

34. FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 g-mode

Test References	
TC Start	04.07.2019 12:17:02
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01 Version: 0.0.1 TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 g-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 g-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - PowerMeter
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 NRP-Z81,102585

Test at TX 2462 MHz

RESULT: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	17.71	dBm	PASS

TEST FINISHED

General Verdict

04.07.2019 12:17:06 / RT: 4 s

PASS

35. FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 12:21:27
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

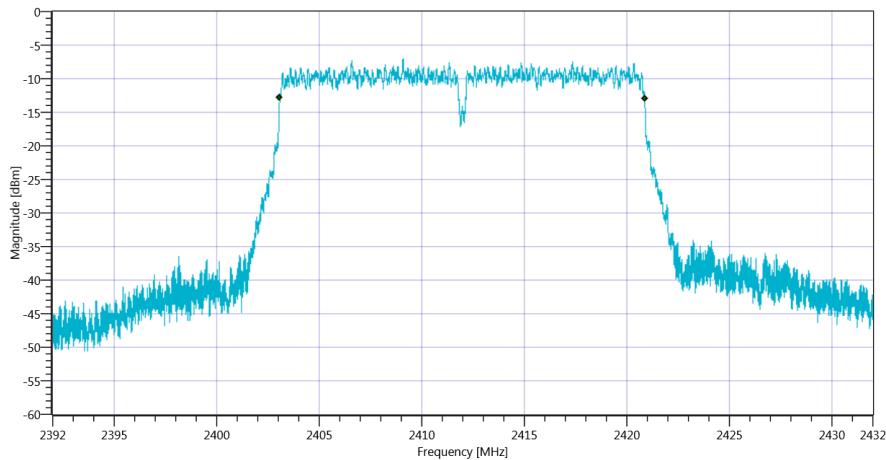
Test at TX 2412 MHz

READ SA SETTINGS:

Ref. Level [dBm]	8.41
Ref. Lev. offs [dB]	9.83
Input Attenuation [dB]	15
Freq. Start [MHz]	2392.000
Freq. Stop [MHz]	2432.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
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)	500	--	17804	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT20-mode_04072019_122155.png

TEST FINISHED

General Verdict

04.07.2019 12:21:55 / RT: 28 s

PASS

36. FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 12:21:59
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

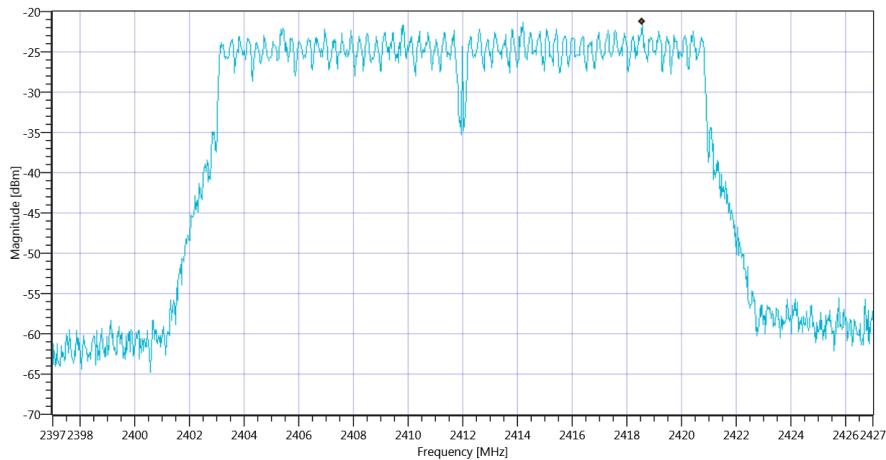
Test at TX 2412 MHz

READ SA SETTINGS:

Ref. Level [dBm]	8.49
Ref. Lev. offs [dB]	9.83
Input Attenuation [dB]	15
Freq. Start [MHz]	2397.000
Freq. Stop [MHz]	2427.000
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	-21.32	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT20-mode_04072019_122233.png

TEST FINISHED

General Verdict

04.07.2019 12:22:33 / RT: 34 s

PASS

37. FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 12:22:37
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

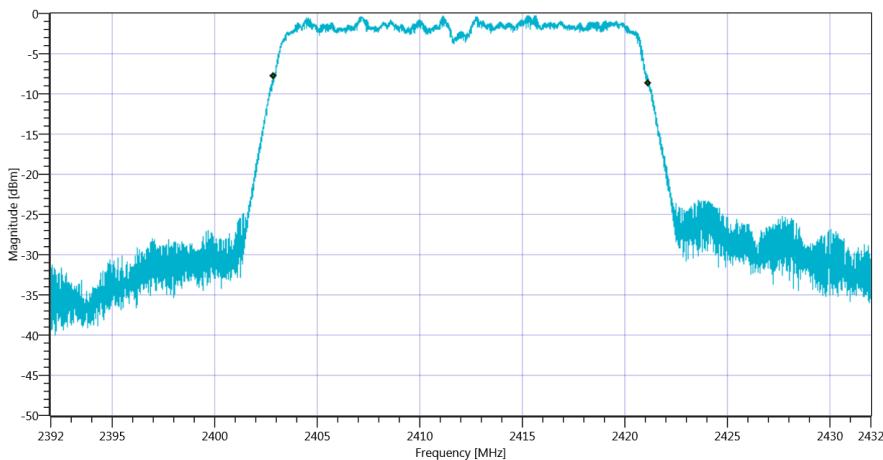
Test at TX 2412 MHz

READ SA SETTINGS:

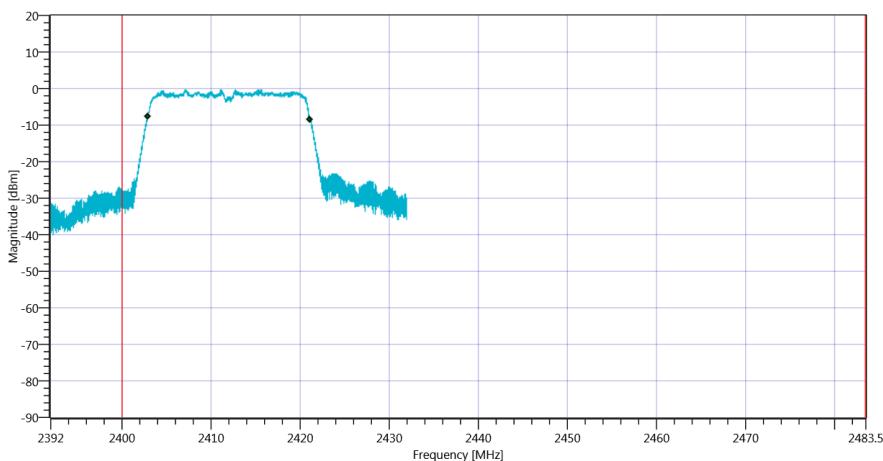
Ref. Level [dBm]	8.59
Ref. Lev. offs [dB]	9.83
Input Attenuation [dB]	15
Freq. Start [MHz]	2392.000
Freq. Stop [MHz]	2432.000
Resolution BW. [MHz]	0.500000
Video BW. [MHz]	1.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	18282	kHz	Information
T1 99%	2400.000000	--	2402.8689	MHz	PASS
T2 99%	--	2483.500000	2421.1511	MHz	PASS



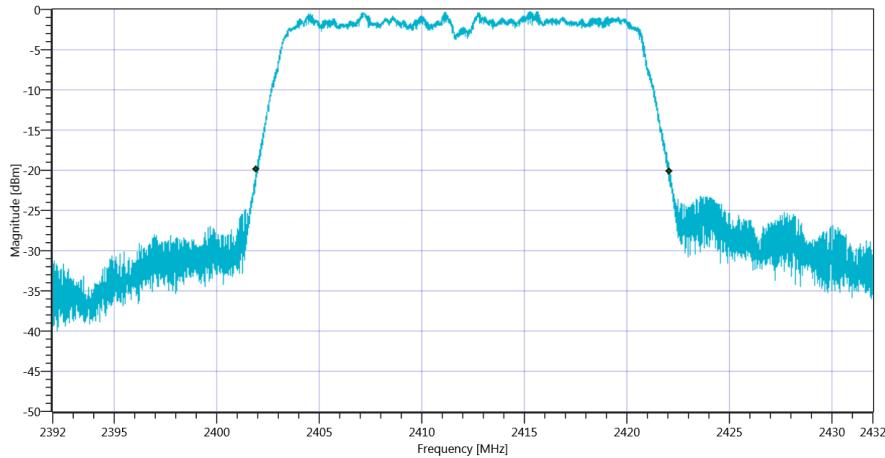
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode 99PCT_04072019_122301.png



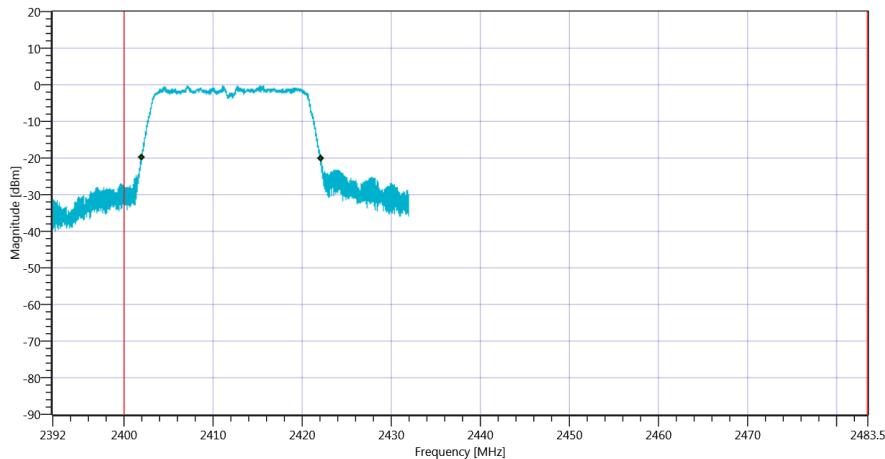
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode_04072019_122304.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	20136	kHz	Information
T1 20dB	2400.000000	--	2401.9480	MHz	PASS
T2 20dB	--	2483.500000	2422.0840	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode 20dB_04072019_122308.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode_04072019_122311.png

TEST FINISHED

General Verdict

04.07.2019 12:23:11 / RT: 34 s

PASS

38. FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 12:23:15
System Version	1.0.0.16
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 - WLAN 2G4 nHT20-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

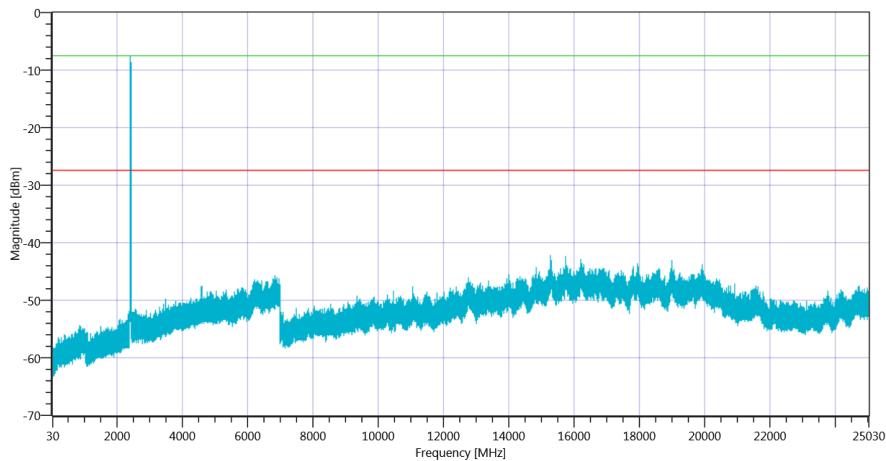
Test at TX 2412 MHz

READ SA SETTINGS:

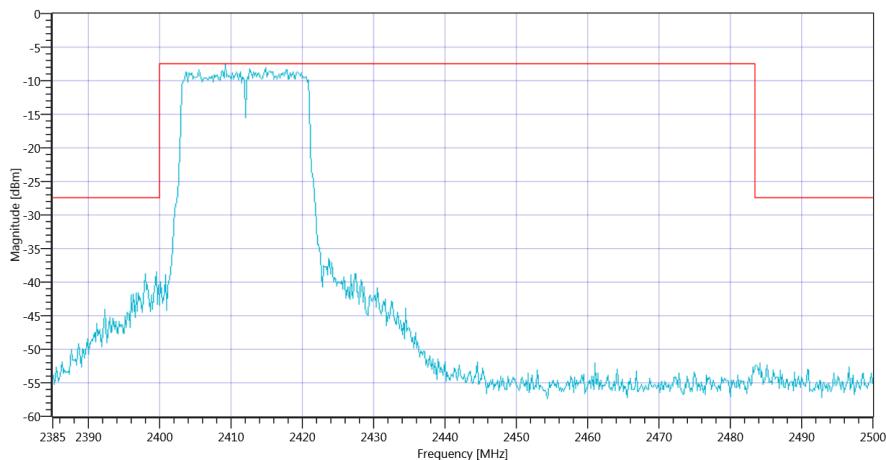
Ref. Level [dBm]	8.61
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	3001
Sweep Count	8
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2409.17 MHz	--	--	-7.45	dBm	Information
No peaks detected	--	--			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2412_04072019_122800.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2412_04072019_122803.png

TEST FINISHED

General Verdict

04.07.2019 12:28:04 / RT: 288 s

PASS

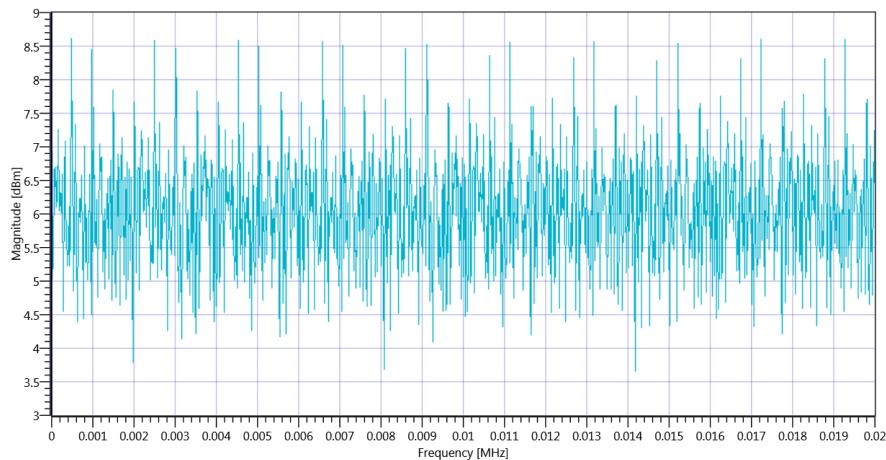
39. FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 12:28:08
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - 8.7.3 Integration Method; ANSI C63.10-2013 11.13.3.4 Trace averaging across on- and off-times of the EUT transmissions followed by duty cycle correction
Class / TC Version / TC ID	TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01 Version: 0.0.1 TCID_FCC15247_7
My Description	FCC 15.247 Restricted Band Edge Cond. Avg DC corrected DTS - WLAN 2G4 nHT20_mode
Add. Information	

Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

Test at TX 2412 MHz

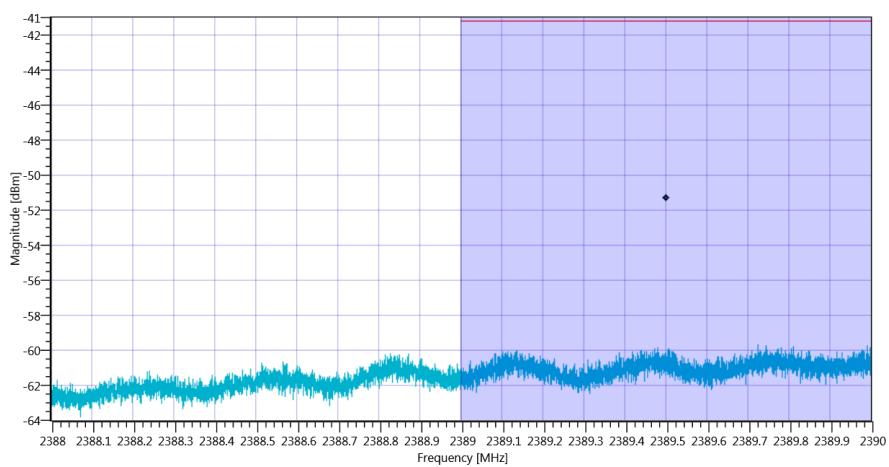
RESULT: Duty Cycle evaluation					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	Information
Duty Cycle max	--	--	0	dB	Information
Duty Cycle (Burst Ratio) min	--	--	1	--	Information
Duty Cycle min	--	--	0	dB	Information



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT20-mode 2412 MHz - Duty Cycle_04072019_122820.png

READ SA SETTINGS:	
Ref. Level [dBm]	13.37
Ref. Lev. offs [dB]	9.83
Input Attenuation [dB]	20
Freq. Start [MHz]	2388.000
Freq. Stop [MHz]	2390.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.500000
Detector	RMS
Sweep Time [ms]	32
Sweep Points/Section	32000
Sweep Count	300
Sweep Mode	AVER
Used Sweep Type	SWE
Marker Method	Band Power

RESULT: TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cylce worst case	--	--	0	dB	Information
Band Power without Antenna Gain Avg	--	--	-51.3	dBm	Information
Band Power without Antenna Gain Avg DC corrected	--	--	-51.3	dBm	Information
Band Power incl. Antenna Gain Avg DC corrected	--	-41.23	-51.3	dBm	PASS



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT20-mode_04072019_122842.png

TEST FINISHED

General Verdict

04.07.2019 12:28:42 / RT: 34 s

PASS

40. FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 12:28:46
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01 Version: 0.0.1 TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT20-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - PowerMeter
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 NRP-Z81,102585

Test at TX 2412 MHz

RESULT: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	17.09	dBm	PASS

TEST FINISHED		
General Verdict	04.07.2019 12:28:50 / RT: 3 s	PASS

41. FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:06:09
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

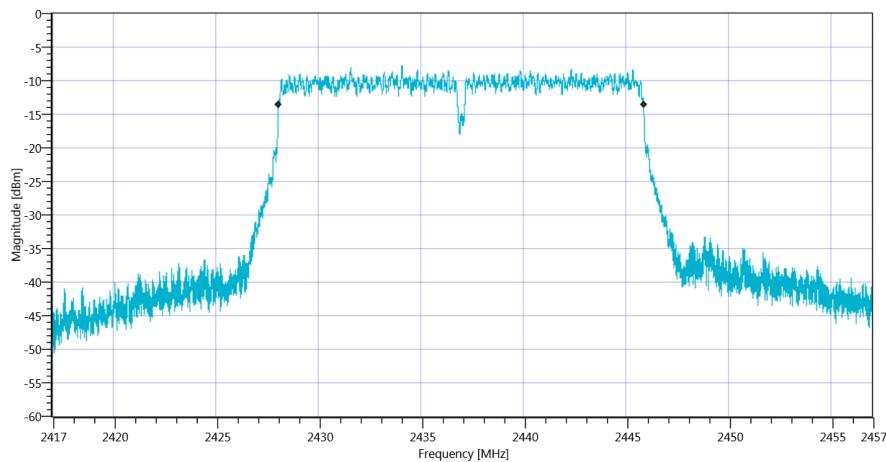
Test at TX 2437 MHz

READ SA SETTINGS:

Ref. Level [dBm]	7.89
Ref. Lev. offs [dB]	9.89
Input Attenuation [dB]	15
Freq. Start [MHz]	2417.000
Freq. Stop [MHz]	2457.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
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)	500	--	17812	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT20-mode_04072019_130635.png

TEST FINISHED

General Verdict

04.07.2019 13:06:35 / RT: 26 s

PASS

42. FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:06:39
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

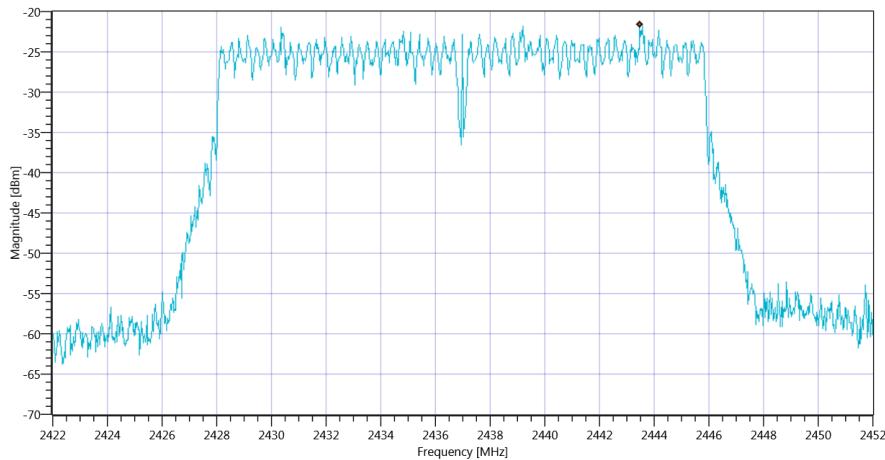
Test at TX 2437 MHz

READ SA SETTINGS:

Ref. Level [dBm]	7.93
Ref. Lev. offs [dB]	9.89
Input Attenuation [dB]	15
Freq. Start [MHz]	2422.000
Freq. Stop [MHz]	2452.000
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	-21.67	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT20-mode_04072019_130713.png

TEST FINISHED

General Verdict

04.07.2019 13:07:13 / RT: 34 s

PASS

43. FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode

Test References

TC Start	04.07.2019 13:07:17
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

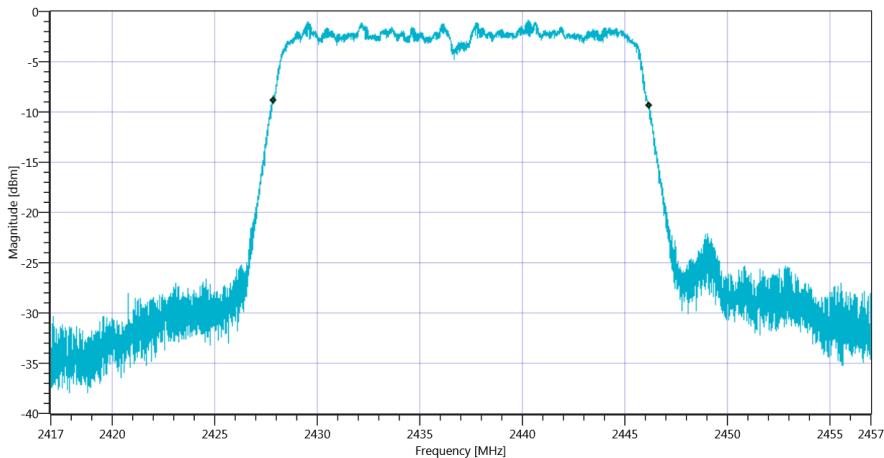
Test at TX 2437 MHz

READ SA SETTINGS:

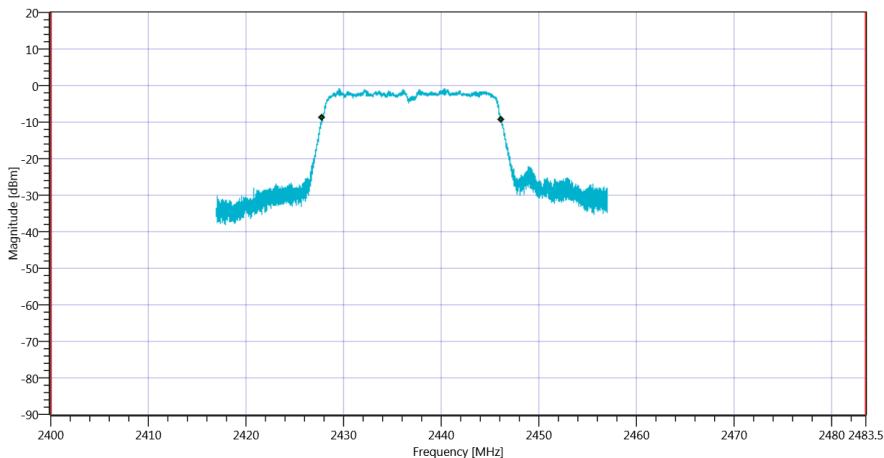
Ref. Level [dBm]	7.89
Ref. Lev. offs [dB]	9.89
Input Attenuation [dB]	15
Freq. Start [MHz]	2417.000
Freq. Stop [MHz]	2457.000
Resolution BW. [MHz]	0.500000
Video BW. [MHz]	1.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	18322	kHz	Information
T1 99%	2400.000000	--	2427.8489	MHz	PASS
T2 99%	--	2483.500000	2446.1711	MHz	PASS



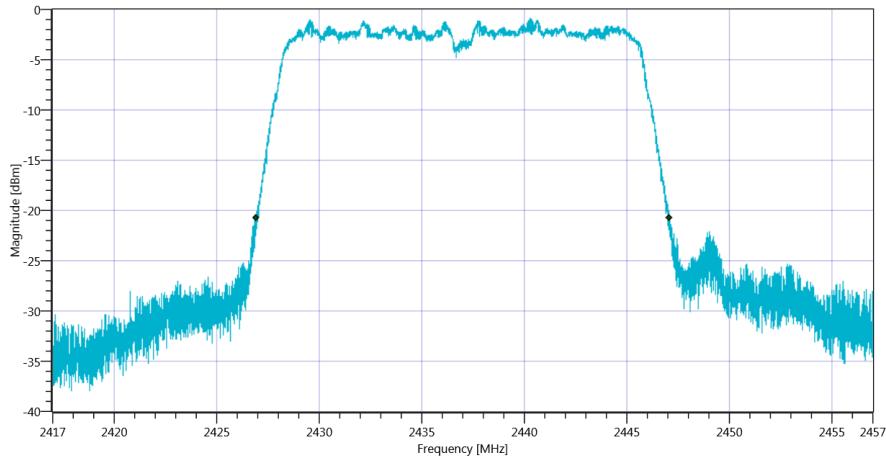
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode 99PCT_04072019_130741.png



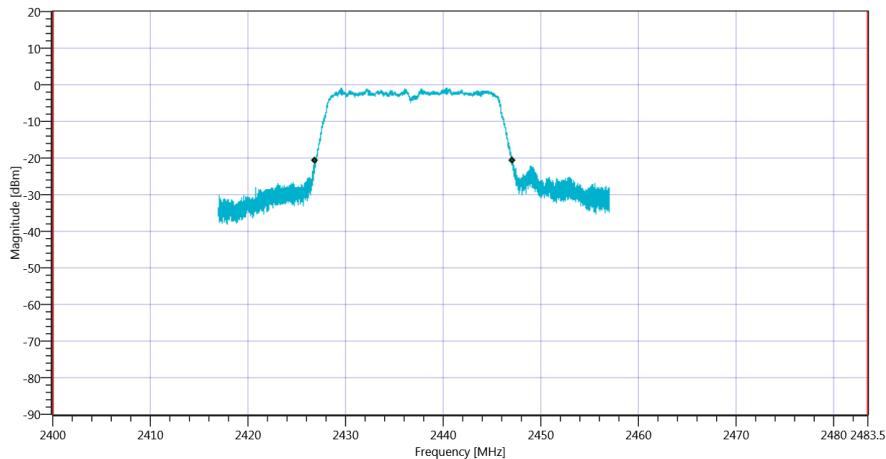
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode_04072019_130744.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	20164	kHz	Information
T1 20dB	2400.000000	--	2426.9160	MHz	PASS
T2 20dB	--	2483.500000	2447.0800	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode 20dB_04072019_130748.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode_04072019_130751.png

TEST FINISHED

General Verdict

04.07.2019 13:07:52 / RT: 34 s

PASS

44. FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:07:56
System Version	1.0.0.16
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 - WLAN 2G4 nHT20-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

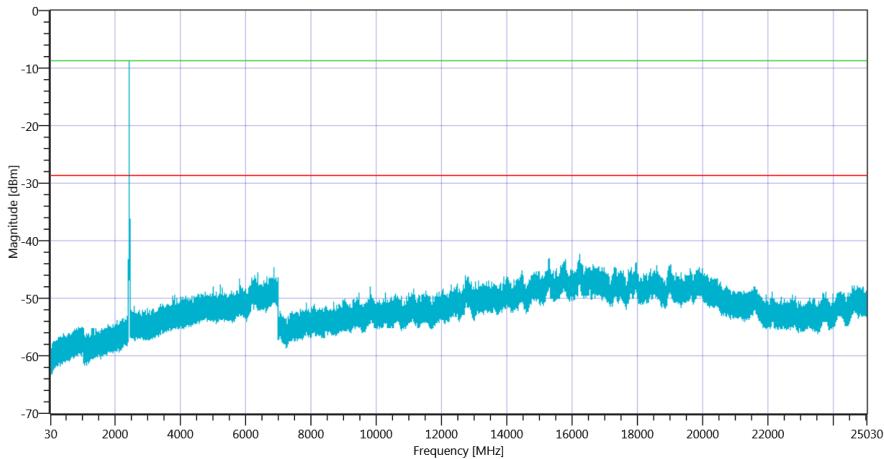
Test at TX 2437 MHz

READ SA SETTINGS:

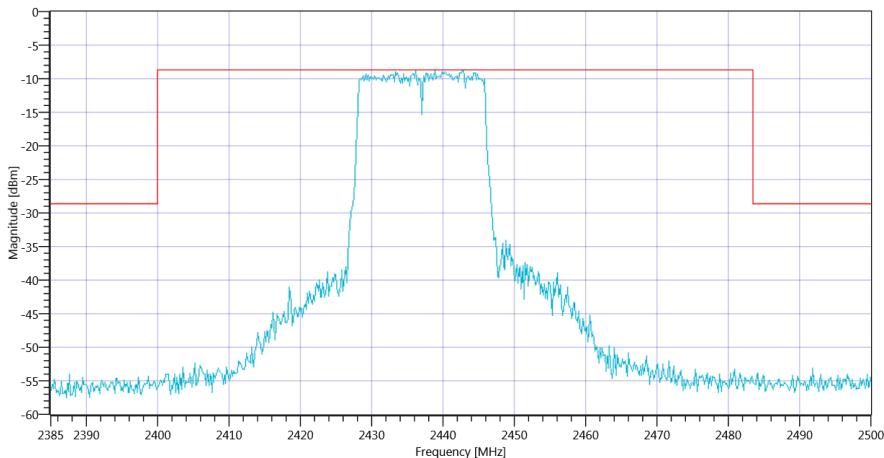
Ref. Level [dBm]	7.74
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	3001
Sweep Count	8
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2442.83 MHz	--	--	-8.66	dBm	Information
No peaks detected	--	--			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2437_04072019_131240.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2437_04072019_131243.png

TEST FINISHED

General Verdict

04.07.2019 13:12:44 / RT: 288 s

PASS

45. FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:13:27
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01 Version: 0.0.1 TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT20-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - PowerMeter
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 NRP-Z81,102585

Test at TX 2437 MHz

RESULT: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	16.34	dBm	PASS

TEST FINISHED

General Verdict

04.07.2019 13:13:31 / RT: 4 s

PASS

46. FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:15:30
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

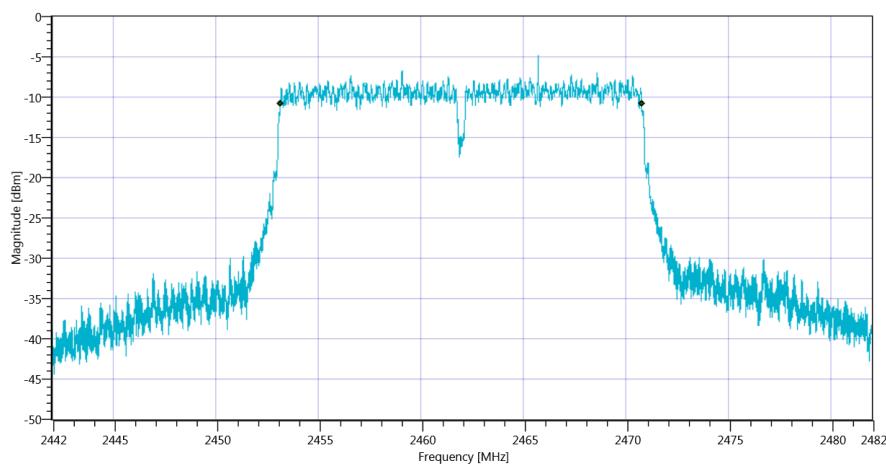
Test at TX 2462 MHz

READ SA SETTINGS:

Ref. Level [dBm]	8.46
Ref. Lev. offs [dB]	9.94
Input Attenuation [dB]	15
Freq. Start [MHz]	2442.000
Freq. Stop [MHz]	2482.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
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)	500	--	17612	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT20-mode_04072019_131557.png

TEST FINISHED

General Verdict

04.07.2019 13:15:57 / RT: 26 s

PASS

47. FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:16:01
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

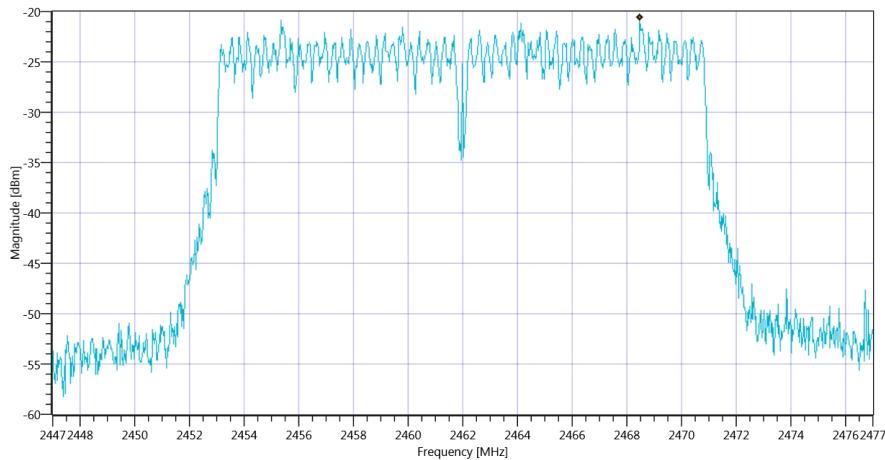
Test at TX 2462 MHz

READ SA SETTINGS:

Ref. Level [dBm]	8.39
Ref. Lev. offs [dB]	9.94
Input Attenuation [dB]	15
Freq. Start [MHz]	2447.000
Freq. Stop [MHz]	2477.000
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	-20.59	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT20-mode_04072019_131635.png

TEST FINISHED

General Verdict

04.07.2019 13:16:35 / RT: 34 s

PASS

48. FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:16:39
System Version	1.0.0.16
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 - WLAN 2G4 nHT20_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

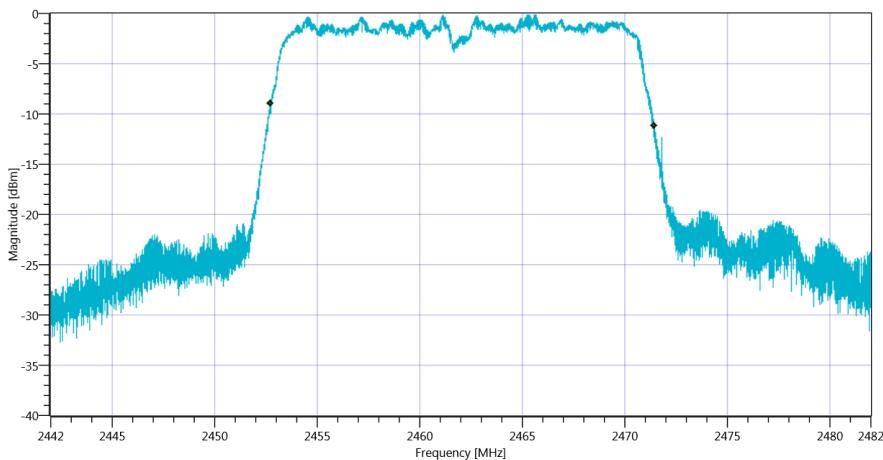
Test at TX 2462 MHz

READ SA SETTINGS:

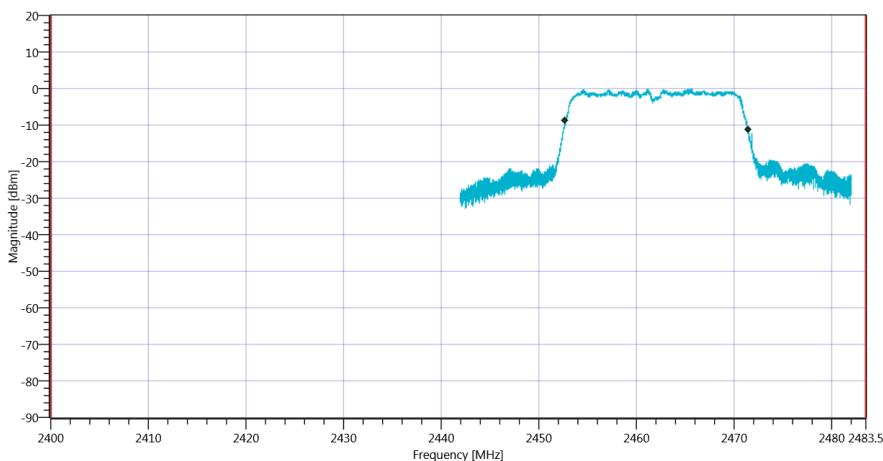
Ref. Level [dBm]	8.62
Ref. Lev. offs [dB]	9.94
Input Attenuation [dB]	15
Freq. Start [MHz]	2442.000
Freq. Stop [MHz]	2482.000
Resolution BW. [MHz]	0.500000
Video BW. [MHz]	1.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	18706	kHz	Information
T1 99%	2400.000000	--	2452.7209	MHz	PASS
T2 99%	--	2483.500000	2471.4271	MHz	PASS



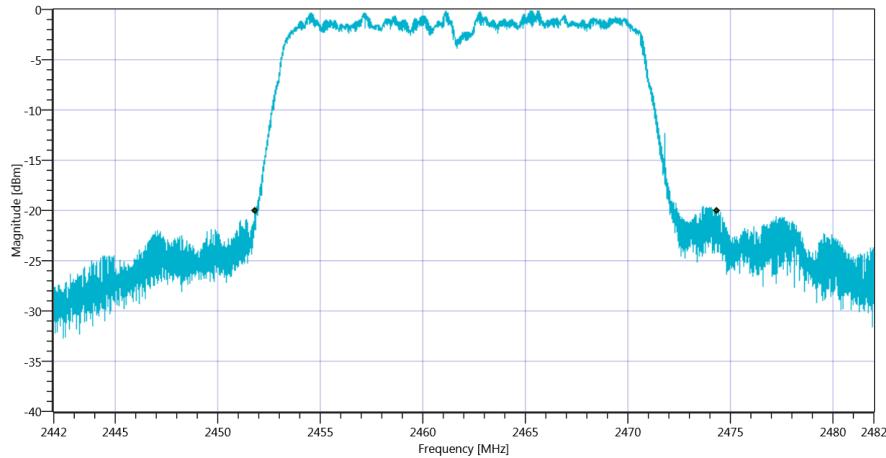
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode 99PCT_04072019_131703.png



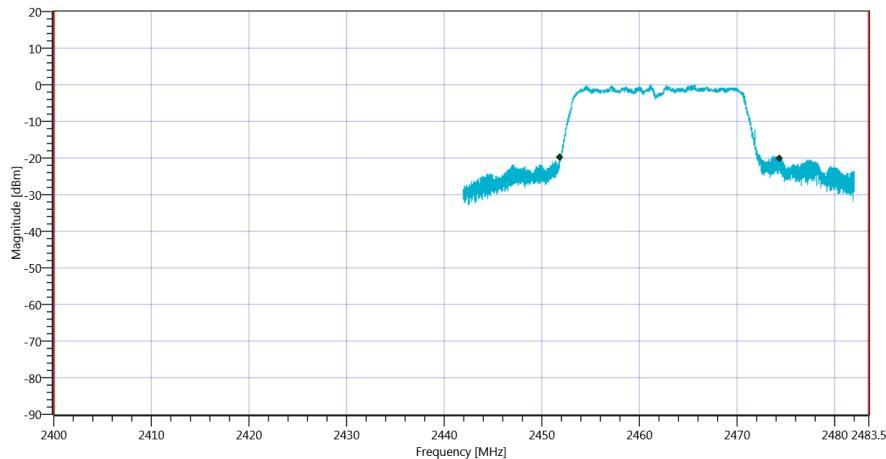
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode_04072019_131706.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	22500	kHz	Information
T1 20dB	2400.000000	--	2451.8360	MHz	PASS
T2 20dB	--	2483.500000	2474.3360	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode 20dB_04072019_131710.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT20-mode_04072019_131713.png

TEST FINISHED

General Verdict

04.07.2019 13:17:14 / RT: 34 s

PASS

49. FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:17:17
System Version	1.0.0.16
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 - WLAN 2G4 nHT20-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

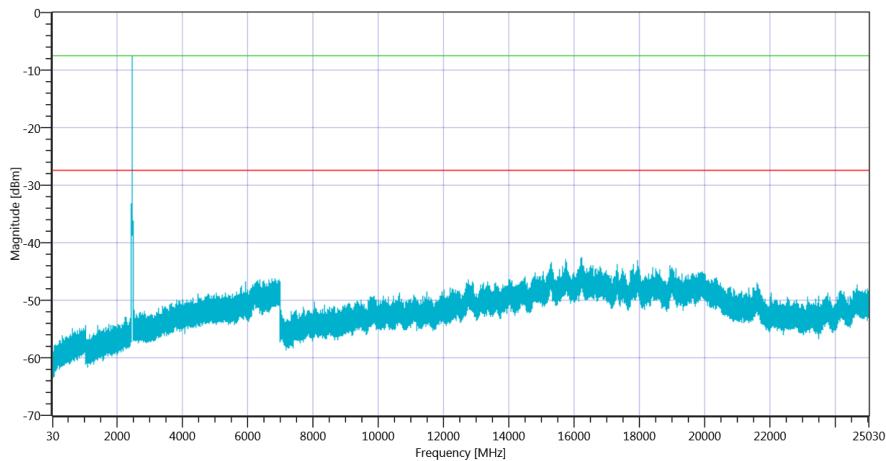
Test at TX 2462 MHz

READ SA SETTINGS:

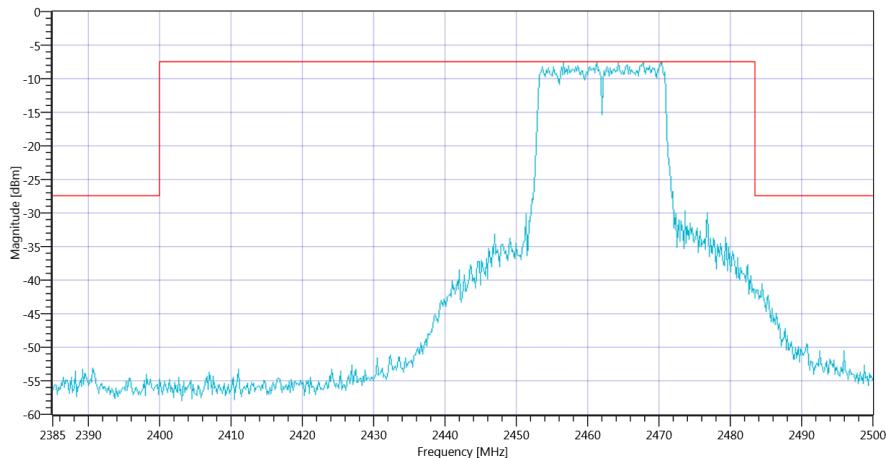
Ref. Level [dBm]	8.37
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	3001
Sweep Count	8
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2456.67 MHz	--	--	-7.43	dBm	Information
No peaks detected	--	--			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2462_04072019_132202.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2462_04072019_132205.png

TEST FINISHED

General Verdict

04.07.2019 13:22:06 / RT: 288 s

PASS

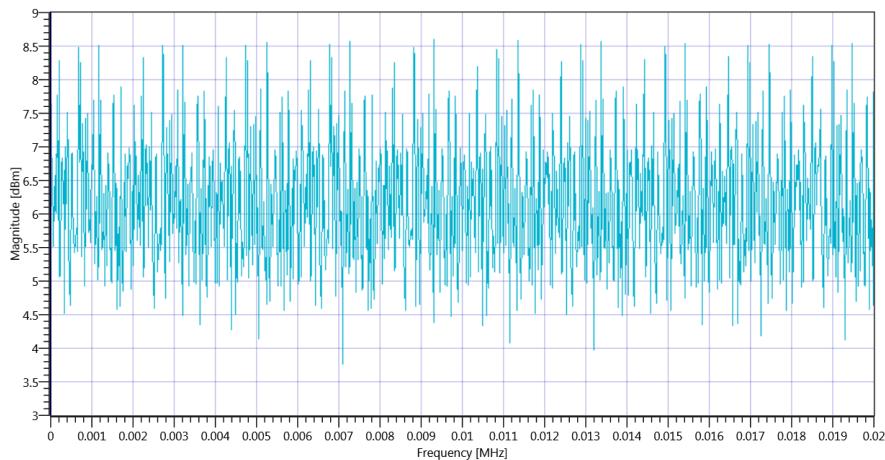
50. FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:29:38
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - 8.7.3 Integration Method; ANSI C63.10-2013 11.13.3.4 Trace averaging across on- and off-times of the EUT transmissions followed by duty cycle correction
Class / TC Version / TC ID	TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01 Version: 0.0.1 TCID_FCC15247_7
My Description	FCC 15.247 Restricted Band Edge Cond. Avg DC corrected DTS - WLAN 2G4 nHT20_mode
Add. Information	

Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

Test at TX 2462 MHz

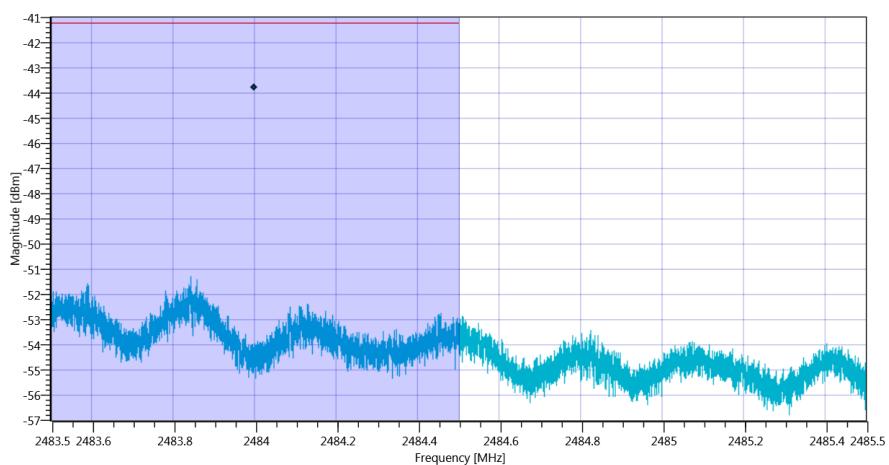
RESULT: Duty Cycle evaluation					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	Information
Duty Cycle max	--	--	0	dB	Information
Duty Cycle (Burst Ratio) min	--	--	1	--	Information
Duty Cycle min	--	--	0	dB	Information



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT20-mode 2462 MHz - Duty Cycle_04072019_132951.png

READ SA SETTINGS:	
Ref. Level [dBm]	13.53
Ref. Lev. offs [dB]	9.94
Input Attenuation [dB]	20
Freq. Start [MHz]	2483.500
Freq. Stop [MHz]	2485.500
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.500000
Detector	RMS
Sweep Time [ms]	32
Sweep Points/Section	32000
Sweep Count	300
Sweep Mode	AVER
Used Sweep Type	SWE
Marker Method	Band Power

RESULT: TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cylce worst case	--	--	0	dB	Information
Band Power without Antenna Gain Avg	--	--	-43.8	dBm	Information
Band Power without Antenna Gain Avg DC corrected	--	--	-43.8	dBm	Information
Band Power incl. Antenna Gain Avg DC corrected	--	-41.23	-43.8	dBm	PASS



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT20-mode_04072019_133013.png

TEST FINISHED

General Verdict

04.07.2019 13:30:13 / RT: 34 s

PASS

51. FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 nHT20-mode

Test References	
TC Start	04.07.2019 13:22:48
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01 Version: 0.0.1 TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT20-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - PowerMeter
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 NRP-Z81,102585

Test at TX 2462 MHz

RESULT: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	16.83	dBm	PASS

TEST FINISHED

General Verdict

04.07.2019 13:22:52 / RT: 4 s

PASS

52. FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 13:46:51
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

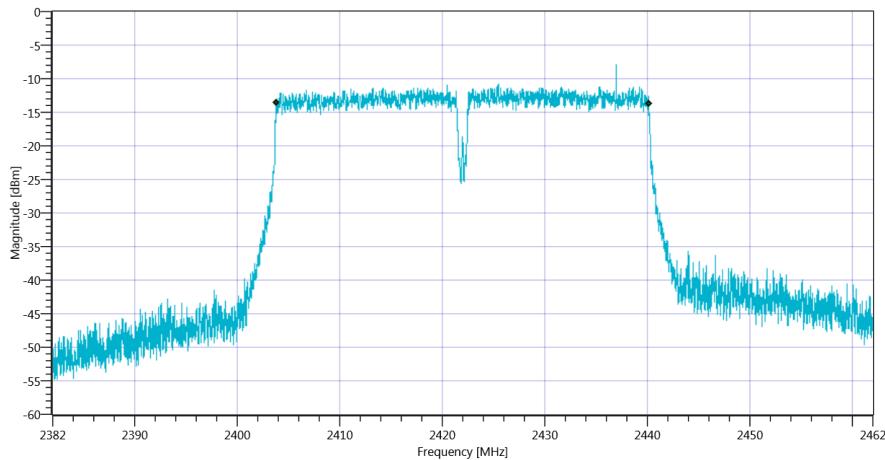
Test at TX 2422 MHz

READ SA SETTINGS:

Ref. Level [dBm]	4.85
Ref. Lev. offs [dB]	9.85
Input Attenuation [dB]	15
Freq. Start [MHz]	2382.000
Freq. Stop [MHz]	2462.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
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)	500	--	36312	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT40-mode_04072019_134715.png

TEST FINISHED

General Verdict

04.07.2019 13:47:15 / RT: 24 s

PASS

53. FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 13:47:19
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

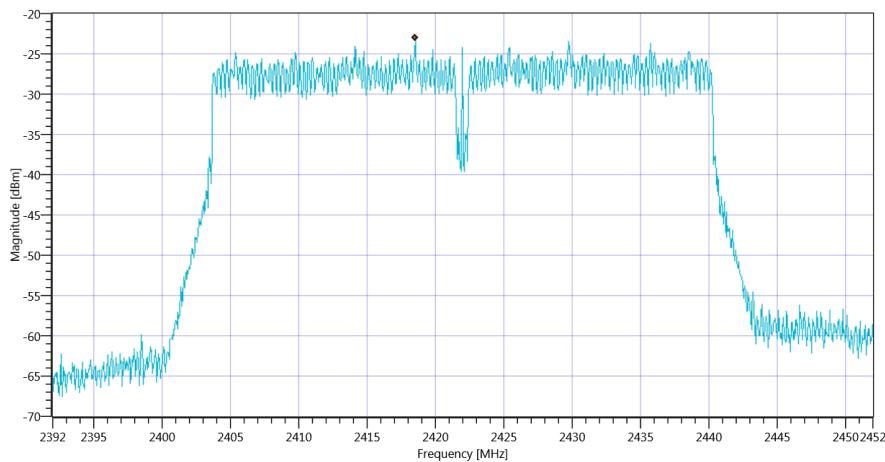
Test at TX 2422 MHz

READ SA SETTINGS:

Ref. Level [dBm]	5.12
Ref. Lev. offs [dB]	9.85
Input Attenuation [dB]	15
Freq. Start [MHz]	2392.000
Freq. Stop [MHz]	2452.000
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	-23.01	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT40-mode_04072019_134755.png

TEST FINISHED

General Verdict

04.07.2019 13:47:55 / RT: 35 s

PASS

54. FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode

Test References

TC Start	04.07.2019 13:47:59
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

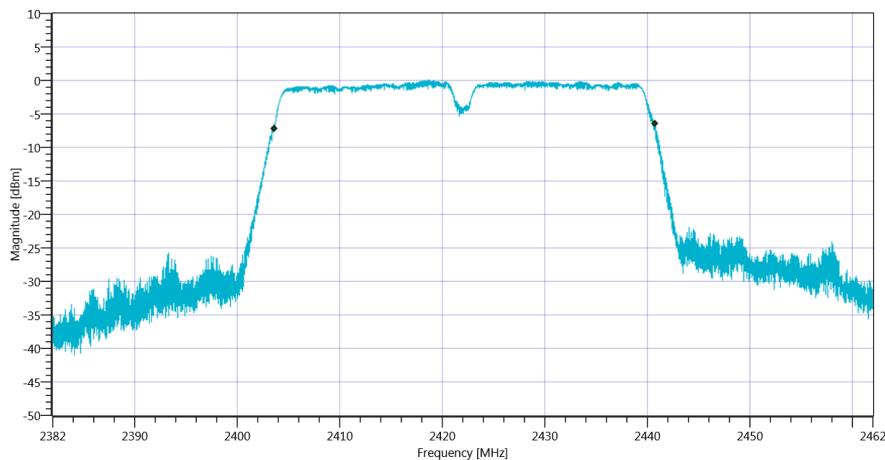
Test at TX 2422 MHz

READ SA SETTINGS:

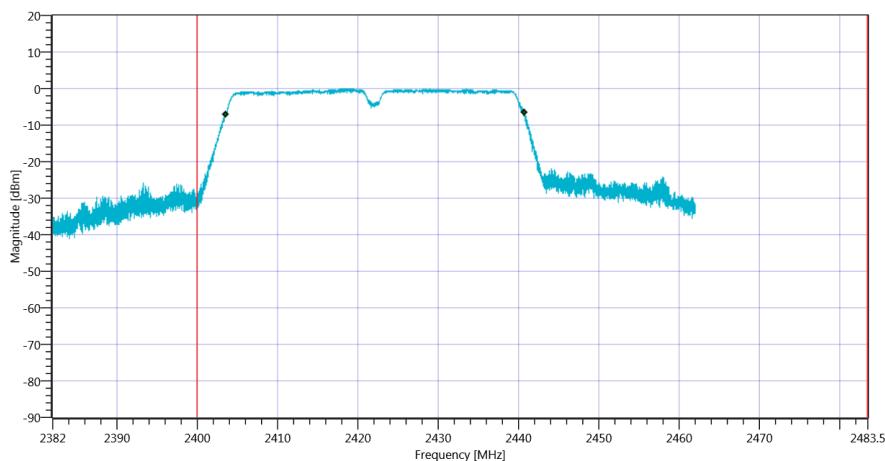
Ref. Level [dBm]	4.88
Ref. Lev. offs [dB]	9.85
Input Attenuation [dB]	15
Freq. Start [MHz]	2382.000
Freq. Stop [MHz]	2462.000
Resolution BW. [MHz]	1.000000
Video BW. [MHz]	2.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	37132	kHz	Information
T1 99%	2400.000000	--	2403.5858	MHz	PASS
T2 99%	--	2483.500000	2440.7181	MHz	PASS



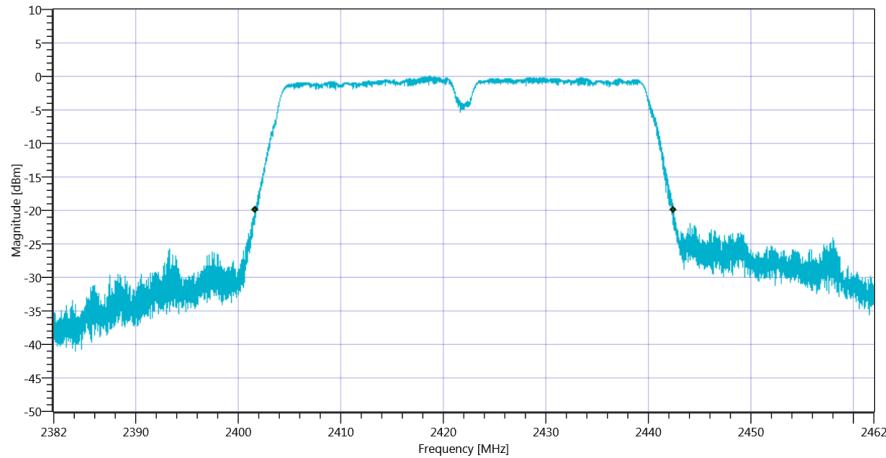
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode 99PCT_04072019_134823.png



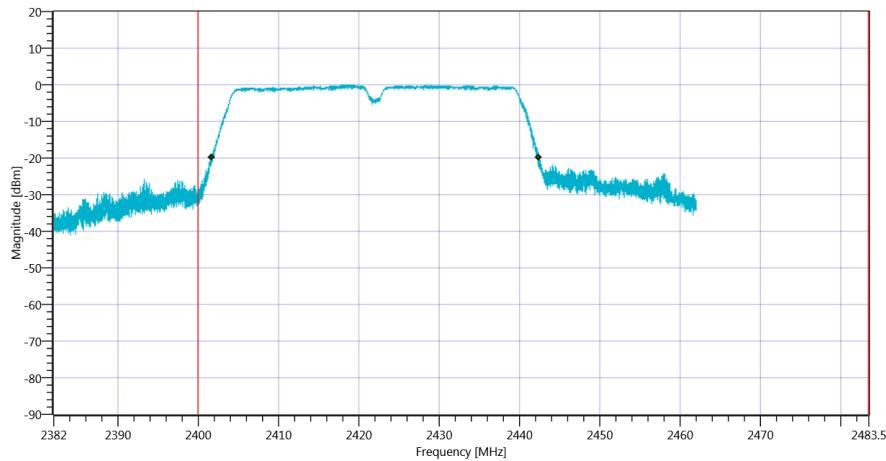
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode_04072019_134826.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	40784	kHz	Information
T1 20dB	2400.000000	--	2401.6640	MHz	PASS
T2 20dB	--	2483.500000	2442.4480	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode 20dB_04072019_134830.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode_04072019_134833.png

TEST FINISHED

General Verdict

04.07.2019 13:48:33 / RT: 34 s

PASS

55. FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 13:48:37
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

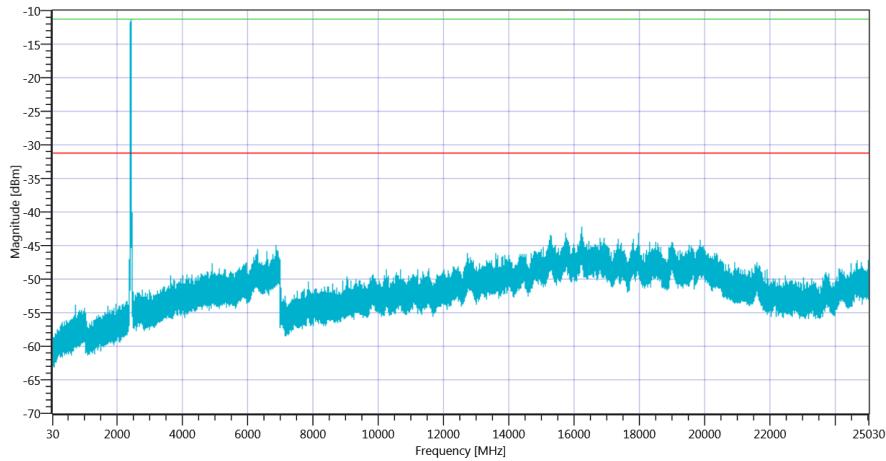
Test at TX 2422 MHz

READ SA SETTINGS:

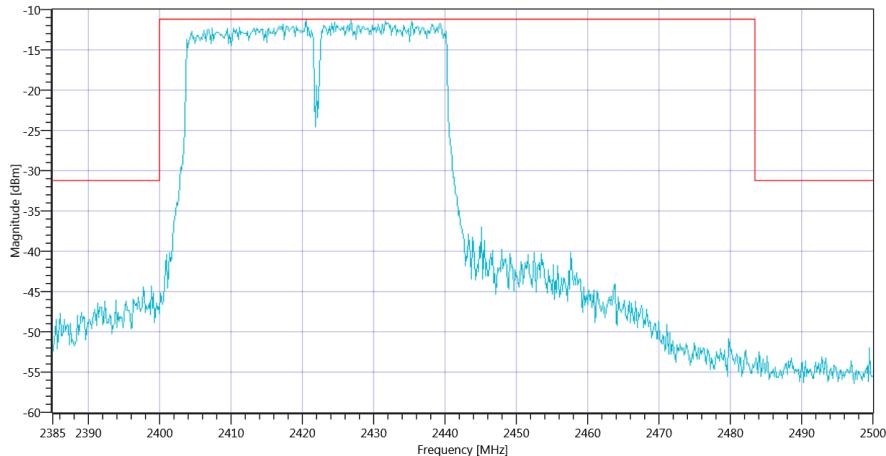
Ref. Level [dBm]	5.05
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	3001
Sweep Count	8
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2420.50 MHz	--	--	-11.22	dBm	Information
No peaks detected	--	--			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2422_04072019_135322.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2422_04072019_135324.png

TEST FINISHED

General Verdict

04.07.2019 13:53:25 / RT: 288 s

PASS

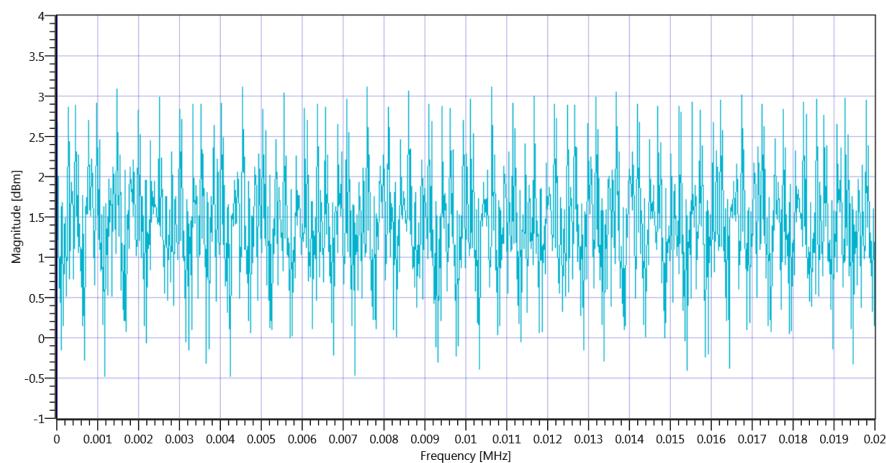
56. FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 13:53:29
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - 8.7.3 Integration Method; ANSI C63.10-2013 11.13.3.4 Trace averaging across on- and off-times of the EUT transmissions followed by duty cycle correction
Class / TC Version / TC ID	TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01 Version: 0.0.1 TCID_FCC15247_7
My Description	FCC 15.247 Restricted Band Edge Cond. Avg DC corrected DTS - WLAN 2G4 nHT40_mode
Add. Information	

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

Test at TX 2422 MHz

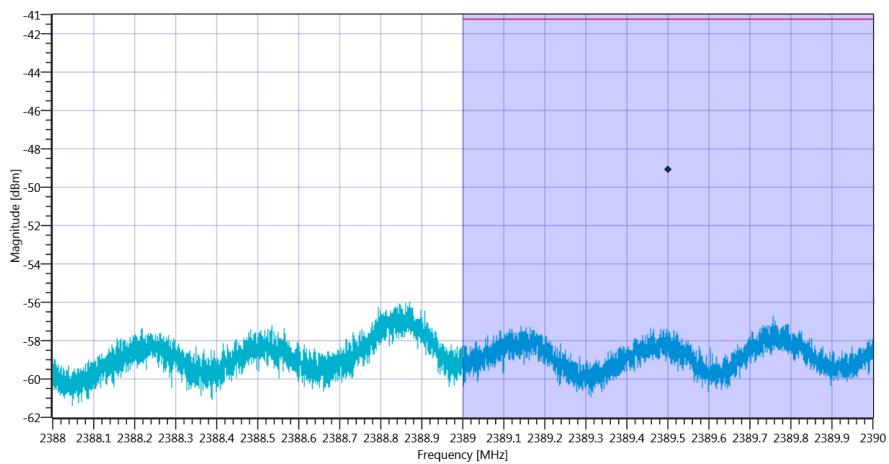
RESULT: Duty Cycle evaluation					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	Information
Duty Cycle max	--	--	0	dB	Information
Duty Cycle (Burst Ratio) min	--	--	1	--	Information
Duty Cycle min	--	--	0	dB	Information



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT40-mode 2422 MHz - Duty Cycle_04072019_135342.png

READ SA SETTINGS:	
Ref. Level [dBm]	10.18
Ref. Lev. offs [dB]	9.85
Input Attenuation [dB]	20
Freq. Start [MHz]	2388.000
Freq. Stop [MHz]	2390.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.500000
Detector	RMS
Sweep Time [ms]	32
Sweep Points/Section	32000
Sweep Count	300
Sweep Mode	AVER
Used Sweep Type	SWE
Marker Method	Band Power

RESULT: TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cylce worst case	--	--	0	dB	Information
Band Power without Antenna Gain Avg	--	--	-49.08	dBm	Information
Band Power without Antenna Gain Avg DC corrected	--	--	-49.08	dBm	Information
Band Power incl. Antenna Gain Avg DC corrected	--	-41.23	-49.08	dBm	PASS



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT40-mode_04072019_135403.png

TEST FINISHED

General Verdict

04.07.2019 13:54:03 / RT: 34 s

PASS

57. FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 13:54:07
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01 Version: 0.0.1 TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT40-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - PowerMeter
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 NRP-Z81,102585

Test at TX 2422 MHz

RESULT: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	18.17	dBm	PASS

TEST FINISHED		
General Verdict	04.07.2019 13:54:11 / RT: 3 s	PASS

58. FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:01:25
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

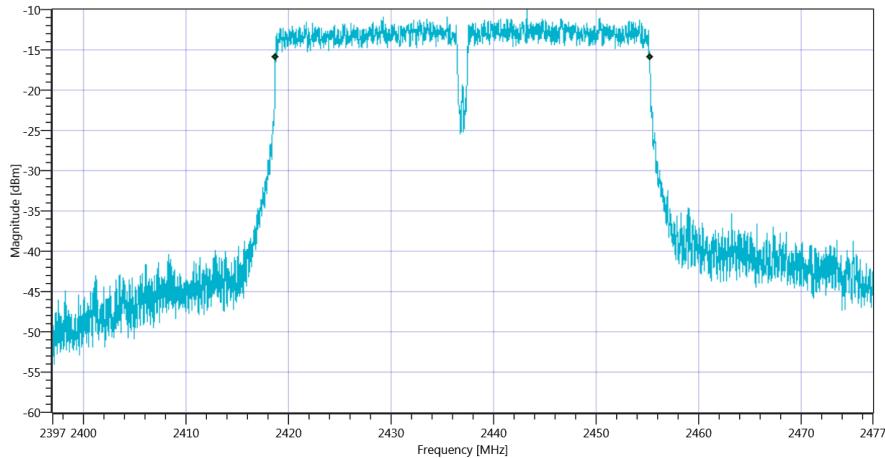
Test at TX 2437 MHz

READ SA SETTINGS:

Ref. Level [dBm]	5.02
Ref. Lev. offs [dB]	9.89
Input Attenuation [dB]	15
Freq. Start [MHz]	2397.000
Freq. Stop [MHz]	2477.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
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)	500	--	36512	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT40-mode_04072019_140149.png

TEST FINISHED

General Verdict

04.07.2019 14:01:49 / RT: 24 s

PASS

59. FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:01:53
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

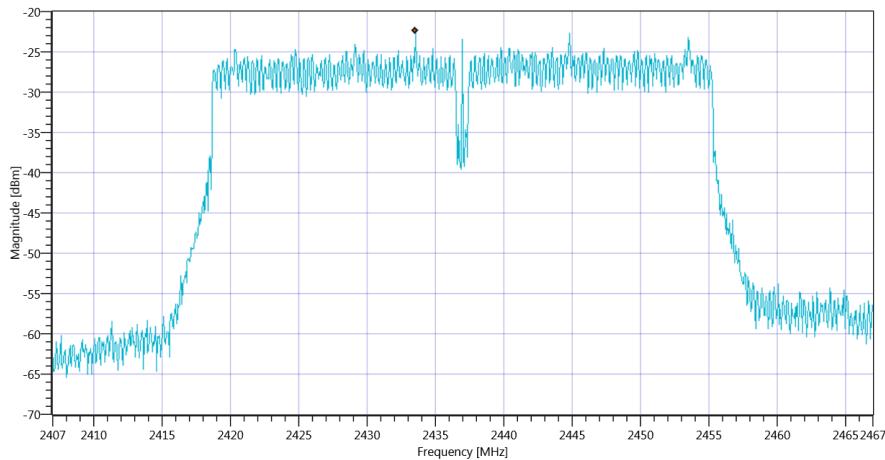
Test at TX 2437 MHz

READ SA SETTINGS:

Ref. Level [dBm]	4.63
Ref. Lev. offs [dB]	9.89
Input Attenuation [dB]	10
Freq. Start [MHz]	2407.000
Freq. Stop [MHz]	2467.000
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	-22.45	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT40-mode_04072019_140229.png

TEST FINISHED

General Verdict

04.07.2019 14:02:29 / RT: 35 s

PASS

60. FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode

Test References

TC Start	04.07.2019 14:02:33
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

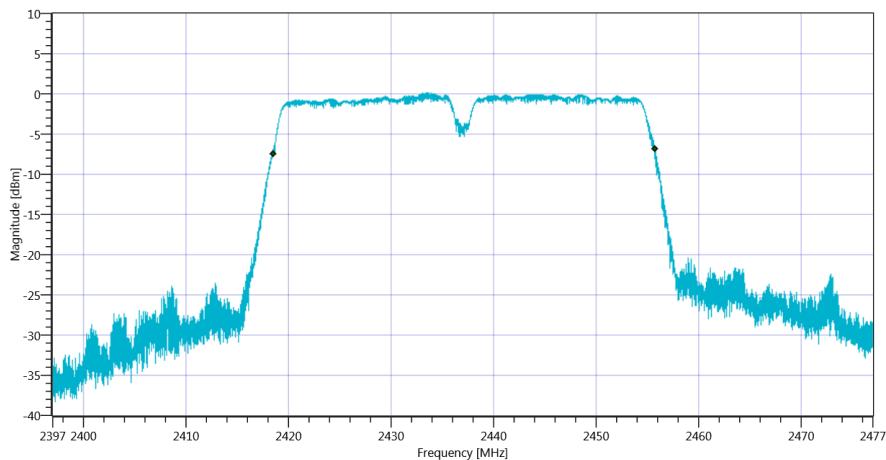
Test at TX 2437 MHz

READ SA SETTINGS:

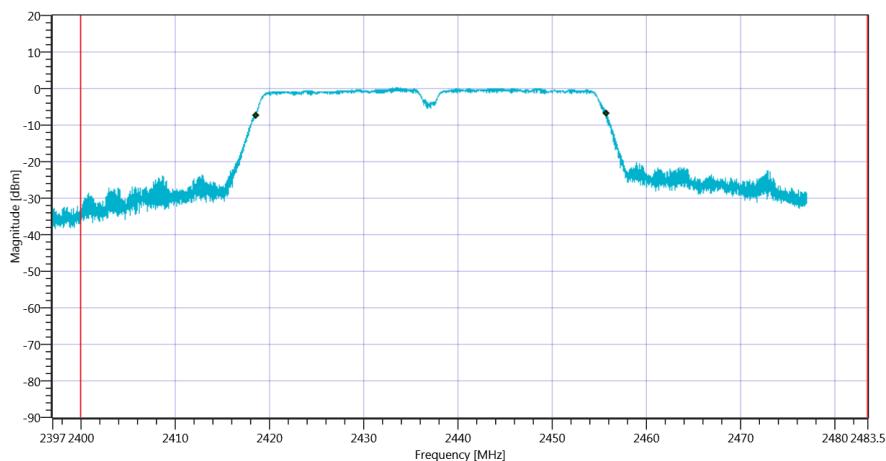
Ref. Level [dBm]	4.90
Ref. Lev. offs [dB]	9.89
Input Attenuation [dB]	15
Freq. Start [MHz]	2397.000
Freq. Stop [MHz]	2477.000
Resolution BW. [MHz]	1.000000
Video BW. [MHz]	2.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	37220	kHz	Information
T1 99%	2400.000000	--	2418.5458	MHz	PASS
T2 99%	--	2483.500000	2455.7661	MHz	PASS



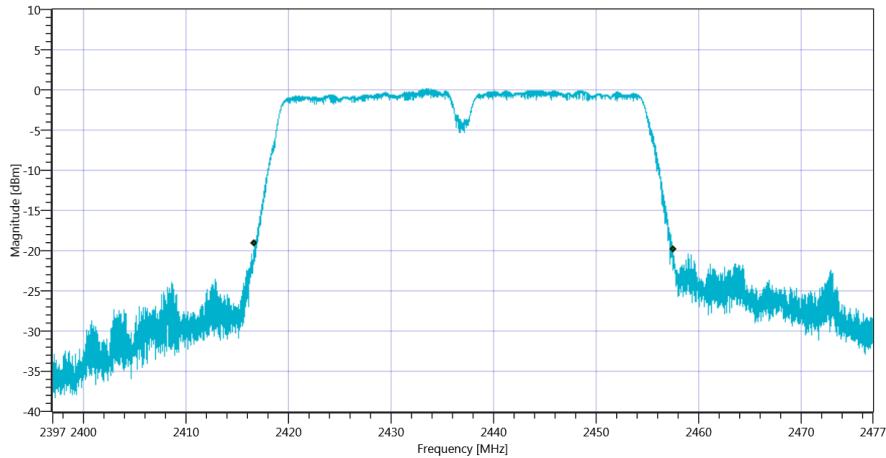
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode 99PCT_04072019_140257.png



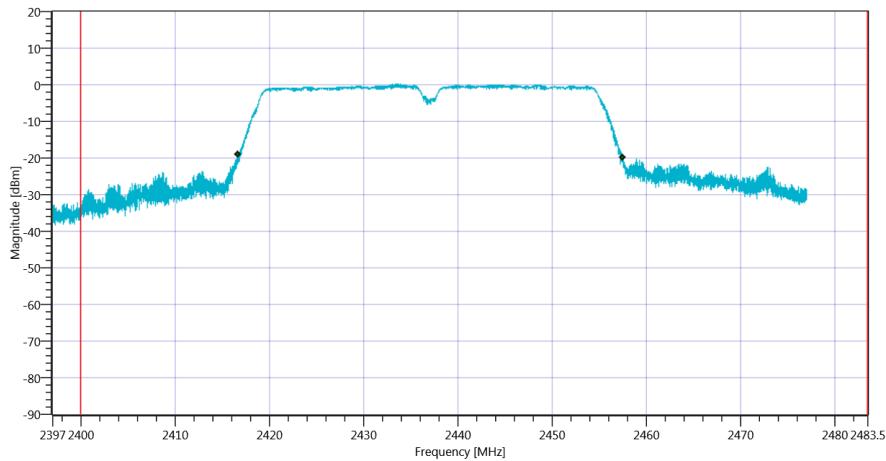
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode_04072019_140300.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	40840	kHz	Information
T1 20dB	2400.000000	--	2416.6640	MHz	PASS
T2 20dB	--	2483.500000	2457.5040	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode 20dB_04072019_140304.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode_04072019_140307.png

TEST FINISHED

General Verdict

04.07.2019 14:03:07 / RT: 34 s

PASS

61. FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:03:11
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

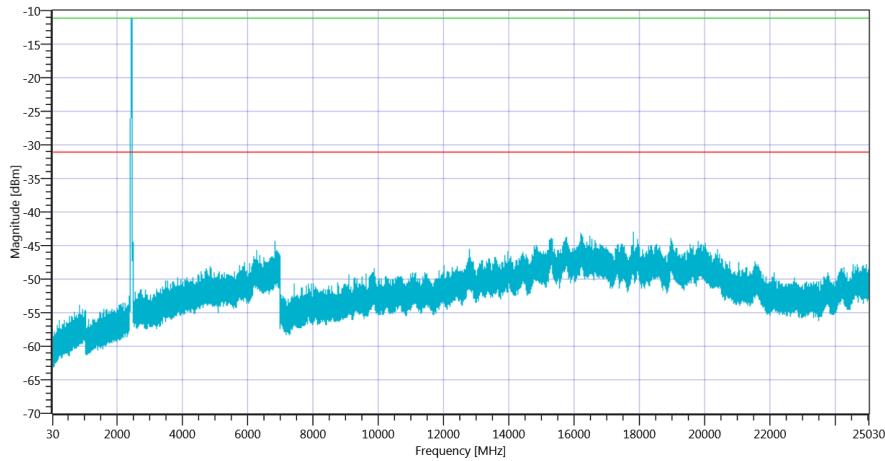
Test at TX 2437 MHz

READ SA SETTINGS:

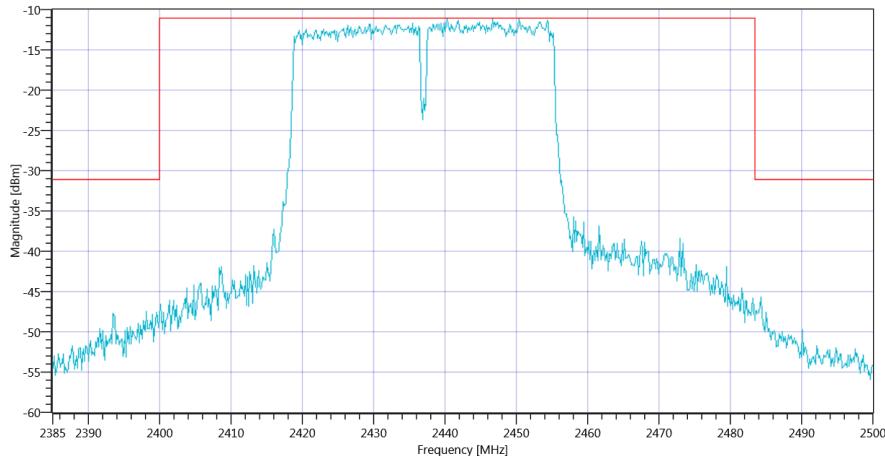
Ref. Level [dBm]	5.21
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	3001
Sweep Count	8
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2440.33 MHz	--	--	-11.10	dBm	Information
No peaks detected	--	--			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2437_04072019_140756.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2437_04072019_140759.png

TEST FINISHED

General Verdict

04.07.2019 14:08:00 / RT: 288 s

PASS

62. FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:08:42
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01 Version: 0.0.1 TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT40-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - PowerMeter
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 NRP-Z81,102585

Test at TX 2437 MHz

RESULT: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	17.71	dBm	PASS

TEST FINISHED		
General Verdict	04.07.2019 14:08:46 / RT: 4 s	PASS

63. FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:19:13
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

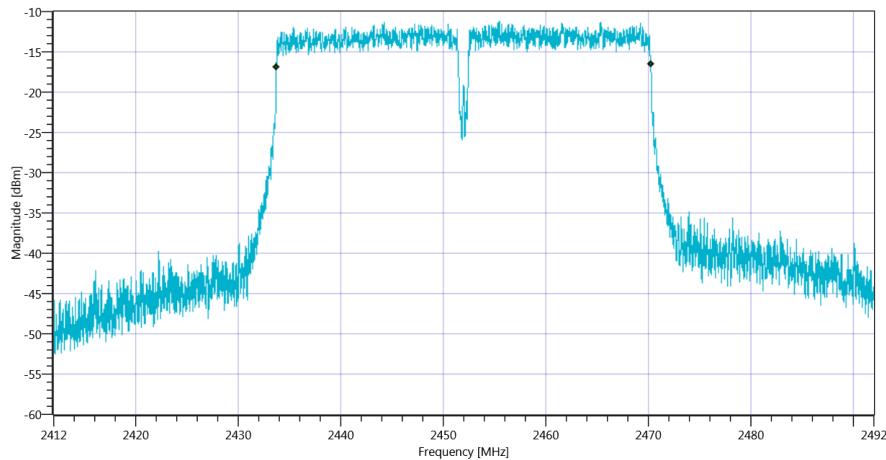
Test at TX 2452 MHz

READ SA SETTINGS:

Ref. Level [dBm]	4.30
Ref. Lev. offs [dB]	9.93
Input Attenuation [dB]	10
Freq. Start [MHz]	2412.000
Freq. Stop [MHz]	2492.000
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
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)	500	--	36552	kHz	PASS



Plot_FCC Part 15.247 Bandwidth 6dB DTS ~ WLAN2G4 nHT40-mode_04072019_141937.png

TEST FINISHED

General Verdict

04.07.2019 14:19:37 / RT: 24 s

PASS

64. FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:19:41
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

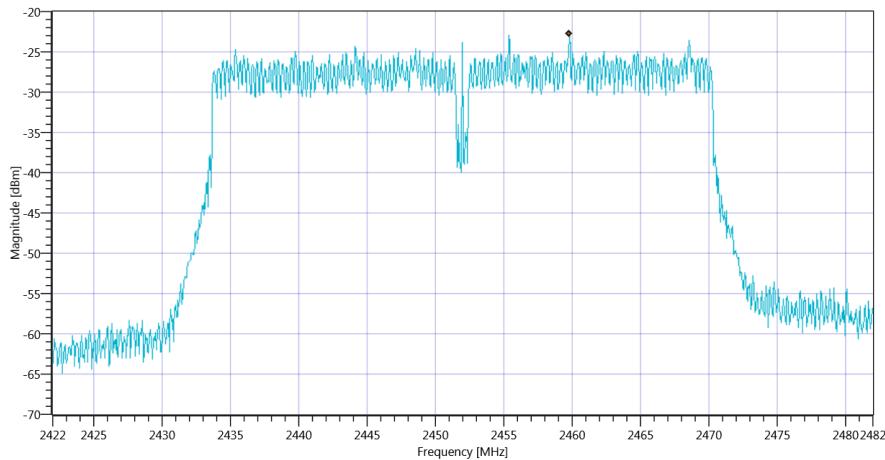
Test at TX 2452 MHz

READ SA SETTINGS:

Ref. Level [dBm]	4.79
Ref. Lev. offs [dB]	9.93
Input Attenuation [dB]	10
Freq. Start [MHz]	2422.000
Freq. Stop [MHz]	2482.000
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	-22.73	dBm/3KHz	PASS



Plot_FCC Part 15.247 Peak Power Spectral Density DTS ~ WLAN2G4 nHT40-mode_04072019_142016.png

TEST FINISHED

General Verdict

04.07.2019 14:20:16 / RT: 35 s

PASS

65. FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode

Test References

TC Start	04.07.2019 14:20:20
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

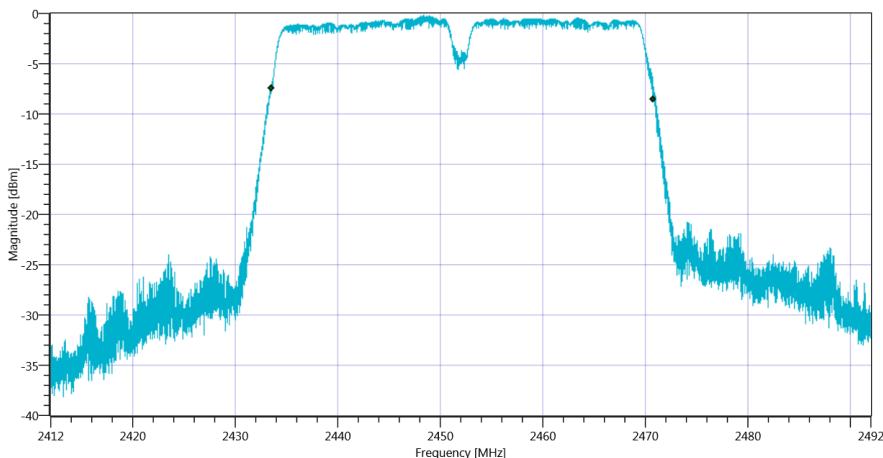
Test at TX 2452 MHz

READ SA SETTINGS:

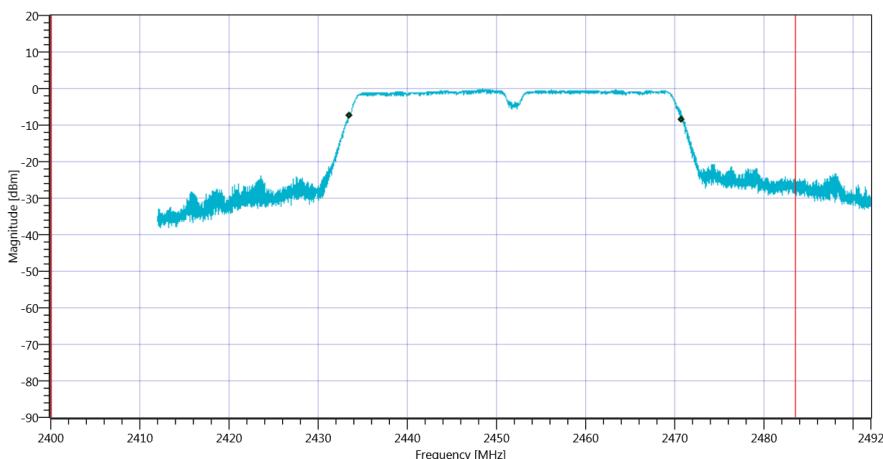
Ref. Level [dBm]	4.56
Ref. Lev. offs [dB]	9.93
Input Attenuation [dB]	10
Freq. Start [MHz]	2412.000
Freq. Stop [MHz]	2492.000
Resolution BW. [MHz]	1.000000
Video BW. [MHz]	2.000000
Detector	POS
Sweep Time [ms]	50
Sweep Points/Section	10001
Sweep Count	200
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	37252	kHz	Information
T1 99%	2400.000000	--	2433.5378	MHz	PASS
T2 99%	--	2483.500000	2470.7901	MHz	PASS



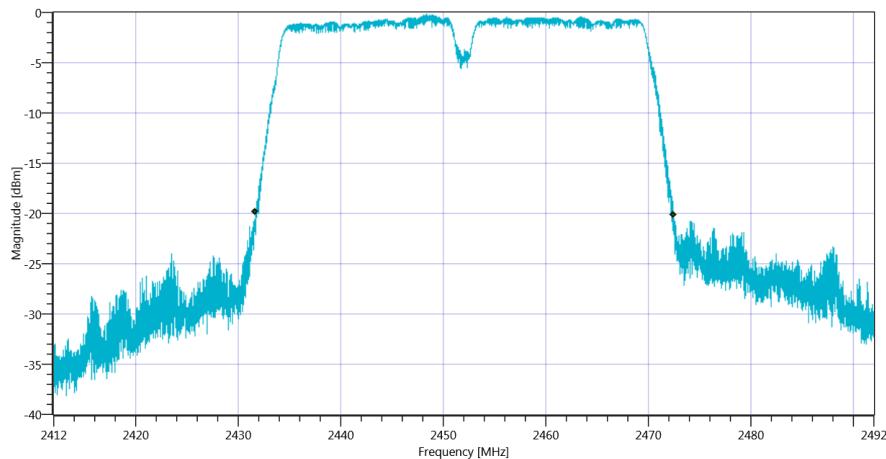
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode 99PCT_04072019_142044.png



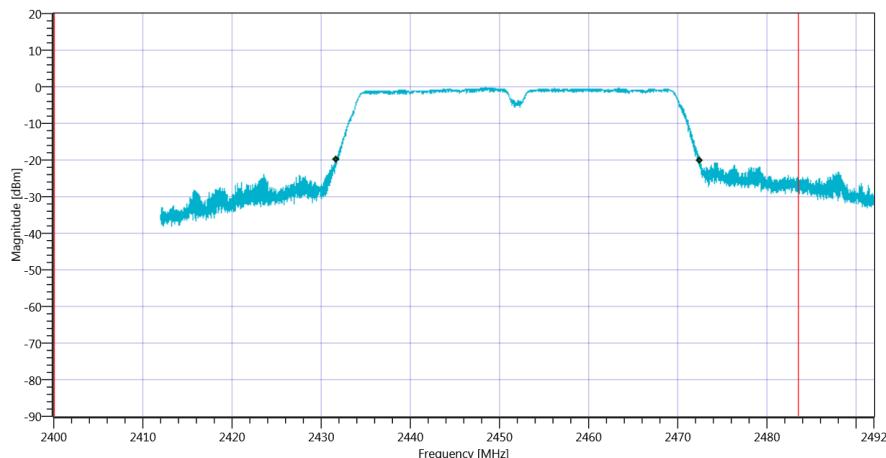
Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode_04072019_142048.png

RESULT: TC_VM_FCC15247_Bandwidth_99PCT_20dB_DTS_FHSS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	--	--	40720	kHz	Information
T1 20dB	2400.000000	--	2431.6960	MHz	PASS
T2 20dB	--	2483.500000	2472.4160	MHz	PASS



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode 20dB_04072019_142052.png



Plot_FCC Part 15.247 Bandwidth 99PCT-20dB ~ WLAN2G4 nHT40-mode_04072019_142055.png

TEST FINISHED

General Verdict

04.07.2019 14:20:55 / RT: 34 s

PASS

66. FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:20:59
System Version	1.0.0.16
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 - WLAN 2G4 nHT40_mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

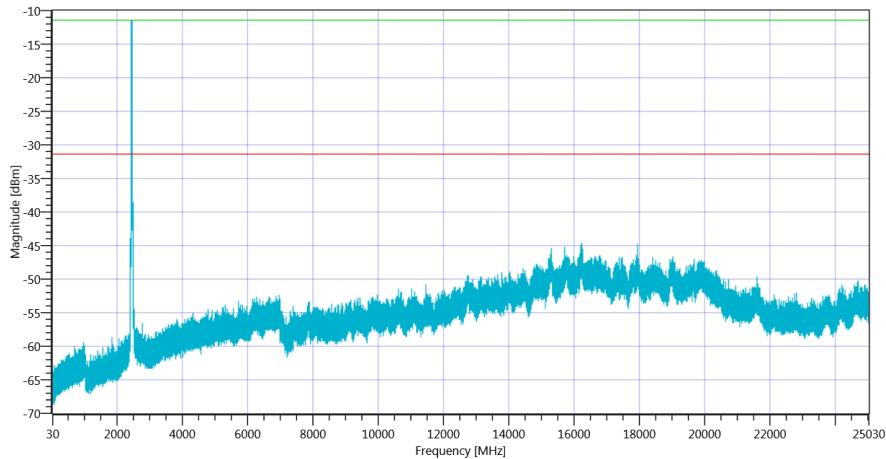
Test at TX 2452 MHz

READ SA SETTINGS:

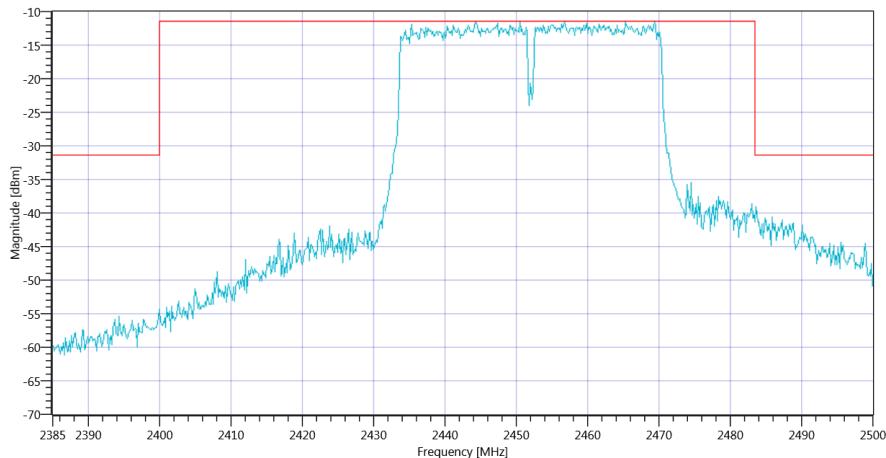
Ref. Level [dBm]	4.60
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.300000
Detector	POS
Sweep Time [ms]	500
Sweep Points/Section	3001
Sweep Count	8
Sweep Mode	MAXH
Used Sweep Type	SWE

RESULT: TC_VM_FCC15247_TX_Emissions_Conducted_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2469.33 MHz	--	--	-11.46	dBm	Information
No peaks detected	--	--			PASS



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2452_04072019_142544.png



Plot_FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2452_04072019_142546.png

TEST FINISHED

General Verdict

04.07.2019 14:25:47 / RT: 288 s

PASS

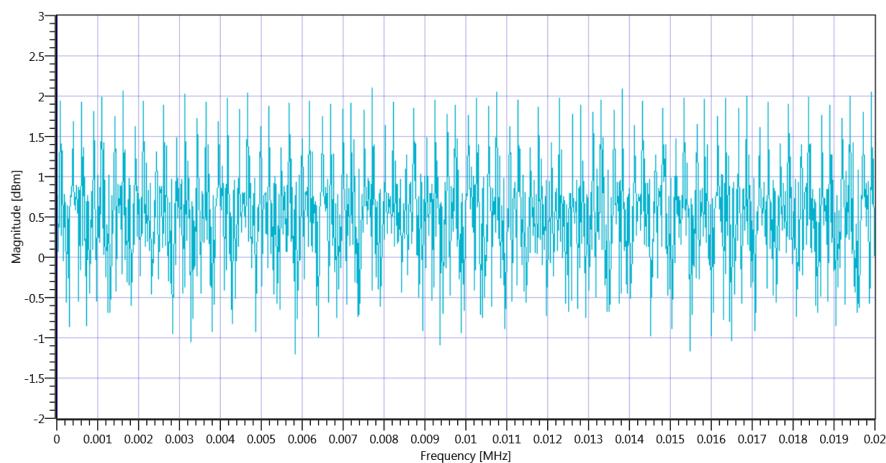
67. FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:29:55
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - 8.7.3 Integration Method; ANSI C63.10-2013 11.13.3.4 Trace averaging across on- and off-times of the EUT transmissions followed by duty cycle correction
Class / TC Version / TC ID	TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01 Version: 0.0.1 TCID_FCC15247_7
My Description	FCC 15.247 Restricted Band Edge Cond. Avg DC corrected DTS - WLAN 2G4 nHT40_mode
Add. Information	

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - SpectrumAnalyzer
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02,P02 SA: Rohde&Schwarz,FSV-30,1321.3008K30/103170,3.40

Test at TX 2452 MHz

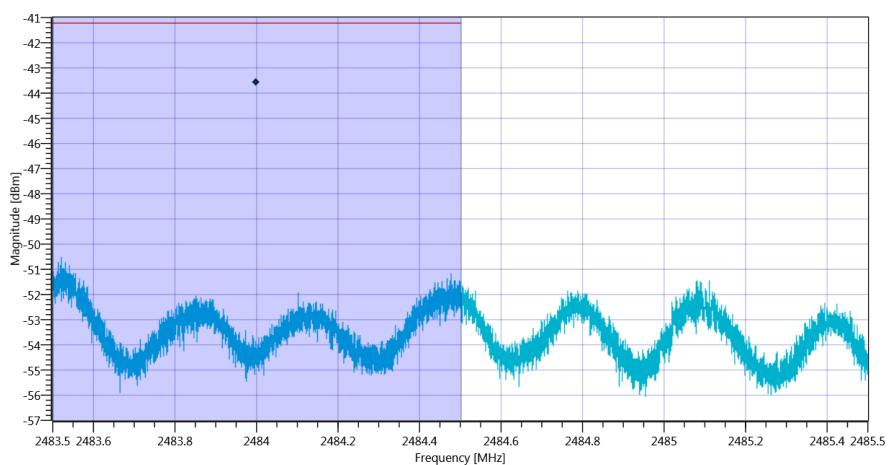
RESULT: Duty Cycle evaluation					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	Information
Duty Cycle max	--	--	0	dB	Information
Duty Cycle (Burst Ratio) min	--	--	1	--	Information
Duty Cycle min	--	--	0	dB	Information



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT40-mode 2452 MHz - Duty Cycle_04072019_143008.png

READ SA SETTINGS:	
Ref. Level [dBm]	9.15
Ref. Lev. offs [dB]	9.93
Input Attenuation [dB]	15
Freq. Start [MHz]	2483.500
Freq. Stop [MHz]	2485.500
Resolution BW. [MHz]	0.100000
Video BW. [MHz]	0.500000
Detector	RMS
Sweep Time [ms]	32
Sweep Points/Section	32000
Sweep Count	300
Sweep Mode	AVER
Used Sweep Type	SWE
Marker Method	Band Power

RESULT: TC_VM_FCC15247_Restricted_Band_Edge_Conducted_Avg_DC_corrected_V01					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cylce worst case	--	--	0	dB	Information
Band Power without Antenna Gain Avg	--	--	-43.59	dBm	Information
Band Power without Antenna Gain Avg DC corrected	--	--	-43.59	dBm	Information
Band Power incl. Antenna Gain Avg DC corrected	--	-41.23	-43.59	dBm	PASS



Plot_FCC Part 15.247 Restricted Band Edge Conducted Avg DC corrected DTS ~ WLAN2G4 nHT40-mode_04072019_143030.png

TEST FINISHED

General Verdict

04.07.2019 14:30:30 / RT: 34 s

PASS

68. FCC Part 15.247 Maximum Peak Conducted Output Power Powermeter DTS ~ WLAN2G4 nHT40-mode

Test References	
TC Start	04.07.2019 14:26:30
System Version	1.0.0.16
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
Class / TC Version / TC ID	TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01 Version: 0.0.1 TCID_FCC15247_3
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT40-mode
Add. Information	
Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	mid
Voltage	mid
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2452
Pattern	PRBS9
Switched Path	IUT - SignalingUnit - PowerMeter
Devices in use	SigBT: Rohde&Schwarz,CBT-1153.9000.35,100185,CBT 6X02.P02 NRP-Z81,102585

Test at TX 2452 MHz

RESULT: TC_VM_FCC15247_Maximum_Peak_Conducted_Output_Power_Powermeter_DTS_V01

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	--	--	16.27	dBm	PASS

TEST FINISHED

General Verdict

04.07.2019 14:26:34 / RT: 4 s

PASS

- END OF DOCUMENT -
