



427 West 12800 South  
Draper, UT 84020

## Test Report Attachment

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| <b>FCC ID</b>                    | SWX-E7                                  |
| <b>ISED ID</b>                   | 6545A-E7                                |
| <b>Equipment Under Test</b>      | E7                                      |
| <b>Test Report Serial Number</b> | TR9005_02                               |
| <b>Date of Test(s)</b>           | 20-21, 23 February and 9, 16 April 2024 |
| <b>Report Issue Date</b>         | 30 September 2024                       |

## Test Personnel

|                             |                  |
|-----------------------------|------------------|
| <b>Testing performed by</b> | Evan J. 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 2024. 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 2024. Unified Compliance Laboratory has been assigned Conformity Assessment Number US0223 by ISED and MRA US5037.



| Revision History |                                      |                   |
|------------------|--------------------------------------|-------------------|
| Revision         | Description                          | Date              |
| 01               | Original Report Release              | 9 May 2024        |
| 02               | Updated to include PSD test settings | 30 September 2024 |

## 1 UNII-1 Band

**Table 1: Summary**

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

## 2 Testcases

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

Customized settings.

Table 2: 26 dB Bandwidth

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Max Level | Result |
|---------------|-----------|-----------|-----------|----------------|-----------------|-----------|--------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             | dBm       |        |
| 5180.000000   | 23.200000 | ---       | ---       | 5168.350000    | 5191.550000     | 3.7       | PASS   |

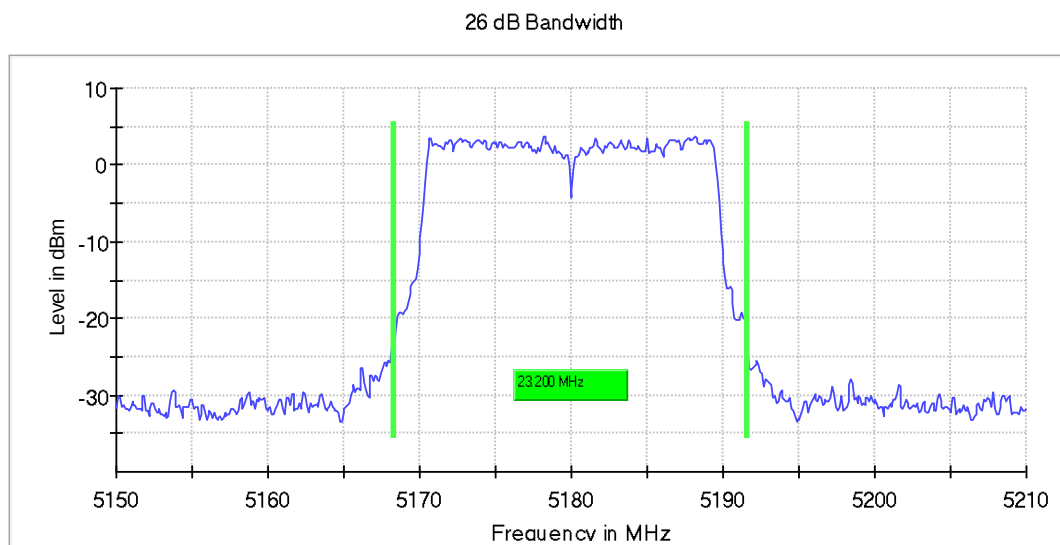
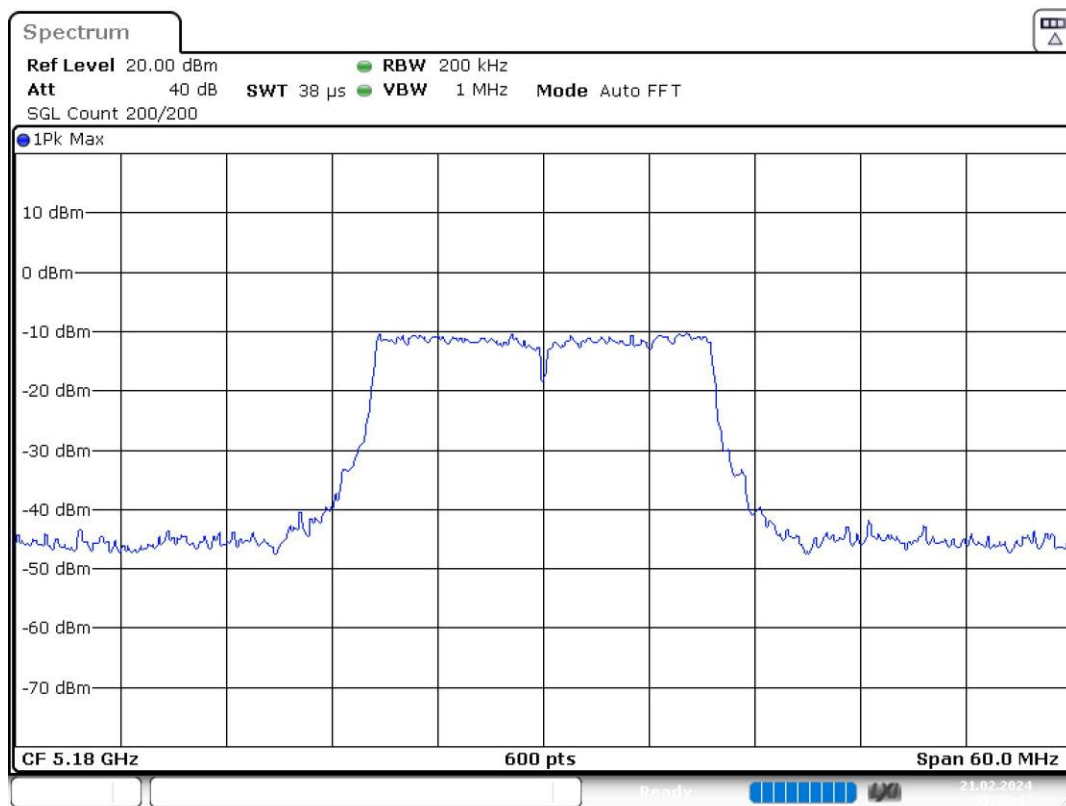


Figure 1: 26 dB Bandwidth



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**Table 3: 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 | 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           |
| Preamp          | off              | off            |

## 2.2 RF output power (5180 MHz, 20 MHz, 24.000 dBm)

Customized settings.

**Table 4: Result**

| DUT<br>Frequency | Gated RMS | Limit Max | Gated EIRP | DutyCycle | Result      |
|------------------|-----------|-----------|------------|-----------|-------------|
| MHz              | dBm       | dBm       | dBm        | %         |             |
| 5180.000000      | 25.5      | 30.0      | 25.5       | 99.718    | <b>PASS</b> |

**Table 5: 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 |

## 2.3 Power Spectral Density (5180 MHz, 20 MHz, 24.000 dBm)

Customized settings.

Table 6: Result

| DUT Frequency | Frequency   | PSD   | Limit Max | Result      |
|---------------|-------------|-------|-----------|-------------|
| MHz           | MHz         | dBm   | dBm       |             |
| 5180.000000   | 5188.316832 | 9.869 | 17.0      | <b>PASS</b> |

Table 7: Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |
| 3    | used  |
| 4    | used  |

Power Spectral Density

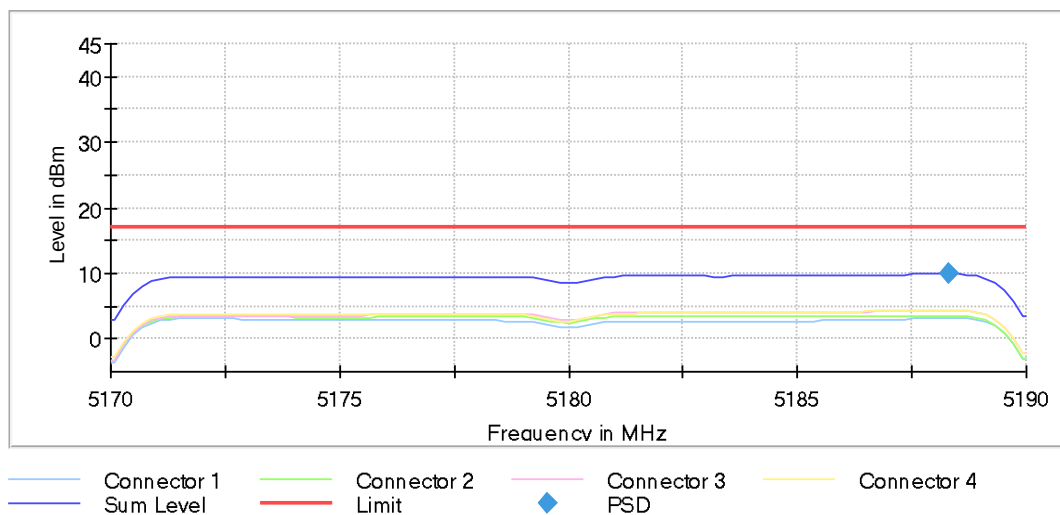


Figure 2: Power Spectral Density

**Table 8: Measurement**

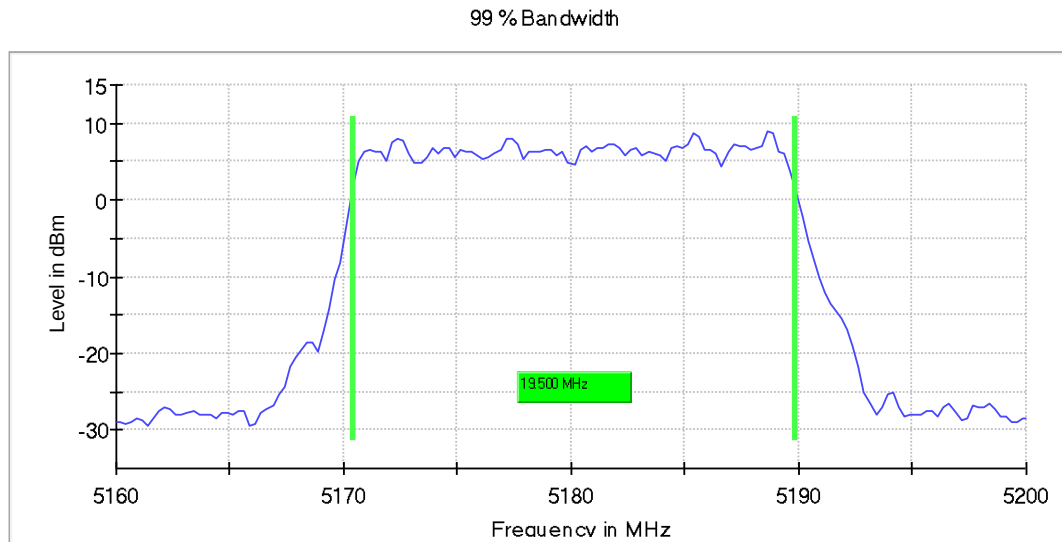
| <b>Setting</b>  | <b>Instrument Value</b> | <b>Target Value</b> |
|-----------------|-------------------------|---------------------|
| Start Frequency | 5.17000 GHz             | 5.17000 GHz         |
| Stop Frequency  | 5.19000 GHz             | 5.19000 GHz         |
| Span            | 20.000 MHz              | 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 | 20.000 dBm              | 20.000 dBm          |
| Attenuation     | 40.000 dB               | AUTO                |
| Detector        | RMS                     | RMS                 |
| SweepCount      | 100                     | 100                 |
| Filter          | 3 dB                    | 3 dB                |
| Trace Mode      | Average Power           | Average Power       |
| SweepType       | FFT                     | AUTO                |
| Preamplifier    | off                     | off                 |

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

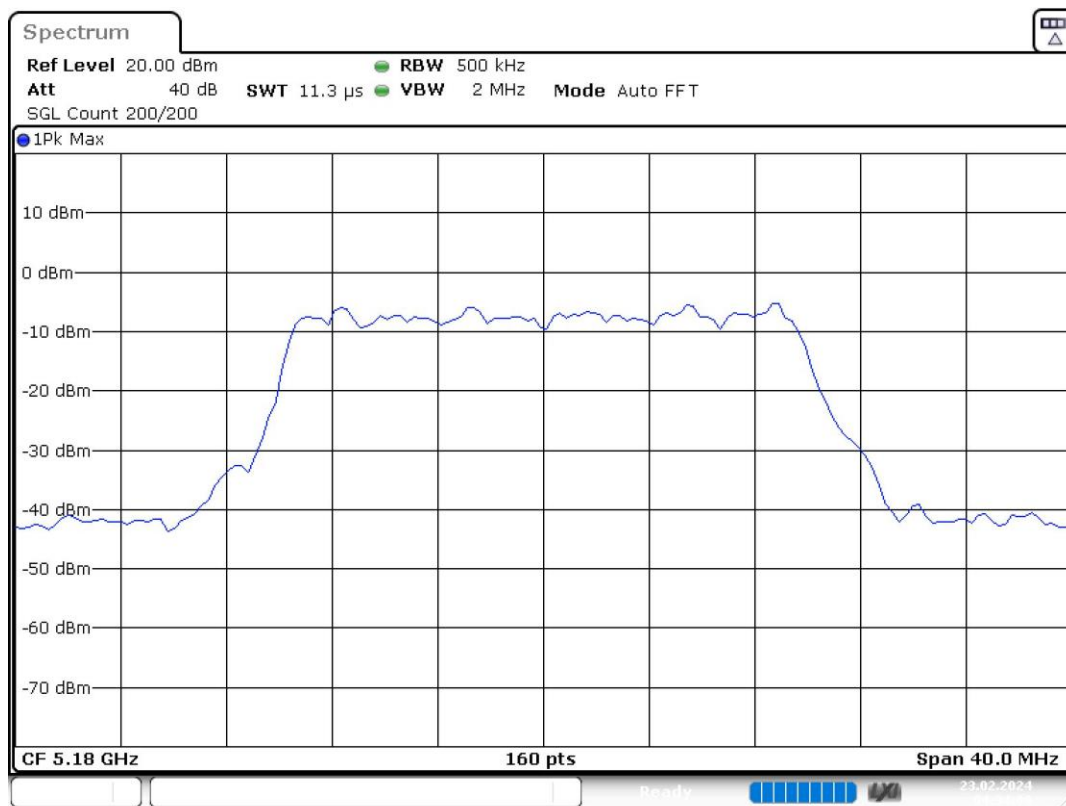
Customized settings.

**Table 9: 99 % Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             |             |
| 5180.000000   | 19.500000 | ---       | ---       | 5170.375000    | 5189.875000     | <b>PASS</b> |



**Figure 3: 99 % Bandwidth**



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**Table 10: 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      | $\geq 500.000$ kHz |
| VBW             | 2.000 MHz        | $\geq 1.500$ MHz   |
| SweepPoints     | 160              | $\sim 160$         |
| 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               |
| Preamp          | off              | off                |

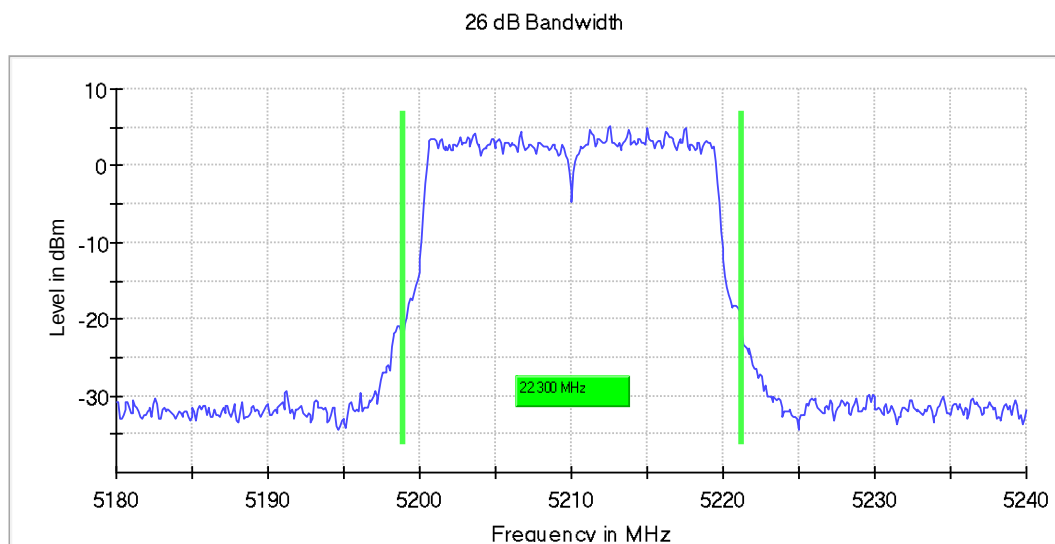


## 2.5 Emission Bandwidth 26 dB (5210 MHz, 20 MHz, 24.000 dBm)

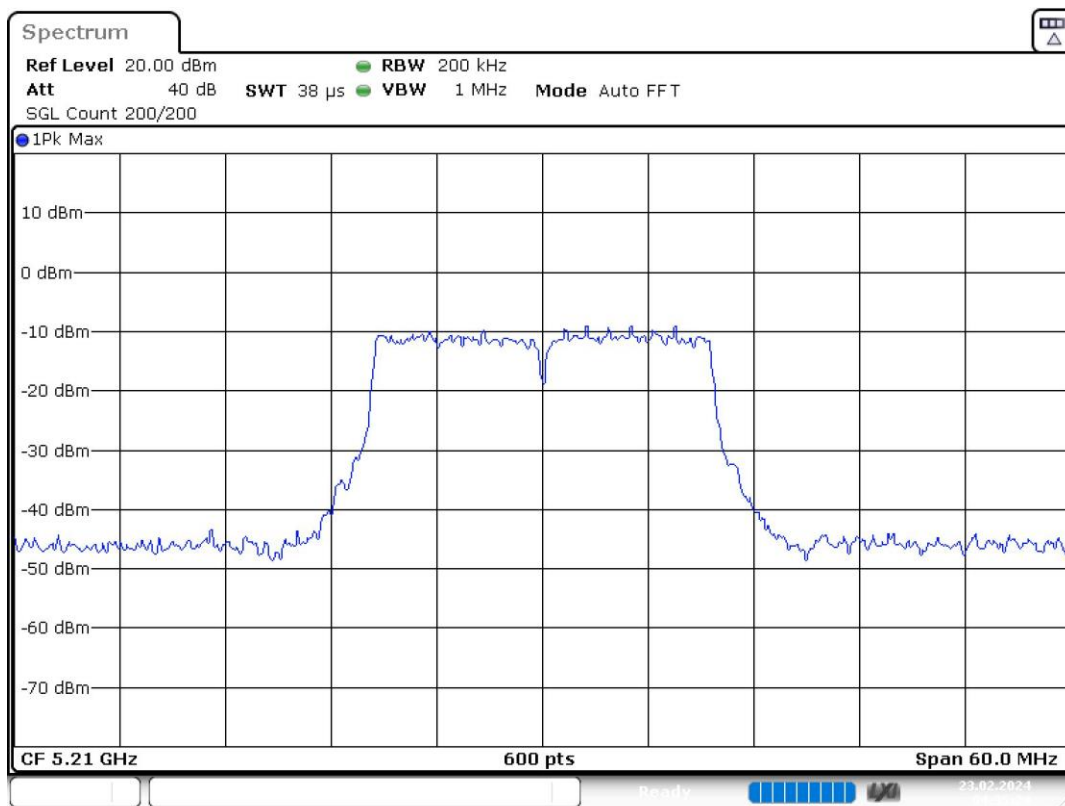
Customized settings.

**Table 11: 26 dB Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Max Level | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-----------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             | dBm       |             |
| 5210.000000   | 22.300000 | ---       | ---       | 5198.950000    | 5221.250000     | 5.1       | <b>PASS</b> |



**Figure 4: 26 dB Bandwidth**



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## 2.6 Power Spectral Density (5210 MHz, 20 MHz, 24.000 dBm)

Customized settings.

Table 12: Result

| DUT Frequency | Frequency   | PSD    | Limit Max | Result      |
|---------------|-------------|--------|-----------|-------------|
| MHz           | MHz         | dBm    | dBm       |             |
| 5210.000000   | 5218.118812 | 10.313 | 17.0      | <b>PASS</b> |

Table 13: Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |
| 3    | used  |
| 4    | used  |

Power Spectral Density

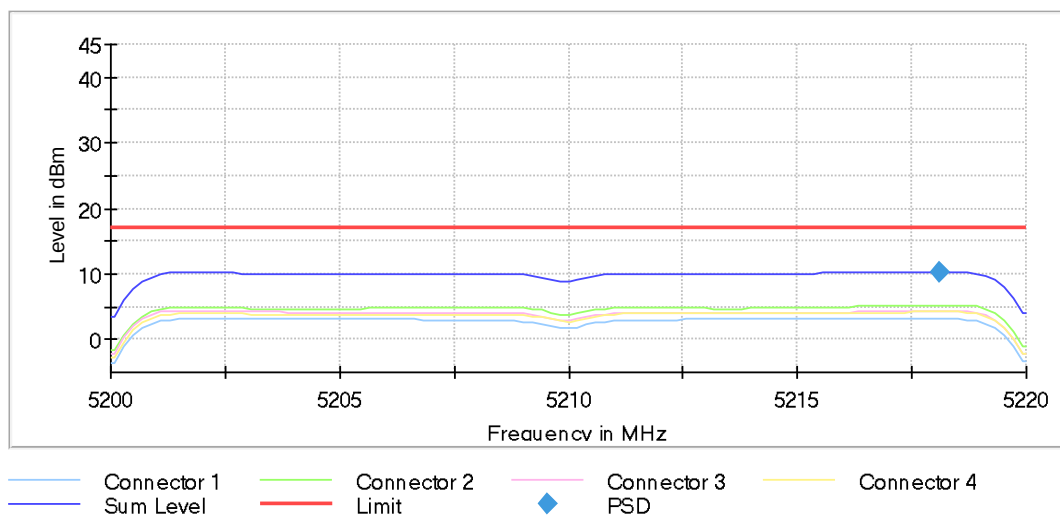


Figure 5: Power Spectral Density

**Table 14: Measurement**

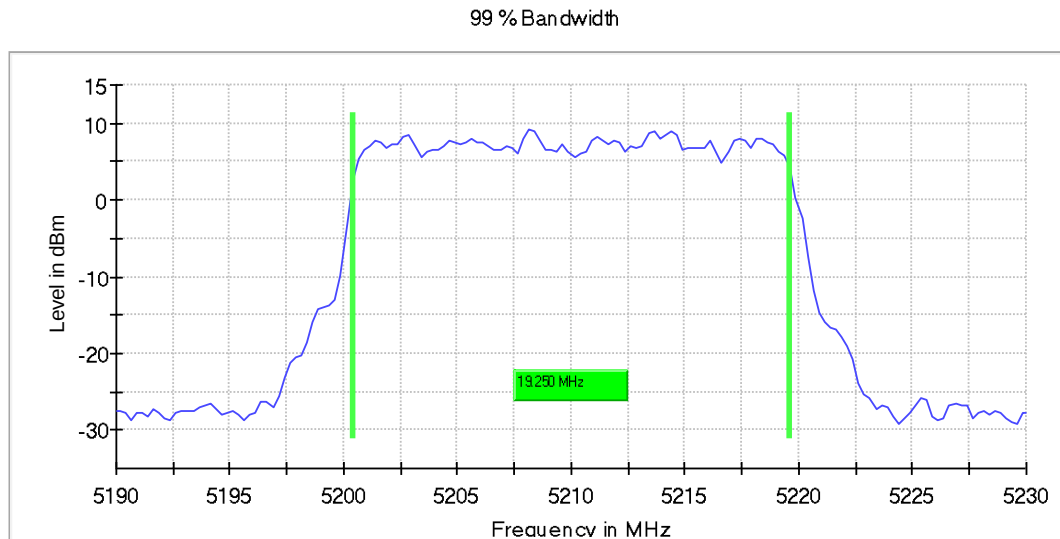
| <b>Setting</b>  | <b>Instrument Value</b> | <b>Target Value</b> |
|-----------------|-------------------------|---------------------|
| Start Frequency | 5.20000 GHz             | 5.20000 GHz         |
| Stop Frequency  | 5.22000 GHz             | 5.22000 GHz         |
| Span            | 20.000 MHz              | 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 | 20.000 dBm              | 20.000 dBm          |
| Attenuation     | 40.000 dB               | AUTO                |
| Detector        | RMS                     | RMS                 |
| SweepCount      | 100                     | 100                 |
| Filter          | 3 dB                    | 3 dB                |
| Trace Mode      | Average Power           | Average Power       |
| SweepType       | FFT                     | AUTO                |
| Preamplifier    | off                     | off                 |

## 2.7 Occupied Channel Bandwidth 99% (5210 MHz, 20 MHz, 24.000 dBm)

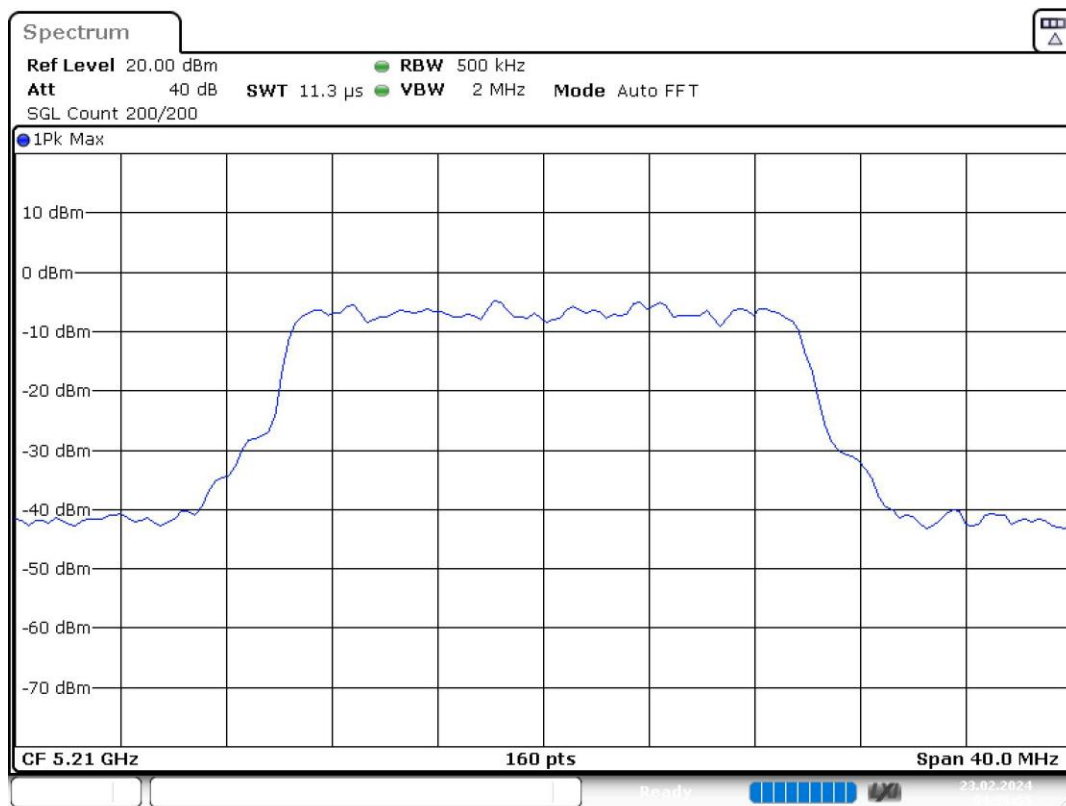
Customized settings.

**Table 15: 99 % Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             |             |
| 5210.000000   | 19.250000 | ---       | ---       | 5200.375000    | 5219.625000     | <b>PASS</b> |



**Figure 6: 99 % Bandwidth**



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**Table 16: 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      | $\geq 500.000$ kHz |
| VBW             | 2.000 MHz        | $\geq 1.500$ MHz   |
| SweepPoints     | 160              | $\sim 160$         |
| 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                |

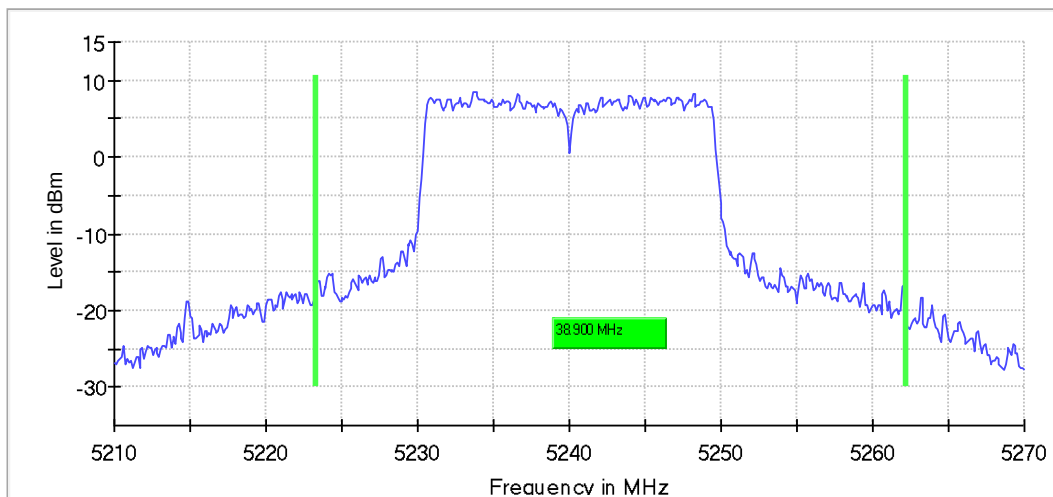
## 2.8 Emission Bandwidth 26 dB (5240 MHz, 20 MHz, 24.000 dBm)

Customized settings.

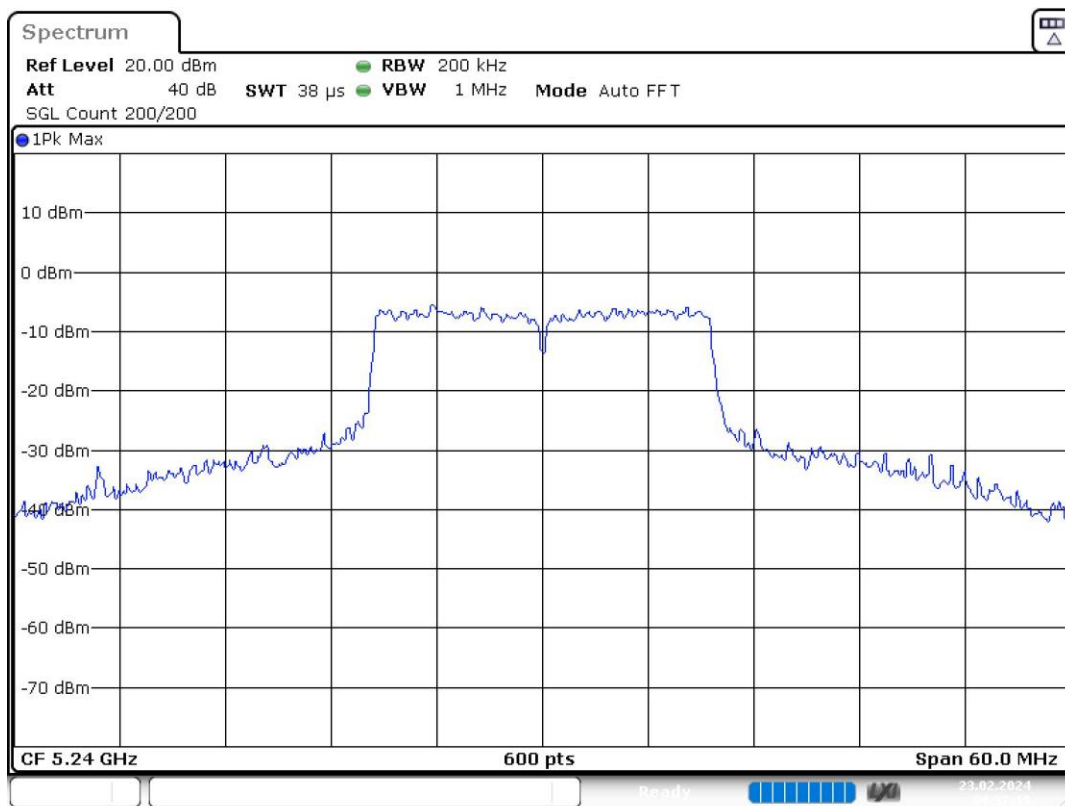
**Table 17: 26 dB Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Max Level | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-----------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             | dBm       |             |
| 5240.000000   | 38.900000 | ---       | ---       | 5223.250000    | 5262.150000     | 8.6       | <b>PASS</b> |

26 dB Bandwidth



**Figure 7: 26 dB Bandwidth**



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## 2.9 Power Spectral Density (5240 MHz, 20 MHz, 24.000 dBm)

Customized settings.

Table 18: Result

| DUT Frequency | Frequency   | PSD    | Limit Max | Result      |
|---------------|-------------|--------|-----------|-------------|
| MHz           | MHz         | dBm    | dBm       |             |
| 5240.000000   | 5248.316832 | 14.103 | 17.0      | <b>PASS</b> |

Table 19: Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |
| 3    | used  |
| 4    | used  |

Power Spectral Density

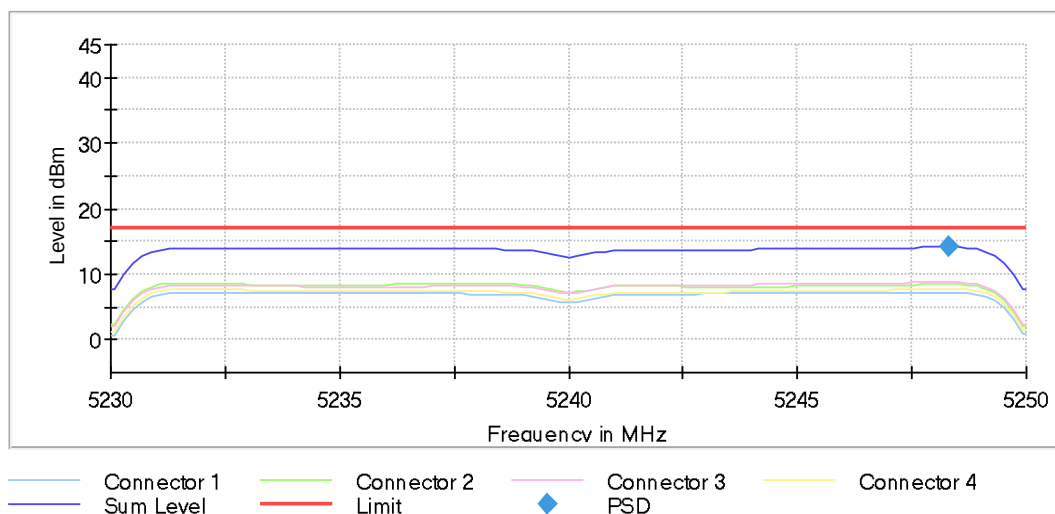


Figure 8: Power Spectral Density

**Table 20: Measurement**

| <b>Setting</b>  | <b>Instrument Value</b> | <b>Target Value</b> |
|-----------------|-------------------------|---------------------|
| Start Frequency | 5.23000 GHz             | 5.23000 GHz         |
| Stop Frequency  | 5.25000 GHz             | 5.25000 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 | 20.000 dBm              | 20.000 dBm          |
| Attenuation     | 40.000 dB               | AUTO                |
| Detector        | RMS                     | RMS                 |
| SweepCount      | 100                     | 100                 |
| Filter          | 3 dB                    | 3 dB                |
| Trace Mode      | Average Power           | Average Power       |
| SweepType       | FFT                     | AUTO                |
| Preamplifier    | off                     | off                 |

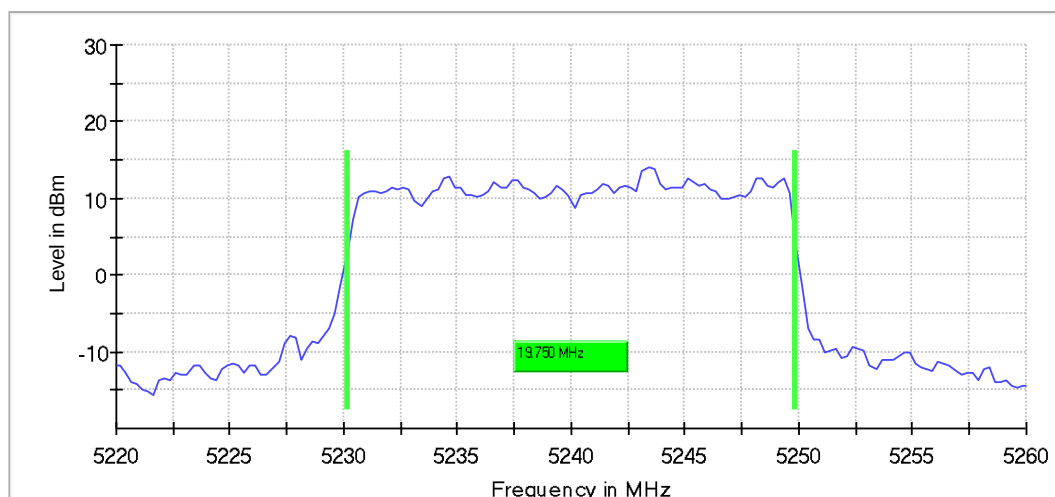
## 2.10 Occupied Channel Bandwidth 99% (5240 MHz, 20 MHz, 24.000 dBm)

Customized settings.

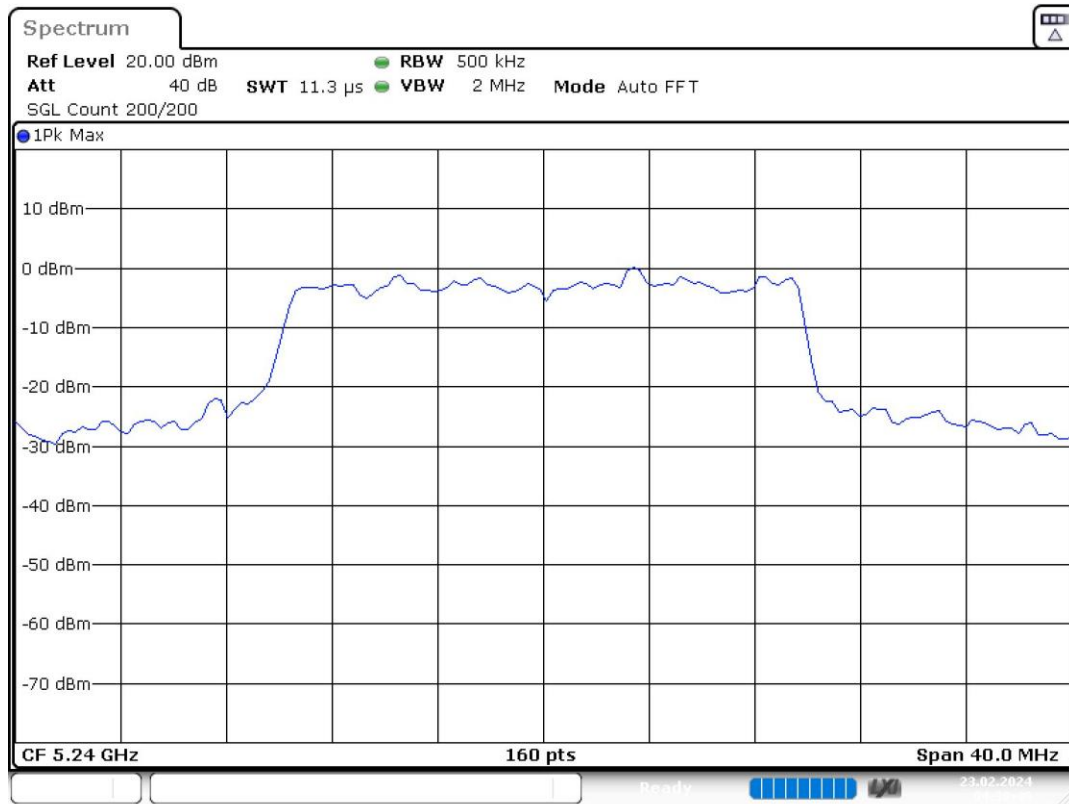
**Table 21: 99 % Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             |             |
| 5240.000000   | 19.750000 | ---       | ---       | 5230.125000    | 5249.875000     | <b>PASS</b> |

99 % Bandwidth



**Figure 9: 99 % Bandwidth**



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**Table 22: 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      | $\geq 500.000$ kHz |
| VBW             | 2.000 MHz        | $\geq 1.500$ MHz   |
| SweepPoints     | 160              | $\sim 160$         |
| 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               |
| Preamp          | off              | off                |

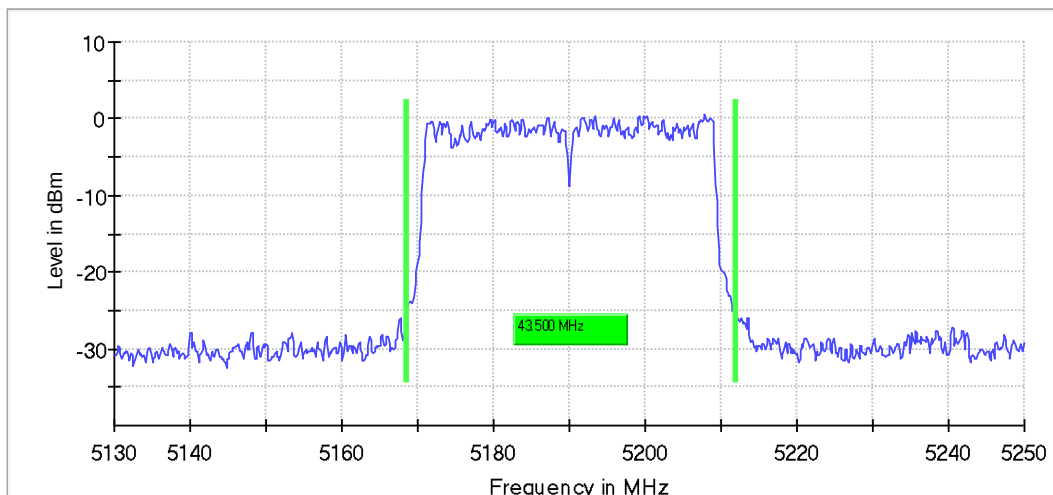
## 2.11 Emission Bandwidth 26 dB (5190 MHz, 40 MHz, 24.000 dBm)

Customized settings.

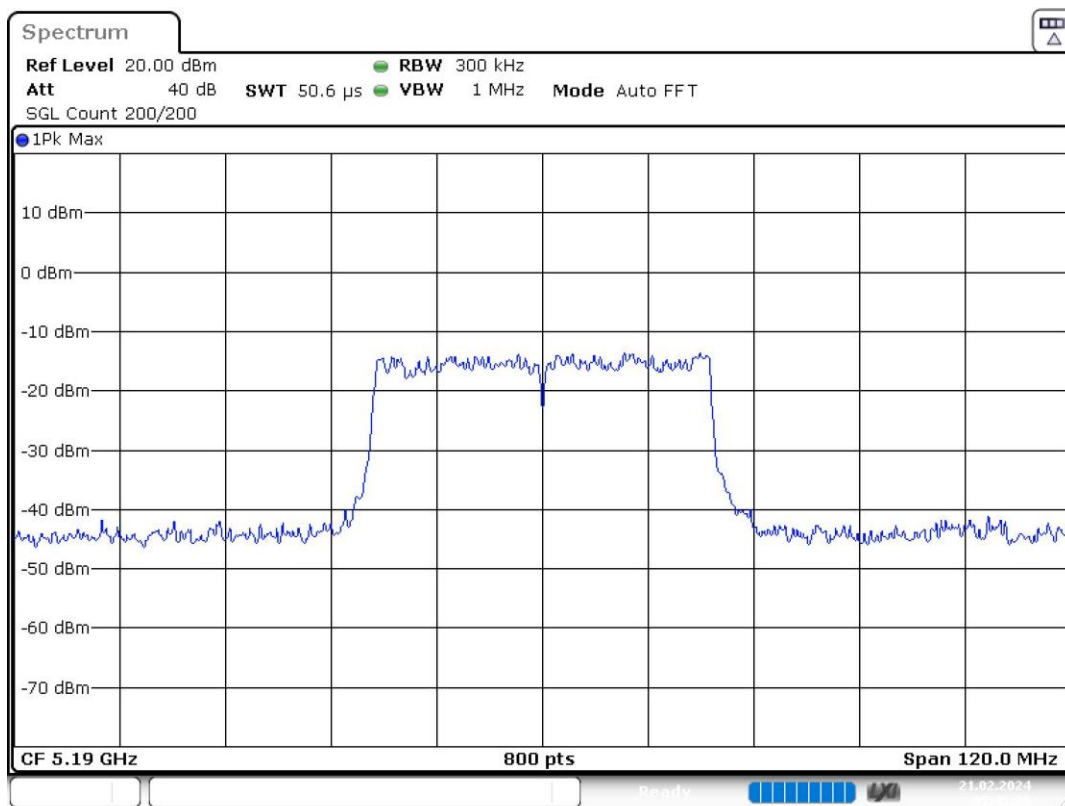
**Table 23: 26 dB Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Max Level | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-----------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             | dBm       |             |
| 5190.000000   | 43.500000 | ---       | ---       | 5168.475000    | 5211.975000     | 0.5       | <b>PASS</b> |

26 dB Bandwidth



**Figure 10: 26 dB Bandwidth**



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## 2.12 Power Spectral Density (5190 MHz, 40 MHz, 24.000 dBm)

Customized settings.

Table 24: Result

| DUT Frequency | Frequency   | PSD   | Limit Max | Result |
|---------------|-------------|-------|-----------|--------|
| MHz           | MHz         | dBm   | dBm       |        |
| 5190.000000   | 5207.425743 | 3.732 | 17.0      | PASS   |

Table 25: Ports

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |
| 3    | used  |
| 4    | used  |

Power Spectral Density

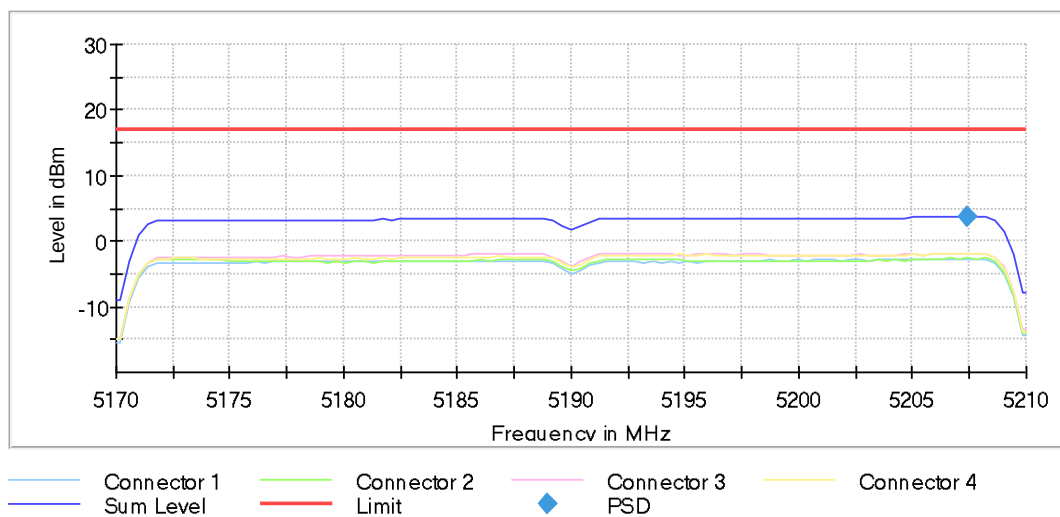


Figure 11: Power Spectral Density

**Table 26: Measurement**

| <b>Setting</b>  | <b>Instrument Value</b> | <b>Target Value</b> |
|-----------------|-------------------------|---------------------|
| Start Frequency | 5.17000 GHz             | 5.17000 GHz         |
| Stop Frequency  | 5.21000 GHz             | 5.21000 GHz         |
| Span            | 40.000 MHz              | 40.000 MHz          |
| RBW             | 1.000 MHz               | <= 1.000 MHz        |
| VBW             | 3.000 MHz               | >= 3.000 MHz        |
| SweepPoints     | 101                     | ~ 80                |
| 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       | Sweep                   | AUTO                |
| Preamplifier    | off                     | off                 |

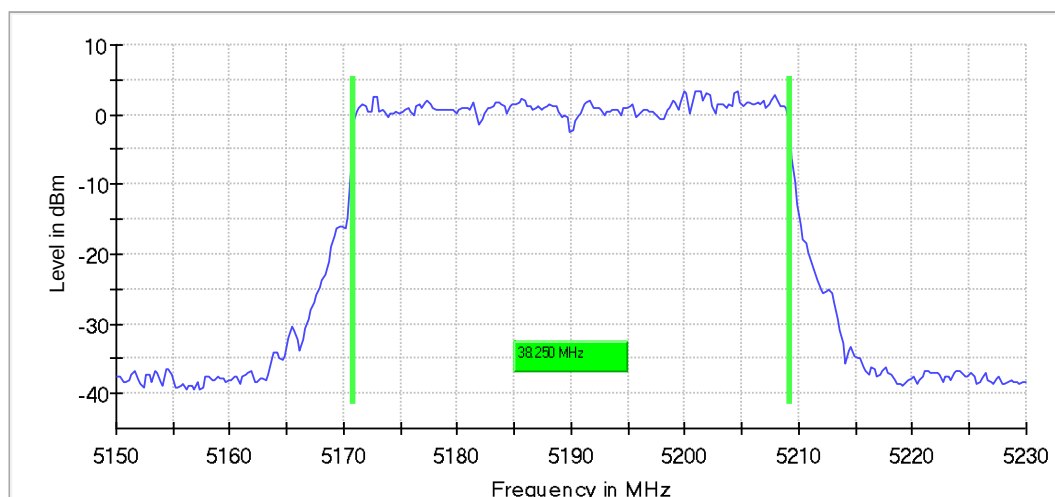
## 2.13 Occupied Channel Bandwidth 99% (5190 MHz, 40 MHz, 24.000 dBm)

Customized settings.

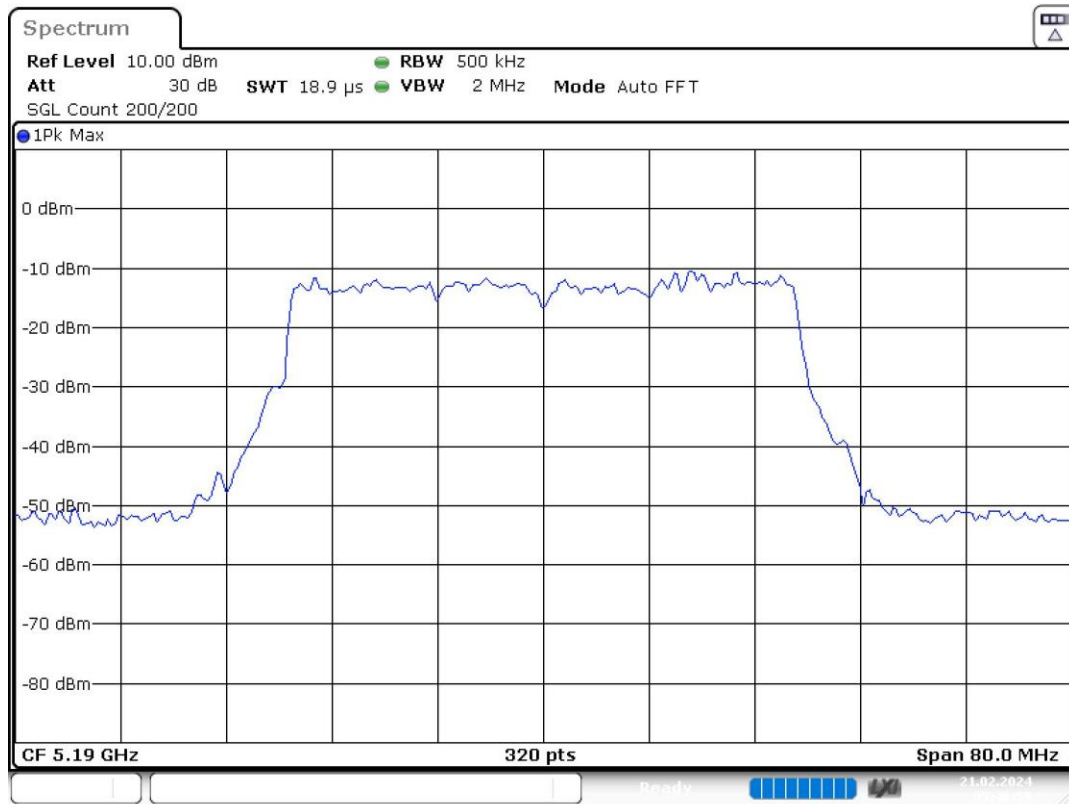
**Table 27: 99 % Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             |             |
| 5190.000000   | 38.250000 | ---       | ---       | 5170.875000    | 5209.125000     | <b>PASS</b> |

99 % Bandwidth



**Figure 12: 99 % Bandwidth**



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**Table 28: Measurement**

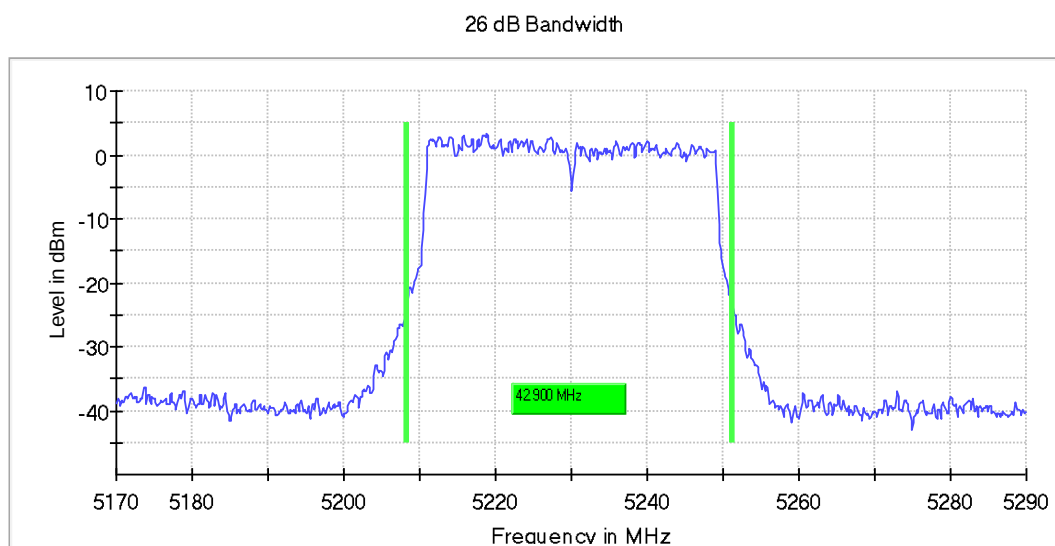
| Setting         | Instrument Value | Target Value       |
|-----------------|------------------|--------------------|
| Start Frequency | 5.15000 GHz      | 5.15000 GHz        |
| Stop Frequency  | 5.23000 GHz      | 5.23000 GHz        |
| Span            | 80.000 MHz       | 80.000 MHz         |
| RBW             | 500.000 kHz      | $\geq 400.000$ kHz |
| VBW             | 2.000 MHz        | $\geq 1.500$ MHz   |
| SweepPoints     | 320              | $\sim 320$         |
| Sweptime        | 18.906 $\mu$ 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                |

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

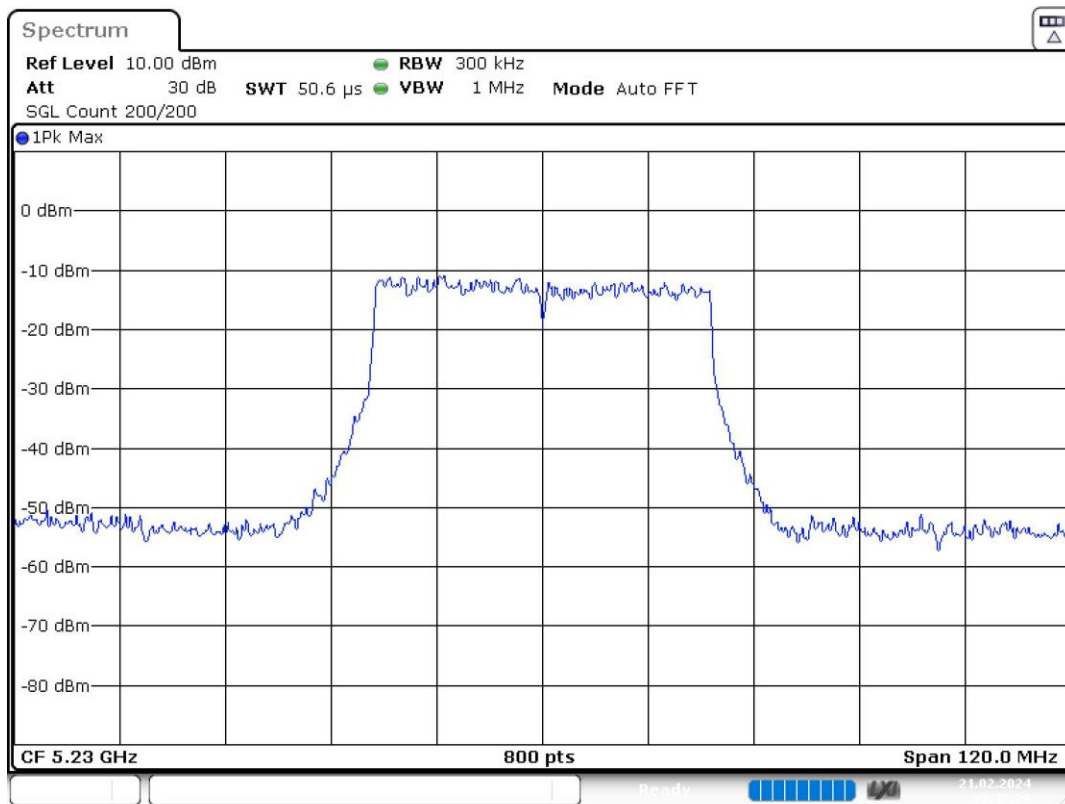
Customized settings.

**Table 29: 26 dB Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Max Level | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-----------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             | dBm       |             |
| 5230.000000   | 42.900000 | ---       | ---       | 5208.325000    | 5251.225000     | 3.2       | <b>PASS</b> |



**Figure 13: 26 dB Bandwidth**



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## 2.15 Power Spectral Density (5230 MHz, 40 MHz, 24.000 dBm)

Customized settings.

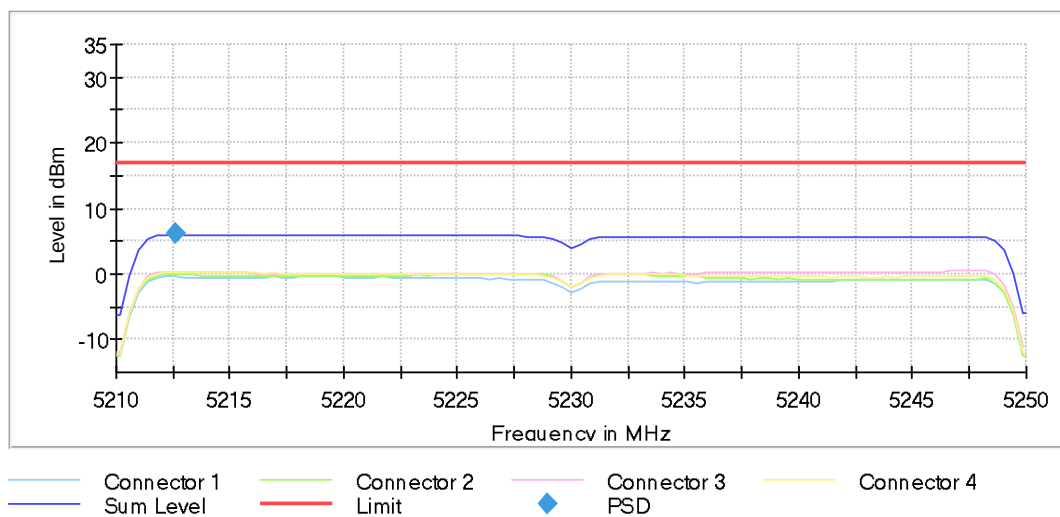
**Table 30: Result**

| DUT Frequency | Frequency   | PSD   | Limit Max | Result      |
|---------------|-------------|-------|-----------|-------------|
| MHz           | MHz         | dBm   | dBm       |             |
| 5230.000000   | 5212.574257 | 6.078 | 17.0      | <b>PASS</b> |

**Table 31: Ports**

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |
| 3    | used  |
| 4    | used  |

**Power Spectral Density**



**Figure 14: Power Spectral Density**

**Table 32: Measurement**

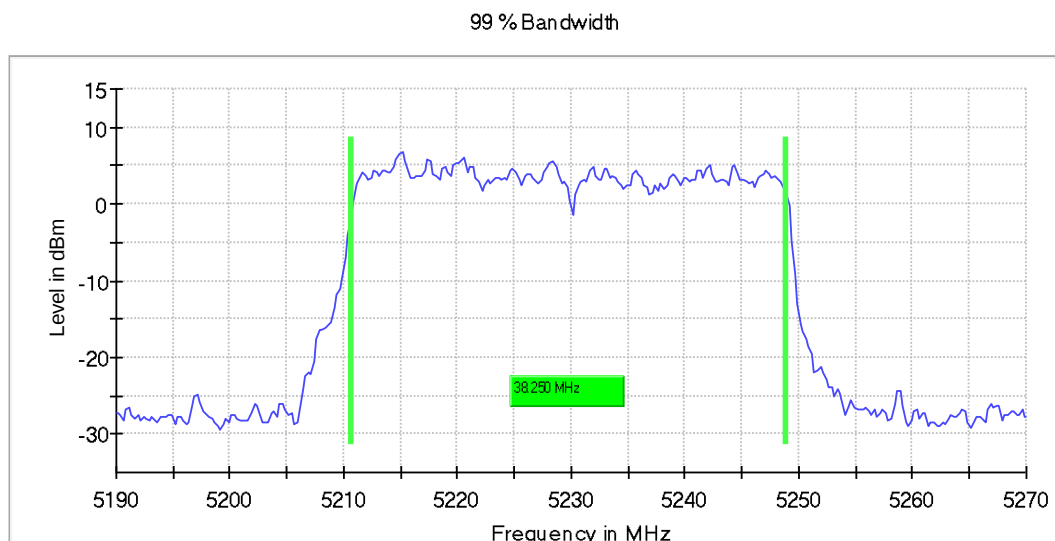
| <b>Setting</b>  | <b>Instrument Value</b> | <b>Target Value</b> |
|-----------------|-------------------------|---------------------|
| Start Frequency | 5.21000 GHz             | 5.21000 GHz         |
| Stop Frequency  | 5.25000 GHz             | 5.25000 GHz         |
| Span            | 40.000 MHz              | 40.000 MHz          |
| RBW             | 1.000 MHz               | <= 1.000 MHz        |
| VBW             | 3.000 MHz               | >= 3.000 MHz        |
| SweepPoints     | 101                     | ~ 80                |
| SweepTime       | 2.020 ms                | 2.020 ms            |
| Reference Level | 20.000 dBm              | 20.000 dBm          |
| Attenuation     | 40.000 dB               | AUTO                |
| Detector        | RMS                     | RMS                 |
| SweepCount      | 100                     | 100                 |
| Filter          | 3 dB                    | 3 dB                |
| Trace Mode      | Average Power           | Average Power       |
| SweepType       | Sweep                   | AUTO                |
| Preamplifier    | off                     | off                 |

## 2.16 Occupied Channel Bandwidth 99% (5230 MHz, 40 MHz, 24.000 dBm)

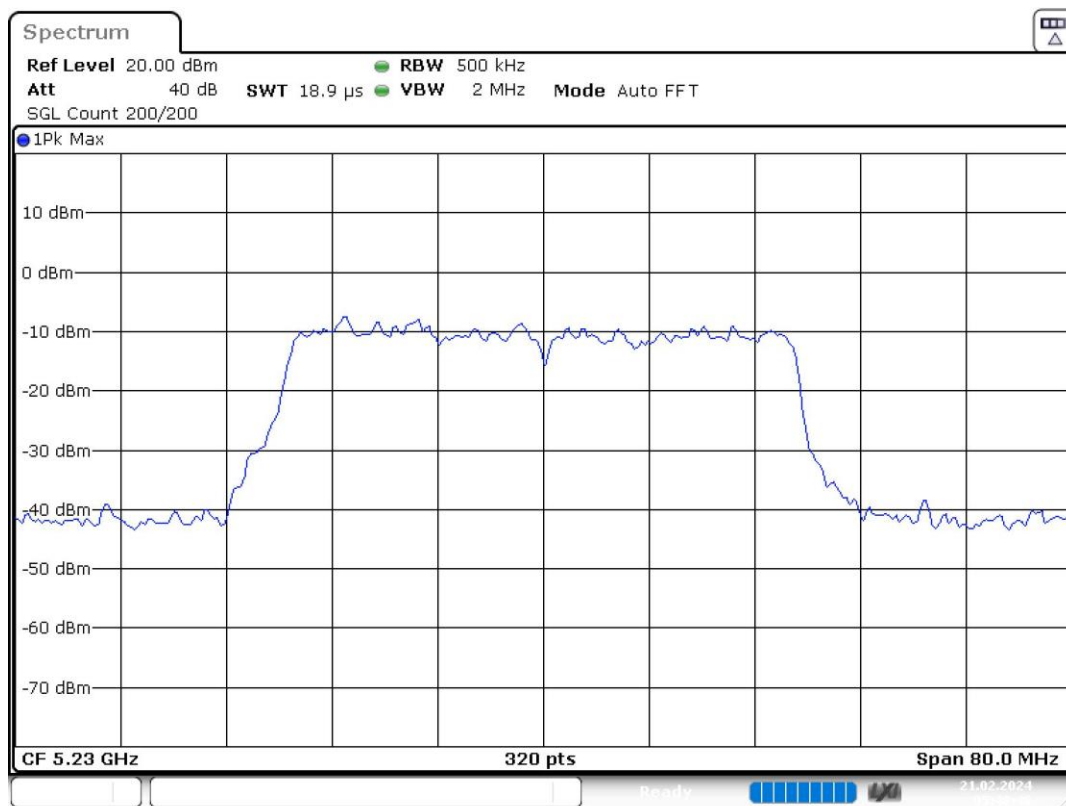
Customized settings.

**Table 33: 99 % Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             |             |
| 5230.000000   | 38.250000 | ---       | ---       | 5210.625000    | 5248.875000     | <b>PASS</b> |



**Figure 15: 99 % Bandwidth**



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**Table 34: Measurement**

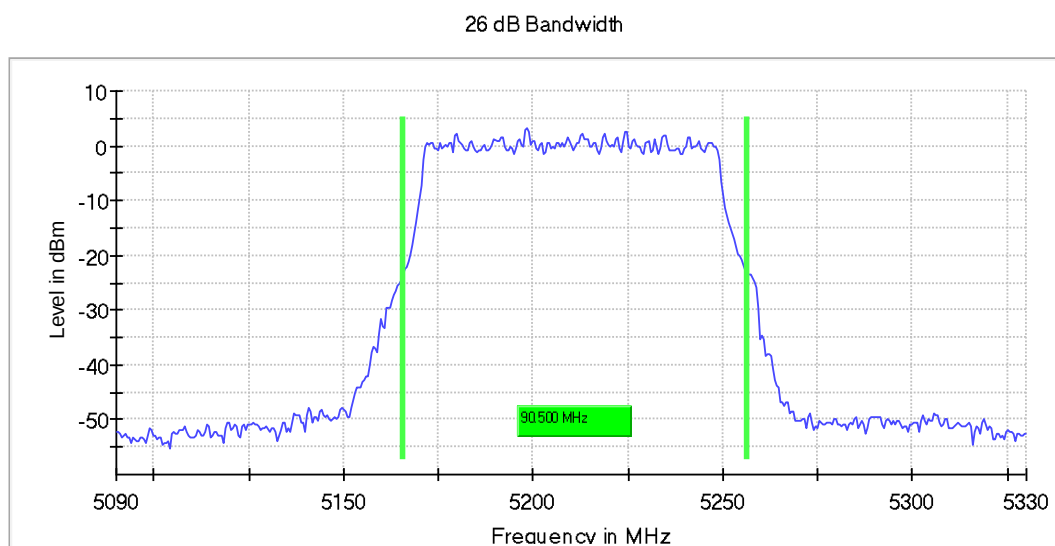
| Setting         | Instrument Value | Target Value       |
|-----------------|------------------|--------------------|
| Start Frequency | 5.19000 GHz      | 5.19000 GHz        |
| Stop Frequency  | 5.27000 GHz      | 5.27000 GHz        |
| Span            | 80.000 MHz       | 80.000 MHz         |
| RBW             | 500.000 kHz      | $\geq 400.000$ kHz |
| VBW             | 2.000 MHz        | $\geq 1.500$ MHz   |
| SweepPoints     | 320              | $\sim 320$         |
| Sweptime        | 18.906 $\mu$ 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               |
| Preamp          | off              | off                |

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

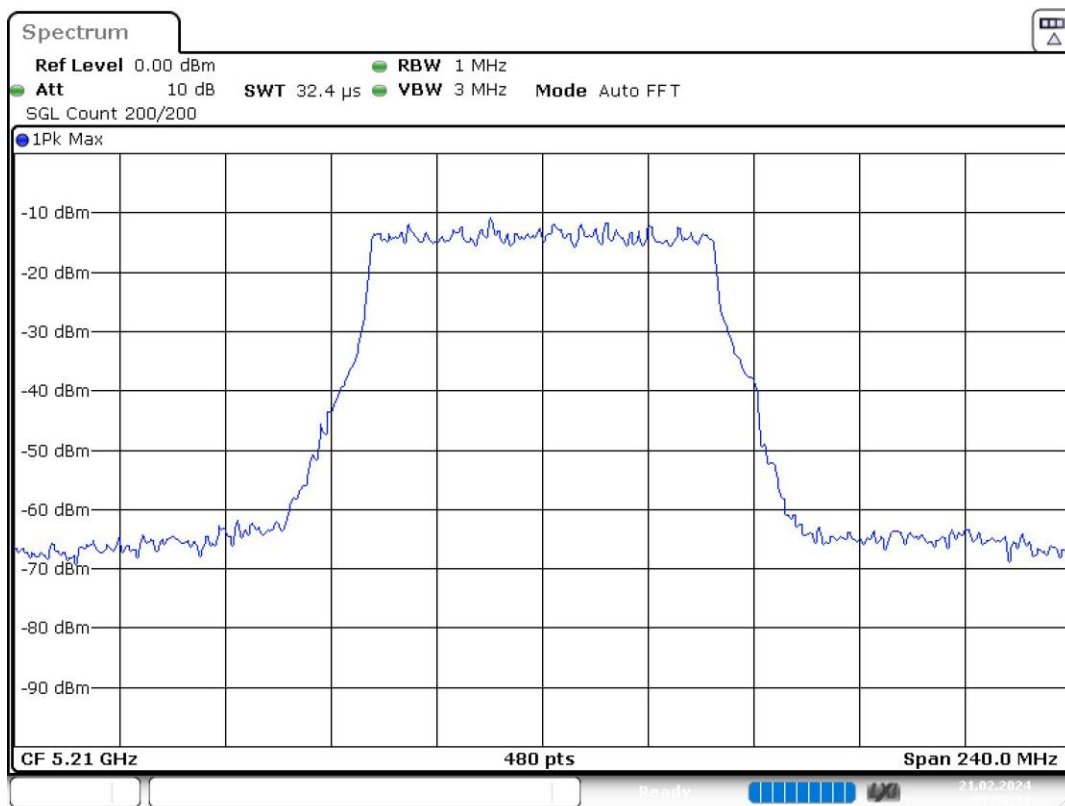
Customized settings.

**Table 35: 26 dB Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Max Level | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-----------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             | dBm       |             |
| 5210.000000   | 90.500000 | ---       | ---       | 5165.750000    | 5256.250000     | 3.3       | <b>PASS</b> |



**Figure 16: 26 dB Bandwidth**



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## 2.18 Power Spectral Density (5210 MHz, 80 MHz, 24.000 dBm)

Customized settings.

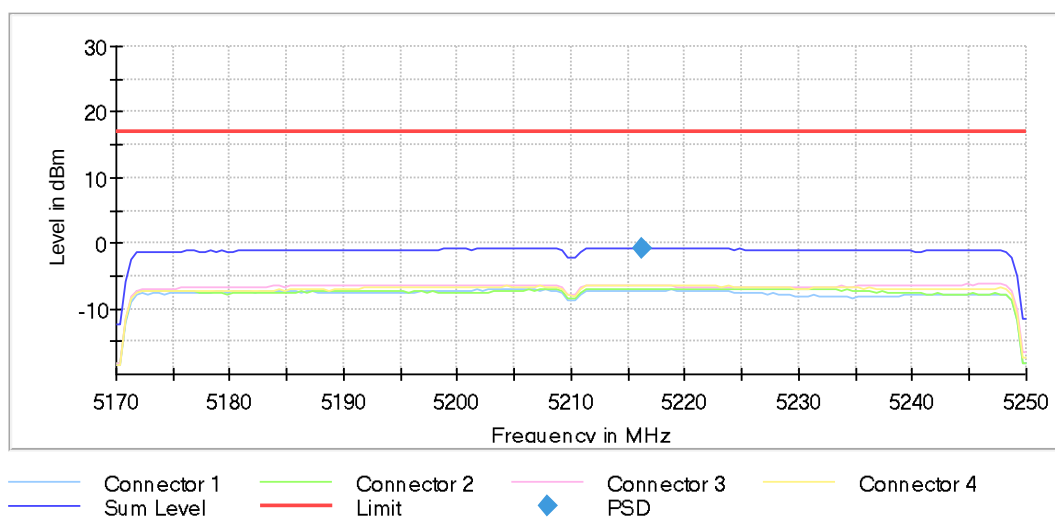
**Table 36: Result**

| DUT Frequency | Frequency   | PSD    | Limit Max | Result      |
|---------------|-------------|--------|-----------|-------------|
| MHz           | MHz         | dBm    | dBm       |             |
| 5210.000000   | 5216.250000 | -0.698 | 17.0      | <b>PASS</b> |

**Table 37: Ports**

| Port | State |
|------|-------|
| 1    | used  |
| 2    | used  |
| 3    | used  |
| 4    | used  |

Power Spectral Density



**Figure 17: Power Spectral Density**

**Table 38: Measurement**

| <b>Setting</b>  | <b>Instrument Value</b> | <b>Target Value</b> |
|-----------------|-------------------------|---------------------|
| Start Frequency | 5.17000 GHz             | 5.17000 GHz         |
| Stop Frequency  | 5.25000 GHz             | 5.25000 GHz         |
| Span            | 80.000 MHz              | 80.000 MHz          |
| RBW             | 1.000 MHz               | <= 1.000 MHz        |
| VBW             | 3.000 MHz               | >= 3.000 MHz        |
| SweepPoints     | 160                     | ~ 160               |
| Sweeptime       | 3.200 ms                | 3.200 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       | Sweep                   | AUTO                |
| Preamplifier    | off                     | off                 |

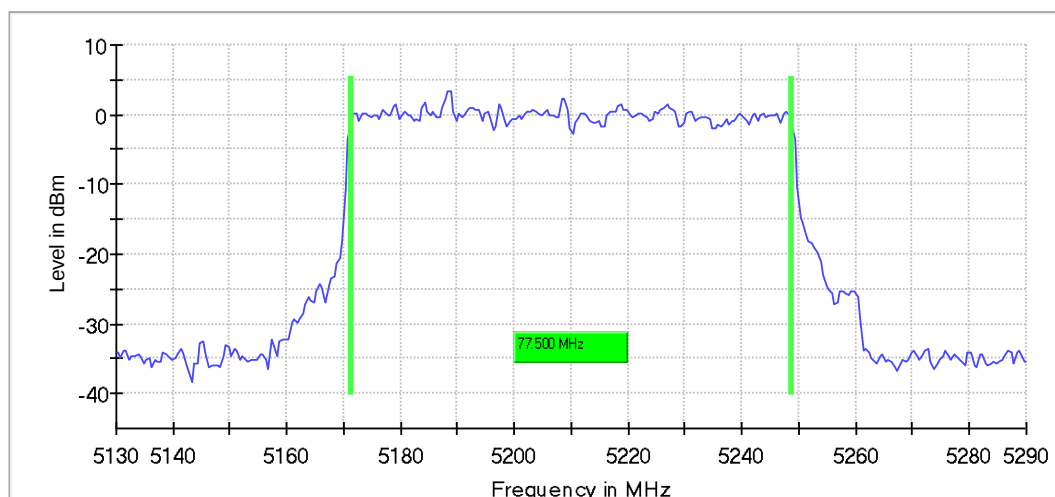
## 2.19 Occupied Channel Bandwidth 99% (5210 MHz, 80 MHz, 24.000 dBm)

Customized settings.

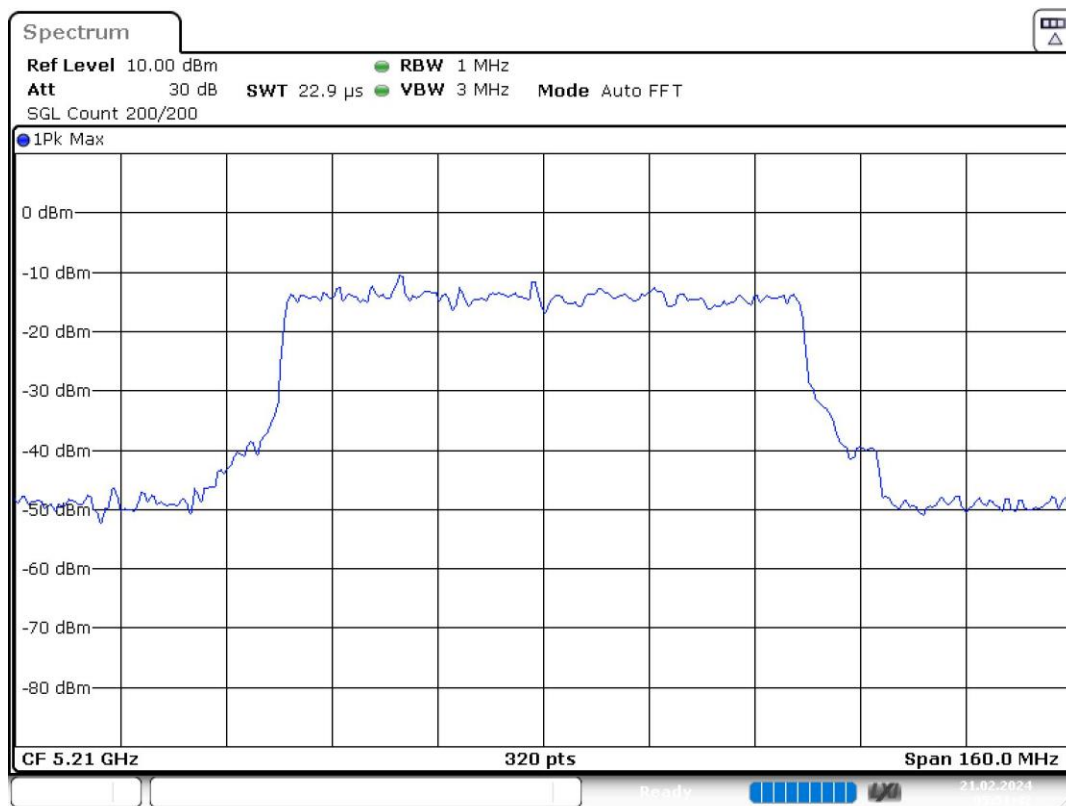
**Table 39: 99 % Bandwidth**

| DUT Frequency | Bandwidth | Limit Min | Limit Max | Band Edge Left | Band Edge Right | Result      |
|---------------|-----------|-----------|-----------|----------------|-----------------|-------------|
| MHz           | MHz       | MHz       | MHz       | MHz            | MHz             |             |
| 5210.000000   | 77.500000 | ---       | ---       | 5171.250000    | 5248.750000     | <b>PASS</b> |

99 % Bandwidth



**Figure 18: 99 % Bandwidth**



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**Table 40: 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             | 1.000 MHz        | $\geq 800.000$ kHz |
| VBW             | 3.000 MHz        | $\geq 3.000$ MHz   |
| SweepPoints     | 320              | $\sim 320$         |
| Sweptime        | 22.875 $\mu$ 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 --**