

Conducted test results

No.1-7077/23-01-04_TR1-A205-R1

January 17, 2024

Test Standard(s)	FCC 15.247 ISED RSS247
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Authorized

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FCC 15.247, ISED RSS247 # Bandwidth 99PCT and 20dB ~ WLAN2G4 ax-HE20	115
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FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz	142
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NA # Message with SA scan ~

References

TC start	13.01.2024 15:16:23
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	NA NI
Method	
Description	Message with SA Scan ax-HE20
Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	13.01.2024 15:16:24
Message	set WLAN2G4 to ax-HE20, Frequency [MHz] 2412 ,

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 ax-HE20

References

TC start	13.01.2024 15:17:26
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

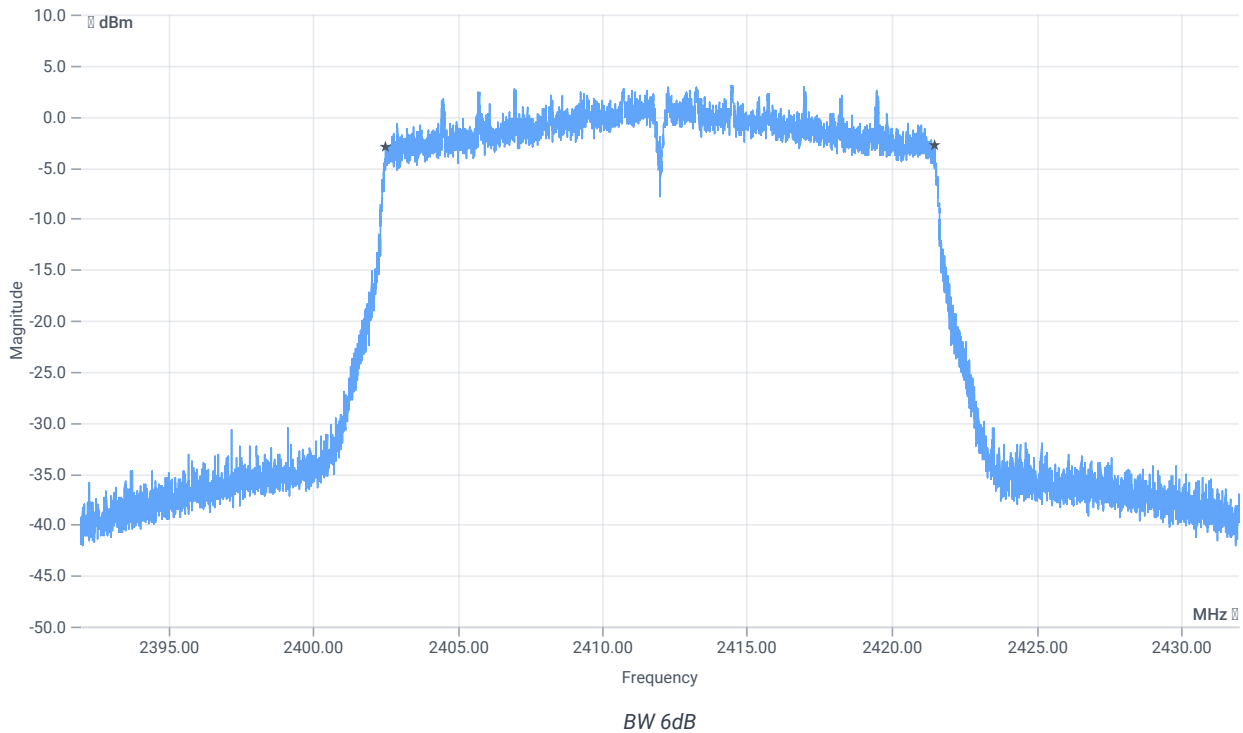
Test at TX 2412 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.91	dBm	INFO
Ref. Frequency	--	--	2412.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.91 13.85 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18924	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:18:00
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

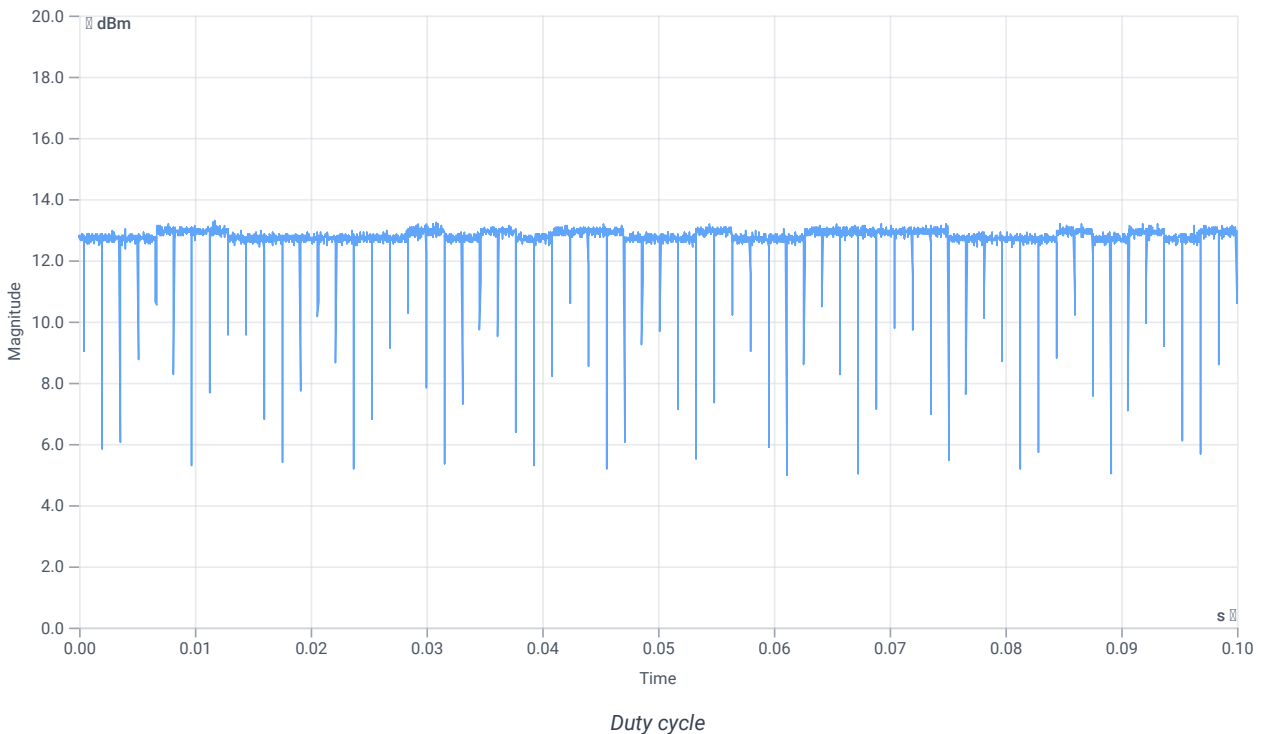
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.59	dBm	INFO
Ref. Frequency	--	--	2412.600	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



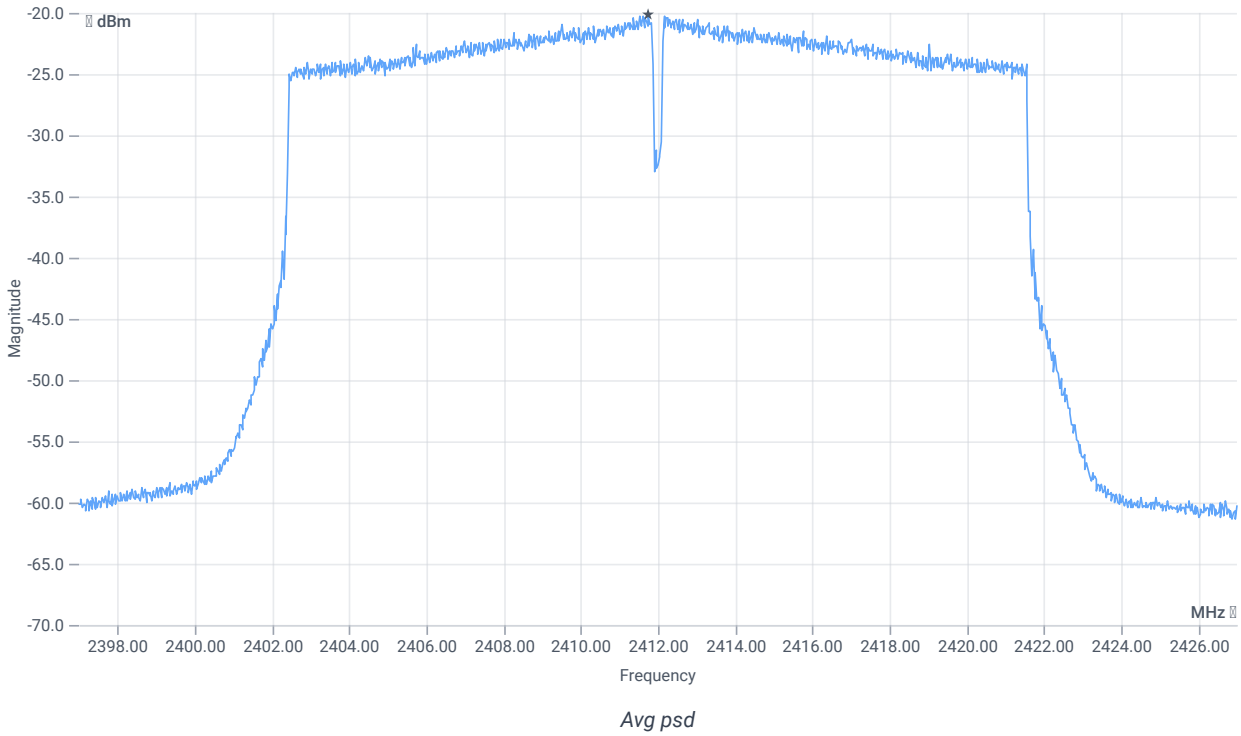
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.59 13.85 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-20.12	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-20.12	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:19:04
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

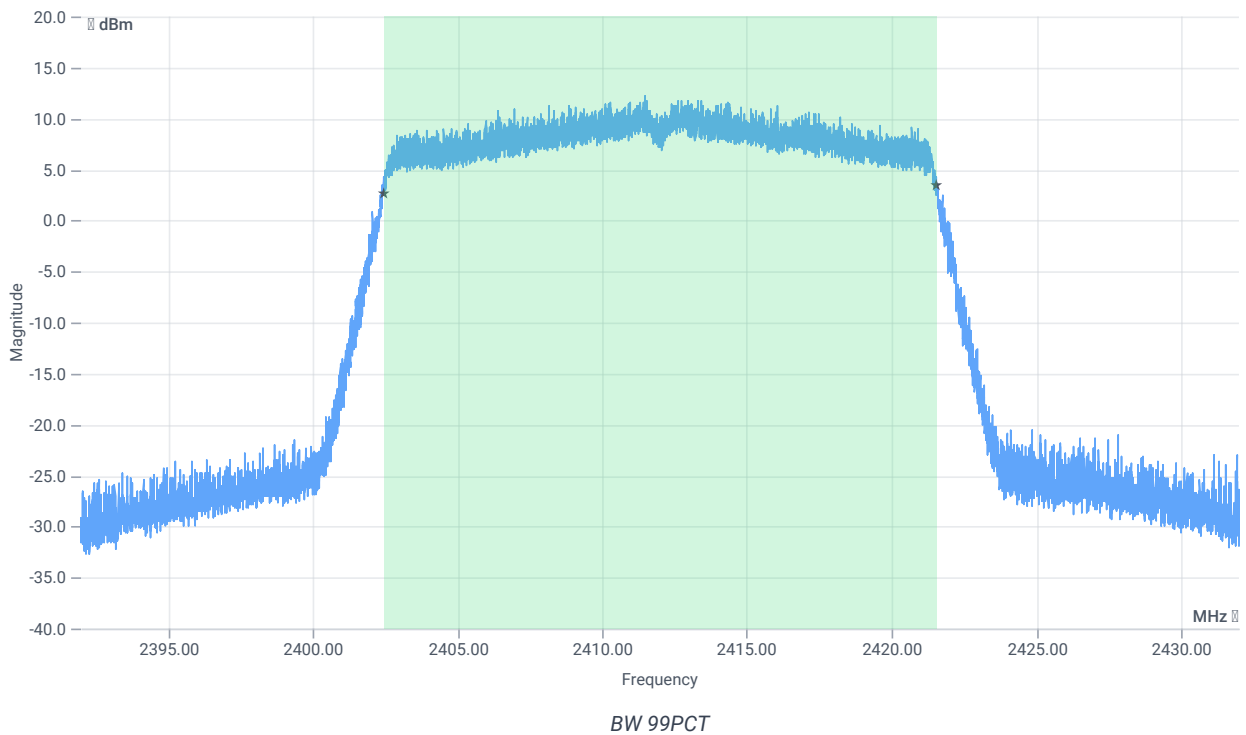
Test at TX 2412 MHz

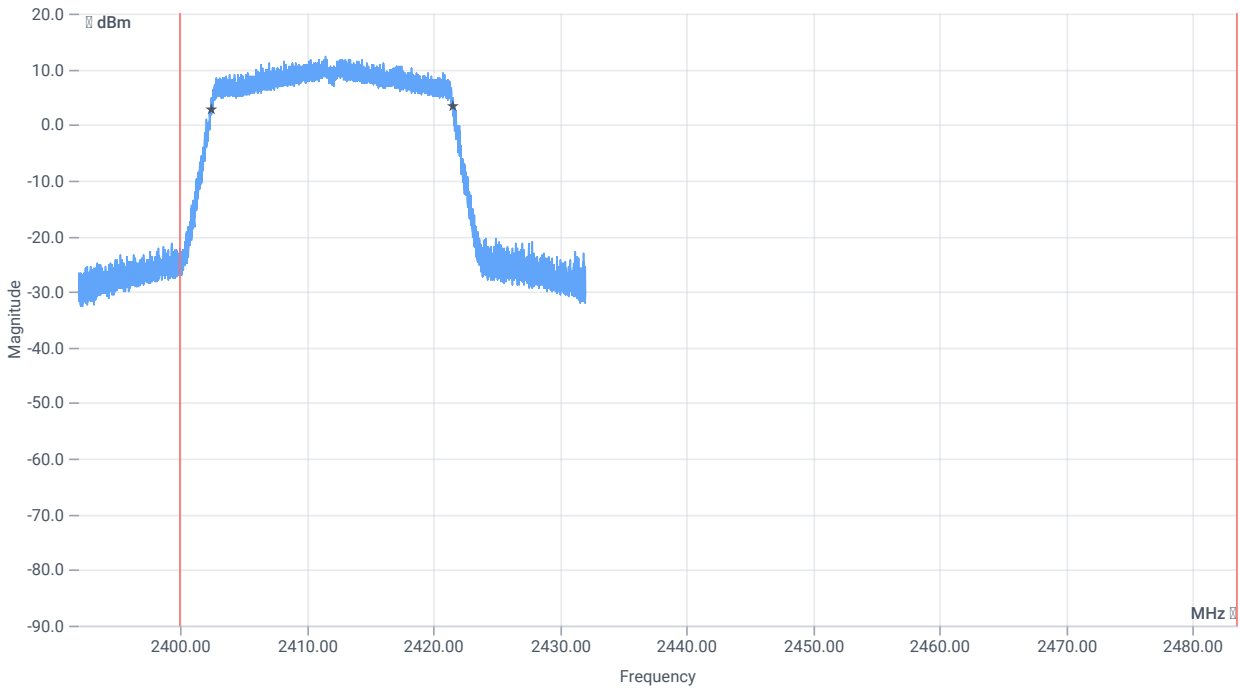
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.97	dBm	INFO
Ref. Frequency	--	--	2412.900	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.97 13.85 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

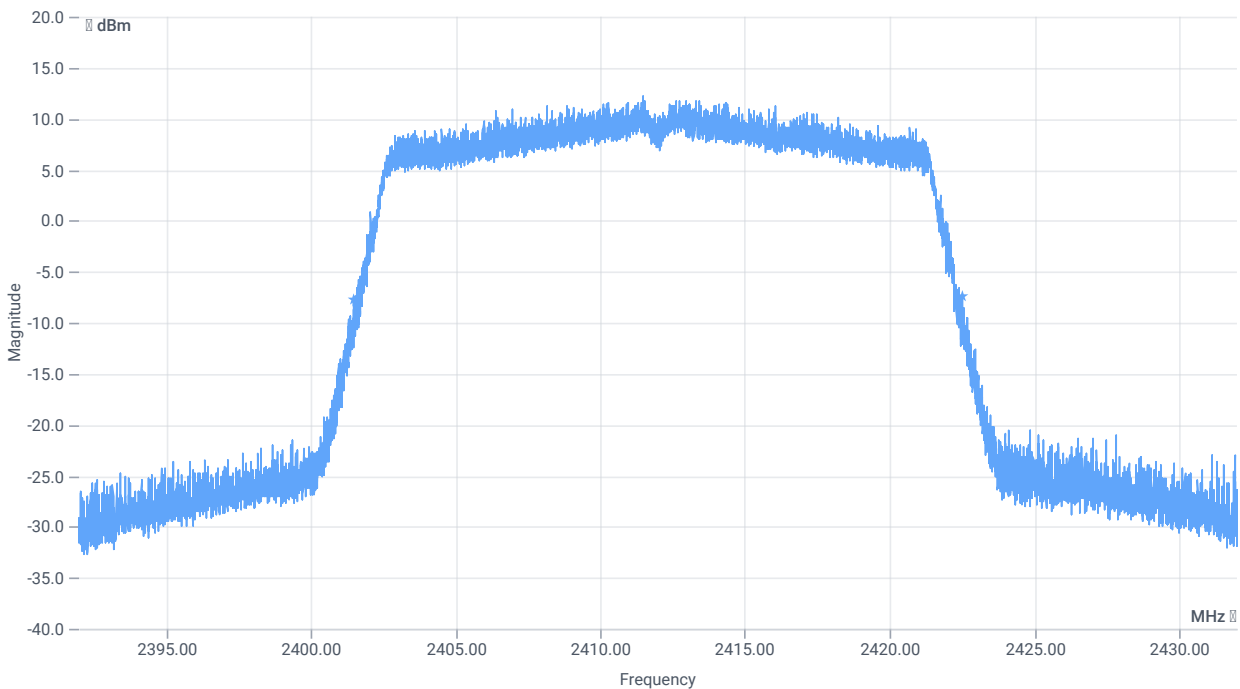




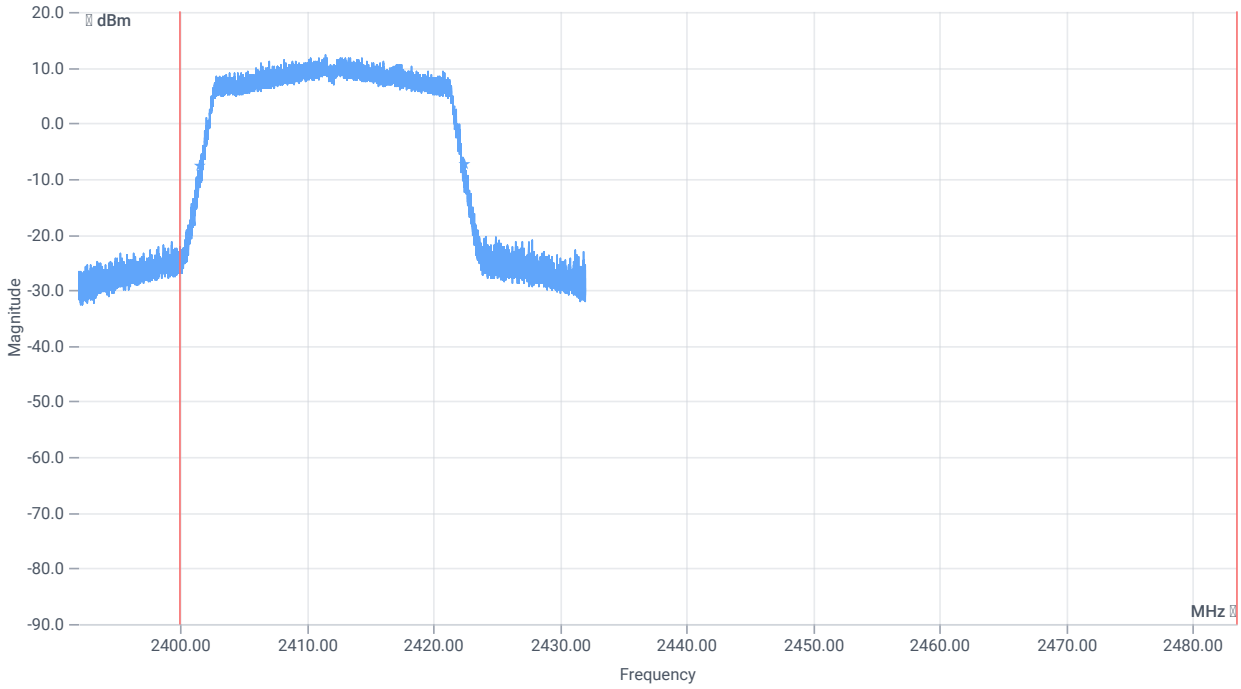
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19114.000	kHz	INFO
T1 99%	2400.000000	--	2402.4530	MHz	PASS
T2 99%	--	2483.500000	2421.5670	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20992	kHz	INFO
T1 20dB	2400.000000	--	2401.5040	MHz	PASS
T2 20dB	--	2483.500000	2422.4960	MHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:19:41
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

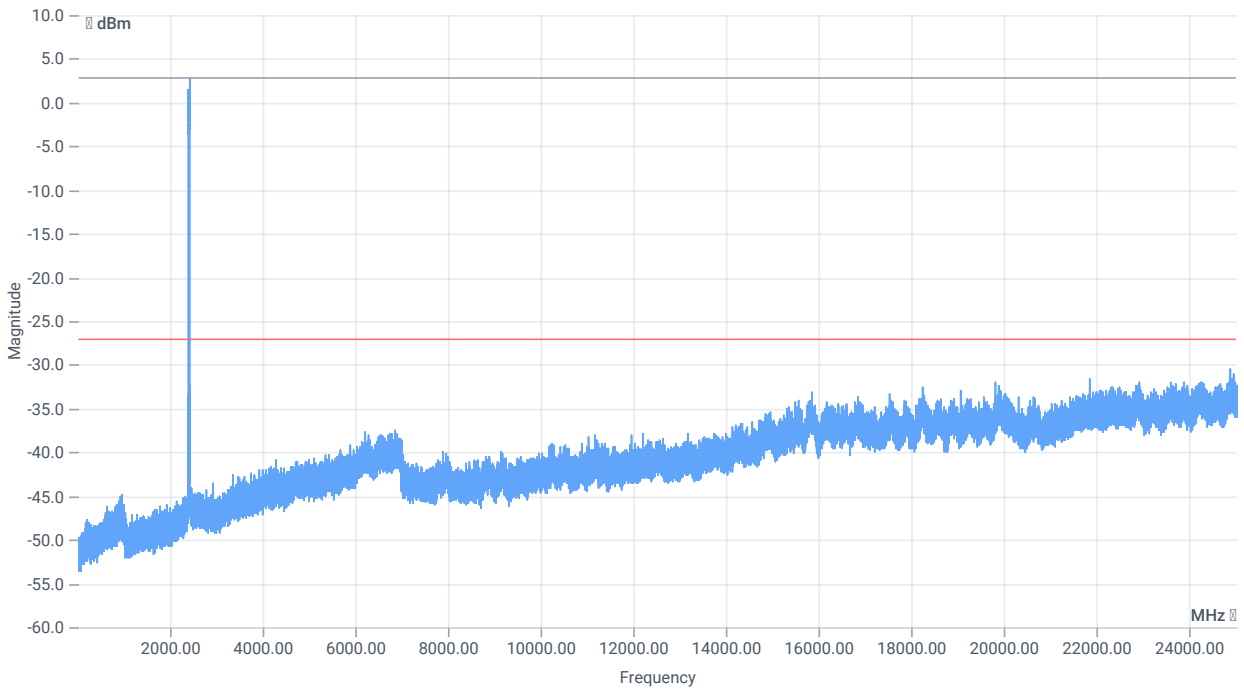
Equipment

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

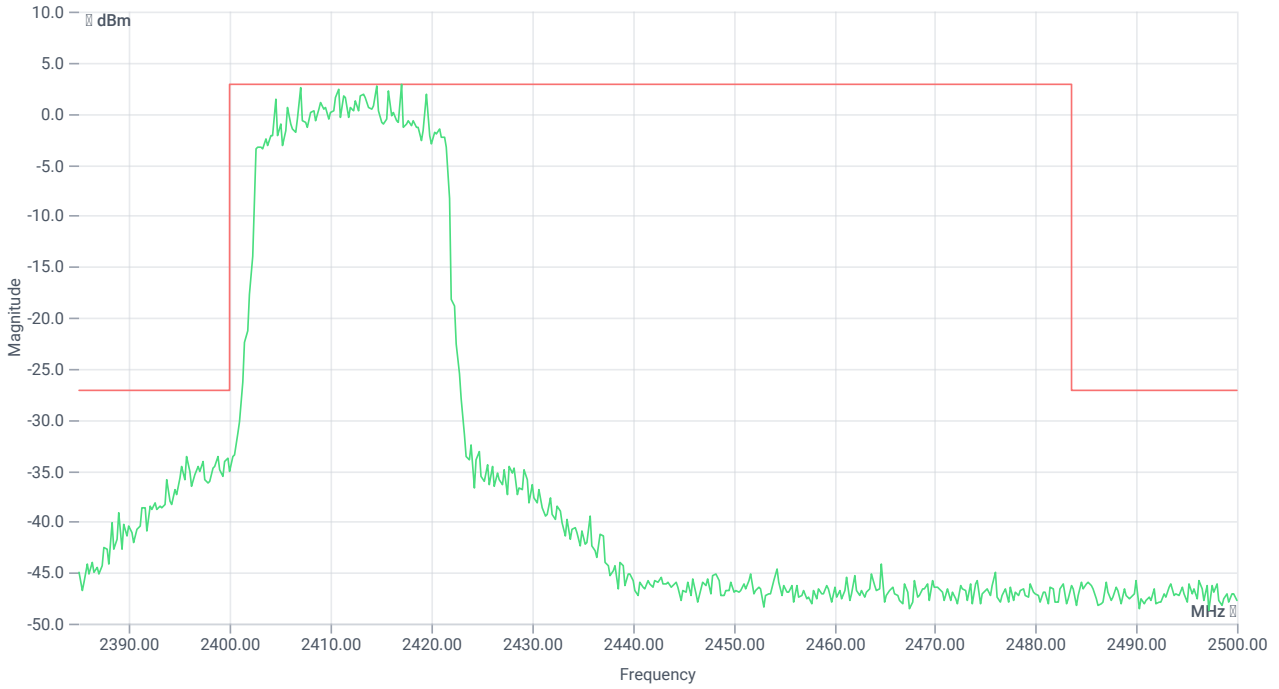
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.56	dBm	INFO
Ref. Frequency	--	--	2410.300	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	12.56 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2417.00 MHz	--	--	2.84	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24897.25 MHz	0	--	3.41	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:26:24
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

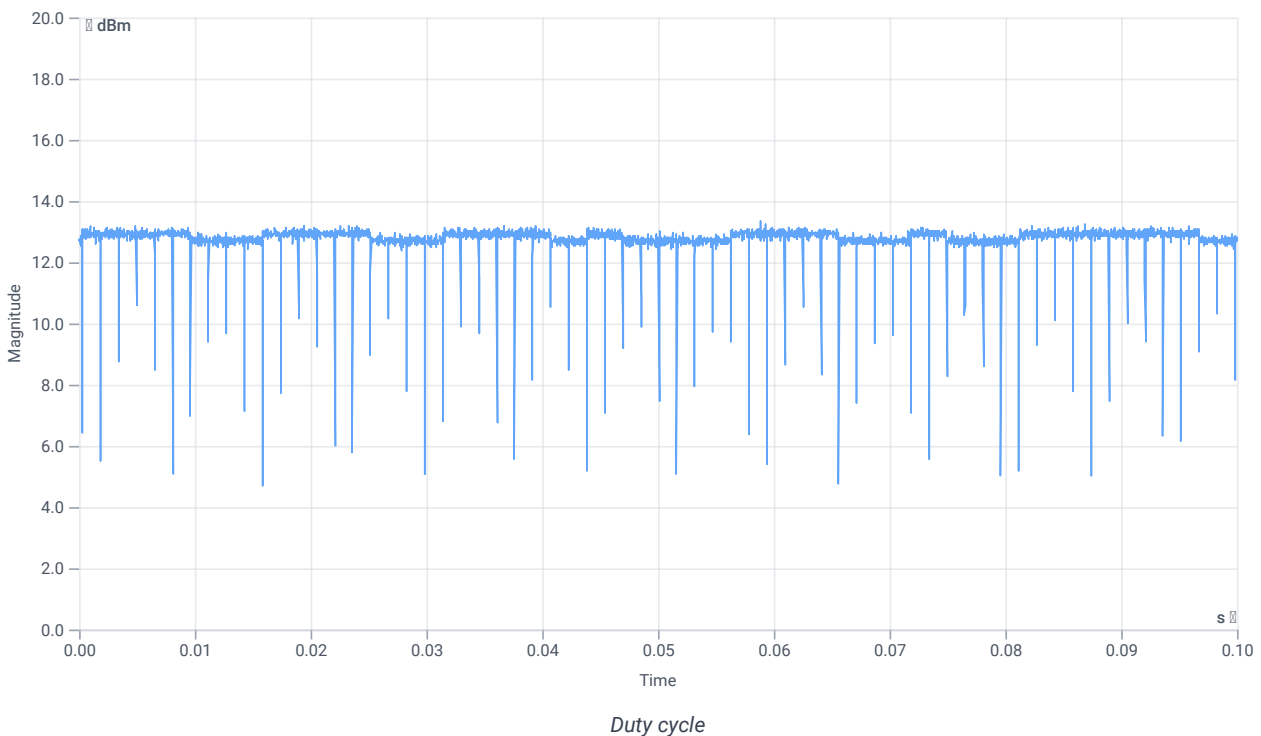
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.27	dBm	INFO
Ref. Frequency	--	--	2407.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



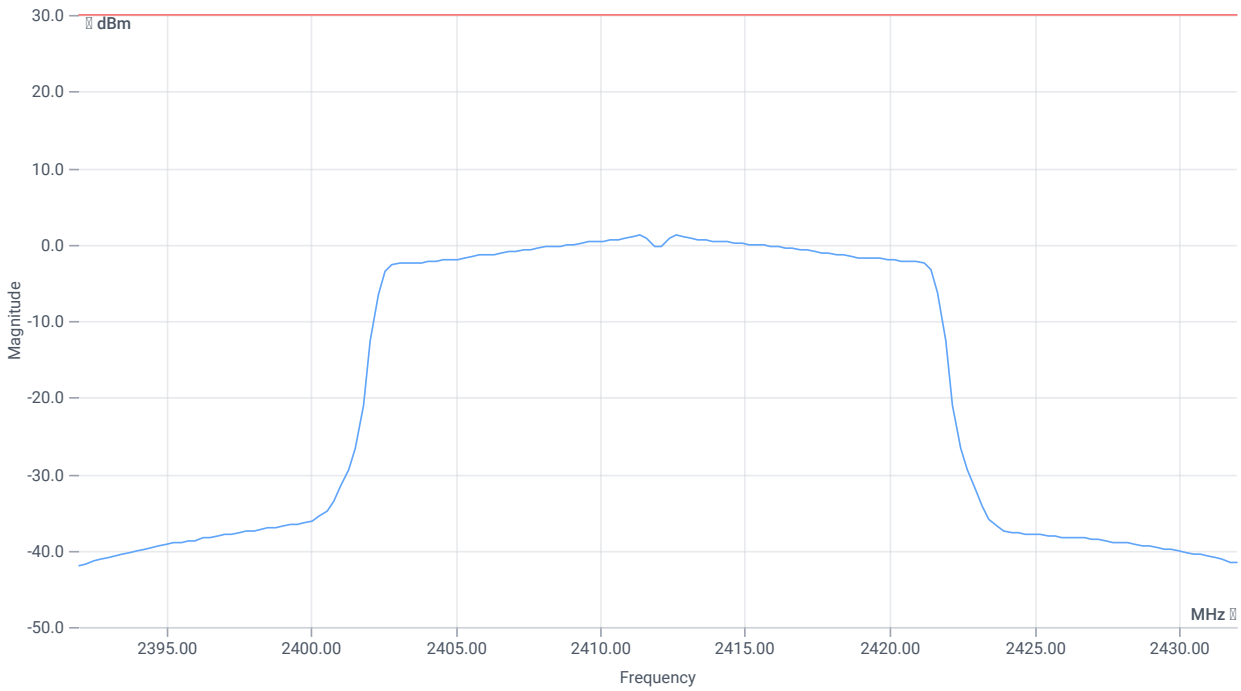
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.27 13.85 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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	14.9	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	14.9	dBm	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:27:39
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

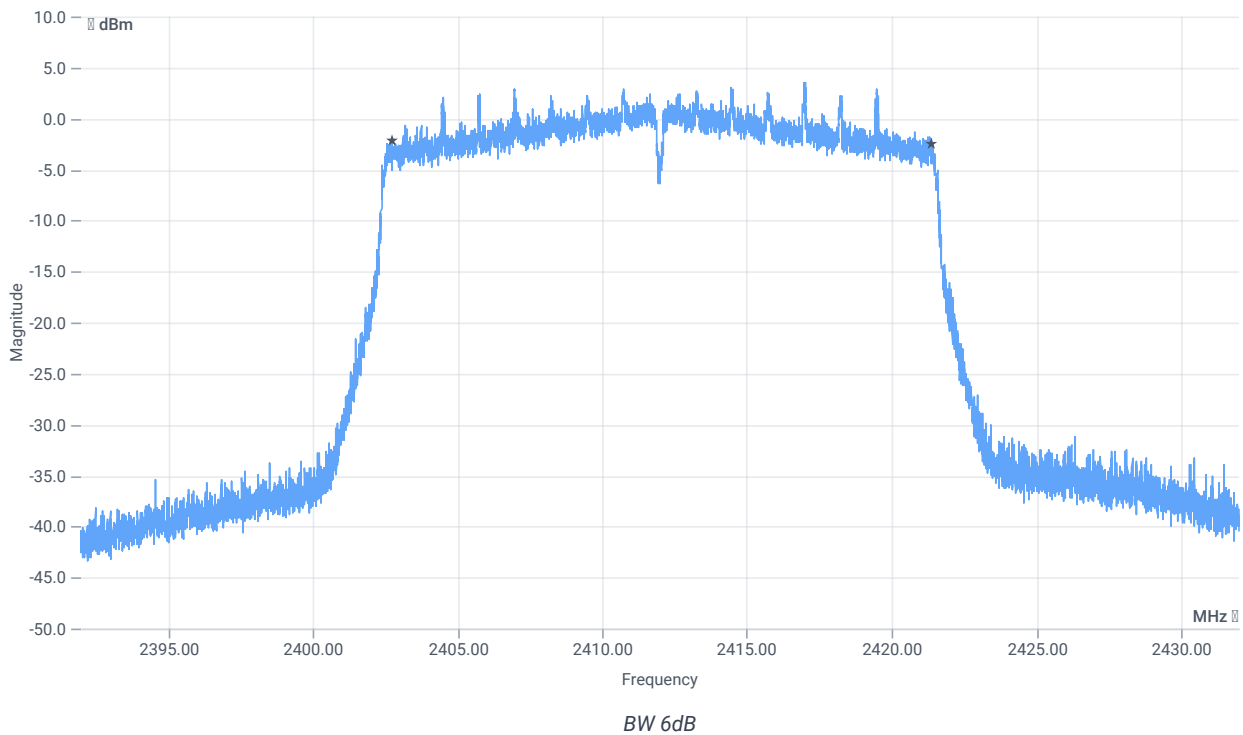
Test at TX 2412 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.07	dBm	INFO
Ref. Frequency	--	--	2413.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.07 13.85 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18668	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:28:13
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

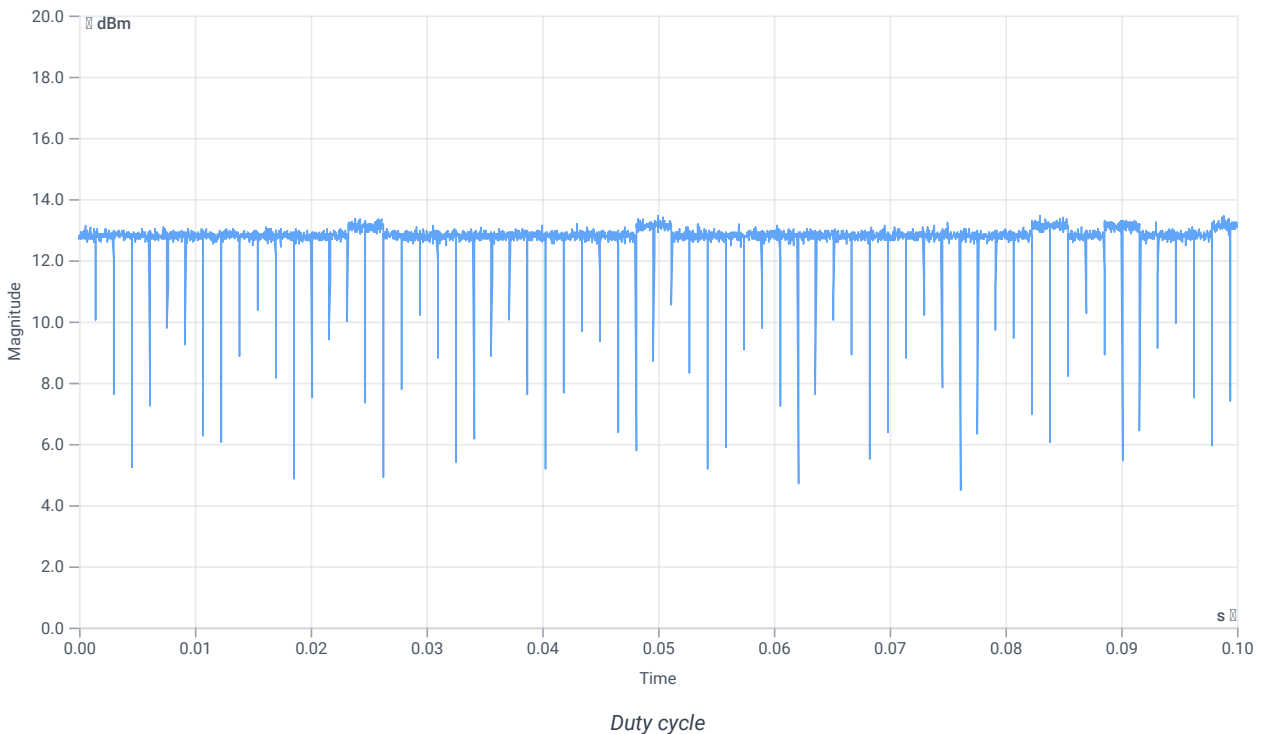
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.57	dBm	INFO
Ref. Frequency	--	--	2411.100	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



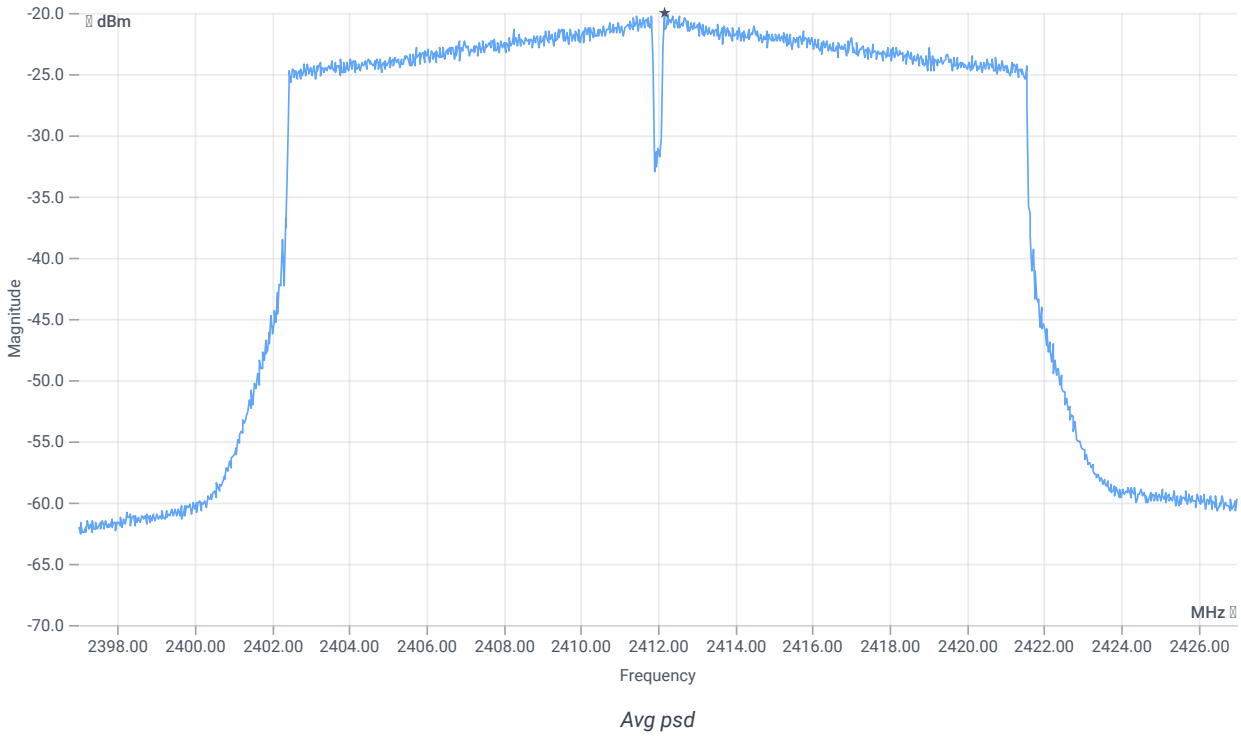
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.57 13.85 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-20.01	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-20.01	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:29:17
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

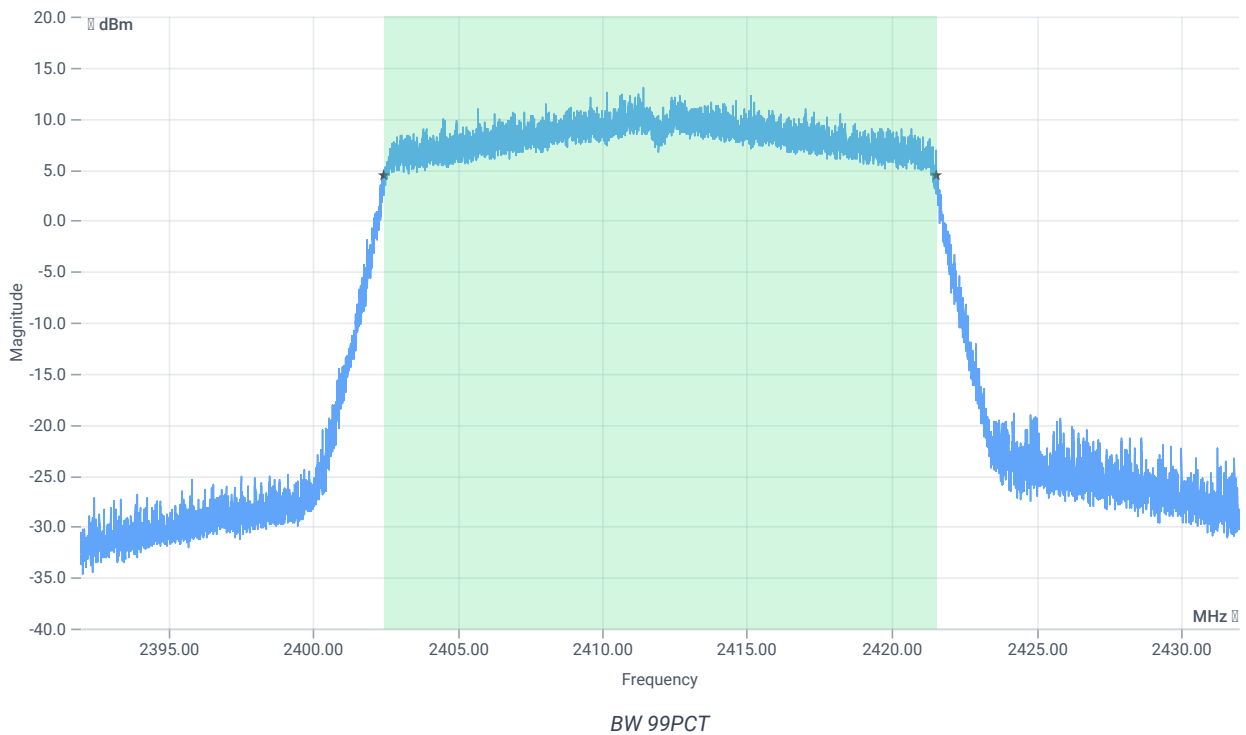
Test at TX 2412 MHz

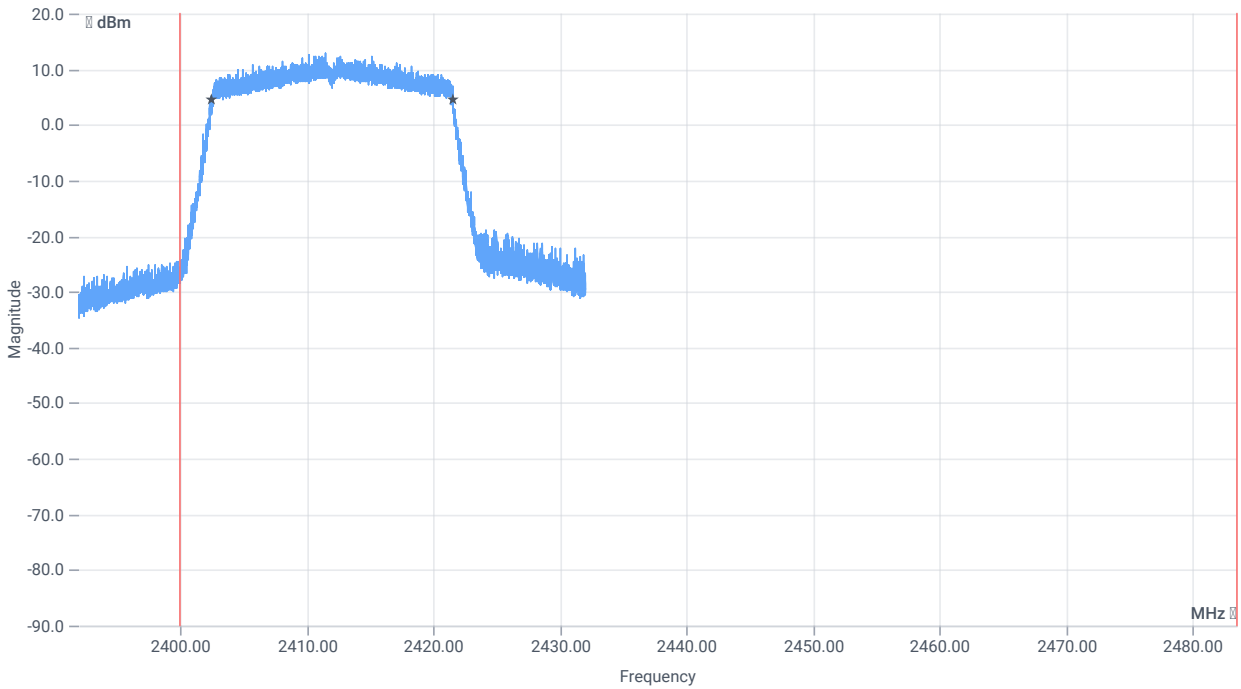
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.75	dBm	INFO
Ref. Frequency	--	--	2413.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.75 13.85 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

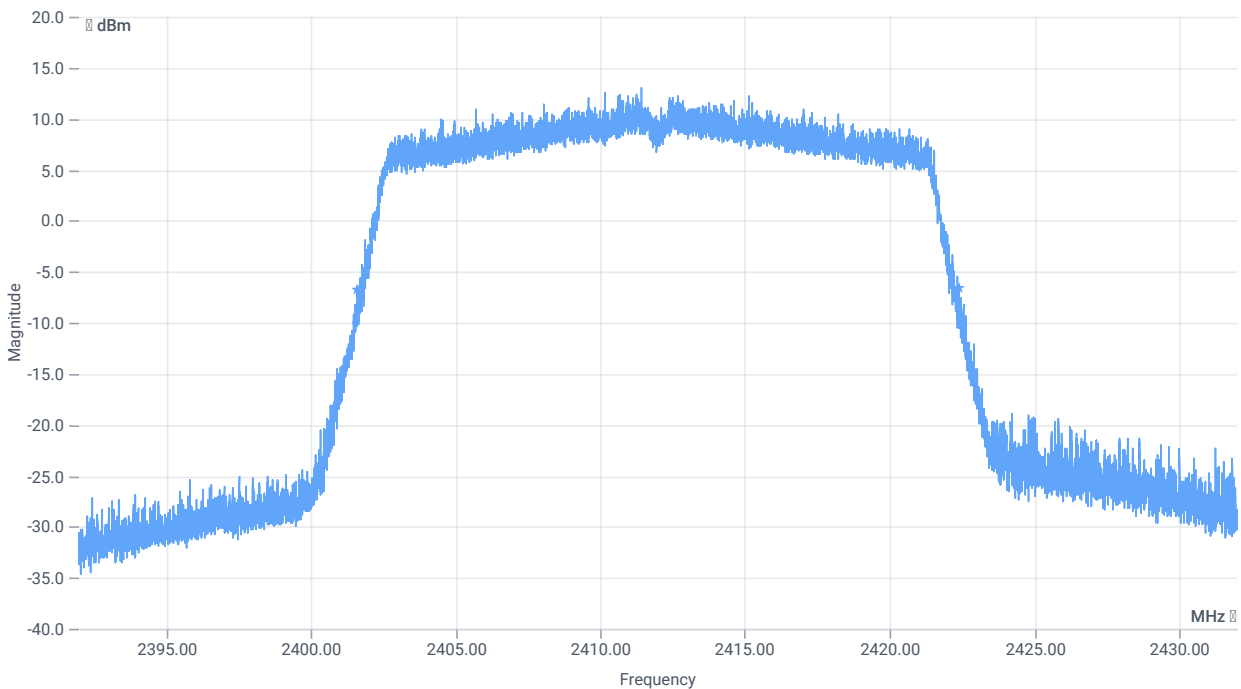




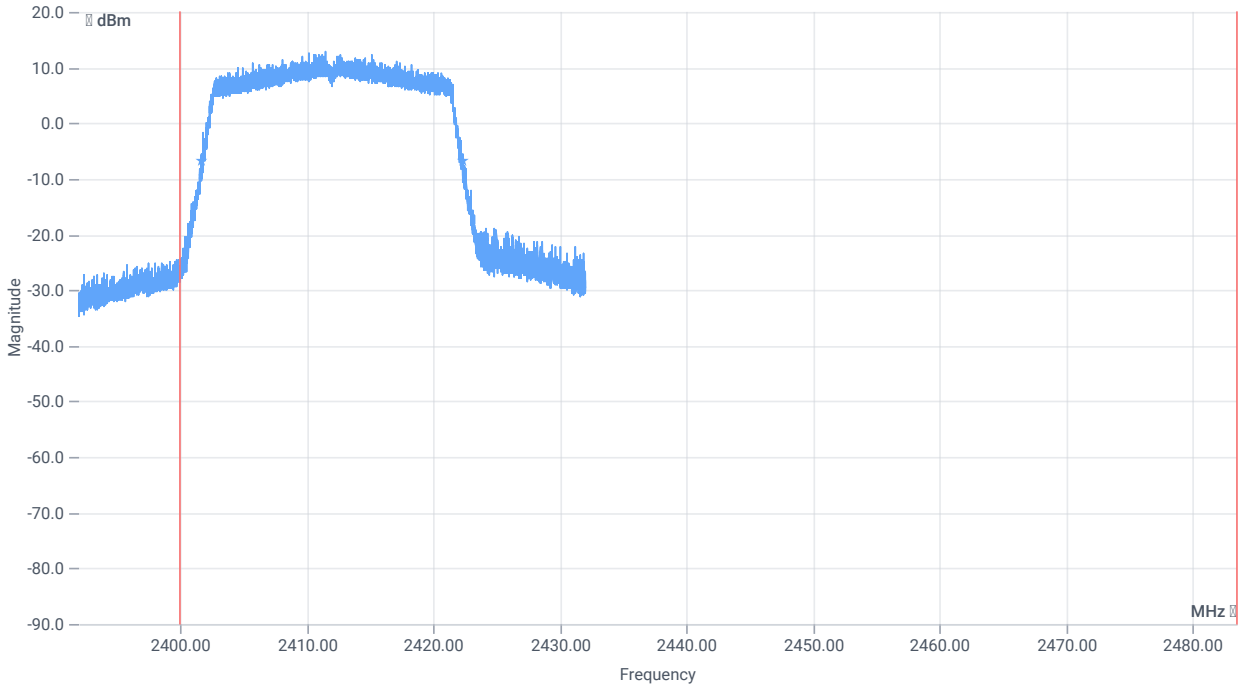
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19086.000	kHz	INFO
T1 99%	2400.000000	--	2402.4610	MHz	PASS
T2 99%	--	2483.500000	2421.5470	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20756	kHz	INFO
T1 20dB	2400.000000	--	2401.6280	MHz	PASS
T2 20dB	--	2483.500000	2422.3840	MHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:29:54
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

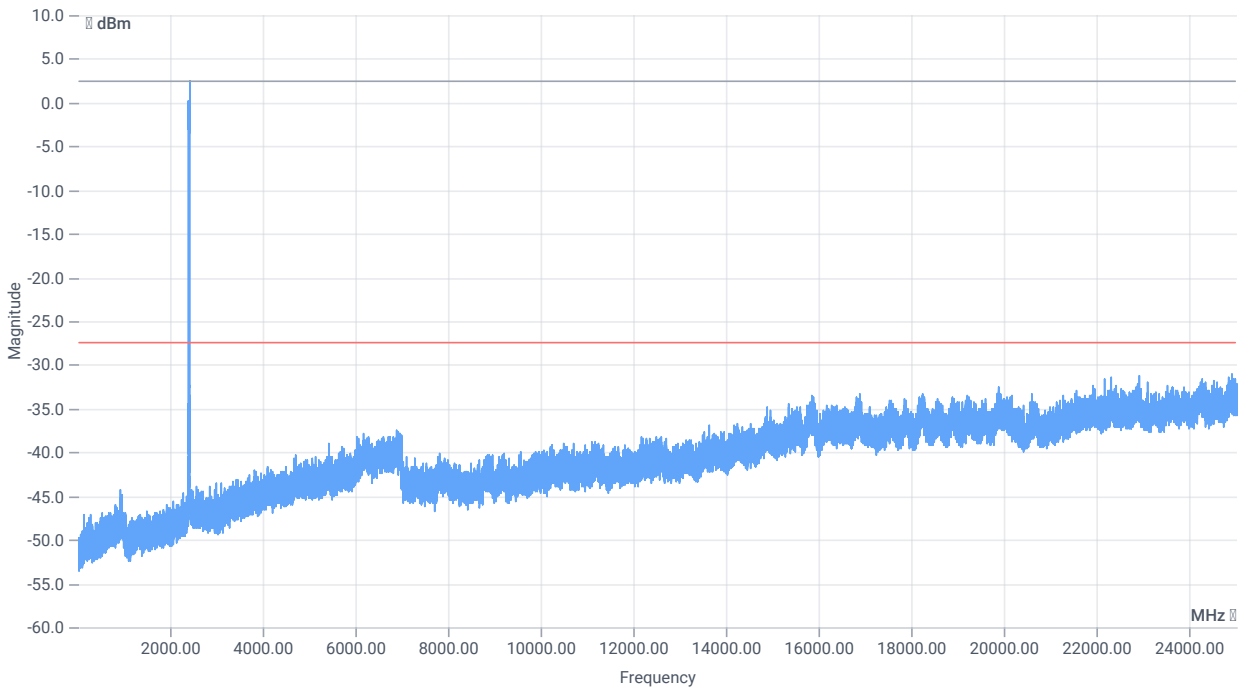
Equipment

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.

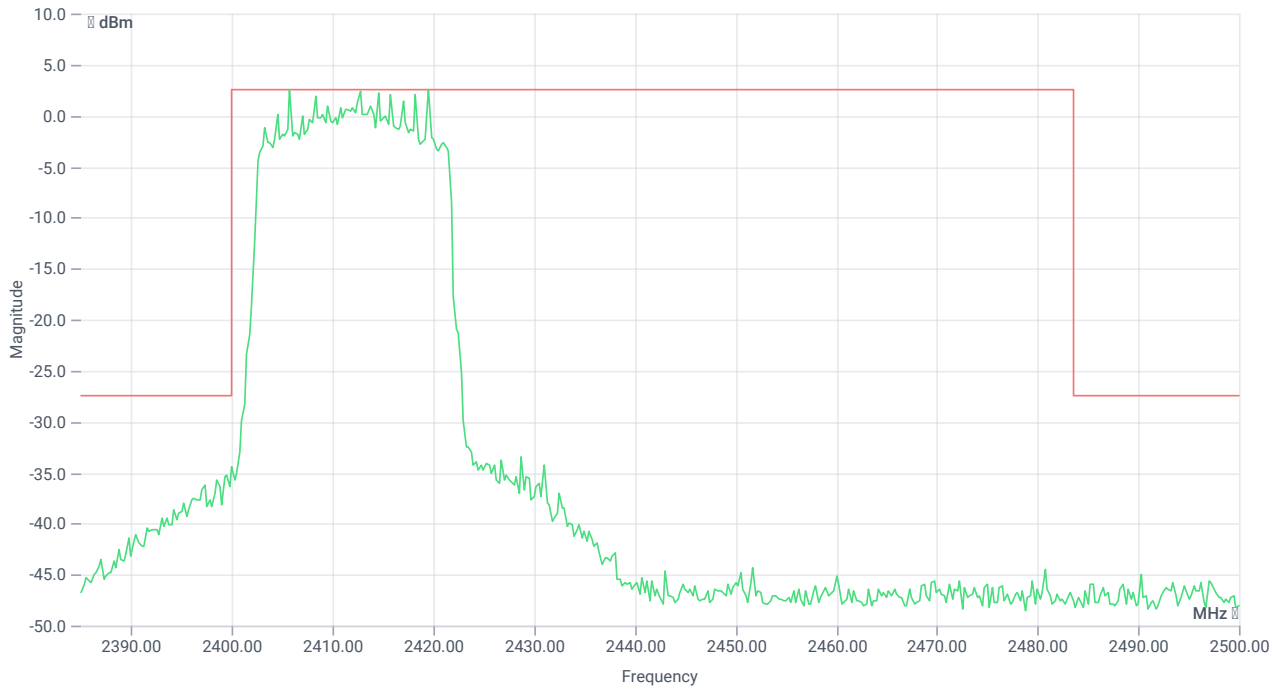
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.38	dBm	INFO
Ref. Frequency	--	--	2409.400	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.38 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2405.75 MHz	--	--	2.48	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24927.5 MHz	0	--	3.59	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:36:37
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

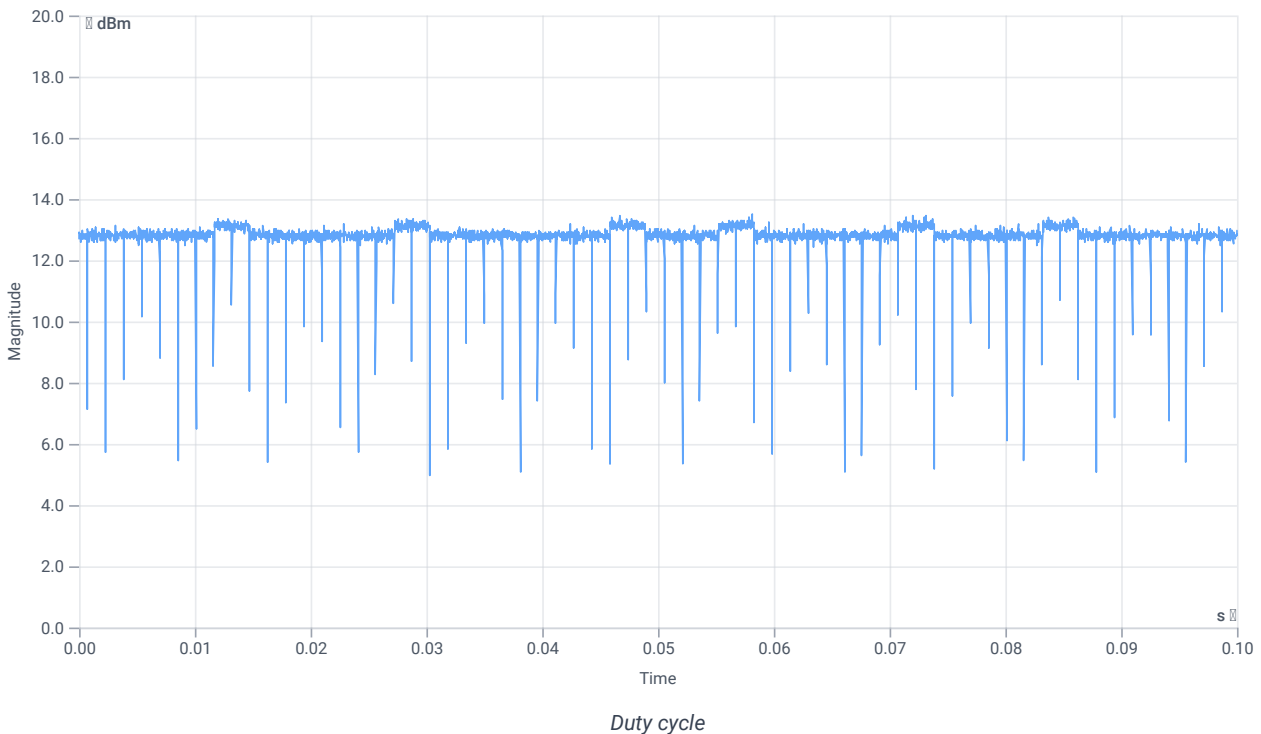
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.27	dBm	INFO
Ref. Frequency	--	--	2413.400	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



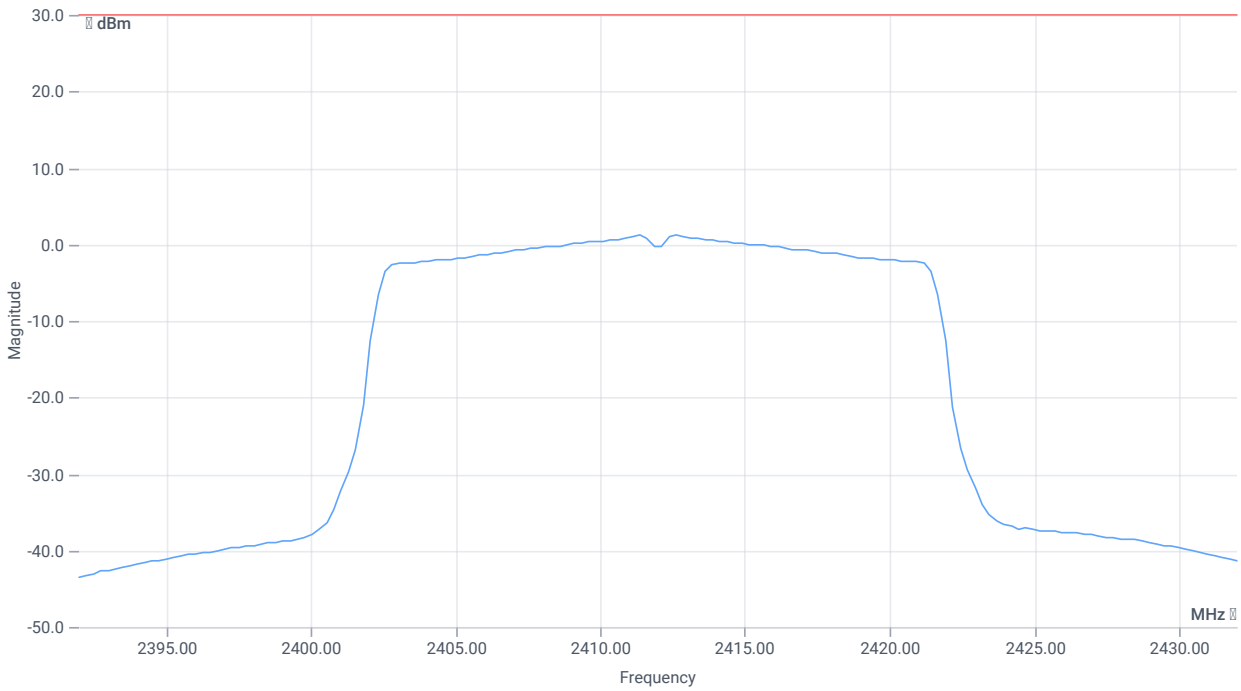
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.27 13.85 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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	14.93	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	14.93	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	13.01.2024 15:37:51
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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
Full path name type	None

Equipment

Test at TX 2412 MHz

RESULT Power

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	--	--	14.9	dBm	INFO
Ant:2 Avg power DC corr.	--	--	14.93	dBm	INFO
Σ Avg output power DC corr.	--	30	17.93	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	13.01.2024 15:38:53
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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
Full path name type	None

Equipment

Test at TX 2412 MHz

RESULT psd

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr	--	--	-20.12	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-20.01	dBm/3kHz	INFO
Σ Avg psd DC corr	--	8	-17.05	dBm/3kHz	PASS

Verdict

PASS

NA # Message with SA scan ~

References

TC start	13.01.2024 15:39:03
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	NA NI
Method	
Description	Message with SA Scan ax-HE20
Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	13.01.2024 15:39:04
Message	set WLAN2G4 to ax-HE20, Frequency [MHz] 2437 ,

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 ax-HE20

References

TC start	13.01.2024 15:39:50
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

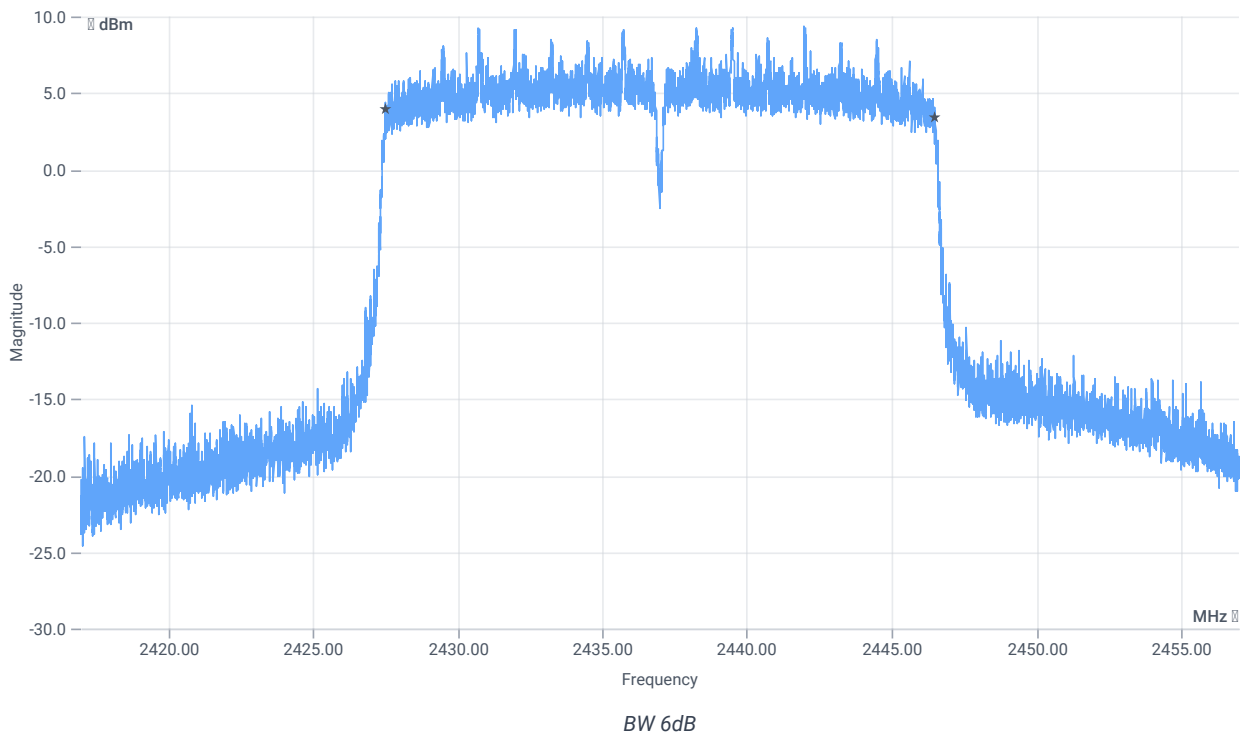
Test at TX 2437 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	17.74	dBm	INFO
Ref. Frequency	--	--	2444.790	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.74 14.01 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18972	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:40:23
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

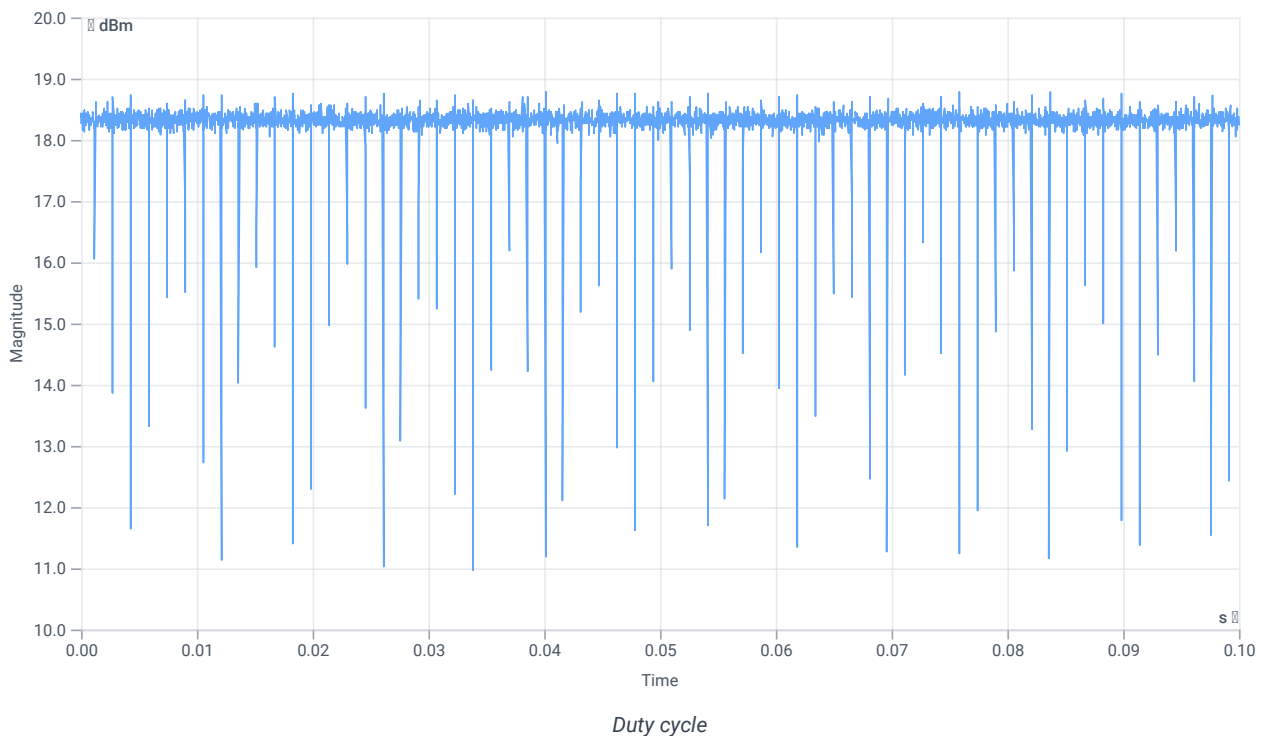
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	19.36	dBm	INFO
Ref. Frequency	--	--	2429.910	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



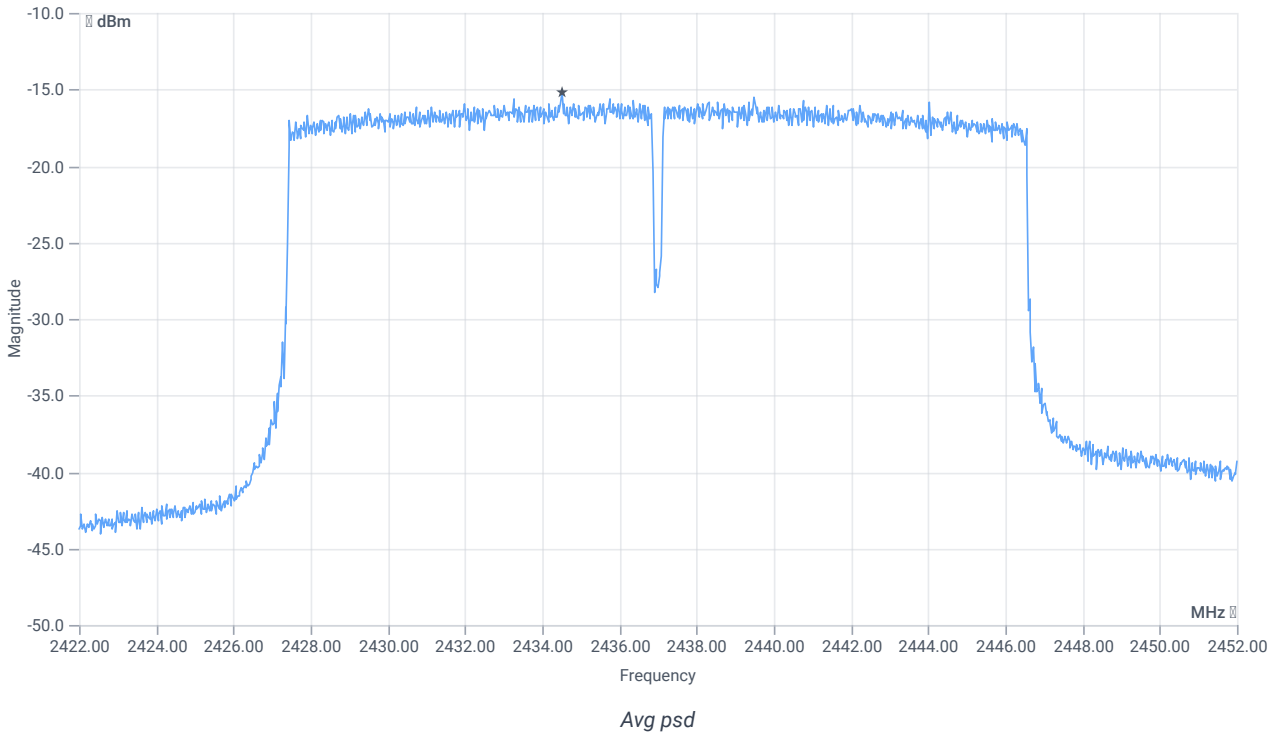
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	24.36 14.01 30
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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-15.18	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-15.18	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:41:28
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

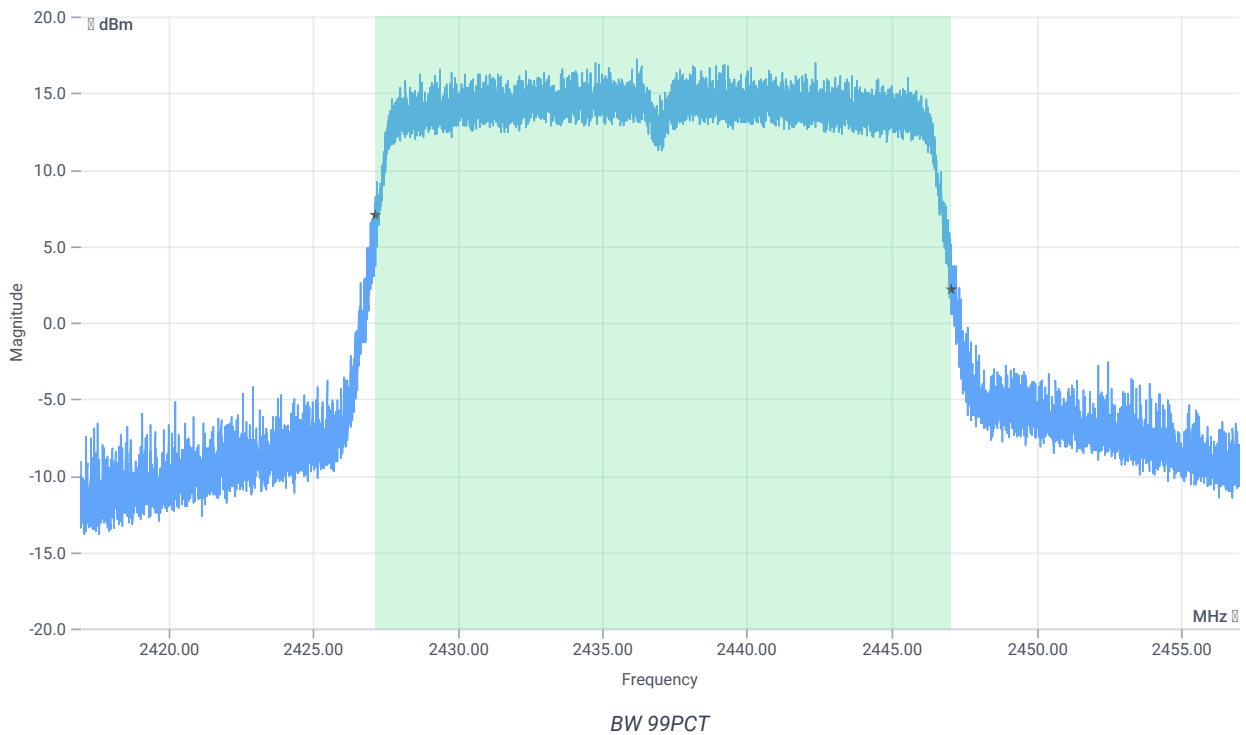
Test at TX 2437 MHz

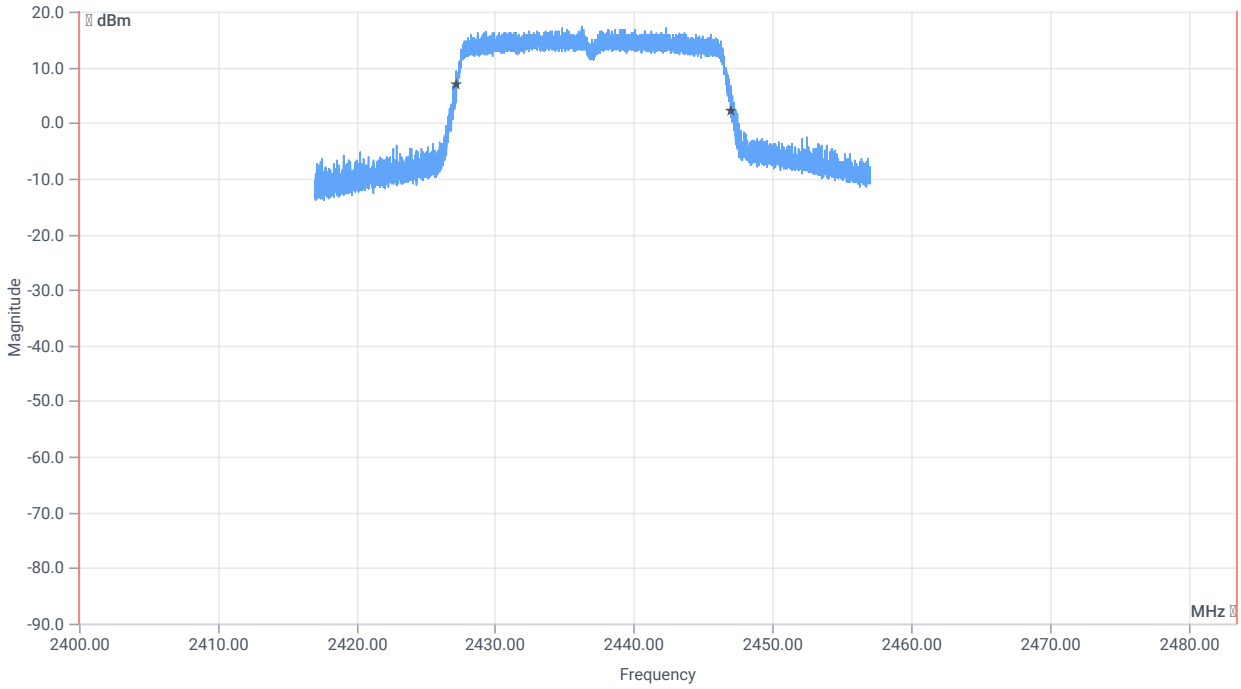
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	18.75	dBm	INFO
Ref. Frequency	--	--	2435.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.75 14.01 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

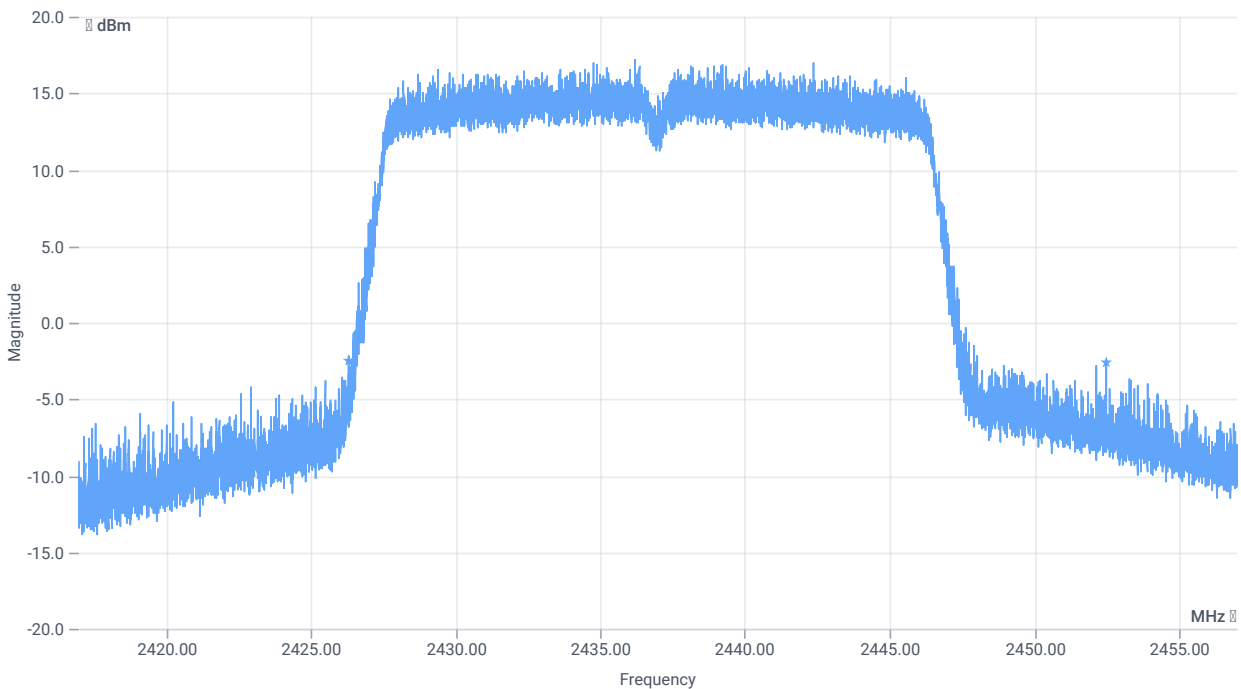




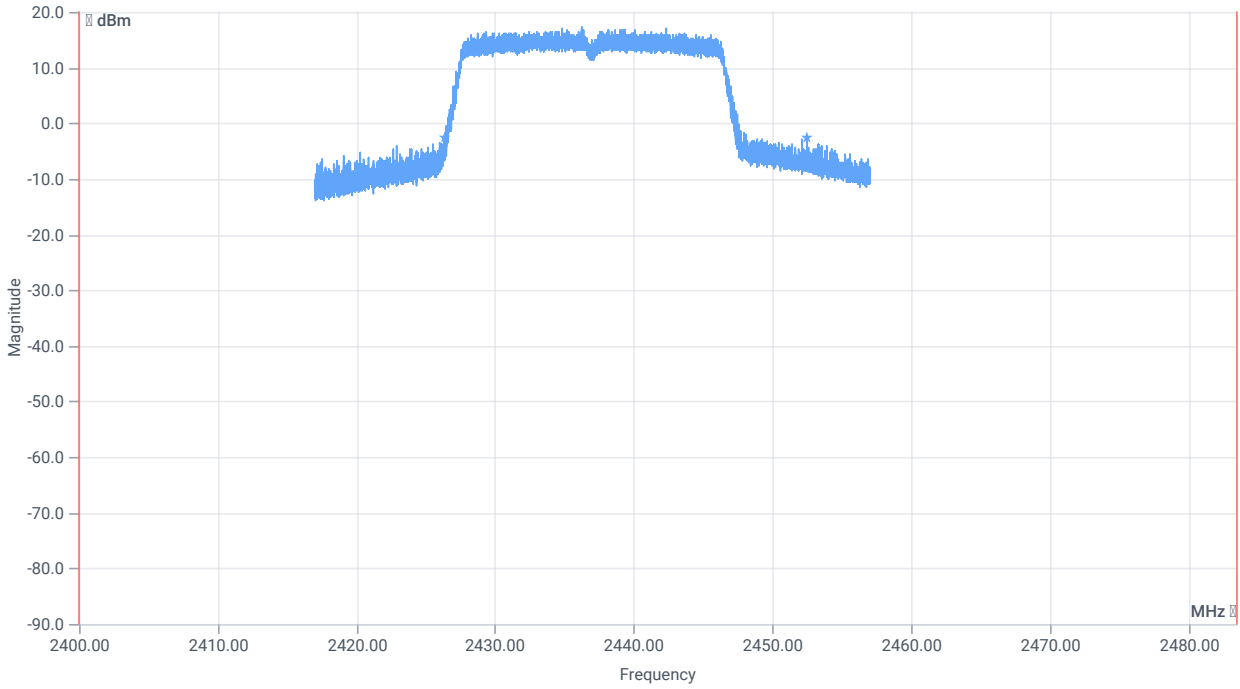
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19850.000	kHz	INFO
T1 99%	2400.000000	--	2427.1930	MHz	PASS
T2 99%	--	2483.500000	2447.0430	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	26160	kHz	INFO
T1 20dB	2400.000000	--	2426.3080	MHz	PASS
T2 20dB	--	2483.500000	2452.4680	MHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:42:04
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

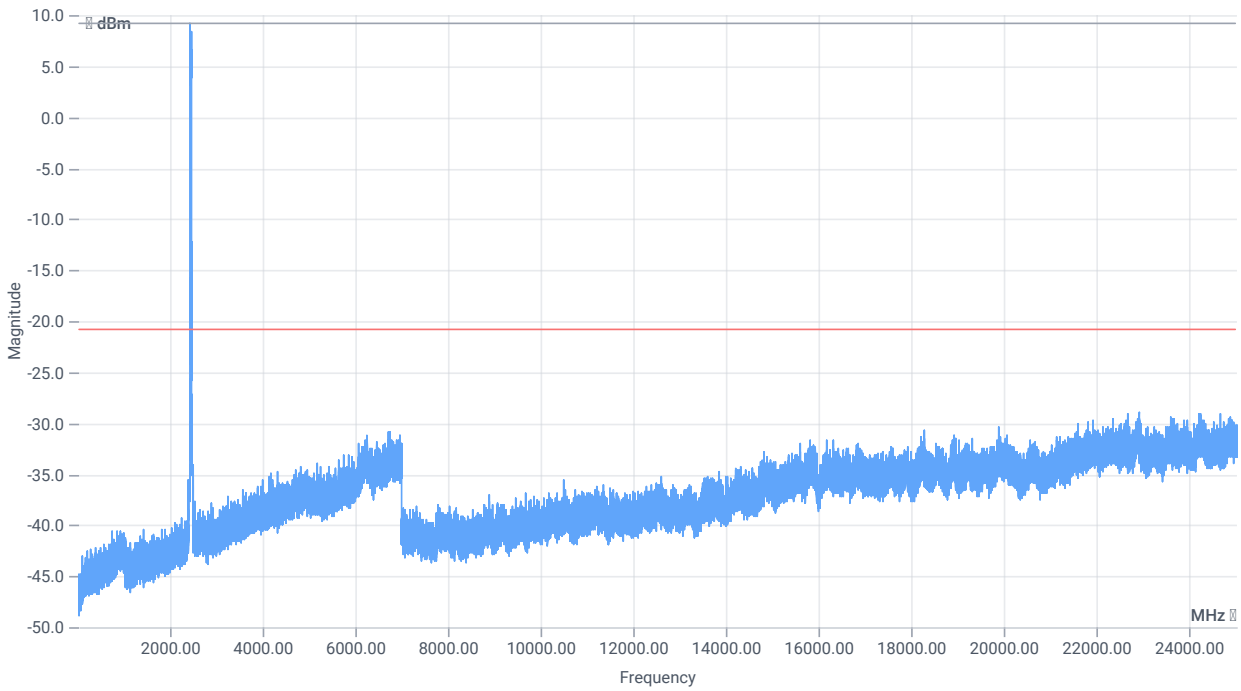
Equipment

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.

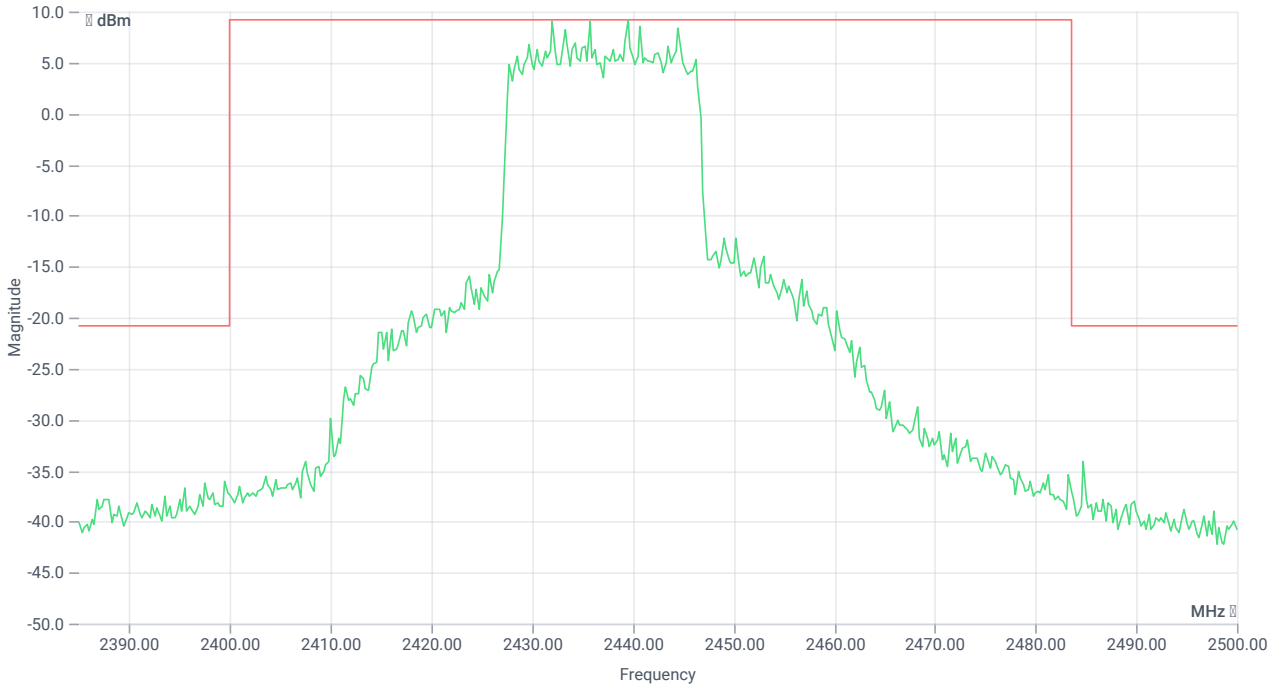
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	17.65	dBm	INFO
Ref. Frequency	--	--	2433.300	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.65 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2439.50 MHz	--	--	9.13	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 22904.75 MHz	0	--	8.1	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:48:47
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

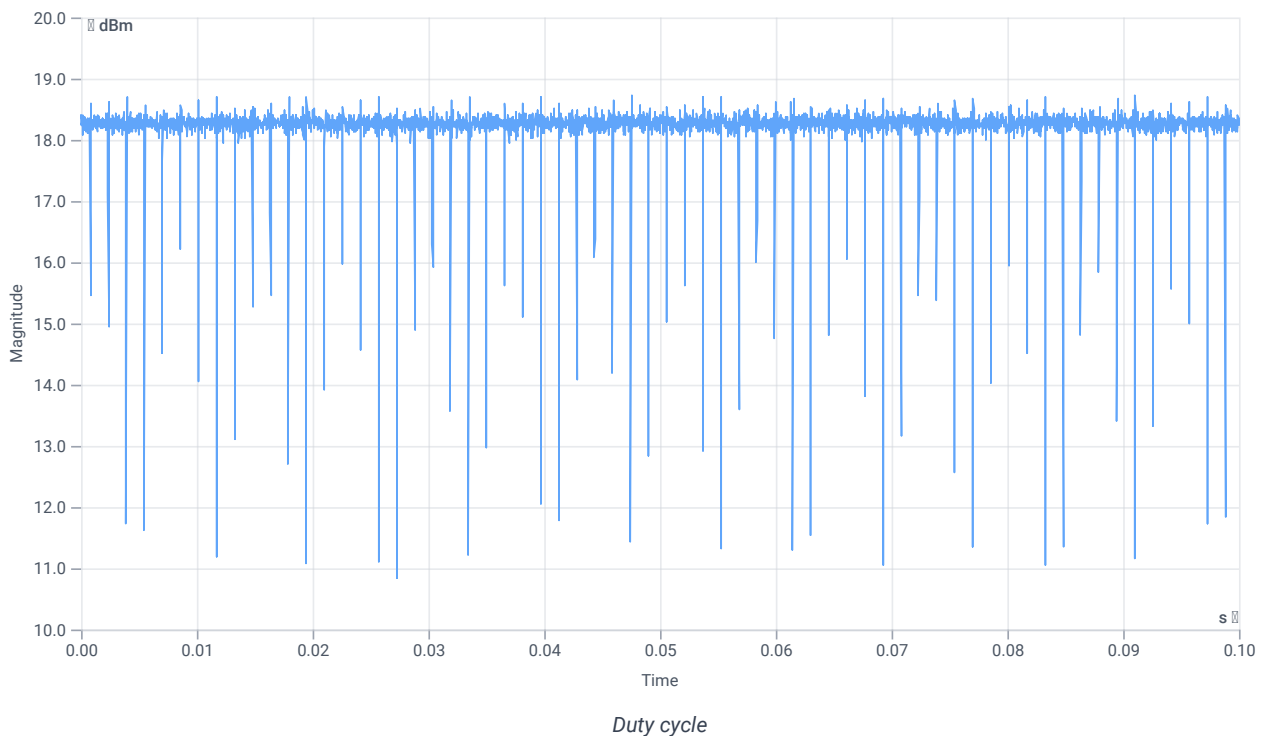
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	20.51	dBm	INFO
Ref. Frequency	--	--	2440.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



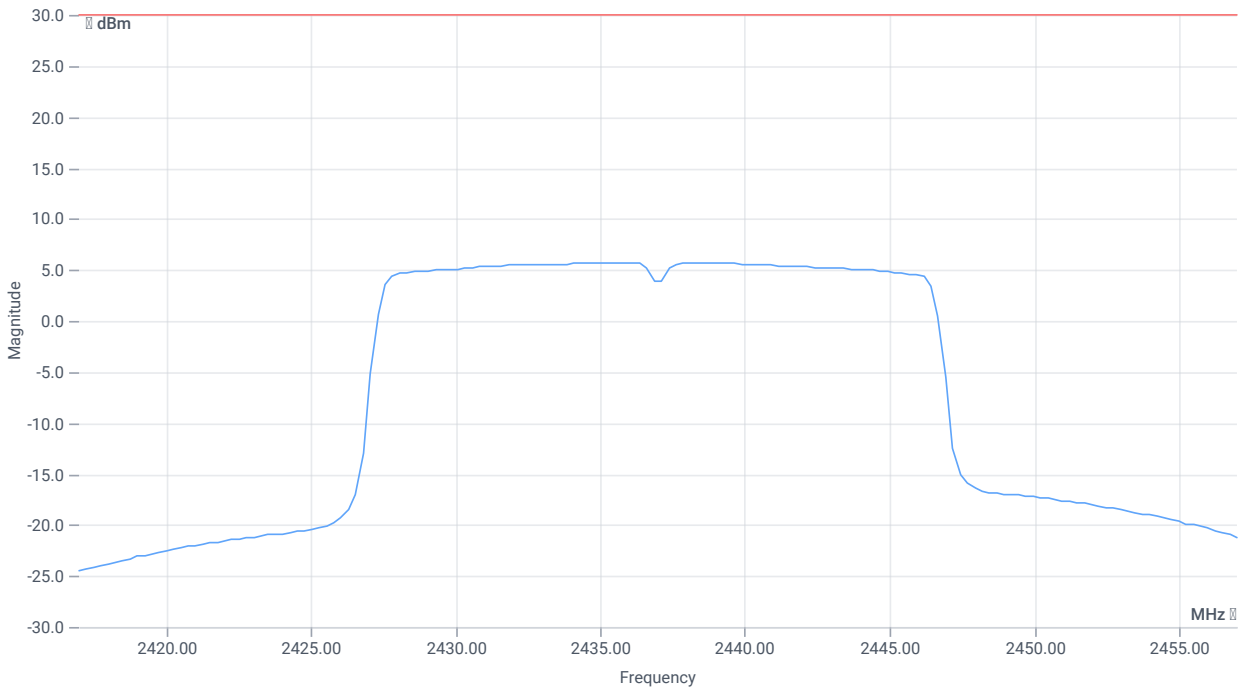
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	30.51 14.01 35
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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	20.8	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	20.8	dBm	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:50:02
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

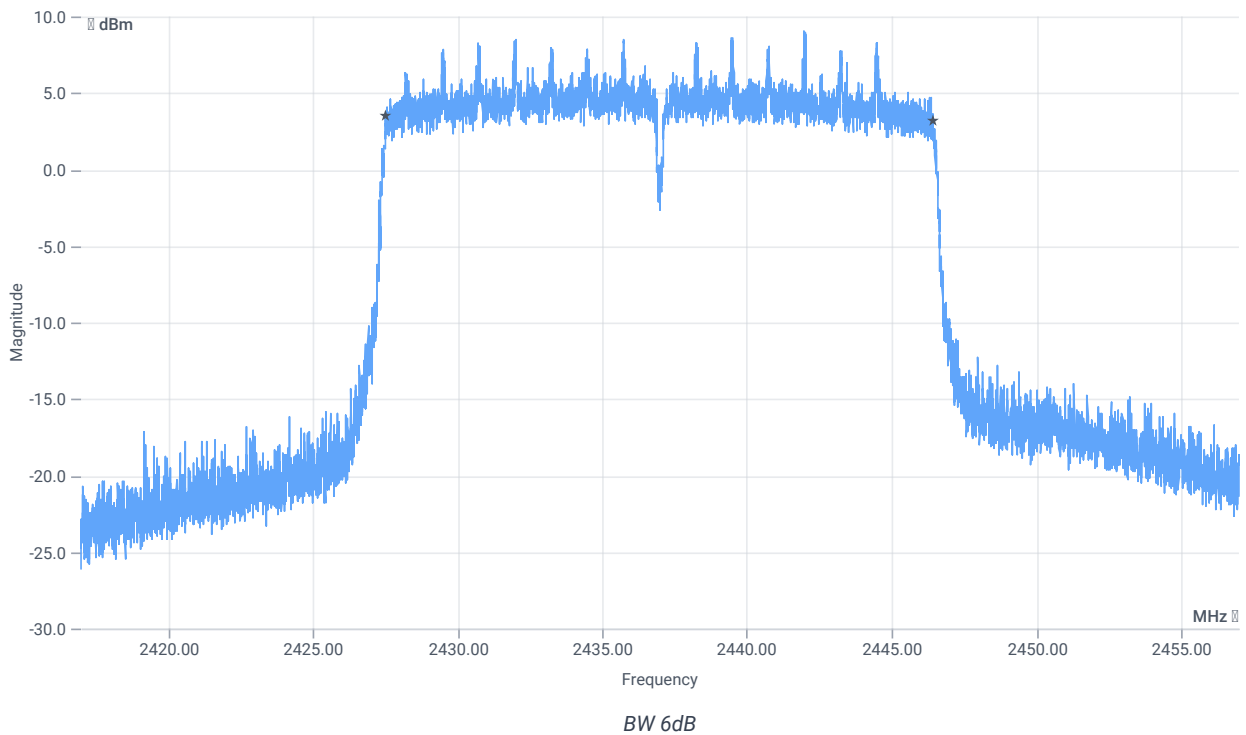
Test at TX 2437 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	17.97	dBm	INFO
Ref. Frequency	--	--	2440.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.97 14.01 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18888	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:50:35
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

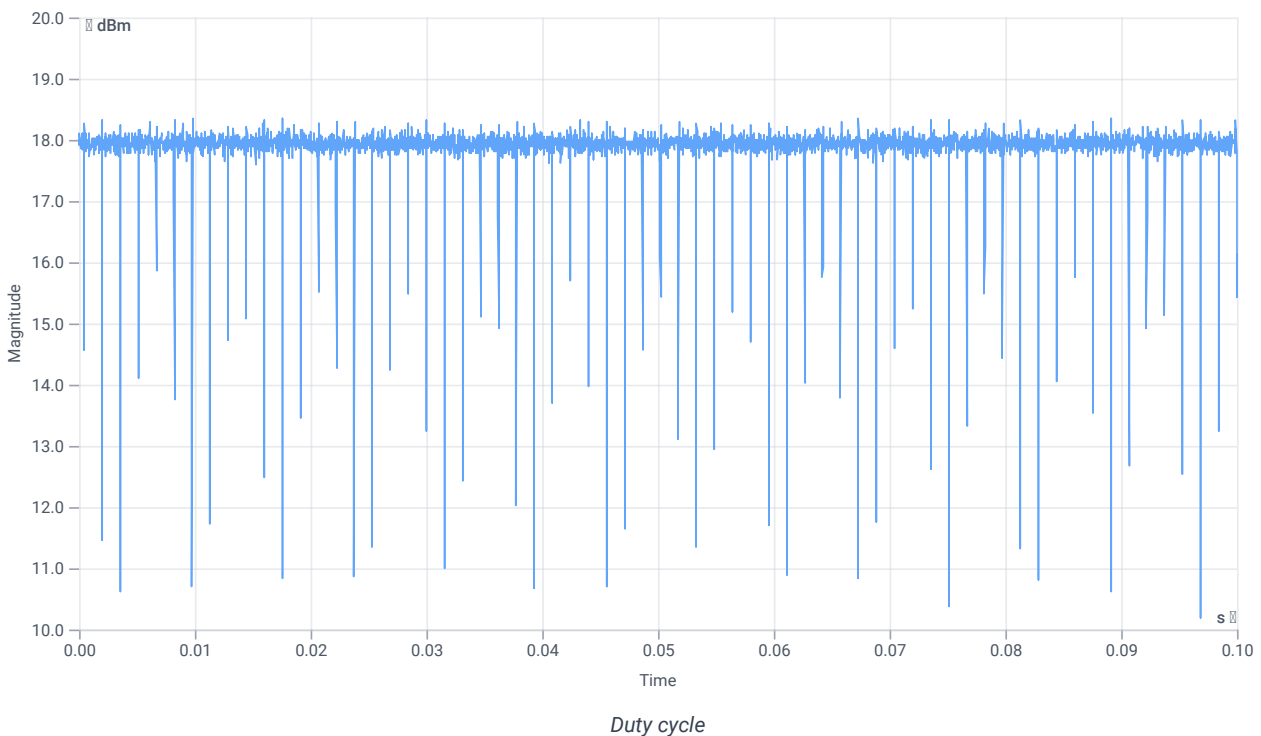
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	18.71	dBm	INFO
Ref. Frequency	--	--	2428.510	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



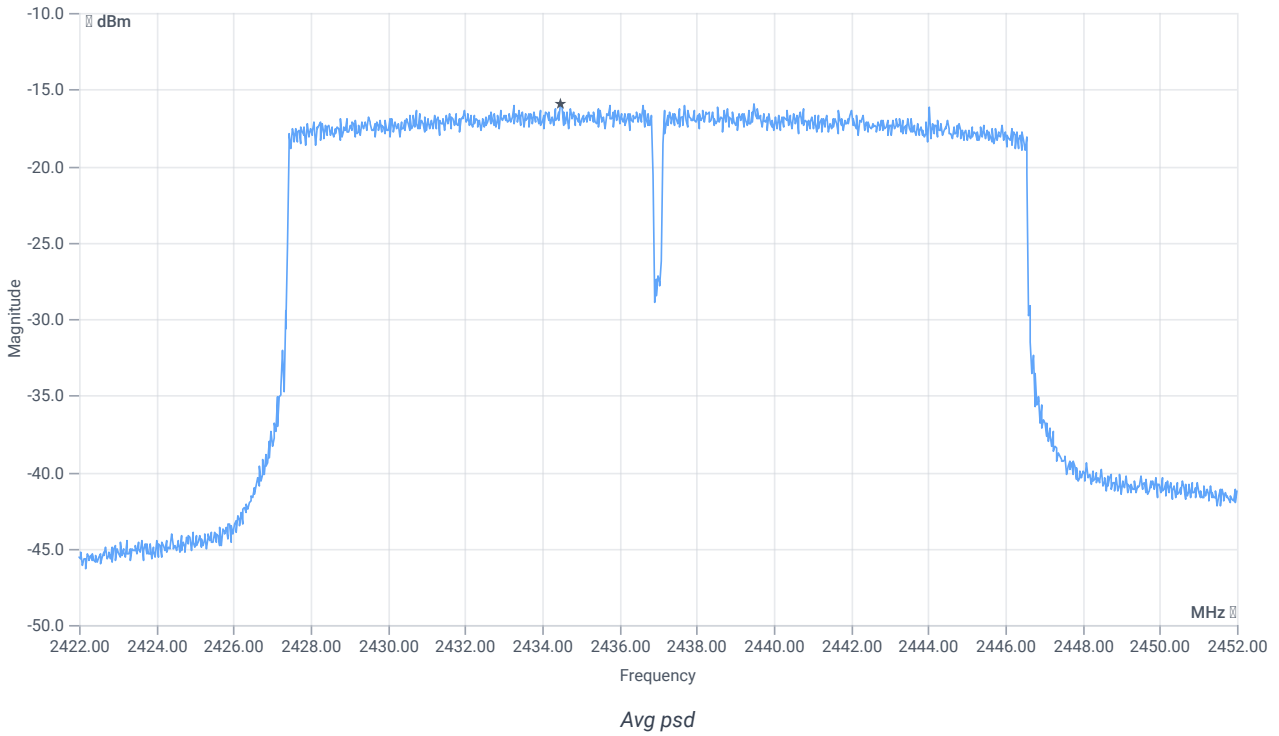
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.71 14.01 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-15.92	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-15.92	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:51:39
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

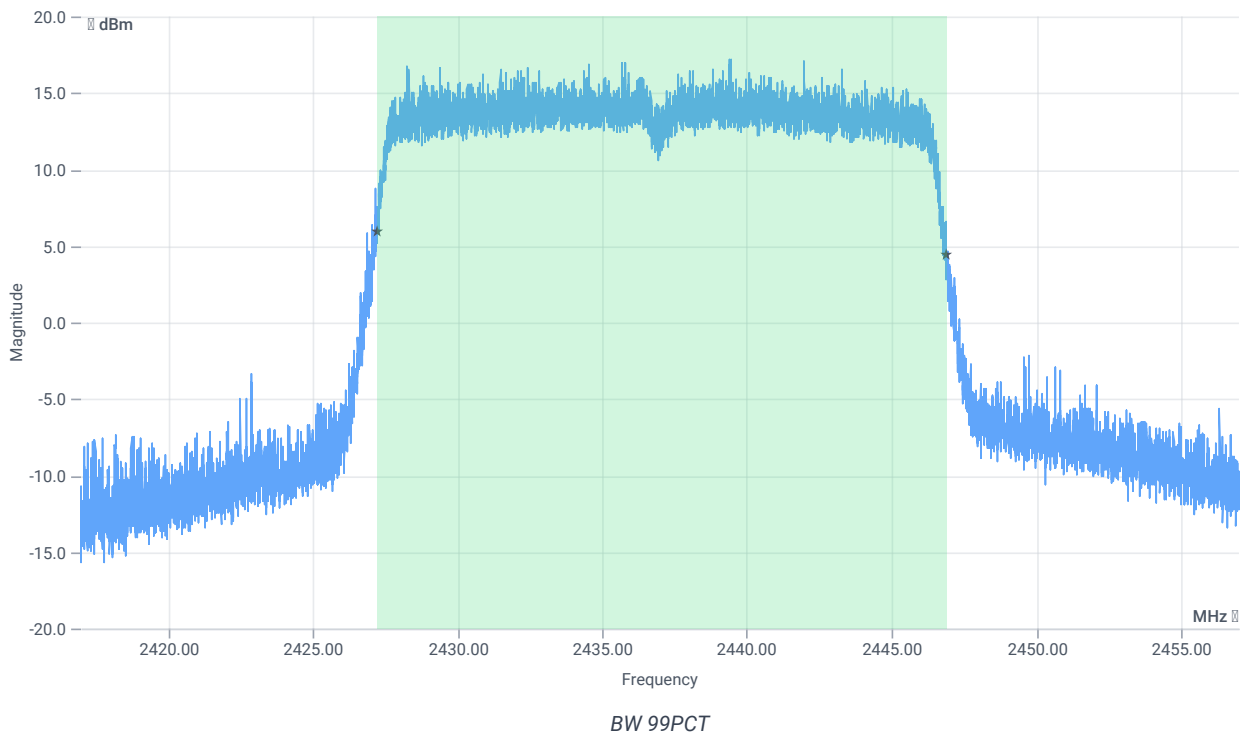
Test at TX 2437 MHz

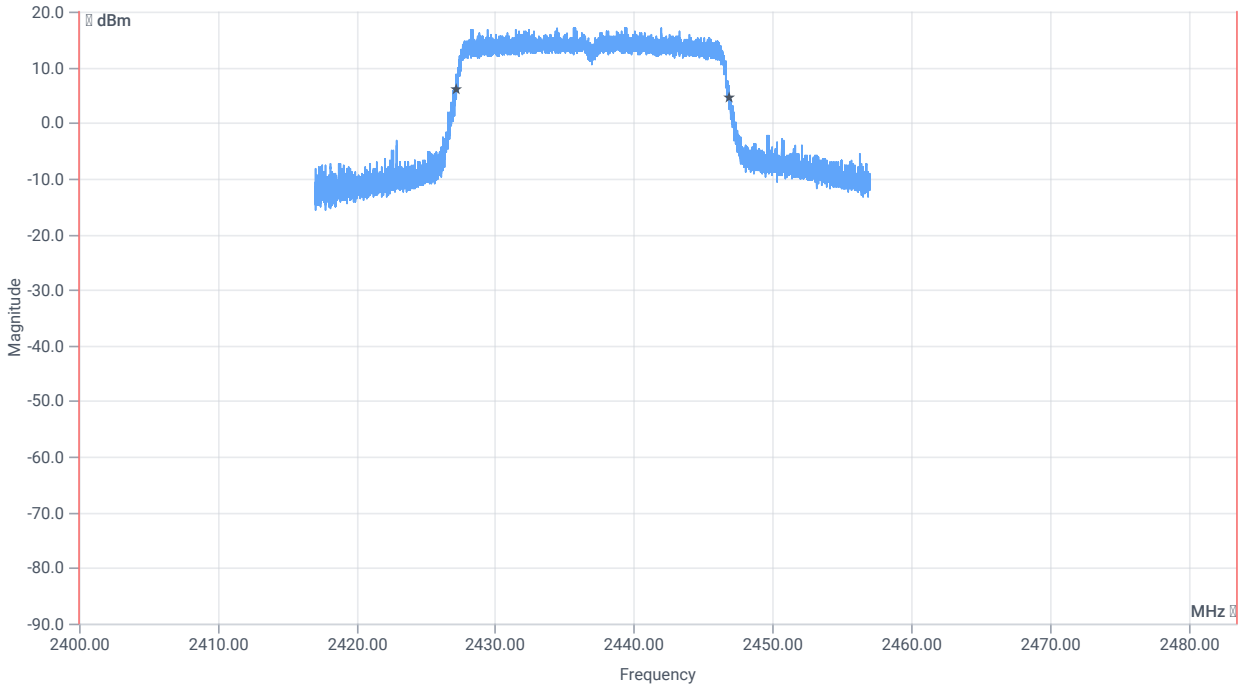
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	18.01	dBm	INFO
Ref. Frequency	--	--	2438.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.01 14.01 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

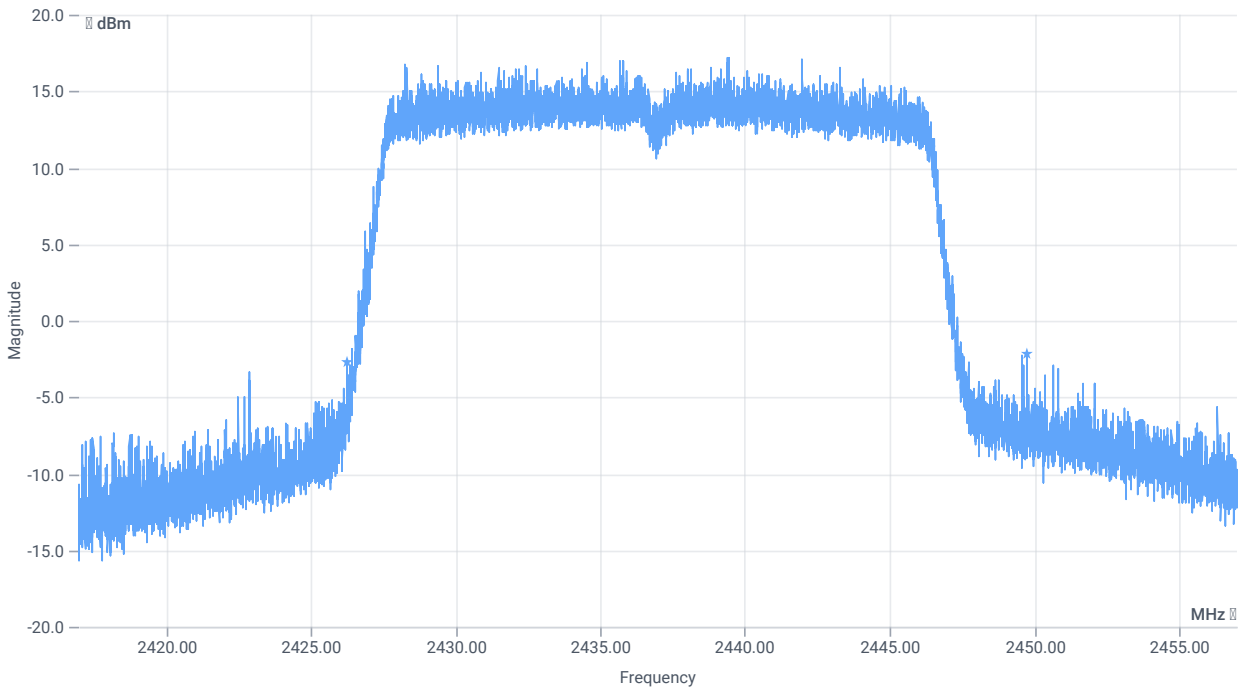




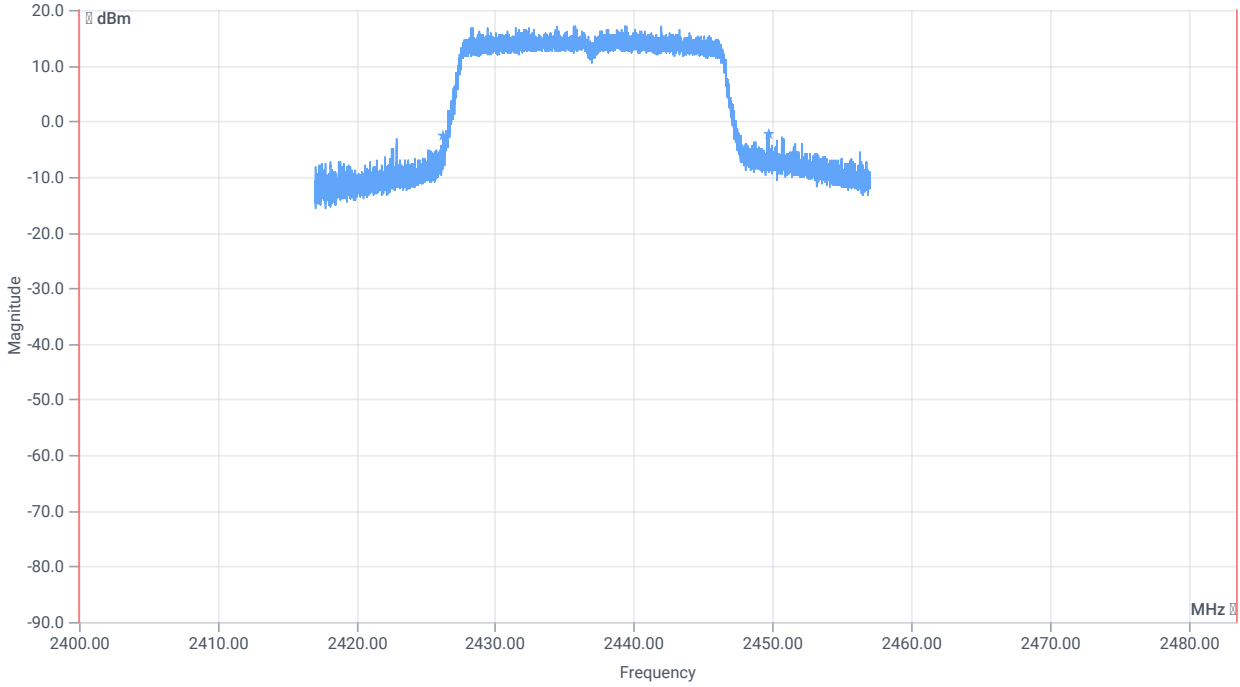
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19634.000	kHz	INFO
T1 99%	2400.000000	--	2427.2410	MHz	PASS
T2 99%	--	2483.500000	2446.8750	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	23480	kHz	INFO
T1 20dB	2400.000000	--	2426.2400	MHz	PASS
T2 20dB	--	2483.500000	2449.7200	MHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 15:52:16
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

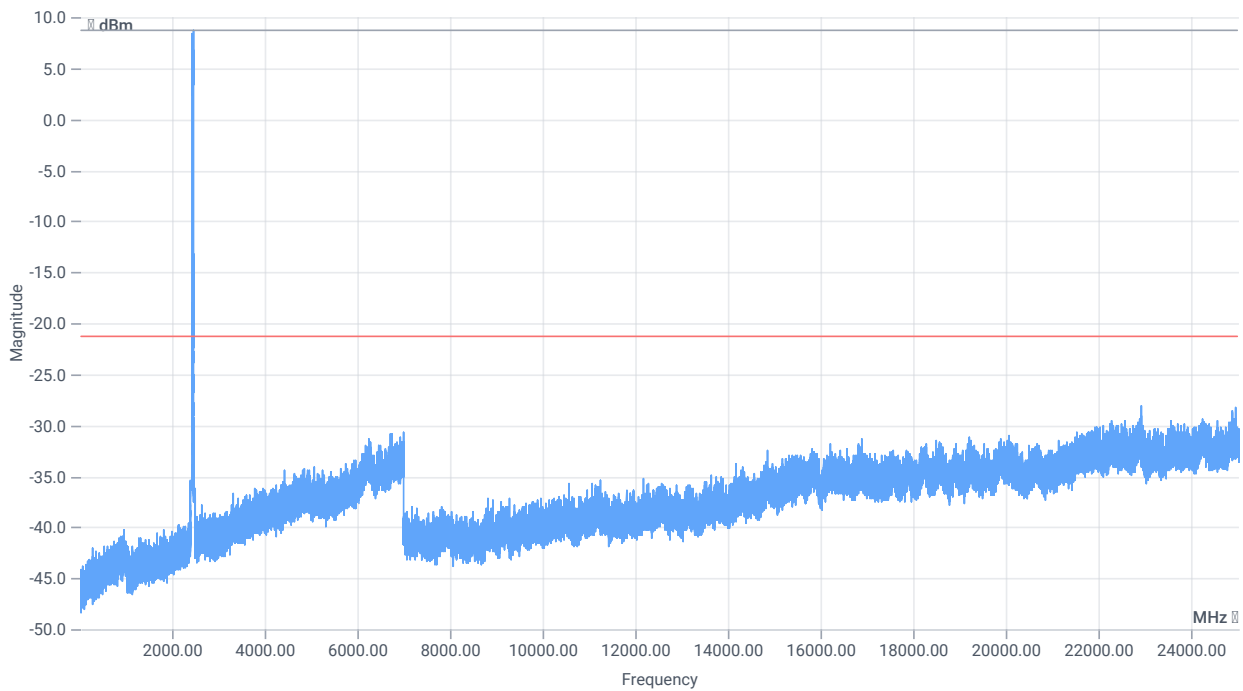
Equipment

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

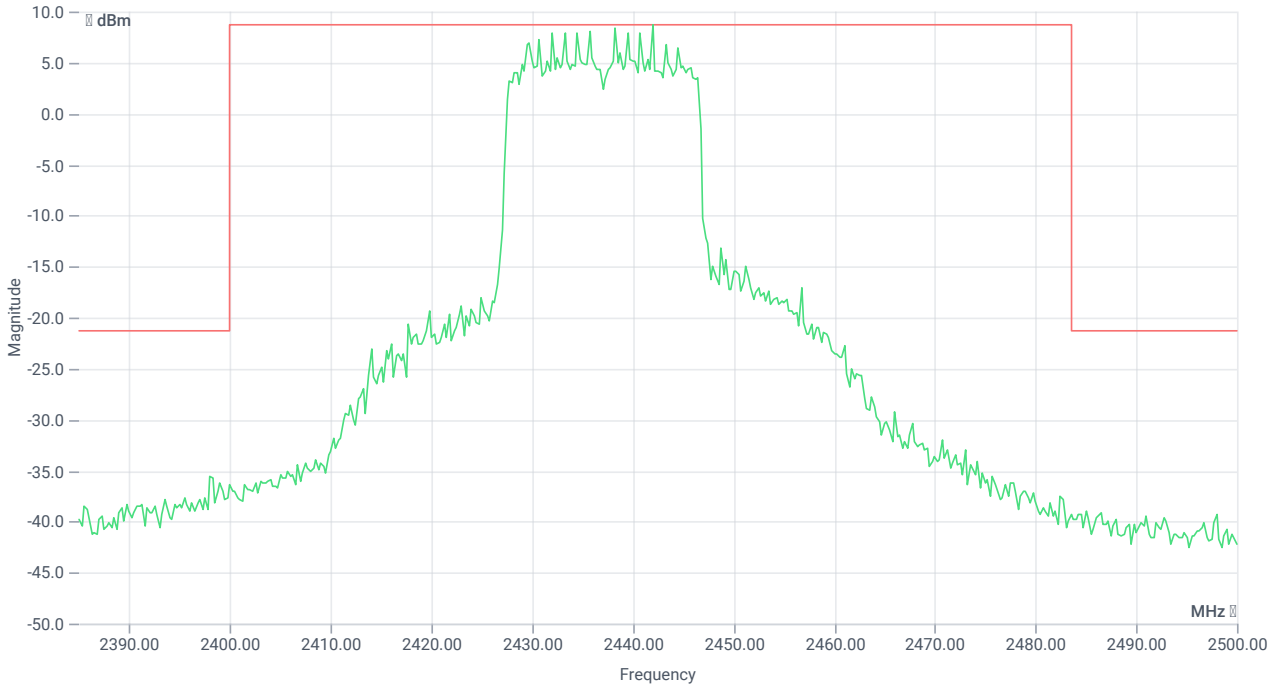
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	18.31	dBm	INFO
Ref. Frequency	--	--	2444.790	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.31 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2442.00 MHz	--	--	8.65	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-154.53	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 15:58:59
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	True Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

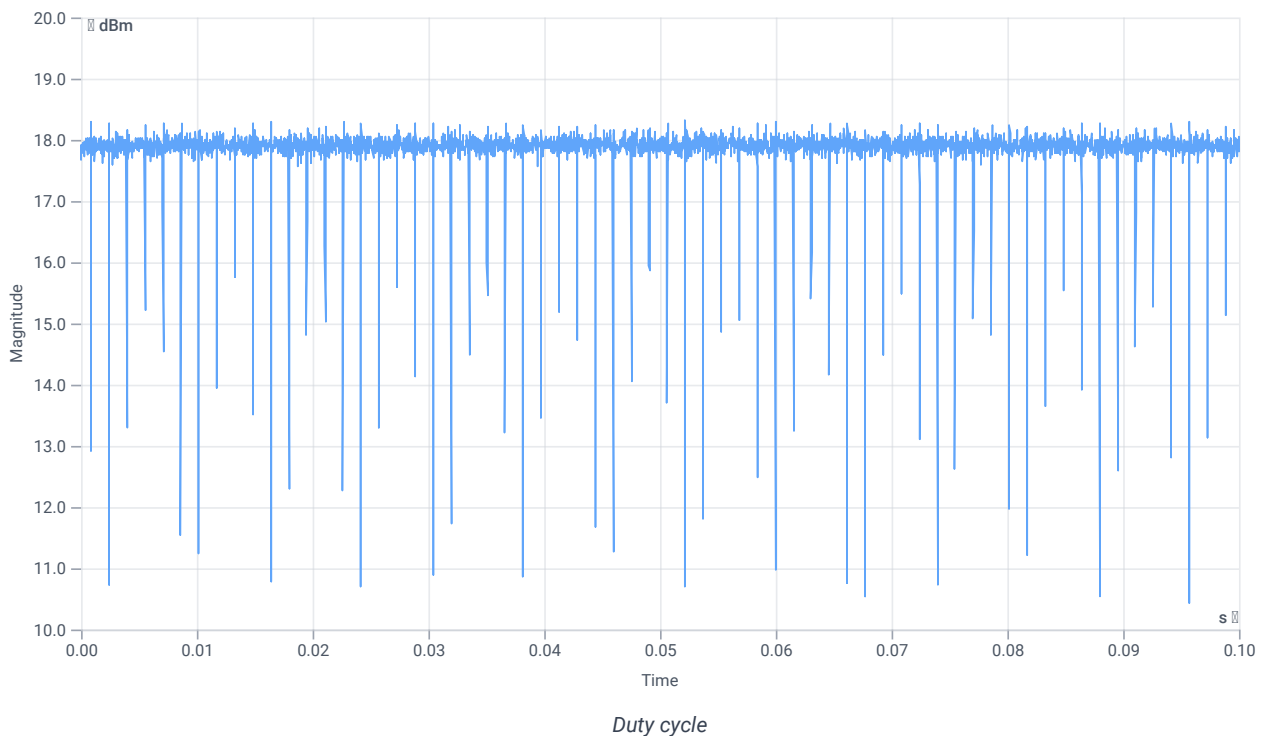
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	17.62	dBm	INFO
Ref. Frequency	--	--	2434.500	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



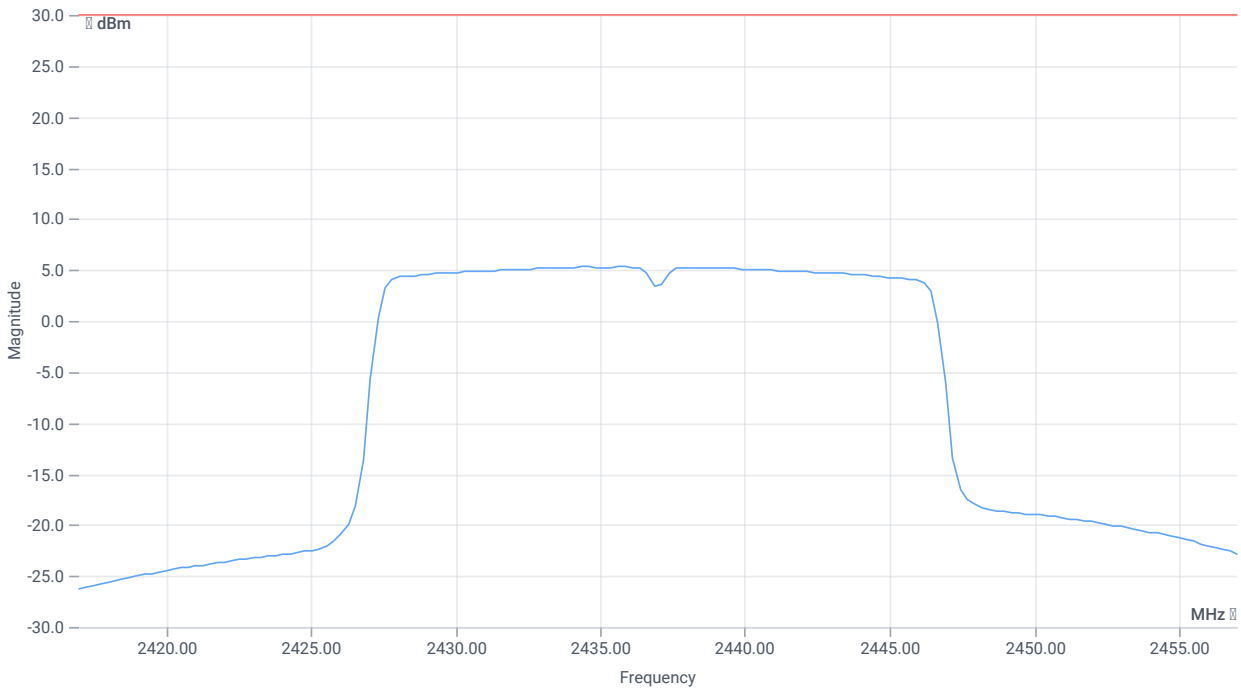
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.62 14.01 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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	20.37	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	20.37	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	13.01.2024 16:00:14
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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
Full path name type	None

Equipment

Test at TX 2437 MHz

RESULT Power

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	--	--	20.8	dBm	INFO
Ant:2 Avg power DC corr.	--	--	20.37	dBm	INFO
Σ Avg output power DC corr.	--	30	23.6	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	13.01.2024 16:05:38
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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
Full path name type	None

Equipment

Test at TX 2437 MHz

RESULT psd

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr	--	--	-15.18	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-15.92	dBm/3kHz	INFO
Σ Avg psd DC corr	--	8	-12.52	dBm/3kHz	PASS

Verdict

PASS

NA # Message with SA scan ~

References

TC start	13.01.2024 16:05:59
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	NA NI
Method	
Description	Message with SA Scan ax-HE20
Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	13.01.2024 16:06:00
Message	set WLAN2G4 to ax-HE20, Frequency [MHz] 2462

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 ax-HE20

References

TC start	13.01.2024 16:06:38
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

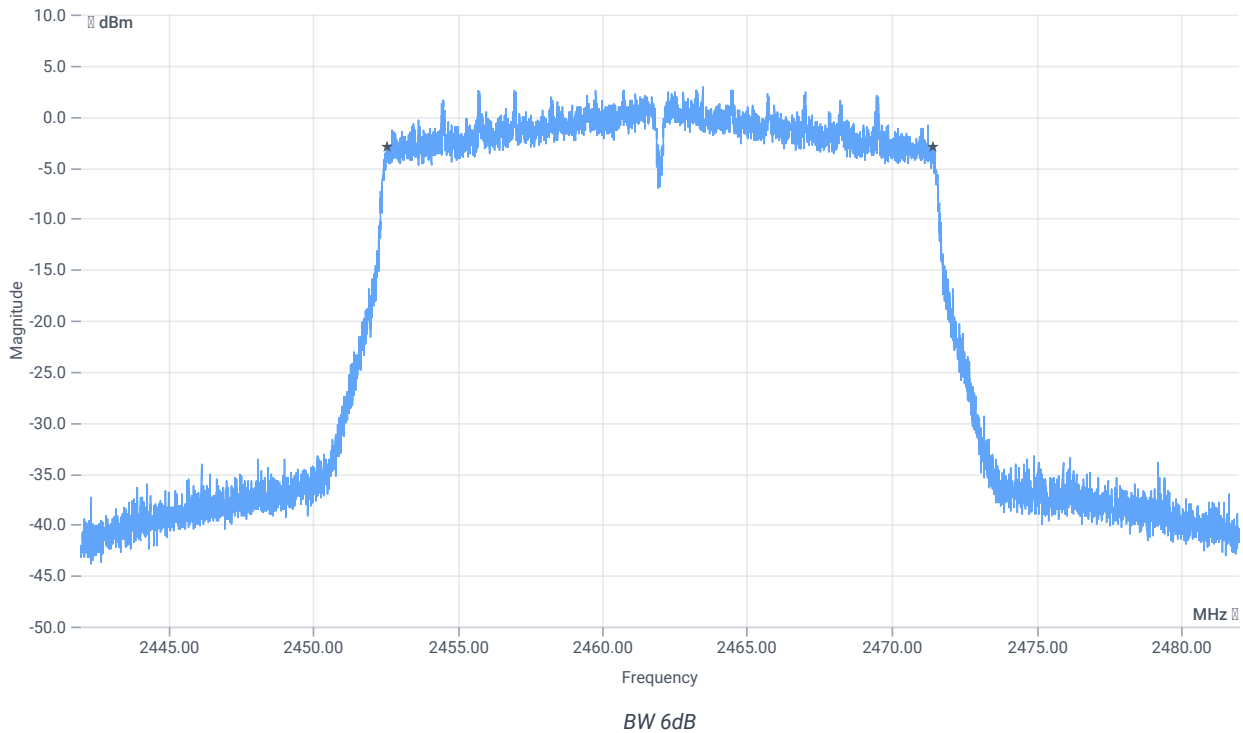
Test at TX 2462 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.45	dBm	INFO
Ref. Frequency	--	--	2463.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.45 14.14 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18904	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 16:07:11
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

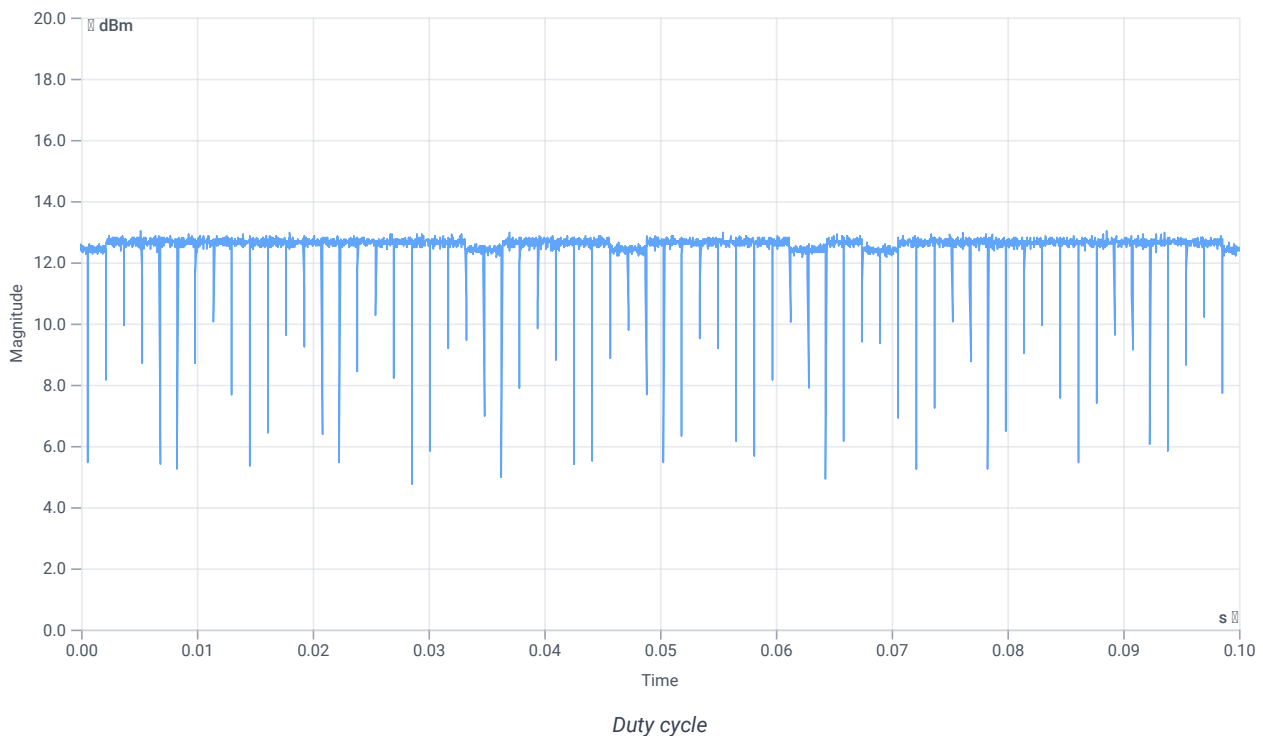
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.30	dBm	INFO
Ref. Frequency	--	--	2464.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



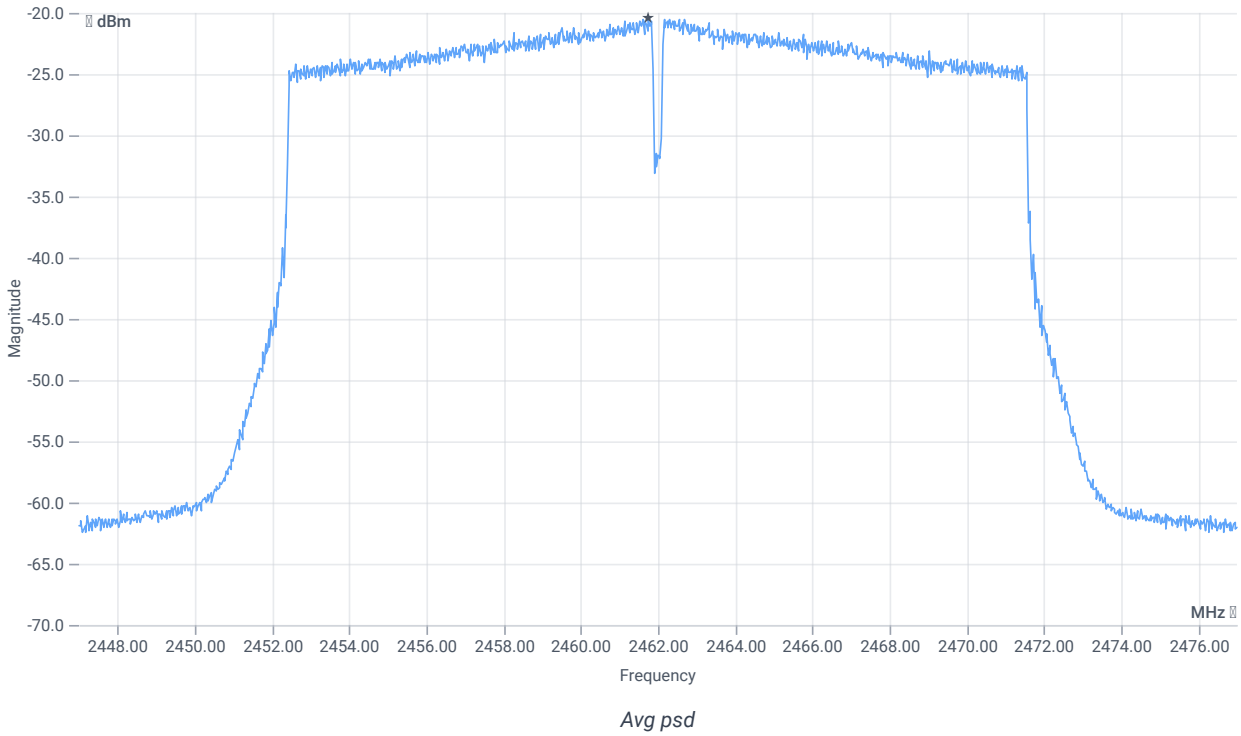
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.30 14.14 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

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 ax-HE20

References

TC start	13.01.2024 16:08:15
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

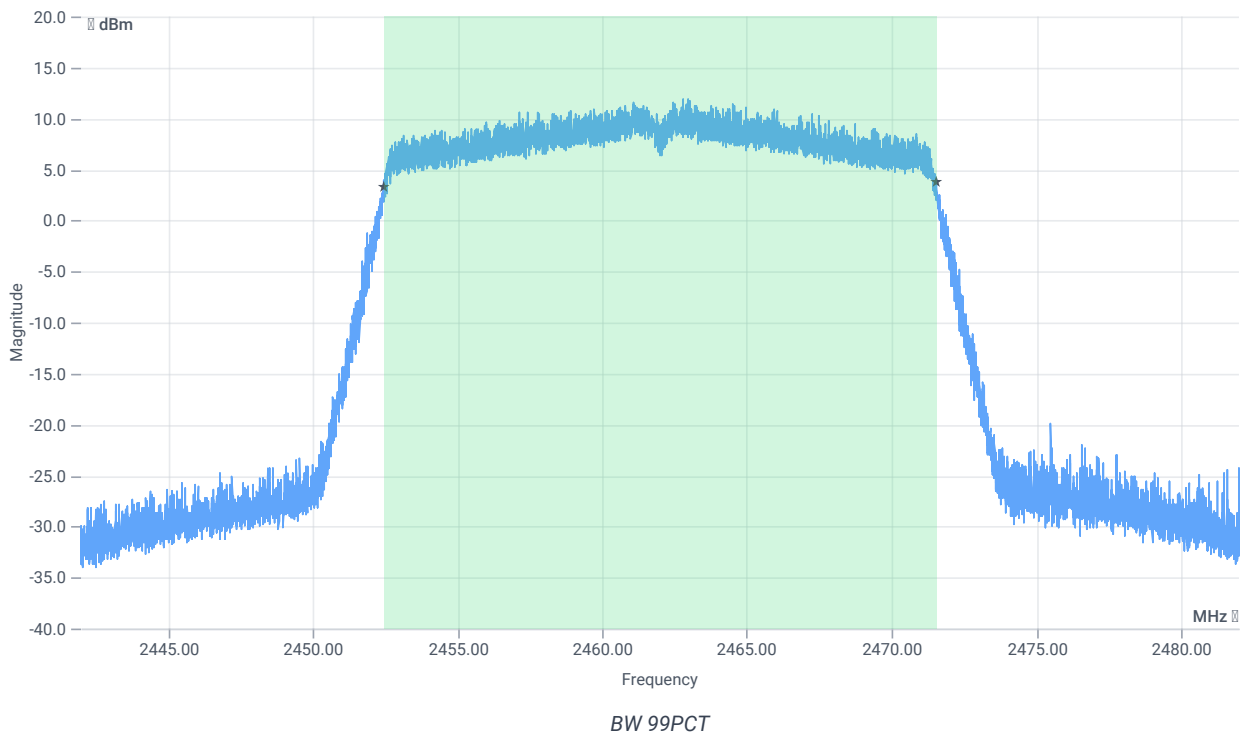
Test at TX 2462 MHz

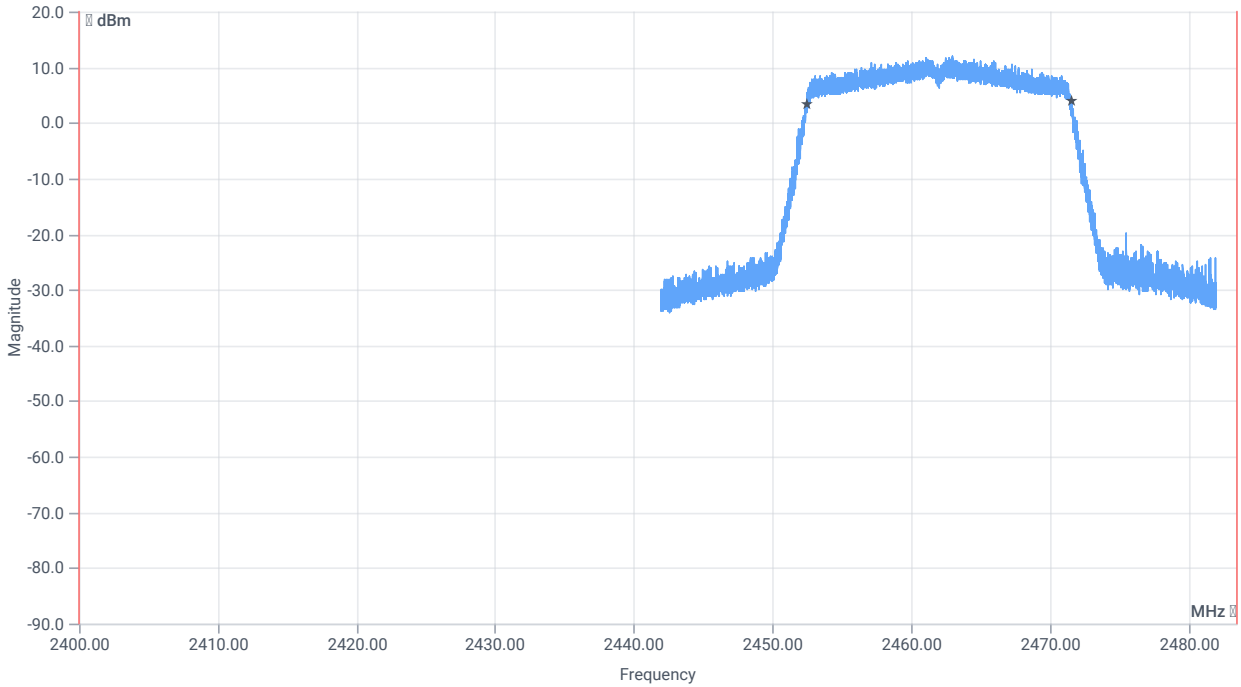
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.59	dBm	INFO
Ref. Frequency	--	--	2462.800	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.59 14.14 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

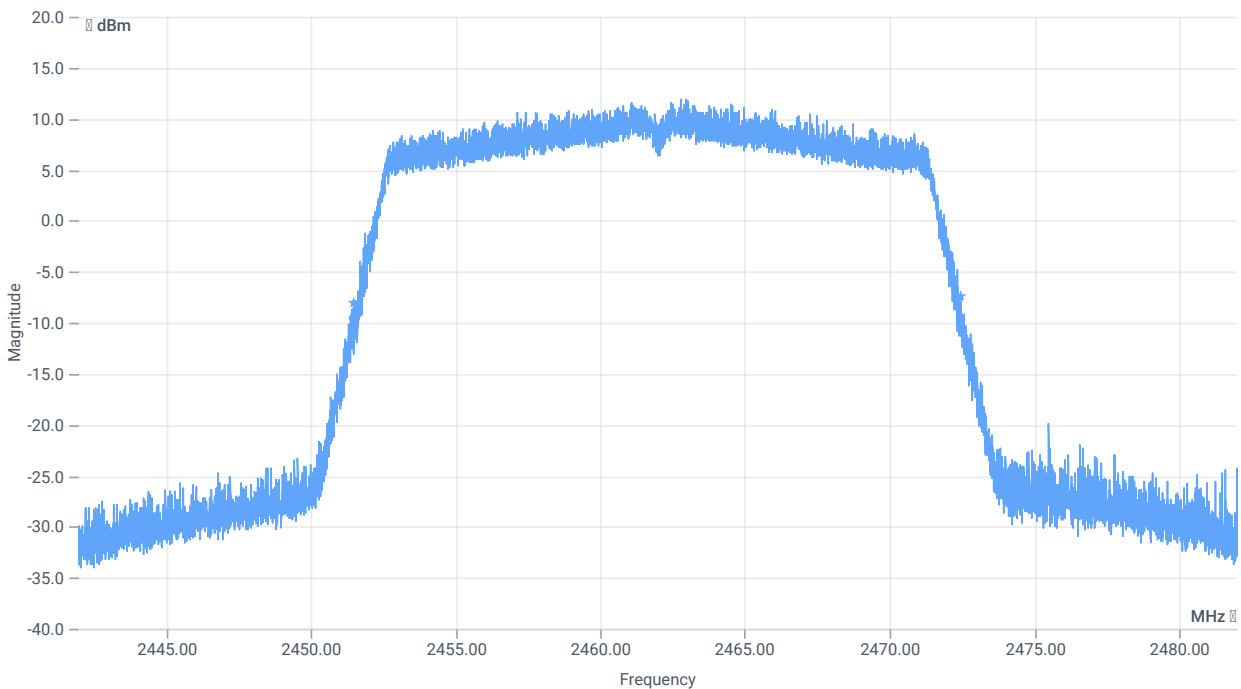




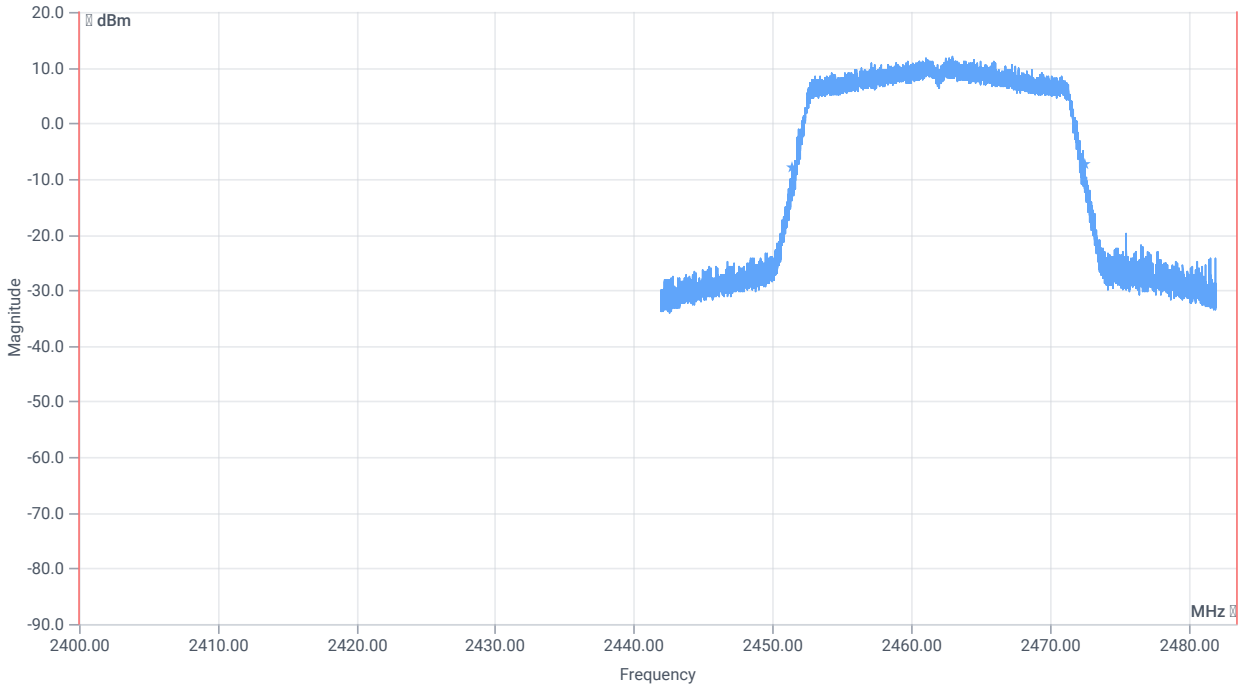
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19090.000	kHz	INFO
T1 99%	2400.000000	--	2452.4570	MHz	PASS
T2 99%	--	2483.500000	2471.5470	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21008	kHz	INFO
T1 20dB	2400.000000	--	2451.4680	MHz	PASS
T2 20dB	--	2483.500000	2472.4760	MHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 16:08:52
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

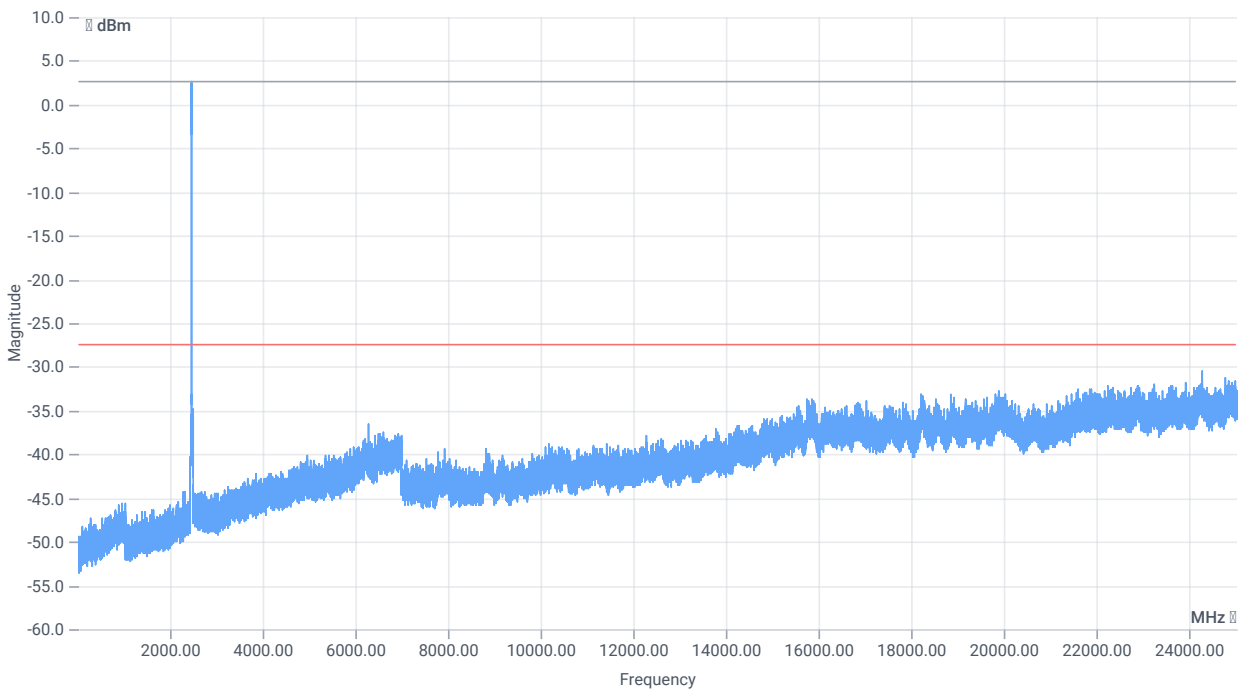
Equipment

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.

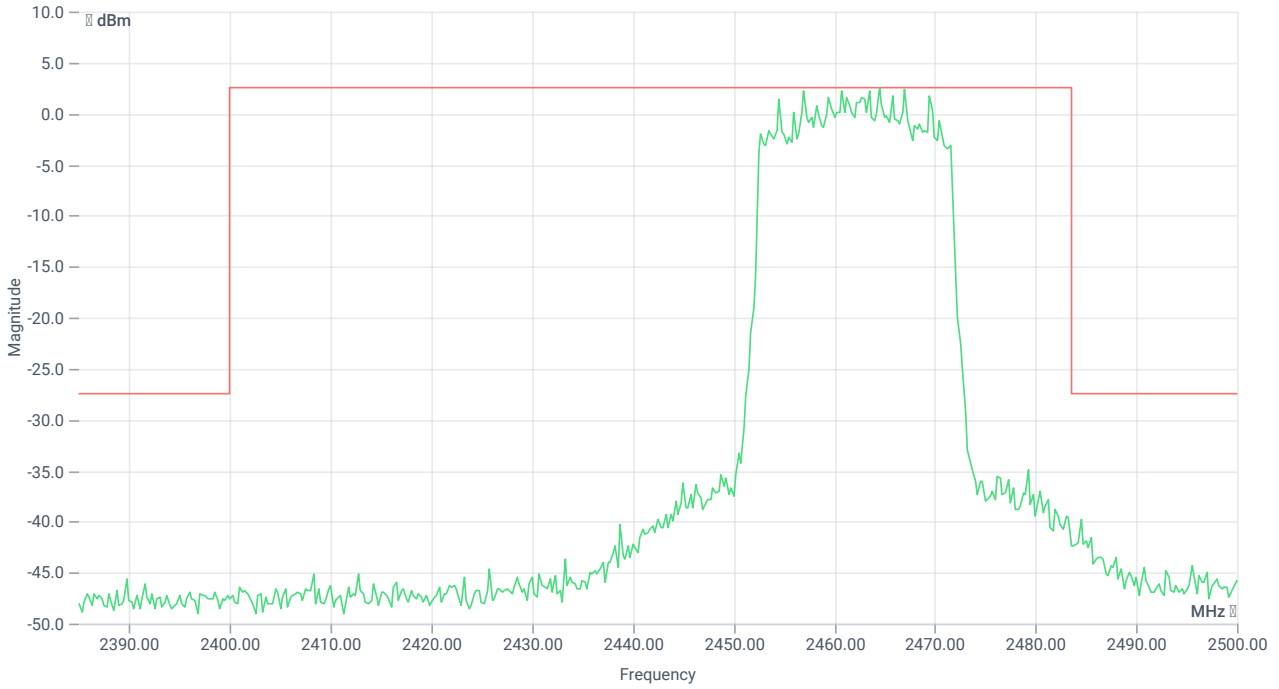
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.51	dBm	INFO
Ref. Frequency	--	--	2463.300	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.51 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2464.50 MHz	--	--	2.55	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-148.39	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 16:15:35
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

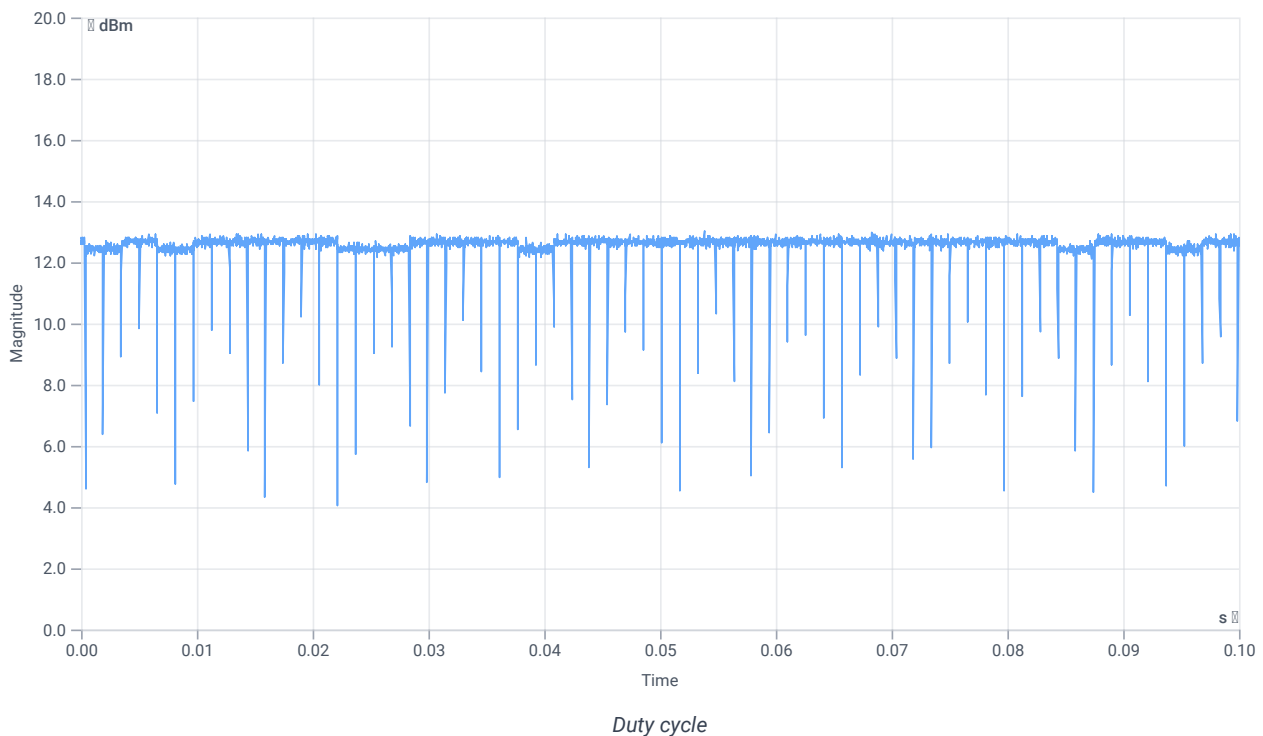
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.21	dBm	INFO
Ref. Frequency	--	--	2463.700	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



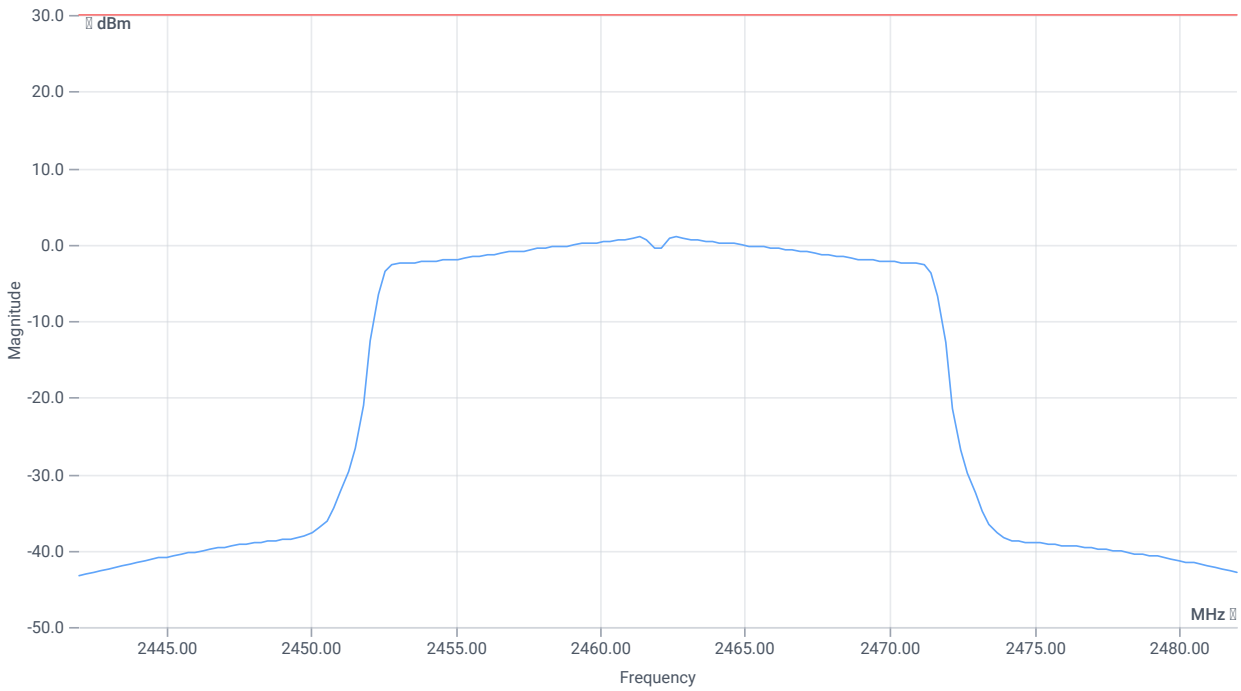
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.21 14.14 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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	14.76	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	14.76	dBm	PASS

Verdict

PASS

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

References

TC start	13.01.2024 16:16:49
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

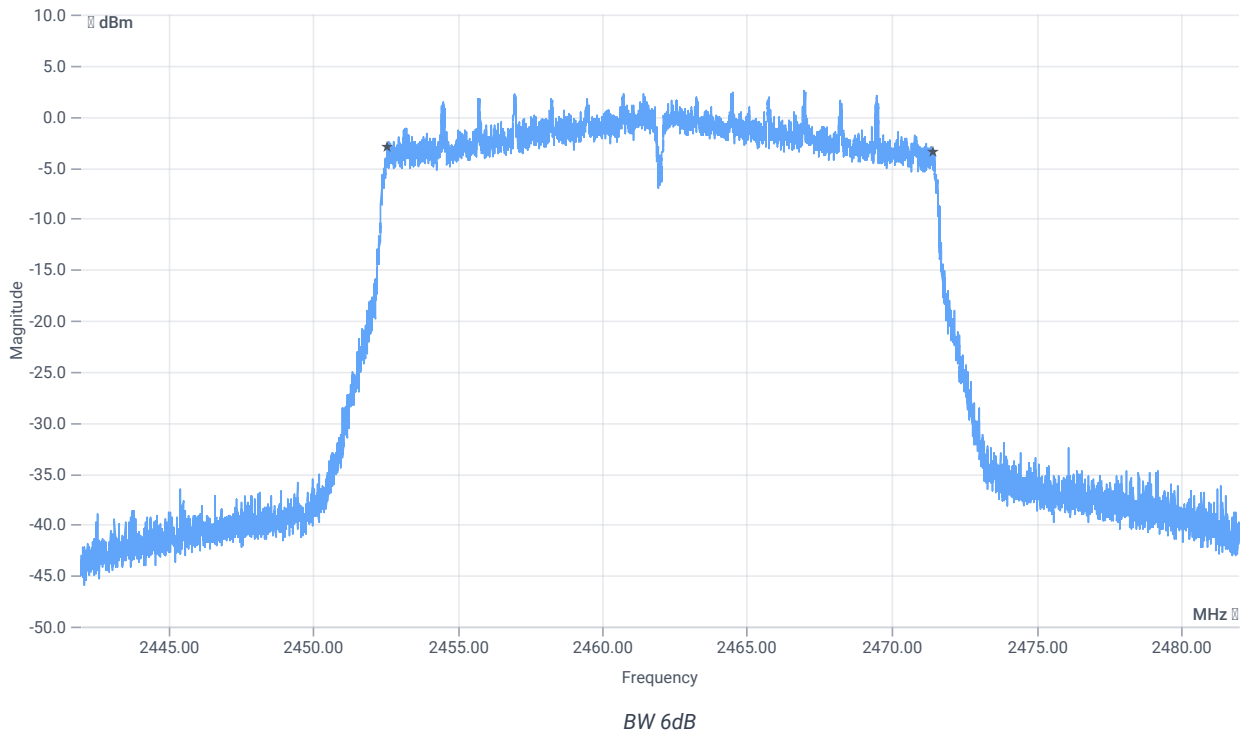
Test at TX 2462 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.40	dBm	INFO
Ref. Frequency	--	--	2463.500	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.40 14.14 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18836	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 16:17:22
Ambit temp [°C] humidity [rel%]	22.6 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

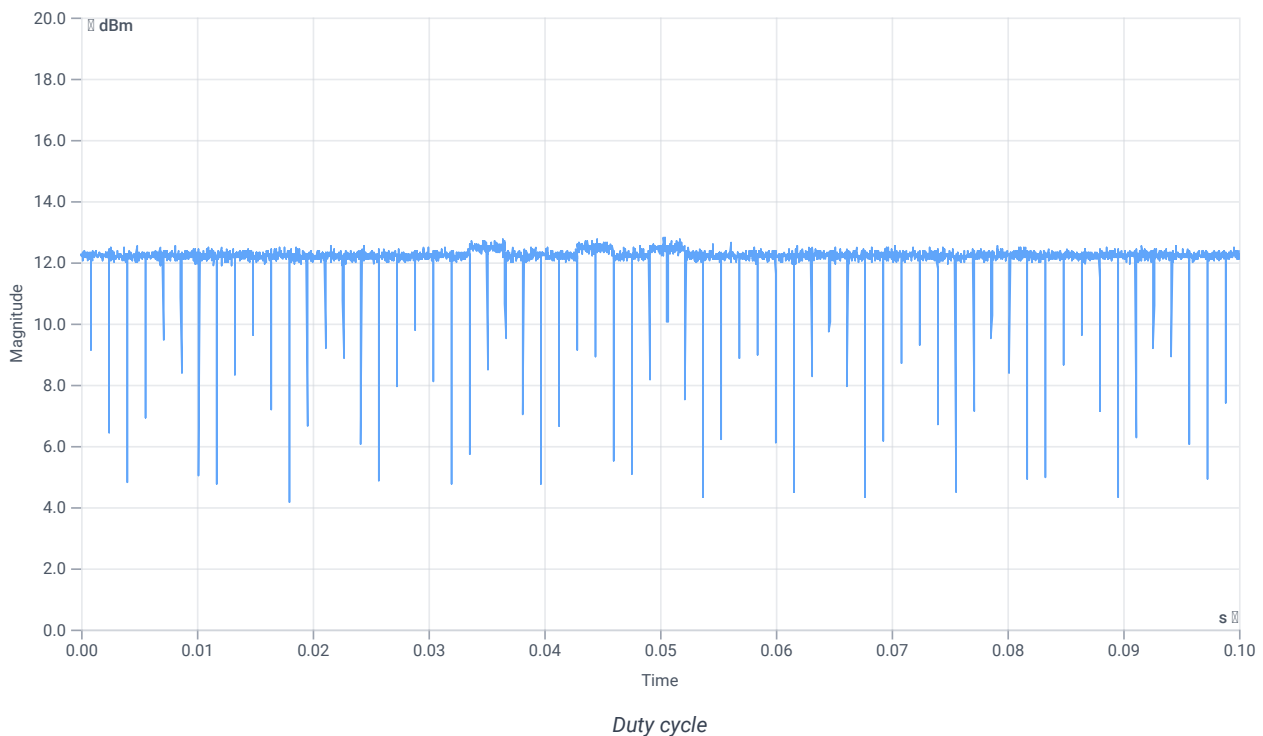
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.40	dBm	INFO
Ref. Frequency	--	--	2463.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



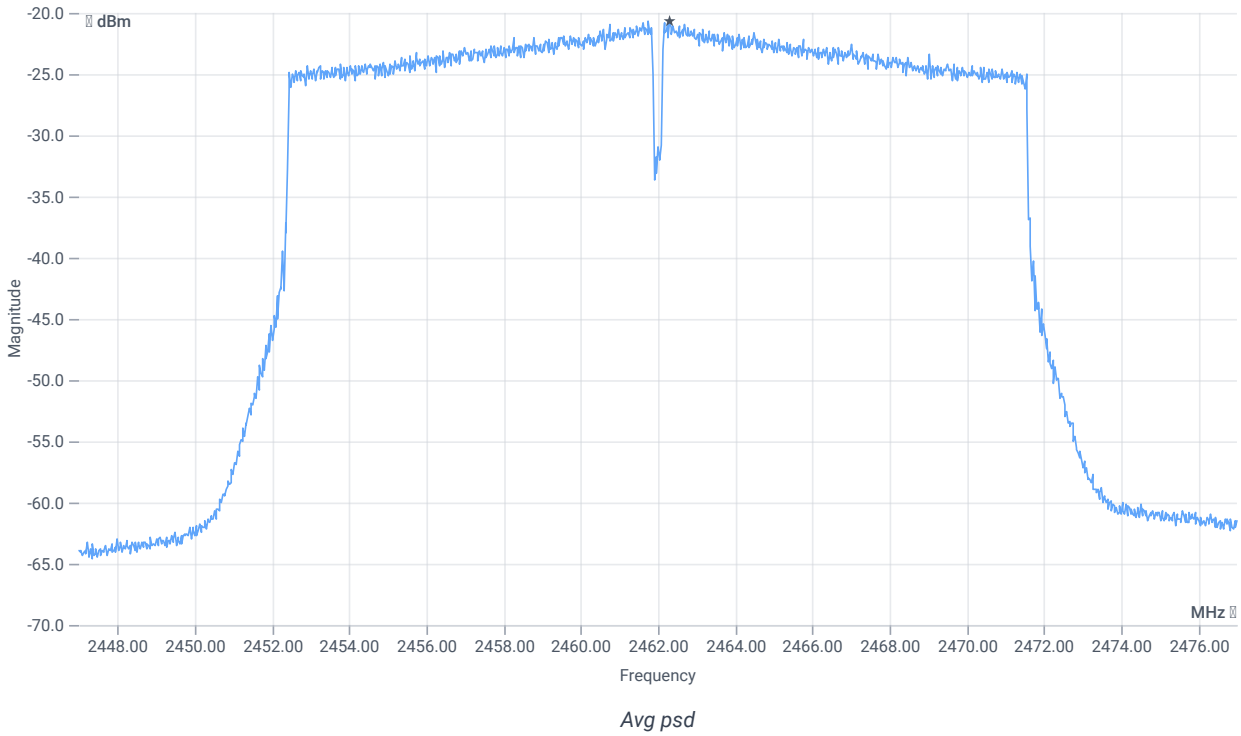
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.40 14.14 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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-20.64	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-20.64	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 16:18:27
Ambit temp [°C] humidity [rel%]	22.6 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

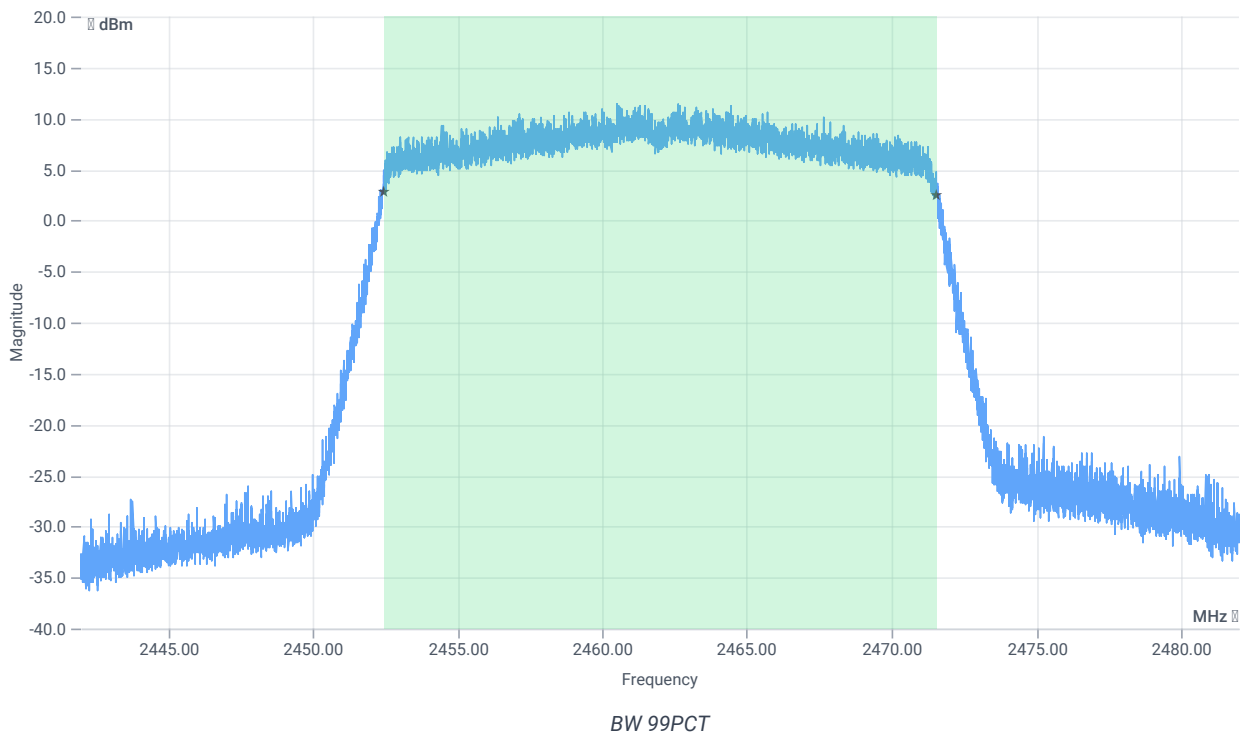
Test at TX 2462 MHz

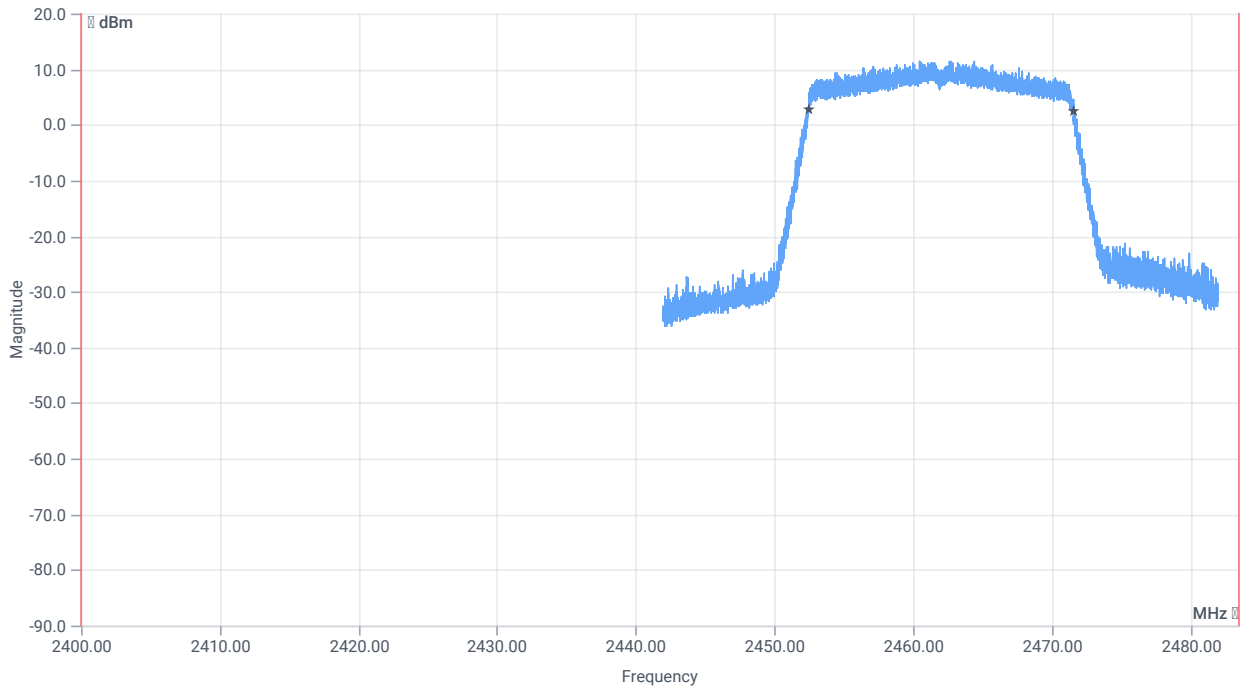
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.00	dBm	INFO
Ref. Frequency	--	--	2461.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.00 14.14 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

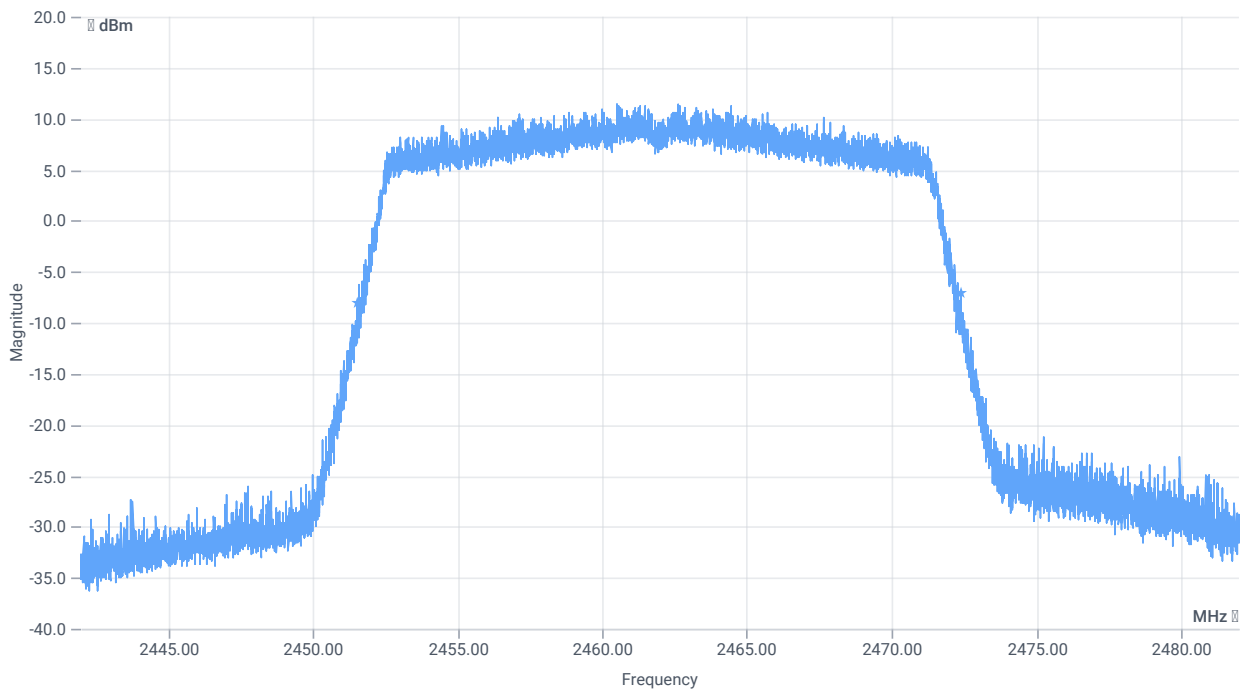




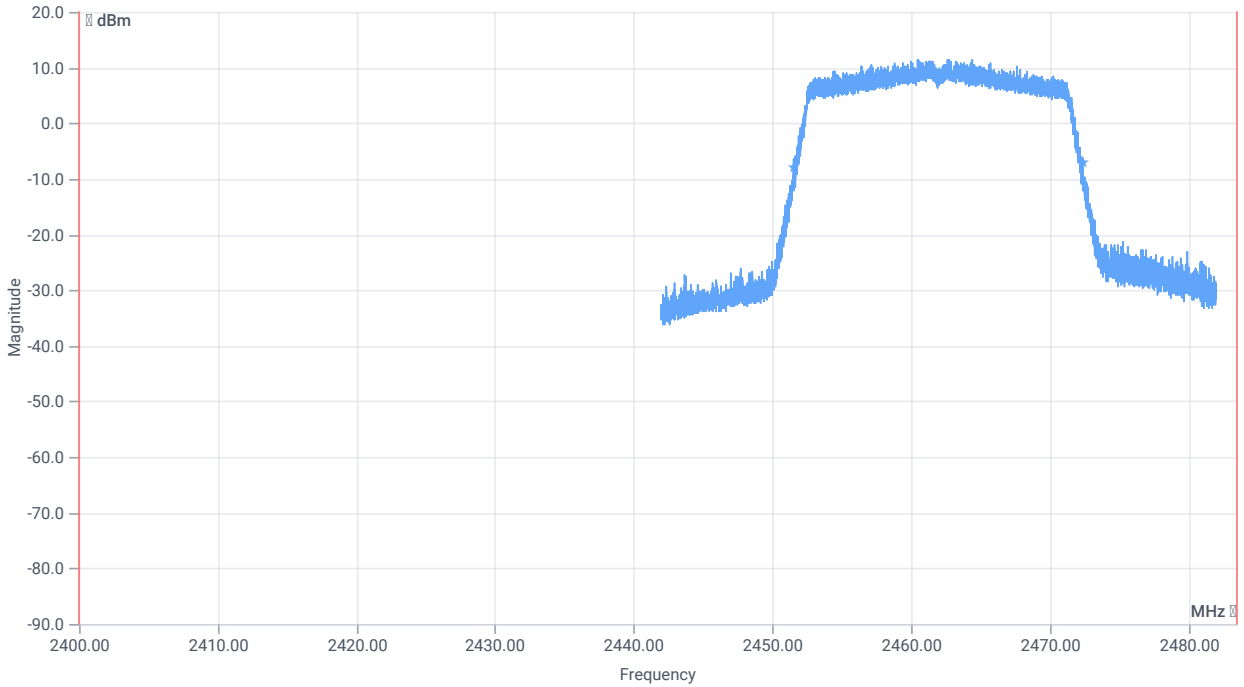
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19094.000	kHz	INFO
T1 99%	2400.000000	--	2452.4450	MHz	PASS
T2 99%	--	2483.500000	2471.5390	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20836	kHz	INFO
T1 20dB	2400.000000	--	2451.5520	MHz	PASS
T2 20dB	--	2483.500000	2472.3880	MHz	PASS

Verdict

PASS

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

References

TC start	13.01.2024 16:19:03
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

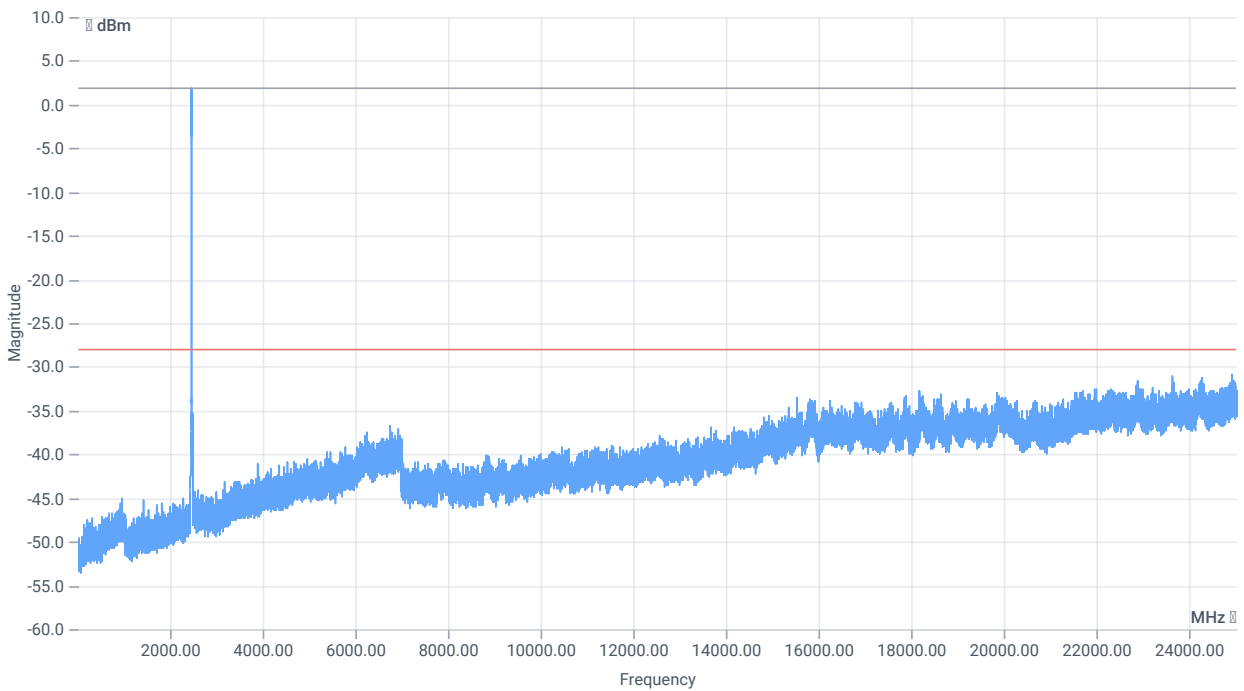
Equipment

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.

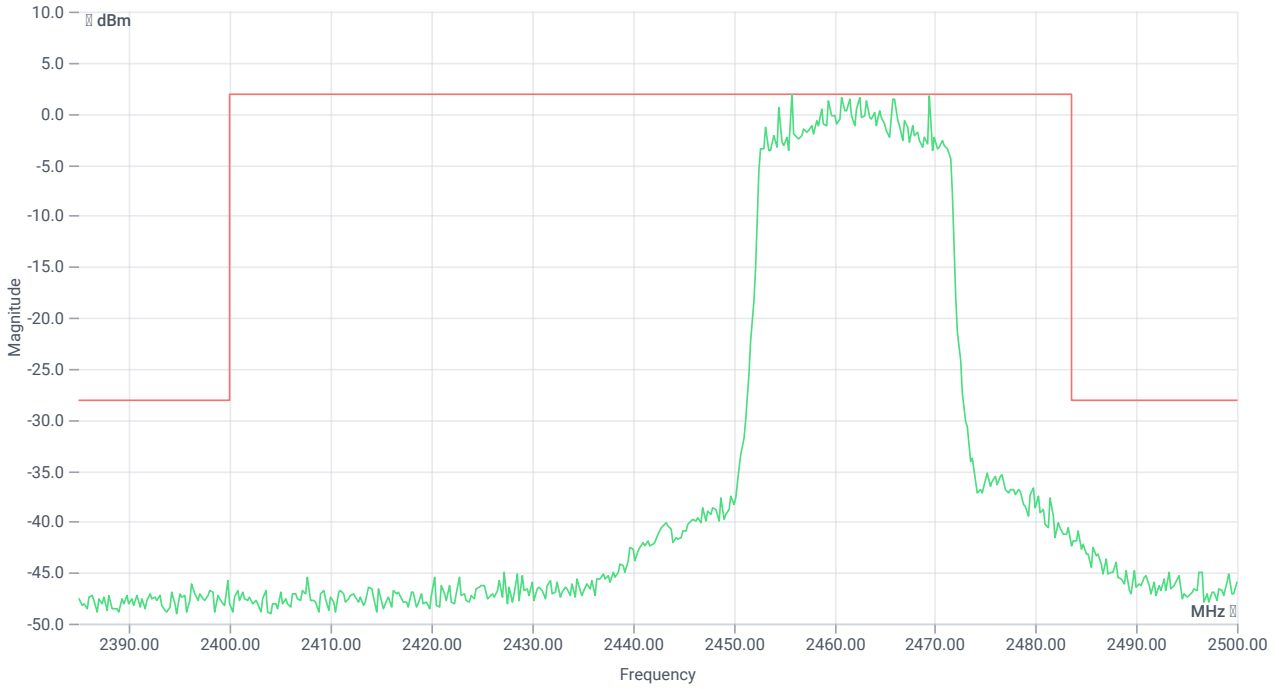
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.19	dBm	INFO
Ref. Frequency	--	--	2464.200	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.19 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2455.75 MHz	--	--	1.95	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-149.06	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	13.01.2024 16:25:46
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2412
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2462
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

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

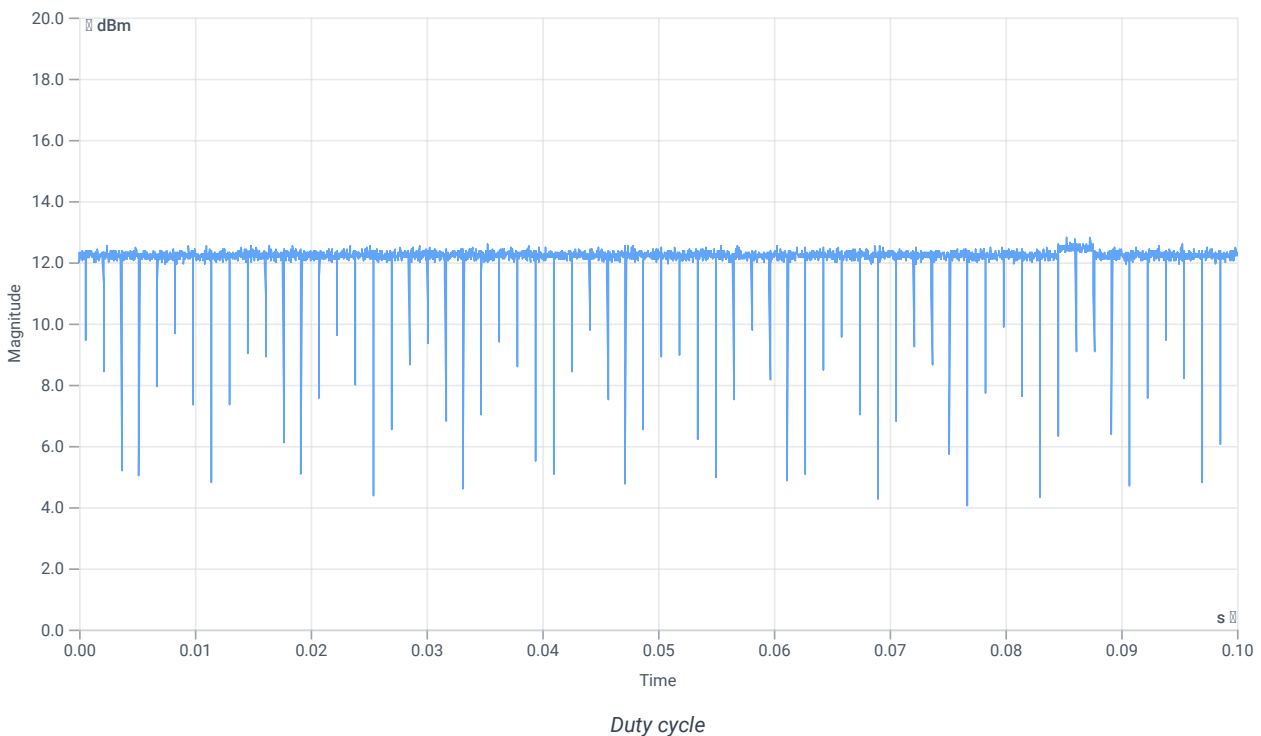
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	11.93	dBm	INFO
Ref. Frequency	--	--	2459.600	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



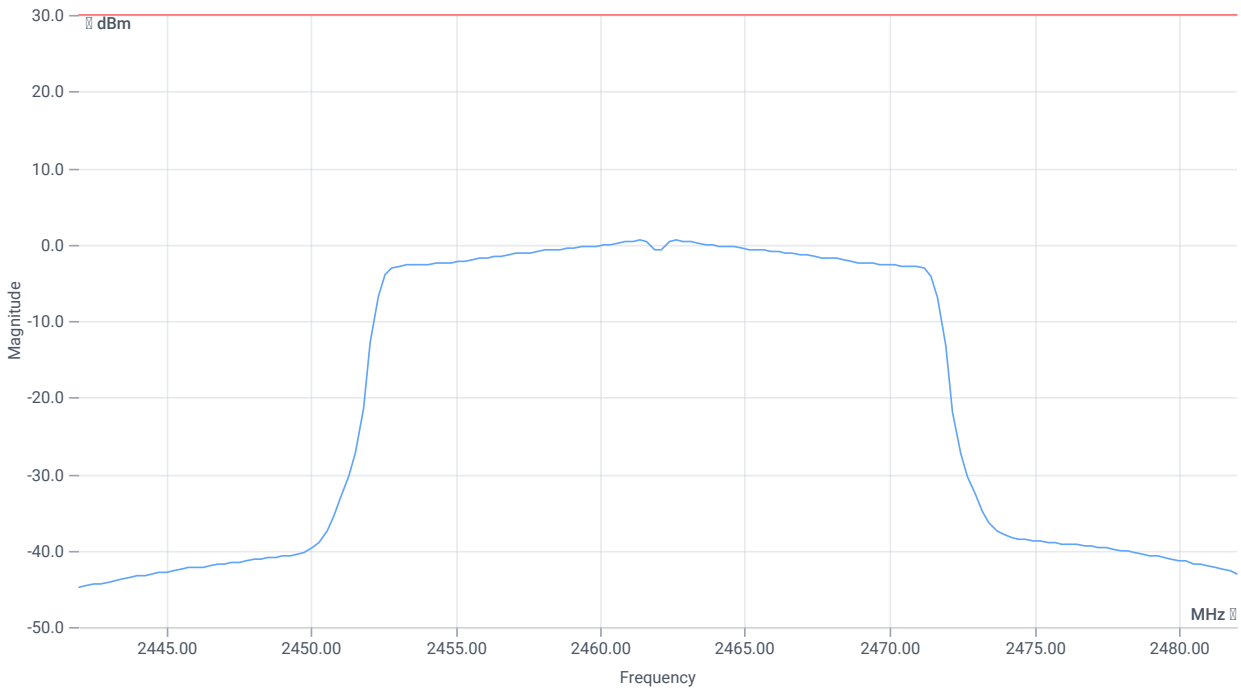
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.93 14.14 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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	14.39	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	14.39	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	13.01.2024 16:27:00
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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
Full path name type	None

Equipment

Test at TX 2462 MHz

RESULT Power

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	--	--	14.76	dBm	INFO
Ant:2 Avg power DC corr.	--	--	14.39	dBm	INFO
Σ Avg output power DC corr.	--	30	17.59	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	13.01.2024 16:29:32
Ambit temp [°C] humidity [rel%]	22.5 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
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
Full path name type	None

Equipment

Test at TX 2462 MHz

RESULT psd

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	--	--	-20.64	dBm/3kHz	INFO
Σ Avg psd DC corr	--	8	-17.54	dBm/3kHz	PASS

Verdict

PASS

NA # Message with SA scan ~

References

TC start	16.01.2024 11:14:53
Ambit temp [°C] humidity [rel%]	22.7 26
System version	4.7.1.5
Standard Version	NA NI
Method	
Description	Message with SA Scan ax-HE20
Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	16.01.2024 11:14:53
Message	set WLAN2G4 to ax-HE20, Frequency [MHz] 2417 ,

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 ax-HE20

References

TC start	16.01.2024 11:16:25
Ambit temp [°C] humidity [rel%]	22.7 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

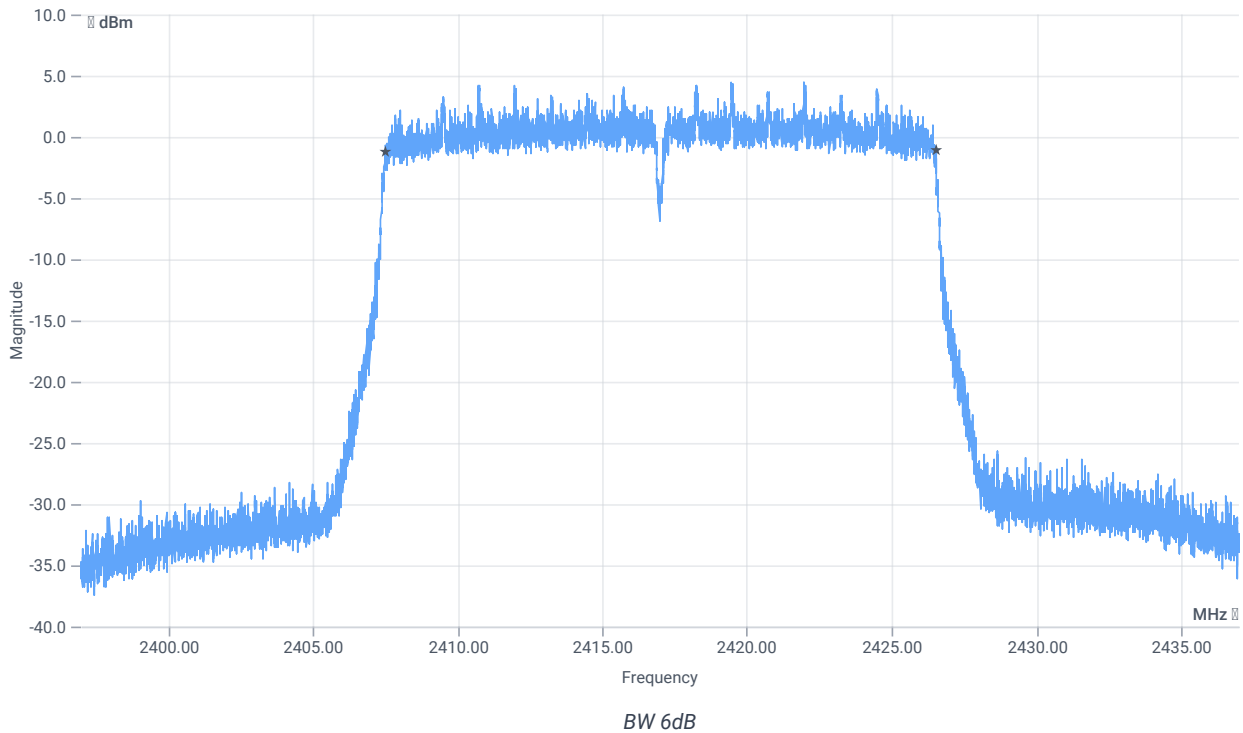
Test at TX 2417 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.32	dBm	INFO
Ref. Frequency	--	--	2420.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.32 13.88 20
Start [MHz] Stop [MHz]	2397.000 2437.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	19020	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:17:01
Ambit temp [°C] humidity [rel%]	22.7 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2417 MHz

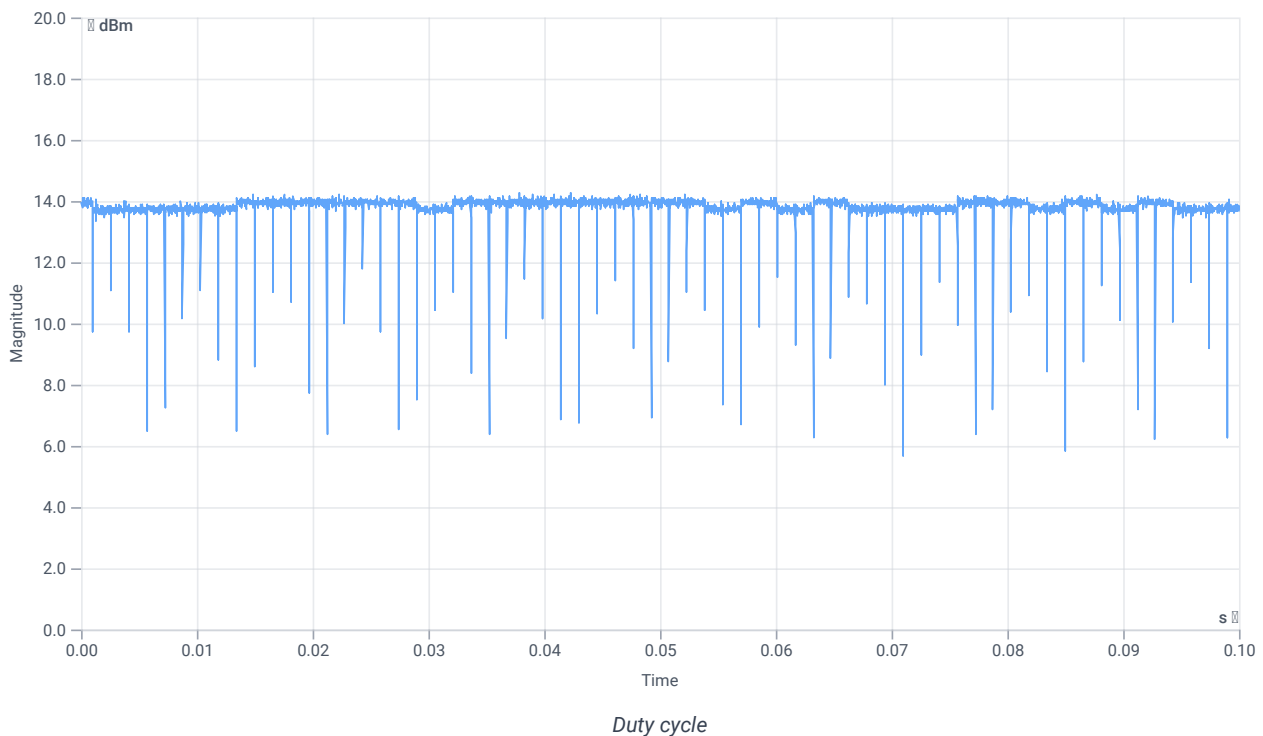
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.62	dBm	INFO
Ref. Frequency	--	--	2416.200	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



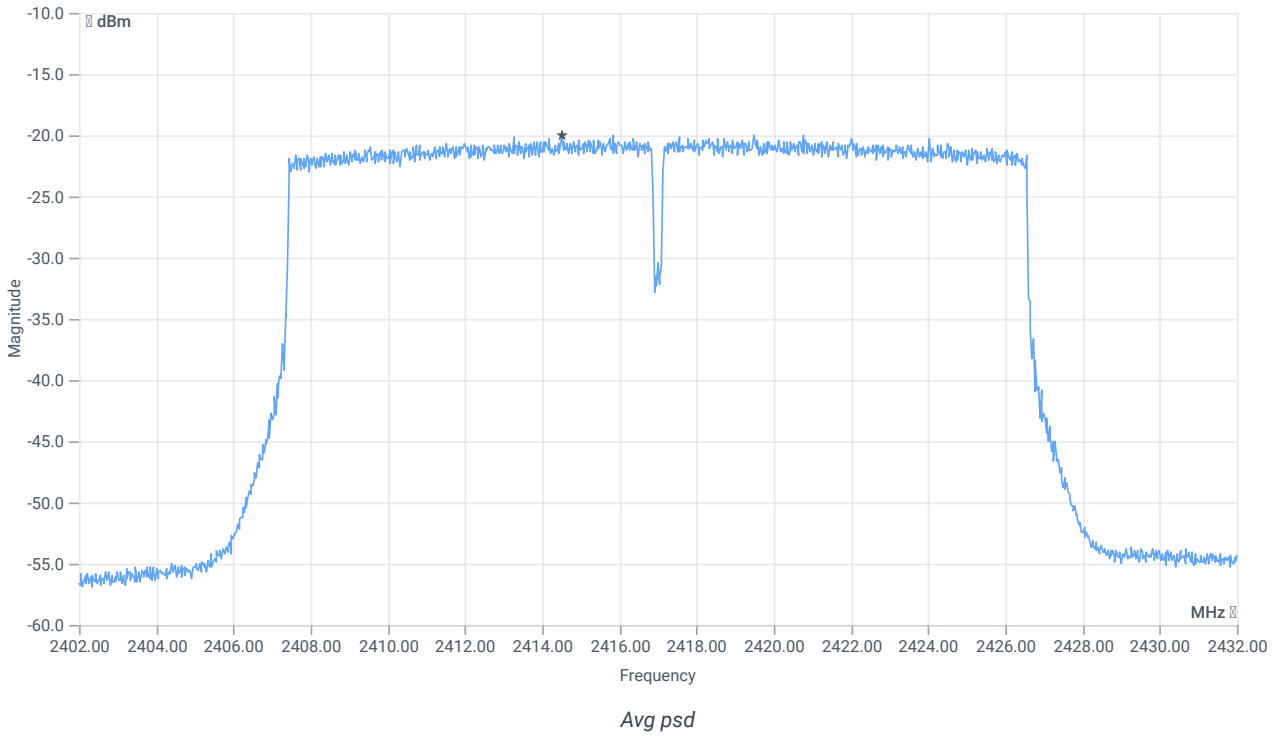
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.62 13.88 25
Start [MHz] Stop [MHz]	2402.000 2432.000

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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-19.94	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-19.94	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:18:04
Ambit temp [°C] humidity [rel%]	22.7 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

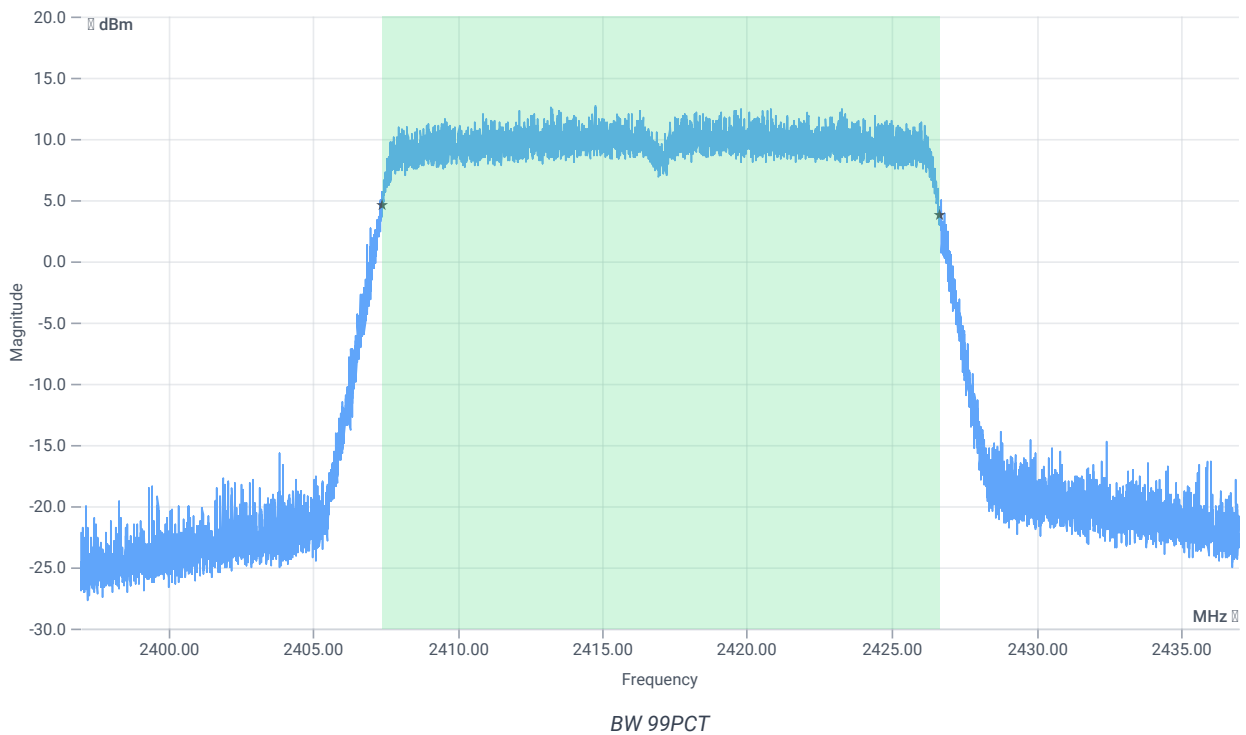
Test at TX 2417 MHz

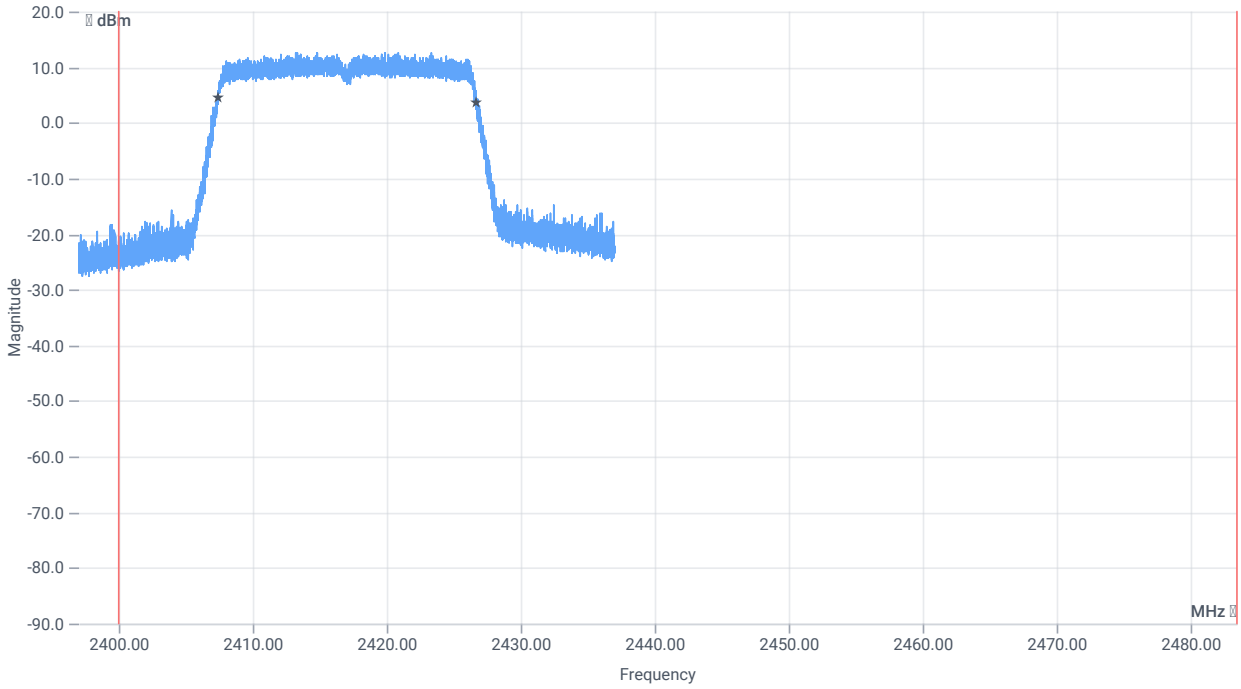
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.43	dBm	INFO
Ref. Frequency	--	--	2419.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.43 13.88 20
Start [MHz] Stop [MHz]	2397.000 2437.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

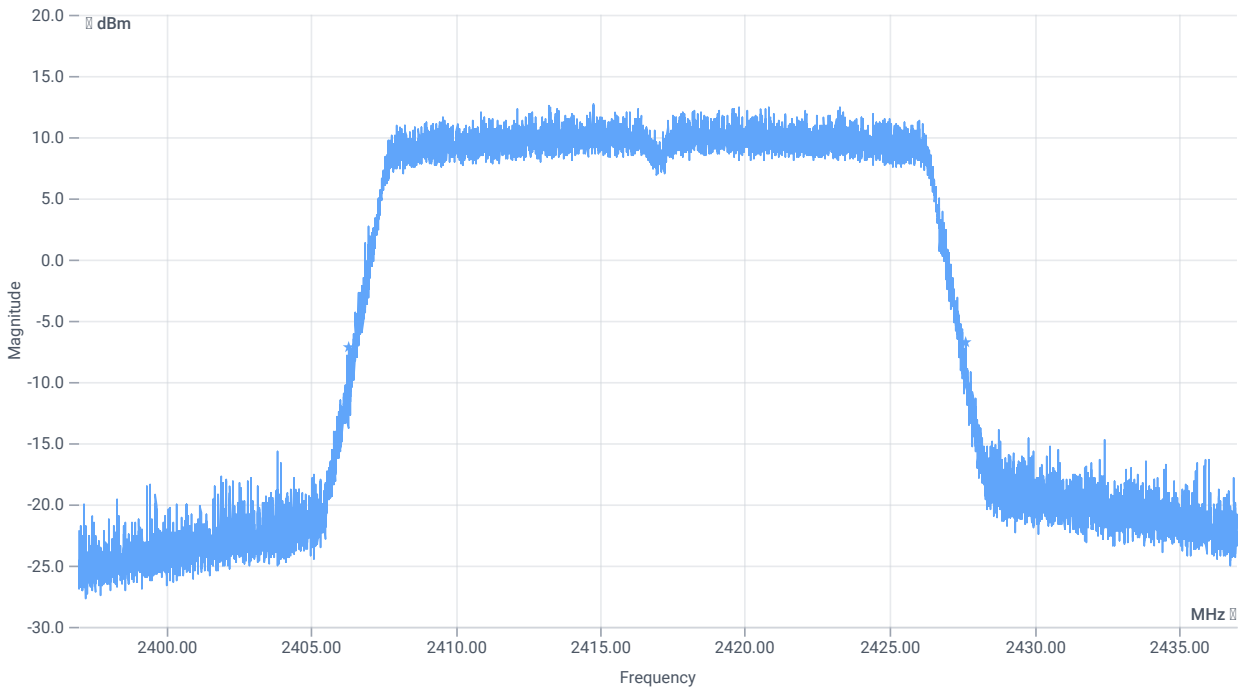




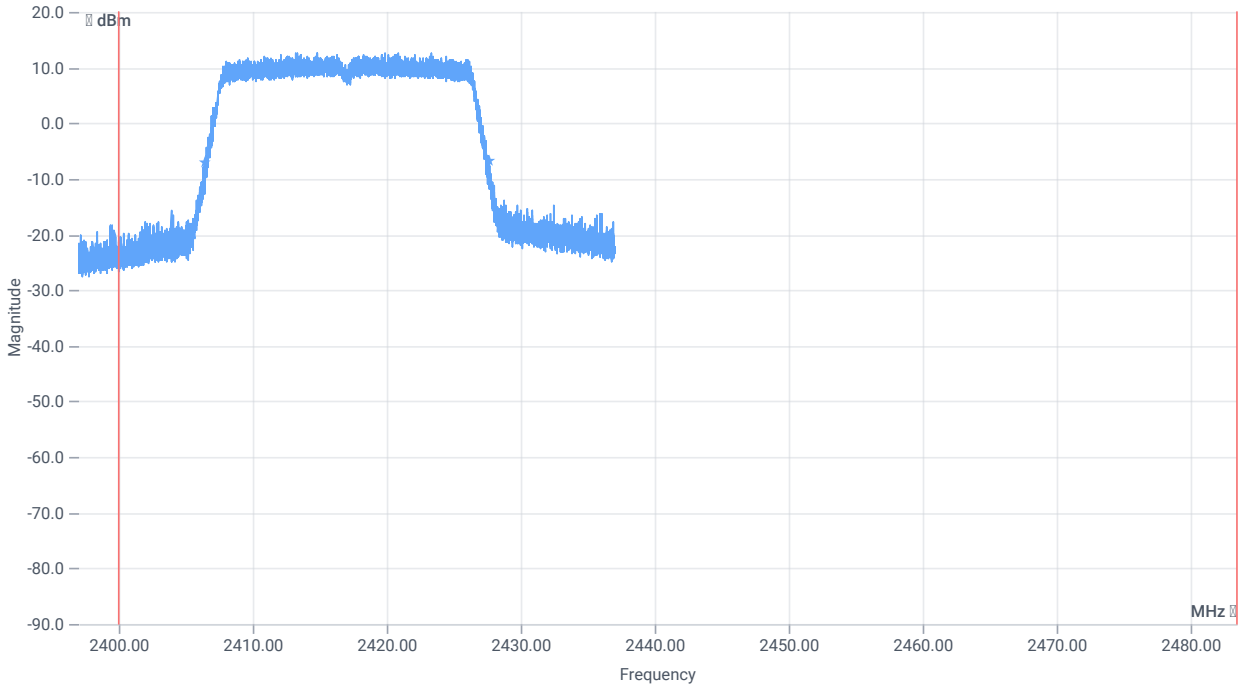
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19282.000	kHz	INFO
T1 99%	2400.000000	--	2407.3730	MHz	PASS
T2 99%	--	2483.500000	2426.6550	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21292	kHz	INFO
T1 20DB	2400.000000	--	2406.3400	MHz	PASS
T2 20dB	--	2483.500000	2427.6320	MHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:18:41
Ambit temp [°C] humidity [rel%]	22.7 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

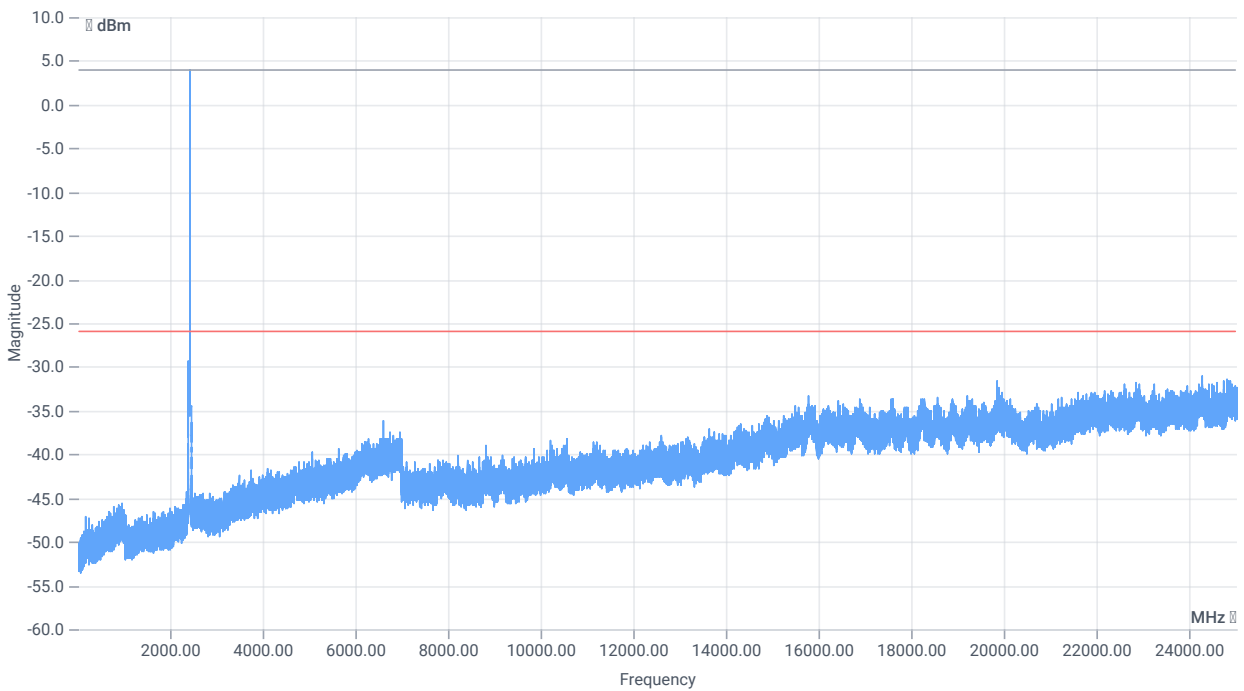
Equipment

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

Test at TX 2417 MHz

RESULT: Reference Power cond.

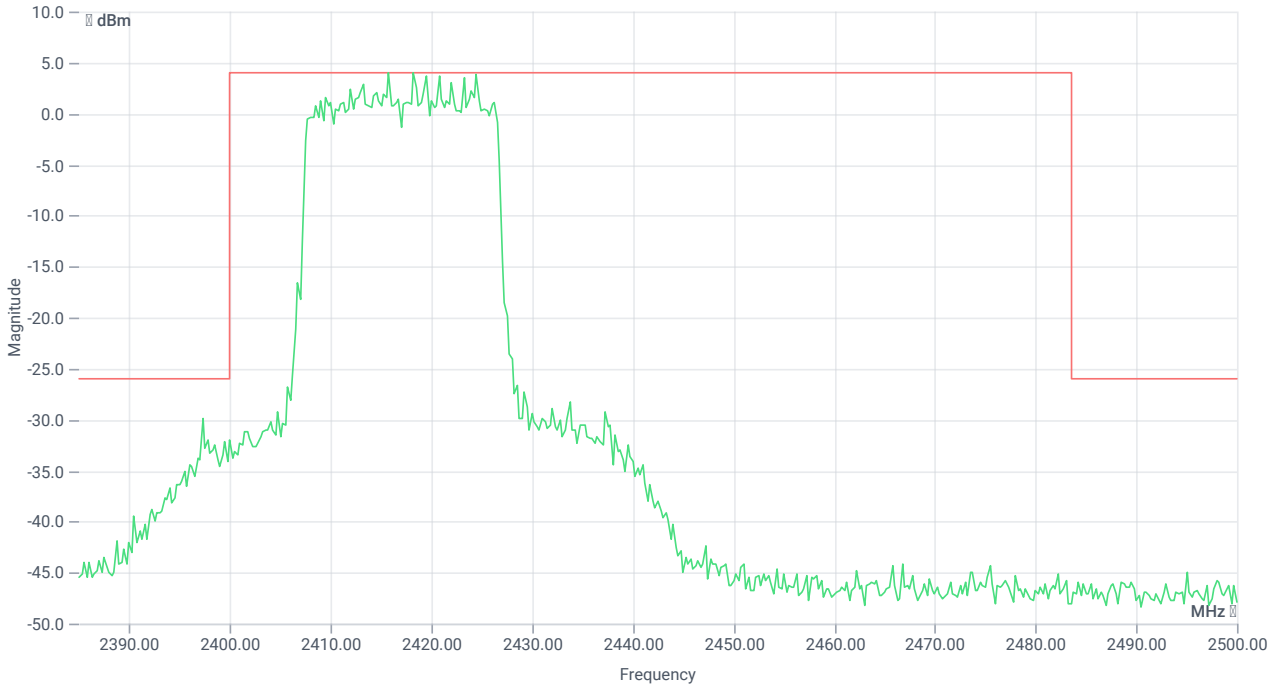
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.17	dBm	INFO
Ref. Frequency	--	--	2412.600	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.17 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2415.75 MHz	--	--	4.00	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-149.1	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:25:27
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2417 MHz

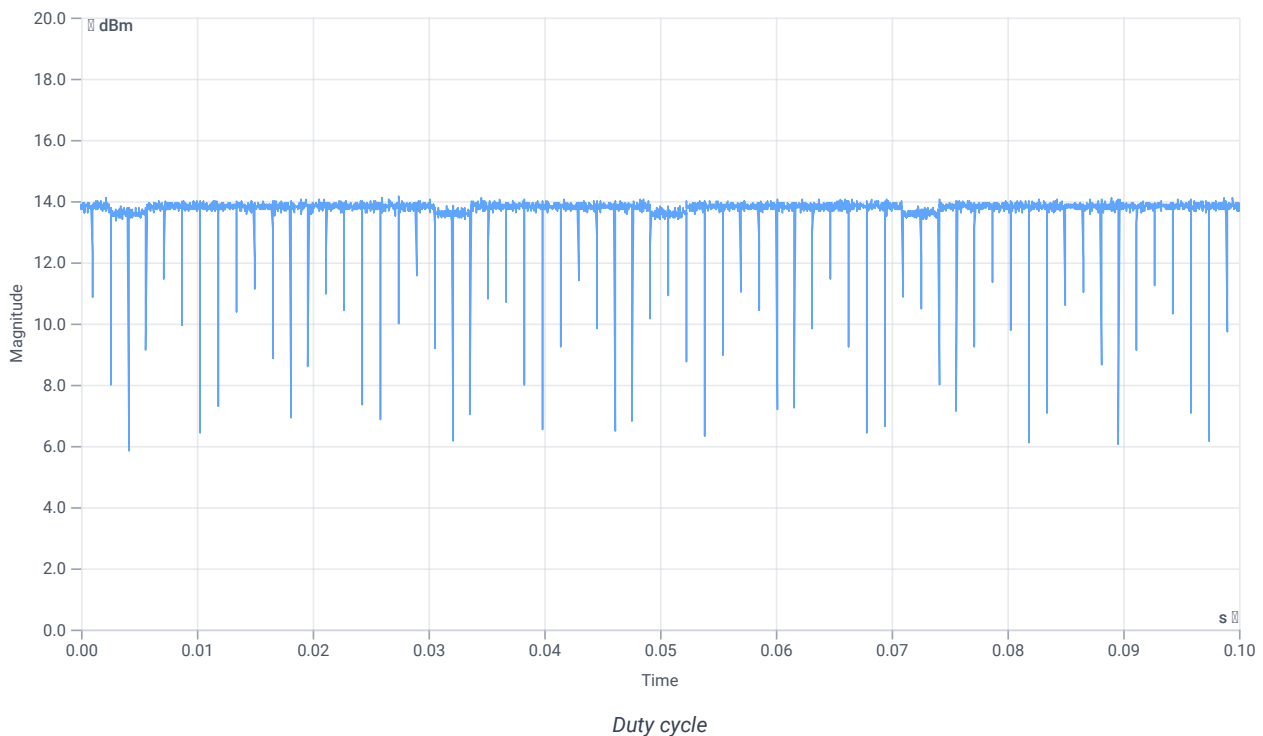
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.20	dBm	INFO
Ref. Frequency	--	--	2420.500	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



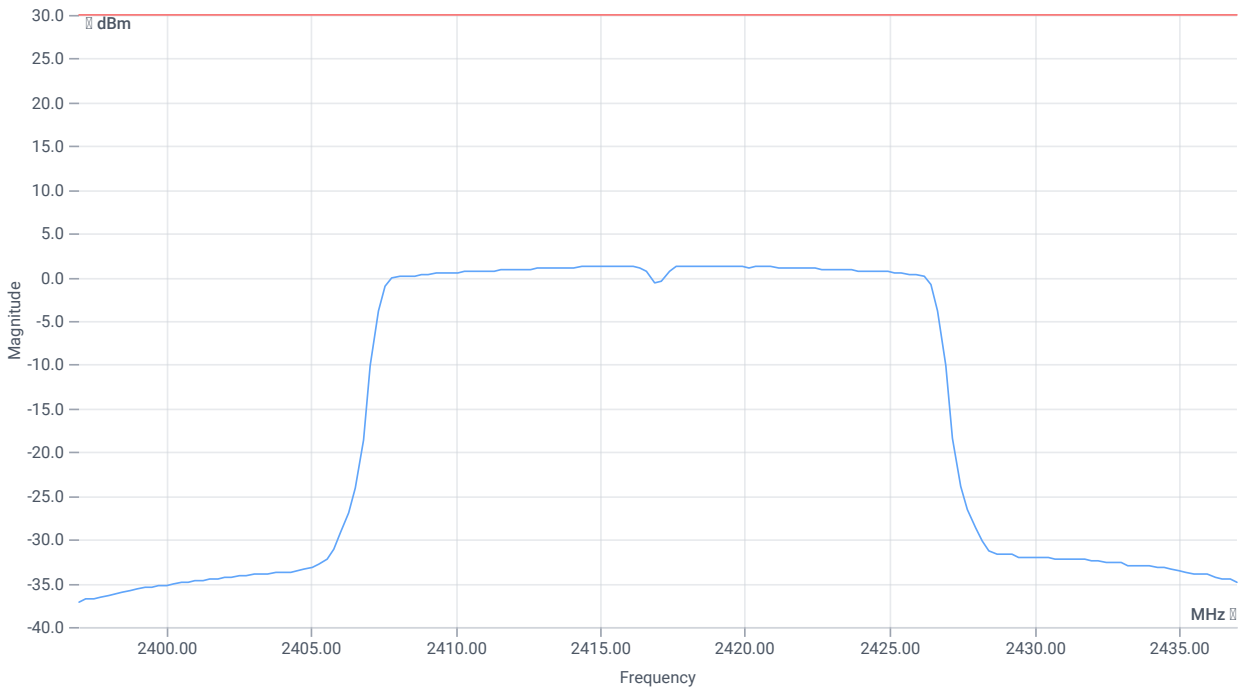
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.20 13.88 25
Start [MHz] Stop [MHz]	2397.000 2437.000

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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	16.38	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	16.38	dBm	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:26:42
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

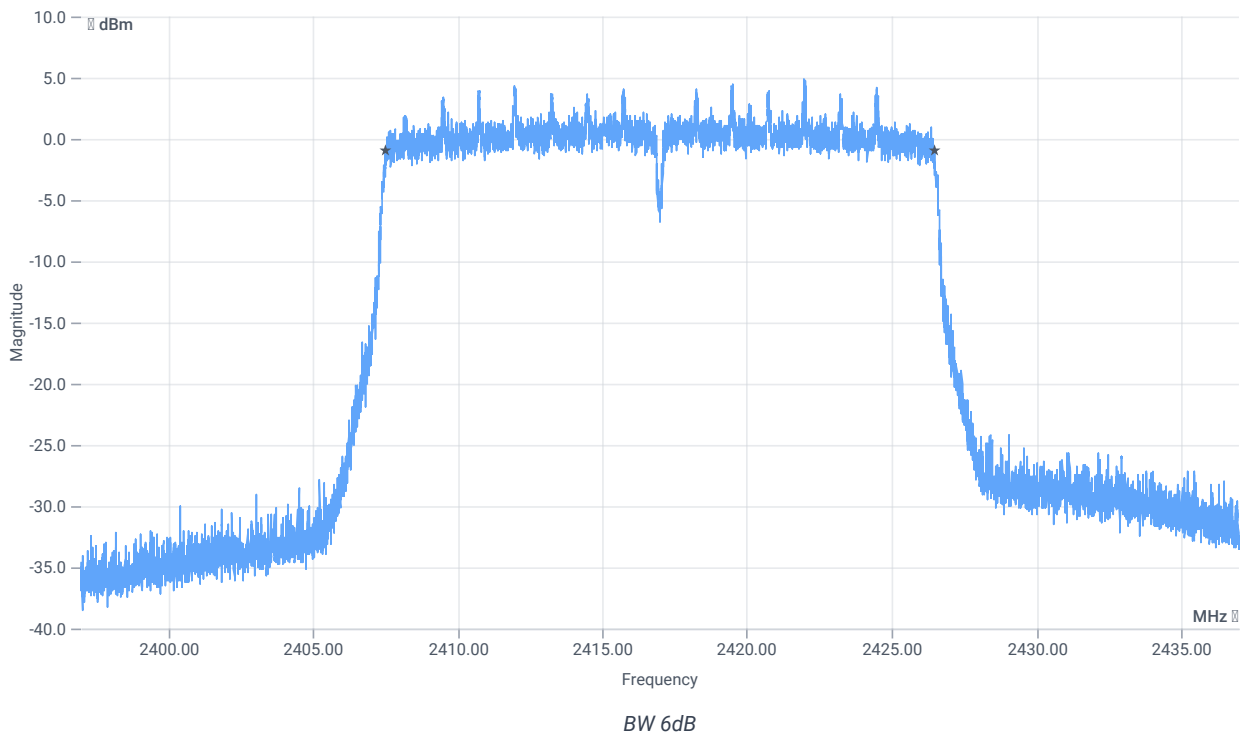
Test at TX 2417 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.76	dBm	INFO
Ref. Frequency	--	--	2419.100	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.76 13.88 20
Start [MHz] Stop [MHz]	2397.000 2437.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18952	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:27:16
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2417 MHz

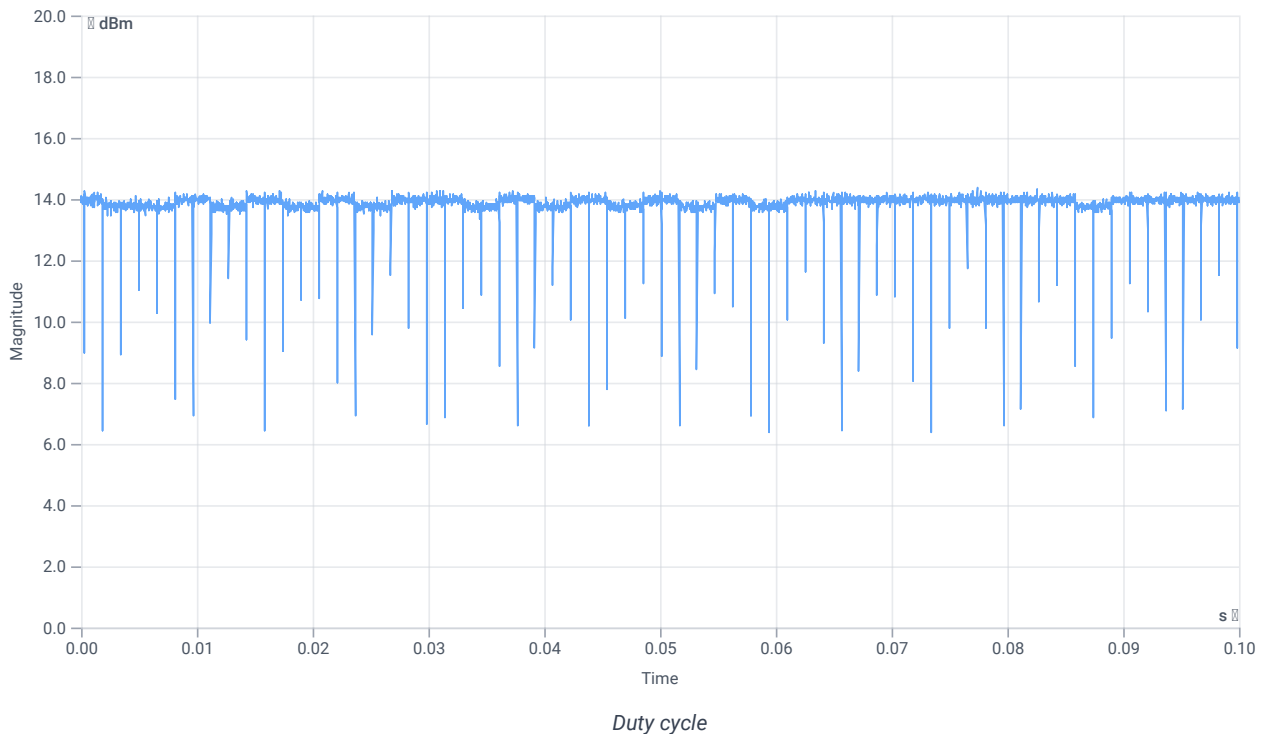
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.74	dBm	INFO
Ref. Frequency	--	--	2417.500	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



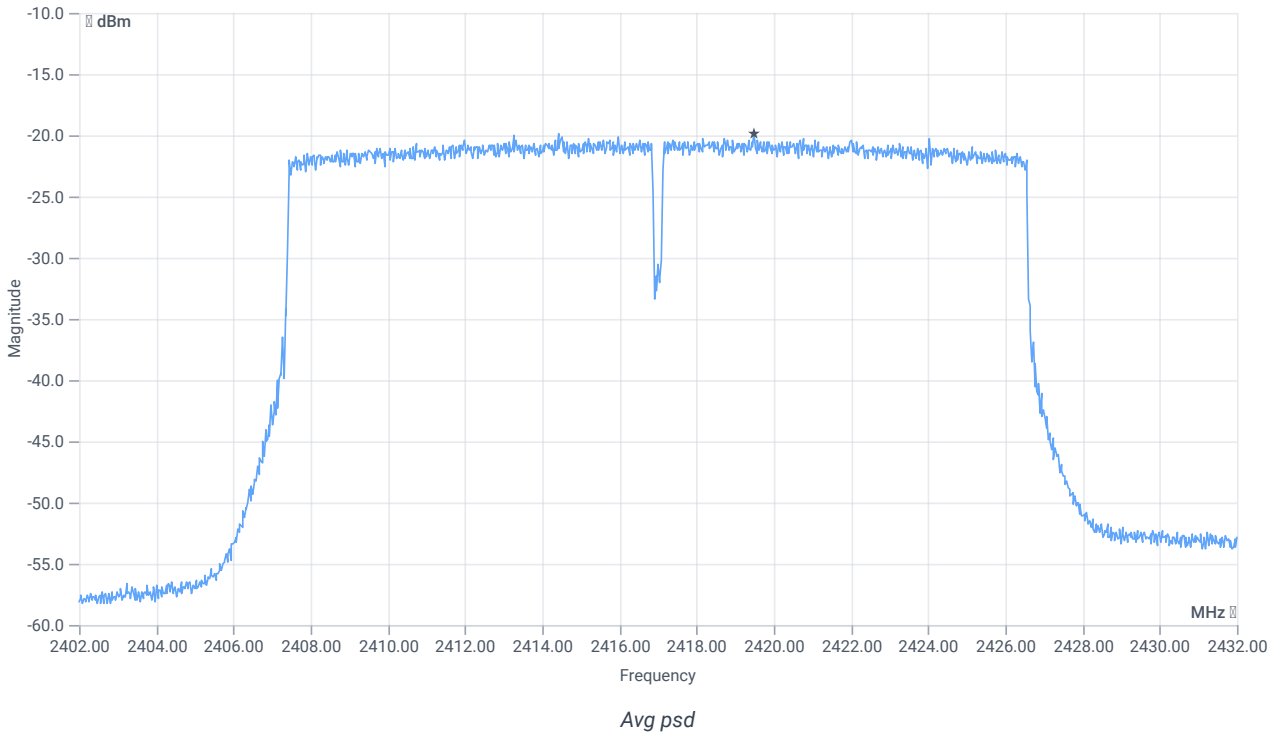
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.74 13.88 25
Start [MHz] Stop [MHz]	2402.000 2432.000

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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-19.8	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-19.8	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:28:21
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

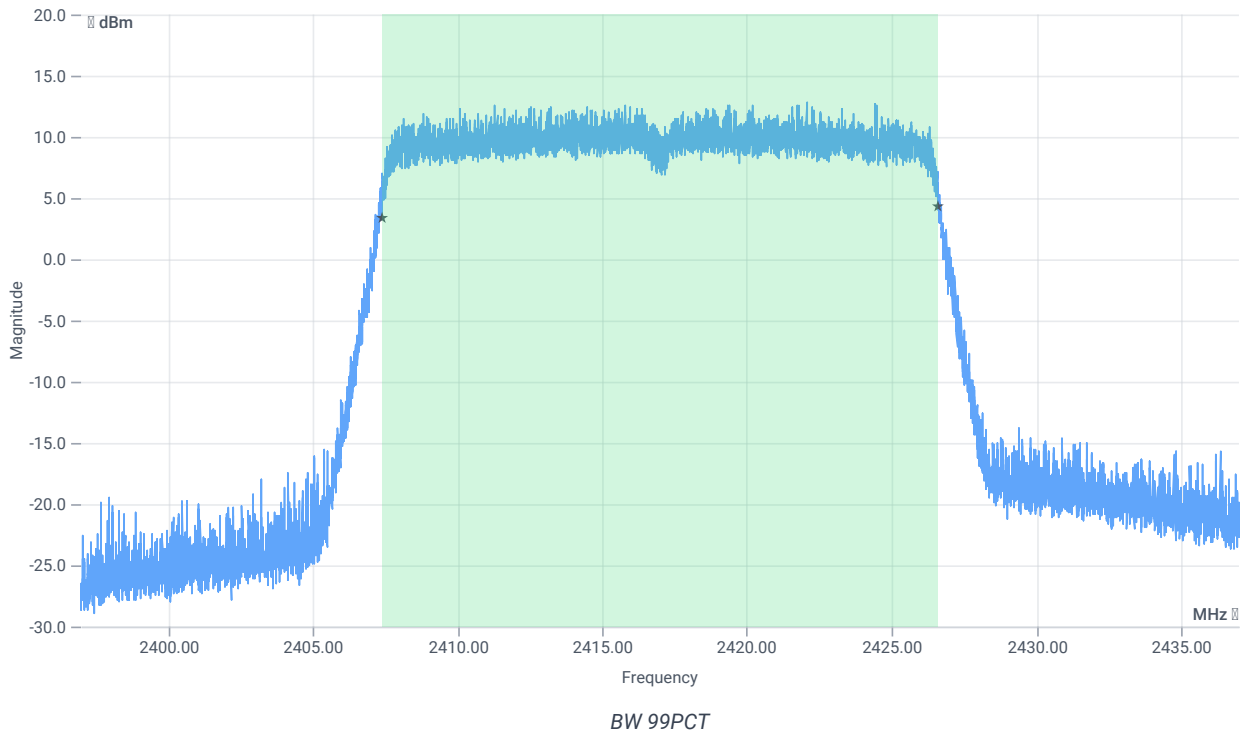
Test at TX 2417 MHz

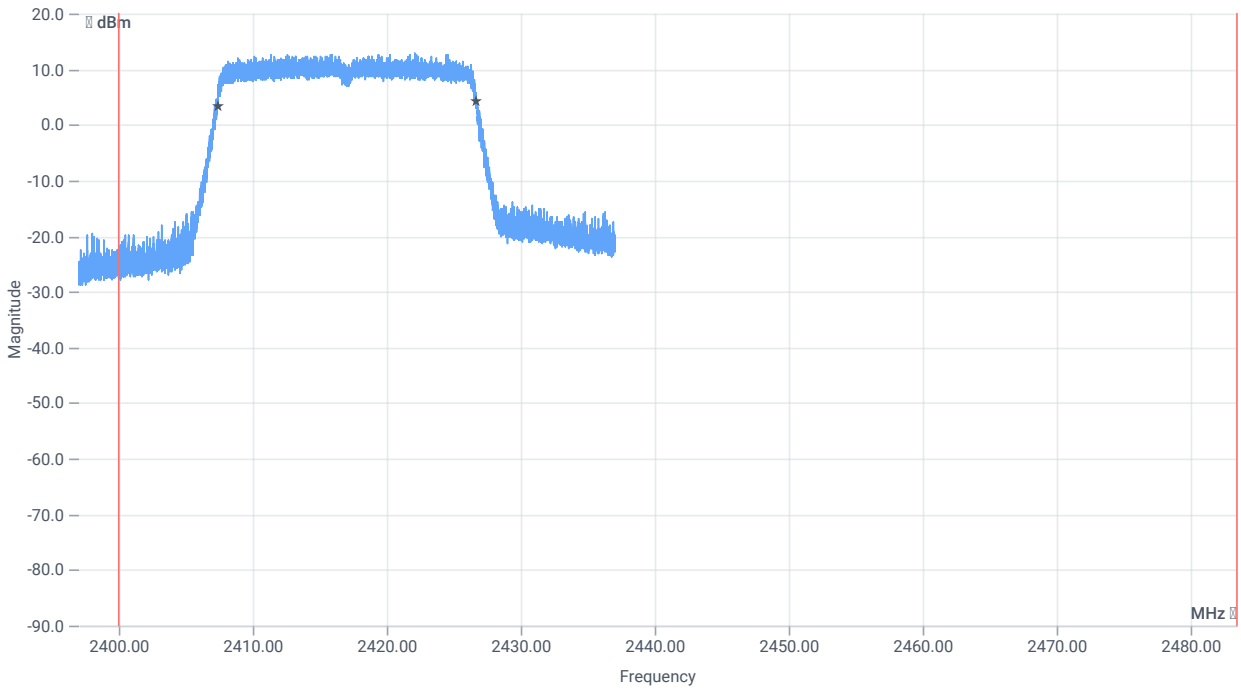
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.71	dBm	INFO
Ref. Frequency	--	--	2422.290	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.71 13.88 20
Start [MHz] Stop [MHz]	2397.000 2437.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

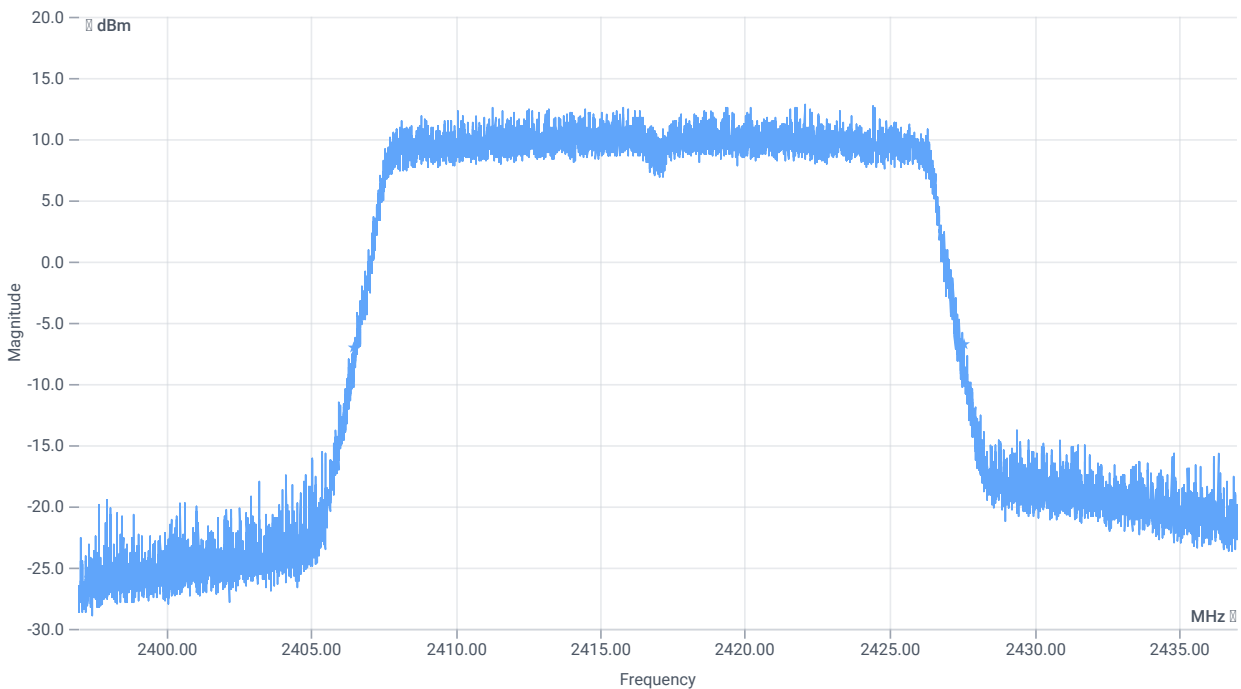




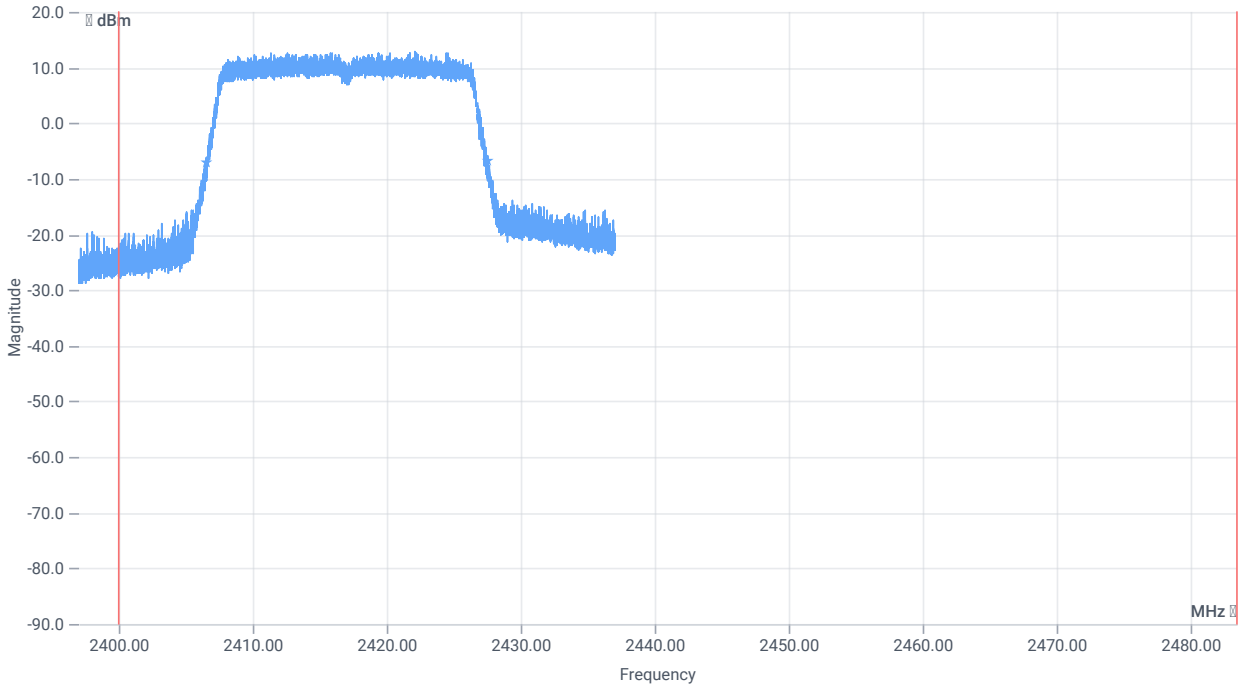
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19242.000	kHz	INFO
T1 99%	2400.000000	--	2407.3850	MHz	PASS
T2 99%	--	2483.500000	2426.6270	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21088	kHz	INFO
T1 20DB	2400.000000	--	2406.4720	MHz	PASS
T2 20dB	--	2483.500000	2427.5600	MHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:28:59
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

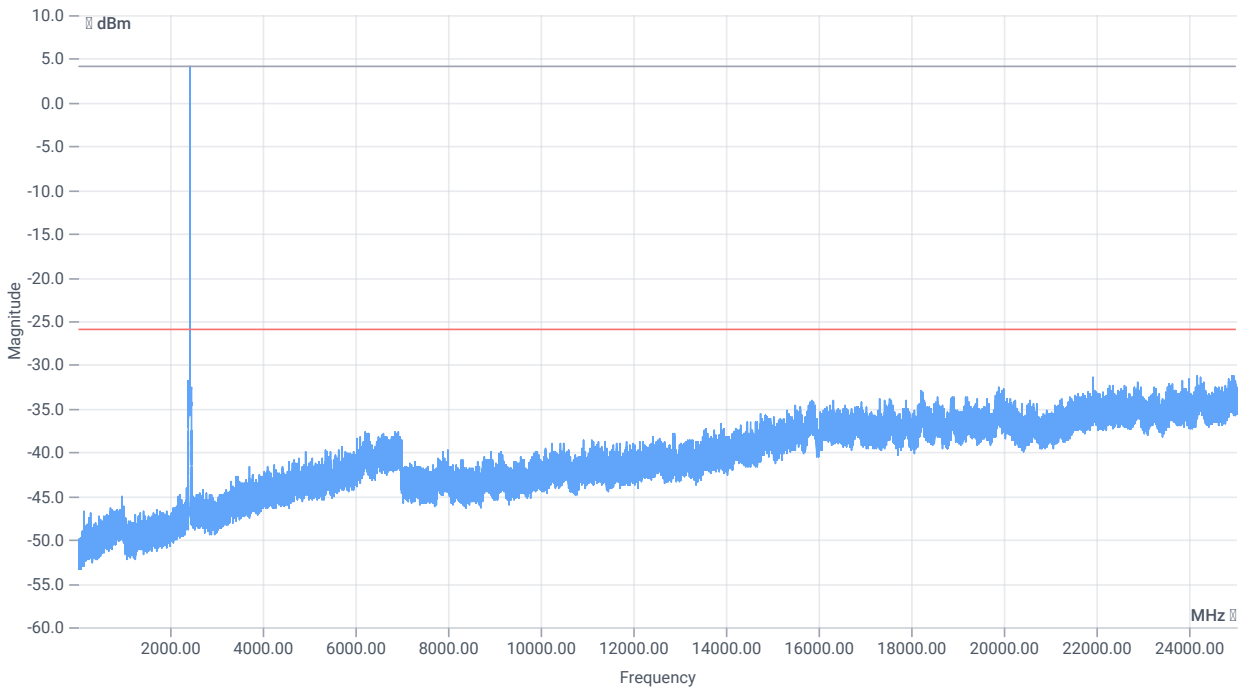
Equipment

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

Test at TX 2417 MHz

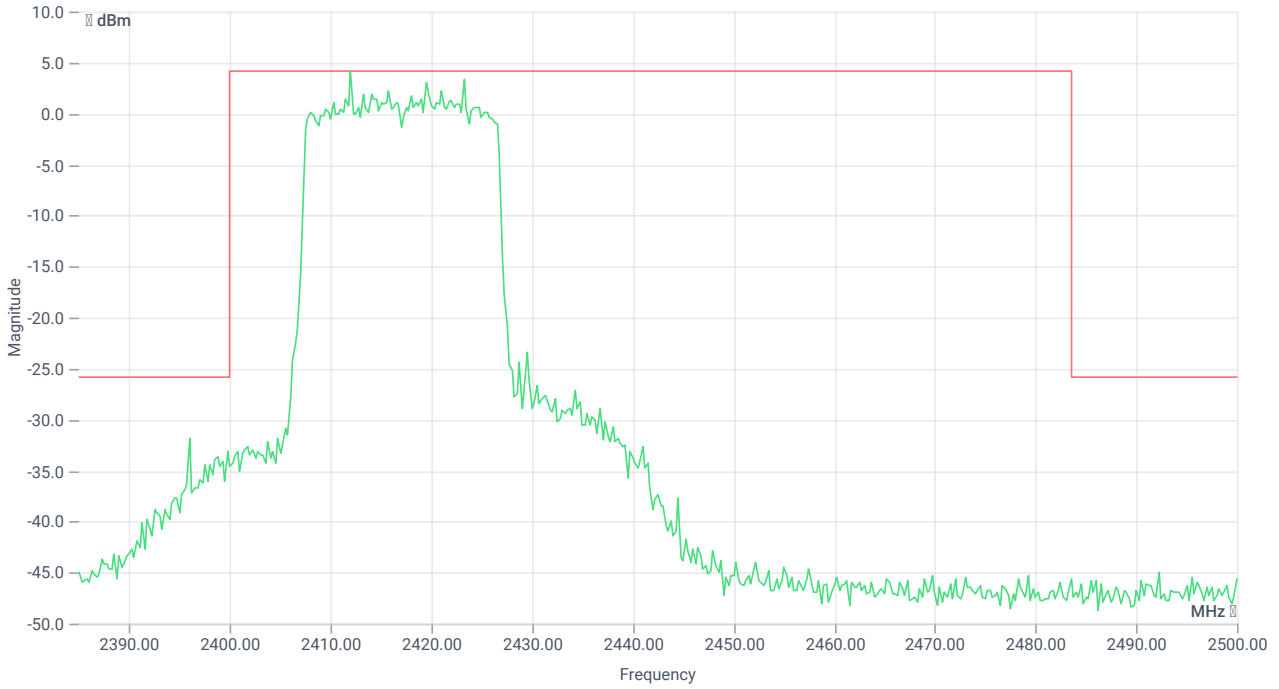
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.82	dBm	INFO
Ref. Frequency	--	--	2415.100	MHz	INFO



READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	14.82 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2412.00 MHz	--	--	4.12	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24941.25 MHz	0	--	5.34	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:35:43
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2417 MHz

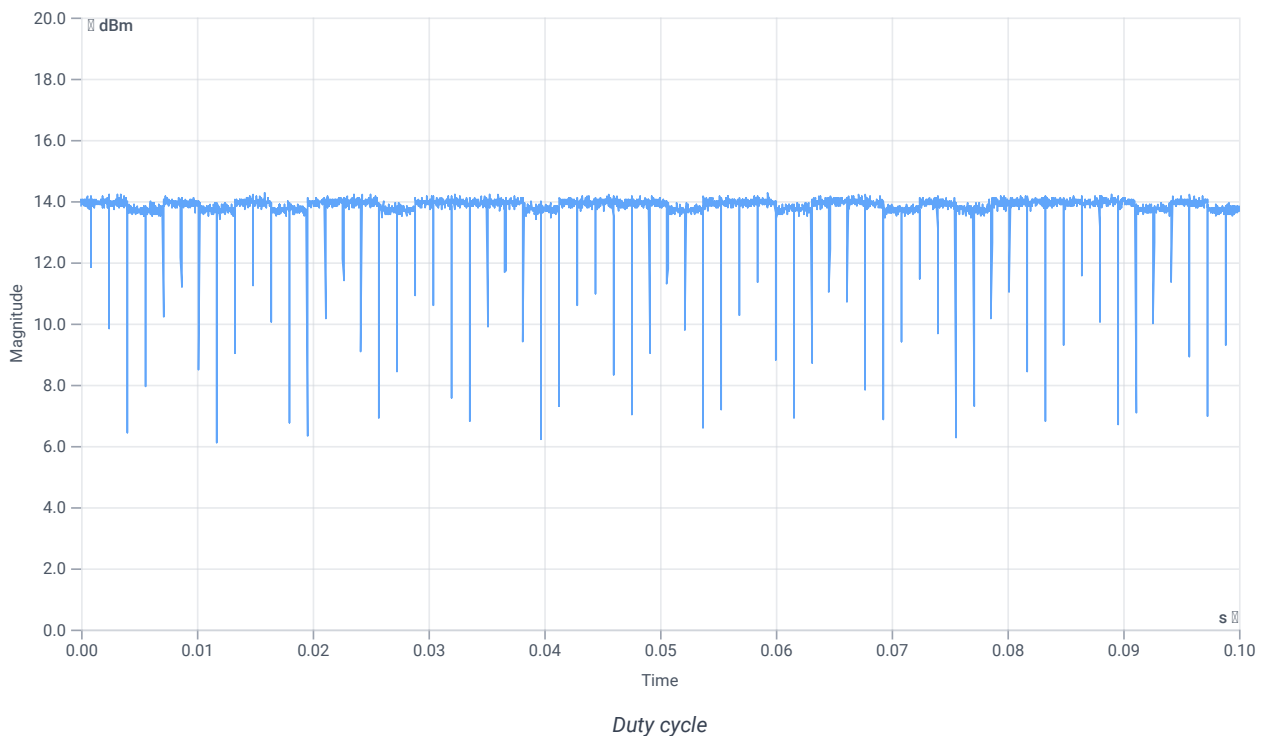
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.76	dBm	INFO
Ref. Frequency	--	--	2419.100	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



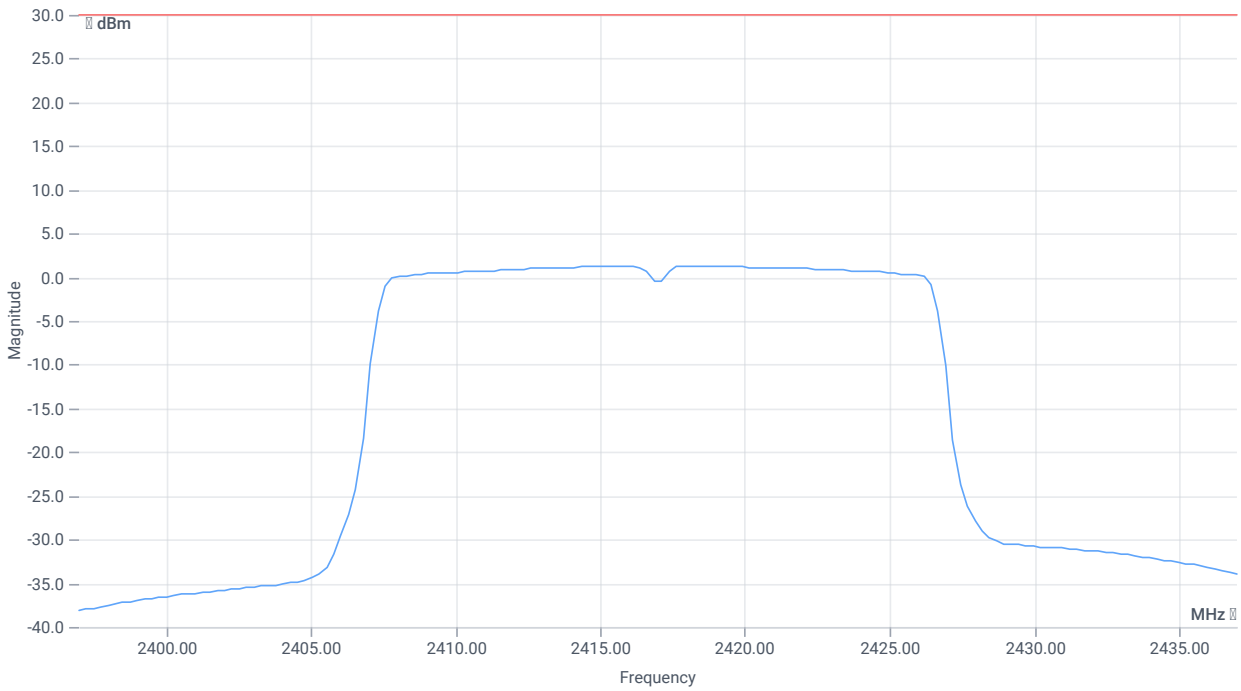
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	24.76 13.88 25
Start [MHz] Stop [MHz]	2397.000 2437.000

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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	16.37	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	16.37	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	16.01.2024 11:36:58
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	None

Equipment

Test at TX 2417 MHz

RESULT Power

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	--	--	16.38	dBm	INFO
Ant:2 Avg power DC corr.	--	--	16.37	dBm	INFO
Σ Avg output power DC corr.	--	30	19.39	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	16.01.2024 11:37:10
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	False Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	None

Equipment

Test at TX 2417 MHz

RESULT psd

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr	--	--	-19.94	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-19.8	dBm/3kHz	INFO
Σ Avg psd DC corr	--	8	-16.86	dBm/3kHz	PASS

Verdict

PASS

NA # Message with SA scan ~

References

TC start	16.01.2024 11:37:20
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	NA NI
Method	
Description	Message with SA Scan ax-HE20
Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	16.01.2024 11:37:21
Message	set WLAN2G4 to ax-HE20, Frequency [MHz] 2457

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 ax-HE20

References

TC start	16.01.2024 11:38:22
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

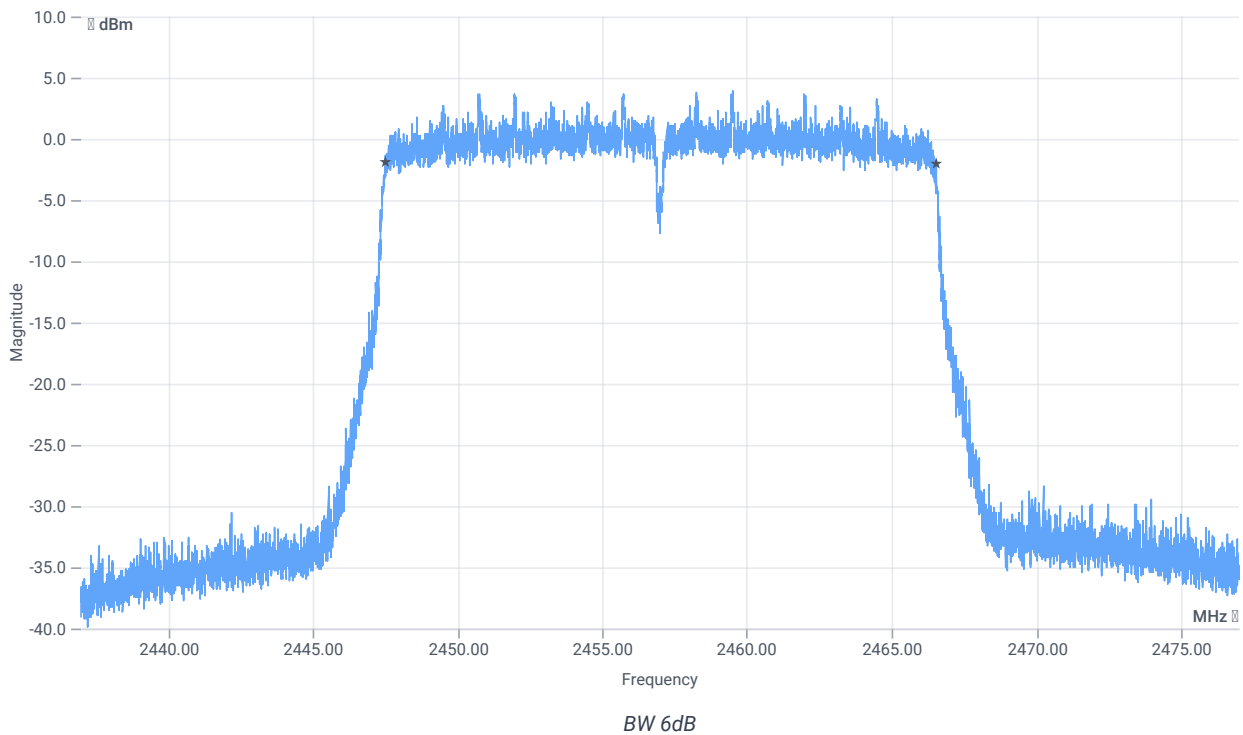
Test at TX 2457 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.85	dBm	INFO
Ref. Frequency	--	--	2461.000	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.85 14.13 20
Start [MHz] Stop [MHz]	2437.000 2477.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	19016	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:38:55
Ambit temp [°C] humidity [rel%]	22.8 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2457 MHz

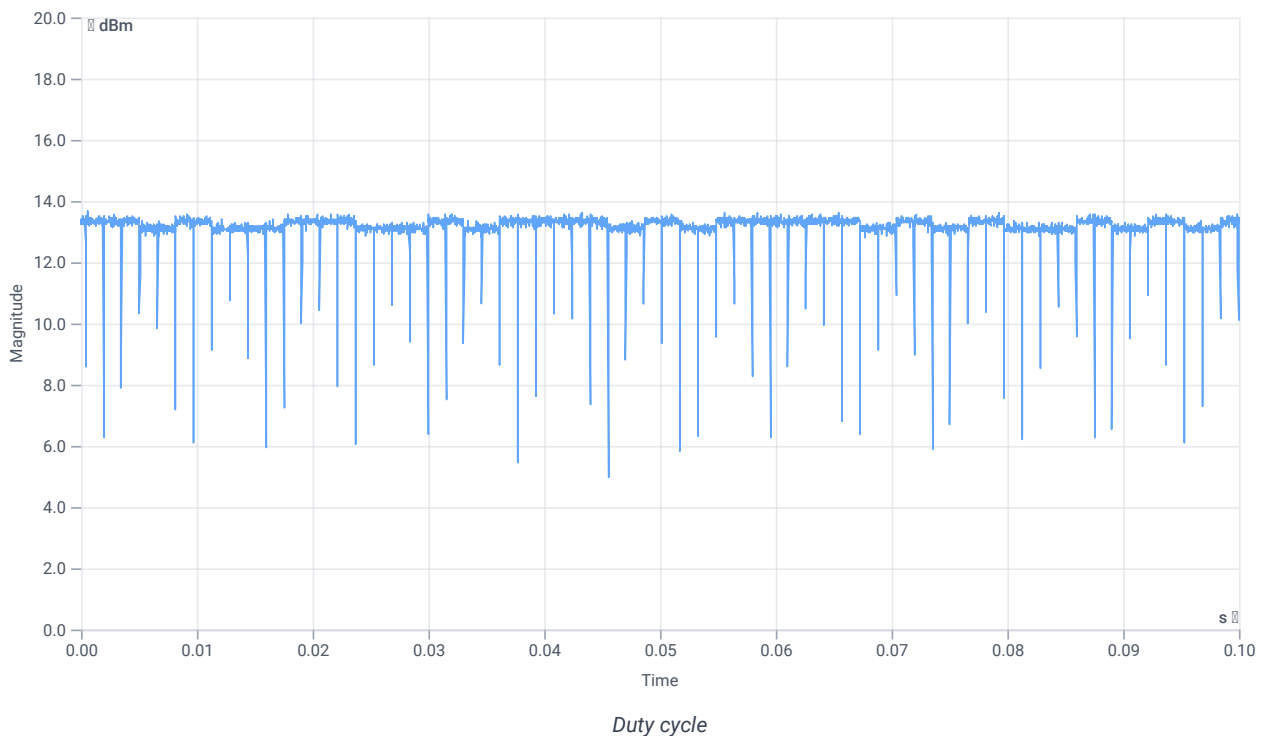
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.60	dBm	INFO
Ref. Frequency	--	--	2453.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



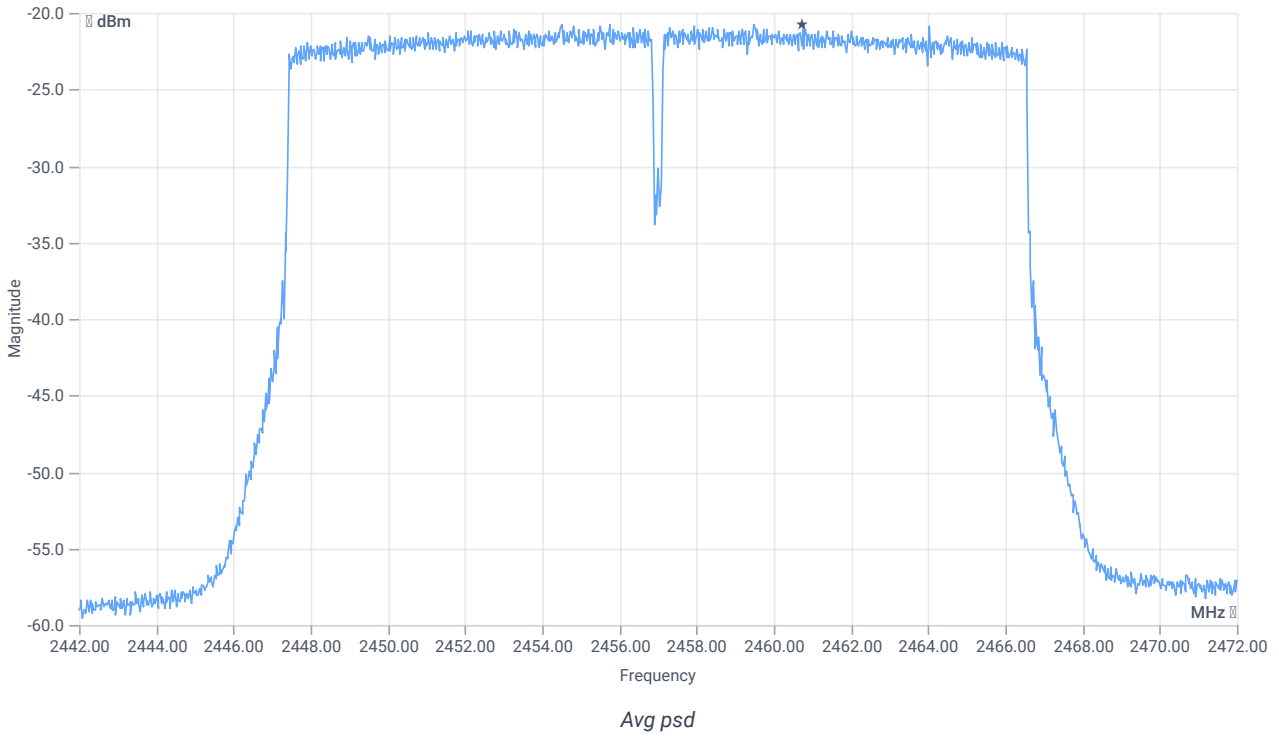
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.60 14.13 20
Start [MHz] Stop [MHz]	2442.000 2472.000

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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-20.73	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-20.73	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:39:59
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

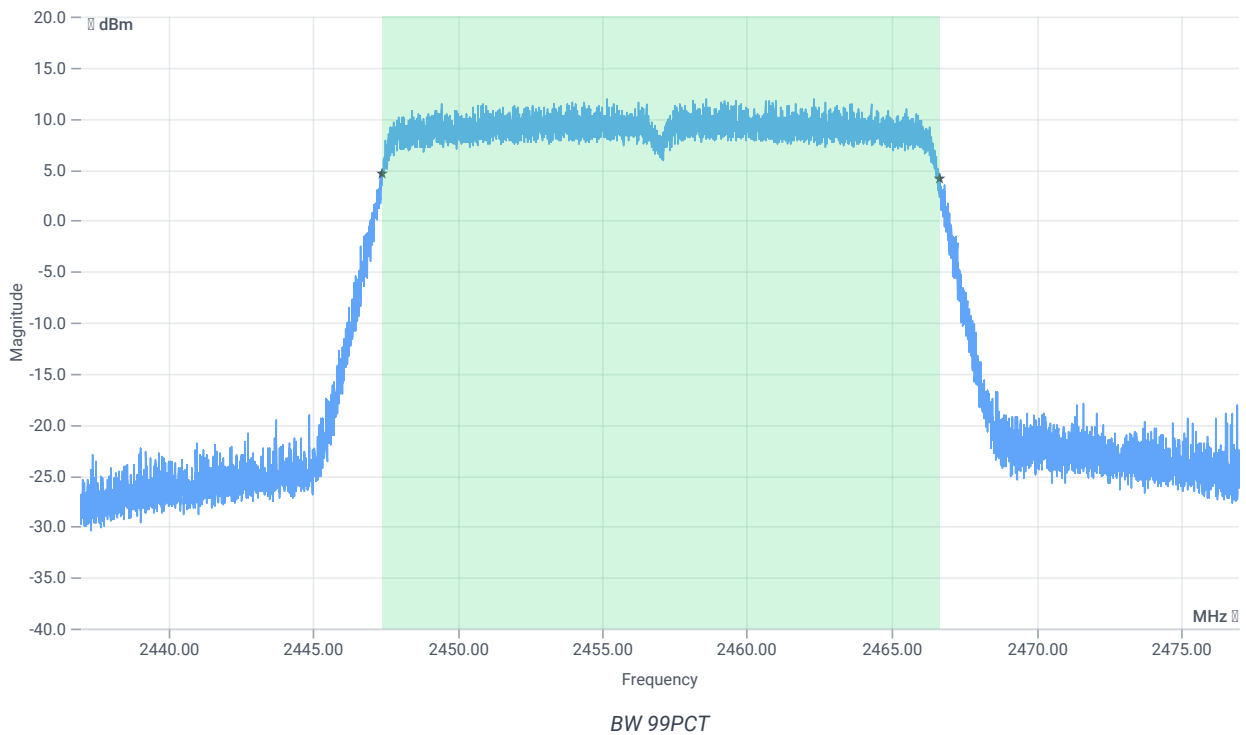
Test at TX 2457 MHz

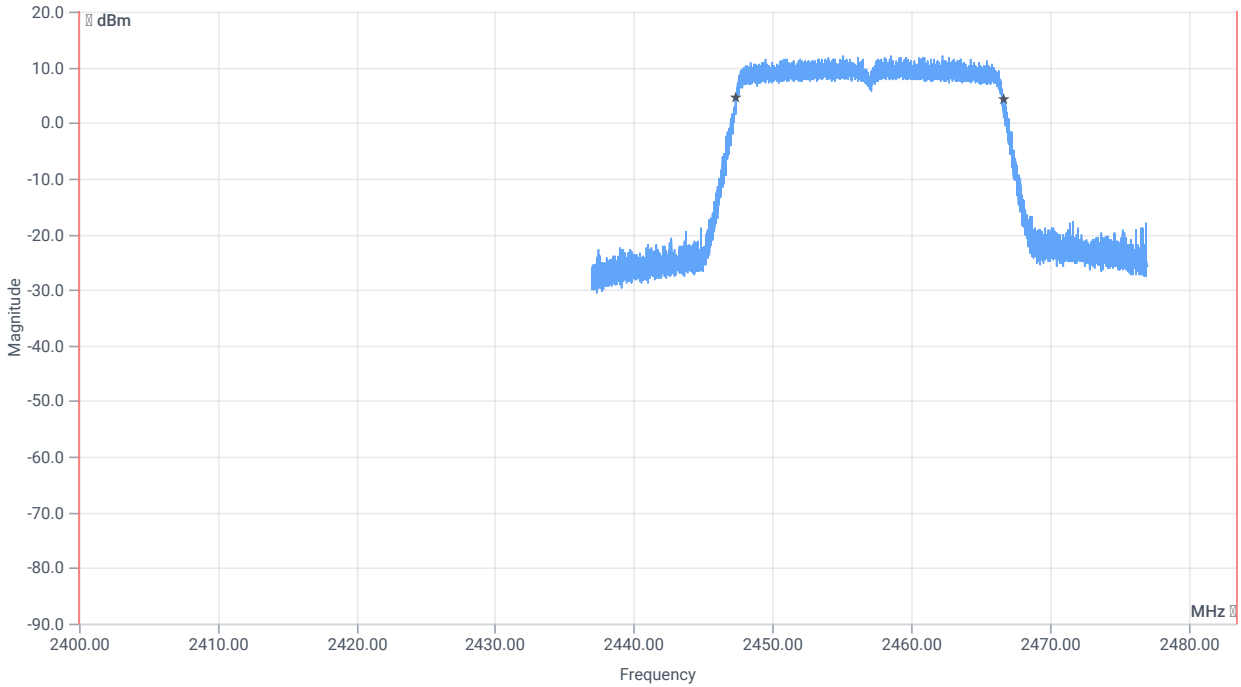
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.08	dBm	INFO
Ref. Frequency	--	--	2451.010	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.08 14.13 20
Start [MHz] Stop [MHz]	2437.000 2477.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

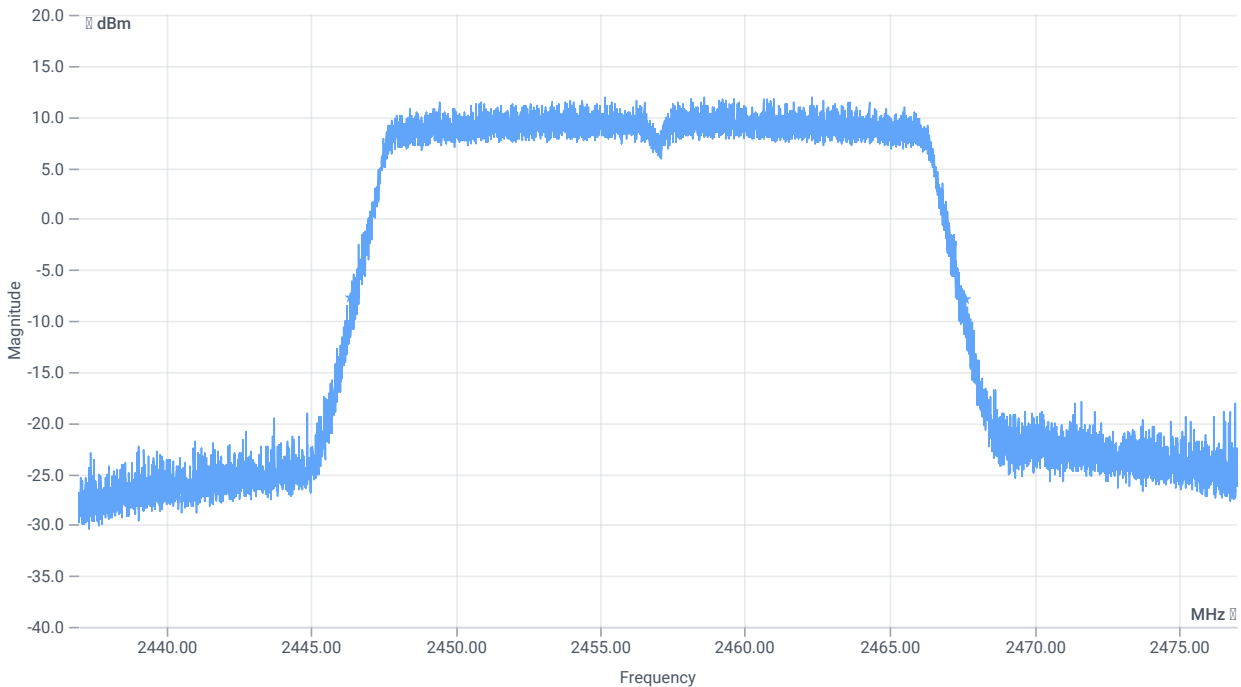




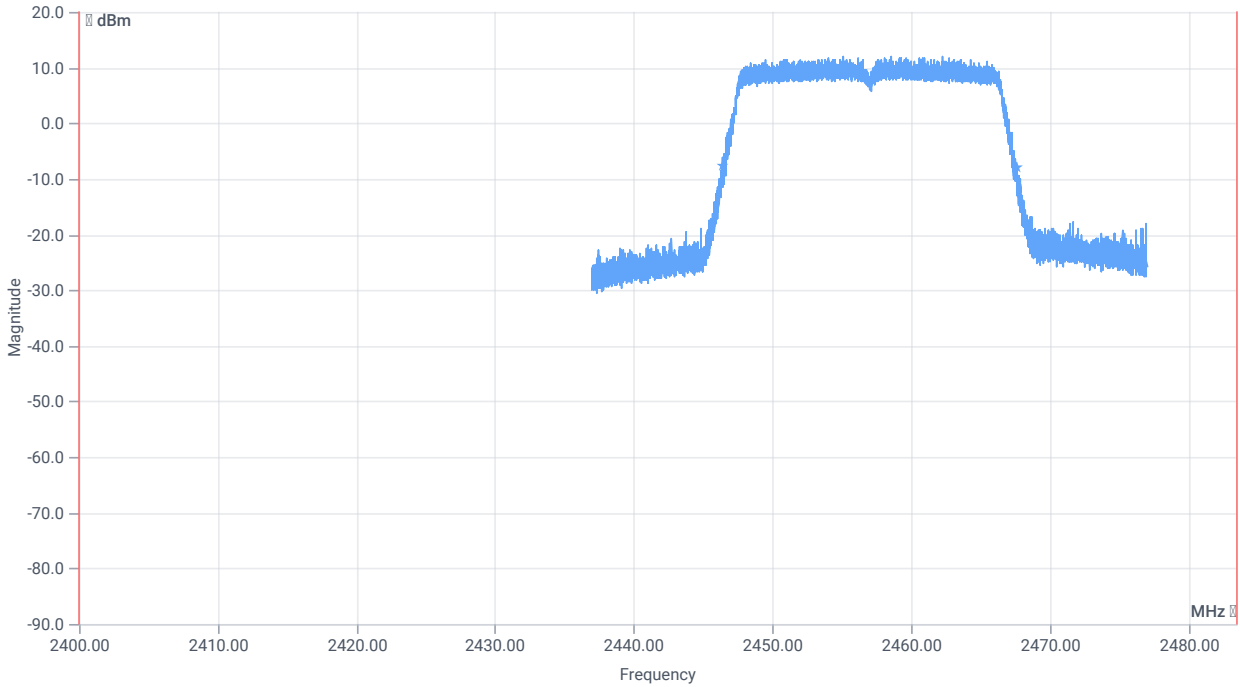
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19262.000	kHz	INFO
T1 99%	2400.000000	--	2447.3810	MHz	PASS
T2 99%	--	2483.500000	2466.6430	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21228	kHz	INFO
T1 20dB	2400.000000	--	2446.3760	MHz	PASS
T2 20dB	--	2483.500000	2467.6040	MHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:40:38
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

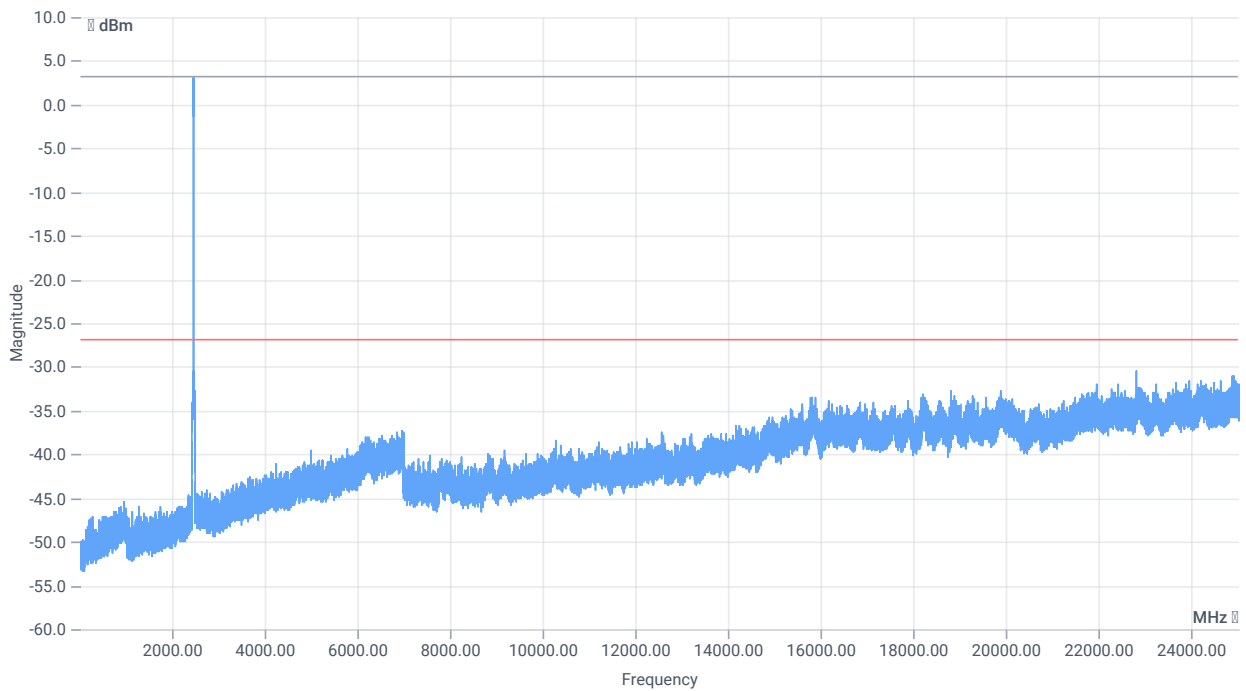
Equipment

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

Test at TX 2457 MHz

RESULT: Reference Power cond.

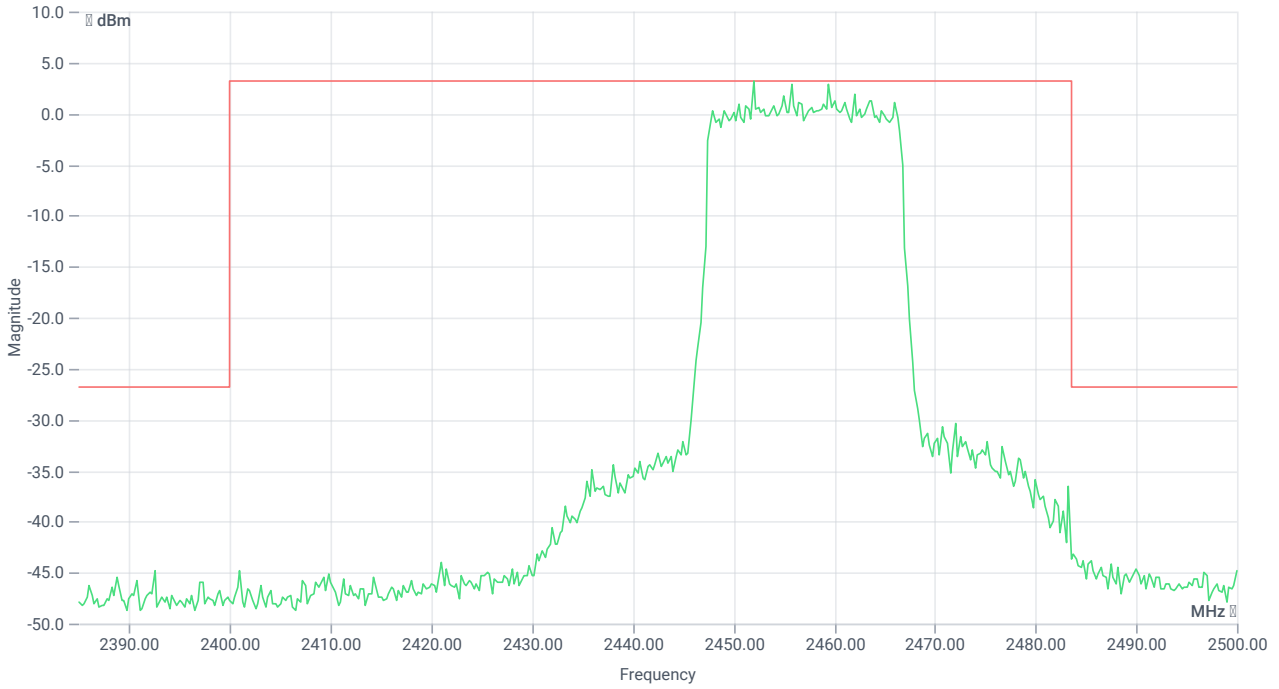
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.78	dBm	INFO
Ref. Frequency	--	--	2458.900	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	12.78 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2452.00 MHz	--	--	3.14	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 22826.75 MHz	0	--	3.6	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:47:23
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2457 MHz

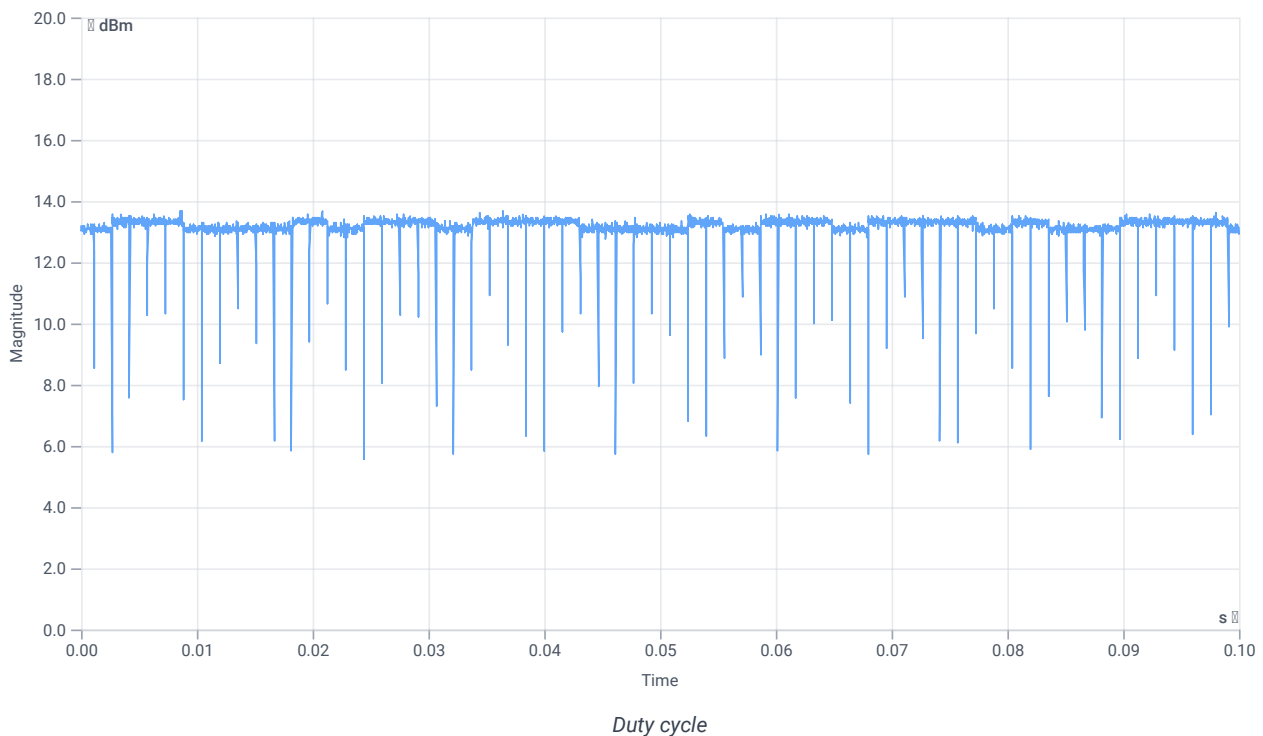
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.51	dBm	INFO
Ref. Frequency	--	--	2460.300	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



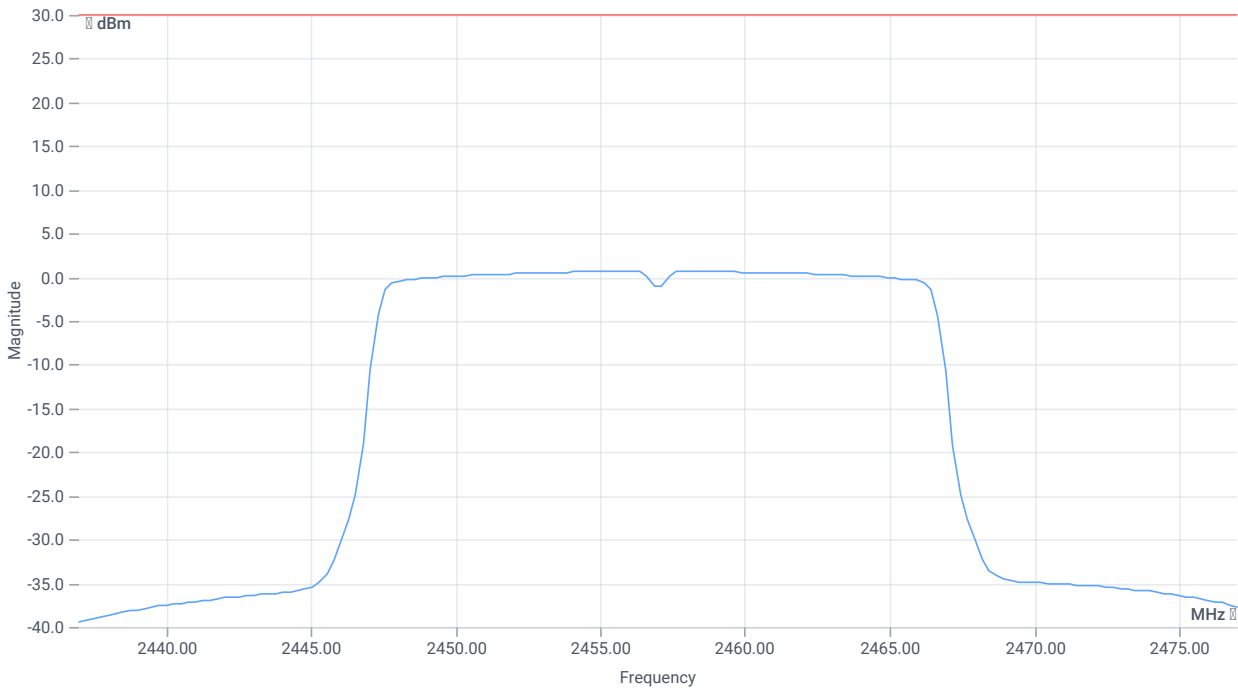
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.51 14.13 25
Start [MHz] Stop [MHz]	2437.000 2477.000

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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	15.82	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	15.82	dBm	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:48:37
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

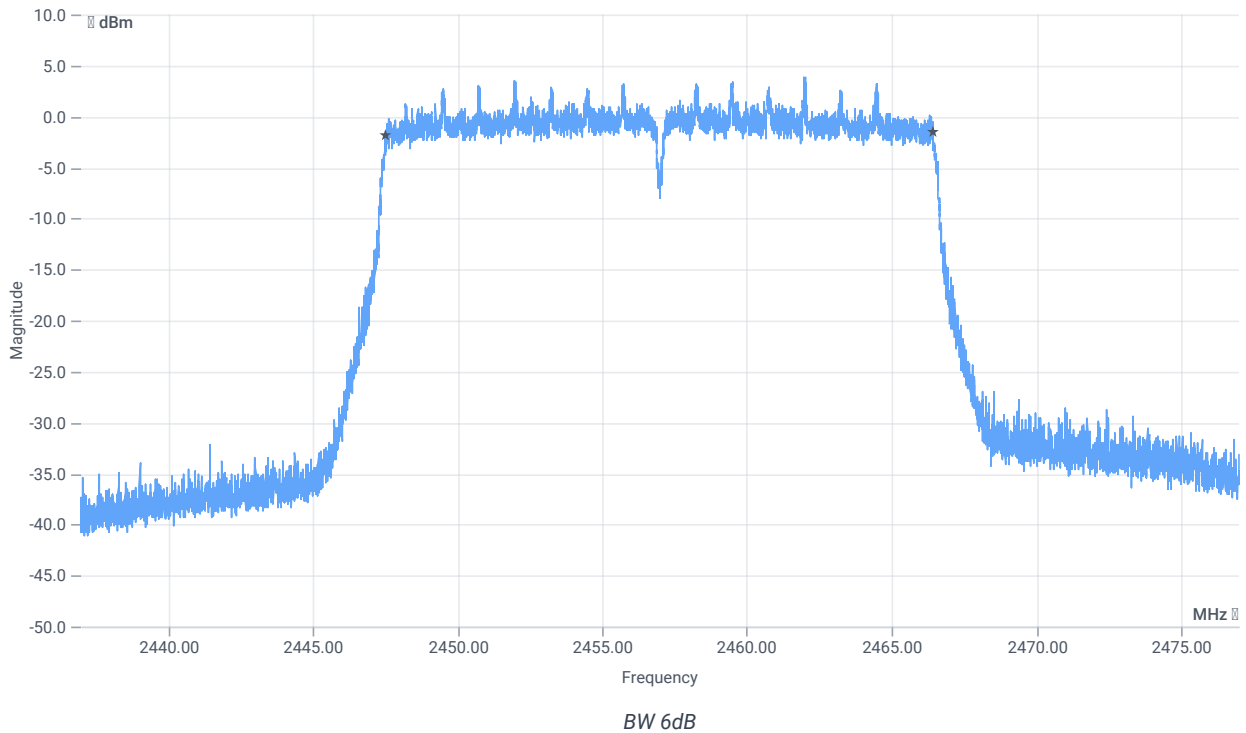
Test at TX 2457 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.64	dBm	INFO
Ref. Frequency	--	--	2454.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	18.64 14.13 20
Start [MHz] Stop [MHz]	2437.000 2477.000
RBW [MHz] VBW [MHz]	0.100000 0.300000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE



RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
DTS Bandwidth (6dB)	500	--	18924	kHz	PASS

Verdict

PASS

FCC 15.247 # Avg psd DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:49:11
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2457 MHz

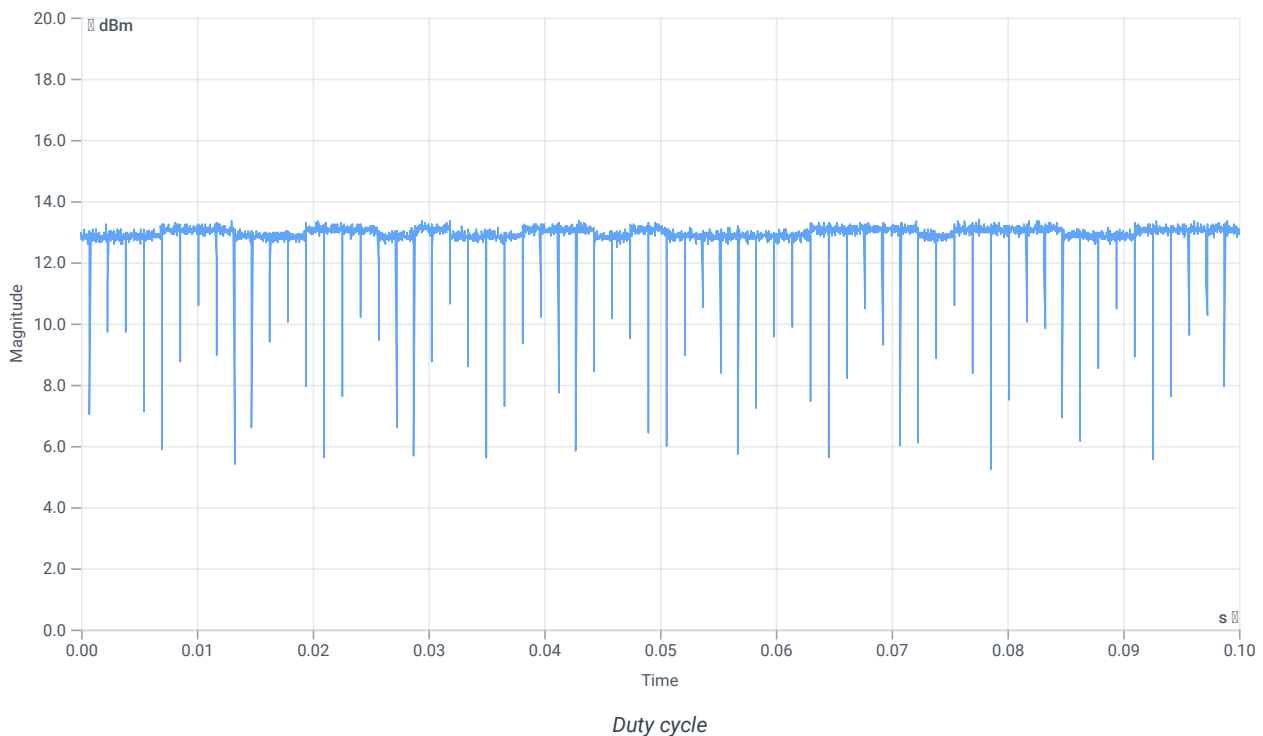
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.86	dBm	INFO
Ref. Frequency	--	--	2453.000	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



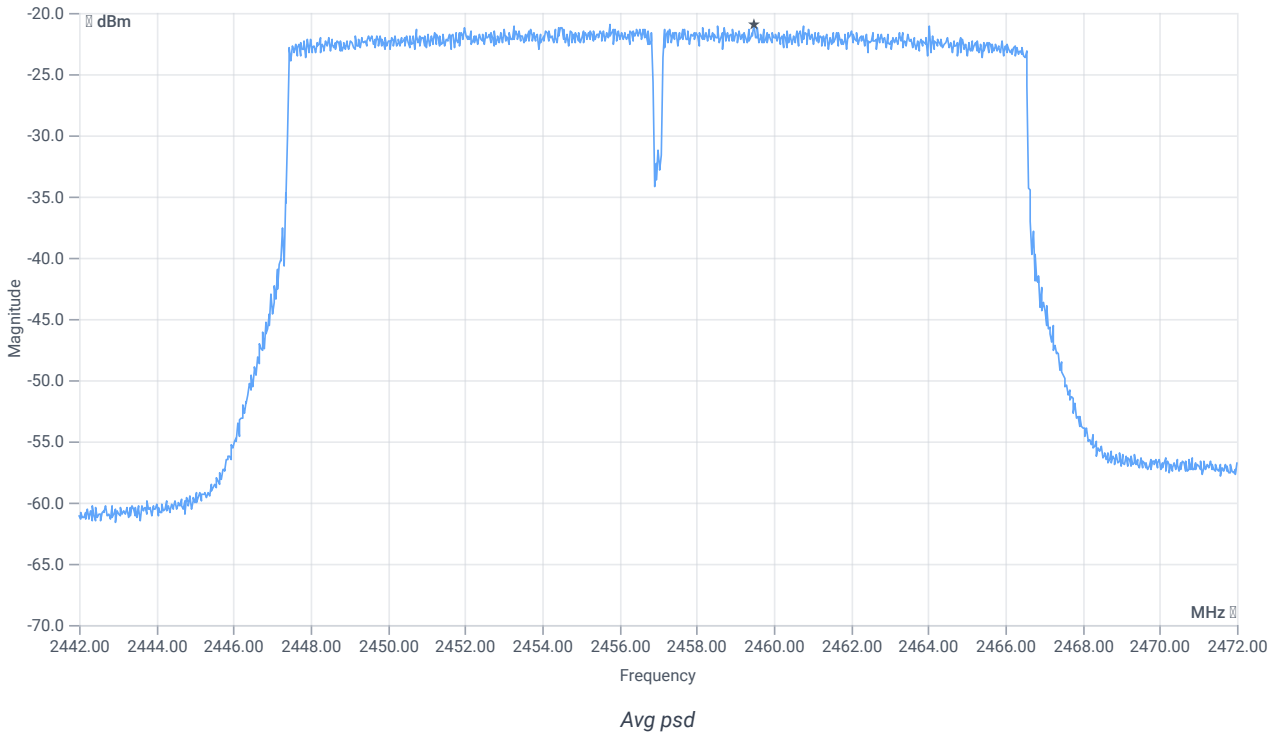
Avg. psd

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.86 14.13 20
Start [MHz] Stop [MHz]	2442.000 2472.000

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

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg psd uncorrected	--	--	-20.93	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-20.93	dBm/3kHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:50:17
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	FCC 15.247, ISED RSS247 NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

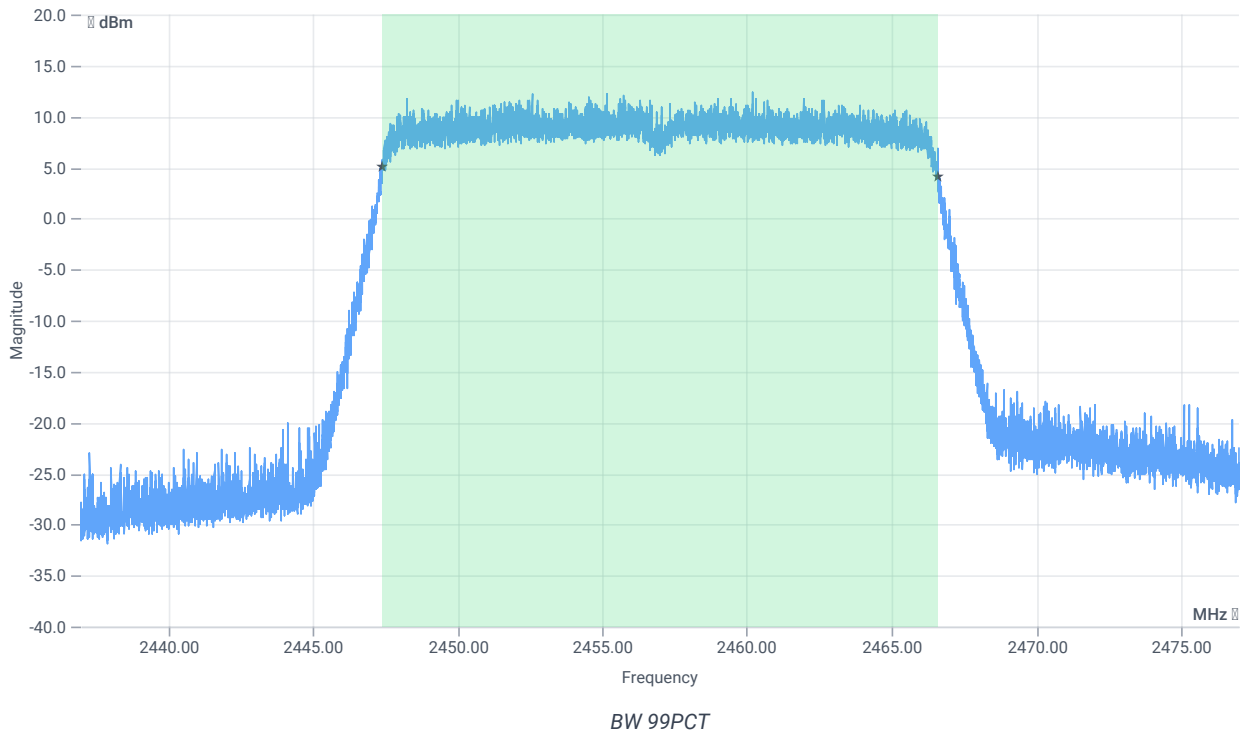
Test at TX 2457 MHz

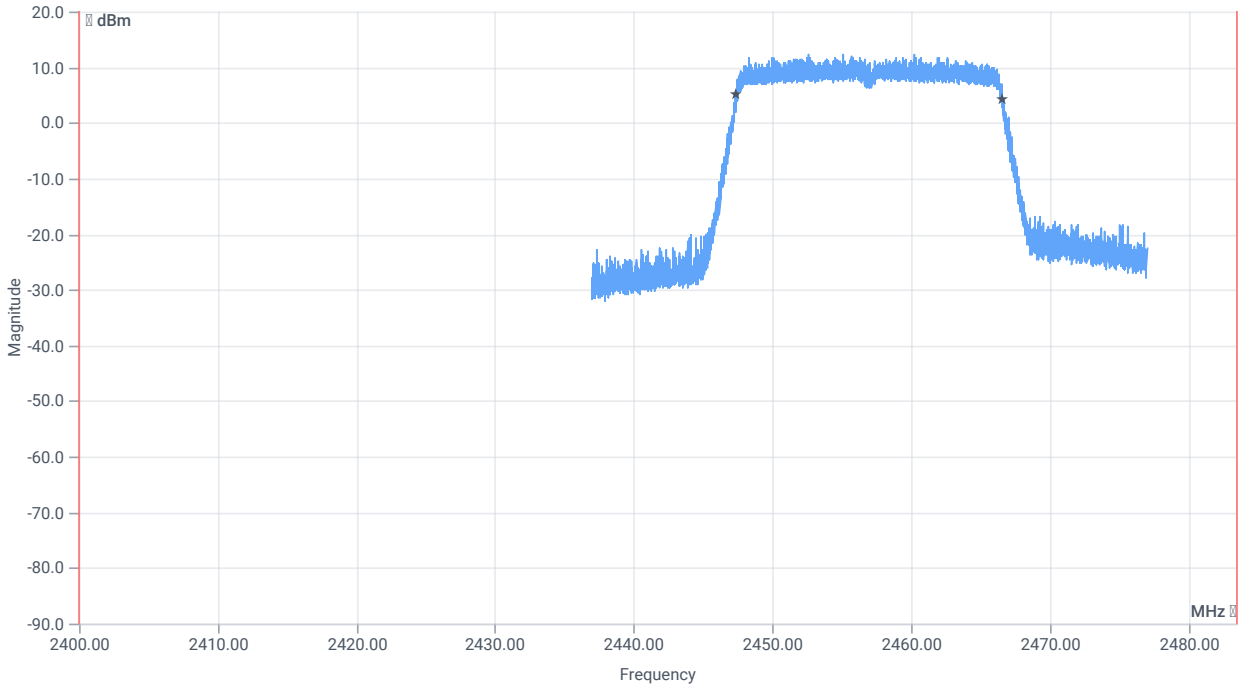
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.29	dBm	INFO
Ref. Frequency	--	--	2458.300	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.29 14.13 20
Start [MHz] Stop [MHz]	2437.000 2477.000
RBW [MHz] VBW [MHz]	0.500000 2.000000
Detector TraceMode	POS MAXH
Sweep: time [ms] count points per Section type	50 200 10001 SWE

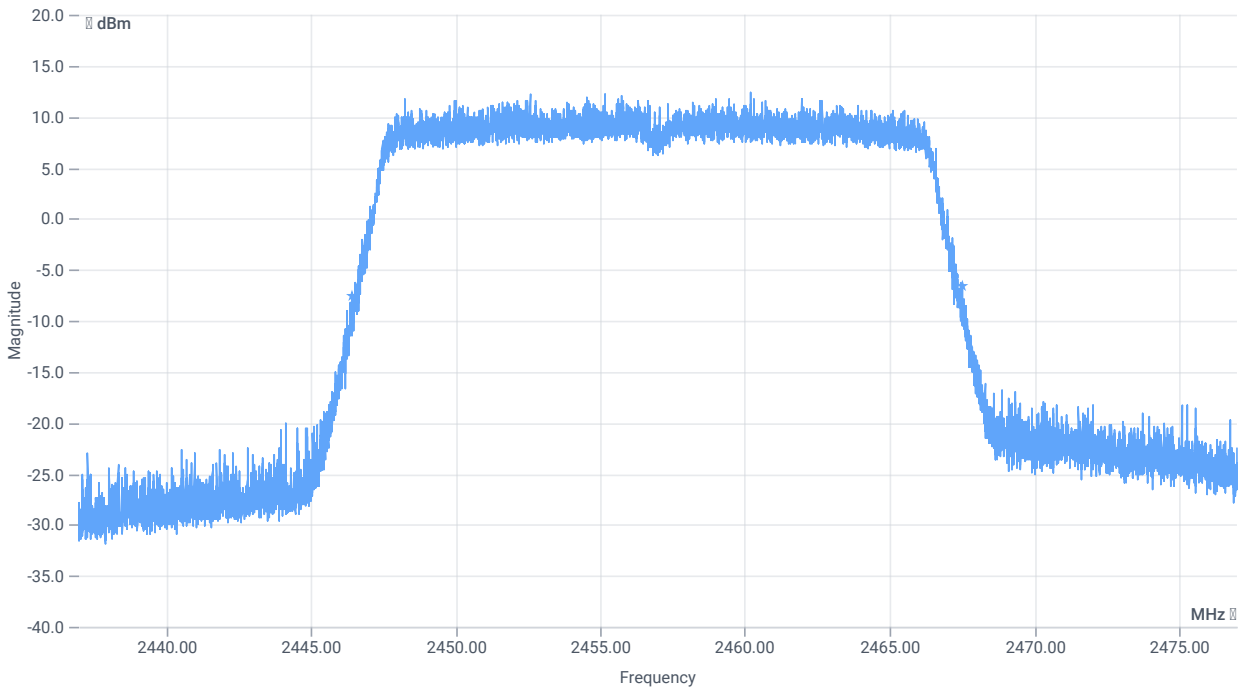




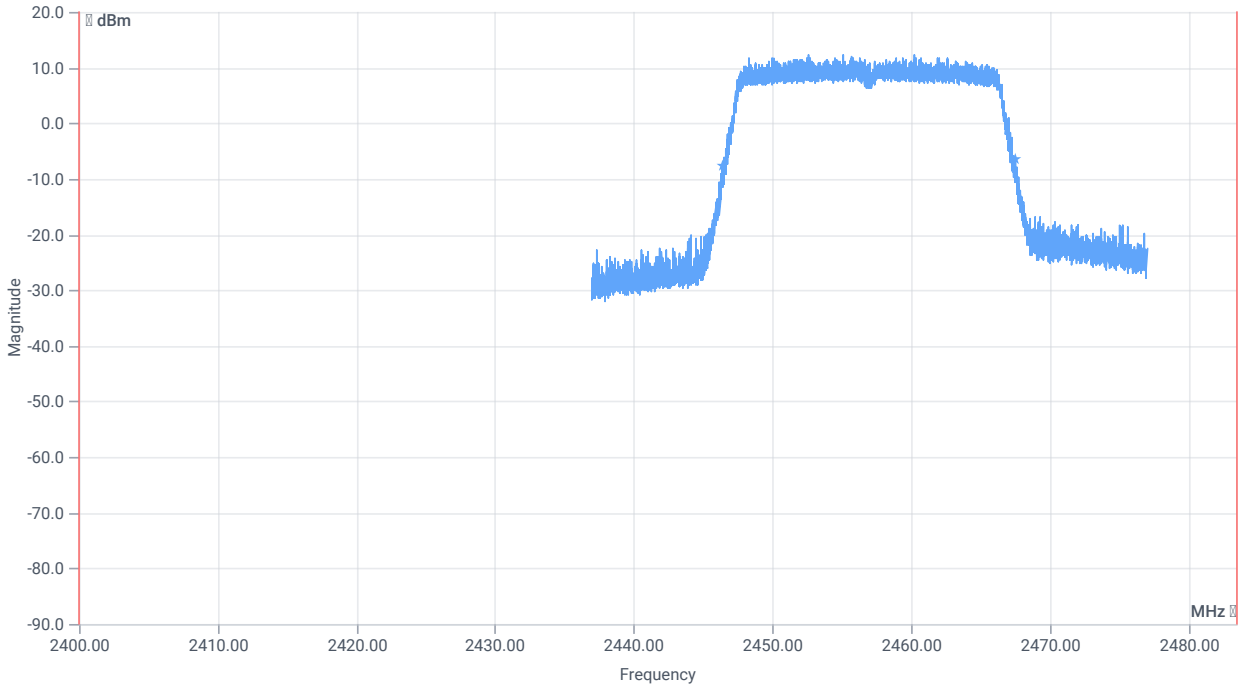
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19218.000	kHz	INFO
T1 99%	2400.000000	--	2447.3770	MHz	PASS
T2 99%	--	2483.500000	2466.5950	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21072	kHz	INFO
T1 20dB	2400.000000	--	2446.4320	MHz	PASS
T2 20dB	--	2483.500000	2467.5040	MHz	PASS

Verdict

PASS

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

References

TC start	16.01.2024 11:50:53
Ambit temp [°C] humidity [rel%]	22.9 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	IF DTS then 8.5 DTS emissions in non-restricted frequency bands: Subclause 11.11 of ANSI C63.10 is applicable
Description	FCC 15.247 TX Emissions Conducted 30dBc DTS DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

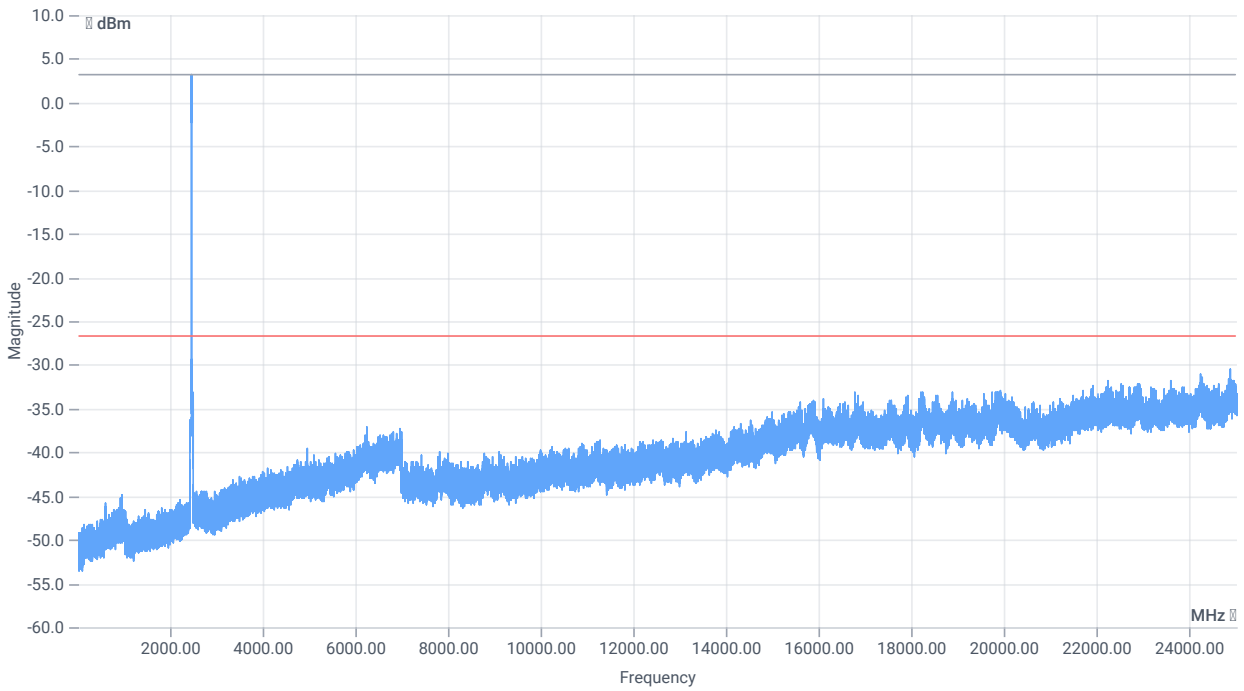
Equipment

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

Test at TX 2457 MHz

RESULT: Reference Power cond.

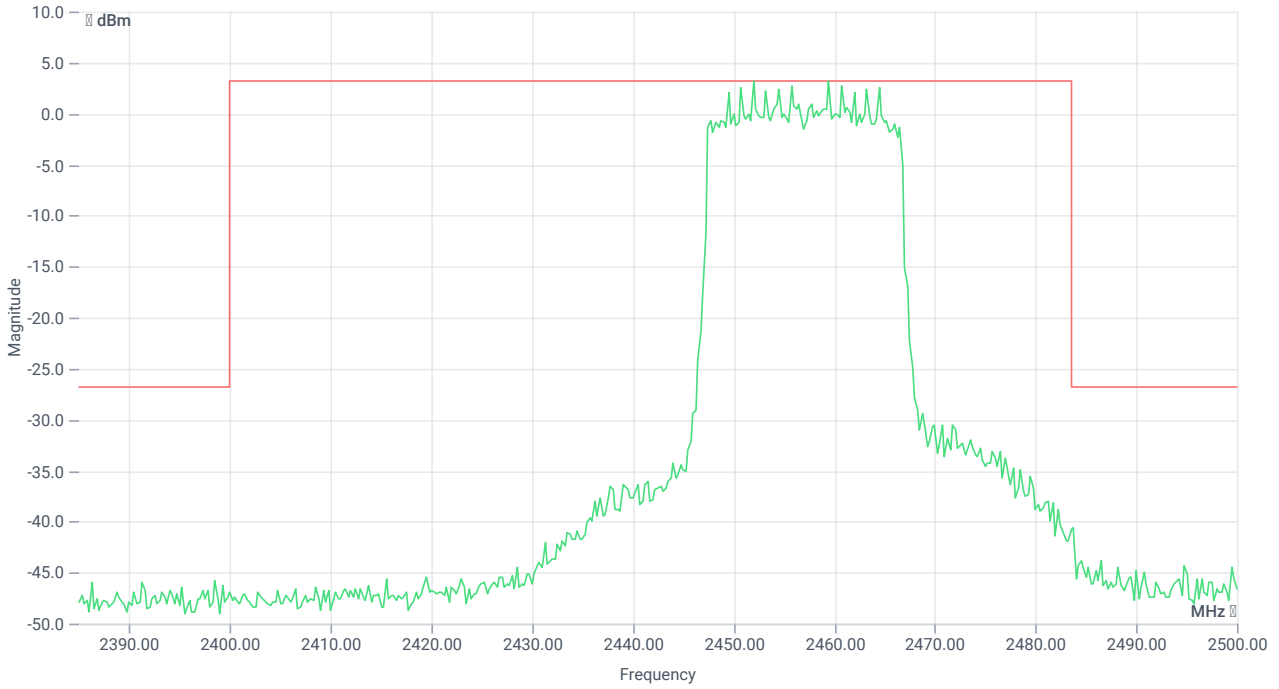
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.11	dBm	INFO
Ref. Frequency	--	--	2455.000	MHz	INFO



TX emissions

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	13.11 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



TX emissions band zoomed

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2452.00 MHz	--	--	3.21	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2487.25 MHz	0	--	3.73	dB	INFO

Verdict

PASS

FCC 15.247 # Avg output power SA DTS ~ WLAN2G4 ax-HE20

References

TC start	16.01.2024 11:57:38
Ambit temp [°C] humidity [rel%]	23.0 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	ANSI C63.10-2013 Chapter 11.9.2.2.2 or .4
Description	FCC 15.247 Avg output power SA DTS - WLAN2G4 ax-HE20
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	EUT - SignalingUnit - SpectrumAnalyzer

Equipment

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

Test at TX 2457 MHz

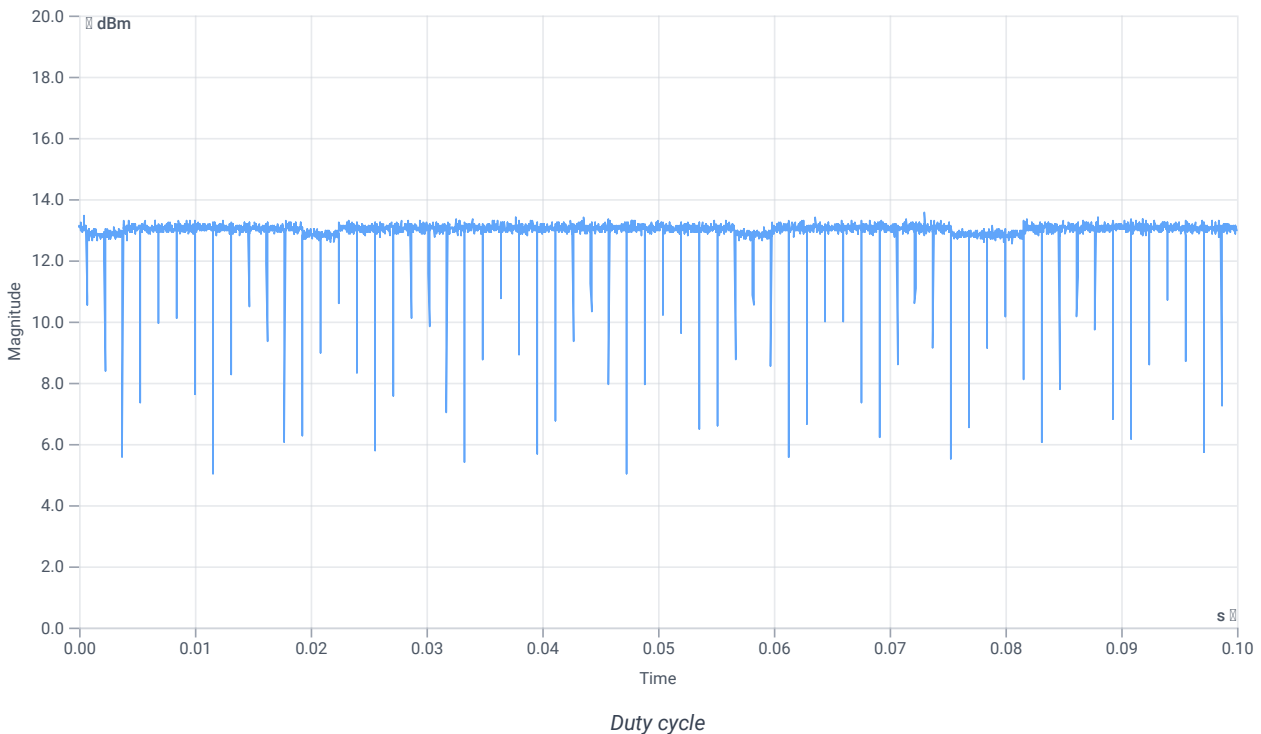
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.53	dBm	INFO
Ref. Frequency	--	--	2453.900	MHz	INFO

Evaluation max. Duty Cycle

Duty Cycle evaluation

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



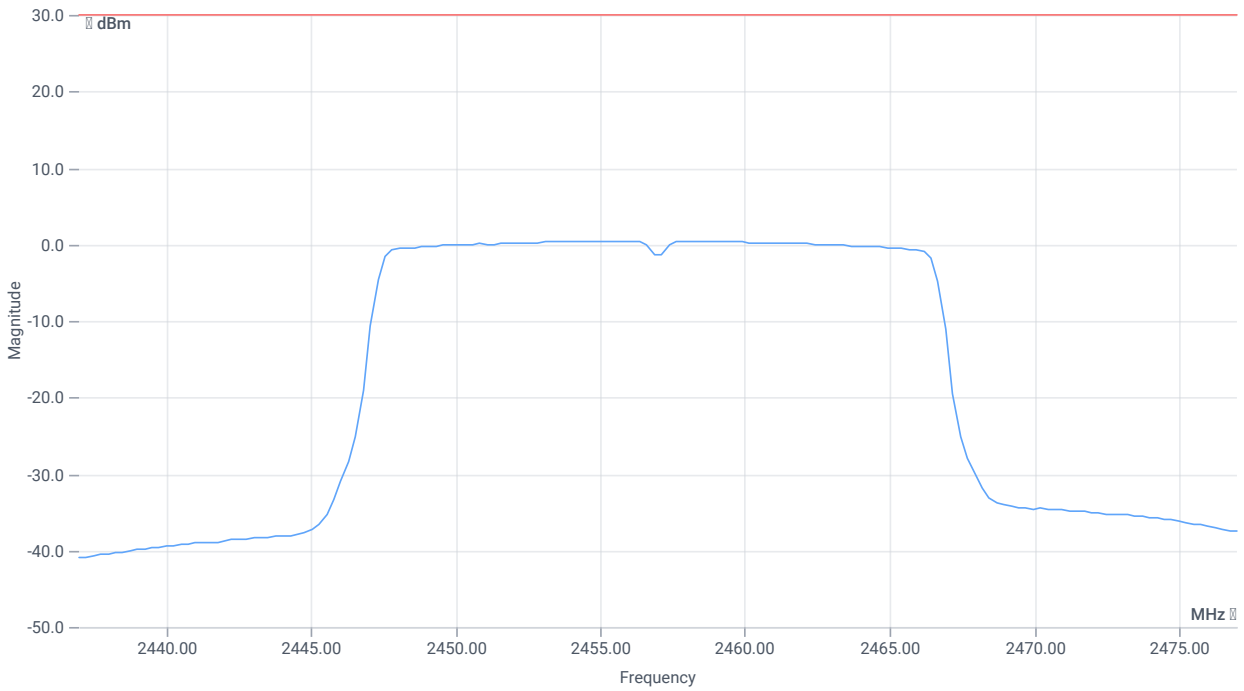
Avg output power SA DTS

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.53 14.13 25
Start [MHz] Stop [MHz]	2437.000 2477.000

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)

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Avg output power uncorrected	--	--	15.55	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	15.55	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg output power SA DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	16.01.2024 11:58:53
Ambit temp [°C] humidity [rel%]	23.0 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg output power SA DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	None

Equipment

Test at TX 2457 MHz

RESULT Power

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg power DC corr.	--	--	15.82	dBm	INFO
Ant:2 Avg power DC corr.	--	--	15.55	dBm	INFO
Σ Avg output power DC corr.	--	30	18.7	dBm	PASS

Verdict

PASS

FCC 15.247 # MIMO Σ Avg psd DTS ~ WLAN2G4 ax-HE20 2400-2483.5 MHz

References

TC start	16.01.2024 11:59:48
Ambit temp [°C] humidity [rel%]	23.0 26
System version	4.7.1.5
Standard Version	FCC 15.247 NI
Method	
Description	MIMO Σ FCC Avg psd DTS - WLAN2G4 ax-HE20 2400-2483.5 MHz
Information	

EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

Test Parameter

Technology to test	WLAN2G4 ax-HE20
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 2417
Frequency mid to test	False Freq [MHz] 2437
Frequency high to test	True Freq [MHz] 2457
Auto control enabled power supply Climatic Box	No No
Additional path loss [dB]	0.7
Full path name type	None

Equipment

Test at TX 2457 MHz

RESULT psd

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ant:1 Avg psd DC corr	--	--	-20.73	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-20.93	dBm/3kHz	INFO
Σ Avg psd DC corr	--	8	-17.82	dBm/3kHz	PASS

Verdict

PASS

- END OF DOCUMENT -