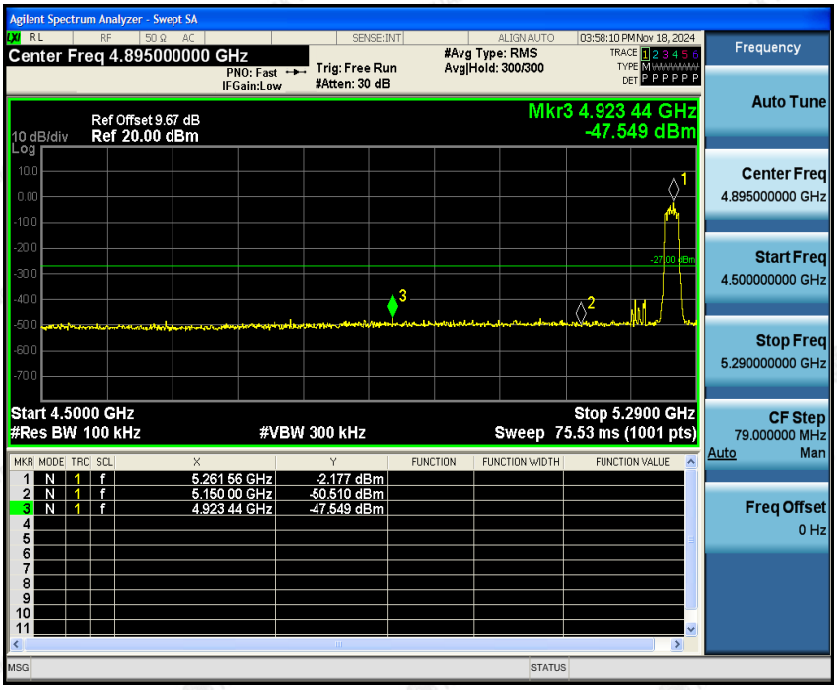
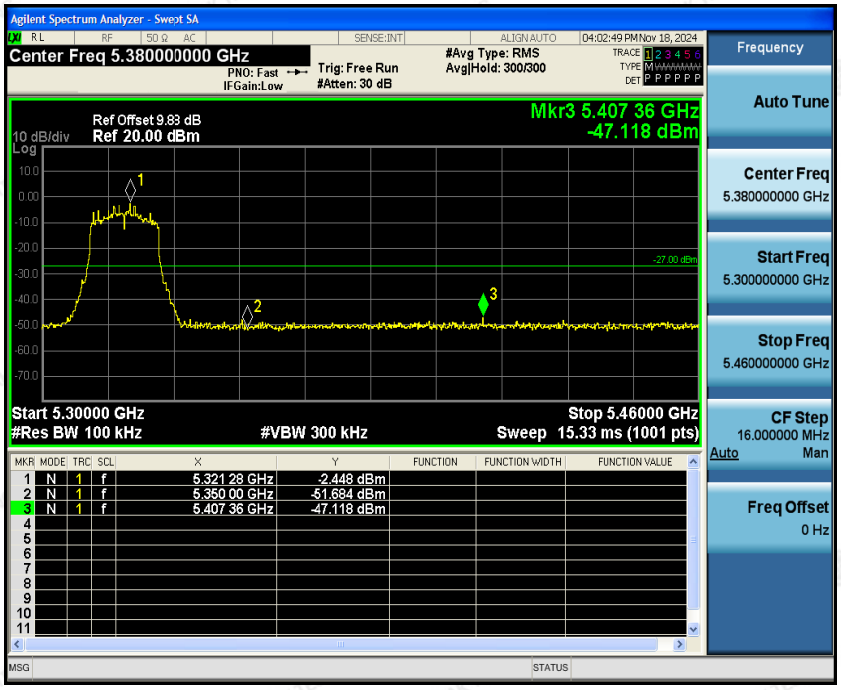
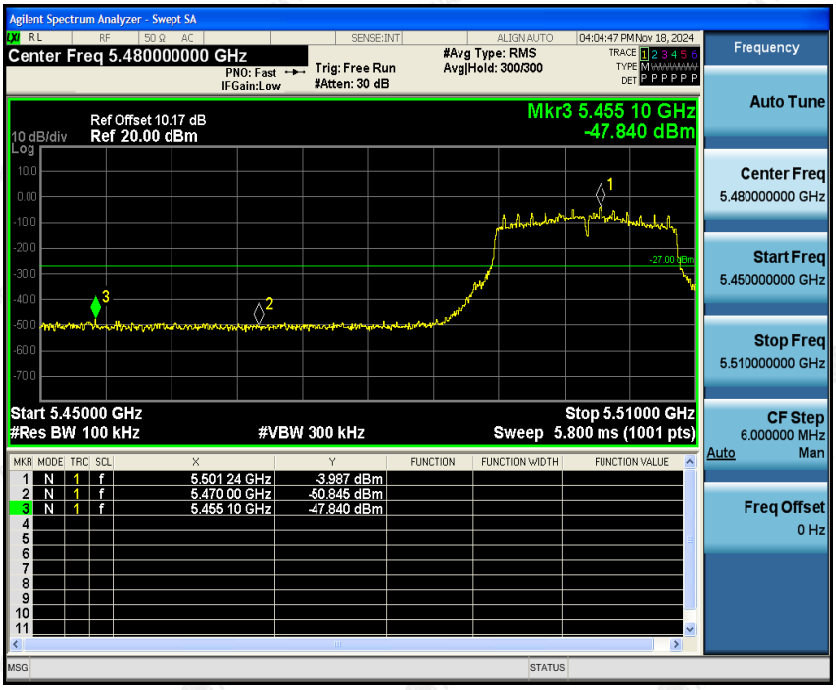
**5260MHz**



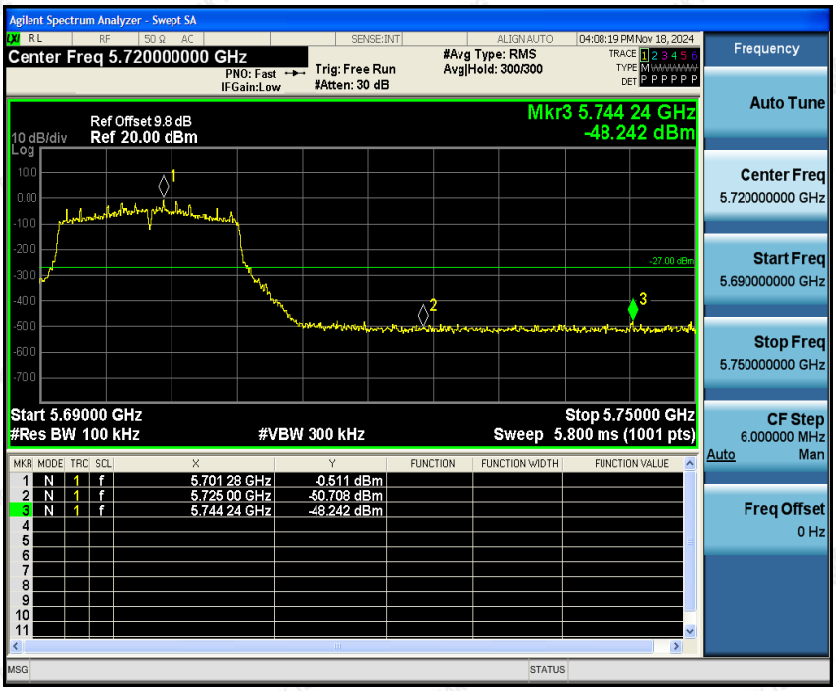

**5320MHz**



**5500MHz**

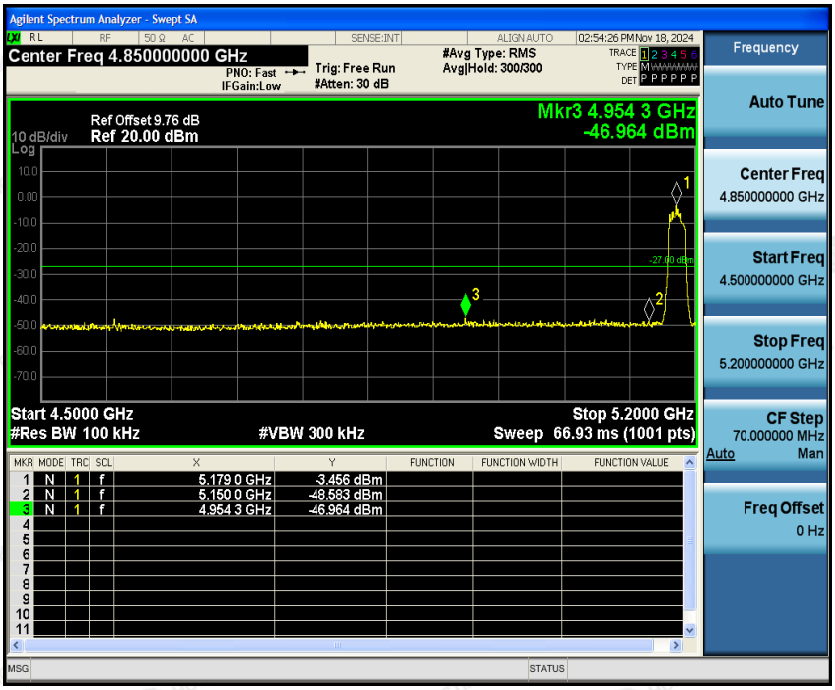



**5700MHz**

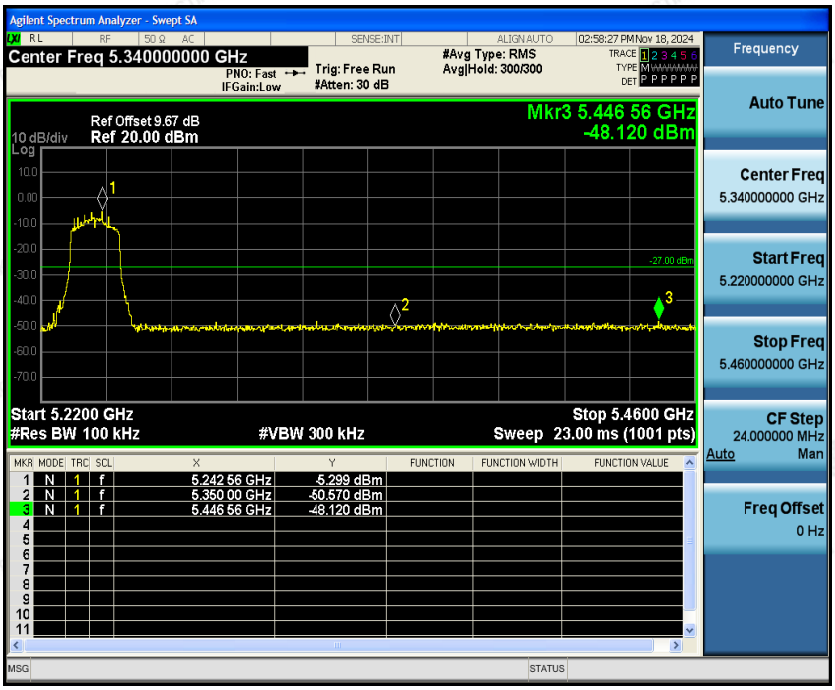


**Band Edges(IEEE802.11n HT20 mode)**

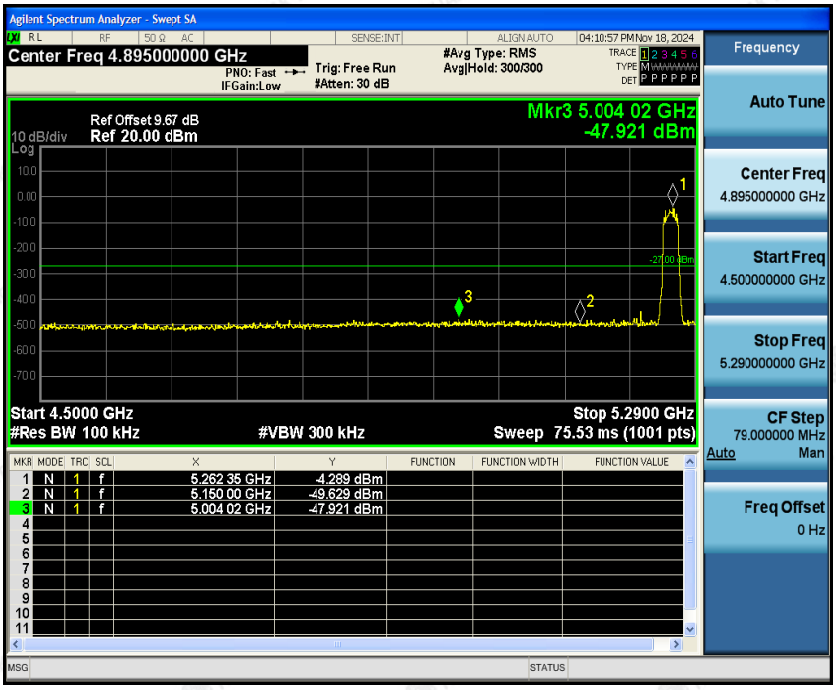
**5180MHz**



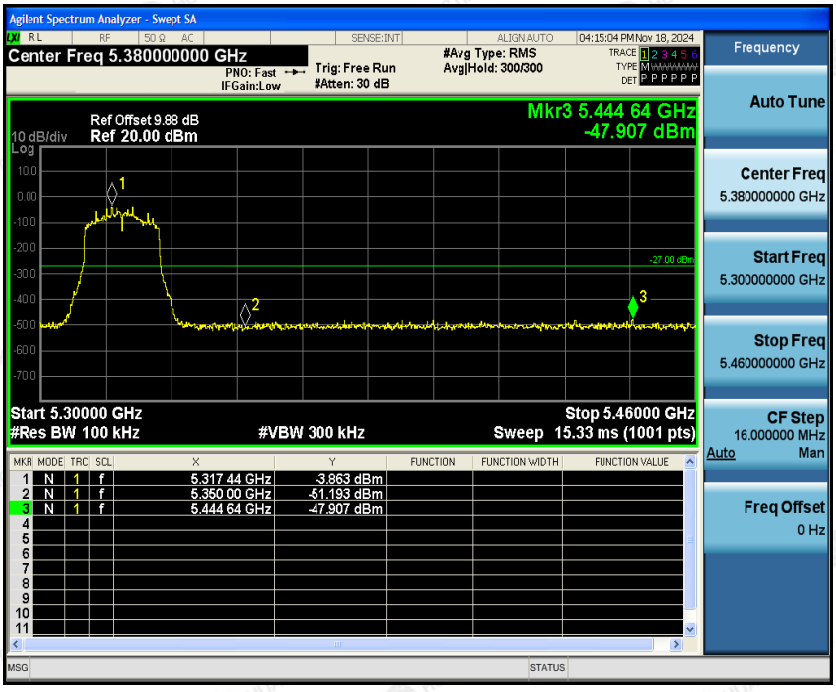

**5240MHz**



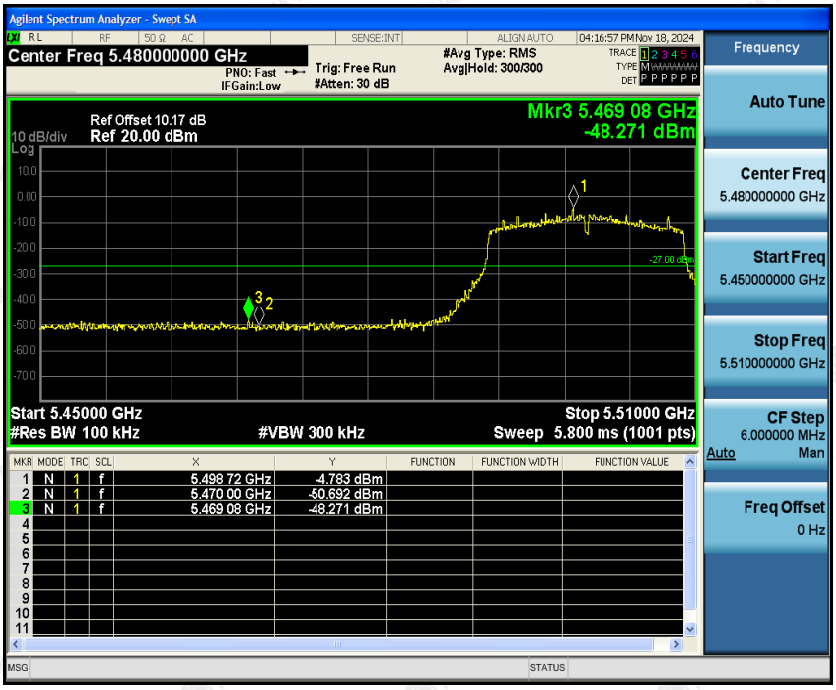
**5260MHz**



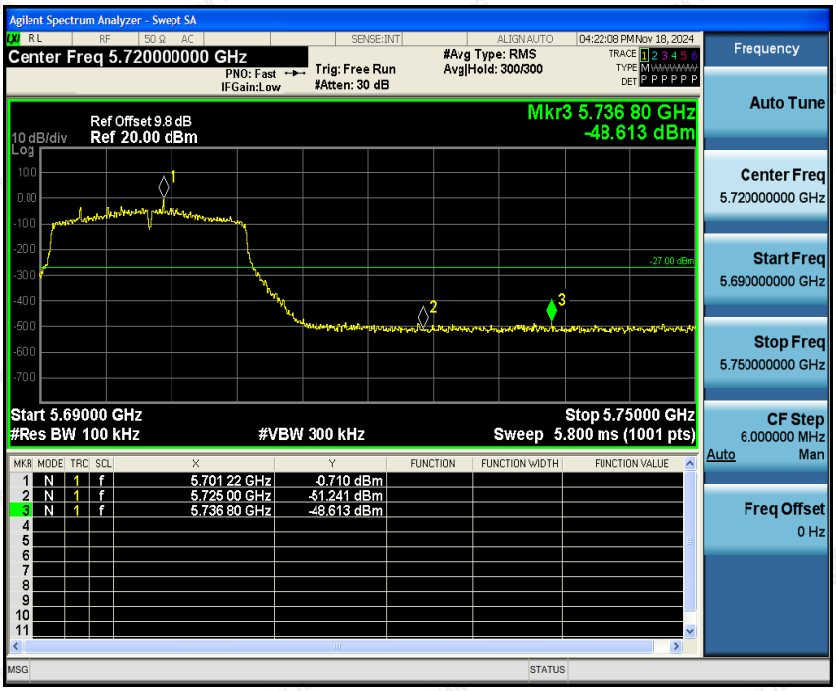

**5320MHz**



**5500MHz**

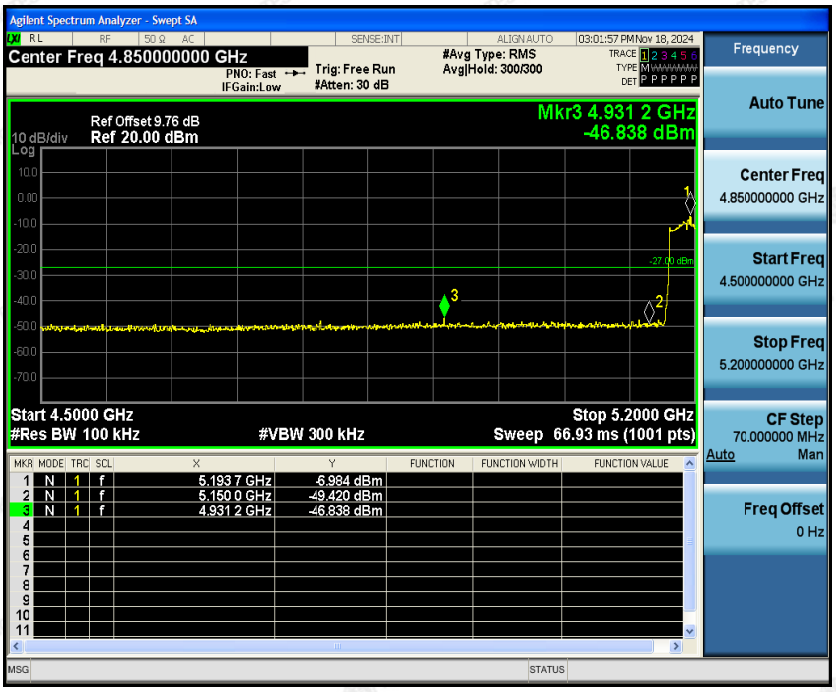



**5700MHz**

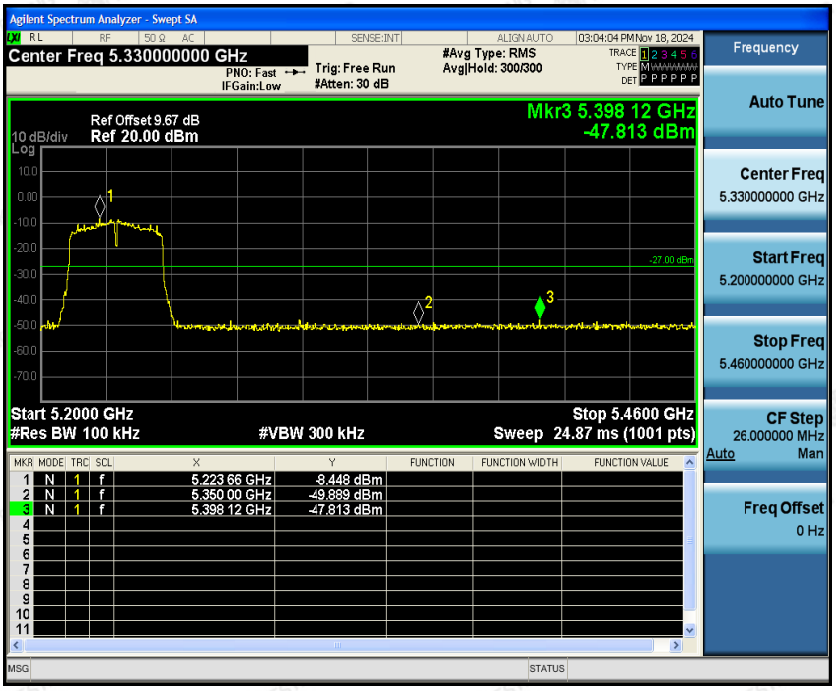


**Band Edges(IEEE802.11n HT40 mode)**

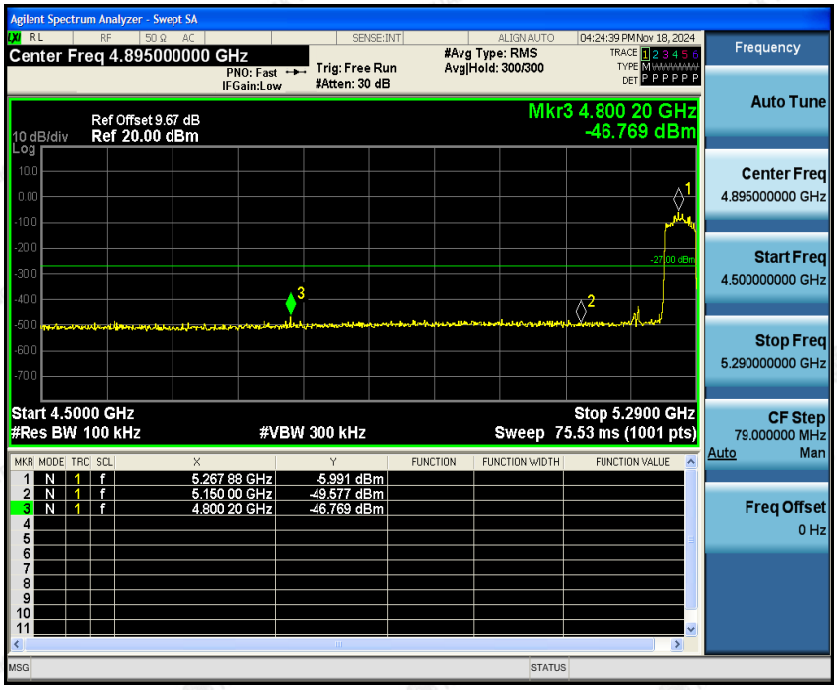
**5190MHz**



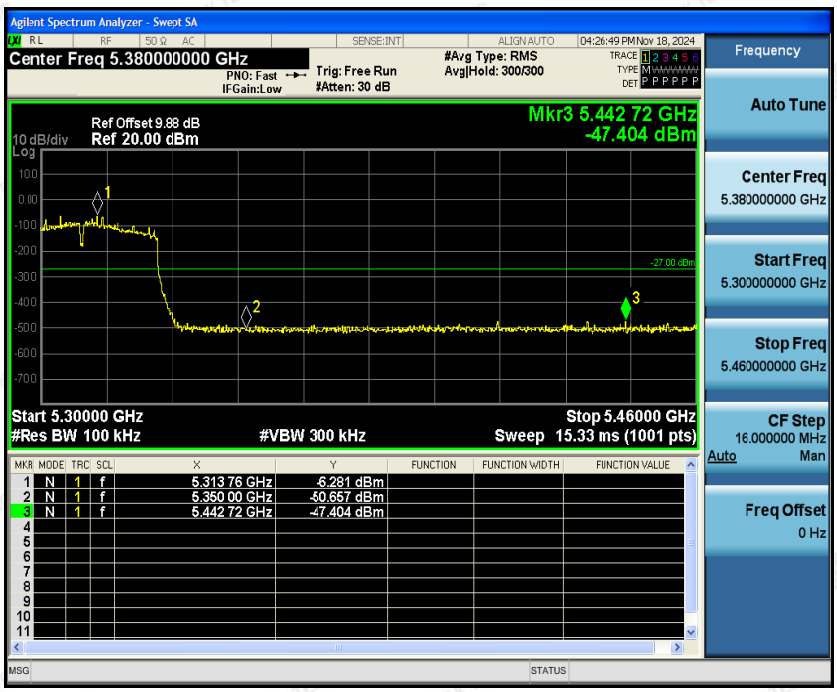

**5230MHz**



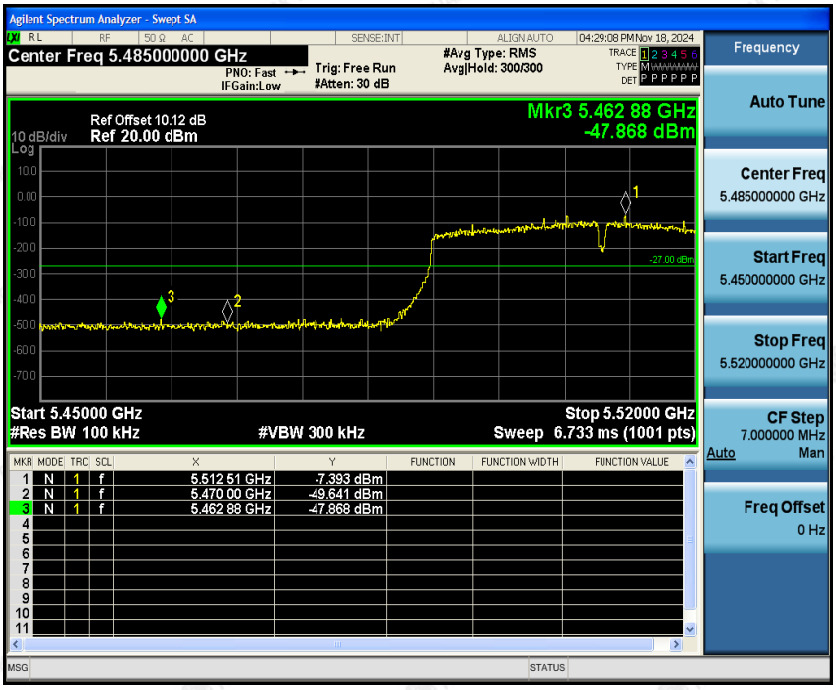
**5270MHz**



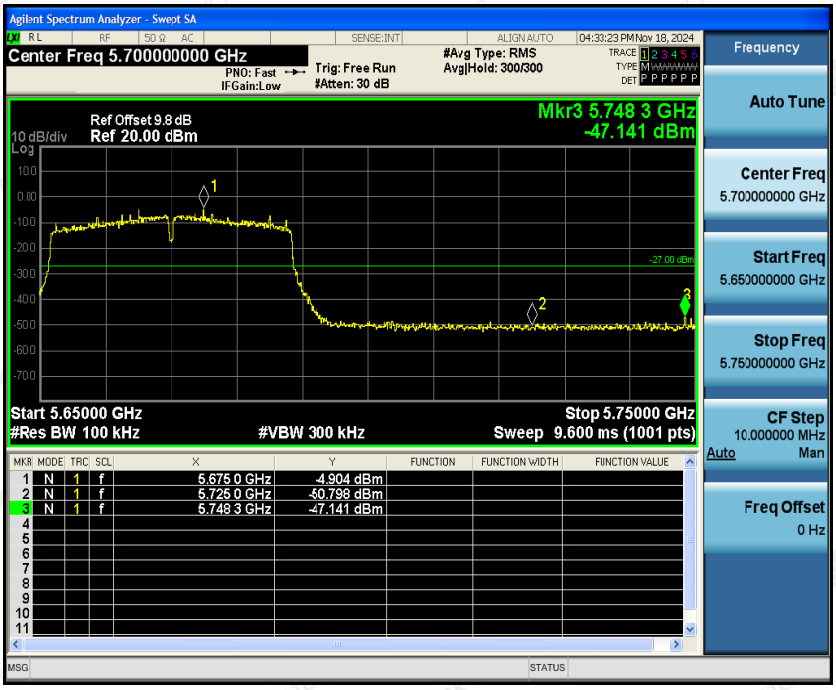

**5310MHz**



**5510MHz**

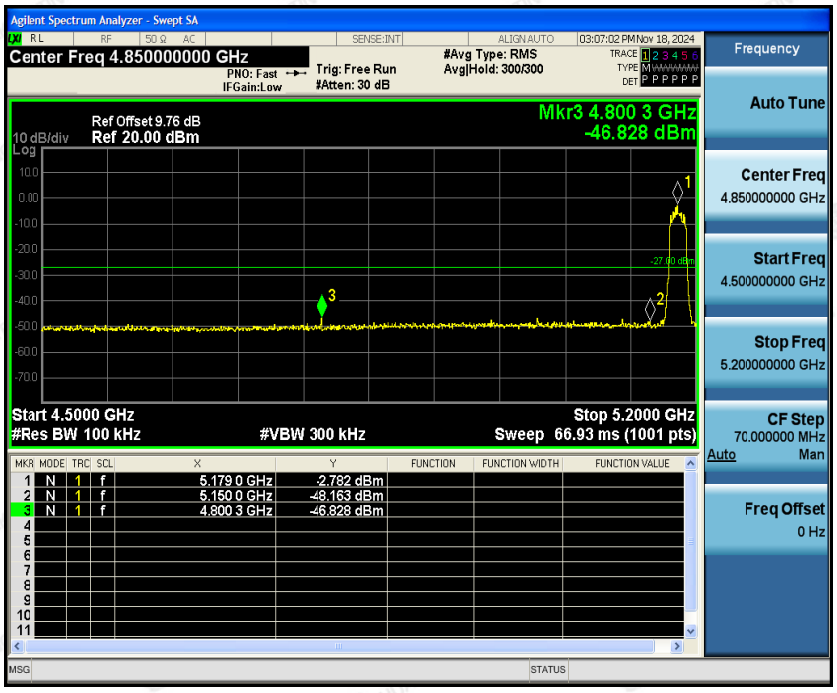



**5670MHz**

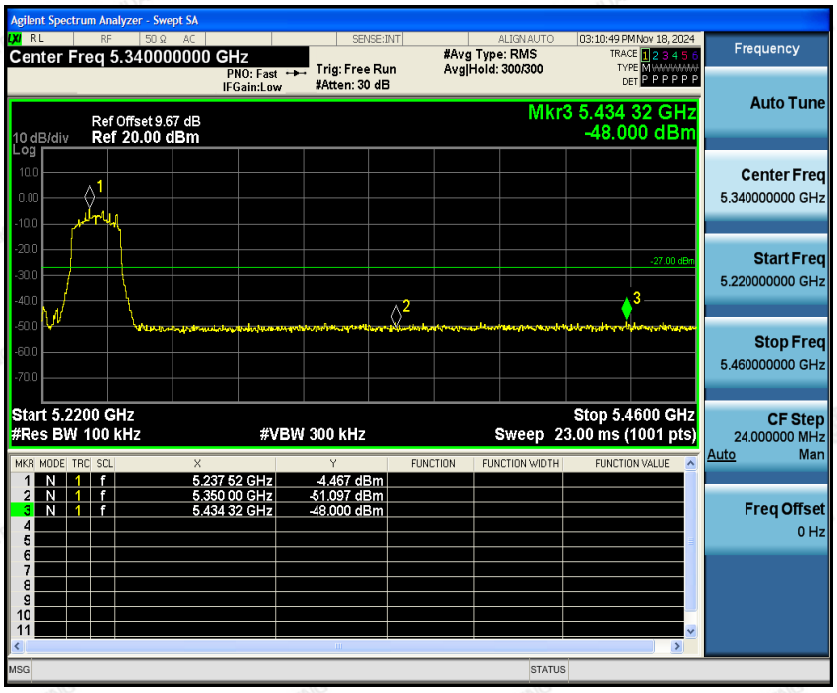


**Band Edges(IEEE802.11ac HT20 mode)**

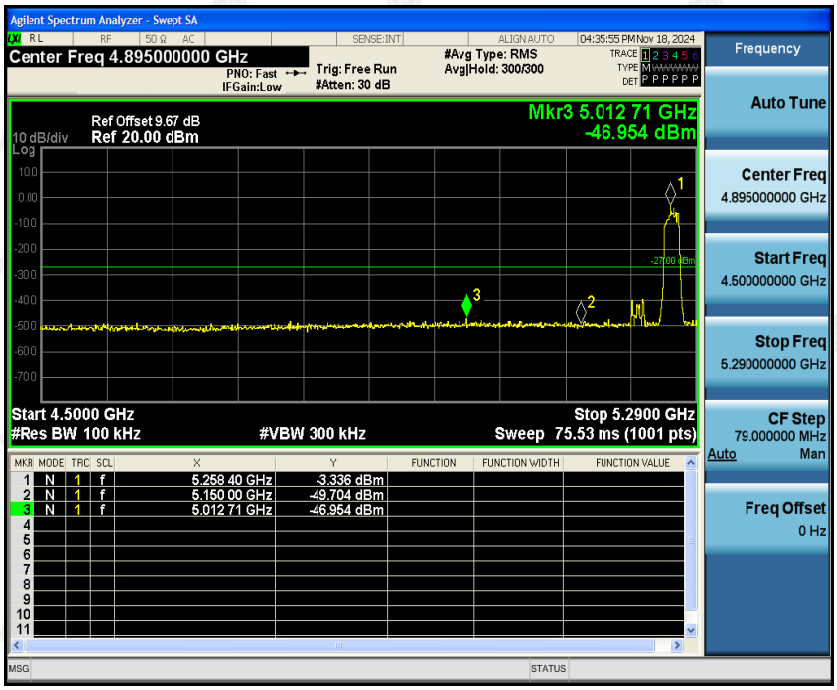
**5180MHz**



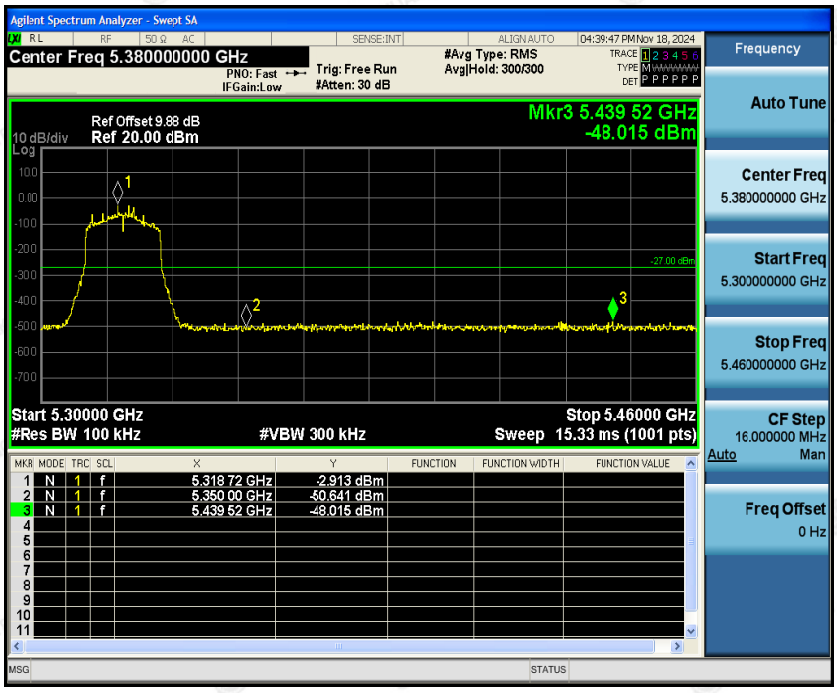

**5240MHz**



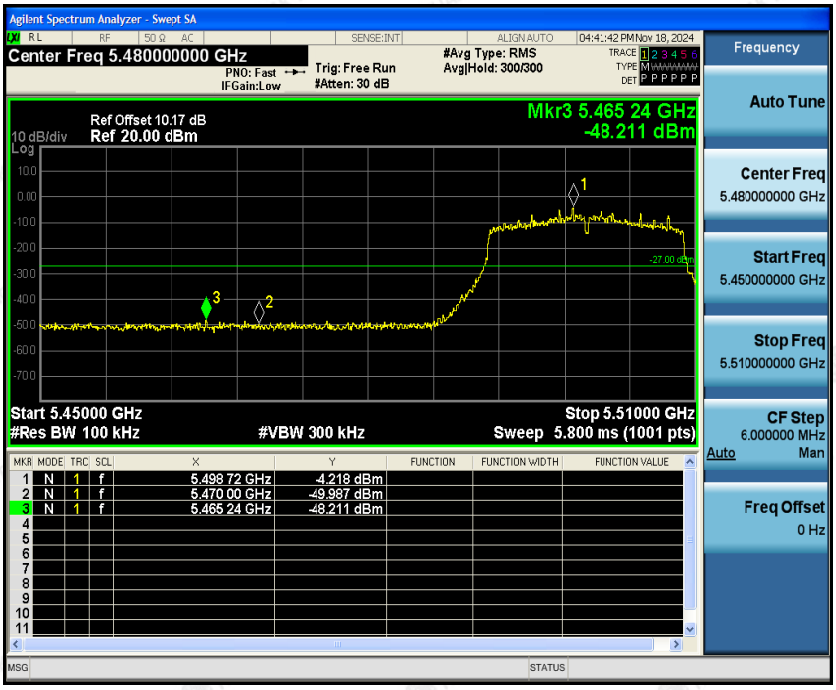
**5260MHz**



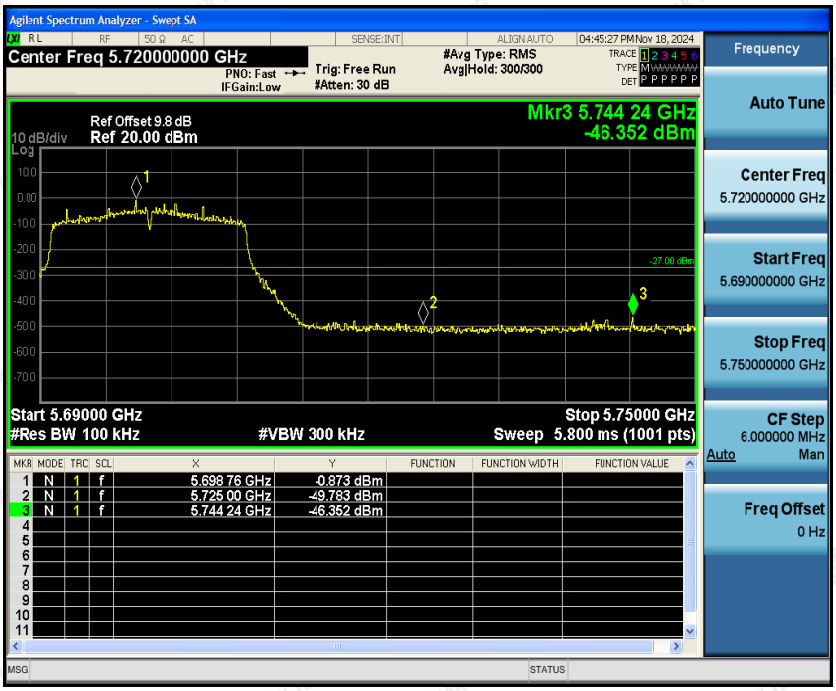

**5320MHz**



**5500MHz**

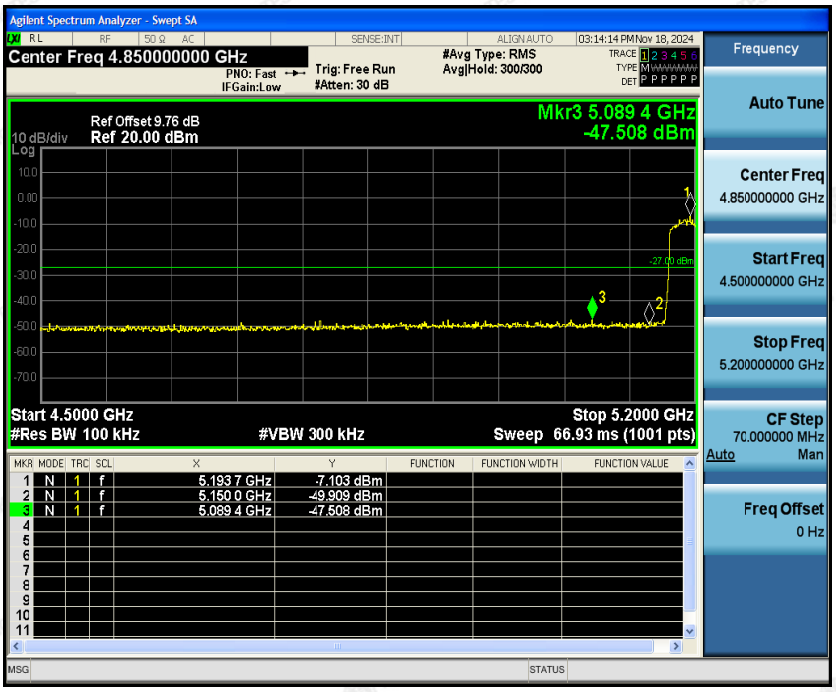



**5700MHz**

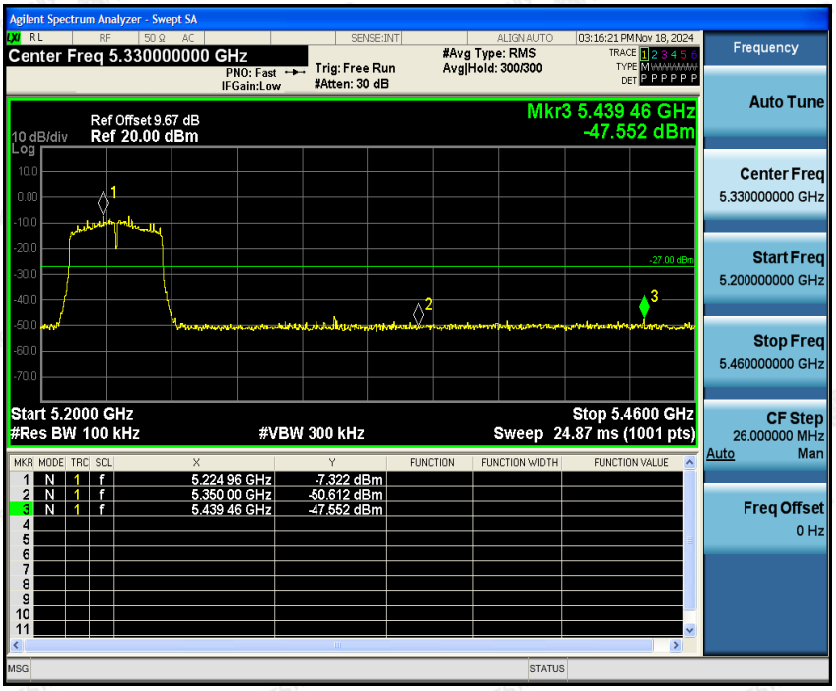


**Band Edges(IEEE802.11ac HT40 mode)**

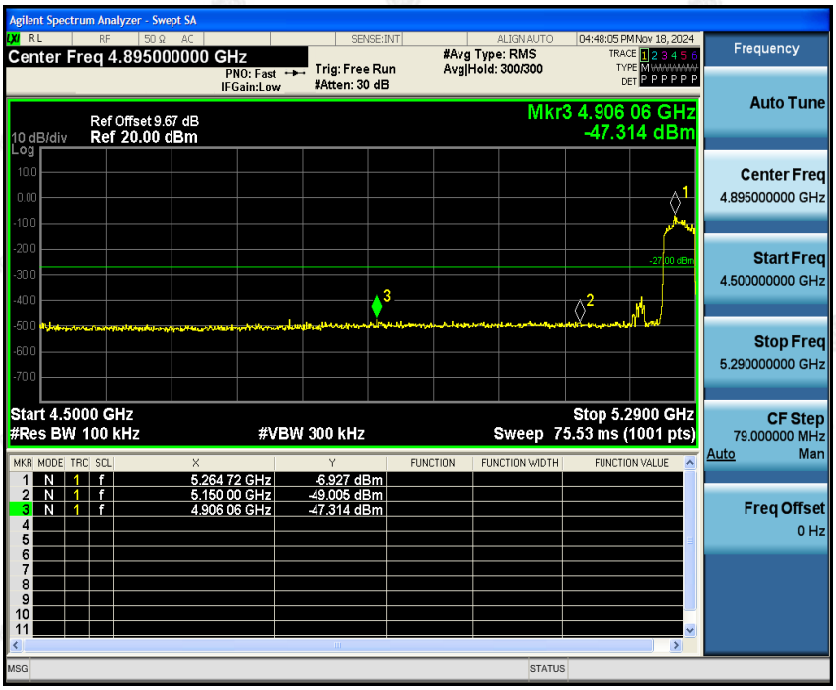
**5190MHz**



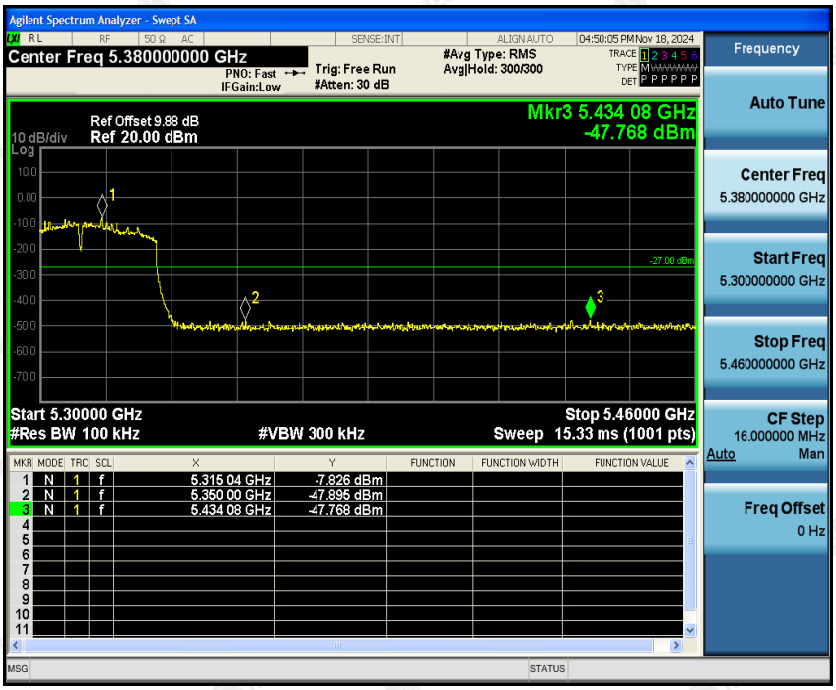

**5230MHz**



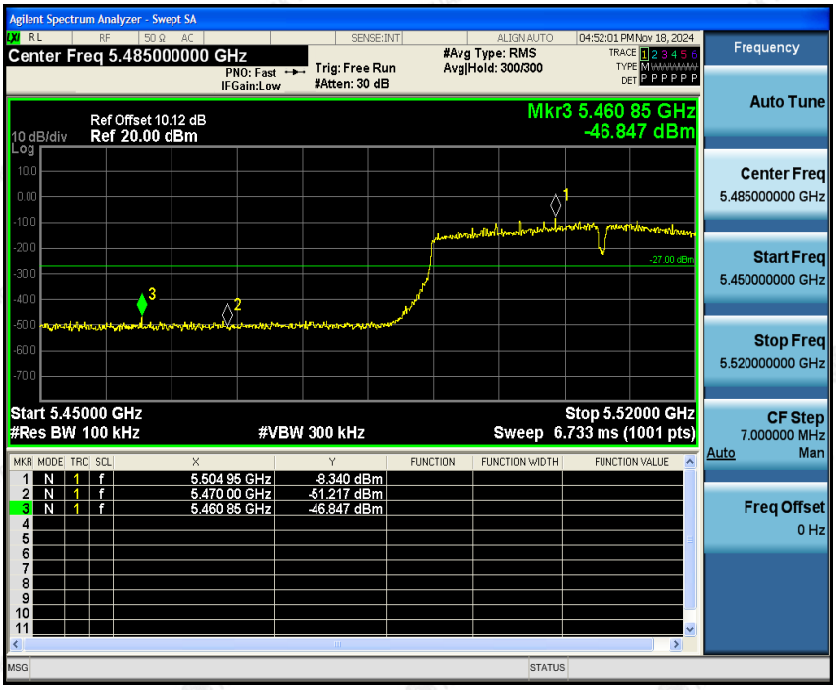
**5270MHz**



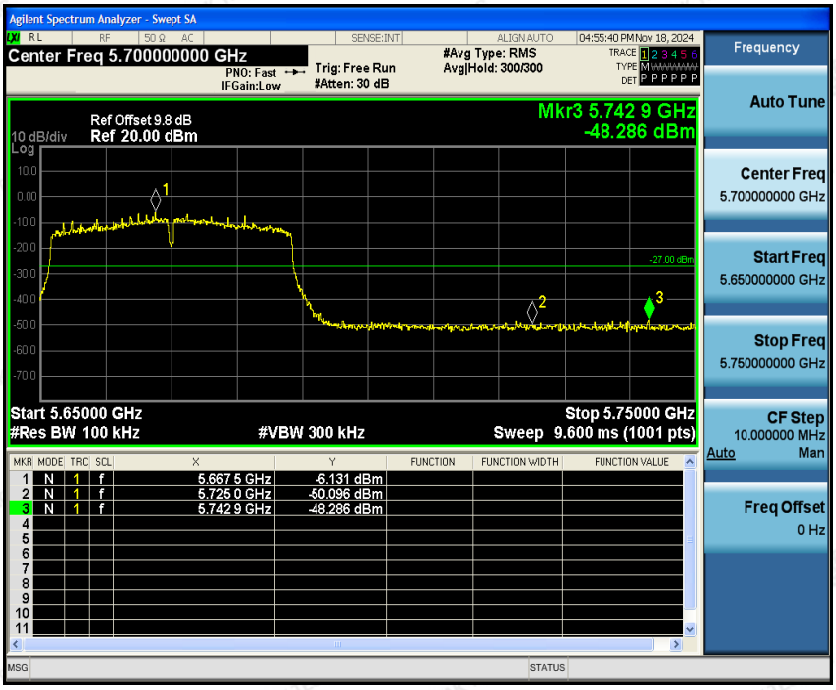

**5310MHz**



**5510MHz**

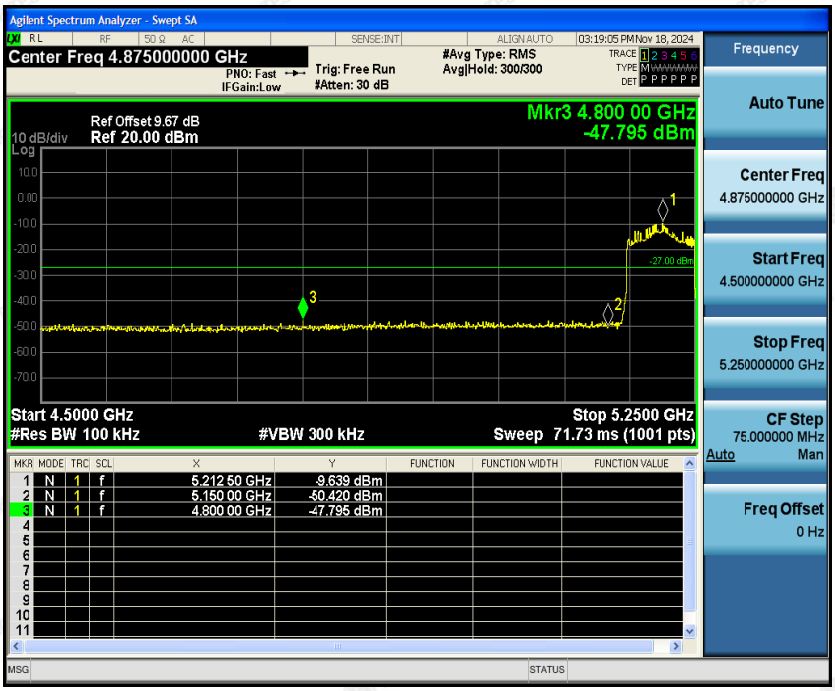



**5670MHz**

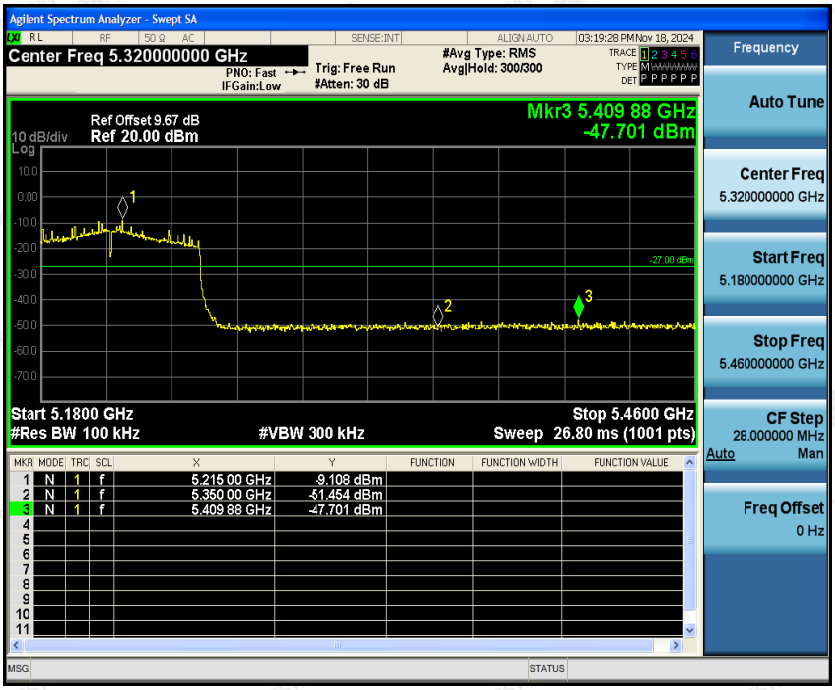


**Band Edges(IEEE802.11ac HT80 mode)**

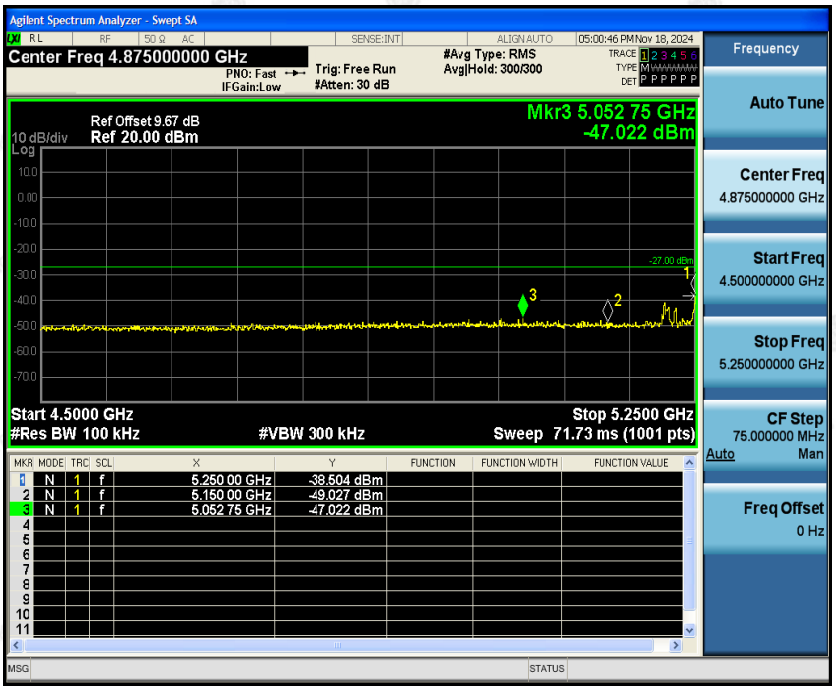
**5210MHz**



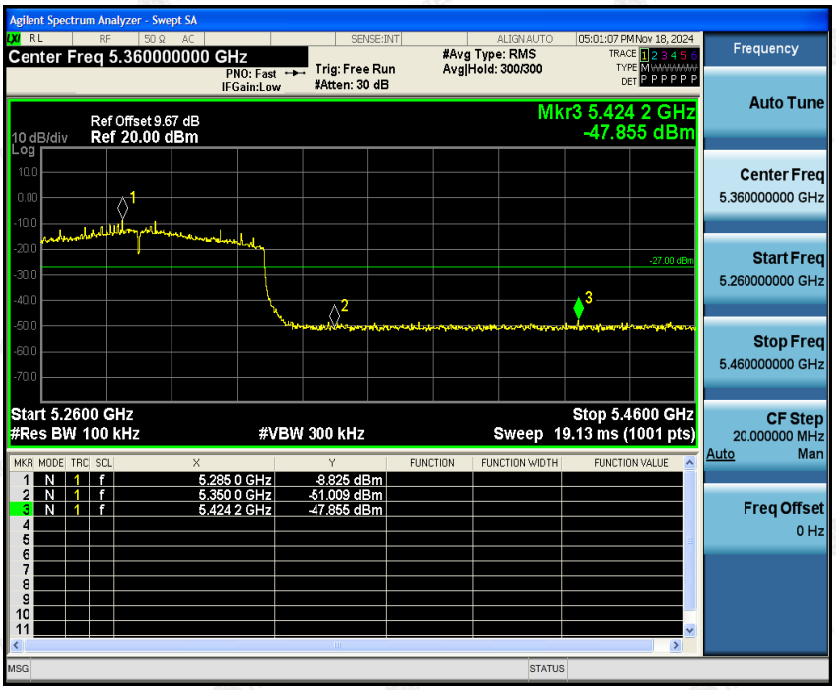

**5210MHz**



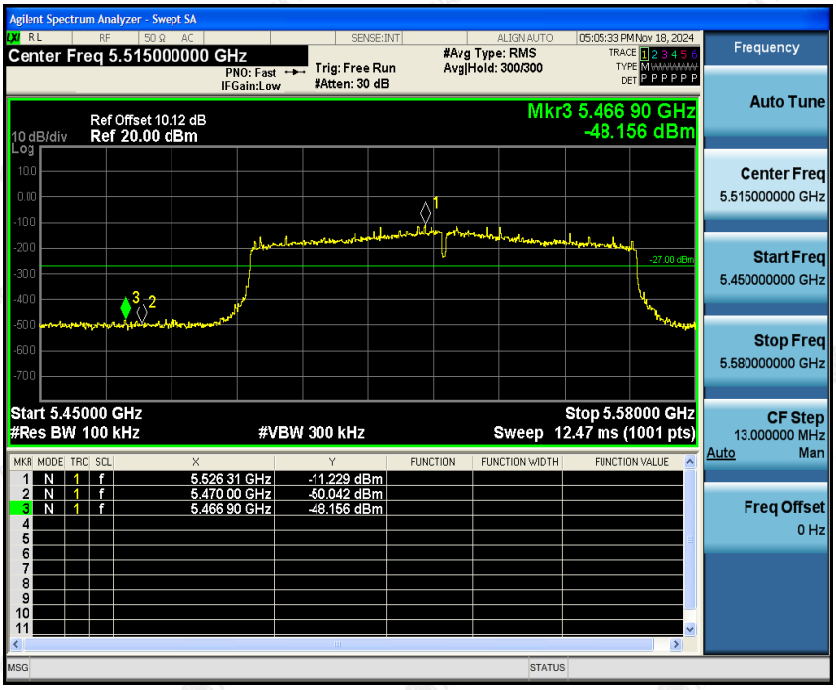
**5290MHz**



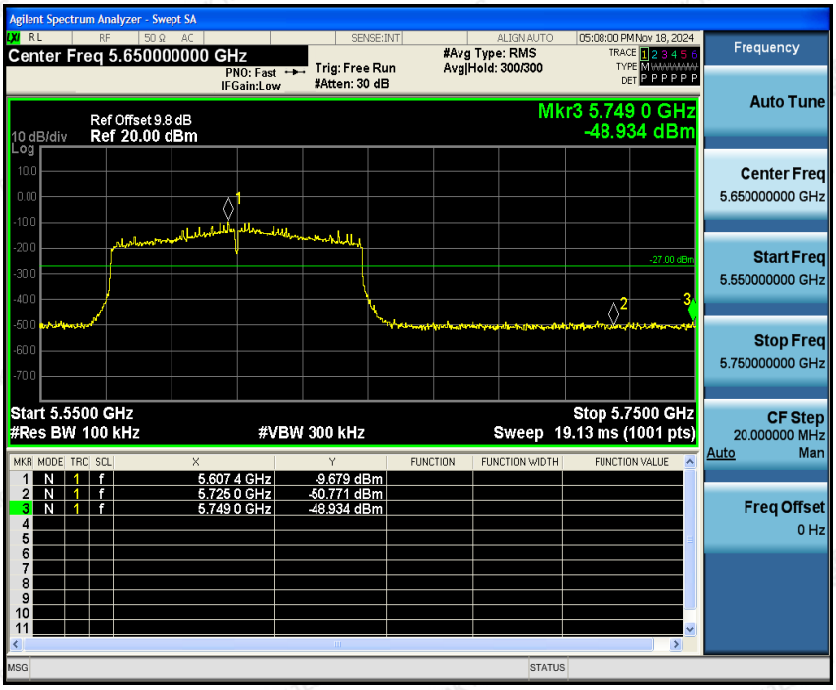

**5290MHz**



**5530MHz**

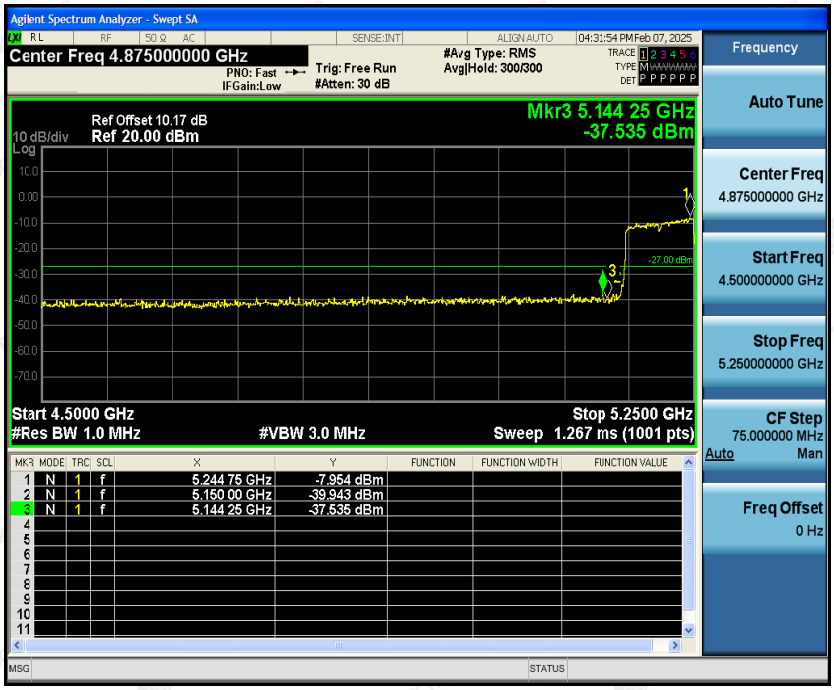



**5610MHz**

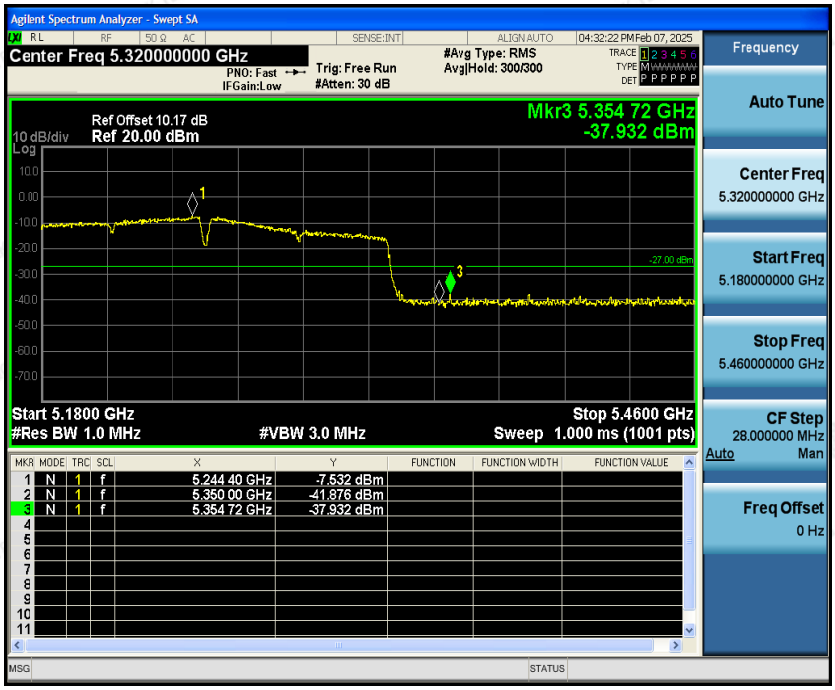


**Band Edges(IEEE802.11ac HT160 mode)**

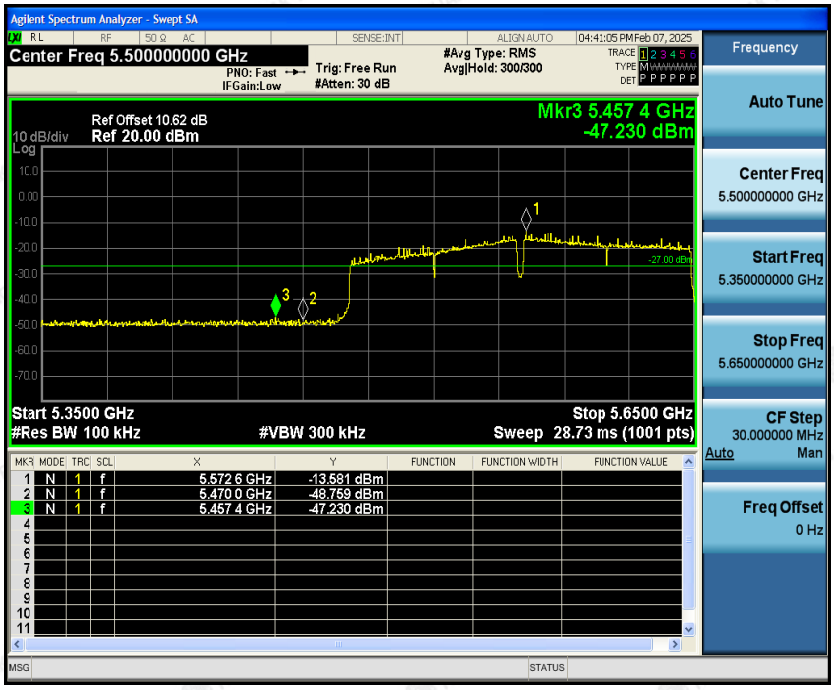
**5250MHz**



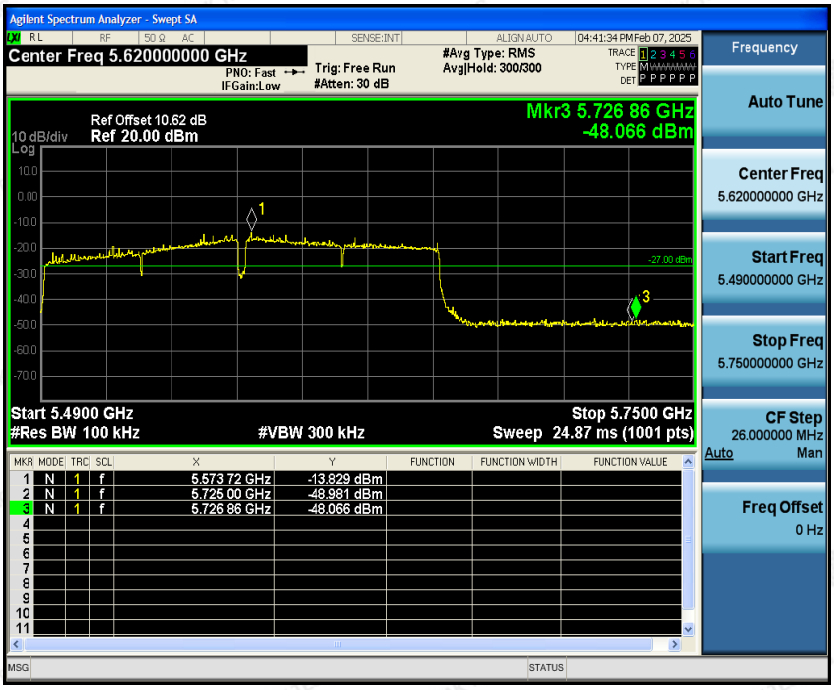

**5250MHz**



**5570MHz**

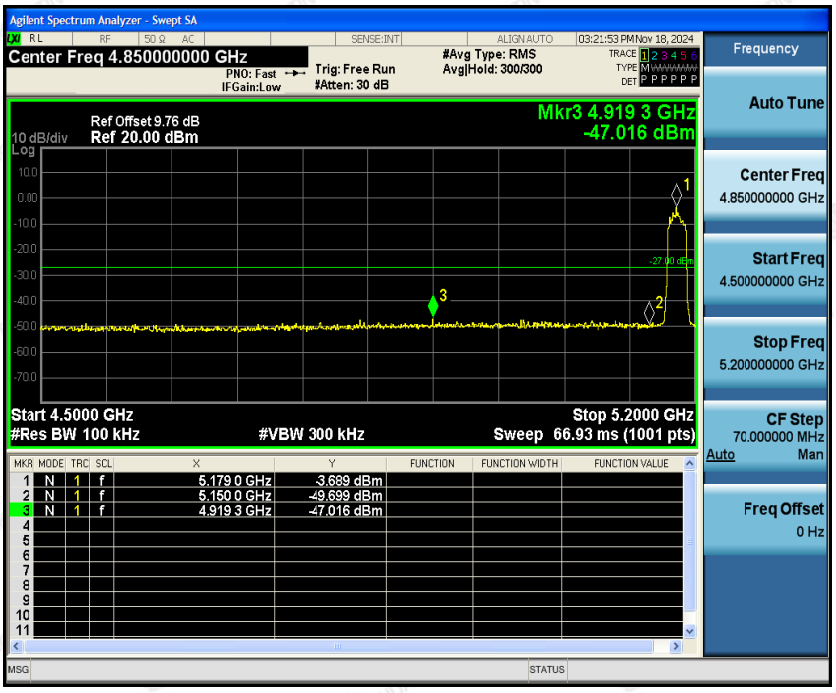



**5570MHz**

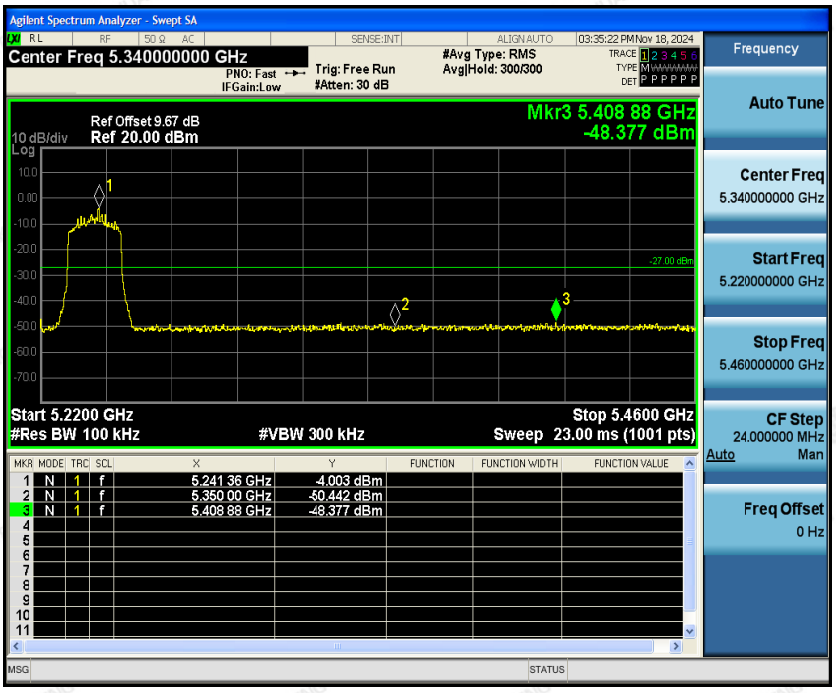


**Band Edges(IEEE802.11ax HE20 mode)**

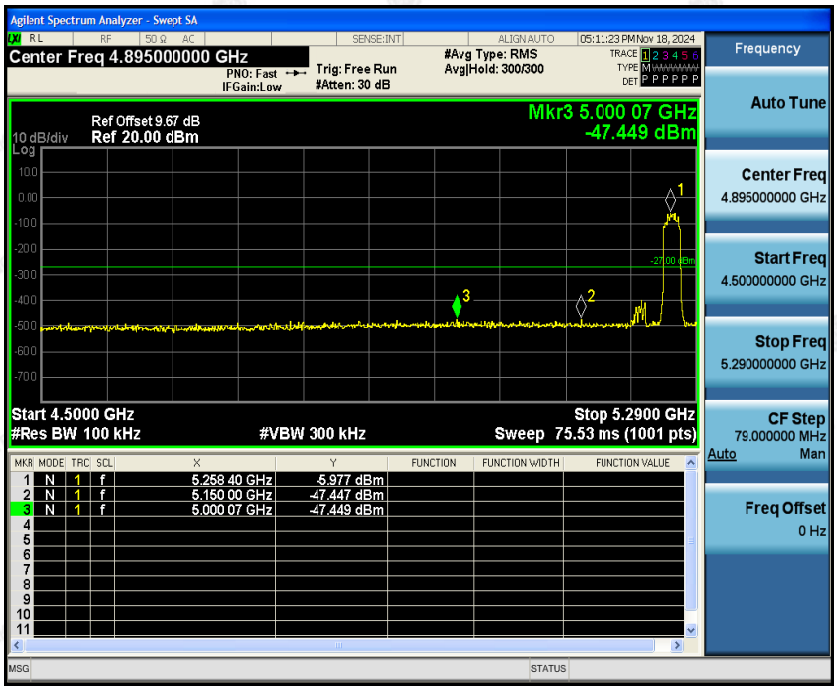
**5180MHz**



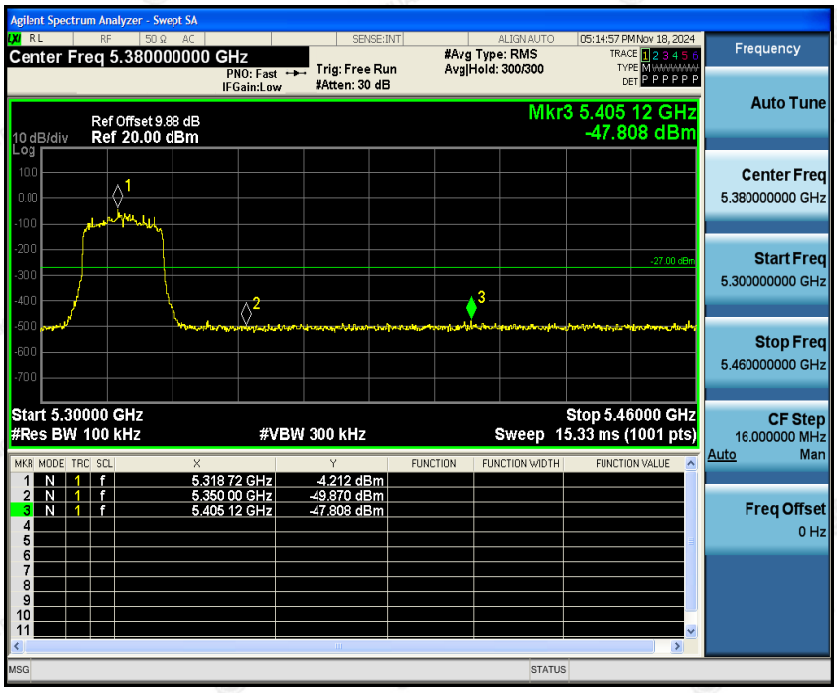

**5240MHz**



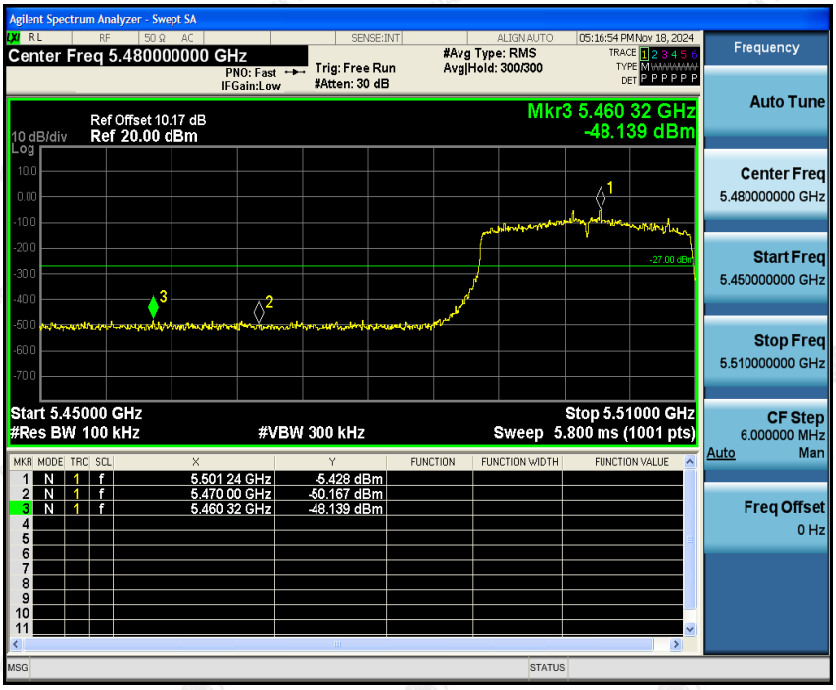
**5260MHz**



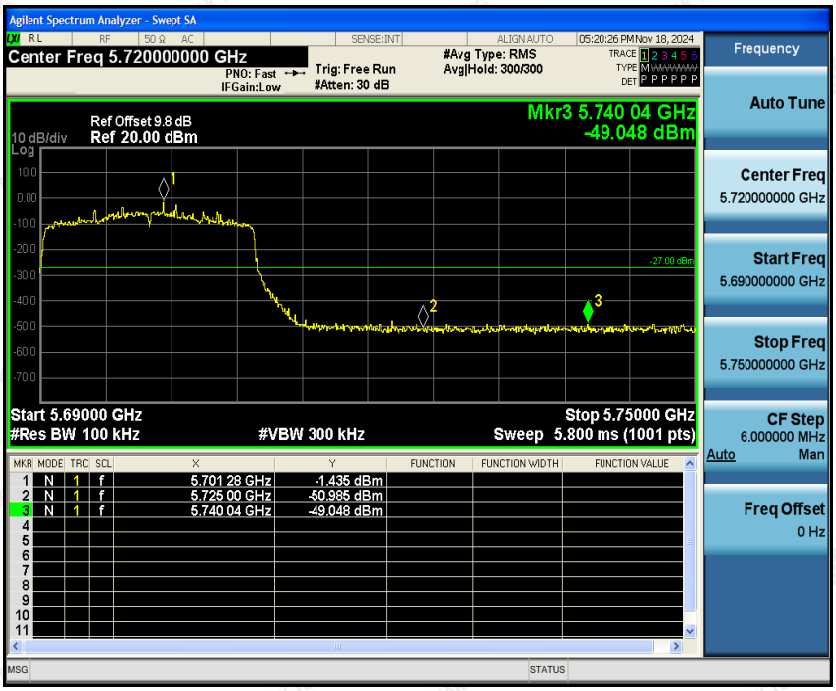

**5320MHz**



**5500MHz**

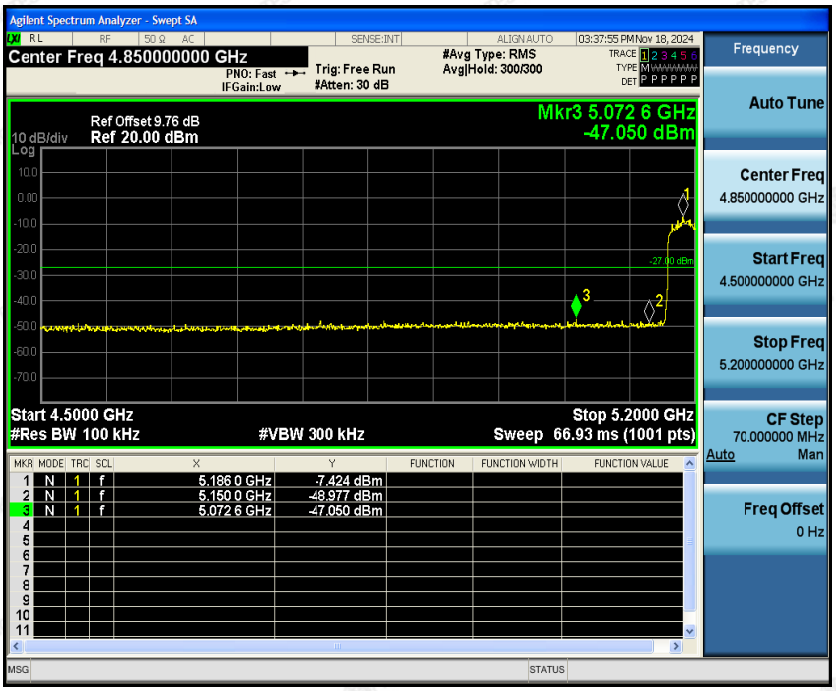



**5700MHz**

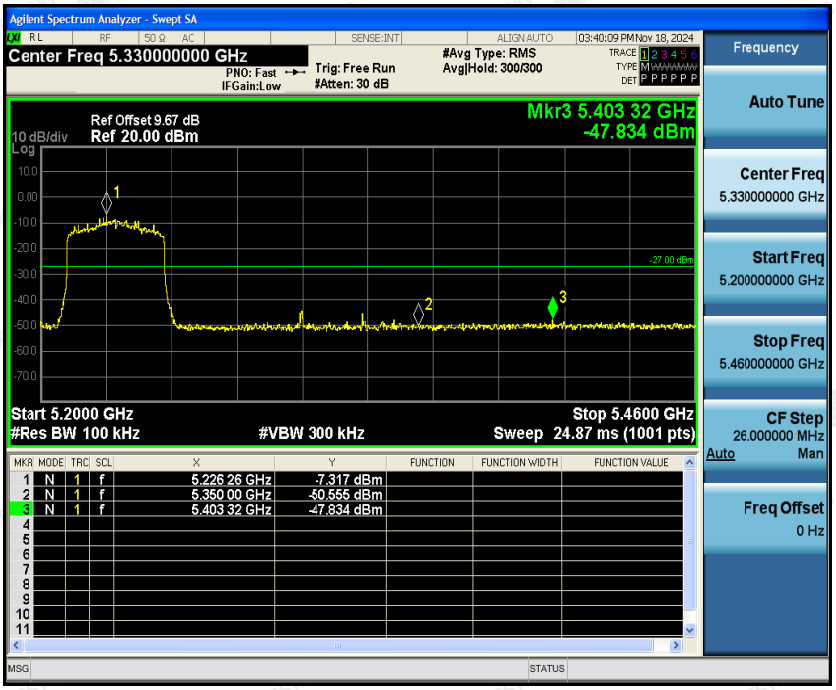


**Band Edges(IEEE802.11ax HE40 mode)**

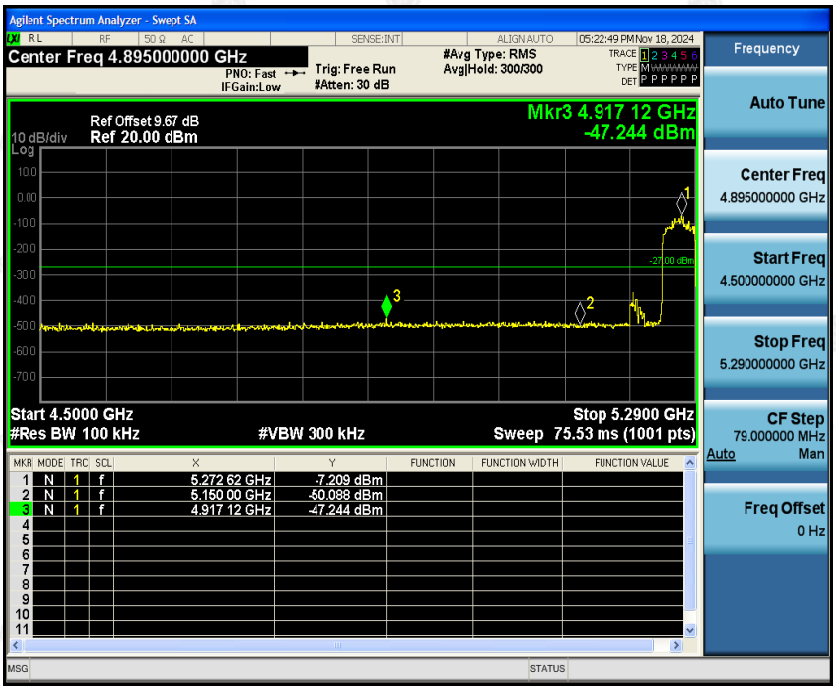
**5190MHz**



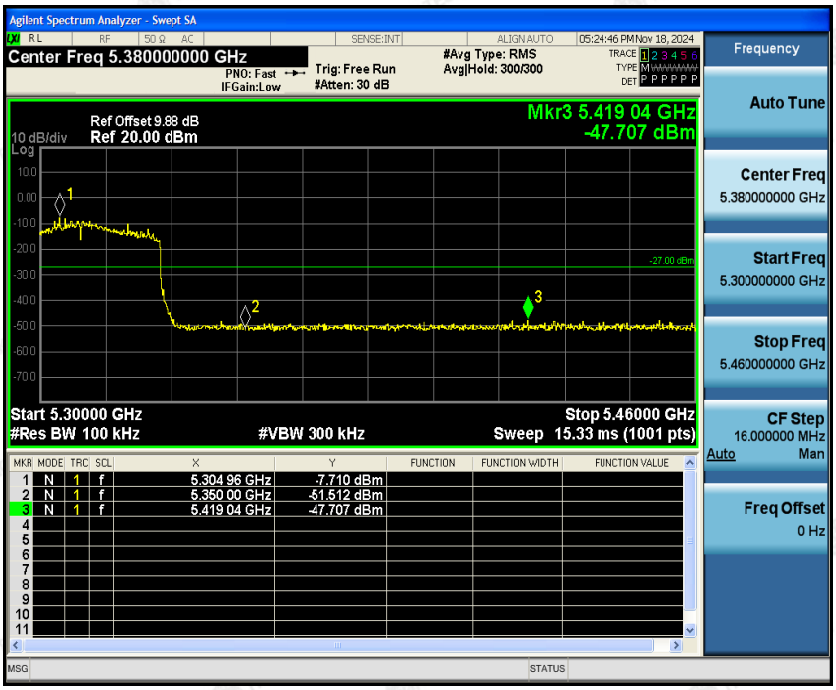

**5230MHz**



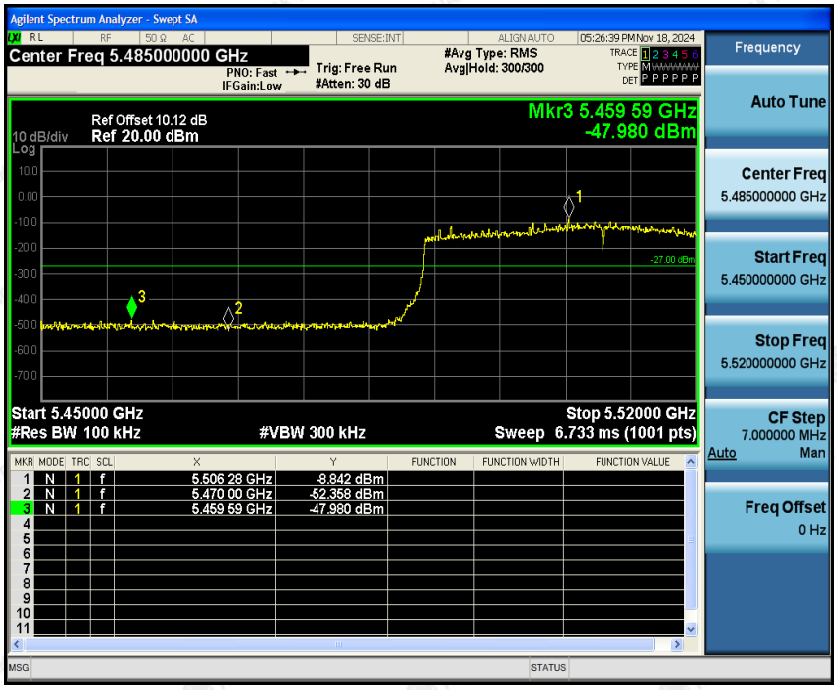
**5270MHz**



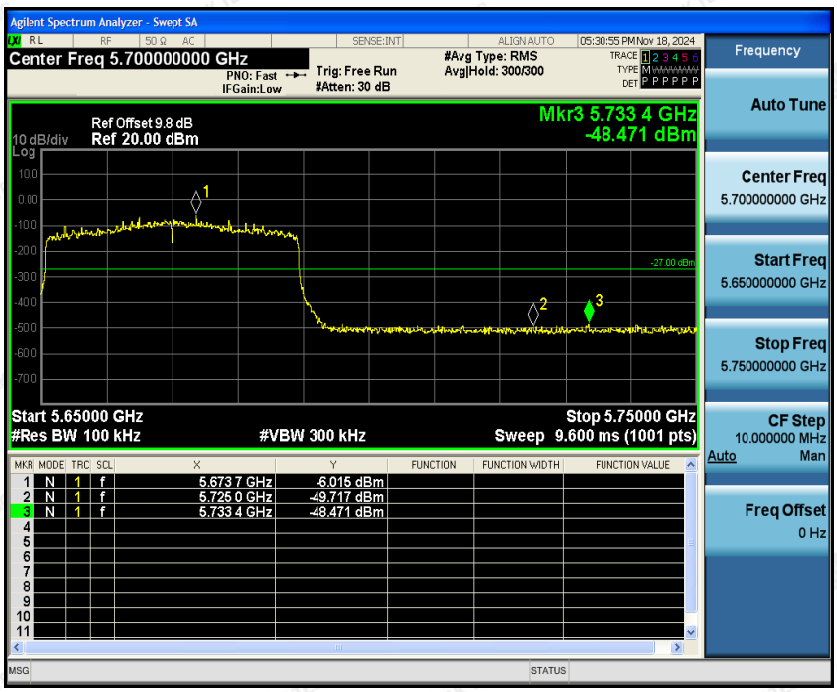

**5310MHz**



**5510MHz**

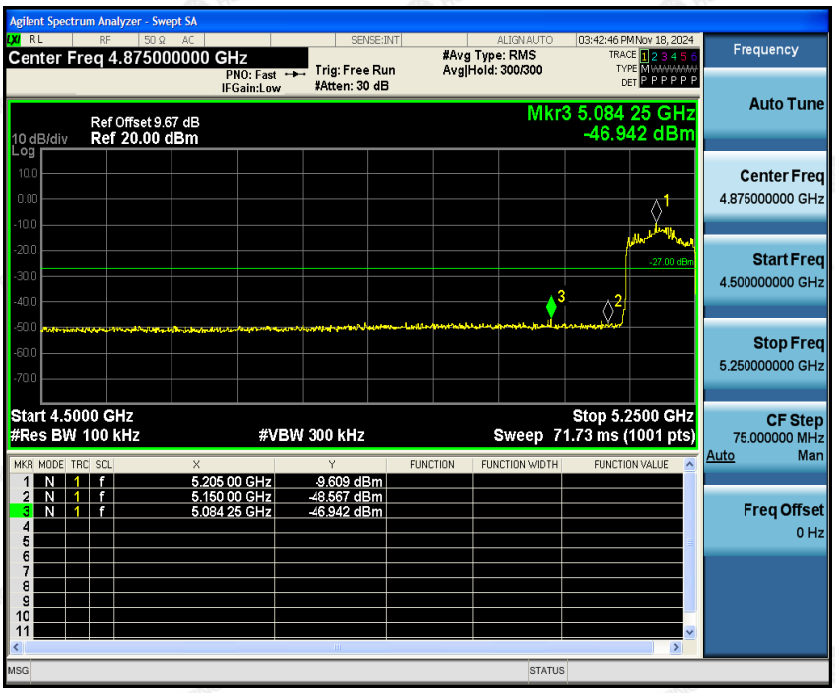



**5670MHz**

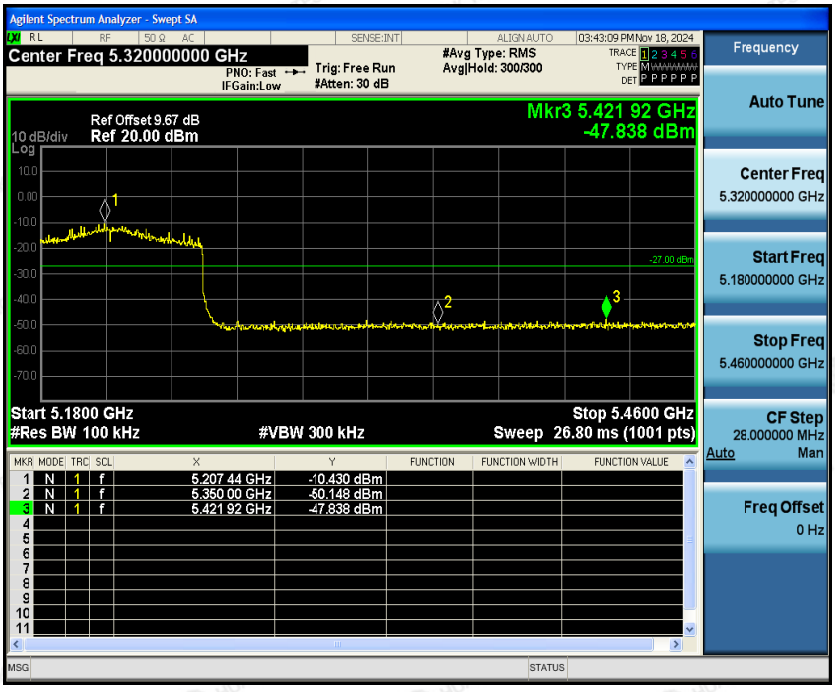


**Band Edges(IEEE802.11ax HE80 mode)**

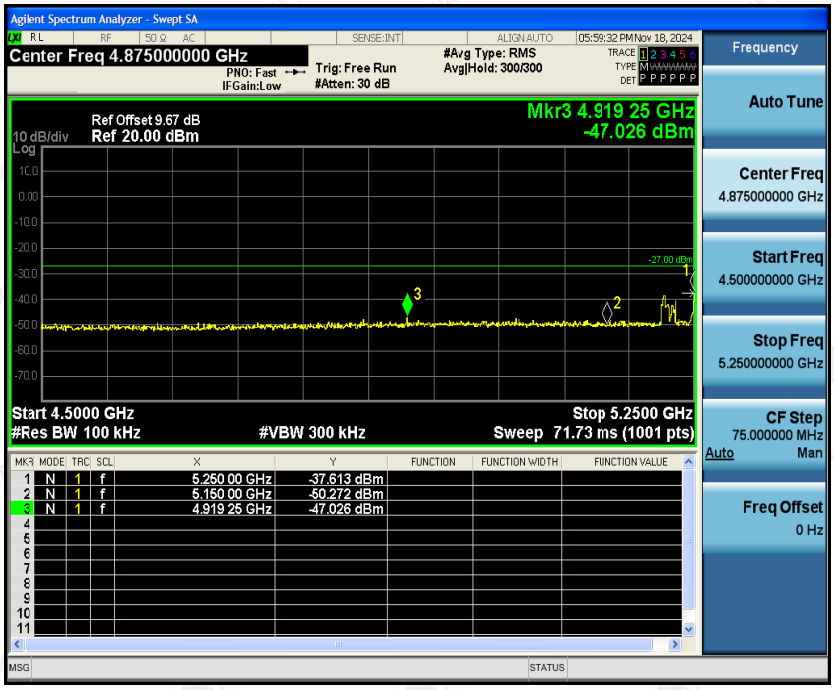
**5210MHz**



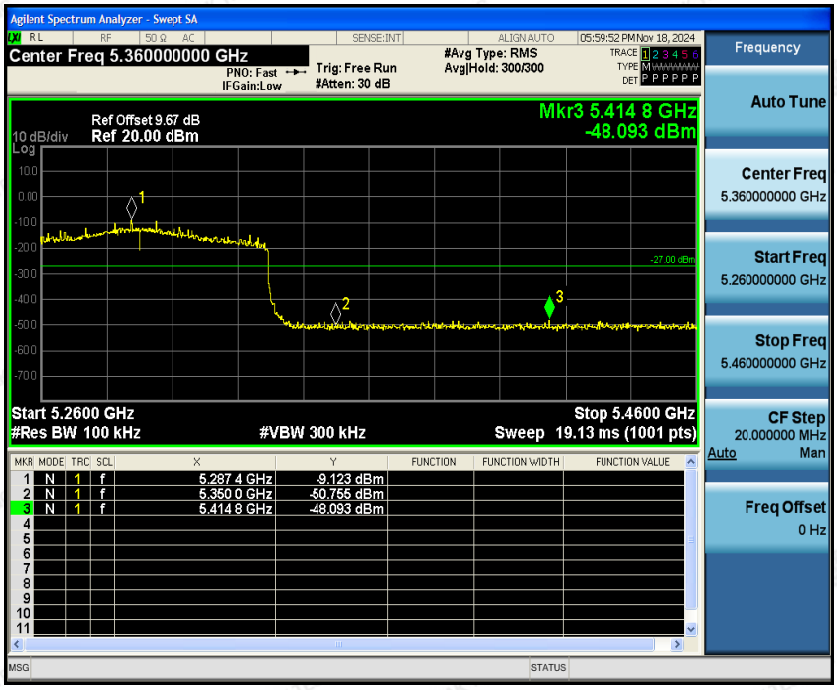

**5210MHz**



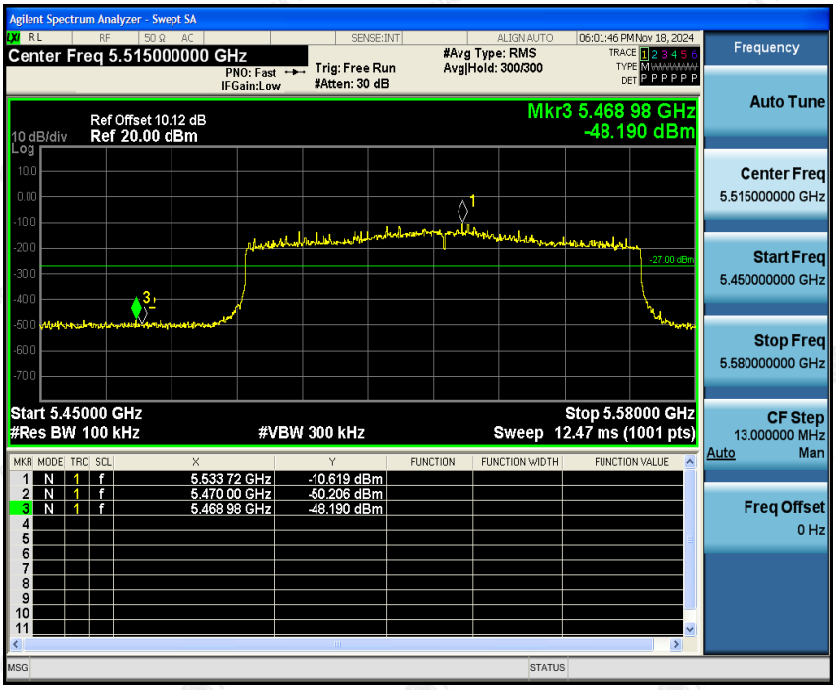
**5290MHz**



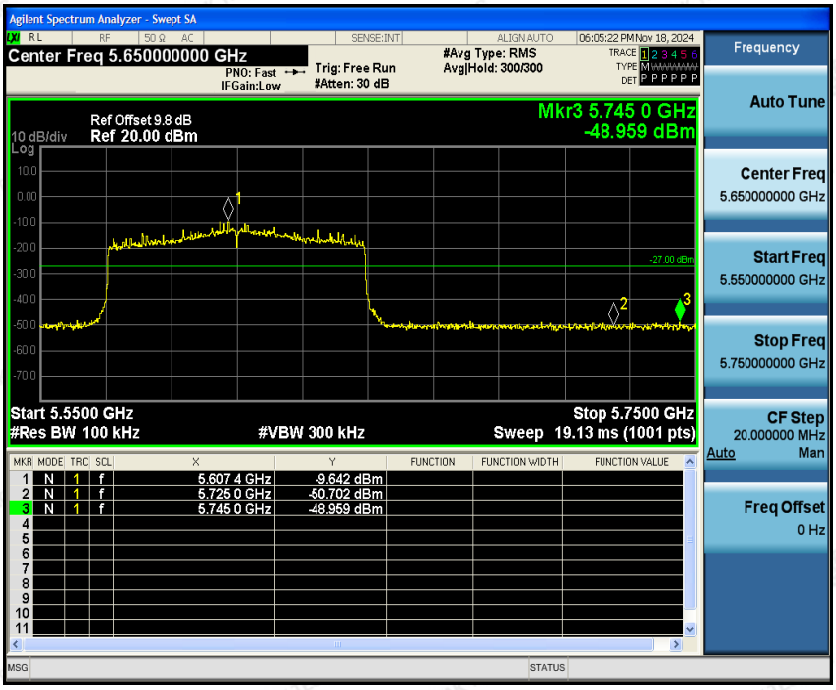

**5290MHz**



**5530MHz**

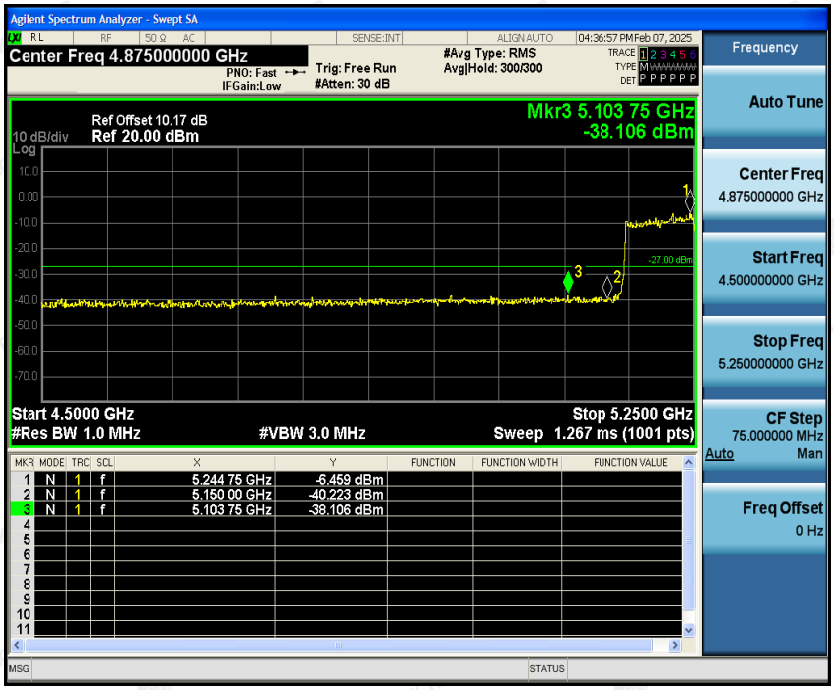



**5610MHz**

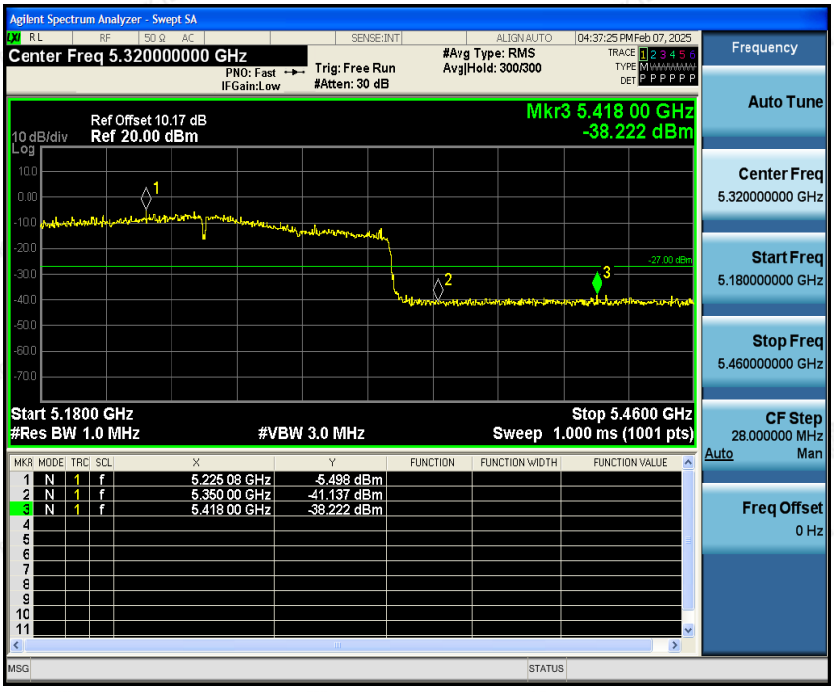


**Band Edges(IEEE802.11ax HE160 mode)**

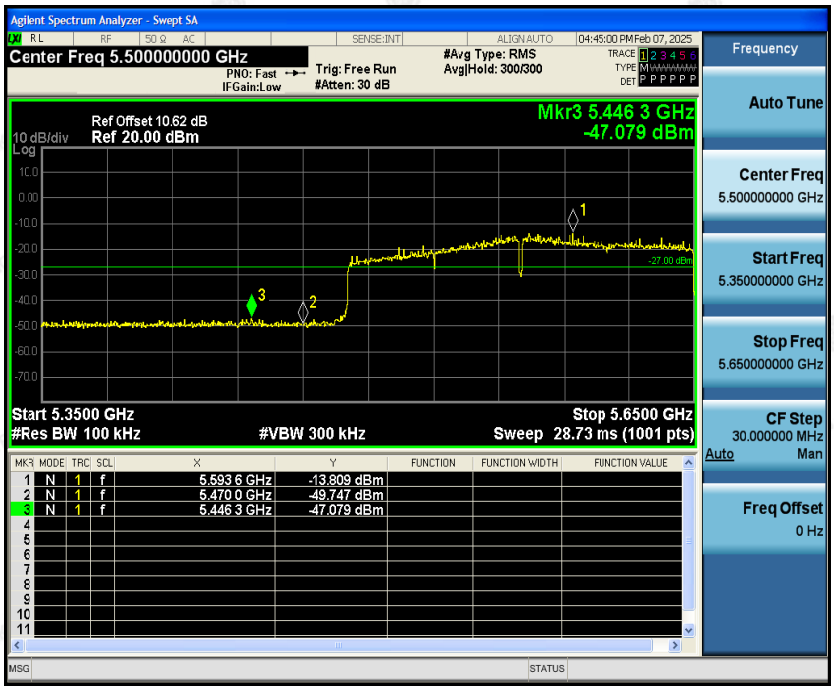
**5250MHz**



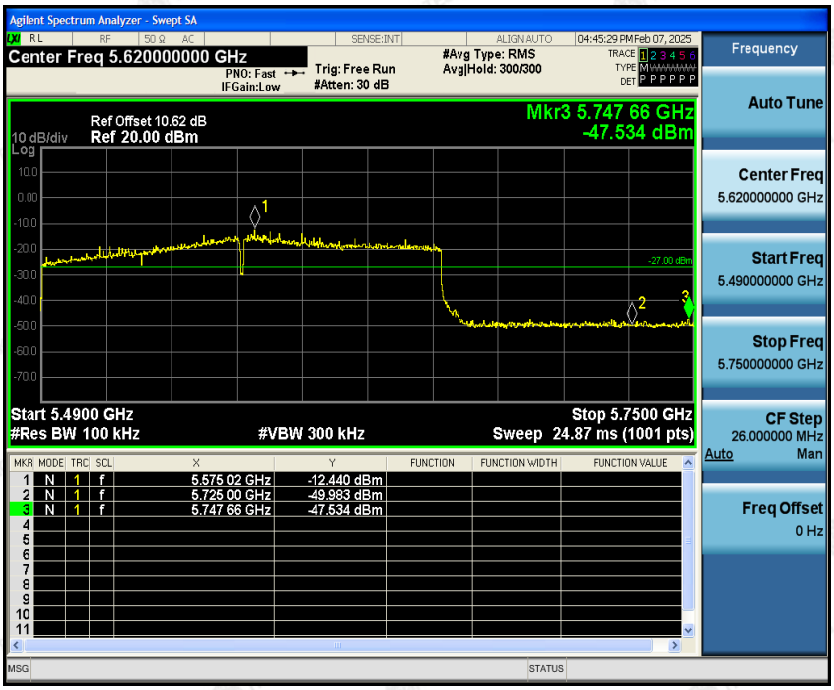

**5250MHz**



**5570MHz**



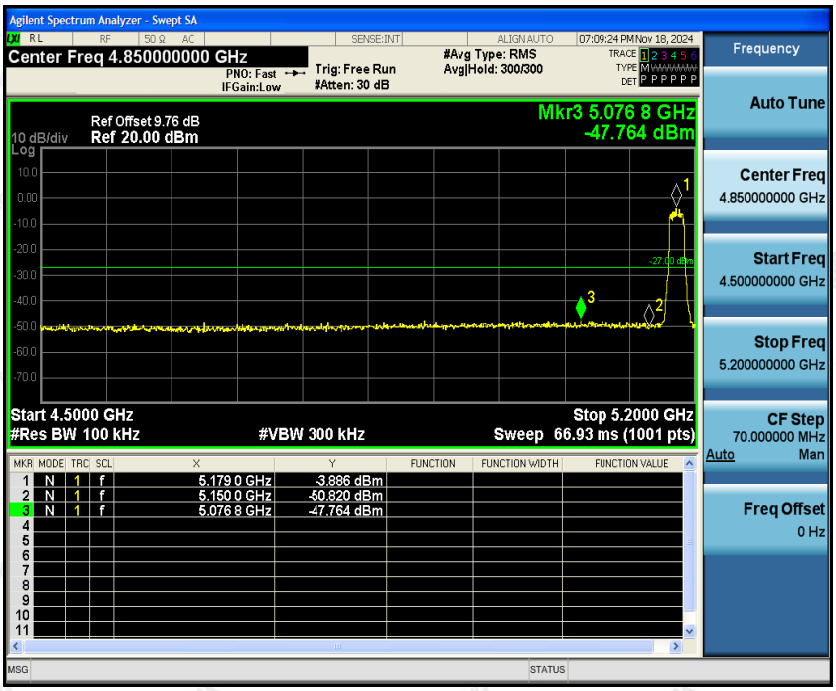

**5570MHz**



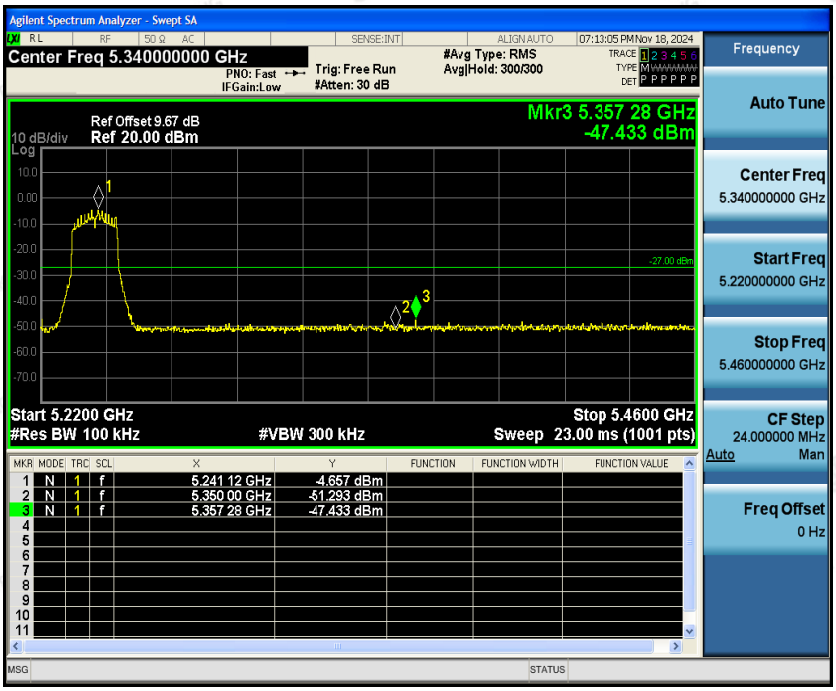
**Antenna 2**

**Band Edges(IEEE802.11a mode)**

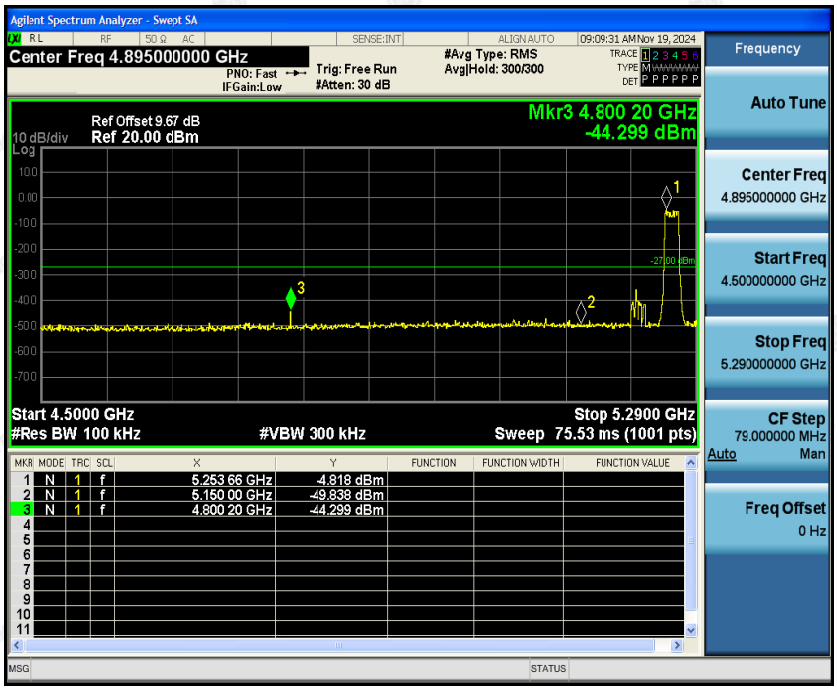
**5180MHz**



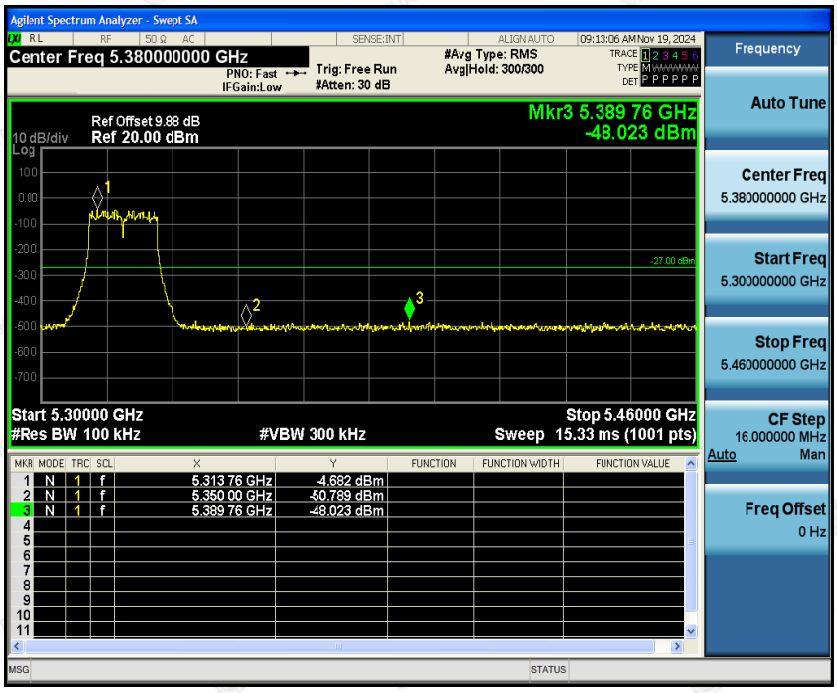

**5240MHz**



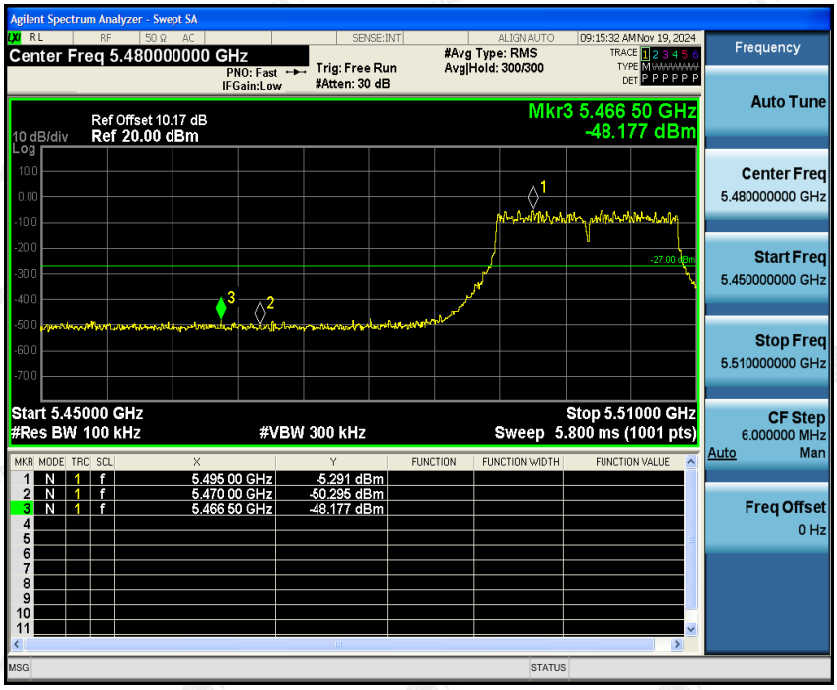
**5260MHz**



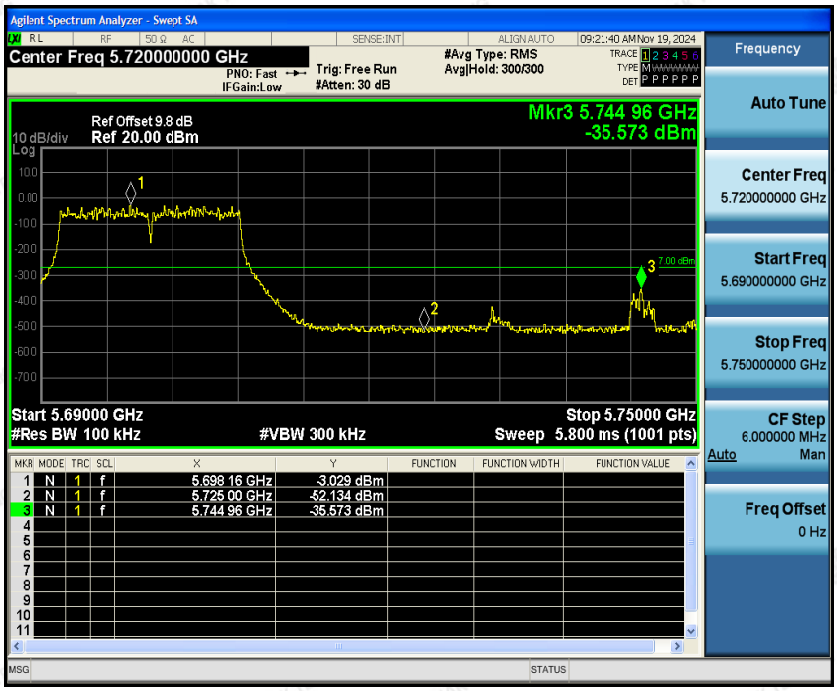

**5320MHz**



**5500MHz**

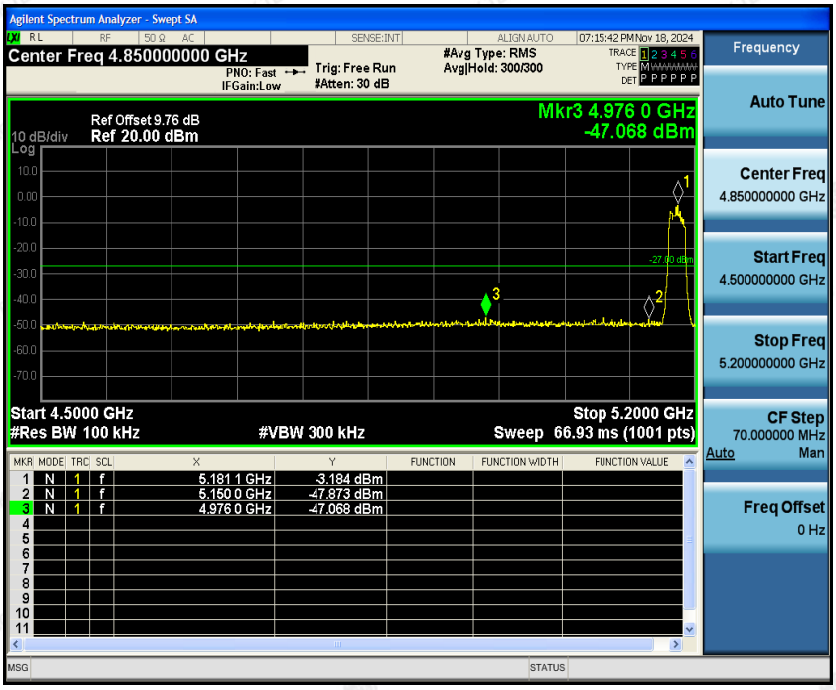



**5700MHz**

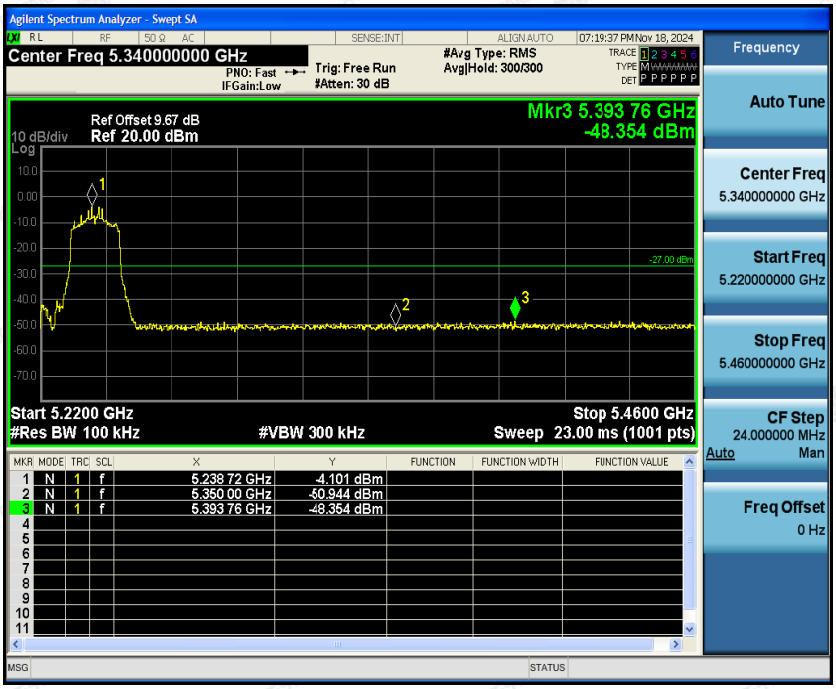


**Band Edges(IEEE802.11n HT20 mode)**

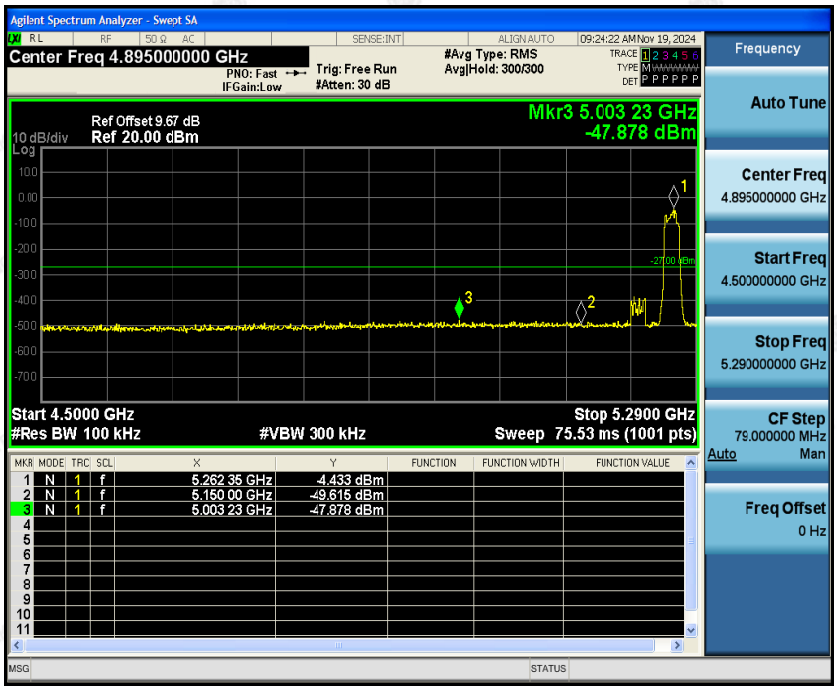
**5180MHz**



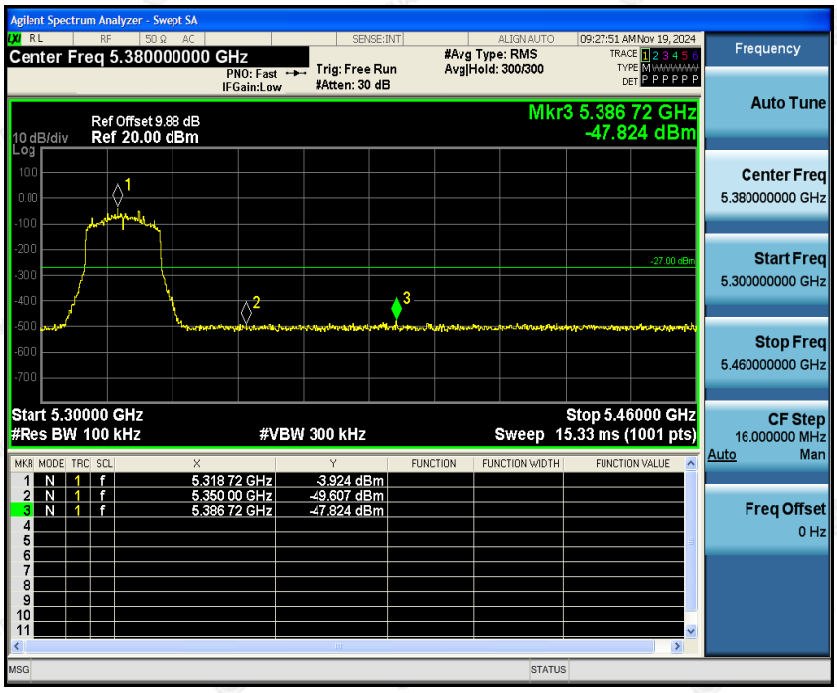

**5240MHz**



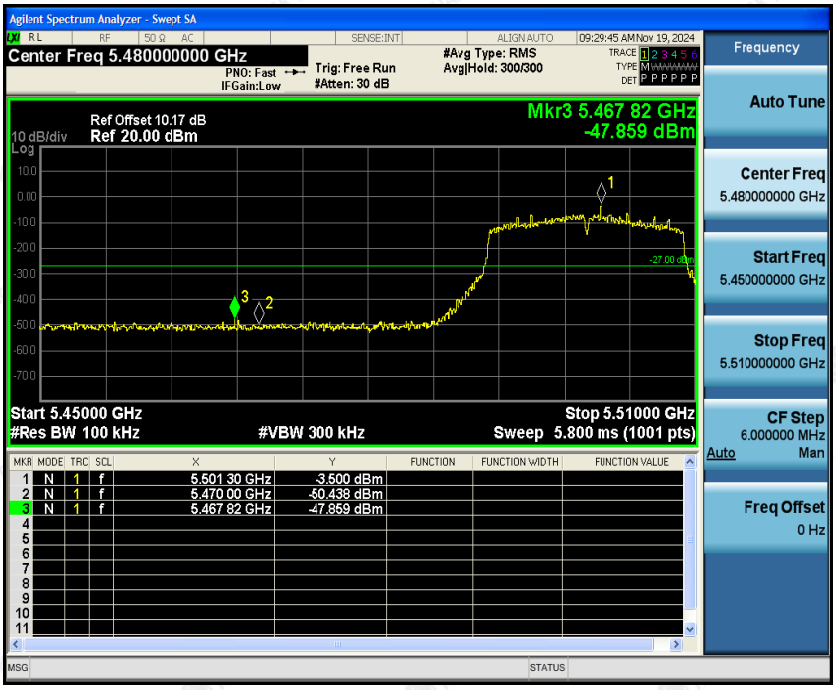
**5260MHz**



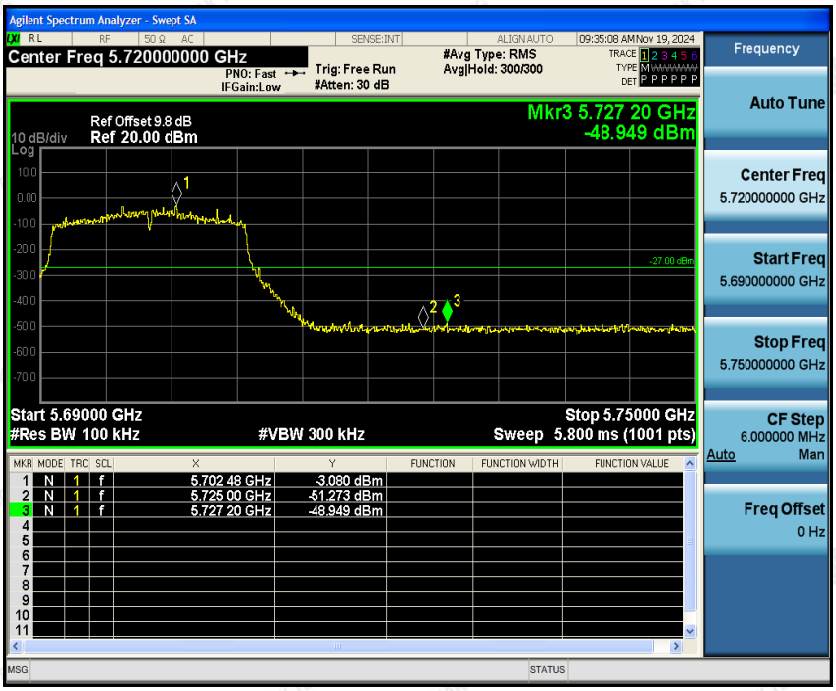

**5320MHz**



**5500MHz**

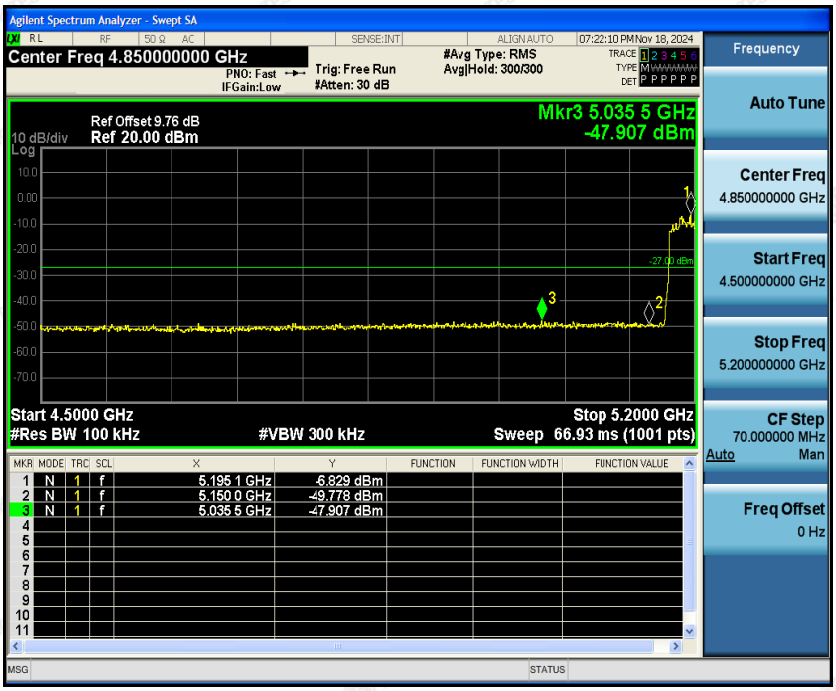



**5700MHz**

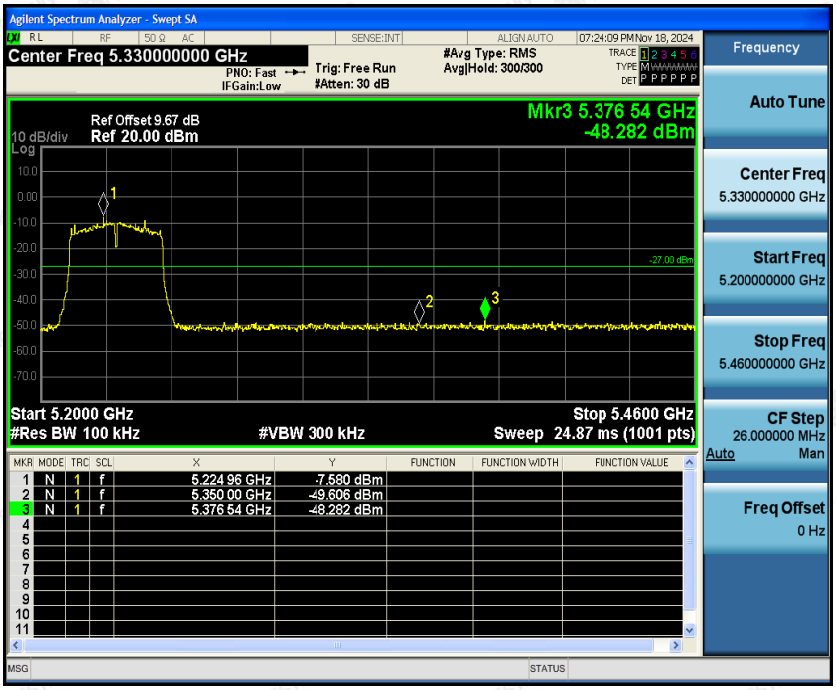


**Band Edges(IEEE802.11n HT40 mode)**

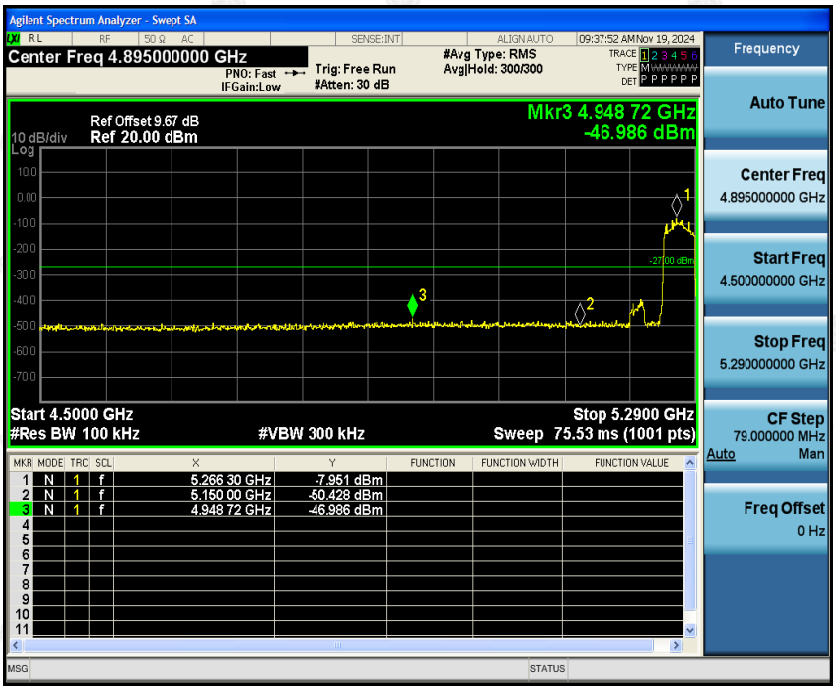
**5190MHz**



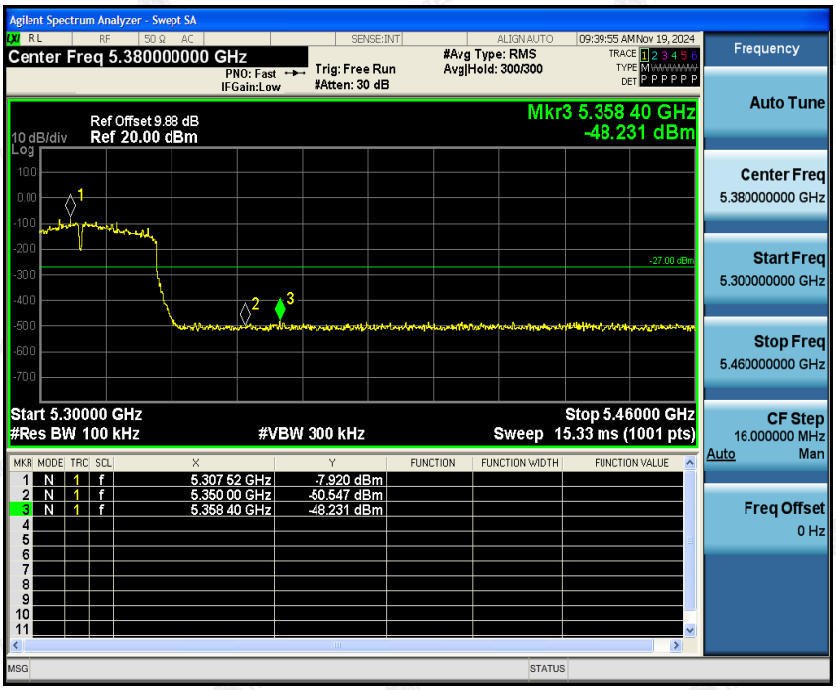

**5230MHz**



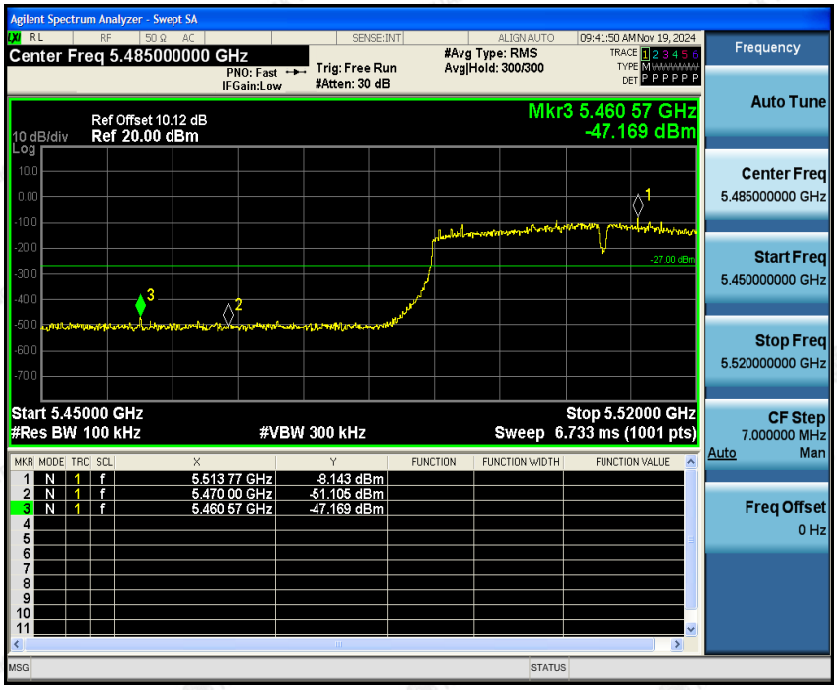
**5270MHz**



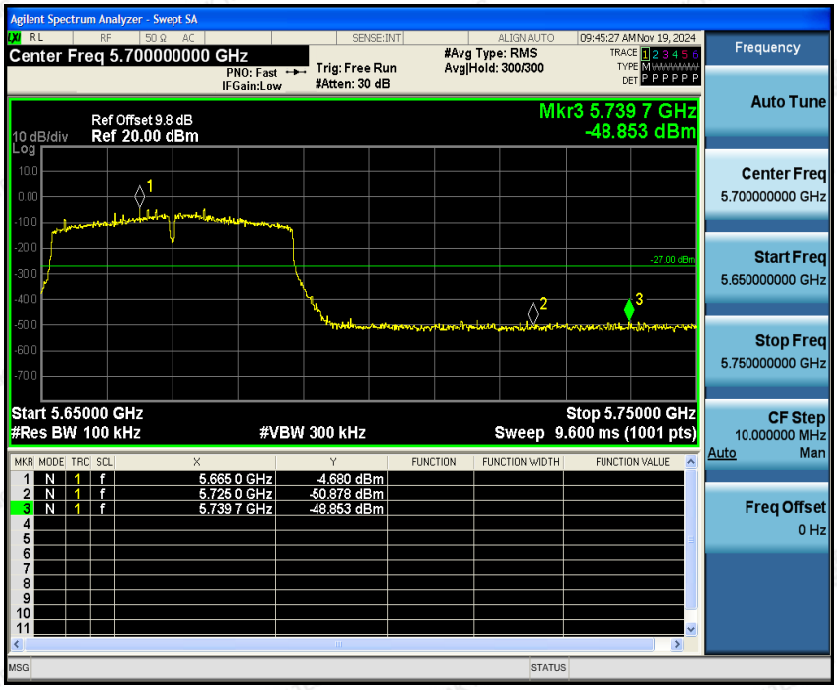

**5310MHz**



**5510MHz**

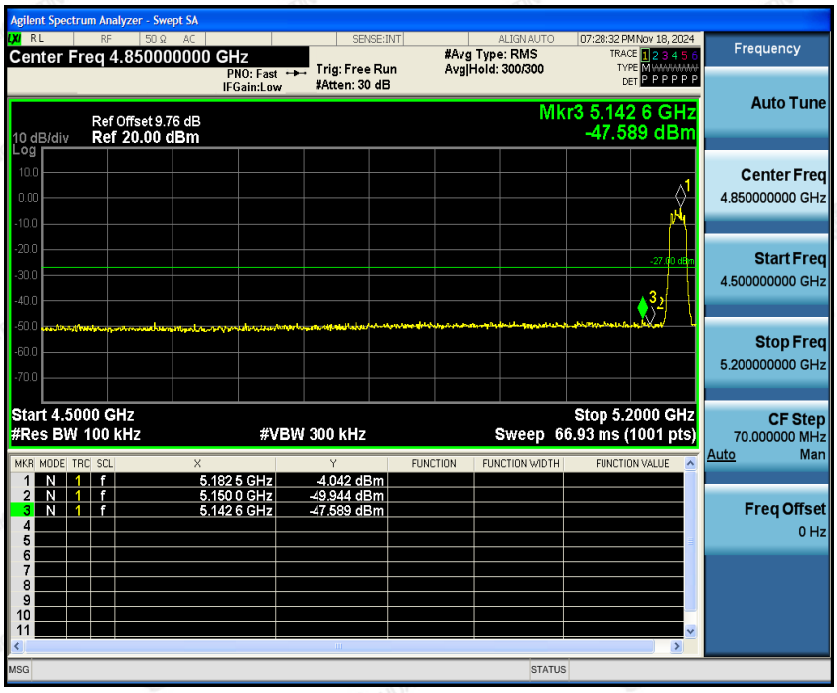



**5670MHz**

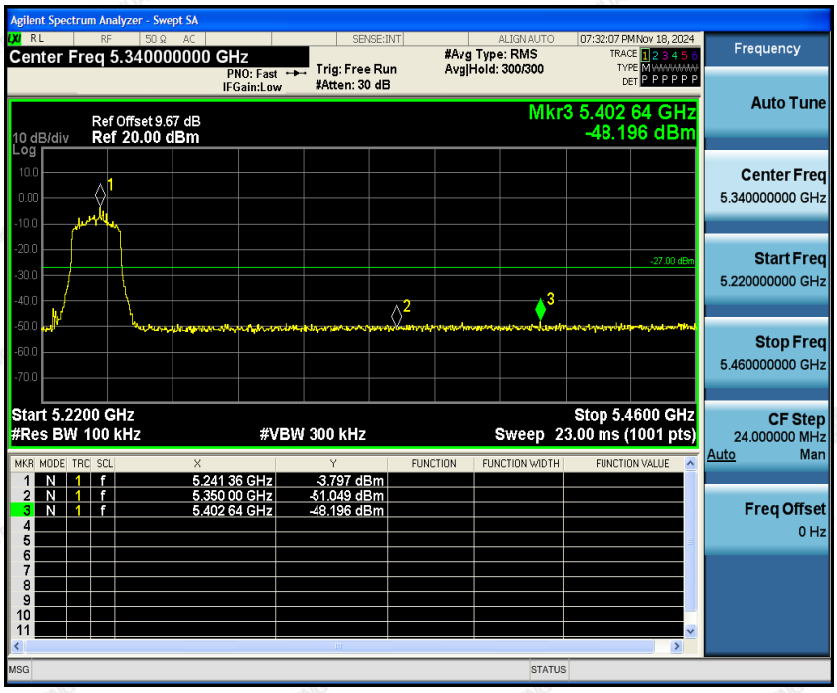


**Band Edges(IEEE802.11ac HT20 mode)**

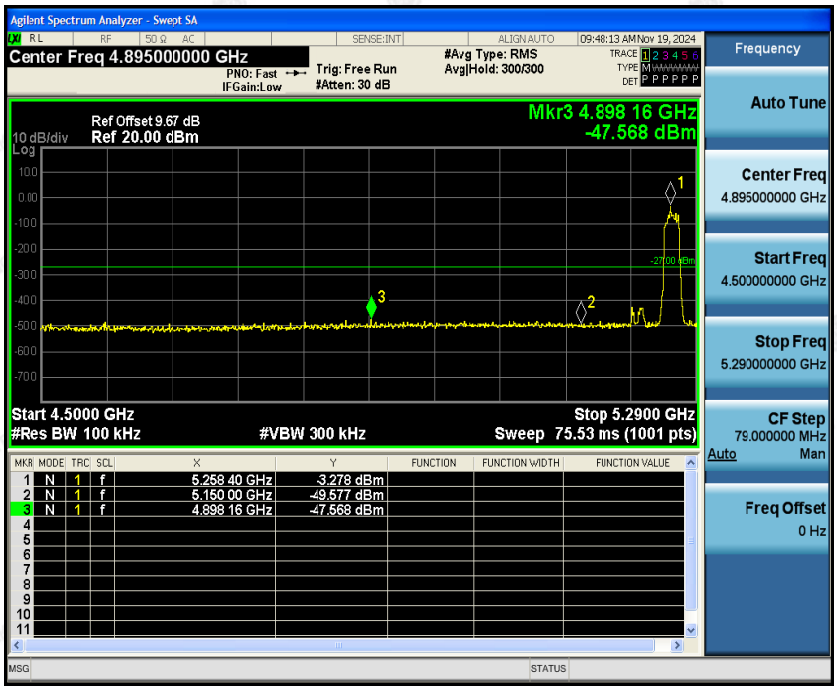
**5180MHz**



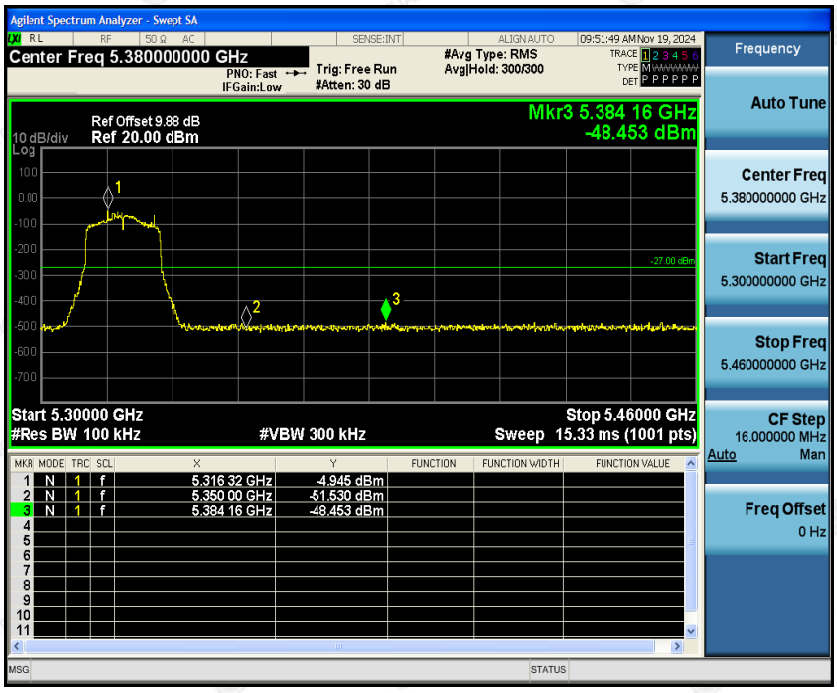

**5240MHz**



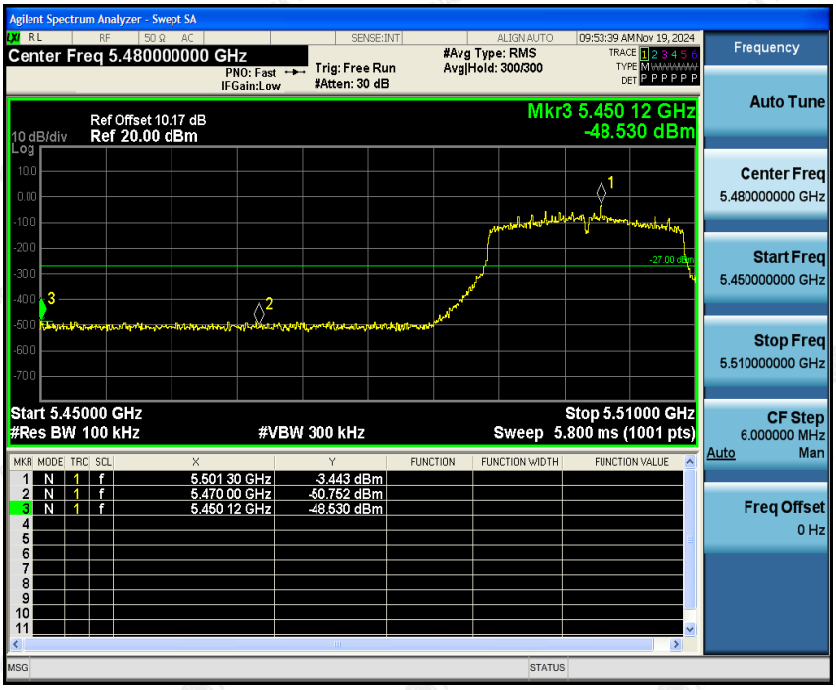
**5260MHz**



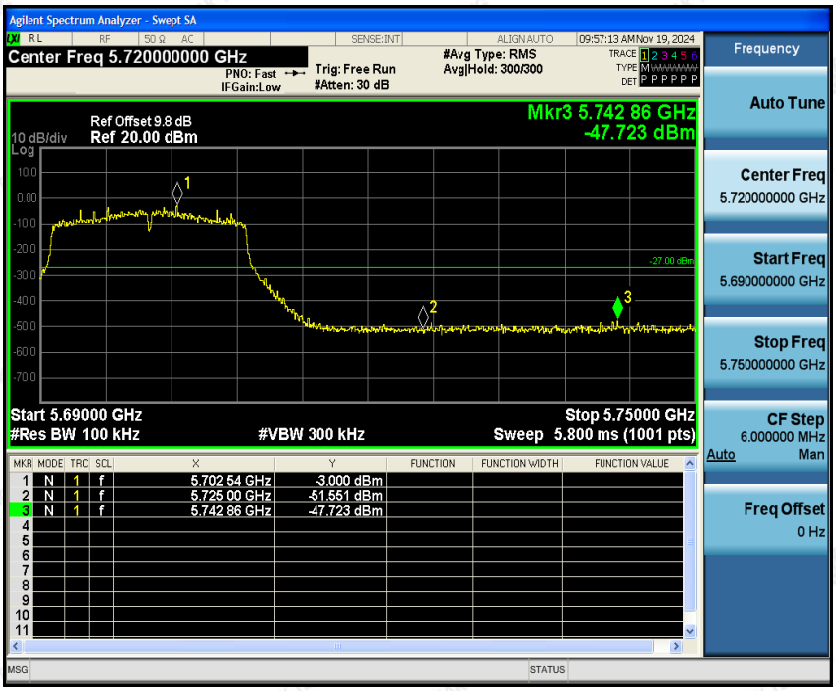

**5320MHz**



**5500MHz**

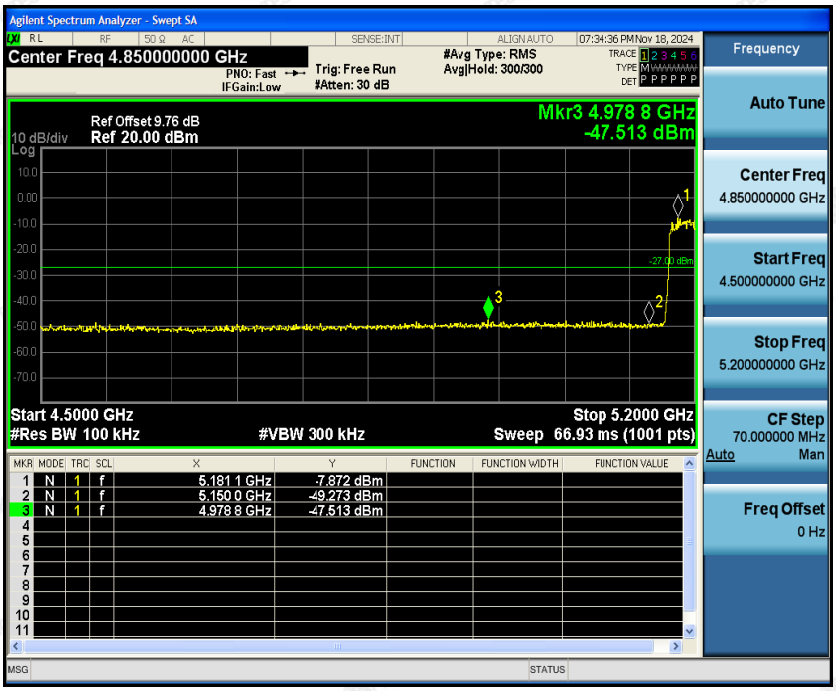



**5700MHz**

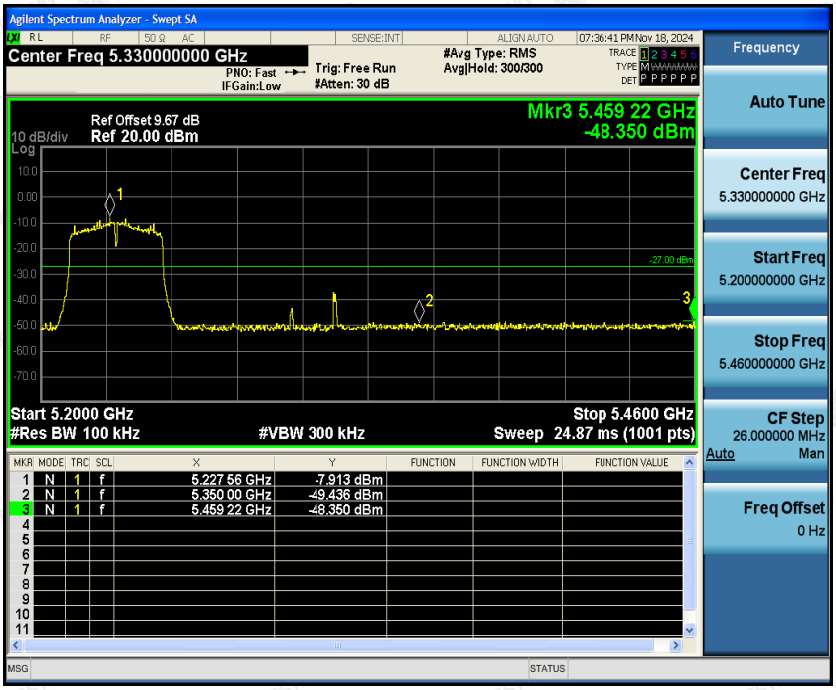


**Band Edges(IEEE802.11ac HT40 mode)**

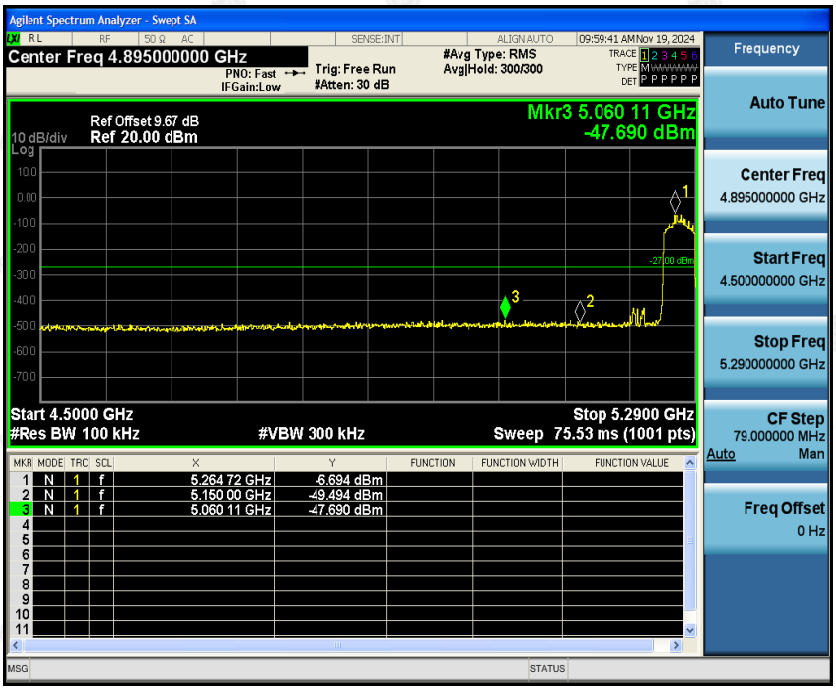
**5190MHz**



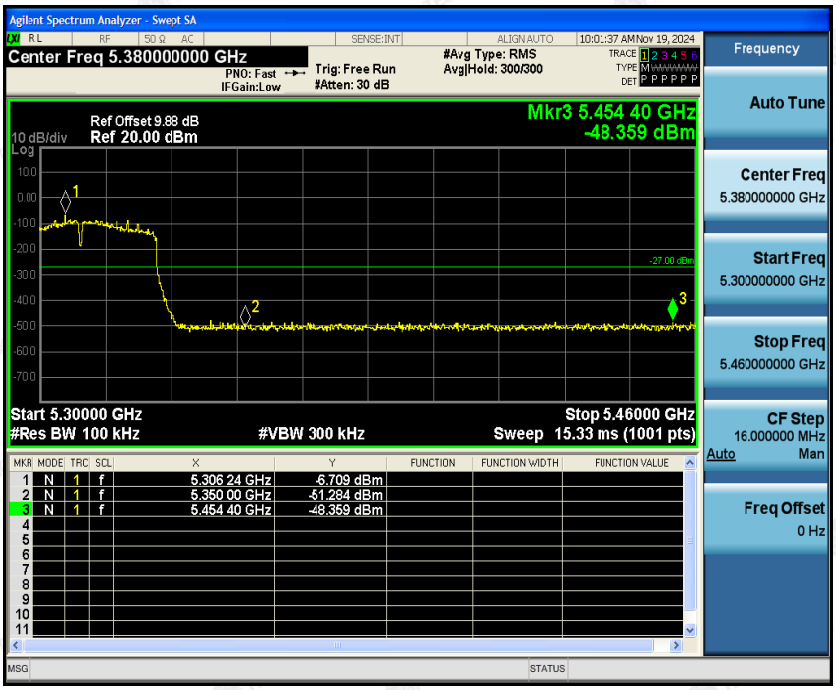

**5230MHz**



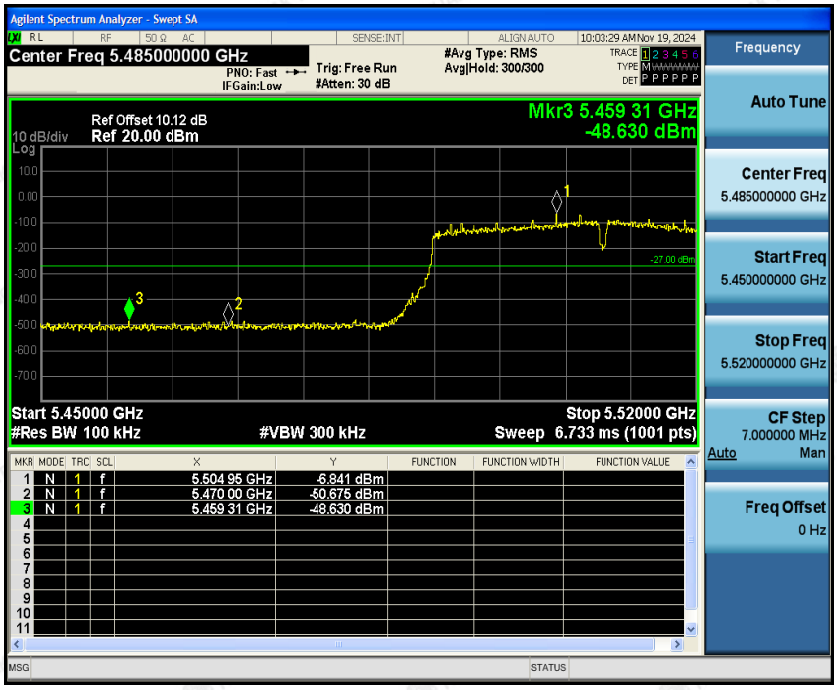
**5270MHz**



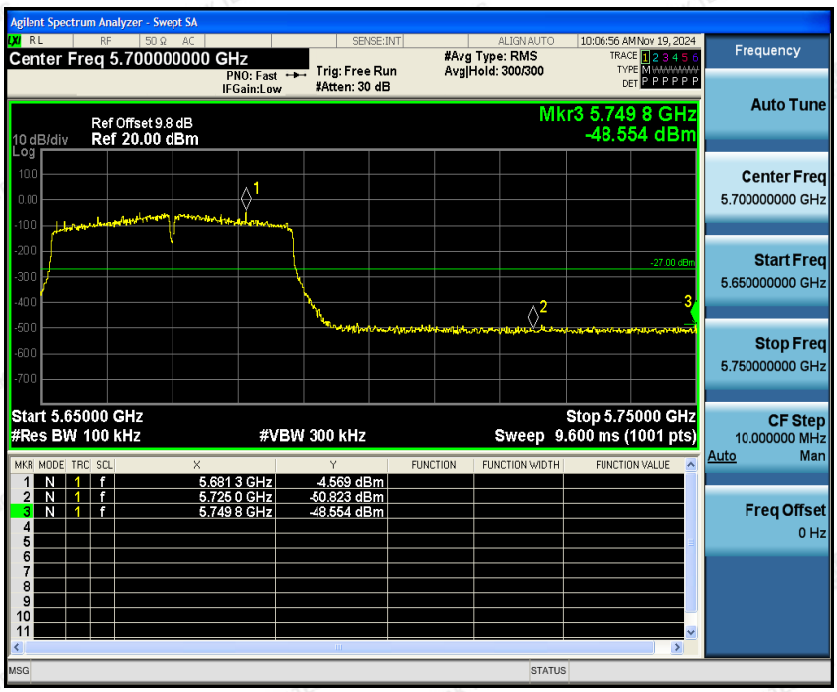

**5310MHz**



**5510MHz**

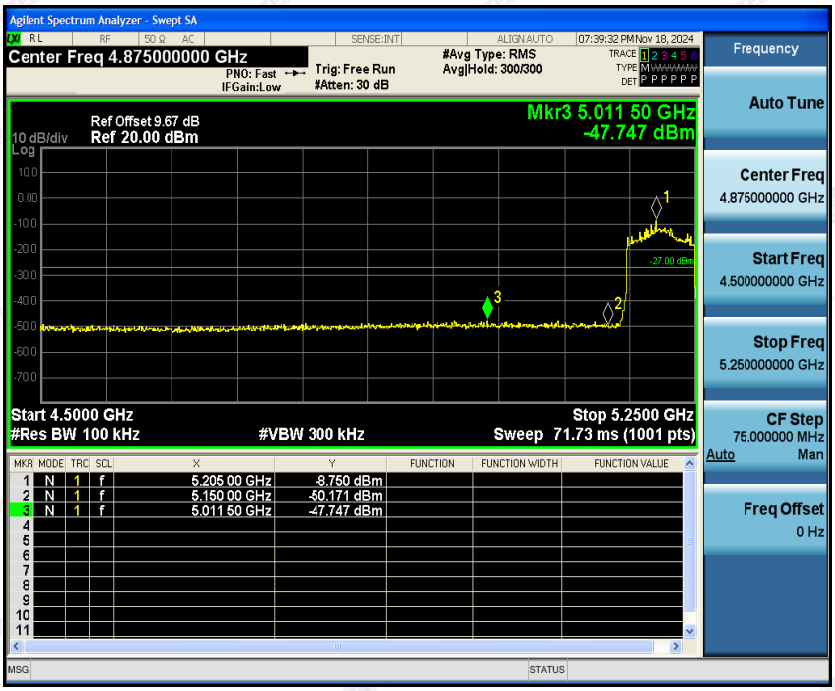



**5670MHz**

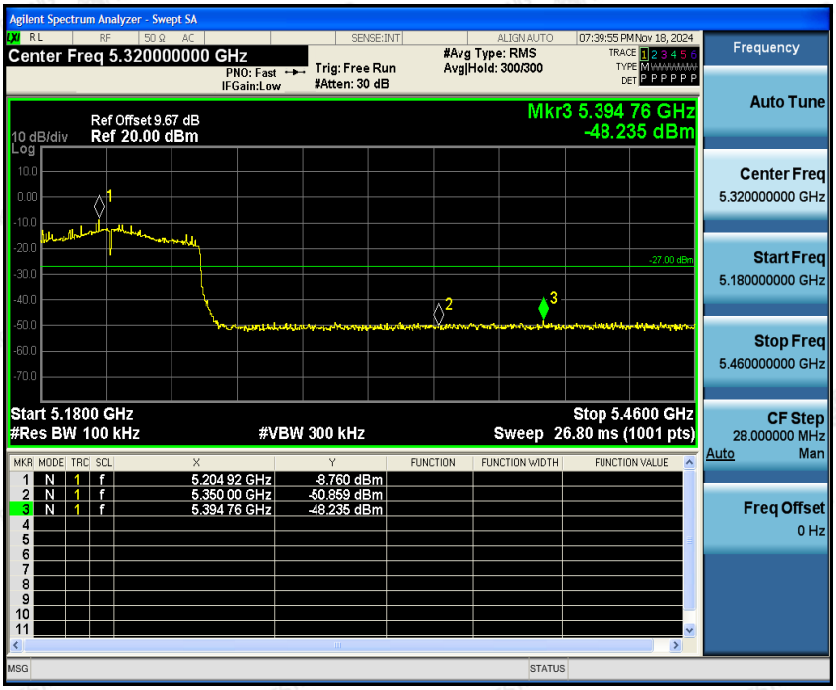


**Band Edges(IEEE802.11ac HT80 mode)**

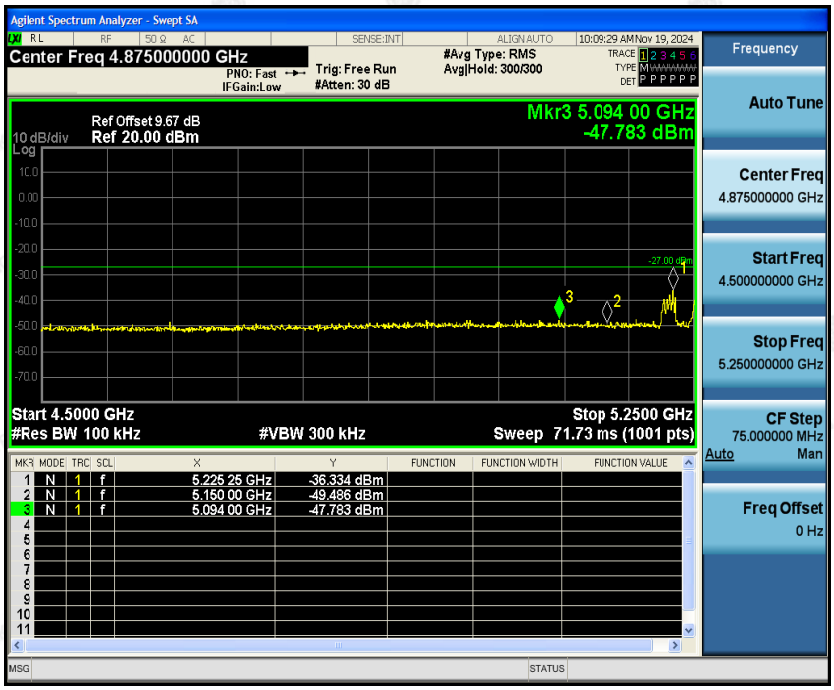
**5210MHz**



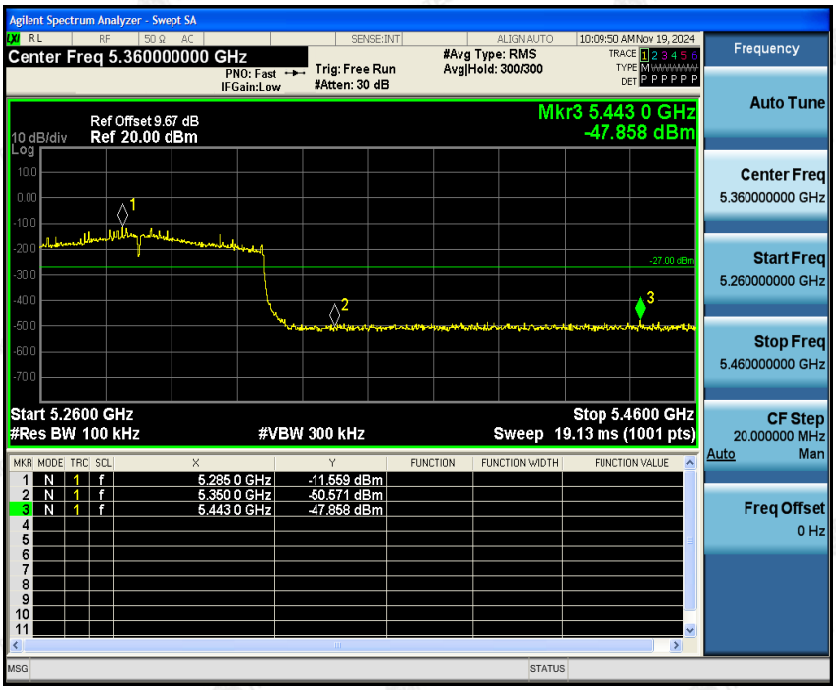

**5210MHz**



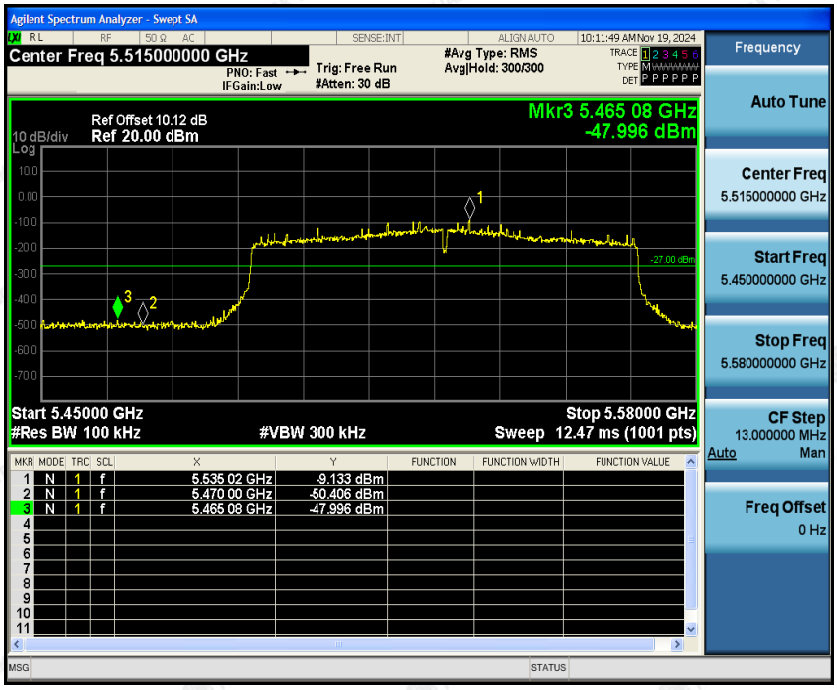
**5290MHz**



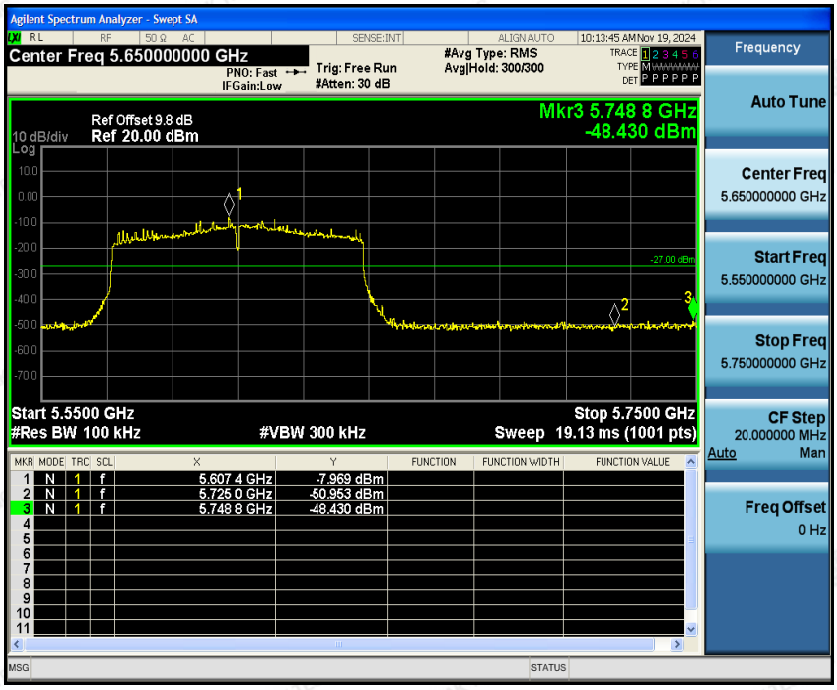

**5290MHz**



**5530MHz**

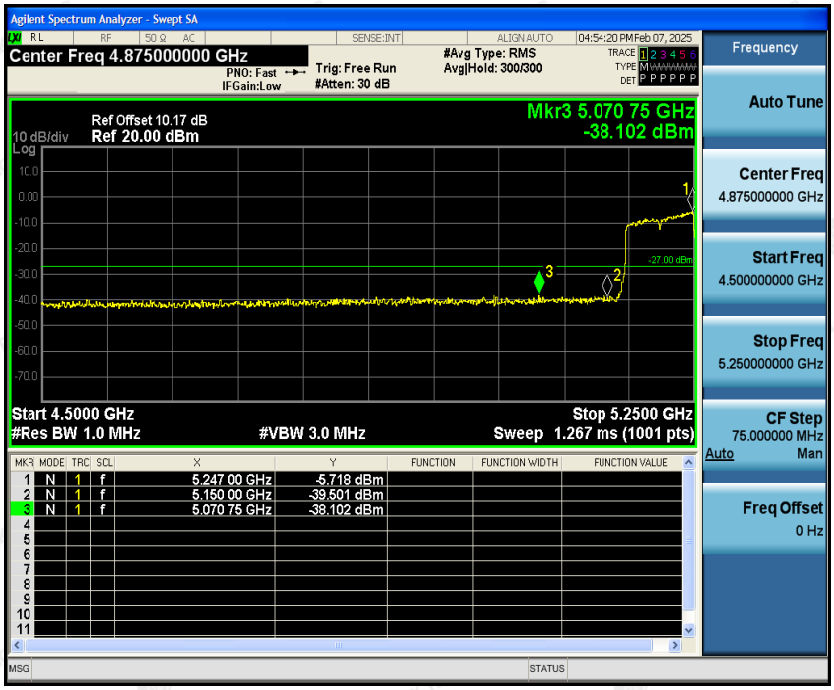



**5610MHz**

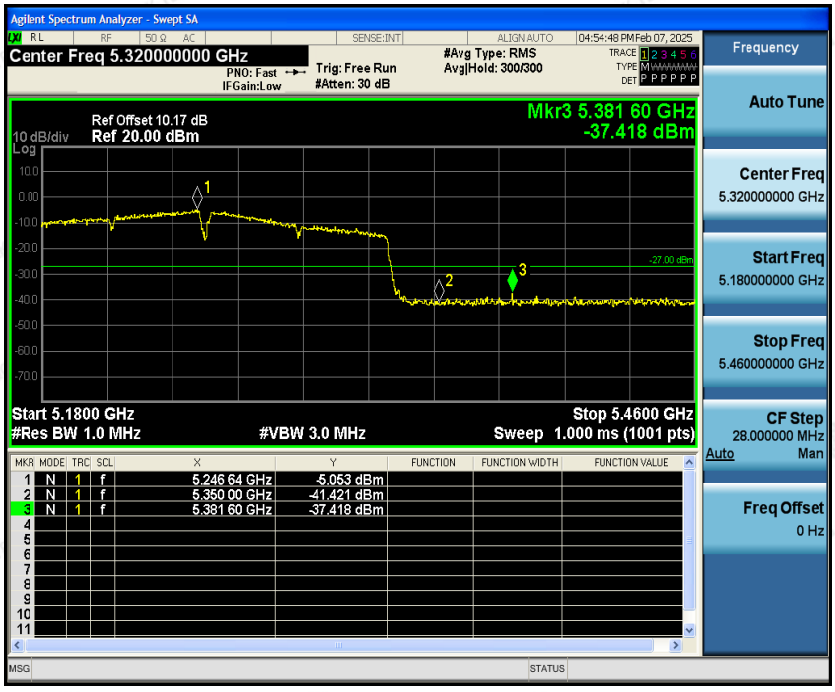


**Band Edges(IEEE802.11ac HT160 mode)**

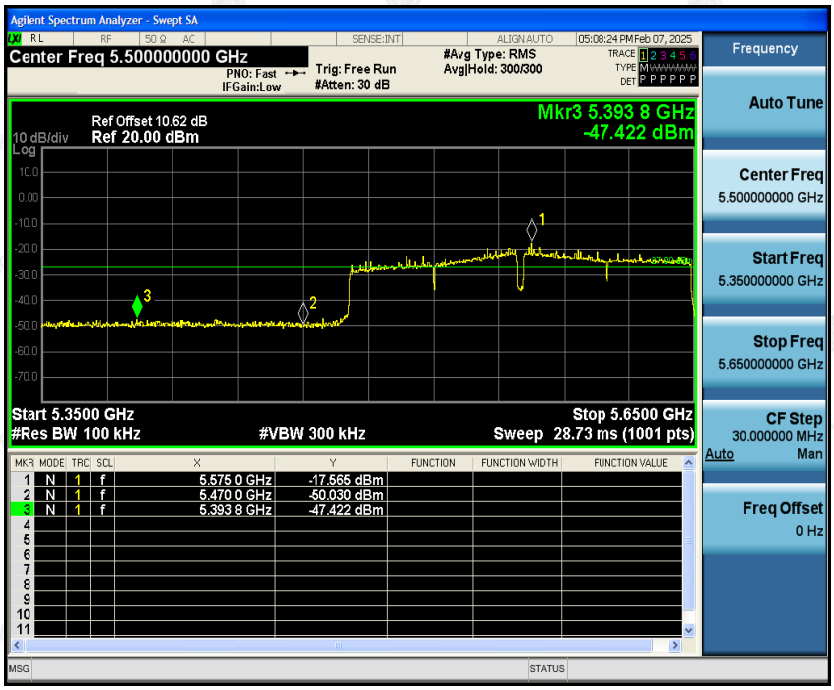
**5250MHz**



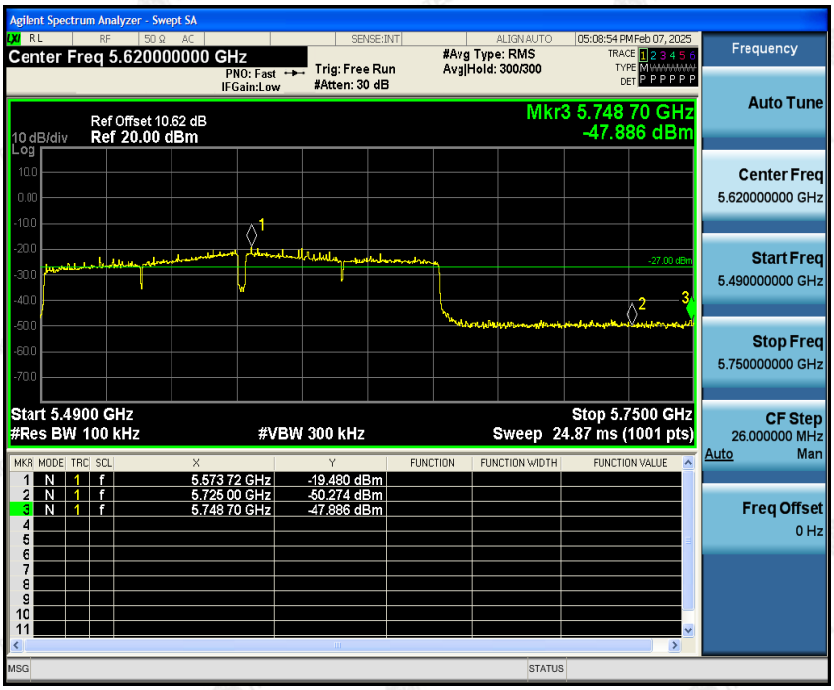

**5250MHz**



**5570MHz**

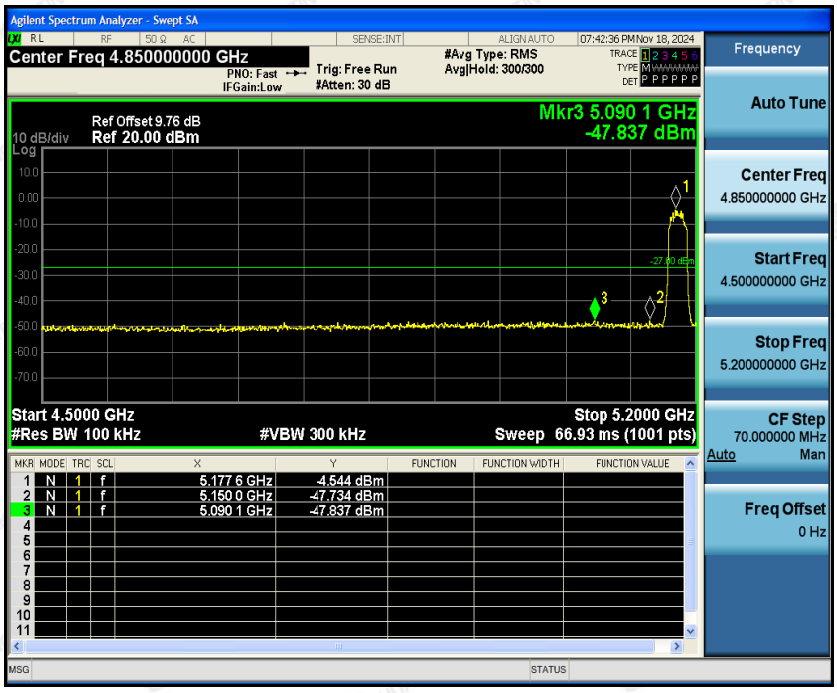



**5570MHz**

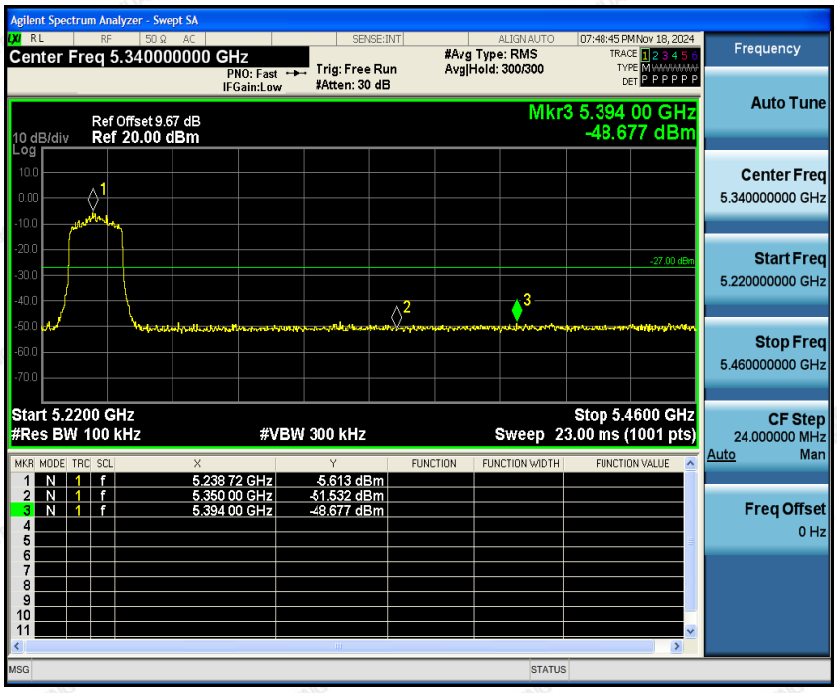


**Band Edges(IEEE802.11ax HE20 mode)**

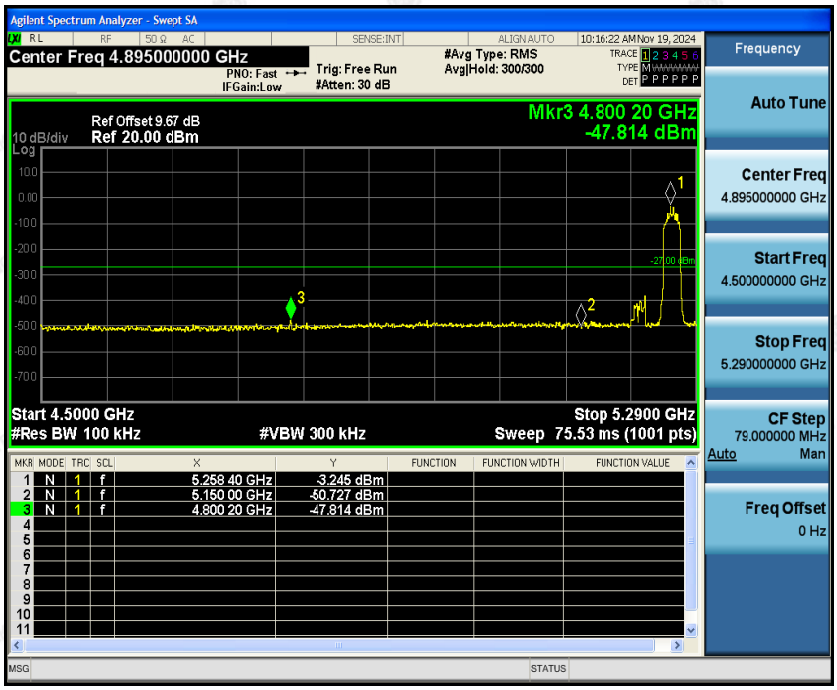
**5180MHz**



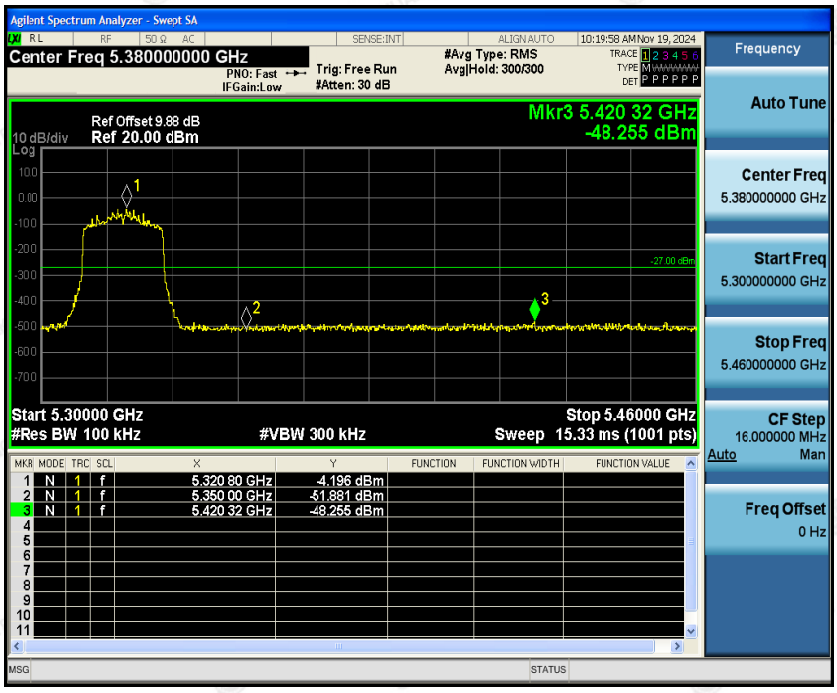

**5240MHz**



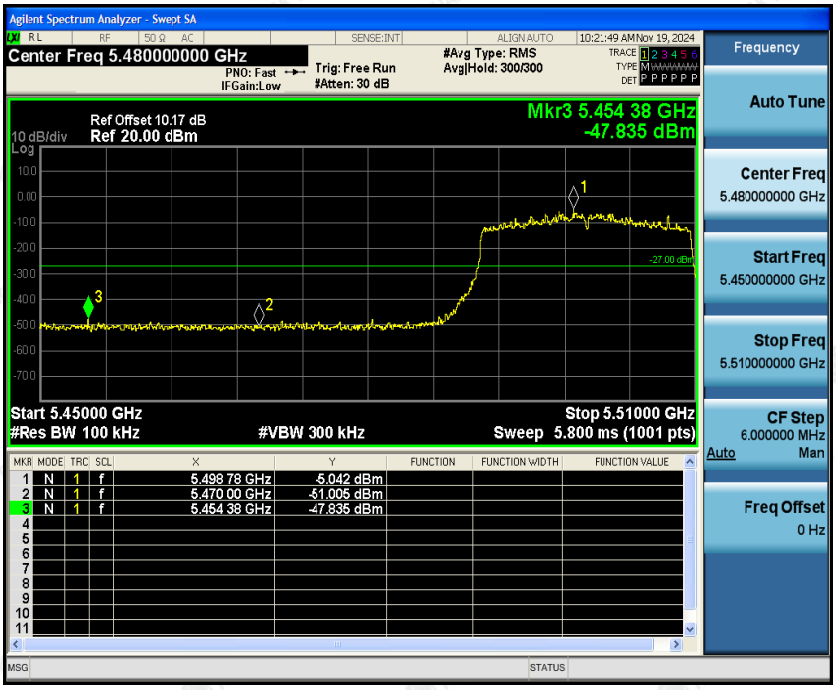
**5260MHz**



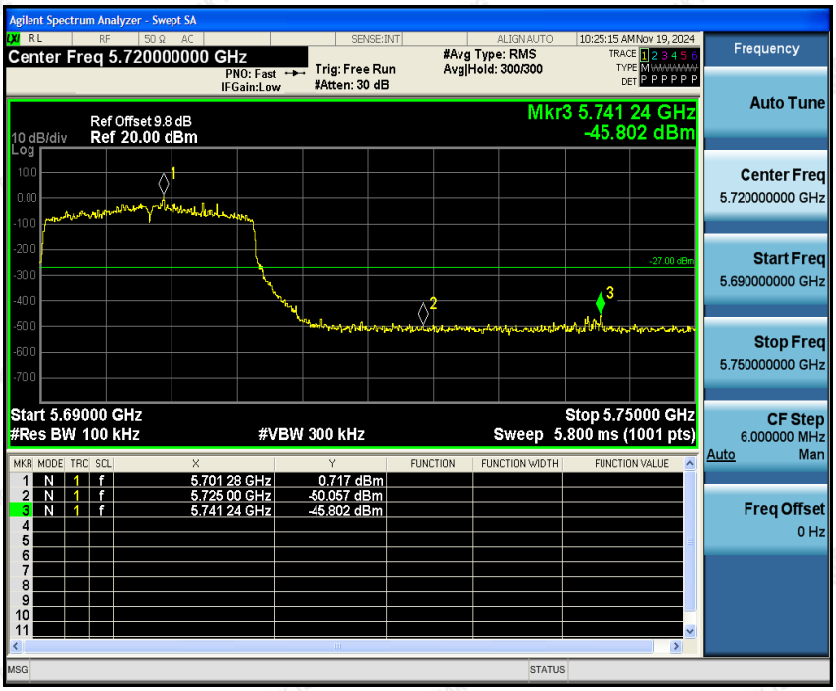

**5320MHz**



**5500MHz**

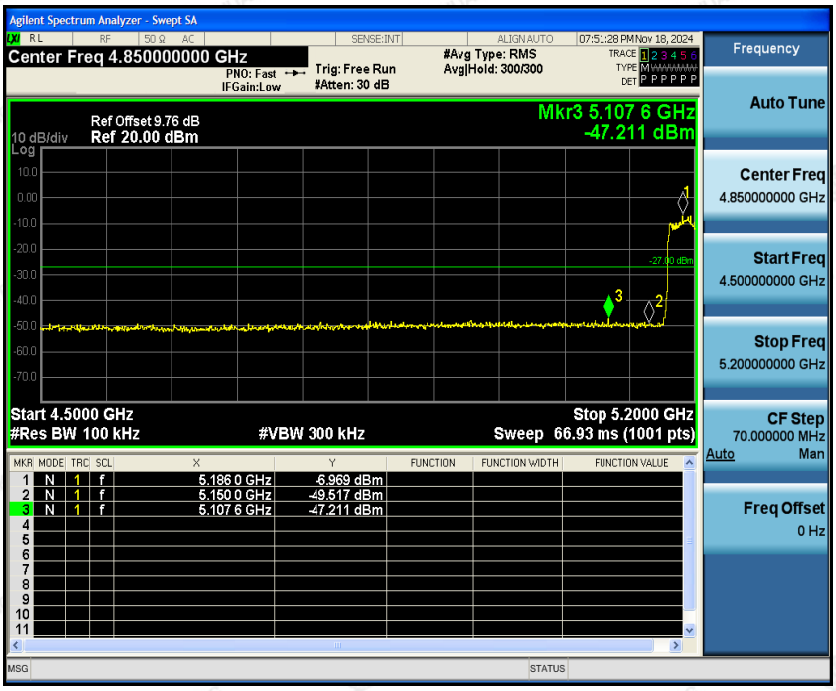



**5700MHz**

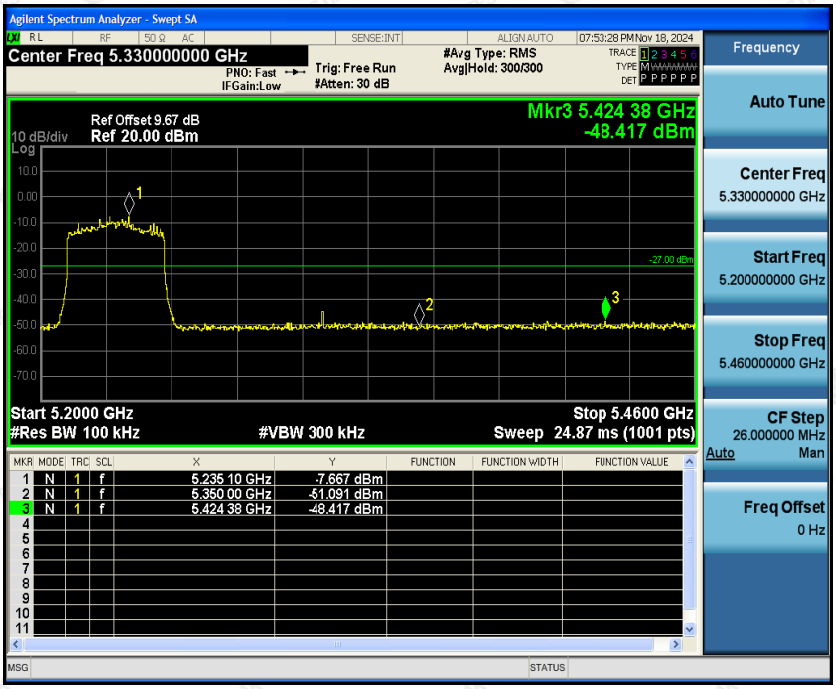


## Band Edges(IEEE802.11ax HE40 mode)

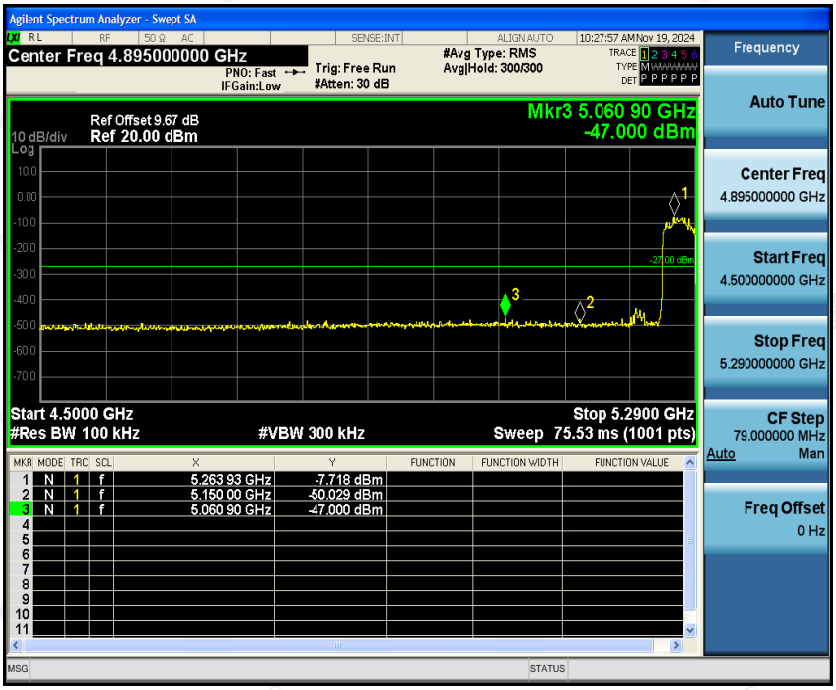
**5190MHz**



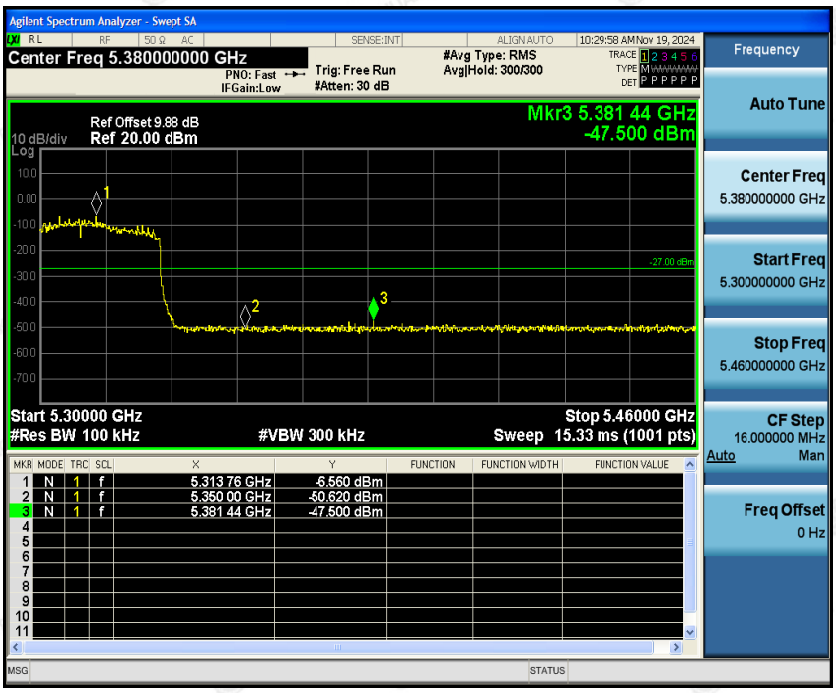

**5230MHz**



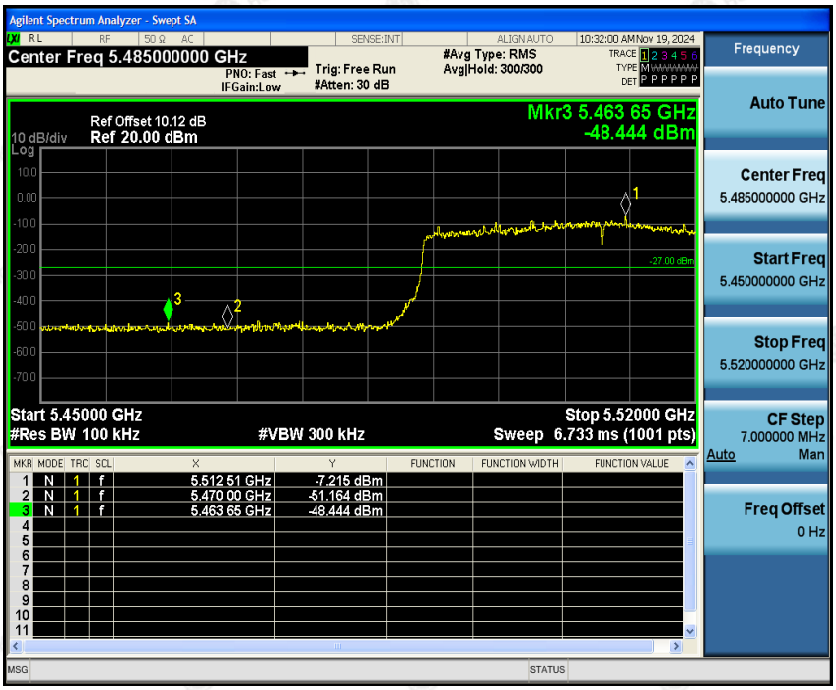
**5270MHz**



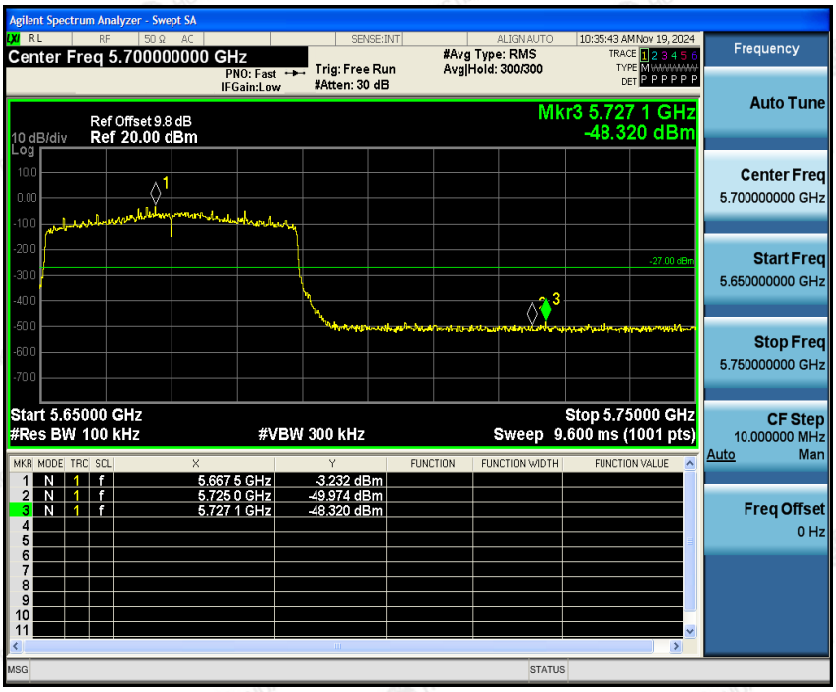

**5310MHz**



**5510MHz**

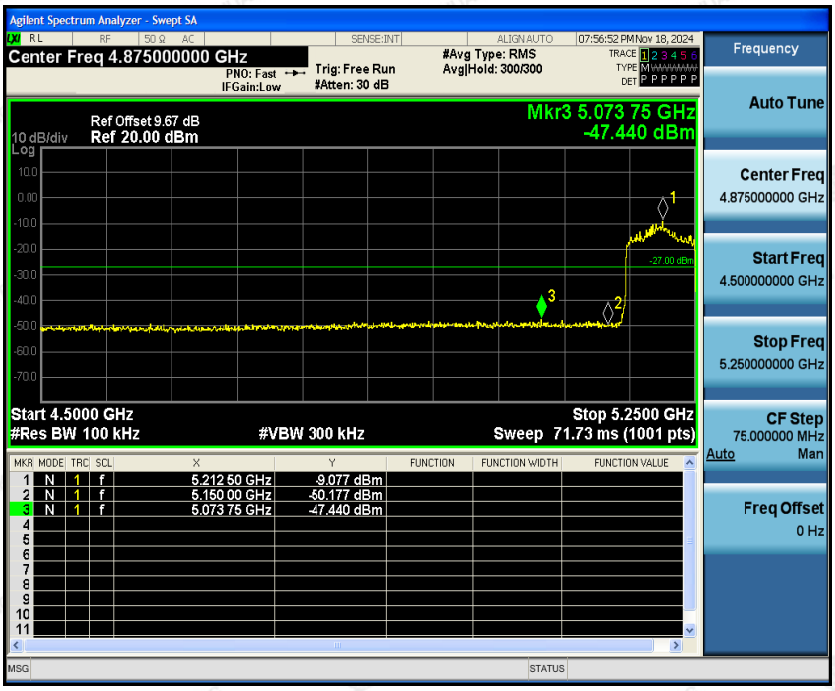



**5670MHz**

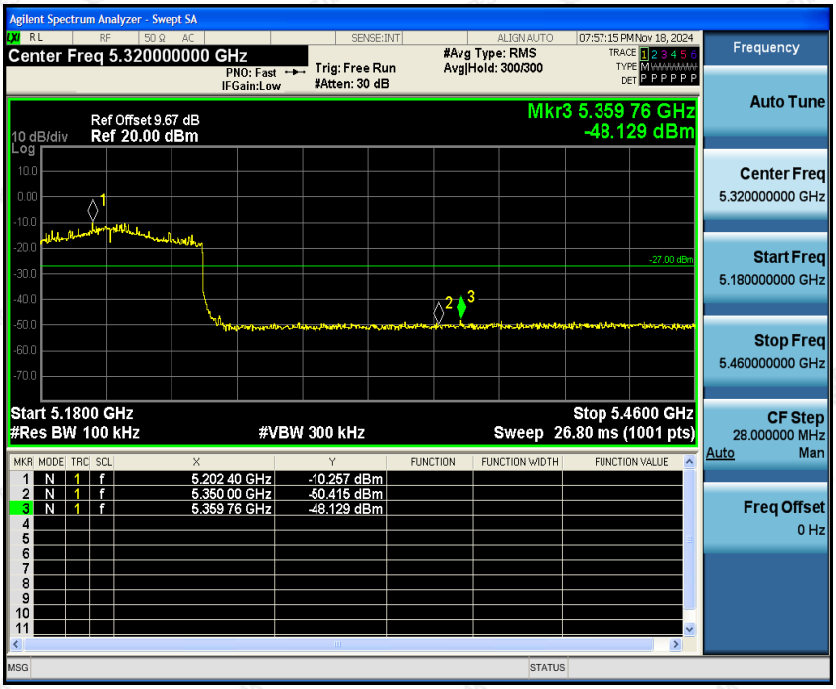


## Band Edges(IEEE802.11ax HE80 mode)

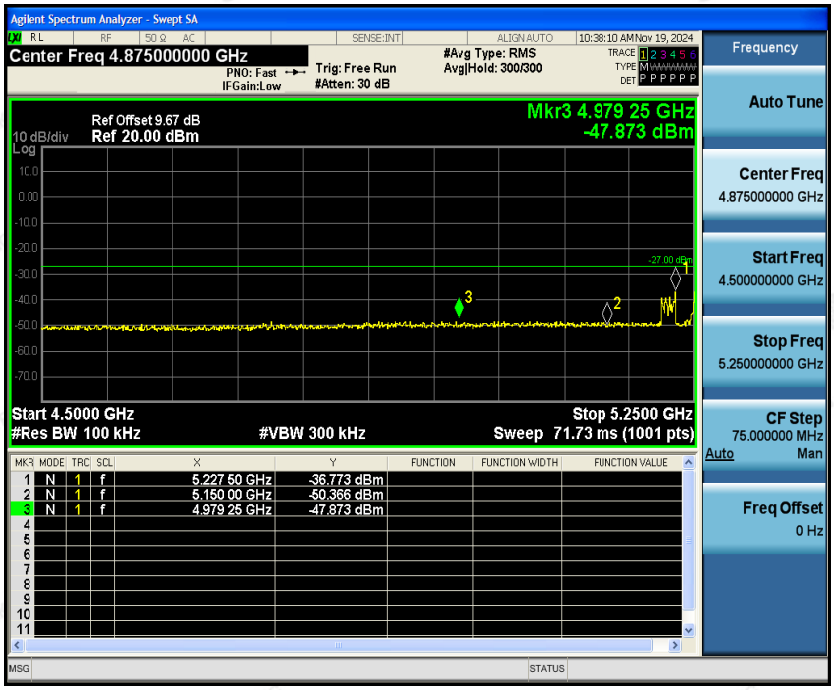
**5210MHz**



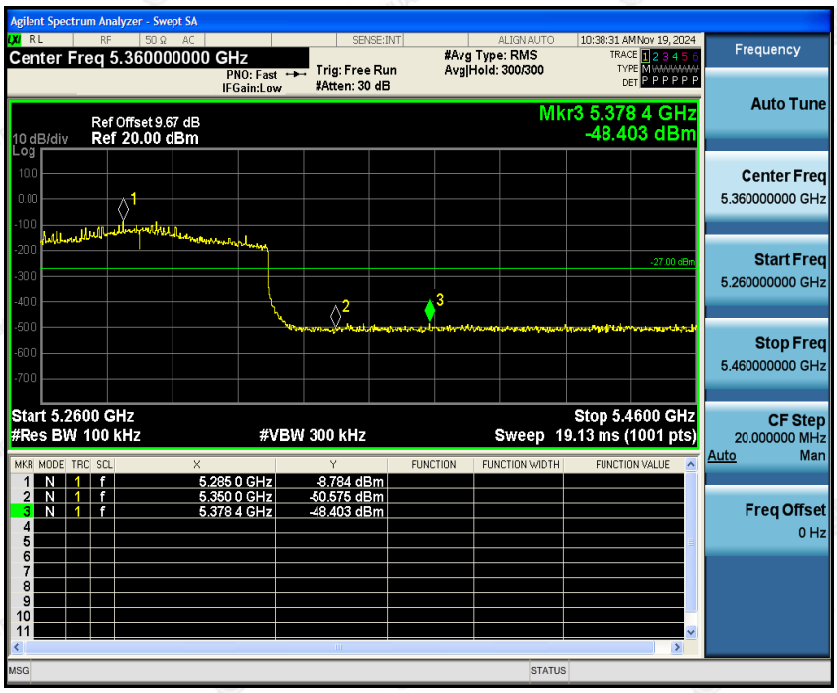

**5210MHz**



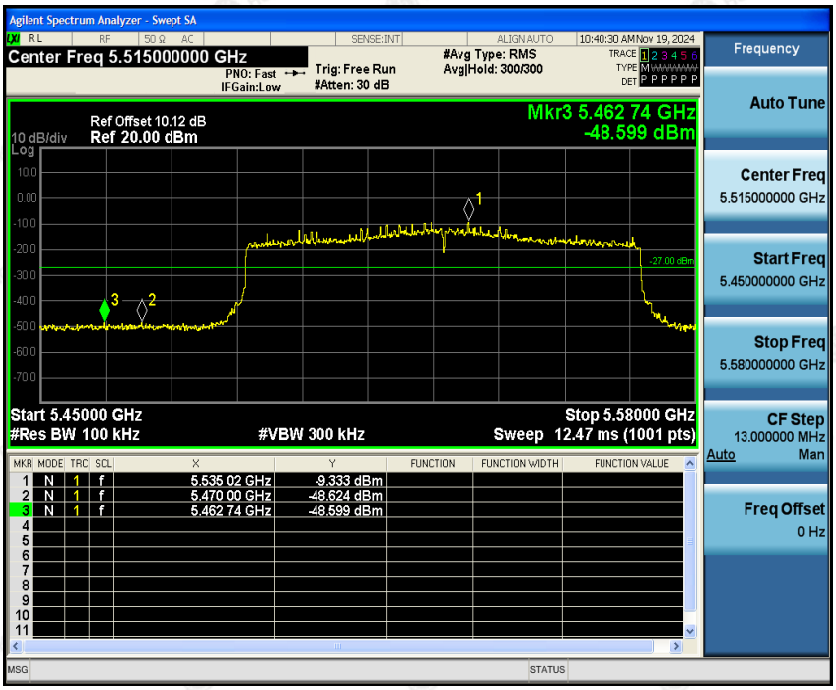
**5290MHz**



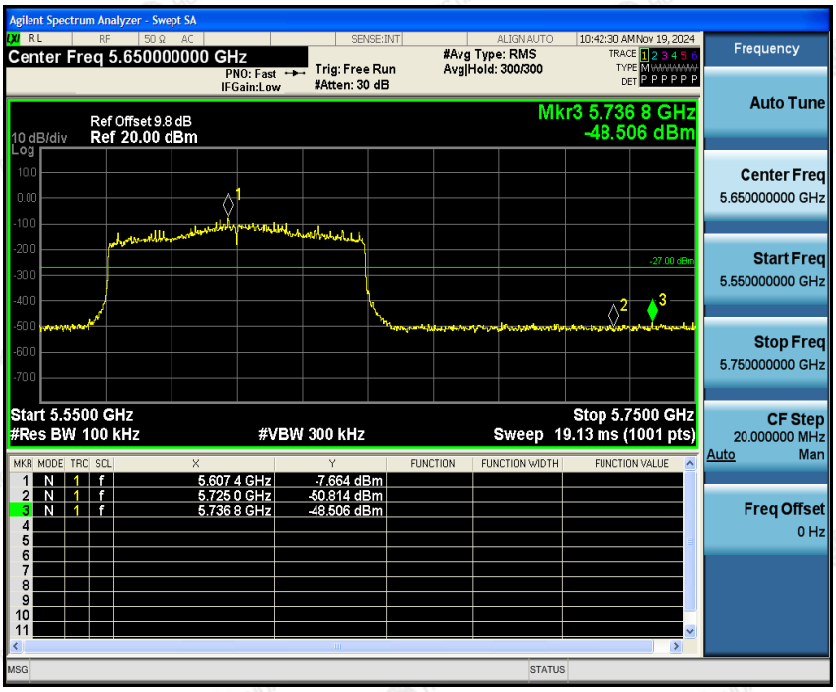

**5290MHz**



**5530MHz**

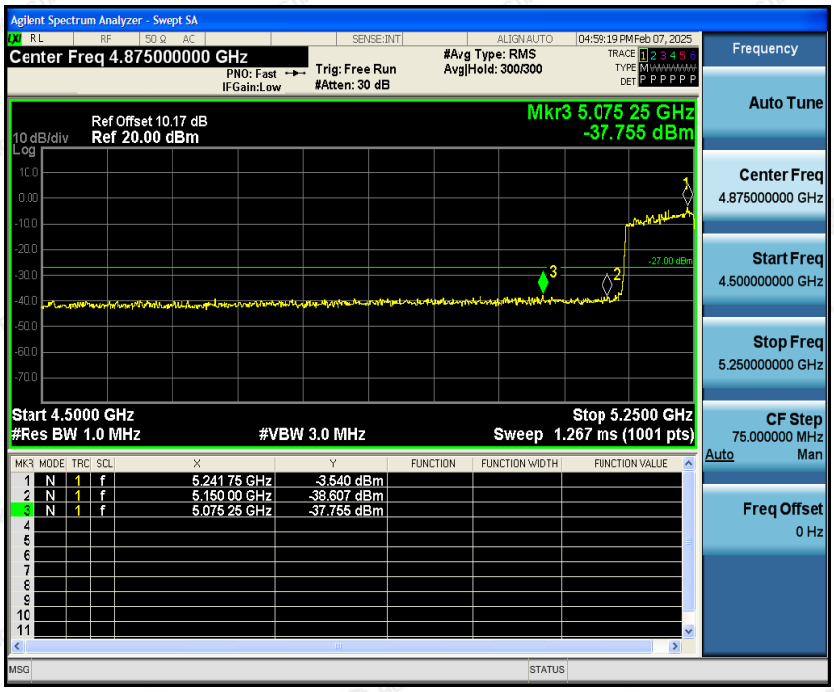



**5610MHz**

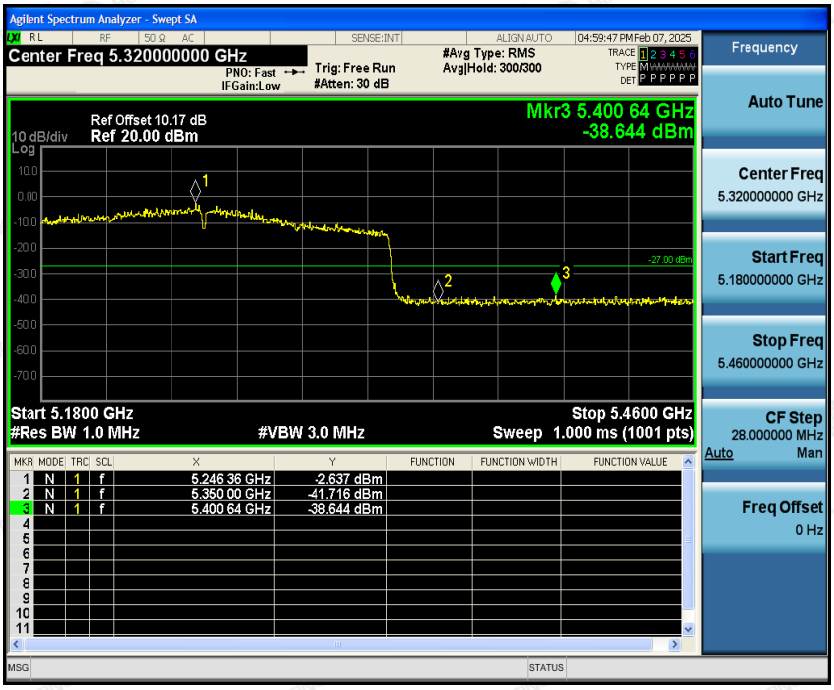


**Band Edges(IEEE802.11ax HE160 mode)**

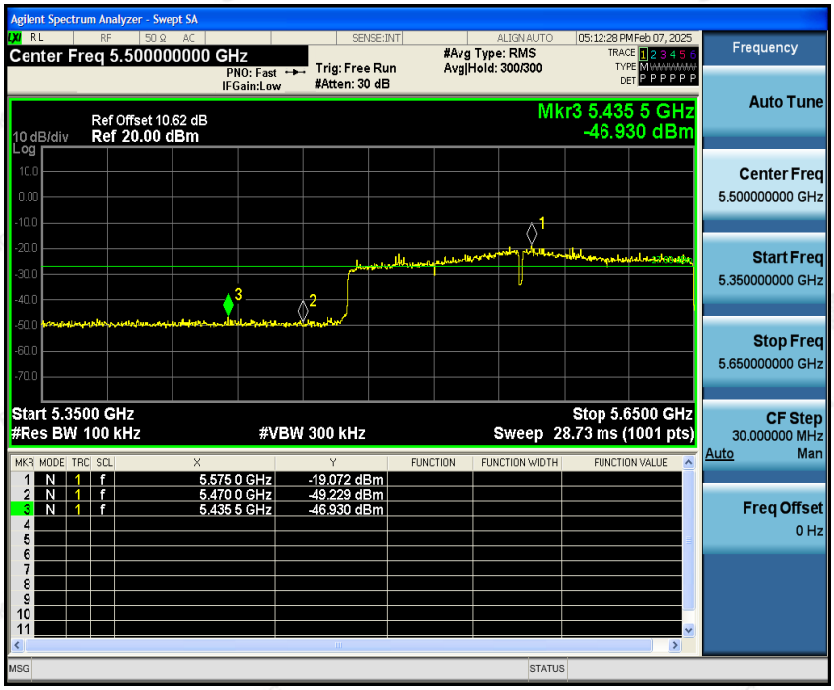
**5250MHz**



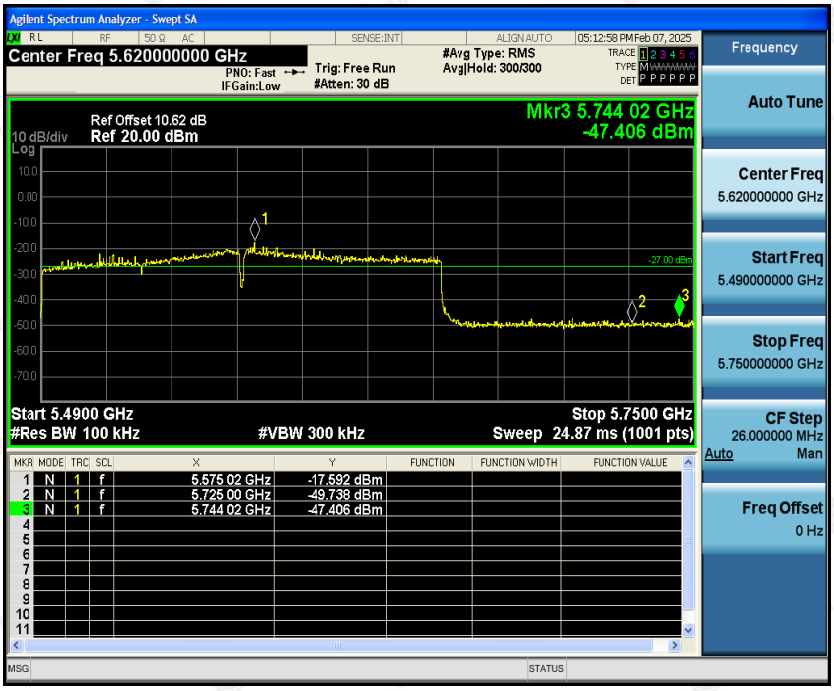

**5250MHz**



**5570MHz**




**5570MHz**



## 6.4 Maximum Power Spectral Density

**LIMIT**

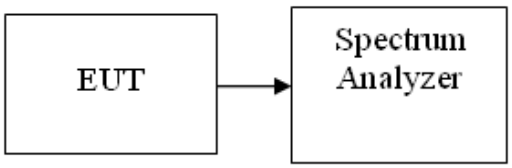
Accordingto§15.407(a),

For the 5.15-5.25 GHz bands, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band

*If transmitting antennas of directional gain greater than 6dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.*

**Test Configuration**




**TESTPROCEDURE**

1. Place the EUT on the table and set it in transmitting mode.
   Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the spectrum analyzer as RBW = 1MHz, VBW = 3MHz, Span must be greater than 26dB bandwidth, adjust as necessary, Sweep= auto, Detector RMS
3. Record the max. reading.

**TESTRESULTS**

*No non-compliance noted*

**Test Data**

**Testmode:IEEE802.11a mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | | |
| Low | 5180 | 1.55 | 1.77 | / | 17 | PASS |
| Mid | 5200 | 0.74 | 0.94 | / | 17 | PASS |
| High | 5240 | 0.68 | 1.17 | / | 17 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | | |
| Low | 5260 | -2.51 | -4.58 | / | 11 | PASS |
| Mid | 5280 | -3.16 | -4.83 | / | 11 | PASS |
| High | 5320 | -2.93 | -4.46 | / | 11 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | | |
| Low | 5500 | -4.14 | -5.24 | / | 11 | PASS |
| Mid | 5580 | -4.53 | -4.86 | / | 11 | PASS |
| High | 5700 | -1 | -2.95 | / | 11 | PASS |

**Testmode:IEEE802.11n HT20 mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5180 | 1.18 | 1.53 | 17 | PASS |
| Mid | 5200 | 0.78 | 0.72 | 17 | PASS |
| High | 5240 | 0.10 | 1.01 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5180 | 4.37 | 15.49 | PASS |
| Mid | 5200 | 3.76 | 15.49 | PASS |
| High | 5240 | 3.59 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5260 | -3.57 | -3.82 | 11 | PASS |
| Mid | 5280 | -3.86 | -4.24 | 11 | PASS |
| High | 5320 | -3.51 | -3.99 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5260 | -0.68 | 9.82 | PASS |
| Mid | 5280 | -1.04 | 9.82 | PASS |
| High | 5320 | -0.73 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5500 | -4.75 | -4.61 | 11 | PASS |
| Mid | 5580 | -4.91 | -3.3 | 11 | PASS |
| High | 5700 | -1.66 | -2.49 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5500 | -1.67 | 9.74 | PASS |
| Mid | 5580 | -1.02 | 9.74 | PASS |
| High | 5700 | 0.96 | 9.74 | PASS |

**Testmode:IEEE802.11n HT40 mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5190 | -1.70 | -1.38 | 17 | PASS |
| High | 5230 | -1.28 | -1.71 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5190 | 1.47 | 15.49 | PASS |
| High | 5230 | 1.52 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5270 | -5.48 | -7.18 | 11 | PASS |
| High | 5310 | -5.89 | -7.05 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5270 | -3.24 | 9.82 | PASS |
| High | 5310 | -3.42 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5510 | -6.84 | -7.68 | 11 | PASS |
| Mid | 5550 | -7.65 | -7.91 | 11 | PASS |
| High | 5670 | -4.48 | -4 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5510 | -4.23 | 9.74 | PASS |
| Mid | 5550 | -4.77 | 9.74 | PASS |
| High | 5670 | -1.22 | 9.74 | PASS |

**Testmode:IEEE802.11ac HT20 mode**
**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5180 | 1.76 | 1.70 | 17 | PASS |
| Mid | 5200 | 1.46 | 0.79 | 17 | PASS |
| High | 5240 | 1.51 | 1.49 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5180 | 4.74 | 15.49 | PASS |
| Mid | 5200 | 4.15 | 15.49 | PASS |
| High | 5240 | 4.51 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5260 | -3.44 | -4.08 | 11 | PASS |
| Mid | 5280 | -3.79 | -4.3 | 11 | PASS |
| High | 5320 | -3.51 | -4.07 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5260 | -0.74 | 9.82 | PASS |
| Mid | 5280 | -1.03 | 9.82 | PASS |
| High | 5320 | -0.77 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5500 | -4.67 | -4.64 | 11 | PASS |
| Mid | 5580 | -5.26 | -4.32 | 11 | PASS |
| High | 5700 | -1.77 | -2.55 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5500 | -1.64 | 9.74 | PASS |
| Mid | 5580 | -1.75 | 9.74 | PASS |
| High | 5700 | 0.87 | 9.74 | PASS |

**Testmode:IEEE802.11ac HT40 mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5190 | -0.34 | -1.27 | 17 | PASS |
| High | 5230 | -1.38 | -1.99 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5190 | 2.23 | 15.49 | PASS |
| High | 5230 | 1.34 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5270 | -6.3 | -5.87 | 11 | PASS |
| High | 5310 | -7.14 | -6.06 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5270 | -3.07 | 9.82 | PASS |
| High | 5310 | -3.56 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5510 | -7.82 | -6.46 | 11 | PASS |
| Mid | 5550 | -7.26 | -6.82 | 11 | PASS |
| High | 5670 | -5.46 | -2.71 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5510 | -4.08 | 9.74 | PASS |
| Mid | 5550 | -4.02 | 9.74 | PASS |
| High | 5670 | -0.86 | 9.74 | PASS |

**Testmode:IEEE802.11ac HT80 mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5210 | -4.95 | -4.09 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5210 | -1.49 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5290 | -9.83 | -11.65 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5290 | -7.64 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5530 | -10.08 | -9.54 | 11 | PASS |
| High | 5610 | -10.25 | -8.25 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5530 | -6.79 | 9.74 | PASS |
| High | 5610 | -6.13 | 9.74 | PASS |

**Testmode:IEEE802.11ac HT160 mode**

**5150~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5250 | -15.80 | -13.66 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5250 | -11.59 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5570 | -13.68 | -19.11 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5570 | -12.59 | 9.74 | PASS |

**Testmode:IEEE802.11ax HE20 mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5180 | 3.15 | 3.68 | 17 | PASS |
| Mid | 5200 | 2.20 | 3.86 | 17 | PASS |
| High | 5240 | 1.69 | 2.78 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5180 | 6.43 | 15.49 | PASS |
| Mid | 5200 | 6.12 | 15.49 | PASS |
| High | 5240 | 5.28 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5260 | -4.4 | -4.14 | 11 | PASS |
| Mid | 5280 | -4.7 | -4.21 | 11 | PASS |
| High | 5320 | -4.58 | -3.86 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5260 | -1.26 | 9.82 | PASS |
| Mid | 5280 | -1.44 | 9.82 | PASS |
| High | 5320 | -1.19 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5500 | -6.03 | -4.6 | 11 | PASS |
| Mid | 5580 | -5.41 | -4.28 | 11 | PASS |
| High | 5700 | -2.67 | -0.14 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5500 | -2.25 | 9.74 | PASS |
| Mid | 5580 | -1.80 | 9.74 | PASS |
| High | 5700 | 1.79 | 9.74 | PASS |

**Testmode:IEEE802.11ax HE40 mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5190 | -0.29 | 0.01 | 17 | PASS |
| High | 5230 | -0.16 | -0.10 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5190 | 2.87 | 15.49 | PASS |
| High | 5230 | 2.88 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5270 | -6.96 | -6.41 | 11 | PASS |
| High | 5310 | -7.26 | -6.27 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5270 | -3.67 | 9.82 | PASS |
| High | 5310 | -3.73 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5510 | -8.17 | -6.76 | 11 | PASS |
| Mid | 5550 | -7.78 | -7.05 | 11 | PASS |
| High | 5670 | -5.98 | -3.06 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5510 | -4.40 | 9.74 | PASS |
| Mid | 5550 | -4.39 | 9.74 | PASS |
| High | 5670 | -1.27 | 9.74 | PASS |

**Testmode:IEEE802.11ax HE80 mode**

**5150~5250MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5210 | -2.16 | -3.06 | 17 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5210 | 0.42 | 15.49 | PASS |

**5250~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5290 | -9.86 | -9.21 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5290 | -6.51 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5530 | -10.58 | -9.3 | 11 | PASS |
| High | 5610 | -10.2 | -8.53 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5530 | -6.88 | 9.74 | PASS |
| High | 5610 | -6.27 | 9.74 | PASS |

**Testmode:IEEE802.11ax HE160 mode**

**5150~5350MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5250 | -15.95 | -13.68 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5250 | -11.66 | 9.82 | PASS |

**5470~5725MHz**

| Channel | Frequency (MHz) | PPSD(dBm) | | Limit(dBm) | Result |
|---|---|---|---|---|---|
| | | Ant1 | Ant2 | | |
| Low | 5570 | -13.57 | -18.98 | 11 | PASS |

| Channel | Frequency (MHz) | Mimo | Limit(dBm) | Result |
|---|---|---|---|---|
| Low | 5570 | -12.47 | 9.74 | PASS |

**Note:**

**1.Duty factor has been off seted with cable loss**

**2. According to KDB 662911, Result power = 10log(10(ant1/10+10(ant2/10)).**

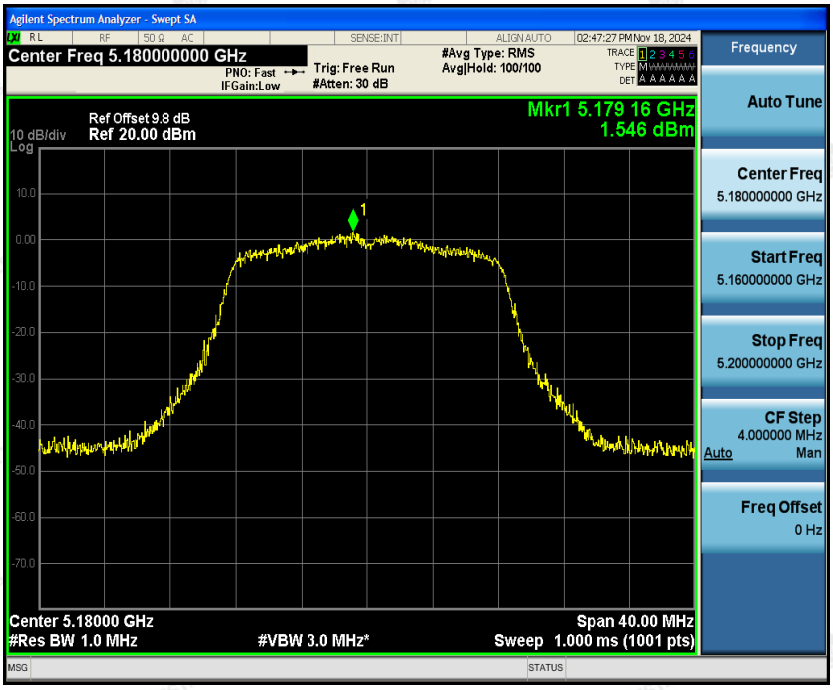
**3. Result unit: W, The end result is converted to units of dBm.**

**5.2G MIMO limit=17dBm-(direction gain-6dBi)= 15.49(dBm/MHz)**
**5.3G MIMO limit=11dBm-(direction gain-6dBi)= 9.82(dBm/MHz)**
**5.6G MIMO limit=11dBm-(direction gain-6dBi)= 9.74(dBm/MHz)**

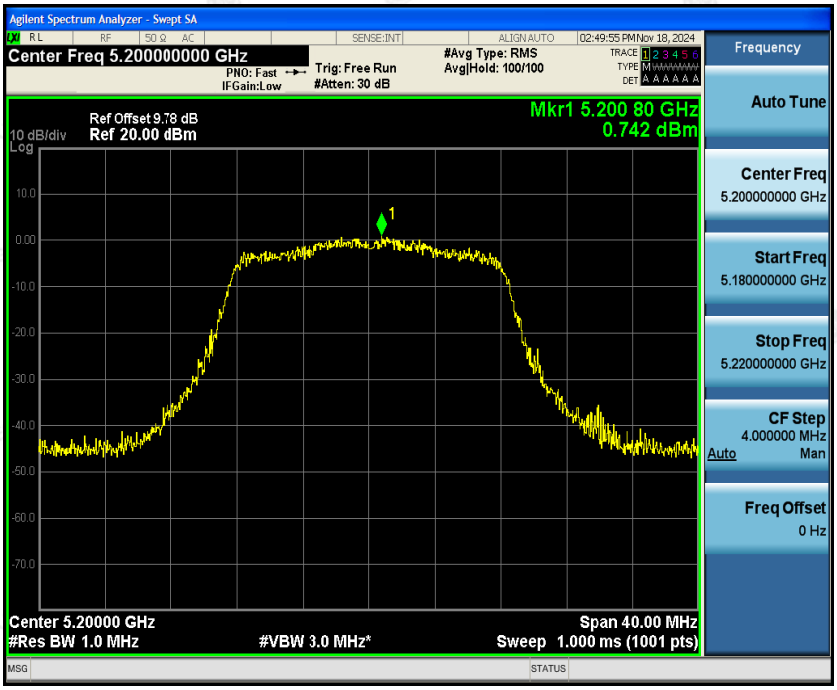
**Test Plot**
**Antenna 1**
**IEEE802.11a mode:**

## 5150~5250MHz

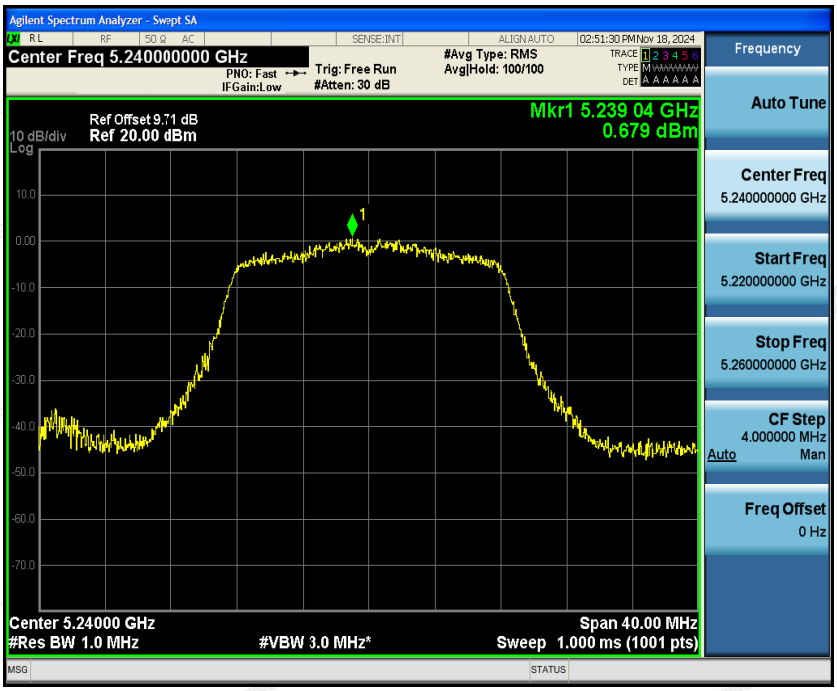
### Low Channel




### Mid Channel

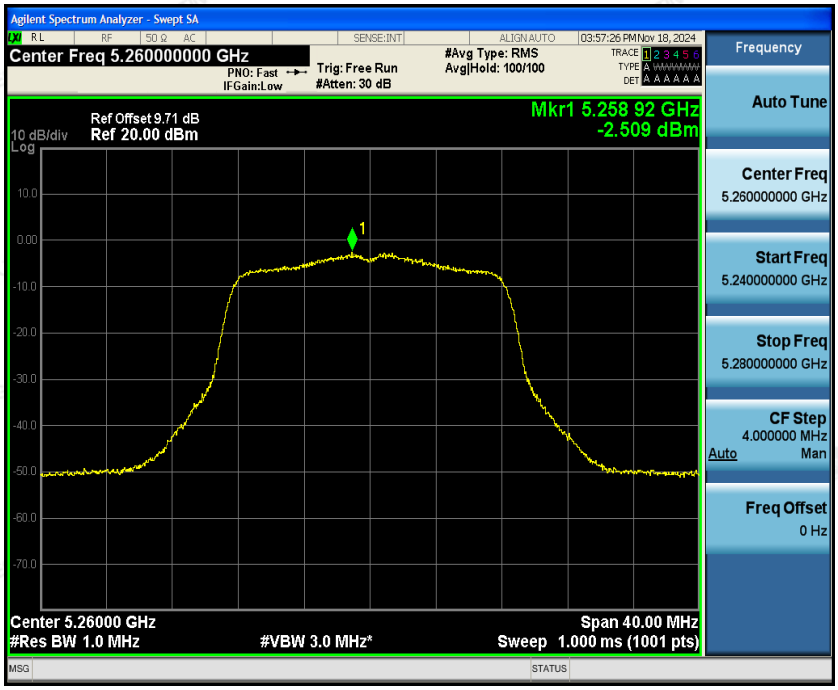


### High Channel

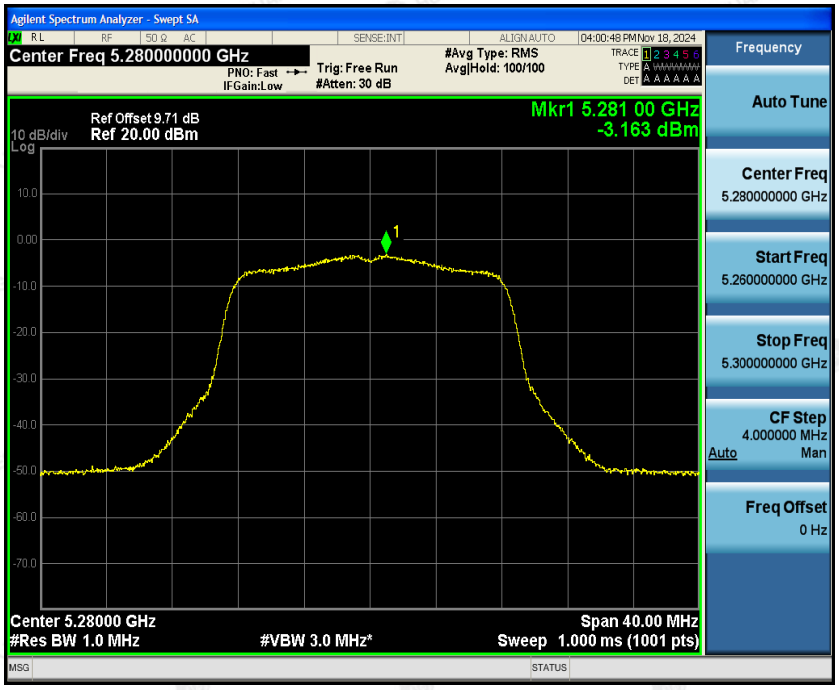



## 5250~5350MHz

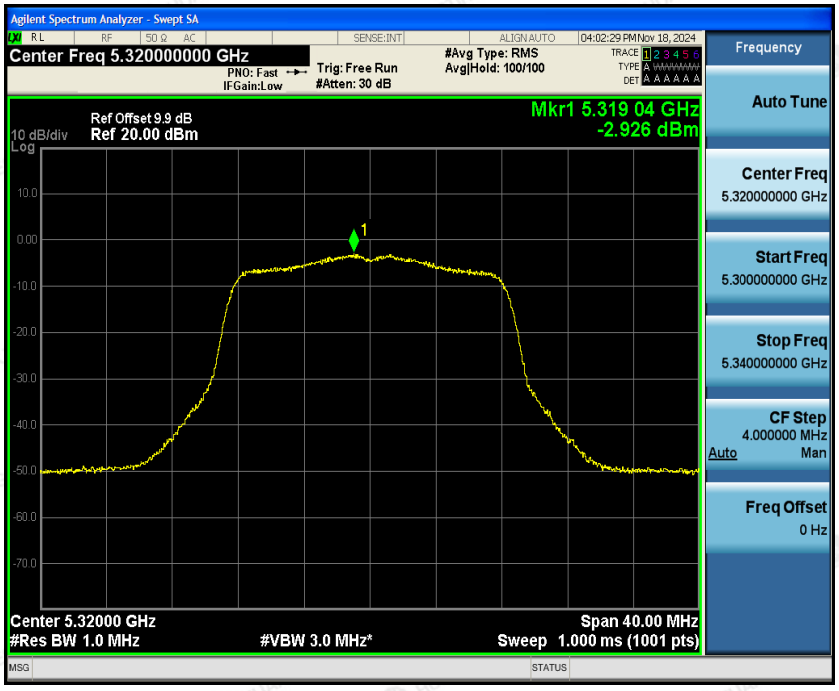
### Low Channel



## Mid Channel

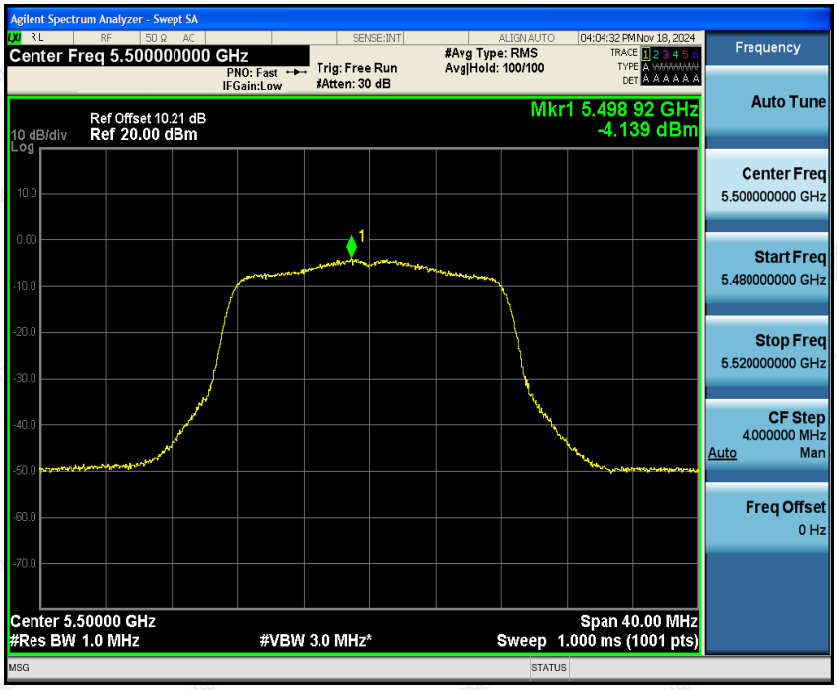



## High Channel

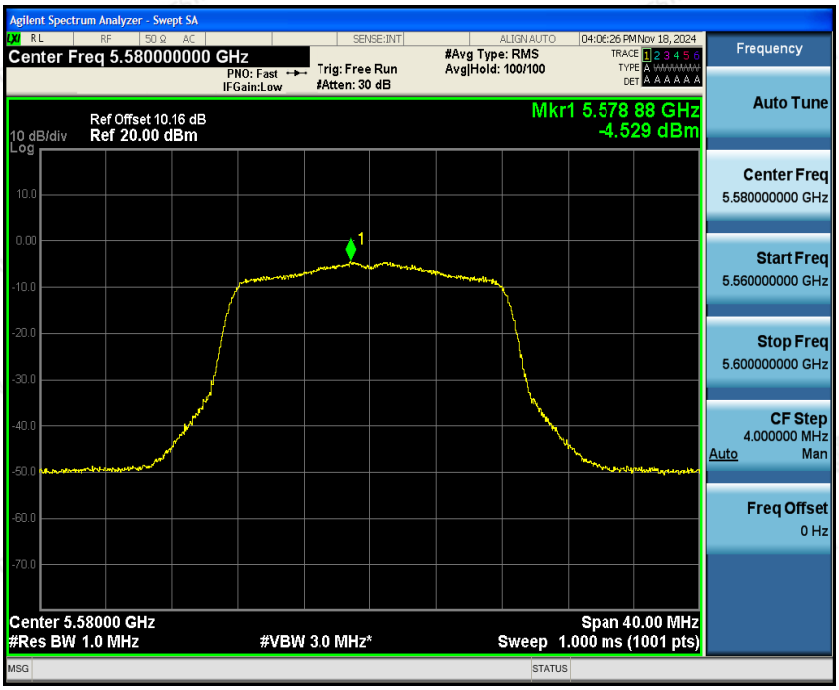


## 5470~5725MHz

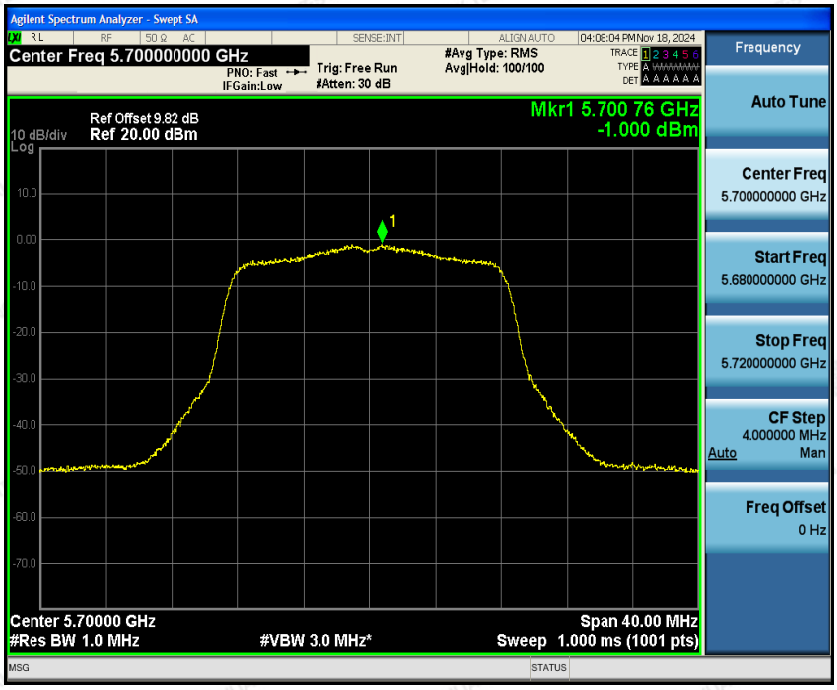
### Low Channel




### Mid Channel



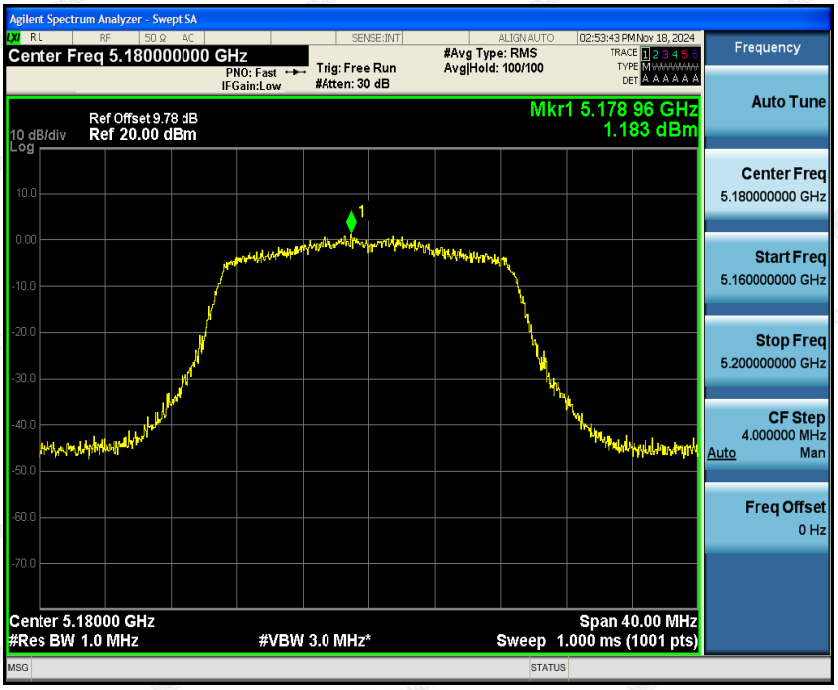
## High Channel



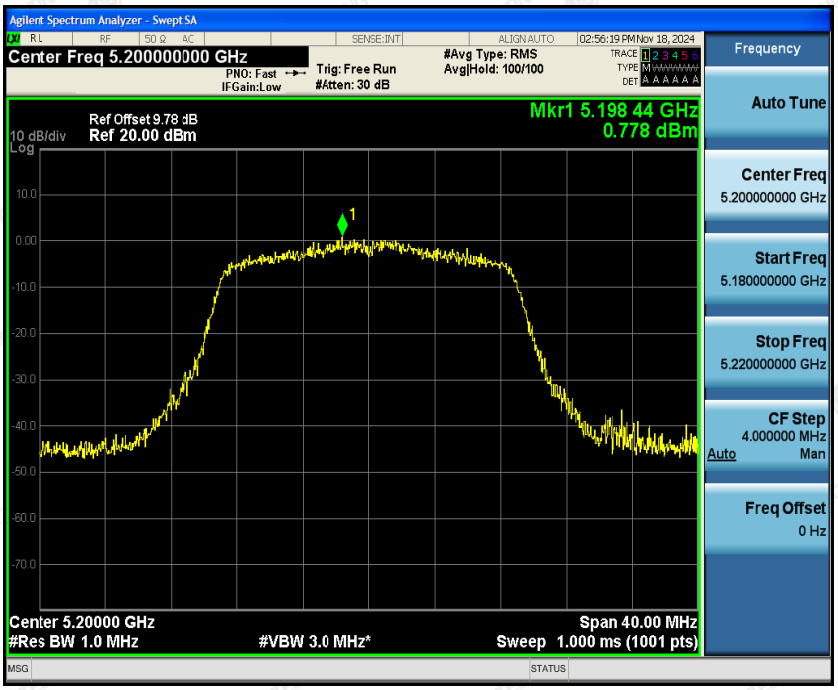
## IEEE802.11n HT20 mode

## 5150~5250MHz

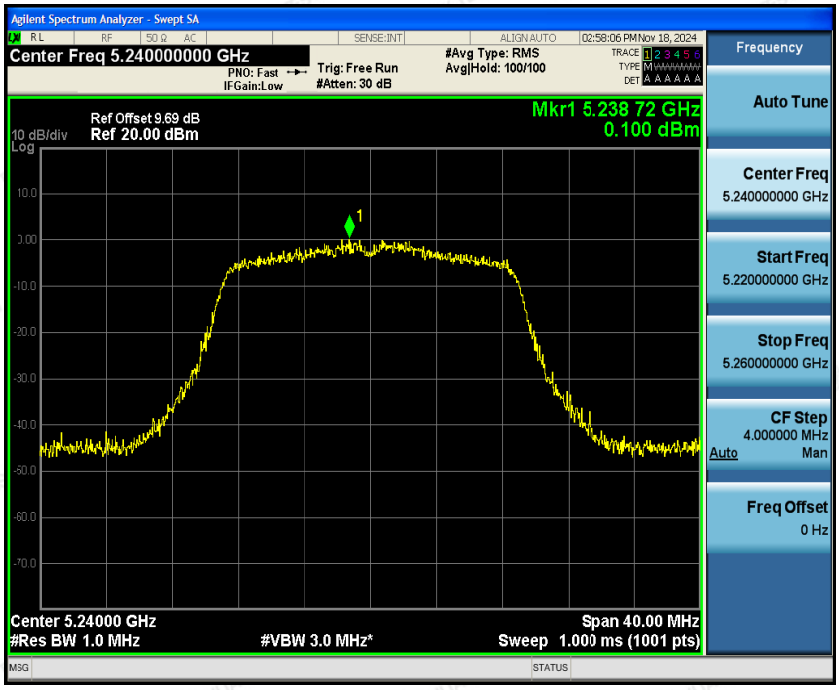
### Low Channel




### Mid Channel

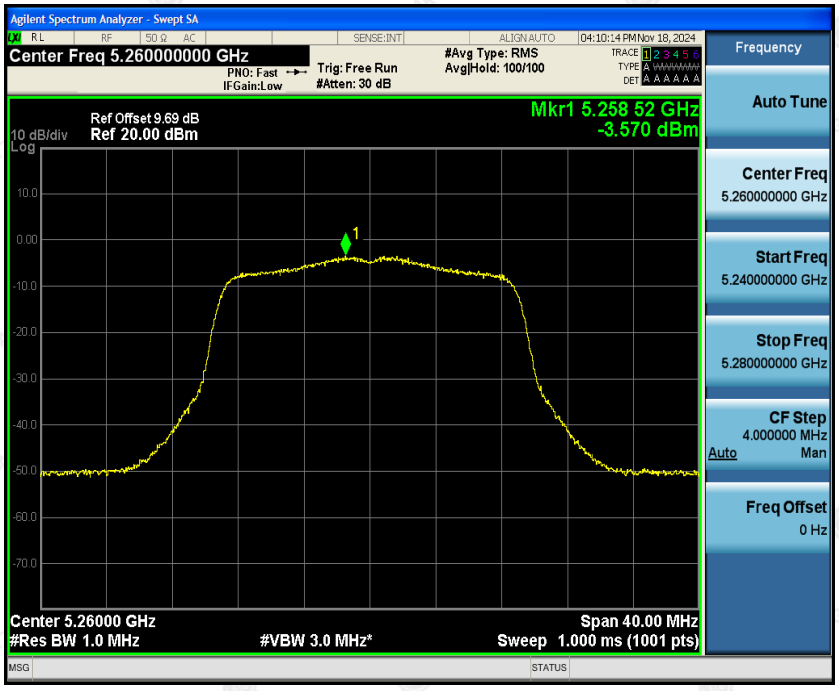


## High Channel

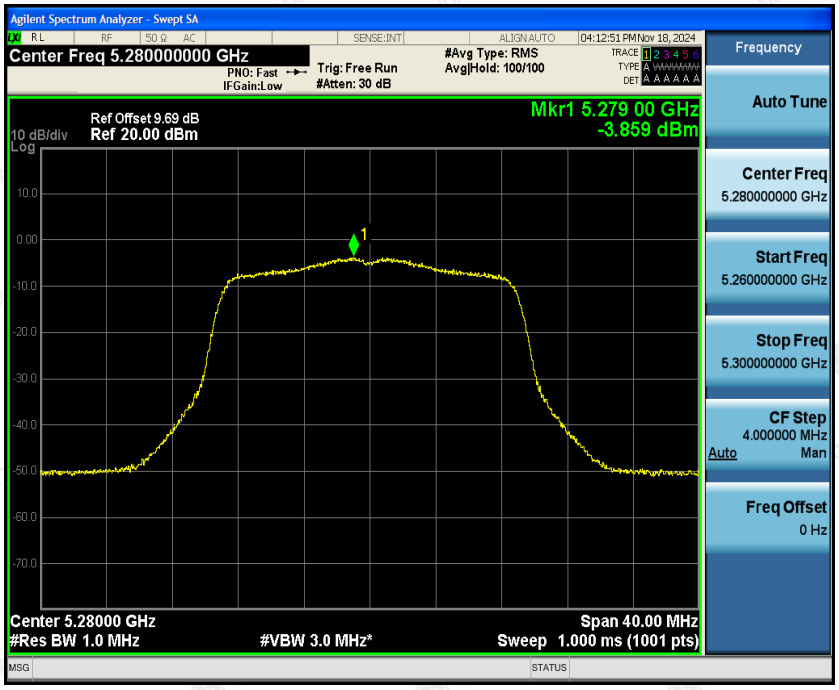



## 5250~5350MHz

## Low Channel



## Mid Channel




## High Channel