

Measurement Results

1-8704/19-01-10_Annex_MR_A_1

[Test logging](#)

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IUT Summary

IUT DEFINITION	
Manufacturer	Widex A S
Type	MRR2D
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 1.4 1.5 @1
Auto Control enabled Power Supply Climatic Box	No 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]	0 0 0
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	09.09.2019 12:43:46
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

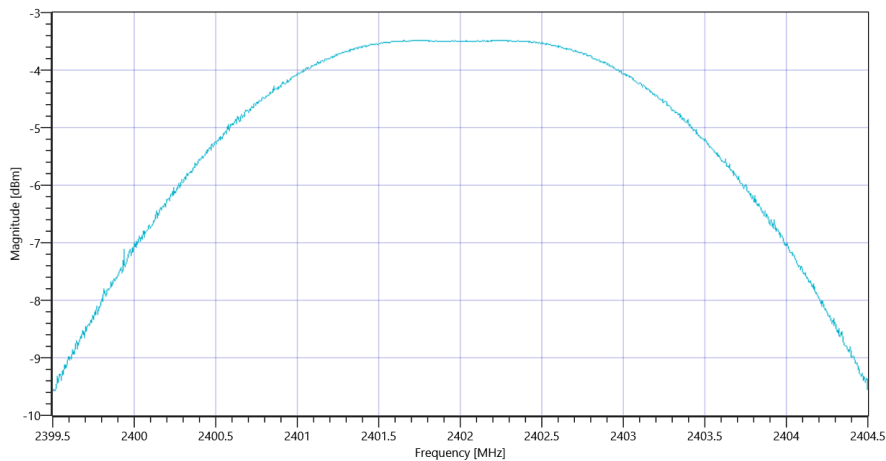
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.52 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	-3.48	dBm	Information
Peak Power	---	1000	0.448745	mW	Information
Frequency at Peak	---	---	2401.715	MHz	Information



Plot_Common2G4 Peak Output Power conducted 3MHz_3MHz ~ BT LE 1 Msps_09092019_124411.png

Test at TX 2440 MHz

RESULT: DTM Connection check

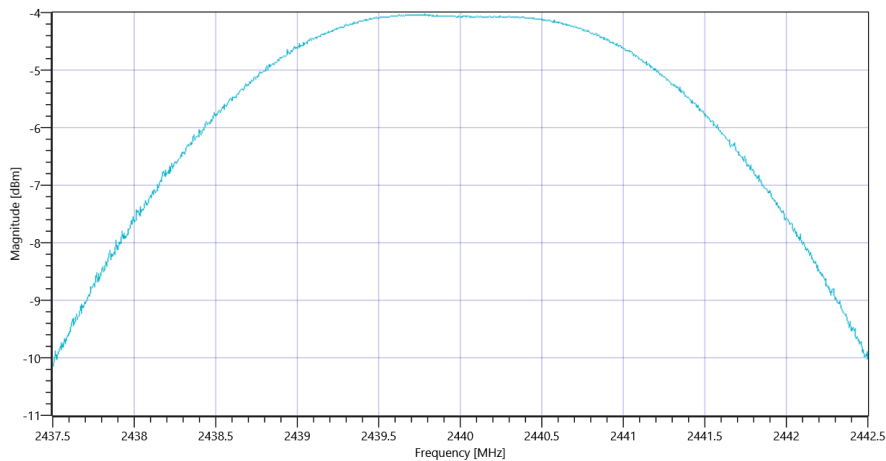
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.96 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	-4.03	dBm	Information
Peak Power	---	1000	0.395367	mW	Information
Frequency at Peak	---	---	2439.78	MHz	Information



Plot_Common2G4 Peak Output Power conducted 3MHz_3MHz ~ BT LE 1 Msps_09092019_124441.png

Test at TX 2480 MHz

RESULT: DTM Connection check

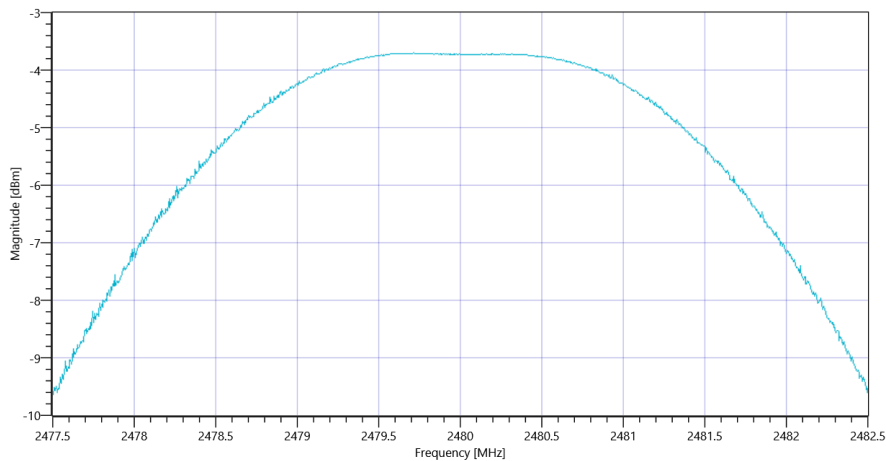
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.25 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	-3.7	dBm	Information
Peak Power	---	1000	0.42658	mW	Information
Frequency at Peak	---	---	2479.715	MHz	Information



Plot_Common2G4 Peak Output Power conducted 3MHz_3MHz ~ BT LE 1 Msps_09092019_124510.png

TEST FINISHED

General Verdict

09.09.2019 12:45:10 / RT: 84 s

PASS

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

Test References	
TC Start	09.09.2019 12:45:14
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

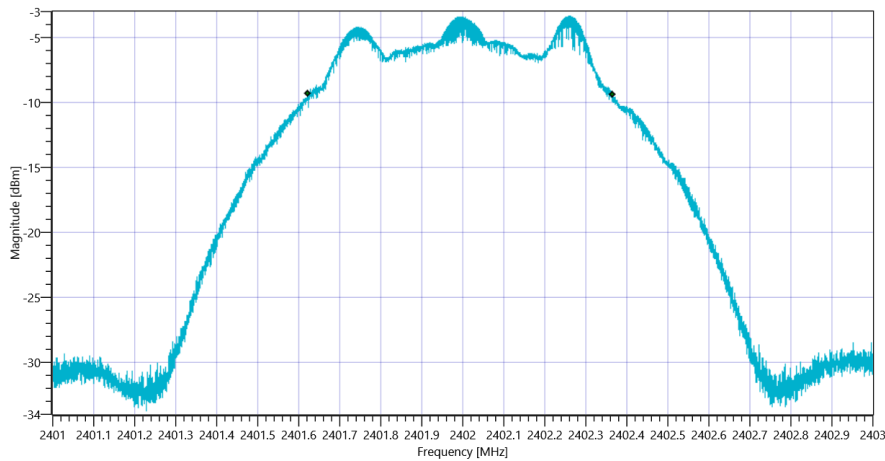
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.49 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)	---	---	741	kHz	Information



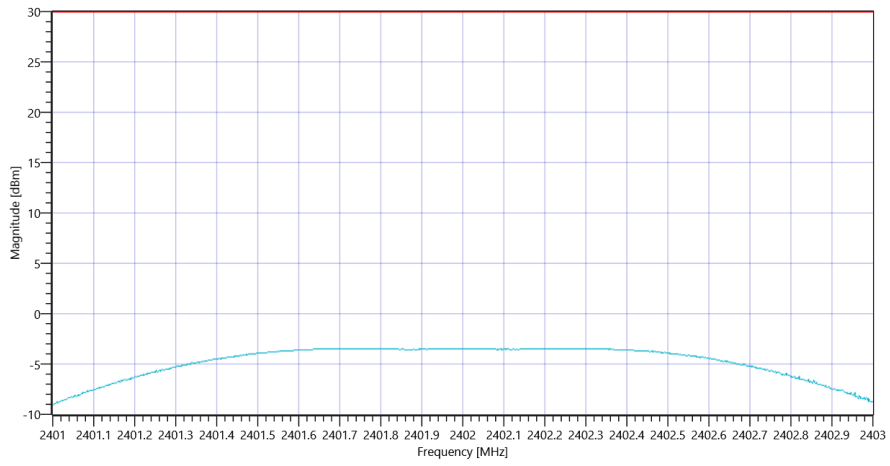
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW _09092019_124539.png

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.49 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	-3.49	dBm	PASS
Peak Power	---	1000	0.447713	mW	PASS
Frequency at Peak	---	---	2402.244	MHz	Information



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_09092019_124554.png

Test at TX 2440 MHz

RESULT: DTM Connection check

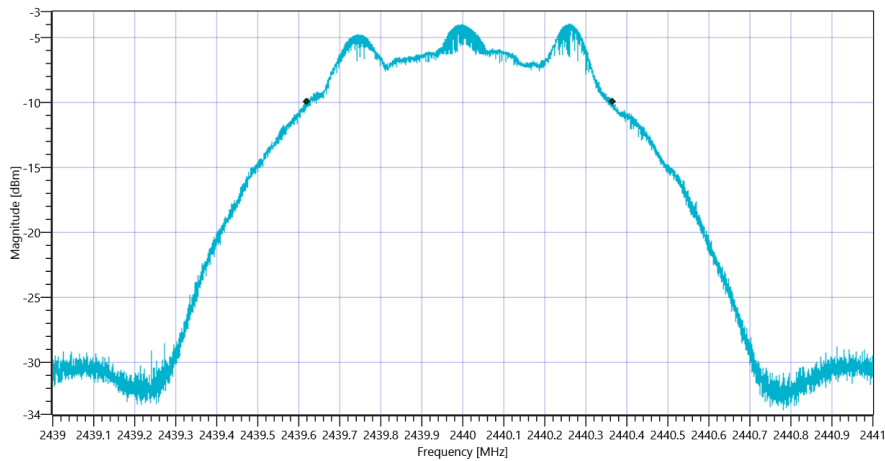
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	0.95 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)	---	---	745	kHz	Information



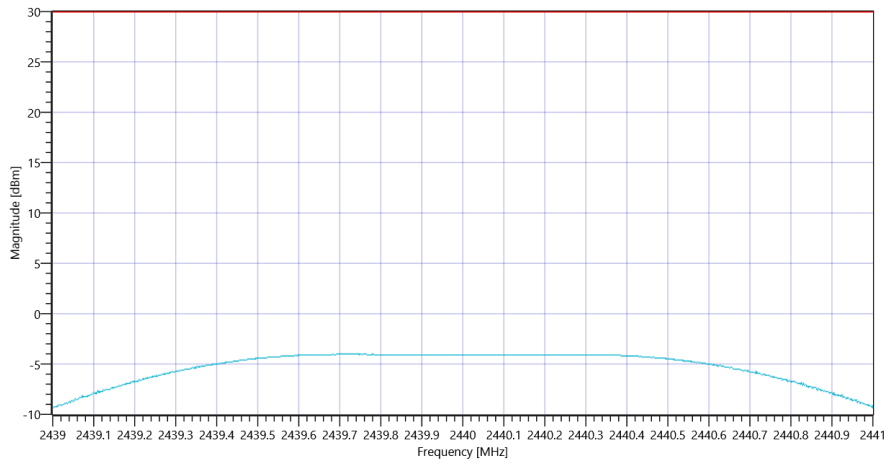
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW _09092019_124624.png

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.95 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	-4.04	dBm	PASS
Peak Power	---	1000	0.394457	mW	PASS
Frequency at Peak	---	---	2439.744	MHz	Information



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps_09092019_124639.png

Test at TX 2480 MHz

RESULT: DTM Connection check

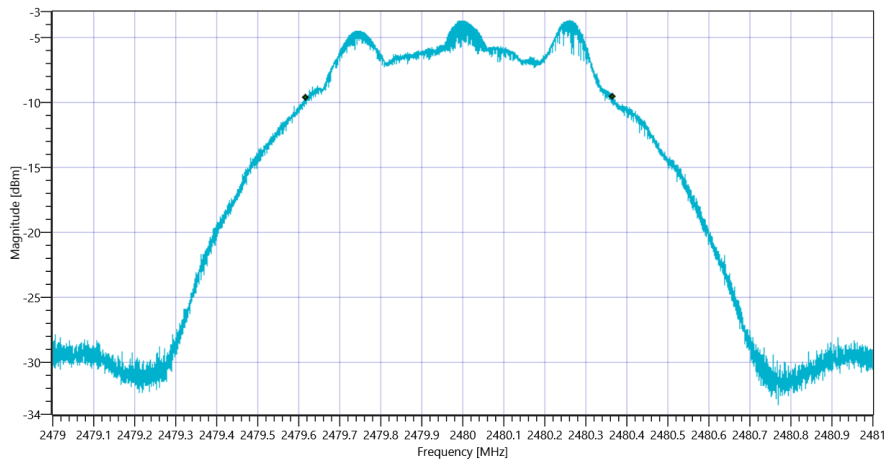
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.30 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)	---	---	750	kHz	Information



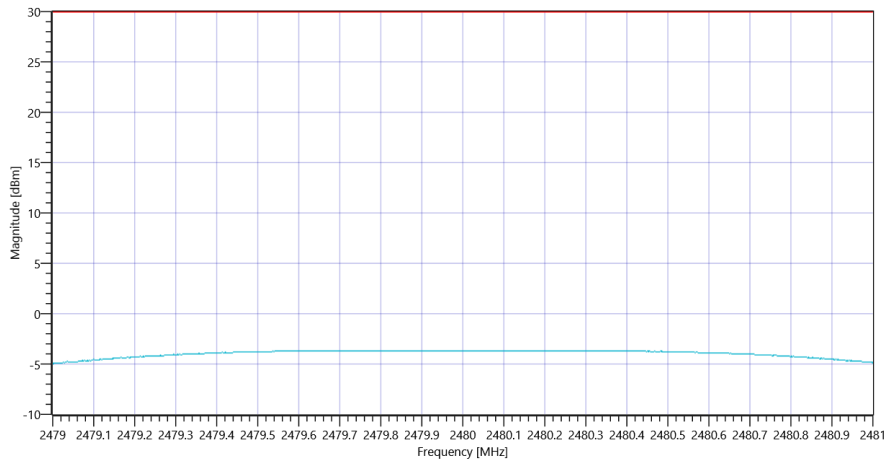
Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msps DTS BW _09092019_124709.png

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.30 10.66 15				
Start [MHz] Stop [MHz]	2479.000 2481.000				
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: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_DTS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Peak Power	---	30.00	-3.68	dBm	PASS
Peak Power	---	1000	0.428549	mW	PASS
Frequency at Peak	---	---	2479.736	MHz	Information



Plot_FCC Part 15.247 Maximum Peak Conducted Output Power DTS ~ BT LE 1 Msp_09092019_124724.png

TEST FINISHED

General Verdict

09.09.2019 12:47:24 / RT: 129 s

PASS

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

Test References	
TC Start	09.09.2019 12:47:28
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 Msp
Add. Information	

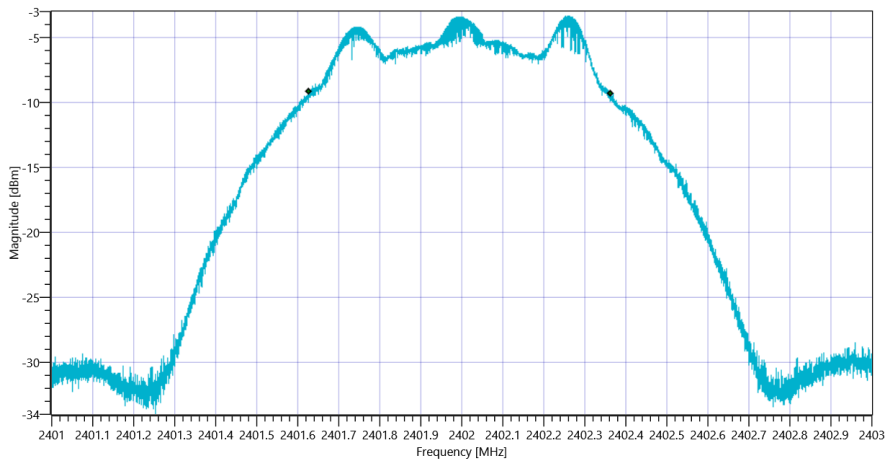
Test Parameter	
Technology to test	BT LE 1 Msp
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2402
Frequency mid to test	True Freq [MHz] 2440
Frequency high to test	True Freq [MHz] 2480
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.70 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]	1.51 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	--	737	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_09092019_124753.png

Test at TX 2440 MHz

RESULT: DTM Connection check

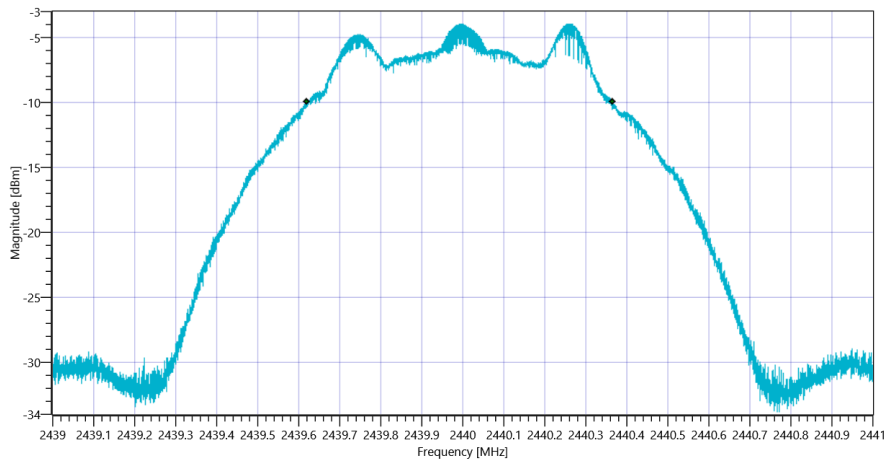
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.03 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	---	745	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 Msps_09092019_124823.png

Test at TX 2480 MHz

RESULT: DTM Connection check

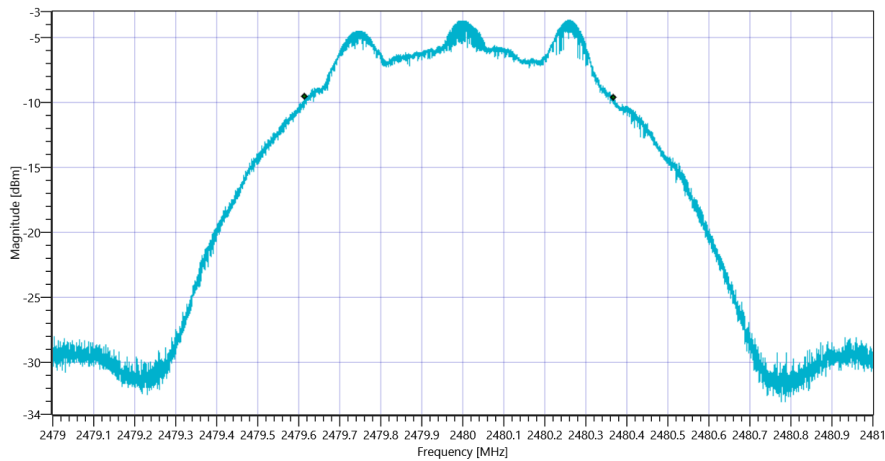
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.33 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	---	753	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ BT LE 1 MspS_09092019_124853.png

TEST FINISHED

General Verdict

09.09.2019 12:48:54 / RT: 85 s

PASS

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

Test References	
TC Start	09.09.2019 12:48:57
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

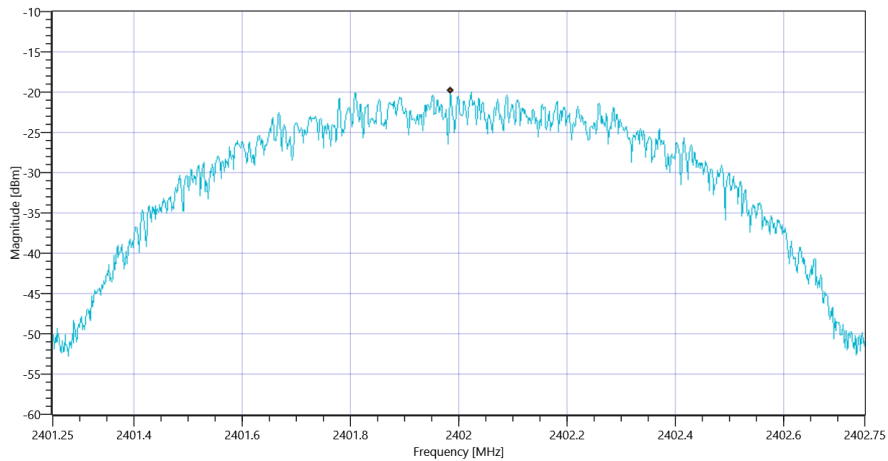
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.55 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	-19.83	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_09092019_124932.png

Test at TX 2440 MHz

RESULT: DTM Connection check

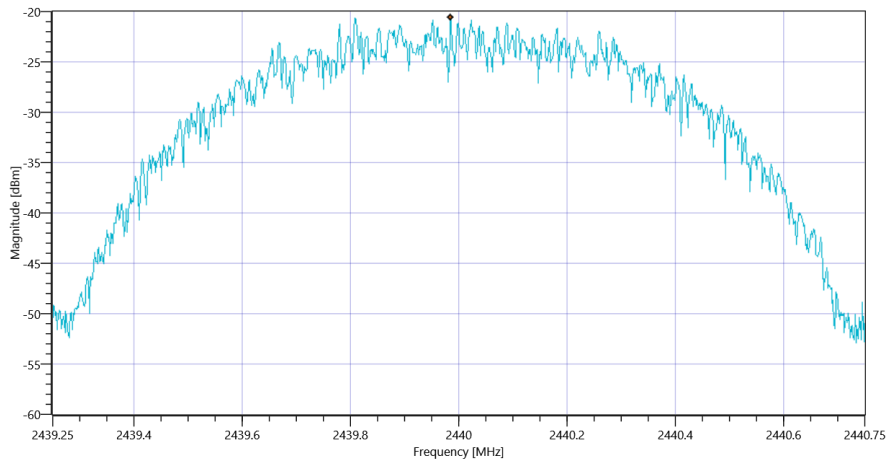
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.01 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	-20.59	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_09092019_125011.png

Test at TX 2480 MHz

RESULT: DTM Connection check

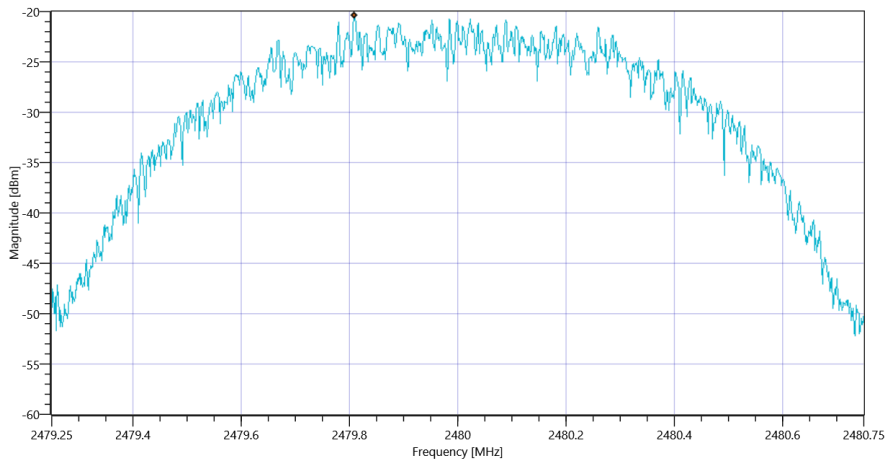
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.30 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	-20.43	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ BT LE 1 Msps_09092019_125051.png

TEST FINISHED

General Verdict	09.09.2019 12:50:51 / RT: 113 s	PASS
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5. FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps

Test References	
TC Start	09.09.2019 12:50:55
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

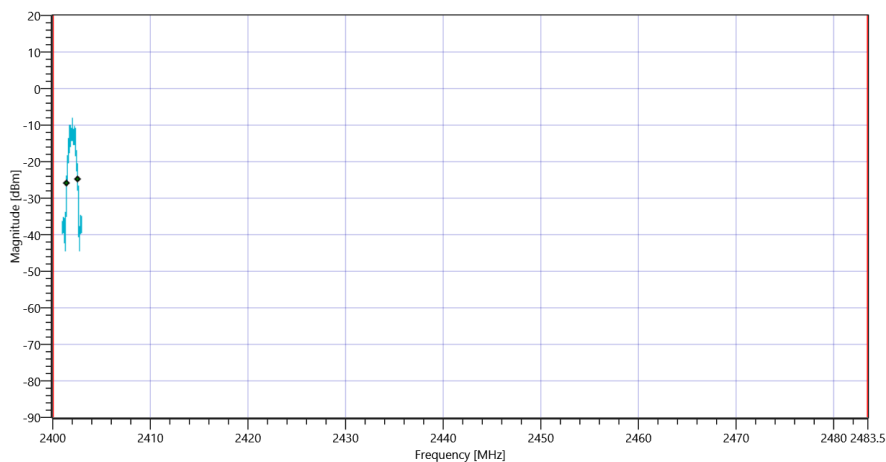
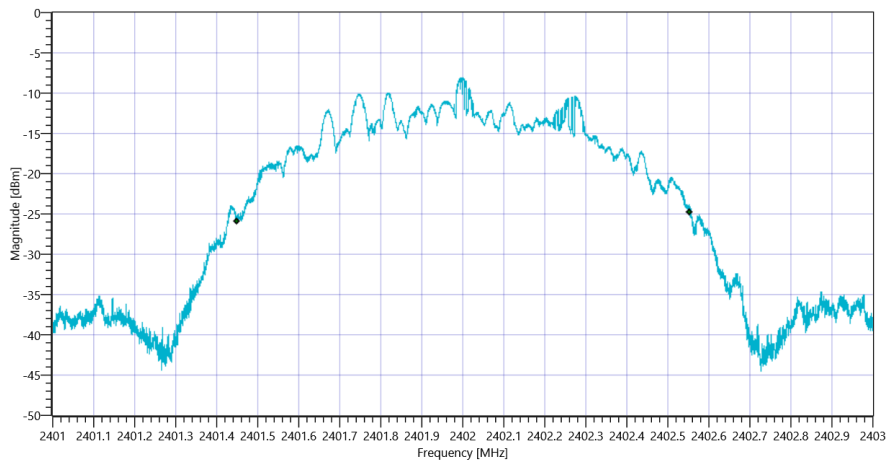
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.55 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%	---	---	1104	kHz	Information
T1 99%	2400.000000	---	2401.4505	MHz	PASS
T2 99%	---	2483.500000	2402.5541	MHz	PASS



RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1207	kHz	Information
T1 20dB	2400.000000	---	2401.3982	MHz	PASS

T2 20dB

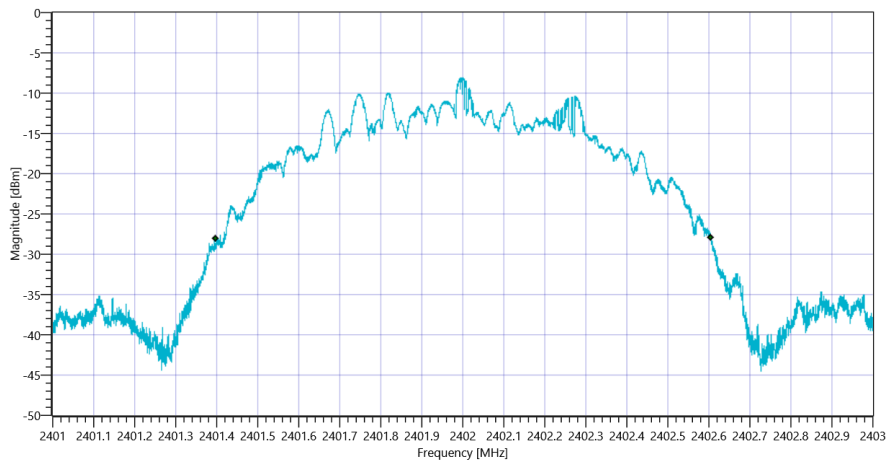
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2483.50000

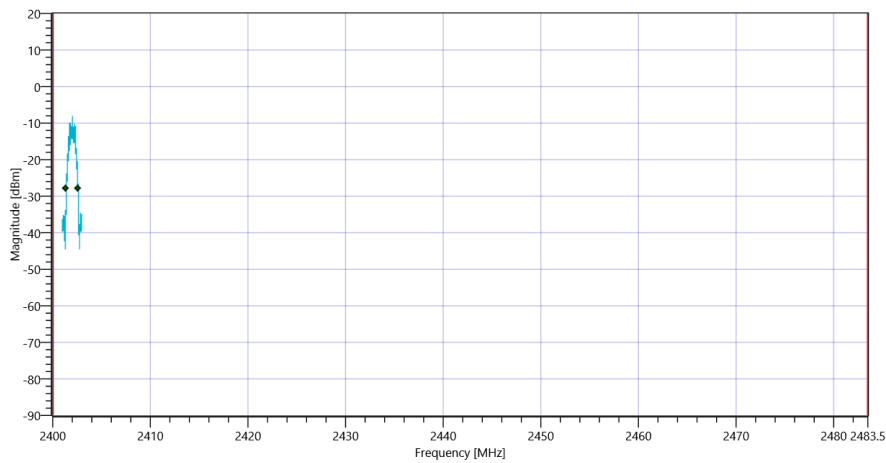
2402.6052

MHz

PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_09092019_125127.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_09092019_125130.png

Test at TX 2440 MHz

RESULT: DTM Connection check

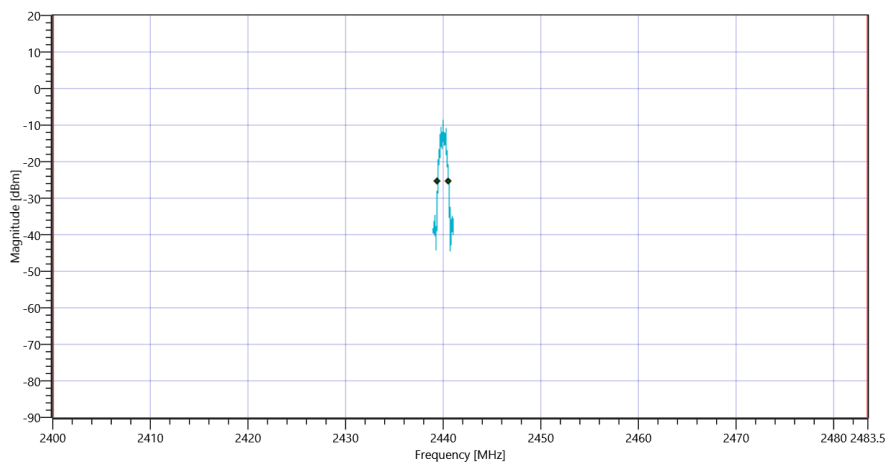
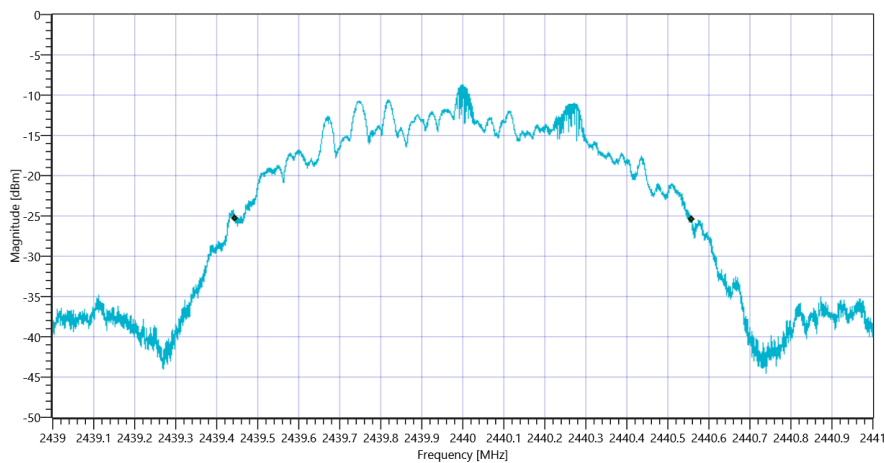
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.03 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%	---	---	1114	kHz	Information
T1 99%	2400.000000	---	2439.4439	MHz	PASS
T2 99%	---	2483.500000	2440.5579	MHz	PASS



RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1220	kHz	Information
T1 20dB	2400.000000	---	2439.3876	MHz	PASS

T2 20dB

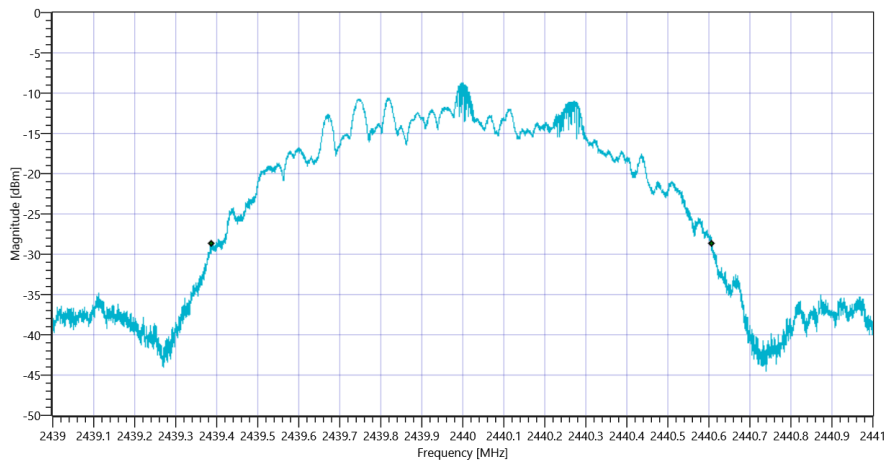
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2483.50000

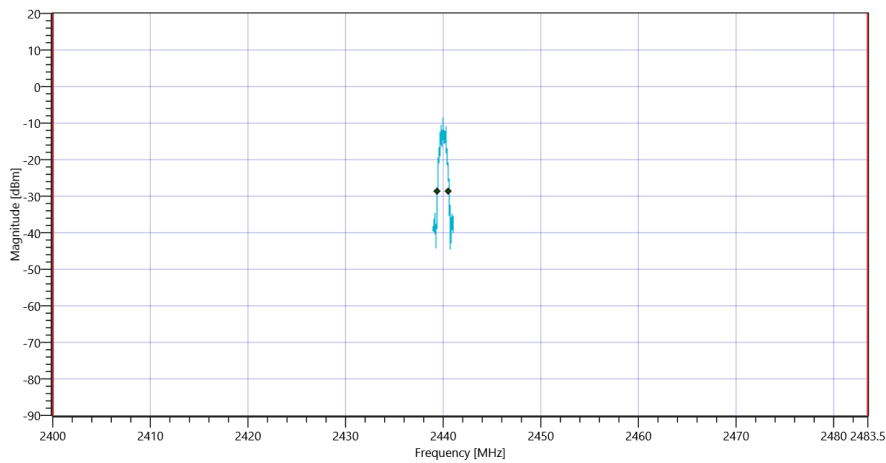
2440.6080

MHz

PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_09092019_125207.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_09092019_125210.png

Test at TX 2480 MHz

RESULT: DTM Connection check

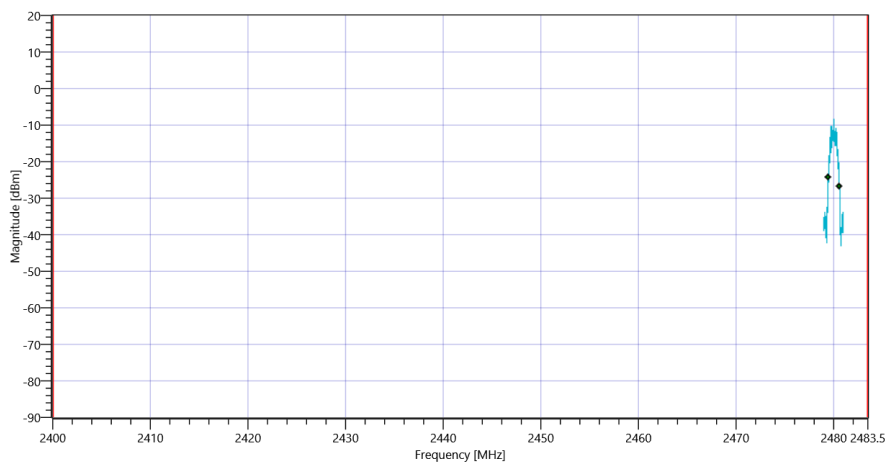
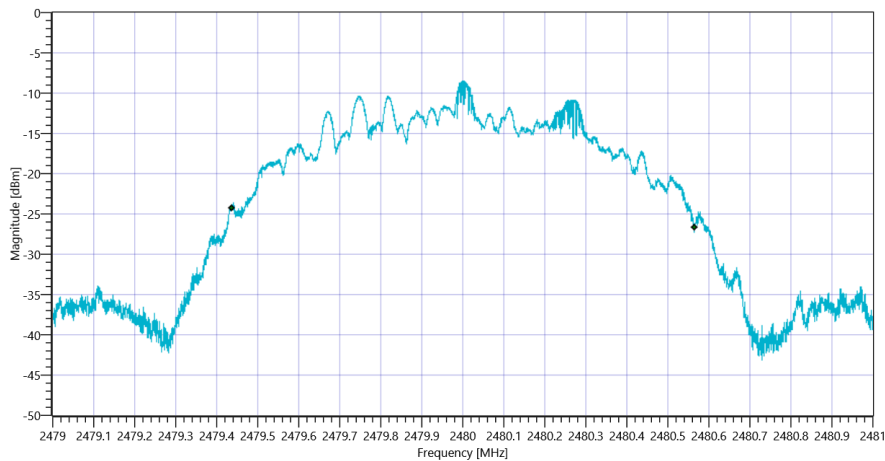
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.34 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%	---	---	1128	kHz	Information
T1 99%	2400.000000	---	2479.4375	MHz	PASS
T2 99%	---	2483.500000	2480.5651	MHz	PASS



RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	1225	kHz	Information
T1 20dB	2400.000000	---	2479.3826	MHz	PASS

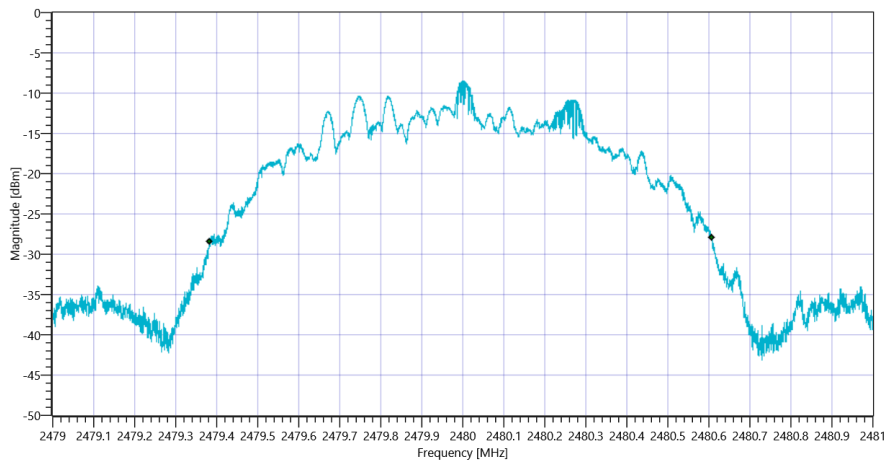
T2 20dB

2483.50000

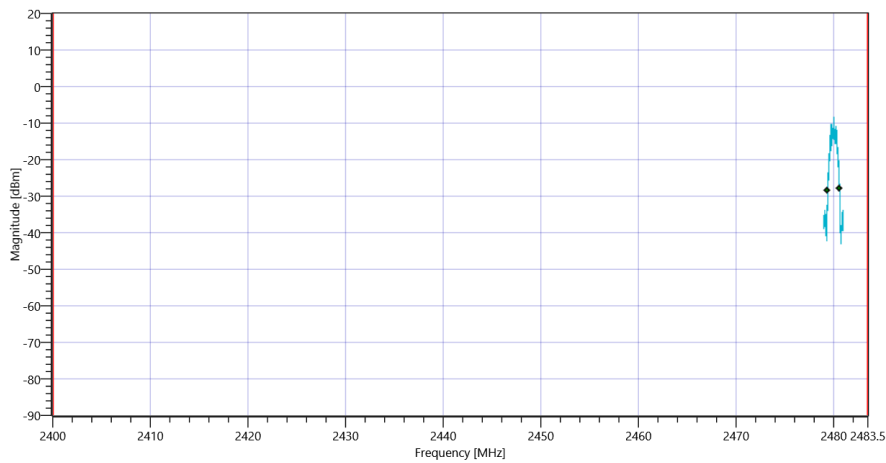
2480.6078

MHz

PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps 20dB_09092019_125248.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ BT LE 1 Msps_09092019_125251.png

TEST FINISHED

General Verdict

09.09.2019 12:52:52 / RT: 116 s

PASS

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

Test References	
TC Start	09.09.2019 12:52:56
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

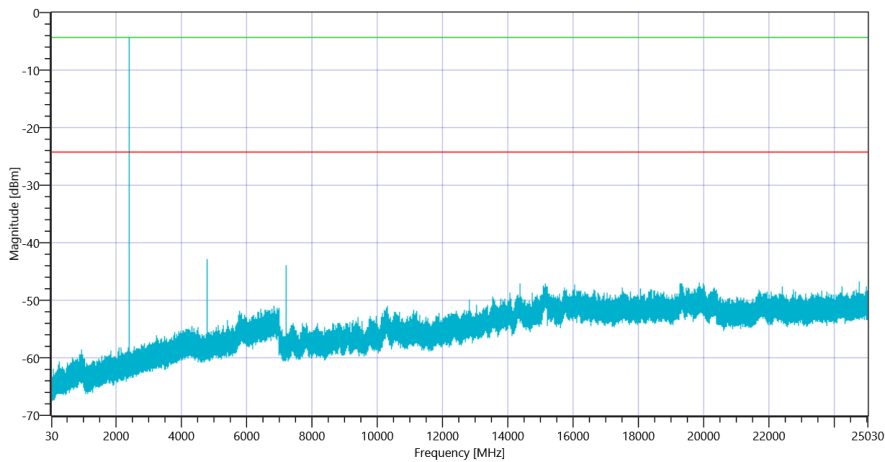
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

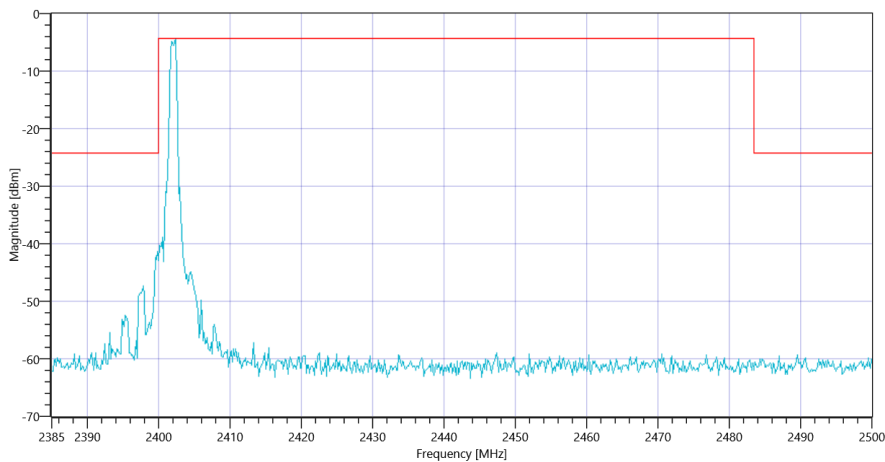
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.21 0 20				
Start [MHz] Stop [MHz]	24530.000 25030.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE				

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2402.33 MHz	---	---	-4.32	dBm	Information
No peaks detected	---	---			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 MspS 2402_09092019_125738.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 MspS 2402_09092019_125740.png

Test at TX 2440 MHz

RESULT: DTM Connection check

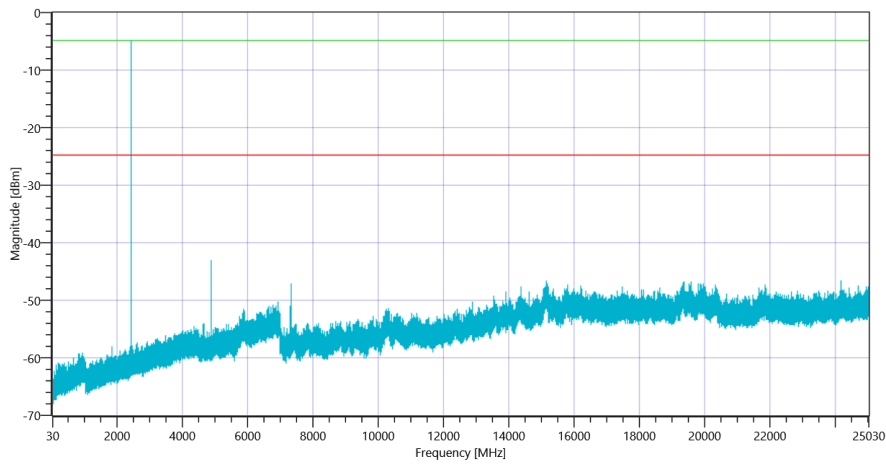
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

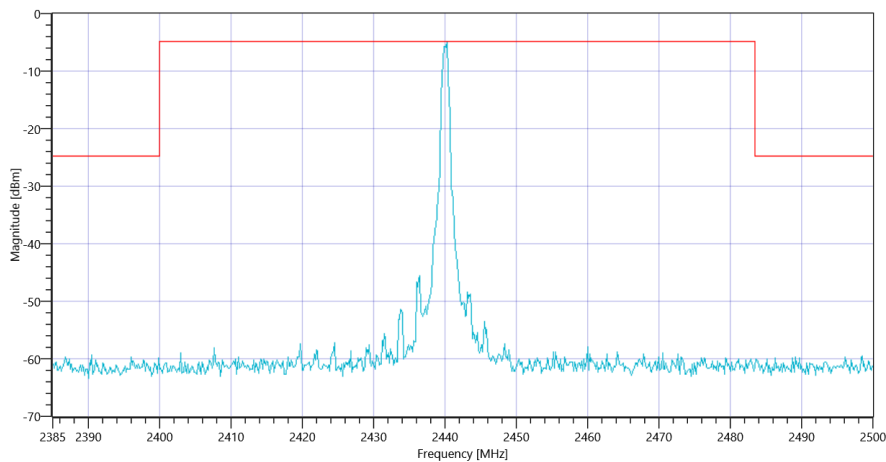
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.64 0 20				
Start [MHz] Stop [MHz]	24530.000 25030.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE				

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.33 MHz	---	---	-4.86	dBm	Information
No peaks detected	---	---			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 MspS 2440_09092019_130228.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 MspS 2440_09092019_130230.png

Test at TX 2480 MHz

RESULT: DTM Connection check

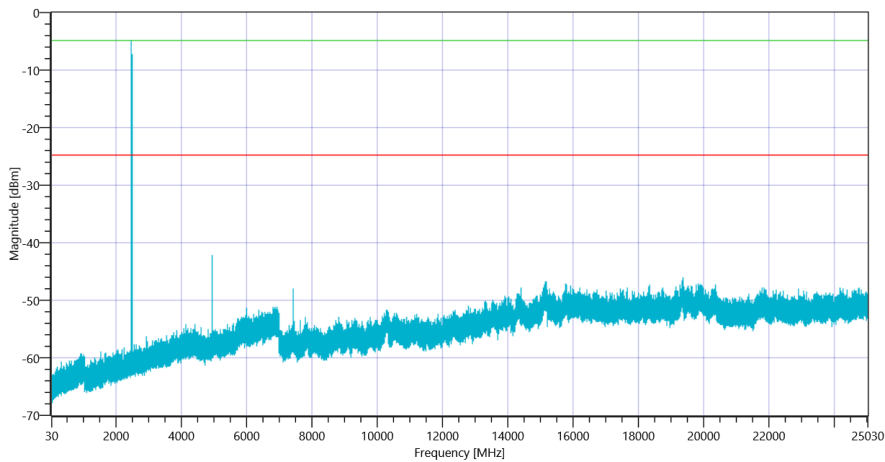
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

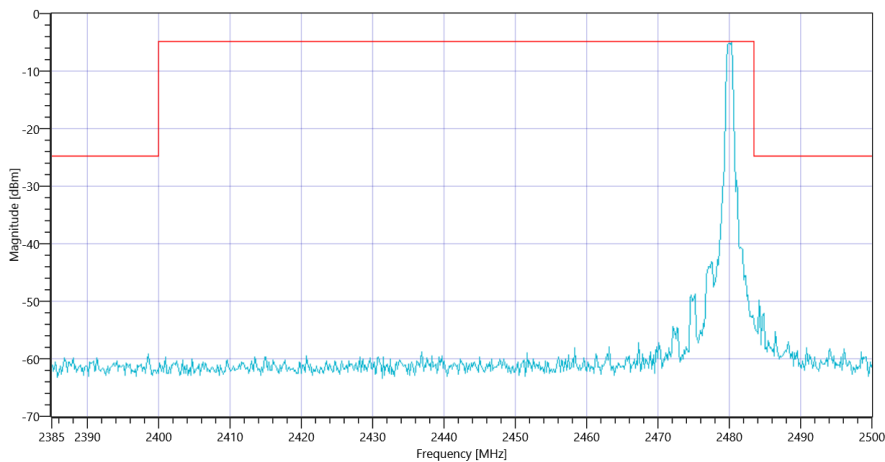
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	2.09 0 20				
Start [MHz] Stop [MHz]	24530.000 25030.000				
RBW [MHz] VBW [MHz]	0.100000 0.300000				
Detector TraceMode	POS MAXH				
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE				

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2480.33 MHz	---	---	-4.81	dBm	Information
No peaks detected	---	---			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2480_09092019_130718.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ BT LE 1 Msps 2480_09092019_130721.png

TEST FINISHED

General Verdict	09.09.2019 13:07:22 / RT: 866 s	PASS
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