















## 10. Maximum Output Power

### 10.1. Block Diagram of Test Setup

Same as section 8.1

### 10.2. Limits

| FCC Part15, Subpart E  |                                                                                                                           |                        |
|------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------|
| Test Item              | Limit                                                                                                                     | Frequency Range (MHz)  |
| Conducted Output Power | <input type="checkbox"/> Outdoor Access Point: 1 W (30 dBm)                                                               | 5150-5250              |
|                        | <input type="checkbox"/> Indoor Access Point: 1 W (30 dBm)                                                                |                        |
|                        | <input type="checkbox"/> Fixed Point-To-Point Access Points: 1 W (30 dBm)                                                 |                        |
|                        | <input checked="" type="checkbox"/> Client Devices: 250 mW (24 dBm)                                                       |                        |
|                        | Shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. | 5250-5350<br>5470-5725 |
|                        | Shall not exceed 1 Watt (30 dBm).                                                                                         | 5725-5850              |

| ISED RSS-247 ISSUE 4               |                                                                                                                                                                                                                                                                                                                                                 |                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Test Item                          | Limit                                                                                                                                                                                                                                                                                                                                           | Frequency Range (MHz)               |
| Conducted Output Power or e.i.r.p. | The maximum e.i.r.p. shall not exceed 200 mW (23 dBm) or $10 + 10 \log_{10} B$ , dBm, whichever power is less. B is the 99 % emission bandwidth in megahertz.                                                                                                                                                                                   | 5150-5250                           |
|                                    | a. The maximum conducted output power shall not exceed 250 mW (24 dBm) or $11 + 10 \log_{10} B$ dBm, whichever is less.                                                                                                                                                                                                                         | 5250-5350                           |
|                                    | b. The maximum e.i.r.p. shall not exceed 1.0 W (30 dBm) or $17 + 10 \log_{10} B$ dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W. | 5250-5350<br>5470-5600<br>5650-5725 |
|                                    | Shall not exceed 1 Watt (30 dBm).                                                                                                                                                                                                                                                                                                               | 5725-5850                           |

Note: The above limits are based upon the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 10.3. Test Procedure

Method PM is Measurement using an RF average power meter. The procedure for this method is as follows:

(1) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:

a) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.

b) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.

c) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.

(2) If the transmitter does not transmit continuously, measure the duty cycle D of the transmitter output signal as described in 12.2.

(3) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.

(4) Correct the measurement in dBm by adding  $[10 \log (1 / D)]$ , where D is the duty cycle {e.g.,  $[10 \log (1 / 0.25)]$ , if the duty cycle is 25%}.

**10.4. Test Result**

| Test Mode  | Ant. | Freq. (MHz)   | Channel Power (dBm) | DC Factor (dBm) | Result (dBm) | FCC Limit (dBm) | ISED Limit (dBm) | Gain(d Bi) | EIRP (dBm) | EIRP Limit (dBm) | Verdict |
|------------|------|---------------|---------------------|-----------------|--------------|-----------------|------------------|------------|------------|------------------|---------|
| 11A        | Ant1 | 5180          | 12.81               | 1.44            | 14.25        | ≤23.98          | ≤22.94           | 4.05       | 18.30      | ≤22.24           | PASS    |
|            |      | 5200          | 11.90               | 1.43            | 13.33        | ≤23.98          | ≤22.94           | 4.05       | 17.38      | ≤22.26           | PASS    |
|            |      | 5240          | 12.33               | 1.44            | 13.77        | ≤23.98          | ≤22.94           | 4.05       | 17.82      | ≤22.21           | PASS    |
|            |      | 5260          | 11.84               | 1.43            | 13.27        | ≤23.92          | ≤23.24           | 4.05       | 17.32      | ≤26.99           | PASS    |
|            |      | 5280          | 11.49               | 1.40            | 12.89        | ≤23.98          | ≤23.22           | 4.05       | 16.94      | ≤26.99           | PASS    |
|            |      | 5320          | 11.67               | 1.40            | 13.07        | ≤23.98          | ≤23.22           | 4.05       | 17.12      | ≤26.99           | PASS    |
|            |      | 5500          | 12.15               | 1.40            | 13.55        | ≤23.98          | ≤23.22           | 4.05       | 17.60      | ≤26.99           | PASS    |
|            |      | 5580          | 11.50               | 1.43            | 12.93        | ≤23.98          | ≤23.23           | 4.05       | 16.98      | ≤26.99           | PASS    |
|            |      | 5700          | 10.74               | 1.43            | 12.17        | ≤23.98          | ≤23.20           | 4.05       | 16.22      | ≤26.99           | PASS    |
|            |      | 5720_U NII-2C | 10.56               | 1.43            | 11.99        | ≤22.78          | ≤22.26           | 4.05       | 16.04      | ≤26.99           | PASS    |
|            |      | 5720_U NII-3  | 2.36                | 1.43            | 3.79         | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5745          | 10.71               | 1.40            | 12.11        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5785          | 10.27               | 1.43            | 11.70        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5825          | 10.60               | 1.43            | 12.03        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
| 11N20SISO  | Ant1 | 5180          | 12.35               | 1.48            | 13.83        | ≤23.98          | ≤22.94           | 4.05       | 17.88      | ≤22.51           | PASS    |
|            |      | 5200          | 12.17               | 1.48            | 13.65        | ≤23.98          | ≤22.94           | 4.05       | 17.70      | ≤22.50           | PASS    |
|            |      | 5240          | 12.19               | 1.48            | 13.67        | ≤23.98          | ≤22.94           | 4.05       | 17.72      | ≤22.50           | PASS    |
|            |      | 5260          | 11.40               | 1.48            | 12.88        | ≤23.98          | ≤23.51           | 4.05       | 16.93      | ≤26.99           | PASS    |
|            |      | 5280          | 11.42               | 1.48            | 12.90        | ≤23.98          | ≤23.52           | 4.05       | 16.95      | ≤26.99           | PASS    |
|            |      | 5320          | 11.40               | 1.48            | 12.88        | ≤23.98          | ≤23.51           | 4.05       | 16.93      | ≤26.99           | PASS    |
|            |      | 5500          | 12.03               | 1.49            | 13.52        | ≤23.98          | ≤23.51           | 4.05       | 17.57      | ≤26.99           | PASS    |
|            |      | 5580          | 11.39               | 1.48            | 12.87        | ≤23.98          | ≤23.51           | 4.05       | 16.92      | ≤26.99           | PASS    |
|            |      | 5700          | 9.71                | 1.48            | 11.19        | ≤23.98          | ≤23.51           | 4.05       | 15.24      | ≤26.99           | PASS    |
|            |      | 5720_U NII-2C | 10.41               | 1.48            | 11.89        | ≤22.94          | ≤22.43           | 4.05       | 15.94      | ≤26.99           | PASS    |
|            |      | 5720_U NII-3  | 2.61                | 1.48            | 4.09         | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5745          | 10.65               | 1.51            | 12.16        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5785          | 10.59               | 1.48            | 12.07        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5825          | 11.30               | 1.51            | 12.81        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
| 11N40SISO  | Ant1 | 5190          | 9.04                | 2.65            | 11.69        | ≤23.98          | ≤22.94           | 4.05       | 15.74      | ≤23.01           | PASS    |
|            |      | 5230          | 11.01               | 2.58            | 13.59        | ≤23.98          | ≤22.94           | 4.05       | 17.64      | ≤23.01           | PASS    |
|            |      | 5270          | 10.51               | 2.58            | 13.09        | ≤23.98          | ≤23.98           | 4.05       | 17.14      | ≤26.99           | PASS    |
|            |      | 5310          | 10.69               | 2.58            | 13.27        | ≤23.98          | ≤23.98           | 4.05       | 17.32      | ≤26.99           | PASS    |
|            |      | 5510          | 10.79               | 2.58            | 13.37        | ≤23.98          | ≤23.98           | 4.05       | 17.42      | ≤26.99           | PASS    |
|            |      | 5550          | 10.78               | 2.65            | 13.43        | ≤23.98          | ≤23.98           | 4.05       | 17.48      | ≤26.99           | PASS    |
|            |      | 5670          | 9.82                | 2.58            | 12.40        | ≤23.98          | ≤23.98           | 4.05       | 16.45      | ≤26.99           | PASS    |
|            |      | 5710_U NII-2C | 9.78                | 2.61            | 12.39        | ≤23.98          | ≤23.98           | 4.05       | 16.44      | ≤26.99           | PASS    |
|            |      | 5710_U NII-3  | -2.97               | 2.61            | -0.36        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5755          | 9.48                | 2.58            | 12.06        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
|            |      | 5795          | 9.31                | 2.58            | 11.89        | ≤30.00          | ≤30.00           | 4.05       | ---        | ---              | PASS    |
| 11AC20SISO | Ant1 | 5180          | 12.67               | 1.45            | 14.12        | ≤23.98          | ≤22.94           | 4.05       | 18.17      | ≤22.51           | PASS    |
|            |      | 5200          | 11.95               | 1.48            | 13.43        | ≤23.98          | ≤22.94           | 4.05       | 17.48      | ≤22.52           | PASS    |
|            |      | 5240          | 12.21               | 1.47            | 13.68        | ≤23.98          | ≤22.94           | 4.05       | 17.73      | ≤22.50           | PASS    |
|            |      | 5260          | 11.44               | 1.50            | 12.94        | ≤23.98          | ≤23.50           | 4.05       | 16.99      | ≤26.99           | PASS    |
|            |      | 5280          | 8.40                | 1.48            | 9.88         | ≤23.98          | ≤23.52           | 4.05       | 13.93      | ≤26.99           | PASS    |
|            |      | 5320          | 11.51               | 1.50            | 13.01        | ≤23.98          | ≤23.50           | 4.05       | 17.06      | ≤26.99           | PASS    |
|            |      | 5500          | 10.56               | 1.50            | 12.06        | ≤23.98          | ≤23.49           | 4.05       | 16.11      | ≤26.99           | PASS    |
|            |      | 5580          | 11.51               | 1.45            | 12.96        | ≤23.98          | ≤23.52           | 4.05       | 17.01      | ≤26.99           | PASS    |
|            |      | 5700          | 9.92                | 1.50            | 11.42        | ≤23.98          | ≤23.53           | 4.05       | 15.47      | ≤26.99           | PASS    |
|            |      | 5720_U NII-2C | 10.19               | 1.50            | 11.69        | ≤22.89          | ≤22.44           | 4.05       | 15.74      | ≤26.99           | PASS    |

|                |      |                  |       |      |       |        |        |      |       |        |      |
|----------------|------|------------------|-------|------|-------|--------|--------|------|-------|--------|------|
|                |      | 5720_U<br>NII-3  | 2.40  | 1.50 | 3.90  | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5745             | 10.63 | 1.50 | 12.13 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5785             | 10.46 | 1.48 | 11.94 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5825             | 9.93  | 1.45 | 11.38 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
| 11AC40SI<br>SO | Ant1 | 5190             | 9.34  | 2.58 | 11.92 | ≤23.98 | ≤22.94 | 4.05 | 15.97 | ≤23.01 | PASS |
|                |      | 5230             | 10.67 | 2.58 | 13.25 | ≤23.98 | ≤22.94 | 4.05 | 17.30 | ≤23.01 | PASS |
|                |      | 5270             | 10.36 | 2.58 | 12.94 | ≤23.98 | ≤23.98 | 4.05 | 16.99 | ≤26.99 | PASS |
|                |      | 5310             | 10.44 | 2.58 | 13.02 | ≤23.98 | ≤23.98 | 4.05 | 17.07 | ≤26.99 | PASS |
|                |      | 5510             | 9.90  | 2.58 | 12.48 | ≤23.98 | ≤23.98 | 4.05 | 16.53 | ≤26.99 | PASS |
|                |      | 5550             | 10.44 | 2.62 | 13.06 | ≤23.98 | ≤23.98 | 4.05 | 17.11 | ≤26.99 | PASS |
|                |      | 5670             | 9.77  | 2.58 | 12.35 | ≤23.98 | ≤23.98 | 4.05 | 16.40 | ≤26.99 | PASS |
|                |      | 5710_U<br>NII-2C | 9.99  | 2.58 | 12.57 | ≤23.98 | ≤23.98 | 4.05 | 16.62 | ≤26.99 | PASS |
|                |      | 5710_U<br>NII-3  | -3.32 | 2.58 | -0.74 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5755             | 9.22  | 2.62 | 11.84 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5795             | 8.22  | 2.58 | 10.80 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      |                  |       |      |       |        |        |      |       |        |      |
| 11AX20SI<br>SO | Ant1 | 5180             | 11.87 | 1.86 | 13.73 | ≤23.98 | ≤22.94 | 4.05 | 17.78 | ≤22.77 | PASS |
|                |      | 5200             | 11.50 | 1.82 | 13.32 | ≤23.98 | ≤22.94 | 4.05 | 17.37 | ≤22.76 | PASS |
|                |      | 5240             | 11.90 | 1.86 | 13.76 | ≤23.98 | ≤22.94 | 4.05 | 17.81 | ≤22.78 | PASS |
|                |      | 5260             | 11.20 | 1.83 | 13.03 | ≤23.98 | ≤23.77 | 4.05 | 17.08 | ≤26.99 | PASS |
|                |      | 5280             | 11.24 | 1.86 | 13.10 | ≤23.98 | ≤23.77 | 4.05 | 17.15 | ≤26.99 | PASS |
|                |      | 5320             | 11.29 | 1.82 | 13.11 | ≤23.98 | ≤23.76 | 4.05 | 17.16 | ≤26.99 | PASS |
|                |      | 5500             | 11.58 | 1.86 | 13.44 | ≤23.98 | ≤23.77 | 4.05 | 17.49 | ≤26.99 | PASS |
|                |      | 5580             | 11.24 | 1.86 | 13.10 | ≤23.98 | ≤23.79 | 4.05 | 17.15 | ≤26.99 | PASS |
|                |      | 5700             | 9.27  | 1.82 | 11.09 | ≤23.98 | ≤23.78 | 4.05 | 15.14 | ≤26.99 | PASS |
|                |      | 5720_U<br>NII-2C | 10.37 | 1.86 | 12.23 | ≤22.94 | ≤22.61 | 4.05 | 16.28 | ≤26.99 | PASS |
|                |      | 5720_U<br>NII-3  | 3.03  | 1.86 | 4.89  | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5745             | 10.36 | 1.83 | 12.19 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5785             | 10.35 | 1.86 | 12.21 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5825             | 9.67  | 1.82 | 11.49 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      |                  |       |      |       |        |        |      |       |        |      |
| 11AX40SI<br>SO | Ant1 | 5190             | 7.75  | 2.97 | 10.72 | ≤23.98 | ≤22.94 | 4.05 | 14.77 | ≤23.01 | PASS |
|                |      | 5230             | 11.00 | 2.97 | 13.97 | ≤23.98 | ≤22.94 | 4.05 | 18.02 | ≤23.01 | PASS |
|                |      | 5270             | 10.07 | 3.05 | 13.12 | ≤23.98 | ≤23.98 | 4.05 | 17.17 | ≤26.99 | PASS |
|                |      | 5310             | 10.50 | 2.97 | 13.47 | ≤23.98 | ≤23.98 | 4.05 | 17.52 | ≤26.99 | PASS |
|                |      | 5510             | 10.59 | 2.97 | 13.56 | ≤23.98 | ≤23.98 | 4.05 | 17.61 | ≤26.99 | PASS |
|                |      | 5550             | 10.38 | 2.97 | 13.35 | ≤23.98 | ≤23.98 | 4.05 | 17.40 | ≤26.99 | PASS |
|                |      | 5670             | 7.89  | 3.01 | 10.90 | ≤23.98 | ≤23.98 | 4.05 | 14.95 | ≤26.99 | PASS |
|                |      | 5710_U<br>NII-2C | 9.49  | 3.01 | 12.50 | ≤23.98 | ≤23.98 | 4.05 | 16.55 | ≤26.99 | PASS |
|                |      | 5710_U<br>NII-3  | -2.72 | 3.01 | 0.29  | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5755             | 9.71  | 2.97 | 12.68 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      | 5795             | 9.15  | 2.97 | 12.12 | ≤30.00 | ≤30.00 | 4.05 | ---   | ---    | PASS |
|                |      |                  |       |      |       |        |        |      |       |        |      |

Note: The EIRP = Channel Power + DC factor + Ant. Gain

## 11. Power Spectral Density

### 11.1. Block Diagram of Test Setup

Same as section 8.1

### 11.2. Limits

| CFR 47 FCC Part15, Subpart E |                                                                                                                                                                                                                                                                    |                        |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Test Item                    | Limit                                                                                                                                                                                                                                                              | Frequency Range (MHz)  |
| Power Spectral Density       | <input type="checkbox"/> Outdoor Access Point: 17 dBm/MHz<br><input type="checkbox"/> Indoor Access Point: 17 dBm/MHz<br><input type="checkbox"/> Fixed Point-To-Point Access Points: 17 dBm/MHz<br><input checked="" type="checkbox"/> Client Devices: 11 dBm/MHz | 5150-5250              |
|                              | 11 dBm/MHz                                                                                                                                                                                                                                                         | 5250-5350<br>5470-5725 |
|                              | 30 dBm/500 kHz                                                                                                                                                                                                                                                     | 5725-5850              |

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|------------------------|----------------------------------------------------------------------------|-------------------------------------|
| Test Item              | Limit                                                                      | Frequency Range (MHz)               |
| Power Spectral Density | The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. | 5150-5250                           |
|                        | The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.    | 5250-5350<br>5470-5600<br>5650-5725 |
|                        | 30 dBm/500 kHz                                                             | 5725-5850                           |

Note: The above limits are based upon the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 11.3. Test Procedure

- a) Measure the duty cycle D of the transmitter output signal as described in 12.2.
  - b) Set span to encompass the entire 99% OBW of the signal.
  - c) Set RBW = 1 MHz.
  - d) Set VBW  $\geq 3$  MHz.
  - e) Number of points in sweep  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
  - f) Sweep time = auto.
  - g) Detector = Power averaging (rms), if available. Otherwise, use sample detector mode.
  - h) Do not use sweep triggering. Allow the sweep to "free run."
  - i) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter. then add  $[10 \log (1 / D)]$ , where D is the duty cycle, to the peak of the spectrum.
  - j) The procedure in item a) through item i) requires the use of 1 MHz resolution bandwidth to satisfy the 1 MHz measurement bandwidth specified by some regulatory authorities.<sup>85</sup> This requirement also permits use of resolution bandwidths less than 1 MHz "provided that the measured power is integrated to show the total power over the measurement bandwidth" (i.e., 1 MHz). If measurements are performed using a reduced resolution bandwidth and integrated over 1 MHz bandwidth, the following adjustments to the procedures apply:
    - 1) Set RBW  $\geq 1 / T$ .
    - 2) Set VBW  $\geq [3 \times \text{RBW}]$ .
    - 3) Care shall be taken such that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.
- Connect the UUT to the spectrum analyzer and use the following settings:

## 5150 MHz~5250 MHz

|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Center Frequency | The centre frequency of the channel under test               |
| Detector         | RMS                                                          |
| RBW              | 1MHz                                                         |
| VBW              | $\geq 3 \times \text{RBW}$                                   |
| Span             | Encompass the entire emissions bandwidth (EBW) of the signal |
| Sweep time       | Auto                                                         |

## 5725 MHz-5850 MHz

|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Center Frequency | The centre frequency of the channel under test               |
| Detector         | RMS                                                          |
| RBW              | 500 kHz                                                      |
| VBW              | $\geq 3 \times \text{RBW}$                                   |
| Span             | Encompass the entire emissions bandwidth (EBW) of the signal |
| Sweep time       | Auto                                                         |

Note:

1. For UNII-3, according to KdB publication 789033 D02 General U-NII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 1 MHz and VBW at 3 MHz if the spectrum analyzer does not have 500 kHz RBW.

2. The value measured with RBW=300kHz is to be added with  $10\log(500\text{kHz}/300\text{kHz})$  which is 2.2dB. For example, if the measured value is +30 dBm using RBW=300kHz (that is +30 dBm/300kHz), then the converted value will be +32.2 dBm/1MHz.

3. Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

## 11.4. Test Result

Test Result for B1/2/3

| Test Mode  | Ant. | Freq. (MHz)   | Raw Data (dBm/MHz) | DC Factor | Result (dBm/MHz) | Limit (dBm/MHz) | EIRP PSD (dBm/MHz) | EIRP PSD Limit (dBm/MHz) | Verdict |
|------------|------|---------------|--------------------|-----------|------------------|-----------------|--------------------|--------------------------|---------|
| 11A        | Ant1 | 5180          | 3.01               | 1.41      | 4.42             | $\leq 11.00$    | 8.47               | $\leq 10.00$             | PASS    |
|            |      | 5200          | 2.54               | 1.43      | 3.97             | $\leq 11.00$    | 8.02               | $\leq 10.00$             | PASS    |
|            |      | 5240          | 2.82               | 1.44      | 4.26             | $\leq 11.00$    | 8.31               | $\leq 10.00$             | PASS    |
|            |      | 5260          | 2.29               | 1.43      | 3.72             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5280          | 2.53               | 1.40      | 3.93             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5320          | 2.63               | 1.40      | 4.03             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5500          | 2.21               | 1.40      | 3.61             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5580          | 1.97               | 1.43      | 3.40             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5700          | 0.92               | 1.43      | 2.35             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5720 UNII-2 C | 1.59               | 1.43      | 3.02             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5720 UNII-3   | -6.12              | 1.43      | -2.47            | $\leq 30.00$    | ---                | ---                      | PASS    |
| 11N20SI SO | Ant1 | 5180          | 2.27               | 1.48      | 3.75             | $\leq 11.00$    | 7.80               | $\leq 10.00$             | PASS    |
|            |      | 5200          | 2.2                | 1.48      | 3.68             | $\leq 11.00$    | 7.73               | $\leq 10.00$             | PASS    |
|            |      | 5240          | 2.18               | 1.48      | 3.66             | $\leq 11.00$    | 7.71               | $\leq 10.00$             | PASS    |
|            |      | 5260          | 1.14               | 1.48      | 2.62             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5280          | 1.15               | 1.48      | 2.63             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5320          | 0.98               | 1.48      | 2.46             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5500          | 1.34               | 1.49      | 2.83             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5580          | 1.61               | 1.48      | 3.09             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5700          | 0.05               | 1.48      | 1.53             | $\leq 11.00$    | ---                | ---                      | PASS    |
|            |      | 5720          | 0.89               | 1.48      | 2.37             | $\leq 11.00$    | ---                | ---                      | PASS    |

|                |      |                      |        |      |       |        |      |        |      |
|----------------|------|----------------------|--------|------|-------|--------|------|--------|------|
|                |      | UNII-2<br>C          |        |      |       |        |      |        |      |
|                |      | 5720_<br>UNII-3      | -6.15  | 1.48 | -2.45 | ≤30.00 | ---  | ---    | PASS |
| 11N40SI<br>SO  | Ant1 | 5190                 | -3.84  | 2.65 | -1.19 | ≤11.00 | 2.86 | ≤10.00 | PASS |
|                |      | 5230                 | 0.06   | 2.58 | 2.64  | ≤11.00 | 6.69 | ≤10.00 | PASS |
|                |      | 5270                 | -1.48  | 2.58 | 1.10  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5310                 | -2.11  | 2.58 | 0.47  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5510                 | -2.28  | 2.58 | 0.30  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5550                 | -2.22  | 2.65 | 0.43  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5670                 | -2.85  | 2.58 | -0.27 | ≤11.00 | ---  | ---    | PASS |
|                |      | 5710_<br>UNII-2<br>C | -2.94  | 2.61 | -0.33 | ≤11.00 | ---  | ---    | PASS |
| 11AC20<br>SISO | Ant1 | 5710_<br>UNII-3      | -11.35 | 2.61 | -6.52 | ≤30.00 | ---  | ---    | PASS |
|                |      | 5180                 | 1.89   | 1.45 | 3.34  | ≤11.00 | 7.39 | ≤10.00 | PASS |
|                |      | 5200                 | 2.21   | 1.48 | 3.69  | ≤11.00 | 7.74 | ≤10.00 | PASS |
|                |      | 5240                 | 1.97   | 1.47 | 3.44  | ≤11.00 | 7.49 | ≤10.00 | PASS |
|                |      | 5260                 | 1.33   | 1.50 | 2.83  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5280                 | 1.19   | 1.48 | 2.67  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5320                 | 1.66   | 1.50 | 3.16  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5500                 | 1.95   | 1.50 | 3.45  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5580                 | 1.28   | 1.45 | 2.73  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5700                 | -0.55  | 1.50 | 0.95  | ≤11.00 | ---  | ---    | PASS |
| 11AC40<br>SISO | Ant1 | 5720_<br>UNII-2<br>C | 0.95   | 1.50 | 2.45  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5720_<br>UNII-3      | -6.45  | 1.50 | -2.73 | ≤30.00 | ---  | ---    | PASS |
|                |      | 5190                 | -3.85  | 2.58 | -1.27 | ≤11.00 | 2.78 | ≤10.00 | PASS |
|                |      | 5230                 | -1.18  | 2.58 | 1.40  | ≤11.00 | 5.45 | ≤10.00 | PASS |
|                |      | 5270                 | -2.01  | 2.58 | 0.57  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5310                 | -2.56  | 2.58 | 0.02  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5510                 | -1.65  | 2.58 | 0.93  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5550                 | -2.11  | 2.62 | 0.51  | ≤11.00 | ---  | ---    | PASS |
| 11AX20<br>SISO | Ant1 | 5670                 | -2.36  | 2.58 | 0.22  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5710_<br>UNII-2<br>C | -2.15  | 2.58 | 0.43  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5710_<br>UNII-3      | -11.46 | 2.58 | -6.66 | ≤30.00 | ---  | ---    | PASS |
|                |      | 5180                 | 2.63   | 1.86 | 4.49  | ≤11.00 | 8.54 | ≤10.00 | PASS |
|                |      | 5200                 | 2.2    | 1.82 | 4.02  | ≤11.00 | 8.07 | ≤10.00 | PASS |
|                |      | 5240                 | 2.26   | 1.86 | 4.12  | ≤11.00 | 8.17 | ≤10.00 | PASS |
|                |      | 5260                 | 0.7    | 1.83 | 2.53  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5280                 | 2.13   | 1.86 | 3.99  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5320                 | 1.39   | 1.82 | 3.21  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5500                 | 1.77   | 1.86 | 3.63  | ≤11.00 | ---  | ---    | PASS |
| 11AX40<br>SISO | Ant1 | 5580                 | 1.46   | 1.86 | 3.32  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5700                 | -0.83  | 1.82 | 0.99  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5720_<br>UNII-2<br>C | 0.73   | 1.86 | 2.59  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5720_<br>UNII-3      | -6.63  | 1.86 | -2.55 | ≤30.00 | ---  | ---    | PASS |
|                |      | 5190                 | -4.56  | 2.97 | -1.59 | ≤11.00 | 2.46 | ≤10.00 | PASS |
|                | Ant1 | 5230                 | -1.57  | 2.97 | 1.40  | ≤11.00 | 5.45 | ≤10.00 | PASS |
|                |      | 5270                 | -1.24  | 3.05 | 1.81  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5310                 | -2.85  | 2.97 | 0.12  | ≤11.00 | ---  | ---    | PASS |
|                |      | 5510                 | -2.68  | 2.97 | 0.29  | ≤11.00 | ---  | ---    | PASS |

|  |  |                     |        |      |       |        |     |     |      |
|--|--|---------------------|--------|------|-------|--------|-----|-----|------|
|  |  | 5550                | -1.76  | 2.97 | 1.21  | ≤11.00 | --- | --- | PASS |
|  |  | 5670                | -5.26  | 3.01 | -2.25 | ≤11.00 | --- | --- | PASS |
|  |  | 5710<br>UNII-2<br>C | -3.52  | 3.01 | -0.51 | ≤11.00 | --- | --- | PASS |
|  |  | 5710<br>UNII-3      | -11.51 | 3.01 | -6.28 | ≤30.00 | --- | --- | PASS |

Note1: The EIRP = Result + Ant. Gain

Note2: Ant. Gain=4.05dBi

Note3: Offset=cable loss

#### Test Result for B4

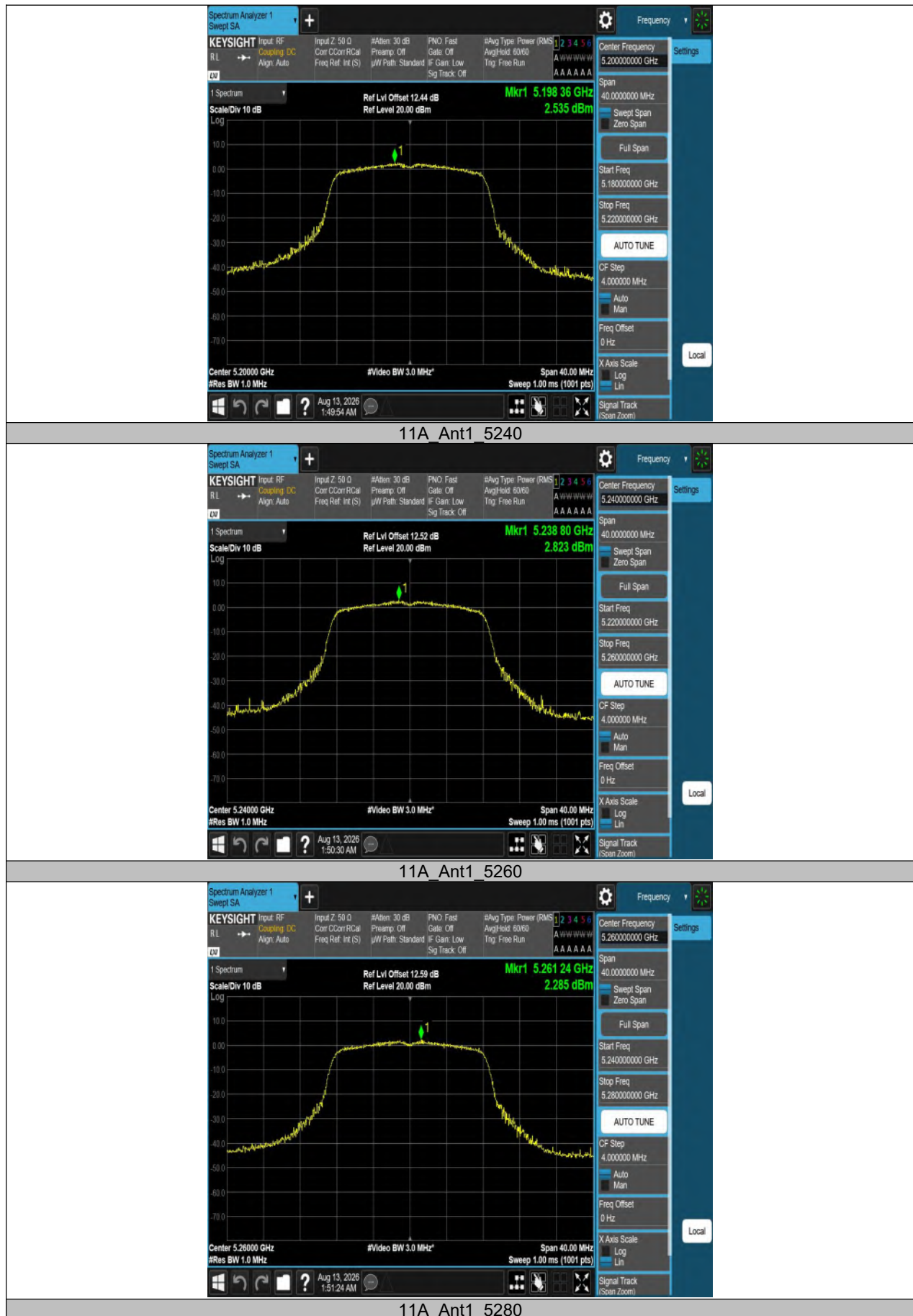
| Test Mode  | Ant. | Freq.<br>(MHz) | Raw Data<br>(dBm/300KHz) | DC<br>Factor | RBW<br>Factor | Result<br>(dBm/500KHz) | Limit<br>(dBm/500KHz) | Verdict |
|------------|------|----------------|--------------------------|--------------|---------------|------------------------|-----------------------|---------|
| 11A        | Ant1 | 5745           | -4.01                    | 1.40         | 2.22          | -0.39                  | ≤30.00                | PASS    |
|            |      | 5785           | -4.11                    | 1.43         | 2.22          | -0.46                  | ≤30.00                | PASS    |
|            |      | 5825           | -4.68                    | 1.43         | 2.22          | -1.03                  | ≤30.00                | PASS    |
| 11N20SISO  | Ant1 | 5745           | -5.15                    | 1.51         | 2.22          | -1.42                  | ≤30.00                | PASS    |
|            |      | 5785           | -4.82                    | 1.48         | 2.22          | -1.12                  | ≤30.00                | PASS    |
|            |      | 5825           | -5.01                    | 1.51         | 2.22          | -1.28                  | ≤30.00                | PASS    |
| 11N40SISO  | Ant1 | 5755           | -8.58                    | 2.58         | 2.22          | -3.78                  | ≤30.00                | PASS    |
|            |      | 5795           | -8.06                    | 2.58         | 2.22          | -3.26                  | ≤30.00                | PASS    |
| 11AC20SISO | Ant1 | 5745           | -5.09                    | 1.50         | 2.22          | -1.37                  | ≤30.00                | PASS    |
|            |      | 5785           | -3.99                    | 1.48         | 2.22          | -0.29                  | ≤30.00                | PASS    |
|            |      | 5825           | -4.78                    | 1.45         | 2.22          | -1.11                  | ≤30.00                | PASS    |
| 11AC40SISO | Ant1 | 5755           | -8.85                    | 2.62         | 2.22          | -4.01                  | ≤30.00                | PASS    |
|            |      | 5795           | -8.37                    | 2.58         | 2.22          | -3.57                  | ≤30.00                | PASS    |
| 11AX20SISO | Ant1 | 5745           | -4.17                    | 1.83         | 2.22          | -0.12                  | ≤30.00                | PASS    |
|            |      | 5785           | -5.15                    | 1.86         | 2.22          | -1.07                  | ≤30.00                | PASS    |
|            |      | 5825           | -4.84                    | 1.82         | 2.22          | -0.80                  | ≤30.00                | PASS    |
| 11AX40SISO | Ant1 | 5755           | -7.54                    | 2.97         | 2.22          | -2.35                  | ≤30.00                | PASS    |
|            |      | 5795           | -8.2                     | 2.97         | 2.22          | -3.01                  | ≤30.00                | PASS    |

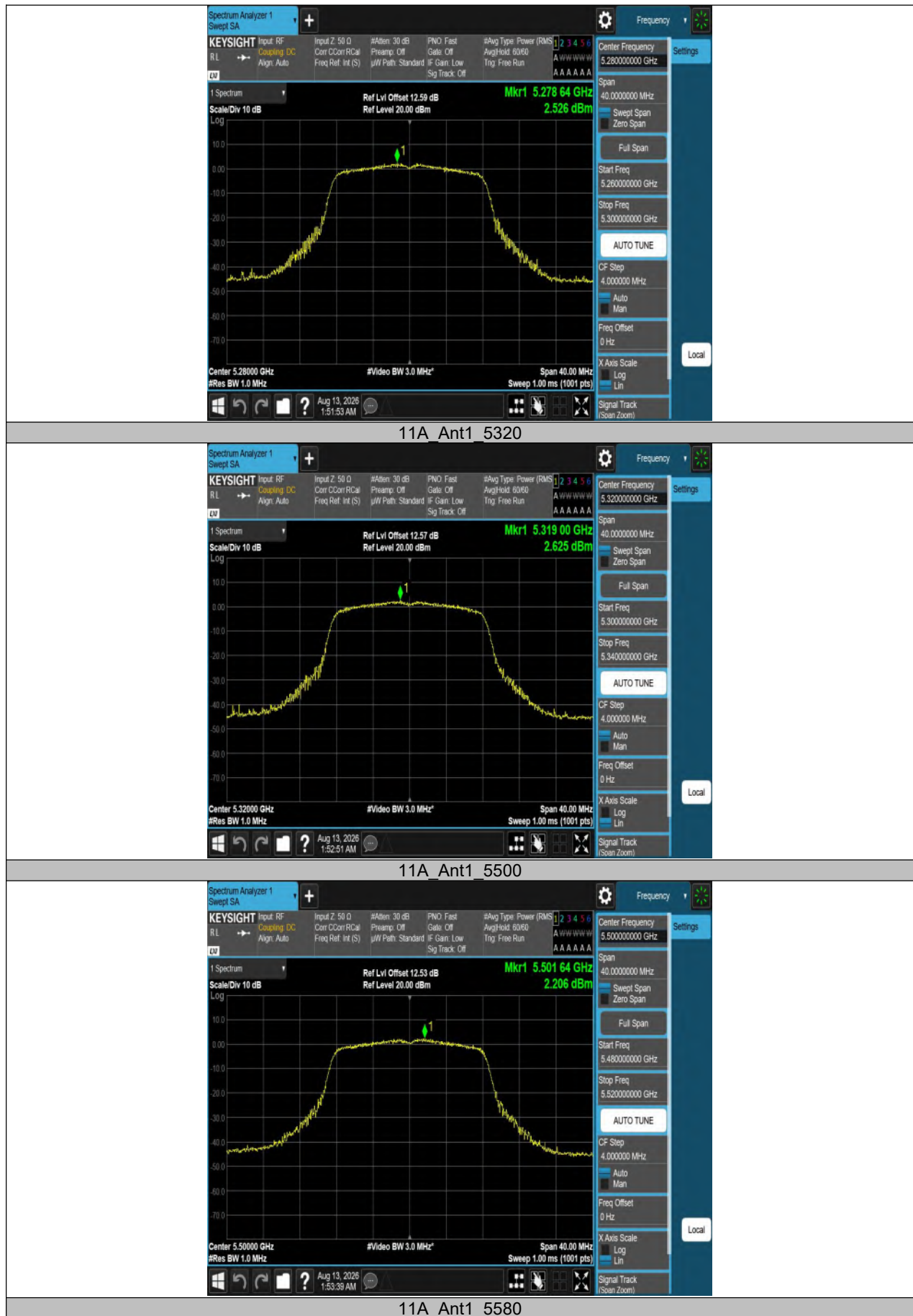
Note1: .The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

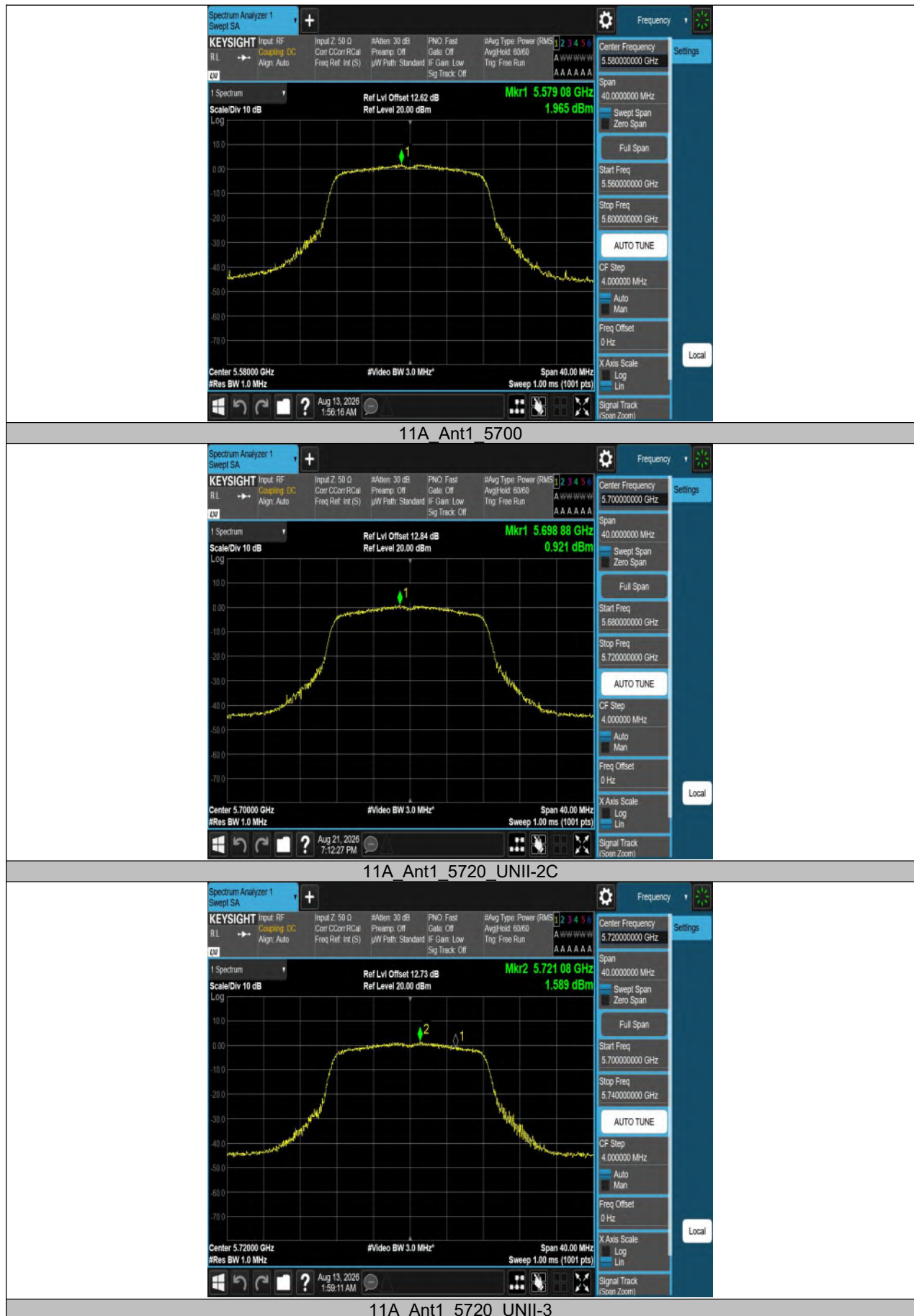
Note2: The Duty Cycle Factor and RBW Factor is compensated in the graph.

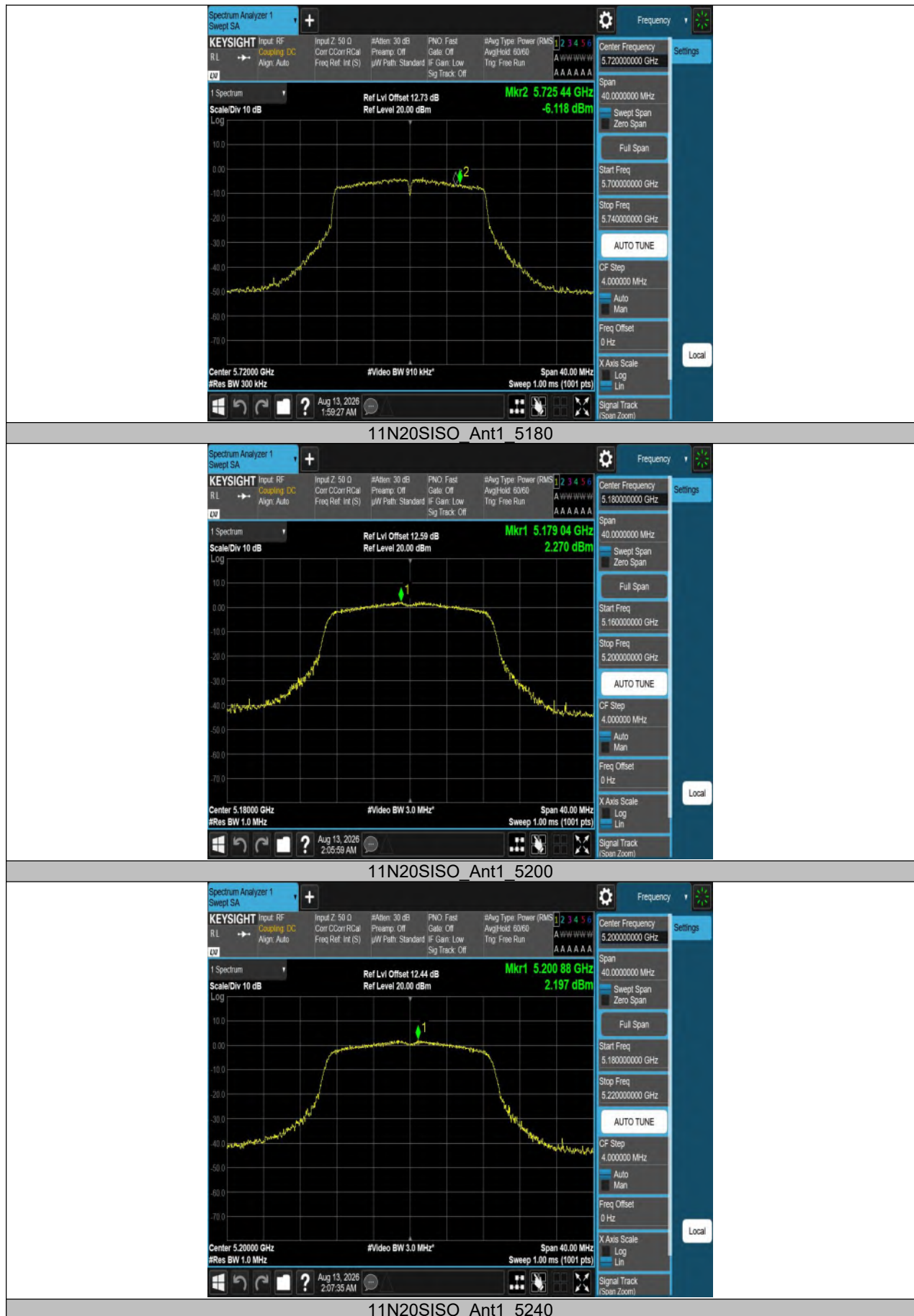
### 11.5. Original Test Data

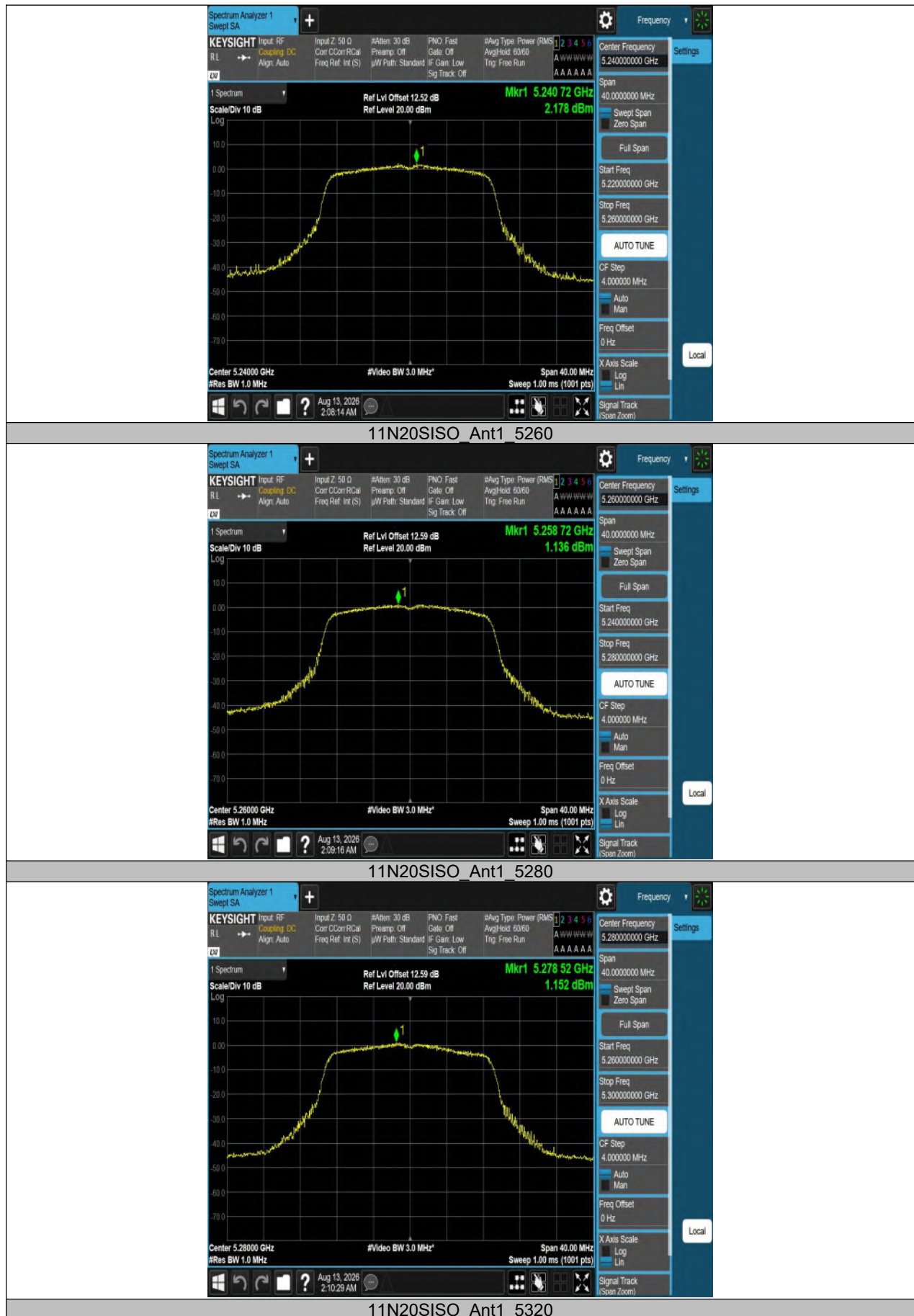


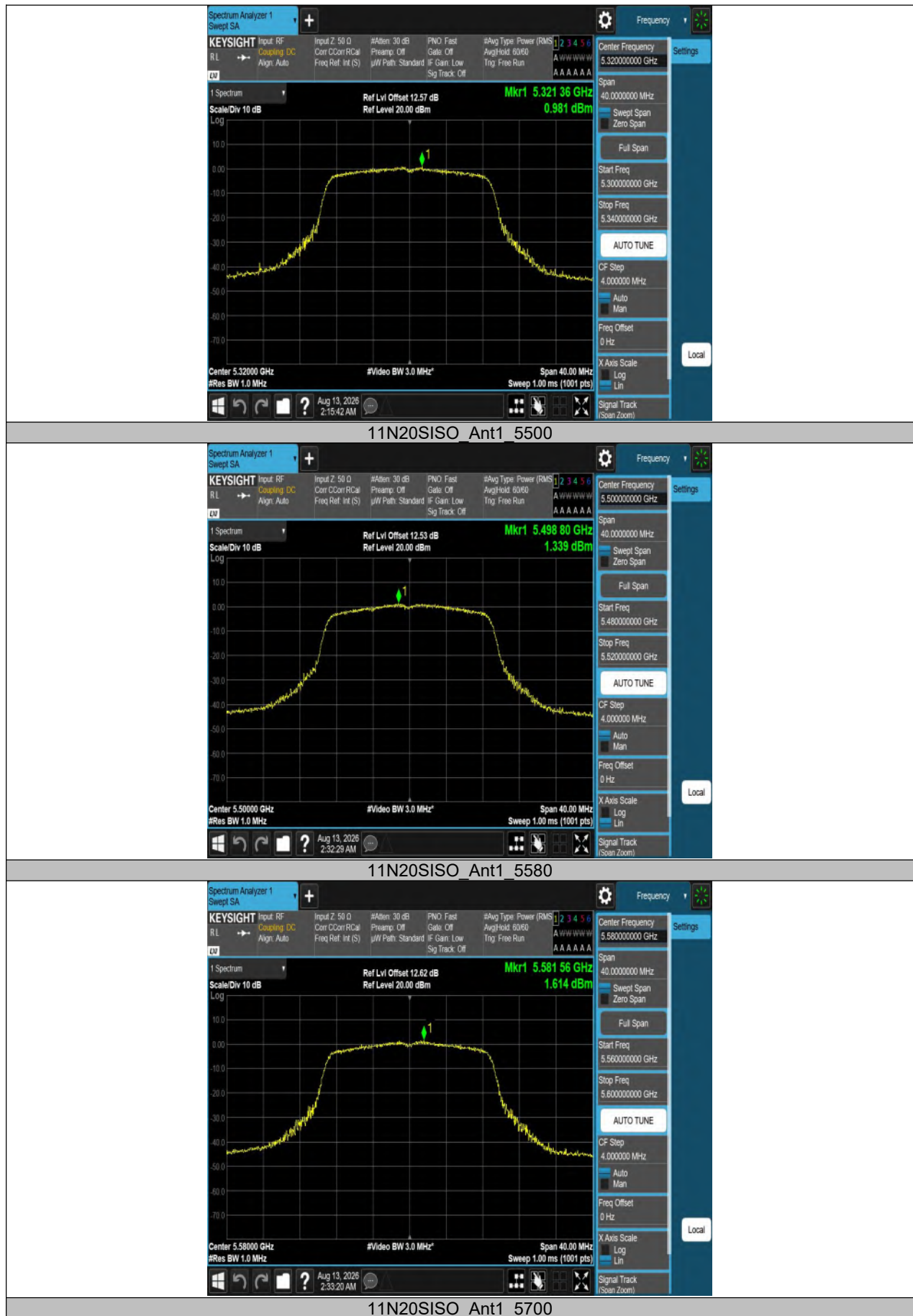


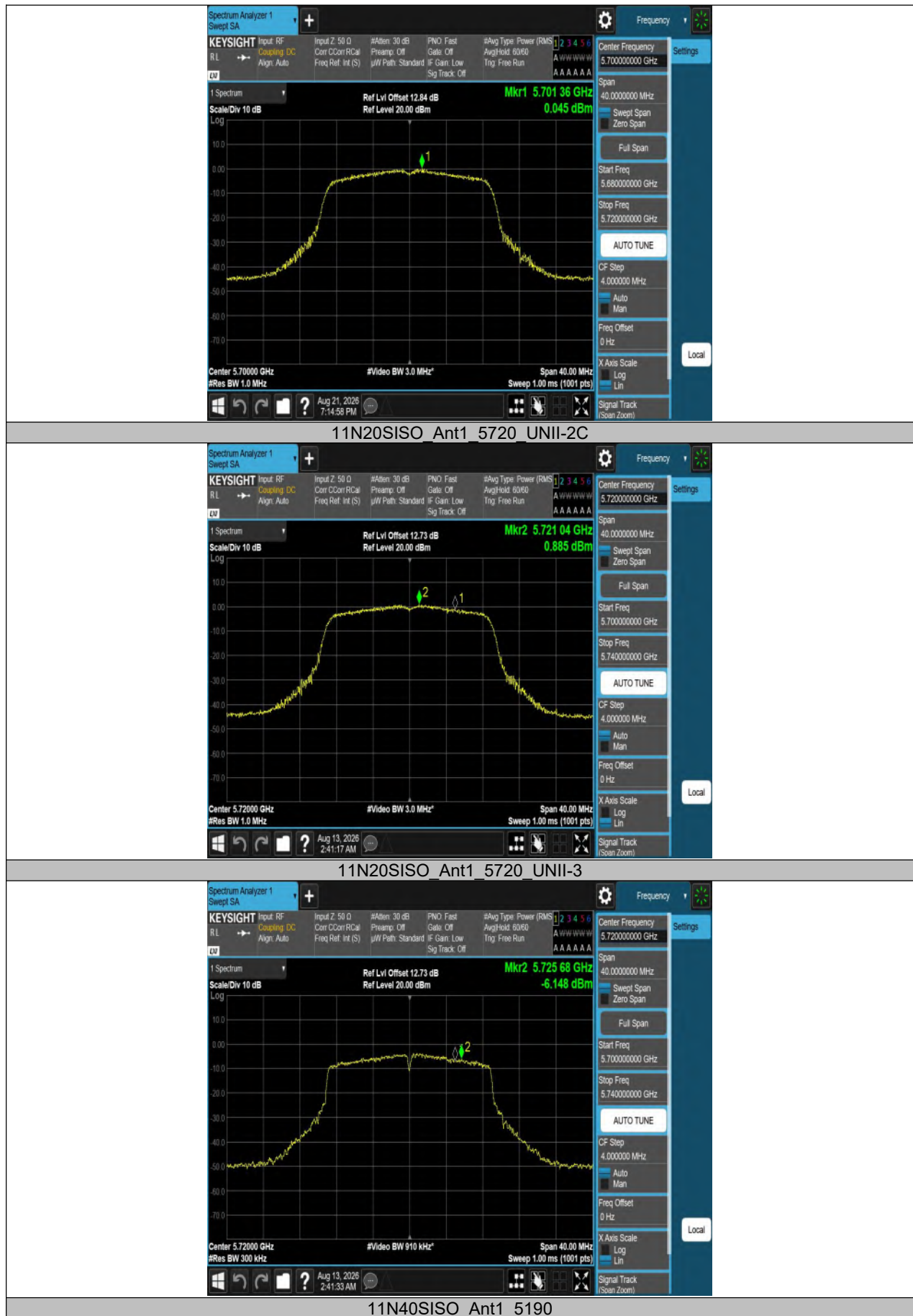


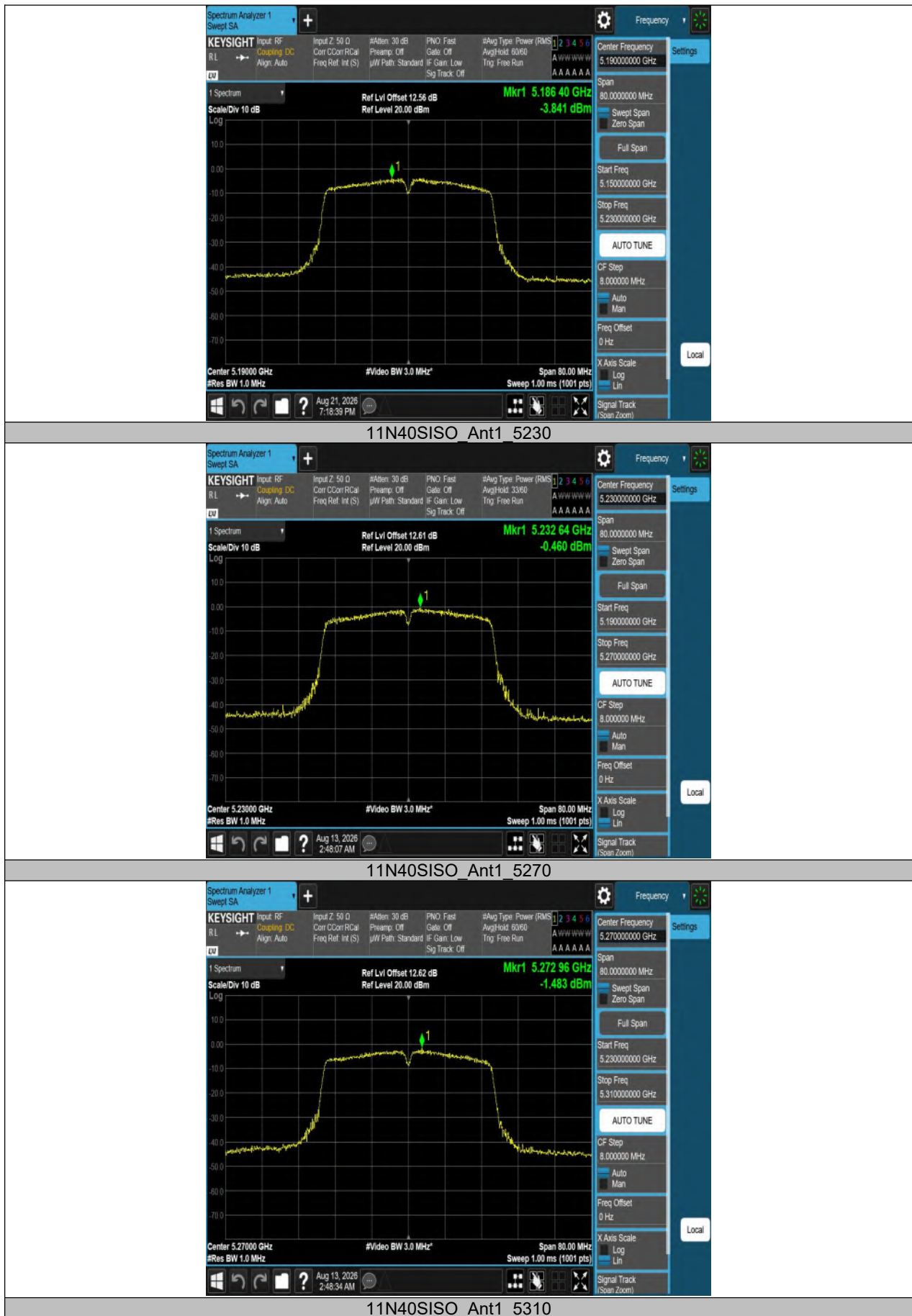


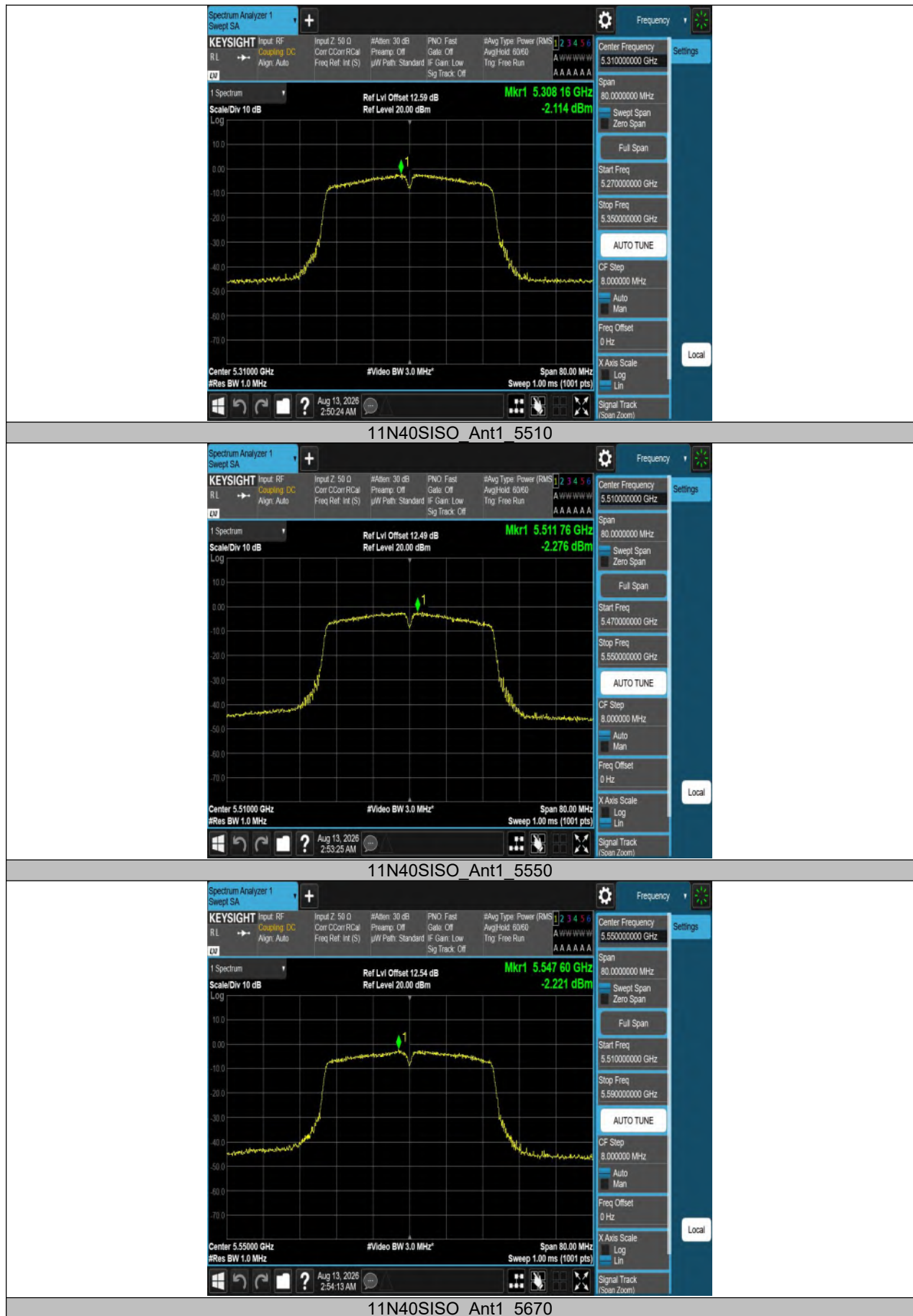


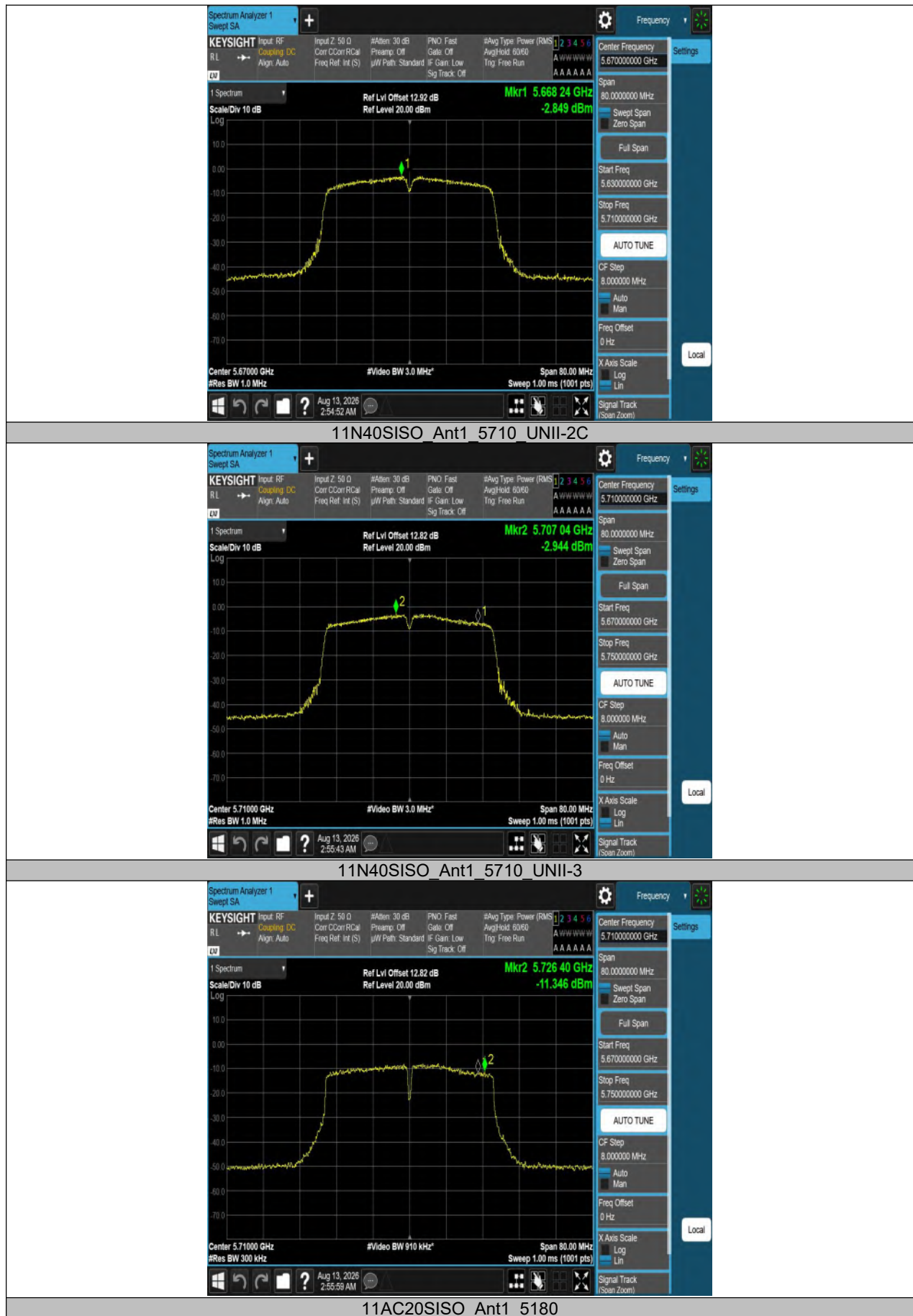


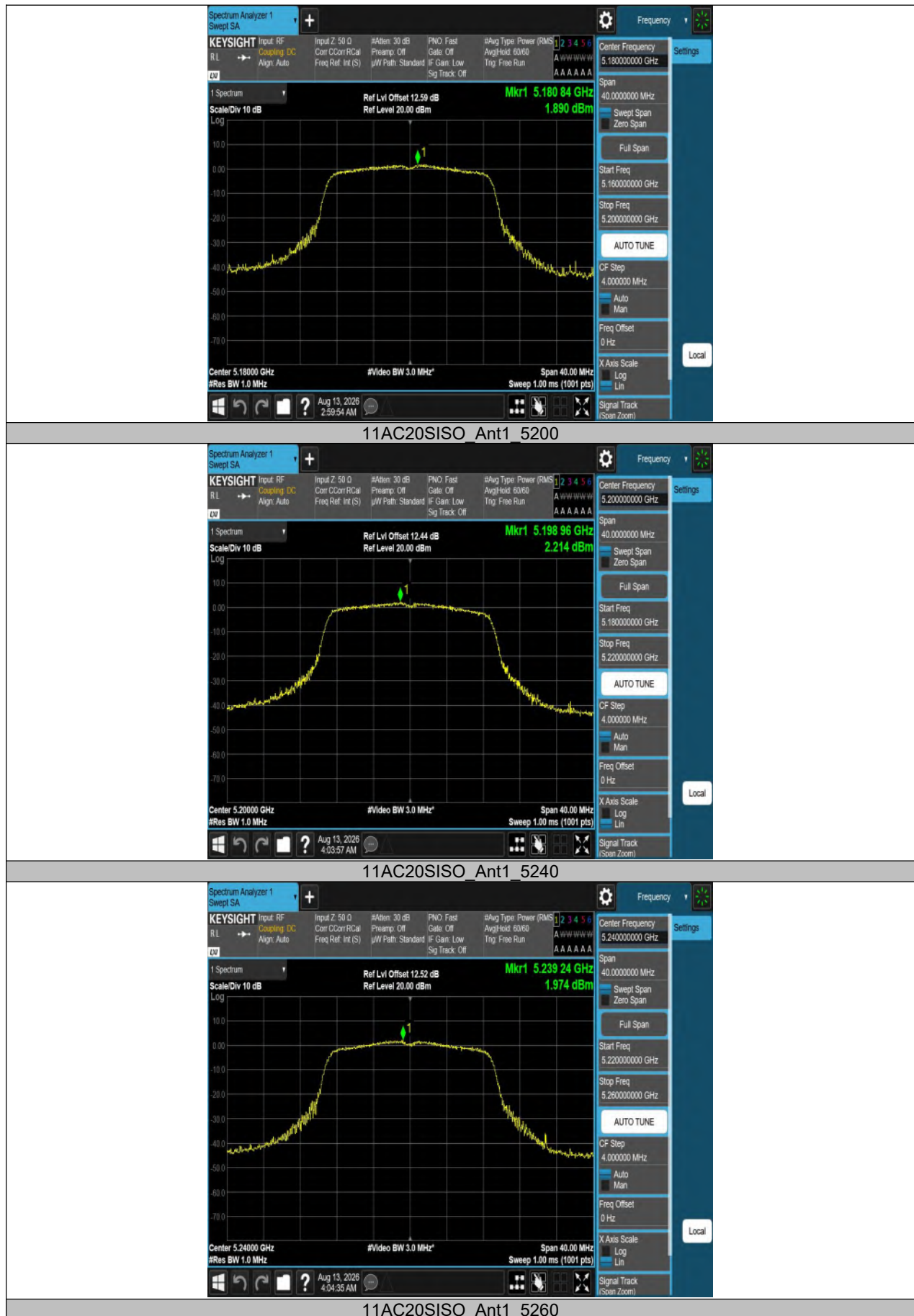


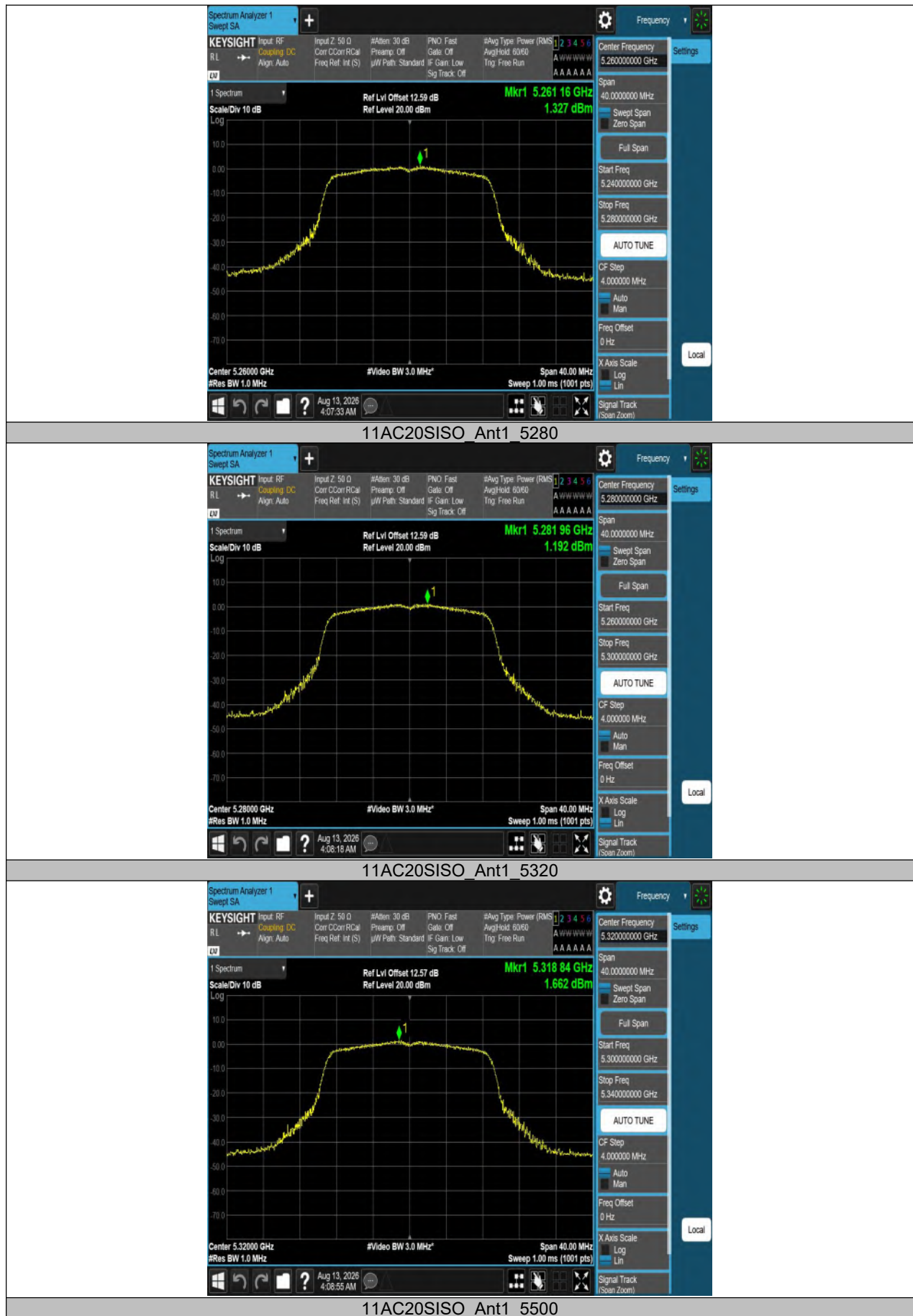


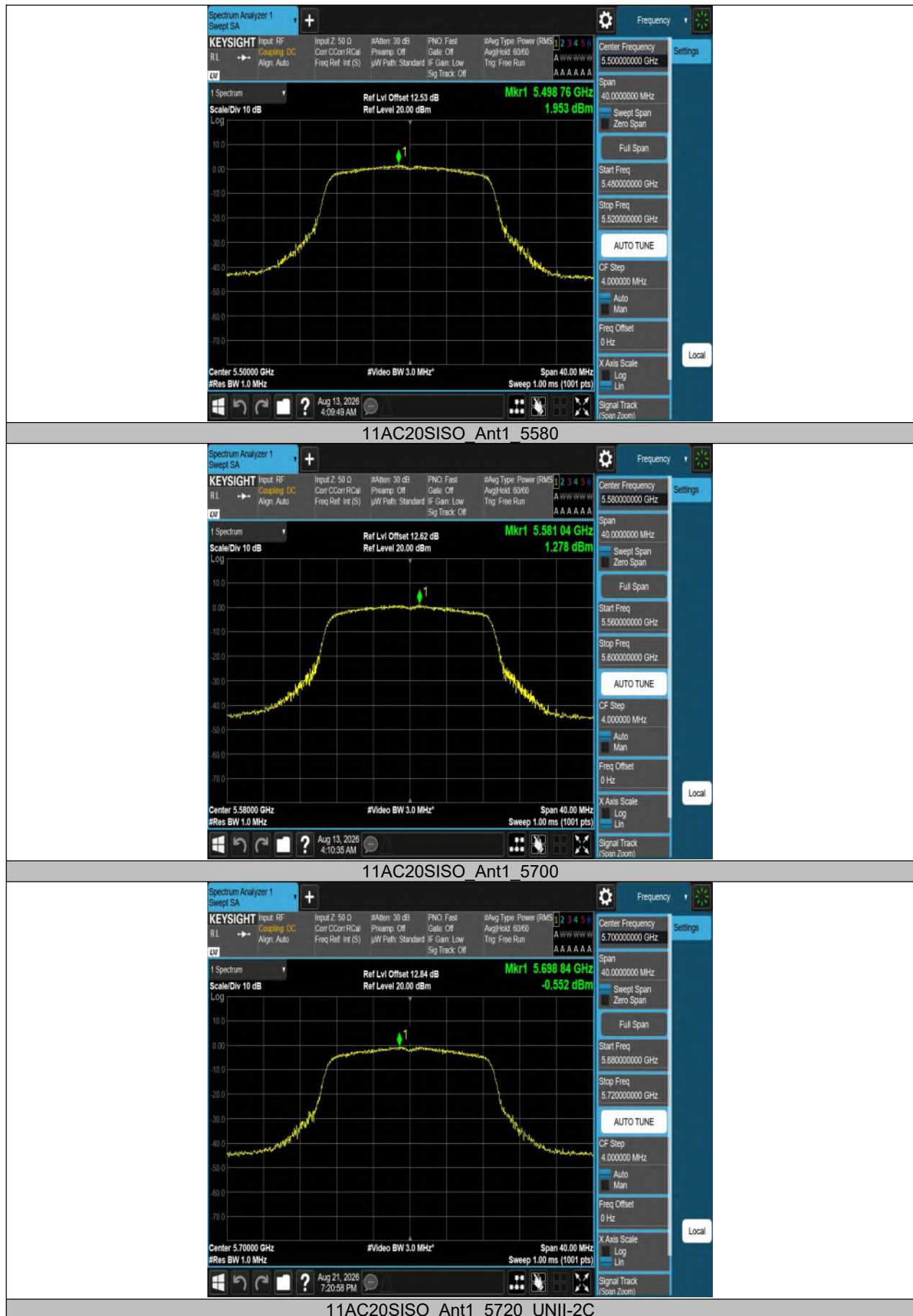


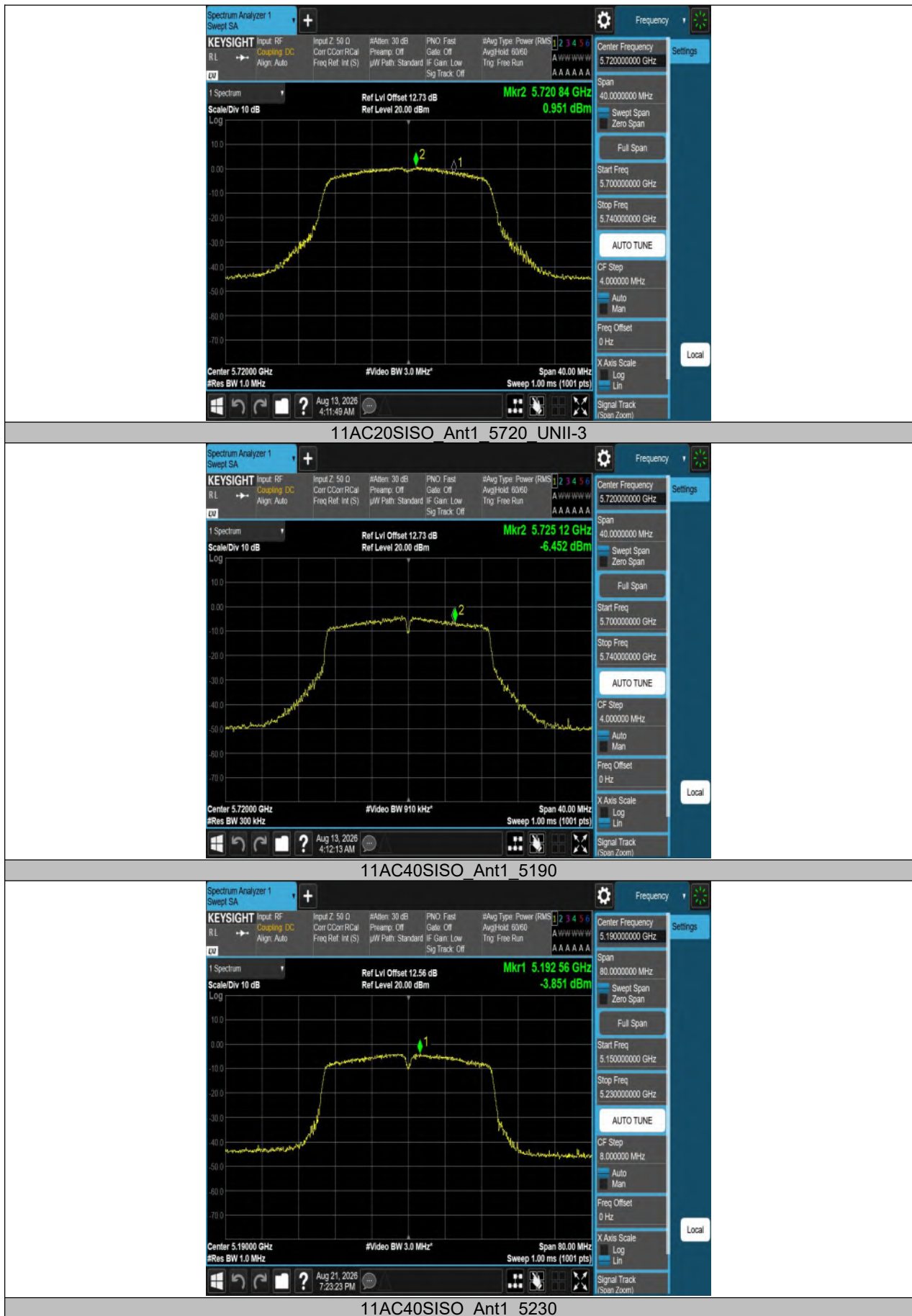


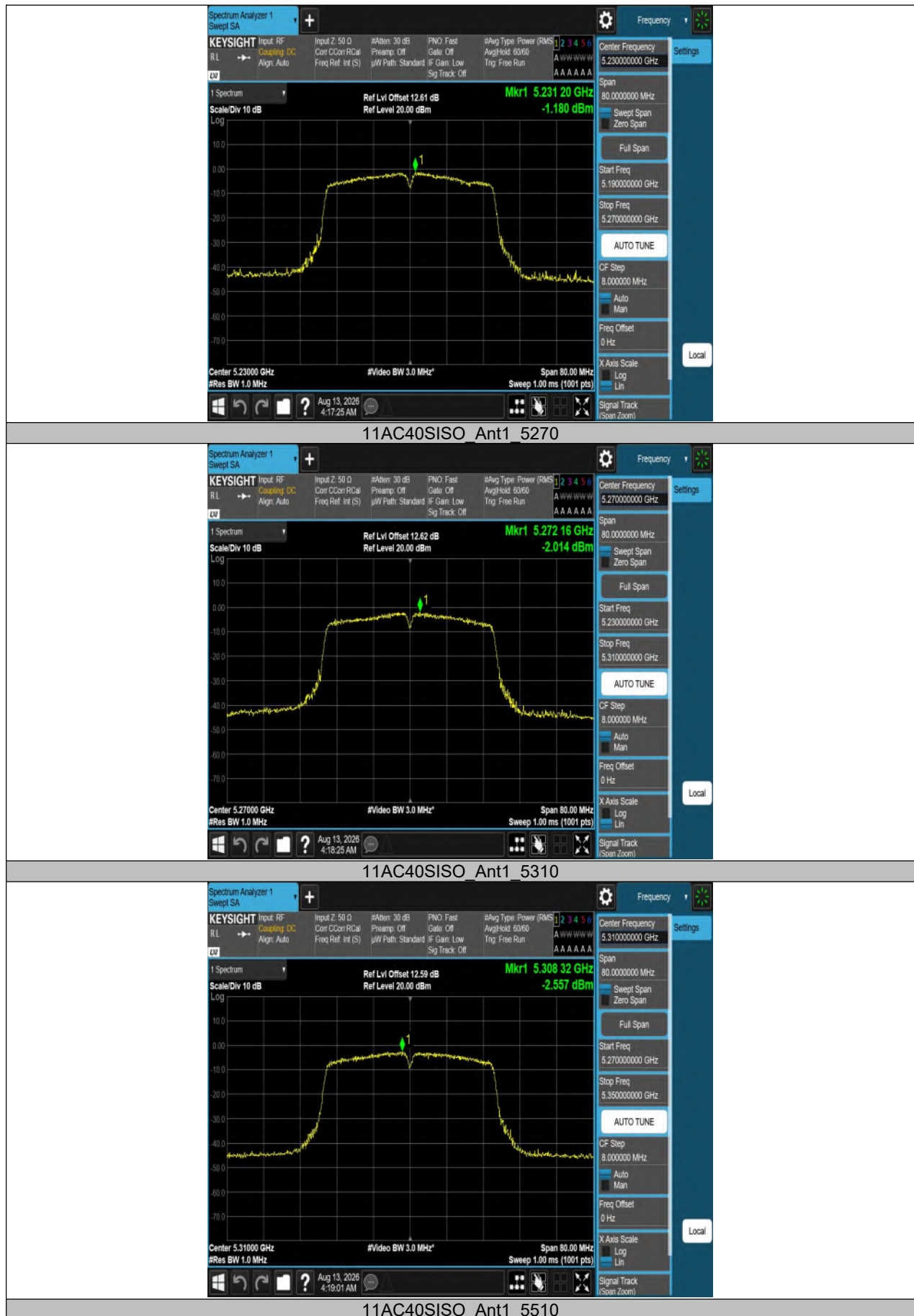


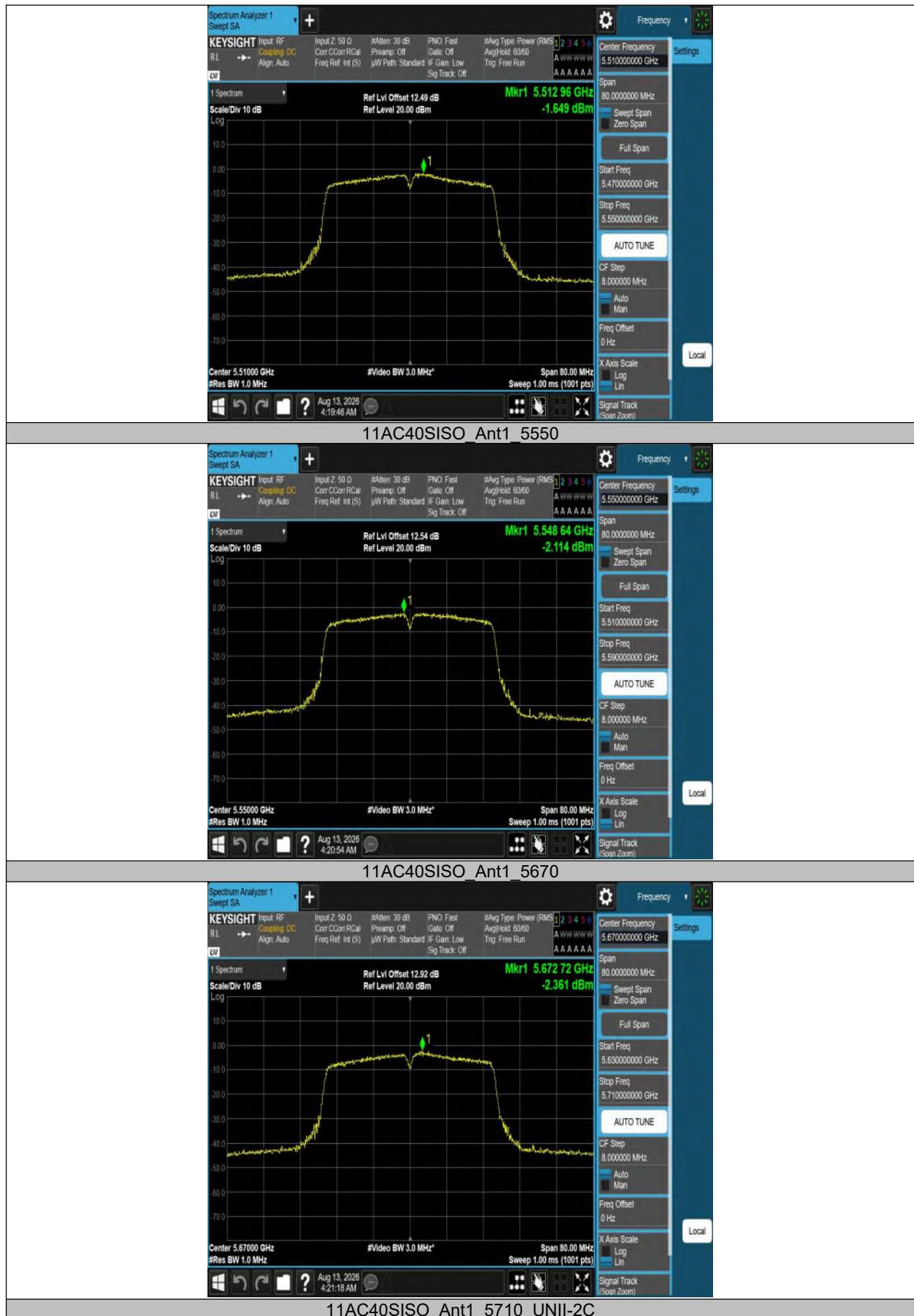


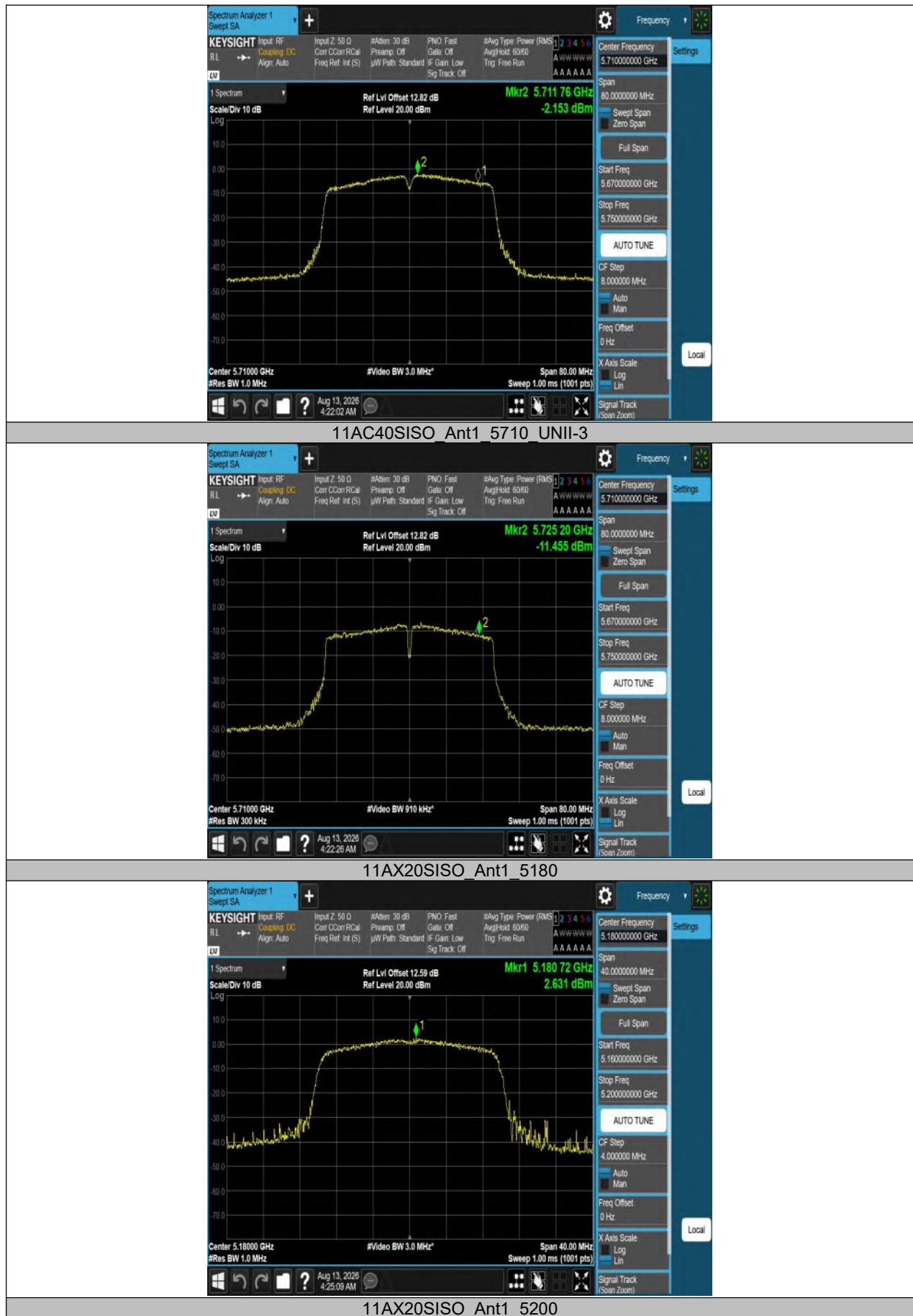


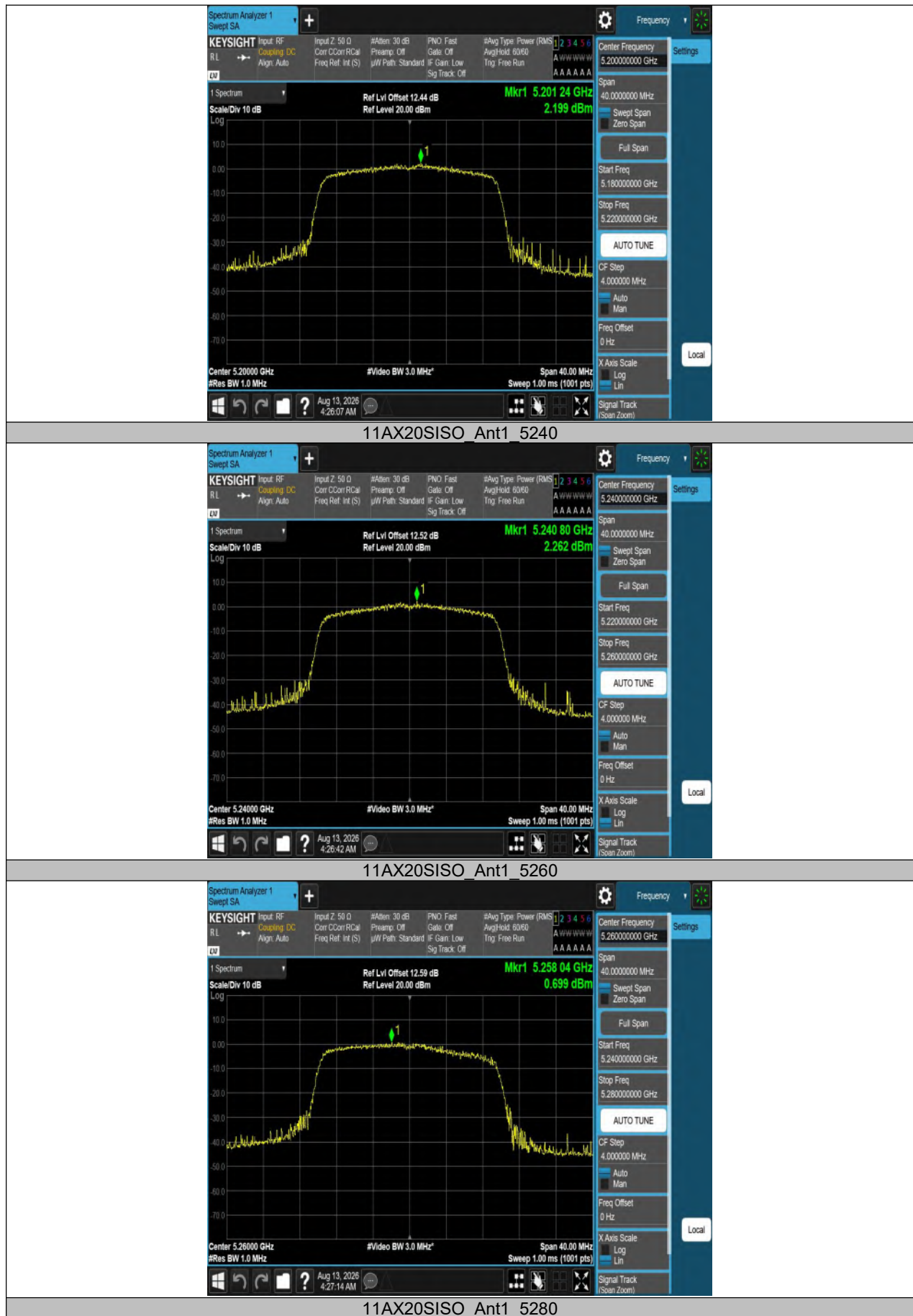


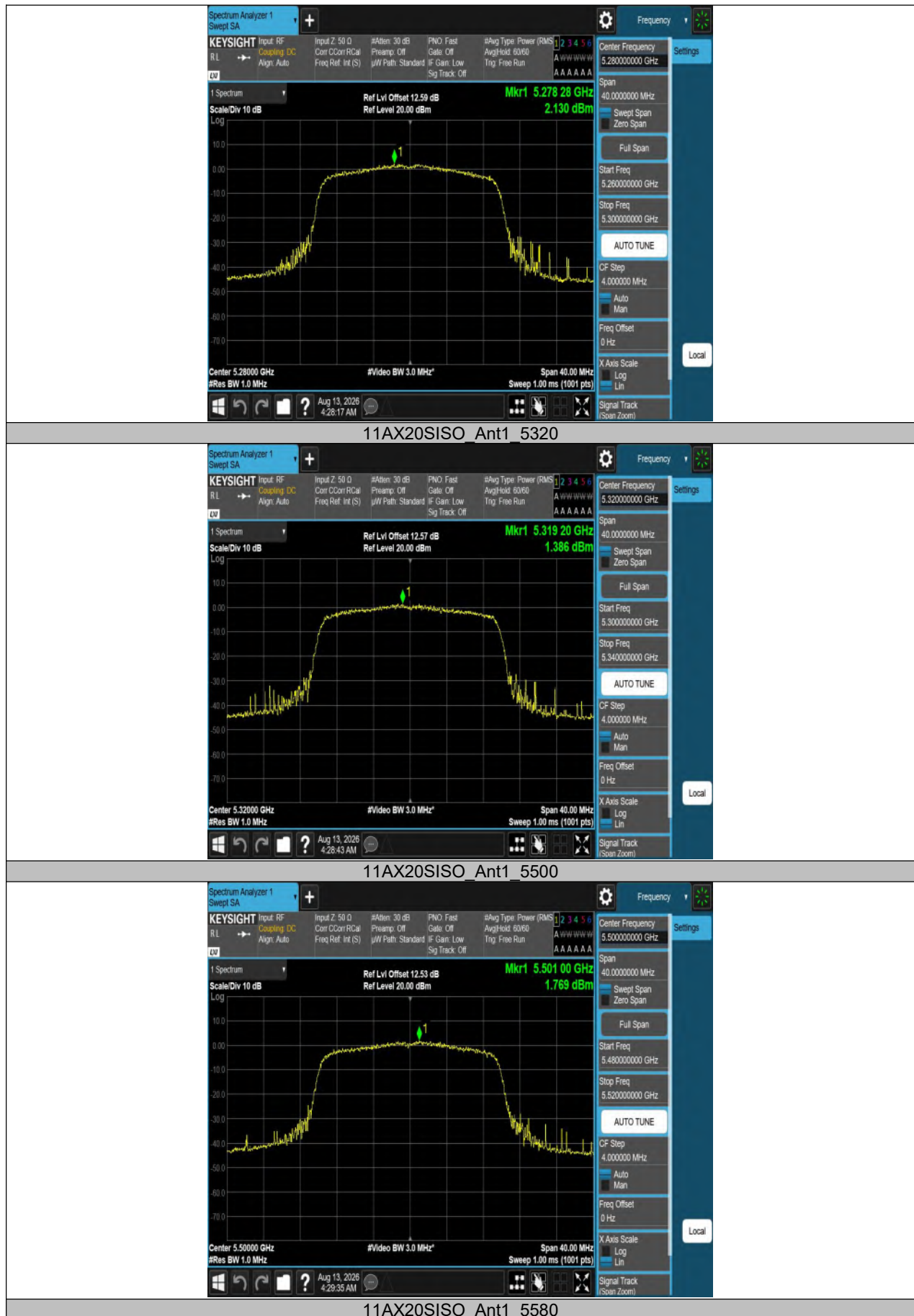


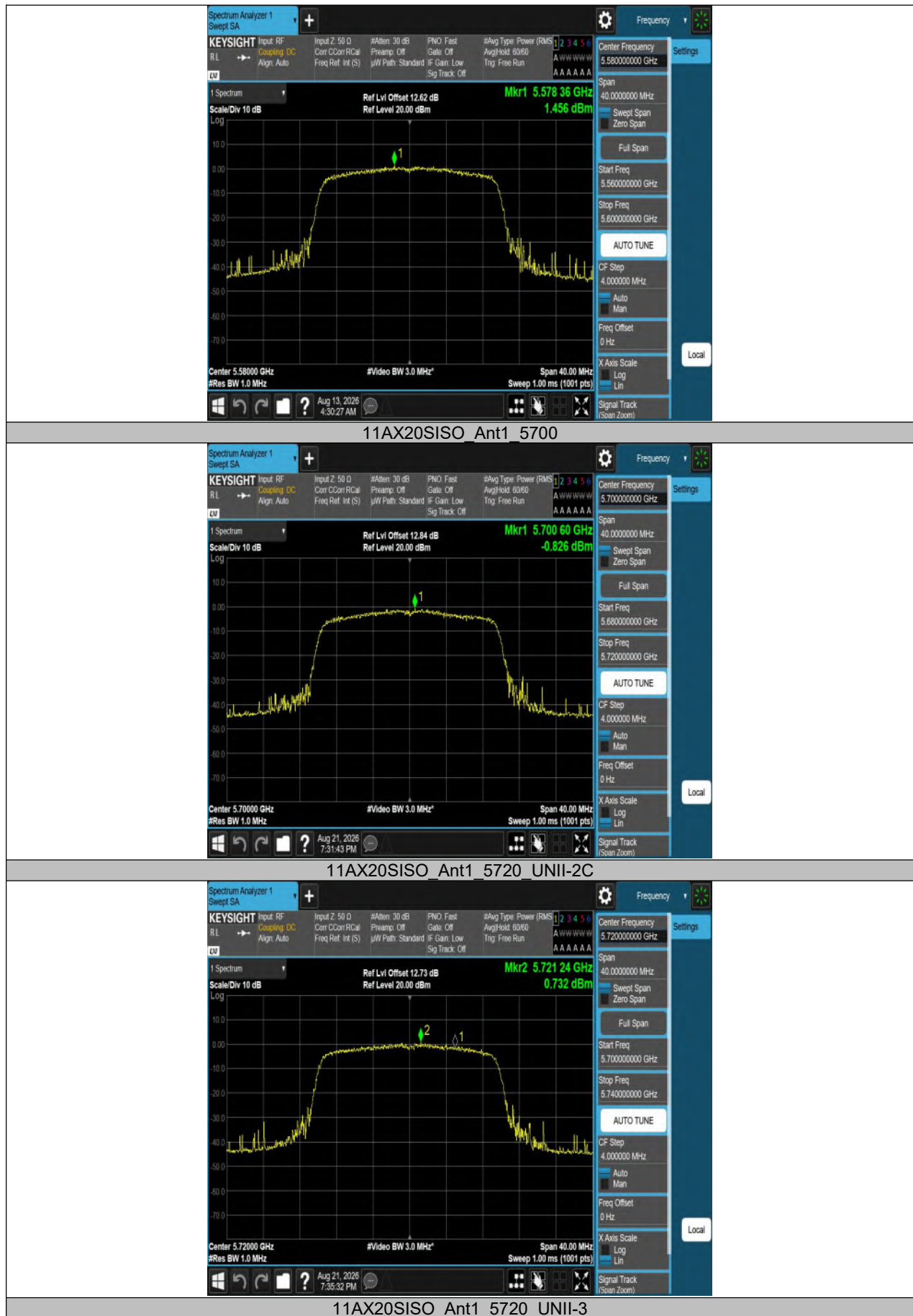


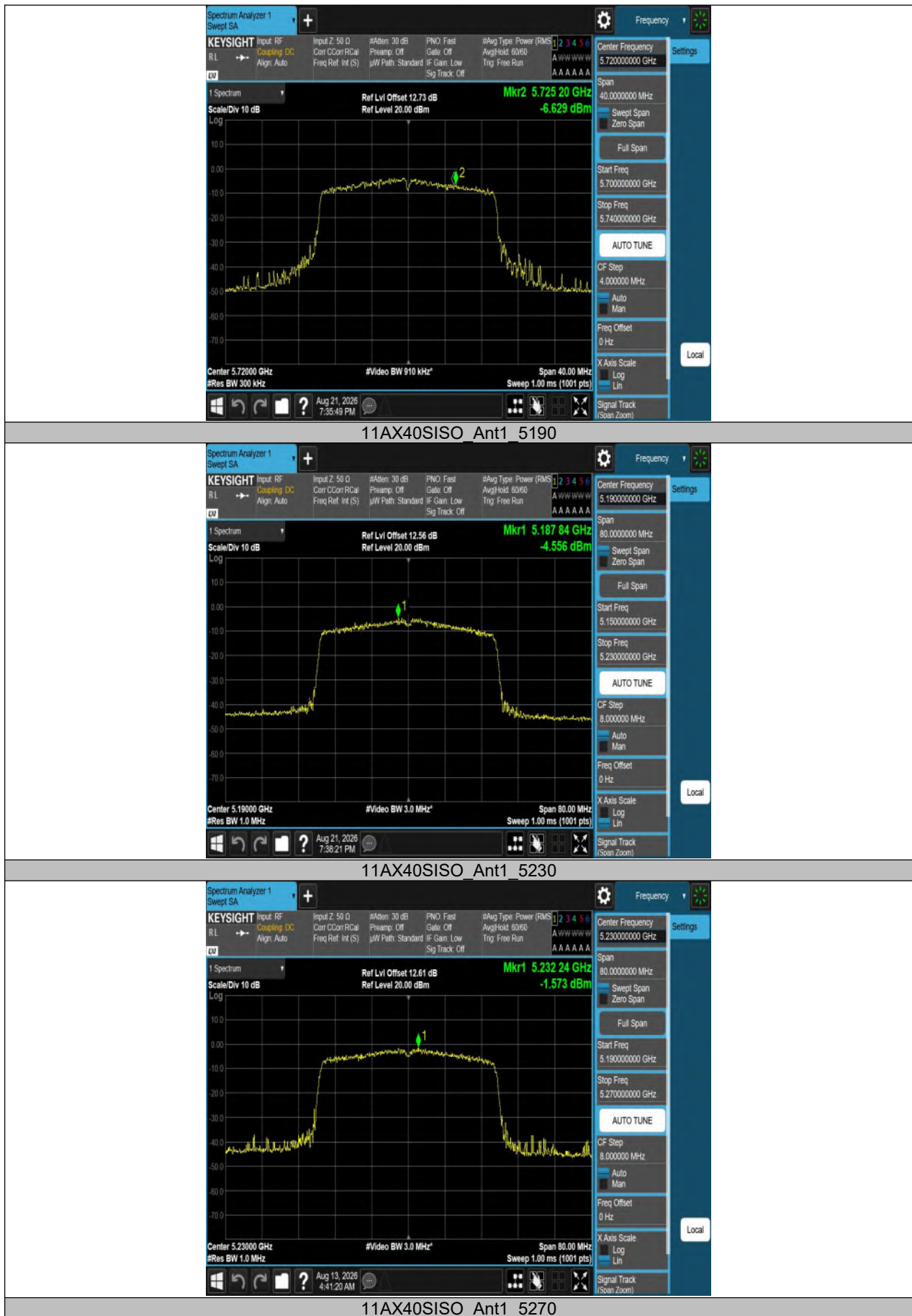


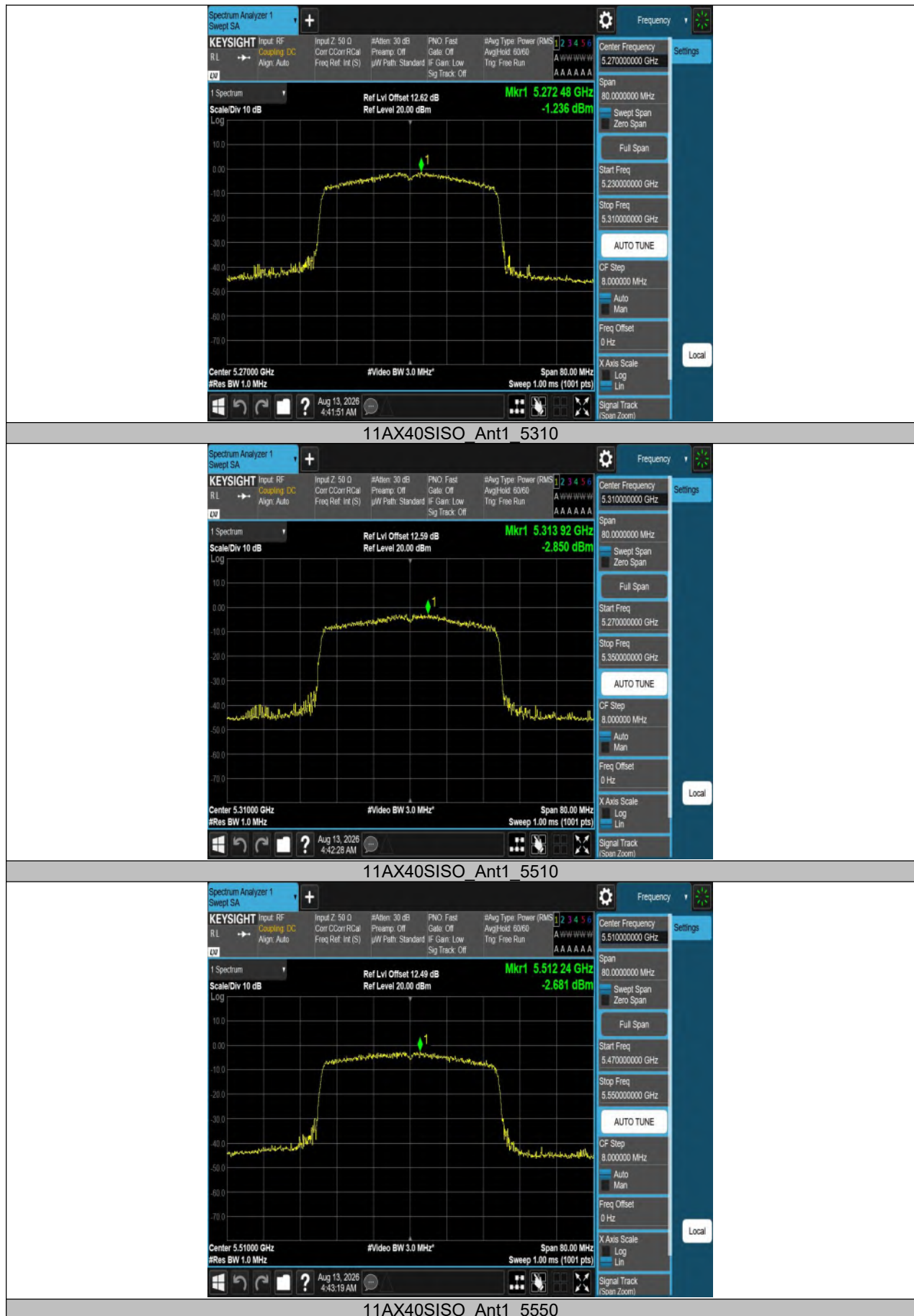


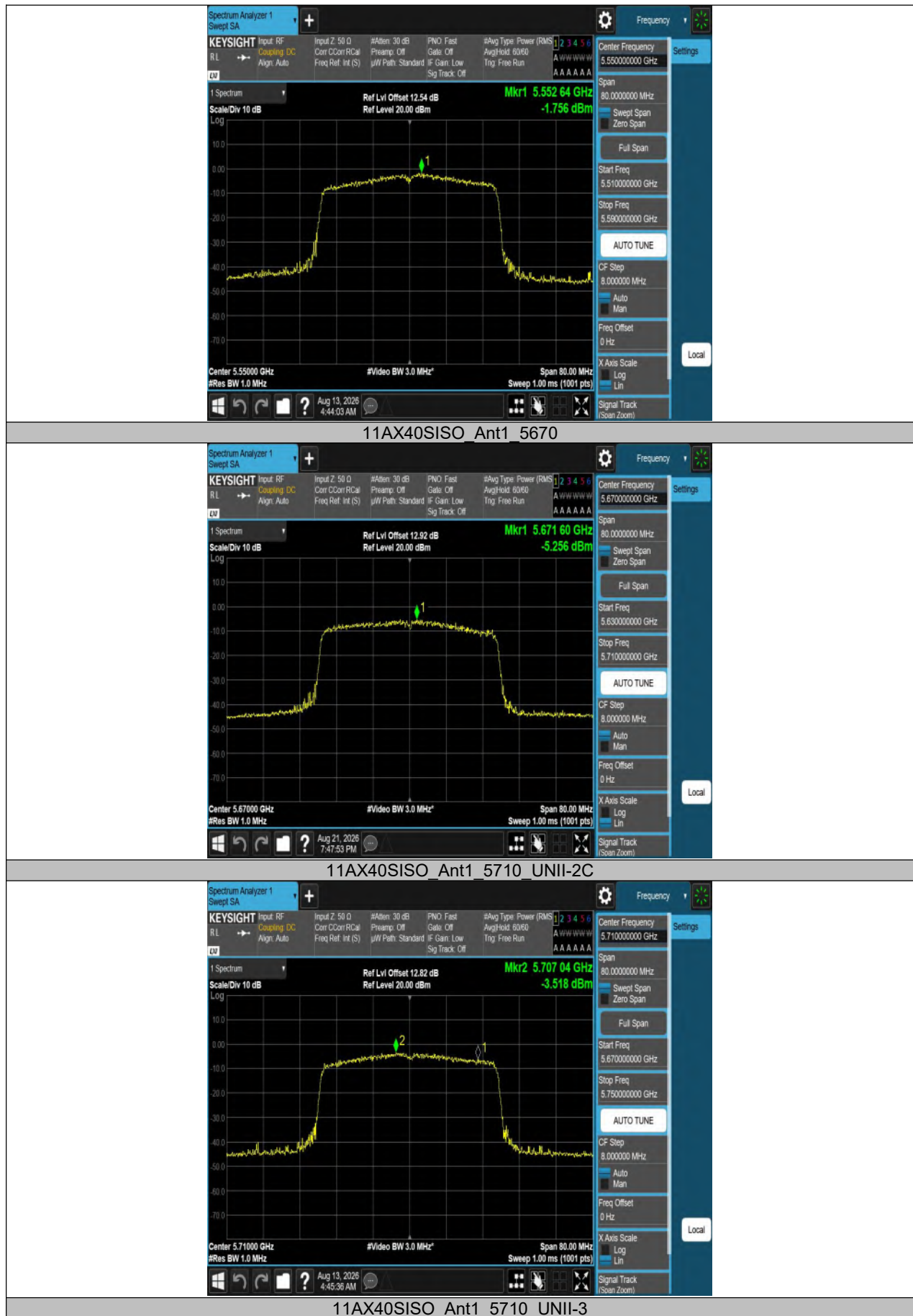








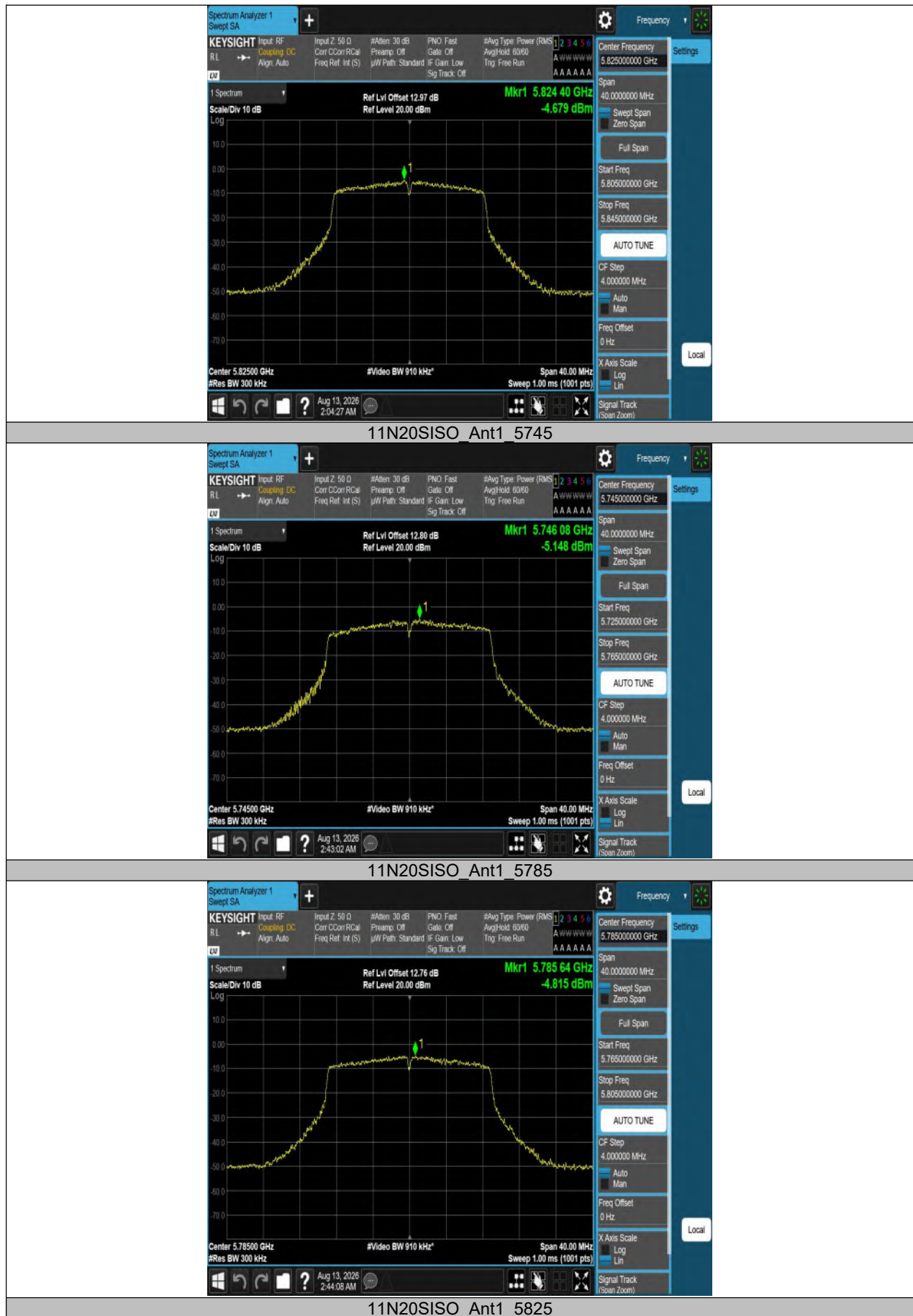


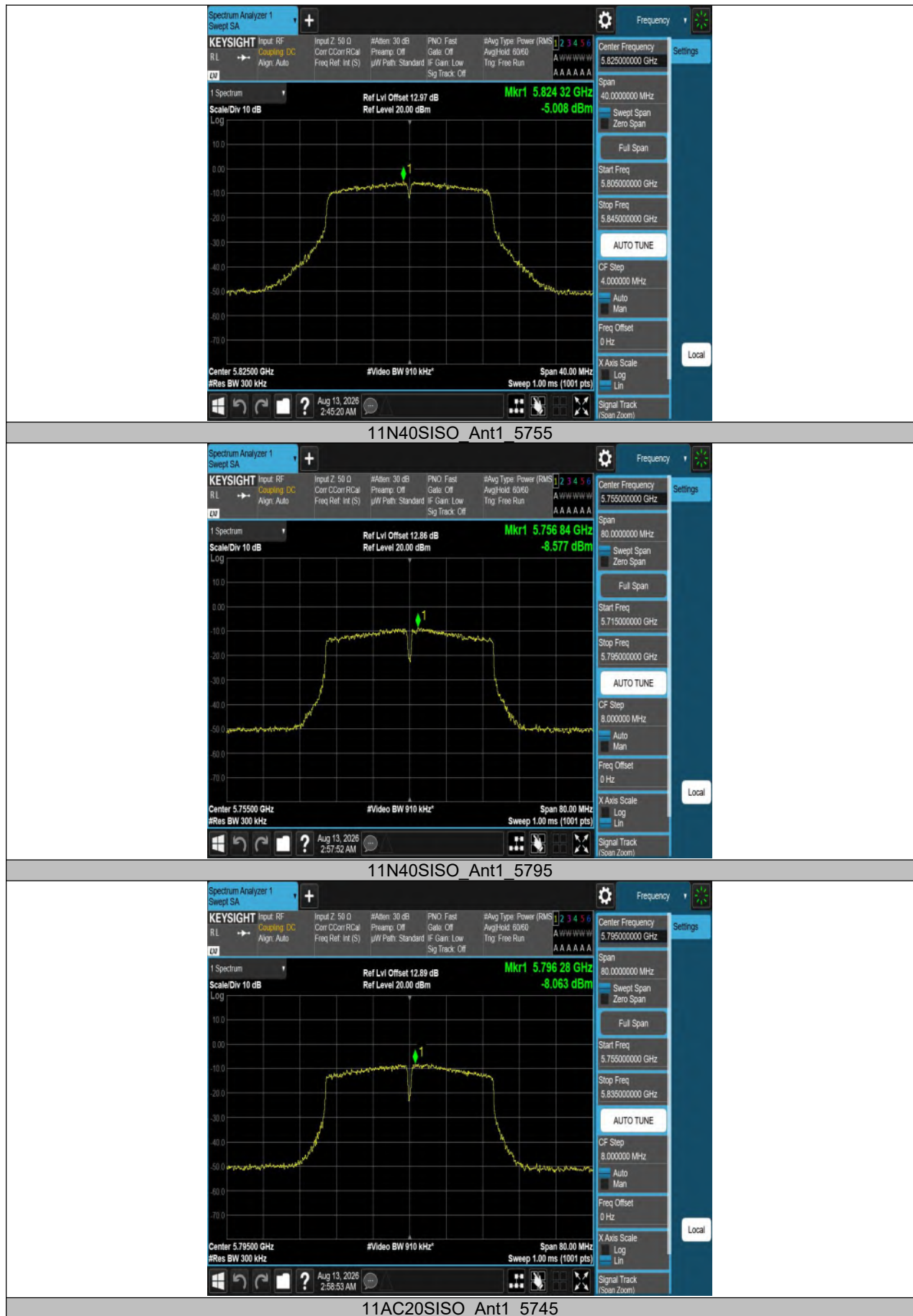


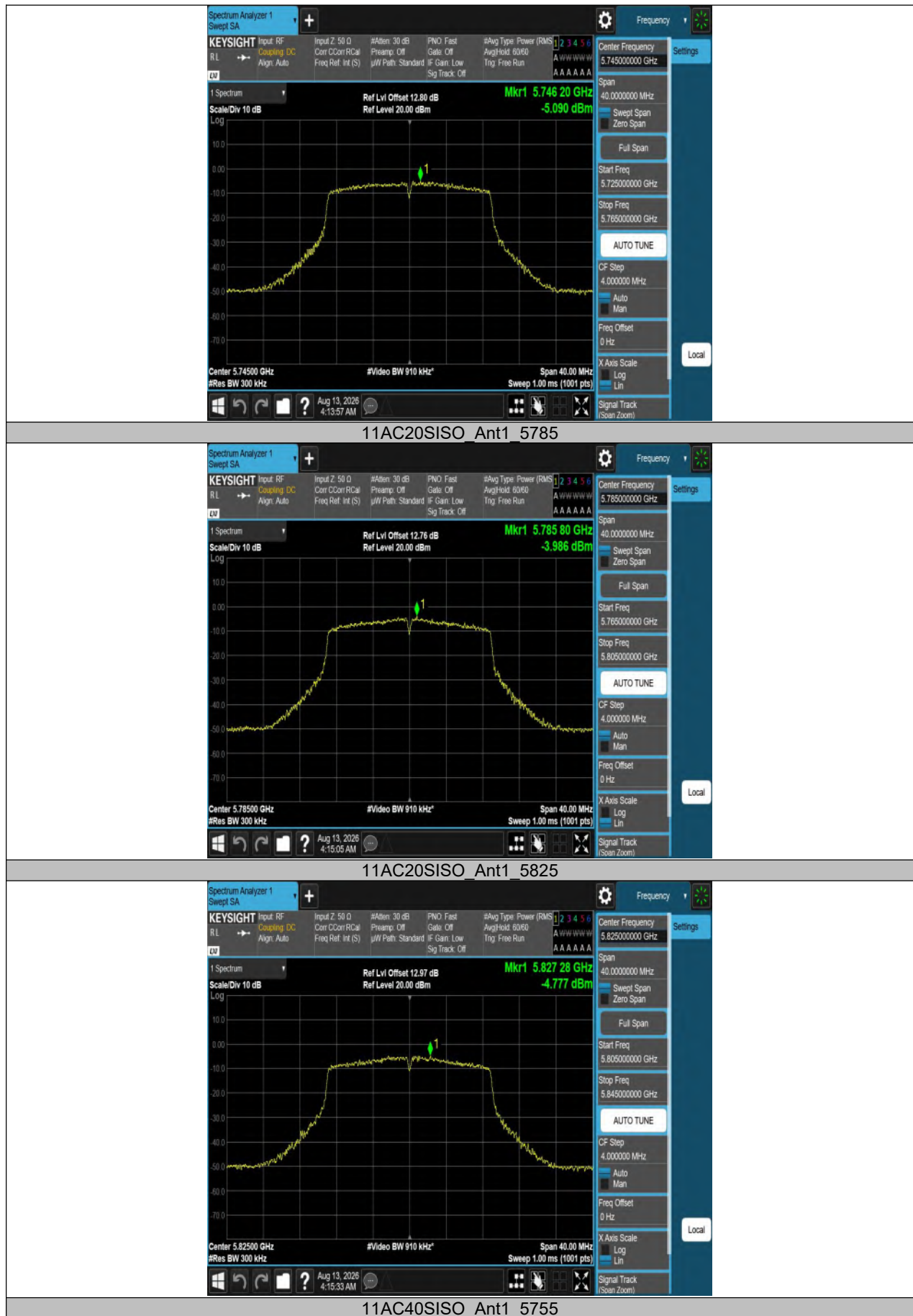


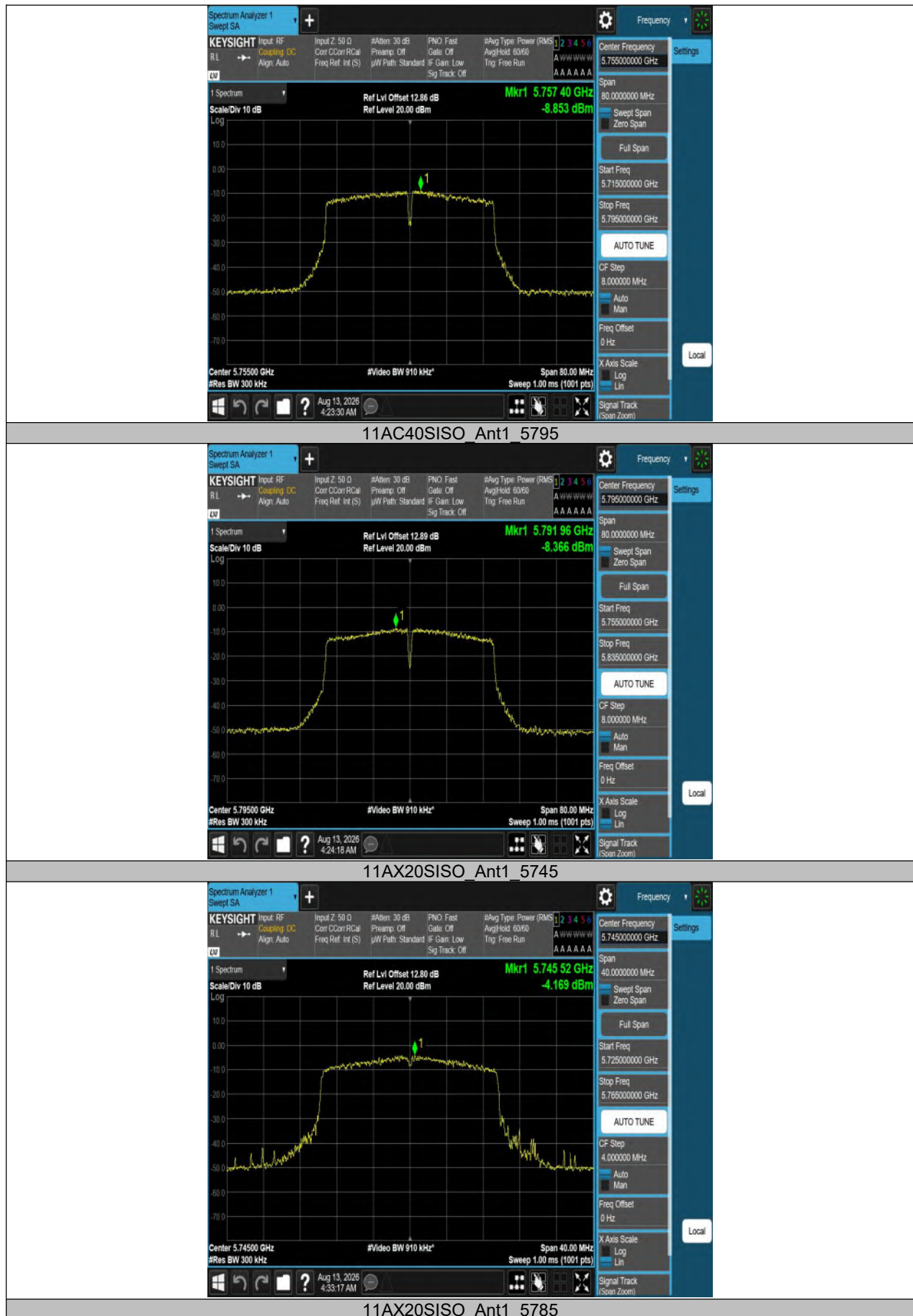
Original Test Data for B4

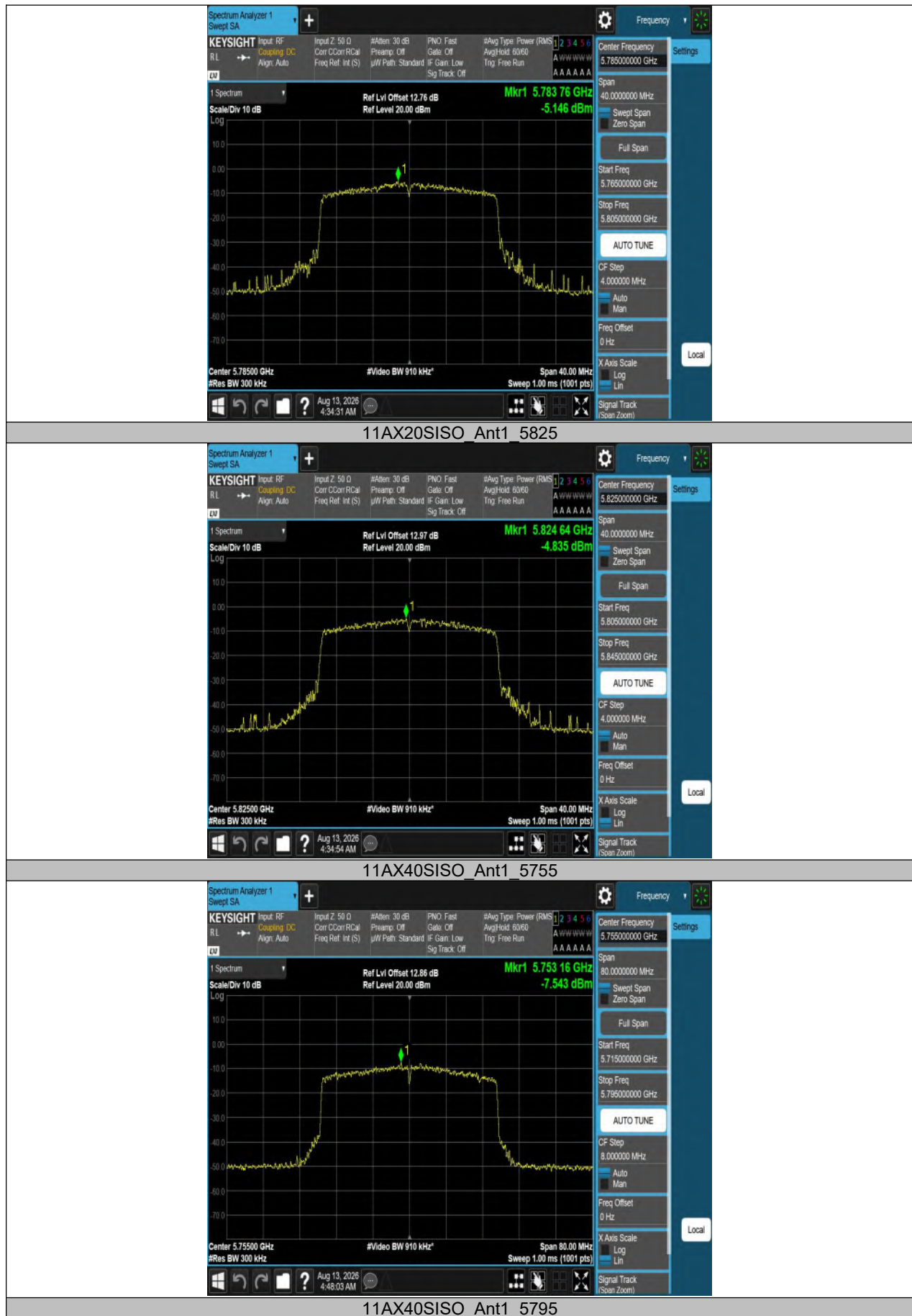














## 12. Frequency Stability Measurement

### 12.1. Block Diagram of Test Setup

Same as section 8.1

### 12.2. Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

### 12.3. Test Procedures

(1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.

(2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10 dB lower than the measured peak value.

(3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

### 12.4. Test Result

| Voltage     |      |             |               |                  |                |                 |             |         |
|-------------|------|-------------|---------------|------------------|----------------|-----------------|-------------|---------|
| Test Mode   | Ant. | Freq. (MHz) | Voltage (Vdc) | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| 11AC20 SISO | Ant1 | 5180        | NV            | NT               | -24000.00      | -4.633205       | 20          | PASS    |
|             |      |             | LV            | NT               | -25000.00      | -4.826255       | 20          | PASS    |
|             |      |             | HV            | NT               | -25000.00      | -4.826255       | 20          | PASS    |
|             |      | 5200        | NV            | NT               | -26000.00      | -5.000000       | 20          | PASS    |
|             |      |             | LV            | NT               | -27000.00      | -5.192308       | 20          | PASS    |
|             |      |             | HV            | NT               | -27000.00      | -5.192308       | 20          | PASS    |
|             |      | 5240        | NV            | NT               | -29000.00      | -5.534351       | 20          | PASS    |
|             |      |             | LV            | NT               | -30000.00      | -5.725191       | 20          | PASS    |
|             |      |             | HV            | NT               | -29000.00      | -5.534351       | 20          | PASS    |
|             |      | 5260        | NV            | NT               | -29000.00      | -5.513308       | 20          | PASS    |
|             |      |             | LV            | NT               | -29000.00      | -5.513308       | 20          | PASS    |
|             |      |             | HV            | NT               | -30000.00      | -5.703422       | 20          | PASS    |
|             |      | 5280        | NV            | NT               | -29000.00      | -5.492424       | 20          | PASS    |
|             |      |             | LV            | NT               | -30000.00      | -5.681818       | 20          | PASS    |
|             |      |             | HV            | NT               | -30000.00      | -5.681818       | 20          | PASS    |
|             |      | 5320        | NV            | NT               | -29000.00      | -5.451128       | 20          | PASS    |
|             |      |             | LV            | NT               | -30000.00      | -5.639098       | 20          | PASS    |
|             |      |             | HV            | NT               | -30000.00      | -5.639098       | 20          | PASS    |
|             |      | 5500        | NV            | NT               | -31000.00      | -5.636364       | 20          | PASS    |
|             |      |             | LV            | NT               | -31000.00      | -5.636364       | 20          | PASS    |
|             |      |             | HV            | NT               | -31000.00      | -5.636364       | 20          | PASS    |
|             |      | 5580        | NV            | NT               | -32000.00      | -5.734767       | 20          | PASS    |
|             |      |             | LV            | NT               | -32000.00      | -5.734767       | 20          | PASS    |
|             |      |             | HV            | NT               | -32000.00      | -5.734767       | 20          | PASS    |
|             |      | 5700        | NV            | NT               | -32000.00      | -5.614035       | 20          | PASS    |
|             |      |             | LV            | NT               | -32000.00      | -5.614035       | 20          | PASS    |
|             |      |             | HV            | NT               | -33000.00      | -5.789474       | 20          | PASS    |
|             |      | 5720        | NV            | NT               | -32000.00      | -5.594406       | 20          | PASS    |
|             |      |             | LV            | NT               | -33000.00      | -5.769231       | 20          | PASS    |
|             |      |             | HV            | NT               | -33000.00      | -5.769231       | 20          | PASS    |
|             |      | 5745        | NV            | NT               | -33000.00      | -5.744125       | 20          | PASS    |
|             |      |             | LV            | NT               | -33000.00      | -5.744125       | 20          | PASS    |

|                |      |      |    |    |           |           |    |      |
|----------------|------|------|----|----|-----------|-----------|----|------|
|                |      | 5785 | HV | NT | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | NT | -33000.00 | -5.704408 | 20 | PASS |
|                |      |      | LV | NT | -33000.00 | -5.704408 | 20 | PASS |
|                |      |      | HV | NT | -33000.00 | -5.704408 | 20 | PASS |
|                |      | 5825 | NV | NT | -33000.00 | -5.665236 | 20 | PASS |
|                |      |      | LV | NT | -33000.00 | -5.665236 | 20 | PASS |
|                |      |      | HV | NT | -33000.00 | -5.665236 | 20 | PASS |
| 11AC40<br>SISO | Ant1 | 5190 | NV | NT | -29000.00 | -5.587669 | 20 | PASS |
|                |      |      | LV | NT | -29000.00 | -5.587669 | 20 | PASS |
|                |      |      | HV | NT | -30000.00 | -5.780347 | 20 | PASS |
|                |      | 5230 | NV | NT | -29000.00 | -5.544933 | 20 | PASS |
|                |      |      | LV | NT | -30000.00 | -5.736138 | 20 | PASS |
|                |      |      | HV | NT | -30000.00 | -5.736138 | 20 | PASS |
|                |      | 5270 | NV | NT | -29000.00 | -5.502846 | 20 | PASS |
|                |      |      | LV | NT | -29000.00 | -5.502846 | 20 | PASS |
|                |      |      | HV | NT | -30000.00 | -5.692600 | 20 | PASS |
|                |      | 5310 | NV | NT | -29000.00 | -5.461394 | 20 | PASS |
|                |      |      | LV | NT | -29000.00 | -5.461394 | 20 | PASS |
|                |      |      | HV | NT | -30000.00 | -5.649718 | 20 | PASS |
|                |      | 5510 | NV | NT | -31000.00 | -5.626134 | 20 | PASS |
|                |      |      | LV | NT | -31000.00 | -5.626134 | 20 | PASS |
|                |      |      | HV | NT | -32000.00 | -5.807623 | 20 | PASS |
|                |      | 5550 | NV | NT | -31000.00 | -5.585586 | 20 | PASS |
|                |      |      | LV | NT | -32000.00 | -5.765766 | 20 | PASS |
|                |      |      | HV | NT | -32000.00 | -5.765766 | 20 | PASS |
|                |      | 5670 | NV | NT | -32000.00 | -5.643739 | 20 | PASS |
|                |      |      | LV | NT | -33000.00 | -5.820106 | 20 | PASS |
|                |      |      | HV | NT | -33000.00 | -5.820106 | 20 | PASS |
|                |      | 5710 | NV | NT | -34000.00 | -5.954466 | 20 | PASS |
|                |      |      | LV | NT | -35000.00 | -6.129597 | 20 | PASS |
|                |      |      | HV | NT | -34000.00 | -5.954466 | 20 | PASS |
|                |      | 5755 | NV | NT | -33000.00 | -5.734144 | 20 | PASS |
|                |      |      | LV | NT | -34000.00 | -5.907906 | 20 | PASS |
|                |      |      | HV | NT | -34000.00 | -5.907906 | 20 | PASS |
|                |      | 5795 | NV | NT | -34000.00 | -5.867127 | 20 | PASS |
|                |      |      | LV | NT | -35000.00 | -6.039689 | 20 | PASS |
|                |      |      | HV | NT | -35000.00 | -6.039689 | 20 | PASS |

| Temperature    |      |             |               |                  |                |                 |             |         |
|----------------|------|-------------|---------------|------------------|----------------|-----------------|-------------|---------|
| Test Mode      | Ant. | Freq. (MHz) | Voltage (Vdc) | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| 11AC20<br>SISO | Ant1 | 5180        | NV            | -30              | -25000.00      | -4.826255       | 20          | PASS    |
|                |      |             | NV            | -20              | -26000.00      | -5.019305       | 20          | PASS    |
|                |      |             | NV            | -10              | -26000.00      | -5.019305       | 20          | PASS    |
|                |      |             | NV            | 0                | -26000.00      | -5.019305       | 20          | PASS    |
|                |      |             | NV            | 10               | -26000.00      | -5.019305       | 20          | PASS    |
|                |      |             | NV            | 20               | -26000.00      | -5.019305       | 20          | PASS    |
|                |      |             | NV            | 30               | -27000.00      | -5.212355       | 20          | PASS    |
|                |      |             | NV            | 40               | -27000.00      | -5.212355       | 20          | PASS    |
|                |      |             | NV            | 50               | -27000.00      | -5.212355       | 20          | PASS    |
|                |      | 5200        | NV            | -30              | -28000.00      | -5.384615       | 20          | PASS    |
|                |      |             | NV            | -20              | -28000.00      | -5.384615       | 20          | PASS    |
|                |      |             | NV            | -10              | -28000.00      | -5.384615       | 20          | PASS    |
|                |      |             | NV            | 0                | -28000.00      | -5.384615       | 20          | PASS    |
|                |      |             | NV            | 10               | -28000.00      | -5.384615       | 20          | PASS    |
|                |      |             | NV            | 20               | -28000.00      | -5.384615       | 20          | PASS    |
|                |      |             | NV            | 30               | -29000.00      | -5.576923       | 20          | PASS    |
|                |      |             | NV            | 40               | -29000.00      | -5.576923       | 20          | PASS    |
|                |      |             | NV            | 50               | -29000.00      | -5.576923       | 20          | PASS    |

|  |  |      |    |     |           |           |    |      |
|--|--|------|----|-----|-----------|-----------|----|------|
|  |  | 5240 | NV | -30 | -30000.00 | -5.725191 | 20 | PASS |
|  |  |      | NV | -20 | -30000.00 | -5.725191 | 20 | PASS |
|  |  |      | NV | -10 | -30000.00 | -5.725191 | 20 | PASS |
|  |  |      | NV | 0   | -30000.00 | -5.725191 | 20 | PASS |
|  |  |      | NV | 10  | -30000.00 | -5.725191 | 20 | PASS |
|  |  |      | NV | 20  | -29000.00 | -5.534351 | 20 | PASS |
|  |  |      | NV | 30  | -30000.00 | -5.725191 | 20 | PASS |
|  |  |      | NV | 40  | -30000.00 | -5.725191 | 20 | PASS |
|  |  | 5260 | NV | 50  | -30000.00 | -5.725191 | 20 | PASS |
|  |  |      | NV | -30 | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | -20 | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | -10 | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | 0   | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | 10  | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | 20  | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | 30  | -30000.00 | -5.703422 | 20 | PASS |
|  |  | 5280 | NV | 40  | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | 50  | -30000.00 | -5.703422 | 20 | PASS |
|  |  |      | NV | -30 | -30000.00 | -5.681818 | 20 | PASS |
|  |  |      | NV | -20 | -30000.00 | -5.681818 | 20 | PASS |
|  |  |      | NV | -10 | -30000.00 | -5.681818 | 20 | PASS |
|  |  |      | NV | 0   | -30000.00 | -5.681818 | 20 | PASS |
|  |  |      | NV | 10  | -30000.00 | -5.681818 | 20 | PASS |
|  |  |      | NV | 20  | -30000.00 | -5.681818 | 20 | PASS |
|  |  | 5320 | NV | 30  | -30000.00 | -5.681818 | 20 | PASS |
|  |  |      | NV | 40  | -30000.00 | -5.681818 | 20 | PASS |
|  |  |      | NV | 50  | -31000.00 | -5.871212 | 20 | PASS |
|  |  |      | NV | -30 | -30000.00 | -5.639098 | 20 | PASS |
|  |  |      | NV | -20 | -30000.00 | -5.639098 | 20 | PASS |
|  |  |      | NV | -10 | -30000.00 | -5.639098 | 20 | PASS |
|  |  |      | NV | 0   | -30000.00 | -5.639098 | 20 | PASS |
|  |  |      | NV | 10  | -30000.00 | -5.639098 | 20 | PASS |
|  |  | 5500 | NV | 20  | -31000.00 | -5.827068 | 20 | PASS |
|  |  |      | NV | 30  | -31000.00 | -5.827068 | 20 | PASS |
|  |  |      | NV | 40  | -31000.00 | -5.827068 | 20 | PASS |
|  |  |      | NV | 50  | -31000.00 | -5.827068 | 20 | PASS |
|  |  |      | NV | -30 | -32000.00 | -5.818182 | 20 | PASS |
|  |  |      | NV | -20 | -32000.00 | -5.818182 | 20 | PASS |
|  |  |      | NV | -10 | -32000.00 | -5.818182 | 20 | PASS |
|  |  |      | NV | 0   | -32000.00 | -5.818182 | 20 | PASS |
|  |  | 5580 | NV | 10  | -33000.00 | -6.000000 | 20 | PASS |
|  |  |      | NV | 20  | -32000.00 | -5.818182 | 20 | PASS |
|  |  |      | NV | 30  | -32000.00 | -5.818182 | 20 | PASS |
|  |  |      | NV | 40  | -32000.00 | -5.818182 | 20 | PASS |
|  |  |      | NV | 50  | -32000.00 | -5.818182 | 20 | PASS |
|  |  |      | NV | -30 | -33000.00 | -5.913978 | 20 | PASS |
|  |  |      | NV | -20 | -33000.00 | -5.913978 | 20 | PASS |
|  |  |      | NV | -10 | -33000.00 | -5.913978 | 20 | PASS |
|  |  | 5700 | NV | 0   | -33000.00 | -5.913978 | 20 | PASS |
|  |  |      | NV | 10  | -33000.00 | -5.913978 | 20 | PASS |
|  |  |      | NV | 20  | -33000.00 | -5.913978 | 20 | PASS |
|  |  |      | NV | 30  | -33000.00 | -5.913978 | 20 | PASS |
|  |  |      | NV | 40  | -33000.00 | -5.913978 | 20 | PASS |
|  |  |      | NV | 50  | -33000.00 | -5.913978 | 20 | PASS |
|  |  | 5700 | NV | -30 | -33000.00 | -5.789474 | 20 | PASS |
|  |  |      | NV | -20 | -33000.00 | -5.789474 | 20 | PASS |
|  |  |      | NV | -10 | -33000.00 | -5.789474 | 20 | PASS |
|  |  |      | NV | 0   | -33000.00 | -5.789474 | 20 | PASS |
|  |  |      | NV | 10  | -34000.00 | -5.964912 | 20 | PASS |
|  |  |      | NV | 20  | -33000.00 | -5.789474 | 20 | PASS |

|                |      |      |    |     |           |           |    |      |
|----------------|------|------|----|-----|-----------|-----------|----|------|
|                |      |      | NV | 30  | -33000.00 | -5.789474 | 20 | PASS |
|                |      |      | NV | 40  | -34000.00 | -5.964912 | 20 | PASS |
|                |      |      | NV | 50  | -34000.00 | -5.964912 | 20 | PASS |
|                |      | 5720 | NV | -30 | -33000.00 | -5.769231 | 20 | PASS |
|                |      |      | NV | -20 | -34000.00 | -5.944056 | 20 | PASS |
|                |      |      | NV | -10 | -33000.00 | -5.769231 | 20 | PASS |
|                |      |      | NV | 0   | -34000.00 | -5.944056 | 20 | PASS |
|                |      |      | NV | 10  | -34000.00 | -5.944056 | 20 | PASS |
|                |      |      | NV | 20  | -34000.00 | -5.944056 | 20 | PASS |
|                |      |      | NV | 30  | -34000.00 | -5.944056 | 20 | PASS |
|                |      |      | NV | 40  | -34000.00 | -5.944056 | 20 | PASS |
|                |      |      | NV | 50  | -34000.00 | -5.944056 | 20 | PASS |
|                |      | 5745 | NV | -30 | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | -20 | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | -10 | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | 0   | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | 10  | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | 20  | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | 30  | -34000.00 | -5.918190 | 20 | PASS |
|                |      |      | NV | 40  | -34000.00 | -5.918190 | 20 | PASS |
|                |      | 5785 | NV | -30 | -34000.00 | -5.877269 | 20 | PASS |
|                |      |      | NV | -20 | -34000.00 | -5.877269 | 20 | PASS |
|                |      |      | NV | -10 | -34000.00 | -5.877269 | 20 | PASS |
|                |      |      | NV | 0   | -34000.00 | -5.877269 | 20 | PASS |
|                |      |      | NV | 10  | -34000.00 | -5.877269 | 20 | PASS |
|                |      |      | NV | 20  | -34000.00 | -5.877269 | 20 | PASS |
|                |      |      | NV | 30  | -34000.00 | -5.877269 | 20 | PASS |
|                |      |      | NV | 40  | -34000.00 | -5.877269 | 20 | PASS |
|                |      | 5825 | NV | -30 | -33000.00 | -5.665236 | 20 | PASS |
|                |      |      | NV | -20 | -34000.00 | -5.836910 | 20 | PASS |
|                |      |      | NV | -10 | -34000.00 | -5.836910 | 20 | PASS |
|                |      |      | NV | 0   | -34000.00 | -5.836910 | 20 | PASS |
|                |      |      | NV | 10  | -34000.00 | -5.836910 | 20 | PASS |
|                |      |      | NV | 20  | -34000.00 | -5.836910 | 20 | PASS |
|                |      |      | NV | 30  | -34000.00 | -5.836910 | 20 | PASS |
|                |      |      | NV | 40  | -34000.00 | -5.836910 | 20 | PASS |
| 11AC40<br>SISO | Ant1 | 5190 | NV | -30 | -30000.00 | -5.780347 | 20 | PASS |
|                |      |      | NV | -20 | -30000.00 | -5.780347 | 20 | PASS |
|                |      |      | NV | -10 | -30000.00 | -5.780347 | 20 | PASS |
|                |      |      | NV | 0   | -30000.00 | -5.780347 | 20 | PASS |
|                |      |      | NV | 10  | -30000.00 | -5.780347 | 20 | PASS |
|                |      |      | NV | 20  | -30000.00 | -5.780347 | 20 | PASS |
|                |      |      | NV | 30  | -30000.00 | -5.780347 | 20 | PASS |
|                |      |      | NV | 40  | -30000.00 | -5.780347 | 20 | PASS |
|                |      | 5230 | NV | -30 | -30000.00 | -5.736138 | 20 | PASS |
|                |      |      | NV | -20 | -30000.00 | -5.736138 | 20 | PASS |
|                |      |      | NV | -10 | -30000.00 | -5.736138 | 20 | PASS |
|                |      |      | NV | 0   | -31000.00 | -5.927342 | 20 | PASS |
|                |      |      | NV | 10  | -30000.00 | -5.736138 | 20 | PASS |
|                |      |      | NV | 20  | -31000.00 | -5.927342 | 20 | PASS |
|                |      |      | NV | 30  | -31000.00 | -5.927342 | 20 | PASS |
|                |      |      | NV | 40  | -31000.00 | -5.927342 | 20 | PASS |
|                |      |      | NV | 50  | -31000.00 | -5.927342 | 20 | PASS |
|                |      | 5270 | NV | -30 | -30000.00 | -5.692600 | 20 | PASS |
|                |      |      | NV | -20 | -30000.00 | -5.692600 | 20 | PASS |
|                |      |      | NV | -10 | -30000.00 | -5.692600 | 20 | PASS |

|  |  |      |    |     |           |           |    |      |
|--|--|------|----|-----|-----------|-----------|----|------|
|  |  |      | NV | 0   | -30000.00 | -5.692600 | 20 | PASS |
|  |  |      | NV | 10  | -30000.00 | -5.692600 | 20 | PASS |
|  |  |      | NV | 20  | -31000.00 | -5.882353 | 20 | PASS |
|  |  |      | NV | 30  | -31000.00 | -5.882353 | 20 | PASS |
|  |  |      | NV | 40  | -30000.00 | -5.692600 | 20 | PASS |
|  |  |      | NV | 50  | -31000.00 | -5.882353 | 20 | PASS |
|  |  |      | NV | -30 | -30000.00 | -5.649718 | 20 | PASS |
|  |  |      | NV | -20 | -30000.00 | -5.649718 | 20 | PASS |
|  |  |      | NV | -10 | -30000.00 | -5.649718 | 20 | PASS |
|  |  |      | NV | 0   | -31000.00 | -5.838041 | 20 | PASS |
|  |  |      | NV | 10  | -31000.00 | -5.838041 | 20 | PASS |
|  |  | 5310 | NV | 20  | -31000.00 | -5.838041 | 20 | PASS |
|  |  |      | NV | 30  | -31000.00 | -5.838041 | 20 | PASS |
|  |  |      | NV | 40  | -31000.00 | -5.838041 | 20 | PASS |
|  |  |      | NV | 50  | -31000.00 | -5.838041 | 20 | PASS |
|  |  |      | NV | -30 | -32000.00 | -5.807623 | 20 | PASS |
|  |  |      | NV | -20 | -32000.00 | -5.807623 | 20 | PASS |
|  |  | 5510 | NV | -10 | -32000.00 | -5.807623 | 20 | PASS |
|  |  |      | NV | 0   | -32000.00 | -5.807623 | 20 | PASS |
|  |  |      | NV | 10  | -32000.00 | -5.807623 | 20 | PASS |
|  |  |      | NV | 20  | -32000.00 | -5.807623 | 20 | PASS |
|  |  |      | NV | 30  | -32000.00 | -5.807623 | 20 | PASS |
|  |  |      | NV | 40  | -32000.00 | -5.807623 | 20 | PASS |
|  |  | 5550 | NV | 50  | -32000.00 | -5.807623 | 20 | PASS |
|  |  |      | NV | -30 | -32000.00 | -5.765766 | 20 | PASS |
|  |  |      | NV | -20 | -32000.00 | -5.765766 | 20 | PASS |
|  |  |      | NV | -10 | -32000.00 | -5.765766 | 20 | PASS |
|  |  |      | NV | 0   | -32000.00 | -5.765766 | 20 | PASS |
|  |  |      | NV | 10  | -32000.00 | -5.765766 | 20 | PASS |
|  |  | 5670 | NV | 20  | -33000.00 | -5.945946 | 20 | PASS |
|  |  |      | NV | 30  | -33000.00 | -5.945946 | 20 | PASS |
|  |  |      | NV | 40  | -33000.00 | -5.945946 | 20 | PASS |
|  |  |      | NV | 50  | -33000.00 | -5.945946 | 20 | PASS |
|  |  |      | NV | -30 | -33000.00 | -5.820106 | 20 | PASS |
|  |  |      | NV | -20 | -33000.00 | -5.820106 | 20 | PASS |
|  |  | 5710 | NV | -10 | -33000.00 | -5.820106 | 20 | PASS |
|  |  |      | NV | 0   | -33000.00 | -5.820106 | 20 | PASS |
|  |  |      | NV | 10  | -33000.00 | -5.820106 | 20 | PASS |
|  |  |      | NV | 20  | -33000.00 | -5.820106 | 20 | PASS |
|  |  |      | NV | 30  | -33000.00 | -5.820106 | 20 | PASS |
|  |  |      | NV | 40  | -34000.00 | -5.996473 | 20 | PASS |
|  |  | 5755 | NV | 50  | -33000.00 | -5.820106 | 20 | PASS |
|  |  |      | NV | -30 | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | -20 | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | -10 | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | 0   | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | 10  | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | 20  | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | 30  | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | 40  | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | 50  | -34000.00 | -5.954466 | 20 | PASS |
|  |  |      | NV | -30 | -34000.00 | -5.907906 | 20 | PASS |
|  |  |      | NV | -20 | -34000.00 | -5.907906 | 20 | PASS |
|  |  |      | NV | -10 | -35000.00 | -6.081668 | 20 | PASS |
|  |  |      | NV | 0   | -35000.00 | -6.081668 | 20 | PASS |
|  |  |      | NV | 10  | -35000.00 | -6.081668 | 20 | PASS |
|  |  |      | NV | 20  | -35000.00 | -6.081668 | 20 | PASS |
|  |  |      | NV | 30  | -35000.00 | -6.081668 | 20 | PASS |
|  |  |      | NV | 40  | -35000.00 | -6.081668 | 20 | PASS |
|  |  |      | NV | 50  | -35000.00 | -6.081668 | 20 | PASS |

|  |  |      |    |     |           |           |    |      |
|--|--|------|----|-----|-----------|-----------|----|------|
|  |  | 5795 | NV | -30 | -35000.00 | -6.039689 | 20 | PASS |
|  |  |      | NV | -20 | -35000.00 | -6.039689 | 20 | PASS |
|  |  |      | NV | -10 | -35000.00 | -6.039689 | 20 | PASS |
|  |  |      | NV | 0   | -35000.00 | -6.039689 | 20 | PASS |
|  |  |      | NV | 10  | -36000.00 | -6.212252 | 20 | PASS |
|  |  |      | NV | 20  | -36000.00 | -6.212252 | 20 | PASS |
|  |  |      | NV | 30  | -36000.00 | -6.212252 | 20 | PASS |
|  |  |      | NV | 40  | -36000.00 | -6.212252 | 20 | PASS |
|  |  |      | NV | 50  | -36000.00 | -6.212252 | 20 | PASS |