

Measurement Results

No.1-1910/21-02-12_Annex_MR_A1

Test logging

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Test/s performed:

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EUT Information

| EUT DEFINITION | |
|----------------------|-------------------------------------|
| Manufacturer | Sennheiser electronic GmbH & Co. KG |
| Type | EW-DP EK |
| Serial Number | 1342000139 |
| Setup Number | 1.0 |
| Version SW | 0.15.1 |
| Version FW | NI |
| Version HW | 589670_11 |
| Comment 1 | |
| Comment 2 | |
| Temperature [°C] Min | -10 |
| Temperature [°C] Nom | 20 |
| Temperature [°C] Max | 55 |
| Voltage [V] Min | 1.8 |
| Voltage [V] Nom | 3 |
| Voltage [V] Max | 4.35 |

Common 2G4 # Peak output power 3MHz/3MHz ~ BT LE 1 Msps

| Test References | |
|-----------------------------------|--|
| TC Start | 21.09.2022 13:19:45 |
| Ambit Temp [°C] Humidity [rel%] | 25.3 34 |
| System Version | 3.3.0.5 |
| Test Specification | Common 2G4 - none |
| Test Method | |
| TC Version | 0.0.1 |
| My Description | Peak Output Power conducted 3MHz/3MHz - BT LE 1 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 1 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2402 MHz

RESULT: Reference Power cond.

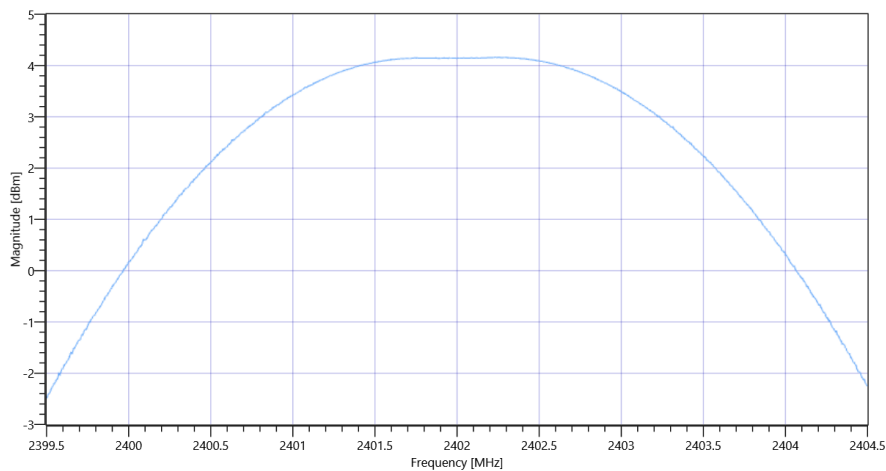
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.22 | dBm | INFO |
| Ref. Frequency | --- | --- | 2402.300 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.22 10.79 20 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | --- | 4.16 | dBm | INFO |
| Peak Power | --- | --- | 2.606154 | mW | INFO |
| Frequency at Peak | --- | --- | 2402.23 | MHz | INFO |



Common 2G4 # Peak output power 3MHz-3MHz ~ BT LE 1 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.

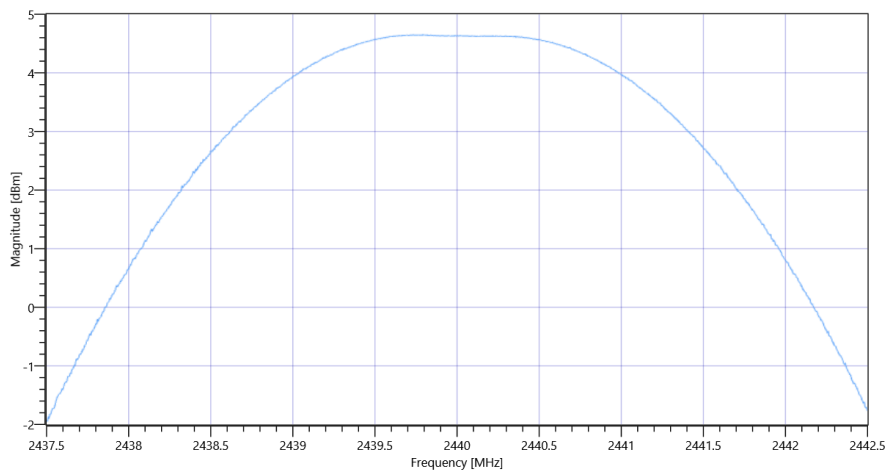
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.64 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.64 10.8 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | --- | 4.65 | dBm | INFO |
| Peak Power | --- | --- | 2.917427 | mW | INFO |
| Frequency at Peak | --- | --- | 2439.79 | MHz | INFO |



Common 2G4 # Peak output power 3MHz-3MHz ~ BT LE 1 Msps

Test at TX 2480 MHz

RESULT: Reference Power cond.

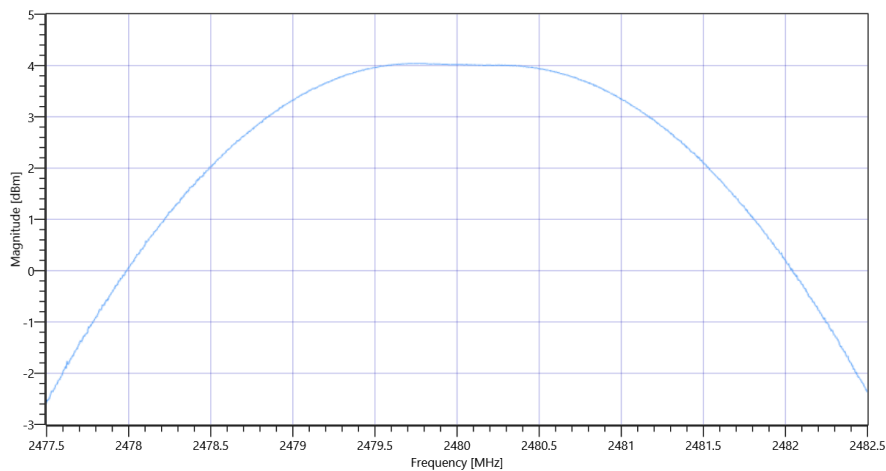
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.01 | dBm | INFO |
| Ref. Frequency | --- | --- | 2480.300 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.01 10.85 20 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | --- | 4.04 | dBm | INFO |
| Peak Power | --- | --- | 2.535129 | mW | INFO |
| Frequency at Peak | --- | --- | 2479.705 | MHz | INFO |



Common 2G4 # Peak output power 3MHz-3MHz ~ BT LE 1 Msps

General verdict

PASS

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

| Test References | |
|-----------------------------------|---|
| TC Start | 21.09.2022 13:56:18 |
| Ambit Temp [°C] Humidity [rel%] | 25.2 33 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 2 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2404 MHz

RESULT: Reference Power cond.

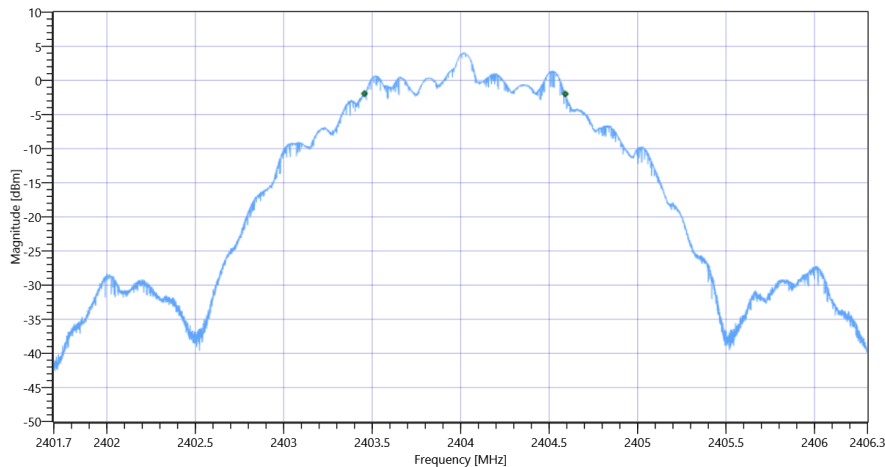
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.23 | dBm | INFO |
| Ref. Frequency | --- | --- | 2404.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.23 10.8 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | 500 | --- | 1136 | kHz | PASS |



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

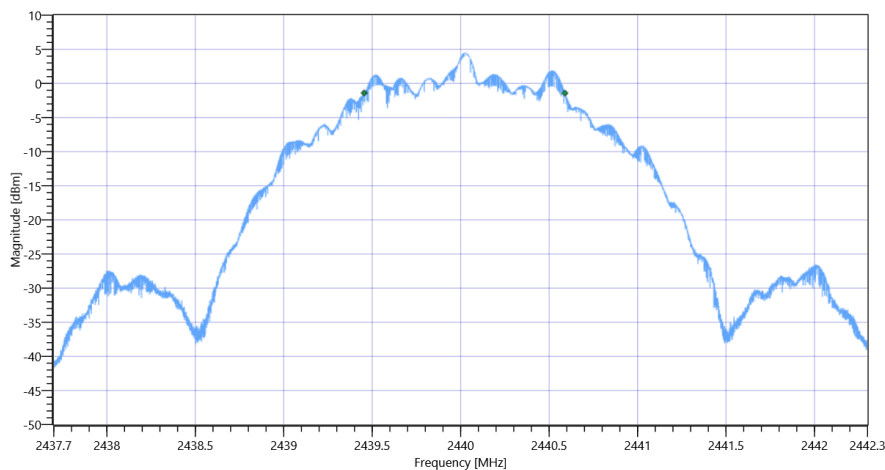
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.66 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.66 10.8 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | 500 | --- | 1135 | kHz | PASS |



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

Test at TX 2478 MHz

RESULT: Reference Power cond.

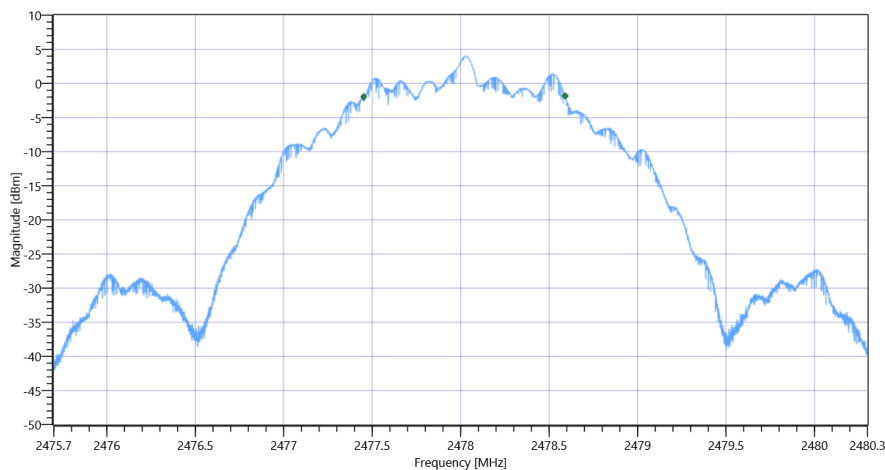
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.21 | dBm | INFO |
| Ref. Frequency | --- | --- | 2477.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.21 10.85 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | 500 | --- | 1139 | kHz | PASS |



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

General verdict

PASS

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

| Test References | |
|-----------------------------------|---|
| TC Start | 21.09.2022 13:24:55 |
| Ambit Temp [°C] Humidity [rel%] | 25.3 33 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 Bandwidth 6dB DTS - BT LE 1 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 1 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2402 MHz

RESULT: Reference Power cond.

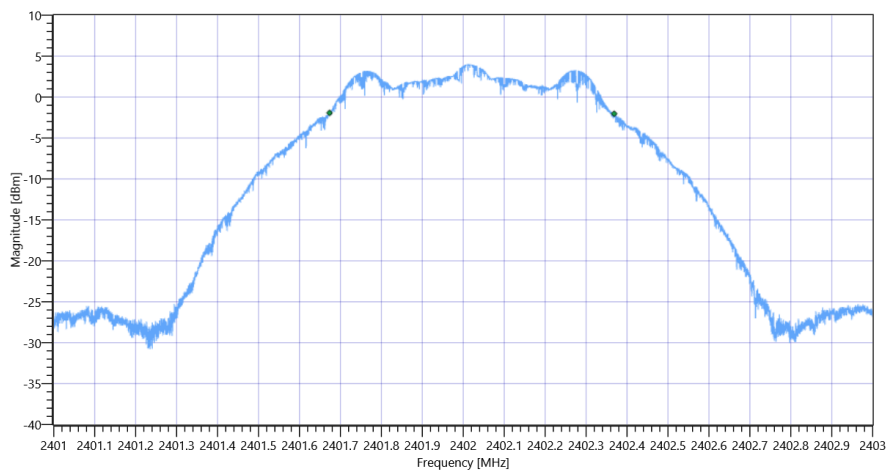
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.18 | dBm | INFO |
| Ref. Frequency | --- | --- | 2402.300 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.18 10.79 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | 500 | --- | 695 | kHz | PASS |



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

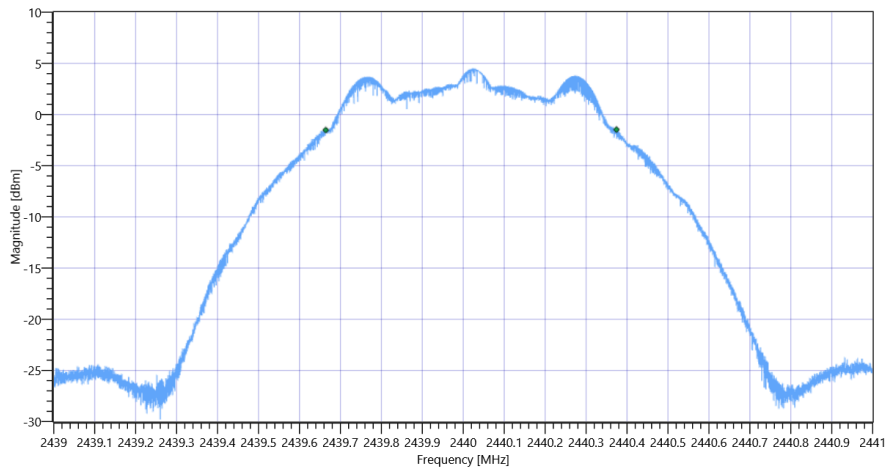
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.62 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.62 10.8 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | 500 | --- | 710 | kHz | PASS |



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

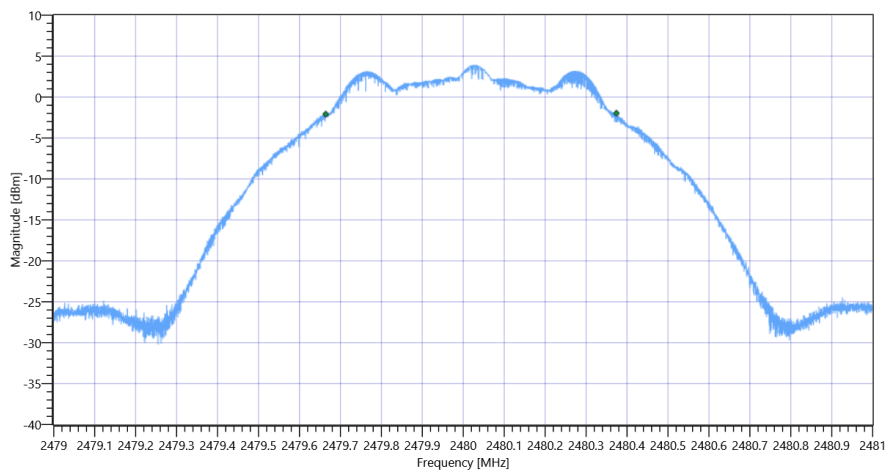
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.01 | dBm | INFO |
| Ref. Frequency | --- | --- | 2479.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.01 10.85 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | 500 | --- | 710 | kHz | PASS |



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

General verdict

PASS

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

| Test References | |
|-----------------------------------|--|
| TC Start | 21.09.2022 14:00:00 |
| Ambit Temp [°C] Humidity [rel%] | 25.2 32 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247, ISED RSS247 - |
| Test Method | |
| TC Version | 0.0.2 |
| My Description | FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 2 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2404 MHz

RESULT: Reference Power cond.

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.15 | dBm | INFO |
| Ref. Frequency | --- | --- | 2404.500 | MHz | INFO |

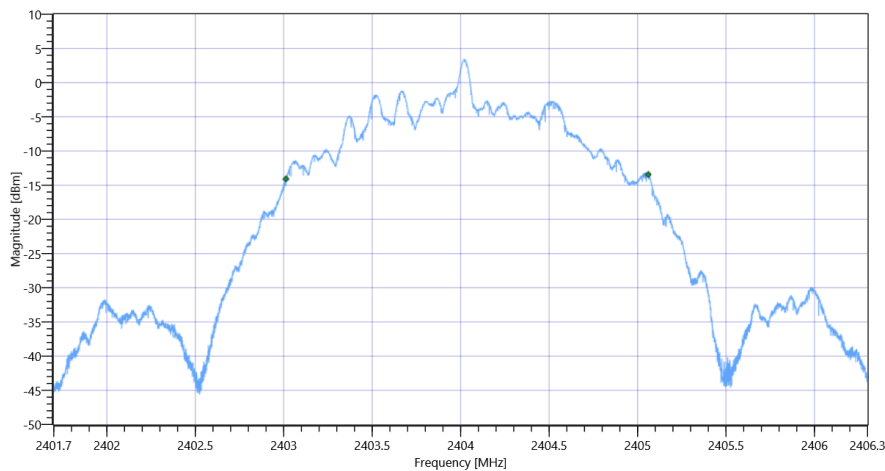
READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.15 10.8 15 |
| 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 |

RESULT

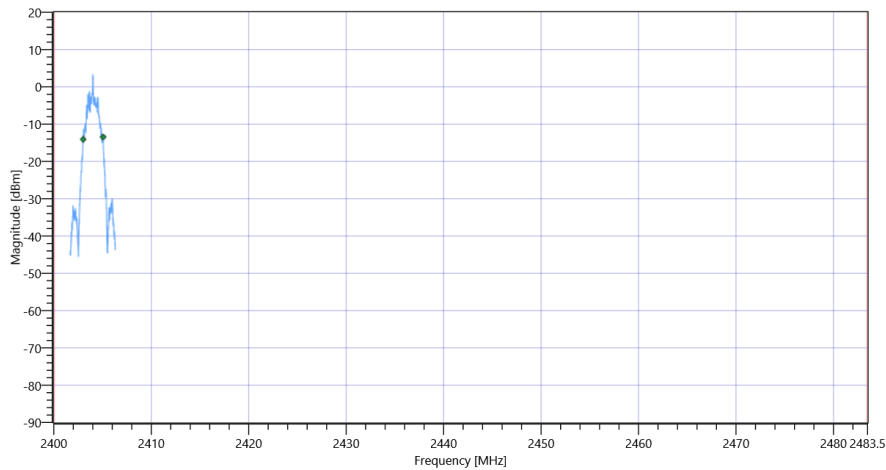
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | --- | --- | 2048.000 | kHz | INFO |
| T1 99% | 2400.000000 | --- | 2403.0125 | MHz | PASS |
| T2 99% | --- | 2483.500000 | 2405.0602 | MHz | PASS |

Plot: Bandwidth only



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

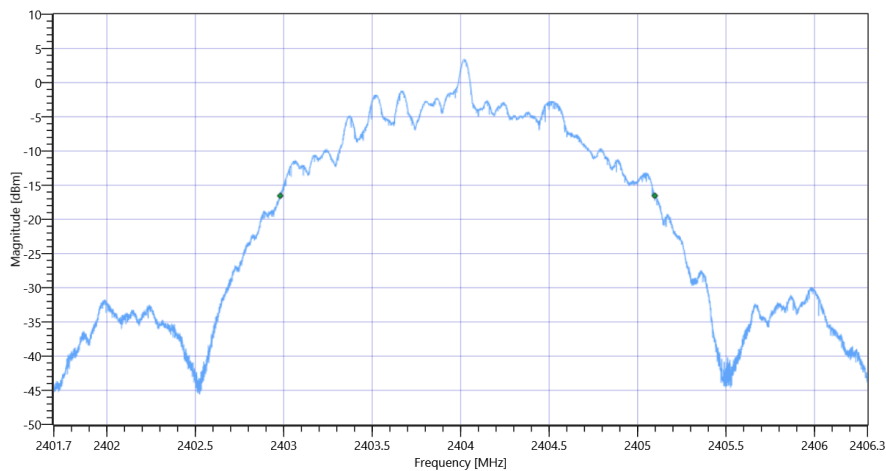
Plot: Bandwidth within Band



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

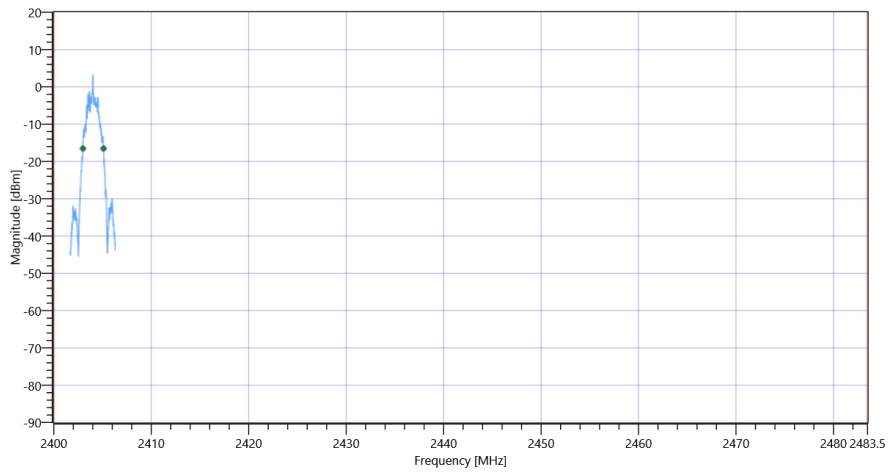
| RESULT | | | | | |
|------------------|-------------|-------------|-----------|------|---------|
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
| Bandwidth 20dB | --- | --- | 2117 | kHz | INFO |
| T1 20dB | 2400.000000 | --- | 2402.9802 | MHz | PASS |
| T2 20dB | --- | 2483.500000 | 2405.0971 | MHz | PASS |

Plot: Bandwidth only



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

Plot: Bandwidth within Band



Test at TX 2440 MHz

RESULT: Reference Power cond.

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.68 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.500 | MHz | INFO |

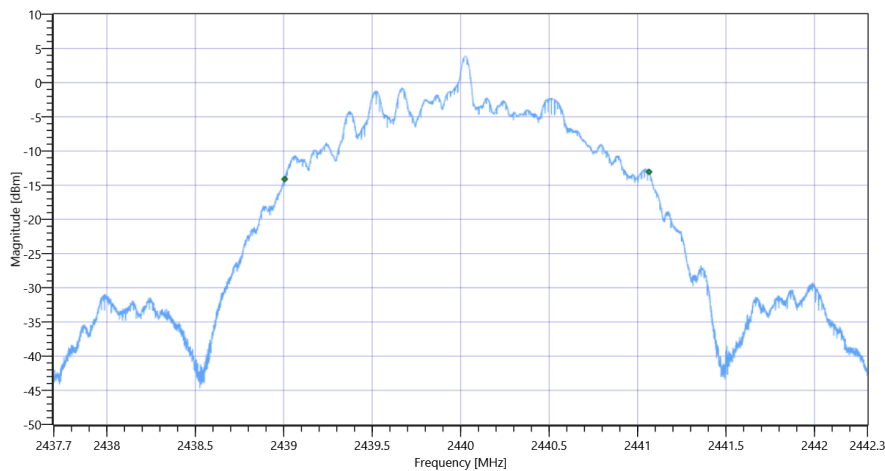
READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.68 10.8 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 |

RESULT

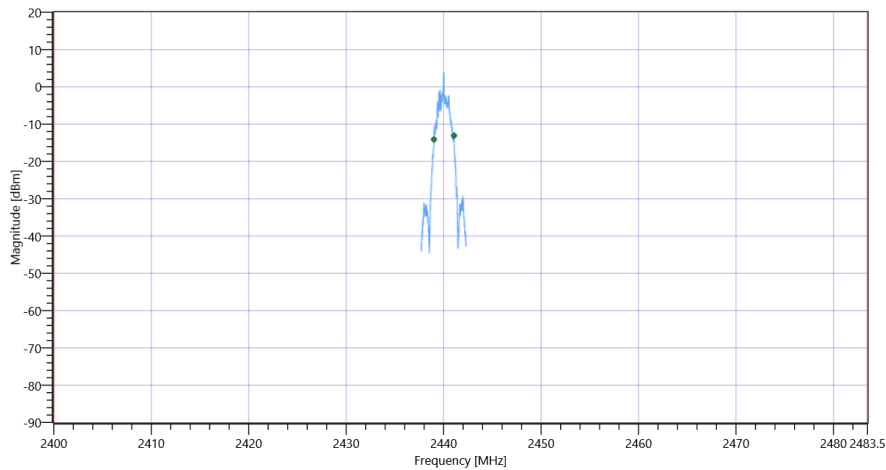
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | --- | --- | 2059.000 | kHz | INFO |
| T1 99% | 2400.000000 | --- | 2439.0051 | MHz | PASS |
| T2 99% | --- | 2483.500000 | 2441.0643 | MHz | PASS |

Plot: Bandwidth only



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

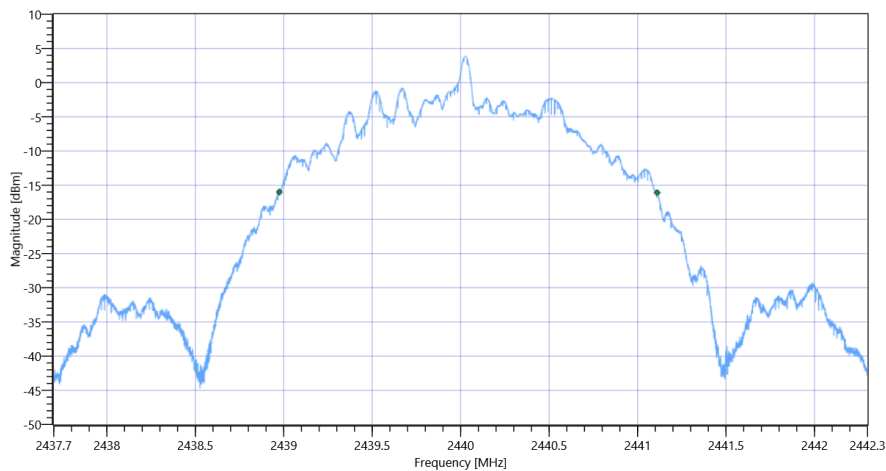
Plot: Bandwidth within Band



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

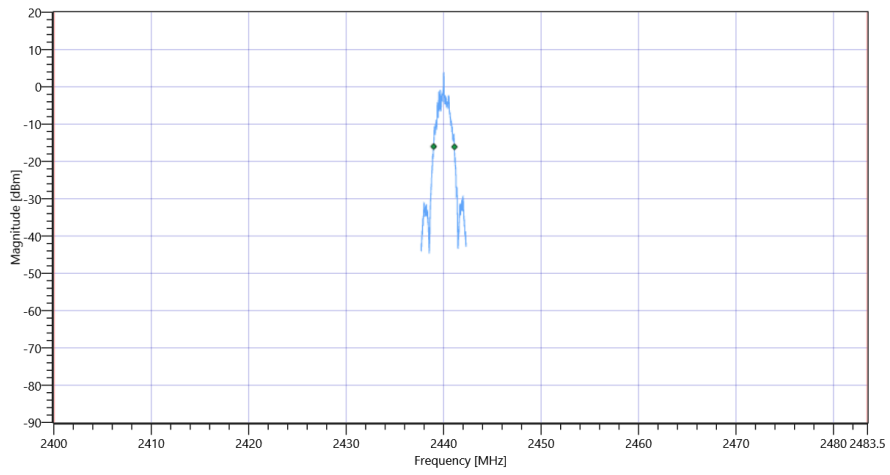
| RESULT | | | | | |
|------------------|-------------|-------------|-----------|------|---------|
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
| Bandwidth 20dB | --- | --- | 2135 | kHz | INFO |
| T1 20dB | 2400.000000 | --- | 2438.9751 | MHz | PASS |
| T2 20dB | --- | 2483.500000 | 2441.1104 | MHz | PASS |

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

Test at TX 2478 MHz

RESULT: Reference Power cond.

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.21 | dBm | INFO |
| Ref. Frequency | --- | --- | 2477.500 | MHz | INFO |

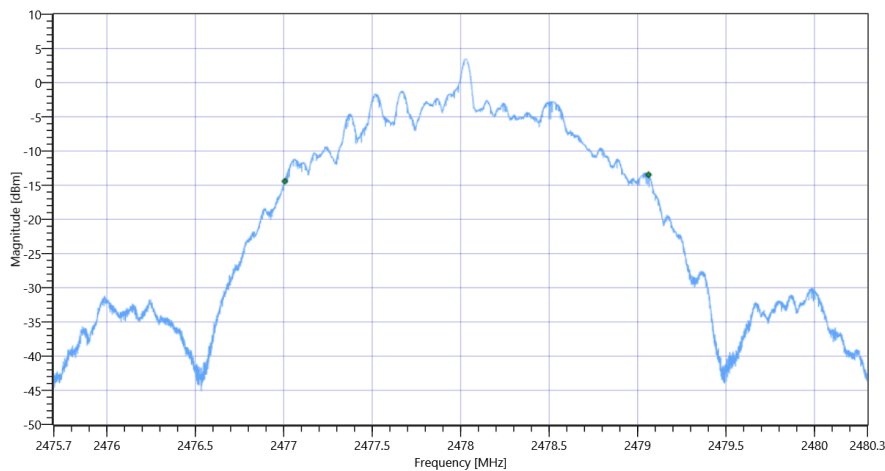
READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.21 10.85 15 |
| 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 |

RESULT

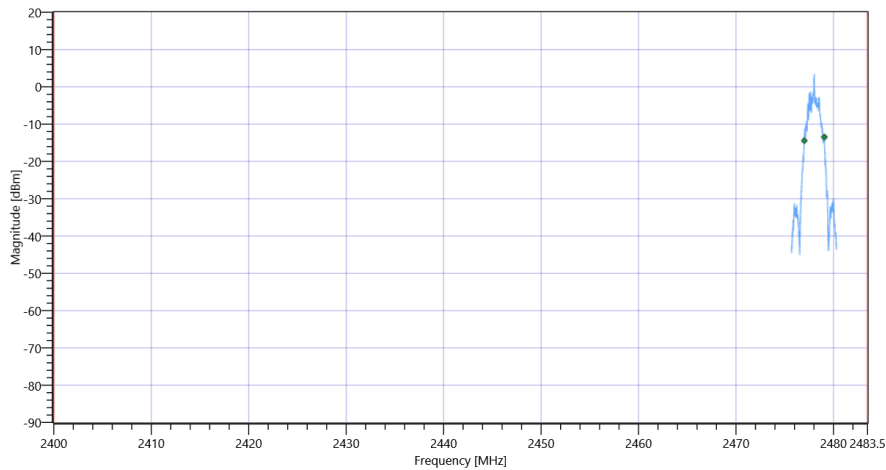
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | --- | --- | 2056.000 | kHz | INFO |
| T1 99% | 2400.000000 | --- | 2477.0065 | MHz | PASS |
| T2 99% | --- | 2483.500000 | 2479.0620 | MHz | PASS |

Plot: Bandwidth only



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

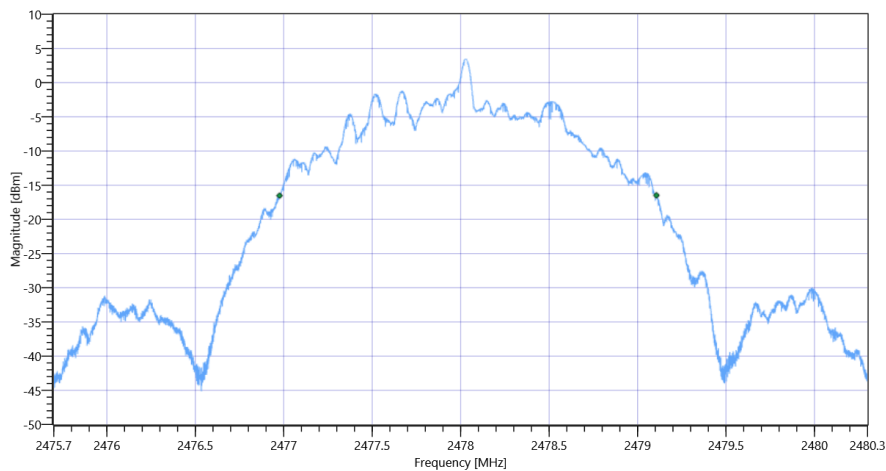
Plot: Bandwidth within Band



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

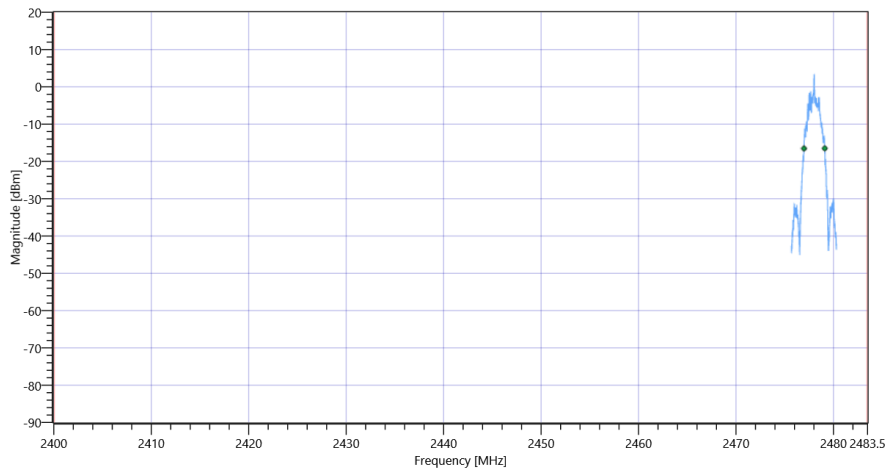
| RESULT | | | | | | |
|------------------|-------------|-------------|-----------|------|---------|--|
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict | |
| Bandwidth 20dB | --- | --- | 2130 | kHz | INFO | |
| T1 20dB | 2400.000000 | --- | 2476.9760 | MHz | PASS | |
| T2 20dB | --- | 2483.500000 | 2479.1063 | MHz | PASS | |

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

General verdict

PASS

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

| Test References | |
|-----------------------------------|--|
| TC Start | 21.09.2022 13:28:35 |
| Ambit Temp [°C] Humidity [rel%] | 25.2 33 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247, ISED RSS247 - |
| Test Method | |
| TC Version | 0.0.2 |
| My Description | FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 1 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 1 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2402 MHz

RESULT: Reference Power cond.

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.17 | dBm | INFO |
| Ref. Frequency | --- | --- | 2402.300 | MHz | INFO |

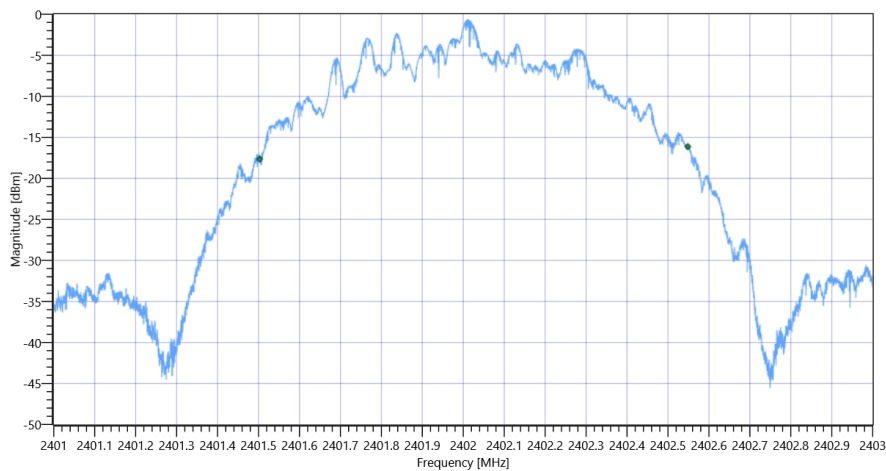
READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.17 10.79 15 |
| 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 |

RESULT

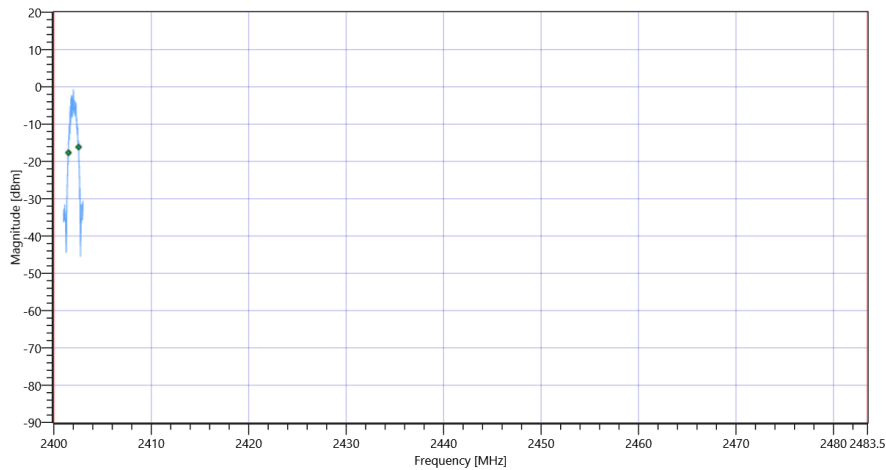
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | --- | --- | 1046.000 | kHz | INFO |
| T1 99% | 2400.000000 | --- | 2401.5026 | MHz | PASS |
| T2 99% | --- | 2483.500000 | 2402.5485 | MHz | PASS |

Plot: Bandwidth only



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

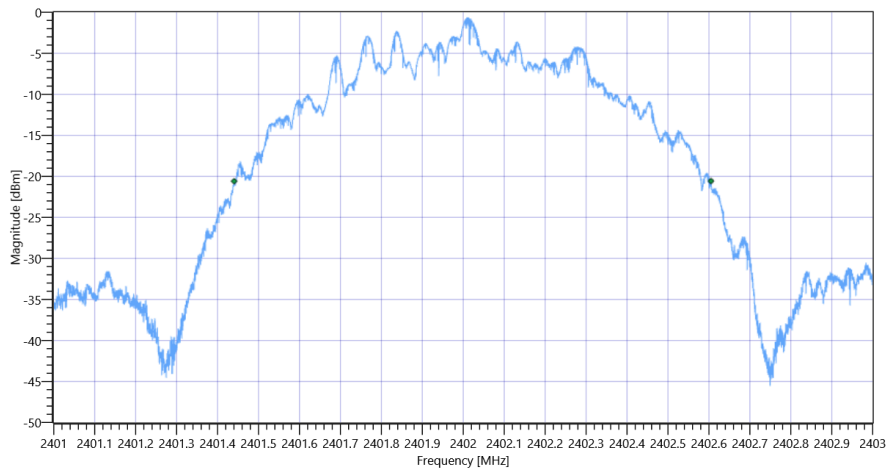
Plot: Bandwidth within Band



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

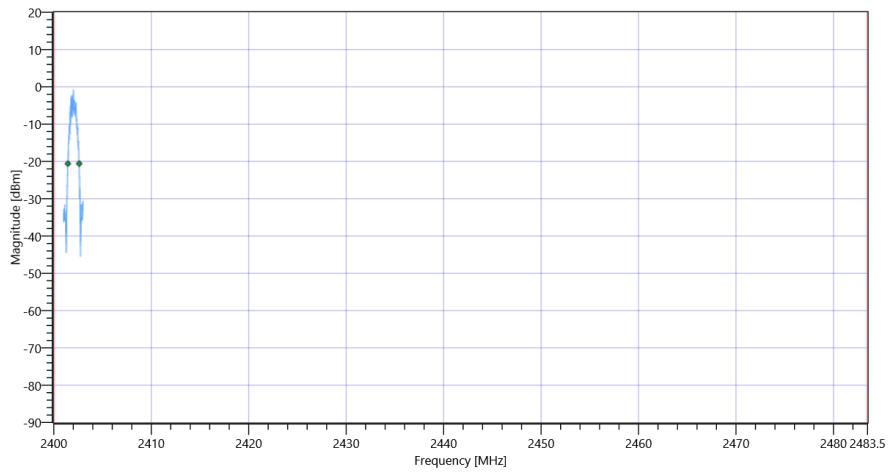
| RESULT | | | | | | |
|------------------|-------------|-------------|-----------|------|---------|--|
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict | |
| Bandwidth 20dB | --- | --- | 1165 | kHz | INFO | |
| T1 20dB | 2400.000000 | --- | 2401.4404 | MHz | PASS | |
| T2 20dB | --- | 2483.500000 | 2402.6050 | MHz | PASS | |

Plot: Bandwidth only



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

Plot: Bandwidth within Band



Test at TX 2440 MHz

RESULT: Reference Power cond.

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.66 | dBm | INFO |
| Ref. Frequency | --- | --- | 2440.300 | MHz | INFO |

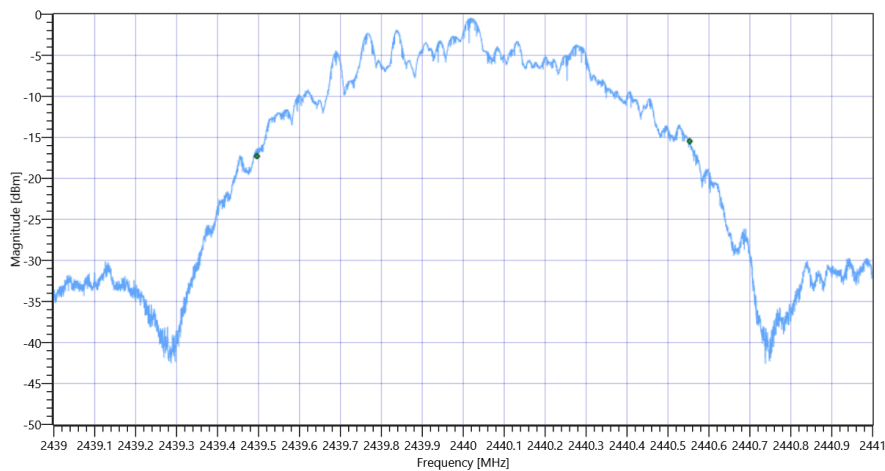
READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.66 10.8 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 |

RESULT

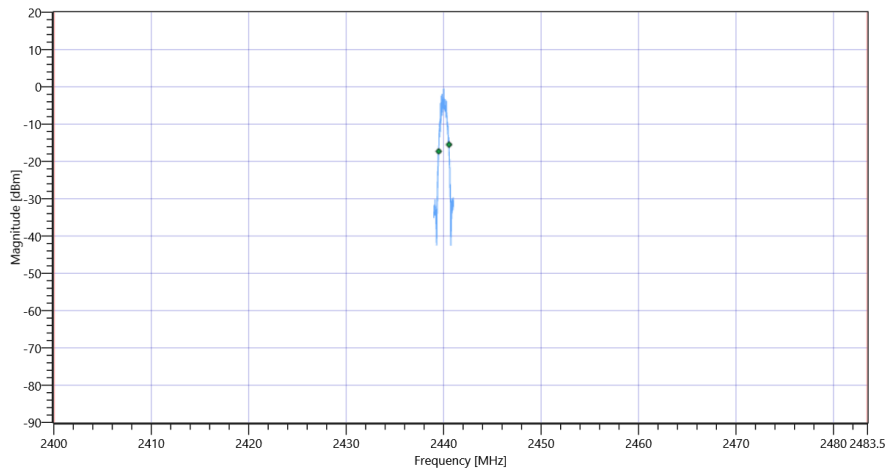
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | --- | --- | 1057.000 | kHz | INFO |
| T1 99% | 2400.000000 | --- | 2439.4961 | MHz | PASS |
| T2 99% | --- | 2483.500000 | 2440.5529 | MHz | PASS |

Plot: Bandwidth only



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

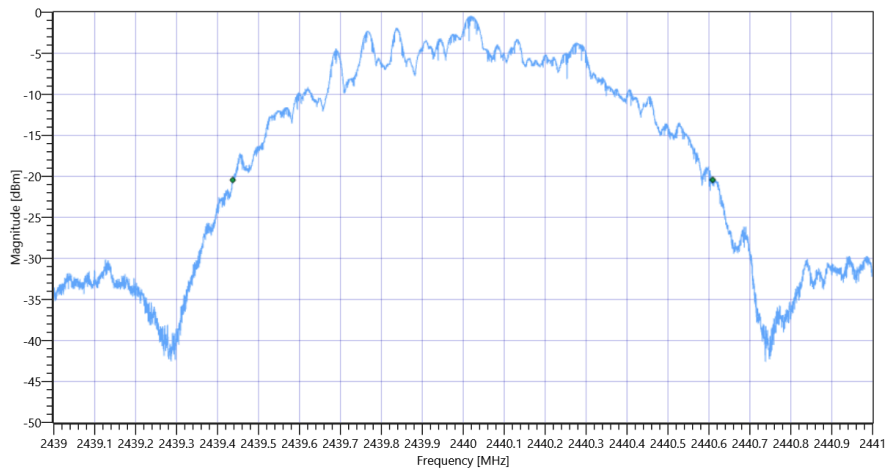
Plot: Bandwidth within Band



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

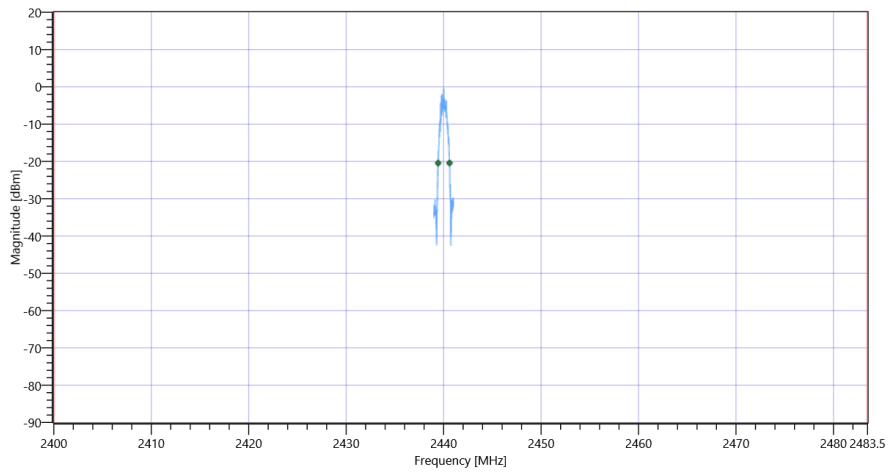
| RESULT | | | | | | |
|------------------|-------------|-------------|-----------|------|---------|--|
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict | |
| Bandwidth 20dB | --- | --- | 1172 | kHz | INFO | |
| T1 20dB | 2400.000000 | --- | 2439.4370 | MHz | PASS | |
| T2 20dB | --- | 2483.500000 | 2440.6092 | MHz | PASS | |

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.03 | dBm | INFO |
| Ref. Frequency | --- | --- | 2479.800 | MHz | INFO |

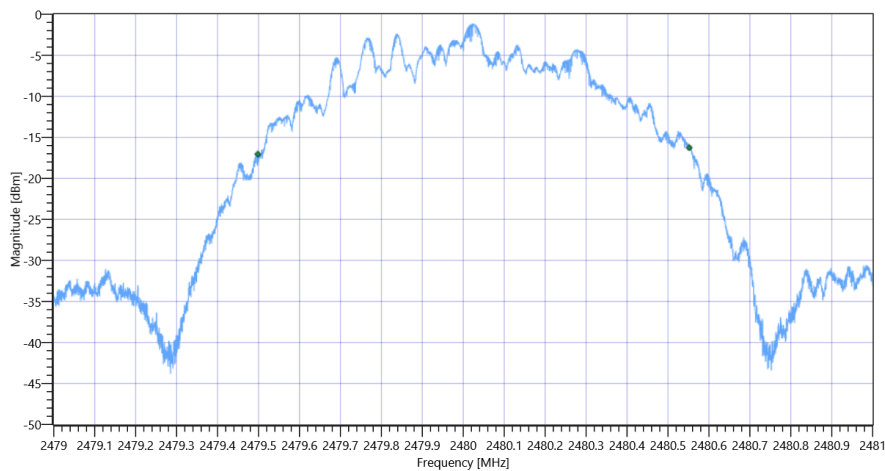
READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.03 10.85 15 |
| 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 |

RESULT

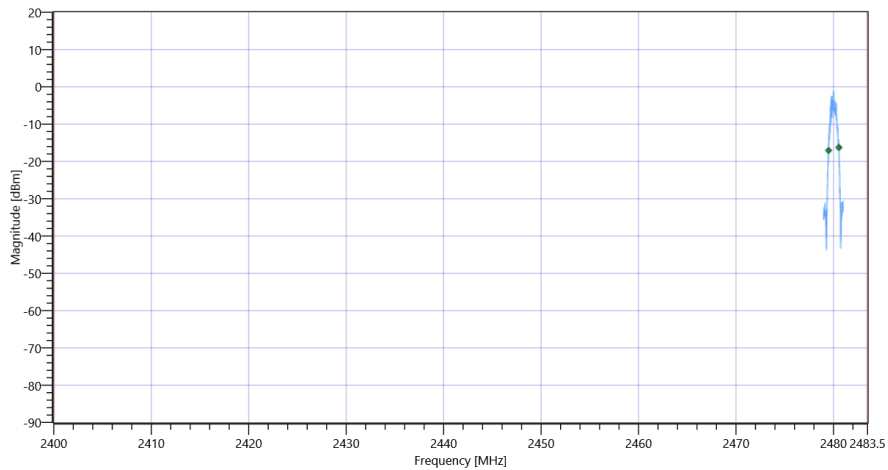
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99% | --- | --- | 1053.000 | kHz | INFO |
| T1 99% | 2400.000000 | --- | 2479.4983 | MHz | PASS |
| T2 99% | --- | 2483.500000 | 2480.5517 | MHz | PASS |

Plot: Bandwidth only



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

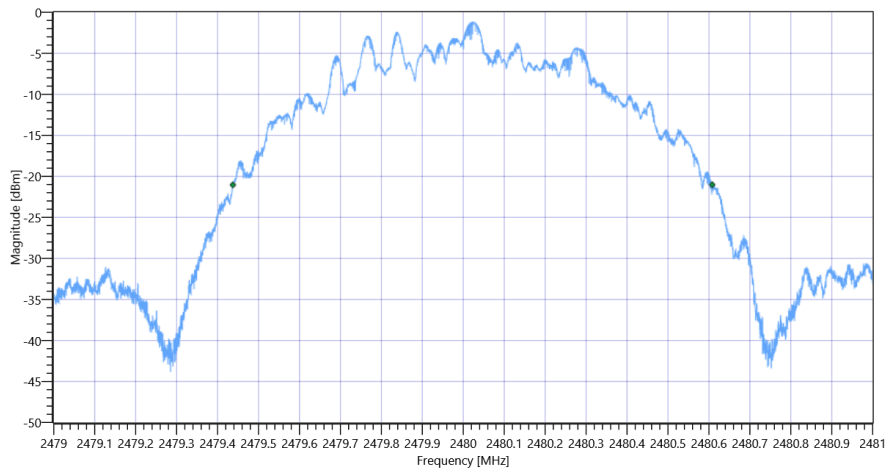
Plot: Bandwidth within Band



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

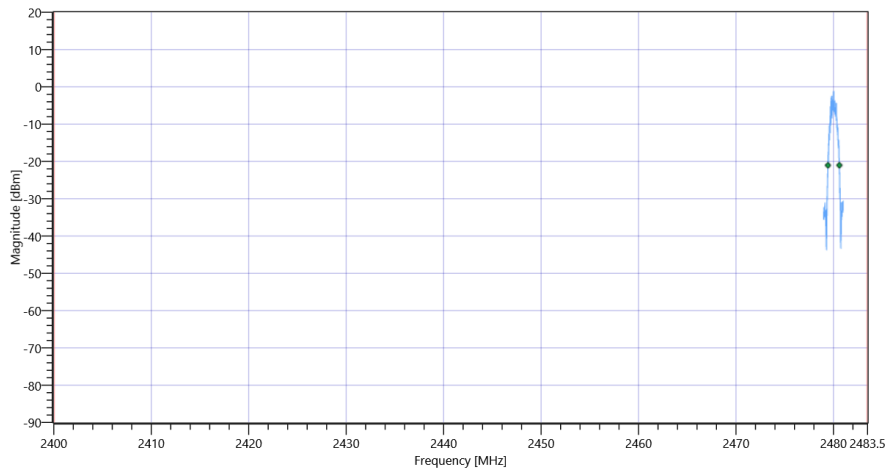
| RESULT | | | | | | |
|------------------|-------------|-------------|-----------|------|---------|--|
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict | |
| Bandwidth 20dB | --- | --- | 1171 | kHz | INFO | |
| T1 20dB | 2400.000000 | --- | 2479.4374 | MHz | PASS | |
| T2 20dB | --- | 2483.500000 | 2480.6080 | MHz | PASS | |

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

General verdict

PASS

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

| Test References | |
|-----------------------------------|---|
| TC Start | 21.09.2022 13:53:47 |
| Ambit Temp [°C] Humidity [rel%] | 25.1 33 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 2 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 2 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2404 MHz

RESULT: Reference Power cond.

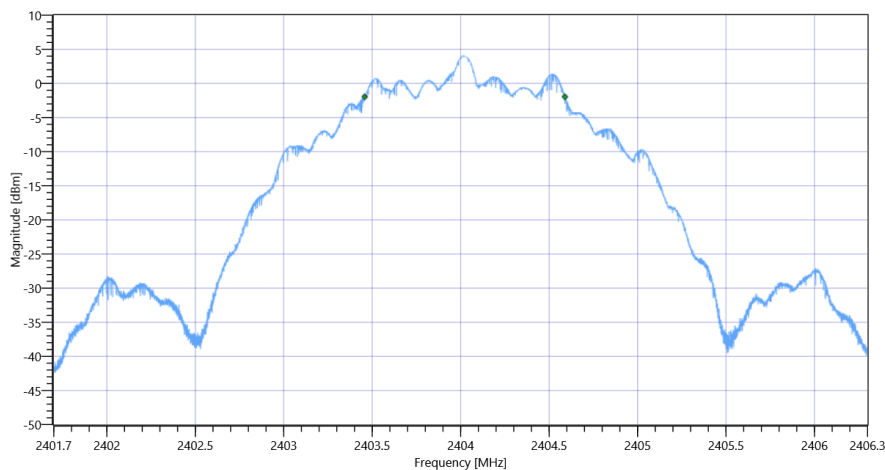
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.22 | dBm | INFO |
| Ref. Frequency | --- | --- | 2403.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.22 10.8 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | --- | --- | 1132 | kHz | INFO |



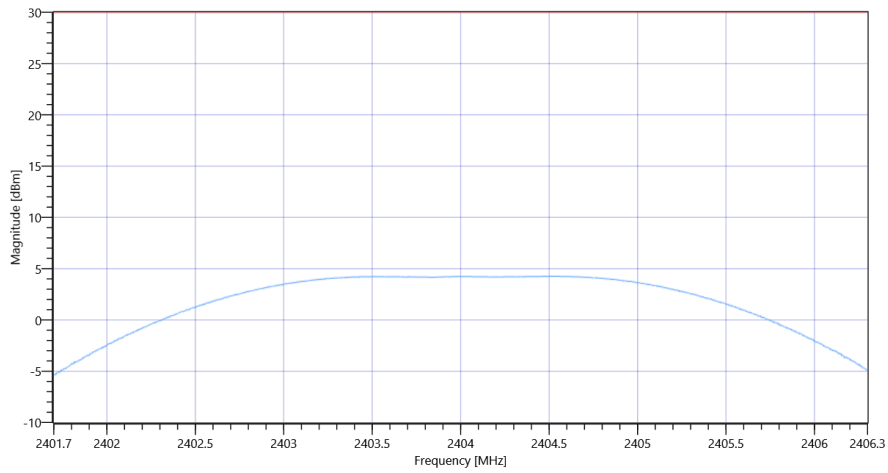
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps DTS BW

READ SA SETTINGS:

| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.22 10.8 20 |
| 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 |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | 30.00 | 4.25 | dBm | PASS |
| Peak Power | --- | 1000 | 2.660725 | mW | PASS |
| Frequency at Peak | --- | --- | 2404.538 | MHz | INFO |



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

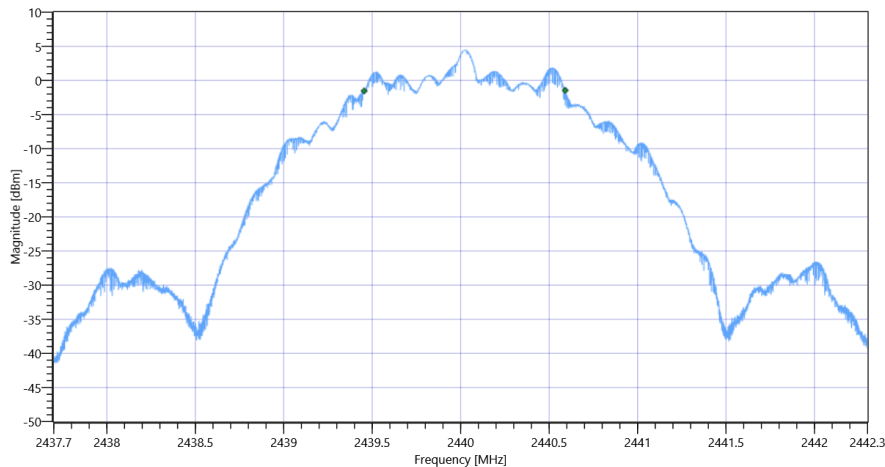
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.63 | dBm | INFO |
| Ref. Frequency | --- | --- | 2440.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.63 10.8 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | --- | --- | 1137 | kHz | INFO |



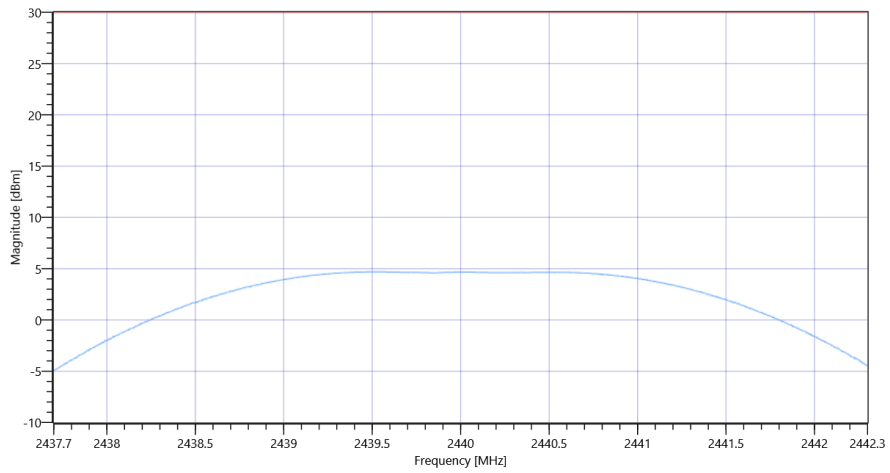
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps DTS BW

READ SA SETTINGS:

| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.63 10.8 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 |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | 30.00 | 4.69 | dBm | PASS |
| Peak Power | --- | 1000 | 2.944422 | mW | PASS |
| Frequency at Peak | --- | --- | 2439.485 | MHz | INFO |



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

Test at TX 2478 MHz

RESULT: Reference Power cond.

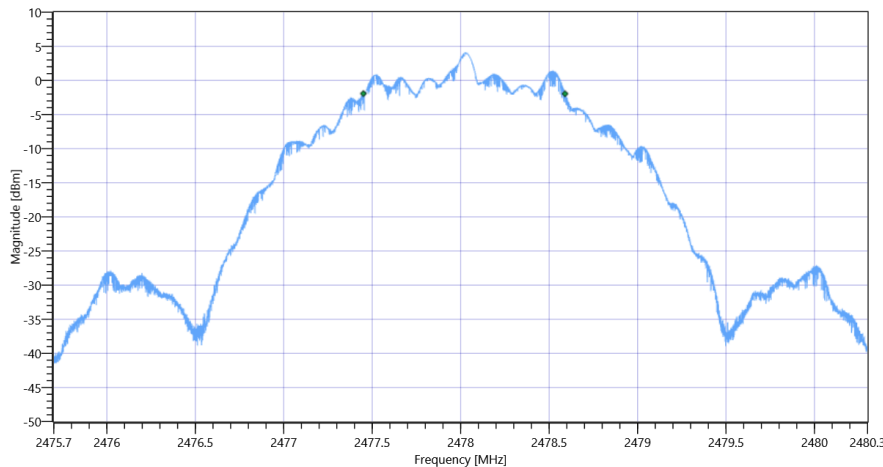
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.14 | dBm | INFO |
| Ref. Frequency | --- | --- | 2477.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.14 10.85 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | --- | --- | 1140 | kHz | INFO |



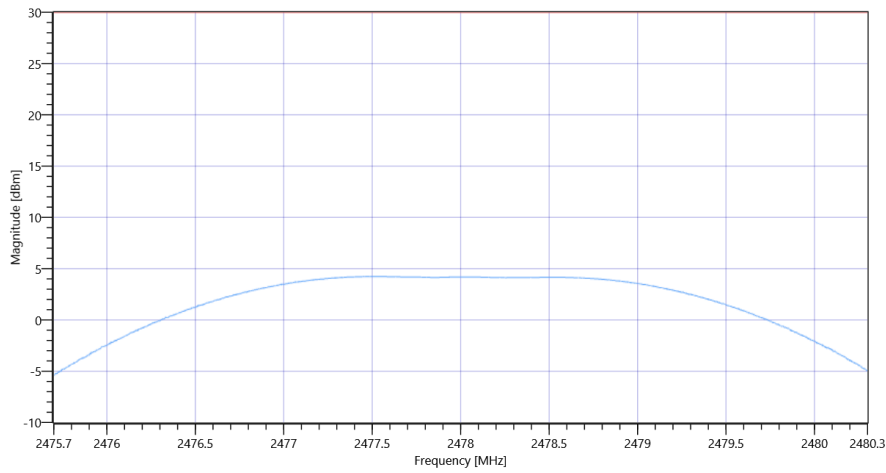
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 2 Msps DTS BW

READ SA SETTINGS:

| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.14 10.85 20 |
| 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 |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | 30.00 | 4.23 | dBm | PASS |
| Peak Power | --- | 1000 | 2.6485 | mW | PASS |
| Frequency at Peak | --- | --- | 2477.508 | MHz | INFO |



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

General verdict

PASS

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

| Test References | |
|-----------------------------------|---|
| TC Start | 21.09.2022 13:22:25 |
| Ambit Temp [°C] Humidity [rel%] | 25.3 34 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 1 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 1 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2402 MHz

RESULT: Reference Power cond.

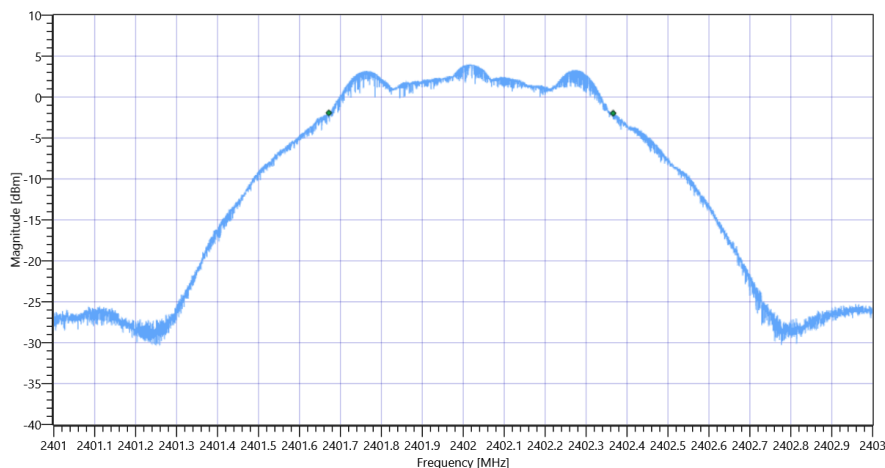
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.19 | dBm | INFO |
| Ref. Frequency | --- | --- | 2401.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.19 10.79 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | --- | --- | 694 | kHz | INFO |



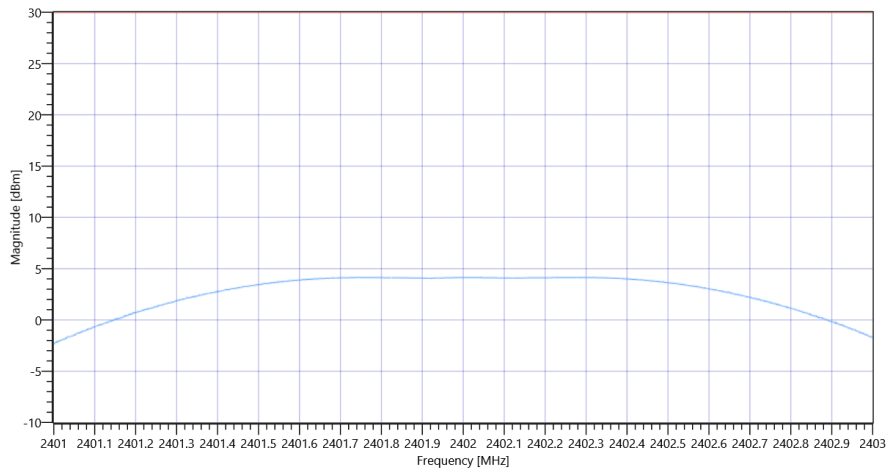
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:

| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.19 10.79 20 |
| Start [MHz] Stop [MHz] | 2401.000 2403.000 |
| RBW [MHz] VBW [MHz] | 1.000000 5.000000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 50 200 1001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | 30.00 | 4.15 | dBm | PASS |
| Peak Power | --- | 1000 | 2.60016 | mW | PASS |
| Frequency at Peak | --- | --- | 2402.262 | MHz | INFO |



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

Test at TX 2440 MHz

RESULT: Reference Power cond.

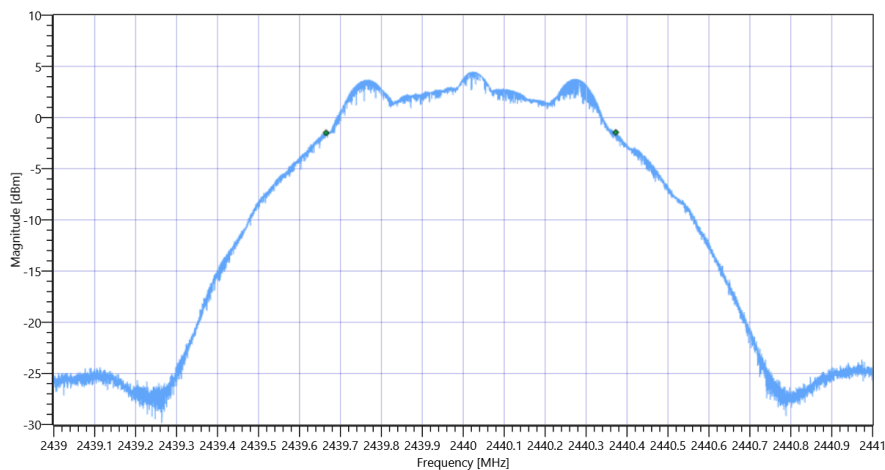
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.61 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.61 10.8 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | --- | --- | 707 | kHz | INFO |



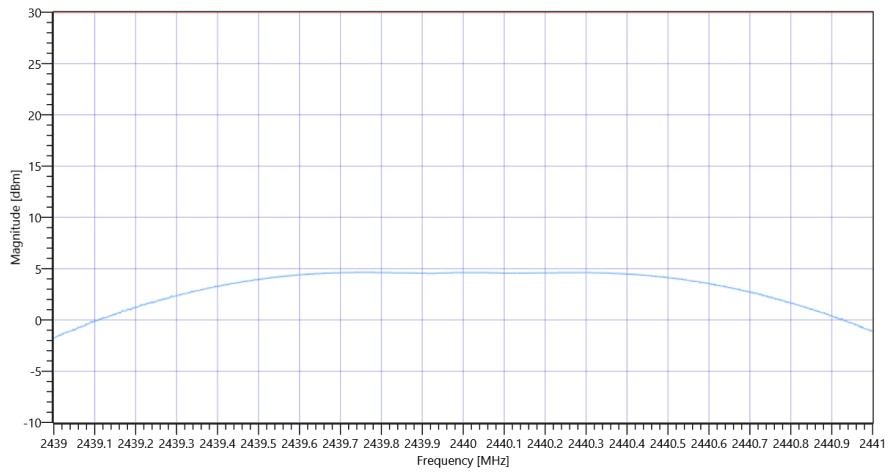
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:

| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.61 10.8 20 |
| Start [MHz] Stop [MHz] | 2439.000 2441.000 |
| RBW [MHz] VBW [MHz] | 1.000000 5.000000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 50 200 1001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | 30.00 | 4.64 | dBm | PASS |
| Peak Power | --- | 1000 | 2.910717 | mW | PASS |
| Frequency at Peak | --- | --- | 2439.754 | MHz | INFO |



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

Test at TX 2480 MHz

RESULT: Reference Power cond.

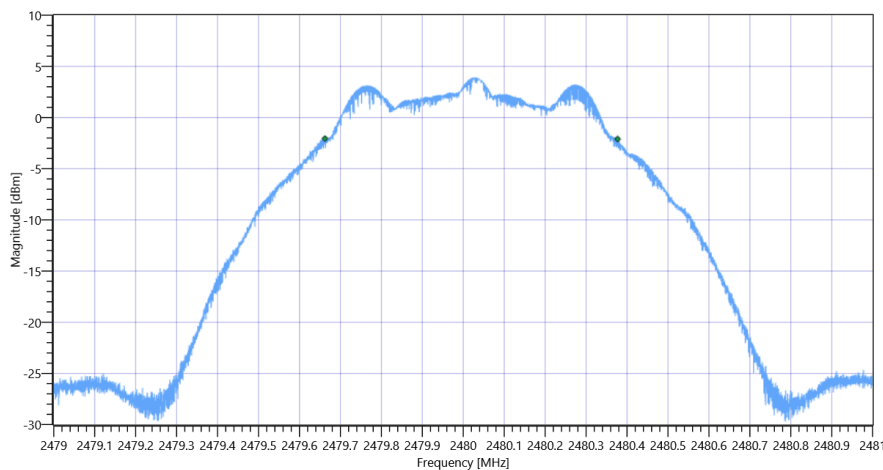
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.05 | dBm | INFO |
| Ref. Frequency | --- | --- | 2480.300 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.05 10.85 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| DTS Bandwidth (6dB) | --- | --- | 715 | kHz | INFO |



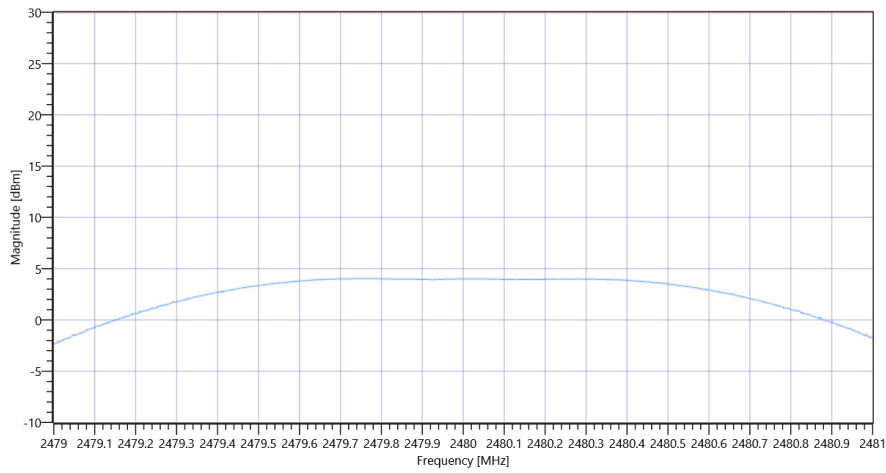
FCC 15.247 # Maximum peak conducted output power DTS ~ BT LE 1 Msps DTS BW

READ SA SETTINGS:

| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 14.05 10.85 20 |
| Start [MHz] Stop [MHz] | 2479.000 2481.000 |
| RBW [MHz] VBW [MHz] | 1.000000 5.000000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 50 200 1001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------|-------------|-------------|----------|------|---------|
| Peak Power | --- | 30.00 | 4.03 | dBm | PASS |
| Peak Power | --- | 1000 | 2.529298 | mW | PASS |
| Frequency at Peak | --- | --- | 2479.76 | MHz | INFO |



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

General verdict

PASS

FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps

| Test References | |
|-----------------------------------|--|
| TC Start | 21.09.2022 13:57:54 |
| Ambit Temp [°C] Humidity [rel%] | 25.2 33 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 Peak Power Spectral Density DTS - BT LE 2 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 2 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2404 MHz

RESULT: Reference Power cond.

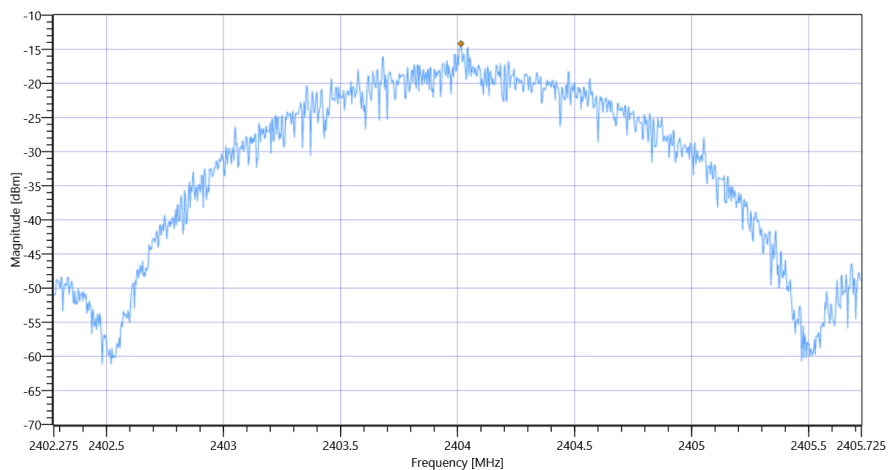
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.14 | dBm | INFO |
| Ref. Frequency | --- | --- | 2403.600 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.14 10.8 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|---------------------------|-------------|-------------|----------|----------|---------|
| Max Peak power Density | --- | 8 | -14.16 | dBm/3KHz | PASS |



FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.

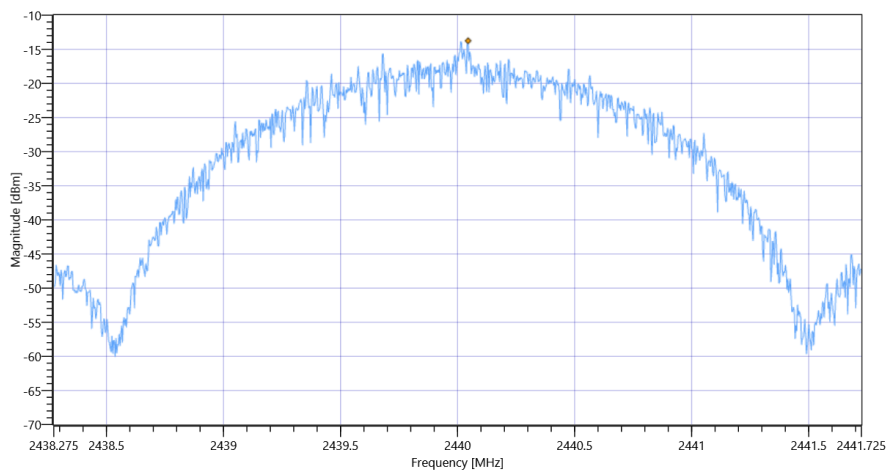
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.65 | dBm | INFO |
| Ref. Frequency | --- | --- | 2440.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.65 10.8 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|---------------------------|-------------|-------------|----------|----------|---------|
| Max Peak power Density | --- | 8 | -13.75 | dBm/3KHz | PASS |



FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps

Test at TX 2478 MHz

RESULT: Reference Power cond.

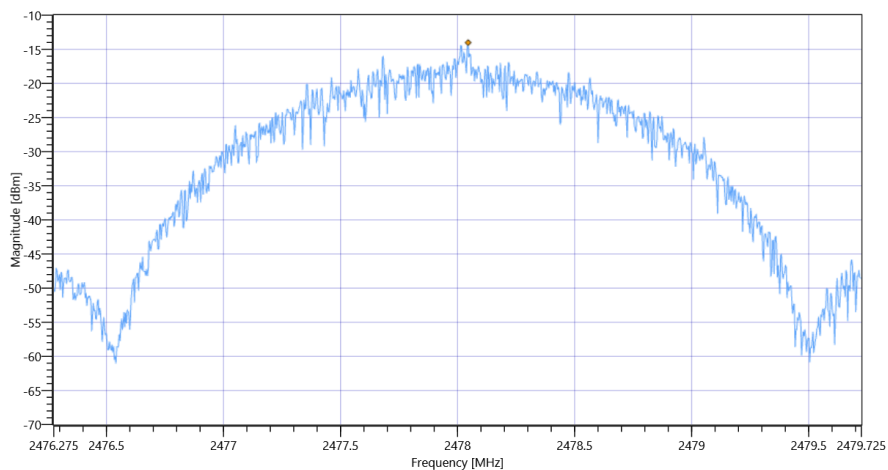
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.14 | dBm | INFO |
| Ref. Frequency | --- | --- | 2478.500 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.14 10.85 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|---------------------------|-------------|-------------|----------|----------|---------|
| Max Peak power Density | --- | 8 | -14.02 | dBm/3KHz | PASS |



FCC 15.247 # Peak power spectral density DTS ~ BT LE 2 Msps

General verdict

PASS

FCC 15.247 # Peak power spectral density DTS ~ BT LE 1 Msps

| Test References | |
|-----------------------------------|--|
| TC Start | 21.09.2022 13:26:31 |
| Ambit Temp [°C] Humidity [rel%] | 25.3 33 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 Peak Power Spectral Density DTS - BT LE 1 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 1 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2402 MHz

RESULT: Reference Power cond.

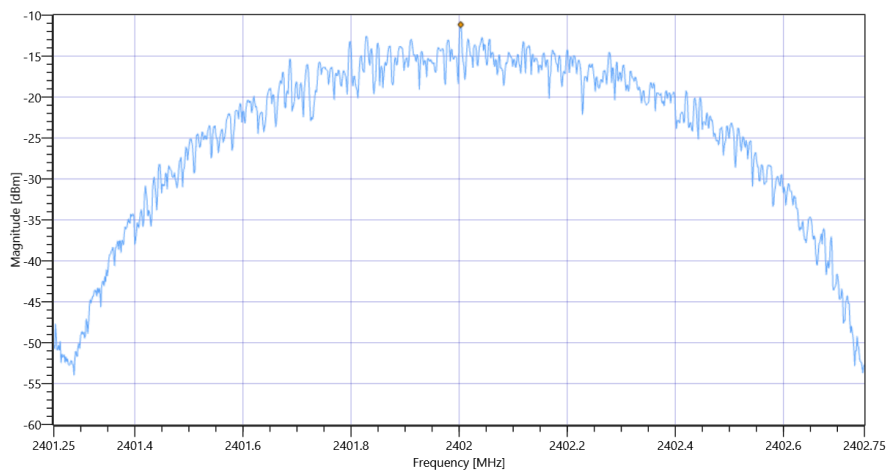
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.20 | dBm | INFO |
| Ref. Frequency | --- | --- | 2401.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.20 10.79 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|---------------------------|-------------|-------------|----------|----------|---------|
| Max Peak power Density | --- | 8 | -11.15 | dBm/3KHz | PASS |



FCC 15.247 # Peak power spectral density DTS ~ BT LE 1 Msps

Test at TX 2440 MHz

RESULT: Reference Power cond.

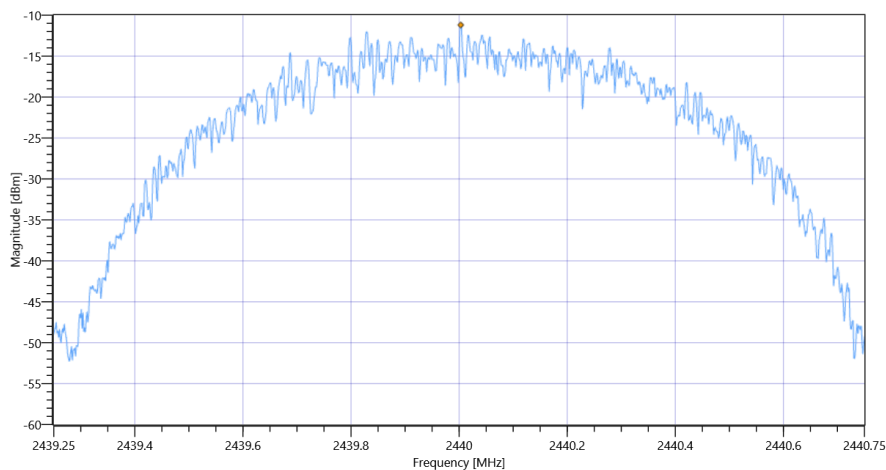
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.65 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.65 10.8 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|---------------------------|-------------|-------------|----------|----------|---------|
| Max Peak power Density | --- | 8 | -11.19 | dBm/3KHz | PASS |



FCC 15.247 # Peak power spectral density DTS ~ BT LE 1 Msps

Test at TX 2480 MHz

RESULT: Reference Power cond.

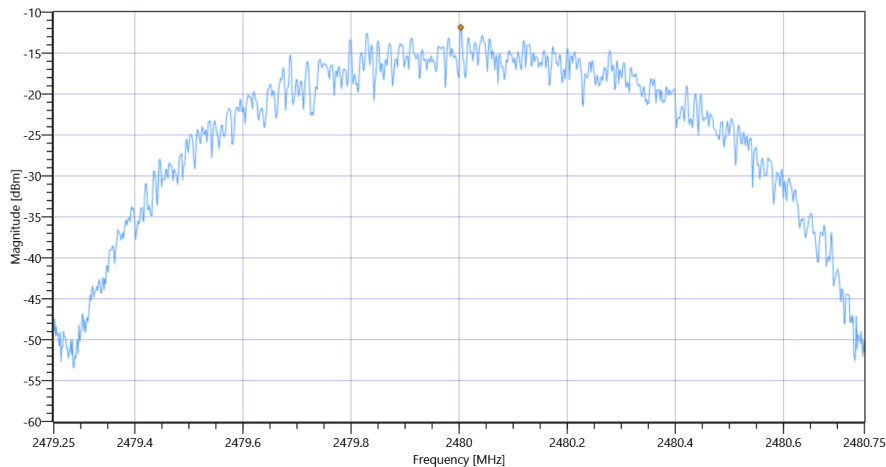
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.02 | dBm | INFO |
| Ref. Frequency | --- | --- | 2479.800 | MHz | INFO |

READ SA SETTINGS:

| | |
|--|------------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 9.02 10.85 15 |
| 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

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|---------------------------|-------------|-------------|----------|----------|---------|
| Max Peak power Density | --- | 8 | -11.85 | dBm/3KHz | PASS |



FCC 15.247 # Peak power spectral density DTS ~ BT LE 1 Msps

General verdict

PASS

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

| Test References | |
|-----------------------------------|--|
| TC Start | 21.09.2022 14:02:48 |
| Ambit Temp [°C] Humidity [rel%] | 25.2 32 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 TX Emissions Conducted DTS - BT LE 2 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 2 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2404 MHz

RESULT: Reference Power cond.

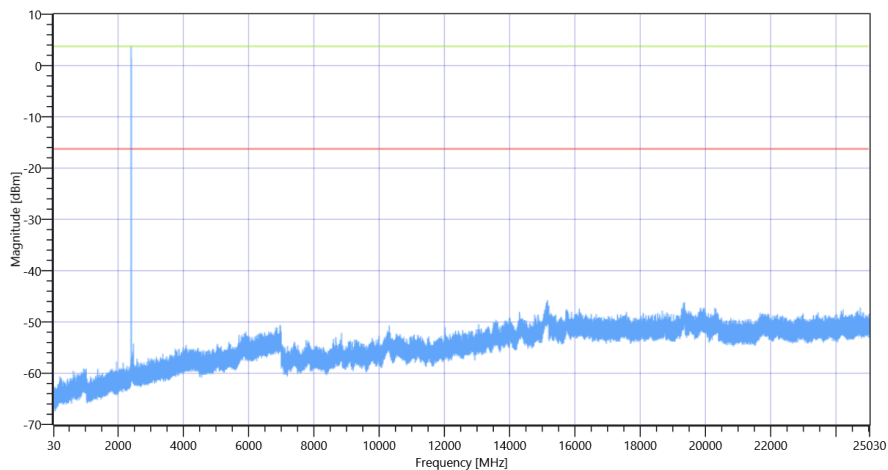
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.22 | dBm | INFO |
| Ref. Frequency | --- | --- | 2404.500 | MHz | INFO |

READ SA SETTINGS:

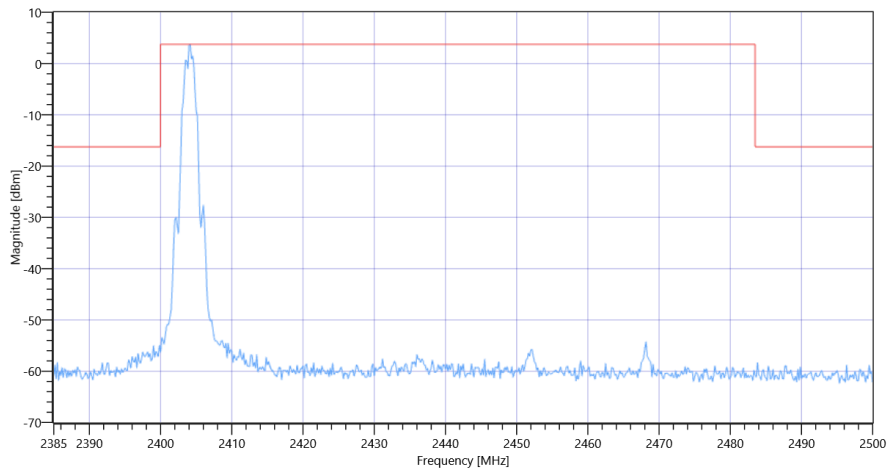
| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 4.22 0 20 |
| Start [MHz] Stop [MHz] | 24530.000 25030.000 |
| RBW [MHz] VBW [MHz] | 0.100000 0.300000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 200 25 3001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|--|-------------|-------------|----------|------|---------|
| Reference @ 2404.00 MHz | --- | --- | 3.78 | dBm | INFO |
| No peaks detected | --- | --- | | | PASS |
| Lowest margin to limit 15154.833 MHz | 0 | --- | 29.57 | dB | INFO |



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps 2404



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps 2404

Test at TX 2440 MHz

RESULT: Reference Power cond.

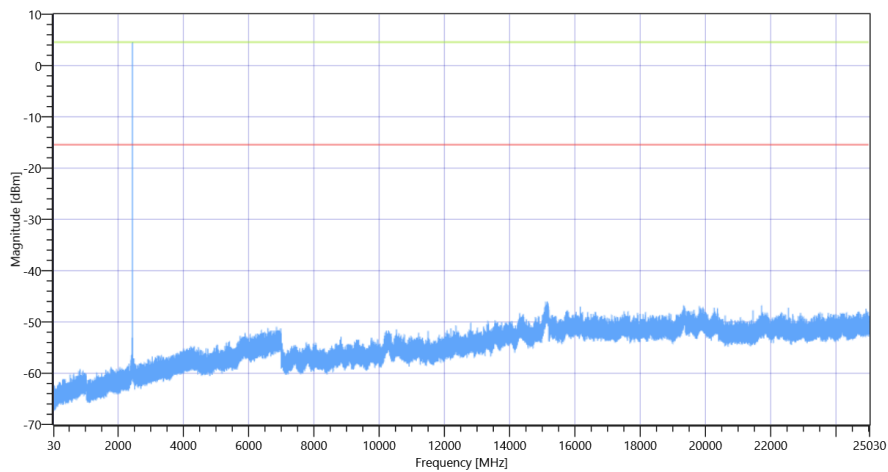
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.63 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.500 | MHz | INFO |

READ SA SETTINGS:

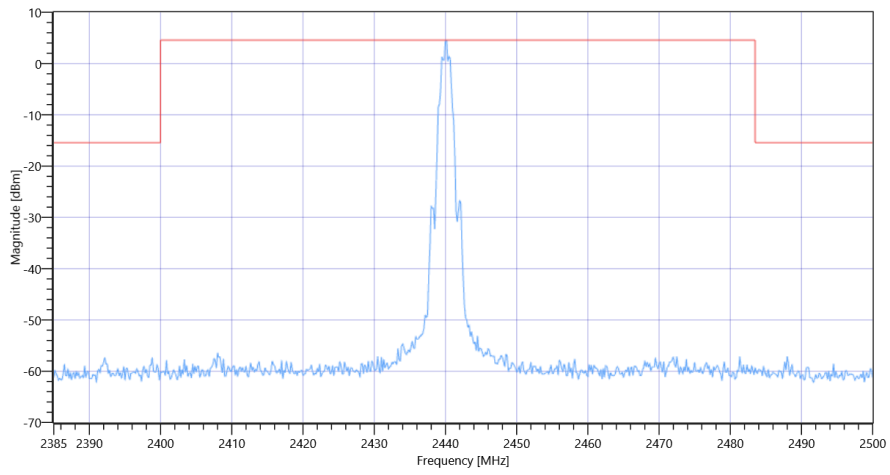
| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 4.63 0 20 |
| Start [MHz] Stop [MHz] | 24530.000 25030.000 |
| RBW [MHz] VBW [MHz] | 0.100000 0.300000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 200 25 3001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|--|-------------|-------------|----------|------|---------|
| Reference @ 2440.00 MHz | --- | --- | 4.57 | dBm | INFO |
| No peaks detected | --- | --- | | | PASS |
| Lowest margin to limit 15156.833 MHz | 0 | --- | 30.59 | dB | INFO |



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps 2440



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps 2440

Test at TX 2478 MHz

RESULT: Reference Power cond.

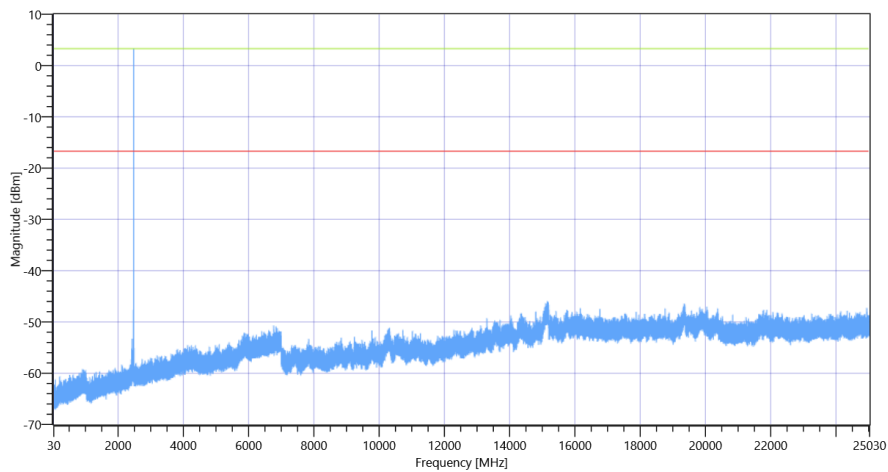
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.17 | dBm | INFO |
| Ref. Frequency | --- | --- | 2477.500 | MHz | INFO |

READ SA SETTINGS:

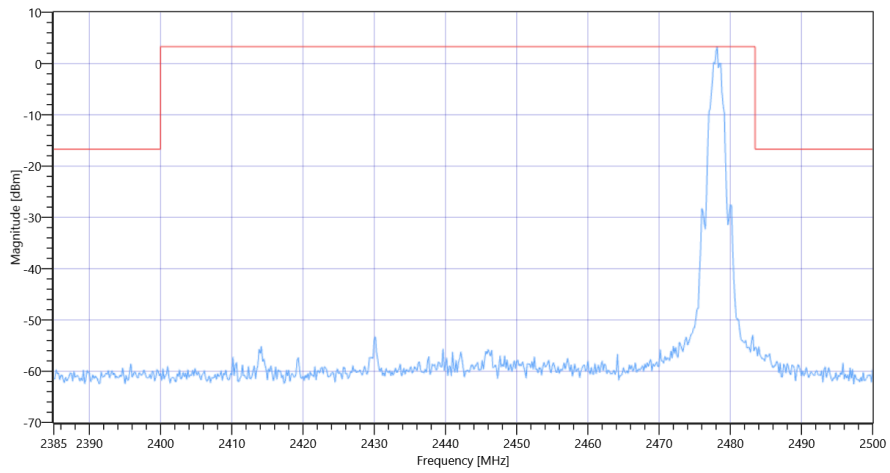
| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 4.17 0 20 |
| Start [MHz] Stop [MHz] | 24530.000 25030.000 |
| RBW [MHz] VBW [MHz] | 0.100000 0.300000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 200 25 3001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|--|-------------|-------------|----------|------|---------|
| Reference @ 2478.17 MHz | --- | --- | 3.29 | dBm | INFO |
| No peaks detected | --- | --- | | | PASS |
| Lowest margin to limit 15151.167 MHz | 0 | --- | 29.25 | dB | INFO |



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps 2478



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 2 Msps 2478

General verdict

PASS

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

| Test References | |
|-----------------------------------|--|
| TC Start | 21.09.2022 13:31:21 |
| Ambit Temp [°C] Humidity [rel%] | 25.2 33 |
| System Version | 3.3.0.5 |
| Test Specification | FCC 15.247 - |
| Test Method | IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable |
| TC Version | 0.0.1 |
| My Description | FCC 15.247 TX Emissions Conducted DTS - BT LE 1 Msps |
| Add. 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 | WS_USB_RS232 TWO 42 115200 None S1 None On |
| Signaling RF Settings | RF1com 0 0 On |
| User Interaction | No |
| Switch Matrix & Pathcompensation enabled | Yes |

| Test Parameter | |
|--|--|
| Technology to test | BT LE 1 Msps |
| Antenna Port used | 1 |
| 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 |
| Switched Path | EUT - SignalingUnit - SpectrumAnalyzer |

| Test Equipment | |
|---|--|
| Signal analyzer,Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.70 | |
| Signaling unit,Rohde&Schwarz,CMW,1201.0002k75/102550,4.0.62 | |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI | |

Test at TX 2402 MHz

RESULT: Reference Power cond.

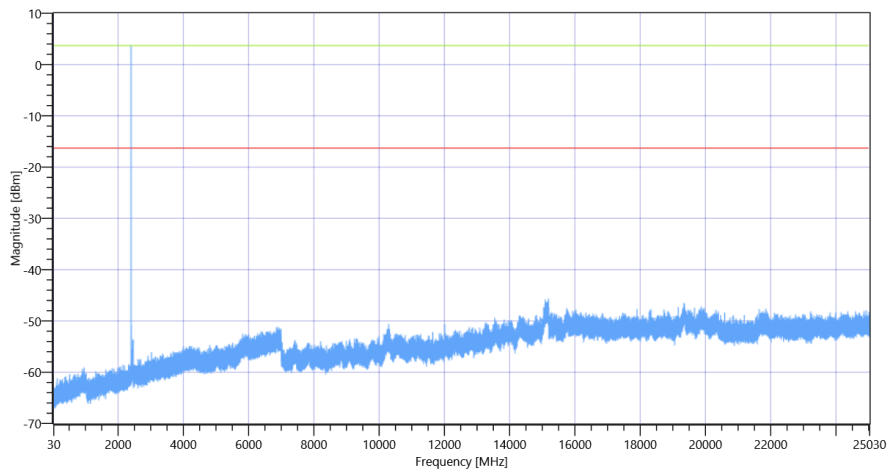
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.19 | dBm | INFO |
| Ref. Frequency | --- | --- | 2402.300 | MHz | INFO |

READ SA SETTINGS:

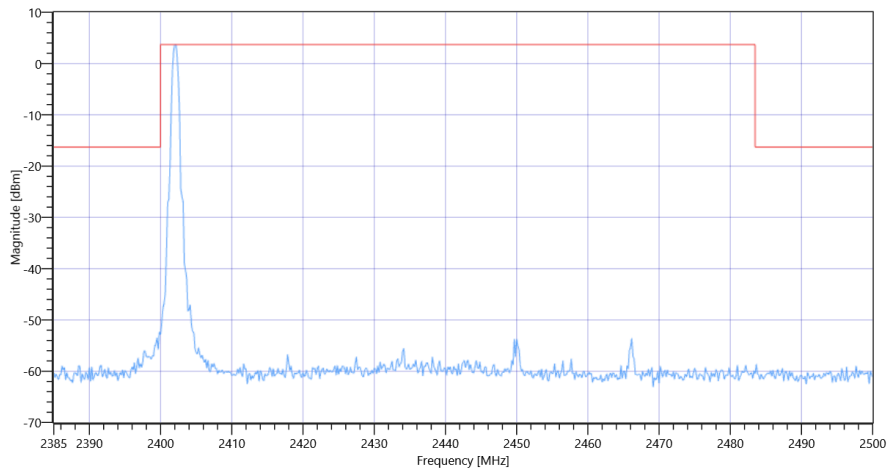
| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 4.19 0 20 |
| Start [MHz] Stop [MHz] | 24530.000 25030.000 |
| RBW [MHz] VBW [MHz] | 0.100000 0.300000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 200 25 3001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|----------------------------------|-------------|-------------|----------|------|---------|
| Reference @ 2402.00 MHz | --- | --- | 3.73 | dBm | INFO |
| No peaks detected | --- | --- | | | PASS |
| Lowest margin to limit 30 MHz | 0 | --- | -134.75 | dB | INFO |



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps 2402



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps 2402

Test at TX 2440 MHz

RESULT: Reference Power cond.

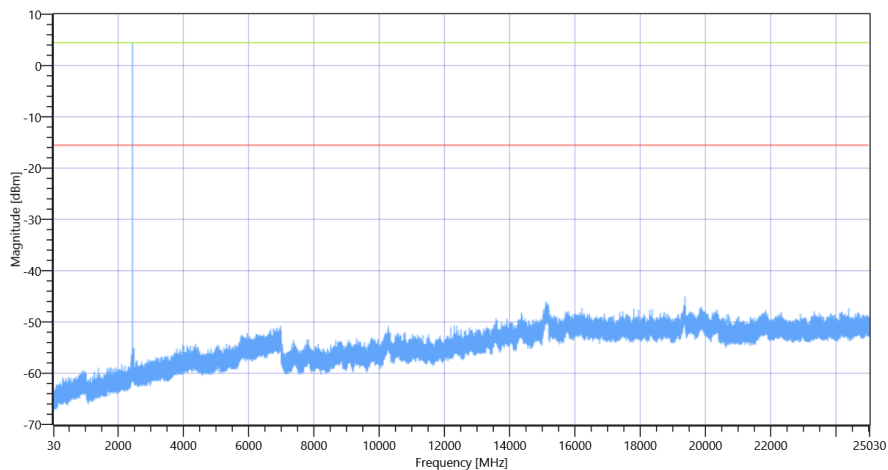
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.67 | dBm | INFO |
| Ref. Frequency | --- | --- | 2439.800 | MHz | INFO |

READ SA SETTINGS:

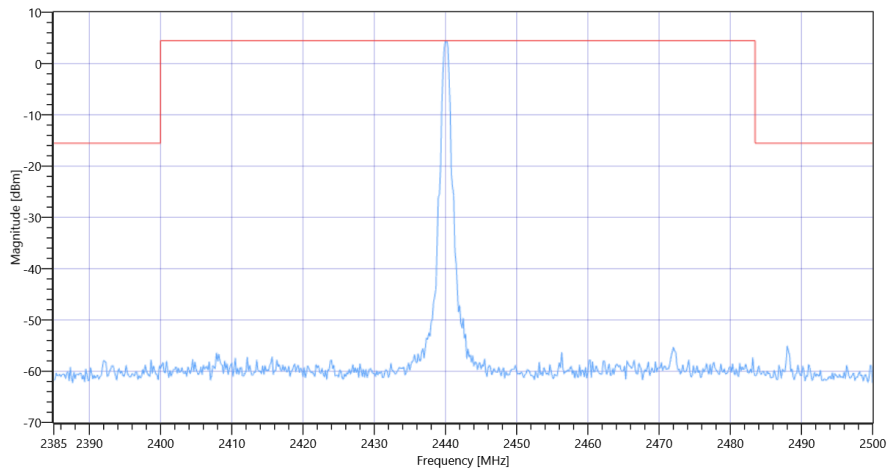
| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 4.67 0 20 |
| Start [MHz] Stop [MHz] | 24530.000 25030.000 |
| RBW [MHz] VBW [MHz] | 0.100000 0.300000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 200 25 3001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|--|-------------|-------------|----------|------|---------|
| Reference @ 2440.17 MHz | --- | --- | 4.44 | dBm | INFO |
| No peaks detected | --- | --- | | | PASS |
| Lowest margin to limit 19369.167 MHz | 0 | --- | 29.5 | dB | INFO |



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps 2440



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps 2440

Test at TX 2480 MHz

RESULT: Reference Power cond.

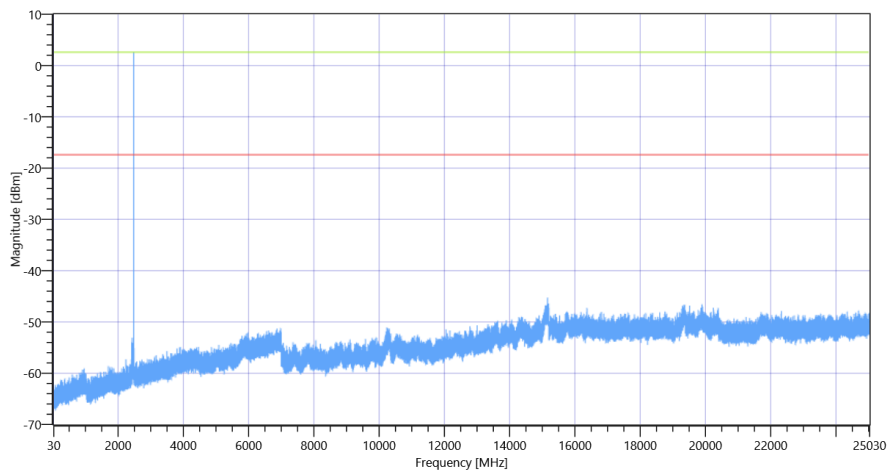
| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power 1MHz/1MHz cond. | --- | --- | 4.09 | dBm | INFO |
| Ref. Frequency | --- | --- | 2480.300 | MHz | INFO |

READ SA SETTINGS:

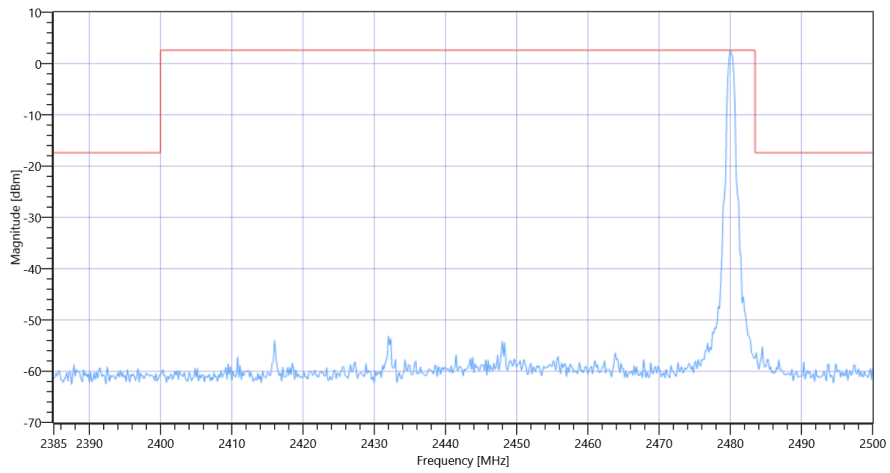
| | |
|--|-----------------------|
| RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB] | 4.09 0 20 |
| Start [MHz] Stop [MHz] | 24530.000 25030.000 |
| RBW [MHz] VBW [MHz] | 0.100000 0.300000 |
| Detector TraceMode | POS MAXH |
| Sweep: Time [ms] Count Points per Section Type | 200 25 3001 SWE |

RESULT

| Test Description | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|--|-------------|-------------|----------|------|---------|
| Reference @ 2480.00 MHz | --- | --- | 2.62 | dBm | INFO |
| No peaks detected | --- | --- | | | PASS |
| Lowest margin to limit 15158.333 MHz | 0 | --- | 27.89 | dB | INFO |



FCC 15.247 # TX spurious conducted 20dBc ~ BT LE 1 Msps 2480



General verdict

PASS

- END OF DOCUMENT -