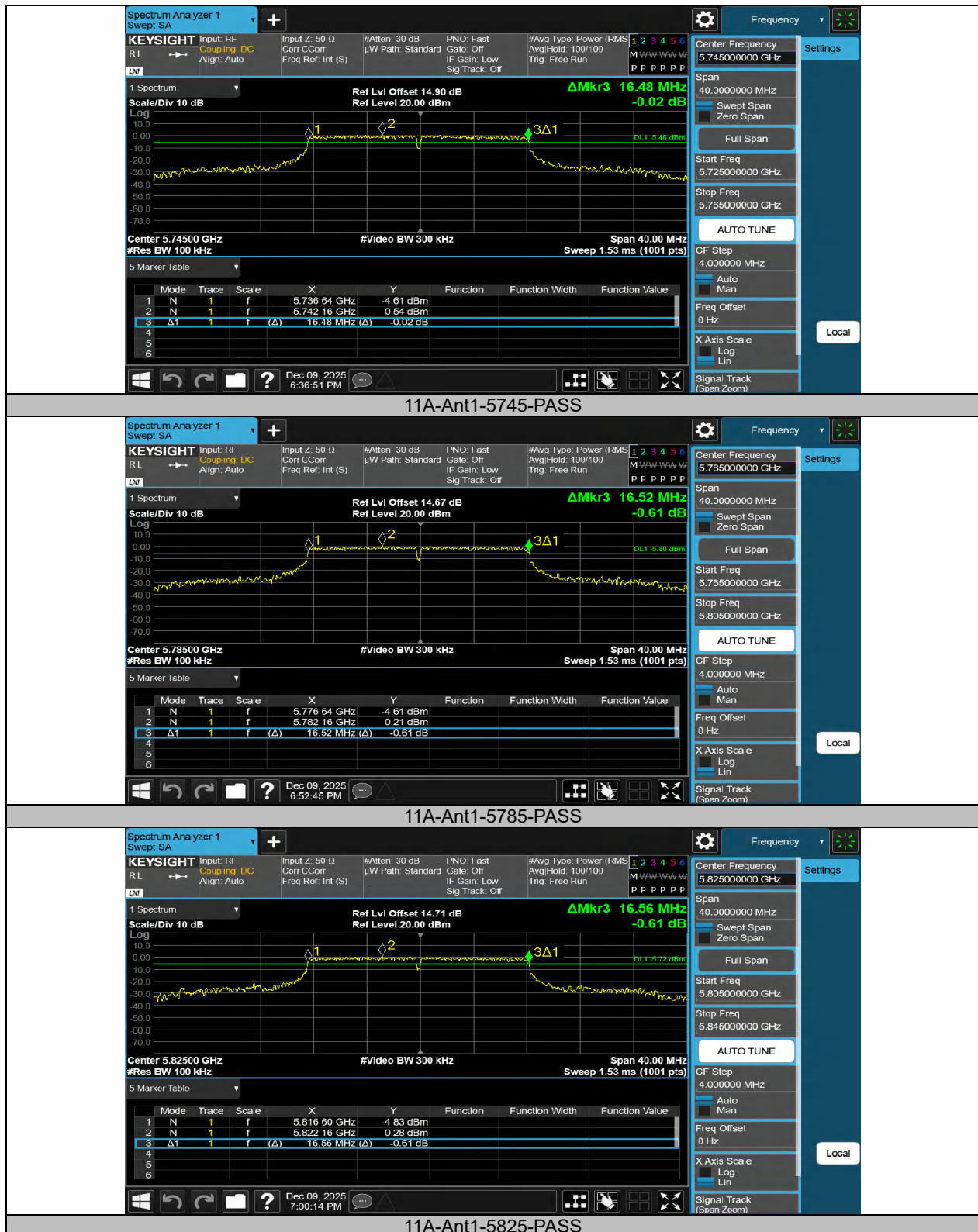
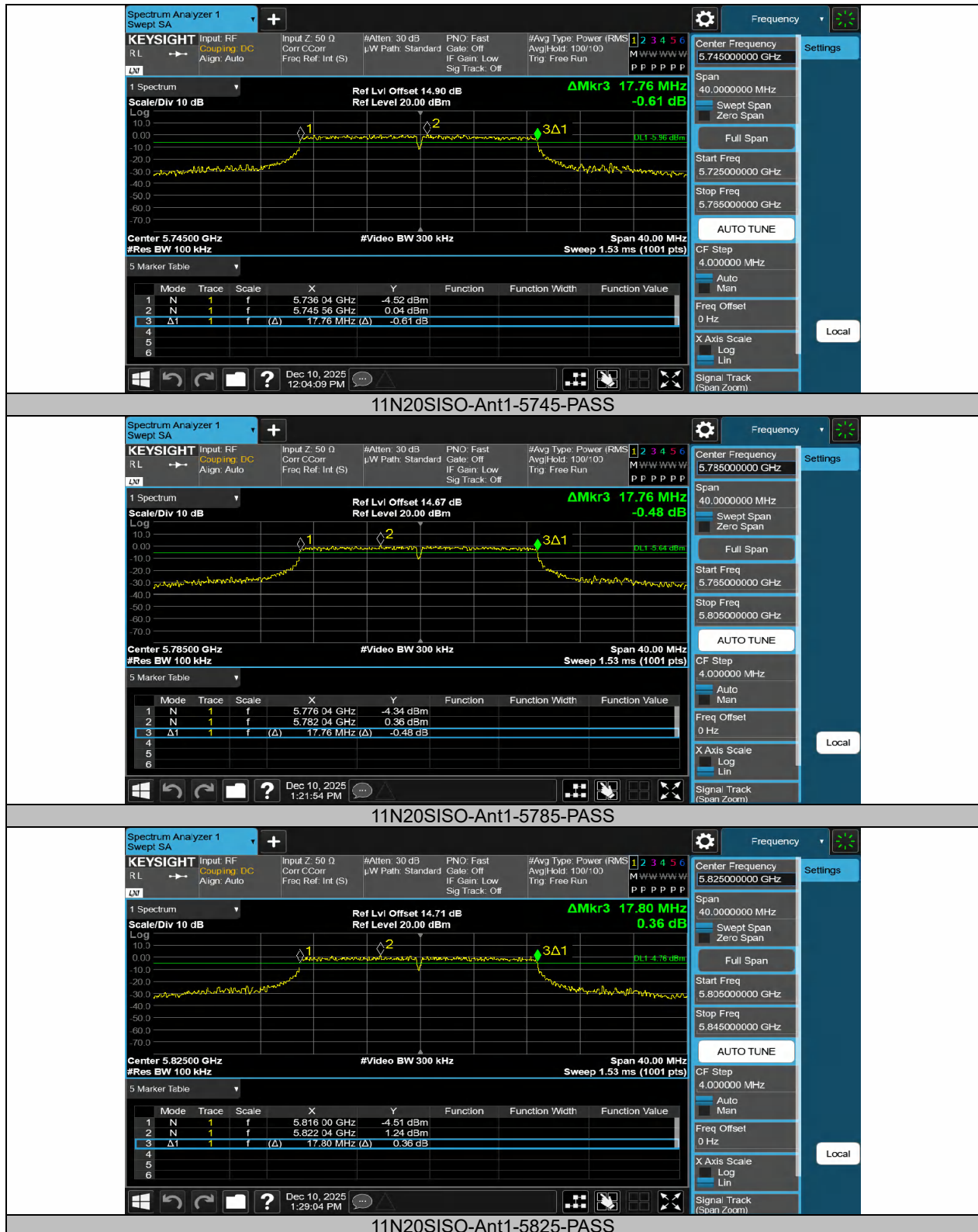


## Min emission bandwidth (6dB) Test Graphs



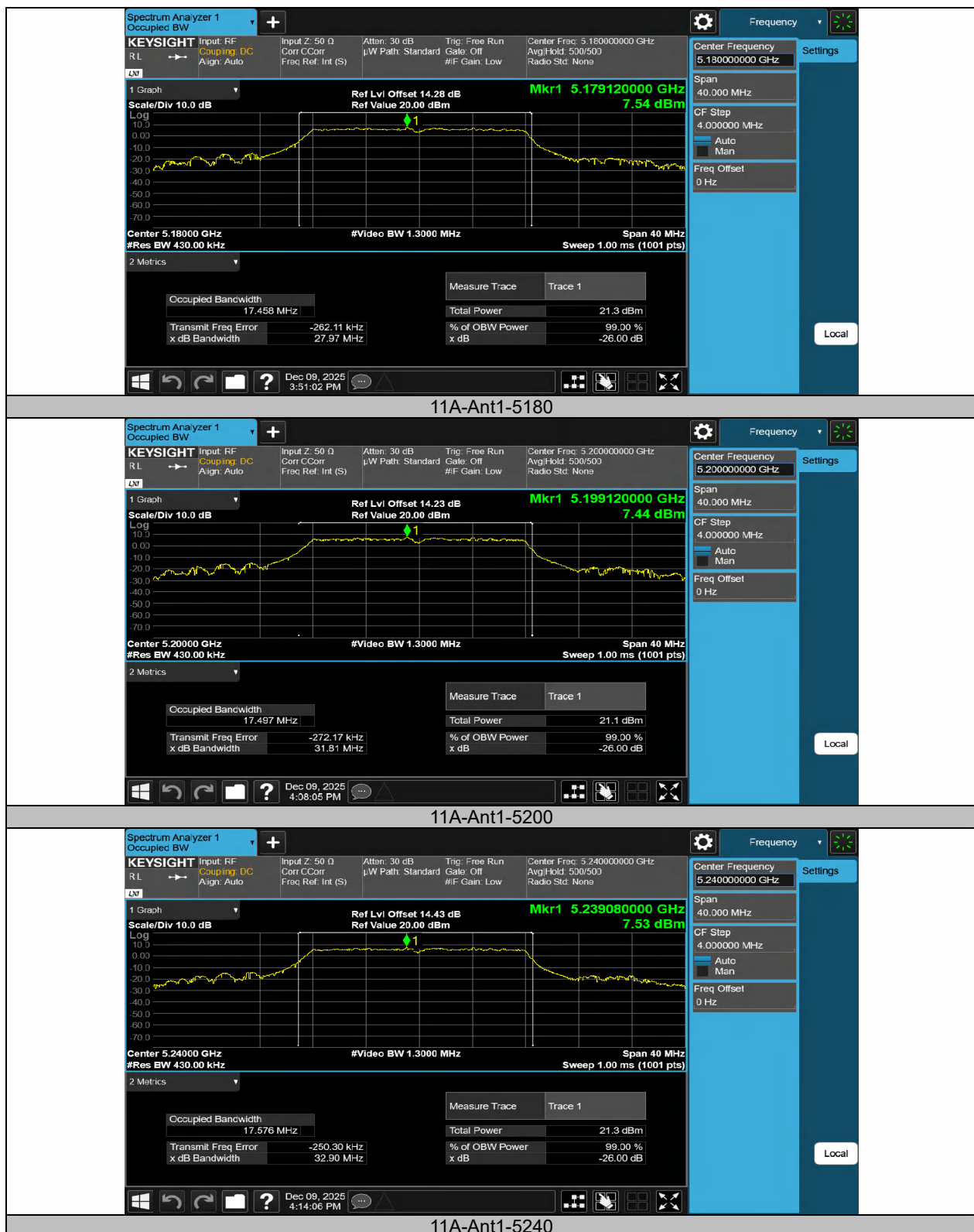




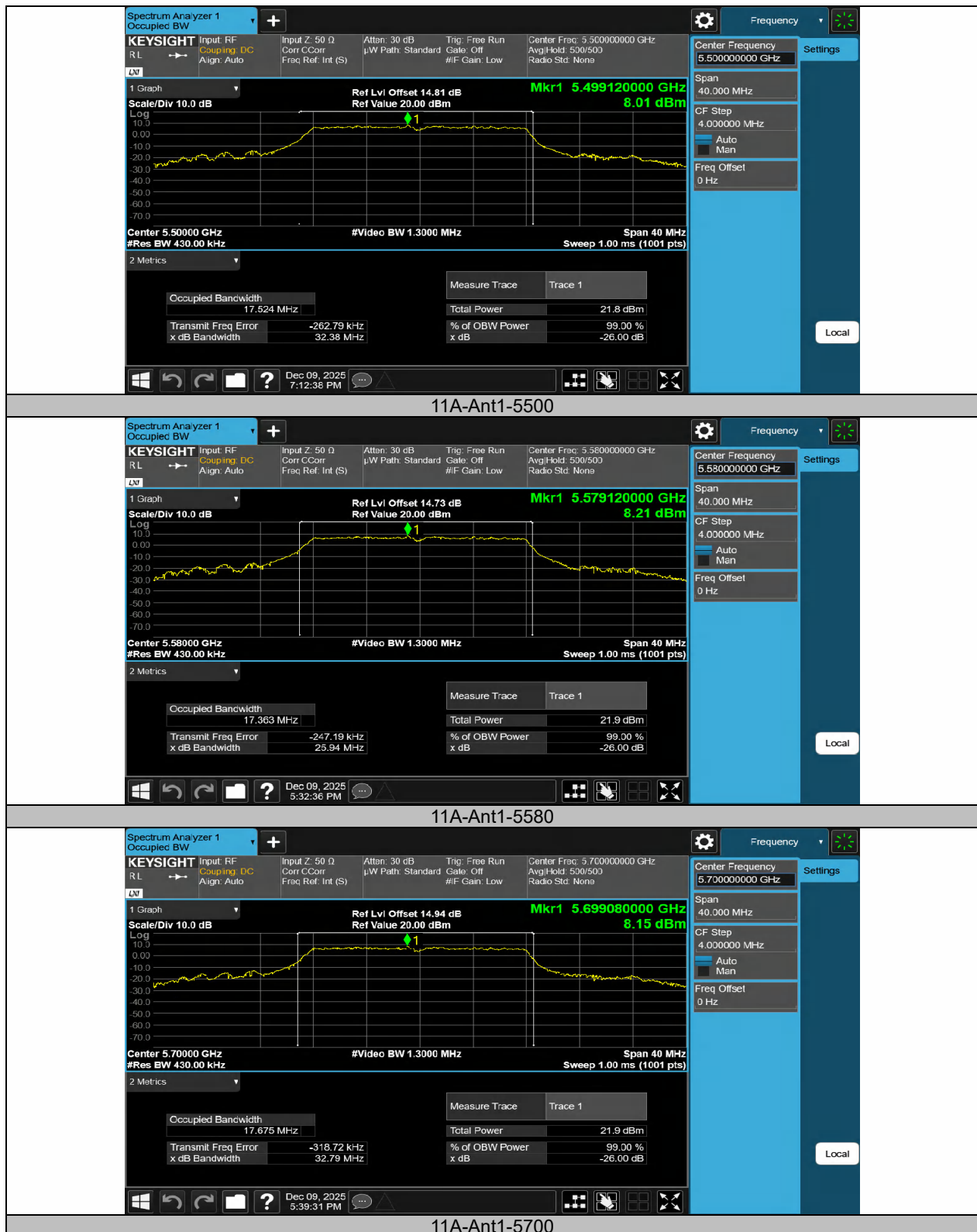
### Occupied channel bandwidth (99%)

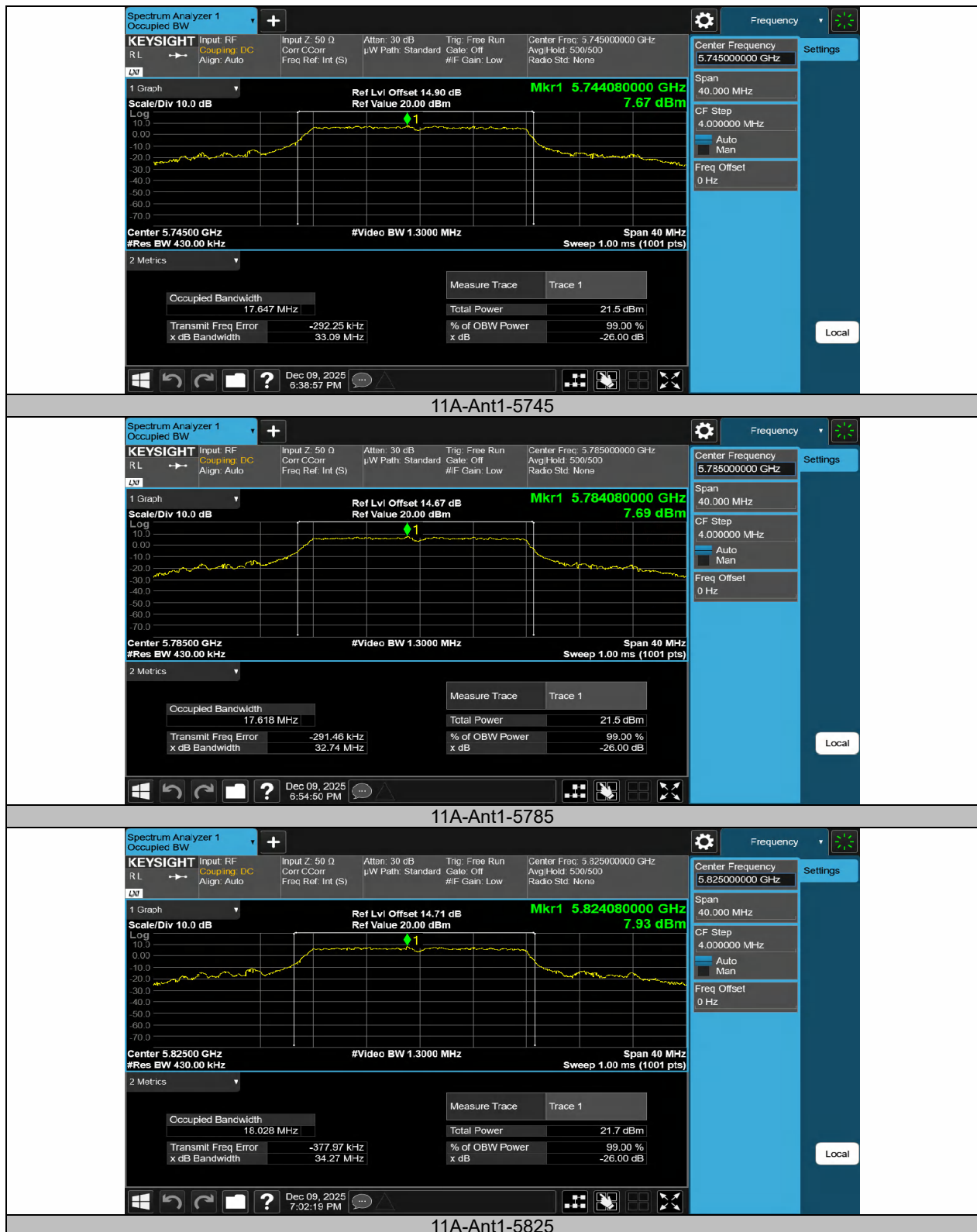
| TestMode  | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|-----------|---------|----------------|-----------|-----------|-----------|------------|---------|
| 11A       | Ant1    | 5180           | 17.458    | 5171.0089 | 5188.4669 | ---        | ---     |
| 11A       | Ant1    | 5200           | 17.497    | 5190.9793 | 5208.4763 | ---        | ---     |
| 11A       | Ant1    | 5240           | 17.576    | 5230.9617 | 5248.5377 | ---        | ---     |
| 11A       | Ant1    | 5260           | 17.635    | 5250.8590 | 5268.4940 | ---        | ---     |
| 11A       | Ant1    | 5280           | 17.749    | 5270.7931 | 5288.5421 | ---        | ---     |
| 11A       | Ant1    | 5320           | 17.892    | 5310.7399 | 5328.6319 | ---        | ---     |
| 11A       | Ant1    | 5500           | 17.524    | 5490.9752 | 5508.4992 | ---        | ---     |
| 11A       | Ant1    | 5580           | 17.363    | 5571.0713 | 5588.4343 | ---        | ---     |
| 11A       | Ant1    | 5700           | 17.675    | 5690.8438 | 5708.5188 | ---        | ---     |
| 11A       | Ant1    | 5745           | 17.647    | 5735.8843 | 5753.5313 | ---        | ---     |
| 11A       | Ant1    | 5785           | 17.618    | 5775.8995 | 5793.5175 | ---        | ---     |
| 11A       | Ant1    | 5825           | 18.028    | 5815.6080 | 5833.6360 | ---        | ---     |
| 11N20SISO | Ant1    | 5180           | 18.457    | 5170.6691 | 5189.1261 | ---        | ---     |
| 11N20SISO | Ant1    | 5200           | 18.455    | 5190.6673 | 5209.1223 | ---        | ---     |
| 11N20SISO | Ant1    | 5240           | 18.559    | 5230.6581 | 5249.2171 | ---        | ---     |
| 11N20SISO | Ant1    | 5260           | 18.652    | 5250.5846 | 5269.2366 | ---        | ---     |
| 11N20SISO | Ant1    | 5280           | 18.669    | 5270.5578 | 5289.2268 | ---        | ---     |
| 11N20SISO | Ant1    | 5320           | 18.752    | 5310.5695 | 5329.3215 | ---        | ---     |
| 11N20SISO | Ant1    | 5500           | 18.595    | 5490.6293 | 5509.2243 | ---        | ---     |
| 11N20SISO | Ant1    | 5580           | 18.452    | 5570.6881 | 5589.1401 | ---        | ---     |
| 11N20SISO | Ant1    | 5700           | 18.512    | 5690.6488 | 5709.1608 | ---        | ---     |
| 11N20SISO | Ant1    | 5745           | 18.705    | 5735.5529 | 5754.2579 | ---        | ---     |
| 11N20SISO | Ant1    | 5785           | 18.678    | 5775.5671 | 5794.2451 | ---        | ---     |
| 11N20SISO | Ant1    | 5825           | 18.735    | 5815.5056 | 5834.2406 | ---        | ---     |
| 11N40SISO | Ant1    | 5190           | 36.075    | 5171.8977 | 5207.9727 | ---        | ---     |
| 11N40SISO | Ant1    | 5230           | 36.207    | 5211.8497 | 5248.0567 | ---        | ---     |
| 11N40SISO | Ant1    | 5270           | 36.209    | 5251.8013 | 5288.0103 | ---        | ---     |
| 11N40SISO | Ant1    | 5310           | 36.063    | 5291.9381 | 5328.0011 | ---        | ---     |
| 11N40SISO | Ant1    | 5510           | 36.074    | 5491.8847 | 5527.9587 | ---        | ---     |
| 11N40SISO | Ant1    | 5550           | 36.074    | 5531.9024 | 5567.9764 | ---        | ---     |
| 11N40SISO | Ant1    | 5670           | 36.107    | 5651.8561 | 5687.9631 | ---        | ---     |
| 11N40SISO | Ant1    | 5755           | 36.363    | 5736.6773 | 5773.0403 | ---        | ---     |
| 11N40SISO | Ant1    | 5795           | 36.444    | 5776.6378 | 5813.0818 | ---        | ---     |

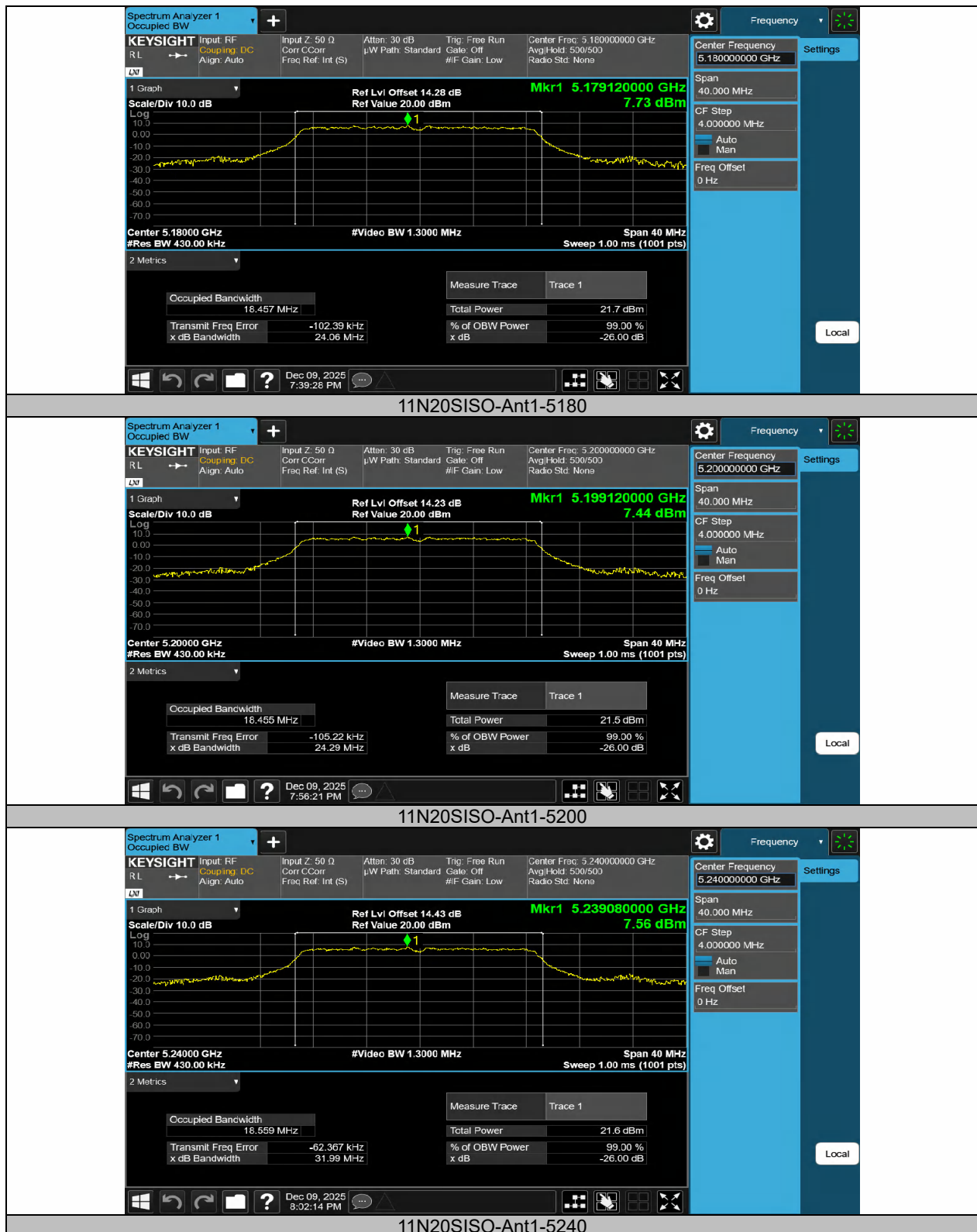
## Occupied channel bandwidth (99%) Test Graphs

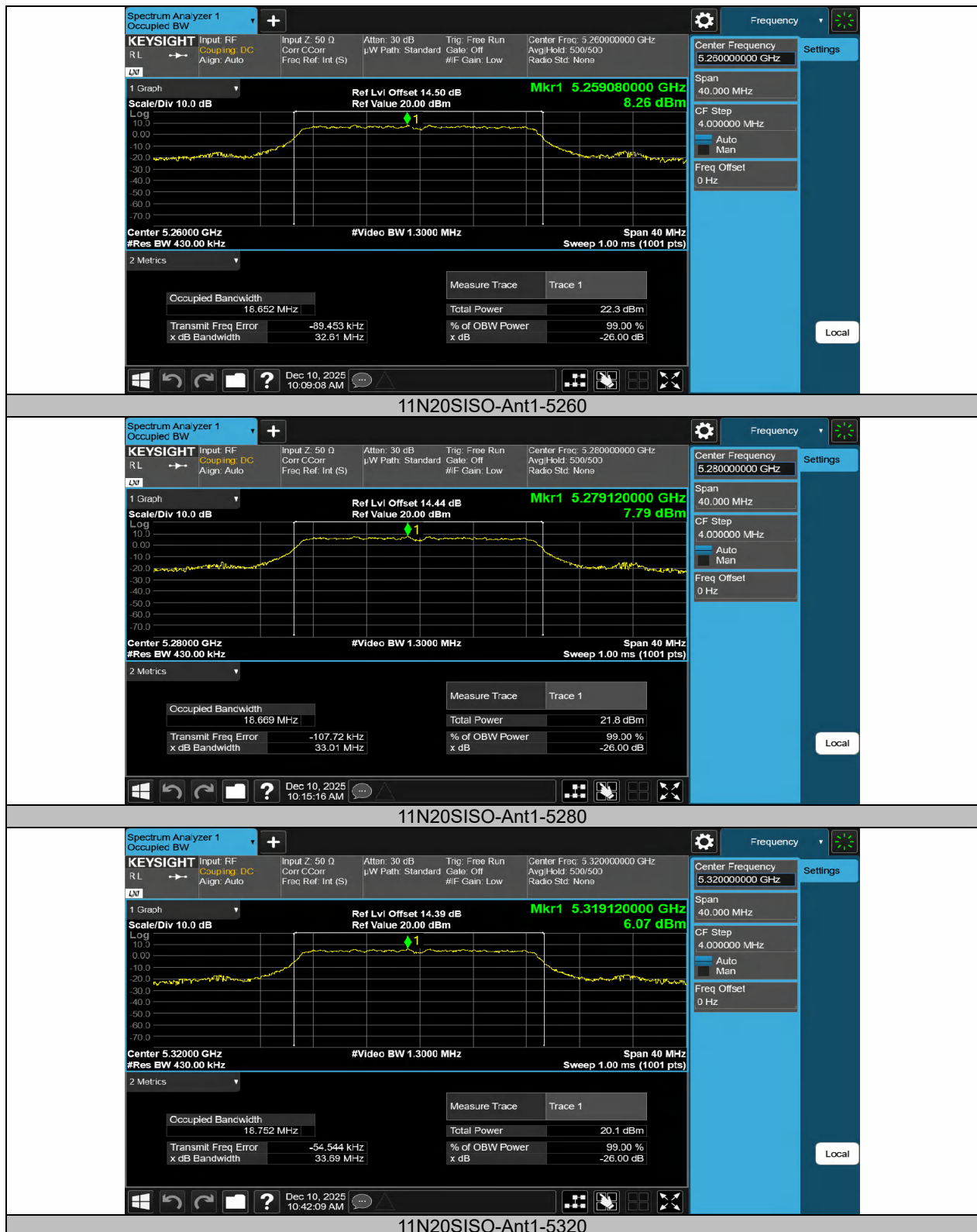










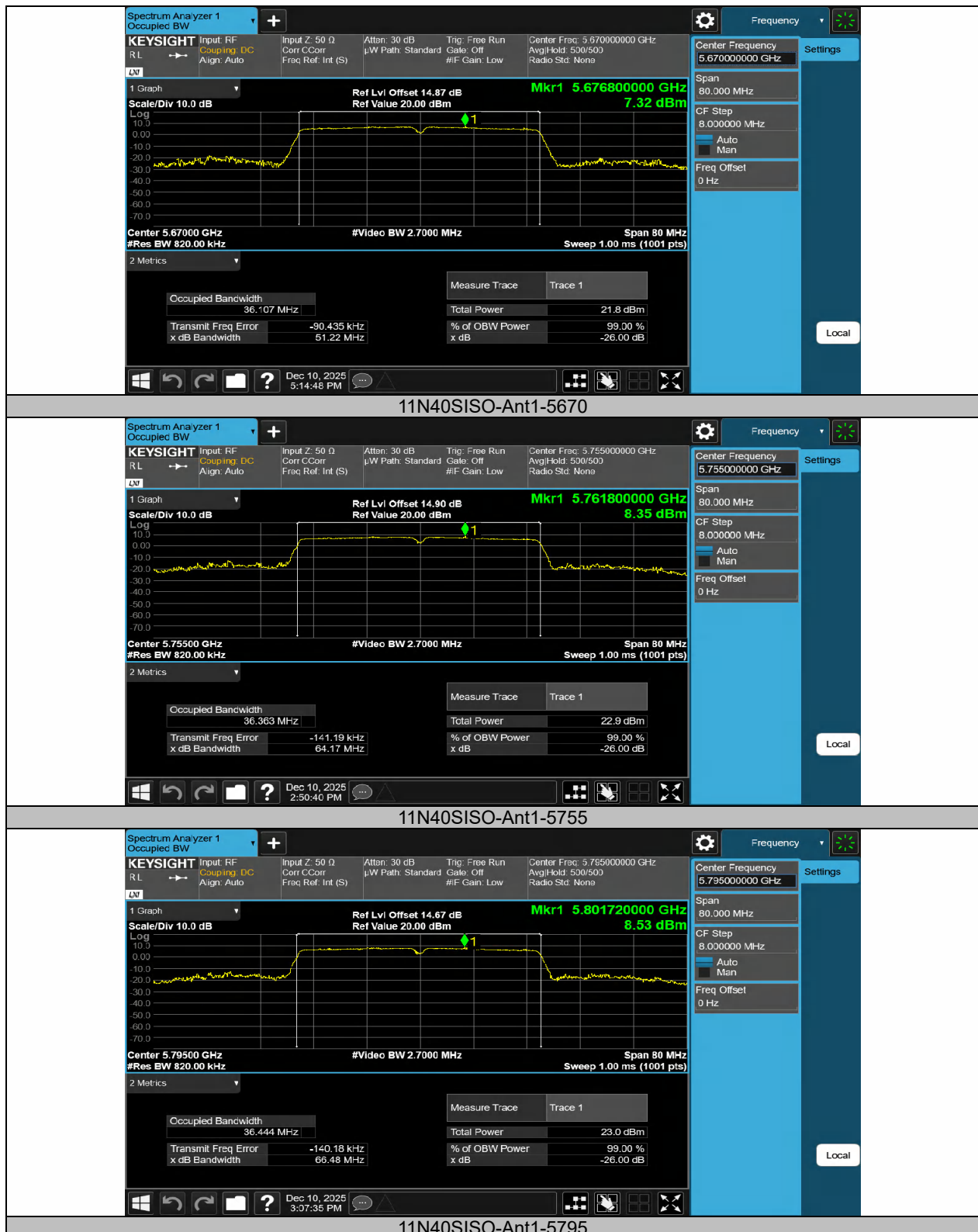












## 8.2 MAXIMUM CONDUCTED OUTPUT POWER

### 8.2.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNII Band I  
According to FCC Part 15.407(a)(2) for UNII Band II-A and UNII Band II-C  
According to FCC Part 15.407(a)(3) for UNII Band III  
According to 789033 D02 Section II(E)

### 8.2.2 Conformance Limit

■ For the band 5.15-5.25 GHz,

(a) (1) (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(a) (1) (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(a) (1) (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(a) (1) (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the 5.25-5.35 GHz and 5.47-5.725 GHz bands

(a) (2) the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the band 5.725-5.85 GHz

(a) (3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 8.2.3 Test Configuration

Test according to clause 6.1 radio frequency test setup 1.

## 8.2.4 Test Procedure

The maximum average conducted output power can be measured using Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

- The Transmitter output (antenna port) was connected to the power meter.
- Turn on the EUT and power meter and then record the power value.
- Repeat above procedures on all channels needed to be tested.

## 8.2.5 Test Results

|                    |           |
|--------------------|-----------|
| Temperature:       | 24°C      |
| Relative Humidity: | 61%       |
| ATM Pressure:      | 1011 mbar |

Note: The sample(EMC3589-S) with higher antenna gain were selected for the conduction test.

### Output Power

| Test Mode | Antenna | Frequency[MHz] | Channel Power [dBm] | Duty Cycle [%] | DC Factor [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|---------------------|----------------|-----------------|--------------|-------------|---------|
| 11A       | Ant1    | 5180           | 14.96               | 100.00         | 0.00            | 14.96        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5200           | 14.85               | 100.00         | 0.00            | 14.85        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5240           | 14.98               | 100.00         | 0.00            | 14.98        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5260           | 15.56               | 100.00         | 0.00            | 15.56        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5280           | 15.27               | 100.00         | 0.00            | 15.27        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5320           | 14.21               | 100.00         | 0.00            | 14.21        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5500           | 15.54               | 100.00         | 0.00            | 15.54        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5580           | 15.58               | 100.00         | 0.00            | 15.58        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5700           | 15.64               | 100.00         | 0.00            | 15.64        | ≤23.98      | PASS    |
| 11A       | Ant1    | 5745           | 15.31               | 100.00         | 0.00            | 15.31        | ≤30.00      | PASS    |
| 11A       | Ant1    | 5785           | 15.26               | 100.00         | 0.00            | 15.26        | ≤30.00      | PASS    |
| 11A       | Ant1    | 5825           | 15.45               | 100.00         | 0.00            | 15.45        | ≤30.00      | PASS    |
| 11N20SISO | Ant1    | 5180           | 15.28               | 100.00         | 0.00            | 15.28        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5200           | 15.00               | 100.00         | 0.00            | 15.00        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5240           | 15.18               | 100.00         | 0.00            | 15.18        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5260           | 15.74               | 100.00         | 0.00            | 15.74        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5280           | 15.18               | 100.00         | 0.00            | 15.18        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5320           | 13.58               | 100.00         | 0.00            | 13.58        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5500           | 15.70               | 100.00         | 0.00            | 15.70        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5580           | 15.81               | 100.00         | 0.00            | 15.81        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5700           | 14.28               | 100.00         | 0.00            | 14.28        | ≤23.98      | PASS    |
| 11N20SISO | Ant1    | 5745           | 15.18               | 100.00         | 0.00            | 15.18        | ≤30.00      | PASS    |
| 11N20SISO | Ant1    | 5785           | 15.24               | 100.00         | 0.00            | 15.24        | ≤30.00      | PASS    |
| 11N20SISO | Ant1    | 5825           | 15.66               | 100.00         | 0.00            | 15.66        | ≤30.00      | PASS    |
| 11N40SISO | Ant1    | 5190           | 12.52               | 100.00         | 0.00            | 12.52        | ≤23.98      | PASS    |
| 11N40SISO | Ant1    | 5230           | 14.98               | 100.00         | 0.00            | 14.98        | ≤23.98      | PASS    |
| 11N40SISO | Ant1    | 5270           | 15.09               | 100.00         | 0.00            | 15.09        | ≤23.98      | PASS    |
| 11N40SISO | Ant1    | 5310           | 10.41               | 100.00         | 0.00            | 10.41        | ≤23.98      | PASS    |
| 11N40SISO | Ant1    | 5510           | 13.17               | 100.00         | 0.00            | 13.17        | ≤23.98      | PASS    |
| 11N40SISO | Ant1    | 5550           | 14.42               | 100.00         | 0.00            | 14.42        | ≤23.98      | PASS    |
| 11N40SISO | Ant1    | 5670           | 14.48               | 100.00         | 0.00            | 14.48        | ≤23.98      | PASS    |
| 11N40SISO | Ant1    | 5755           | 15.84               | 100.00         | 0.00            | 15.84        | ≤30.00      | PASS    |
| 11N40SISO | Ant1    | 5795           | 15.88               | 100.00         | 0.00            | 15.88        | ≤30.00      | PASS    |

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

## 8.3 MAXIMUM PEAK POWER DENSITY

### 8.3.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNII Band I  
 According to FCC Part 15.407(a)(2) for UNII Band II-A and UNII Band II-C  
 According to FCC Part 15.407(a)(3) for UNII Band III  
 According to 789033 D02 Section II(F)

### 8.3.2 Conformance Limit

#### ■ For the band 5.15-5.25 GHz

(a) (1) (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(a) (1) (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(a) (1) (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(a) (1) (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### ■ For the 5.25-5.35 GHz and 5.47-5.725 GHz

(b) (2) the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### ■ For the band 5.725-5.85 GHz

(a) (3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 8.3.3 Test Configuration

Test according to clause 6.1 radio frequency test setup 1.