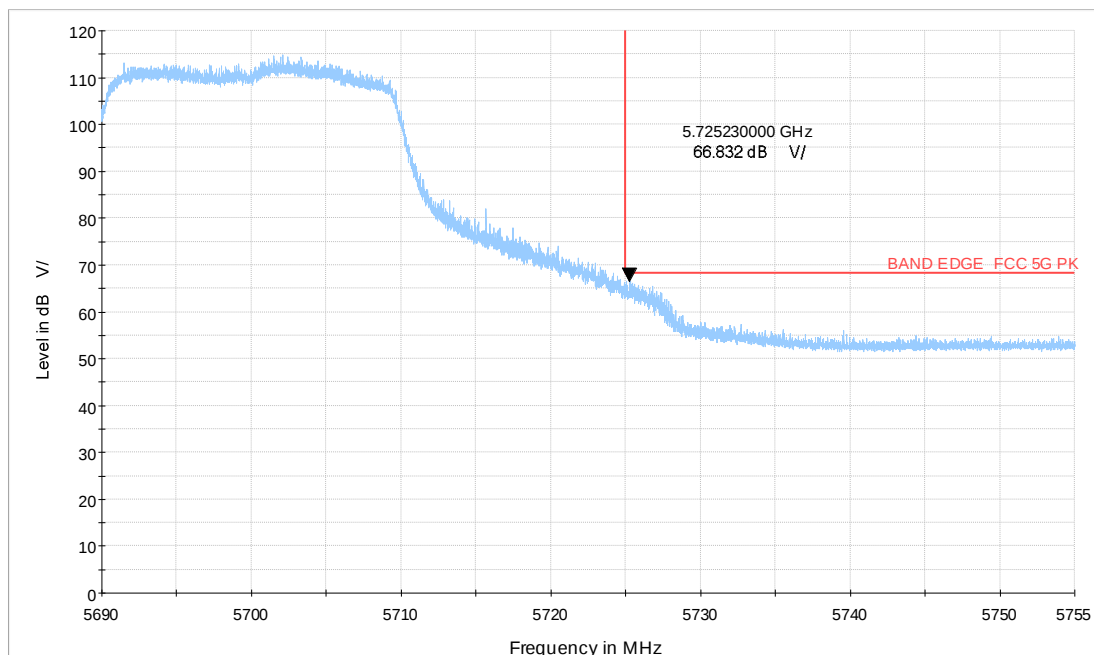
Wi-Fi 5G_ac80 CH58_5.25-5.46GHz_MCS0_MIMO_V_TP19_AV



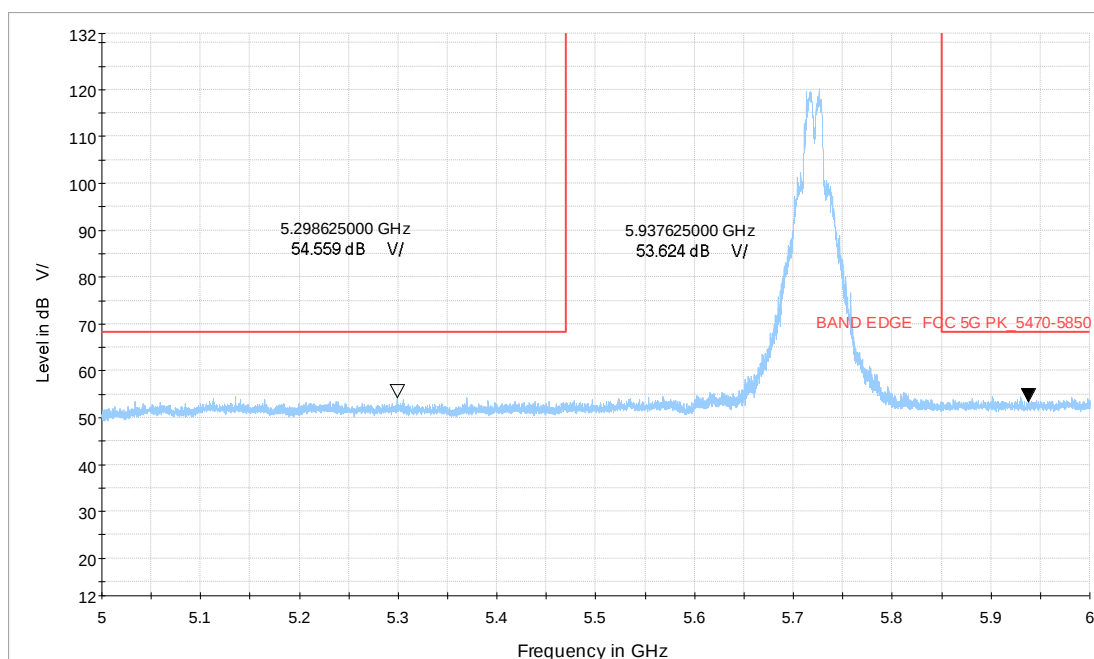
Wi-Fi 5G_ac80 CH58_5.25-5.46GHz_MCS0_MIMO_V_TP19_PK



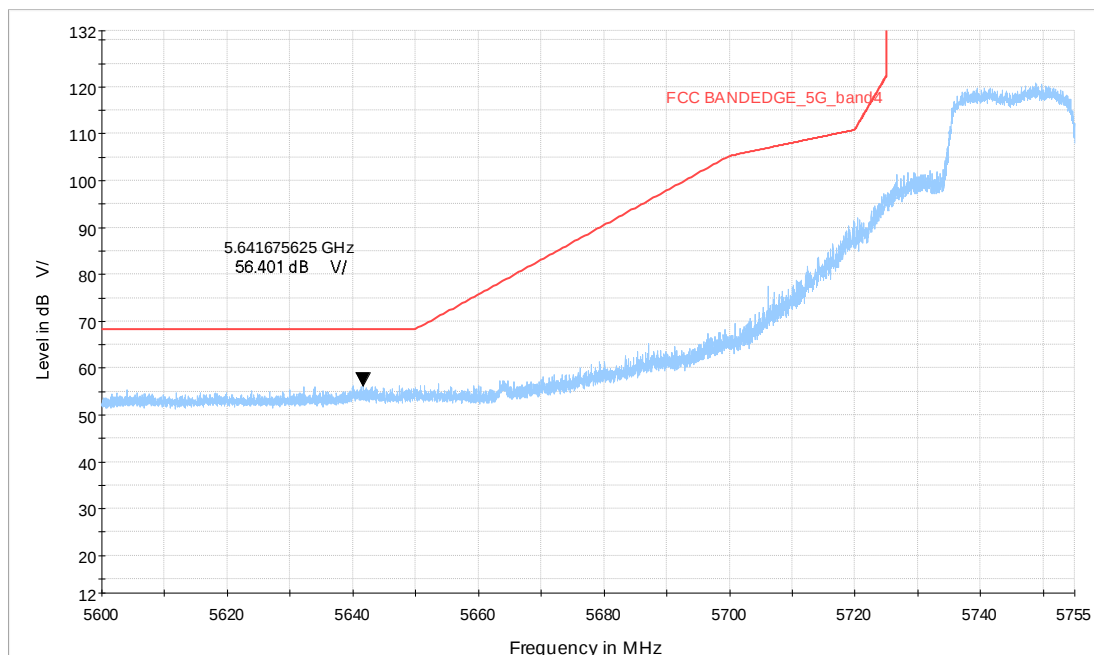
Wi-Fi 5G_ax20 CH100_5.35-5.51GHz_MCS0_MIMO_V_TP22



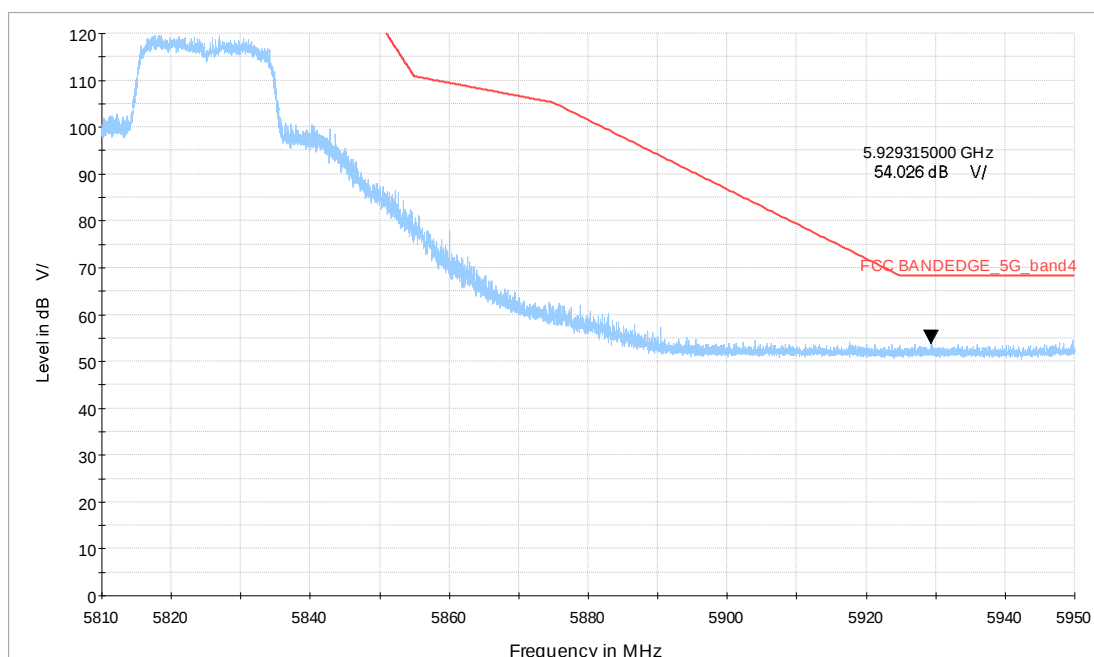
Wi-Fi 5G_ax20 CH140_5.69-5.755GHz_MCS0_MIMO_V_TP17



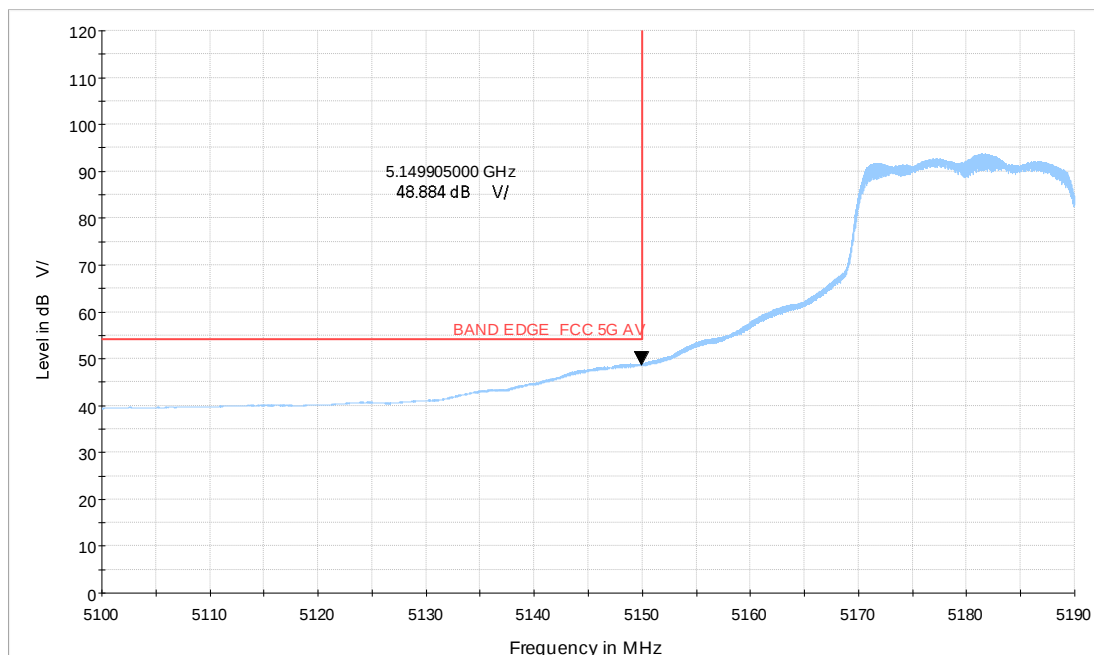
Wi-Fi 5G_ax20 CH144_5-6GHz_MCS0_MIMO_V_TP24



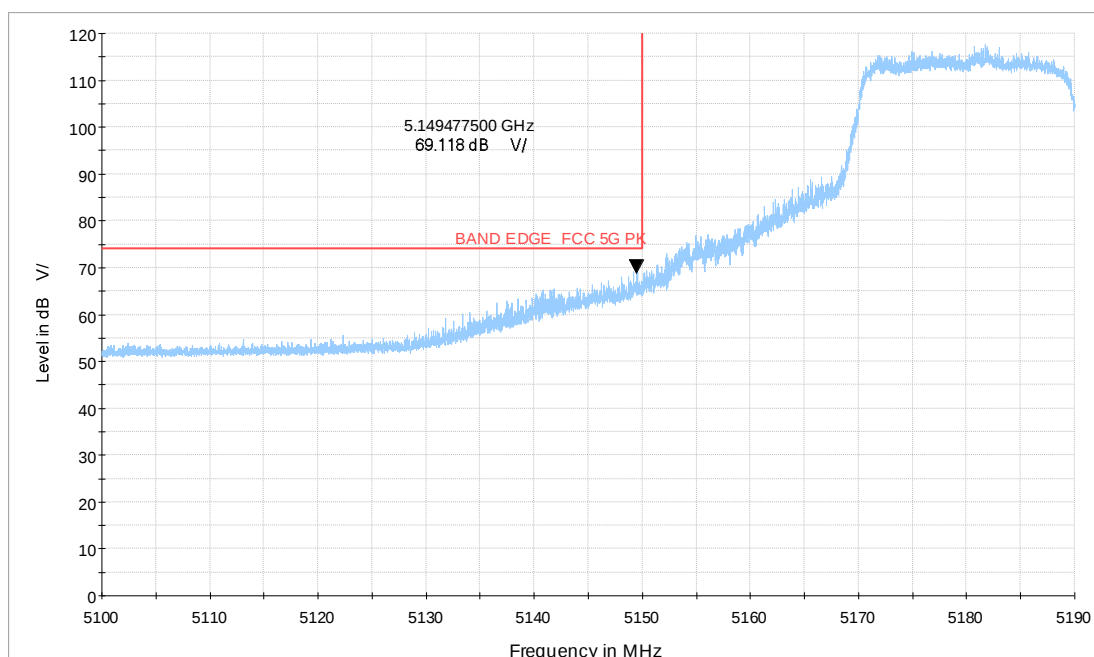
Wi-Fi 5G_ax20 CH149_5.6-5.755GHz_MCS0_MIMO_V_TP24



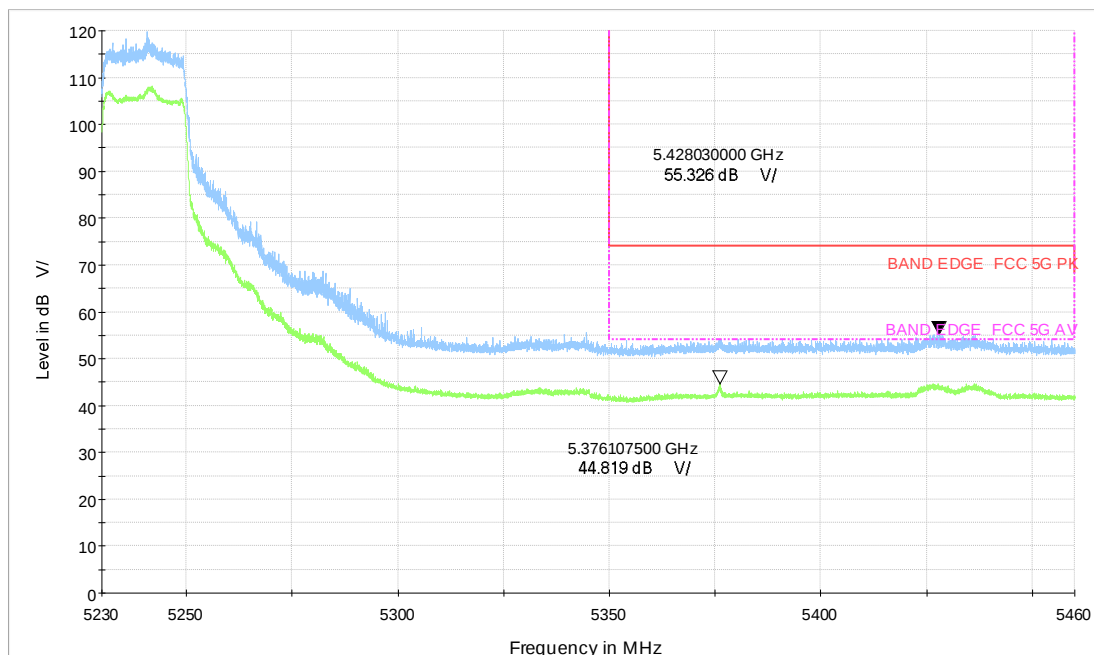
Wi-Fi 5G_ax20 CH165_5.81-5.95GHz_MCS0_MIMO_V_TP24



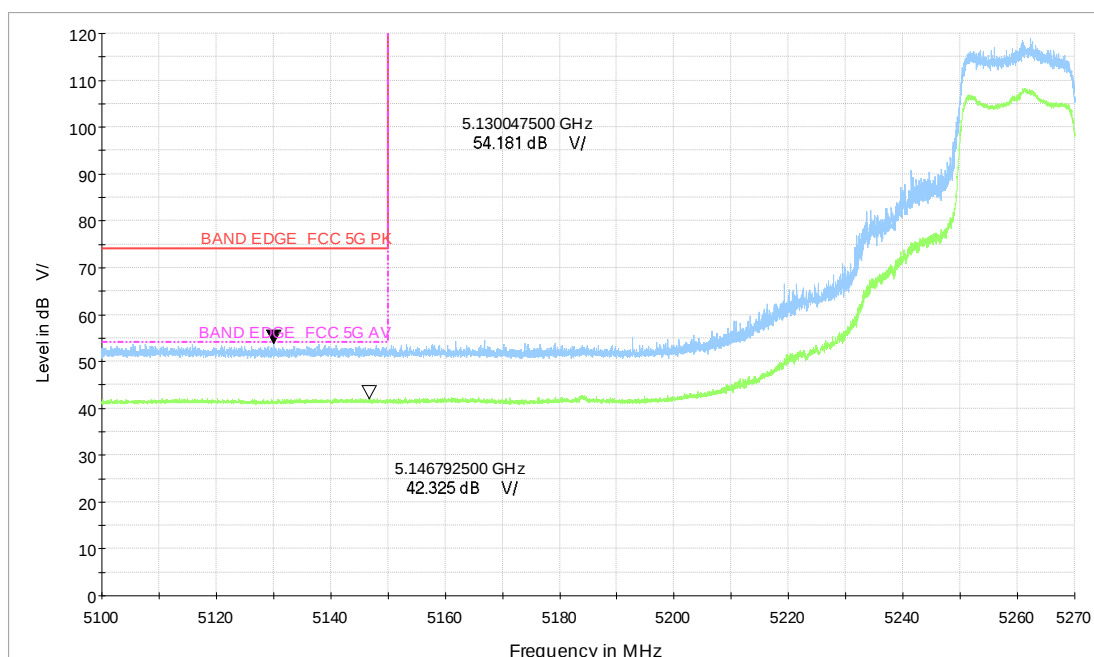
Wi-Fi 5G_ax20 CH36_5.1-5.19GHz_MCS0_MIMO_V_TP22_AV



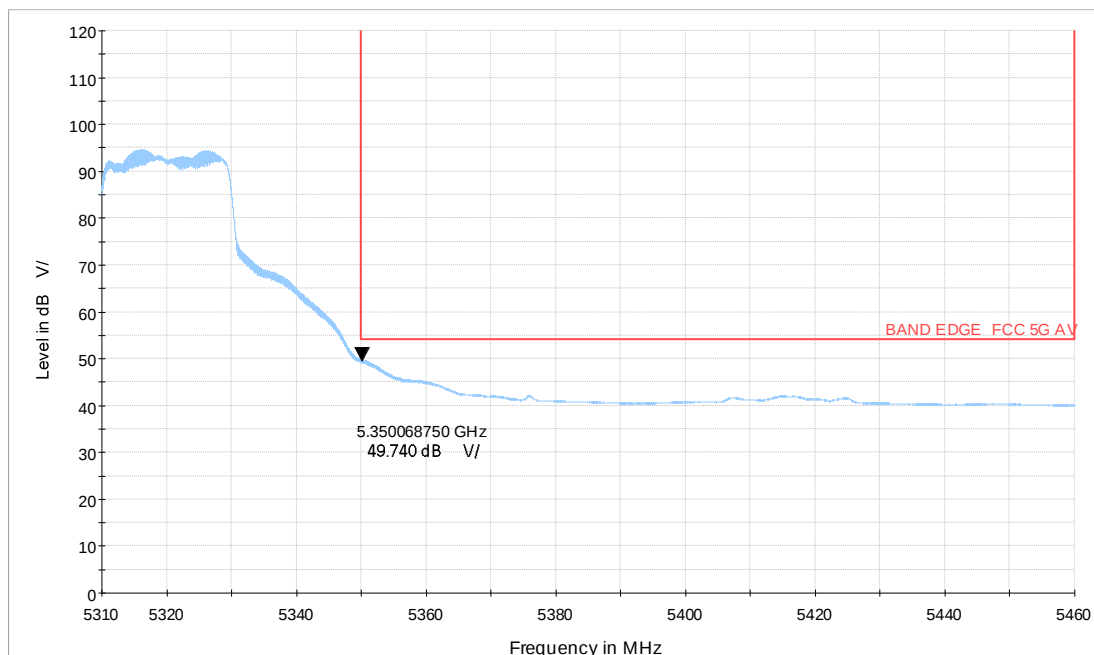
Wi-Fi 5G_ax20 CH36_5.1-5.19GHz_MCS0_MIMO_V_TP22_PK



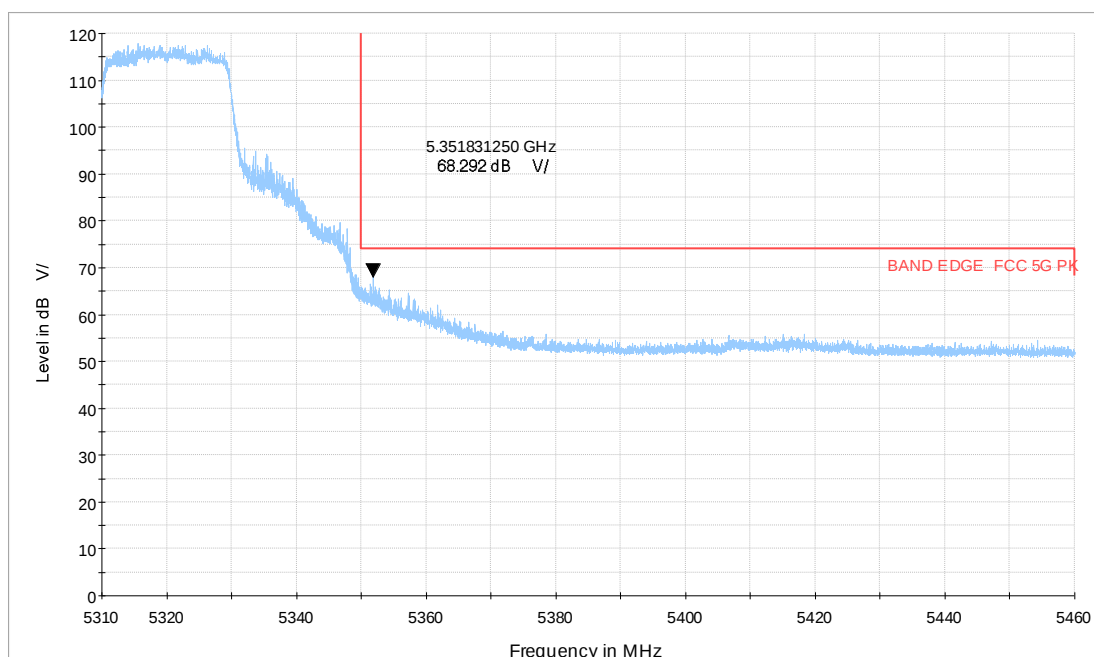
Wi-Fi 5G_ax20 CH48_5.23-5.46GHz_MCS0_MIMO_V_TP24



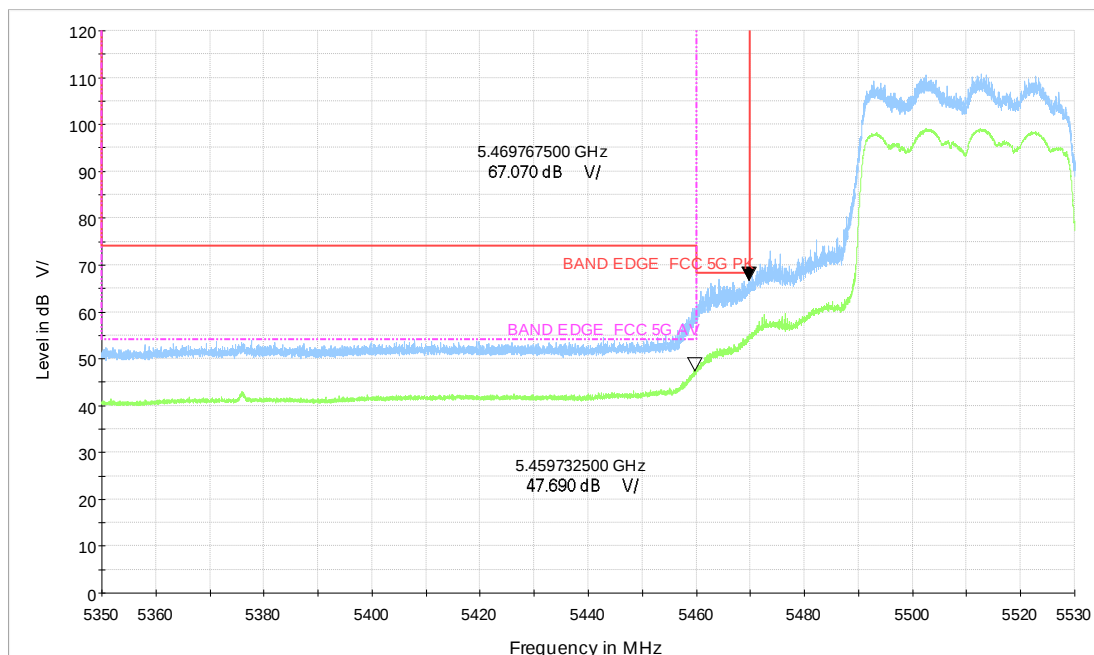
Wi-Fi 5G_ax20 CH52_5.1-5.27GHz_MCS0_MIMO_V_TP24



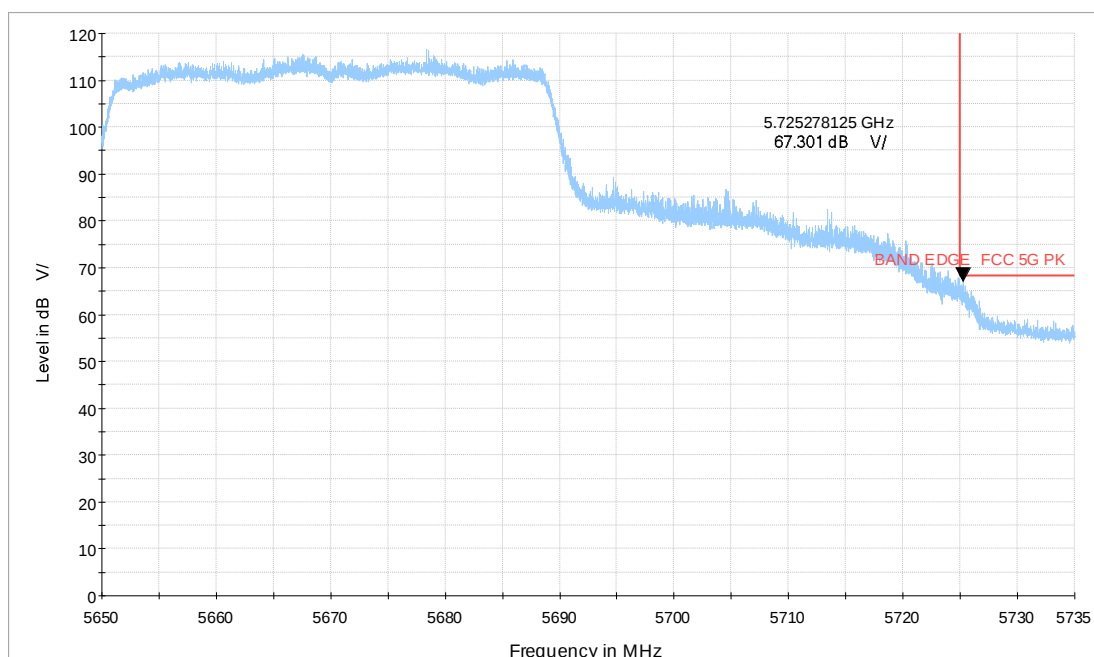
Wi-Fi 5G_ax20 CH64_5.31-5.46GHz_MCS0_MIMO_V_TP24_AV



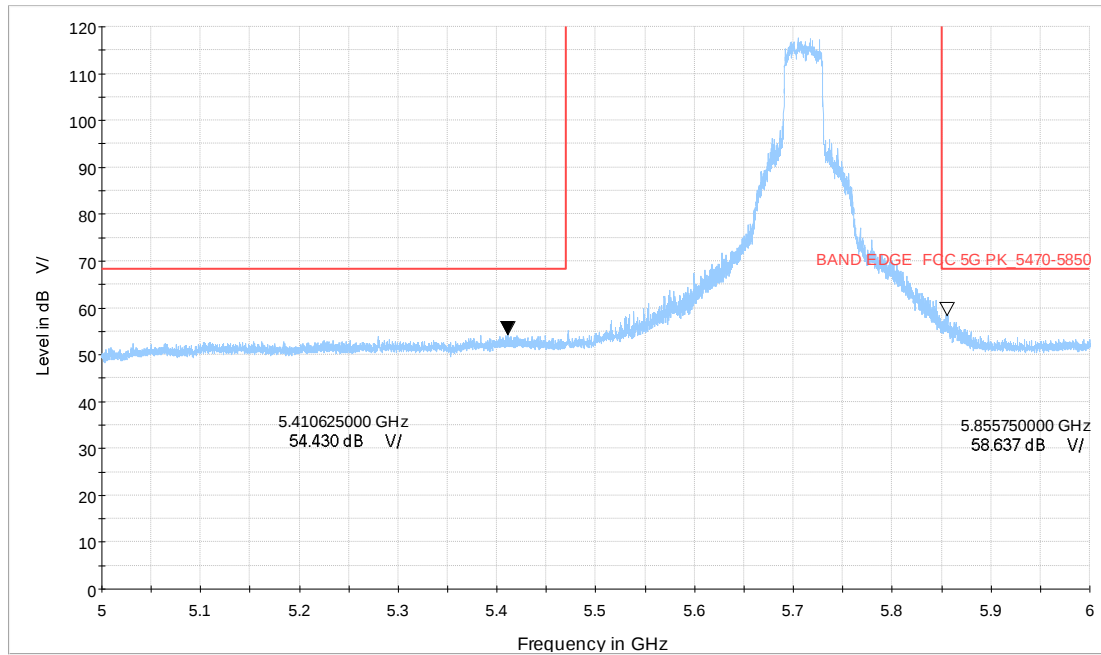
Wi-Fi 5G_ax20 CH64_5.31-5.46GHz_MCS0_MIMO_V_TP24_PK



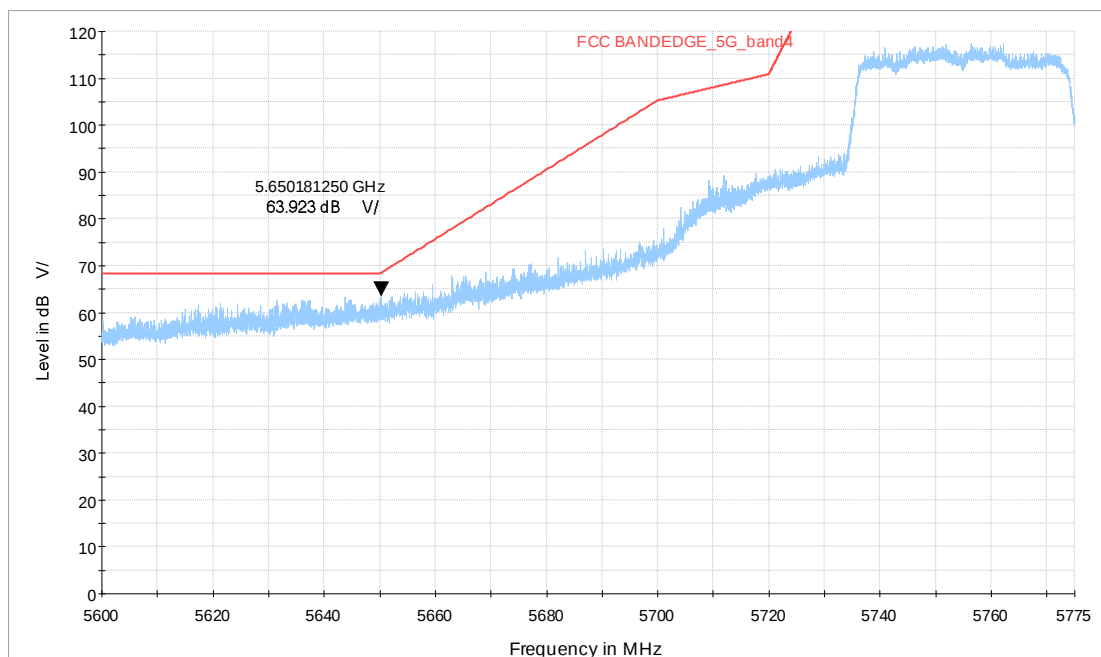
Wi-Fi 5G_ax40 CH102_5.35-5.51GHz_MCS0_MIMO_V_TP15



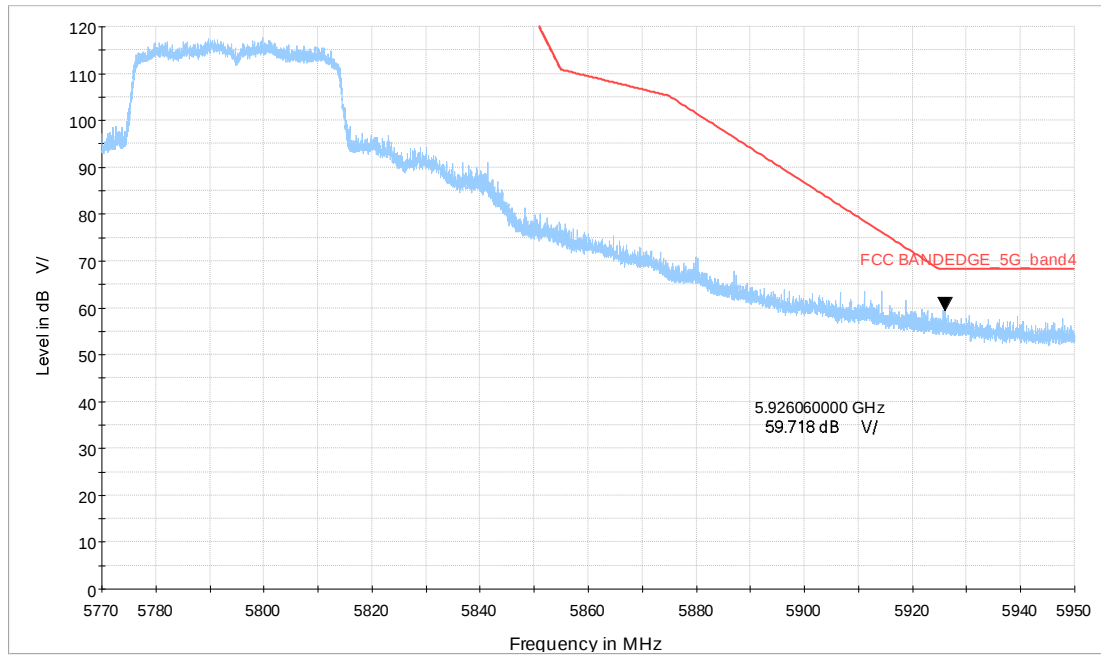
Wi-Fi 5G_ax40 CH134_5.65-5.735GHz_MCS0_MIMO_V_TP20



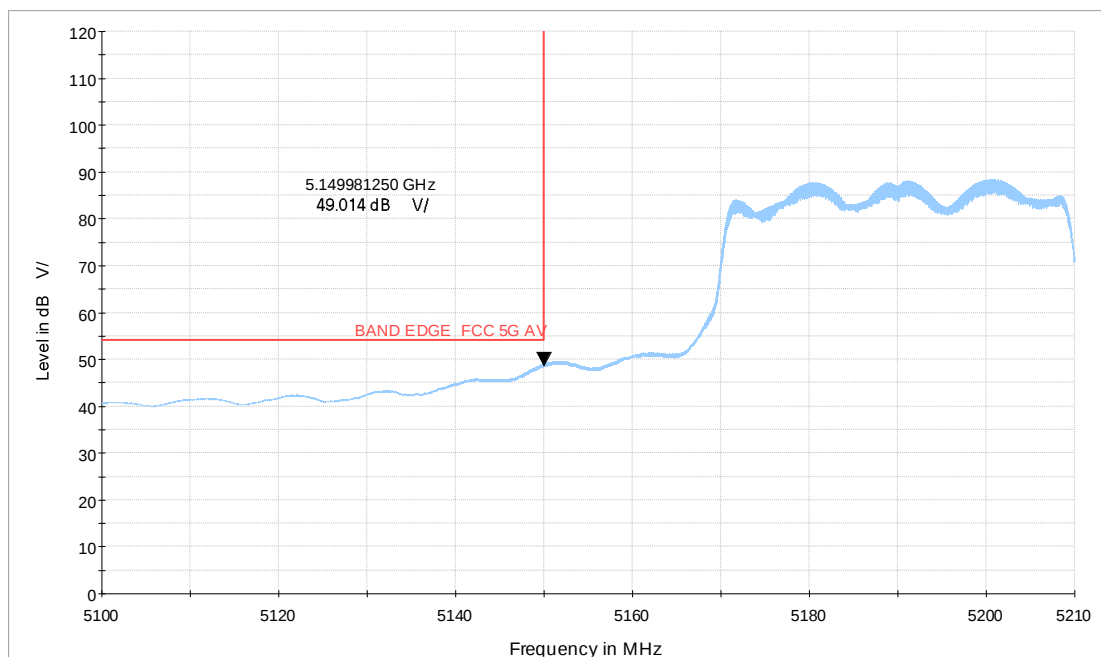
Wi-Fi 5G_ax40 CH142_5-6GHz_MCS0_MIMO_V_TP24



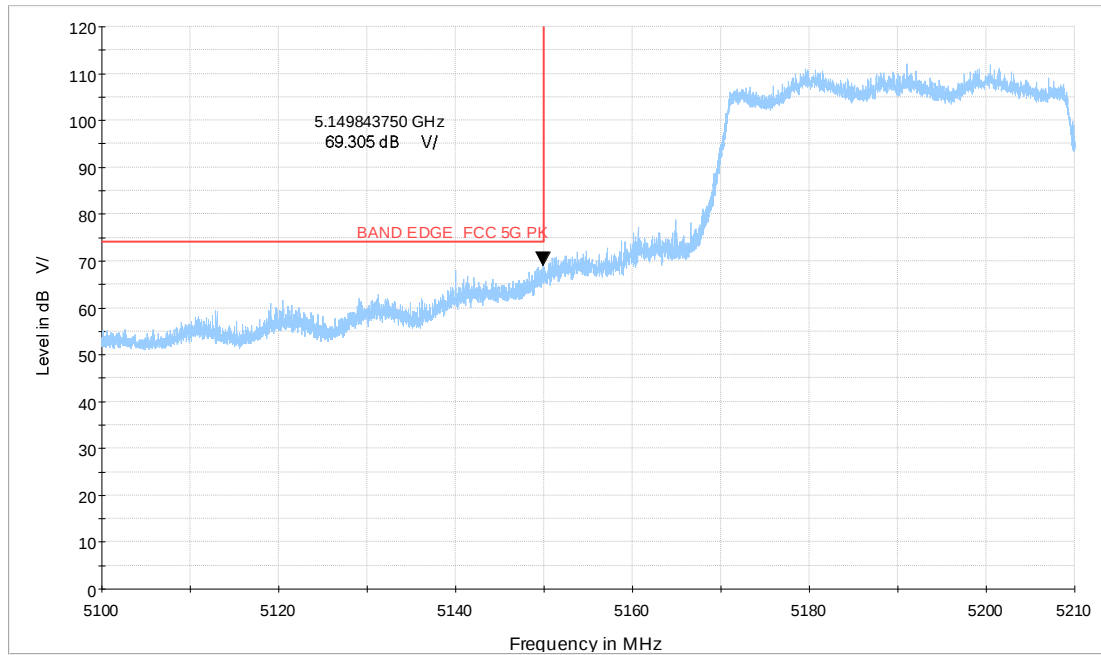
Wi-Fi 5G_ax40 CH151_5.6-5.775GHz_MCS0_MIMO_V_TP23



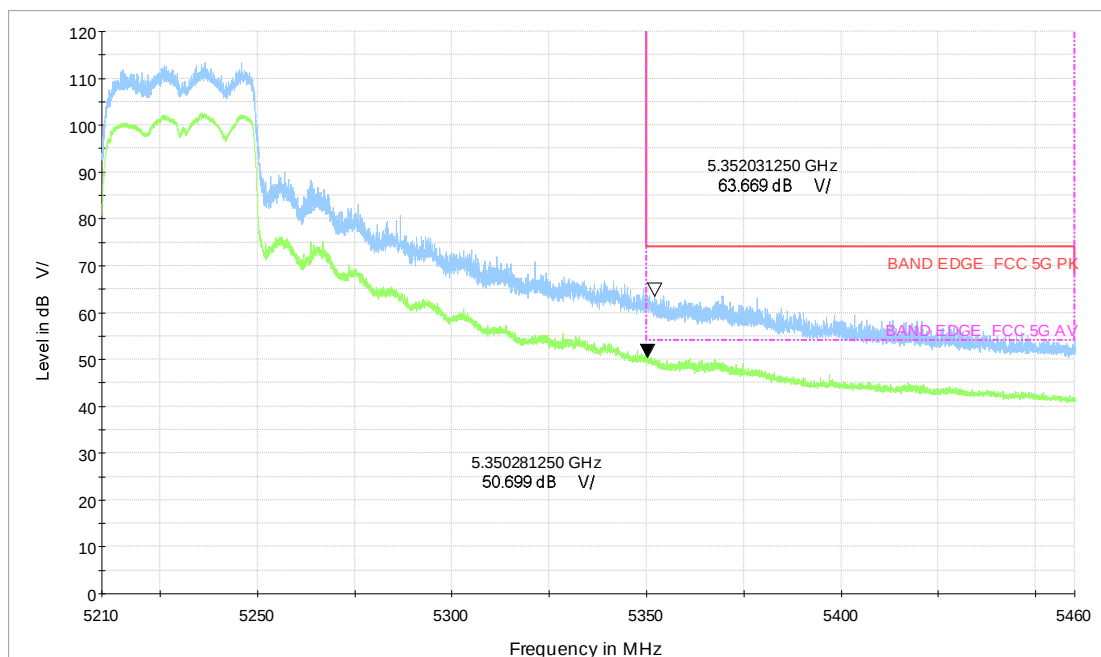
Wi-Fi 5G_ax40 CH159_5.77-5.95GHz_MCS0_MIMO_V_TP24



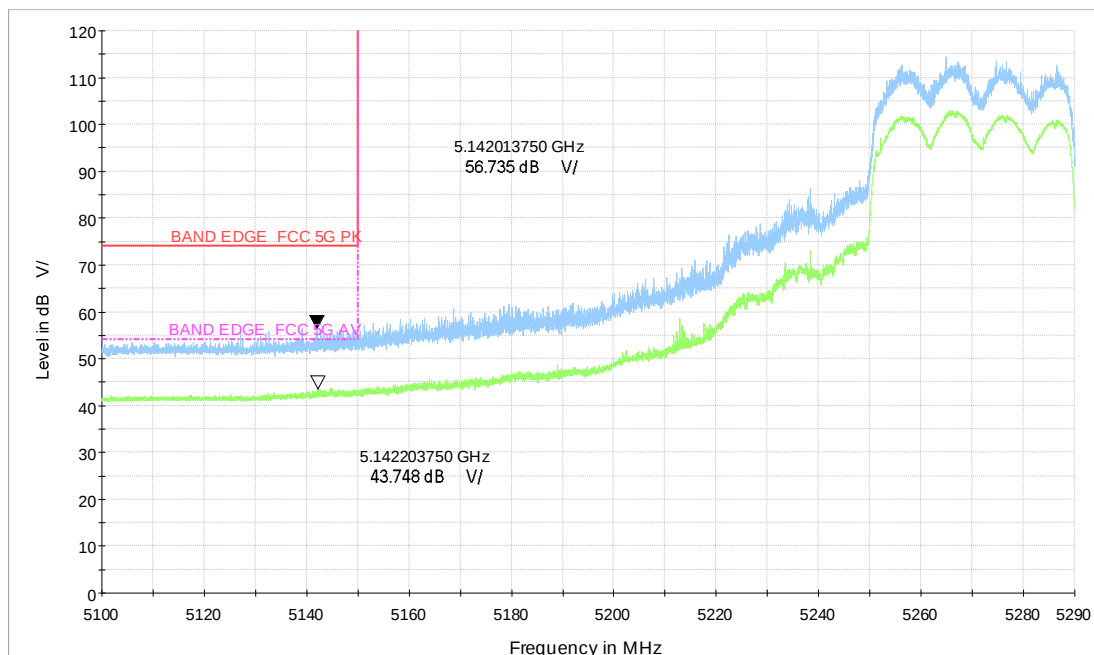
Wi-Fi 5G_ax40 CH38_5.1-5.21GHz_MCS0_MIMO_V_TP21_AV



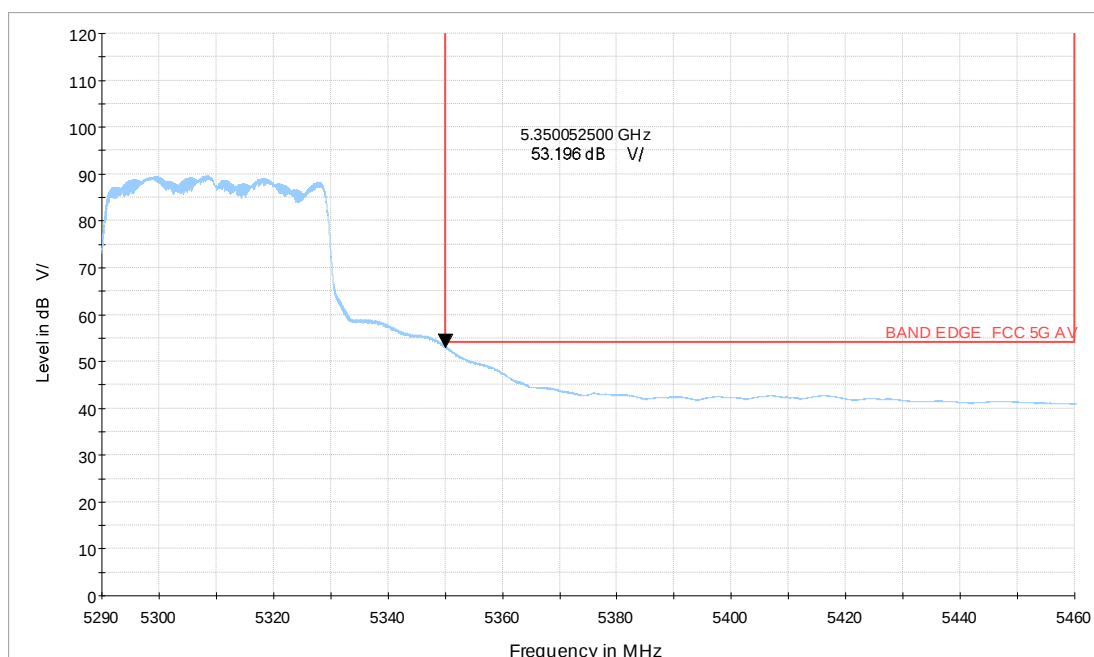
Wi-Fi 5G_ax40 CH38_5.1-5.21GHz_MCS0_MIMO_V_TP21_PK



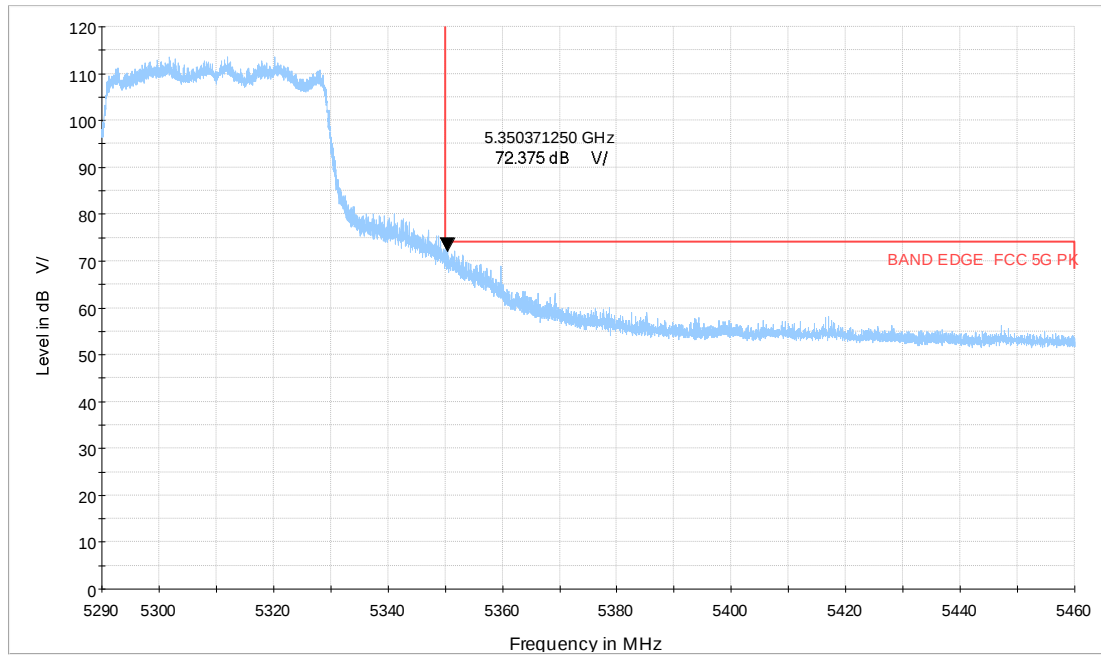
Wi-Fi 5G_ax40 CH46_5.21-5.46GHz_MCS0_MIMO_V_TP24



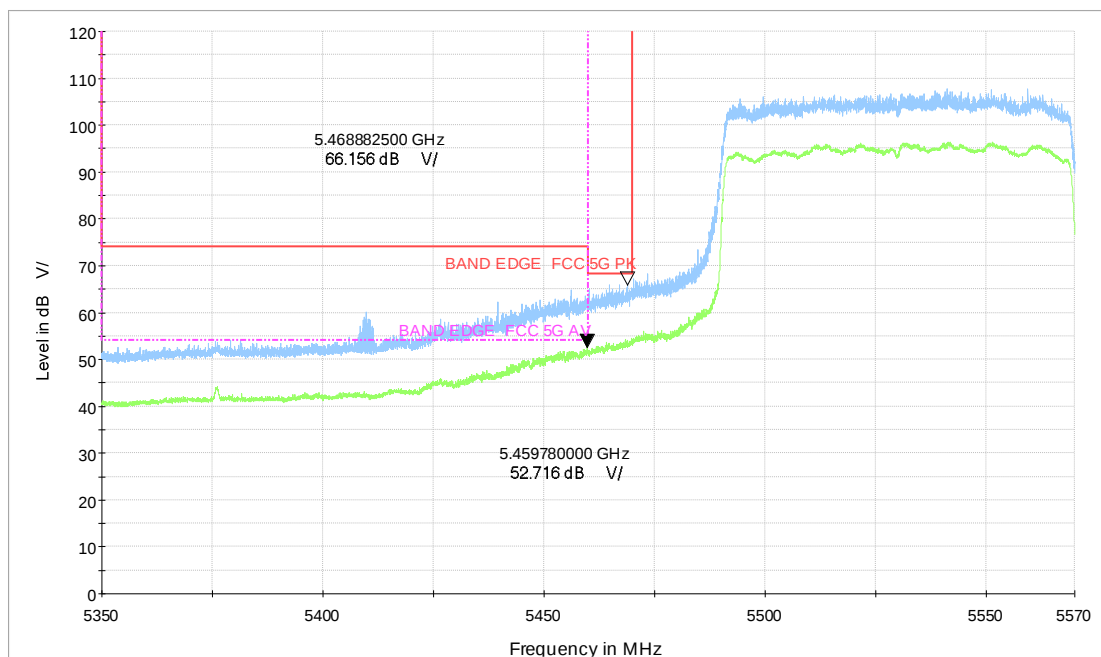
Wi-Fi 5G_ax40 CH54_5.1-5.29GHz_MCS0_MIMO_V_TP24



Wi-Fi 5G_ax40 CH62_5.29-5.46GHz_MCS0_MIMO_V_TP22_AV



Wi-Fi 5G_ax40 CH62_5.29-5.46GHz_MCS0_MIMO_V_TP22_PK



Wi-Fi 5G_ax80 CH106_5.35-5.57GHz_MCS0_MIMO_V_TP15