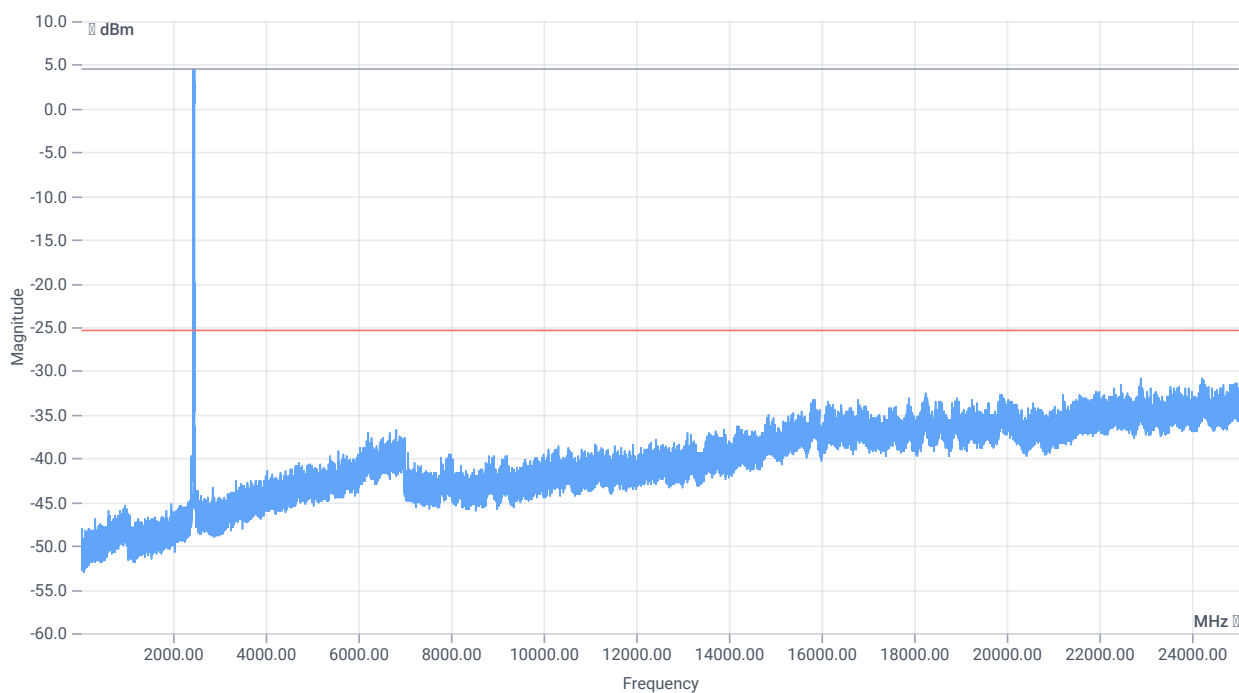


Test at TX 2437 MHz

RESULT: Reference Power cond.

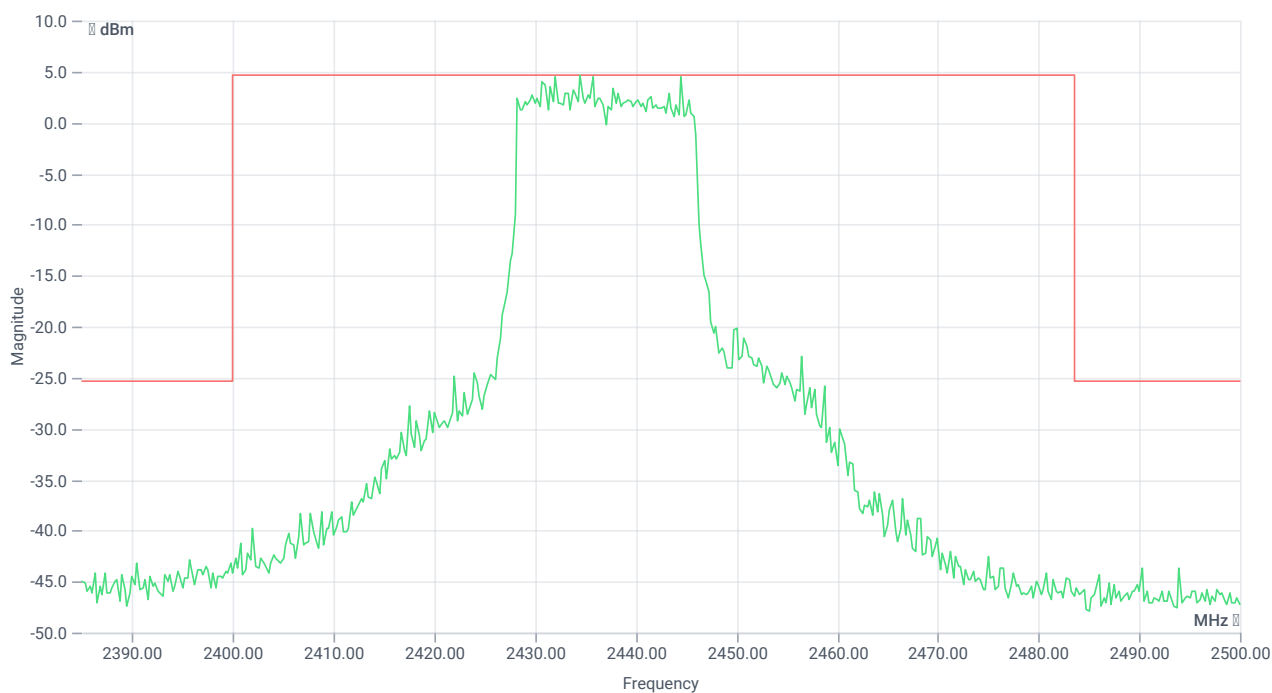
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.94	dBm	INFO
Ref. Frequency	---	---	2438.700	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.94 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2434.50 MHz	---	---	4.61	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-150.37	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:15:21
Ambit Temp [°C] Humidity [rel%]	26.2 34
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

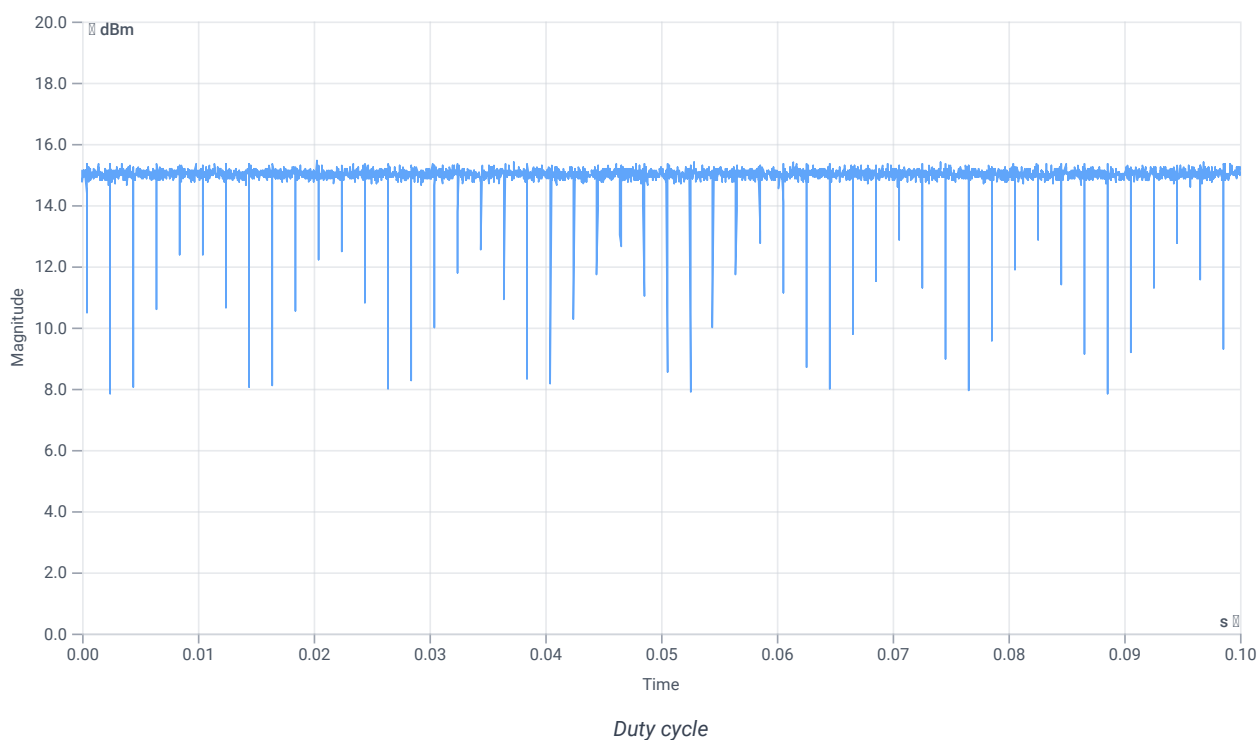
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	13.70	dBm	INFO
Ref. Frequency	---	---	2434.000	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



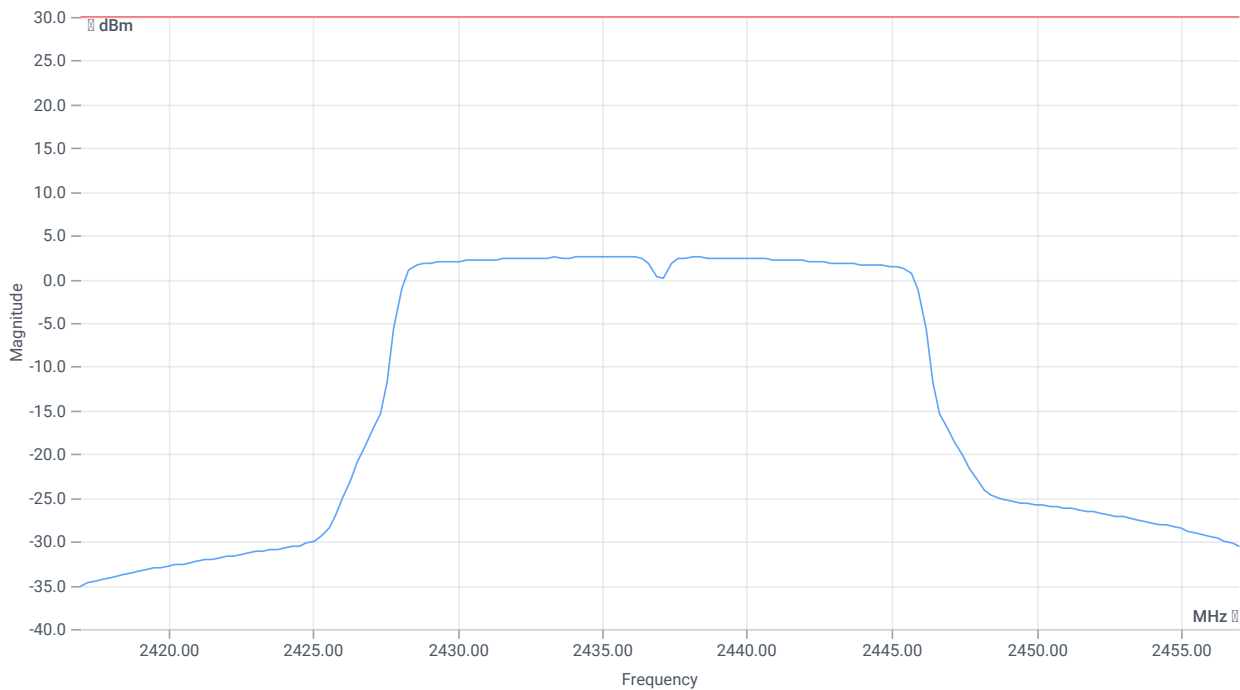
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.70 14.2 25
Start [MHz] Stop [MHz]	2417.000 2457.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	17.36	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	17.36	dBm	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	06.07.2023 15:16:36
Ambit Temp [°C] Humidity [rel%]	26.1 35
System Version	4.5.2.0
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan n-HT20 mode
Add. Information	ac20-mode

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	06.07.2023 15:16:36
Message	set WLAN2G4 to n-HT20 mode, Frequency [MHz] 2462

Test Equipment

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

Verdict

INFO

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:19:47
Ambit Temp [°C] Humidity [rel%]	26.2 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

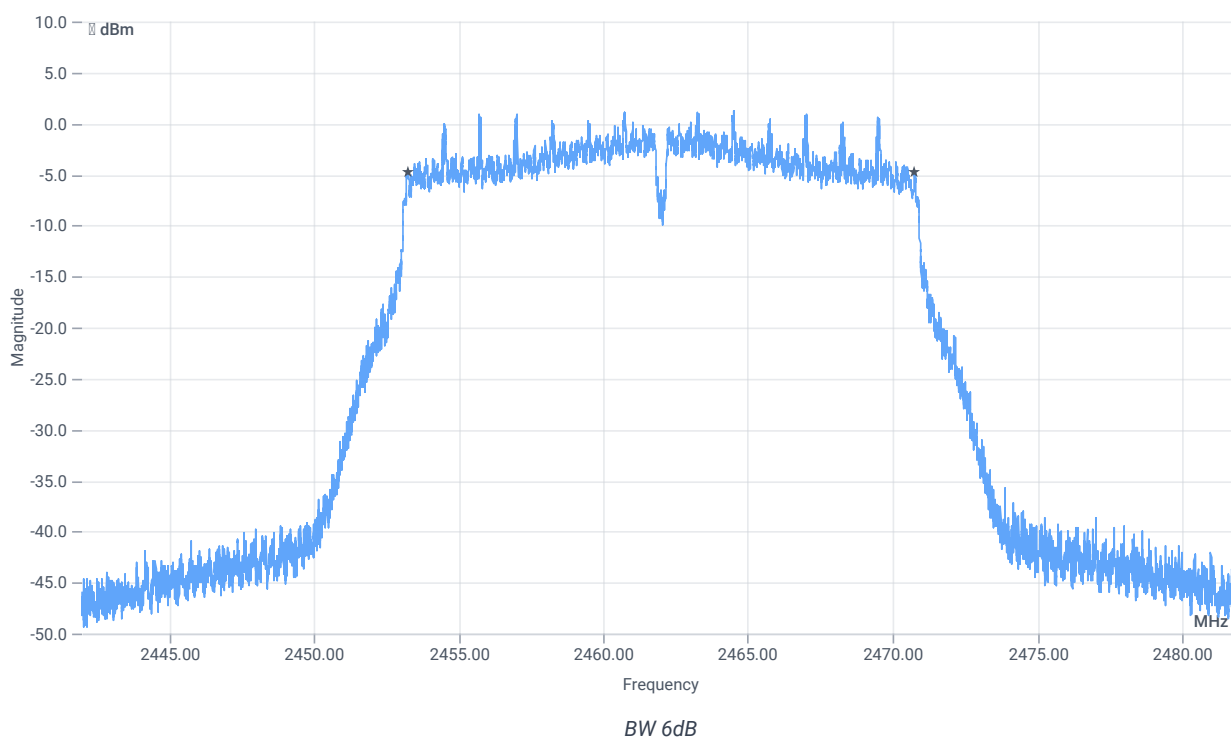
Test at TX 2462 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.25	dBm	INFO
Ref. Frequency	---	---	2460.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.25 14.04 20
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	---	17492	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:20:20
Ambit Temp [°C] Humidity [rel%]	26.2 34
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

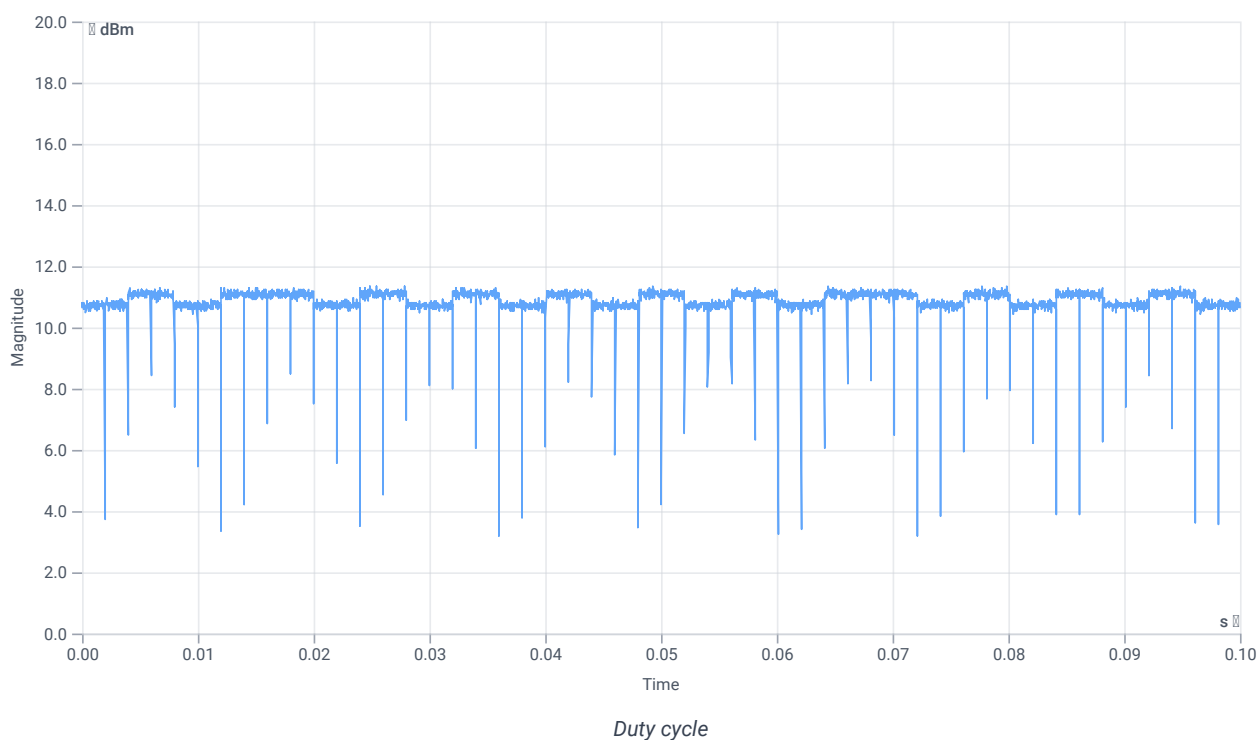
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.11	dBm	INFO
Ref. Frequency	---	---	2463.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



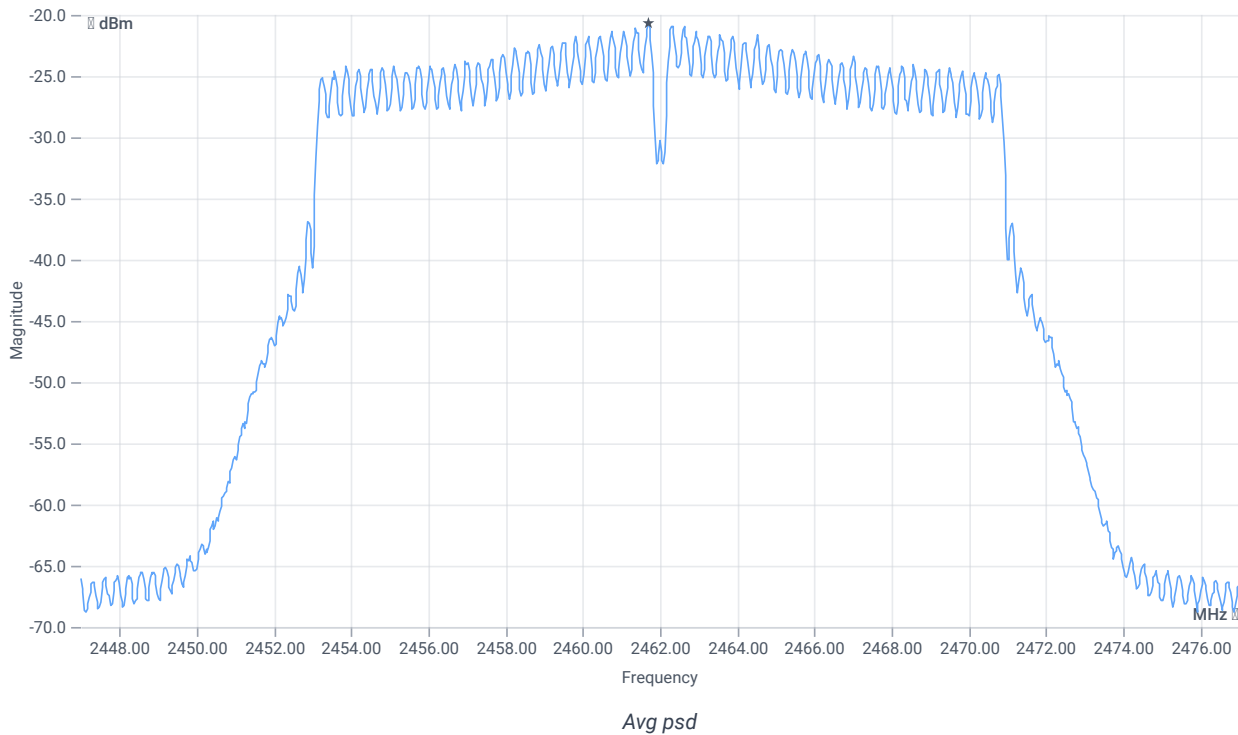
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.11 14.04 20
Start [MHz] Stop [MHz]	2447.000 2477.000

READ SA SETTINGS:

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	---	---	-20.65	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-20.65	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:21:23
Ambit Temp [°C] Humidity [rel%]	26.2 35
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

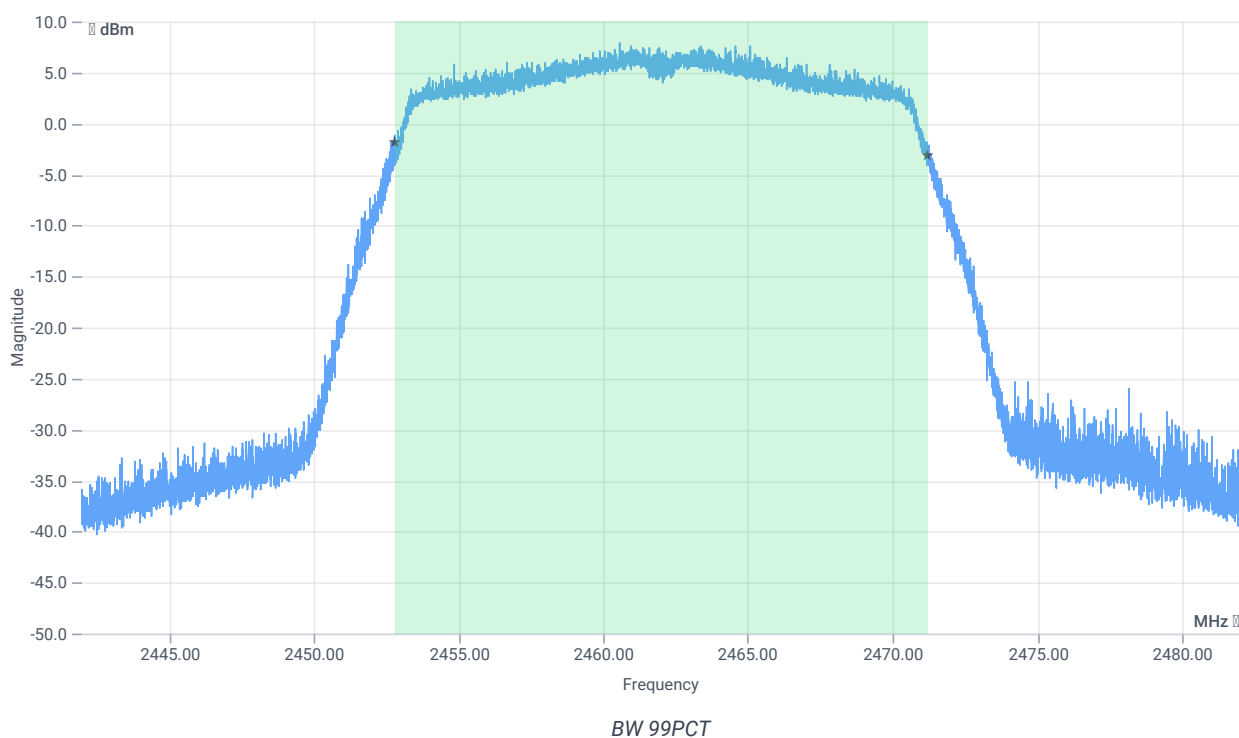
Test at TX 2462 MHz

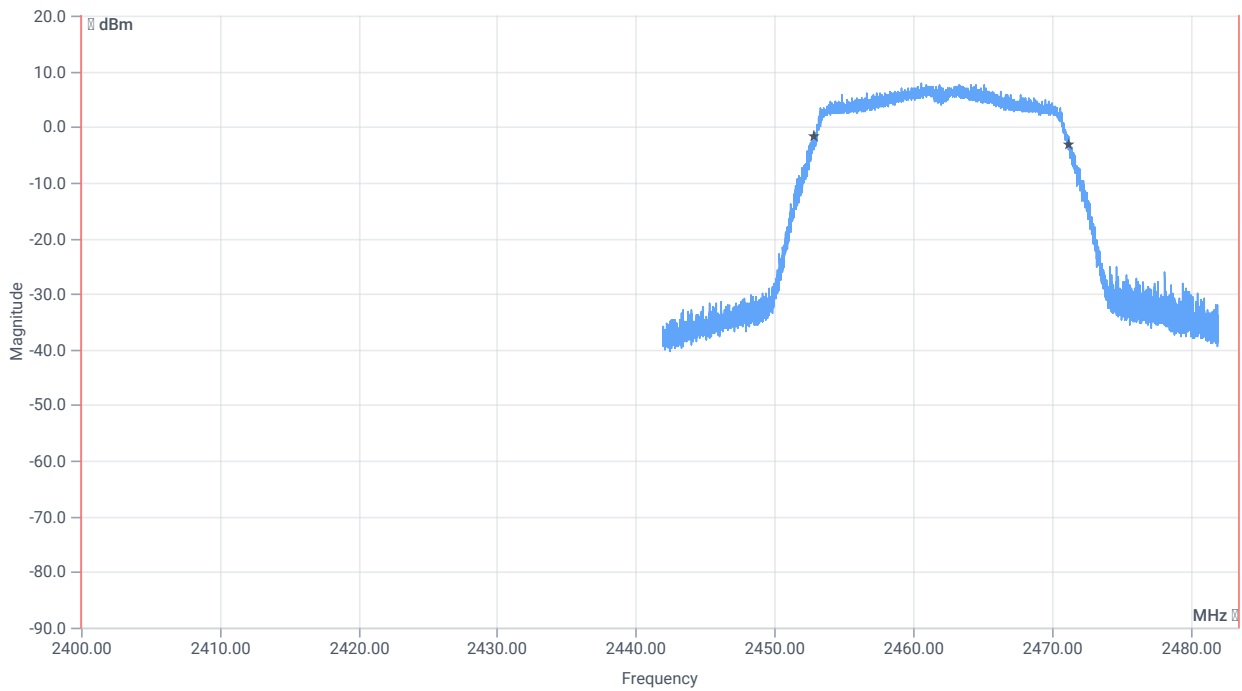
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.64	dBm	INFO
Ref. Frequency	---	---	2459.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.64 14.04 20
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

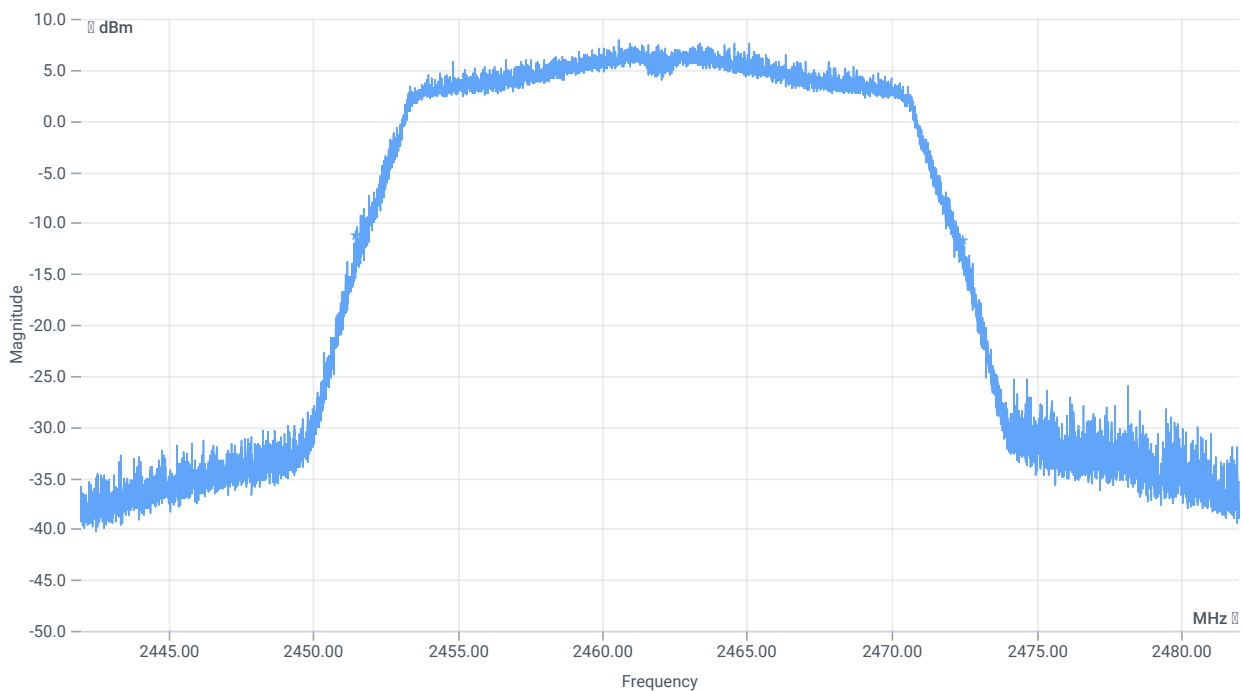




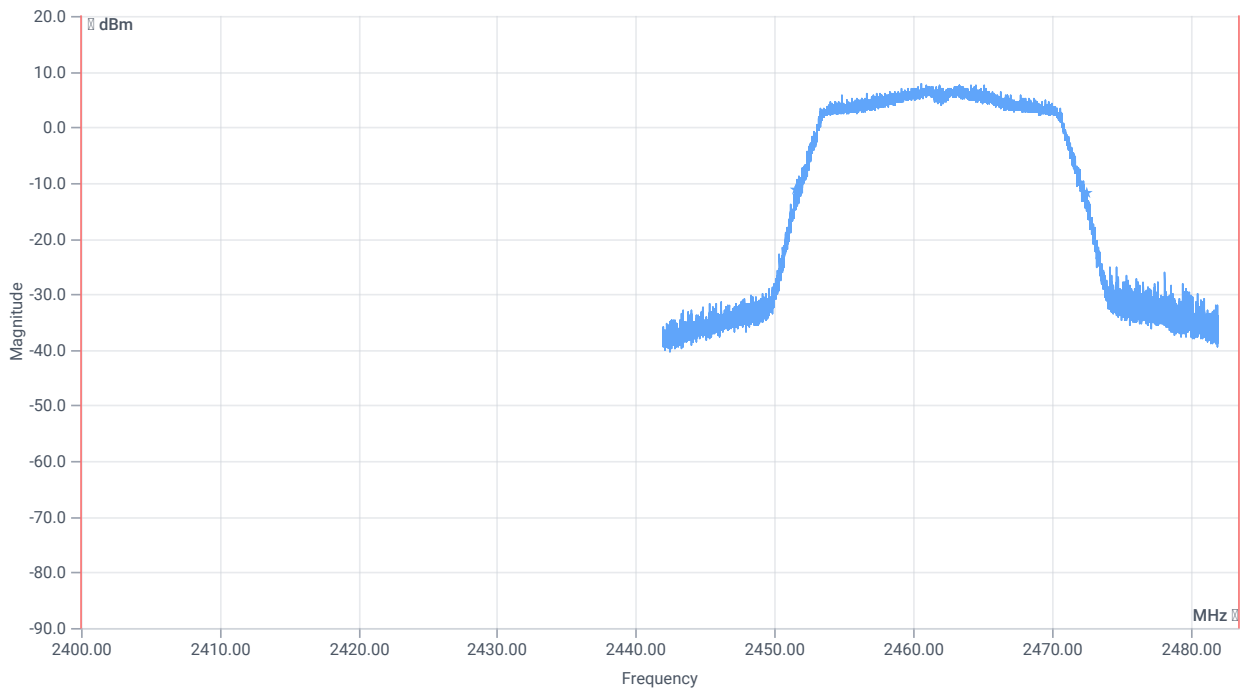
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18410.000	kHz	INFO
T1 99%	2400.000000	---	2452.7929	MHz	PASS
T2 99%	---	2483.500000	2471.2031	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	21004	kHz	INFO
T1 20dB	2400.000000	---	2451.4720	MHz	PASS
T2 20dB	---	2483.500000	2472.4760	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:22:00
Ambit Temp [°C] Humidity [rel%]	26.2 35
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

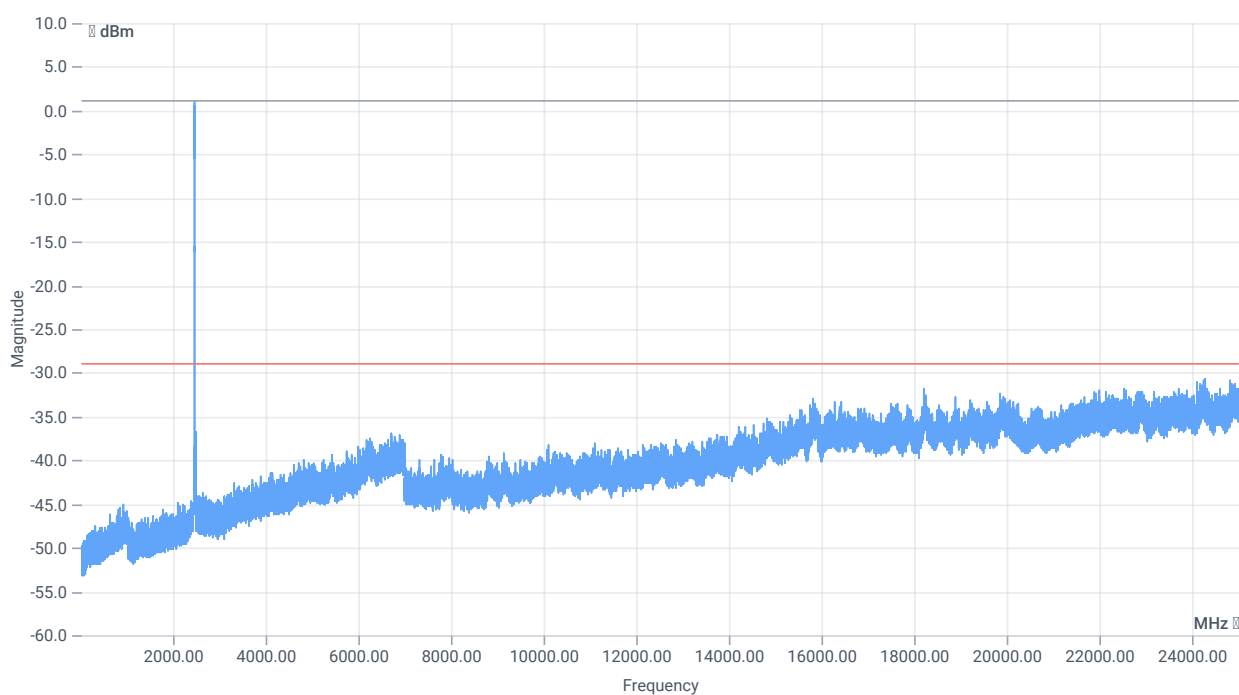
Test Equipment

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.

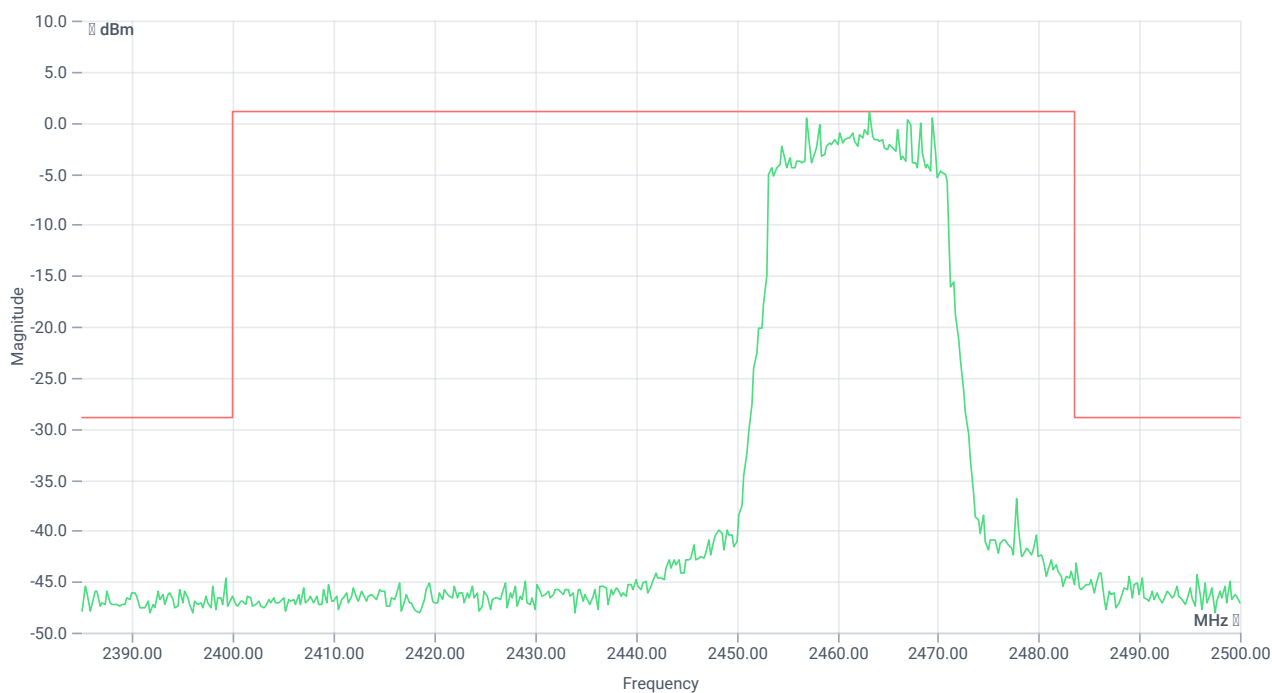
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.02	dBm	INFO
Ref. Frequency	---	---	2463.500	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	10.02 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2463.25 MHz	---	---	1.08	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-149.35	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:28:42
Ambit Temp [°C] Humidity [rel%]	26.2 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

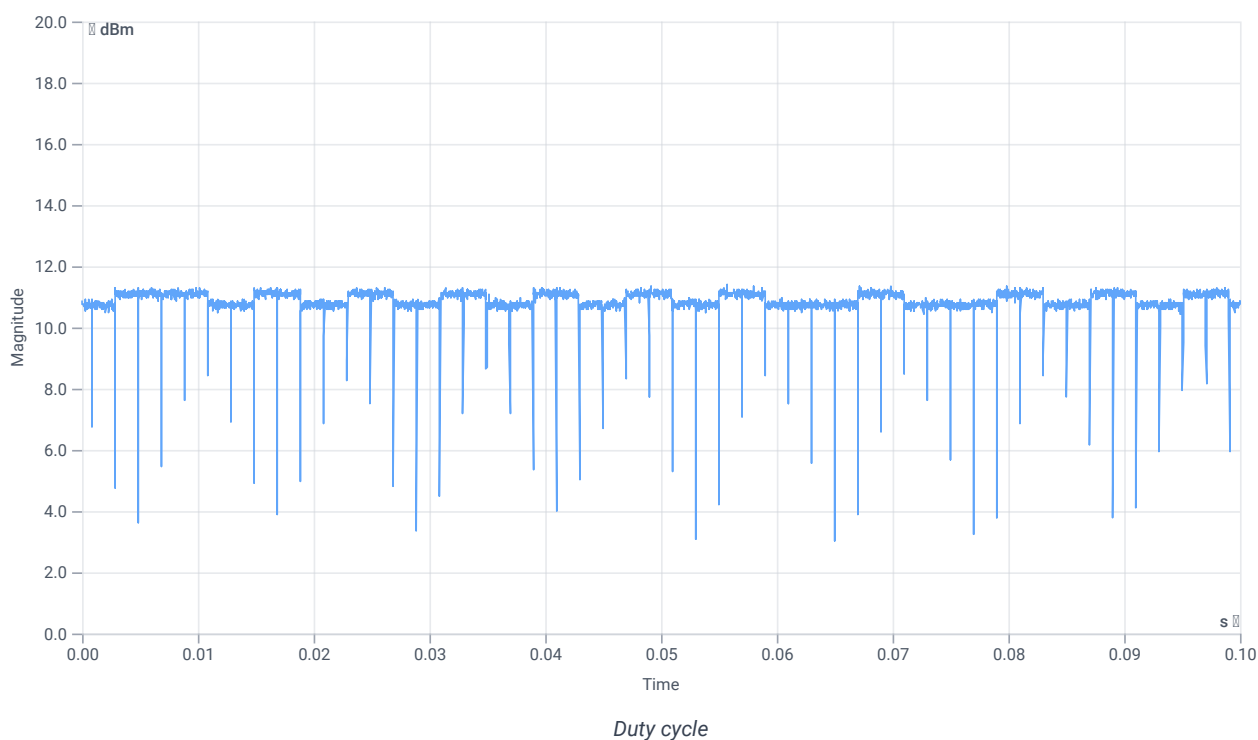
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.95	dBm	INFO
Ref. Frequency	---	---	2460.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



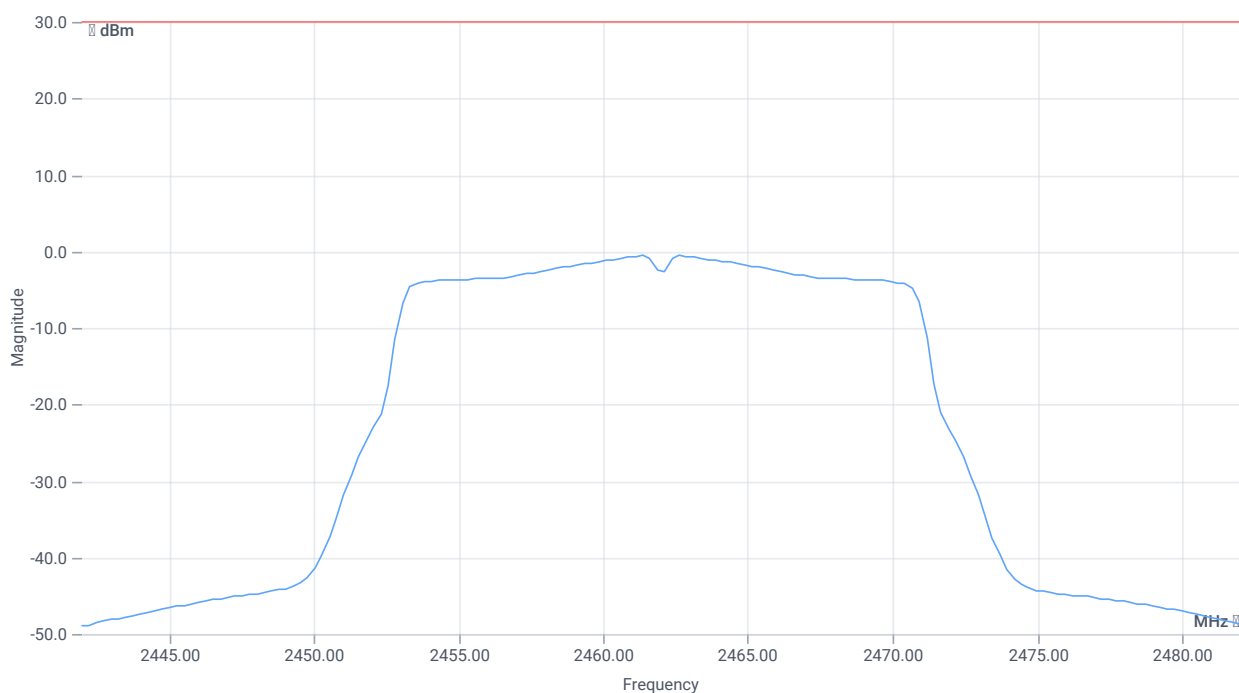
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.95 14.04 20
Start [MHz] Stop [MHz]	2442.000 2482.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	12.79	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	12.79	dBm	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:29:57
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

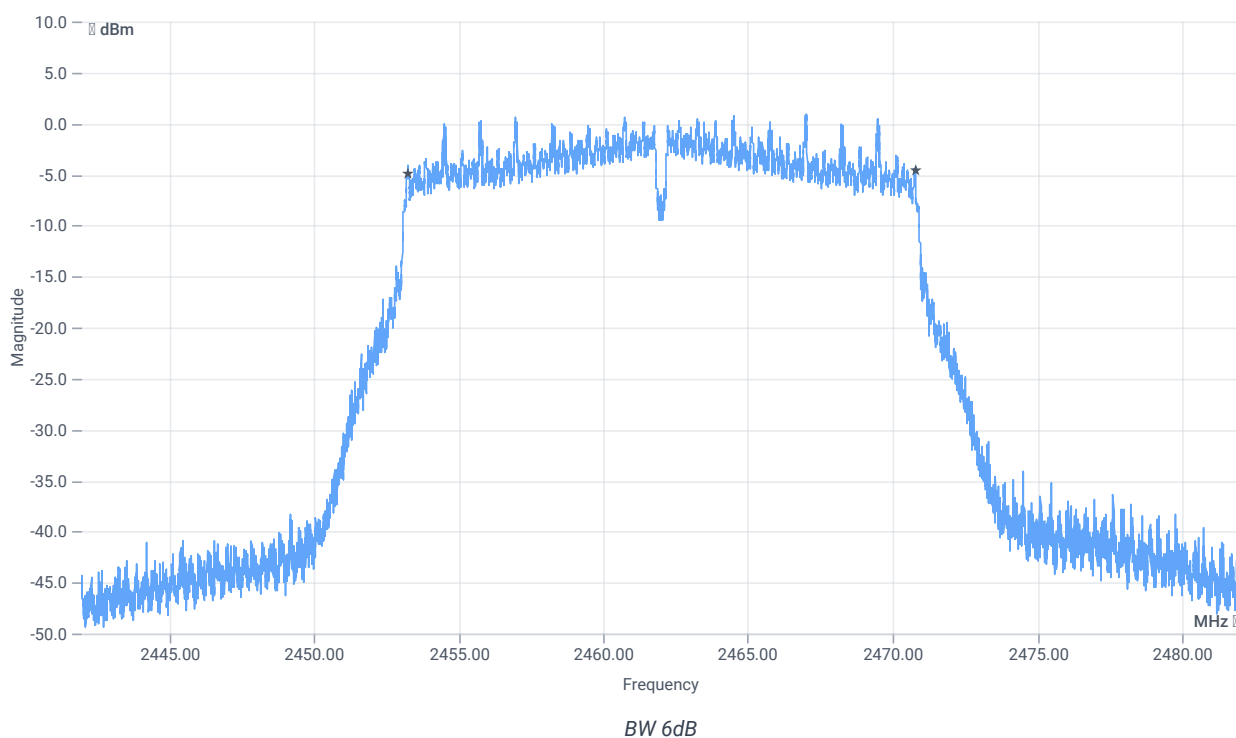
Test at TX 2462 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.37	dBm	INFO
Ref. Frequency	---	---	2463.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.37 14.04 20
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	---	17544	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:30:31
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

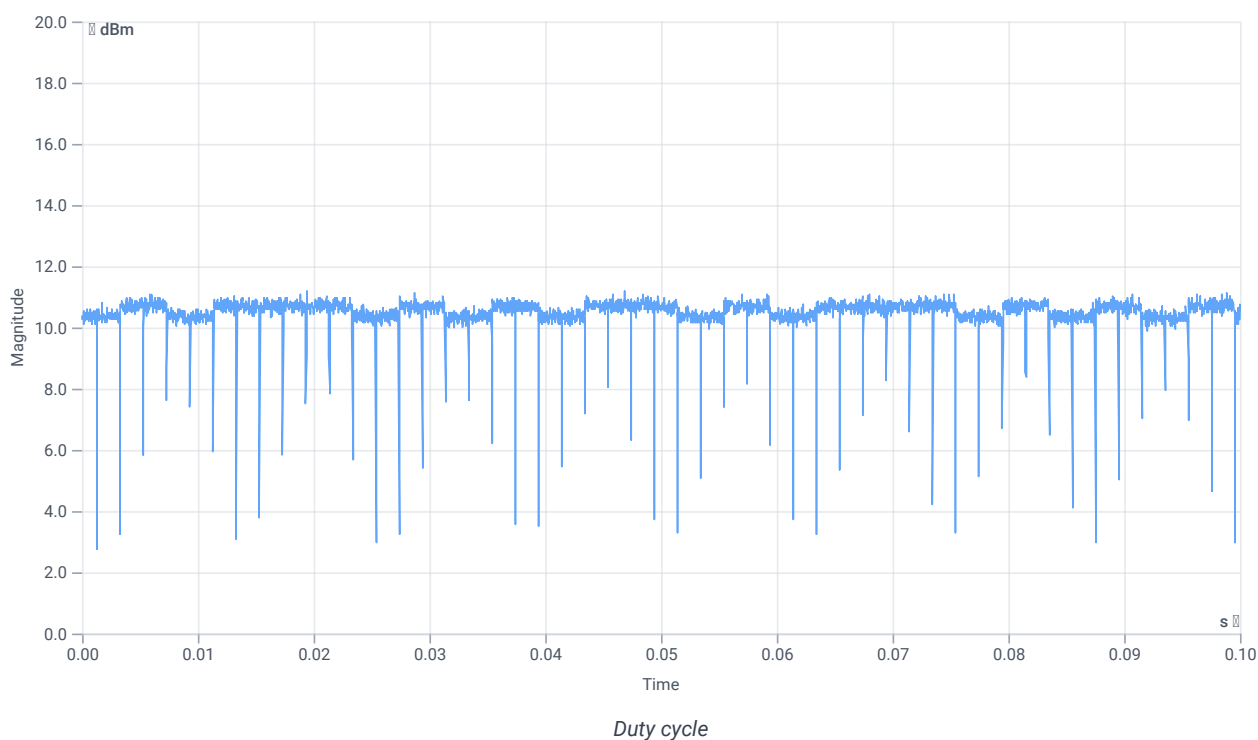
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.29	dBm	INFO
Ref. Frequency	---	---	2463.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



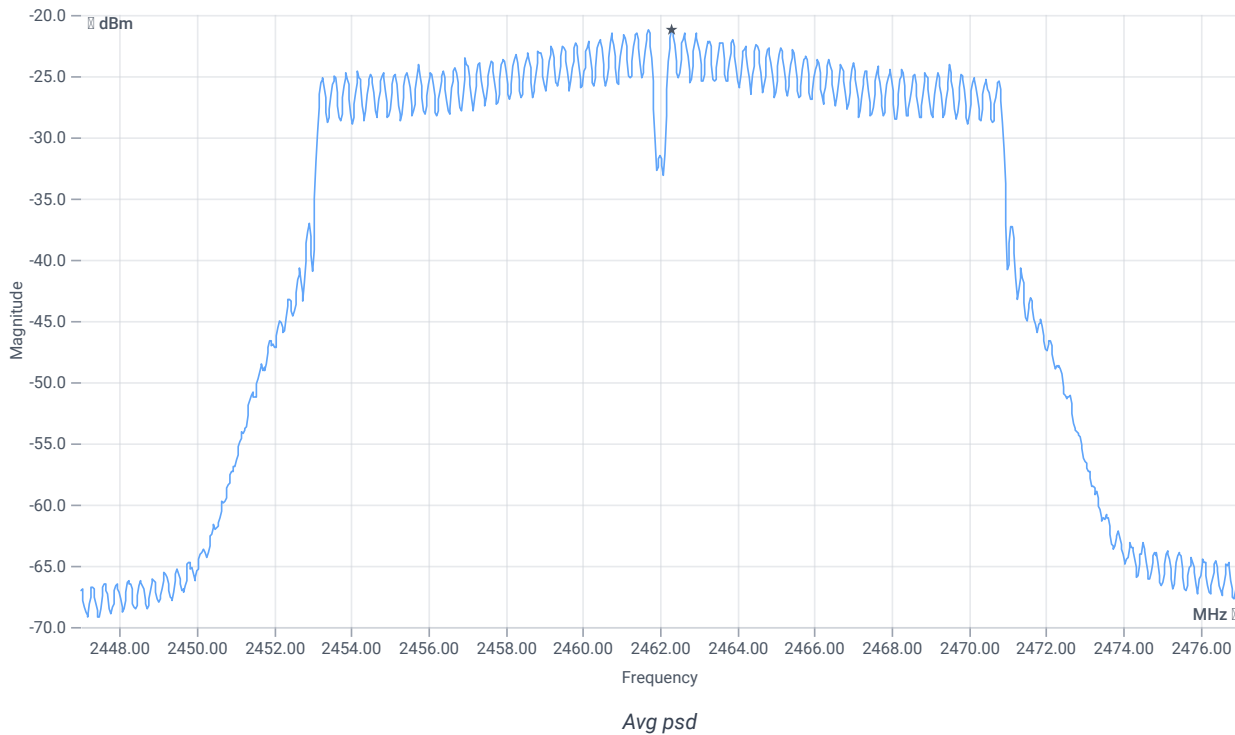
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.29 14.04 20
Start [MHz] Stop [MHz]	2447.000 2477.000

READ SA SETTINGS:

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	---	---	-21.15	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-21.15	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:31:33
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

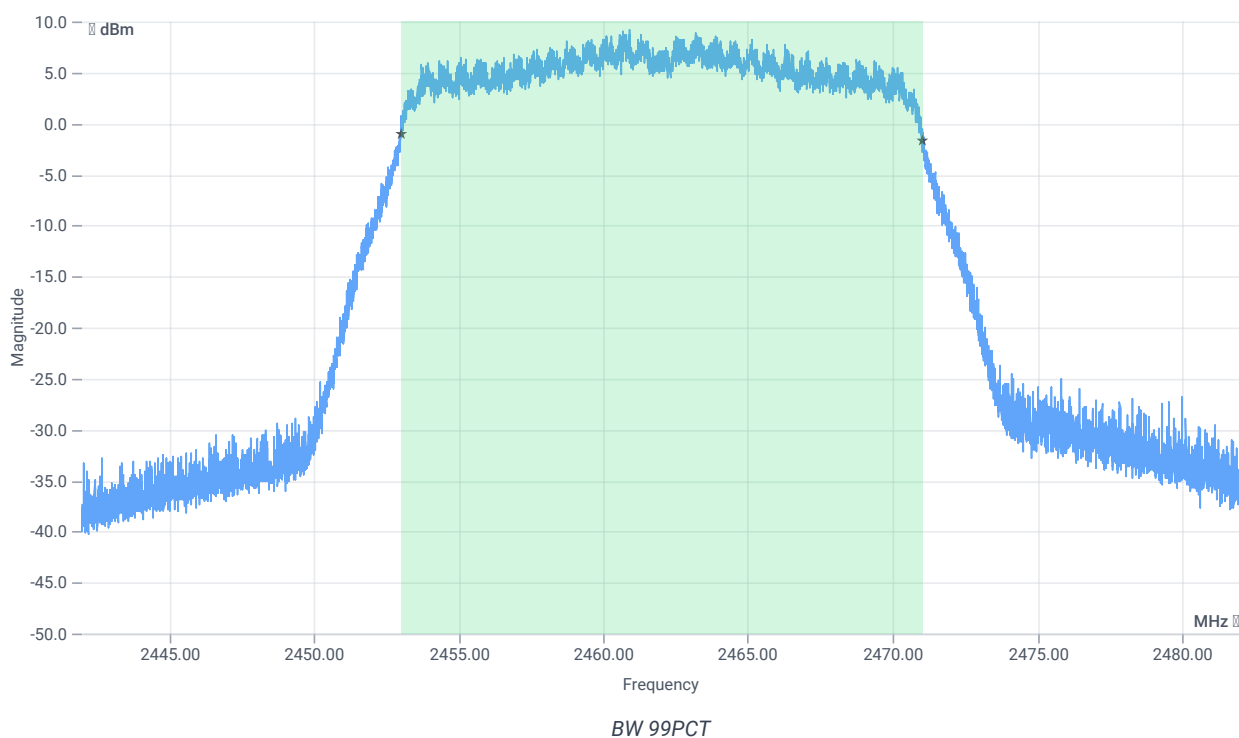
Test at TX 2462 MHz

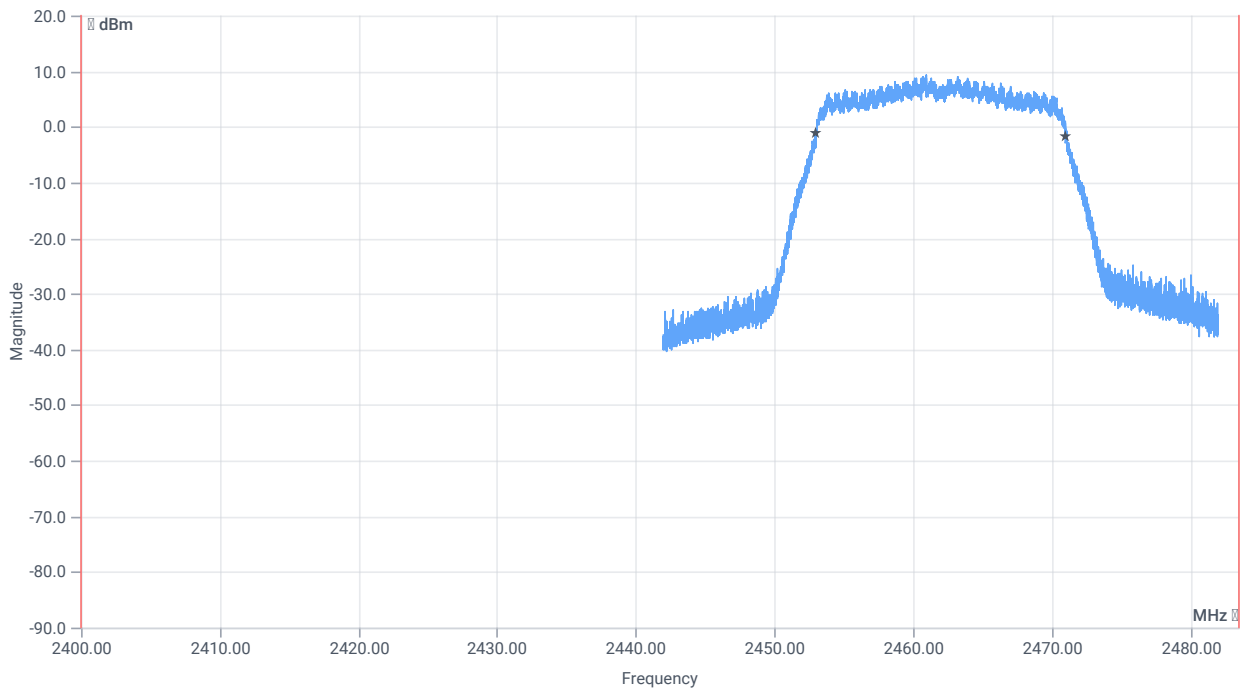
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.02	dBm	INFO
Ref. Frequency	---	---	2463.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.02 14.04 20
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

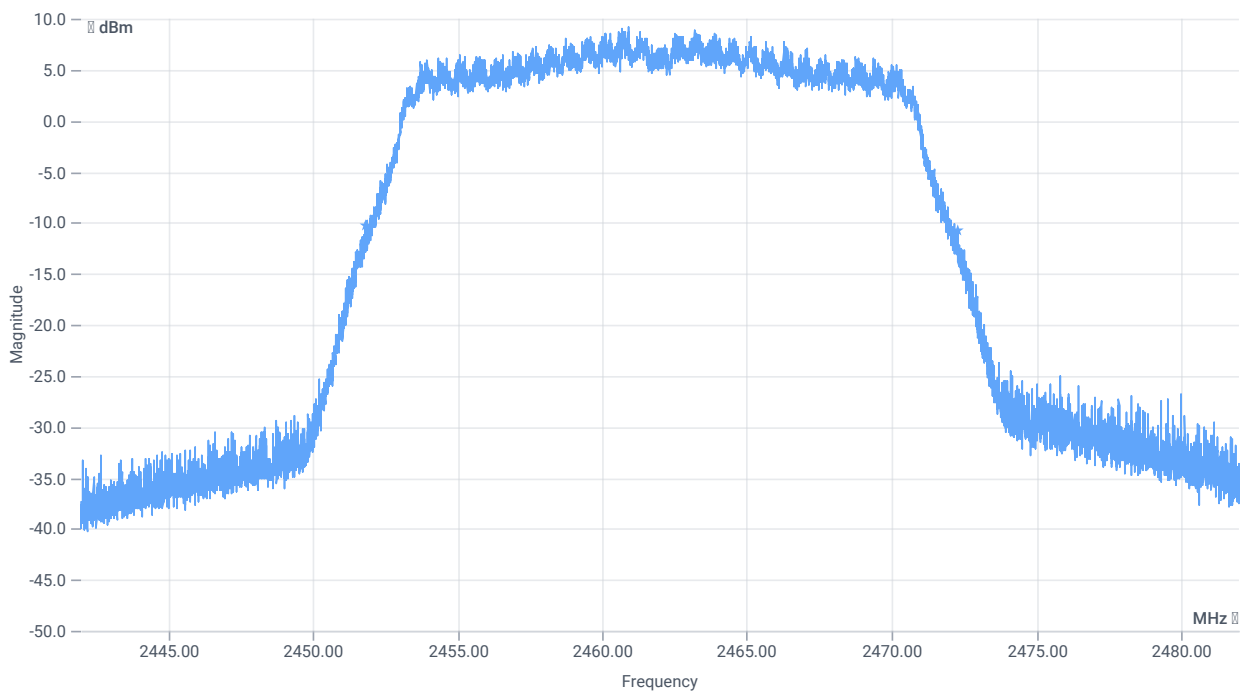




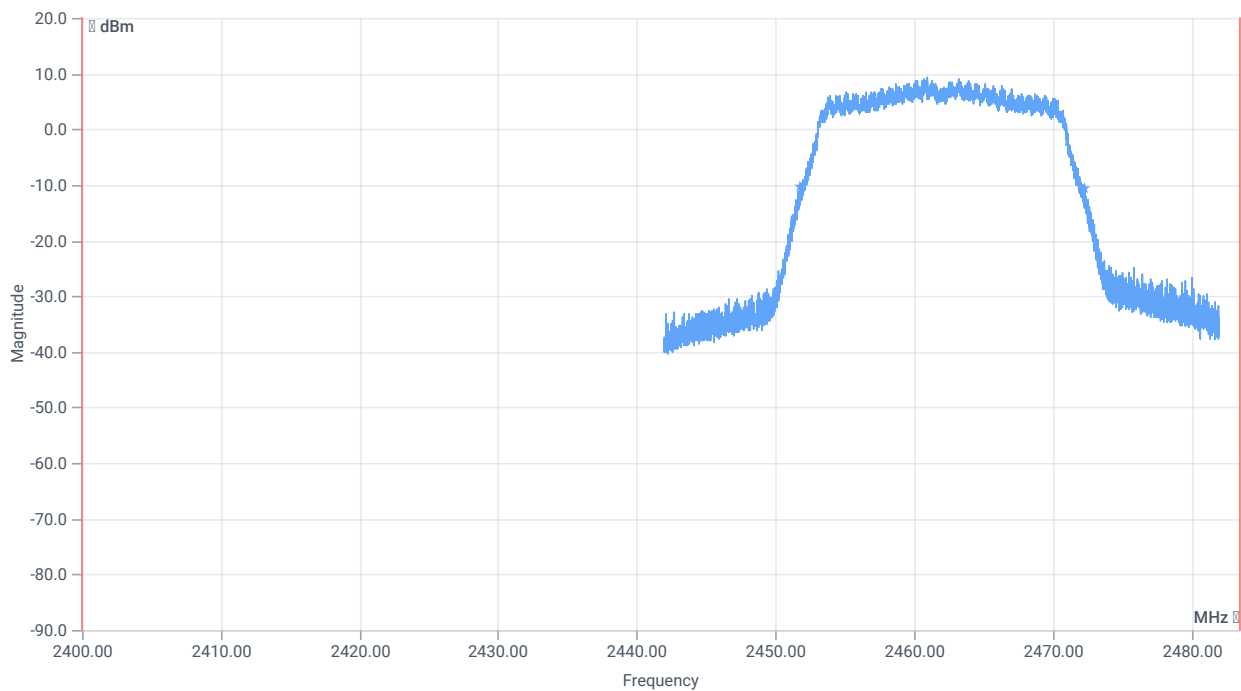
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18006.000	kHz	INFO
T1 99%	2400.000000	---	2453.0049	MHz	PASS
T2 99%	---	2483.500000	2471.0111	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20444	kHz	INFO
T1 20dB	2400.000000	---	2451.8280	MHz	PASS
T2 20dB	---	2483.500000	2472.2720	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:32:10
Ambit Temp [°C] Humidity [rel%]	26.3 34
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

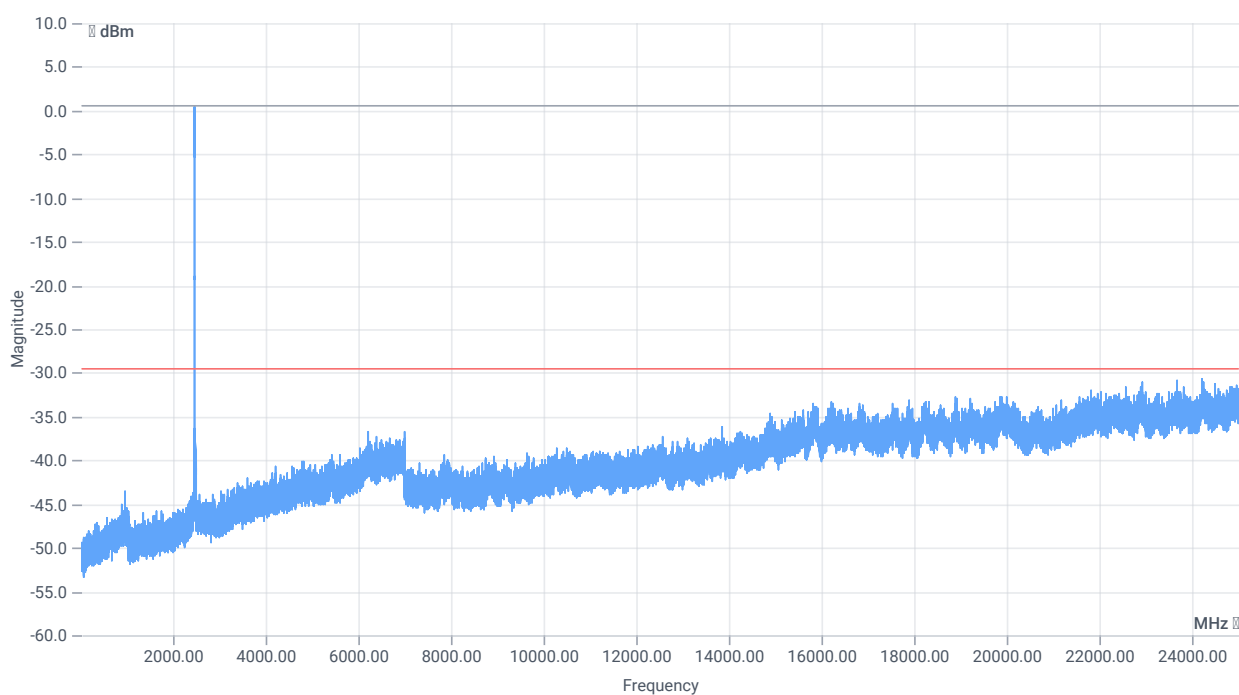
Test Equipment

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.

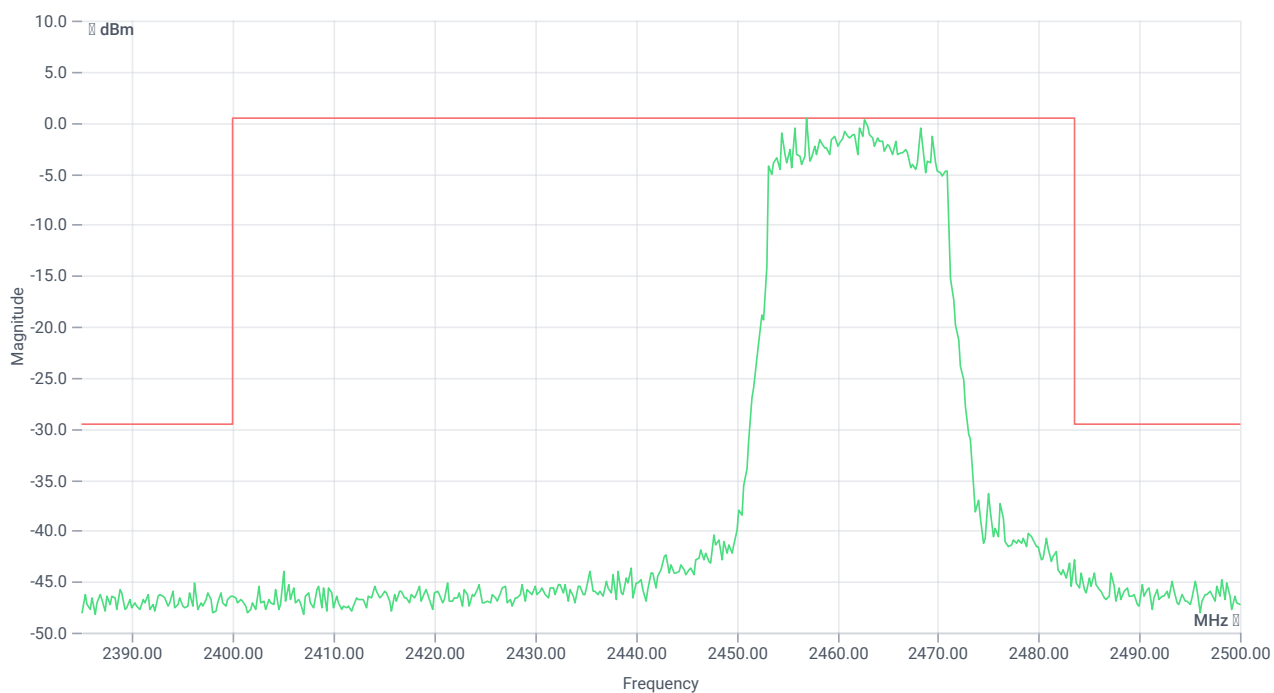
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.96	dBm	INFO
Ref. Frequency	---	---	2460.700	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	10.96 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2457.00 MHz	---	---	0.48	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-149.2	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 15:38:51
Ambit Temp [°C] Humidity [rel%]	26.3 34
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

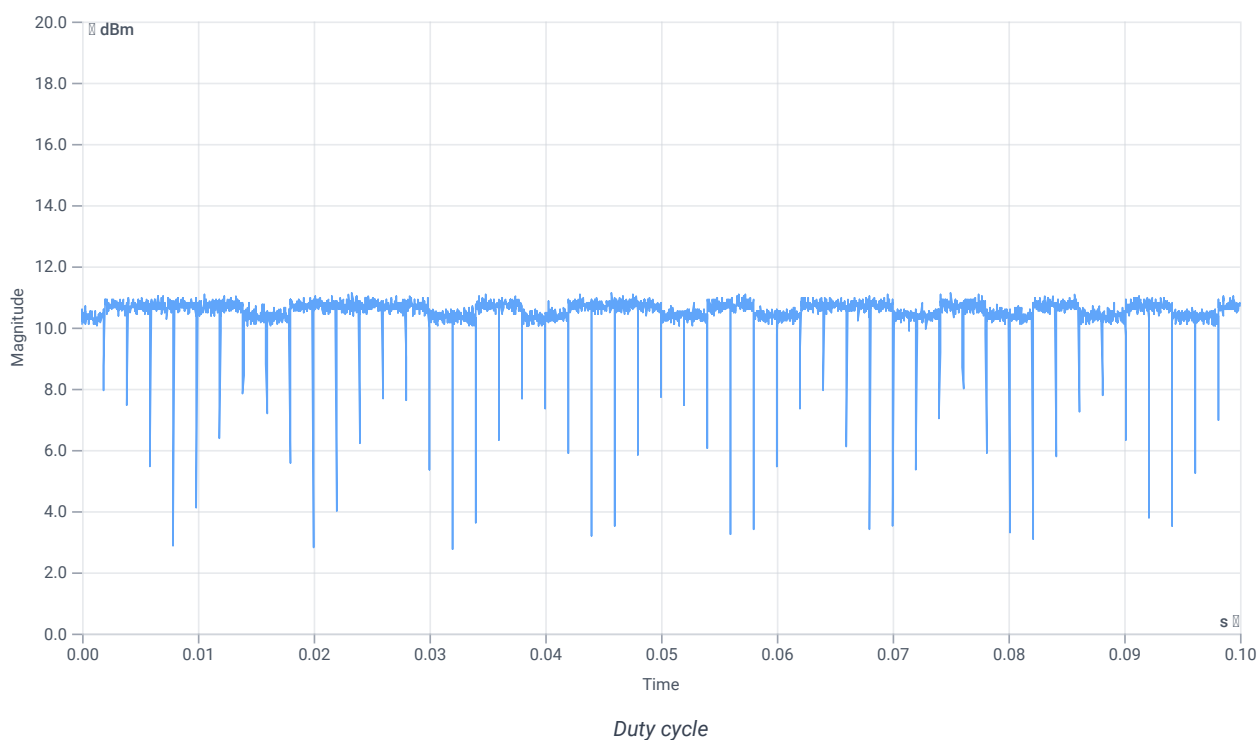
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.10	dBm	INFO
Ref. Frequency	---	---	2463.700	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



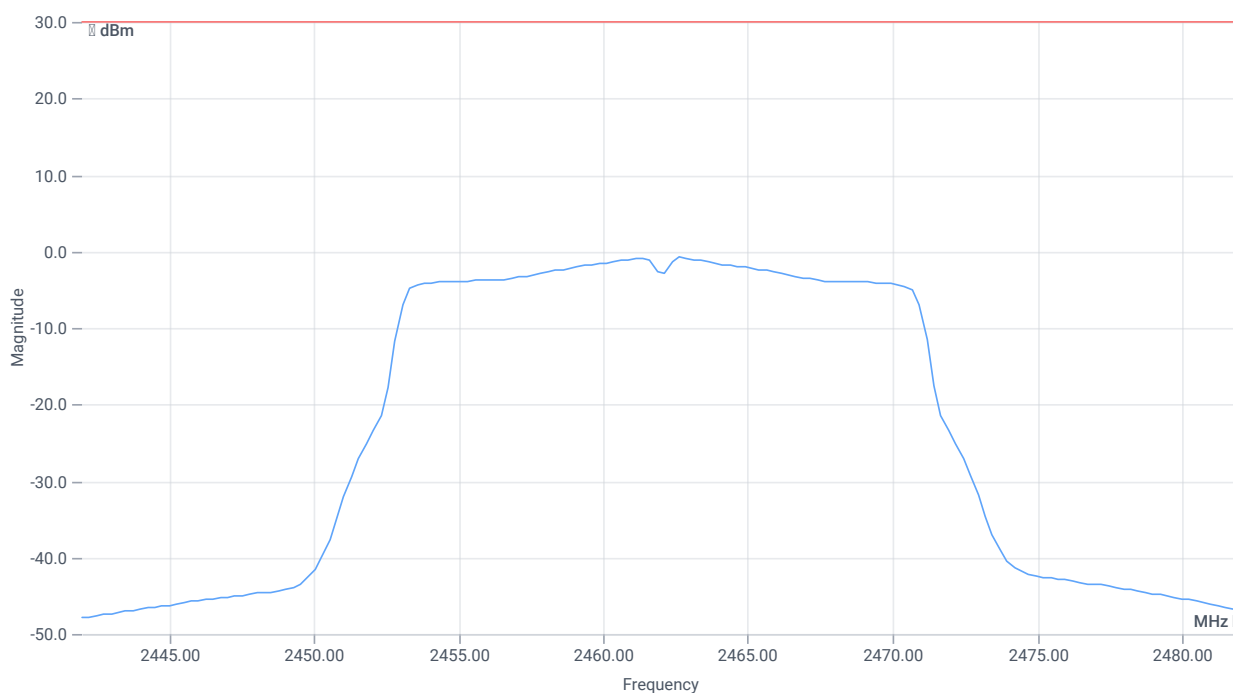
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.10 14.04 25
Start [MHz] Stop [MHz]	2442.000 2482.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	12.51	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	12.51	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 15:40:06
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2412 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	13.28	dBm	INFO
Ant:2 Avg power DC corr.	---	---	13.62	dBm	INFO
Σ Avg output power DC corr.	---	30	16.46	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 15:42:15
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2412 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-20.03	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-19.86	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-16.93	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 15:43:16
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2437 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	18.38	dBm	INFO
Ant:2 Avg power DC corr.	---	---	17.36	dBm	INFO
Σ Avg output power DC corr.	---	30	20.91	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 15:43:30
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2437 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-16.67	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-17.68	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-14.14	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 15:43:51
Ambit Temp [°C] Humidity [rel%]	26.3 34
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2462 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	12.79	dBm	INFO
Ant:2 Avg power DC corr.	---	---	12.51	dBm	INFO
Σ Avg output power DC corr.	---	30	15.66	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 15:44:04
Ambit Temp [°C] Humidity [rel%]	26.3 35
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	ac20-mode

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2462 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-20.65	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-21.15	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-17.88	dBm/3kHz	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	06.07.2023 11:24:59
Ambit Temp [°C] Humidity [rel%]	24.9 38
System Version	4.5.2.0
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan g mode
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	06.07.2023 11:24:59
Message	set WLAN2G4 to g mode, Frequency [MHz] 2412 ,

Test Equipment

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

Verdict

INFO

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:25:14
Ambit Temp [°C] Humidity [rel%]	24.9 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

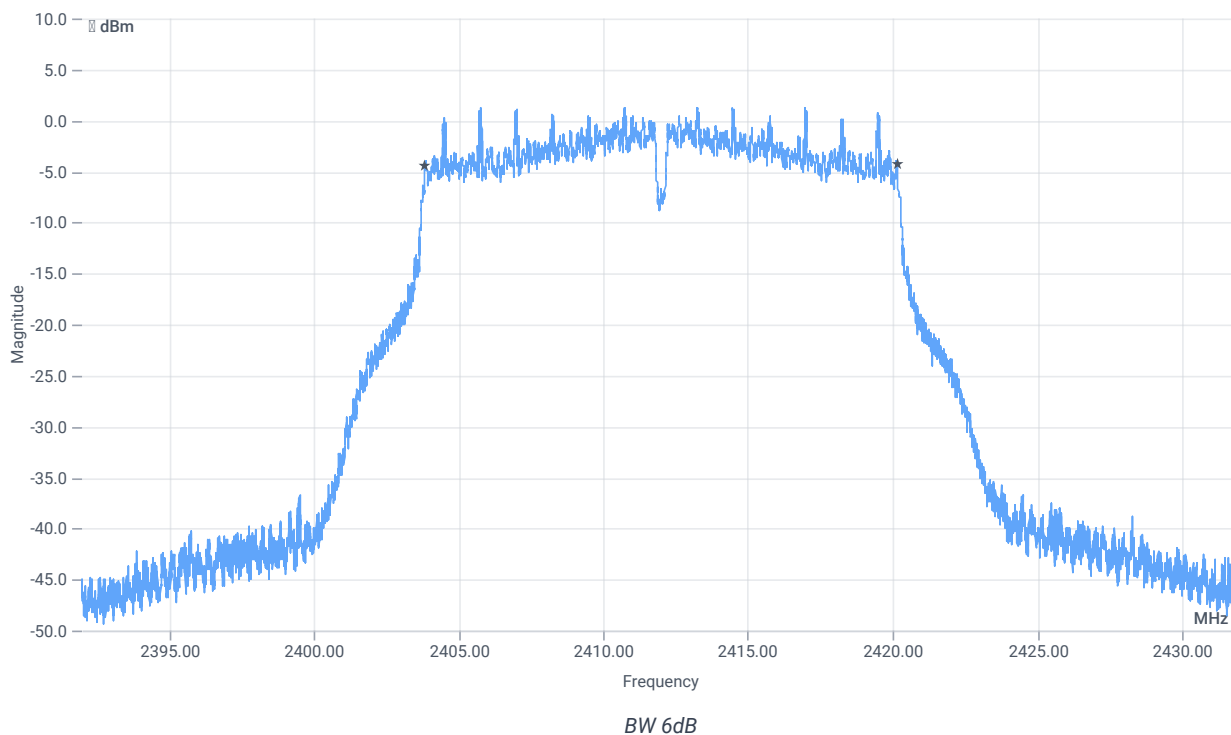
Test at TX 2412 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.05	dBm	INFO
Ref. Frequency	---	---	2410.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.05 14.43 20
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	---	16296	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:25:49
Ambit Temp [°C] Humidity [rel%]	24.9 38
System Version	4.5.2.0
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 psd DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

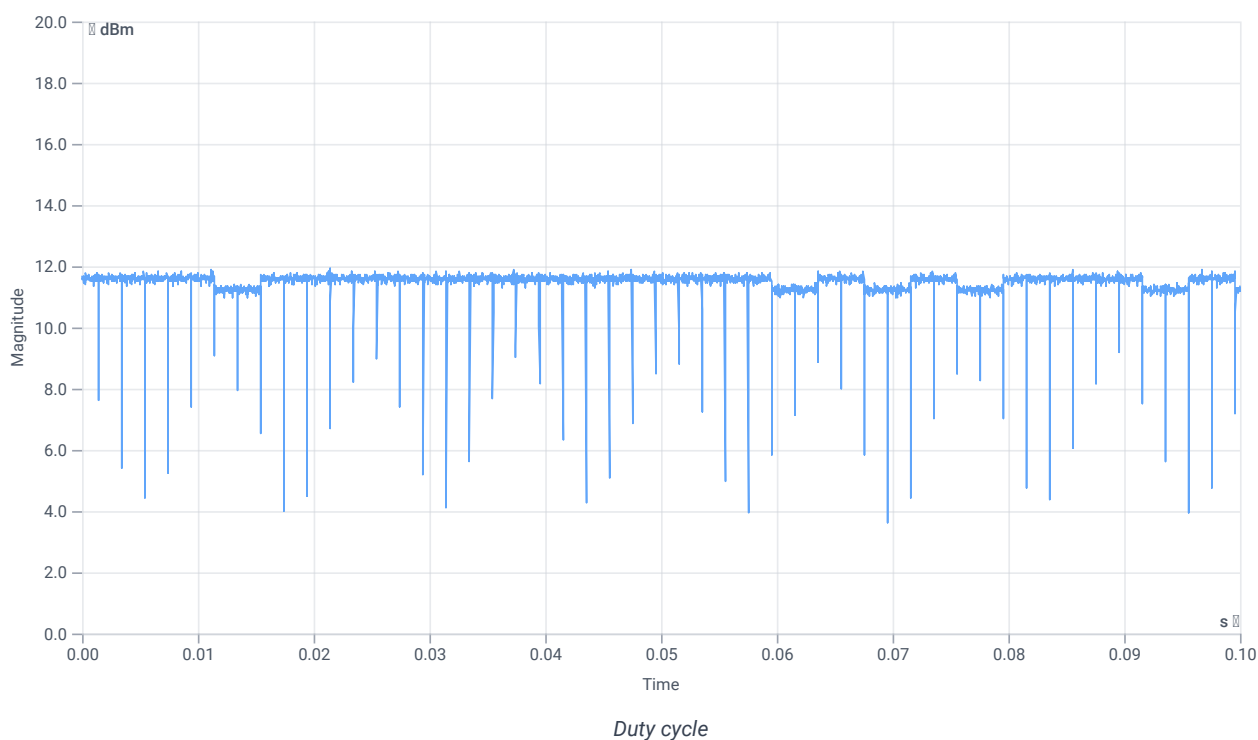
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.88	dBm	INFO
Ref. Frequency	---	---	2413.500	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



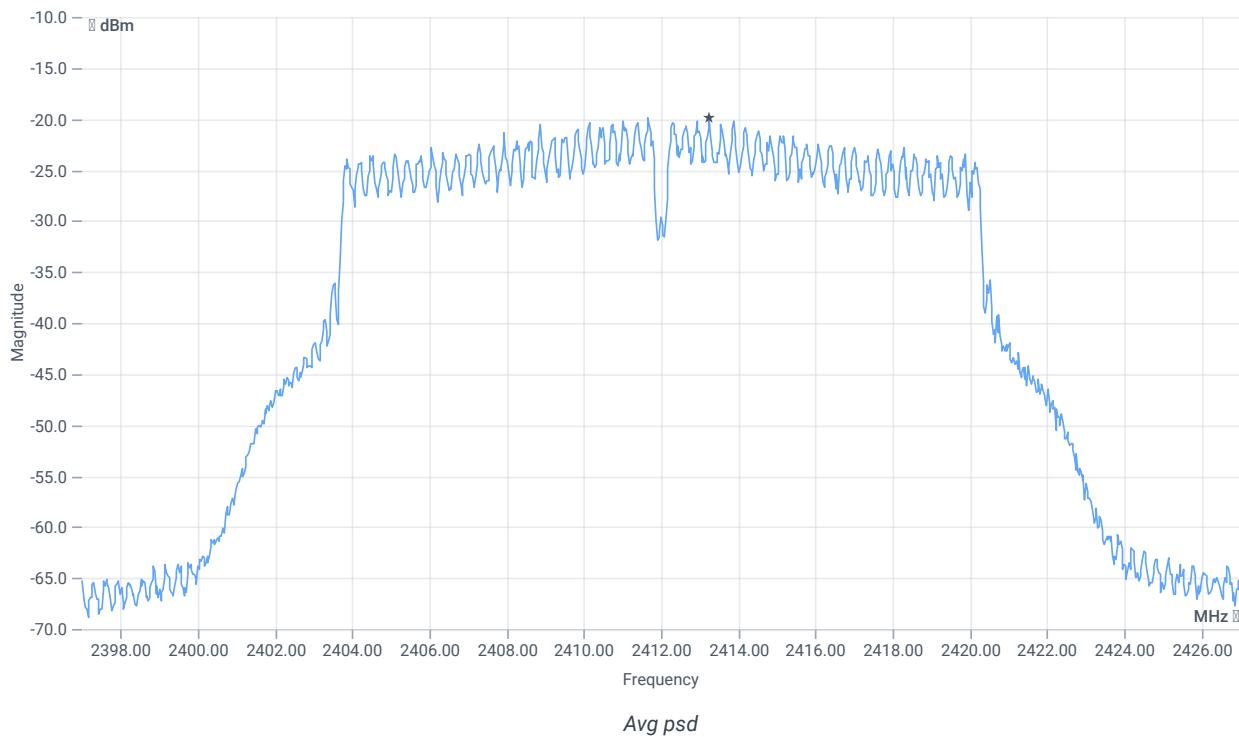
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.88 14.43 20
Start [MHz] Stop [MHz]	2397.000 2427.000

READ SA SETTINGS:

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	---	---	-19.84	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-19.84	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:26:52
Ambit Temp [°C] Humidity [rel%]	24.9 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

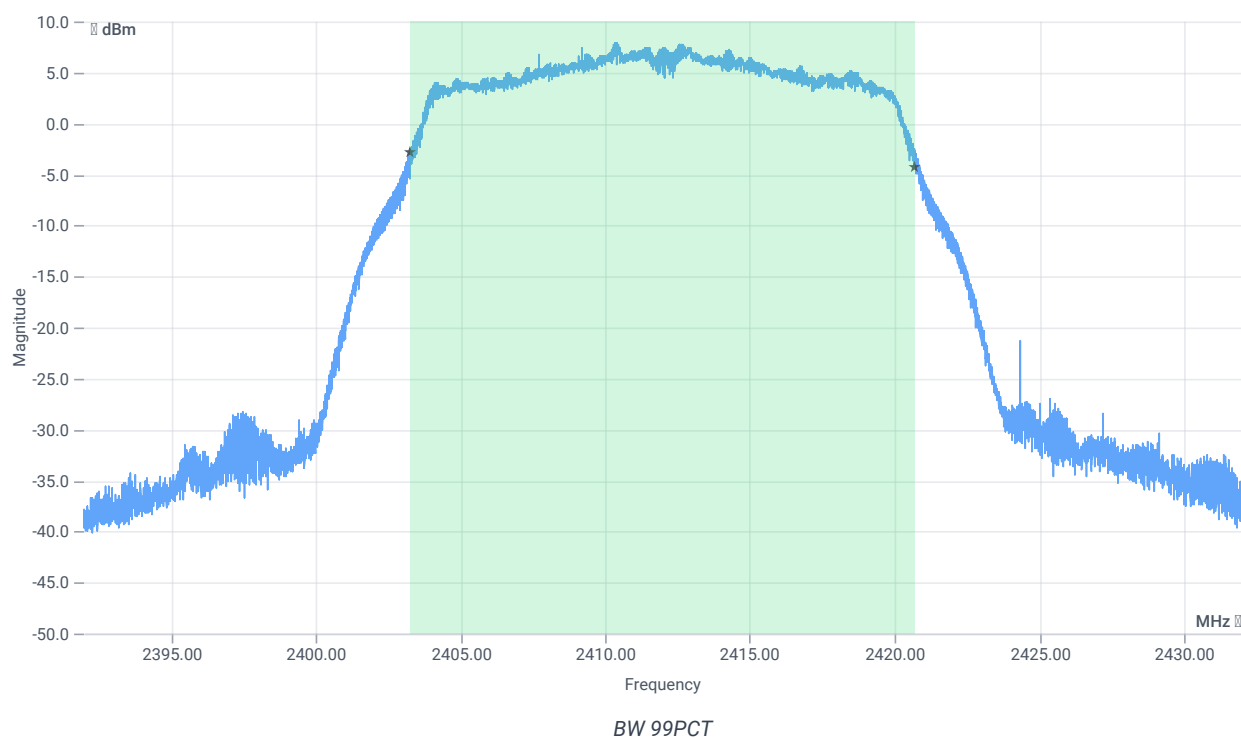
Test at TX 2412 MHz

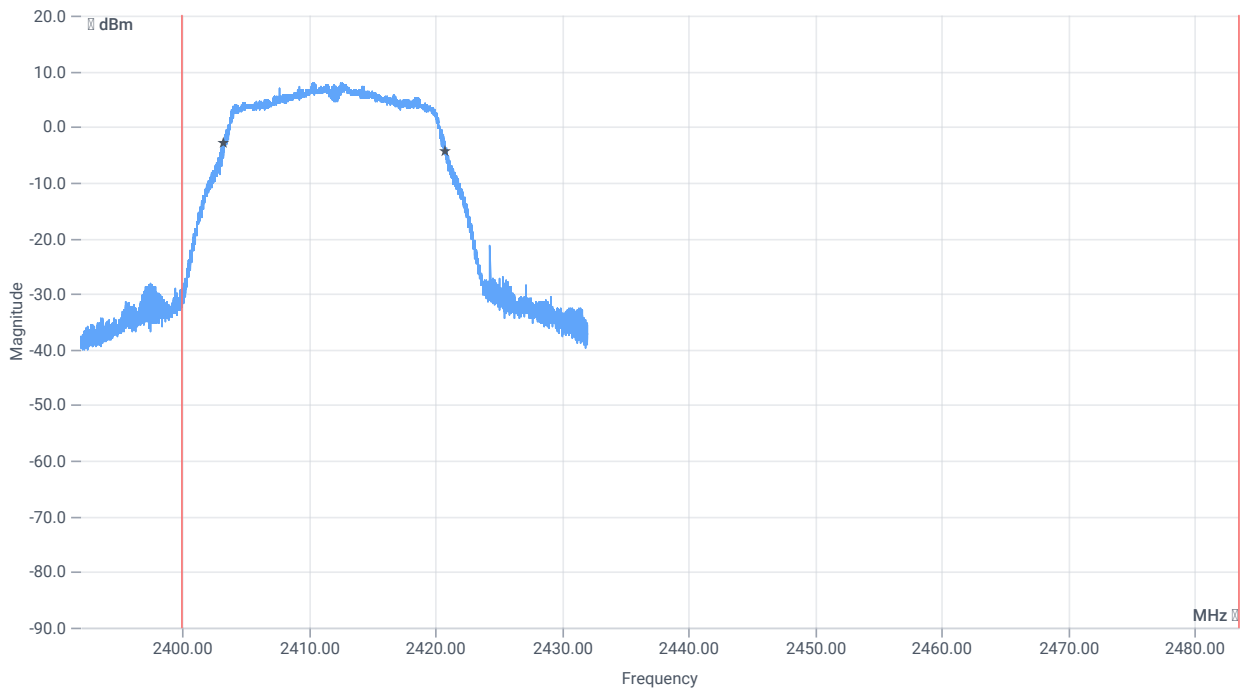
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.62	dBm	INFO
Ref. Frequency	---	---	2413.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.62 14.43 20
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

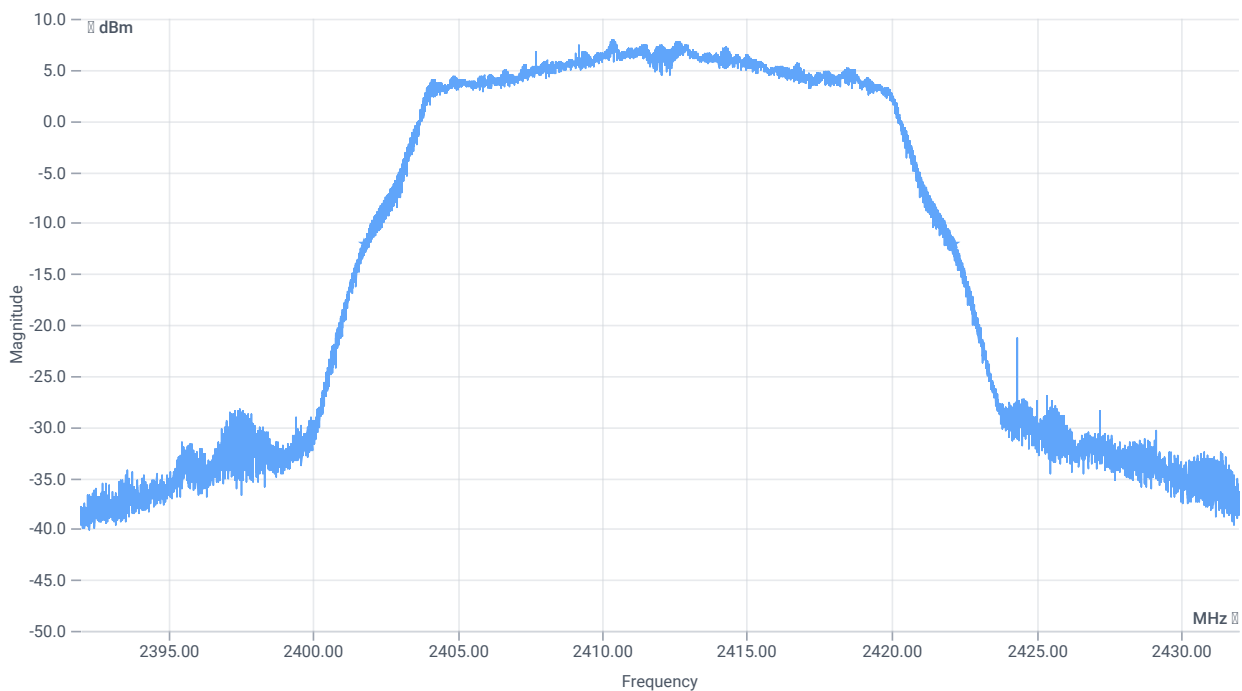




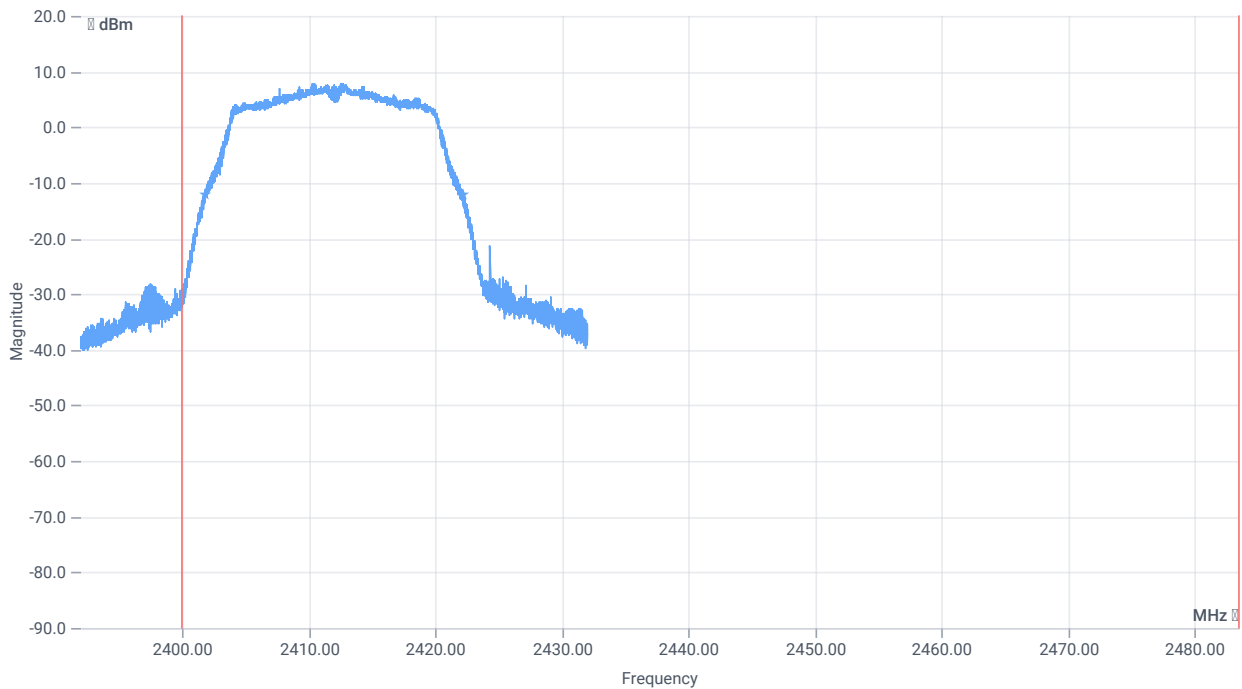
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	17438.000	kHz	INFO
T1 99%	2400.000000	---	2403.2649	MHz	PASS
T2 99%	---	2483.500000	2420.7031	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20444	kHz	INFO
T1 20dB	2400.000000	---	2401.7480	MHz	PASS
T2 20dB	---	2483.500000	2422.1920	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:27:30
Ambit Temp [°C] Humidity [rel%]	24.9 38
System Version	4.5.2.0
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 - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

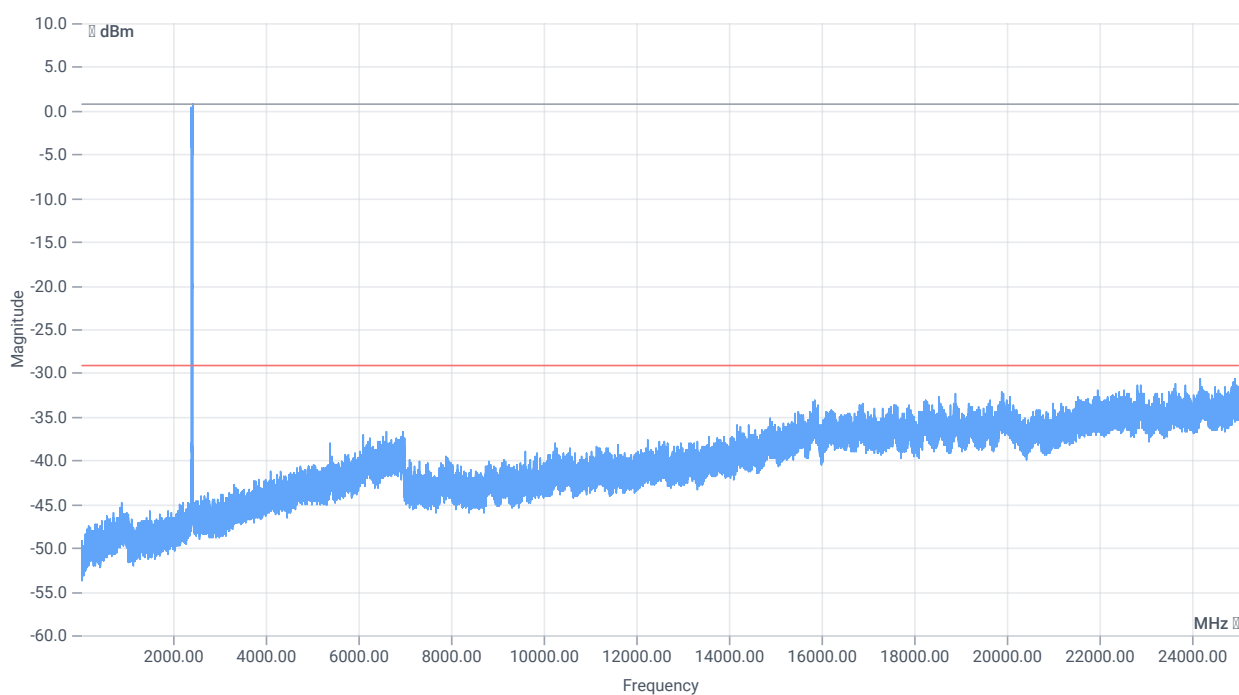
Test Equipment

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.

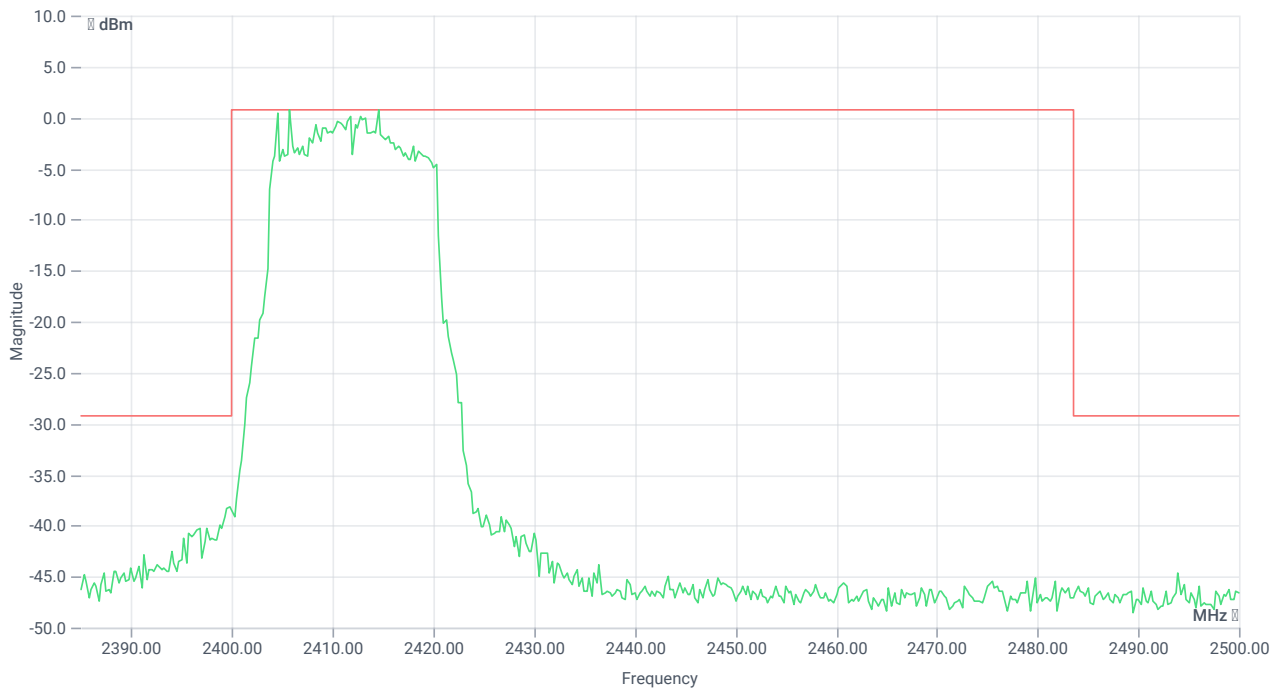
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.68	dBm	INFO
Ref. Frequency	---	---	2410.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	10.68 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2405.75 MHz	---	---	0.82	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24183.75 MHz	0	---	1.51	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:34:11
Ambit Temp [°C] Humidity [rel%]	25.0 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

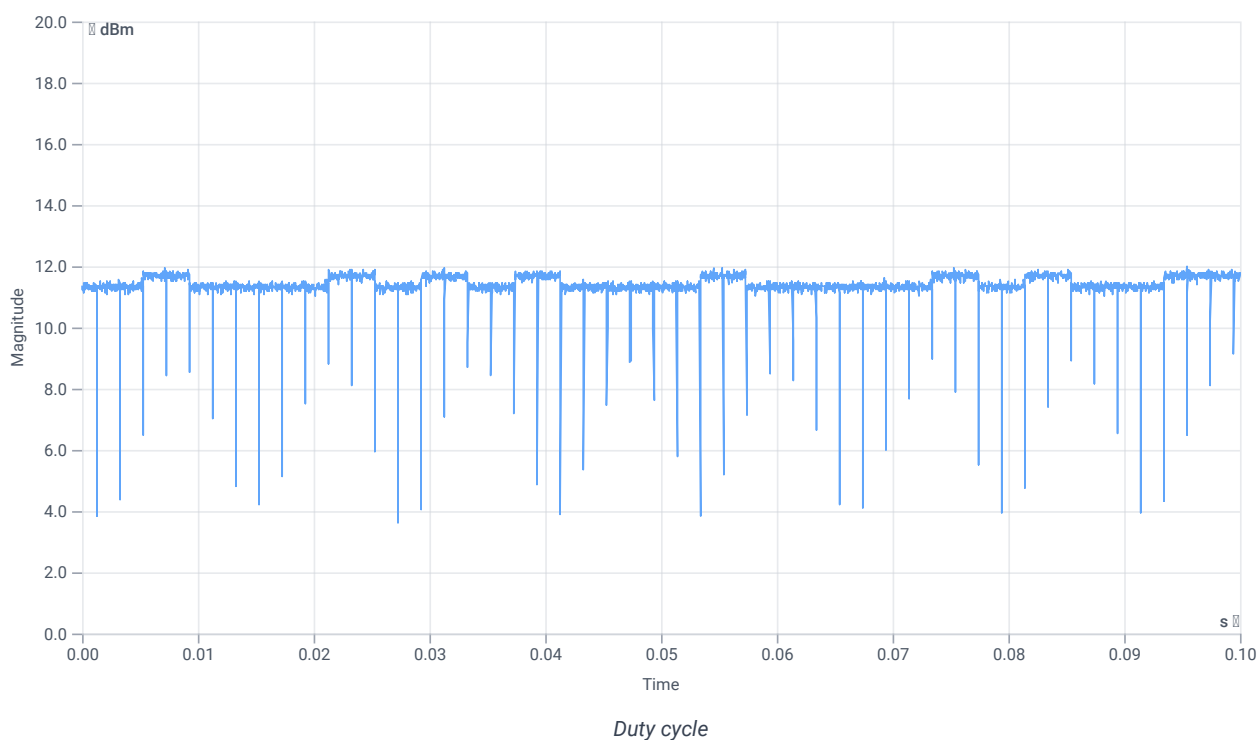
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.95	dBm	INFO
Ref. Frequency	---	---	2410.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



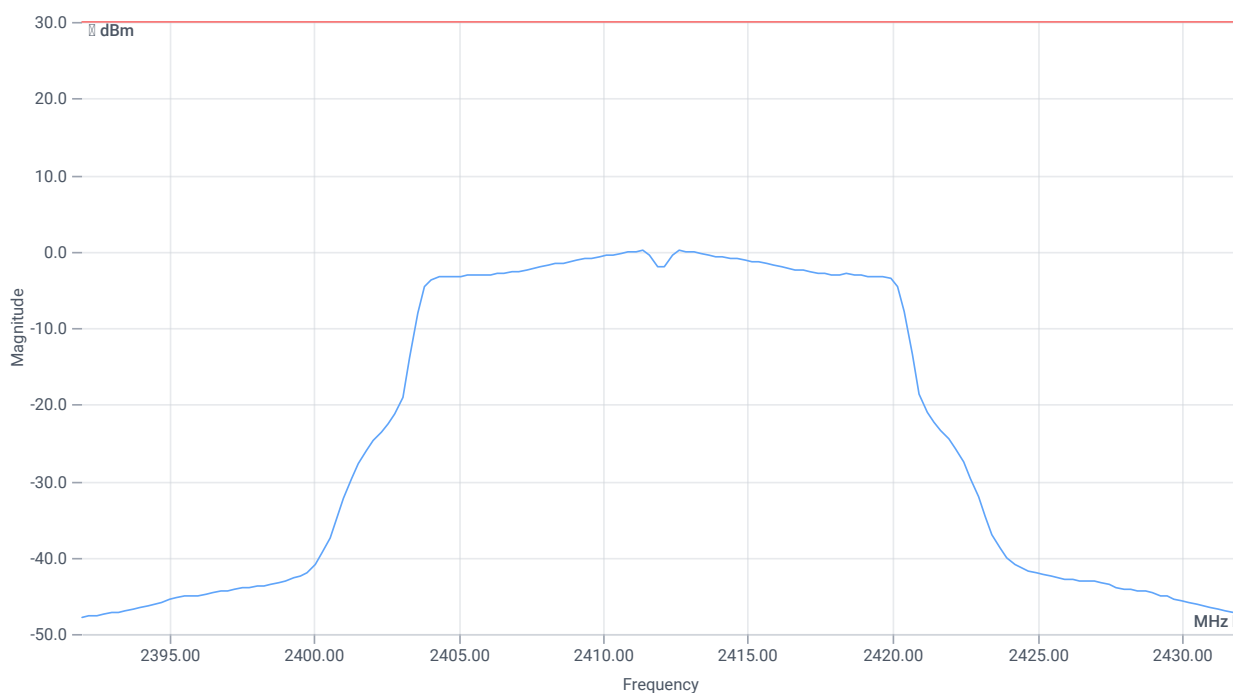
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.95 14.43 25
Start [MHz] Stop [MHz]	2392.000 2432.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	13.15	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	13.15	dBm	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:35:26
Ambit Temp [°C] Humidity [rel%]	25.0 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

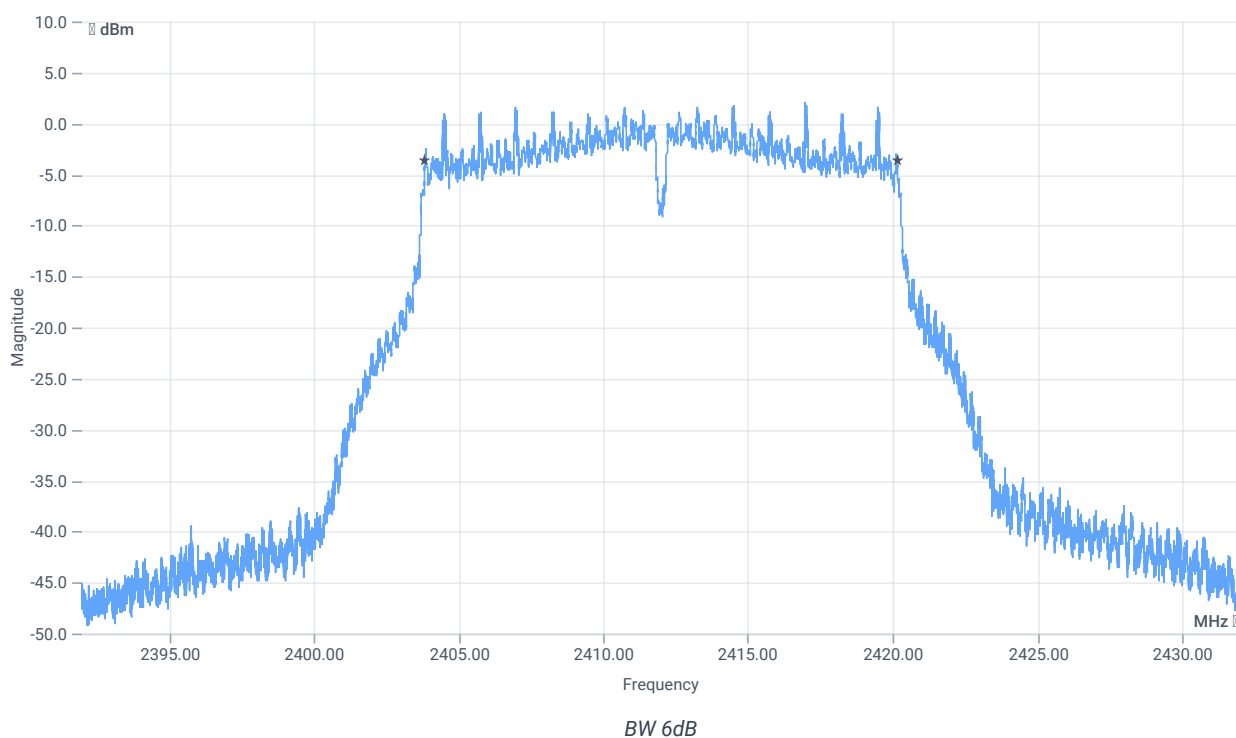
Test at TX 2412 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	12.32	dBm	INFO
Ref. Frequency	---	---	2410.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.32 14.43 20
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	---	16308	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:36:01
Ambit Temp [°C] Humidity [rel%]	25.0 38
System Version	4.5.2.0
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 psd DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

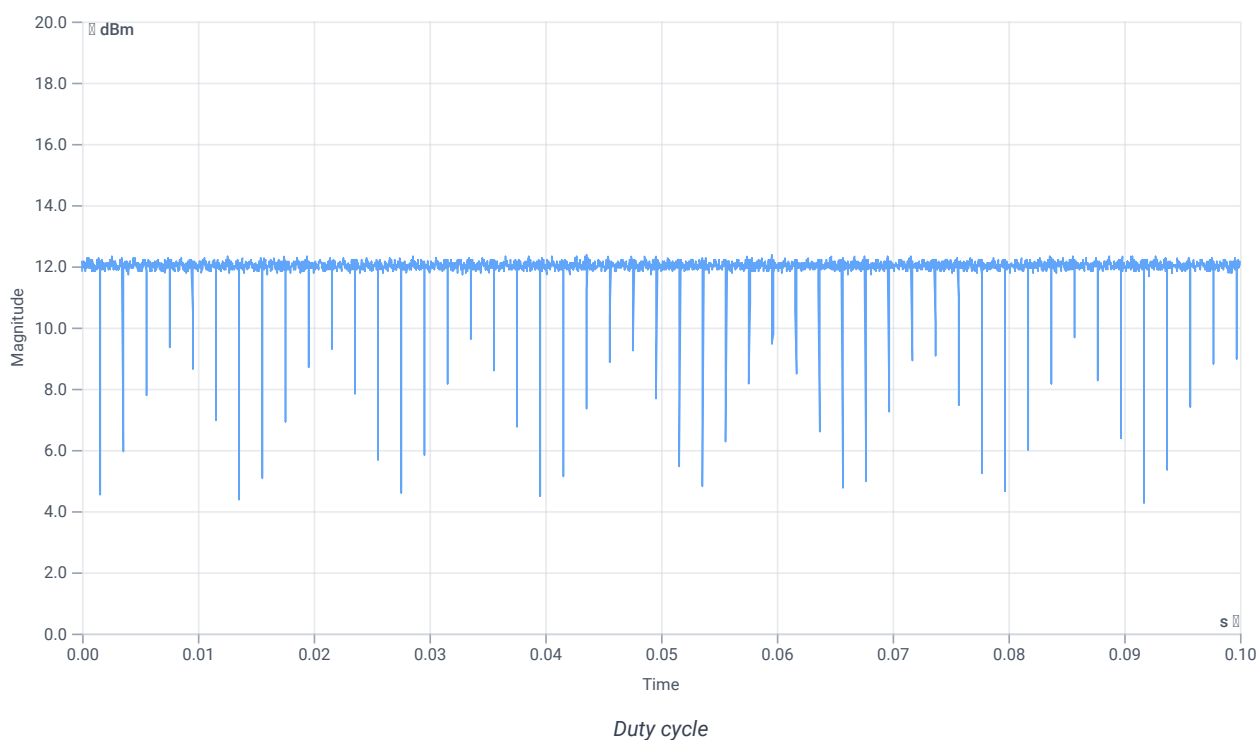
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.13	dBm	INFO
Ref. Frequency	---	---	2413.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



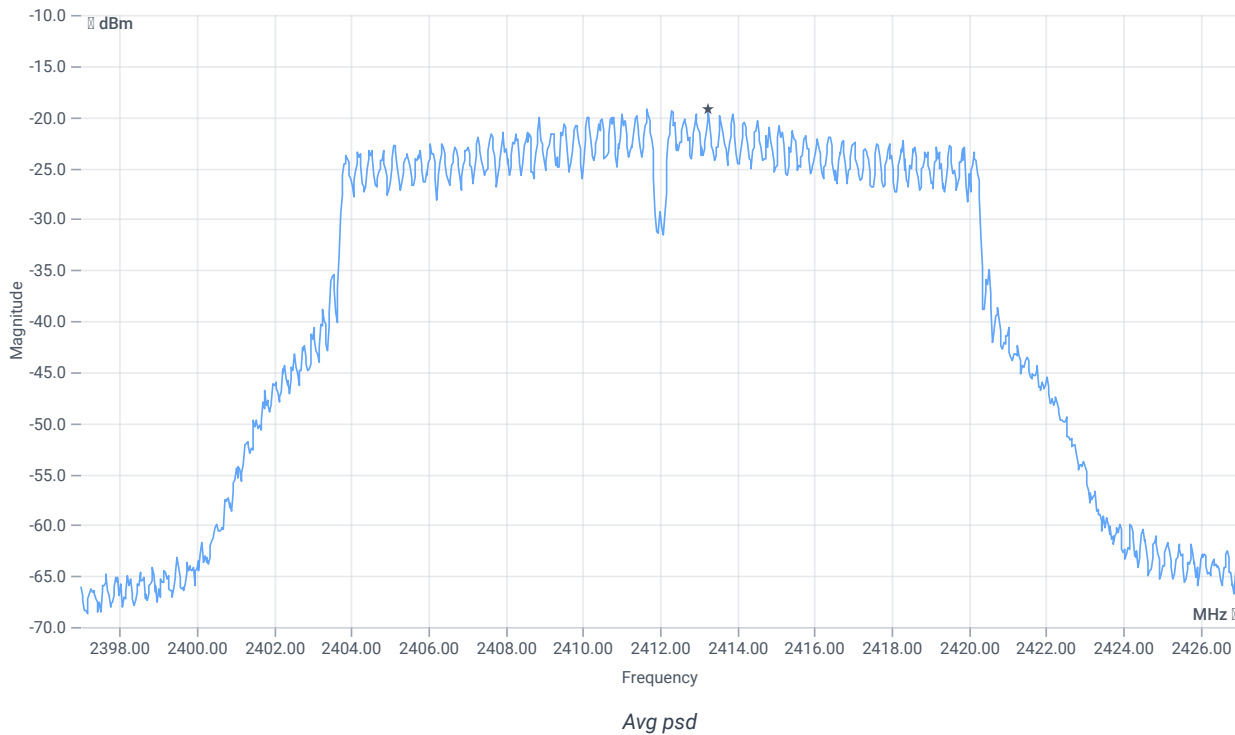
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.13 14.43 20
Start [MHz] Stop [MHz]	2397.000 2427.000

READ SA SETTINGS:

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	---	---	-19.21	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-19.21	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:37:04
Ambit Temp [°C] Humidity [rel%]	25.0 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

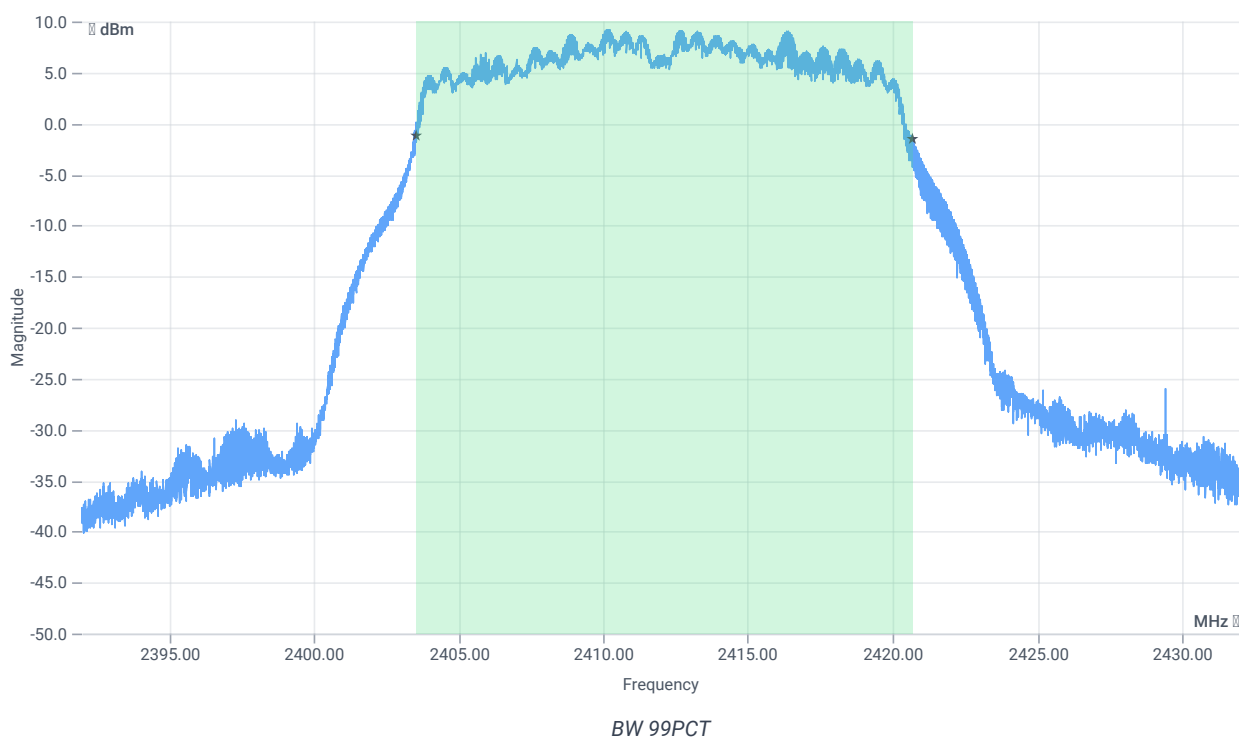
Test at TX 2412 MHz

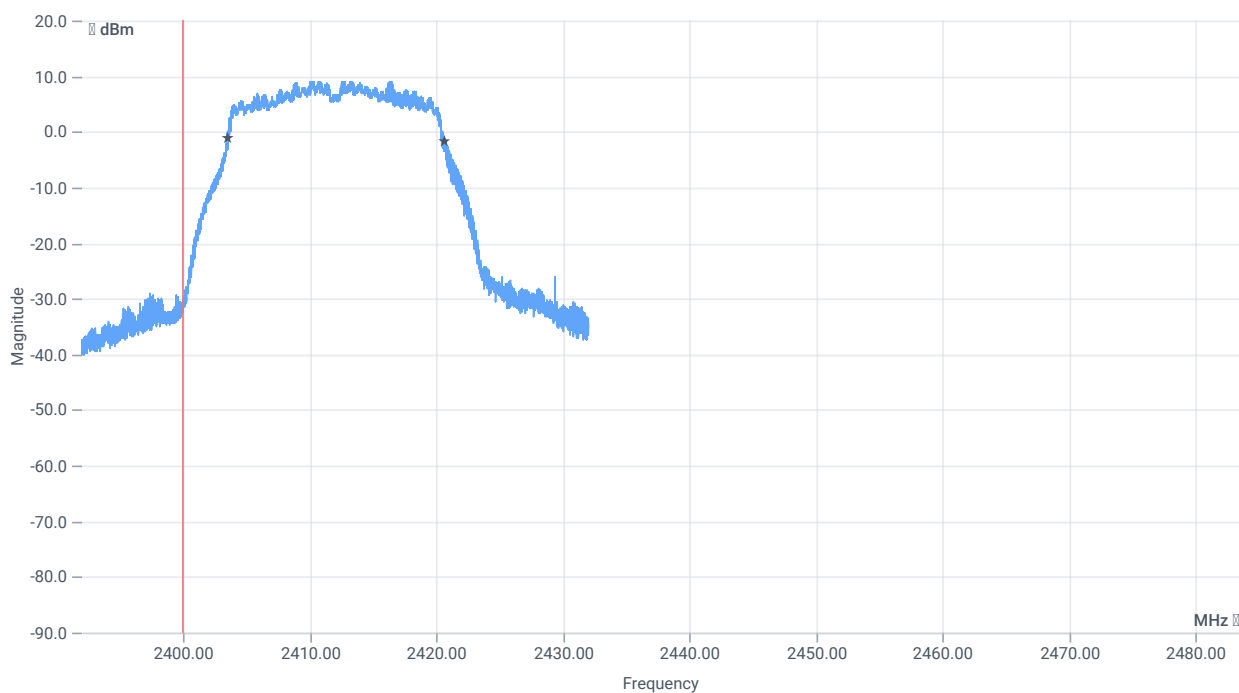
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.99	dBm	INFO
Ref. Frequency	---	---	2414.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.99 14.43 20
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

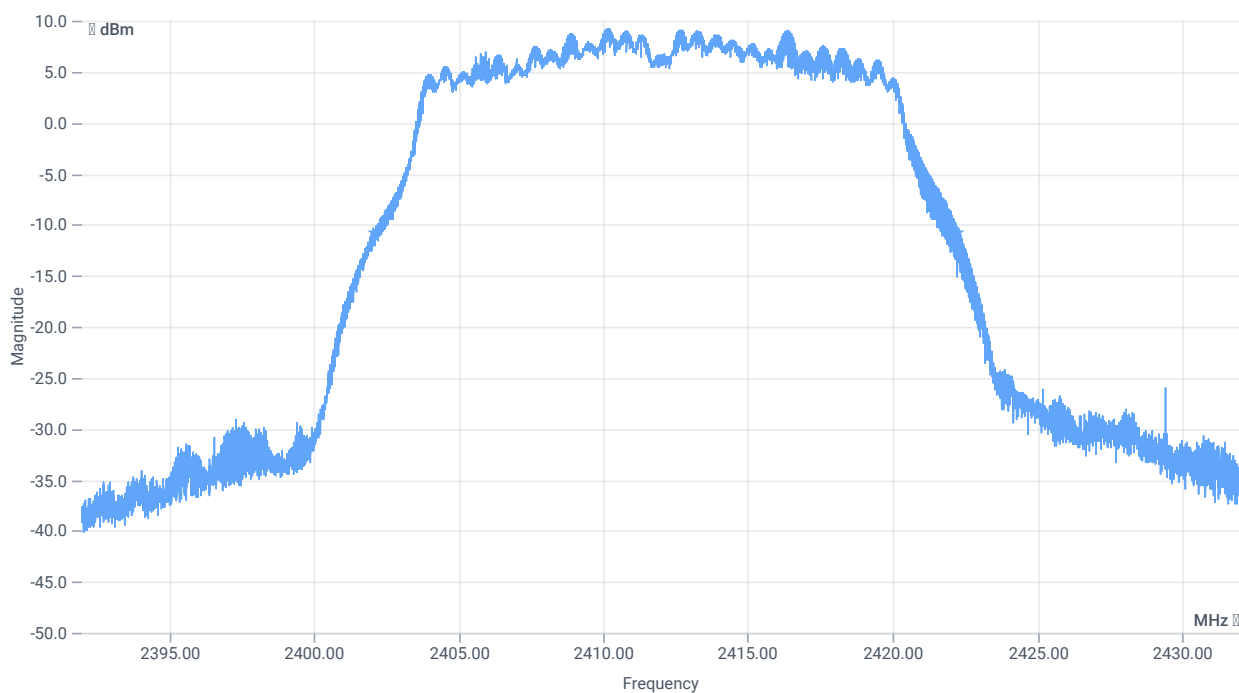




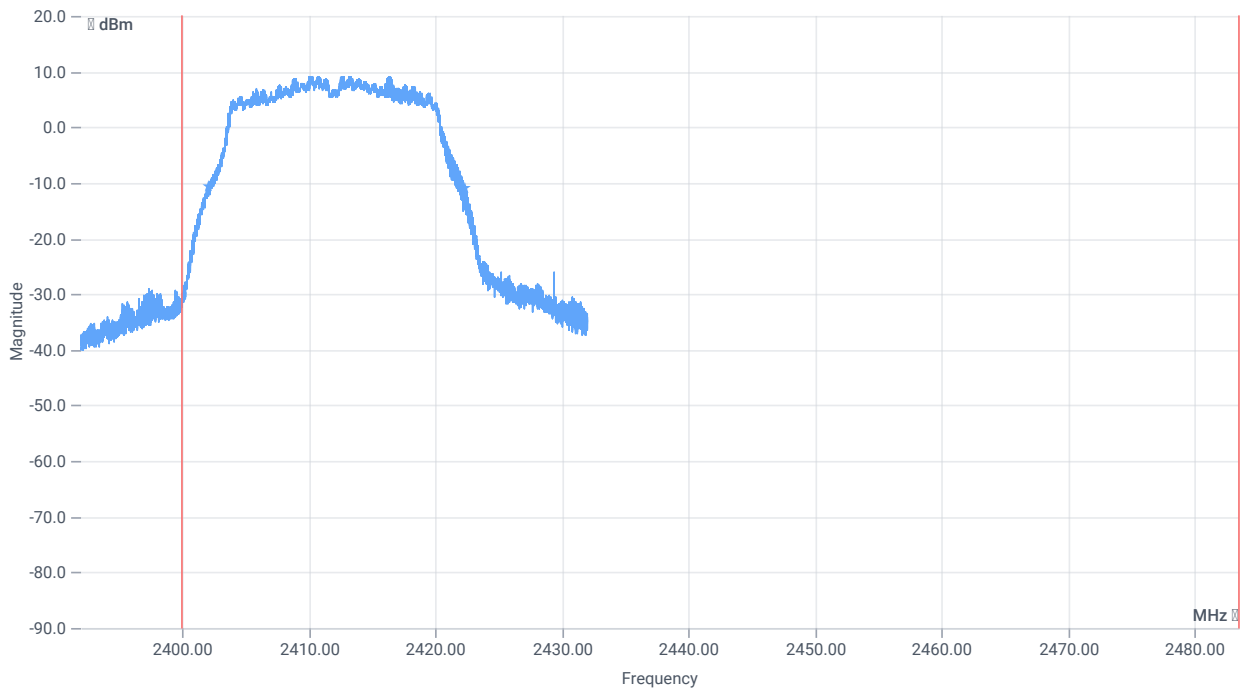
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	17158.000	kHz	INFO
T1 99%	2400.000000	---	2403.5208	MHz	PASS
T2 99%	---	2483.500000	2420.6791	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20228	kHz	INFO
T1 20dB	2400.000000	---	2402.0640	MHz	PASS
T2 20dB	---	2483.500000	2422.2920	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:37:42
Ambit Temp [°C] Humidity [rel%]	25.0 39
System Version	4.5.2.0
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 - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

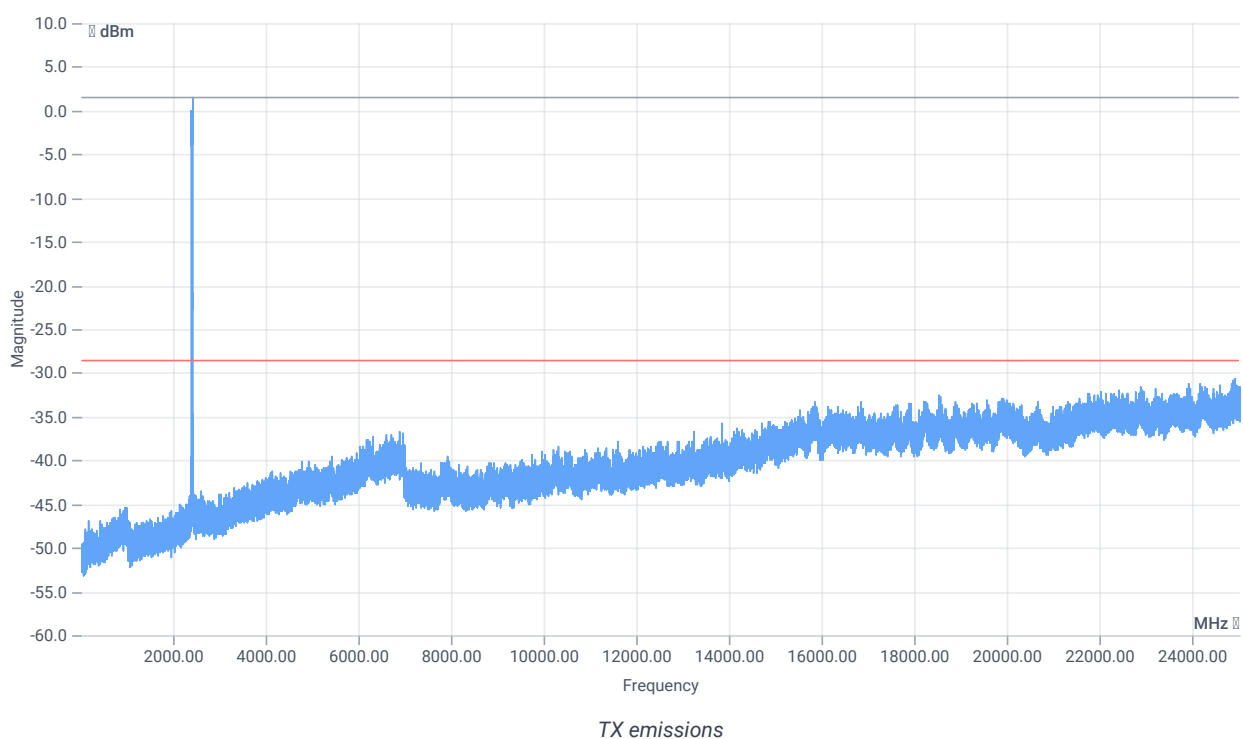
Test Equipment

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

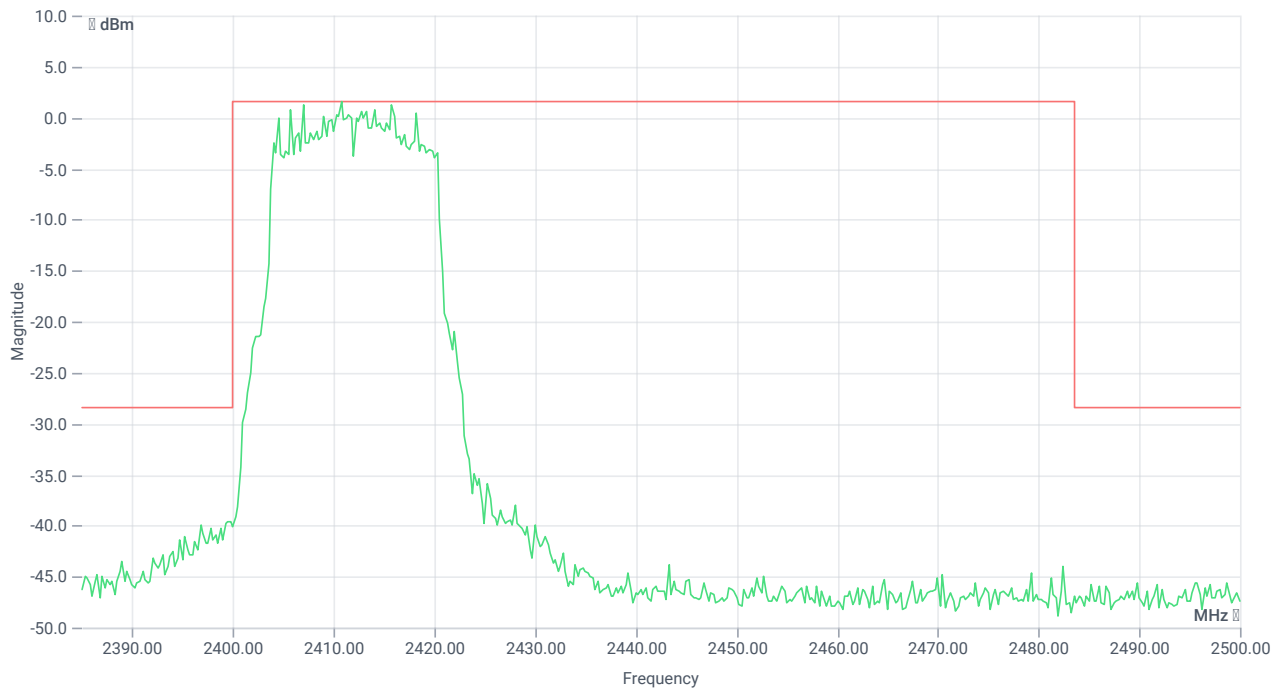
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.13	dBm	INFO
Ref. Frequency	---	---	2410.600	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.13 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2410.75 MHz	---	---	1.50	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24925.5 MHz	0	---	2.16	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:44:22
Ambit Temp [°C] Humidity [rel%]	25.0 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

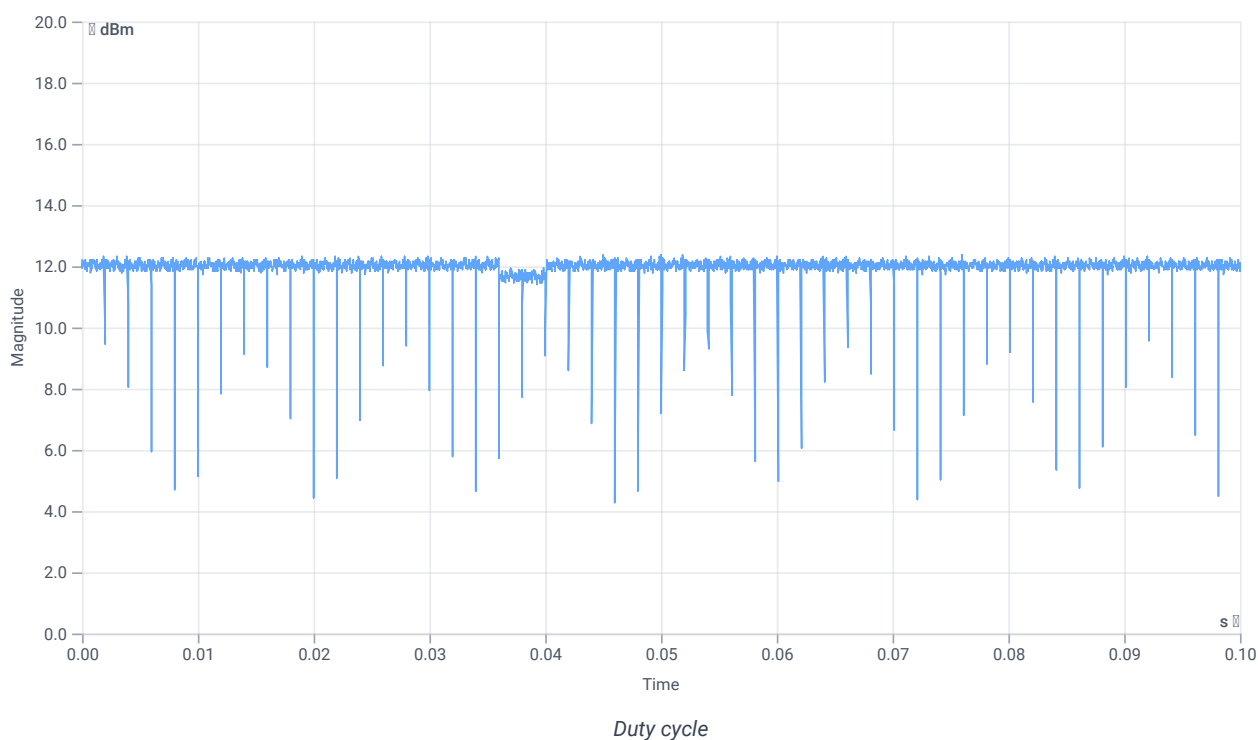
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.69	dBm	INFO
Ref. Frequency	---	---	2413.600	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



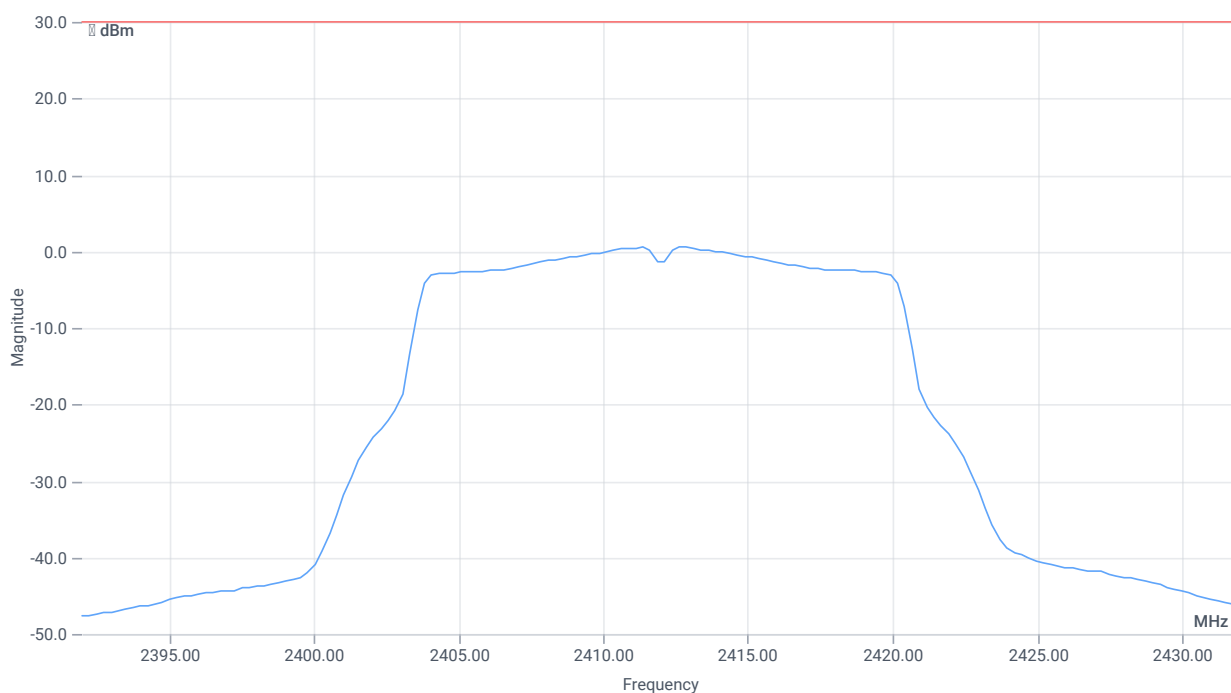
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.69 14.43 25
Start [MHz] Stop [MHz]	2392.000 2432.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	13.7	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	13.7	dBm	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	06.07.2023 11:45:38
Ambit Temp [°C] Humidity [rel%]	25.1 38
System Version	4.5.2.0
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan g mode
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	06.07.2023 11:45:38
Message	set WLAN2G4 to g mode, Frequency [MHz] 2437 ,

Test Equipment

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

Verdict

INFO

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:46:34
Ambit Temp [°C] Humidity [rel%]	25.1 39
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

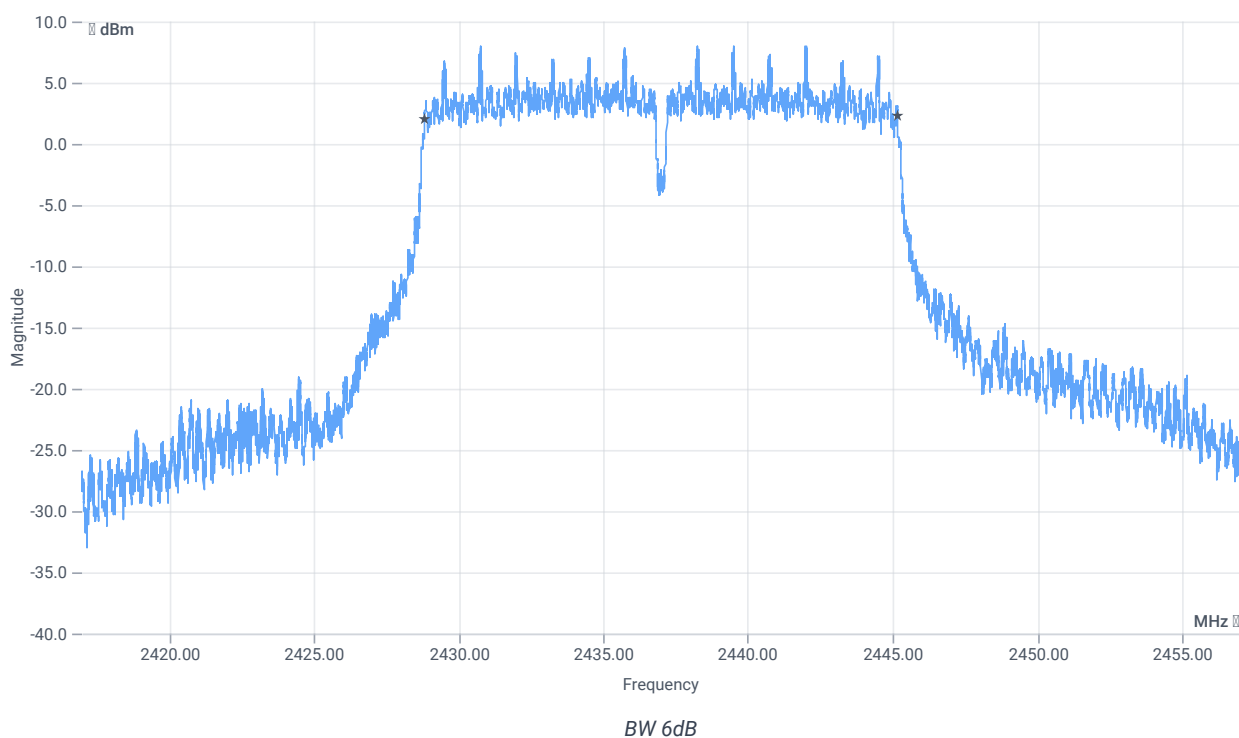
Test at TX 2437 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.89	dBm	INFO
Ref. Frequency	---	---	2435.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.89 14.2 25
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	---	16336	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:47:07
Ambit Temp [°C] Humidity [rel%]	25.1 38
System Version	4.5.2.0
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 psd DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

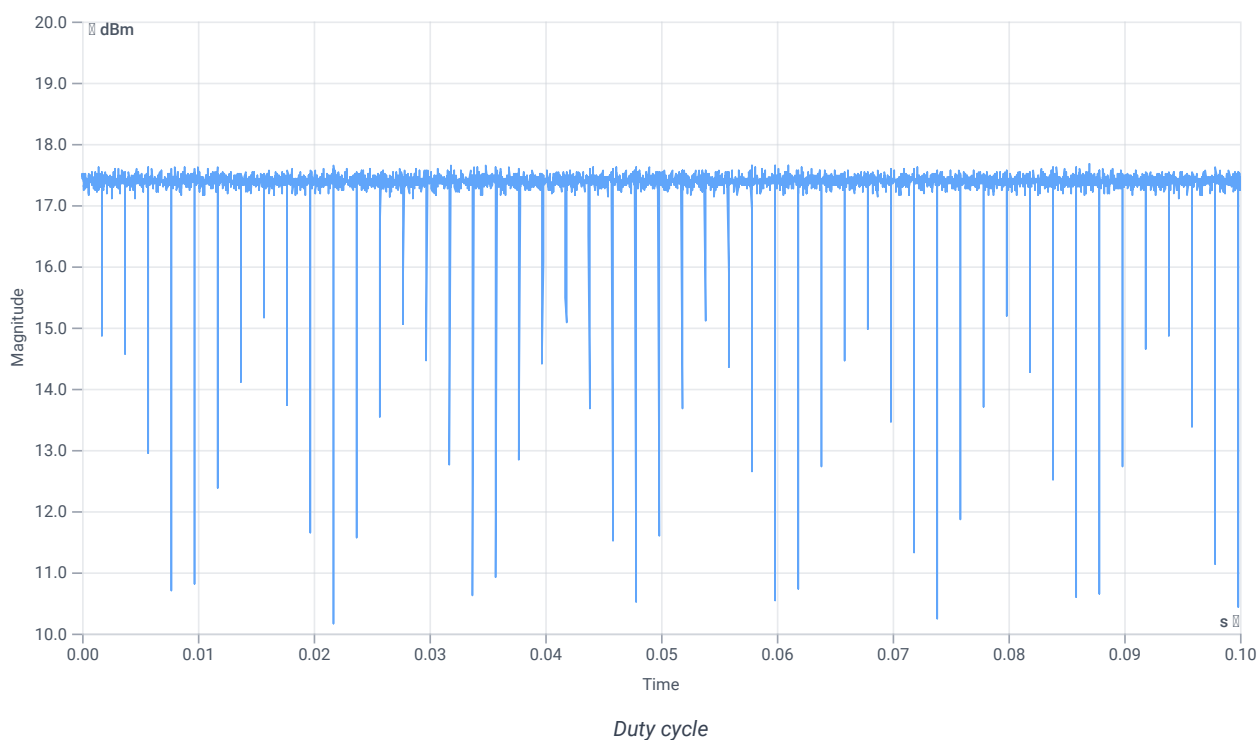
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.97	dBm	INFO
Ref. Frequency	---	---	2439.800	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



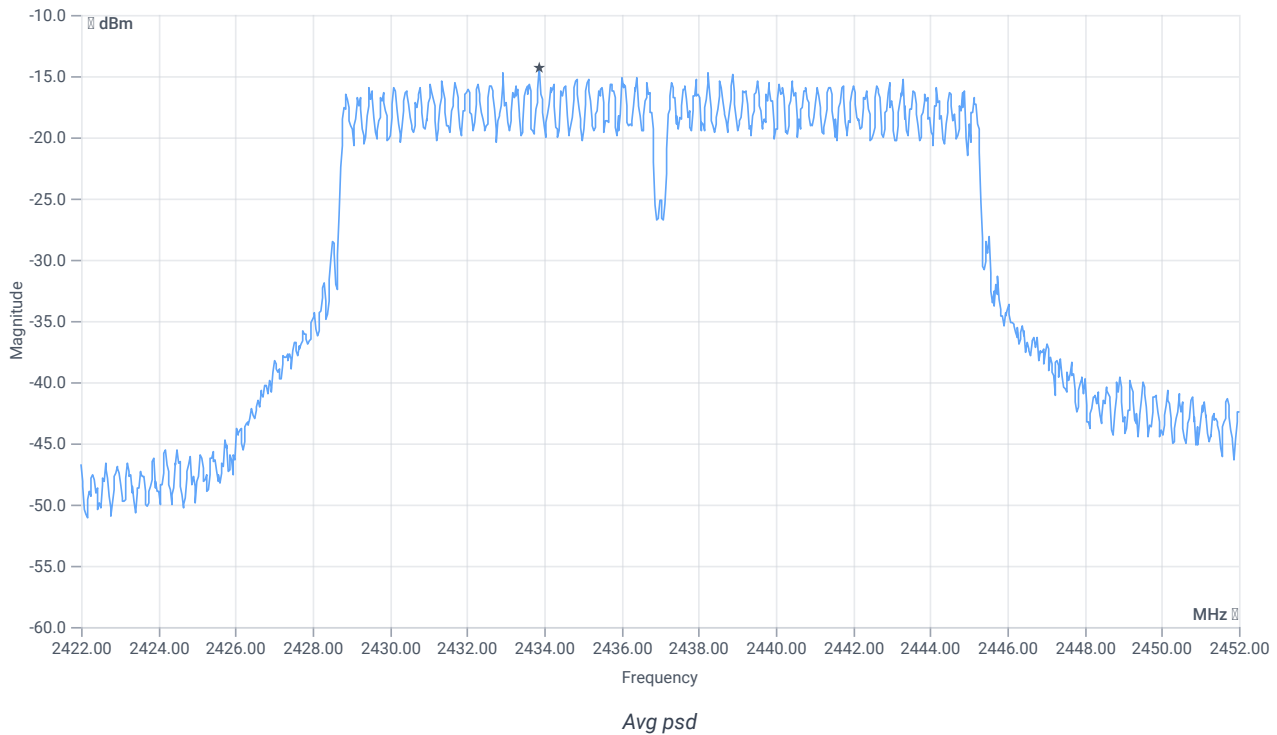
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.97 14.2 25
Start [MHz] Stop [MHz]	2422.000 2452.000

READ SA SETTINGS:

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	---	---	-14.36	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-14.36	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:48:10
Ambit Temp [°C] Humidity [rel%]	25.1 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

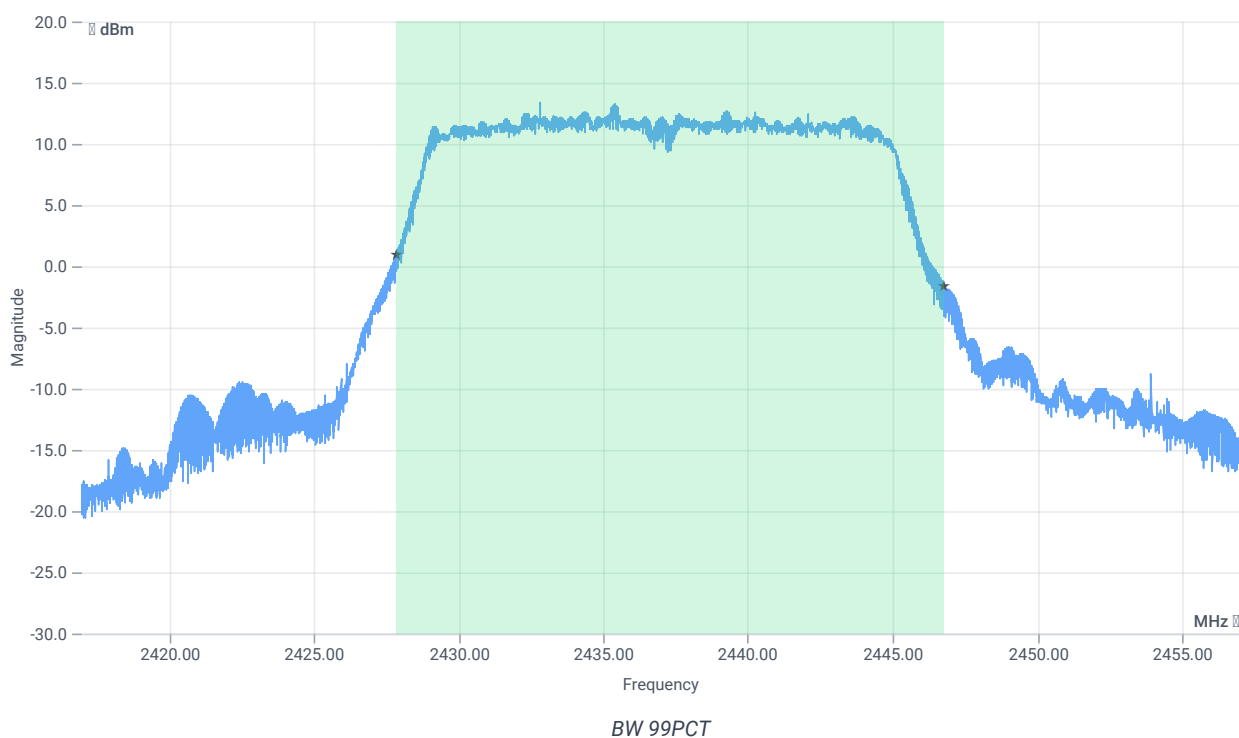
Test at TX 2437 MHz

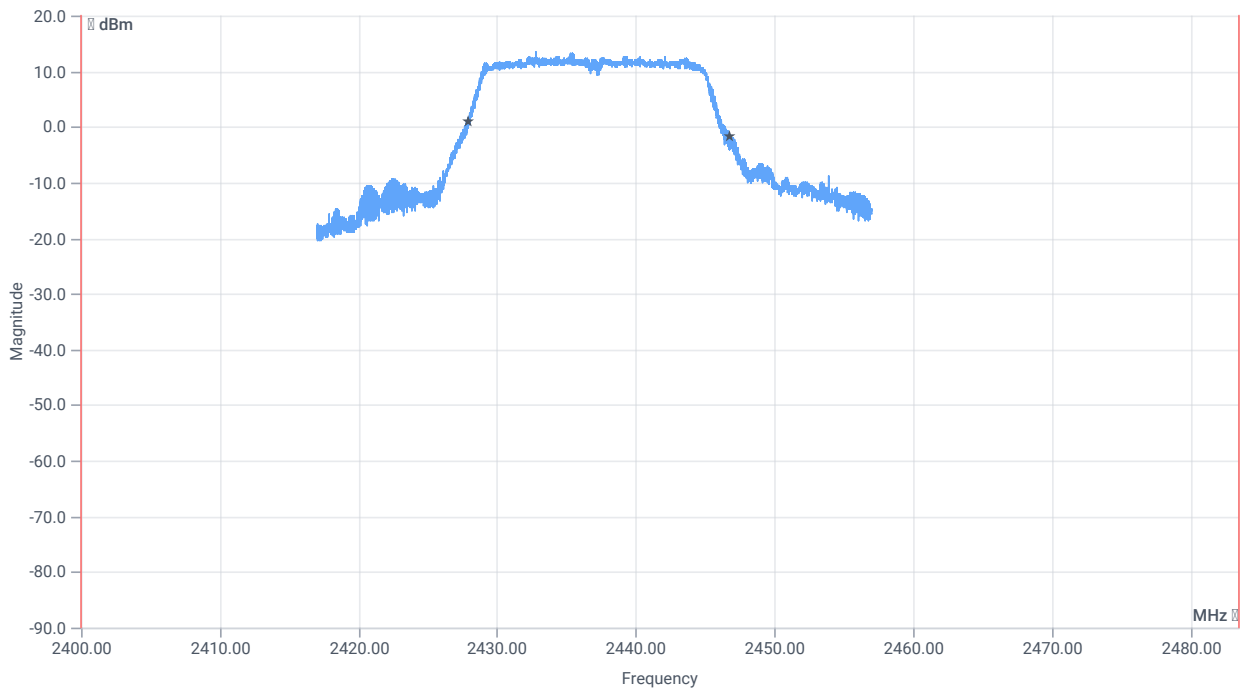
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.86	dBm	INFO
Ref. Frequency	---	---	2432.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.86 14.2 25
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

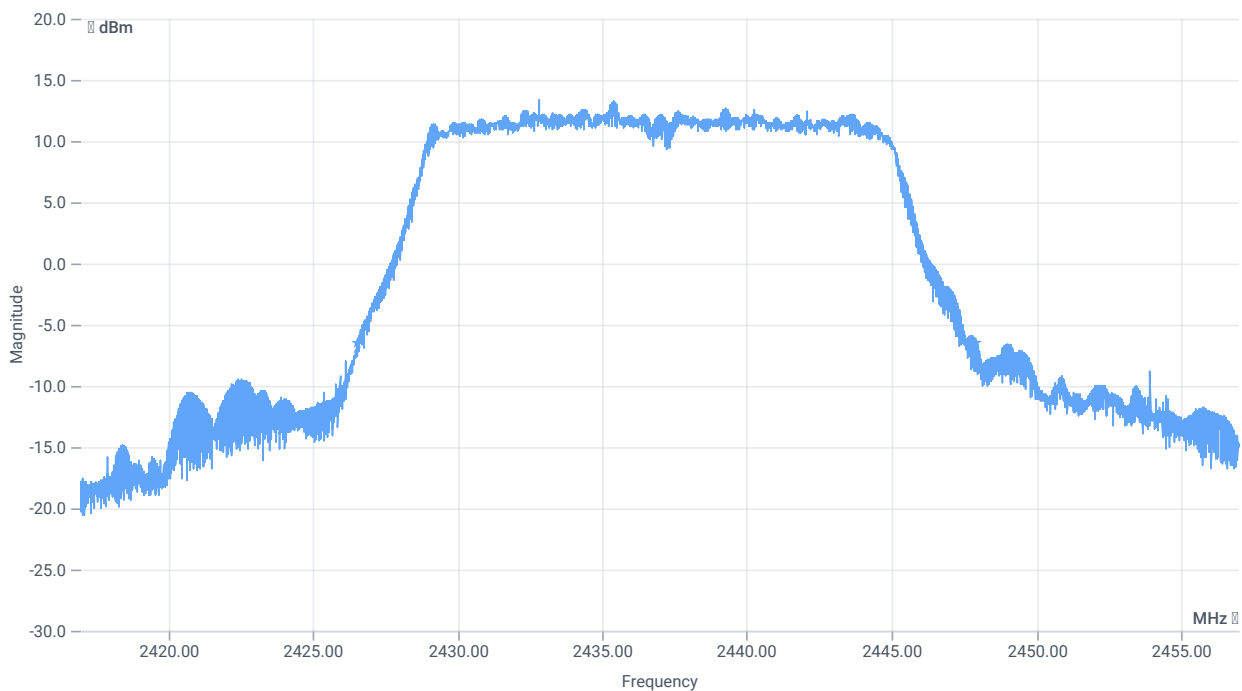




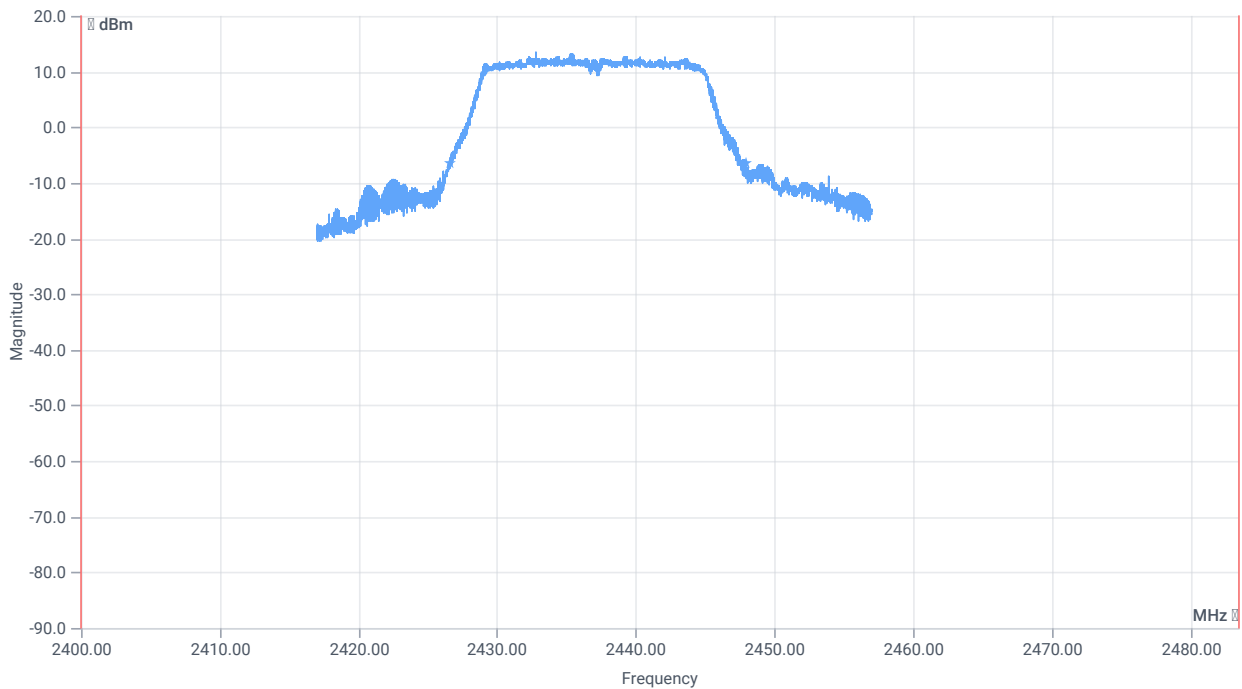
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18906.000	kHz	INFO
T1 99%	2400.000000	---	2427.8569	MHz	PASS
T2 99%	---	2483.500000	2446.7630	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	21380	kHz	INFO
T1 20dB	2400.000000	---	2426.5560	MHz	PASS
T2 20dB	---	2483.500000	2447.9360	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:48:47
Ambit Temp [°C] Humidity [rel%]	25.2 38
System Version	4.5.2.0
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 - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

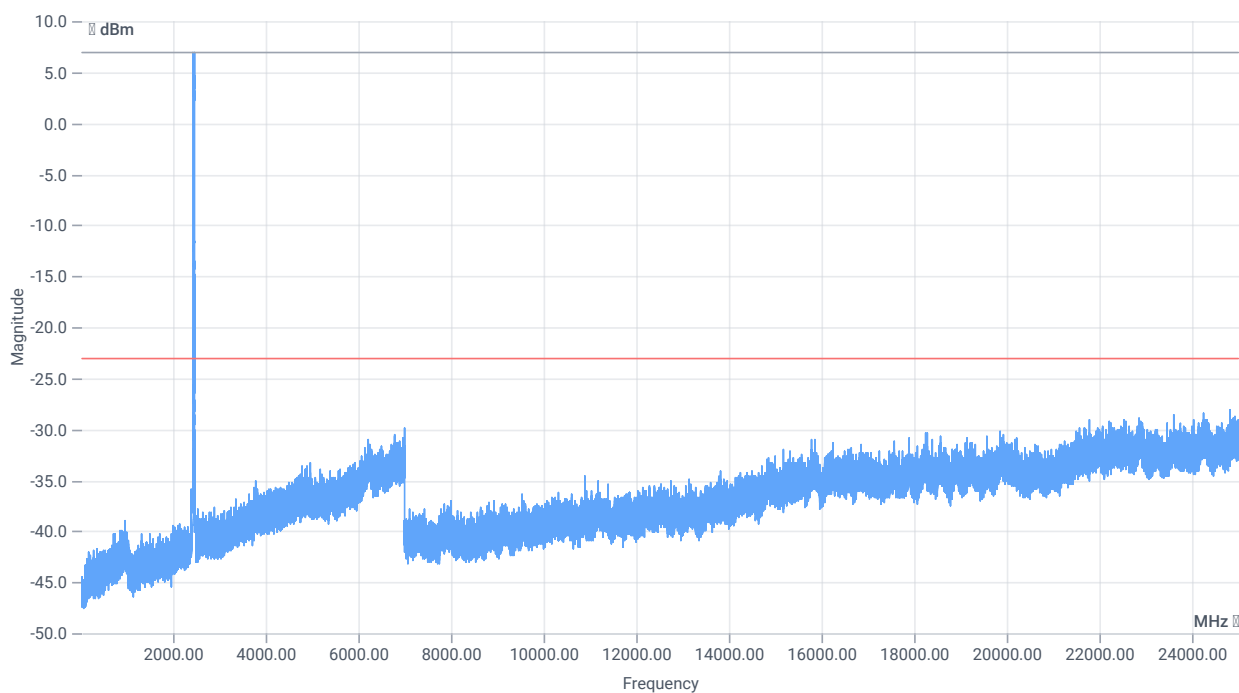
Test Equipment

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.

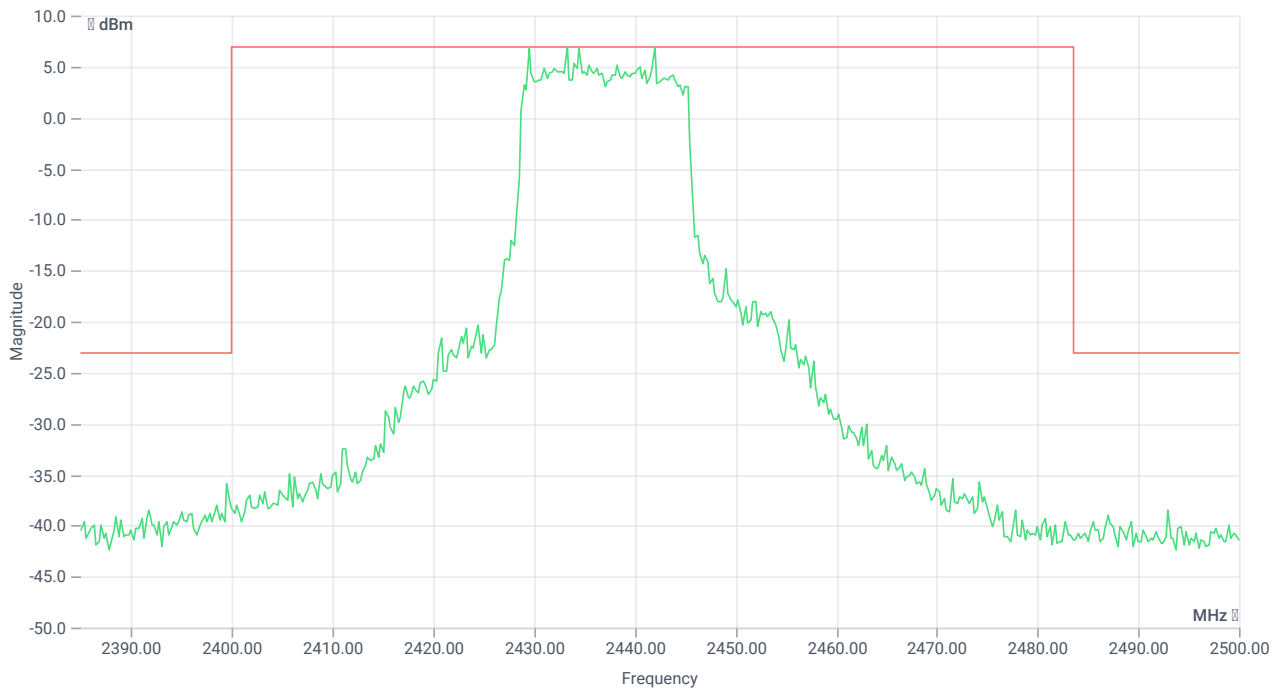
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.89	dBm	INFO
Ref. Frequency	---	---	2436.000	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.89 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 2001 SWE



TX emissions band zoomed

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2442.00 MHz	---	---	6.97	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24807.75 MHz	0	---	5.13	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:55:28
Ambit Temp [°C] Humidity [rel%]	25.2 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

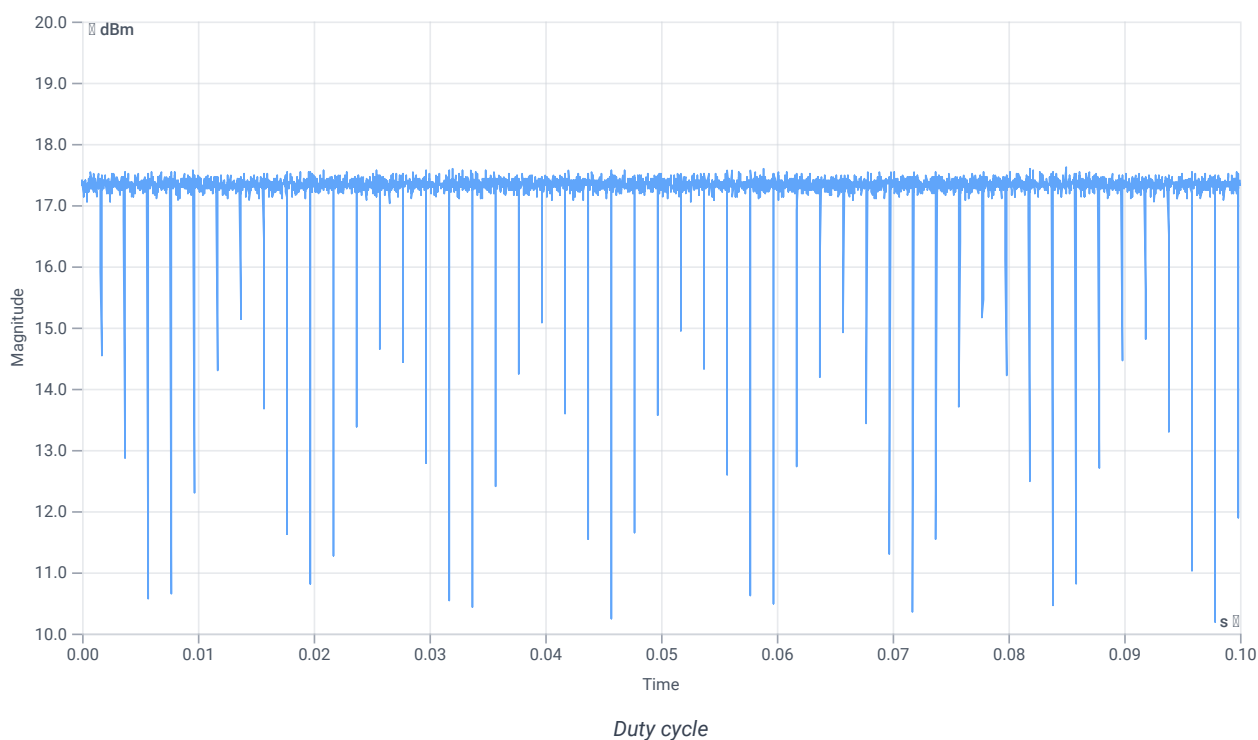
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.93	dBm	INFO
Ref. Frequency	---	---	2434.500	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



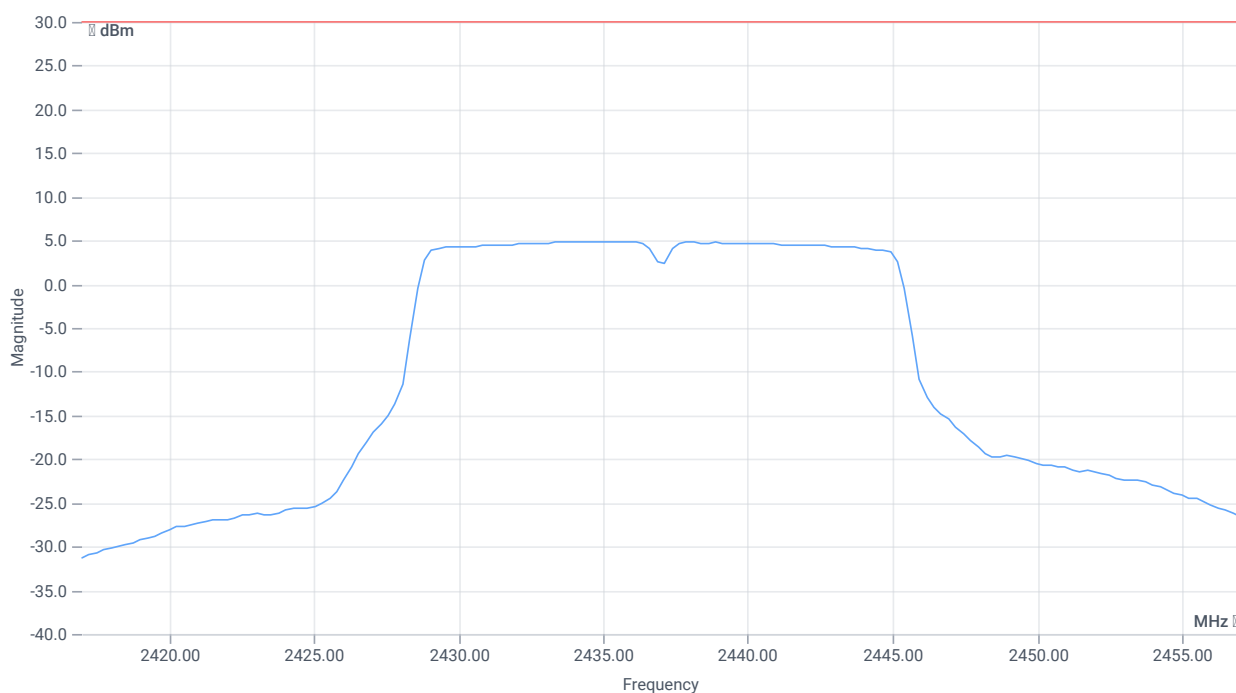
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	25.93 14.2 30
Start [MHz] Stop [MHz]	2417.000 2457.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	19.4	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	19.4	dBm	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:56:44
Ambit Temp [°C] Humidity [rel%]	25.2 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

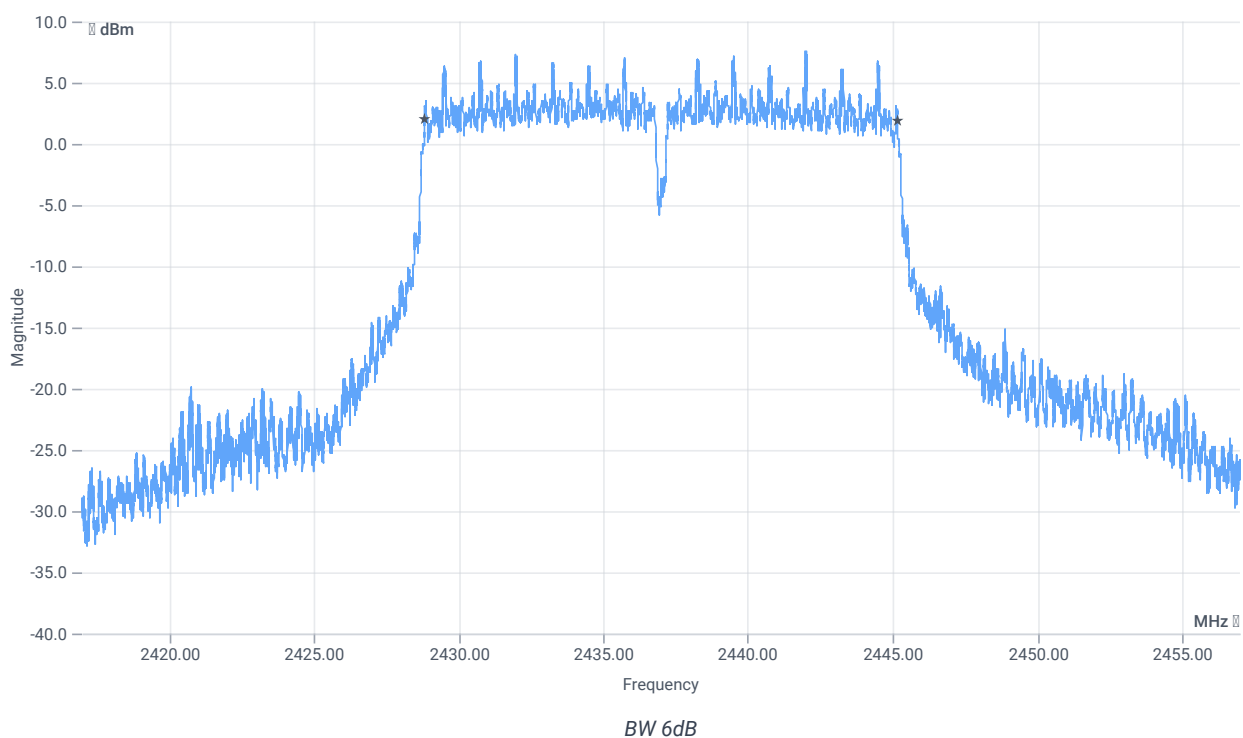
Test at TX 2437 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.51	dBm	INFO
Ref. Frequency	---	---	2439.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.51 14.2 25
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	---	16336	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:57:18
Ambit Temp [°C] Humidity [rel%]	25.2 38
System Version	4.5.2.0
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 psd DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

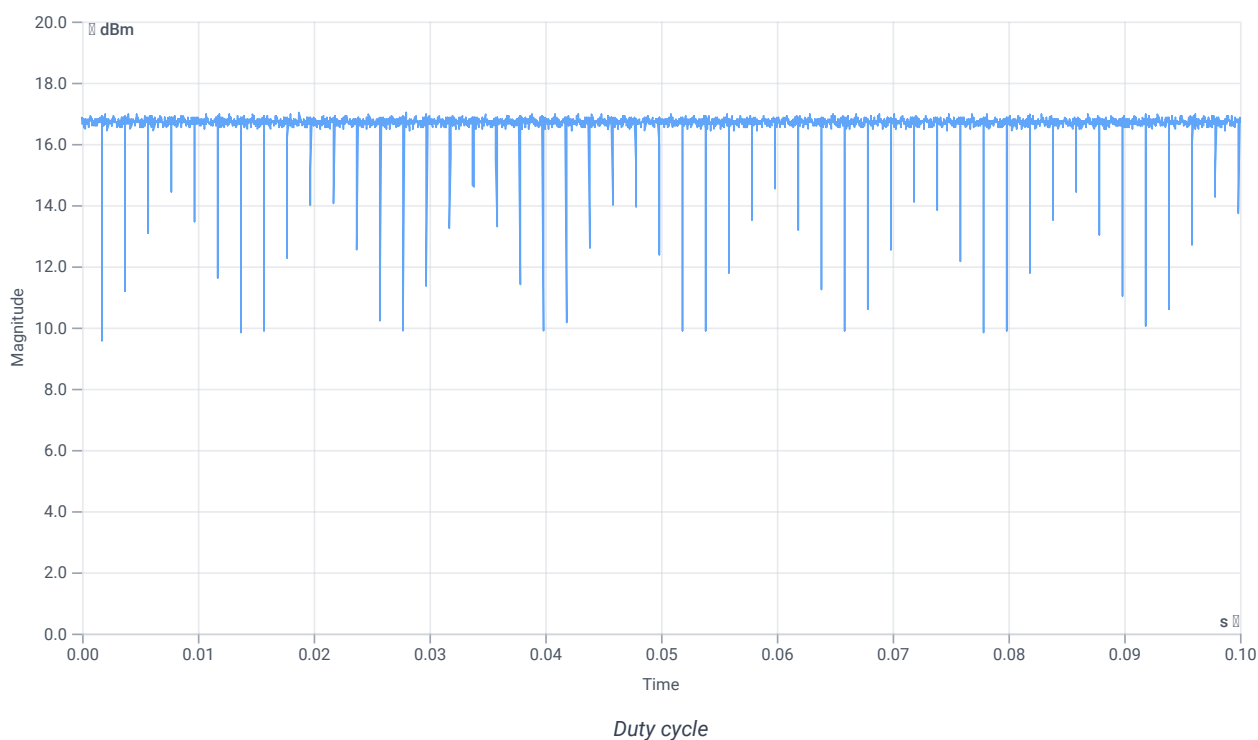
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	16.07	dBm	INFO
Ref. Frequency	---	---	2441.800	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



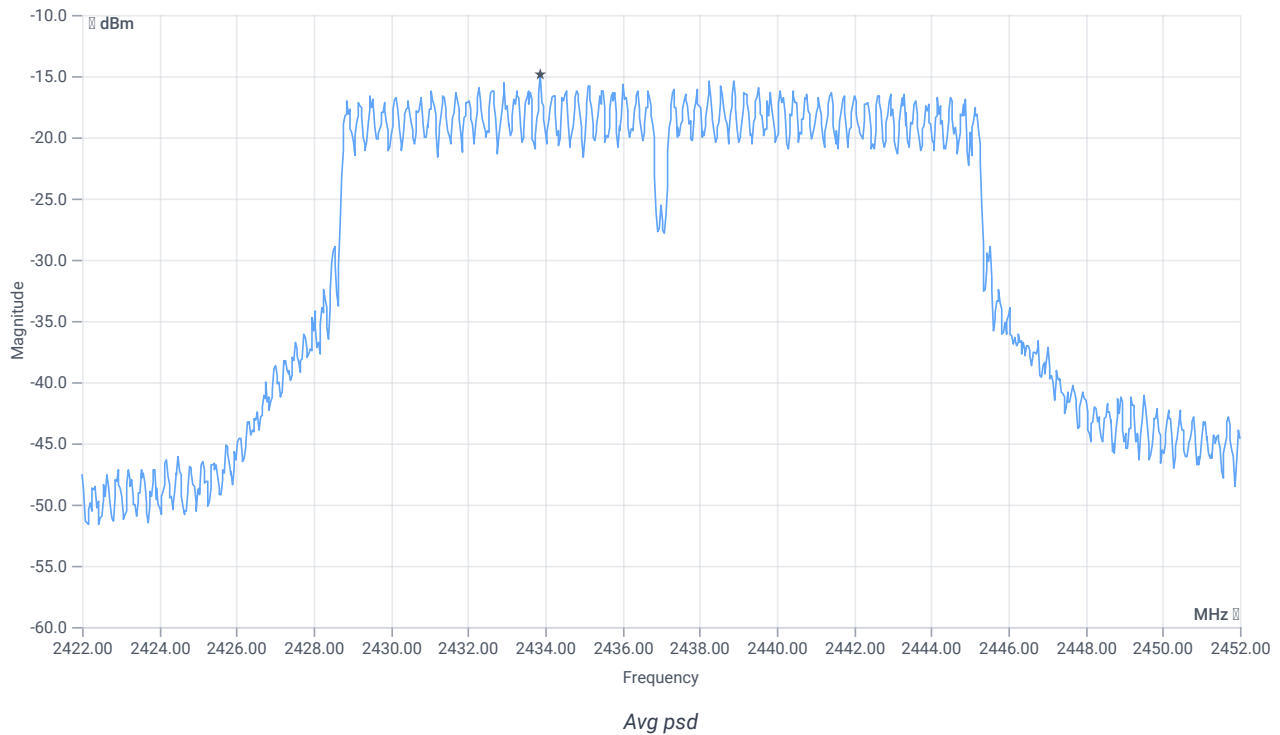
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.07 14.2 25
Start [MHz] Stop [MHz]	2422.000 2452.000

READ SA SETTINGS:

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	---	---	-14.87	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-14.87	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:58:21
Ambit Temp [°C] Humidity [rel%]	25.2 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

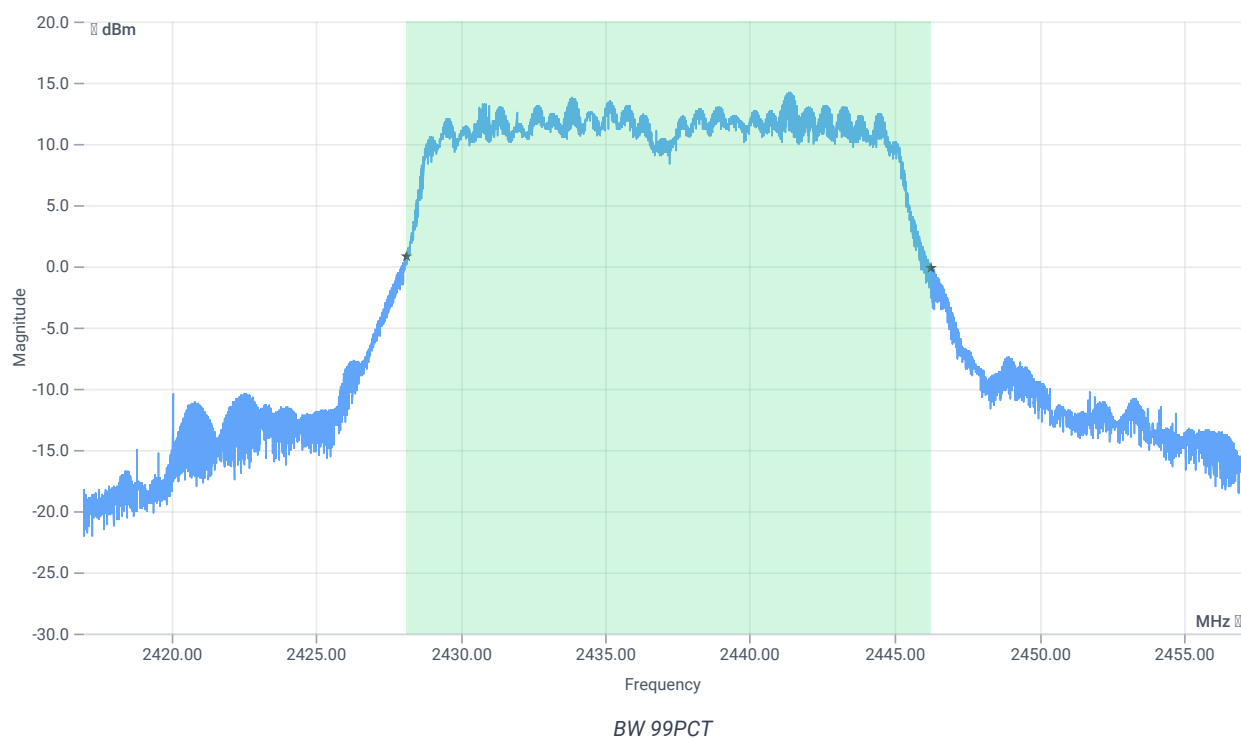
Test at TX 2437 MHz

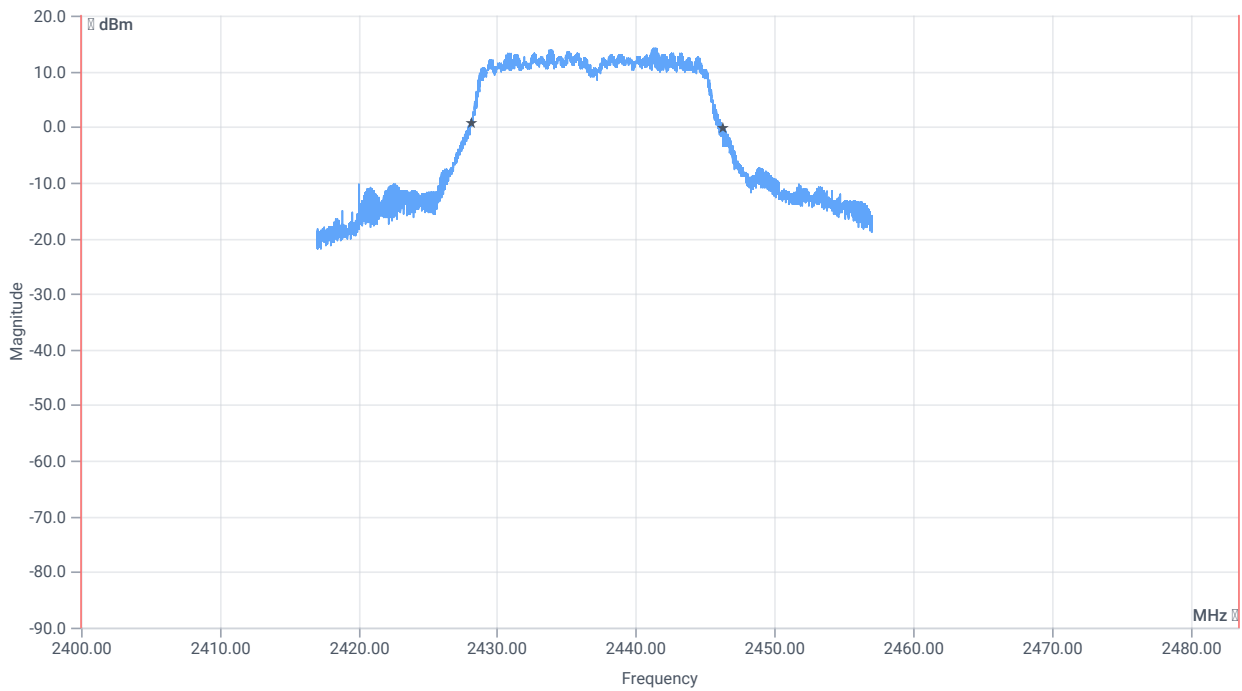
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.53	dBm	INFO
Ref. Frequency	---	---	2432.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.53 14.2 25
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

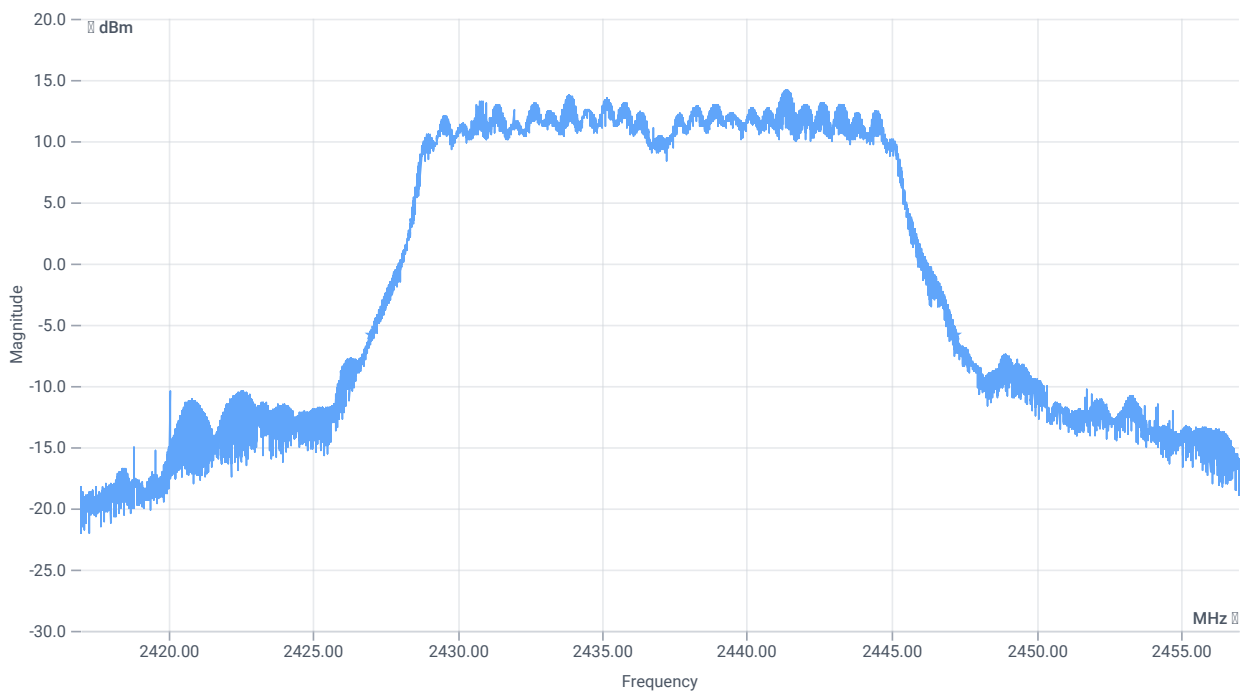




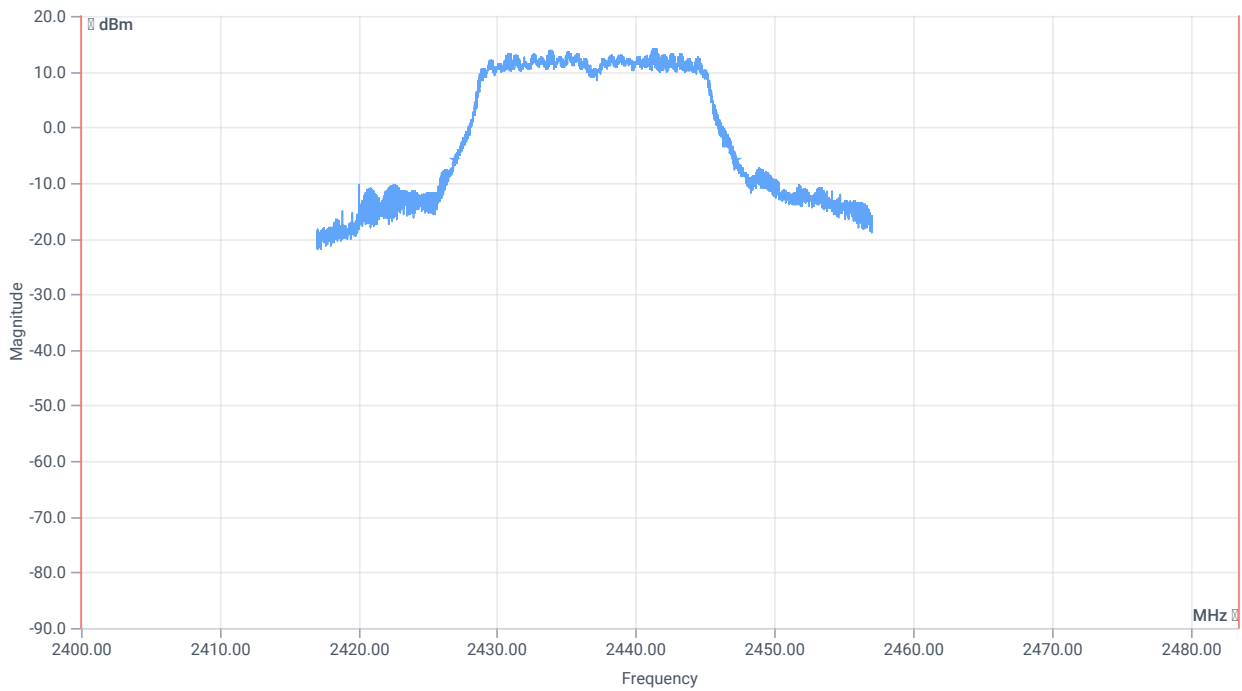
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18102.000	kHz	INFO
T1 99%	2400.000000	---	2428.1689	MHz	PASS
T2 99%	---	2483.500000	2446.2711	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20256	kHz	INFO
T1 20dB	2400.000000	---	2426.9880	MHz	PASS
T2 20dB	---	2483.500000	2447.2440	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 11:58:58
Ambit Temp [°C] Humidity [rel%]	25.2 38
System Version	4.5.2.0
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 - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

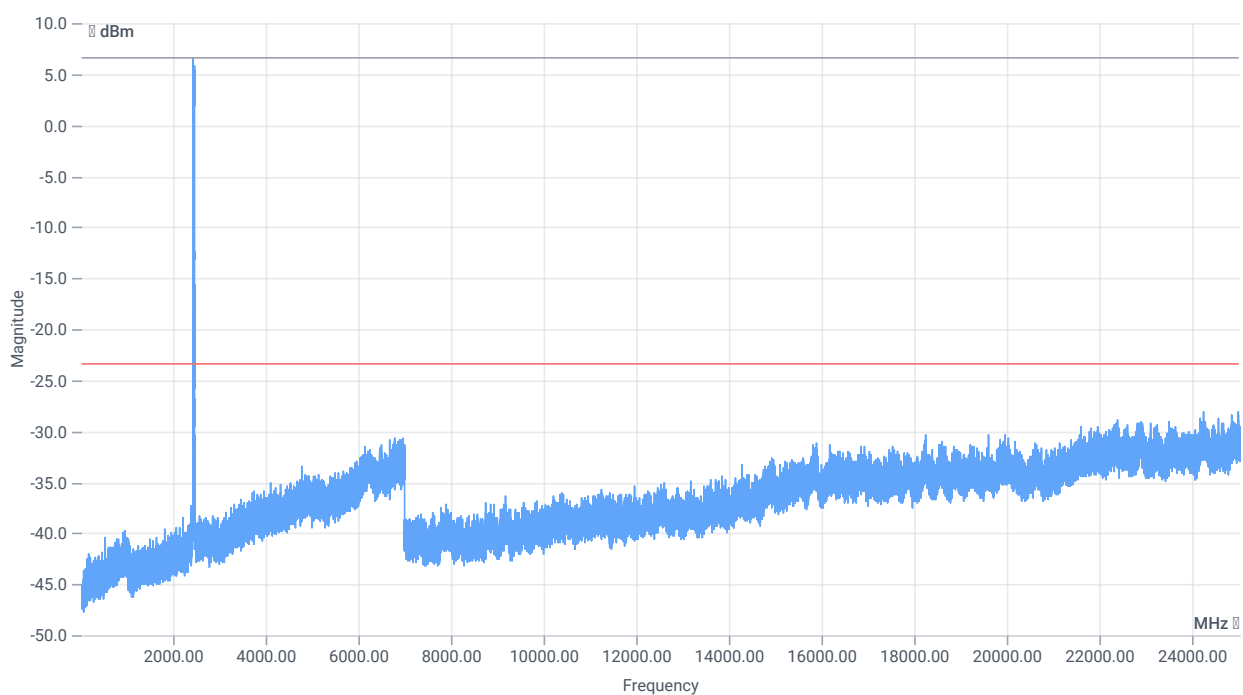
Test Equipment

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.

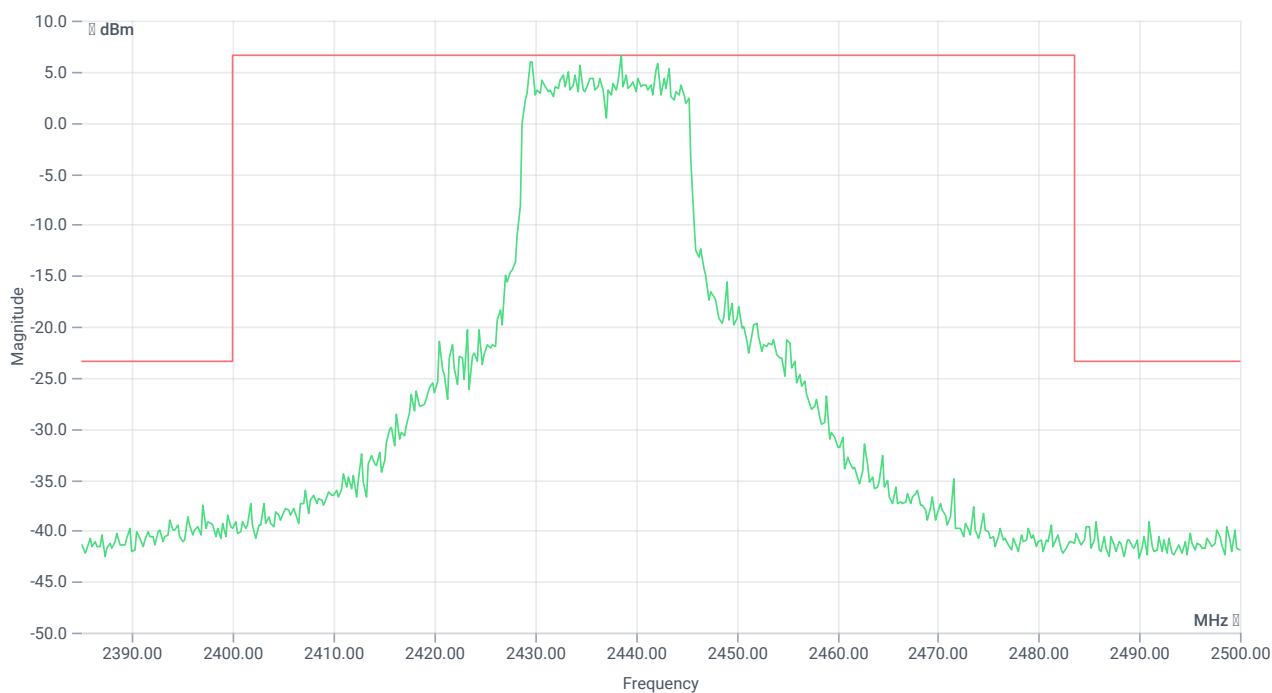
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.74	dBm	INFO
Ref. Frequency	---	---	2433.700	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.74 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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2438.50 MHz	---	---	6.53	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24988.5 MHz	0	---	4.7	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:05:39
Ambit Temp [°C] Humidity [rel%]	25.3 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

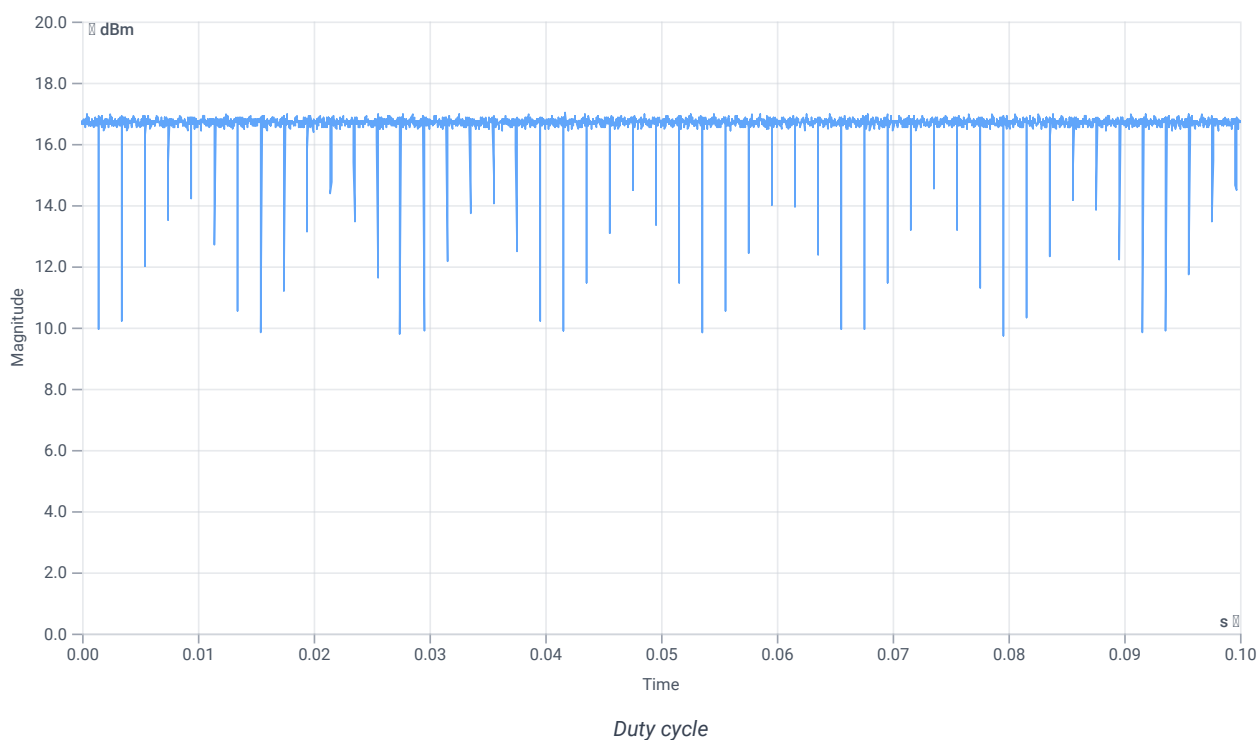
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	15.42	dBm	INFO
Ref. Frequency	---	---	2439.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



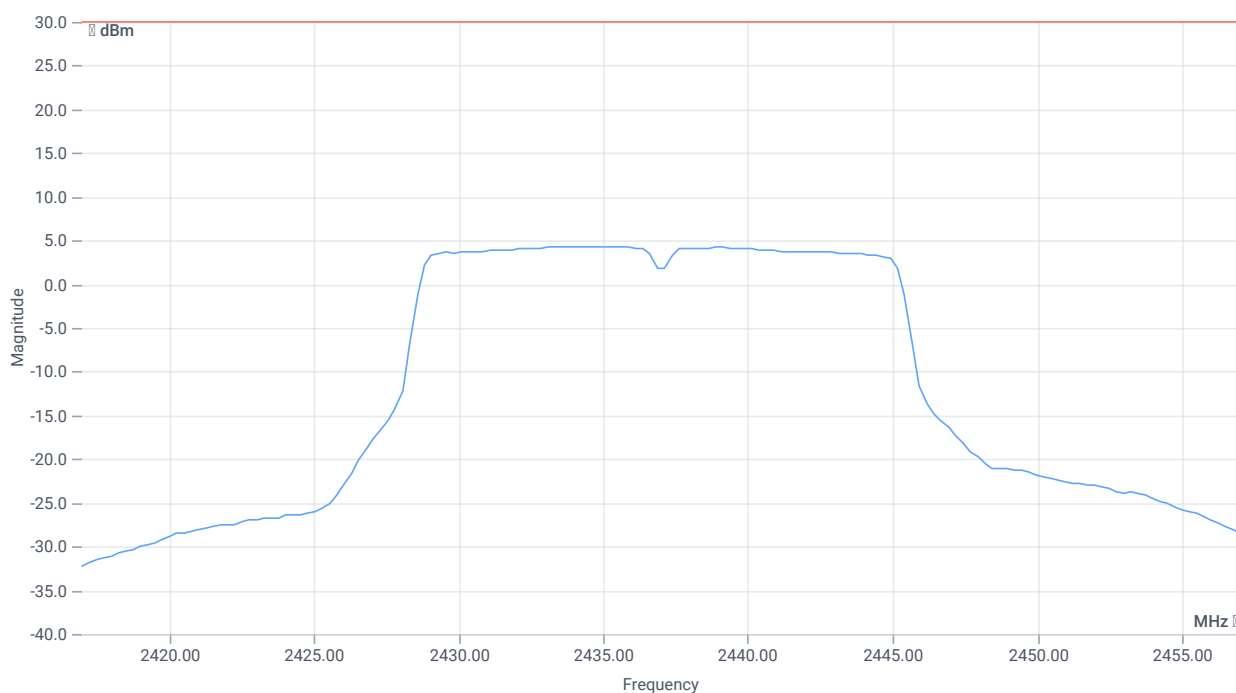
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	25.42 14.2 30
Start [MHz] Stop [MHz]	2417.000 2457.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	18.76	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	18.76	dBm	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	06.07.2023 12:06:54
Ambit Temp [°C] Humidity [rel%]	25.3 38
System Version	4.5.2.0
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan g mode
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	06.07.2023 12:06:54
Message	set WLAN2G4 to g mode, Frequency [MHz] 2462

Test Equipment

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

Verdict

INFO

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:10:51
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

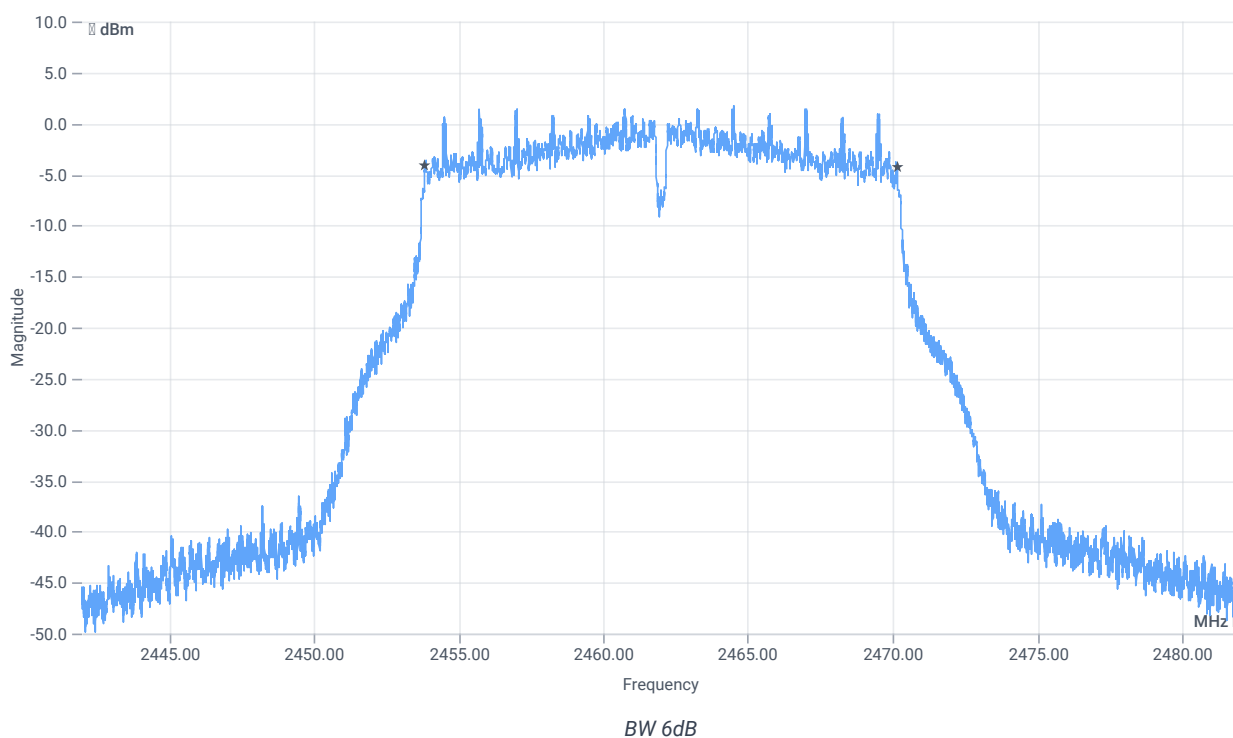
Test at TX 2462 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.90	dBm	INFO
Ref. Frequency	---	---	2460.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.90 14.04 20
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	---	16304	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:11:25
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
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 psd DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

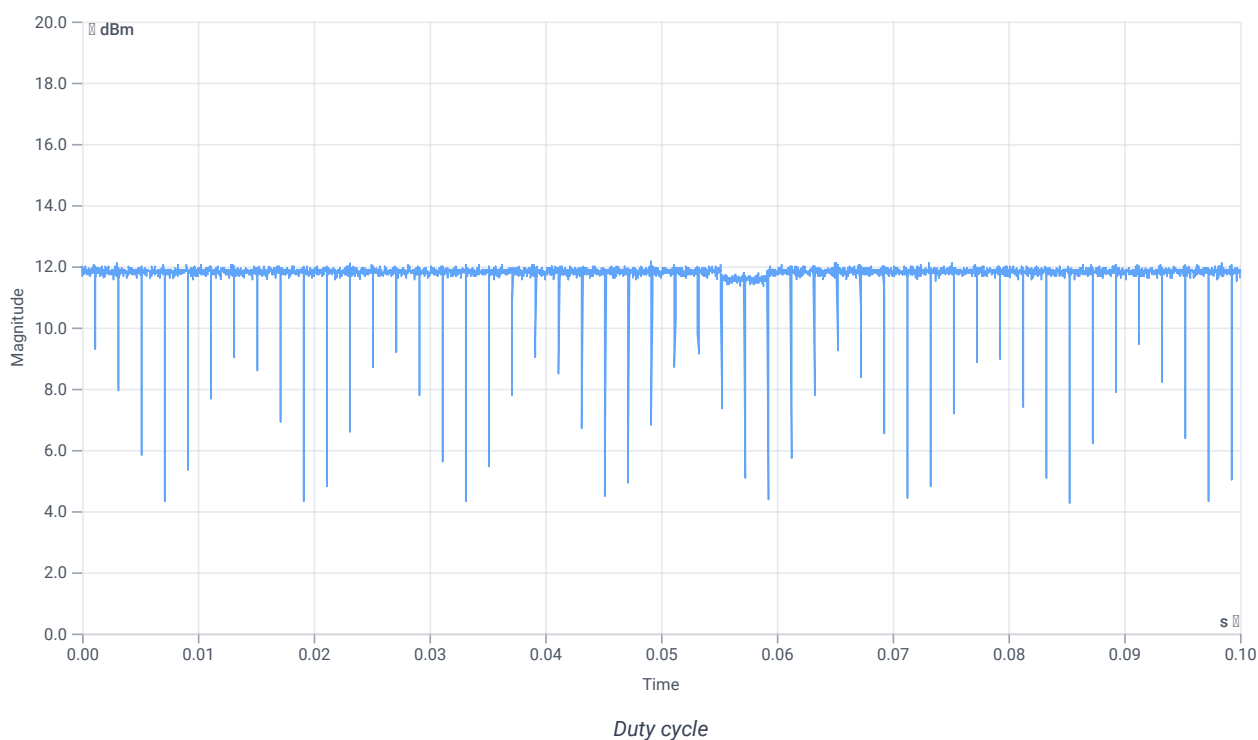
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.10	dBm	INFO
Ref. Frequency	---	---	2460.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



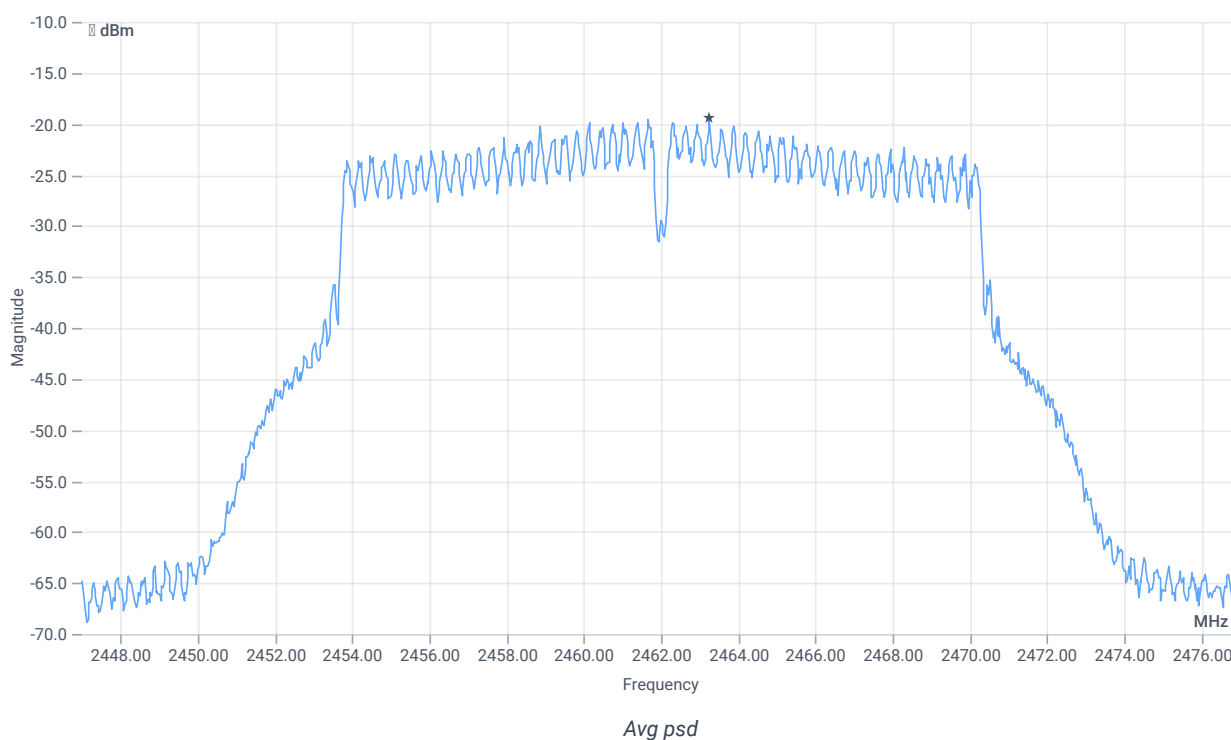
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.10 14.04 20
Start [MHz] Stop [MHz]	2447.000 2477.000

READ SA SETTINGS:

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	---	---	-19.45	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-19.45	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:12:27
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

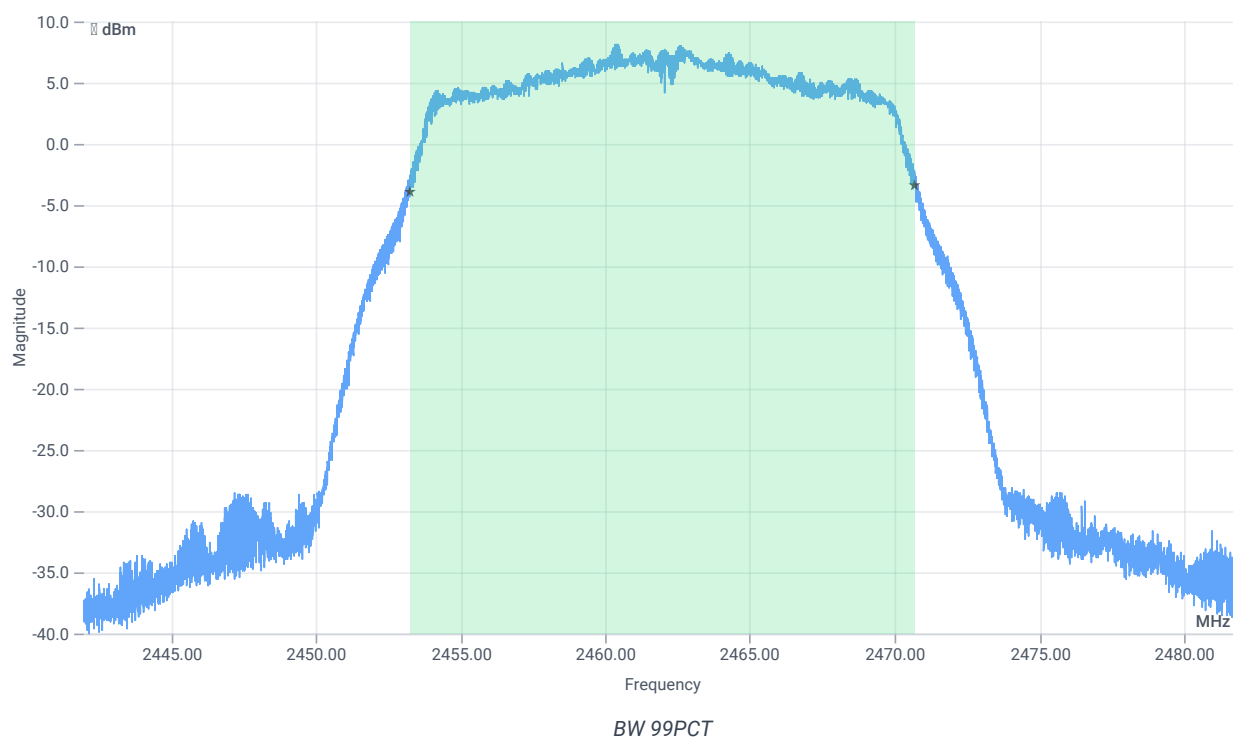
Test at TX 2462 MHz

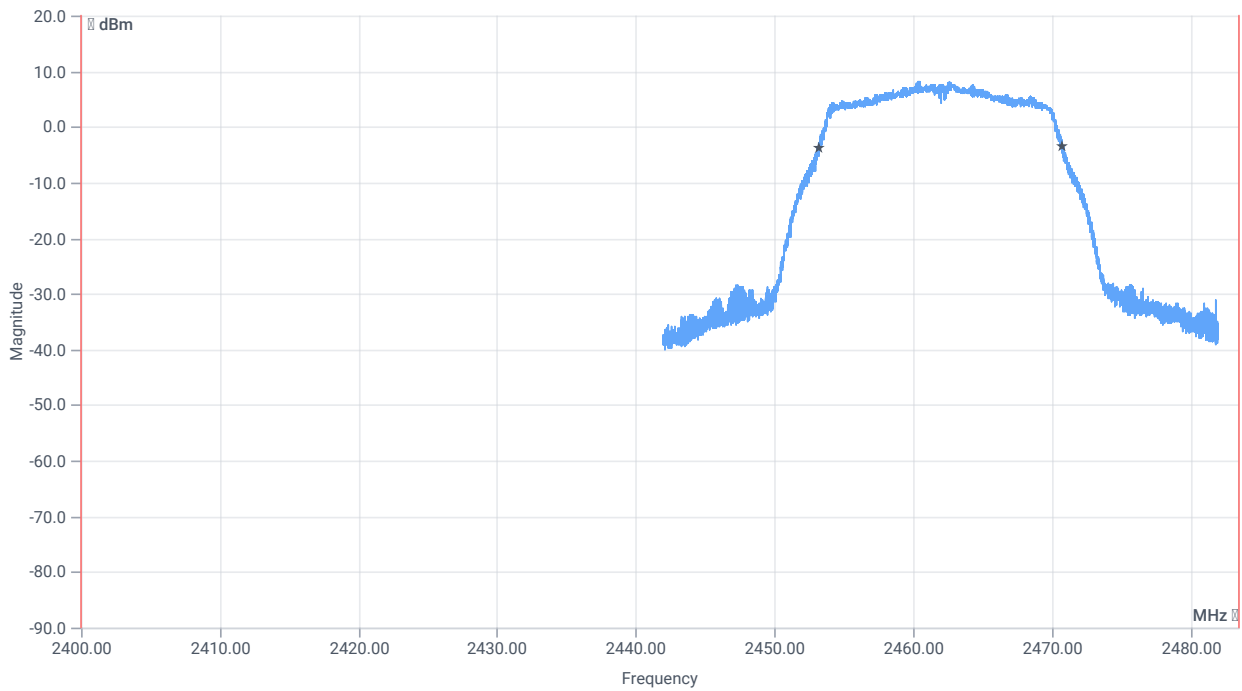
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.10	dBm	INFO
Ref. Frequency	---	---	2460.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.10 14.04 20
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

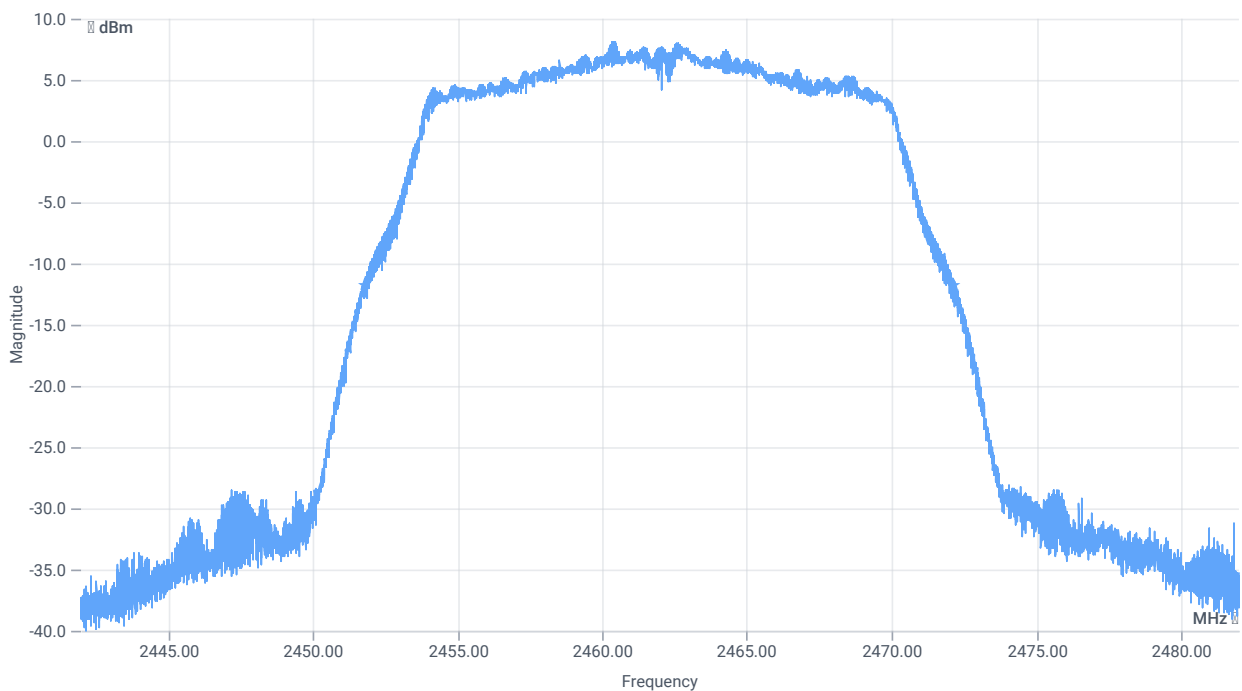




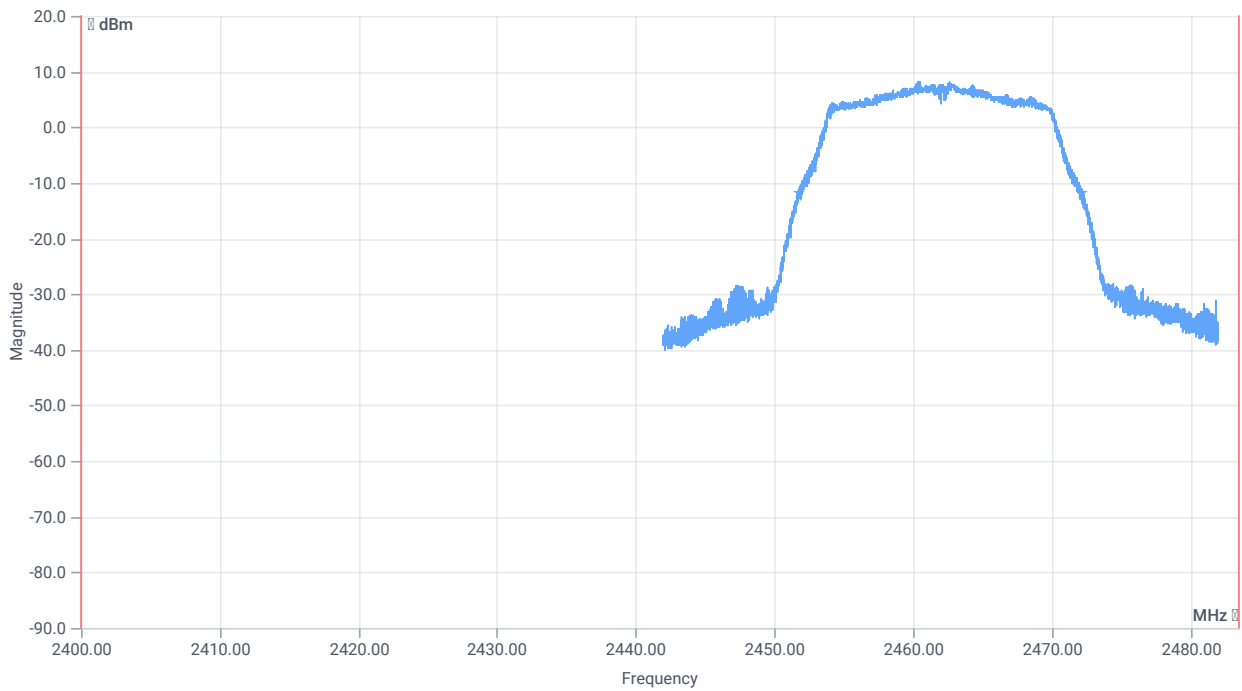
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	17454.000	kHz	INFO
T1 99%	2400.000000	---	2453.2529	MHz	PASS
T2 99%	---	2483.500000	2470.7071	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20452	kHz	INFO
T1 20dB	2400.000000	---	2451.7480	MHz	PASS
T2 20dB	---	2483.500000	2472.2000	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:13:04
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
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 - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

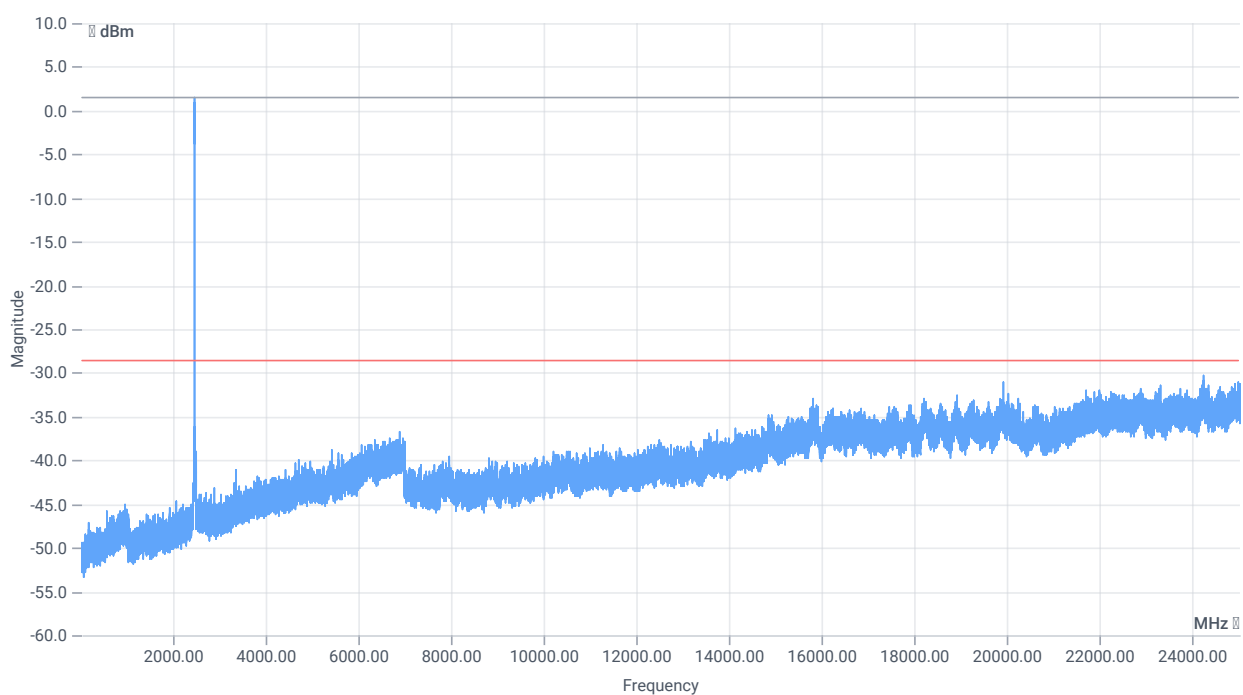
Test Equipment

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.

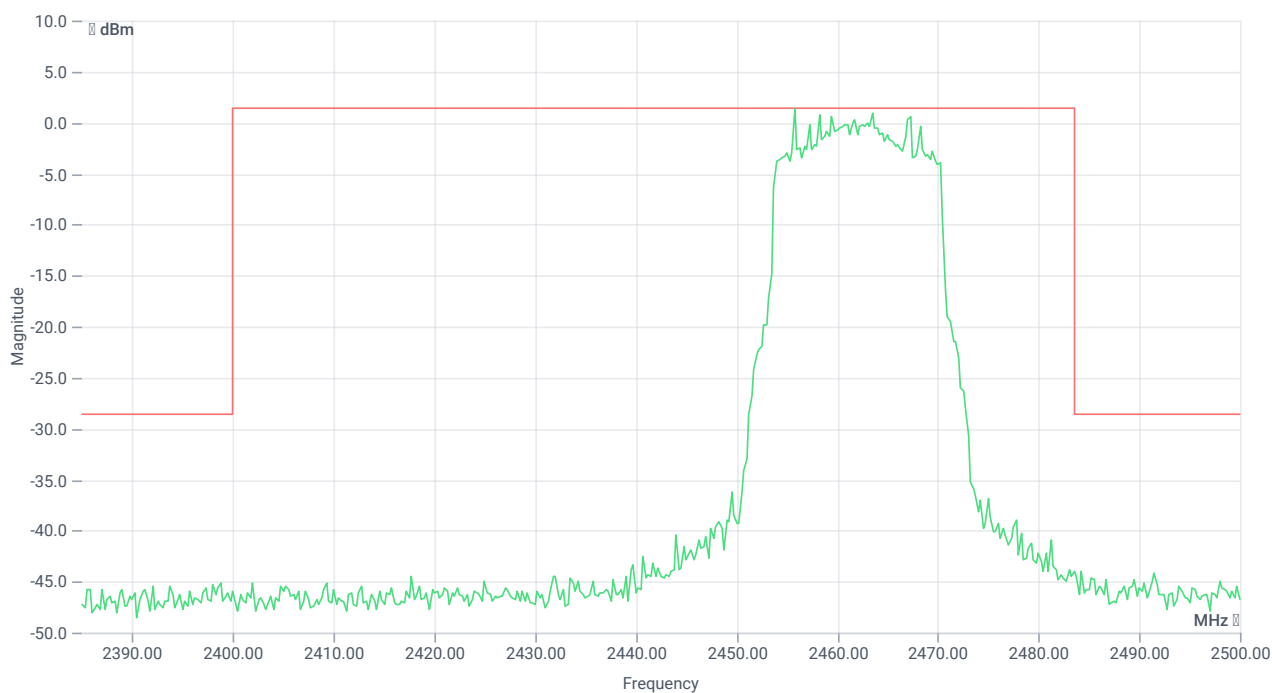
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.06	dBm	INFO
Ref. Frequency	---	---	2460.700	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.07 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2455.75 MHz	---	---	1.42	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-148.96	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:19:46
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

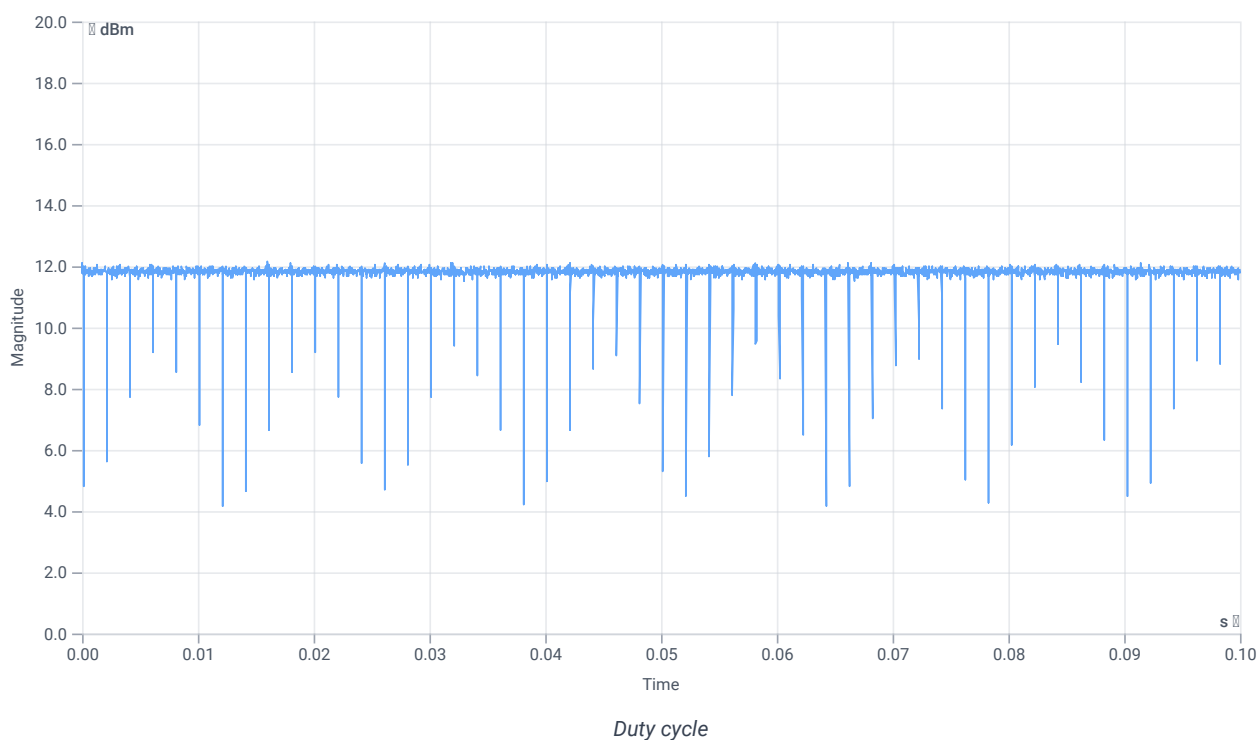
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.81	dBm	INFO
Ref. Frequency	---	---	2460.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



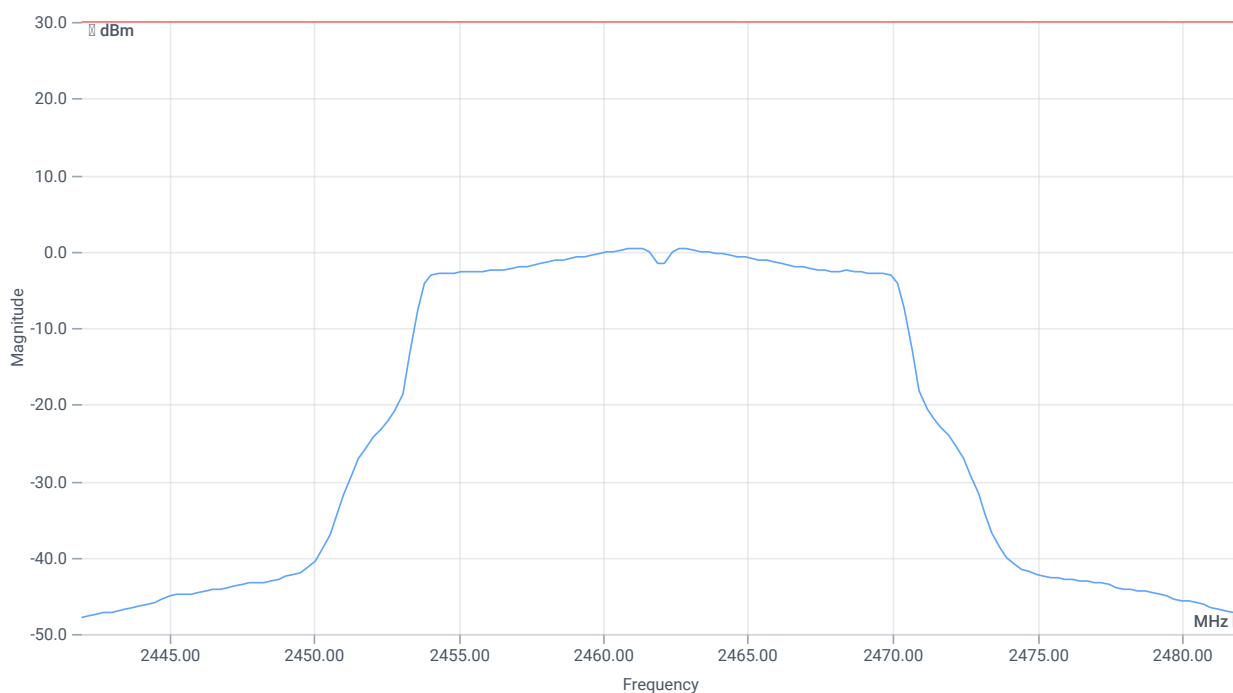
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.81 14.04 25
Start [MHz] Stop [MHz]	2442.000 2482.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	13.58	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	13.58	dBm	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:21:01
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

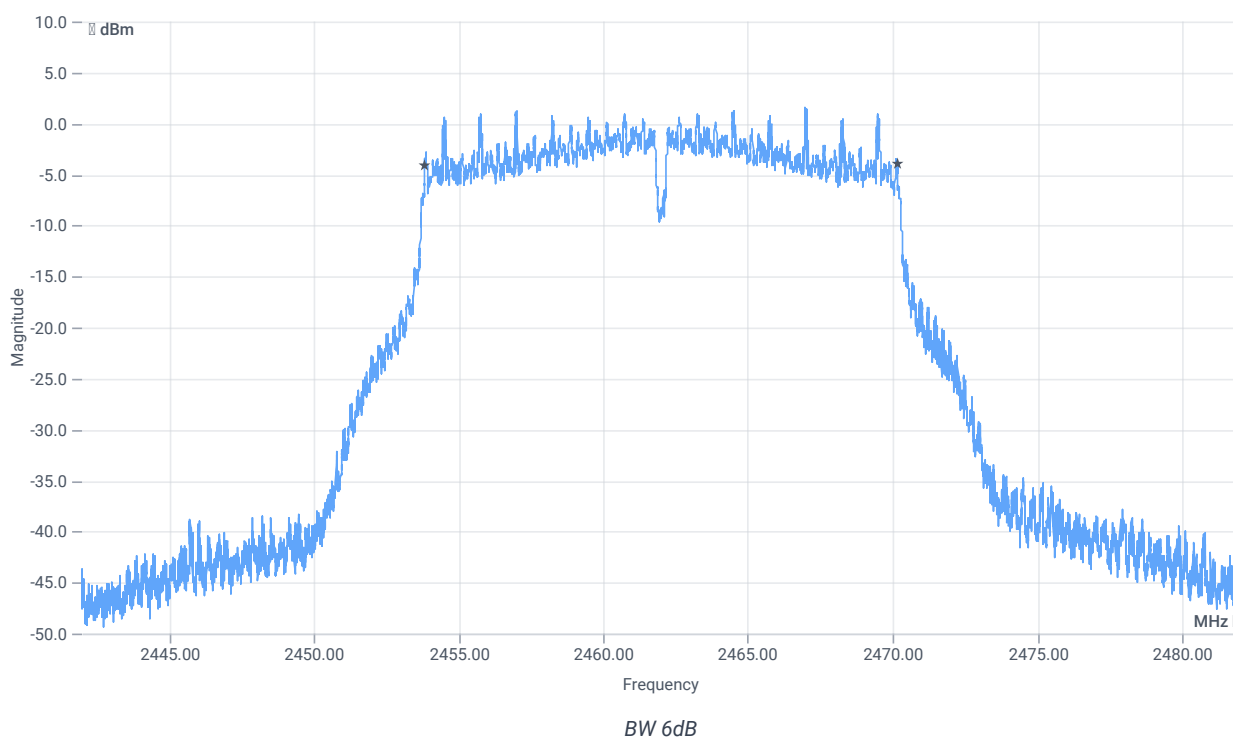
Test at TX 2462 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.82	dBm	INFO
Ref. Frequency	---	---	2460.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.82 14.04 20
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	---	16316	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:21:35
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
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 psd DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

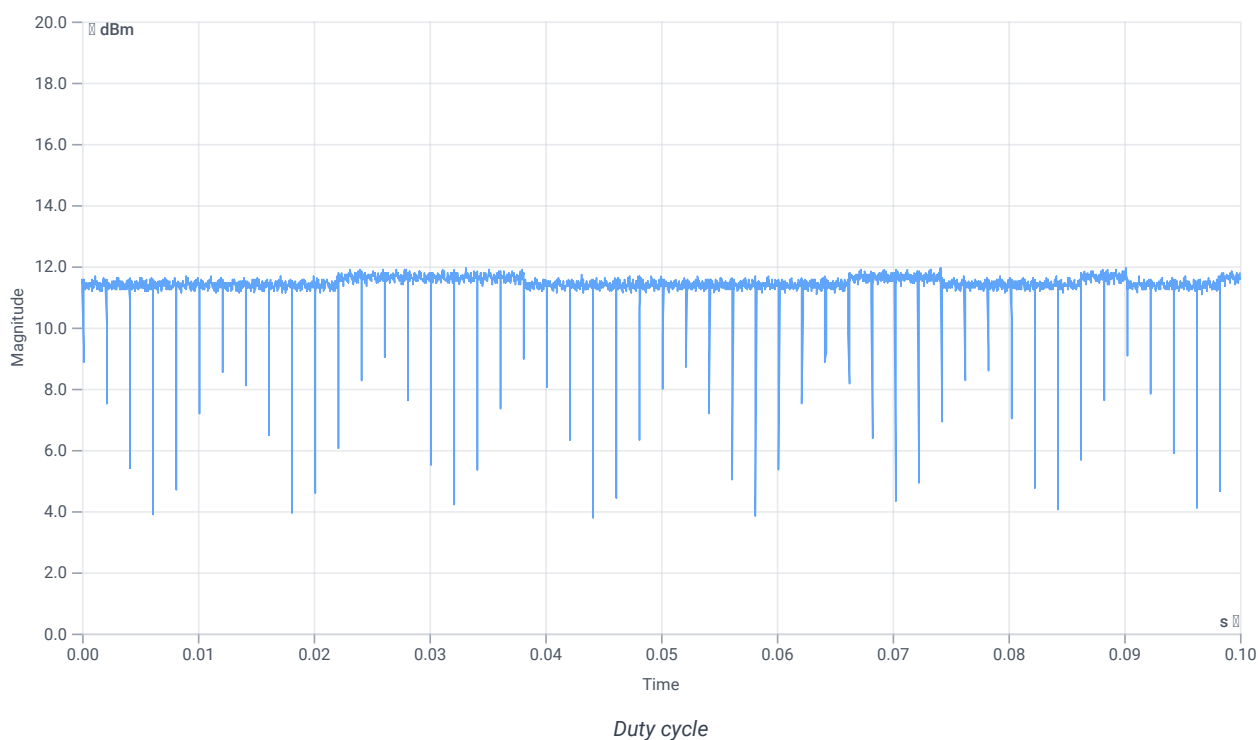
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.46	dBm	INFO
Ref. Frequency	---	---	2460.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



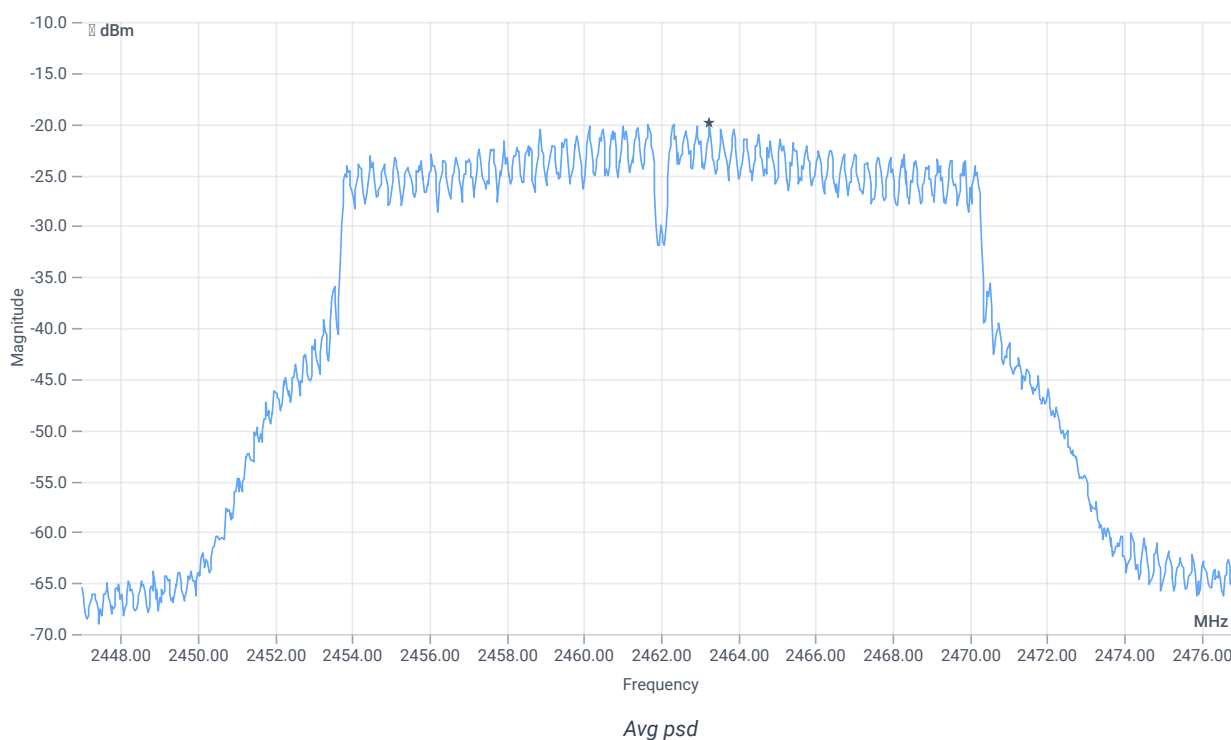
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.46 14.04 20
Start [MHz] Stop [MHz]	2447.000 2477.000

READ SA SETTINGS:

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	---	---	-19.91	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-19.91	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:22:38
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

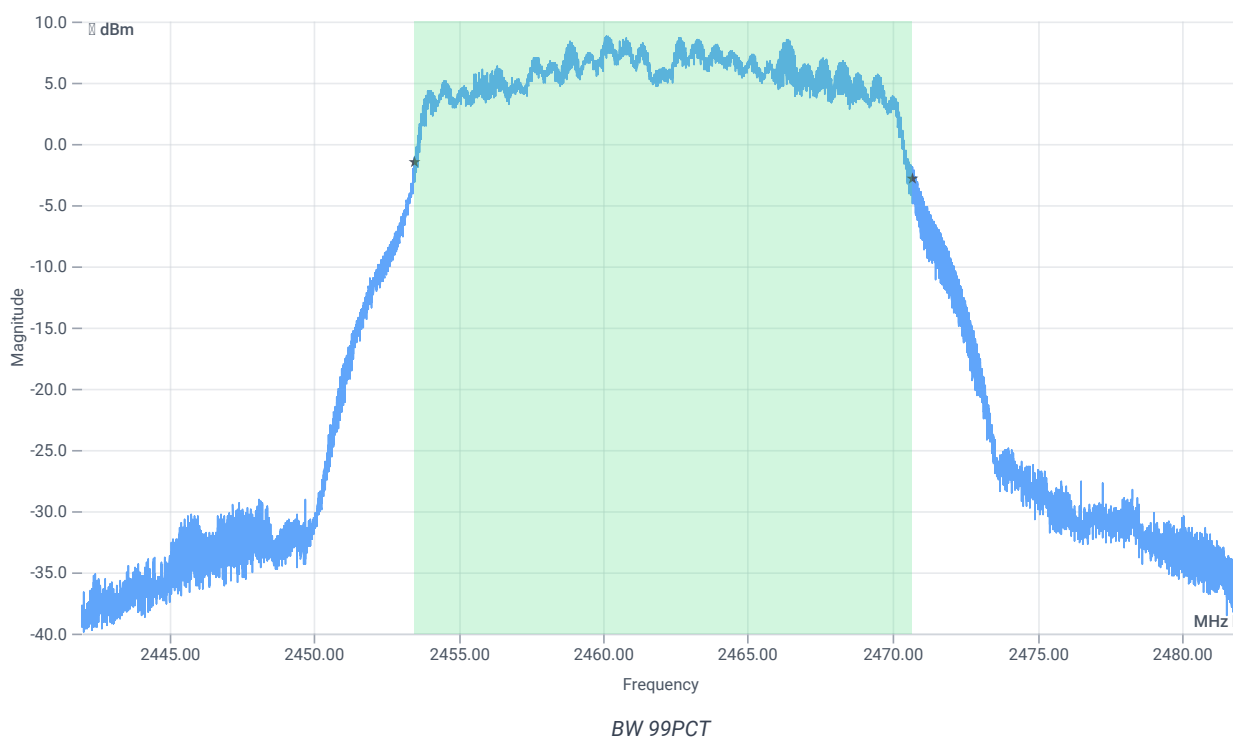
Test at TX 2462 MHz

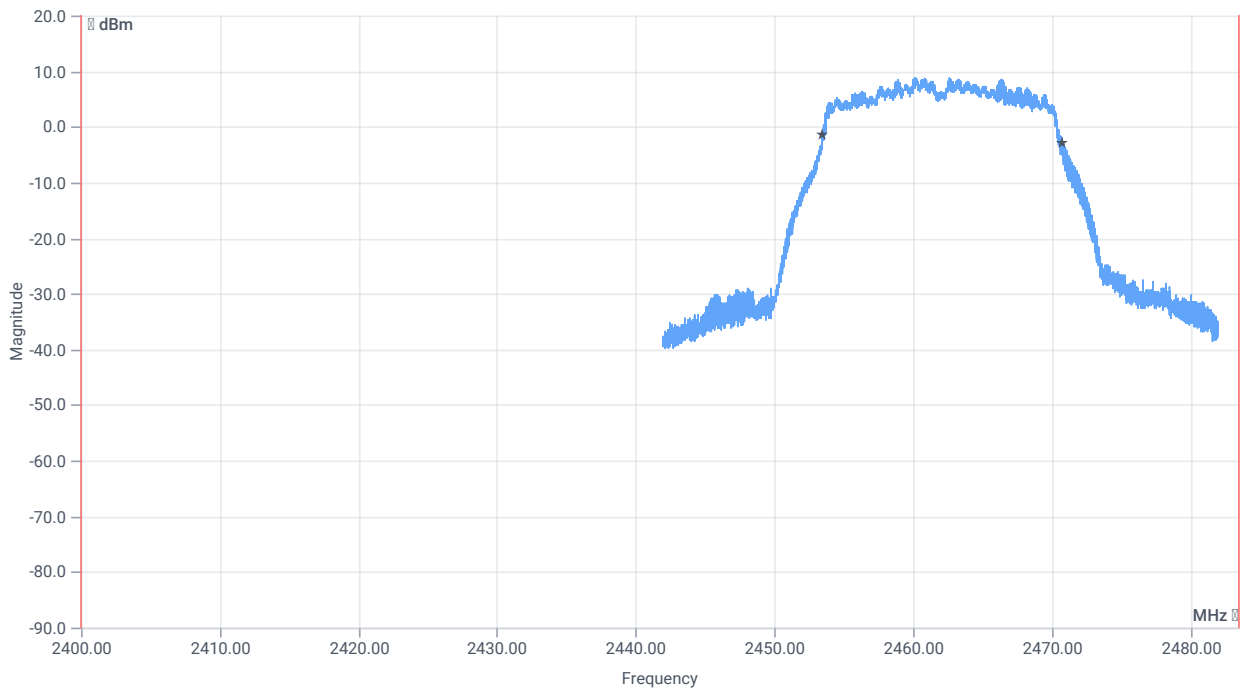
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.97	dBm	INFO
Ref. Frequency	---	---	2463.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.97 14.04 20
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

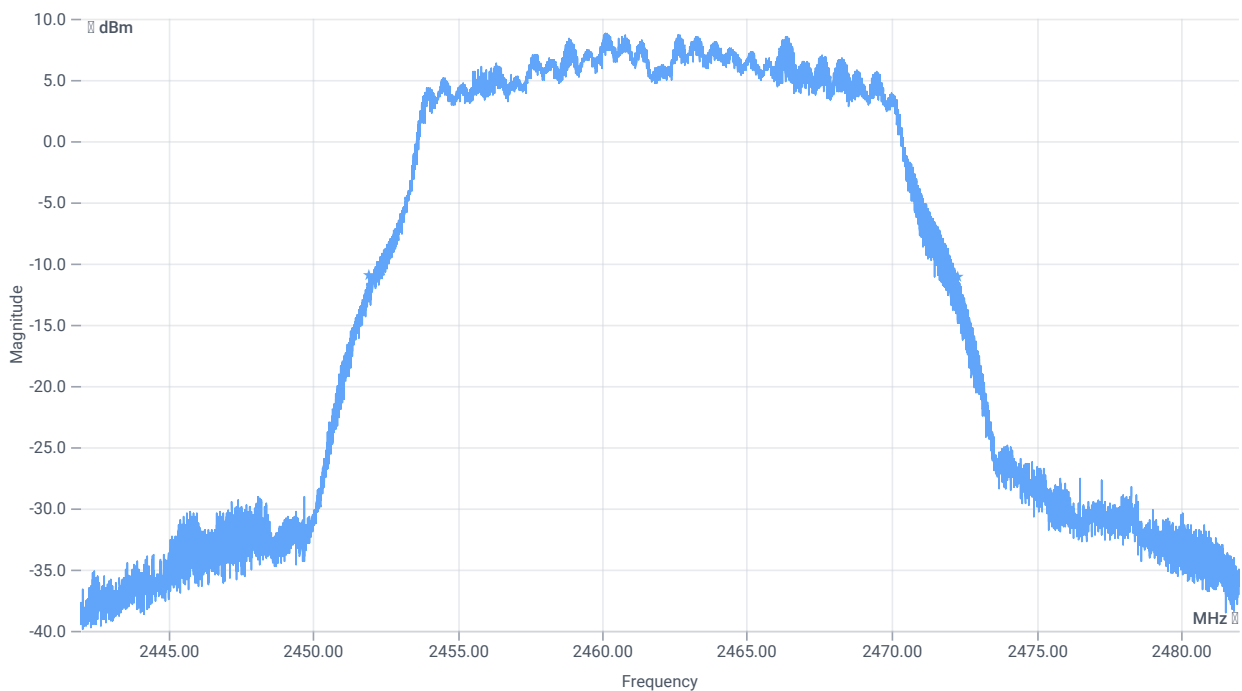




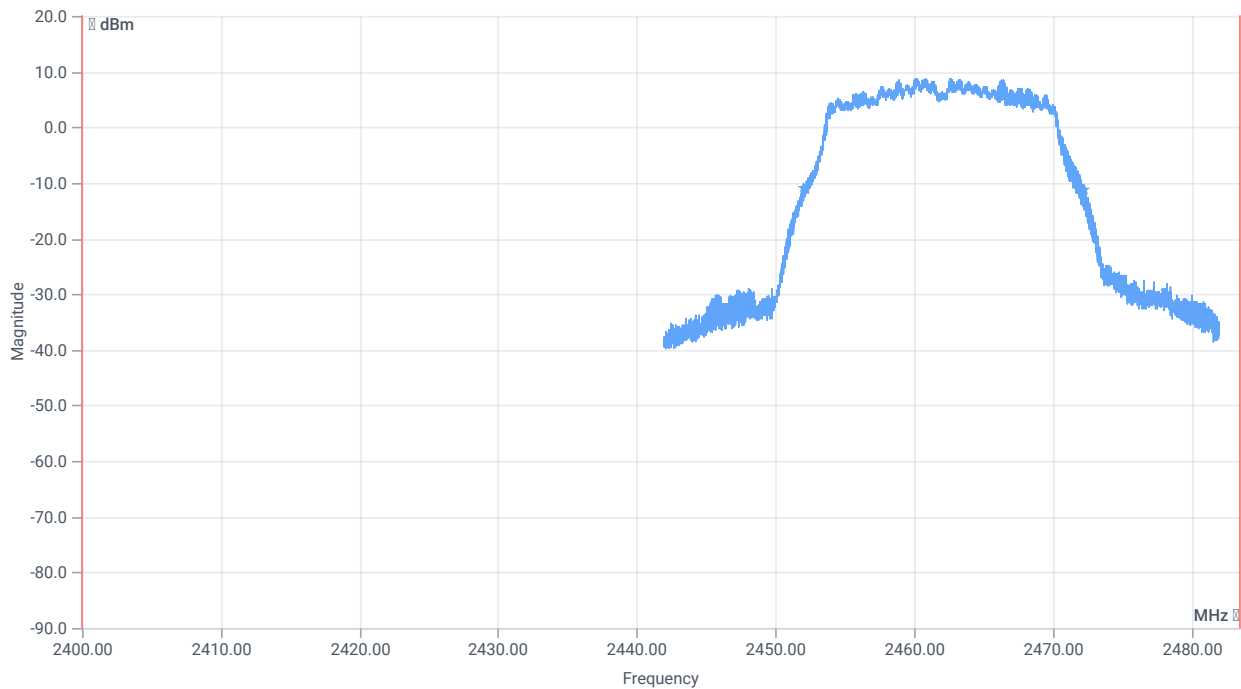
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	17182.000	kHz	INFO
T1 99%	2400.000000	---	2453.4969	MHz	PASS
T2 99%	---	2483.500000	2470.6791	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20296	kHz	INFO
T1 20dB	2400.000000	---	2451.9680	MHz	PASS
T2 20dB	---	2483.500000	2472.2640	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:23:15
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
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 - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

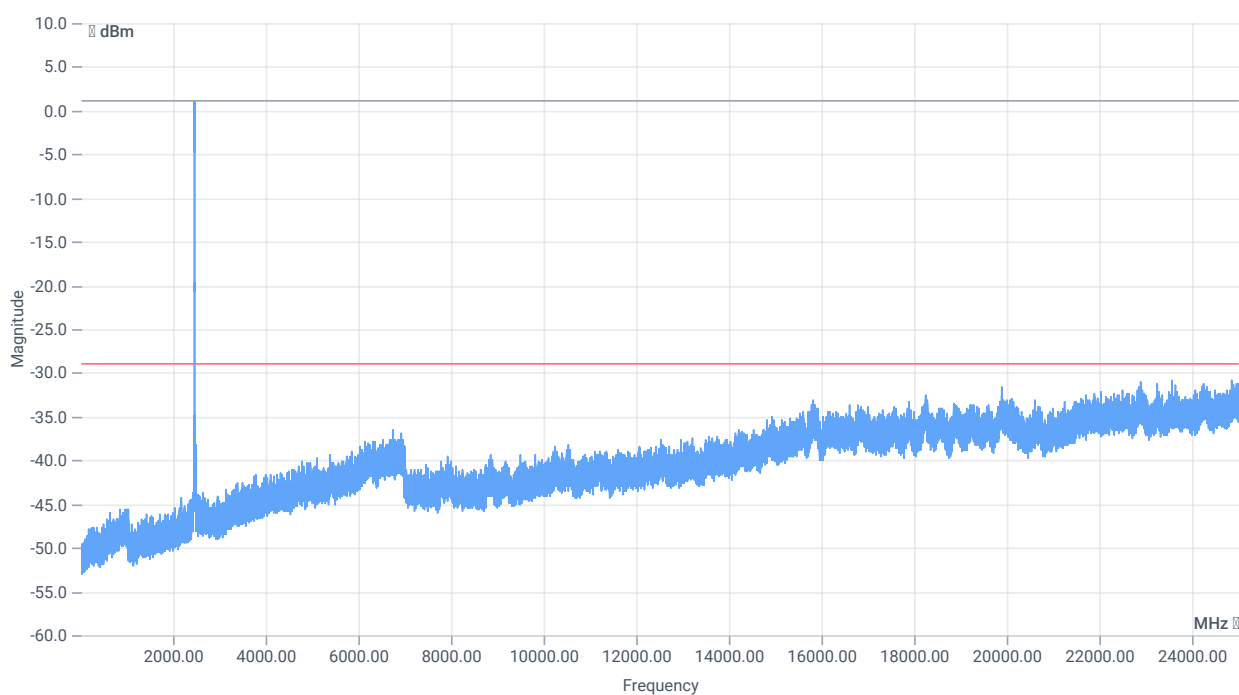
Test Equipment

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.

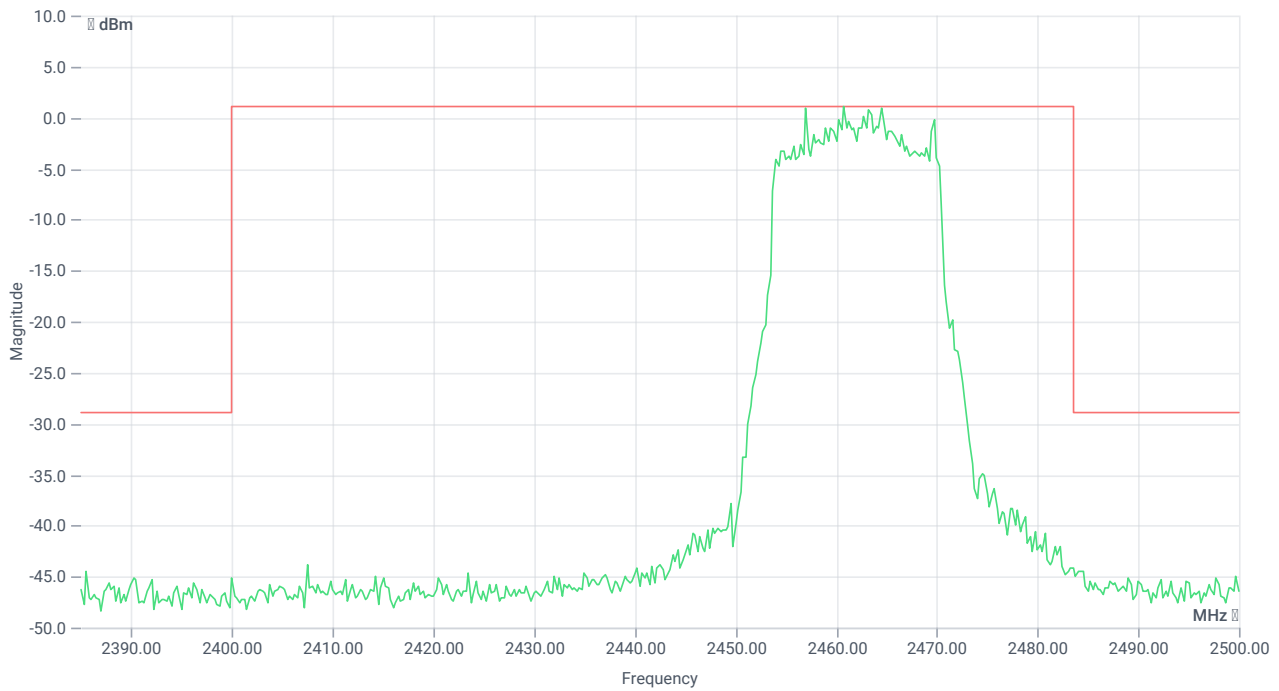
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.53	dBm	INFO
Ref. Frequency	---	---	2464.900	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.53 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2460.75 MHz	---	---	1.08	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 23579.75 MHz	0	---	1.96	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 g mode

Test References

TC Start	06.07.2023 12:29:56
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 g mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
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]	0.7
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

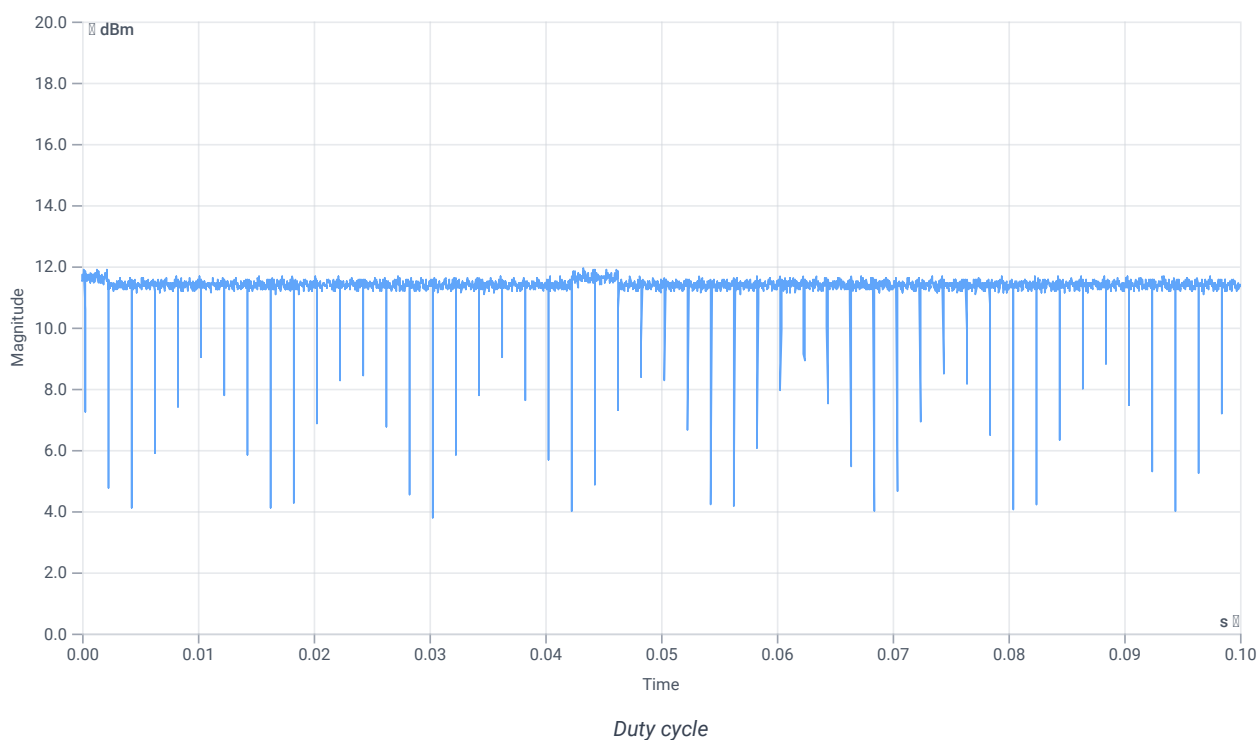
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.59	dBm	INFO
Ref. Frequency	---	---	2464.800	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



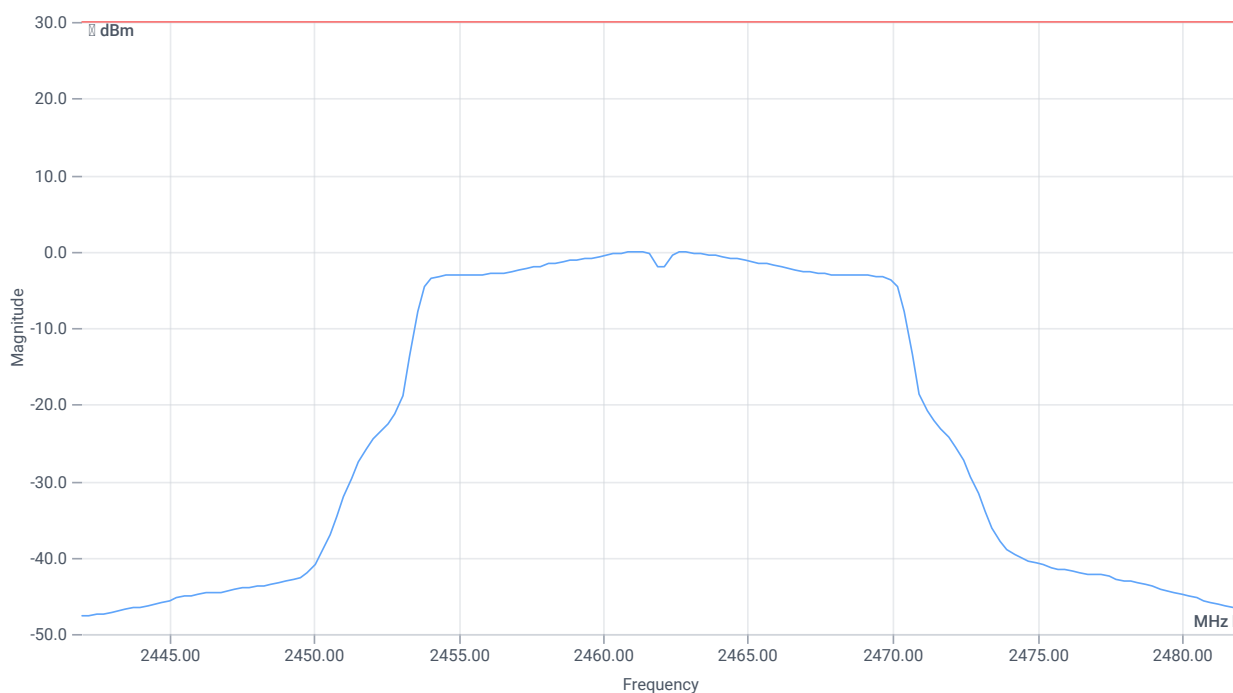
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.59 14.04 25
Start [MHz] Stop [MHz]	2442.000 2482.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	13.19	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	13.19	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 g mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 12:31:11
Ambit Temp [°C] Humidity [rel%]	25.4 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 g mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2412 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	13.15	dBm	INFO
Ant:2 Avg power DC corr.	---	---	13.7	dBm	INFO
Σ Avg output power DC corr.	---	30	16.44	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 g mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 12:32:15
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 g mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2412 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-19.84	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-19.21	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-16.5	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 g mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 12:32:26
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 g mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2437 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	19.4	dBm	INFO
Ant:2 Avg power DC corr.	---	---	18.76	dBm	INFO
Σ Avg output power DC corr.	---	30	22.1	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 g mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 12:32:38
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 g mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2437 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-14.36	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-14.87	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-11.6	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 g mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 12:32:50
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 g mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2462 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	13.58	dBm	INFO
Ant:2 Avg power DC corr.	---	---	13.19	dBm	INFO
Σ Avg output power DC corr.	---	30	16.4	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 g mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 12:33:00
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 g mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 g mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2462 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-19.45	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-19.91	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-16.66	dBm/3kHz	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	06.07.2023 12:40:11
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan n-HT20 mode
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	06.07.2023 12:40:12
Message	set WLAN2G4 to n-HT20 mode, Frequency [MHz] 2412 ,

Test Equipment

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

Verdict

INFO

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:40:24
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

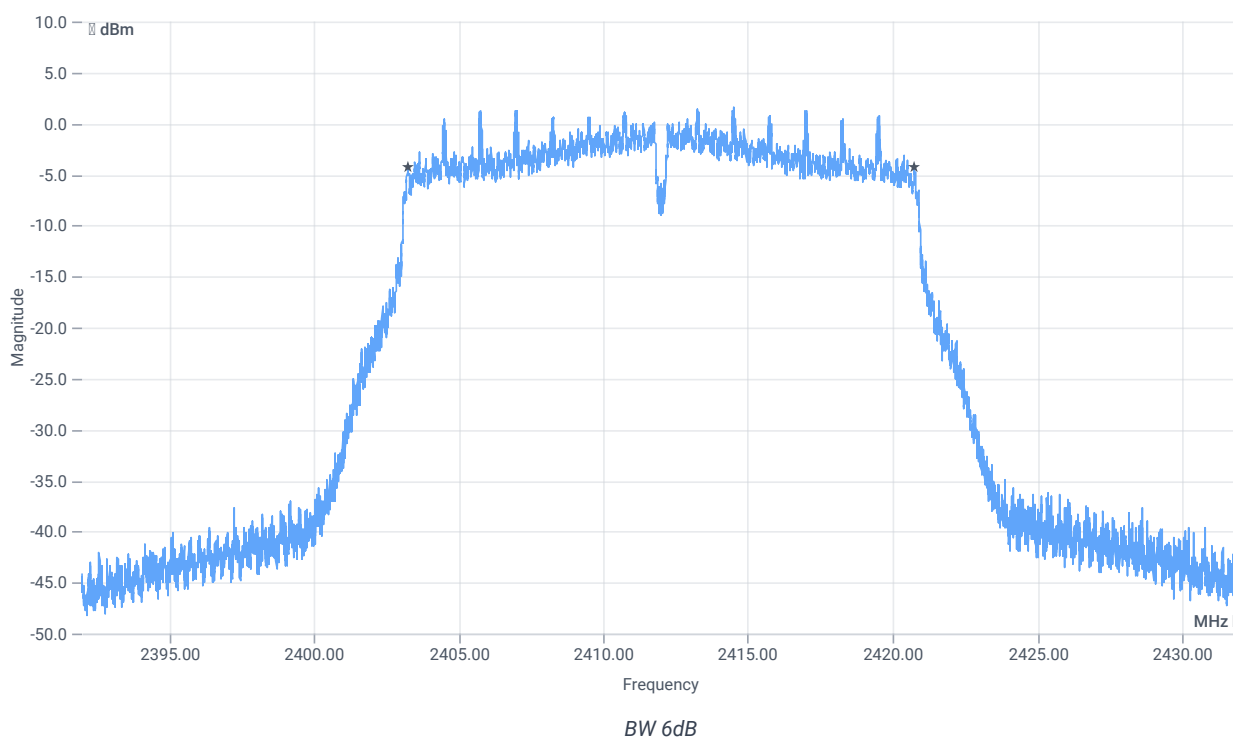
Test at TX 2412 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.72	dBm	INFO
Ref. Frequency	---	---	2413.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.72 14.43 20
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	---	17500	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:40:58
Ambit Temp [°C] Humidity [rel%]	25.6 38
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

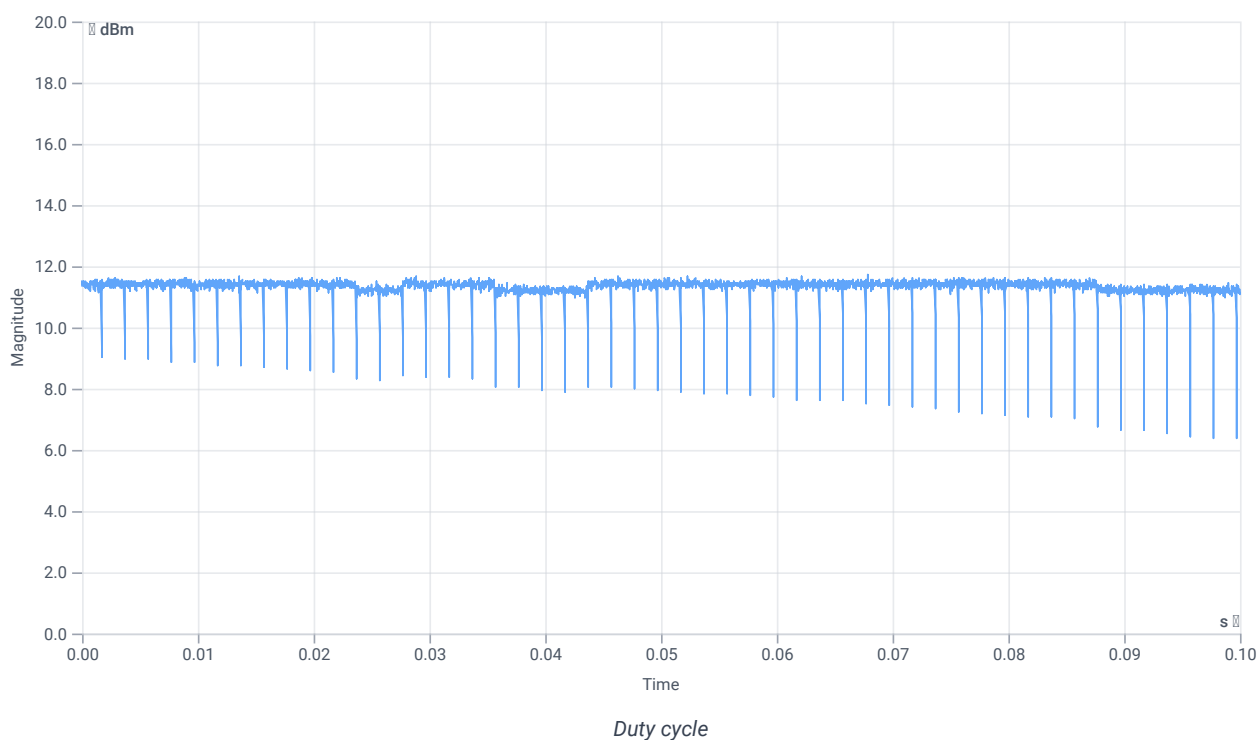
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.10	dBm	INFO
Ref. Frequency	---	---	2413.100	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



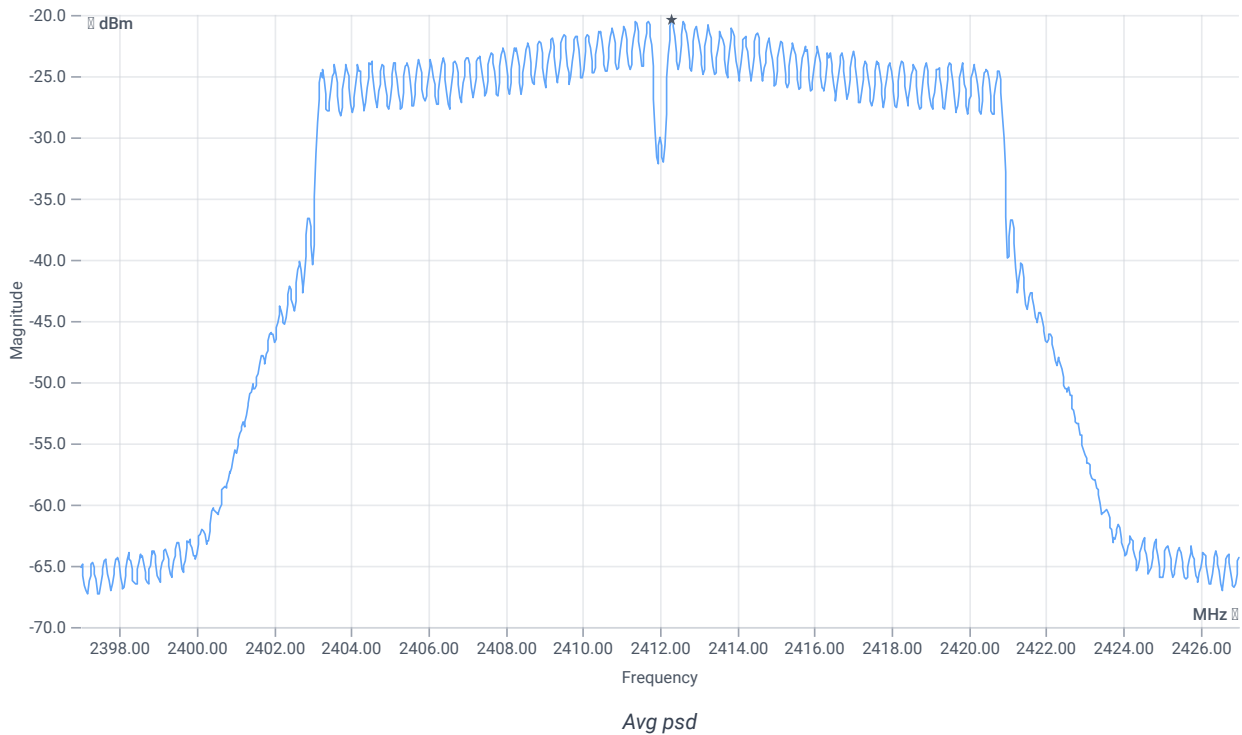
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.10 14.43 20
Start [MHz] Stop [MHz]	2397.000 2427.000

READ SA SETTINGS:

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	---	---	-20.46	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-20.46	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:42:01
Ambit Temp [°C] Humidity [rel%]	25.5 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

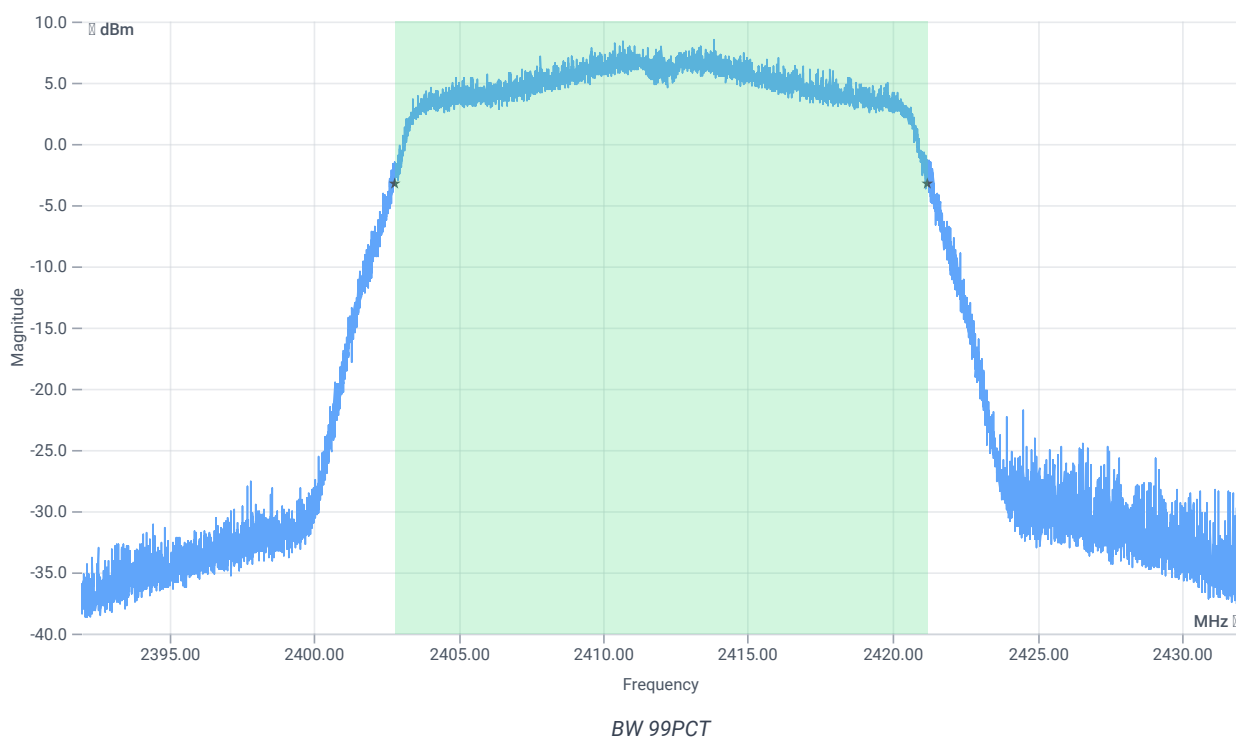
Test at TX 2412 MHz

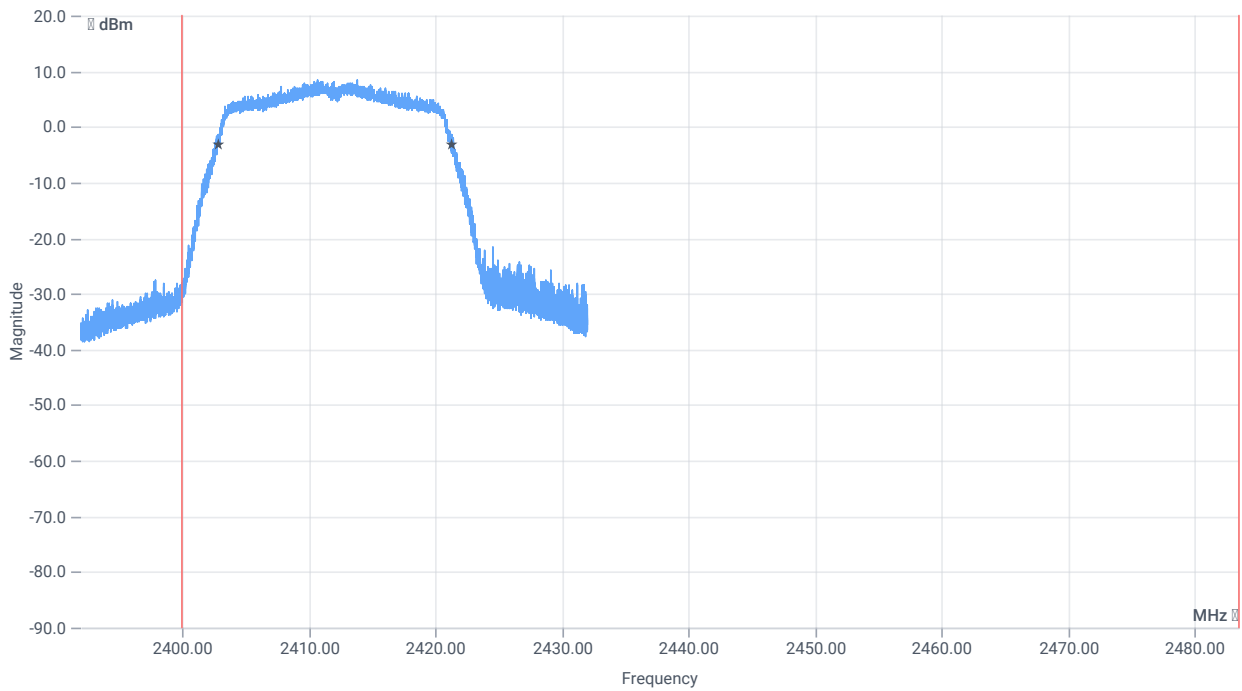
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.37	dBm	INFO
Ref. Frequency	---	---	2413.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.37 14.43 20
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

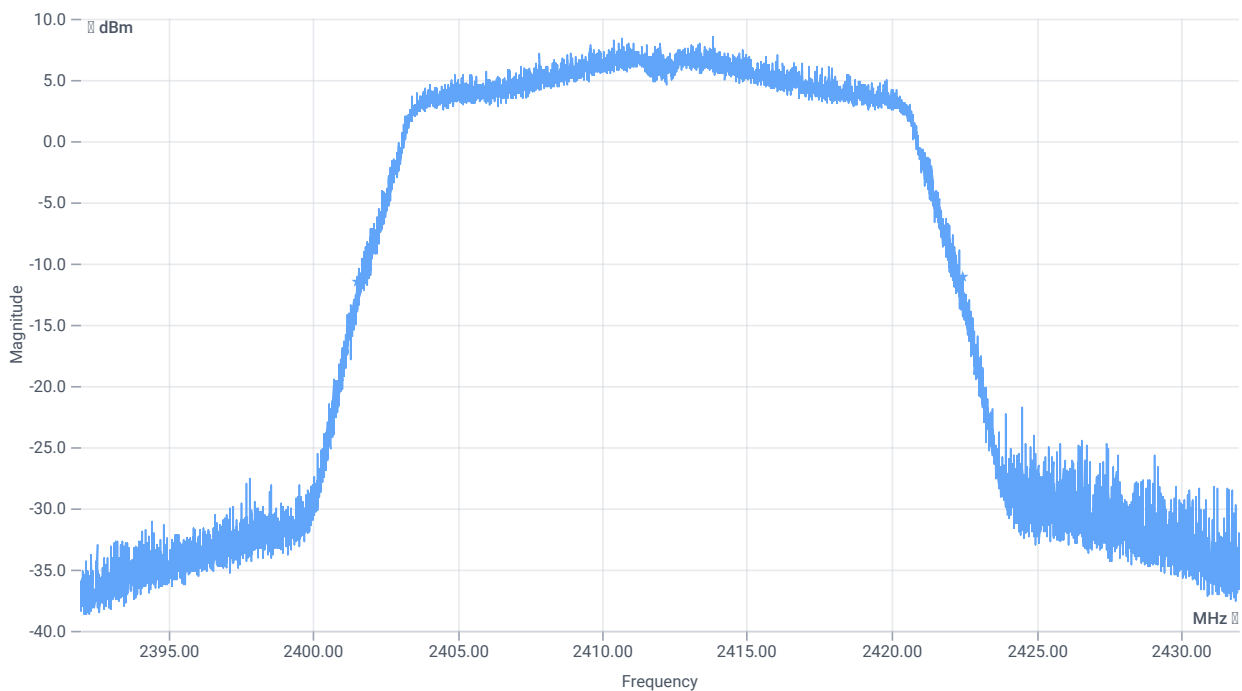




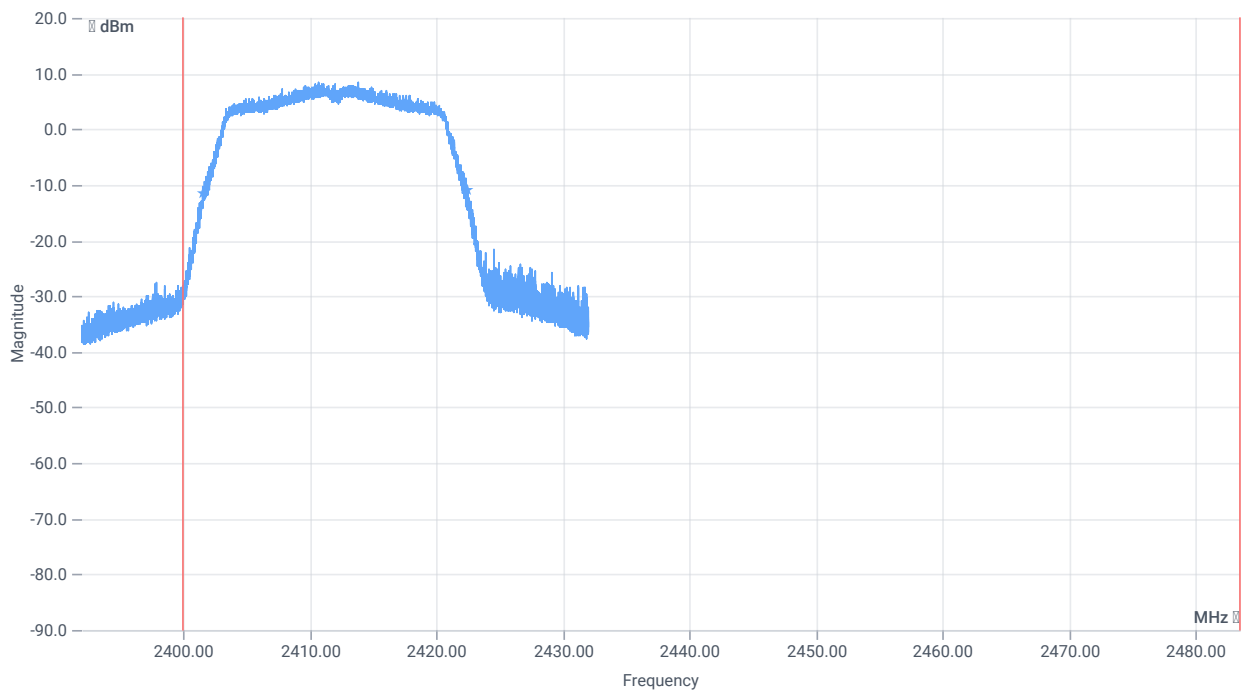
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18406.000	kHz	INFO
T1 99%	2400.000000	---	2402.8089	MHz	PASS
T2 99%	---	2483.500000	2421.2151	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20936	kHz	INFO
T1 20dB	2400.000000	---	2401.5160	MHz	PASS
T2 20dB	---	2483.500000	2422.4520	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:42:39
Ambit Temp [°C] Humidity [rel%]	25.6 38
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

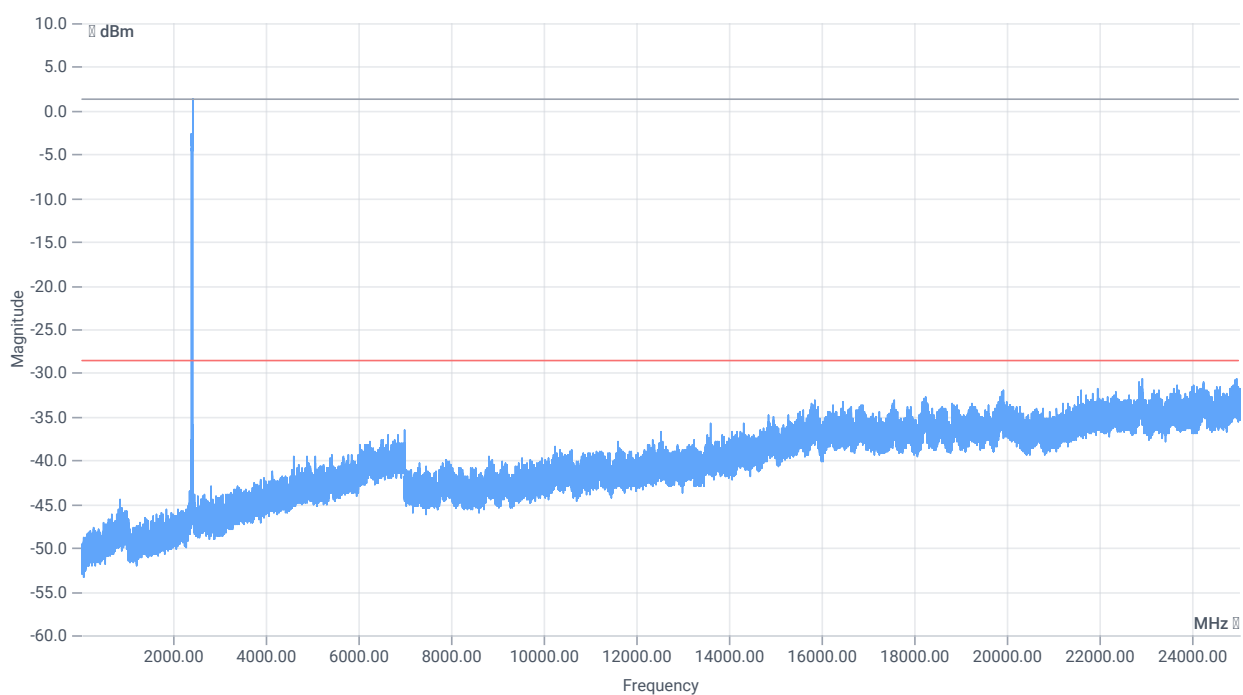
Test Equipment

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.

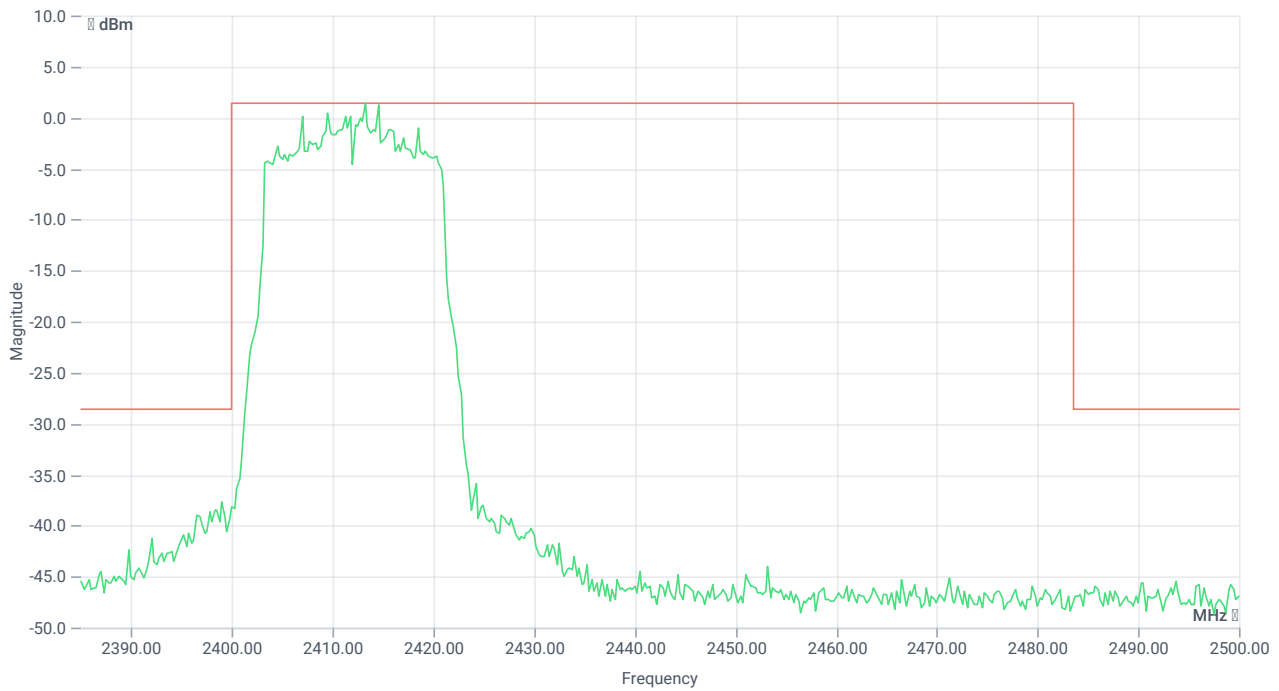
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.16	dBm	INFO
Ref. Frequency	---	---	2413.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	10.16 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2413.25 MHz	---	---	1.39	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 22921.25 MHz	0	---	2.02	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:49:20
Ambit Temp [°C] Humidity [rel%]	25.6 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

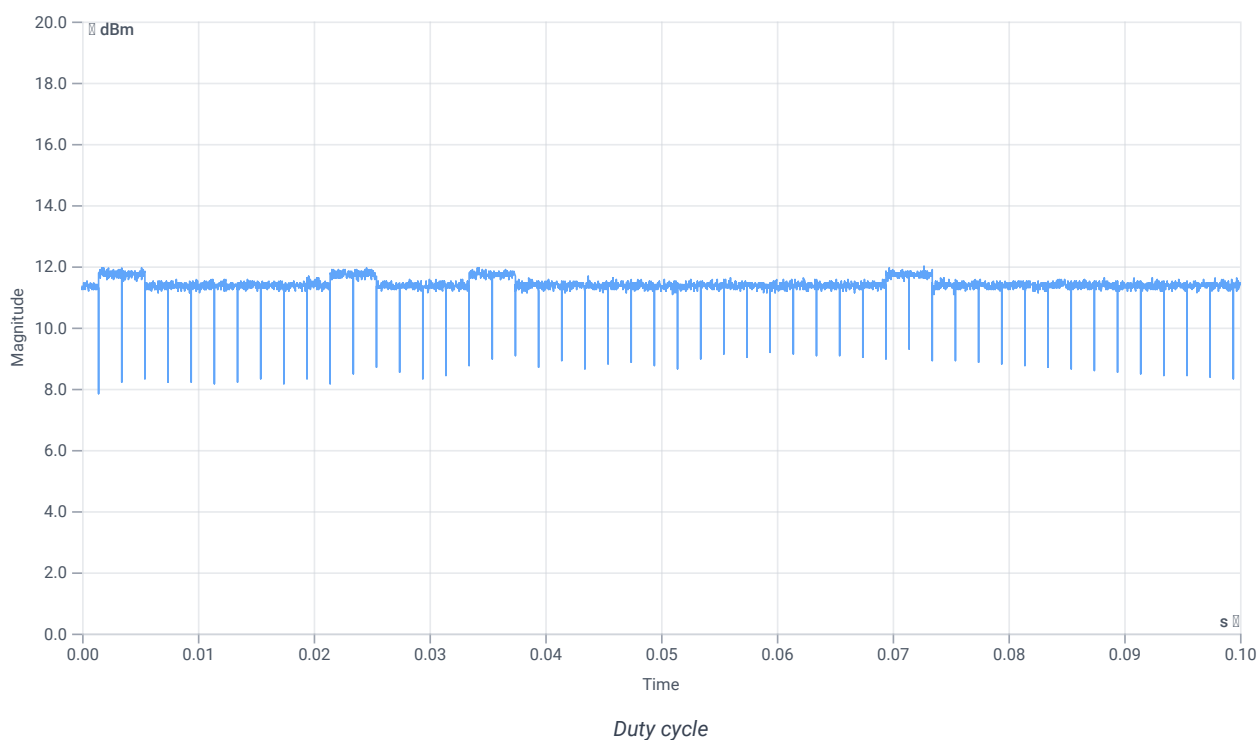
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.46	dBm	INFO
Ref. Frequency	---	---	2410.800	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



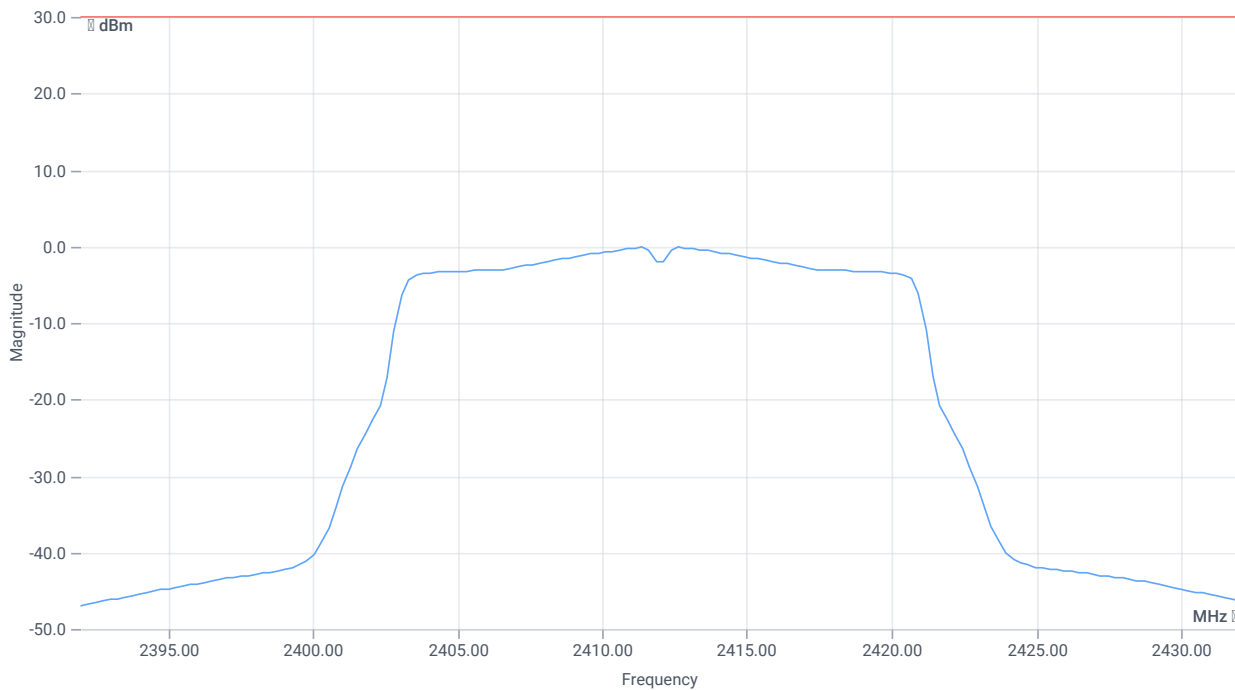
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.46 14.43 25
Start [MHz] Stop [MHz]	2392.000 2432.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	13.24	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	13.24	dBm	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:50:34
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

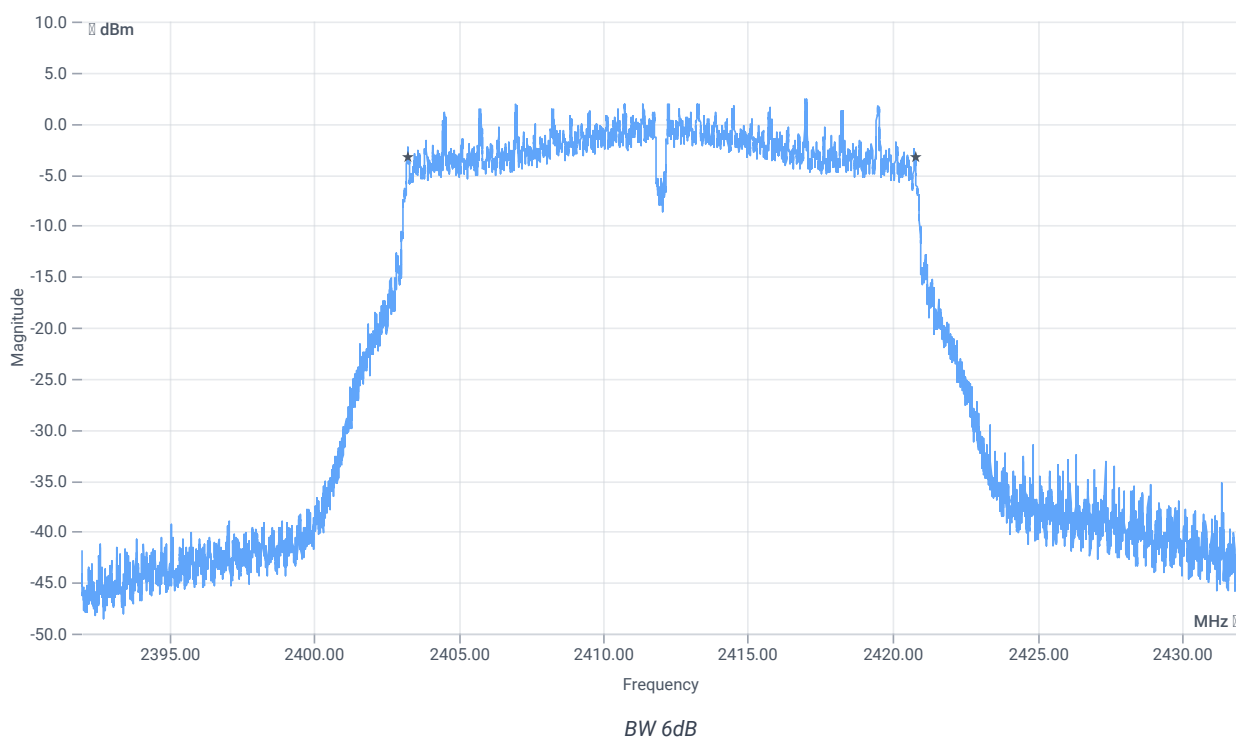
Test at TX 2412 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	12.02	dBm	INFO
Ref. Frequency	---	---	2410.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.02 14.43 20
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	---	17556	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:51:09
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

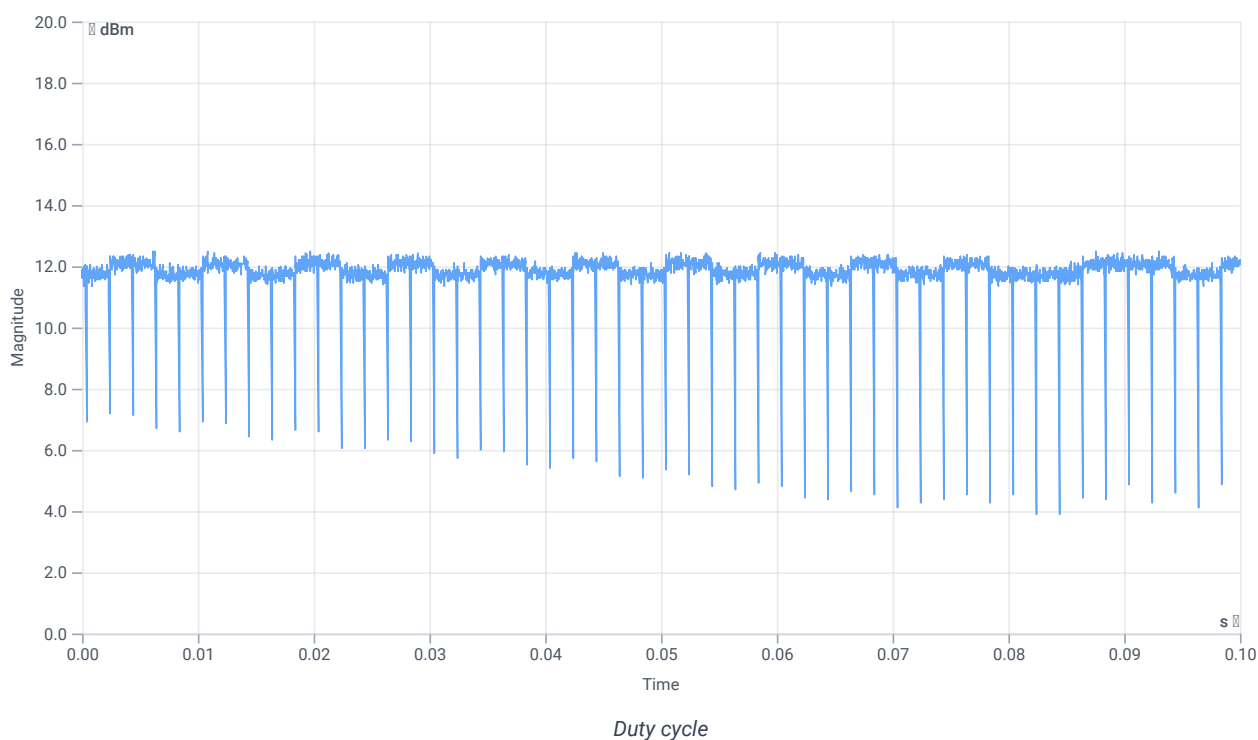
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.28	dBm	INFO
Ref. Frequency	---	---	2413.800	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



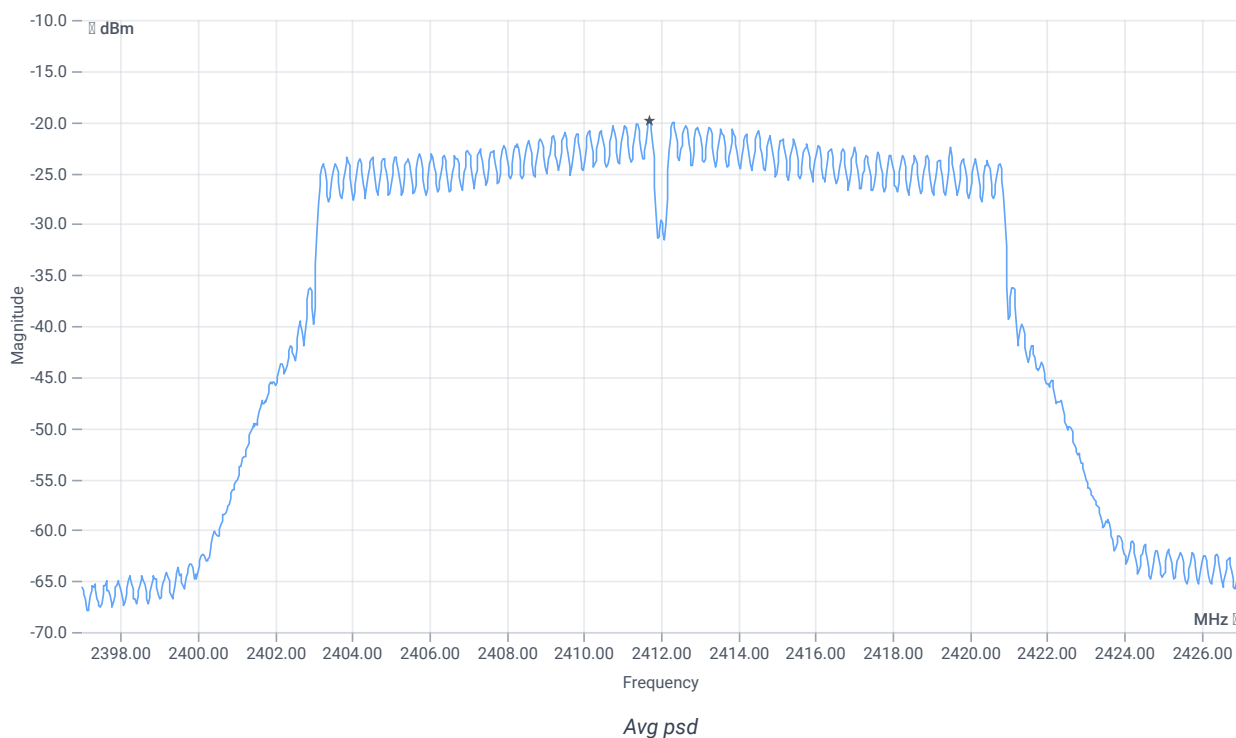
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.28 14.43 20
Start [MHz] Stop [MHz]	2397.000 2427.000

READ SA SETTINGS:

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	---	---	-19.93	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-19.93	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:52:12
Ambit Temp [°C] Humidity [rel%]	25.6 38
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

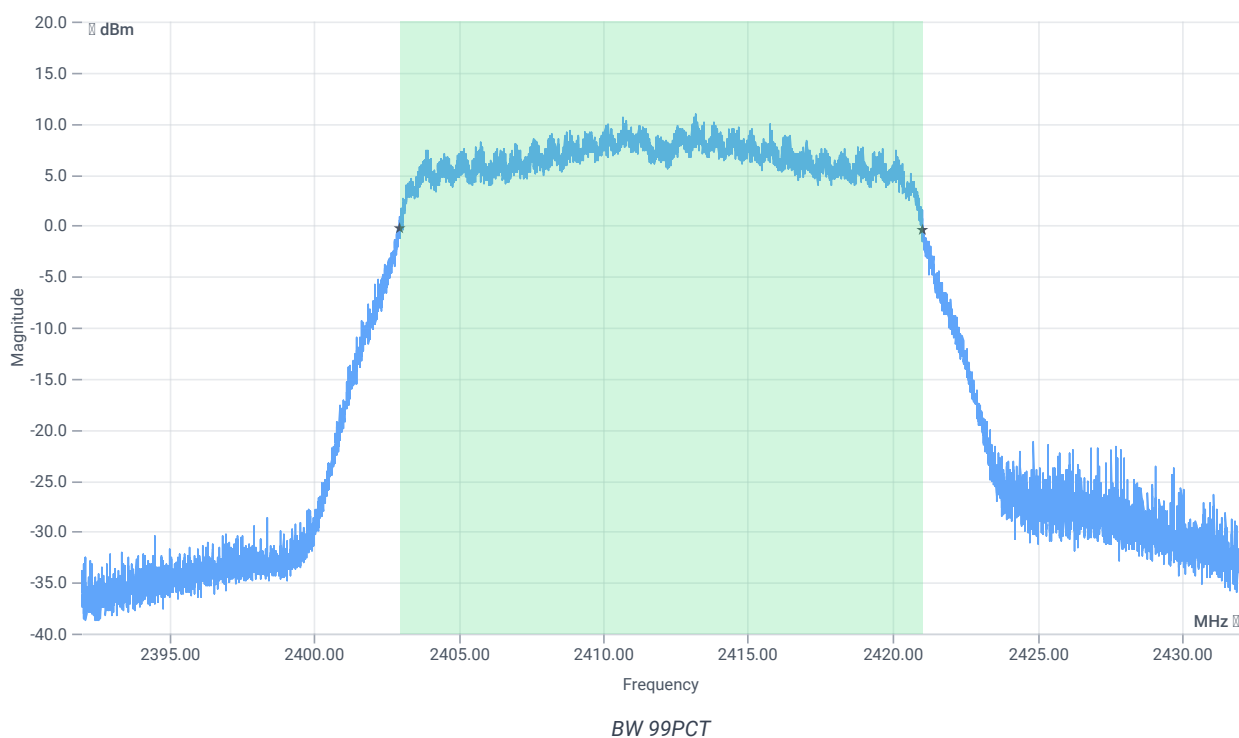
Test at TX 2412 MHz

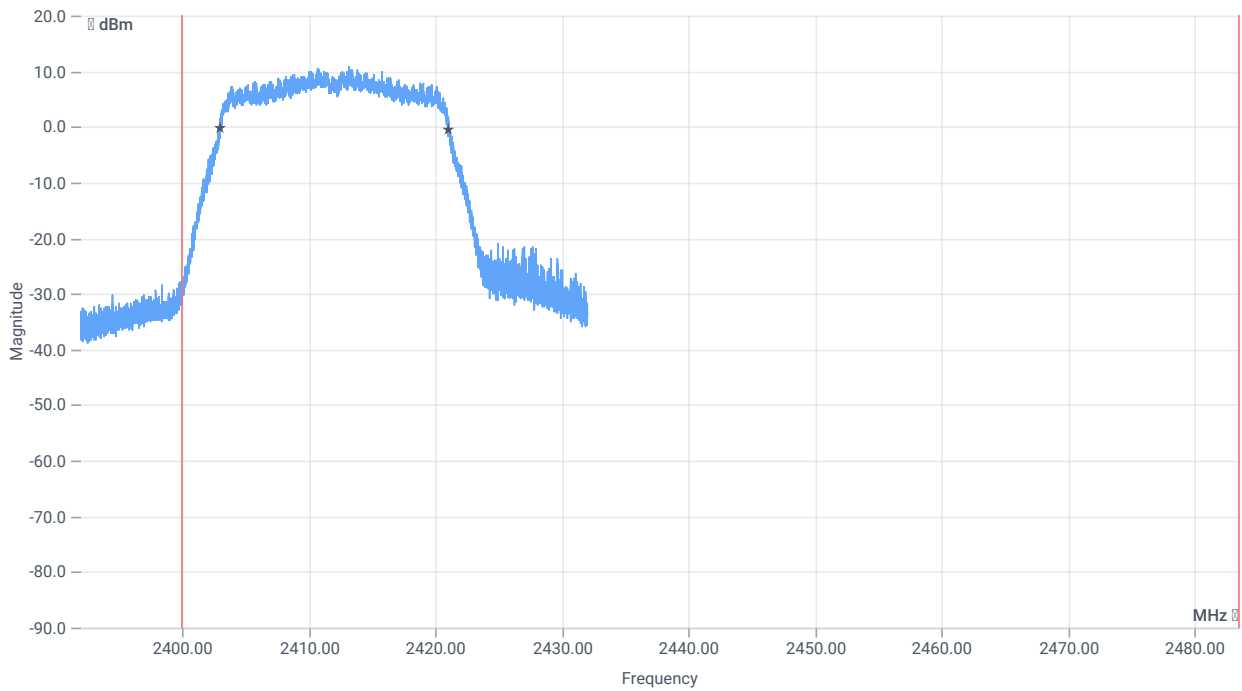
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.80	dBm	INFO
Ref. Frequency	---	---	2410.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.80 14.43 20
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

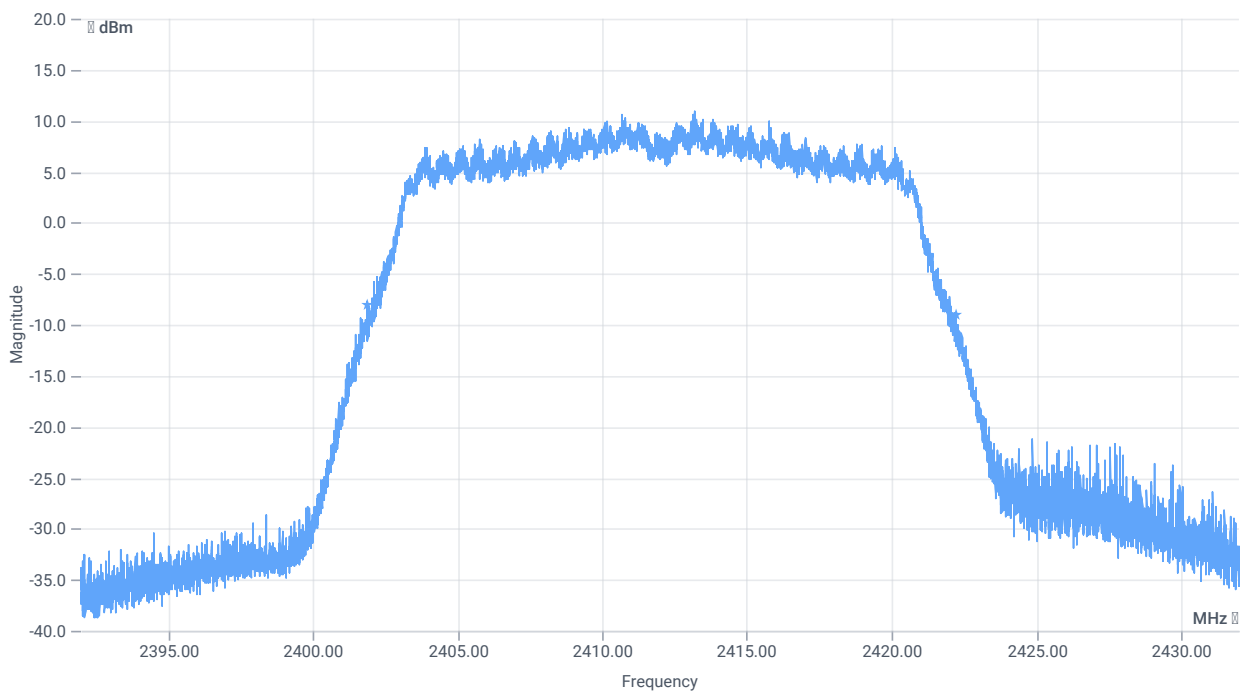




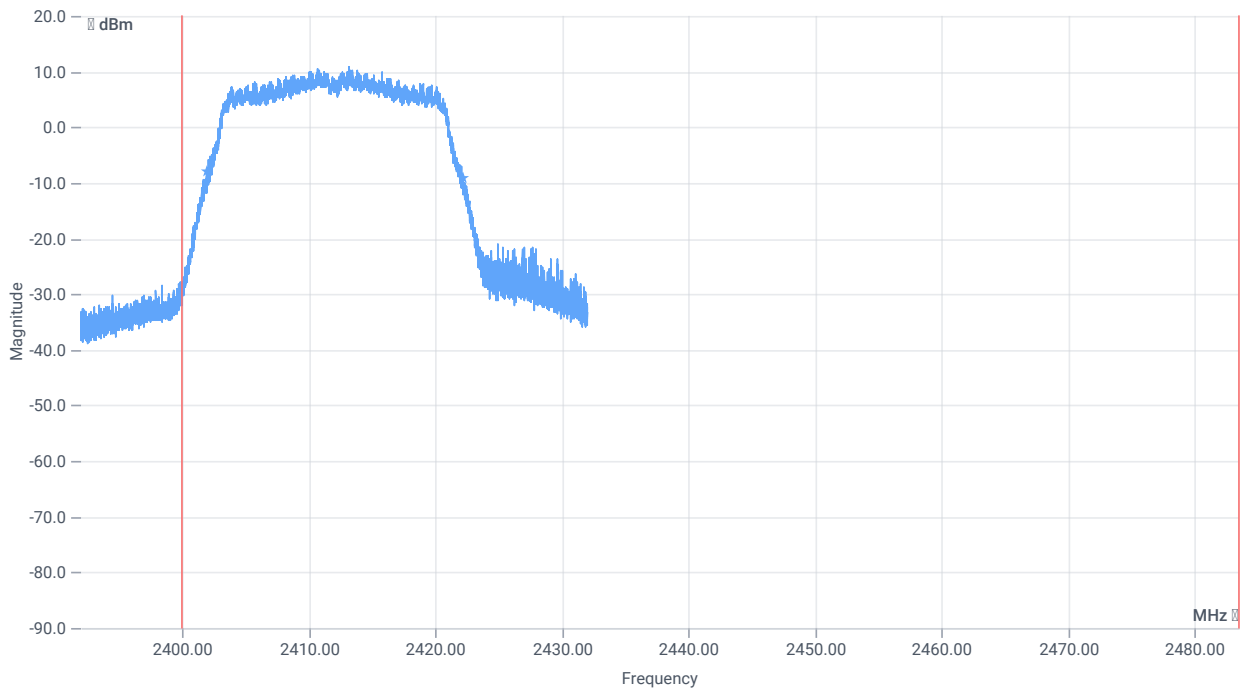
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18022.000	kHz	INFO
T1 99%	2400.000000	---	2402.9969	MHz	PASS
T2 99%	---	2483.500000	2421.0191	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20352	kHz	INFO
T1 20dB	2400.000000	---	2401.8800	MHz	PASS
T2 20dB	---	2483.500000	2422.2320	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:52:49
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

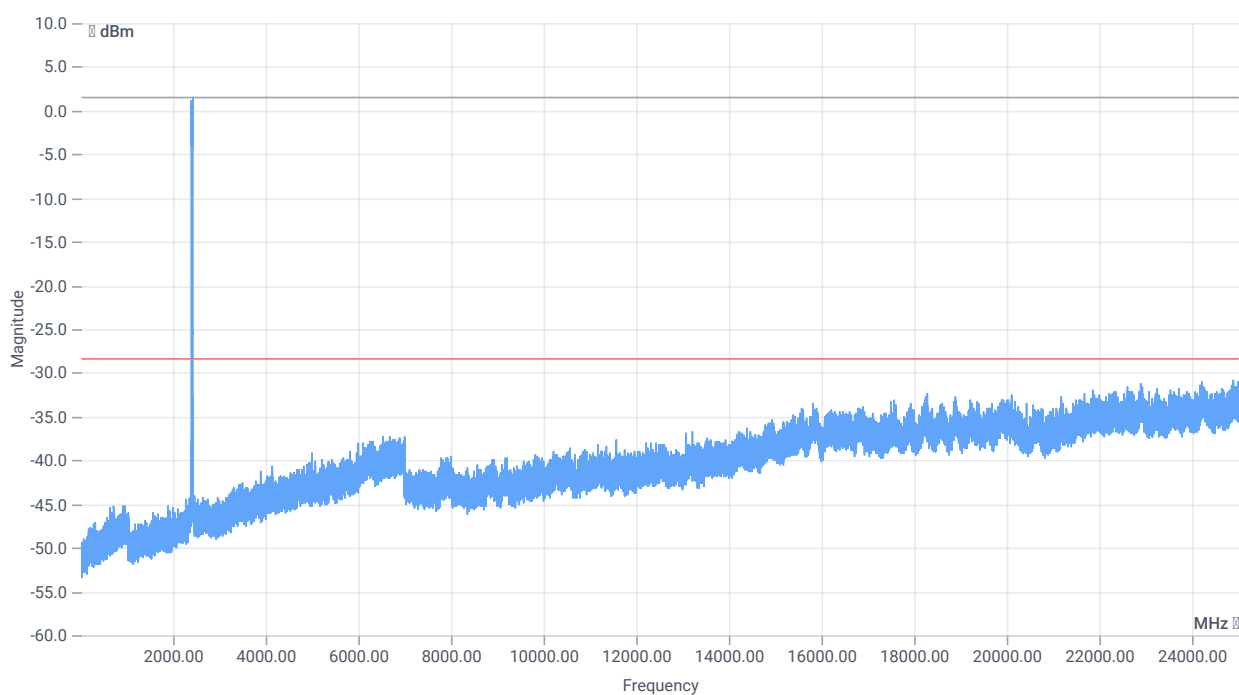
Test Equipment

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.

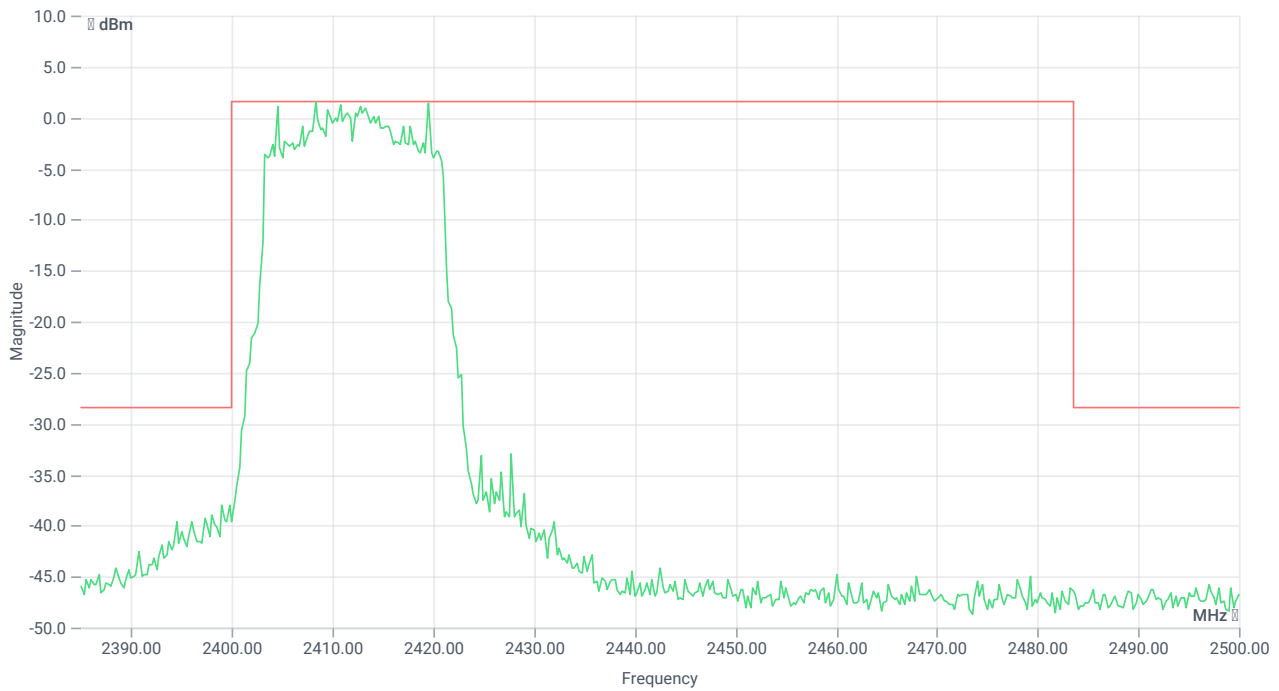
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.47	dBm	INFO
Ref. Frequency	---	---	2413.800	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	11.47 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2408.25 MHz	---	---	1.51	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24898 MHz	0	---	2.32	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 12:59:30
Ambit Temp [°C] Humidity [rel%]	25.6 38
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

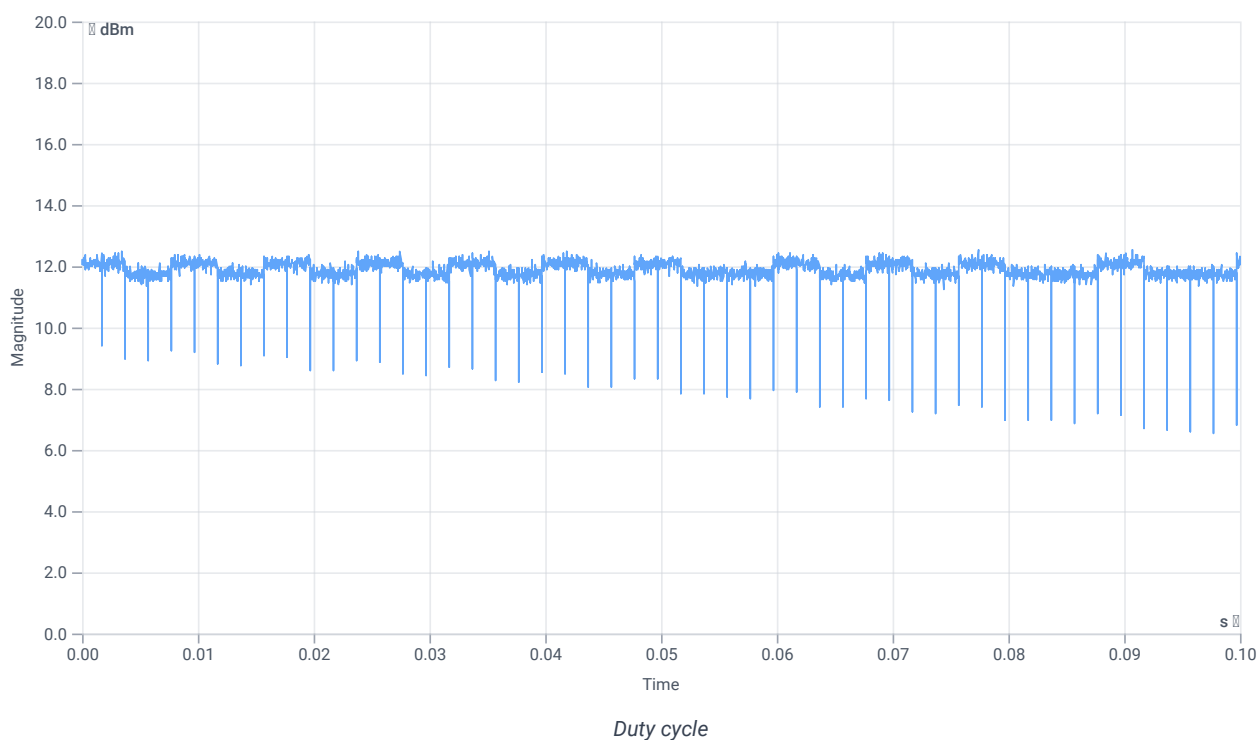
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	11.76	dBm	INFO
Ref. Frequency	---	---	2412.800	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



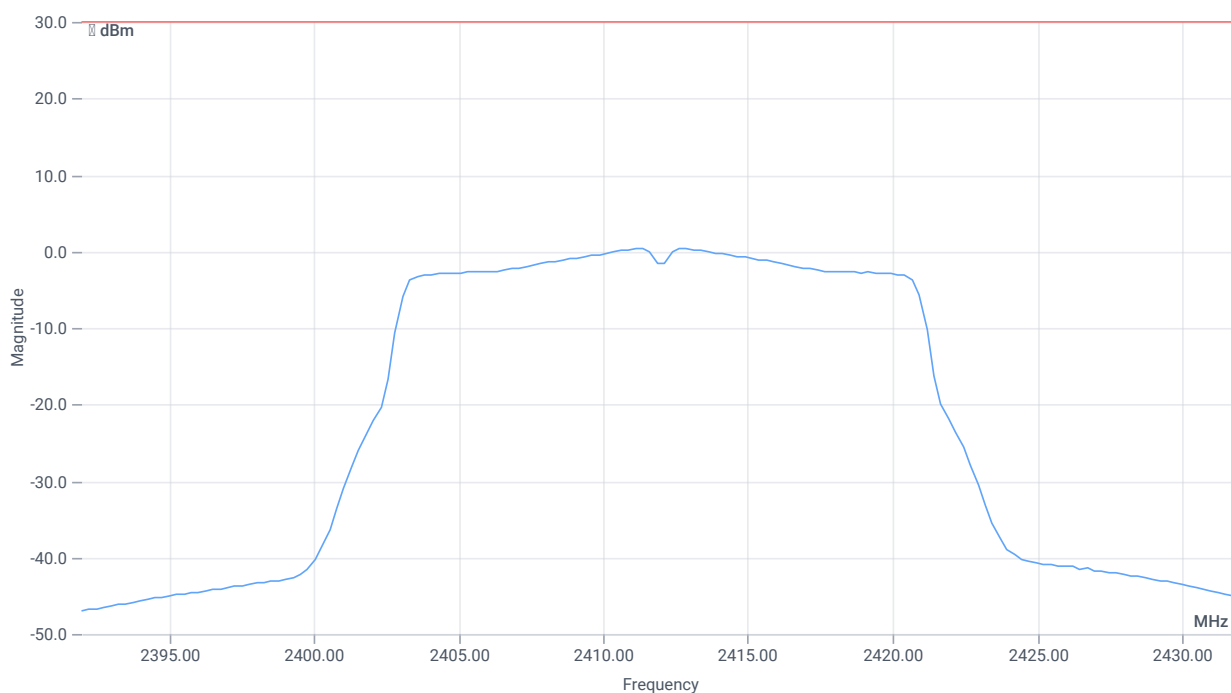
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.76 14.43 25
Start [MHz] Stop [MHz]	2392.000 2432.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	13.75	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	13.75	dBm	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	06.07.2023 13:00:45
Ambit Temp [°C] Humidity [rel%]	25.6 38
System Version	4.5.2.0
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan n-HT20 mode
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	06.07.2023 13:00:46
Message	set WLAN2G4 to n-HT20 mode, Frequency [MHz] 2437 ,

Test Equipment

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

Verdict

INFO

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:01:37
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

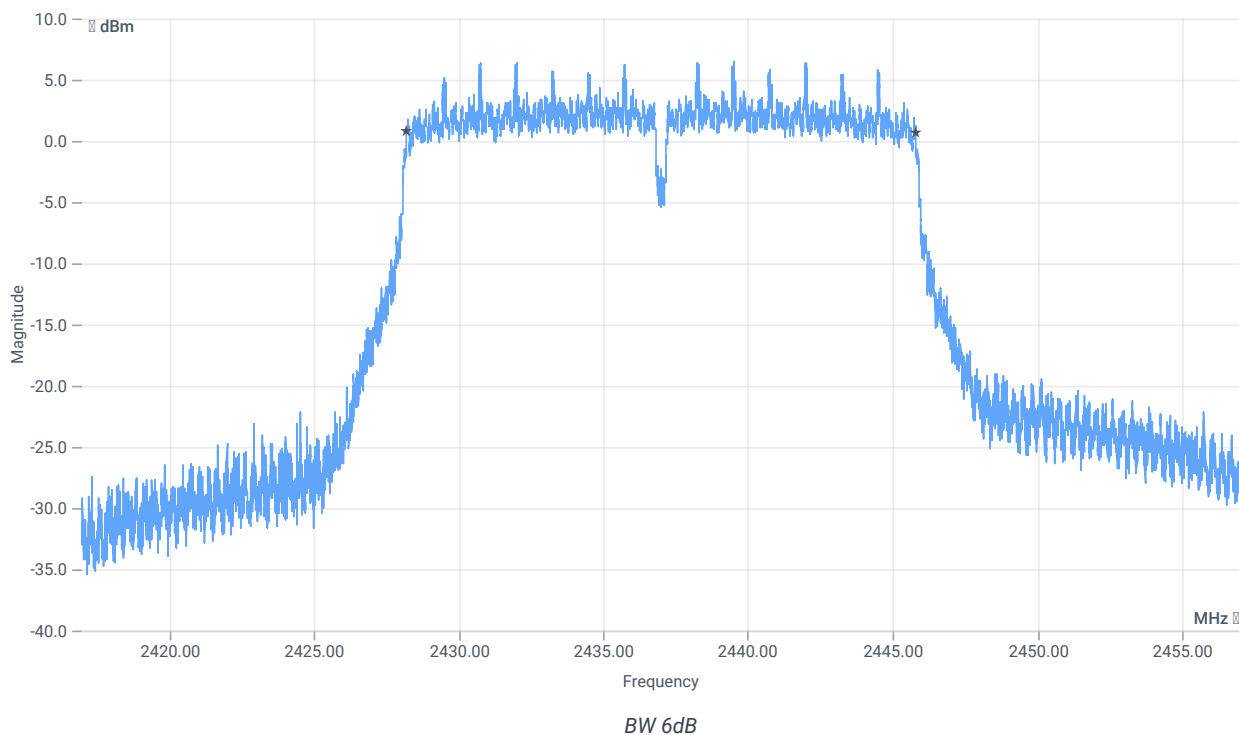
Test at TX 2437 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.46	dBm	INFO
Ref. Frequency	---	---	2439.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.46 14.2 25
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	---	17572	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:02:10
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

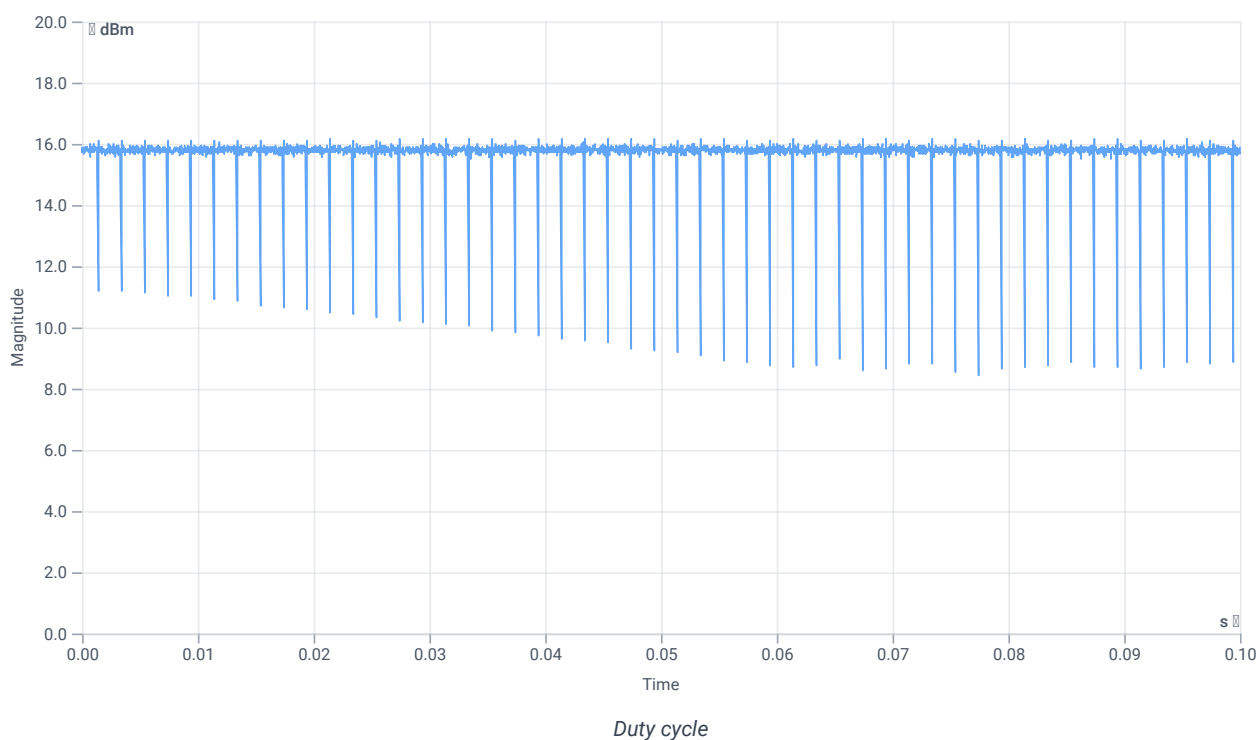
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.36	dBm	INFO
Ref. Frequency	---	---	2433.700	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



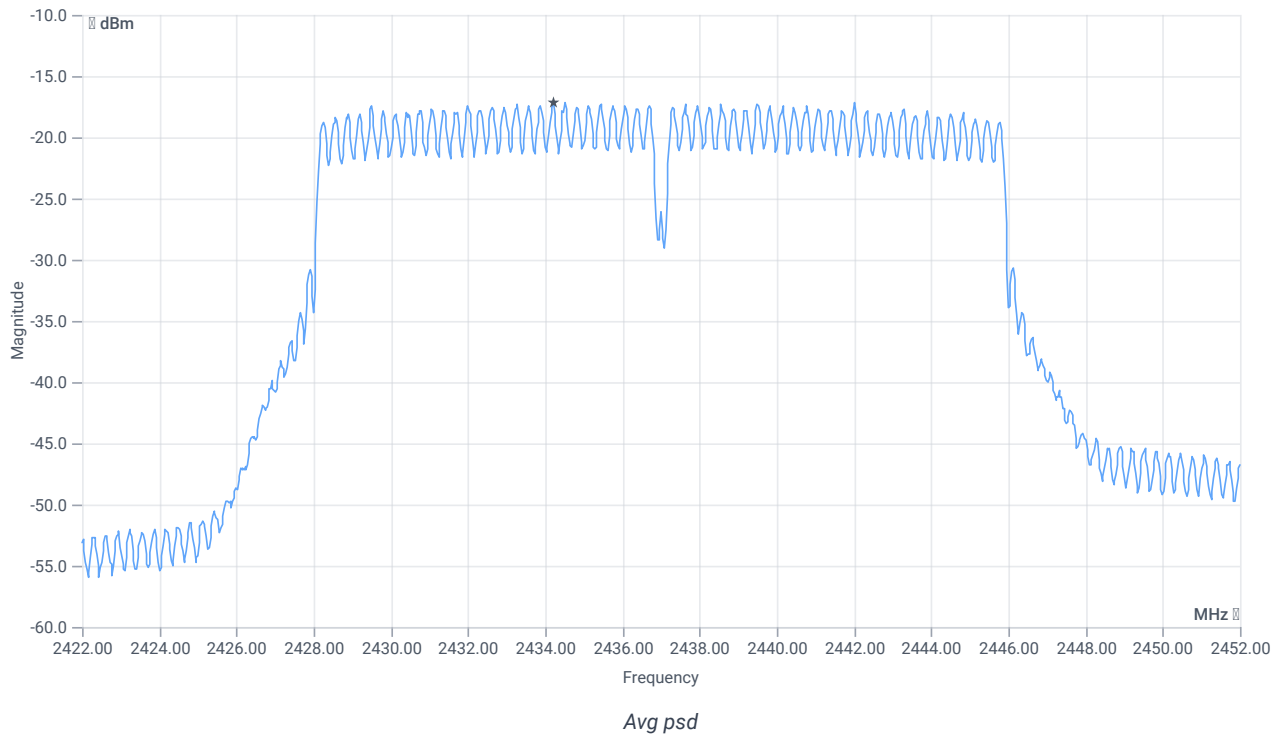
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.36 14.2 25
Start [MHz] Stop [MHz]	2422.000 2452.000

READ SA SETTINGS:

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	---	---	-17.17	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-17.17	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:03:13
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

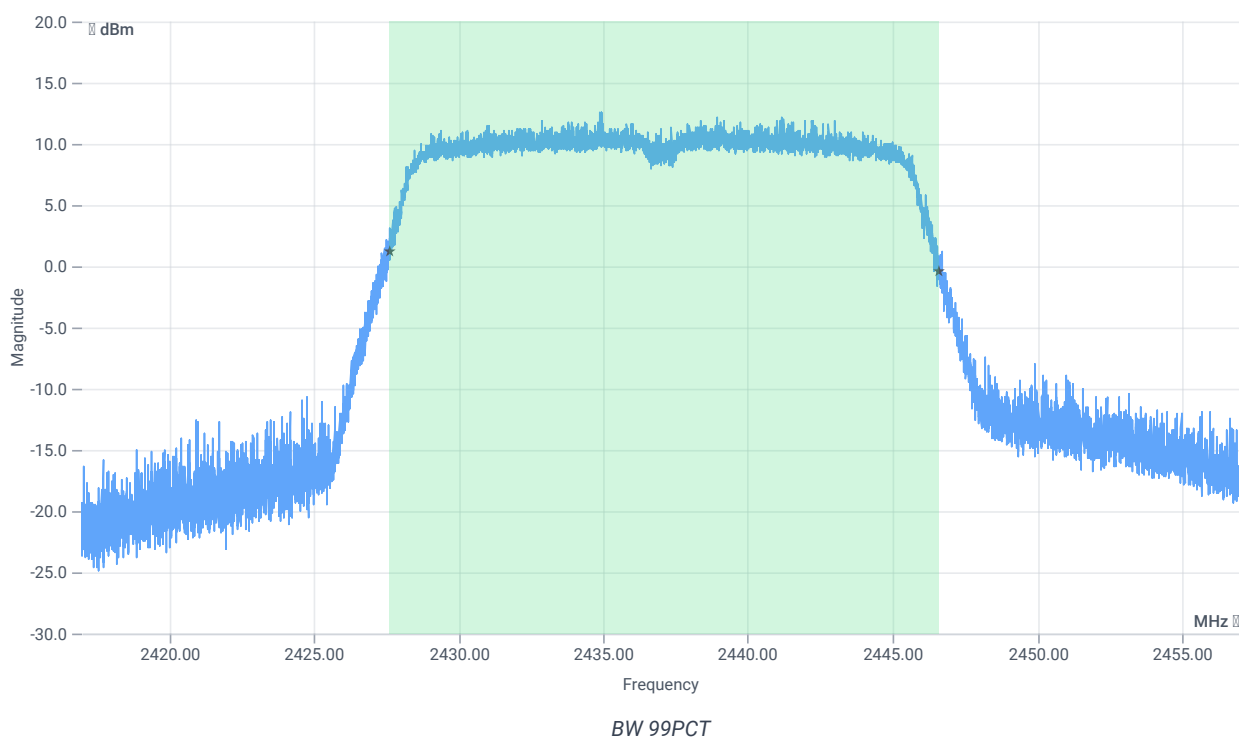
Test at TX 2437 MHz

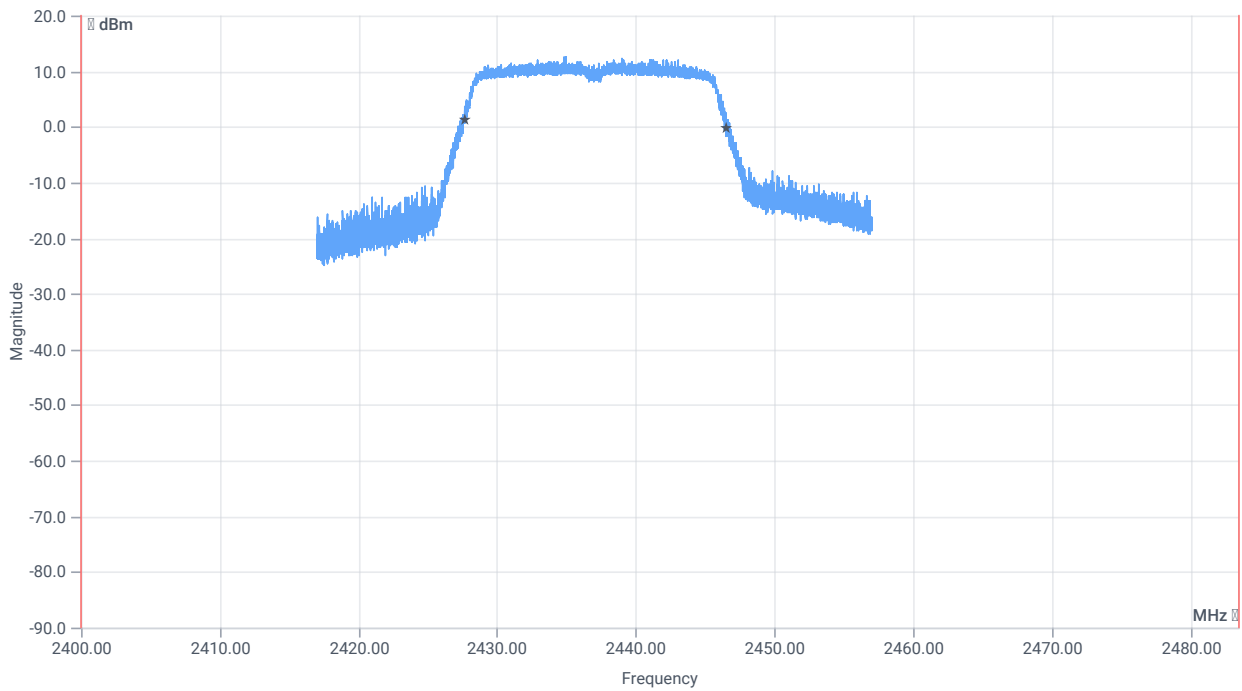
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.22	dBm	INFO
Ref. Frequency	---	---	2440.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.22 14.2 25
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

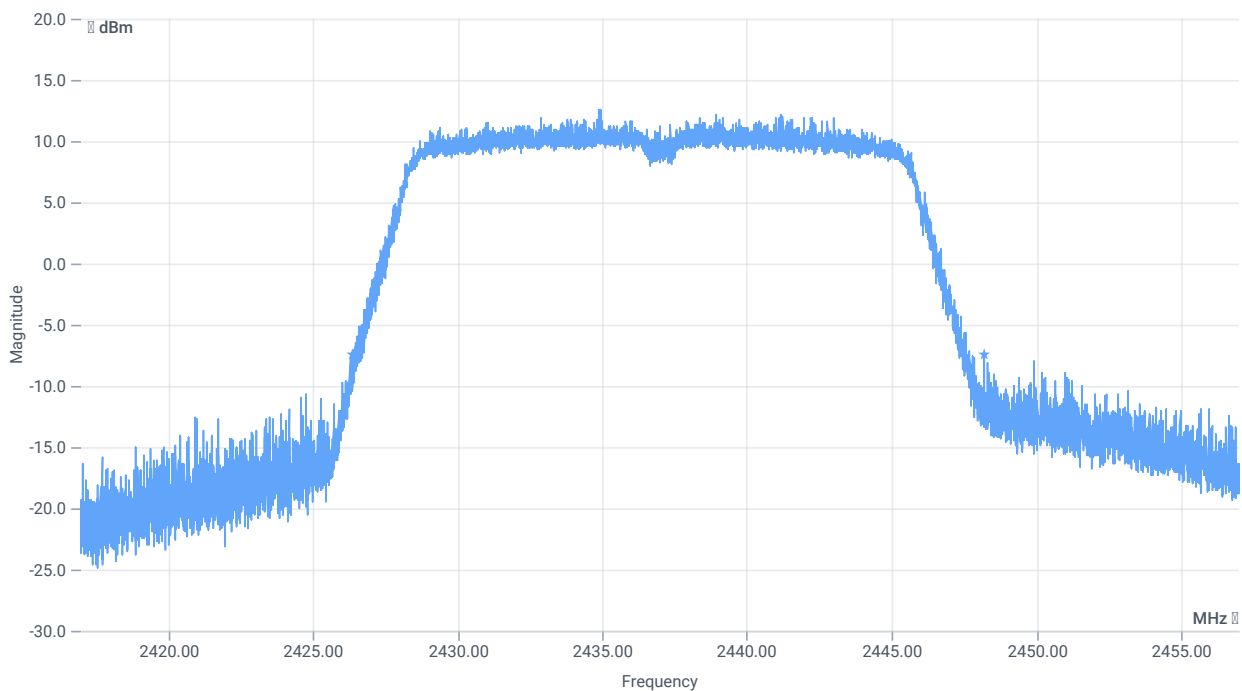




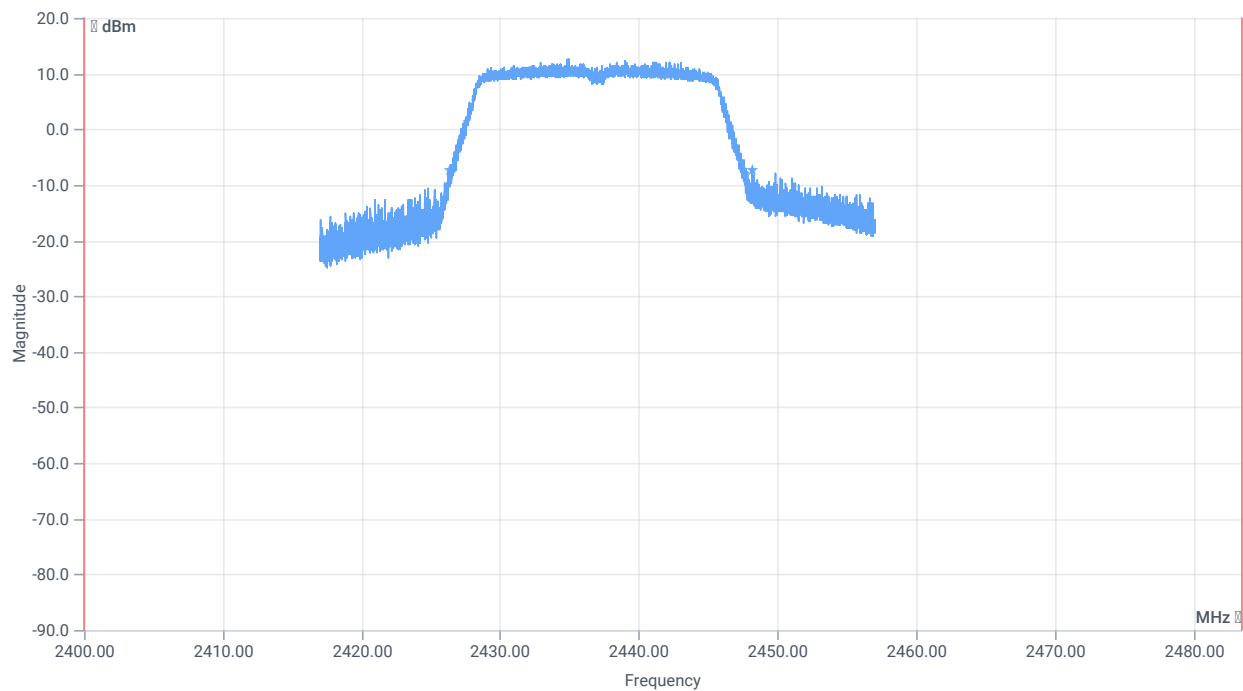
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18946.000	kHz	INFO
T1 99%	2400.000000	---	2427.6289	MHz	PASS
T2 99%	---	2483.500000	2446.5750	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	21848	kHz	INFO
T1 20dB	2400.000000	---	2426.3560	MHz	PASS
T2 20dB	---	2483.500000	2448.2040	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:03:50
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

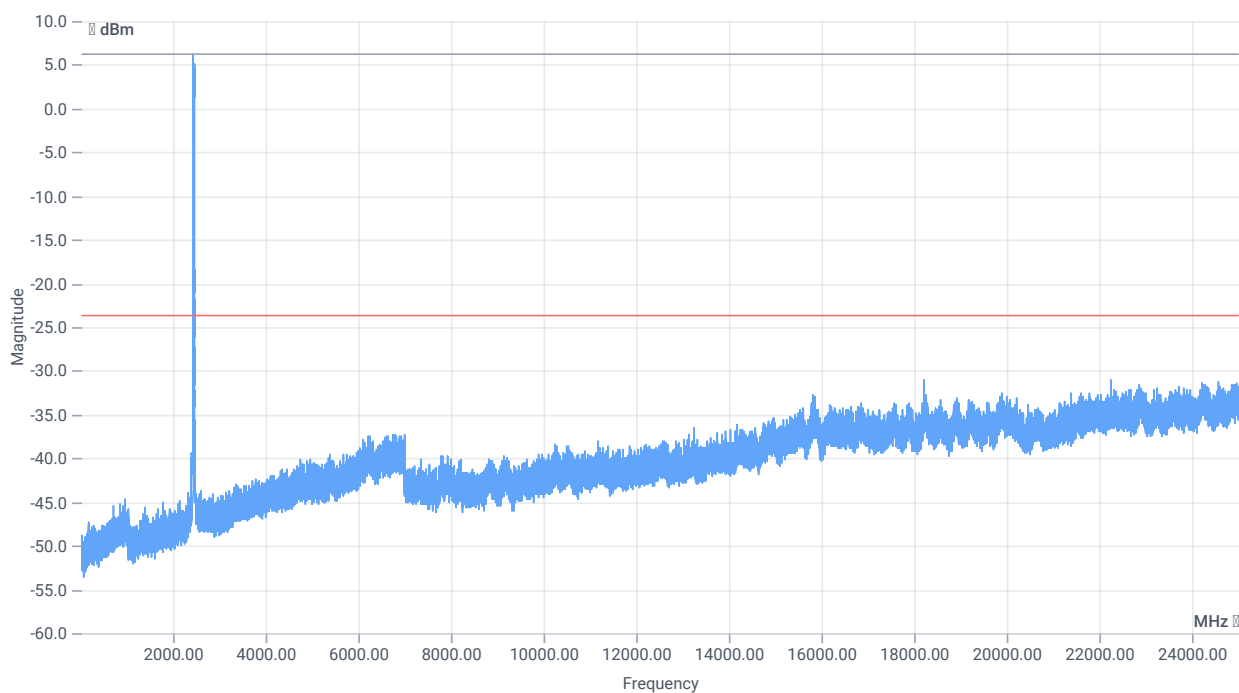
Test Equipment

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.

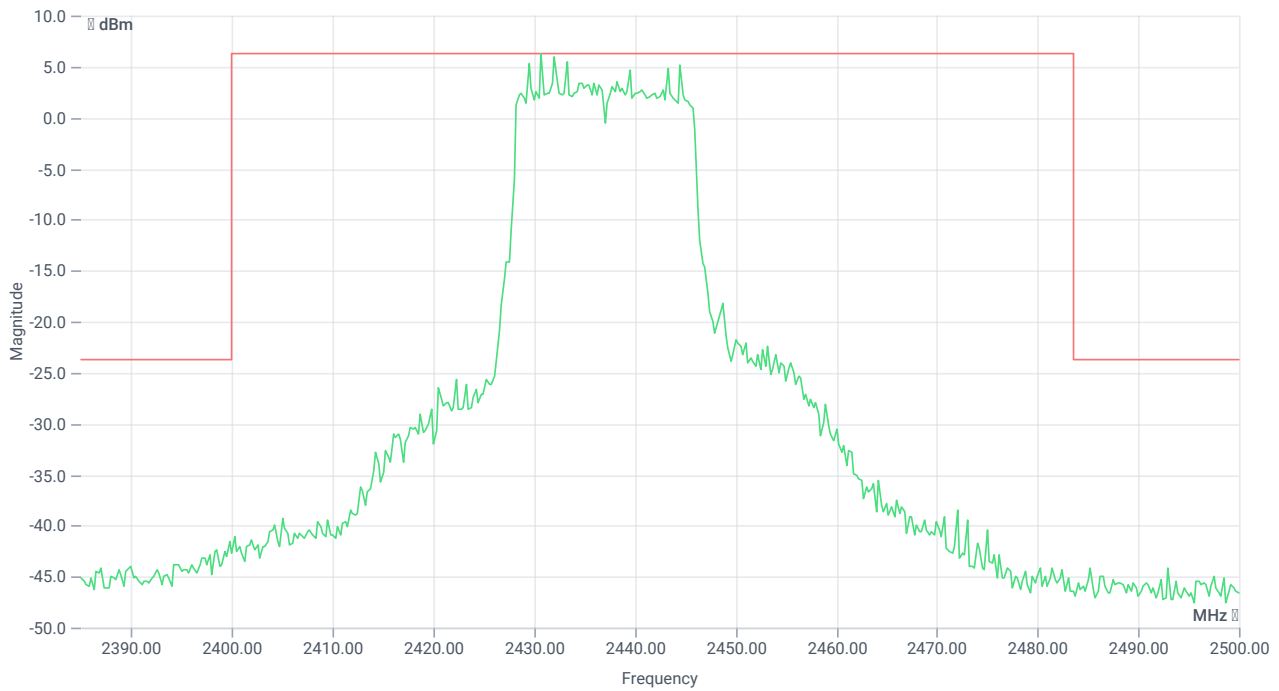
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.25	dBm	INFO
Ref. Frequency	---	---	2434.500	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.25 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2430.75 MHz	---	---	6.24	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 22247.5 MHz	0	---	7.22	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:10:31
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

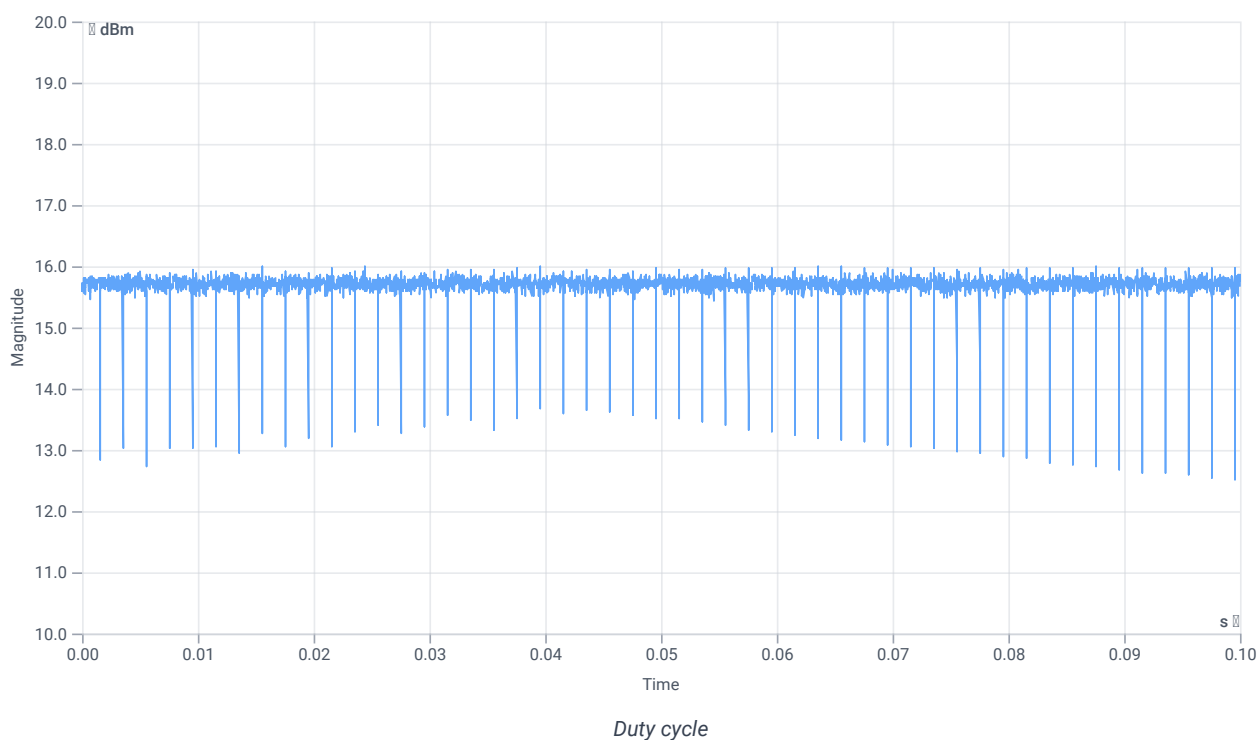
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.13	dBm	INFO
Ref. Frequency	---	---	2432.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



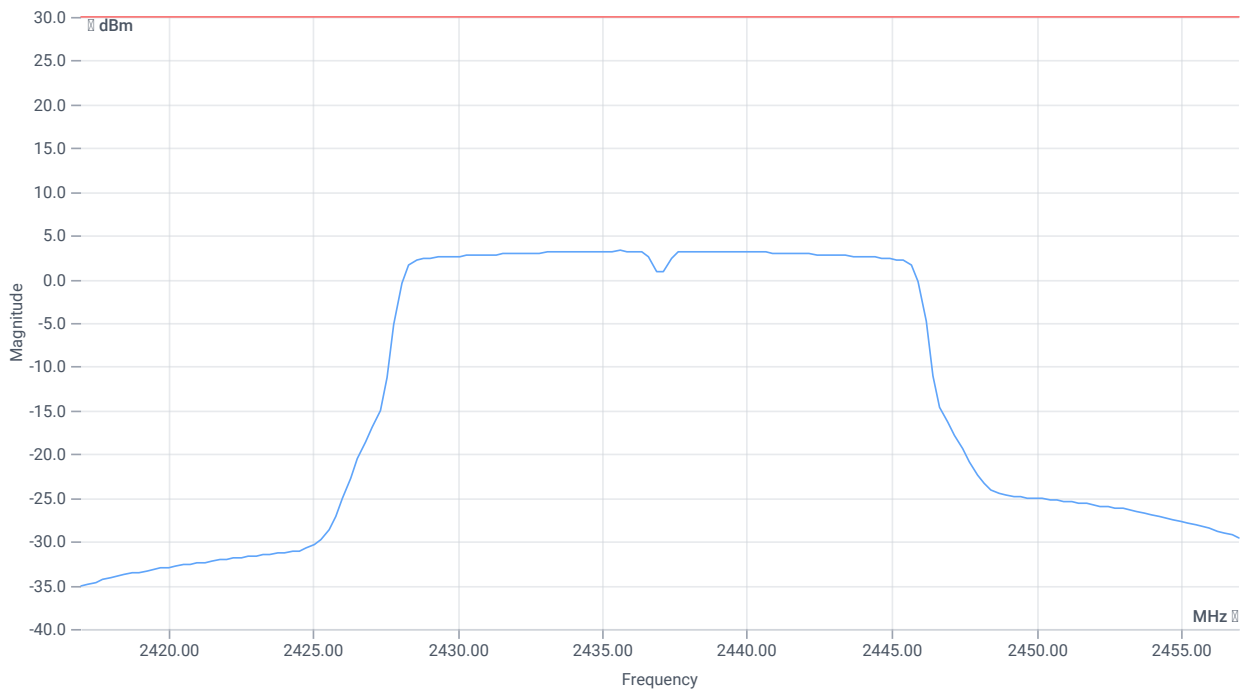
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	24.13 14.2 25
Start [MHz] Stop [MHz]	2417.000 2457.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	18.06	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	18.06	dBm	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:11:46
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

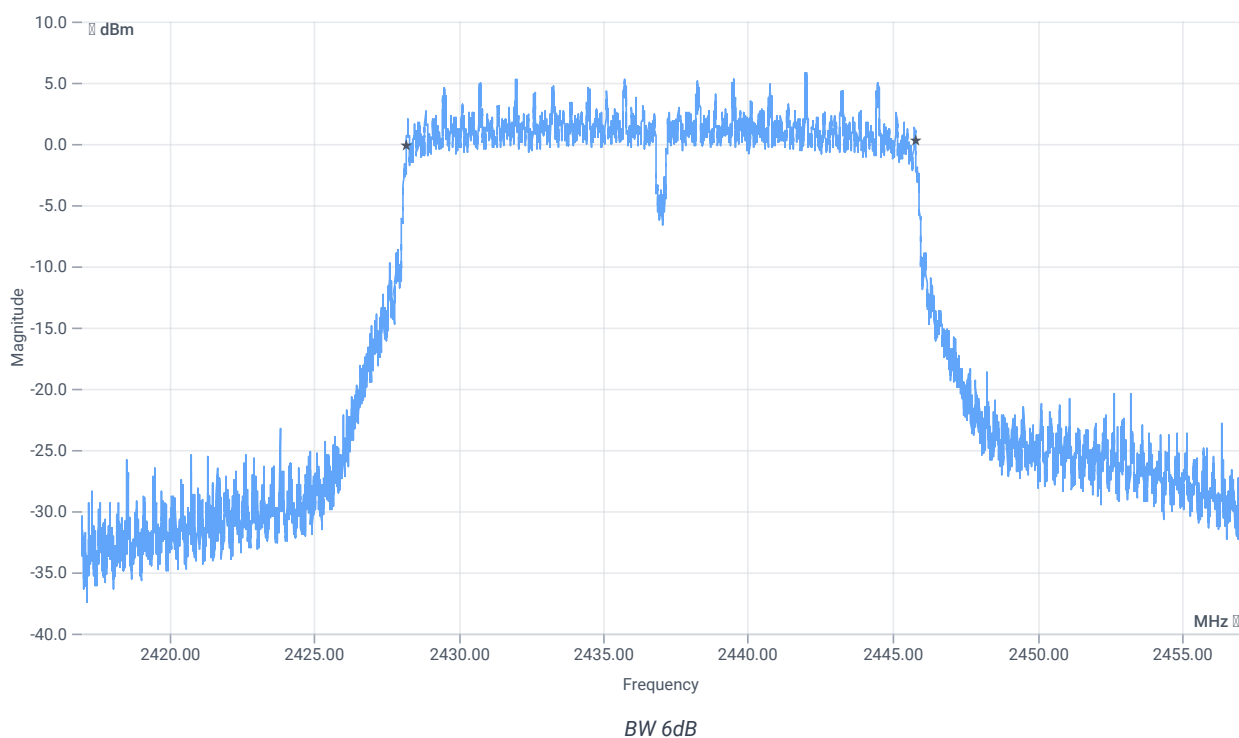
Test at TX 2437 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.51	dBm	INFO
Ref. Frequency	---	---	2438.700	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.51 14.2 25
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	---	17584	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:12:19
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

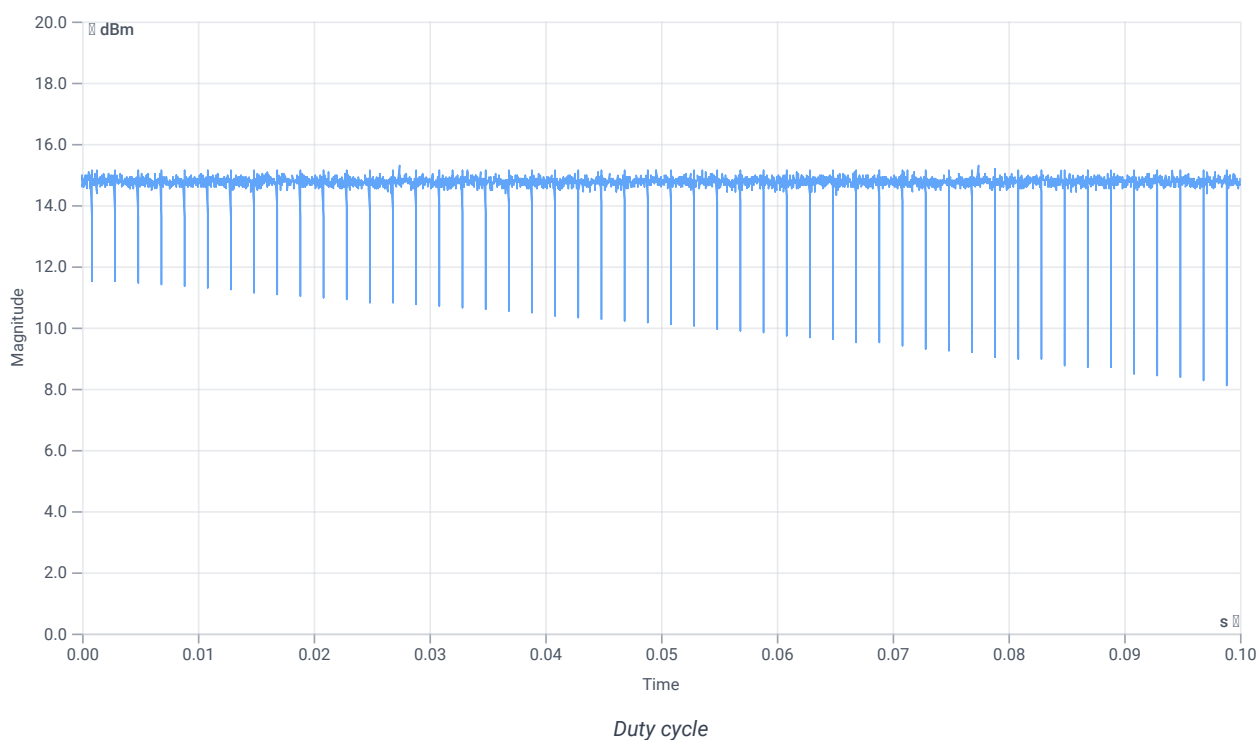
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	13.81	dBm	INFO
Ref. Frequency	---	---	2434.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



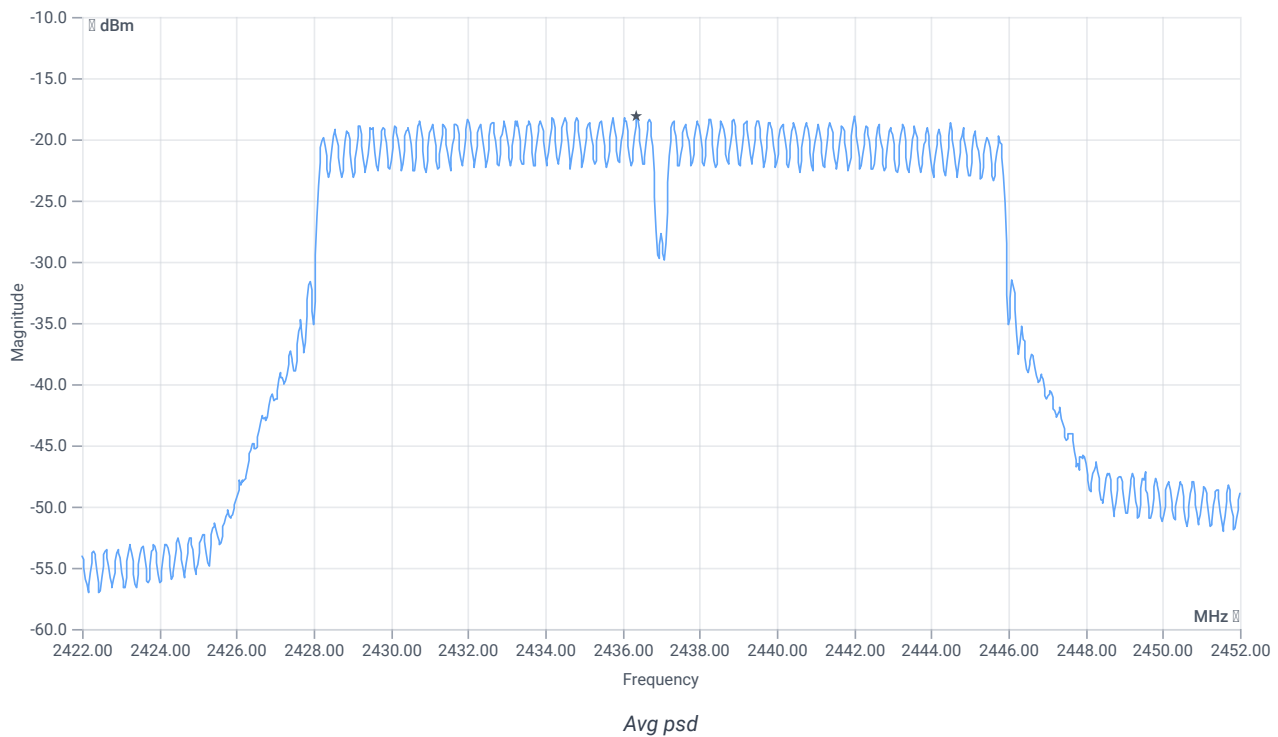
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.81 14.2 20
Start [MHz] Stop [MHz]	2422.000 2452.000

READ SA SETTINGS:

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	---	---	-18.08	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-18.08	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:13:22
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

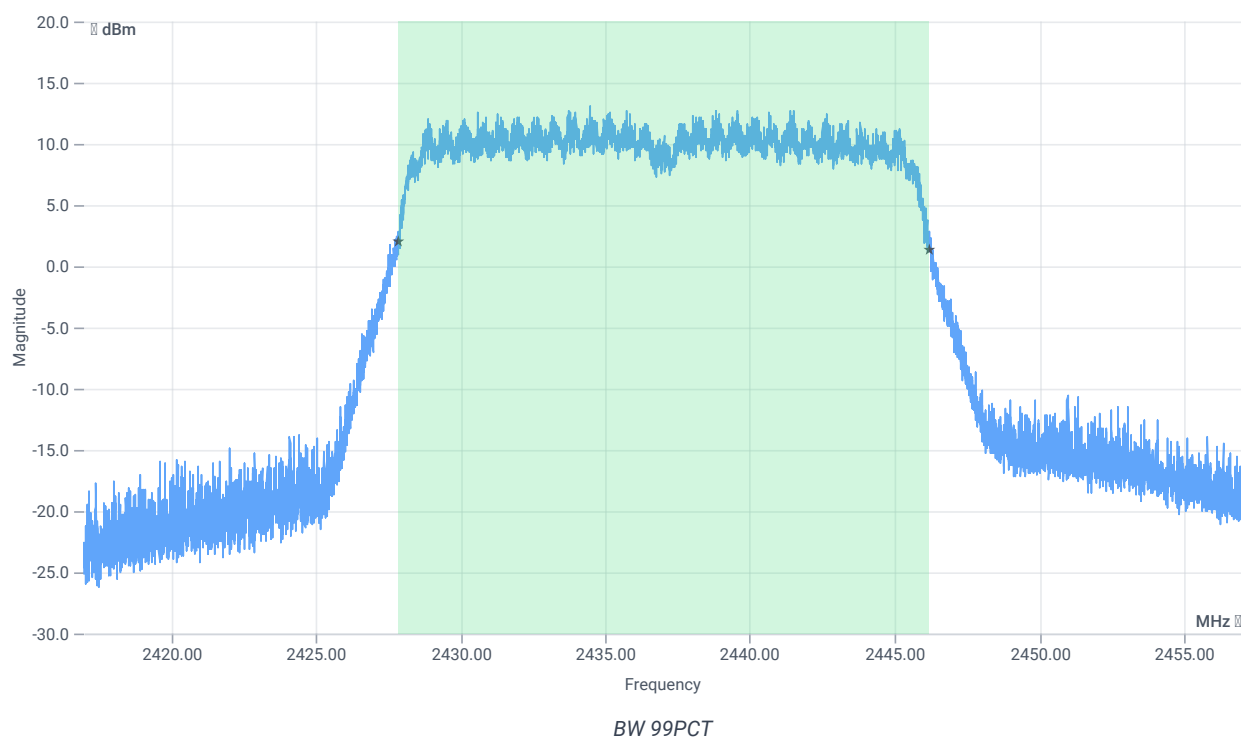
Test at TX 2437 MHz

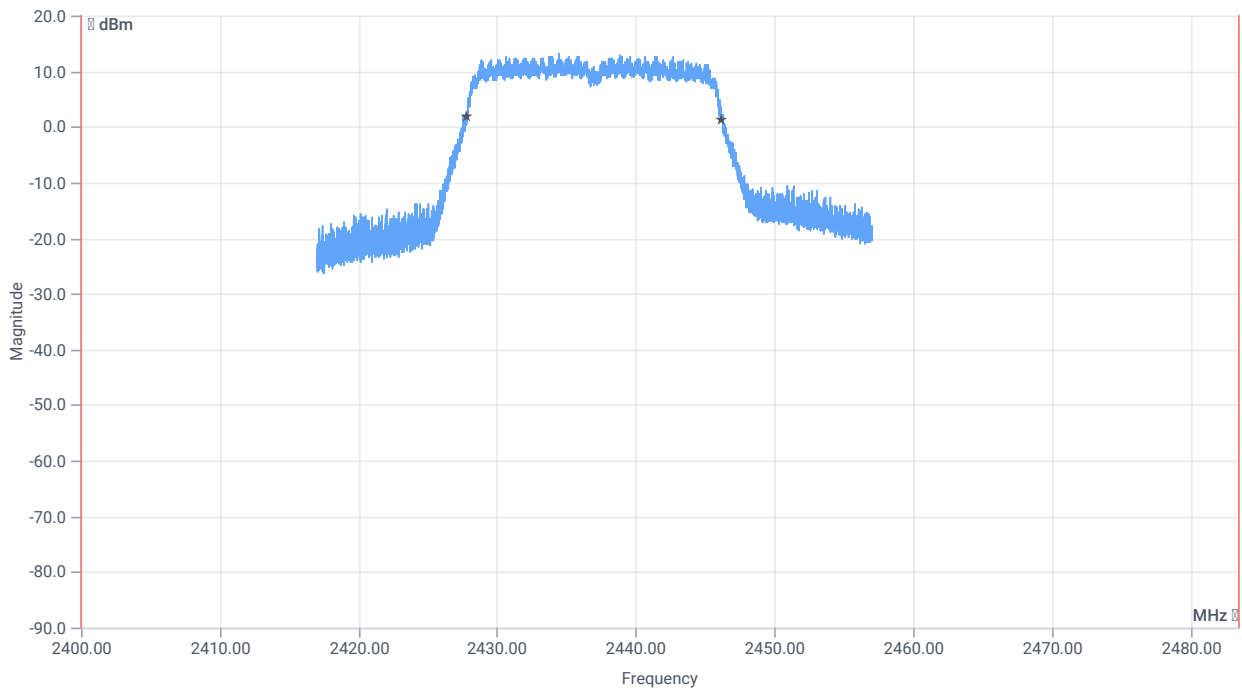
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.77	dBm	INFO
Ref. Frequency	---	---	2439.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.77 14.2 25
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

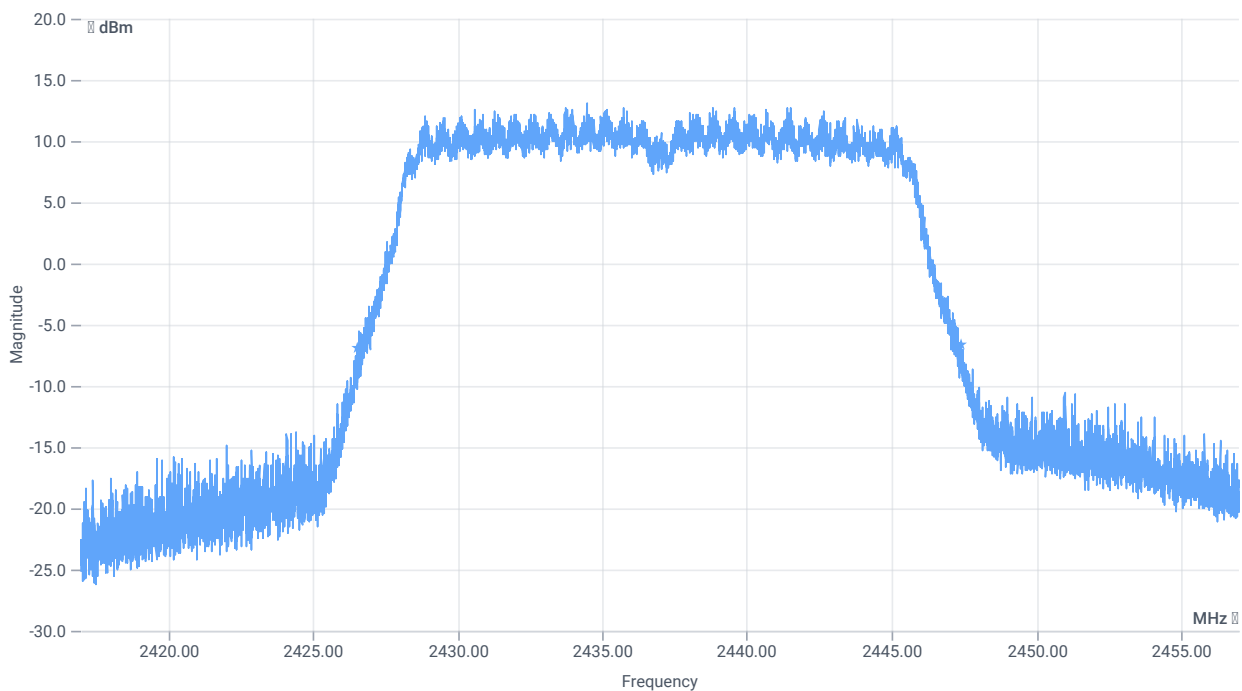




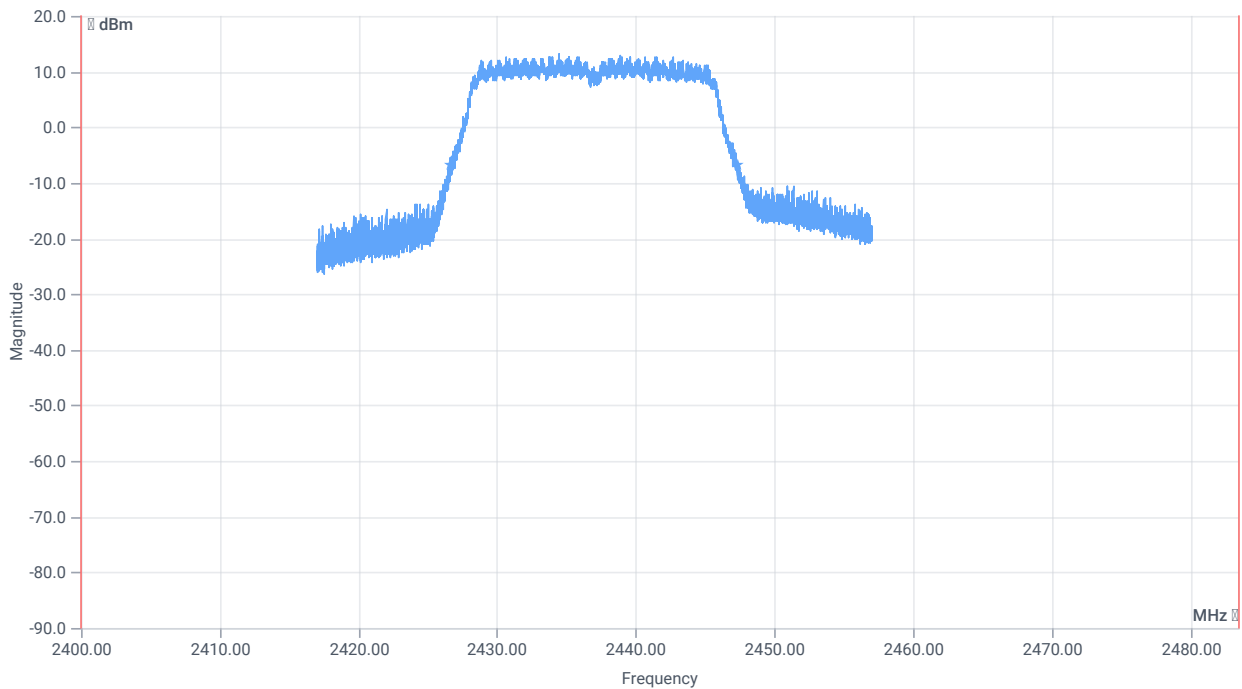
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18370.000	kHz	INFO
T1 99%	2400.000000	---	2427.8529	MHz	PASS
T2 99%	---	2483.500000	2446.2231	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20848	kHz	INFO
T1 20dB	2400.000000	---	2426.5440	MHz	PASS
T2 20dB	---	2483.500000	2447.3920	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:13:59
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

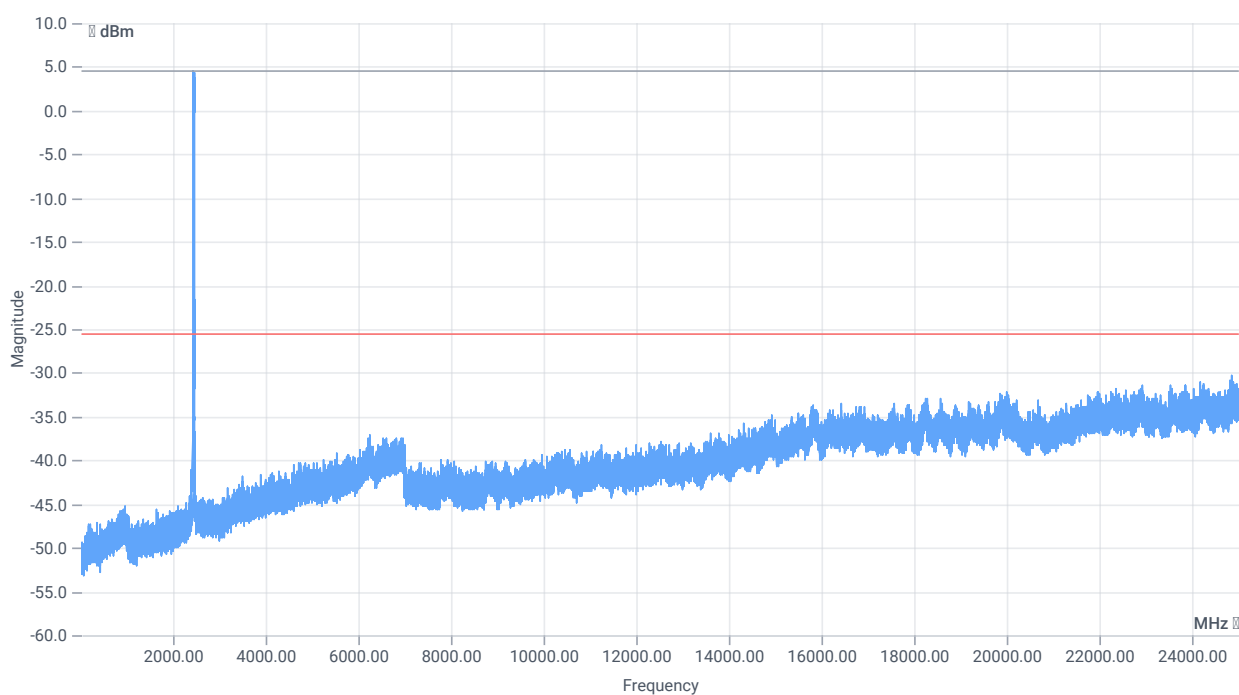
Test Equipment

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.

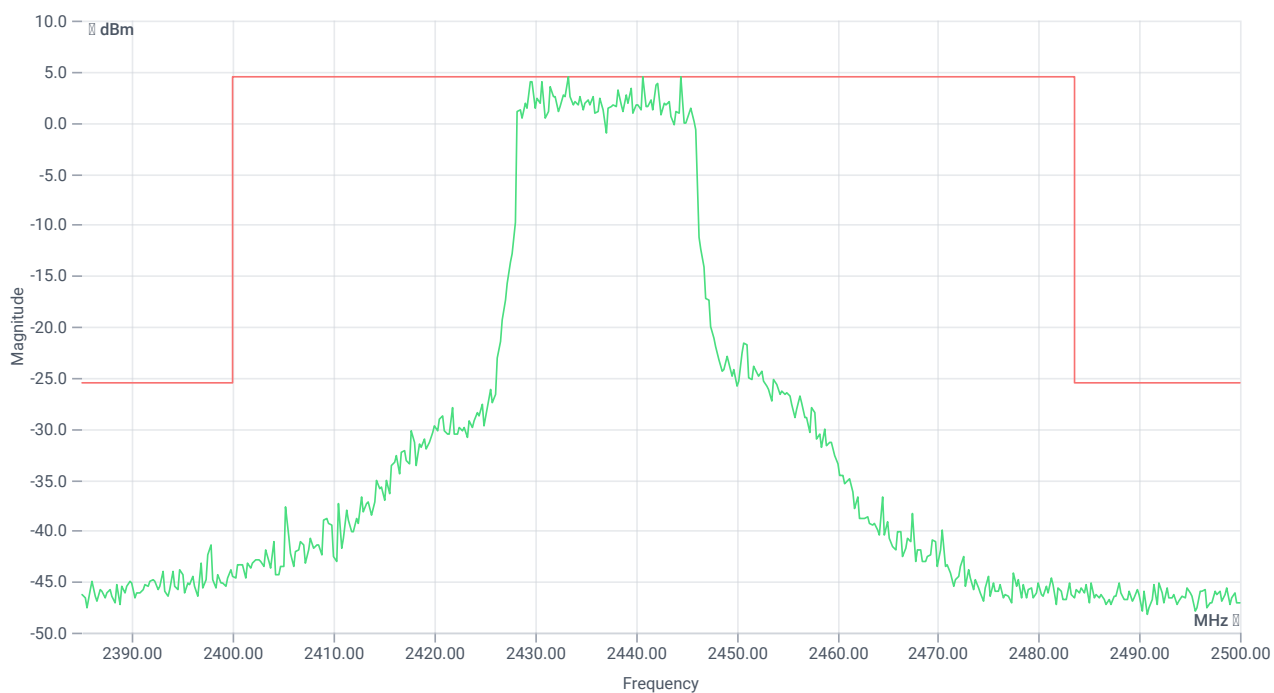
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	14.19	dBm	INFO
Ref. Frequency	---	---	2439.900	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.19 0 30
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 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2433.25 MHz	---	---	4.47	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24837.25 MHz	0	---	4.8	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:20:41
Ambit Temp [°C] Humidity [rel%]	25.7 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

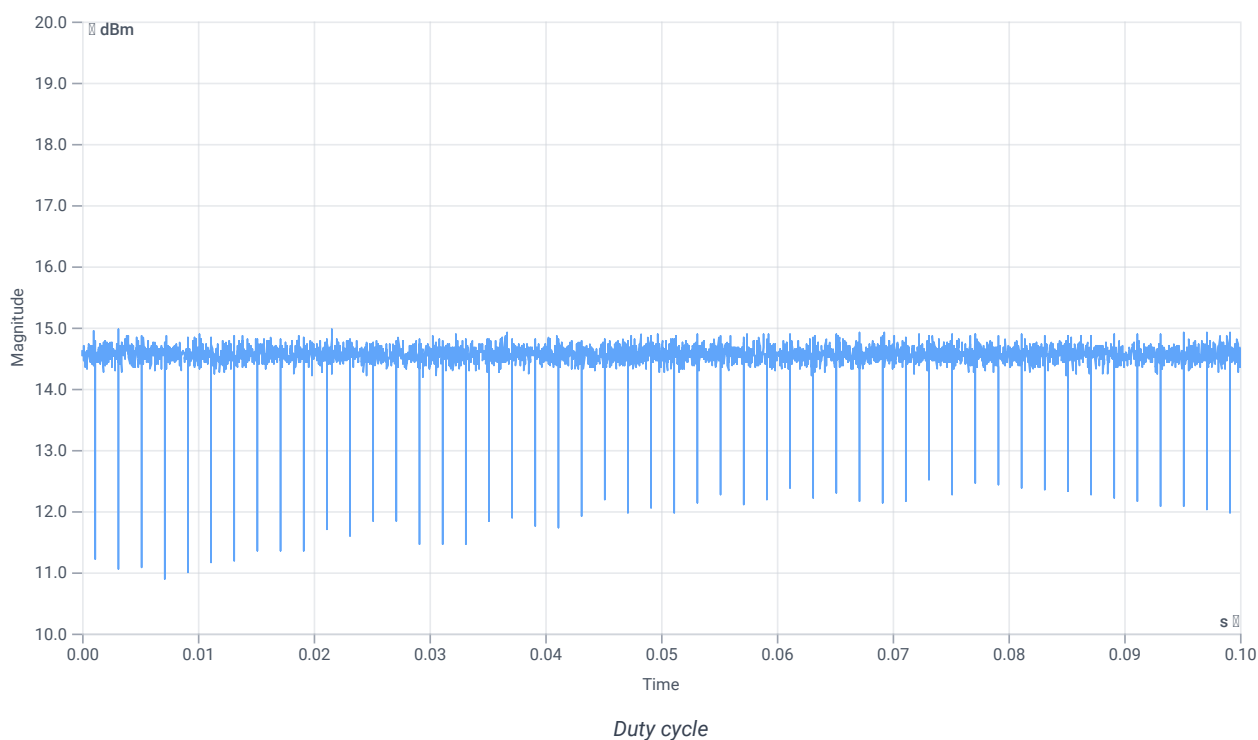
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	13.55	dBm	INFO
Ref. Frequency	---	---	2434.700	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



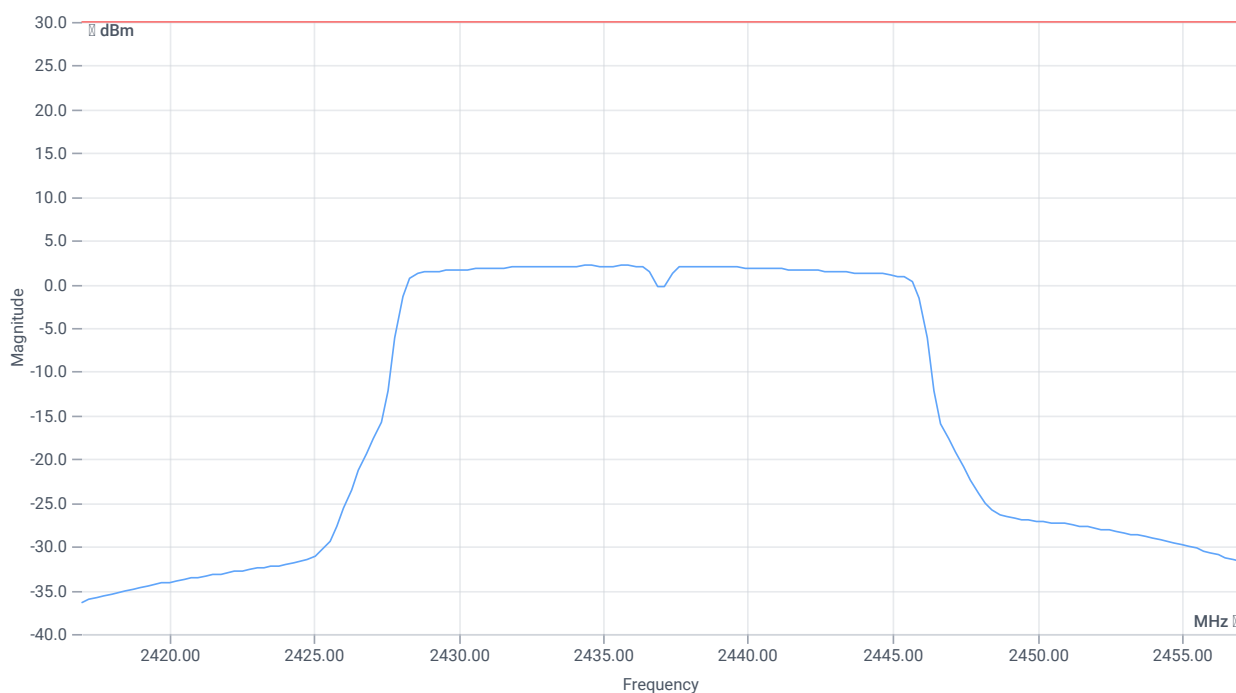
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.55 14.2 25
Start [MHz] Stop [MHz]	2417.000 2457.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	16.91	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	16.91	dBm	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	06.07.2023 13:21:55
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan n-HT20 mode
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	06.07.2023 13:21:56
Message	set WLAN2G4 to n-HT20 mode, Frequency [MHz] 2462

Test Equipment

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

Verdict

INFO

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:22:54
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

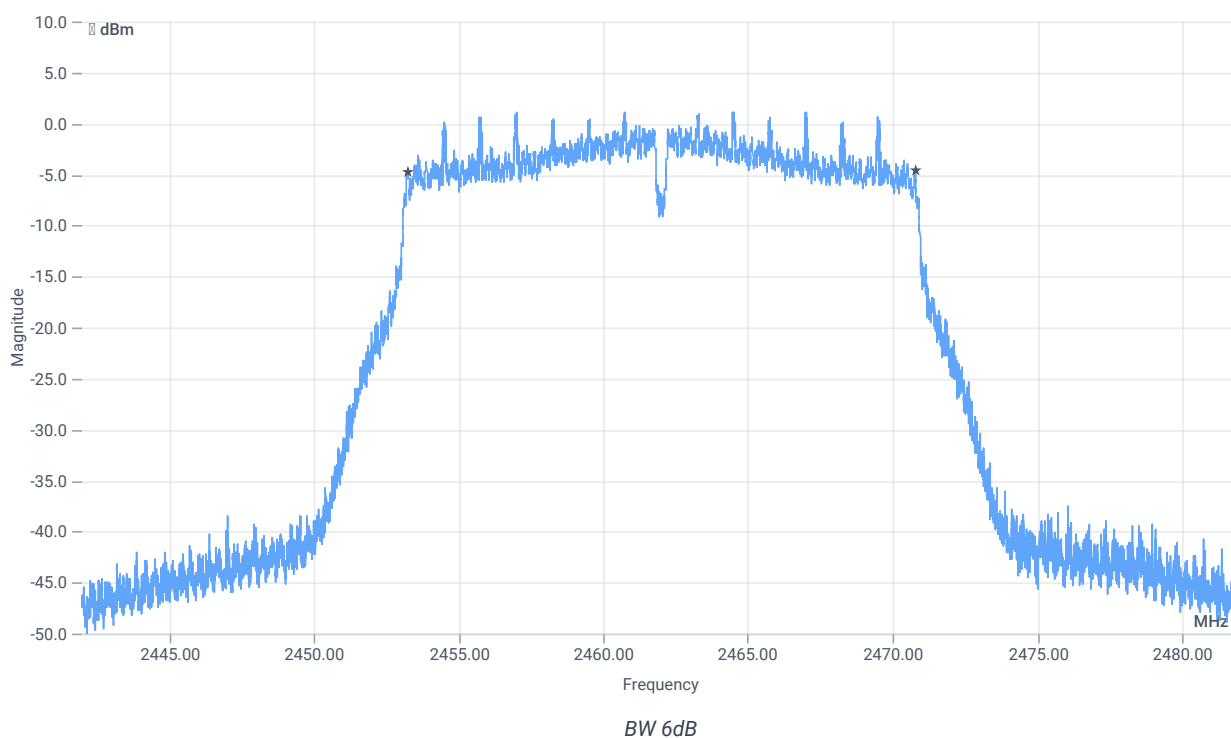
Test at TX 2462 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.79	dBm	INFO
Ref. Frequency	---	---	2463.000	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.79 14.04 20
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	---	17528	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:23:28
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

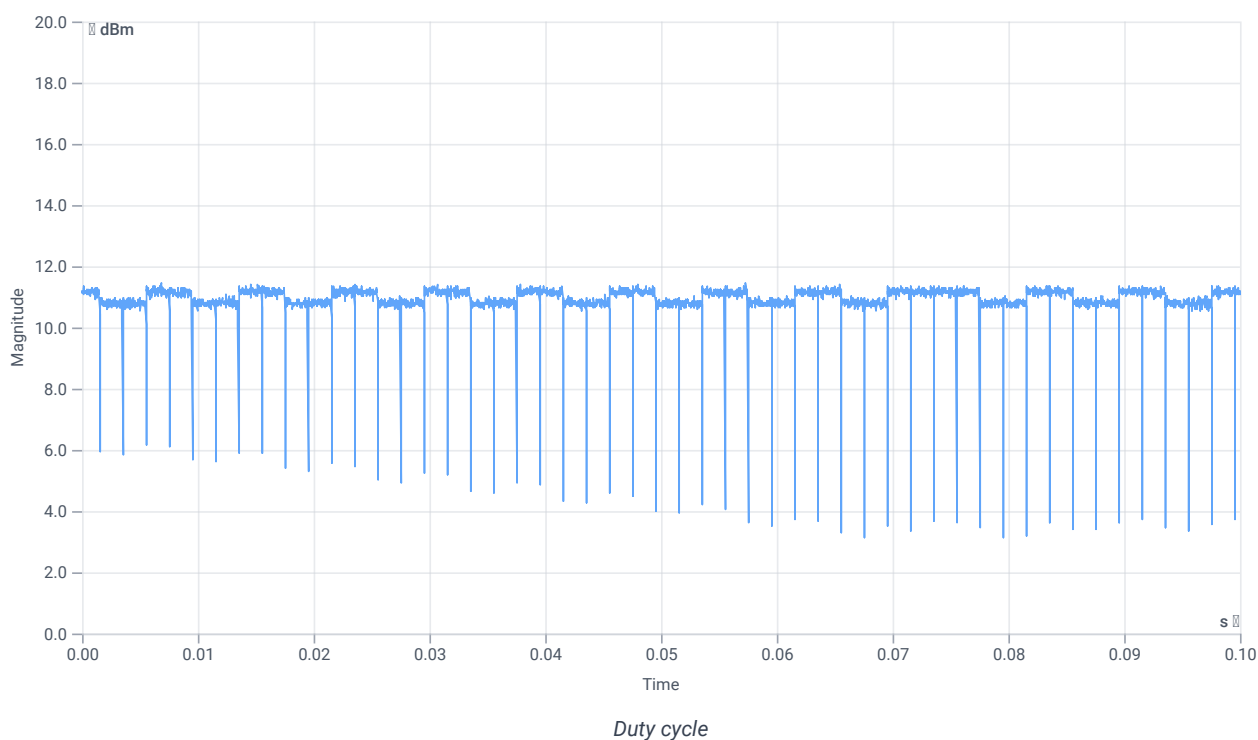
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.41	dBm	INFO
Ref. Frequency	---	---	2460.700	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



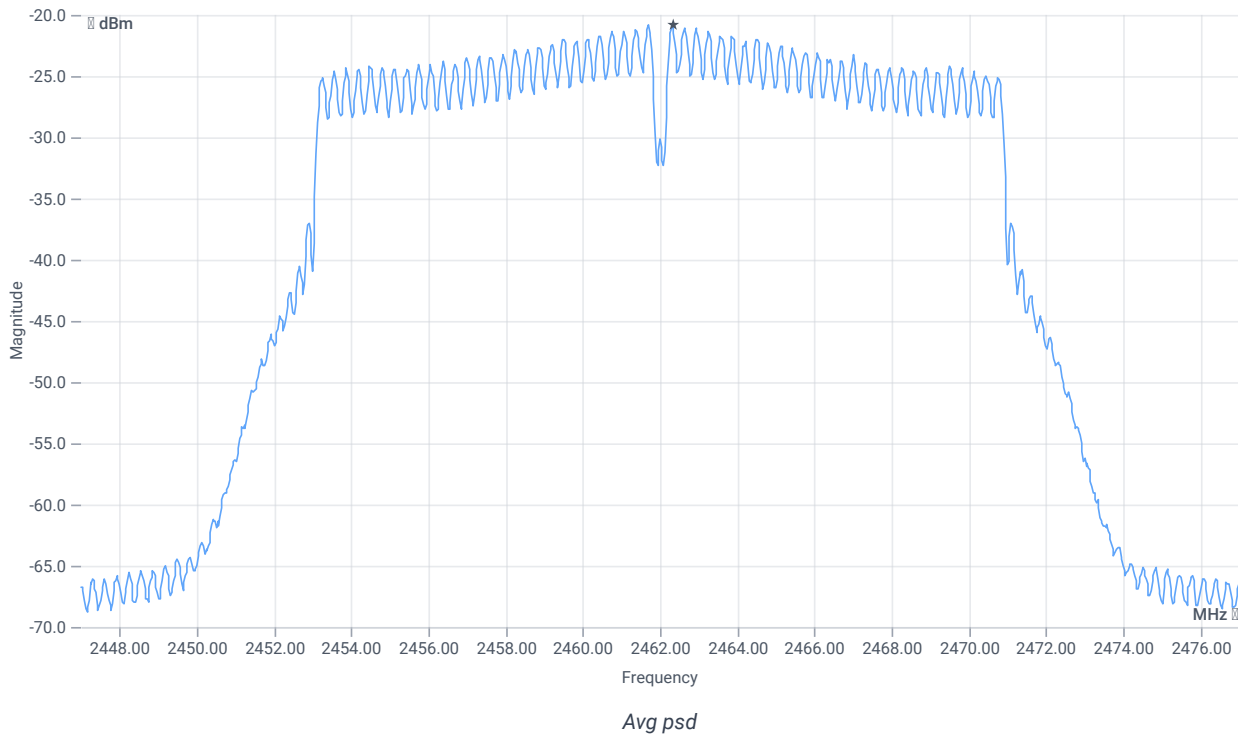
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.41 14.04 20
Start [MHz] Stop [MHz]	2447.000 2477.000

READ SA SETTINGS:

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	---	---	-20.84	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-20.84	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:24:30
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

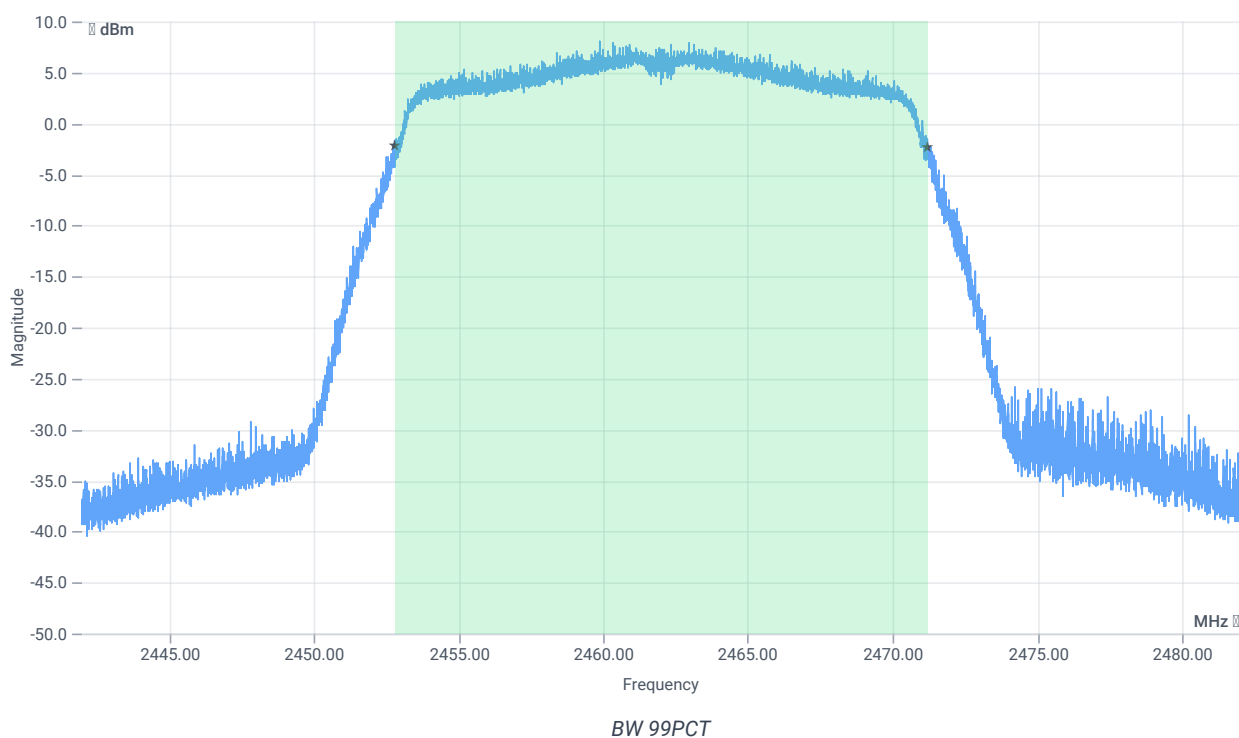
Test at TX 2462 MHz

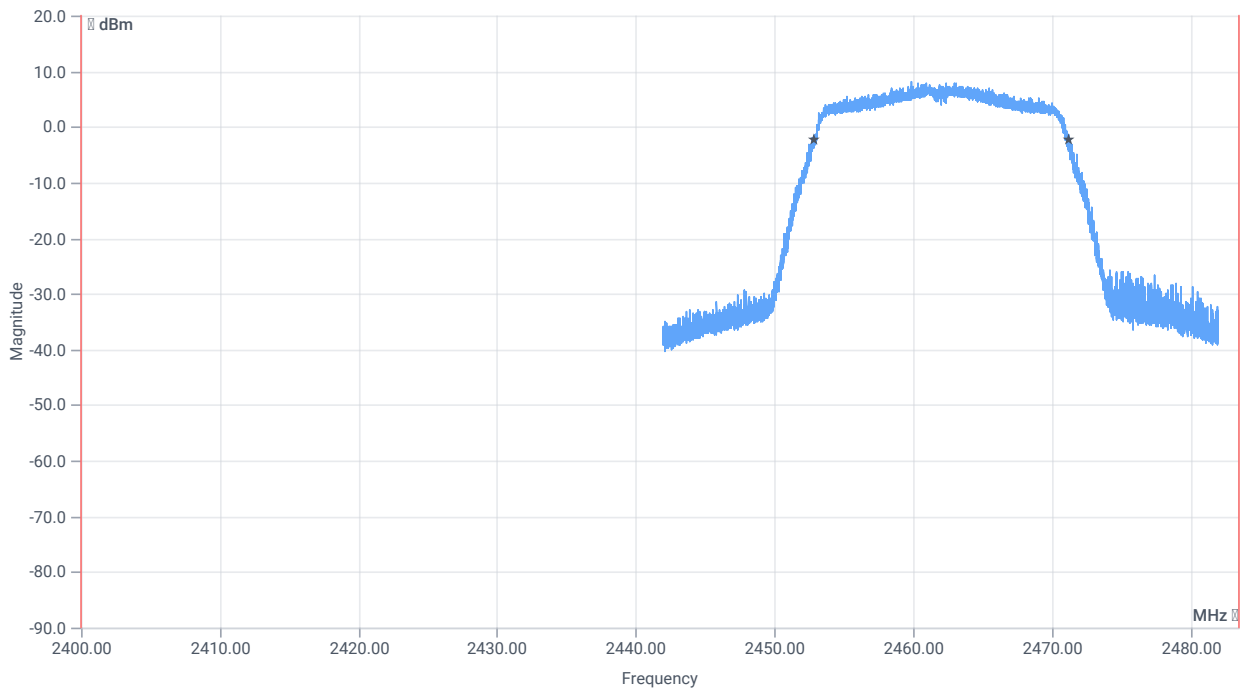
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.10	dBm	INFO
Ref. Frequency	---	---	2459.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.10 14.04 20
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

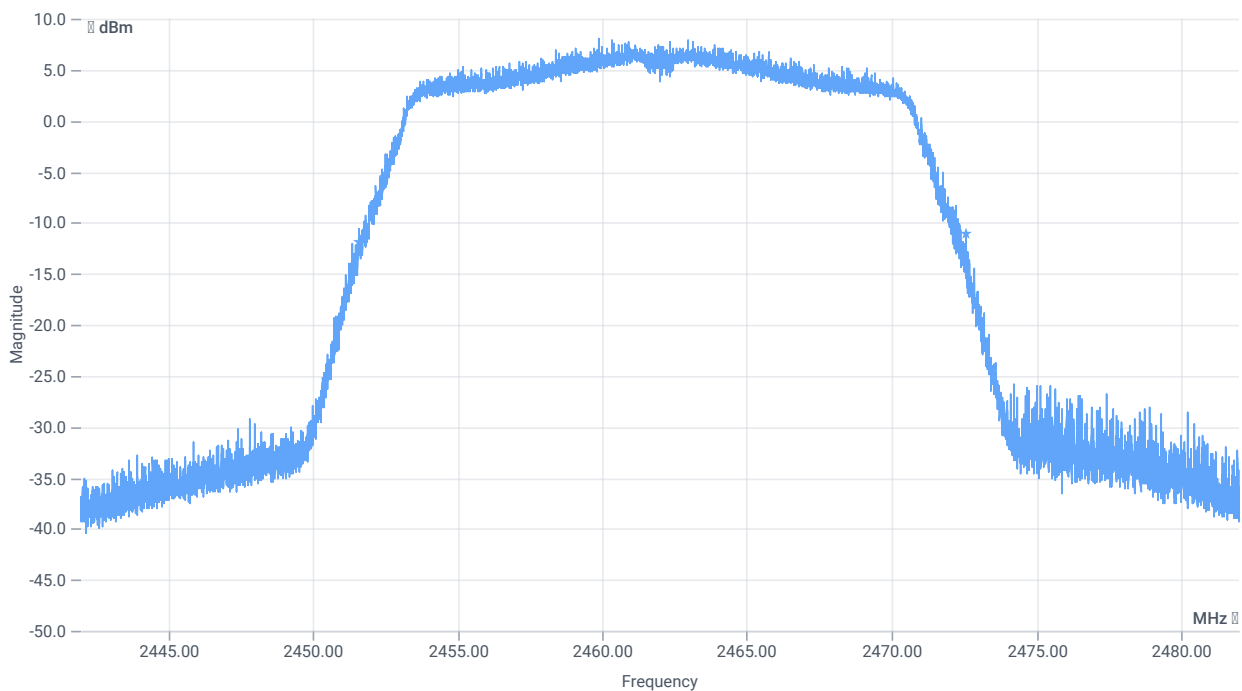




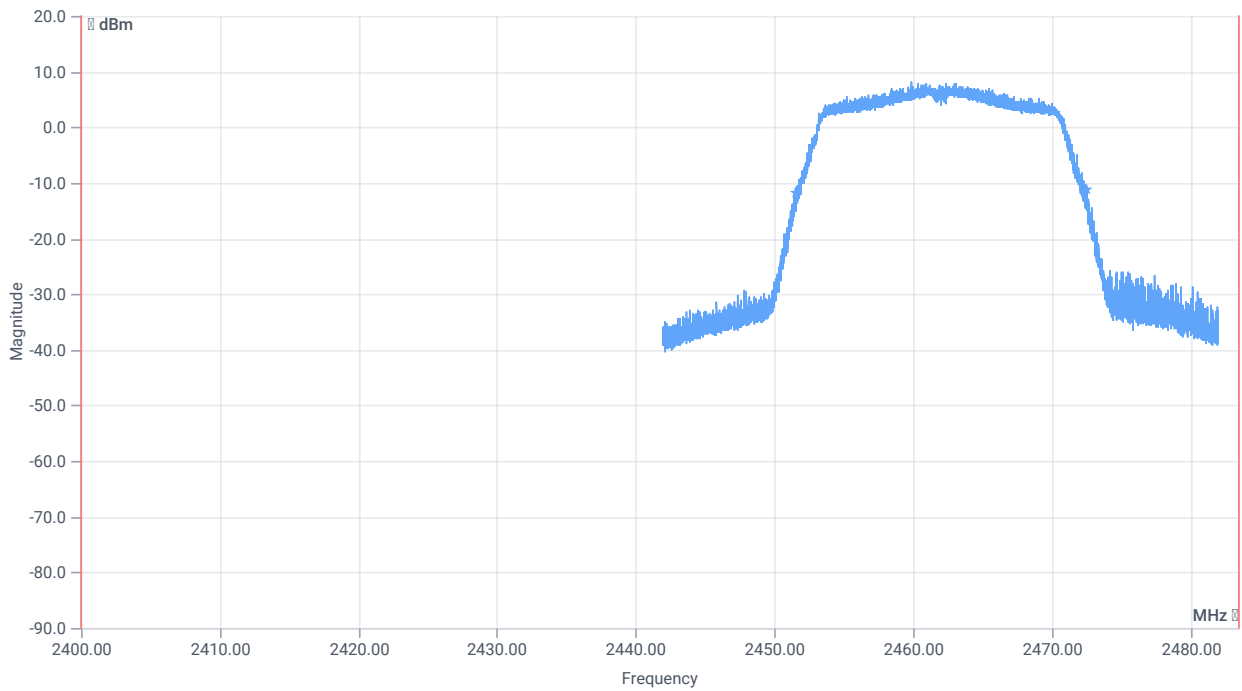
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18398.000	kHz	INFO
T1 99%	2400.000000	---	2452.8089	MHz	PASS
T2 99%	---	2483.500000	2471.2071	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	21000	kHz	INFO
T1 20dB	2400.000000	---	2451.5760	MHz	PASS
T2 20dB	---	2483.500000	2472.5760	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:25:07
Ambit Temp [°C] Humidity [rel%]	25.6 37
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

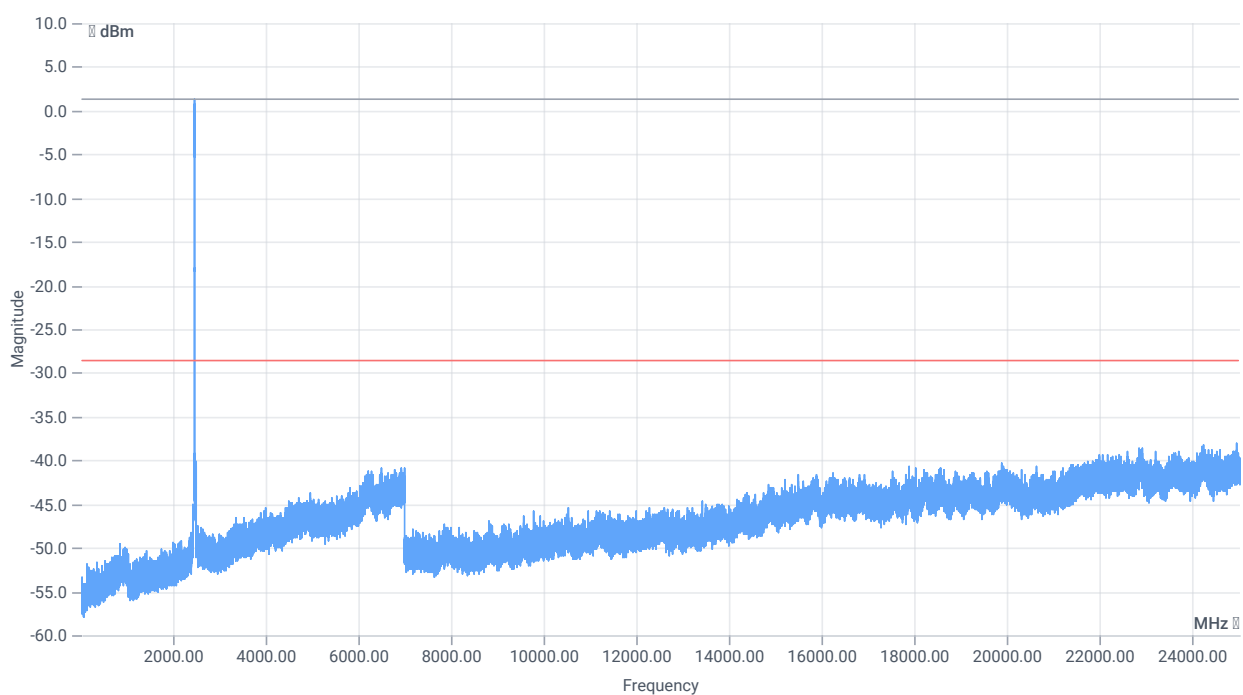
Test Equipment

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.

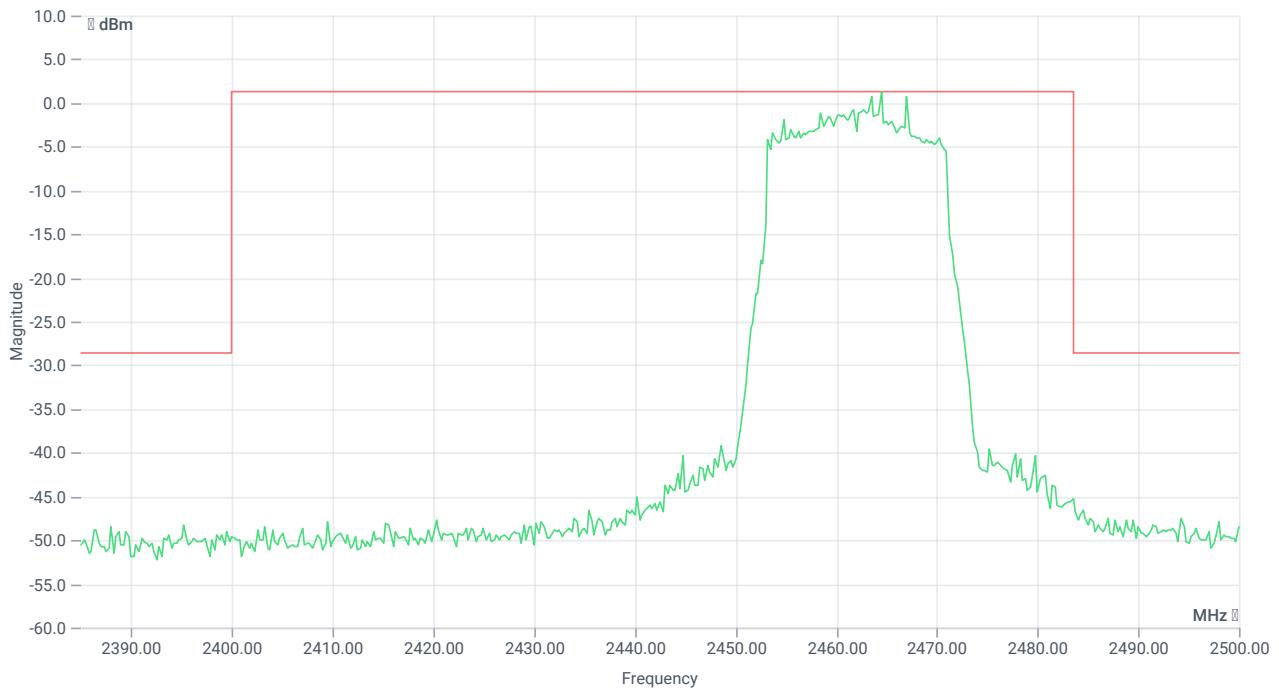
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.81	dBm	INFO
Ref. Frequency	---	---	2463.700	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	9.81 0 25
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2464.50 MHz	---	---	1.32	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 24942.75 MHz	0	---	9.36	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:31:48
Ambit Temp [°C] Humidity [rel%]	25.7 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
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

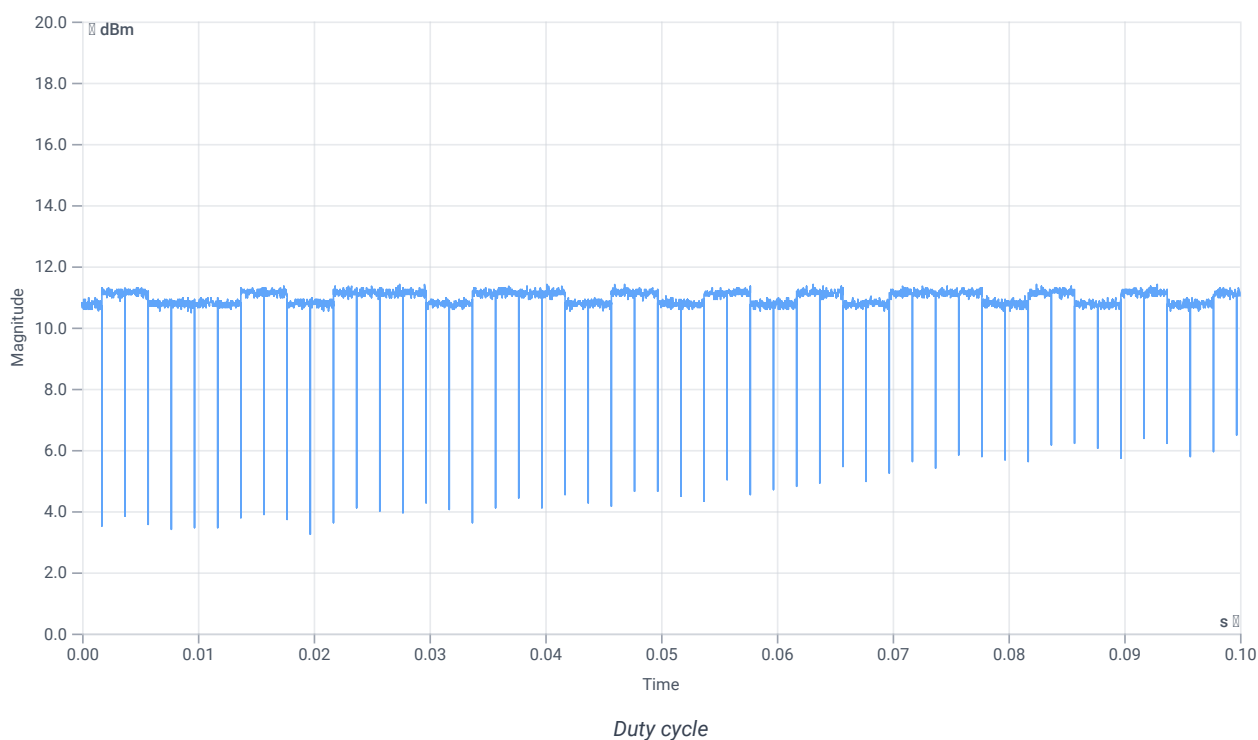
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.42	dBm	INFO
Ref. Frequency	---	---	2463.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



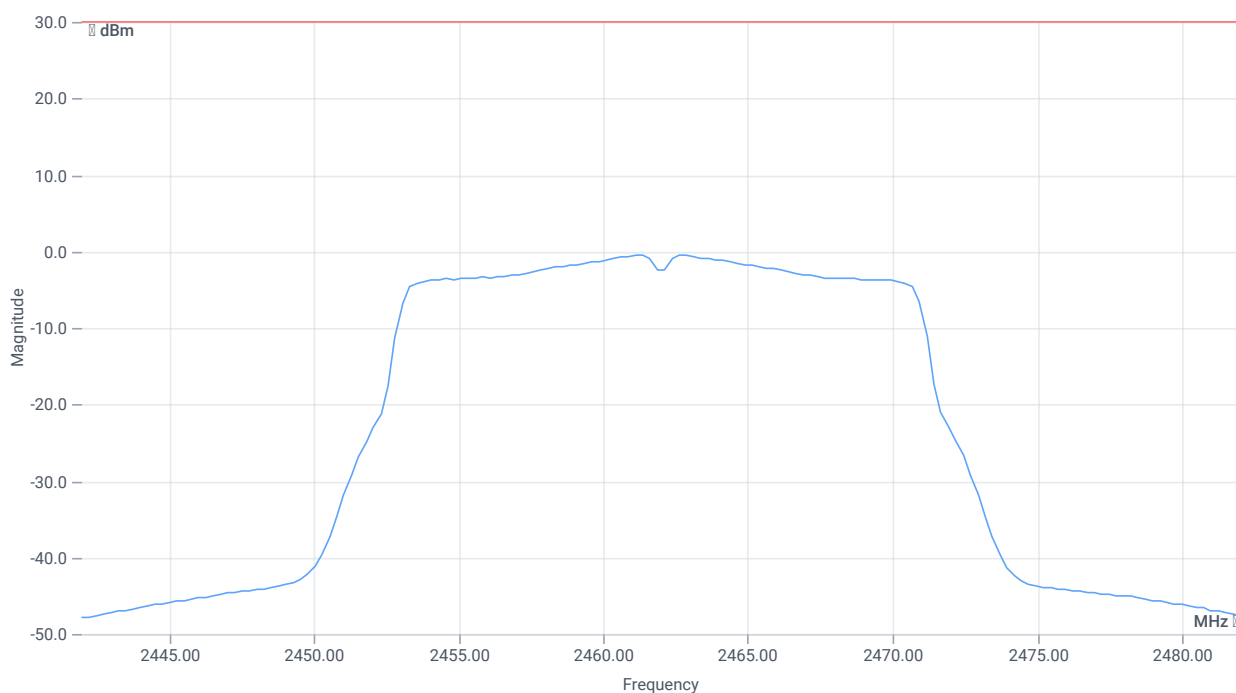
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.42 14.04 25
Start [MHz] Stop [MHz]	2442.000 2482.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	12.9	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	12.9	dBm	PASS

Verdict

PASS

FCC 15.247 # Bandwidth 6dB DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:33:03
Ambit Temp [°C] Humidity [rel%]	25.7 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

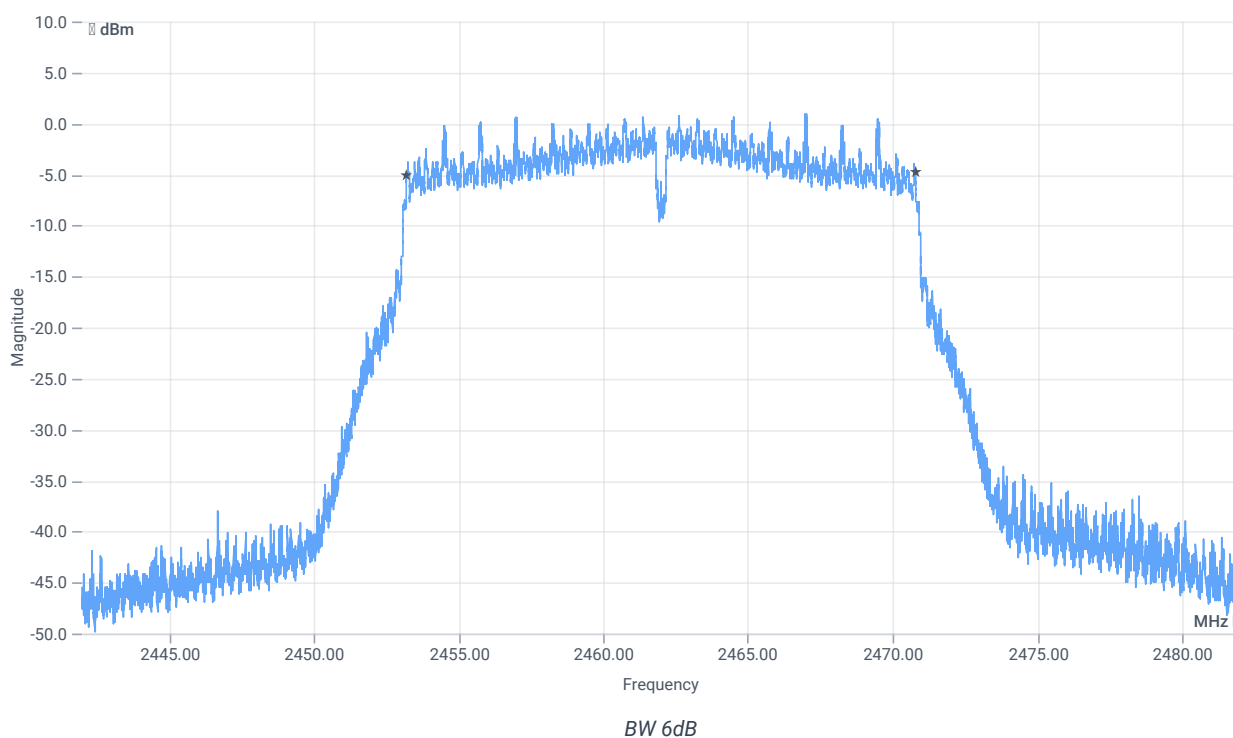
Test at TX 2462 MHz

RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.77	dBm	INFO
Ref. Frequency	---	---	2464.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.77 14.04 20
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	---	17552	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:33:36
Ambit Temp [°C] Humidity [rel%]	25.7 37
System Version	4.5.2.0
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 psd DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

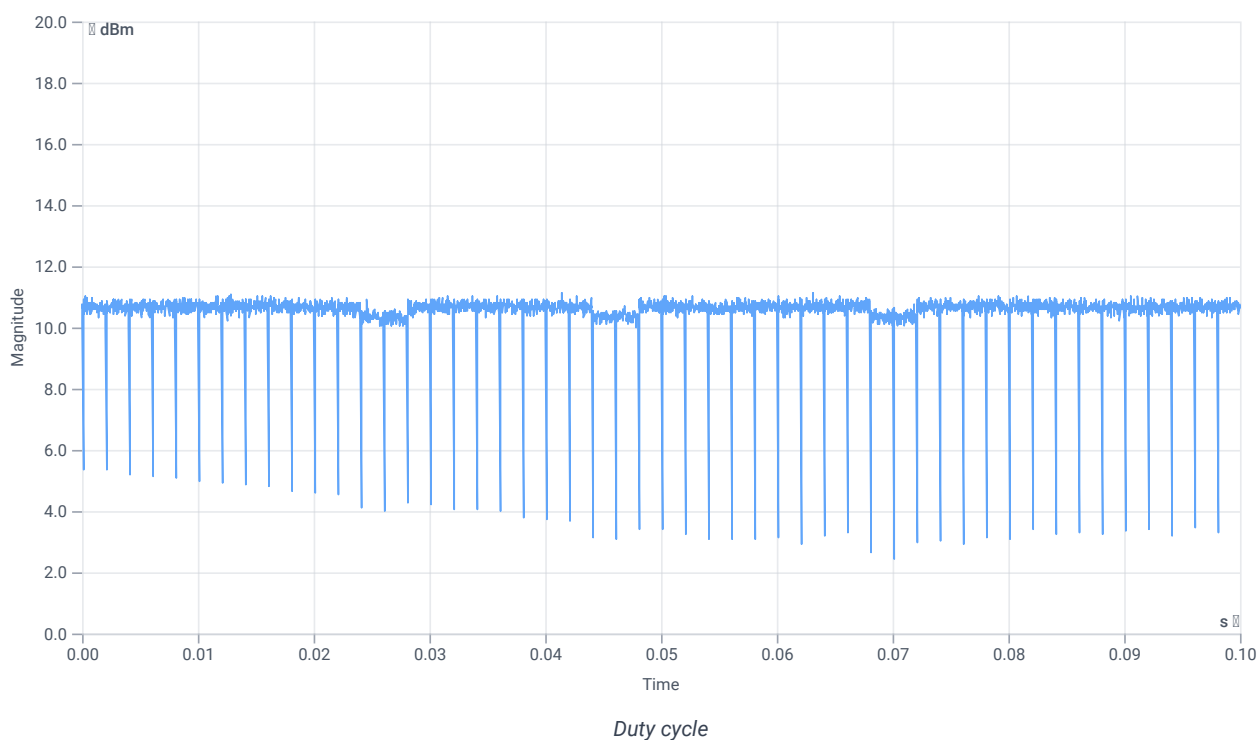
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.40	dBm	INFO
Ref. Frequency	---	---	2460.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



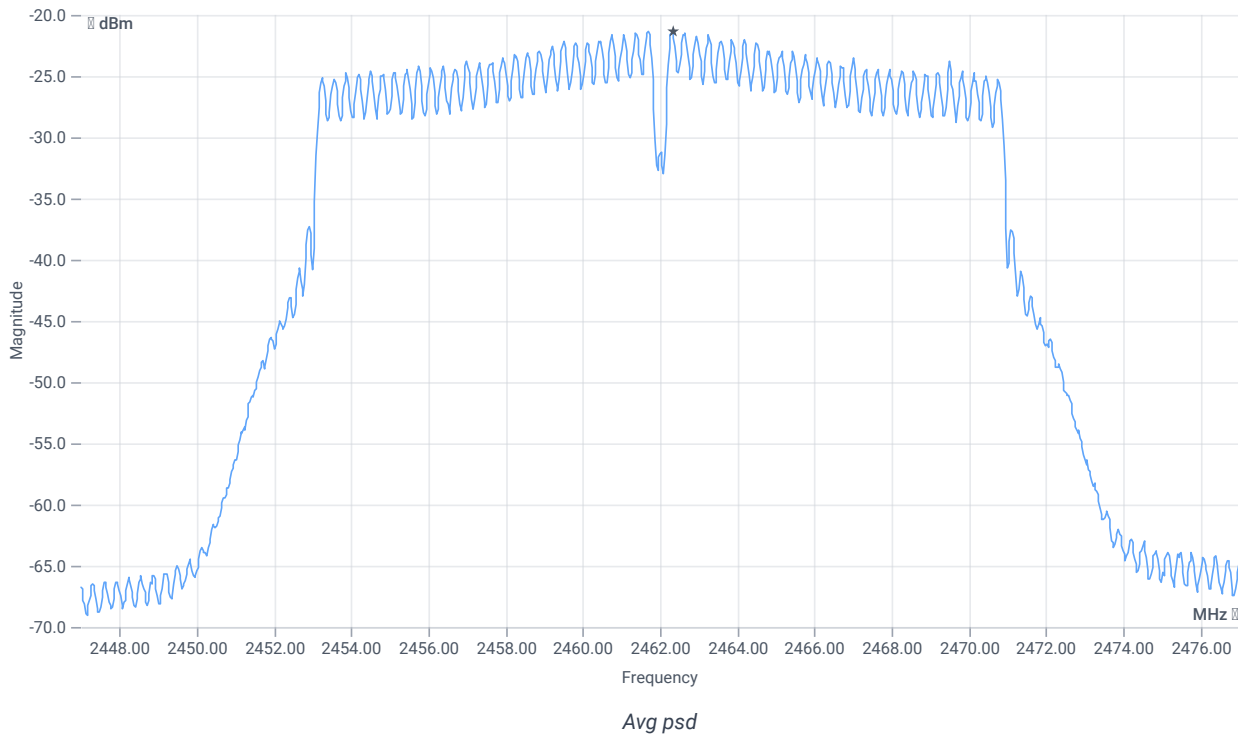
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.40 14.04 20
Start [MHz] Stop [MHz]	2447.000 2477.000

READ SA SETTINGS:

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	---	---	-21.32	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg psd DC corrected	---	8	-21.32	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:34:39
Ambit Temp [°C] Humidity [rel%]	25.7 37
System Version	4.5.2.0
Test Specification	FCC 15.247, ISED RSS247 -
Test Method	
TC Version	0.0.2
My Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

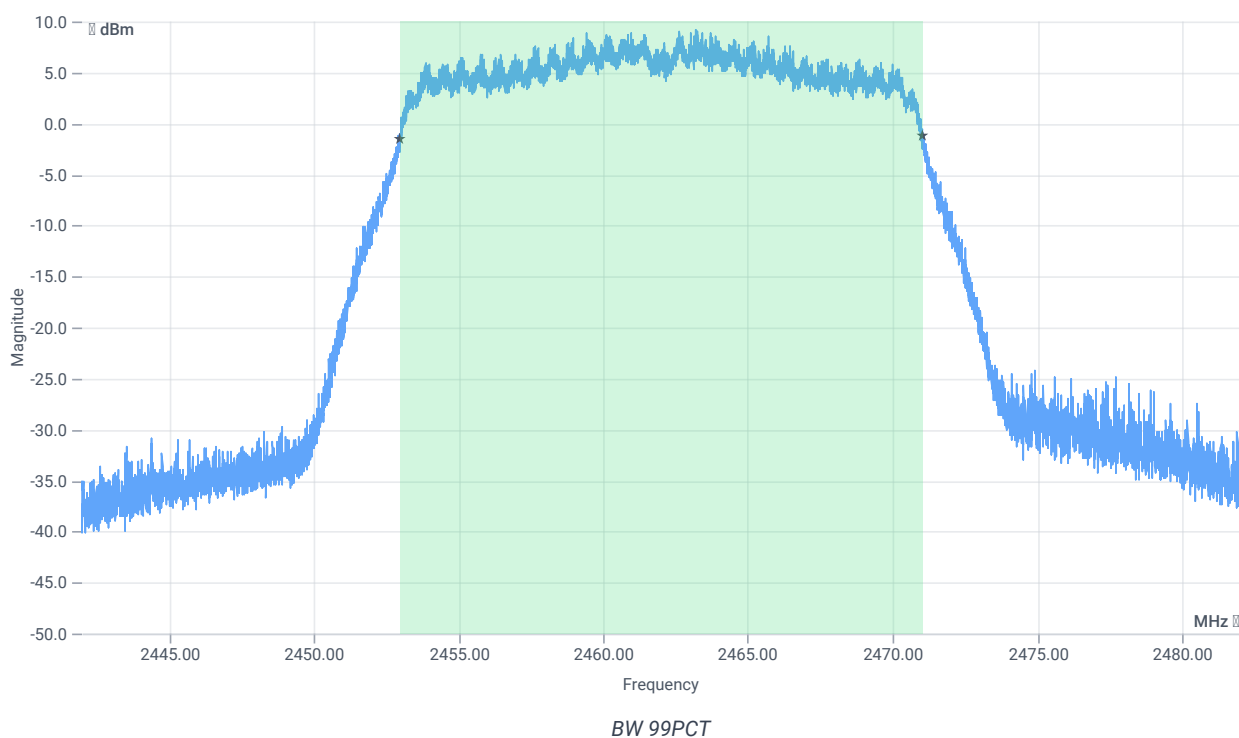
Test at TX 2462 MHz

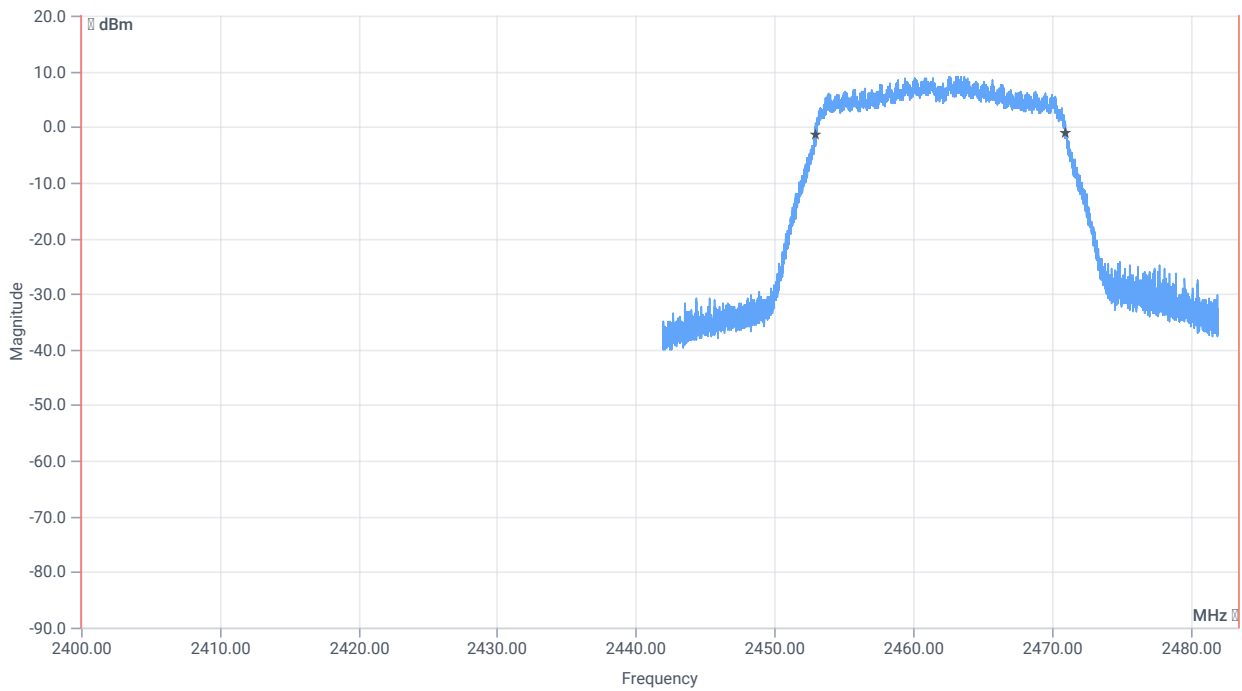
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.52	dBm	INFO
Ref. Frequency	---	---	2460.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	15.52 14.04 20
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

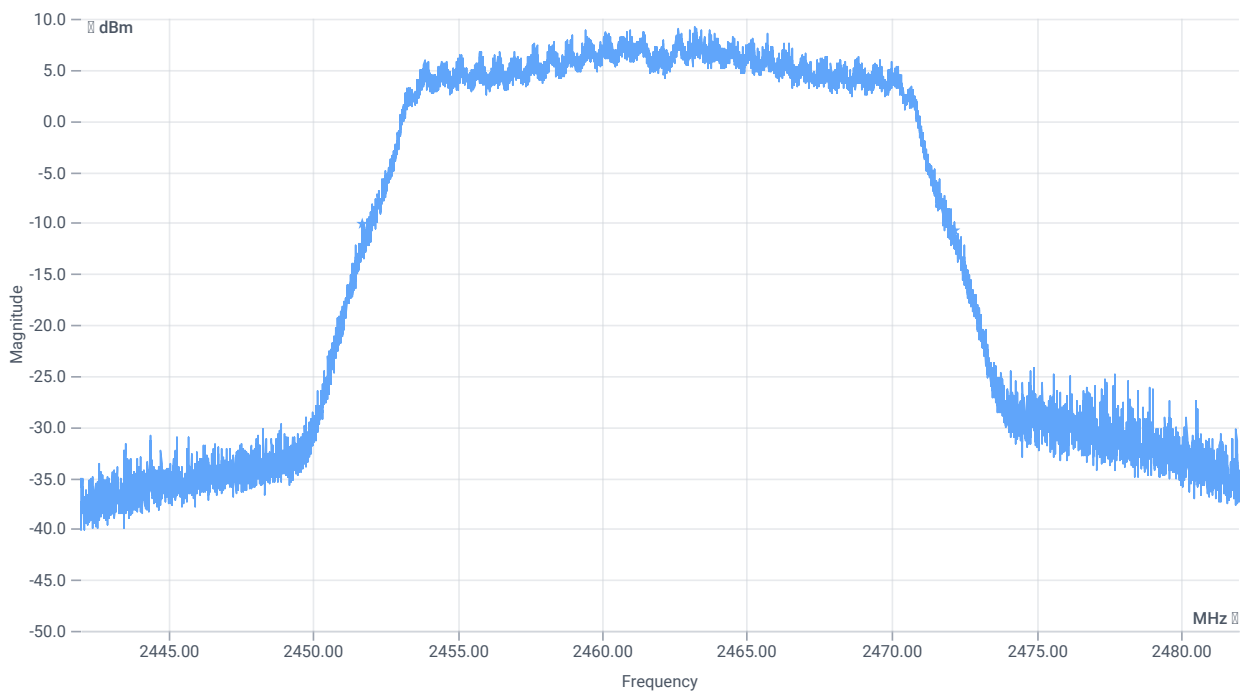




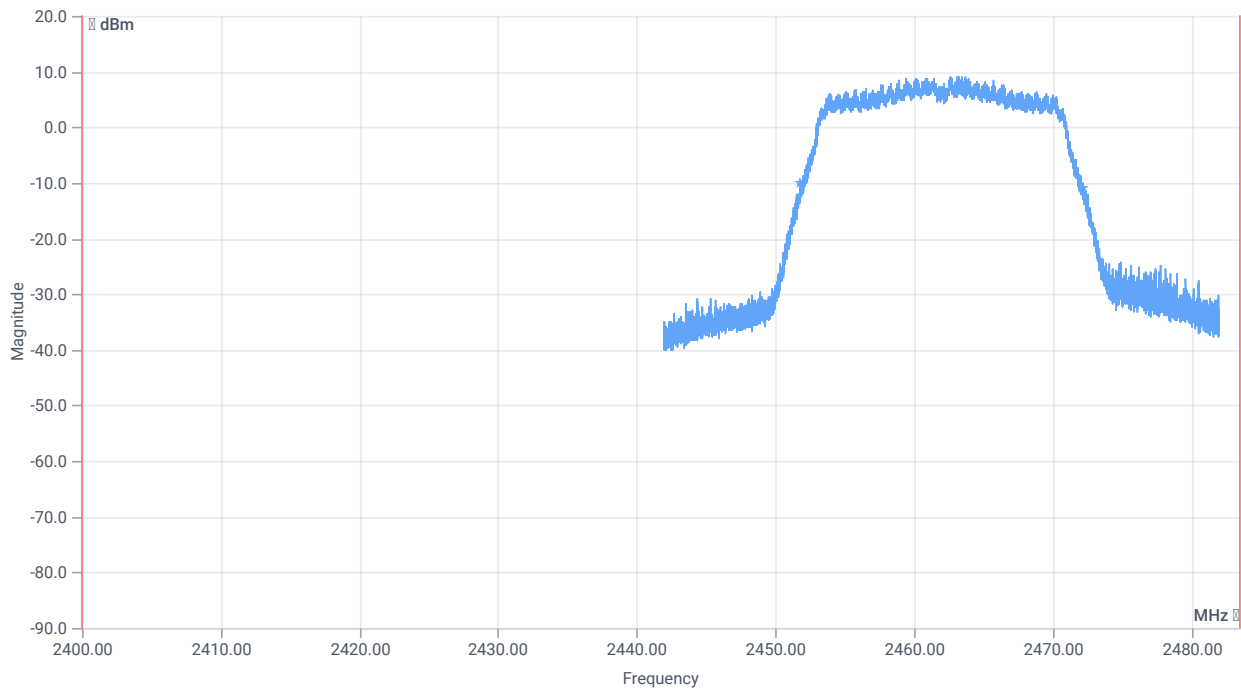
BW within Band 99PCT

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	---	---	18042.000	kHz	INFO
T1 99%	2400.000000	---	2452.9889	MHz	PASS
T2 99%	---	2483.500000	2471.0311	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	---	---	20464	kHz	INFO
T1 20dB	2400.000000	---	2451.7240	MHz	PASS
T2 20dB	---	2483.500000	2472.1880	MHz	PASS

Verdict

PASS

FCC 15.247 # TX spurious conducted 30dBc ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:35:16
Ambit Temp [°C] Humidity [rel%]	25.7 37
System Version	4.5.2.0
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 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

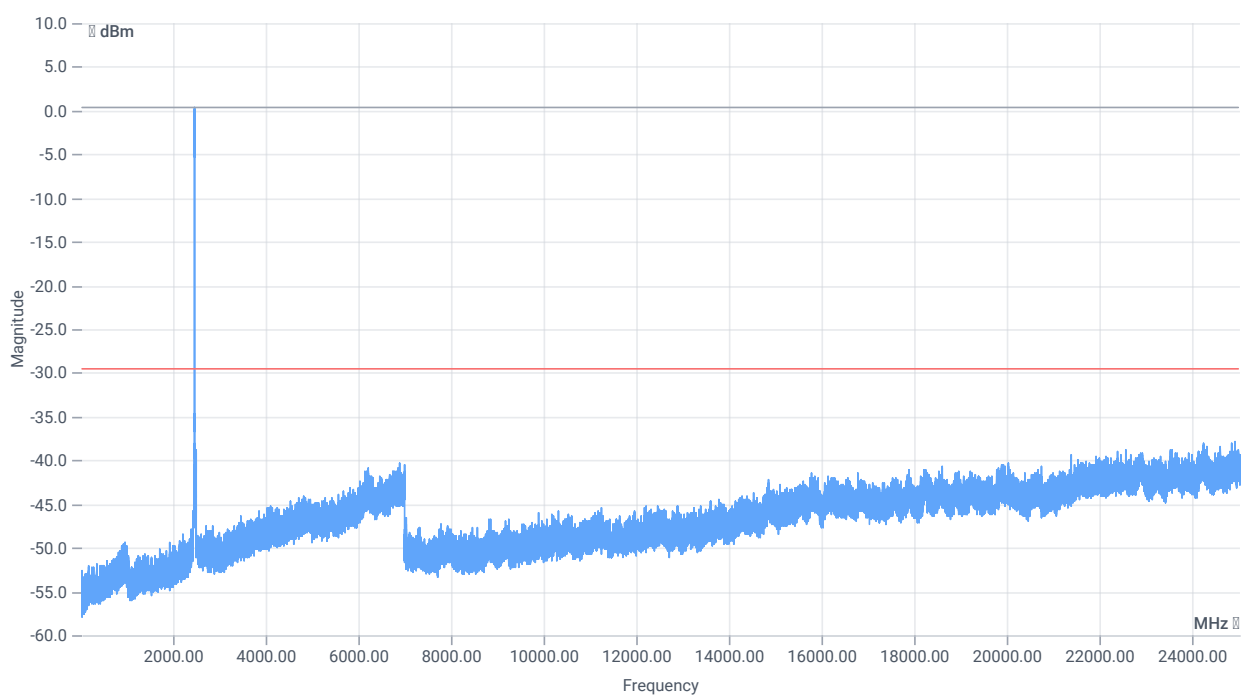
Test Equipment

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.

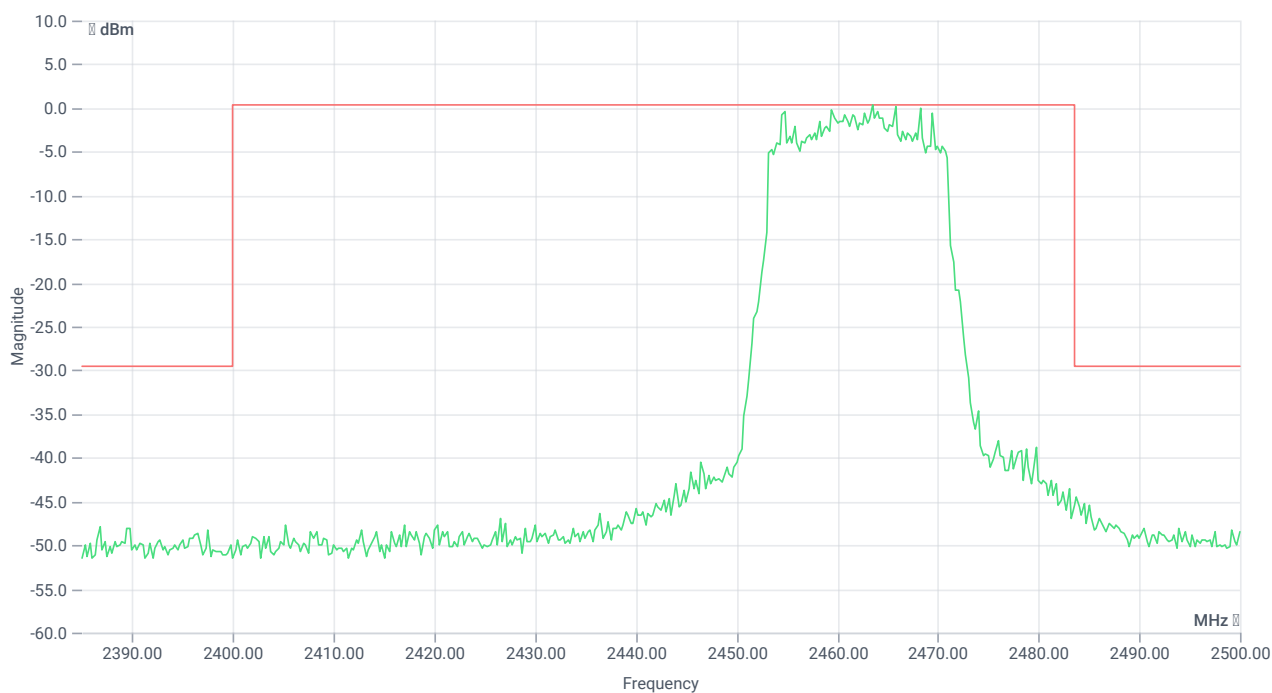
TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	9.93	dBm	INFO
Ref. Frequency	---	---	2460.100	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	9.93 0 25
Start [MHz] Stop [MHz]	24530.000 25030.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	200 25 2001 SWE



RESULT

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2463.50 MHz	---	---	0.43	dBm	INFO
No peaks detected	---	---			PASS
Lowest margin to limit 30 MHz	0	---	-144.65	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 n-HT20 mode

Test References

TC Start	06.07.2023 13:41:57
Ambit Temp [°C] Humidity [rel%]	25.7 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
TC Version	0.0.1
My Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 n-HT20 mode
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
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]	0.7
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

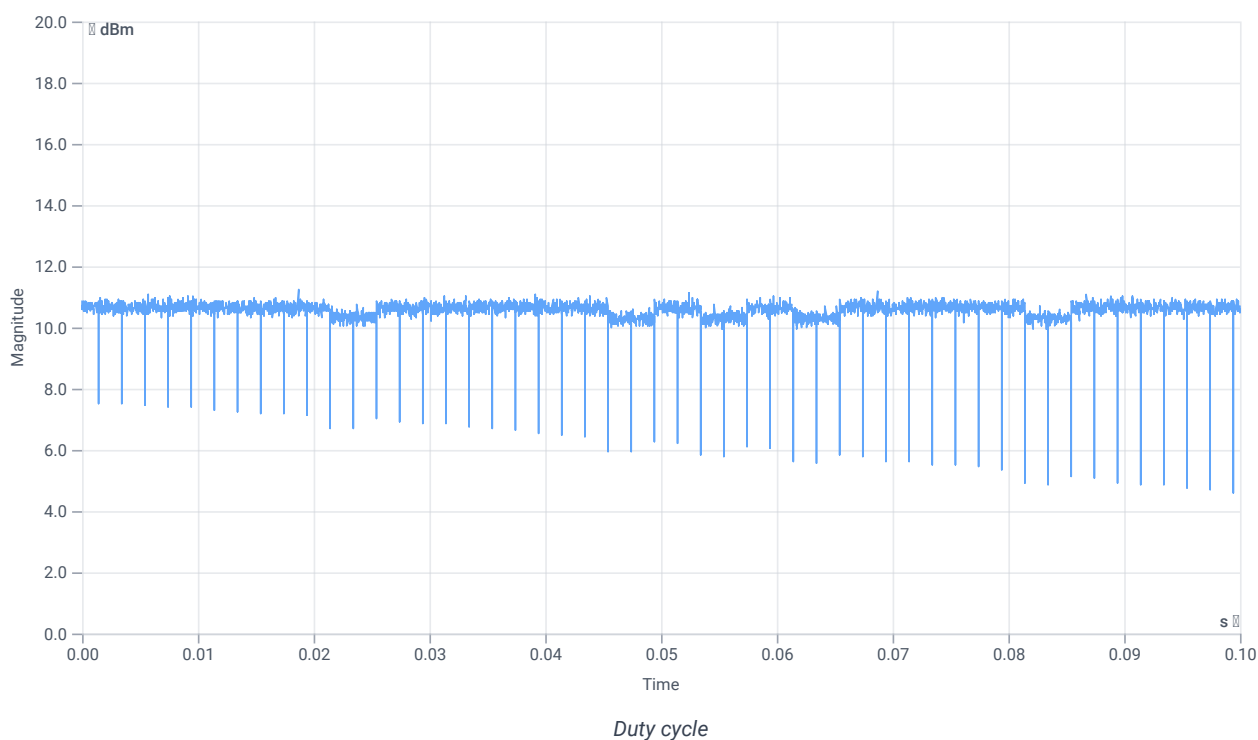
RESULT: Reference Power cond.

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	---	---	10.45	dBm	INFO
Ref. Frequency	---	---	2464.100	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	---	---	1	---	INFO
Duty Cycle max	---	---	0	dB	INFO
Duty Cycle (Burst Ratio) min	---	---	1	---	INFO
Duty Cycle min	---	---	0	dB	INFO



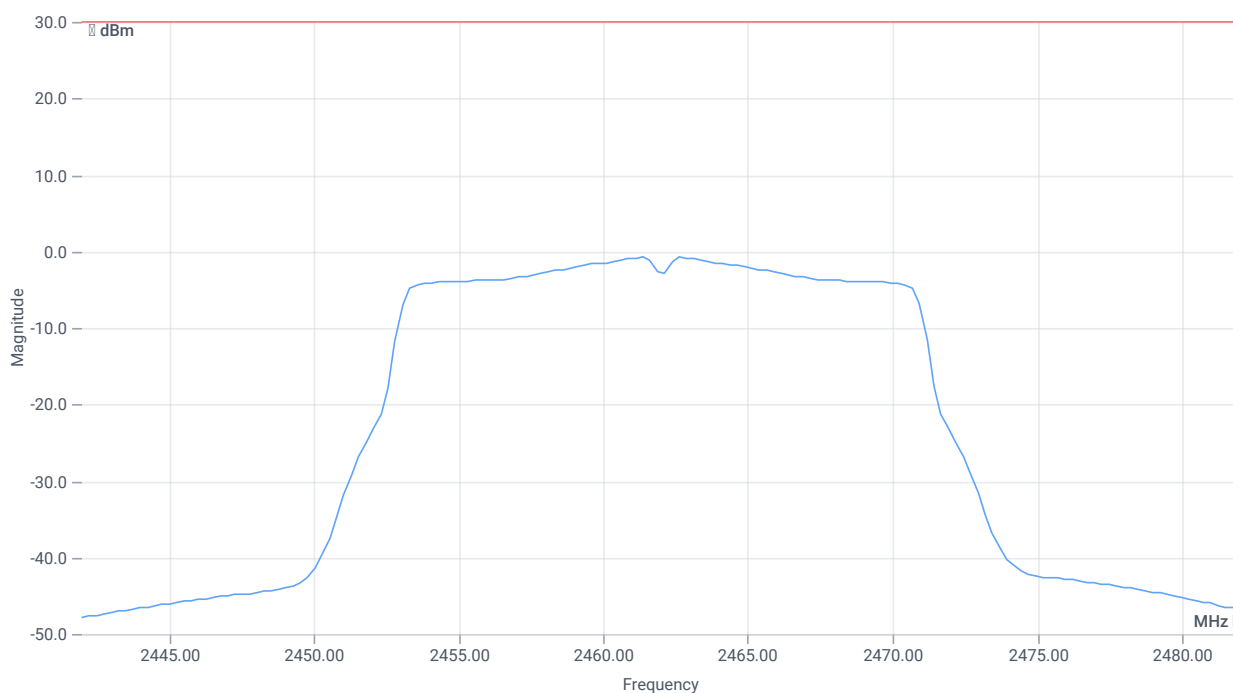
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.45 14.04 25
Start [MHz] Stop [MHz]	2442.000 2482.000

READ SA SETTINGS:

RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	RMS AVER
Sweep: Time [ms] Count Points per Section Type	500 100 160 SWE



Avg output power SA DTS

RESULT (Channel power method)

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	---	---	12.55	dBm	INFO
Duty cycle correction	---	---	0	dB	INFO
Avg power DC corrected	---	30	12.55	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 13:43:12
Ambit Temp [°C] Humidity [rel%]	25.8 37
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2412 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	13.24	dBm	INFO
Ant:2 Avg power DC corr.	---	---	13.75	dBm	INFO
Σ Avg output power DC corr.	---	30	16.51	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 13:43:55
Ambit Temp [°C] Humidity [rel%]	25.7 36
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2412 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-20.46	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-19.93	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-17.18	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 13:44:07
Ambit Temp [°C] Humidity [rel%]	25.8 36
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2437 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	18.06	dBm	INFO
Ant:2 Avg power DC corr.	---	---	16.91	dBm	INFO
Σ Avg output power DC corr.	---	30	20.53	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 13:44:19
Ambit Temp [°C] Humidity [rel%]	25.8 36
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2437 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-17.17	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-18.08	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-14.59	dBm/3kHz	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 13:44:29
Ambit Temp [°C] Humidity [rel%]	25.8 36
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2462 MHz

RESULT Power

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	---	---	12.9	dBm	INFO
Ant:2 Avg power DC corr.	---	---	12.55	dBm	INFO
Σ Avg output power DC corr.	---	30	15.74	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 n-HT20 mode 2400-2483.5 MHz

Test References

TC Start	06.07.2023 13:44:42
Ambit Temp [°C] Humidity [rel%]	25.8 36
System Version	4.5.2.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Add. Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	1
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	0.7
Switched Path	None

Test Equipment

Test at TX 2462 MHz

RESULT psd

TEST DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr ---		---	-20.84	dBm/3kHz	INFO
Ant:2 Avg psd DC corr ---		---	-21.32	dBm/3kHz	INFO
Σ Avg psd DC corr ---		8	-18.06	dBm/3kHz	PASS

Verdict

PASS

- END OF DOCUMENT -