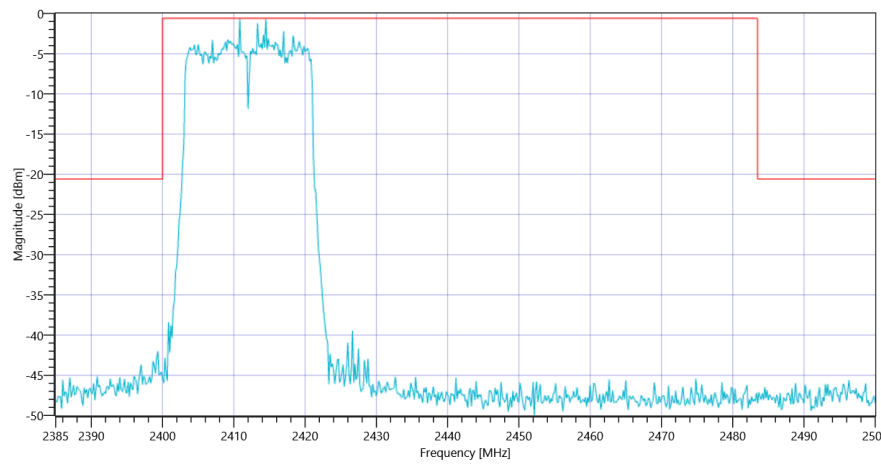




FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2412

General verdict

PASS

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

Test References

TC Start	17.08.2021 15:54:37
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT20-mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2412 MHz

RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	---	---	22.75	dBm	PASS
General verdict			PASS		

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

Test References

TC Start	17.08.2021 15:55:47
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2437 MHz

RESULT: Reference Power cond.

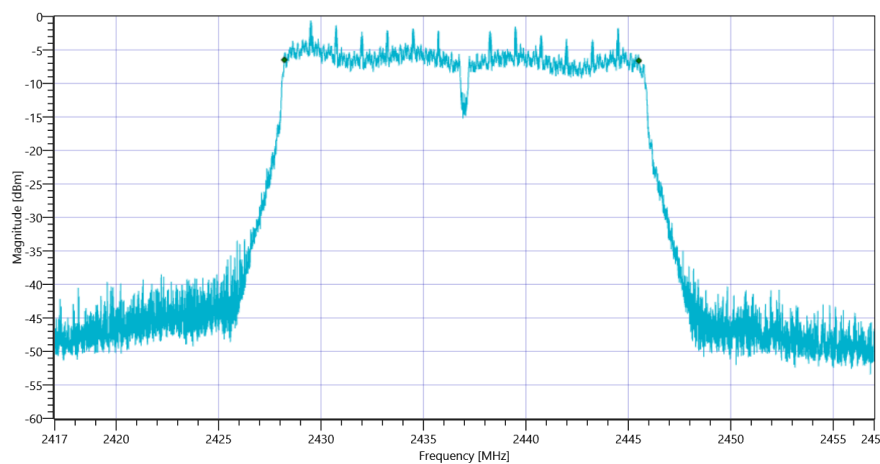
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.81	dBm	INFO
Ref. Frequency	---	---	2429.610	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.81 16.02 15
Start [MHz] Stop [MHz]	2417.000 2457.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	17304	kHz	PASS



General verdict

PASS

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

Test References

TC Start	17.08.2021 15:56:25
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2437 MHz

RESULT: Reference Power cond.

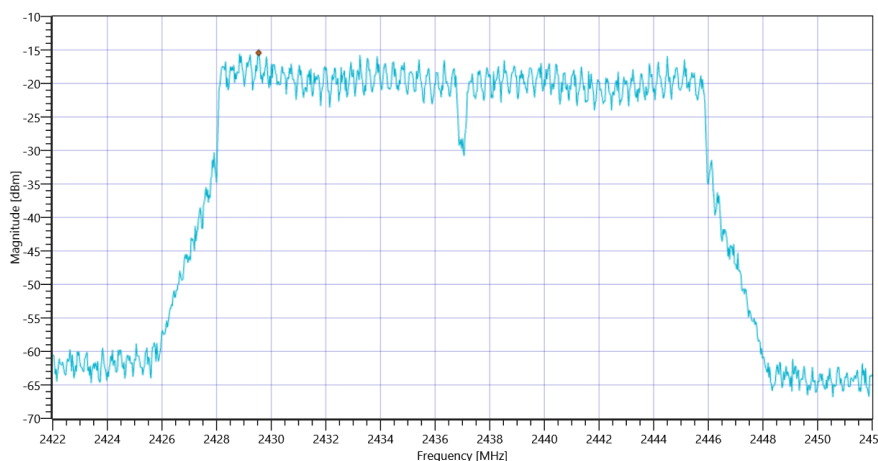
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	7.20	dBm	INFO
Ref. Frequency	---	---	2429.310	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	12.20 16.02 15
Start [MHz] Stop [MHz]	2422.000 2452.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-15.42	dBm/3KHz	PASS



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

General verdict

PASS

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

Test References

TC Start	17.08.2021 15:57:12
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2437 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.45	dBm	INFO
Ref. Frequency	---	---	2434.000	MHz	INFO

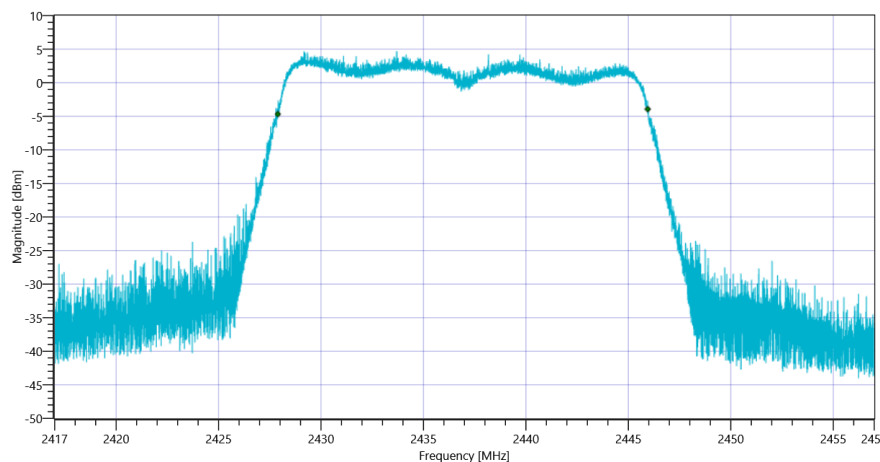
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.45 16.02 15
Start [MHz] Stop [MHz]	2417.000 2457.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

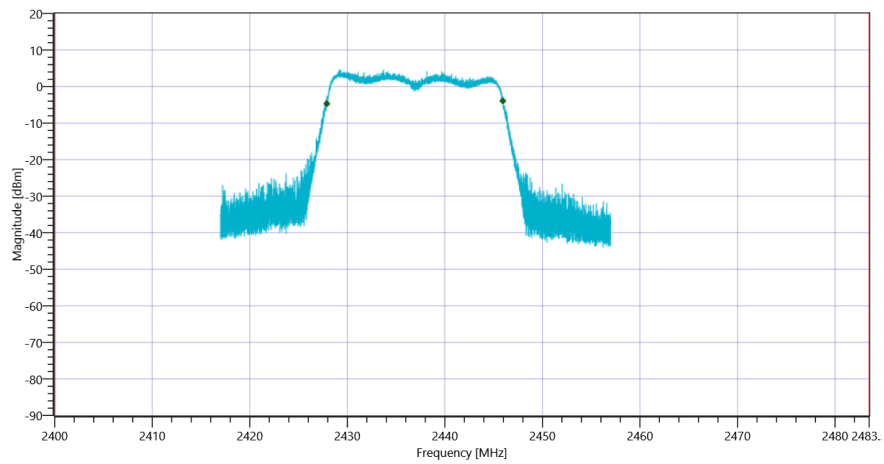
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	18050.195	kHz	INFO
T1 99%	2400.000000	---	2427.8929	MHz	PASS
T2 99%	---	2483.500000	2445.9431	MHz	PASS

Plot: Bandwidth only



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

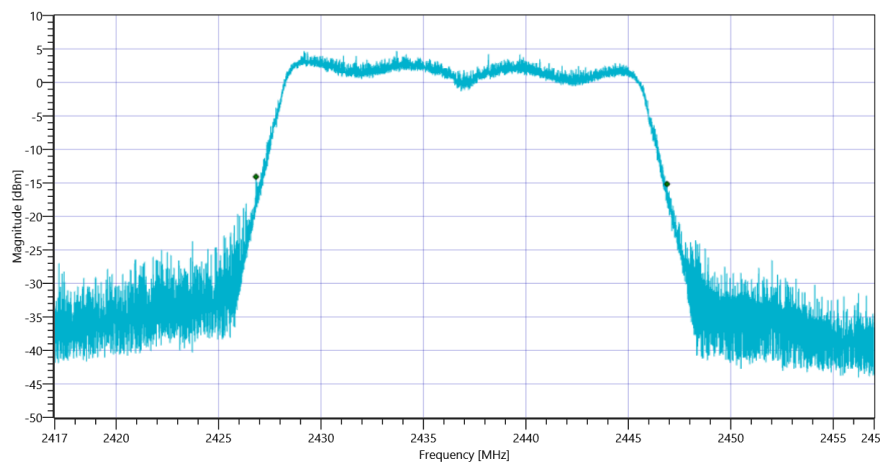
Plot: Bandwidth within Band



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

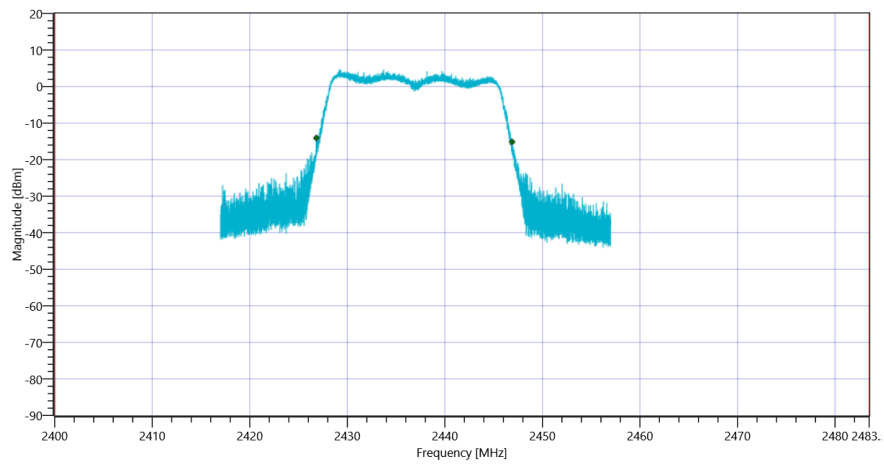
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20064	kHz	INFO
T1 20dB	2400.000000	---	2426.8240	MHz	PASS
T2 20dB	---	2483.500000	2446.8880	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode

Test References	
TC Start	17.08.2021 15:58:11
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2437 MHz

RESULT: Reference Power cond.

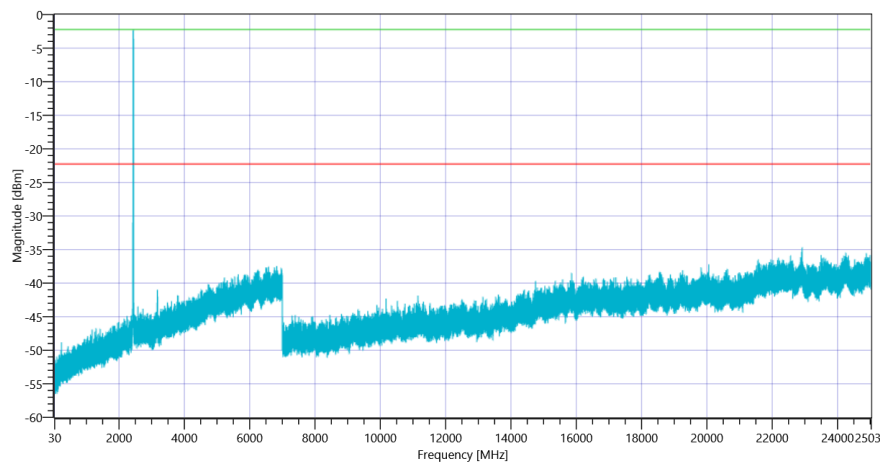
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.84	dBm	INFO
Ref. Frequency	---	---	2429.110	MHz	INFO

READ SA SETTINGS:

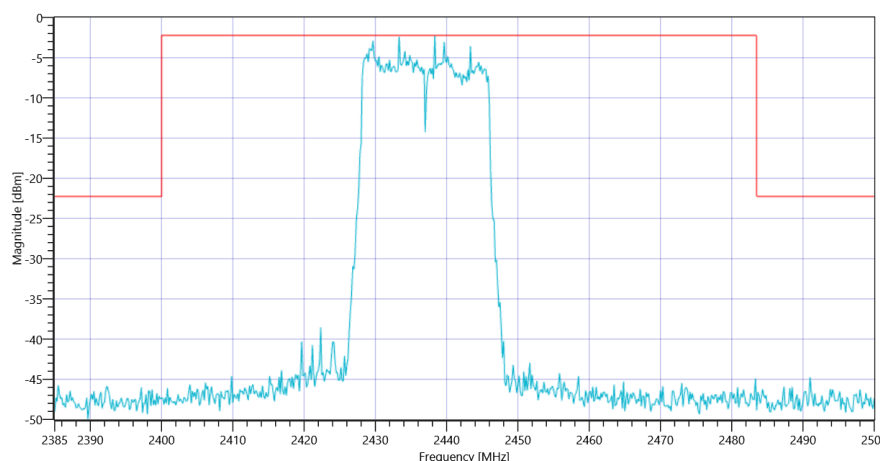
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.84 0 25
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2438.33 MHz	---	---	-2.25	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-146.64	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2437



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2437

General verdict

PASS

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

Test References

TC Start	17.08.2021 16:05:09
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT20-mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2437 MHz

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	---	---	21.64	dBm	PASS

General verdict

PASS

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

Test References	
TC Start	17.08.2021 16:06:25
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

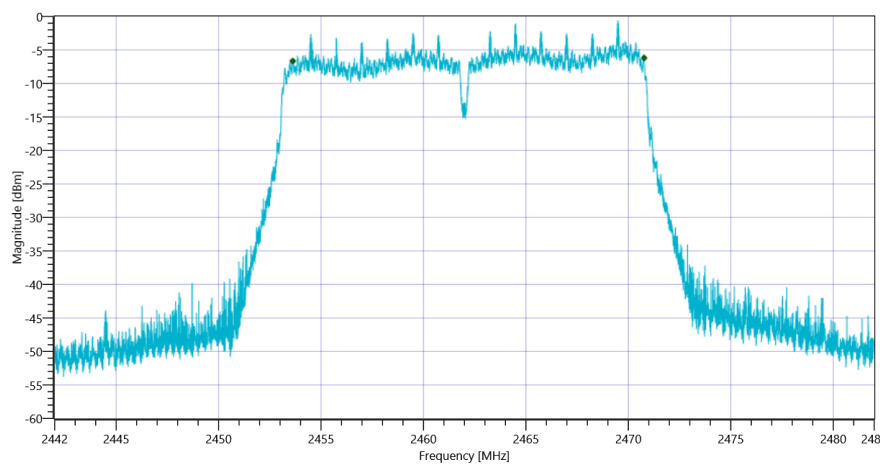
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.65	dBm	INFO
Ref. Frequency	---	---	2468.890	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.65 15.92 15
Start [MHz] Stop [MHz]	2442.000 2482.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	17156	kHz	PASS



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

General verdict

PASS

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

Test References	
TC Start	17.08.2021 16:07:04
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

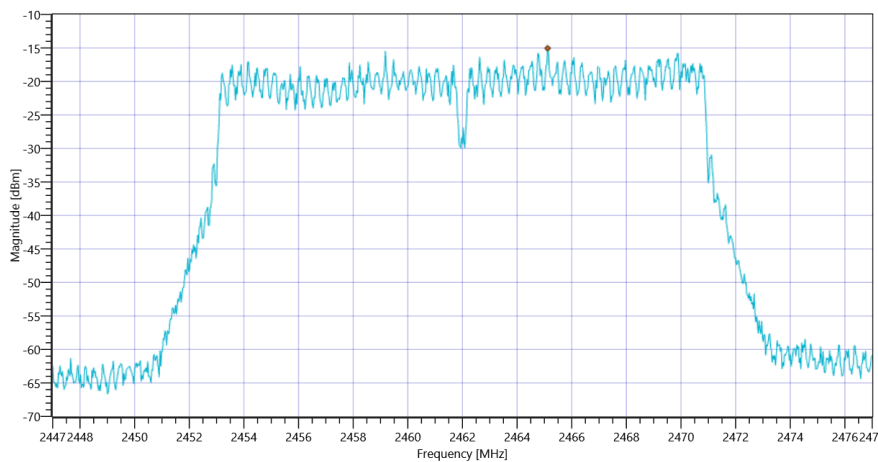
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.65	dBm	INFO
Ref. Frequency	---	---	2469.590	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.65 15.92 15
Start [MHz] Stop [MHz]	2447.000 2477.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-15.04	dBm/3KHz	PASS



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

General verdict

PASS

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

Test References

TC Start	17.08.2021 16:07:51
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2462 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.43	dBm	INFO
Ref. Frequency	---	---	2468.690	MHz	INFO

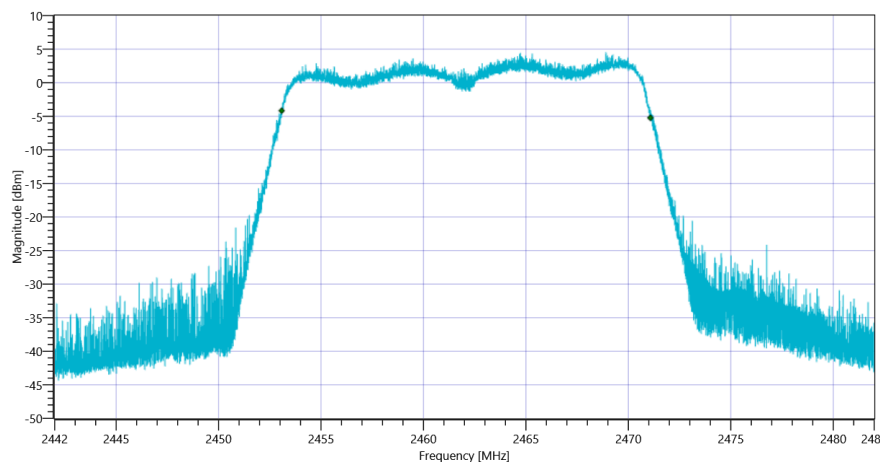
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.43 15.92 15
Start [MHz] Stop [MHz]	2442.000 2482.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

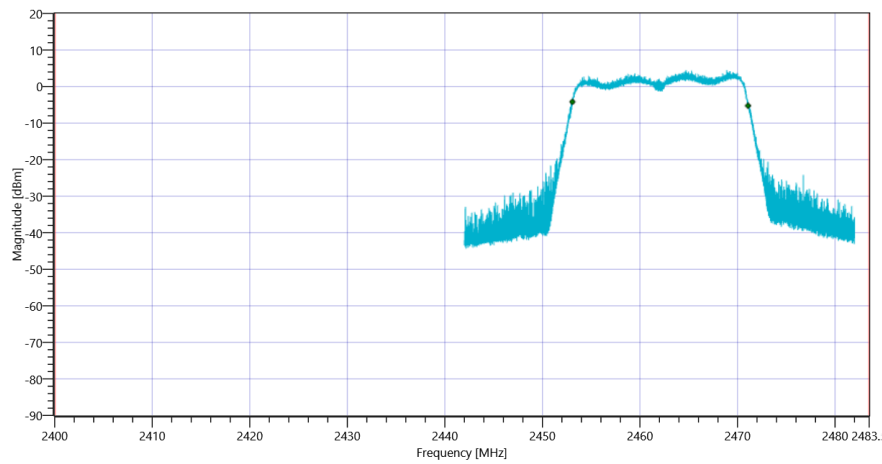
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17998.200	kHz	INFO
T1 99%	2400.000000	---	2453.0769	MHz	PASS
T2 99%	---	2483.500000	2471.0751	MHz	PASS

Plot: Bandwidth only



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

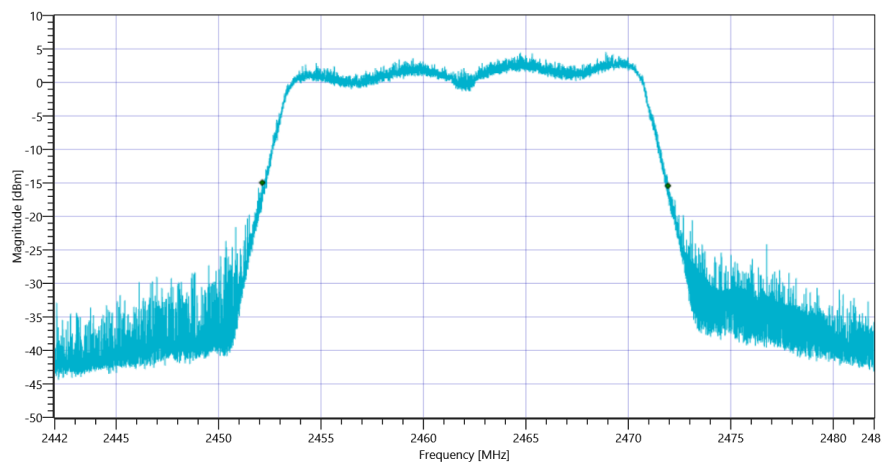
Plot: Bandwidth within Band



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

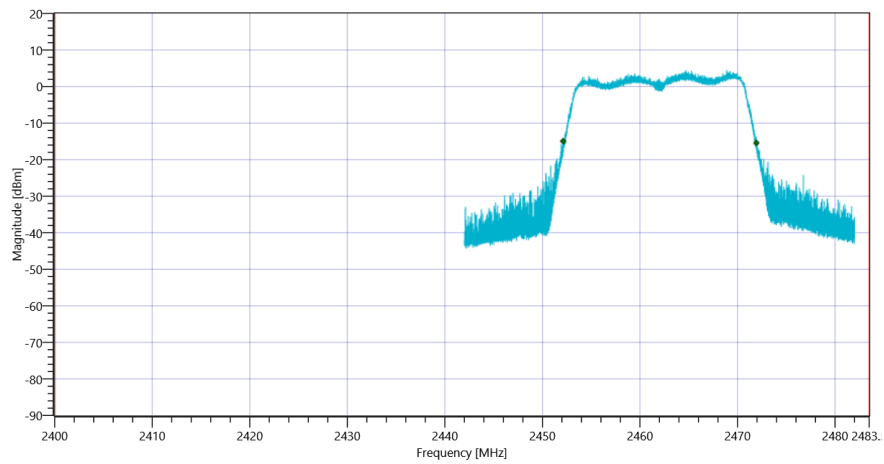
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	19804	kHz	INFO
T1 20dB	2400.000000	---	2452.1280	MHz	PASS
T2 20dB	---	2483.500000	2471.9320	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band



General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode

Test References	
TC Start	17.08.2021 16:08:50
Ambit Temp [°C] Humidity [rel%]	25.9 37
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 nHT20_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2462 MHz

RESULT: Reference Power cond.

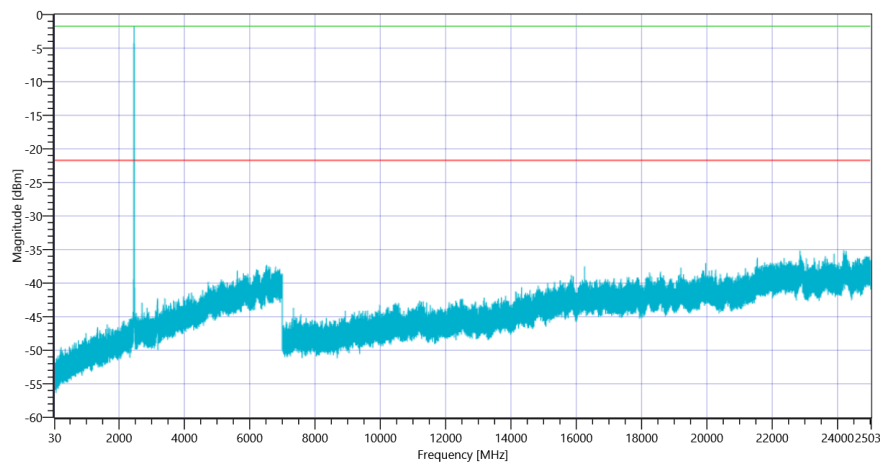
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	6.72	dBm	INFO
Ref. Frequency	---	---	2468.890	MHz	INFO

READ SA SETTINGS:

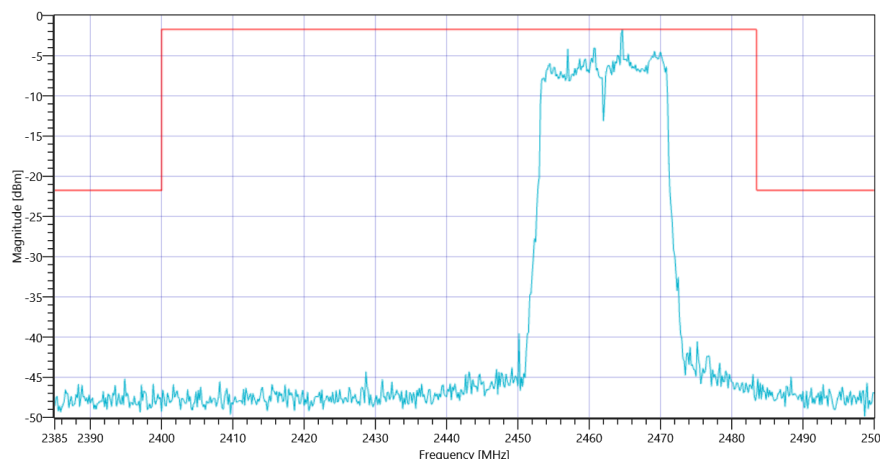
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.72 0 25
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2464.67 MHz	---	---	-1.74	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24191 MHz	0	---	13.37	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2462



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT20-mode 2462

General verdict

PASS

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

Test References

TC Start	17.08.2021 16:15:47
Ambit Temp [°C] Humidity [rel%]	25.9 38
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT20-mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT20-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2462 MHz

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	---	---	21.34	dBm	PASS

General verdict

PASS

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

Test References

TC Start	20.08.2021 15:16:11
Ambit Temp [°C] Humidity [rel%]	26.1 46
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2422 MHz

RESULT: Reference Power cond.

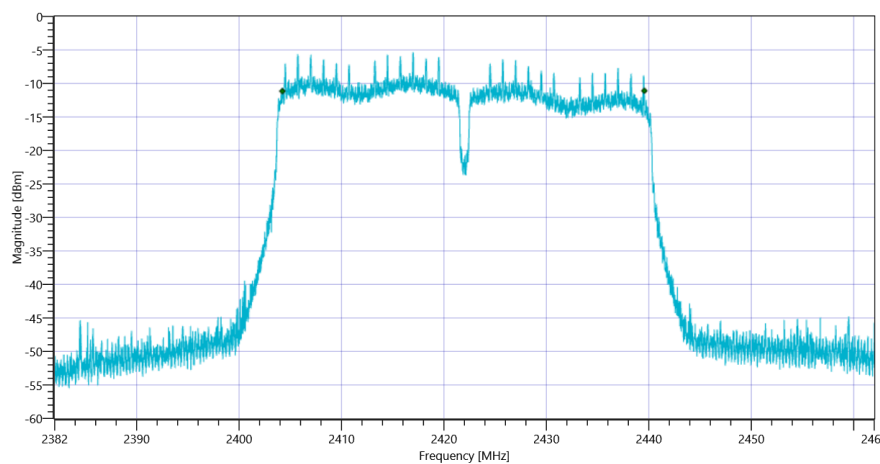
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.36	dBm	INFO
Ref. Frequency	---	---	2406.620	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.36 16.1 10
Start [MHz] Stop [MHz]	2382.000 2462.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	35336	kHz	PASS



General verdict

PASS

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

Test References

TC Start	20.08.2021 15:16:47
Ambit Temp [°C] Humidity [rel%]	26.1 46
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2422 MHz

RESULT: Reference Power cond.

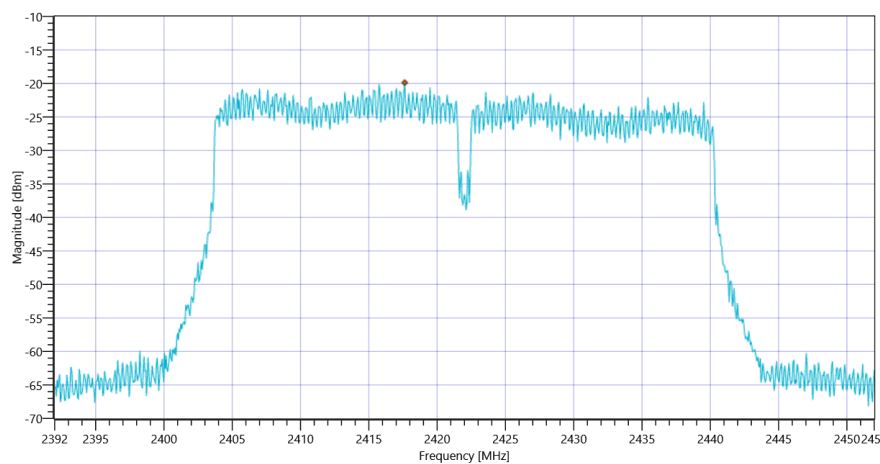
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.29	dBm	INFO
Ref. Frequency	---	---	2416.910	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.29 16.1 10
Start [MHz] Stop [MHz]	2392.000 2452.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-19.87	dBm/3KHz	PASS



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

General verdict

PASS

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

Test References	
TC Start	20.08.2021 15:17:34
Ambit Temp [°C] Humidity [rel%]	26.1 46
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2422 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.86	dBm	INFO
Ref. Frequency	---	---	2418.500	MHz	INFO

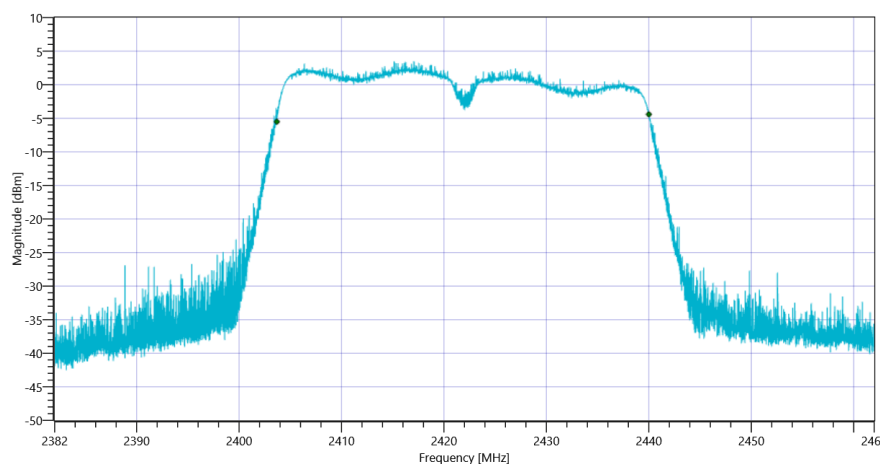
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.86 16.1 10
Start [MHz] Stop [MHz]	2382.000 2462.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

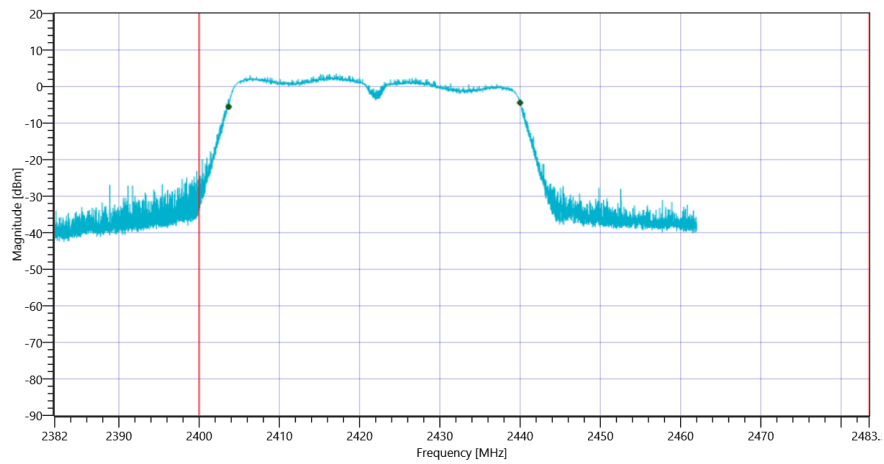
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	36308.369	kHz	INFO
T1 99%	2400.000000	---	2403.6898	MHz	PASS
T2 99%	---	2483.500000	2439.9982	MHz	PASS

Plot: Bandwidth only



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

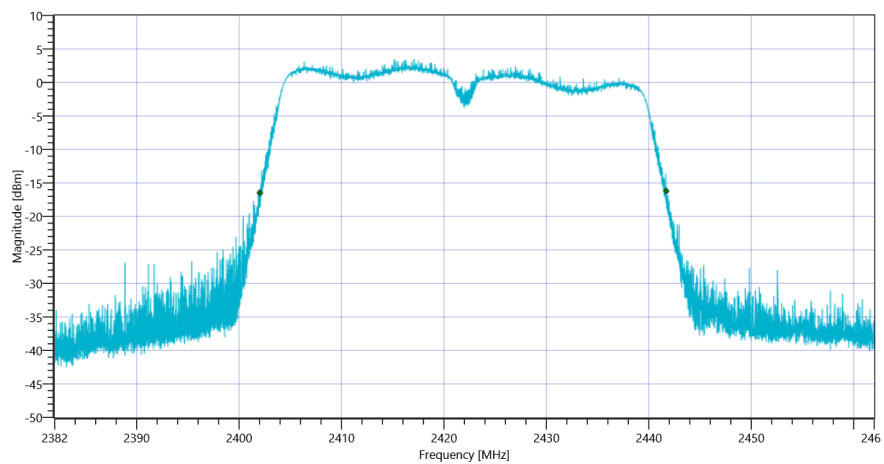
Plot: Bandwidth within Band



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

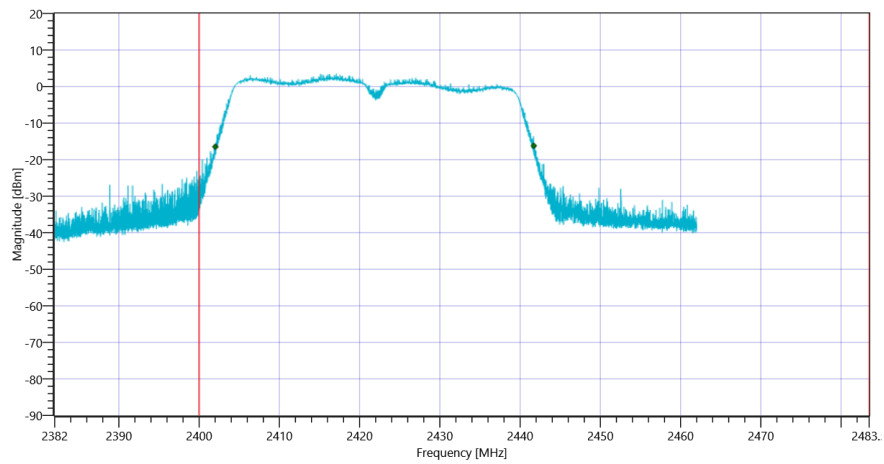
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	39672	kHz	INFO
T1 20dB	2400.000000	---	2402.0240	MHz	PASS
T2 20dB	---	2483.500000	2441.6960	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode

Test References	
TC Start	20.08.2021 15:18:33
Ambit Temp [°C] Humidity [rel%]	26.1 46
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2422 MHz

RESULT: Reference Power cond.

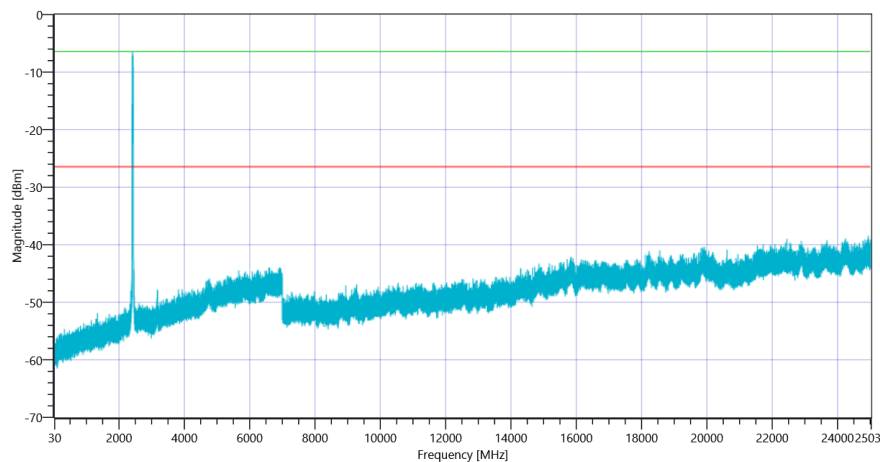
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.94	dBm	INFO
Ref. Frequency	---	---	2416.810	MHz	INFO

READ SA SETTINGS:

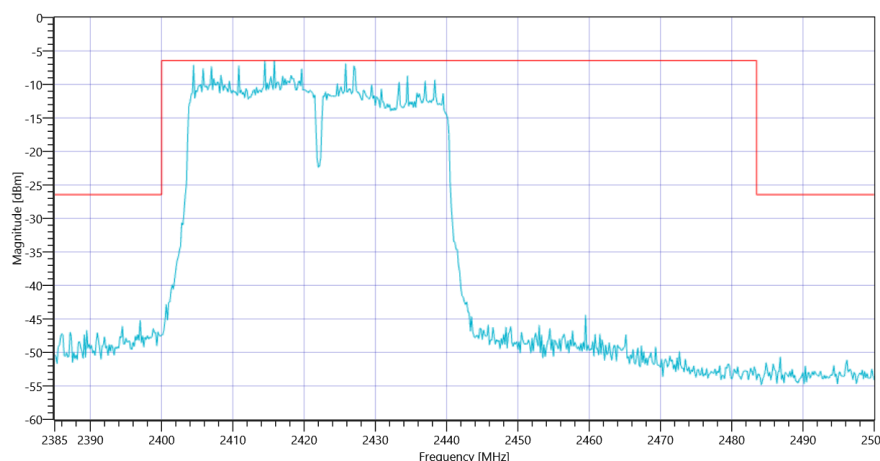
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	1.94 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2415.83 MHz	---	---	-6.44	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-141.55	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2422



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2422

General verdict

PASS

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

Test References

TC Start	20.08.2021 15:25:29
Ambit Temp [°C] Humidity [rel%]	26.1 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT40-mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2422 MHz

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	---	---	19.66	dBm	PASS

General verdict

PASS

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

Test References

TC Start	20.08.2021 15:28:10
Ambit Temp [°C] Humidity [rel%]	26.1 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2432 MHz

RESULT: Reference Power cond.

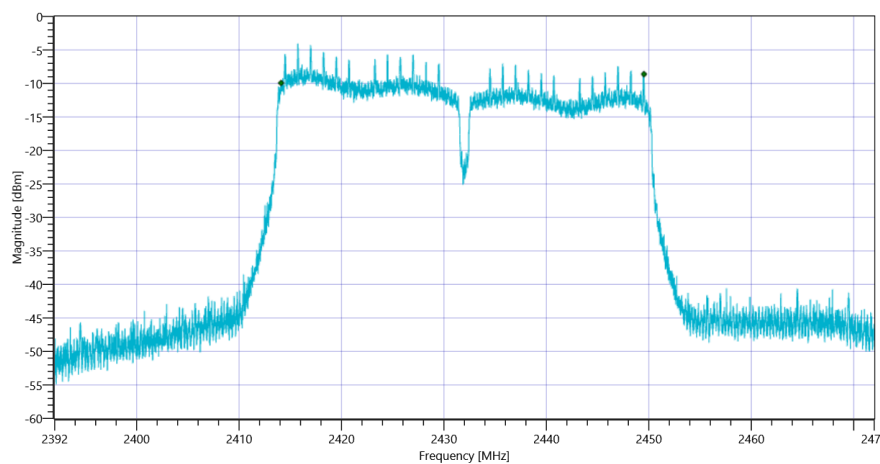
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.87	dBm	INFO
Ref. Frequency	---	---	2415.920	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.87 16.05 10
Start [MHz] Stop [MHz]	2392.000 2472.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	35424	kHz	PASS



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

General verdict

PASS

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

Test References

TC Start	20.08.2021 15:28:46
Ambit Temp [°C] Humidity [rel%]	26.2 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2432 MHz

RESULT: Reference Power cond.

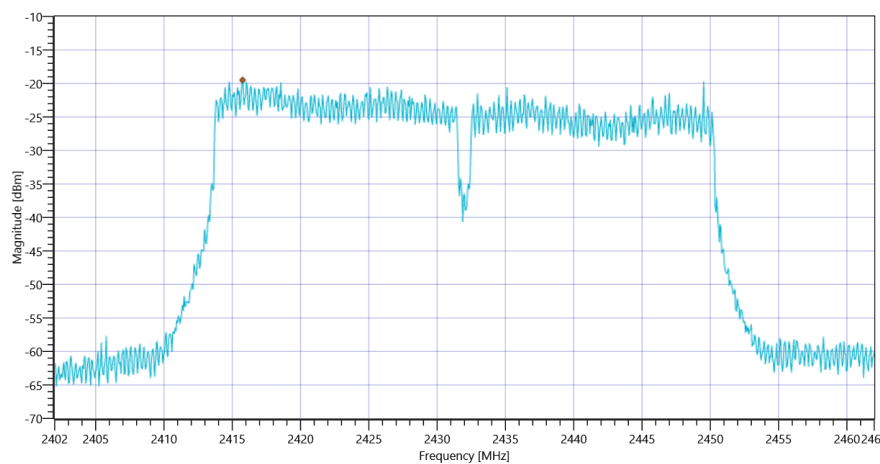
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	2.63	dBm	INFO
Ref. Frequency	---	---	2415.520	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	7.63 16.05 10
Start [MHz] Stop [MHz]	2402.000 2462.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-19.49	dBm/3KHz	PASS



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

General verdict

PASS

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

Test References	
TC Start	20.08.2021 15:29:33
Ambit Temp [°C] Humidity [rel%]	26.1 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2432 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	3.48	dBm	INFO
Ref. Frequency	---	---	2416.820	MHz	INFO

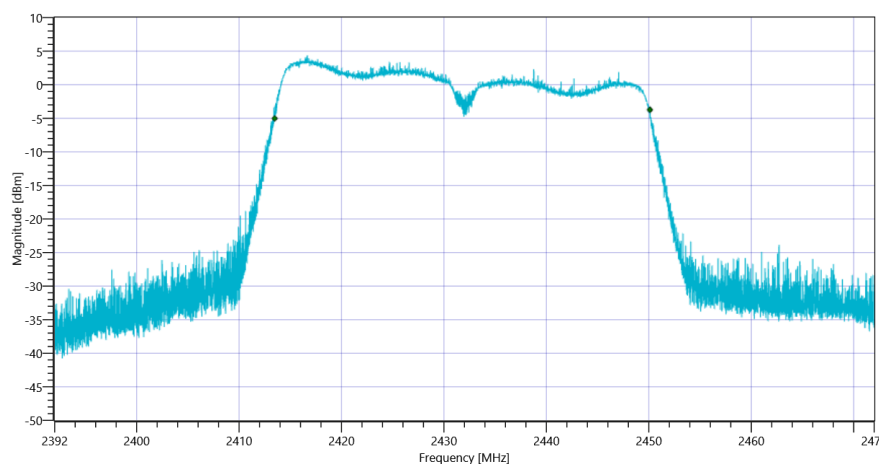
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	8.48 16.05 10
Start [MHz] Stop [MHz]	2392.000 2472.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

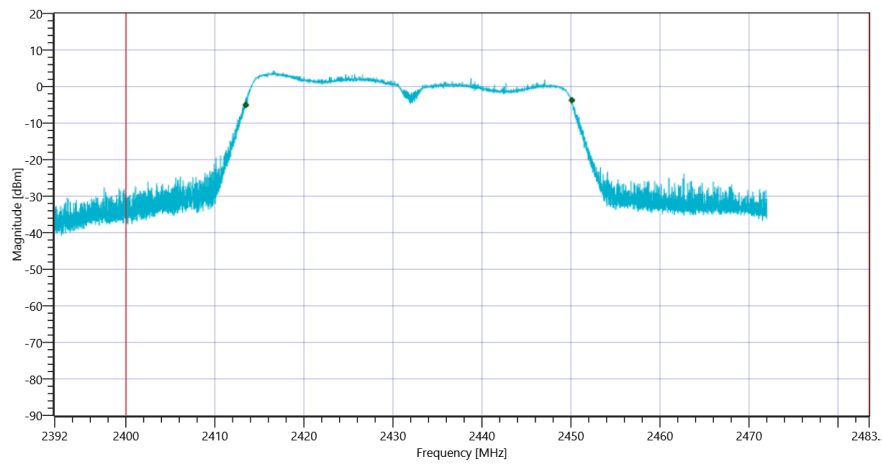
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	36628.337	kHz	INFO
T1 99%	2400.000000	---	2413.4739	MHz	PASS
T2 99%	---	2483.500000	2450.1022	MHz	PASS

Plot: Bandwidth only



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

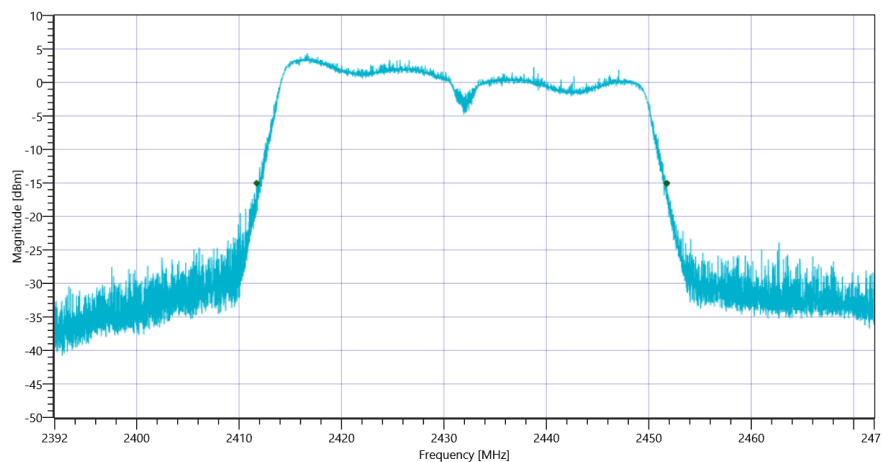
Plot: Bandwidth within Band



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

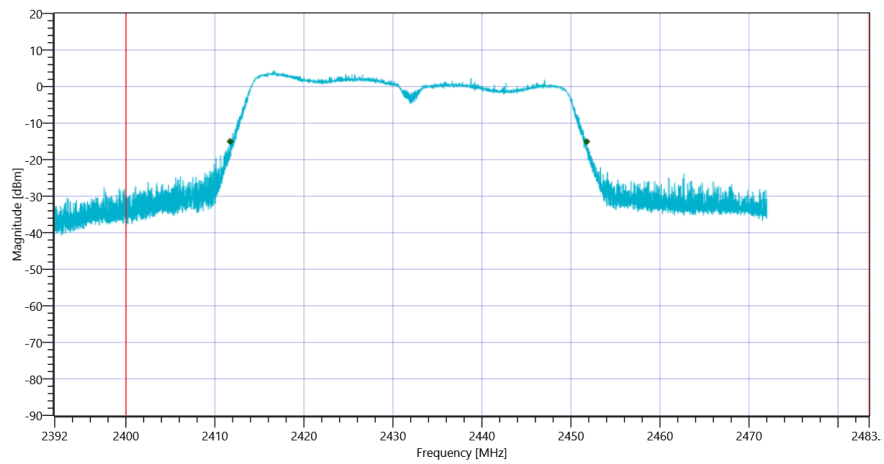
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	40056	kHz	INFO
T1 20dB	2400.000000	---	2411.7040	MHz	PASS
T2 20dB	---	2483.500000	2451.7600	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode

Test References	
TC Start	20.08.2021 15:30:31
Ambit Temp [°C] Humidity [rel%]	26.2 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2432 MHz

RESULT: Reference Power cond.

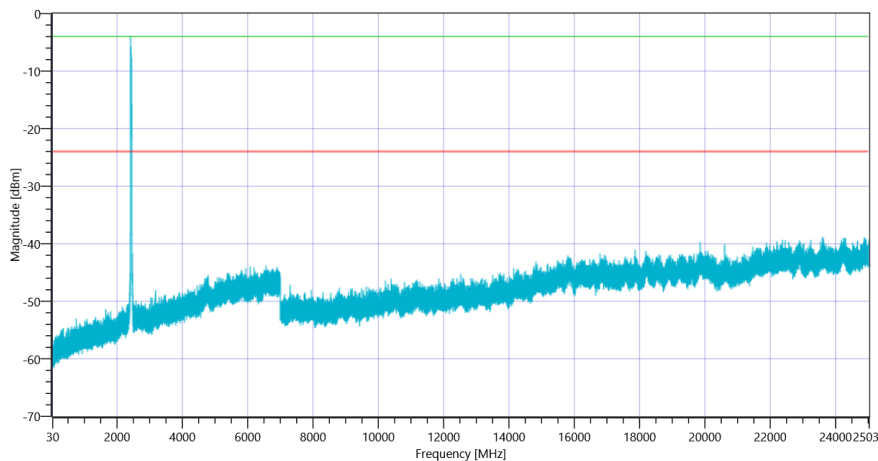
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	3.38	dBm	INFO
Ref. Frequency	---	---	2416.820	MHz	INFO

READ SA SETTINGS:

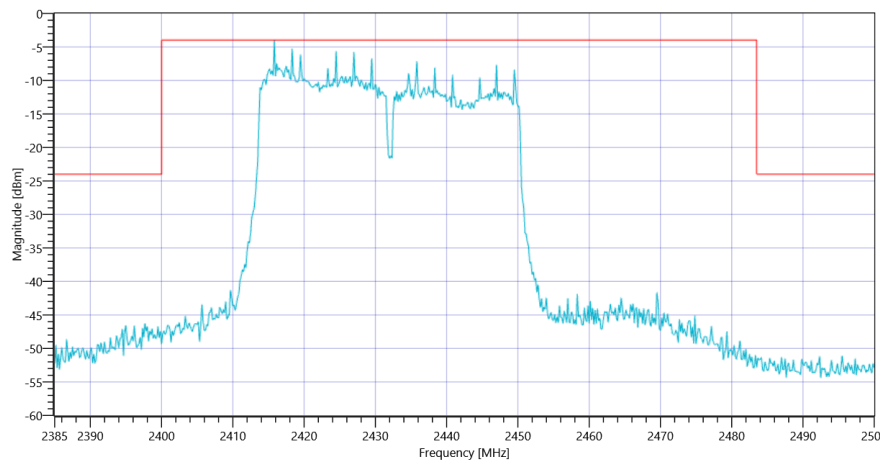
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	3.38 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2415.83 MHz	---	---	-3.98	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 23595.167 MHz	0	---	14.82	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2432



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2432

General verdict

PASS

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

Test References	
TC Start	20.08.2021 15:37:29
Ambit Temp [°C] Humidity [rel%]	26.2 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT40-mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	True Freq [MHz] 2432
Frequency high to test	False Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06	

Test at TX 2432 MHz

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	---	---	19.89	dBm	PASS

General verdict

PASS

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

Test References	
TC Start	20.08.2021 15:38:49
Ambit Temp [°C] Humidity [rel%]	26.2 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	99
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	True Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2452 MHz

RESULT: Reference Power cond.

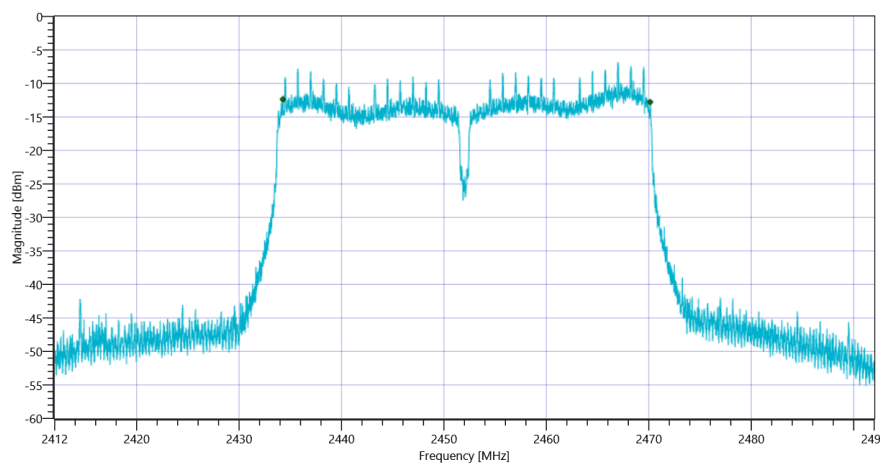
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.74	dBm	INFO
Ref. Frequency	---	---	2467.180	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.74 15.95 5
Start [MHz] Stop [MHz]	2412.000 2492.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
DTS Bandwidth (6dB)	500	---	35864	kHz	PASS



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

General verdict

PASS

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

Test References	
TC Start	20.08.2021 15:39:24
Ambit Temp [°C] Humidity [rel%]	26.2 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.4 DTS maximum power spectral density level in the fundamental emission
TC Version	0.0.1
My Description	FCC 15.247 Peak Power Spectral Density DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	True Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2452 MHz

RESULT: Reference Power cond.

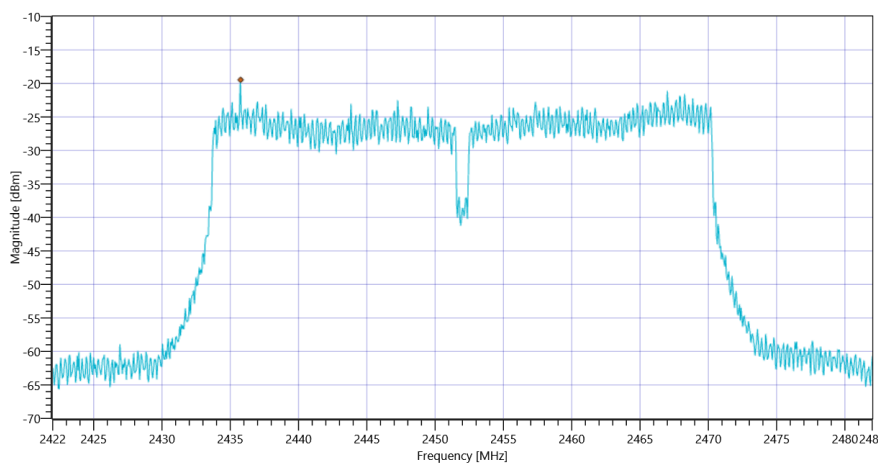
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.97	dBm	INFO
Ref. Frequency	---	---	2466.690	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	5.97 15.95 10
Start [MHz] Stop [MHz]	2422.000 2482.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1000 20 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Peak power Density	---	8	-19.45	dBm/3KHz	PASS



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

General verdict

PASS

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

Test References

TC Start	20.08.2021 15:40:12
Ambit Temp [°C] Humidity [rel%]	26.2 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	True Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2452 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	1.07	dBm	INFO
Ref. Frequency	---	---	2466.990	MHz	INFO

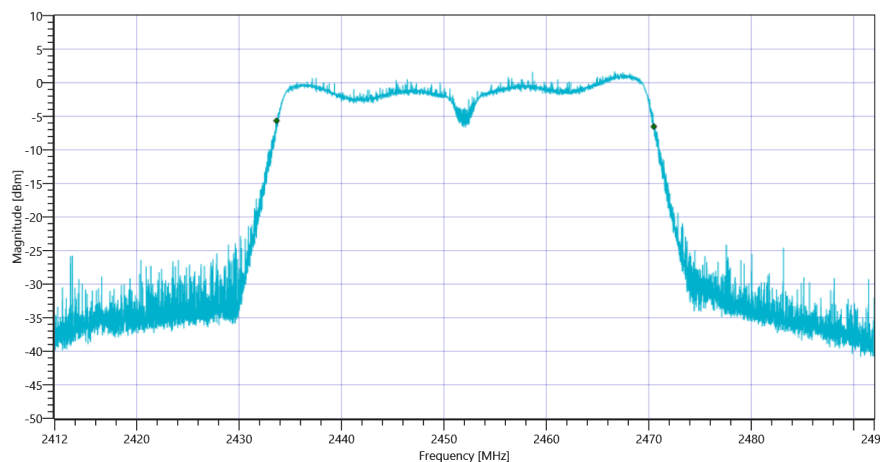
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	6.07 15.95 10
Start [MHz] Stop [MHz]	2412.000 2492.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	50 200 10001 SWE

RESULT

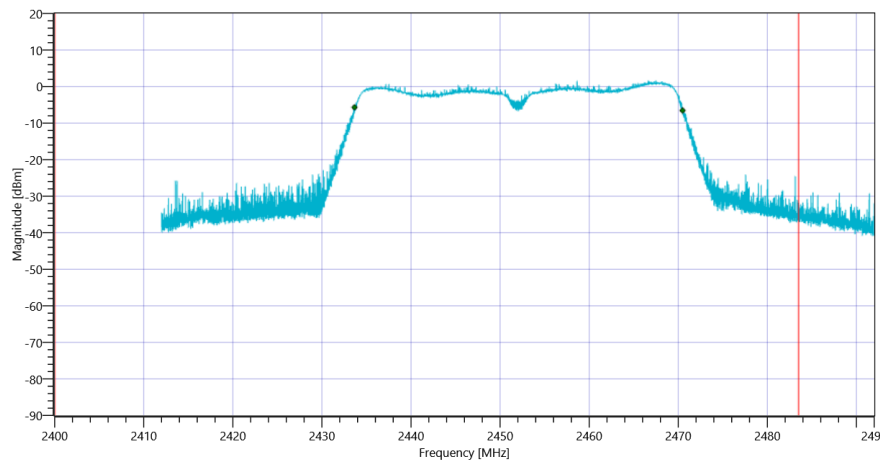
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	36828.317	kHz	INFO
T1 99%	2400.000000	---	2433.6578	MHz	PASS
T2 99%	---	2483.500000	2470.4862	MHz	PASS

Plot: Bandwidth only



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

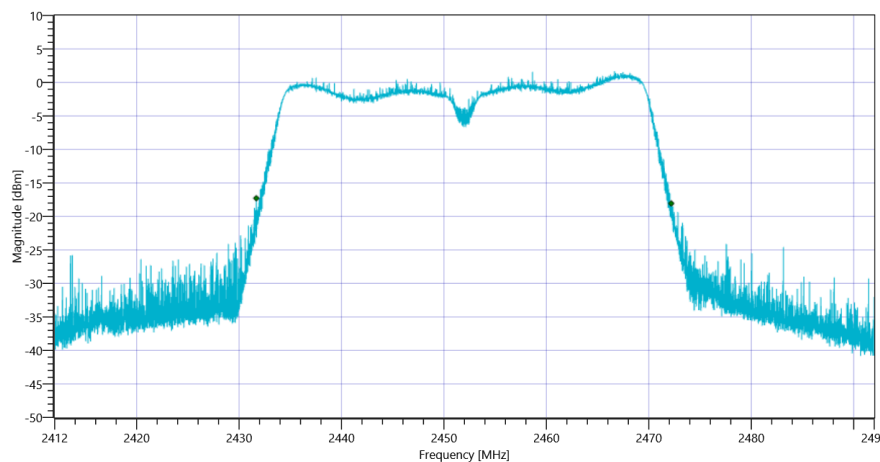
Plot: Bandwidth within Band



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

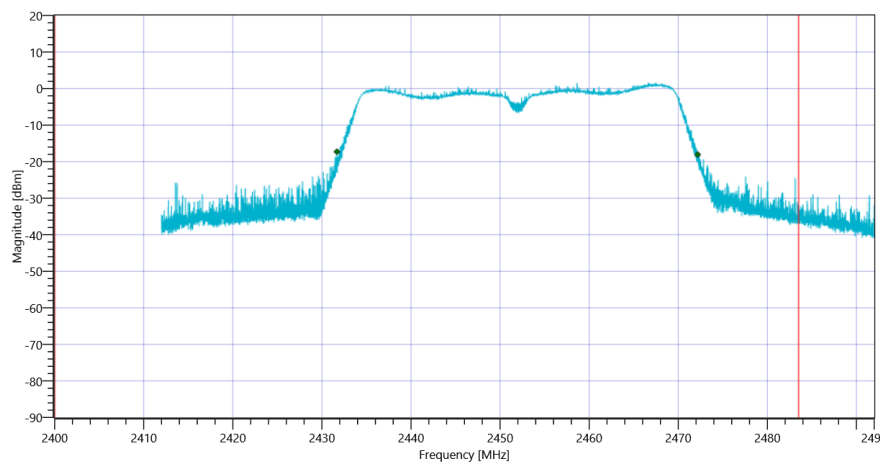
RESULT					
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	40504	kHz	INFO
T1 20dB	2400.000000	---	2431.6800	MHz	PASS
T2 20dB	---	2483.500000	2472.1840	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band



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

General verdict

PASS

FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode

Test References	
TC Start	20.08.2021 15:41:11
Ambit Temp [°C] Humidity [rel%]	26.3 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable.
TC Version	0.0.1
My Description	FCC 15.247 TX Emissions Conducted DTS - WLAN 2G4 nHT40_mode
Add. Information	

EUT Common Settings WLAN2G4	
Number of Antenna Ports	1
User Interaction	No

Test Parameter	
Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	True Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment	
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.60	
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI	

Test at TX 2452 MHz

RESULT: Reference Power cond.

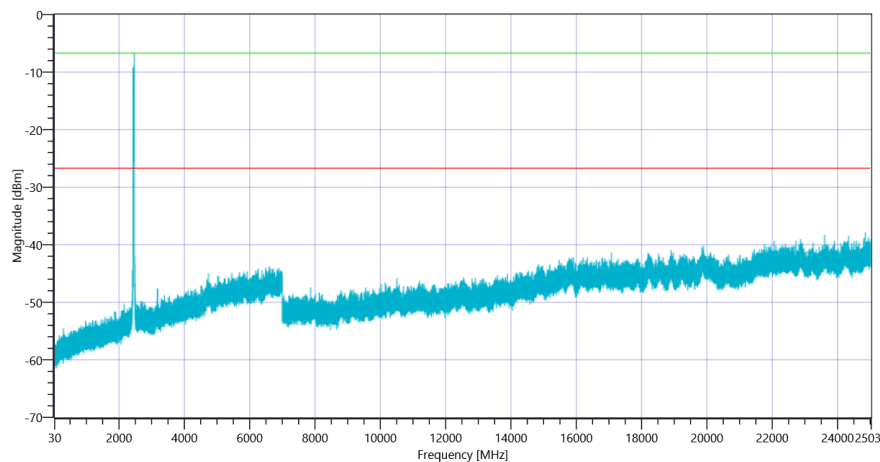
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	0.73	dBm	INFO
Ref. Frequency	---	---	2436.320	MHz	INFO

READ SA SETTINGS:

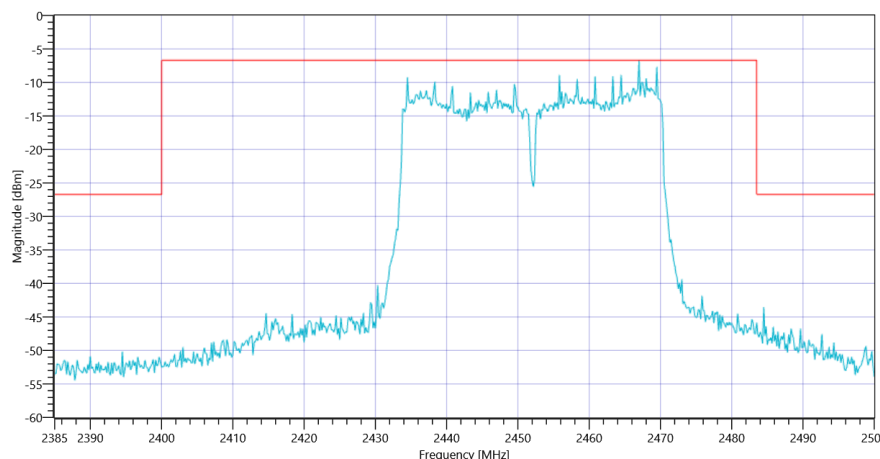
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	0.73 0 20
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	500 8 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2467.00 MHz	---	---	-6.70	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24854 MHz	0	---	11.14	dB	INFO



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2452



FCC Part 15.247 TX Spurious Conducted ~ WLAN2G4 nHT40-mode 2452

General verdict

PASS

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

Test References

TC Start	20.08.2021 15:48:05
Ambit Temp [°C] Humidity [rel%]	26.3 45
System Version	3.0.1.5
Test Specification	FCC Part 15.247
Test Method	DTS: KDB 558074 D01 V05 - Chapter 8.3.1.3 PKPM1 Peak-reading Power Meter Method
TC Version	0.0.1
My Description	FCC 15.247 Maximum Peak Output Power Powermeter Conducted DTS - WLAN 2G4 nHT40-mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 nHT40-mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2422
Frequency mid to test	False Freq [MHz] 2432
Frequency high to test	True Freq [MHz] 2452
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.5
Switched Path	EUT - SignalingUnit - PowerMeter

Test Equipment

Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI
Power sensor,Keysight Technologies,U2021XA,MY59190010,A.04.06

Test at TX 2452 MHz

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Found Peak cond.	---	---	18.3	dBm	PASS

General verdict

PASS

- END OF DOCUMENT -