



## Appendix D

### RF Test Data for 5.8G WIFI (Conducted Measurement)

Product Name: Fivestars-Pegasus

Test Model: SBC2.0a

HVIN: SBC2.0a

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 21.1° C   |
| Relative Humidity: | 52.2%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Carl Fu   |
| Supervised by:     | Li Huan   |



## D.1 Occupied channel bandwidth

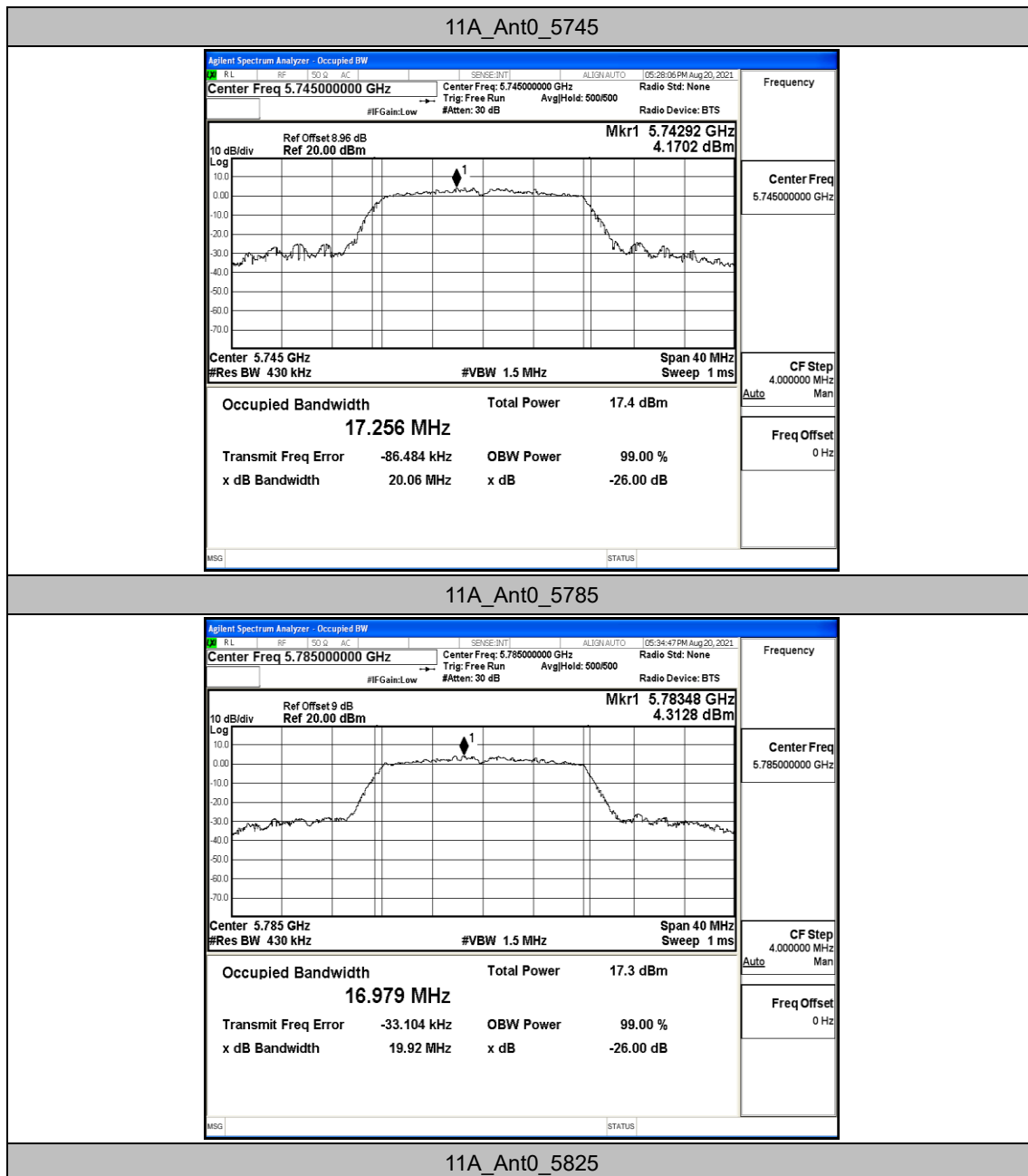
### Test Result

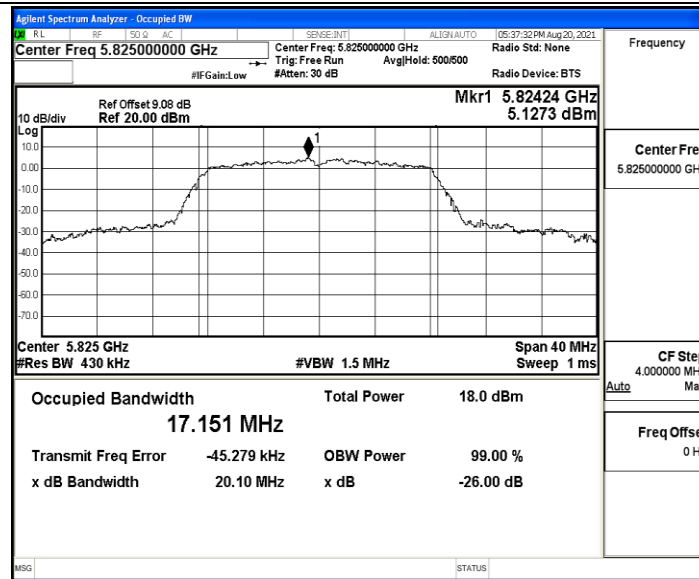
ANT0

| TestMode   | Antenna | Channel | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|------------|---------|---------|-----------|----------|----------|------------|---------|
| 11A        | Ant0    | 5745    | 17.256    | 5736.286 | 5753.542 | ---        | PASS    |
|            |         | 5785    | 16.979    | 5776.477 | 5793.456 | ---        | PASS    |
|            |         | 5825    | 17.151    | 5816.379 | 5833.530 | ---        | PASS    |
| 11N20SISO  | Ant0    | 5745    | 17.763    | 5736.114 | 5753.877 | ---        | PASS    |
|            |         | 5785    | 17.840    | 5776.104 | 5793.944 | ---        | PASS    |
|            |         | 5825    | 17.856    | 5816.077 | 5833.933 | ---        | PASS    |
| 11N40SISO  | Ant0    | 5755    | 36.284    | 5736.891 | 5773.175 | ---        | PASS    |
|            |         | 5795    | 36.248    | 5776.913 | 5813.161 | ---        | PASS    |
| 11AC20SISO | Ant0    | 5745    | 17.826    | 5736.104 | 5753.930 | ---        | PASS    |
|            |         | 5785    | 17.887    | 5776.090 | 5793.977 | ---        | PASS    |
|            |         | 5825    | 17.895    | 5816.037 | 5833.932 | ---        | PASS    |
| 11AC40SISO | Ant0    | 5755    | 36.274    | 5736.884 | 5773.158 | ---        | PASS    |
|            |         | 5795    | 36.314    | 5776.855 | 5813.169 | ---        | PASS    |
| 11AC80SISO | Ant0    | 5775    | 75.211    | 5737.499 | 5812.710 | ---        | PASS    |

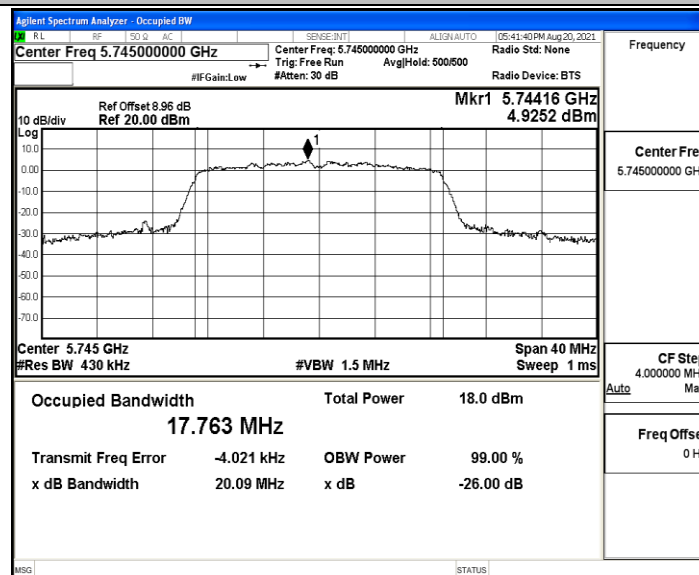


## Test Graphs

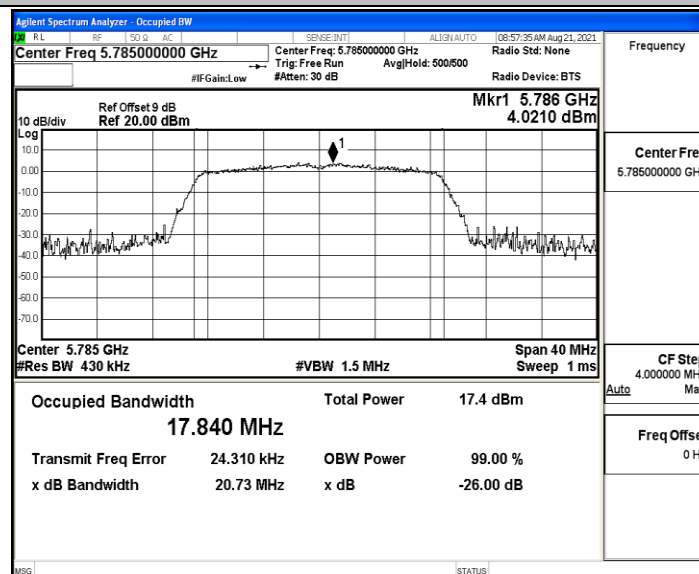




11N20SISO\_Ant0\_5745

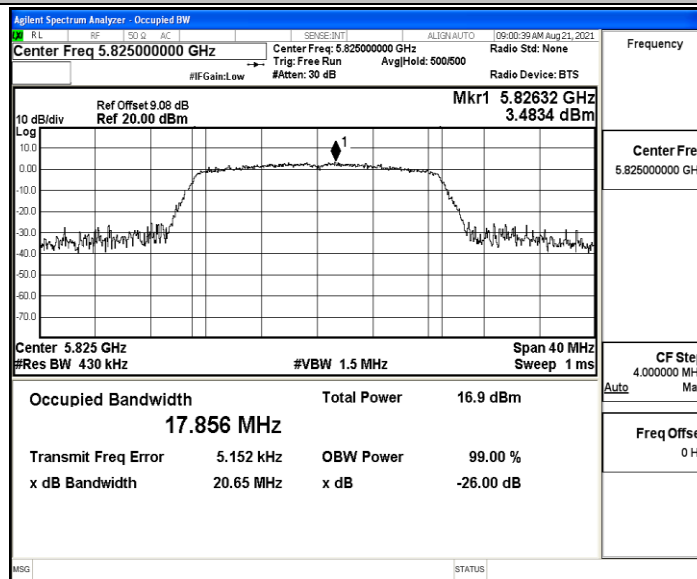


11N20SISO\_Ant0\_5785

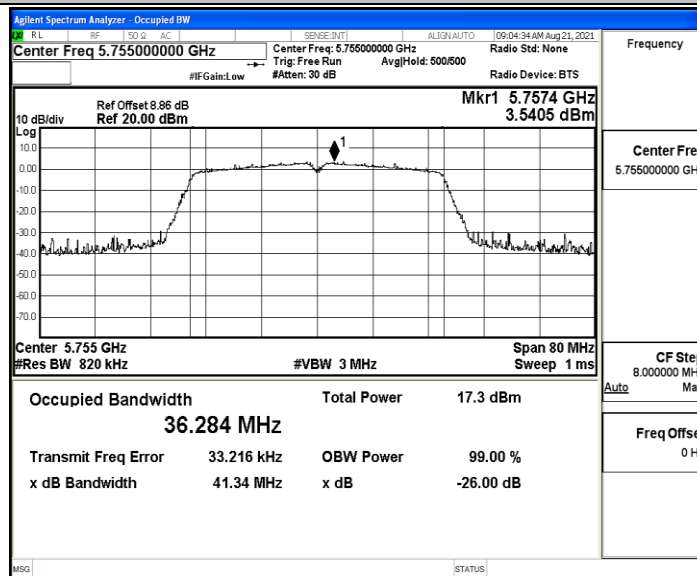




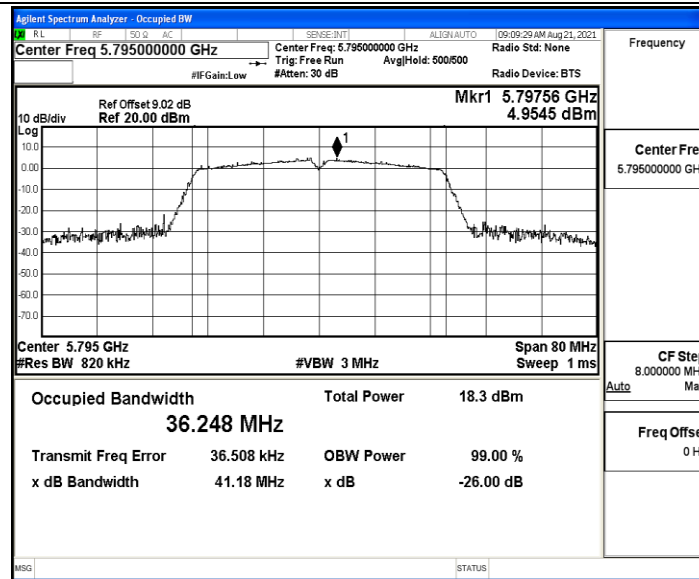
## 11N20SISO\_Ant0\_5825



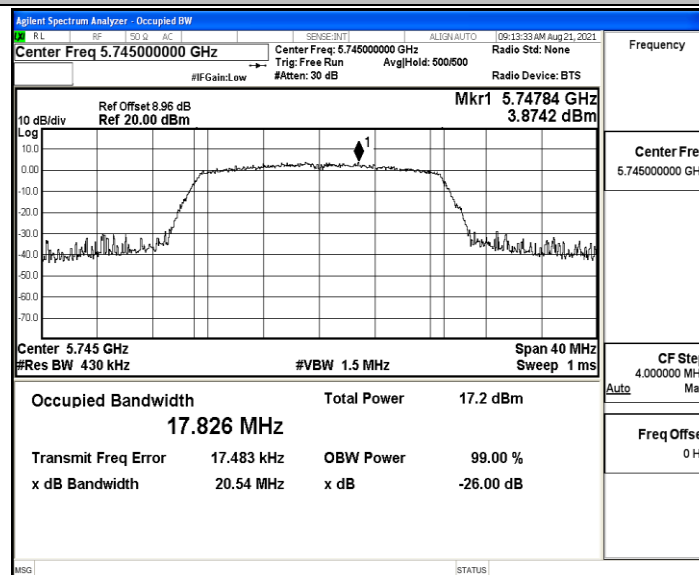
## 11N40SISO\_Ant0\_5755



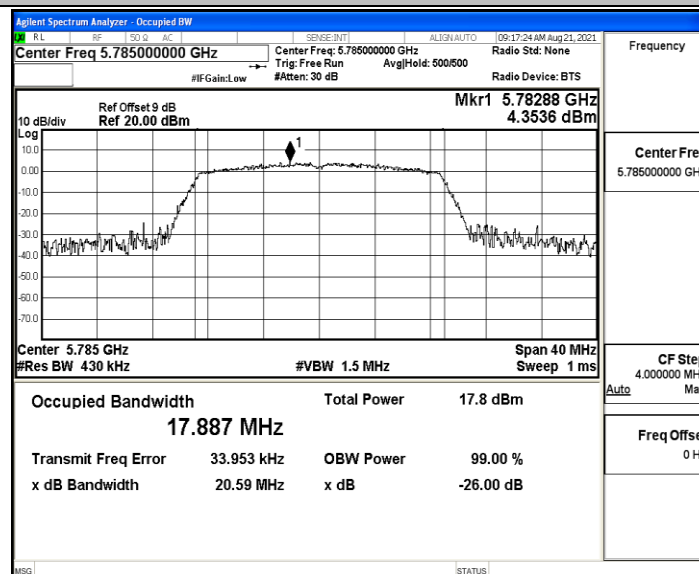
## 11N40SISO\_Ant0\_5795



11AC20SISO\_Ant0\_5745

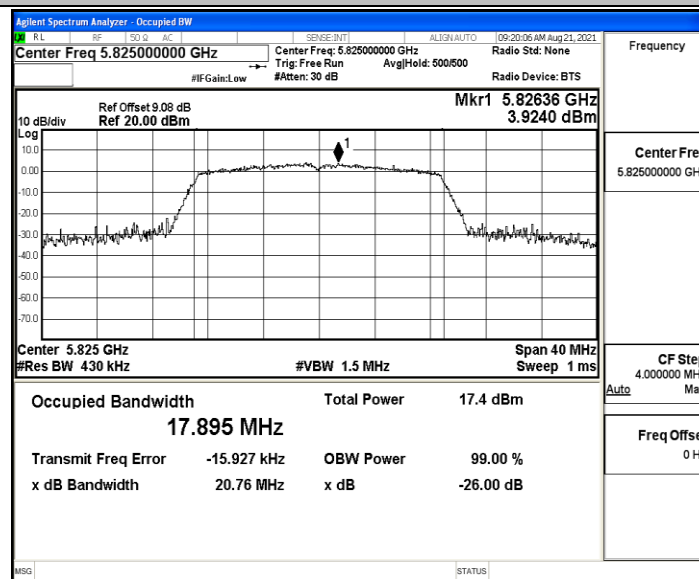


11AC20SISO\_Ant0\_5785

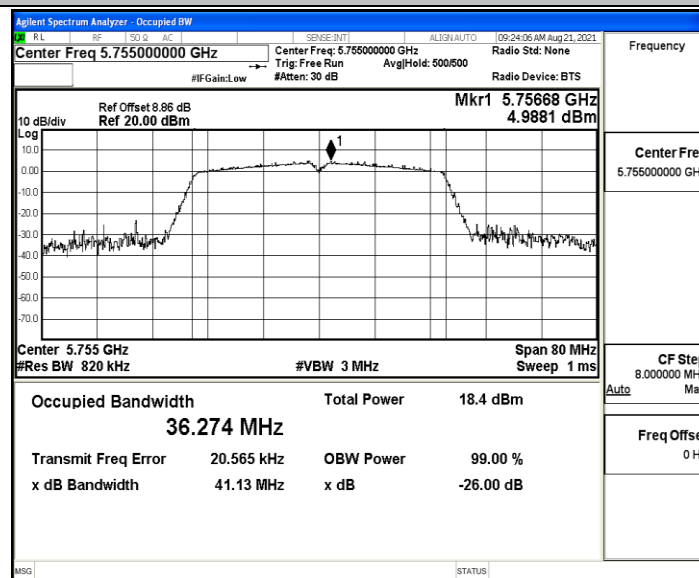




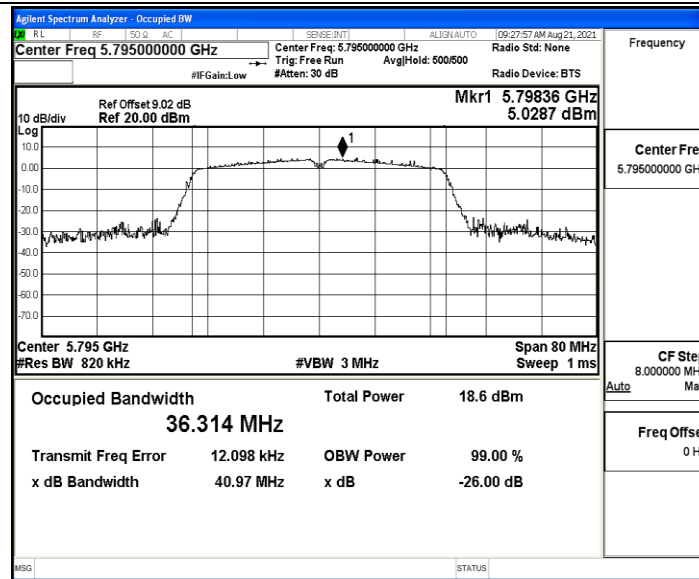
## 11AC20SISO\_Ant0\_5825



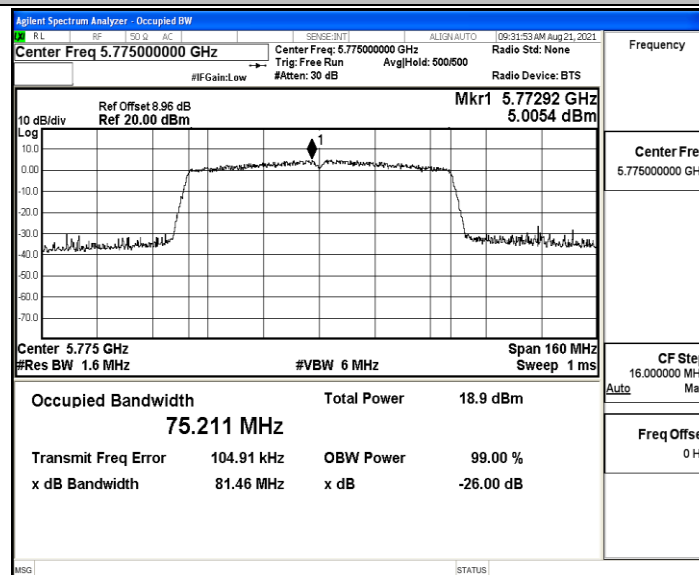
## 11AC40SISO\_Ant0\_5755



## 11AC40SISO\_Ant0\_5795



11AC80SISO\_Ant0\_5775



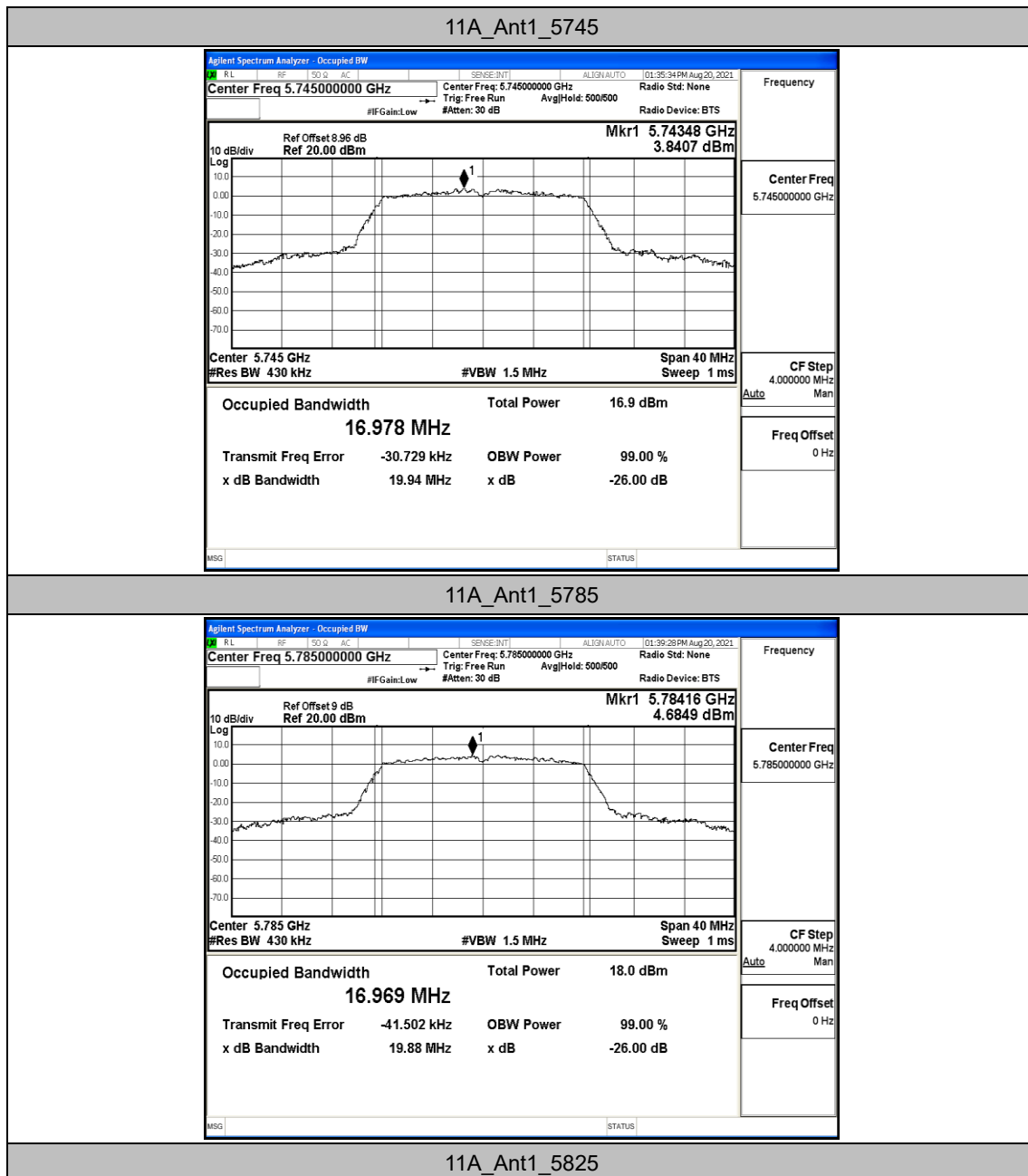


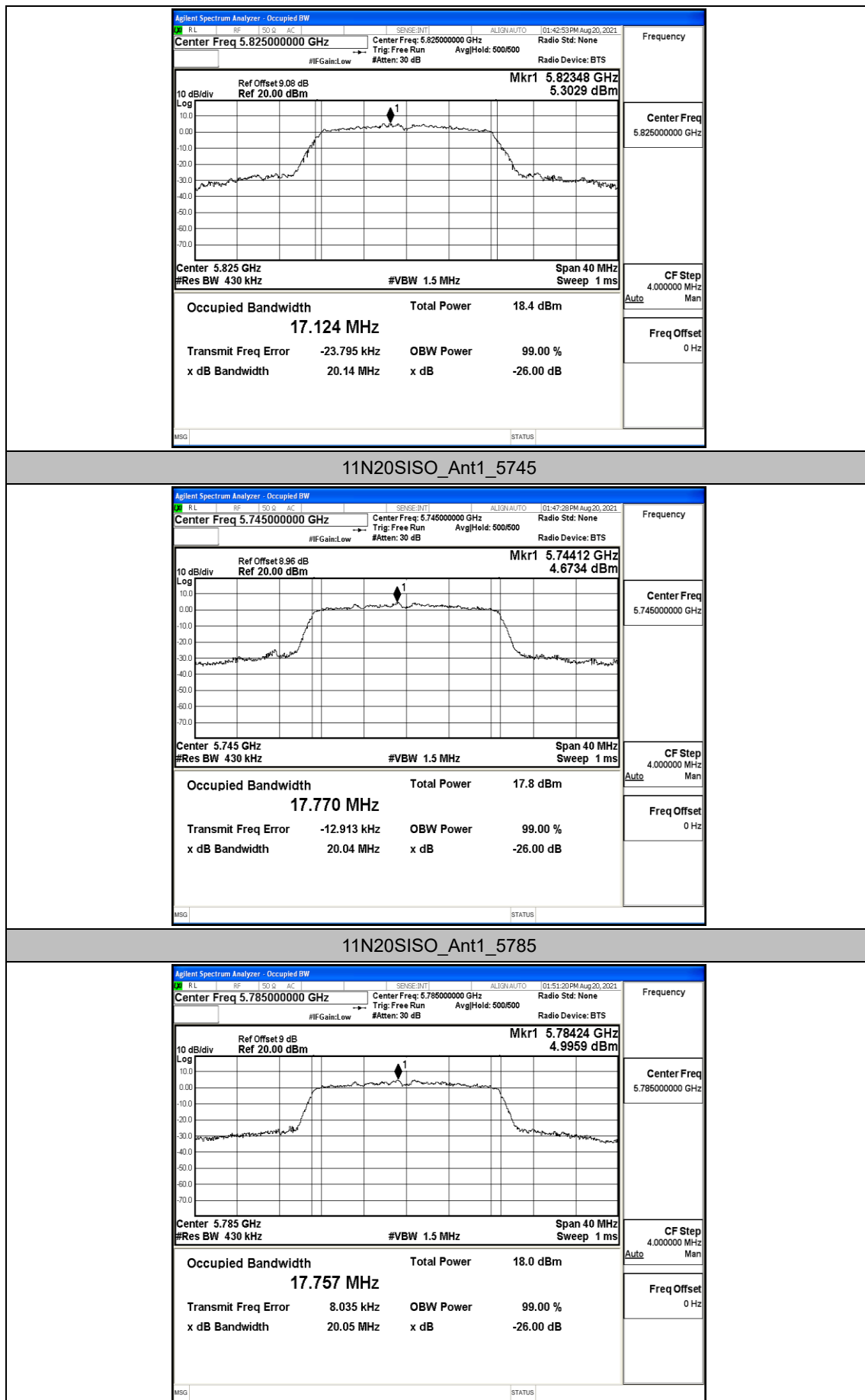
## ANT1

| TestMode   | Antenna | Channel | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|------------|---------|---------|-----------|----------|----------|------------|---------|
| 11A        | Ant1    | 5745    | 16.978    | 5736.480 | 5753.458 | ---        | PASS    |
|            |         | 5785    | 16.969    | 5776.474 | 5793.443 | ---        | PASS    |
|            |         | 5825    | 17.124    | 5816.414 | 5833.538 | ---        | PASS    |
| 11N20SISO  | Ant1    | 5745    | 17.770    | 5736.102 | 5753.872 | ---        | PASS    |
|            |         | 5785    | 17.757    | 5776.130 | 5793.887 | ---        | PASS    |
|            |         | 5825    | 17.754    | 5816.120 | 5833.874 | ---        | PASS    |
| 11N40SISO  | Ant1    | 5755    | 36.213    | 5736.929 | 5773.142 | ---        | PASS    |
|            |         | 5795    | 36.204    | 5776.958 | 5813.162 | ---        | PASS    |
| 11AC20SISO | Ant1    | 5745    | 17.777    | 5736.100 | 5753.877 | ---        | PASS    |
|            |         | 5785    | 17.770    | 5776.111 | 5793.881 | ---        | PASS    |
|            |         | 5825    | 17.773    | 5816.119 | 5833.892 | ---        | PASS    |
| 11AC40SISO | Ant1    | 5755    | 36.197    | 5736.942 | 5773.139 | ---        | PASS    |
|            |         | 5795    | 36.183    | 5776.956 | 5813.139 | ---        | PASS    |
| 11AC80SISO | Ant1    | 5775    | 75.197    | 5737.496 | 5812.693 | ---        | PASS    |



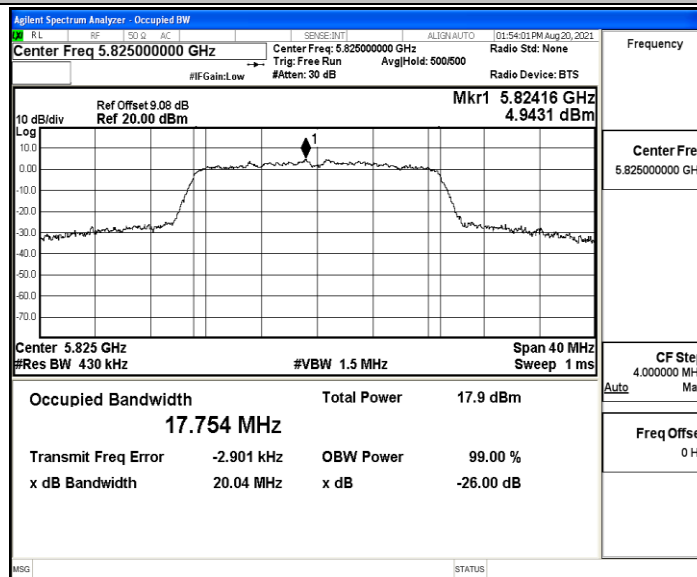
## Test Graphs



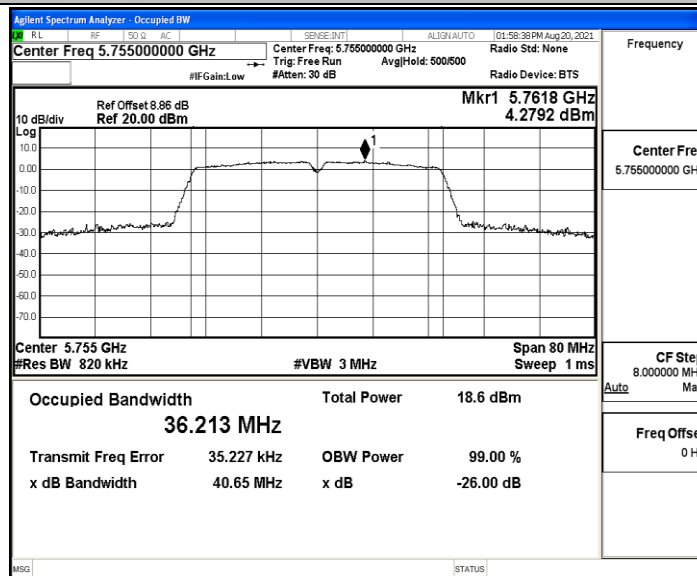




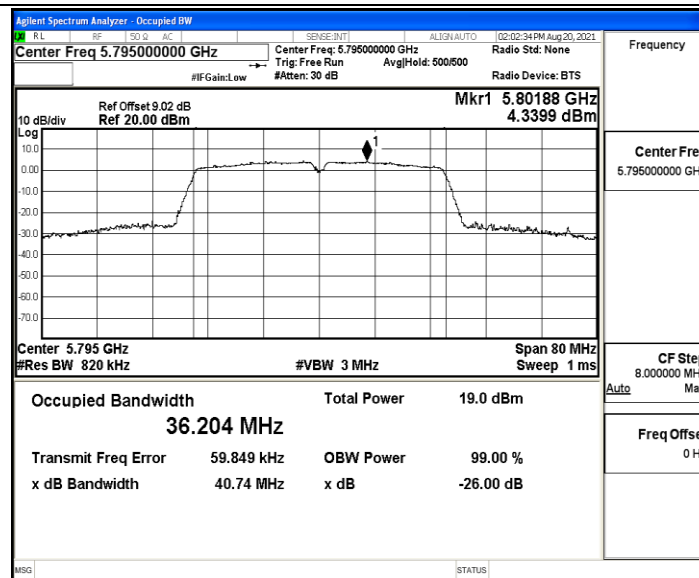
## 11N20SISO\_Ant1\_5825



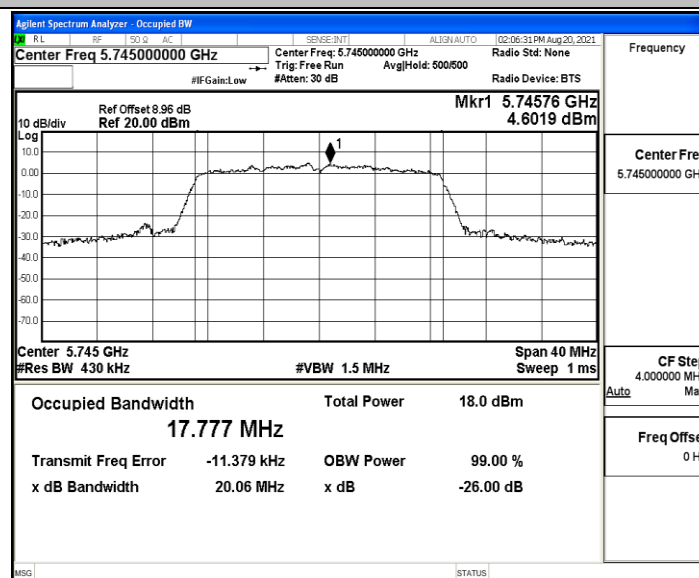
## 11N40SISO\_Ant1\_5755



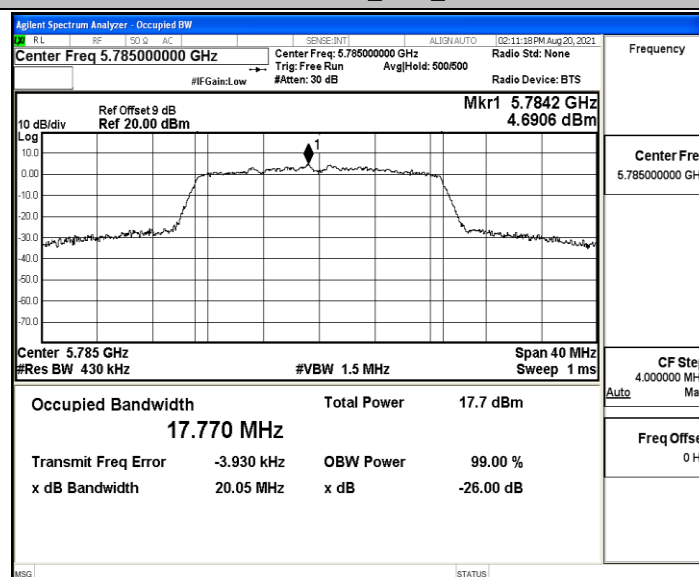
## 11N40SISO\_Ant1\_5795



11AC20SISO\_Ant1\_5745

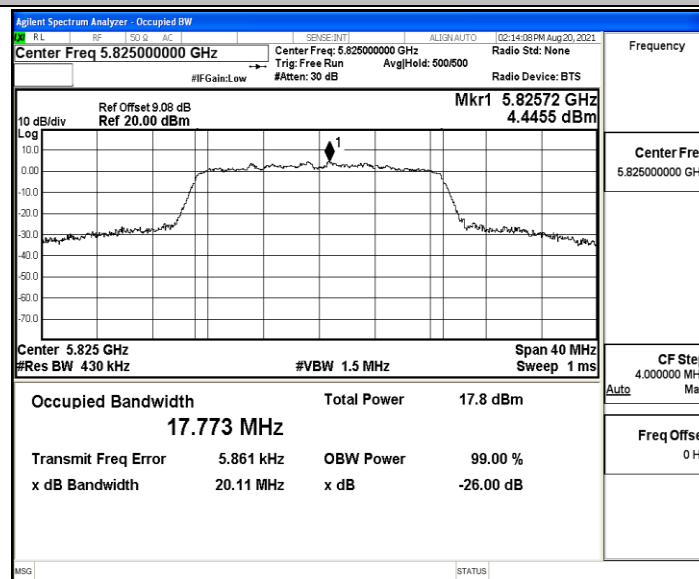


11AC20SISO\_Ant1\_5785

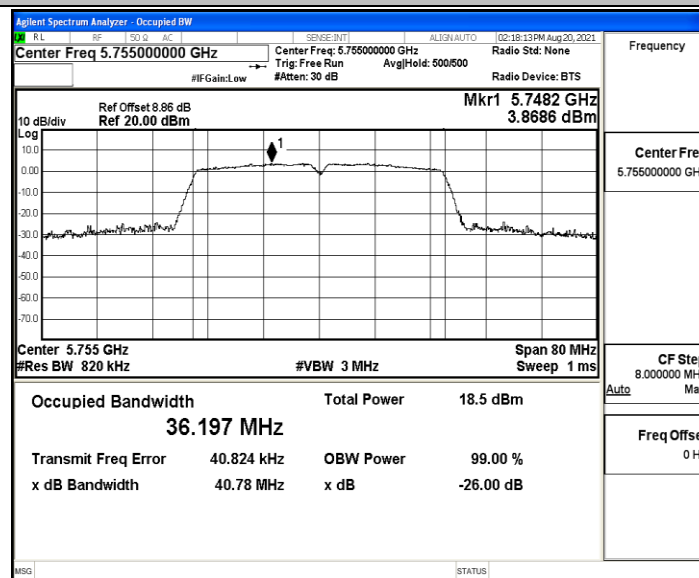




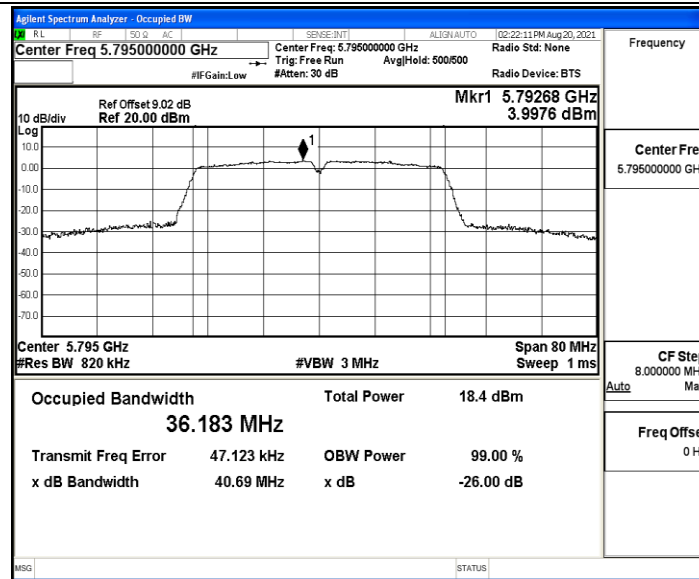
## 11AC20SISO\_Ant1\_5825



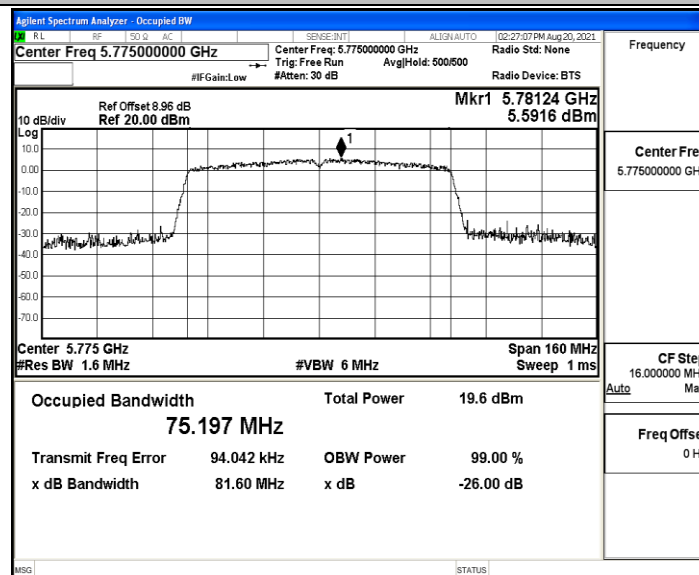
## 11AC40SISO\_Ant1\_5755



## 11AC40SISO\_Ant1\_5795



11AC80SISO\_Ant1\_5775





## D.2 Min emission bandwidth

### Test Result

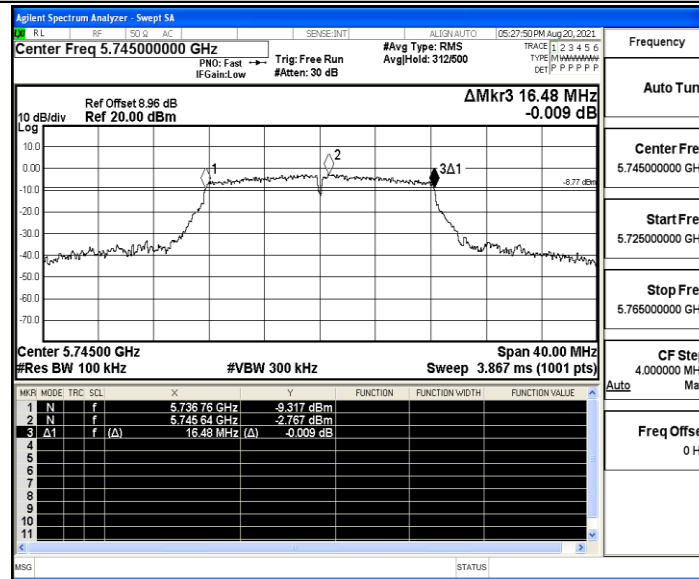
ANT0

| TestMode   | Antenna | Channel | 6db EBW<br>[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|------------|---------|---------|------------------|----------|----------|------------|---------|
| 11A        | Ant0    | 5745    | 16.480           | 5736.760 | 5753.240 | 0.5        | PASS    |
|            |         | 5785    | 16.480           | 5776.760 | 5793.240 | 0.5        | PASS    |
|            |         | 5825    | 16.480           | 5816.760 | 5833.240 | 0.5        | PASS    |
| 11N20SISO  | Ant0    | 5745    | 17.680           | 5736.160 | 5753.840 | 0.5        | PASS    |
|            |         | 5785    | 17.360           | 5776.440 | 5793.800 | 0.5        | PASS    |
|            |         | 5825    | 17.640           | 5816.160 | 5833.800 | 0.5        | PASS    |
| 11N40SISO  | Ant0    | 5755    | 36.480           | 5736.760 | 5773.240 | 0.5        | PASS    |
|            |         | 5795    | 36.480           | 5776.760 | 5813.240 | 0.5        | PASS    |
| 11AC20SISO | Ant0    | 5745    | 17.680           | 5736.160 | 5753.840 | 0.5        | PASS    |
|            |         | 5785    | 17.680           | 5776.160 | 5793.840 | 0.5        | PASS    |
|            |         | 5825    | 17.680           | 5816.160 | 5833.840 | 0.5        | PASS    |
| 11AC40SISO | Ant0    | 5755    | 36.480           | 5736.760 | 5773.240 | 0.5        | PASS    |
|            |         | 5795    | 35.760           | 5777.160 | 5812.920 | 0.5        | PASS    |
| 11AC80SISO | Ant0    | 5775    | 76.480           | 5736.760 | 5813.240 | 0.5        | PASS    |

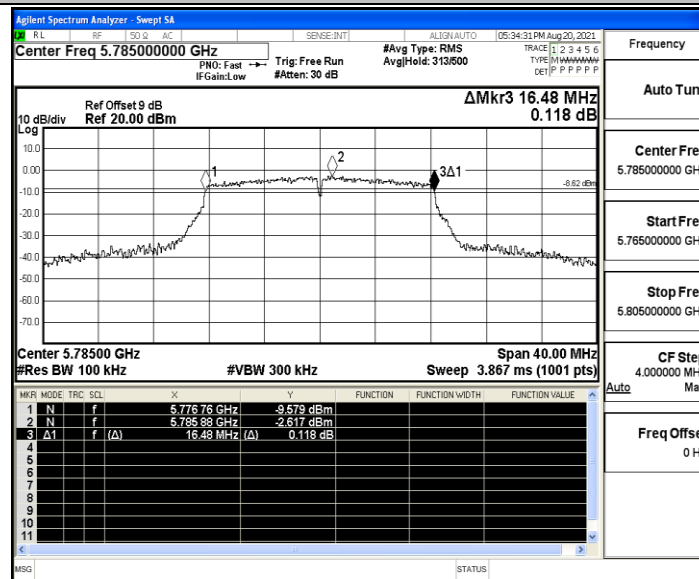


## Test Graphs

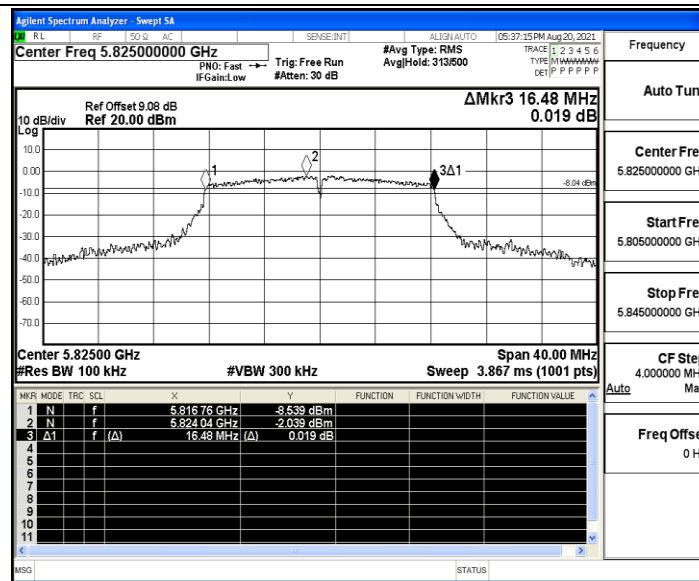
11A\_Ant0\_5745



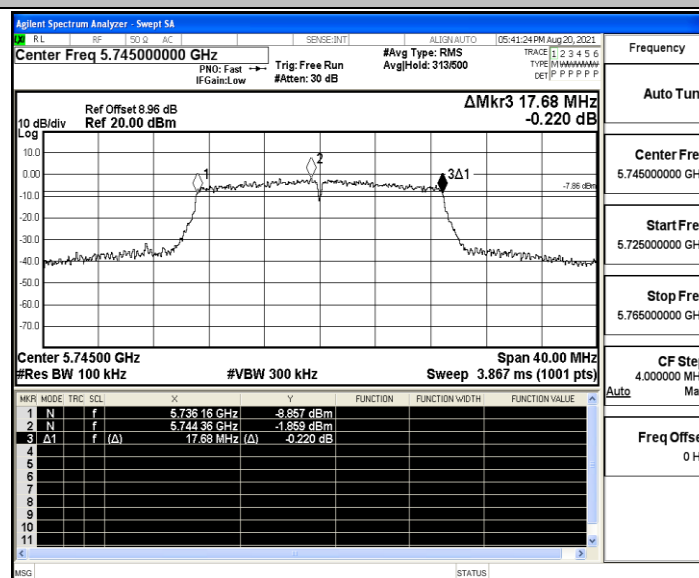
11A\_Ant0\_5785



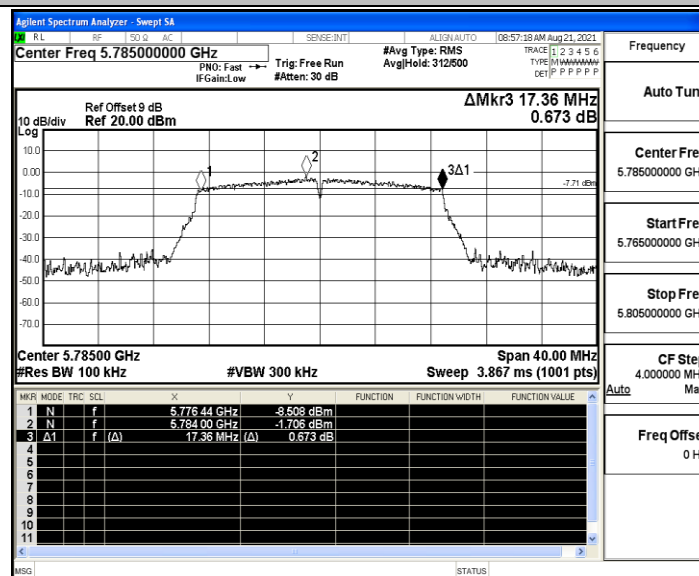
11A\_Ant0\_5825



11N20SISO\_Ant0\_5745

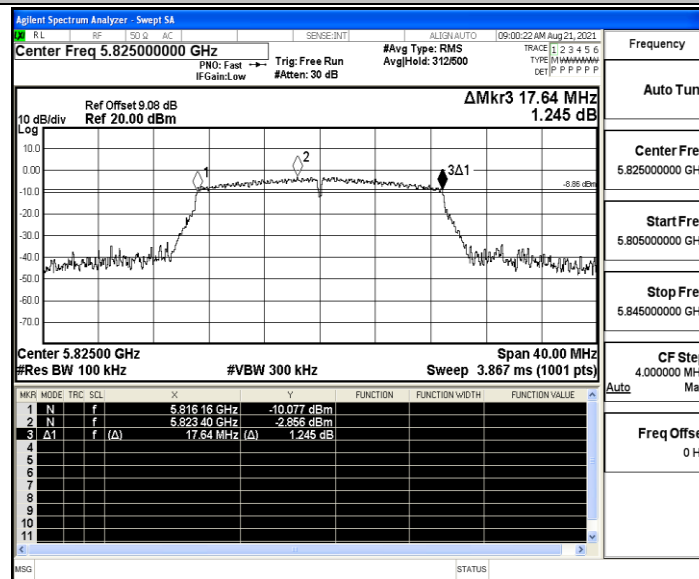


11N20SISO\_Ant0\_5785

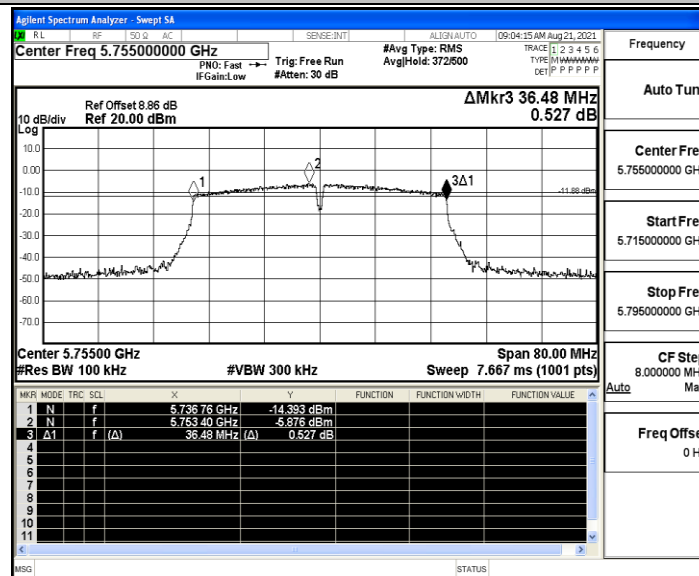




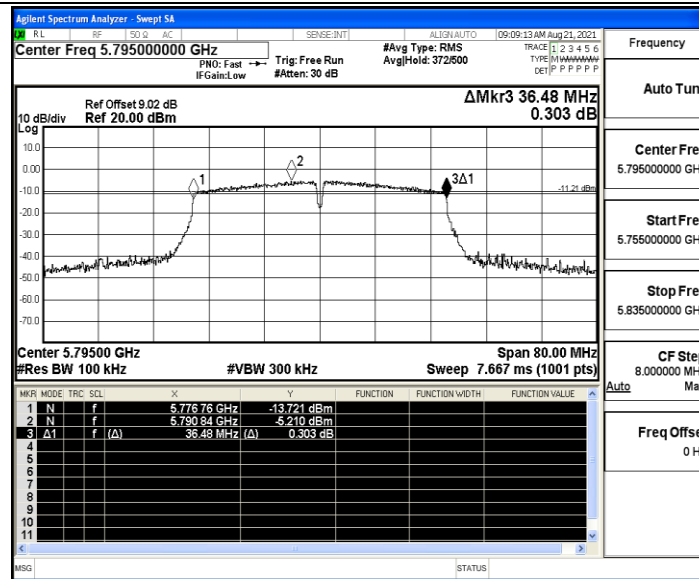
## 11N20SISO\_Ant0\_5825



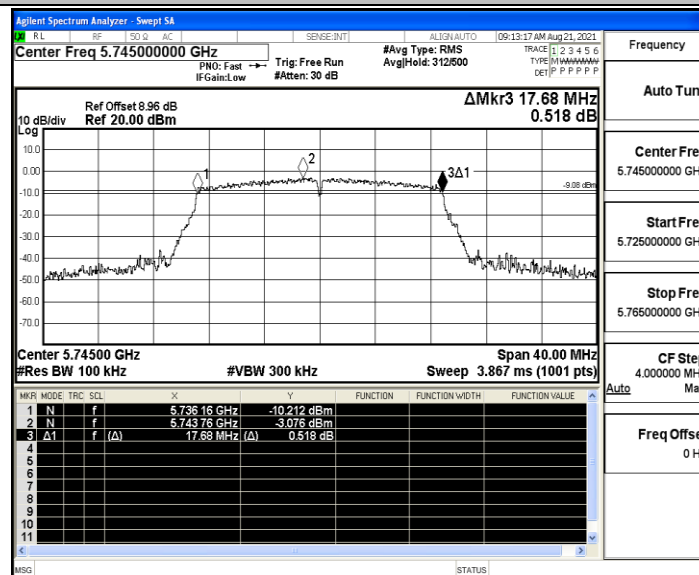
## 11N40SISO\_Ant0\_5755



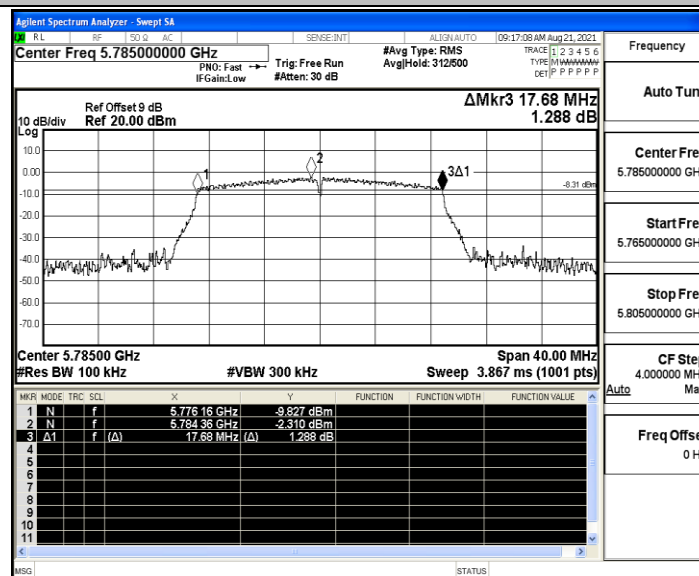
## 11N40SISO\_Ant0\_5795



11AC20SISO\_Ant0\_5745

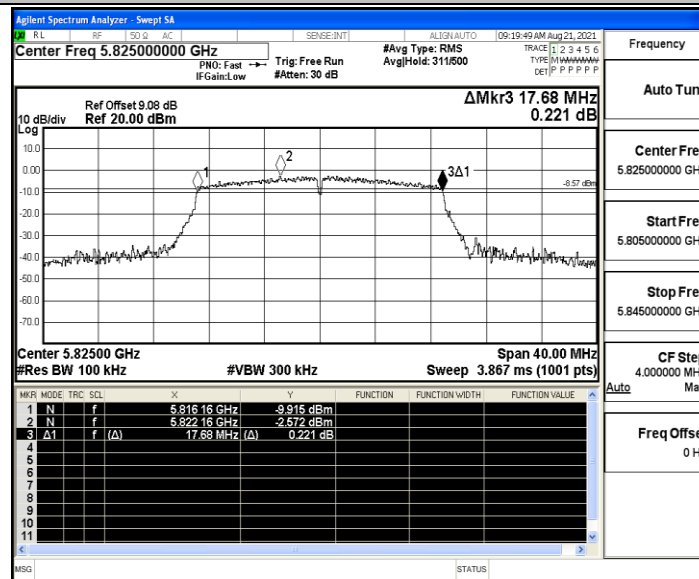


11AC20SISO\_Ant0\_5785

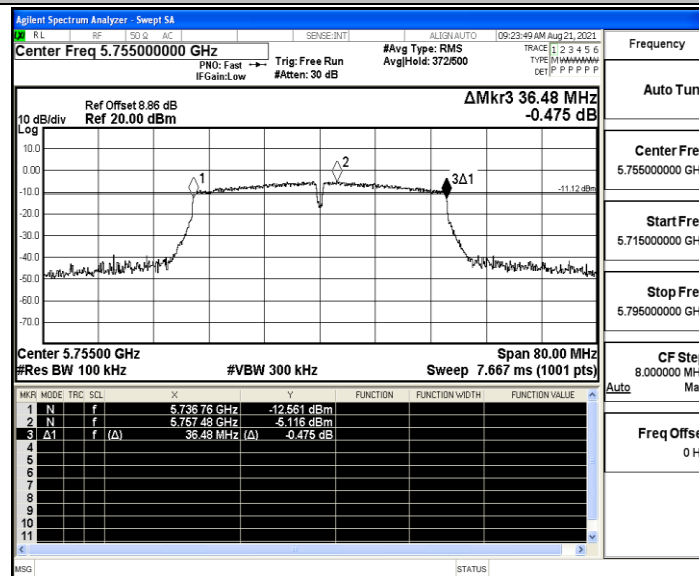




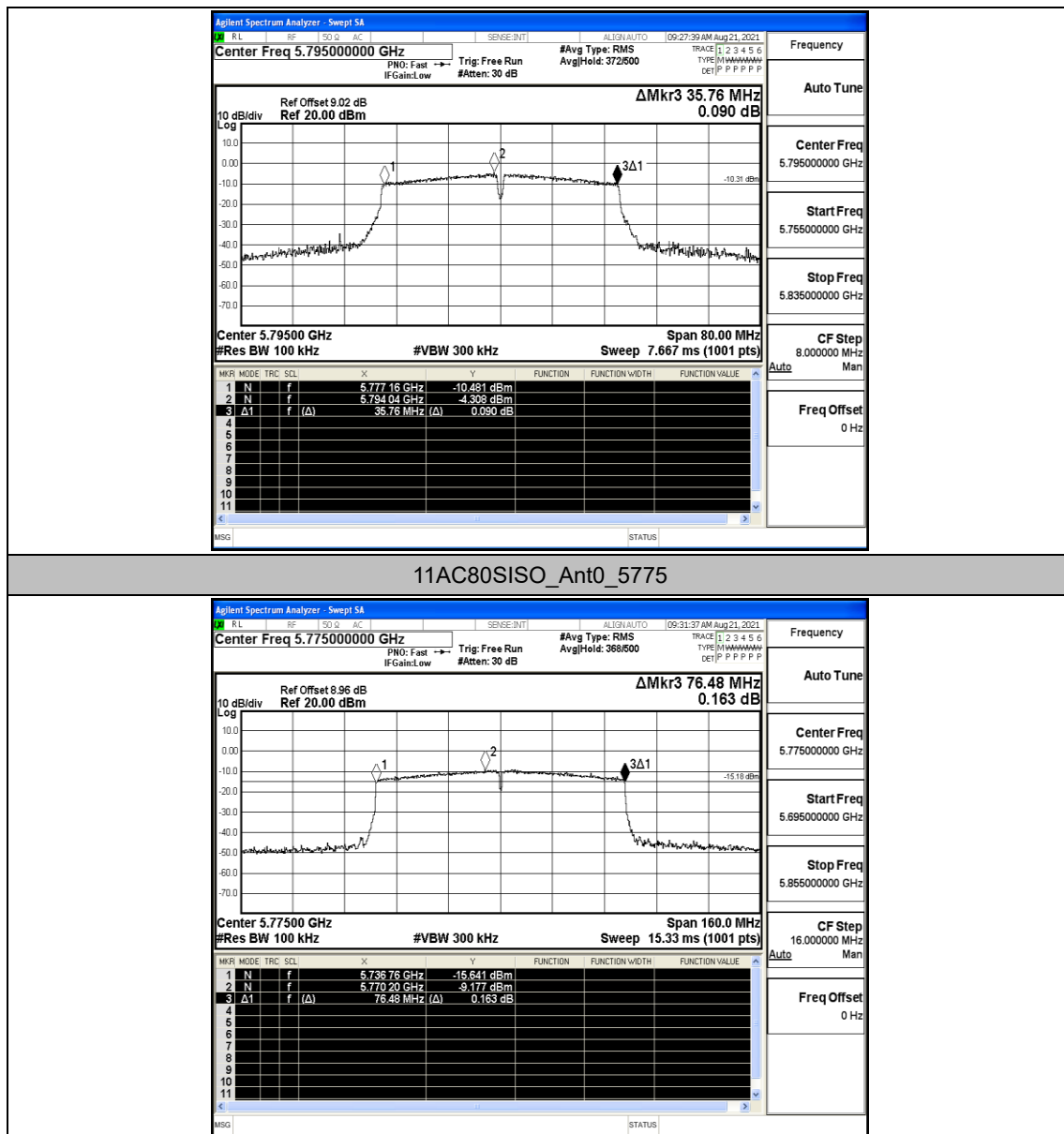
## 11AC20SISO\_Ant0\_5825



## 11AC40SISO\_Ant0\_5755



## 11AC40SISO\_Ant0\_5795



ANT1

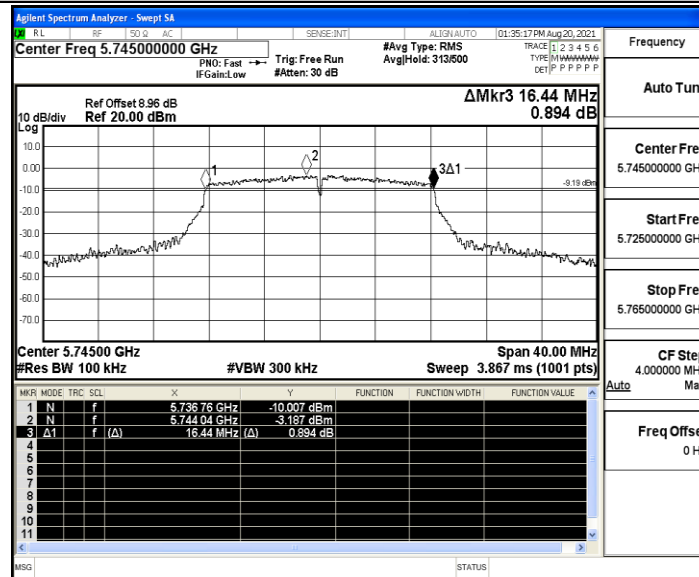


| TestMode   | Antenna | Channel | 6db EBW<br>[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|------------|---------|---------|------------------|----------|----------|------------|---------|
| 11A        | Ant1    | 5745    | 16.440           | 5736.760 | 5753.200 | 0.5        | PASS    |
|            |         | 5785    | 16.480           | 5776.760 | 5793.240 | 0.5        | PASS    |
|            |         | 5825    | 16.480           | 5816.760 | 5833.240 | 0.5        | PASS    |
| 11N20SISO  | Ant1    | 5745    | 17.680           | 5736.160 | 5753.840 | 0.5        | PASS    |
|            |         | 5785    | 17.680           | 5776.160 | 5793.840 | 0.5        | PASS    |
|            |         | 5825    | 17.680           | 5816.160 | 5833.840 | 0.5        | PASS    |
| 11N40SISO  | Ant1    | 5755    | 36.480           | 5736.760 | 5773.240 | 0.5        | PASS    |
|            |         | 5795    | 36.480           | 5776.760 | 5813.240 | 0.5        | PASS    |
| 11AC20SISO | Ant1    | 5745    | 17.680           | 5736.160 | 5753.840 | 0.5        | PASS    |
|            |         | 5785    | 17.680           | 5776.160 | 5793.840 | 0.5        | PASS    |
|            |         | 5825    | 17.680           | 5816.160 | 5833.840 | 0.5        | PASS    |
| 11AC40SISO | Ant1    | 5755    | 36.480           | 5736.760 | 5773.240 | 0.5        | PASS    |
|            |         | 5795    | 36.480           | 5776.760 | 5813.240 | 0.5        | PASS    |
| 11AC80SISO | Ant1    | 5775    | 76.640           | 5736.760 | 5813.400 | 0.5        | PASS    |

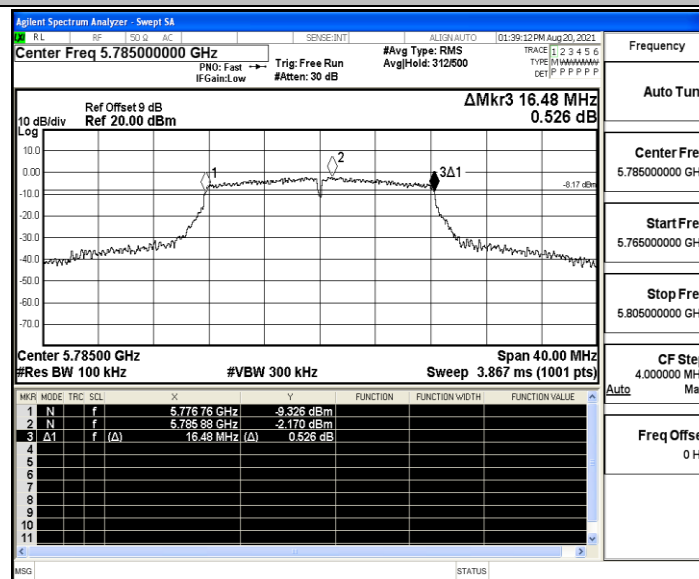


## Test Graphs

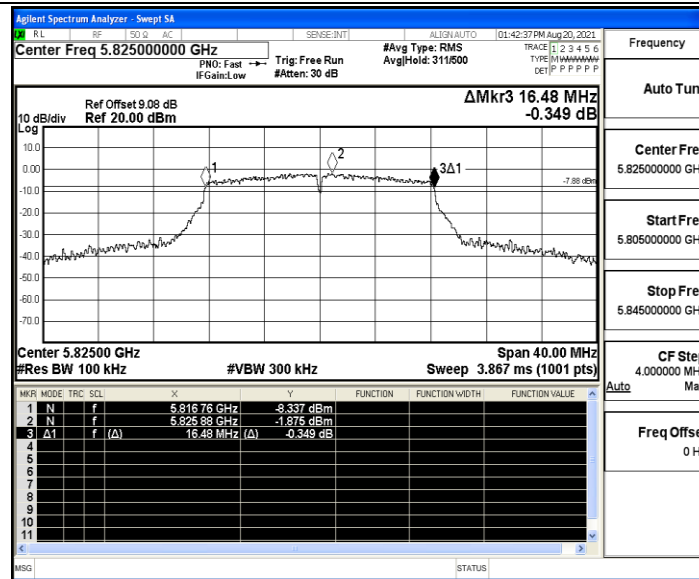
11A\_Ant1\_5745



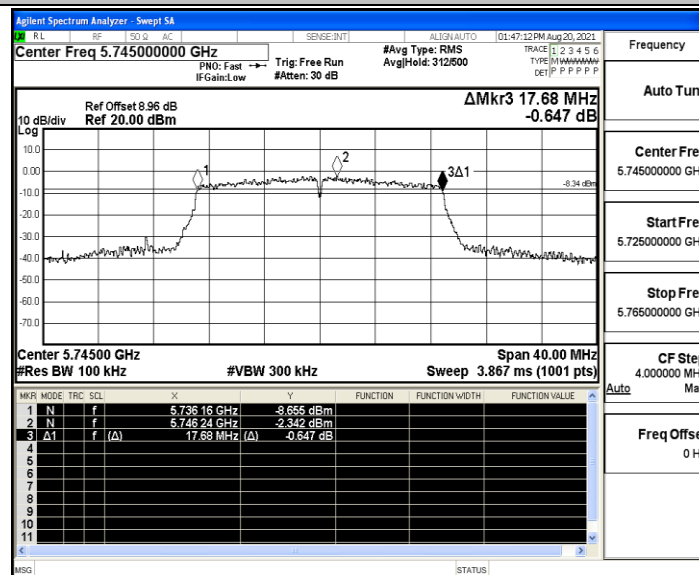
11A\_Ant1\_5785



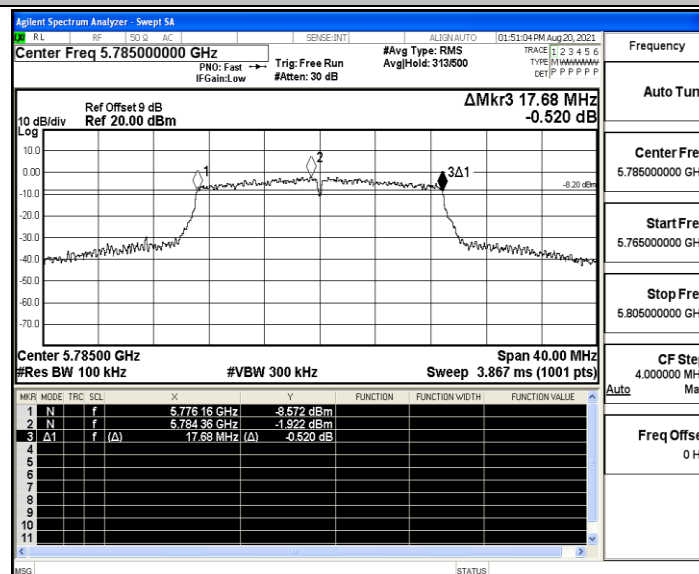
11A\_Ant1\_5825



11N20SISO\_Ant1\_5745

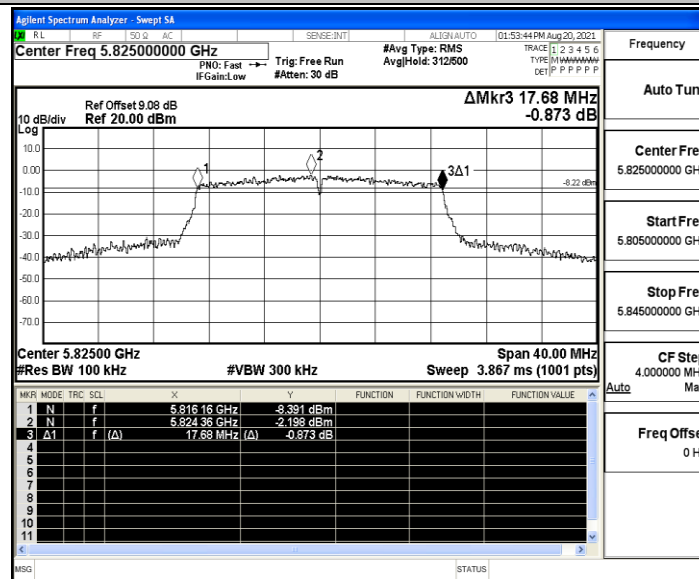


11N20SISO\_Ant1\_5785

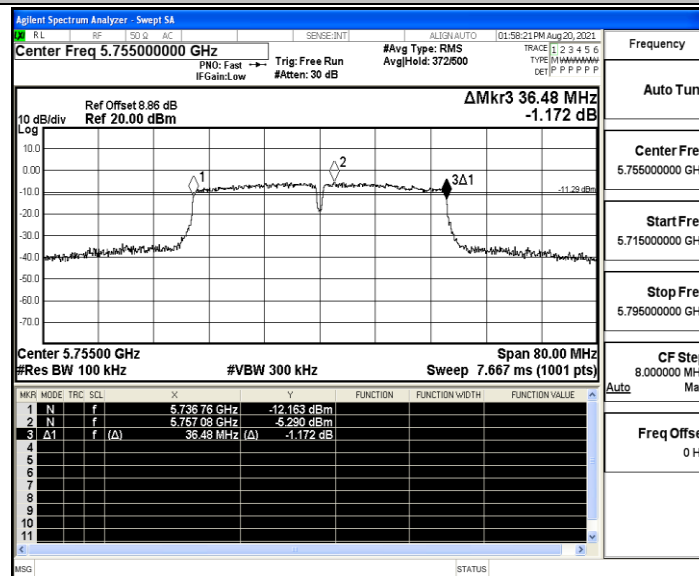




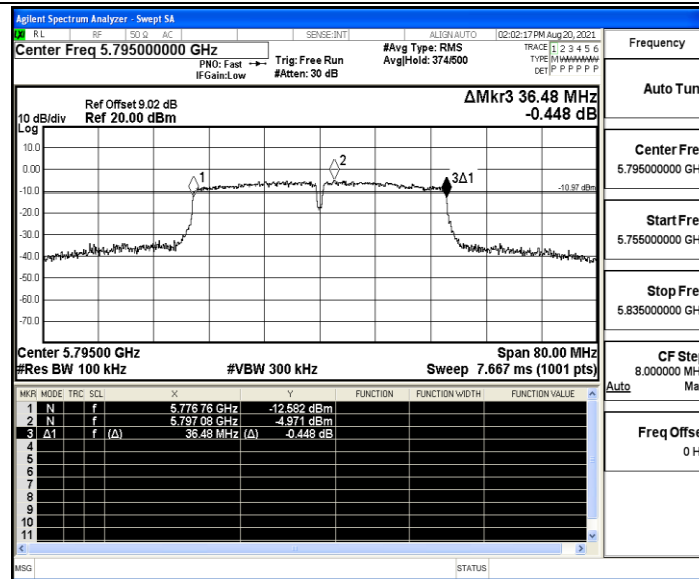
## 11N20SISO\_Ant1\_5825



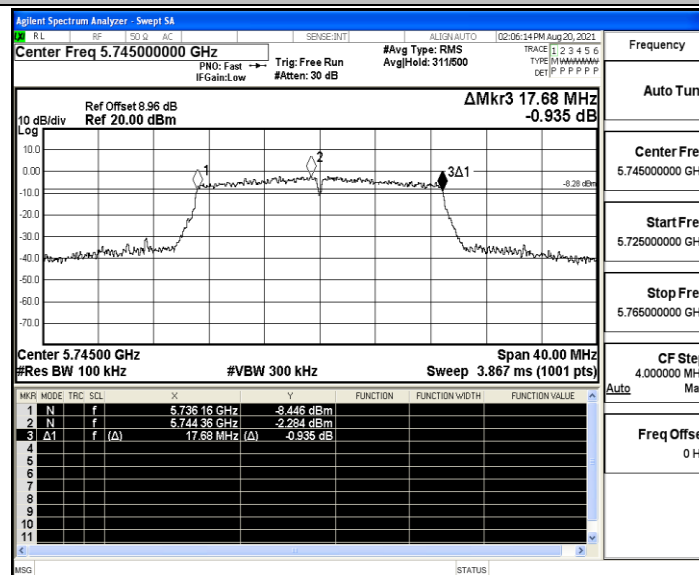
## 11N40SISO\_Ant1\_5755



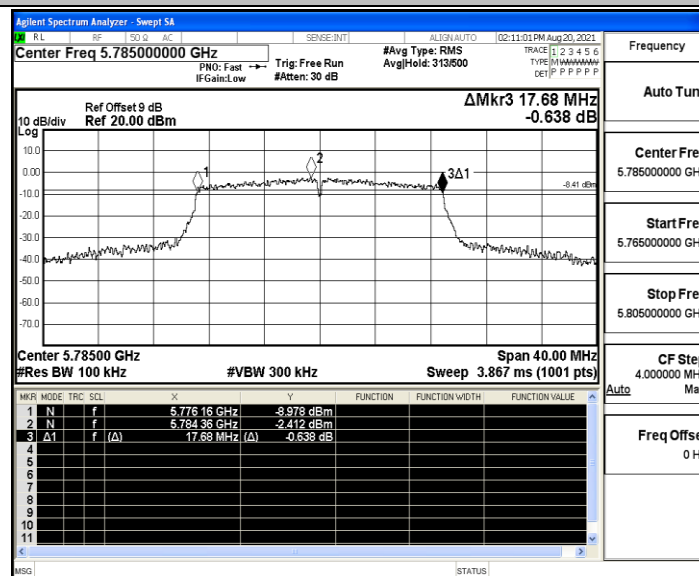
## 11N40SISO\_Ant1\_5795



11AC20SISO\_Ant1\_5745

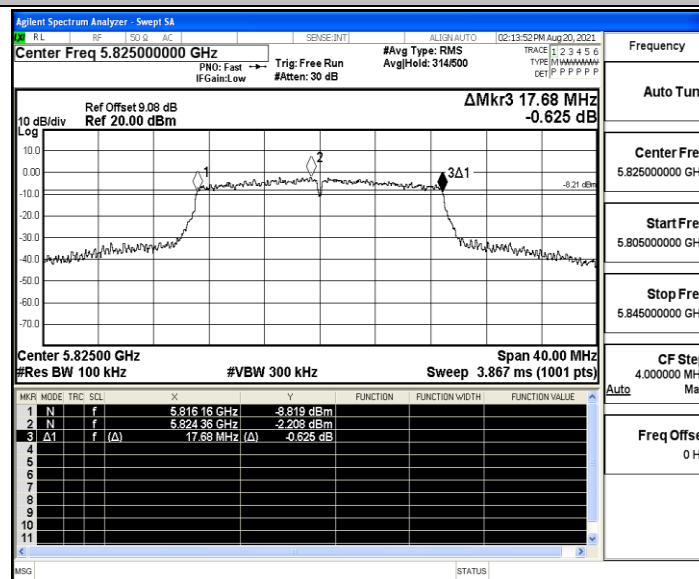


11AC20SISO\_Ant1\_5785

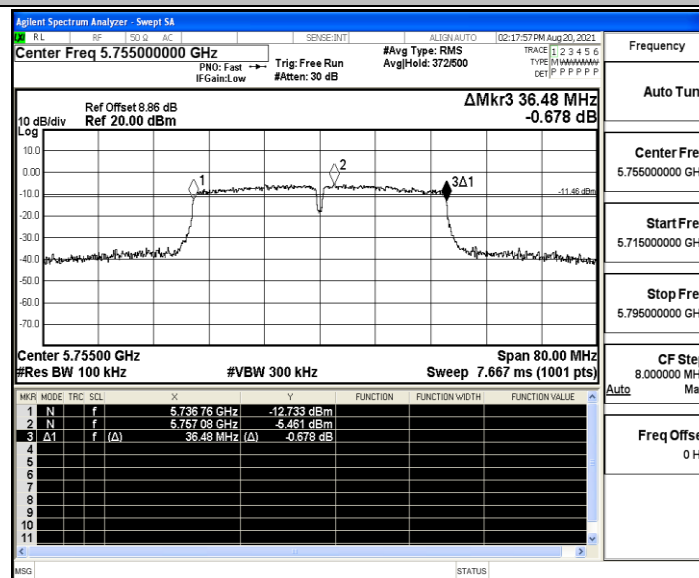




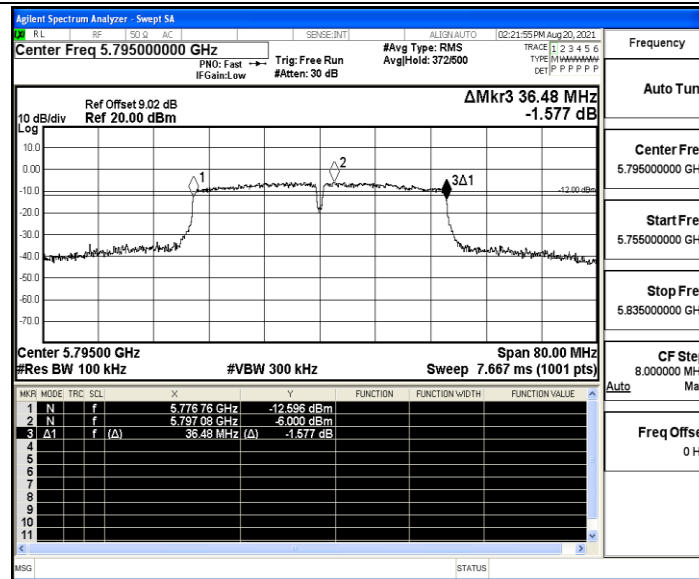
## 11AC20SISO\_Ant1\_5825



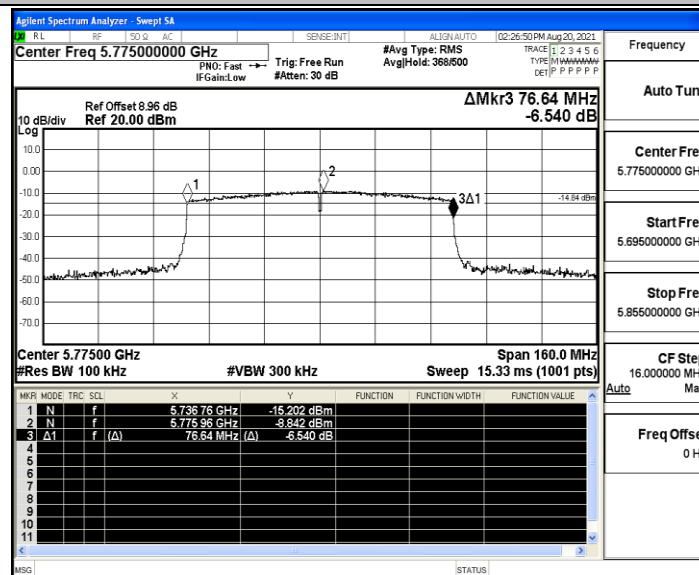
## 11AC40SISO\_Ant1\_5755



## 11AC40SISO\_Ant1\_5795



11AC80SISO\_Ant1\_5775





## D.3 Maximum conducted output power

### Test Result

#### ANT0

| TestMode   | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|------------|---------|---------|-------------|------------|---------|
| 11A        | Ant0    | 5745    | 11.35       | ≤30        | PASS    |
|            |         | 5785    | 10.66       | ≤30        | PASS    |
|            |         | 5825    | 11.57       | ≤30        | PASS    |
| 11N20SISO  | Ant0    | 5745    | 11.27       | ≤30        | PASS    |
|            |         | 5785    | 10.49       | ≤30        | PASS    |
|            |         | 5825    | 10.14       | ≤30        | PASS    |
| 11N40SISO  | Ant0    | 5755    | 10.92       | ≤30        | PASS    |
|            |         | 5795    | 10.95       | ≤30        | PASS    |
| 11AC20SISO | Ant0    | 5745    | 10.26       | ≤30        | PASS    |
|            |         | 5785    | 11.00       | ≤30        | PASS    |
|            |         | 5825    | 10.69       | ≤30        | PASS    |
| 11AC40SISO | Ant0    | 5755    | 11.08       | ≤30        | PASS    |
|            |         | 5795    | 11.17       | ≤30        | PASS    |
| 11AC80SISO | Ant0    | 5775    | 11.28       | ≤30        | PASS    |

#### ANT1

| TestMode   | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|------------|---------|---------|-------------|------------|---------|
| 11A        | Ant1    | 5745    | 10.09       | ≤30        | PASS    |
|            |         | 5785    | 11.33       | ≤30        | PASS    |
|            |         | 5825    | 11.58       | ≤30        | PASS    |
| 11N20SISO  | Ant1    | 5745    | 11.04       | ≤30        | PASS    |
|            |         | 5785    | 11.29       | ≤30        | PASS    |
|            |         | 5825    | 11.25       | ≤30        | PASS    |
| 11N40SISO  | Ant1    | 5755    | 11.35       | ≤30        | PASS    |
|            |         | 5795    | 11.87       | ≤30        | PASS    |
| 11AC20SISO | Ant1    | 5745    | 11.30       | ≤30        | PASS    |
|            |         | 5785    | 11.03       | ≤30        | PASS    |
|            |         | 5825    | 11.15       | ≤30        | PASS    |
| 11AC40SISO | Ant1    | 5755    | 11.29       | ≤30        | PASS    |
|            |         | 5795    | 11.30       | ≤30        | PASS    |
| 11AC80SISO | Ant1    | 5775    | 10.56       | ≤30        | PASS    |

Note: The Duty Cycle Factor is compensated in the graph.



MIMO

| Test Mode | Channel | Frequency (MHz) | ANT 0<br>AVG<br>Conducted<br>Power (dBm) | ANT 1<br>AVG<br>Conducted<br>Power (dBm) | MIMO<br>AVG<br>Conducted<br>Power (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|------------------------------------------|------------------------------------------|-----------------------------------------|-------------|---------|
| 11N20     | 149     | 5745            | 11.27                                    | 11.04                                    | 14.17                                   | 29.99       | Pass    |
|           | 157     | 5785            | 10.49                                    | 11.29                                    | 13.92                                   |             | Pass    |
|           | 165     | 5825            | 10.14                                    | 11.25                                    | 13.74                                   |             | Pass    |
| 11N40     | 151     | 5755            | 10.92                                    | 11.35                                    | 14.15                                   | 29.99       | Pass    |
|           | 159     | 5795            | 10.95                                    | 11.87                                    | 14.44                                   |             | Pass    |
| 11AC20    | 149     | 5745            | 10.26                                    | 11.30                                    | 13.82                                   | 29.99       | Pass    |
|           | 157     | 5785            | 11.00                                    | 11.03                                    | 14.03                                   |             | Pass    |
|           | 165     | 5825            | 10.69                                    | 11.15                                    | 13.94                                   |             | Pass    |
| 11AC40    | 151     | 5755            | 11.08                                    | 11.29                                    | 14.20                                   | 29.99       | Pass    |
|           | 159     | 5795            | 11.17                                    | 11.30                                    | 14.25                                   |             | Pass    |
| 11AC80    | 155     | 5775            | 11.28                                    | 10.56                                    | 13.95                                   | 29.99       | Pass    |



## D.4 Maximum power spectral density

### Test Result

ANT0

| TestMode   | Antenna | Channel | Result [dBm/MHz] | Limit[dBm/MHz] | Verdict |
|------------|---------|---------|------------------|----------------|---------|
| 11A        | Ant0    | 5745    | -1.69            | ≤30            | PASS    |
|            |         | 5785    | -2.36            | ≤30            | PASS    |
|            |         | 5825    | -1.45            | ≤30            | PASS    |
| 11N20SISO  | Ant0    | 5745    | -1.67            | ≤30            | PASS    |
|            |         | 5785    | -2.8             | ≤30            | PASS    |
|            |         | 5825    | -2.91            | ≤30            | PASS    |
| 11N40SISO  | Ant0    | 5755    | -5.27            | ≤30            | PASS    |
|            |         | 5795    | -5.19            | ≤30            | PASS    |
| 11AC20SISO | Ant0    | 5745    | -2.89            | ≤30            | PASS    |
|            |         | 5785    | -2.32            | ≤30            | PASS    |
|            |         | 5825    | -2.48            | ≤30            | PASS    |
| 11AC40SISO | Ant0    | 5755    | -4.85            | ≤30            | PASS    |
|            |         | 5795    | -5.03            | ≤30            | PASS    |
| 11AC80SISO | Ant0    | 5775    | -8.31            | ≤30            | PASS    |

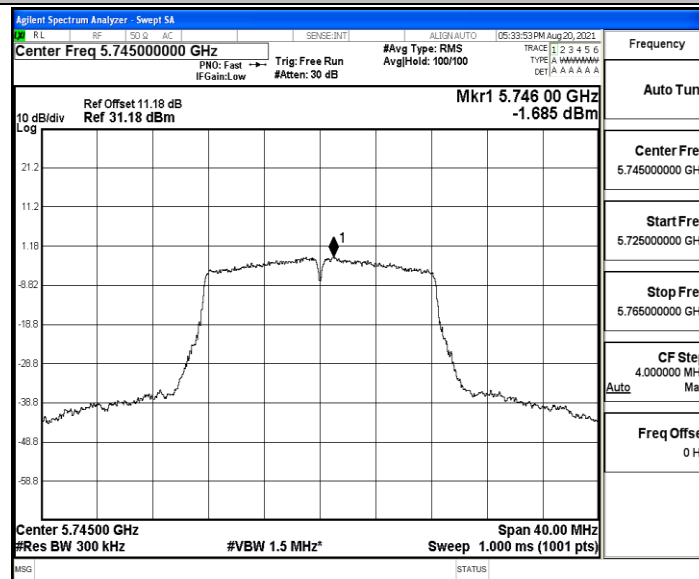
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

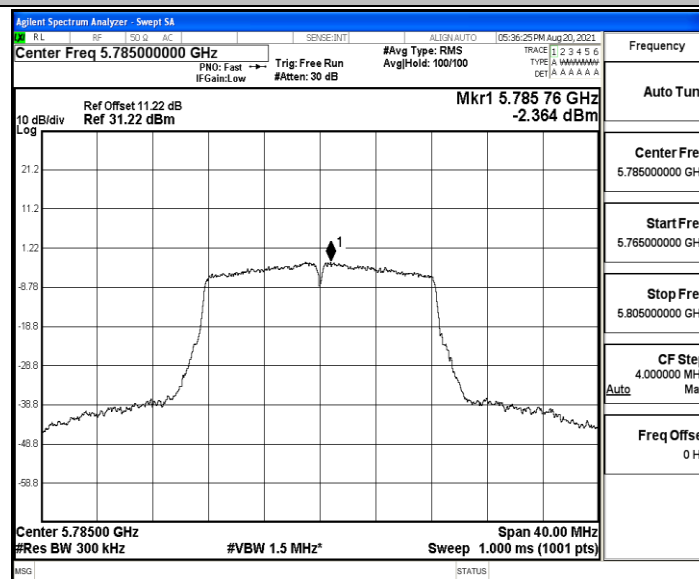


## Test Graphs

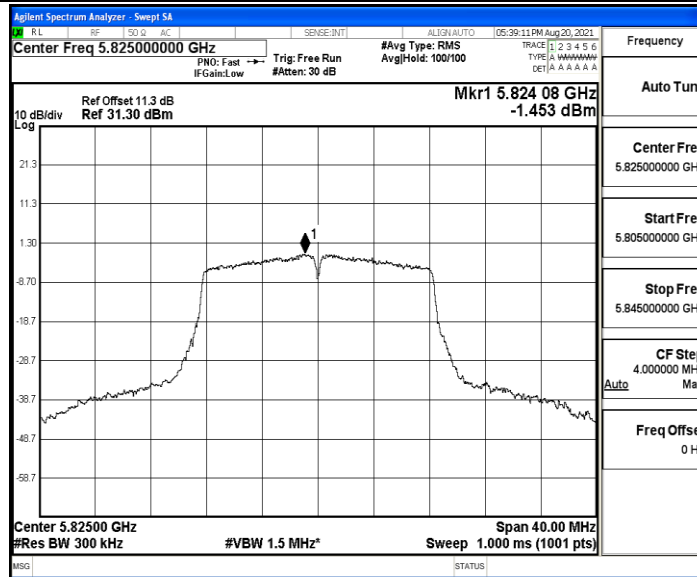
11A\_Ant0\_5745



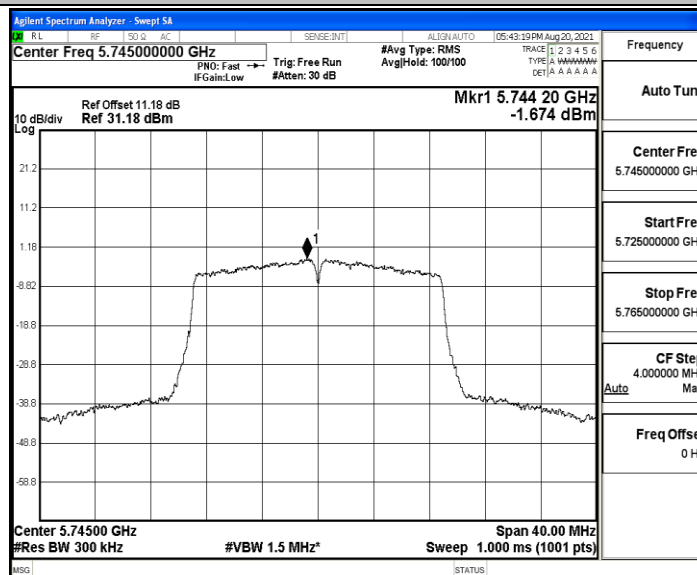
11A\_Ant0\_5785



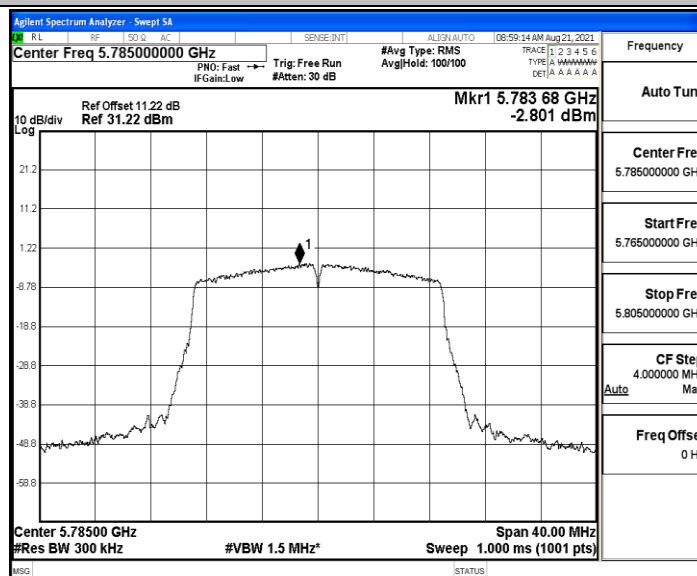
11A\_Ant0\_5825



11N20SISO\_Ant0\_5745

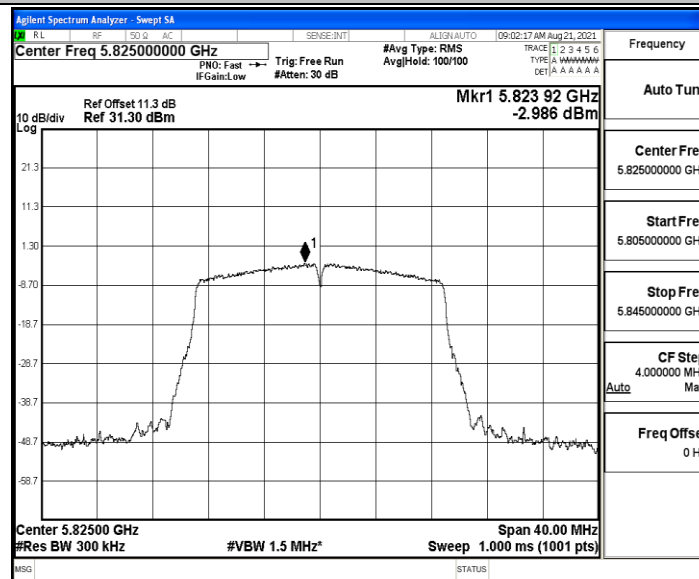


11N20SISO\_Ant0\_5785

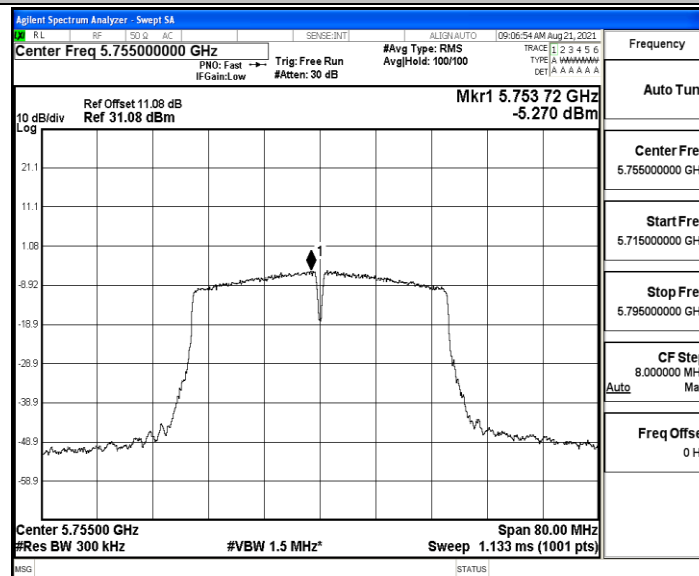




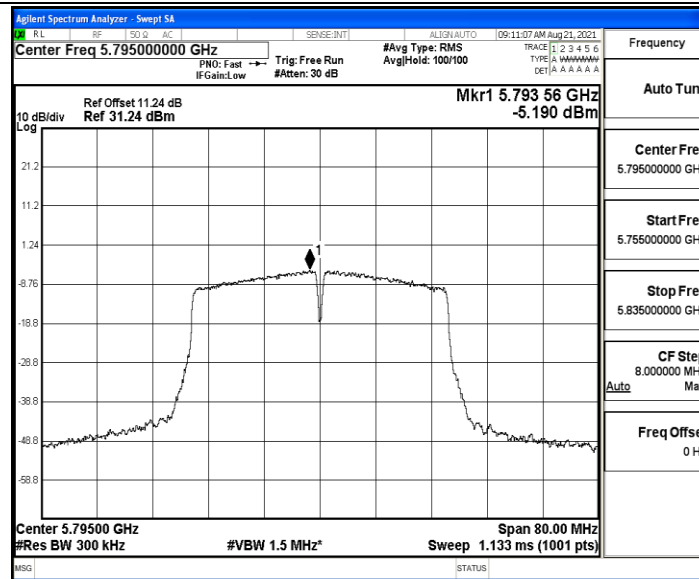
## 11N20SISO\_Ant0\_5825



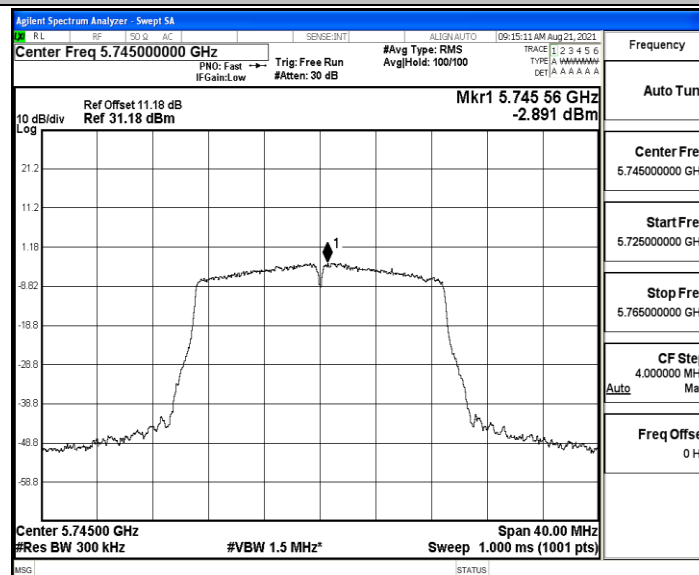
## 11N40SISO\_Ant0\_5755



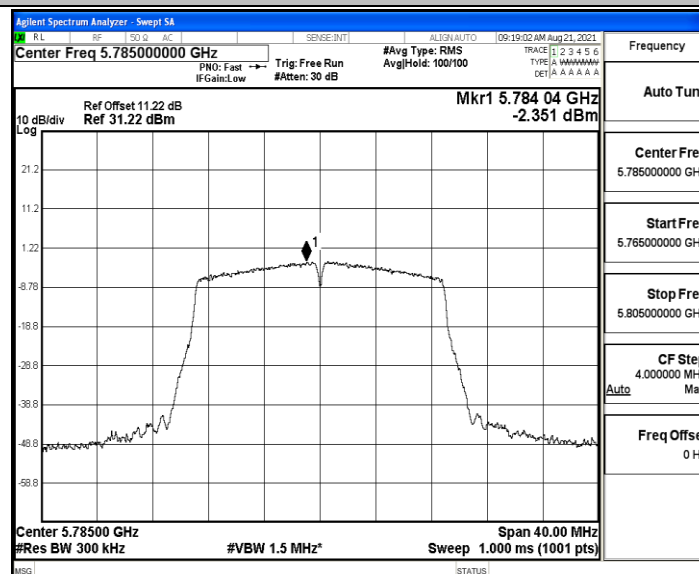
## 11N40SISO\_Ant0\_5795



11AC20SISO\_Ant0\_5745

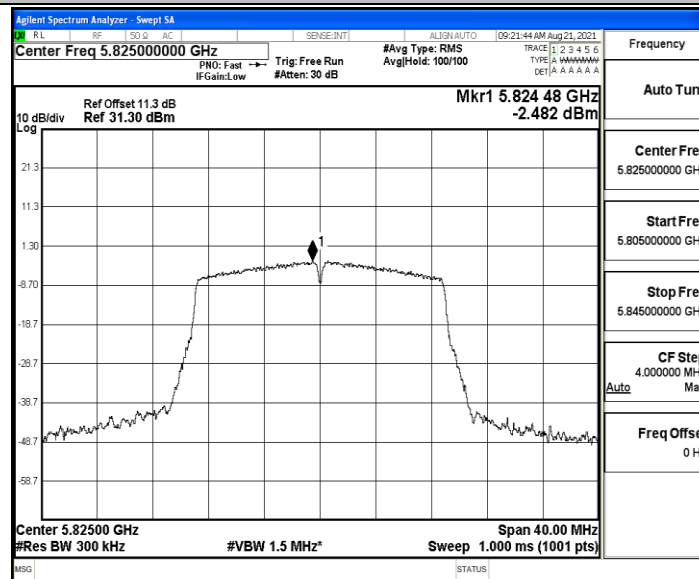


11AC20SISO\_Ant0\_5785

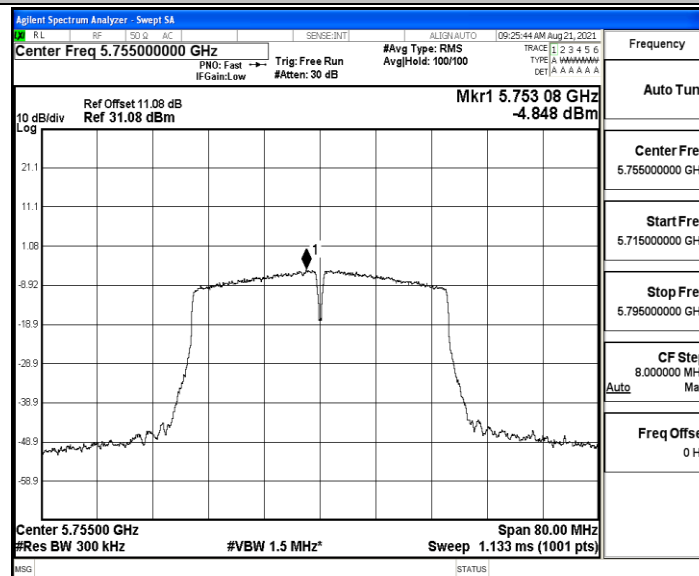




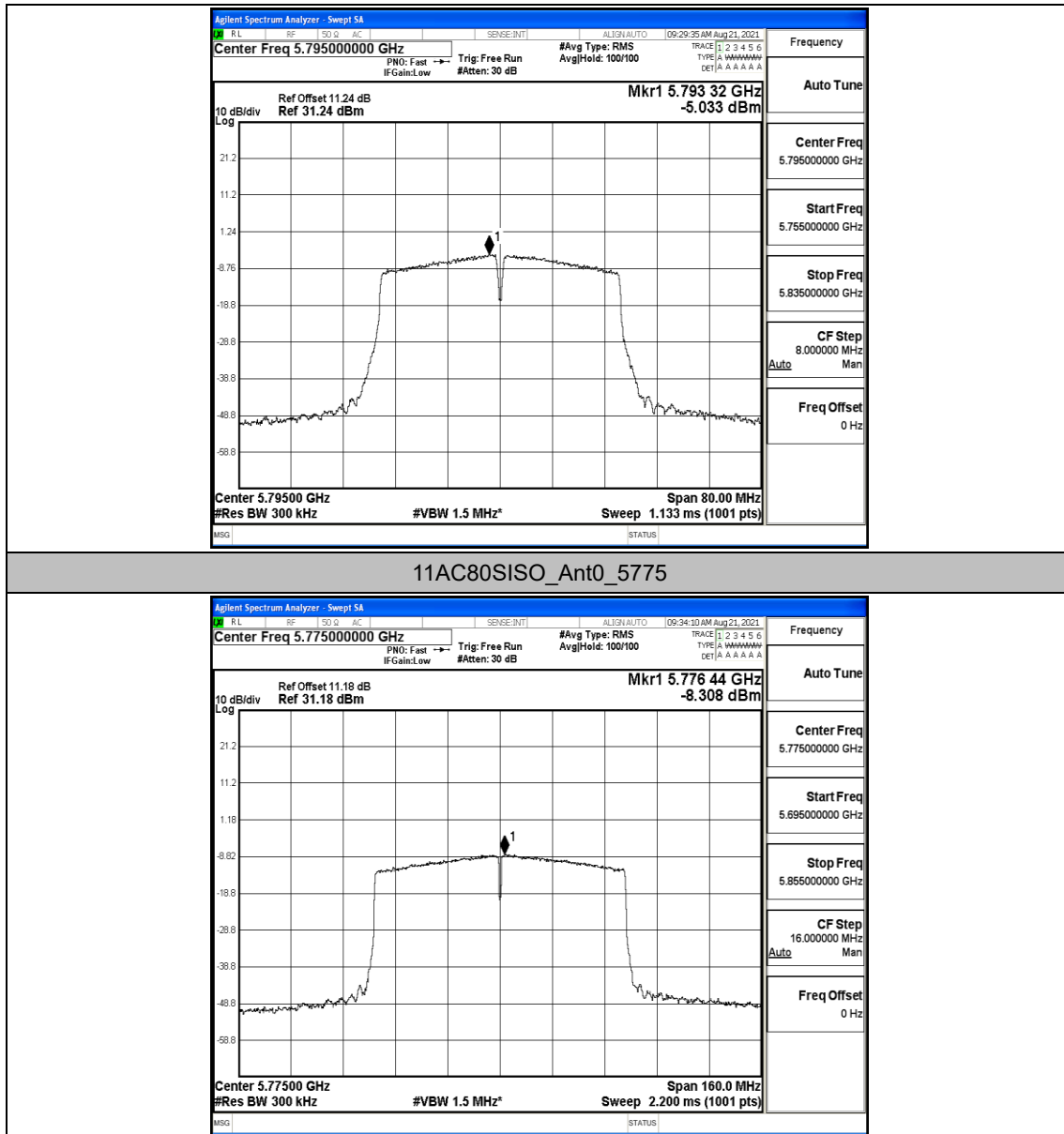
## 11AC20SISO\_Ant0\_5825



## 11AC40SISO\_Ant0\_5755



## 11AC40SISO\_Ant0\_5795





## ANT1

| TestMode   | Antenna | Channel | Result [dBm/MHz] | Limit[dBm/MHz] | Verdict |
|------------|---------|---------|------------------|----------------|---------|
| 11A        | Ant1    | 5745    | -2.8             | ≤30            | PASS    |
|            |         | 5785    | -1.45            | ≤30            | PASS    |
|            |         | 5825    | -1.23            | ≤30            | PASS    |
| 11N20SISO  | Ant1    | 5745    | -2.09            | ≤30            | PASS    |
|            |         | 5785    | -1.92            | ≤30            | PASS    |
|            |         | 5825    | -2.06            | ≤30            | PASS    |
| 11N40SISO  | Ant1    | 5755    | -5.4             | ≤30            | PASS    |
|            |         | 5795    | -4.96            | ≤30            | PASS    |
| 11AC20SISO | Ant1    | 5745    | -1.88            | ≤30            | PASS    |
|            |         | 5785    | -2.11            | ≤30            | PASS    |
|            |         | 5825    | -1.89            | ≤30            | PASS    |
| 11AC40SISO | Ant1    | 5755    | -5.57            | ≤30            | PASS    |
|            |         | 5795    | -5.51            | ≤30            | PASS    |
| 11AC80SISO | Ant1    | 5775    | -8.96            | ≤30            | PASS    |

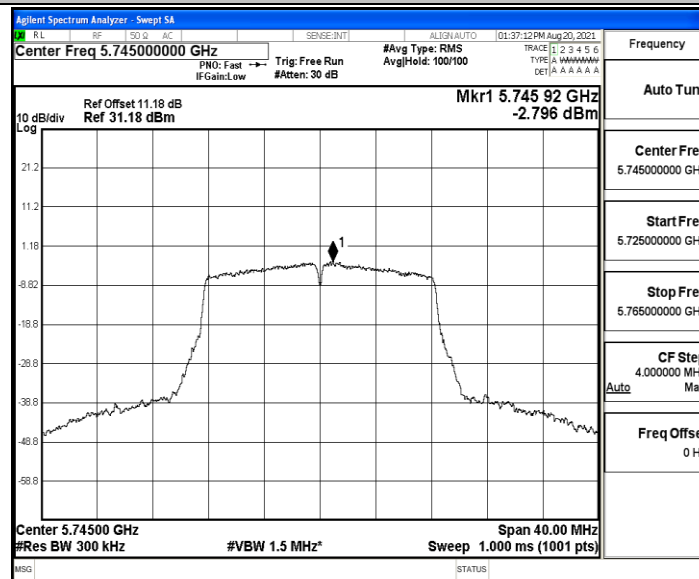
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

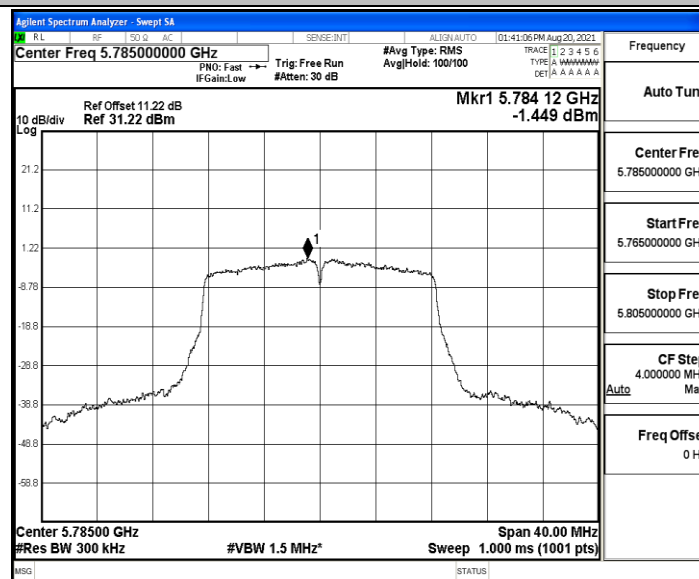


## Test Graphs

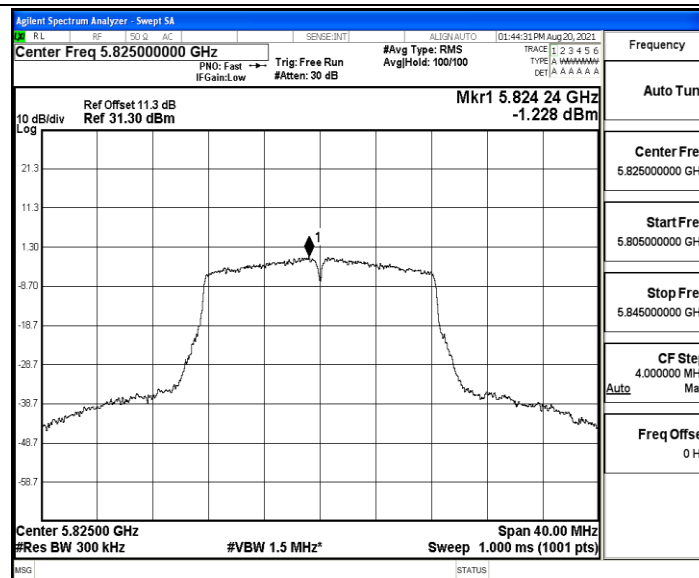
11A\_Ant1\_5745



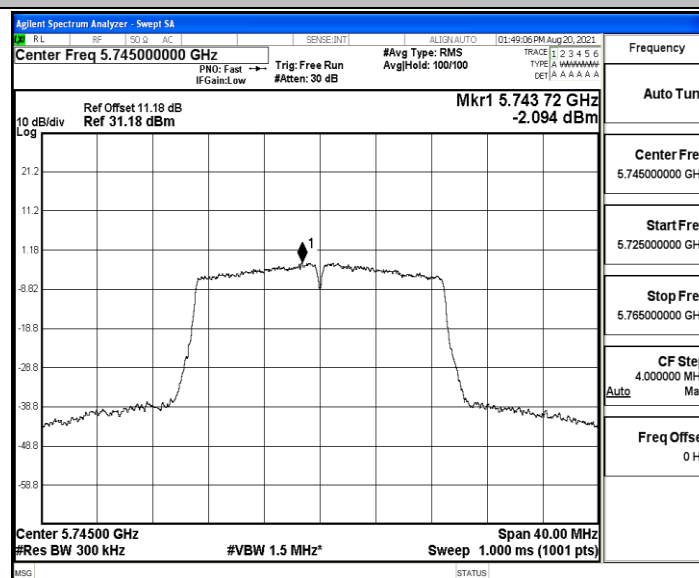
11A\_Ant1\_5785



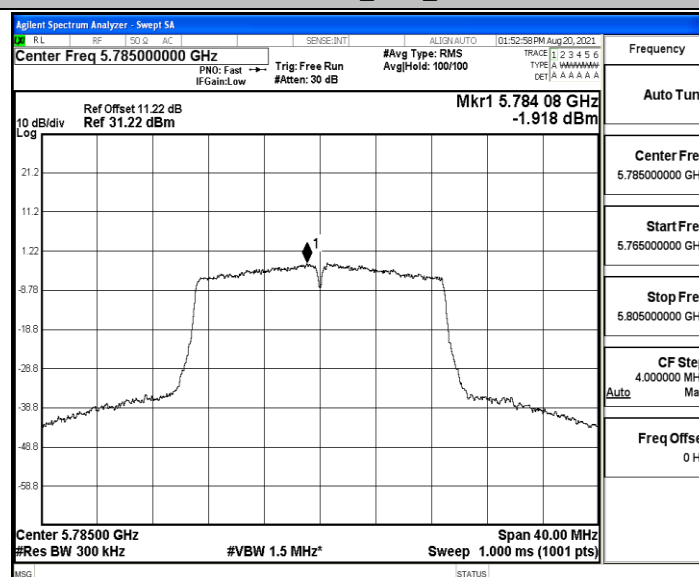
11A\_Ant1\_5825



11N20SISO\_Ant1\_5745

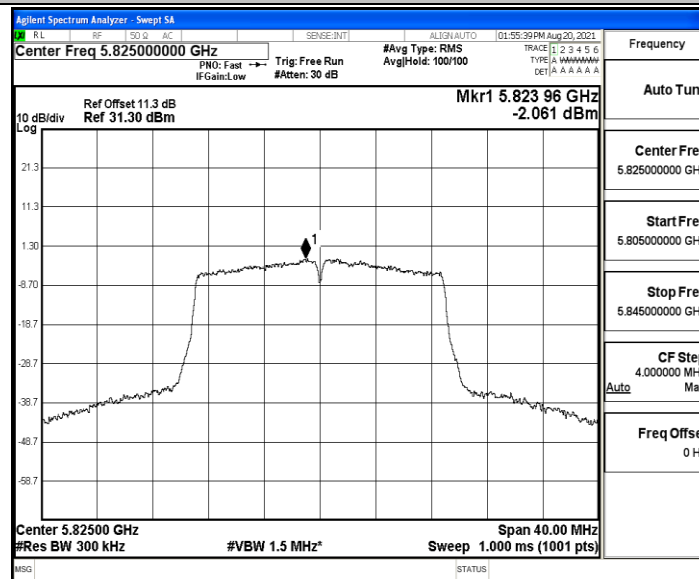


11N20SISO\_Ant1\_5785

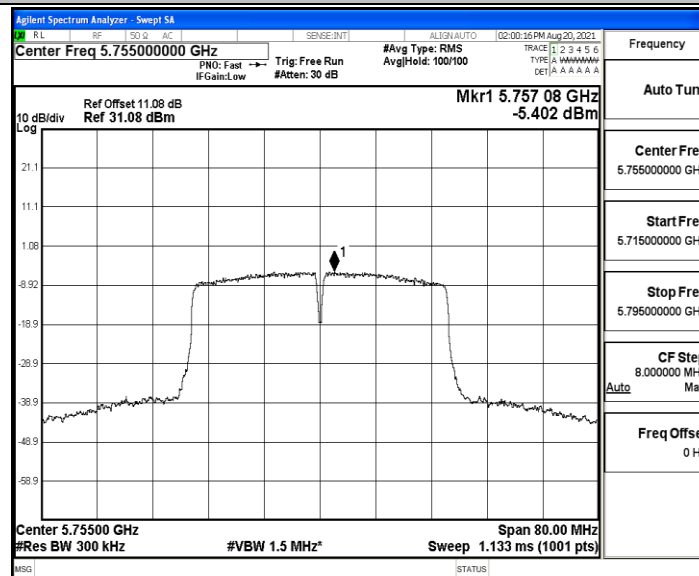




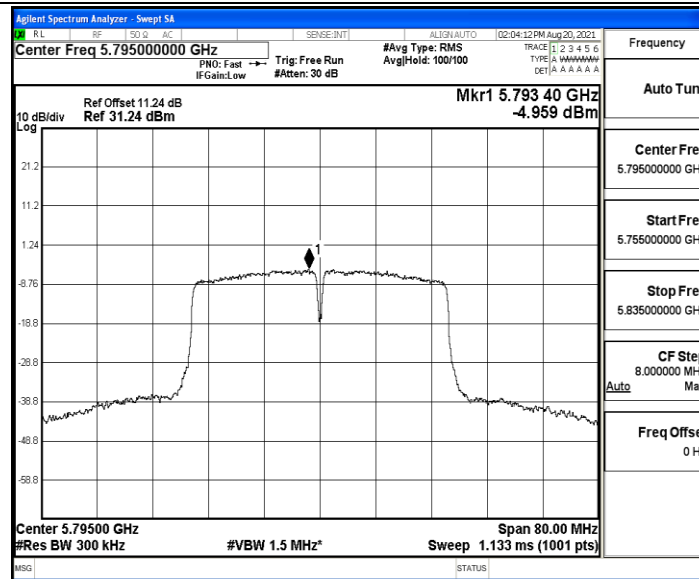
## 11N20SISO\_Ant1\_5825



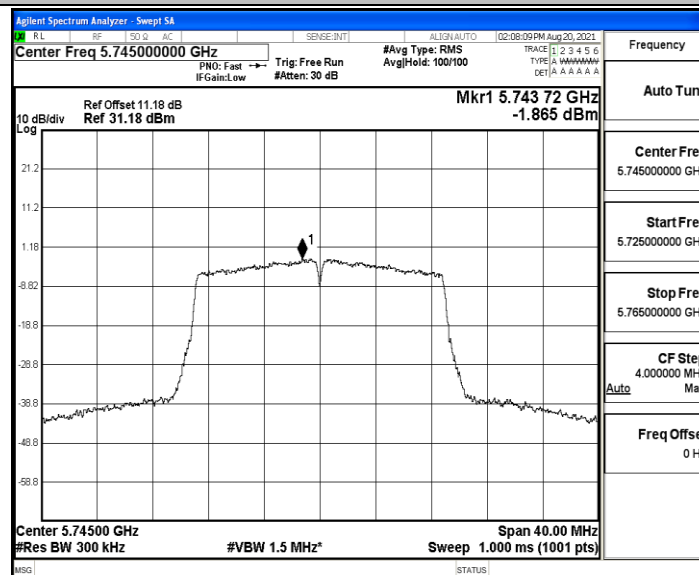
## 11N40SISO\_Ant1\_5755



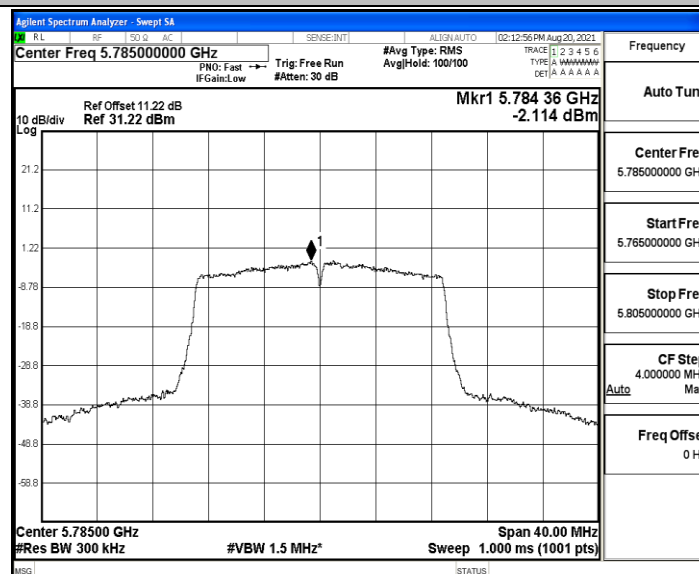
## 11N40SISO\_Ant1\_5795



11AC20SISO\_Ant1\_5745

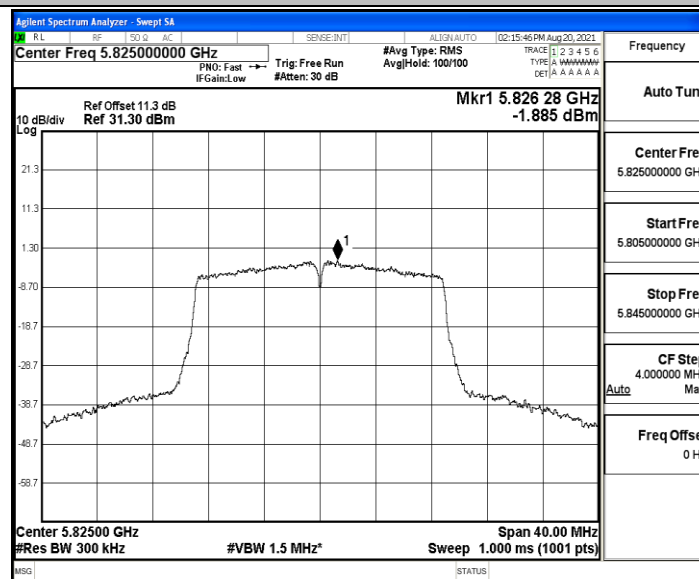


11AC20SISO\_Ant1\_5785

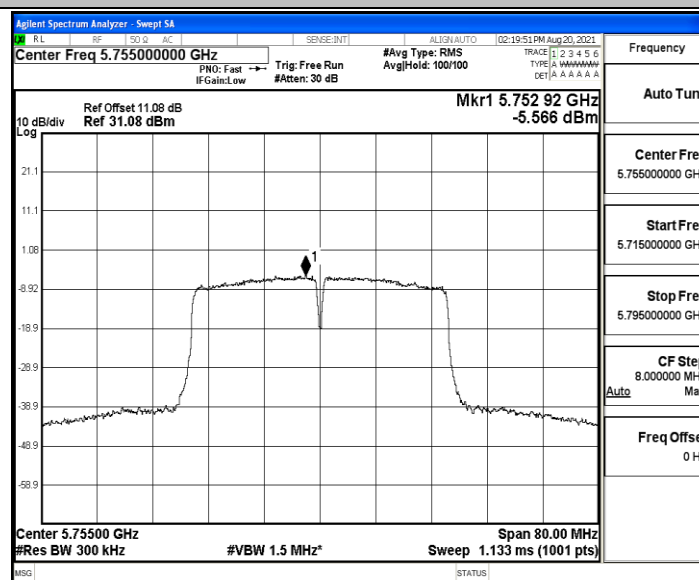




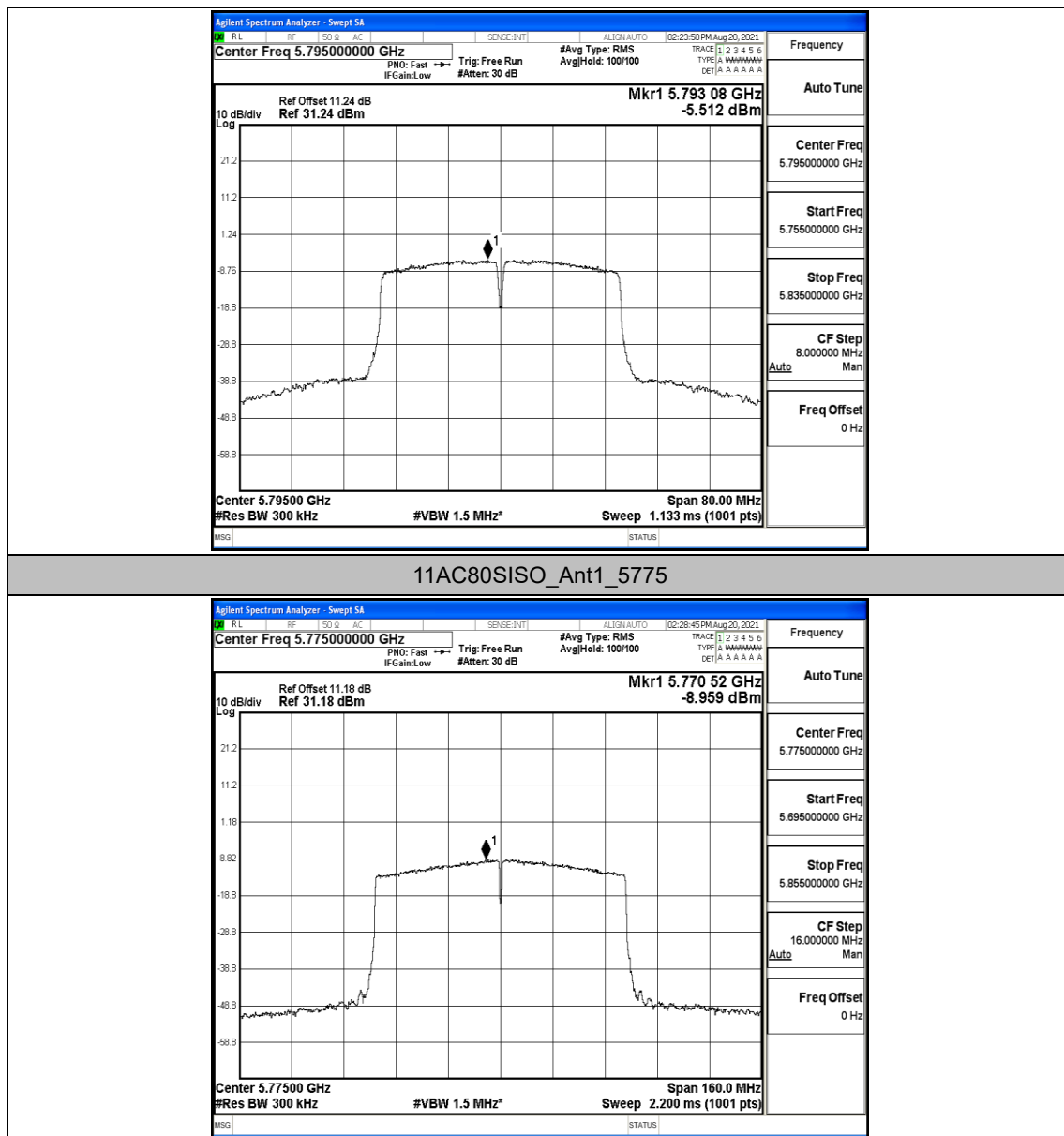
## 11AC20SISO\_Ant1\_5825



## 11AC40SISO\_Ant1\_5755



## 11AC40SISO\_Ant1\_5795





MIMO

| Test Mode | Channel | Frequency (MHz) | ANT 0 Power Density (dBm/500KHz) | ANT 1 Power Density (dBm/500KHz) | MIMO Power Density (dBm/500KHz) | Report Power Density (dBm/500KHz) | Verdict |
|-----------|---------|-----------------|----------------------------------|----------------------------------|---------------------------------|-----------------------------------|---------|
| 11N20     | 149     | 5745            | -1.67                            | -2.09                            | 1.14                            | 29.99                             | Pass    |
|           | 157     | 5785            | -2.8                             | -1.92                            | 0.67                            |                                   | Pass    |
|           | 165     | 5825            | -2.91                            | -2.06                            | 0.55                            |                                   | Pass    |
| 11N40     | 151     | 5755            | -5.27                            | -5.4                             | -2.32                           | 29.99                             | Pass    |
|           | 159     | 5795            | -5.19                            | -4.96                            | -2.06                           |                                   | Pass    |
| 11AC20    | 149     | 5745            | -2.89                            | -1.88                            | 0.65                            | 29.99                             | Pass    |
|           | 157     | 5785            | -2.32                            | -2.11                            | 0.80                            |                                   | Pass    |
|           | 165     | 5825            | -2.48                            | -1.89                            | 0.84                            |                                   | Pass    |
| 11AC40    | 151     | 5755            | -4.85                            | -5.57                            | -2.18                           | 29.99                             | Pass    |
|           | 159     | 5795            | -5.03                            | -5.51                            | -2.25                           |                                   | Pass    |
| 11AC80    | 155     | 5775            | -8.31                            | -8.96                            | -5.61                           | 29.99                             | Pass    |