

# Measurement Results

1-6395/18-02-02\_log1\_conducted

[Test logging](#)

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## IUT Summary

IUT DEFINITION	
Manufacturer	Robert Bosch GmbH
Type	BUI330
Serial No.	855250033D0
Setup No.	NI
SW Version	NI
HW Version	NI
Comment 1	NI
Comment 2	NI

IUT Common Settings	
Tlow [°C]	-10
Tmid [°C]	20
Thigh [°C]	50
Vlow [V]	9
Vmid [V]	12
Vhigh [V]	15
Imax [A]	1
Antenna Gain [dBi]	0
Additional Path Loss [dB]	0.3

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 37   RXpayload 37
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   11   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	07.08.2018 08:48:48
System Version	1.0.0.9
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
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.40   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

## Test at TX 2402 MHz

RESULT: DTM Connection check

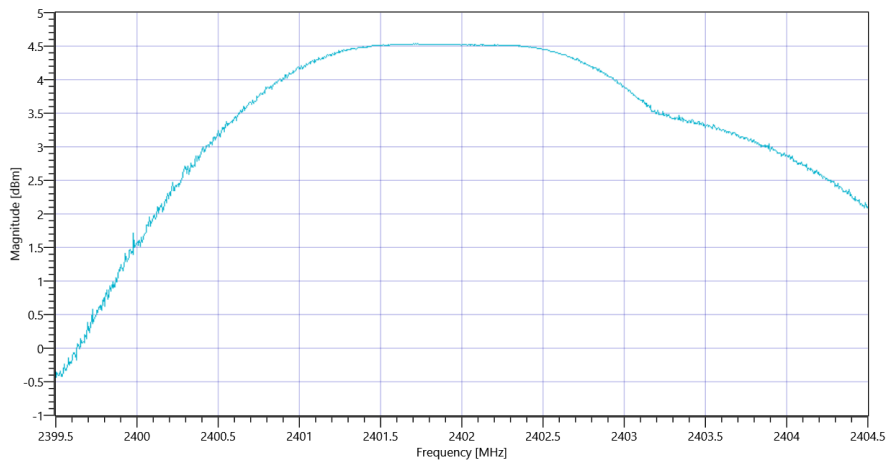
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	--	--	--	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	14.45
Ref. Lev. offs [dB]	10.09
Input Attenuation [dB]	20
Freq. Start [MHz]	2399.500
Freq. Stop [MHz]	2404.500
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	3.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	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	4.53	dBm	Information
Peak Power	--	1000	2.837919	mW	Information
Frequency at Peak	--	--	2401.705	MHz	Information



Plot\_Common2G4 Peak Output Power conducted 3MHz\_3MHz BT LE 1 Msps\_07082018\_084925.png

## Test at TX 2440 MHz

### RESULT: DTM Connection check

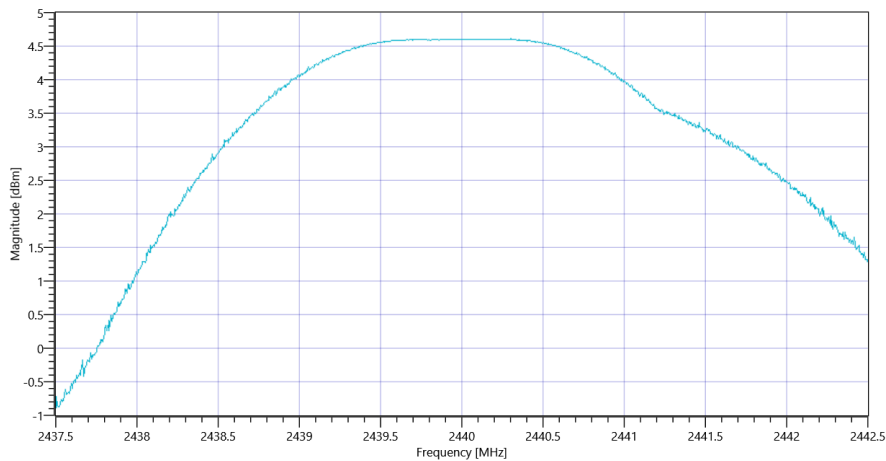
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	--	--	--	--	PASS

### READ SA SETTINGS:

Ref. Level [dBm]	14.52
Ref. Lev. offs [dB]	10.21
Input Attenuation [dB]	20
Freq. Start [MHz]	2437.500
Freq. Stop [MHz]	2442.500
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	3.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	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	4.61	dBm	Information
Peak Power	--	1000	2.89068	mW	Information
Frequency at Peak	--	--	2440.3	MHz	Information



Plot\_Common2G4 Peak Output Power conducted 3MHz\_3MHz BT LE 1 Msps\_07082018\_085000.png

## Test at TX 2480 MHz

RESULT: DTM Connection check

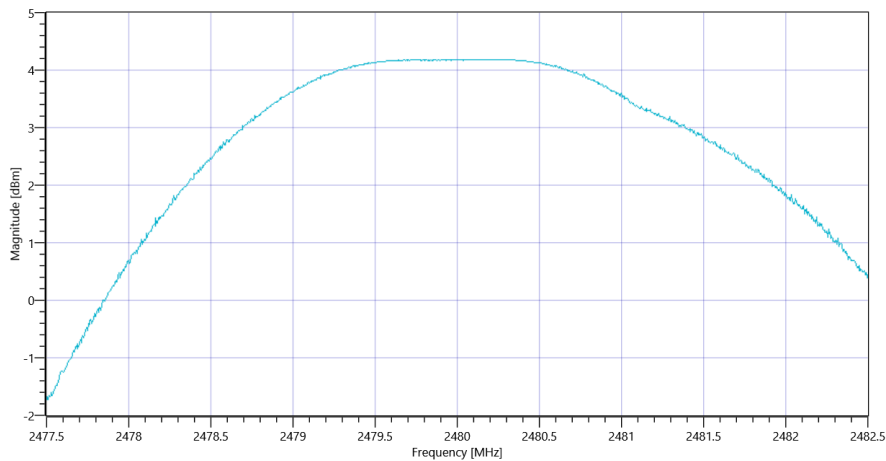
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	14.09
Ref. Lev. offs [dB]	10.26
Input Attenuation [dB]	20
Freq. Start [MHz]	2477.500
Freq. Stop [MHz]	2482.500
Resolution BW. [MHz]	3.000000
Video BW. [MHz]	3.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	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	4.19	dBm	Information
Peak Power	---	1000	2.624219	mW	Information
Frequency at Peak	---	---	2480.225	MHz	Information



Plot\_Common2G4 Peak Output Power conducted 3MHz\_3MHz BT LE 1 Msps\_07082018\_085036.png

TEST FINISHED

General Verdict

07.08.2018 08:50:36 / RT: 108 s

PASS

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

Test References	
TC Start	07.08.2018 08:52:03
System Version	1.0.0.9
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V04 - Chapter 9.1.1 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
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.40   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40



## Test at TX 2402 MHz

### RESULT: DTM Connection check

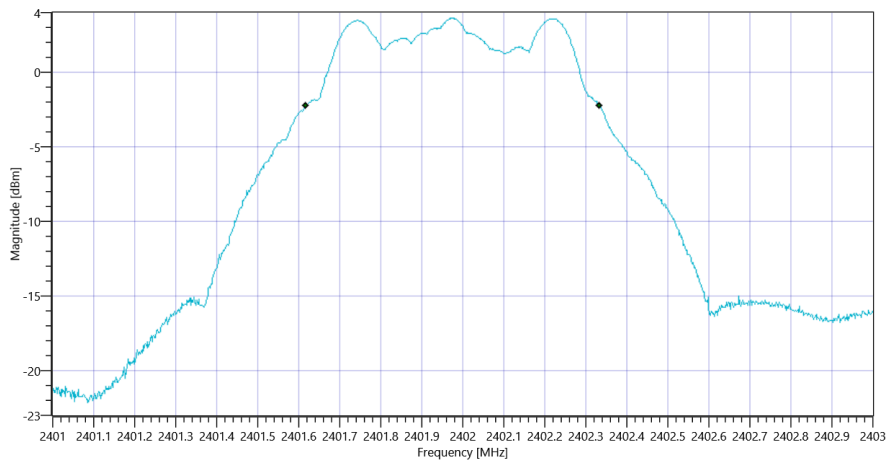
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	--	--	--	--	PASS

### READ SA SETTINGS:

Ref. Level [dBm]	9.45
Ref. Lev. offs [dB]	10.09
Input Attenuation [dB]	15
Freq. Start [MHz]	2401.000
Freq. Stop [MHz]	2403.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	--	--	0.716	MHz	Information

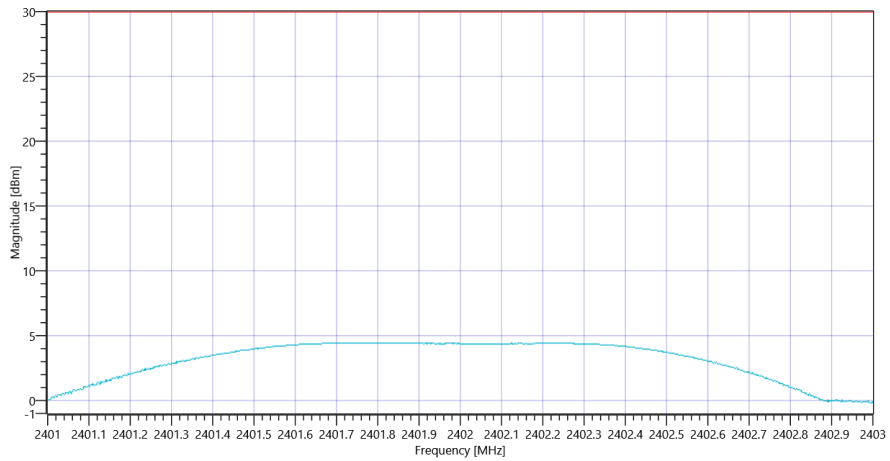


Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS BT LE 1 Msps DTS BW \_07082018\_085239.png

### READ SA SETTINGS:

Ref. Level [dBm]	14.45
Ref. Lev. offs [dB]	10.09
Input Attenuation [dB]	20
Freq. Start [MHz]	2401.000
Freq. Stop [MHz]	2403.000
Resolution BW. [MHz]	1.000000
Video BW. [MHz]	5.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	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	4.42	dBm	PASS
Peak Power	---	1000	2.766942	mW	PASS
Frequency at Peak	---	---	2401.74	MHz	Information



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS BT LE 1 Msps\_07082018\_085254.png

## Test at TX 2440 MHz

### RESULT: DTM Connection check

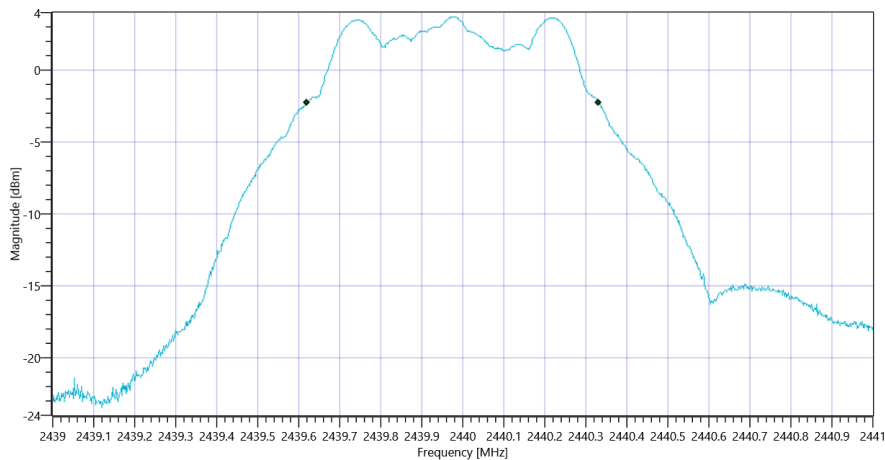
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

### READ SA SETTINGS:

Ref. Level [dBm]	9.52
Ref. Lev. offs [dB]	10.21
Input Attenuation [dB]	15
Freq. Start [MHz]	2439.000
Freq. Stop [MHz]	2441.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	0.712	MHz	Information

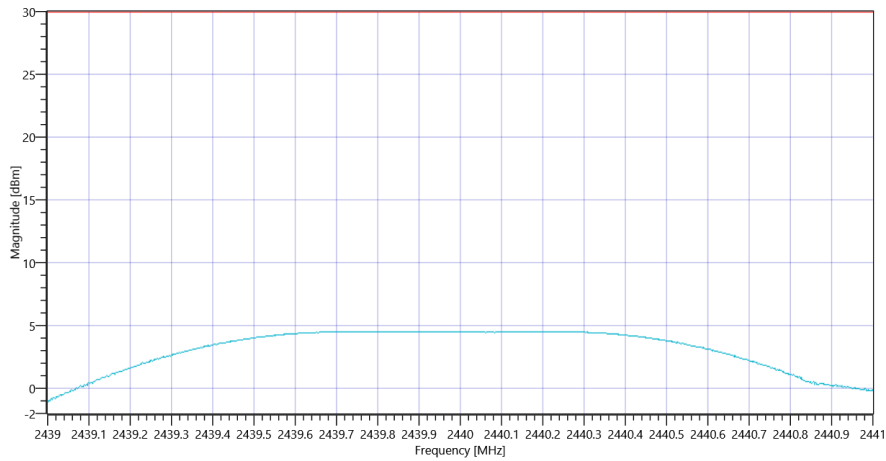


Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS BT LE 1 Msps DTS BW \_07082018\_085329.png

### READ SA SETTINGS:

Ref. Level [dBm]	14.52
Ref. Lev. offs [dB]	10.21
Input Attenuation [dB]	20
Freq. Start [MHz]	2439.000
Freq. Stop [MHz]	2441.000
Resolution BW. [MHz]	1.000000
Video BW. [MHz]	5.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	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	4.49	dBm	PASS
Peak Power	---	1000	2.811901	mW	PASS
Frequency at Peak	---	---	2440.222	MHz	Information



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS BT LE 1 Msps\_07082018\_085344.png

## Test at TX 2480 MHz

### RESULT: DTM Connection check

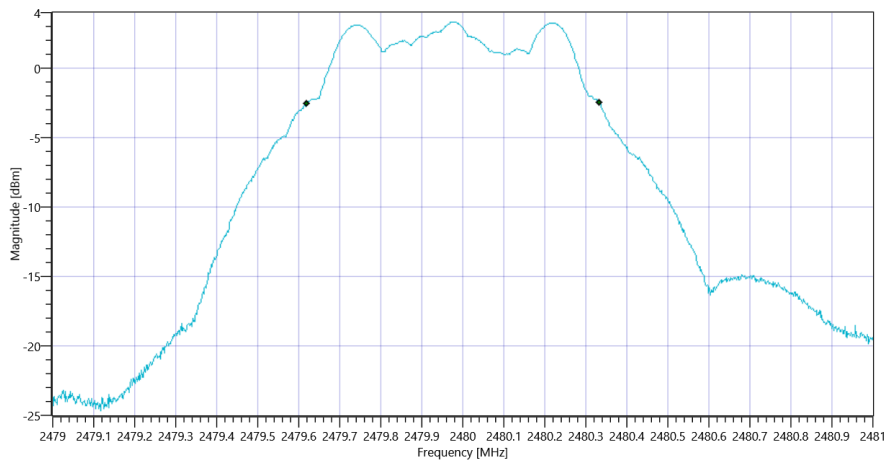
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

### READ SA SETTINGS:

Ref. Level [dBm]	9.09
Ref. Lev. offs [dB]	10.26
Input Attenuation [dB]	15
Freq. Start [MHz]	2479.000
Freq. Stop [MHz]	2481.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: DTS Bandwidth

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	---	---	0.714	MHz	Information



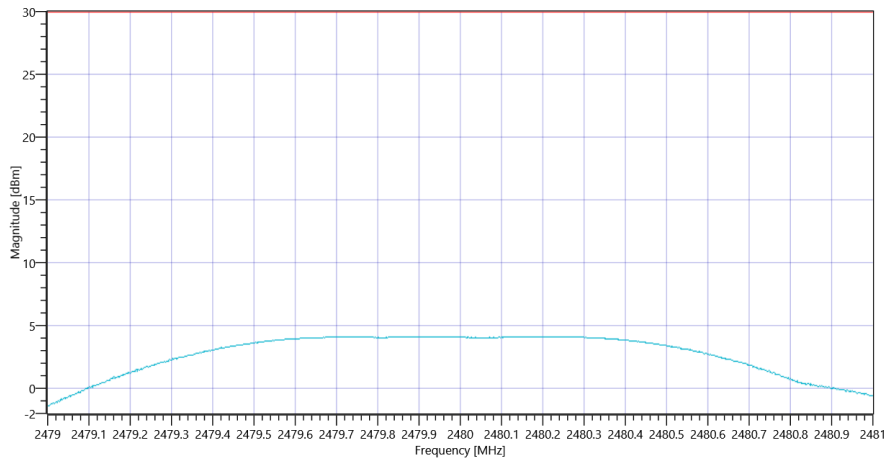
Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS BT LE 1 Msps DTS BW \_07082018\_085420.png

### READ SA SETTINGS:

Ref. Level [dBm]	14.09
Ref. Lev. offs [dB]	10.26
Input Attenuation [dB]	20
Freq. Start [MHz]	2479.000
Freq. Stop [MHz]	2481.000
Resolution BW. [MHz]	1.000000
Video BW. [MHz]	5.000000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	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	4.07	dBm	PASS
Peak Power	---	1000	2.552701	mW	PASS
Frequency at Peak	---	---	2480.236	MHz	Information



Plot\_FCC Part 15.247 Maximum Peak Conducted Output Power DTS BT LE 1 Msps\_07082018\_085435.png

TEST FINISHED

General Verdict

07.08.2018 08:54:35 / RT: 151 s

PASS

### 3. FCC Part 15.247 Bandwidth 6dB DTS BT LE 1 Msp/s

Test References	
TC Start	07.08.2018 08:54:37
System Version	1.0.0.9
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V04 - Chapter 8.1 DTS Bandwidth
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/s
Add. Information	

Test Parameter	
Technology to test	BT LE 1 Msp/s
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
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.40   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

## Test at TX 2402 MHz

RESULT: DTM Connection check

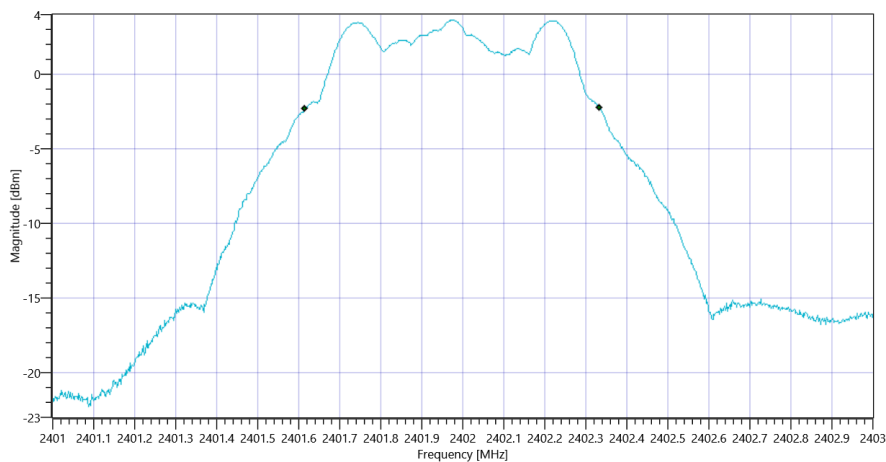
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	9.43
Ref. Lev. offs [dB]	10.09
Input Attenuation [dB]	15
Freq. Start [MHz]	2401.000
Freq. Stop [MHz]	2403.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC\_VM\_FCC15247\_Bandwidth\_6dB\_DTS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	0.500	---	0.718	MHz	PASS



Plot\_FCC Part 15.247 Bandwidth 6dB DTS BT LE 1 Msps\_07082018\_085513.png



## Test at TX 2440 MHz

**RESULT: DTM Connection check**

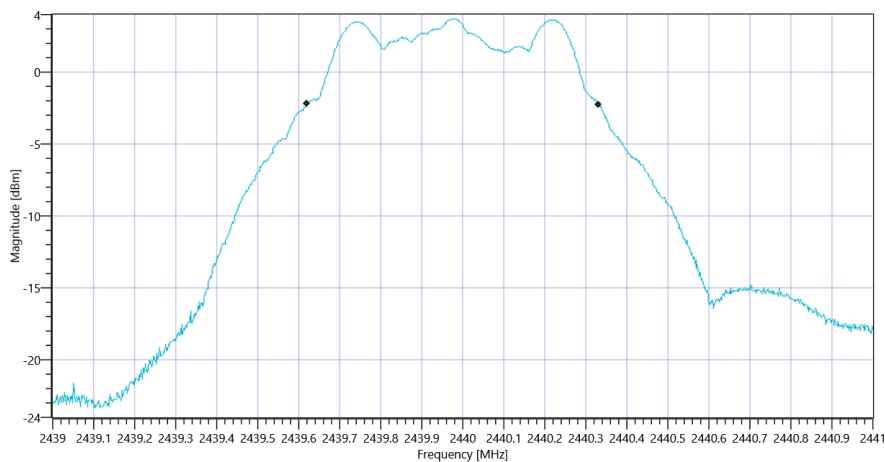
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

**READ SA SETTINGS:**

Ref. Level [dBm]	9.51
Ref. Lev. offs [dB]	10.21
Input Attenuation [dB]	15
Freq. Start [MHz]	2439.000
Freq. Stop [MHz]	2441.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

**RESULT: TC\_VM\_FCC15247\_Bandwidth\_6dB\_DTS\_V01**

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	0.500	---	0.712	MHz	PASS



Plot\_FCC Part 15.247 Bandwidth 6dB DTS BT LE 1 Msps\_07082018\_085548.png

## Test at TX 2480 MHz

RESULT: DTM Connection check

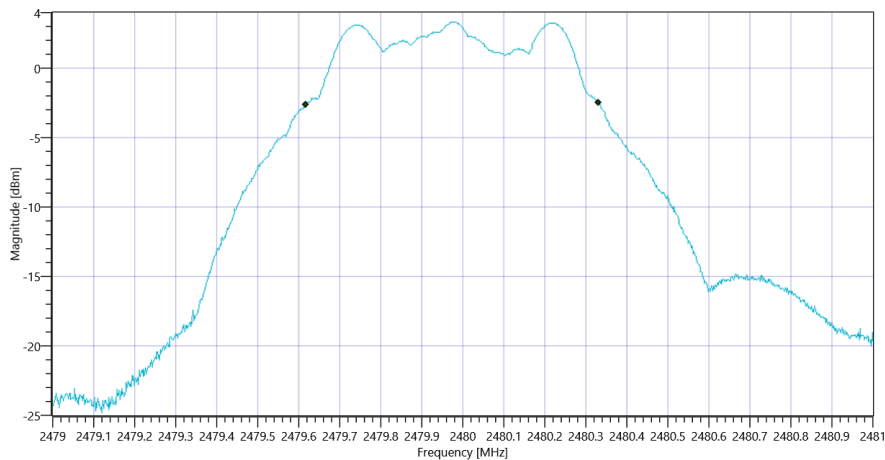
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	9.09
Ref. Lev. offs [dB]	10.26
Input Attenuation [dB]	15
Freq. Start [MHz]	2479.000
Freq. Stop [MHz]	2481.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC\_VM\_FCC15247\_Bandwidth\_6dB\_DTS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	0.500	---	0.714	MHz	PASS



Plot\_FCC Part 15.247 Bandwidth 6dB DTS BT LE 1 Msps\_07082018\_085627.png

TEST FINISHED

General Verdict

07.08.2018 08:56:28 / RT: 110 s

PASS

## 4. FCC Part 15.247 Peak Power Spectral Density DTS BT LE 1 Msp

Test References	
TC Start	07.08.2018 08:56:29
System Version	1.0.0.9
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V04 - Chapter 10.2 Peak PSD
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 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
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.40   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

## Test at TX 2402 MHz

RESULT: DTM Connection check

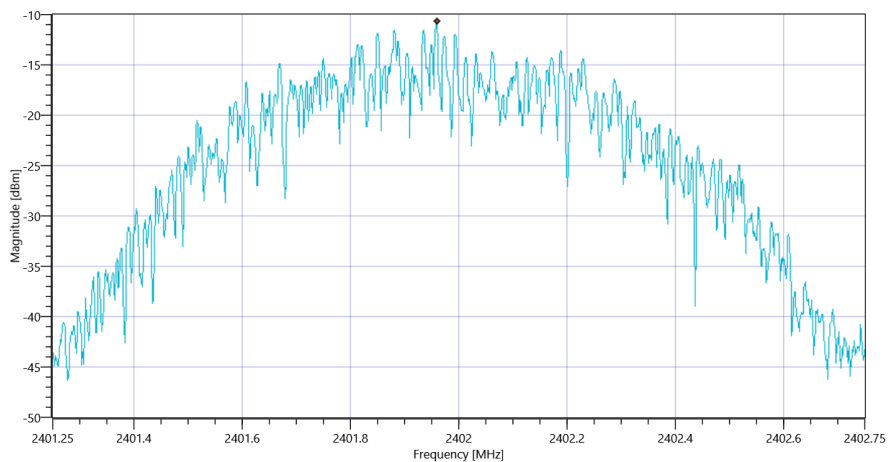
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	9.43
Ref. Lev. offs [dB]	10.09
Input Attenuation [dB]	15
Freq. Start [MHz]	2401.250
Freq. Stop [MHz]	2402.750
Resolution BW. [MHz]	0.003000
Video BW. [MHz]	0.010000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	20
Sweep Mode	MAXH
Used Sweep Type	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	-10.75	dBm/3KHz	PASS



Plot\_FCC Part 15.247 Peak Power Spectral Density DTS BT LE 1 Msps\_07082018\_085715.png

## Test at TX 2440 MHz

RESULT: DTM Connection check

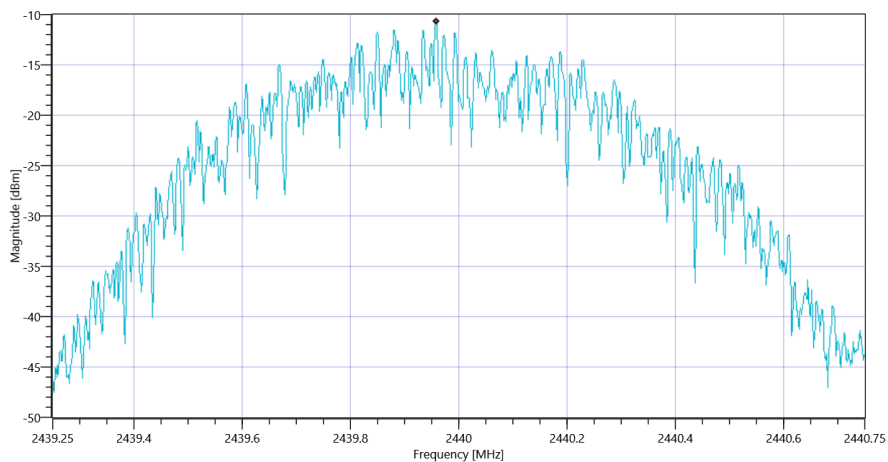
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	9.51
Ref. Lev. offs [dB]	10.21
Input Attenuation [dB]	15
Freq. Start [MHz]	2439.250
Freq. Stop [MHz]	2440.750
Resolution BW. [MHz]	0.003000
Video BW. [MHz]	0.010000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	20
Sweep Mode	MAXH
Used Sweep Type	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	-10.66	dBm/3KHz	PASS



Plot\_FCC Part 15.247 Peak Power Spectral Density DTS BT LE 1 Msps\_07082018\_085801.png

## Test at TX 2480 MHz

RESULT: DTM Connection check

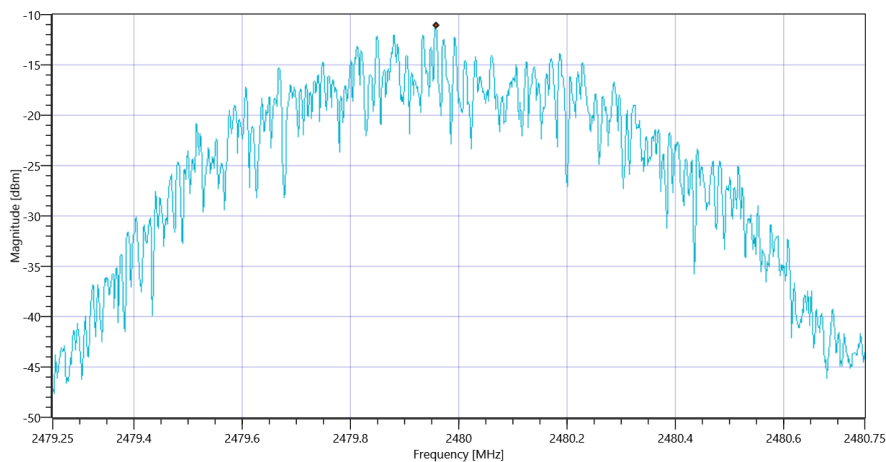
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	9.07
Ref. Lev. offs [dB]	10.26
Input Attenuation [dB]	15
Freq. Start [MHz]	2479.250
Freq. Stop [MHz]	2480.750
Resolution BW. [MHz]	0.003000
Video BW. [MHz]	0.010000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	20
Sweep Mode	MAXH
Used Sweep Type	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	-11.06	dBm/3KHz	PASS



Plot\_FCC Part 15.247 Peak Power Spectral Density DTS BT LE 1 Msps\_07082018\_085847.png

TEST FINISHED

General Verdict

07.08.2018 08:58:47 / RT: 137 s

PASS

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

Test References	
TC Start	07.08.2018 08:58:48
System Version	1.0.0.9
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
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.40   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

## Test at TX 2402 MHz

RESULT: DTM Connection check

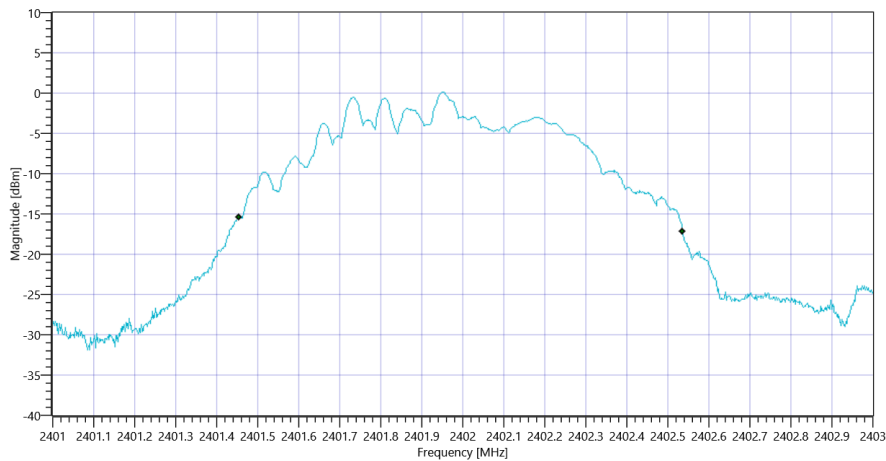
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	--	--	--	--	PASS

READ SA SETTINGS:

Ref. Level [dBm]	9.43
Ref. Lev. offs [dB]	10.09
Input Attenuation [dB]	15
Freq. Start [MHz]	2401.000
Freq. Stop [MHz]	2403.000
Resolution BW. [MHz]	0.030000
Video BW. [MHz]	0.100000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

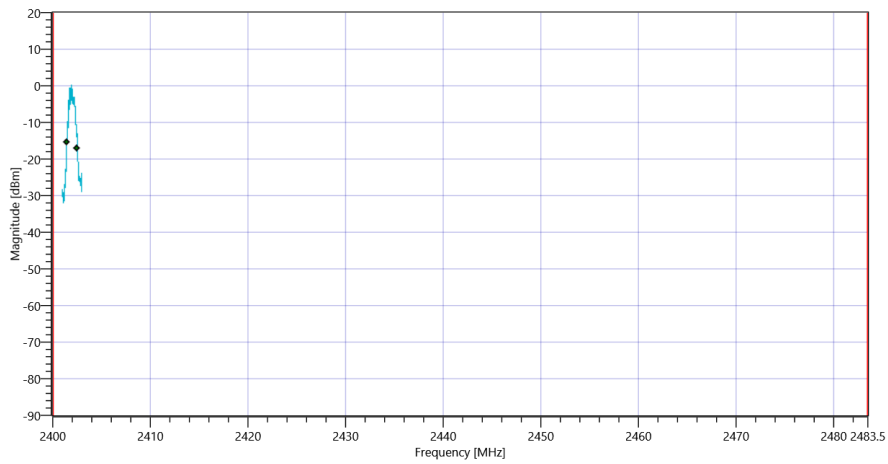
RESULT: TC\_VM\_FCC15247\_Bandwidth\_99PCT\_20dB\_DTS\_FHSS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	1.081	MHz	Information
T1	2400.000000	--	2401.4545	MHz	PASS
T2	--	2483.500000	2402.5355	MHz	PASS



Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps 99PCT\_07082018\_085925.png

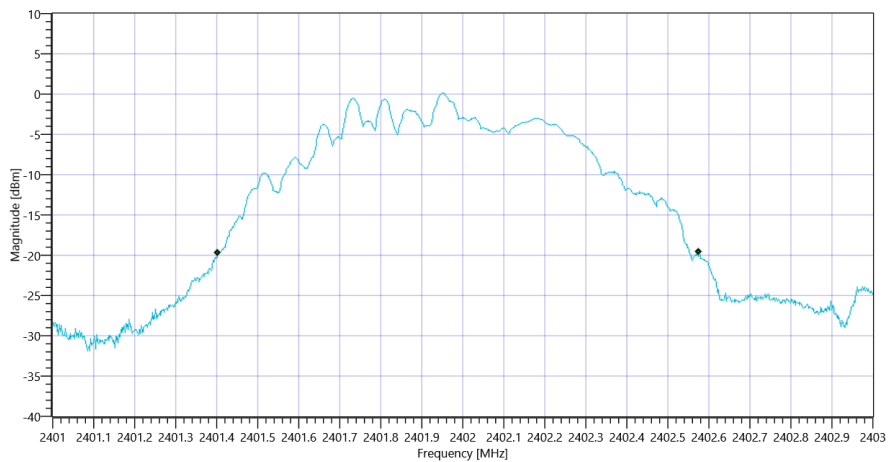




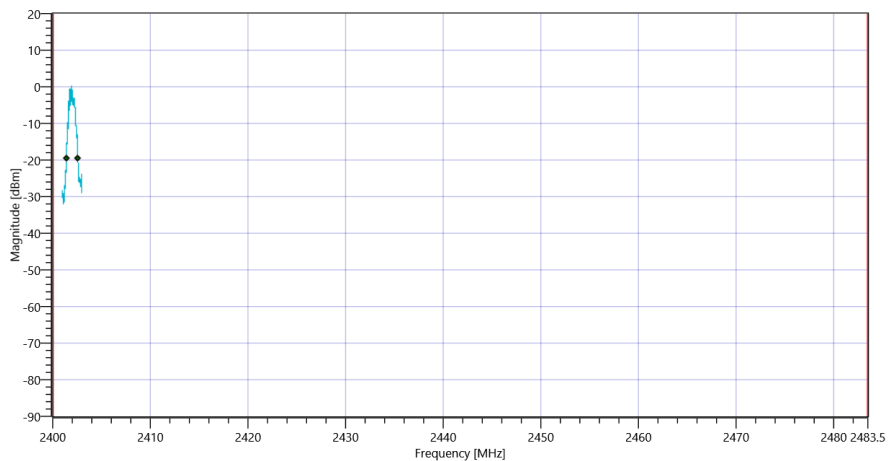
Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps\_07082018\_085927.png

RESULT: TC\_VM\_FCC15247\_Bandwidth\_99PCT\_20dB\_DTS\_FHSS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	1.174	MHz	Information
T1 20dB	2400.000000	--	2401.4020	MHz	PASS
T2 20dB	--	2483.500000	2402.5760	MHz	PASS



Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps 20dB\_07082018\_085931.png



Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps\_07082018\_085934.png

## Test at TX 2440 MHz

RESULT: DTM Connection check

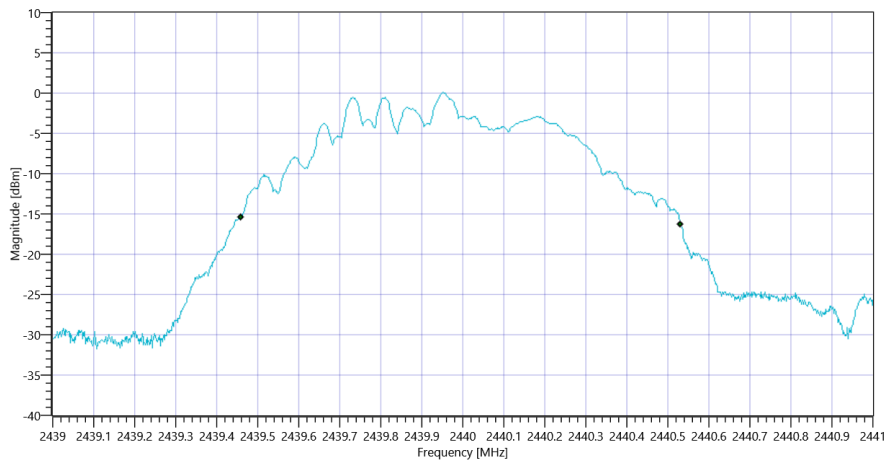
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	--	--	--	--	PASS

READ SA SETTINGS:

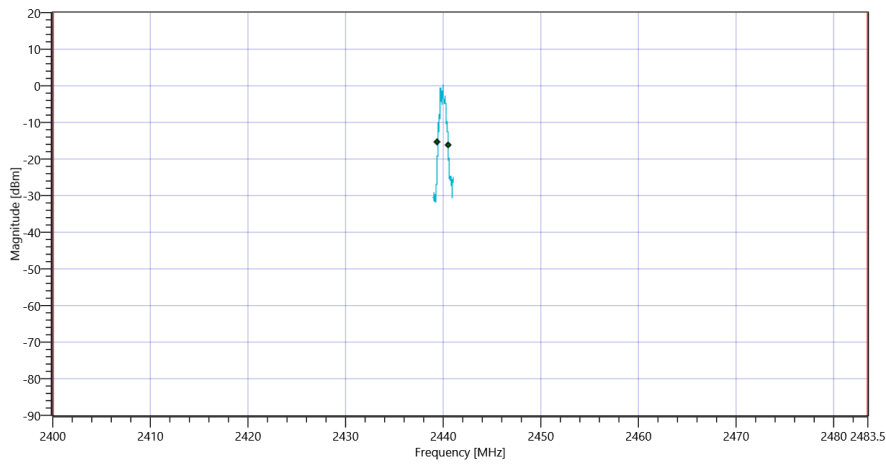
Ref. Level [dBm]	9.52
Ref. Lev. offs [dB]	10.21
Input Attenuation [dB]	15
Freq. Start [MHz]	2439.000
Freq. Stop [MHz]	2441.000
Resolution BW. [MHz]	0.030000
Video BW. [MHz]	0.100000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC\_VM\_FCC15247\_Bandwidth\_99PCT\_20dB\_DTS\_FHSS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	1.073	MHz	Information
T1	2400.000000	--	2439.4585	MHz	PASS
T2	--	2483.500000	2440.5315	MHz	PASS

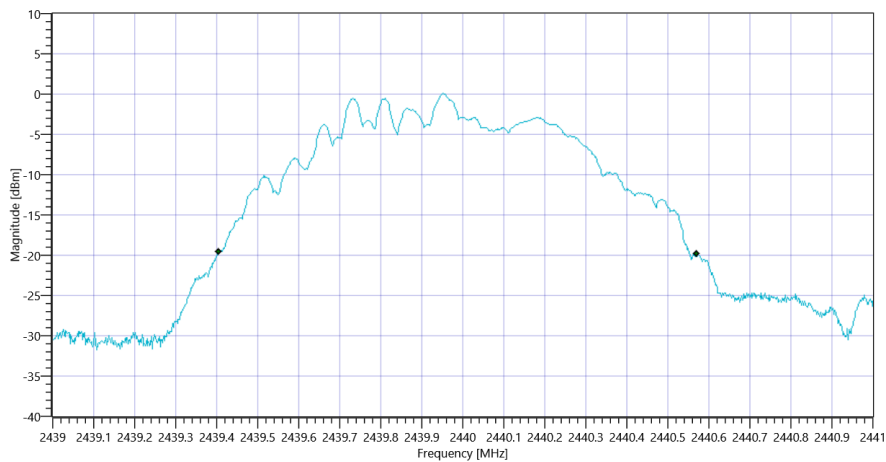


Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps 99PCT\_07082018\_090010.png

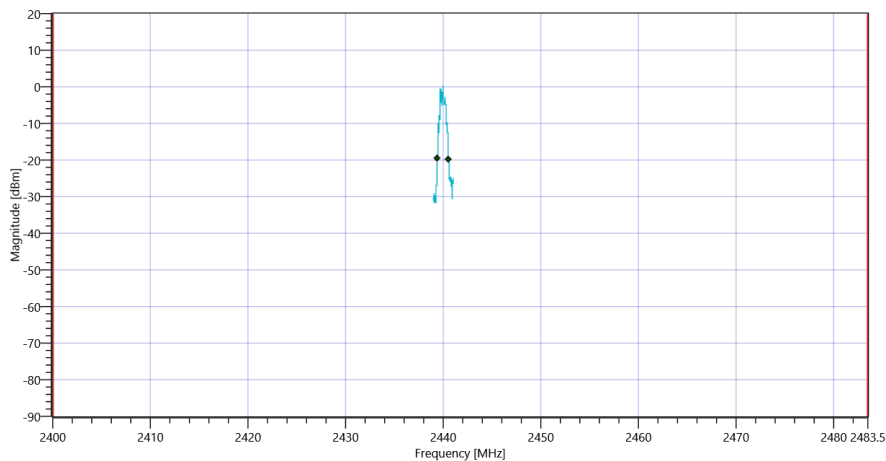


Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps\_07082018\_090013.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	1.166	MHz	Information
T1 20dB	2400.000000	--	2439.4040	MHz	PASS
T2 20dB	--	2483.500000	2440.5700	MHz	PASS



Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps 20dB\_07082018\_090017.png



Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps\_07082018\_090019.png

## Test at TX 2480 MHz

### RESULT: DTM Connection check

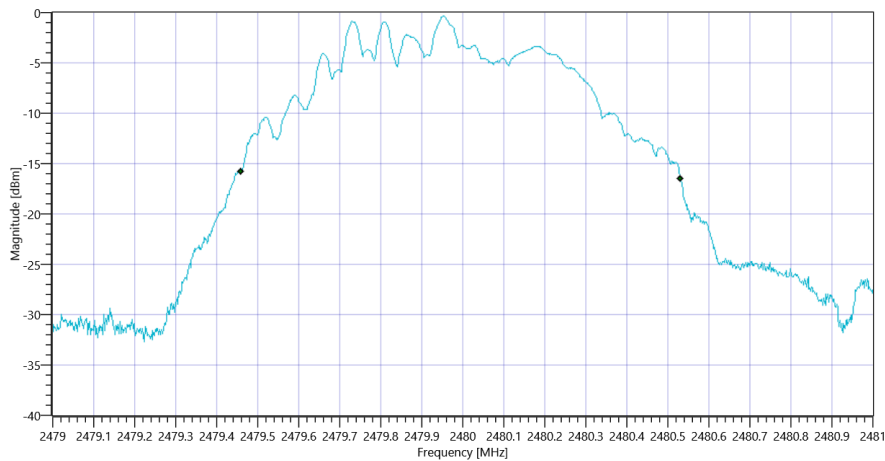
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

### READ SA SETTINGS:

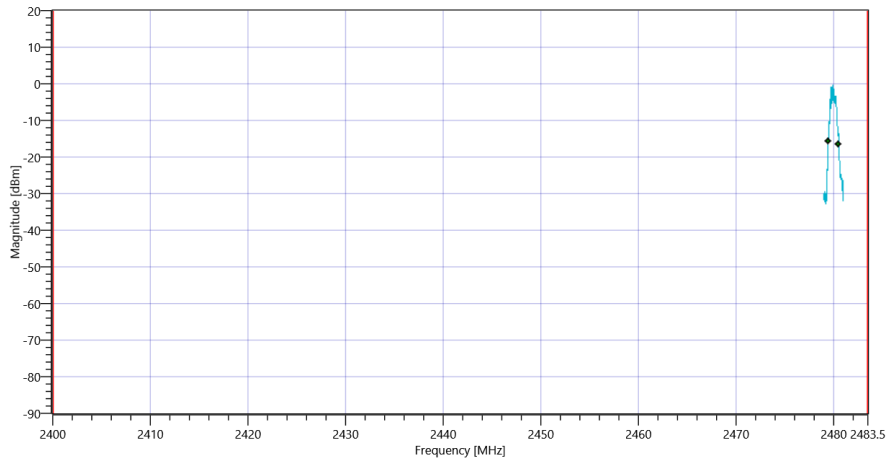
Ref. Level [dBm]	9.06
Ref. Lev. offs [dB]	10.26
Input Attenuation [dB]	15
Freq. Start [MHz]	2479.000
Freq. Stop [MHz]	2481.000
Resolution BW. [MHz]	0.030000
Video BW. [MHz]	0.100000
Detector	POS
Sweep Time [ms]	1000
Sweep Points/Section	1001
Sweep Count	10
Sweep Mode	MAXH
Used Sweep Type	SWE

### RESULT: TC\_VM\_FCC15247\_Bandwidth\_99PCT\_20dB\_DTS\_FHSS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	1.073	MHz	Information
T1	2400.000000	---	2479.4585	MHz	PASS
T2	---	2483.500000	2480.5315	MHz	PASS

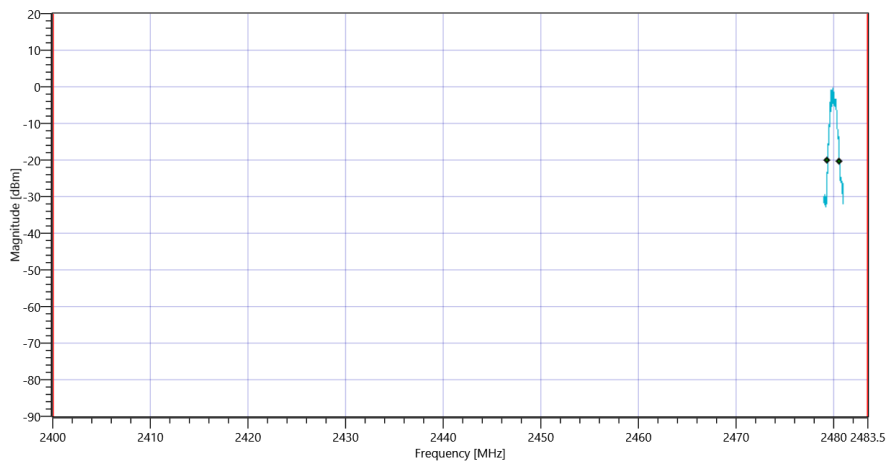
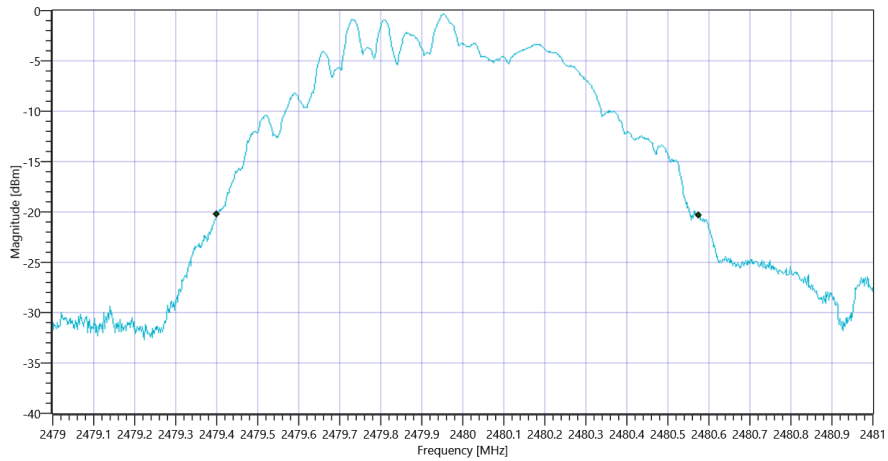


Plot\_FCC Part 15.247 Bandwidth 99PCT - 20dB BT LE 1 Msps 99PCT\_07082018\_090056.png



RESULT: TC\_VM\_FCC15247\_Bandwidth\_99PCT\_20dB\_DTS\_FHSS\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	1.176	MHz	Information
T1 20dB	2400.000000	--	2479.4000	MHz	PASS
T2 20dB	--	2483.500000	2480.5760	MHz	PASS



TEST FINISHED

General Verdict

07.08.2018 09:01:06 / RT: 137 s

PASS

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

Test References	
TC Start	07.08.2018 09:01:08
System Version	1.0.0.9
Test Specification	FCC Part 15.247
Test Method	
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 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
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.40   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

## Test at TX 2402 MHz

RESULT: DTM Connection check

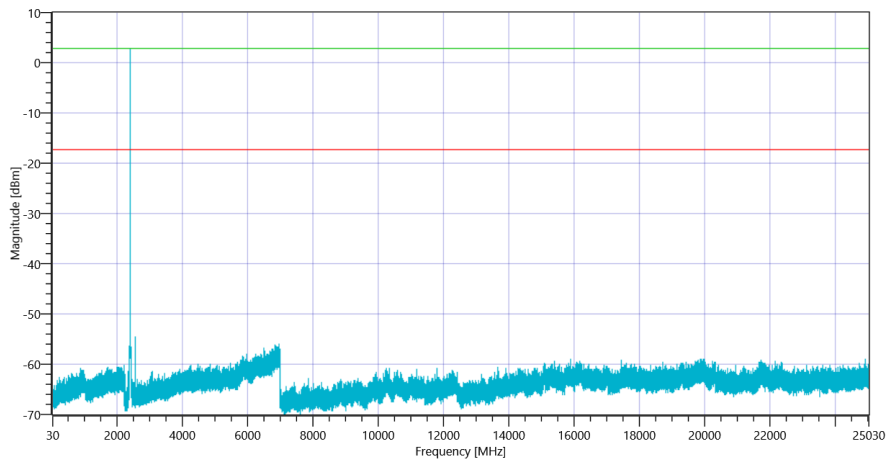
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	--	--	--	--	PASS

READ SA SETTINGS:

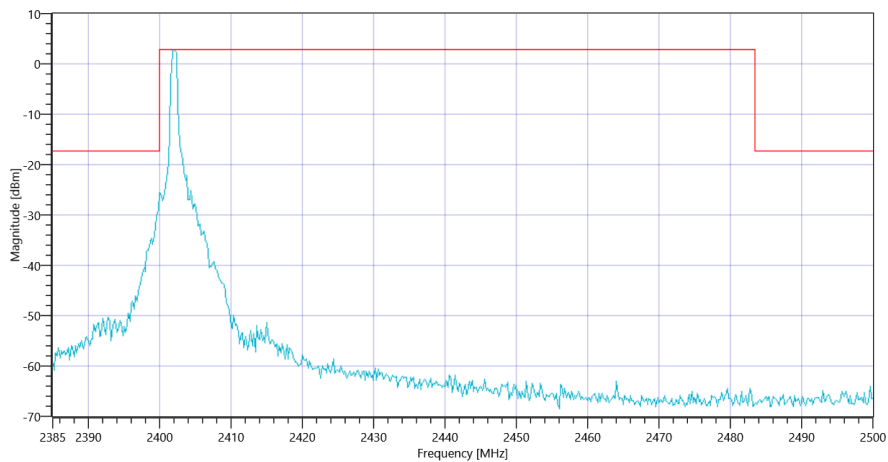
Ref. Level [dBm]	9.43
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	1001
Sweep Count	3
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC\_VM\_FCC15247\_TX\_Emissions\_Conducted\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2402.00 MHz	--	--	2.76	dBm	Information
No peaks detected	--	--			PASS



Plot\_FCC Part 15.247 TX Spurious Conducted BT LE 1 Msps 2402\_07082018\_090701.png



Plot\_FCC Part 15.247 TX Spurious Conducted BT LE 1 Msps 2402\_07082018\_090704.png



## Test at TX 2440 MHz

RESULT: DTM Connection check

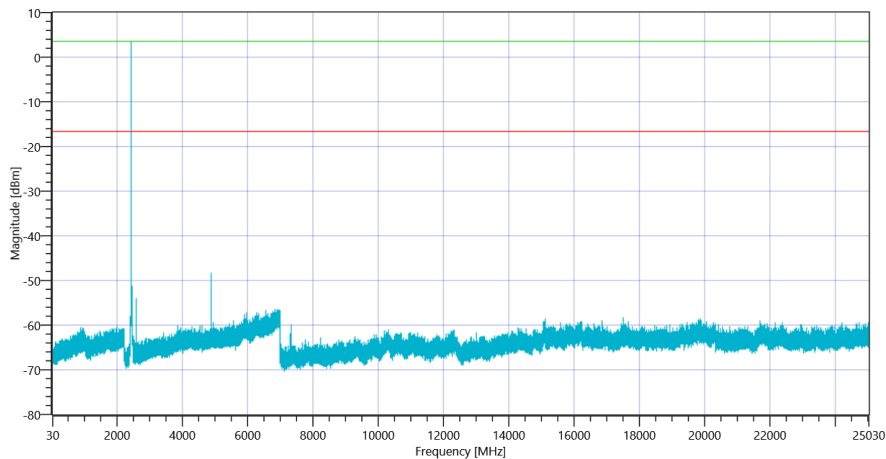
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

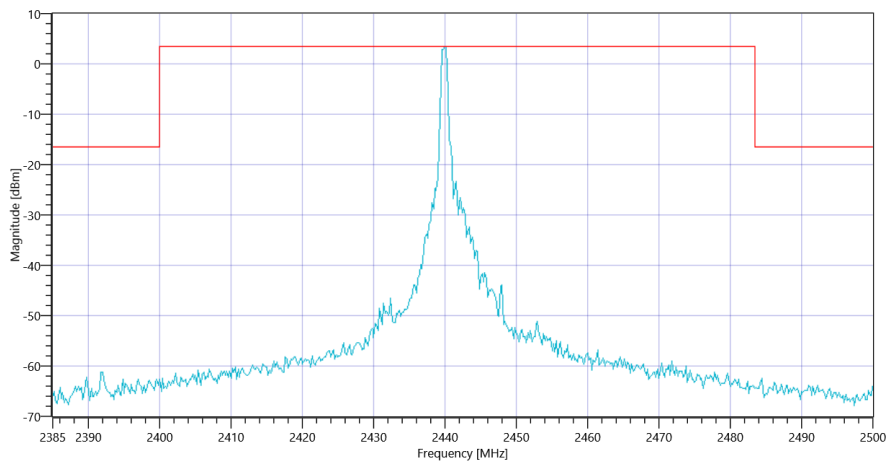
Ref. Level [dBm]	9.53
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	1001
Sweep Count	3
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC\_VM\_FCC15247\_TX\_Emissions\_Conducted\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.20 MHz	---	---	3.43	dBm	Information
No peaks detected	---	---			PASS



Plot\_FCC Part 15.247 TX Spurious Conducted BT LE 1 Msps 2440\_07082018\_091258.png



Plot\_FCC Part 15.247 TX Spurious Conducted BT LE 1 Msps 2440\_07082018\_091301.png

## Test at TX 2480 MHz

RESULT: DTM Connection check

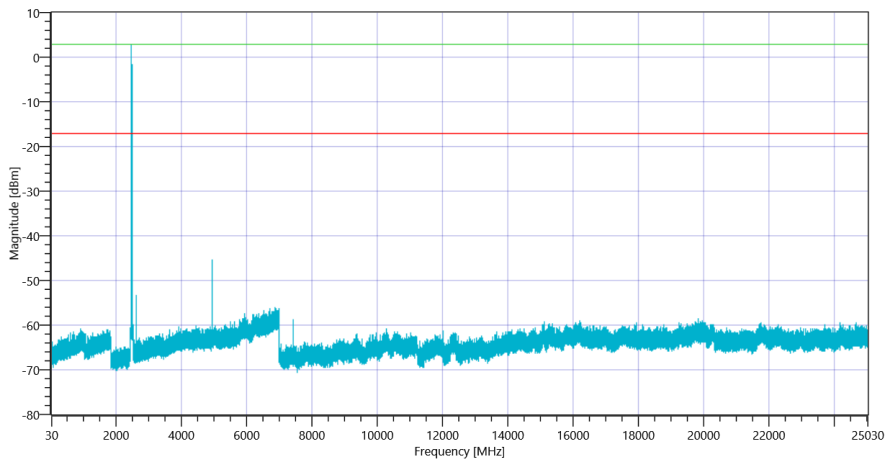
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

READ SA SETTINGS:

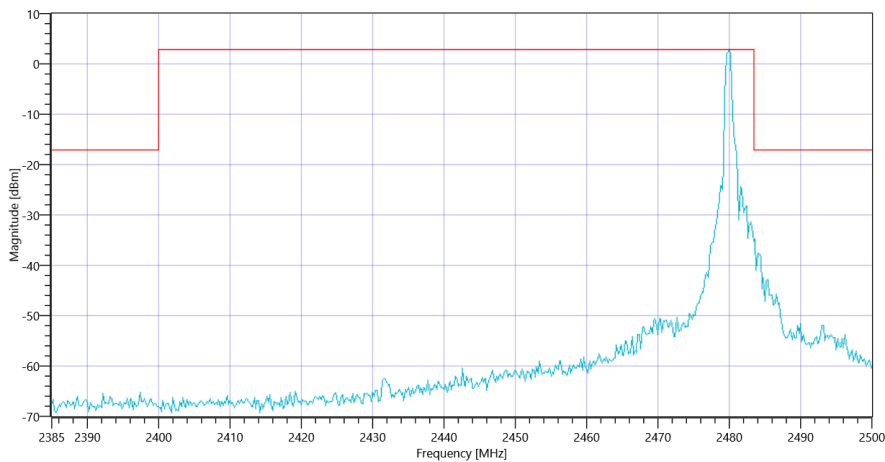
Ref. Level [dBm]	9.03
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	1001
Sweep Count	3
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC\_VM\_FCC15247\_TX\_Emissions\_Conducted\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2480.00 MHz	---	---	2.83	dBm	Information
No peaks detected	---	---			PASS



Plot\_FCC Part 15.247 TX Spurious Conducted BT LE 1 Msps 2480\_07082018\_091855.png



Plot\_FCC Part 15.247 TX Spurious Conducted BT LE 1 Msps 2480\_07082018\_091858.png

TEST FINISHED

General Verdict

07.08.2018 09:18:59 / RT: 1070 s

PASS

## 7. FCC Part 15.247 Restricted Band Edge Conducted Peak DTS BT LE 1 Msps

Test References	
TC Start	07.08.2018 09:19:01
System Version	1.0.0.9
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V04 - 13.3.3 EUT transmissions with max hold
Class / TC Version / TC ID	TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Peak_V01 Version: 0.0.1   TCID_FCC15247_7
My Description	FCC 15.247 Restricted Band Edge Conducted Peak 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	False   Freq [MHz] 2440
Frequency high to test	True   Freq [MHz] 2480
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CMW,1201.0002k75/100683,3.7.40   SA: Rohde&Schwarz,FSV-30,1321.3008K30/103809,3.40

## Test at TX 2402 MHz

### RESULT: DTM Connection check

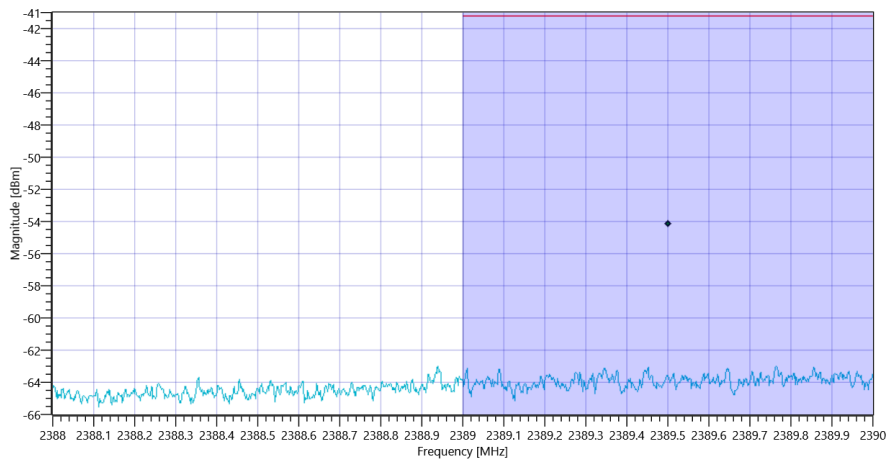
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

### READ SA SETTINGS:

Ref. Level [dBm]	9.41
Ref. Lev. offs [dB]	10.09
Input Attenuation [dB]	15
Freq. Start [MHz]	2388.000
Freq. Stop [MHz]	2390.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.002000
Detector	POS
Sweep Time [ms]	8
Sweep Points/Section	1001
Sweep Count	300
Sweep Mode	MAXH
Used Sweep Type	SWE
Marker Method	Band Power

### RESULT: TC\_VM\_FCC15247\_Restricted\_Band\_Edge\_Conducted\_Peak\_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Band Power without Antenna Gain	---	-41.23	-54.19	dBm	Information
Band Power incl. Antenna Gain	---	-41.23	-54.19	dBm	PASS



Plot\_FCC Part 15.247 Restricted Band Edge Conducted Peak DTS BT LE 1 Msps\_07082018\_091929.png

## Test at TX 2480 MHz

**RESULT: DTM Connection check**

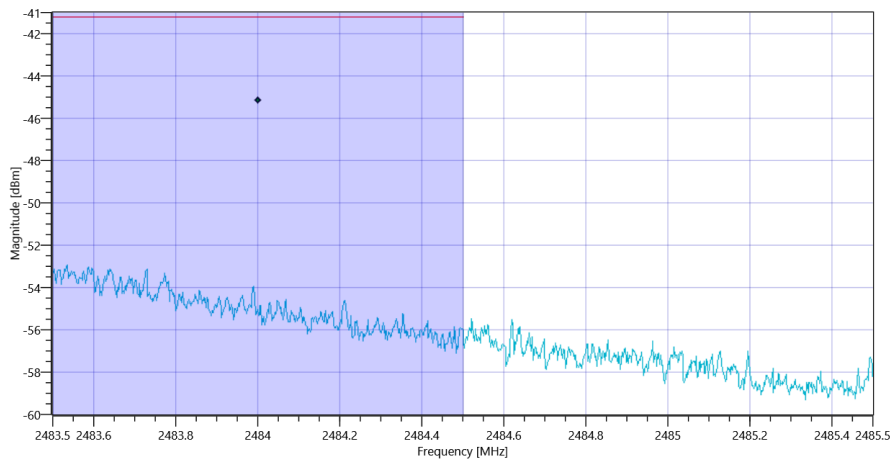
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Connection result	---	---	---	--	PASS

**READ SA SETTINGS:**

Ref. Level [dBm]	9.03
Ref. Lev. offs [dB]	10.26
Input Attenuation [dB]	15
Freq. Start [MHz]	2483.500
Freq. Stop [MHz]	2485.500
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.002000
Detector	POS
Sweep Time [ms]	8
Sweep Points/Section	1001
Sweep Count	300
Sweep Mode	MAXH
Used Sweep Type	SWE
Marker Method	Band Power

**RESULT: TC\_VM\_FCC15247\_Restricted\_Band\_Edge\_Conducted\_Peak\_V01**

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Band Power without Antenna Gain	---	-41.23	-45.15	dBm	Information
Band Power incl. Antenna Gain	---	-41.23	-45.15	dBm	PASS



Plot\_FCC Part 15.247 Restricted Band Edge Conducted Peak DTS BT LE 1 Msps\_07082018\_091958.png

**TEST FINISHED**

General Verdict

07.08.2018 09:19:58 / RT: 57 s

PASS