Measurement Results

No.1-3977/22-03-03_Annex_MR_A5

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2022.12.19 08:04:05 +01'00'

Michael Dorongovski
Lab Manager
Radio Communications

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

Test References

TC Start	06.12.2022 07:53:42
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

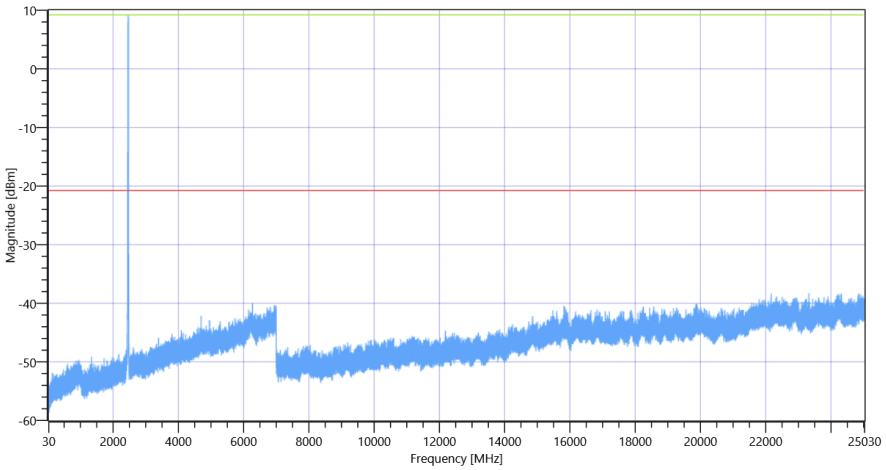
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	19.56	dBm	INFO
Ref. Frequency	---	---	2463.400	MHz	INFO

READ SA SETTINGS:

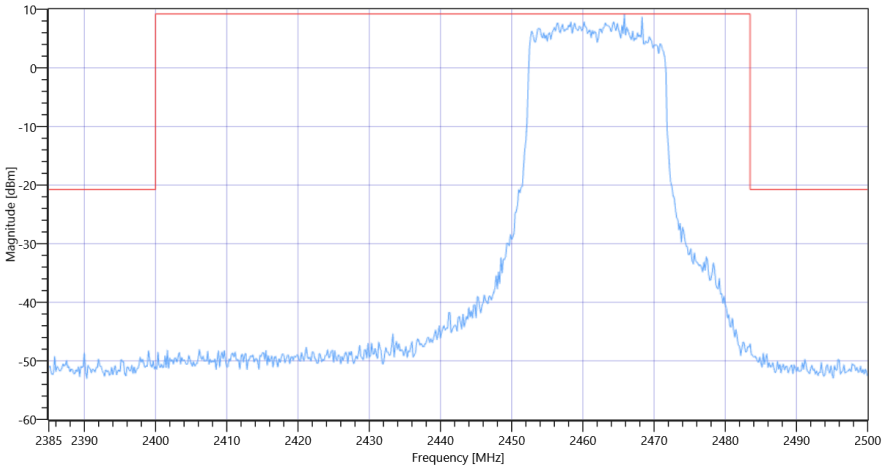
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.56 | 0 | 35
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 3001 | SWE

RESULT

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Reference @ 2465.83 MHz	---	---	9.22	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 23324.167 MHz	0	---	17.48	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462

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

Test References

TC Start	06.12.2022 07:52:40
Ambit Temp [°C] | Humidity [rel%]	23.8 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	19.79	dBm	INFO
Ref. Frequency	---	---	2458.500	MHz	INFO

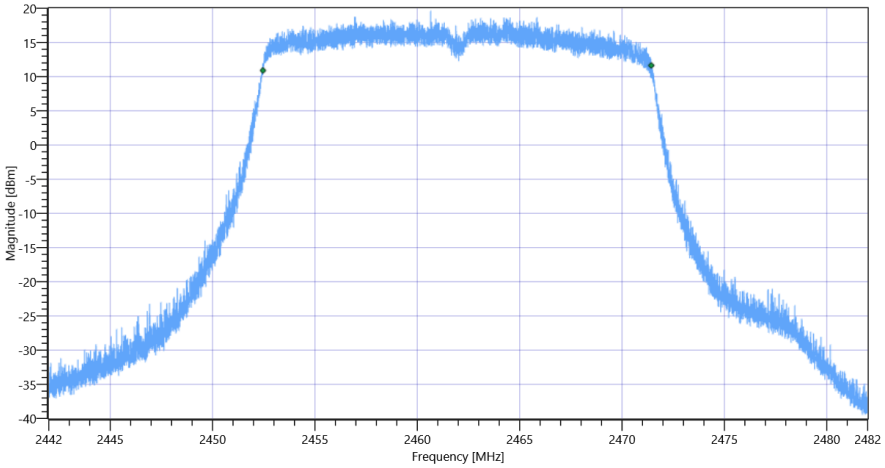
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	24.79 | 4.84 | 35
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

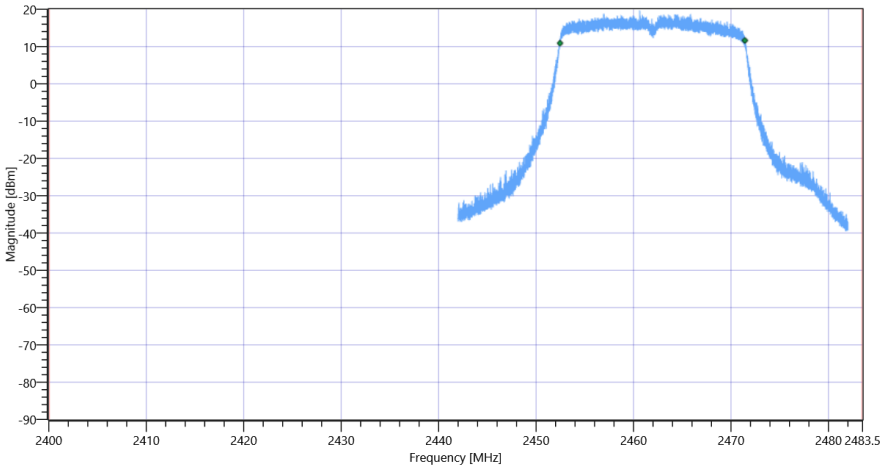
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	18966.000	kHz	INFO
T1 99%	2400.000000	---	2452.4610	MHz	PASS
T2 99%	---	2483.500000	2471.4271	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

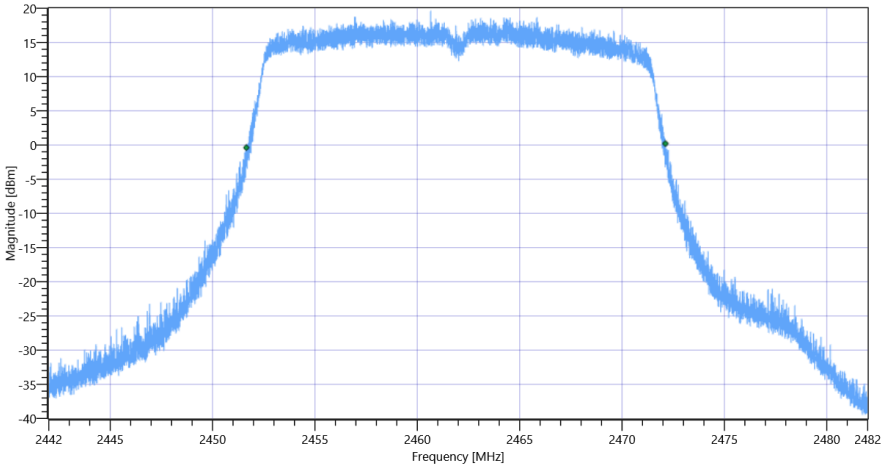


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

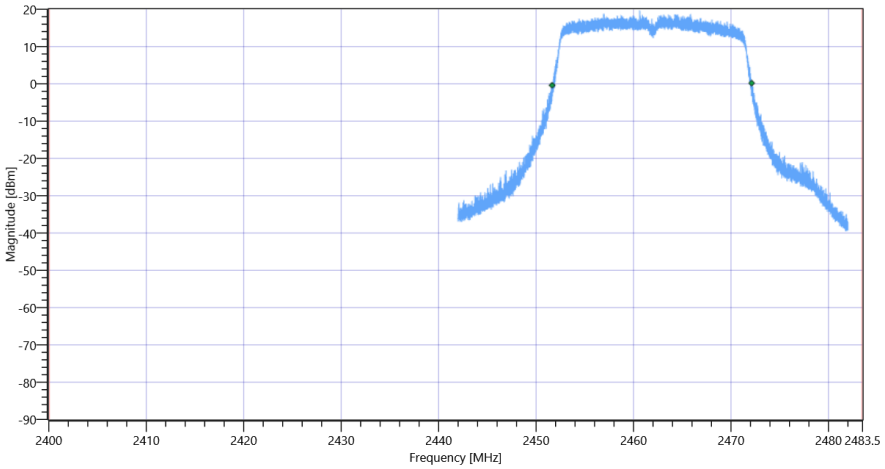
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20472	kHz	INFO
T1 20DB	2400.000000	---	2451.6480	MHz	PASS
T2 20dB	---	2483.500000	2472.1200	MHz	PASS

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	06.12.2022 07:51:32
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	19.13	dBm	INFO
Ref. Frequency	---	---	2465.100	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

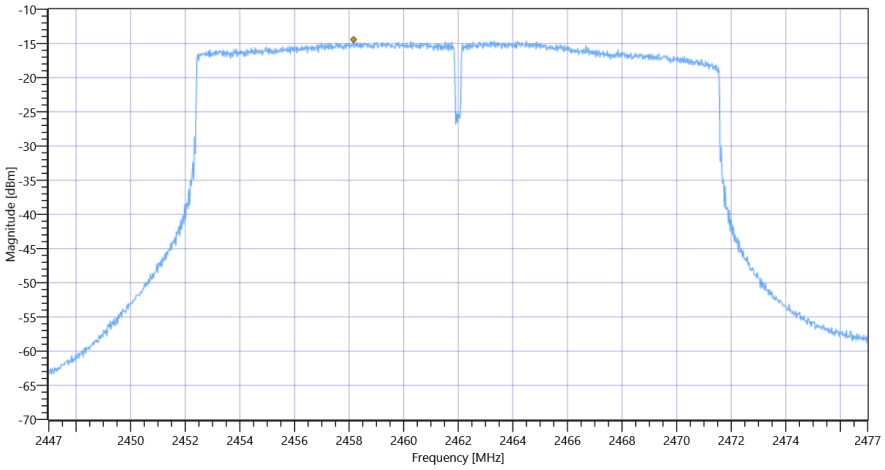
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	24.13 | 4.84 | 35
Start [MHz] | Stop [MHz]	2447.000 | 2477.000
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	---	---	-14.43	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-14.43	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	06.12.2022 07:50:53
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

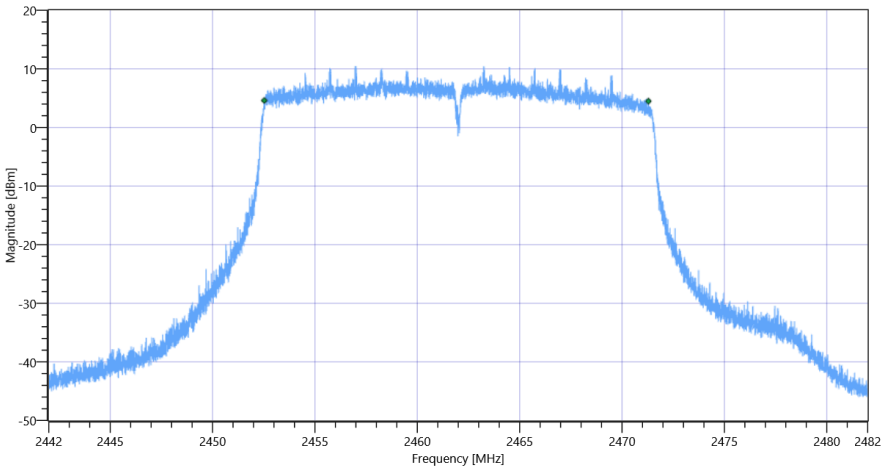
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	19.93	dBm	INFO
Ref. Frequency	---	---	2458.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	24.93 | 4.84 | 40
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	---	18764	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	06.12.2022 07:40:27
Ambit Temp [°C] | Humidity [rel%]	23.8 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

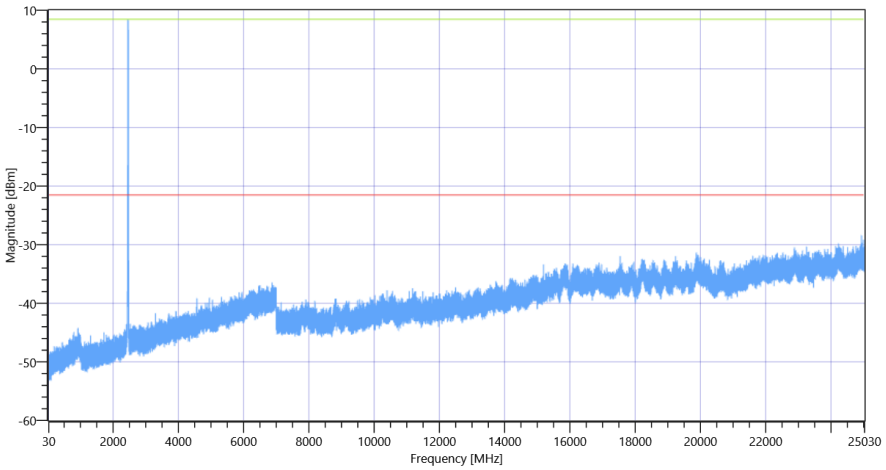
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	20.89	dBm	INFO
Ref. Frequency	---	---	2464.600	MHz	INFO

READ SA SETTINGS:

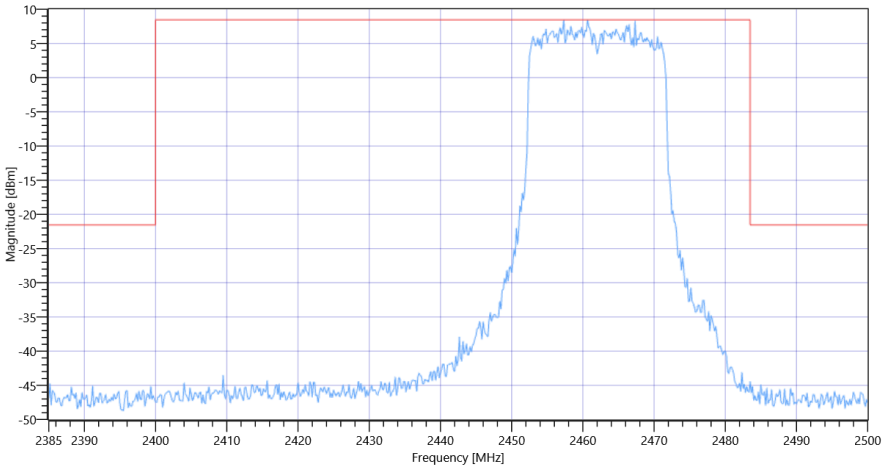
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	20.89 | 0 | 40
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 3001 | SWE

RESULT

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Reference @ 2457.33 MHz	---	---	8.46	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24939 MHz	0	---	6.84	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462

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

Test References

TC Start	06.12.2022 07:39:25
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	19.65	dBm	INFO
Ref. Frequency	---	---	2467.090	MHz	INFO

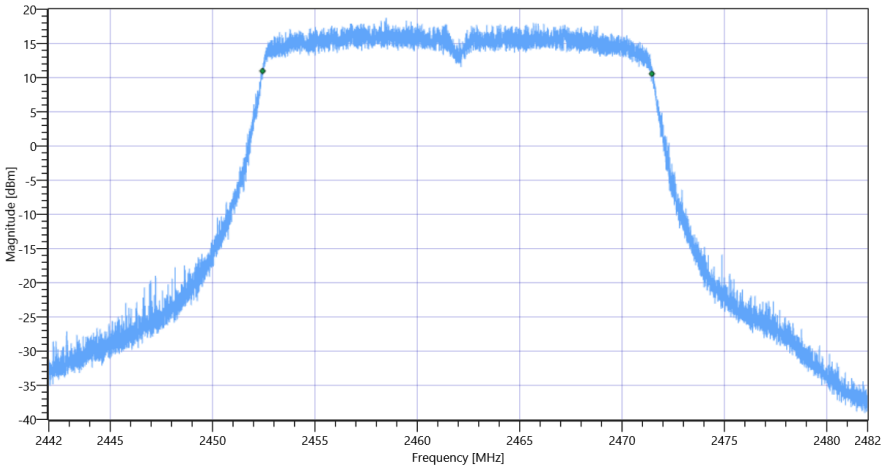
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	24.65 | 4.84 | 35
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

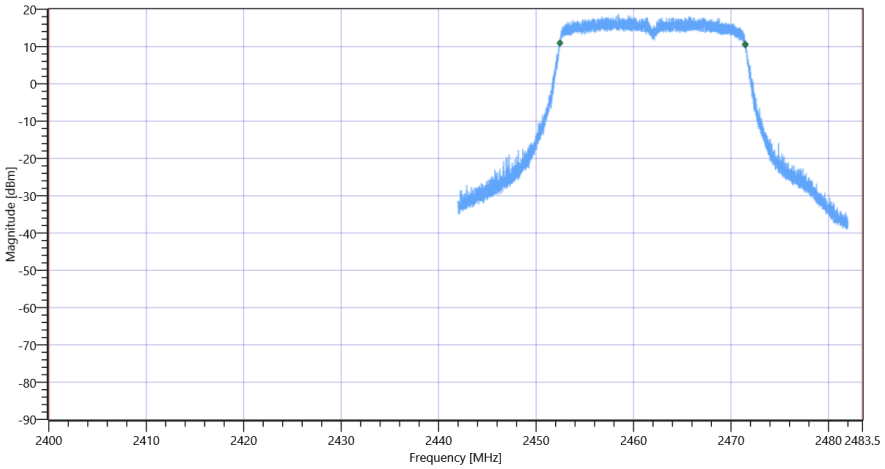
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	19014.000	kHz	INFO
T1 99%	2400.000000	---	2452.4410	MHz	PASS
T2 99%	---	2483.500000	2471.4551	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

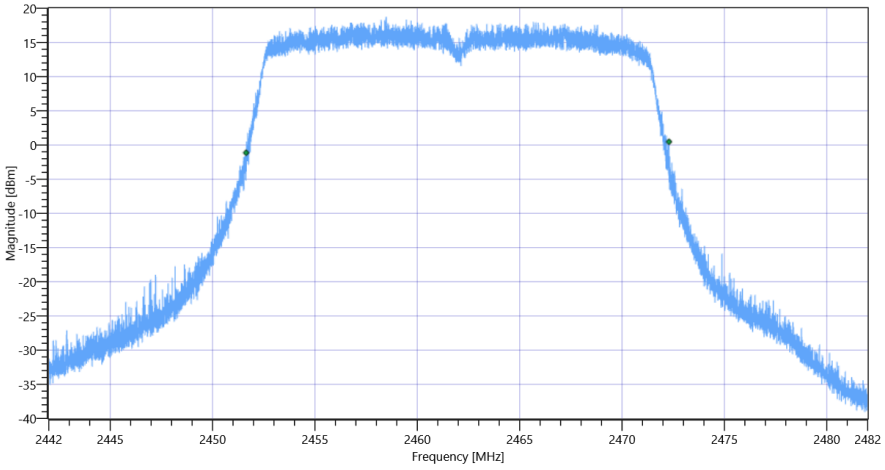


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

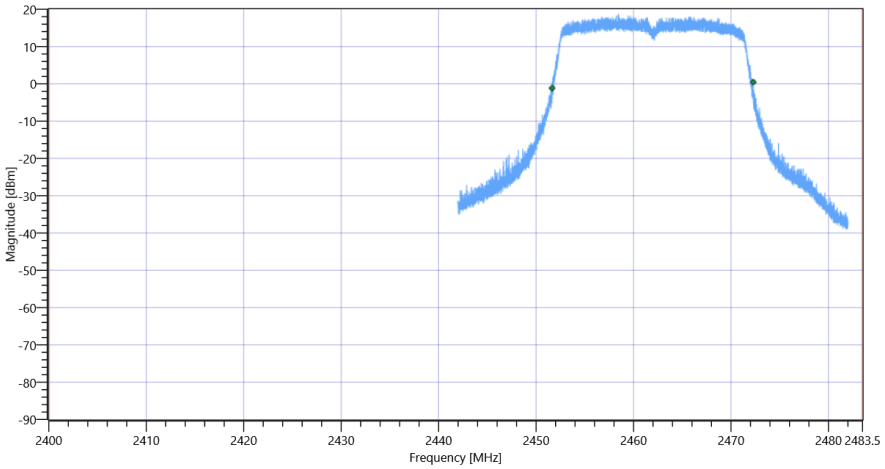
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20656	kHz	INFO
T1 20DB	2400.000000	---	2451.6360	MHz	PASS
T2 20dB	---	2483.500000	2472.2920	MHz	PASS

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	06.12.2022 07:38:18
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	20.48	dBm	INFO
Ref. Frequency	---	---	2456.210	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

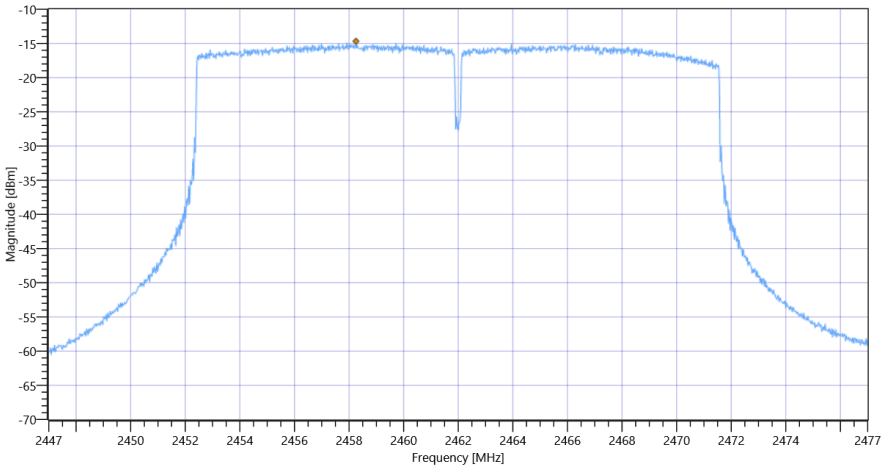
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	25.48 | 4.84 | 40
Start [MHz] | Stop [MHz]	2447.000 | 2477.000
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	---	---	-14.67	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-14.67	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	06.12.2022 07:37:38
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

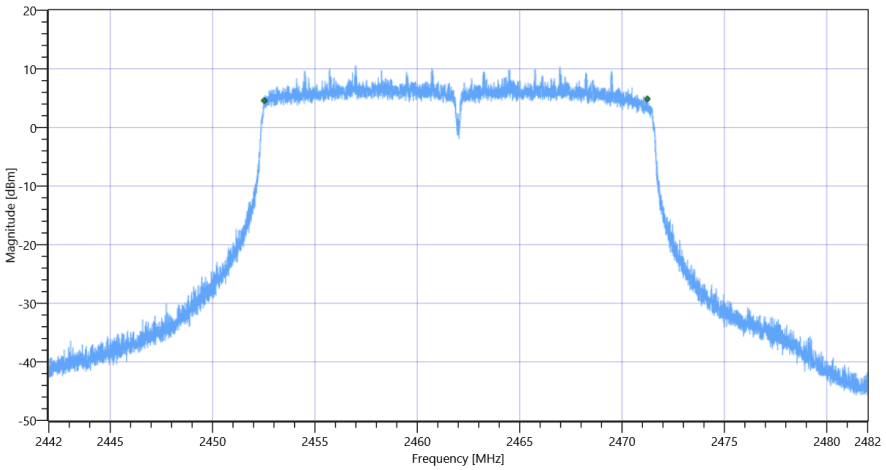
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	20.09	dBm	INFO
Ref. Frequency	---	---	2459.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	25.09 | 4.84 | 40
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	---	18712	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	06.12.2022 07:27:13
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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	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]	-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 2462 MHz

RESULT: Reference Power cond.

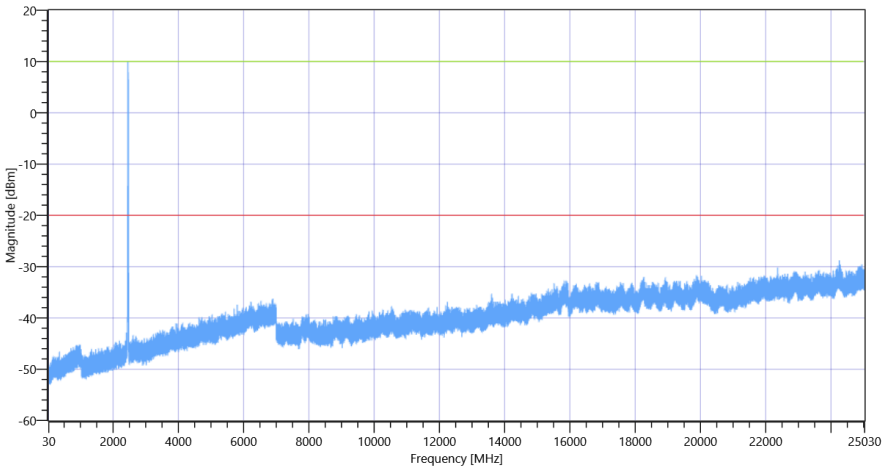
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	20.19	dBm	INFO
Ref. Frequency	---	---	2462.600	MHz	INFO

READ SA SETTINGS:

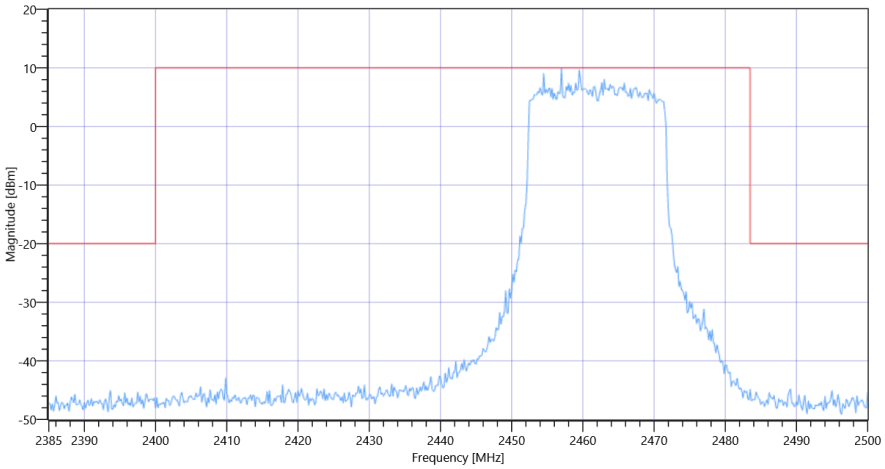
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	20.19 | 0 | 40
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 3001 | SWE

RESULT

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Reference @ 2457.00 MHz	---	---	10.00	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24256 MHz	0	---	8.77	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462

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

Test References

TC Start	06.12.2022 07:26:12
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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	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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	18.92	dBm	INFO
Ref. Frequency	---	---	2465.300	MHz	INFO

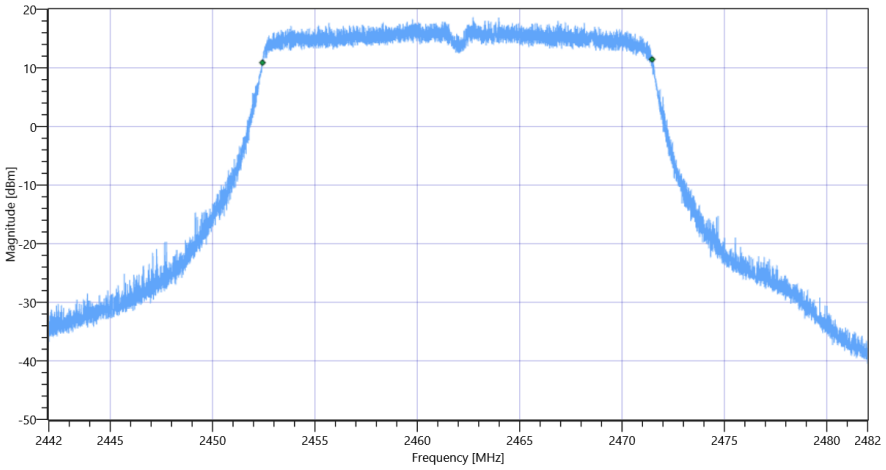
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	23.92 | 4.84 | 35
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

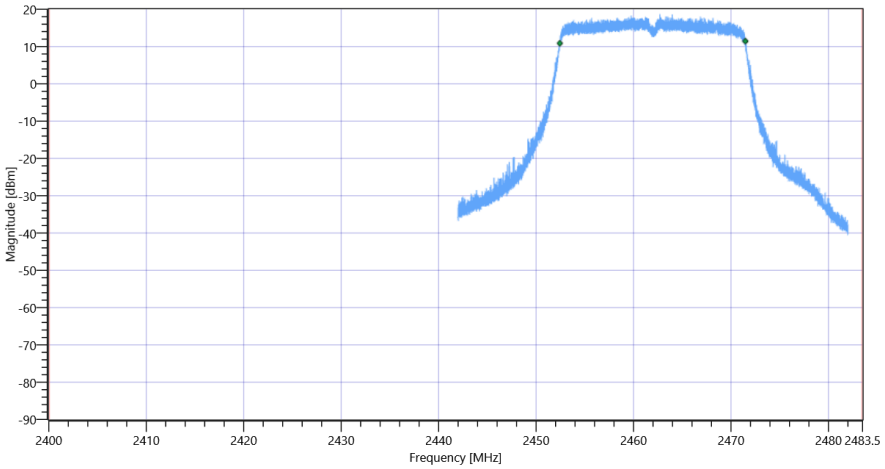
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	19034.000	kHz	INFO
T1 99%	2400.000000	---	2452.4370	MHz	PASS
T2 99%	---	2483.500000	2471.4711	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

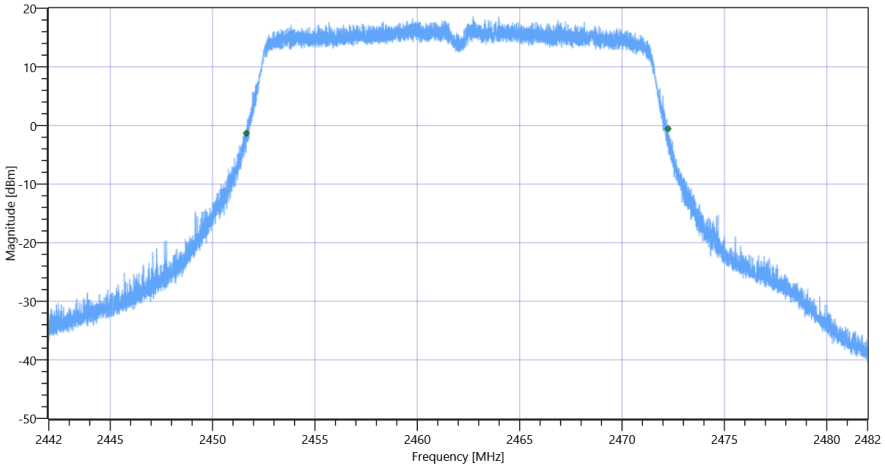


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

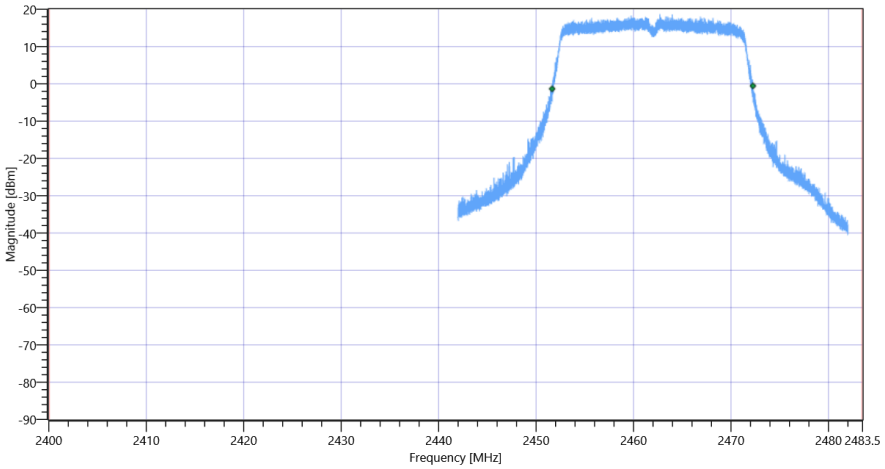
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20612	kHz	INFO
T1 20DB	2400.000000	---	2451.6440	MHz	PASS
T2 20dB	---	2483.500000	2472.2560	MHz	PASS

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	06.12.2022 07:25:05
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	20.29	dBm	INFO
Ref. Frequency	---	---	2463.800	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

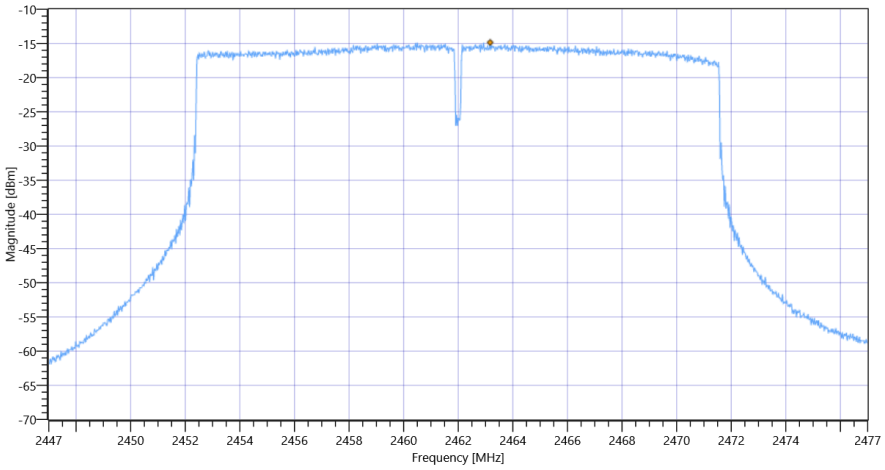
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	25.29 | 4.84 | 40
Start [MHz] | Stop [MHz]	2447.000 | 2477.000
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	---	---	-14.85	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-14.85	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	06.12.2022 07:24:25
Ambit Temp [°C] | Humidity [rel%]	23.8 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

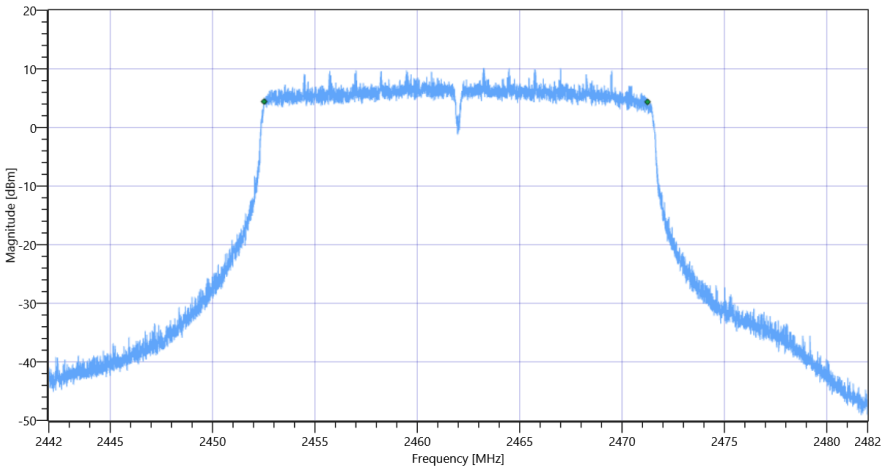
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	19.08	dBm	INFO
Ref. Frequency	---	---	2460.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	24.08 | 4.84 | 35
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	---	18728	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	06.12.2022 07:14:00
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

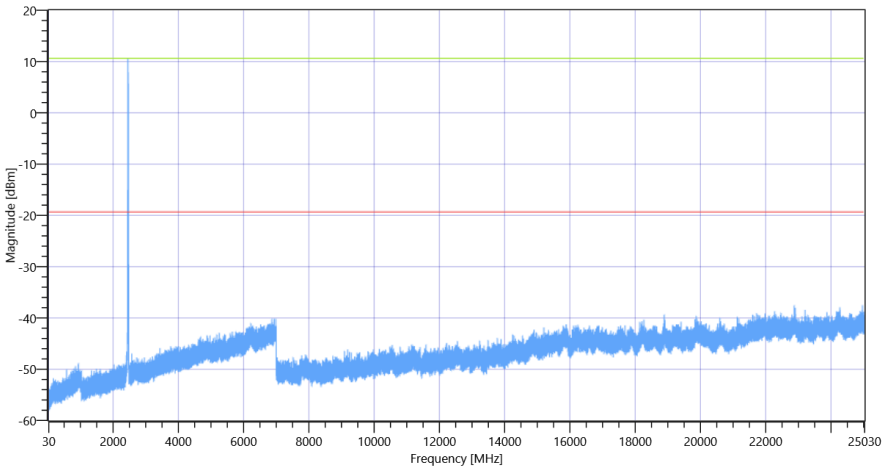
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	19.60	dBm	INFO
Ref. Frequency	---	---	2455.510	MHz	INFO

READ SA SETTINGS:

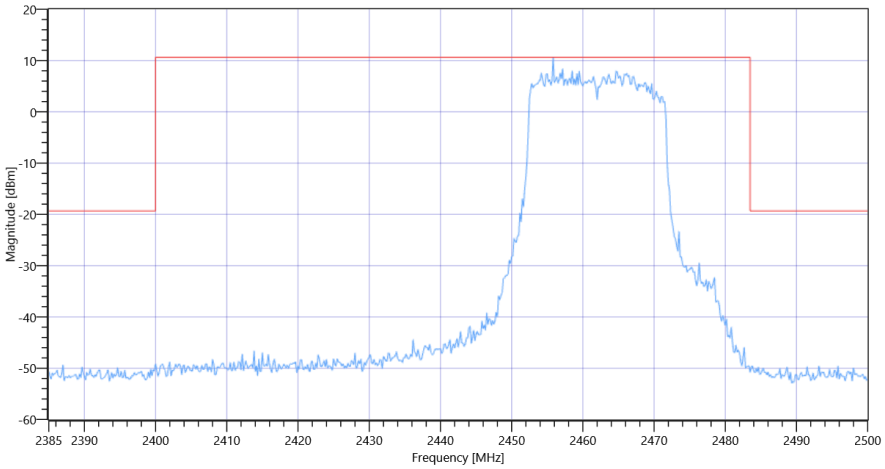
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	19.60 | 0 | 35
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 3001 | SWE

RESULT

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Reference @ 2455.83 MHz	---	---	10.64	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 22876.5 MHz	0	---	18.16	dB	INFO



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462



FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2462

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

Test References

TC Start	06.12.2022 07:12:59
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	19.08	dBm	INFO
Ref. Frequency	---	---	2463.500	MHz	INFO

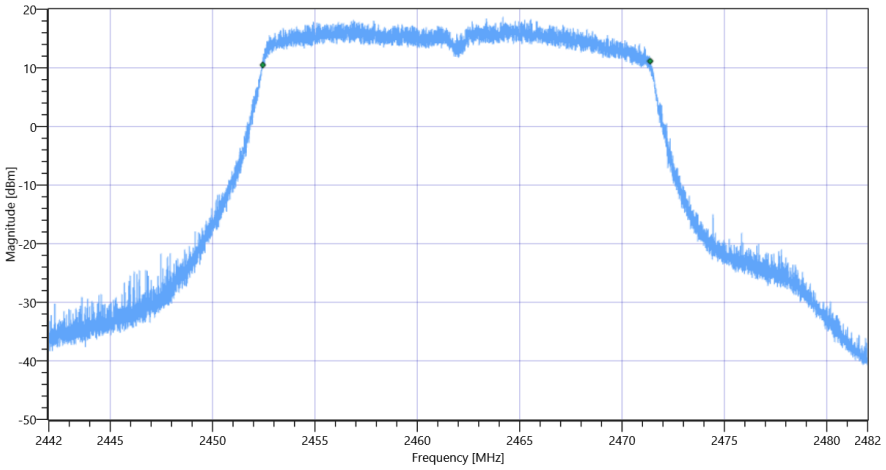
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	24.08 | 4.84 | 35
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

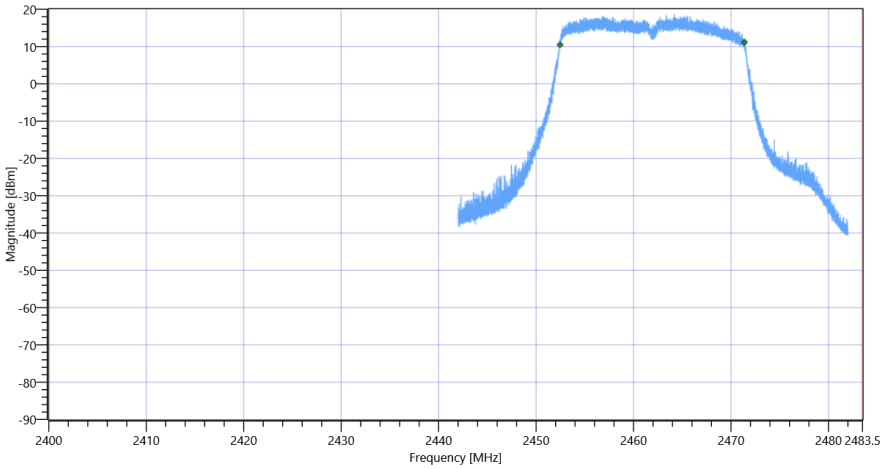
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	18922.000	kHz	INFO
T1 99%	2400.000000	---	2452.4530	MHz	PASS
T2 99%	---	2483.500000	2471.3751	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

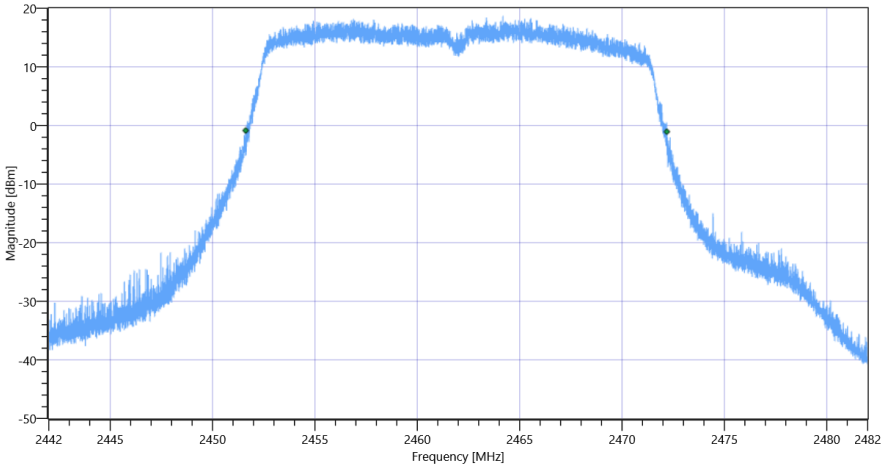


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

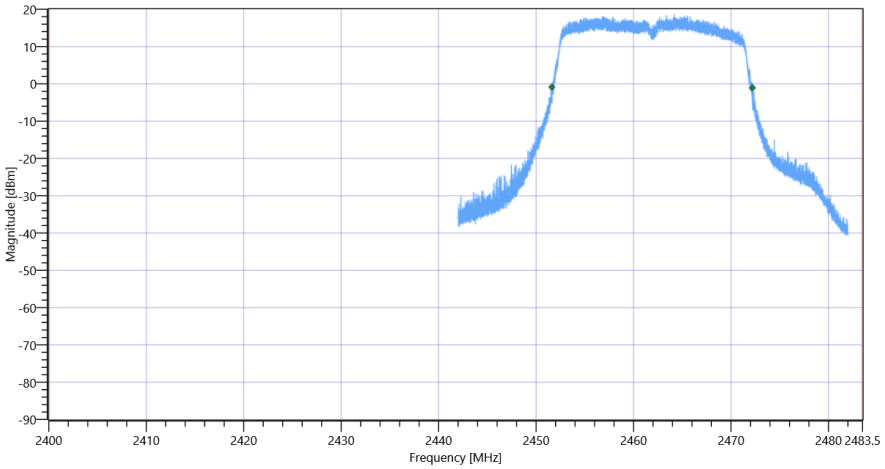
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20572	kHz	INFO
T1 20DB	2400.000000	---	2451.6160	MHz	PASS
T2 20dB	---	2483.500000	2472.1880	MHz	PASS

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	06.12.2022 07:11:51
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	20.11	dBm	INFO
Ref. Frequency	---	---	2462.900	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

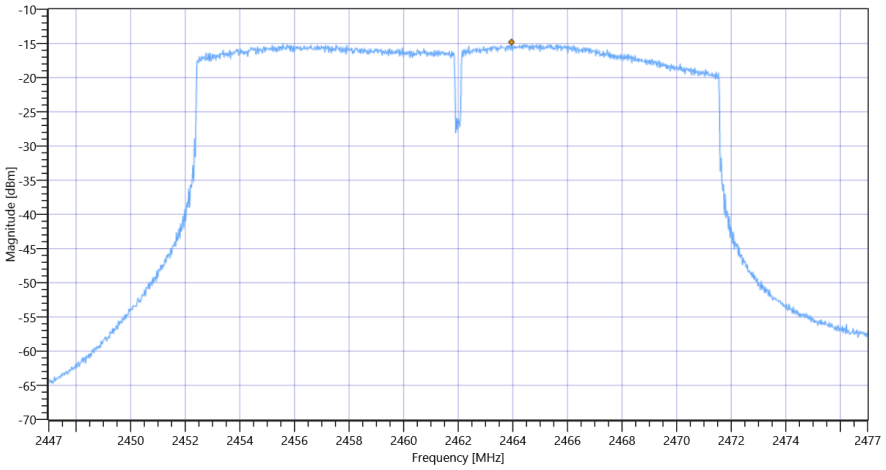
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	25.11 | 4.84 | 40
Start [MHz] | Stop [MHz]	2447.000 | 2477.000
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	---	---	-14.8	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-14.8	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	06.12.2022 07:11:12
Ambit Temp [°C] | Humidity [rel%]	23.9 | 29
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] 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]	-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 2462 MHz

RESULT: Reference Power cond.

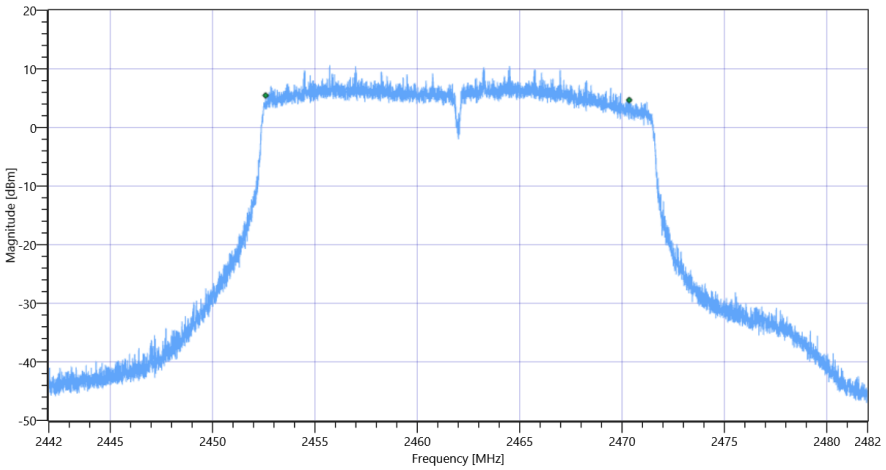
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	20.81	dBm	INFO
Ref. Frequency	---	---	2465.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	25.81 | 4.84 | 40
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	---	17760	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 17:05:29
Ambit Temp [°C] | Humidity [rel%]	19.8 | 35
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] 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

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

Test References

TC Start	05.12.2022 17:04:29
Ambit Temp [°C] | Humidity [rel%]	19.8 | 35
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] 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]	-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 2437 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	---	---	2435.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	27.99 | 5 | 40
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%	---	---	19050.000	kHz	INFO
T1 99%	2400.000000	---	2427.4490	MHz	PASS
T2 99%	---	2483.500000	2446.4991	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	---	---	20744	kHz	INFO
T1 20DB	2400.000000	---	2426.6400	MHz	PASS
T2 20dB	---	2483.500000	2447.3840	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 17:03:21
Ambit Temp [°C] | Humidity [rel%]	19.8 | 35
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	23.39	dBm	INFO
Ref. Frequency	---	---	2439.500	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]	28.39 | 5 | 40
Start [MHz] | Stop [MHz]	2422.000 | 2452.000
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	---	---	-11.27	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-11.27	dBm/3kHz	PASS

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

Test References

TC Start	05.12.2022 17:02:43
Ambit Temp [°C] | Humidity [rel%]	19.8 | 35
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	23.75	dBm	INFO
Ref. Frequency	---	---	2432.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	28.75 | 5 | 40
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	---	18888	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 16:52:20
Ambit Temp [°C] | Humidity [rel%]	19.6 | 35
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] 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]	-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 2437 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	---	---	2434.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	23.97 | 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 @ 2435.83 MHz	---	---	13.87	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24296.667 MHz	0	---	13.36	dB	INFO

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2437

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2437

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

Test References

TC Start	05.12.2022 16:51:19
Ambit Temp [°C] | Humidity [rel%]	19.6 | 34
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	24.22	dBm	INFO
Ref. Frequency	---	---	2442.000	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	29.22 | 5 | 40
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%	---	---	19018.000	kHz	INFO
T1 99%	2400.000000	---	2427.4770	MHz	PASS
T2 99%	---	2483.500000	2446.4951	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	---	---	20788	kHz	INFO
T1 20DB	2400.000000	---	2426.5640	MHz	PASS
T2 20dB	---	2483.500000	2447.3520	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 16:50:12
Ambit Temp [°C] | Humidity [rel%]	19.5 | 35
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	23.65	dBm	INFO
Ref. Frequency	---	---	2434.700	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]	28.65 | 5 | 40
Start [MHz] | Stop [MHz]	2422.000 | 2452.000
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	---	---	-11.01	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-11.01	dBm/3kHz	PASS

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

Test References

TC Start	05.12.2022 16:49:33
Ambit Temp [°C] | Humidity [rel%]	19.5 | 34
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

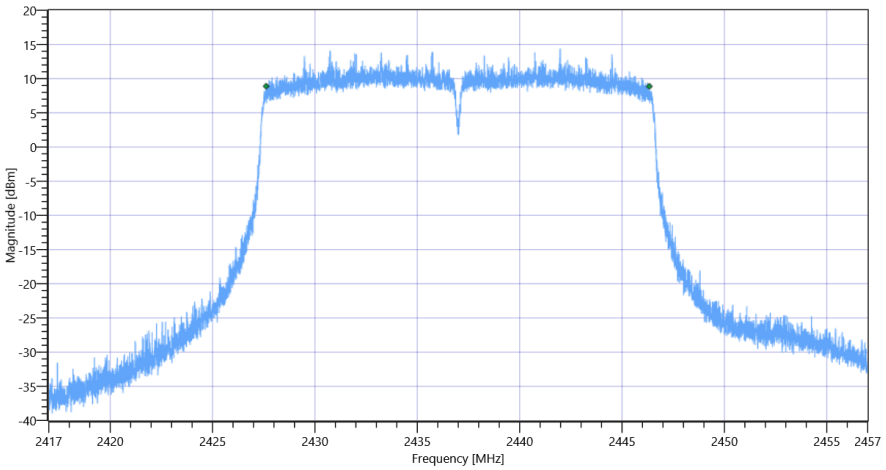
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	23.01	dBm	INFO
Ref. Frequency	---	---	2431.610	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	28.01 | 5 | 40
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	---	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	05.12.2022 16:39:09
Ambit Temp [°C] | Humidity [rel%]	19.5 | 35
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	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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	23.13	dBm	INFO
Ref. Frequency	---	---	2434.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	23.13 | 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 @ 2430.83 MHz	---	---	12.61	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24859 MHz	0	---	11.83	dB	INFO

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2437

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2437

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

Test References

TC Start	05.12.2022 16:38:09
Ambit Temp [°C] | Humidity [rel%]	19.4 | 35
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	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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	23.72	dBm	INFO
Ref. Frequency	---	---	2442.390	MHz	INFO

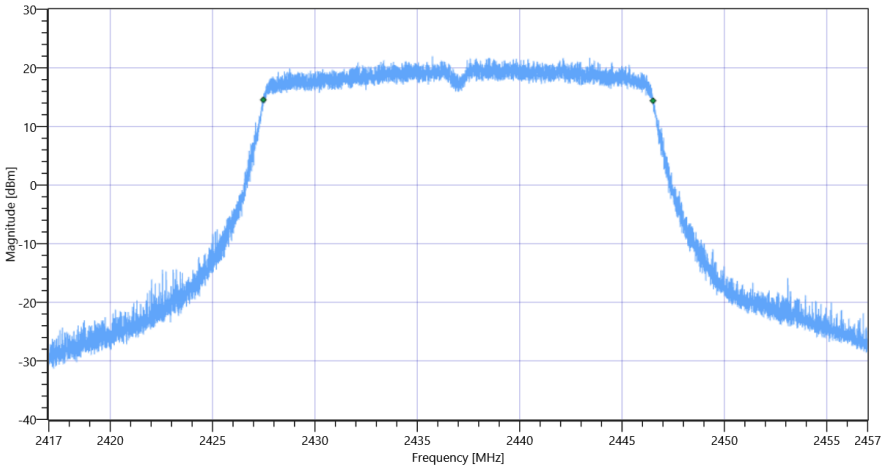
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	28.72 | 5 | 40
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

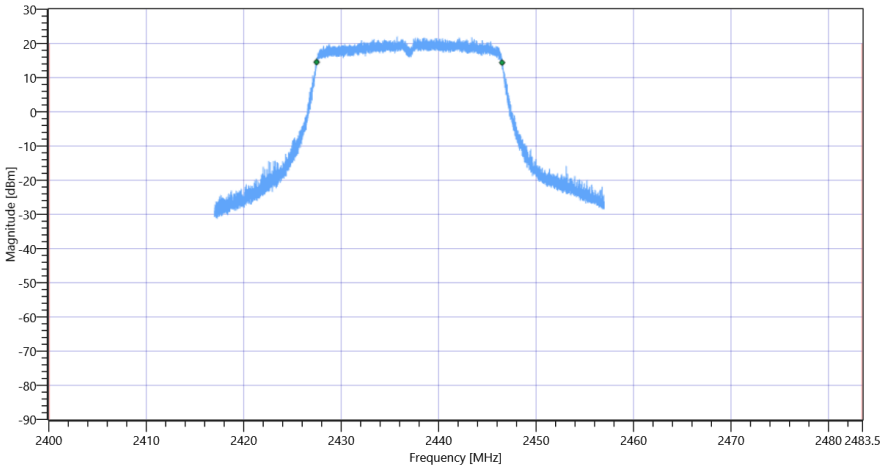
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	19030.000	kHz	INFO
T1 99%	2400.000000	---	2427.4810	MHz	PASS
T2 99%	---	2483.500000	2446.5110	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

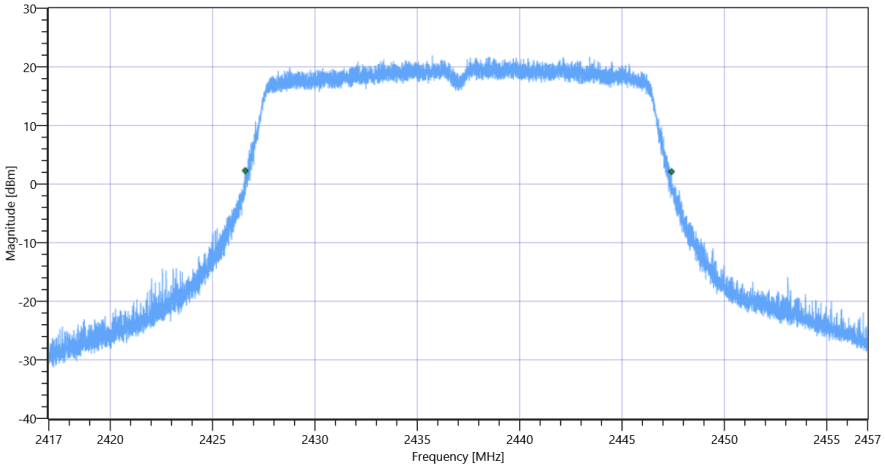


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

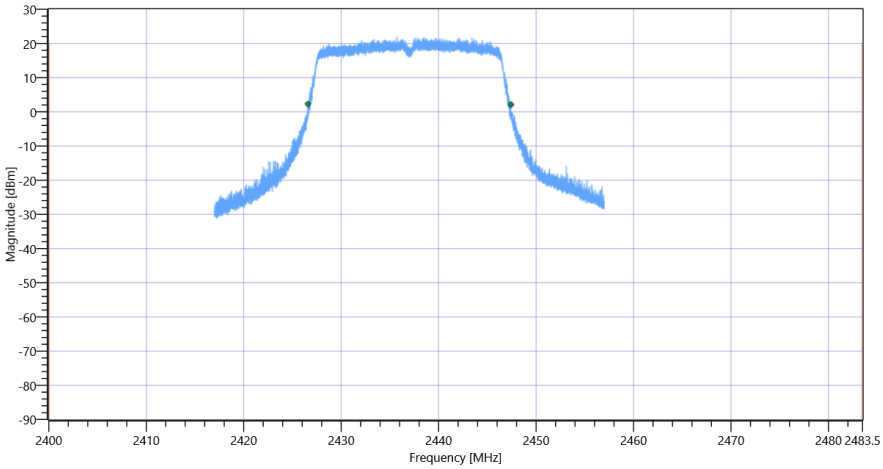
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20824	kHz	INFO
T1 20DB	2400.000000	---	2426.5920	MHz	PASS
T2 20dB	---	2483.500000	2447.4160	MHz	PASS

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 16:37:01
Ambit Temp [°C] | Humidity [rel%]	19.4 | 34
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	23.22	dBm	INFO
Ref. Frequency	---	---	2438.900	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

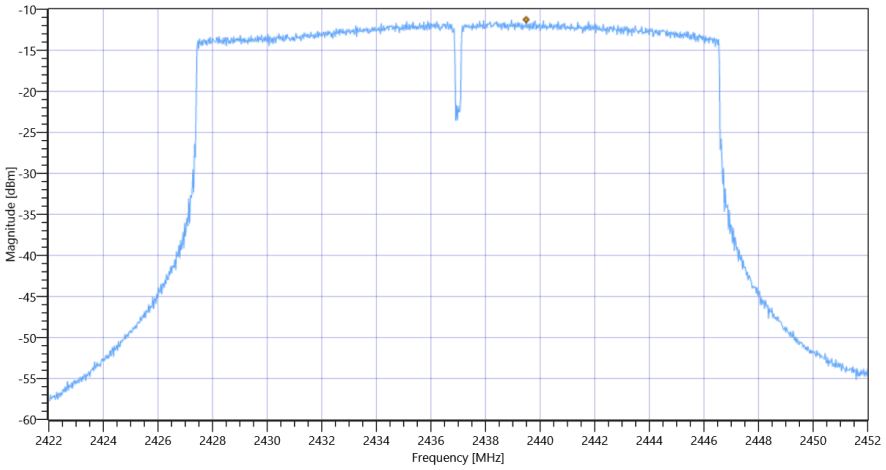
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	28.22 | 5 | 40
Start [MHz] | Stop [MHz]	2422.000 | 2452.000
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	---	---	-11.26	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-11.26	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 16:36:22
Ambit Temp [°C] | Humidity [rel%]	19.4 | 35
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] 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]	-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 2437 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	---	---	2442.190	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	28.26 | 5 | 40
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	---	18628	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 16:25:59
Ambit Temp [°C] | Humidity [rel%]	19.2 | 35
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	22.62	dBm	INFO
Ref. Frequency	---	---	2433.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	22.62 | 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 @ 2440.67 MHz	---	---	11.80	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24243.667 MHz	0	---	10.61	dB	INFO

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2437

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 ax-HE20 2437

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

Test References

TC Start	05.12.2022 16:24:59
Ambit Temp [°C] | Humidity [rel%]	19.2 | 35
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] 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]	-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 2437 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	---	---	2433.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	27.69 | 5 | 40
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%	---	---	19042.000	kHz	INFO
T1 99%	2400.000000	---	2427.4570	MHz	PASS
T2 99%	---	2483.500000	2446.4991	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	---	2426.4680	MHz	PASS
T2 20dB	---	2483.500000	2447.3440	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 16:23:52
Ambit Temp [°C] | Humidity [rel%]	19.2 | 35
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	25.43	dBm	INFO
Ref. Frequency	---	---	2439.600	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]	30.43 | 5 | 45
Start [MHz] | Stop [MHz]	2422.000 | 2452.000
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	---	---	-10.96	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-10.96	dBm/3kHz	PASS

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

Test References

TC Start	05.12.2022 16:23:14
Ambit Temp [°C] | Humidity [rel%]	19.1 | 35
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] 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]	-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 2437 MHz

RESULT: Reference Power cond.

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	22.74	dBm	INFO
Ref. Frequency	---	---	2430.810	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	27.74 | 5 | 40
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	---	18216	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 16:06:35
Ambit Temp [°C] | Humidity [rel%]	18.6 | 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	4
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.

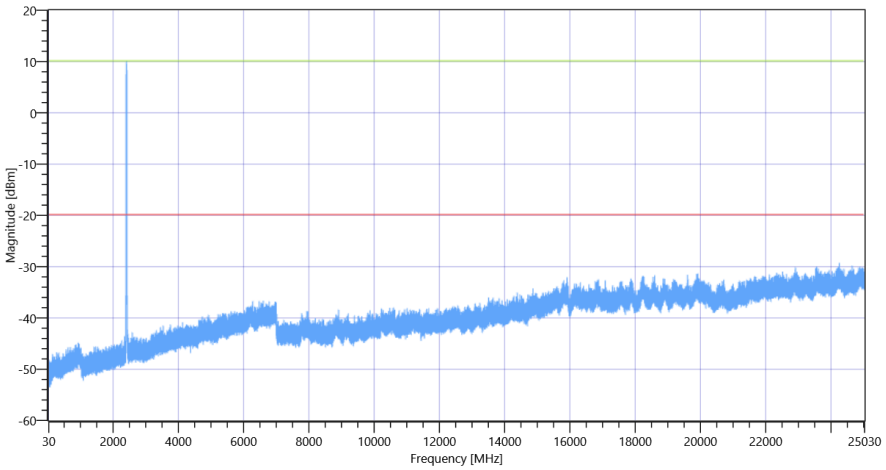
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	22.16	dBm	INFO
Ref. Frequency	---	---	2410.600	MHz	INFO

READ SA SETTINGS:

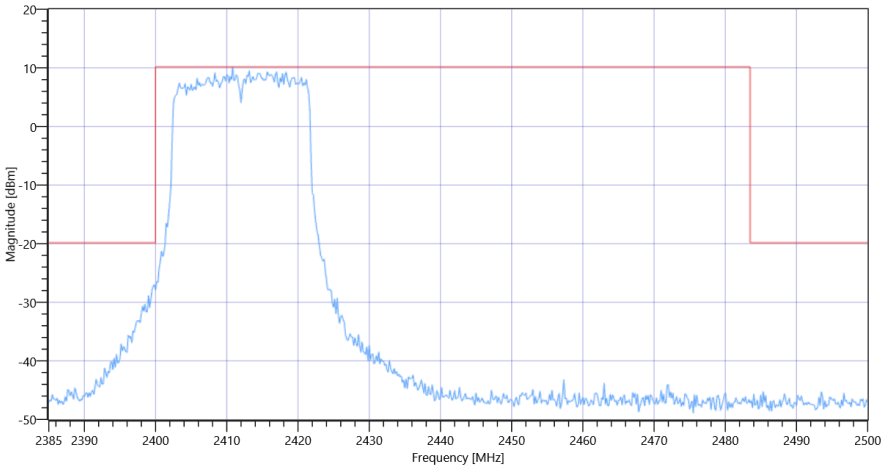
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	22.16 | 0 | 40
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 3001 | SWE

RESULT

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Reference @ 2410.83 MHz	---	---	10.15	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2399.833 MHz	0	---	7.16	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 16:05:35
Ambit Temp [°C] | Humidity [rel%]	18.6 | 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	4
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.	---	---	21.44	dBm	INFO
Ref. Frequency	---	---	2414.400	MHz	INFO

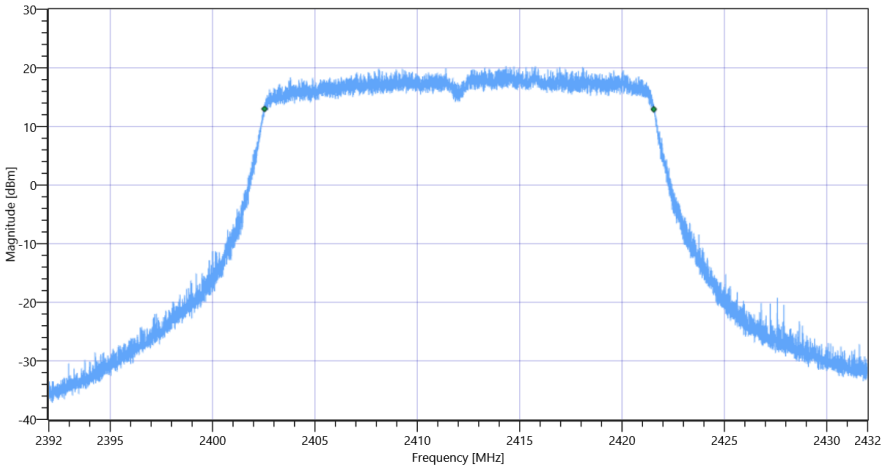
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	26.44 | 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

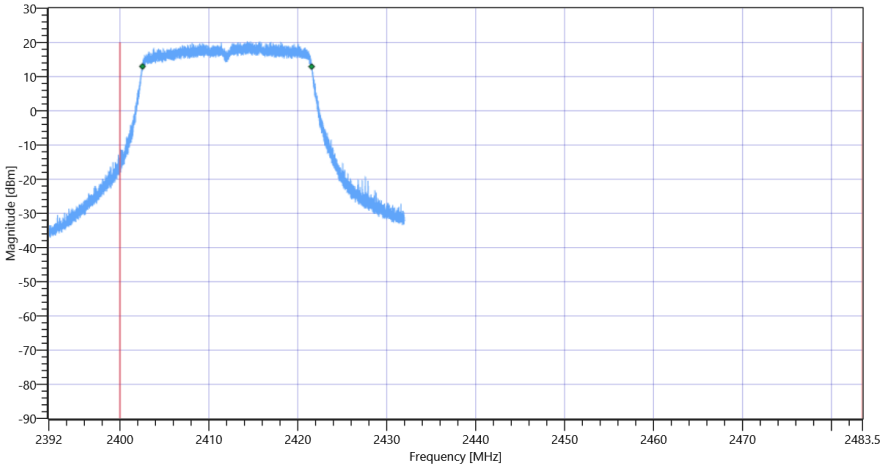
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	19014.000	kHz	INFO
T1 99%	2400.000000	---	2402.5369	MHz	PASS
T2 99%	---	2483.500000	2421.5510	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

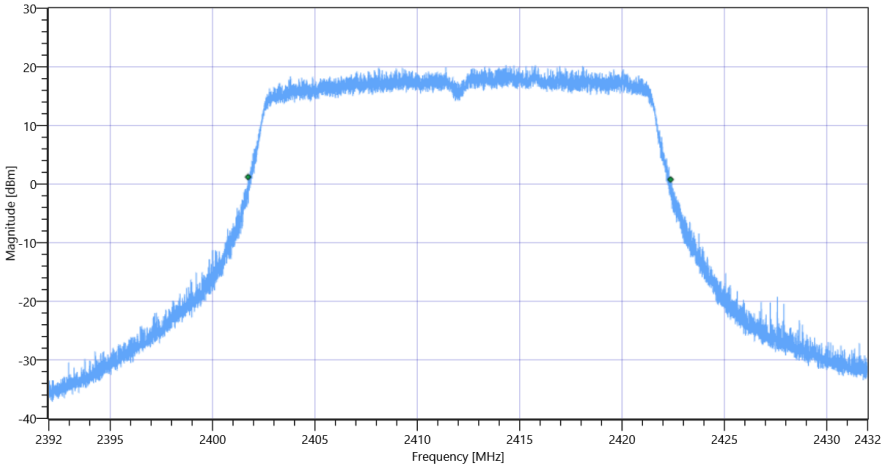


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

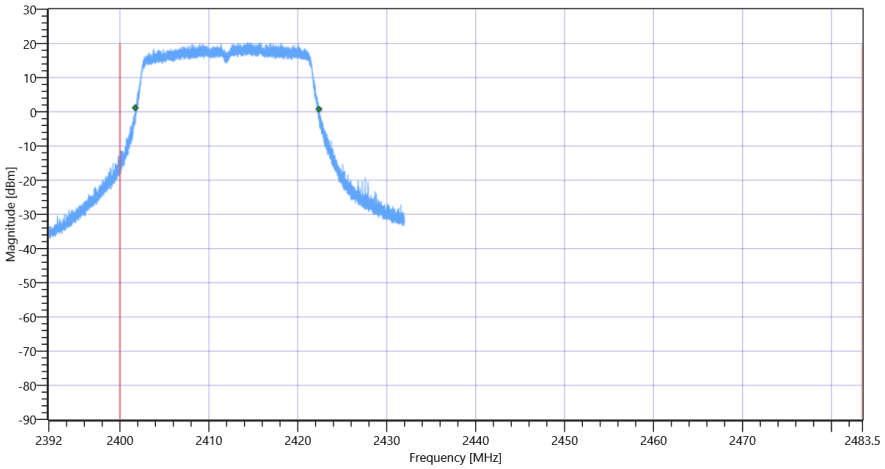
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20640	kHz	INFO
T1 20DB	2400.000000	---	2401.7320	MHz	PASS
T2 20dB	---	2483.500000	2422.3720	MHz	PASS

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 16:04:28
Ambit Temp [°C] | Humidity [rel%]	18.6 | 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	4
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.	---	---	20.91	dBm	INFO
Ref. Frequency	---	---	2415.800	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

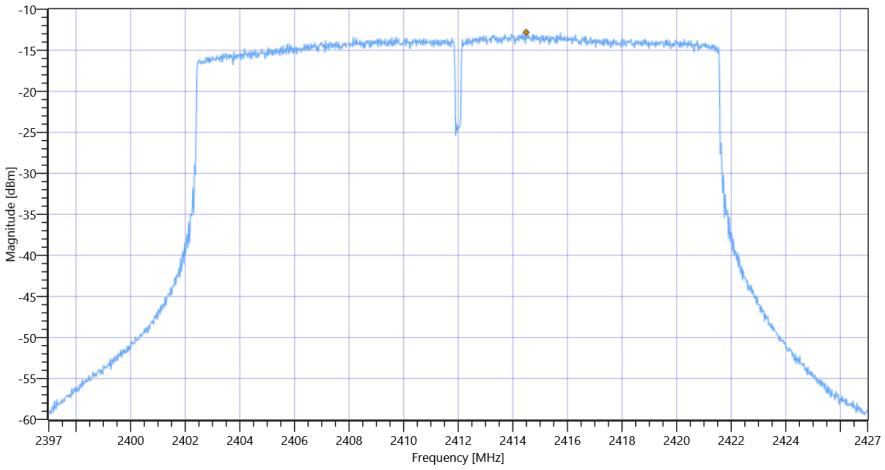
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	25.91 | 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	---	---	-12.81	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-12.81	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 16:03:49
Ambit Temp [°C] | Humidity [rel%]	18.5 | 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	4
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.

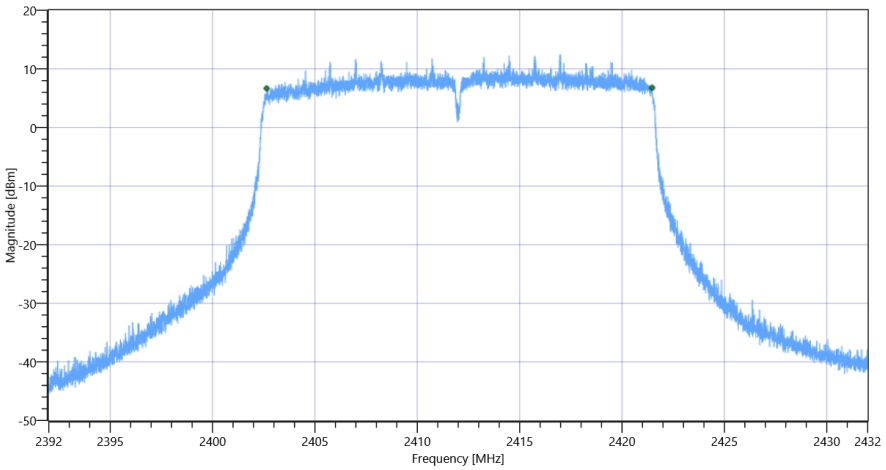
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	21.12	dBm	INFO
Ref. Frequency	---	---	2417.190	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	26.12 | 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	---	18828	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 15:53:28
Ambit Temp [°C] | Humidity [rel%]	18.3 | 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	3
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.

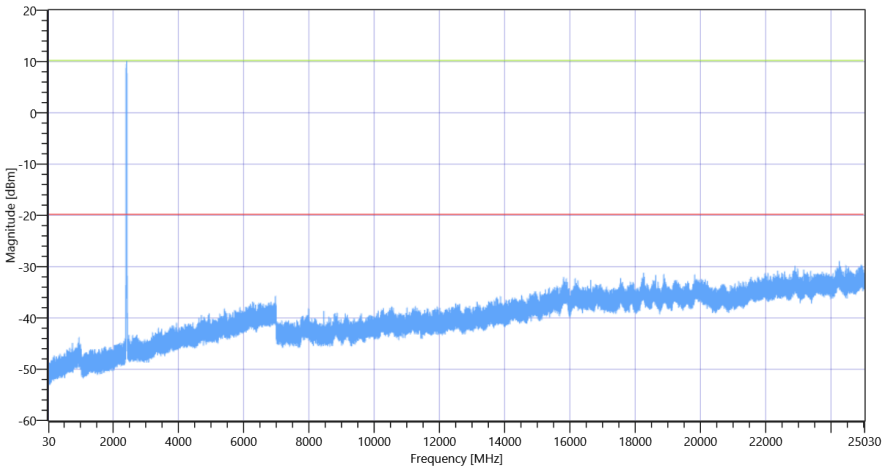
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	21.92	dBm	INFO
Ref. Frequency	---	---	2405.710	MHz	INFO

READ SA SETTINGS:

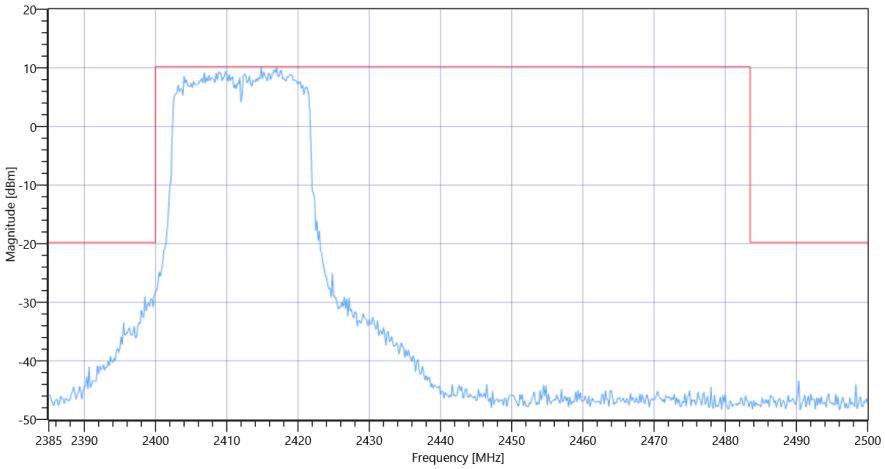
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	21.92 | 0 | 40
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 3001 | SWE

RESULT

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Reference @ 2414.83 MHz	---	---	10.19	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2399.833 MHz	0	---	8.77	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 15:52:28
Ambit Temp [°C] | Humidity [rel%]	18.3 | 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	3
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.	---	---	22.55	dBm	INFO
Ref. Frequency	---	---	2407.800	MHz	INFO

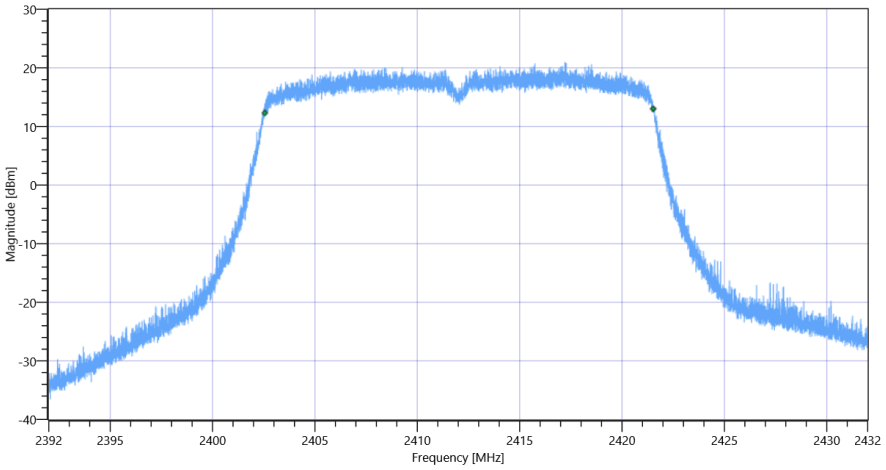
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	27.55 | 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

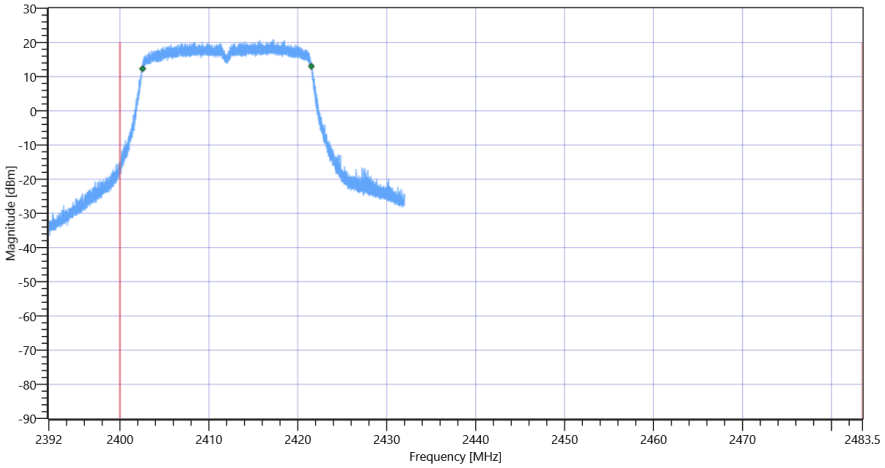
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	18970.000	kHz	INFO
T1 99%	2400.000000	---	2402.5529	MHz	PASS
T2 99%	---	2483.500000	2421.5230	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

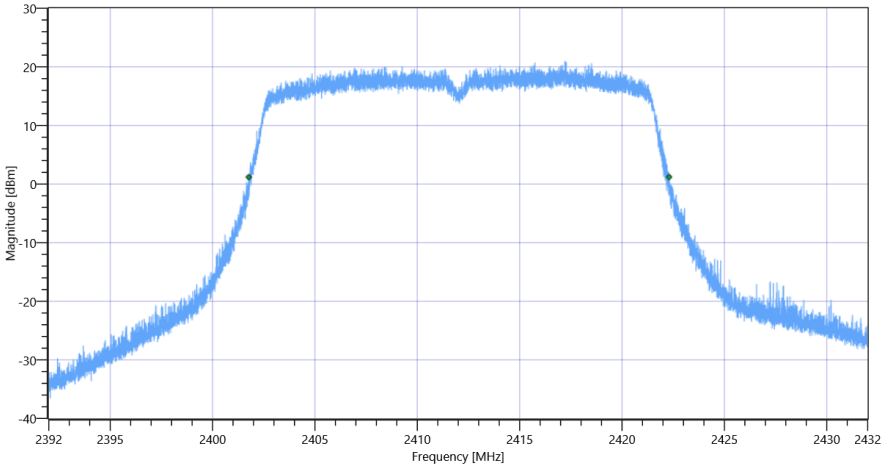


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

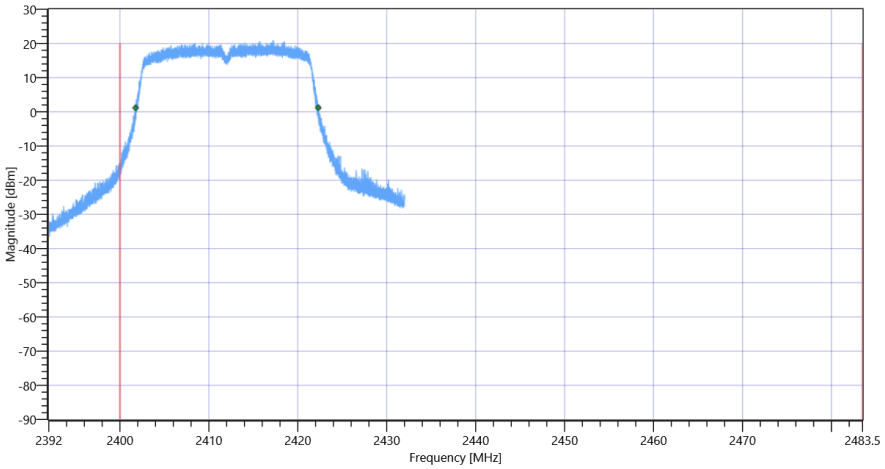
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20528	kHz	INFO
T1 20DB	2400.000000	---	2401.7680	MHz	PASS
T2 20dB	---	2483.500000	2422.2960	MHz	PASS

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 15:51:22
Ambit Temp [°C] | Humidity [rel%]	18.2 | 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	3
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.	---	---	22.49	dBm	INFO
Ref. Frequency	---	---	2409.900	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

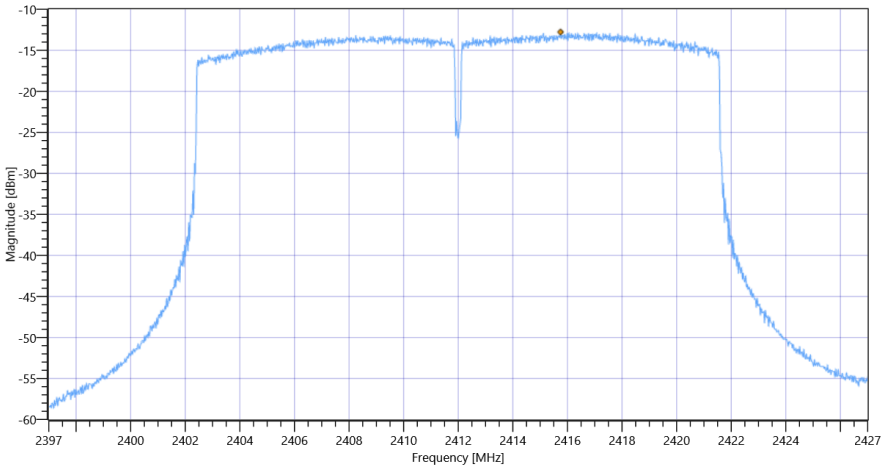
Avg. PSD

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	27.49 | 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	---	---	-12.77	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg PSD DC corrected	---	8	-12.77	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 15:50:42
Ambit Temp [°C] | Humidity [rel%]	18.2 | 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	3
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.

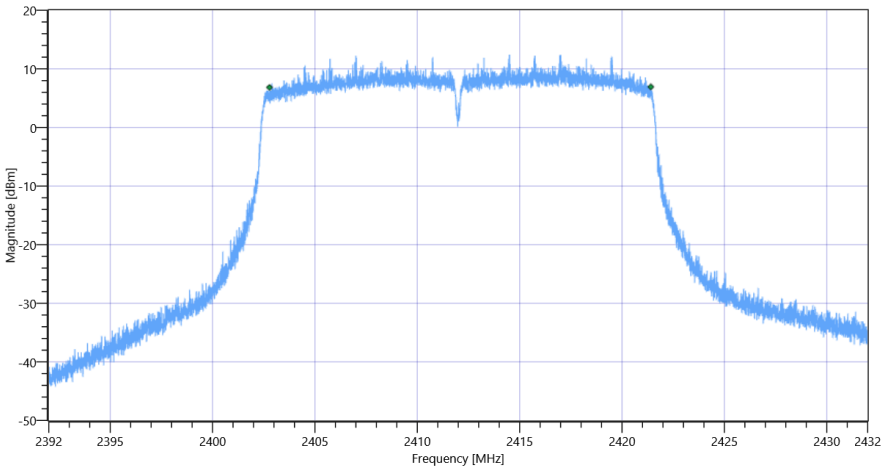
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	22.44	dBm	INFO
Ref. Frequency	---	---	2414.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	27.44 | 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	---	18628	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 15:40:22
Ambit Temp [°C] | Humidity [rel%]	18.1 | 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	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.

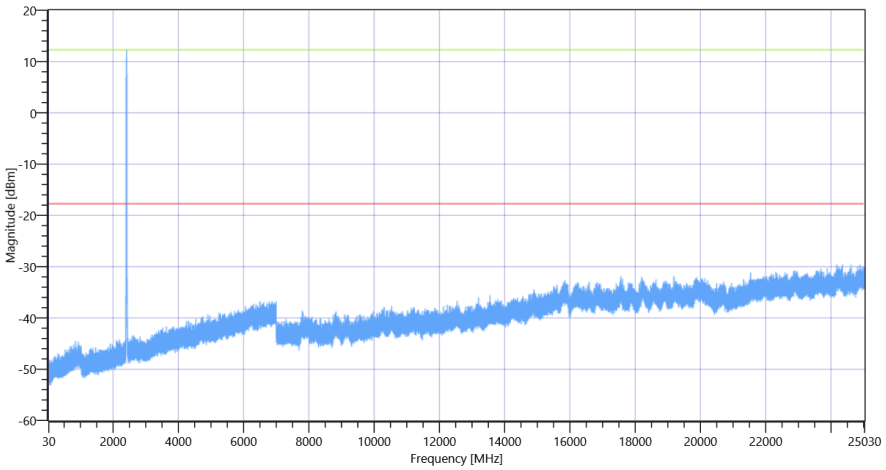
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Ref. Power 1MHz/1MHz cond.	---	---	21.55	dBm	INFO
Ref. Frequency	---	---	2412.700	MHz	INFO

READ SA SETTINGS:

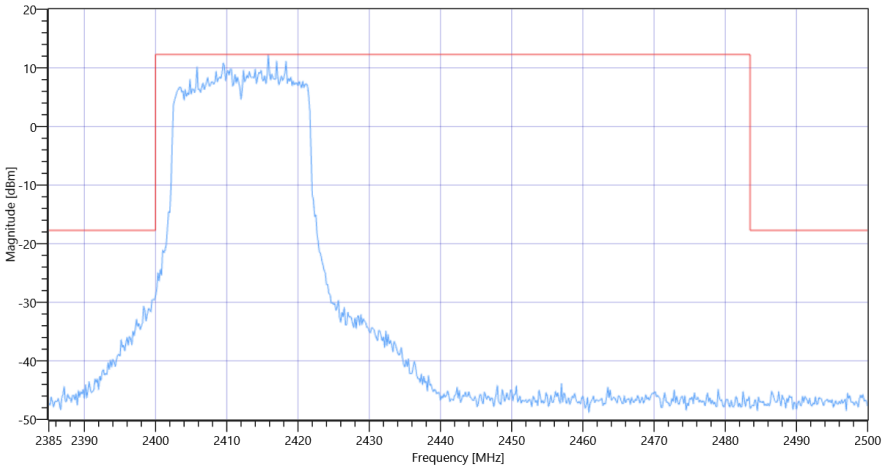
RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	21.55 | 0 | 40
Start [MHz] | Stop [MHz]	24530.000 | 25030.000
RBW [MHz] | VBW [MHz]	0.100000 | 0.300000
Detector | TraceMode	POS | MAXH
Sweep: Time [ms] | Count | Points per Section | Type	200 | 25 | 3001 | SWE

RESULT

Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Reference @ 2415.83 MHz	---	---	12.27	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 2399.5 MHz	0	---	11.81	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 15:39:23
Ambit Temp [°C] | Humidity [rel%]	18.1 | 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	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.	---	---	22.75	dBm	INFO
Ref. Frequency	---	---	2411.100	MHz	INFO

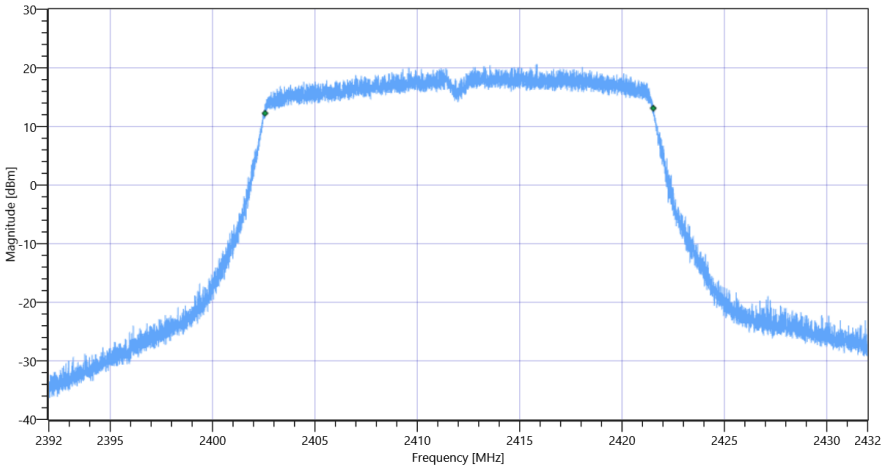
READ SA SETTINGS:

RefLevel [dBm] | RefLevelOffset [dB] | InpAtt [dB]	27.75 | 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

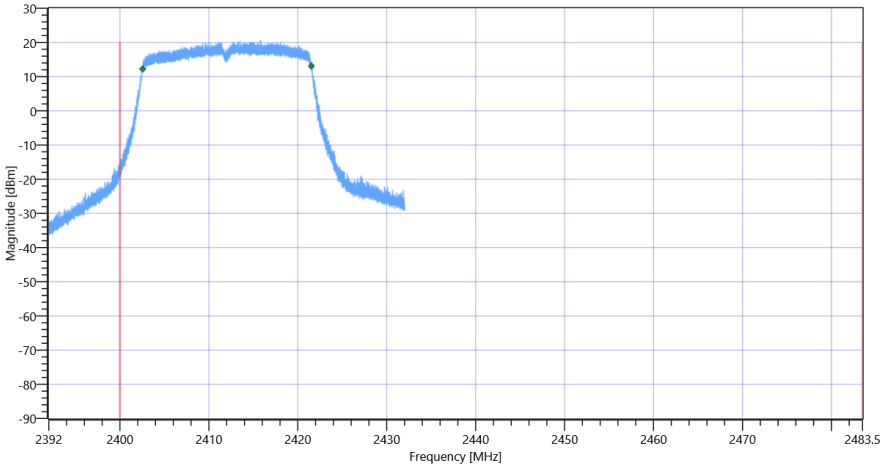
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 99%	---	---	18962.000	kHz	INFO
T1 99%	2400.000000	---	2402.5649	MHz	PASS
T2 99%	---	2483.500000	2421.5270	MHz	PASS

Plot: Bandwidth only



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

Plot: Bandwidth within Band

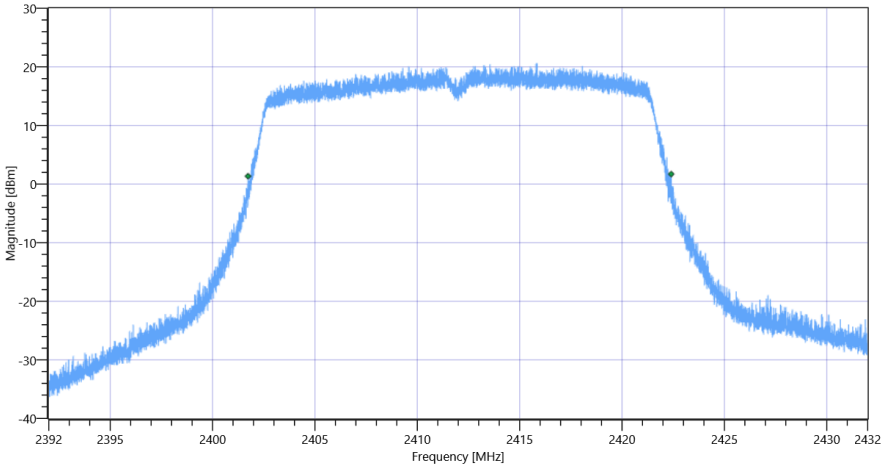


FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20

RESULT

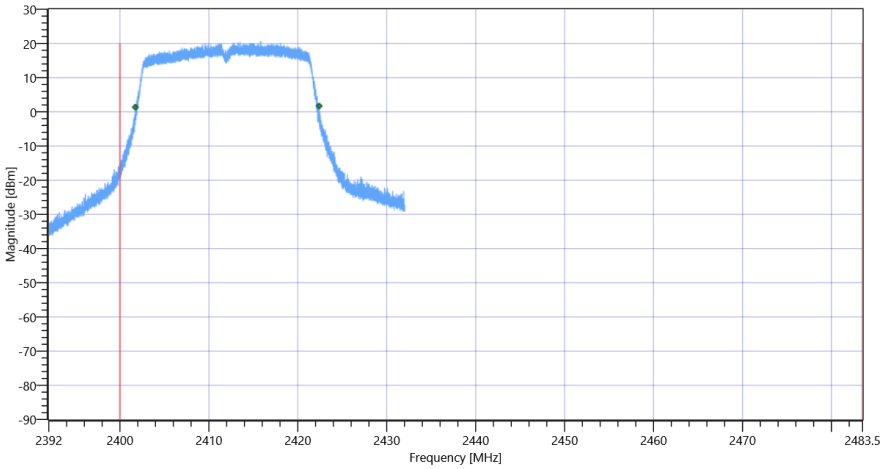
Test Description	*Lower Limit*	*Upper Limit*	*Measured*	*Unit*	*Verdict*
Bandwidth 20dB	---	---	20668	kHz	INFO
T1 20DB	2400.000000	---	2401.7320	MHz	PASS
T2 20dB	---	2483.500000	2422.4000	MHz	PASS

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 15:38:17
Ambit Temp [°C] | Humidity [rel%]	18.1 | 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	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