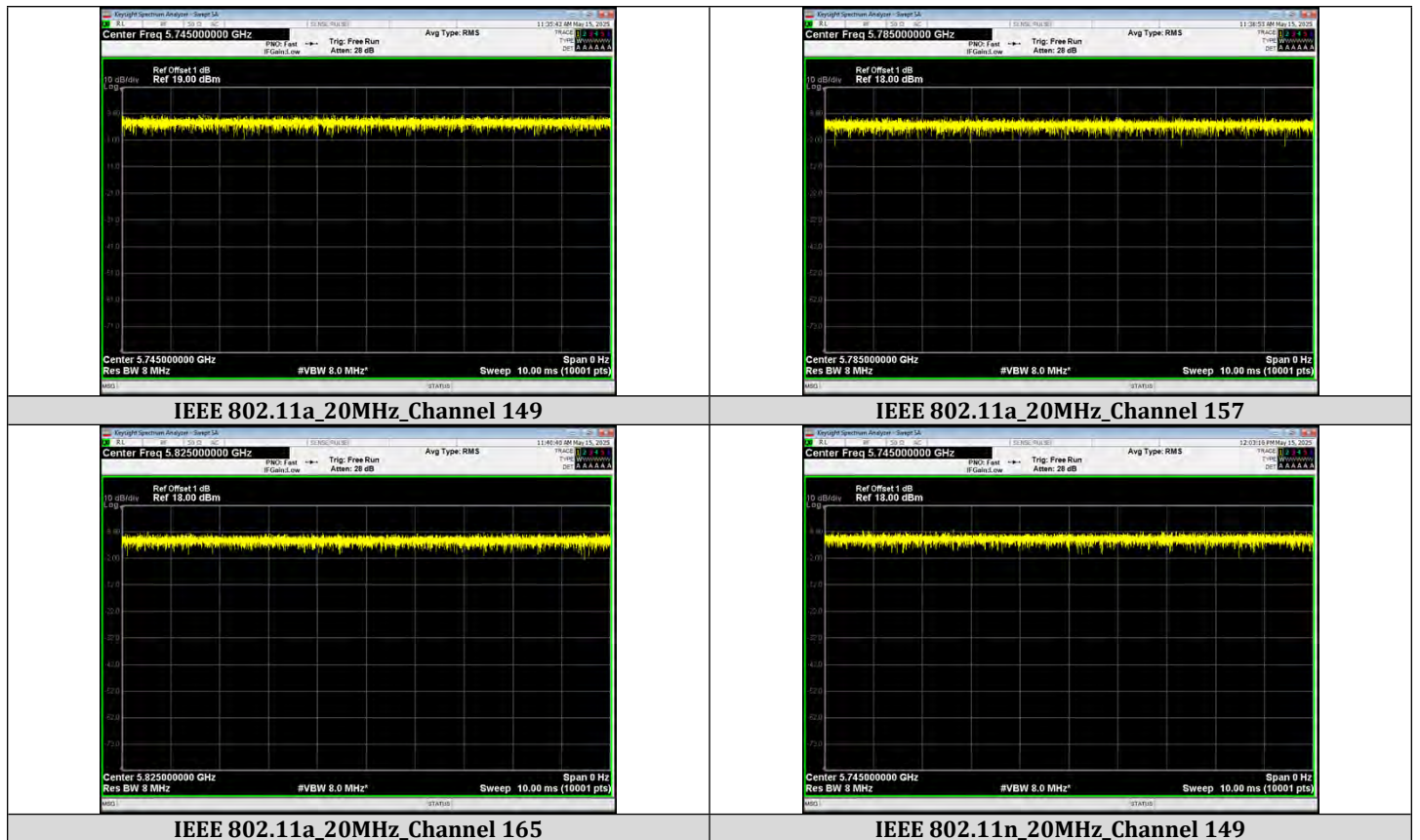


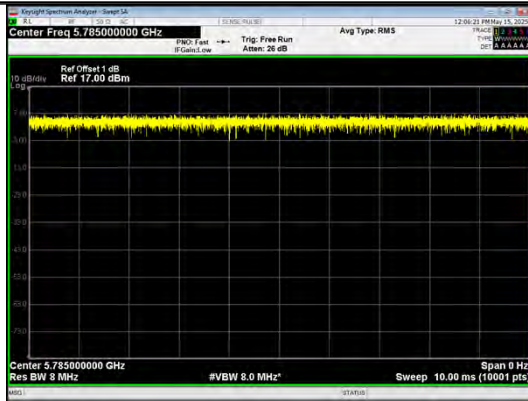
## Duty Cycle

### Test Result

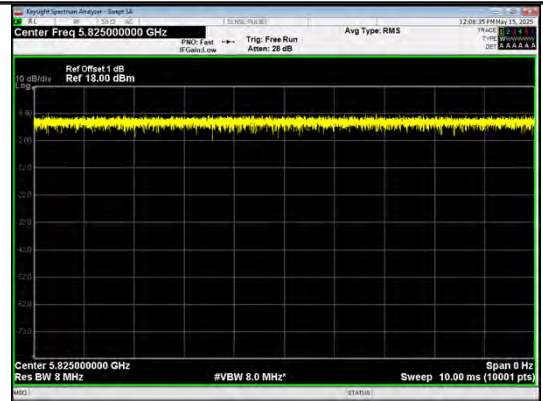
| Mode             | Data rates | Channel | Antenna | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) | 1/T    |
|------------------|------------|---------|---------|--------------|-------------|----------------|---------------------|------------------------|--------|
| IEEE 802.11a     | 6          | 149     | 1       | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
|                  |            | 157     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
|                  |            | 165     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
| IEEE 802.11n_20  | 149        | 10.000  |         | 10.000       | 100         | 1              | 0.0                 | 0.1000                 |        |
|                  | 157        | 10.000  |         | 10.000       | 100         | 1              | 0.0                 | 0.1000                 |        |
|                  | 165        | 10.000  |         | 10.000       | 100         | 1              | 0.0                 | 0.1000                 |        |
| IEEE 802.11n_40  | 151        | 10.000  |         | 10.000       | 100         | 1              | 0.0                 | 0.1000                 |        |
|                  | 159        | 10.000  |         | 10.000       | 100         | 1              | 0.0                 | 0.1000                 |        |
| IEEE 802.11ac_20 | MCS 0      | 149     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
|                  |            | 157     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
|                  |            | 165     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
| IEEE 802.11ac_40 |            | 151     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
|                  |            | 159     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |
| IEEE 802.11ac_80 |            | 155     |         | 10.000       | 10.000      | 100            | 1                   | 0.0                    | 0.1000 |

### Test Graphs

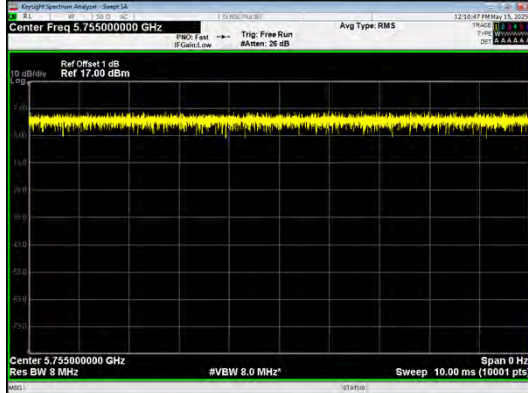




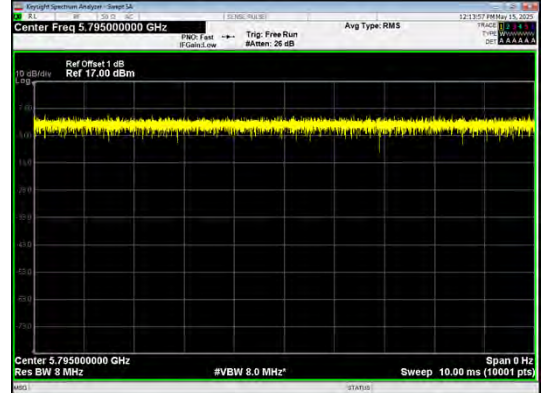
IEEE 802.11n 20MHz\_Channel 157



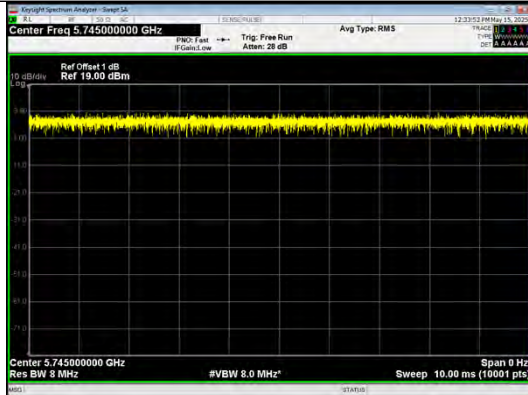
IEEE 802.11n 20MHz\_Channel 165



IEEE 802.11n 40MHz\_Channel 151



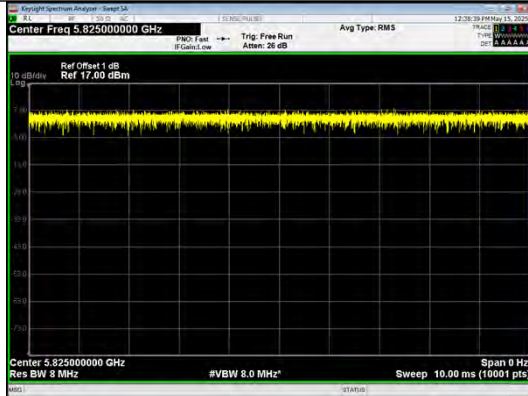
IEEE 802.11n 40MHz\_Channel 159



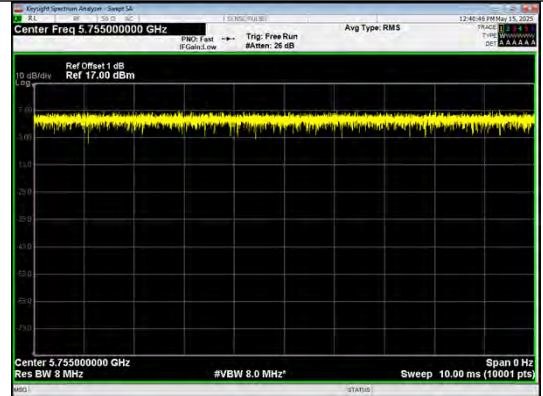
IEEE 802.11ac 20MHz\_Channel 149



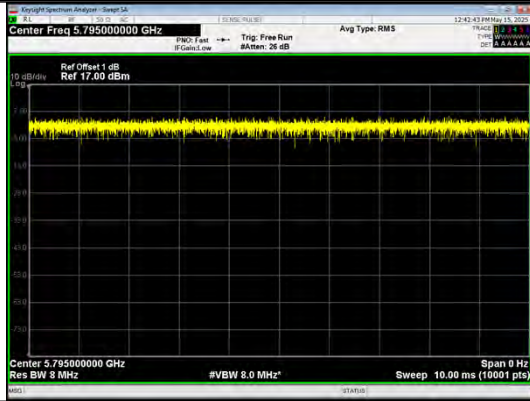
IEEE 802.11ac 20MHz\_Channel 157



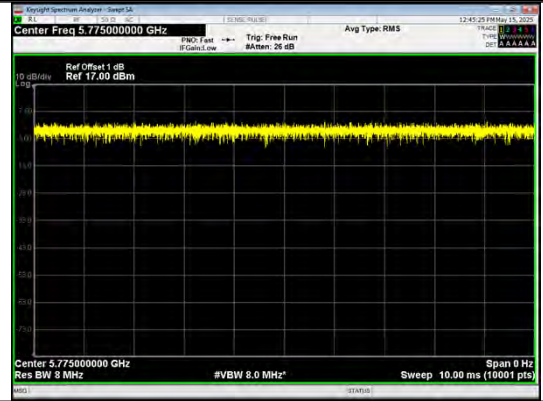
IEEE 802.11ac 20MHz\_Channel 165



IEEE 802.11ac 40MHz\_Channel 151



IEEE 802.11ac\_40MHz\_Channel 159



IEEE 802.11ac\_80MHz\_Channel 155

**Conducted Output Power**

Conducted output power

| Mode             | Channel | Ant. 0 (dBm) | Corr'd Value Ant. 0 (dBm) | Limit (dBm) | Result |
|------------------|---------|--------------|---------------------------|-------------|--------|
| IEEE 802.11a     | 149     | 8.177        | 8.18                      | ≤30         | PASS   |
|                  | 157     | 6.343        | 6.34                      | ≤30         | PASS   |
|                  | 165     | 7.388        | 7.39                      | ≤30         | PASS   |
| IEEE 802.11n_20  | 149     | 7.850        | 7.85                      | ≤30         | PASS   |
|                  | 157     | 6.173        | 6.17                      | ≤30         | PASS   |
|                  | 165     | 7.519        | 7.52                      | ≤30         | PASS   |
| IEEE 802.11n_40  | 151     | 7.942        | 7.94                      | ≤30         | PASS   |
|                  | 159     | 6.439        | 6.44                      | ≤30         | PASS   |
| IEEE 802.11ac_20 | 149     | 7.725        | 7.72                      | ≤30         | PASS   |
|                  | 157     | 7.000        | 7.0                       | ≤30         | PASS   |
|                  | 165     | 6.819        | 6.82                      | ≤30         | PASS   |
| IEEE 802.11ac_40 | 151     | 8.866        | 8.87                      | ≤30         | PASS   |
|                  | 159     | 7.076        | 7.08                      | ≤30         | PASS   |
| IEEE 802.11ac_80 | 155     | 8.624        | 8.62                      | ≤30         | PASS   |



**Conducted AVG output power  
IEEE 802.11a\_Channel 149\_Antenna 0**



**Conducted AVG output power  
IEEE 802.11a\_Channel 157\_Antenna 0**



**Conducted AVG output power  
IEEE 802.11a\_Channel 165\_Antenna 0**



**Conducted AVG output power  
IEEE 802.11n\_20\_Channel 149\_Antenna 0**



Conducted AVG output power  
IEEE 802.11n\_20\_Channel 157\_Antenna 0



Conducted AVG output power  
IEEE 802.11n\_20\_Channel 165\_Antenna 0



Conducted AVG output power  
IEEE 802.11n\_40\_Channel 151\_Antenna 0



Conducted AVG output power  
IEEE 802.11n\_40\_Channel 159\_Antenna 0



Conducted AVG output power  
IEEE 802.11ac\_20\_Channel 149\_Antenna 0



Conducted AVG output power  
IEEE 802.11ac\_20\_Channel 157\_Antenna 0



Conducted AVG output power  
IEEE 802.11ac\_20\_Channel 165\_Antenna 0



Conducted AVG output power  
IEEE 802.11ac\_40\_Channel 151\_Antenna 0



**Conducted AVG output power**  
**IEEE 802.11ac\_40\_Channel 159\_Antenna 0**



**Conducted AVG output power**  
**IEEE 802.11ac\_80\_Channel 155\_Antenna 0**

Note: Corr'd Value= Ant. 0 (dBm)+Duty cycle Factor.



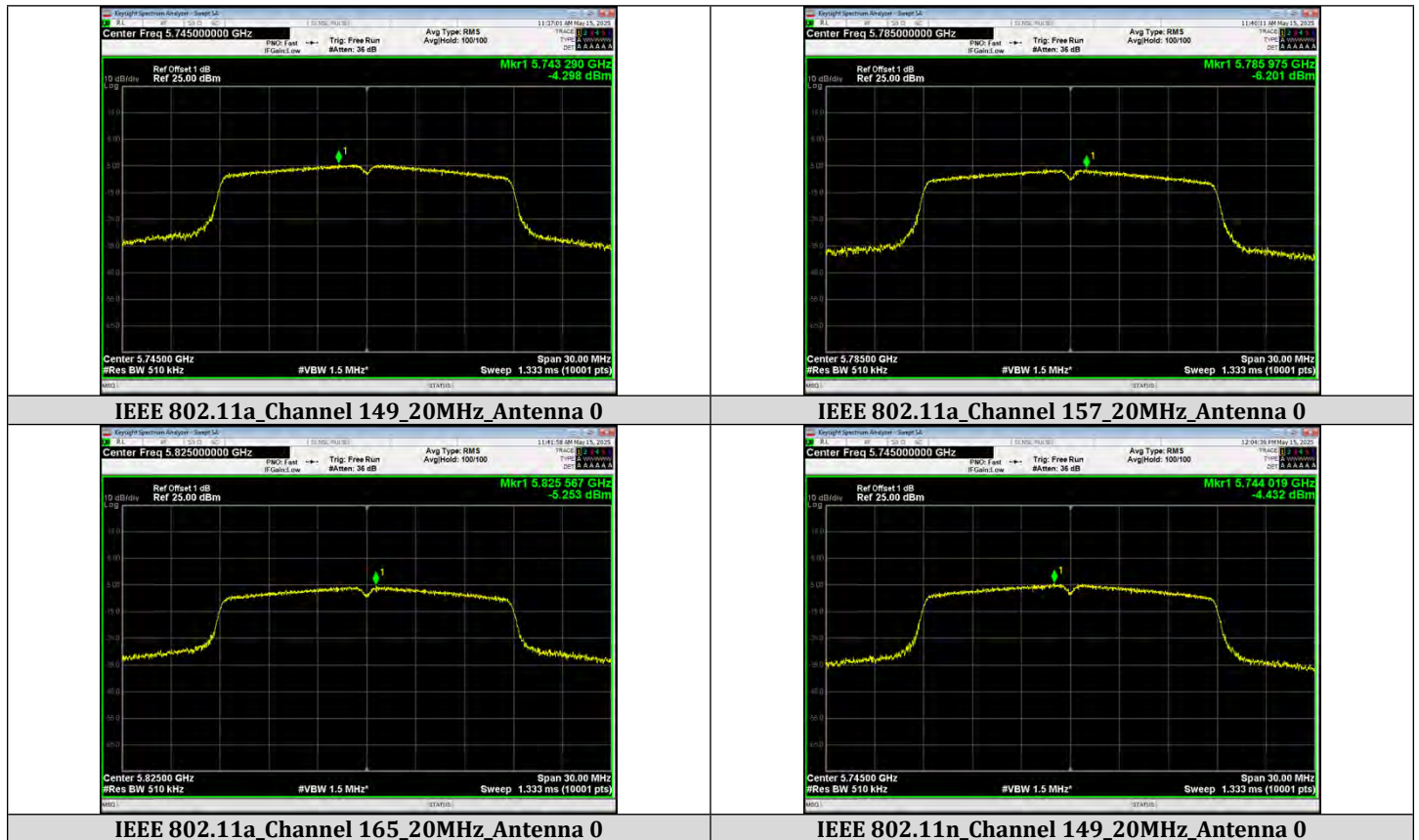
## Peak Power Spectral Density

### Test Result

| Mode             | Channel | Ant. 0<br>Meas PSD<br>(dBm/MHz or<br>dBm/0.51MHz) | Ant. 0<br>Corr'd PSD<br>(dBm/MHz or<br>dBm/0.5MHz) | Limit<br>(dBm/MHz or<br>dBm/0.5MHz) | Result |
|------------------|---------|---------------------------------------------------|----------------------------------------------------|-------------------------------------|--------|
| IEEE 802.11a     | 149     | -4.298                                            | -4.384                                             | 30                                  | PASS   |
|                  | 157     | -6.201                                            | -6.287                                             |                                     | PASS   |
|                  | 165     | -5.253                                            | -5.339                                             |                                     | PASS   |
| IEEE 802.11n_20  | 149     | -4.432                                            | -4.518                                             |                                     | PASS   |
|                  | 157     | -6.284                                            | -6.370                                             |                                     | PASS   |
|                  | 165     | -5.439                                            | -5.525                                             |                                     | PASS   |
| IEEE 802.11n_40  | 151     | -7.458                                            | -7.544                                             |                                     | PASS   |
|                  | 159     | -8.926                                            | -9.012                                             |                                     | PASS   |
| IEEE 802.11ac_20 | 149     | -4.427                                            | -4.513                                             |                                     | PASS   |
|                  | 157     | -5.334                                            | -5.420                                             |                                     | PASS   |
|                  | 165     | -5.803                                            | -5.889                                             |                                     | PASS   |
| IEEE 802.11ac_40 | 151     | -6.413                                            | -6.499                                             |                                     | PASS   |
|                  | 159     | -8.292                                            | -8.378                                             |                                     | PASS   |
| IEEE 802.11ac_80 | 155     | -9.953                                            | -10.039                                            |                                     | PASS   |

Note: Corr'd PSD = Meas PSD +Duty cycle Factor- BW factor( $10*\log(510/500)$ ).

### Test Graphs





IEEE 802.11n\_Channel 157\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 165\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 151\_40MHz\_Antenna 0



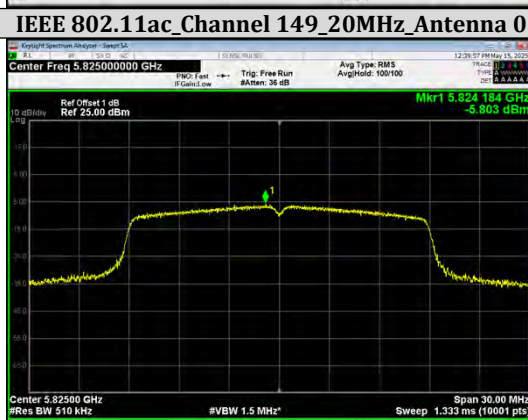
IEEE 802.11n\_Channel 159\_40MHz\_Antenna 0



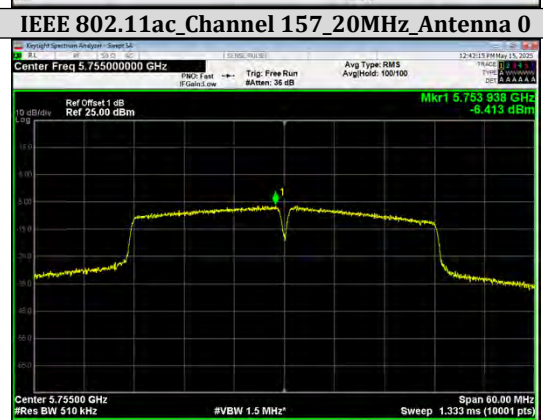
IEEE 802.11ac\_Channel 149\_20MHz\_Antenna 0



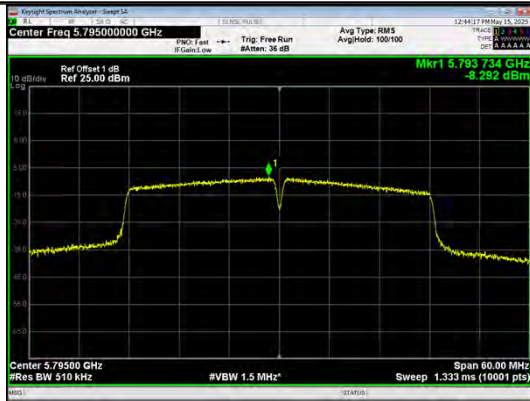
IEEE 802.11ac\_Channel 157\_20MHz\_Antenna 0



IEEE 802.11ac\_Channel 165\_20MHz\_Antenna 0



IEEE 802.11ac\_Channel 151\_40MHz\_Antenna 0



IEEE 802.11ac\_Channel 159\_40MHz\_Antenna 0



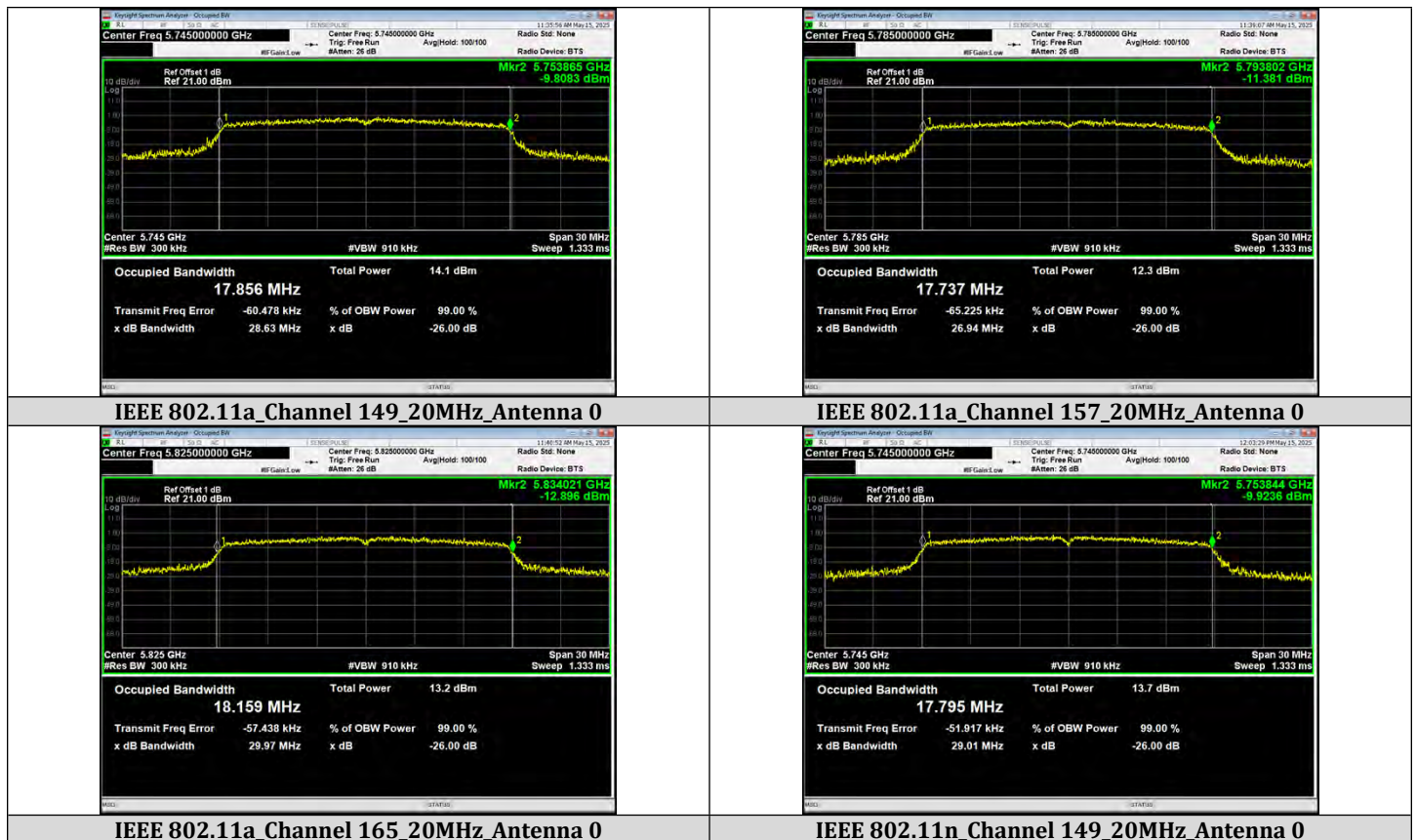
IEEE 802.11ac\_Channel 155\_80MHz\_Antenna 0

## 99% Bandwidth

### Test Result

| Mode             | Channel | Ant. | Center Frequency (MHz) | 99% BW (MHz) |
|------------------|---------|------|------------------------|--------------|
| IEEE 802.11a     | 149     | 0    | 5745                   | 17.856       |
|                  | 157     |      | 5785                   | 17.737       |
|                  | 165     |      | 5825                   | 18.159       |
| IEEE 802.11n_20  | 149     |      | 5745                   | 17.795       |
|                  | 157     |      | 5785                   | 17.727       |
|                  | 165     |      | 5825                   | 18.195       |
| IEEE 802.11n_40  | 151     |      | 5755                   | 36.277       |
|                  | 159     |      | 5795                   | 36.293       |
| IEEE 802.11ac_20 | 149     |      | 5745                   | 17.803       |
|                  | 157     |      | 5785                   | 17.850       |
|                  | 165     |      | 5825                   | 17.959       |
| IEEE 802.11ac_40 | 151     |      | 5755                   | 36.612       |
|                  | 159     |      | 5795                   | 36.353       |
| IEEE 802.11ac_80 | 155     |      | 5775                   | 79.745       |

### Test Graphs





IEEE 802.11n\_Channel 157\_20MHz\_Antenna 0

IEEE 802.11n\_Channel 165\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 151\_40MHz\_Antenna 0

IEEE 802.11n\_Channel 159\_40MHz\_Antenna 0



IEEE 802.11ac\_Channel 149\_20MHz\_Antenna 0

IEEE 802.11ac\_Channel 157\_20MHz\_Antenna 0



IEEE 802.11ac\_Channel 165\_20MHz\_Antenna 0

IEEE 802.11ac\_Channel 151\_40MHz\_Antenna 0



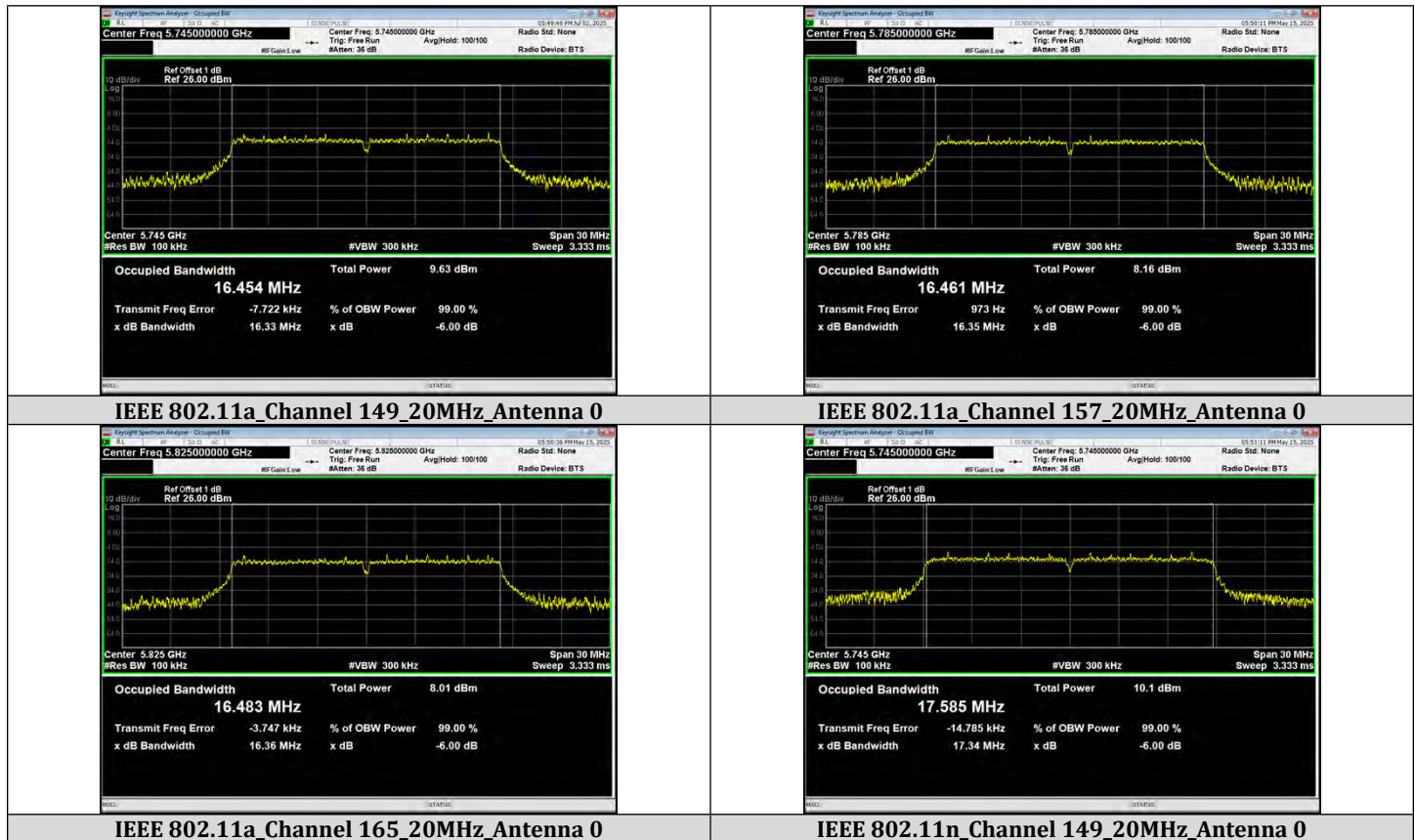
IEEE 802.11ac\_Channel 159\_40MHz\_Antenna 0

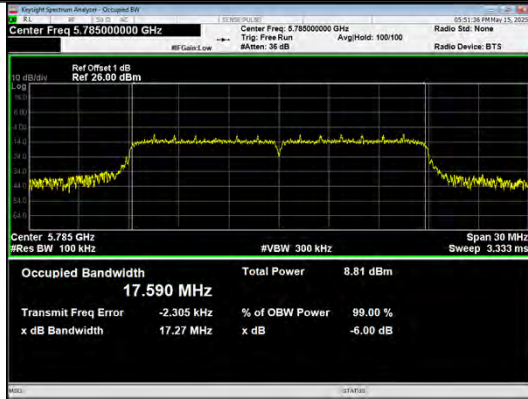


IEEE 802.11ac\_Channel 155\_80MHz\_Antenna 0

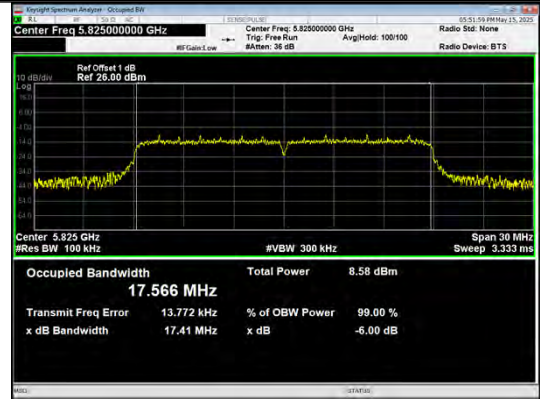
**6dB Bandwidth****Test Result**

| Mode             | Channel | Ant. | Center Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit (MHz) | Result |
|------------------|---------|------|------------------------|----------------------|-------------|--------|
| IEEE 802.11a     | 149     | 0    | 5745                   | 16.33                | ≥0.5        | PASS   |
|                  | 157     |      | 5785                   | 16.35                |             | PASS   |
|                  | 165     |      | 5825                   | 16.36                |             | PASS   |
| IEEE 802.11n_20  | 149     |      | 5745                   | 17.34                |             | PASS   |
|                  | 157     |      | 5785                   | 17.27                |             | PASS   |
|                  | 165     |      | 5825                   | 17.41                |             | PASS   |
| IEEE 802.11n_40  | 151     |      | 5755                   | 35.96                |             | PASS   |
|                  | 159     |      | 5795                   | 36.01                |             | PASS   |
| IEEE 802.11ac_20 | 149     |      | 5745                   | 17.52                |             | PASS   |
|                  | 157     |      | 5785                   | 17.28                |             | PASS   |
|                  | 165     |      | 5825                   | 17.28                |             | PASS   |
| IEEE 802.11ac_40 | 151     |      | 5755                   | 36.30                |             | PASS   |
|                  | 159     |      | 5795                   | 36.14                |             | PASS   |
| IEEE 802.11ac_80 | 155     |      | 5775                   | 75.47                |             | PASS   |

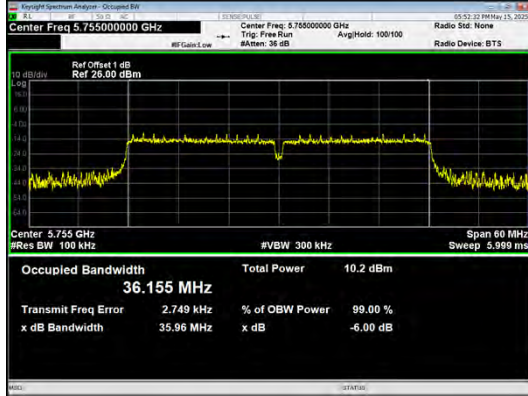
**Test Graphs**



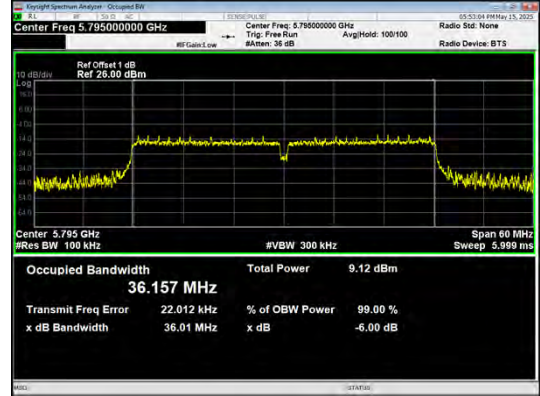
IEEE 802.11n\_Channel 157\_20MHz\_Antenna 0



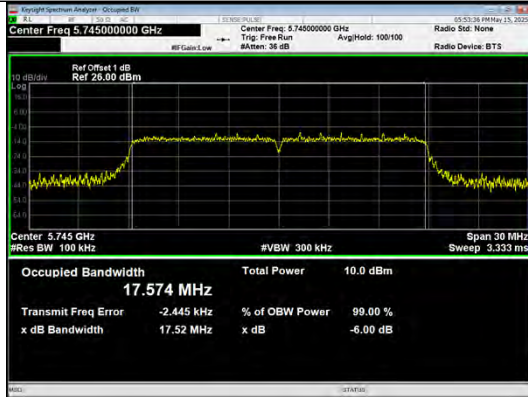
IEEE 802.11n\_Channel 165\_20MHz\_Antenna 0



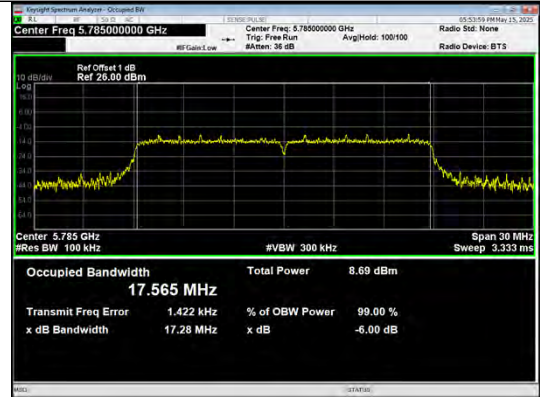
IEEE 802.11n\_Channel 151\_40MHz\_Antenna 0



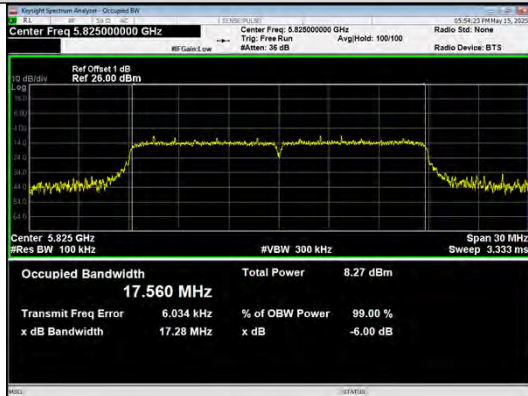
IEEE 802.11n\_Channel 159\_40MHz\_Antenna 0



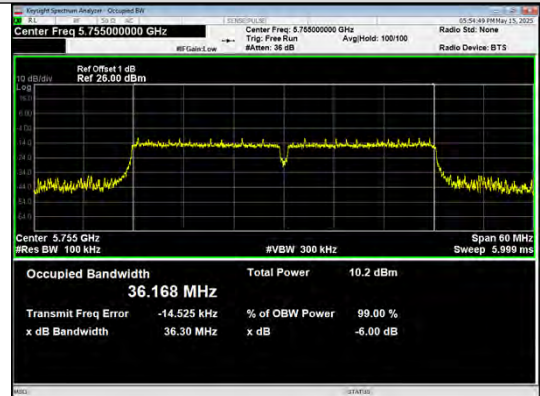
IEEE 802.11ac\_Channel 149\_20MHz\_Antenna 0



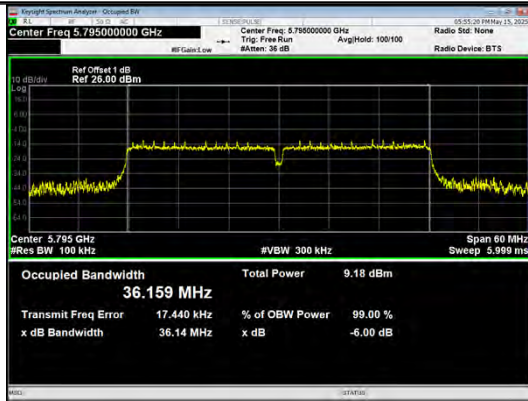
IEEE 802.11ac\_Channel 157\_20MHz\_Antenna 0



IEEE 802.11ac\_Channel 165\_20MHz\_Antenna 0



IEEE 802.11ac\_Channel 151\_40MHz\_Antenna 0



IEEE 802.11ac\_Channel 159\_40MHz\_Antenna 0



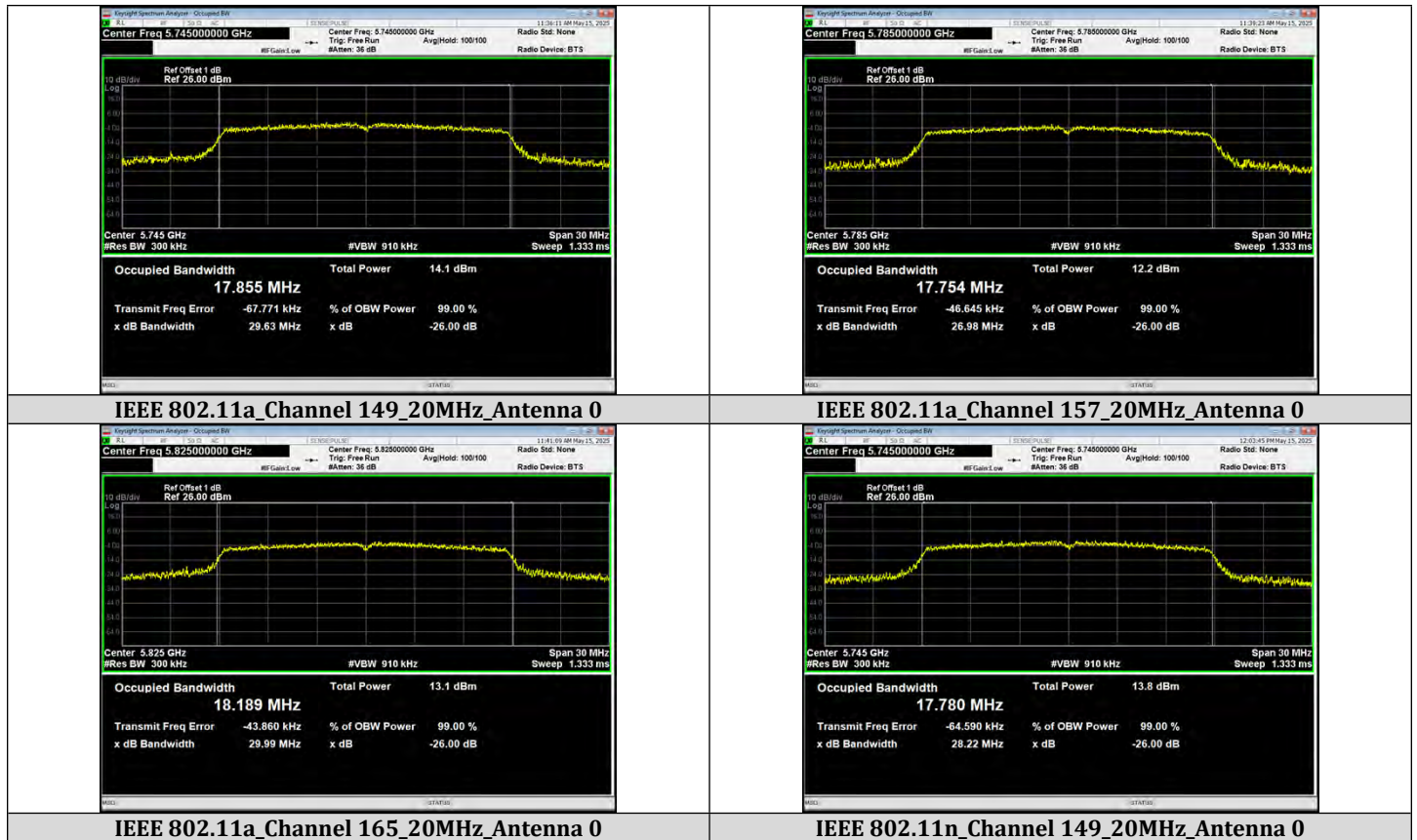
IEEE 802.11ac\_Channel 155\_80MHz\_Antenna 0

## 26dB Bandwidth

### Test Result

| Mode             | Channel | Ant. | Center Frequency (MHz) | 26 dB Bandwidth (MHz) | RBW/EBW |
|------------------|---------|------|------------------------|-----------------------|---------|
| IEEE 802.11a     | 149     | 0    | 5745                   | 29.63                 | 1.01    |
|                  | 157     |      | 5785                   | 26.98                 | 1.11    |
|                  | 165     |      | 5825                   | 29.99                 | 1.0     |
| IEEE 802.11n_20  | 149     |      | 5745                   | 28.22                 | 1.06    |
|                  | 157     |      | 5785                   | 27.15                 | 1.1     |
|                  | 165     |      | 5825                   | 29.92                 | 1.0     |
| IEEE 802.11n_40  | 151     |      | 5755                   | 58.47                 | 1.01    |
|                  | 159     |      | 5795                   | 53.86                 | 1.04    |
| IEEE 802.11ac_20 | 149     |      | 5745                   | 27.47                 | 1.09    |
|                  | 157     |      | 5785                   | 28.66                 | 1.05    |
|                  | 165     |      | 5825                   | 29.50                 | 1.02    |
| IEEE 802.11ac_40 | 151     |      | 5755                   | 59.89                 | 1.03    |
|                  | 159     |      | 5795                   | 58.01                 | 1.02    |
| IEEE 802.11ac_80 | 155     |      | 5775                   | 119.14                | 1.02    |

### Test Graphs





IEEE 802.11n\_Channel 157\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 165\_20MHz\_Antenna 0



IEEE 802.11n\_Channel 151\_40MHz\_Antenna 0



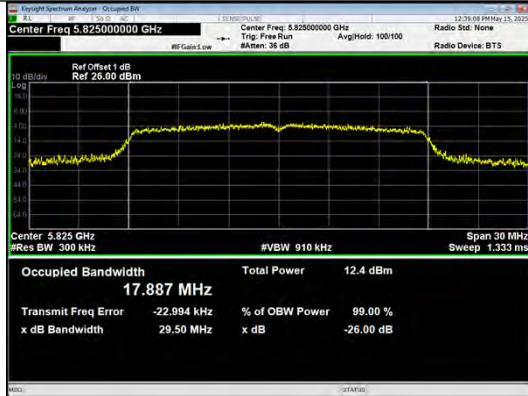
IEEE 802.11n\_Channel 159\_40MHz\_Antenna 0



IEEE 802.11ac\_Channel 149\_20MHz\_Antenna 0



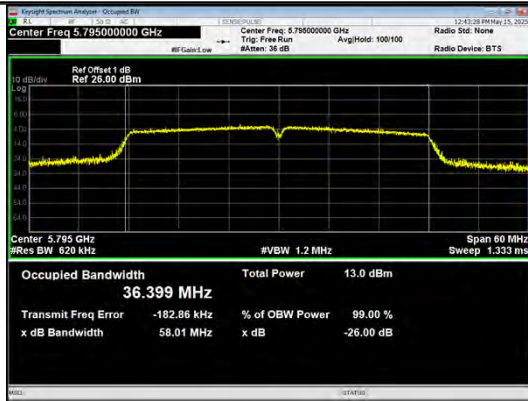
IEEE 802.11ac\_Channel 157\_20MHz\_Antenna 0



IEEE 802.11ac\_Channel 165\_20MHz\_Antenna 0



IEEE 802.11ac\_Channel 151\_40MHz\_Antenna 0



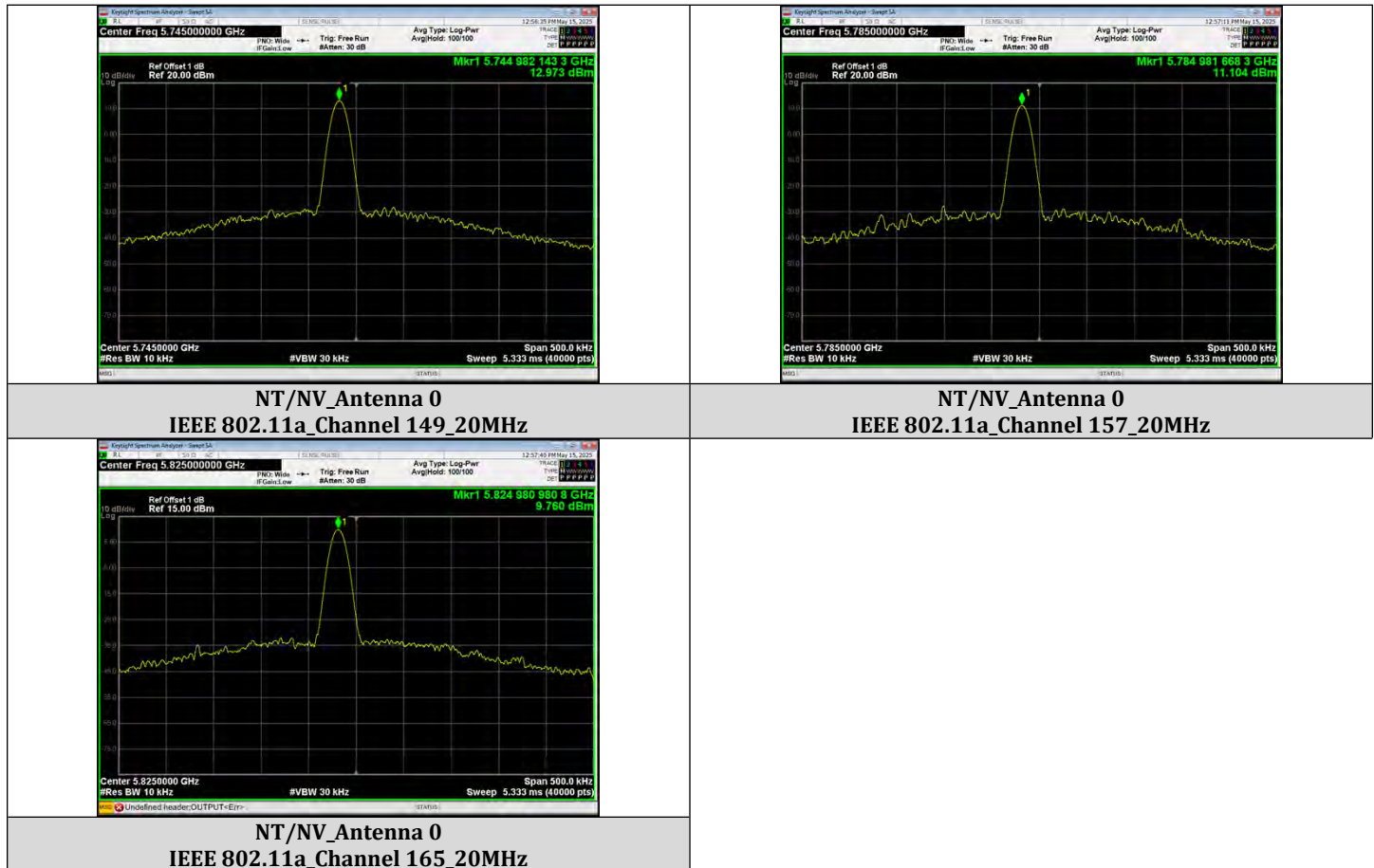
IEEE 802.11ac\_Channel 159\_40MHz\_Antenna 0



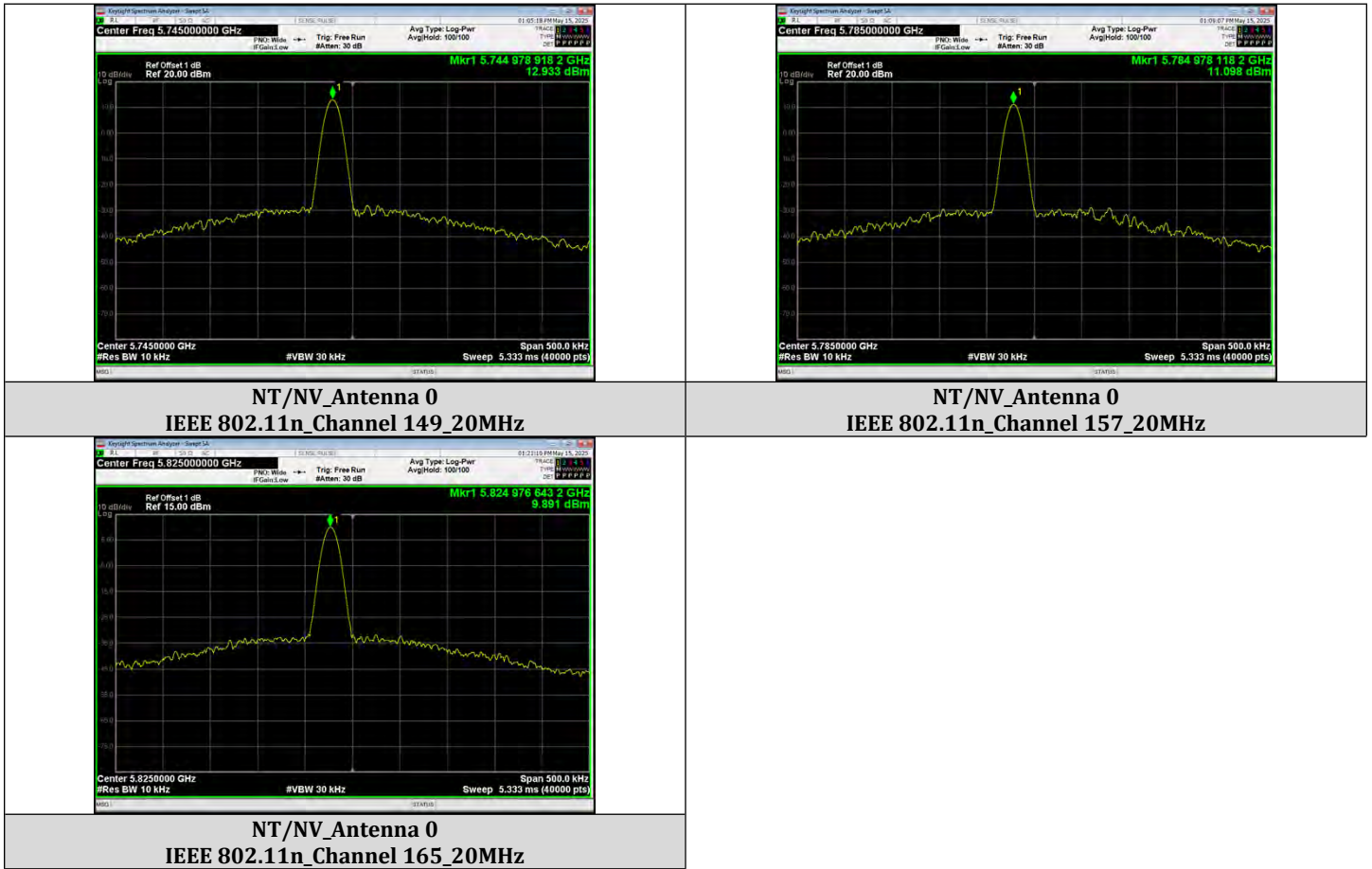
IEEE 802.11ac\_Channel 155\_80MHz\_Antenna 0

**Frequency Stability****Test Result**

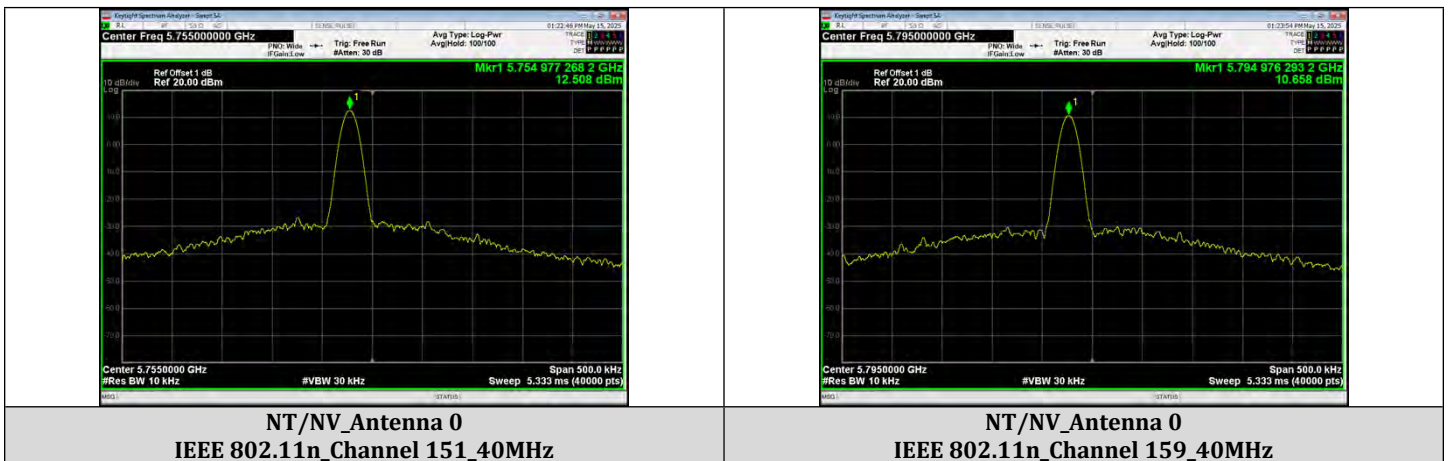
| Condition | Mode             | Ch. | Antenna | Center Frequency (MHz) | Calculated Value of Center Frequency(MHz) | Result (ppm) | Limit (ppm)            | State |
|-----------|------------------|-----|---------|------------------------|-------------------------------------------|--------------|------------------------|-------|
| NT/NV     | IEEE 802.11a     | 149 | 0       | 5745.0                 | 5744.982143                               | -3.11        | Within authorized band | PASS  |
|           |                  | 157 |         | 5785.0                 | 5784.981668                               | -3.17        |                        | PASS  |
|           |                  | 165 |         | 5825.0                 | 5824.980981                               | -3.27        |                        | PASS  |
|           | IEEE 802.11n_20  | 149 |         | 5745.0                 | 5744.978918                               | -3.67        |                        | PASS  |
|           |                  | 157 |         | 5785.0                 | 5784.978118                               | -3.78        |                        | PASS  |
|           |                  | 165 |         | 5825.0                 | 5824.976643                               | -4.01        |                        | PASS  |
|           | IEEE 802.11n_40  | 151 |         | 5755.0                 | 5754.977268                               | -3.95        |                        | PASS  |
|           |                  | 159 |         | 5795.0                 | 5794.976293                               | -4.09        |                        | PASS  |
|           |                  | 149 |         | 5745.0                 | 5744.977668                               | -3.89        |                        | PASS  |
|           | IEEE 802.11ac_20 | 157 |         | 5785.0                 | 5784.976593                               | -4.05        |                        | PASS  |
|           |                  | 165 |         | 5825.0                 | 5824.975906                               | -4.14        |                        | PASS  |
|           |                  | 151 |         | 5755.0                 | 5754.976793                               | -4.03        |                        | PASS  |
|           | IEEE 802.11ac_40 | 159 |         | 5795.0                 | 5794.976593                               | -4.04        |                        | PASS  |
|           | IEEE 802.11ac_80 | 155 |         | 5775.0                 | 5774.976881                               | -4.0         |                        | PASS  |

**Test Graphs****NT/NV****IEEE 802.11a**

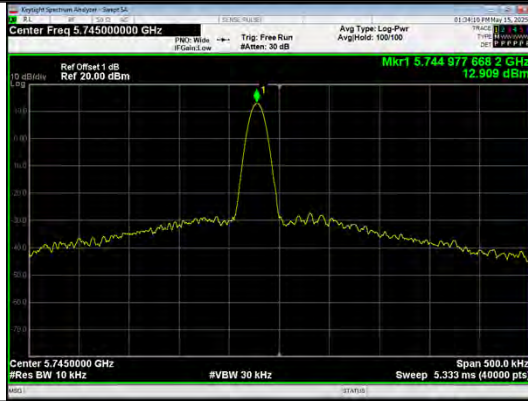
## IEEE 802.11n\_20



## IEEE 802.11n\_40



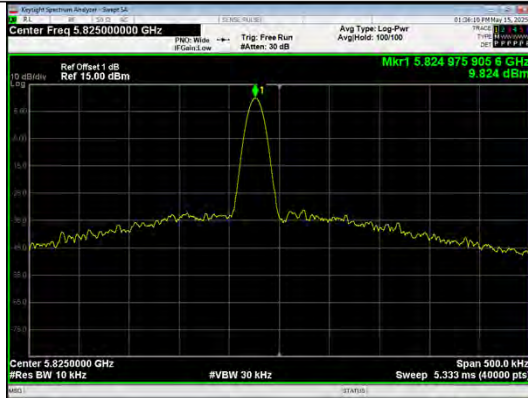
## IEEE 802.11ac\_20



**NT/NV\_Antenna 0**  
**IEEE 802.11ac\_Channel 149\_20MHz**

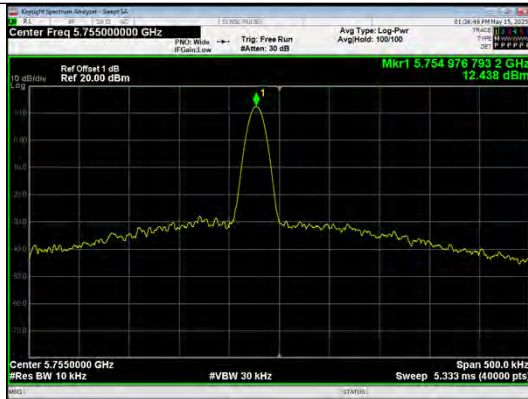


**NT/NV\_Antenna 0**  
**IEEE 802.11ac\_Channel 157\_20MHz**

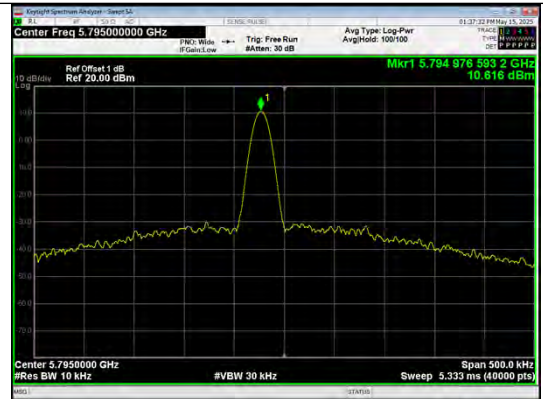


**NT/NV\_Antenna 0**  
**IEEE 802.11ac\_Channel 165\_20MHz**

IEEE 802.11ac\_40



**NT/NV\_Antenna 0**  
**IEEE 802.11ac\_Channel 151\_40MHz**



**NT/NV\_Antenna 0**  
**IEEE 802.11ac\_Channel 159\_40MHz**

IEEE 802.11ac\_80



NT/NV\_Antenna 0  
IEEE 802.11ac\_Channel 155\_80MHz

\*\*\*\*\* End of Report \*\*\*\*\*