

Test at TX 2412 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.42	dBm	INFO
Ref. Frequency	--	--	2410.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

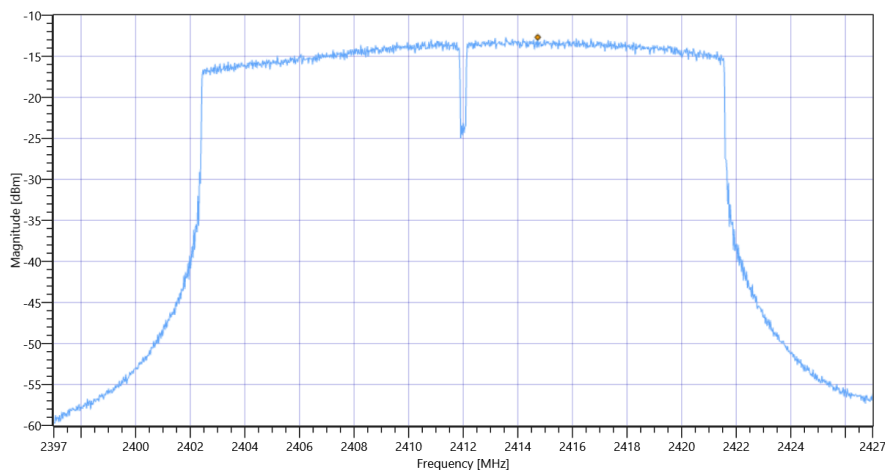
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.42 5.23 40
Start [MHz] Stop [MHz]	2397.000 2427.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-12.68	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-12.68	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	05.12.2022 15:37:37
Ambit Temp [°C] Humidity [rel%]	18.1 36
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	2
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]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2412 MHz

RESULT: Reference Power cond.

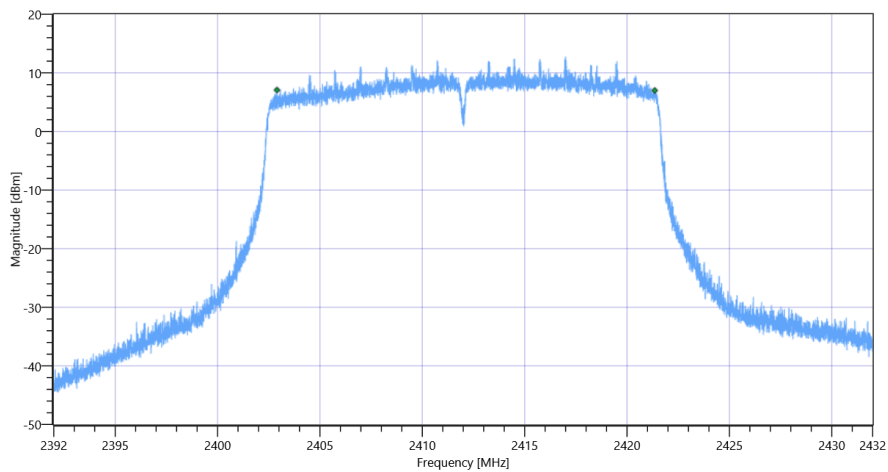
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	20.77	dBm	INFO
Ref. Frequency	--	--	2410.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	25.77 5.23 40
Start [MHz] Stop [MHz]	2392.000 2432.000
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	--	18452	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	05.12.2022 15:27:18
Ambit Temp [°C] Humidity [rel%]	18.0 36
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2412 MHz

RESULT: Reference Power cond.

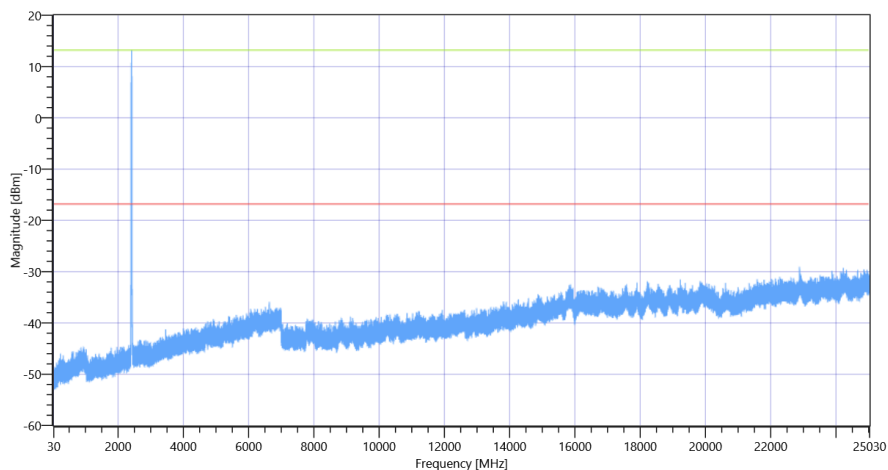
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.28	dBm	INFO
Ref. Frequency	---	---	2417.690	MHz	INFO

READ SA SETTINGS:

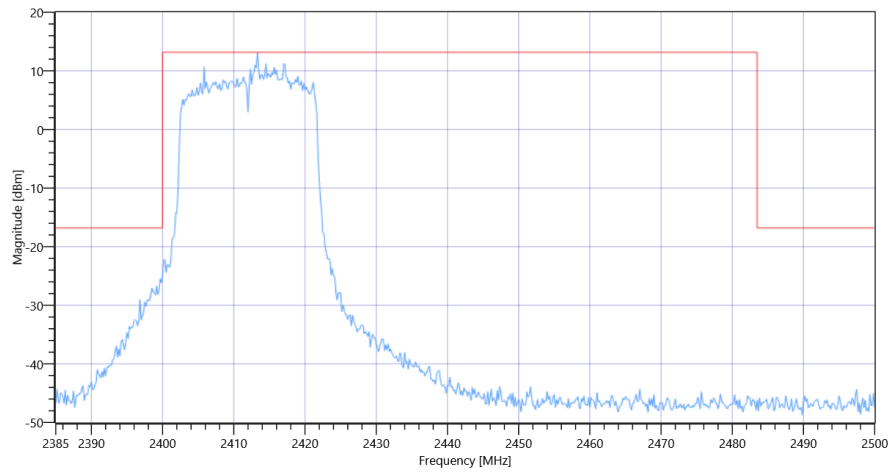
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.28 0 40
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2413.33 MHz	---	---	13.18	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2399.667 MHz	0	---	8.65	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2412



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2412

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	05.12.2022 15:26:19
Ambit Temp [°C] Humidity [rel%]	18.0 36
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2412 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	21.69	dBm	INFO
Ref. Frequency	---	---	2418.390	MHz	INFO

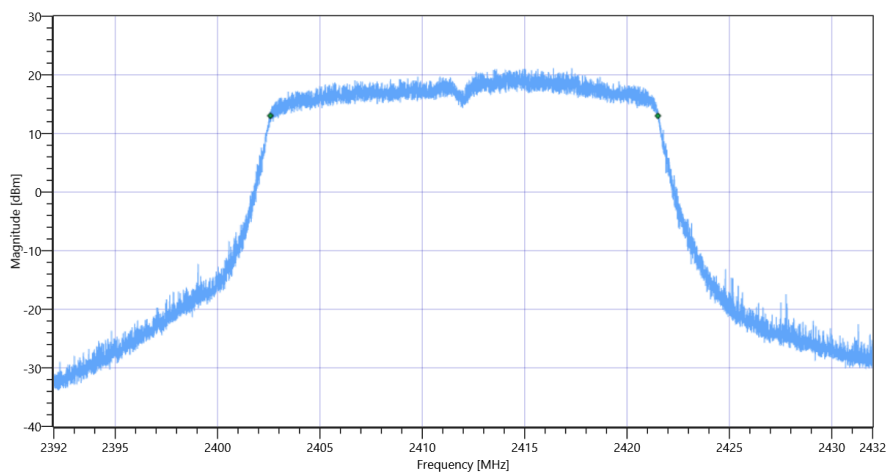
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.69 5.23 40
Start [MHz] Stop [MHz]	2392.000 2432.000
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

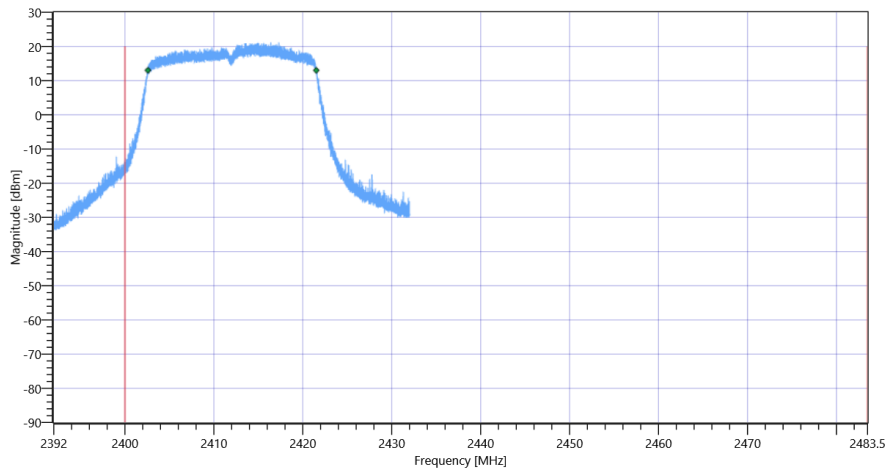
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	18926.000	kHz	INFO
T1 99%	2400.000000	---	2402.5809	MHz	PASS
T2 99%	---	2483.500000	2421.5070	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

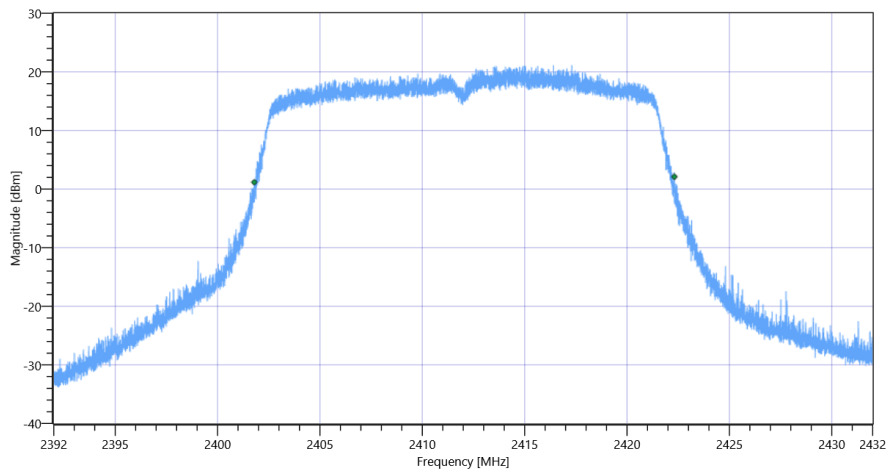


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

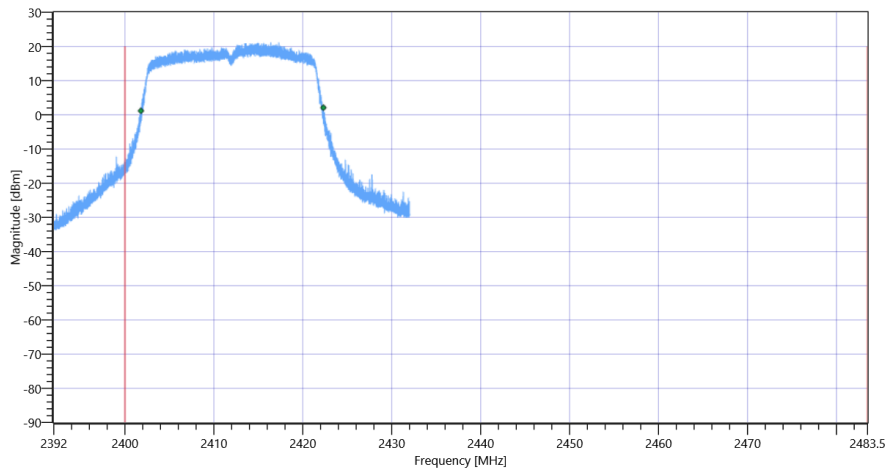
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20520	kHz	INFO
T1 20dB	2400.000000	---	2401.7920	MHz	PASS
T2 20dB	---	2483.500000	2422.3120	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	05.12.2022 15:25:13
Ambit Temp [°C] Humidity [rel%]	18.0 36
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2412 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	21.74	dBm	INFO
Ref. Frequency	--	--	2414.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

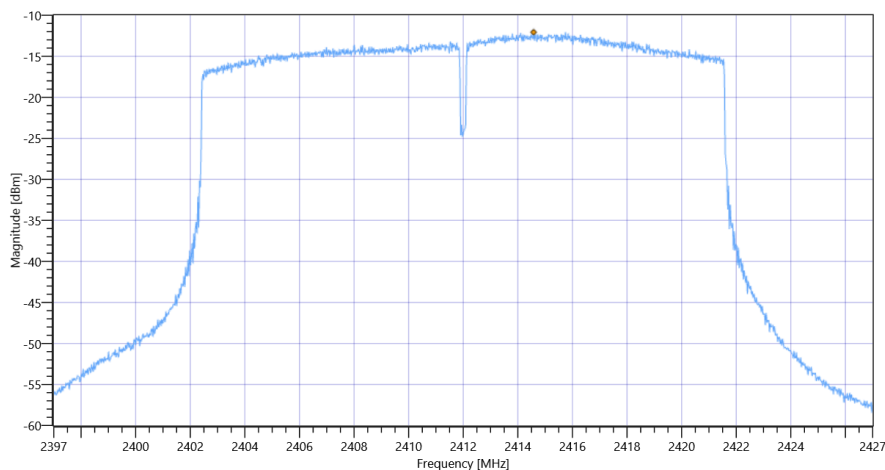
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.74 5.23 40
Start [MHz] Stop [MHz]	2397.000 2427.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-12.06	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-12.06	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	05.12.2022 15:24:34
Ambit Temp [°C] Humidity [rel%]	18.0 37
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2412 MHz

RESULT: Reference Power cond.

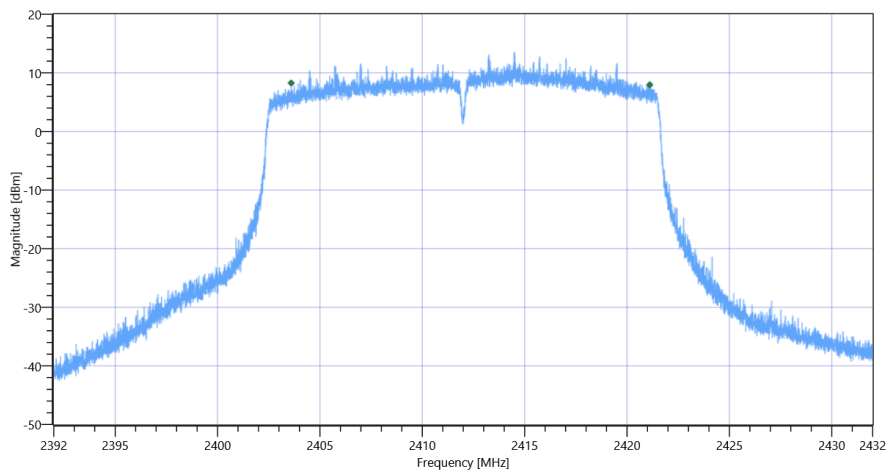
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	21.90	dBm	INFO
Ref. Frequency	--	--	2412.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.90 5.23 40
Start [MHz] Stop [MHz]	2392.000 2432.000
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	--	17512	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:44:11
Ambit Temp [°C] Humidity [rel%]	23.2 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

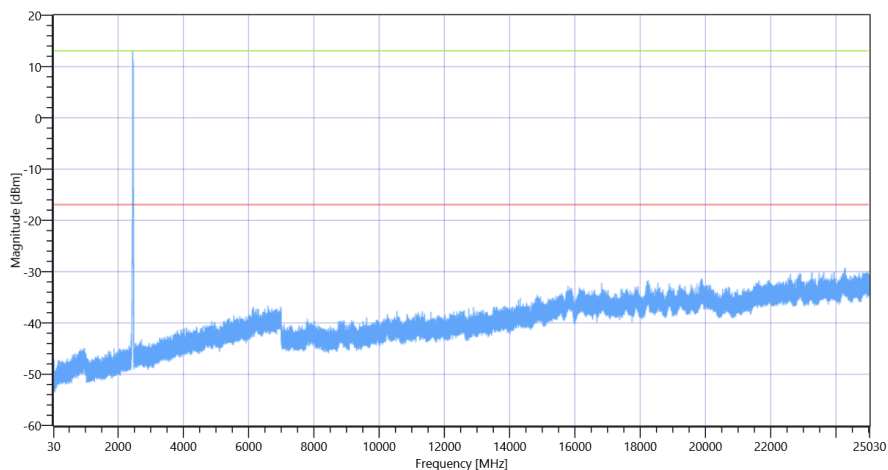
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.29	dBm	INFO
Ref. Frequency	---	---	2456.300	MHz	INFO

READ SA SETTINGS:

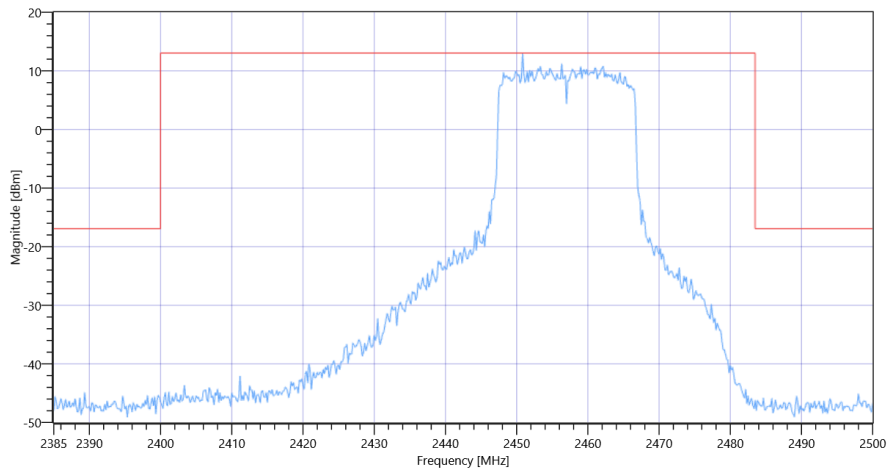
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.29 0 40
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2450.83 MHz	---	---	13.05	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24288.167 MHz	0	---	12.33	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:43:11
Ambit Temp [°C] Humidity [rel%]	23.2 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	22.35	dBm	INFO
Ref. Frequency	---	---	2459.200	MHz	INFO

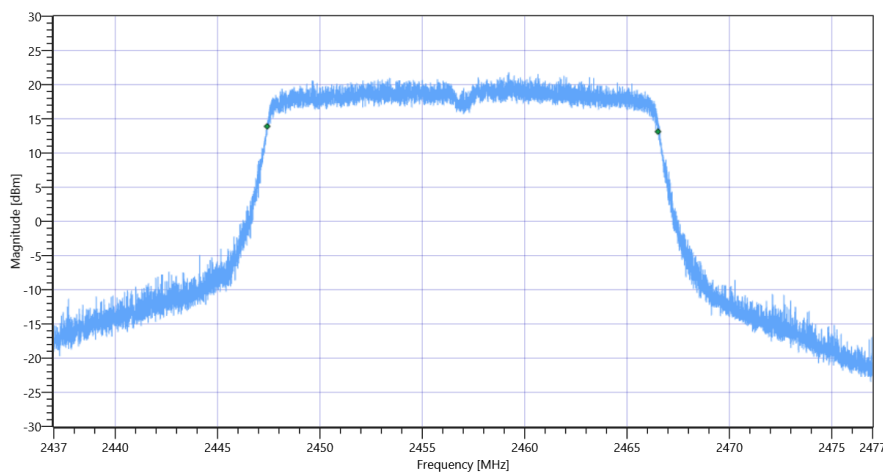
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.35 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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

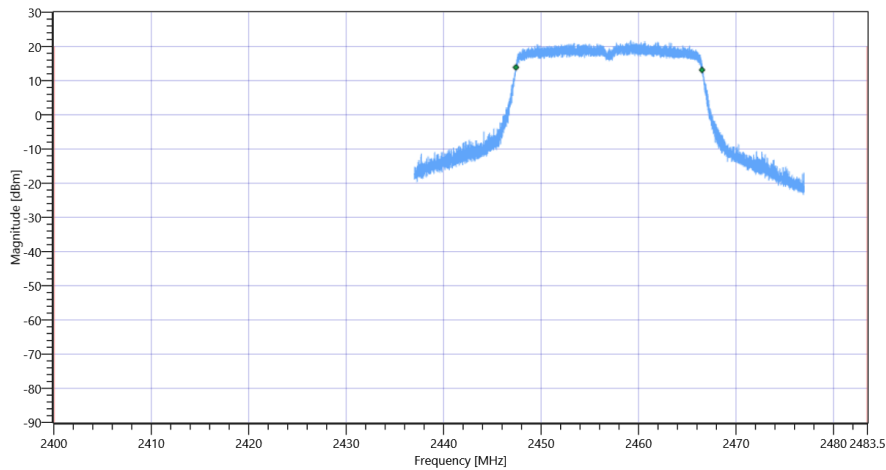
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	19090.000	kHz	INFO
T1 99%	2400.000000	---	2447.4210	MHz	PASS
T2 99%	---	2483.500000	2466.5110	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

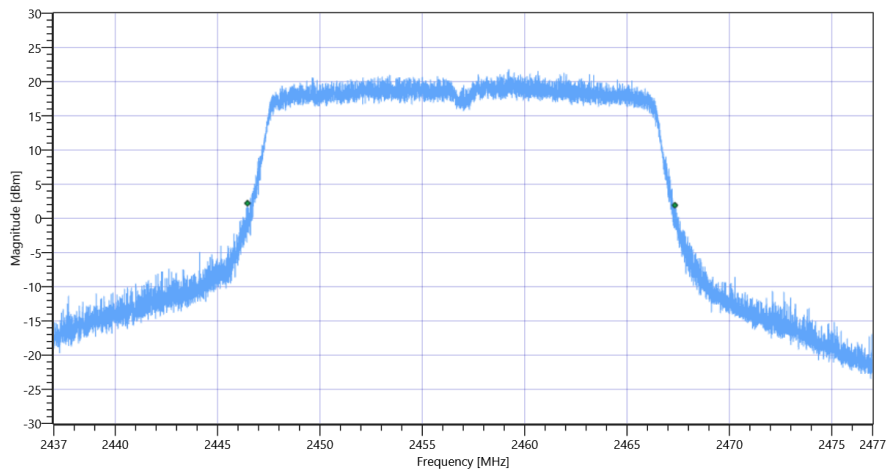


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

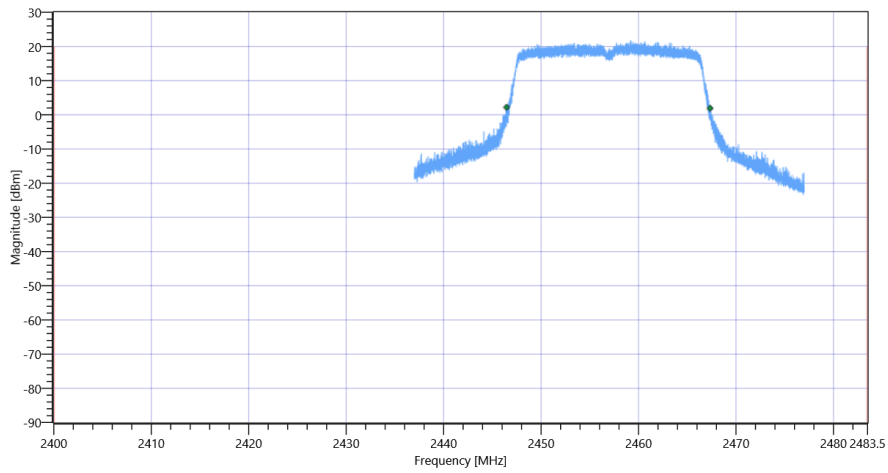
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20876	kHz	INFO
T1 20dB	2400.000000	---	2446.4600	MHz	PASS
T2 20dB	---	2483.500000	2467.3360	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:42:03
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.97	dBm	INFO
Ref. Frequency	--	--	2459.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

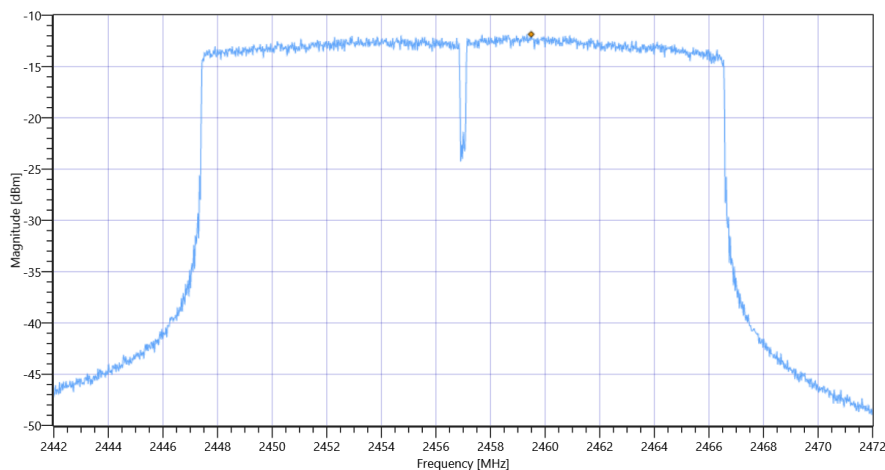
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.97 4.83 40
Start [MHz] Stop [MHz]	2442.000 2472.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-11.85	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-11.85	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:41:25
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

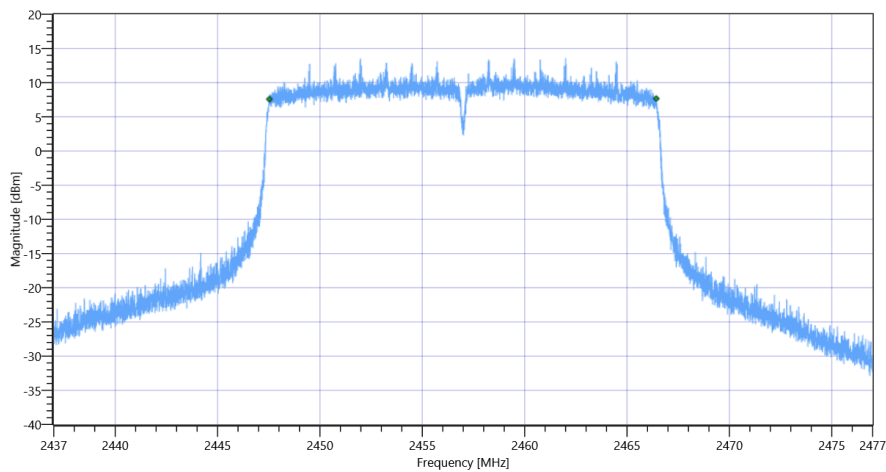
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.94	dBm	INFO
Ref. Frequency	--	--	2459.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.94 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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	--	18896	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:33:15
Ambit Temp [°C] Humidity [rel%]	23.2 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

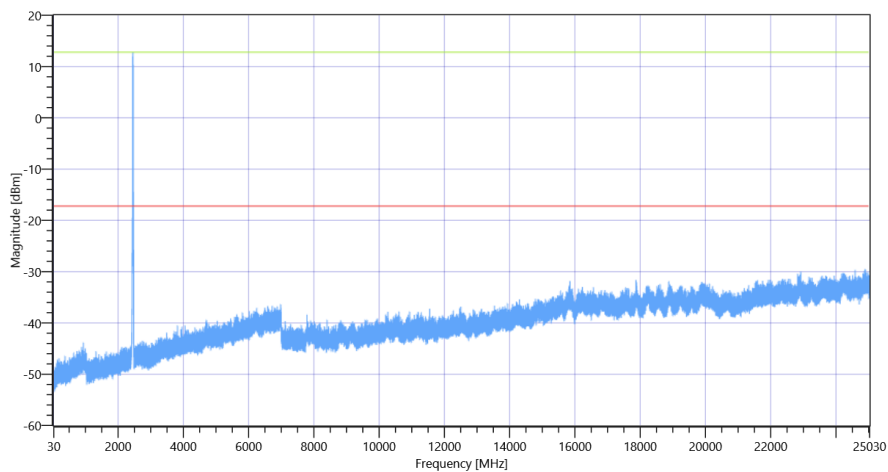
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.57	dBm	INFO
Ref. Frequency	--	--	2458.500	MHz	INFO

READ SA SETTINGS:

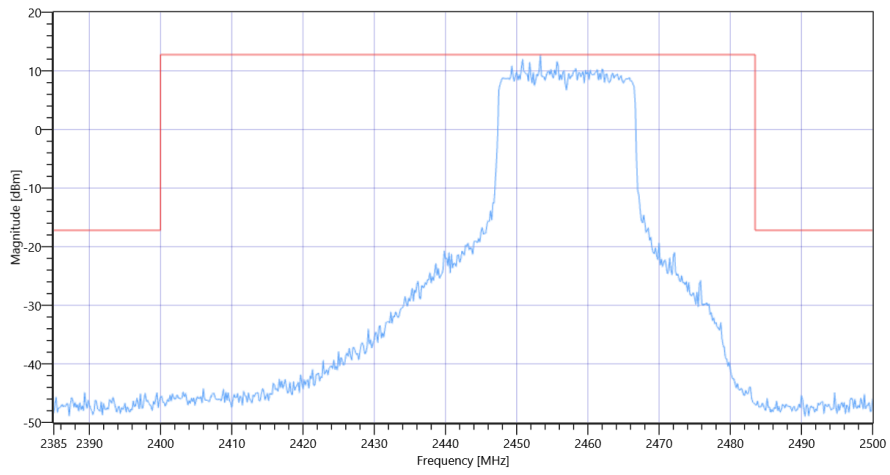
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.57 0 40
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2453.33 MHz	--	--	12.79	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24907.333 MHz	0	--	12.32	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:32:14
Ambit Temp [°C] Humidity [rel%]	23.2 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.26	dBm	INFO
Ref. Frequency	---	---	2457.800	MHz	INFO

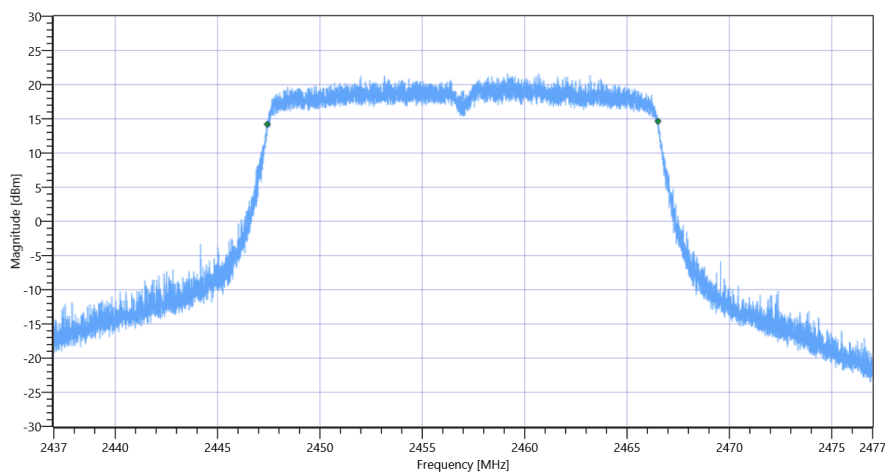
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.26 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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

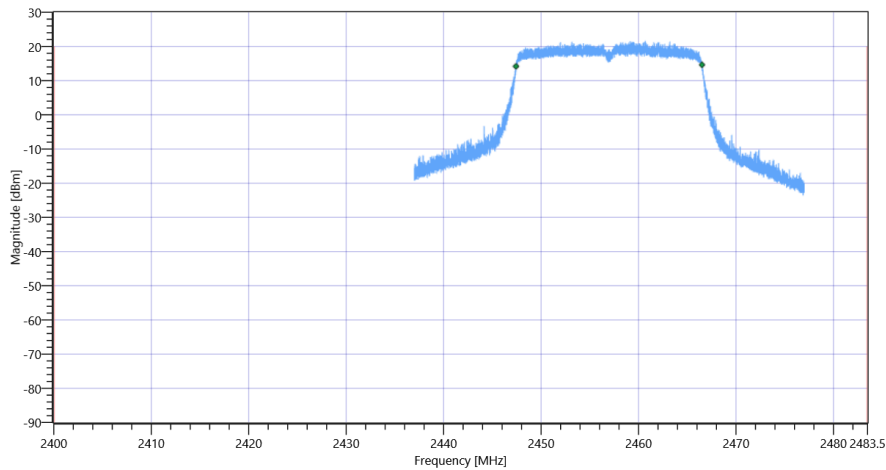
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	19086.000	kHz	INFO
T1 99%	2400.000000	---	2447.4250	MHz	PASS
T2 99%	---	2483.500000	2466.5110	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

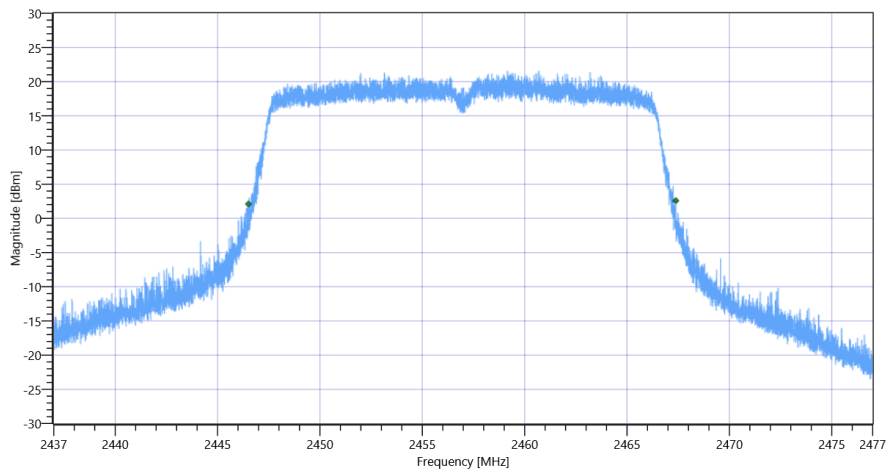


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

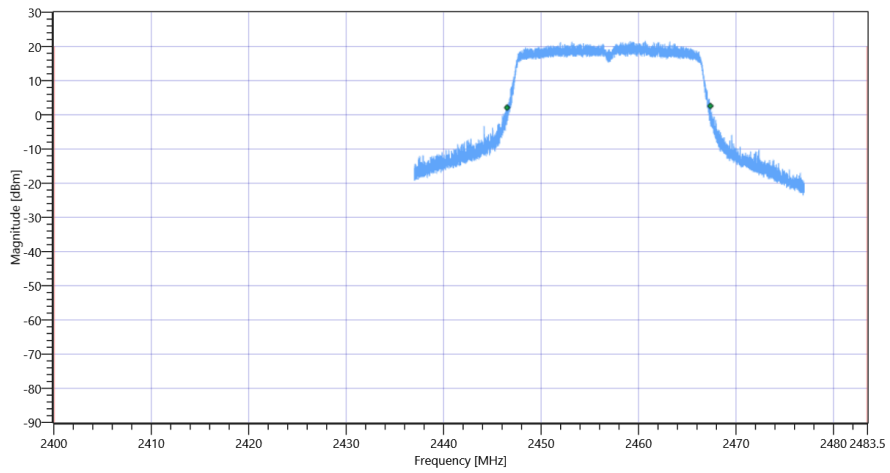
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20872	kHz	INFO
T1 20dB	2400.000000	---	2446.5040	MHz	PASS
T2 20dB	---	2483.500000	2467.3760	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:31:07
Ambit Temp [°C] Humidity [rel%]	23.2 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.06	dBm	INFO
Ref. Frequency	--	--	2450.610	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

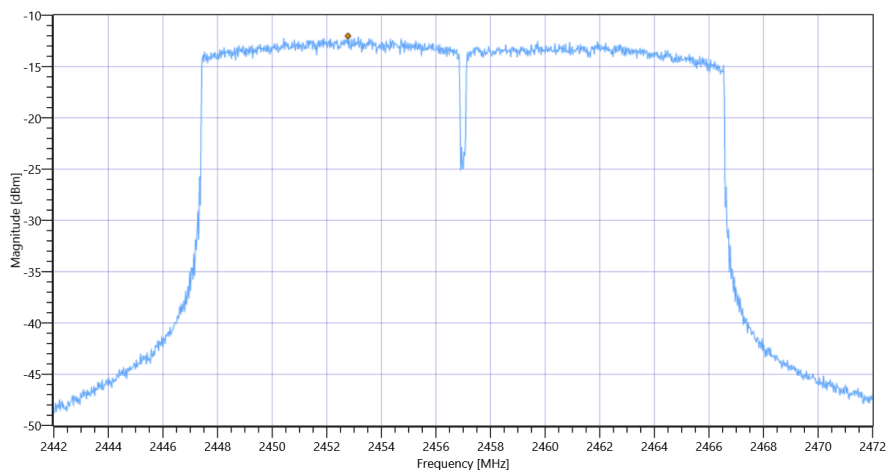
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.06 4.83 40
Start [MHz] Stop [MHz]	2442.000 2472.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-12.02	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-12.02	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:30:28
Ambit Temp [°C] Humidity [rel%]	23.2 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

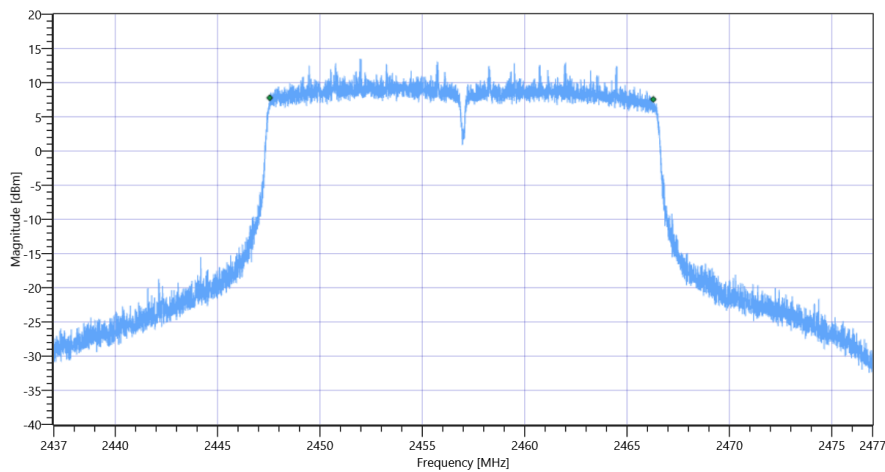
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.02	dBm	INFO
Ref. Frequency	--	--	2459.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.02 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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	--	18740	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:22:17
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

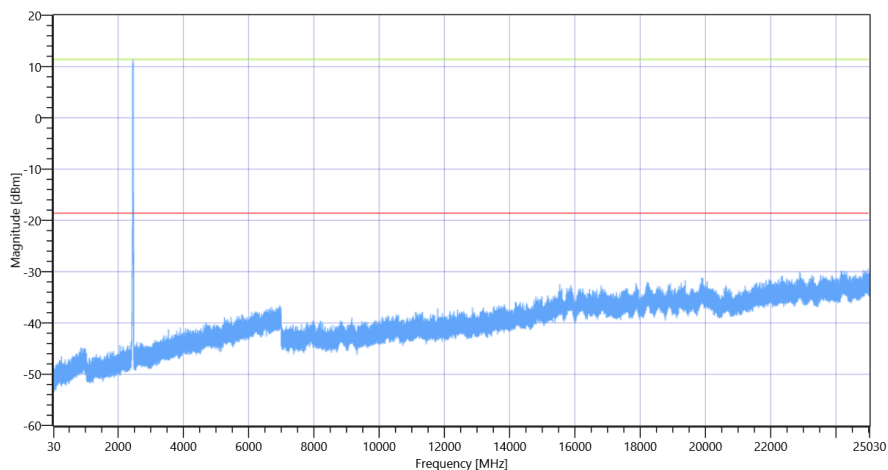
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	21.79	dBm	INFO
Ref. Frequency	--	--	2455.200	MHz	INFO

READ SA SETTINGS:

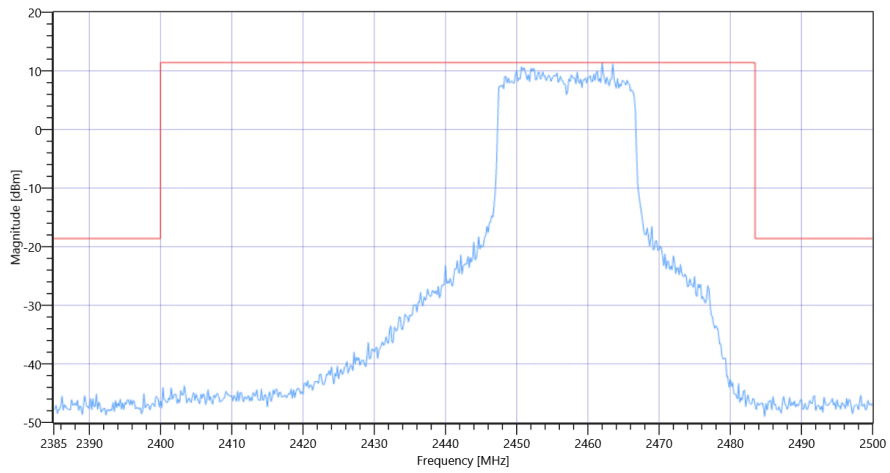
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.79 0 40
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2462.00 MHz	--	--	11.41	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24977.5 MHz	0	--	10.86	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:21:17
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	22.54	dBm	INFO
Ref. Frequency	---	---	2456.000	MHz	INFO

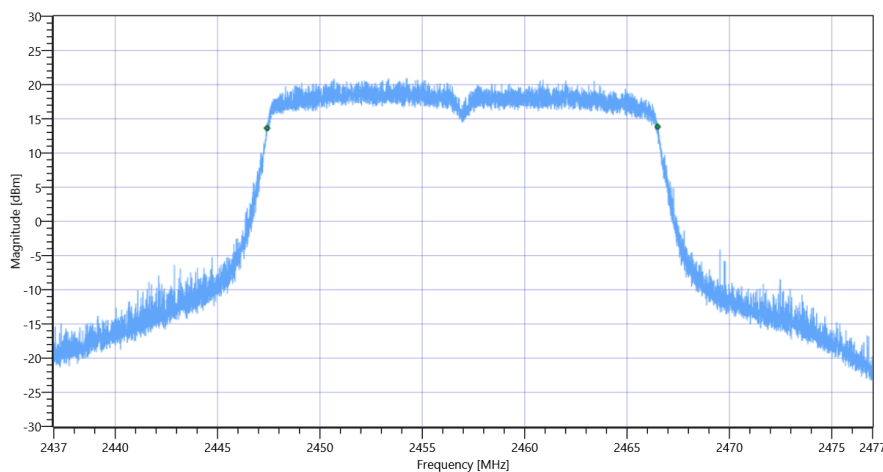
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.54 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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

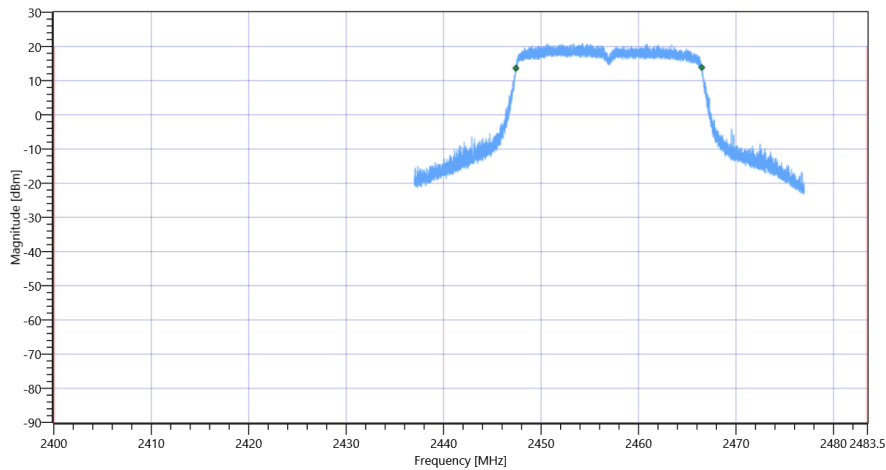
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	19078.000	kHz	INFO
T1 99%	2400.000000	---	2447.4170	MHz	PASS
T2 99%	---	2483.500000	2466.4951	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

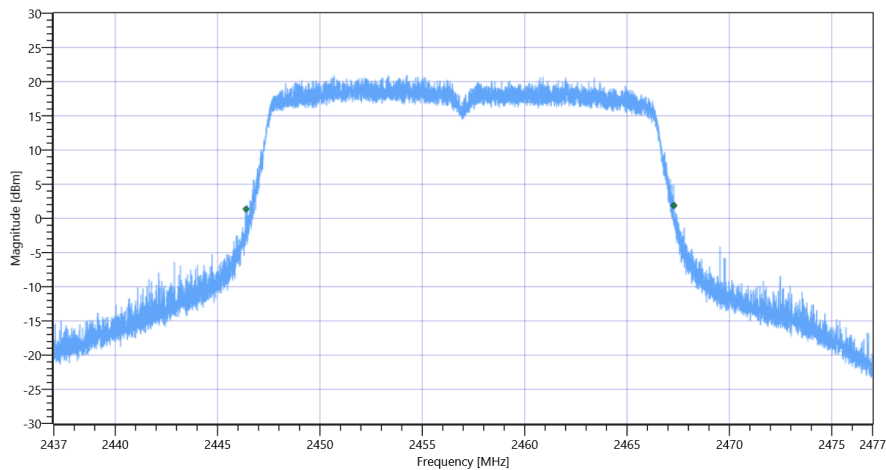


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

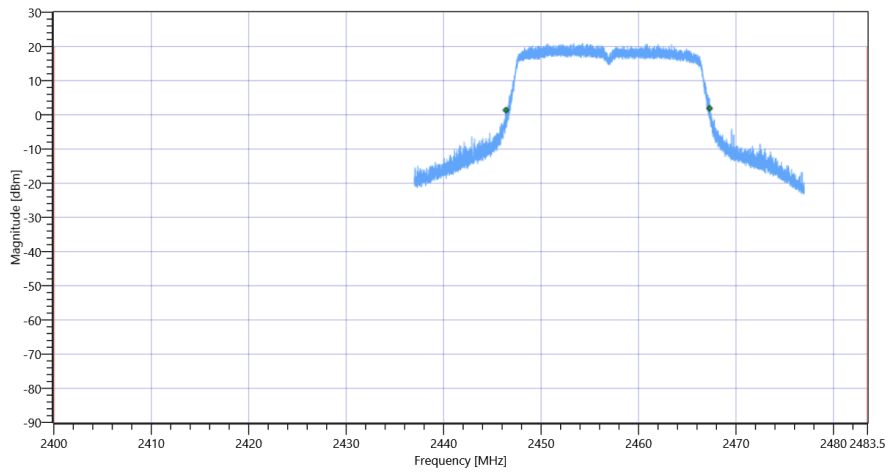
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20900	kHz	INFO
T1 20dB	2400.000000	---	2446.3880	MHz	PASS
T2 20dB	---	2483.500000	2467.2880	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:20:10
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.36	dBm	INFO
Ref. Frequency	--	--	2458.600	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

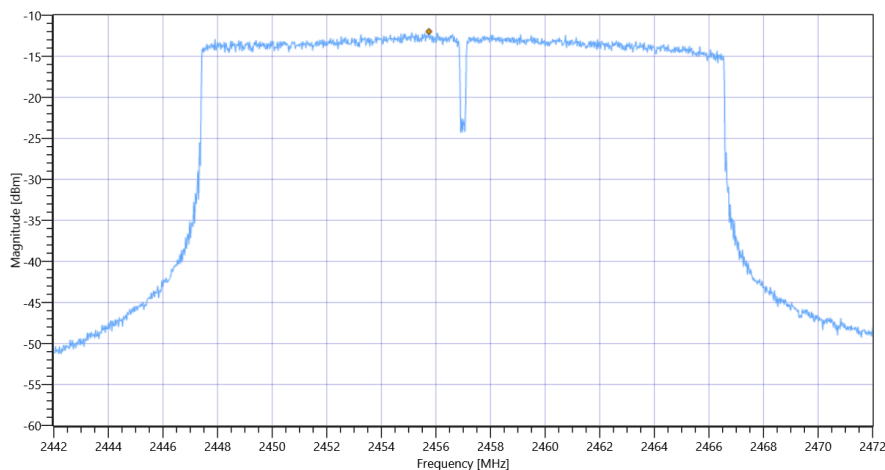
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.36 4.83 40
Start [MHz] Stop [MHz]	2442.000 2472.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-11.98	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-11.98	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:19:31
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

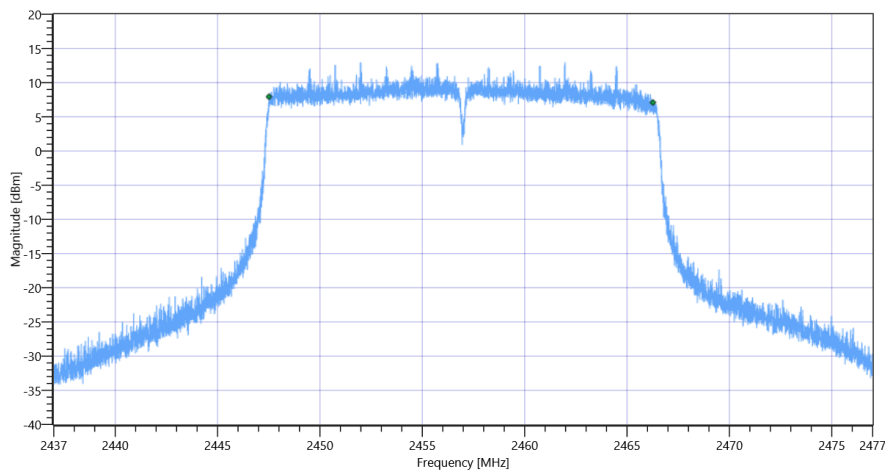
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.41	dBm	INFO
Ref. Frequency	--	--	2458.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.41 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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	--	18752	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:09:10
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

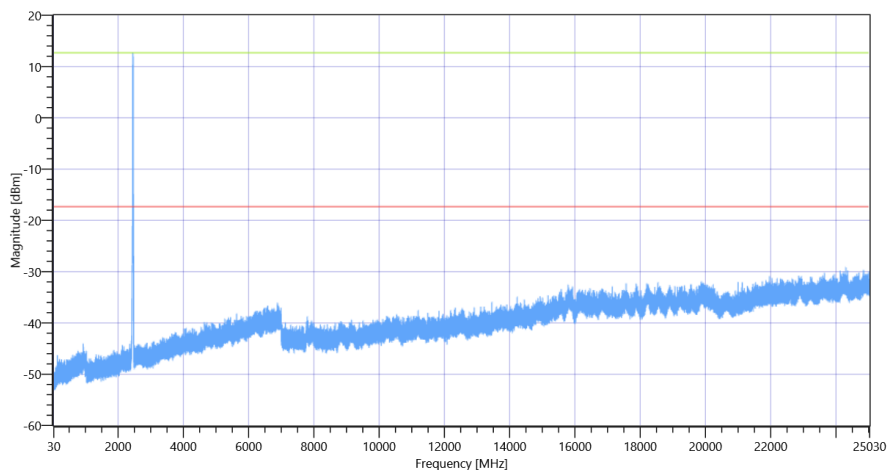
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.11	dBm	INFO
Ref. Frequency	---	---	2456.000	MHz	INFO

READ SA SETTINGS:

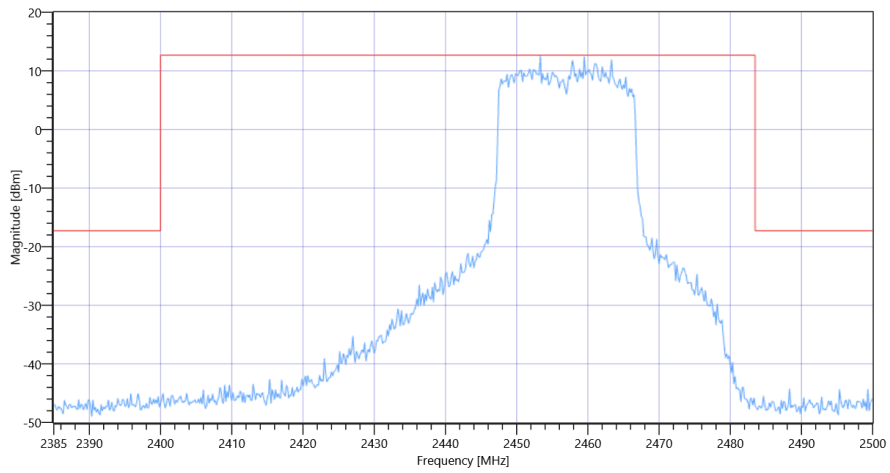
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.11 0 40
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2453.33 MHz	---	---	12.69	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24305.667 MHz	0	---	11.81	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2457

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:08:10
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.10	dBm	INFO
Ref. Frequency	---	---	2450.210	MHz	INFO

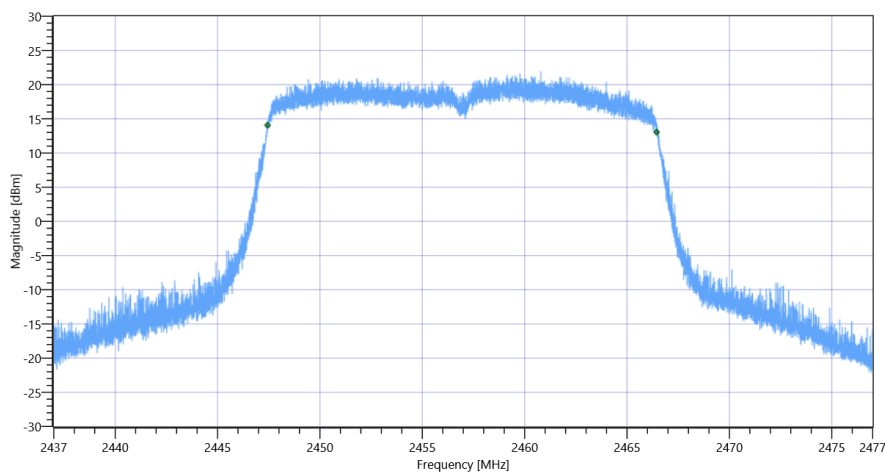
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.10 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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

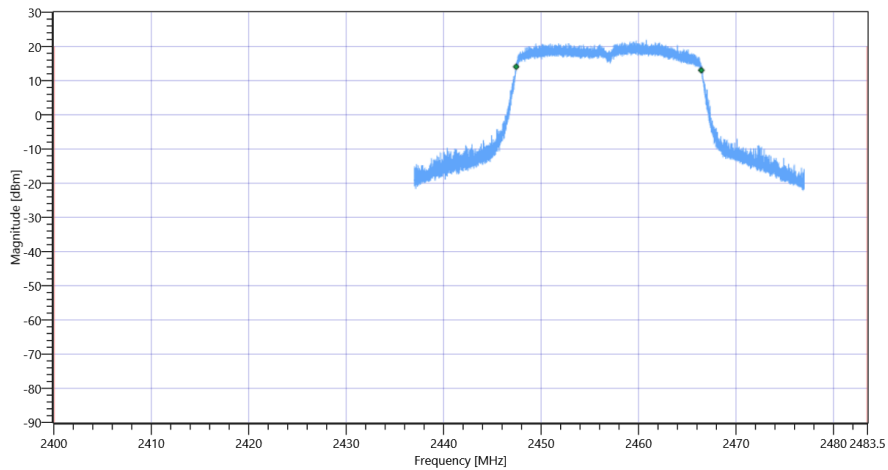
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	19002.000	kHz	INFO
T1 99%	2400.000000	---	2447.4410	MHz	PASS
T2 99%	---	2483.500000	2466.4431	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

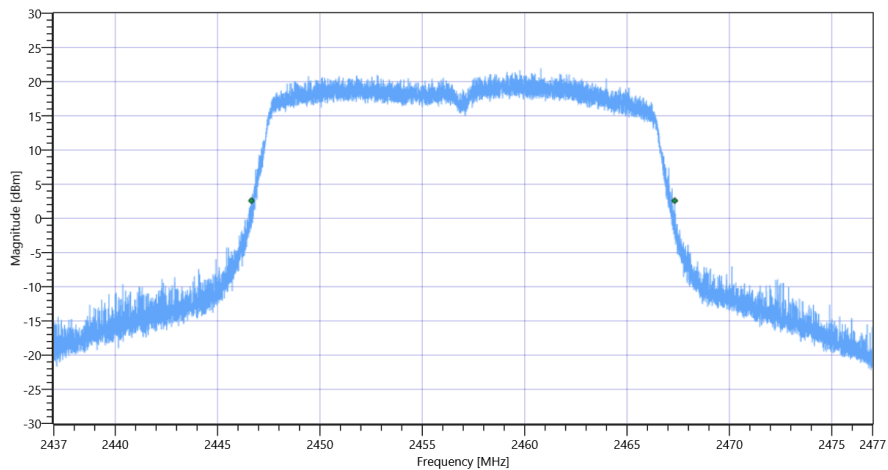


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

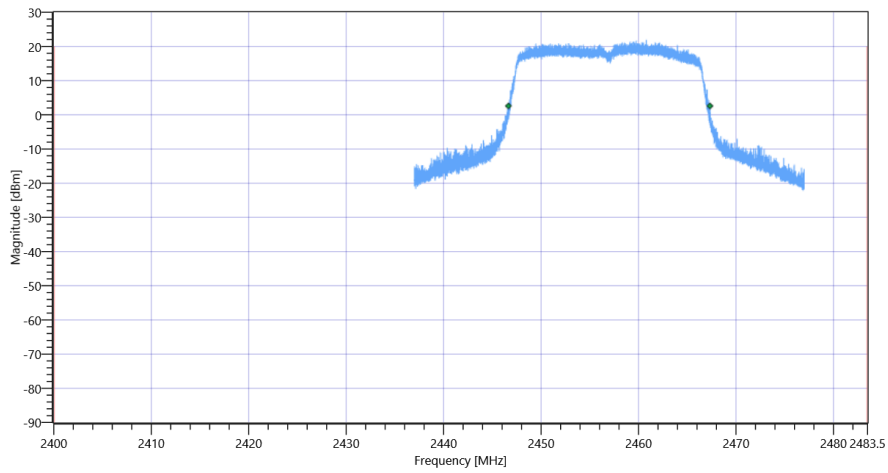
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20680	kHz	INFO
T1 20dB	2400.000000	---	2446.6480	MHz	PASS
T2 20dB	---	2483.500000	2467.3280	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:07:03
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	21.65	dBm	INFO
Ref. Frequency	--	--	2460.600	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

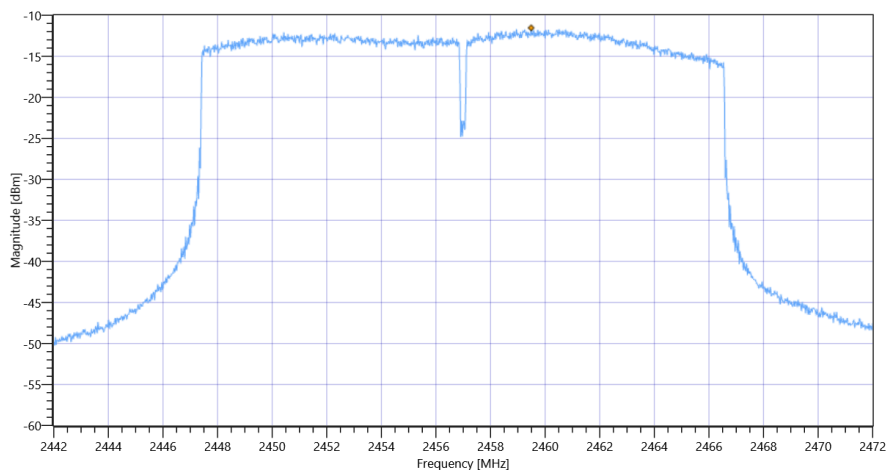
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.65 4.83 40
Start [MHz] Stop [MHz]	2442.000 2472.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-11.53	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-11.53	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 07:06:24
Ambit Temp [°C] Humidity [rel%]	23.1 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	True Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2457 MHz

RESULT: Reference Power cond.

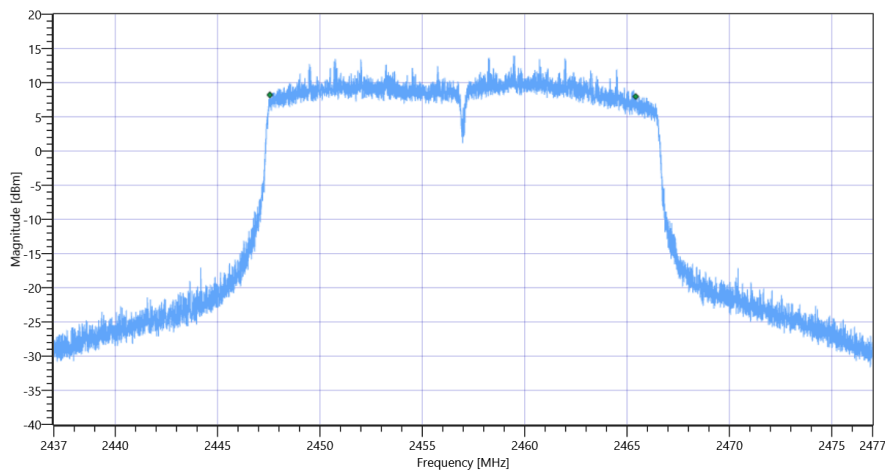
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.32	dBm	INFO
Ref. Frequency	--	--	2459.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.32 4.83 40
Start [MHz] Stop [MHz]	2437.000 2477.000
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	--	17872	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:55:49
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.31	dBm	INFO
Ref. Frequency	--	--	2421.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.31 0 40
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	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2415.83 MHz	--	--	12.75	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2399 MHz	0	--	11.35	dB	INFO

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:54:49
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.69	dBm	INFO
Ref. Frequency	--	--	2419.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.69 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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%	--	--	19050.000	kHz	INFO
T1 99%	2400.000000	--	2407.4850	MHz	PASS
T2 99%	--	2483.500000	2426.5350	MHz	PASS

Plot: Bandwidth only

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20836	kHz	INFO
T1 20DB	2400.000000	---	2406.6240	MHz	PASS
T2 20dB	---	2483.500000	2427.4600	MHz	PASS

Plot: Bandwidth only

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:53:42
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.08	dBm	INFO
Ref. Frequency	--	--	2419.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.08 5.18 40
Start [MHz] Stop [MHz]	2402.000 2432.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-11.3	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-11.3	dBm/3kHz	PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:53:03
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.23	dBm	INFO
Ref. Frequency	--	--	2418.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.23 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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	--	18756	kHz	PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:42:42
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.25	dBm	INFO
Ref. Frequency	--	--	2412.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.25 0 40
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	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2409.50 MHz	--	--	12.53	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2399.167 MHz	0	--	10.73	dB	INFO

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:41:43
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.99	dBm	INFO
Ref. Frequency	--	--	2424.590	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.99 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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%	--	--	19038.000	kHz	INFO
T1 99%	2400.000000	--	2407.4850	MHz	PASS
T2 99%	--	2483.500000	2426.5230	MHz	PASS

Plot: Bandwidth only

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20768	kHz	INFO
T1 20DB	2400.000000	---	2406.6720	MHz	PASS
T2 20dB	---	2483.500000	2427.4400	MHz	PASS

Plot: Bandwidth only

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:40:35
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.90	dBm	INFO
Ref. Frequency	--	--	2414.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.90 5.18 40
Start [MHz] Stop [MHz]	2402.000 2432.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-11.54	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-11.54	dBm/3kHz	PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:39:57
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.83	dBm	INFO
Ref. Frequency	--	--	2415.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.83 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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	--	18500	kHz	PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:29:37
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.61	dBm	INFO
Ref. Frequency	--	--	2422.390	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.61 0 40
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	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2423.33 MHz	--	--	12.41	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24879.167 MHz	0	--	11.96	dB	INFO

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:28:37
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.62	dBm	INFO
Ref. Frequency	---	---	2418.100	MHz	INFO

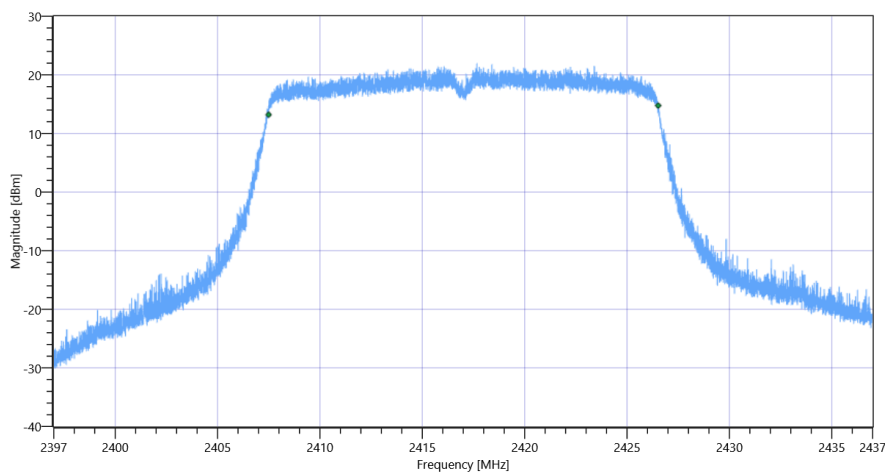
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.62 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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

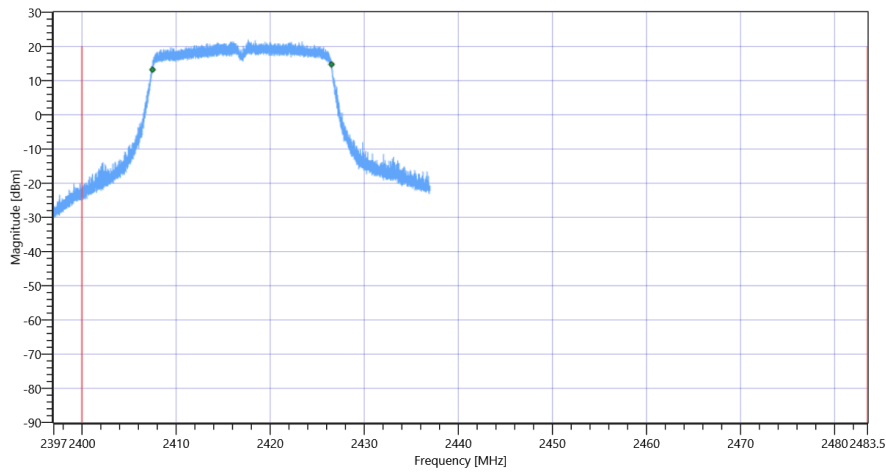
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	19030.000	kHz	INFO
T1 99%	2400.000000	---	2407.4930	MHz	PASS
T2 99%	---	2483.500000	2426.5230	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

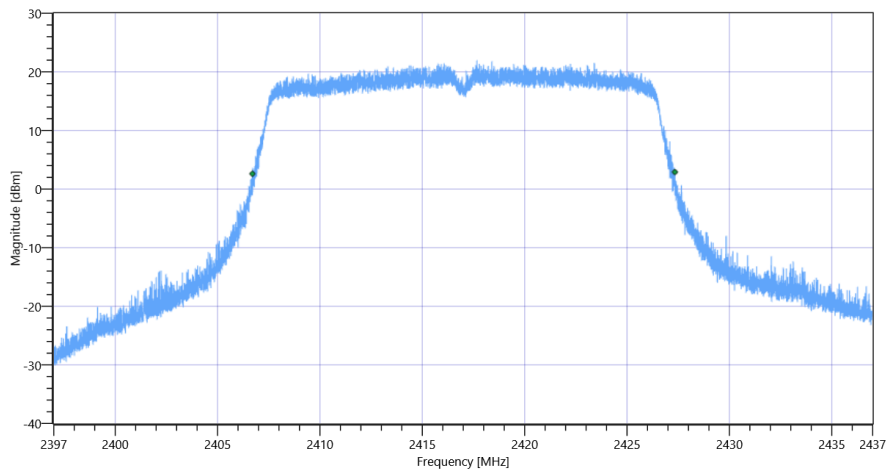


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

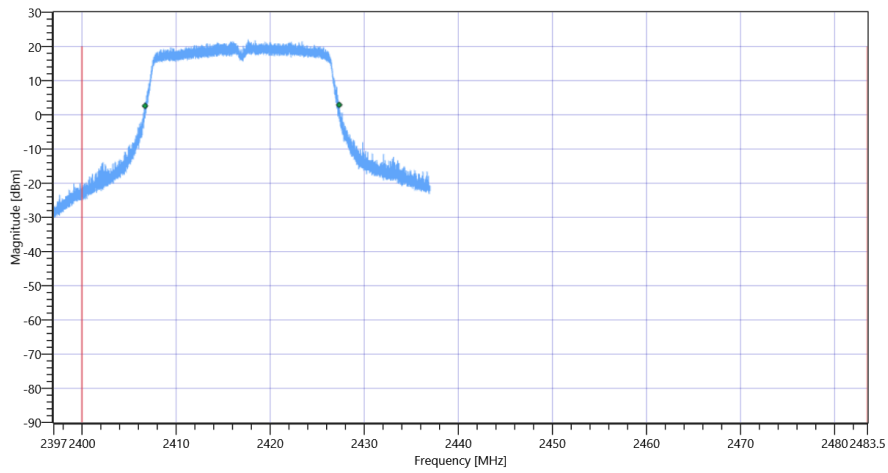
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20636	kHz	INFO
T1 20dB	2400.000000	---	2406.7000	MHz	PASS
T2 20dB	---	2483.500000	2427.3360	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:27:31
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	22.95	dBm	INFO
Ref. Frequency	--	--	2419.400	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

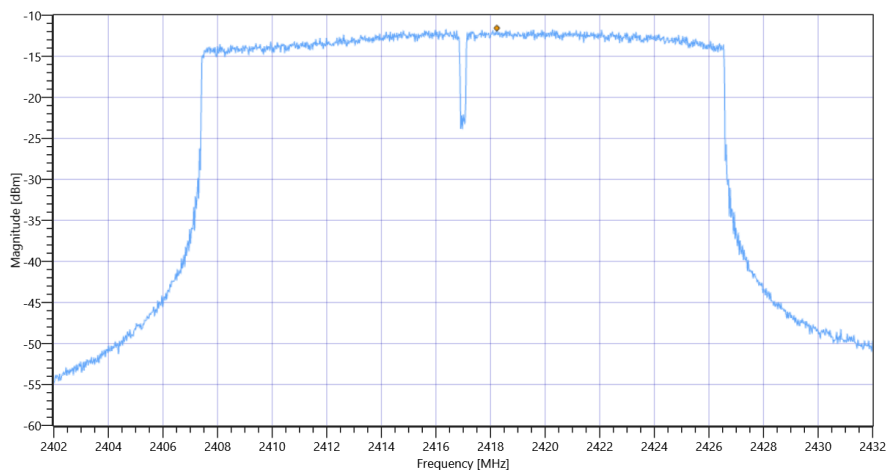
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.95 5.18 40
Start [MHz] Stop [MHz]	2402.000 2432.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-11.56	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-11.56	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:26:53
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

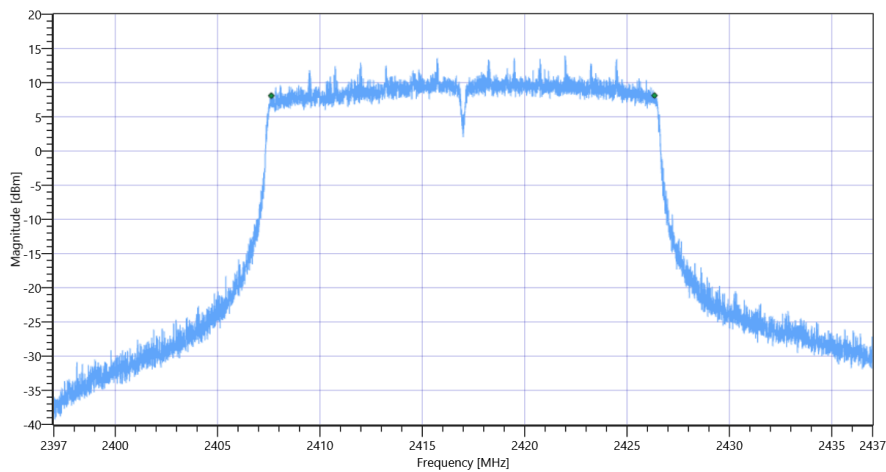
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	21.98	dBm	INFO
Ref. Frequency	--	--	2416.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.98 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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	--	18716	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:16:34
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 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 30dBc DTS DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

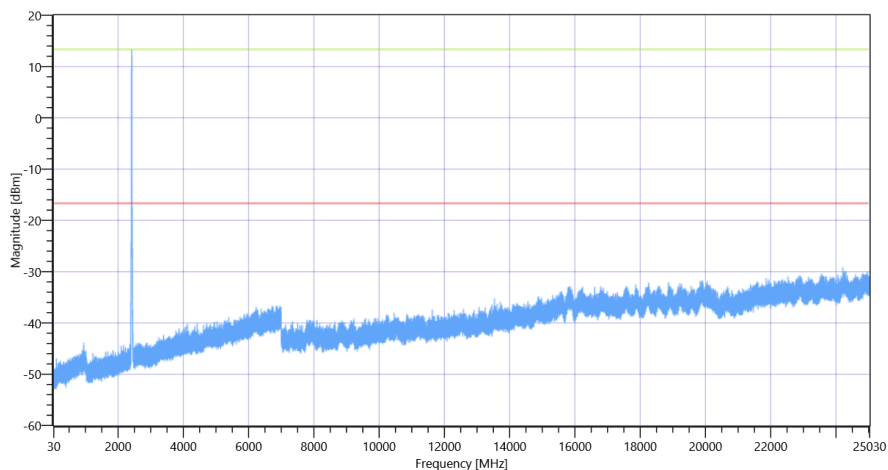
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	22.48	dBm	INFO
Ref. Frequency	---	---	2418.300	MHz	INFO

READ SA SETTINGS:

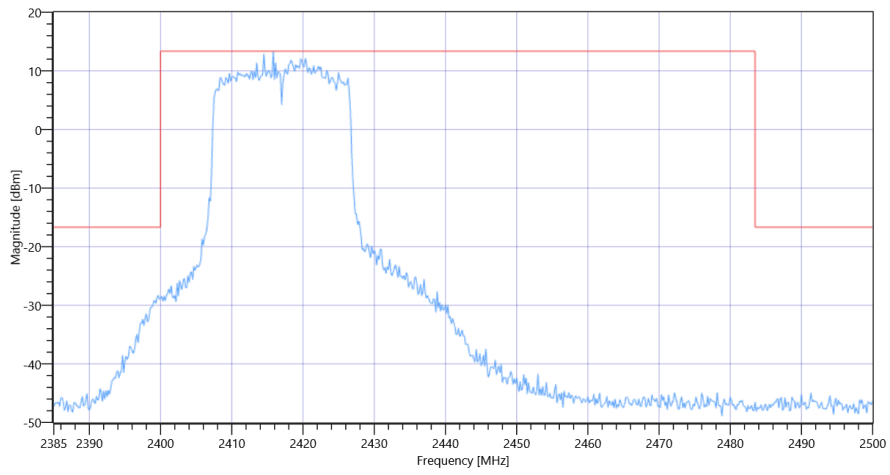
RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.48 0 40
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 3001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Reference @ 2415.83 MHz	---	---	13.33	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-148.8	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2417

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:15:35
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.46	dBm	INFO
Ref. Frequency	---	---	2418.100	MHz	INFO

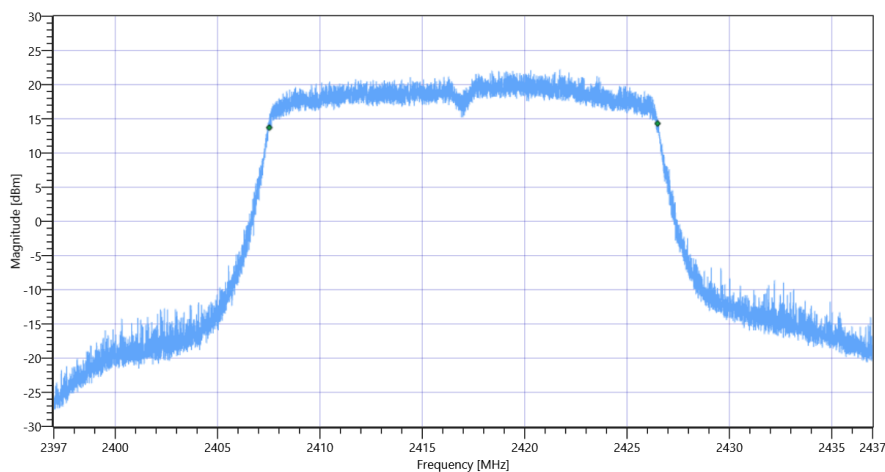
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.46 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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

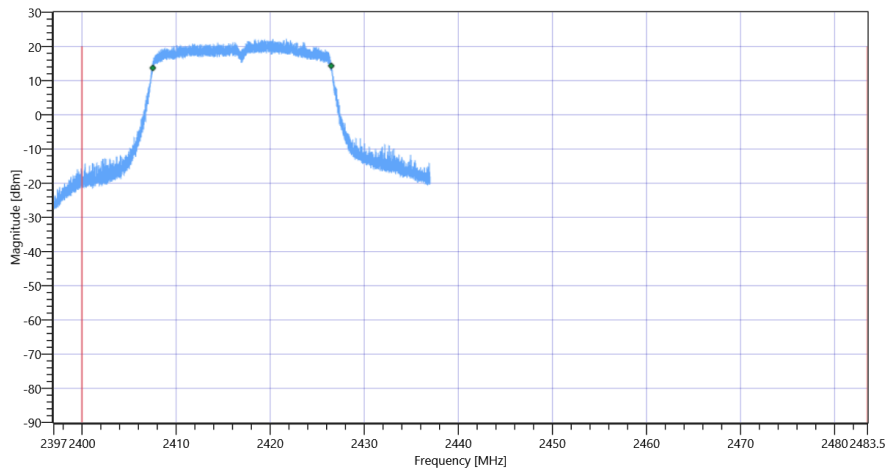
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	18966.000	kHz	INFO
T1 99%	2400.000000	---	2407.5249	MHz	PASS
T2 99%	---	2483.500000	2426.4911	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 99PCT

Plot: Bandwidth within Band

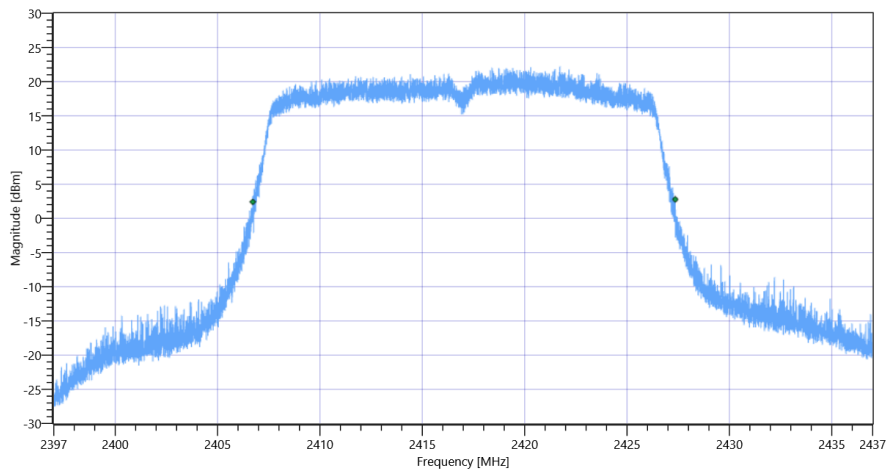


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

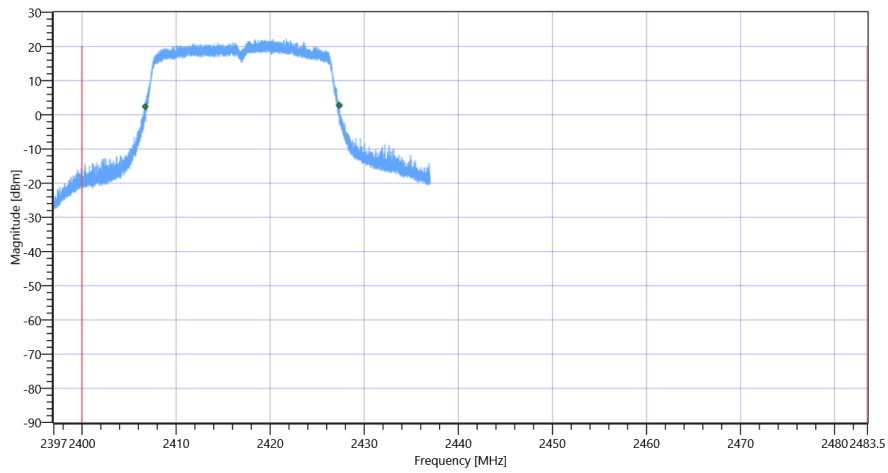
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 20dB	---	---	20636	kHz	INFO
T1 20dB	2400.000000	---	2406.7200	MHz	PASS
T2 20dB	---	2483.500000	2427.3560	MHz	PASS

Plot: Bandwidth only



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20 20dB

Plot: Bandwidth within Band



FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:14:29
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
TC Version	0.0.1
My Description	FCC 15.247 Avg Power Spectral Density DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.31	dBm	INFO
Ref. Frequency	--	--	2420.500	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

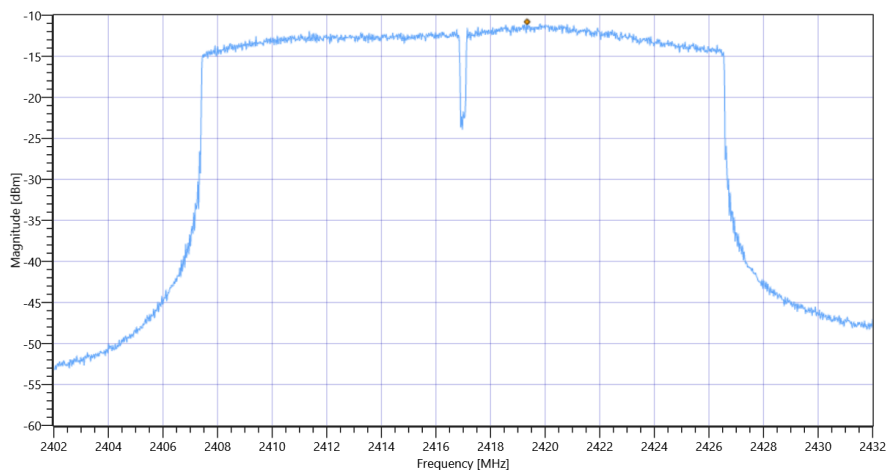
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.31 5.18 40
Start [MHz] Stop [MHz]	2402.000 2432.000
RBW [MHz] VBW [MHz]	0.003000 0.010000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	334 100 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Avg PSD uncorrected	--	--	-10.79	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg PSD DC corrected	--	8	-10.79	dBm/3kHz	PASS



FCC 15.247 # Avg power spectral density DTS ~ WLAN2G4 ax-HE20

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

Test References

TC Start	07.12.2022 06:13:50
Ambit Temp [°C] Humidity [rel%]	23.0 30
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	4
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2457
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

Test Equipment

Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI

Test at TX 2417 MHz

RESULT: Reference Power cond.

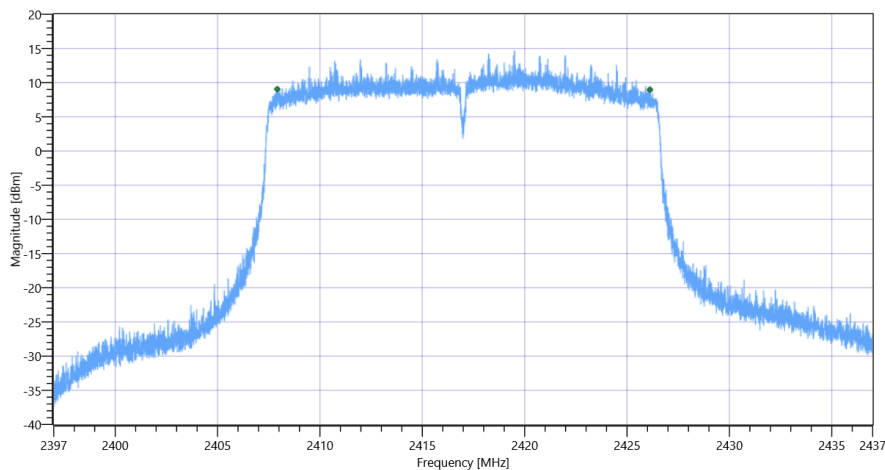
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	23.04	dBm	INFO
Ref. Frequency	--	--	2417.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.04 5.18 40
Start [MHz] Stop [MHz]	2397.000 2437.000
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	--	18204	kHz	PASS



FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 ax-HE20

- END OF DOCUMENT -