

# Conducted test results

No.1-9373-25-01-03\_TR1-A201-R1

March 07, 2025

|                  |                               |
|------------------|-------------------------------|
| Test Standard(s) | NA - NI                       |
|                  | FCC 15.247 - NI               |
|                  | FCC 15.247, ISSED RSS247 - NI |

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## NA # Peak output power 3MHz/3MHz ~ BT LE 1 Msps

### References

|                                               |                                  |
|-----------------------------------------------|----------------------------------|
| TC start                                      | 13.02.2025 14:46:34              |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled        |
| System version                                | 5.1.6.4                          |
| Standard   Version                            | NA   NI                          |
| Method                                        |                                  |
| Description                                   | Peak OP 3MHz/3MHz - BT LE 1 Msps |
| Information                                   |                                  |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                                           |
|--------------------------------------------------|-------------------------------------------|
| Technology to test                               | BT LE 1 Msps                              |
| EUT port                                         | EUT1                                      |
| Temperature                                      | nom                                       |
| Voltage                                          | nom                                       |
| Frequency low to test                            | True   Freq [MHz] 2402                    |
| Frequency mid to test                            | True   Freq [MHz] 2440                    |
| Frequency high to test                           | True   Freq [MHz] 2480                    |
| Auto control enabled power supply   Climatic Box | No   No                                   |
| Additional path loss [dB]                        | 0.7                                       |
| Full path type                                   | EUT_SA_GEN_SIG                            |
| Full path name                                   | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |

## Test Parameter

---

Switch bits

00010001:00010001:00000000:00000001

---

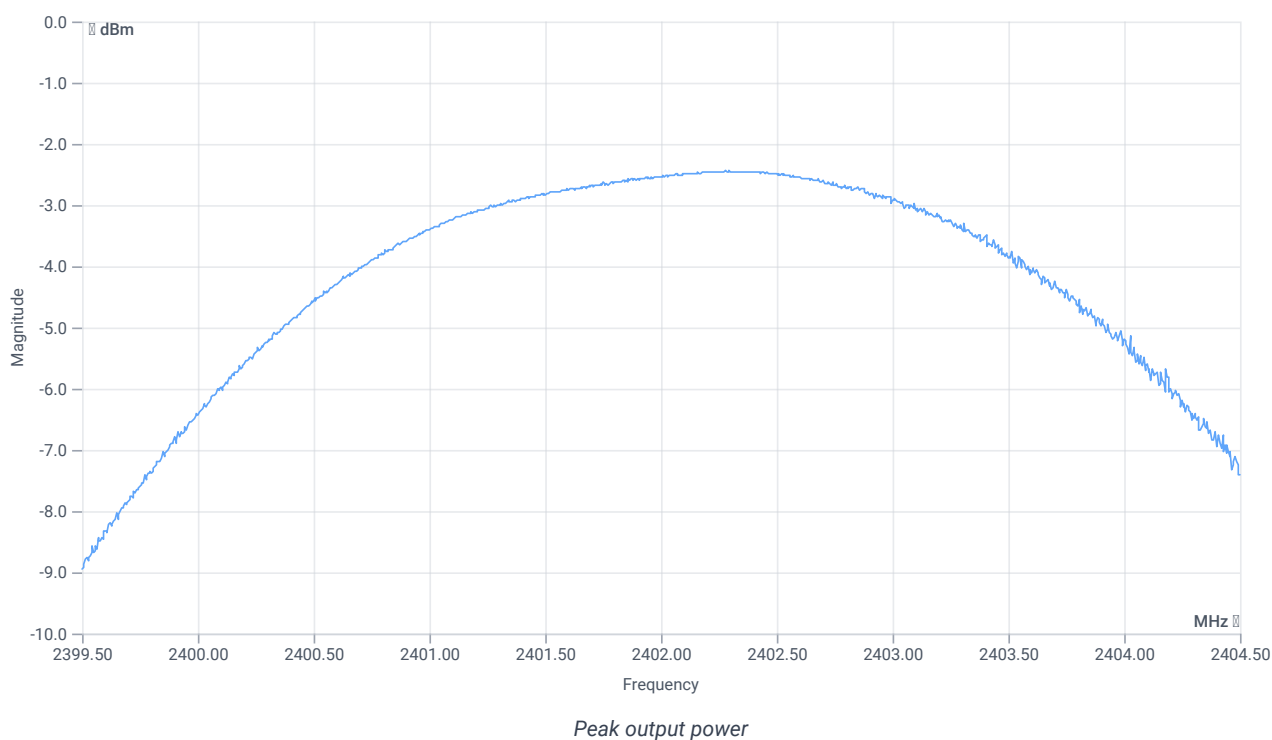
## Test at TX 2402 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.39    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2402.300 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 7.61   8.85   15       |
| Start [MHz]   Stop [MHz]                             | 2399.500   2404.500    |
| RBW [MHz]   VBW [MHz]                                | 3.000000   3.000000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   10   1001   SWE |



### RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | ---         | -2.44    | dBm  | INFO    |
| Peak power        | ---         | ---         | 0.570164 | mW   | INFO    |
| Frequency at peak | ---         | ---         | 2402.295 | MHz  | INFO    |

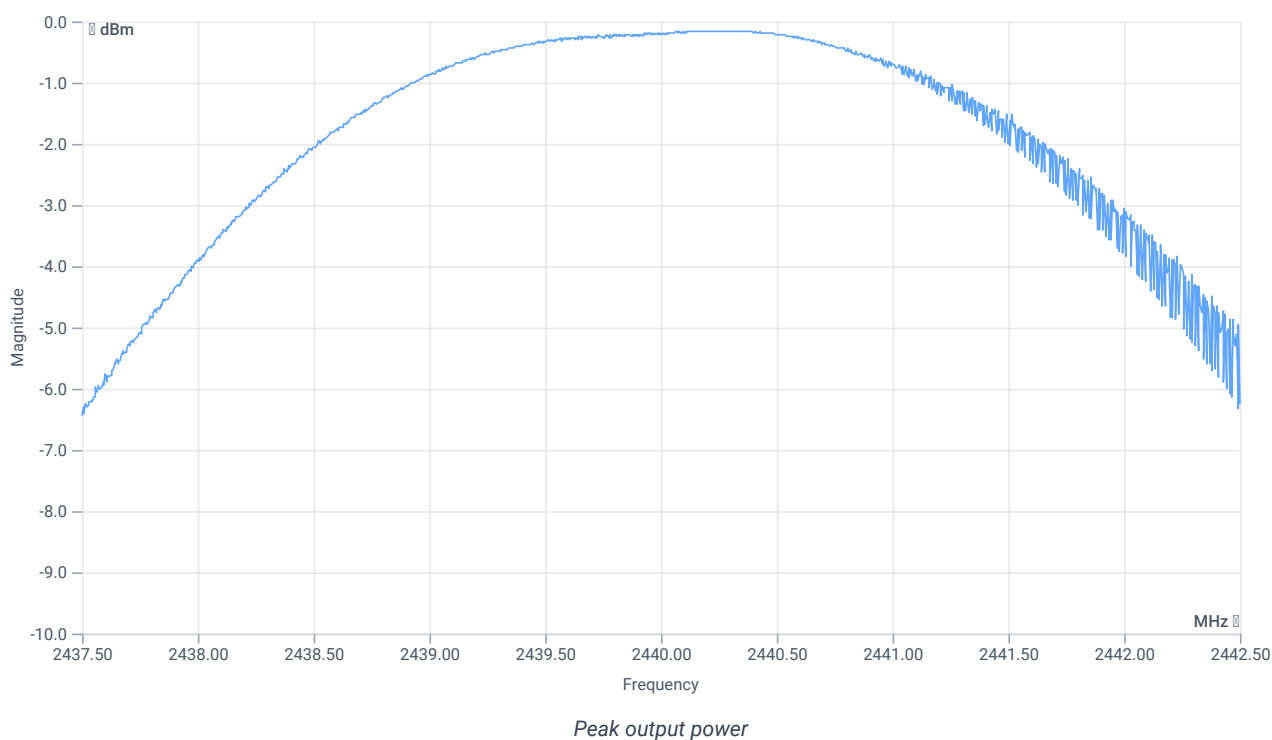
## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.15    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.300 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 9.85   8.94   20       |
| Start [MHz]   Stop [MHz]                             | 2437.500   2442.500    |
| RBW [MHz]   VBW [MHz]                                | 3.000000   3.000000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   10   1001   SWE |



### RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | ---         | -0.15    | dBm  | INFO    |
| Peak power        | ---         | ---         | 0.966051 | mW   | INFO    |
| Frequency at peak | ---         | ---         | 2440.27  | MHz  | INFO    |

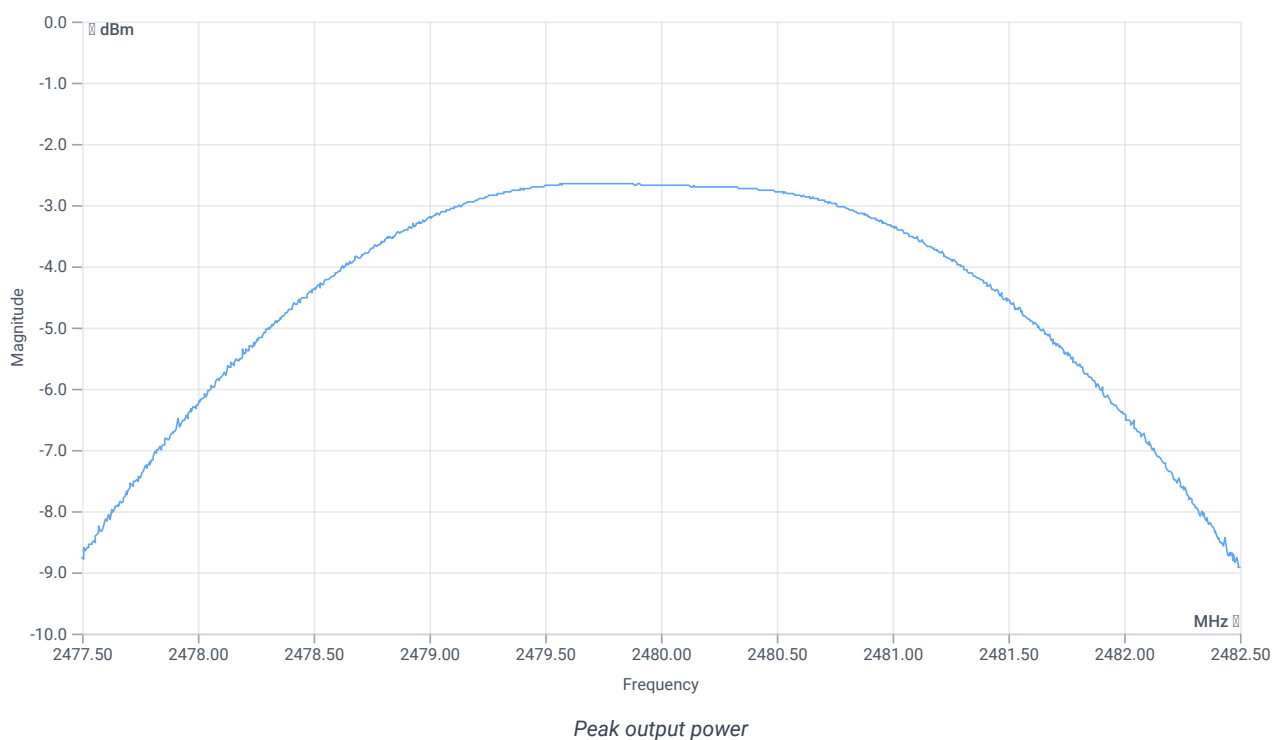
## Test at TX 2480 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.62    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2479.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 7.38   9.03   15       |
| Start [MHz]   Stop [MHz]                             | 2477.500   2482.500    |
| RBW [MHz]   VBW [MHz]                                | 3.000000   3.000000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   10   1001   SWE |



### RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | ---         | -2.64    | dBm  | INFO    |
| Peak power        | ---         | ---         | 0.544503 | mW   | INFO    |
| Frequency at peak | ---         | ---         | 2479.73  | MHz  | INFO    |

Verdict

PASS

## FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps

### References

|                                               |                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------|
| TC start                                      | 13.02.2025 14:48:03                                               |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                                         |
| System version                                | 5.1.6.4                                                           |
| Standard   Version                            | FCC 15.247   NI                                                   |
| Method                                        | DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth     |
| Description                                   | FCC 15.247 Maximum peak output power conducted DTS - BT LE 1 Msps |
| Information                                   |                                                                   |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 1 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2402 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2480 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |

## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path type | EUT_SA_GEN_SIG                            |
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

## Test at TX 2402 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.38    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2402.300 | MHz  | INFO    |

### READ SA SETTINGS:

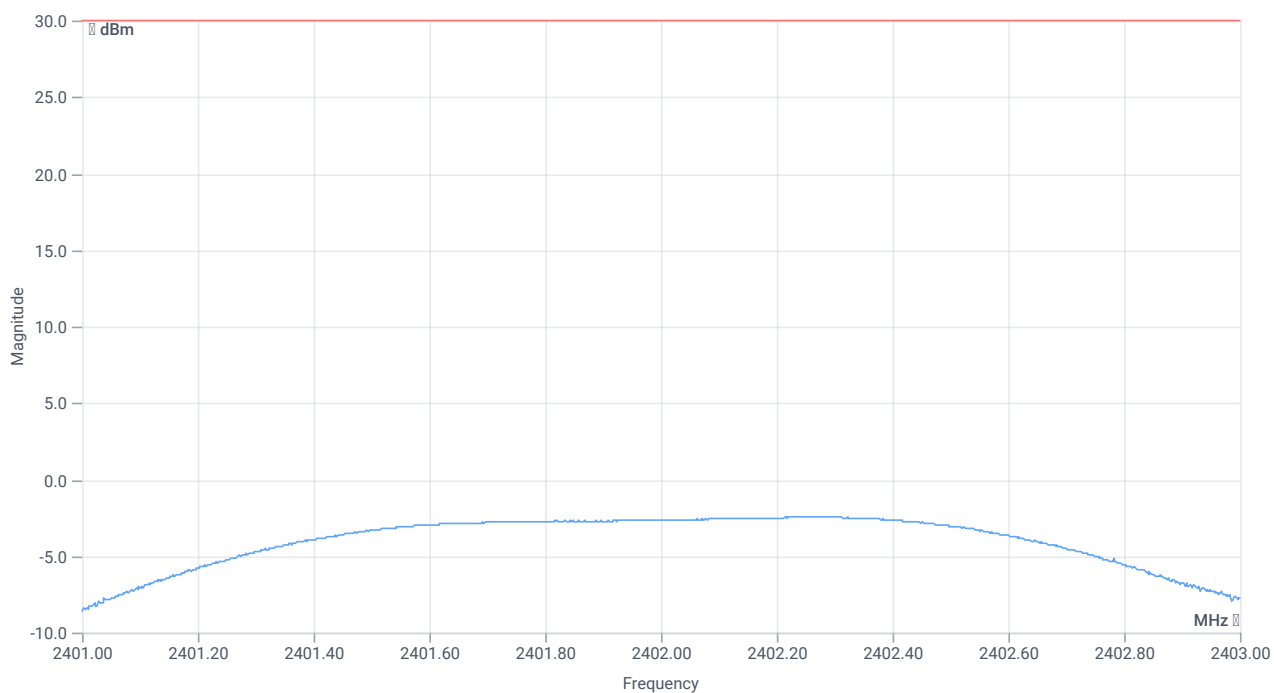
|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.62   8.85   10       |
| Start [MHz]   Stop [MHz]                             | 2401.000   2403.000    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

### DTS bandwidth

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | ---         | ---         | 652      | kHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 7.62   8.85   15      |
| Start [MHz]   Stop [MHz]                             | 2401.000   2403.000   |
| RBW [MHz]   VBW [MHz]                                | 1.000000   3.000000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 50   200   1001   SWE |



Peak output power

## RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | 30.00       | -2.46    | dBm  | PASS    |
| Peak power        | ---         | 1000        | 0.567545 | mW   | PASS    |
| Frequency at peak | ---         | ---         | 2402.266 | MHz  | INFO    |

## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.13    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.300 | MHz  | INFO    |

### READ SA SETTINGS:

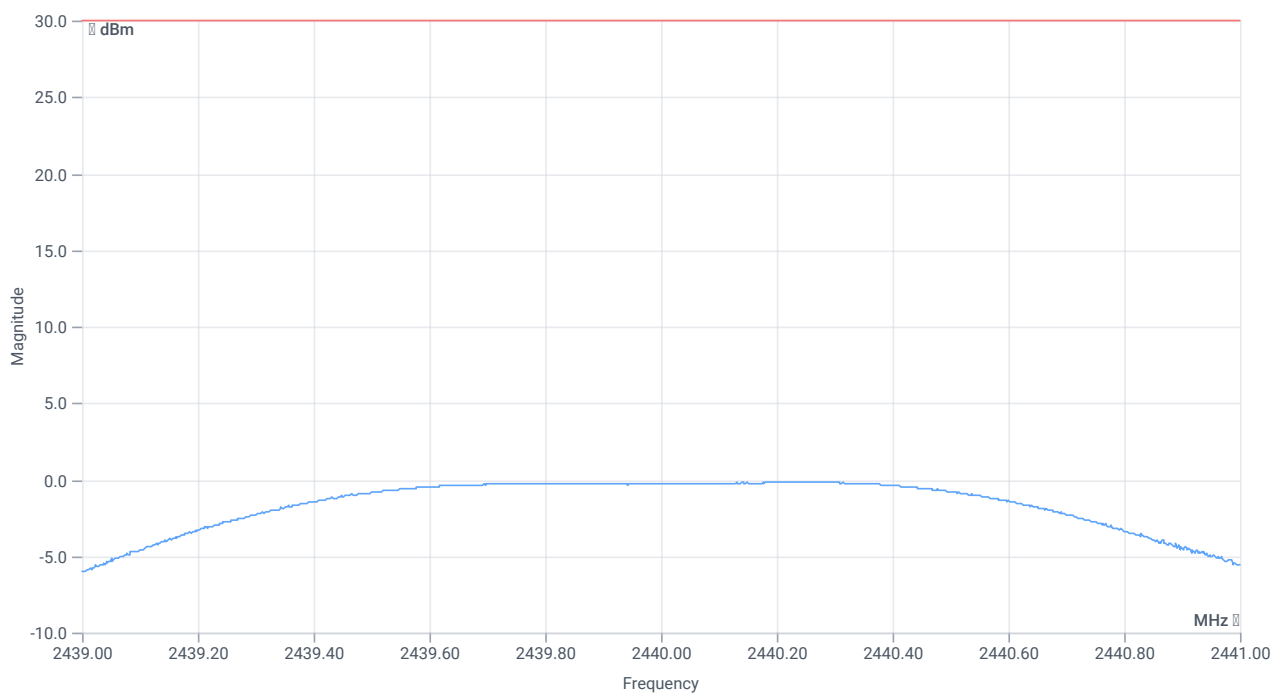
|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.87   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2439.000   2441.000    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

### DTS bandwidth

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | ---         | ---         | 650      | kHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 9.87   8.94   20      |
| Start [MHz]   Stop [MHz]                             | 2439.000   2441.000   |
| RBW [MHz]   VBW [MHz]                                | 1.000000   3.000000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 50   200   1001   SWE |



Peak output power

## RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | 30.00       | -0.18    | dBm  | PASS    |
| Peak power        | ---         | 1000        | 0.959401 | mW   | PASS    |
| Frequency at peak | ---         | ---         | 2440.26  | MHz  | INFO    |

## Test at TX 2480 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.57    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2480.300 | MHz  | INFO    |

### READ SA SETTINGS:

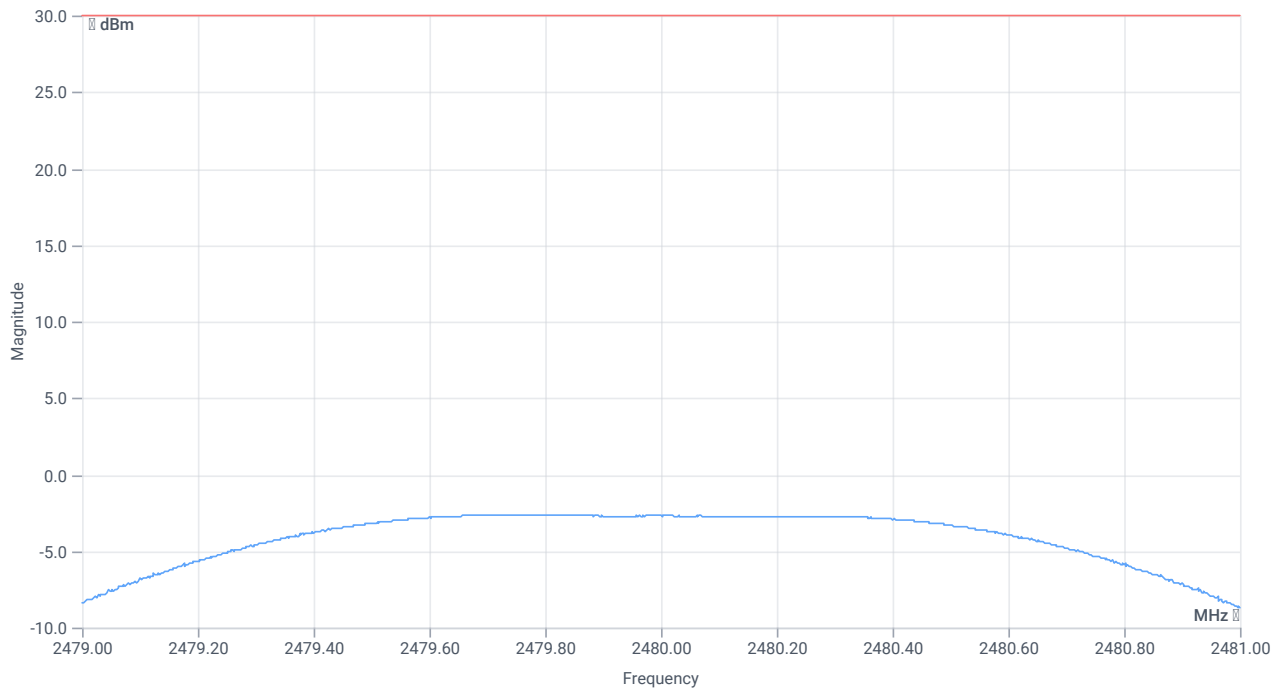
|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.43   9.03   10       |
| Start [MHz]   Stop [MHz]                             | 2479.000   2481.000    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

### DTS bandwidth

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | ---         | ---         | 651      | kHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 7.43   9.03   15      |
| Start [MHz]   Stop [MHz]                             | 2479.000   2481.000   |
| RBW [MHz]   VBW [MHz]                                | 1.000000   3.000000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 50   200   1001   SWE |



Peak output power

## RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | 30.00       | -2.65    | dBm  | PASS    |
| Peak power        | ---         | 1000        | 0.54325  | mW   | PASS    |
| Frequency at peak | ---         | ---         | 2479.742 | MHz  | INFO    |

Verdict

PASS

## FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 1 Msps

### References

|                                               |                                             |
|-----------------------------------------------|---------------------------------------------|
| TC start                                      | 13.02.2025 14:50:13                         |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                   |
| System version                                | 5.1.6.4                                     |
| Standard   Version                            | FCC 15.247   NI                             |
| Method                                        |                                             |
| Description                                   | FCC 15.247 Bandwidth 6dB DTS - BT LE 1 Msps |
| Information                                   |                                             |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                                           |
|--------------------------------------------------|-------------------------------------------|
| Technology to test                               | BT LE 1 Msps                              |
| EUT port                                         | EUT1                                      |
| Temperature                                      | nom                                       |
| Voltage                                          | nom                                       |
| Frequency low to test                            | True   Freq [MHz] 2402                    |
| Frequency mid to test                            | True   Freq [MHz] 2440                    |
| Frequency high to test                           | True   Freq [MHz] 2480                    |
| Auto control enabled power supply   Climatic Box | No   No                                   |
| Additional path loss [dB]                        | 0.7                                       |
| Full path type                                   | EUT_SA_GEN_SIG                            |
| Full path name                                   | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |

## Test Parameter

---

|             |                                     |
|-------------|-------------------------------------|
| Switch bits | 00010001:00010001:00000000:00000001 |
|-------------|-------------------------------------|

---

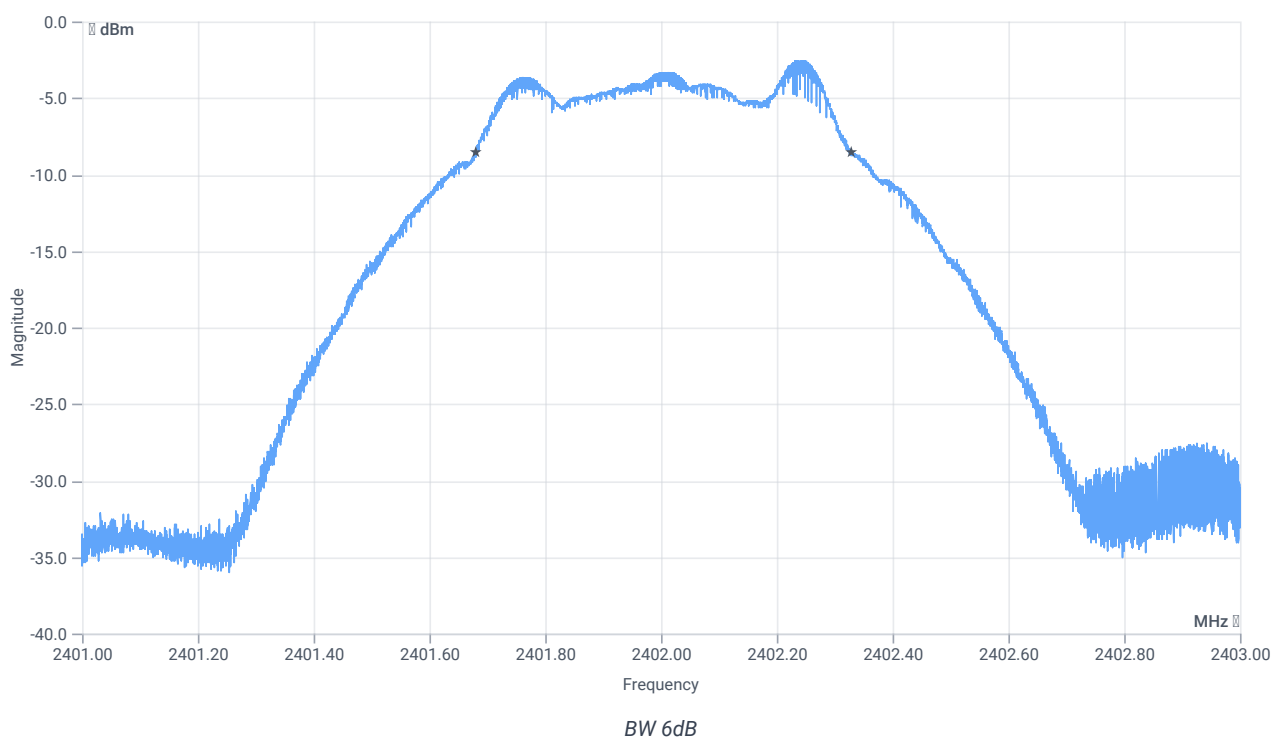
## Test at TX 2402 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.42    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2402.300 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.58   8.85   10       |
| Start [MHz]   Stop [MHz]                             | 2401.000   2403.000    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |



### RESULT

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | 500         | ---         | 649      | kHz  | PASS    |

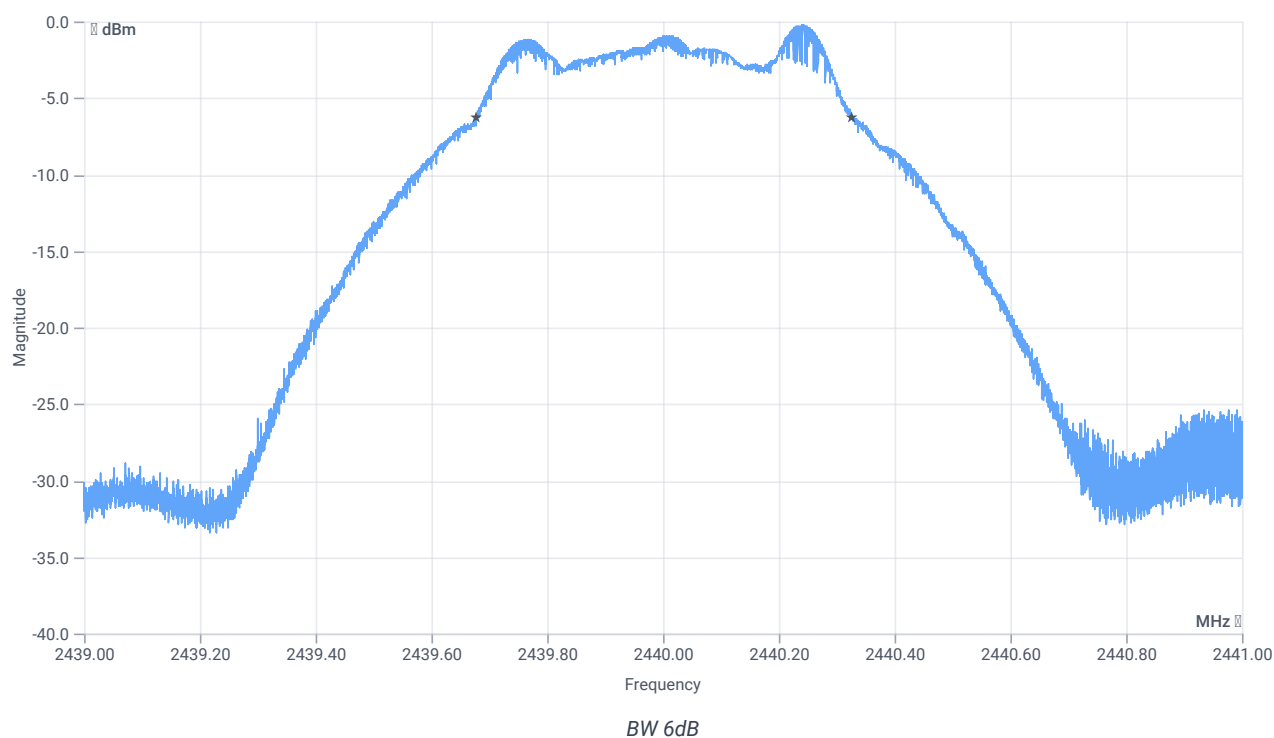
## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.19    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.200 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.81   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2439.000   2441.000    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |



### RESULT

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | 500         | ---         | 649      | kHz  | PASS    |

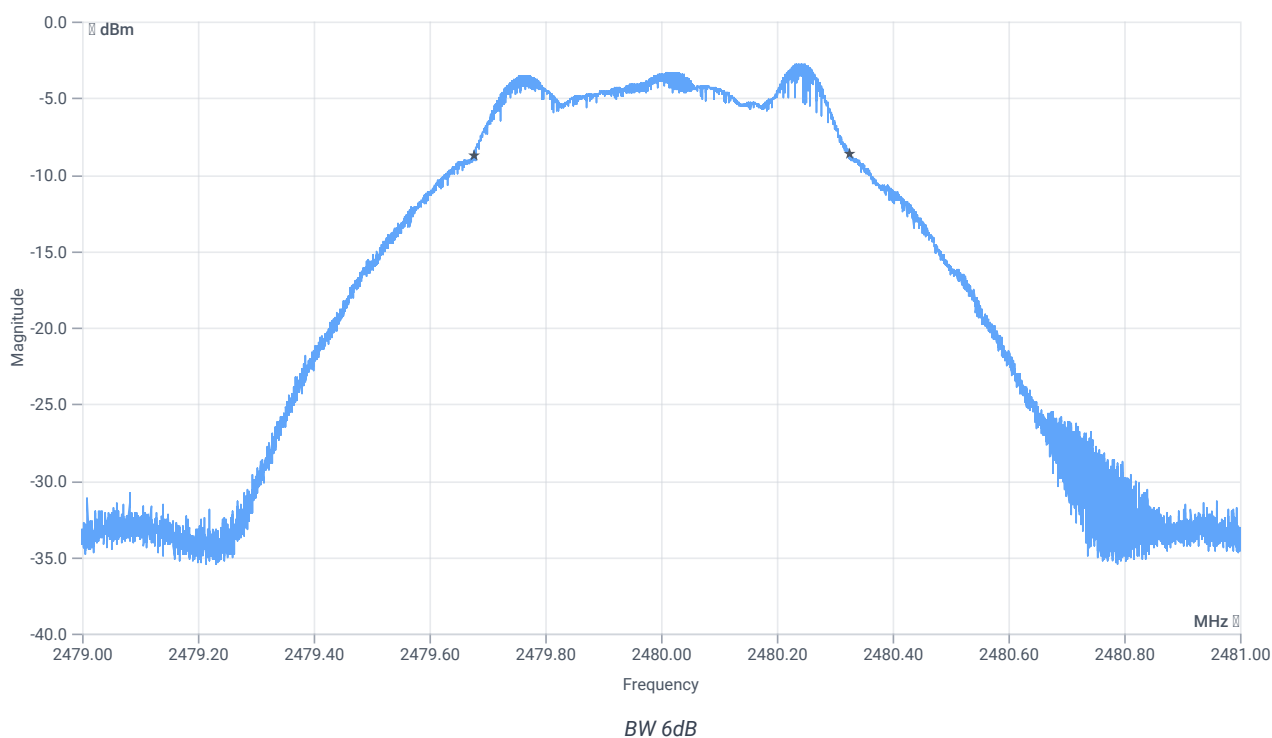
## Test at TX 2480 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.66    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2480.200 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.34   9.03   10       |
| Start [MHz]   Stop [MHz]                             | 2479.000   2481.000    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |



### RESULT

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | 500         | ---         | 651      | kHz  | PASS    |

#### Verdict

PASS

## FCC 15.247 # Peak psd DTS ~ BT LE 1 Msps

### References

|                                               |                                                                                                            |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------|
| TC start                                      | 13.02.2025 14:51:45                                                                                        |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                                                                                  |
| System version                                | 5.1.6.4                                                                                                    |
| Standard   Version                            | FCC 15.247   NI                                                                                            |
| Method                                        | DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission |
| Description                                   | FCC 15.247 Peak psd DTS - BT LE 1 Msps                                                                     |
| Information                                   |                                                                                                            |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 1 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2402 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2480 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |
| Full path type                                   | EUT_SA_GEN_SIG         |

## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

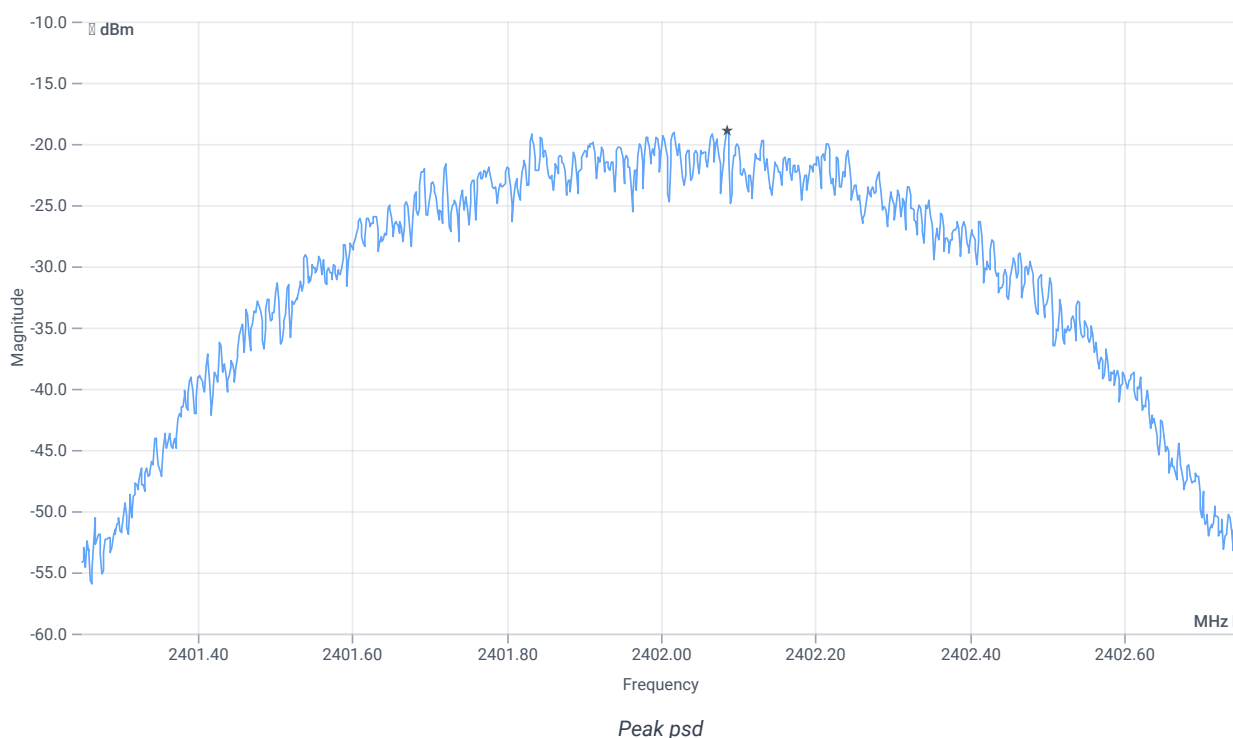
## Test at TX 2402 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.44    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2402.200 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.56   8.85   10       |
| Start [MHz]   Stop [MHz]                             | 2401.250   2402.750    |
| RBW [MHz]   VBW [MHz]                                | 0.003000   0.010000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   20   1001   SWE |



### RESULT

| DESCRIPTION | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT     | VERDICT |
|-------------|-------------|-------------|----------|----------|---------|
| Peak psd    | ---         | 8           | -18.92   | dBm/3KHz | PASS    |

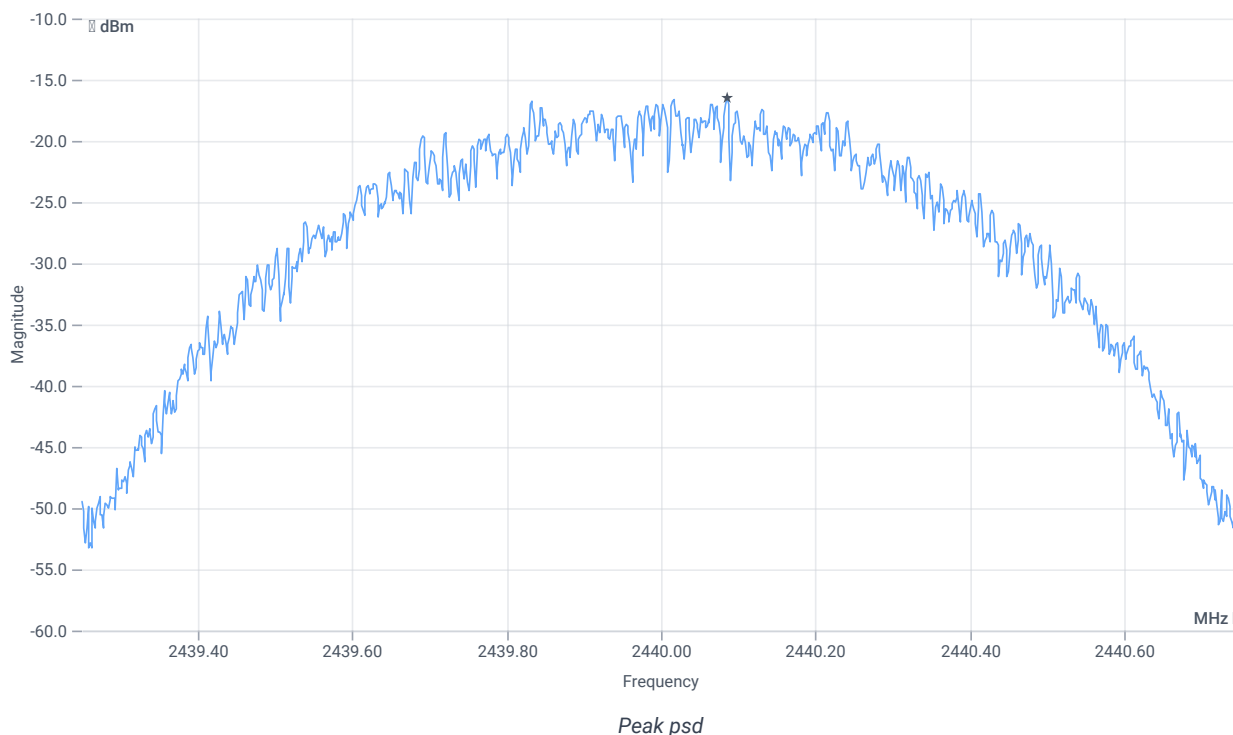
## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.14    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.200 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.86   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2439.250   2440.750    |
| RBW [MHz]   VBW [MHz]                                | 0.003000   0.010000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   20   1001   SWE |



### RESULT

| DESCRIPTION | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT     | VERDICT |
|-------------|-------------|-------------|----------|----------|---------|
| Peak psd    | ---         | 8           | -16.55   | dBm/3KHz | PASS    |

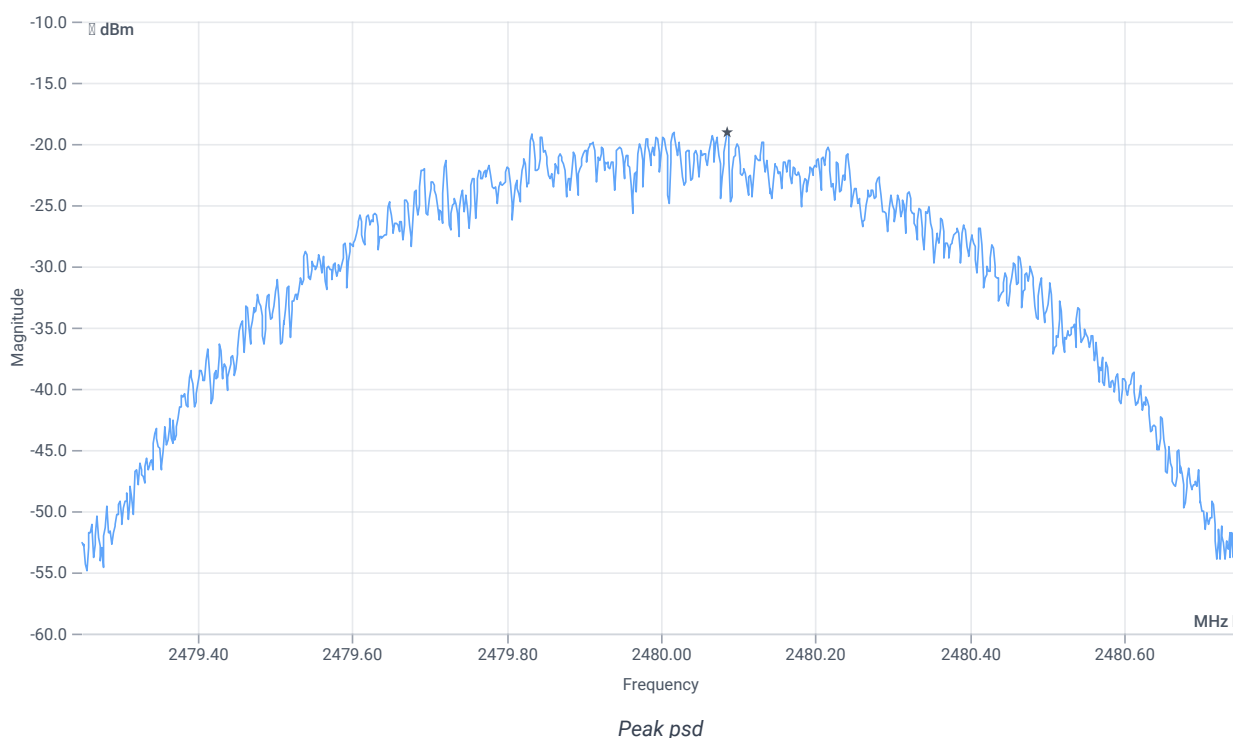
## Test at TX 2480 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.64    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2479.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.36   9.03   10       |
| Start [MHz]   Stop [MHz]                             | 2479.250   2480.750    |
| RBW [MHz]   VBW [MHz]                                | 0.003000   0.010000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   20   1001   SWE |



### RESULT

| DESCRIPTION | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT     | VERDICT |
|-------------|-------------|-------------|----------|----------|---------|
| Peak psd    | ---         | 8           | -19.04   | dBm/3KHz | PASS    |

#### Verdict

PASS

# FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 1 Msps

## References

|                                               |                                                    |
|-----------------------------------------------|----------------------------------------------------|
| TC start                                      | 13.02.2025 14:53:45                                |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                          |
| System version                                | 5.1.6.4                                            |
| Standard   Version                            | FCC 15.247, ISED RSS247   NI                       |
| Method                                        |                                                    |
| Description                                   | FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 1 Msps |
| Information                                   |                                                    |

## EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

## Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

## Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 1 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2402 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2480 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |
| Full path type                                   | EUT_SA_GEN_SIG         |

## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

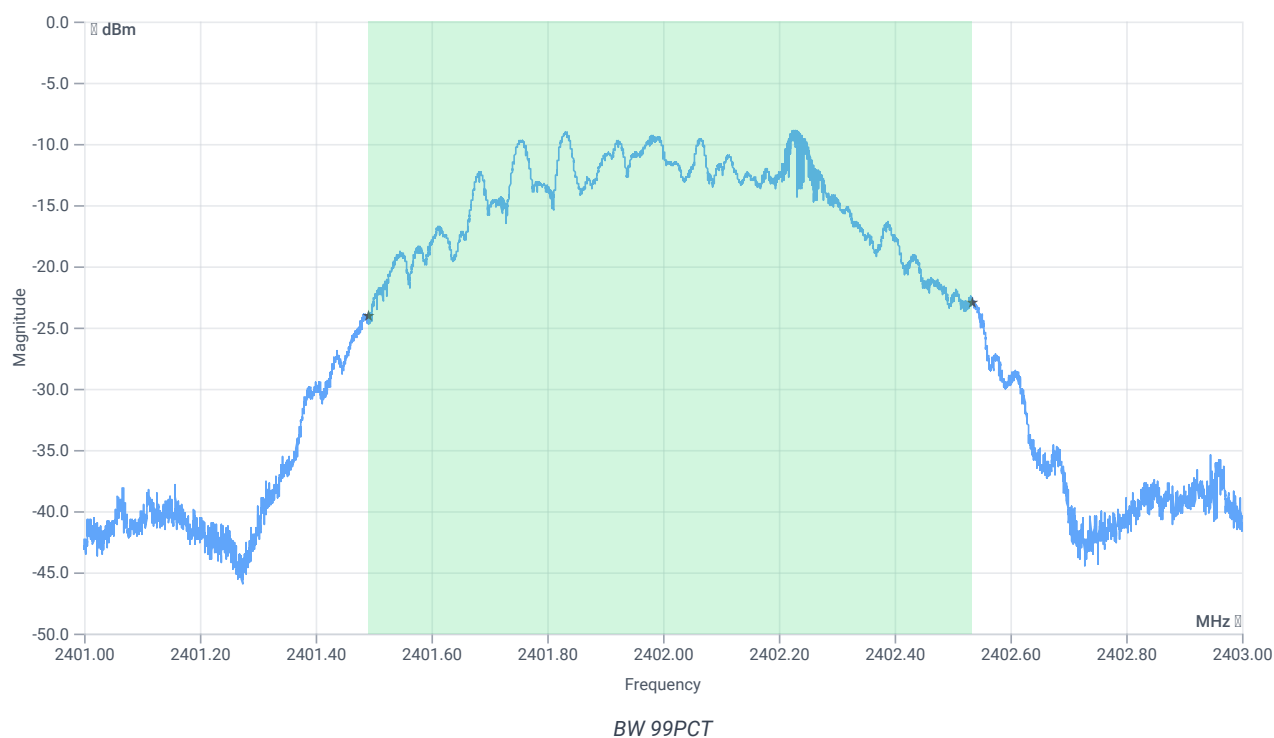
## Test at TX 2402 MHz

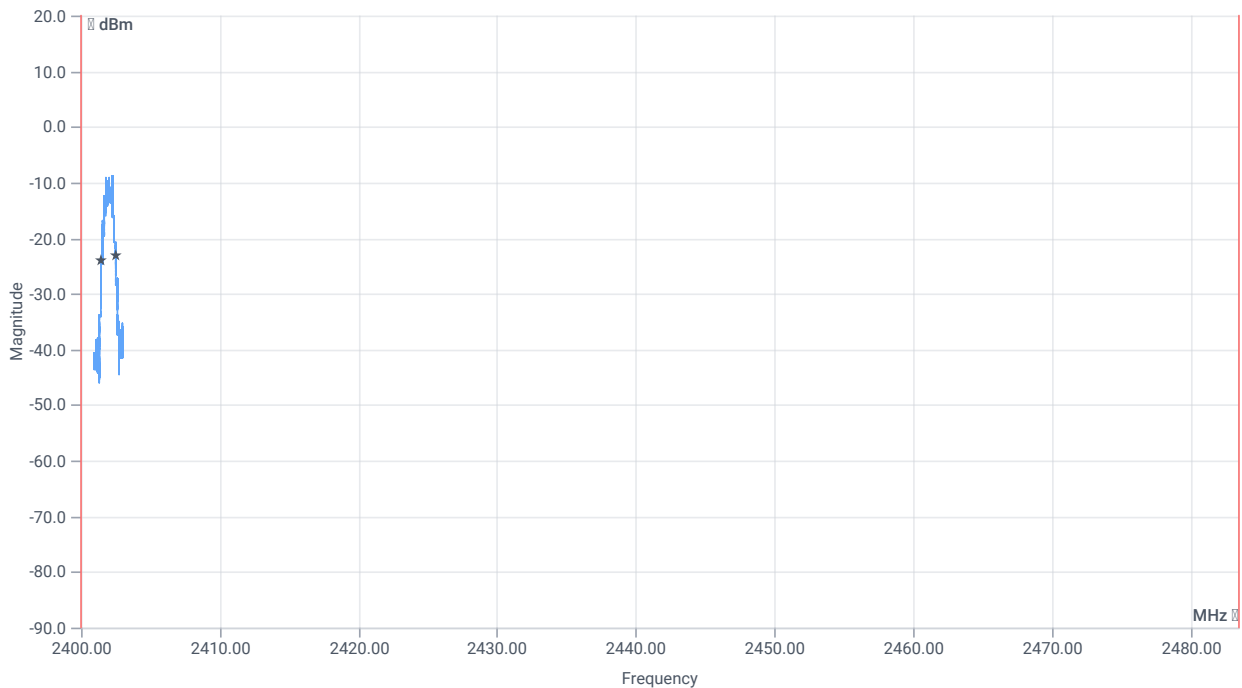
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.37    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2402.300 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.63   8.85   10       |
| Start [MHz]   Stop [MHz]                             | 2401.000   2403.000    |
| RBW [MHz]   VBW [MHz]                                | 0.020000   0.100000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

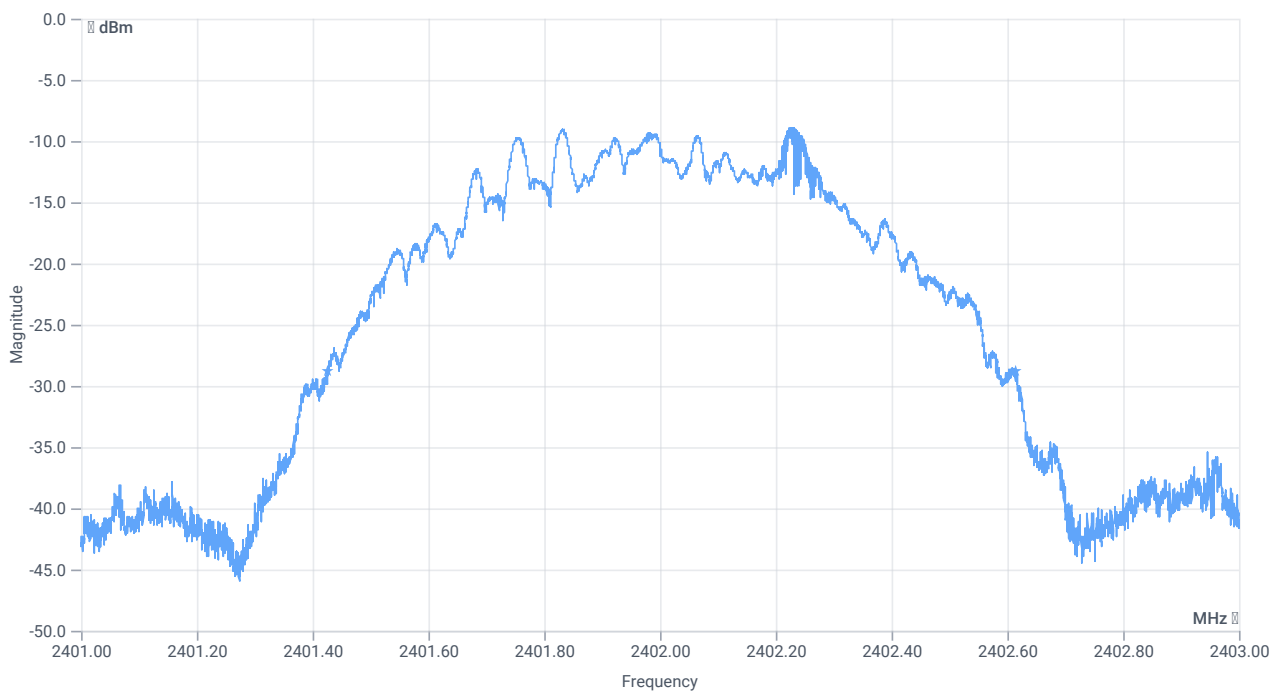




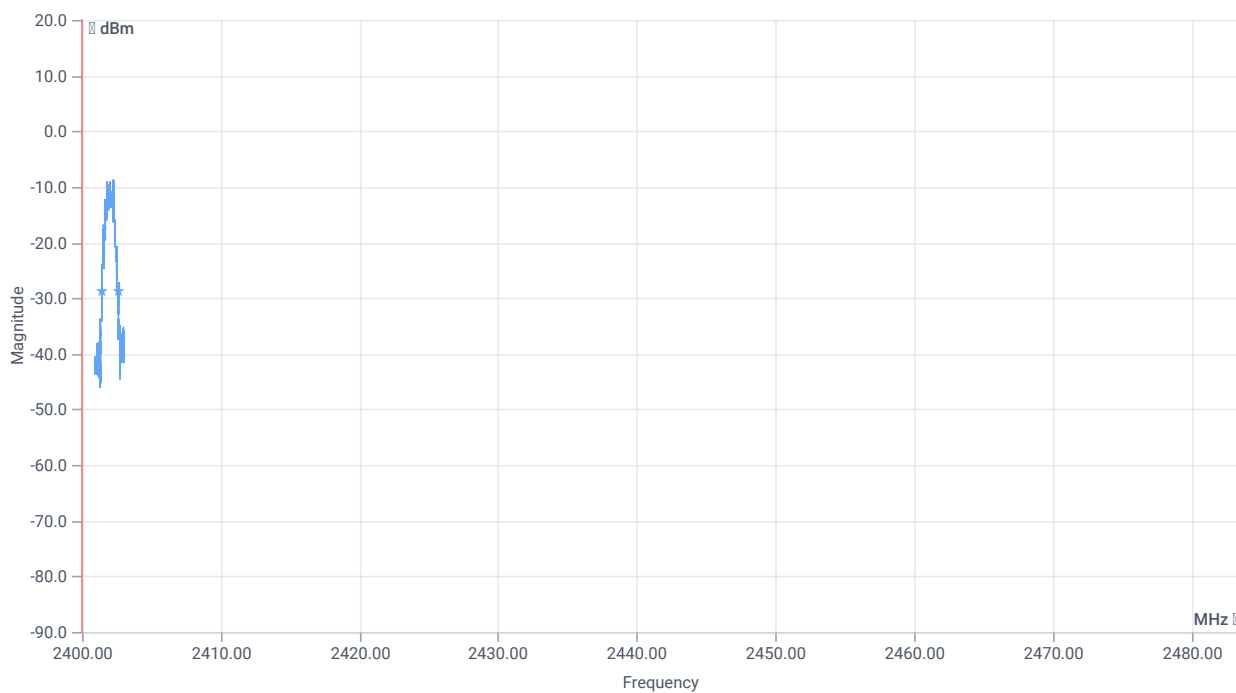
*BW within Band 99PCT*

## RESULT

| DESCRIPTION   | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|---------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | ---         | ---         | 1043.000  | kHz  | INFO    |
| T1 99%        | 2400.000000 | ---         | 2401.4911 | MHz  | PASS    |
| T2 99%        | ---         | 2483.500000 | 2402.5343 | MHz  | PASS    |



BW 20dB



BW within band 20dB

## RESULT

| DESCRIPTION    | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|----------------|-------------|-------------|-----------|------|---------|
| Bandwidth 20dB | ---         | ---         | 1188      | kHz  | INFO    |
| T1 20dB        | 2400.000000 | ---         | 2401.4250 | MHz  | PASS    |
| T2 20dB        | ---         | 2483.500000 | 2402.6134 | MHz  | PASS    |

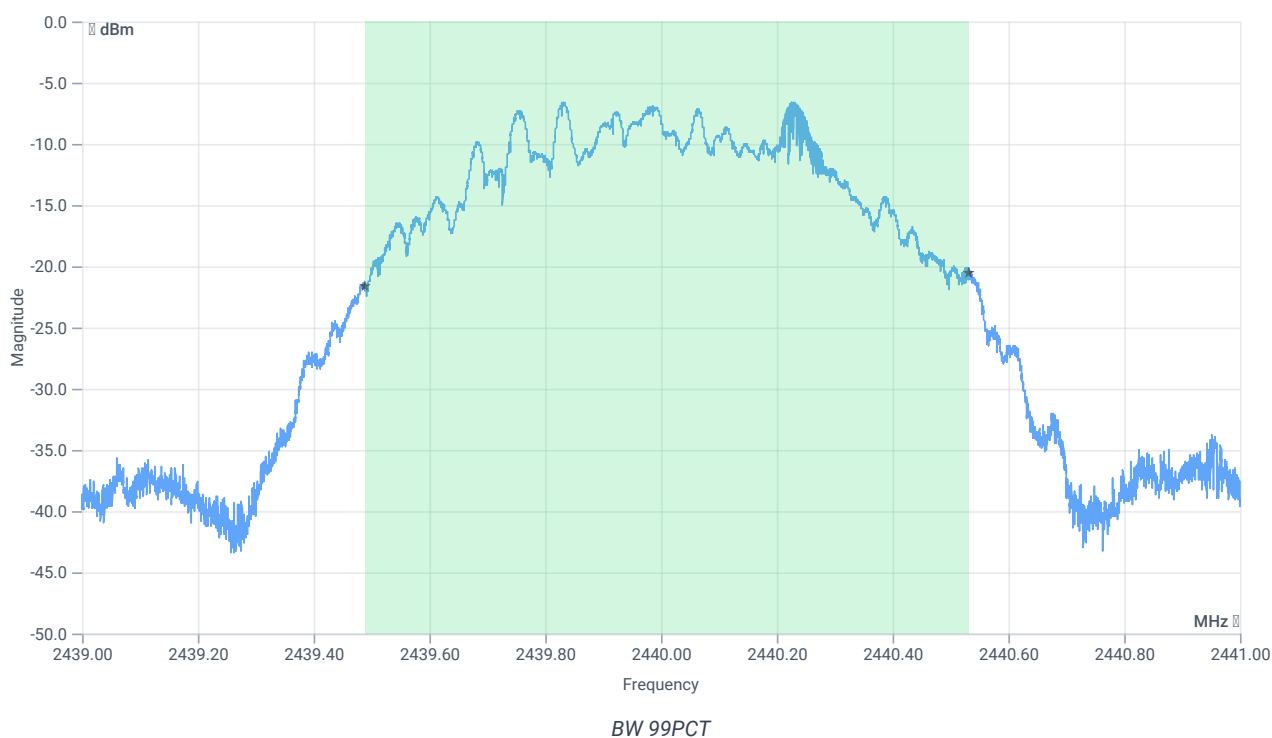
## Test at TX 2440 MHz

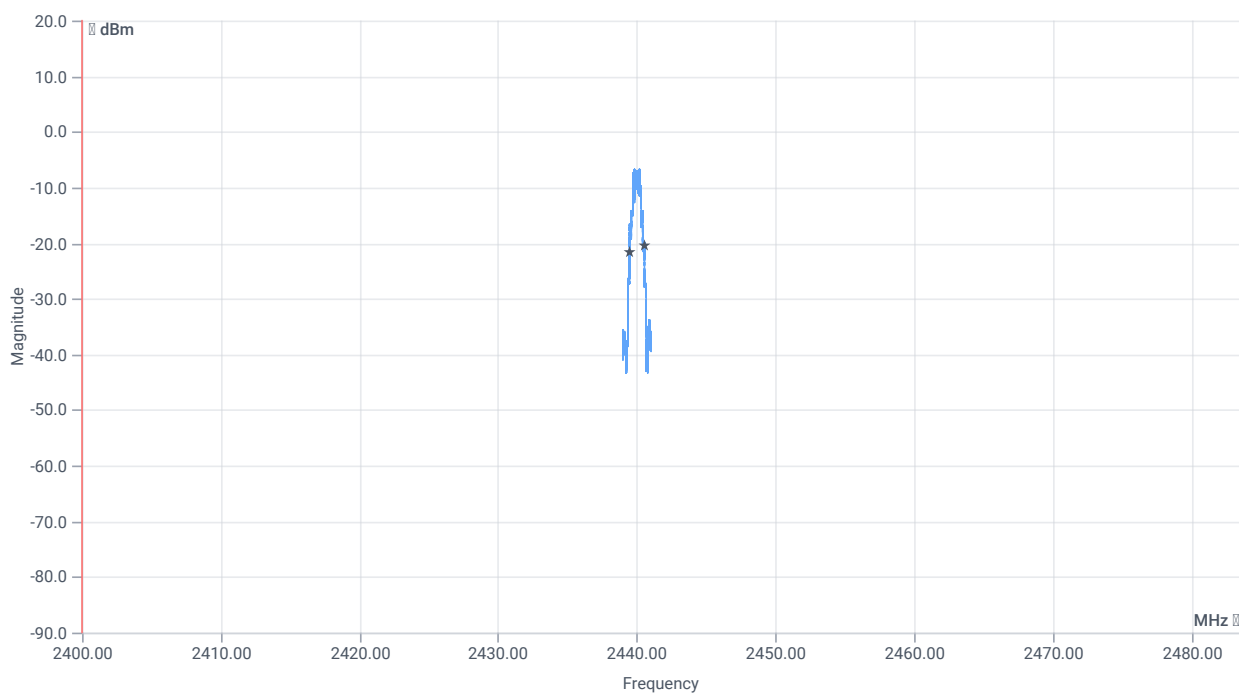
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.12    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.300 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.88   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2439.000   2441.000    |
| RBW [MHz]   VBW [MHz]                                | 0.020000   0.100000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

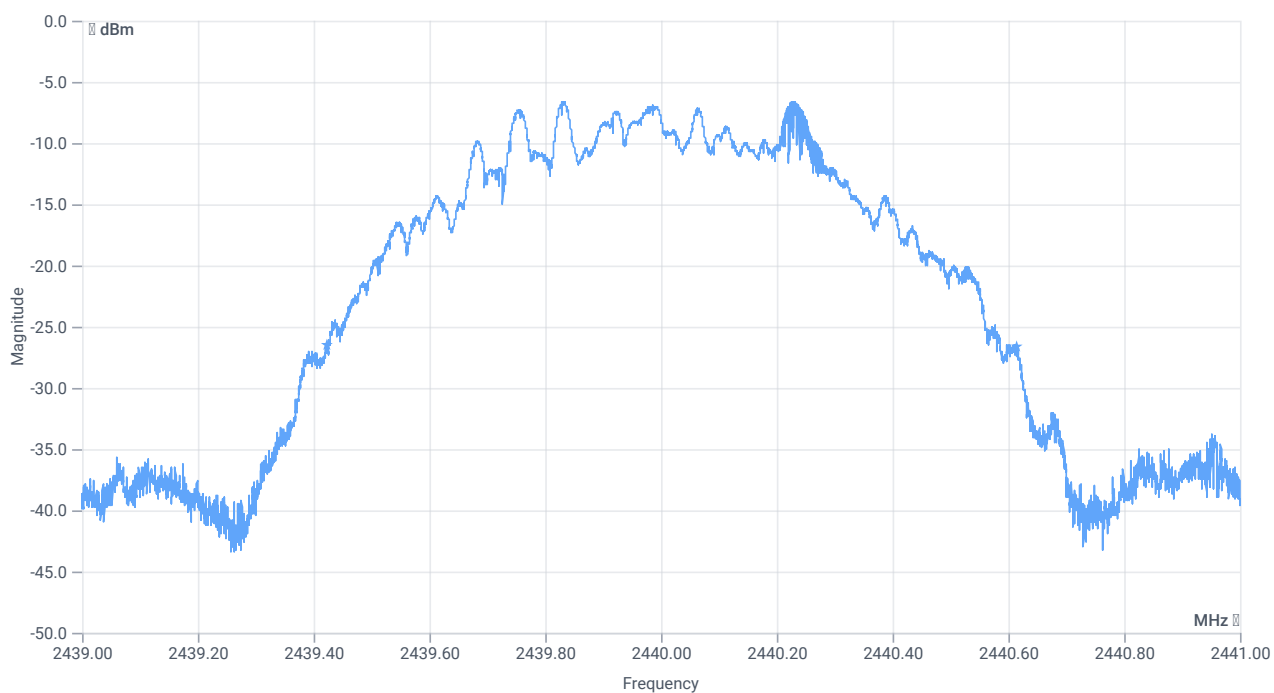




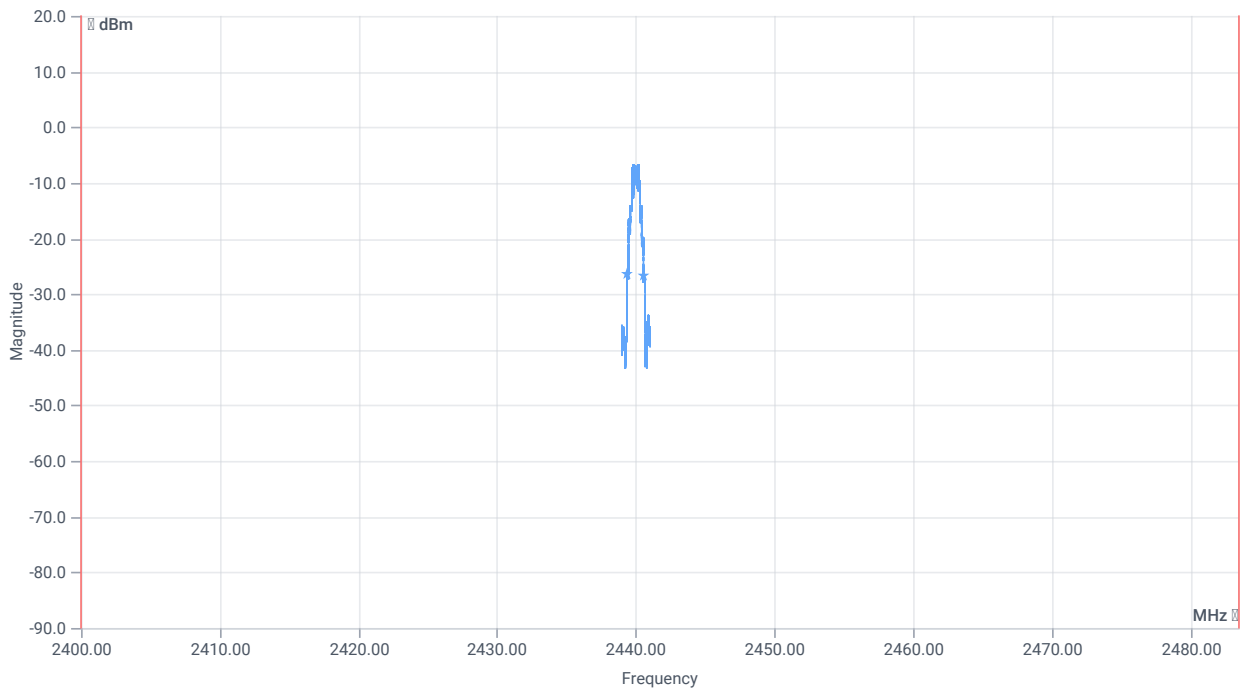
*BW within Band 99PCT*

## RESULT

| DESCRIPTION   | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|---------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | ---         | ---         | 1044.000  | kHz  | INFO    |
| T1 99%        | 2400.000000 | ---         | 2439.4881 | MHz  | PASS    |
| T2 99%        | ---         | 2483.500000 | 2440.5317 | MHz  | PASS    |



BW 20dB



BW within band 20dB

## RESULT

| DESCRIPTION    | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|----------------|-------------|-------------|-----------|------|---------|
| Bandwidth 20dB | ---         | ---         | 1193      | kHz  | INFO    |
| T1 20dB        | 2400.000000 | ---         | 2439.4216 | MHz  | PASS    |
| T2 20dB        | ---         | 2483.500000 | 2440.6142 | MHz  | PASS    |

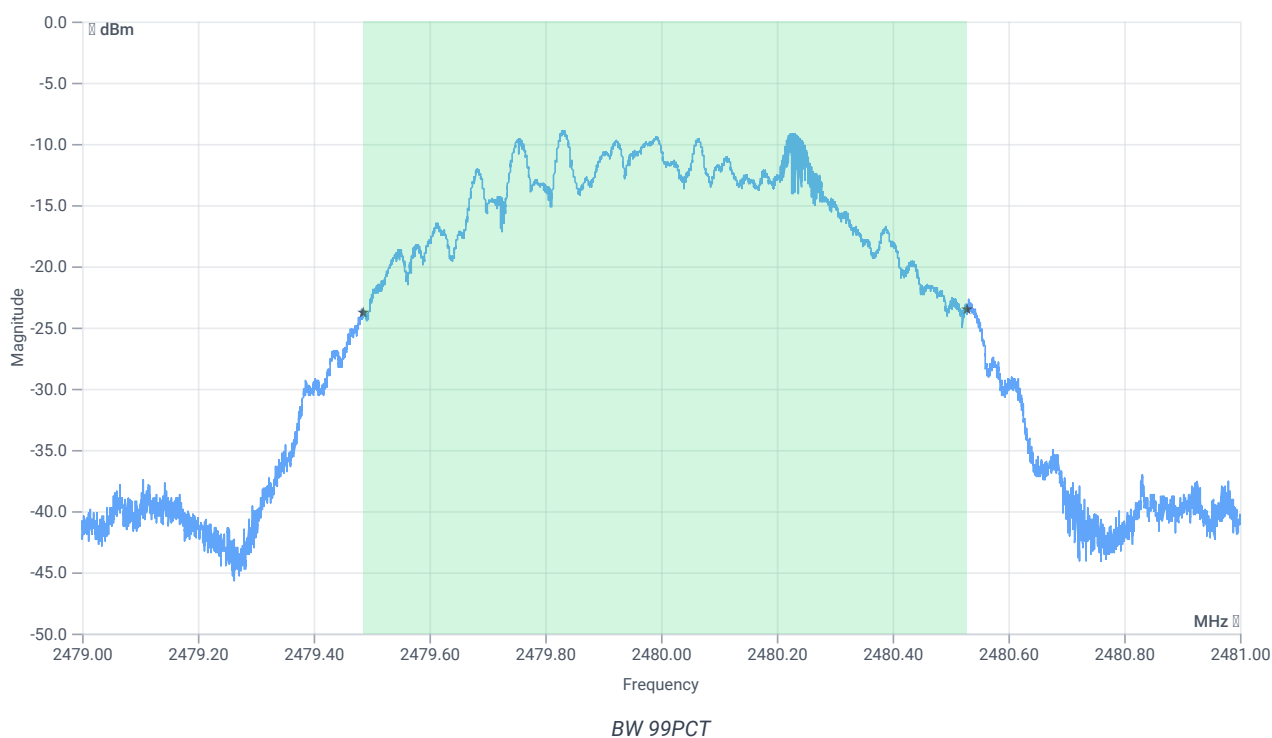
## Test at TX 2480 MHz

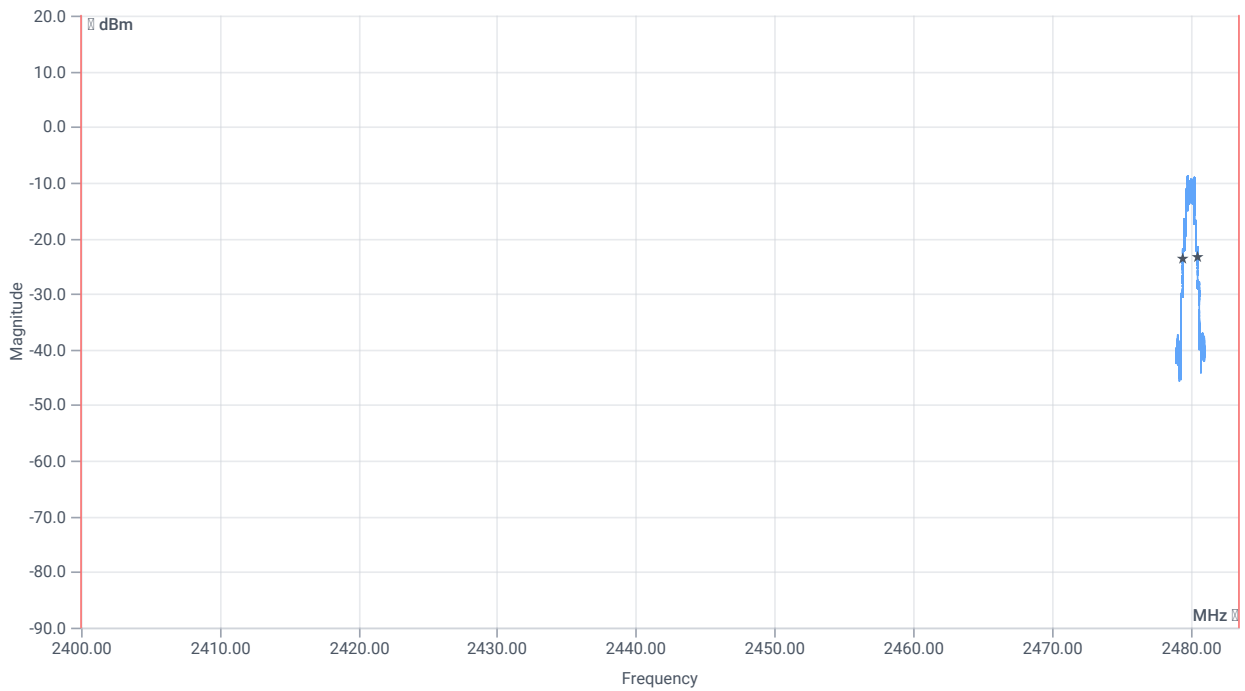
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.55    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2480.200 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 2.45   9.03   10       |
| Start [MHz]   Stop [MHz]                             | 2479.000   2481.000    |
| RBW [MHz]   VBW [MHz]                                | 0.020000   0.100000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

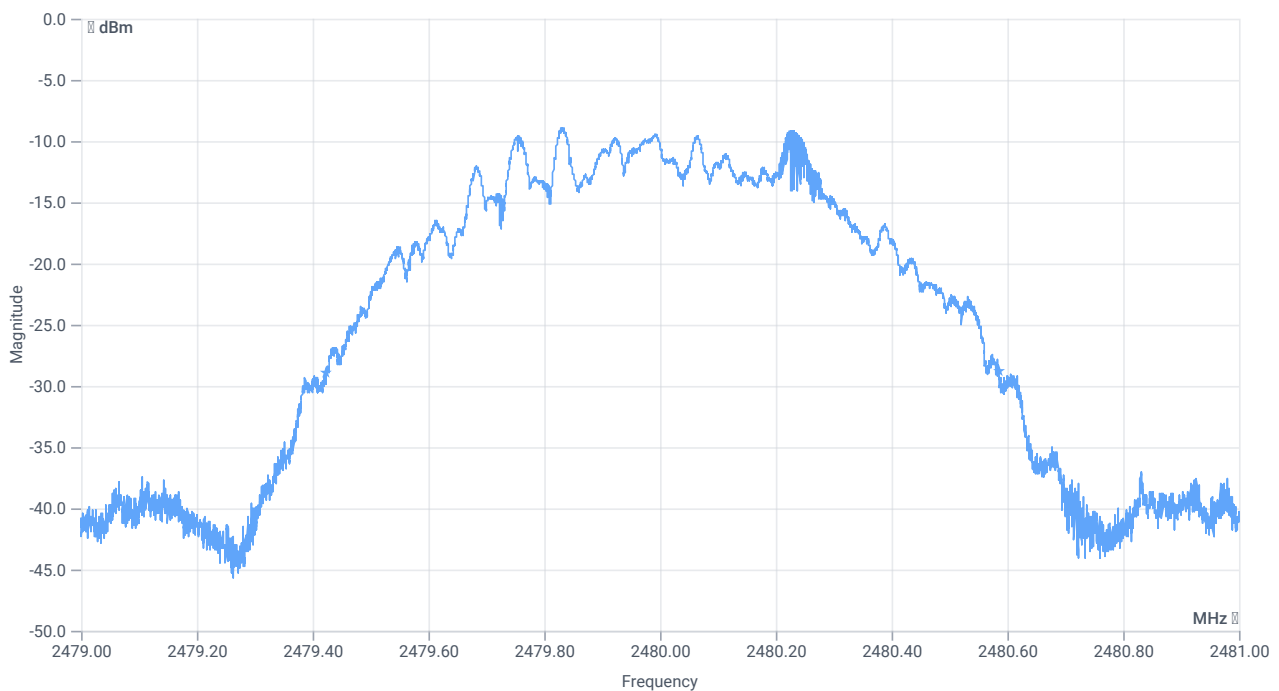




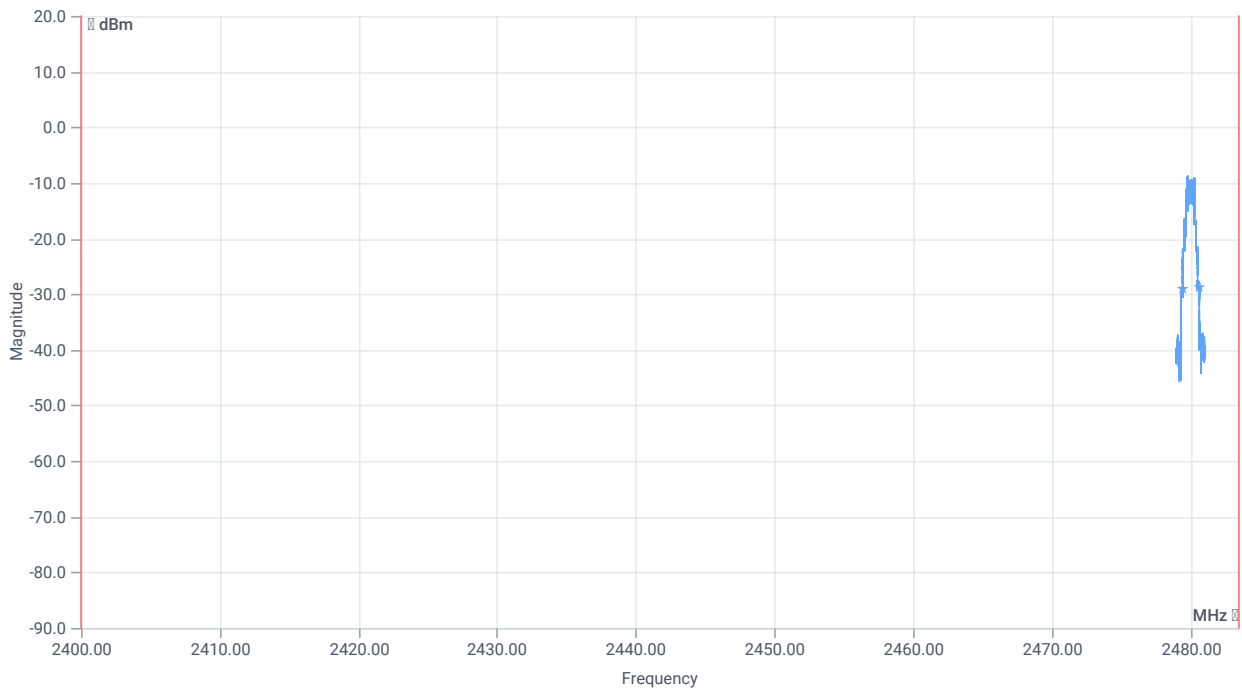
*BW within Band 99PCT*

## RESULT

| DESCRIPTION   | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|---------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | ---         | ---         | 1044.000  | kHz  | INFO    |
| T1 99%        | 2400.000000 | ---         | 2479.4857 | MHz  | PASS    |
| T2 99%        | ---         | 2483.500000 | 2480.5299 | MHz  | PASS    |



BW 20dB



BW within band 20dB

## RESULT

| DESCRIPTION    | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|----------------|-------------|-------------|-----------|------|---------|
| Bandwidth 20dB | ---         | ---         | 1161      | kHz  | INFO    |
| T1 20dB        | 2400.000000 | ---         | 2479.4236 | MHz  | PASS    |
| T2 20dB        | ---         | 2483.500000 | 2480.5846 | MHz  | PASS    |

Verdict

PASS

## FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps

### References

|                                               |                                                                                                                  |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| TC start                                      | 13.02.2025 14:55:41                                                                                              |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                                                                                        |
| System version                                | 5.1.6.4                                                                                                          |
| Standard   Version                            | FCC 15.247   NI                                                                                                  |
| Method                                        | IF DTS then 8.5 DTS emissions in non-restricted frequency bands:<br>Subclause 11.11 of ANSI C63.10 is applicable |
| Description                                   | FCC 15.247 TX emissions conducted DTS - BT LE 1 Msps                                                             |
| Information                                   |                                                                                                                  |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 1 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2402 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2480 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |
| Full path type                                   | EUT_SA_GEN_SIG         |

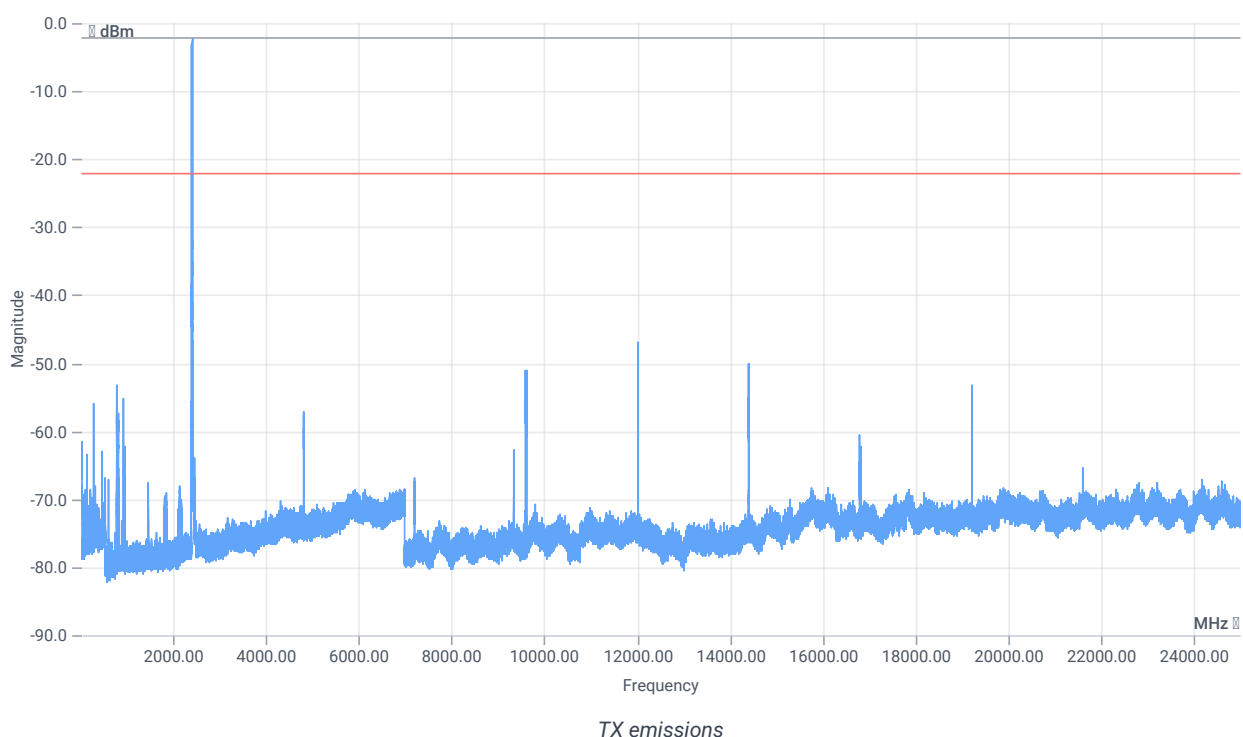
## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

## Test at TX 2402 MHz

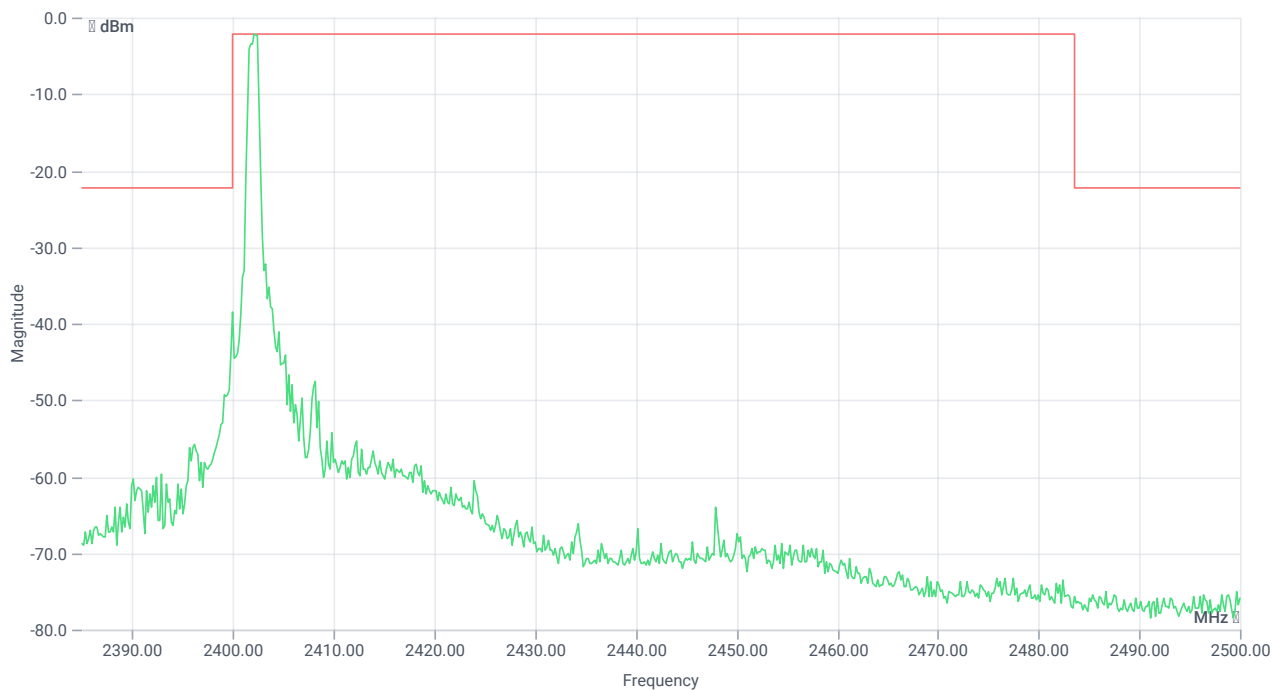
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.42    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2402.300 | MHz  | INFO    |



### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | -2.42   17.03   0     |
| Start [MHz]   Stop [MHz]                             | 24780.000   25000.000 |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 200   25   1501   SWE |



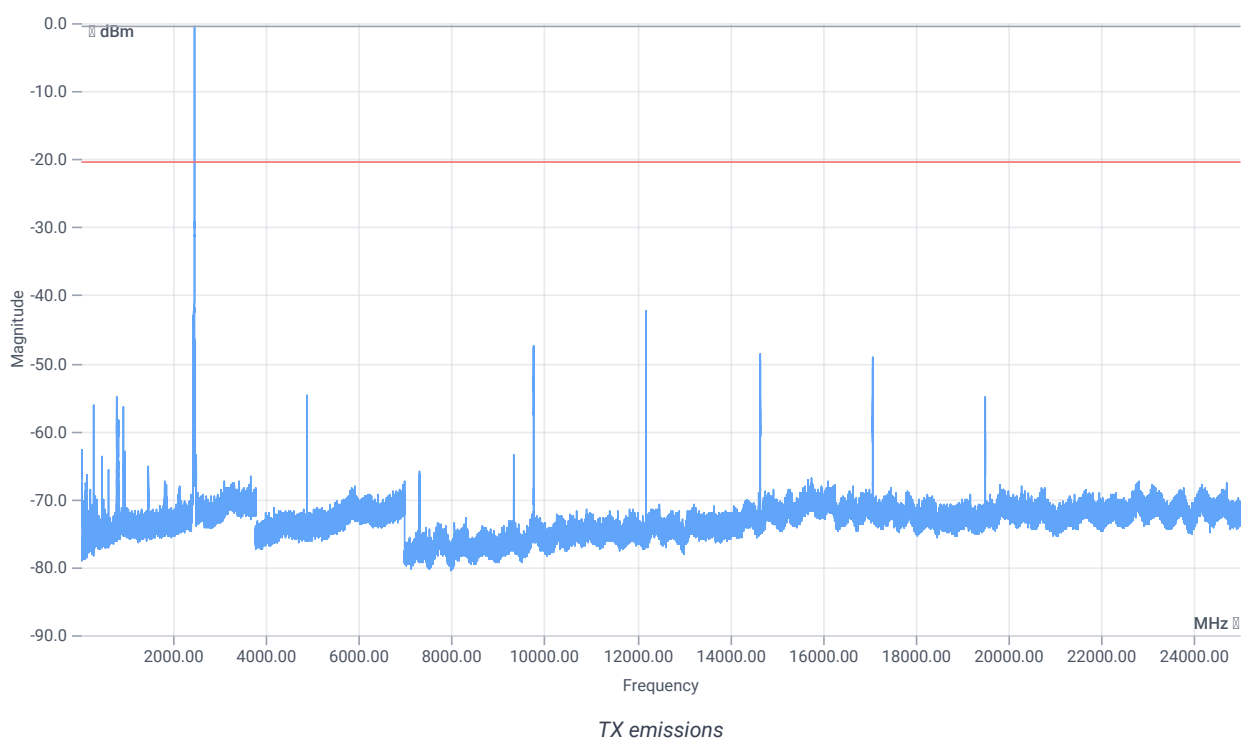
## RESULT

| DESCRIPTION                         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------------|-------------|-------------|----------|------|---------|
| Reference @ 2402.17 MHz             | ---         | ---         | -2.24    | dBm  | INFO    |
| No peaks detected                   | ---         | ---         |          |      | PASS    |
| Lowest margin to limit 2399.833 MHz | 0           | ---         | 21.57    | dB   | INFO    |

## Test at TX 2440 MHz

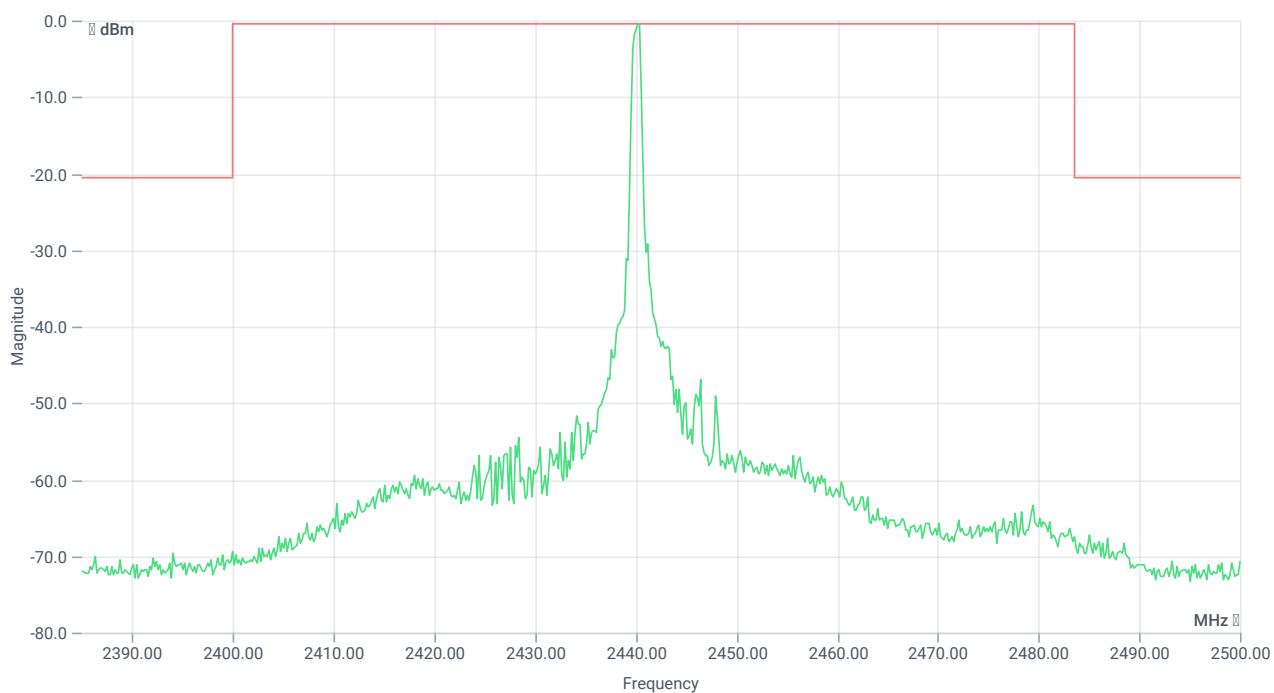
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.14    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.300 | MHz  | INFO    |



### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | -0.14   17.03   0     |
| Start [MHz]   Stop [MHz]                             | 24780.000   25000.000 |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 200   25   1501   SWE |



TX emissions band zoomed

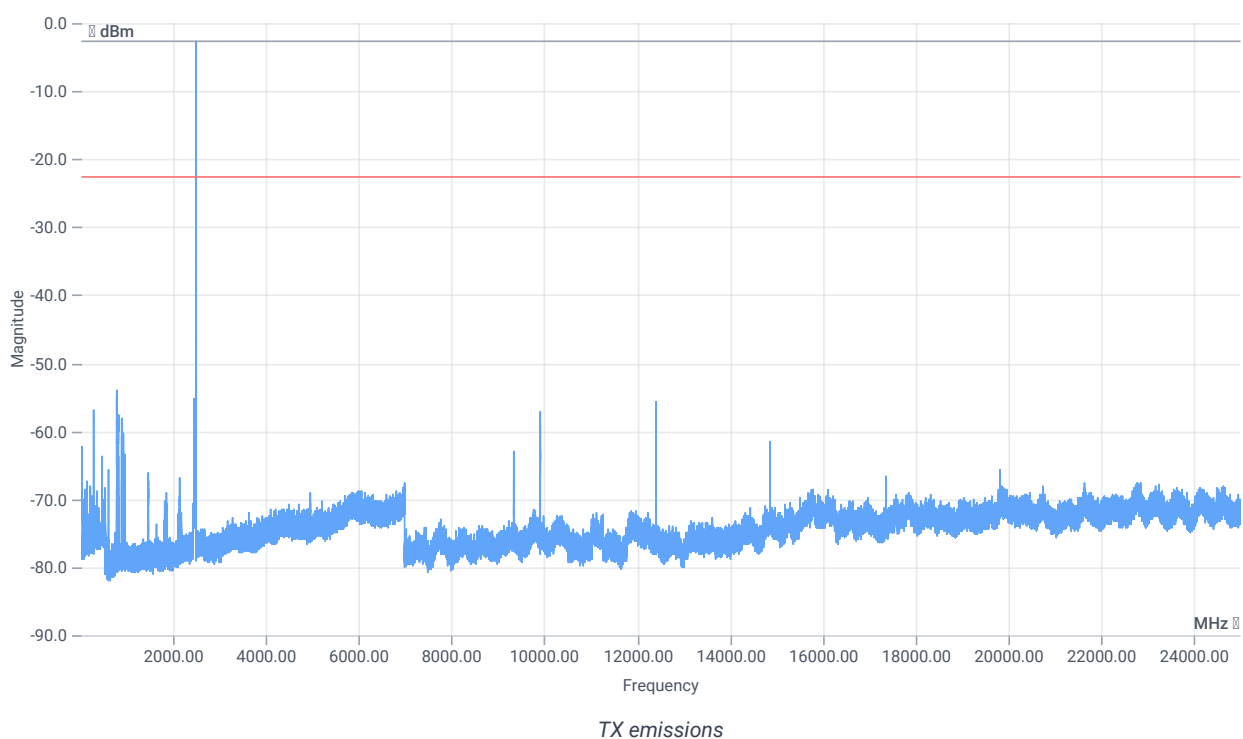
## RESULT

| DESCRIPTION                          | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|--------------------------------------|-------------|-------------|----------|------|---------|
| Reference @ 2440.17 MHz              | ---         | ---         | -0.46    | dBm  | INFO    |
| No peaks detected                    | ---         | ---         |          |      | PASS    |
| Lowest margin to limit 12201.167 MHz | 0           | ---         | 21.82    | dB   | INFO    |

## Test at TX 2480 MHz

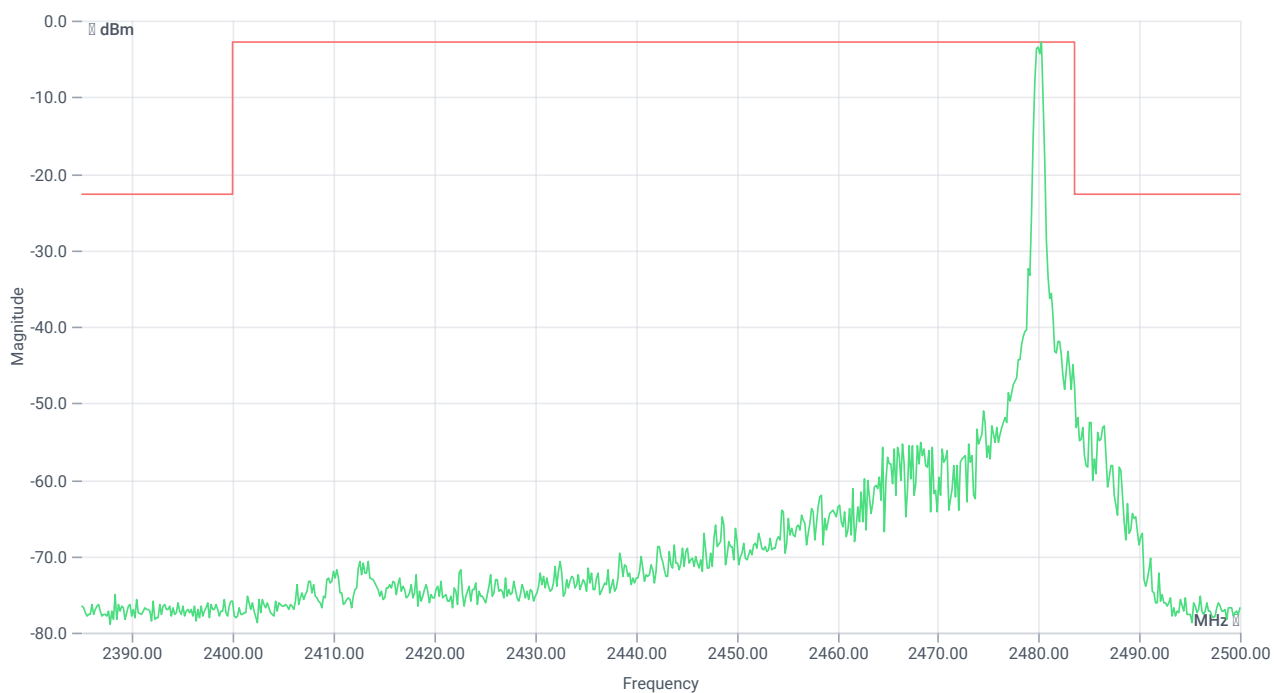
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -2.63    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2480.200 | MHz  | INFO    |



### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | -2.63   17.03   0     |
| Start [MHz]   Stop [MHz]                             | 24780.000   25000.000 |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 200   25   1501   SWE |



## RESULT

| DESCRIPTION                         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------------|-------------|-------------|----------|------|---------|
| Reference @ 2480.33 MHz             | ---         | ---         | -2.72    | dBm  | INFO    |
| No peaks detected                   | ---         | ---         |          |      | PASS    |
| Lowest margin to limit 2483.833 MHz | 0           | ---         | 29.18    | dB   | INFO    |

Verdict

PASS

## FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps

### References

|                                               |                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------|
| TC start                                      | 13.02.2025 15:35:37                                               |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                                         |
| System version                                | 5.1.6.4                                                           |
| Standard   Version                            | FCC 15.247   NI                                                   |
| Method                                        | DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth     |
| Description                                   | FCC 15.247 Maximum peak output power conducted DTS - BT LE 2 Msps |
| Information                                   |                                                                   |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 2 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2404 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2478 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |

## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path type | EUT_SA_GEN_SIG                            |
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

## Test at TX 2404 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -1.18    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2404.500 | MHz  | INFO    |

### READ SA SETTINGS:

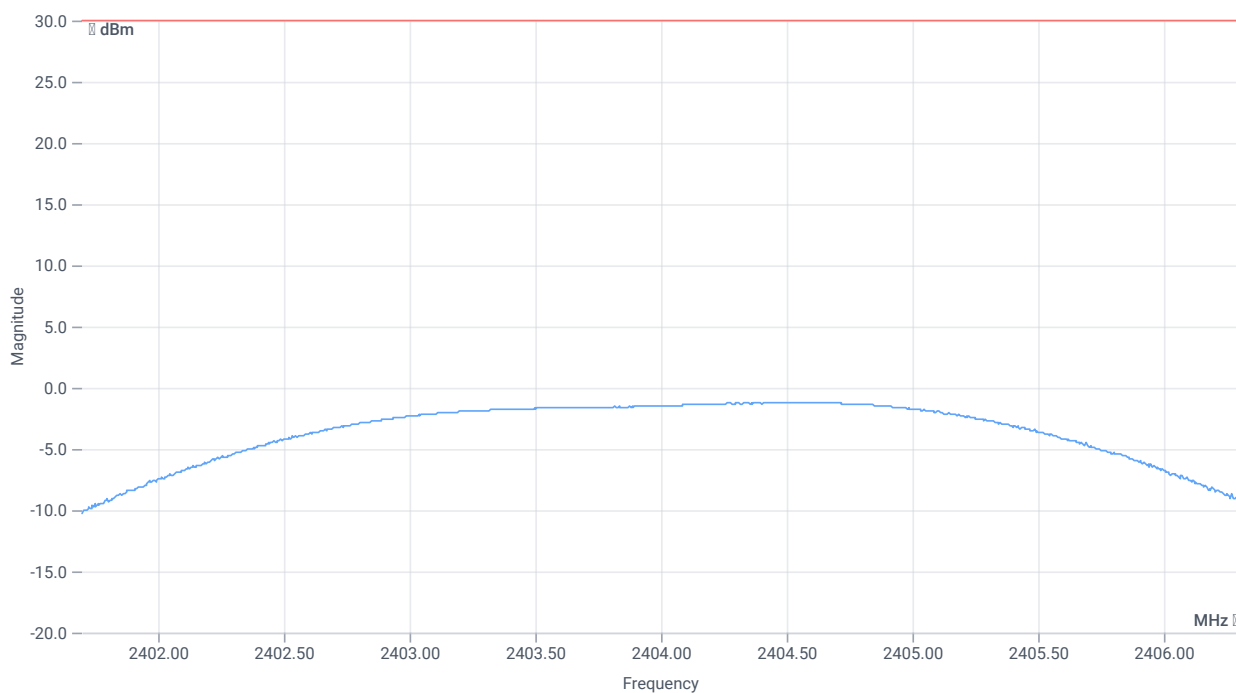
|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 3.82   8.86   10       |
| Start [MHz]   Stop [MHz]                             | 2401.700   2406.300    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

### DTS bandwidth

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | ---         | ---         | 1132     | kHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 8.82   8.86   15      |
| Start [MHz]   Stop [MHz]                             | 2401.700   2406.300   |
| RBW [MHz]   VBW [MHz]                                | 2.000000   5.000000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 50   200   1001   SWE |



Peak output power

## RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | 30.00       | -1.23    | dBm  | PASS    |
| Peak power        | ---         | 1000        | 0.753356 | mW   | PASS    |
| Frequency at peak | ---         | ---         | 2404.597 | MHz  | INFO    |

## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.10    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.500 | MHz  | INFO    |

### READ SA SETTINGS:

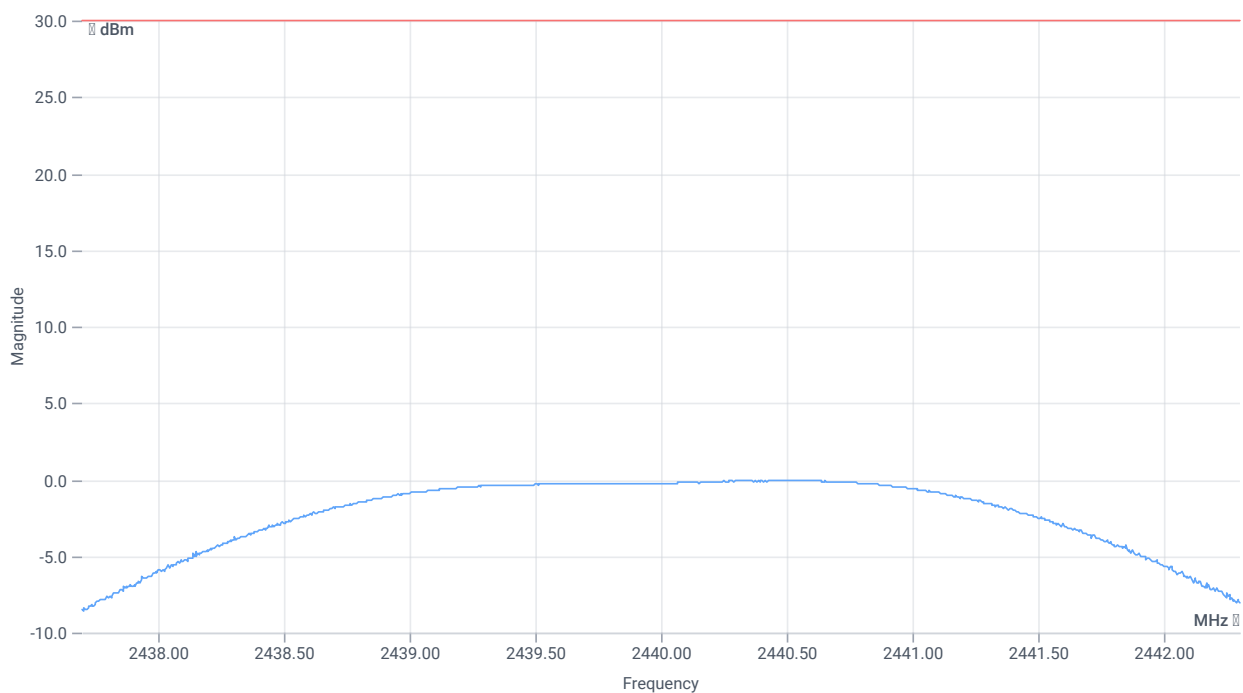
|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.90   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2437.700   2442.300    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

### DTS bandwidth

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | ---         | ---         | 1136     | kHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 9.90   8.94   20      |
| Start [MHz]   Stop [MHz]                             | 2437.700   2442.300   |
| RBW [MHz]   VBW [MHz]                                | 2.000000   5.000000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 50   200   1001   SWE |



Peak output power

## RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | 30.00       | -0.08    | dBm  | PASS    |
| Peak power        | ---         | 1000        | 0.981748 | mW   | PASS    |
| Frequency at peak | ---         | ---         | 2440.322 | MHz  | INFO    |

## Test at TX 2478 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | 4.03     | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2478.500 | MHz  | INFO    |

### READ SA SETTINGS:

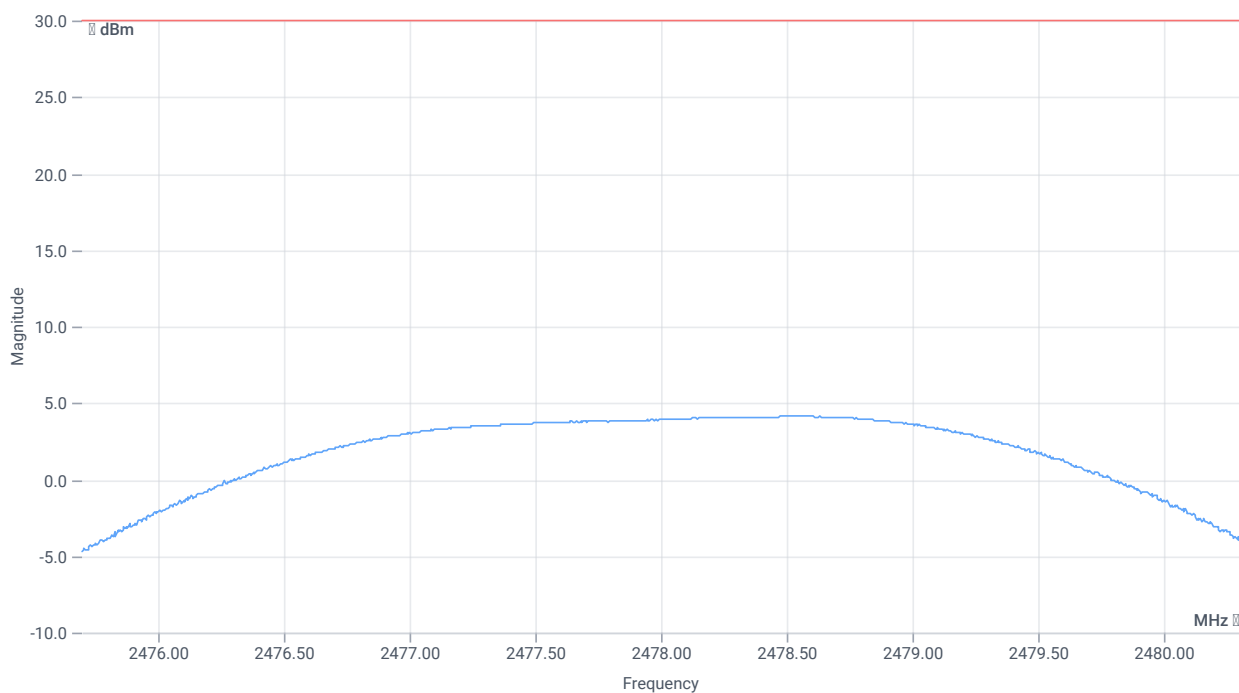
|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 9.03   9.03   20       |
| Start [MHz]   Stop [MHz]                             | 2475.700   2480.300    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

### DTS bandwidth

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | ---         | ---         | 1128     | kHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 14.03   9.03   25     |
| Start [MHz]   Stop [MHz]                             | 2475.700   2480.300   |
| RBW [MHz]   VBW [MHz]                                | 2.000000   5.000000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 50   200   1001   SWE |



Peak output power

## RESULT

| DESCRIPTION       | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------|-------------|-------------|----------|------|---------|
| Peak power        | ---         | 30.00       | 4.12     | dBm  | PASS    |
| Peak power        | ---         | 1000        | 2.58226  | mW   | PASS    |
| Frequency at peak | ---         | ---         | 2478.561 | MHz  | INFO    |

Verdict

PASS

## FCC 15.247 # Bandwidth 6dB DTS ~ BT LE 2 Msps

### References

|                                               |                                             |
|-----------------------------------------------|---------------------------------------------|
| TC start                                      | 13.02.2025 15:37:48                         |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                   |
| System version                                | 5.1.6.4                                     |
| Standard   Version                            | FCC 15.247   NI                             |
| Method                                        |                                             |
| Description                                   | FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msps |
| Information                                   |                                             |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                                           |
|--------------------------------------------------|-------------------------------------------|
| Technology to test                               | BT LE 2 Msps                              |
| EUT port                                         | EUT1                                      |
| Temperature                                      | nom                                       |
| Voltage                                          | nom                                       |
| Frequency low to test                            | True   Freq [MHz] 2404                    |
| Frequency mid to test                            | True   Freq [MHz] 2440                    |
| Frequency high to test                           | True   Freq [MHz] 2478                    |
| Auto control enabled power supply   Climatic Box | No   No                                   |
| Additional path loss [dB]                        | 0.7                                       |
| Full path type                                   | EUT_SA_GEN_SIG                            |
| Full path name                                   | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |

## Test Parameter

---

|             |                                     |
|-------------|-------------------------------------|
| Switch bits | 00010001:00010001:00000000:00000001 |
|-------------|-------------------------------------|

---

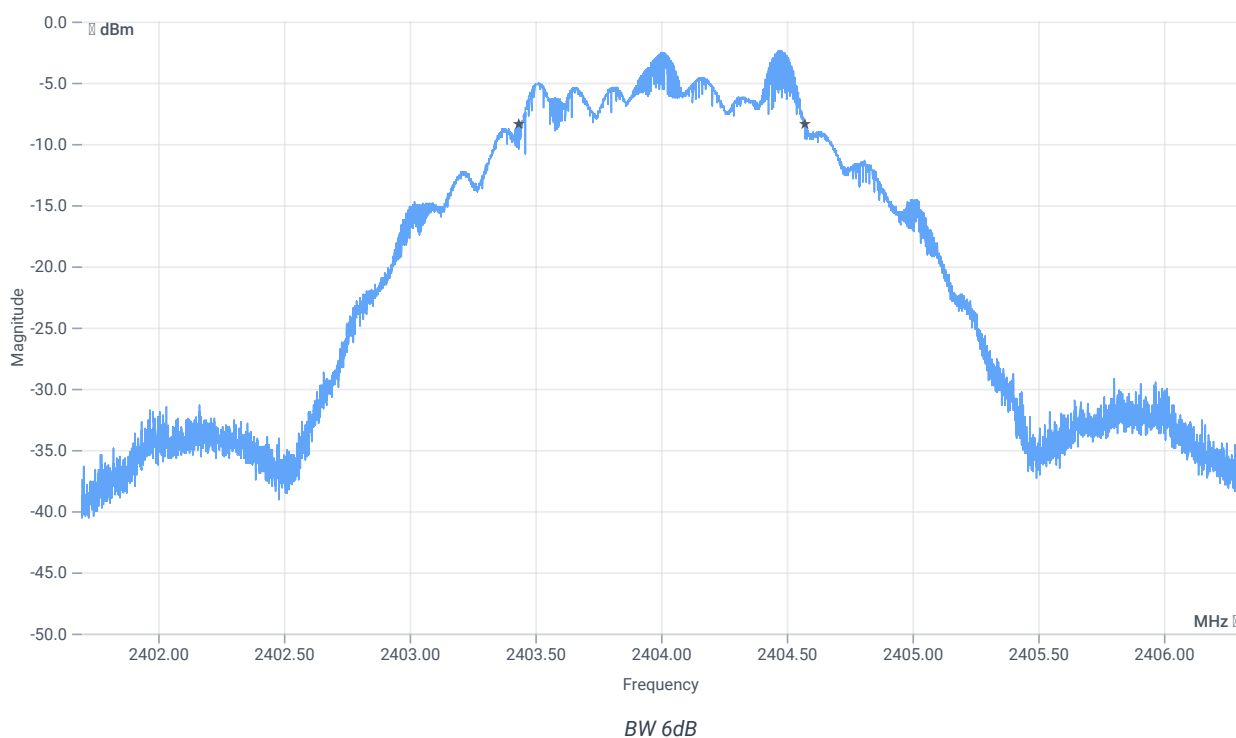
## Test at TX 2404 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -1.18    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2404.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 3.82   8.86   10       |
| Start [MHz]   Stop [MHz]                             | 2401.700   2406.300    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |



### RESULT

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | 500         | ---         | 1135     | kHz  | PASS    |

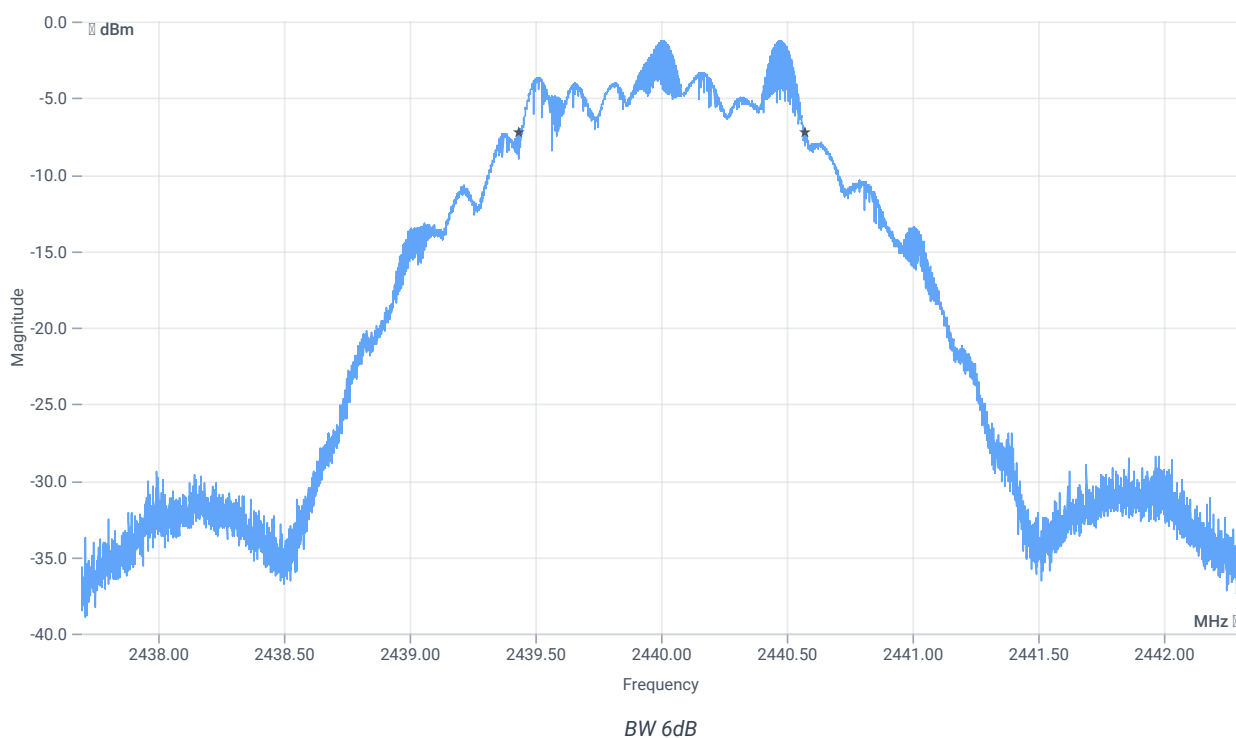
## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.12    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.88   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2437.700   2442.300    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |



### RESULT

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | 500         | ---         | 1139     | kHz  | PASS    |

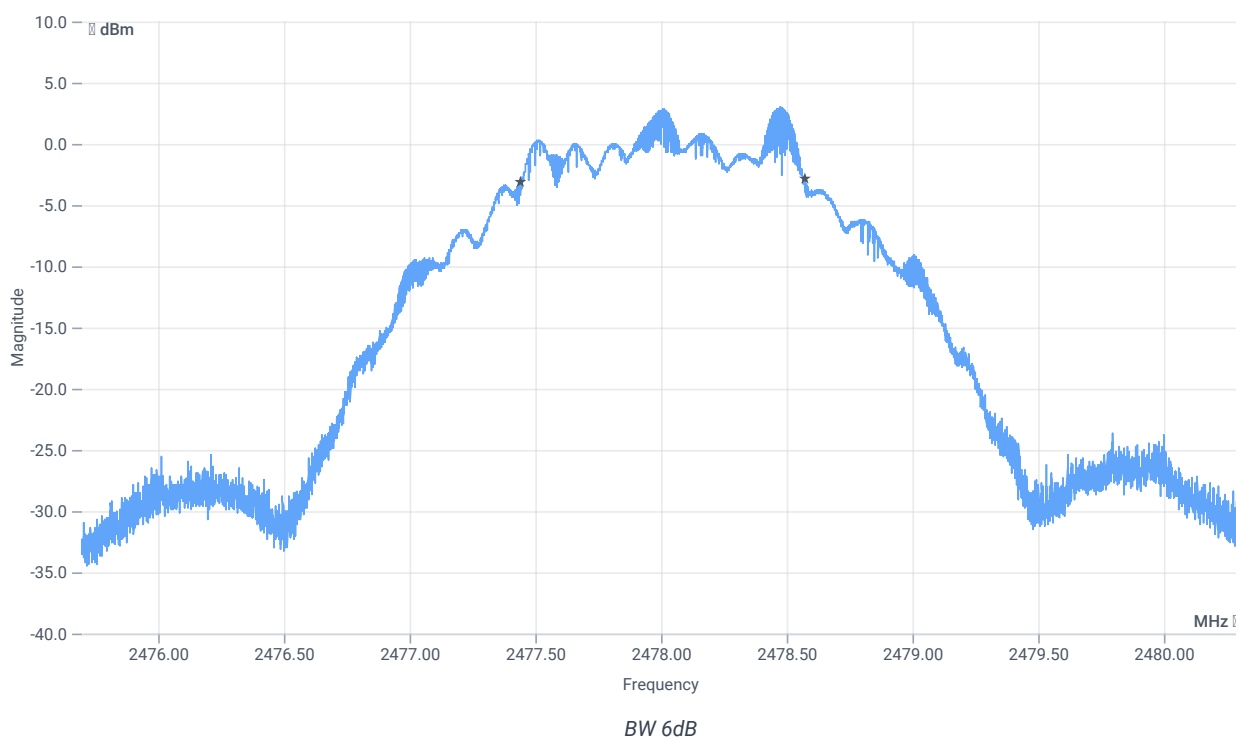
## Test at TX 2478 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | 4.10     | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2478.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 9.10   9.03   20       |
| Start [MHz]   Stop [MHz]                             | 2475.700   2480.300    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |



### RESULT

| DESCRIPTION         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|---------------------|-------------|-------------|----------|------|---------|
| DTS bandwidth (6dB) | 500         | ---         | 1126     | kHz  | PASS    |

#### Verdict

PASS

## FCC 15.247 # Peak psd DTS ~ BT LE 2 Msps

### References

|                                               |                                                                                                            |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------|
| TC start                                      | 13.02.2025 15:39:21                                                                                        |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                                                                                  |
| System version                                | 5.1.6.4                                                                                                    |
| Standard   Version                            | FCC 15.247   NI                                                                                            |
| Method                                        | DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission |
| Description                                   | FCC 15.247 Peak psd DTS - BT LE 2 Msps                                                                     |
| Information                                   |                                                                                                            |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 2 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2404 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2478 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |
| Full path type                                   | EUT_SA_GEN_SIG         |

## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

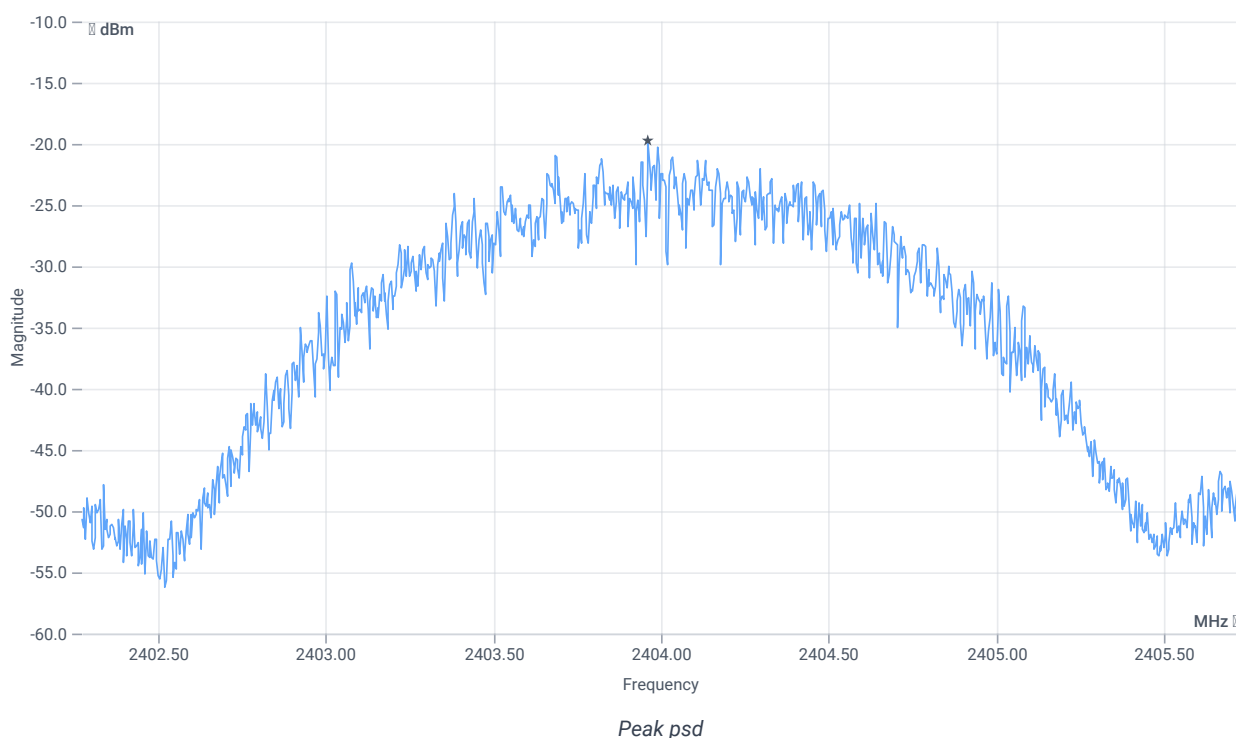
## Test at TX 2404 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -1.27    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2404.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 3.73   8.86   10       |
| Start [MHz]   Stop [MHz]                             | 2402.275   2405.725    |
| RBW [MHz]   VBW [MHz]                                | 0.003000   0.010000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   20   1001   SWE |



### RESULT

| DESCRIPTION | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT     | VERDICT |
|-------------|-------------|-------------|----------|----------|---------|
| Peak psd    | ---         | 8           | -19.72   | dBm/3KHz | PASS    |

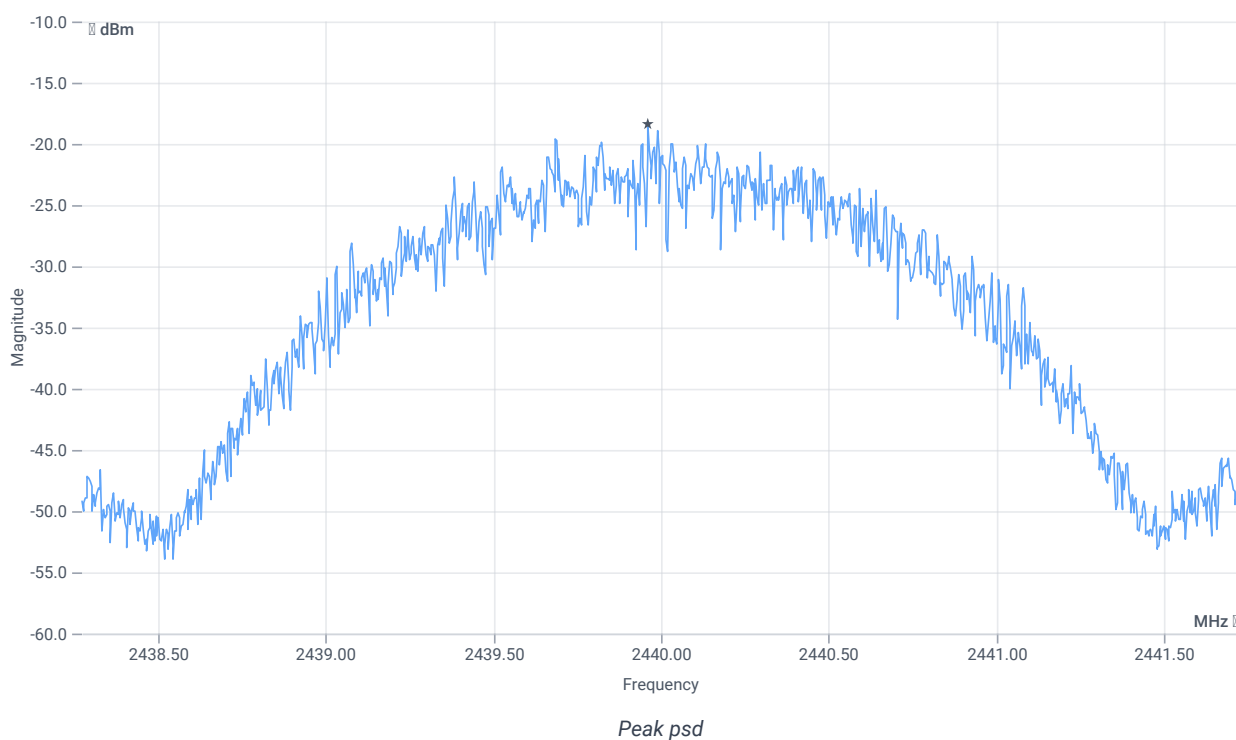
## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.10    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.90   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2438.275   2441.725    |
| RBW [MHz]   VBW [MHz]                                | 0.003000   0.010000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   20   1001   SWE |



### RESULT

| DESCRIPTION | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT     | VERDICT |
|-------------|-------------|-------------|----------|----------|---------|
| Peak psd    | ---         | 8           | -18.35   | dBm/3KHz | PASS    |

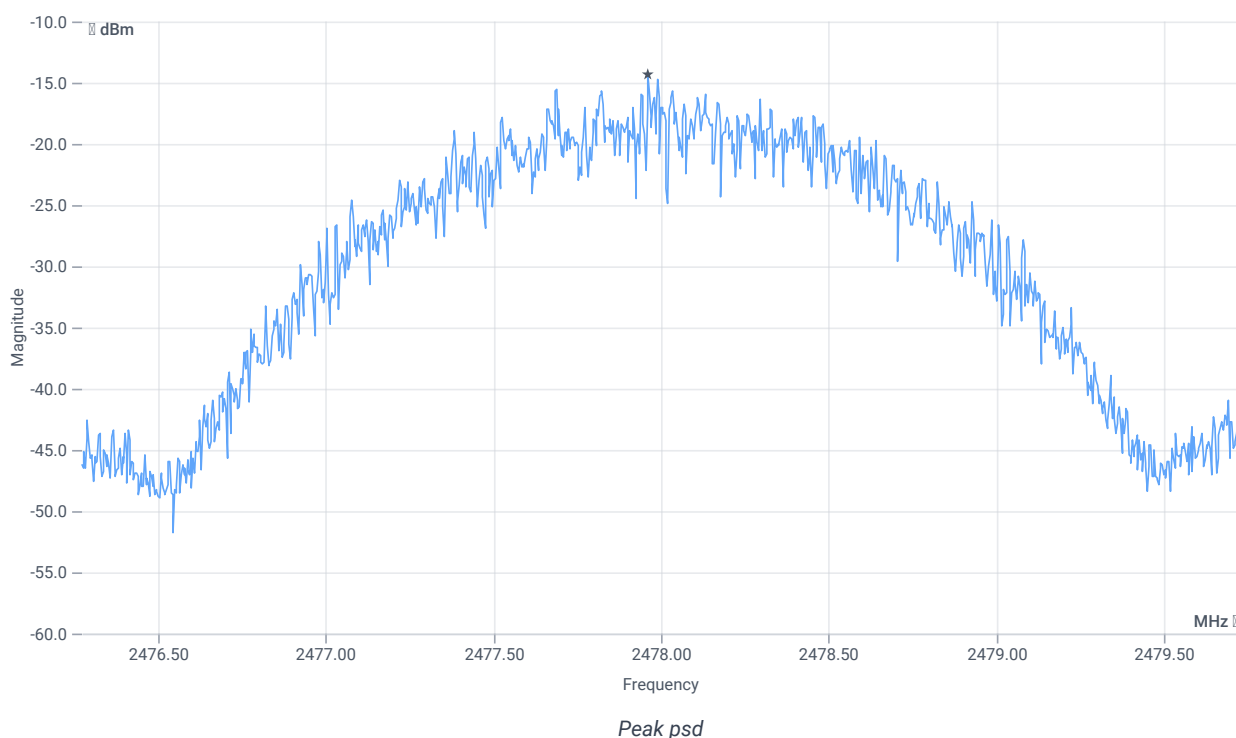
## Test at TX 2478 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | 4.11     | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2478.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 9.11   9.03   20       |
| Start [MHz]   Stop [MHz]                             | 2476.275   2479.725    |
| RBW [MHz]   VBW [MHz]                                | 0.003000   0.010000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 1000   20   1001   SWE |



### RESULT

| DESCRIPTION | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT     | VERDICT |
|-------------|-------------|-------------|----------|----------|---------|
| Peak psd    | ---         | 8           | -14.27   | dBm/3KHz | PASS    |

#### Verdict

PASS

# FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ BT LE 2 Msps

## References

|                                               |                                                    |
|-----------------------------------------------|----------------------------------------------------|
| TC start                                      | 13.02.2025 15:41:21                                |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                          |
| System version                                | 5.1.6.4                                            |
| Standard   Version                            | FCC 15.247, ISED RSS247   NI                       |
| Method                                        |                                                    |
| Description                                   | FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps |
| Information                                   |                                                    |

## EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

## Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

## Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 2 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2404 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2478 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |
| Full path type                                   | EUT_SA_GEN_SIG         |

## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

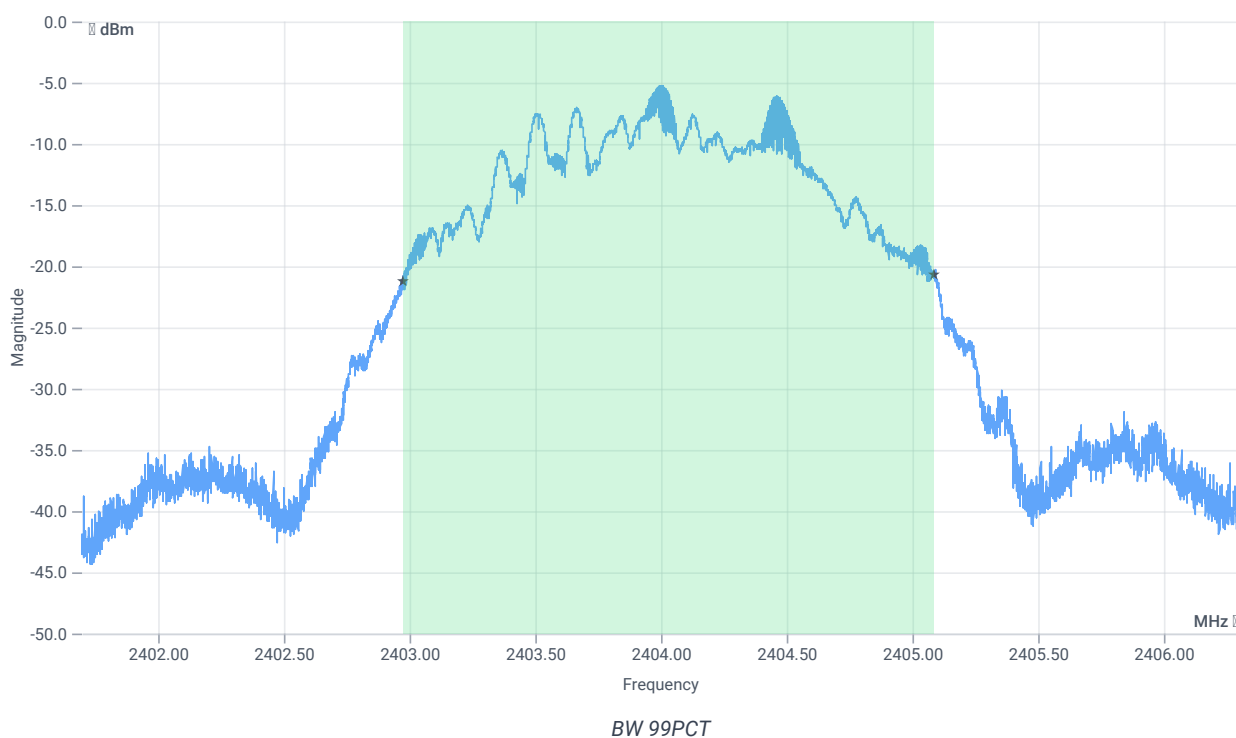
## Test at TX 2404 MHz

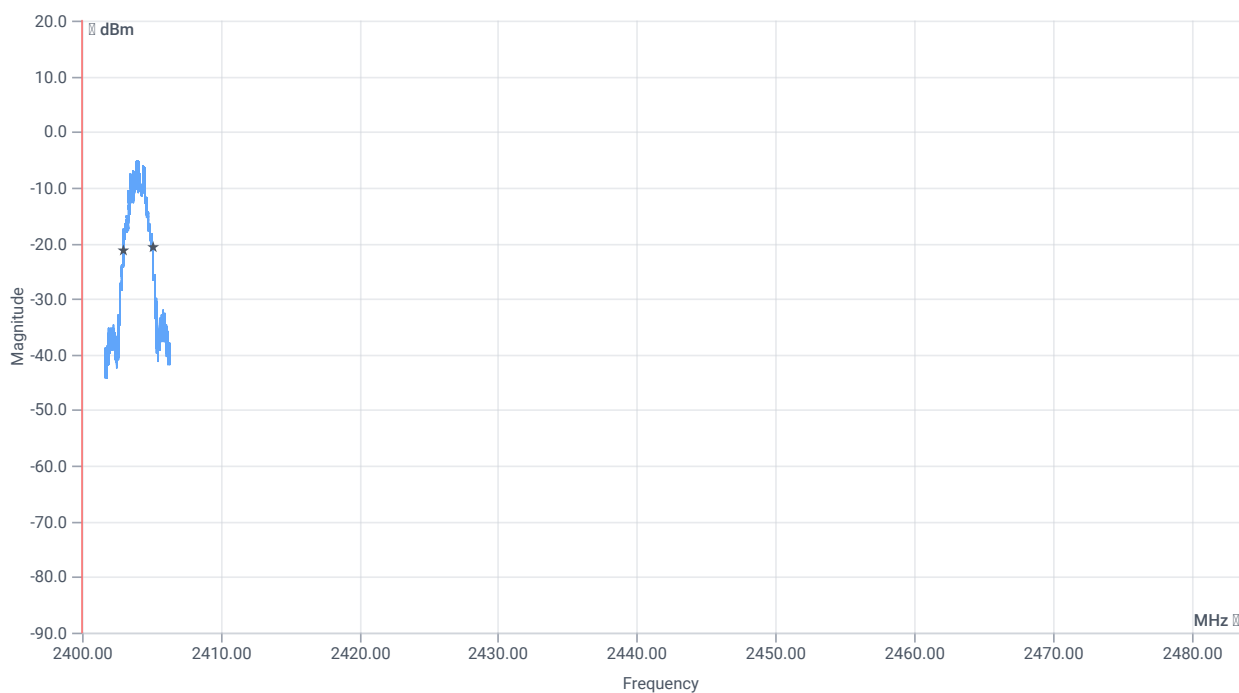
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -1.15    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2404.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 3.85   8.86   10       |
| Start [MHz]   Stop [MHz]                             | 2401.700   2406.300    |
| RBW [MHz]   VBW [MHz]                                | 0.050000   0.200000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

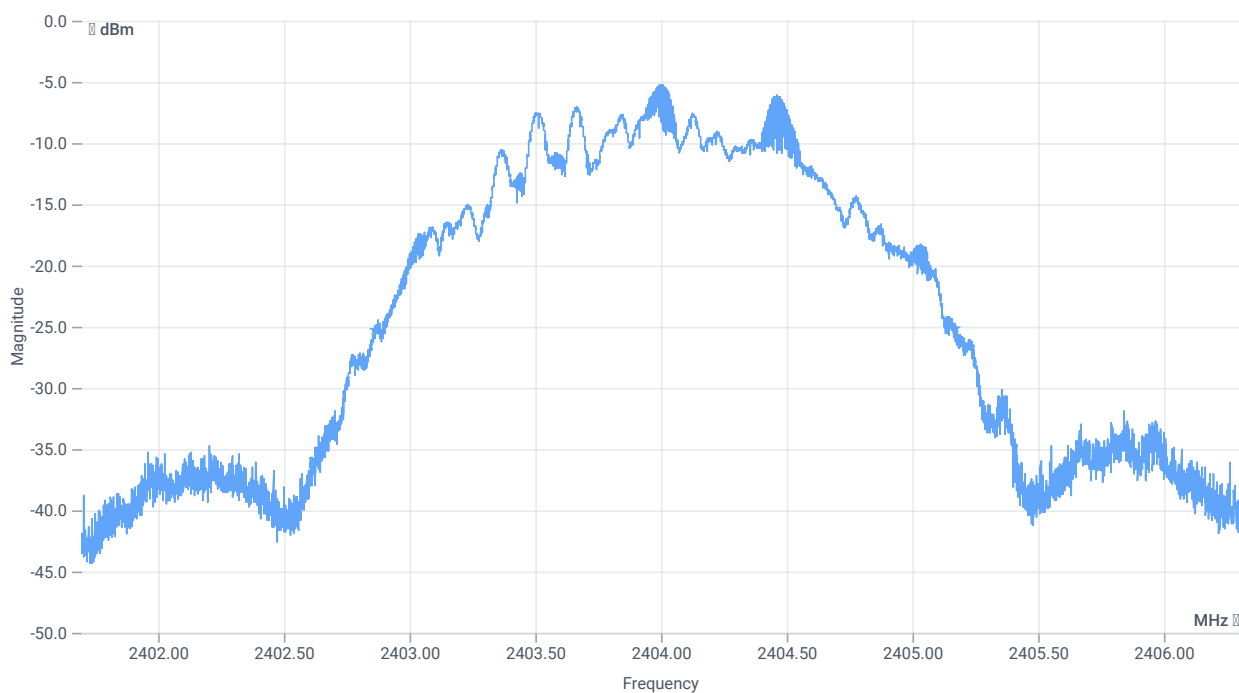




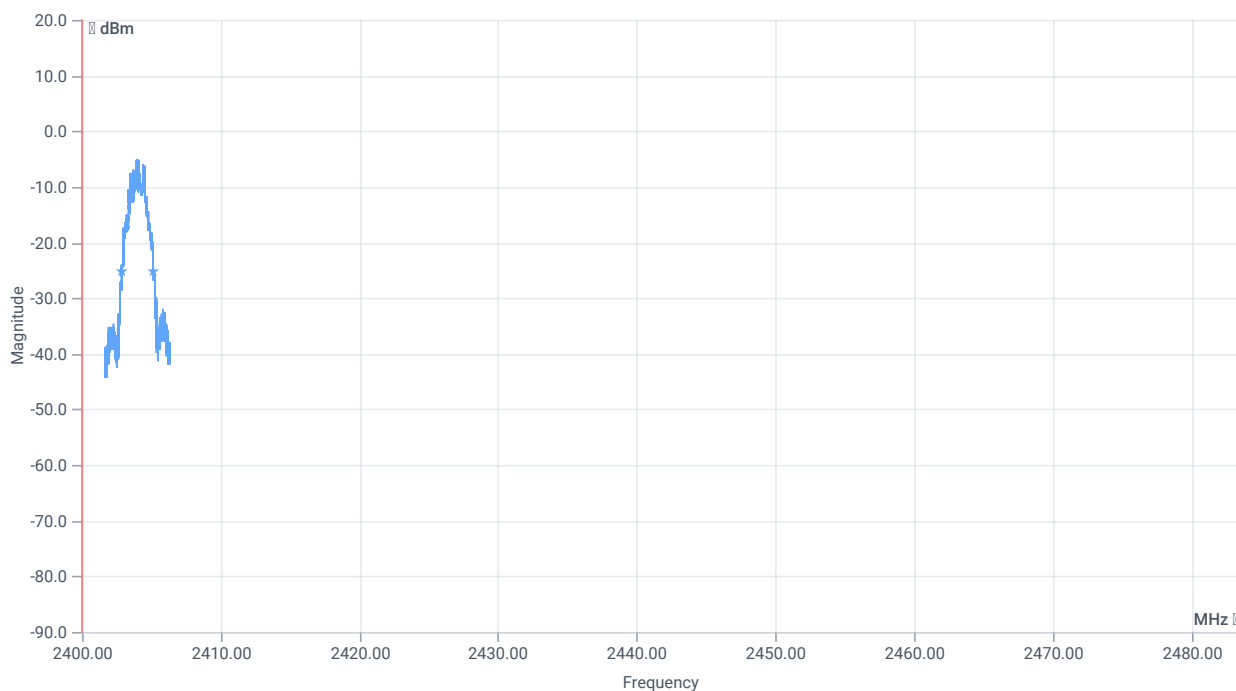
*BW within Band 99PCT*

## RESULT

| DESCRIPTION   | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|---------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | ---         | ---         | 2112.000  | kHz  | INFO    |
| T1 99%        | 2400.000000 | ---         | 2402.9738 | MHz  | PASS    |
| T2 99%        | ---         | 2483.500000 | 2405.0860 | MHz  | PASS    |



BW 20dB



BW within band 20dB

## RESULT

| DESCRIPTION    | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|----------------|-------------|-------------|-----------|------|---------|
| Bandwidth 20dB | ---         | ---         | 2303      | kHz  | INFO    |
| T1 20dB        | 2400.000000 | ---         | 2402.8652 | MHz  | PASS    |
| T2 20dB        | ---         | 2483.500000 | 2405.1679 | MHz  | PASS    |

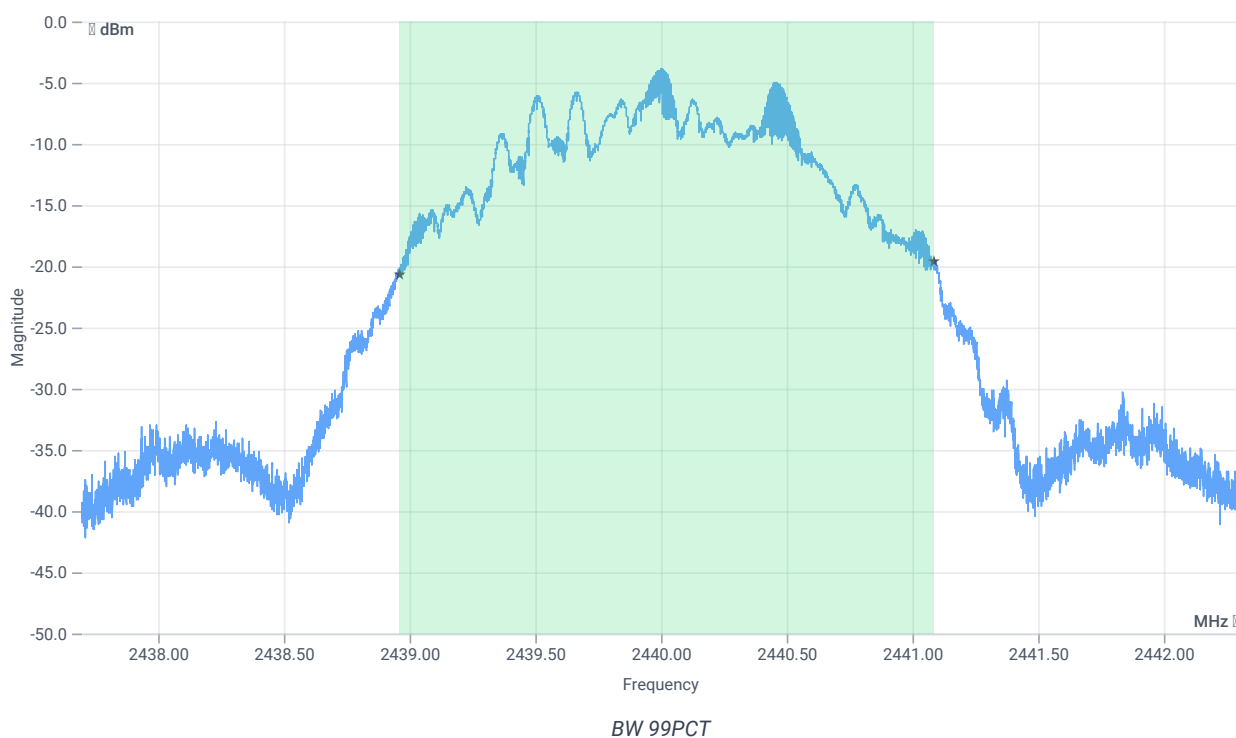
## Test at TX 2440 MHz

RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.17    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.83   8.94   15       |
| Start [MHz]   Stop [MHz]                             | 2437.700   2442.300    |
| RBW [MHz]   VBW [MHz]                                | 0.050000   0.200000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

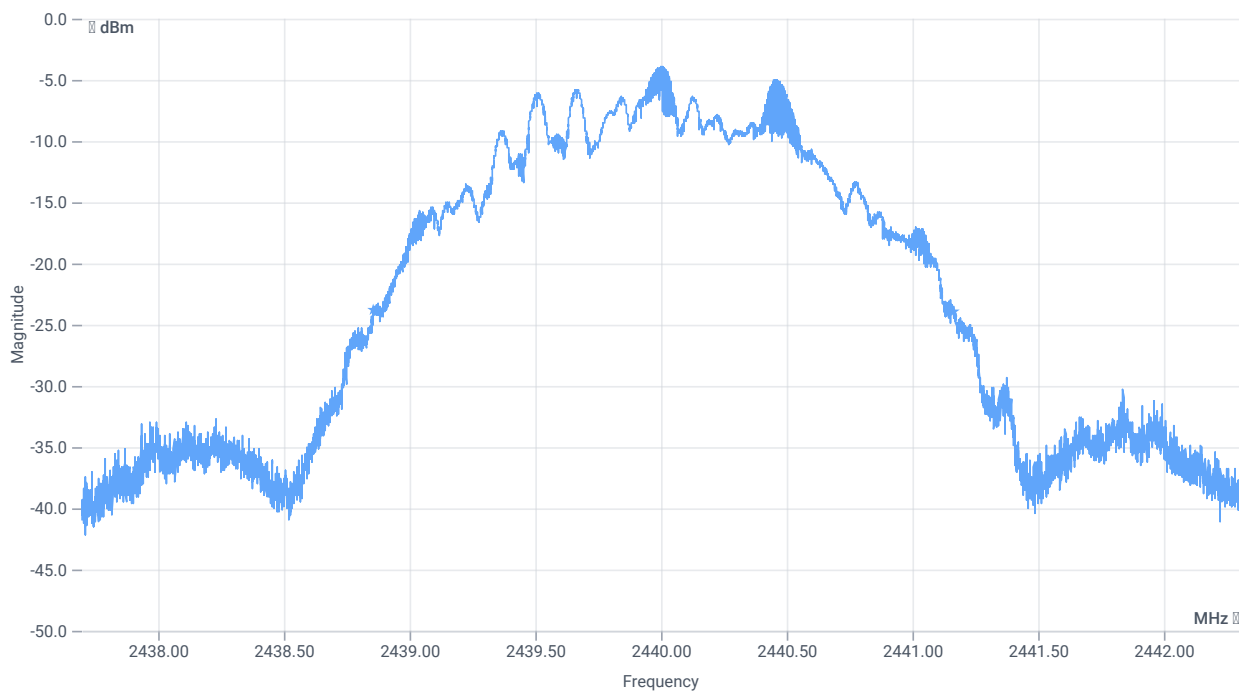




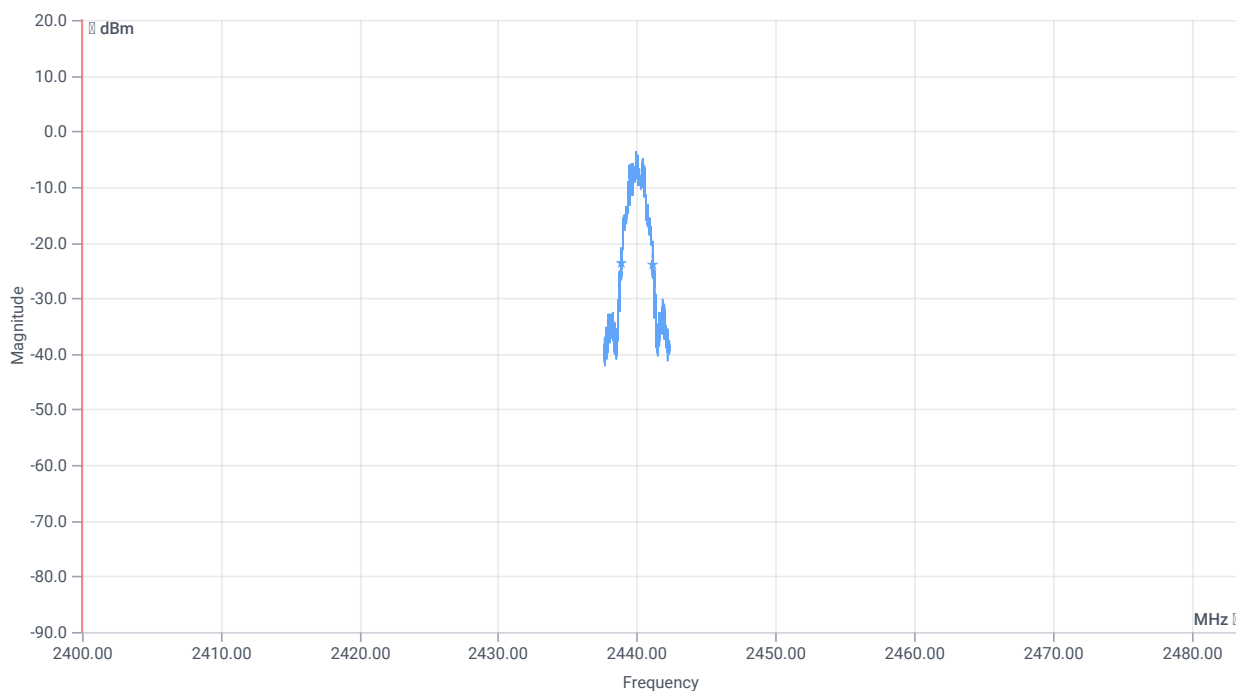
*BW within Band 99PCT*

## RESULT

| DESCRIPTION   | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|---------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | ---         | ---         | 2120.000  | kHz  | INFO    |
| T1 99%        | 2400.000000 | ---         | 2438.9614 | MHz  | PASS    |
| T2 99%        | ---         | 2483.500000 | 2441.0814 | MHz  | PASS    |



BW 20dB



BW within band 20dB

## RESULT

| DESCRIPTION    | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|----------------|-------------|-------------|-----------|------|---------|
| Bandwidth 20dB | ---         | ---         | 2307      | kHz  | INFO    |
| T1 20dB        | 2400.000000 | ---         | 2438.8583 | MHz  | PASS    |
| T2 20dB        | ---         | 2483.500000 | 2441.1656 | MHz  | PASS    |

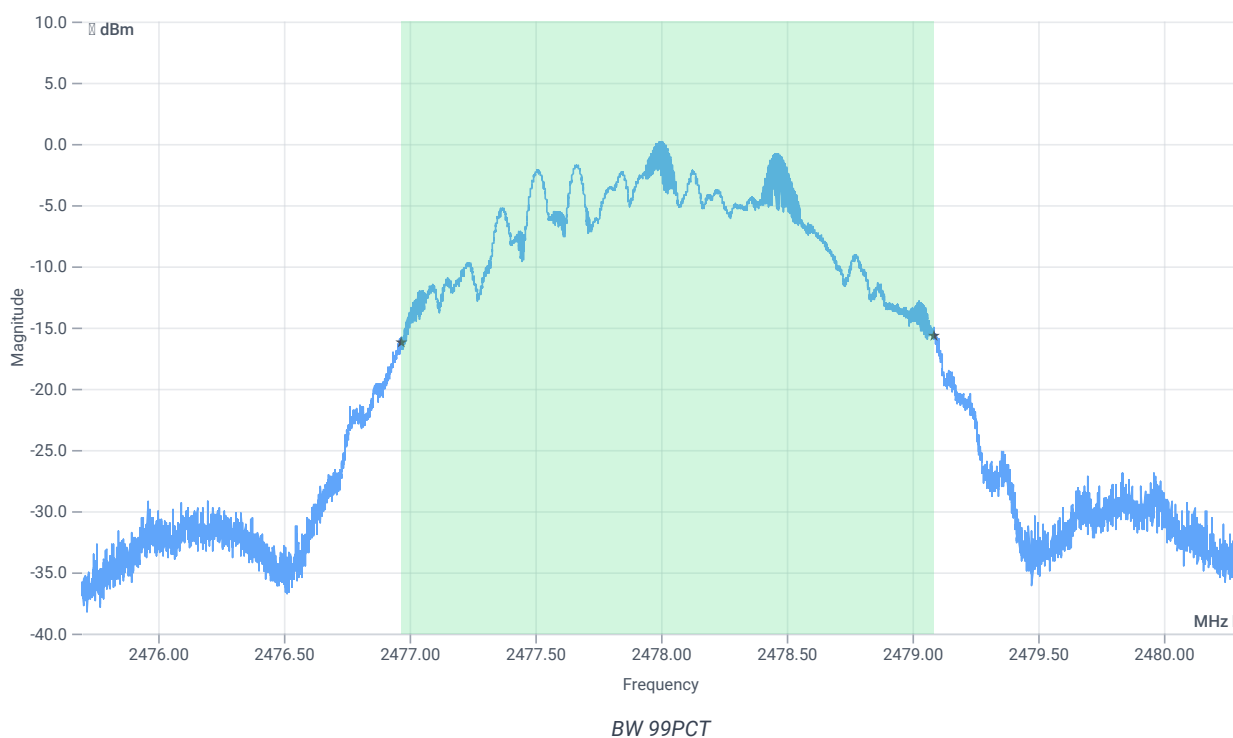
## Test at TX 2478 MHz

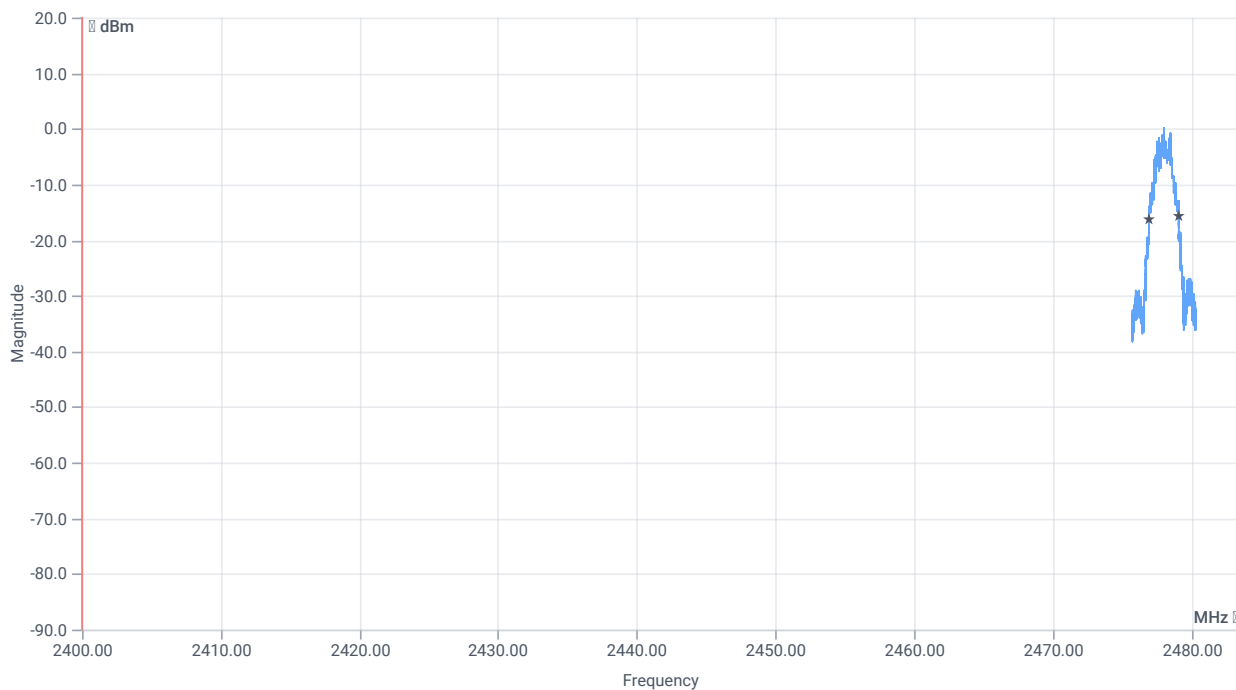
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | 4.11     | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2478.500 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 9.11   9.03   20       |
| Start [MHz]   Stop [MHz]                             | 2475.700   2480.300    |
| RBW [MHz]   VBW [MHz]                                | 0.050000   0.200000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: time [ms]   count   points per Section   type | 50   200   10001   SWE |

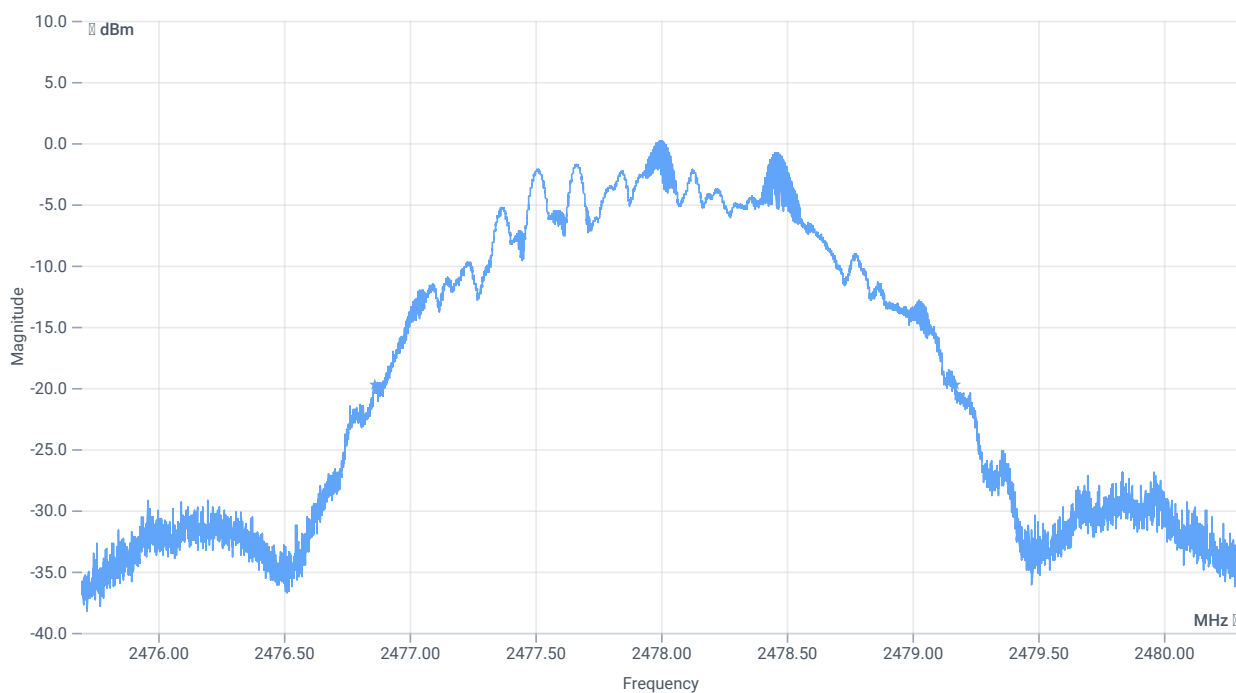




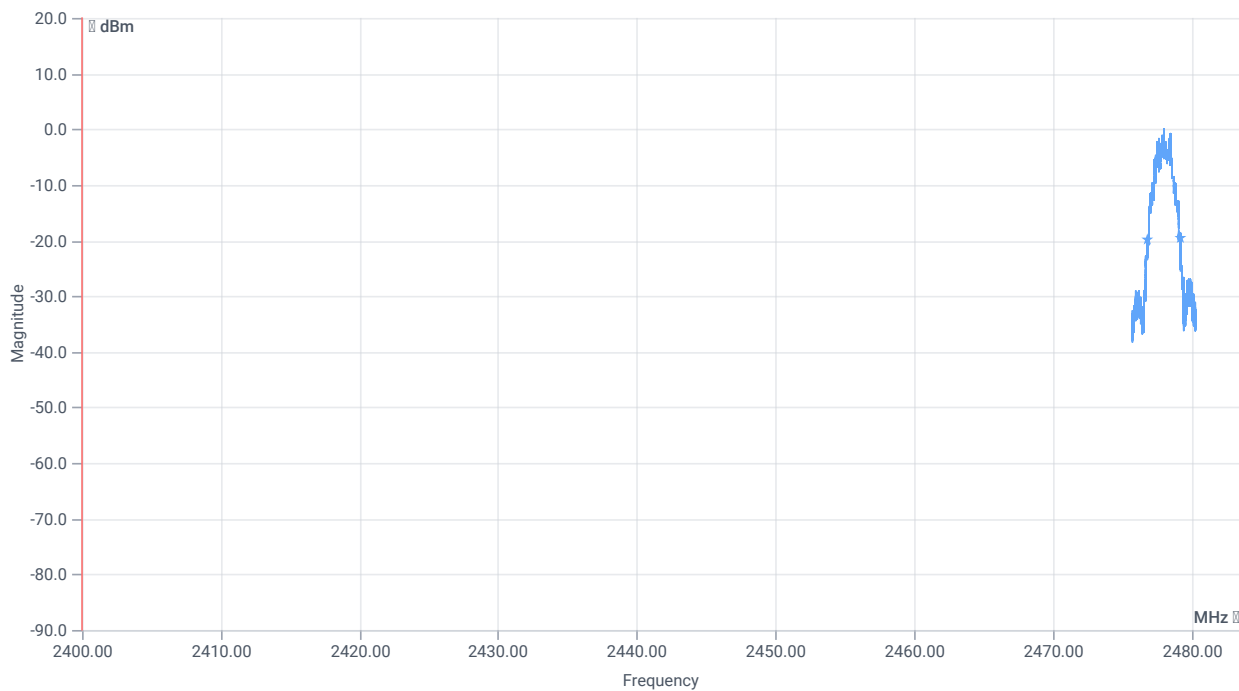
*BW within Band 99PCT*

## RESULT

| DESCRIPTION   | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|---------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | ---         | ---         | 2118.000  | kHz  | INFO    |
| T1 99%        | 2400.000000 | ---         | 2476.9697 | MHz  | PASS    |
| T2 99%        | ---         | 2483.500000 | 2479.0873 | MHz  | PASS    |



BW 20dB



BW within band 20dB

RESULT

| DESCRIPTION    | LOWER LIMIT | UPPER LIMIT | MEASURED  | UNIT | VERDICT |
|----------------|-------------|-------------|-----------|------|---------|
| Bandwidth 20dB | ---         | ---         | 2308      | kHz  | INFO    |
| T1 20dB        | 2400.000000 | ---         | 2476.8601 | MHz  | PASS    |
| T2 20dB        | ---         | 2483.500000 | 2479.1679 | MHz  | PASS    |

|         |
|---------|
| Verdict |
| PASS    |

## FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps

### References

|                                               |                                                                                                                  |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| TC start                                      | 13.02.2025 15:43:17                                                                                              |
| Ambit temp (test rack) [°C]   humidity [rel%] | not enabled   not enabled                                                                                        |
| System version                                | 5.1.6.4                                                                                                          |
| Standard   Version                            | FCC 15.247   NI                                                                                                  |
| Method                                        | IF DTS then 8.5 DTS emissions in non-restricted frequency bands:<br>Subclause 11.11 of ANSI C63.10 is applicable |
| Description                                   | FCC 15.247 TX emissions conducted DTS - BT LE 2 Msps                                                             |
| Information                                   |                                                                                                                  |

### EUT Common Settings BT Low Energy

|                                    |                                                     |
|------------------------------------|-----------------------------------------------------|
| Intermodulation value N            | 3                                                   |
| Image freq. Low   Mid   High [MHz] | 0   0   0                                           |
| Power class                        | 2                                                   |
| 1 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| 2 Mbps supported                   | True   TXpayload 255   RXpayload 255                |
| Longrange S8 supported             | False   TXpayload 255   RXpayload 255               |
| Longrange S2 supported             | False   TXpayload 255   RXpayload 255               |
| Signaling settings                 | USB_RS232   TWO   14   2400   None   S1   None   On |
| Signaling RF settings              | RF1com   0   0   On                                 |
| User interaction                   | No                                                  |

### Equipment

|                                                               |
|---------------------------------------------------------------|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.70 |
| Switch matrix,cetecom advanced GmbH,USM,A001,1.0.0            |

### Test Parameter

|                                                  |                        |
|--------------------------------------------------|------------------------|
| Technology to test                               | BT LE 2 Msps           |
| EUT port                                         | EUT1                   |
| Temperature                                      | nom                    |
| Voltage                                          | nom                    |
| Frequency low to test                            | True   Freq [MHz] 2404 |
| Frequency mid to test                            | True   Freq [MHz] 2440 |
| Frequency high to test                           | True   Freq [MHz] 2478 |
| Auto control enabled power supply   Climatic Box | No   No                |
| Additional path loss [dB]                        | 0.7                    |
| Full path type                                   | EUT_SA_GEN_SIG         |

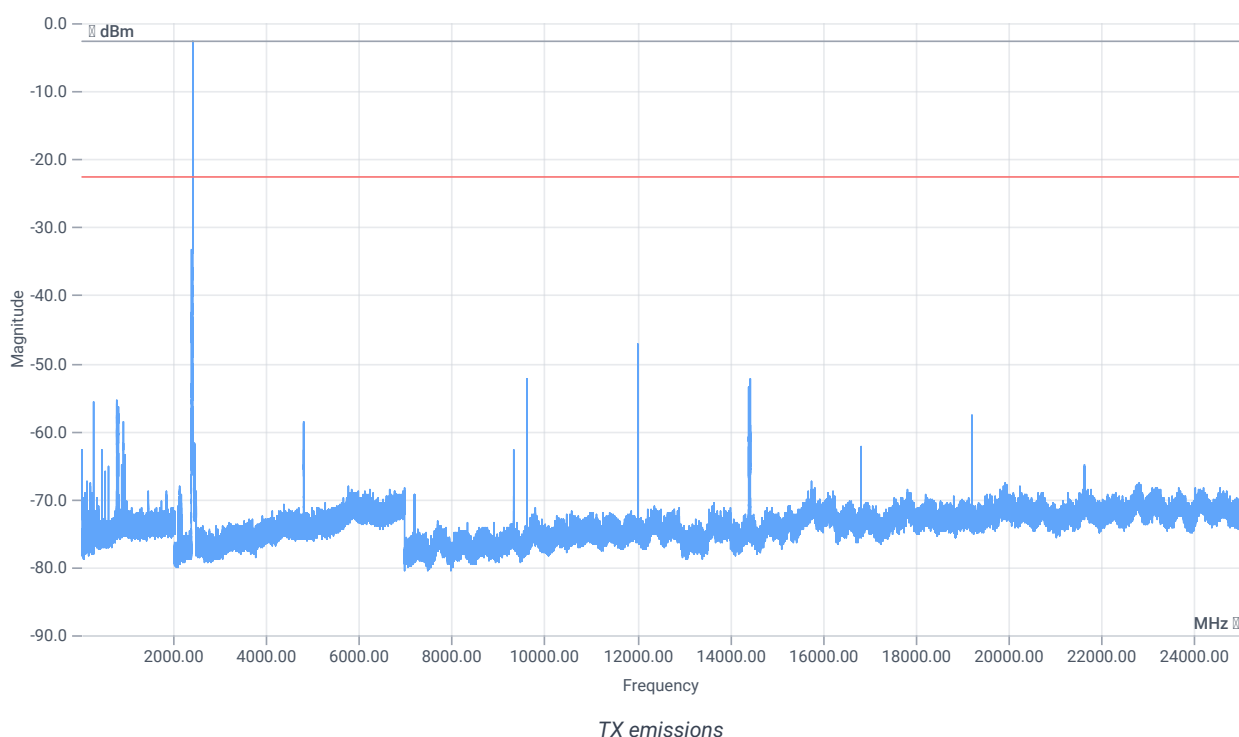
## Test Parameter

|                |                                           |
|----------------|-------------------------------------------|
| Full path name | EUT1.MP.SIG1/EUT1.SA/EUT1.GEN1/EUT1.GEN2/ |
| Switch bits    | 00010001:00010001:00000000:00000001       |

## Test at TX 2404 MHz

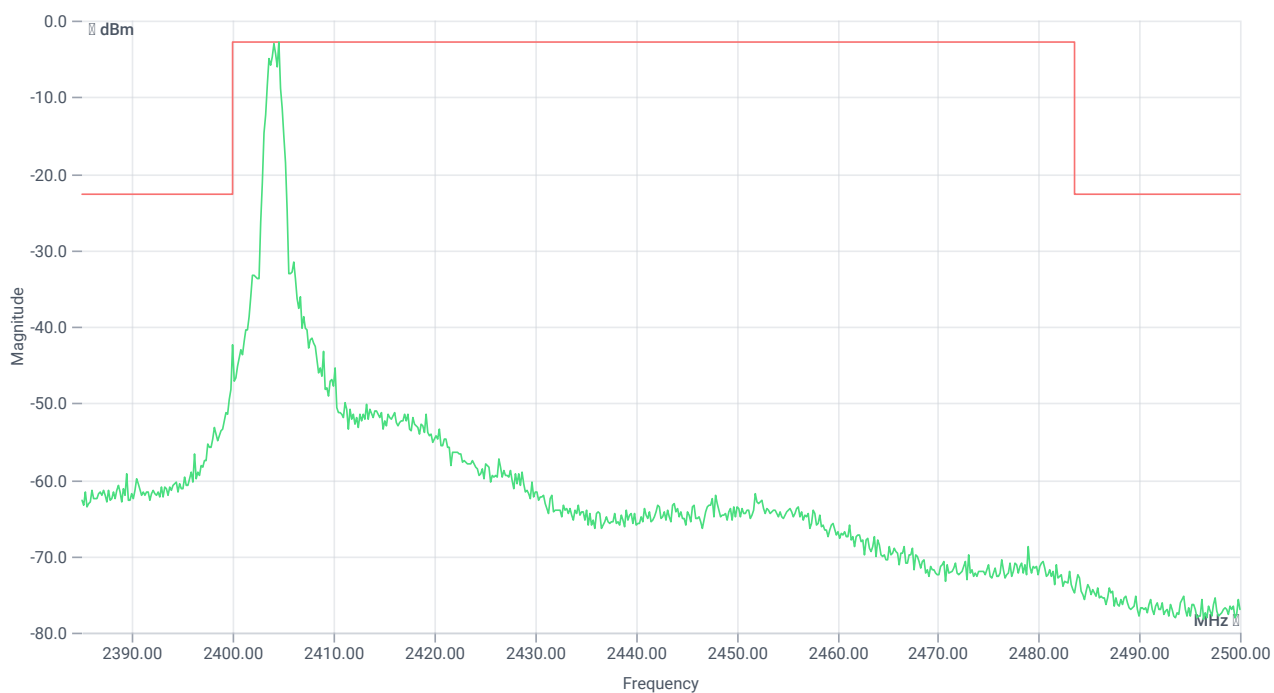
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -1.30    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2404.500 | MHz  | INFO    |



### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | -1.30   17.03   0     |
| Start [MHz]   Stop [MHz]                             | 24780.000   25000.000 |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 200   25   1501   SWE |



TX emissions band zoomed

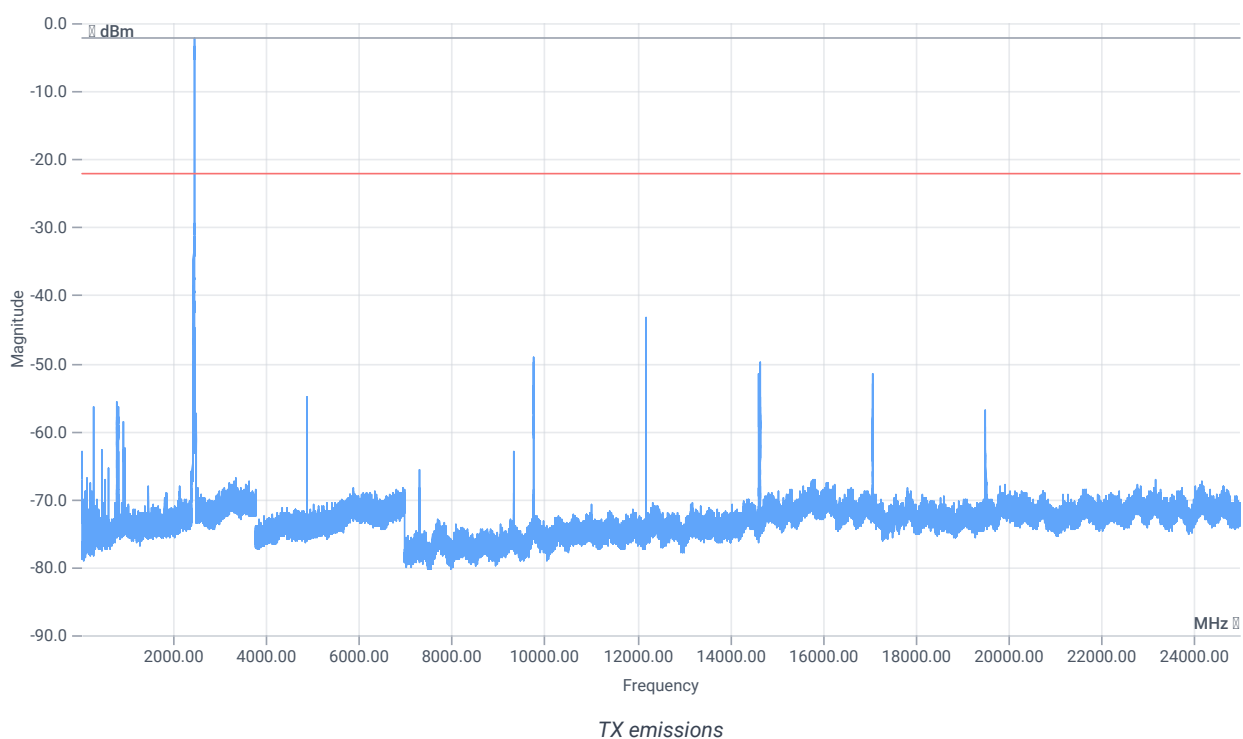
## RESULT

| DESCRIPTION                        | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|------------------------------------|-------------|-------------|----------|------|---------|
| Reference @ 2404.50 MHz            | ---         | ---         | -2.74    | dBm  | INFO    |
| No peaks detected                  | ---         | ---         |          |      | PASS    |
| Lowest margin to limit 12022.5 MHz | 0           | ---         | 24.39    | dB   | INFO    |

## Test at TX 2440 MHz

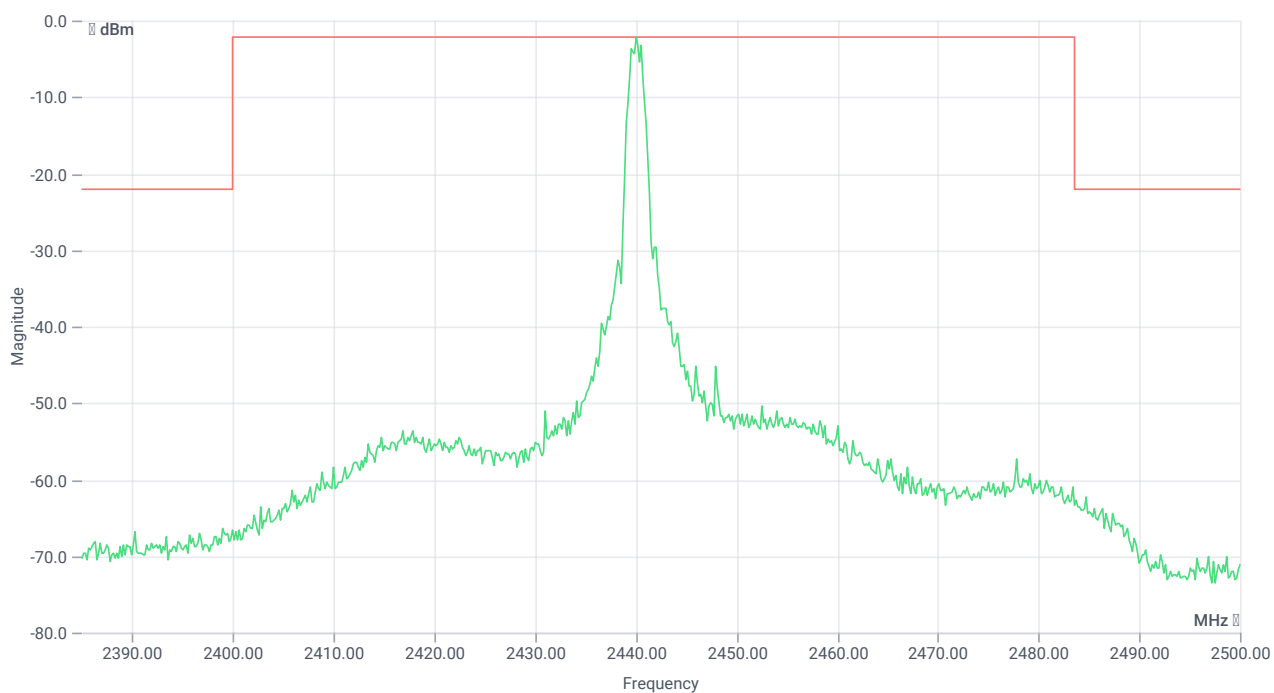
RESULT: Reference power cond.

| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | -0.18    | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2440.500 | MHz  | INFO    |



### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | -0.18   17.03   0     |
| Start [MHz]   Stop [MHz]                             | 24780.000   25000.000 |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 200   25   1501   SWE |



TX emissions band zoomed

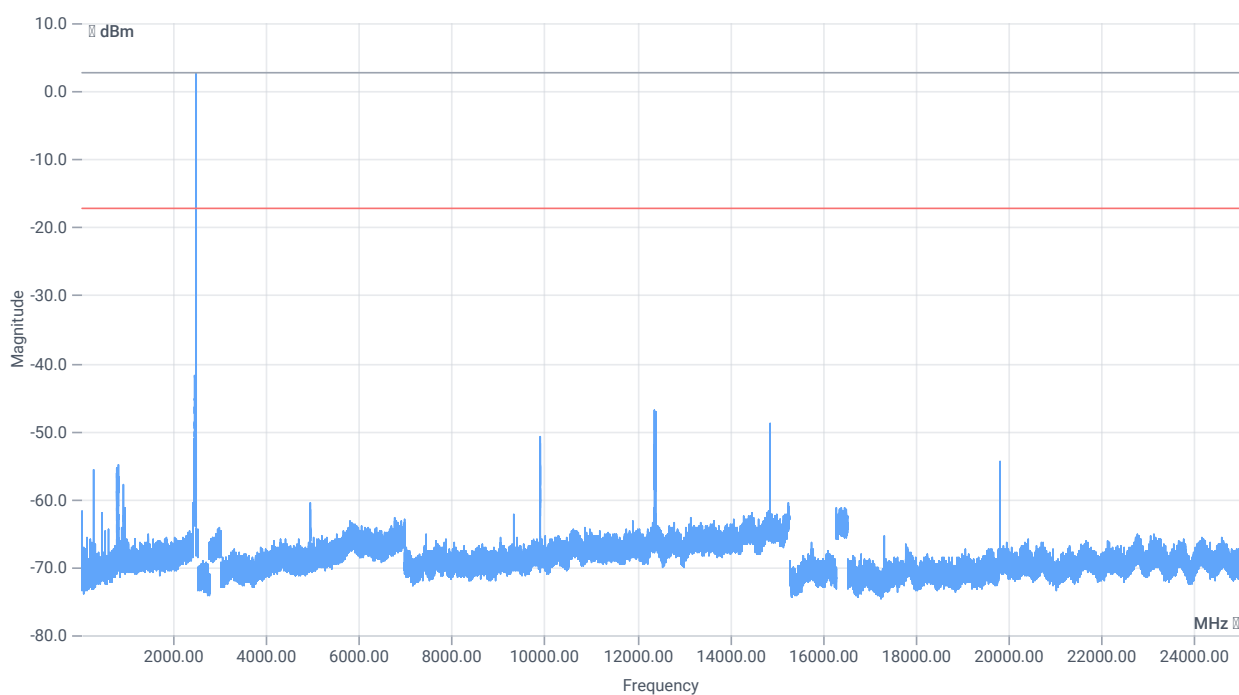
## RESULT

| DESCRIPTION                          | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|--------------------------------------|-------------|-------------|----------|------|---------|
| Reference @ 2440.00 MHz              | ---         | ---         | -2.09    | dBm  | INFO    |
| No peaks detected                    | ---         | ---         |          |      | PASS    |
| Lowest margin to limit 12202.333 MHz | 0           | ---         | 21.24    | dB   | INFO    |

## Test at TX 2478 MHz

RESULT: Reference power cond.

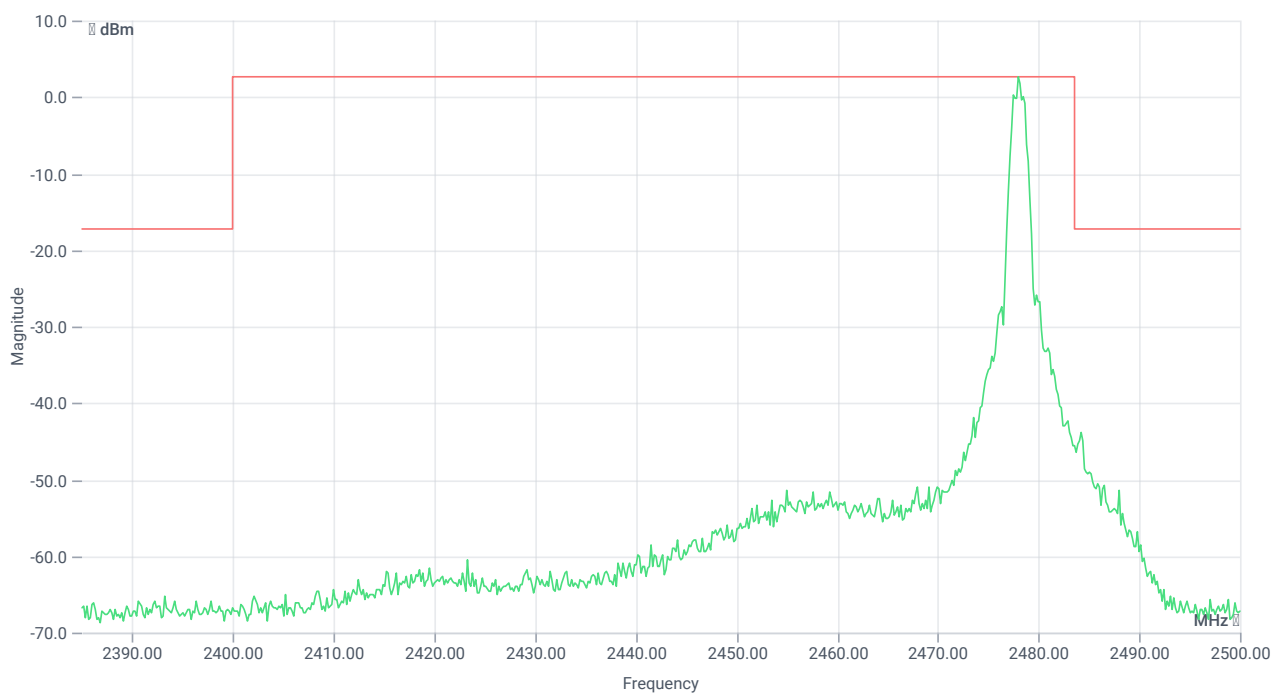
| DESCRIPTION                   | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. power<br>1MHz/1MHz cond. | ---         | ---         | 4.09     | dBm  | INFO    |
| Ref. frequency                | ---         | ---         | 2478.500 | MHz  | INFO    |



TX emissions

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 4.09   17.03   5      |
| Start [MHz]   Stop [MHz]                             | 24780.000   25000.000 |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000   |
| Detector   TraceMode                                 | POS   MAXH            |
| Sweep: time [ms]   count   points per Section   type | 200   25   1501   SWE |



## RESULT

| DESCRIPTION                         | LOWER LIMIT | UPPER LIMIT | MEASURED | UNIT | VERDICT |
|-------------------------------------|-------------|-------------|----------|------|---------|
| Reference @ 2478.00 MHz             | ---         | ---         | 2.70     | dBm  | INFO    |
| No peaks detected                   | ---         | ---         |          |      | PASS    |
| Lowest margin to limit 2484.167 MHz | 0           | ---         | 26.54    | dB   | INFO    |

Verdict

PASS

- END OF DOCUMENT -