

# Measurement Results

No.1-4450/22-01-07\_Annex\_MR\_A1

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## Test logging

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Test/s performed:

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## EUT Information

| EUT DEFINITION       |                                           |
|----------------------|-------------------------------------------|
| Manufacturer         | Sonnova Communications AG                 |
| Type                 | DigiMaster 5000 /V2 & DigiMaster 7000 /V2 |
| Serial Number        | Sample 7                                  |
| Setup Number         | 1.0                                       |
| Version SW           | NI                                        |
| Version FW           | NI                                        |
| Version HW           | NI                                        |
| Comment 1            |                                           |
| Comment 2            |                                           |
| Temperature [°C] Min | 0                                         |
| Temperature [°C] Nom | 20                                        |
| Temperature [°C] Max | 40                                        |
| Voltage [V] Min      | 100                                       |
| Voltage [V] Nom      | 220                                       |
| Voltage [V] Max      | 240                                       |

## Common2G4 Peak OP 3MHz/3MHz ~ BT Classic Basic rate

| Test References                   |                                                               |
|-----------------------------------|---------------------------------------------------------------|
| TC Start                          | 23.05.2022 13:58:23                                           |
| Ambit Temp [°C]   Humidity [rel%] | 26.3   49                                                     |
| System Version                    | 3.0.6.3                                                       |
| Test Specification                | None                                                          |
| Test Method                       |                                                               |
| TC Version                        | 0.0.1                                                         |
| My Description                    | Peak Output Power conducted 3MHz/3MHz - BT Classic Basic Rate |
| Add. Information                  |                                                               |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADBAD                                            |
| Signaling BT Address                     | BABEBEDADBAD                                            |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | True   Freq [MHz] 2402                 |
| Frequency mid to test                            | True   Freq [MHz] 2441                 |
| 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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX 2402 MHz

### RESULT: Reference Power cond.

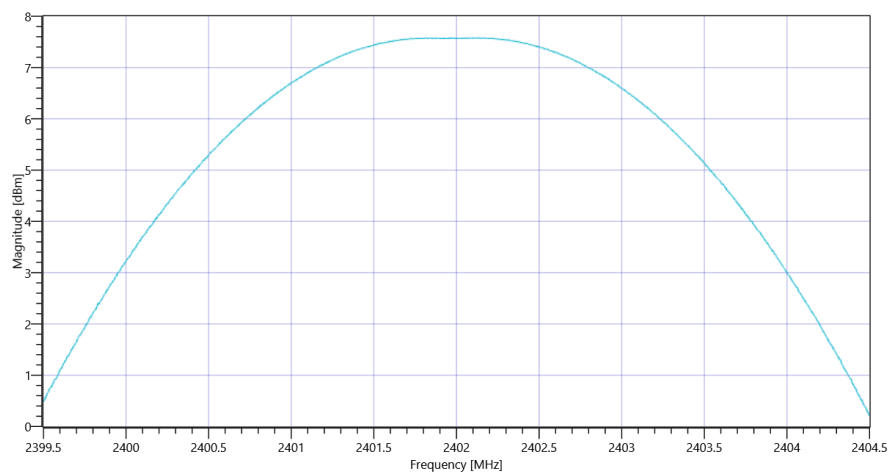
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 7.82     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2401.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 17.82   10.79   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        | ---         | ---         | 7.58     | dBm  | INFO    |
| Peak Power        | ---         | ---         | 5.72796  | mW   | INFO    |
| Frequency at Peak | ---         | ---         | 2402.11  | MHz  | INFO    |



Common2G4 Peak OP 3MHz-3MHz ~ BT Classic Basic rate

## Test at TX 2441 MHz

### RESULT: Reference Power cond.

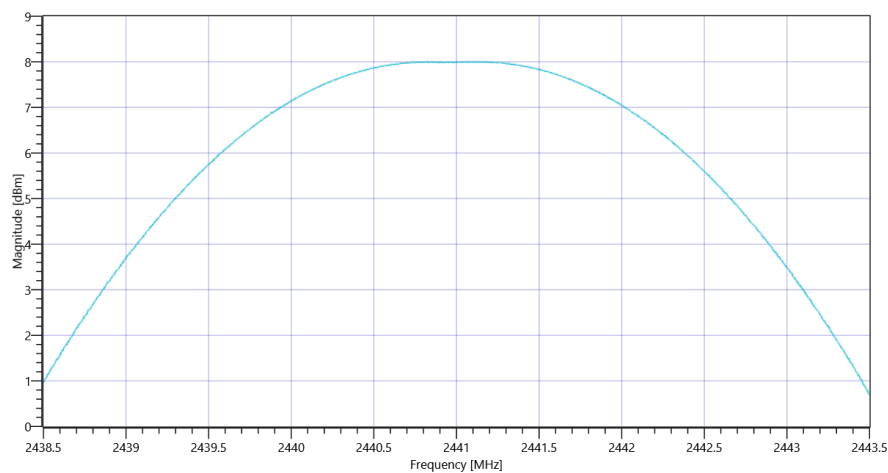
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 8.16     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2440.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 18.16   10.8   25      |
| Start [MHz]   Stop [MHz]                             | 2438.500   2443.500    |
| 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        | ---         | ---         | 8        | dBm  | INFO    |
| Peak Power        | ---         | ---         | 6.309573 | mW   | INFO    |
| Frequency at Peak | ---         | ---         | 2441.015 | MHz  | INFO    |



Common2G4 Peak OP 3MHz-3MHz ~ BT Classic Basic rate

## Test at TX 2480 MHz

### RESULT: Reference Power cond.

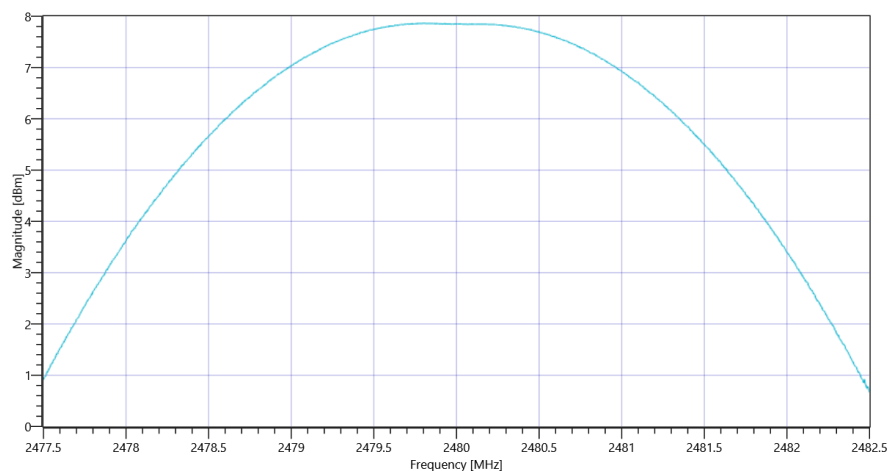
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 7.96     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2479.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 17.96   10.85   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        | ---         | ---         | 7.86     | dBm  | INFO    |
| Peak Power        | ---         | ---         | 6.10942  | mW   | INFO    |
| Frequency at Peak | ---         | ---         | 2479.83  | MHz  | INFO    |



Common2G4 Peak OP 3MHz-3MHz ~ BT Classic Basic rate

General verdict

PASS

## FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate

| Test References                   |                                                                |
|-----------------------------------|----------------------------------------------------------------|
| TC Start                          | 23.05.2022 11:55:03                                            |
| Ambit Temp [°C]   Humidity [rel%] | 25.9   48                                                      |
| System Version                    | 3.0.6.3                                                        |
| Test Specification                | FCC Part 15.247                                                |
| Test Method                       |                                                                |
| TC Version                        | 0.0.2                                                          |
| My Description                    | FCC 15.247 Bandwidth 99PCT - 20DB FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADBAD                                            |
| Signaling BT Address                     | BABEBEDADBAD                                            |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | True   Freq [MHz] 2402                 |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| Frequency high to test                           | False   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 |  |
| 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<br>1MHz/1MHz cond. | ---         | ---         | 7.84     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2401.900 | MHz  | INFO    |

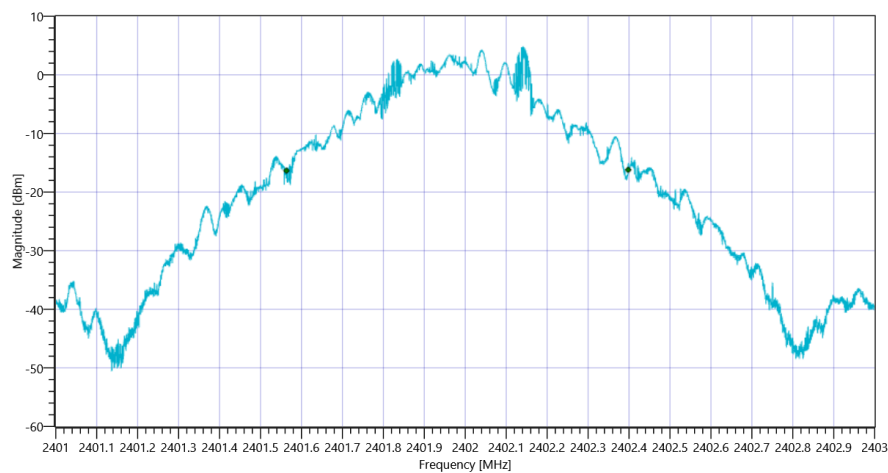
### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 12.84   10.79   20     |
| 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

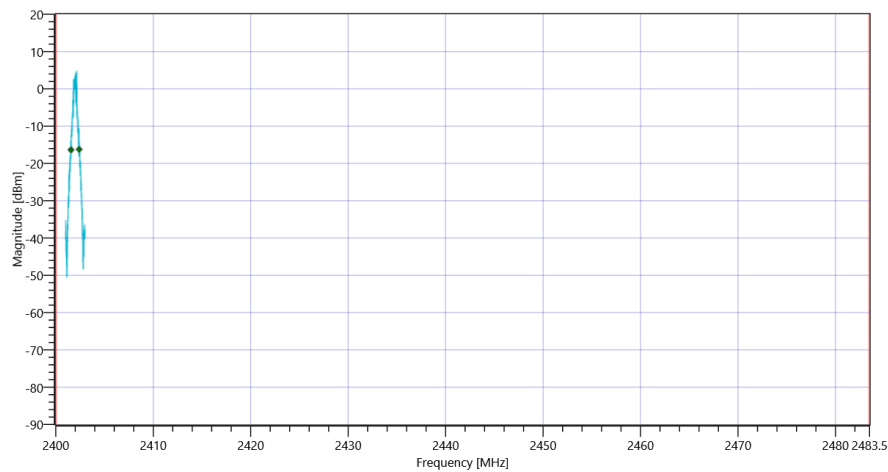
| Test Description | Lower Limit | Upper Limit | Measured  | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99%    | ---         | ---         | 834.717   | kHz  | INFO    |
| T1 99%           | 2400.000000 | ---         | 2401.5632 | MHz  | PASS    |
| T2 99%           | ---         | 2483.500000 | 2402.3980 | MHz  | PASS    |

### Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT:20dB ~ BT Classic Basic rate 99PCT

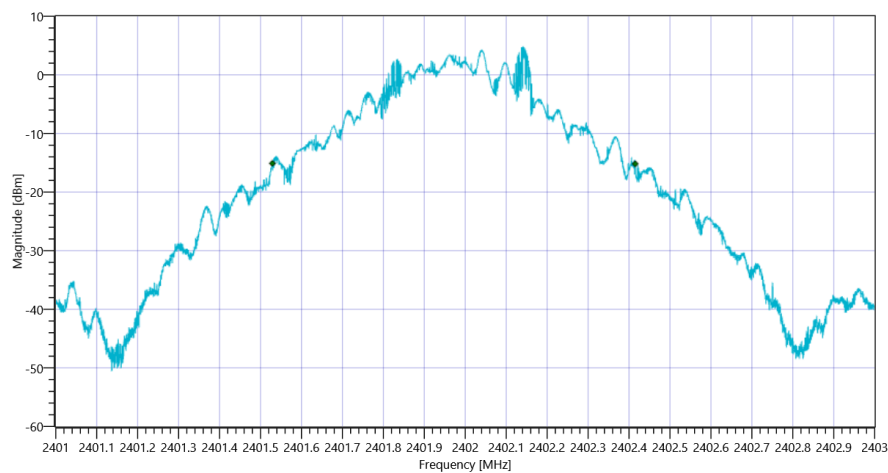
### Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate

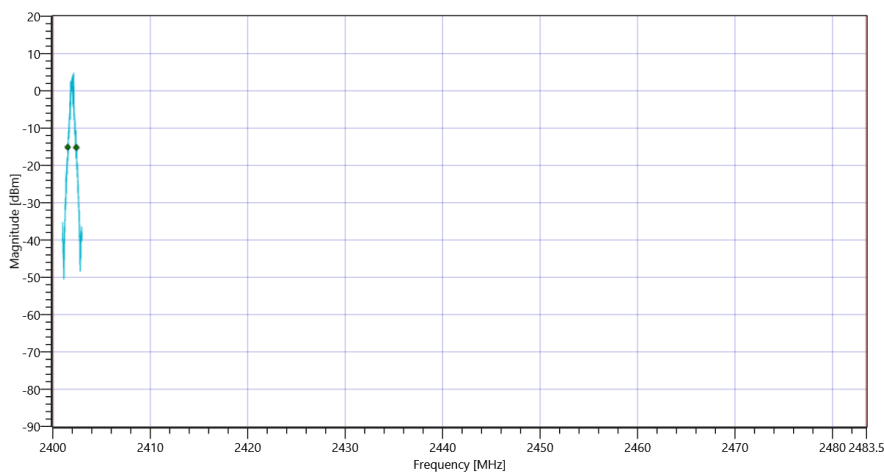
| RESULT           |             |             |           |      |         |
|------------------|-------------|-------------|-----------|------|---------|
| Test Description | Lower Limit | Upper Limit | Measured  | Unit | Verdict |
| Bandwidth 20dB   | ---         | ---         | 886       | kHz  | INFO    |
| T1 20dB          | 2400.000000 | ---         | 2401.5290 | MHz  | PASS    |
| T2 20dB          | ---         | 2483.500000 | 2402.4152 | MHz  | PASS    |

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate 20dB

Plot: Bandwidth within Band



General verdict

PASS

## FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate

### Test References

|                                   |                                                                |
|-----------------------------------|----------------------------------------------------------------|
| TC Start                          | 23.05.2022 12:43:09                                            |
| Ambit Temp [°C]   Humidity [rel%] | 26.1   48                                                      |
| System Version                    | 3.0.6.3                                                        |
| Test Specification                | FCC Part 15.247                                                |
| Test Method                       |                                                                |
| TC Version                        | 0.0.2                                                          |
| My Description                    | FCC 15.247 Bandwidth 99PCT - 20DB FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                |

### EUT Common Settings BT Classic

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADBAD                                            |
| Signaling BT Address                     | BABEBEDADBAD                                            |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

### Test Parameter

|                                                  |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | True   Freq [MHz] 2441                 |
| Frequency high to test                           | False   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 |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |

## Test at TX 2441 MHz

### RESULT: Reference Power cond.

| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 8.22     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2440.800 | MHz  | INFO    |

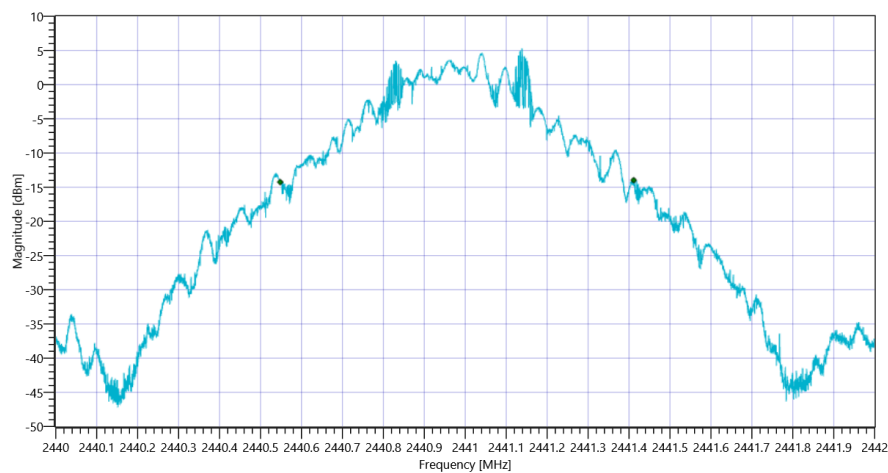
### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 13.22   10.8   20      |
| Start [MHz]   Stop [MHz]                             | 2440.000   2442.000    |
| 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

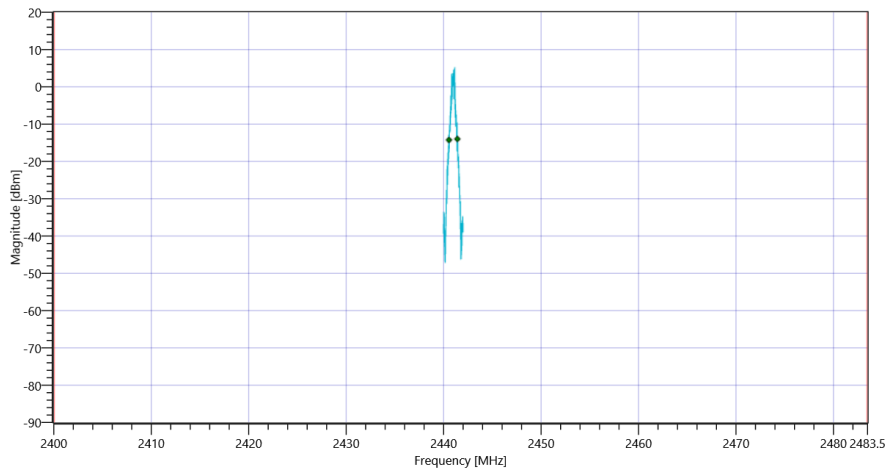
| Test Description | Lower Limit | Upper Limit | Measured  | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99%    | ---         | ---         | 863.314   | kHz  | INFO    |
| T1 99%           | 2400.000000 | ---         | 2440.5480 | MHz  | PASS    |
| T2 99%           | ---         | 2483.500000 | 2441.4114 | MHz  | PASS    |

### Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT:20dB ~ BT Classic Basic rate 99PCT

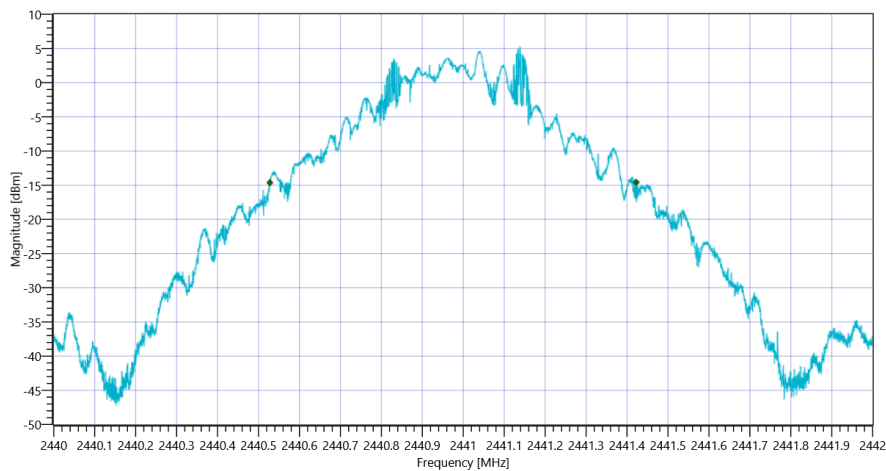
### Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate

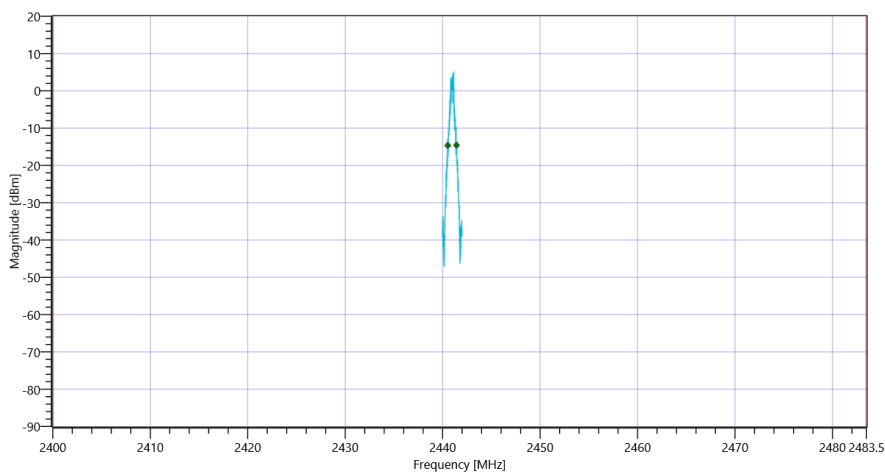
| RESULT           |             |             |           |      |         |
|------------------|-------------|-------------|-----------|------|---------|
| Test Description | Lower Limit | Upper Limit | Measured  | Unit | Verdict |
| Bandwidth 20dB   | ---         | ---         | 895       | kHz  | INFO    |
| T1 20dB          | 2400.000000 | ---         | 2440.5278 | MHz  | PASS    |
| T2 20dB          | ---         | 2483.500000 | 2441.4224 | MHz  | PASS    |

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate 20dB

Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate

General verdict

PASS

## FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate

| Test References                   |                                                                |
|-----------------------------------|----------------------------------------------------------------|
| TC Start                          | 23.05.2022 13:00:12                                            |
| Ambit Temp [°C]   Humidity [rel%] | 26.1   50                                                      |
| System Version                    | 3.0.6.3                                                        |
| Test Specification                | FCC Part 15.247                                                |
| Test Method                       |                                                                |
| TC Version                        | 0.0.2                                                          |
| My Description                    | FCC 15.247 Bandwidth 99PCT - 20DB FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADBAD                                            |
| Signaling BT Address                     | BABEBEDADBAD                                            |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| 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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX 2480 MHz

### RESULT: Reference Power cond.

| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 7.98     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2479.800 | MHz  | INFO    |

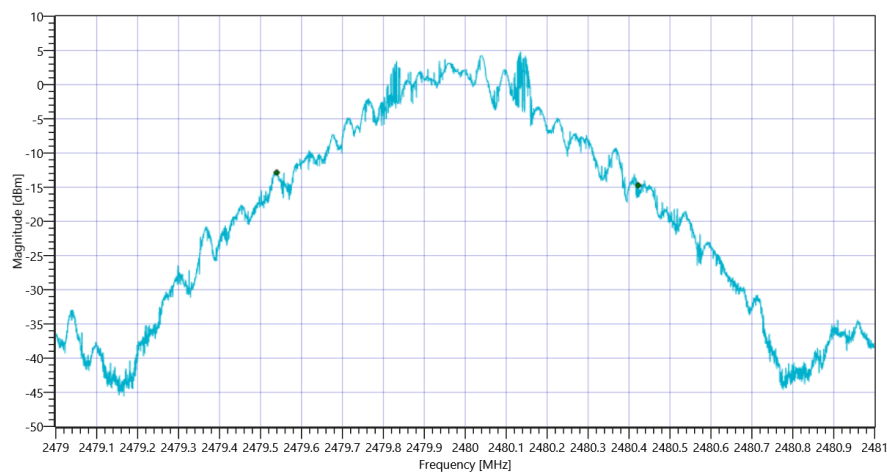
### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 12.98   10.85   20     |
| 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

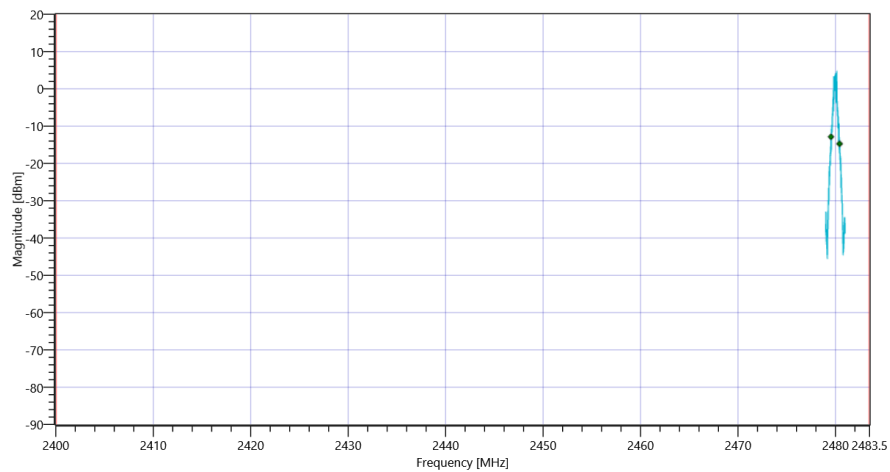
| Test Description | Lower Limit | Upper Limit | Measured  | Unit | Verdict |
|------------------|-------------|-------------|-----------|------|---------|
| Bandwidth 99%    | ---         | ---         | 882.912   | kHz  | INFO    |
| T1 99%           | 2400.000000 | ---         | 2479.5394 | MHz  | PASS    |
| T2 99%           | ---         | 2483.500000 | 2480.4224 | MHz  | PASS    |

### Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate 99PCT

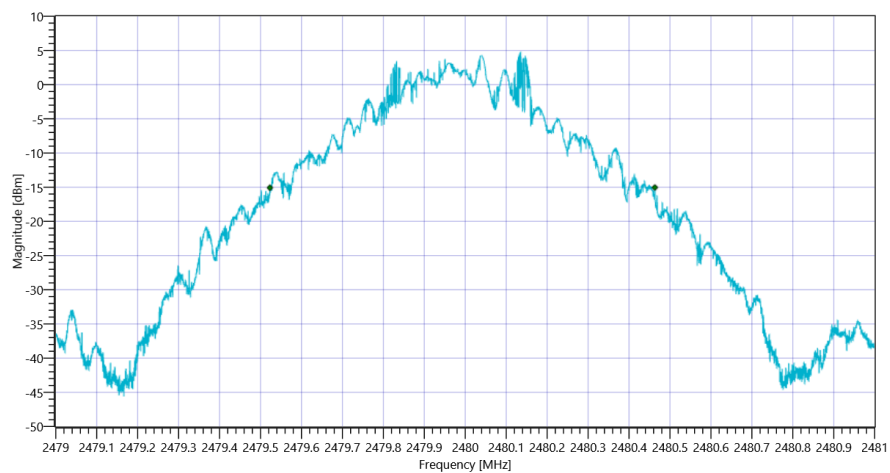
### Plot: Bandwidth within Band



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate

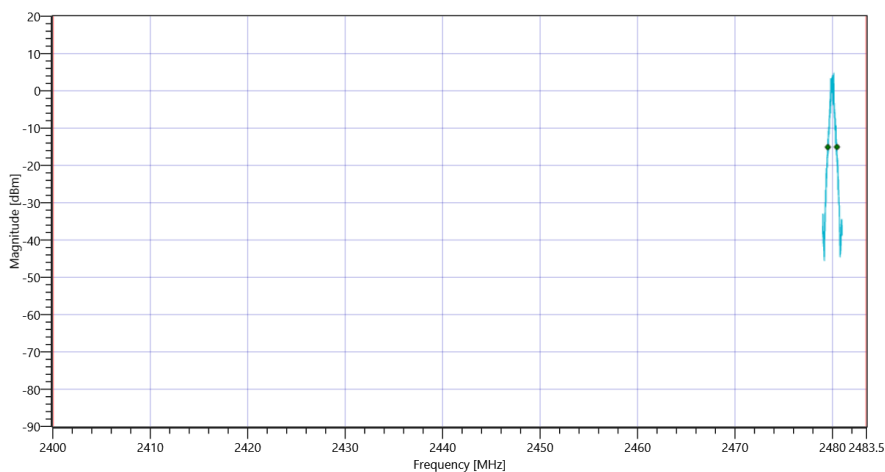
| RESULT           |             |             |           |      |         |
|------------------|-------------|-------------|-----------|------|---------|
| Test Description | Lower Limit | Upper Limit | Measured  | Unit | Verdict |
| Bandwidth 20dB   | ---         | ---         | 940       | kHz  | INFO    |
| T1 20dB          | 2400.000000 | ---         | 2479.5230 | MHz  | PASS    |
| T2 20dB          | ---         | 2483.500000 | 2480.4630 | MHz  | PASS    |

Plot: Bandwidth only



FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT Classic Basic rate 20dB

Plot: Bandwidth within Band



General verdict

PASS

## FCC Part 15.247 Carrier Frequency Separation FHSS ~ BT Classic Basic rate

| Test References                   |                                                                      |
|-----------------------------------|----------------------------------------------------------------------|
| TC Start                          | 23.05.2022 14:01:15                                                  |
| Ambit Temp [°C]   Humidity [rel%] | 26.3   49                                                            |
| System Version                    | 3.0.6.3                                                              |
| Test Specification                | FCC Part 15.247                                                      |
| Test Method                       |                                                                      |
| TC Version                        | 0.0.1                                                                |
| My Description                    | FCC 15.247 Carrier Frequency Separation FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                      |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADB                                              |
| Signaling BT Address                     | BABEBEDADB                                              |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| Frequency high to test                           | False   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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX hopping MHz

### RESULT: Reference Power cond.

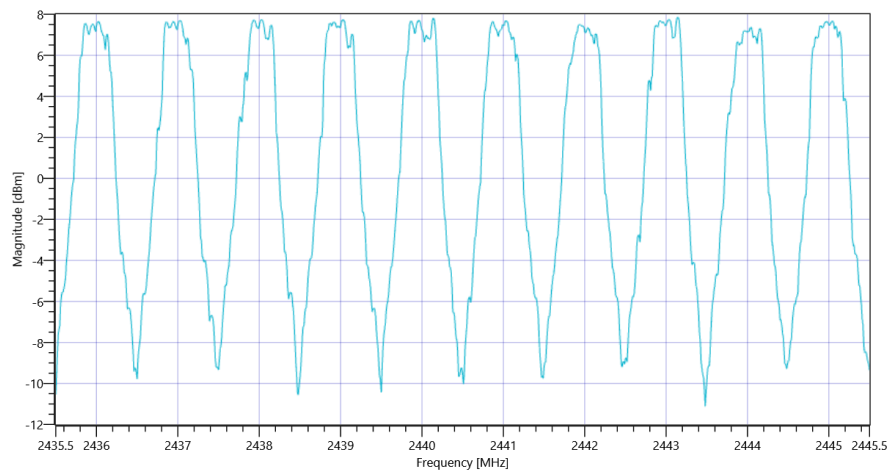
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 8.24     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2463.180 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 13.24   10.8   20      |
| Start [MHz]   Stop [MHz]                             | 2435.500   2445.500    |
| RBW [MHz]   VBW [MHz]                                | 0.100000   0.300000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: Time [ms]   Count   Points per Section   Type | 1   20000   1001   SWE |

### RESULT

| Test Description     | Lower Limit        | Upper Limit | Measured | Unit | Verdict |
|----------------------|--------------------|-------------|----------|------|---------|
| 1 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 1 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 2 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 2 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 3 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 3 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 4 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 4 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 5 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 5 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 6 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 6 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 7 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 7 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 8 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 8 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| 9 CFS n to n+1 (rnd) | 0.025              | ---         | 1        | MHz  | PASS    |
| 9 CFS n to n+1 (rnd) | 0.667 (2/3 Nom.BW) | ---         | 1        | MHz  | PASS    |
| Carrier Freq. (rnd)  | ---                | ---         | 2436     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2437     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2438     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2439     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2440     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2441     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2442     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2443     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2444     | MHz  | INFO    |
| Carrier Freq. (rnd)  | ---                | ---         | 2445     | MHz  | INFO    |



FCC Part 15.247 Carrier Frequency Separation FHSS ~ BT Classic Basic rate

General verdict

PASS

## FCC Part 15.247 Maximum Peak Conducted Output Power FHSS ~ BT Classic Basic rate

| Test References                   |                                                                             |
|-----------------------------------|-----------------------------------------------------------------------------|
| TC Start                          | 23.05.2022 11:46:55                                                         |
| Ambit Temp [°C]   Humidity [rel%] | 25.7   50                                                                   |
| System Version                    | 3.0.6.3                                                                     |
| Test Specification                | FCC Part 15.247                                                             |
| Test Method                       |                                                                             |
| TC Version                        | 0.0.1                                                                       |
| My Description                    | FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                             |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADB                                              |
| Signaling BT Address                     | BABEBEDADB                                              |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | True   Freq [MHz] 2402                 |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| Frequency high to test                           | False   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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX 2402 MHz

### RESULT: Reference Power cond.

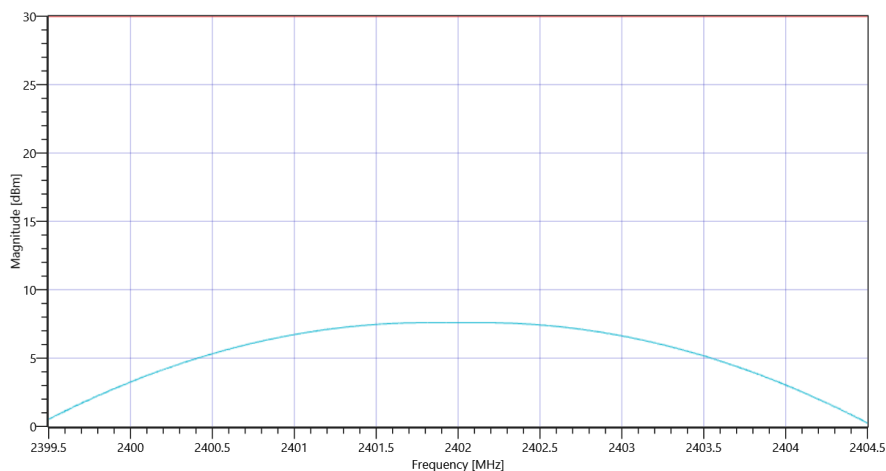
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 7.83     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2401.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 17.83   10.79   25     |
| Start [MHz]   Stop [MHz]                             | 2399.500   2404.500    |
| RBW [MHz]   VBW [MHz]                                | 3.000000   10.000000   |
| 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        | ---         | 30.00       | 7.6      | dBm  | PASS    |
| Peak Power        | ---         | 1000        | 5.754399 | mW   | PASS    |
| Frequency at Peak | ---         | ---         | 2402     | MHz  | INFO    |



FCC Part 15.247 Maximum Peak Conducted Output Power FHSS ~ BT Classic Basic rate

General verdict

PASS

## FCC Part 15.247 Maximum Peak Conducted Output Power FHSS ~ BT Classic Basic rate

| Test References                   |                                                                             |
|-----------------------------------|-----------------------------------------------------------------------------|
| TC Start                          | 23.05.2022 12:05:37                                                         |
| Ambit Temp [°C]   Humidity [rel%] | 25.8   48                                                                   |
| System Version                    | 3.0.6.3                                                                     |
| Test Specification                | FCC Part 15.247                                                             |
| Test Method                       |                                                                             |
| TC Version                        | 0.0.1                                                                       |
| My Description                    | FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                             |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADBAD                                            |
| Signaling BT Address                     | BABEBEDADBAD                                            |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | True   Freq [MHz] 2441                 |
| Frequency high to test                           | False   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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX 2441 MHz

### RESULT: Reference Power cond.

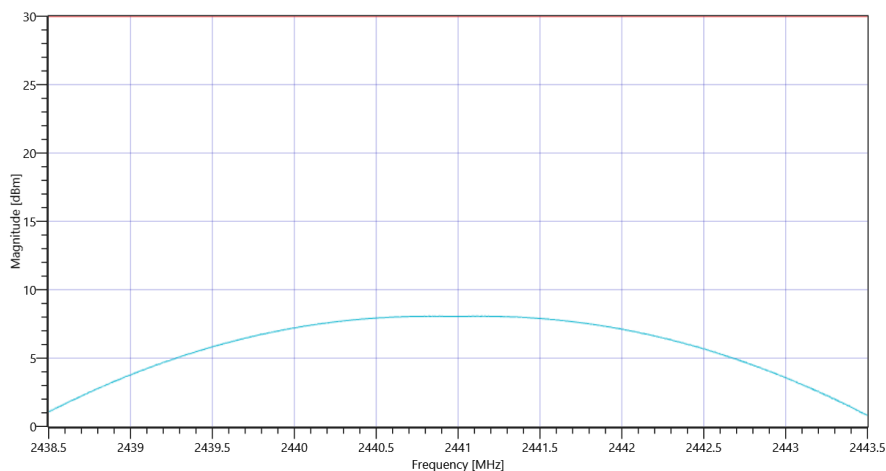
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 8.21     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2440.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 18.21   10.8   25      |
| Start [MHz]   Stop [MHz]                             | 2438.500   2443.500    |
| RBW [MHz]   VBW [MHz]                                | 3.000000   10.000000   |
| 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        | ---         | 30.00       | 8.07     | dBm  | PASS    |
| Peak Power        | ---         | 1000        | 6.412096 | mW   | PASS    |
| Frequency at Peak | ---         | ---         | 2441.115 | MHz  | INFO    |



FCC Part 15.247 Maximum Peak Conducted Output Power FHSS ~ BT Classic Basic rate

General verdict

PASS

## FCC Part 15.247 Maximum Peak Conducted Output Power FHSS ~ BT Classic Basic rate

| Test References                   |                                                                             |
|-----------------------------------|-----------------------------------------------------------------------------|
| TC Start                          | 23.05.2022 12:52:03                                                         |
| Ambit Temp [°C]   Humidity [rel%] | 26.3   48                                                                   |
| System Version                    | 3.0.6.3                                                                     |
| Test Specification                | FCC Part 15.247                                                             |
| Test Method                       |                                                                             |
| TC Version                        | 0.0.1                                                                       |
| My Description                    | FCC 15.247 Maximum Peak Output Power Conducted FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                             |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADB                                              |
| Signaling BT Address                     | BABEBEDADB                                              |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| 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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX 2480 MHz

### RESULT: Reference Power cond.

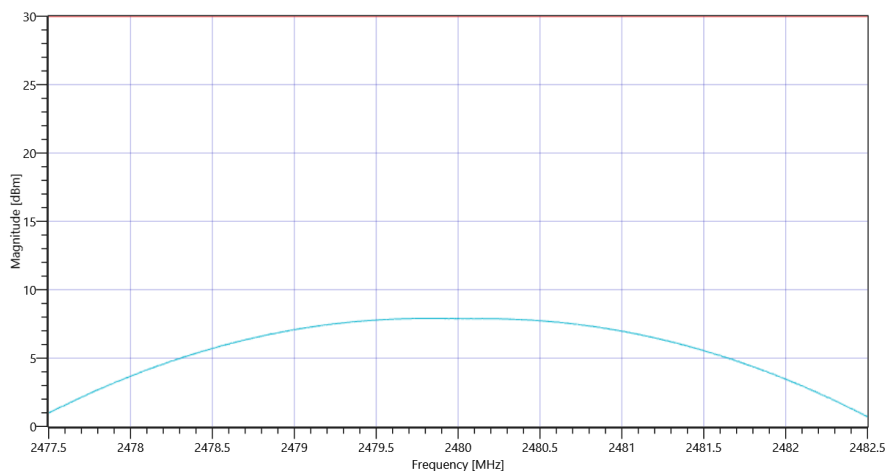
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 7.98     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2479.800 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 17.98   10.85   25     |
| Start [MHz]   Stop [MHz]                             | 2477.500   2482.500    |
| RBW [MHz]   VBW [MHz]                                | 3.000000   10.000000   |
| 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        | ---         | 30.00       | 7.9      | dBm  | PASS    |
| Peak Power        | ---         | 1000        | 6.16595  | mW   | PASS    |
| Frequency at Peak | ---         | ---         | 2479.85  | MHz  | INFO    |



FCC Part 15.247 Maximum Peak Conducted Output Power FHSS ~ BT Classic Basic rate

General verdict

PASS

## FCC Part 15.247 Number Of Hopping Channels FHSS ~ BT Classic Basic rate

### Test References

|                                   |                                                                    |
|-----------------------------------|--------------------------------------------------------------------|
| TC Start                          | 23.05.2022 14:00:22                                                |
| Ambit Temp [°C]   Humidity [rel%] | 26.3   50                                                          |
| System Version                    | 3.0.6.3                                                            |
| Test Specification                | FCC Part 15.247                                                    |
| Test Method                       |                                                                    |
| TC Version                        | 0.0.1                                                              |
| My Description                    | FCC 15.247 Number Of Hopping Channels FHSS - BT Classic Basic Rate |
| Add. Information                  |                                                                    |

### EUT Common Settings BT Classic

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADBAD                                            |
| Signaling BT Address                     | BABEBEDADBAD                                            |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

### Test Parameter

|                                                  |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| Frequency high to test                           | False   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 |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |

## Test at TX hopping MHz

### RESULT: Reference Power cond.

| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 8.24     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2463.880 | MHz  | INFO    |

### READ SA SETTINGS:

|                                                      |                        |
|------------------------------------------------------|------------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 13.24   10.8   20      |
| Start [MHz]   Stop [MHz]                             | 2399.000   2483.000    |
| RBW [MHz]   VBW [MHz]                                | 0.200000   0.500000    |
| Detector   TraceMode                                 | POS   MAXH             |
| Sweep: Time [ms]   Count   Points per Section   Type | 1   10000   1001   SWE |

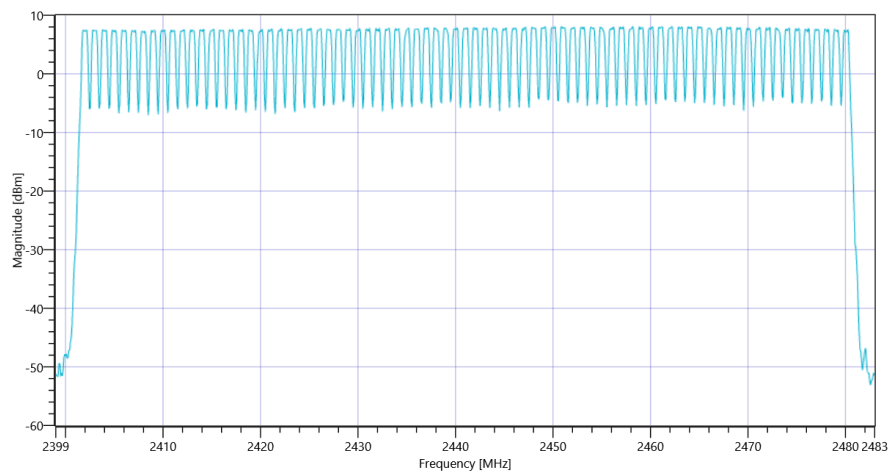
### RESULT

| Test Description       | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|------------------------|-------------|-------------|----------|------|---------|
| Hopp channel (rounded) | ---         | ---         | 2402     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2403     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2404     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2405     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2406     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2407     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2408     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2409     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2410     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2411     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2412     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2413     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2414     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2415     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2416     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2417     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2418     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2419     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2420     | MHz  | INFO    |

| RESULT                 |             |             |          |      |         |
|------------------------|-------------|-------------|----------|------|---------|
| Test Description       | Lower Limit | Upper Limit | Measured | Unit | Verdict |
| Hopp channel (rounded) | ---         | ---         | 2421     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2422     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2423     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2424     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2425     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2426     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2427     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2428     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2429     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2430     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2431     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2432     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2433     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2434     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2435     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2436     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2437     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2438     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2439     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2440     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2441     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2442     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2443     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2444     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2445     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2446     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2447     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2448     | MHz  | INFO    |

| RESULT                 |             |             |          |      |         |
|------------------------|-------------|-------------|----------|------|---------|
| Test Description       | Lower Limit | Upper Limit | Measured | Unit | Verdict |
| Hopp channel (rounded) | ---         | ---         | 2449     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2450     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2451     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2452     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2453     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2454     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2455     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2456     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2457     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2458     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2459     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2460     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2461     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2462     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2463     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2464     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2465     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2466     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2467     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2468     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2469     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2470     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2471     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2472     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2473     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2474     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2475     | MHz  | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2476     | MHz  | INFO    |

| RESULT                 |             |             |          |        |         |
|------------------------|-------------|-------------|----------|--------|---------|
| Test Description       | Lower Limit | Upper Limit | Measured | Unit   | Verdict |
| Hopp channel (rounded) | ---         | ---         | 2477     | MHz    | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2478     | MHz    | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2479     | MHz    | INFO    |
| Hopp channel (rounded) | ---         | ---         | 2480     | MHz    | INFO    |
| Σ Hopping channels     | 15          | ---         | 79       | Number | PASS    |



FCC Part 15.247 Number Of Hopping Channels FHSS ~ BT Classic Basic rate

General verdict

PASS

## FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate

### Test References

|                                   |                                                                                                                   |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------|
| TC Start                          | 23.05.2022 11:47:33                                                                                               |
| Ambit Temp [°C]   Humidity [rel%] | 25.7   50                                                                                                         |
| System Version                    | 3.0.6.3                                                                                                           |
| Test Specification                | FCC Part 15.247                                                                                                   |
| Test Method                       | IF DTS then 8.5 DTS emissions in non-restricted frequency bands:<br>Subclause 11.11 of ANSI C63.10 is applicable. |
| TC Version                        | 0.0.1                                                                                                             |
| My Description                    | FCC 15.247 TX Emissions Conducted FHSS - BT Classic Basic Rate                                                    |
| Add. Information                  |                                                                                                                   |

### EUT Common Settings BT Classic

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADB                                              |
| Signaling BT Address                     | BABEBEDADB                                              |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

### Test Parameter

|                                                  |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | True   Freq [MHz] 2402                 |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| Frequency high to test                           | False   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 |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |

## Test at TX 2402 MHz

### RESULT: Reference Power cond.

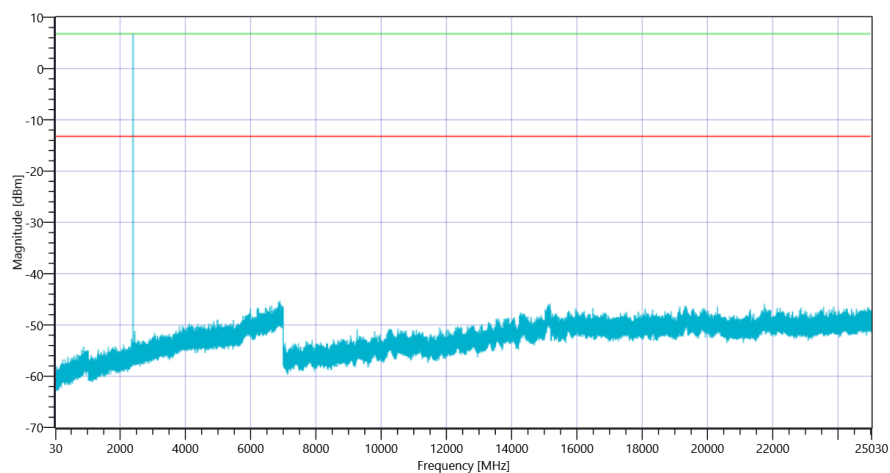
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 7.82     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2401.800 | MHz  | INFO    |

### READ SA SETTINGS:

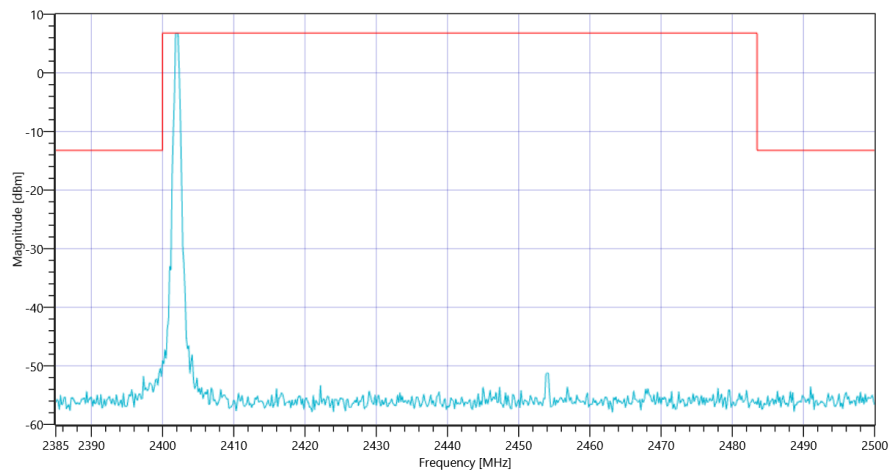
|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 7.82   0   25         |
| Start [MHz]   Stop [MHz]                             | 24530.000   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 @<br>2401.83 MHz           | ---         | ---         | 6.78     | dBm  | INFO    |
| No peaks detected                    | ---         | ---         |          |      | PASS    |
| Lowest margin to<br>limit 6892.5 MHz | 0           | ---         | 32.07    | dB   | INFO    |



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate 2402



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate 2402

General verdict

PASS

## FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate

| Test References                   |                                                                                                                |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------|
| TC Start                          | 23.05.2022 11:58:07                                                                                            |
| Ambit Temp [°C]   Humidity [rel%] | 25.8   49                                                                                                      |
| System Version                    | 3.0.6.3                                                                                                        |
| Test Specification                | FCC Part 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 FHSS - BT Classic Basic Rate                                                 |
| Add. Information                  |                                                                                                                |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADBAD                                            |
| Signaling BT Address                     | BABEBEDADBAD                                            |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | True   Freq [MHz] 2441                 |
| Frequency high to test                           | False   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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX 2441 MHz

### RESULT: Reference Power cond.

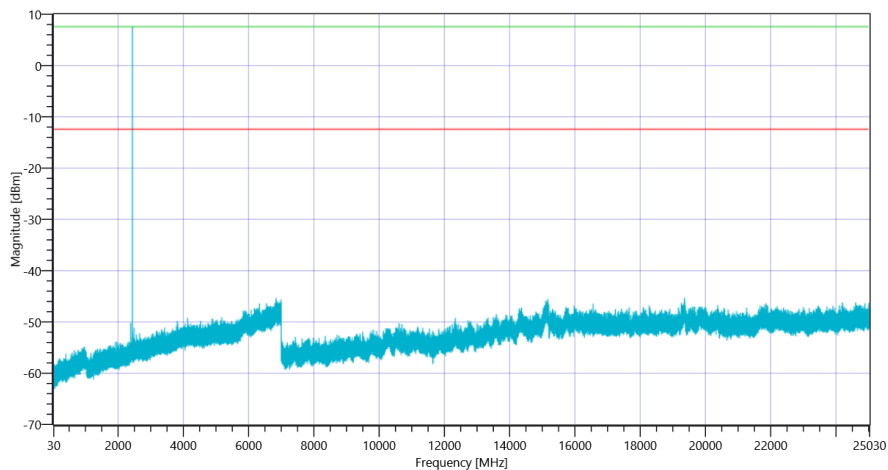
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 8.24     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2440.800 | MHz  | INFO    |

### READ SA SETTINGS:

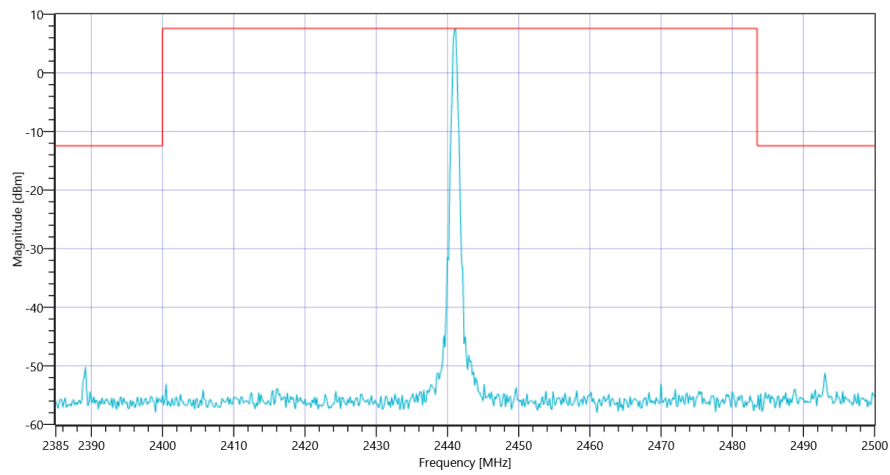
|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 8.24   0   25         |
| Start [MHz]   Stop [MHz]                             | 24530.000   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 @<br>2441.17 MHz                 | ---         | ---         | 7.56     | dBm  | INFO    |
| No peaks detected                          | ---         | ---         |          |      | PASS    |
| Lowest margin to<br>limit 19358.667<br>MHz | 0           | ---         | 32.86    | dB   | INFO    |



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate 2441



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate 2441

General verdict

PASS

## FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate

| Test References                   |                                                                                                                |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------|
| TC Start                          | 23.05.2022 12:44:33                                                                                            |
| Ambit Temp [°C]   Humidity [rel%] | 26.2   49                                                                                                      |
| System Version                    | 3.0.6.3                                                                                                        |
| Test Specification                | FCC Part 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 FHSS - BT Classic Basic Rate                                                 |
| Add. Information                  |                                                                                                                |

| EUT Common Settings BT Classic           |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Intermodulation Value N                  | 3                                                       |
| Image Freq. Low   Mid   High [MHz]       | 0   0   0                                               |
| Power Class                              | 1                                                       |
| Power Control                            | Enhanced                                                |
| Longest Supported Packet Type            | DH5                                                     |
| RF Supported                             | Basic Rate True   EDR Pi/4DQPSK False   EDR 8DPSK False |
| Testmode                                 | None                                                    |
| Perform Inquiry                          | No                                                      |
| EUT BT Address (if Inquiry No)           | BABEBEDADB                                              |
| Signaling BT Address                     | BABEBEDADB                                              |
| Switch Matrix & Pathcompensation enabled | Yes                                                     |

| Test Parameter                                   |                                        |
|--------------------------------------------------|----------------------------------------|
| Technology to test                               | BT Classic Basic rate                  |
| Antenna Port used                                | 1                                      |
| Temperature                                      | nom                                    |
| Voltage                                          | nom                                    |
| Frequency low to test                            | False   Freq [MHz] 2402                |
| Frequency mid to test                            | False   Freq [MHz] 2441                |
| 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 |  |
| Switch matrix,CTCadvanced,RSM-1 NI DAQ,29655273,NI            |  |

## Test at TX 2480 MHz

### RESULT: Reference Power cond.

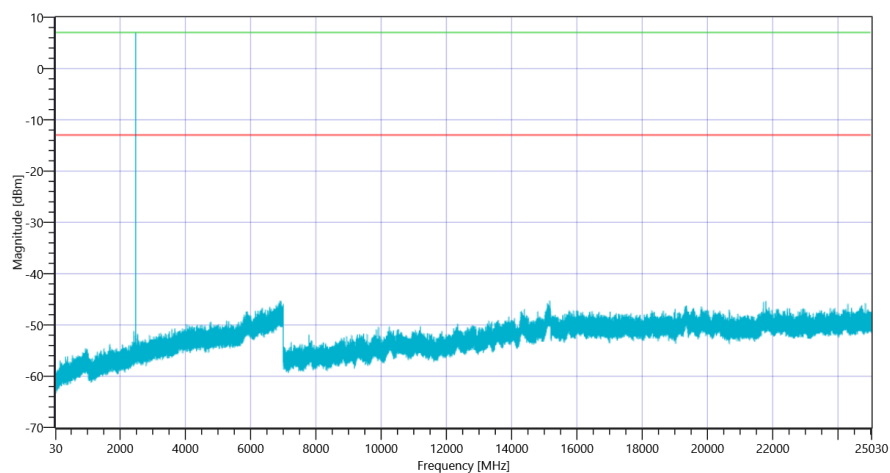
| Test Description              | Lower Limit | Upper Limit | Measured | Unit | Verdict |
|-------------------------------|-------------|-------------|----------|------|---------|
| Ref. Power<br>1MHz/1MHz cond. | ---         | ---         | 8.01     | dBm  | INFO    |
| Ref. Frequency                | ---         | ---         | 2479.800 | MHz  | INFO    |

### READ SA SETTINGS:

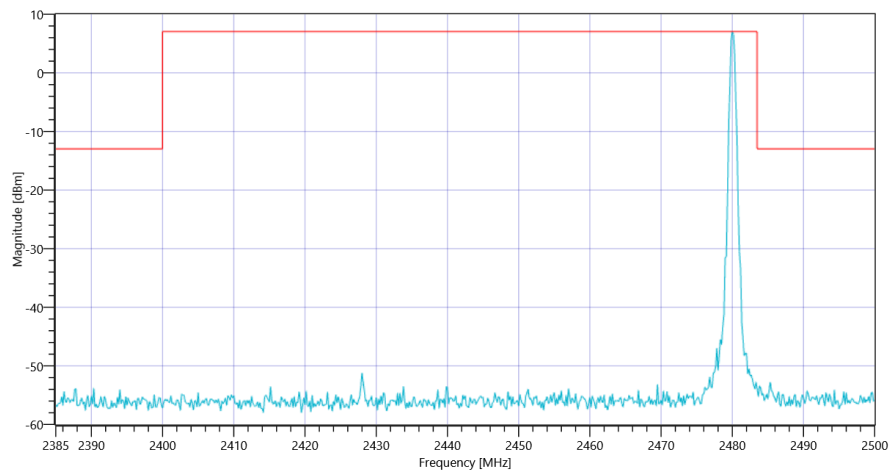
|                                                      |                       |
|------------------------------------------------------|-----------------------|
| RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]   | 8.01   0   25         |
| Start [MHz]   Stop [MHz]                             | 24530.000   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 @<br>2480.00 MHz          | ---         | ---         | 7.03     | dBm  | INFO    |
| No peaks detected                   | ---         | ---         |          |      | PASS    |
| Lowest margin to<br>limit 15166 MHz | 0           | ---         | 32.3     | dB   | INFO    |



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate 2480



FCC Part 15.247 TX Spurious Conducted 20dBc ~ BT Classic Basic rate 2480

General verdict

PASS

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