

Measurement Results

1-0254/20-03-02_log1_conducted

[Test logging](#)

This addendum is electronically signed and valid without handwritten signature.
For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Document authorized:



cn=Michael Dorongovski, o=CTC
advanced GmbH, ou=DOR-210422,
email=Michael.Dorongovski@ctcad
vanced.com, c=DE
2021.11.22 11:30:55 +01'00'

Michael Dorongovski
Lab Manager
Radio Communications

Table of Content

EUT Summary	3
1. Common2G4 Peak OP 3MHz/3MHz ~ BT LE 1 Msps	4
2. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps	8
3. FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps	15
4. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps	19
5. FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps	23
6. FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps	30
7. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8	34
8. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8	41
9. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2	45
10. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2	52
11. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps	56
12. FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps	63
13. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps	67
14. FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps	71
15. FCC Part 15.247 TX Spurious Conducted ~ BT LE 2 Msps	78

EUT Summary

EUT DEFINITION	
Manufacturer	Acconeer AB
Type	XM122 Connectivity Module
Kind	IoT battery driven connectivity module
Serial Number Setup Number	XM122R2DFW21072603130 1.0
Version SW FW HW	2.8.2 NI XM122-01
Comment 1 2	
Temperature [°C] Min Nom Max	-40 20 85
Voltage [V] Min Nom Max	2 3 5.5

EUT Common Settings BT Low Energy	
Intermodulation Value N	3
Image Freq. Low Mid High [MHz]	0 0 0
Power Class	2
1 Mbps supported	True TXpayload 255 RXpayload 255
2 Mbps supported	True TXpayload 255 RXpayload 255
Longrange S8 supported	True TXpayload 255 RXpayload 255
Longrange S2 supported	True TXpayload 255 RXpayload 255
Signaling Settings	WS_USB_RS232 TWO 29 19200 None S1 None On
Signaling RF Settings	RF1com 0 0 On
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

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

Test References	
TC Start	08.11.2021 13:20:58
Ambit Temp [°C] Humidity [rel%]	23.8 32
System Version	3.0.2.7
Test Specification	None
Test Method	
TC Version	0.0.1
My Description	Peak Output Power conducted 3MHz/3MHz - BT LE 1 Msps
Add. Information	

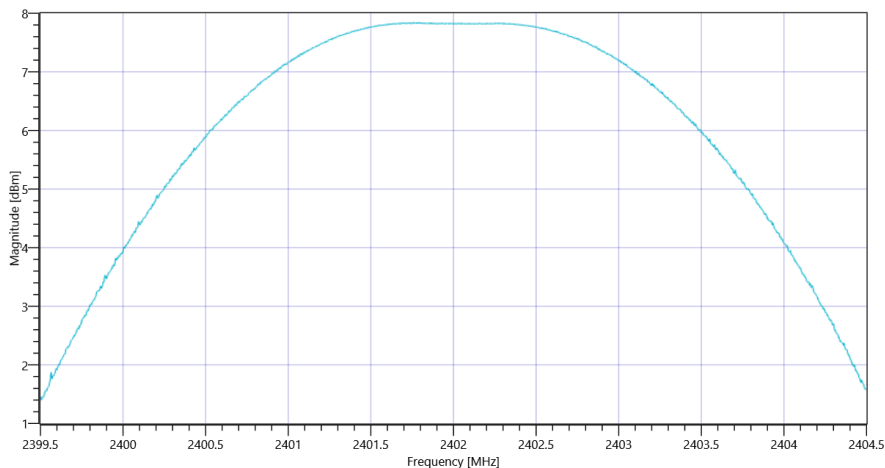
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.07 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	---	---	7.84	dBm	Info
Peak Power	---	---	6.08135	mW	Info
Frequency at Peak	---	---	2401.76	MHz	Info



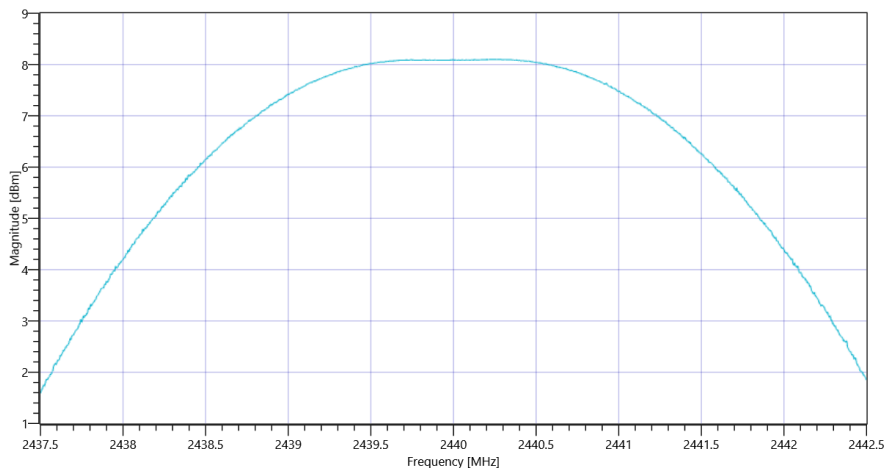
Plot_Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps_08112021_132128.png

Test at TX 2440 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.29 10.8 25	
Start [MHz] Stop [MHz]	2437.500 2442.500	
RBW [MHz] VBW [MHz]	3.000000 3.000000	
Detector TraceMode	POS MAXH	
Sweep: Time [ms] Count Points per Section Type	1000 10 1001 SWE	

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	---	8.1	dBm	Info
Peak Power	---	---	6.456542	mW	Info
Frequency at Peak	---	---	2440.29	MHz	Info



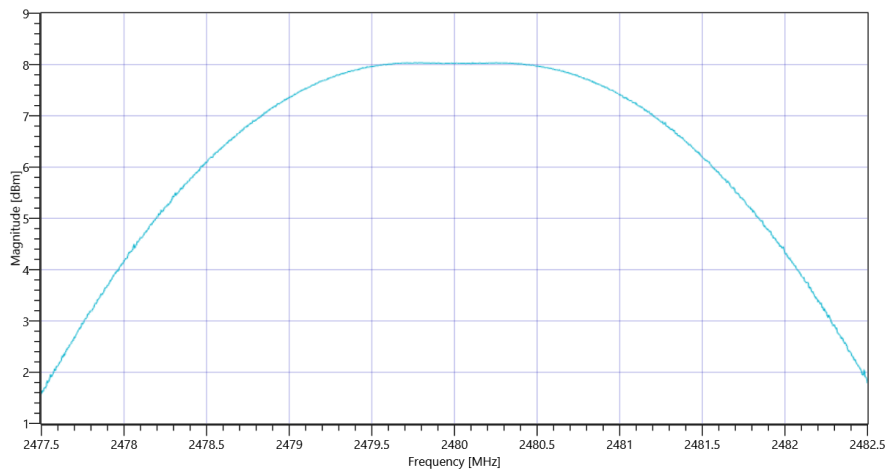
Plot_Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps_08112021_132155.png

Test at TX 2480 MHz

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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			18.15 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	---	---	8.04	dBm	Info
Peak Power	---	---	6.367955	mW	Info
Frequency at Peak	---	---	2480.21	MHz	Info



Plot_Common2G4 Peak OP 3MHz-3MHz ~ BT LE 1 Msps_08112021_132223.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	08.11.2021 13:32:06
Ambit Temp [°C] Humidity [rel%]	23.6 33
System Version	3.0.2.7
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	

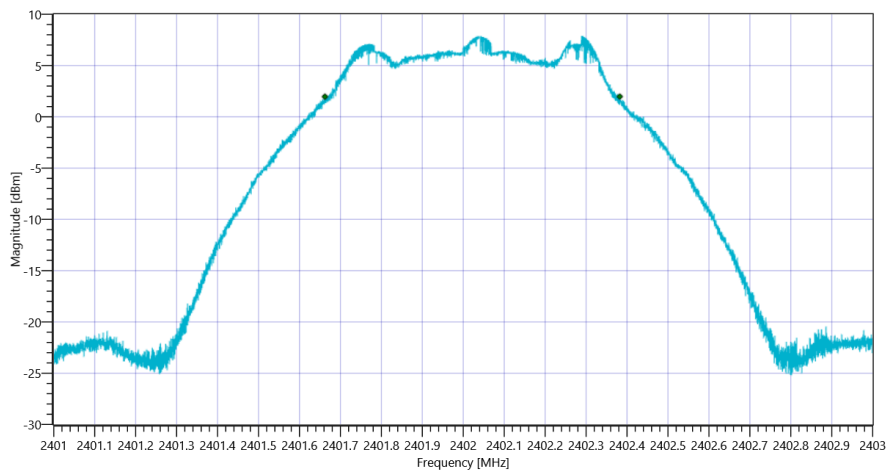
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.09 10.79 20		
Start [MHz] Stop [MHz]			2401.000 2403.000		
RBW [MHz] VBW [MHz]			0.100000 0.300000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 10001 SWE		

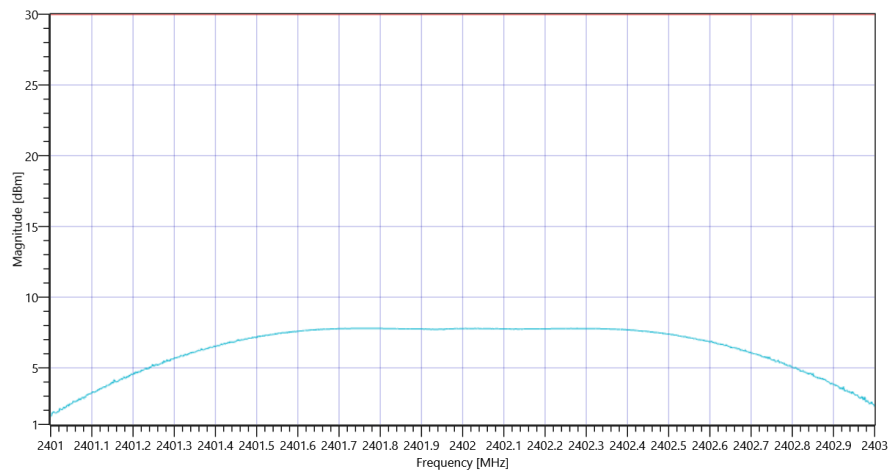
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	720	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW_08112021_133236.png

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			18.09 10.79 25		
Start [MHz] Stop [MHz]			2401.000 2403.000		
RBW [MHz] VBW [MHz]			1.000000 5.000000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 1001 SWE		

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	7.8	dBm	PASS
Peak Power	---	1000	6.025596	mW	PASS
Frequency at Peak	---	---	2401.78	MHz	INFO



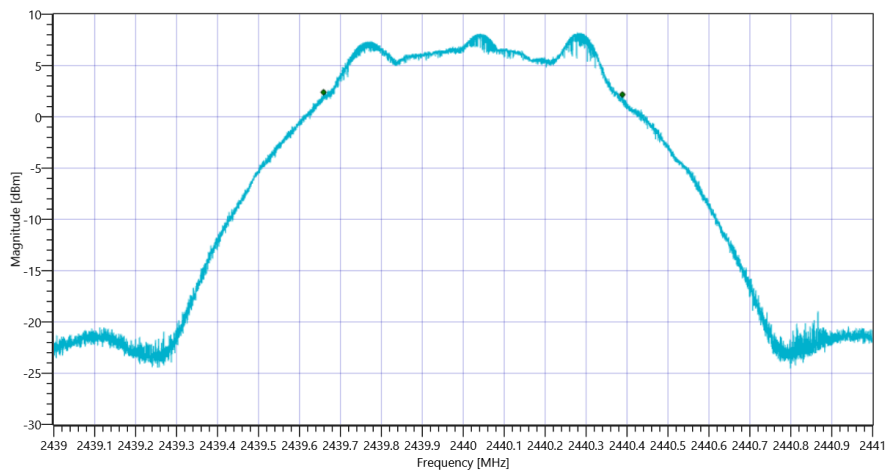
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msp_08112021_133254.png

Test at TX 2440 MHz

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

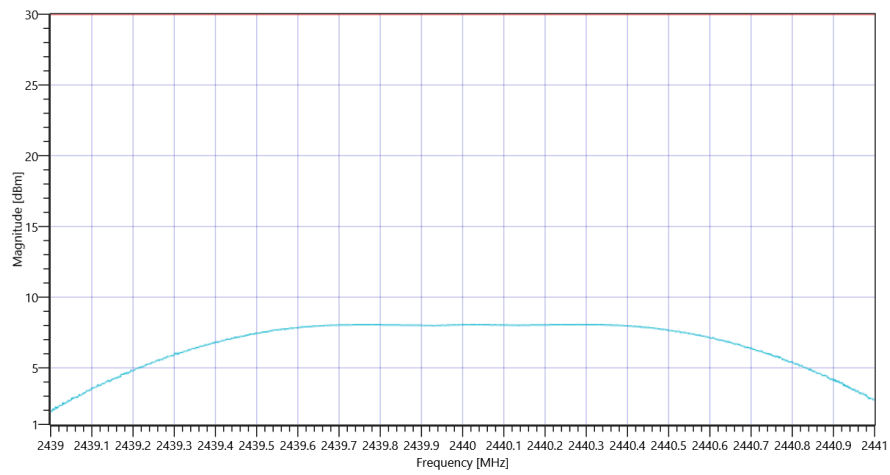
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.28 10.8 20				
Start [MHz] Stop [MHz]	2439.000 2441.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	730	kHz	INFO



READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.28 10.8 25				
Start [MHz] Stop [MHz]	2439.000 2441.000				
RBW [MHz] VBW [MHz]	1.000000 5.000000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 1001 SWE				

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	8.06	dBm	PASS
Peak Power	---	1000	6.397348	mW	PASS
Frequency at Peak	---	---	2440.008	MHz	INFO



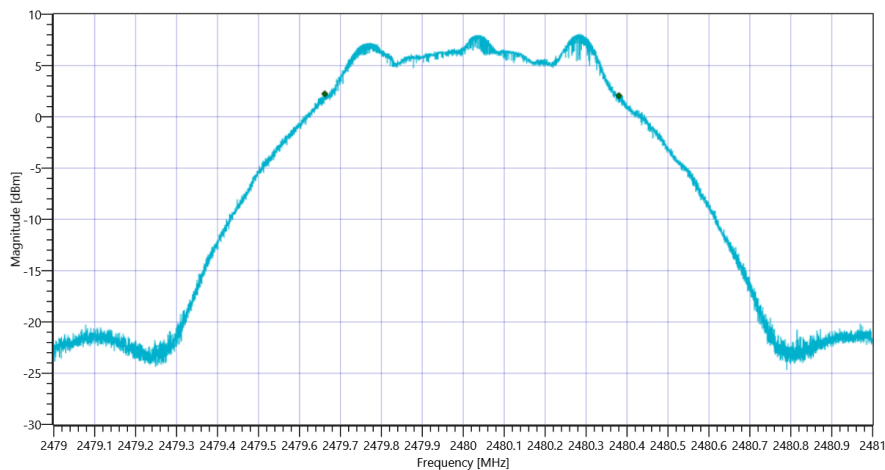
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msp_08112021_133340.png

Test at TX 2480 MHz

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

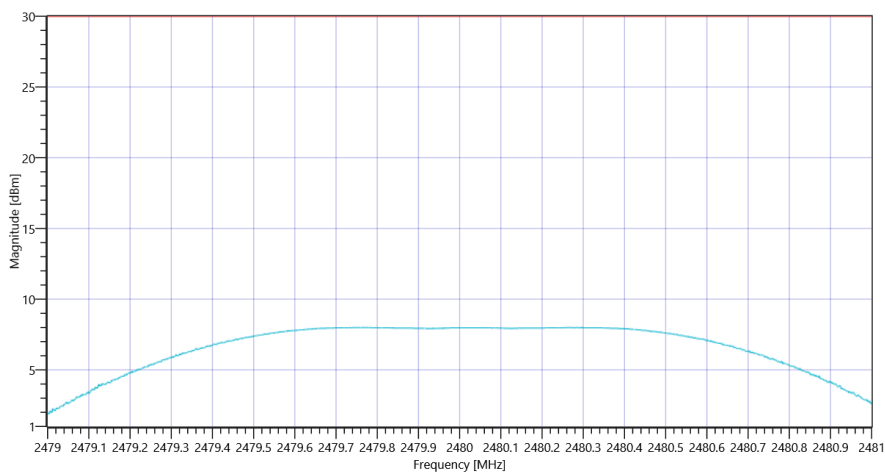
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.16 10.85 20				
Start [MHz] Stop [MHz]	2479.000 2481.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	718	kHz	INFO



READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.16 10.85 25				
Start [MHz] Stop [MHz]	2479.000 2481.000				
RBW [MHz] VBW [MHz]	1.000000 5.000000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 1001 SWE				

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	7.99	dBm	PASS
Peak Power	---	1000	6.295062	mW	PASS
Frequency at Peak	---	---	2480.276	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_08112021_133427.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	08.11.2021 13:34:33
Ambit Temp [°C] Humidity [rel%]	23.7 32
System Version	3.0.2.7
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	

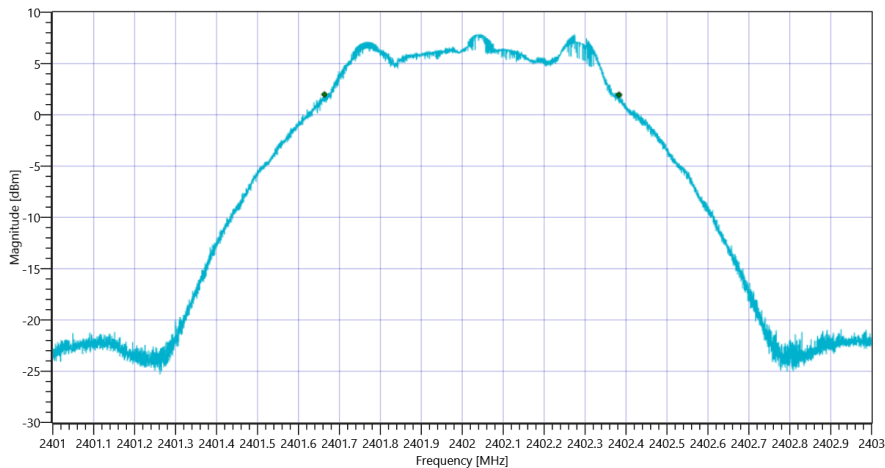
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.11 10.79 20	
Start [MHz] Stop [MHz]	2401.000 2403.000	
RBW [MHz] VBW [MHz]	0.100000 0.300000	
Detector TraceMode	POS MAXH	
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE	

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	719	kHz	PASS



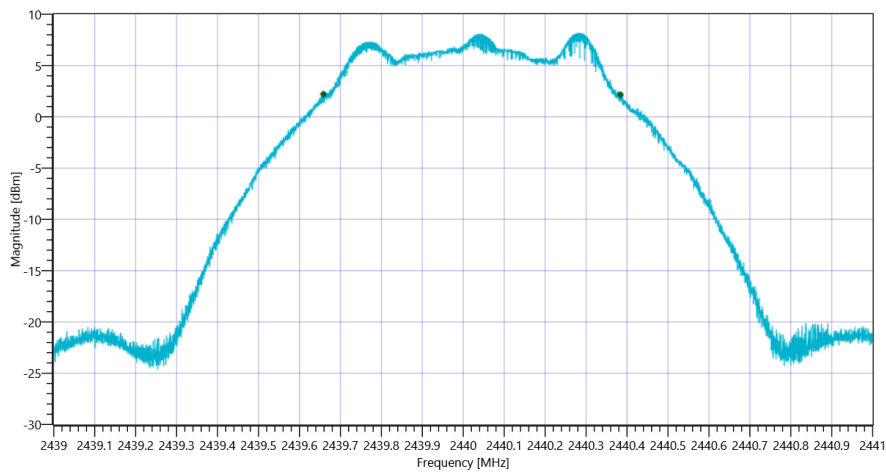
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_08112021_133503.png

Test at TX 2440 MHz

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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.27 10.8 20				
Start [MHz] Stop [MHz]	2439.000 2441.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	726	kHz	PASS



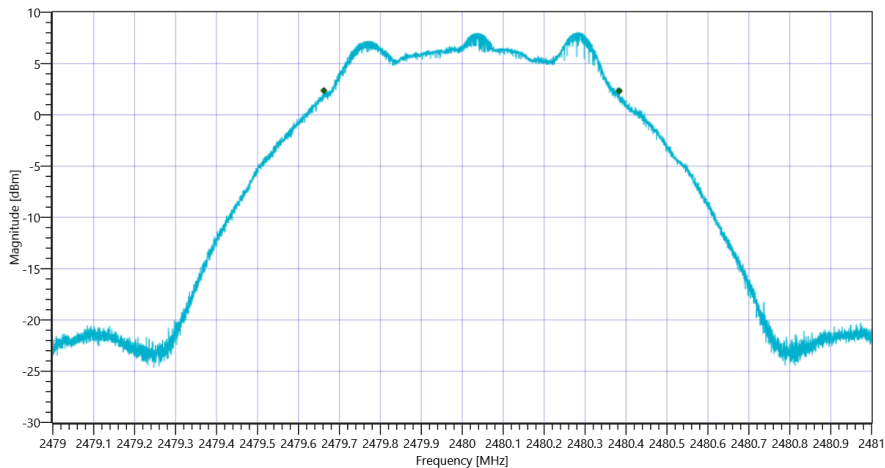
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_08112021_133531.png

Test at TX 2480 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.19 10.85 20	
Start [MHz] Stop [MHz]	2479.000 2481.000	
RBW [MHz] VBW [MHz]	0.100000 0.300000	
Detector TraceMode	POS MAXH	
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE	

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	721	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_08112021_133600.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	08.11.2021 13:36:06
Ambit Temp [°C] Humidity [rel%]	24.0 32
System Version	3.0.2.7
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	

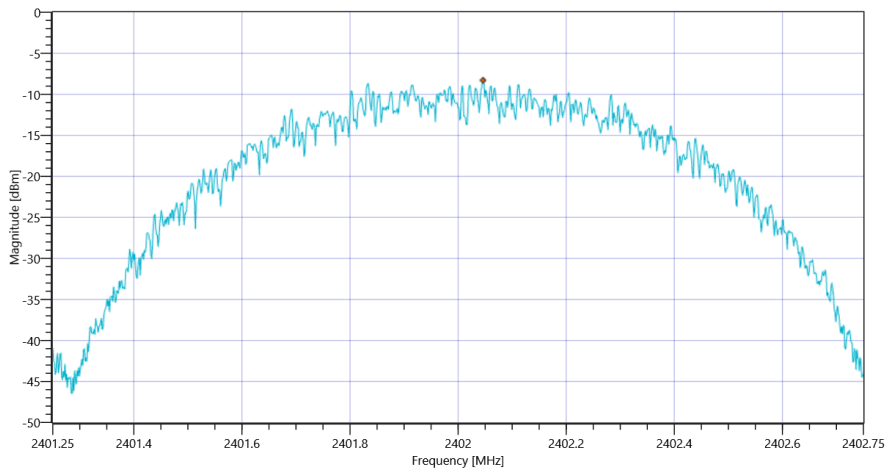
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.07 10.79 20	
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	-8.29	dBm/3KHz	PASS



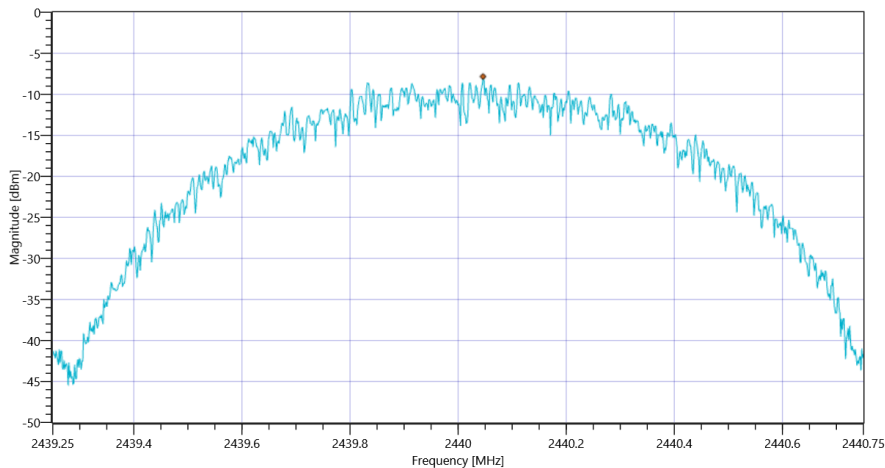
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_08112021_133645.png

Test at TX 2440 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.28 10.8 20	
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	-7.83	dBm/3KHz	PASS



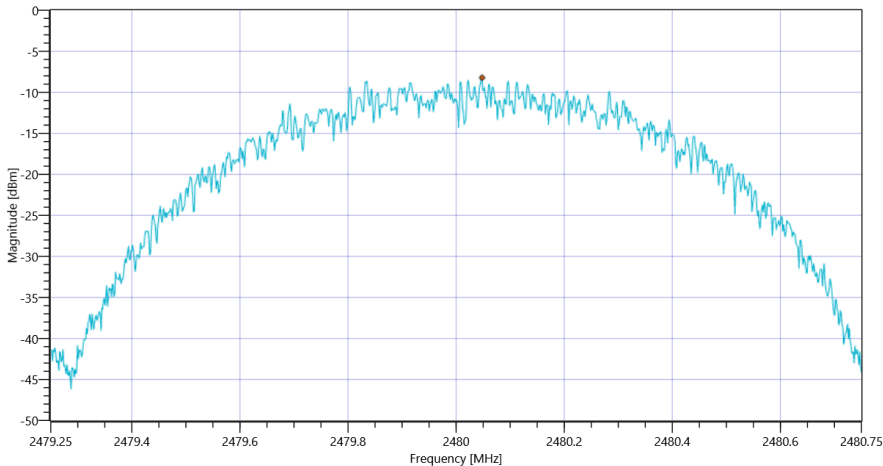
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_08112021_133723.png

Test at TX 2480 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.16 10.85 20	
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	-8.21	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_08112021_133801.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	08.11.2021 13:38:07
Ambit Temp [°C] Humidity [rel%]	24.2 32
System Version	3.0.2.7
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	

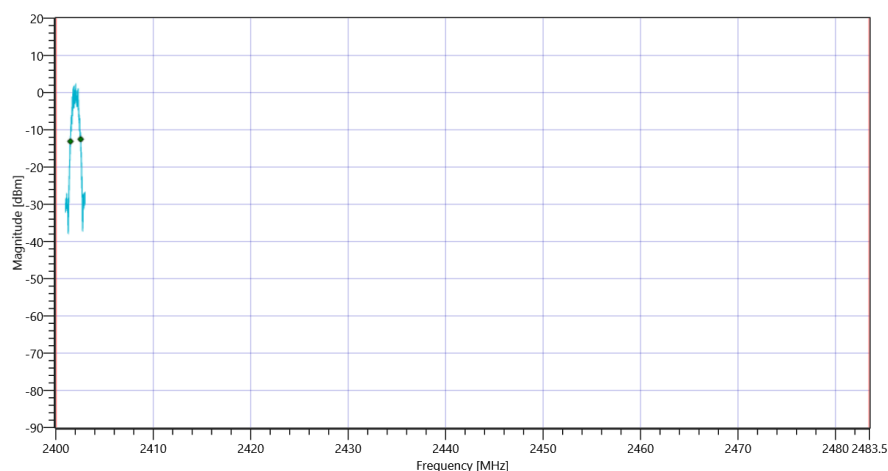
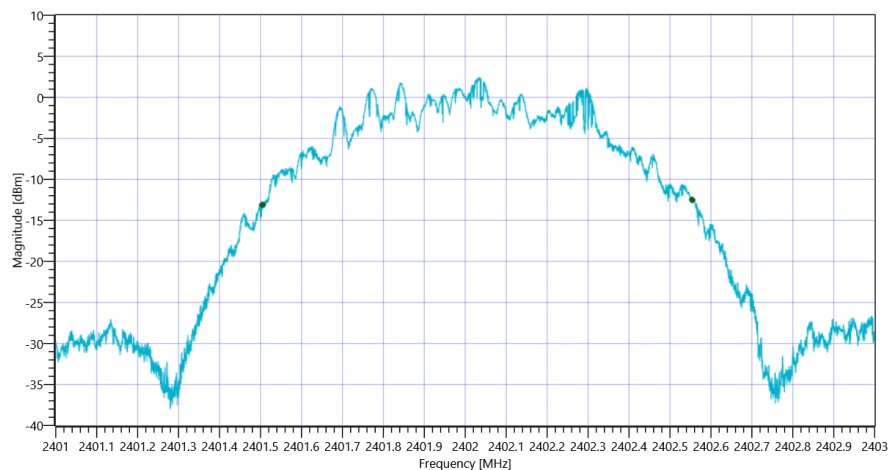
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]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

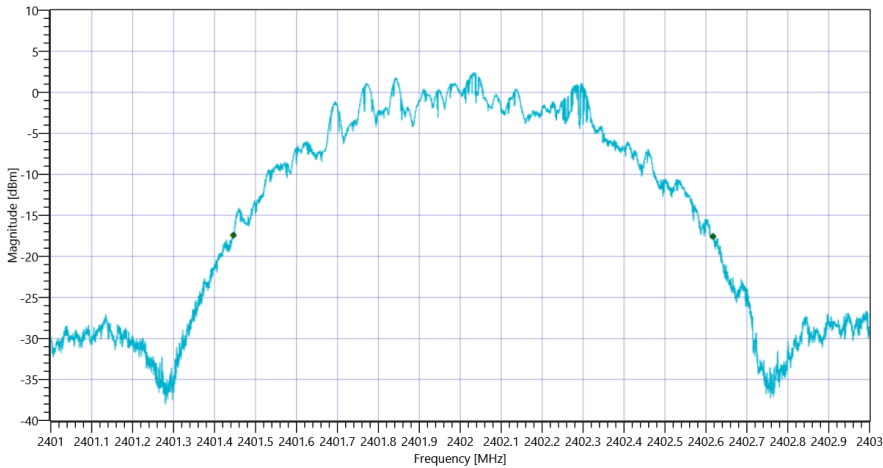
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.07 10.79 20		
Start [MHz] Stop [MHz]			2401.000 2403.000		
RBW [MHz] VBW [MHz]			0.020000 0.100000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 10001 SWE		

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1050.295	kHz	INFO
T1 99%	2400.000000	---	2401.5040	MHz	PASS
T2 99%	---	2483.500000	2402.5543	MHz	PASS

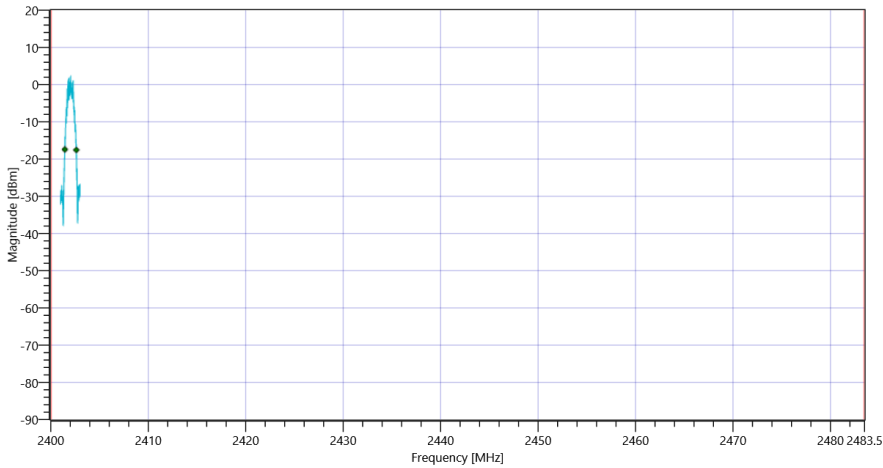


RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1171	kHz	INFO

T1 20dB	2400.000000	---	2401.4460	MHz	PASS
T2 20dB	---	2483.500000	2402.6172	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_08112021_133851.png



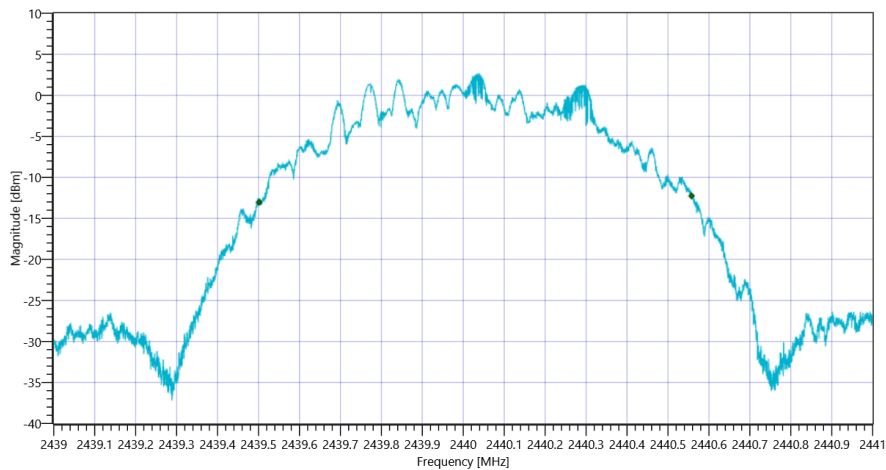
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_08112021_133857.png

Test at TX 2440 MHz

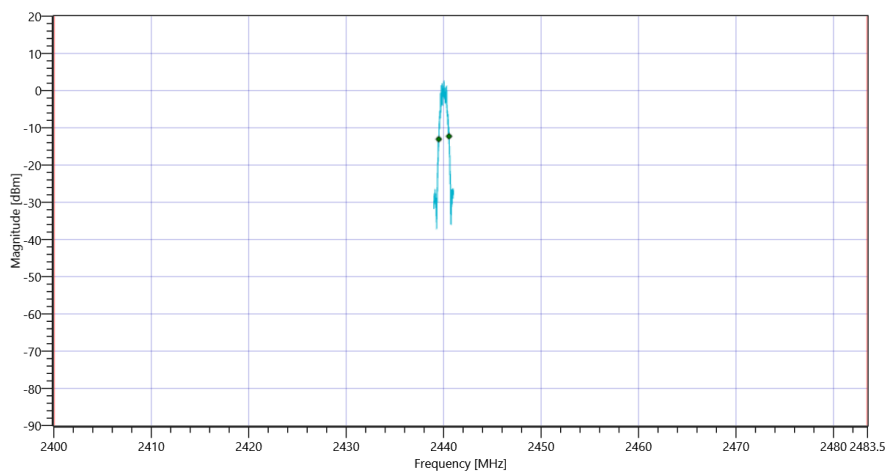
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	RESET OK

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.28 10.8 20		
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%	---	---	1056.094	kHz	INFO
T1 99%	2400.000000	---	2439.5014	MHz	PASS
T2 99%	---	2483.500000	2440.5575	MHz	PASS



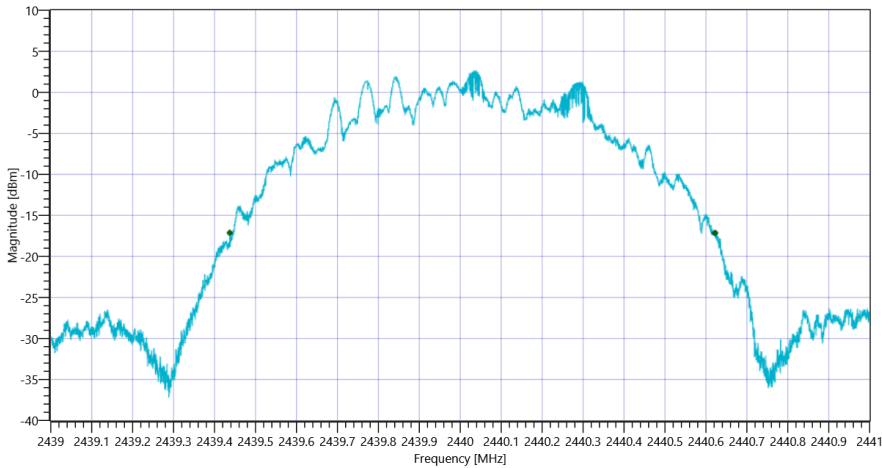
Plot_FCC Part 15.247 Bandwidth 99PCT:20dB ~ BT LE 1 Msps 99PCT_08112021_133927.png



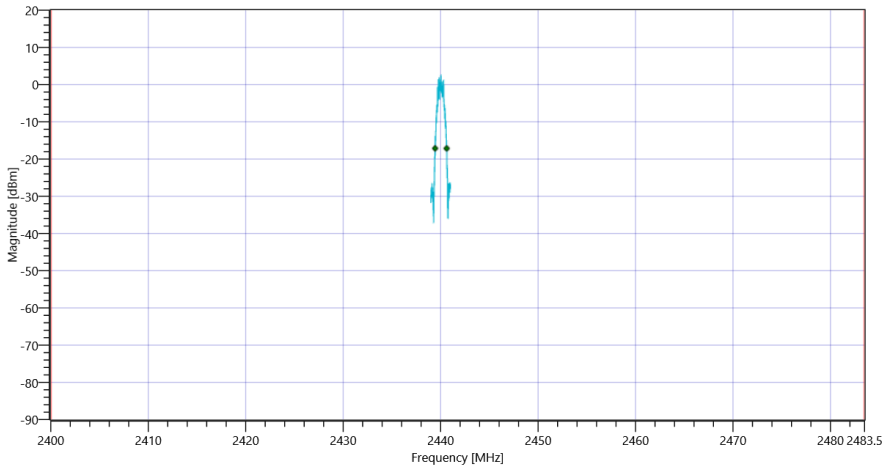
Plot_FCC Part 15.247 Bandwidth 99PCT:20dB ~ BT LE 1 Msps_08112021_133934.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1185	kHz	INFO

T1 20dB	2400.000000	---	2439.4370	MHz	PASS
T2 20dB	---	2483.500000	2440.6224	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_08112021_133941.png



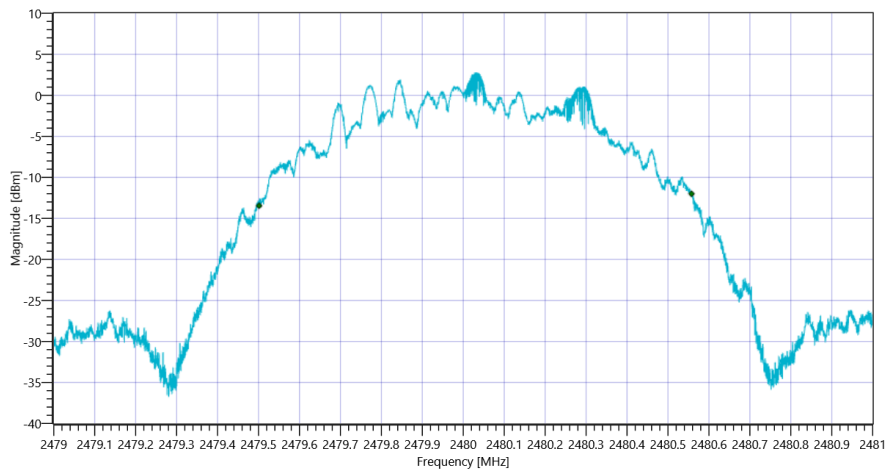
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_08112021_133947.png

Test at TX 2480 MHz

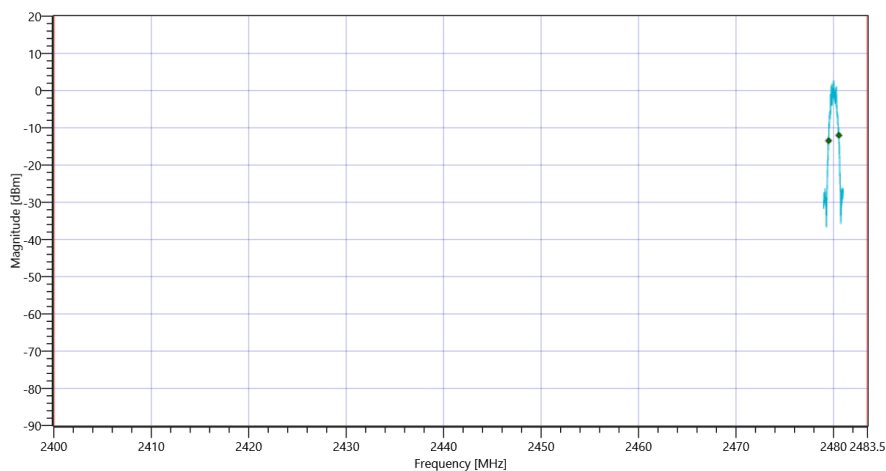
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	RESET OK

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.14 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%	---	---	1056.094	kHz	INFO
T1 99%	2400.000000	---	2479.5014	MHz	PASS
T2 99%	---	2483.500000	2480.5575	MHz	PASS



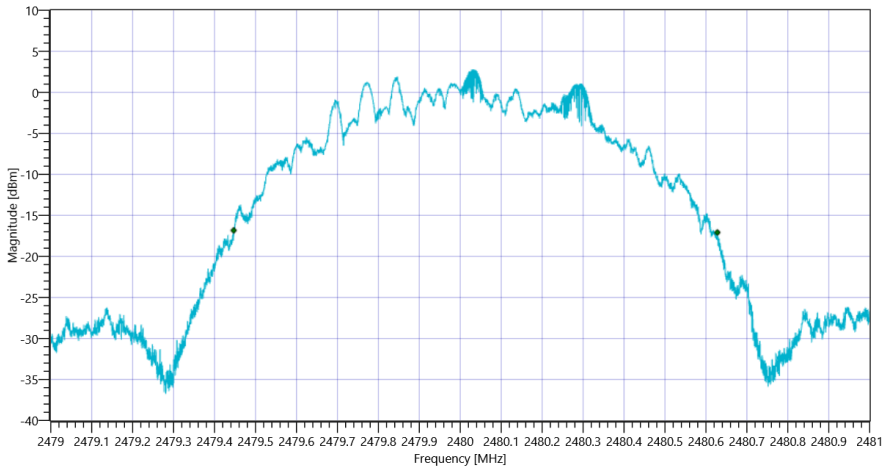
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_08112021_134018.png



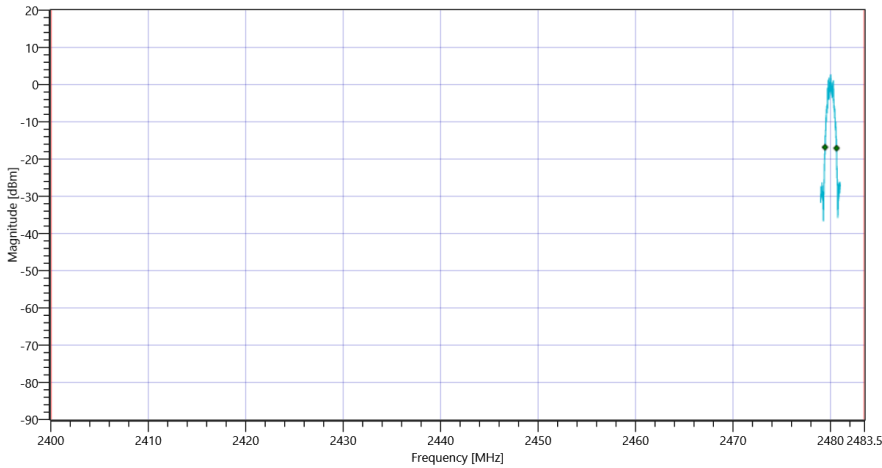
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_08112021_134024.png

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1181	kHz	INFO

T1 20dB	2400.000000	---	2479.4466	MHz	PASS
T2 20dB	---	2483.500000	2480.6278	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_08112021_134032.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_08112021_134038.png

TEST FINISHED	
General Verdict	PASS

6. FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msp

Test References	
TC Start	08.11.2021 13:40:44
Ambit Temp [°C] Humidity [rel%]	24.3 32
System Version	3.0.2.7
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 Msp
Add. Information	

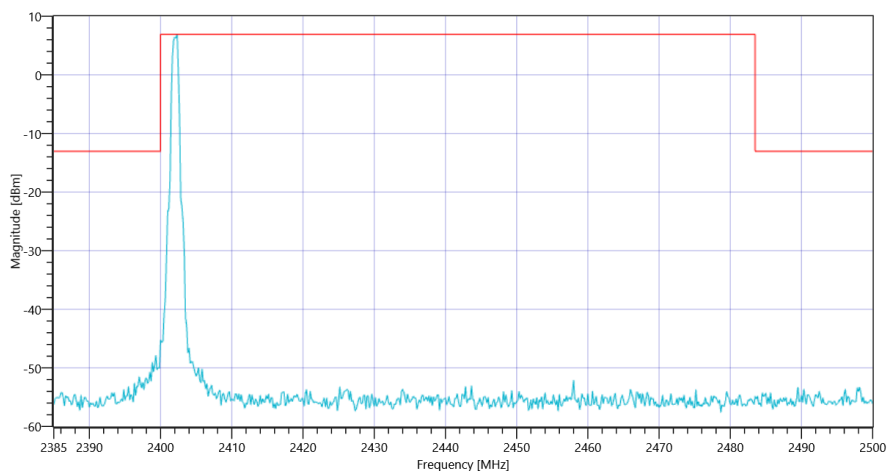
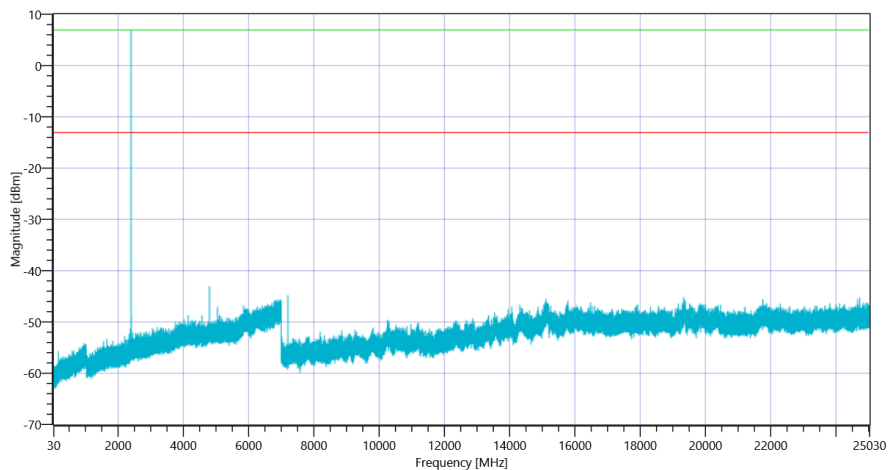
Test Parameter	
Technology to test	BT LE 1 Msp
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	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	---	---	---	---	RESET OK

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			8.07 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	---	---	6.93	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4804.667 MHz	0	---	29.99	dB	INFO

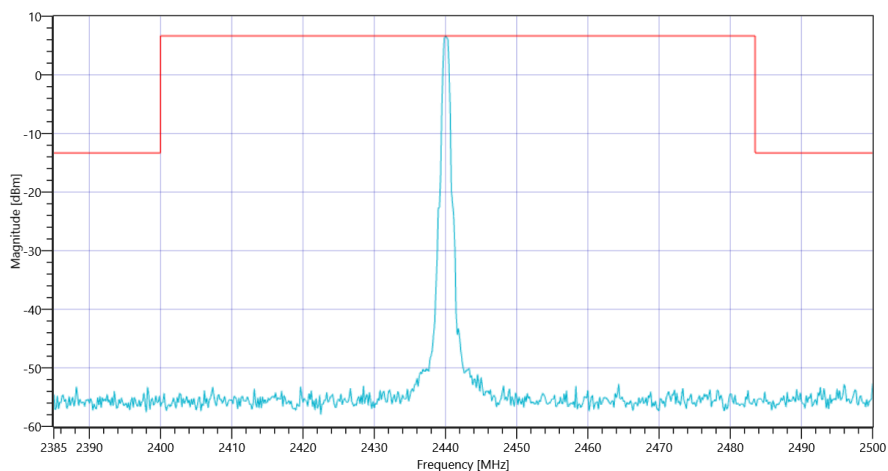
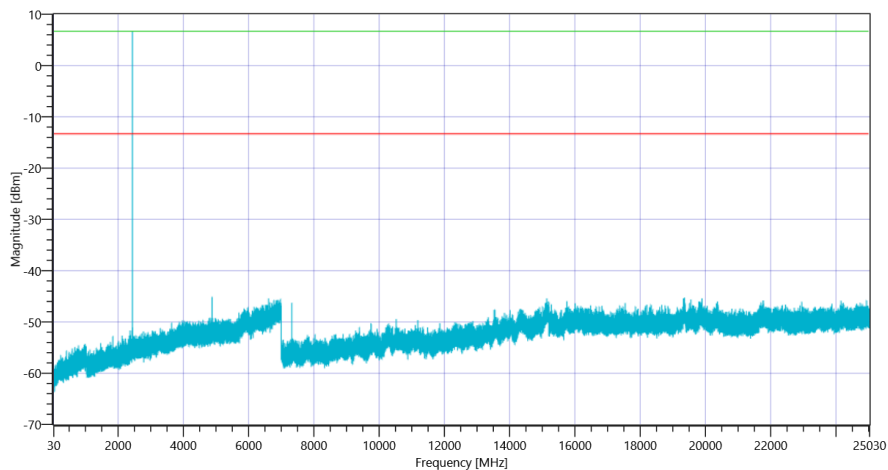


Test at TX 2440 MHz

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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			8.25 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 @ 2440.00 MHz	---	---	6.66	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 4879.5 MHz	0	---	31.8	dB	INFO

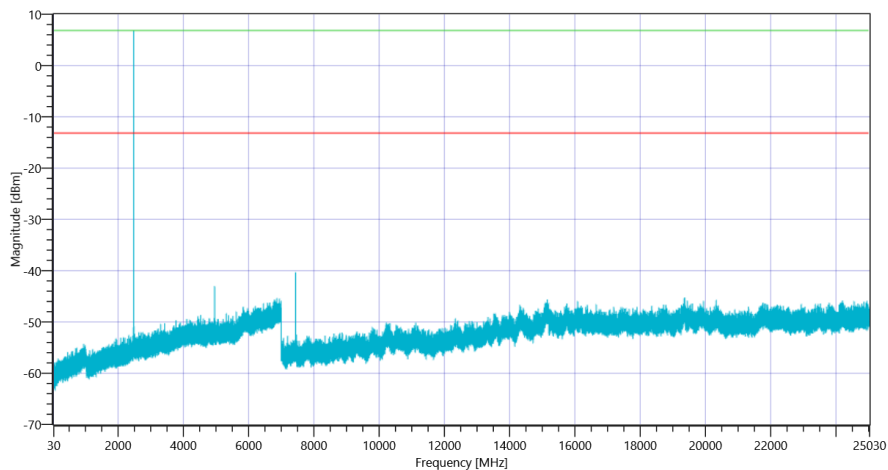


Test at TX 2480 MHz

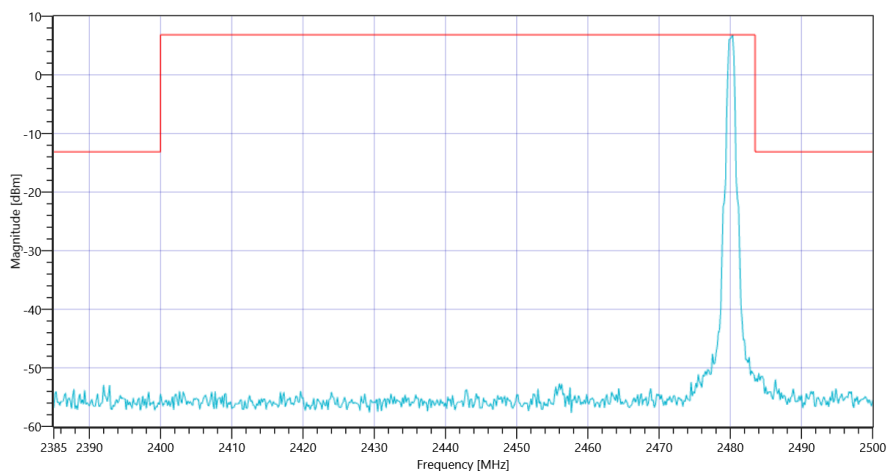
DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	---	RESET OK

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			8.16 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 @ 2480.33 MHz	---	---	6.85	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-140.41	dB	INFO



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2480_08112021_135735.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2480_08112021_135740.png

TEST FINISHED	
General Verdict	PASS

7. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8

Test References	
TC Start	08.11.2021 14:27:08
Ambit Temp [°C] Humidity [rel%]	23.7 33
System Version	3.0.2.7
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 coded S8
Add. Information	

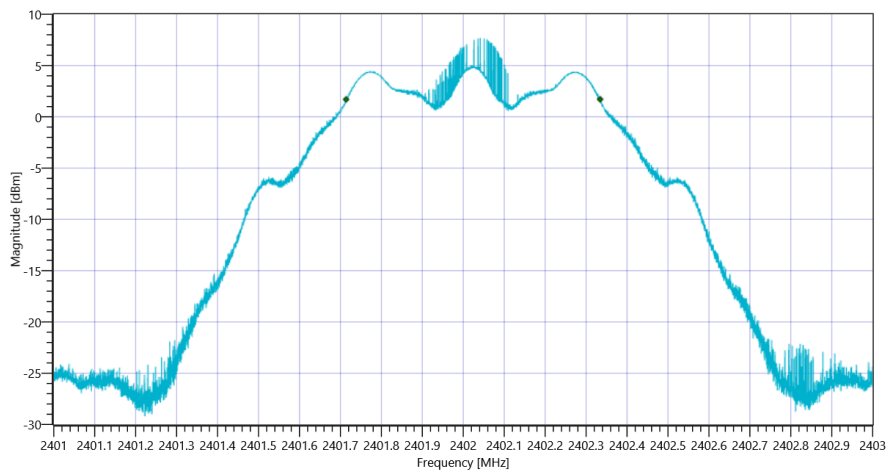
Test Parameter	
Technology to test	BT LE coded S8
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [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	---	---	---	---	RESET OK

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.10 10.79 20				
Start [MHz] Stop [MHz]	2401.000 2403.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

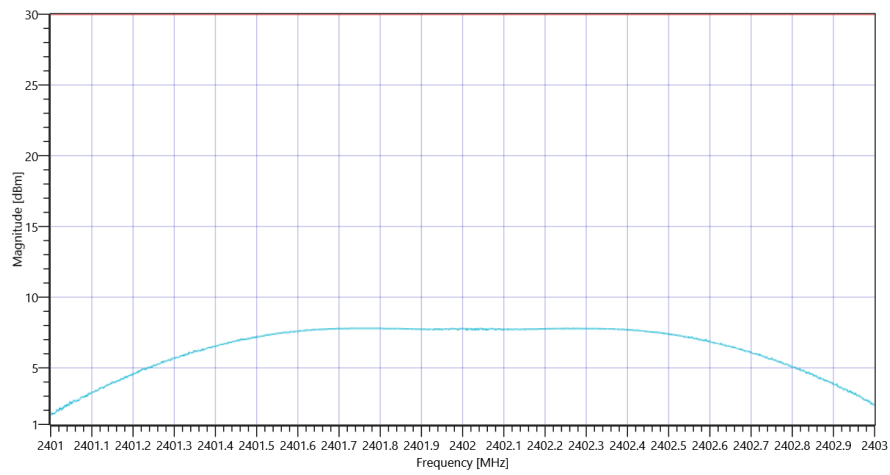
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	620	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8 DTS BW_08112021_142738.png

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.10 10.79 25				
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	7.8	dBm	PASS
Peak Power	---	1000	6.025596	mW	PASS
Frequency at Peak	---	---	2401.766	MHz	INFO



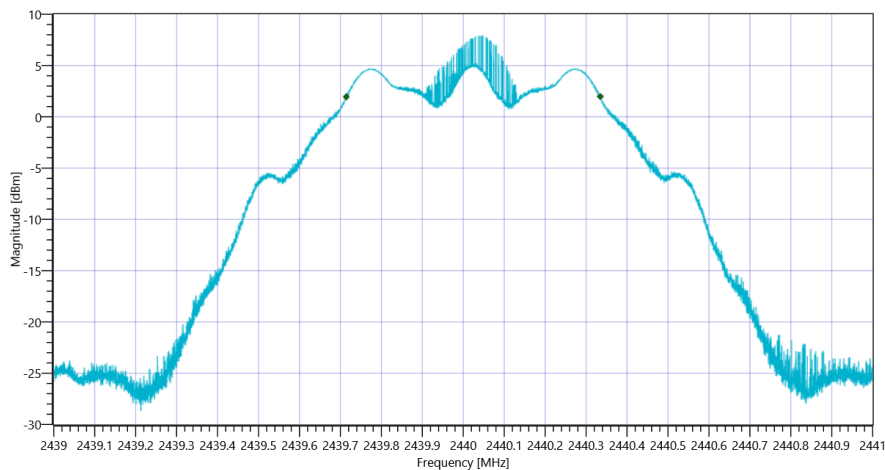
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8_08112021_142756.png

Test at TX 2440 MHz

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

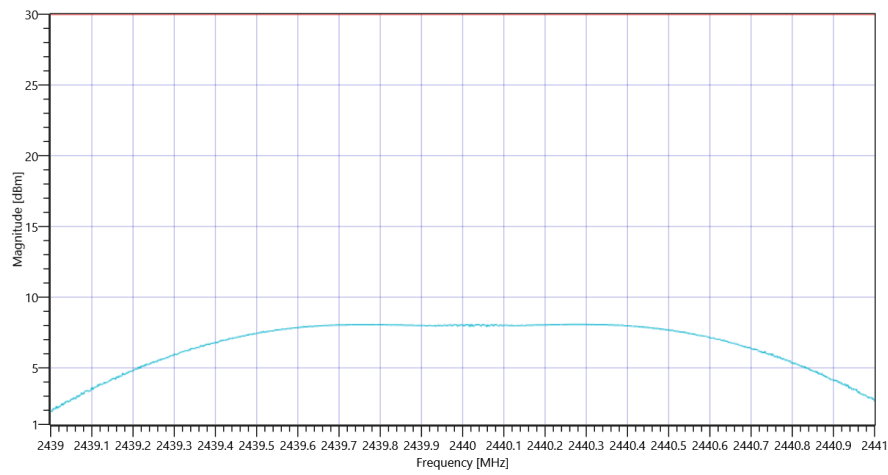
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.28 10.8 20				
Start [MHz] Stop [MHz]	2439.000 2441.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	620	kHz	INFO



READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.28 10.8 25				
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	8.07	dBm	PASS
Peak Power	---	1000	6.412096	mW	PASS
Frequency at Peak	---	---	2440.292	MHz	INFO



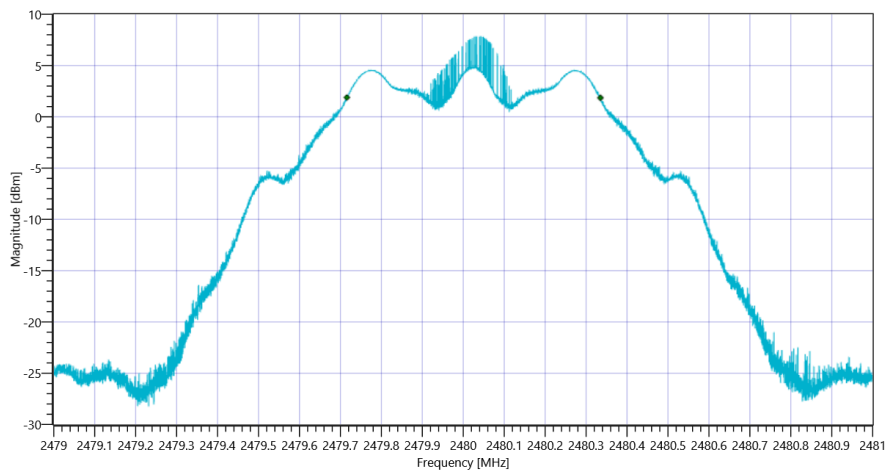
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8_08112021_142843.png

Test at TX 2480 MHz

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

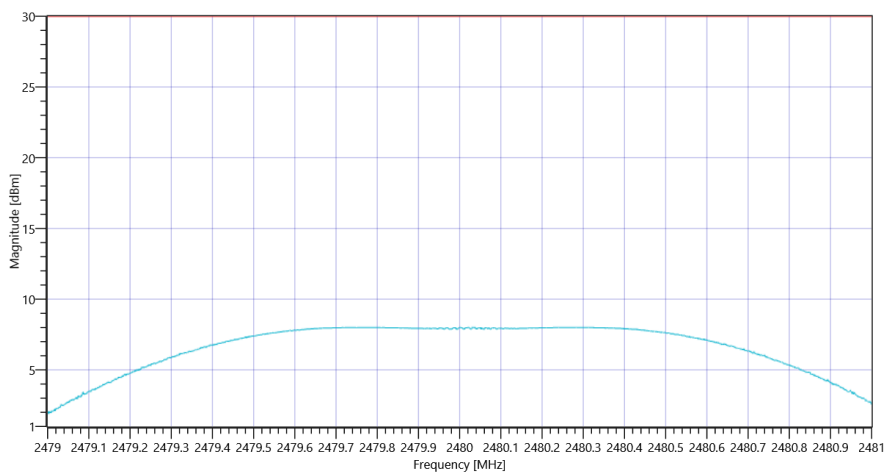
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.20 10.85 20				
Start [MHz] Stop [MHz]	2479.000 2481.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	619	kHz	INFO



READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.20 10.85 25				
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	8	dBm	PASS
Peak Power	---	1000	6.309573	mW	PASS
Frequency at Peak	---	---	2479.754	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S8_08112021_142931.png

TEST FINISHED	
General Verdict	PASS

8. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8

Test References	
TC Start	08.11.2021 14:29:37
Ambit Temp [°C] Humidity [rel%]	23.7 33
System Version	3.0.2.7
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 coded S8
Add. Information	

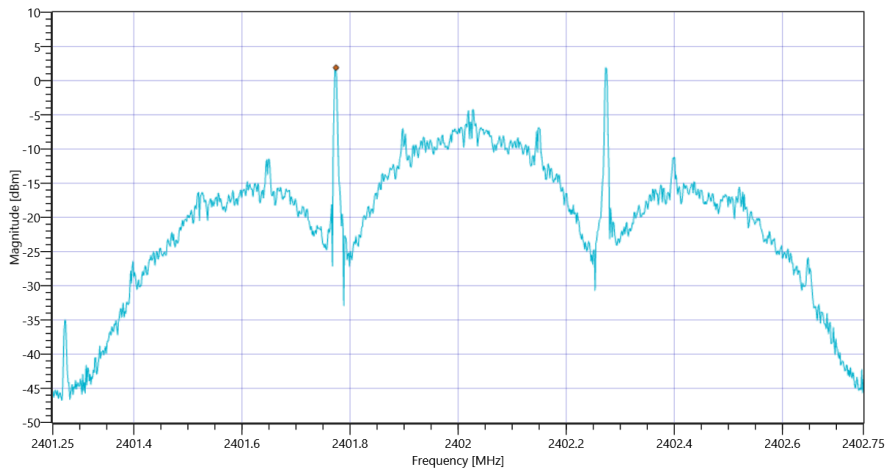
Test Parameter	
Technology to test	BT LE coded S8
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [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	---	---	---	---	RESET OK

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.11 10.79 20	
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	1.9	dBm/3KHz	PASS



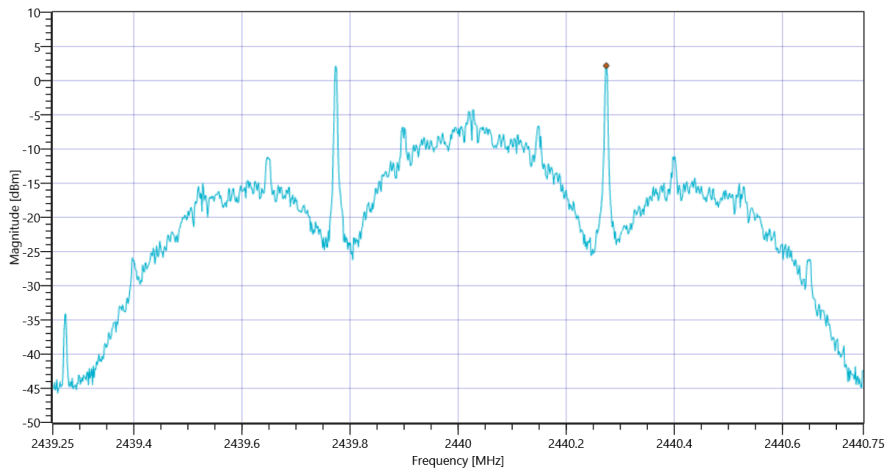
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8_08112021_143017.png

Test at TX 2440 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.29 10.8 20
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	2.19	dBm/3KHz	PASS



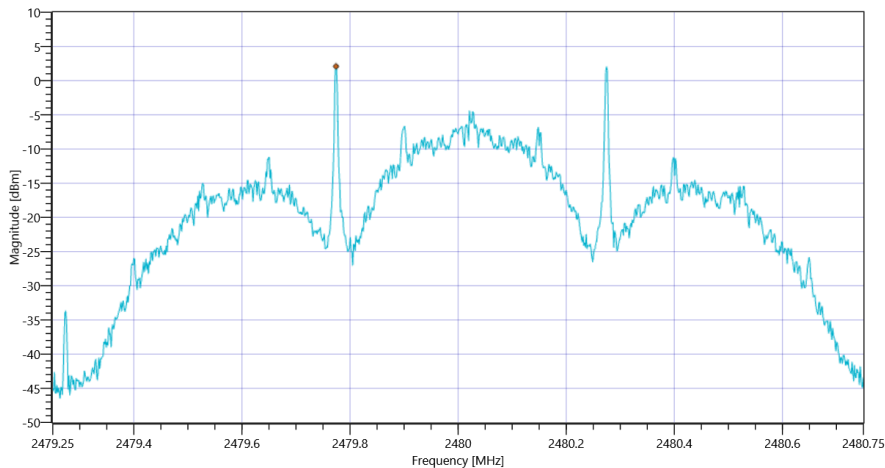
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S8_08112021_143055.png

Test at TX 2480 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.18 10.85 20	
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	2.09	dBm/3KHz	PASS



TEST FINISHED	
General Verdict	PASS

9. FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2

Test References	
TC Start	08.11.2021 14:31:39
Ambit Temp [°C] Humidity [rel%]	23.7 33
System Version	3.0.2.7
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 coded S2
Add. Information	

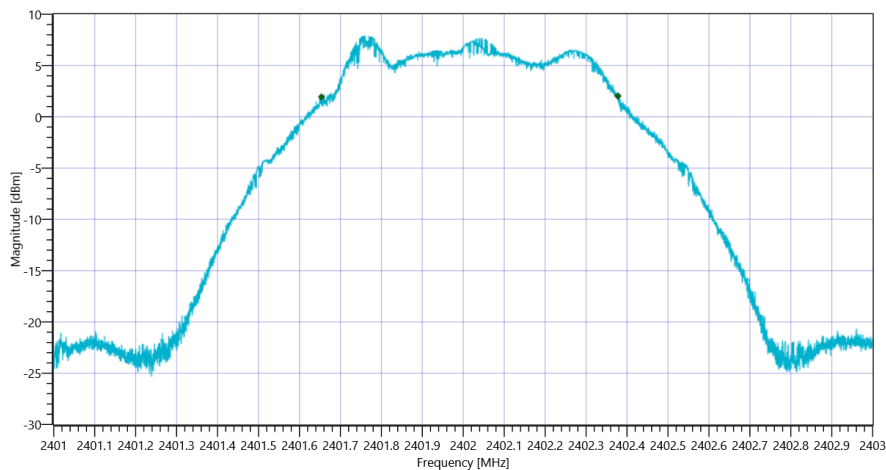
Test Parameter	
Technology to test	BT LE coded S2
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [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	---	---	---	---	RESET OK

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.10 10.79 20				
Start [MHz] Stop [MHz]	2401.000 2403.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

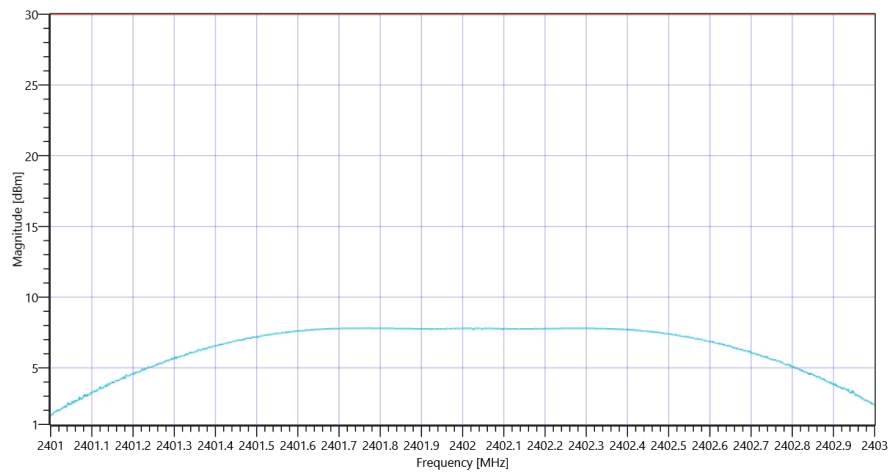
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	724	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2 DTS BW_08112021_143210.png

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.10 10.79 25				
Start [MHz] Stop [MHz]	2401.000 2403.000				
RBW [MHz] VBW [MHz]	1.000000 5.000000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 1001 SWE				

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	7.8	dBm	PASS
Peak Power	---	1000	6.025596	mW	PASS
Frequency at Peak	---	---	2401.764	MHz	INFO



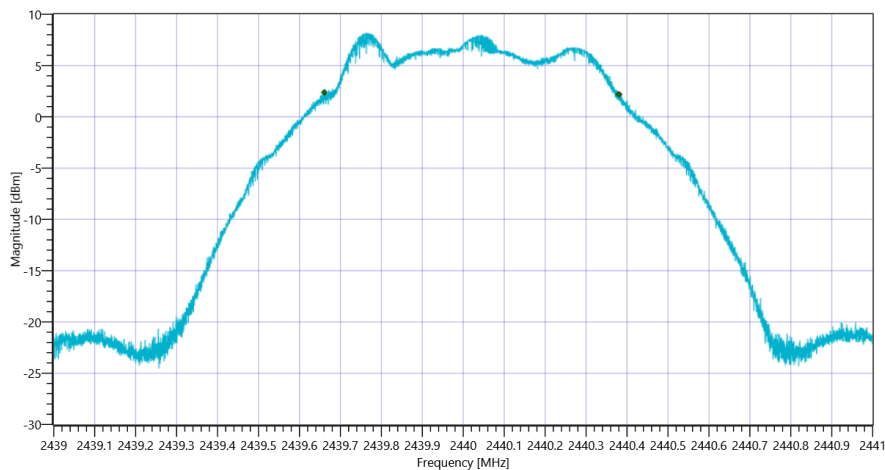
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2_08112021_143228.png

Test at TX 2440 MHz

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

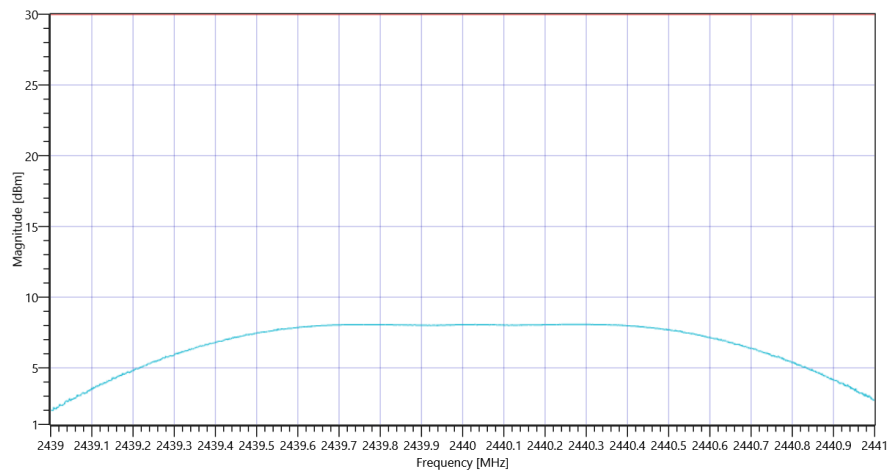
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.32 10.8 20				
Start [MHz] Stop [MHz]	2439.000 2441.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	719	kHz	INFO



READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.32 10.8 25				
Start [MHz] Stop [MHz]	2439.000 2441.000				
RBW [MHz] VBW [MHz]	1.000000 5.000000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 1001 SWE				

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	8.07	dBm	PASS
Peak Power	---	1000	6.412096	mW	PASS
Frequency at Peak	---	---	2440.256	MHz	INFO



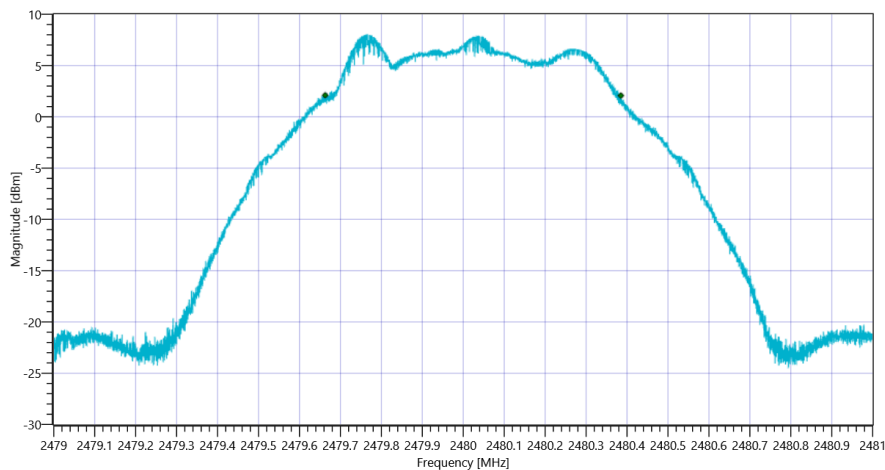
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2_08112021_143315.png

Test at TX 2480 MHz

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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.17 10.85 20				
Start [MHz] Stop [MHz]	2479.000 2481.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

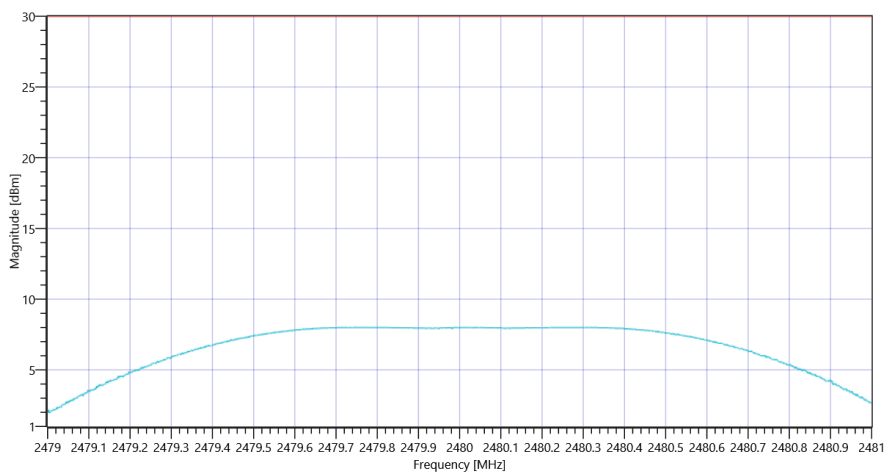
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	722	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2 DTS BW_08112021_143345.png

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.17 10.85 25				
Start [MHz] Stop [MHz]	2479.000 2481.000				
RBW [MHz] VBW [MHz]	1.000000 5.000000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 1001 SWE				

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	8.01	dBm	PASS
Peak Power	---	1000	6.324119	mW	PASS
Frequency at Peak	---	---	2479.746	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE coded S2_08112021_143403.png

TEST FINISHED	
General Verdict	PASS

10. FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2

Test References	
TC Start	08.11.2021 14:34:09
Ambit Temp [°C] Humidity [rel%]	23.6 33
System Version	3.0.2.7
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 coded S2
Add. Information	

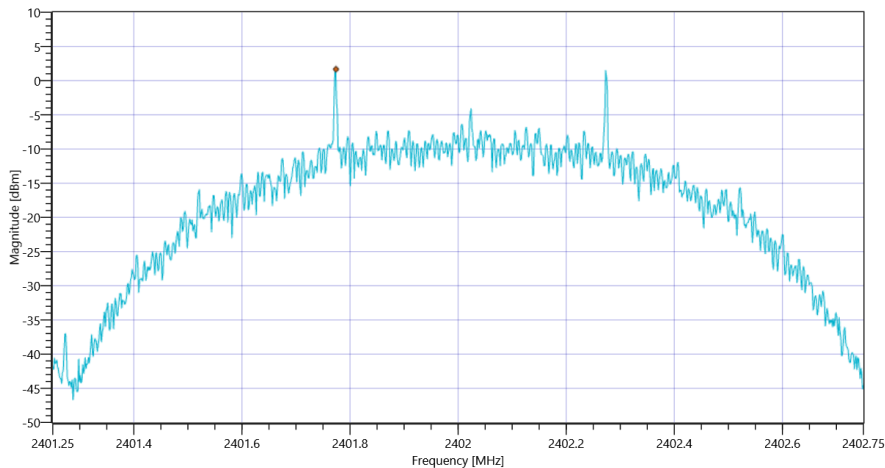
Test Parameter	
Technology to test	BT LE coded S2
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [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	---	---	---	---	RESET OK

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.11 10.79 20	
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	1.67	dBm/3KHz	PASS



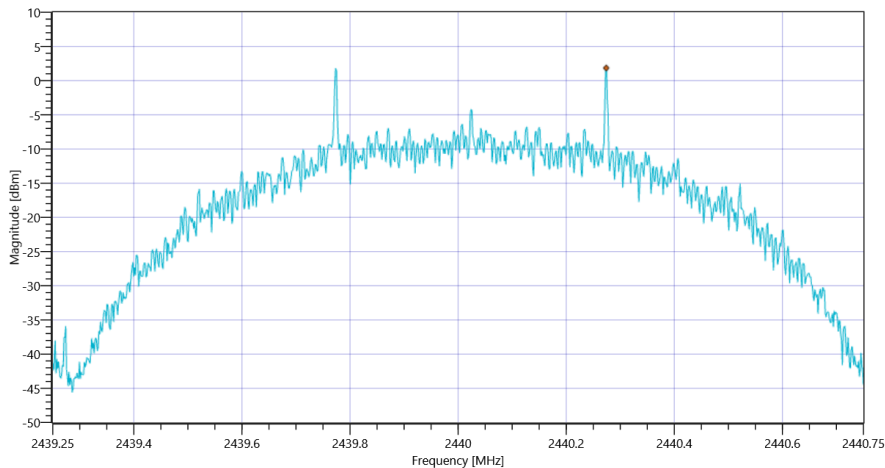
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2_08112021_143449.png

Test at TX 2440 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.29 10.8 20	
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	1.85	dBm/3KHz	PASS



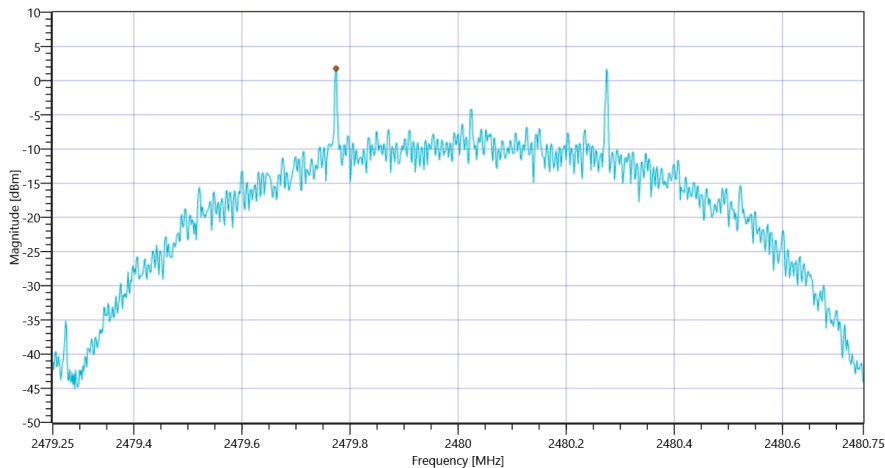
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2_08112021_143528.png

Test at TX 2480 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.20 10.85 20	
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	1.78	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE coded S2_08112021_143606.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	16.11.2021 11:35:36
Ambit Temp [°C] Humidity [rel%]	23.2 34
System Version	3.0.3.0
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	

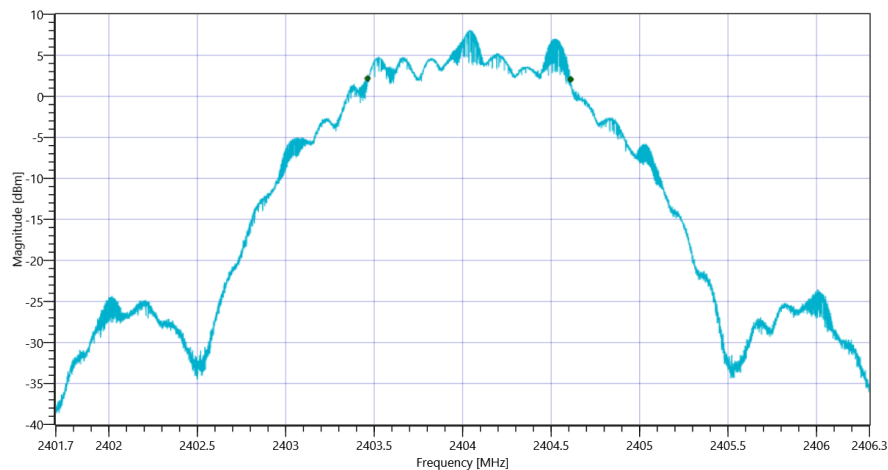
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2404 MHz

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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.26 10.8 20		
Start [MHz] Stop [MHz]			2401.700 2406.300		
RBW [MHz] VBW [MHz]			0.100000 0.300000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 10001 SWE		

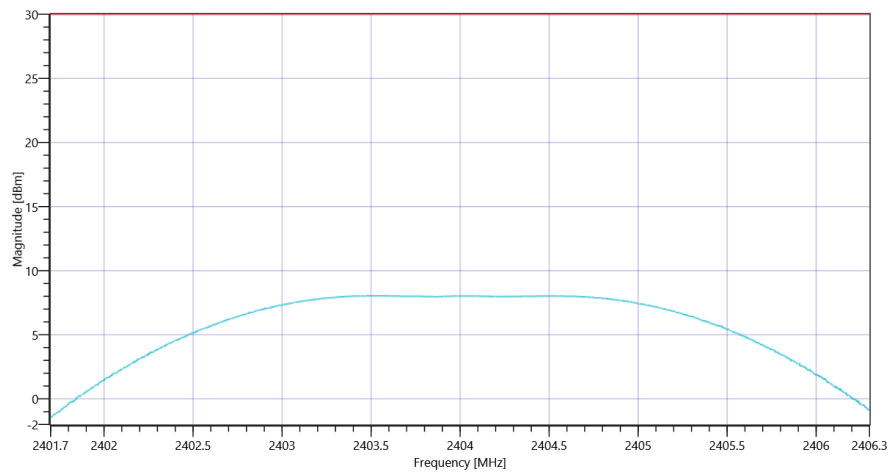
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1148	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW_16112021_113606.png

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			18.26 10.8 25		
Start [MHz] Stop [MHz]			2401.700 2406.300		
RBW [MHz] VBW [MHz]			2.000000 5.000000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 1001 SWE		

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	8.03	dBm	PASS
Peak Power	---	1000	6.353309	mW	PASS
Frequency at Peak	---	---	2403.504	MHz	INFO



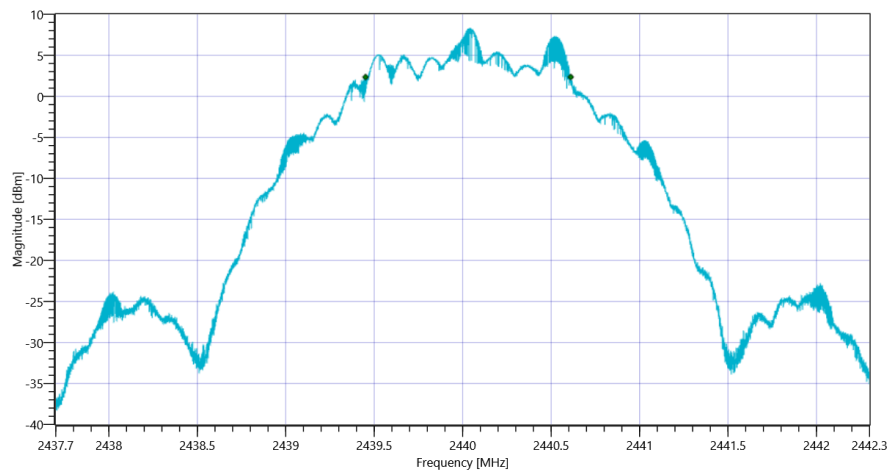
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msp_16112021_113623.png

Test at TX 2440 MHz

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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.47 10.8 20		
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		

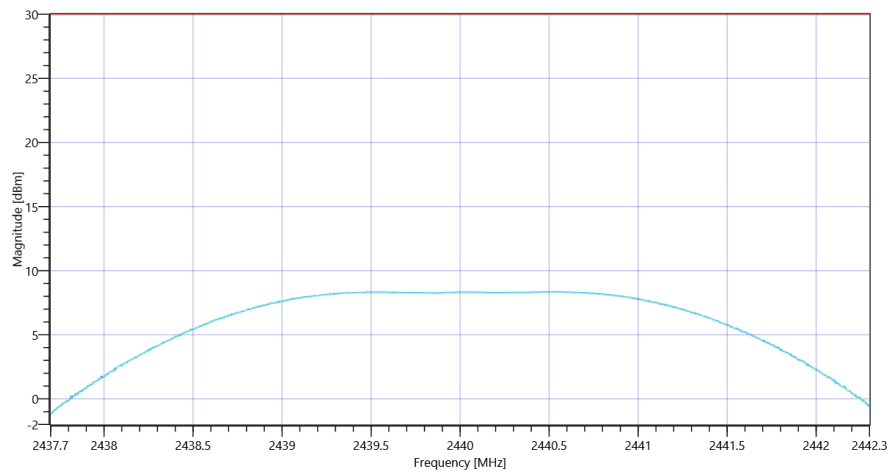
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1160	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW_16112021_113652.png

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			18.47 10.8 25		
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	8.34	dBm	PASS
Peak Power	---	1000	6.823387	mW	PASS
Frequency at Peak	---	---	2440.515	MHz	INFO



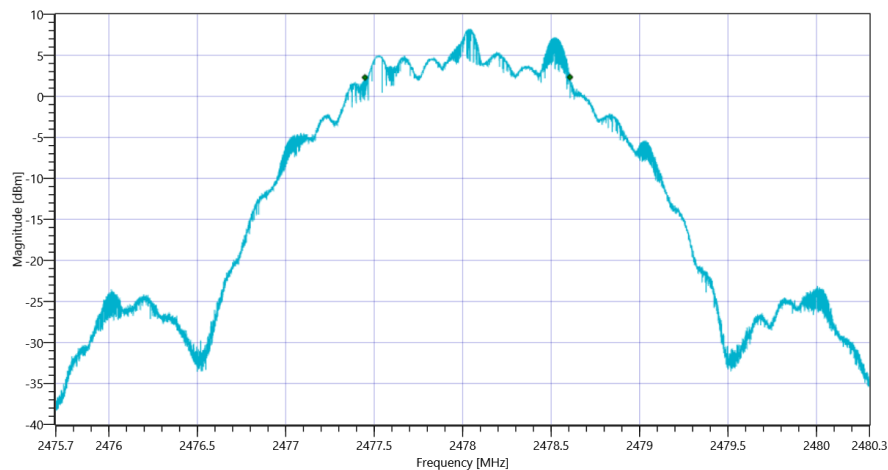
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msp_16112021_113709.png

Test at TX 2478 MHz

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

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.33 10.85 20				
Start [MHz] Stop [MHz]	2475.700 2480.300				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE				

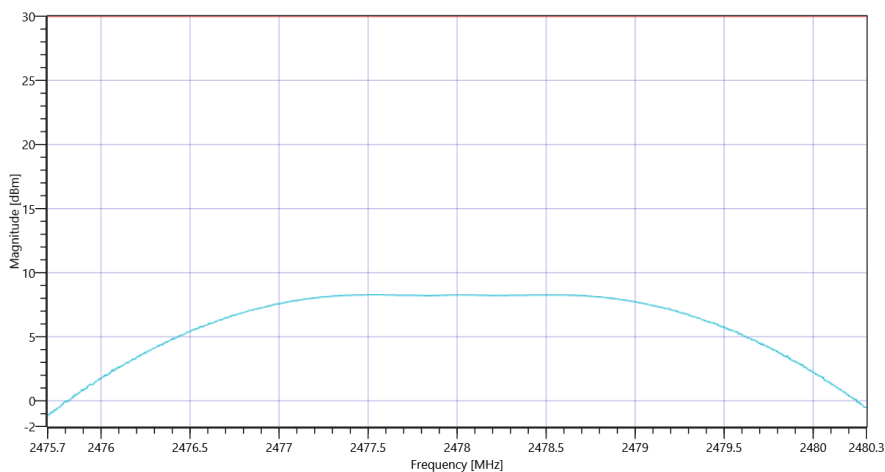
DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	1159	kHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps DTS BW_16112021_113738.png

READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.33 10.85 25				
Start [MHz] Stop [MHz]	2475.700 2480.300				
RBW [MHz] VBW [MHz]	2.000000 5.000000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	50 200 1001 SWE				

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	8.28	dBm	PASS
Peak Power	---	1000	6.729767	mW	PASS
Frequency at Peak	---	---	2477.545	MHz	INFO



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 2 Msps_16112021_113756.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	16.11.2021 11:38:01
Ambit Temp [°C] Humidity [rel%]	23.2 34
System Version	3.0.3.0
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	

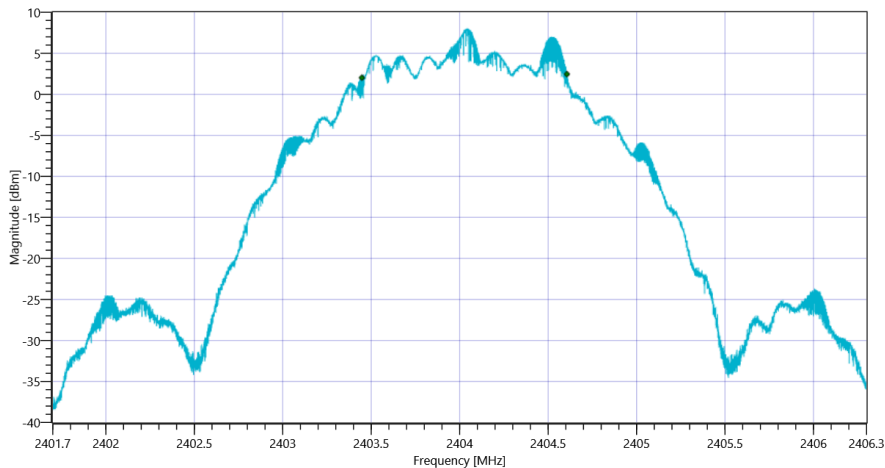
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2404 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.25 10.8 20	
Start [MHz] Stop [MHz]	2401.700 2406.300	
RBW [MHz] VBW [MHz]	0.100000 0.300000	
Detector TraceMode	POS MAXH	
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE	

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	1159	kHz	PASS



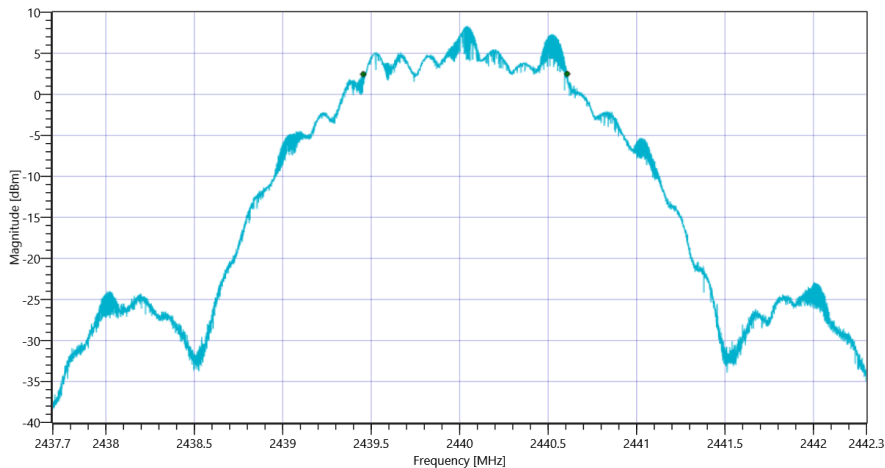
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps_16112021_113831.png

Test at TX 2440 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.46 10.8 20	
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	---	1153	kHz	PASS



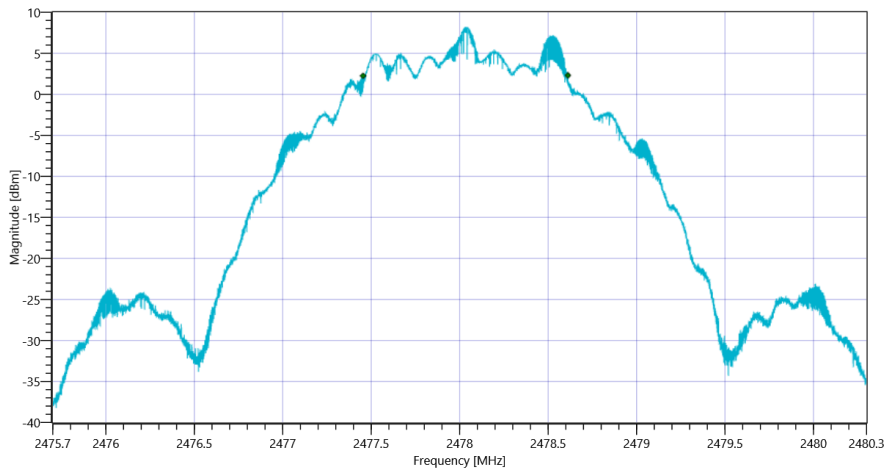
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps_16112021_113900.png

Test at TX 2478 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.30 10.85 20	
Start [MHz] Stop [MHz]	2475.700 2480.300	
RBW [MHz] VBW [MHz]	0.100000 0.300000	
Detector TraceMode	POS MAXH	
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE	

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	1158	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 2 Msps_16112021_113928.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	16.11.2021 11:39:34
Ambit Temp [°C] Humidity [rel%]	23.2 34
System Version	3.0.3.0
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	

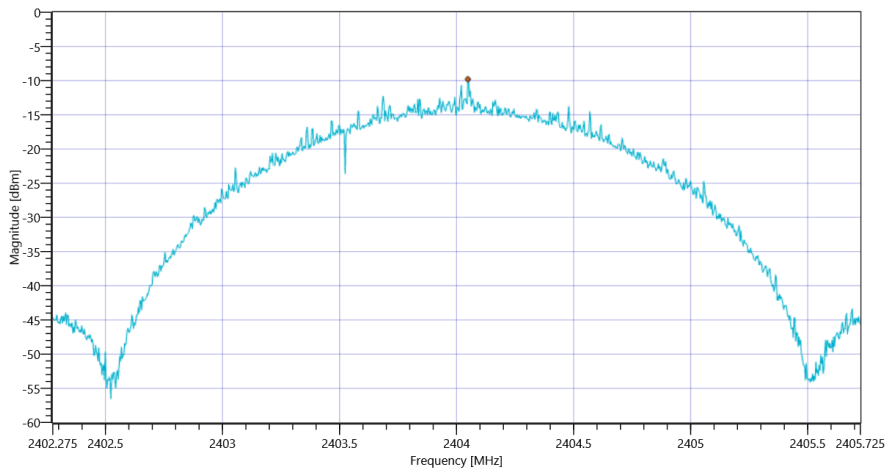
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2404 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.25 10.8 20	
Start [MHz] Stop [MHz]	2402.275 2405.725	
RBW [MHz] VBW [MHz]	0.003000 0.010000	
Detector TraceMode	POS MAXH	
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE	

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-9.79	dBm/3KHz	PASS



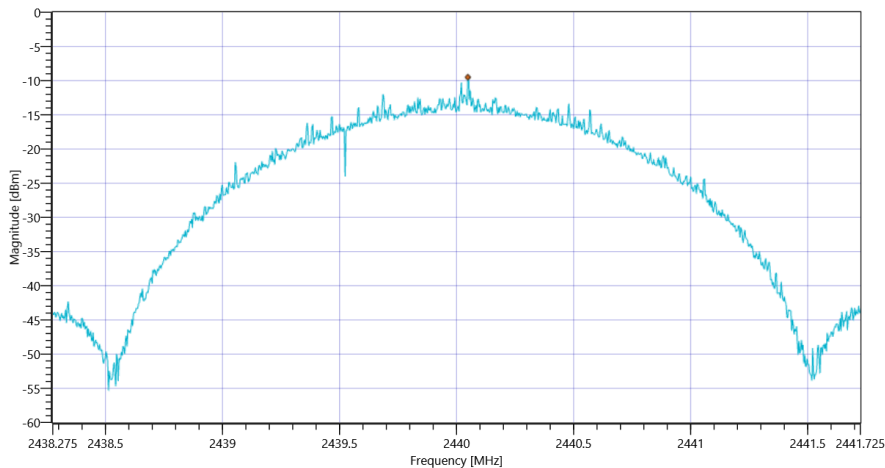
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps_16112021_114014.png

Test at TX 2440 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.45 10.8 20	
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	-9.5	dBm/3KHz	PASS



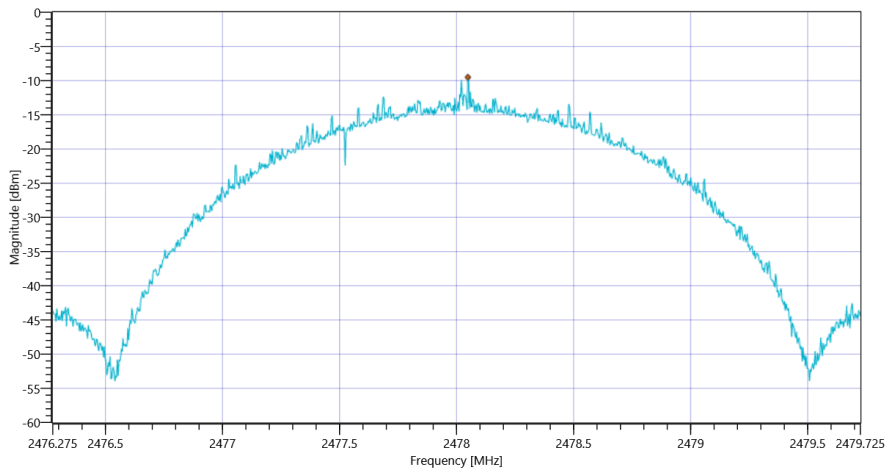
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps_16112021_114052.png

Test at TX 2478 MHz

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

READ SA SETTINGS:		
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.38 10.85 20	
Start [MHz] Stop [MHz]	2476.275 2479.725	
RBW [MHz] VBW [MHz]	0.003000 0.010000	
Detector TraceMode	POS MAXH	
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE	

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-9.5	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 2 Msps_16112021_114130.png

TEST FINISHED	
General Verdict	PASS

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

Test References	
TC Start	16.11.2021 11:41:35
Ambit Temp [°C] Humidity [rel%]	23.2 34
System Version	3.0.3.0
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	

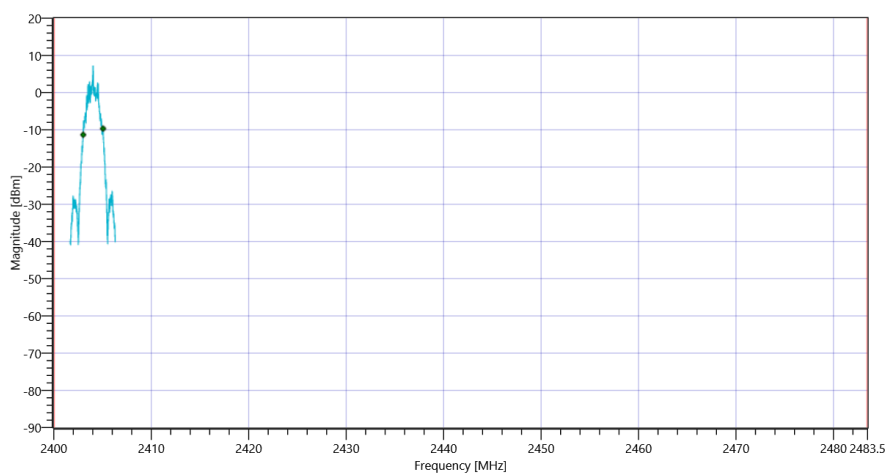
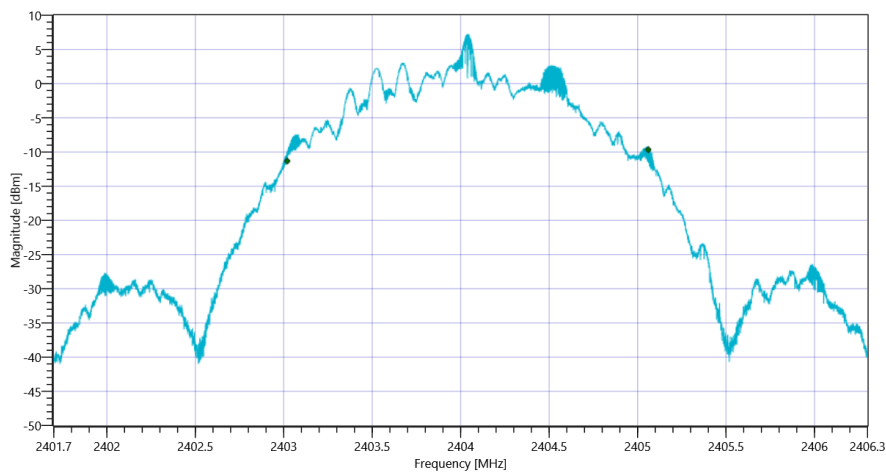
Test Parameter	
Technology to test	BT LE 2 Msps
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test at TX 2404 MHz

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

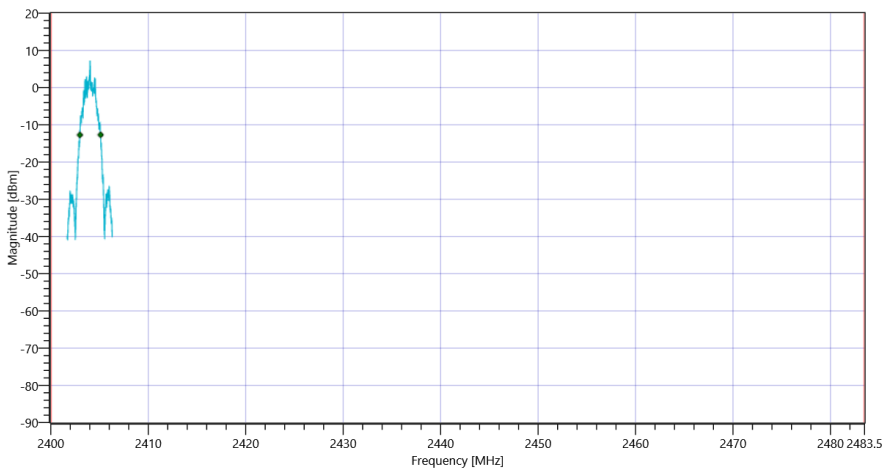
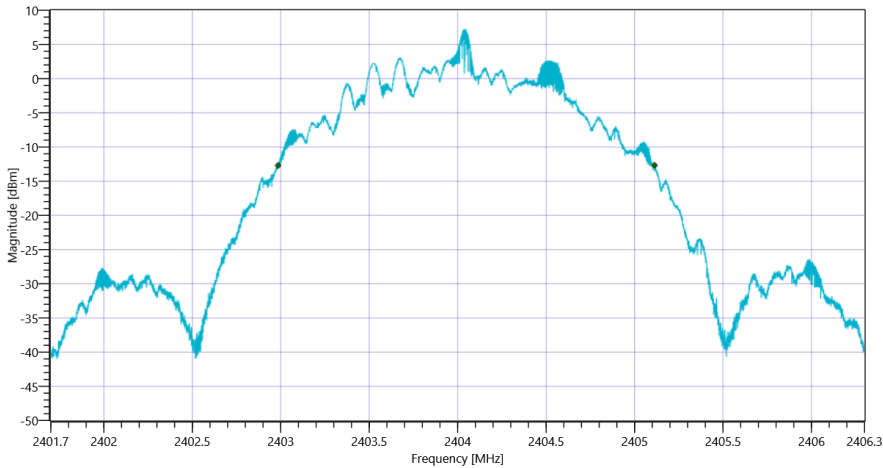
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.26 10.8 20		
Start [MHz] Stop [MHz]			2401.700 2406.300		
RBW [MHz] VBW [MHz]			0.050000 0.200000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 10001 SWE		

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2040.816	kHz	INFO
T1 99%	2400.000000	---	2403.0194	MHz	PASS
T2 99%	---	2483.500000	2405.0602	MHz	PASS



RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2127	kHz	INFO

T1 20dB	2400.000000	---	2402.9848	MHz	PASS
T2 20dB	---	2483.500000	2405.1118	MHz	PASS

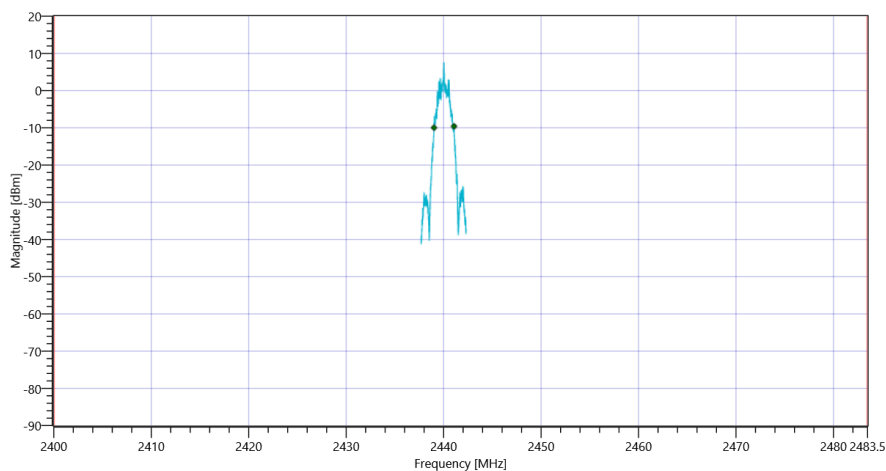
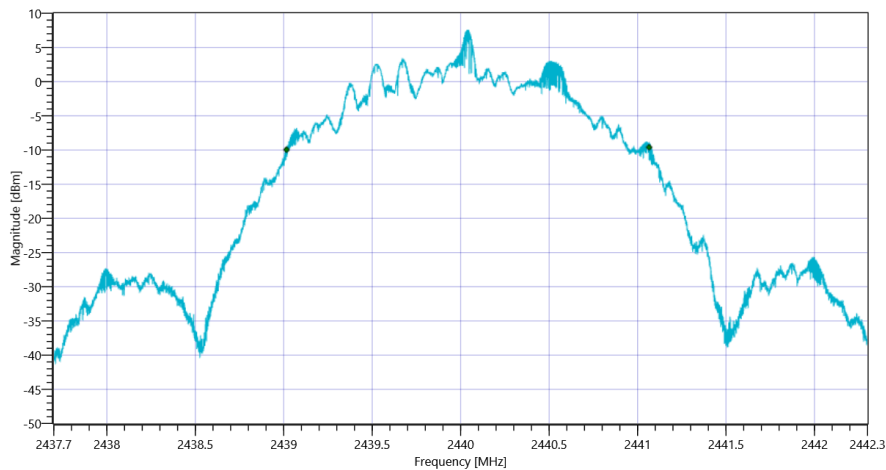


Test at TX 2440 MHz

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

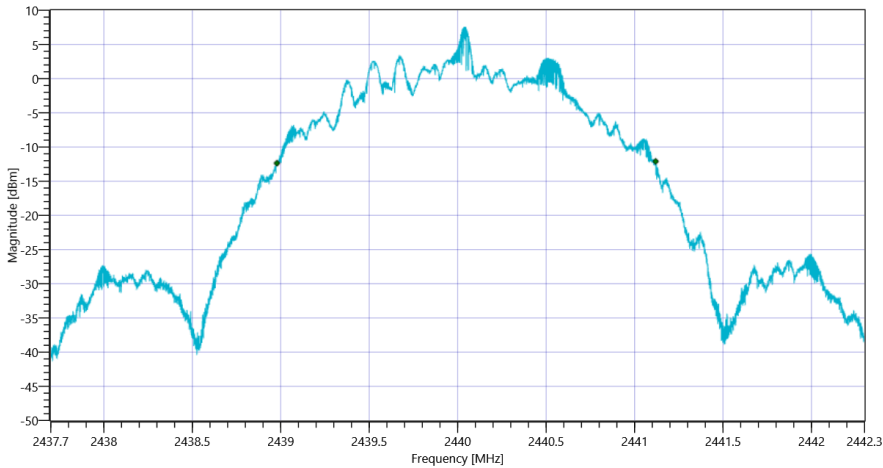
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.43 10.8 20		
Start [MHz] Stop [MHz]			2437.700 2442.300		
RBW [MHz] VBW [MHz]			0.050000 0.200000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 10001 SWE		

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2049.555	kHz	INFO
T1 99%	2400.000000	---	2439.0157	MHz	PASS
T2 99%	---	2483.500000	2441.0653	MHz	PASS

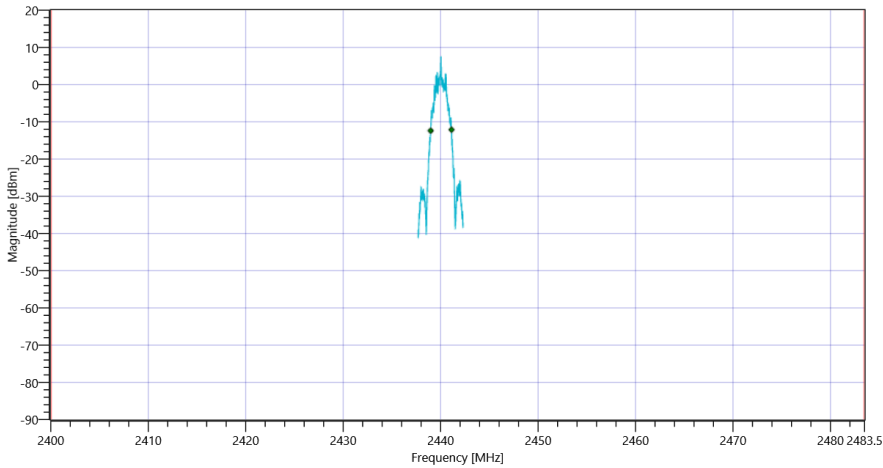


RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2141	kHz	INFO

T1 20dB	2400.000000	---	2438.9779	MHz	PASS
T2 20dB	---	2483.500000	2441.1192	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB_16112021_114308.png



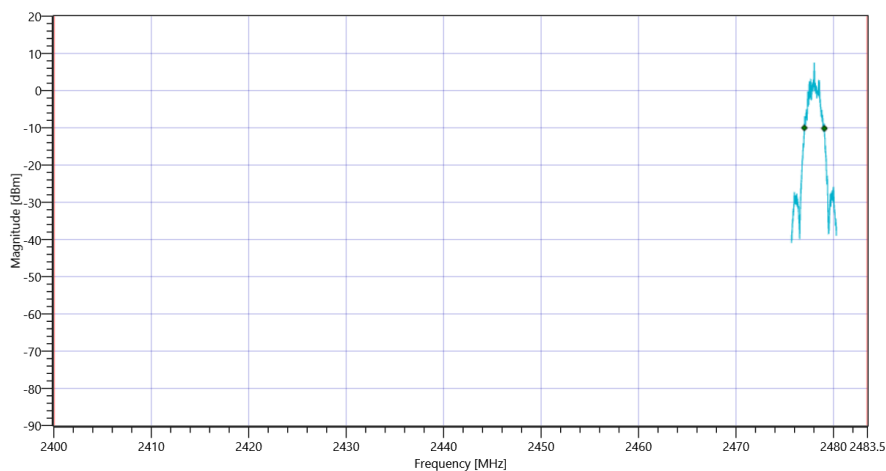
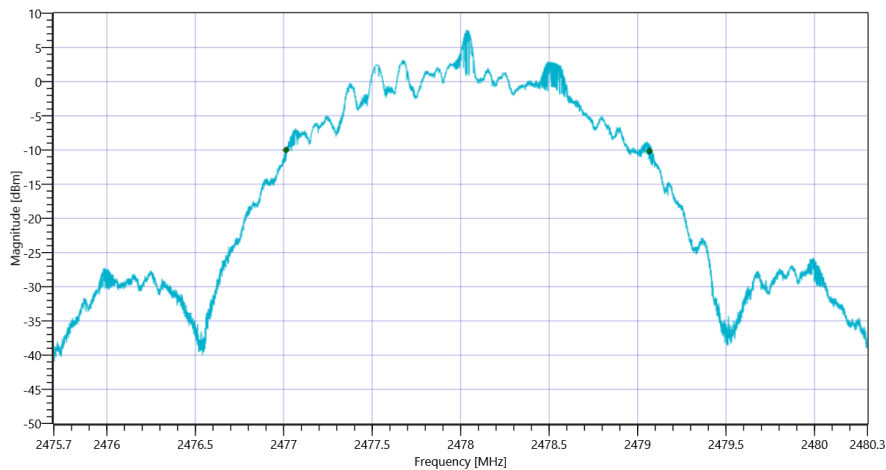
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_16112021_114314.png

Test at TX 2478 MHz

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

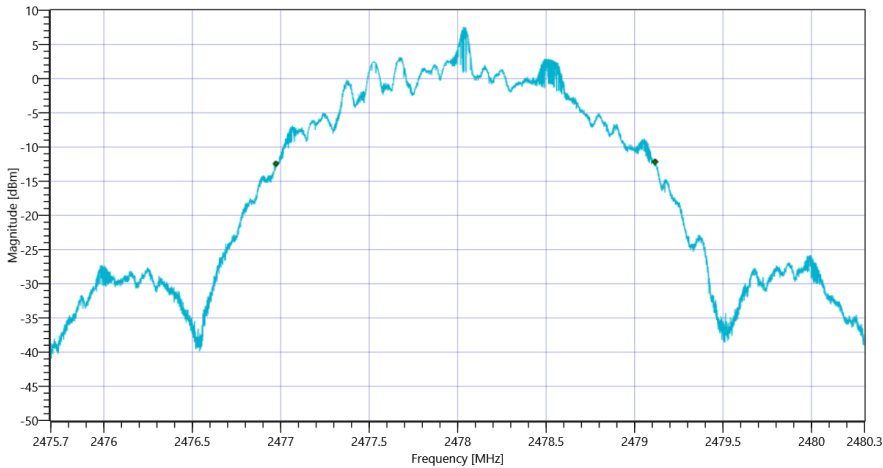
READ SA SETTINGS:					
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]			13.32 10.85 20		
Start [MHz] Stop [MHz]			2475.700 2480.300		
RBW [MHz] VBW [MHz]			0.050000 0.200000		
Detector TraceMode			POS MAXH		
Sweep: Time [ms] Count Points per Section Type			50 200 10001 SWE		

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	2054.155	kHz	INFO
T1 99%	2400.000000	---	2477.0129	MHz	PASS
T2 99%	---	2483.500000	2479.0671	MHz	PASS

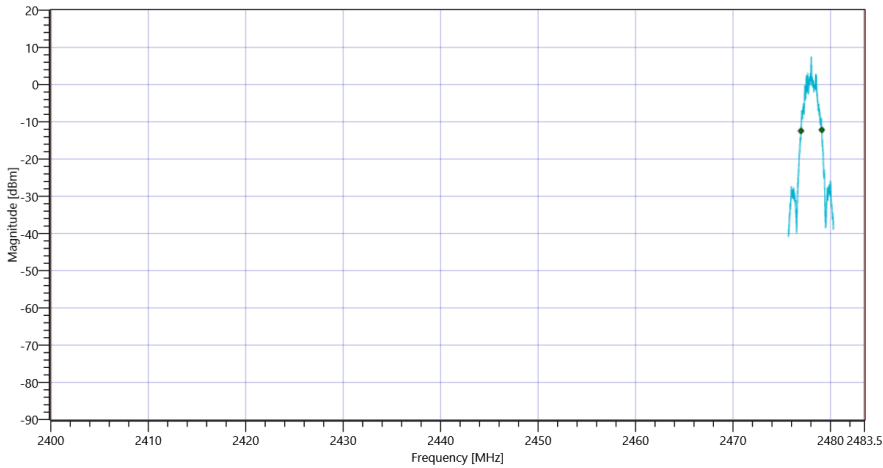


RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	2144	kHz	INFO

T1 20dB	2400.000000	---	2476.9724	MHz	PASS
T2 20dB	---	2483.500000	2479.1160	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps 20dB_16112021_114358.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 2 Msps_16112021_114405.png

TEST FINISHED					
General Verdict				PASS	

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

Test References	
TC Start	16.11.2021 11:44:10
Ambit Temp [°C] Humidity [rel%]	23.2 34
System Version	3.0.3.0
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] 2404
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2478
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer