

# FCC Part 47 §15.247 2400-2483.5 MHz 2015

## DUT Information

### Frequencies

|                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| 2402 MHz (2402 MHz)   | WLAN CH 3 (2422 MHz)  | WLAN CH 6 (2437 MHz)  |
| WLAN CH 9 (2452 MHz)  | 2440 MHz (2440 MHz)   | 2480 MHz (2480 MHz)   |
| WLAN CH 2 (2417 MHz)  | WLAN CH 4 (2427 MHz)  | WLAN CH 5 (2432 MHz)  |
| WLAN CH 7 (2442 MHz)  | WLAN CH 8 (2447 MHz)  | WLAN CH 10 (2457 MHz) |
| WLAN CH 11 (2462 MHz) | WLAN CH 12 (2467 MHz) | WLAN CH 13 (2472 MHz) |
| WLAN CH 1 (2412 MHz)  | BT CH 3 (2405 MHz)    |                       |

### Bandwidths

|                 |               |                 |
|-----------------|---------------|-----------------|
| 2 MHz (2 MHz)   | 1 MHz (1 MHz) | 20 MHz (20 MHz) |
| 40 MHz (40 MHz) |               |                 |

### Power

20.000 dBm (20 dBm)

### Beamforming Gain

|                        |                              |
|------------------------|------------------------------|
| Powerstep name (value) | Beamforming gain table names |
| 20.000 dBm (20 dBm)    | ---                          |

### Gain Tables

|                        |                  |
|------------------------|------------------|
| Powerstep name (value) | Gain table names |
| 20.000 dBm (20 dBm)    | Port 1: ---;     |

### DUT Settings

|                            |       |
|----------------------------|-------|
| No. of transmission chains | 1     |
| Equipment Type             | Other |
| Digital Modulation         | Yes   |
| Frequency Hopping          | No    |

## Hardware Setup: WMS Measurements\TS8997

Spectrum Analyzer: SA FSV 40 (SA FSV 40) @ VISA (ADR  
TCPIP::192.168.48.111::INST0::INSTR), SN 1307.9002K40/101076,  
FW 3.40

Vector Generator: VG SMBV100B (VG SMBV100B) @ VISA (ADR  
TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33

Generator: SMB100Aa (SMB100A) @ VISA (ADR  
TCPIP::192.168.48.28::INST0::INSTR), SN 113690, FW / Drv:Rev  
2.21.0, 07/2016, CVI 2015

OSP: OSP-B157W (OSP-B157W) @ VISA (ADR  
TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. /, FW  
1.27.0.0

## Summary

| Test                            | Frequency (MHz) | Nominal Power (dBm) | Nominal Bandwidth (MHz) | Result |
|---------------------------------|-----------------|---------------------|-------------------------|--------|
| Minimum Emission Bandwidth 6 dB | 2412.000        | 20.0                | 20.000000               | PASS   |
| Emission Bandwidth 20 dB        | 2412.000        | 20.0                | 20.000000               | PASS   |
| RF output power                 | 2412.000        | 20.0                | 20.000000               | PASS   |
| Peak Power Spectral Density     | 2412.000        | 20.0                | 20.000000               | PASS   |
| Band Edge low                   | 2412.000        | 20.0                | 20.000000               | PASS   |
| Tx Spurious Emission            | 2412.000        | 20.0                | 20.000000               | PASS   |
| Emission Bandwidth 20 dB        | 2437.000        | 20.0                | 20.000000               | PASS   |
| Minimum Emission Bandwidth 6 dB | 2437.000        | 20.0                | 20.000000               | PASS   |
| RF output power                 | 2437.000        | 20.0                | 20.000000               | PASS   |
| Peak Power Spectral Density     | 2437.000        | 20.0                | 20.000000               | PASS   |
| Tx Spurious Emission            | 2437.000        | 20.0                | 20.000000               | PASS   |
| Emission Bandwidth 20 dB        | 2462.000        | 20.0                | 20.000000               | PASS   |
| Minimum Emission Bandwidth 6 dB | 2462.000        | 20.0                | 20.000000               | PASS   |
| RF output power                 | 2462.000        | 20.0                | 20.000000               | PASS   |
| Peak Power Spectral Density     | 2462.000        | 20.0                | 20.000000               | PASS   |
| Band Edge high                  | 2462.000        | 20.0                | 20.000000               | PASS   |
| Tx Spurious Emission            | 2462.000        | 20.0                | 20.000000               | PASS   |

## Minimum Emission Bandwidth 6 dB (2412 MHz; 20.000 dBm; 20 MHz)

Customized settings.

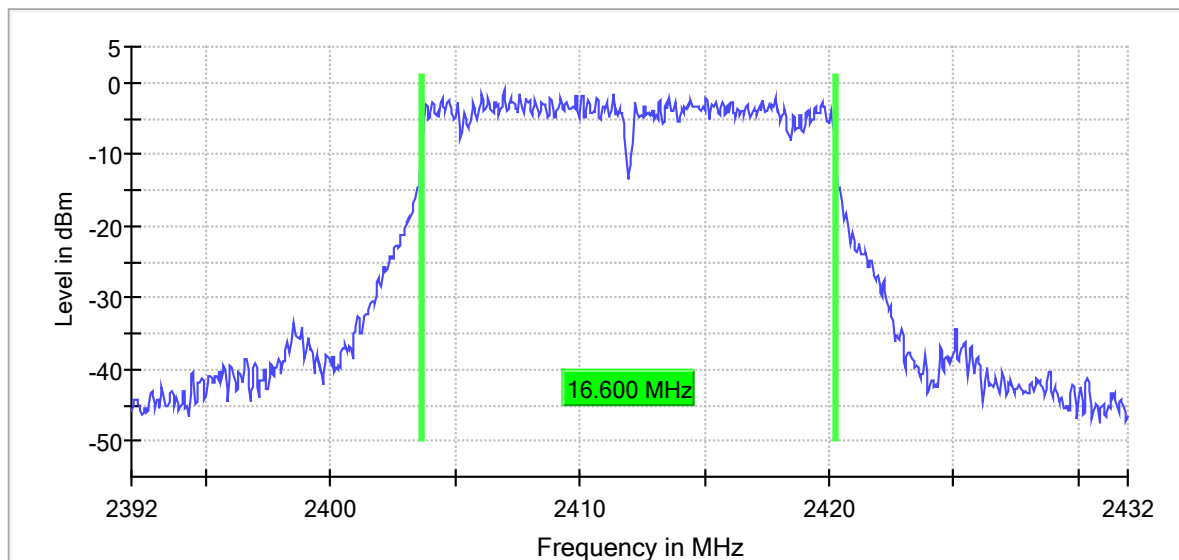
### 6 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2412.000000         | 16.600000       | 0.500000        | ---             | 2403.675000          | 2420.275000           |

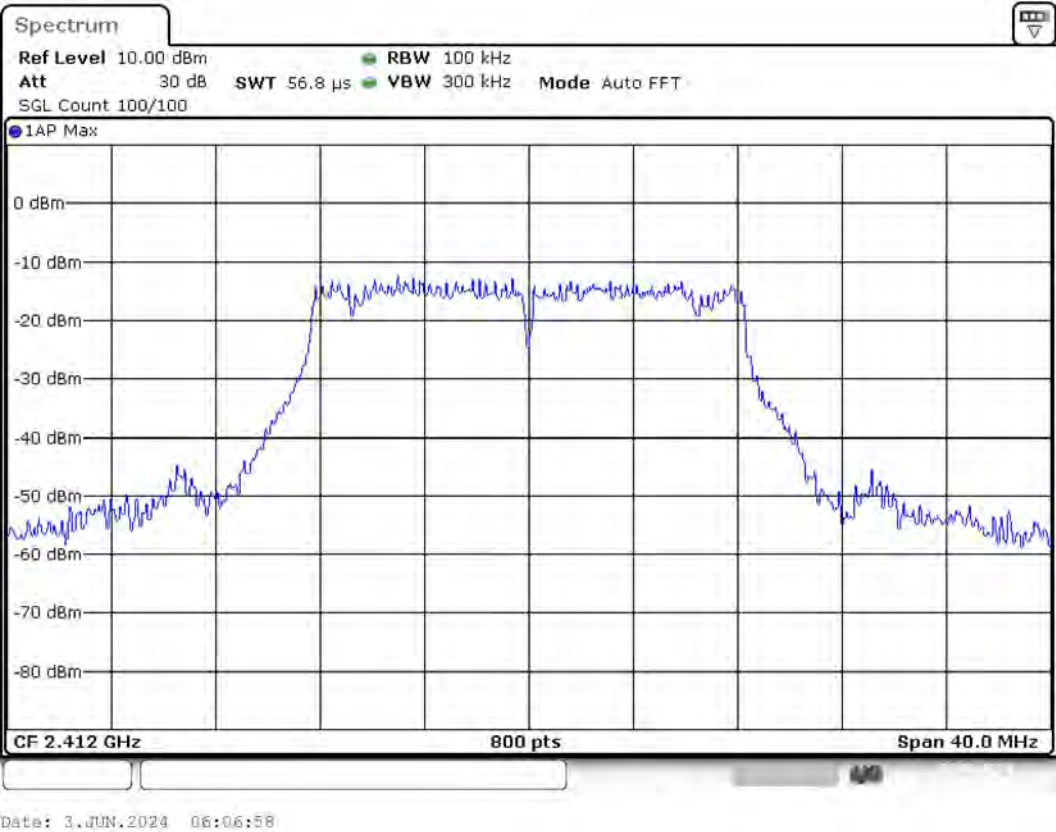
(continuation of the "6 dB Bandwidth" table from column 6 ...)

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2412.000000         | -1.1            | PASS   |

6 dB Bandwidth



Bandwidth



Measurement

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.39200 GHz      | 2.39200 GHz   |
| Stop Frequency        | 2.43200 GHz      | 2.43200 GHz   |
| Span                  | 40.000 MHz       | 40.000 MHz    |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 800              | ~ 800         |
| SweepTime             | 56.836 µs        | AUTO          |
| Reference Level       | 10.000 dBm       | 10.000 dBm    |
| Attenuation           | 30.000 dB        | AUTO          |
| Detector              | Peak             | Peak          |
| SweepCount            | 100              | 100           |
| Filter                | 3 dB             | 3 dB          |
| Trace Mode            | Max Hold         | Max Hold      |
| SweepType             | FFT              | AUTO          |
| Preamp                | off              | off           |
| Stablemode            | Trace            | Trace         |
| Stablevalue           | 0.50 dB          | 0.50 dB       |
| Run                   | 1 / max. 1       | max. 1        |
| Stable                | 0 / 1            | 1             |
| Max Stable Difference | 0.00 dB          | 0.50 dB       |

## Emission Bandwidth 20 dB (2412 MHz; 20.000 dBm; 20 MHz)

Customized settings.

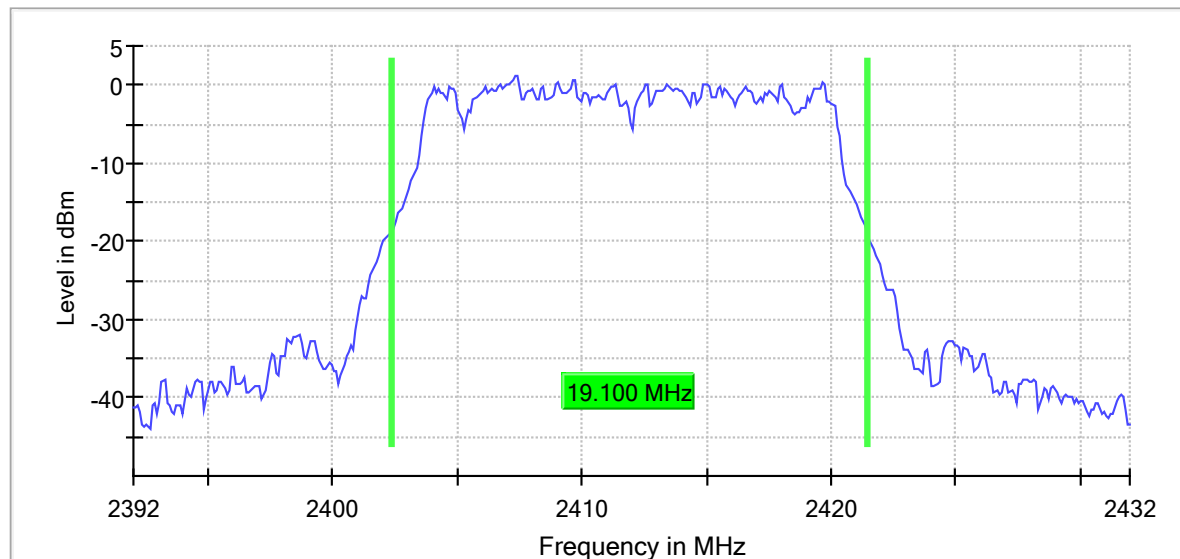
### 20 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2412.000000         | 19.100000       | ---             | ---             | 2402.350000          | 2421.450000           |

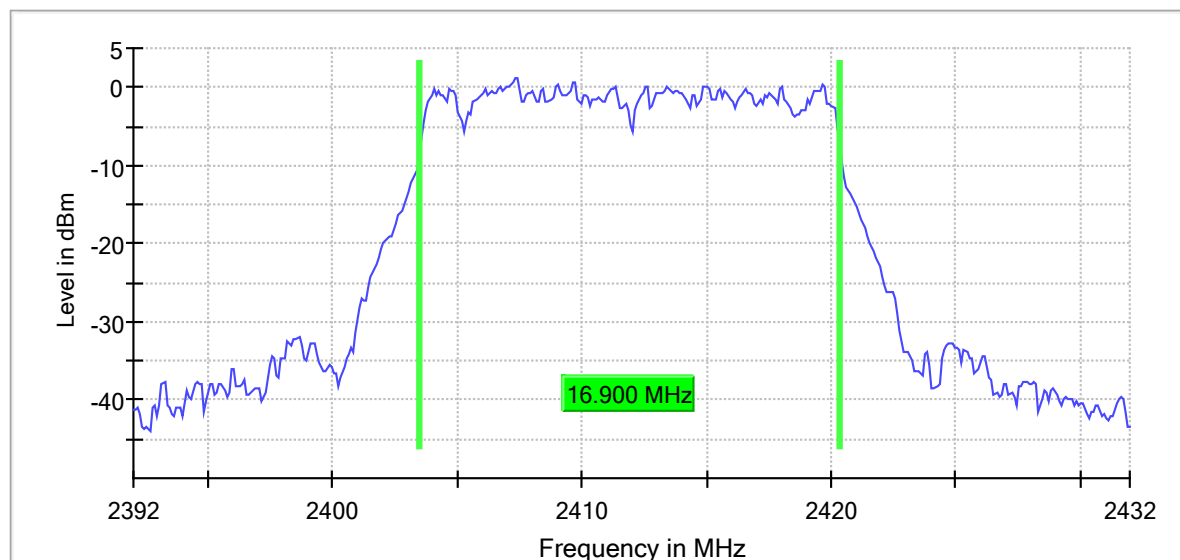
(continuation of the "20 dB Bandwidth" table from column 6 ...)

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2412.000000         | 1.2             | PASS   |

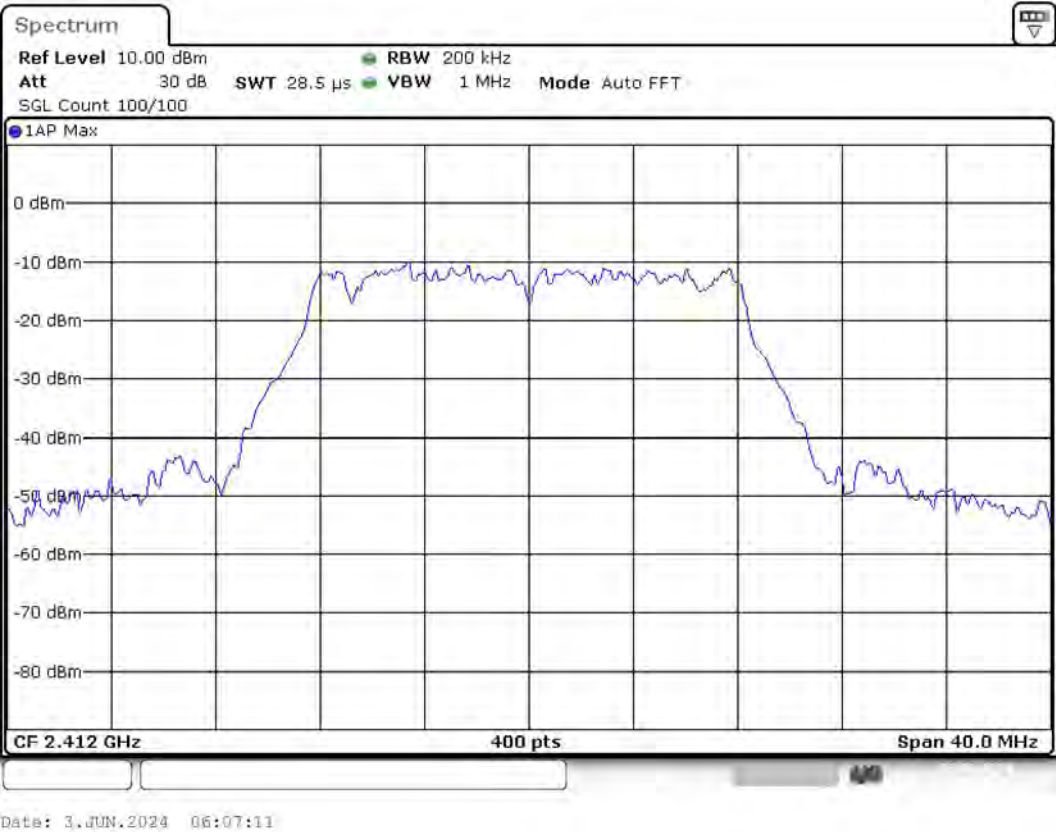
20 dB Bandwidth



99 % Bandwidth



Bandwidth



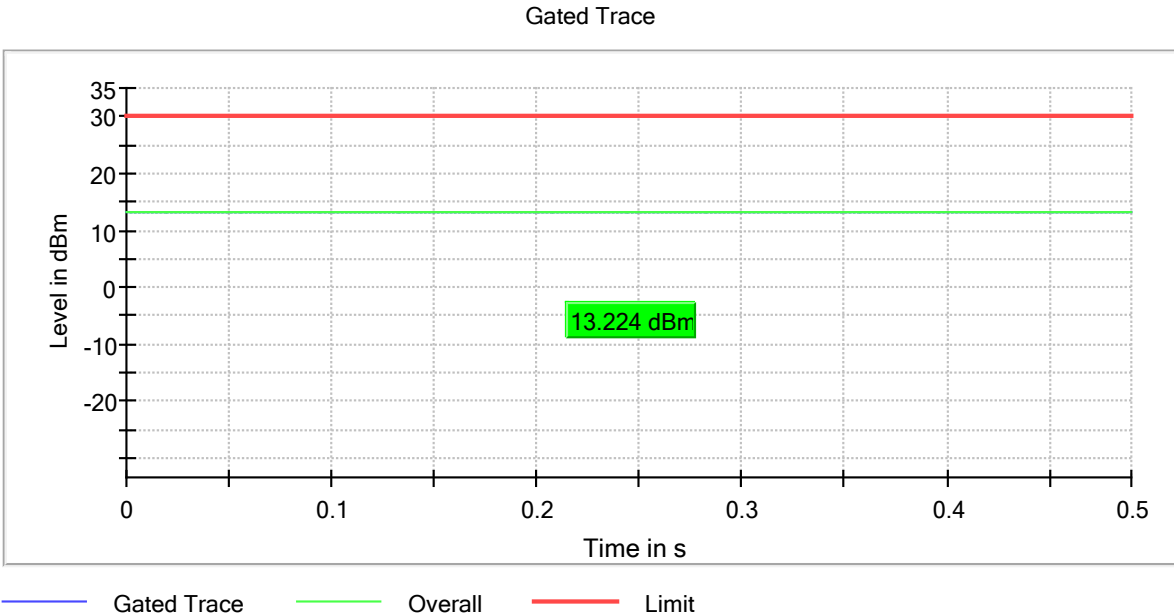
Measurement

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.39200 GHz      | 2.39200 GHz    |
| Stop Frequency        | 2.43200 GHz      | 2.43200 GHz    |
| Span                  | 40.000 MHz       | 40.000 MHz     |
| RBW                   | 200.000 kHz      | >= 200.000 kHz |
| VBW                   | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints           | 400              | ~ 400          |
| SweepTime             | 28.477 µs        | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | Peak             | Peak           |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

RF output power (2412 MHz; 20.000 dBm; 20 MHz)

Result

| DUT Frequency (MHz) | Gated RMS (dBm) | Limit Max (dBm) | Gated EIRP (dBm) | DutyCycle (%) | Result |
|---------------------|-----------------|-----------------|------------------|---------------|--------|
| 2412.000000         | 13.2            | 30.0            | 13.2             | 49.350        | PASS   |



OSP PowerMeter settings

| Setting          | Instrument Value | Target Value |
|------------------|------------------|--------------|
| Measurement Time | 1.000 s          | 1.000 s      |
| Points           | 1000000          | 1000000      |
| Time resolution  | 1.000 µs         | 1.000 µs     |

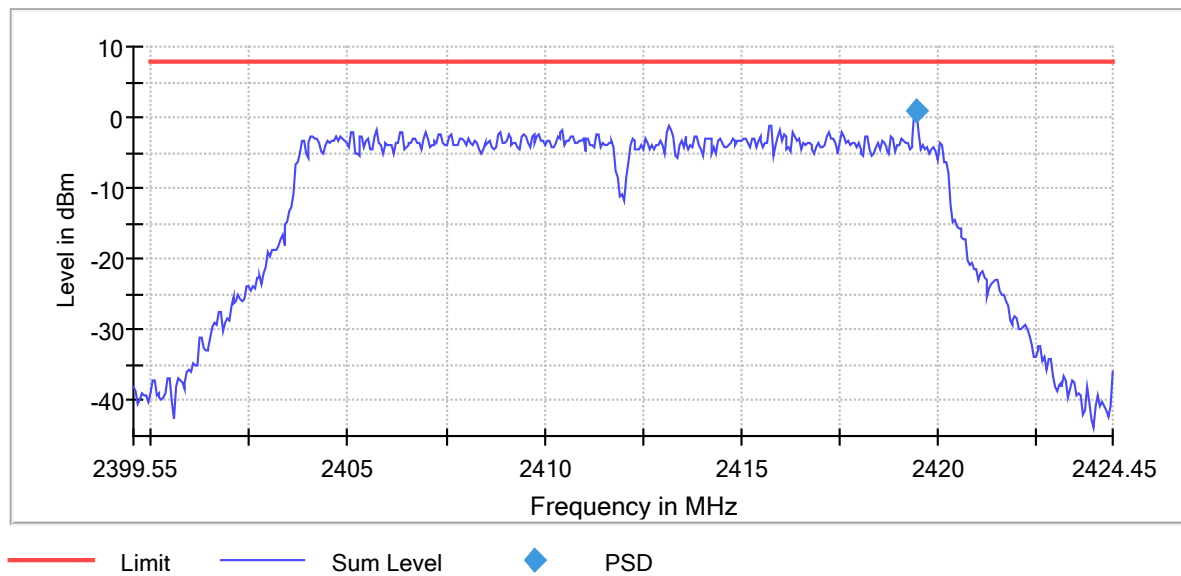
## Peak Power Spectral Density (2412 MHz; 20.000 dBm; 20 MHz)

Customized settings.

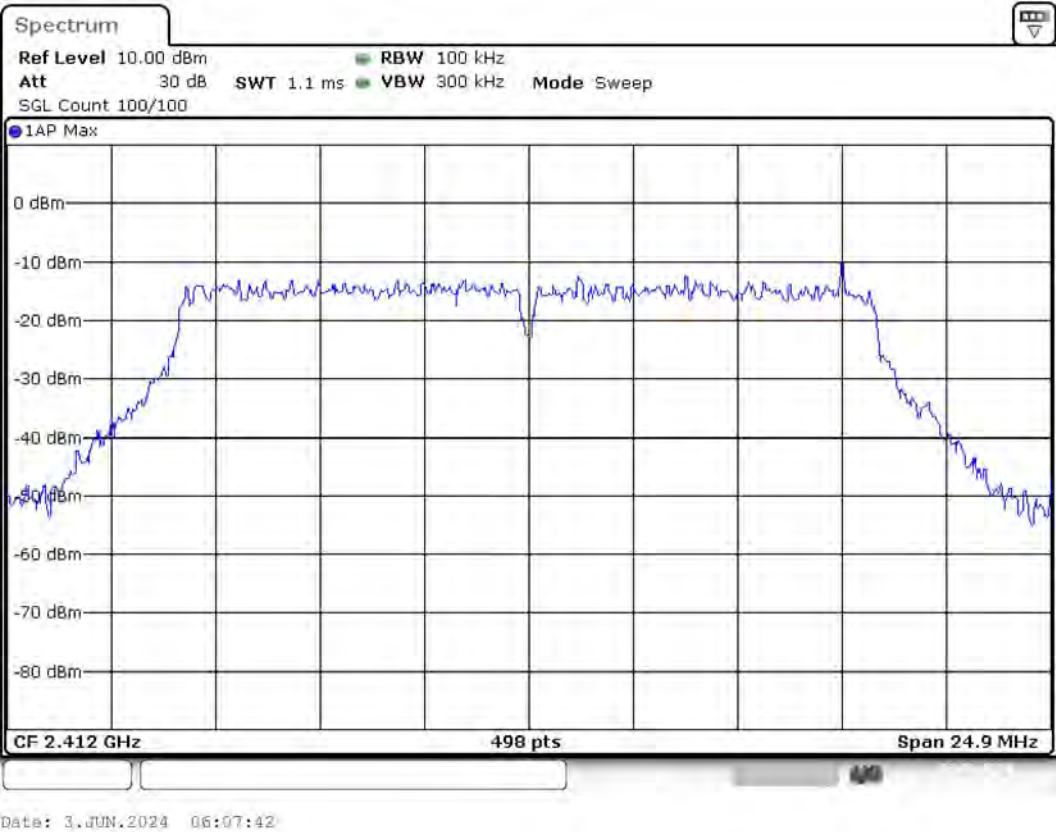
### Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 2412.000000         | 2419.475000     | 0.987     | 8.0             | PASS   |

Peak Power Spectral Density



PSD Connector 1



Measurement

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.39955 GHz      | 2.39955 GHz    |
| Stop Frequency        | 2.42445 GHz      | 2.42445 GHz    |
| Span                  | 24.900 MHz       | 24.900 MHz     |
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 498              | ~ 498          |
| SweepTime             | 1.050 ms         | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | Peak             | Peak           |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | Sweep            | Sweep          |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

**Band Edge low (2412 MHz; 20.000 dBm; 20 MHz)****Result**

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 2412.000000         | PASS   |

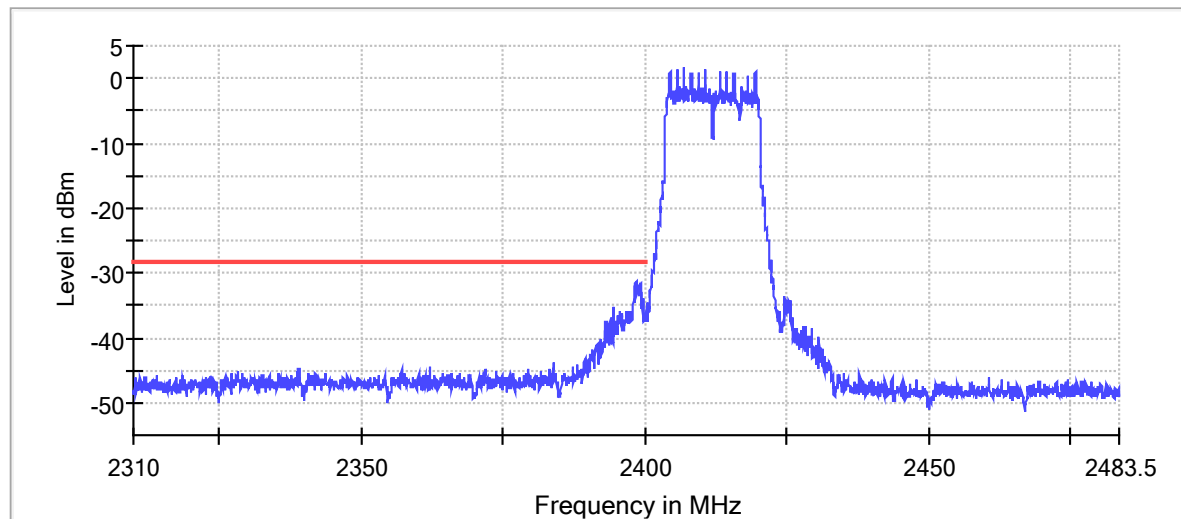
**Inband Peak**

| Frequency (MHz) | Level (dBm) |
|-----------------|-------------|
| 2406.975000     | 1.5         |

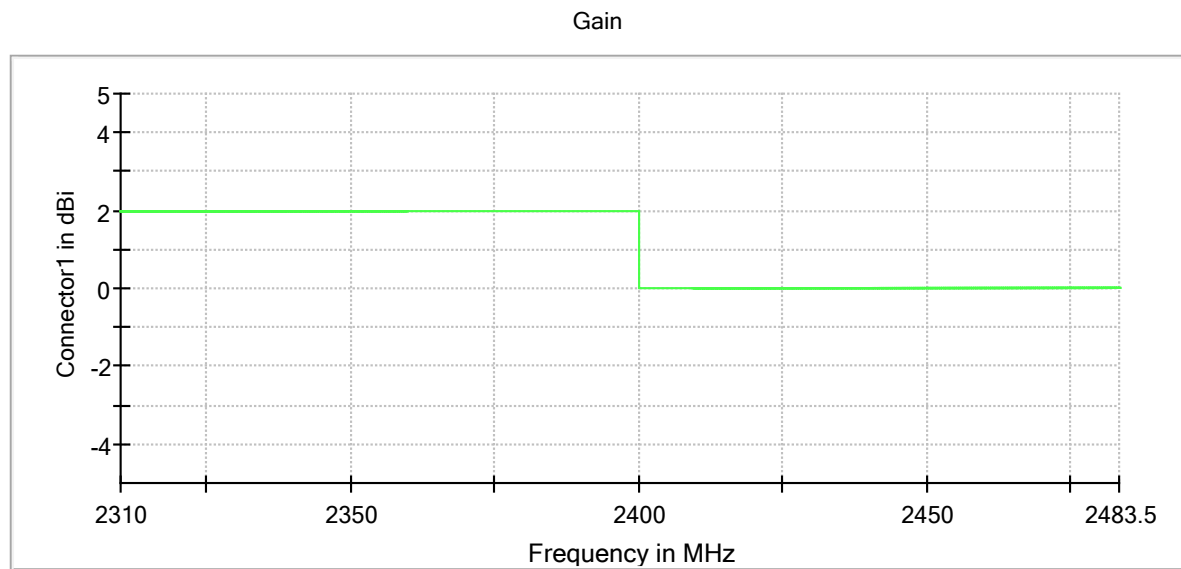
**Measurements**

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 2398.475000     | -31.3       | 2.8         | -28.5       | PASS   |
| 2398.575000     | -31.3       | 2.9         | -28.5       | PASS   |
| 2399.225000     | -31.6       | 3.1         | -28.5       | PASS   |
| 2398.425000     | -31.7       | 3.3         | -28.5       | PASS   |
| 2399.175000     | -31.8       | 3.4         | -28.5       | PASS   |
| 2398.525000     | -31.8       | 3.4         | -28.5       | PASS   |
| 2398.675000     | -32.0       | 3.5         | -28.5       | PASS   |
| 2398.225000     | -32.0       | 3.6         | -28.5       | PASS   |
| 2398.625000     | -32.0       | 3.6         | -28.5       | PASS   |
| 2398.825000     | -32.1       | 3.7         | -28.5       | PASS   |
| 2398.875000     | -32.2       | 3.7         | -28.5       | PASS   |
| 2398.175000     | -32.2       | 3.8         | -28.5       | PASS   |
| 2398.725000     | -32.3       | 3.9         | -28.5       | PASS   |
| 2398.275000     | -32.4       | 3.9         | -28.5       | PASS   |
| 2399.475000     | -32.8       | 4.3         | -28.5       | PASS   |

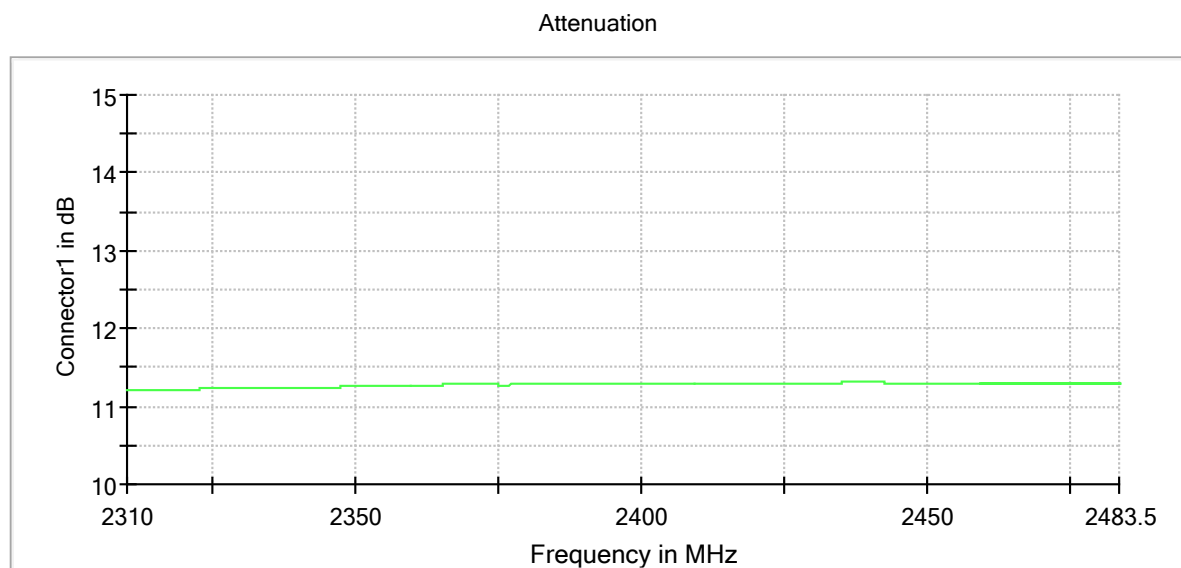
Band Edge



— Limit — Sum Level × Fail

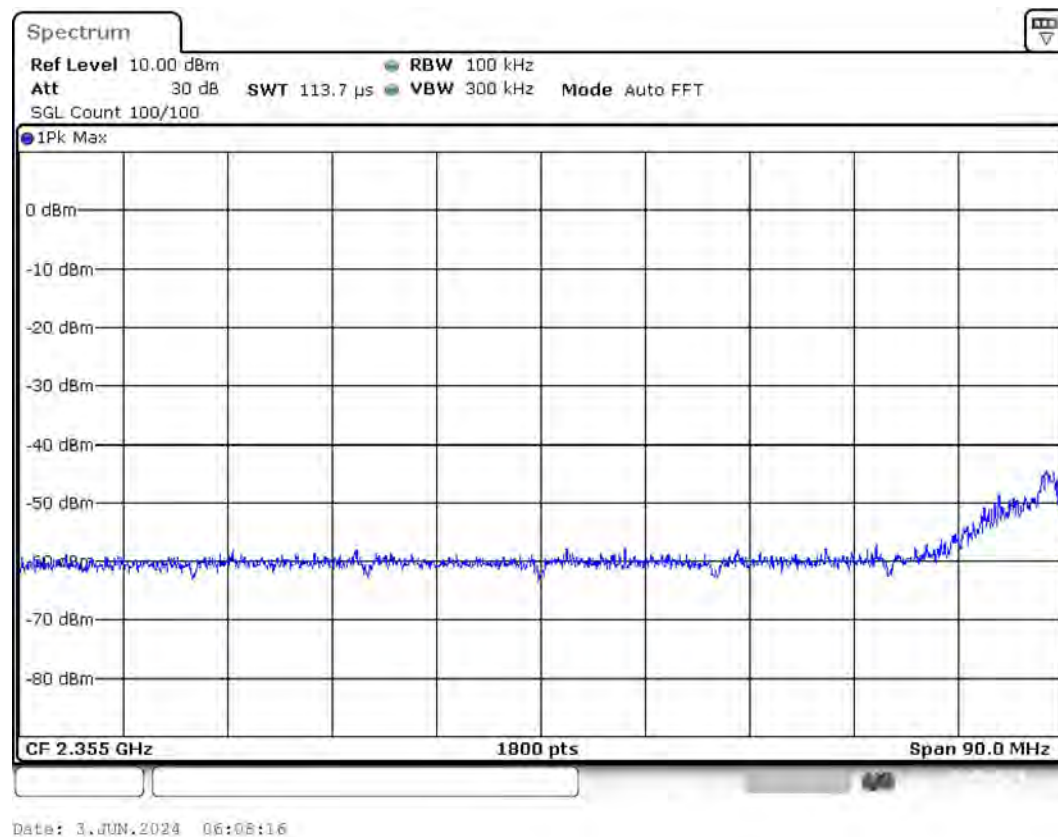


Connector1

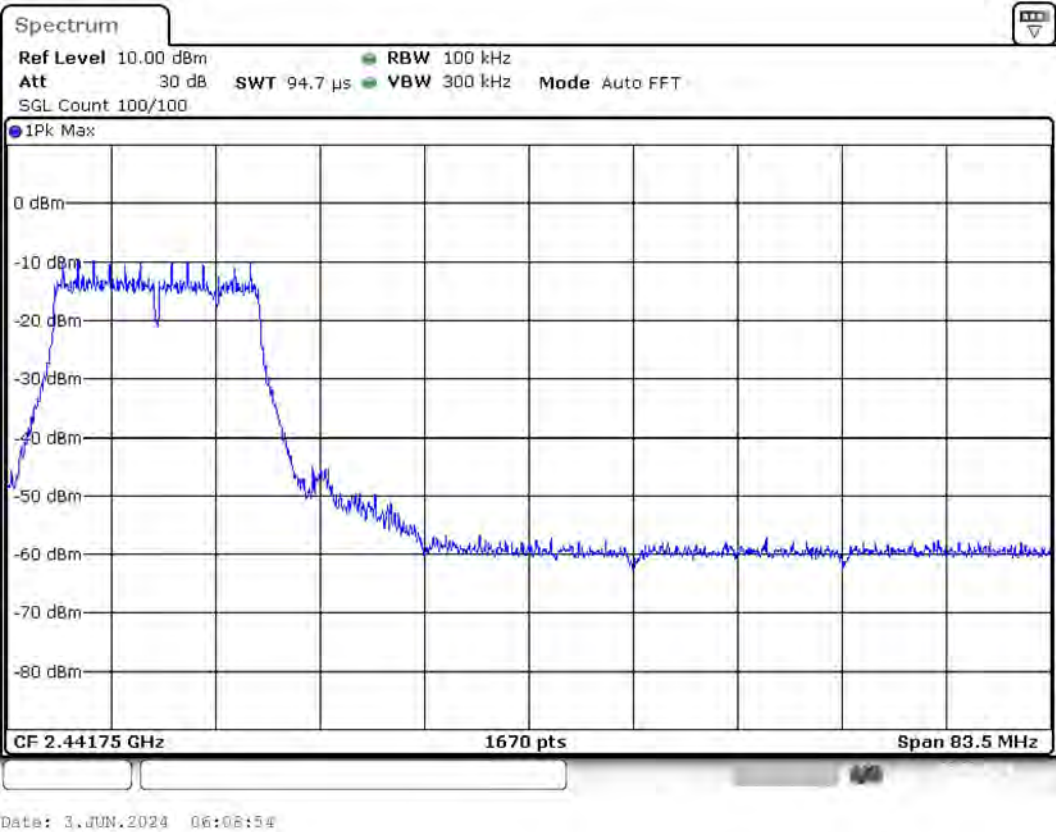


Connector1

Band Edge Connector 1\_0



Band Edge Connector 1\_1



Measurement 1

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.31000 GHz      | 2.31000 GHz    |
| Stop Frequency        | 2.40000 GHz      | 2.40000 GHz    |
| Span                  | 90.000 MHz       | 90.000 MHz     |
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 1800             | ~ 1800         |
| Sweptime              | 113.672 μs       | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 17 / max. 150    | max. 150       |
| Stable                | 3 / 3            | 3              |
| Max Stable Difference | 0.05 dB          | 0.50 dB        |

Measurement 2

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| Start Frequency | 2.40000 GHz      | 2.40000 GHz    |
| Stop Frequency  | 2.48350 GHz      | 2.48350 GHz    |
| Span            | 83.500 MHz       | 83.500 MHz     |
| RBW             | 100.000 kHz      | <= 100.000 kHz |
| VBW             | 300.000 kHz      | >= 300.000 kHz |

|                       |               |            |
|-----------------------|---------------|------------|
| SweepPoints           | 1670          | ~ 1670     |
| SweepTime             | 94.727 µs     | AUTO       |
| Reference Level       | 10.000 dBm    | 10.000 dBm |
| Attenuation           | 30.000 dB     | AUTO       |
| Detector              | MaxPeak       | MaxPeak    |
| SweepCount            | 100           | 100        |
| Filter                | 3 dB          | 3 dB       |
| Trace Mode            | Max Hold      | Max Hold   |
| SweepType             | FFT           | AUTO       |
| Preamp                | off           | off        |
| Stablemode            | Trace         | Trace      |
| Stablevalue           | 0.50 dB       | 0.50 dB    |
| Run                   | 28 / max. 150 | max. 150   |
| Stable                | 3 / 3         | 3          |
| Max Stable Difference | 0.43 dB       | 0.50 dB    |

**Tx Spurious Emission (2412 MHz; 20.000 dBm; 20 MHz)**

Customized settings.

**Result**

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 2412.000000         | PASS   |

**Final measurements**

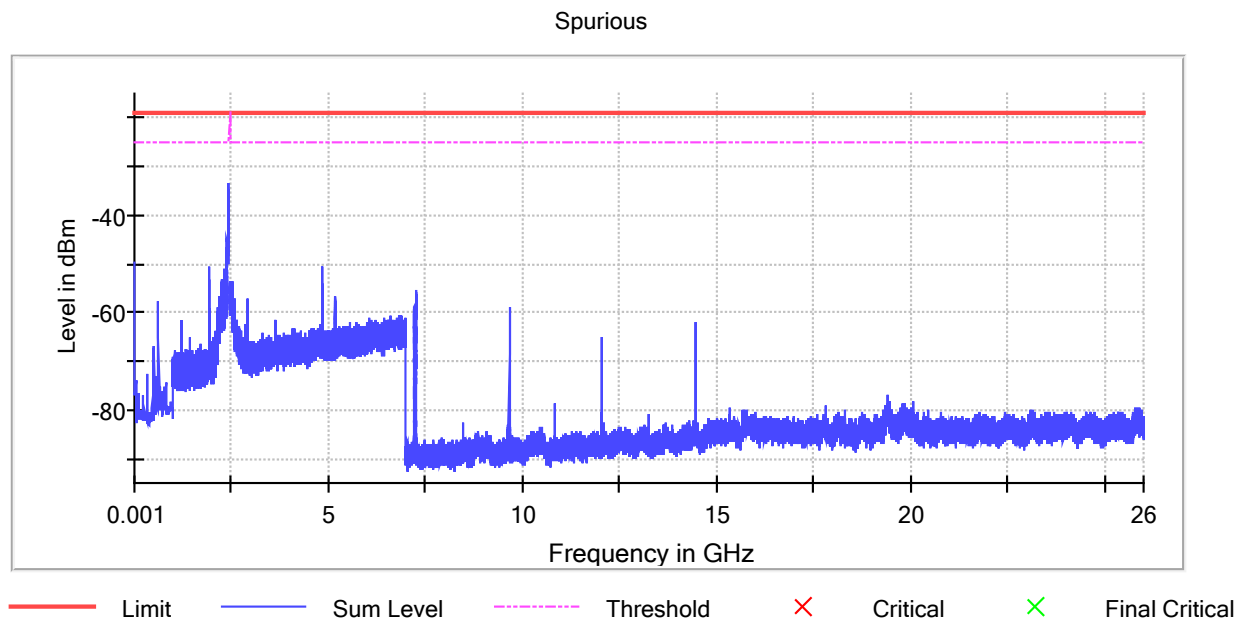
| Frequency (MHz) | Level Pre Measurement (dBm) | level (dBm) | Limit (dBm) | Margin (dB) | Result |
|-----------------|-----------------------------|-------------|-------------|-------------|--------|
| ---             | ---                         | ---         | ---         | ---         | ---    |

**Pre Measurements**

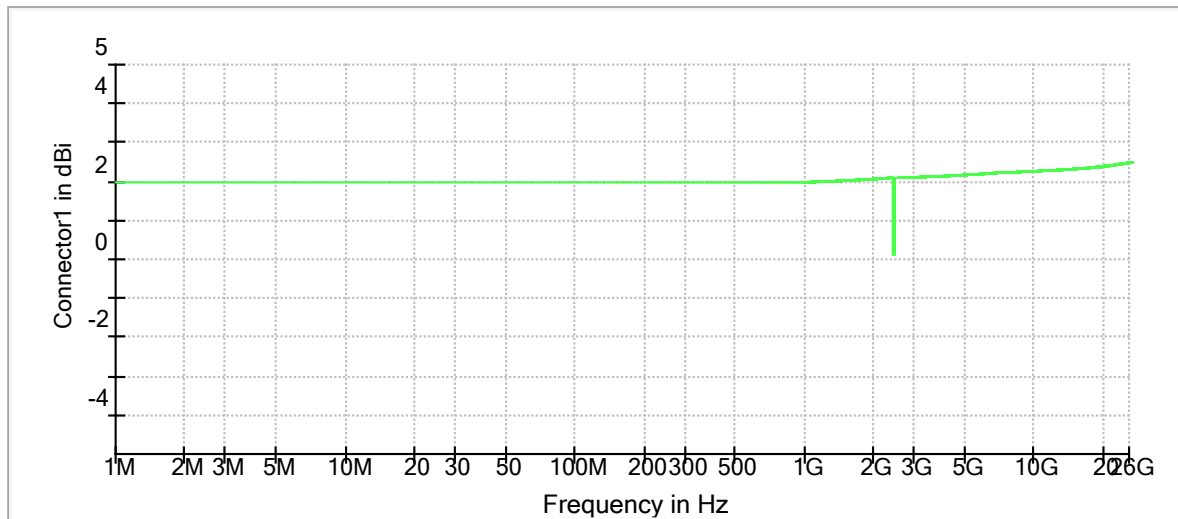
| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) |
|-----------------|-------------|-------------|-------------|
| 2398.525000     | -33.7       | 14.6        | -19.0       |
| 2398.475000     | -33.8       | 14.8        | -19.0       |
| 2398.225000     | -34.6       | 15.6        | -19.0       |
| 2398.275000     | -34.6       | 15.6        | -19.0       |
| 2399.125000     | -34.7       | 15.7        | -19.0       |
| 2399.075000     | -34.9       | 15.9        | -19.0       |
| 2397.975000     | -35.2       | 16.2        | -19.0       |
| 2397.925000     | -35.6       | 16.6        | -19.0       |
| 2399.275000     | -35.6       | 16.6        | -19.0       |
| 2398.025000     | -35.6       | 16.6        | -19.0       |
| 2398.925000     | -35.6       | 16.6        | -19.0       |
| 2398.975000     | -35.7       | 16.7        | -19.0       |
| 2399.225000     | -35.8       | 16.8        | -19.0       |
| 2399.025000     | -35.9       | 16.9        | -19.0       |
| 2398.725000     | -36.0       | 17.0        | -19.0       |

**Measurement Settings**

| Start Frequency (MHz) | Stop Frequency (MHz) | Pre Measurement | Final Measurement |
|-----------------------|----------------------|-----------------|-------------------|
| 1.000000              | 1000.000000          | 1               | 1                 |
| 1000.000000           | 2400.000000          | 2               | 2                 |
| 2483.500000           | 7000.000000          | 2               | 2                 |
| 7000.000000           | 18000.000000         | 2               | 2                 |
| 18000.000000          | 26000.000000         | 2               | 2                 |

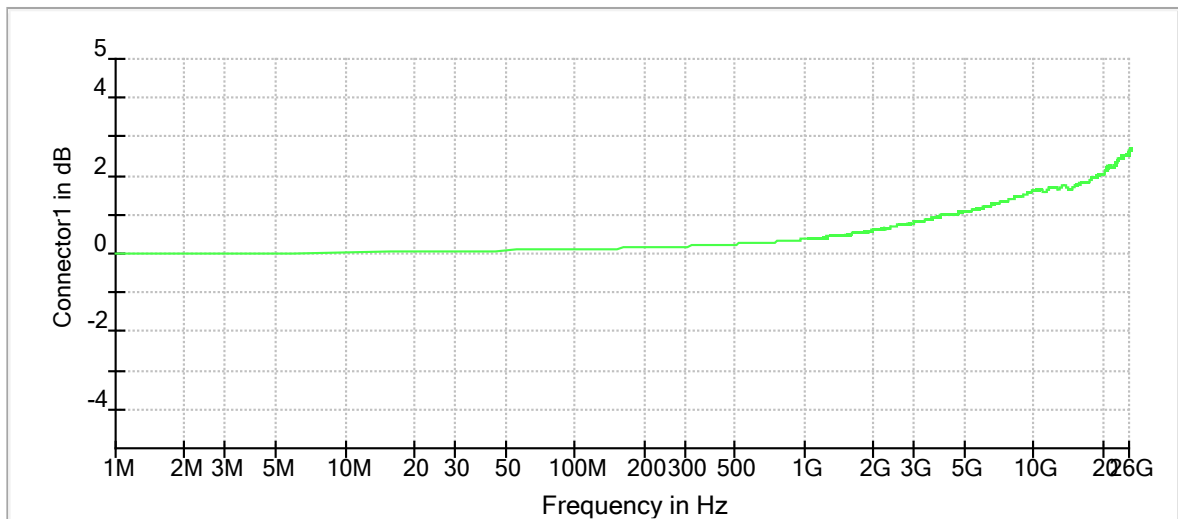


Gain



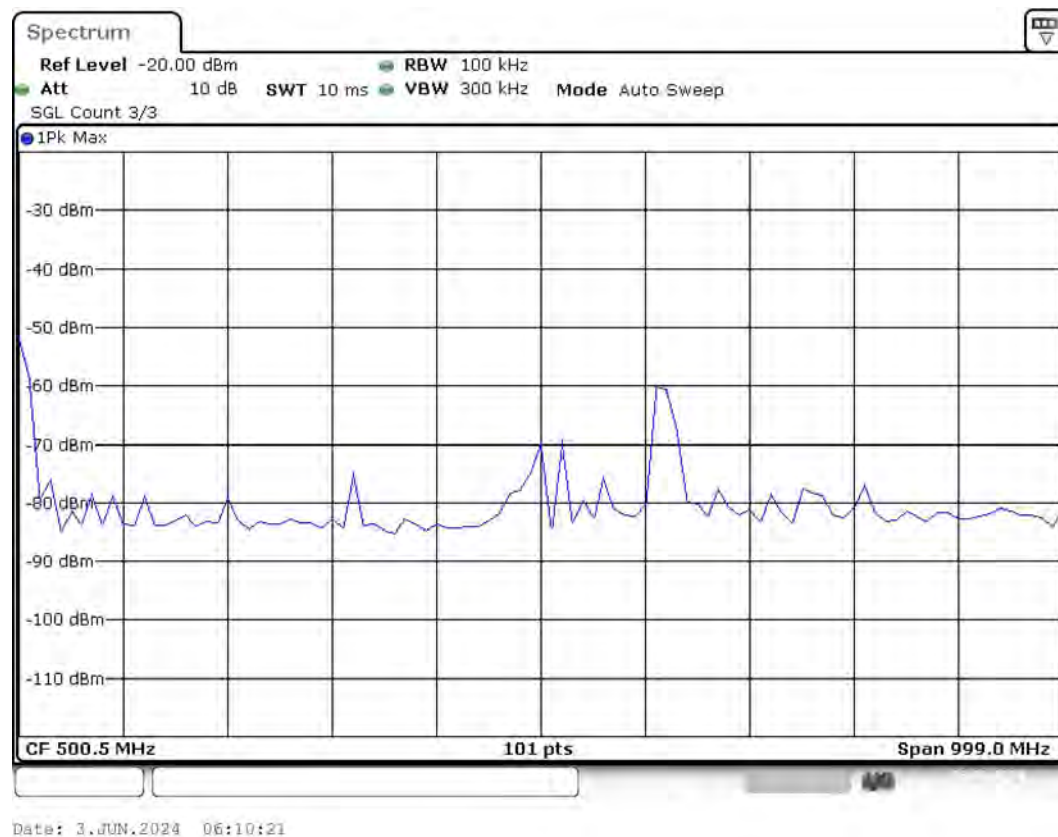
Connector1

Attenuation

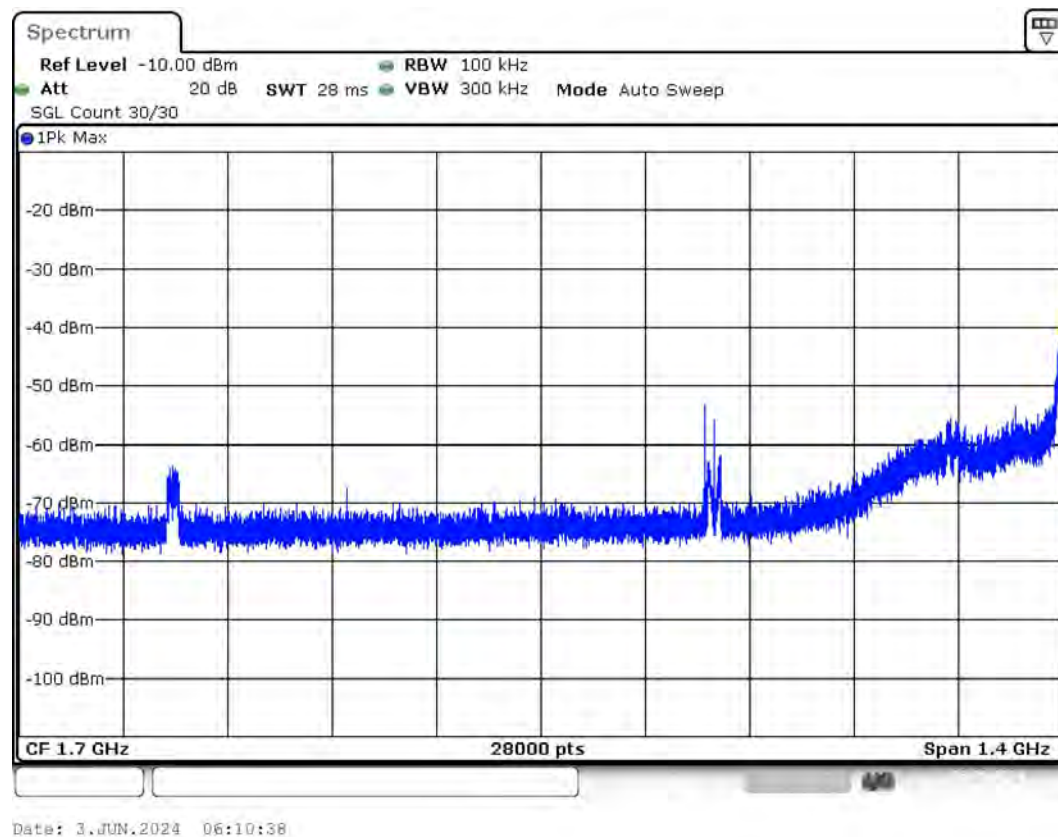


Connector1

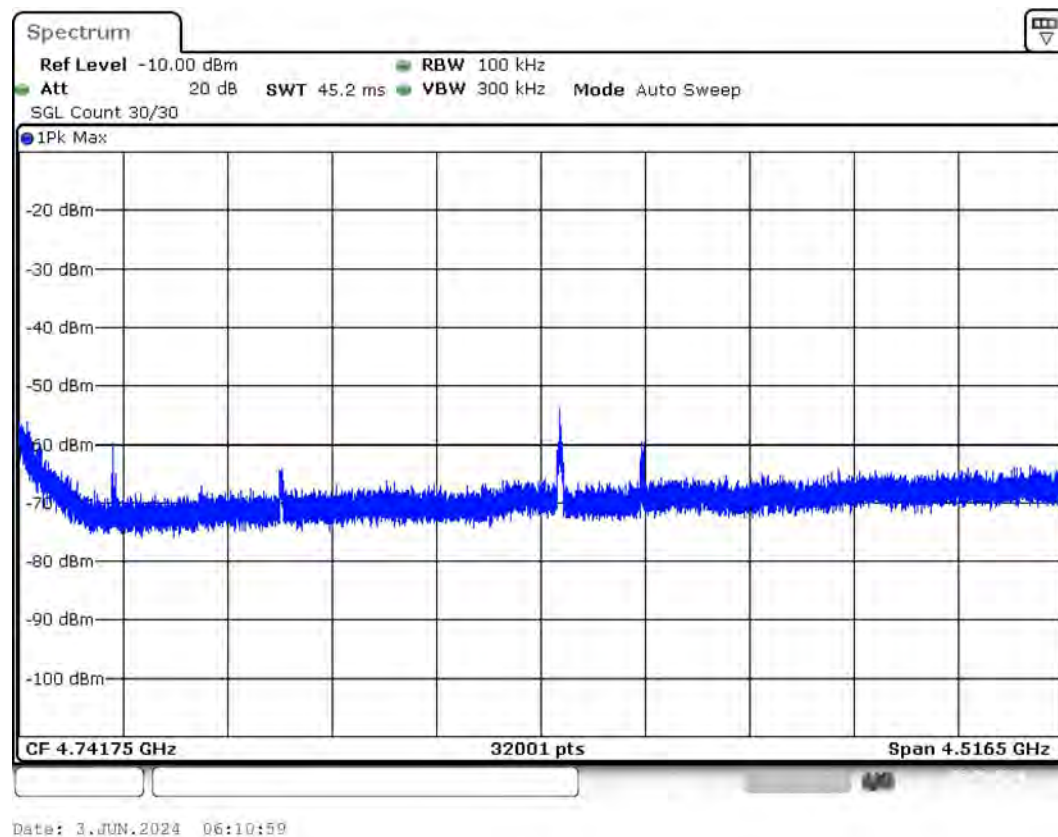
Spurious Connector 1\_0



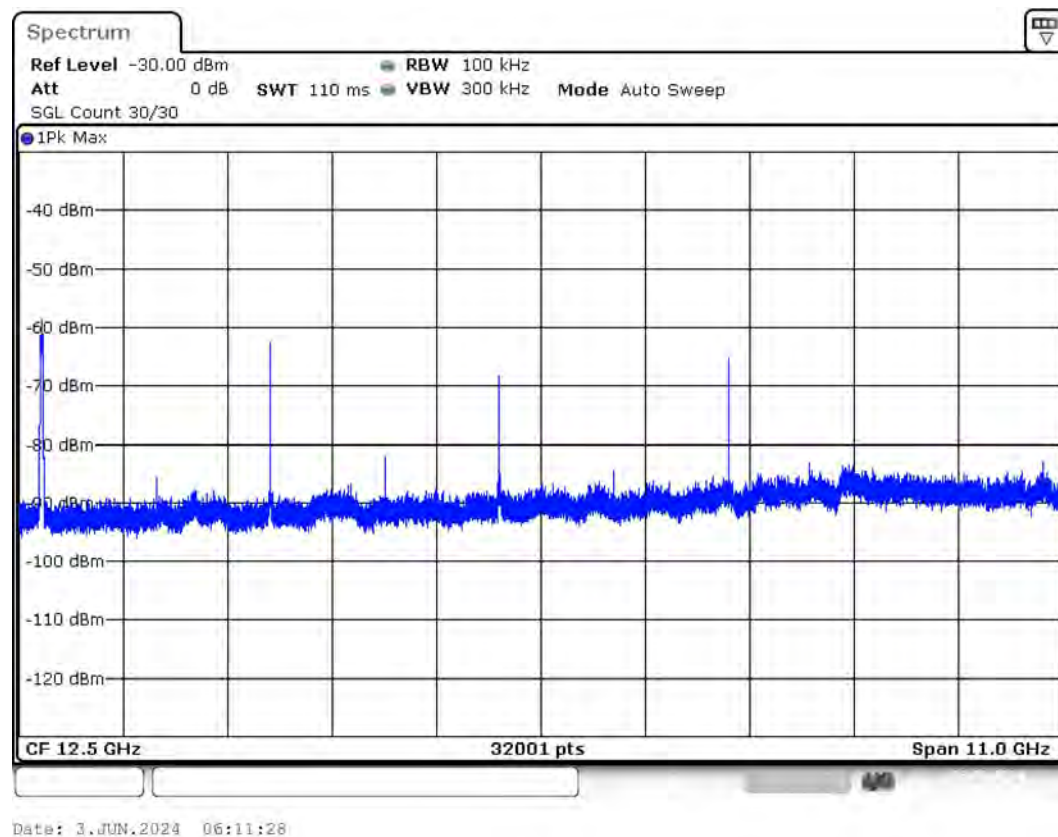
Spurious Connector 1\_1



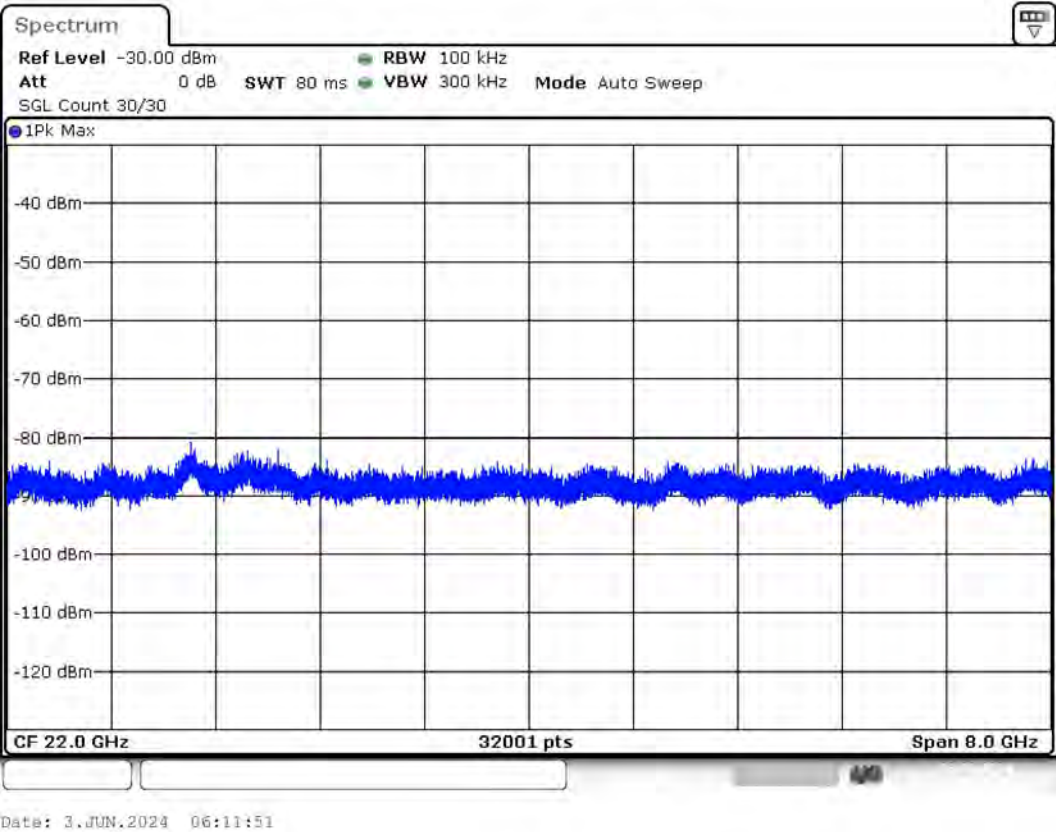
Spurious Connector 1\_2



Spurious Connector 1\_3



Spurious Connector 1\_4



Pre Measurement 1

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 101              | ~ 101          |
| SweepTime             | 9.990 ms         | AUTO           |
| Reference Level       | -20.000 dBm      | -30.000 dBm    |
| Attenuation           | 10.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 3                | 3              |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | Sweep            | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

Pre Measurement 2

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| RBW             | 100.000 kHz      | <= 100.000 kHz |
| VBW             | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints     | 28000            | ~ 28000        |
| SweepTime       | 28.000 ms        | AUTO           |
| Reference Level | -10.000 dBm      | -30.000 dBm    |
| Attenuation     | 20.000 dB        | AUTO           |
| Detector        | MaxPeak          | MaxPeak        |
| SweepCount      | 30               | 30             |

|                              |                   |                 |
|------------------------------|-------------------|-----------------|
| <b>Filter</b>                | <b>3 dB</b>       | <b>3 dB</b>     |
| <b>Trace Mode</b>            | <b>Max Hold</b>   | <b>Max Hold</b> |
| <b>Sweep type</b>            | <b>Sweep</b>      | <b>AUTO</b>     |
| <b>Preamp</b>                | <b>off</b>        | <b>off</b>      |
| <b>Stable mode</b>           | <b>Trace</b>      | <b>Trace</b>    |
| <b>Stable value</b>          | <b>1.00 dB</b>    | <b>1.00 dB</b>  |
| <b>Run</b>                   | <b>1 / max. 1</b> | <b>max. 1</b>   |
| <b>Stable</b>                | <b>0 / 3</b>      | <b>3</b>        |
| <b>Max Stable Difference</b> | <b>0.00 dB</b>    | <b>1.00 dB</b>  |

**Emission Bandwidth 20 dB (2437 MHz; 20.000 dBm; 20 MHz)**

Customized settings.

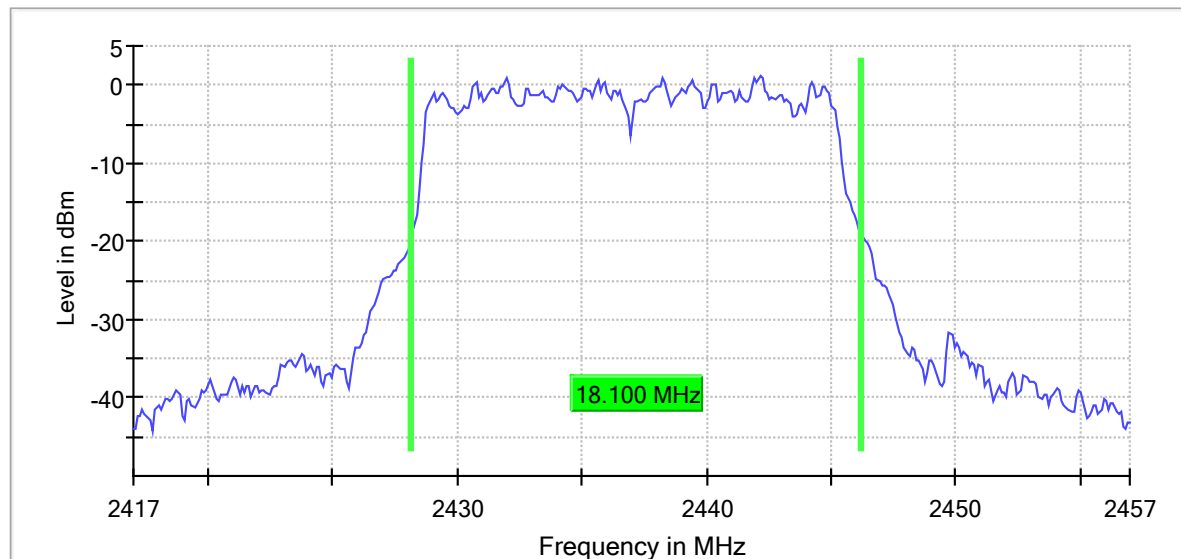
**20 dB Bandwidth**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2437.000000         | 18.100000       | ---             | ---             | 2428.150000          | 2446.250000           |

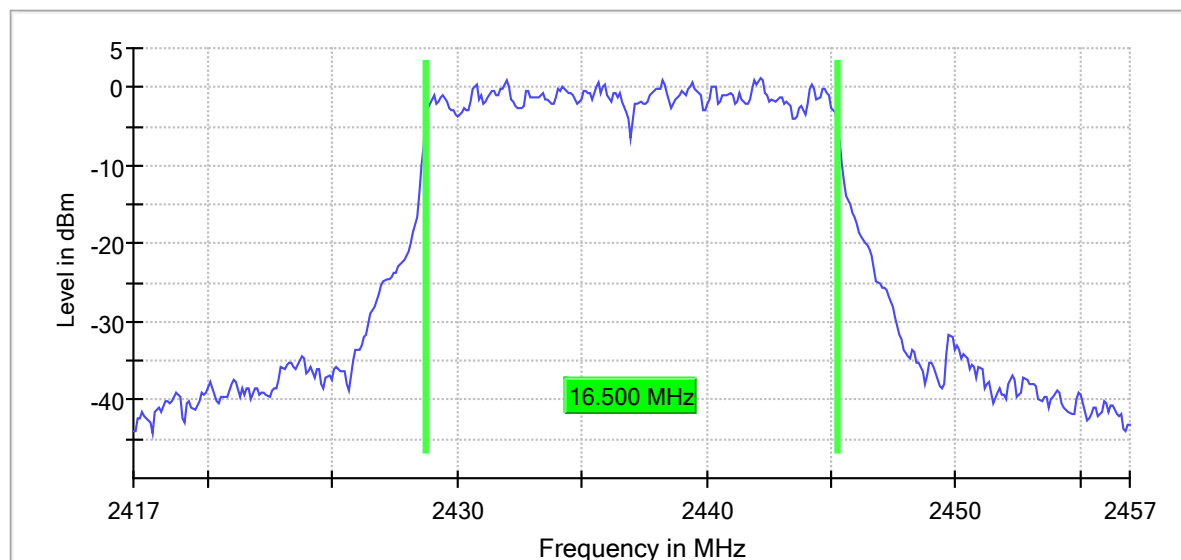
(continuation of the "20 dB Bandwidth" table from column 6 ...)

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2437.000000         | 1.1             | PASS   |

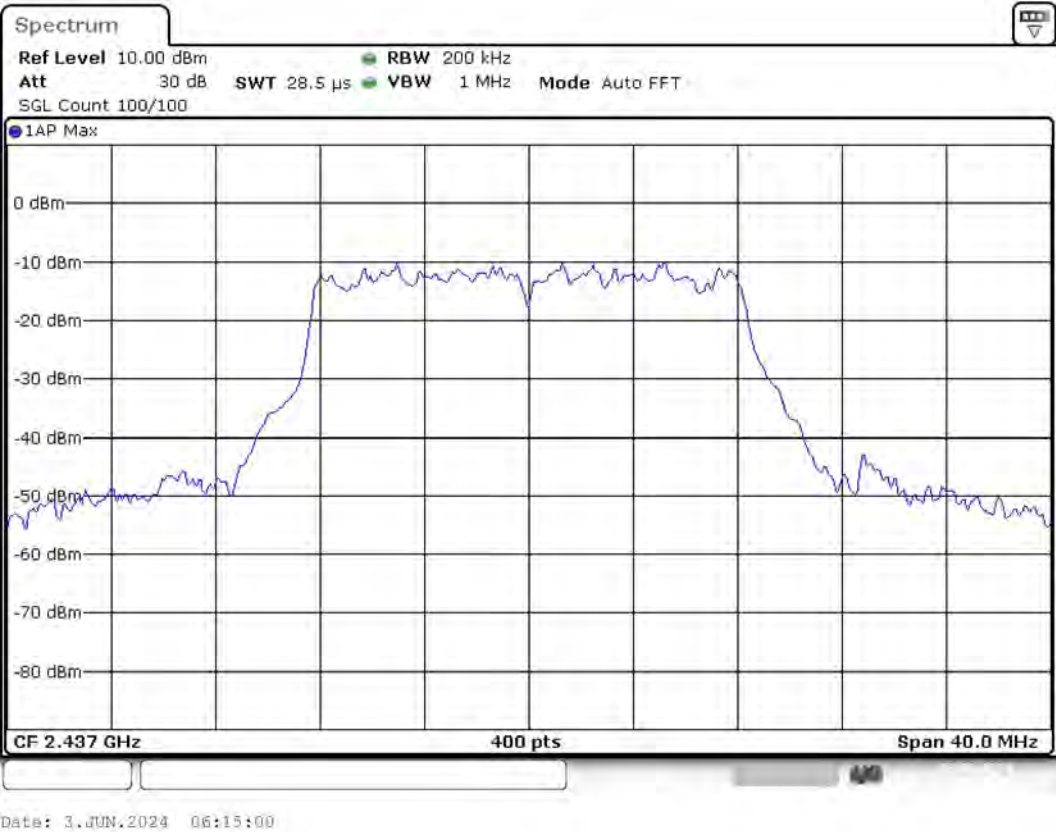
20 dB Bandwidth



99 % Bandwidth



Bandwidth



Measurement

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.41700 GHz      | 2.41700 GHz    |
| Stop Frequency        | 2.45700 GHz      | 2.45700 GHz    |
| Span                  | 40.000 MHz       | 40.000 MHz     |
| RBW                   | 200.000 kHz      | >= 200.000 kHz |
| VBW                   | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints           | 400              | ~ 400          |
| SweepTime             | 28.477 µs        | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | Peak             | Peak           |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

Minimum Emission Bandwidth 6 dB (2437 MHz; 20.000 dBm; 20 MHz)

Customized settings.

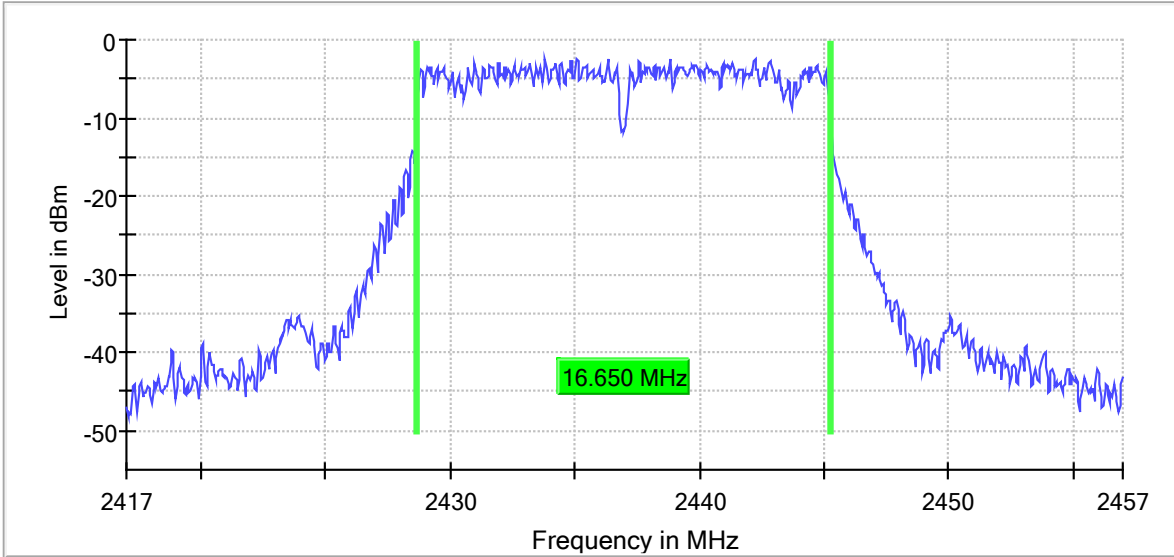
6 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2437.000000         | 16.650000       | 0.500000        | ---             | 2428.625000          | 2445.275000           |

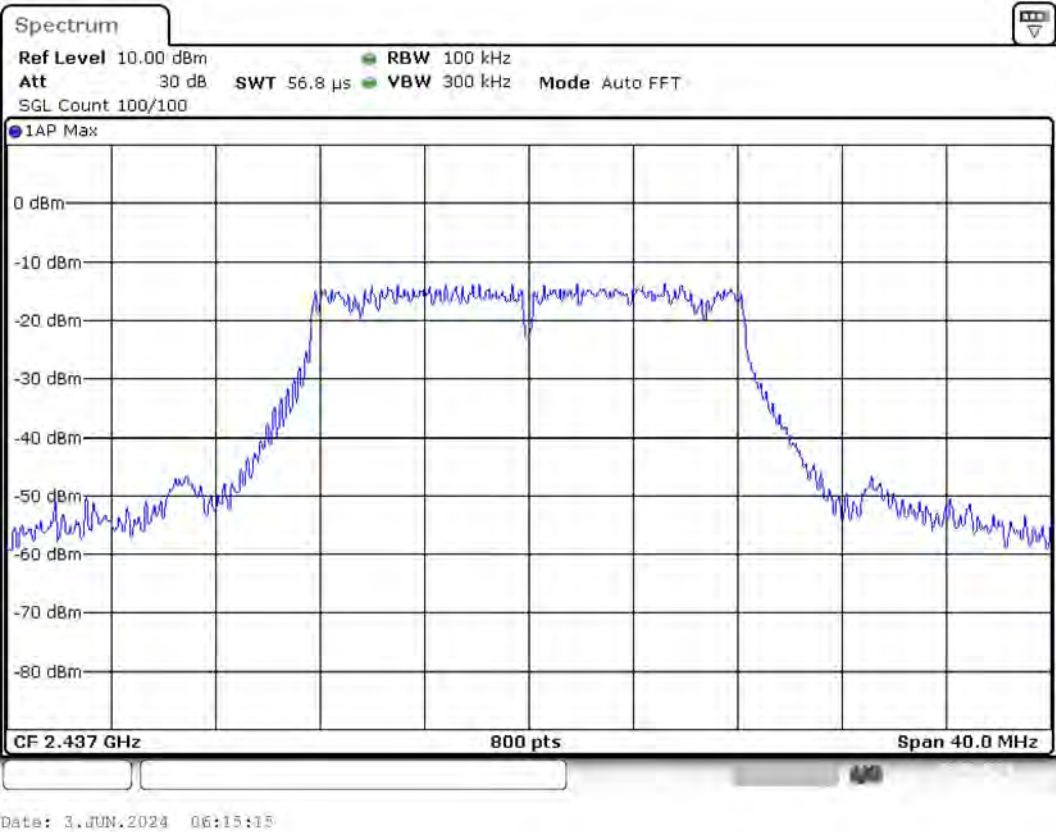
(continuation of the "6 dB Bandwidth" table from column 6 ...)

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2437.000000         | -2.5            | PASS   |

6 dB Bandwidth



Bandwidth



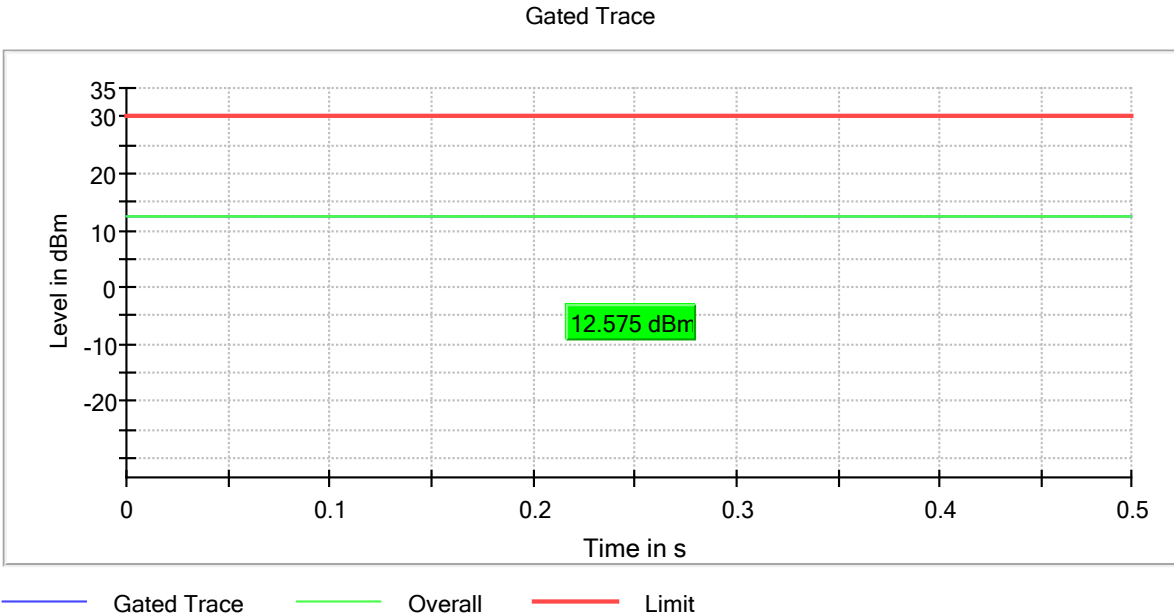
Measurement

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.41700 GHz      | 2.41700 GHz   |
| Stop Frequency        | 2.45700 GHz      | 2.45700 GHz   |
| Span                  | 40.000 MHz       | 40.000 MHz    |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 800              | ~ 800         |
| SweepTime             | 56.836 µs        | AUTO          |
| Reference Level       | 10.000 dBm       | 10.000 dBm    |
| Attenuation           | 30.000 dB        | AUTO          |
| Detector              | Peak             | Peak          |
| SweepCount            | 100              | 100           |
| Filter                | 3 dB             | 3 dB          |
| Trace Mode            | Max Hold         | Max Hold      |
| SweepType             | FFT              | AUTO          |
| Preamp                | off              | off           |
| Stablemode            | Trace            | Trace         |
| Stablevalue           | 0.50 dB          | 0.50 dB       |
| Run                   | 1 / max. 1       | max. 1        |
| Stable                | 0 / 1            | 1             |
| Max Stable Difference | 0.00 dB          | 0.50 dB       |

RF output power (2437 MHz; 20.000 dBm; 20 MHz)

Result

| DUT Frequency (MHz) | Gated RMS (dBm) | Limit Max (dBm) | Gated EIRP (dBm) | DutyCycle (%) | Result |
|---------------------|-----------------|-----------------|------------------|---------------|--------|
| 2437.000000         | 12.6            | 30.0            | 12.6             | 49.662        | PASS   |



OSP PowerMeter settings

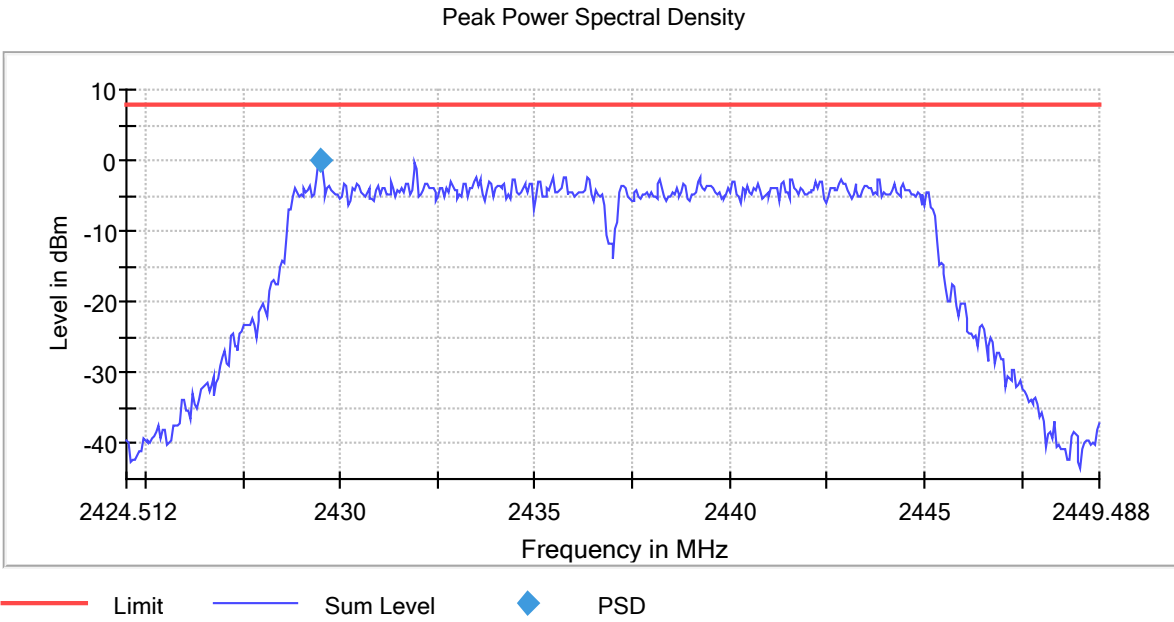
| Setting          | Instrument Value | Target Value  |
|------------------|------------------|---------------|
| Measurement Time | 1.000 s          | 1.000 s       |
| Points           | 1000000          | 1000000       |
| Time resolution  | 1.000 $\mu$ s    | 1.000 $\mu$ s |

Peak Power Spectral Density (2437 MHz; 20.000 dBm; 20 MHz)

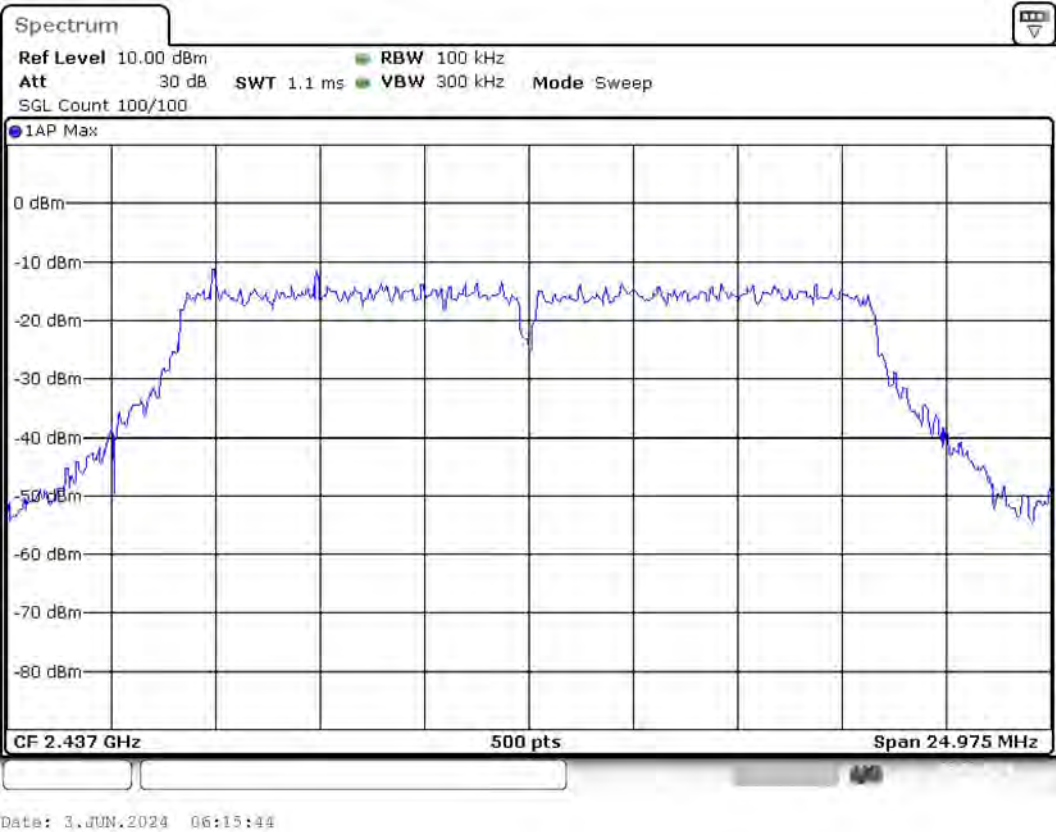
Customized settings.

Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 2437.000000         | 2429.482525     | 0.145     | 8.0             | PASS   |



PSD Connector 1



Measurement

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.42451 GHz      | 2.42451 GHz    |
| Stop Frequency        | 2.44949 GHz      | 2.44949 GHz    |
| Span                  | 24.975 MHz       | 24.975 MHz     |
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 500              | ~ 500          |
| SweepTime             | 1.050 ms         | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | Peak             | Peak           |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | Sweep            | Sweep          |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

**Tx Spurious Emission (2437 MHz; 20.000 dBm; 20 MHz)**

Customized settings.

**Result**

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 2437.000000         | PASS   |

**Final measurements**

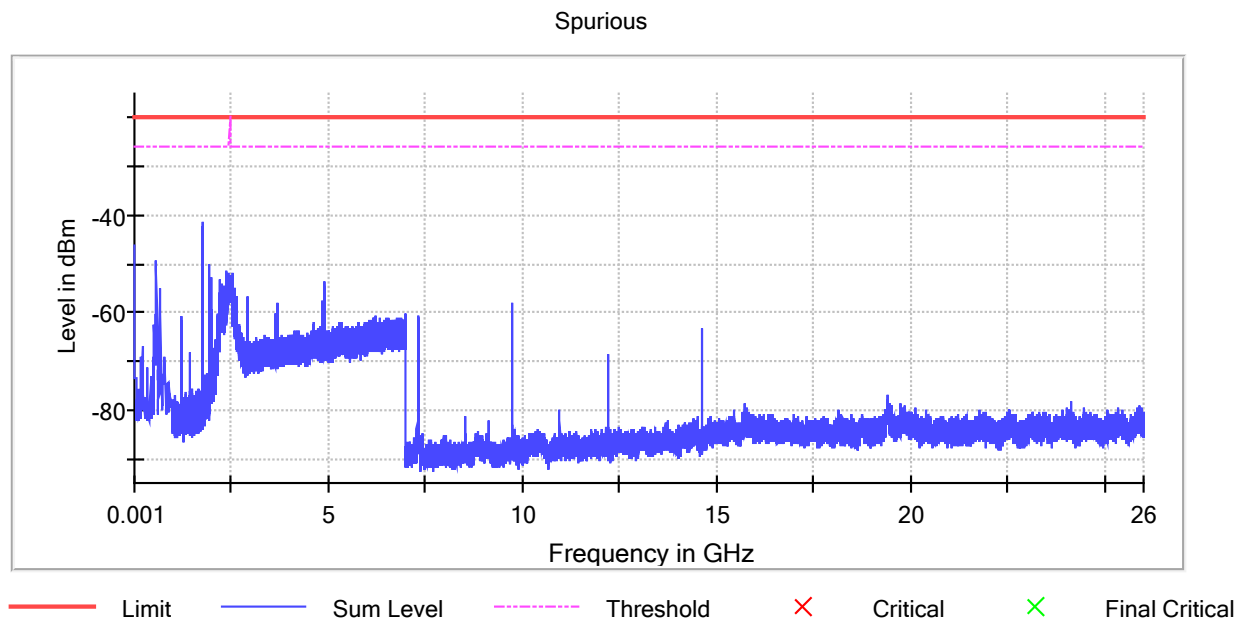
| Frequency (MHz) | Level Pre Measurement (dBm) | level (dBm) | Limit (dBm) | Margin (dB) | Result |
|-----------------|-----------------------------|-------------|-------------|-------------|--------|
| ---             | ---                         | ---         | ---         | ---         | ---    |

**Pre Measurements**

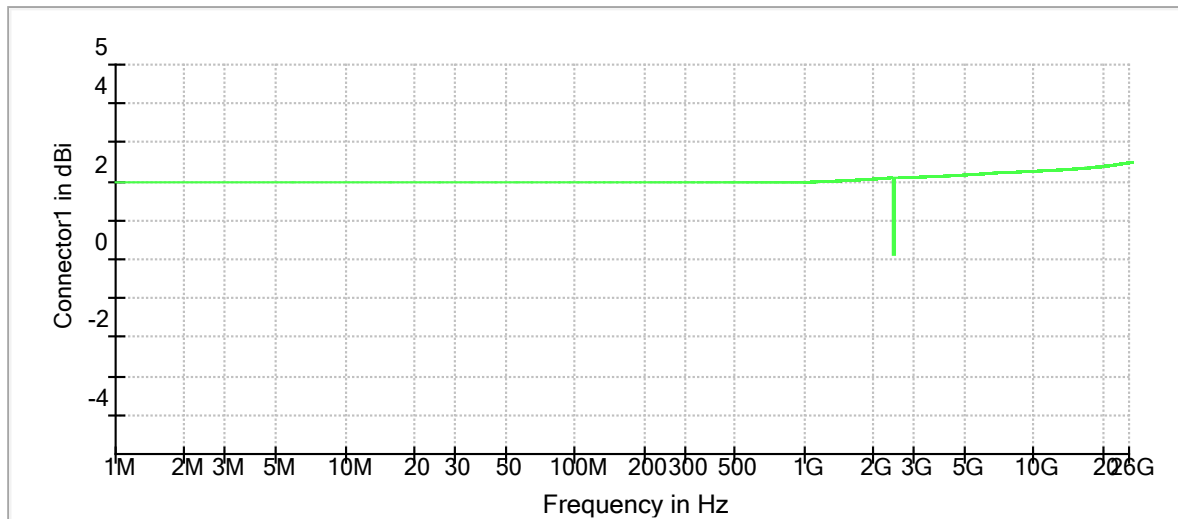
| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) |
|-----------------|-------------|-------------|-------------|
| 1771.575000     | -41.4       | 21.5        | -19.9       |
| 1771.525000     | -41.7       | 21.8        | -19.9       |
| 1772.625000     | -42.1       | 22.3        | -19.9       |
| 1772.575000     | -42.4       | 22.6        | -19.9       |
| 1773.025000     | -44.3       | 24.5        | -19.9       |
| 1771.625000     | -44.7       | 24.8        | -19.9       |
| 1773.075000     | -44.7       | 24.9        | -19.9       |
| 1772.675000     | -44.9       | 25.0        | -19.9       |
| 1772.875000     | -45.0       | 25.2        | -19.9       |
| 1772.025000     | -45.6       | 25.7        | -19.9       |
| 1771.875000     | -45.7       | 25.8        | -19.9       |
| 1771.475000     | -45.7       | 25.9        | -19.9       |
| 1771.825000     | -45.8       | 25.9        | -19.9       |
| 5.945545        | -46.2       | 26.4        | -19.9       |
| 1.000000        | -46.2       | 26.4        | -19.9       |

**Measurement Settings**

| Start Frequency (MHz) | Stop Frequency (MHz) | Pre Measurement | Final Measurement |
|-----------------------|----------------------|-----------------|-------------------|
| 1.000000              | 1000.000000          | 1               | 1                 |
| 1000.000000           | 2400.000000          | 2               | 2                 |
| 2483.500000           | 7000.000000          | 2               | 2                 |
| 7000.000000           | 18000.000000         | 2               | 2                 |
| 18000.000000          | 26000.000000         | 2               | 2                 |

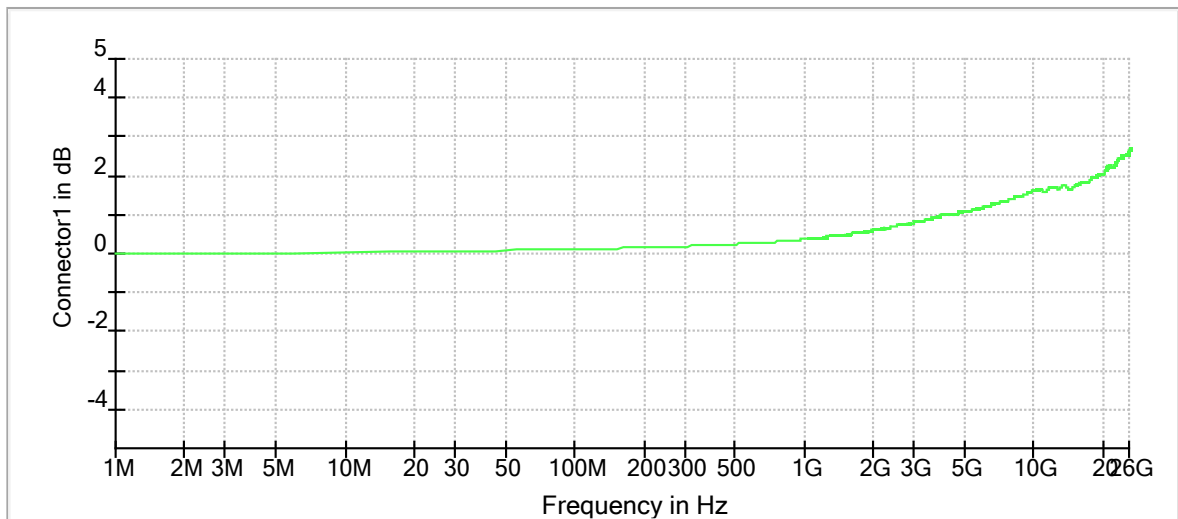


Gain



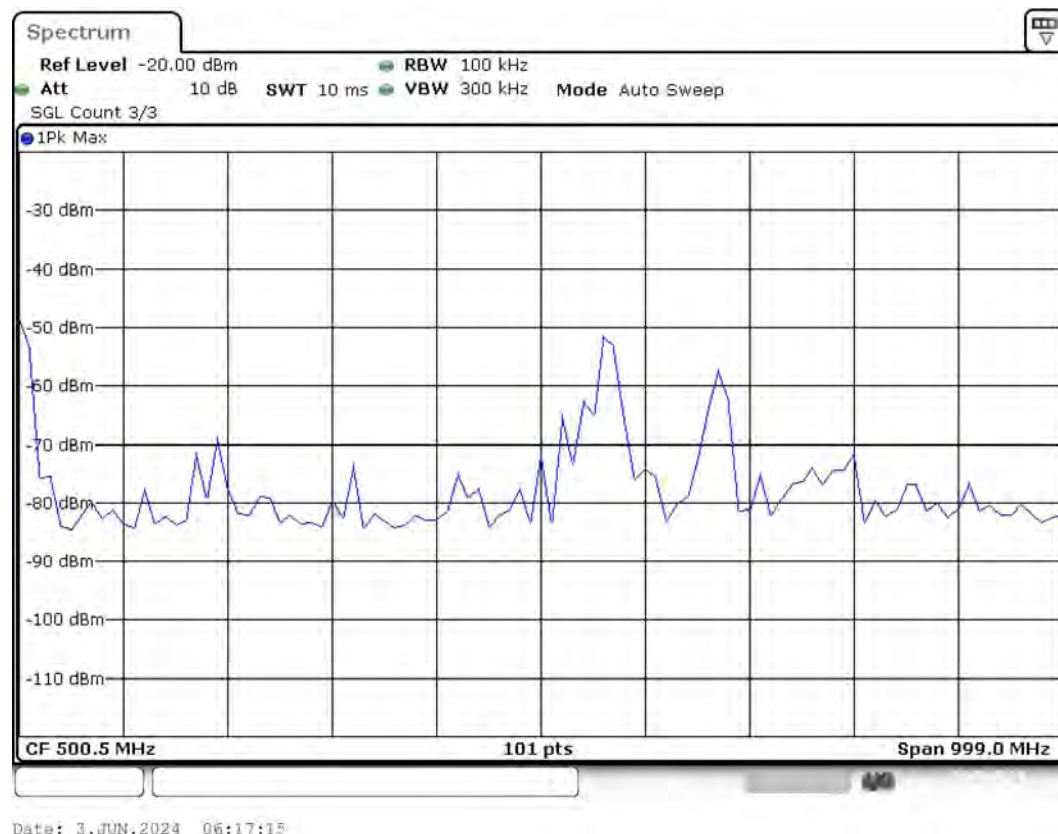
Connector1

Attenuation

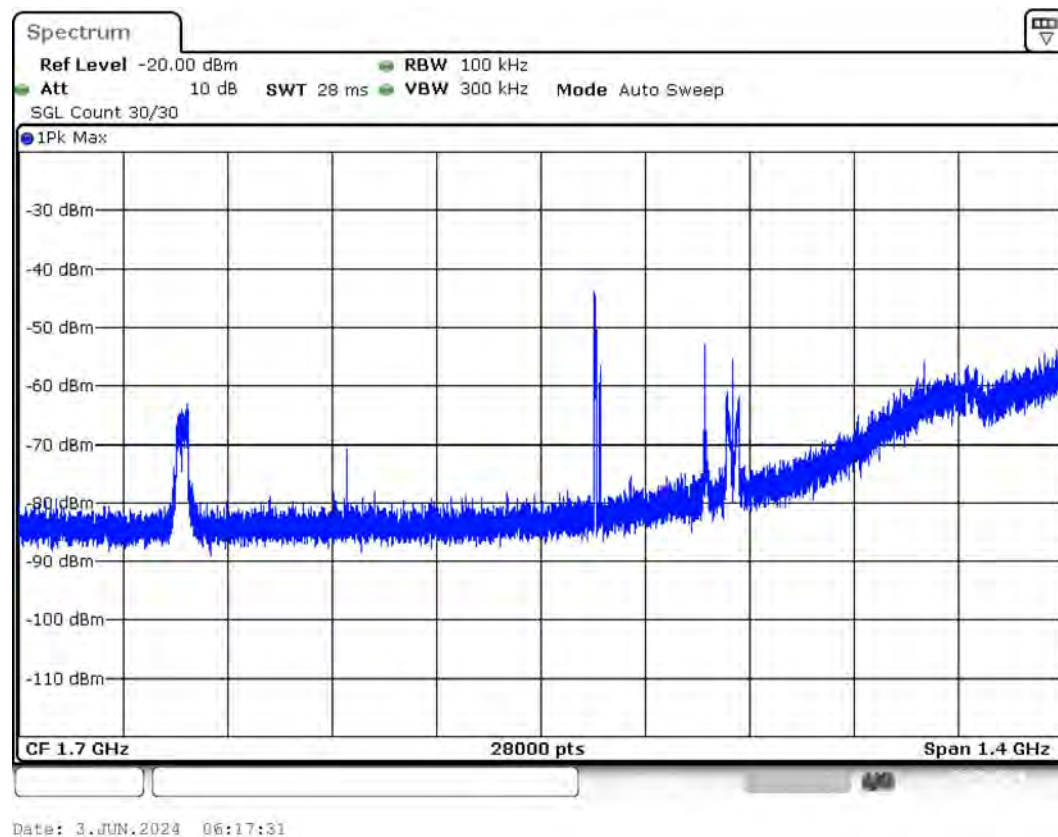


Connector1

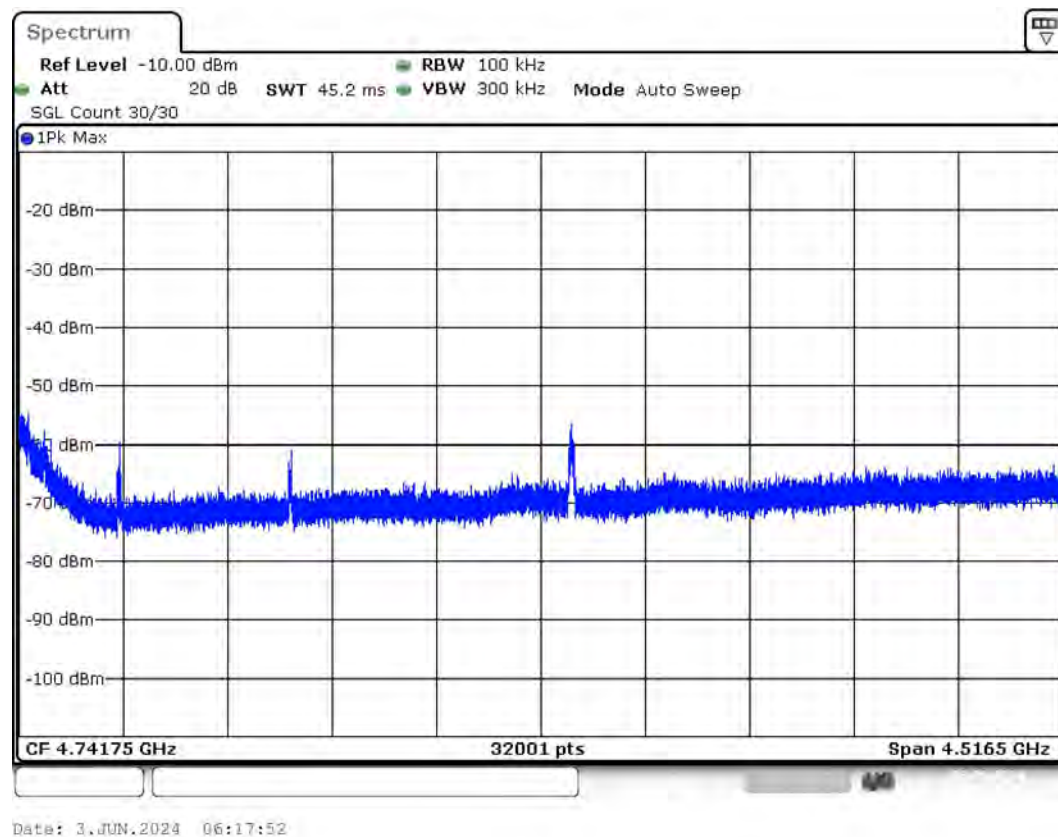
Spurious Connector 1\_0



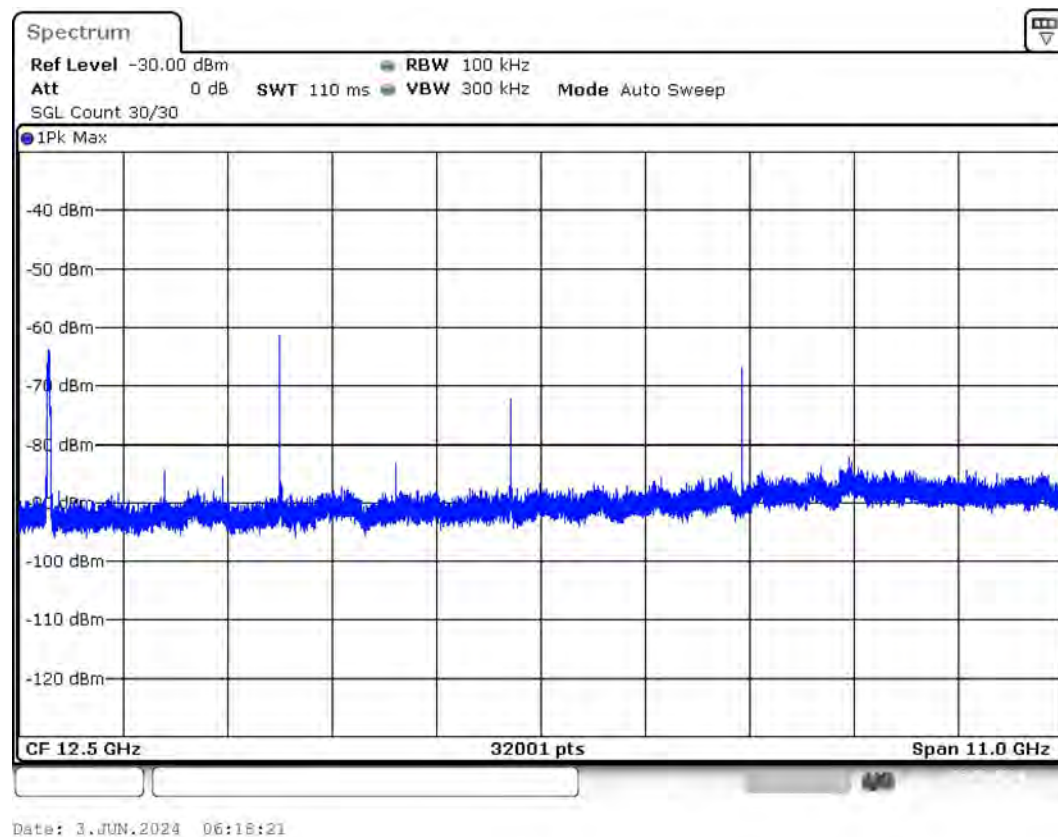
Spurious Connector 1\_1



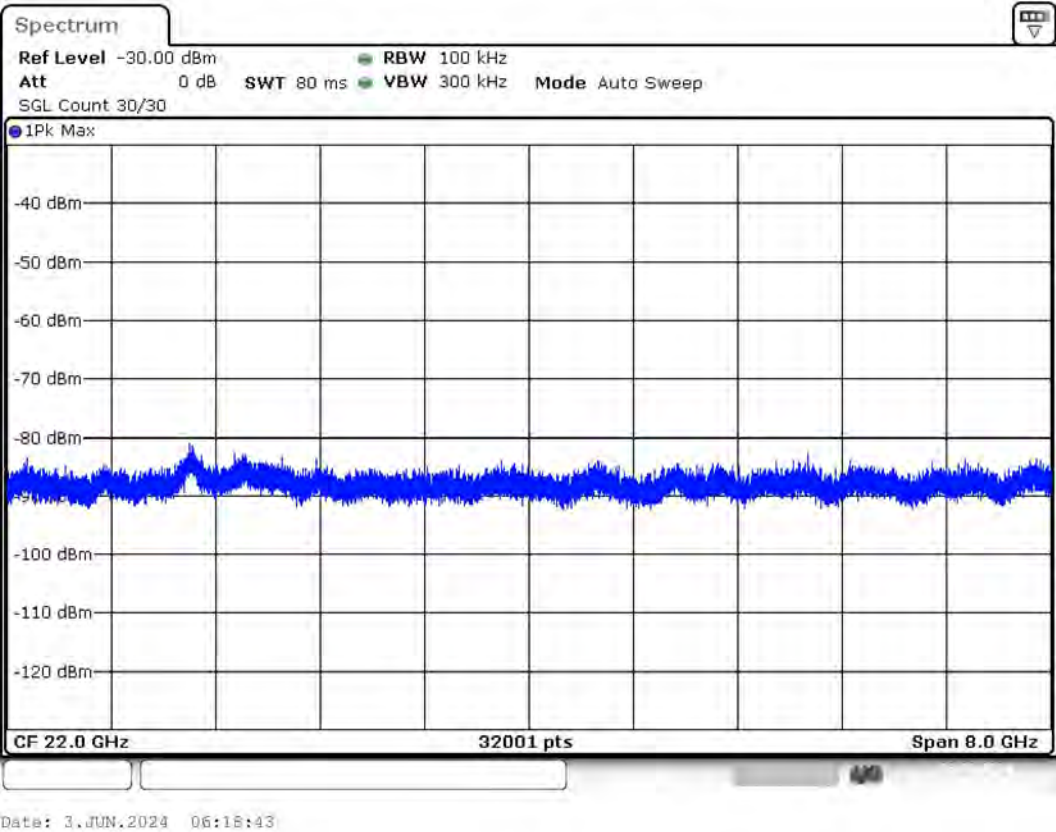
Spurious Connector 1\_2



Spurious Connector 1\_3



Spurious Connector 1\_4



Pre Measurement 1

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 101              | ~ 101          |
| SweepTime             | 9.990 ms         | AUTO           |
| Reference Level       | -20.000 dBm      | -30.000 dBm    |
| Attenuation           | 10.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 3                | 3              |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | Sweep            | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 1.00 dB          | 1.00 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 1.00 dB        |

Pre Measurement 2

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| RBW             | 100.000 kHz      | <= 100.000 kHz |
| VBW             | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints     | 28000            | ~ 28000        |
| SweepTime       | 28.000 ms        | AUTO           |
| Reference Level | -20.000 dBm      | -30.000 dBm    |
| Attenuation     | 10.000 dB        | AUTO           |
| Detector        | MaxPeak          | MaxPeak        |
| SweepCount      | 30               | 30             |

|                              |                   |                 |
|------------------------------|-------------------|-----------------|
| <b>Filter</b>                | <b>3 dB</b>       | <b>3 dB</b>     |
| <b>Trace Mode</b>            | <b>Max Hold</b>   | <b>Max Hold</b> |
| <b>Sweep type</b>            | <b>Sweep</b>      | <b>AUTO</b>     |
| <b>Preamp</b>                | <b>off</b>        | <b>off</b>      |
| <b>Stable mode</b>           | <b>Trace</b>      | <b>Trace</b>    |
| <b>Stable value</b>          | <b>1.00 dB</b>    | <b>1.00 dB</b>  |
| <b>Run</b>                   | <b>1 / max. 1</b> | <b>max. 1</b>   |
| <b>Stable</b>                | <b>0 / 3</b>      | <b>3</b>        |
| <b>Max Stable Difference</b> | <b>0.00 dB</b>    | <b>1.00 dB</b>  |

**Emission Bandwidth 20 dB (2462 MHz; 20.000 dBm; 20 MHz)**

Customized settings.

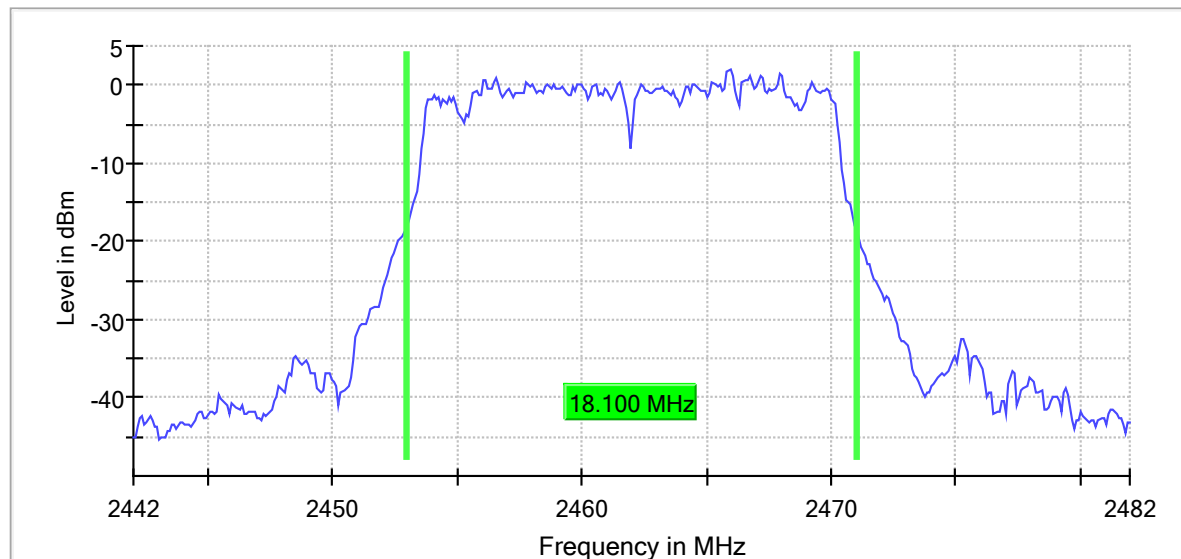
**20 dB Bandwidth**

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2462.000000         | 18.100000       | ---             | ---             | 2452.950000          | 2471.050000           |

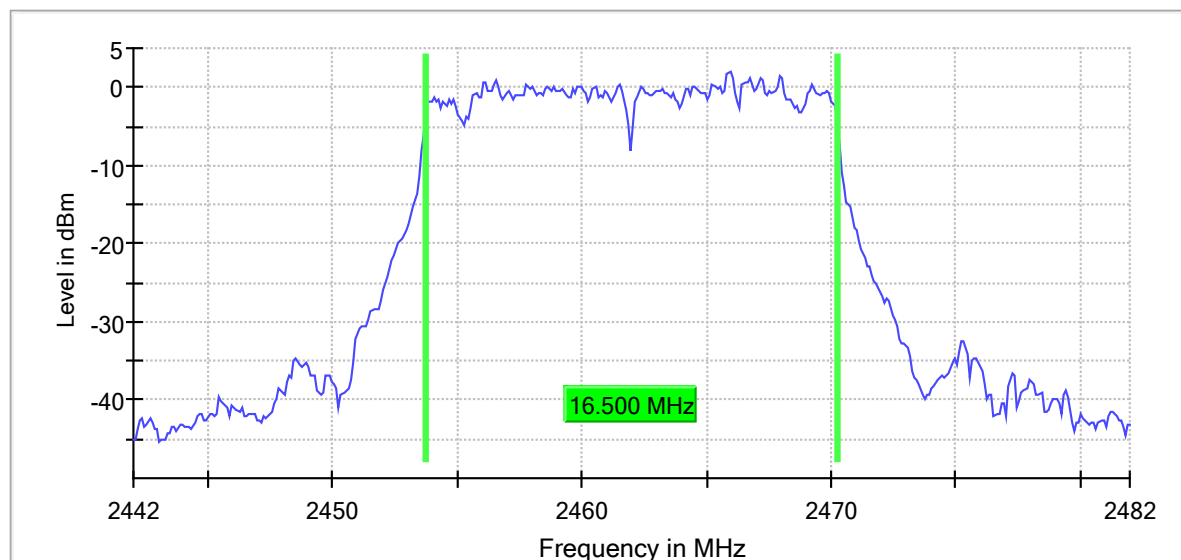
(continuation of the "20 dB Bandwidth" table from column 6 ...)

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2462.000000         | 1.9             | PASS   |

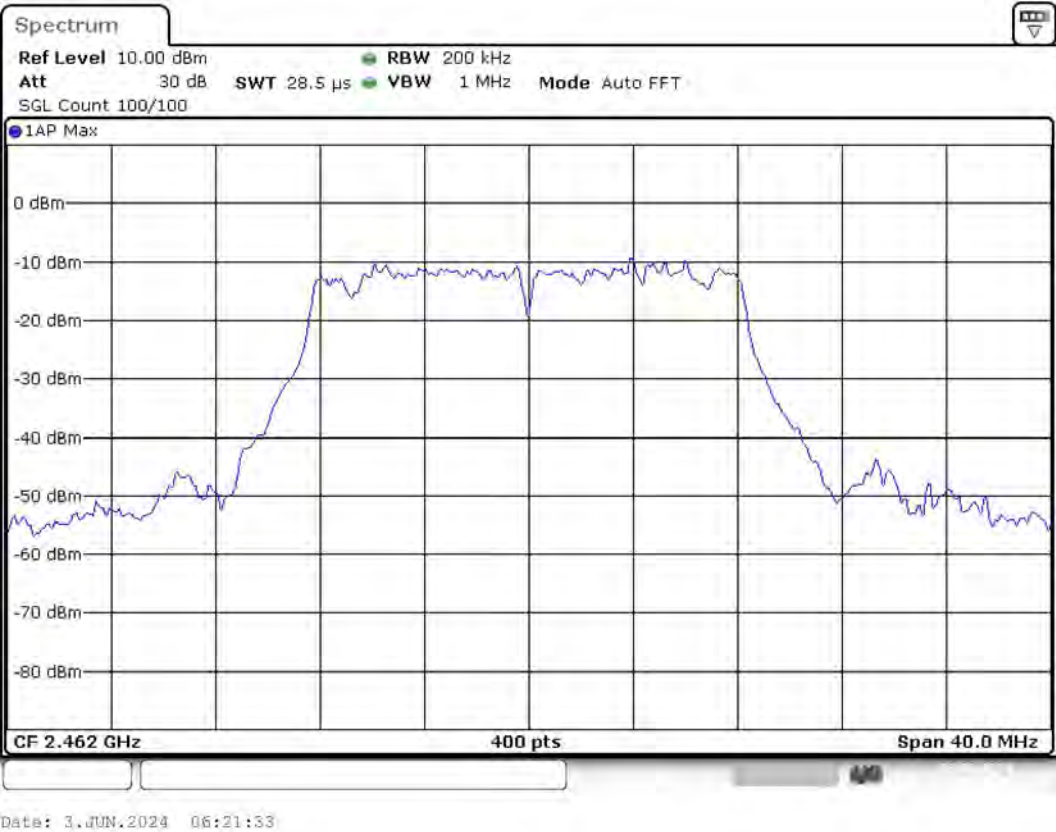
20 dB Bandwidth



99 % Bandwidth



Bandwidth



Measurement

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.44200 GHz      | 2.44200 GHz    |
| Stop Frequency        | 2.48200 GHz      | 2.48200 GHz    |
| Span                  | 40.000 MHz       | 40.000 MHz     |
| RBW                   | 200.000 kHz      | >= 200.000 kHz |
| VBW                   | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints           | 400              | ~ 400          |
| SweepTime             | 28.477 µs        | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | Peak             | Peak           |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

Minimum Emission Bandwidth 6 dB (2462 MHz; 20.000 dBm; 20 MHz)

Customized settings.

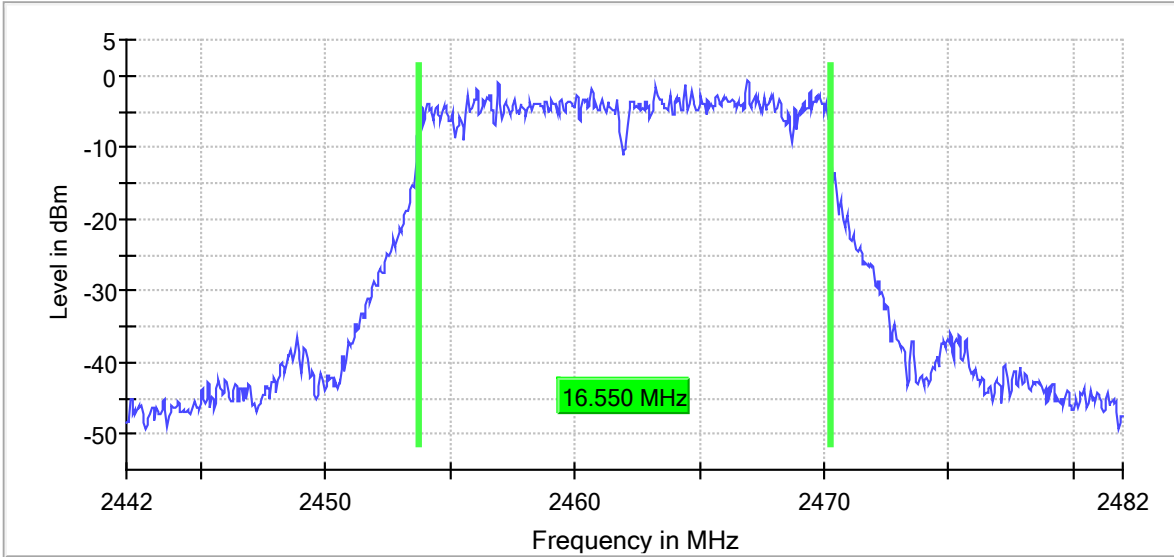
6 dB Bandwidth

| DUT Frequency (MHz) | Bandwidth (MHz) | Limit Min (MHz) | Limit Max (MHz) | Band Edge Left (MHz) | Band Edge Right (MHz) |
|---------------------|-----------------|-----------------|-----------------|----------------------|-----------------------|
| 2462.000000         | 16.550000       | 0.500000        | ---             | 2453.725000          | 2470.275000           |

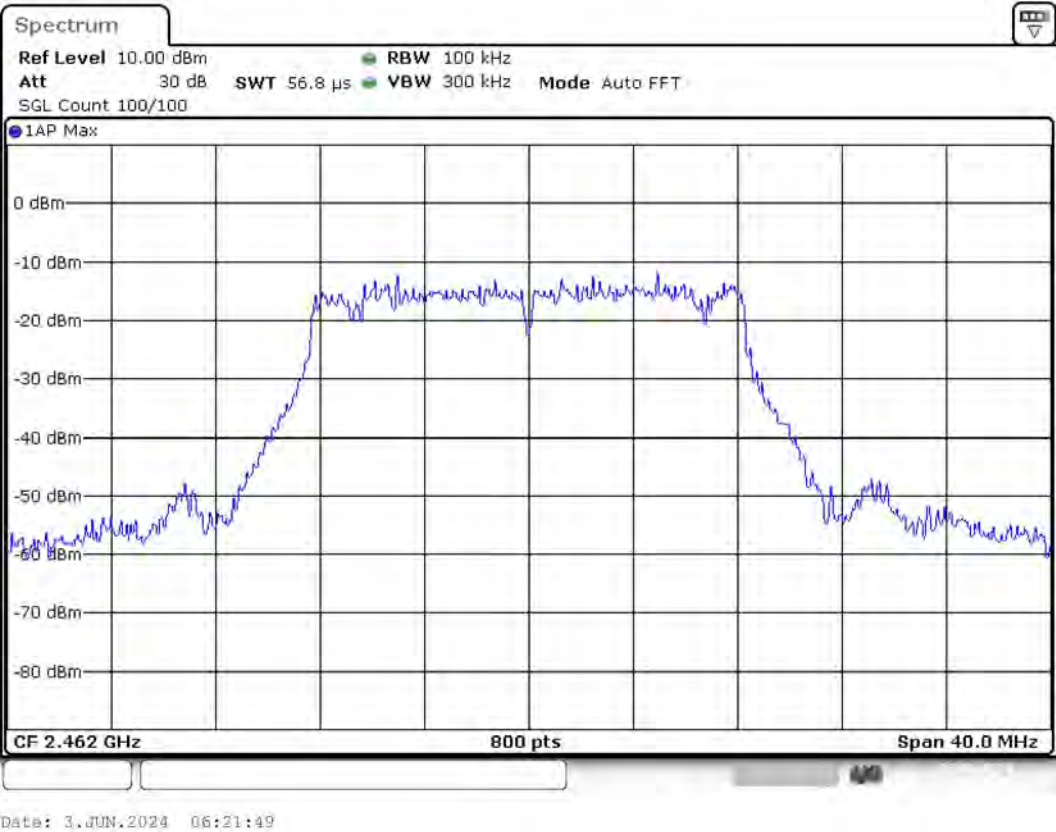
(continuation of the "6 dB Bandwidth" table from column 6 ...)

| DUT Frequency (MHz) | Max Level (dBm) | Result |
|---------------------|-----------------|--------|
| 2462.000000         | -0.6            | PASS   |

6 dB Bandwidth



Bandwidth



Measurement

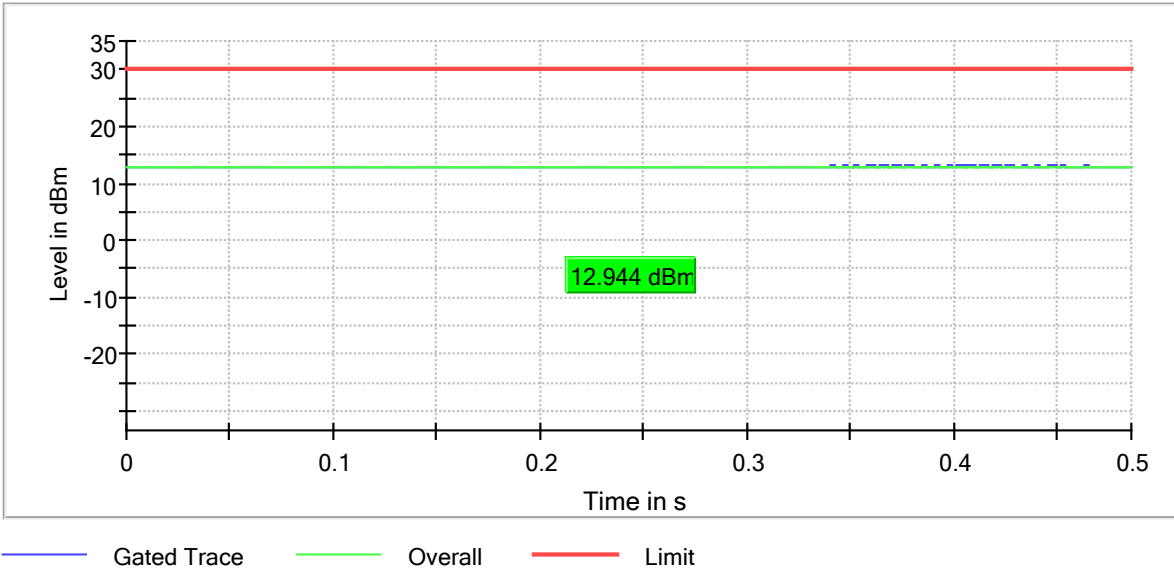
| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 2.44200 GHz      | 2.44200 GHz   |
| Stop Frequency        | 2.48200 GHz      | 2.48200 GHz   |
| Span                  | 40.000 MHz       | 40.000 MHz    |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 800              | ~ 800         |
| SweepTime             | 56.836 µs        | AUTO          |
| Reference Level       | 10.000 dBm       | 10.000 dBm    |
| Attenuation           | 30.000 dB        | AUTO          |
| Detector              | Peak             | Peak          |
| SweepCount            | 100              | 100           |
| Filter                | 3 dB             | 3 dB          |
| Trace Mode            | Max Hold         | Max Hold      |
| SweepType             | FFT              | AUTO          |
| Preamp                | off              | off           |
| Stablemode            | Trace            | Trace         |
| Stablevalue           | 0.50 dB          | 0.50 dB       |
| Run                   | 1 / max. 1       | max. 1        |
| Stable                | 0 / 1            | 1             |
| Max Stable Difference | 0.00 dB          | 0.50 dB       |

RF output power (2462 MHz; 20.000 dBm; 20 MHz)

Result

| DUT Frequency (MHz) | Gated RMS (dBm) | Limit Max (dBm) | Gated EIRP (dBm) | DutyCycle (%) | Result |
|---------------------|-----------------|-----------------|------------------|---------------|--------|
| 2462.000000         | 12.9            | 30.0            | 12.9             | 48.979        | PASS   |

Gated Trace



OSP PowerMeter settings

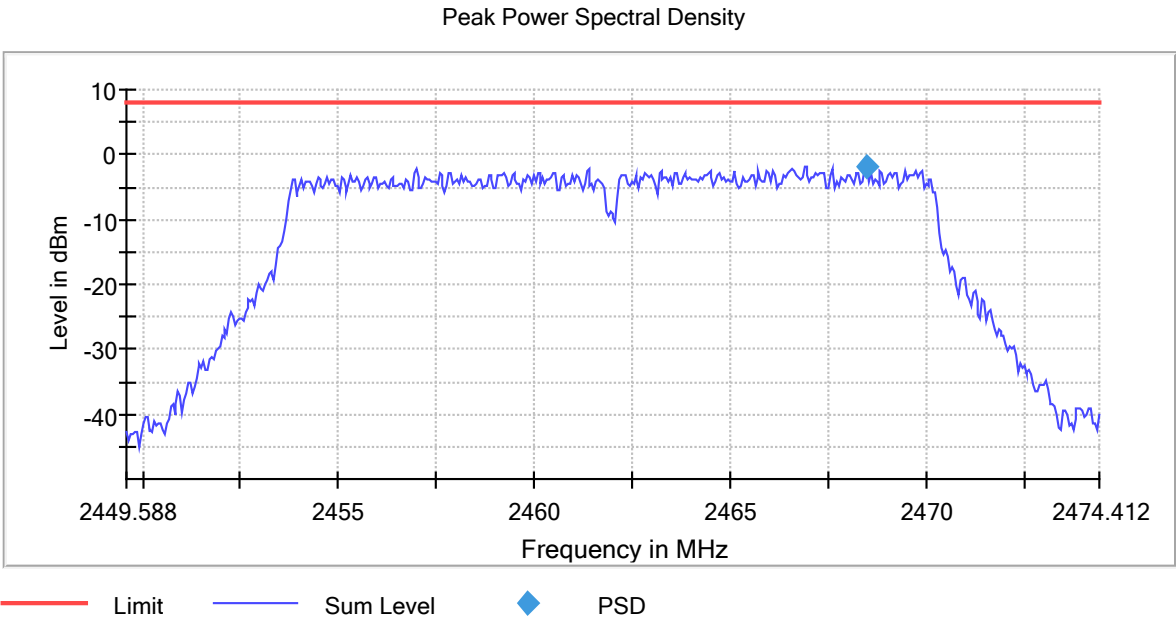
| Setting          | Instrument Value | Target Value |
|------------------|------------------|--------------|
| Measurement Time | 1.000 s          | 1.000 s      |
| Points           | 1000000          | 1000000      |
| Time resolution  | 1.000 µs         | 1.000 µs     |

Peak Power Spectral Density (2462 MHz; 20.000 dBm; 20 MHz)

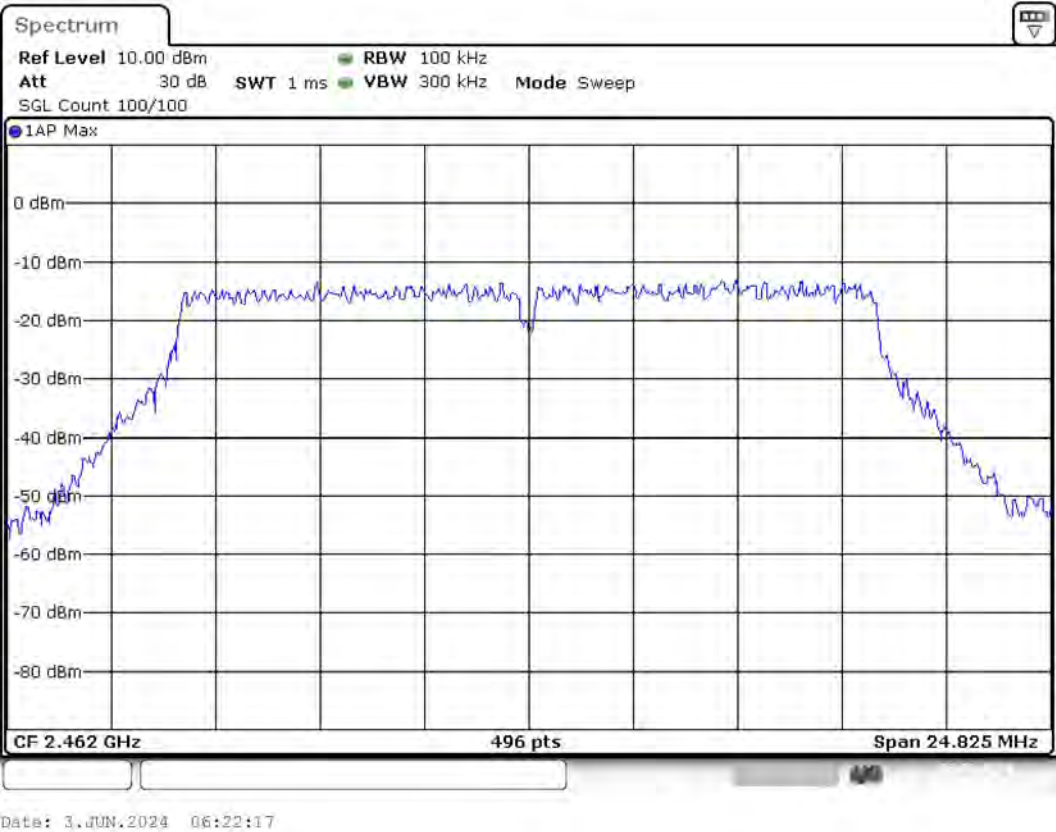
Customized settings.

Result

| DUT Frequency (MHz) | Frequency (MHz) | PSD (dBm) | Limit Max (dBm) | Result |
|---------------------|-----------------|-----------|-----------------|--------|
| 2462.000000         | 2468.481527     | -1.879    | 8.0             | PASS   |



PSD Connector 1



Measurement

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.44959 GHz      | 2.44959 GHz    |
| Stop Frequency        | 2.47441 GHz      | 2.47441 GHz    |
| Span                  | 24.825 MHz       | 24.825 MHz     |
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 496              | ~ 496          |
| SweepTime             | 1.040 ms         | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | Peak             | Peak           |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | Sweep            | Sweep          |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

Band Edge high (2462 MHz; 20.000 dBm; 20 MHz)

Result

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 2462.000000         | PASS   |

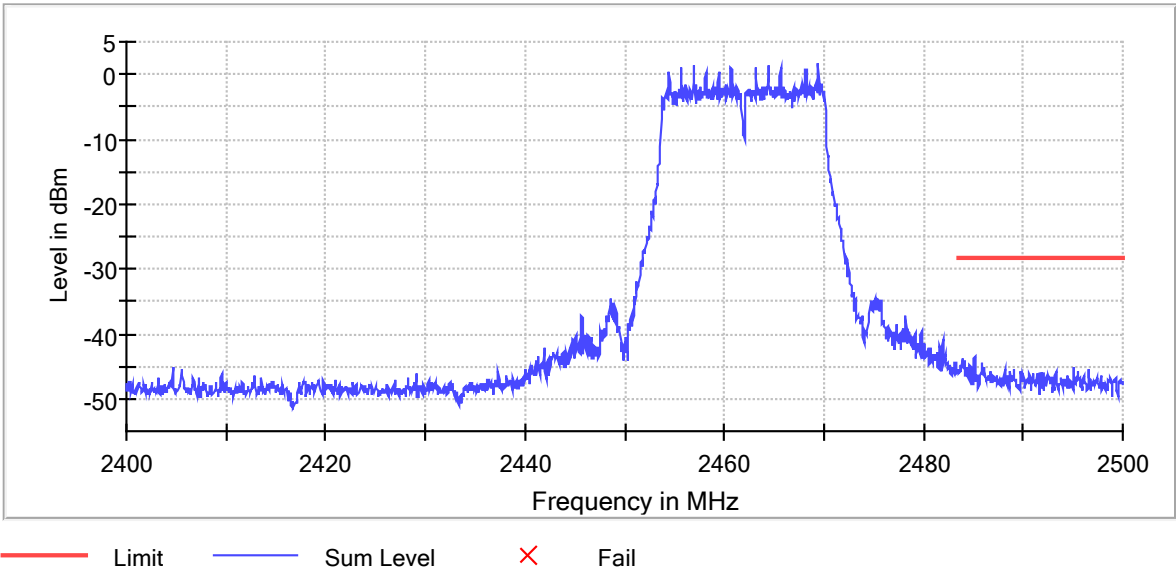
Inband Peak

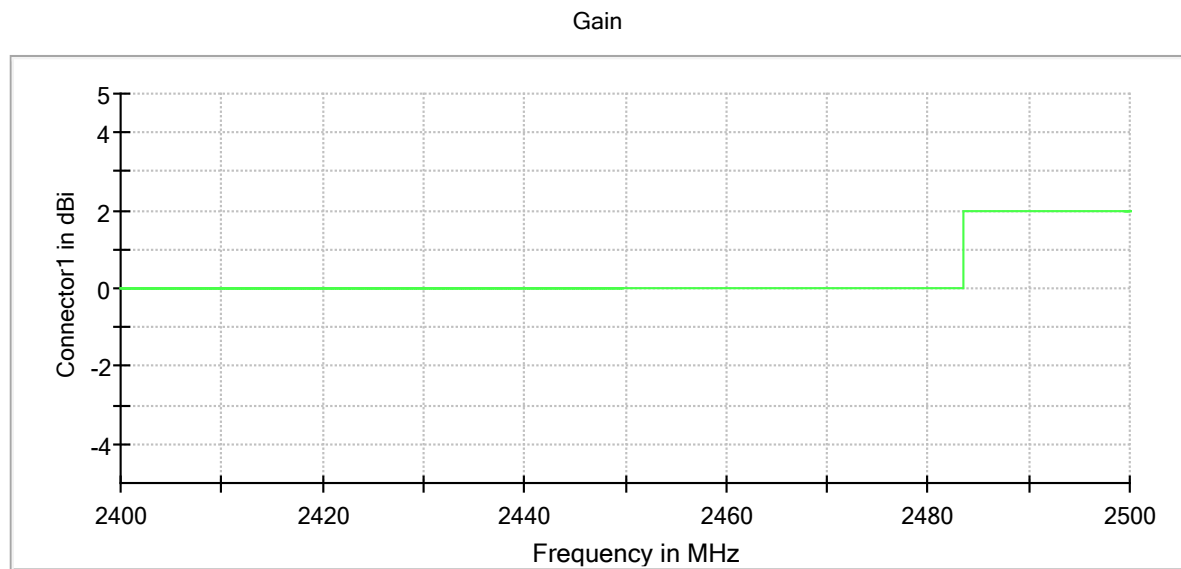
| Frequency (MHz) | Level (dBm) |
|-----------------|-------------|
| 2469.425000     | 1.6         |

Measurements

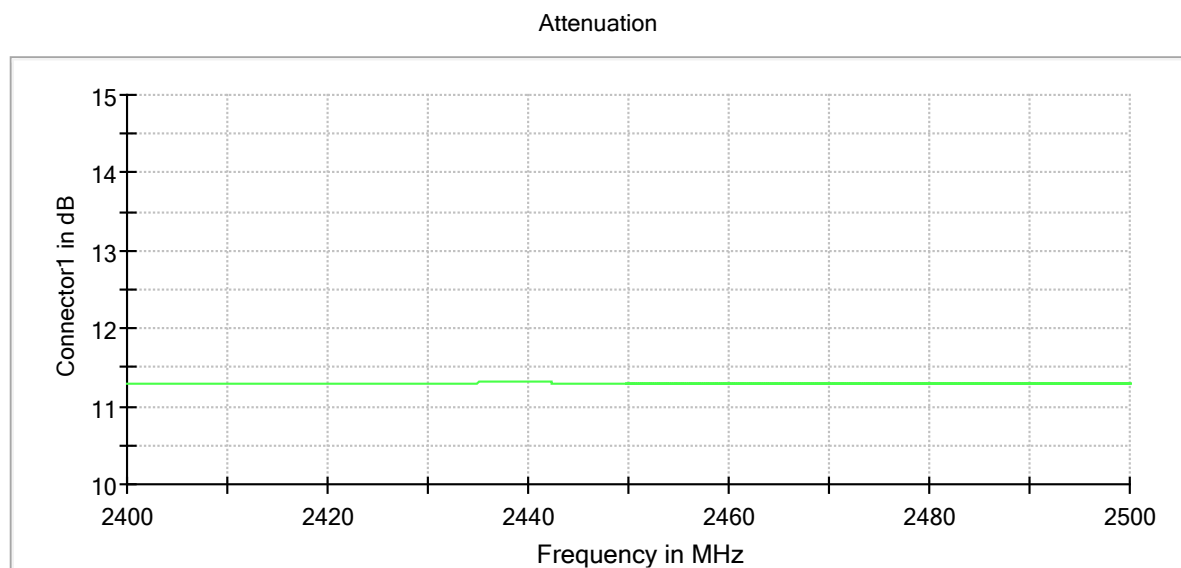
| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 2485.125000     | -43.4       | 15.0        | -28.4       | PASS   |
| 2485.075000     | -43.7       | 15.2        | -28.4       | PASS   |
| 2483.875000     | -43.9       | 15.5        | -28.4       | PASS   |
| 2484.125000     | -44.1       | 15.7        | -28.4       | PASS   |
| 2484.175000     | -44.3       | 15.8        | -28.4       | PASS   |
| 2483.925000     | -44.3       | 15.8        | -28.4       | PASS   |
| 2485.825000     | -44.3       | 15.9        | -28.4       | PASS   |
| 2485.175000     | -44.3       | 15.9        | -28.4       | PASS   |
| 2484.675000     | -44.6       | 16.2        | -28.4       | PASS   |
| 2485.875000     | -44.7       | 16.3        | -28.4       | PASS   |
| 2483.975000     | -44.8       | 16.3        | -28.4       | PASS   |
| 2483.775000     | -44.9       | 16.5        | -28.4       | PASS   |
| 2486.125000     | -45.1       | 16.7        | -28.4       | PASS   |
| 2484.375000     | -45.2       | 16.7        | -28.4       | PASS   |
| 2483.725000     | -45.2       | 16.7        | -28.4       | PASS   |

Band Edge



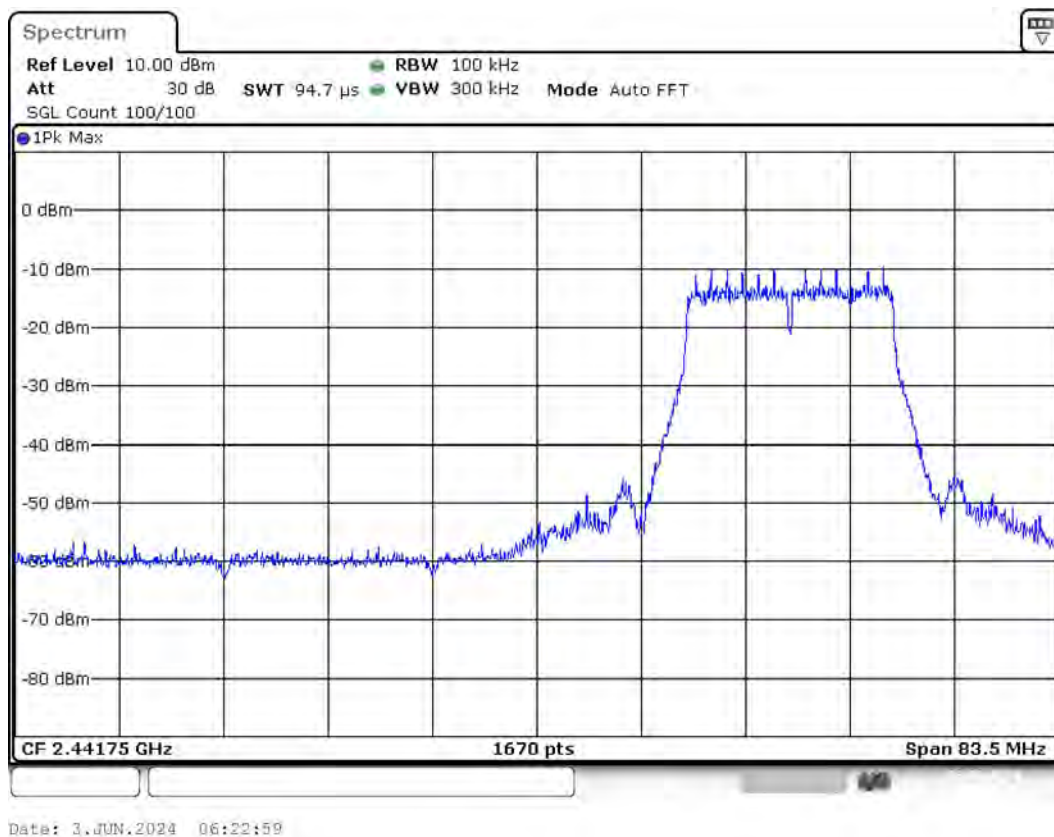


Connector1

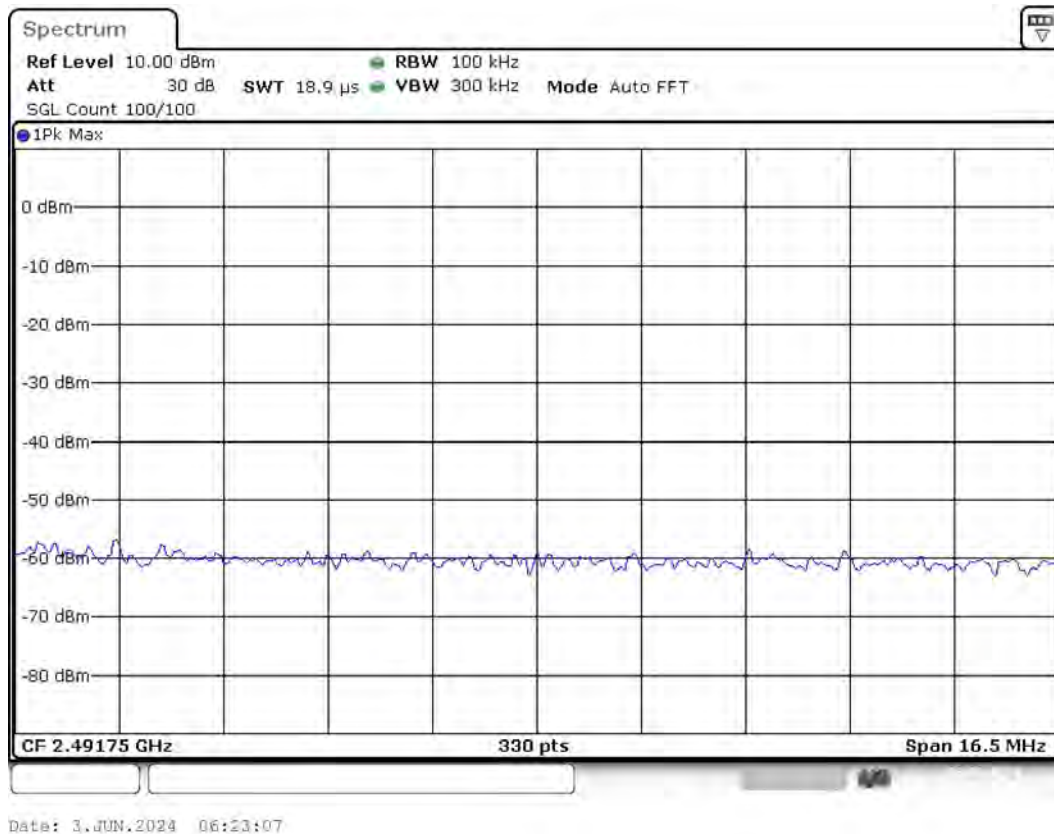


Connector1

Band Edge Connector 1\_0



Band Edge Connector 1\_1



## Measurement 1

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 2.40000 GHz      | 2.40000 GHz    |
| Stop Frequency        | 2.48350 GHz      | 2.48350 GHz    |
| Span                  | 83.500 MHz       | 83.500 MHz     |
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 1670             | ~ 1670         |
| Sweptime              | 94.727 μs        | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 100              | 100            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamplifier          | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 26 / max. 150    | max. 150       |
| Stable                | 3 / 3            | 3              |
| Max Stable Difference | 0.36 dB          | 0.50 dB        |

## Measurement 2

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| Start Frequency | 2.48350 GHz      | 2.48350 GHz    |
| Stop Frequency  | 2.50000 GHz      | 2.50000 GHz    |
| Span            | 16.500 MHz       | 16.500 MHz     |
| RBW             | 100.000 kHz      | <= 100.000 kHz |
| VBW             | 300.000 kHz      | >= 300.000 kHz |

|                       |                |            |
|-----------------------|----------------|------------|
| SweepPoints           | 330            | ~ 330      |
| SweepTime             | 18.945 $\mu$ s | AUTO       |
| Reference Level       | 10.000 dBm     | 10.000 dBm |
| Attenuation           | 30.000 dB      | AUTO       |
| Detector              | MaxPeak        | MaxPeak    |
| SweepCount            | 100            | 100        |
| Filter                | 3 dB           | 3 dB       |
| Trace Mode            | Max Hold       | Max Hold   |
| SweepType             | FFT            | AUTO       |
| Preamp                | off            | off        |
| Stablemode            | Trace          | Trace      |
| Stablevalue           | 0.50 dB        | 0.50 dB    |
| Run                   | 4 / max. 150   | max. 150   |
| Stable                | 3 / 3          | 3          |
| Max Stable Difference | 0.00 dB        | 0.50 dB    |

**Tx Spurious Emission (2462 MHz; 20.000 dBm; 20 MHz)**

Customized settings.

**Result**

| DUT Frequency (MHz) | Result |
|---------------------|--------|
| 2462.000000         | PASS   |

**Final measurements**

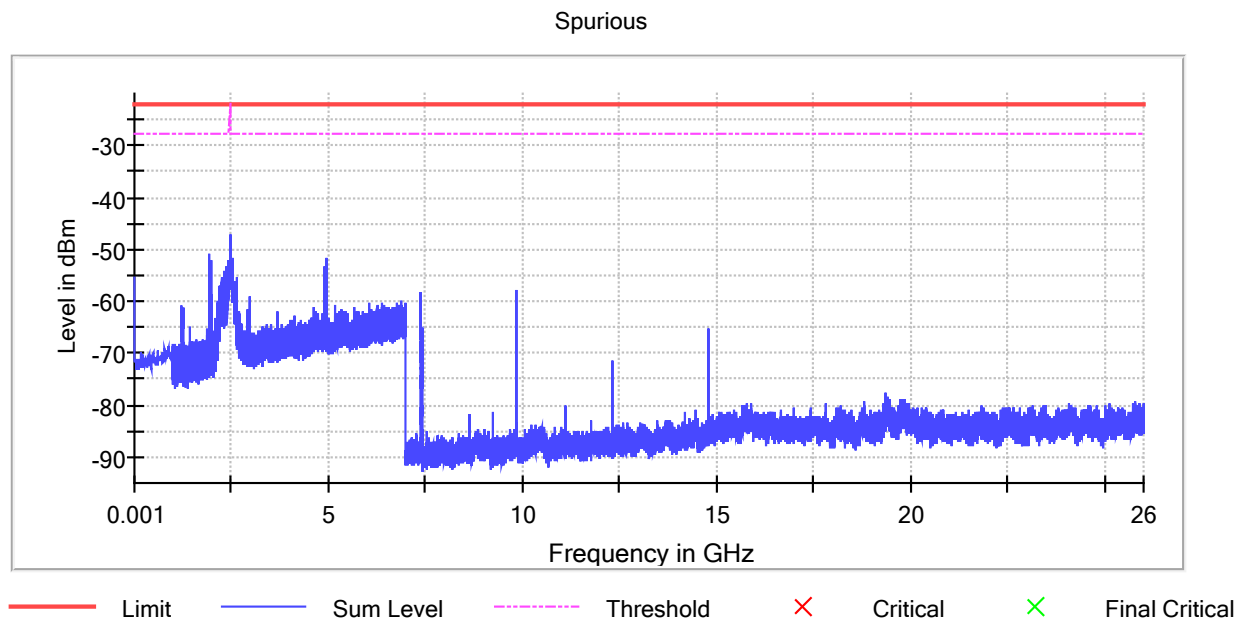
| Frequency (MHz) | Level Pre Measurement (dBm) | level (dBm) | Limit (dBm) | Margin (dB) | Result |
|-----------------|-----------------------------|-------------|-------------|-------------|--------|
| ---             | ---                         | ---         | ---         | ---         | ---    |

**Pre Measurements**

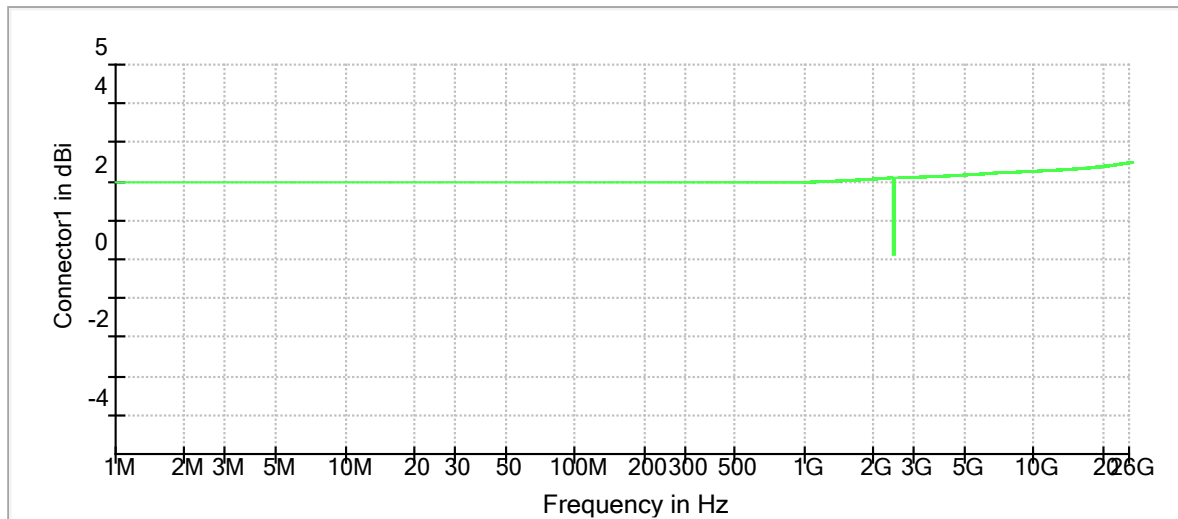
| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) |
|-----------------|-------------|-------------|-------------|
| 2483.570568     | -47.2       | 25.3        | -21.9       |
| 2483.852841     | -48.5       | 26.6        | -21.9       |
| 2484.135113     | -48.7       | 26.8        | -21.9       |
| 2483.711704     | -48.9       | 27.0        | -21.9       |
| 2483.500000     | -49.2       | 27.3        | -21.9       |
| 2486.675565     | -49.8       | 28.0        | -21.9       |
| 2484.699658     | -50.2       | 28.3        | -21.9       |
| 2485.687611     | -50.2       | 28.3        | -21.9       |
| 2486.957837     | -50.6       | 28.7        | -21.9       |
| 1919.975000     | -50.7       | 28.8        | -21.9       |
| 2485.405339     | -50.7       | 28.8        | -21.9       |
| 2487.945791     | -50.9       | 29.0        | -21.9       |
| 2486.393292     | -51.0       | 29.1        | -21.9       |
| 2484.276249     | -51.1       | 29.2        | -21.9       |
| 2485.264203     | -51.1       | 29.3        | -21.9       |

**Measurement Settings**

| Start Frequency (MHz) | Stop Frequency (MHz) | Pre Measurement | Final Measurement |
|-----------------------|----------------------|-----------------|-------------------|
| 1.000000              | 1000.000000          | 1               | 1                 |
| 1000.000000           | 2400.000000          | 2               | 2                 |
| 2483.500000           | 7000.000000          | 2               | 2                 |
| 7000.000000           | 18000.000000         | 2               | 2                 |
| 18000.000000          | 26000.000000         | 2               | 2                 |

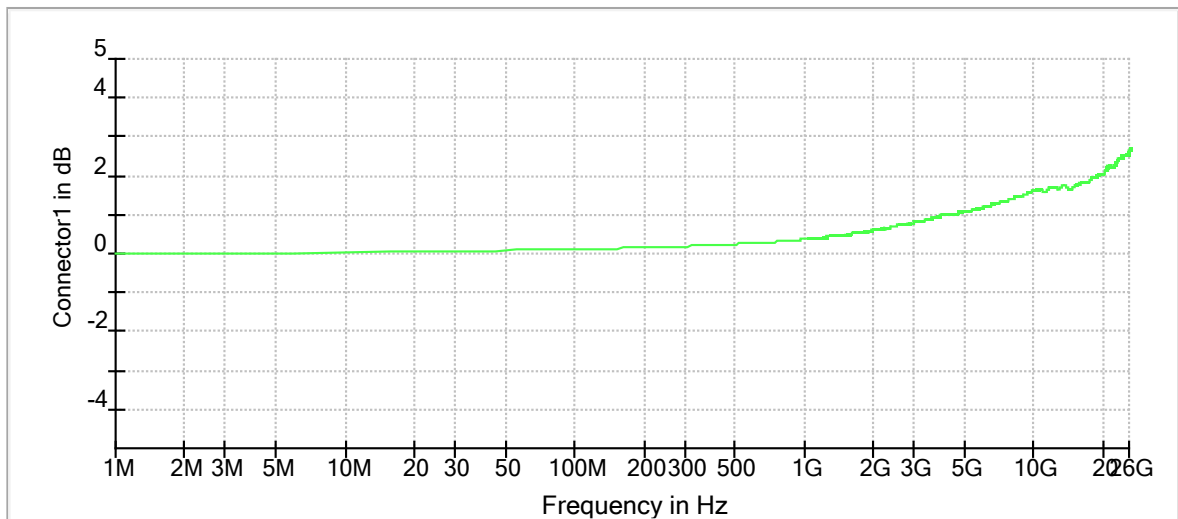


Gain



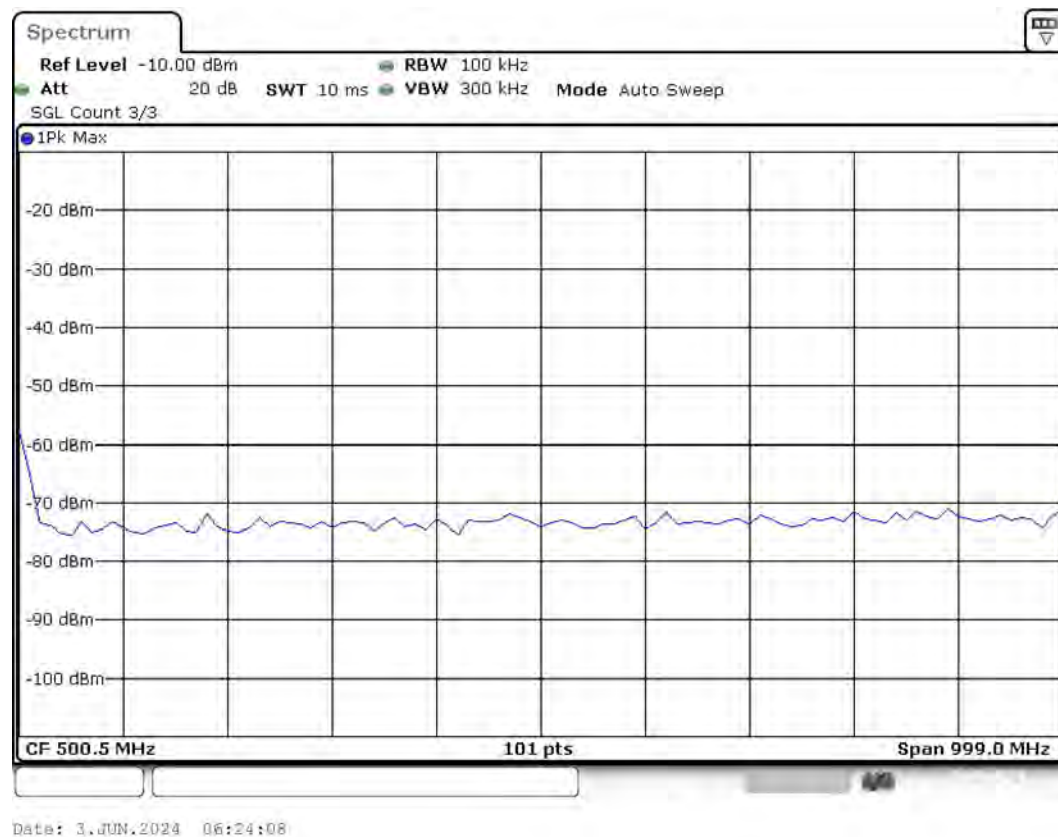
Connector1

Attenuation

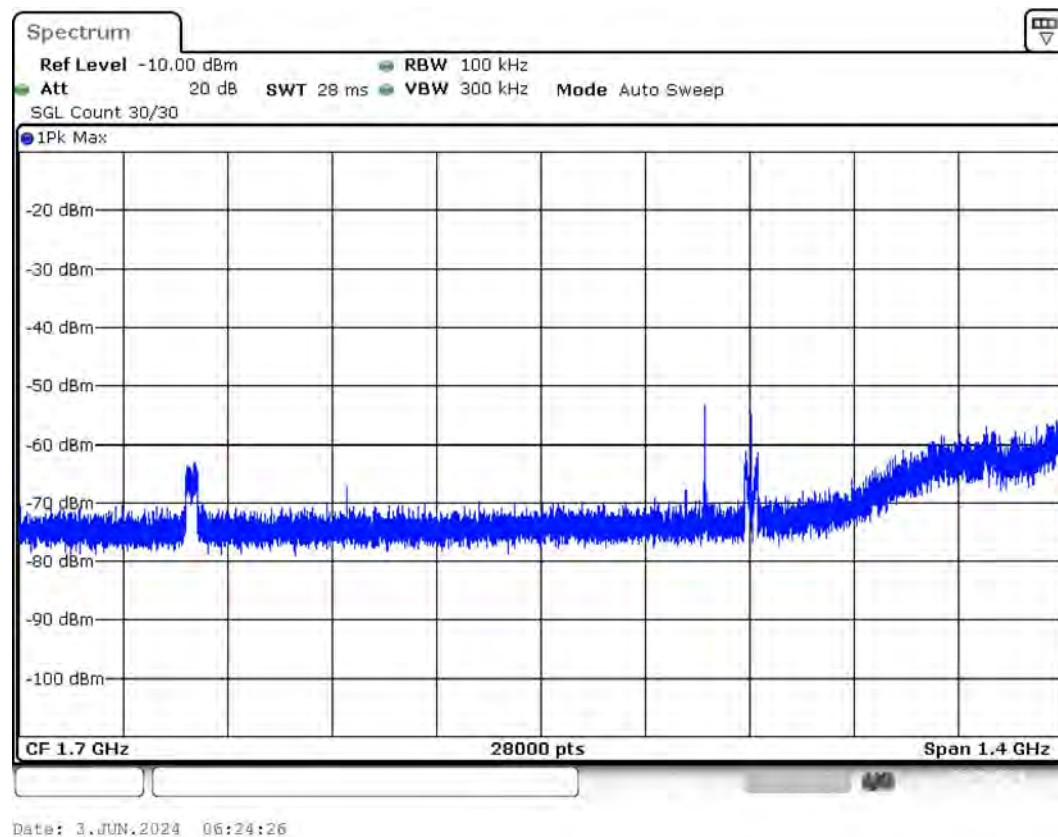


Connector1

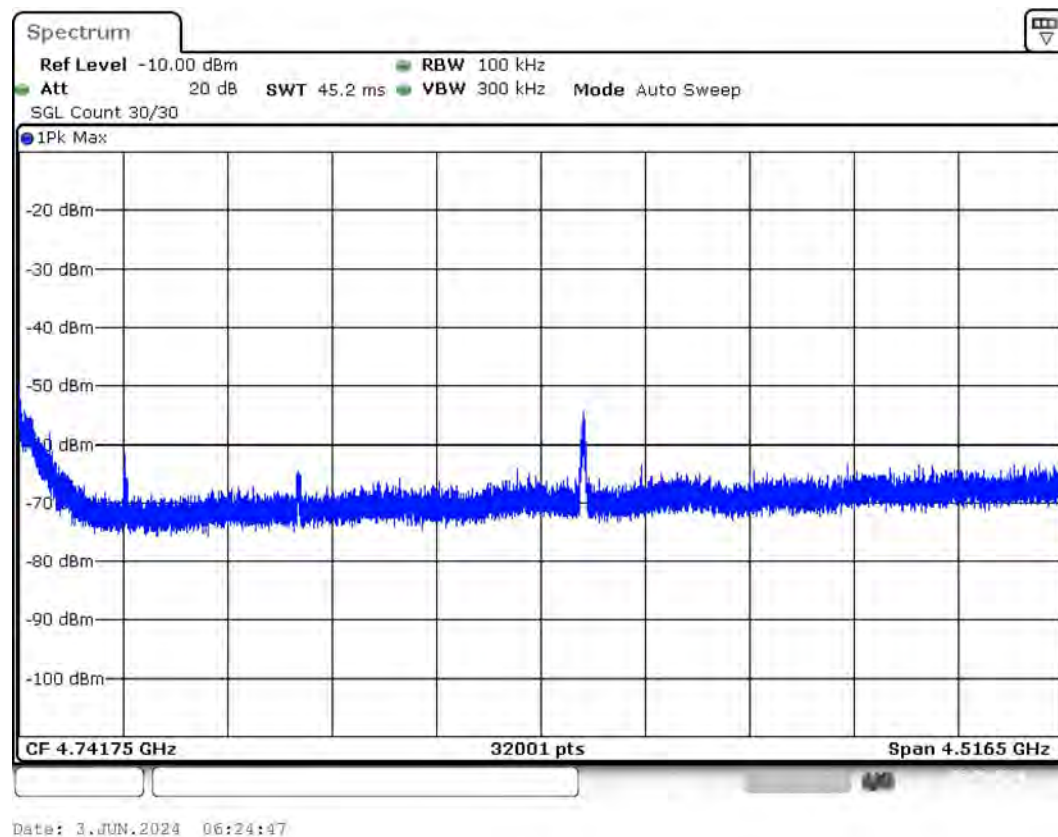
Spurious Connector 1\_0



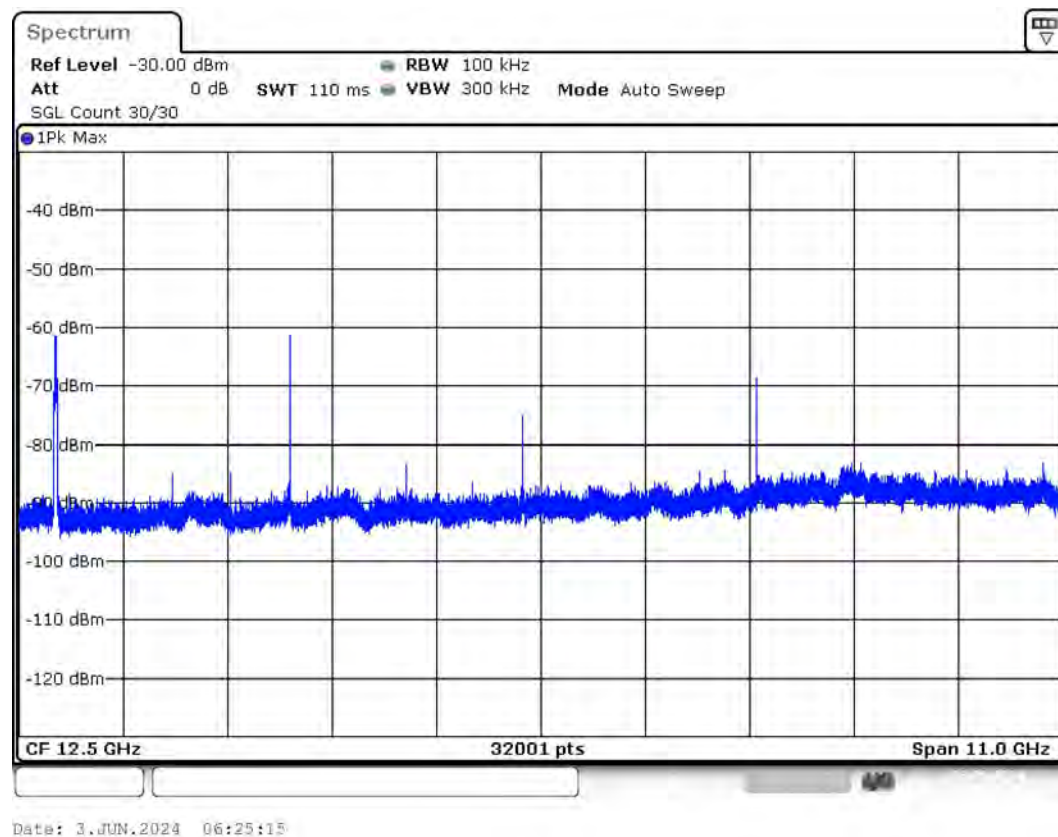
Spurious Connector 1\_1



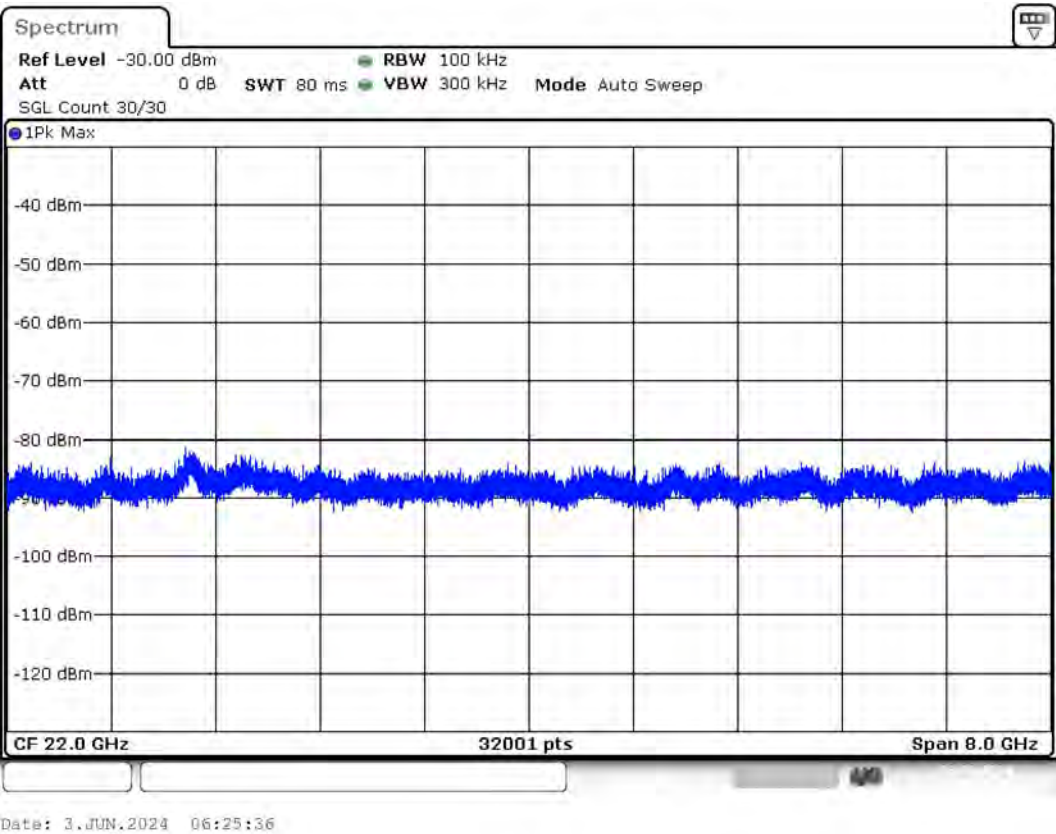
Spurious Connector 1\_2



Spurious Connector 1\_3



Spurious Connector 1\_4



Pre Measurement 1

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| RBW                   | 100.000 kHz      | <= 100.000 kHz |
| VBW                   | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints           | 101              | ~ 101          |
| SweepTime             | 9.990 ms         | AUTO           |
| Reference Level       | -10.000 dBm      | -30.000 dBm    |
| Attenuation           | 20.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 3                | 3              |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | Sweep            | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.50 dB          | 0.50 dB        |
| Run                   | 1 / max. 1       | max. 1         |
| Stable                | 0 / 1            | 1              |
| Max Stable Difference | 0.00 dB          | 0.50 dB        |

Pre Measurement 2

| Setting         | Instrument Value | Target Value   |
|-----------------|------------------|----------------|
| RBW             | 100.000 kHz      | <= 100.000 kHz |
| VBW             | 300.000 kHz      | >= 300.000 kHz |
| SweepPoints     | 28000            | ~ 28000        |
| SweepTime       | 28.000 ms        | AUTO           |
| Reference Level | -10.000 dBm      | -30.000 dBm    |
| Attenuation     | 20.000 dB        | AUTO           |
| Detector        | MaxPeak          | MaxPeak        |
| SweepCount      | 30               | 30             |

|                              |                   |                 |
|------------------------------|-------------------|-----------------|
| <b>Filter</b>                | <b>3 dB</b>       | <b>3 dB</b>     |
| <b>Trace Mode</b>            | <b>Max Hold</b>   | <b>Max Hold</b> |
| <b>Sweep type</b>            | <b>Sweep</b>      | <b>AUTO</b>     |
| <b>Preamp</b>                | <b>off</b>        | <b>off</b>      |
| <b>Stable mode</b>           | <b>Trace</b>      | <b>Trace</b>    |
| <b>Stable value</b>          | <b>1.00 dB</b>    | <b>1.00 dB</b>  |
| <b>Run</b>                   | <b>1 / max. 1</b> | <b>max. 1</b>   |
| <b>Stable</b>                | <b>0 / 3</b>      | <b>3</b>        |
| <b>Max Stable Difference</b> | <b>0.00 dB</b>    | <b>1.00 dB</b>  |