

## Measurement Results

1-6371/18-02-10\_log1\_conducted

[Test logging](#)

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## IUT Summary

| IUT DEFINITION & Common settings                                           |                        |
|----------------------------------------------------------------------------|------------------------|
| Manufacturer                                                               | Roche Diagnostics GmbH |
| Type                                                                       | Cobas Pulse            |
| Serial No.   Setup No.                                                     | NI   1.0               |
| SW Version   HW Version                                                    | v01.01.00-rc2   PT3    |
| Comment 1   2                                                              |                        |
| Tlow   Tmid   Thigh [°C]                                                   | 5   20   40            |
| Vlow   Vmid   Vhigh [V] @Imax [A]                                          | 3.7   3.7   3.7 @1     |
| Auto Control enabled Power Supply   Climatic Box                           | No   No                |
| Antenna Gain [dBi] (only considered if explicitly mentioned in testresult) | 0                      |
| Additional Path Loss [dB]                                                  | 0.3                    |

| IUT 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 37   RXpayload 37            |
| 2 Mbps supported                         | False   TXpayload 255   RXpayload 255         |
| Longrange S8 supported                   | False   TXpayload 255   RXpayload 255         |
| Longrange S2 supported                   | False   TXpayload 255   RXpayload 255         |
| Signaling Settings                       | None   HCI   1   2400   None   S1   None   On |
| Signaling RF Settings                    | RF1com   0   0   On                           |
| User Interaction                         | Yes                                           |
| Switch Matrix & Pathcompensation enabled | Yes                                           |

## 1. Common2G4 Peak OP 3MHz/3MHz ~ BT LE 1 Msps

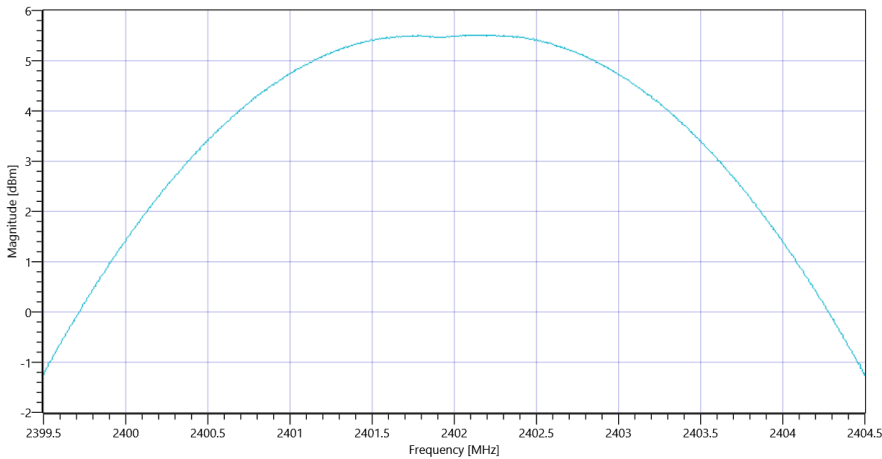
| Test References                   |                                                                          |
|-----------------------------------|--------------------------------------------------------------------------|
| TC Start                          | 10.08.2020 15:30:39                                                      |
| Ambit Temp [°C]   Humidity [rel%] | 30.5   36                                                                |
| System Version                    | 1.0.0.49                                                                 |
| Test Specification                | None                                                                     |
| Test Method                       |                                                                          |
| Class / TC Version                | TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1 |
| My Description                    | Peak Output Power conducted 3MHz/3MHz - BT LE 1 Msps                     |
| Add. Information                  |                                                                          |

| Test Parameter         |                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------|
| Technology to test     | BT LE 1 Msps                                                                                                |
| Antenna Port used      | 1                                                                                                           |
| Temperature            | mid                                                                                                         |
| Voltage                | mid                                                                                                         |
| Frequency low to test  | True   Freq [MHz] 2402                                                                                      |
| Frequency mid to test  | True   Freq [MHz] 2440                                                                                      |
| Frequency high to test | True   Freq [MHz] 2480                                                                                      |
| Switched Path          | IUT - SignalingUnit - SpectrumAnalyzer                                                                      |
| Devices in use         | SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.170   SA:<br>Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.60 |

Test at TX 2402 MHz

| READ SA SETTINGS:                                    |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 15.44   10.39   25     |
| 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        | ---         | ---         | 5.51     | dBm  | Info    |
| Peak Power        | ---         | ---         | 3.556313 | mW   | Info    |
| Frequency at Peak | ---         | ---         | 2402.13  | MHz  | Info    |



Plot\_Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps\_10082020\_153331.png

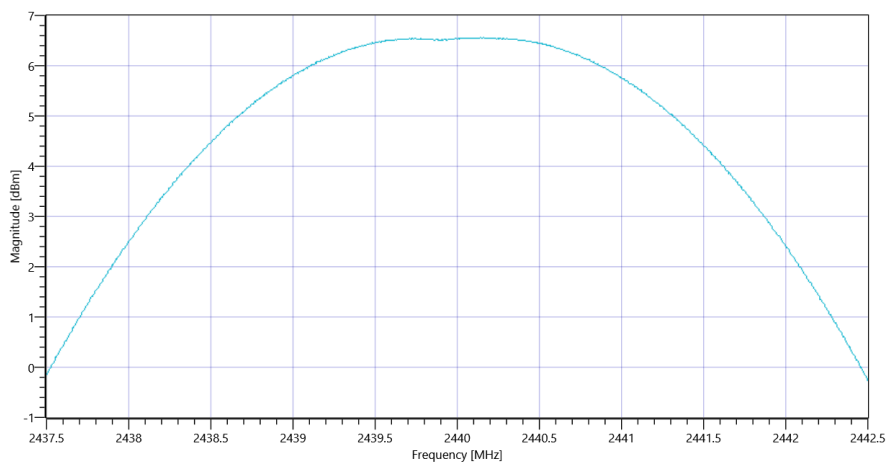
## Test at TX 2440 MHz

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 16.48   10.4   25      |
| 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        | ---         | ---         | 6.56     | dBm  | Info    |
| Peak Power        | ---         | ---         | 4.528976 | mW   | Info    |
| Frequency at Peak | ---         | ---         | 2440.14  | MHz  | Info    |



Plot\_Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps\_10082020\_153405.png

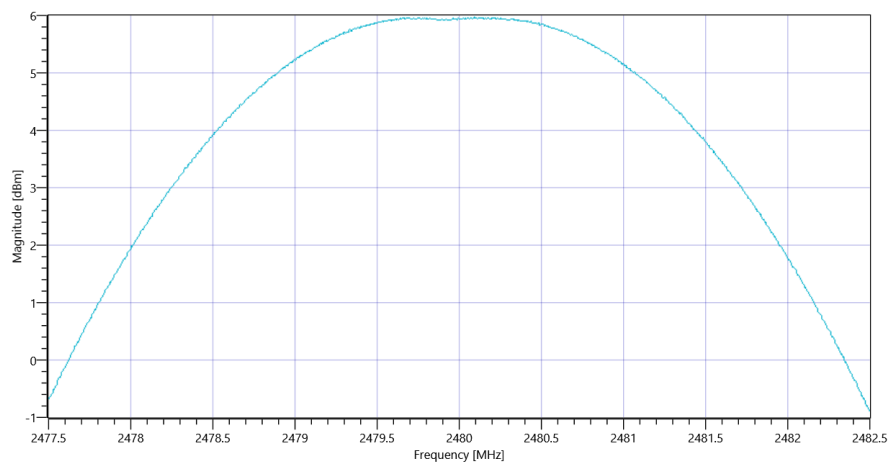
## Test at TX 2480 MHz

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 15.82   10.45   25     |
| 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        | ---         | ---         | 5.97     | dBm  | Info    |
| Peak Power        | ---         | ---         | 3.953666 | mW   | Info    |
| Frequency at Peak | ---         | ---         | 2480.095 | MHz  | Info    |



Plot\_Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps\_10082020\_153440.png

### TEST FINISHED

General Verdict 10.08.2020 15:34:40 / RT: 241 s

PASS

## 2. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps

| Test References                   |                                                                           |
|-----------------------------------|---------------------------------------------------------------------------|
| TC Start                          | 10.08.2020 15:35:03                                                       |
| Ambit Temp [°C]   Humidity [rel%] | 29.2   36                                                                 |
| System Version                    | 1.0.0.49                                                                  |
| Test Specification                | FCC Part 15.247                                                           |
| Test Method                       | DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth             |
| Class / TC Version                | TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1 |
| My Description                    | FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 1 Msps         |
| Add. Information                  |                                                                           |

| Test Parameter         |                                                                                                          |
|------------------------|----------------------------------------------------------------------------------------------------------|
| Technology to test     | BT LE 1 Msps                                                                                             |
| Antenna Port used      | 1                                                                                                        |
| Temperature            | mid                                                                                                      |
| Voltage                | mid                                                                                                      |
| Frequency low to test  | True   Freq [MHz] 2402                                                                                   |
| Frequency mid to test  | True   Freq [MHz] 2440                                                                                   |
| Frequency high to test | True   Freq [MHz] 2480                                                                                   |
| Switched Path          | IUT - SignalingUnit - SpectrumAnalyzer                                                                   |
| Devices in use         | SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.170   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.60 |

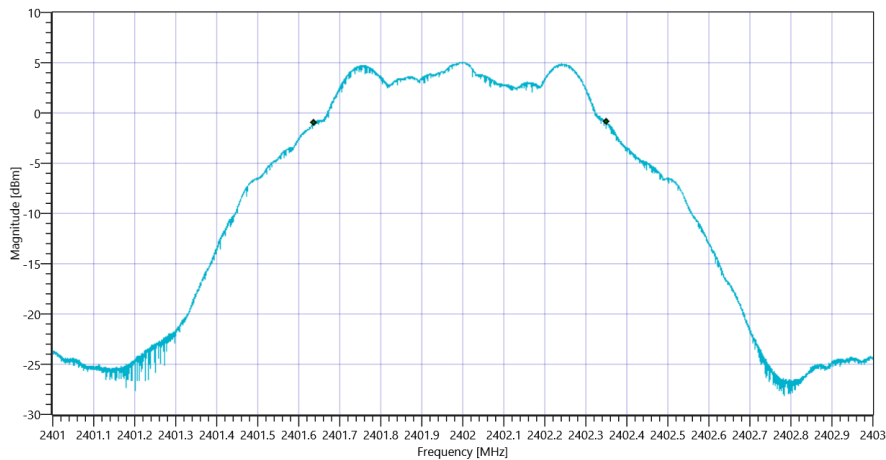
## Test at TX 2402 MHz

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 10.55   10.39   20     |
| 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) | ---         | ---         | 714      | kHz  | INFO    |



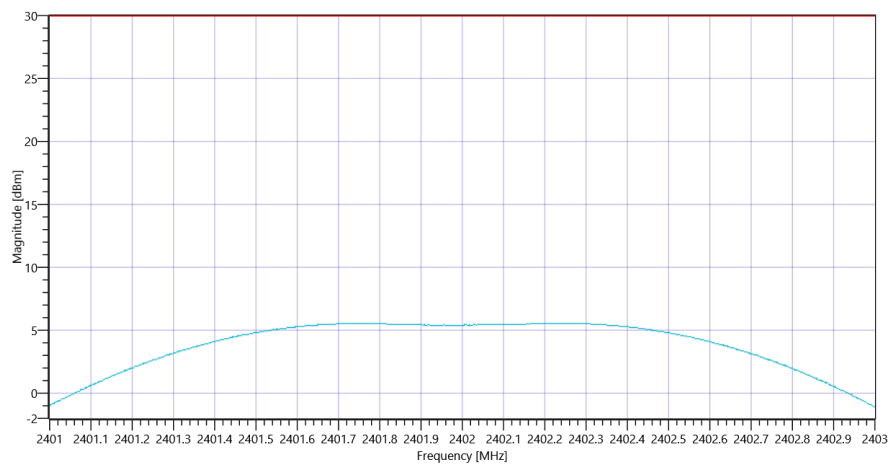
Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW\_10082020\_153531.png

### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 15.55   10.39   25    |
| 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       | 5.55     | dBm  | PASS    |
| Peak Power        | ---         | 1000        | 3.589219 | mW   | PASS    |
| Frequency at Peak | ---         | ---         | 2402.24  | MHz  | INFO    |



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msp\_10082020\_153547.png

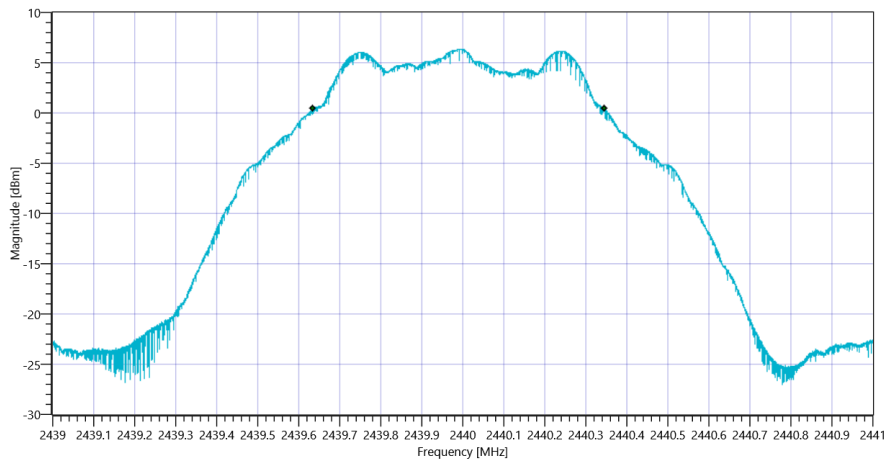
## Test at TX 2440 MHz

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 11.85   10.4   20      |
| 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) | ---         | ---         | 710      | kHz  | INFO    |

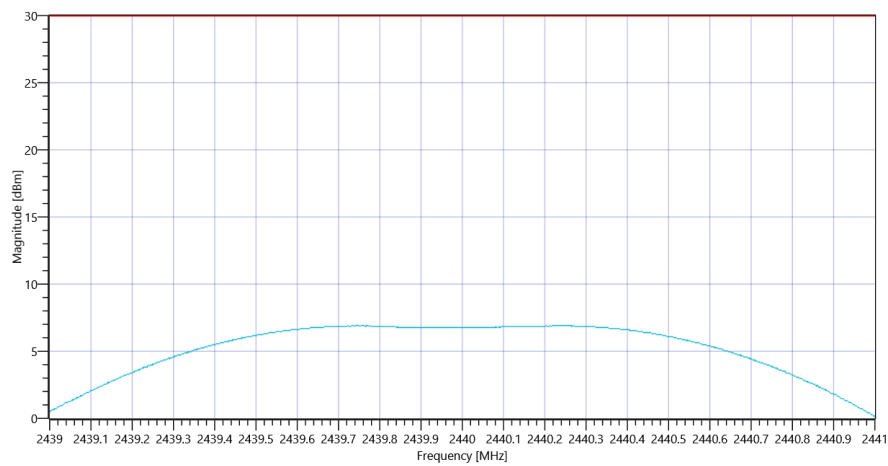


### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 16.85   10.4   25     |
| 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       | 6.89     | dBm  | PASS    |
| Peak Power        | ---         | 1000        | 4.886524 | mW   | PASS    |
| Frequency at Peak | ---         | ---         | 2440.224 | MHz  | INFO    |



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msp\_10082020\_154433.png

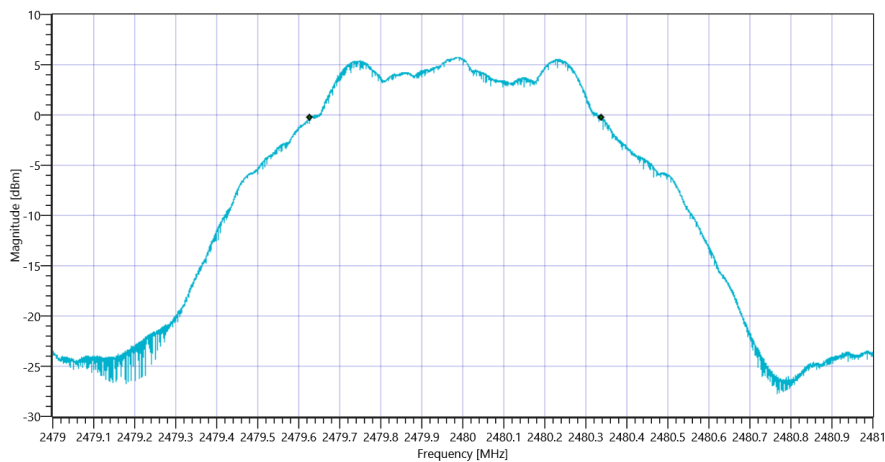
## Test at TX 2480 MHz

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 11.21   10.45   20     |
| 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) | ---         | ---         | 712      | kHz  | INFO    |

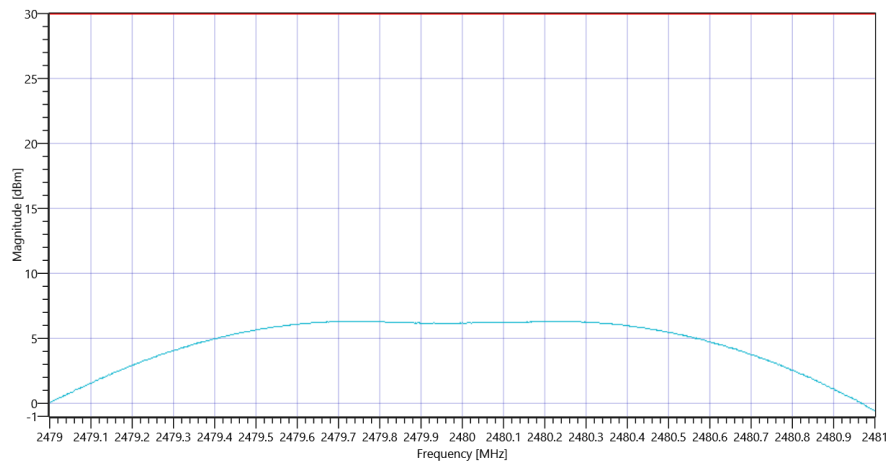


### READ SA SETTINGS:

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 16.21   10.45   25    |
| 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       | 6.33     | dBm  | PASS    |
| Peak Power        | ---         | 1000        | 4.295364 | mW   | PASS    |
| Frequency at Peak | ---         | ---         | 2479.75  | MHz  | INFO    |



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msp.10082020\_154522.png

TEST FINISHED

General Verdict

10.08.2020 15:45:23 / RT: 619 s

PASS

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