



427 West 12800 South  
Draper, UT 84020

## Test Report Attachment

|                                  |                 |
|----------------------------------|-----------------|
| <b>FCC ID</b>                    | SWX-U7IW        |
| <b>ISED ID</b>                   | 6545A-U7IW      |
| <b>Equipment Under Test</b>      | U7-IW           |
| <b>Test Report Serial Number</b> | TR9702_01       |
| <b>Date of Tests</b>             | 22 January 2025 |
| <b>Report Issue Date</b>         | 27 January 2025 |

## Test Personnel

|                             |               |
|-----------------------------|---------------|
| <b>Testing performed by</b> | Evan Hartzell |
|-----------------------------|---------------|

## Test Location

Testing was performed at the Unified Compliance Laboratory located at 427 West 12800 South, Draper, UT 84020. Unified Compliance Laboratory is accredited by National Voluntary Laboratory Accreditation Program (NVLAP); NVLAP Code 600241-0 which is effective until 30 June 2025. This site has also been registered with Innovations, Science and Economic Development (ISED) department as was accepted under Appendix B, Phase 1 procedures of the APEC Tel MRA for Canadian recognition. ISED No.: 25346, effective until 30 June 2025. Unified Compliance Laboratory has been assigned Conformity Assessment Number US0223 by ISED and MRA US5037.



# 1 RF Conducted UNII-1

## 1.1 HE Mode

### 1.1.1 Summary

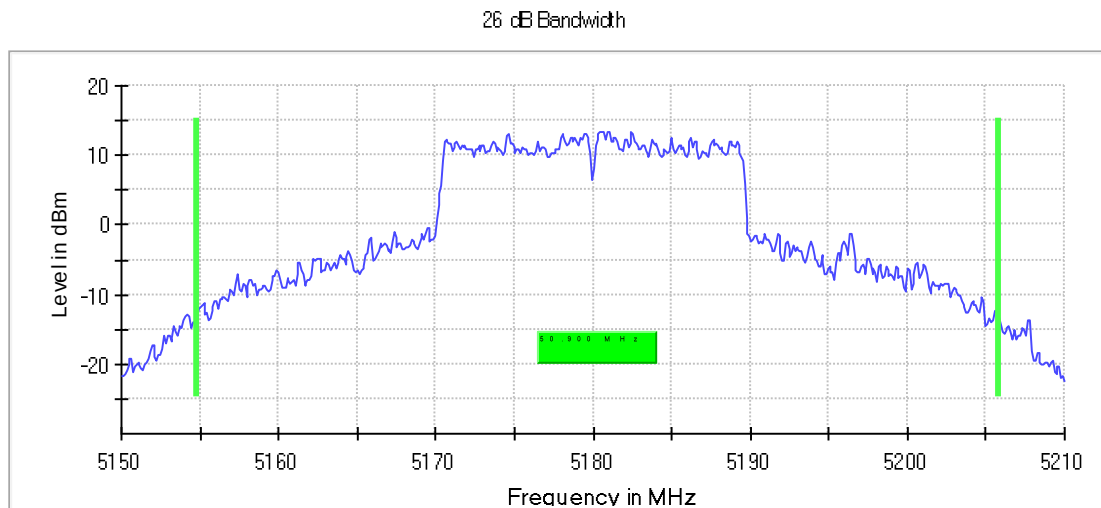
| Test                           | Frequency (MHz) | Nominal Power (dBm) | Nominal Bandwidth (MHz) | Result |
|--------------------------------|-----------------|---------------------|-------------------------|--------|
| Emission Bandwidth 26 dB       | 5180.000        | 24.0                | 20.000000               | PASS   |
| RF output power                | 5180.000        | 24.0                | 20.000000               | PASS   |
| Power Spectral Density         | 5180.000        | 24.0                | 20.000000               | PASS   |
| Occupied Channel Bandwidth 99% | 5180.000        | 24.0                | 20.000000               | PASS   |
| Emission Bandwidth 26 dB       | 5210.000        | 24.0                | 20.000000               | PASS   |
| Power Spectral Density         | 5210.000        | 24.0                | 20.000000               | PASS   |
| Occupied Channel Bandwidth 99% | 5210.000        | 24.0                | 20.000000               | PASS   |
| Emission Bandwidth 26 dB       | 5240.000        | 24.0                | 20.000000               | PASS   |
| Power Spectral Density         | 5240.000        | 24.0                | 20.000000               | PASS   |
| Occupied Channel Bandwidth 99% | 5240.000        | 24.0                | 20.000000               | PASS   |
| Emission Bandwidth 26 dB       | 5190.000        | 24.0                | 40.000000               | PASS   |
| Power Spectral Density         | 5190.000        | 24.0                | 40.000000               | PASS   |
| Occupied Channel Bandwidth 99% | 5190.000        | 24.0                | 40.000000               | PASS   |
| Emission Bandwidth 26 dB       | 5230.000        | 24.0                | 40.000000               | PASS   |
| Power Spectral Density         | 5230.000        | 24.0                | 40.000000               | PASS   |
| Occupied Channel Bandwidth 99% | 5230.000        | 24.0                | 40.000000               | PASS   |
| Emission Bandwidth 26 dB       | 5210.000        | 24.0                | 80.000000               | PASS   |
| Power Spectral Density         | 5210.000        | 24.0                | 80.000000               | PASS   |
| Occupied Channel Bandwidth 99% | 5210.000        | 24.0                | 80.000000               | PASS   |

### Emission Bandwidth 26 dB (5180 MHz; 24.000 dBm; 20 MHz)

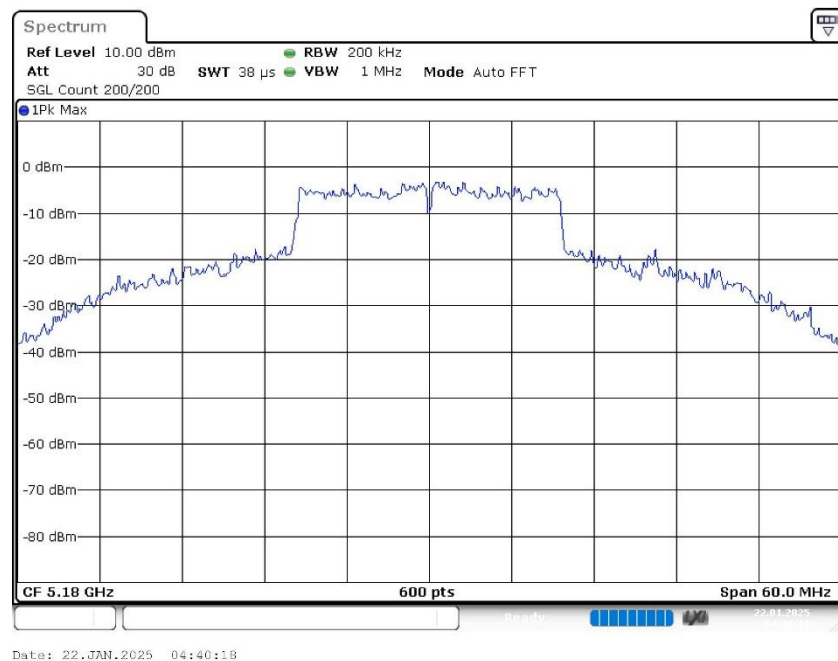
#### 26 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5180.000000         | 50.900000       | ---             | ---             | 5154.850000          | 5205.750000           |

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 5180.000000         | 13.4            | PASS   |



## Bandwidth



## Measurement

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| Start Frequency | 5.15000 GHz      | 5.15000 GHz    |
| Stop Frequency  | 5.21000 GHz      | 5.21000 GHz    |
| Span            | 60.000 MHz       | 60.000 MHz     |
| RBW             | 200.000 kHz      | ~ 200.000 kHz  |
| VBW             | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints     | 600              | ~ 600          |
| Sweptime        | 37.969 $\mu$ s   | AUTO           |
| Reference Level | 10.000 dBm       | 10.000 dBm     |

|             |           |          |
|-------------|-----------|----------|
| Attenuation | 30.000 dB | AUTO     |
| Detector    | MaxPeak   | MaxPeak  |
| SweepCount  | 200       | 200      |
| Filter      | 3 dB      | 3 dB     |
| Trace Mode  | Max Hold  | Max Hold |
| SweepType   | FFT       | AUTO     |
| Preamp      | off       | off      |

## RF output power (5180 MHz; 24.000 dBm; 20 MHz)

### Result

| DUT Frequency (MHz) | Gated RMS (dBm) | Limit Max (dBm) | Gated EIRP (dBm) | DutyCycle (%) | Result |
|---------------------|-----------------|-----------------|------------------|---------------|--------|
| 5180.000000         | 21.8            | 30.0            | 21.8             | 99.687        | PASS   |

### OSP PowerMeter settings

| Setting          | Instrument Value | Target Value  |
|------------------|------------------|---------------|
| Measurement Time | 1.000 s          | 1.000 s       |
| Points           | 1000000          | 1000000       |
| Time resolution  | 1.000 $\mu$ s    | 1.000 $\mu$ s |

## Power Spectral Density (5180 MHz; 24.000 dBm; 20 MHz)

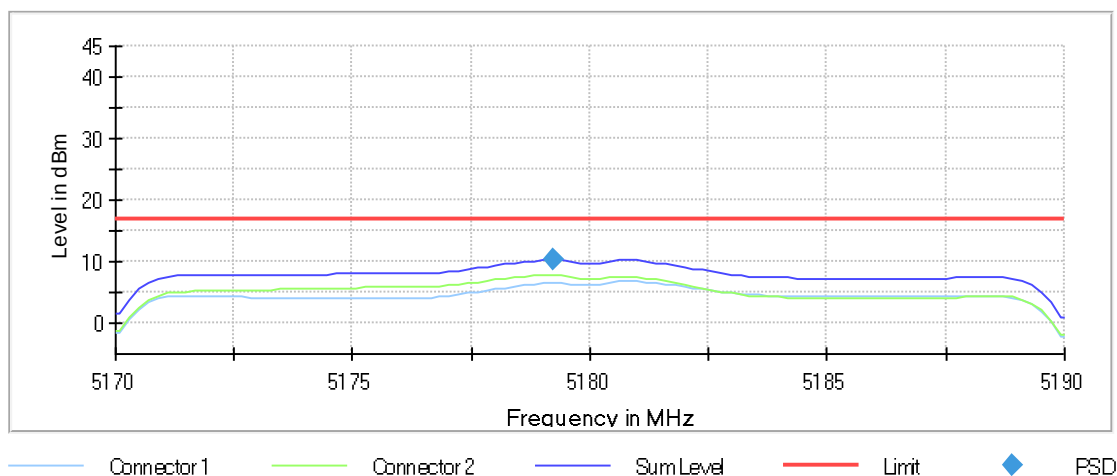
### Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 5180.000000         | 5179.207921     | 10.272    | 17.0            | PASS   |

### Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |

Power Spectral Density



## Measurement

| Setting         | Instrument Value | Target Value  |
|-----------------|------------------|---------------|
| Start Frequency | 5.17000 GHz      | 5.17000 GHz   |
| Stop Frequency  | 5.19000 GHz      | 5.19000 GHz   |
| Span            | 20.000 MHz       | 20.000 MHz    |
| RBW             | 1.000 MHz        | <= 1.000 MHz  |
| VBW             | 3.000 MHz        | >= 3.000 MHz  |
| SweepPoints     | 101              | ~ 40          |
| SweepTime       | 2.020 ms         | 2.020 ms      |
| Reference Level | 10.000 dBm       | 10.000 dBm    |
| Attenuation     | 30.000 dB        | AUTO          |
| Detector        | RMS              | RMS           |
| SweepCount      | 100              | 100           |
| Filter          | 3 dB             | 3 dB          |
| Trace Mode      | Average Power    | Average Power |
| SweepType       | FFT              | AUTO          |
| Preamp          | off              | off           |

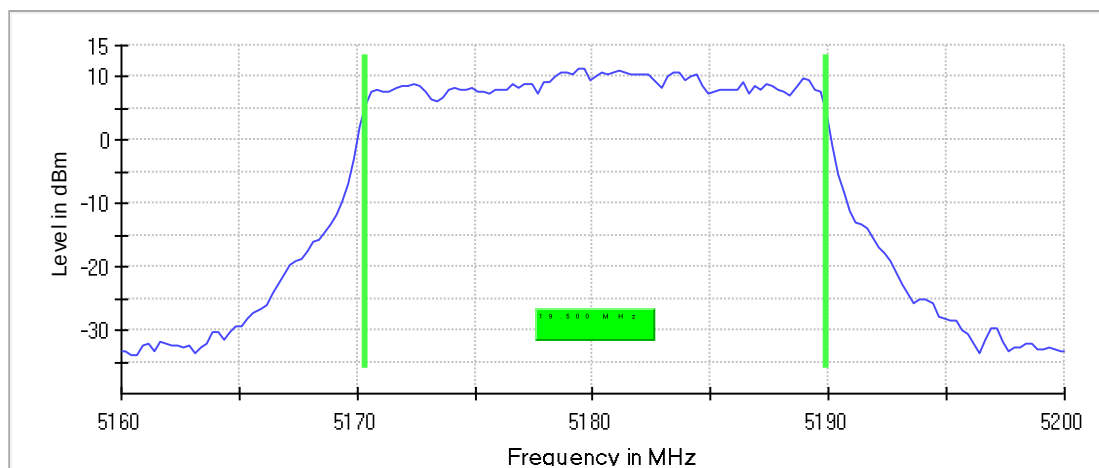
## Occupied Channel Bandwidth 99% (5180 MHz; 24.000 dBm; 20 MHz)

### 99 % Bandwidth

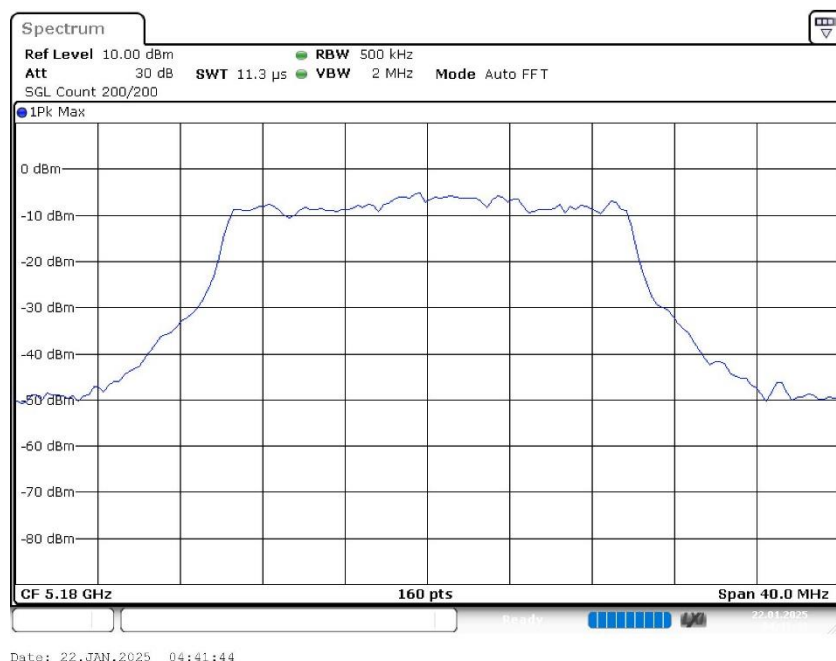
| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5180.000000         | 19.500000       | ---             | ---             | 5170.375000          | 5189.875000           |

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 5180.000000         | PASS   |

99 %Bandwidth



Bandwidth



## Measurement

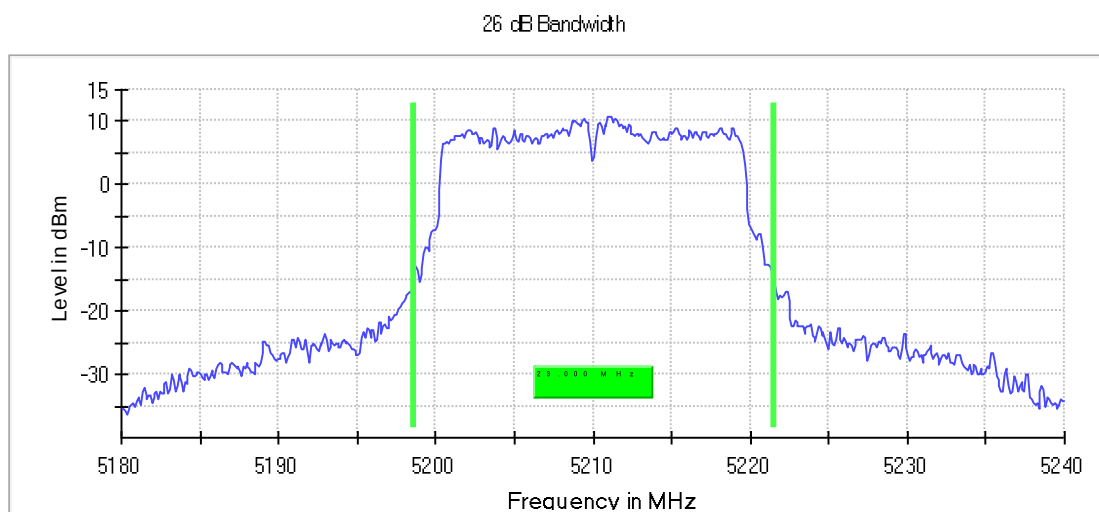
| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| Start Frequency | 5.16000 GHz      | 5.16000 GHz    |
| Stop Frequency  | 5.20000 GHz      | 5.20000 GHz    |
| Span            | 40.000 MHz       | 40.000 MHz     |
| RBW             | 500.000 kHz      | >= 500.000 kHz |
| VBW             | 2.000 MHz        | >= 1.500 MHz   |
| SweepPoints     | 160              | ~ 160          |
| SweepTime       | 11.344 $\mu$ s   | AUTO           |
| Reference Level | 10.000 dBm       | 10.000 dBm     |
| Attenuation     | 30.000 dB        | AUTO           |
| Detector        | MaxPeak          | MaxPeak        |
| SweepCount      | 200              | 200            |
| Filter          | 3 dB             | 3 dB           |
| Trace Mode      | Max Hold         | Max Hold       |
| SweepType       | FFT              | AUTO           |
| Preamp          | off              | off            |

## Emission Bandwidth 26 dB (5210 MHz; 24.000 dBm; 20 MHz)

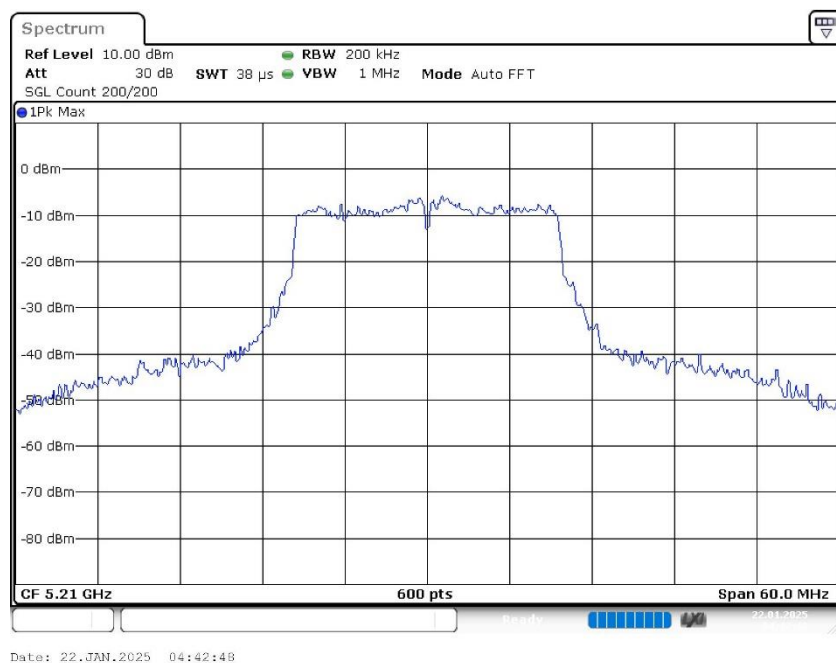
### 26 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5210.000000         | 23.000000       | ---             | ---             | 5198.550000          | 5221.550000           |

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 5210.000000         | 10.9            | PASS   |



## Bandwidth



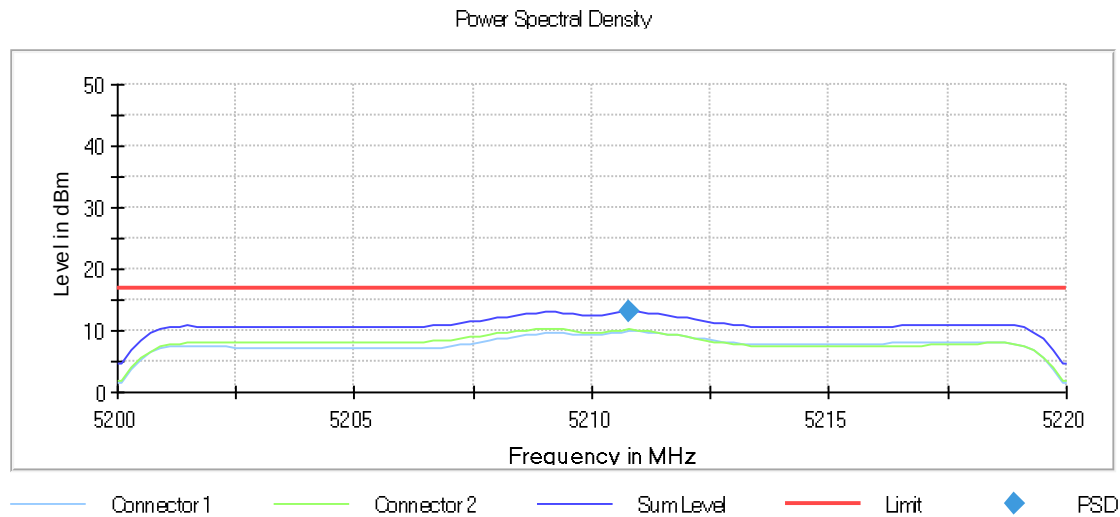
## Power Spectral Density (5210 MHz; 24.000 dBm; 20 MHz)

## Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 5210.000000         | 5210.792079     | 13.058    | 17.0            | PASS   |

## Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |

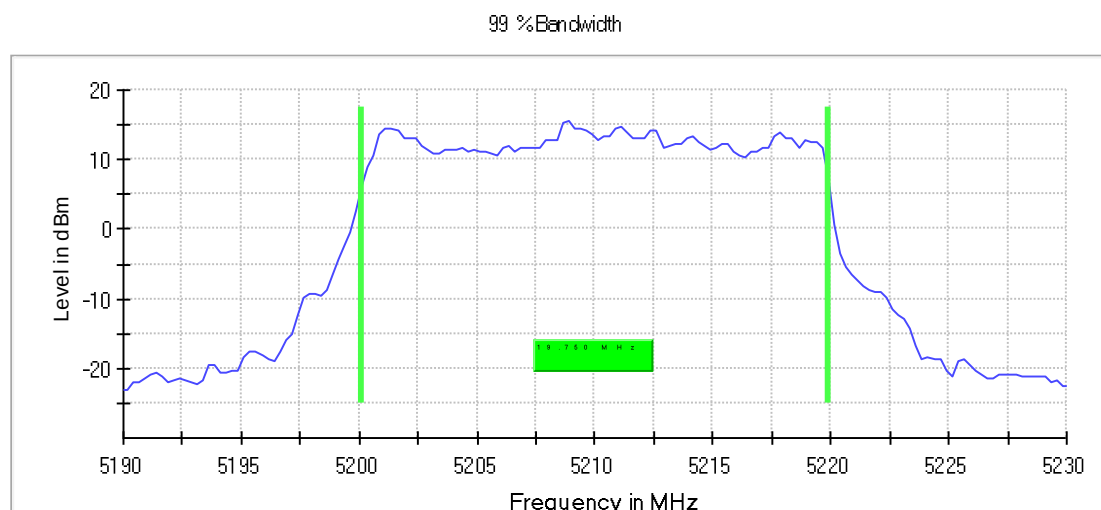


**Occupied Channel Bandwidth 99% (5210 MHz; 24.000 dBm; 20 MHz)**

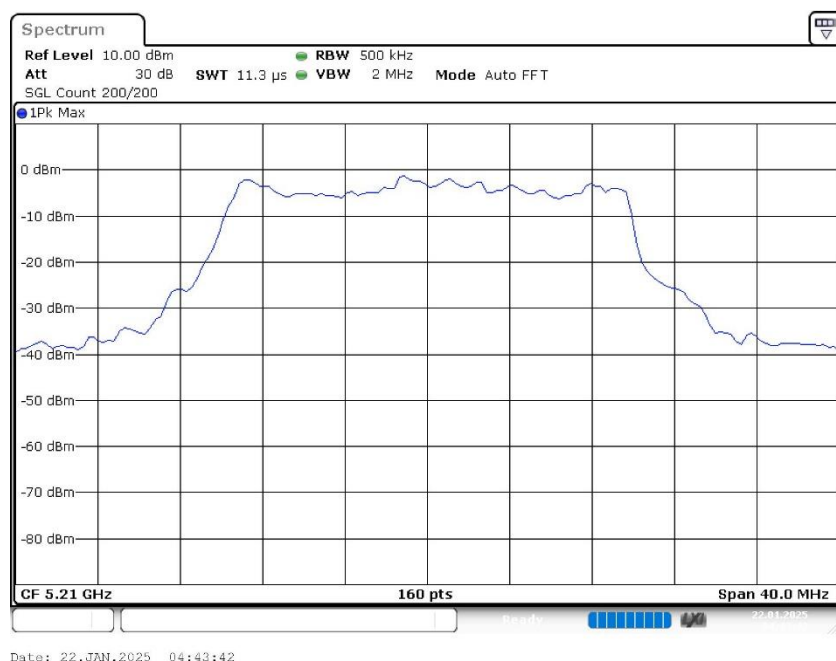
### 99 % Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5210.000000         | 19.750000       | ---             | ---             | 5200.125000          | 5219.875000           |

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 5210.000000         | PASS   |



## Bandwidth



## Measurement

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| Start Frequency | 5.19000 GHz      | 5.19000 GHz    |
| Stop Frequency  | 5.23000 GHz      | 5.23000 GHz    |
| Span            | 40.000 MHz       | 40.000 MHz     |
| RBW             | 500.000 kHz      | >= 500.000 kHz |
| VBW             | 2.000 MHz        | >= 1.500 MHz   |
| SweepPoints     | 160              | ~ 160          |
| SweepTime       | 11.344 $\mu$ s   | AUTO           |
| Reference Level | 10.000 dBm       | 10.000 dBm     |
| Attenuation     | 30.000 dB        | AUTO           |
| Detector        | MaxPeak          | MaxPeak        |
| SweepCount      | 200              | 200            |
| Filter          | 3 dB             | 3 dB           |
| Trace Mode      | Max Hold         | Max Hold       |
| SweepType       | FFT              | AUTO           |
| Preamp          | off              | off            |

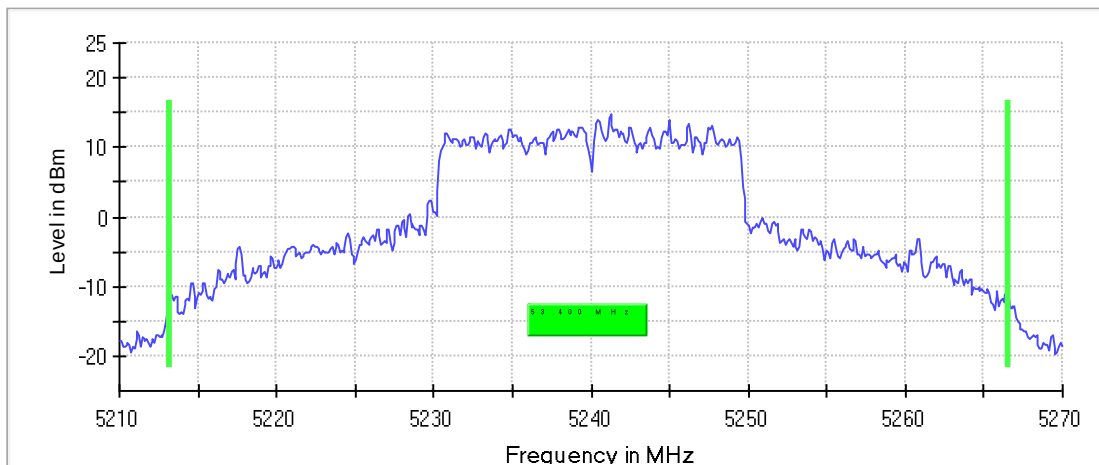
## Emission Bandwidth 26 dB (5240 MHz; 24.000 dBm; 20 MHz)

### 26 dB Bandwidth

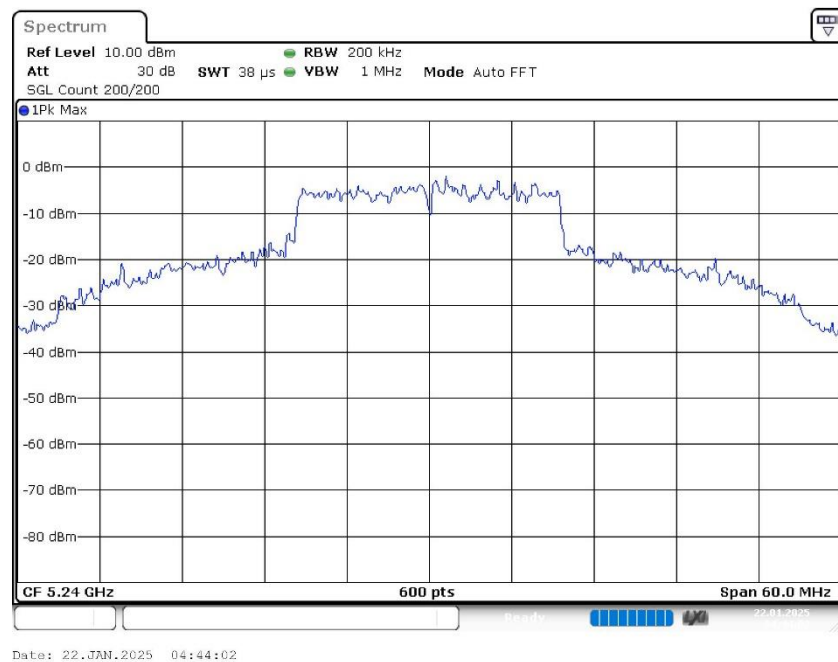
| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5240.000000         | 53.400000       | ---             | ---             | 5213.150000          | 5266.550000           |

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 5240.000000         | 14.8            | PASS   |

26 dB Bandwidth



Bandwidth



Date: 22.JAN.2025 04:44:02

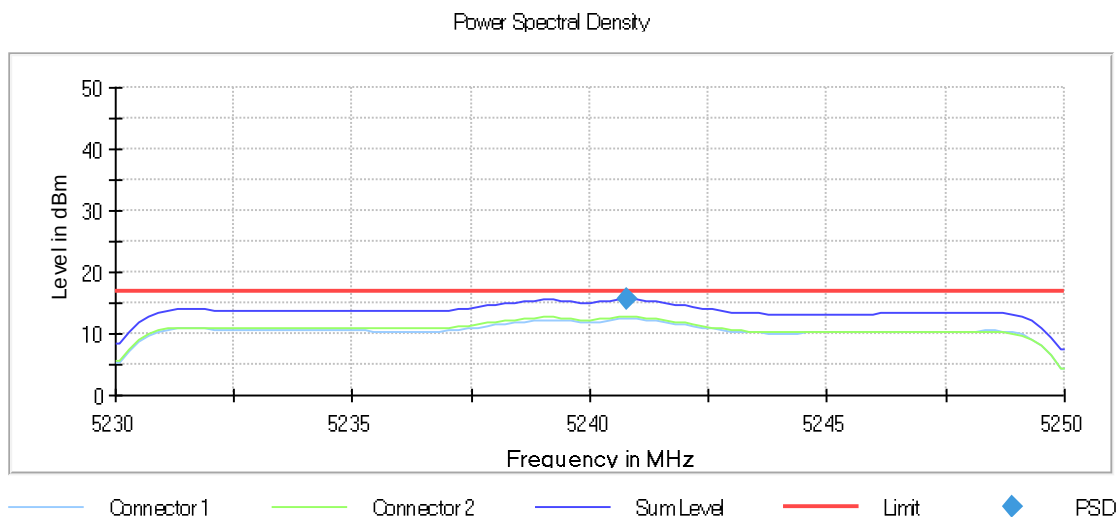
## Power Spectral Density (5240 MHz; 24.000 dBm; 20 MHz)

### Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 5240.000000         | 5240.792079     | 15.614    | 17.0            | PASS   |

## Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |



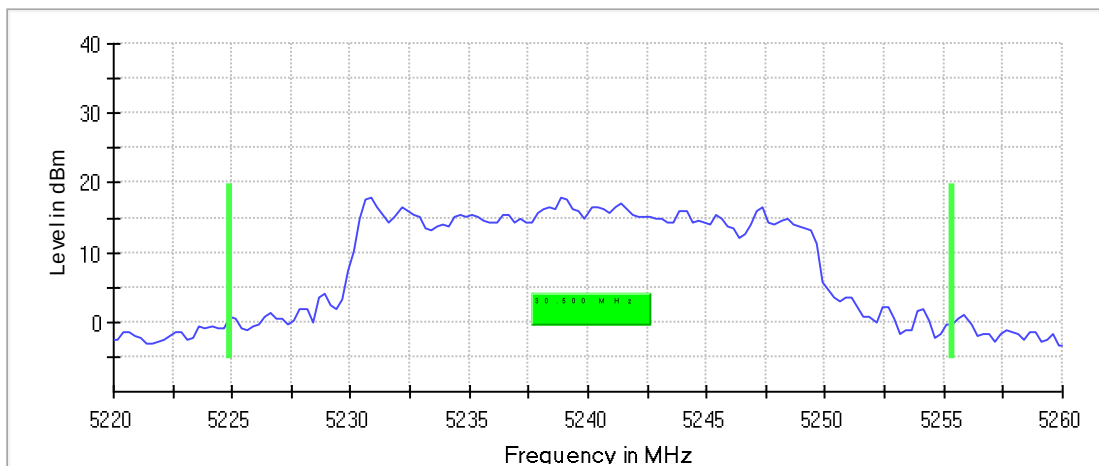
**Occupied Channel Bandwidth 99% (5240 MHz; 24.000 dBm; 20 MHz)**

## 99 % Bandwidth

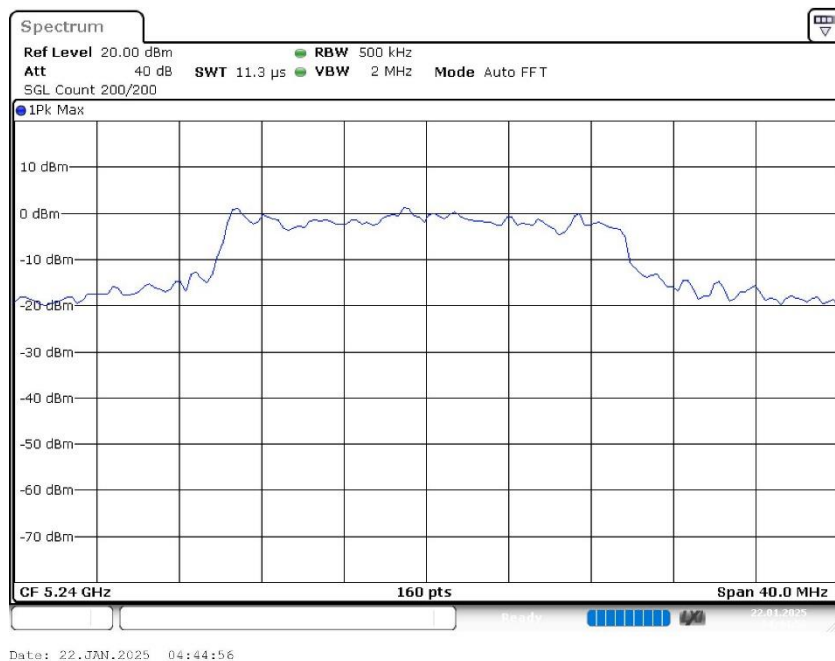
| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5240.000000         | 30.500000       | ---             | ---             | 5224.875000          | 5255.375000           |

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 5240.000000         | PASS   |

99 %Bandwidth



Bandwidth



Date: 22.JAN.2025 04:44:56

## Measurement

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| Start Frequency | 5.22000 GHz      | 5.22000 GHz    |
| Stop Frequency  | 5.26000 GHz      | 5.26000 GHz    |
| Span            | 40.000 MHz       | 40.000 MHz     |
| RBW             | 500.000 kHz      | >= 500.000 kHz |
| VBW             | 2.000 MHz        | >= 1.500 MHz   |
| SweepPoints     | 160              | ~ 160          |
| Sweptime        | 11.344 $\mu$ s   | AUTO           |
| Reference Level | 20.000 dBm       | 20.000 dBm     |

|              |           |          |
|--------------|-----------|----------|
| Attenuation  | 40.000 dB | AUTO     |
| Detector     | MaxPeak   | MaxPeak  |
| SweepCount   | 200       | 200      |
| Filter       | 3 dB      | 3 dB     |
| Trace Mode   | Max Hold  | Max Hold |
| SweepType    | FFT       | AUTO     |
| Preamplifier | off       | off      |

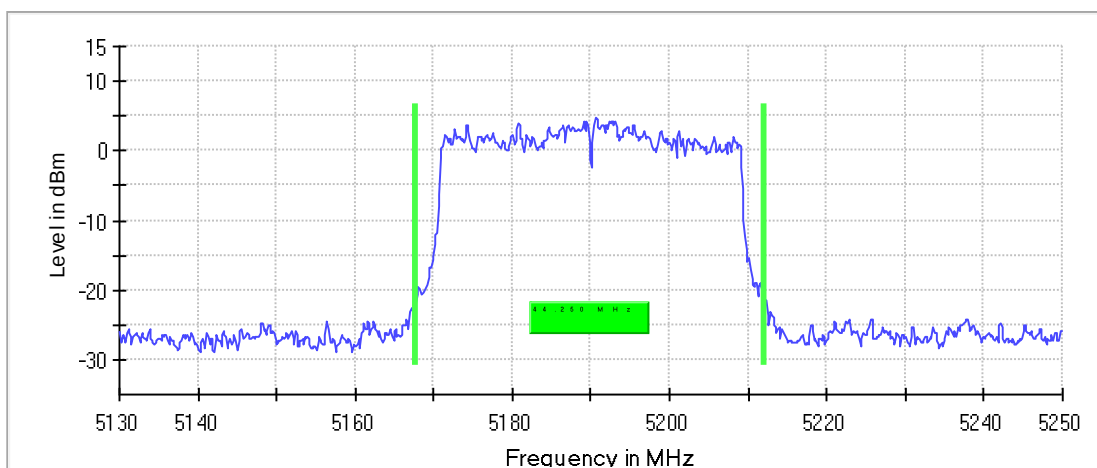
## Emission Bandwidth 26 dB (5190 MHz; 24.000 dBm; 40 MHz)

### 26 dB Bandwidth

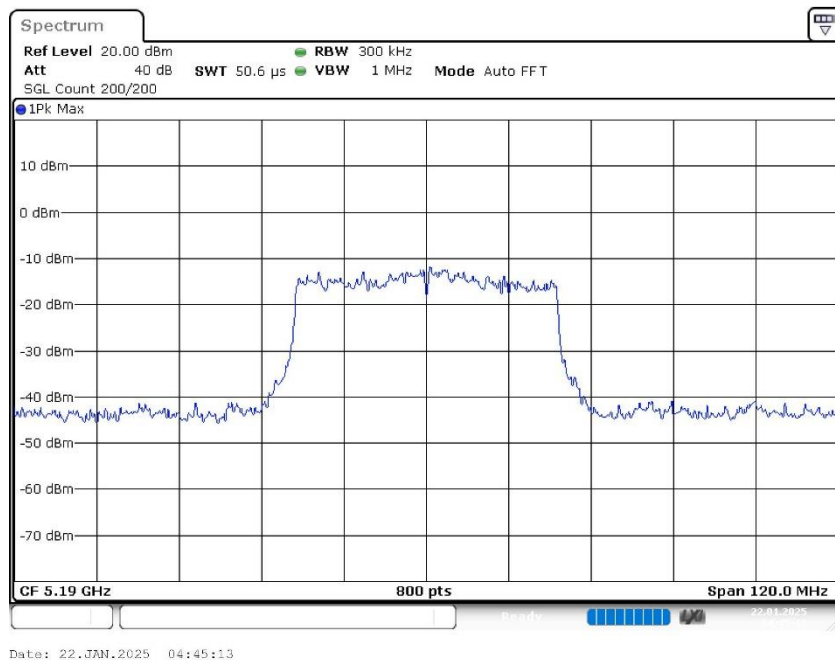
| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5190.000000         | 44.250000       | ---             | ---             | 5167.725000          | 5211.975000           |

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 5190.000000         | 4.8             | PASS   |

26 dB Bandwidth



Bandwidth



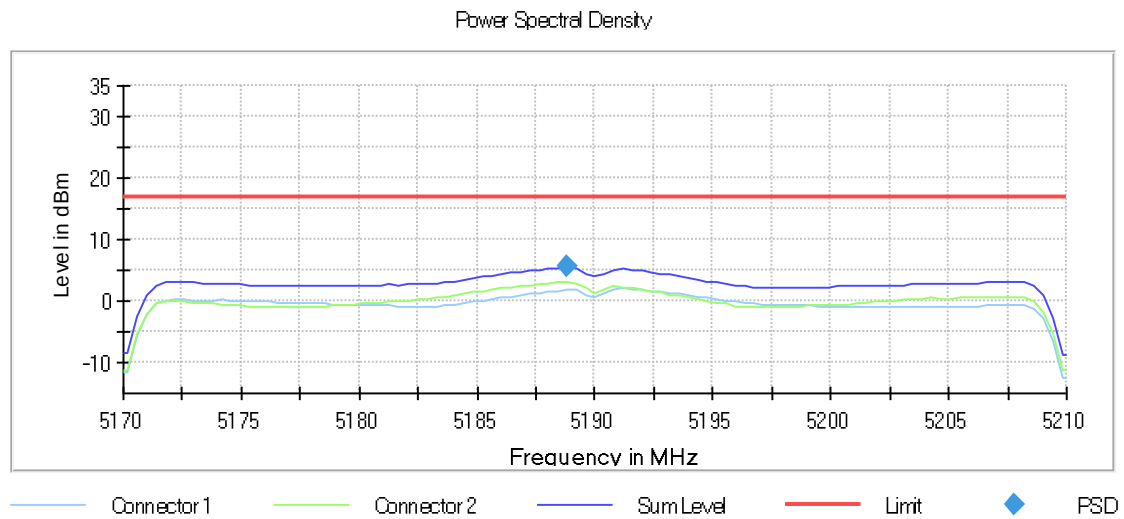
## Power Spectral Density (5190 MHz; 24.000 dBm; 40 MHz)

### Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 5190.000000         | 5188.811881     | 5.501     | 17.0            | PASS   |

### Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |

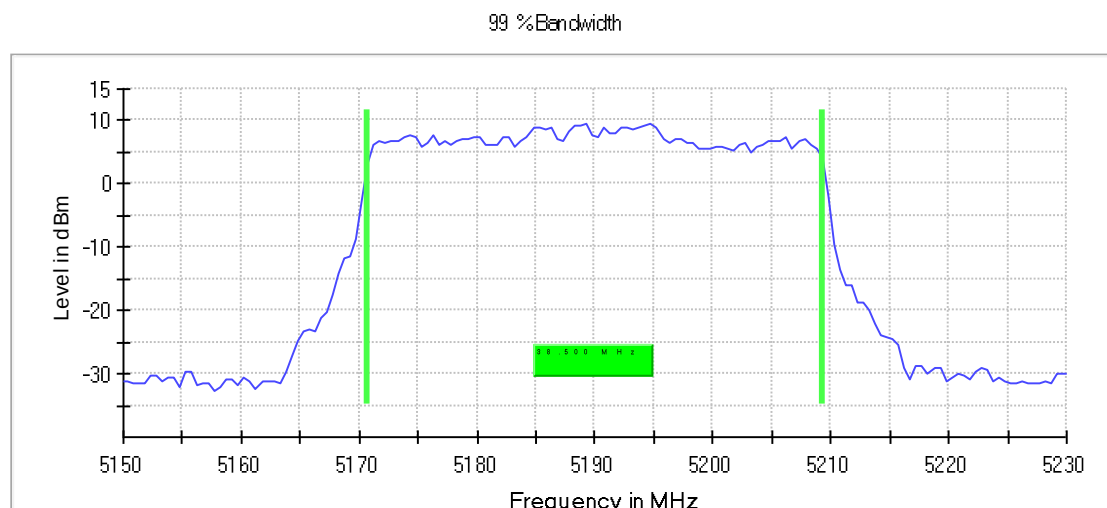


**Occupied Channel Bandwidth 99% (5190 MHz; 24.000 dBm; 40 MHz)**

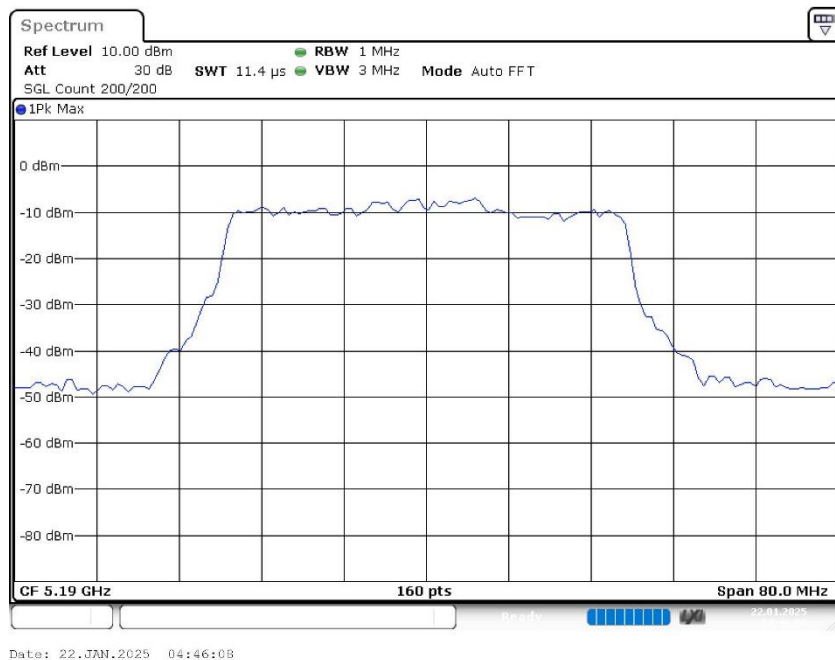
### 99 % Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5190.000000         | 38.500000       | ---             | ---             | 5170.750000          | 5209.250000           |

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 5190.000000         | PASS   |



Bandwidth



## Measurement

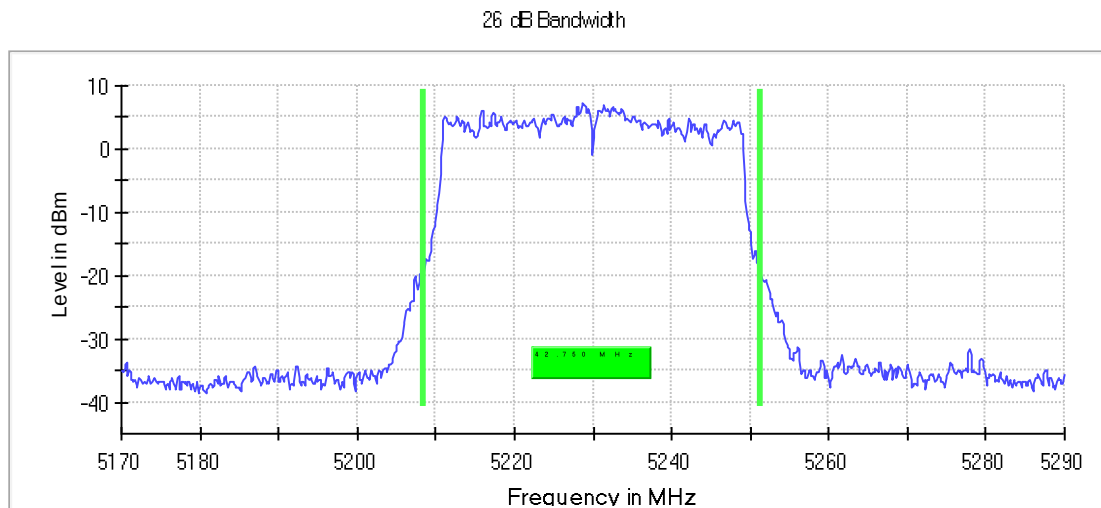
| Setting         | Instrument Value | Target Value     |
|-----------------|------------------|------------------|
| Start Frequency | 5.15000 GHz      | 5.15000 GHz      |
| Stop Frequency  | 5.23000 GHz      | 5.23000 GHz      |
| Span            | 80.000 MHz       | 80.000 MHz       |
| RBW             | 1.000 MHz        | $\geq 1.000$ MHz |
| VBW             | 3.000 MHz        | $\geq 3.000$ MHz |
| SweepPoints     | 160              | $\sim 160$       |
| SweepTime       | 11.438 $\mu$ s   | AUTO             |
| Reference Level | 10.000 dBm       | 10.000 dBm       |
| Attenuation     | 30.000 dB        | AUTO             |
| Detector        | MaxPeak          | MaxPeak          |
| SweepCount      | 200              | 200              |
| Filter          | 3 dB             | 3 dB             |
| Trace Mode      | Max Hold         | Max Hold         |
| SweepType       | FFT              | AUTO             |
| Preamp          | off              | off              |

## Emission Bandwidth 26 dB (5230 MHz; 24.000 dBm; 40 MHz)

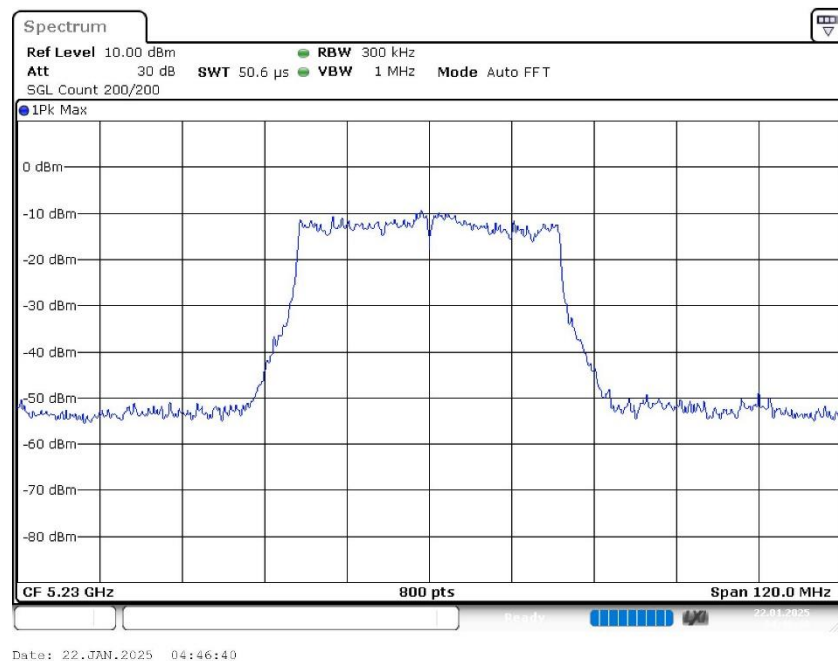
### 26 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5230.000000         | 42.750000       | ---             | ---             | 5208.475000          | 5251.225000           |

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 5230.000000         | 7.3             | PASS   |



## Bandwidth



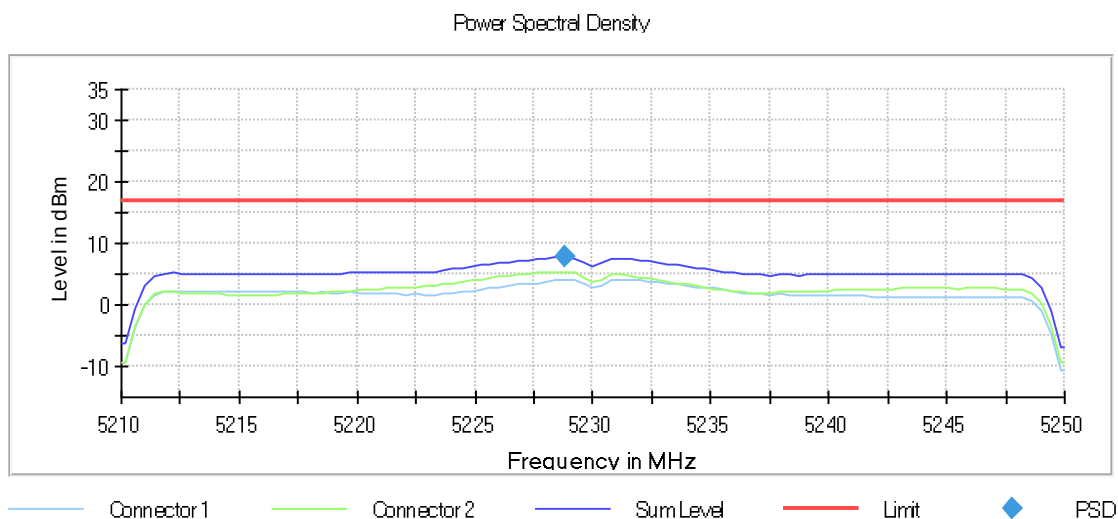
## Power Spectral Density (5230 MHz; 24.000 dBm; 40 MHz)

## Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 5230.000000         | 5228.811881     | 7.758     | 17.0            | PASS   |

## Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |

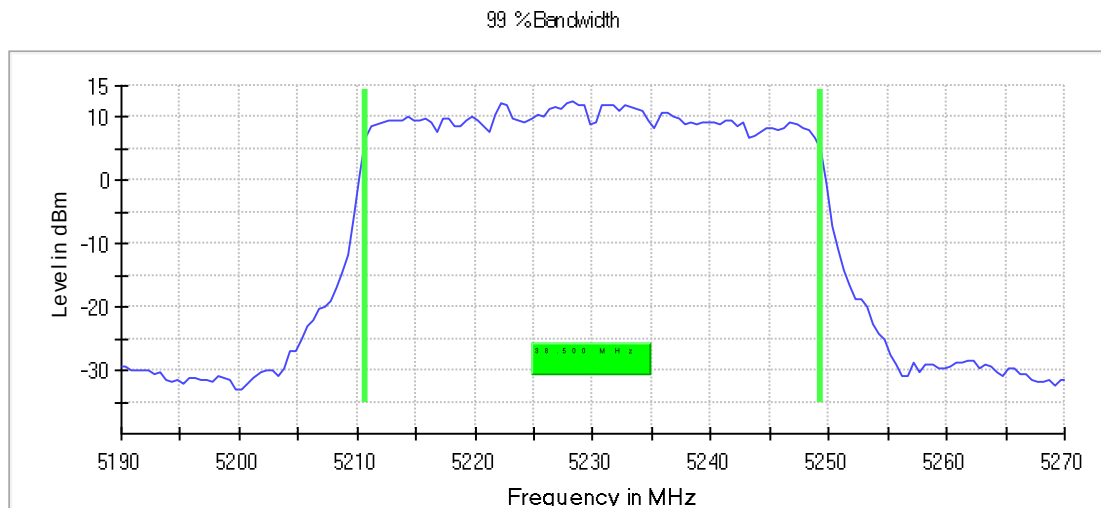


**Occupied Channel Bandwidth 99% (5230 MHz; 24.000 dBm; 40 MHz)**

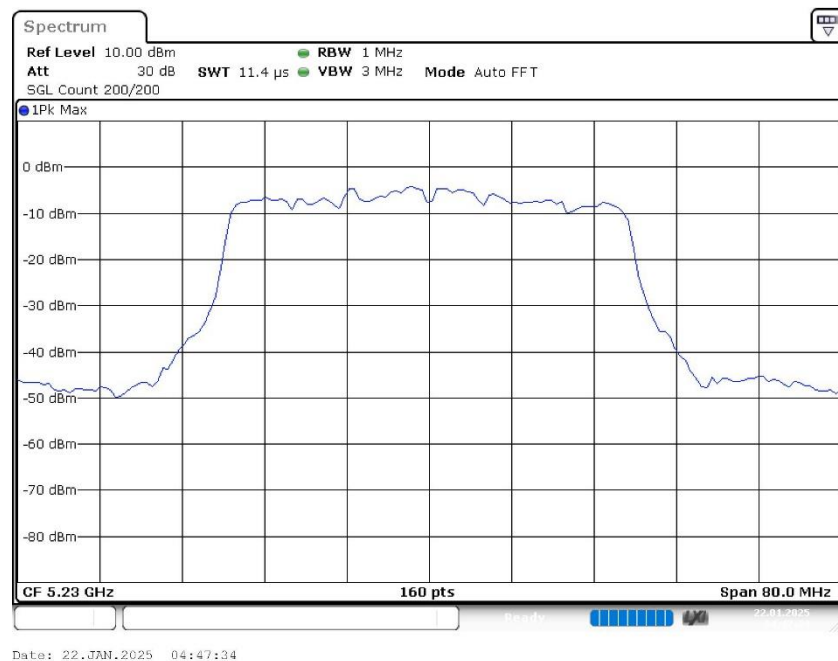
## 99 % Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5230.000000         | 38.500000       | ---             | ---             | 5210.750000          | 5249.250000           |

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 5230.000000         | PASS   |



## Bandwidth



## Measurement

| Setting         | Instrument Value | Target Value     |
|-----------------|------------------|------------------|
| Start Frequency | 5.19000 GHz      | 5.19000 GHz      |
| Stop Frequency  | 5.27000 GHz      | 5.27000 GHz      |
| Span            | 80.000 MHz       | 80.000 MHz       |
| RBW             | 1.000 MHz        | $\geq 1.000$ MHz |
| VBW             | 3.000 MHz        | $\geq 3.000$ MHz |
| SweepPoints     | 160              | $\sim 160$       |
| Sweptime        | 11.438 $\mu$ s   | AUTO             |
| Reference Level | 10.000 dBm       | 10.000 dBm       |

|             |           |          |
|-------------|-----------|----------|
| Attenuation | 30.000 dB | AUTO     |
| Detector    | MaxPeak   | MaxPeak  |
| SweepCount  | 200       | 200      |
| Filter      | 3 dB      | 3 dB     |
| Trace Mode  | Max Hold  | Max Hold |
| SweepType   | FFT       | AUTO     |
| Preamp      | off       | off      |

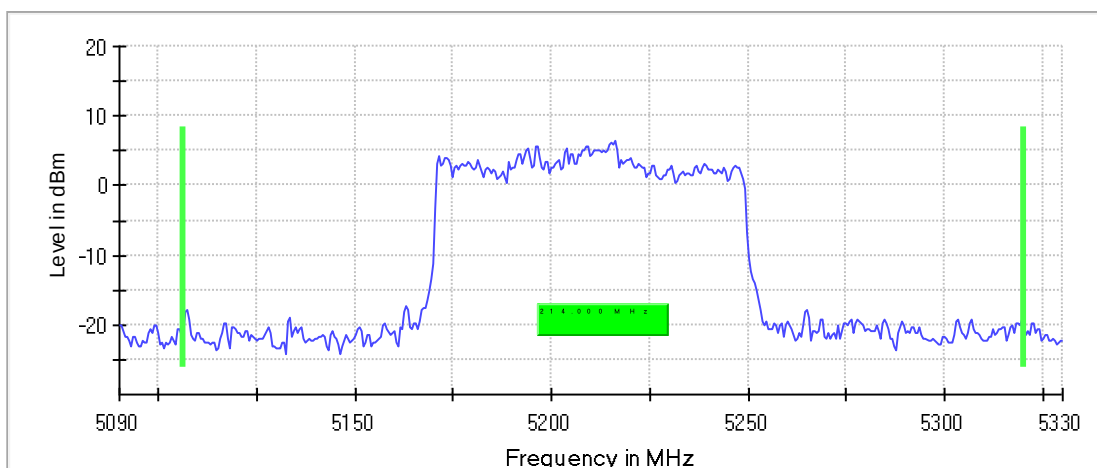
## Emission Bandwidth 26 dB (5210 MHz; 24.000 dBm; 80 MHz)

### 26 dB Bandwidth

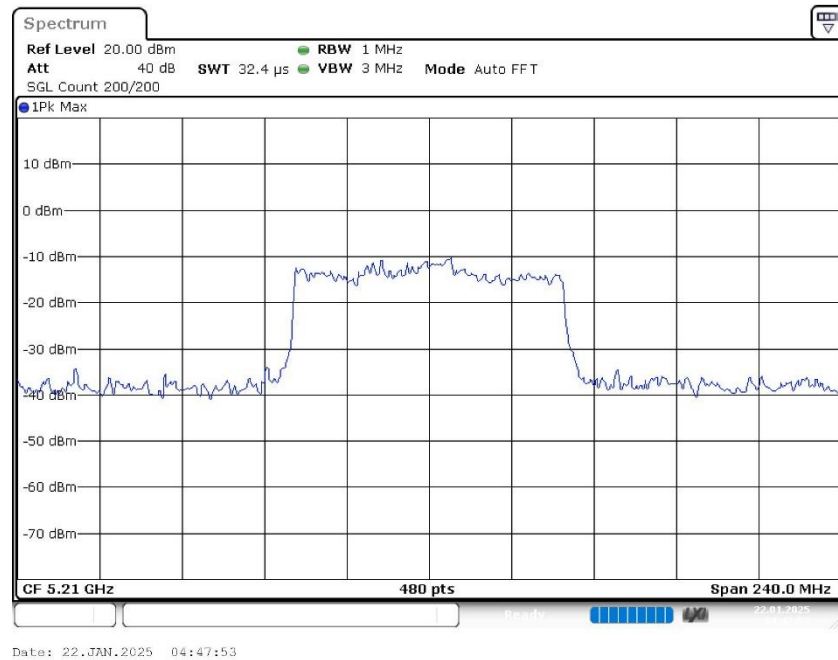
| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5210.000000         | 214.000000      | ---             | ---             | 5106.250000          | 5320.250000           |

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 5210.000000         | 6.4             | PASS   |

26 dB Bandwidth



Bandwidth



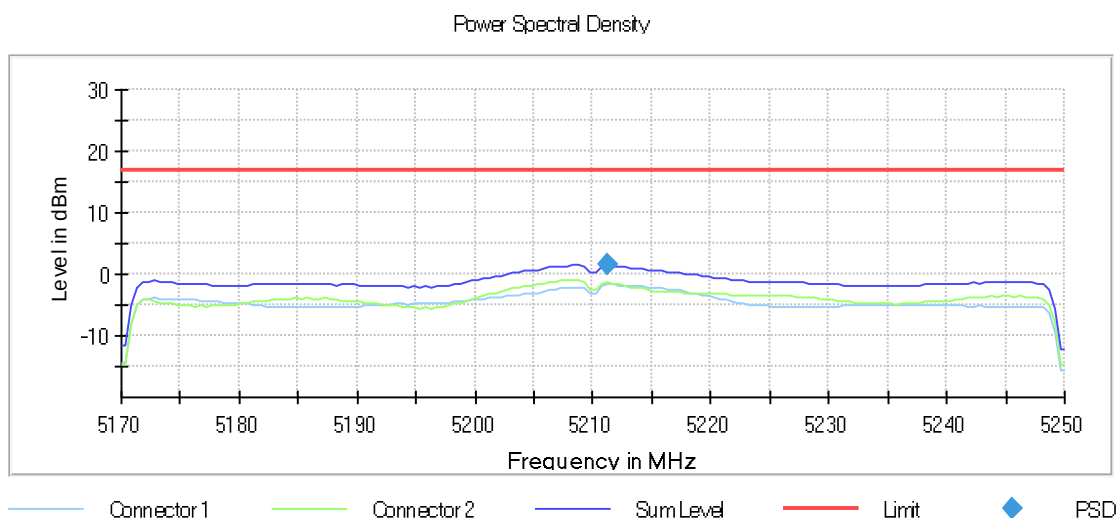
## Power Spectral Density (5210 MHz; 24.000 dBm; 80 MHz)

### Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 5210.000000         | 5211.250000     | 1.524     | 17.0            | PASS   |

### Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |

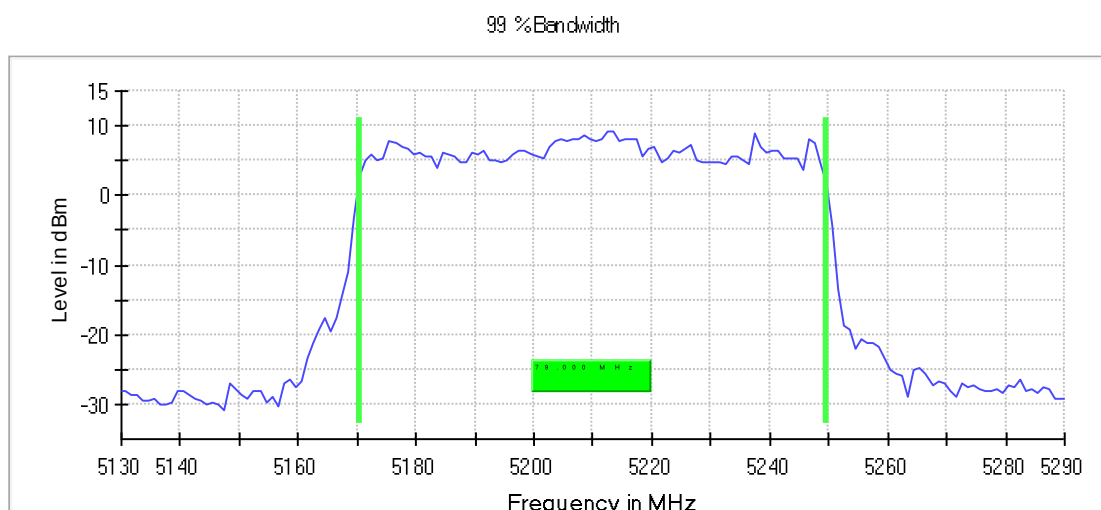


**Occupied Channel Bandwidth 99% (5210 MHz; 24.000 dBm; 80 MHz)**

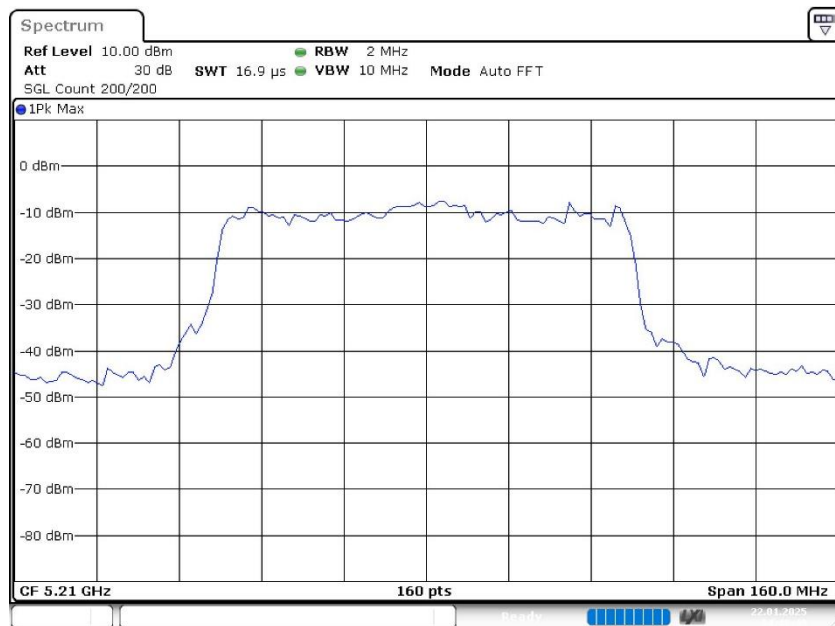
### 99 % Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 5210.000000         | 79.000000       | ---             | ---             | 5170.500000          | 5249.500000           |

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 5210.000000         | PASS   |



Bandwidth



Date: 22.JAN.2025 04:48:49

## Measurement

| Setting         | Instrument Value | Target Value |
|-----------------|------------------|--------------|
| Start Frequency | 5.13000 GHz      | 5.13000 GHz  |
| Stop Frequency  | 5.29000 GHz      | 5.29000 GHz  |
| Span            | 160.000 MHz      | 160.000 MHz  |
| RBW             | 2.000 MHz        | >= 2.000 MHz |
| VBW             | 10.000 MHz       | >= 6.000 MHz |
| SweepPoints     | 160              | ~ 160        |
| SweepTime       | 16.875 $\mu$ s   | AUTO         |
| Reference Level | 10.000 dBm       | 10.000 dBm   |
| Attenuation     | 30.000 dB        | AUTO         |
| Detector        | MaxPeak          | MaxPeak      |
| SweepCount      | 200              | 200          |
| Filter          | 3 dB             | 3 dB         |
| Trace Mode      | Max Hold         | Max Hold     |
| SweepType       | FFT              | AUTO         |
| Preamp          | off              | off          |

**-- End of Report --**