

## RF Test Data for RLAN(5. 8G) (Conducted Measurement)

Product Name: Drone

Trade Mark: TTROARDS

Test Model: K600GPS

FCC ID: 2BOL3TTN19

### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.5℃     |
| Relative Humidity: | 58%       |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Allen Lai |
| Supervised by:     | Max Zhang |
| NOTE               | N/A       |

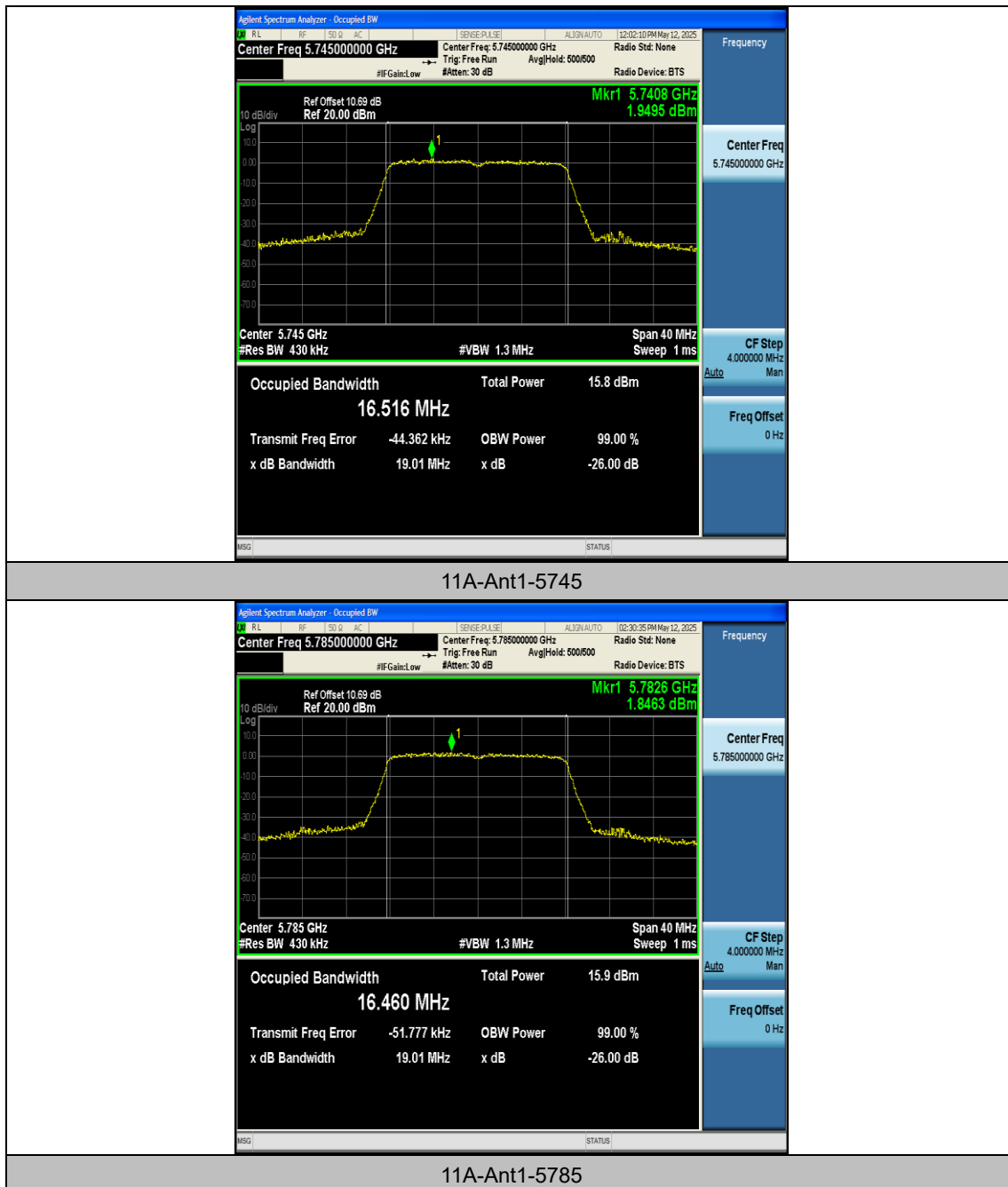
## Appendix A2: Occupied channel bandwidth

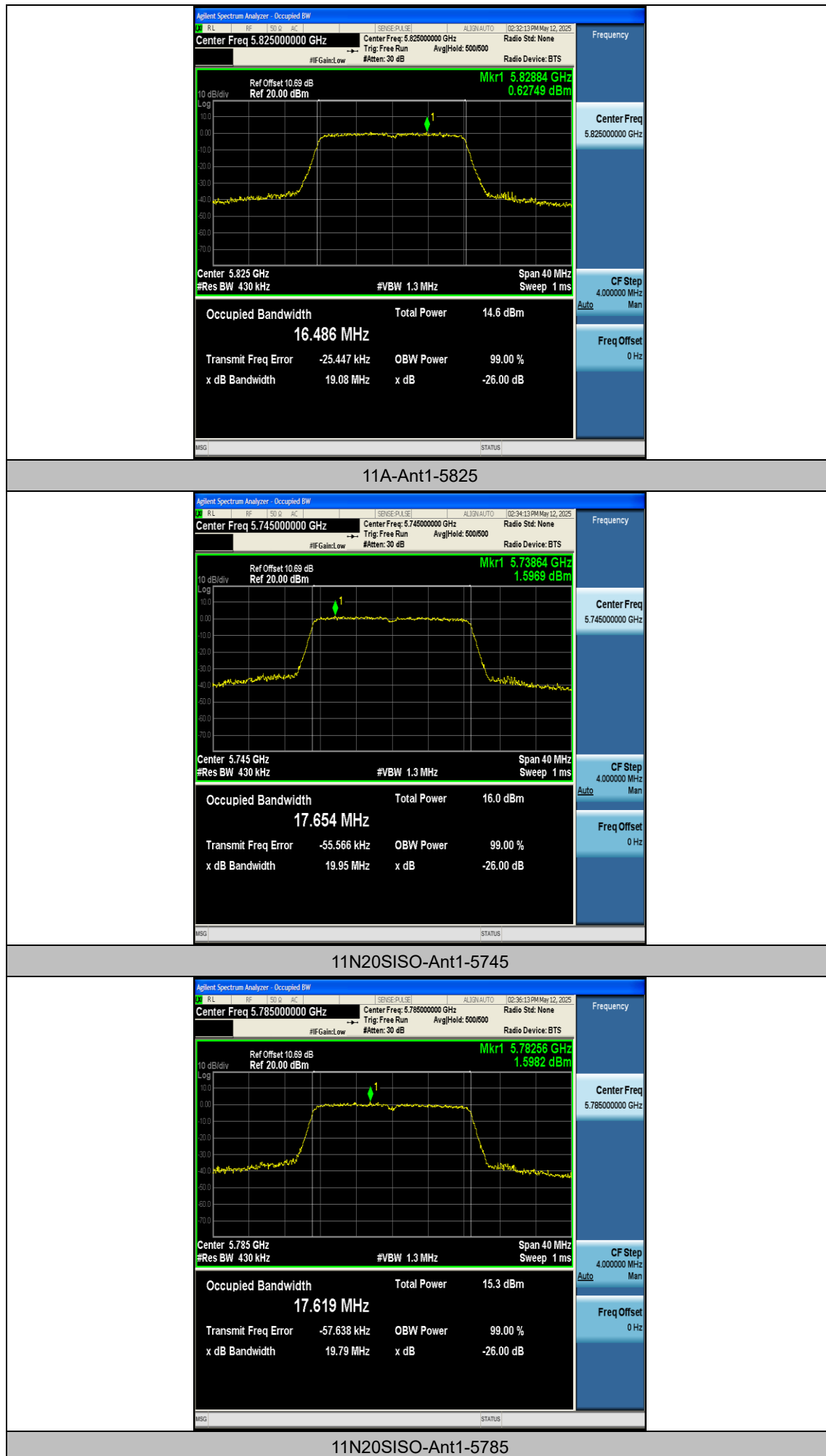
### Test Result

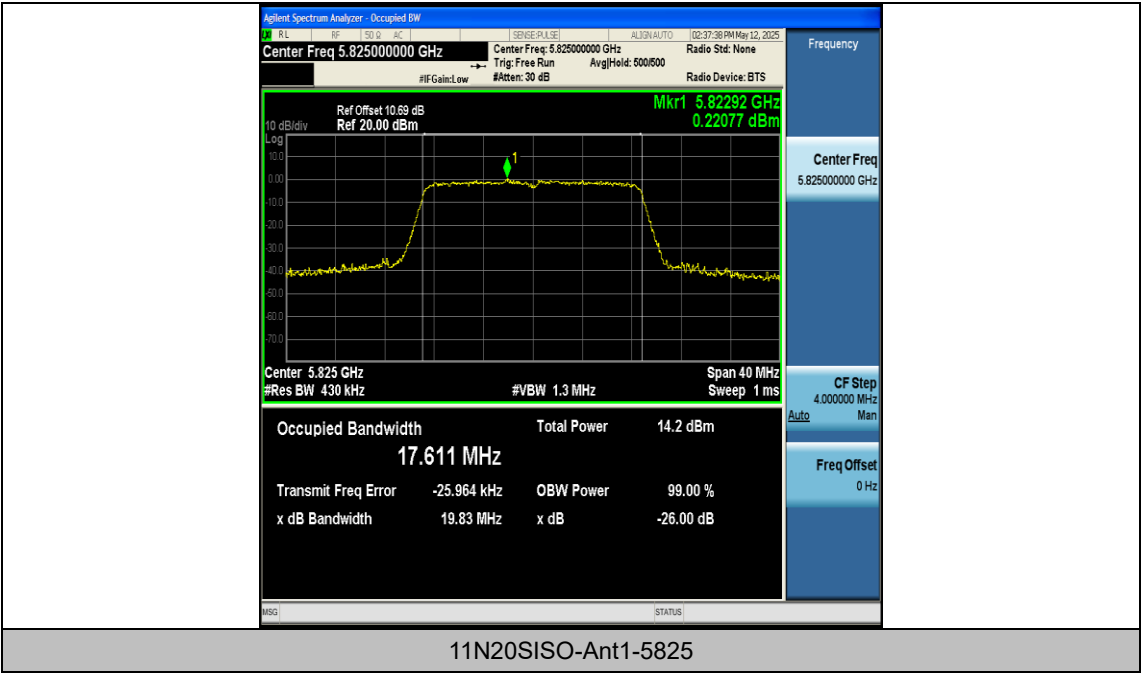
| Test Mode | Antenna | Frequency<br>[MHz] | OCB<br>[MHz] | FL<br>[MHz] | FH<br>[MHz] | Limit<br>[MHz] | Verdict |
|-----------|---------|--------------------|--------------|-------------|-------------|----------------|---------|
| 11A       | Ant1    | 5745               | 16.516       | 5736.6976   | 5753.2136   | ---            | ---     |
| 11A       | Ant1    | 5785               | 16.460       | 5776.7182   | 5793.1782   | ---            | ---     |
| 11A       | Ant1    | 5825               | 16.486       | 5816.7316   | 5833.2176   | ---            | ---     |
| 11N20SISO | Ant1    | 5745               | 17.654       | 5736.1174   | 5753.7714   | ---            | ---     |
| 11N20SISO | Ant1    | 5785               | 17.619       | 5776.1329   | 5793.7519   | ---            | ---     |
| 11N20SISO | Ant1    | 5825               | 17.611       | 5816.1685   | 5833.7795   | ---            | ---     |

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

## Test Graphs







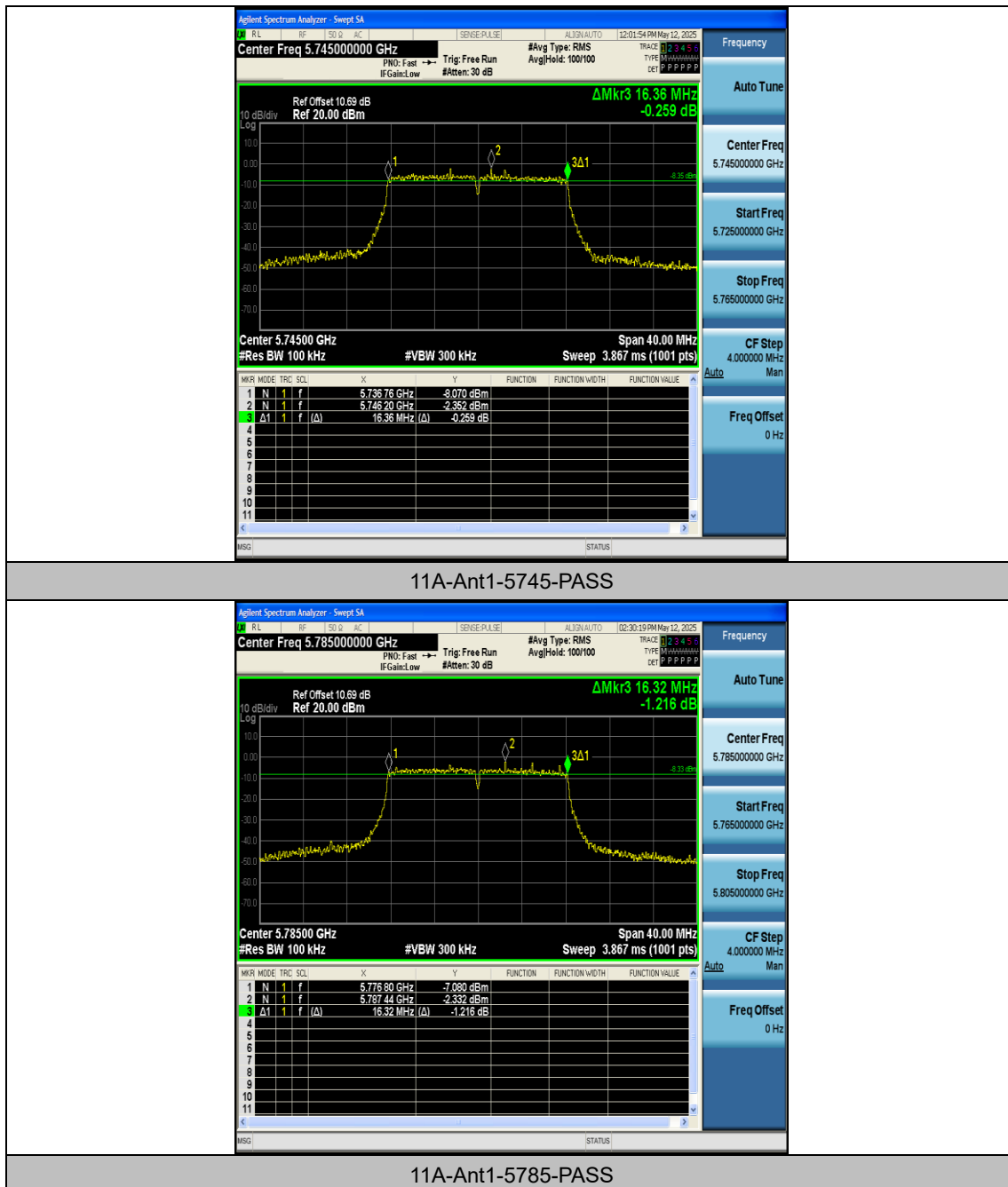
## Appendix A: Min emission bandwidth

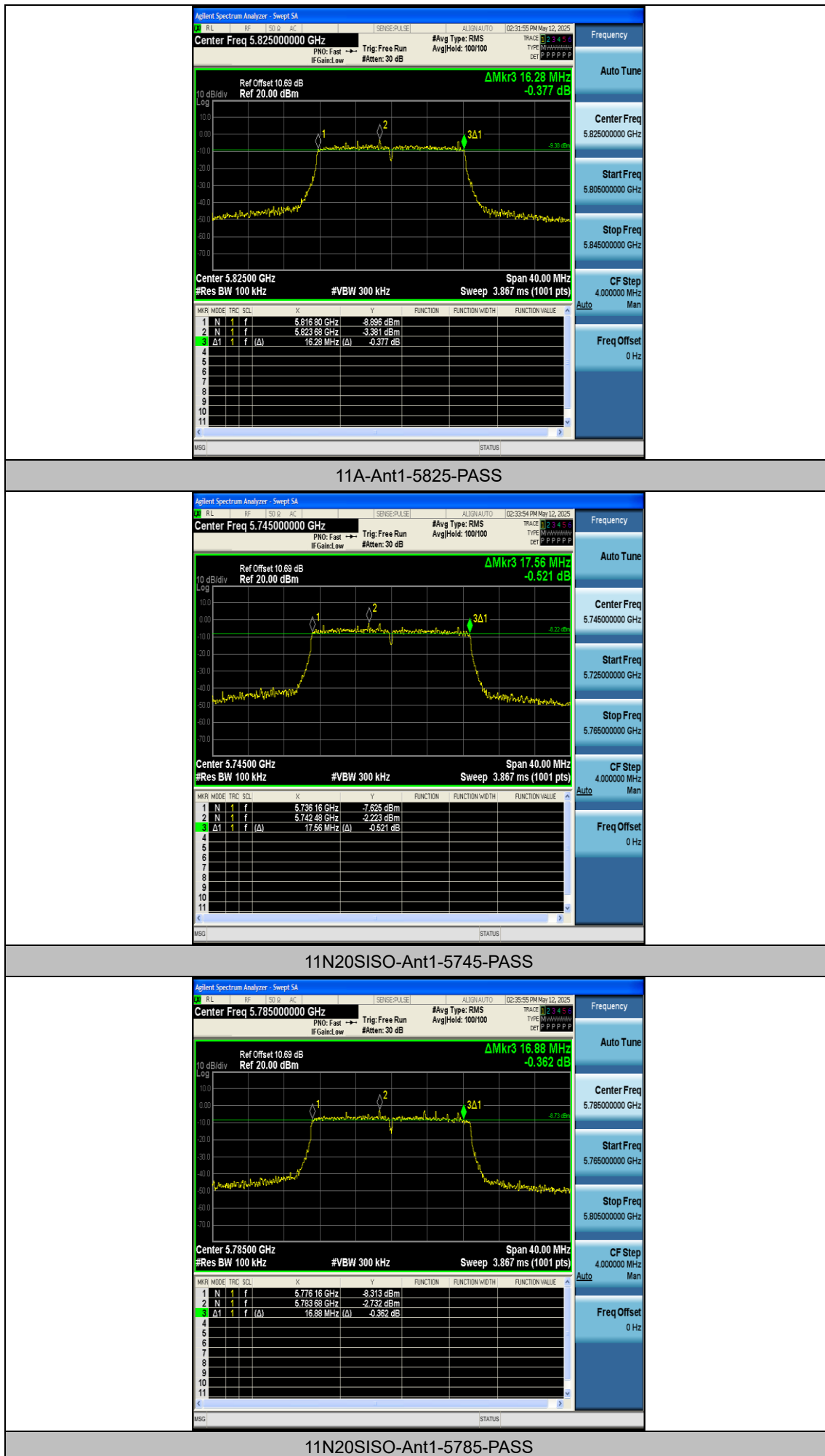
### Test Result

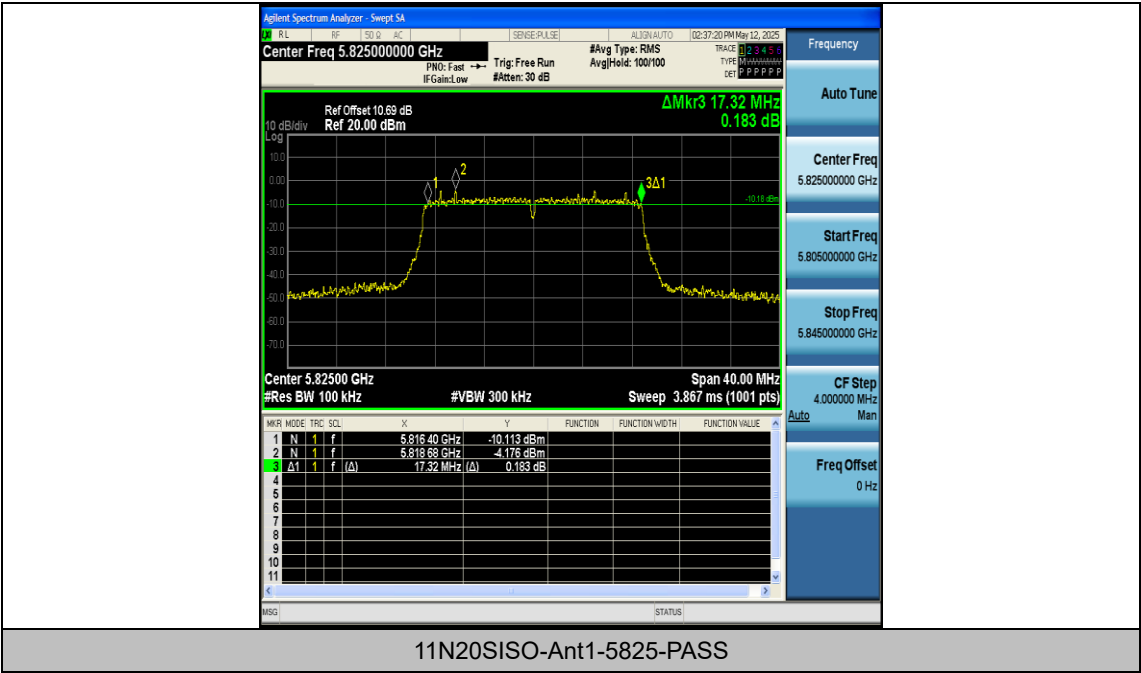
| Test Mode | Antenna | Frequency<br>[MHz] | 6db EBW<br>[MHz] | FL<br>[MHz] | FH<br>[MHz] | Limit<br>[MHz] | Verdict |
|-----------|---------|--------------------|------------------|-------------|-------------|----------------|---------|
| 11A       | Ant1    | 5745               | 16.360           | 5736.760    | 5753.120    | 0.5            | PASS    |
| 11A       | Ant1    | 5785               | 16.320           | 5776.800    | 5793.120    | 0.5            | PASS    |
| 11A       | Ant1    | 5825               | 16.280           | 5816.800    | 5833.080    | 0.5            | PASS    |
| 11N20SISO | Ant1    | 5745               | 17.560           | 5736.160    | 5753.720    | 0.5            | PASS    |
| 11N20SISO | Ant1    | 5785               | 16.880           | 5776.160    | 5793.040    | 0.5            | PASS    |
| 11N20SISO | Ant1    | 5825               | 17.320           | 5816.400    | 5833.720    | 0.5            | PASS    |

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

## Test Graphs







## Appendix B: Maximum conducted output power

### Test Result

| Test Mode | Antenna | Frequency<br>[MHz] | Conducted<br>Power<br>[dBm] | Conducted<br>Limit<br>[dBm] | Verdict |
|-----------|---------|--------------------|-----------------------------|-----------------------------|---------|
| 11A       | Ant1    | 5745               | 9.04                        | ≤30.00                      | PASS    |
| 11A       | Ant1    | 5785               | 9.30                        | ≤30.00                      | PASS    |
| 11A       | Ant1    | 5825               | 7.98                        | ≤30.00                      | PASS    |
| 11N20SISO | Ant1    | 5745               | 9.40                        | ≤30.00                      | PASS    |
| 11N20SISO | Ant1    | 5785               | 8.61                        | ≤30.00                      | PASS    |
| 11N20SISO | Ant1    | 5825               | 7.70                        | ≤30.00                      | PASS    |

Note: offset(dB) = cable loss(dB) + attenuator factor(dB) + Duty Cycle Factor(dB)

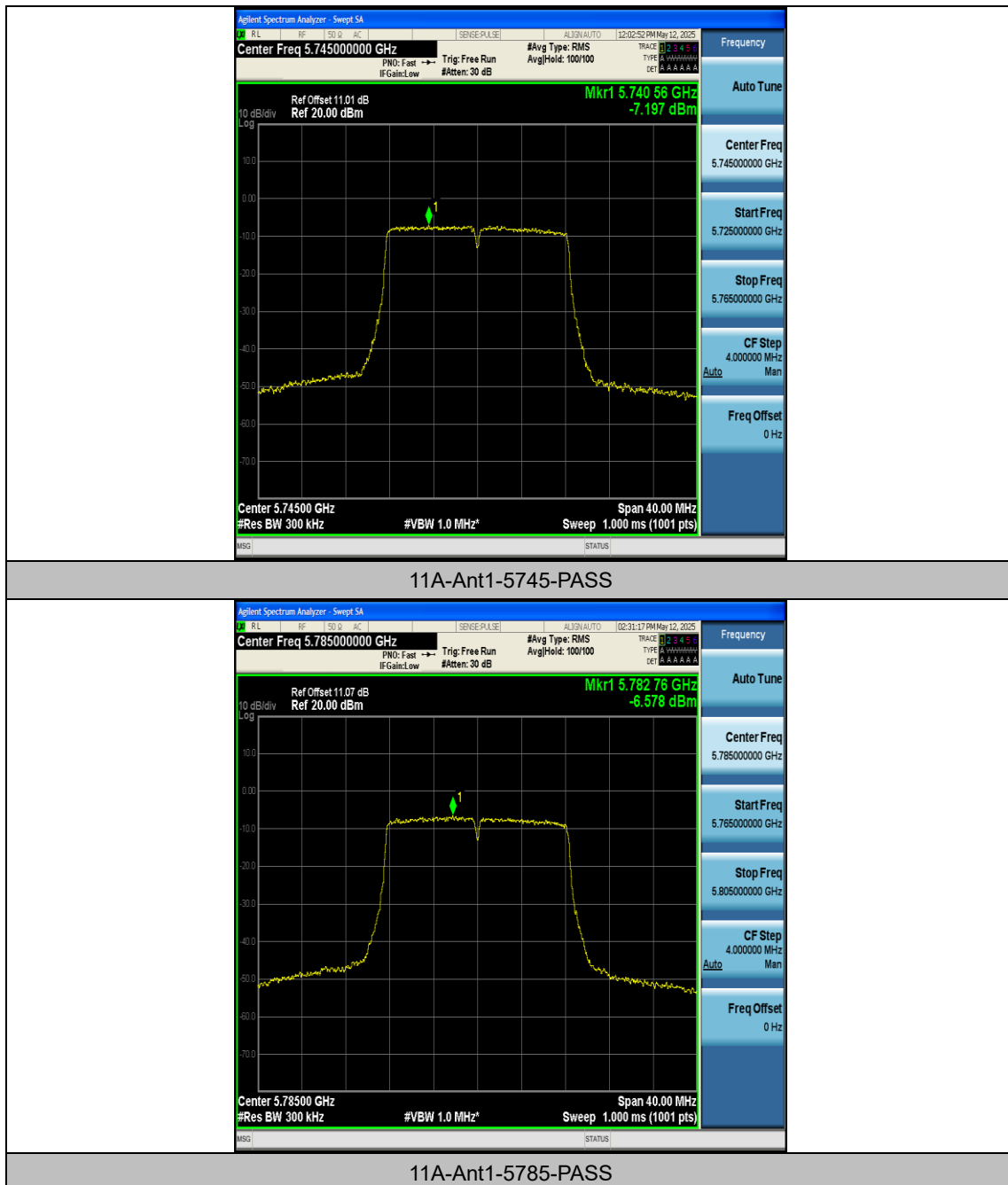
## Appendix C: Maximum power spectral density

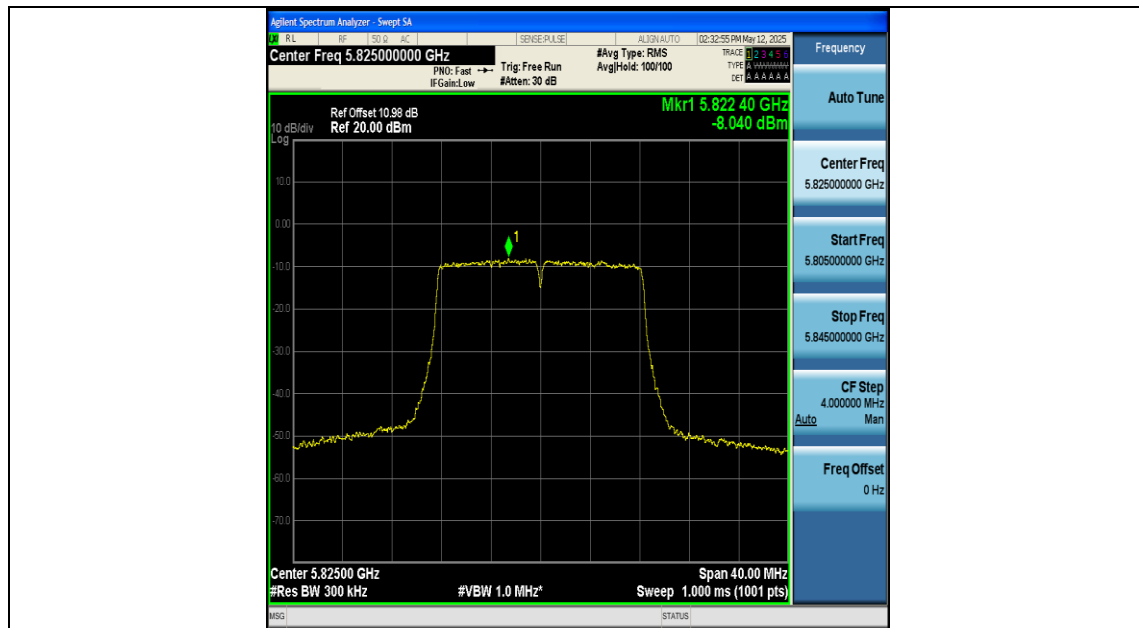
### Test Result

| Frequency<br>[MHz] | Test Mode | Antenna | Result<br>[dBm/500KHz] | Limit<br>[dBm/500KHz] | Verdict |
|--------------------|-----------|---------|------------------------|-----------------------|---------|
| 5745               | 11A       | Ant1    | -7.20                  | ≤30.00                | PASS    |
| 5785               | 11A       | Ant1    | -6.58                  | ≤30.00                | PASS    |
| 5825               | 11A       | Ant1    | -8.04                  | ≤30.00                | PASS    |
| 5745               | 11N20SISO | Ant1    | -7.17                  | ≤30.00                | PASS    |
| 5785               | 11N20SISO | Ant1    | -7.97                  | ≤30.00                | PASS    |
| 5825               | 11N20SISO | Ant1    | -8.11                  | ≤30.00                | PASS    |

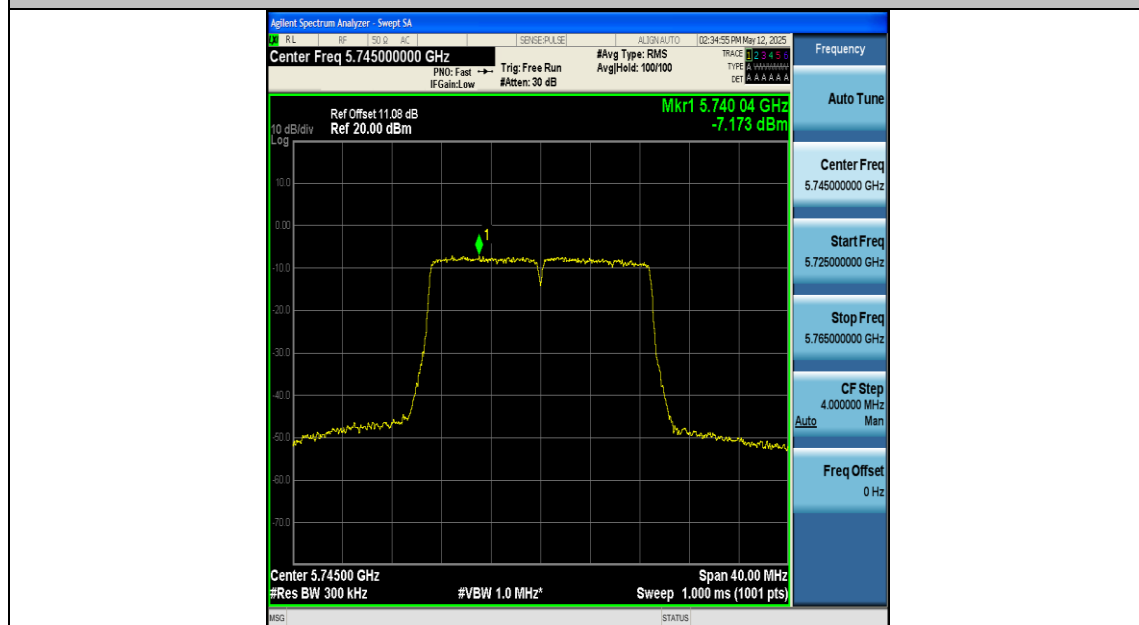
Note: offset(dB) = cable loss(dB) + attenuator factor(dB) + Duty Cycle Factor(dB) + RB Factor(dB)

## Test Graphs

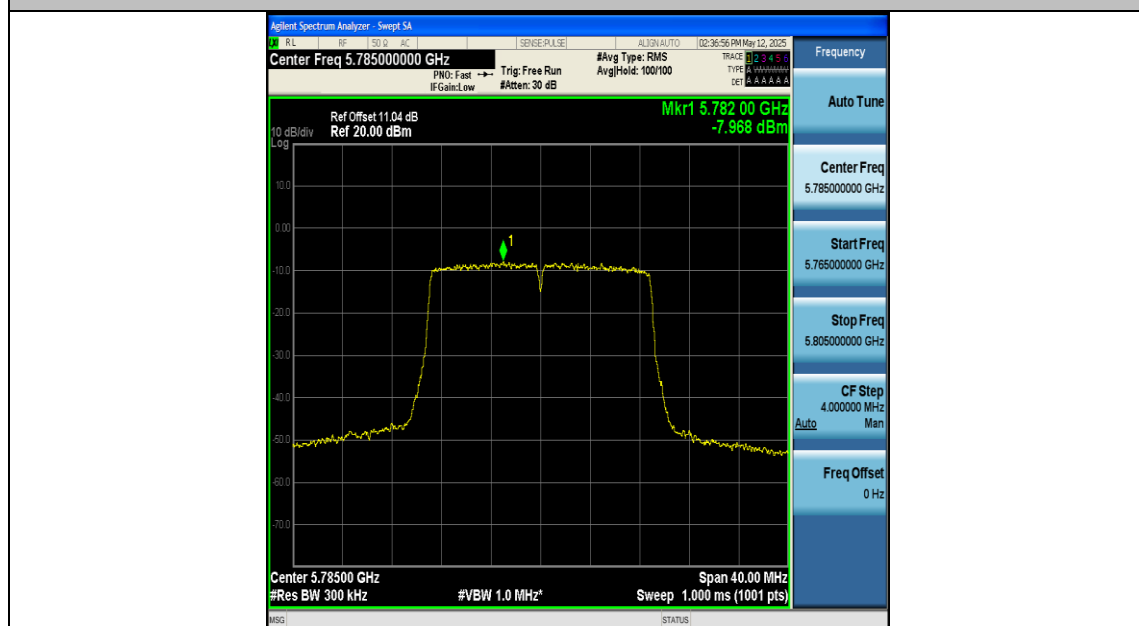




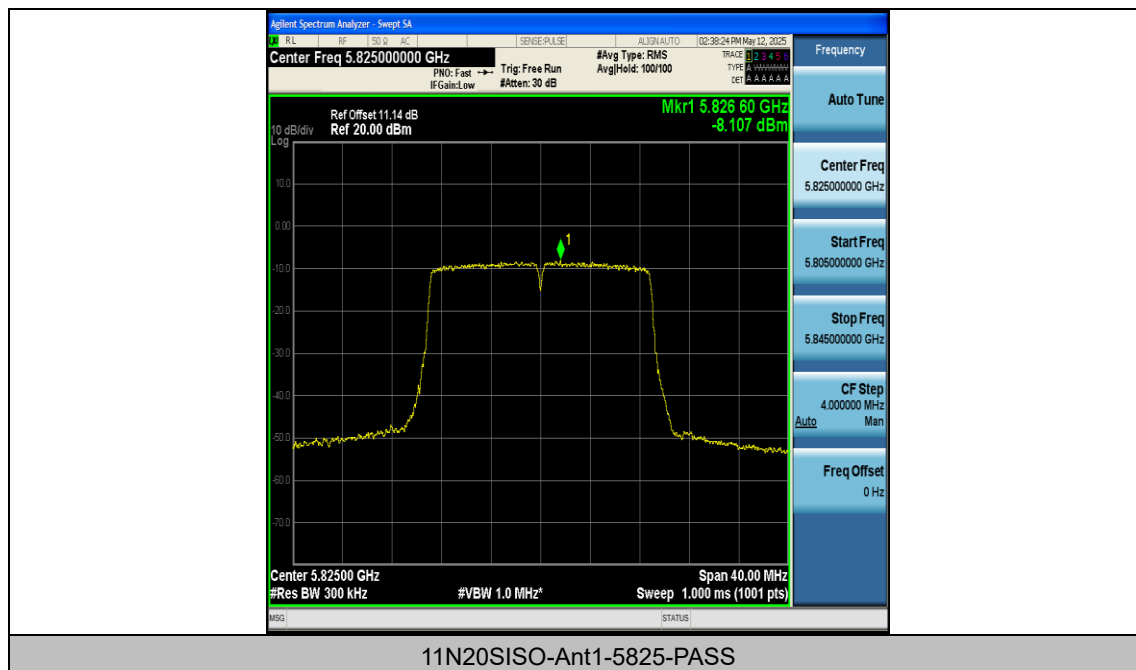
11A-Ant1-5825-PASS



11N20SISO-Ant1-5745-PASS



11N20SISO-Ant1-5785-PASS



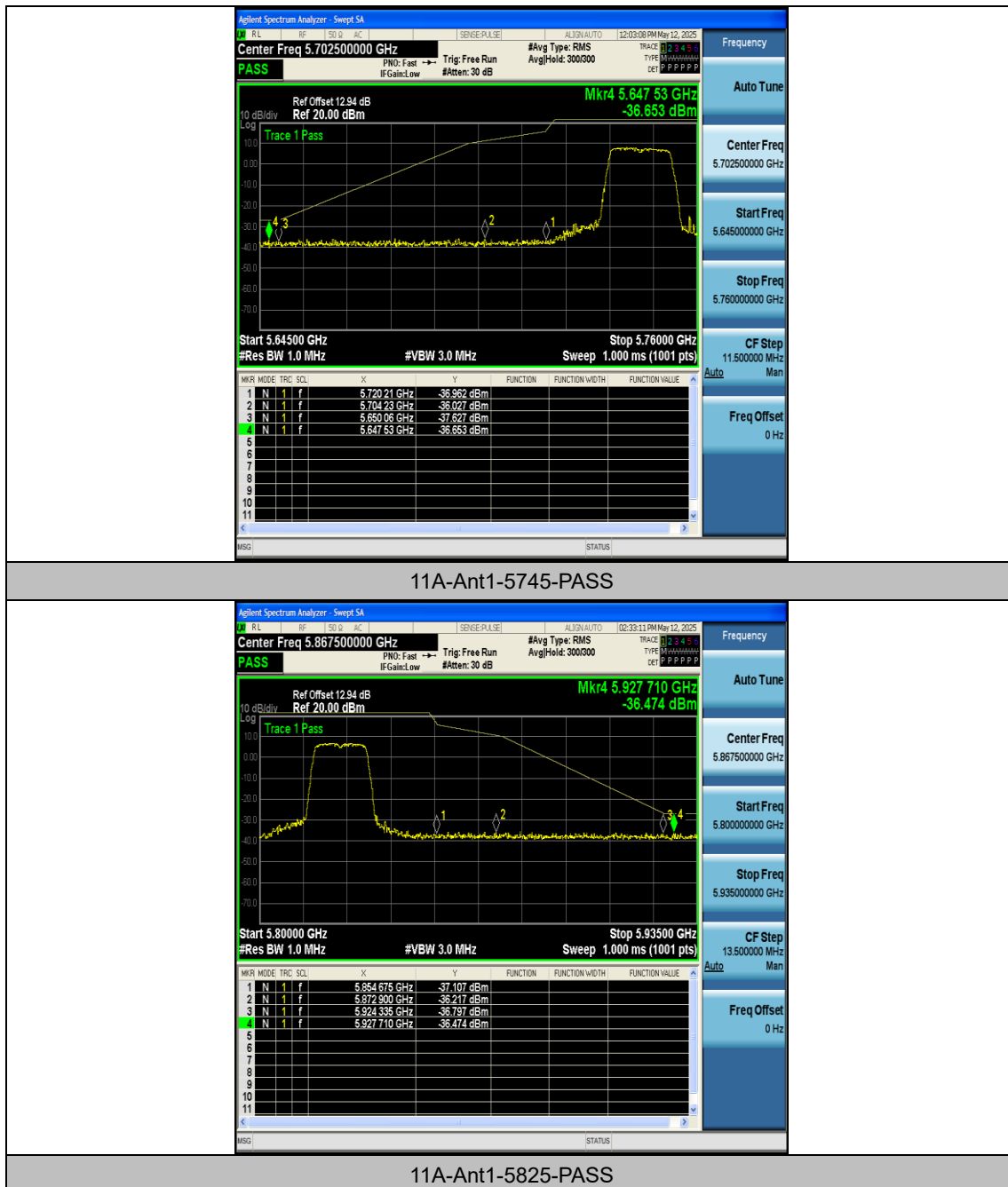
## Appendix D: Band edge measurements

### Test Result

| Test Mode     | Antenna | Ch. Name | Frequency [MHz] | Freq. Range [MHz] | Result [dBm] | Limit [dBm] | Verdict |
|---------------|---------|----------|-----------------|-------------------|--------------|-------------|---------|
| 11A           | Ant1    | Low      | 5745            | 5720~5725         | -36.96       | ≤16.08      | PASS    |
| 11A           | Ant1    | Low      | 5745            | 5700~5720         | -36.03       | ≤11.18      | PASS    |
| 11A           | Ant1    | Low      | 5745            | 5650~5700         | -37.63       | ≤-26.96     | PASS    |
| 11A           | Ant1    | Low      | 5745            | 5760~5650         | -36.65       | ≤-27        | PASS    |
| 11A           | Ant1    | High     | 5825            | 5850~5855         | -37.11       | ≤16.34      | PASS    |
| 11A           | Ant1    | High     | 5825            | 5855~5875         | -36.22       | ≤10.59      | PASS    |
| 11A           | Ant1    | High     | 5825            | 5875~5925         | -36.8        | ≤-26.51     | PASS    |
| 11A           | Ant1    | High     | 5825            | 5925~5935         | -36.47       | ≤-27        | PASS    |
| 11N20SI<br>SO | Ant1    | Low      | 5745            | 5720~5725         | -37.35       | ≤15.82      | PASS    |
| 11N20SI<br>SO | Ant1    | Low      | 5745            | 5700~5720         | -36.14       | ≤11.57      | PASS    |
| 11N20SI<br>SO | Ant1    | Low      | 5745            | 5650~5700         | -36.97       | ≤-26.02     | PASS    |
| 11N20SI<br>SO | Ant1    | Low      | 5745            | 5760~5650         | -36.05       | ≤-27        | PASS    |
| 11N20SI<br>SO | Ant1    | High     | 5825            | 5850~5855         | -37.21       | ≤15.73      | PASS    |
| 11N20SI<br>SO | Ant1    | High     | 5825            | 5855~5875         | -35.55       | ≤10.02      | PASS    |
| 11N20SI<br>SO | Ant1    | High     | 5825            | 5875~5925         | -37.52       | ≤-26.81     | PASS    |
| 11N20SI<br>SO | Ant1    | High     | 5825            | 5925~5935         | -36.71       | ≤-27        | PASS    |

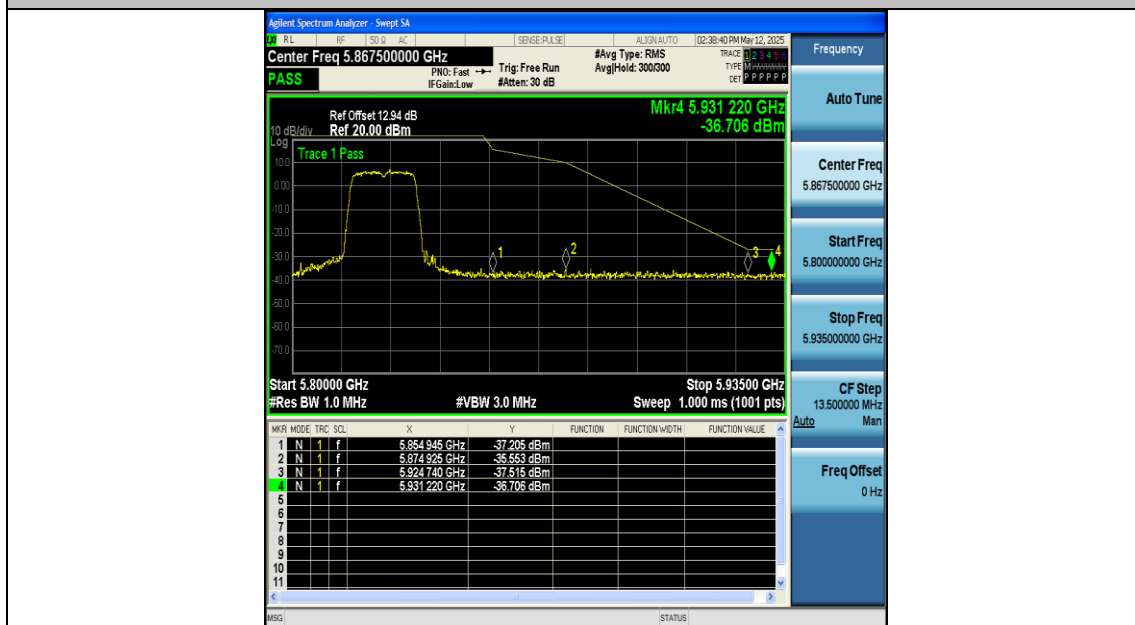
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

## Test Graphs





11N20SISO-Ant1-5745-PASS



11N20SISO-Ant1-5825-PASS

## Appendix E: Frequency Stability

### Test Result

Ant1

| Frequency<br>(MHz) | Environment<br>Temperature<br>(Degree) | Voltage<br>(VDC) | Measured<br>Frequency<br>(MHz) | Limit Range<br>(MHz) | Test<br>Results |
|--------------------|----------------------------------------|------------------|--------------------------------|----------------------|-----------------|
| 5745               | 20                                     | 4.07             | 5744.900978                    | 5725 – 5850          | PASS            |
| 5745               | 20                                     | 3.33             | 5745.041039                    | 5725 – 5850          | PASS            |
| 5745               | 50                                     | 3.70             | 5744.933548                    | 5725 – 5850          | PASS            |
| 5745               | 40                                     | 3.70             | 5745.050945                    | 5725 – 5850          | PASS            |
| 5745               | 30                                     | 3.70             | 5745.009926                    | 5725 – 5850          | PASS            |
| 5745               | 20                                     | 3.70             | 5744.907202                    | 5725 – 5850          | PASS            |
| 5745               | 10                                     | 3.70             | 5745.076732                    | 5725 – 5850          | PASS            |
| 5745               | 0                                      | 3.70             | 5745.084333                    | 5725 – 5850          | PASS            |
| 5745               | -10                                    | 3.70             | 5744.903159                    | 5725 – 5850          | PASS            |
| 5745               | -20                                    | 3.70             | 5745.033055                    | 5725 – 5850          | PASS            |
| 5745               | -30                                    | 3.70             | 5745.059729                    | 5725 – 5850          | PASS            |

Ant1

| Frequency<br>(MHz) | Environment<br>Temperature<br>(Degree) | Voltage<br>(VDC) | Measured<br>Frequency<br>(MHz) | Limit Range<br>(MHz) | Test<br>Results |
|--------------------|----------------------------------------|------------------|--------------------------------|----------------------|-----------------|
| 5785               | 20                                     | 4.07             | 5784.918658                    | 5725 – 5850          | PASS            |
| 5785               | 20                                     | 3.33             | 5784.976167                    | 5725 – 5850          | PASS            |
| 5785               | 50                                     | 3.70             | 5785.027551                    | 5725 – 5850          | PASS            |
| 5785               | 40                                     | 3.70             | 5784.962090                    | 5725 – 5850          | PASS            |
| 5785               | 30                                     | 3.70             | 5784.990629                    | 5725 – 5850          | PASS            |
| 5785               | 20                                     | 3.70             | 5784.998354                    | 5725 – 5850          | PASS            |
| 5785               | 10                                     | 3.70             | 5785.012681                    | 5725 – 5850          | PASS            |
| 5785               | 0                                      | 3.70             | 5785.059765                    | 5725 – 5850          | PASS            |
| 5785               | -10                                    | 3.70             | 5784.912339                    | 5725 – 5850          | PASS            |
| 5785               | -20                                    | 3.70             | 5785.074352                    | 5725 – 5850          | PASS            |
| 5785               | -30                                    | 3.70             | 5784.912952                    | 5725 – 5850          | PASS            |

Ant1

| Frequency<br>(MHz) | Enviroment<br>Temperature<br>(Degree) | Voltage<br>(VDC) | Measured<br>Frequency<br>(MHz) | Limit Range<br>(MHz) | Test<br>Results |
|--------------------|---------------------------------------|------------------|--------------------------------|----------------------|-----------------|
| 5825               | 20                                    | 4.07             | 5824.902968                    | 5725 – 5850          | PASS            |
| 5825               | 20                                    | 3.33             | 5824.910994                    | 5725 – 5850          | PASS            |
| 5825               | 50                                    | 3.70             | 5824.955446                    | 5725 – 5850          | PASS            |
| 5825               | 40                                    | 3.70             | 5824.950636                    | 5725 – 5850          | PASS            |
| 5825               | 30                                    | 3.70             | 5824.982370                    | 5725 – 5850          | PASS            |
| 5825               | 20                                    | 3.70             | 5825.085909                    | 5725 – 5850          | PASS            |
| 5825               | 10                                    | 3.70             | 5824.906989                    | 5725 – 5850          | PASS            |
| 5825               | 0                                     | 3.70             | 5825.008848                    | 5725 – 5850          | PASS            |
| 5825               | -10                                   | 3.70             | 5824.975844                    | 5725 – 5850          | PASS            |
| 5825               | -20                                   | 3.70             | 5824.953194                    | 5725 – 5850          | PASS            |
| 5825               | -30                                   | 3.70             | 5825.032182                    | 5725 – 5850          | PASS            |

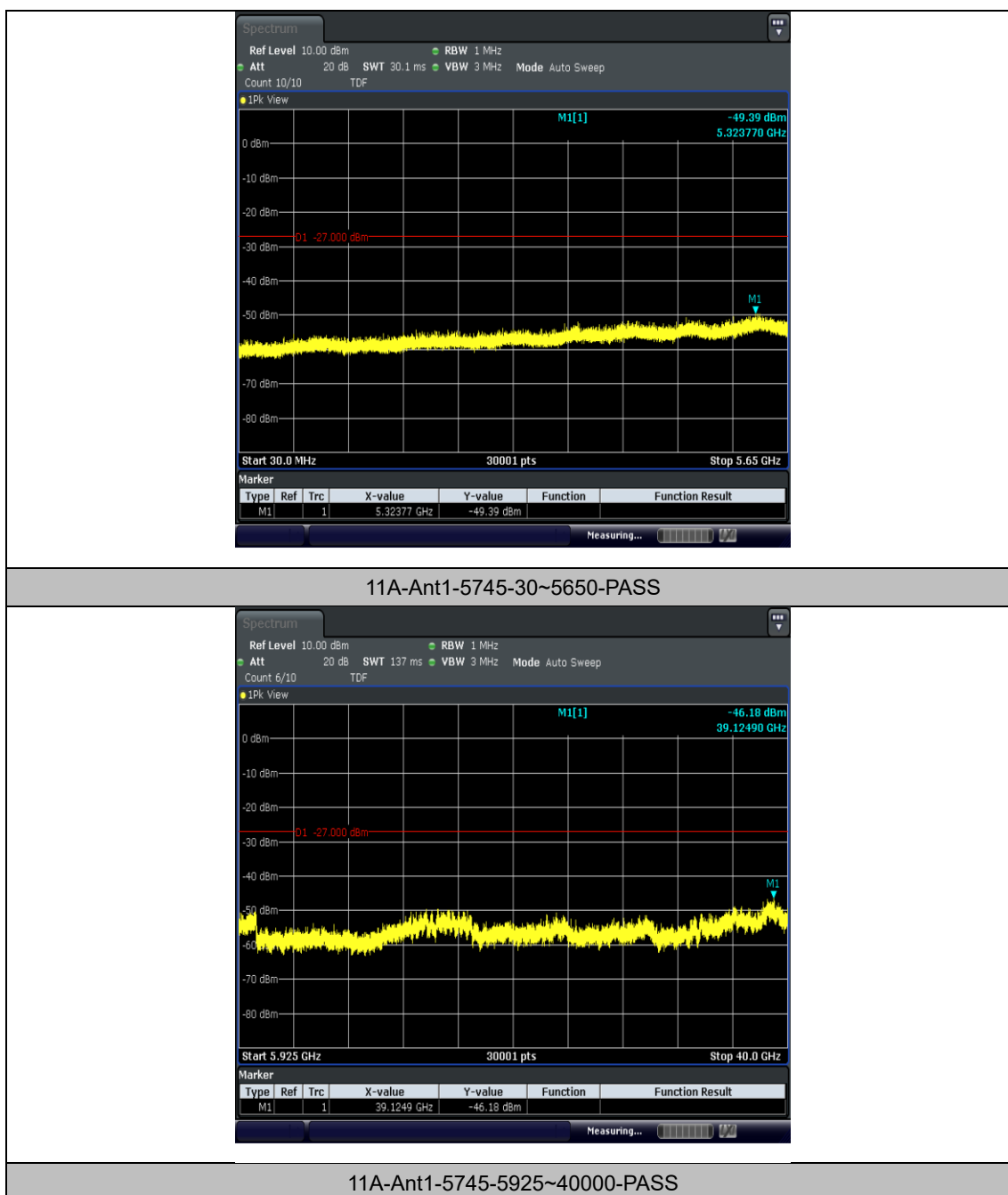
## Appendix F: Conducted Spurious Emission

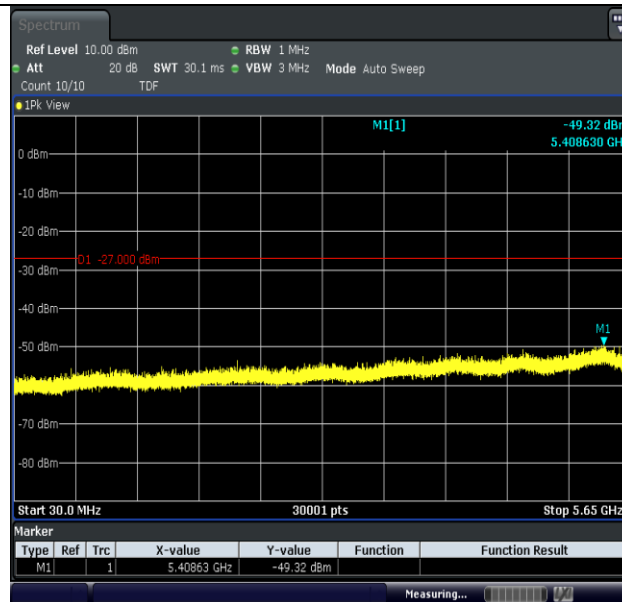
### Test Result

| TestMode  | Antenna | Frequency[MHz] | FreqRange [MHz] | Max. Fre [MHz] | Max. Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|-----------------|----------------|------------------|-------------|---------|
| 11A       | Ant1    | 5745           | 30~5650         | 5323.77        | -49.39           | ≤-27        | PASS    |
| 11A       | Ant1    | 5745           | 5925~40000      | 39124.9        | -46.18           | ≤-27        | PASS    |
| 11A       | Ant1    | 5785           | 30~5650         | 5408.63        | -49.32           | ≤-27        | PASS    |
| 11A       | Ant1    | 5785           | 5925~40000      | 38756.9        | -46.04           | ≤-27        | PASS    |
| 11A       | Ant1    | 5825           | 30~5650         | 5320.02        | -48.84           | ≤-27        | PASS    |
| 11A       | Ant1    | 5825           | 5925~40000      | 38768.2        | -46.02           | ≤-27        | PASS    |
| 11N20SISO | Ant1    | 5745           | 30~5650         | 5448.53        | -49.1            | ≤-27        | PASS    |
| 11N20SISO | Ant1    | 5745           | 5925~40000      | 38793.2        | -45.41           | ≤-27        | PASS    |
| 11N20SISO | Ant1    | 5785           | 30~5650         | 5367.98        | -49.63           | ≤-27        | PASS    |
| 11N20SISO | Ant1    | 5785           | 5925~40000      | 39105.6        | -45.38           | ≤-27        | PASS    |
| 11N20SISO | Ant1    | 5825           | 30~5650         | 5411.63        | -49.63           | ≤-27        | PASS    |
| 11N20SISO | Ant1    | 5825           | 5925~40000      | 39087.4        | -46.2            | ≤-27        | PASS    |

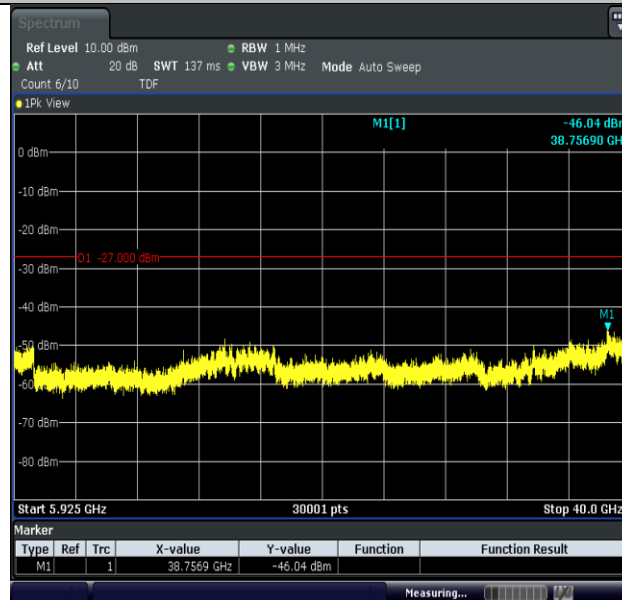
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 40 GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.

## Test Graphs

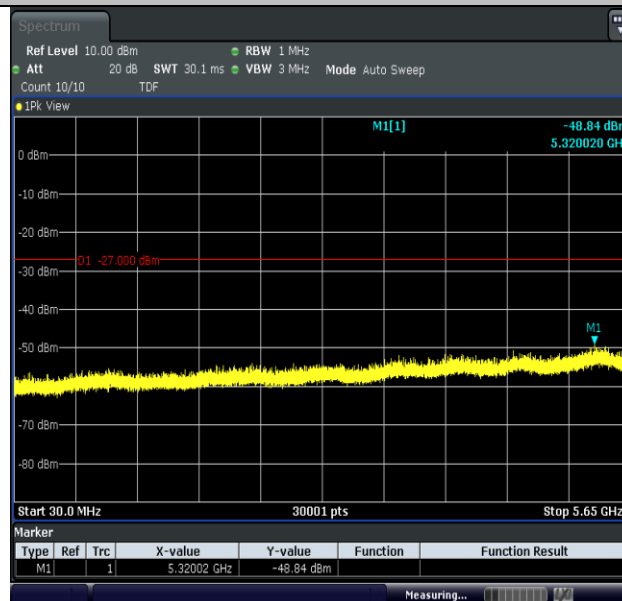




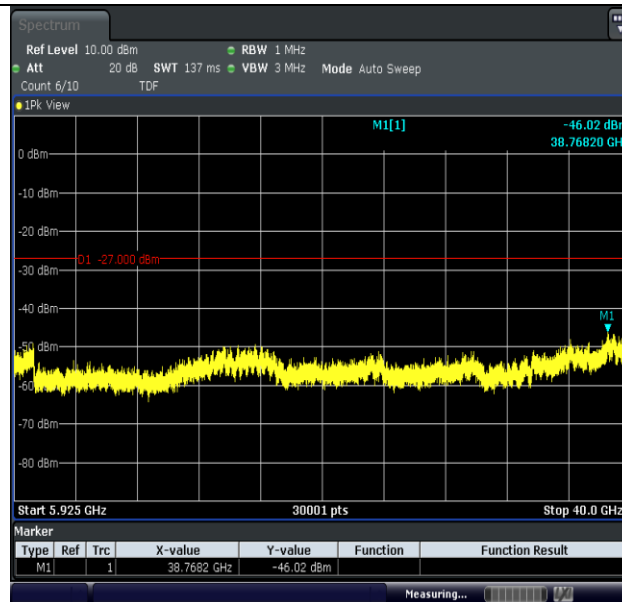
## 11A-Ant1-5785-30~5650-PASS



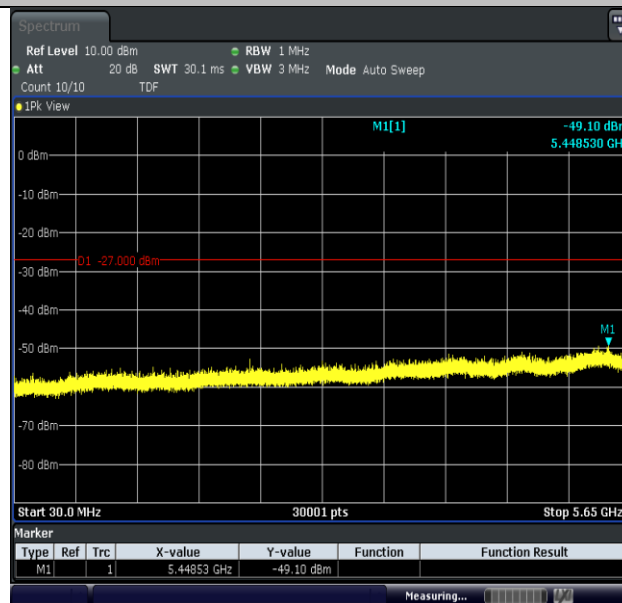
## 11A-Ant1-5785-5925~40000-PASS



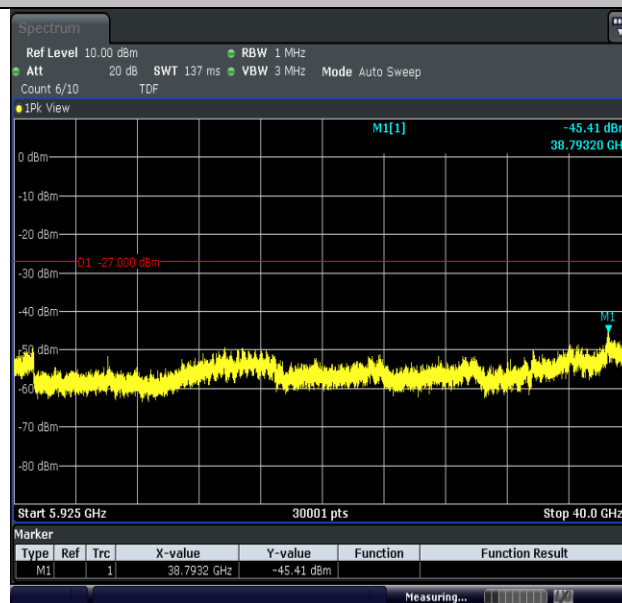
## 11A-Ant1-5825-30~5650-PASS



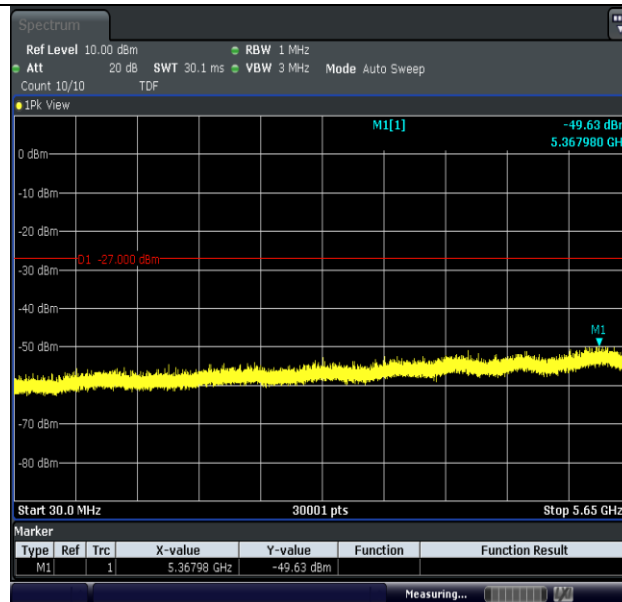
11A-Ant1-5825-5925~40000-PASS



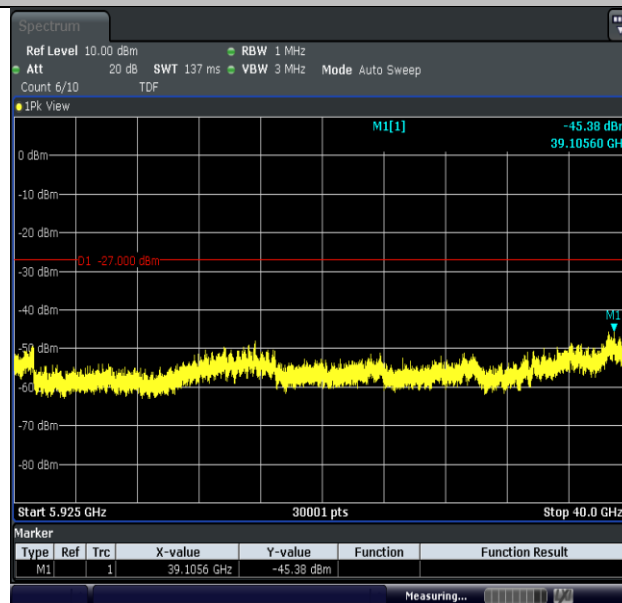
11N20SISO-Ant1-5745-30~5650-PASS



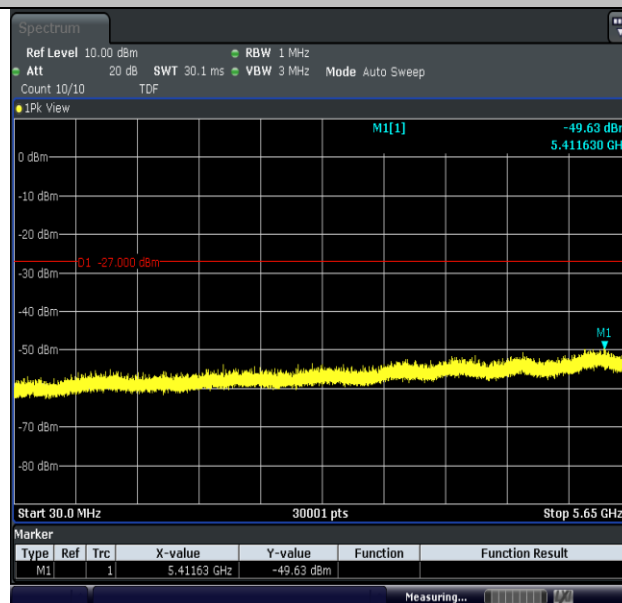
11N20SISO-Ant1-5745-5925~40000-PASS



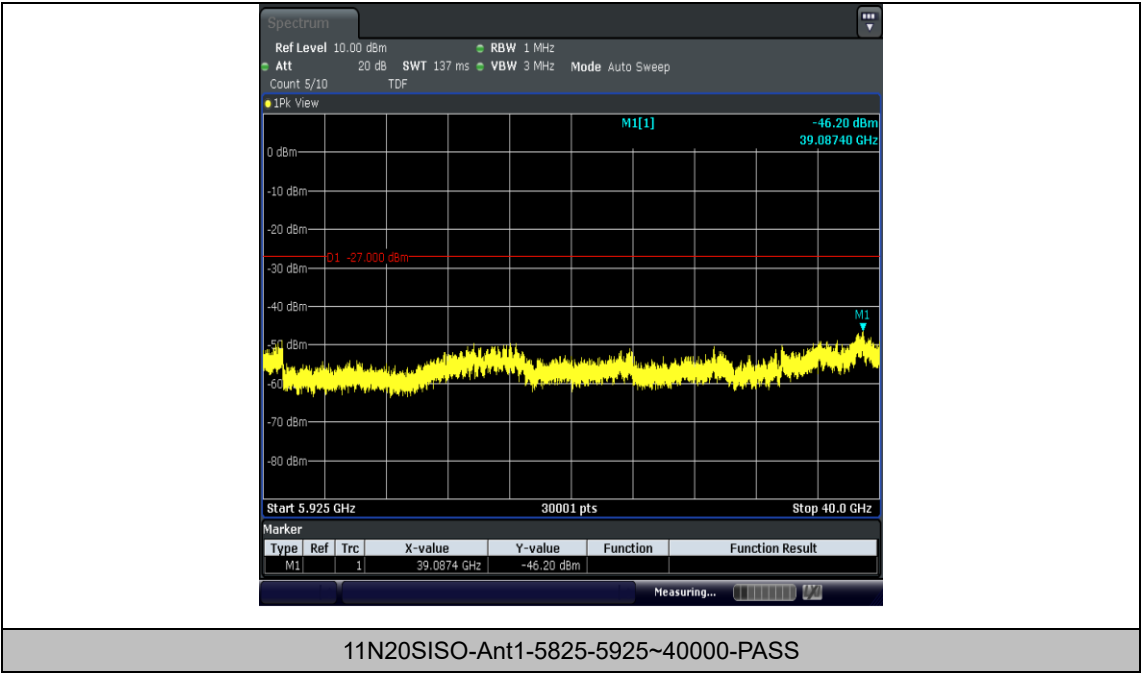
## 11N20SISO-Ant1-5785-30~5650-PASS



## 11N20SISO-Ant1-5785-5925~40000-PASS



## 11N20SISO-Ant1-5825-30~5650-PASS



## Appendix G: Duty Cycle

### Test Result

| Test Mode | Antenna | Frequency<br>[MHz] | Transmission<br>Duration<br>[ms] | Transmission<br>Period<br>[ms] | Duty Cycle<br>[%] | Dc. Factor<br>[%] | 1/T  |
|-----------|---------|--------------------|----------------------------------|--------------------------------|-------------------|-------------------|------|
| 11A       | Ant1    | 5745               | 2.06                             | 2.22                           | 92.79             | 0.32              | 0.49 |
| 11A       | Ant1    | 5785               | 2.06                             | 2.25                           | 91.56             | 0.38              | 0.49 |
| 11A       | Ant1    | 5825               | 2.06                             | 2.20                           | 93.64             | 0.29              | 0.49 |
| 11N20SISO | Ant1    | 5745               | 1.92                             | 2.10                           | 91.43             | 0.39              | 0.52 |
| 11N20SISO | Ant1    | 5785               | 1.92                             | 2.08                           | 92.31             | 0.35              | 0.52 |
| 11N20SISO | Ant1    | 5825               | 1.92                             | 2.13                           | 90.14             | 0.45              | 0.52 |

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

## Test Graphs

