Measurement Results

1-2702/21-01-05_log1_conducted

Test logging

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2021.09.29 15:54:15 +02'00'

Michael Dorongovski
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Radio Communications

Table of Content

EUT Summary

EUT DEFINITION	
Manufacturer	WSAUD A/S
Type	RF Module 4
Kind	NI
Serial Number | Setup Number	NI | 1.0
Version SW | FW | HW	NI | NI | NI
Comment 1 | 2	|
Temperature [°C] Min | Nom | Max	0 | 20 | 50
Voltage [V] Min | Nom | Max	3.3 | 3.8 | 4.2

EUT Common Settings BT Low Energy	
Intermodulation Value N	3
Image Freq. Low | Mid | High [MHz]	-4 | -4 | -4
Power Class	2
1 Mbps supported	True | TXpayload 255 | RXpayload 255
2 Mbps supported	True | TXpayload 255 | RXpayload 255
Longrange S8 supported	False | TXpayload 255 | RXpayload 255
Longrange S2 supported	False | TXpayload 255 | RXpayload 255
Signaling Settings	USB_RS232 | TWO | 3 | 2400 | None | S1 | None | On
Signaling RF Settings	RF1com | 0 | 0 | On |
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

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

Test References	
TC Start	15.06.2021 11:53:27
Ambit Temp [°C] | Humidity [rel%]	29.0 | 36
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 1 Msps
Add. Information	

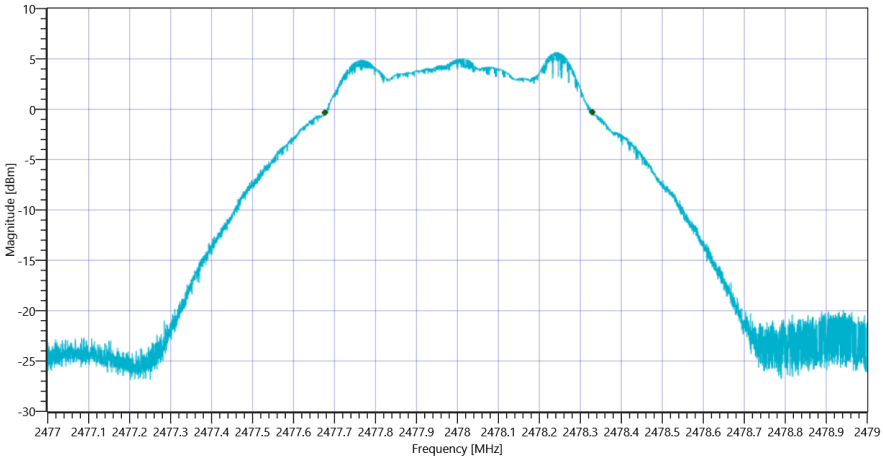
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.82 | 13.65 | 15
Start [MHz] | Stop [MHz]	2477.000 | 2479.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

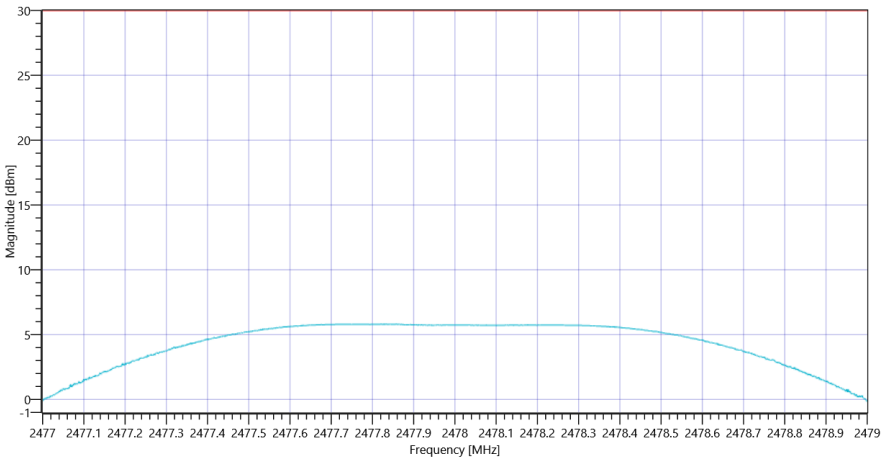
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	652	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW_15062021_115357.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.82 | 13.65 | 20
Start [MHz] | Stop [MHz]	2477.000 | 2479.000
RBW [MHz] | VBW [MHz]	1.000000 | 3.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	5.81	dBm	PASS
Peak Power	---	1000	3.810658	mW	PASS
Frequency at Peak	---	---	2477.858	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_15062021_115415.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	15.06.2021 12:03:37
Ambit Temp [°C] | Humidity [rel%]	28.4 | 38
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 2 Msps
Add. Information	

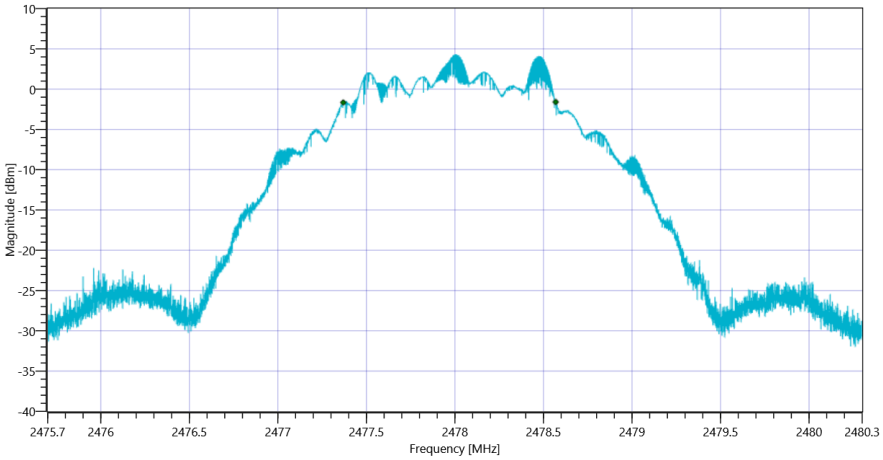
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.42 | 13.65 | 15
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

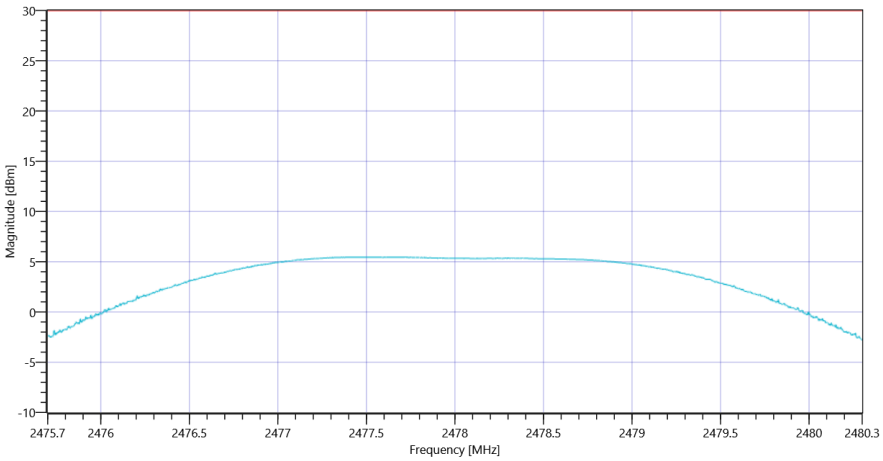
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1200	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW_15062021_120407.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.42 | 13.65 | 20
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	5.45	dBm	PASS
Peak Power	---	1000	3.507519	mW	PASS
Frequency at Peak	---	---	2477.472	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps_15062021_120425.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	07.06.2021 15:41:44
Ambit Temp [°C] | Humidity [rel%]	26.6 | 39
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 1 Msps
Add. Information	

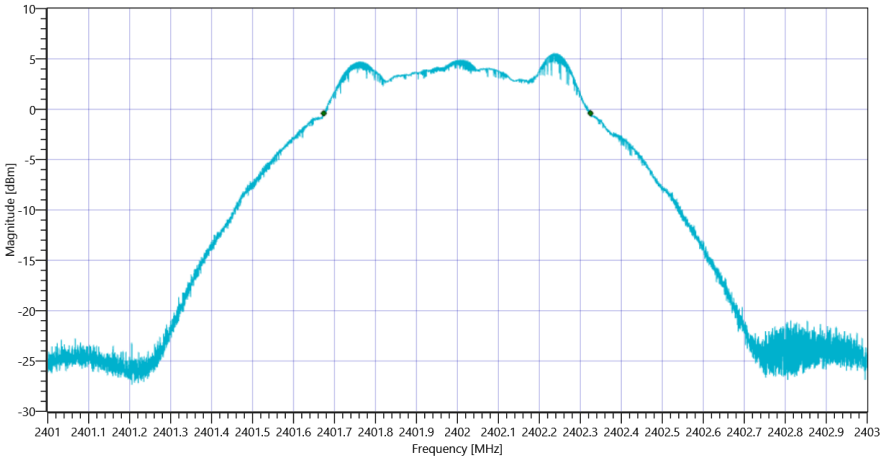
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.78 | 10.86 | 15
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

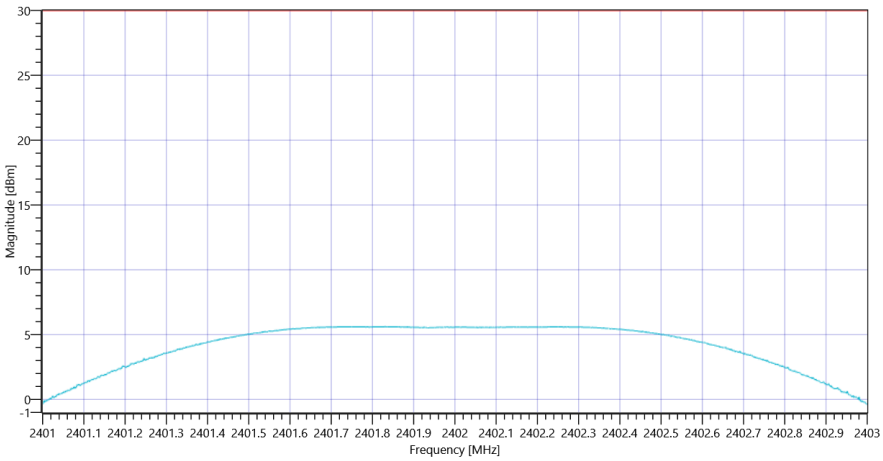
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	651	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW_07062021_154214.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.78 | 10.86 | 20
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	1.000000 | 3.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	5.61	dBm	PASS
Peak Power	---	1000	3.63915	mW	PASS
Frequency at Peak	---	---	2401.83	MHz	INFO



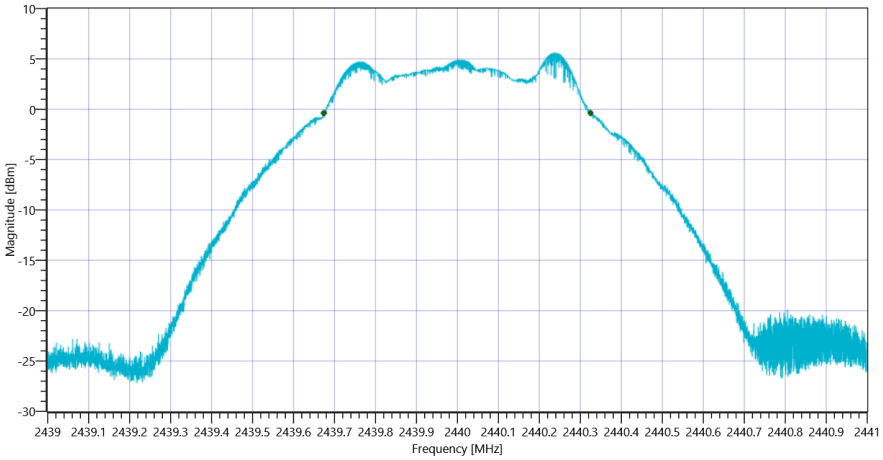
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_07062021_154232.png

Test at TX 2440 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.84 | 10.94 | 15
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

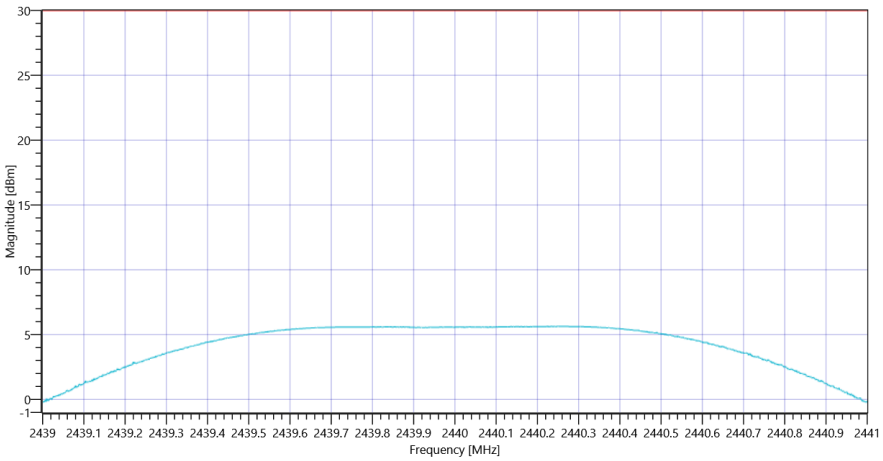
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	651	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW_07062021_154306.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.84 | 10.94 | 20
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	1.000000 | 3.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	5.63	dBm	PASS
Peak Power	---	1000	3.655948	mW	PASS
Frequency at Peak	---	---	2440.268	MHz	INFO



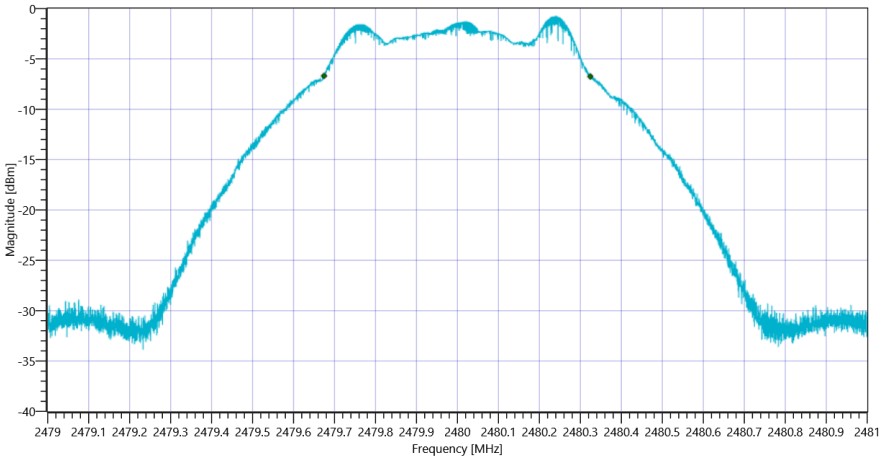
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_07062021_154324.png

Test at TX 2480 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.41 | 11 | 10
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

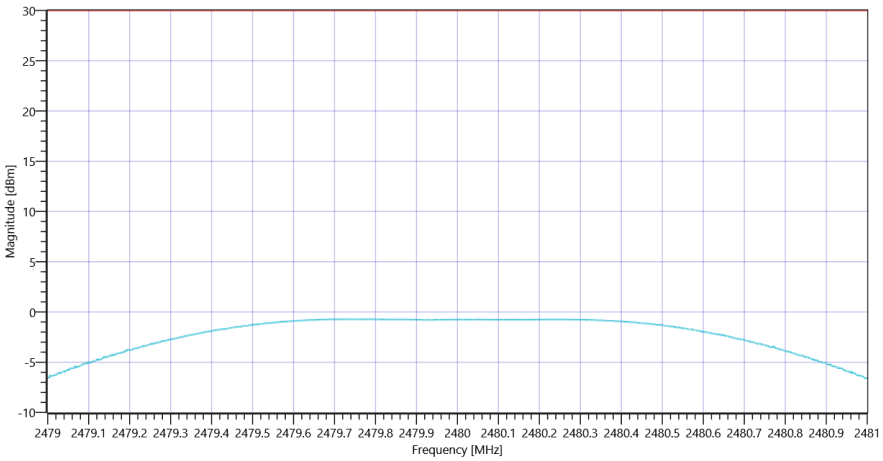
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	650	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW_07062021_154357.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	9.41 | 11 | 15
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	1.000000 | 3.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-0.72	dBm	PASS
Peak Power	---	1000	0.847227	mW	PASS
Frequency at Peak	---	---	2479.756	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_07062021_154416.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	07.06.2021 16:09:26
Ambit Temp [°C] | Humidity [rel%]	26.4 | 39
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 2 Msps
Add. Information	

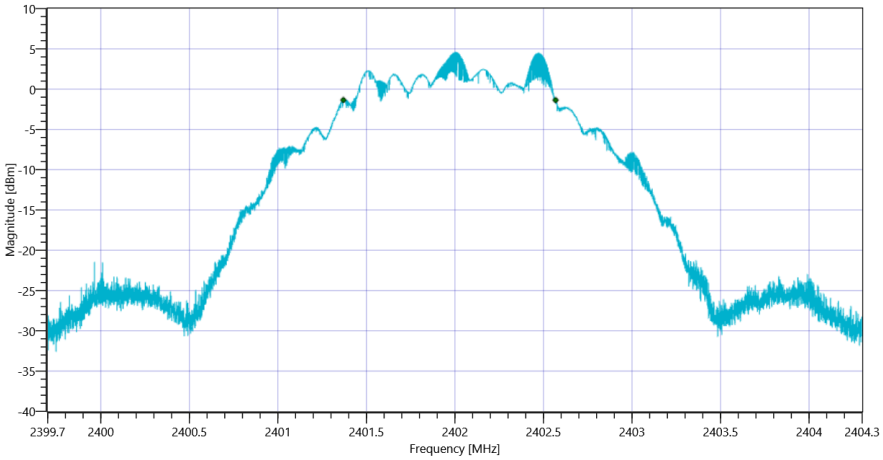
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.81 | 10.86 | 15
Start [MHz] | Stop [MHz]	2399.700 | 2404.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

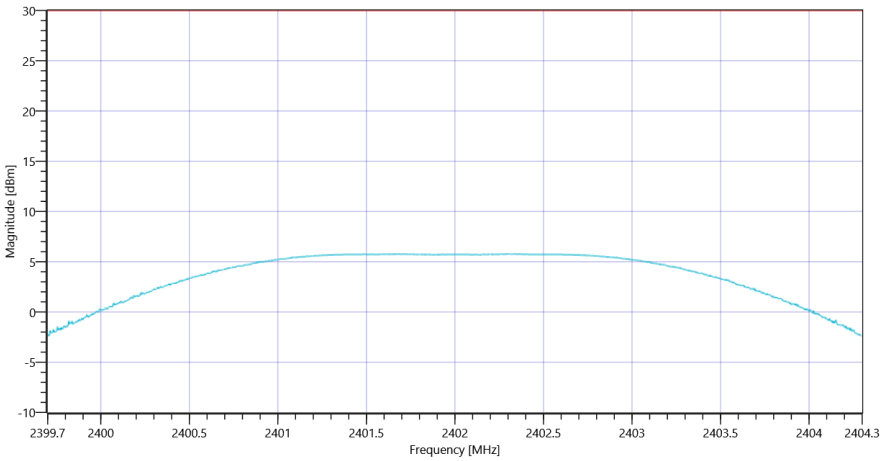
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1199	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW_07062021_160956.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.81 | 10.86 | 20
Start [MHz] | Stop [MHz]	2399.700 | 2404.300
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	5.77	dBm	PASS
Peak Power	---	1000	3.775722	mW	PASS
Frequency at Peak	---	---	2402.29	MHz	INFO



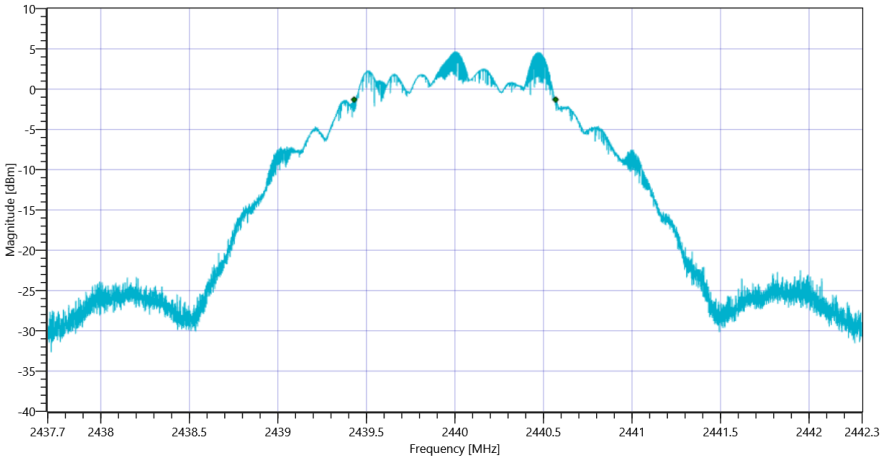
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps_07062021_161014.png

Test at TX 2440 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.85 | 10.94 | 15
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

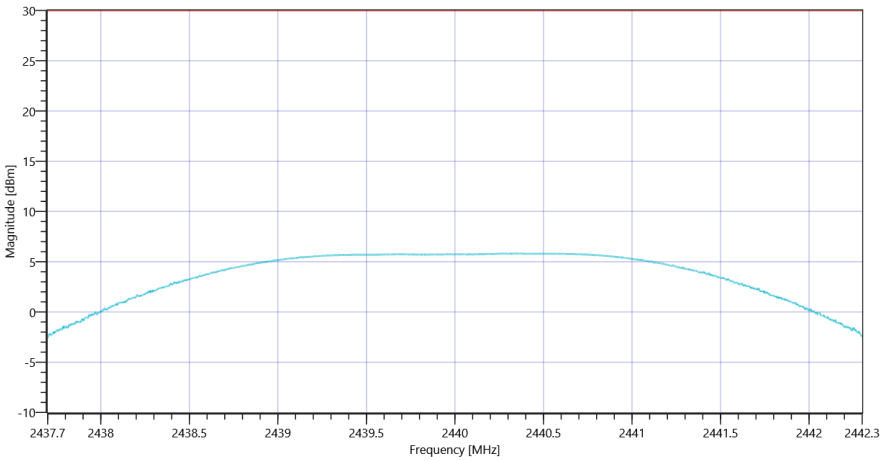
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1138	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW_07062021_161048.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	15.85 | 10.94 | 20
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	5.82	dBm	PASS
Peak Power	---	1000	3.819443	mW	PASS
Frequency at Peak	---	---	2440.257	MHz	INFO



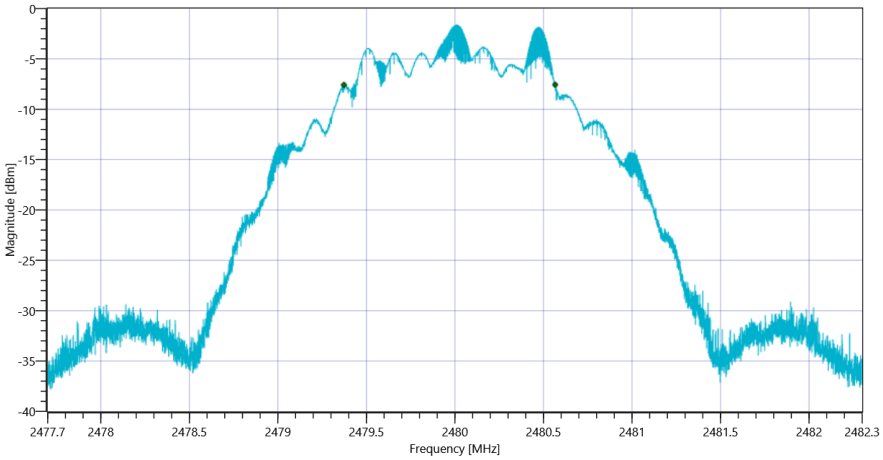
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps_07062021_161106.png

Test at TX 2480 MHz

DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.49 | 11 | 10
Start [MHz] | Stop [MHz]	2477.700 | 2482.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

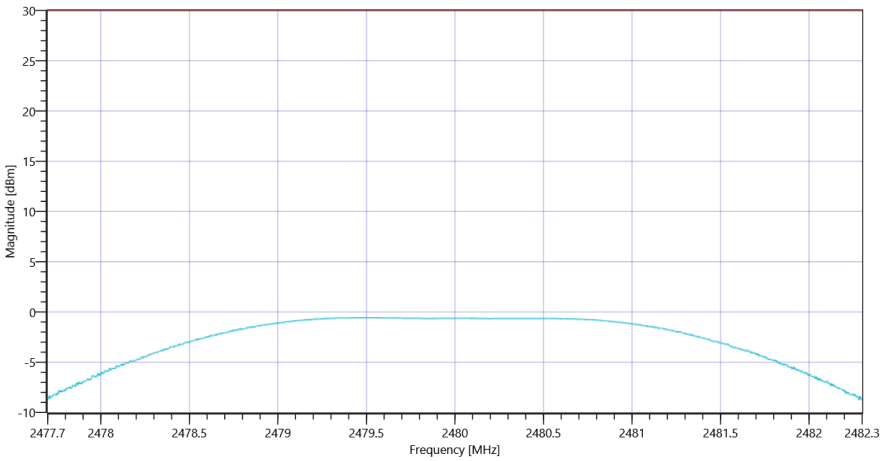
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1193	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW_07062021_161140.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	9.49 | 11 | 15
Start [MHz] | Stop [MHz]	2477.700 | 2482.300
RBW [MHz] | VBW [MHz]	2.000000 | 5.000000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 1001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-0.57	dBm	PASS
Peak Power	---	1000	0.877001	mW	PASS
Frequency at Peak	---	---	2479.481	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps_07062021_161158.png

TEST FINISHED	
General Verdict	PASS

5. FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps

Test References	
TC Start	15.06.2021 11:54:20
Ambit Temp [°C] | Humidity [rel%]	28.9 | 37
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 1 Msps
Add. Information	

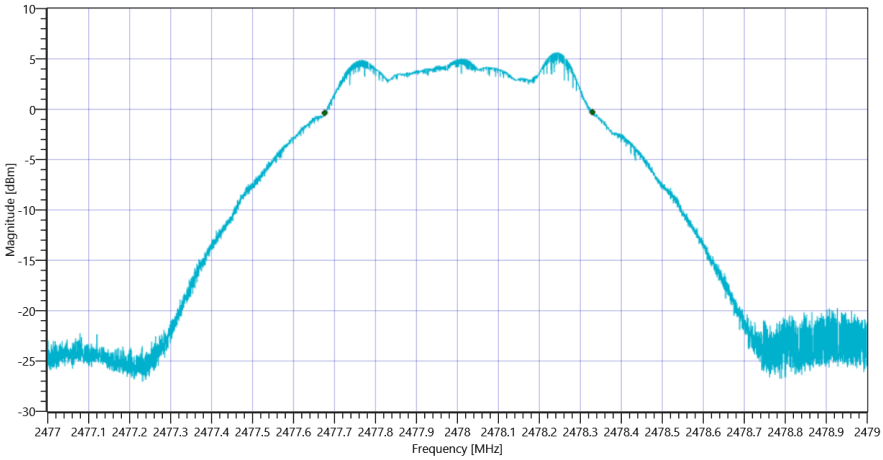
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.81 | 13.65 | 15
Start [MHz] | Stop [MHz]	2477.000 | 2479.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	653	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_15062021_115451.png

TEST FINISHED	
General Verdict	PASS

6. FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps

Test References	
TC Start	15.06.2021 12:04:31
Ambit Temp [°C] | Humidity [rel%]	28.4 | 37
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msps
Add. Information	

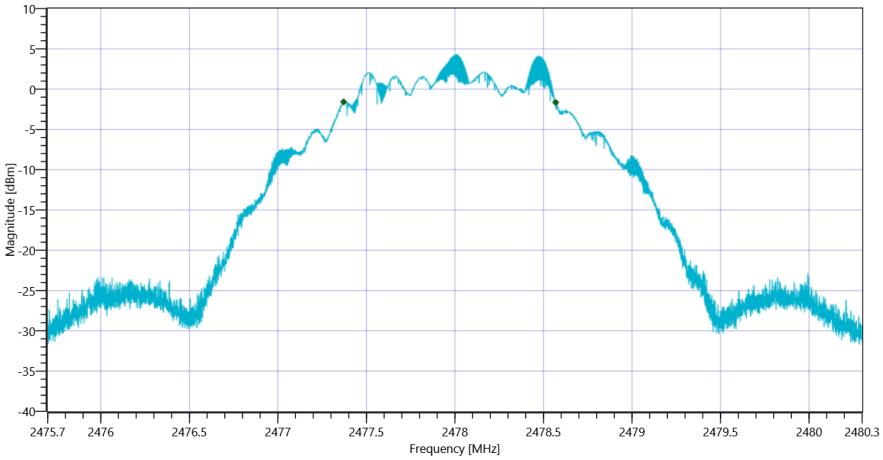
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.41 | 13.65 | 15
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	1198	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps_15062021_120501.png

TEST FINISHED	
General Verdict	PASS

7. FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps

Test References	
TC Start	07.06.2021 15:44:21
Ambit Temp [°C] | Humidity [rel%]	26.6 | 39
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 1 Msps
Add. Information	

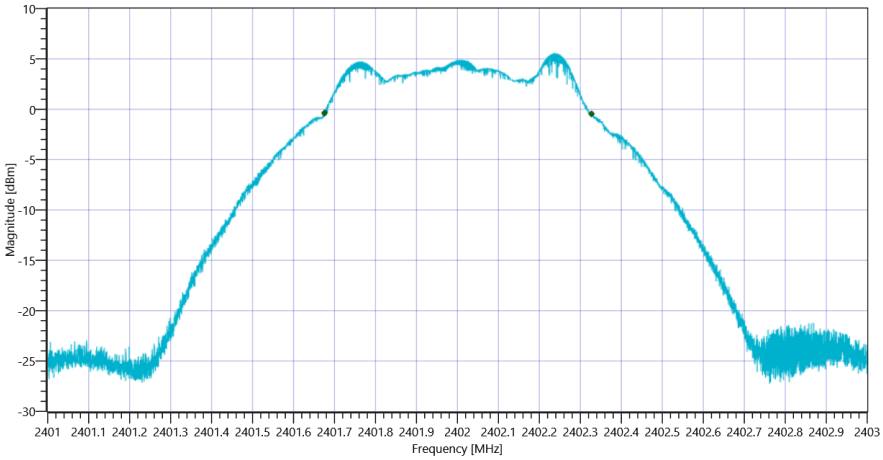
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.78 | 10.86 | 15
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	652	kHz	PASS



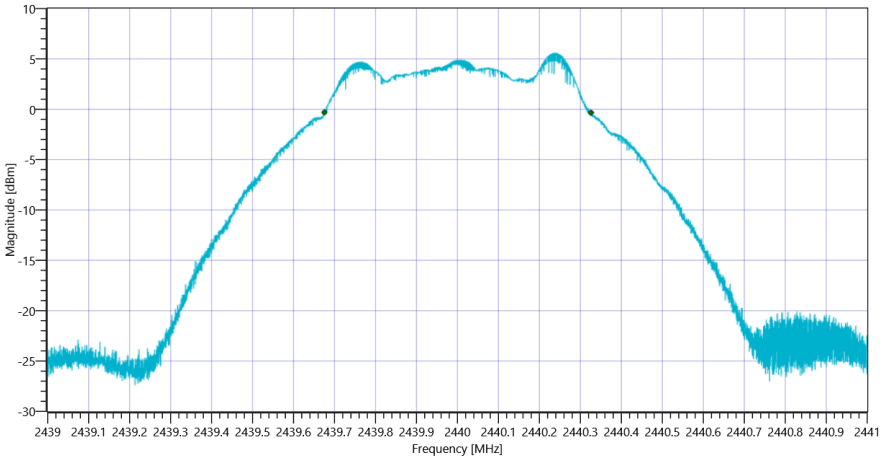
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_07062021_154451.png

Test at TX 2440 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.79 | 10.94 | 15
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	651	kHz	PASS



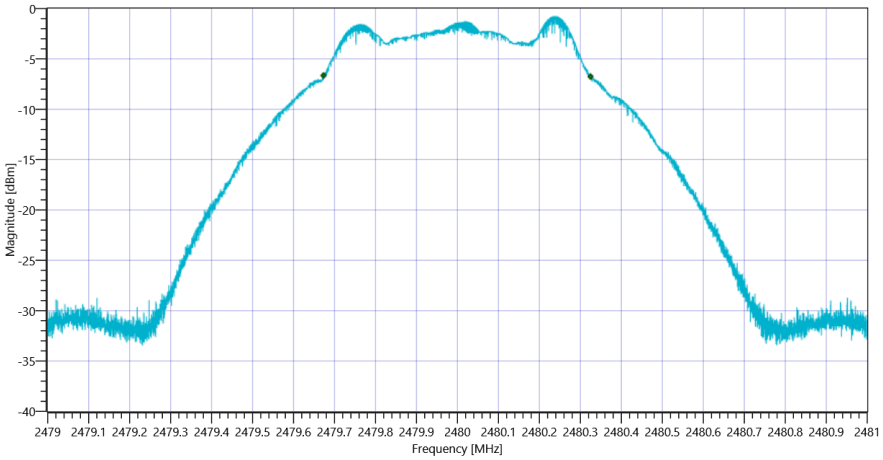
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_07062021_154525.png

Test at TX 2480 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.43 | 11 | 10
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	652	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_07062021_154558.png

TEST FINISHED	
General Verdict	PASS

8. FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps

Test References	
TC Start	07.06.2021 16:12:04
Ambit Temp [°C] | Humidity [rel%]	26.4 | 39
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 2 Msps
Add. Information	

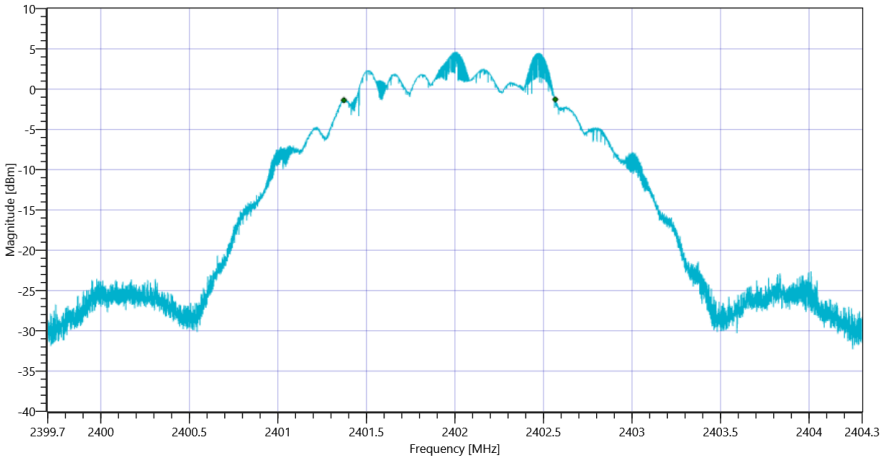
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.83 | 10.86 | 15
Start [MHz] | Stop [MHz]	2399.700 | 2404.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	1194	kHz	PASS



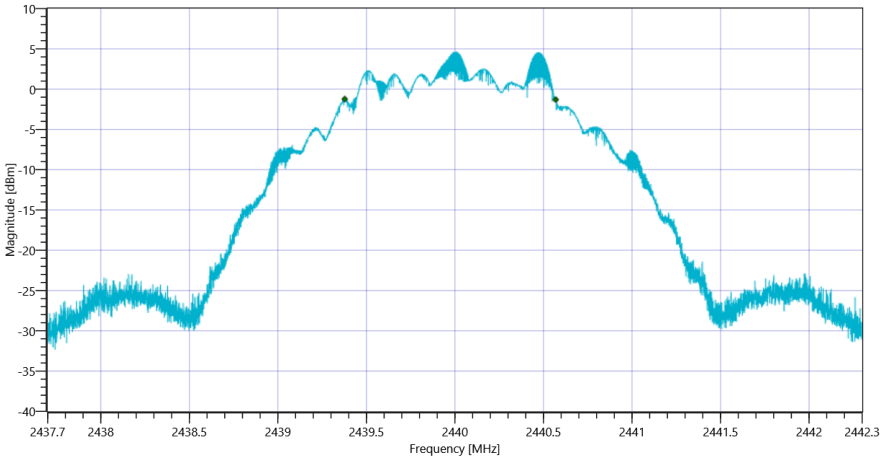
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps_07062021_161234.png

Test at TX 2440 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.87 | 10.94 | 15
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	1191	kHz	PASS



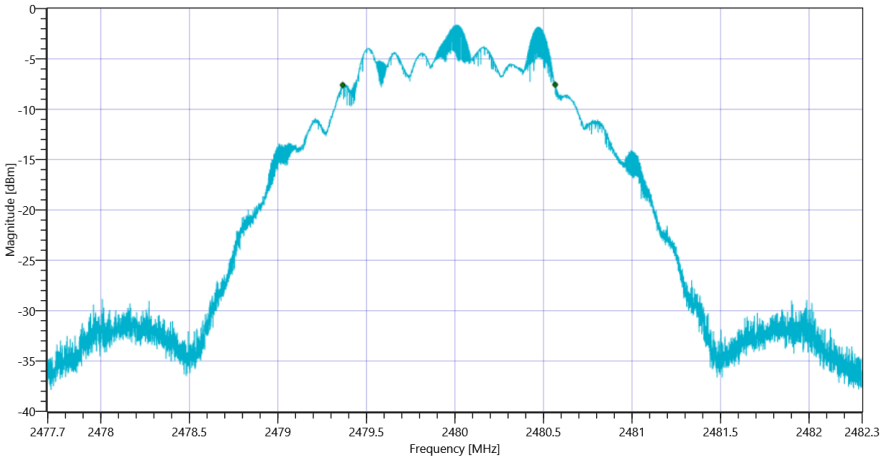
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps_07062021_161307.png

Test at TX 2480 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.41 | 11 | 10
Start [MHz] | Stop [MHz]	2477.700 | 2482.300
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
DTS Bandwidth (6dB)	500	---	1200	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps_07062021_161341.png

TEST FINISHED	
General Verdict	PASS

9. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps

Test References	
TC Start	15.06.2021 11:54:56
Ambit Temp [°C] | Humidity [rel%]	28.8 | 37
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 1 Msps
Add. Information	

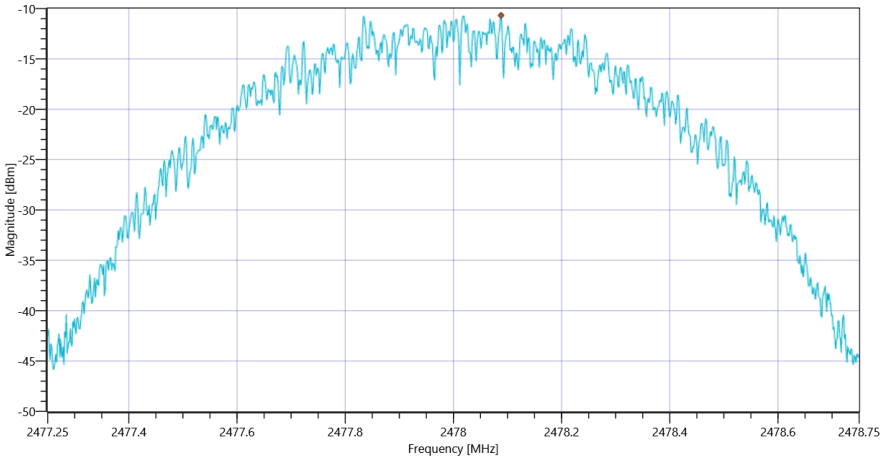
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.79 | 13.65 | 15
Start [MHz] | Stop [MHz]	2477.250 | 2478.750
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-10.67	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_15062021_115536.png

TEST FINISHED	
General Verdict	PASS

10. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps

Test References	
TC Start	15.06.2021 12:05:07
Ambit Temp [°C] | Humidity [rel%]	28.4 | 37
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 2 Msps
Add. Information	

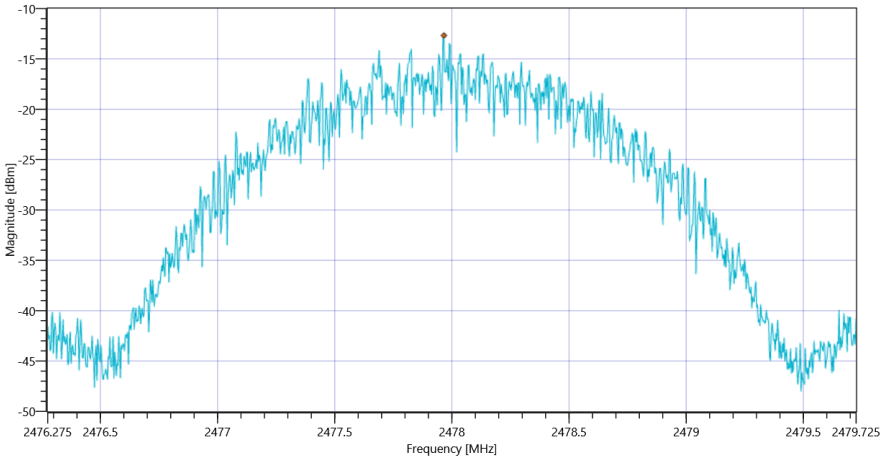
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.39 | 13.65 | 15
Start [MHz] | Stop [MHz]	2476.275 | 2479.725
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-12.67	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps_15062021_120547.png

TEST FINISHED	
General Verdict	PASS

11. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps

Test References	
TC Start	07.06.2021 15:46:04
Ambit Temp [°C] | Humidity [rel%]	26.5 | 38
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 1 Msps
Add. Information	

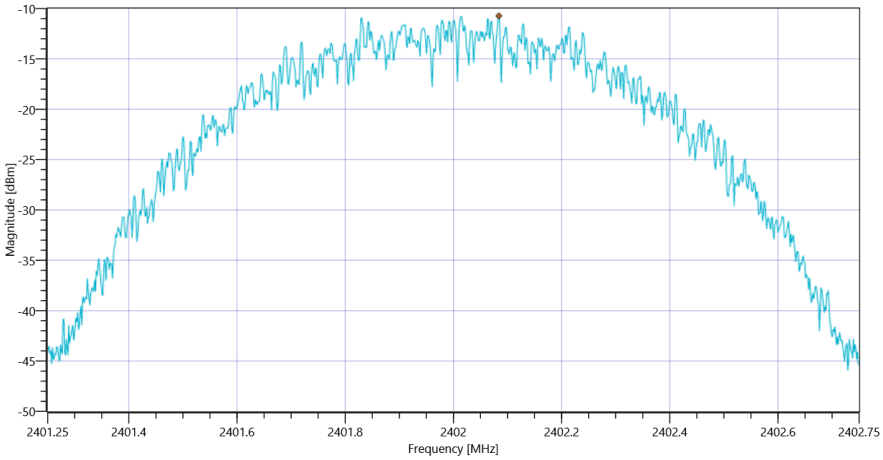
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.79 | 10.86 | 15
Start [MHz] | Stop [MHz]	2401.250 | 2402.750
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-10.72	dBm/3KHz	PASS



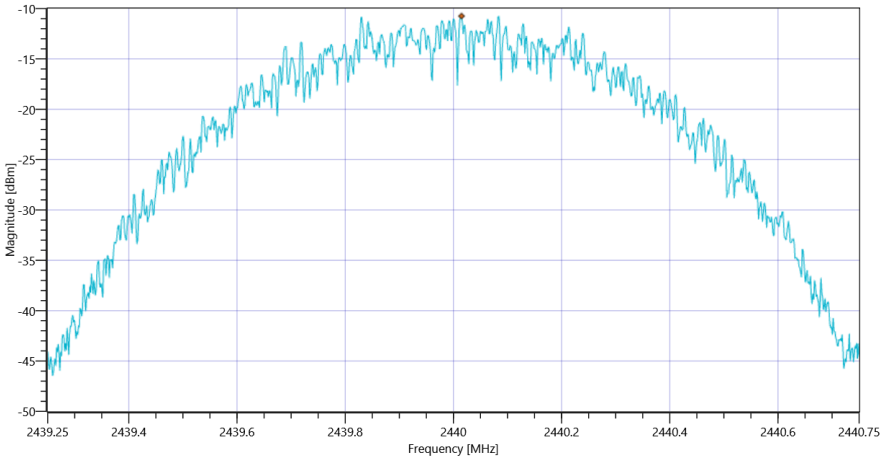
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_07062021_154643.png

Test at TX 2440 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.80 | 10.94 | 15
Start [MHz] | Stop [MHz]	2439.250 | 2440.750
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-10.74	dBm/3KHz	PASS



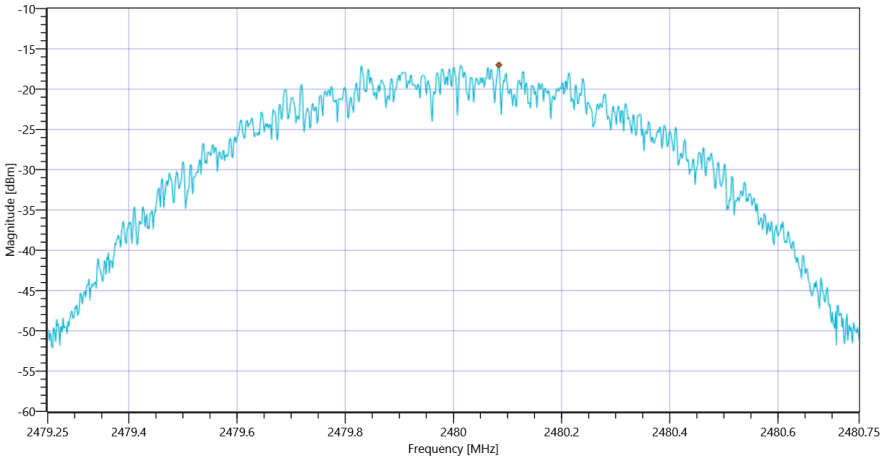
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_07062021_154726.png

Test at TX 2480 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.51 | 11 | 10
Start [MHz] | Stop [MHz]	2479.250 | 2480.750
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-16.99	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_07062021_154809.png

TEST FINISHED	
General Verdict	PASS

12. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps

Test References	
TC Start	07.06.2021 16:13:46
Ambit Temp [°C] | Humidity [rel%]	26.3 | 39
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 2 Msps
Add. Information	

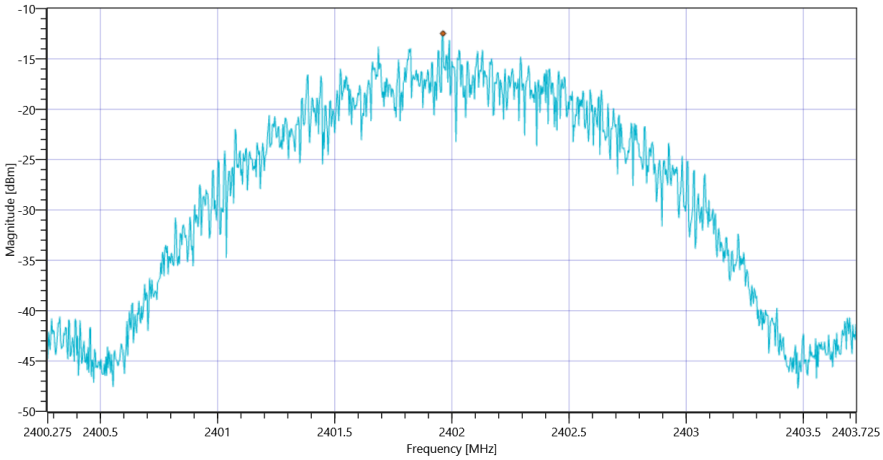
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.84 | 10.86 | 15
Start [MHz] | Stop [MHz]	2400.275 | 2403.725
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-12.47	dBm/3KHz	PASS



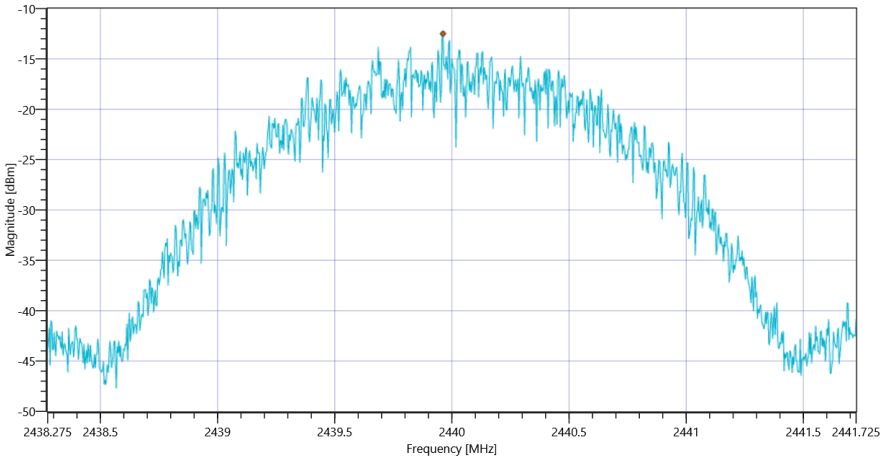
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps_07062021_161426.png

Test at TX 2440 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.84 | 10.94 | 15
Start [MHz] | Stop [MHz]	2438.275 | 2441.725
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-12.49	dBm/3KHz	PASS



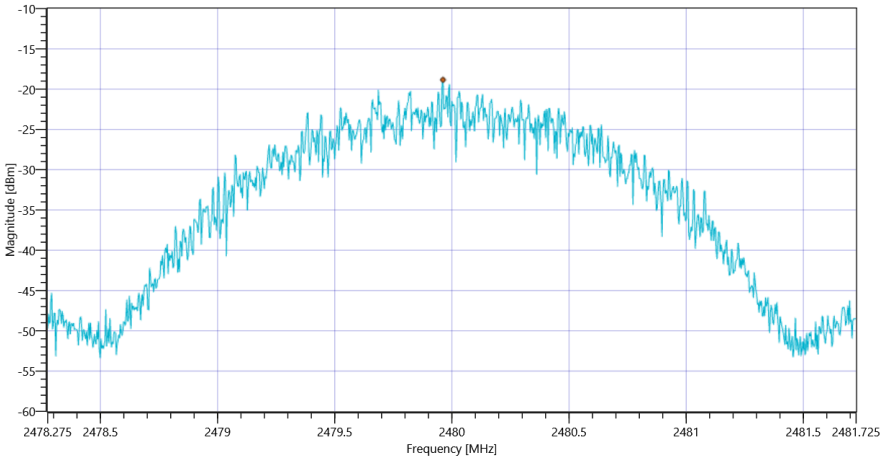
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps_07062021_161510.png

Test at TX 2480 MHz

DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.56 | 11 | 10
Start [MHz] | Stop [MHz]	2478.275 | 2481.725
RBW [MHz] | VBW [MHz]	0.003000 | 0.010000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	1000 | 20 | 1001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Max Peak power Density	---	8	-18.84	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps_07062021_161553.png

TEST FINISHED	
General Verdict	PASS

13. FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

Test References	
TC Start	15.06.2021 11:55:41
Ambit Temp [°C] | Humidity [rel%]	28.8 | 37
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 1 Msps
Add. Information	

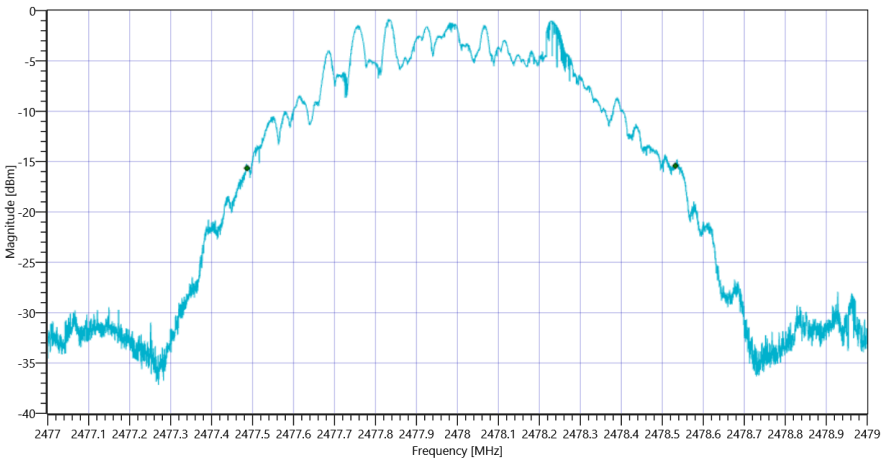
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

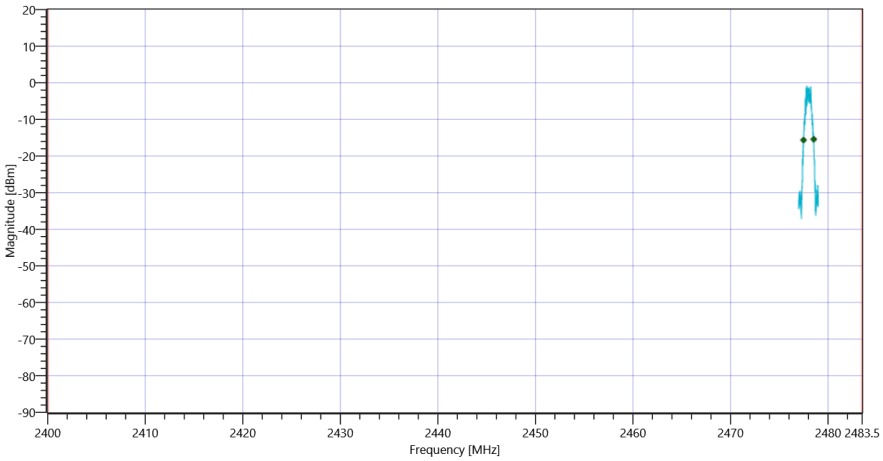
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.64 | 13.65 | 15
Start [MHz] | Stop [MHz]	2477.000 | 2479.000
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%	---	---	1045.295	kHz	INFO
T1 99%	2400.000000	---	2477.4865	MHz	PASS
T2 99%	---	2483.500000	2478.5317	MHz	PASS



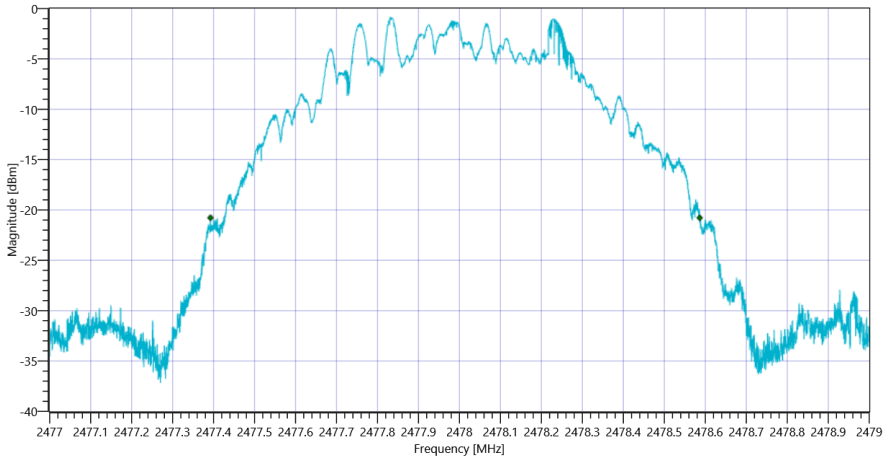
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_15062021_115612.png



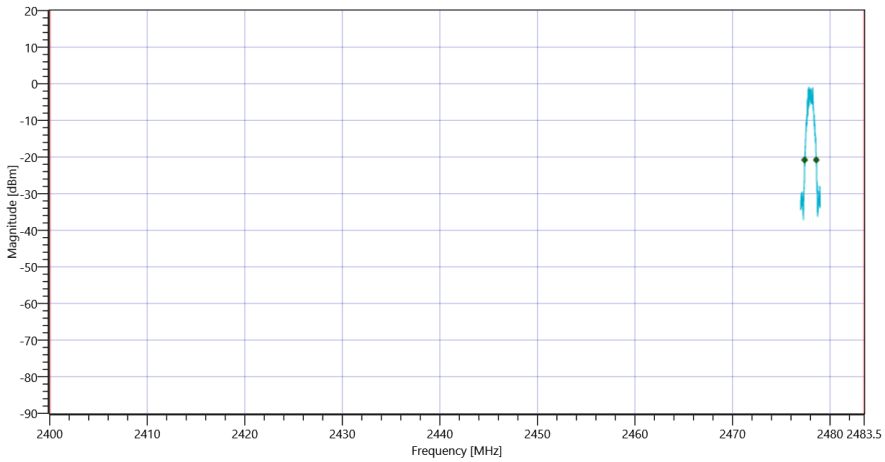
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_15062021_115619.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1194	kHz	INFO
T1 20DB	2400.000000	---	2477.3924	MHz	PASS

T2 20dB	---	2483.500000	2478.5862	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_15062021_115626.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_15062021_115633.png

TEST FINISHED	
General Verdict	PASS

14. FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

Test References	
TC Start	15.06.2021 12:05:52
Ambit Temp [°C] | Humidity [rel%]	28.4 | 37
System Version	3.0.1.3
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps
Add. Information	

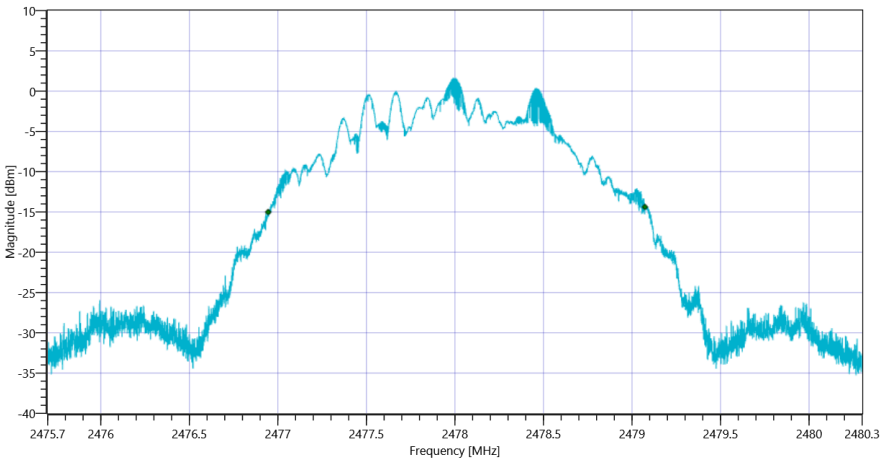
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

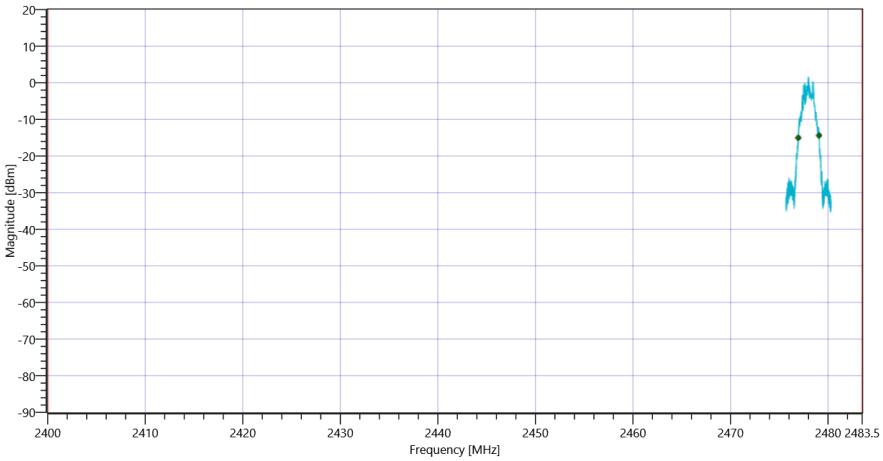
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.43 | 13.65 | 15
Start [MHz] | Stop [MHz]	2475.700 | 2480.300
RBW [MHz] | VBW [MHz]	0.050000 | 0.200000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2127.747	kHz	INFO
T1 99%	2400.000000	---	2476.9453	MHz	PASS
T2 99%	---	2483.500000	2479.0731	MHz	PASS



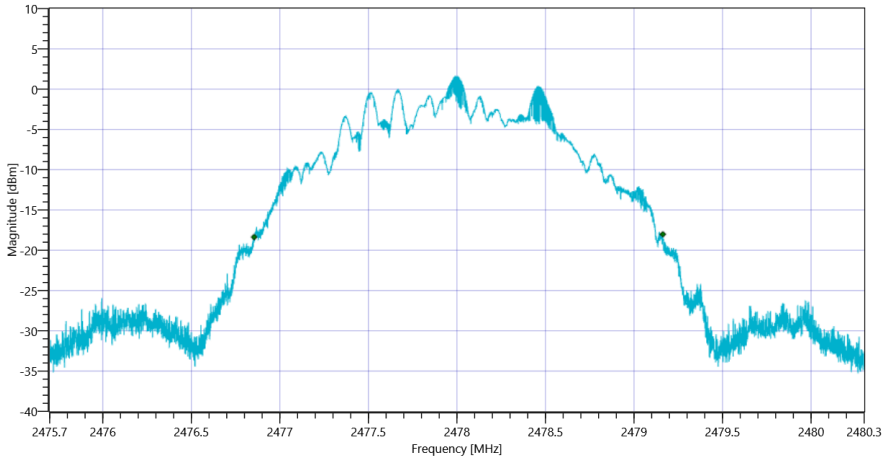
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 99PCT_15062021_120623.png



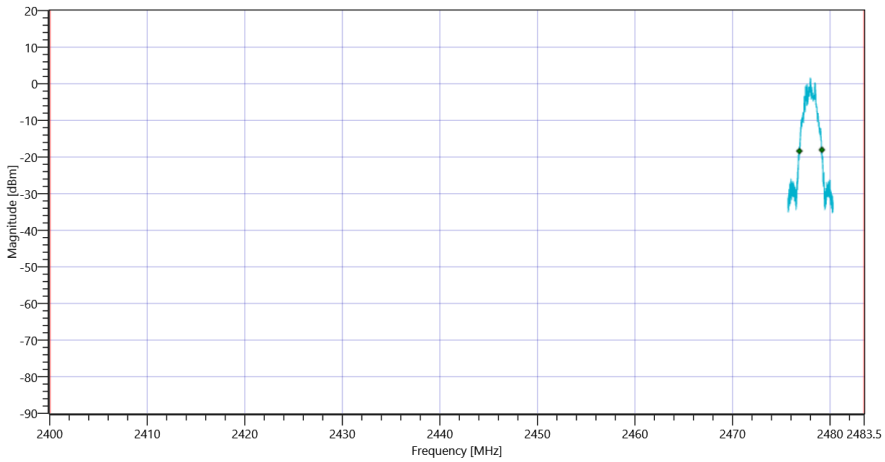
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_15062021_120630.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2308	kHz	INFO
T1 20DB	2400.000000	---	2476.8546	MHz	PASS

T2 20dB	---	2483.500000	2479.1629	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB_15062021_120638.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_15062021_120644.png

TEST FINISHED	
General Verdict	PASS

15. FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

Test References	
TC Start	07.06.2021 15:48:15
Ambit Temp [°C] | Humidity [rel%]	26.5 | 38
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 1 Msps
Add. Information	

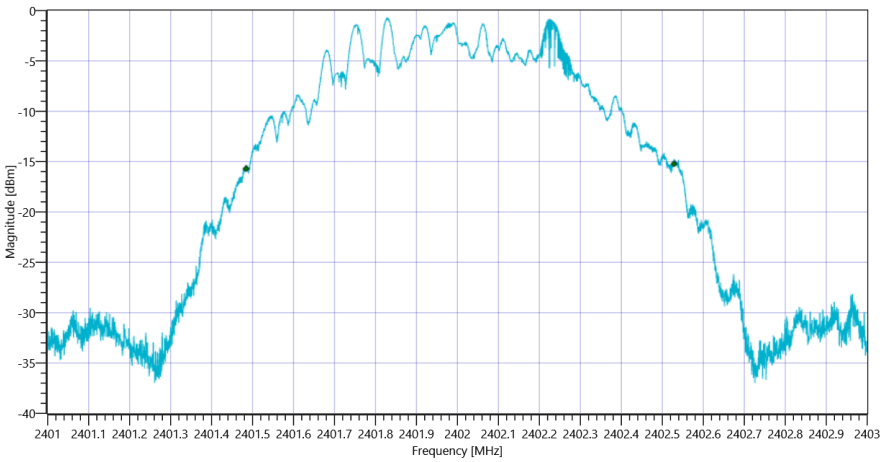
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

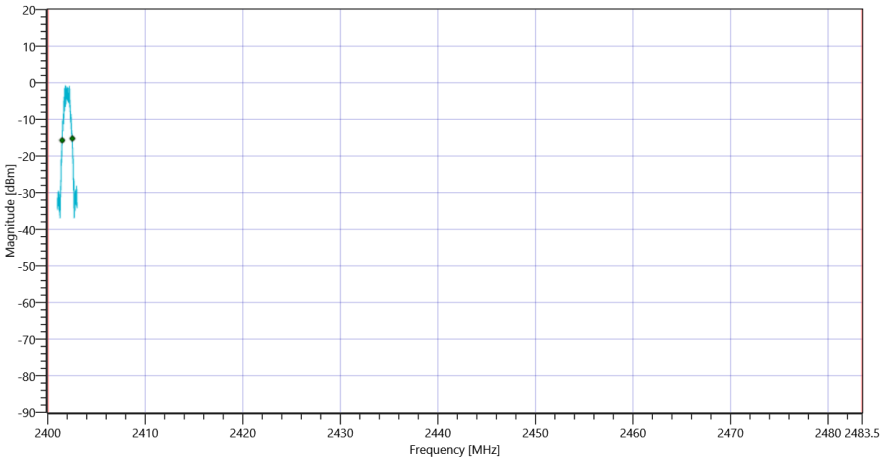
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.80 | 10.86 | 15
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.100000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1044.496	kHz	INFO
T1 99%	2400.000000	---	2401.4841	MHz	PASS
T2 99%	---	2483.500000	2402.5285	MHz	PASS



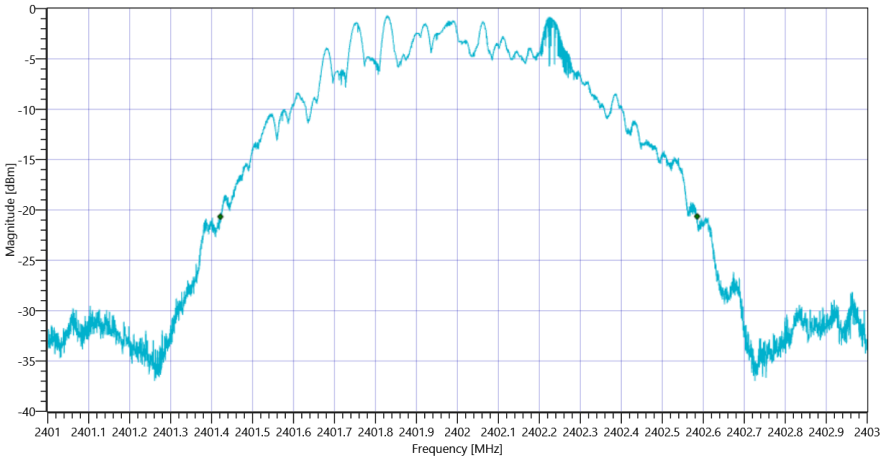
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_07062021_154846.png



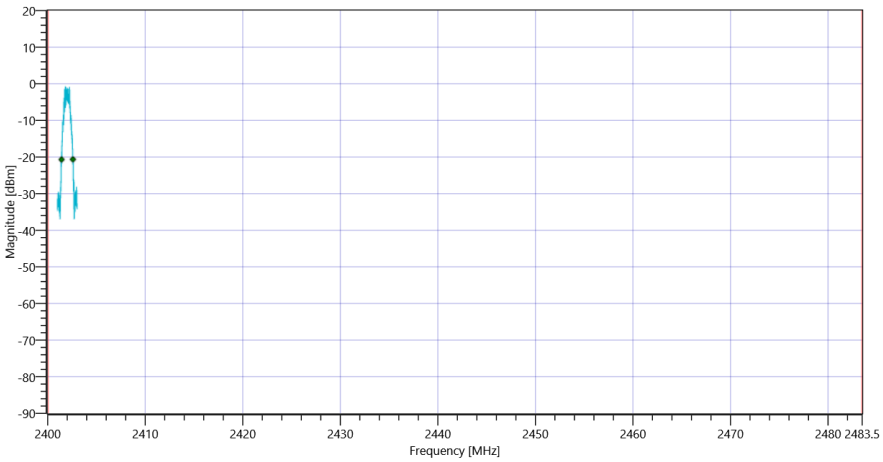
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_07062021_154853.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1164	kHz	INFO
T1 20DB	2400.000000	---	2401.4214	MHz	PASS

T2 20dB	---	2483.500000	2402.5850	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_07062021_154900.png



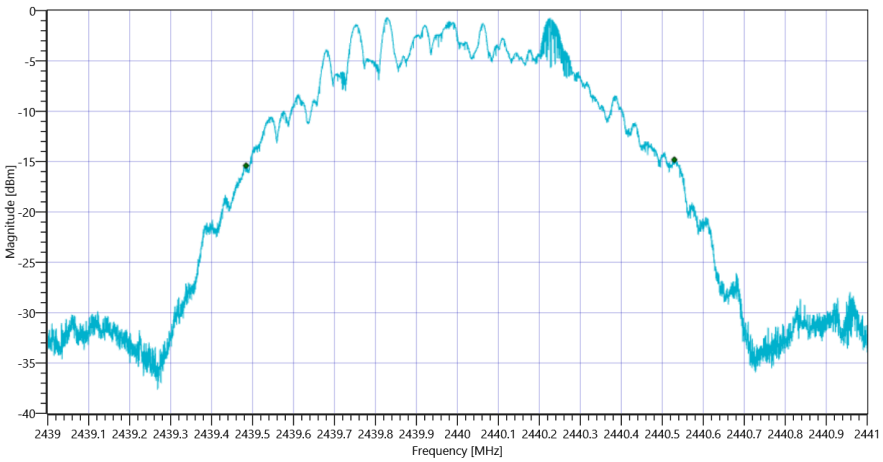
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_07062021_154907.png

Test at TX 2440 MHz

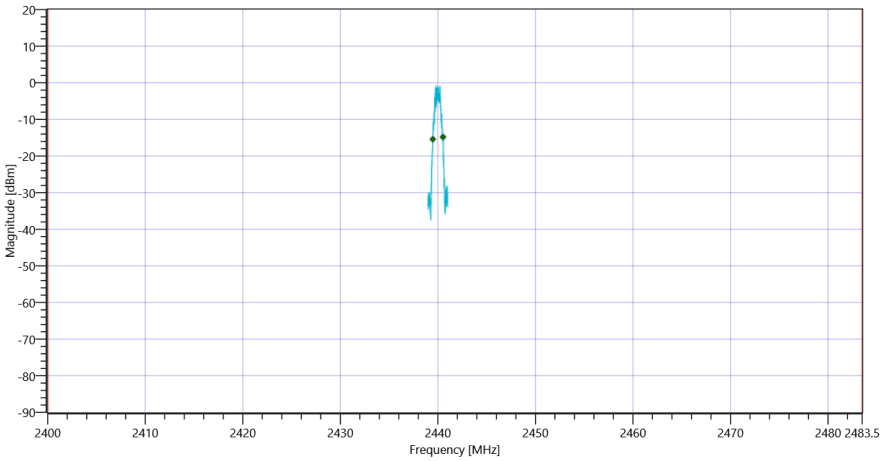
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.79 | 10.94 | 15
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.100000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1045.095	kHz	INFO
T1 99%	2400.000000	---	2439.4841	MHz	PASS
T2 99%	---	2483.500000	2440.5291	MHz	PASS



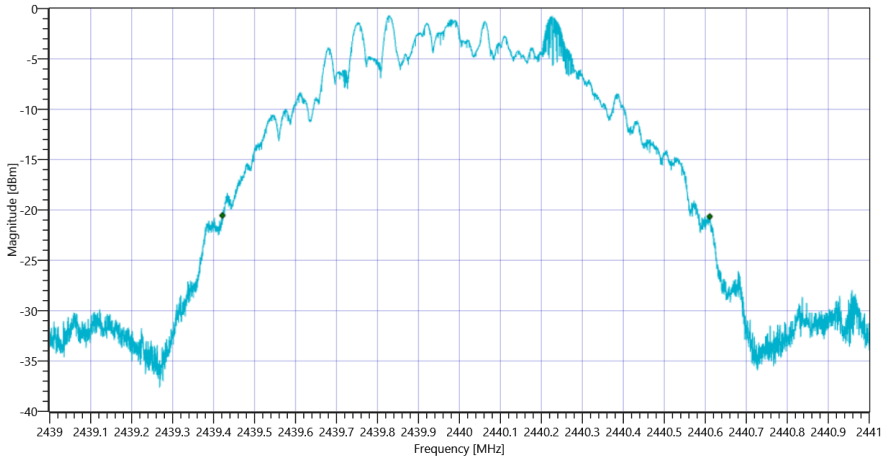
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_07062021_154942.png



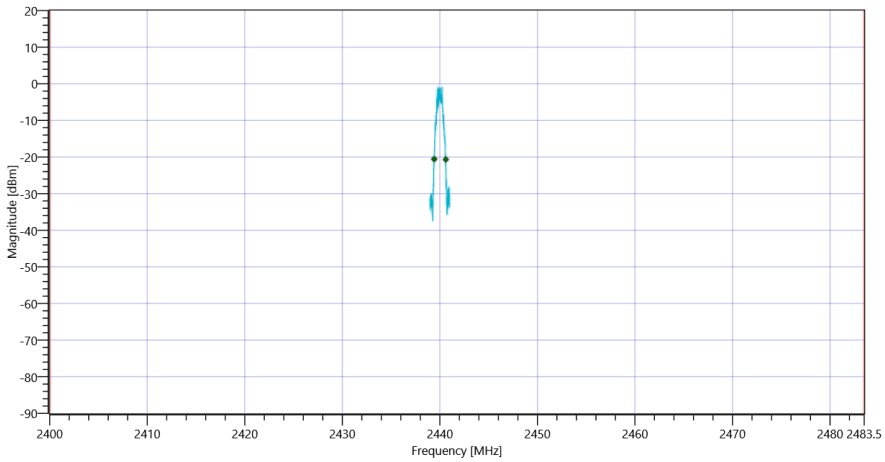
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_07062021_154949.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1189	kHz	INFO
T1 20DB	2400.000000	---	2439.4214	MHz	PASS

T2 20dB	---	2483.500000	2440.6108	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_07062021_154956.png



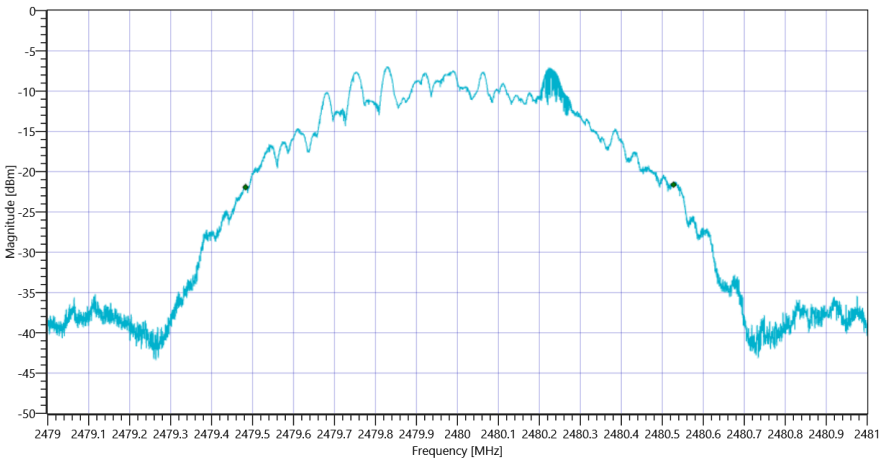
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_07062021_155003.png

Test at TX 2480 MHz

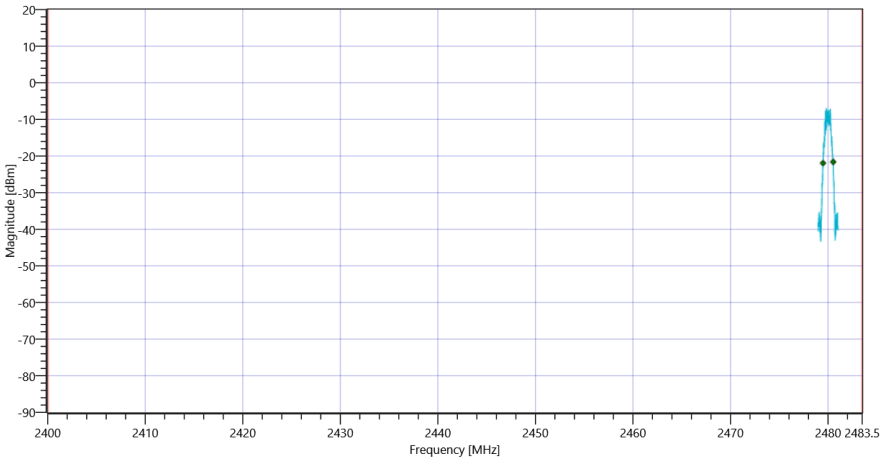
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.43 | 11 | 10
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.100000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1044.496	kHz	INFO
T1 99%	2400.000000	---	2479.4829	MHz	PASS
T2 99%	---	2483.500000	2480.5273	MHz	PASS



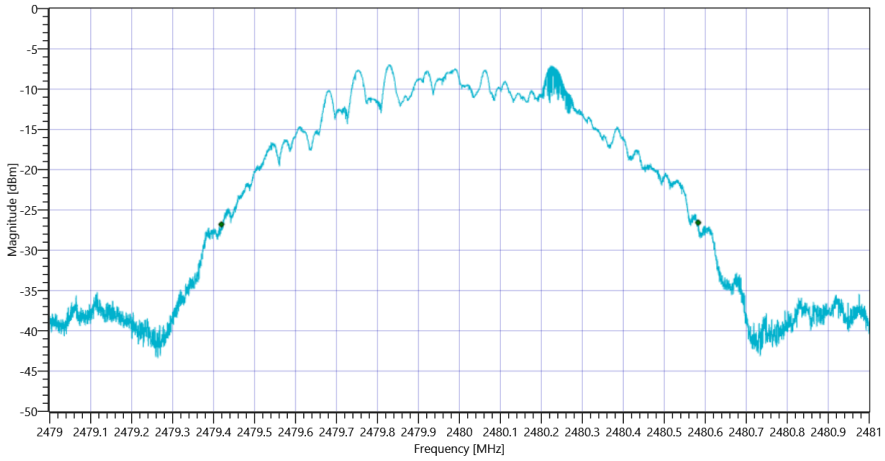
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_07062021_155038.png



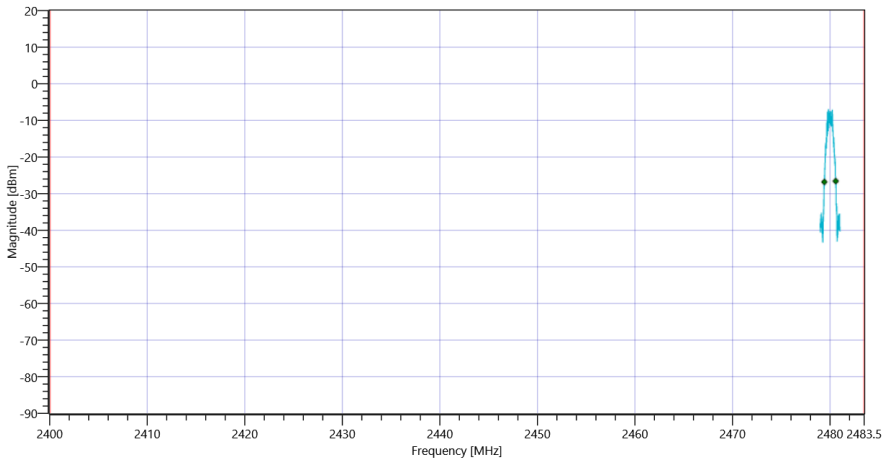
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_07062021_155045.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1164	kHz	INFO
T1 20DB	2400.000000	---	2479.4190	MHz	PASS

T2 20dB	---	2483.500000	2480.5826	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_07062021_155053.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_07062021_155100.png

TEST FINISHED	
General Verdict	PASS

16. FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps

Test References	
TC Start	07.06.2021 16:15:59
Ambit Temp [°C] | Humidity [rel%]	26.4 | 38
System Version	3.0.1.2
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 2 Msps
Add. Information	

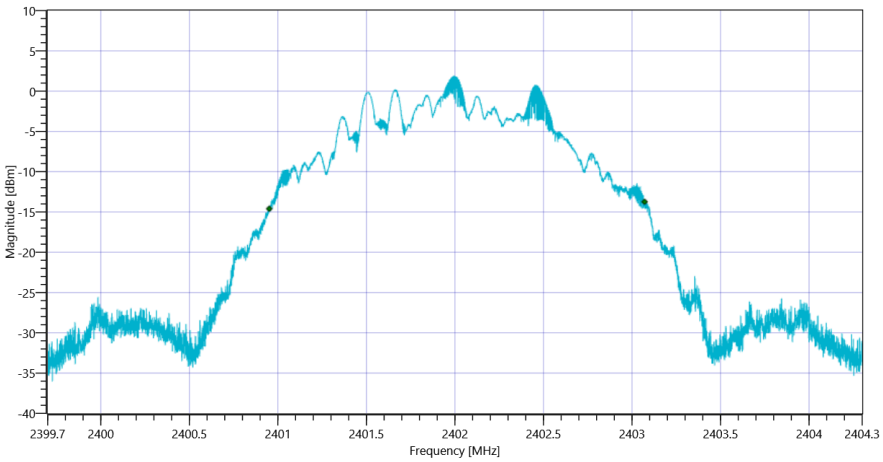
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

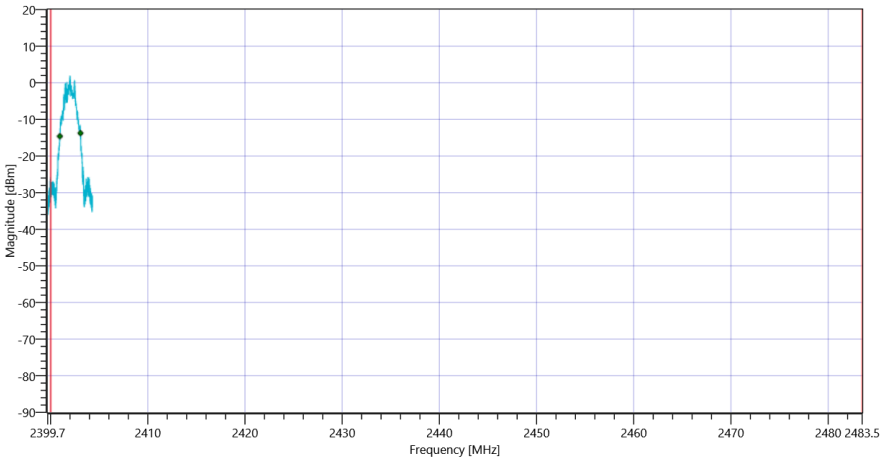
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.83 | 10.86 | 15
Start [MHz] | Stop [MHz]	2399.700 | 2404.300
RBW [MHz] | VBW [MHz]	0.050000 | 0.200000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2119.928	kHz	INFO
T1 99%	2400.000000	---	2400.9513	MHz	PASS
T2 99%	---	2483.500000	2403.0712	MHz	PASS



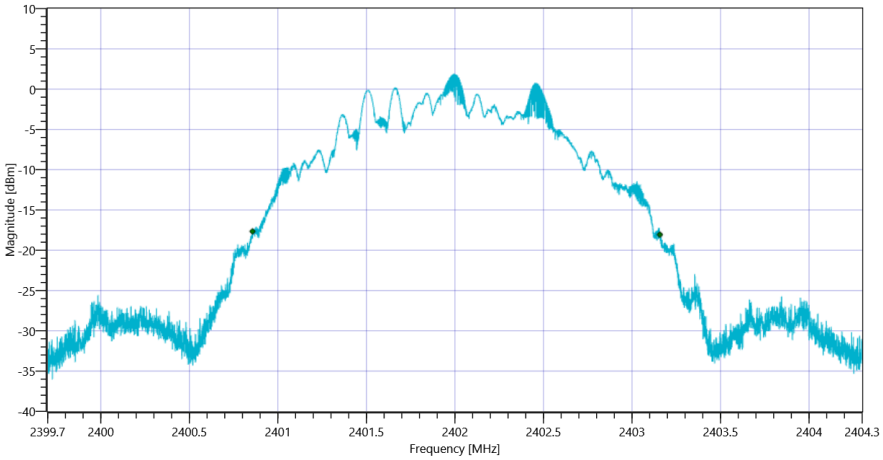
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 99PCT_07062021_161630.png



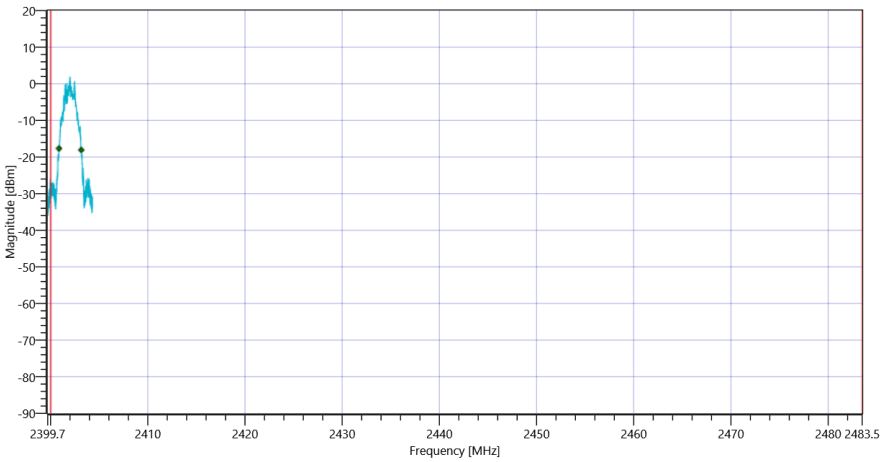
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_07062021_161637.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2301	kHz	INFO
T1 20DB	2400.000000	---	2400.8564	MHz	PASS

T2 20dB	---	2483.500000	2403.1574	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB_07062021_161644.png



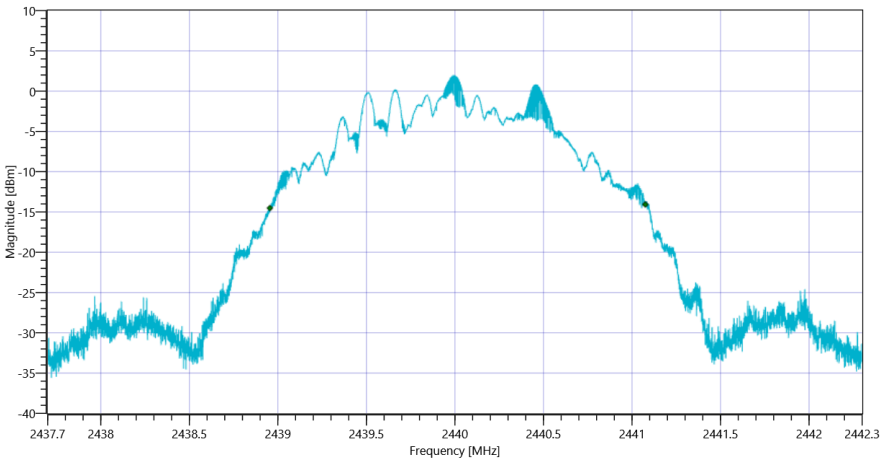
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_07062021_161651.png

Test at TX 2440 MHz

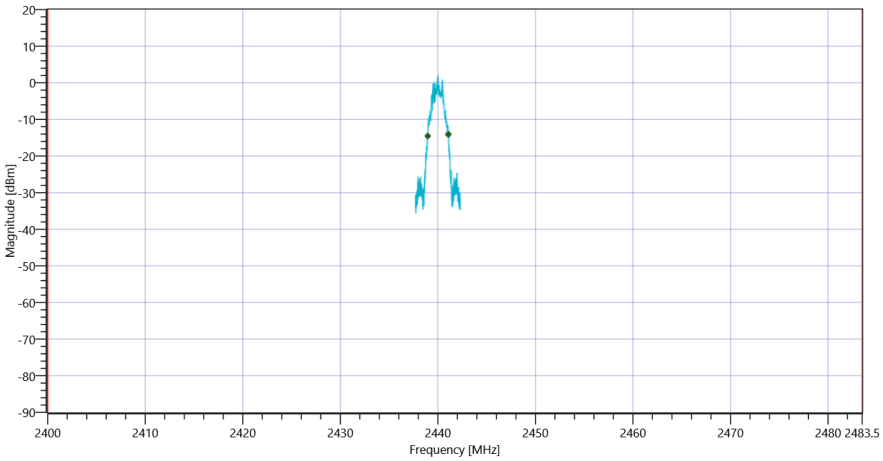
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	10.85 | 10.94 | 15
Start [MHz] | Stop [MHz]	2437.700 | 2442.300
RBW [MHz] | VBW [MHz]	0.050000 | 0.200000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2120.388	kHz	INFO
T1 99%	2400.000000	---	2438.9550	MHz	PASS
T2 99%	---	2483.500000	2441.0754	MHz	PASS



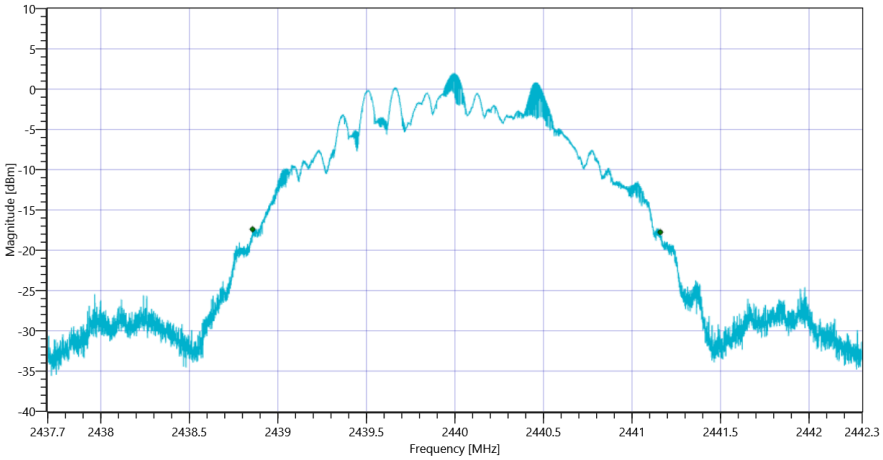
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 99PCT_07062021_161726.png



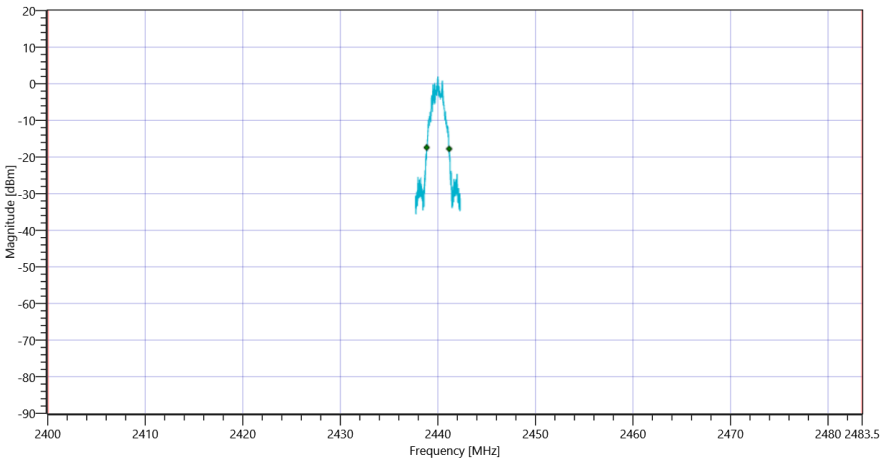
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_07062021_161733.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2303	kHz	INFO
T1 20DB	2400.000000	---	2438.8569	MHz	PASS

T2 20dB	---	2483.500000	2441.1597	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB_07062021_161741.png



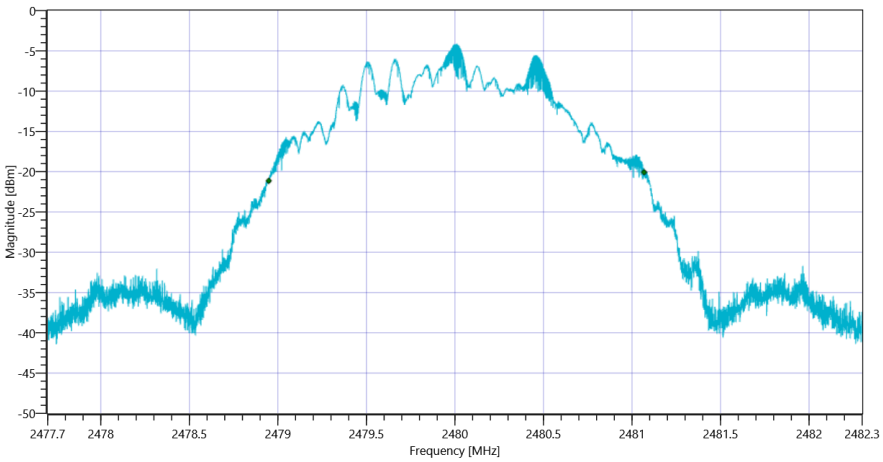
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_07062021_161748.png

Test at TX 2480 MHz

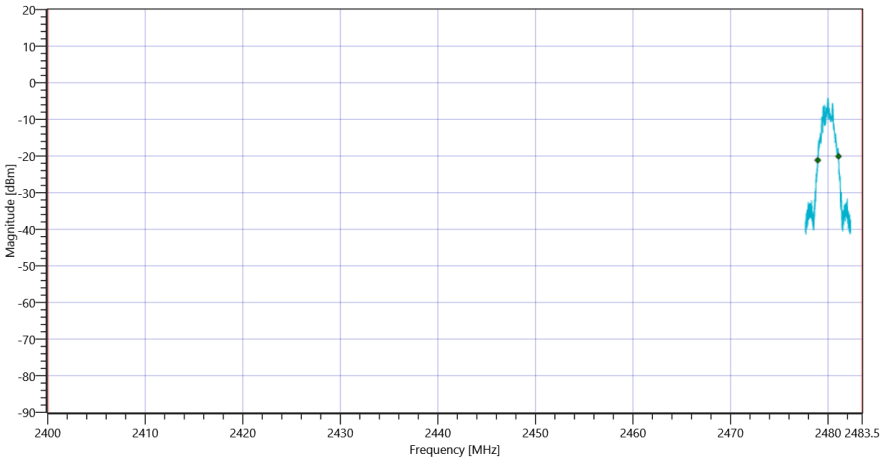
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	4.46 | 11 | 10
Start [MHz] | Stop [MHz]	2477.700 | 2482.300
RBW [MHz] | VBW [MHz]	0.050000 | 0.200000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2119.928	kHz	INFO
T1 99%	2400.000000	---	2478.9485	MHz	PASS
T2 99%	---	2483.500000	2481.0685	MHz	PASS



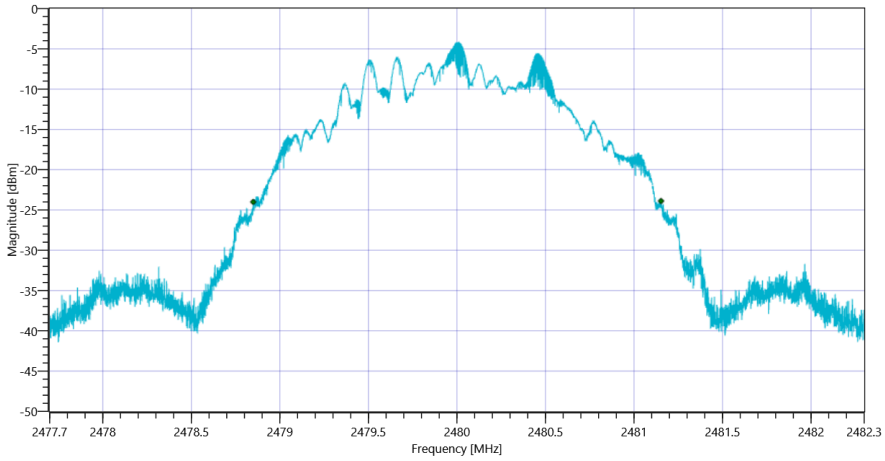
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 99PCT_07062021_161823.png



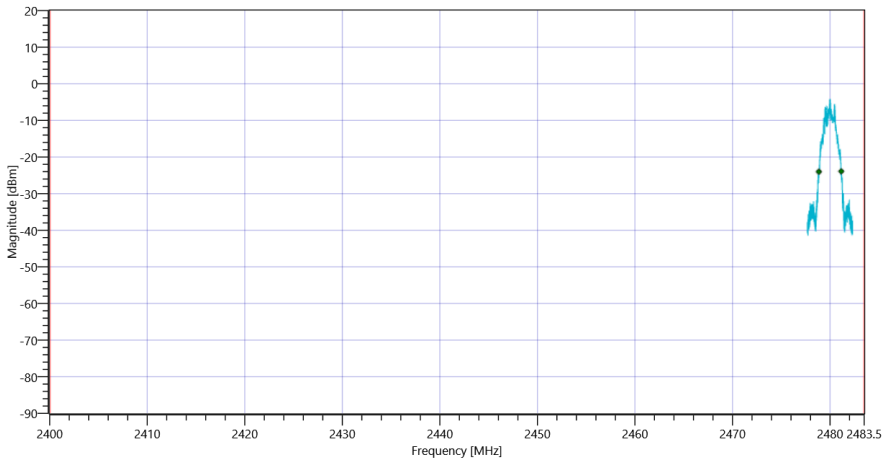
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_07062021_161830.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2303	kHz	INFO
T1 20DB	2400.000000	---	2478.8495	MHz	PASS

T2 20dB	---	2483.500000	2481.1528	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB_07062021_161838.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_07062021_161845.png

TEST FINISHED	
General Verdict	PASS

17. FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps

Test References	
TC Start	15.06.2021 11:56:38
Ambit Temp [°C] | Humidity [rel%]	28.7 | 37
System Version	3.0.1.3
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 DTS - BT LE 1 Msps
Add. Information	

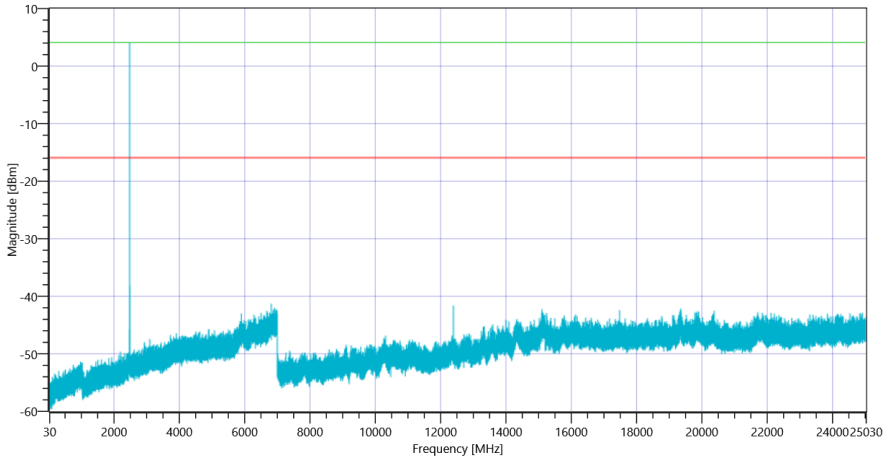
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

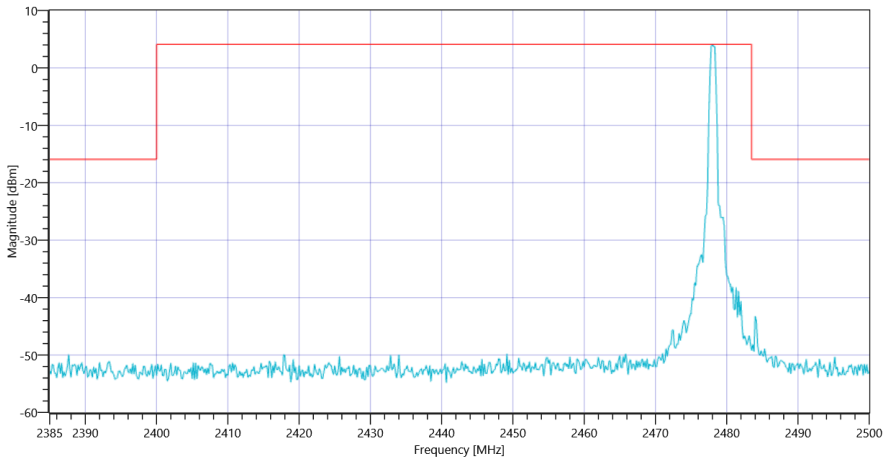
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	5.47 | 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	500 | 8 | 3001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2478.00 MHz	---	---	4.08	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 6811.667 MHz	0	---	25.35	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2478_15062021_120217.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2478_15062021_120222.png

TEST FINISHED	
General Verdict	PASS

18. FCC Part 15.247 TX Spurious Conducted ~ BT LE 2 Msps

Test References	
TC Start	15.06.2021 12:06:49
Ambit Temp [°C] | Humidity [rel%]	28.4 | 38
System Version	3.0.1.3
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 DTS - BT LE 2 Msps
Add. Information	

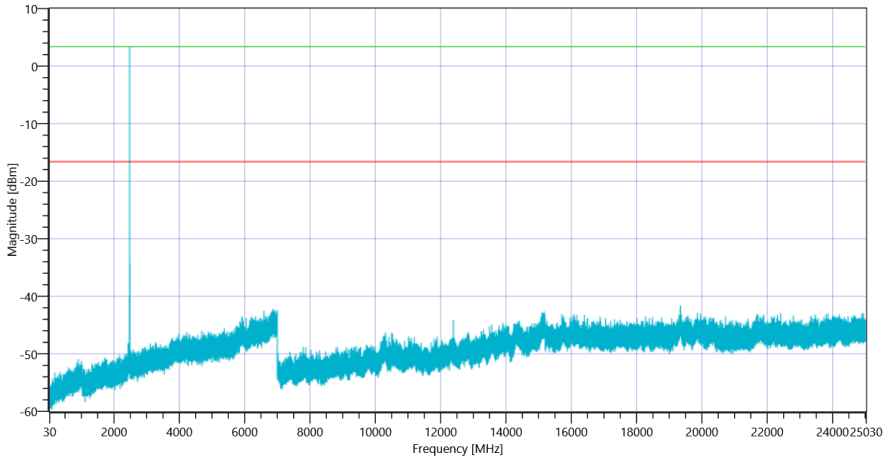
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False | Freq [MHz] 2402
Frequency mid to test	False | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2478
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	3.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2478 MHz

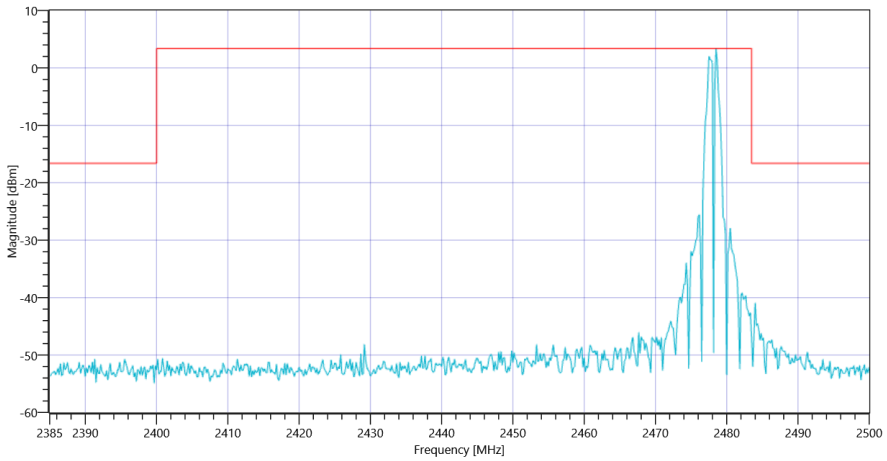
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	5.39 | 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	500 | 8 | 3001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2478.50 MHz	---	---	3.39	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2484 MHz	0	---	24.32	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 2 Msps 2478_15062021_121228.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 2 Msps 2478_15062021_121234.png

TEST FINISHED	
General Verdict	PASS

19. FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps

Test References	
TC Start	07.06.2021 15:51:06
Ambit Temp [°C] | Humidity [rel%]	26.4 | 39
System Version	3.0.1.2
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 DTS - BT LE 1 Msps
Add. Information	

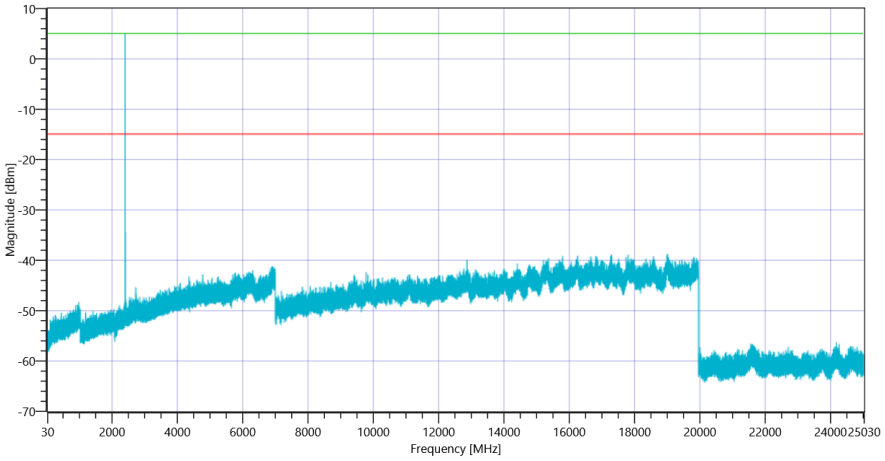
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2402 MHz

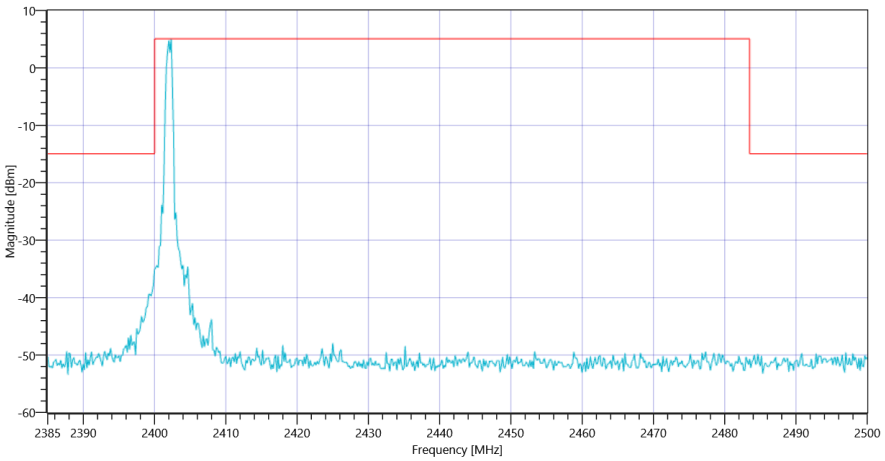
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	5.81 | 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	500 | 8 | 3001 | SWE

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2402.33 MHz	---	---	5.07	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2399.833 MHz	0	---	22.86	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2402_07062021_155642.png



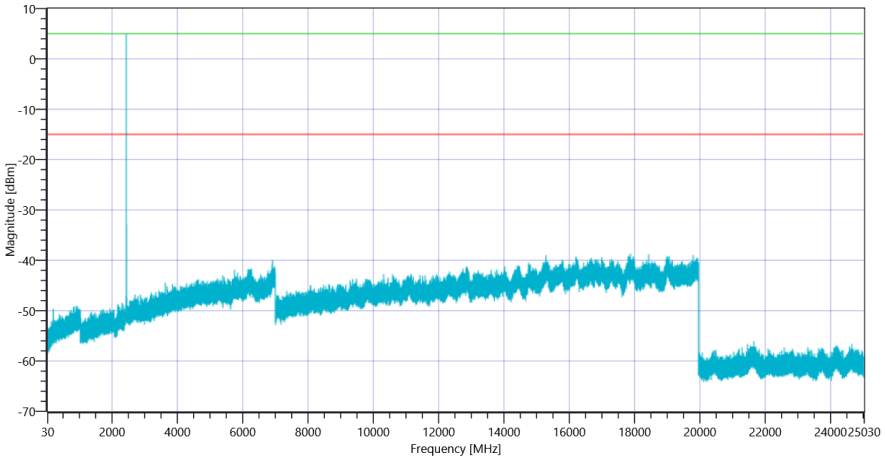
Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2402_07062021_155648.png

Test at TX 2440 MHz

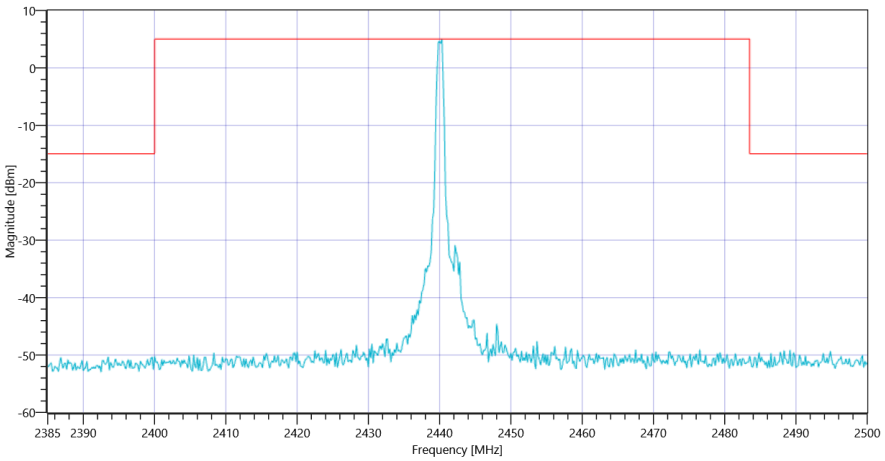
DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	5.81 | 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	500 | 8 | 3001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Reference @ 2440.33 MHz	---	---	5.03	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 17873.833 MHz	0	---	23.69	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2440_07062021_160230.png



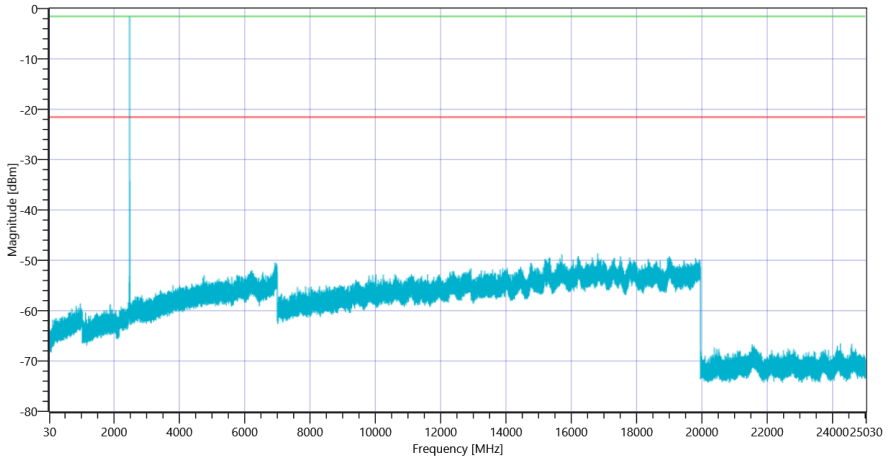
Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2440_07062021_160236.png

Test at TX 2480 MHz

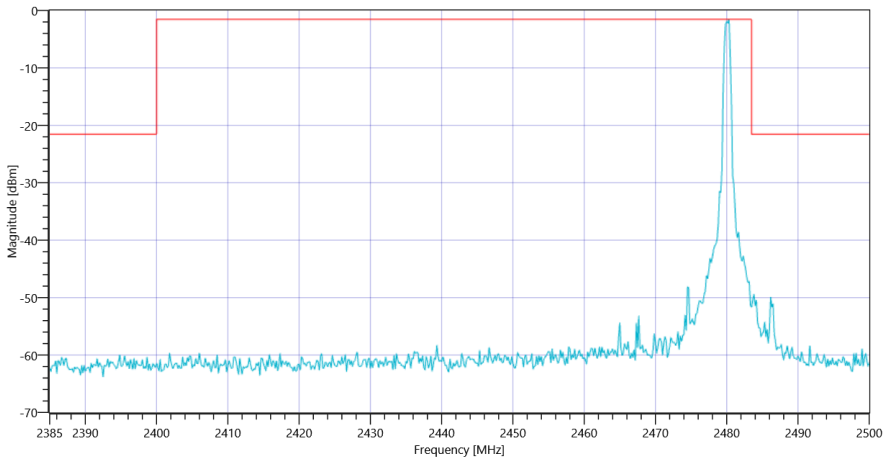
DTM Connection check					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Connection result	---	---	---	---	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	-0.55 | 0 | 15
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	500 | 8 | 3001 | SWE

RESULT					
Test Description	**Lower Limit**	**Upper Limit**	**Measured**	**Unit**	**Verdict**
Reference @ 2480.33 MHz	---	---	-1.55	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 16812.167 MHz	0	---	27.06	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2480_07062021_160818.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2480_07062021_160824.png

TEST FINISHED	
General Verdict	PASS

20. FCC Part 15.247 TX Spurious Conducted ~ BT LE 2 Msps

Test References	
TC Start	07.06.2021 16:18:51
Ambit Temp [°C] | Humidity [rel%]	26.3 | 38
System Version	3.0.1.2
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 DTS - BT LE 2 Msps
Add. Information	

Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Auto Control enabled Power Supply | Climatic Box	No | No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer