Measurement Results

1-9045/19-01-09_Annex_MR_A_1

Test logging

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2019.09.13 08:46:12 +02'00'

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IUT Summary

IUT DEFINITION	
Manufacturer	Widex A S
Type	MRB2D
Serial No. | Setup No.	NI | 1.0
SW Version | HW Version	NI | NI
Comment 1 | 2	|

IUT Common Settings	
Tlow | Tmid | Thigh [°C]	0 | 20 | 50
Vlow | Vmid | Vhigh [V] @Imax [A]	1.05 | 1.3 | 1.5 @1
Auto Control enabled Power Supply | Climatic Box	Yes | No
Antenna Gain [dBi]	0
Additional Path Loss [dB]	0.7

IUT Common Settings BT Low Energy	
Intermodulation Value N	3
Image Freq. Low | Mid | High [MHz]	3 | 3 | 3
Power Class	2
1 Mbps supported	True | TXpayload 255 | RXpayload 255
2 Mbps supported	False | TXpayload 255 | RXpayload 255
Longrange S8 supported	False | TXpayload 255 | RXpayload 255
Longrange S2 supported	False | TXpayload 255 | RXpayload 255
Signaling Settings	USB_RS232 | HCI | 19 | B115K | None | S1 | None | On
Signaling RF Settings	RF1com | 0 | 0 | On |
User Interaction	No
Switch Matrix & Pathcompensation enabled	Yes

1. Common2G4 Peak Output Power conducted 3MHz_3MHz ~ BT LE 1 Msps

Test References	
TC Start	10.09.2019 14:31:04
System Version	1.0.0.20
Test Specification	None
Test Method	
Class / TC Version / TC ID	TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01 Version: 0.0.1 | TCID_Common2G4_1
My Description	Peak Output Power conducted 3MHz/3MHz - BT LE 1 Msps
Add. Information	

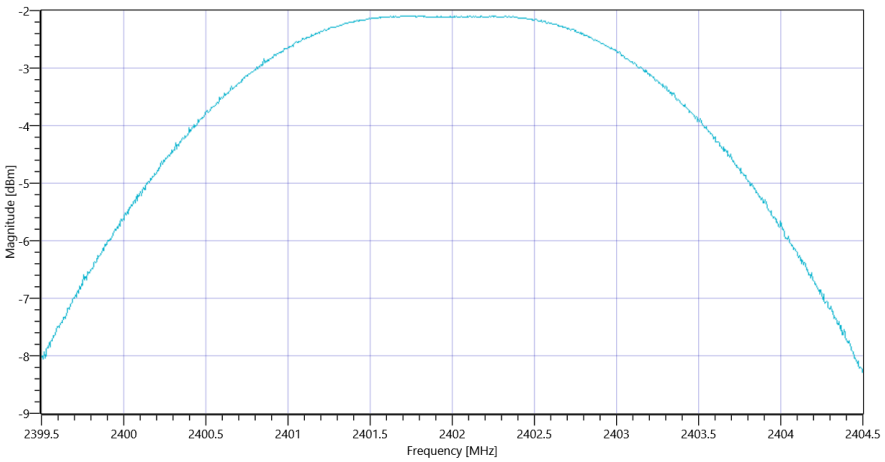
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.70 | SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

Test at TX 2402 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.86 | 10.49 | 15
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: TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-2.09	dBm	Information
Peak Power	---	1000	0.618016	mW	Information
Frequency at Peak	---	---	2401.7	MHz	Information



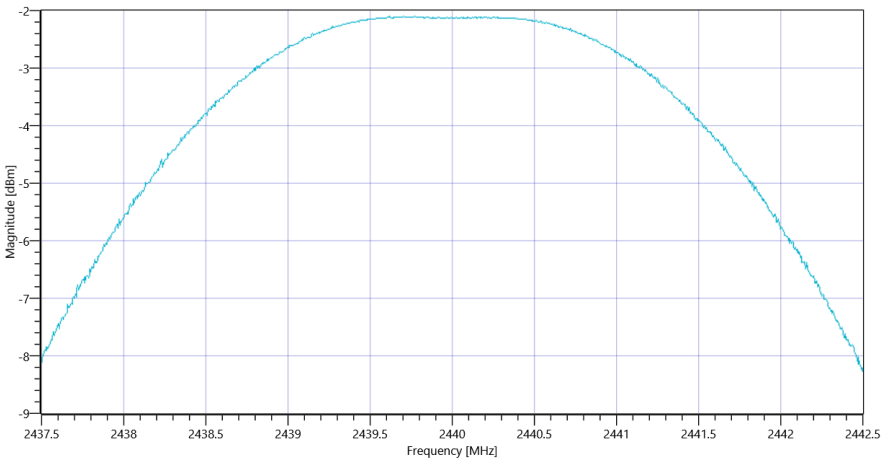
Plot_Common2G4 Peak Output Power conducted 3MHz_3MHz ~ BT LE 1 Msps_10092019_143133.png

Test at TX 2440 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.87 | 10.61 | 15
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: TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-2.1	dBm	Information
Peak Power	---	1000	0.616595	mW	Information
Frequency at Peak	---	---	2439.62	MHz	Information



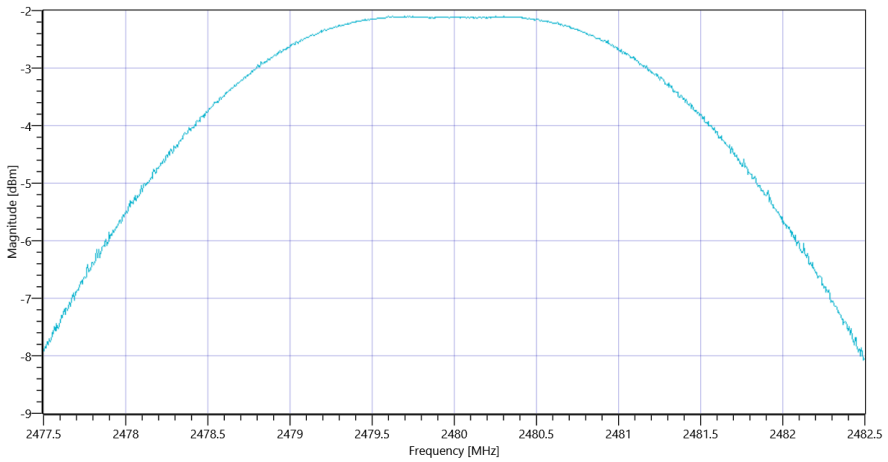
Plot_Common2G4 Peak Output Power conducted 3MHz_3MHz ~ BT LE 1 Msps_10092019_143202.png

Test at TX 2480 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.93 | 10.66 | 15
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: TC_VM_Common2G4_Peak_Output_Power_Conducted_3MHz_3MHz_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-2.1	dBm	Information
Peak Power	---	1000	0.616595	mW	Information
Frequency at Peak	---	---	2479.715	MHz	Information



Plot_Common2G4 Peak Output Power conducted 3MHz_3MHz ~ BT LE 1 Msps_10092019_143231.png

TEST FINISHED		
General Verdict	10.09.2019 14:32:31 / RT: 87 s	PASS

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

Test References	
TC Start	10.09.2019 14:32:35
System Version	1.0.0.20
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.1 RBW ≥ DTS Bandwidth
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01 Version: 0.0.1 | TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Conducted DTS - BT LE 1 Msps
Add. Information	

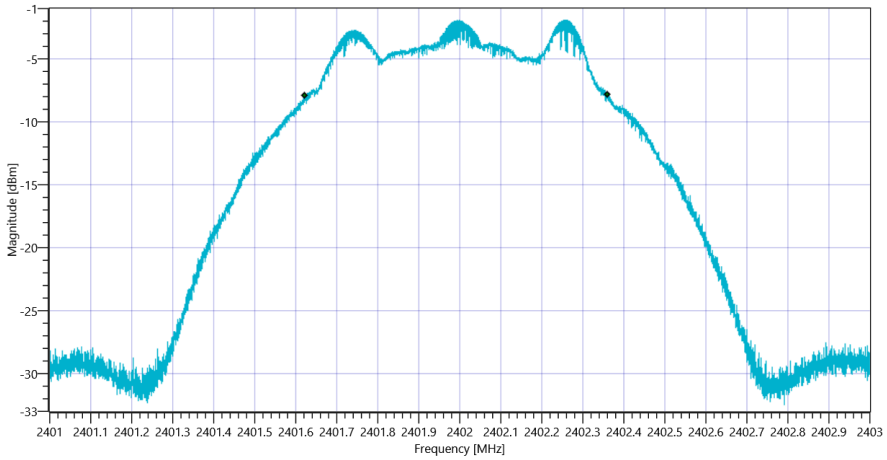
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.70 | SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

Test at TX 2402 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.02 | 10.49 | 10
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

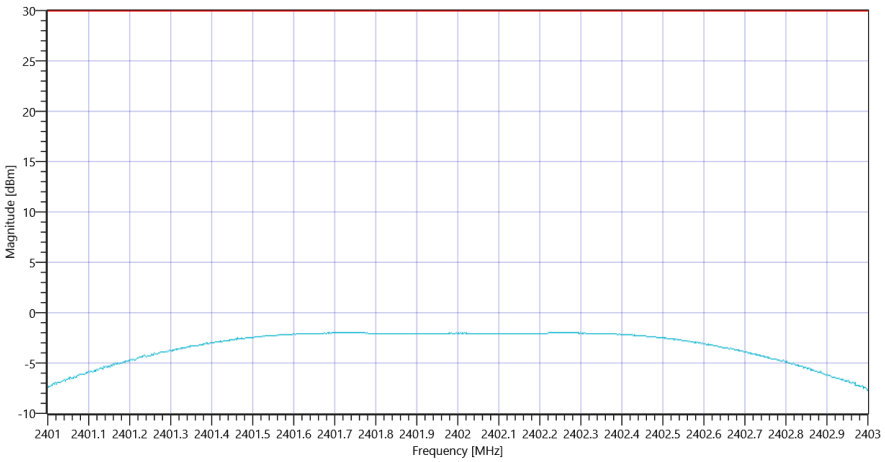
RESULT: DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	739	kHz	Information



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW _10092019_143304.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	8.02 | 10.49 | 15
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: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-2.02	dBm	PASS
Peak Power	---	1000	0.628058	mW	PASS
Frequency at Peak	---	---	2401.724	MHz	Information



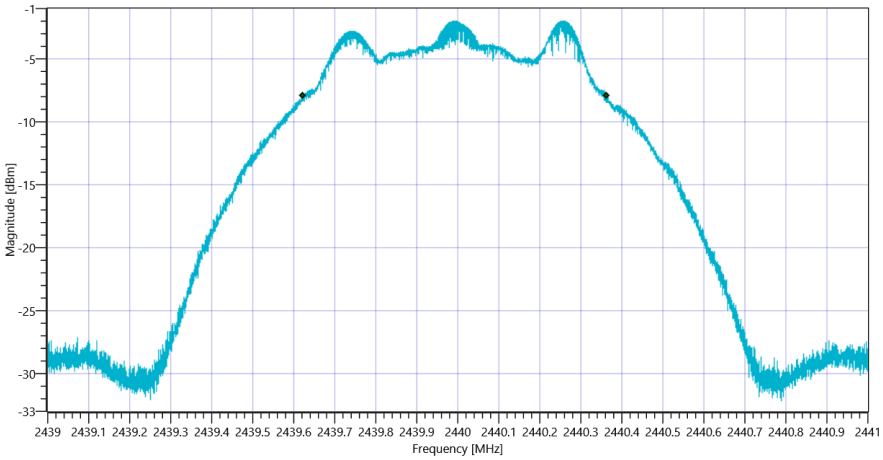
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_10092019_143318.png

Test at TX 2440 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	2.93 | 10.61 | 10
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

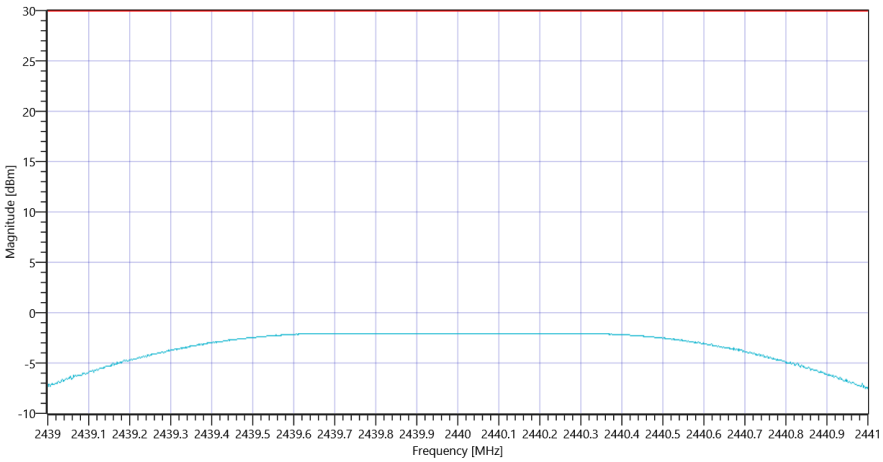
RESULT: DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	739	kHz	Information



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW _10092019_143348.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.93 | 10.61 | 15
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: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-2.04	dBm	PASS
Peak Power	---	1000	0.625173	mW	PASS
Frequency at Peak	---	---	2440.252	MHz	Information



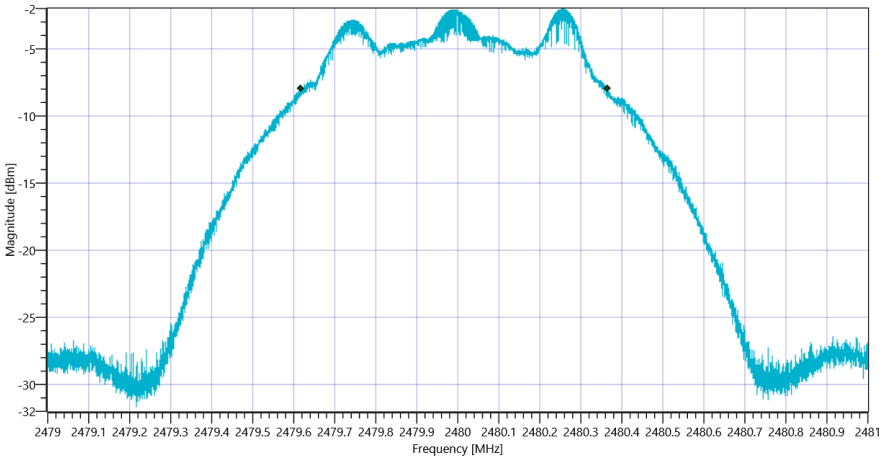
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_10092019_143403.png

Test at TX 2480 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	2.96 | 10.66 | 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

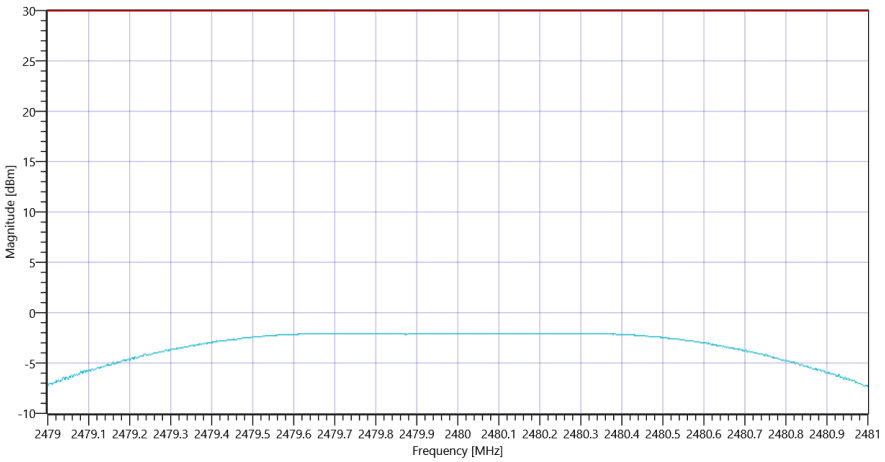
RESULT: DTS Bandwidth					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	747	kHz	Information



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW _10092019_143433.png

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	7.96 | 10.66 | 15
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: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-2.05	dBm	PASS
Peak Power	---	1000	0.623735	mW	PASS
Frequency at Peak	---	---	2479.726	MHz	Information



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_10092019_143448.png

TEST FINISHED		
General Verdict	10.09.2019 14:34:48 / RT: 133 s	PASS

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

Test References	
TC Start	10.09.2019 14:34:52
System Version	1.0.0.20
Test Specification	FCC Part 15.247
Test Method	99
Class / TC Version / TC ID	TC_VM_FCC15247_Bandwidth_6dB_DTS_V01 Version: 0.0.1 | TCID_FCC15247_1
My Description	FCC 15.247 Bandwidth 6dB DTS - BT LE 1 Msps
Add. Information	

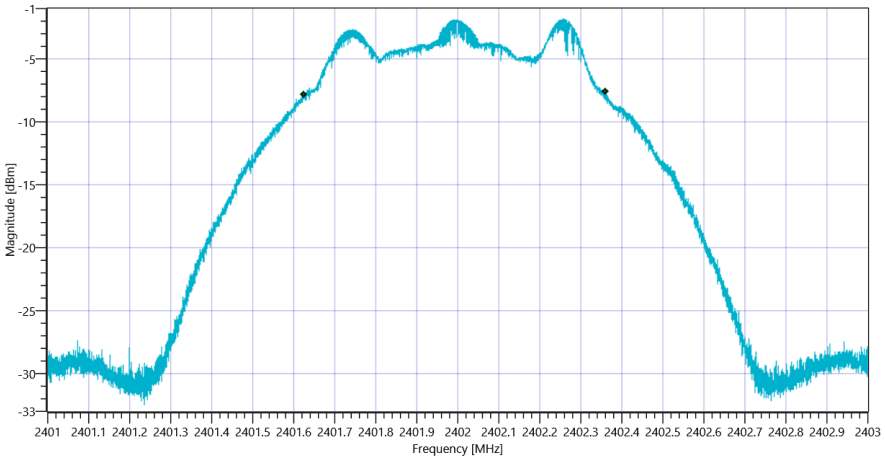
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.70 | SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

Test at TX 2402 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.05 | 10.49 | 10
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: TC_VM_FCC15247_Bandwidth_6dB_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	736	kHz	PASS



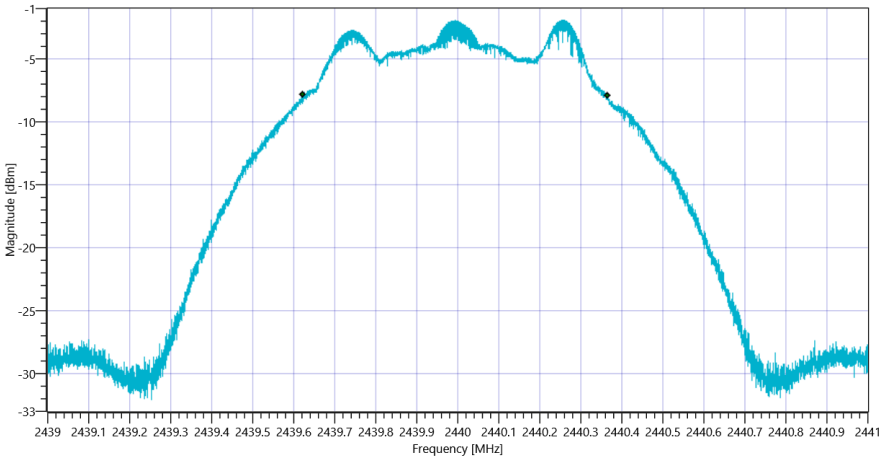
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_10092019_143521.png

Test at TX 2440 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	2.98 | 10.61 | 10
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: TC_VM_FCC15247_Bandwidth_6dB_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	743	kHz	PASS



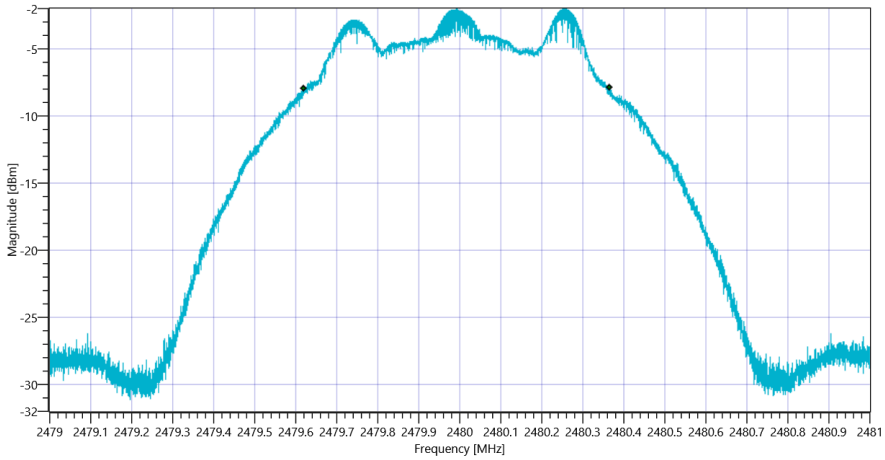
Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_10092019_143551.png

Test at TX 2480 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	2.95 | 10.66 | 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: TC_VM_FCC15247_Bandwidth_6dB_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	747	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_10092019_143621.png

TEST FINISHED		
General Verdict	10.09.2019 14:36:21 / RT: 88 s	PASS

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

Test References	
TC Start	10.09.2019 14:36:25
System Version	1.0.0.20
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
Class / TC Version / TC ID	TC_VM_FCC15247_Peak_Power_Spectral_Density_DTS_V01 Version: 0.0.1 | TCID_FCC15247_6
My Description	FCC 15.247 Peak Power Spectral Density DTS - BT LE 1 Msps
Add. Information	

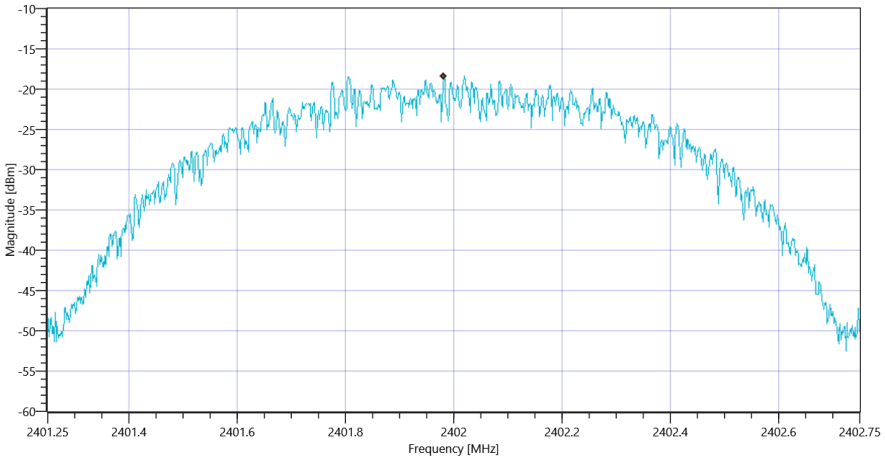
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.70 | SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

Test at TX 2402 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.02 | 10.49 | 10
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: TC_VM_FCC15247_Peak_Power_Spectral_Density_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-18.4	dBm/3KHz	PASS



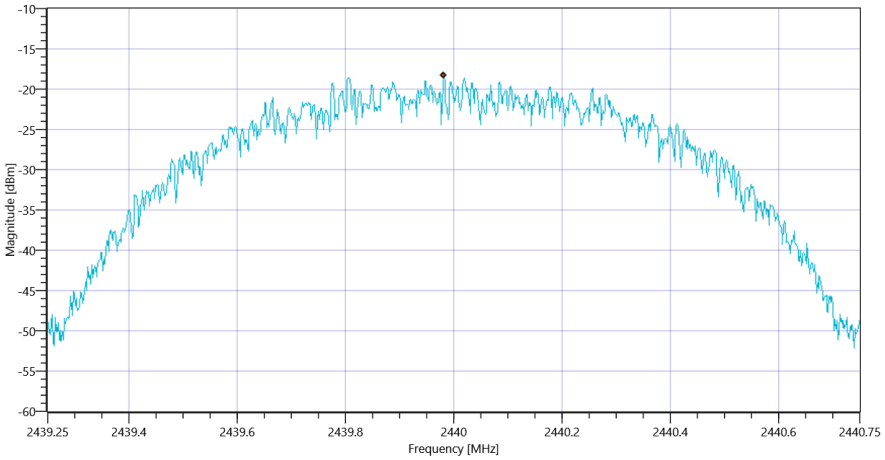
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_10092019_143704.png

Test at TX 2440 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.03 | 10.61 | 10
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: TC_VM_FCC15247_Peak_Power_Spectral_Density_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-18.32	dBm/3KHz	PASS



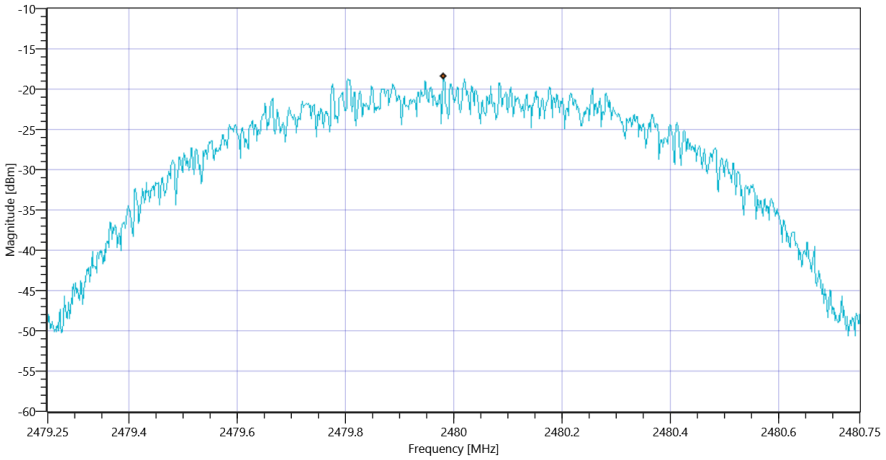
Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_10092019_143743.png

Test at TX 2480 MHz

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

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.02 | 10.66 | 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: TC_VM_FCC15247_Peak_Power_Spectral_Density_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-18.49	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_10092019_143822.png

TEST FINISHED		
General Verdict	10.09.2019 14:38:22 / RT: 116 s	PASS

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

Test References	
TC Start	10.09.2019 14:38:26
System Version	1.0.0.20
Test Specification	FCC Part 15.247
Test Method	
Class / TC Version / TC ID	TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01 Version: 0.0.2 | TCID_FCC15247_2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - BT LE 1 Msps
Add. Information	

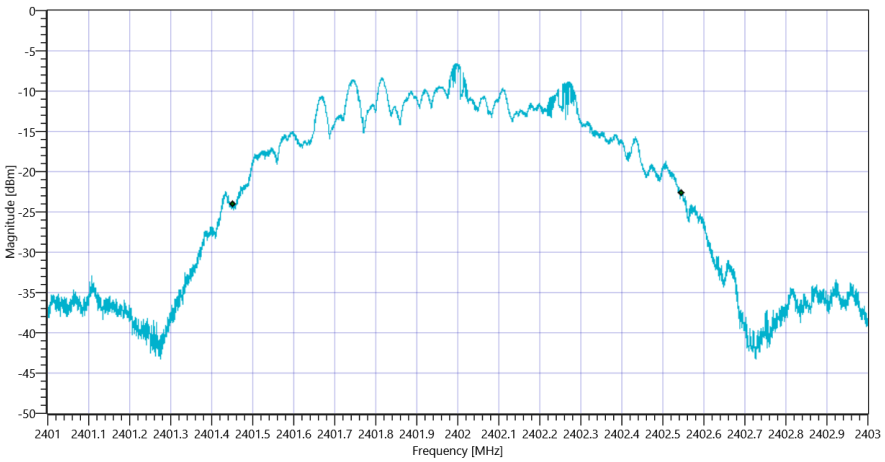
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.70 | SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

Test at TX 2402 MHz

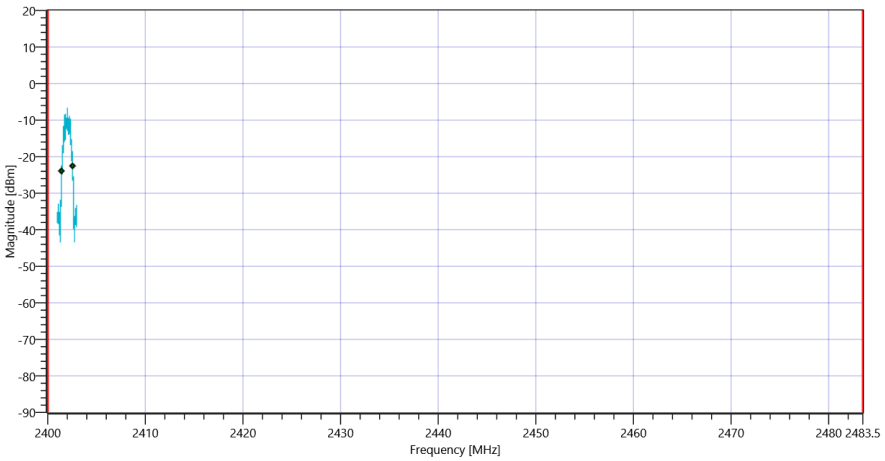
RESULT: DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.06 | 10.49 | 10
Start [MHz] | Stop [MHz]	2401.000 | 2403.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.050000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1095	kHz	Information
T1 99%	2400.000000	---	2401.4519	MHz	PASS
T2 99%	---	2483.500000	2402.5467	MHz	PASS



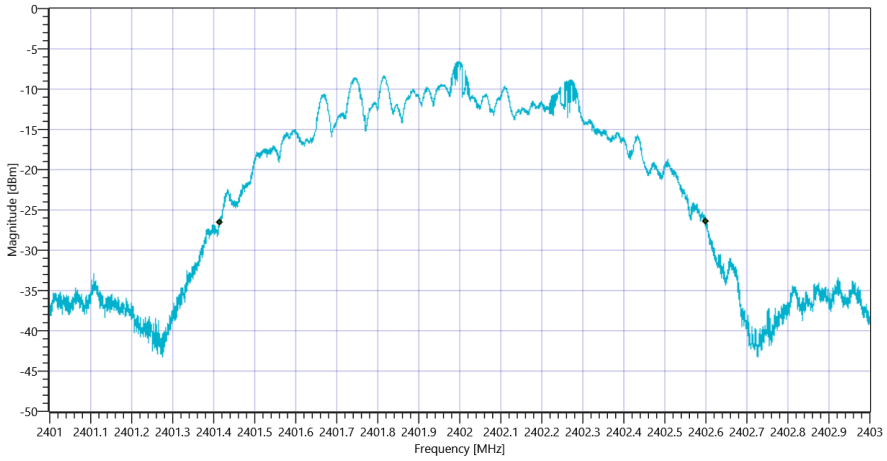
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_10092019_143855.png



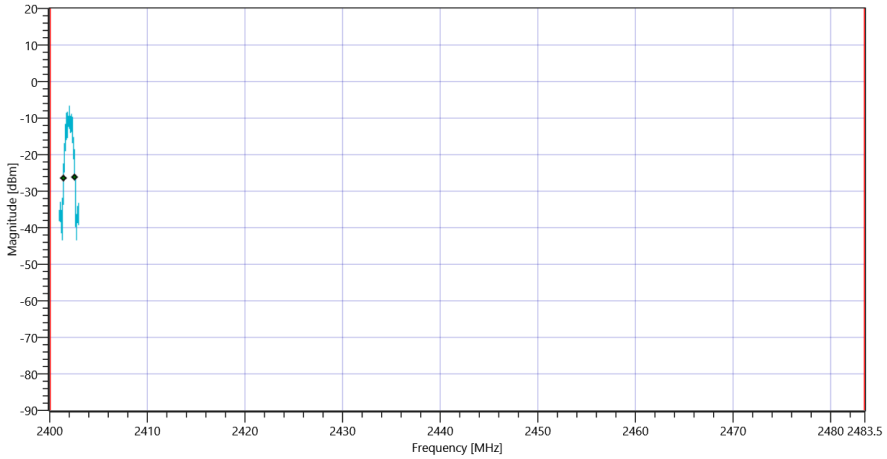
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_10092019_143858.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1186	kHz	Information
T1 20dB	2400.000000	---	2401.4148	MHz	PASS

T2 20dB	---	2483.500000	2402.6006	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_10092019_143902.png



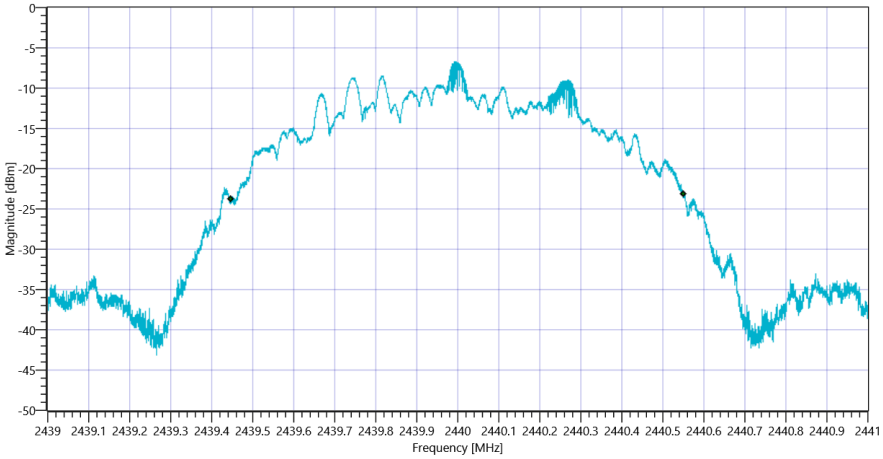
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_10092019_143904.png

Test at TX 2440 MHz

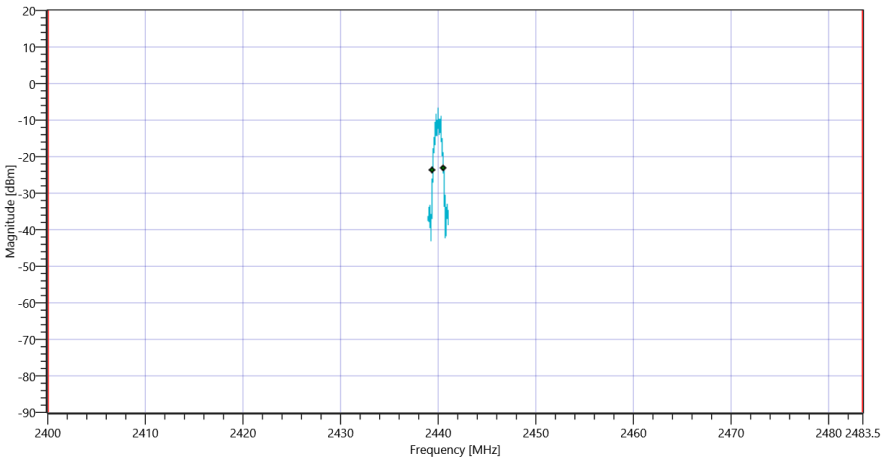
RESULT: DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.01 | 10.61 | 10
Start [MHz] | Stop [MHz]	2439.000 | 2441.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.050000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1104	kHz	Information
T1 99%	2400.000000	---	2439.4471	MHz	PASS
T2 99%	---	2483.500000	2440.5509	MHz	PASS



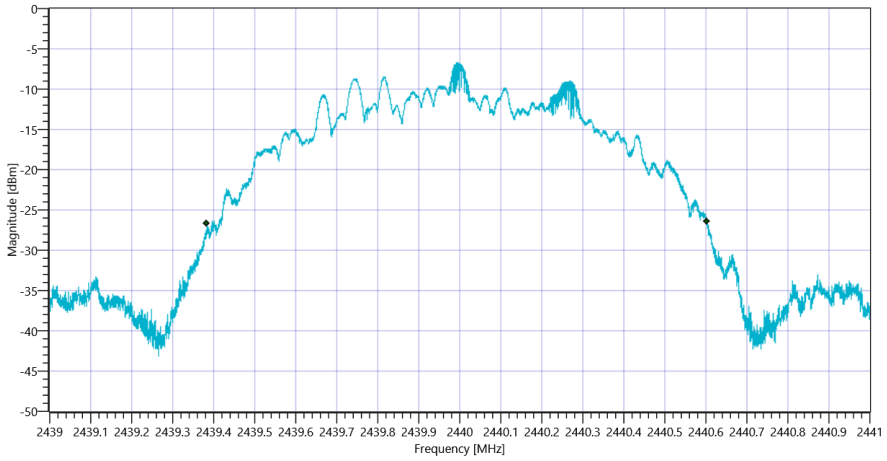
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_10092019_143935.png



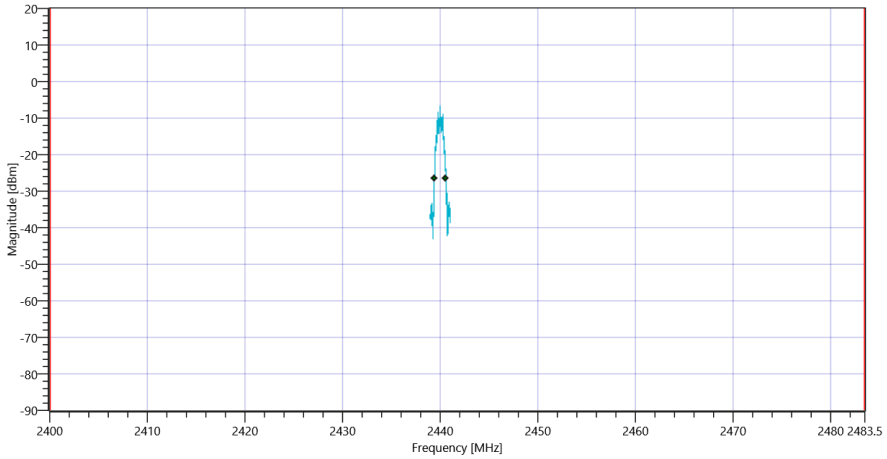
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_10092019_143938.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1219	kHz	Information
T1 20dB	2400.000000	---	2439.3834	MHz	PASS

T2 20dB	---	2483.500000	2440.6024	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_10092019_143941.png



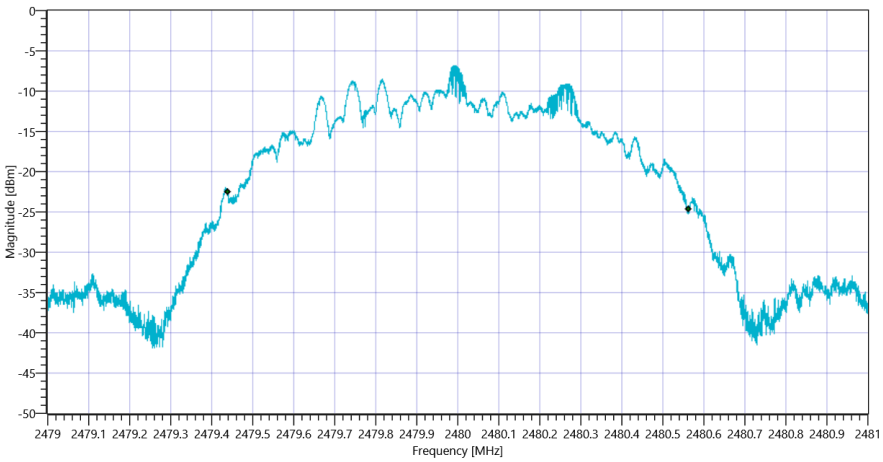
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_10092019_143944.png

Test at TX 2480 MHz

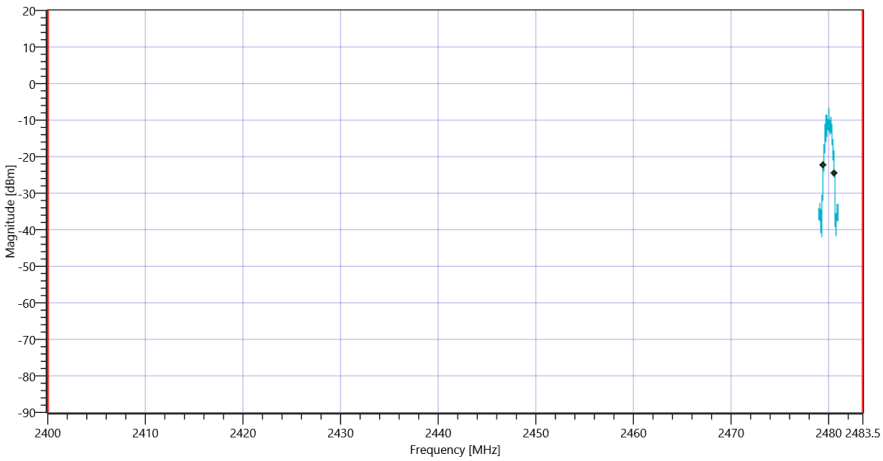
RESULT: DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	2.99 | 10.66 | 10
Start [MHz] | Stop [MHz]	2479.000 | 2481.000
RBW [MHz] | VBW [MHz]	0.020000 | 0.050000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	50 | 200 | 10001 | SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1125	kHz	Information
T1 99%	2400.000000	---	2479.4385	MHz	PASS
T2 99%	---	2483.500000	2480.5633	MHz	PASS



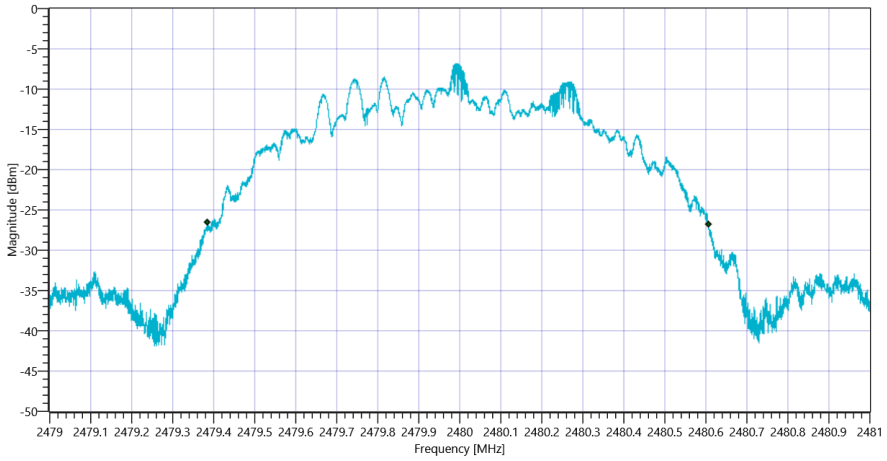
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 99PCT_10092019_144015.png



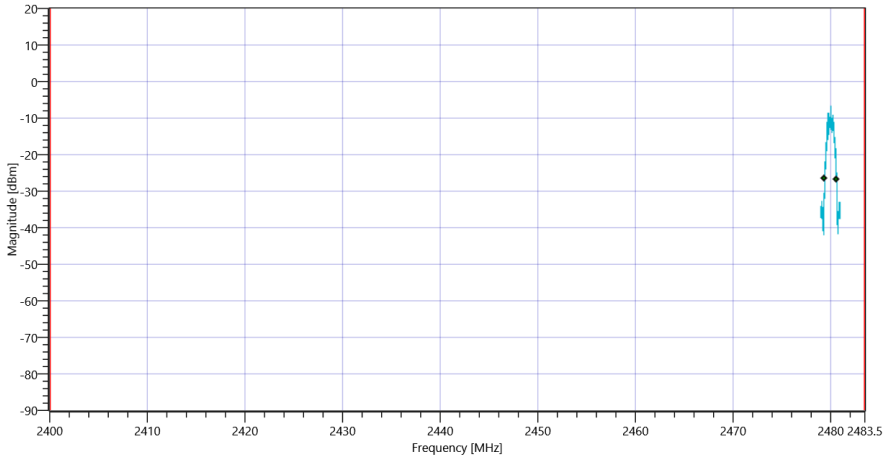
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_10092019_144018.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1221	kHz	Information
T1 20dB	2400.000000	---	2479.3850	MHz	PASS

T2 20dB	---	2483.500000	2480.6062	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_10092019_144022.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_10092019_144025.png

TEST FINISHED		
General Verdict	10.09.2019 14:40:26 / RT: 120 s	PASS

6. FCC Part 15.247 TX Spurious Conduced ~ BT LE 1 Msps

Test References	
TC Start	10.09.2019 14:40:30
System Version	1.0.0.20
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.
Class / TC Version / TC ID	TC_VM_FCC15247_TX_Emissions_Conducted_V01 Version: 0.0.1 | TCID_FCC15247_8
My Description	FCC 15.247 TX Emissions Conducted DTS - BT LE 1 Msps
Add. Information	

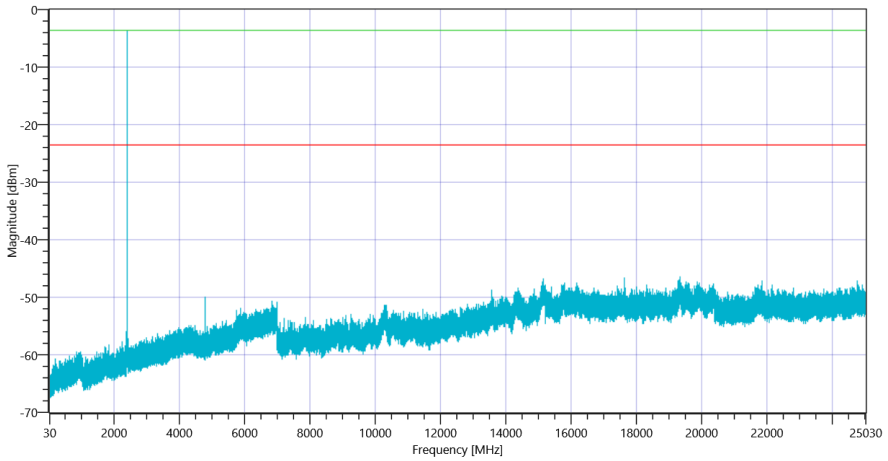
Test Parameter	
Technology to test	BT LE 1 Msps
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True | Freq [MHz] 2402
Frequency mid to test	True | Freq [MHz] 2440
Frequency high to test	True | Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.70 | SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

Test at TX 2402 MHz

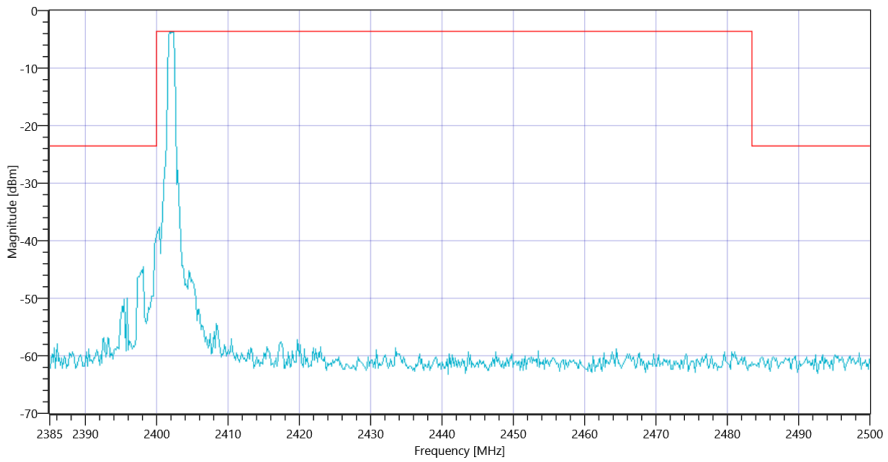
RESULT: DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.63 | 0 | 20
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	500 | 8 | 3001 | SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2401.83 MHz	---	---	-3.54	dBm	Information
No peaks detected	---	---			PASS



Plot_FCC Part 15.247 TX Spurious Conduced ~ BT LE 1 Msps 2402_10092019_144516.png



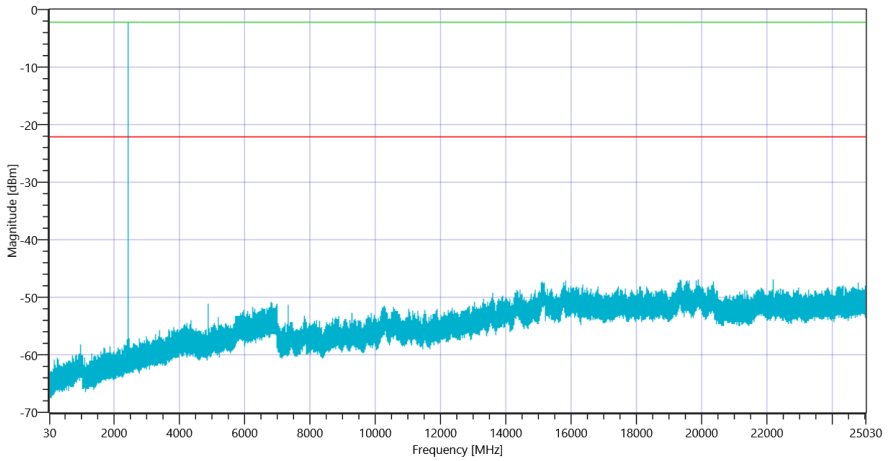
Plot_FCC Part 15.247 TX Spurious Conduced ~ BT LE 1 Msps 2402_10092019_144519.png

Test at TX 2440 MHz

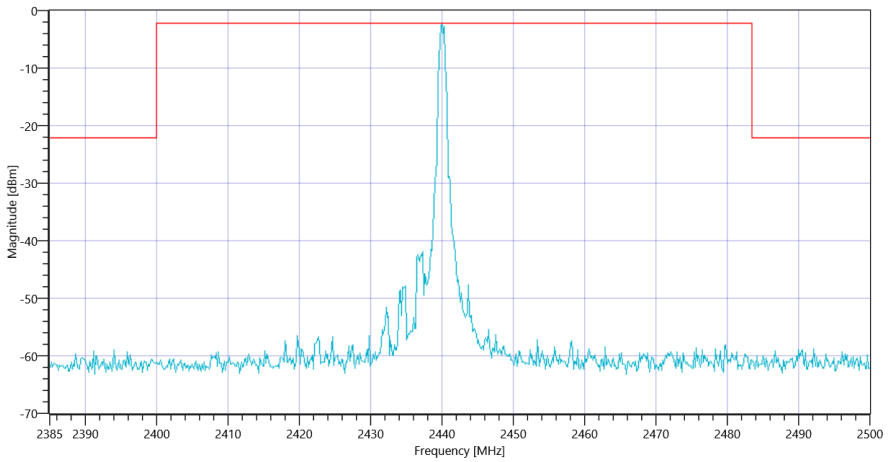
RESULT: DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.69 | 0 | 20
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	500 | 8 | 3001 | SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.00 MHz	---	---	-2.16	dBm	Information
No peaks detected	---	---			PASS



Plot_FCC Part 15.247 TX Spurious Conduced ~ BT LE 1 Msps 2440_10092019_145006.png



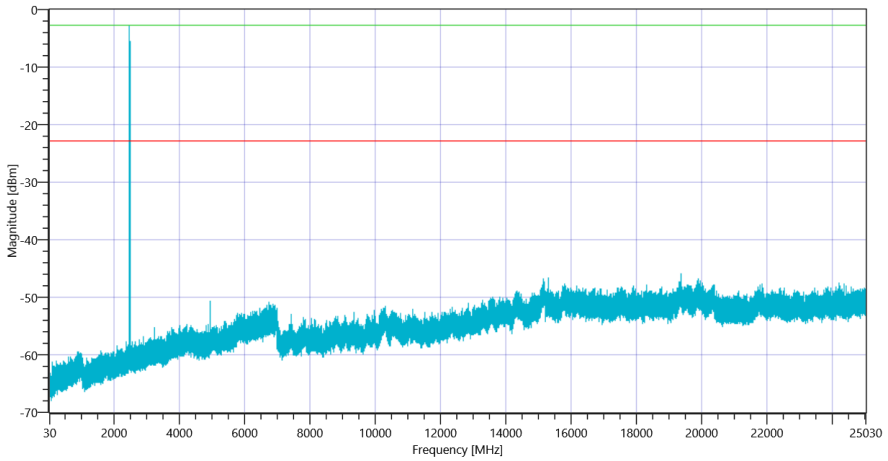
Plot_FCC Part 15.247 TX Spurious Conduced ~ BT LE 1 Msps 2440_10092019_145008.png

Test at TX 2480 MHz

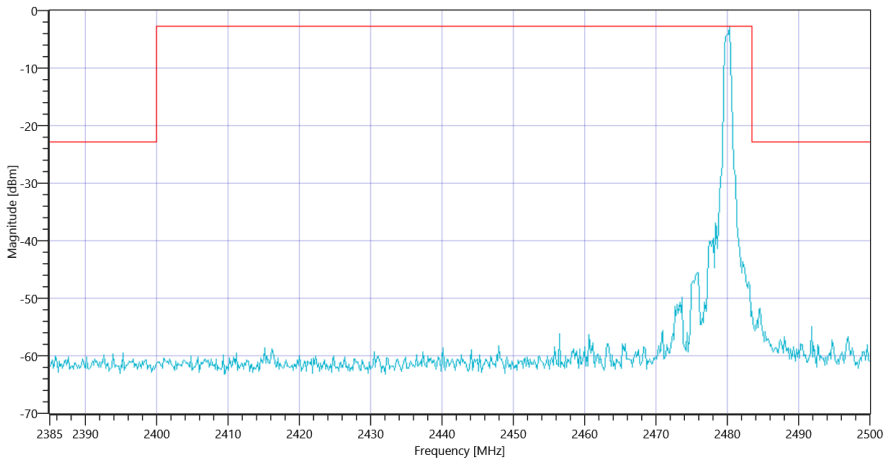
RESULT: DTM Connection check					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:	
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	3.48 | 0 | 20
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	500 | 8 | 3001 | SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2480.33 MHz	---	---	-2.75	dBm	Information
No peaks detected	---	---			PASS



Plot_FCC Part 15.247 TX Spurious Conduced ~ BT LE 1 Msps 2480_10092019_145456.png



Plot_FCC Part 15.247 TX Spurious Conduced ~ BT LE 1 Msps 2480_10092019_145459.png

TEST FINISHED		
General Verdict	10.09.2019 14:55:00 / RT: 869 s	PASS

- END OF DOCUMENT -