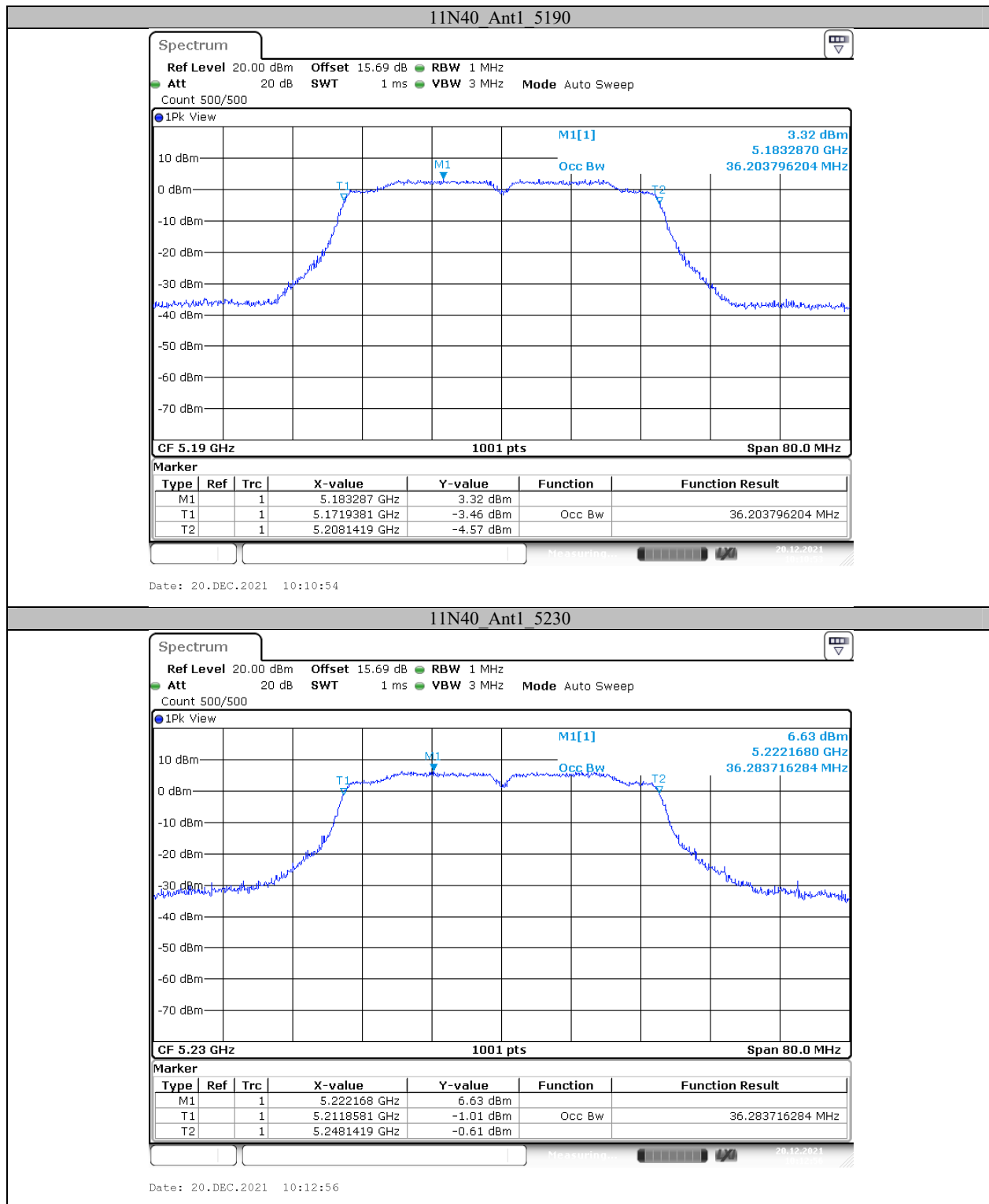
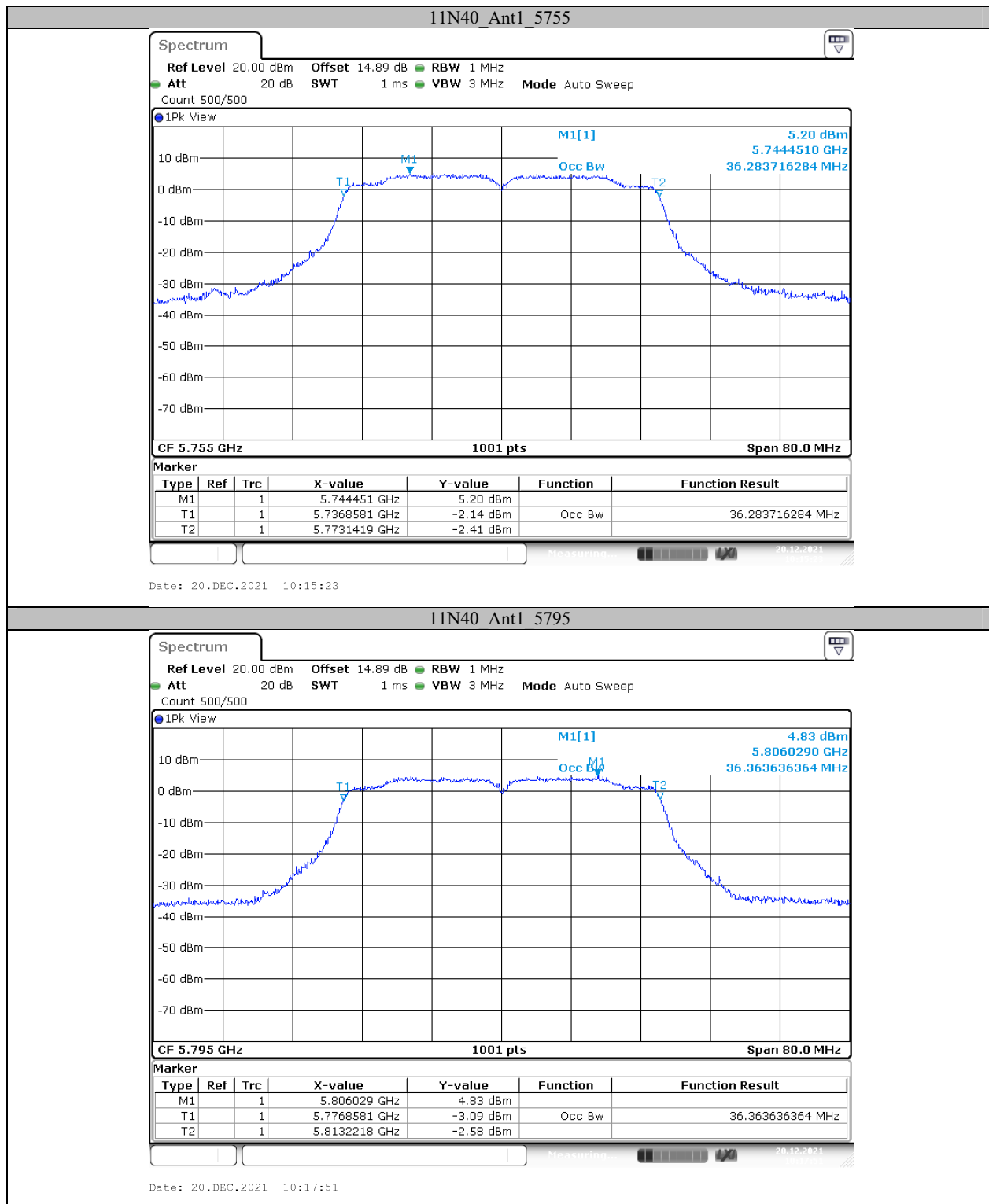
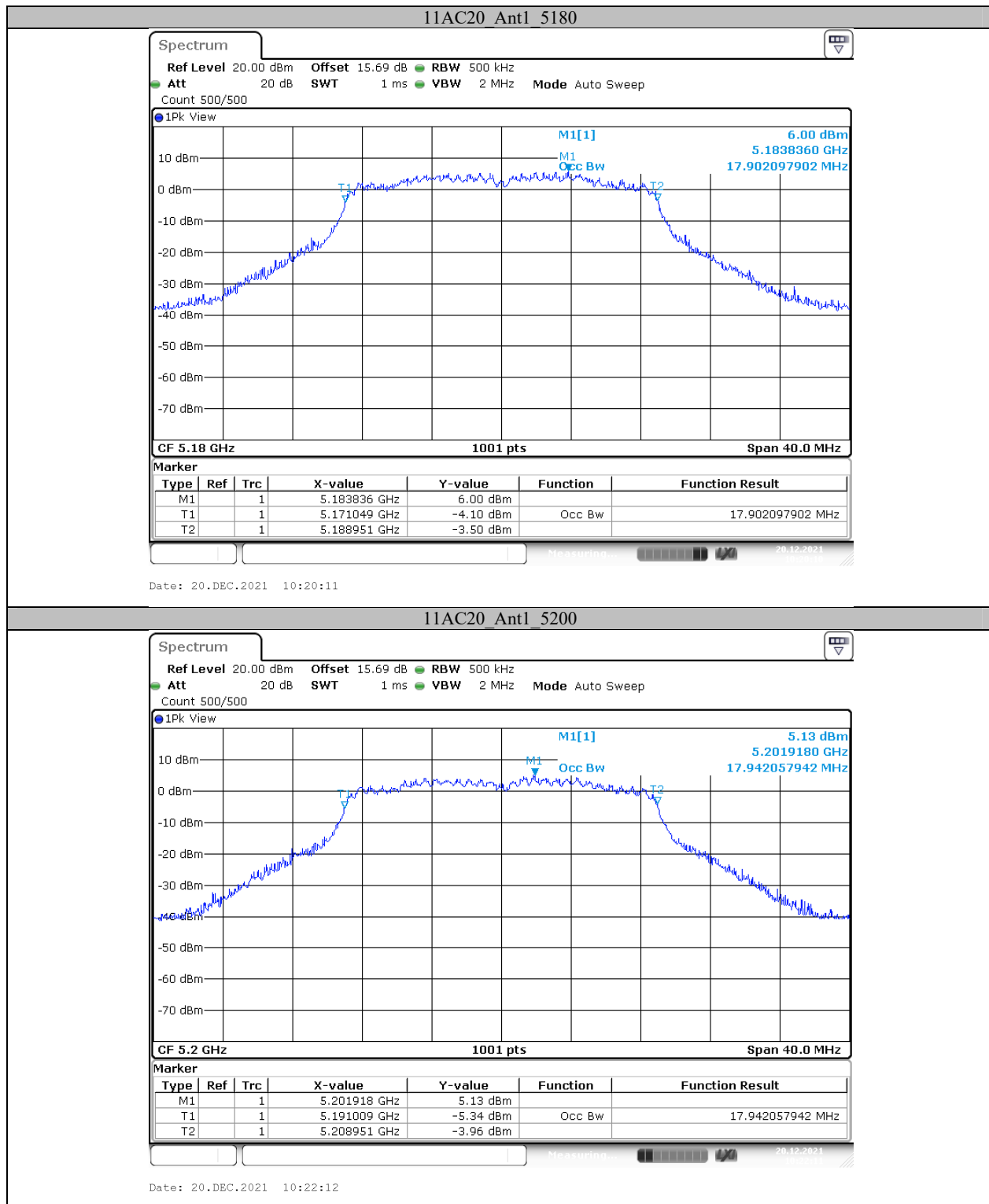
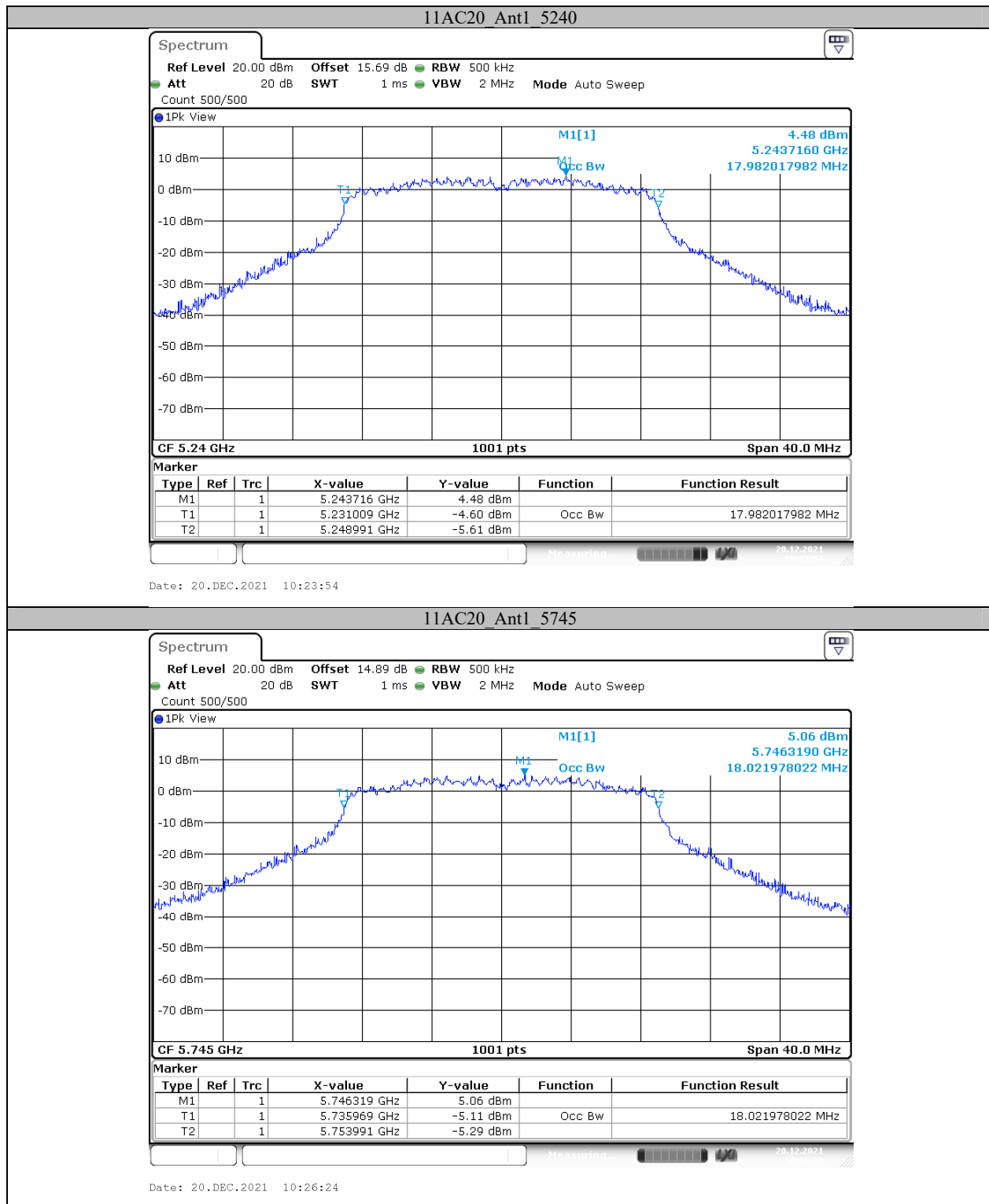
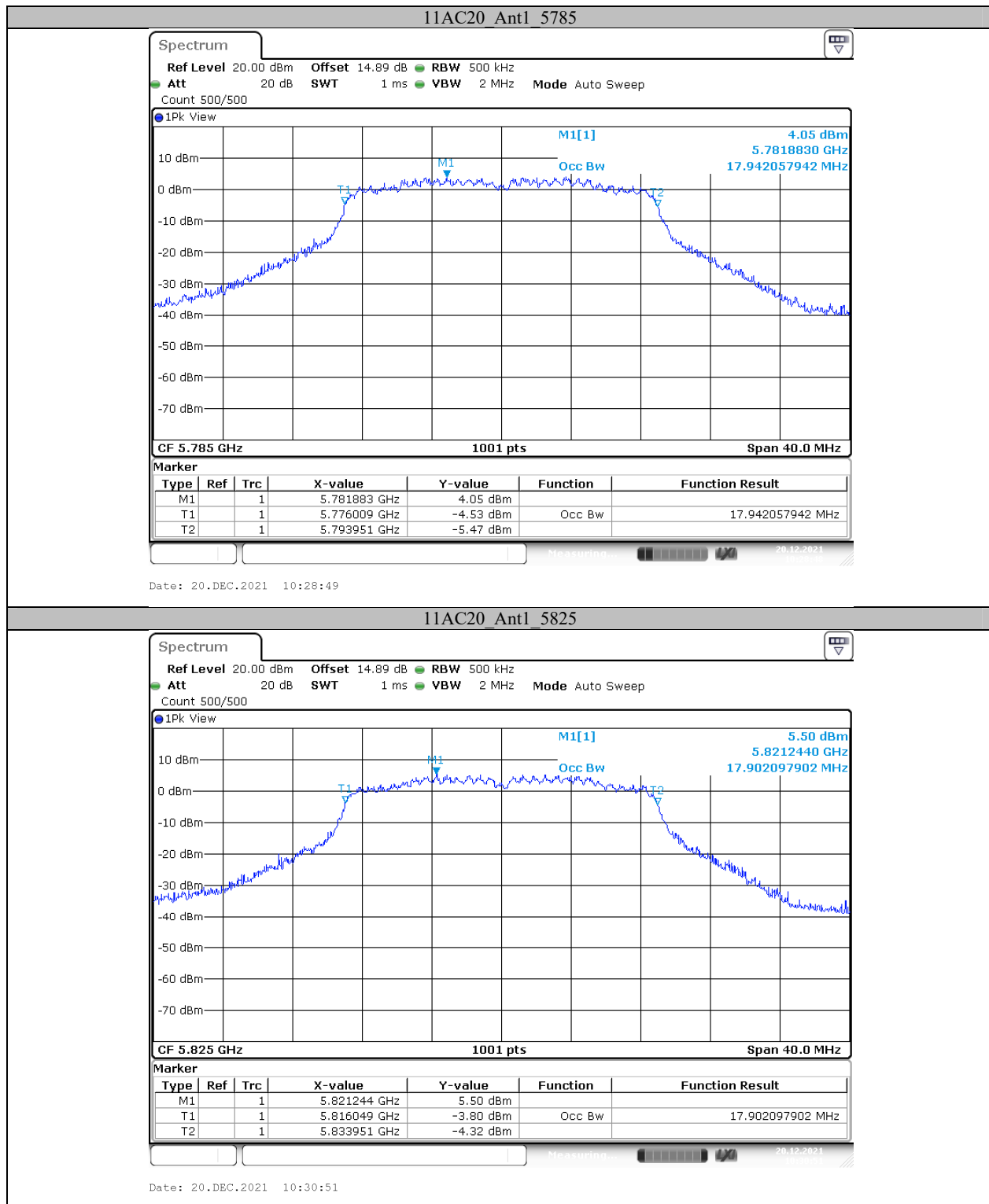


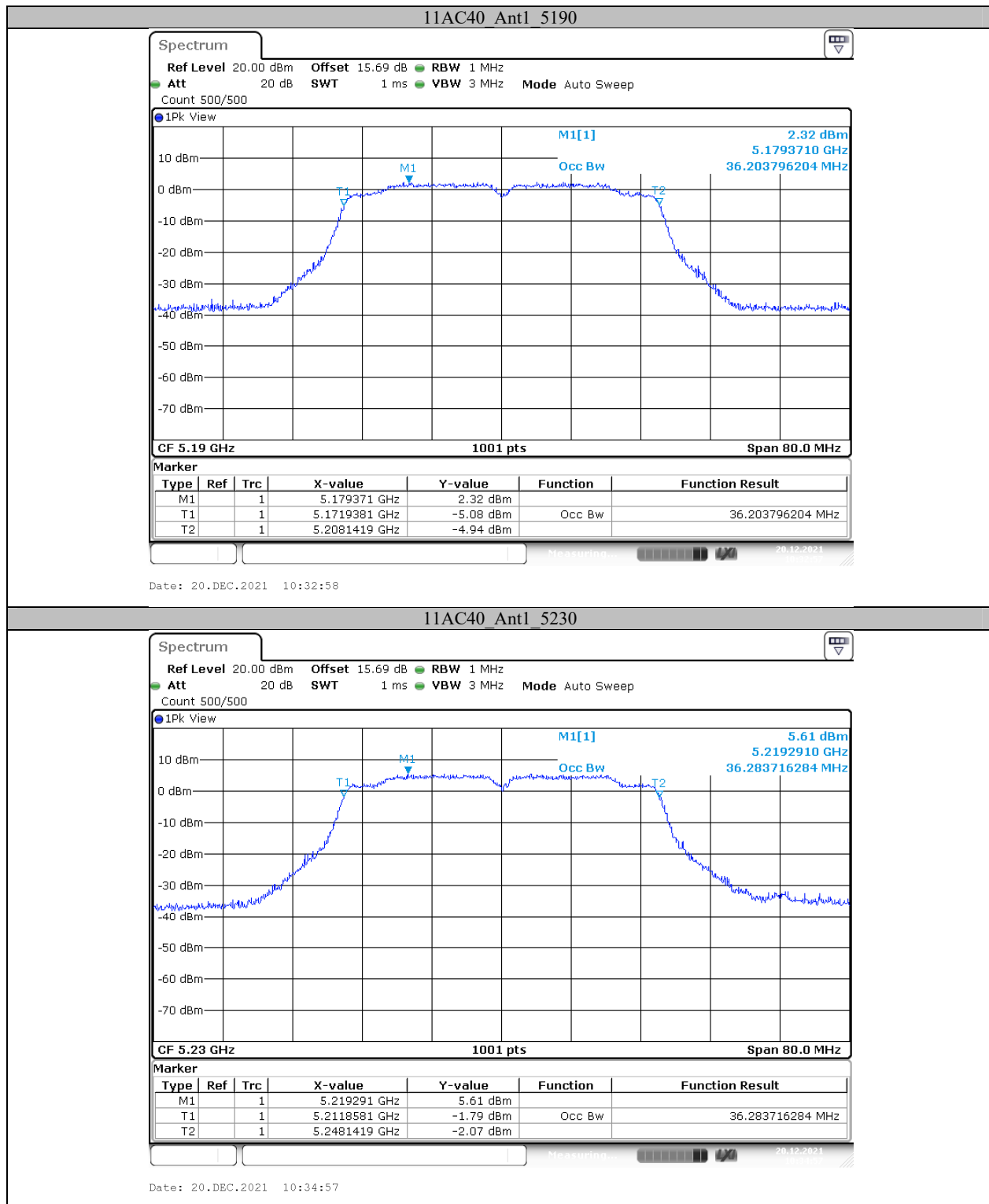


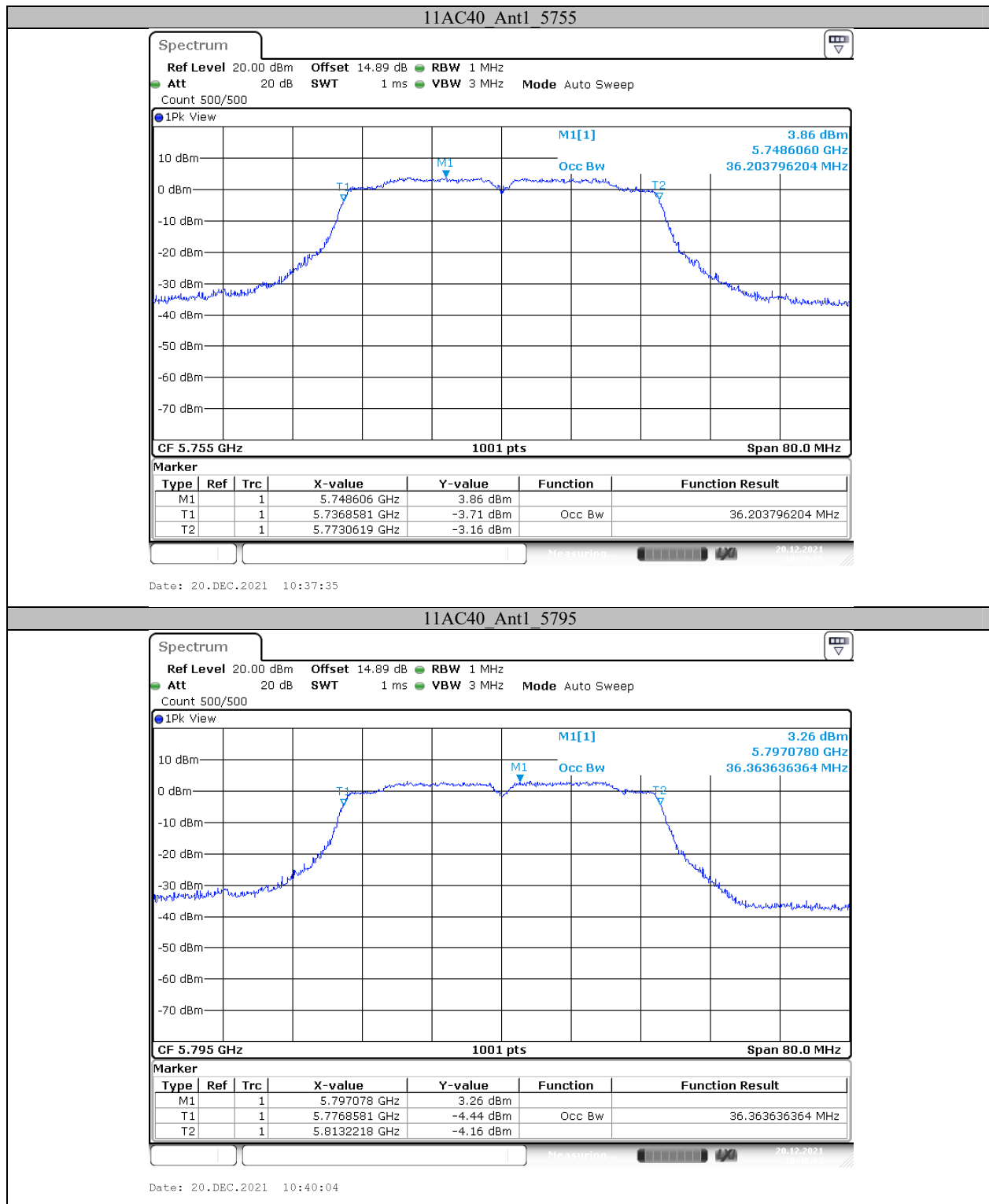


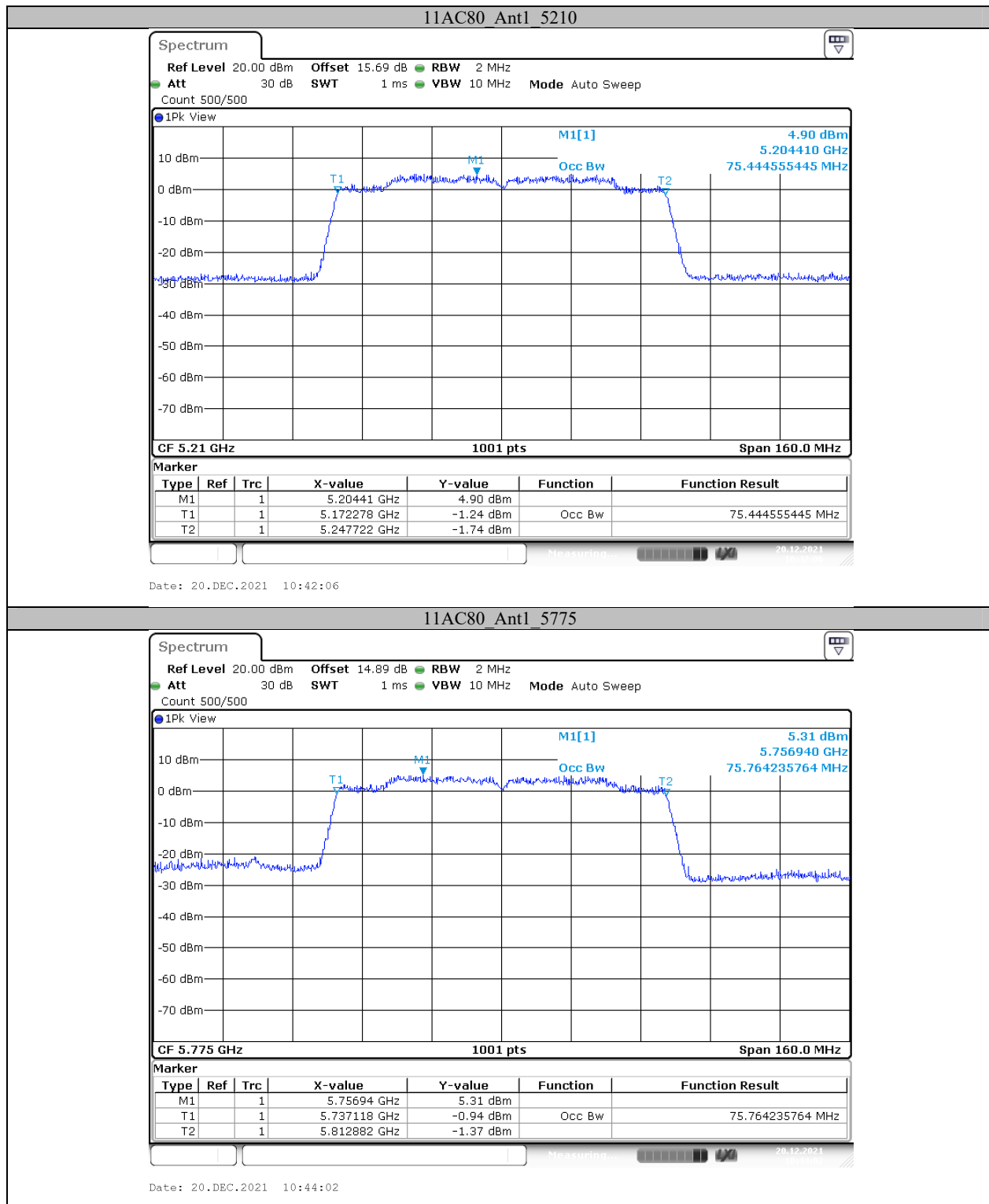












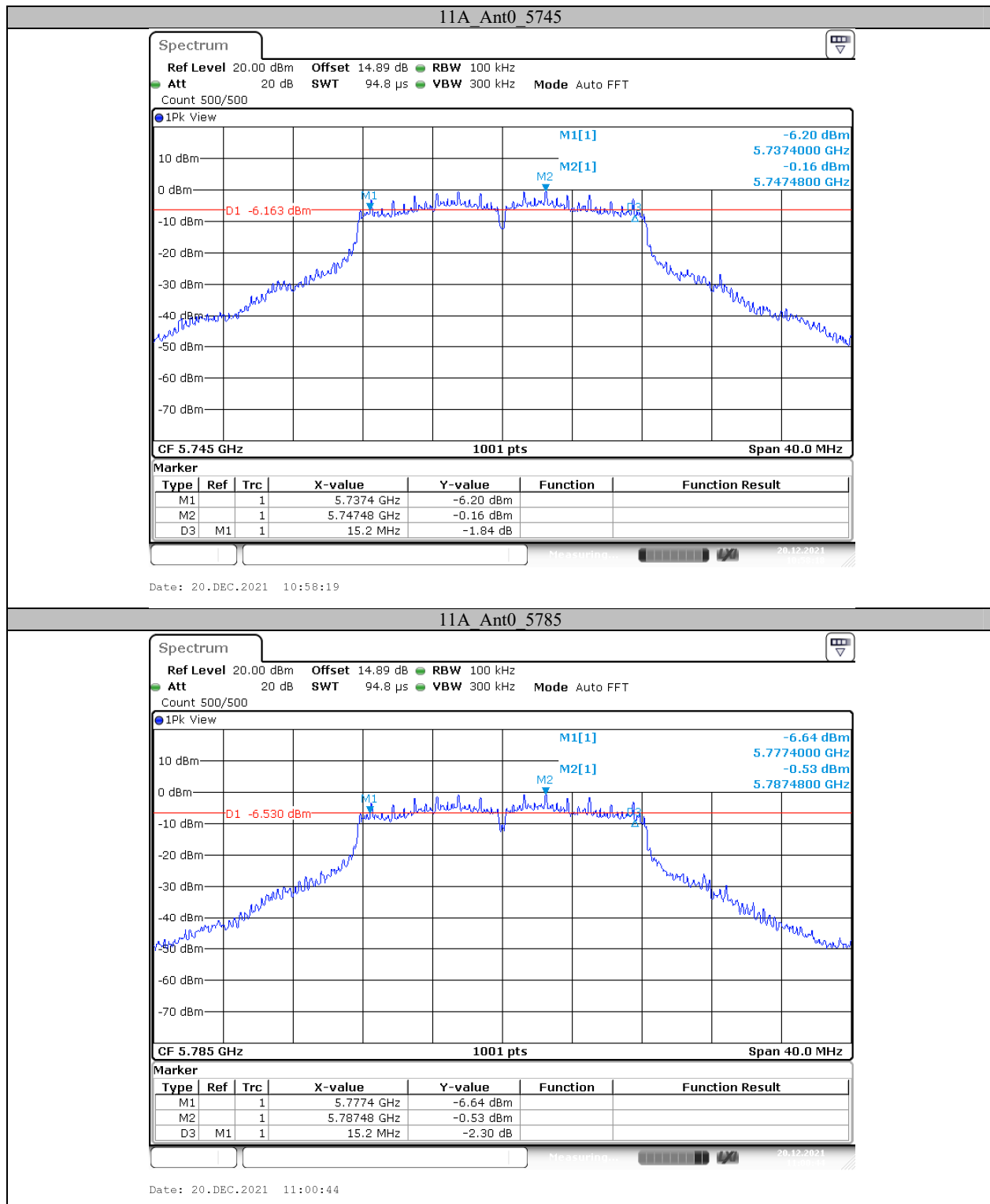


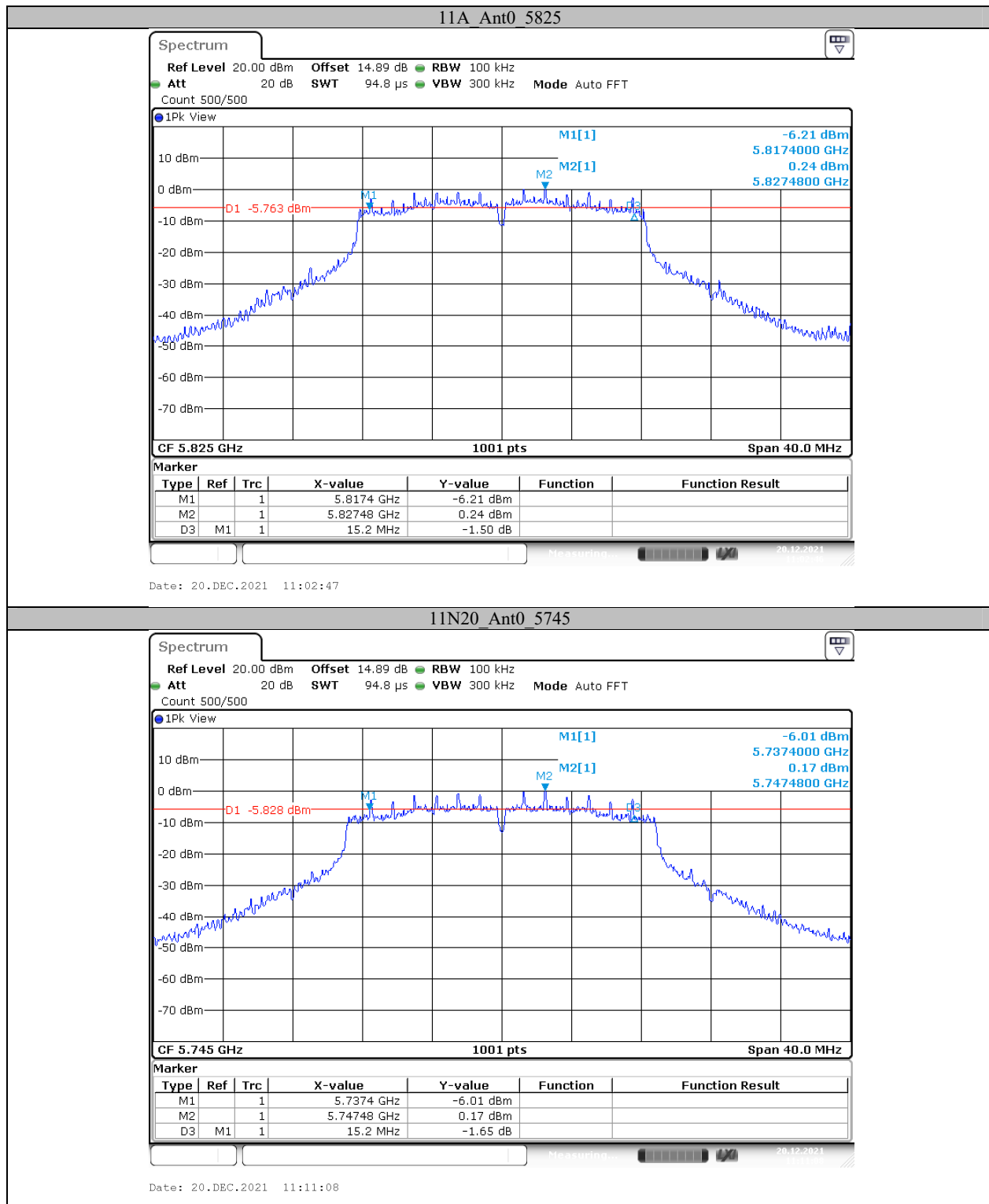
### Appendix A3: Min emission bandwidth Test Result

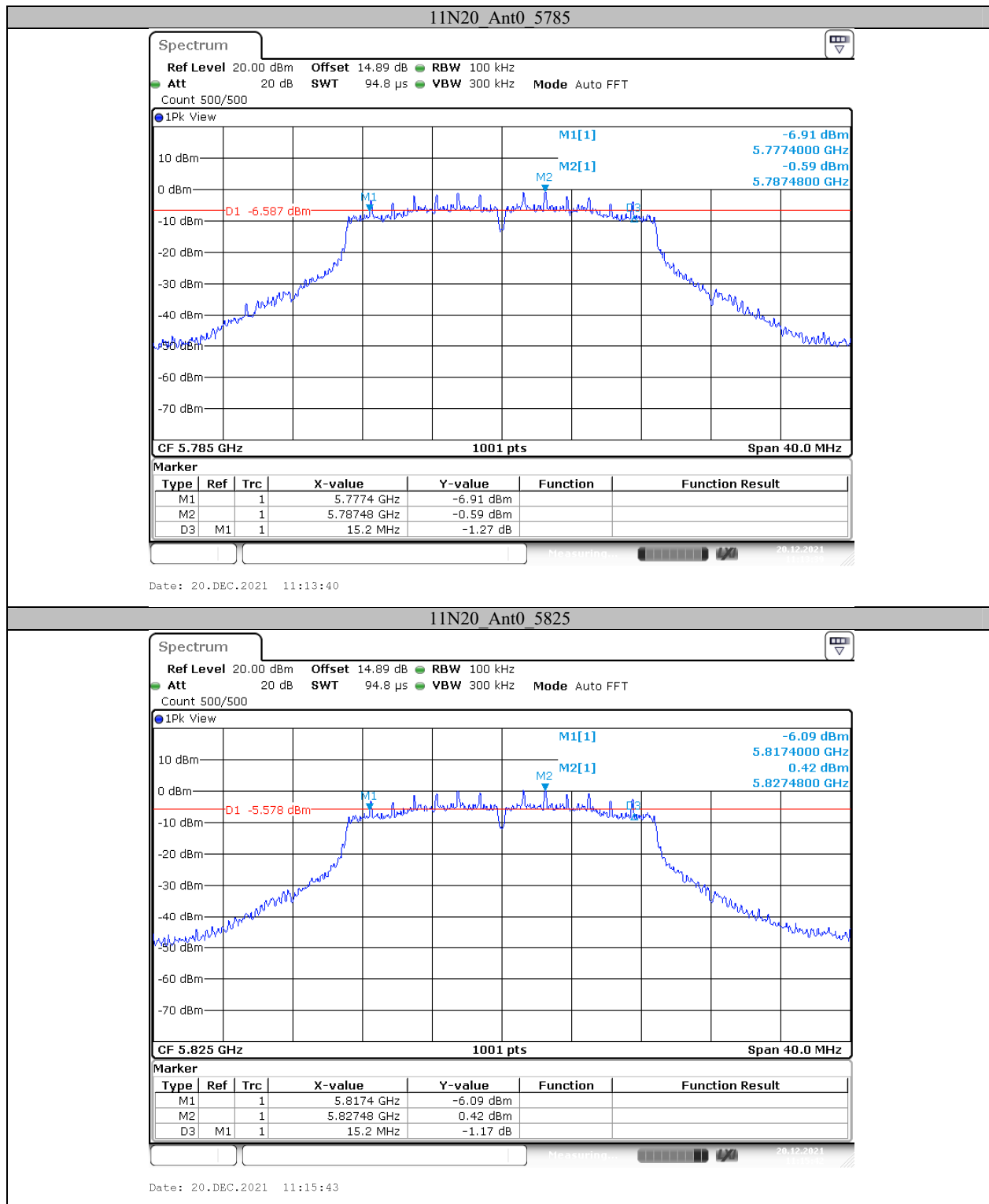
| TestMode | Antenna | Channel | 6db EBW<br>[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|------------------|----------|----------|------------|---------|
| 11A      | Ant0    | 5745    | 15.200           | 5737.400 | 5752.600 | 0.5        | PASS    |
|          |         | 5785    | 15.200           | 5777.400 | 5792.600 | 0.5        | PASS    |
|          |         | 5825    | 15.200           | 5817.400 | 5832.600 | 0.5        | PASS    |
| 11N20    | Ant0    | 5745    | 15.200           | 5737.400 | 5752.600 | 0.5        | PASS    |
|          |         | 5785    | 15.200           | 5777.400 | 5792.600 | 0.5        | PASS    |
|          |         | 5825    | 15.200           | 5817.400 | 5832.600 | 0.5        | PASS    |
| 11N40    | Ant0    | 5755    | 35.200           | 5737.400 | 5772.600 | 0.5        | PASS    |
|          |         | 5795    | 35.280           | 5777.400 | 5812.680 | 0.5        | PASS    |
| 11AC20   | Ant0    | 5745    | 15.200           | 5737.400 | 5752.600 | 0.5        | PASS    |
|          |         | 5785    | 15.240           | 5777.360 | 5792.600 | 0.5        | PASS    |
|          |         | 5825    | 15.160           | 5817.400 | 5832.560 | 0.5        | PASS    |
| 11AC40   | Ant0    | 5755    | 35.200           | 5737.400 | 5772.600 | 0.5        | PASS    |
|          |         | 5795    | 35.280           | 5777.400 | 5812.680 | 0.5        | PASS    |
| 11AC80   | Ant0    | 5775    | 75.520           | 5737.240 | 5812.760 | 0.5        | PASS    |

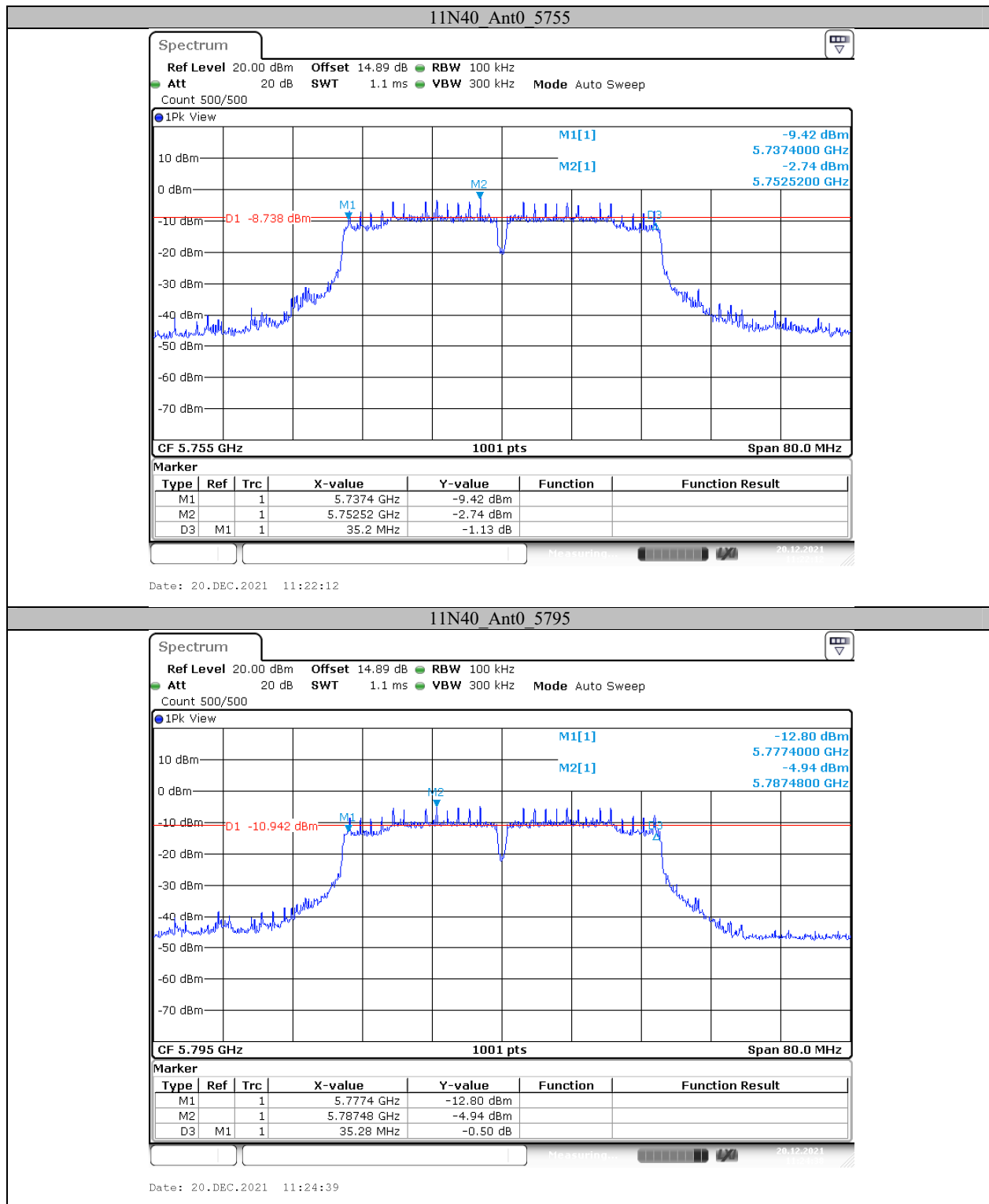
| TestMode | Antenna | Channel | 6db EBW<br>[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|------------------|----------|----------|------------|---------|
| 11A      | Ant1    | 5745    | 15.200           | 5737.400 | 5752.600 | 0.5        | PASS    |
|          |         | 5785    | 15.240           | 5777.360 | 5792.600 | 0.5        | PASS    |
|          |         | 5825    | 15.200           | 5817.400 | 5832.600 | 0.5        | PASS    |
| 11N20    | Ant1    | 5745    | 15.200           | 5737.400 | 5752.600 | 0.5        | PASS    |
|          |         | 5785    | 15.200           | 5777.400 | 5792.600 | 0.5        | PASS    |
|          |         | 5825    | 15.120           | 5817.480 | 5832.600 | 0.5        | PASS    |
| 11N40    | Ant1    | 5755    | 35.280           | 5737.320 | 5772.600 | 0.5        | PASS    |
|          |         | 5795    | 35.280           | 5777.400 | 5812.680 | 0.5        | PASS    |
| 11AC20   | Ant1    | 5745    | 15.760           | 5736.800 | 5752.560 | 0.5        | PASS    |
|          |         | 5785    | 15.800           | 5776.800 | 5792.600 | 0.5        | PASS    |
|          |         | 5825    | 15.760           | 5817.400 | 5833.160 | 0.5        | PASS    |
| 11AC40   | Ant1    | 5755    | 35.200           | 5737.400 | 5772.600 | 0.5        | PASS    |
|          |         | 5795    | 35.280           | 5777.400 | 5812.680 | 0.5        | PASS    |
| 11AC80   | Ant1    | 5775    | 75.520           | 5737.240 | 5812.760 | 0.5        | PASS    |

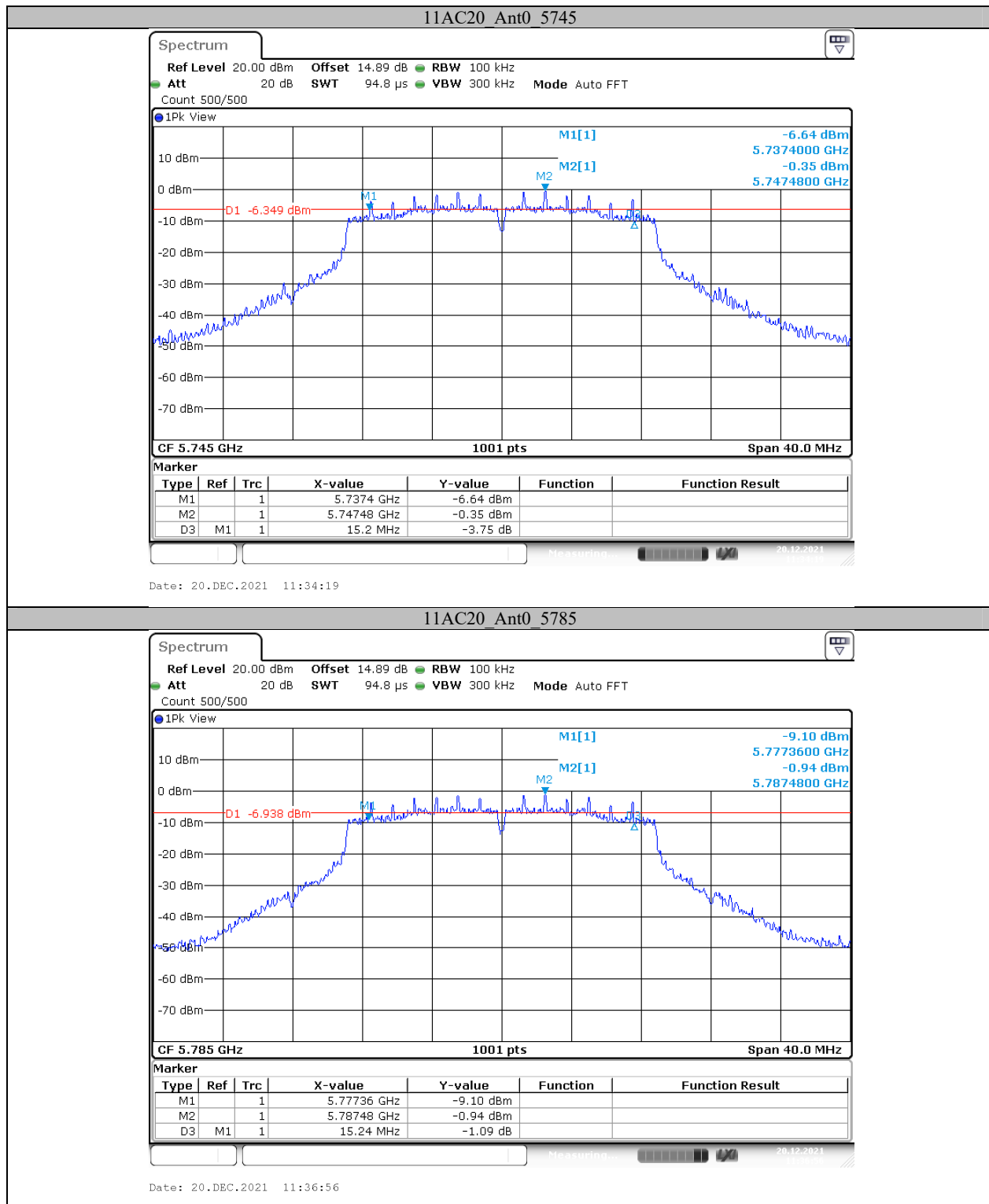
## Test Graphs

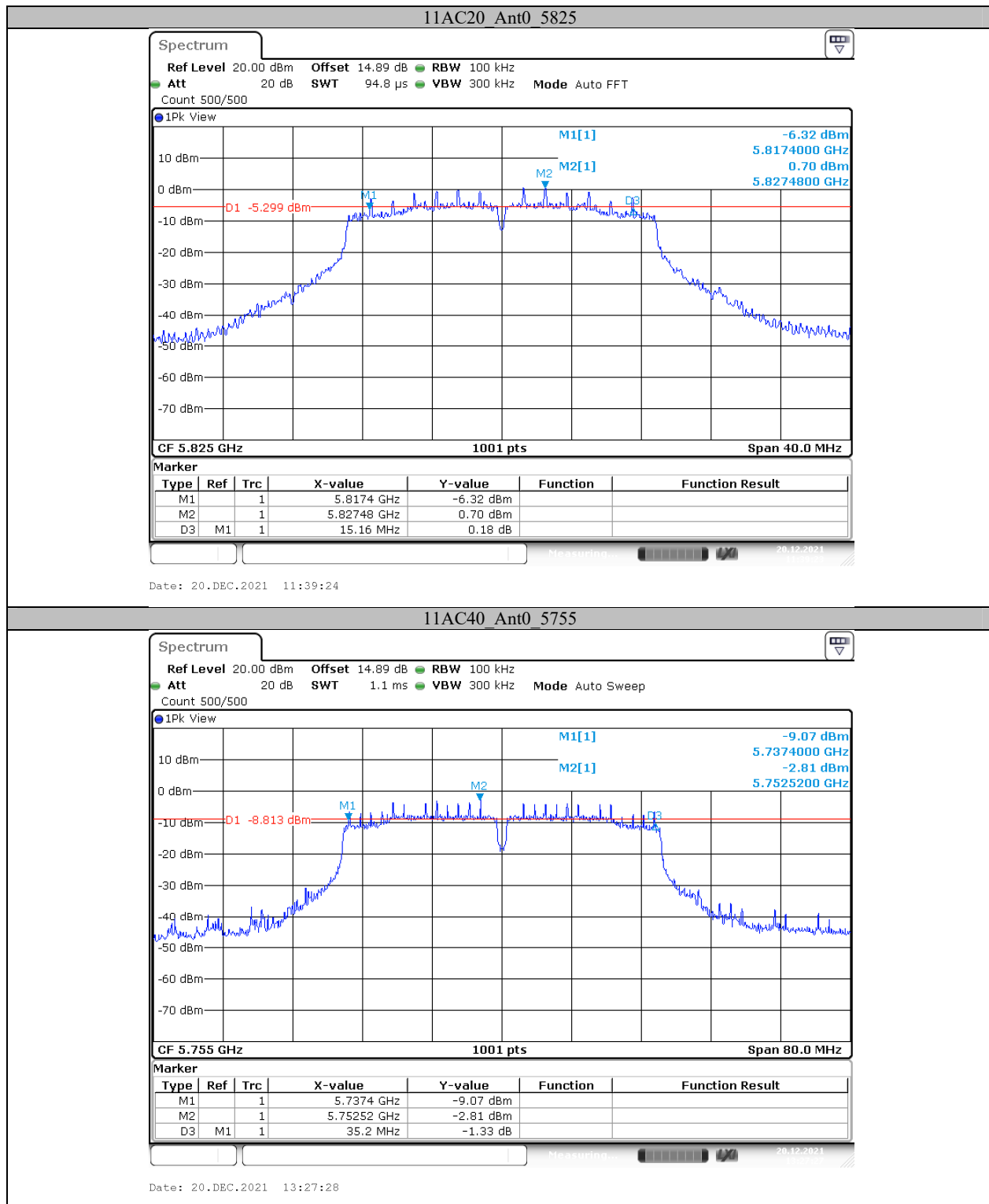


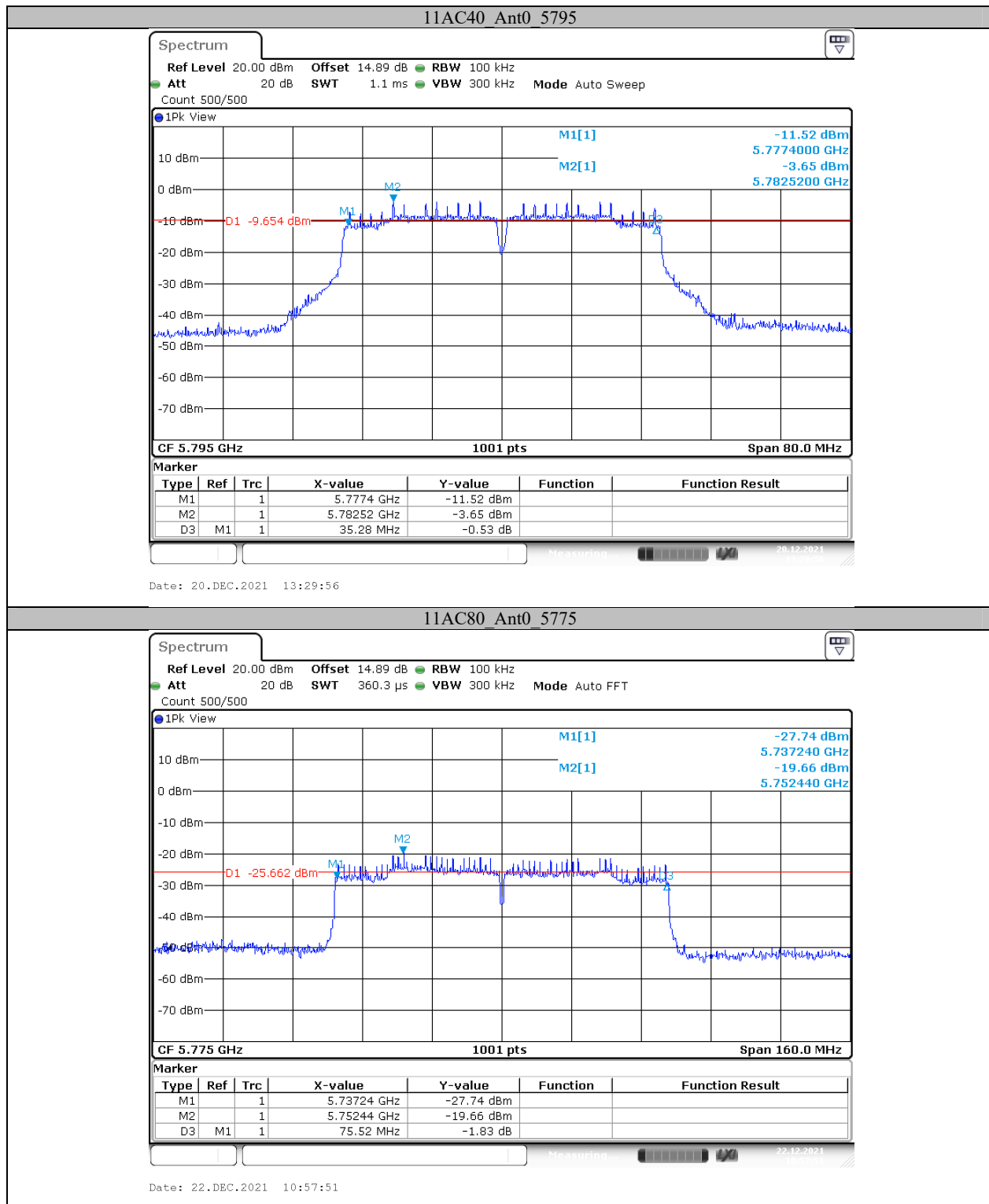




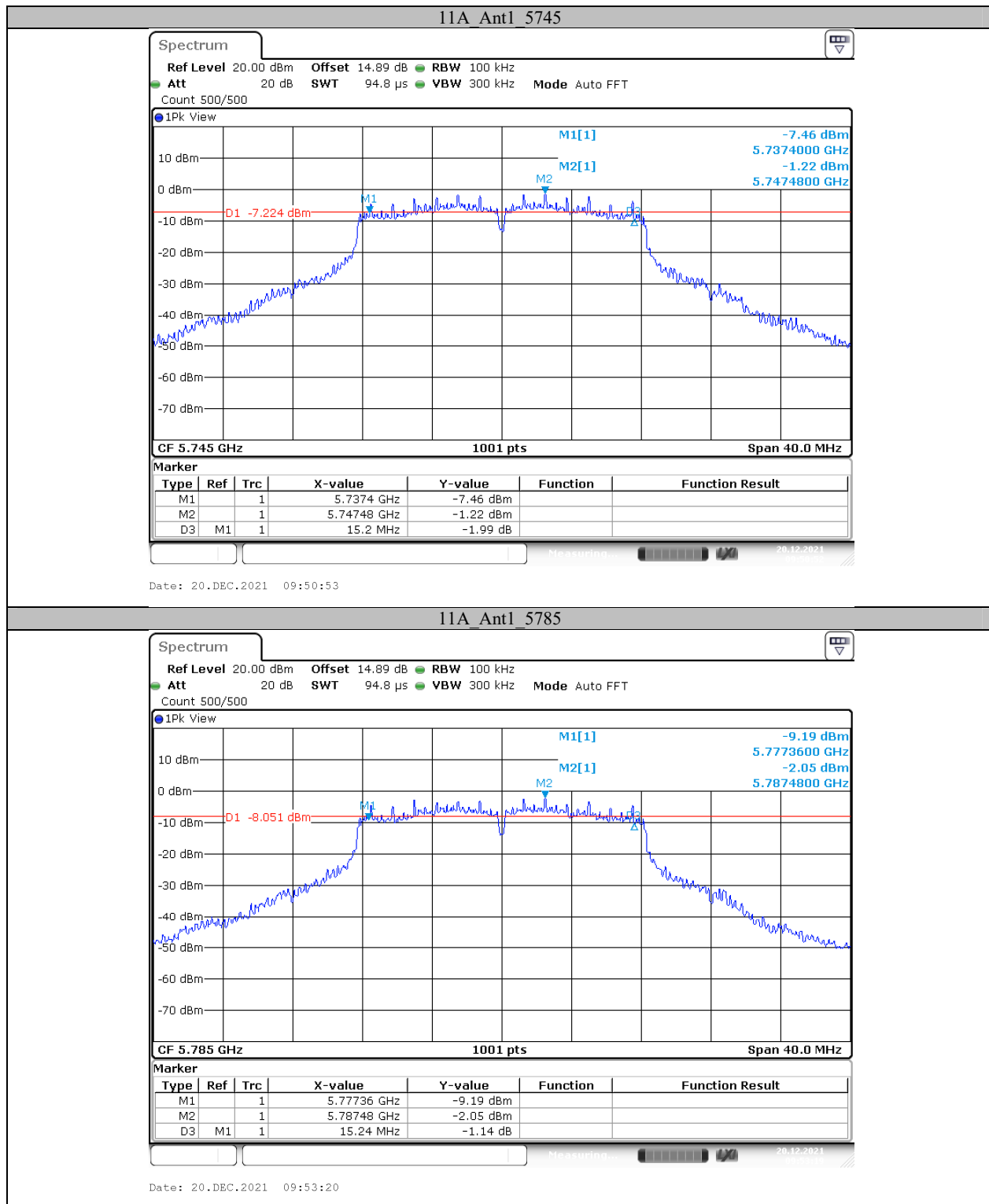


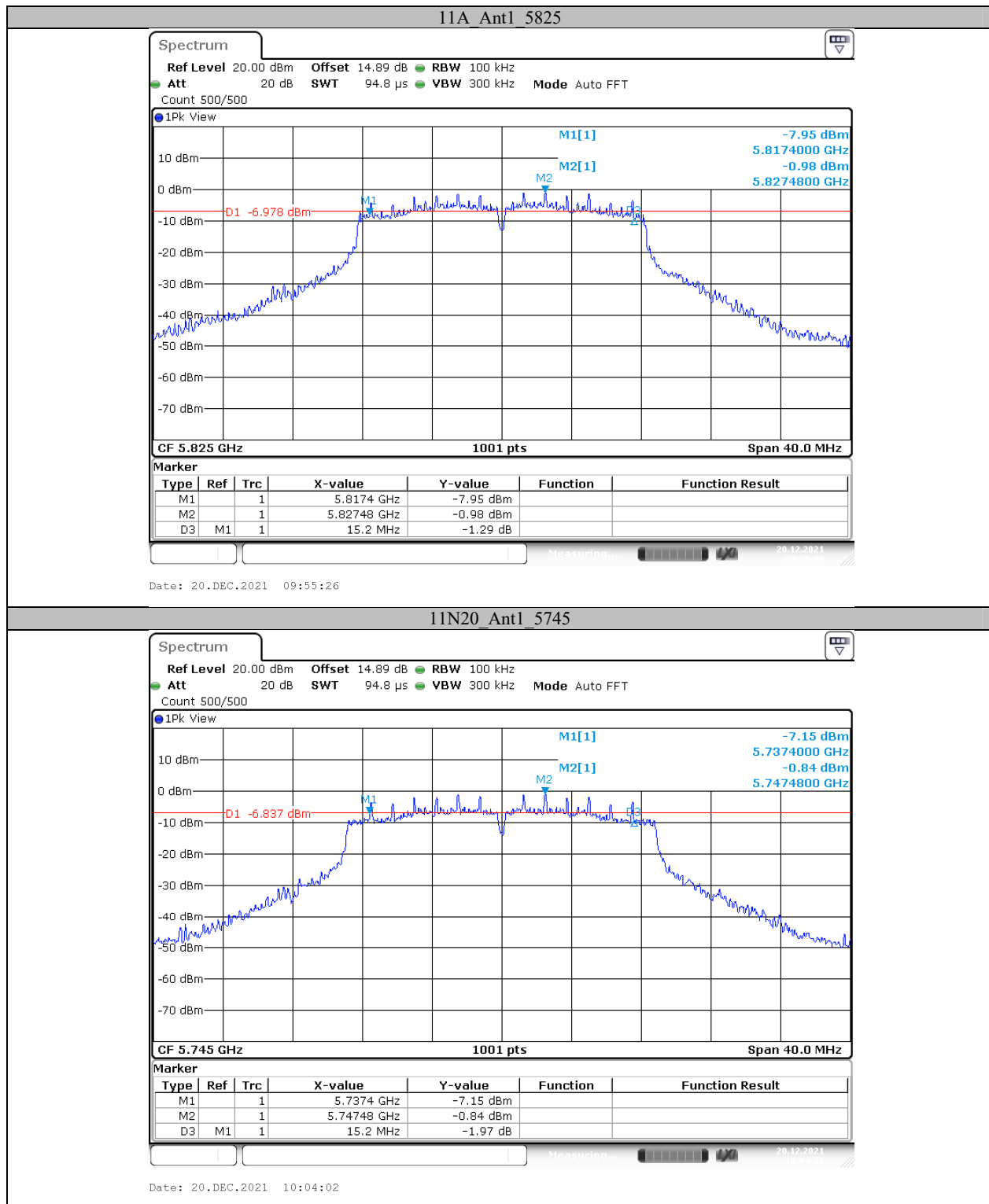


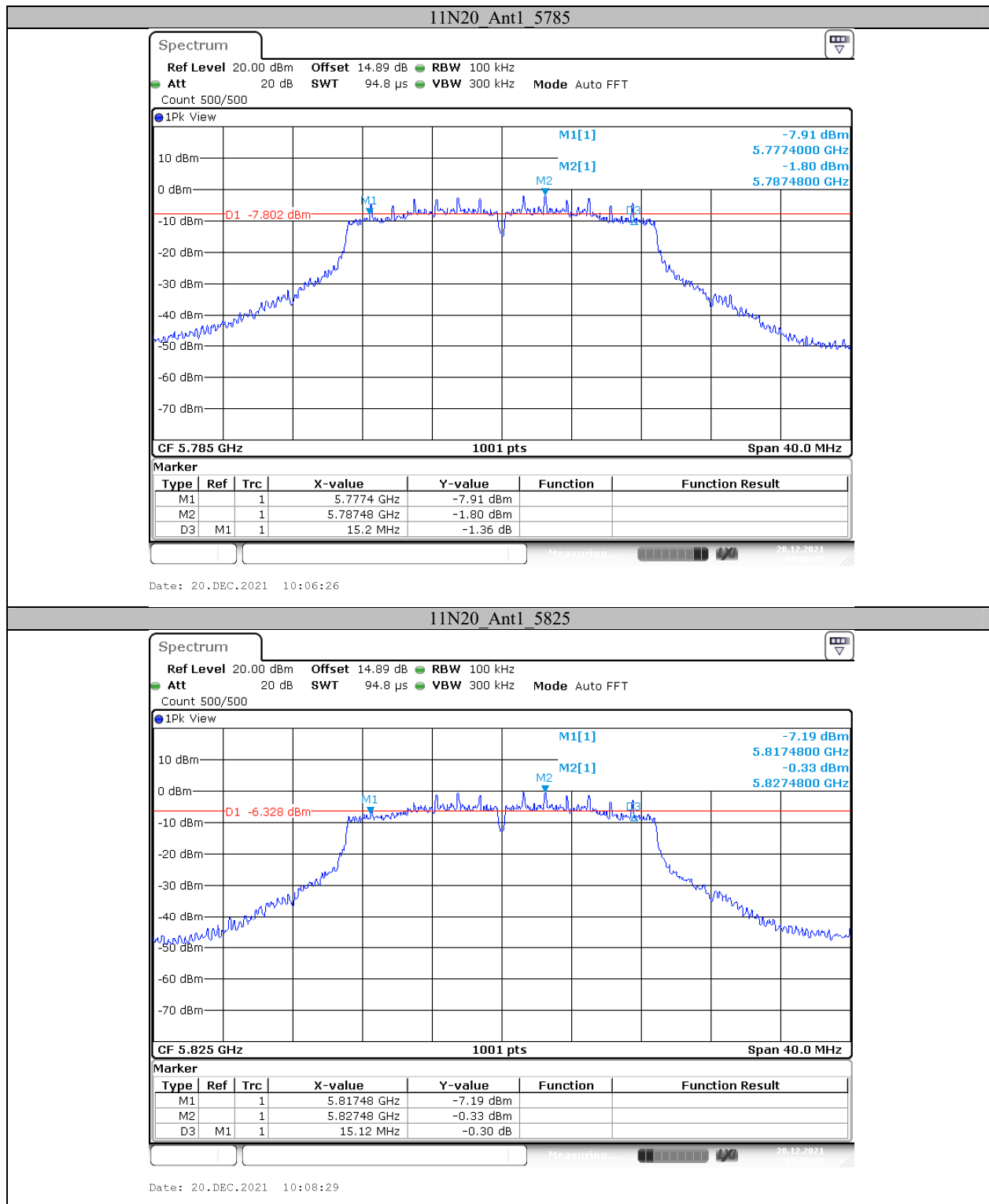


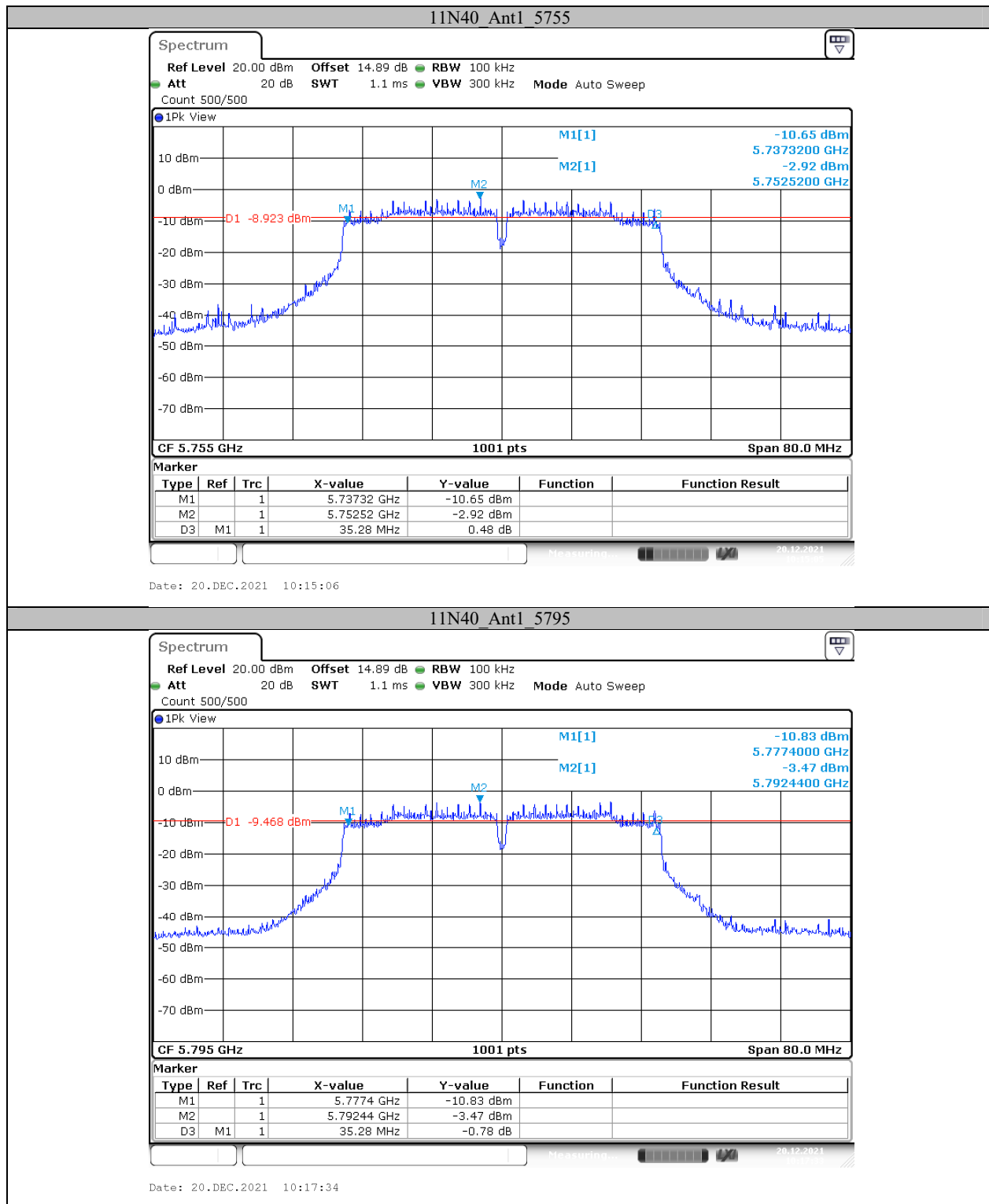


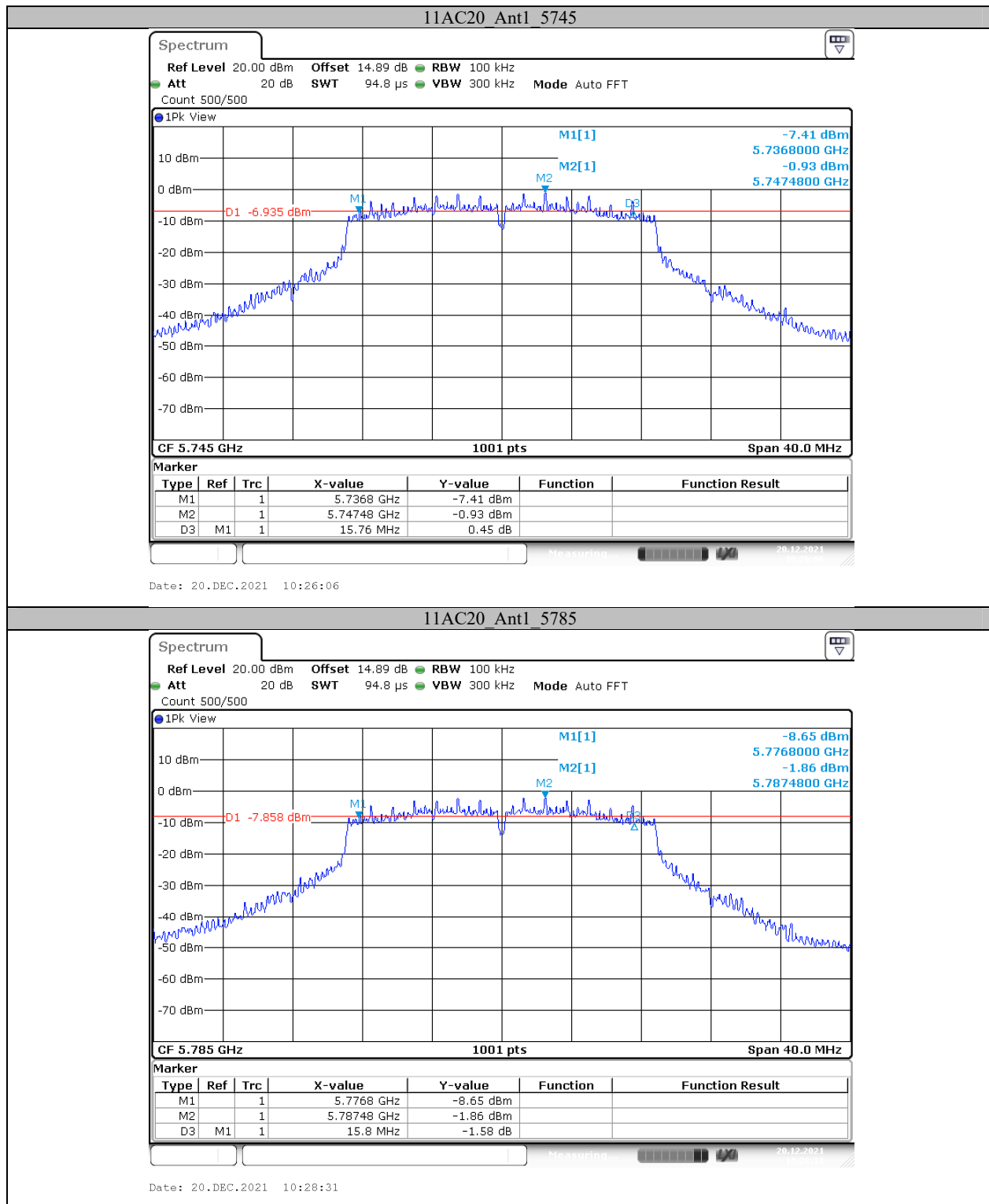


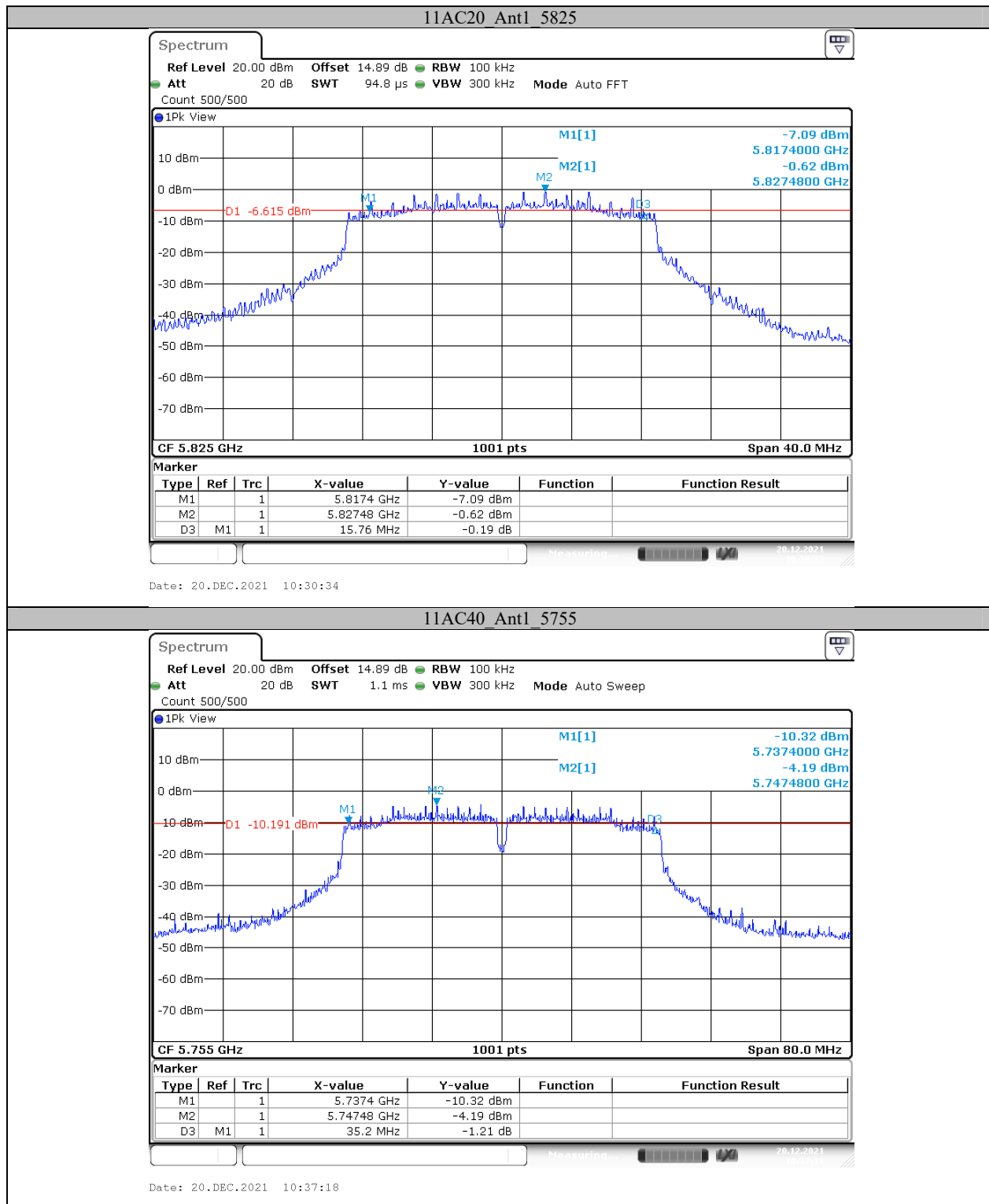


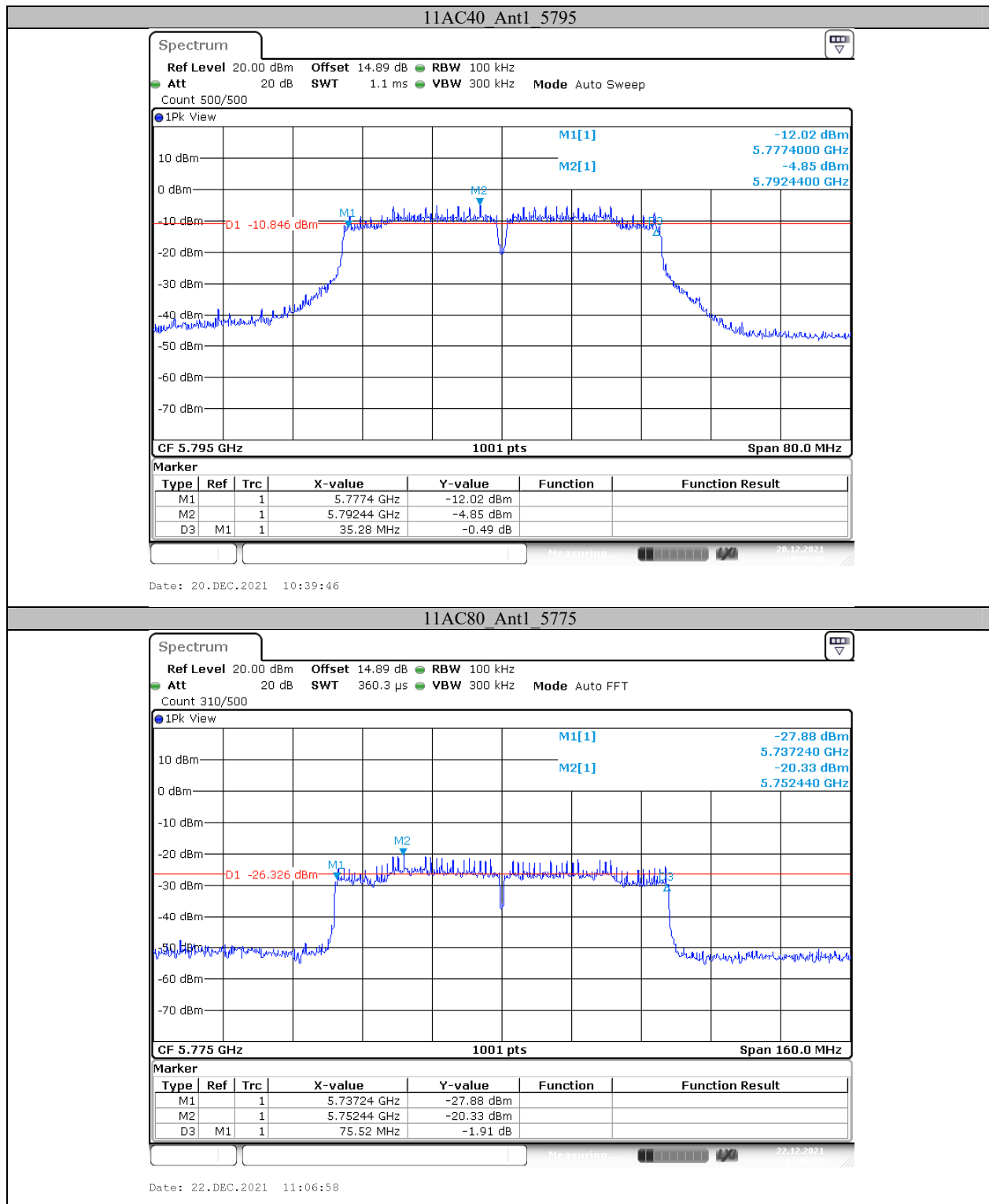












## Appendix B: Maximum conducted output power Test Result

5150 MHz – 5250 MHz

| TestMode   | Channel | Conducted Output<br>Average Power<br>(dBm) |         |       | Limit[dBm]   | Verdict |
|------------|---------|--------------------------------------------|---------|-------|--------------|---------|
|            |         | Chain 0                                    | Chain 1 | Total |              |         |
| 802.11a    | 5180    | 11.45                                      | 11.23   | 14.35 | $\leq 23.98$ | PASS    |
|            | 5200    | 11.46                                      | 11.45   | 14.47 | $\leq 23.98$ | PASS    |
|            | 5240    | 11.75                                      | 11.45   | 14.61 | $\leq 23.98$ | PASS    |
| 802.11n20  | 5180    | 11.75                                      | 11.46   | 14.62 | $\leq 23.98$ | PASS    |
|            | 5200    | 11.46                                      | 11.23   | 14.36 | $\leq 23.98$ | PASS    |
|            | 5240    | 11.76                                      | 11.75   | 14.77 | $\leq 23.98$ | PASS    |
| 802.11n40  | 5190    | 11.86                                      | 11.47   | 14.68 | $\leq 23.98$ | PASS    |
|            | 5230    | 14.46                                      | 14.26   | 17.37 | $\leq 23.98$ | PASS    |
| 802.11ac20 | 5180    | 11.47                                      | 11.56   | 14.53 | $\leq 23.98$ | PASS    |
|            | 5200    | 11.46                                      | 11.45   | 14.47 | $\leq 23.98$ | PASS    |
|            | 5240    | 11.23                                      | 11.75   | 14.51 | $\leq 23.98$ | PASS    |
| 802.11ac40 | 5190    | 11.23                                      | 11.26   | 14.26 | $\leq 23.98$ | PASS    |
|            | 5230    | 13.46                                      | 13.75   | 16.62 | $\leq 23.98$ | PASS    |
| 802.11ac80 | 5210    | 11.46                                      | 11.43   | 14.46 | $\leq 23.98$ | PASS    |

Note 1: The device is a master and client device, and the tighter limit applies in the table.

Note 2: The maximum antenna gain is 2.5 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0dB (i.e., no array gain) For  $N_{ANT} \leq 4$ ;

So: Directional gain=2.5dBi <6dBi



## 5725 – 5850 MHz

| TestMode   | Channel | Conducted Output<br>Average Power<br>(dBm) |         |       | Limit[dBm] | Verdict |
|------------|---------|--------------------------------------------|---------|-------|------------|---------|
|            |         | Chain 0                                    | Chain 1 | Total |            |         |
| 802.11a    | 5745    | 11.13                                      | 11.56   | 14.36 | <=30       | PASS    |
|            | 5785    | 11.26                                      | 11.46   | 14.37 | <=30       | PASS    |
|            | 5825    | 11.45                                      | 11.47   | 14.47 | <=30       | PASS    |
| 802.11n20  | 5745    | 11.23                                      | 11.42   | 14.34 | <=30       | PASS    |
|            | 5785    | 11.12                                      | 10.25   | 13.72 | <=30       | PASS    |
|            | 5825    | 11.20                                      | 11.23   | 14.22 | <=30       | PASS    |
| 802.11n40  | 5755    | 11.23                                      | 11.75   | 14.51 | <=30       | PASS    |
|            | 5795    | 11.45                                      | 11.75   | 14.61 | <=30       | PASS    |
| 802.11ac20 | 5745    | 11.46                                      | 11.35   | 14.42 | <=30       | PASS    |
|            | 5785    | 11.76                                      | 11.56   | 14.67 | <=30       | PASS    |
|            | 5825    | 11.23                                      | 11.47   | 14.36 | <=30       | PASS    |
| 802.11ac40 | 5755    | 11.46                                      | 11.13   | 14.31 | <=30       | PASS    |
|            | 5795    | 11.75                                      | 11.12   | 14.46 | <=30       | PASS    |
| 802.11ac80 | 5775    | 11.35                                      | 11.43   | 14.40 | <=30       | PASS    |

Note 1: The device is a master and client device, and the tighter limit applies in the table.

Note 2: The maximum antenna gain is 2.5 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0dB (i.e., no array gain) For  $N_{ANT} \leq 4$ ;

So: Directional gain=2.5dBi <6dBi

**Appendix C: Maximum power spectral density****Test Result**

5150 – 5250 MHz

| TestMode | Frequency (MHz) | Power Spectral Density (dBm/MHz) |         |       | Limit[dBm/MHz] | Verdict |
|----------|-----------------|----------------------------------|---------|-------|----------------|---------|
|          |                 | Chain 0                          | Chain 1 | Total |                |         |
| 11A      | 5180            | 5.55                             | 4.32    | 7.99  | $\leq 11$      | PASS    |
|          | 5200            | 4.95                             | 3.91    | 7.47  | $\leq 11$      | PASS    |
|          | 5240            | 4.99                             | 3.83    | 7.46  | $\leq 11$      | PASS    |
| 11N20    | 5180            | 3.17                             | 2.58    | 5.90  | $\leq 11$      | PASS    |
|          | 5200            | 3.17                             | 2.89    | 6.04  | $\leq 11$      | PASS    |
|          | 5240            | 3.25                             | 2.09    | 5.72  | $\leq 11$      | PASS    |
| 11N40    | 5190            | -1.11                            | 0.95    | 3.05  | $\leq 11$      | PASS    |
|          | 5230            | 3.18                             | 4.23    | 6.75  | $\leq 11$      | PASS    |
| 11AC20   | 5180            | 2.61                             | 6.23    | 7.80  | $\leq 11$      | PASS    |
|          | 5200            | 3.44                             | 5.32    | 7.49  | $\leq 11$      | PASS    |
|          | 5240            | 3.45                             | 5.27    | 7.46  | $\leq 11$      | PASS    |
| 11AC40   | 5190            | -1.46                            | 0.23    | 2.48  | $\leq 11$      | PASS    |
|          | 5230            | 1.90                             | 3.11    | 5.56  | $\leq 11$      | PASS    |
| 11AC80   | 5210            | -2.3                             | -0.95   | 1.44  | $\leq 11$      | PASS    |

Note 1: The Duty Cycle Factor is compensated in the graph.

Note 2: The maximum antenna gain is 2.5 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices

$$\text{Array Gain} = 10 \log(N_{\text{ANT}}/N_{\text{ss}})\text{dB}$$

$$\text{So: Directional gain} = G_{\text{ANT}} + \text{Array Gain} = 2.5 + 10 \log(2/1) = 5.51 \text{ dBi}$$

5725 – 5850 MHz

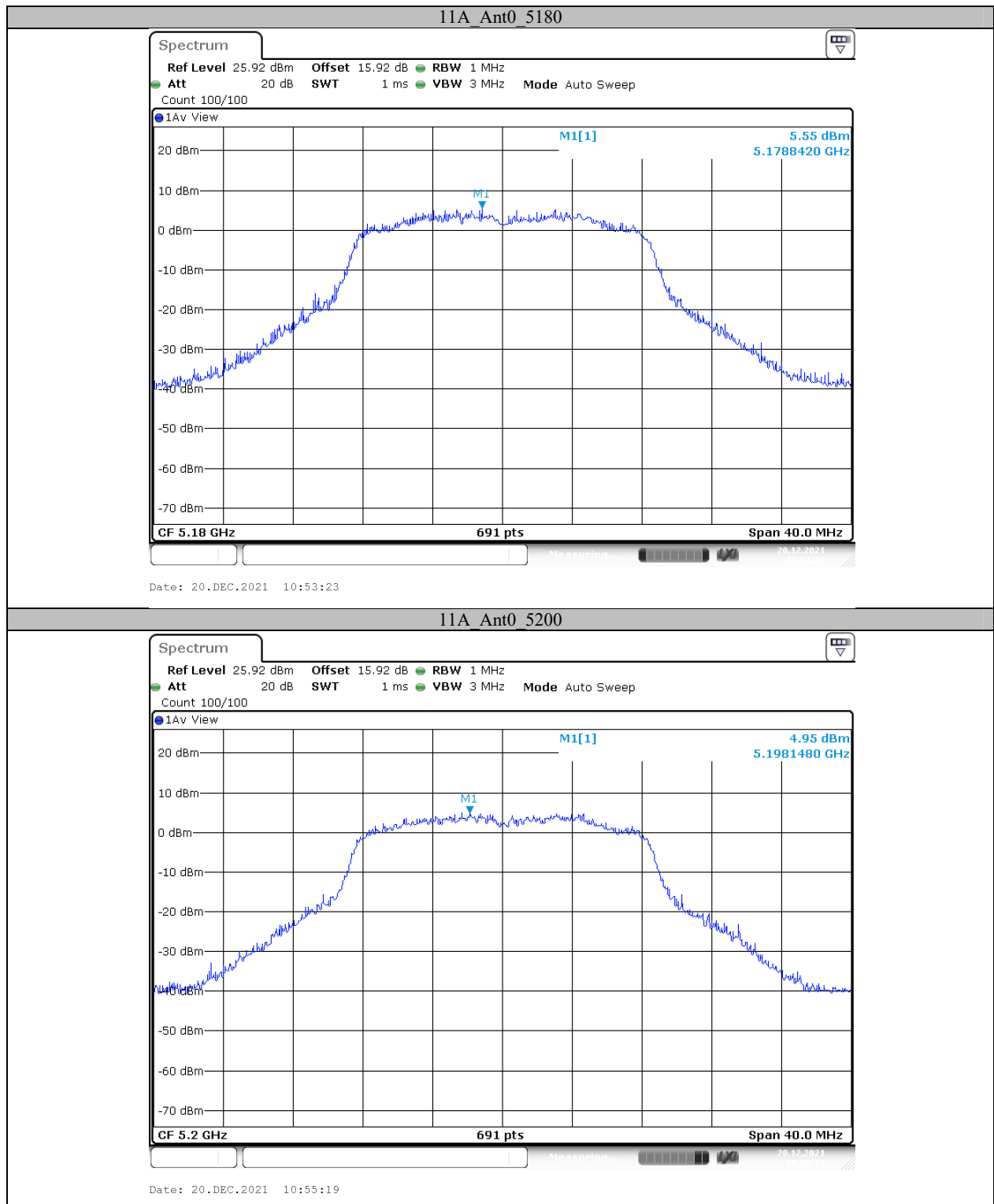
| TestMode | Frequency<br>(MHz) | Power Spectral Density<br>(dBm/500kHz) |         |       | Limit[dBm/500kHz] | Verdict |
|----------|--------------------|----------------------------------------|---------|-------|-------------------|---------|
|          |                    | Chain 0                                | Chain 1 | Total |                   |         |
| 11A      | 5745               | 3.94                                   | 3.48    | 6.73  | <=30              | PASS    |
|          | 5785               | 3.94                                   | 2.72    | 6.38  | <=30              | PASS    |
|          | 5825               | 5.17                                   | 3.96    | 7.62  | <=30              | PASS    |
| 11N20    | 5745               | 2.04                                   | 2.04    | 5.05  | <=30              | PASS    |
|          | 5785               | 1.81                                   | 0.67    | 4.29  | <=30              | PASS    |
|          | 5825               | 3.13                                   | 3.60    | 6.38  | <=30              | PASS    |
| 11N40    | 5755               | -0.54                                  | 1.54    | 3.63  | <=30              | PASS    |
|          | 5795               | -1.94                                  | 1.4     | 3.05  | <=30              | PASS    |
| 11AC20   | 5745               | 1.97                                   | 3.61    | 5.88  | <=30              | PASS    |
|          | 5785               | 2.06                                   | 3.34    | 5.76  | <=30              | PASS    |
|          | 5825               | 3.30                                   | 4.57    | 6.99  | <=30              | PASS    |
| 11AC40   | 5755               | -0.41                                  | 0.41    | 3.03  | <=30              | PASS    |
|          | 5795               | -0.41                                  | 0.05    | 2.84  | <=30              | PASS    |
| 11AC80   | 5775               | -3.40                                  | -1.62   | 0.59  | <=30              | PASS    |

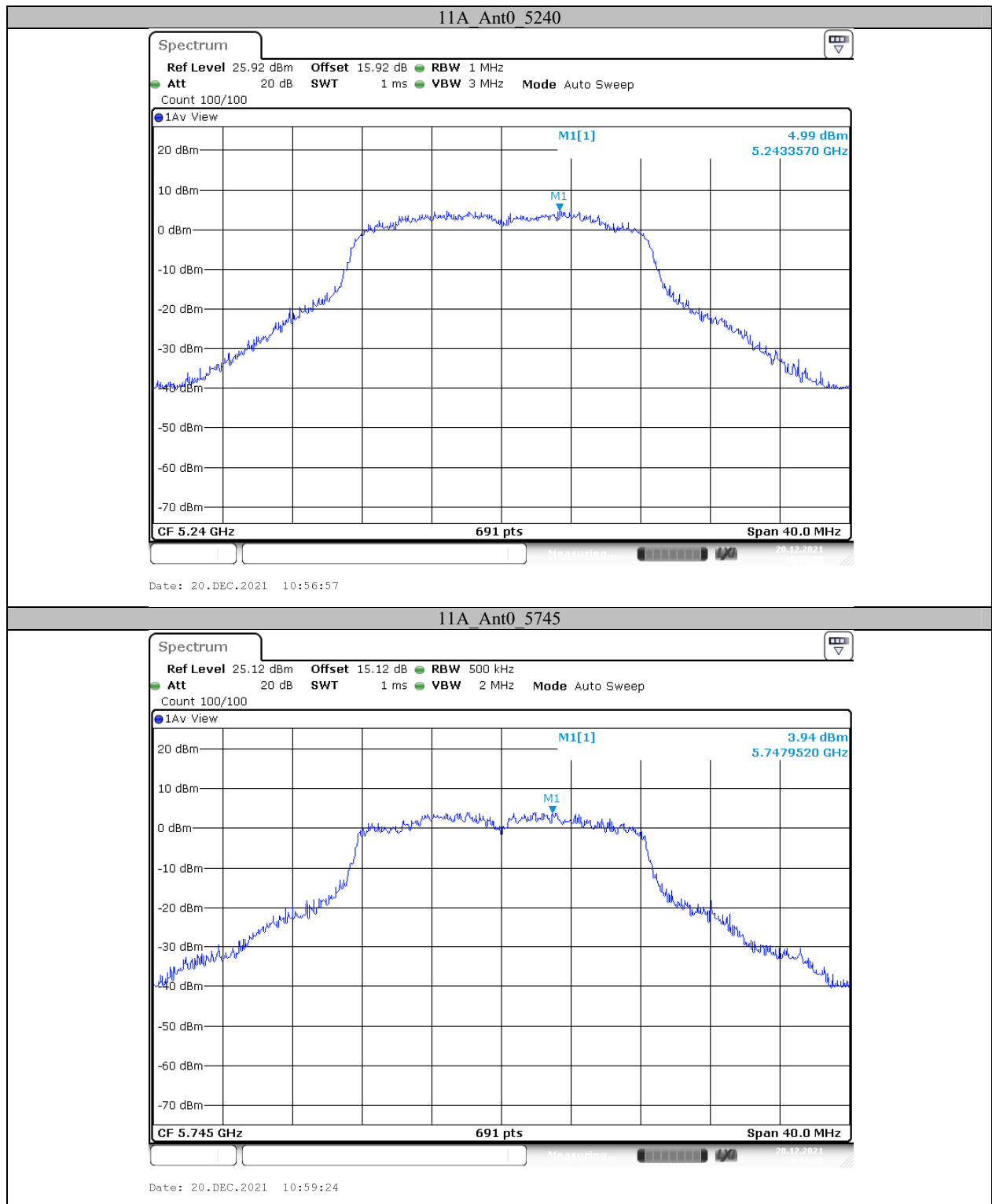
Note 1: The Duty Cycle Factor is compensated in the graph.

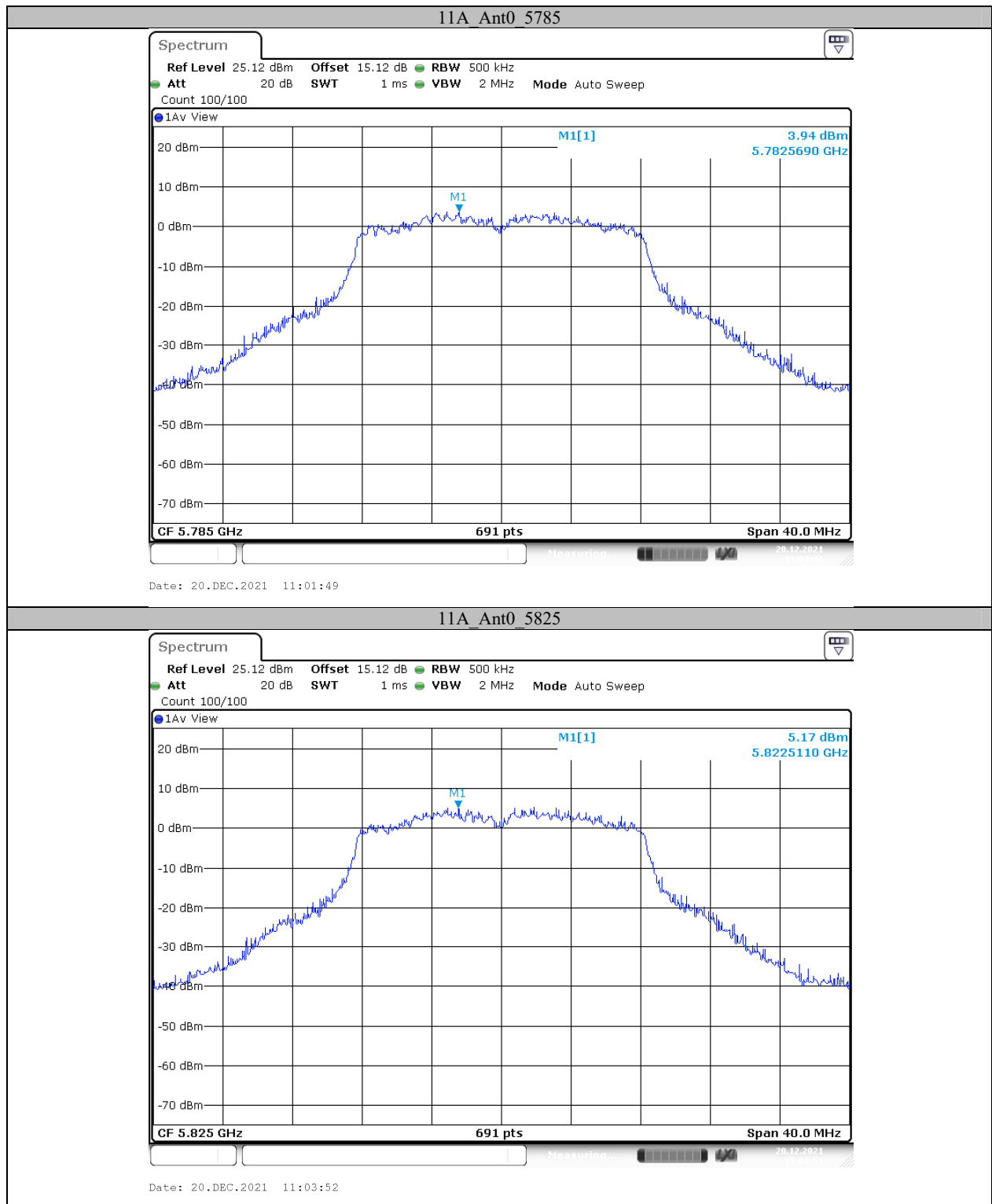
Note 2: The maximum antenna gain is 2.5 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices

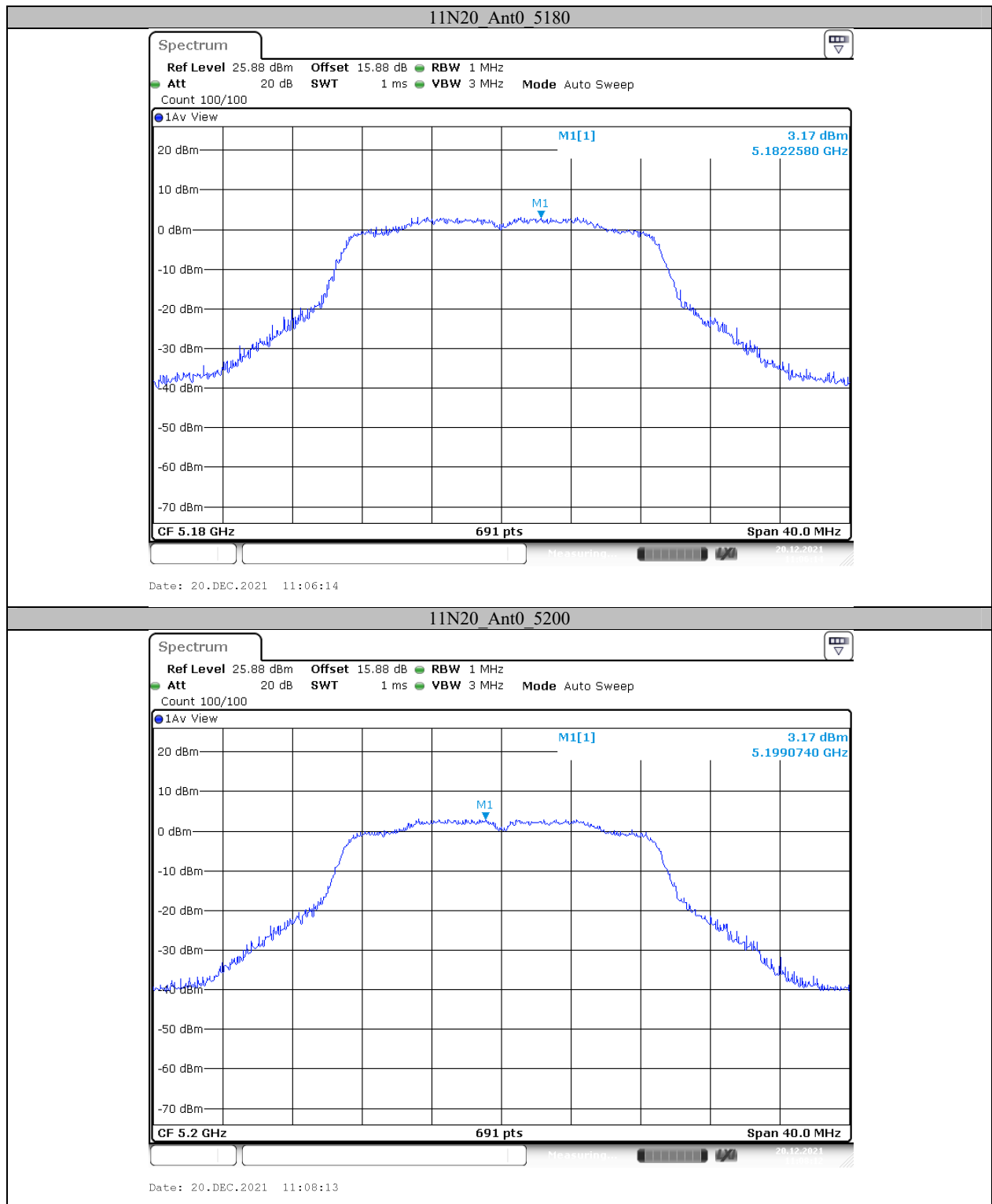
$$\text{Array Gain} = 10 \log(N_{\text{ANT}}/N_{\text{ss}})\text{dB}$$

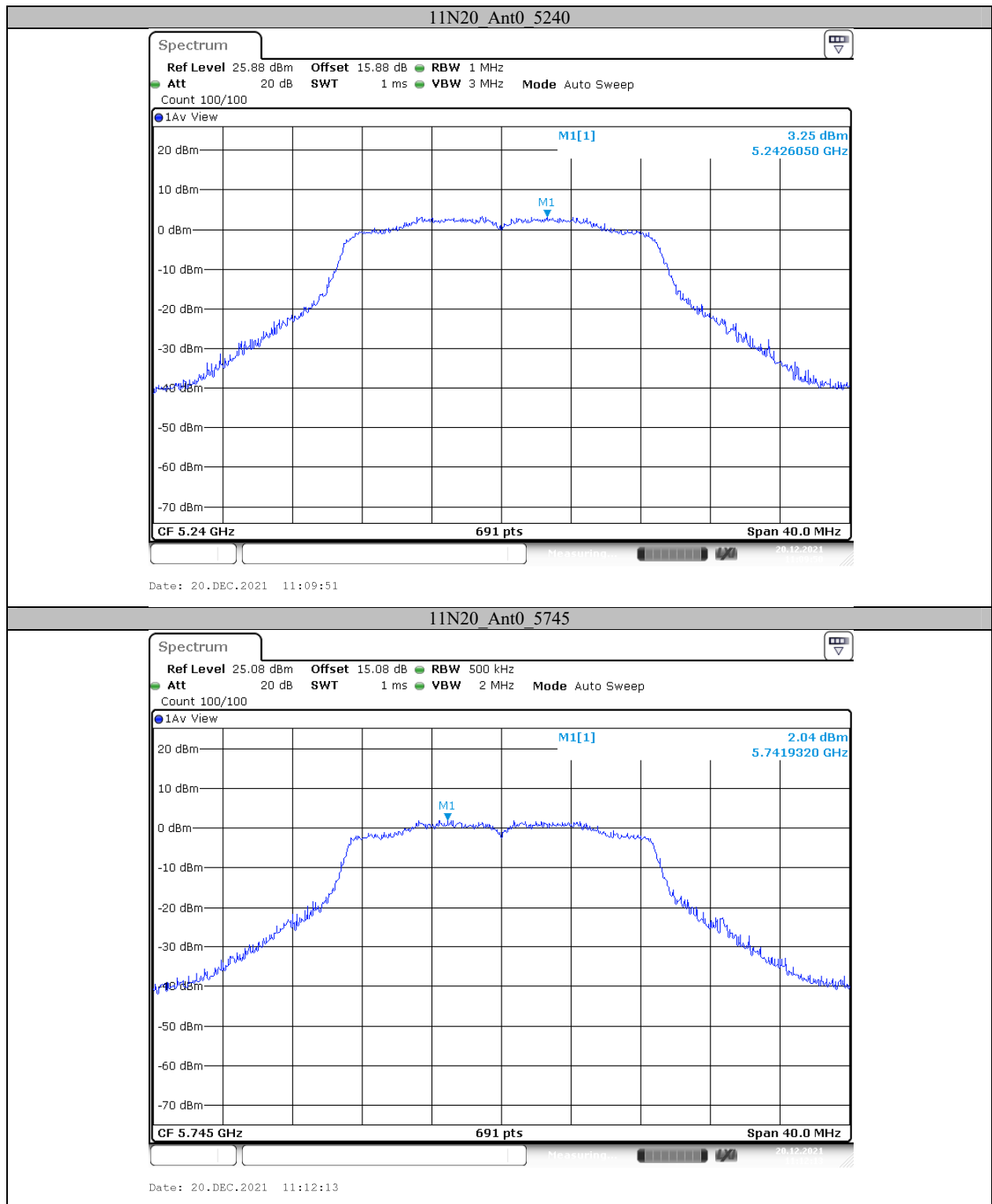
$$\text{So: Directional gain} = G_{\text{ANT}} + \text{Array Gain} = 2.5 + 10 \log(2/1) = 5.51 \text{dBi}$$

**Test Graphs**

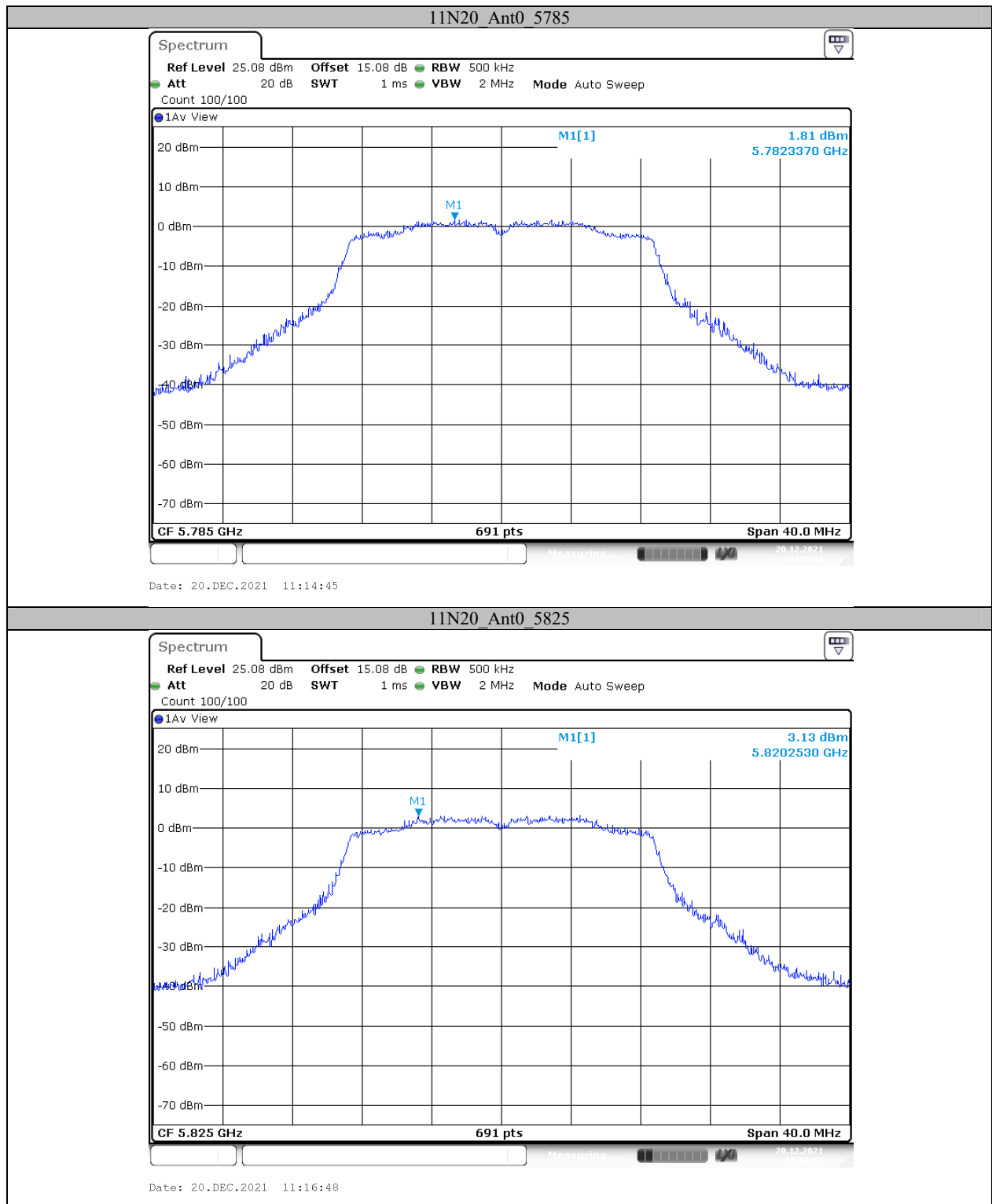


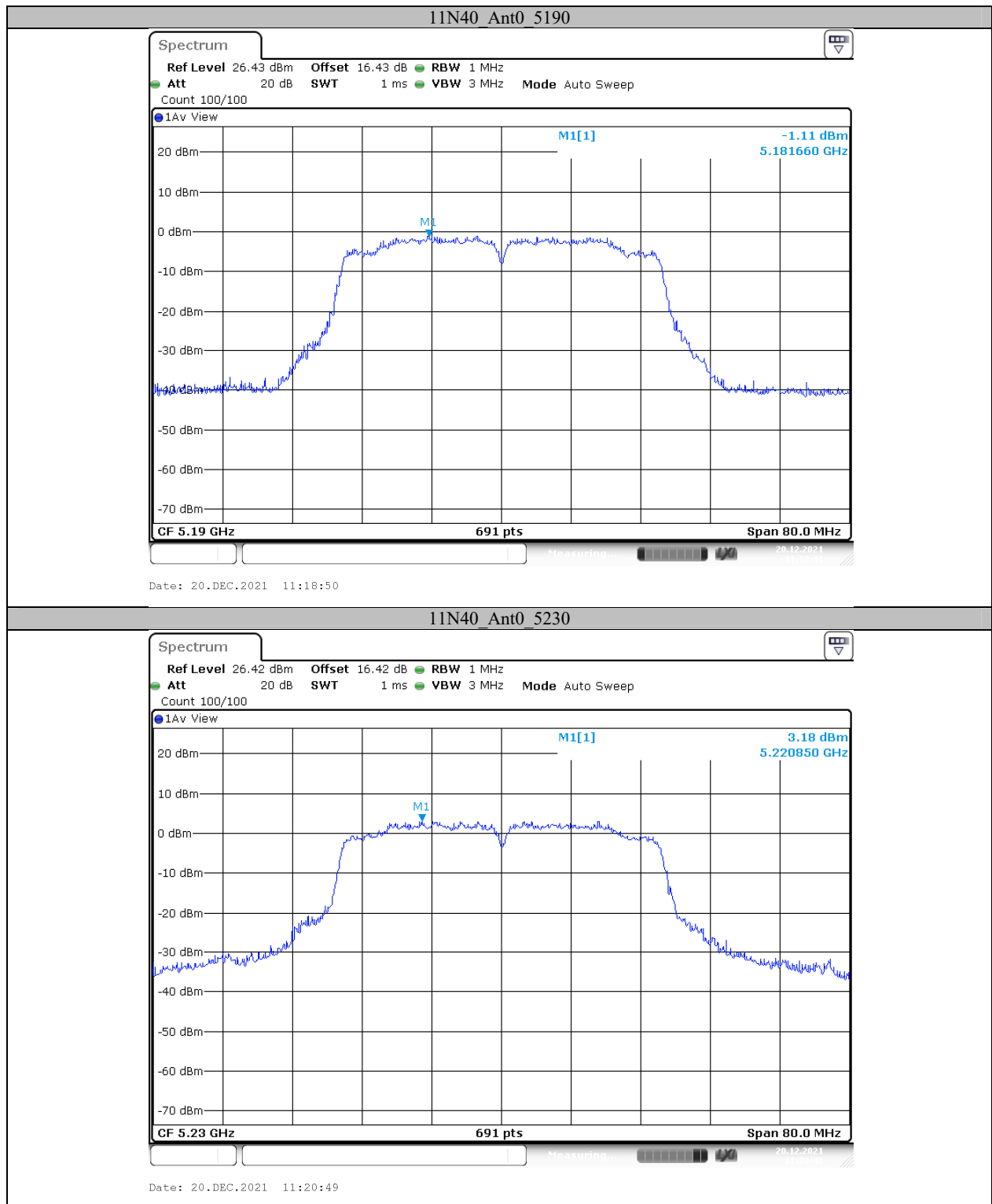


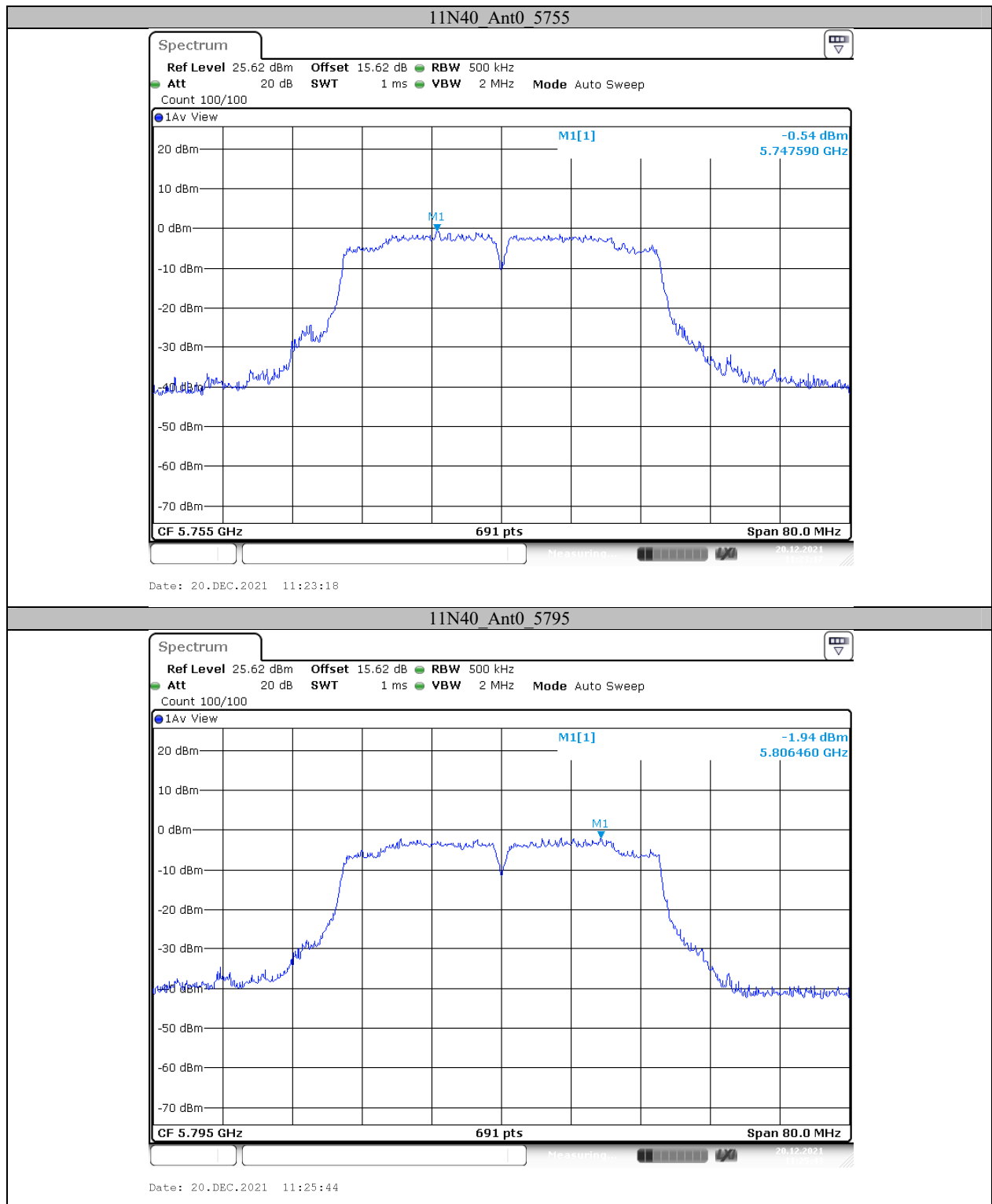


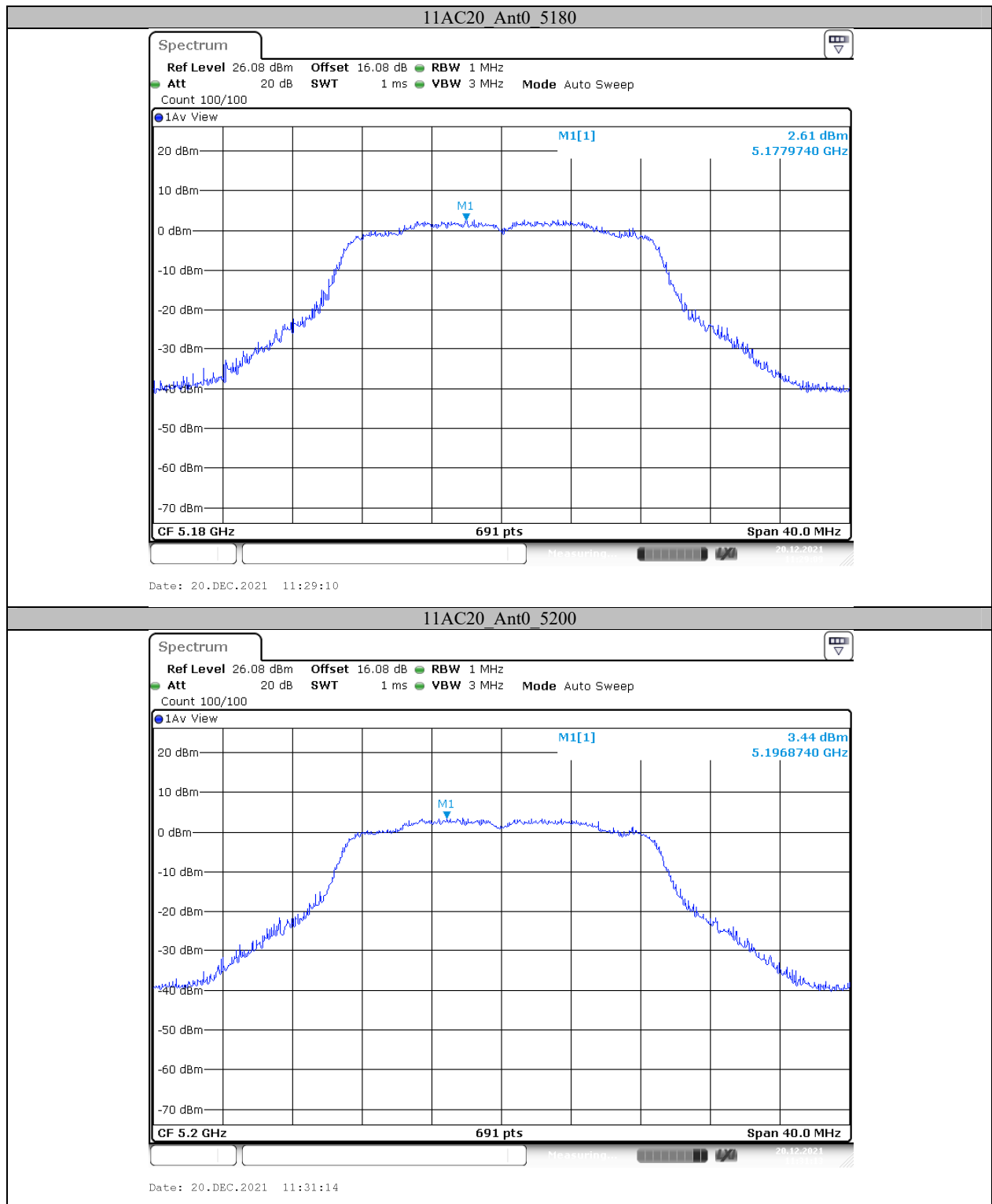


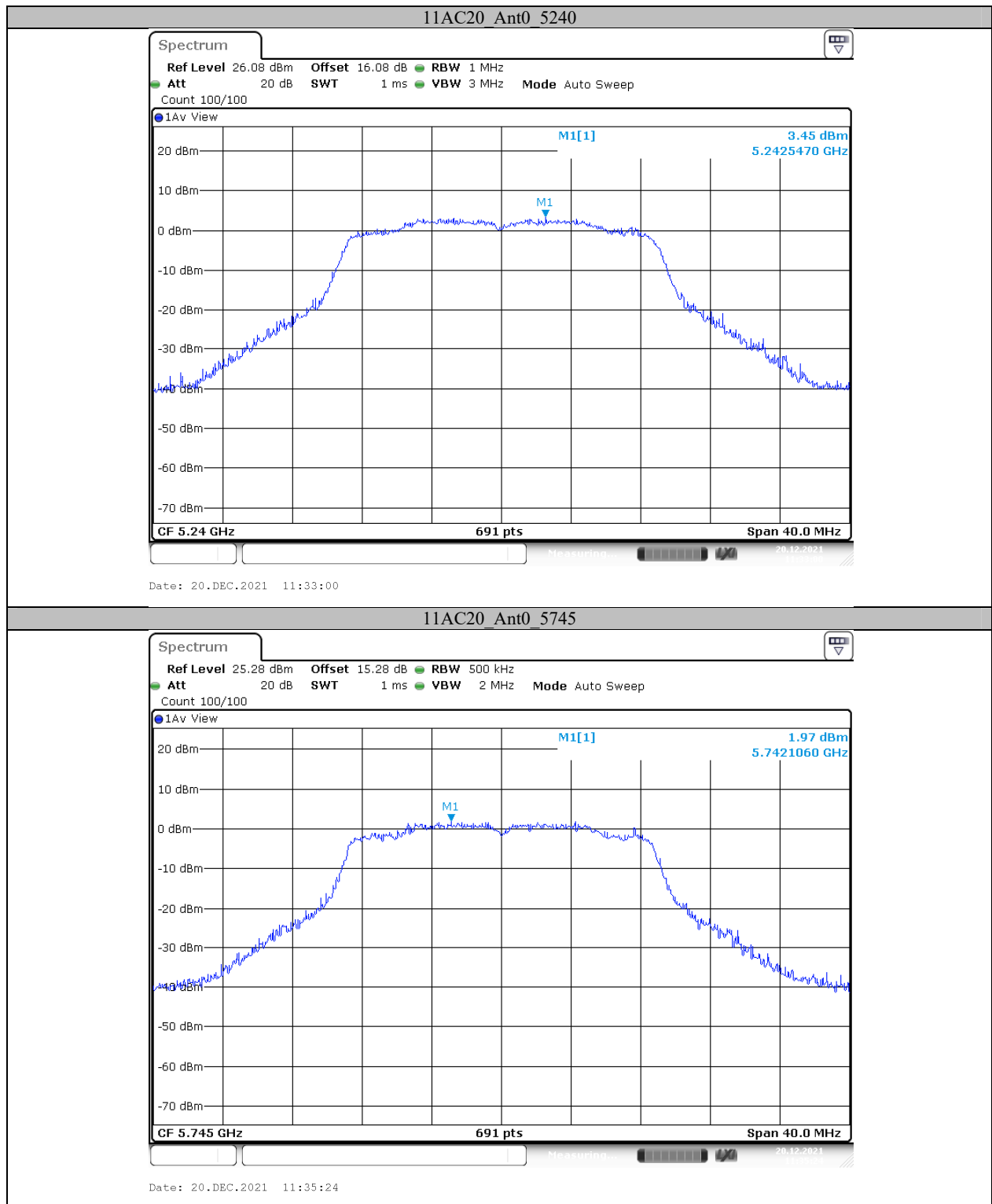


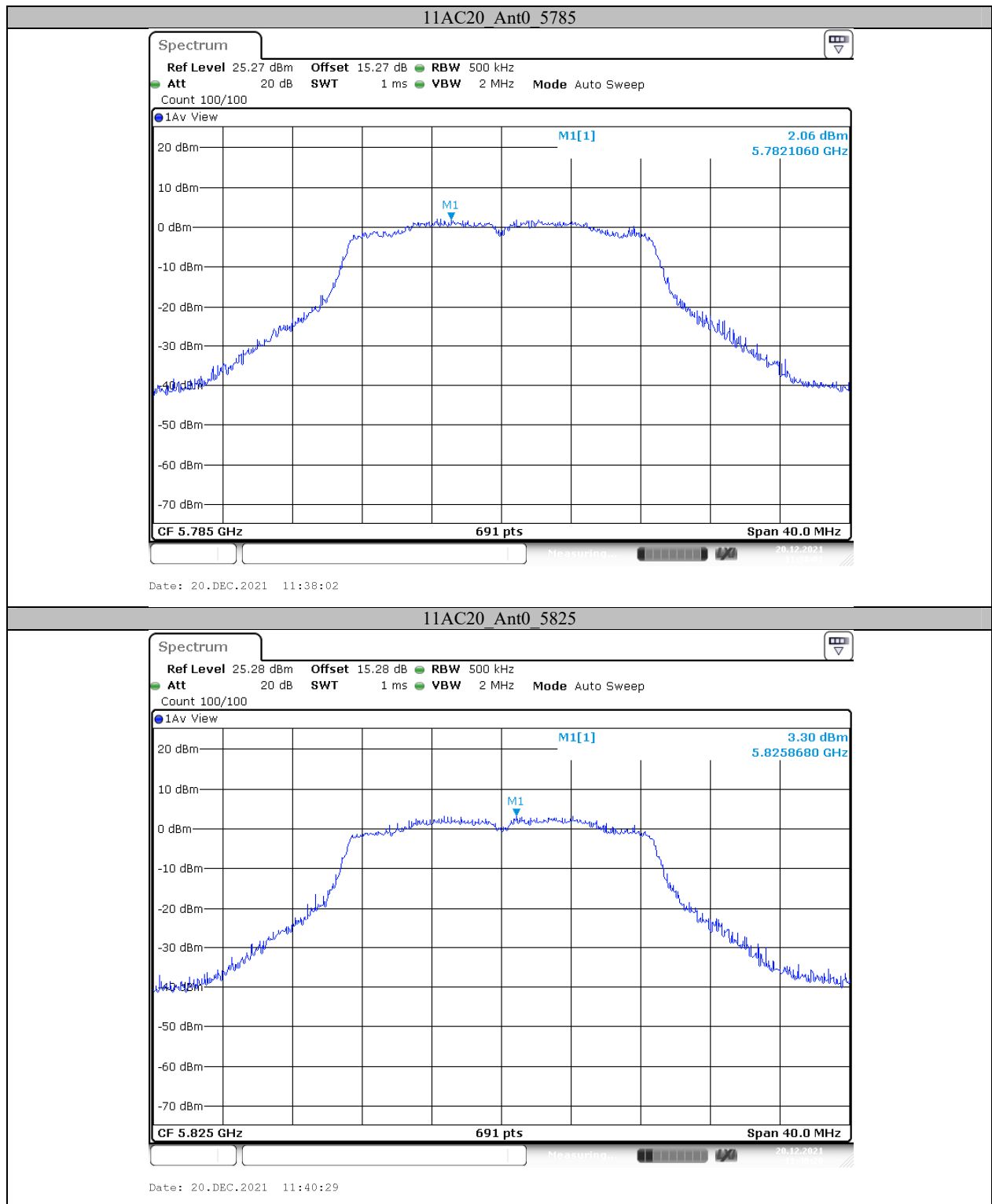


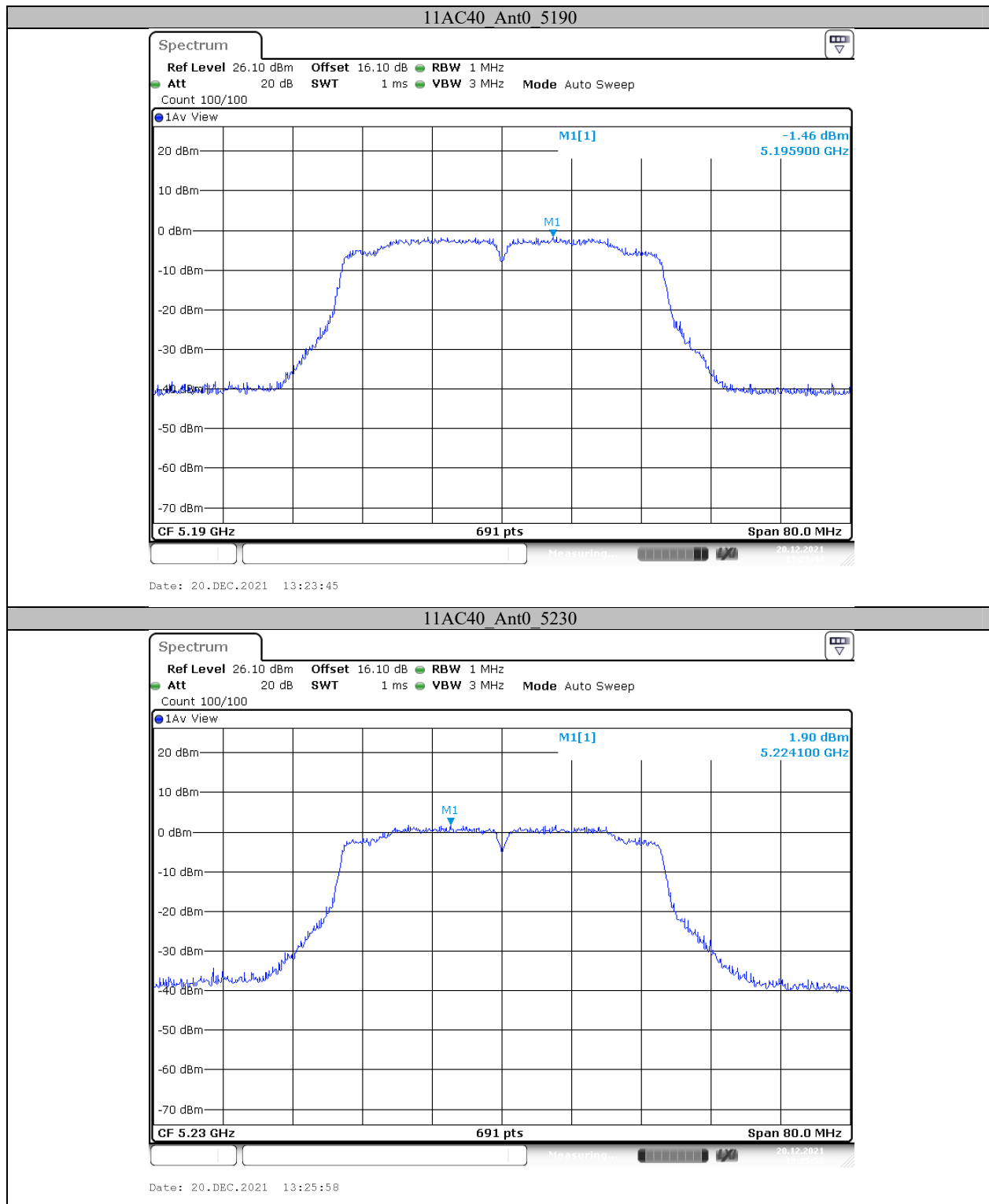


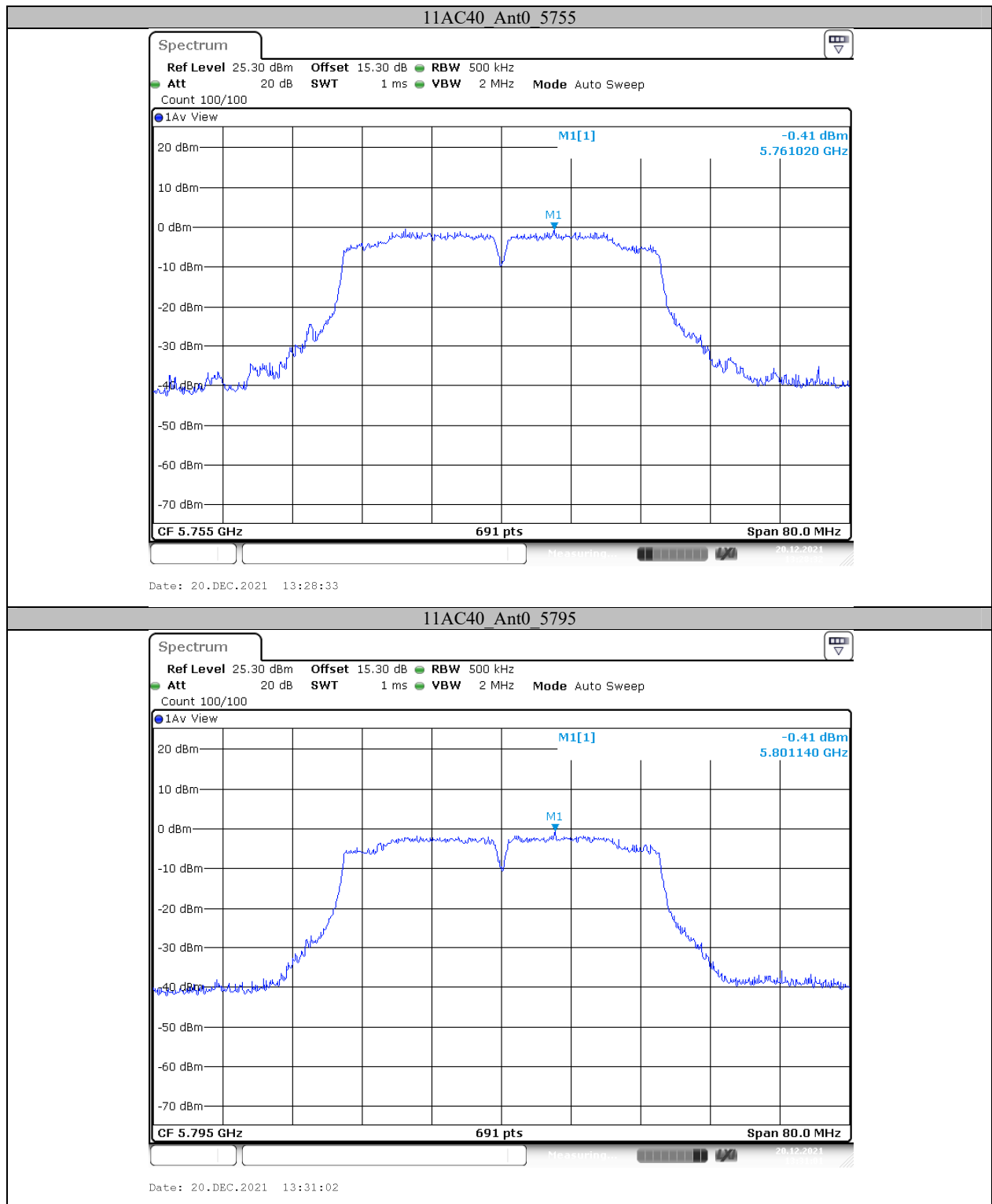




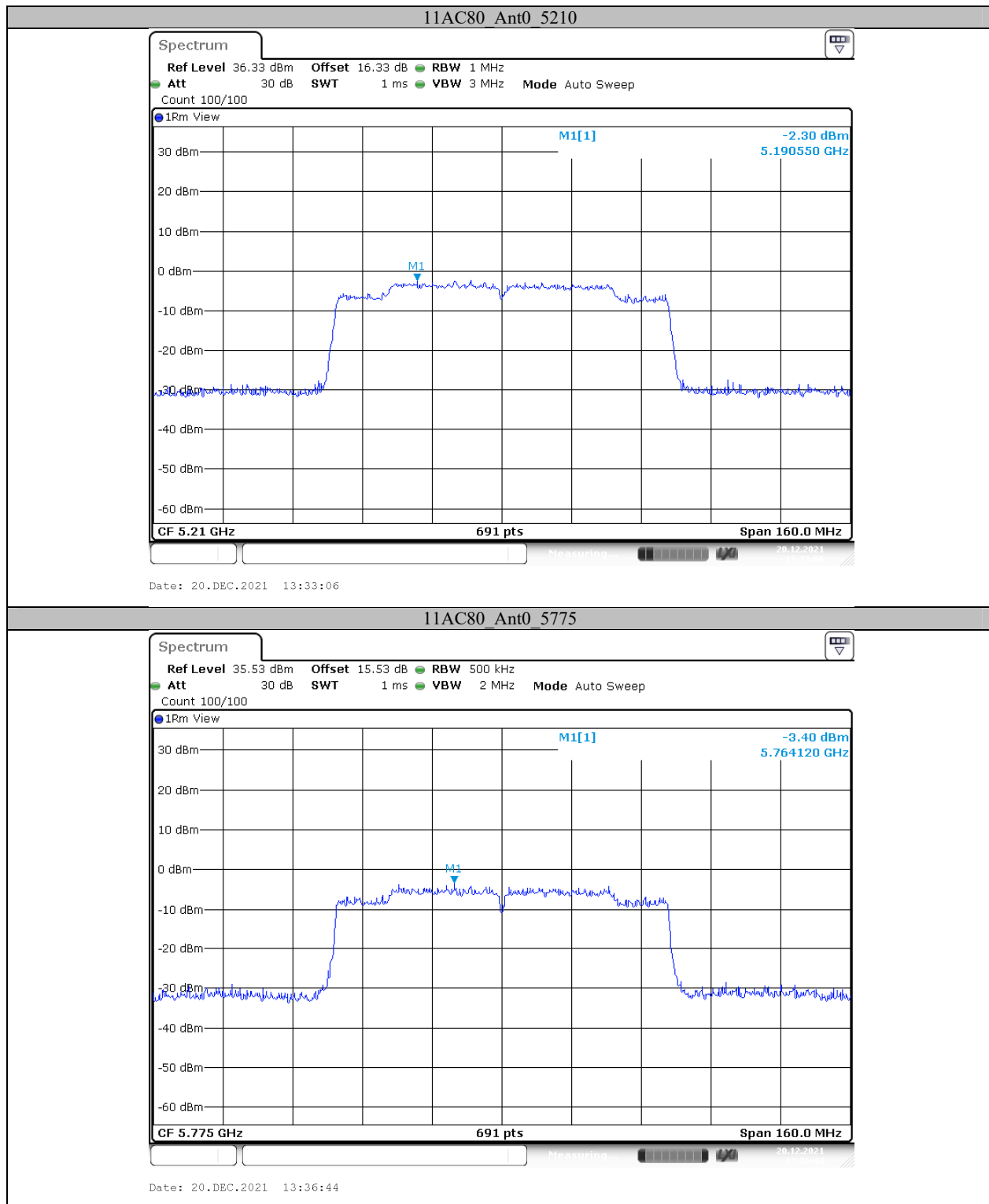


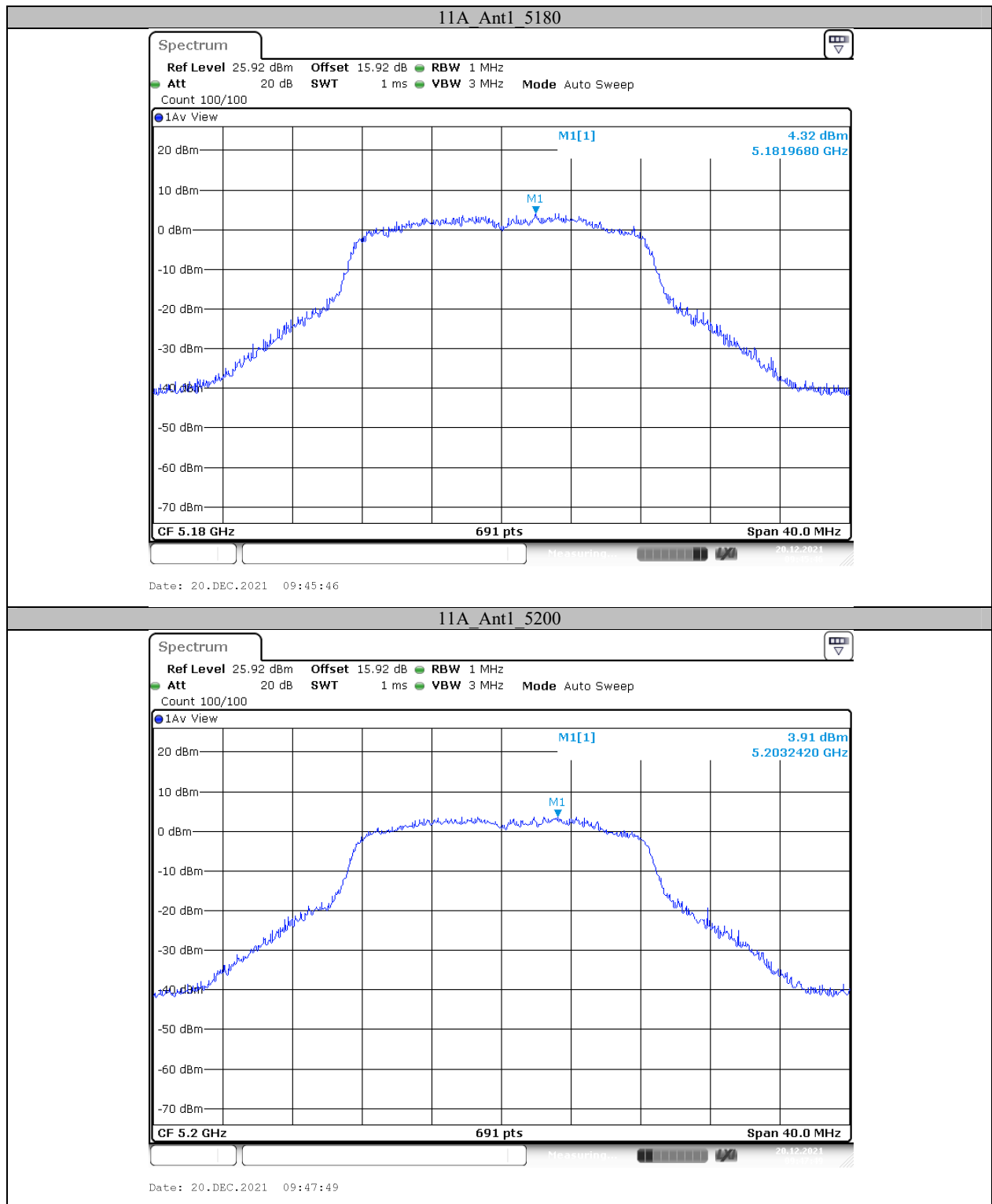


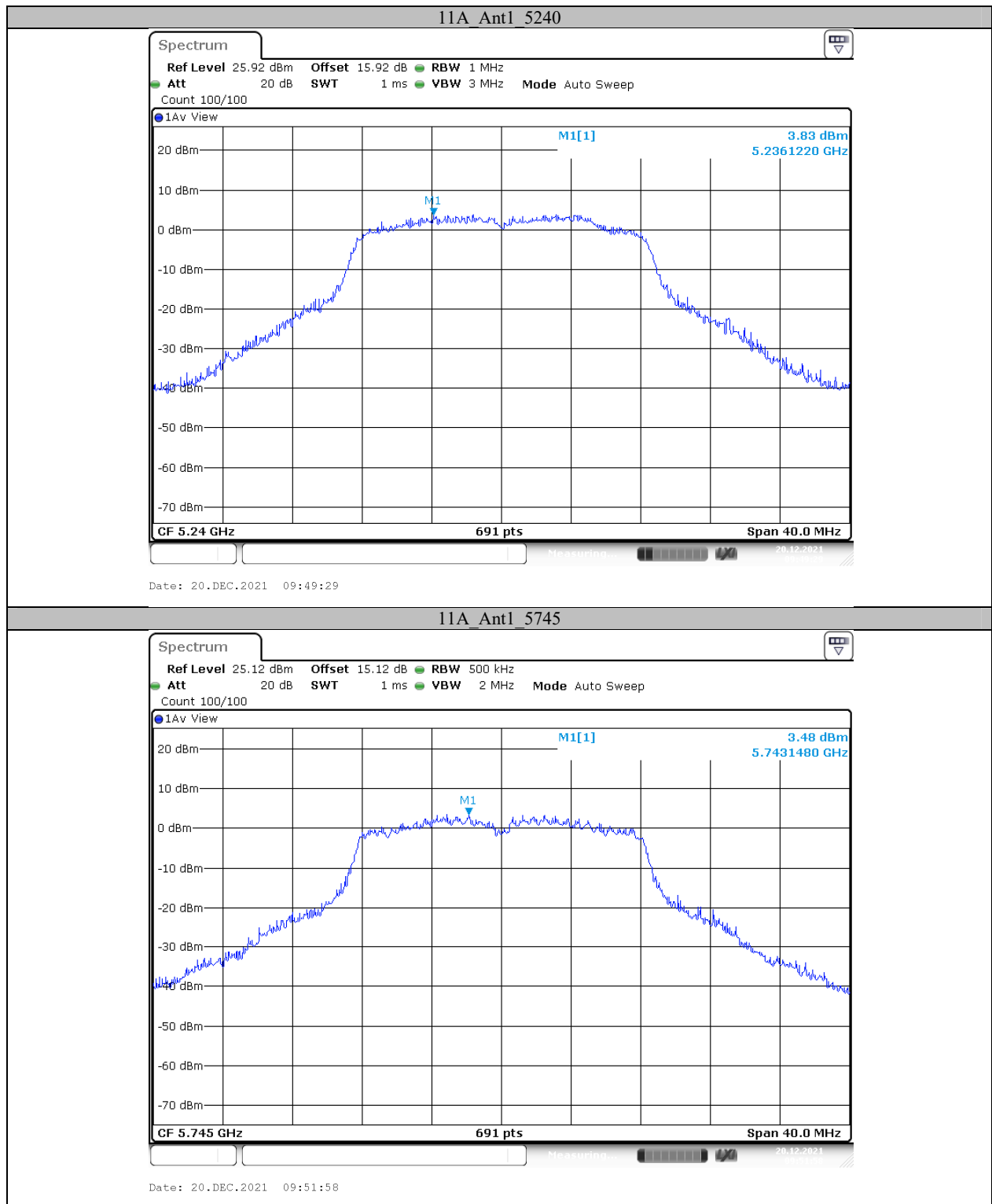


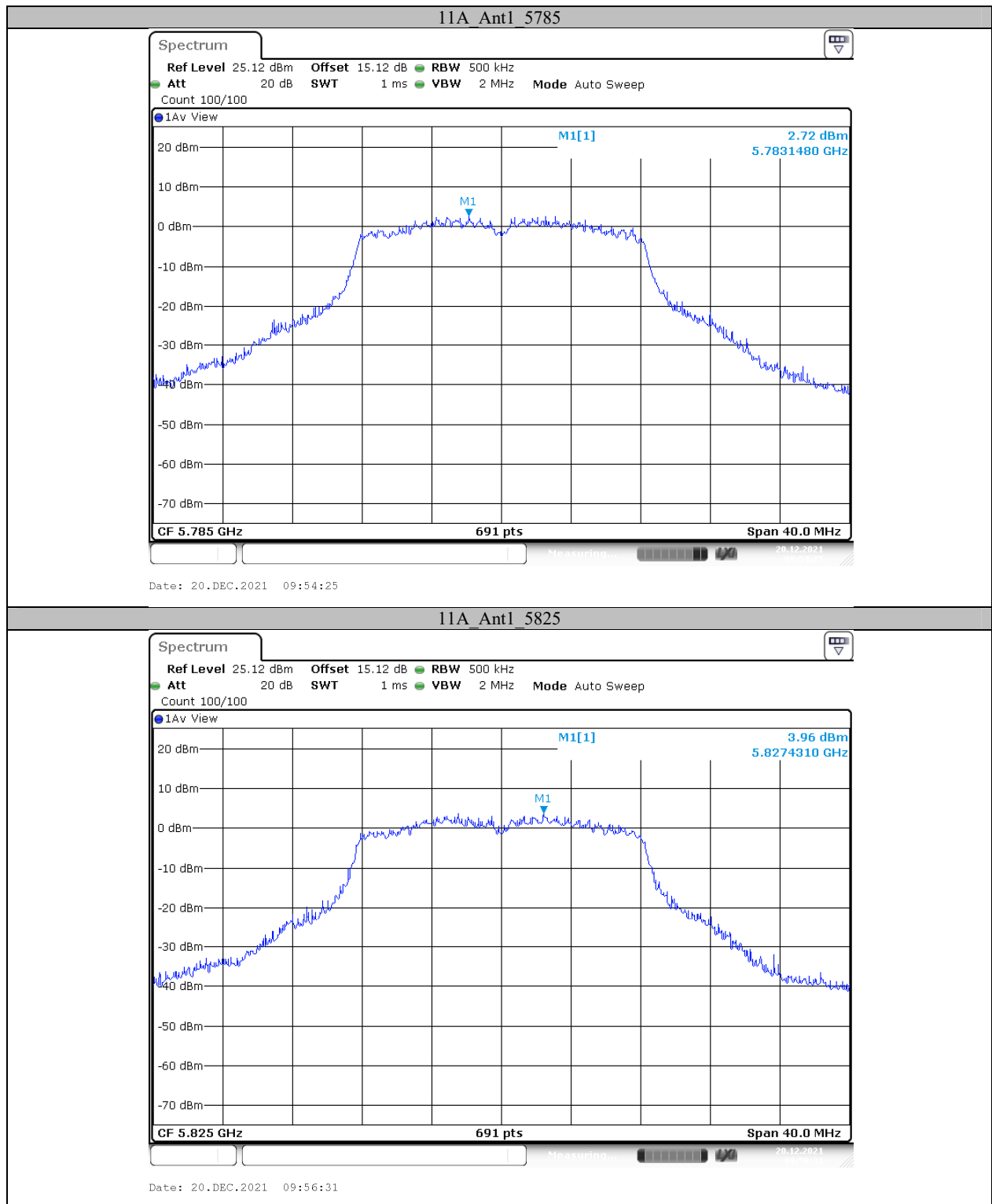


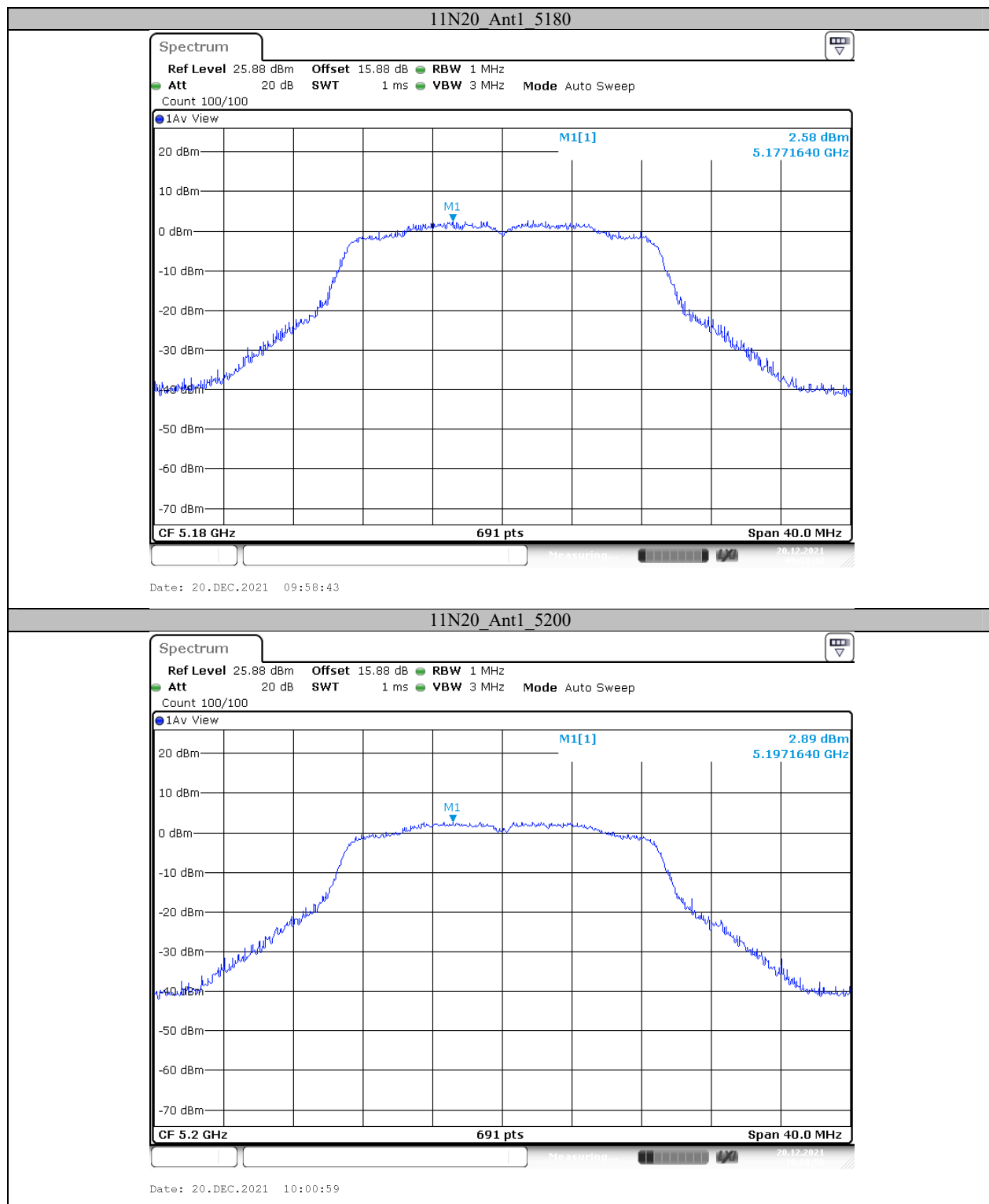


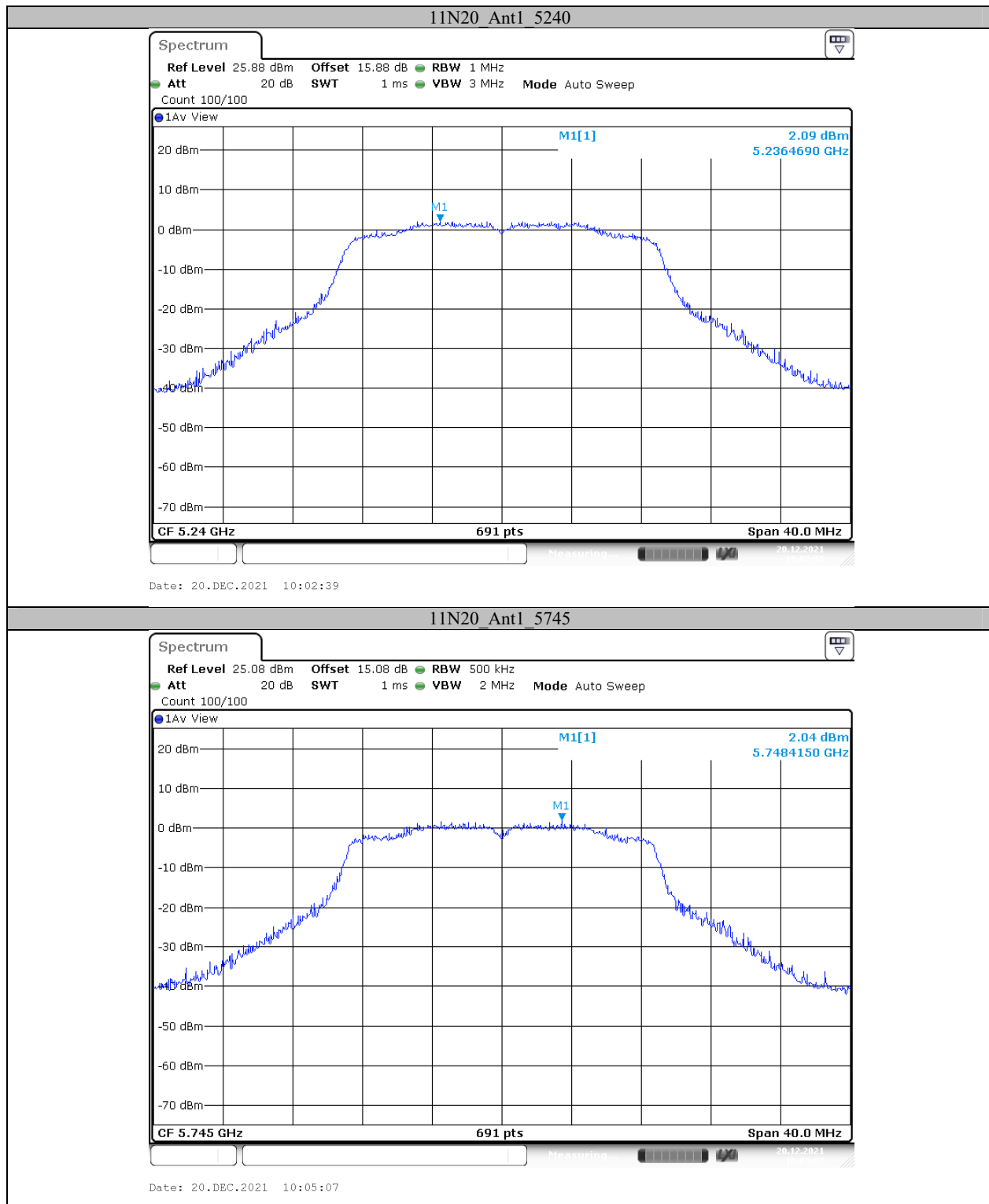


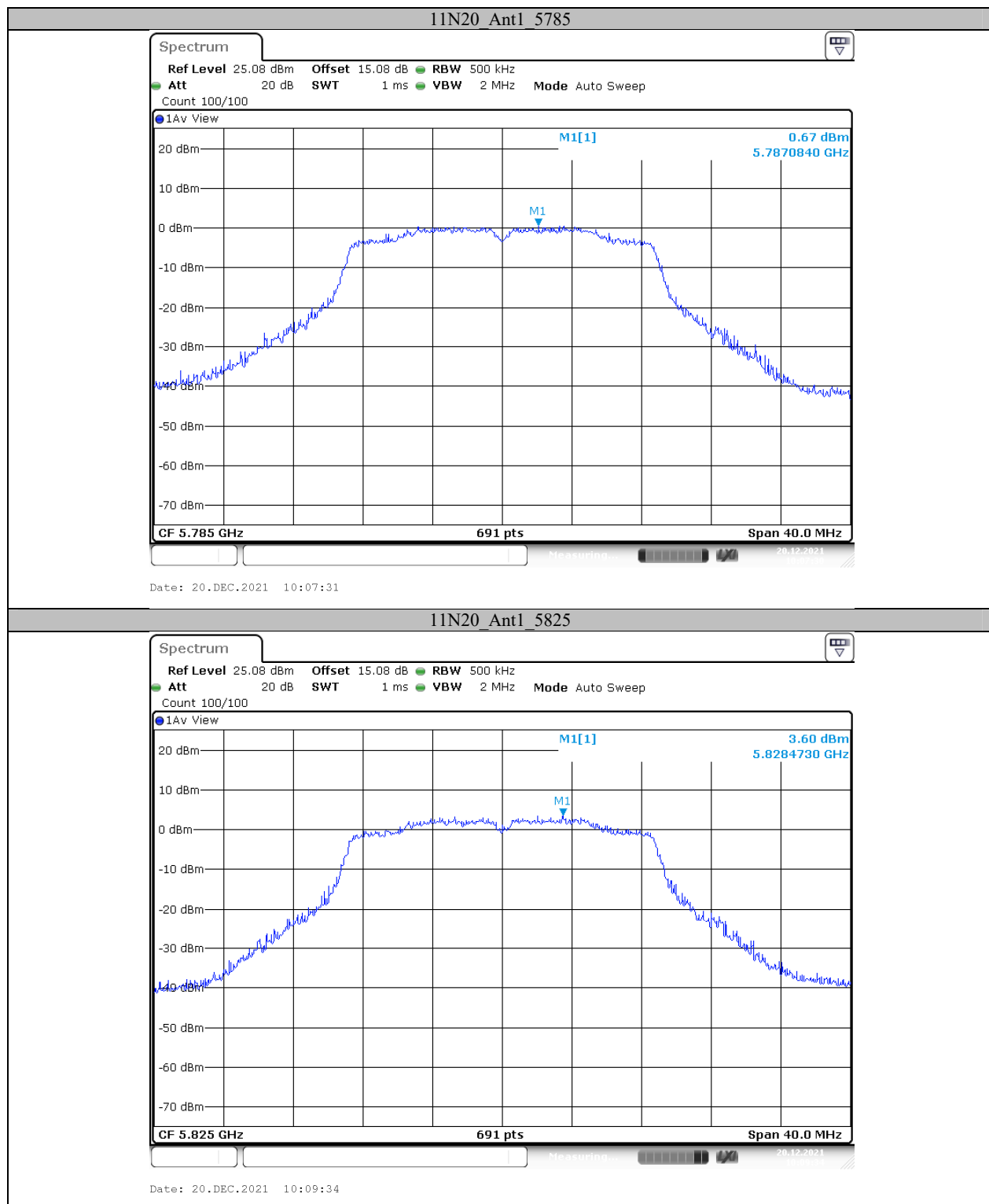


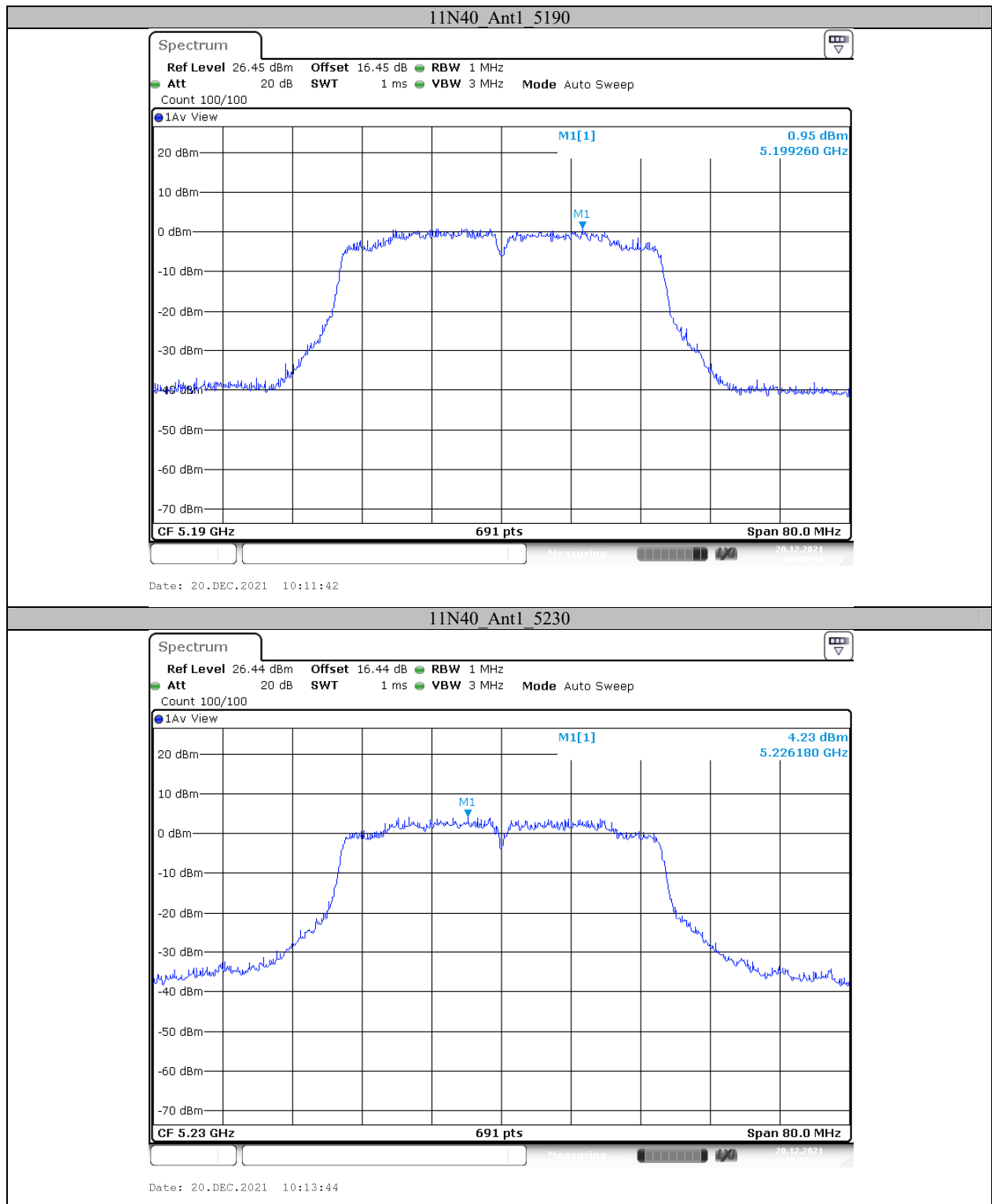




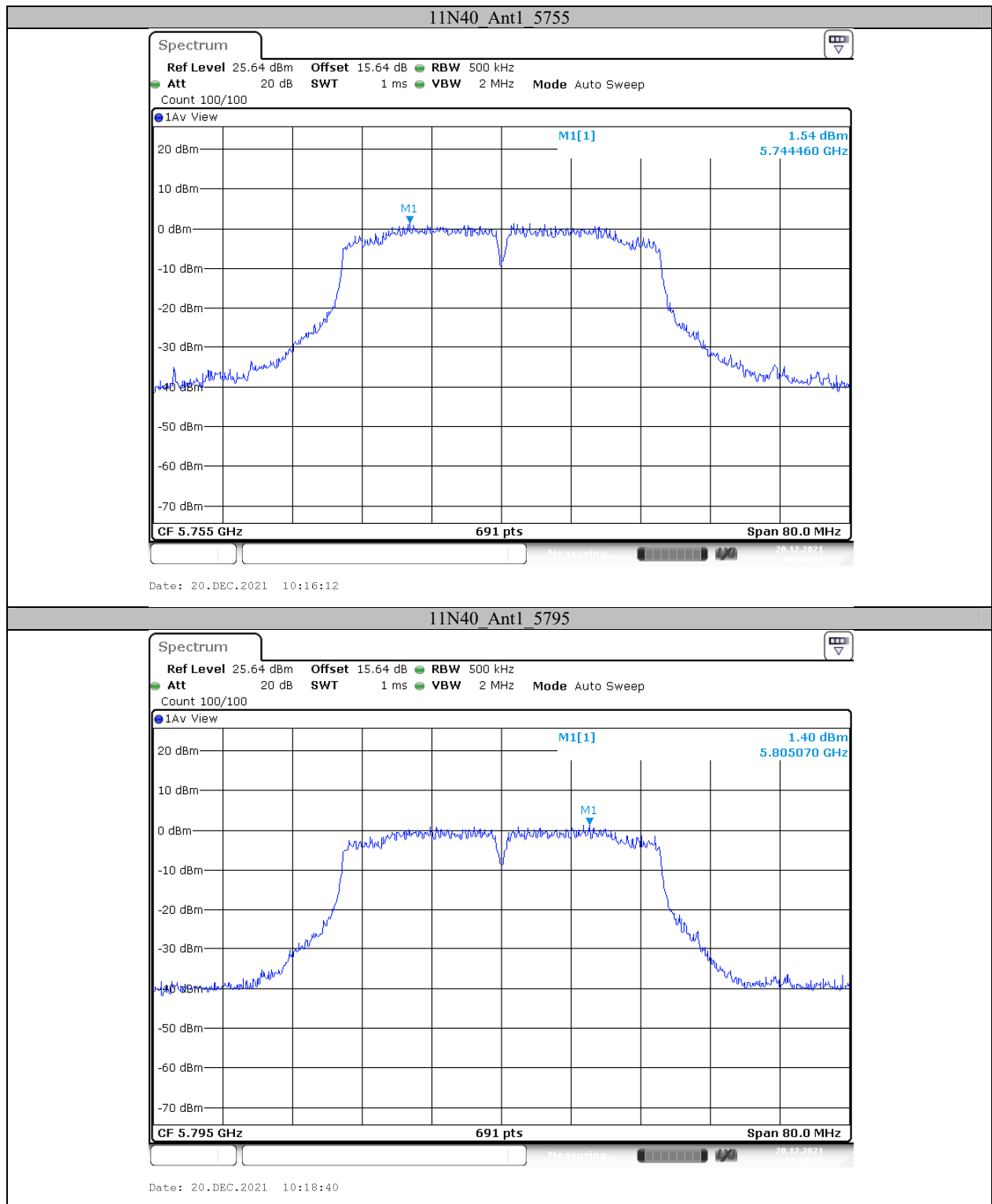


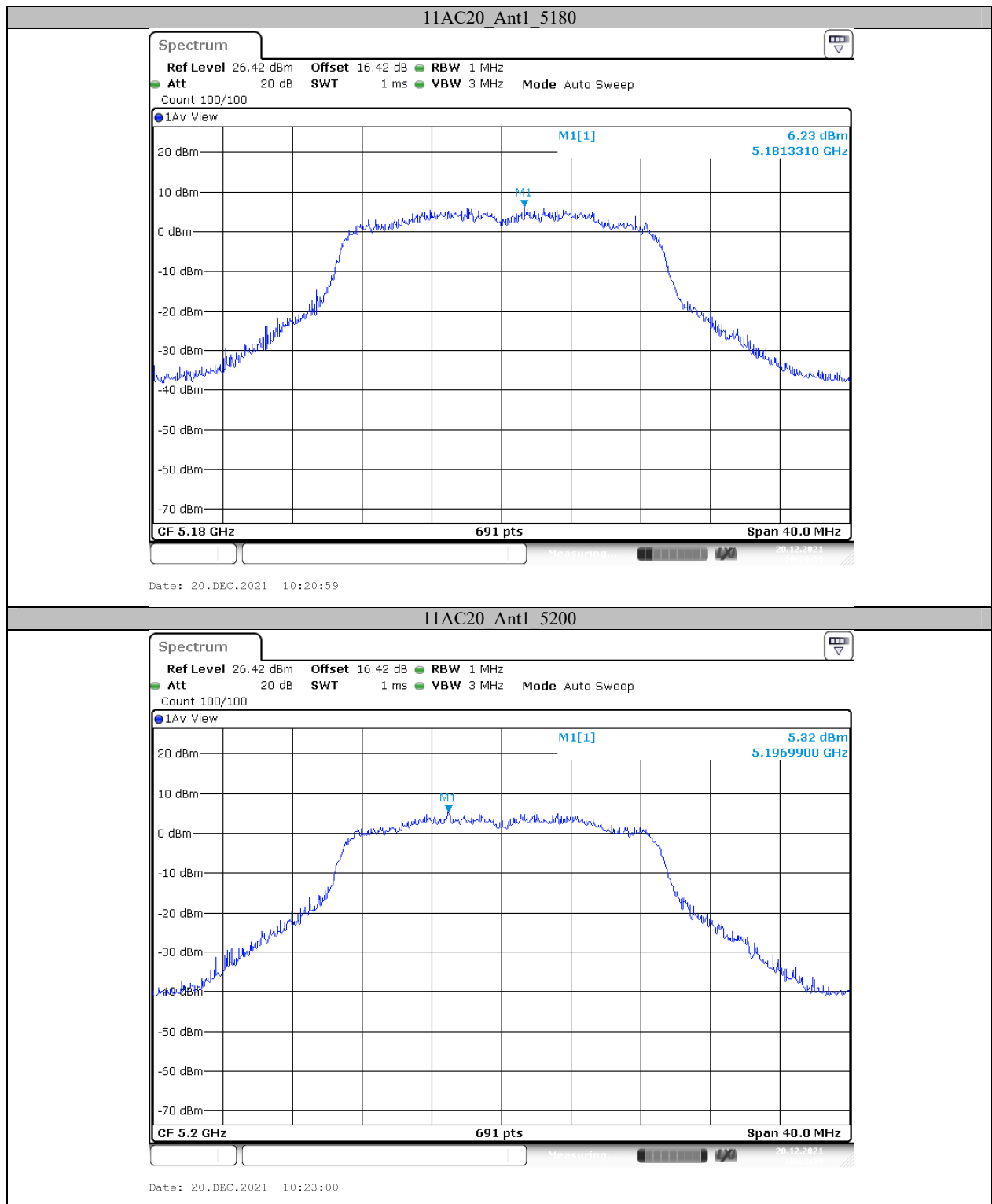


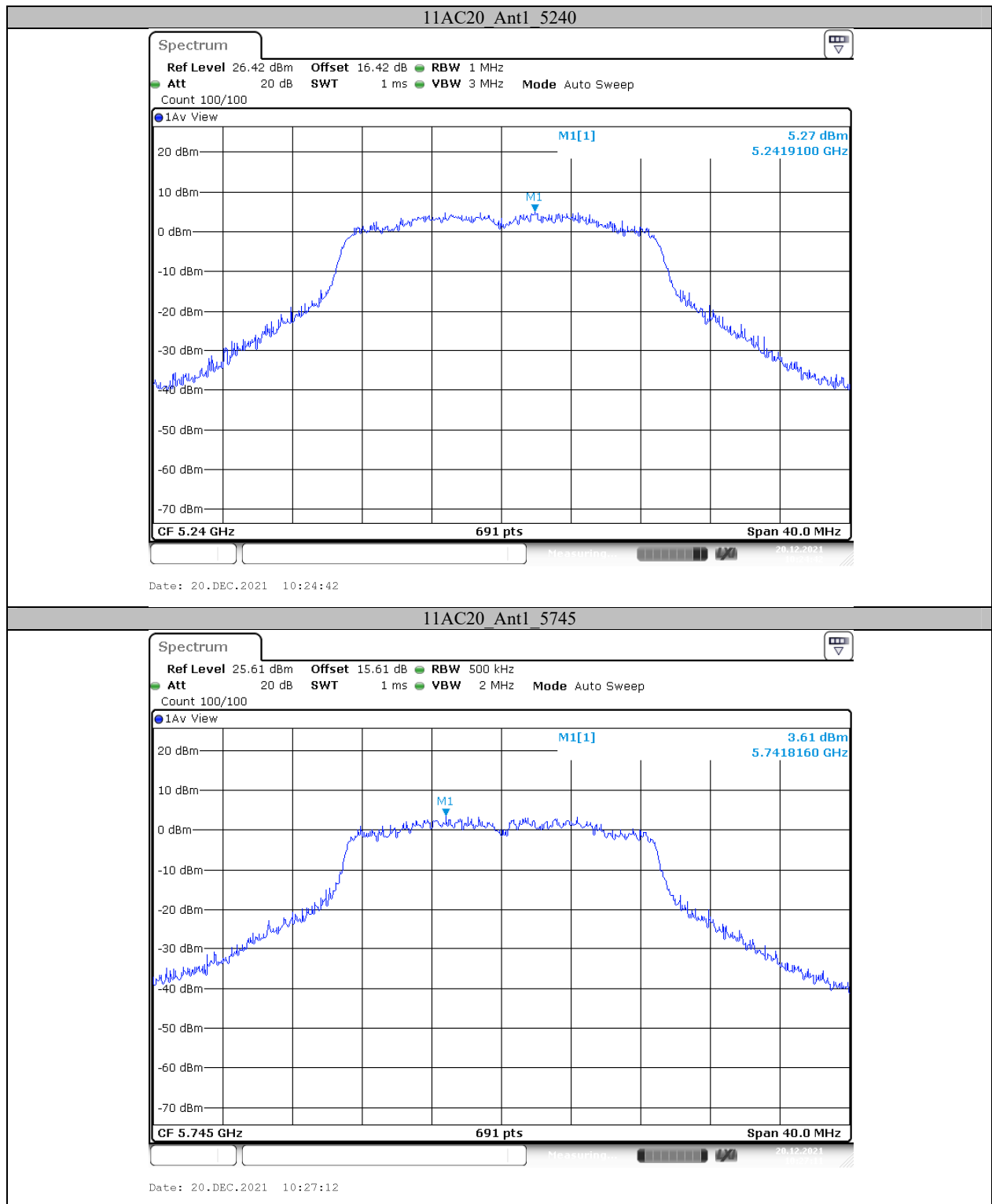


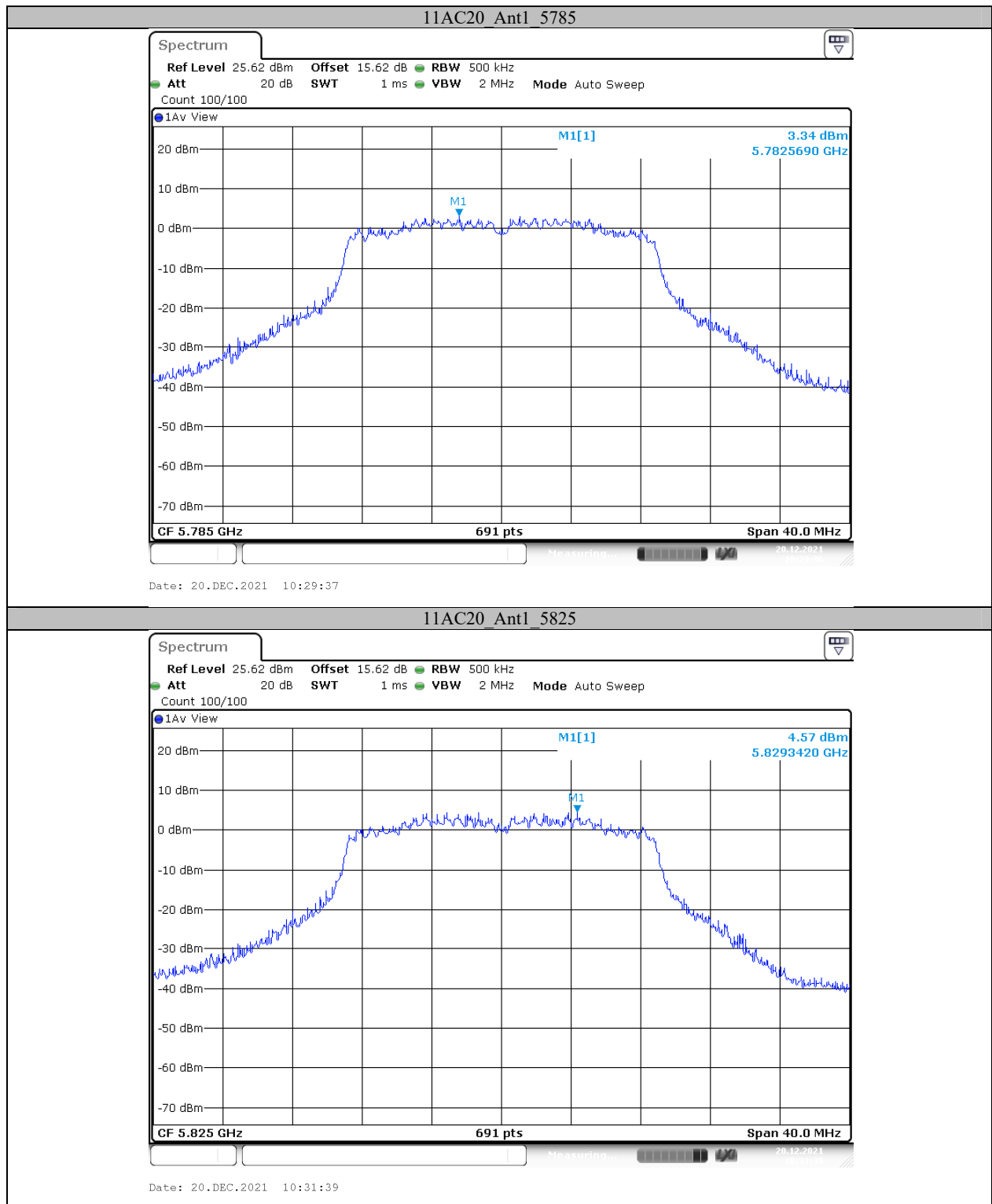


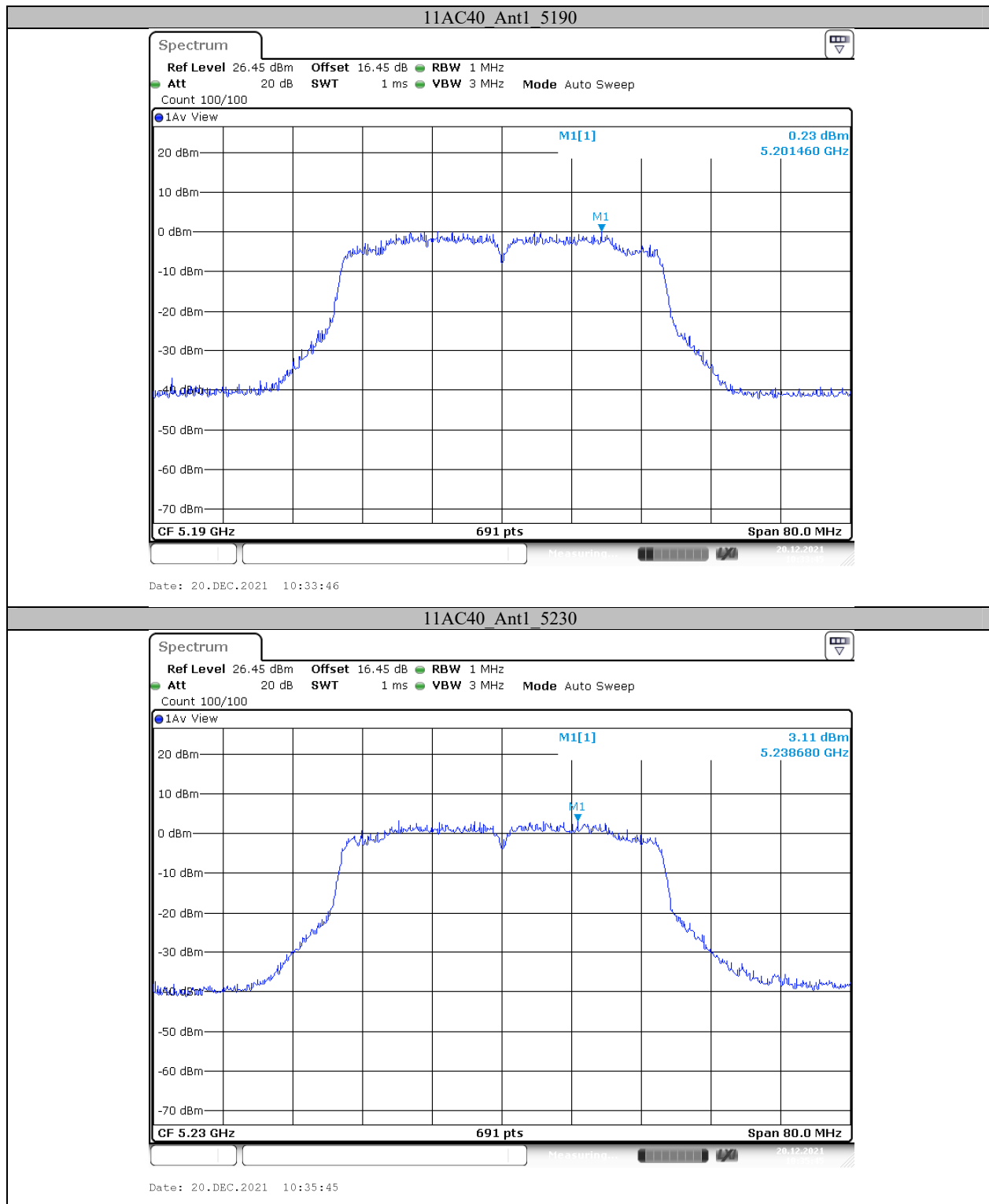


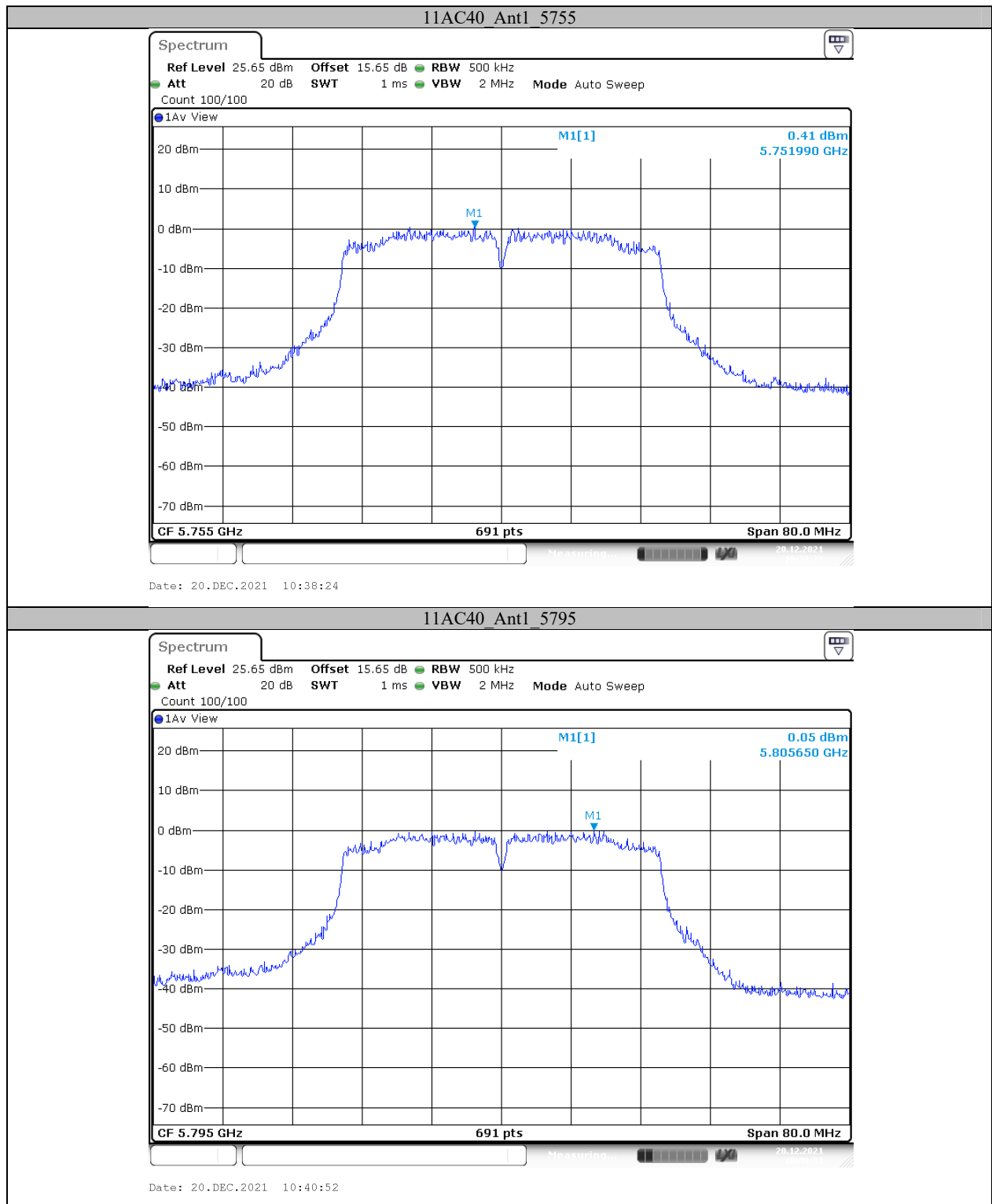


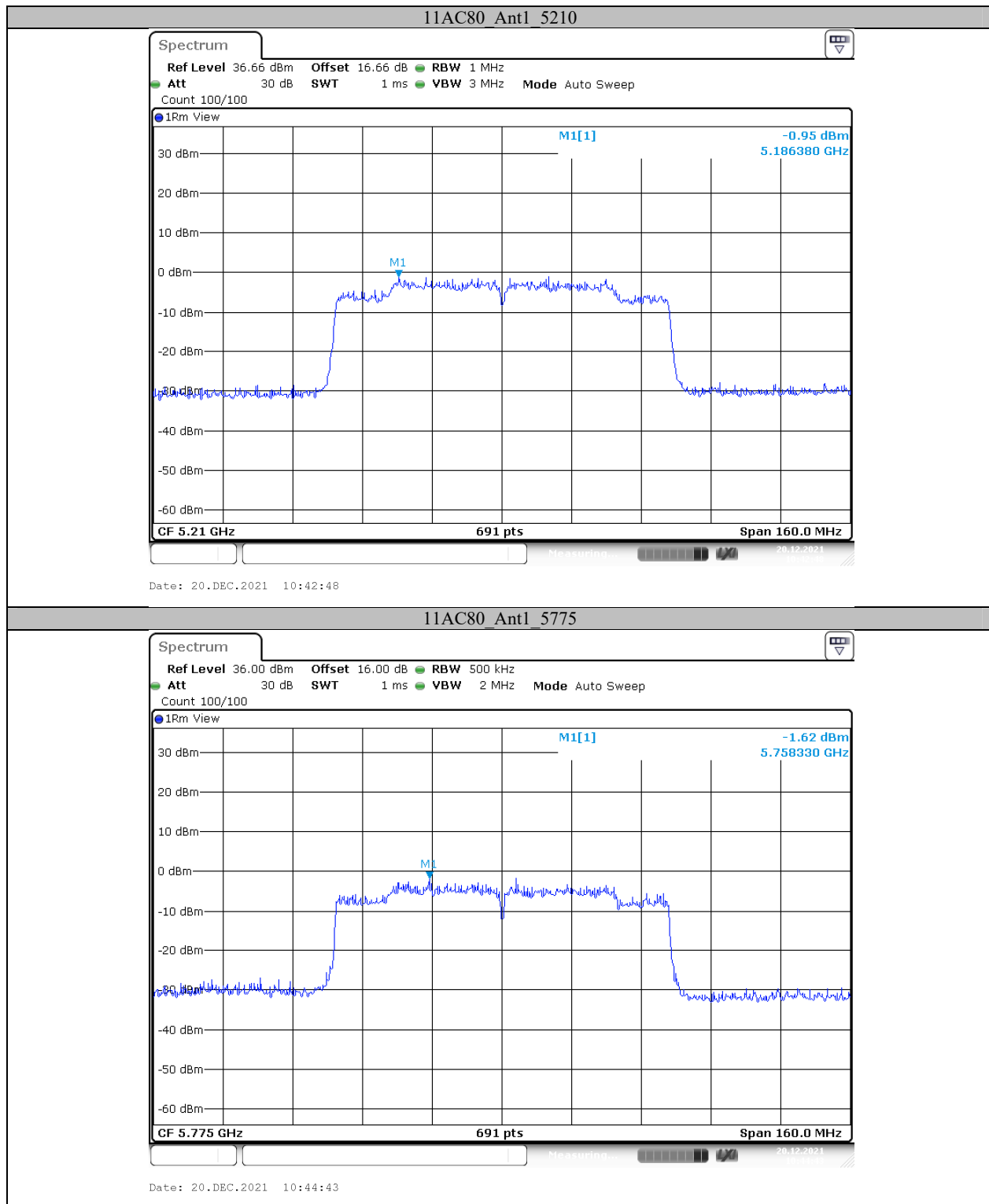












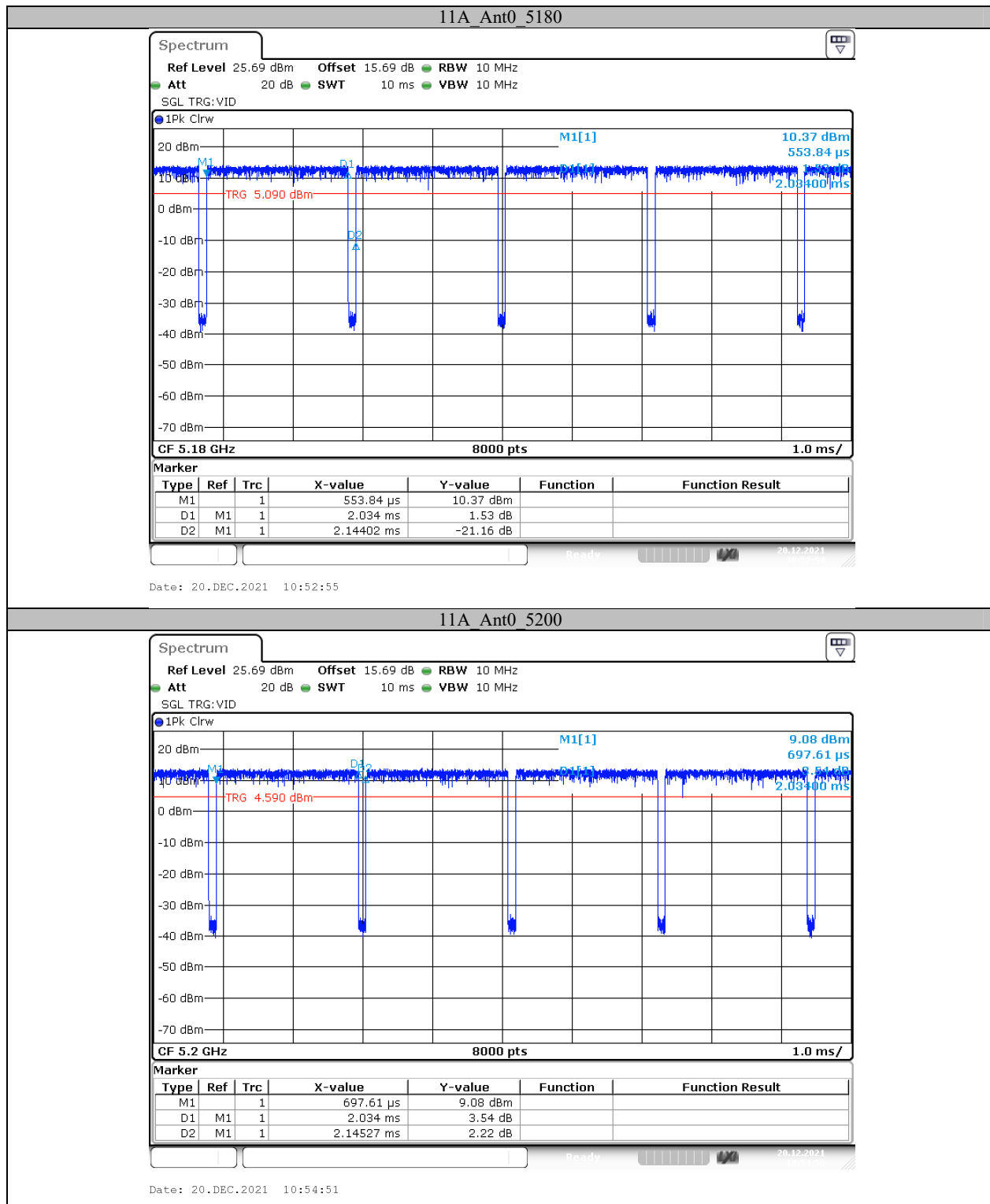
## Appendix D: Duty Cycle Test Result

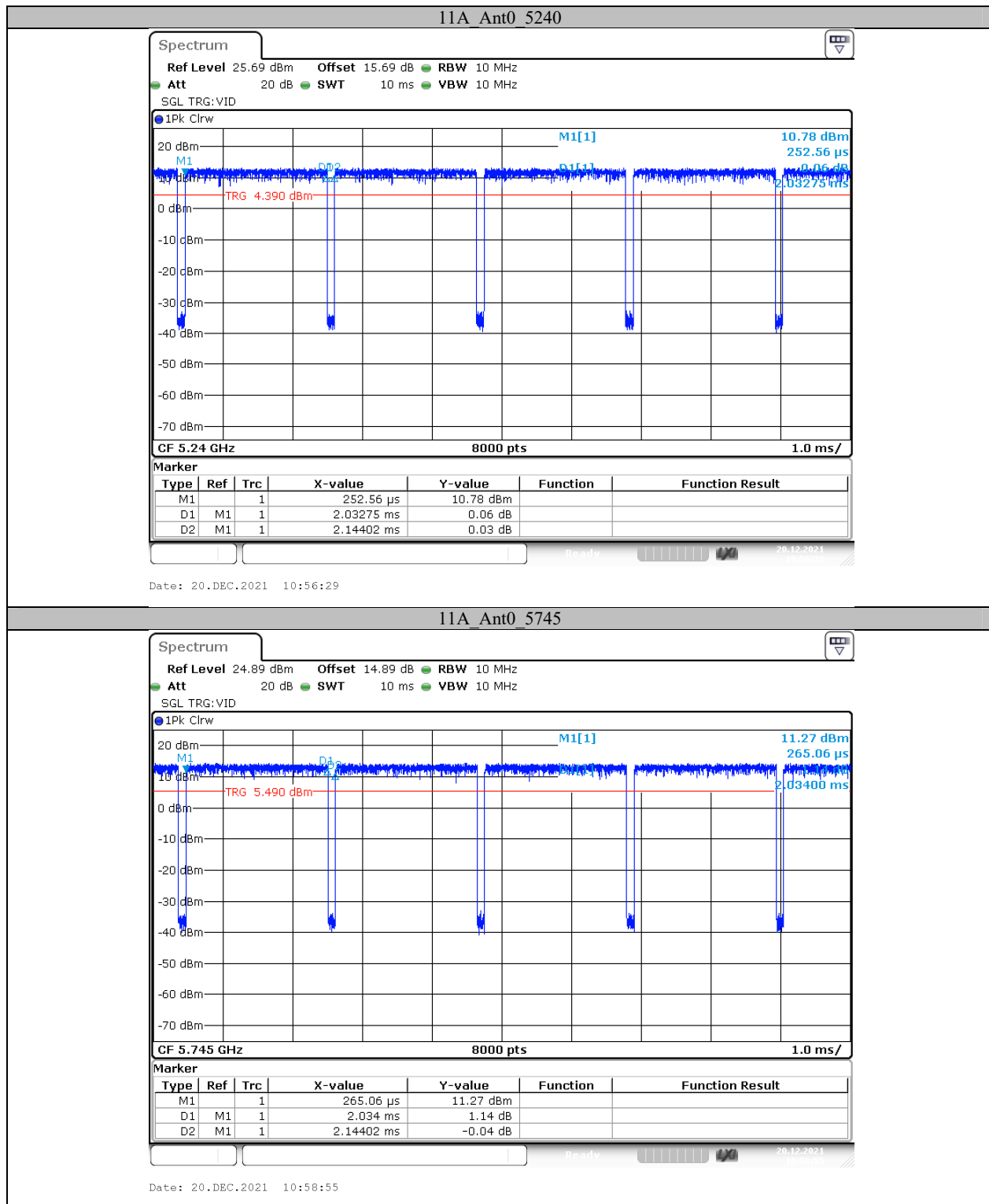
| TestMode | Antenna | Channel | Transmission<br>Duration [ms] | Transmission<br>Period [ms] | Duty Cycle [%] |
|----------|---------|---------|-------------------------------|-----------------------------|----------------|
| 11A      | Ant0    | 5180    | 2.03                          | 2.14                        | 94.87          |
|          |         | 5200    | 2.03                          | 2.15                        | 94.81          |
|          |         | 5240    | 2.03                          | 2.14                        | 94.81          |
|          |         | 5745    | 2.03                          | 2.14                        | 94.87          |
|          |         | 5785    | 2.03                          | 2.14                        | 94.81          |
|          |         | 5825    | 2.03                          | 2.14                        | 94.81          |
| 11N20    | Ant0    | 5180    | 1.89                          | 1.98                        | 95.70          |
|          |         | 5200    | 1.89                          | 1.98                        | 95.64          |
|          |         | 5240    | 1.89                          | 1.98                        | 95.70          |
|          |         | 5745    | 1.89                          | 1.98                        | 95.64          |
|          |         | 5785    | 1.89                          | 1.98                        | 95.64          |
|          |         | 5825    | 1.89                          | 1.98                        | 95.64          |
| 11N40    | Ant0    | 5190    | 0.93                          | 1.10                        | 84.41          |
|          |         | 5230    | 0.93                          | 1.10                        | 84.53          |
|          |         | 5755    | 0.93                          | 1.10                        | 84.51          |
|          |         | 5795    | 0.93                          | 1.10                        | 84.53          |
| 11AC20   | Ant0    | 5180    | 1.90                          | 2.08                        | 91.46          |
|          |         | 5200    | 1.90                          | 2.08                        | 91.47          |
|          |         | 5240    | 1.90                          | 2.08                        | 91.46          |
|          |         | 5745    | 1.90                          | 2.08                        | 91.46          |
|          |         | 5785    | 1.90                          | 2.08                        | 91.52          |
|          |         | 5825    | 1.90                          | 2.08                        | 91.46          |
| 11AC40   | Ant0    | 5190    | 0.94                          | 1.03                        | 91.01          |
|          |         | 5230    | 0.94                          | 1.03                        | 90.89          |
|          |         | 5755    | 0.94                          | 1.03                        | 90.89          |
|          |         | 5795    | 0.94                          | 1.03                        | 90.89          |
| 11AC80   | Ant0    | 5210    | 0.44                          | 0.51                        | 86.27          |
|          |         | 5775    | 0.44                          | 0.51                        | 86.27          |

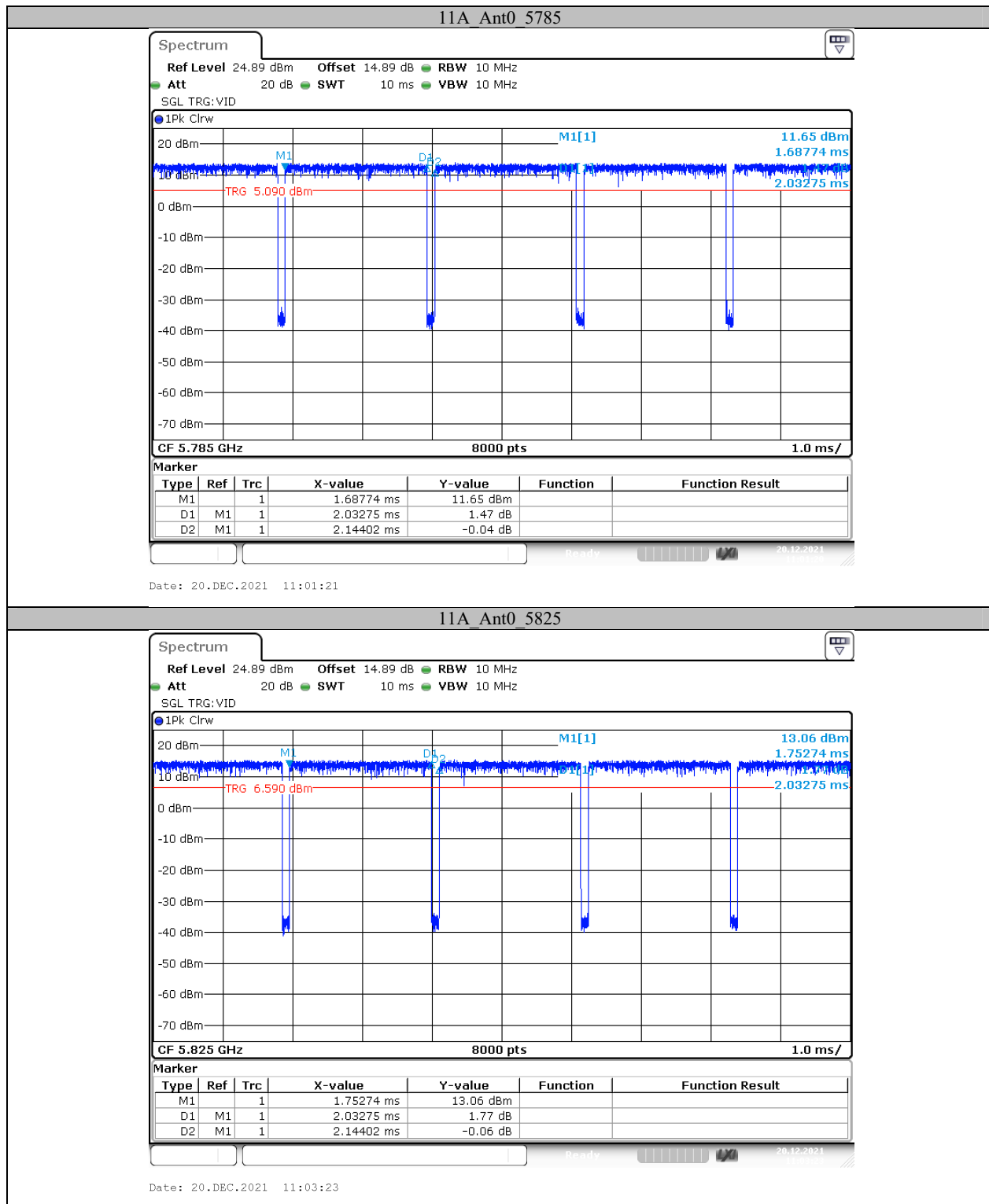


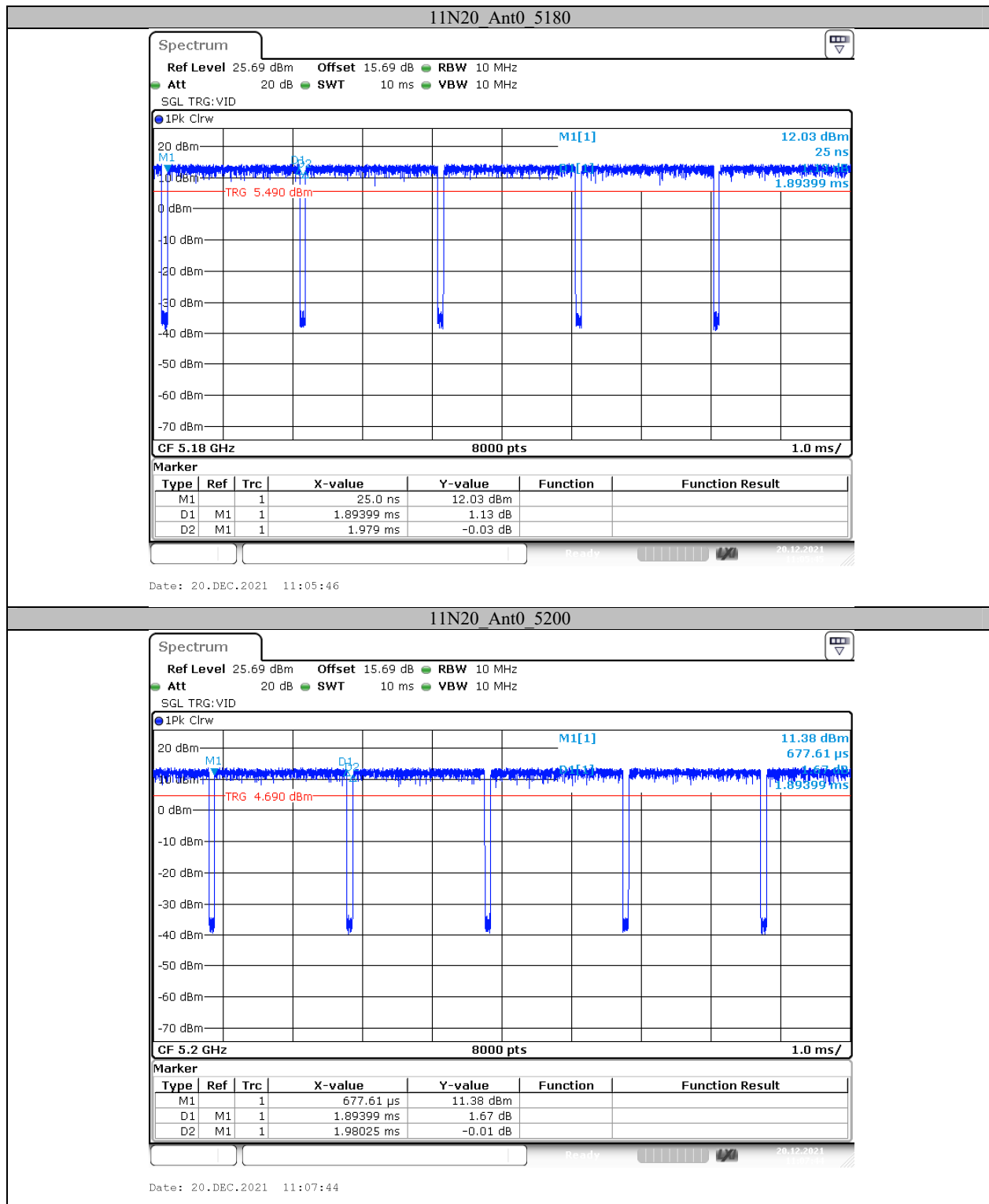
| TestMode | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] |
|----------|---------|---------|----------------------------|--------------------------|----------------|
| 11A      | Ant1    | 5180    | 2.03                       | 2.14                     | 94.81          |
|          |         | 5200    | 2.03                       | 2.14                     | 94.81          |
|          |         | 5240    | 2.03                       | 2.15                     | 94.81          |
|          |         | 5745    | 2.03                       | 2.14                     | 94.81          |
|          |         | 5785    | 2.03                       | 2.14                     | 94.87          |
|          |         | 5825    | 2.03                       | 2.14                     | 94.87          |
| 11N20    | Ant1    | 5180    | 1.89                       | 1.98                     | 95.64          |
|          |         | 5200    | 1.89                       | 1.98                     | 95.64          |
|          |         | 5240    | 1.89                       | 1.98                     | 95.70          |
|          |         | 5745    | 1.89                       | 1.98                     | 95.64          |
|          |         | 5785    | 1.89                       | 1.98                     | 95.64          |
|          |         | 5825    | 1.89                       | 1.98                     | 95.70          |
| 11N40    | Ant1    | 5190    | 0.49                       | 0.58                     | 83.94          |
|          |         | 5230    | 0.49                       | 0.58                     | 84.12          |
|          |         | 5755    | 0.49                       | 0.58                     | 84.15          |
|          |         | 5795    | 0.49                       | 0.58                     | 84.15          |
| 11AC20   | Ant1    | 5180    | 0.98                       | 1.15                     | 84.62          |
|          |         | 5200    | 0.98                       | 1.15                     | 84.60          |
|          |         | 5240    | 0.98                       | 1.15                     | 84.60          |
|          |         | 5745    | 0.98                       | 1.15                     | 84.71          |
|          |         | 5785    | 0.98                       | 1.15                     | 84.60          |
|          |         | 5825    | 0.98                       | 1.15                     | 84.60          |
| 11AC40   | Ant1    | 5190    | 0.49                       | 0.58                     | 83.94          |
|          |         | 5230    | 0.49                       | 0.58                     | 83.94          |
|          |         | 5755    | 0.49                       | 0.58                     | 83.94          |
|          |         | 5795    | 0.49                       | 0.58                     | 83.94          |
| 11AC80   | Ant1    | 5210    | 0.24                       | 0.30                     | 80.00          |
|          |         | 5775    | 0.24                       | 0.31                     | 77.42          |

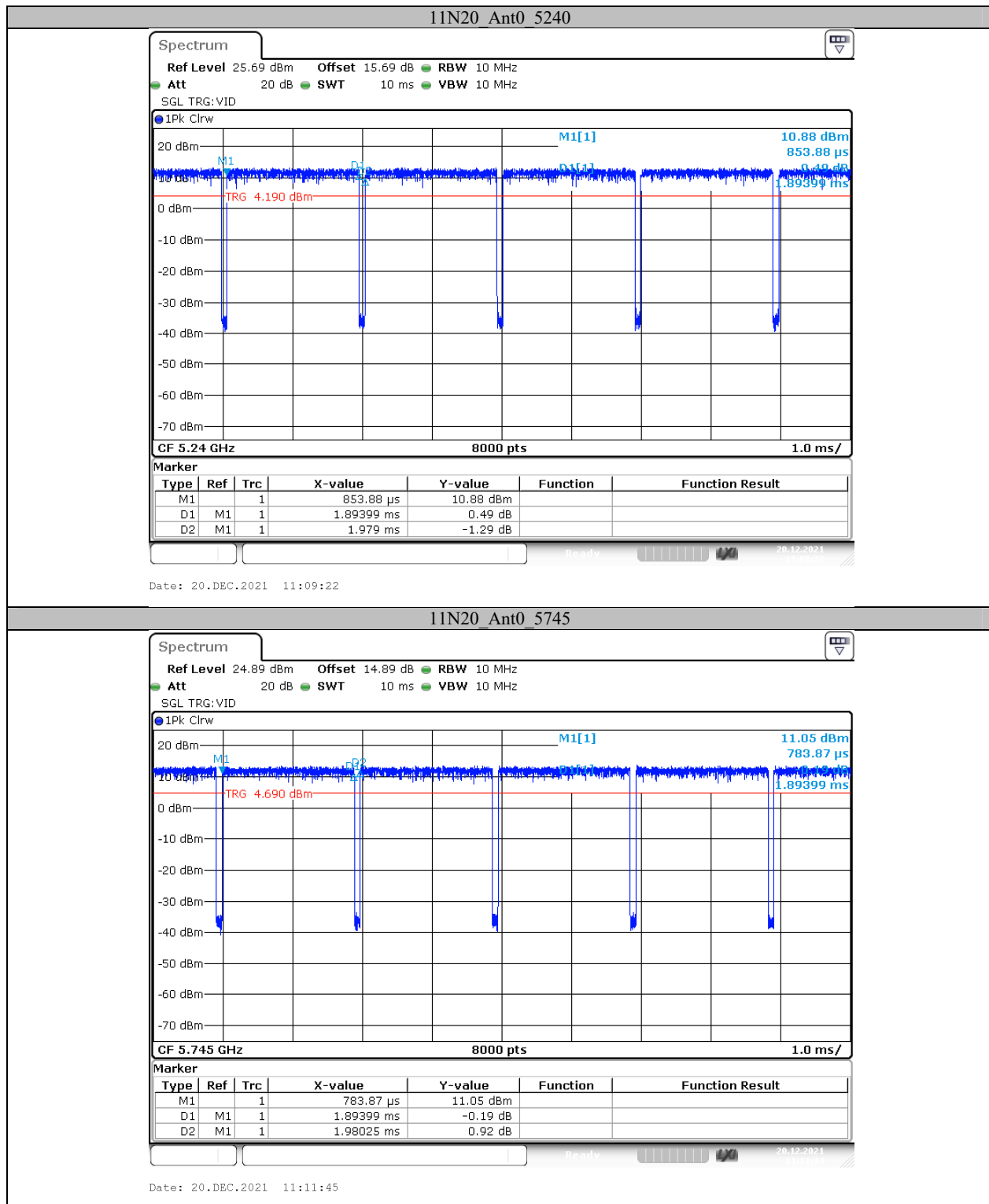
## Test Graphs

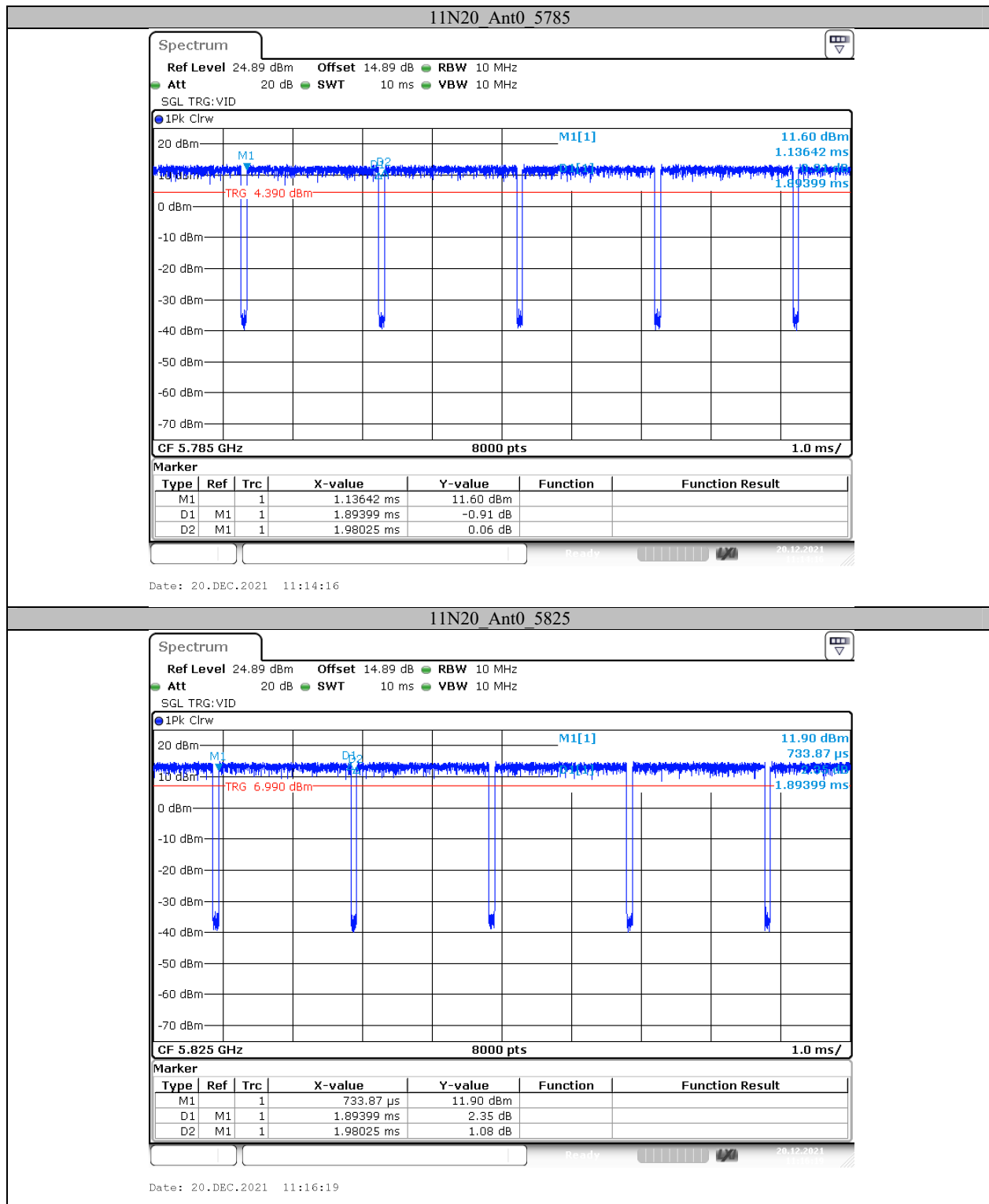


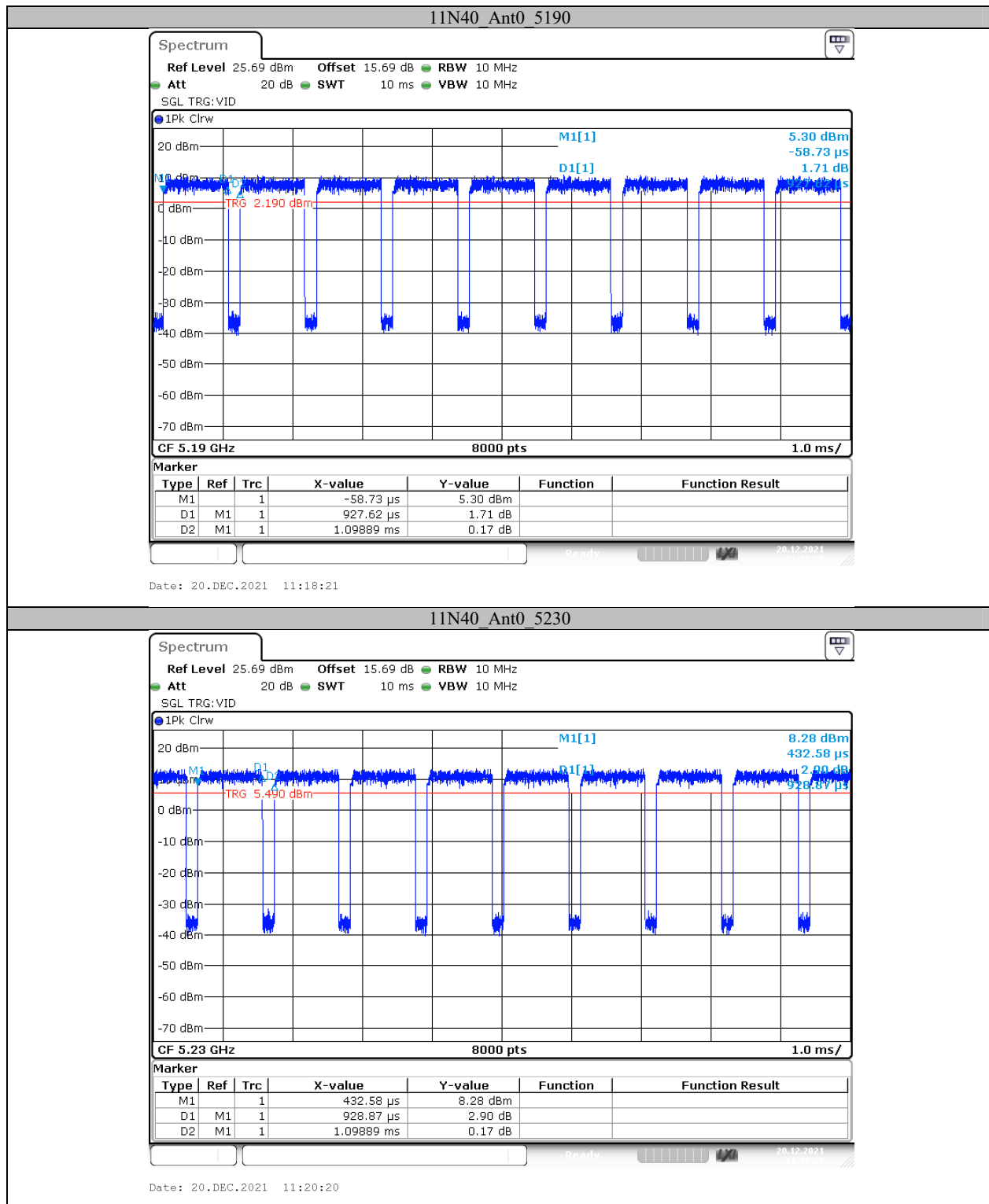




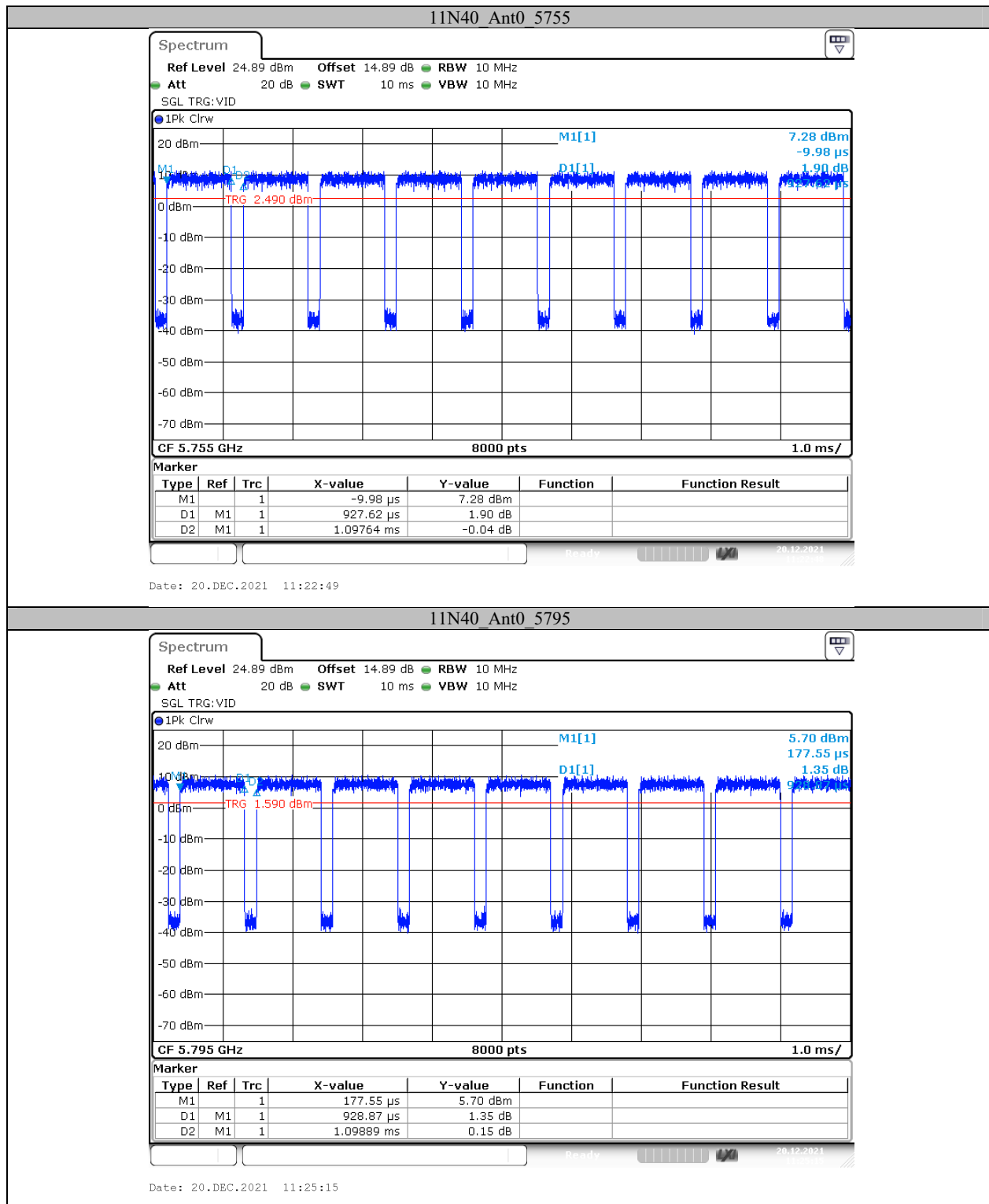


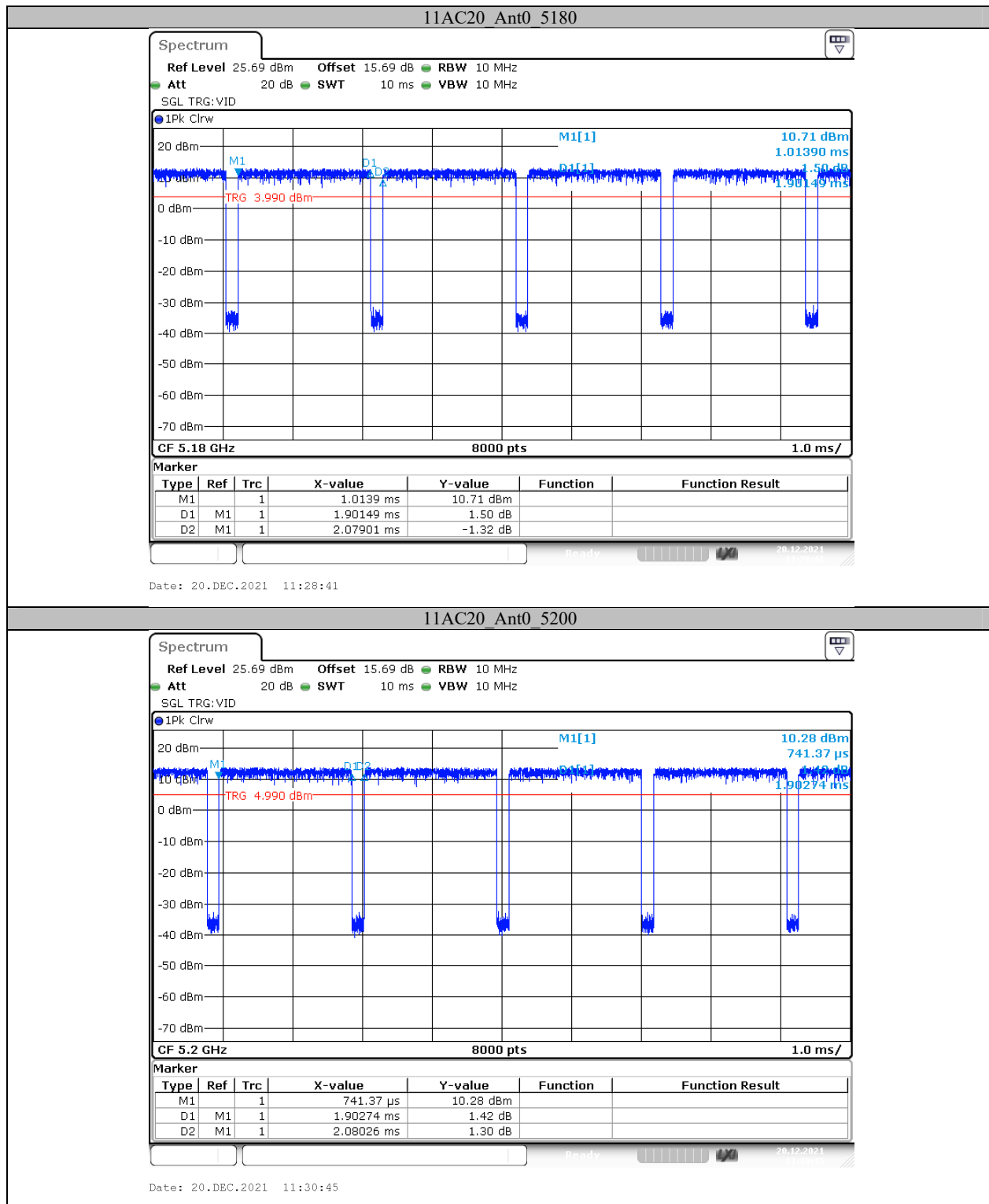


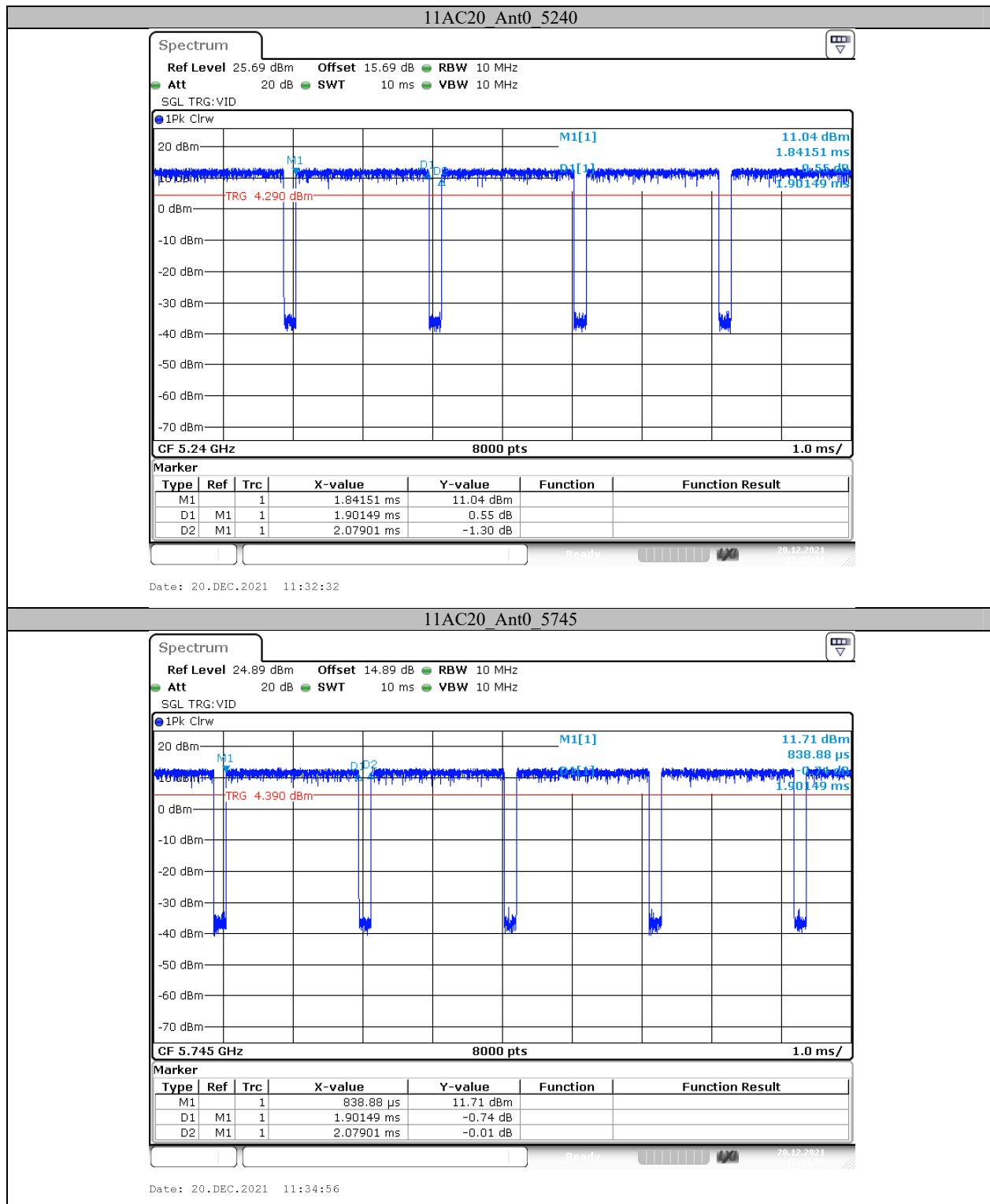


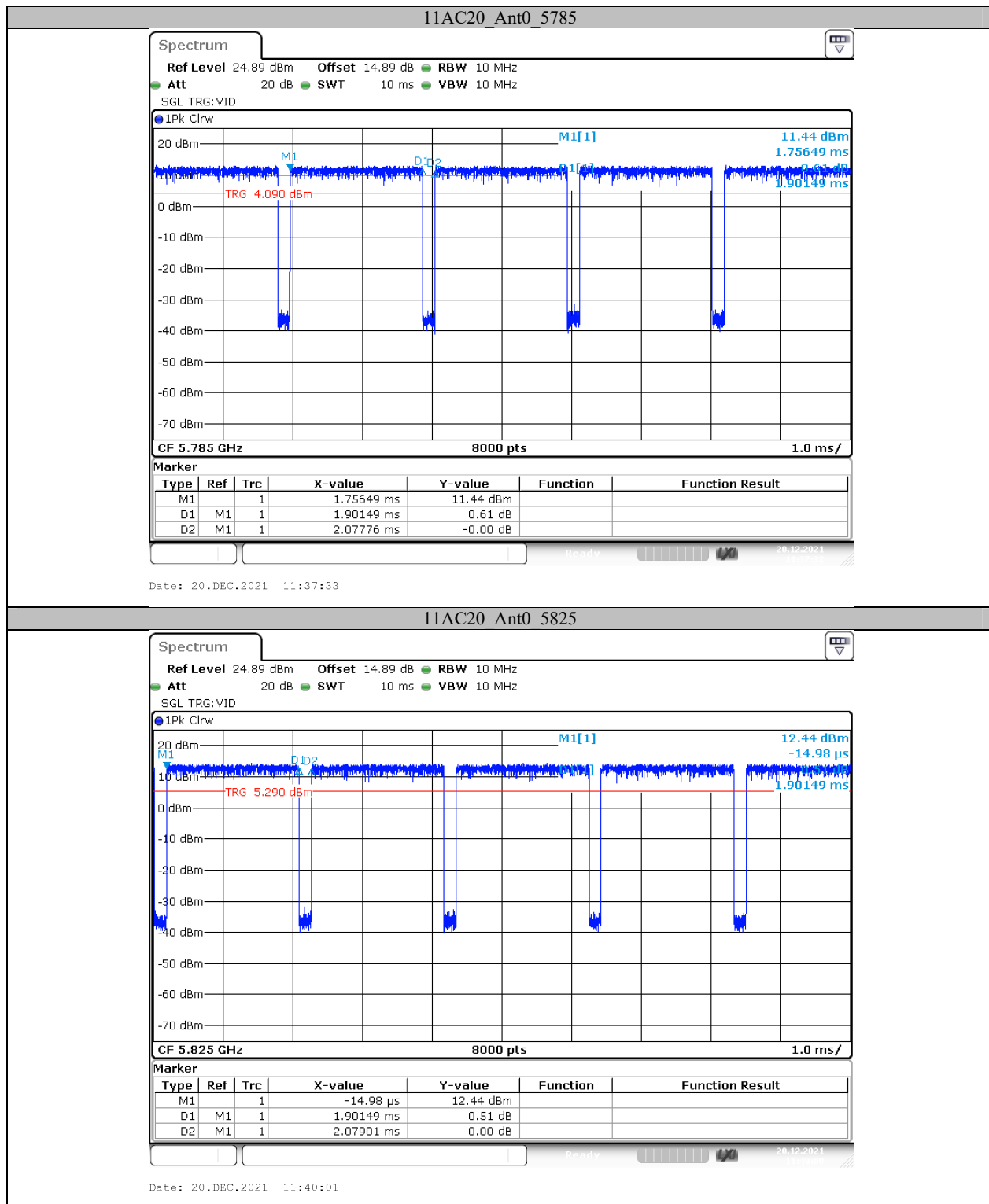


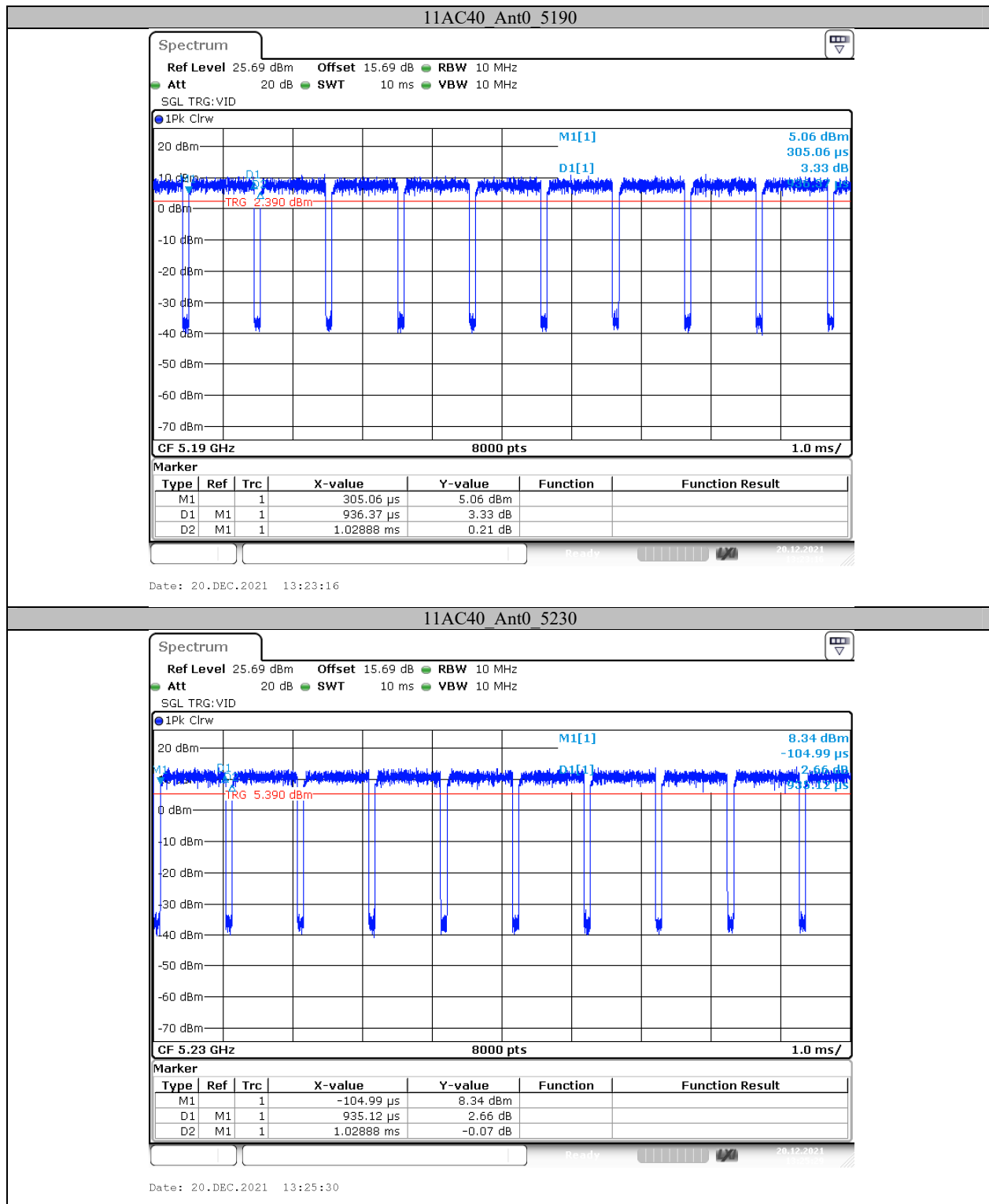


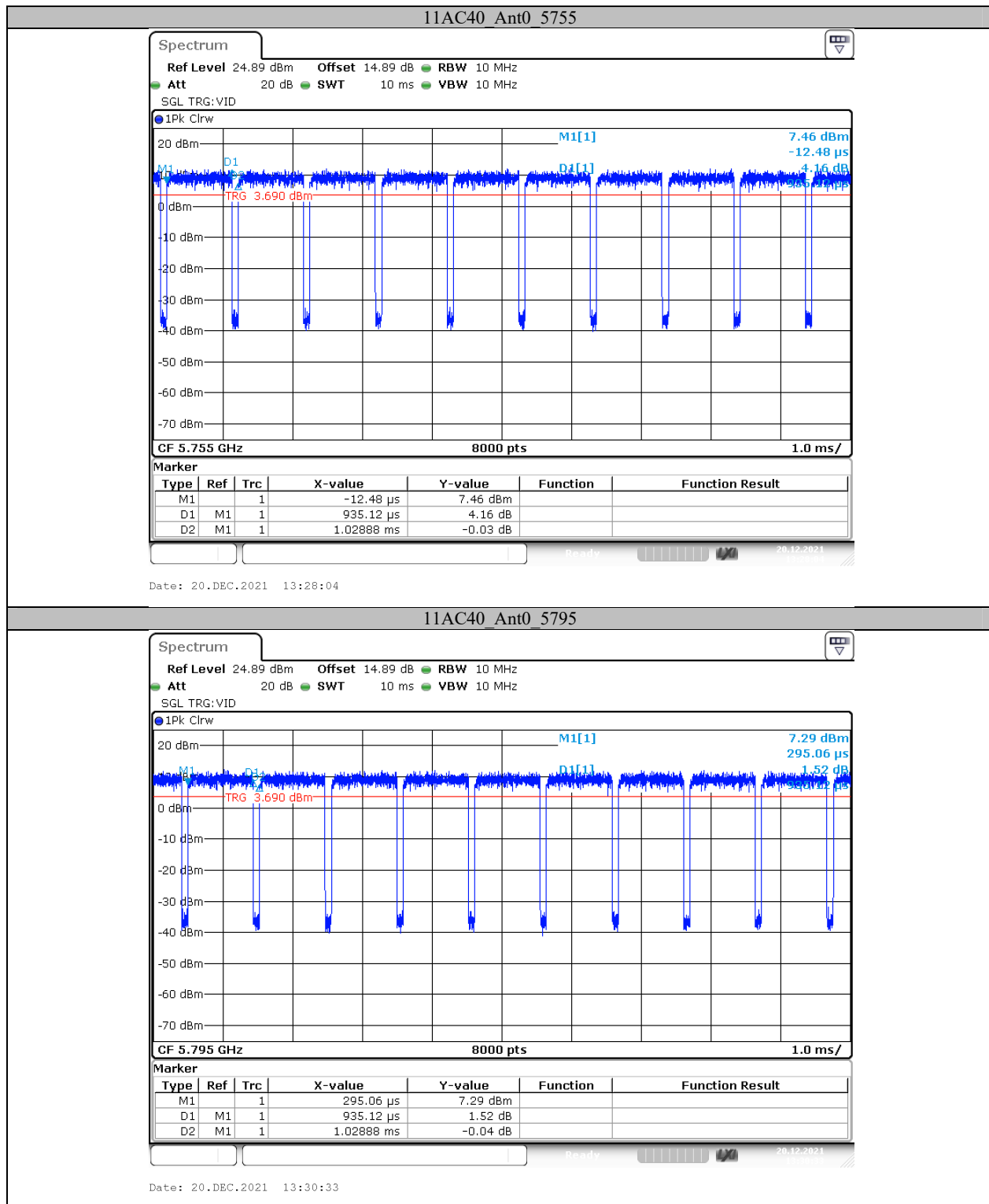


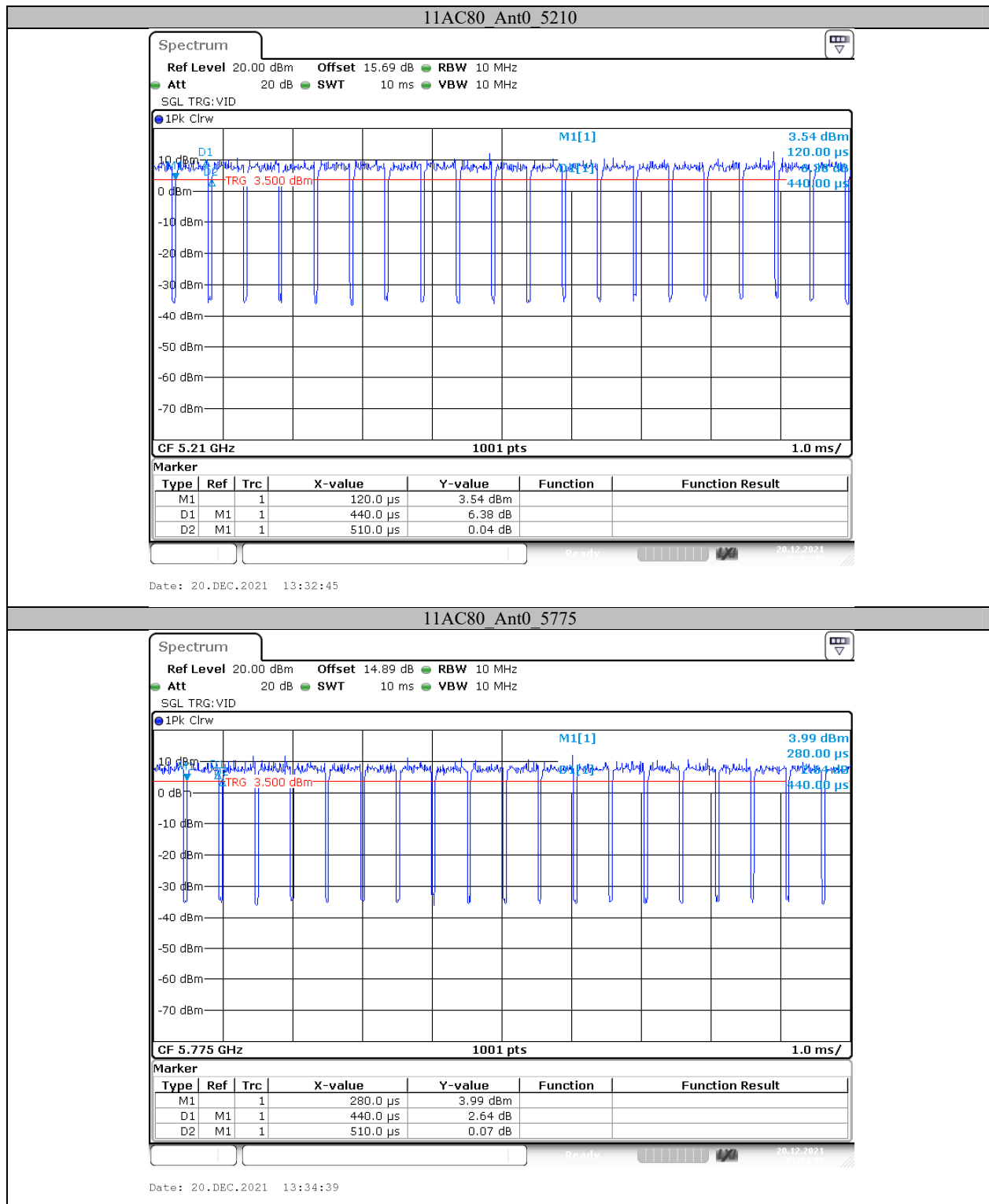


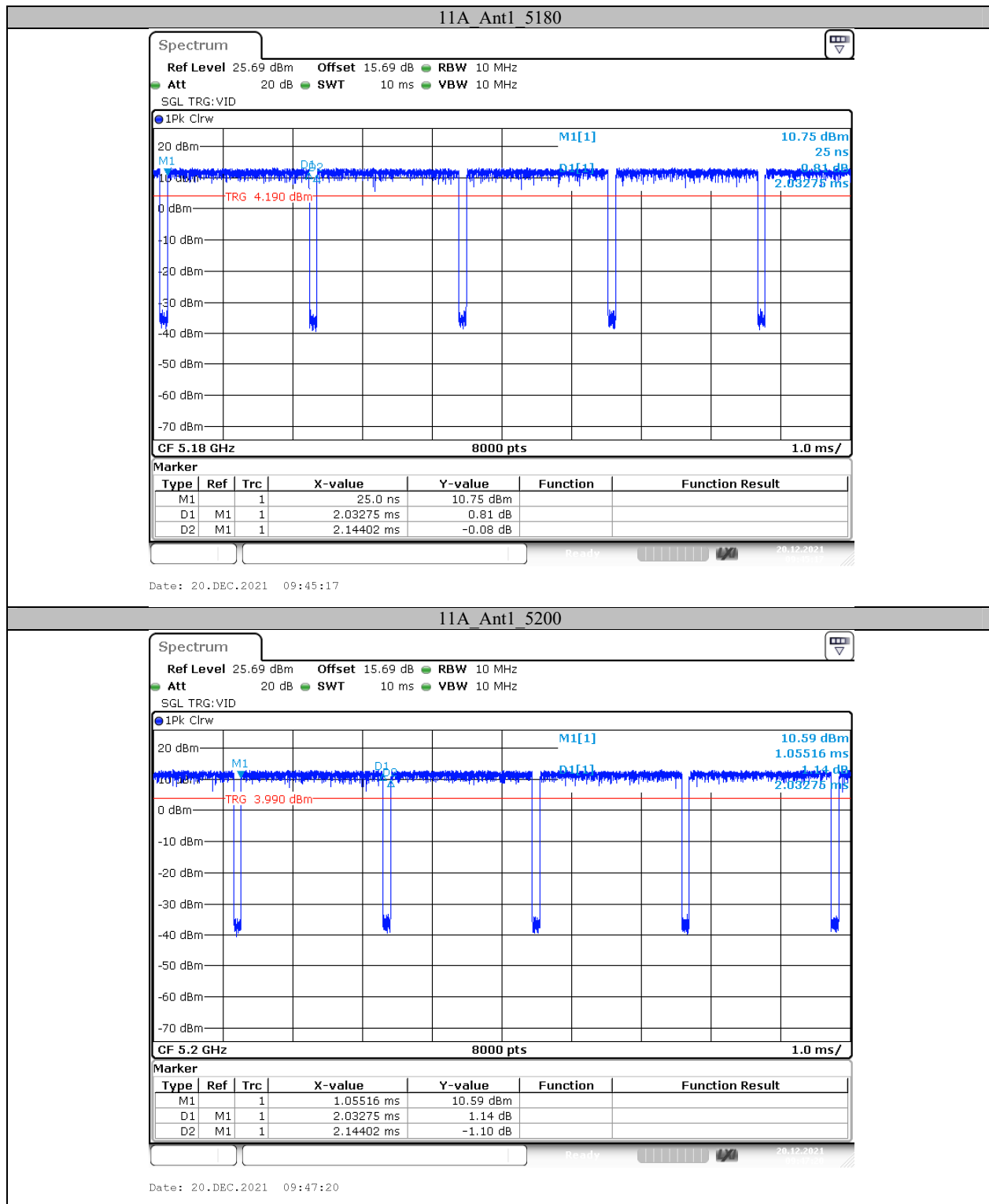




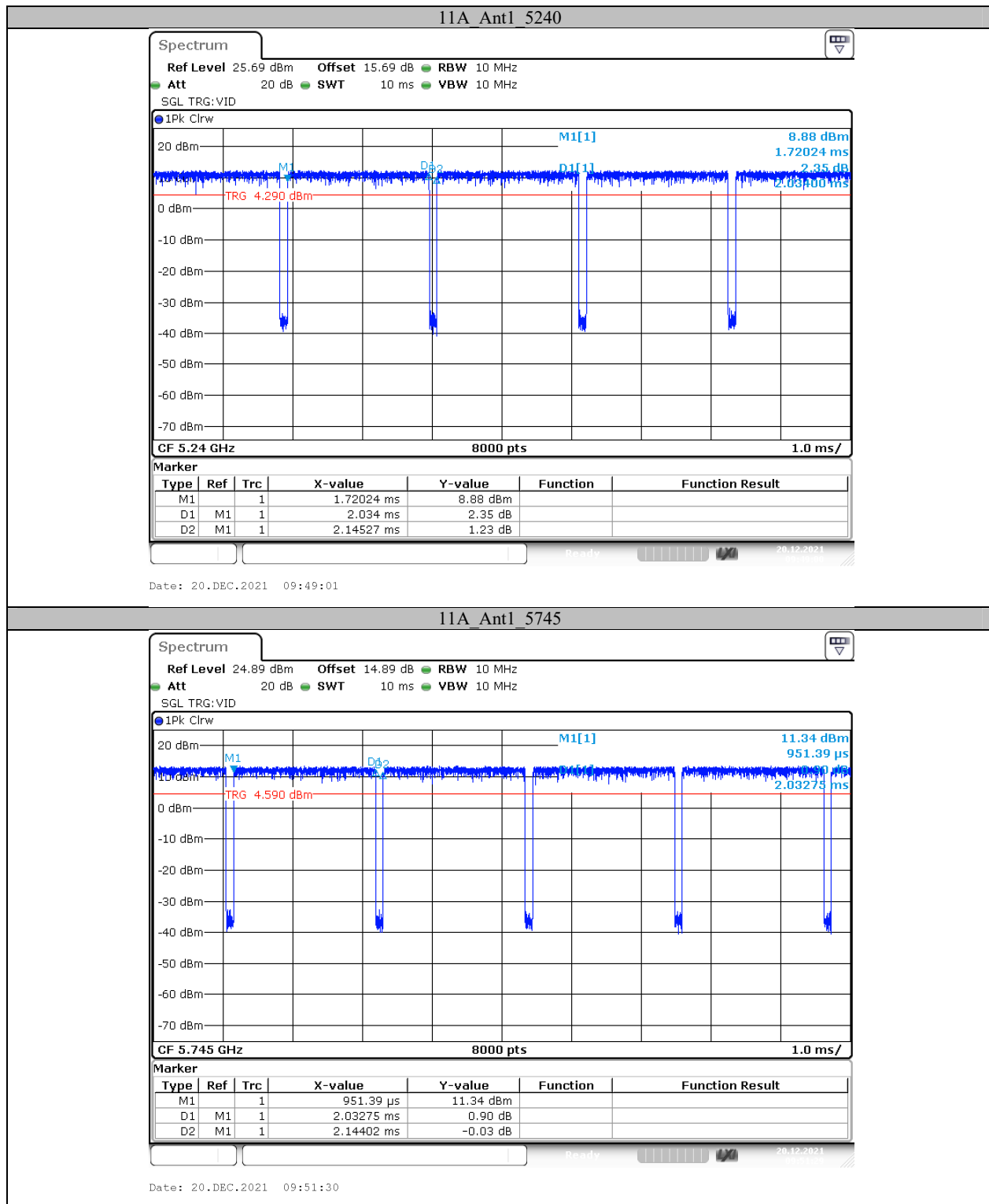


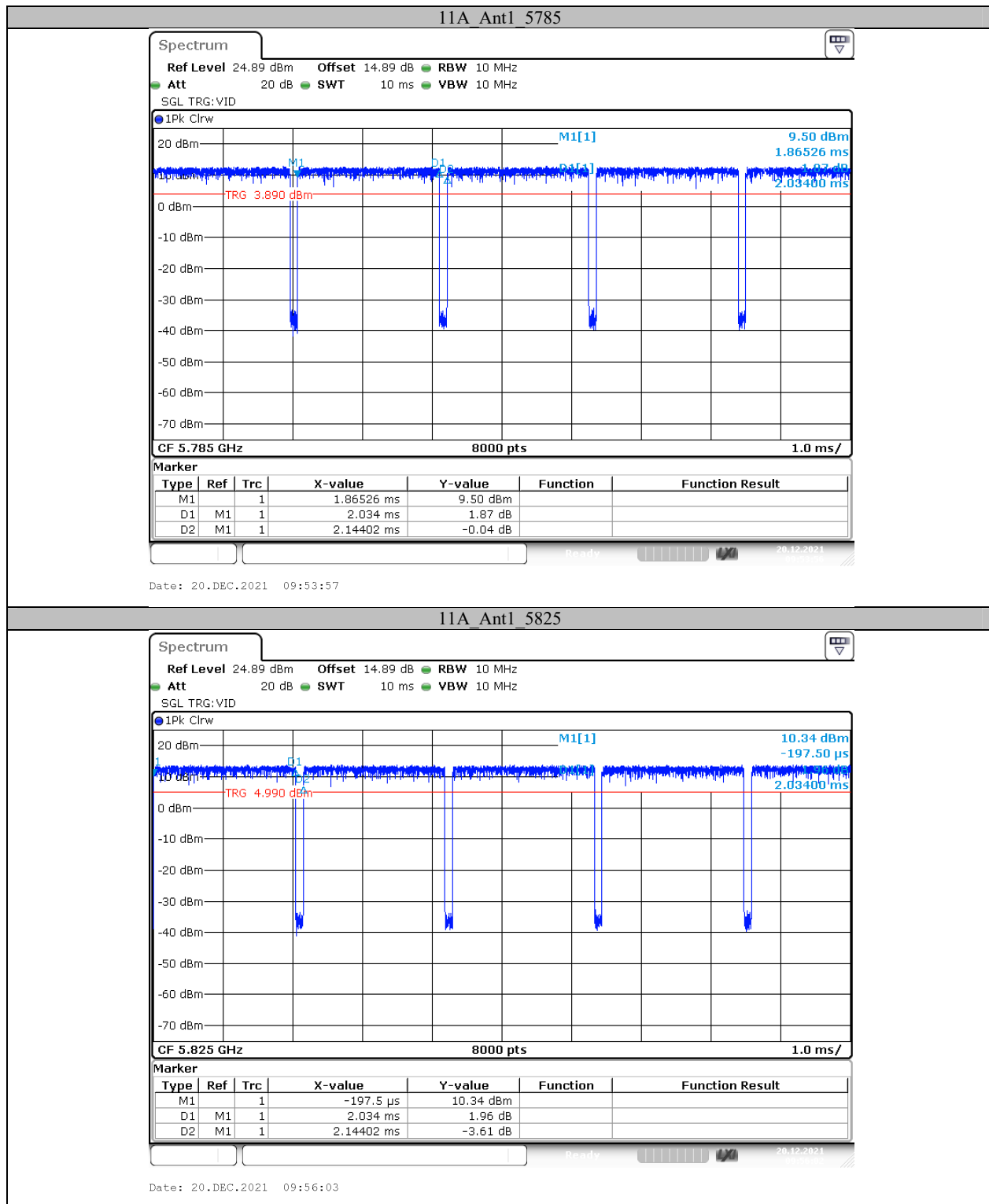


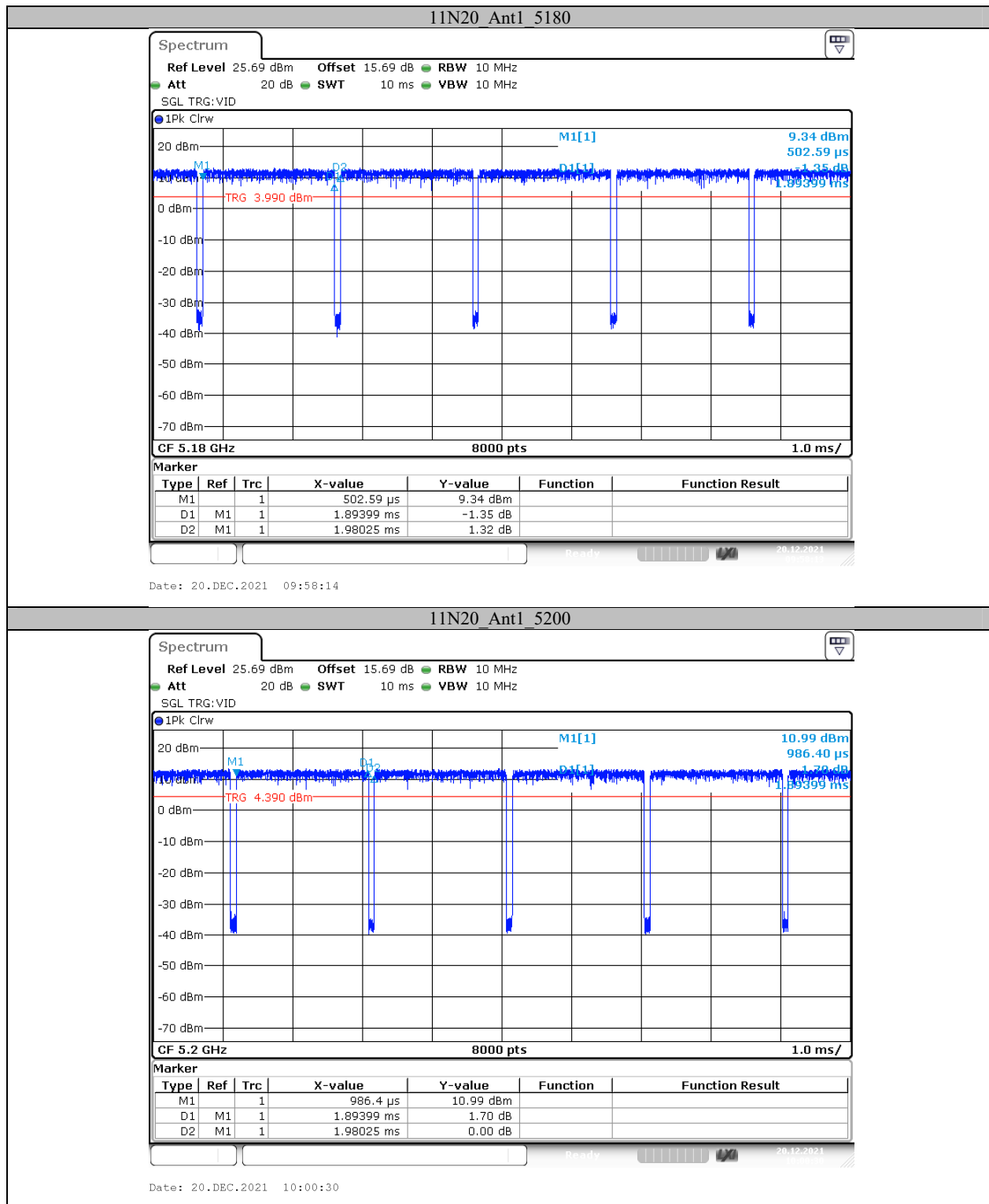


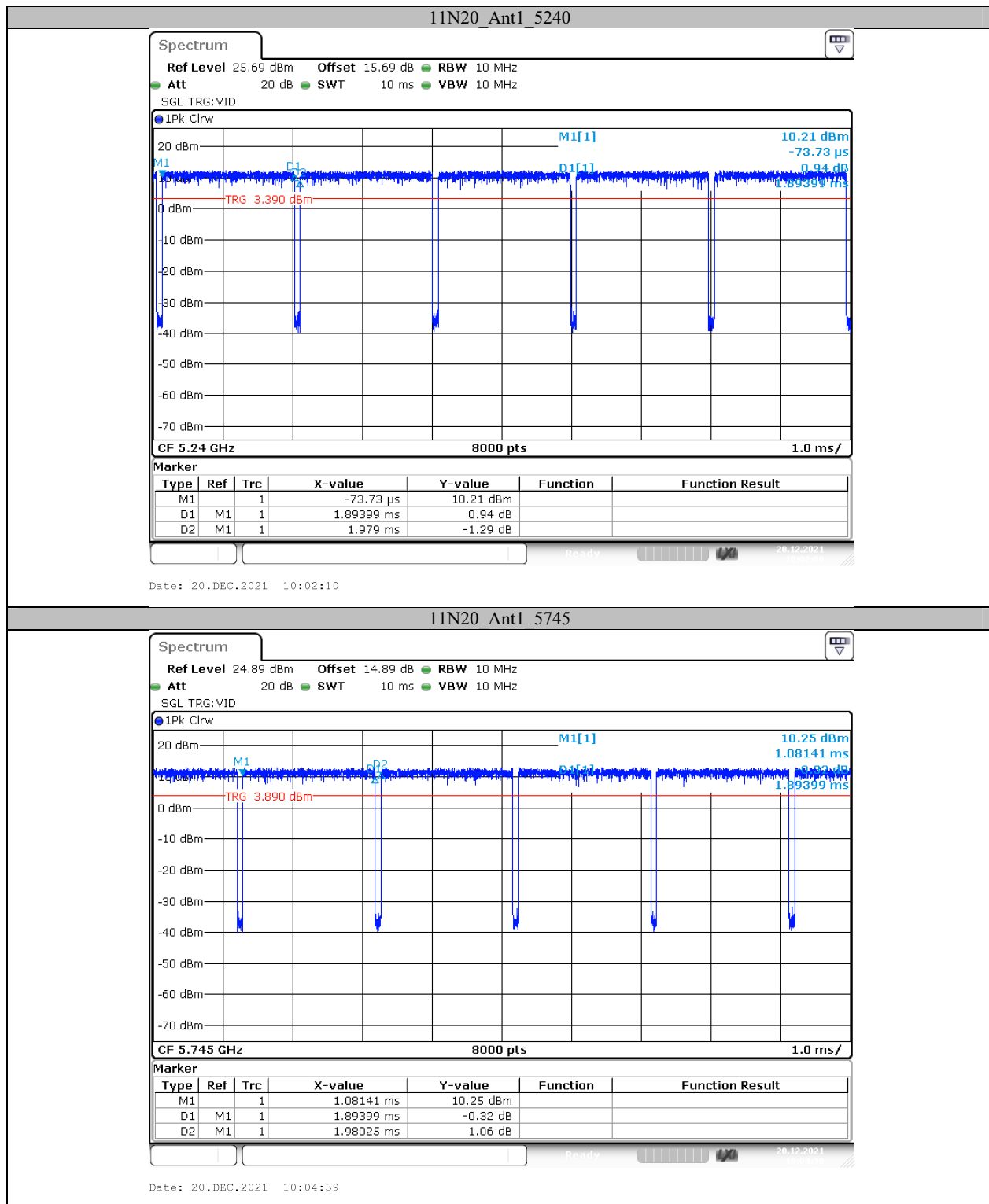


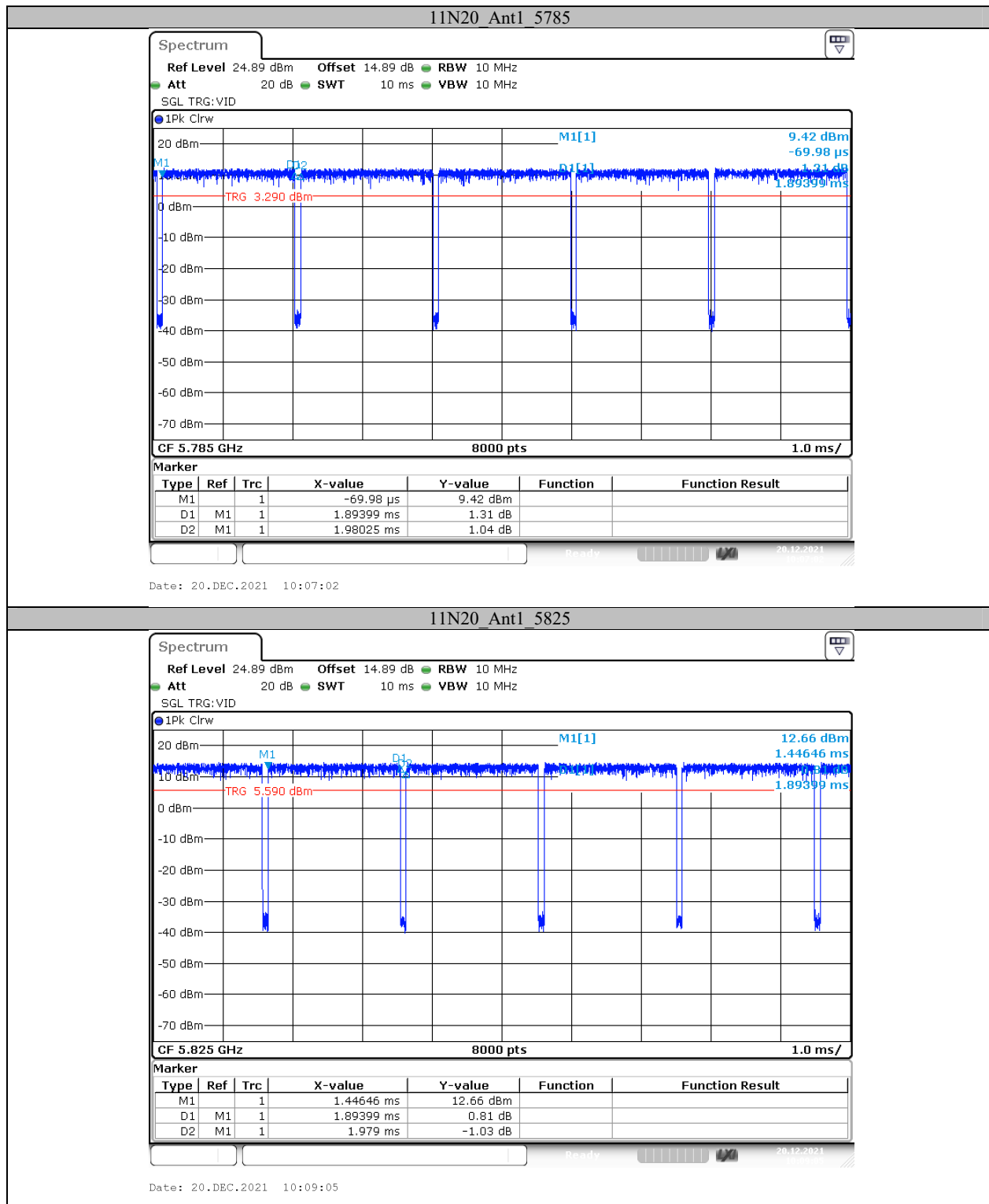


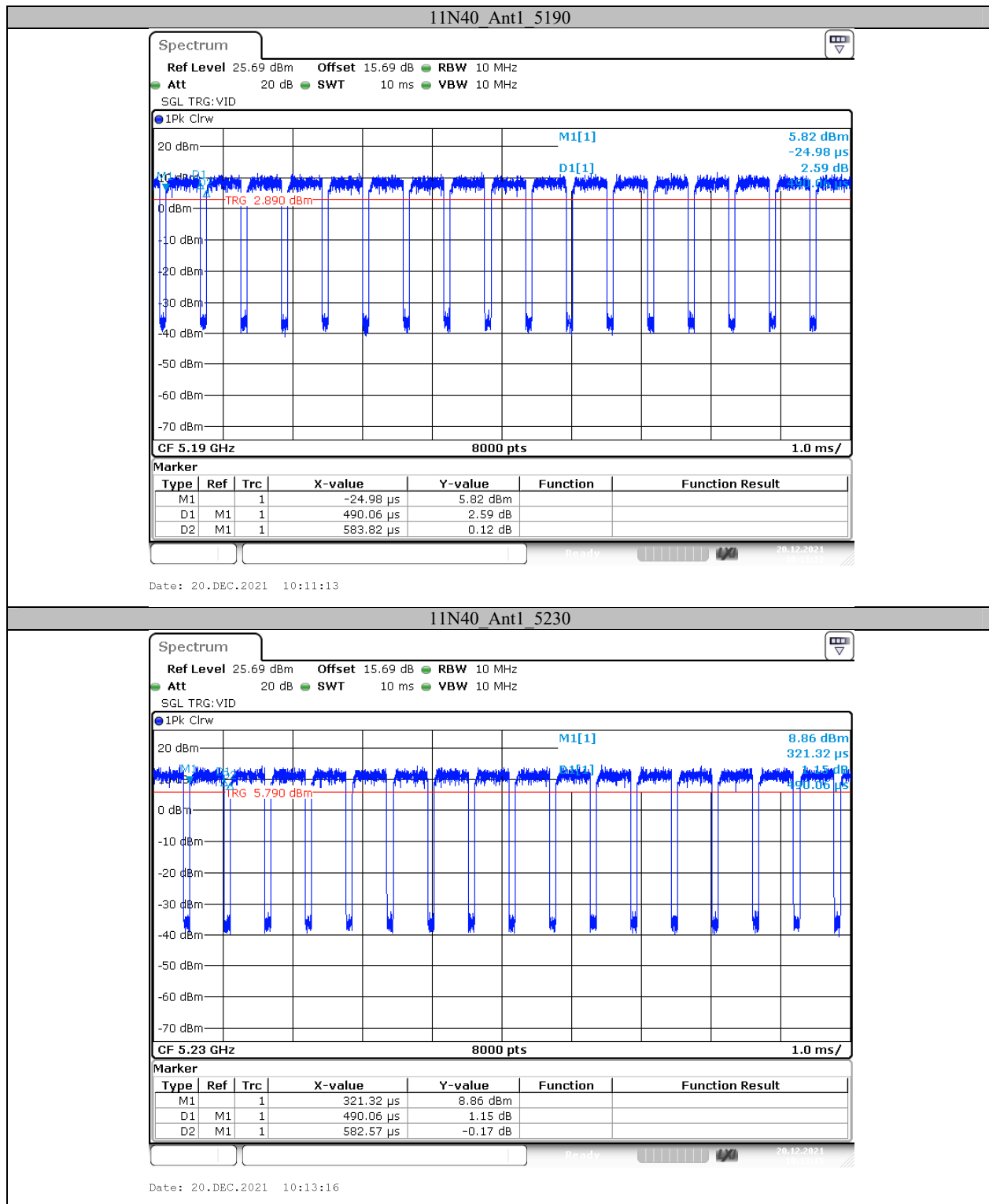


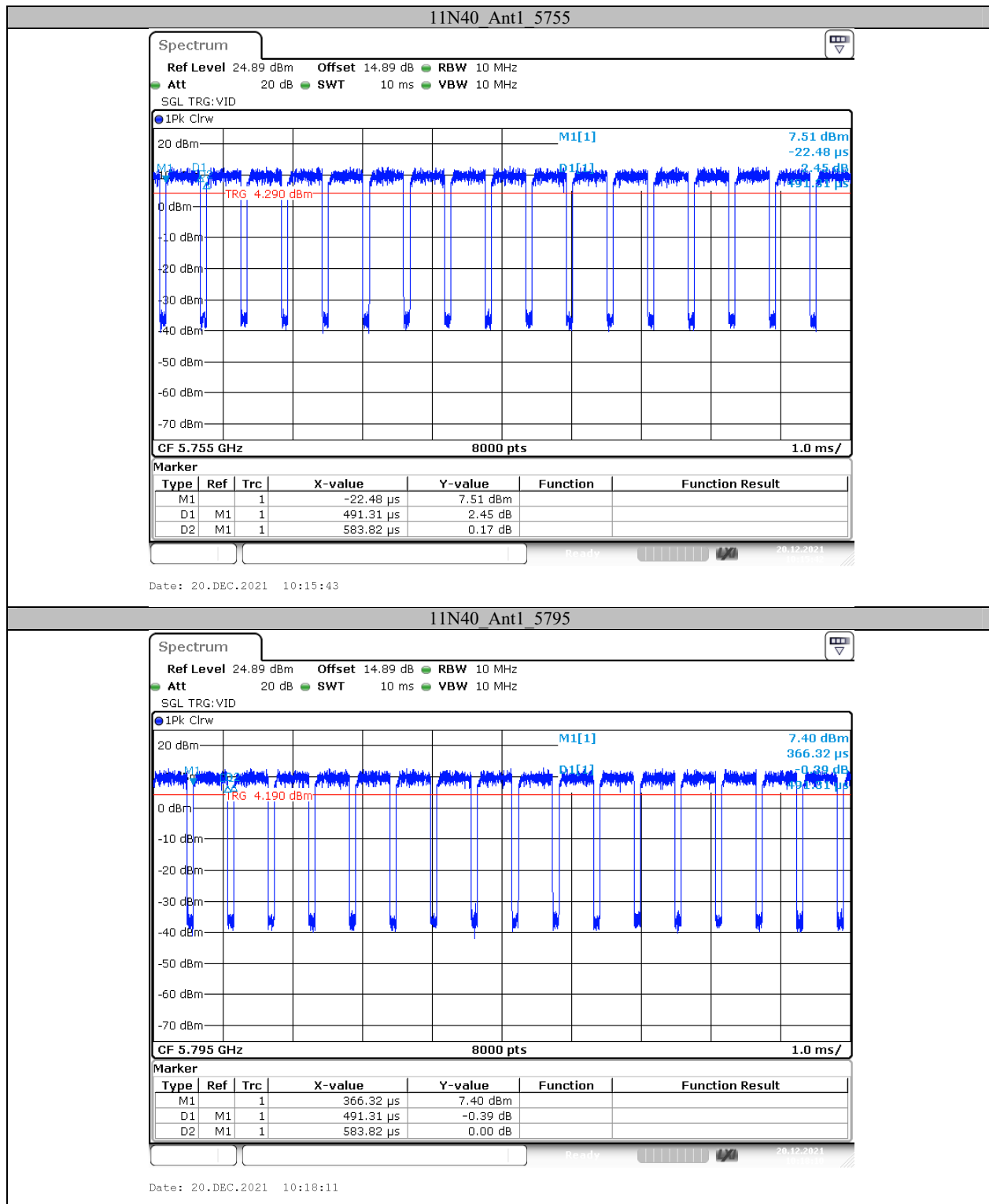


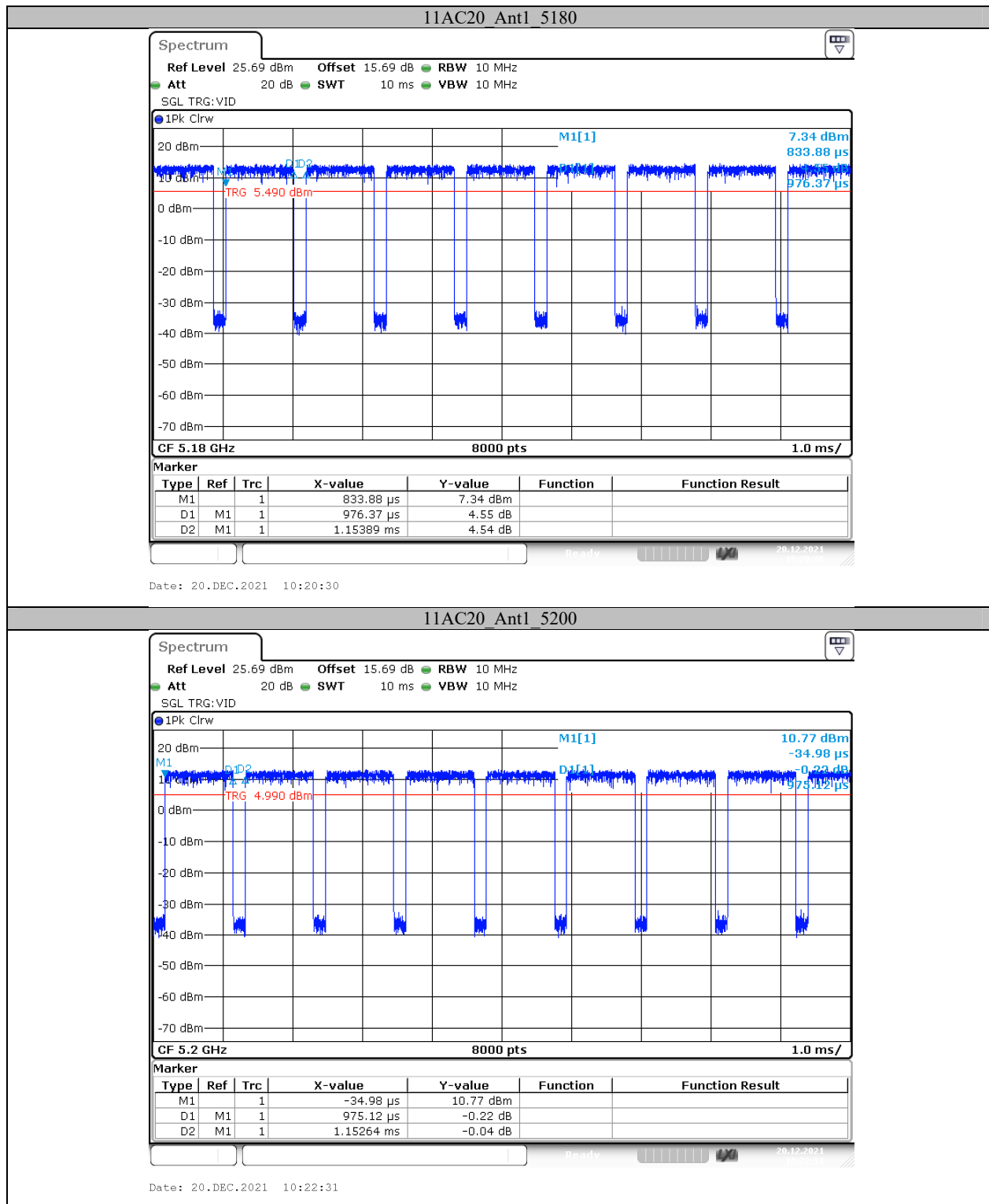




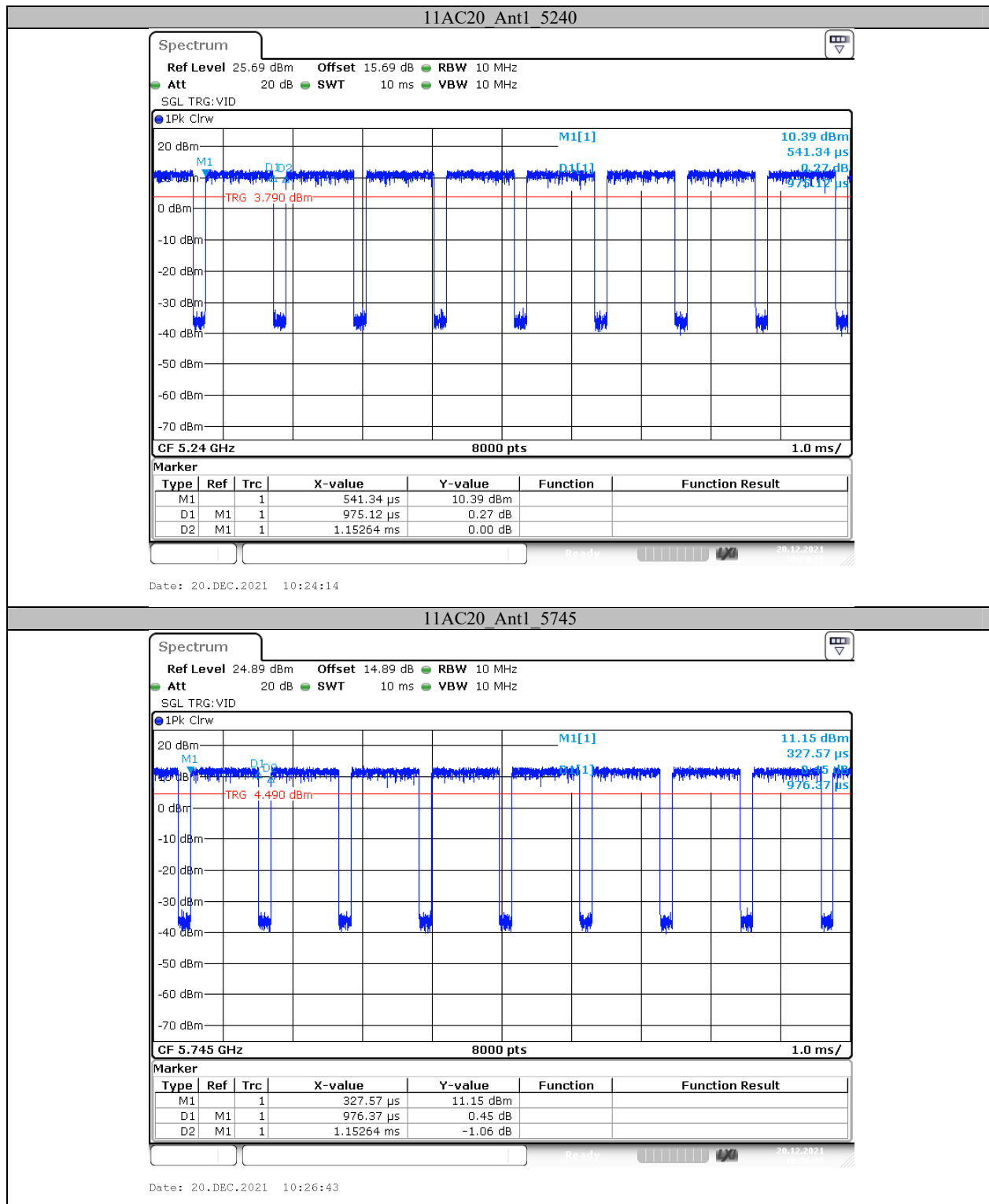


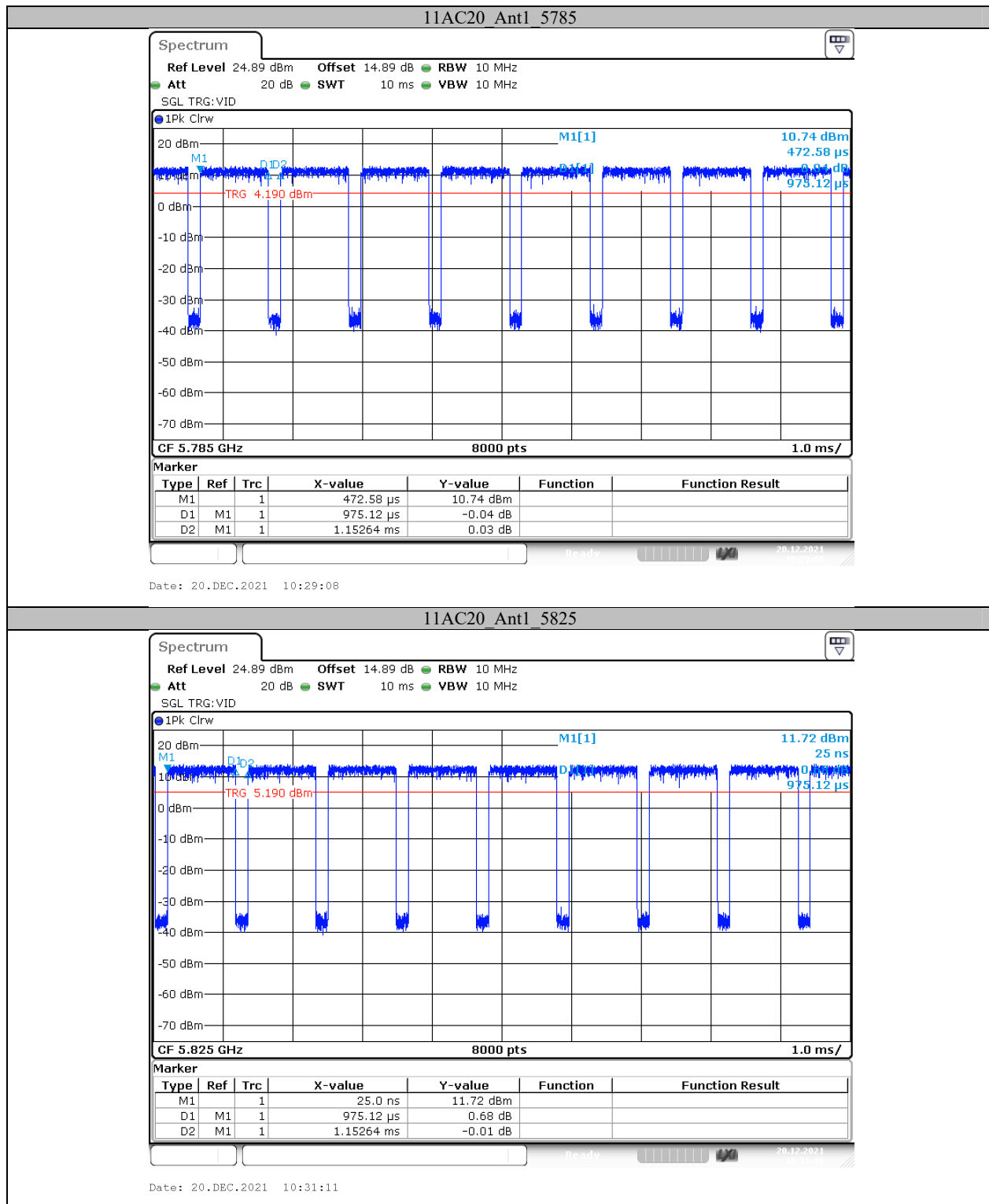


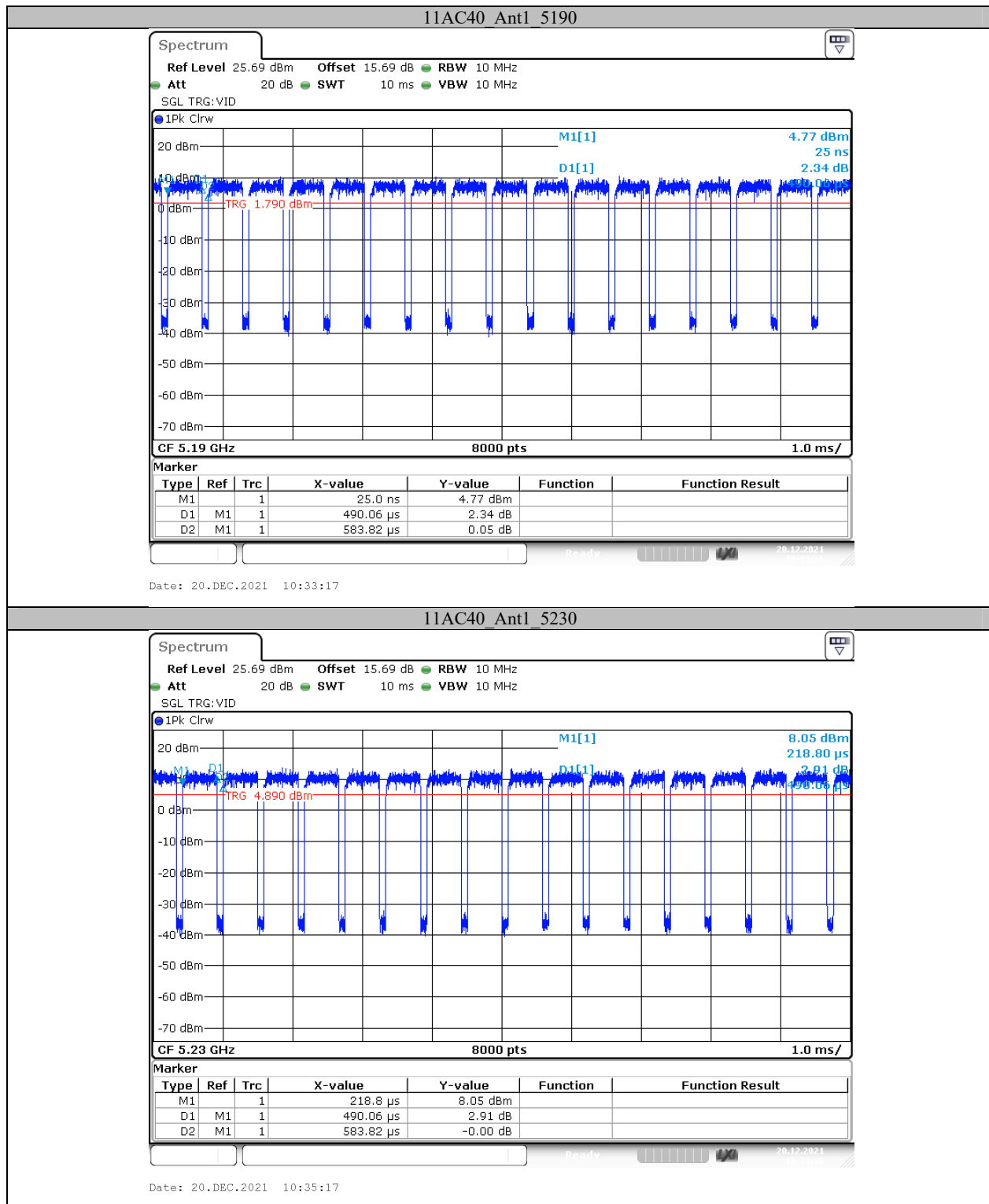


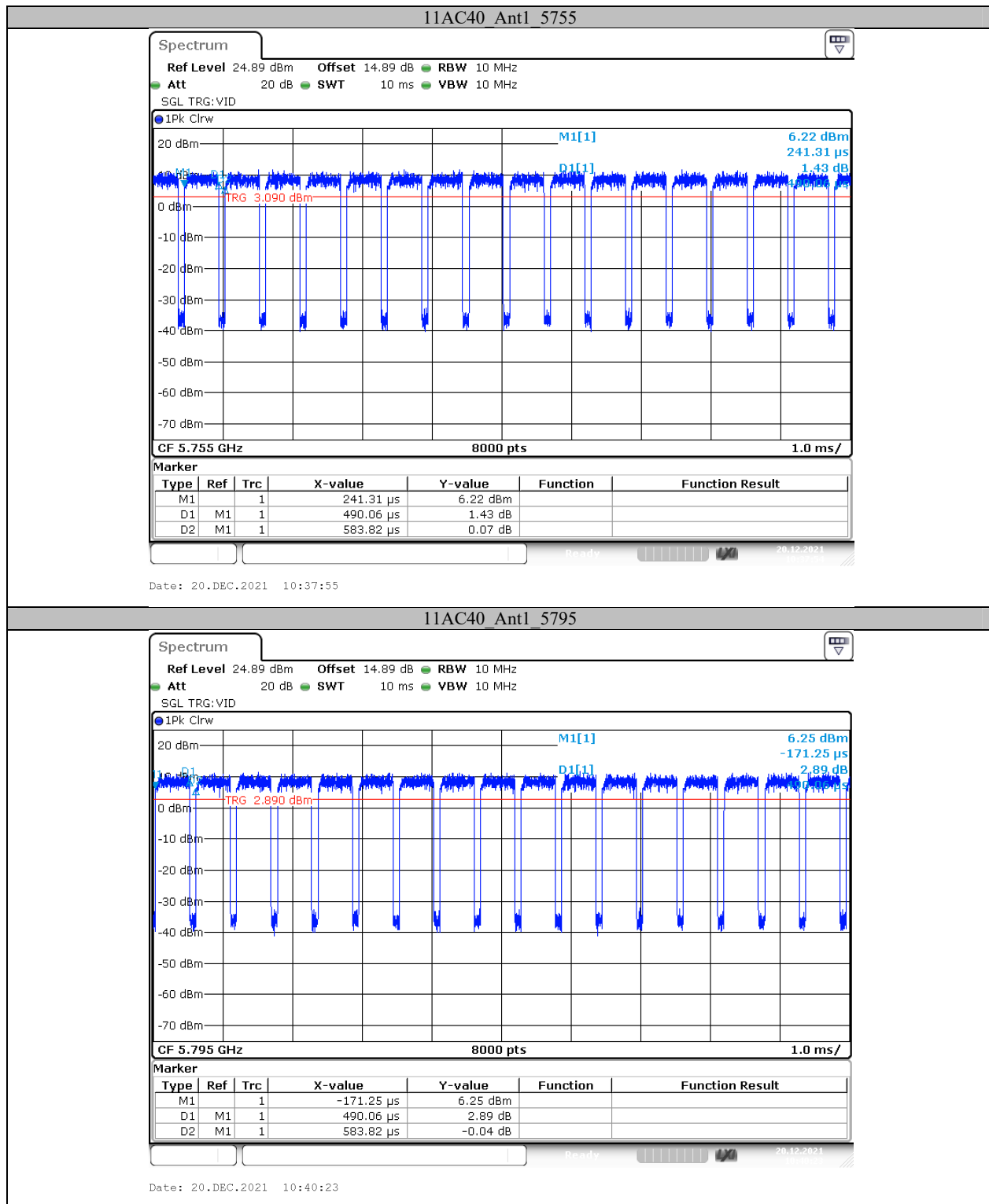


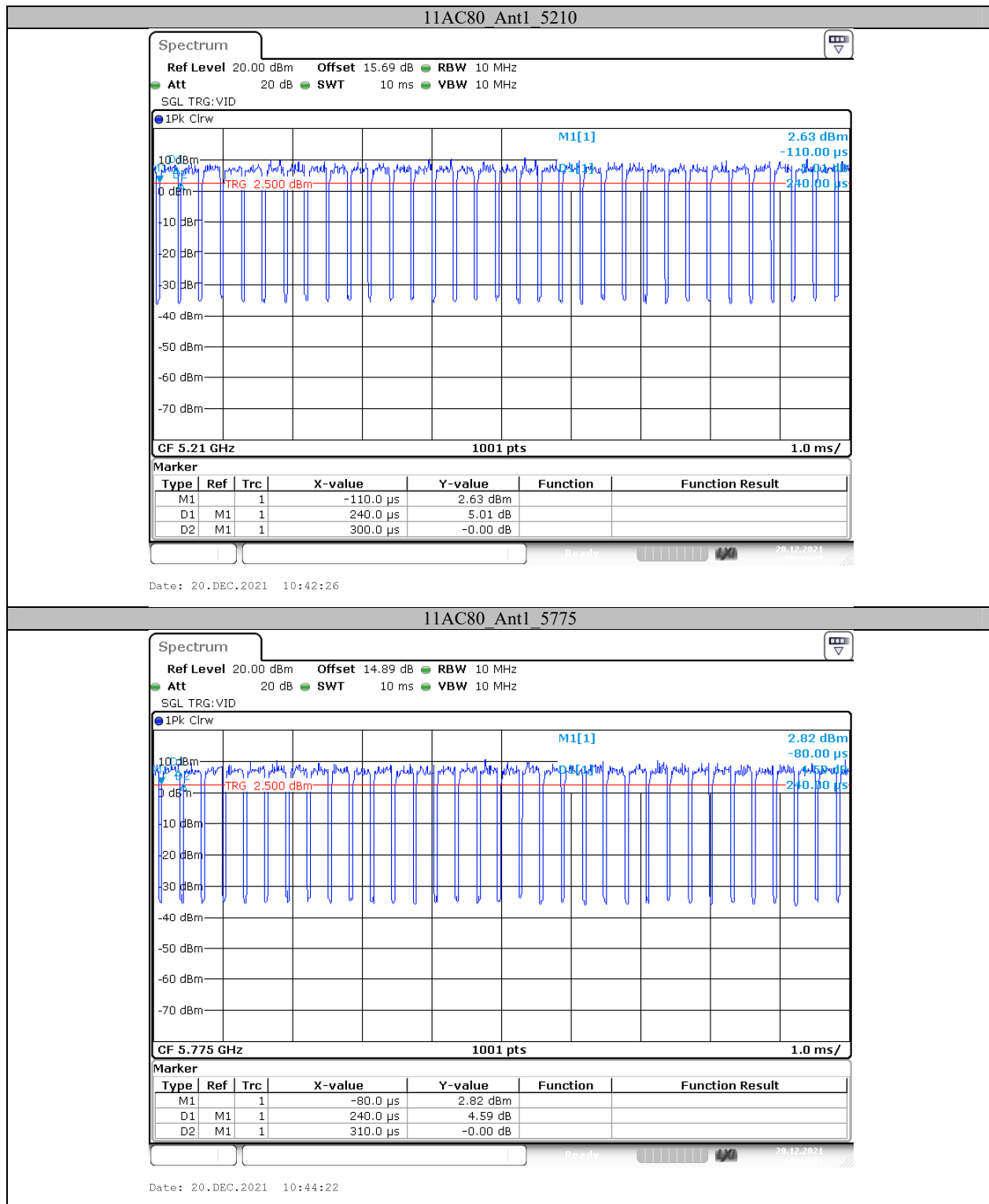












\*\*\*\*\* END OF REPORT \*\*\*\*\*