

# Conducted test results

No.1-7077/23-01-04\_TR1-A204-R1

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January 17, 2024

Test Standard(s)                      FCC 15.247  
  ISED RSS247

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## NA # Message with SA scan ~

### References

TC start	15.01.2024 10:15:53
Ambit temp [°C]   humidity [rel%]	21.3   28
System version	4.7.1.5
Standard   Version	NA   NI
Method	
Description	Message with SA Scan n-HT20 mode
Information	ac20-mode

### Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.01.2024 10:15:54
Message	set WLAN2G4 to n-HT20 mode, 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 n-HT20 mode

### References

TC start	15.01.2024 10:16:14
Ambit temp [°C]   humidity [rel%]	21.3   28
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

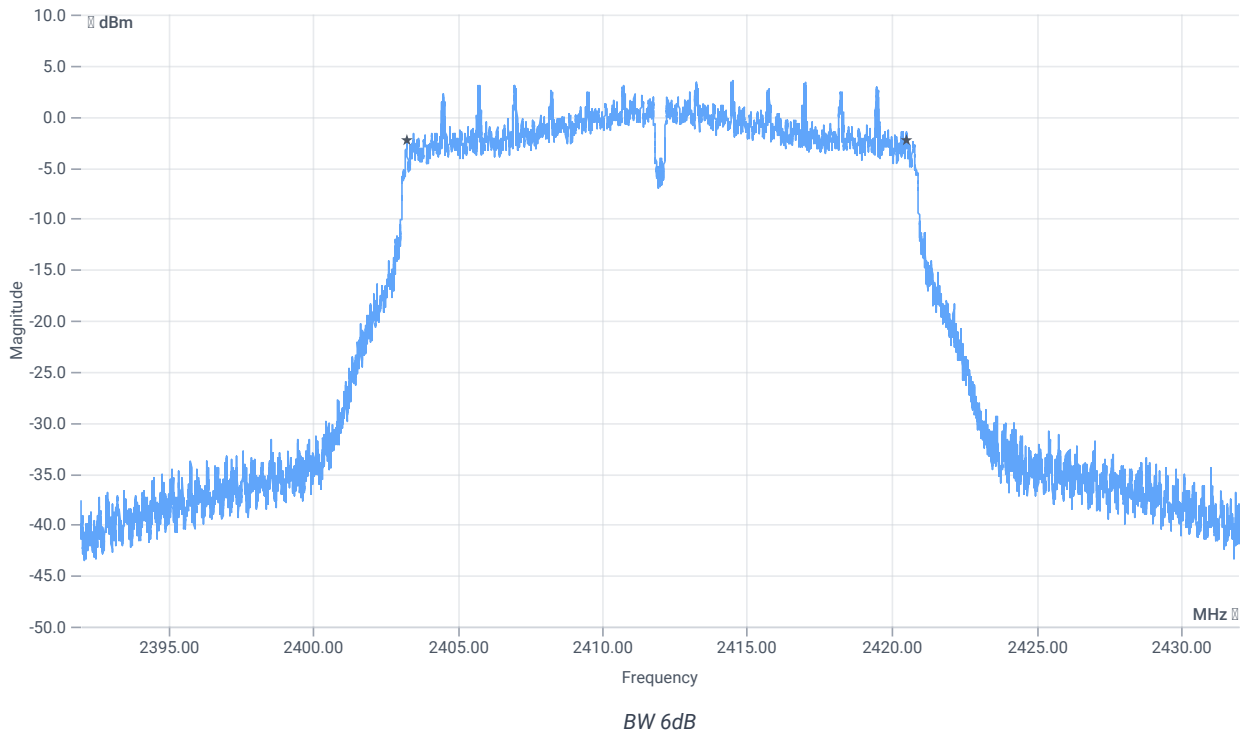
## Test at TX 2412 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	11.97	dBm	INFO
Ref. Frequency	--	--	2412.900	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	16.97   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	--	17284	kHz	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 10:16:51
Ambit temp [°C]   humidity [rel%]	21.3   28
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

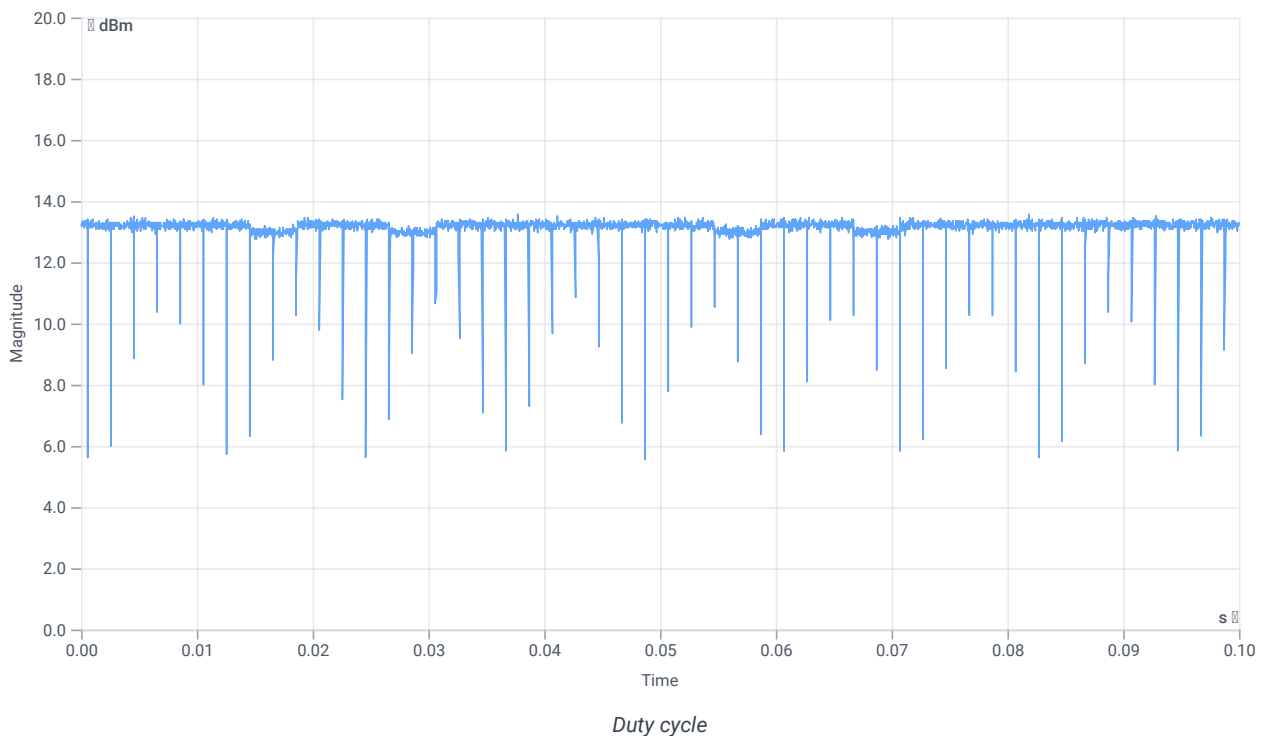
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.35	dBm	INFO
Ref. Frequency	--	--	2413.300	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. psd

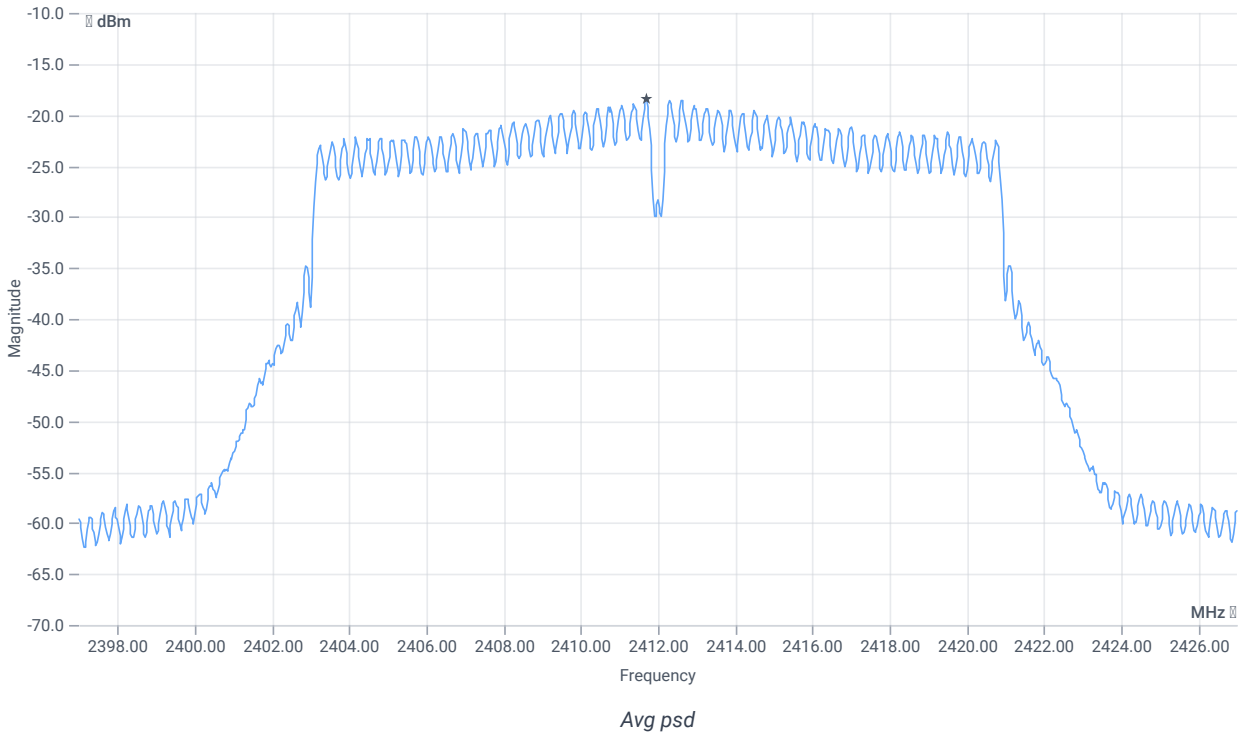
### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.35   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	--	--	-18.41	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-18.41	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 10:18:00
Ambit temp [°C]   humidity [rel%]	21.3   28
System version	4.7.1.5
Standard   Version	FCC 15.247, ISED RSS247   NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

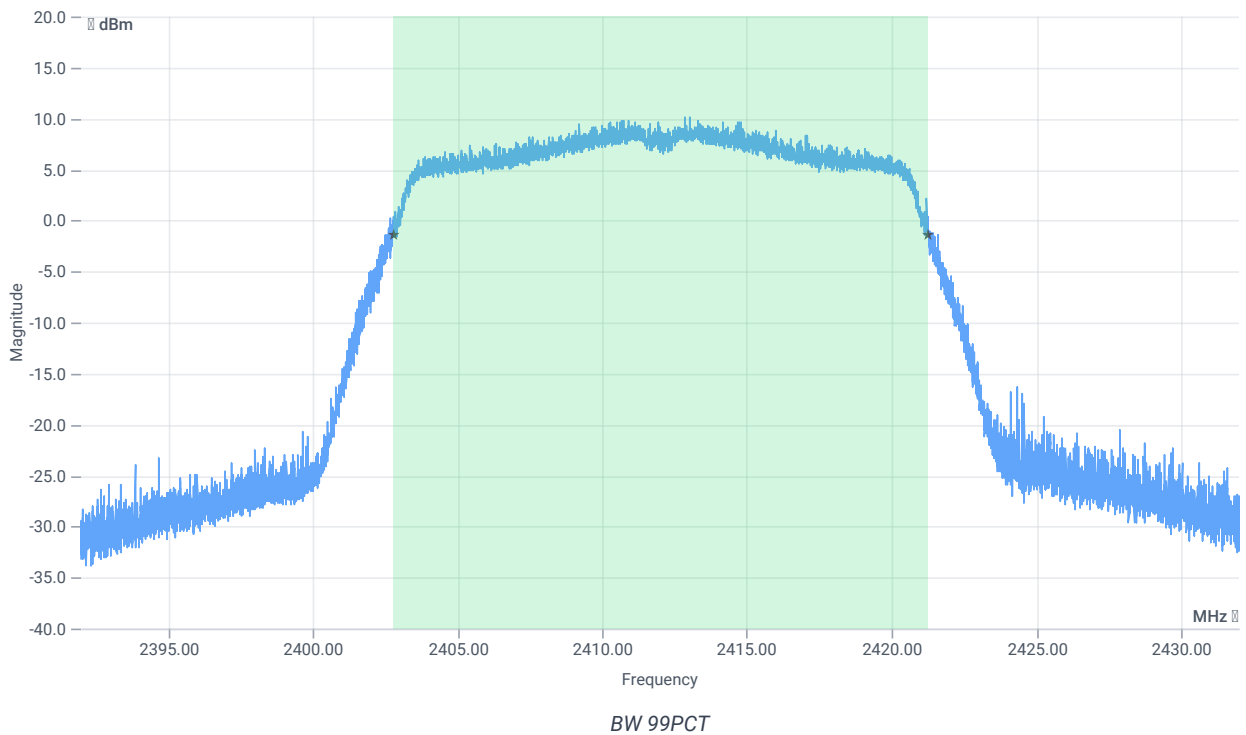
## Test at TX 2412 MHz

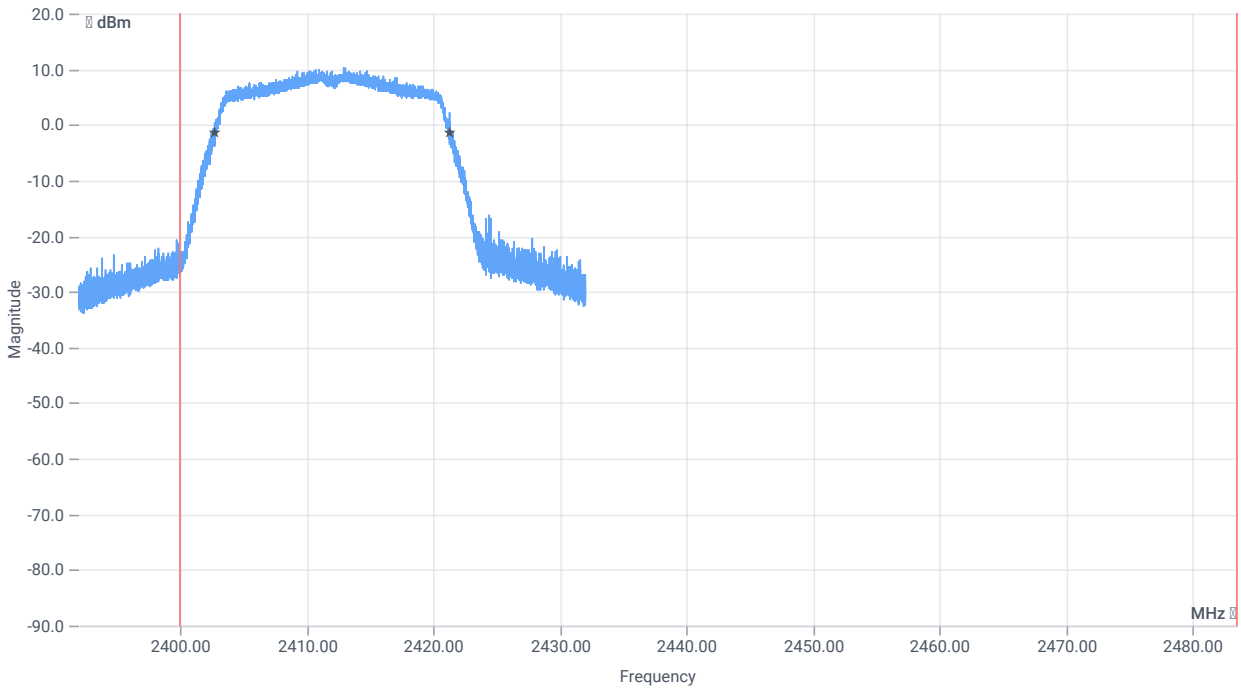
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.08	dBm	INFO
Ref. Frequency	--	--	2413.100	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.08   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

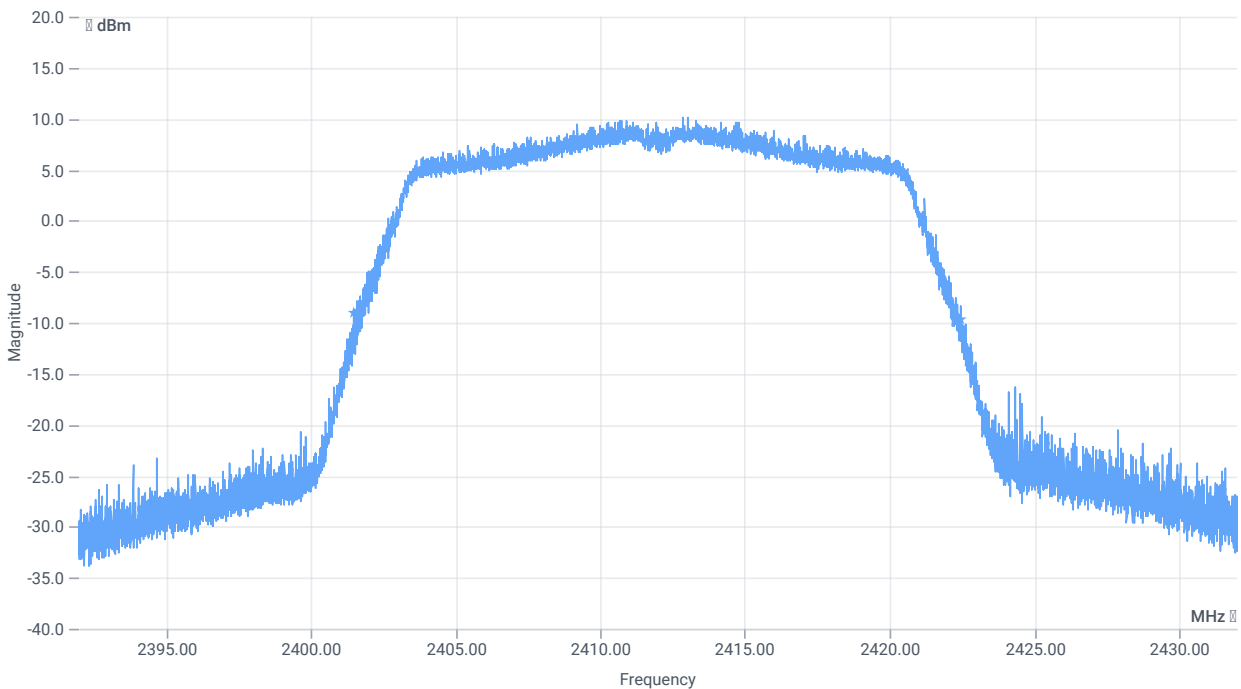




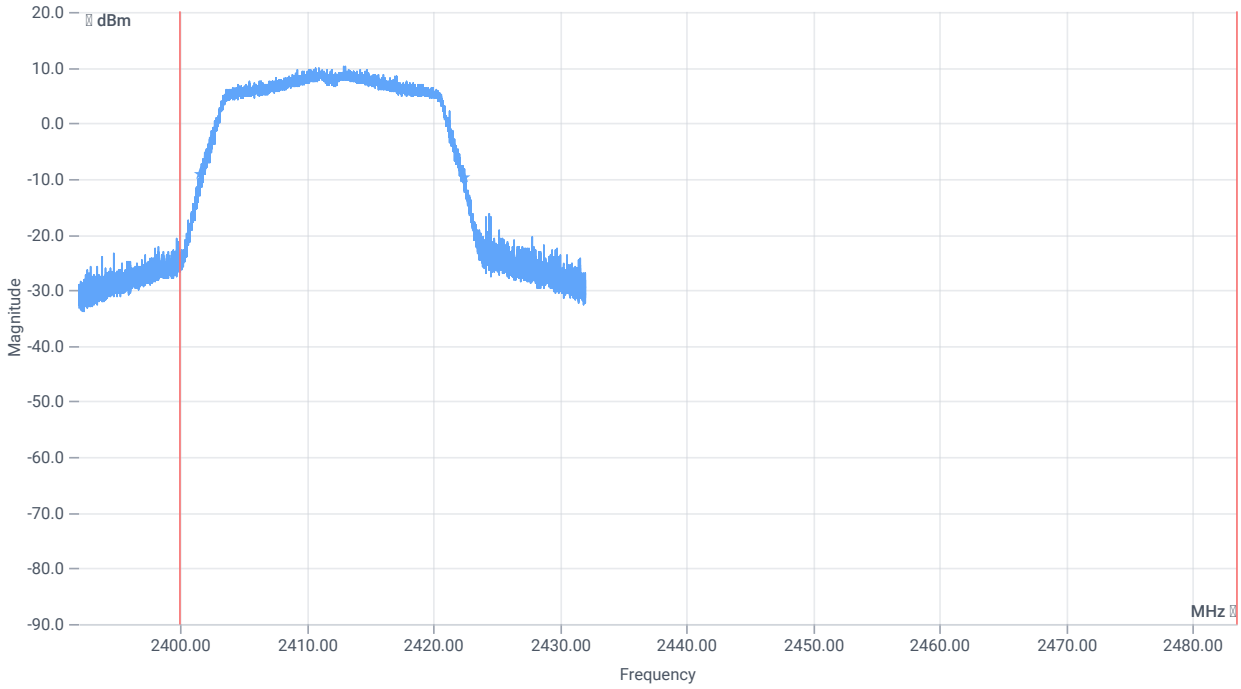
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18458.000	kHz	INFO
T1 99%	2400.000000	--	2402.7809	MHz	PASS
T2 99%	--	2483.500000	2421.2391	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20968	kHz	INFO
T1 20DB	2400.000000	--	2401.5120	MHz	PASS
T2 20dB	--	2483.500000	2422.4800	MHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 10:18:39
Ambit temp [°C]   humidity [rel%]	21.3   28
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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
Full path name   type	EUT - SignalingUnit - SpectrumAnalyzer

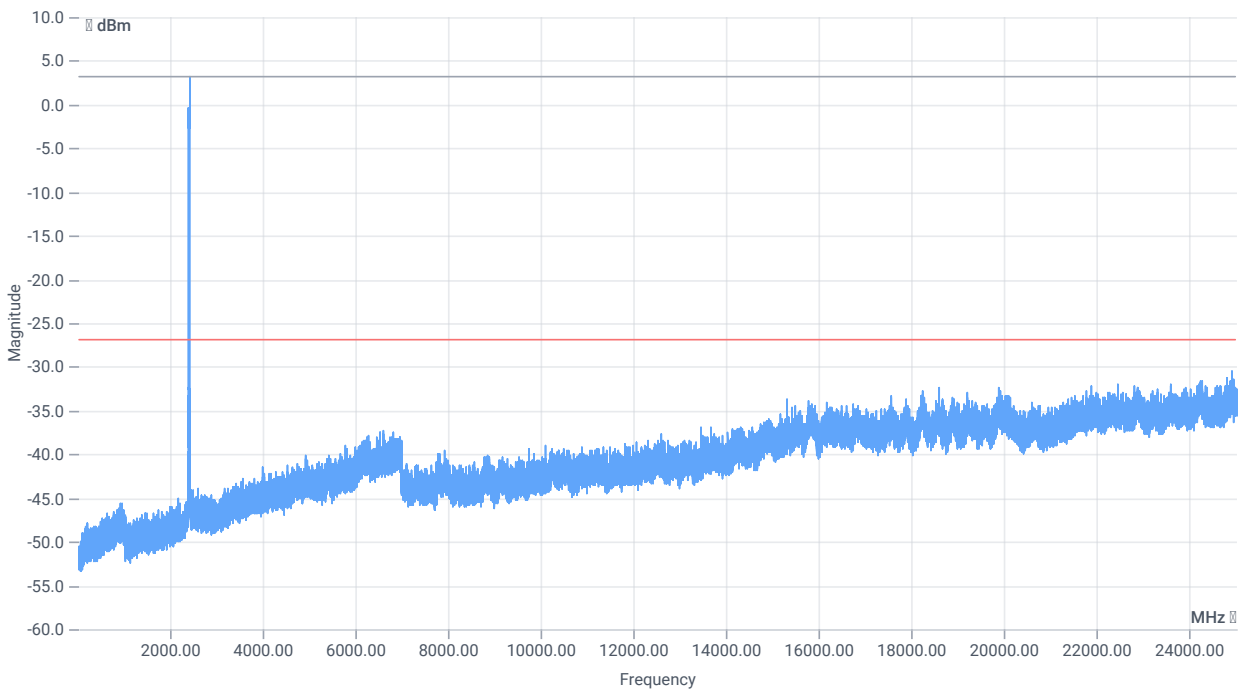
## Equipment

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.

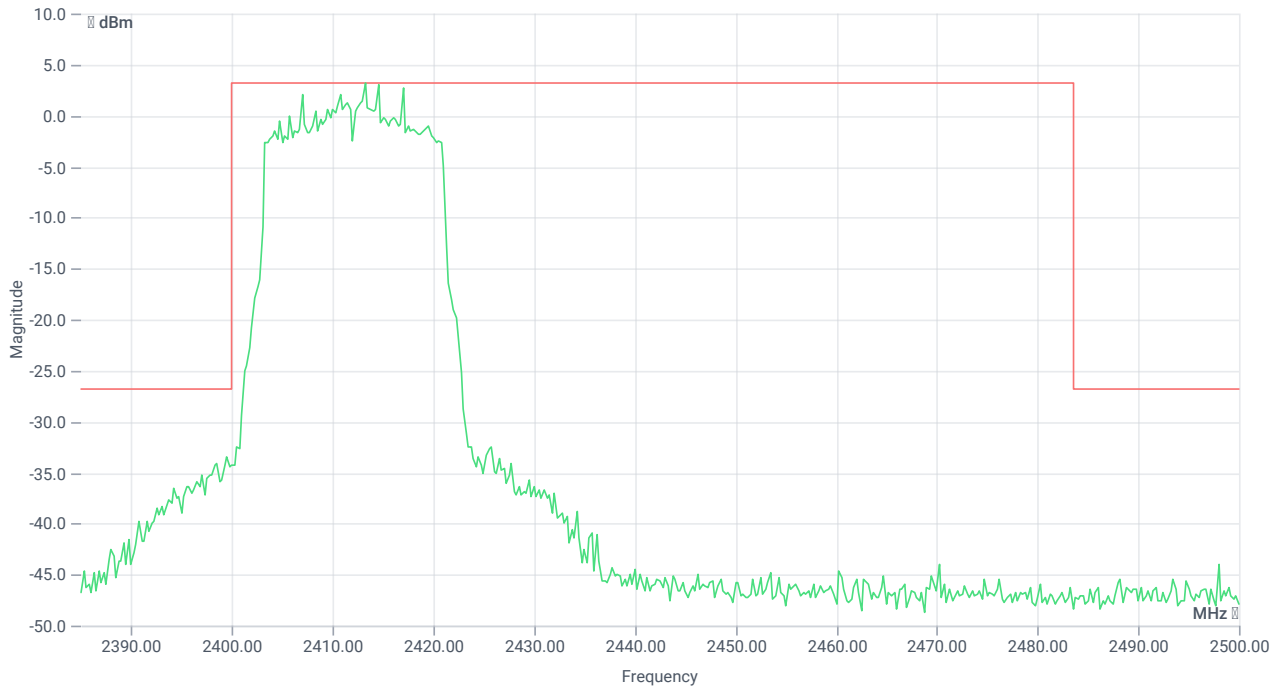
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.31	dBm	INFO
Ref. Frequency	--	--	2410.200	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	12.31   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 @ 2413.25 MHz	--	--	3.18	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-149.07	dB	INFO

Verdict

PASS



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

### References

TC start	15.01.2024 10:25:24
Ambit temp [°C]   humidity [rel%]	21.2   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

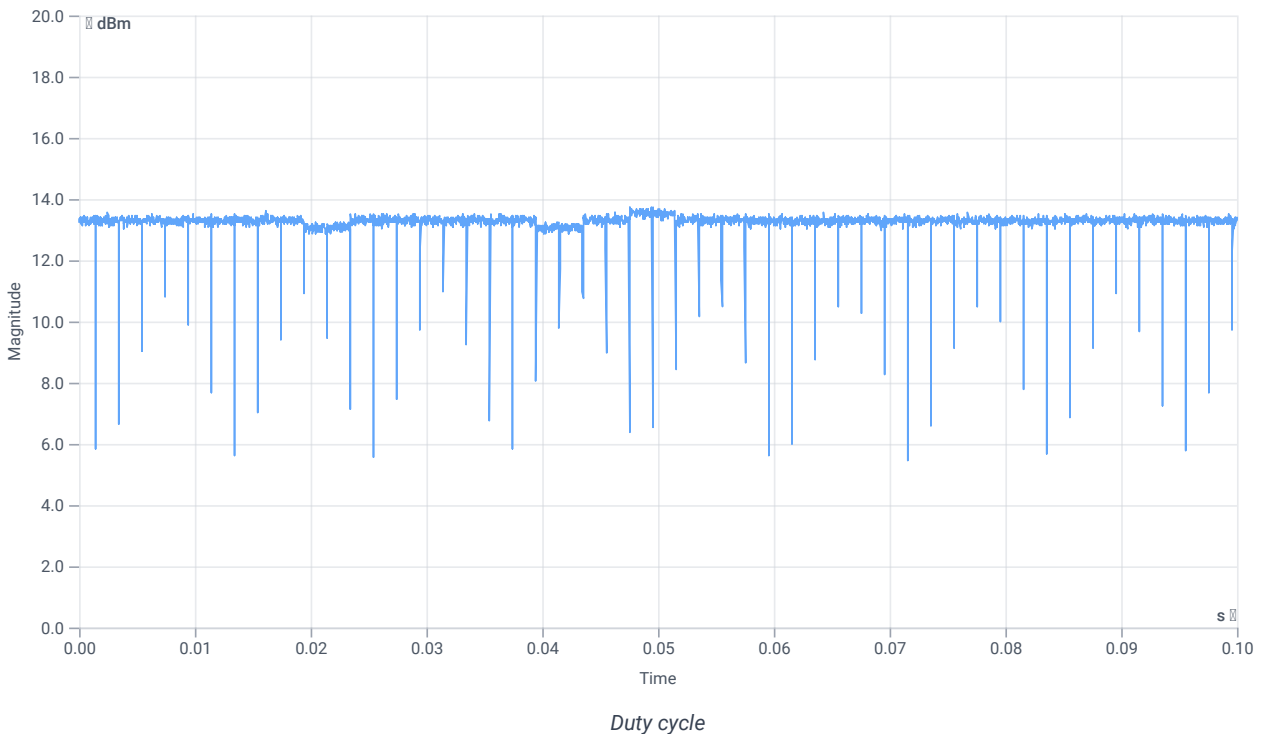
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.44	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



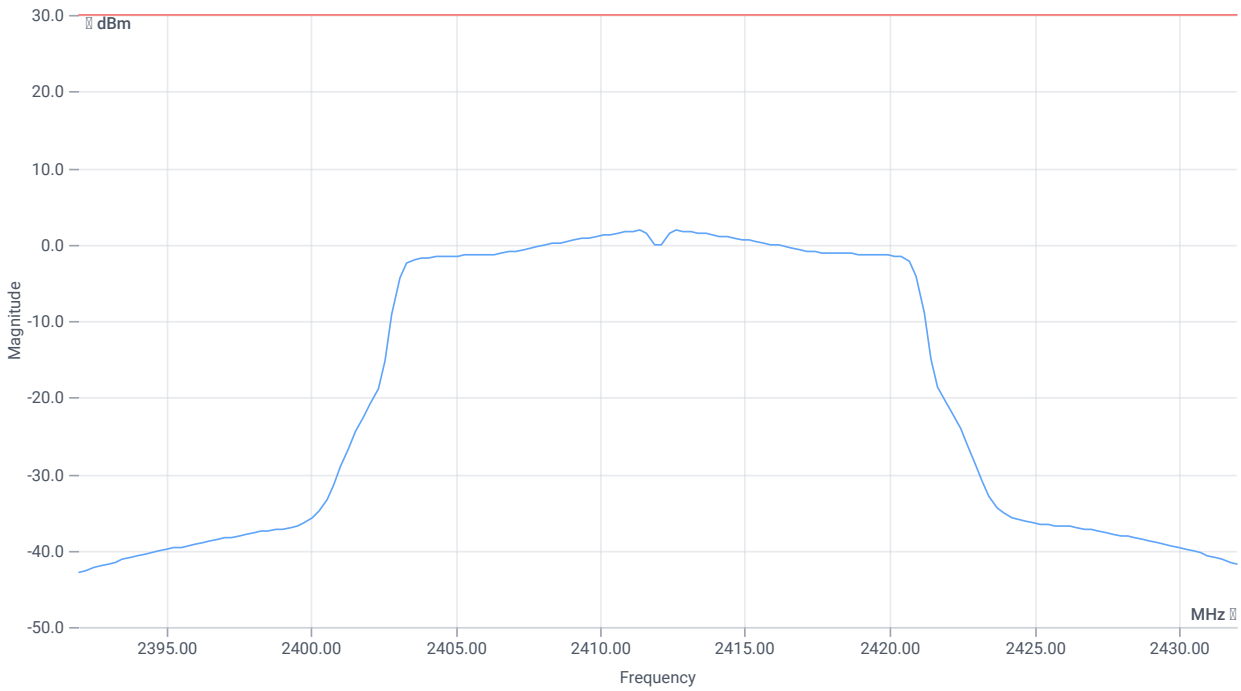
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	22.44   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	--	--	15.16	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	15.16	dBm	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 10:26:42
Ambit temp [°C]   humidity [rel%]	21.1   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

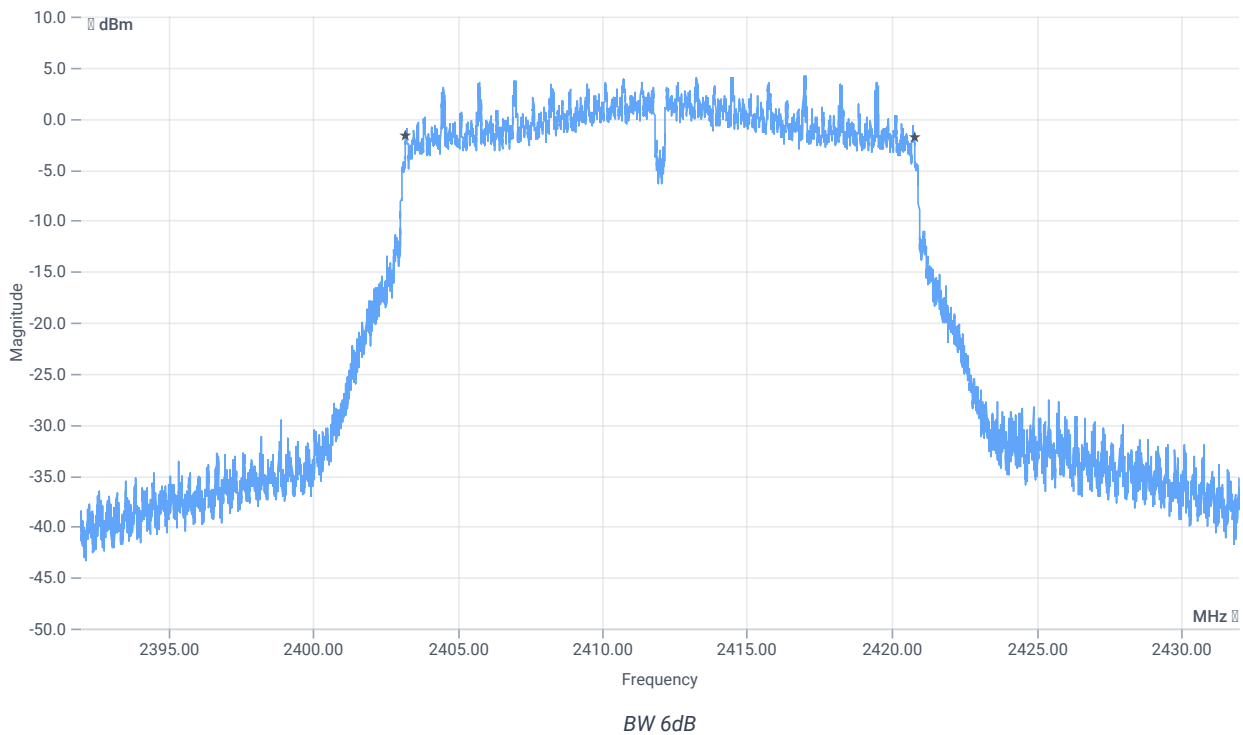
## Test at TX 2412 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.75	dBm	INFO
Ref. Frequency	--	--	2413.700	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.75   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	--	17552	kHz	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 10:27:21
Ambit temp [°C]   humidity [rel%]	21.1   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

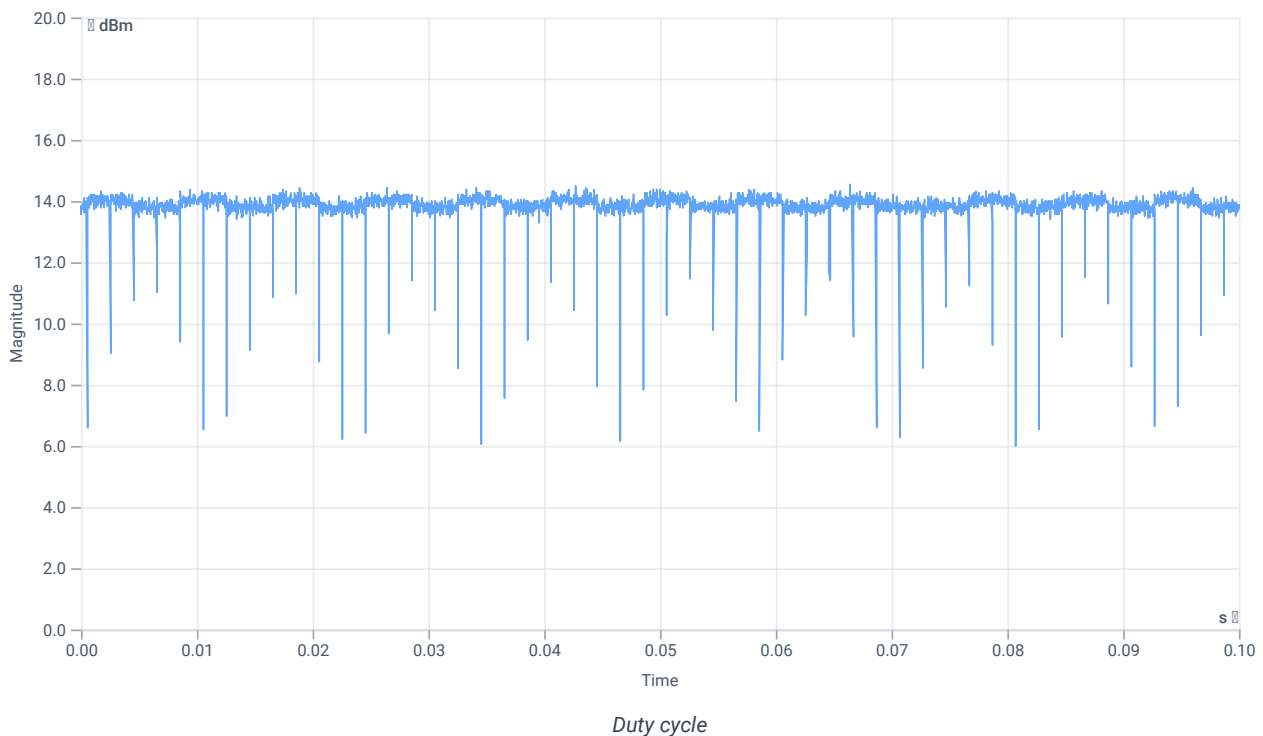
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.06	dBm	INFO
Ref. Frequency	--	--	2410.500	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



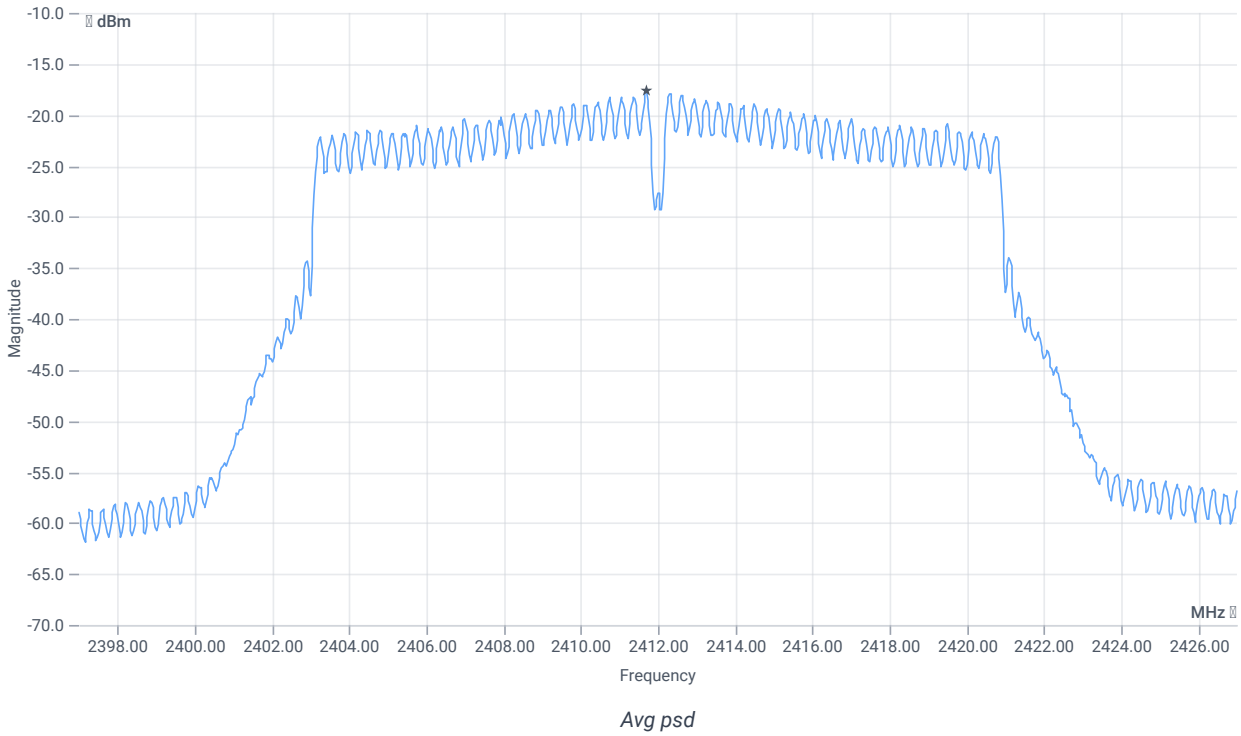
## Avg. psd

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.06   13.85   25
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	--	--	-17.65	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-17.65	dBm/3kHz	PASS

Verdict

PASS



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

## References

TC start	15.01.2024 10:28:25
Ambit temp [°C]   humidity [rel%]	21.1   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

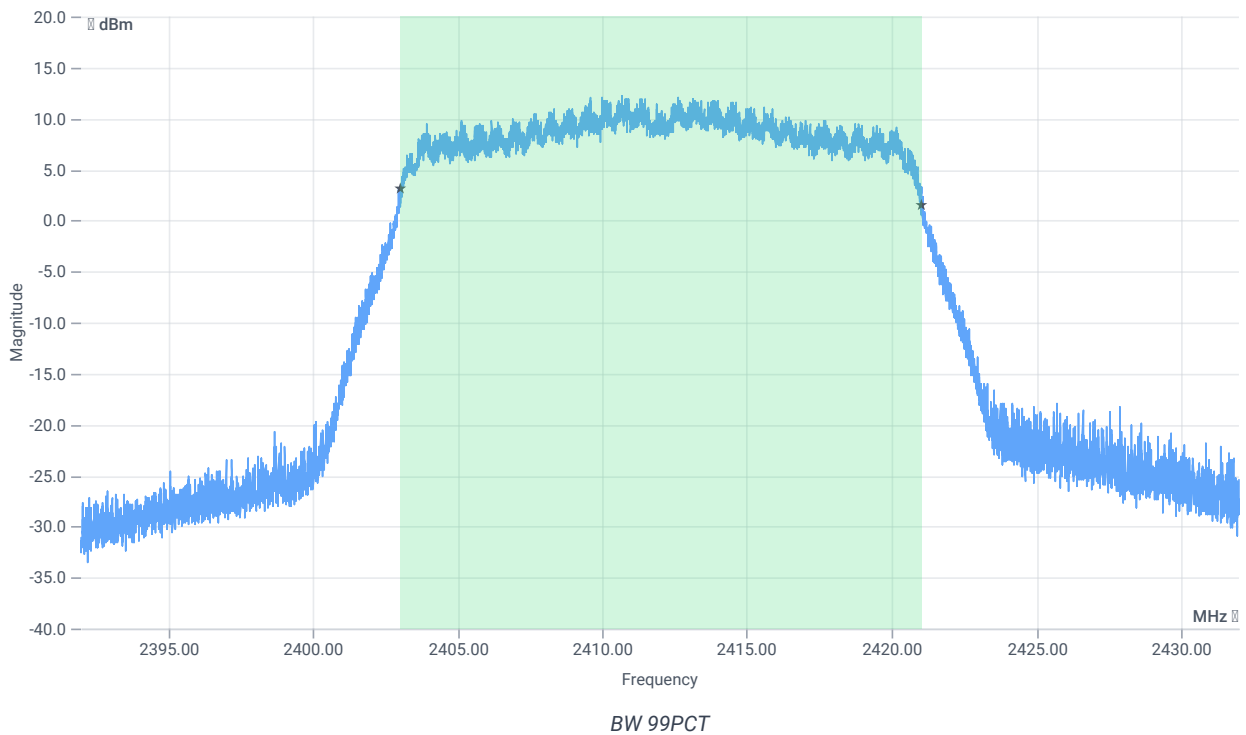
## Test at TX 2412 MHz

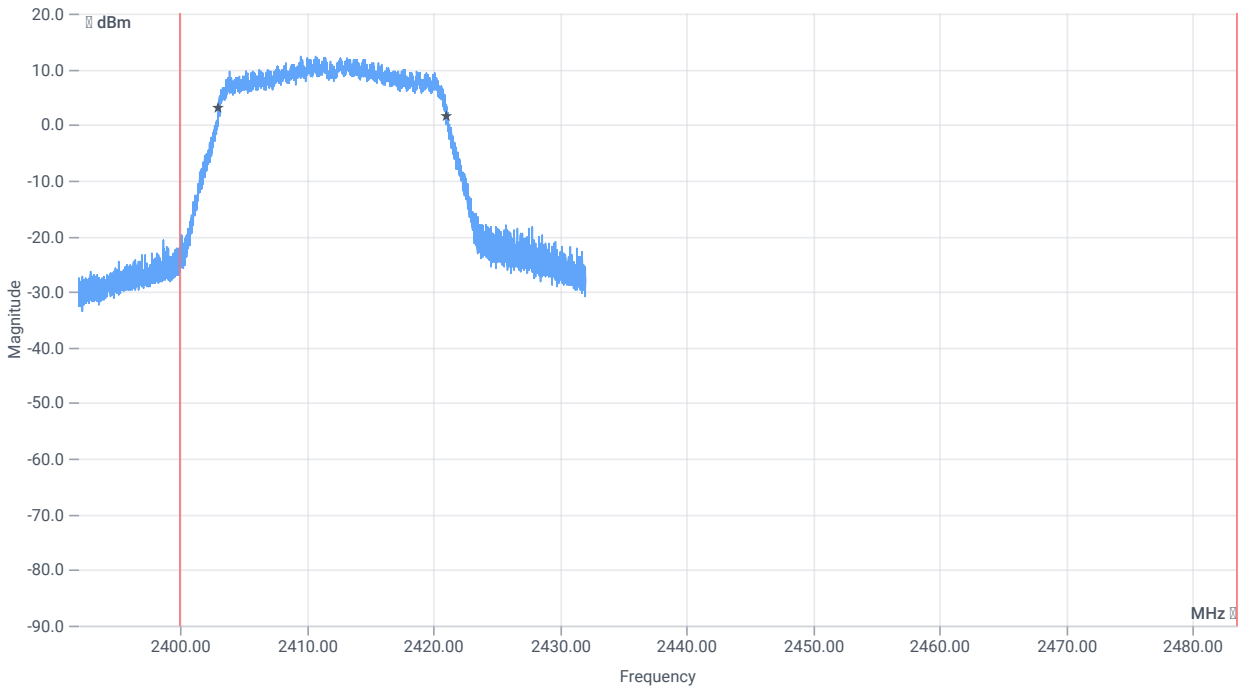
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.20	dBm	INFO
Ref. Frequency	--	--	2413.200	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.20   13.85   25
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

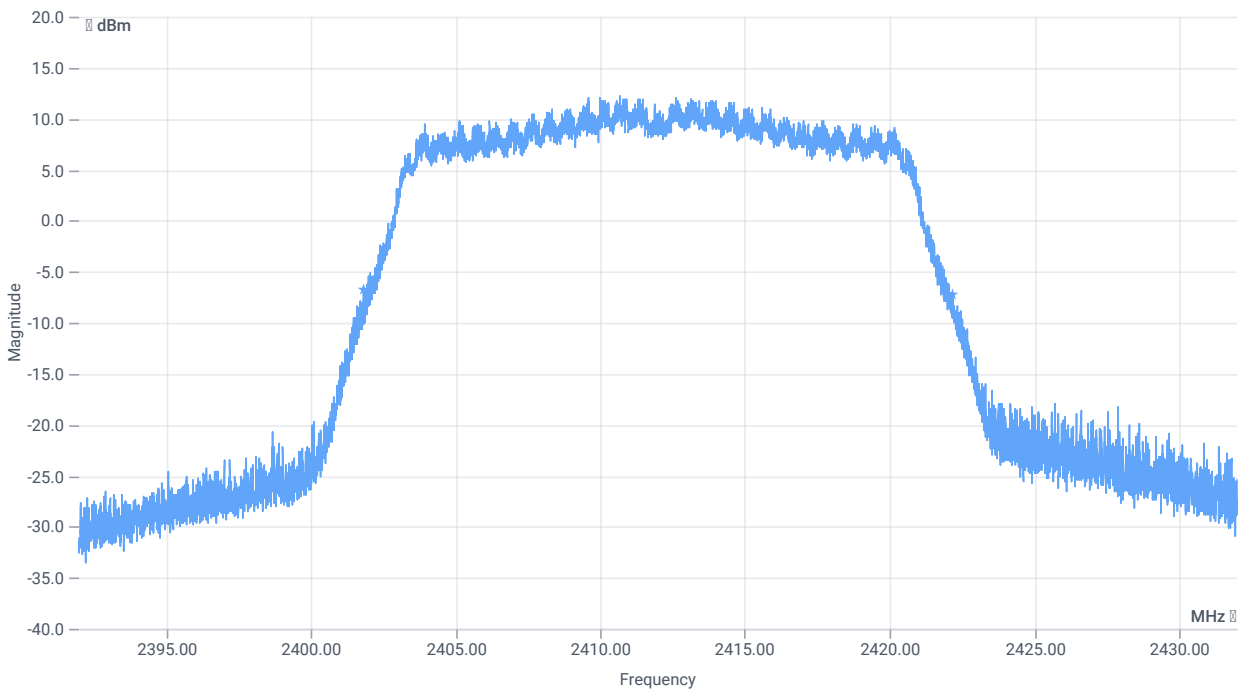




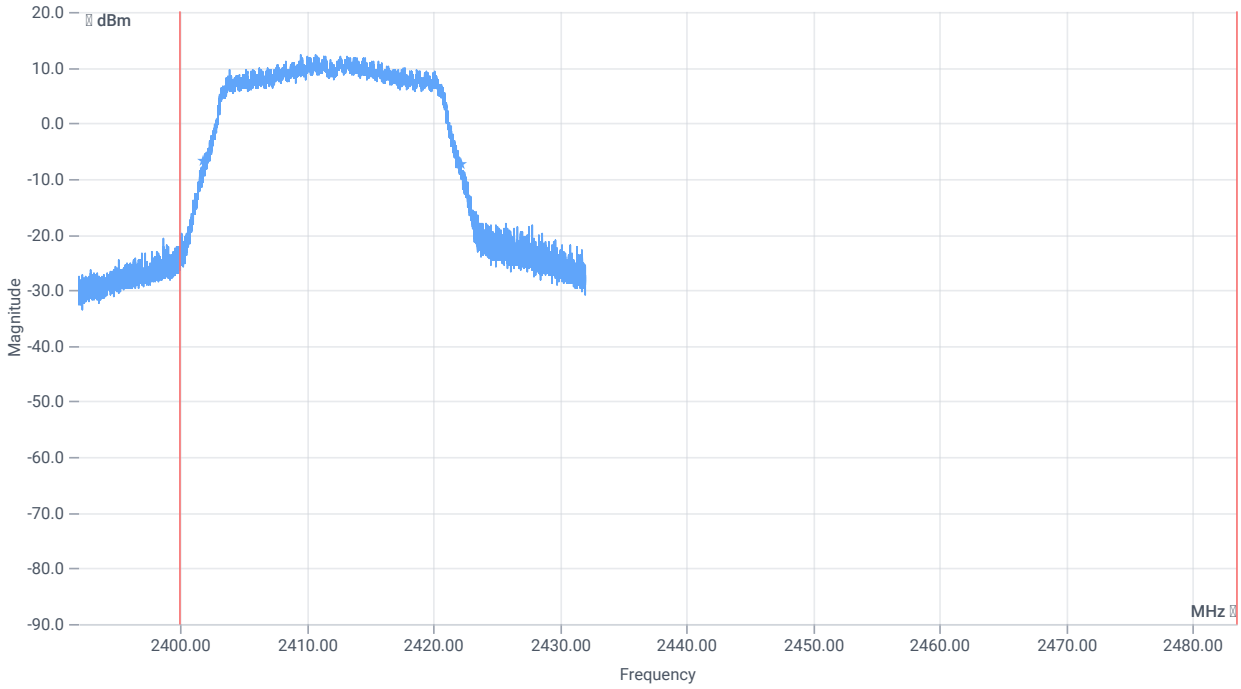
BW within Band 99PCT

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18022.000	kHz	INFO
T1 99%	2400.000000	--	2403.0089	MHz	PASS
T2 99%	--	2483.500000	2421.0311	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20324	kHz	INFO
T1 20DB	2400.000000	--	2401.8520	MHz	PASS
T2 20dB	--	2483.500000	2422.1760	MHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 10:29:03
Ambit temp [°C]   humidity [rel%]	21.1   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
Full path name   type	EUT - SignalingUnit - SpectrumAnalyzer

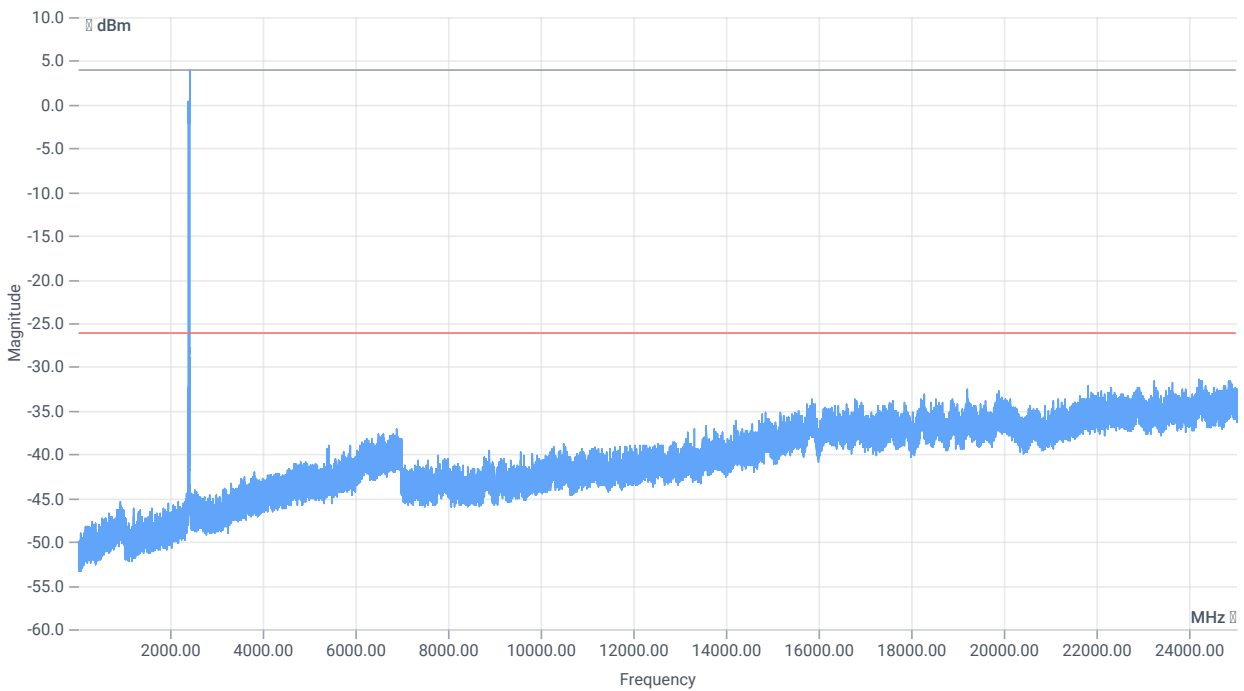
## Equipment

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.

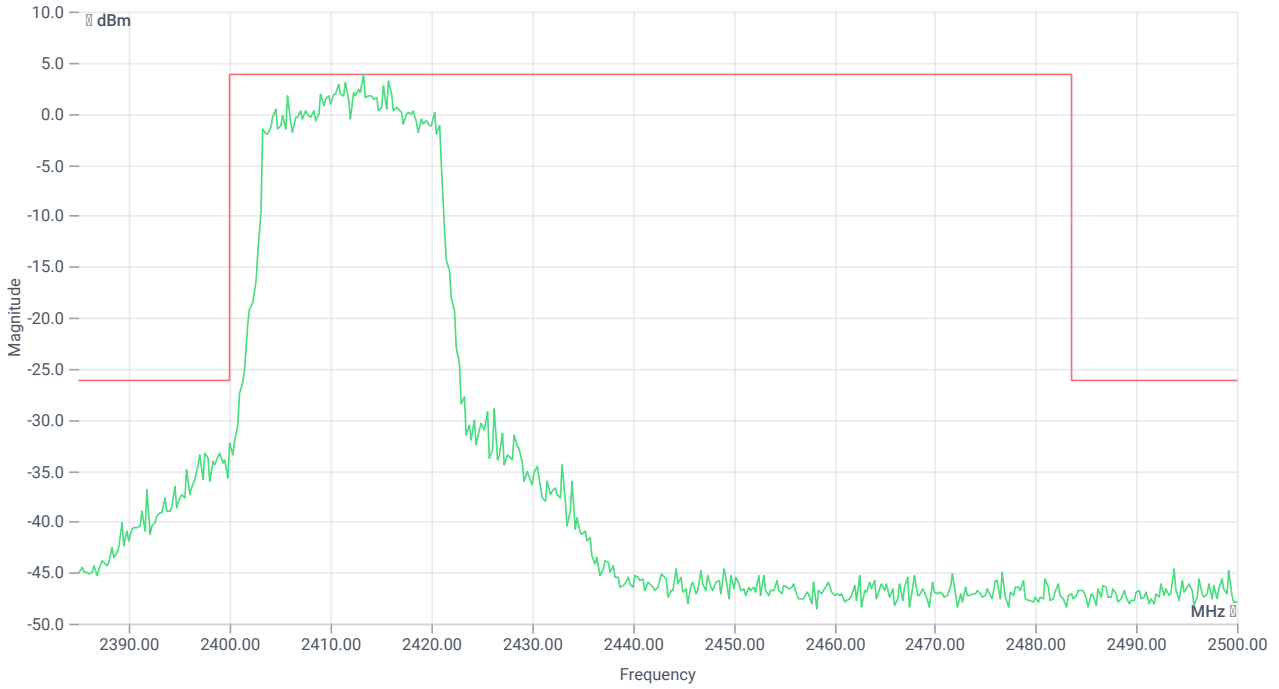
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.88	dBm	INFO
Ref. Frequency	--	--	2410.200	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	12.88   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 @ 2413.25 MHz	--	--	3.92	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24202.5 MHz	0	--	5.36	dB	INFO

Verdict

PASS

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

### References

TC start	15.01.2024 10:35:48
Ambit temp [°C]   humidity [rel%]	21.2   27
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

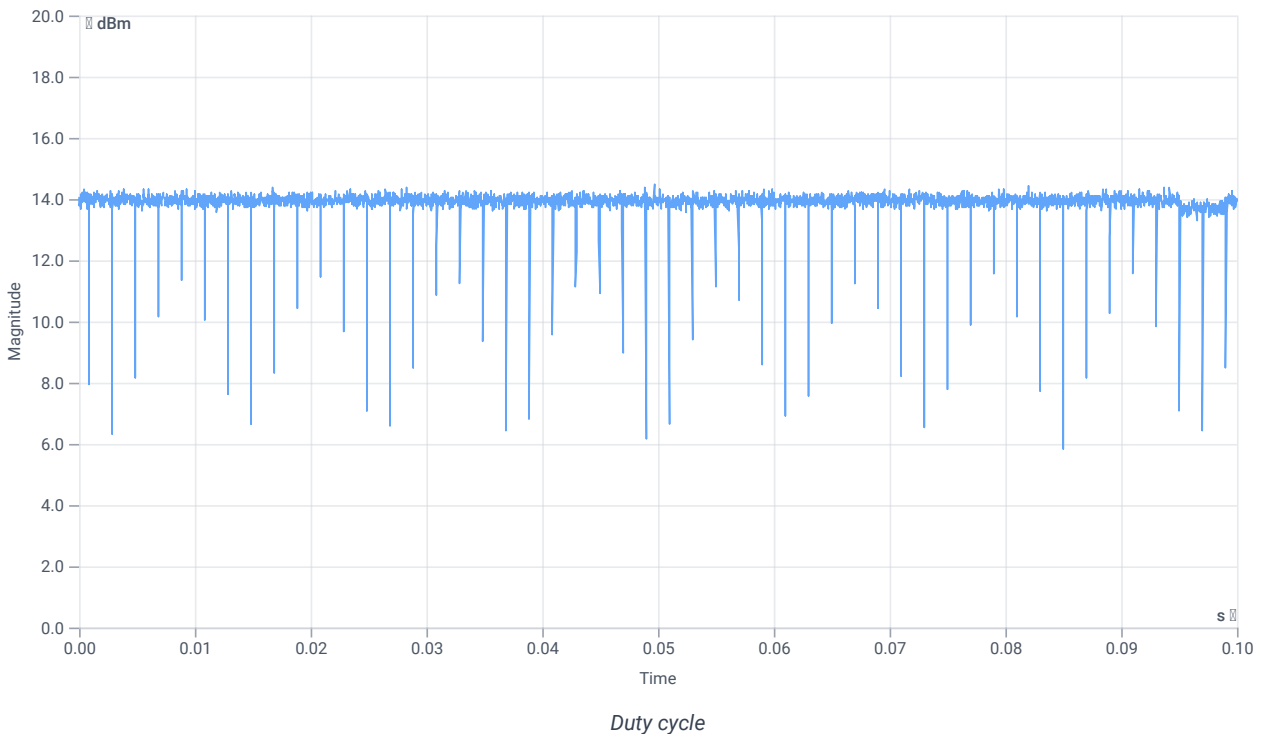
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.18	dBm	INFO
Ref. Frequency	--	--	2413.200	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



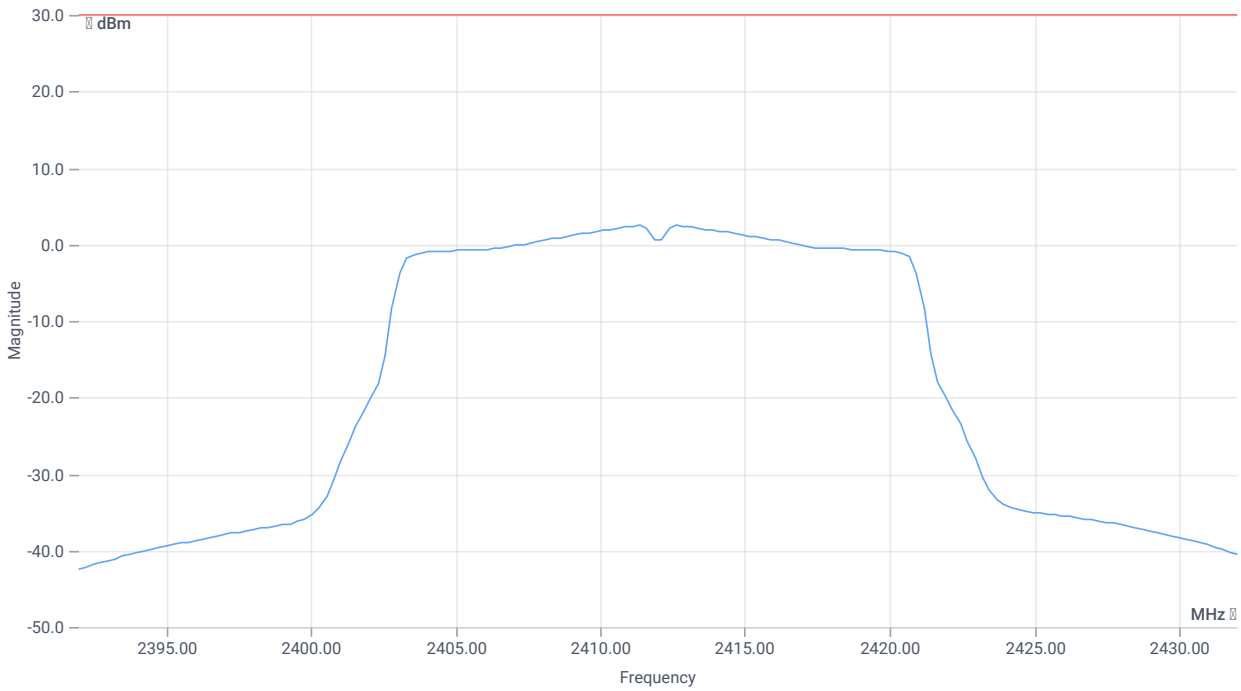
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	24.18   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	--	--	15.81	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	15.81	dBm	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 10:37:05
Ambit temp [°C]   humidity [rel%]	21.2   27
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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.	--	--	15.16	dBm	INFO
Ant:2 Avg power DC corr.	--	--	15.81	dBm	INFO
$\Sigma$ Avg output power DC corr.	--	30	18.51	dBm	PASS

### Verdict

PASS

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

### References

TC start	15.01.2024 10:40:57
Ambit temp [°C]   humidity [rel%]	21.1   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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	--	--	-18.41	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-17.65	dBm/3kHz	INFO
$\Sigma$ Avg psd DC corr	--	8	-15	dBm/3kHz	PASS

Verdict

PASS

## NA # Message with SA scan ~

### References

TC start	15.01.2024 10:41:18
Ambit temp [°C]   humidity [rel%]	21.1   26
System version	4.7.1.5
Standard   Version	NA   NI
Method	
Description	Message with SA Scan n-HT20 mode
Information	ac20-mode

### Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.01.2024 10:41:18
Message	set WLAN2G4 to n-HT20 mode, 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 n-HT20 mode

### References

TC start	15.01.2024 10:41:28
Ambit temp [°C]   humidity [rel%]	21.1   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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



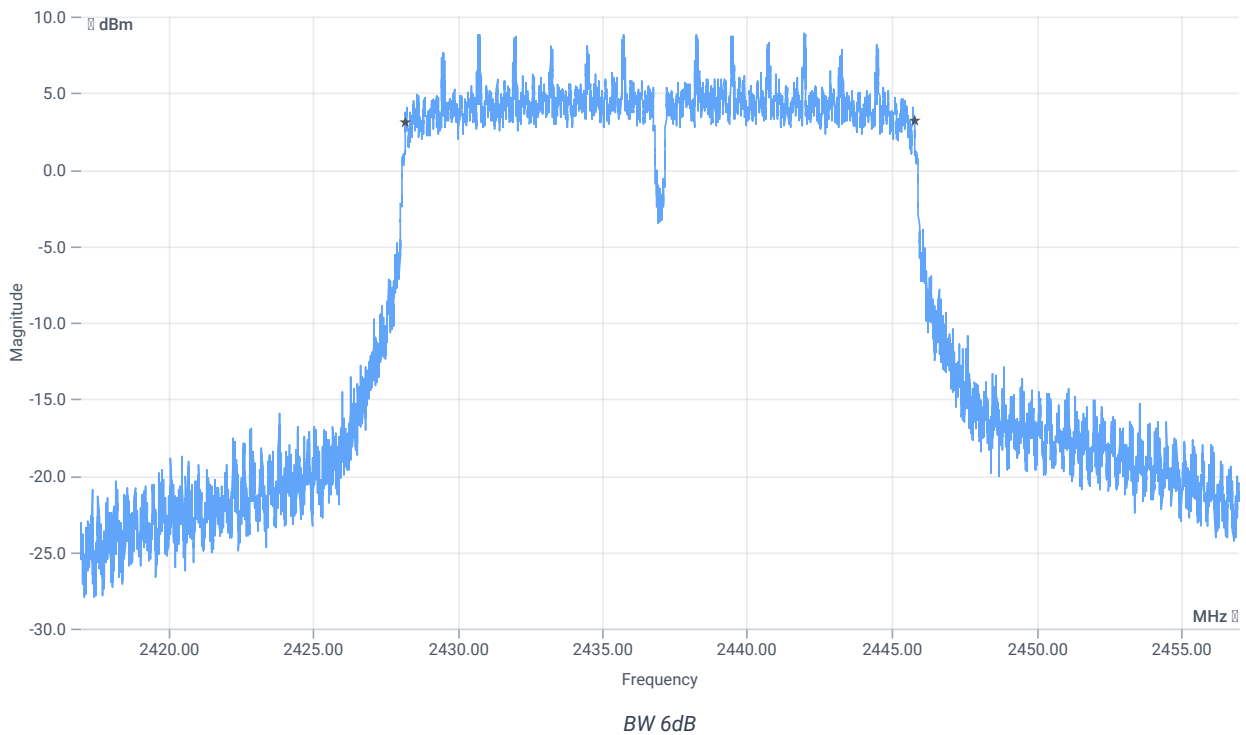
## Test at TX 2437 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	16.26	dBm	INFO
Ref. Frequency	--	--	2435.800	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	21.26   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	--	17568	kHz	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 10:42:02
Ambit temp [°C]   humidity [rel%]	21.2   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

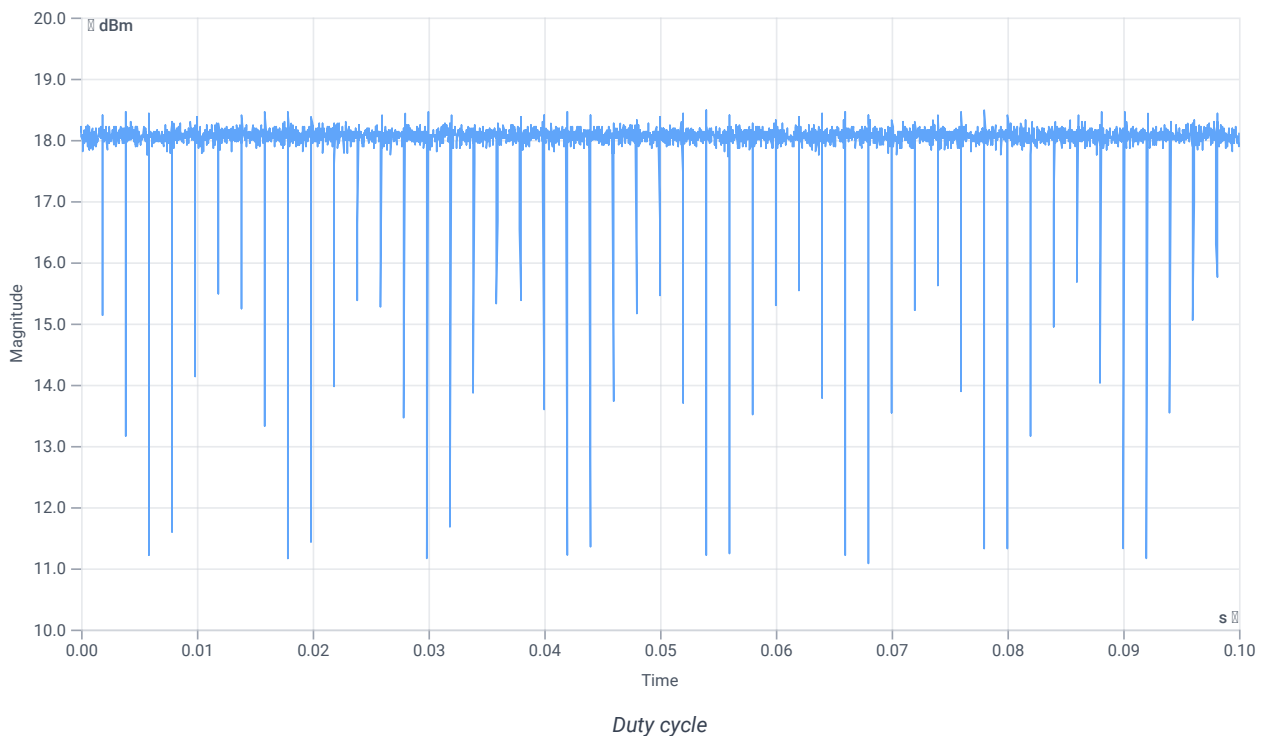
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	16.41	dBm	INFO
Ref. Frequency	--	--	2442.690	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



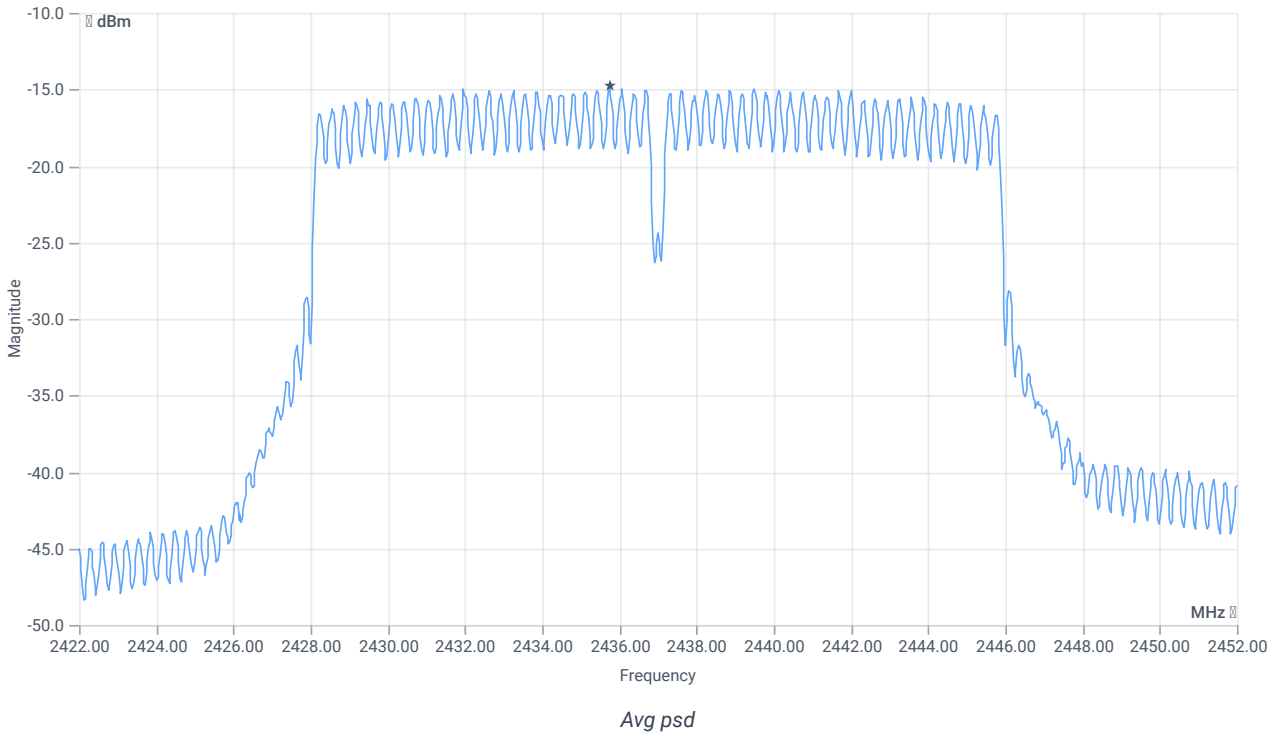
## Avg. psd

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	21.41   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	--	--	-14.79	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-14.79	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 10:43:08
Ambit temp [°C]   humidity [rel%]	21.2   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

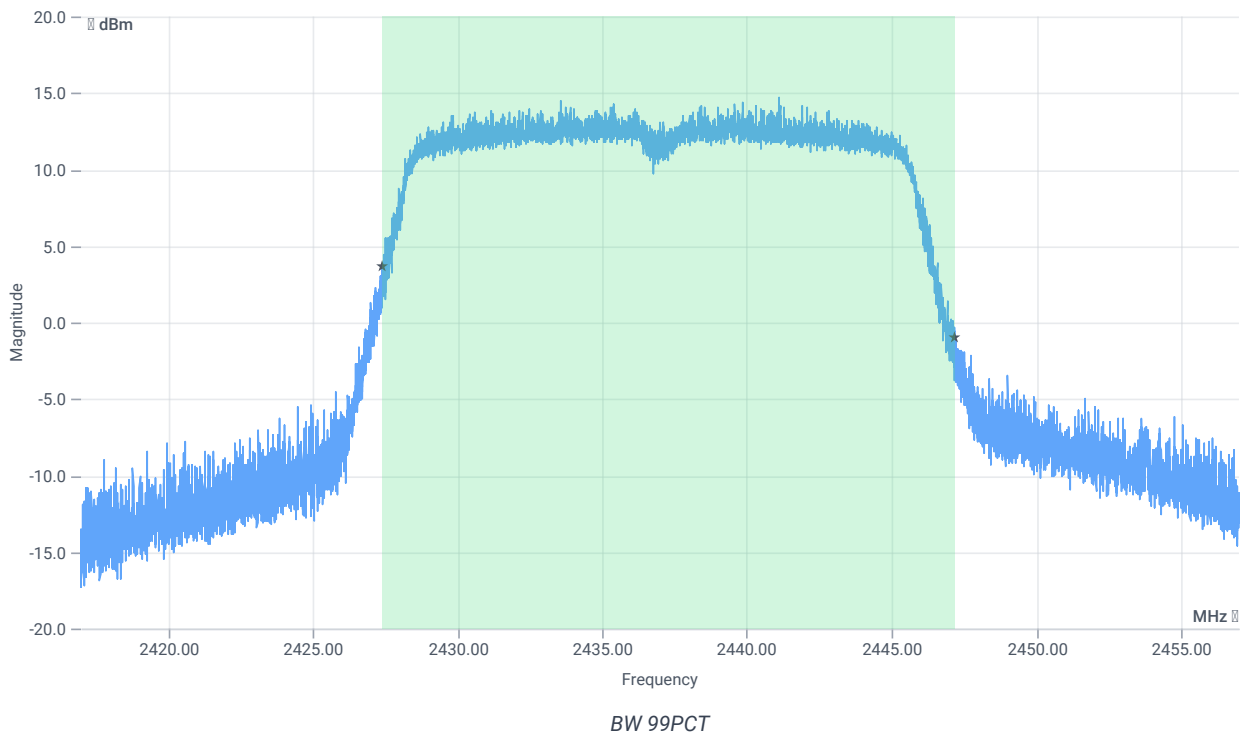
## Test at TX 2437 MHz

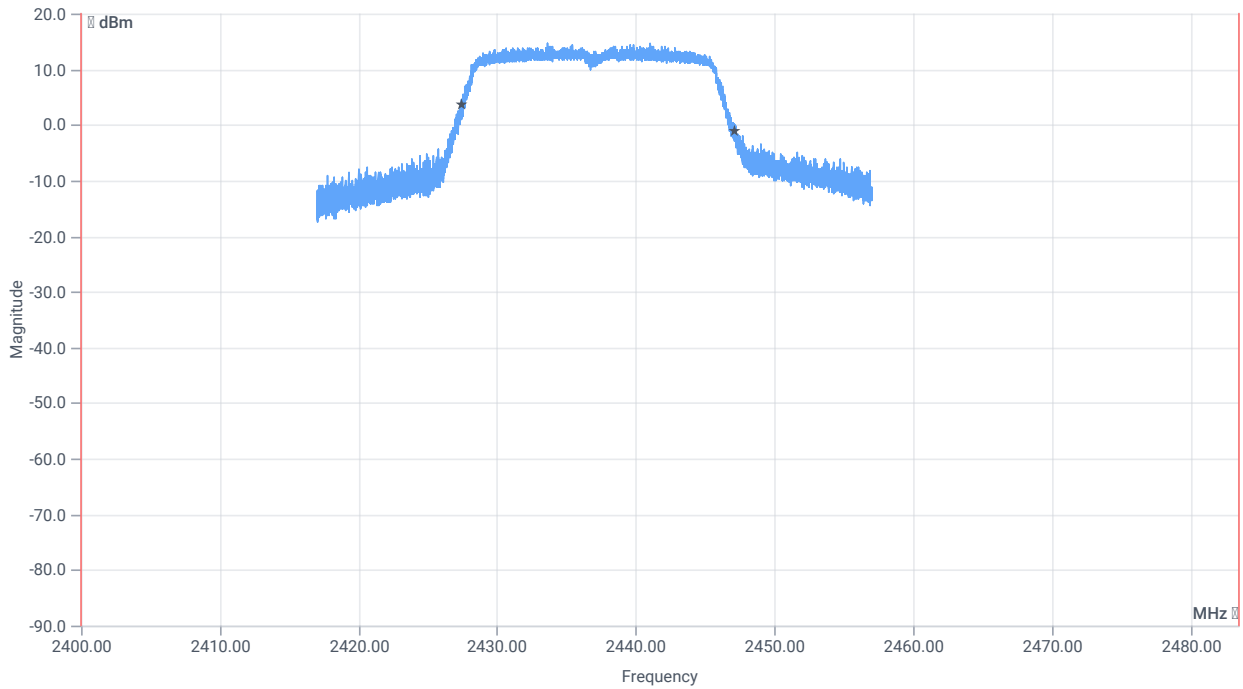
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	16.85	dBm	INFO
Ref. Frequency	--	--	2439.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	21.85   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

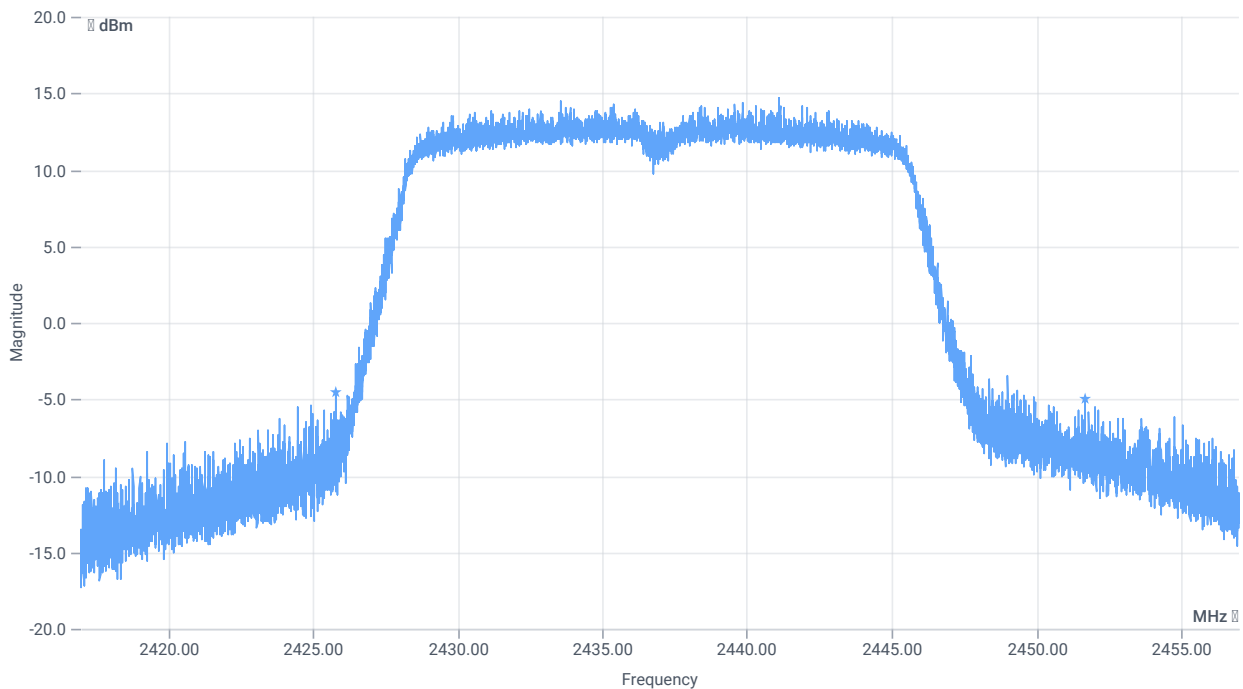




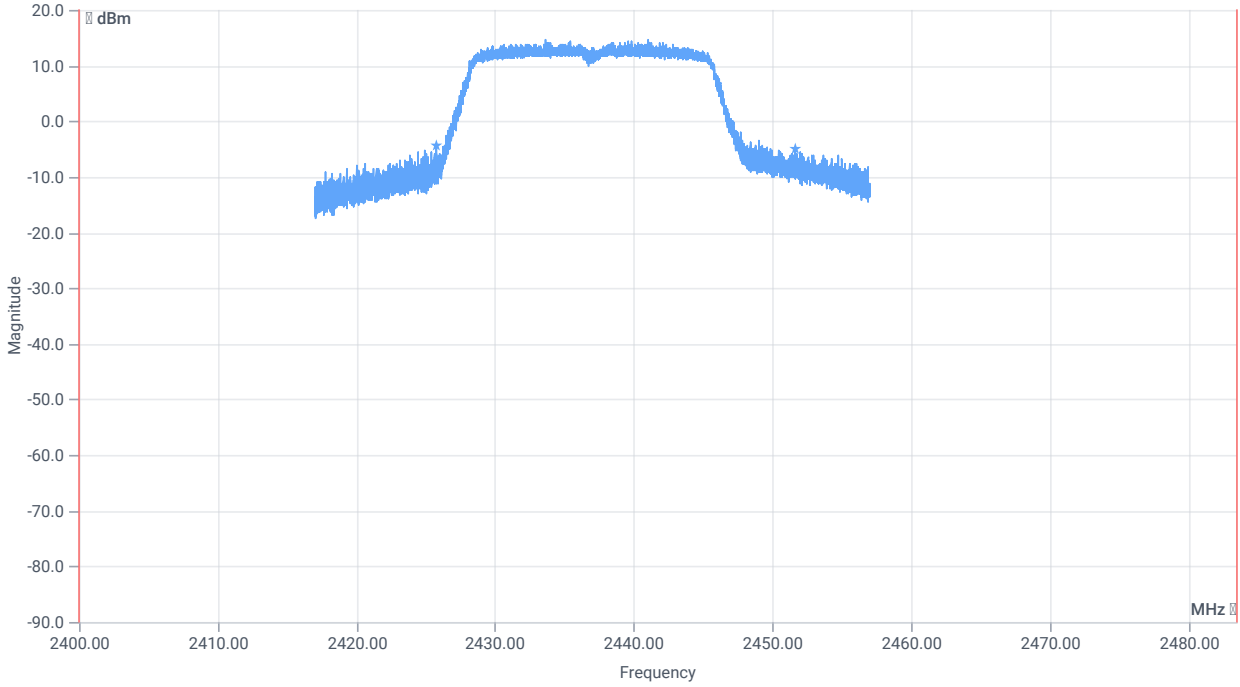
*BW within Band 99PCT*

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19790.000	kHz	INFO
T1 99%	2400.000000	--	2427.3850	MHz	PASS
T2 99%	--	2483.500000	2447.1750	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	25868	kHz	INFO
T1 20dB	2400.000000	--	2425.8080	MHz	PASS
T2 20dB	--	2483.500000	2451.6760	MHz	PASS

Verdict

PASS



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

## References

TC start	15.01.2024 10:43:45
Ambit temp [°C]   humidity [rel%]	21.2   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
Full path name   type	EUT - SignalingUnit - SpectrumAnalyzer

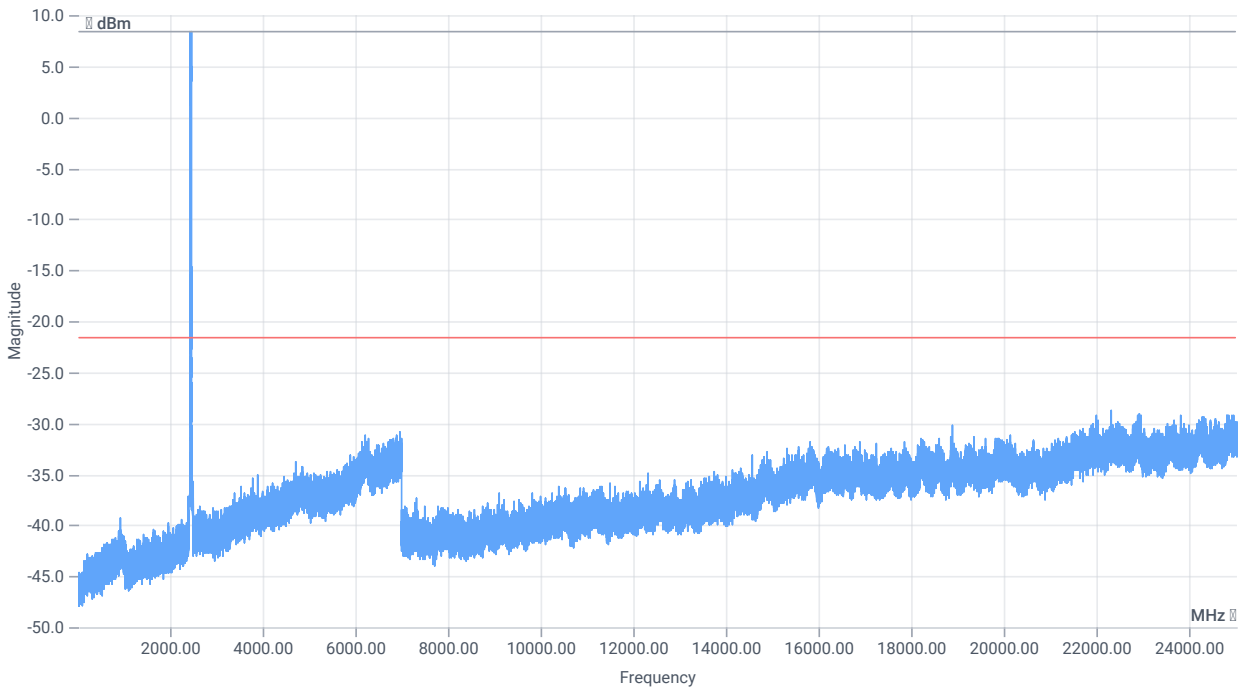
## Equipment

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

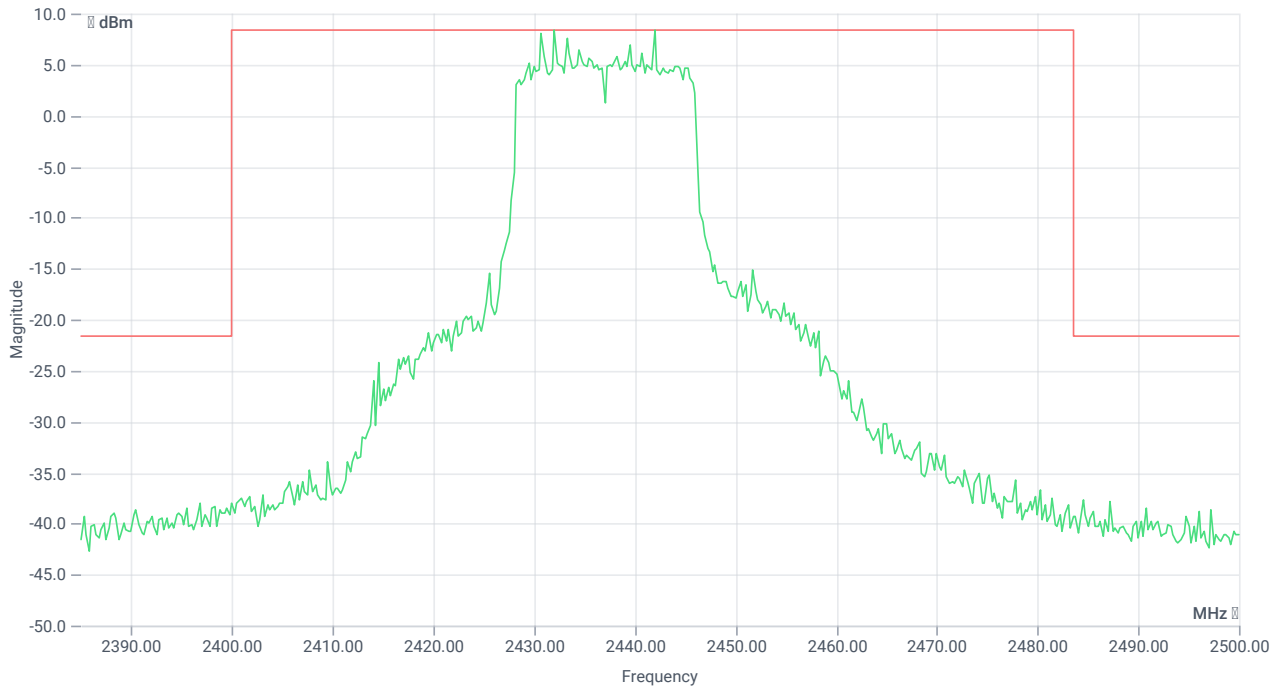
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	16.74	dBm	INFO
Ref. Frequency	--	--	2431.310	MHz	INFO



### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	16.74   0   35
Start [MHz]   Stop [MHz]	24530.000   25030.000
RBW [MHz]   VBW [MHz]	0.100000   0.300000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	200   25   2001   SWE



TX emissions band zoomed

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Reference @ 2442.00 MHz	--	--	8.40	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 22319 MHz	0	--	7.21	dB	INFO

Verdict

PASS

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

### References

TC start	15.01.2024 10:50:29
Ambit temp [°C]   humidity [rel%]	21.1   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

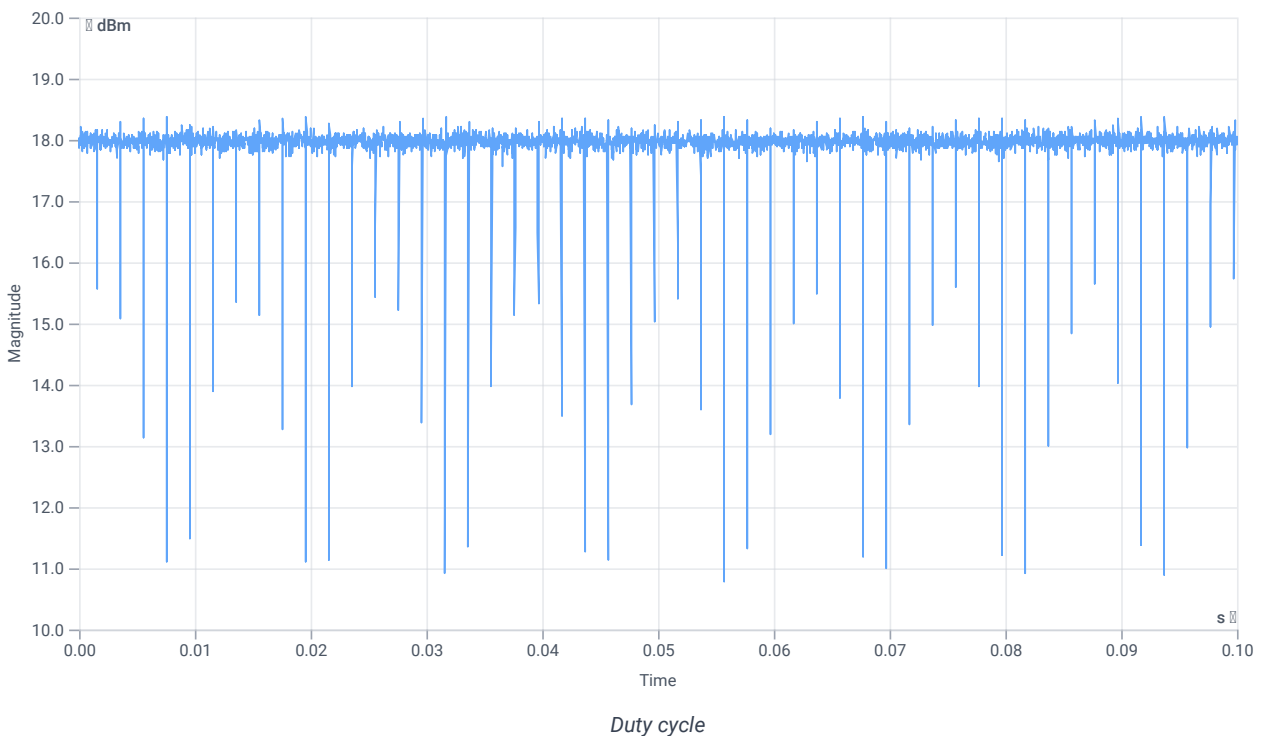
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	16.24	dBm	INFO
Ref. Frequency	--	--	2435.900	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



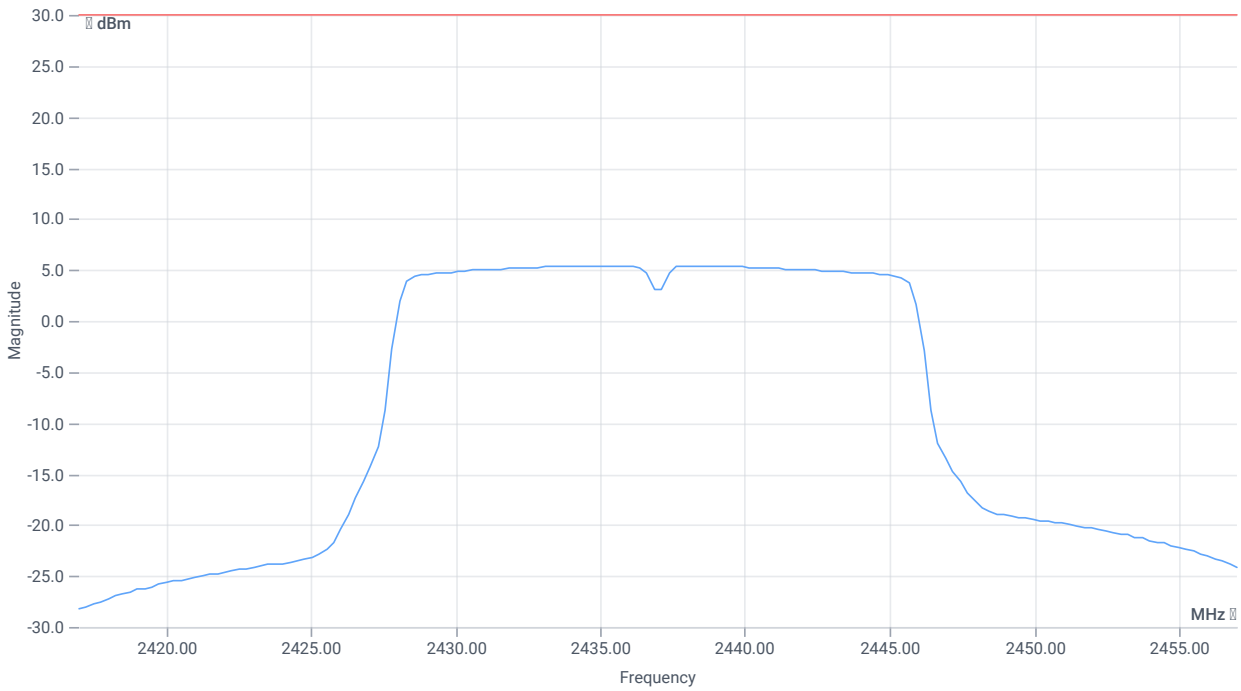
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	26.24   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	--	--	20.24	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	20.24	dBm	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 10:51:45
Ambit temp [°C]   humidity [rel%]	21.2   27
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

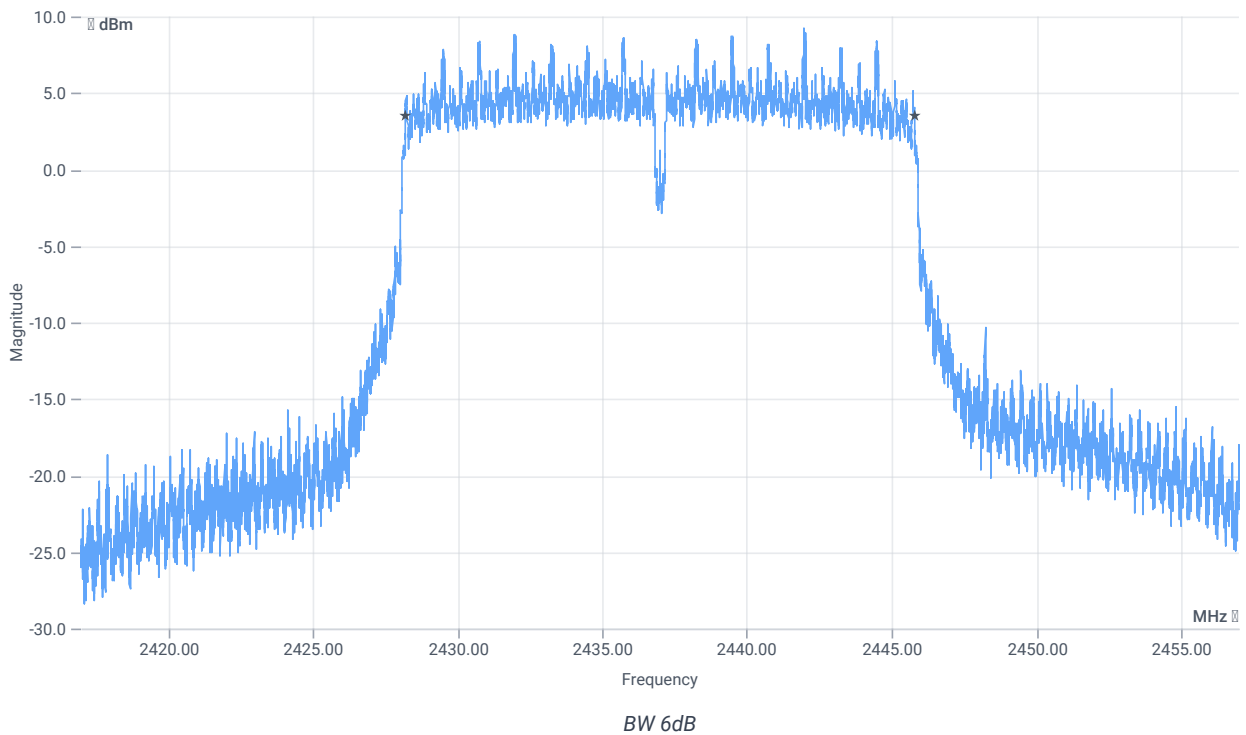
## Test at TX 2437 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	17.03	dBm	INFO
Ref. Frequency	--	--	2434.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	22.03   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	--	17580	kHz	PASS

Verdict

PASS



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

### References

TC start	15.01.2024 10:52:19
Ambit temp [°C]   humidity [rel%]	21.2   27
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

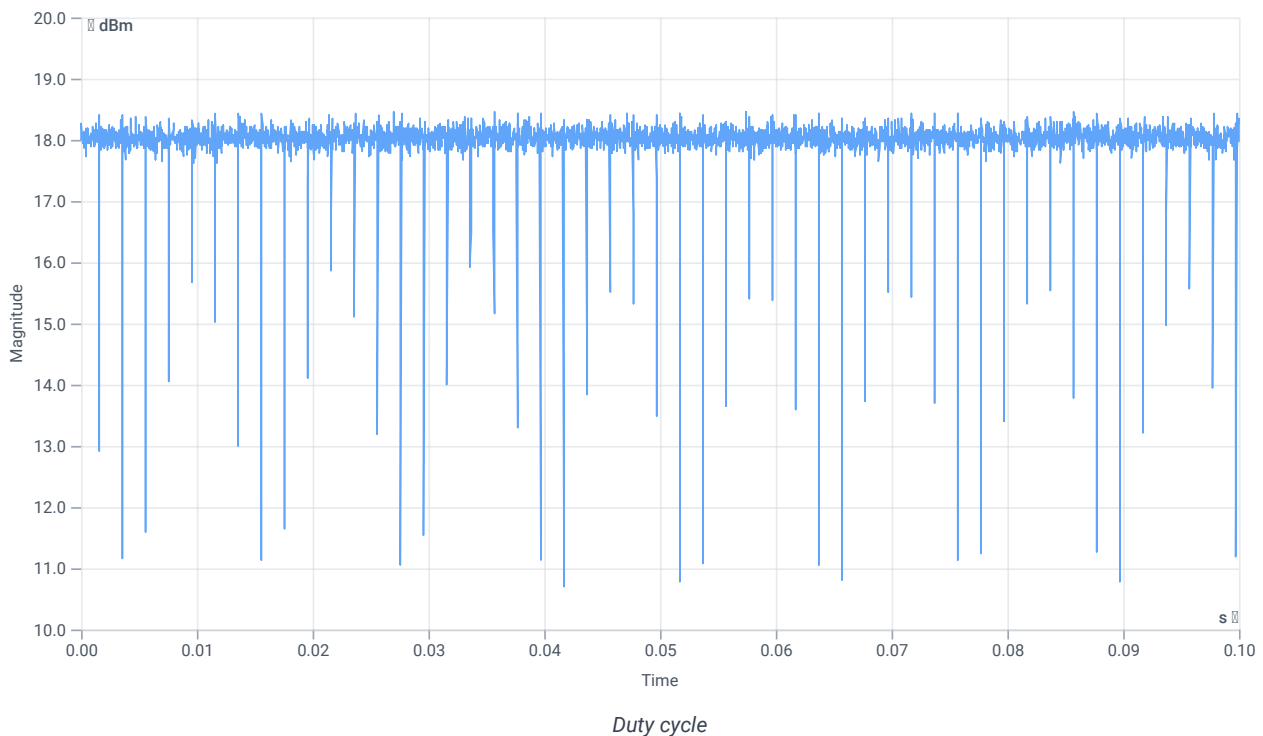
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	16.81	dBm	INFO
Ref. Frequency	--	--	2437.900	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



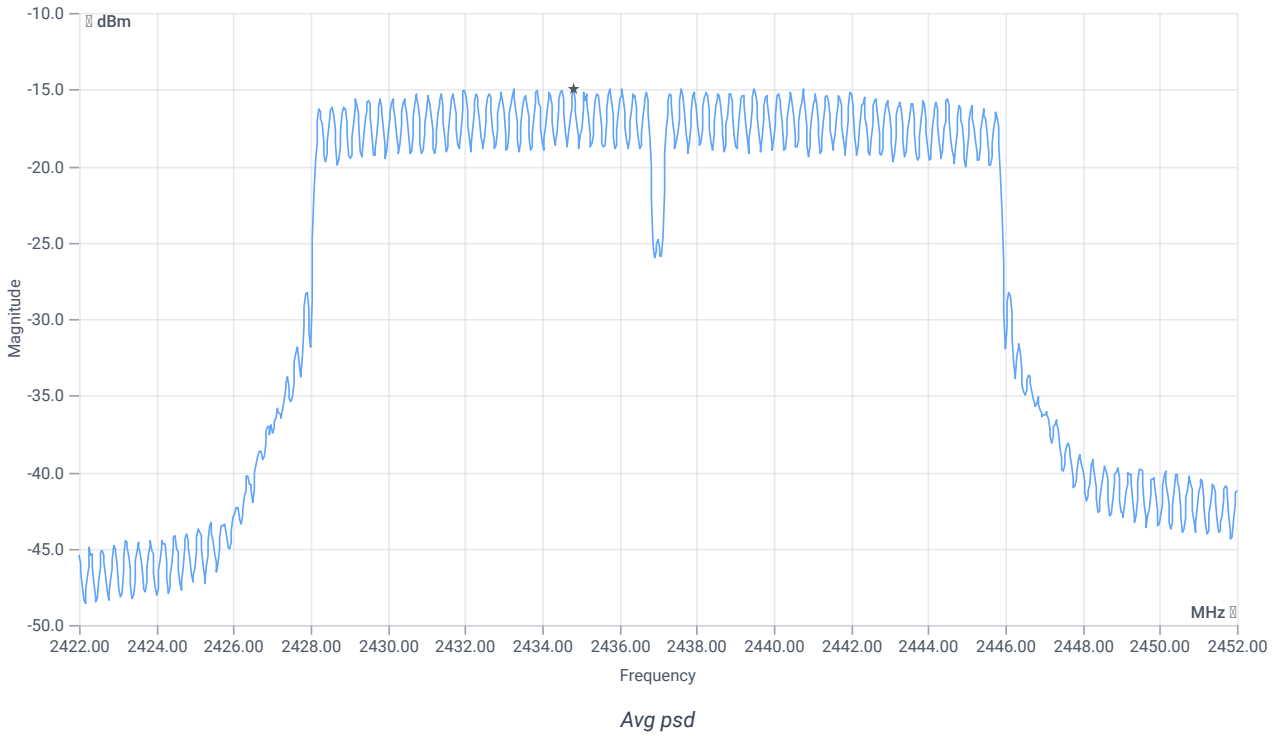
## Avg. psd

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	21.81   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	--	--	-14.96	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-14.96	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 10:53:24
Ambit temp [°C]   humidity [rel%]	21.2   27
System version	4.7.1.5
Standard   Version	FCC 15.247, ISED RSS247   NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

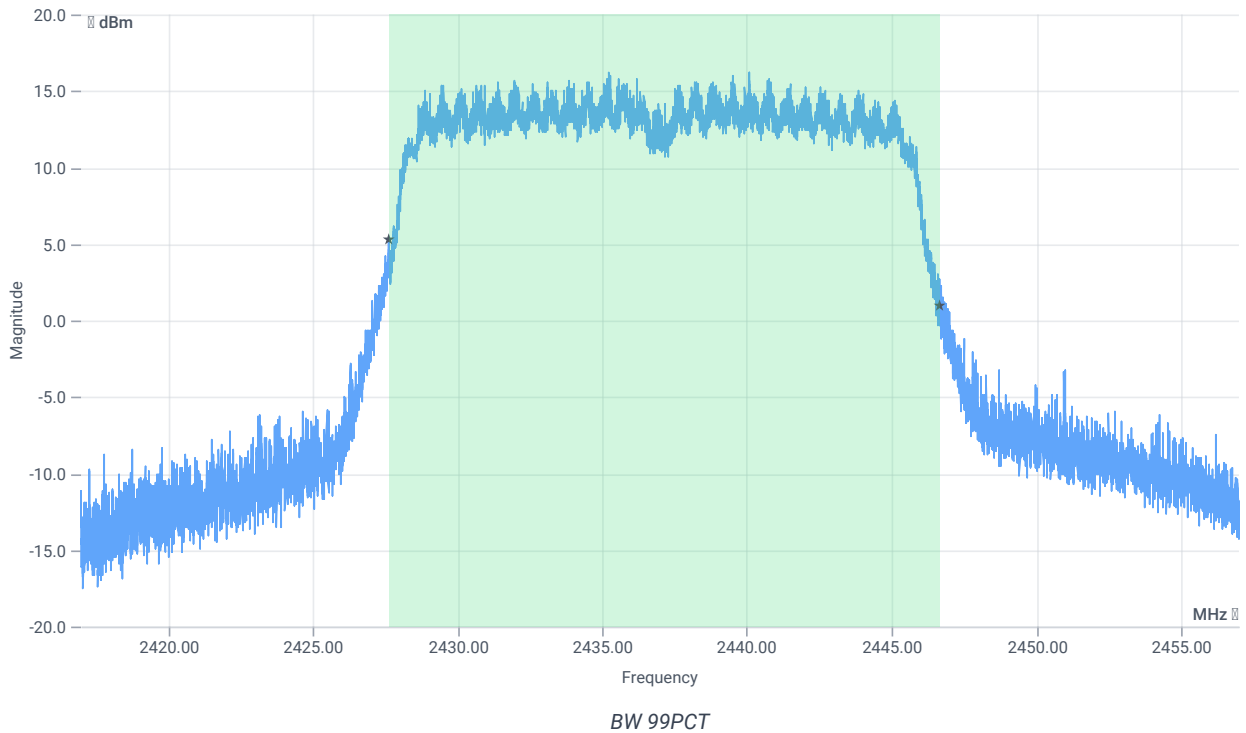
## Test at TX 2437 MHz

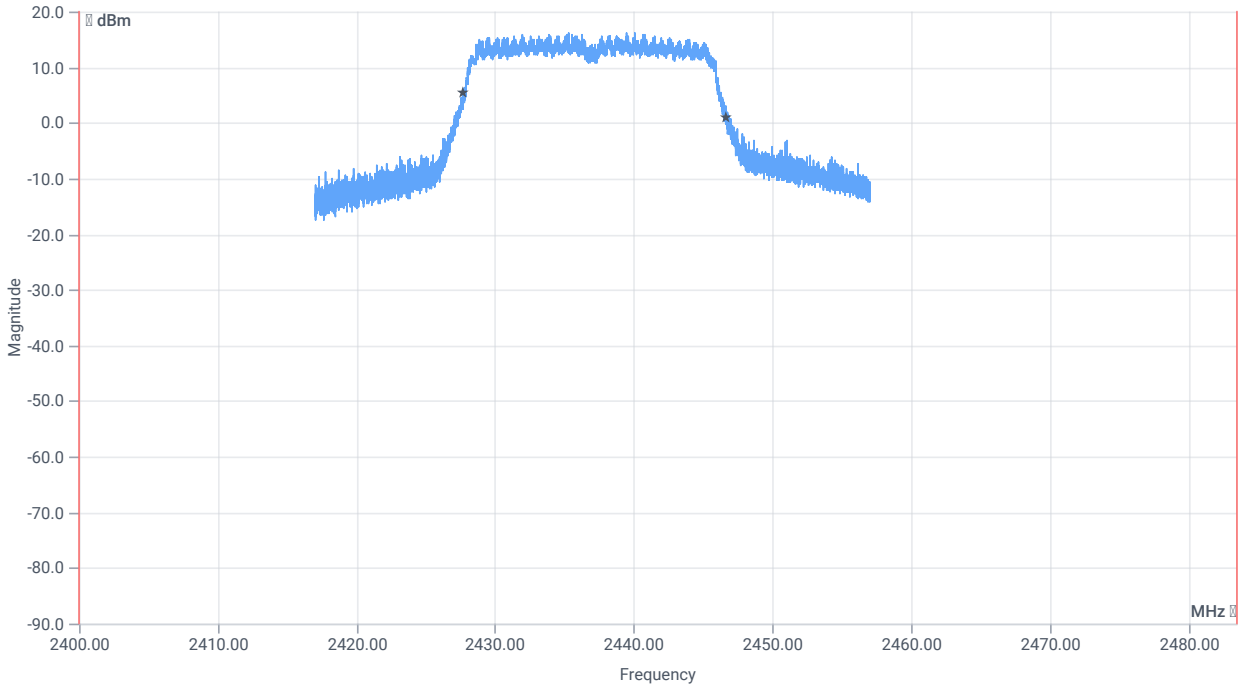
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	18.62	dBm	INFO
Ref. Frequency	--	--	2434.600	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	23.62   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

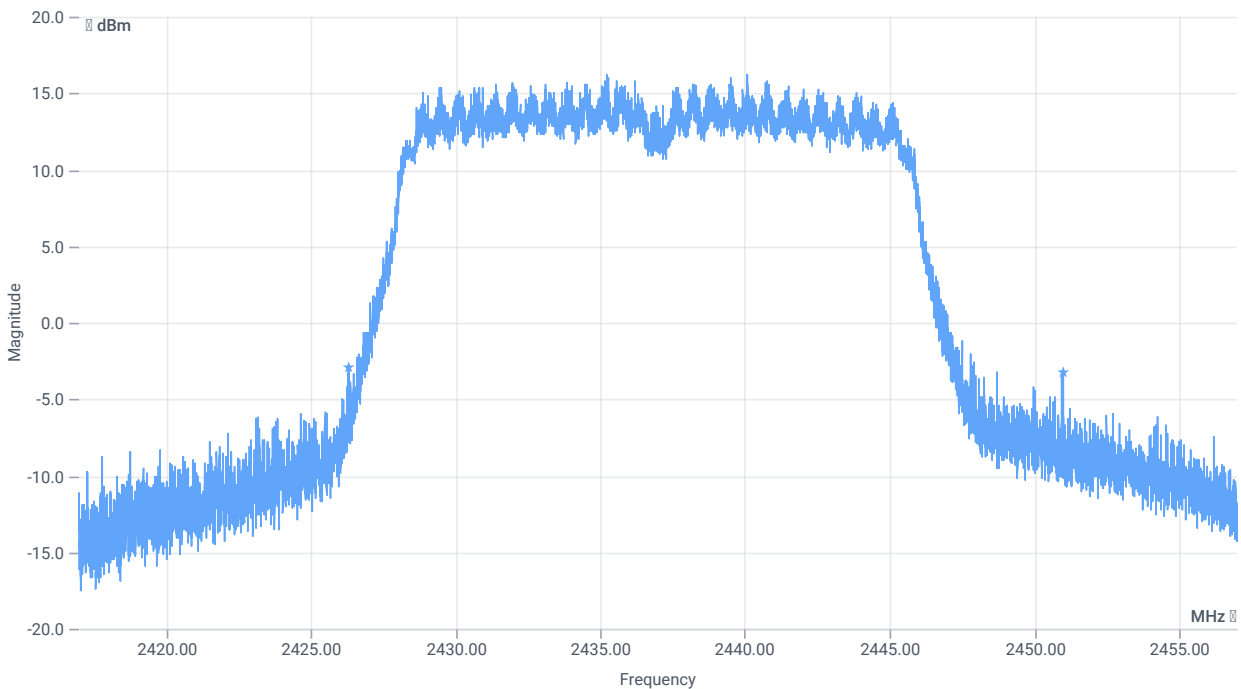




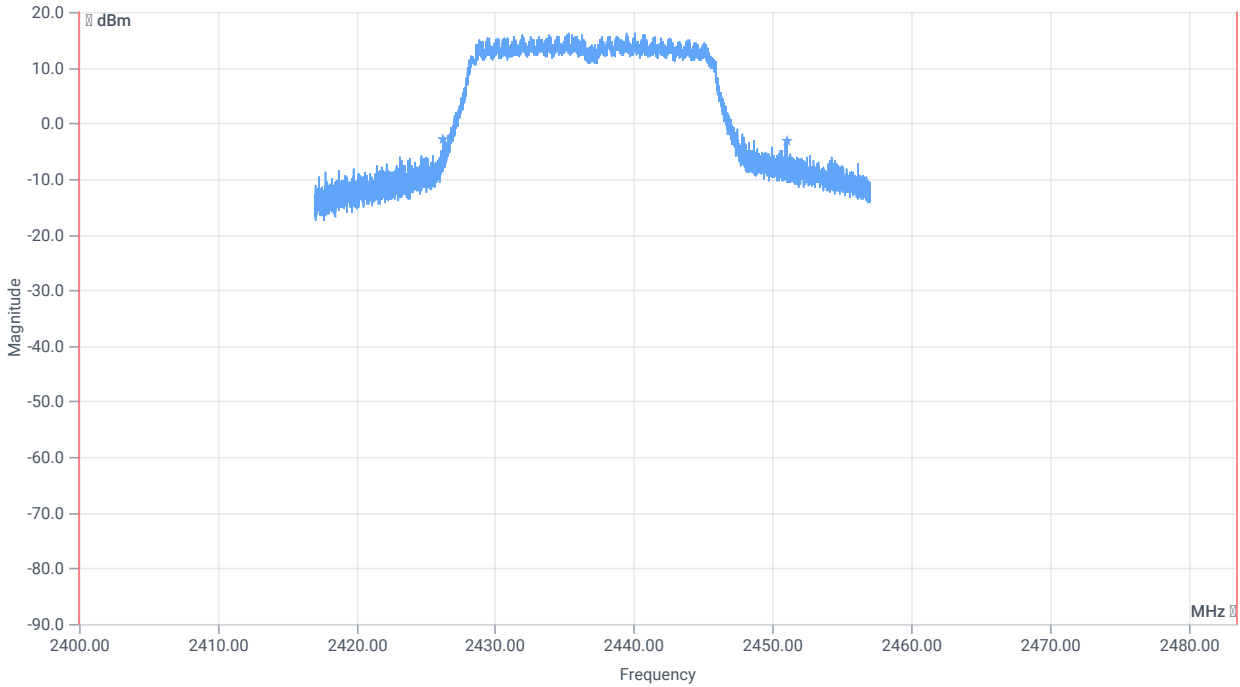
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	19014.000	kHz	INFO
T1 99%	2400.000000	--	2427.6449	MHz	PASS
T2 99%	--	2483.500000	2446.6590	MHz	PASS



BW 20dB



BW within Band 20dB

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	24728	kHz	INFO
T1 20dB	2400.000000	--	2426.2880	MHz	PASS
T2 20dB	--	2483.500000	2451.0160	MHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 10:54:02
Ambit temp [°C]   humidity [rel%]	21.2   27
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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
Full path name   type	EUT - SignalingUnit - SpectrumAnalyzer

## Equipment

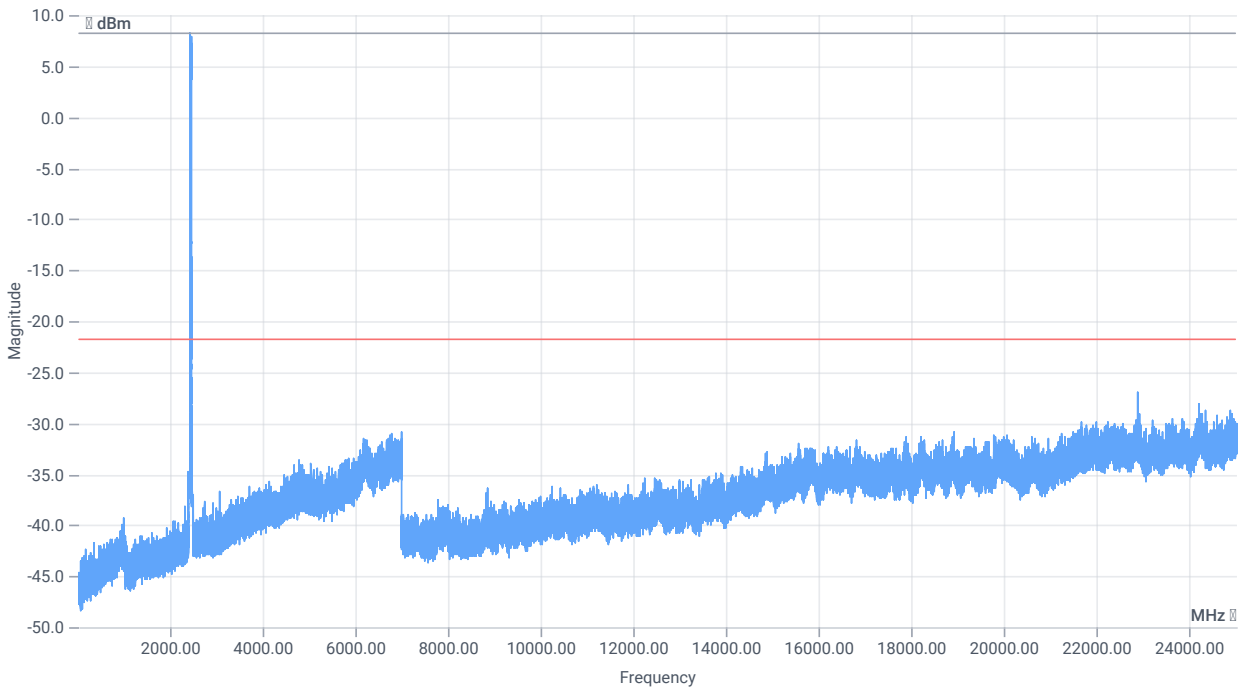
Signal analyzer,Rohde&Schwarz,FSV-40,1307.9002K40/101042,3.70
Switch matrix,CTCadvanced,SPM-4 NI DAQ,28016133,NI



## Test at TX 2437 MHz

RESULT: Reference Power cond.

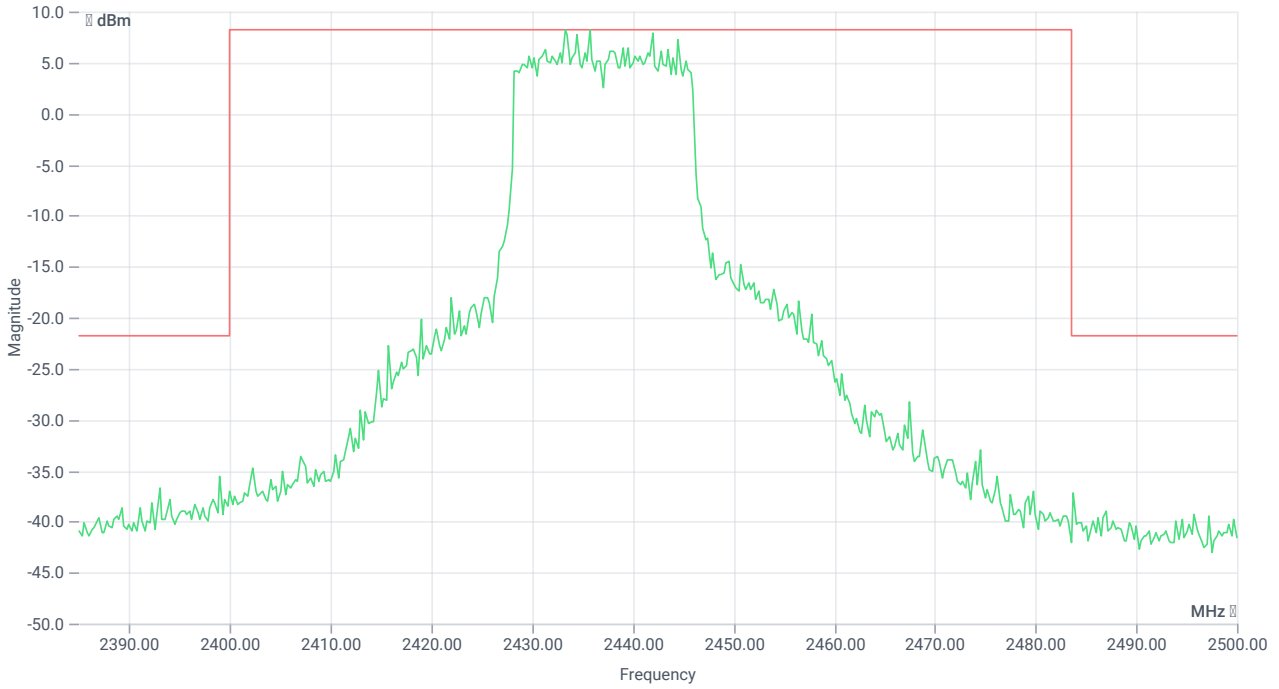
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	17.73	dBm	INFO
Ref. Frequency	--	--	2440.900	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.73   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 @ 2433.25 MHz	--	--	8.21	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 22902.5 MHz	0	--	5.26	dB	INFO

Verdict

PASS

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

### References

TC start	15.01.2024 11:00:46
Ambit temp [°C]   humidity [rel%]	21.2   28
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

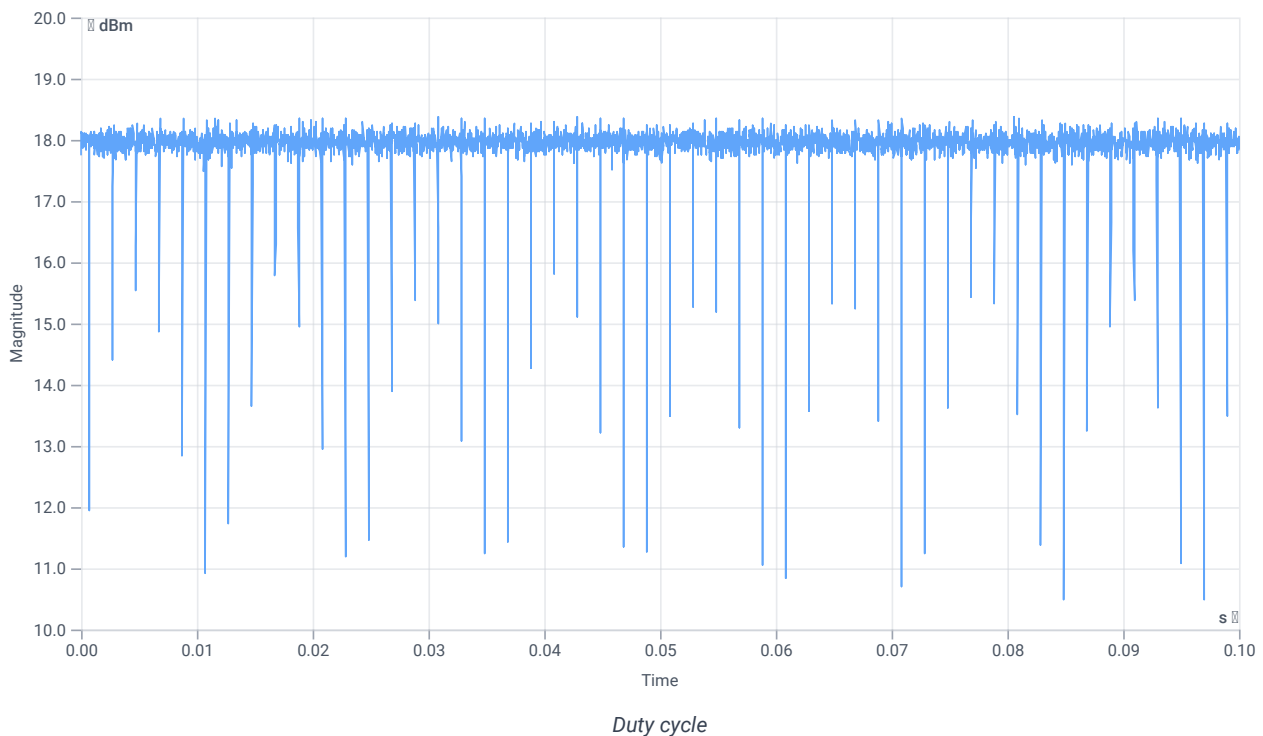
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	16.99	dBm	INFO
Ref. Frequency	--	--	2440.200	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



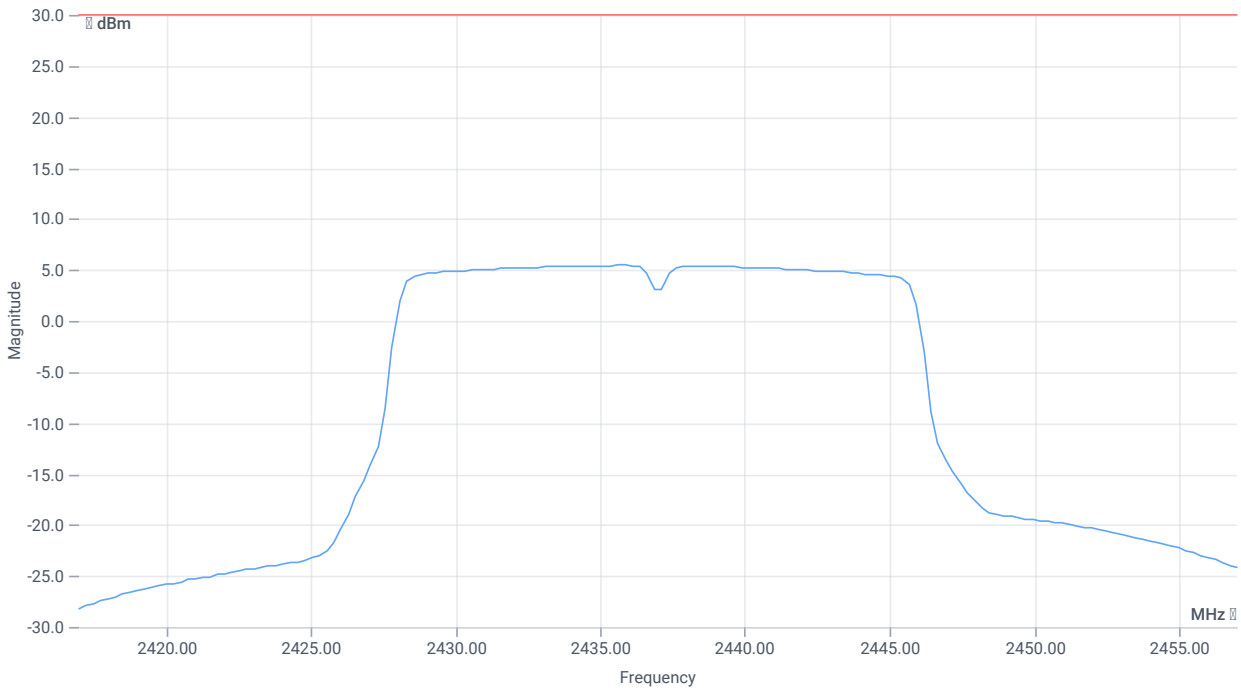
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	26.99   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	--	--	20.24	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	20.24	dBm	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 11:02:02
Ambit temp [°C]   humidity [rel%]	21.2   28
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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.	--	--	20.24	dBm	INFO
Ant:2 Avg power DC corr.	--	--	20.24	dBm	INFO
$\Sigma$ Avg output power DC corr.	--	30	23.25	dBm	PASS

### Verdict

PASS

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

### References

TC start	15.01.2024 11:05:10
Ambit temp [°C]   humidity [rel%]	21.2   28
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	True   Freq [MHz] 2437
Frequency high to test	False   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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	--	--	-14.79	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-14.96	dBm/3kHz	INFO
$\Sigma$ Avg psd DC corr	--	8	-11.86	dBm/3kHz	PASS

Verdict

PASS

## NA # Message with SA scan ~

### References

TC start	15.01.2024 11:05:21
Ambit temp [°C]   humidity [rel%]	21.2   28
System version	4.7.1.5
Standard   Version	NA   NI
Method	
Description	Message with SA Scan n-HT20 mode
Information	ac20-mode

### Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.01.2024 11:05:22
Message	set WLAN2G4 to n-HT20 mode, 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 n-HT20 mode

### References

TC start	15.01.2024 11:06:11
Ambit temp [°C]   humidity [rel%]	21.2   28
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

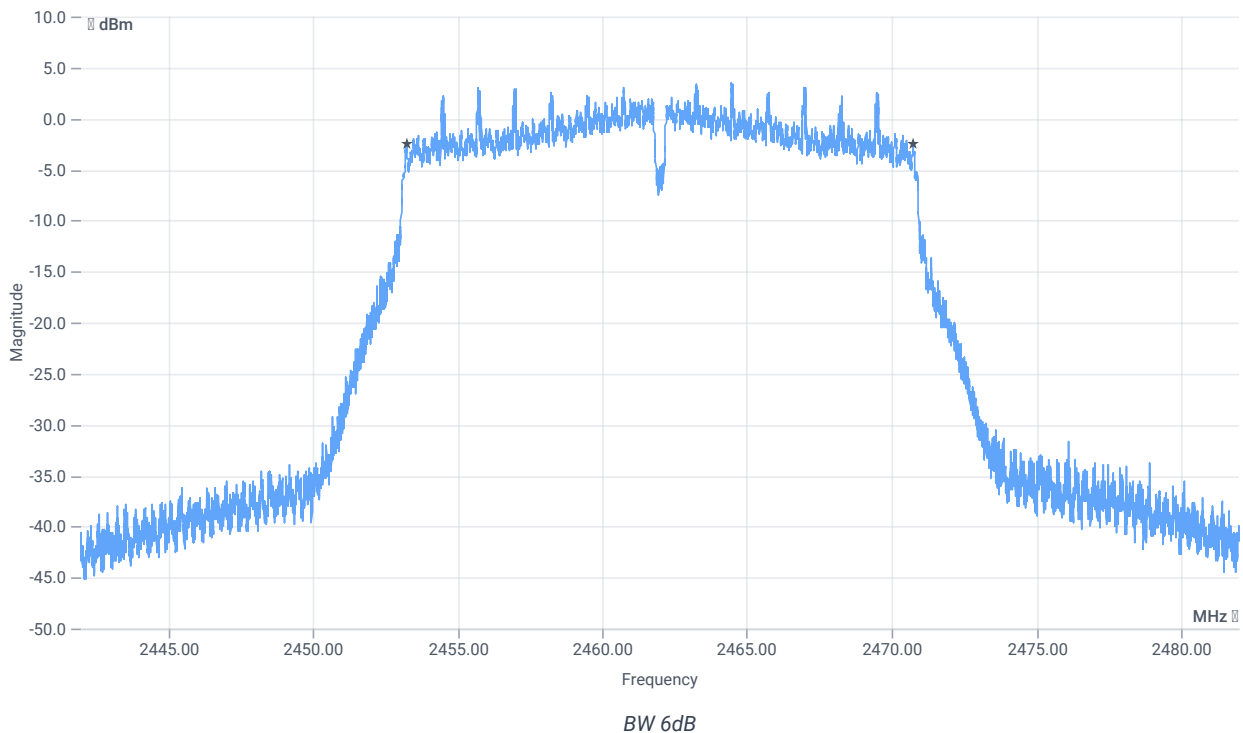
## Test at TX 2462 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.24	dBm	INFO
Ref. Frequency	--	--	2463.300	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.24   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	--	17520	kHz	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 11:06:45
Ambit temp [°C]   humidity [rel%]	21.2   28
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

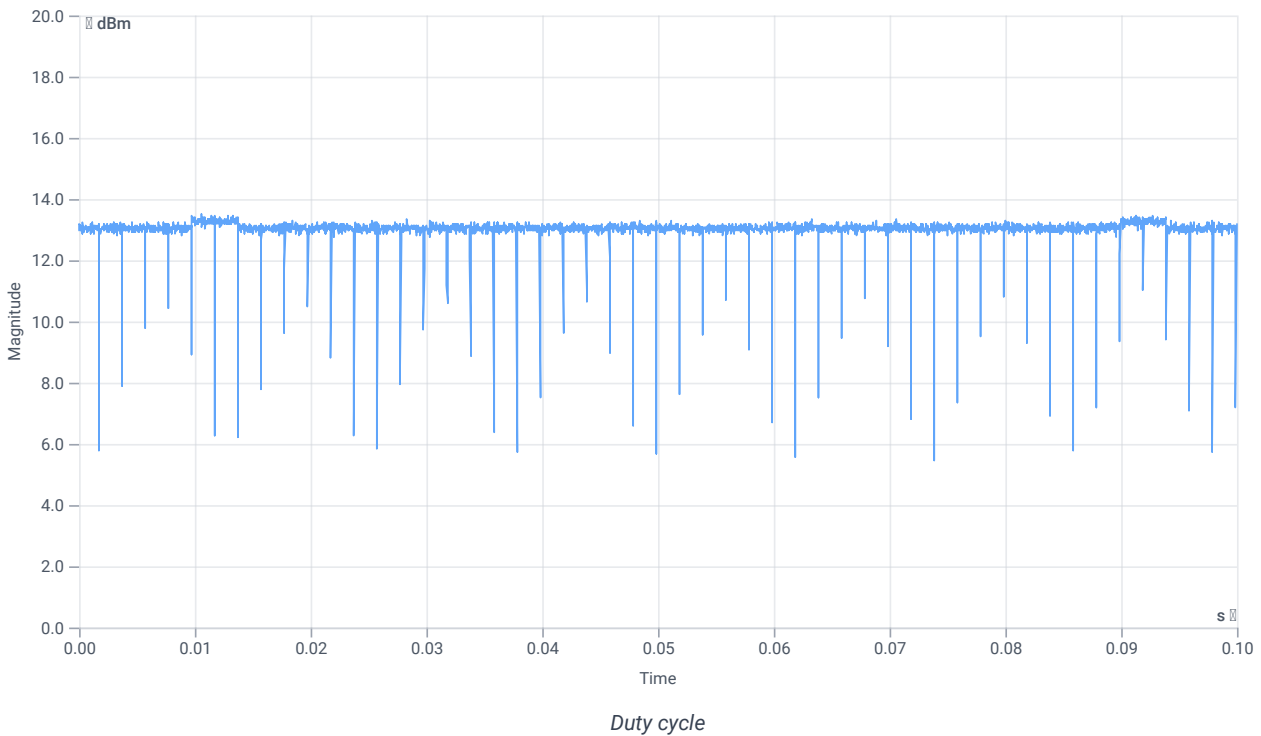
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.17	dBm	INFO
Ref. Frequency	--	--	2463.300	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



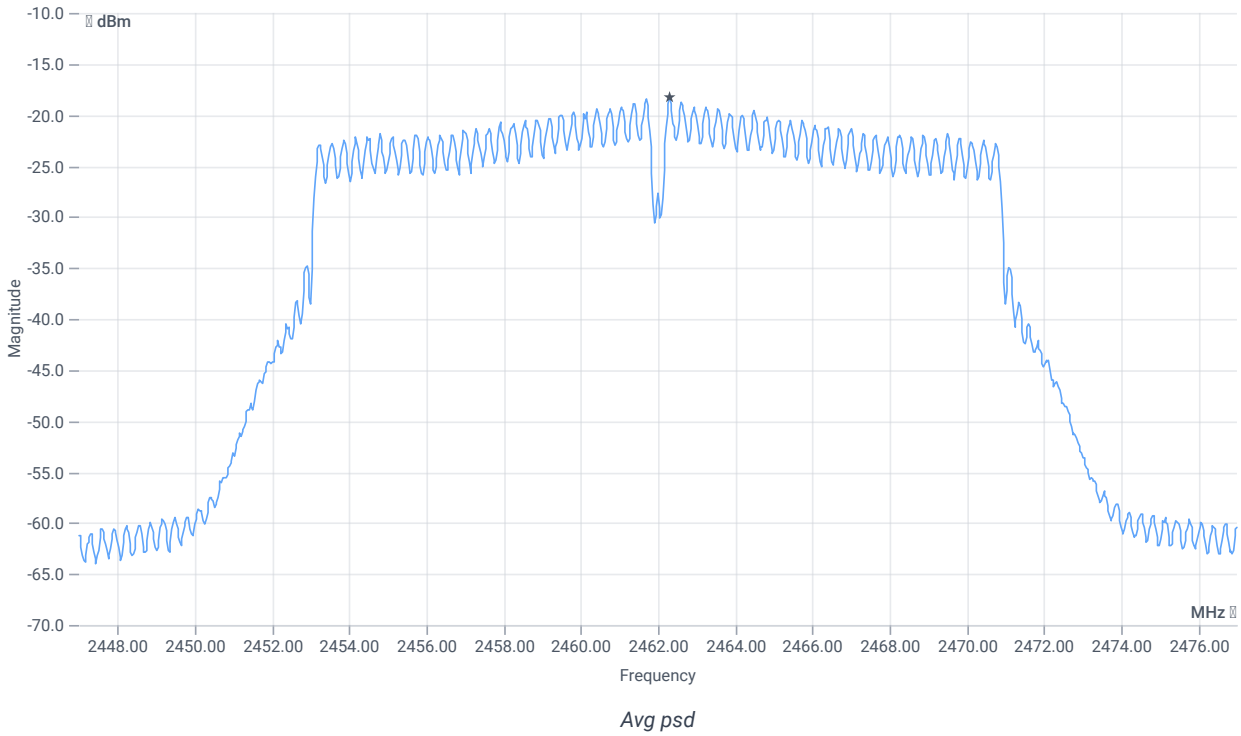
### Avg. psd

#### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.17   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	--	--	-18.34	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-18.34	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 11:07:51
Ambit temp [°C]   humidity [rel%]	21.2   28
System version	4.7.1.5
Standard   Version	FCC 15.247, ISED RSS247   NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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



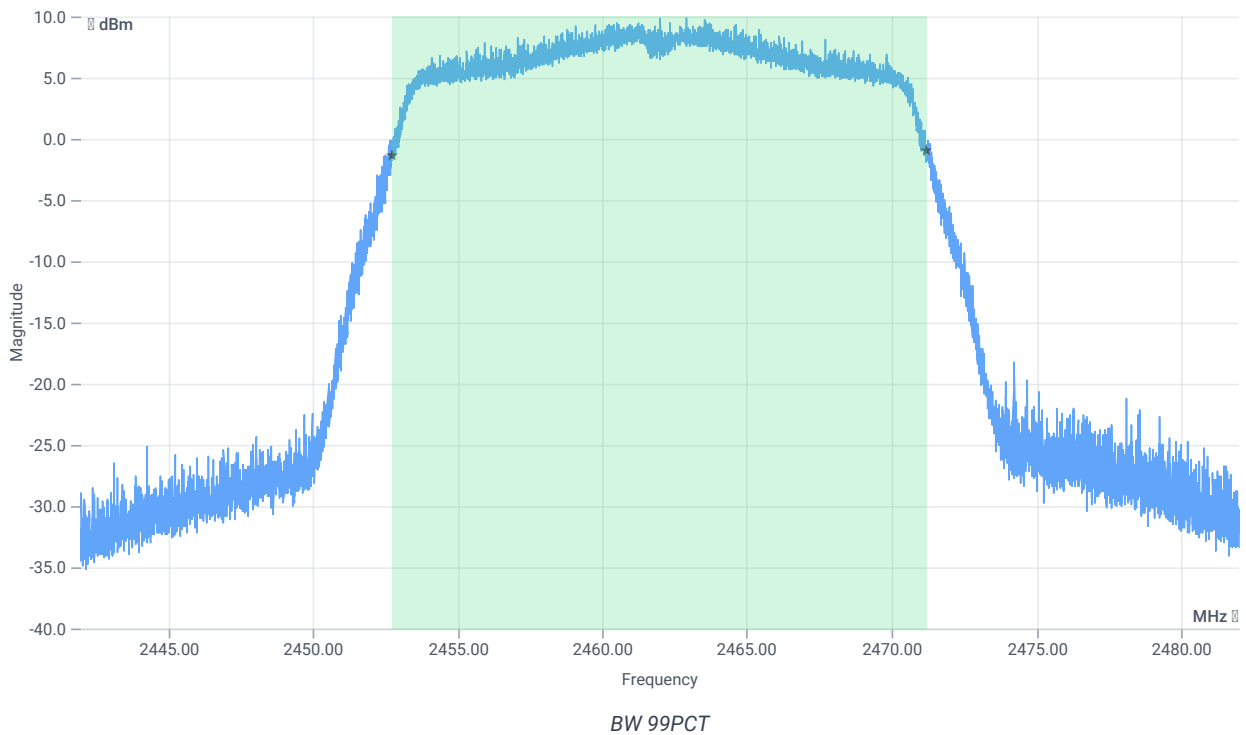
## Test at TX 2462 MHz

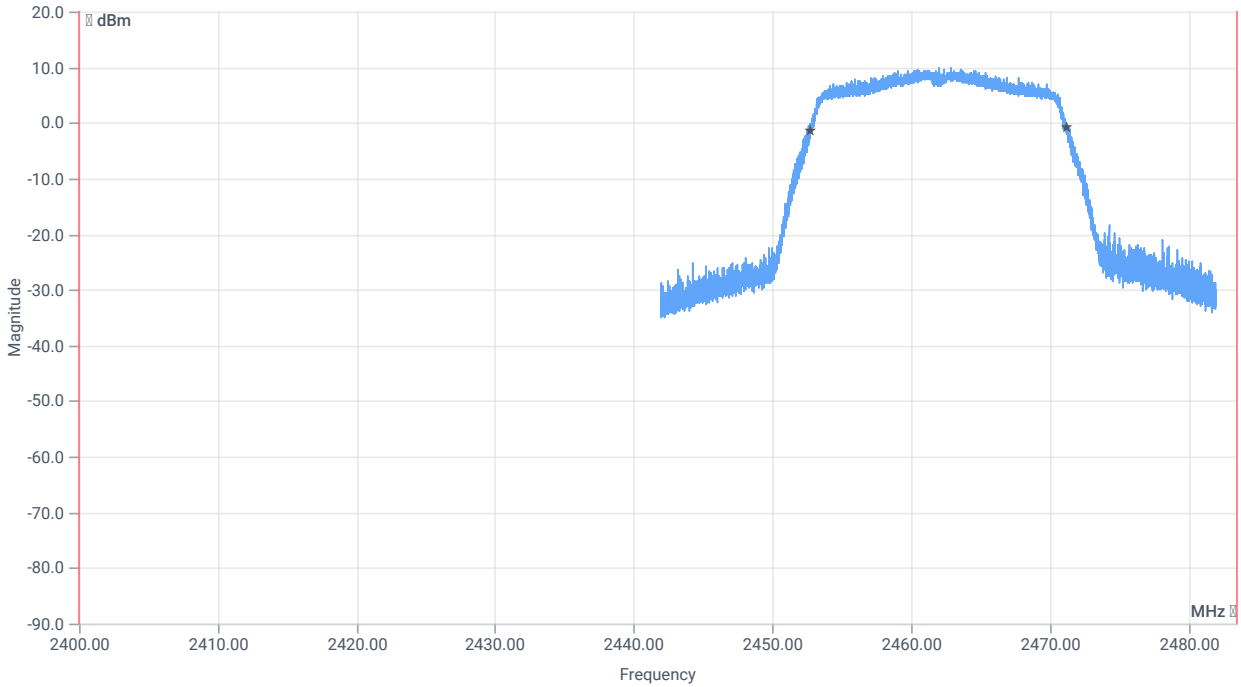
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.52	dBm	INFO
Ref. Frequency	--	--	2463.400	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.52   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

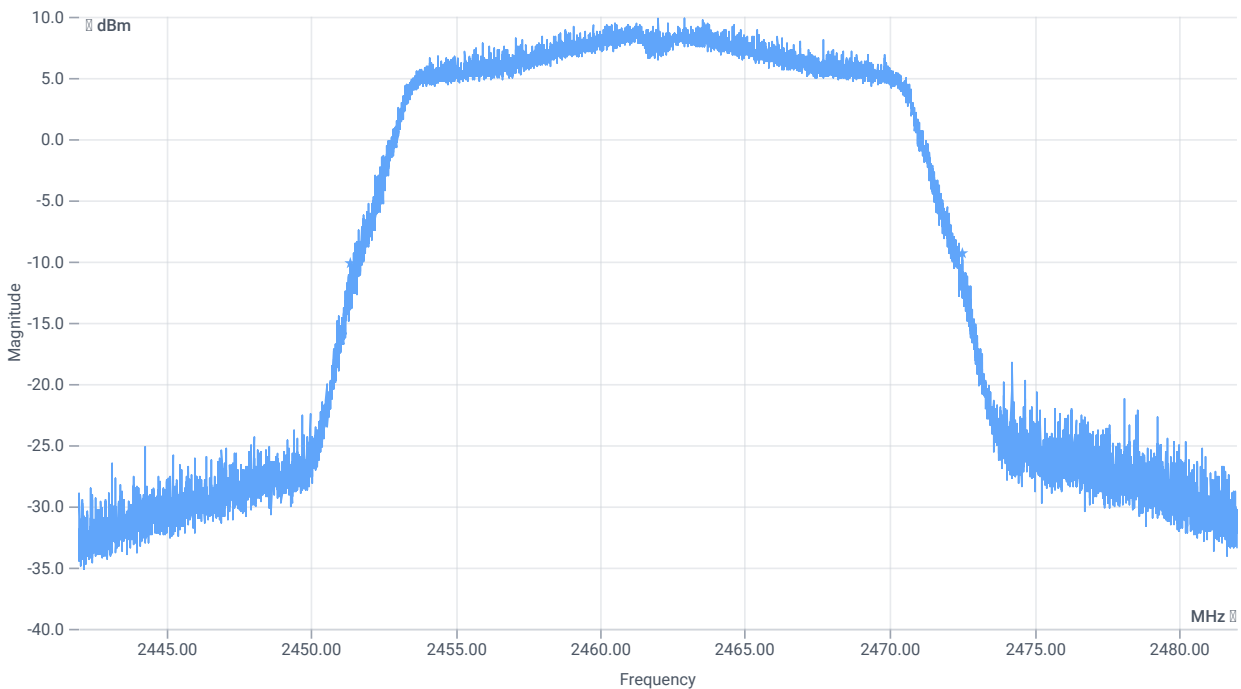




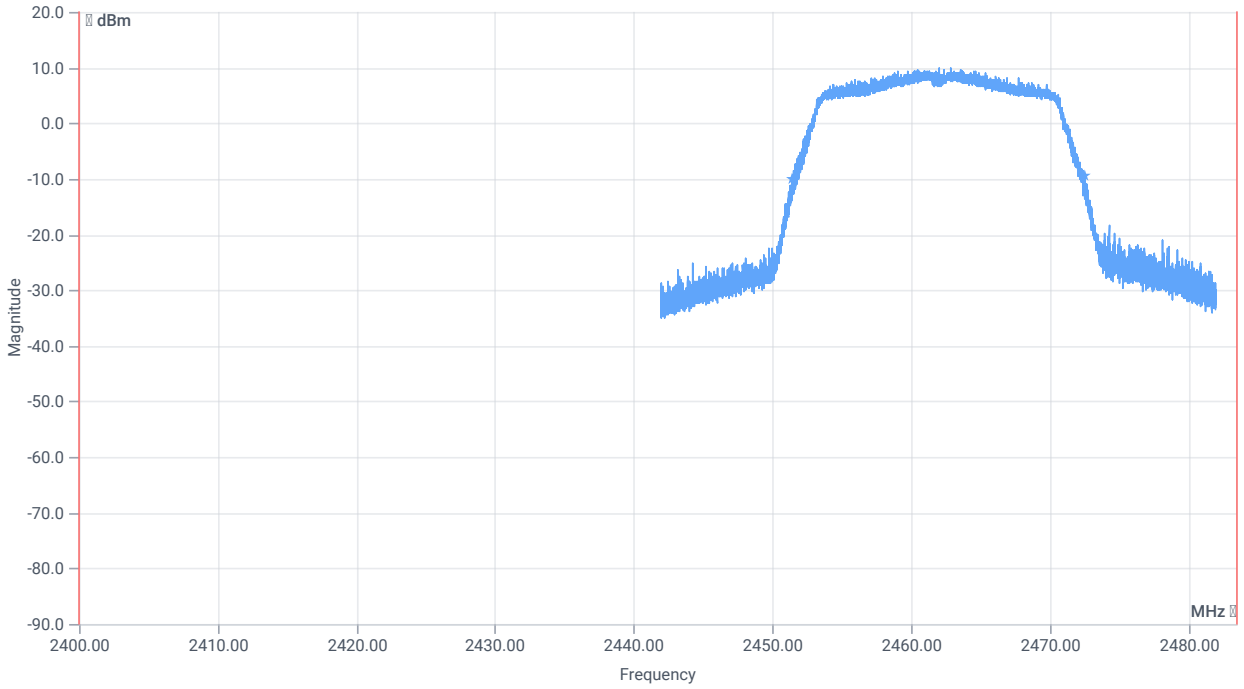
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18446.000	kHz	INFO
T1 99%	2400.000000	--	2452.7649	MHz	PASS
T2 99%	--	2483.500000	2471.2111	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21156	kHz	INFO
T1 20dB	2400.000000	--	2451.3680	MHz	PASS
T2 20dB	--	2483.500000	2472.5240	MHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 11:08:28
Ambit temp [°C]   humidity [rel%]	21.2   28
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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
Full path name   type	EUT - SignalingUnit - SpectrumAnalyzer

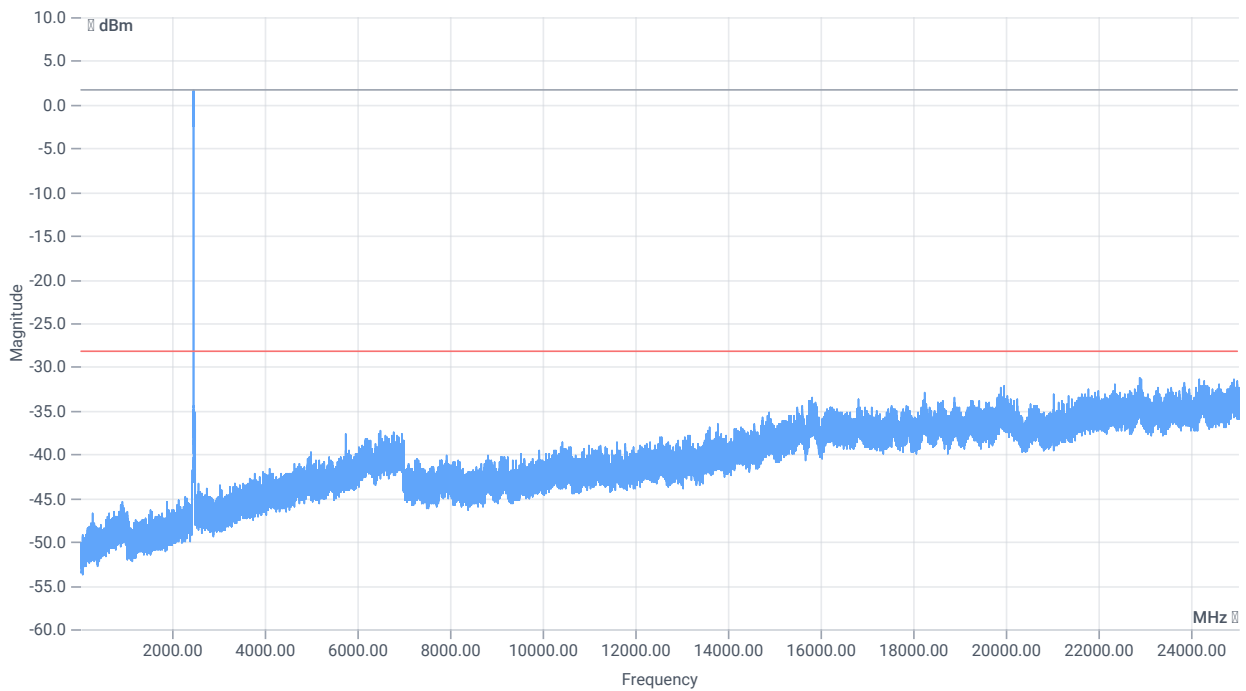
## Equipment

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.

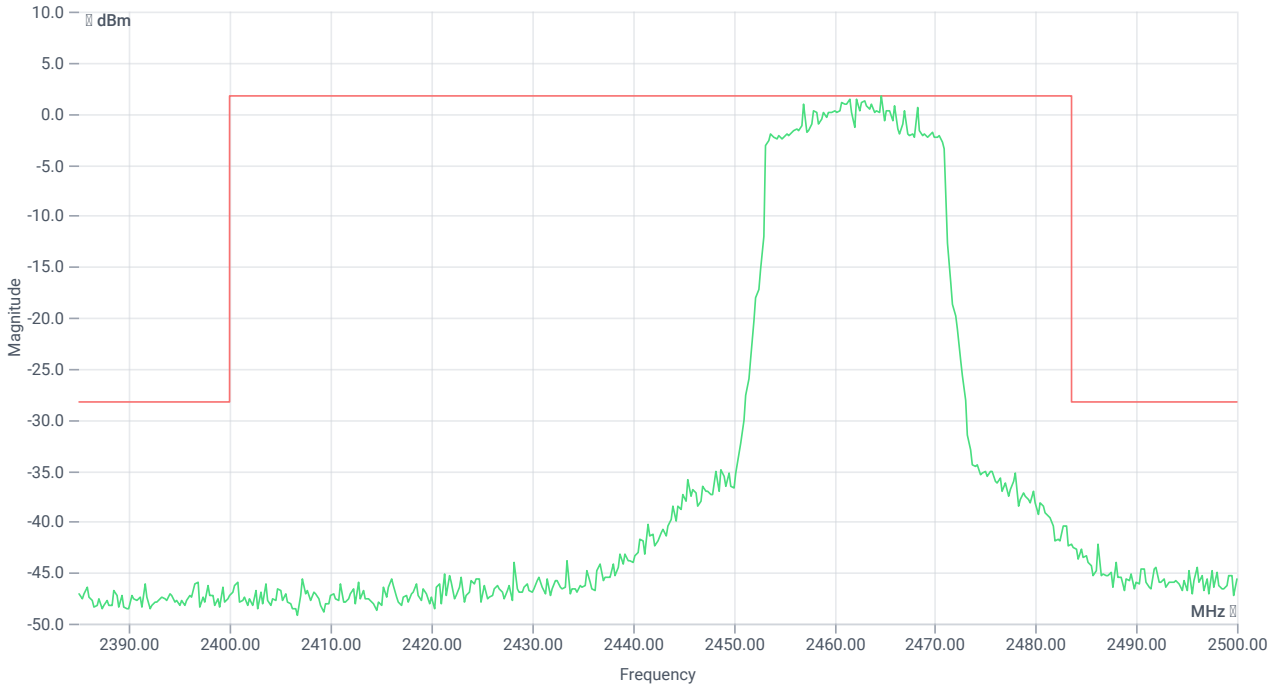
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.05	dBm	INFO
Ref. Frequency	--	--	2460.600	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	12.05   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 @ 2464.75 MHz	--	--	1.69	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 22900.75 MHz	0	--	2.96	dB	INFO

Verdict

PASS

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

### References

TC start	15.01.2024 11:15:13
Ambit temp [°C]   humidity [rel%]	21.3   28
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

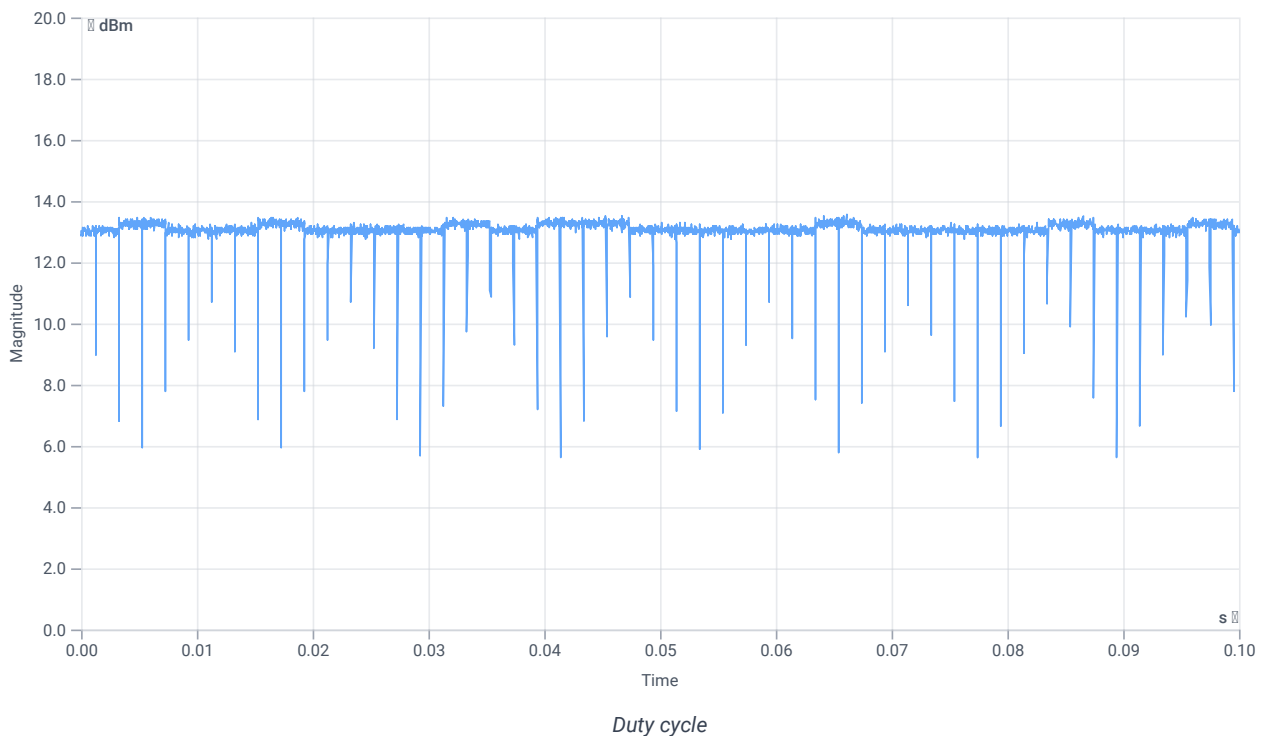
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	11.90	dBm	INFO
Ref. Frequency	--	--	2462.900	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

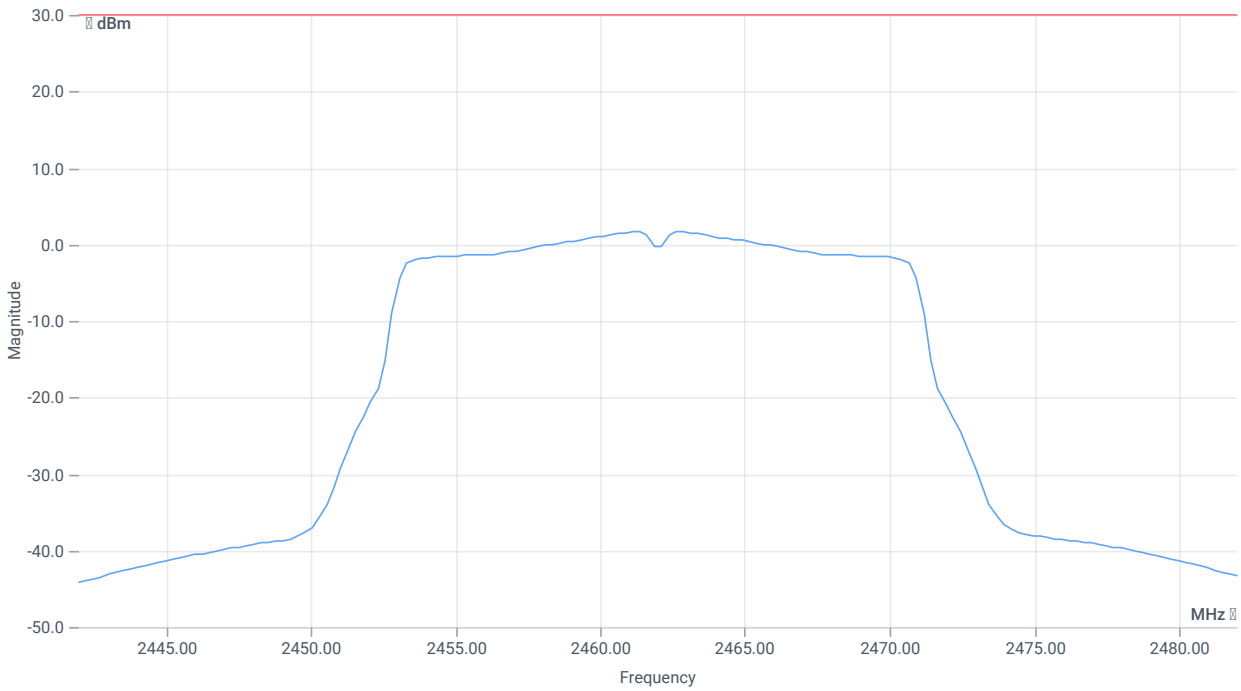
### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	21.90   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	--	--	15.05	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	15.05	dBm	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 11:16:29
Ambit temp [°C]   humidity [rel%]	21.3   28
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

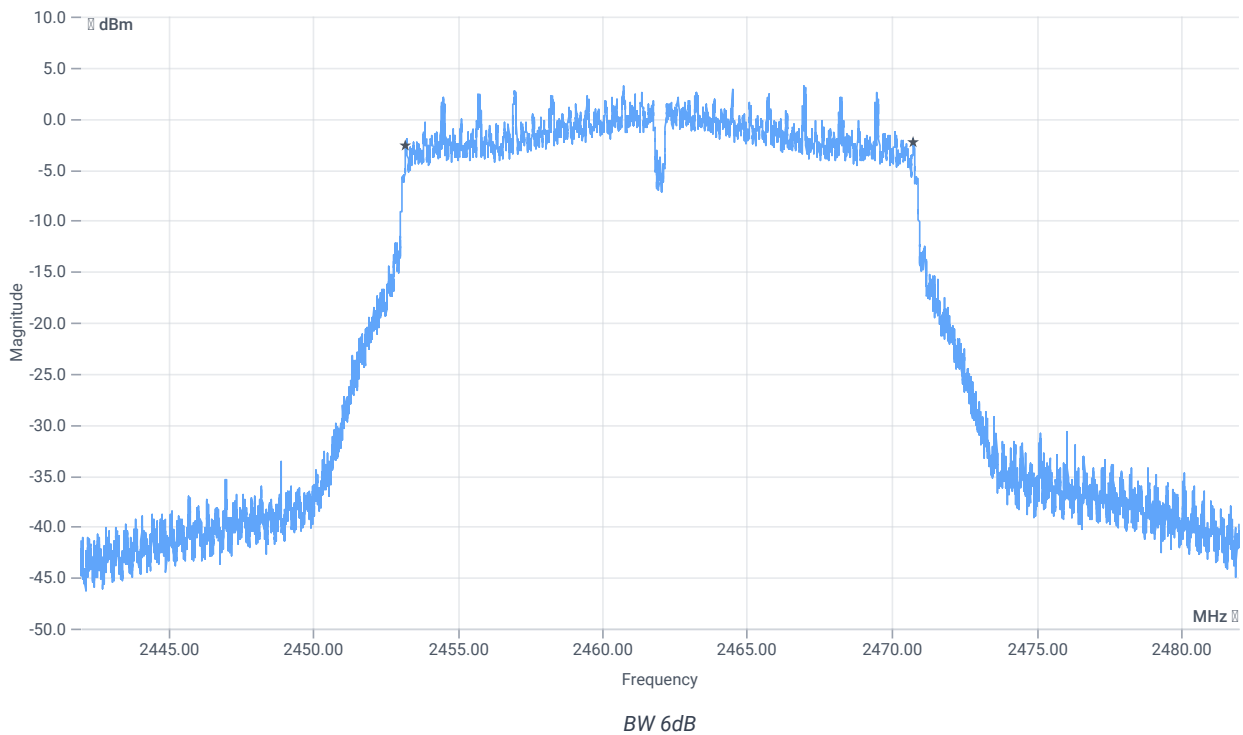
## Test at TX 2462 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.04	dBm	INFO
Ref. Frequency	--	--	2460.800	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.04   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	--	17544	kHz	PASS

Verdict

PASS

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

### References

TC start	15.01.2024 11:17:03
Ambit temp [°C]   humidity [rel%]	21.3   28
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

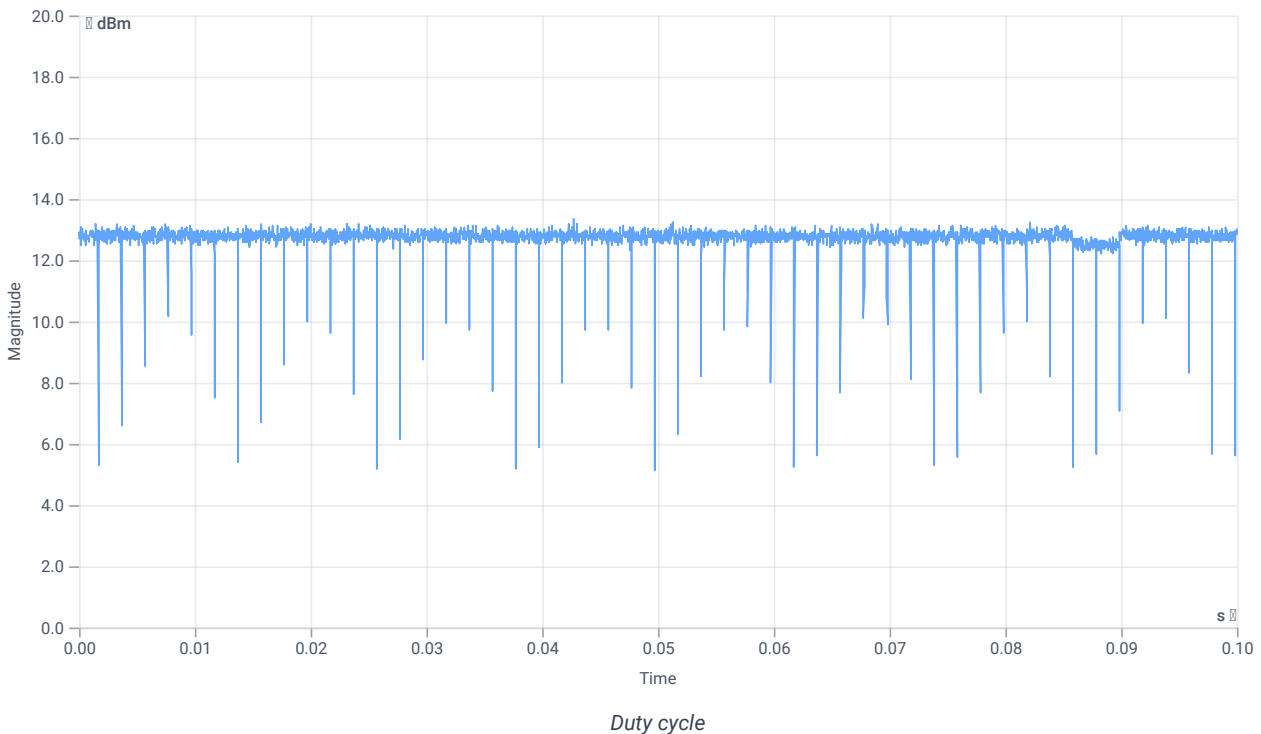
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.19	dBm	INFO
Ref. Frequency	--	--	2460.500	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



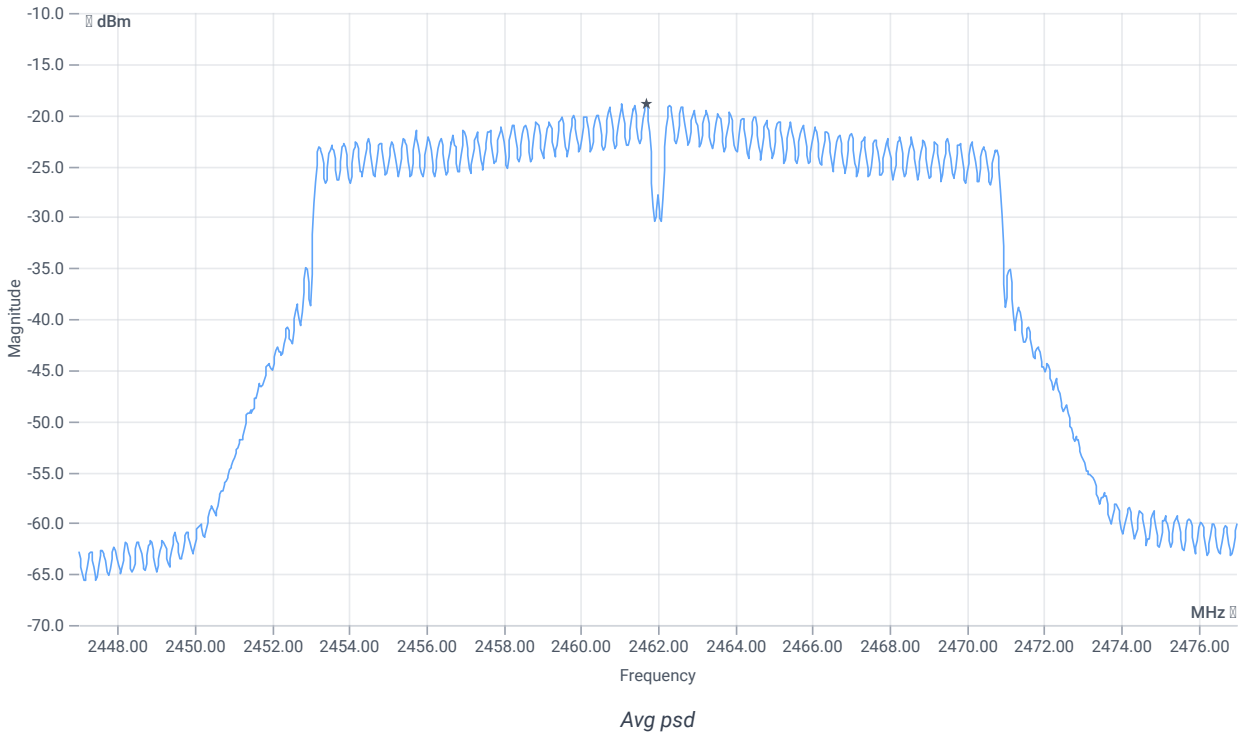
## Avg. psd

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.19   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	--	--	-18.94	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-18.94	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 11:18:09
Ambit temp [°C]   humidity [rel%]	21.2   28
System version	4.7.1.5
Standard   Version	FCC 15.247, ISED RSS247   NI
Method	
Description	FCC 15.247 Bandwidth 99PCT-20dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

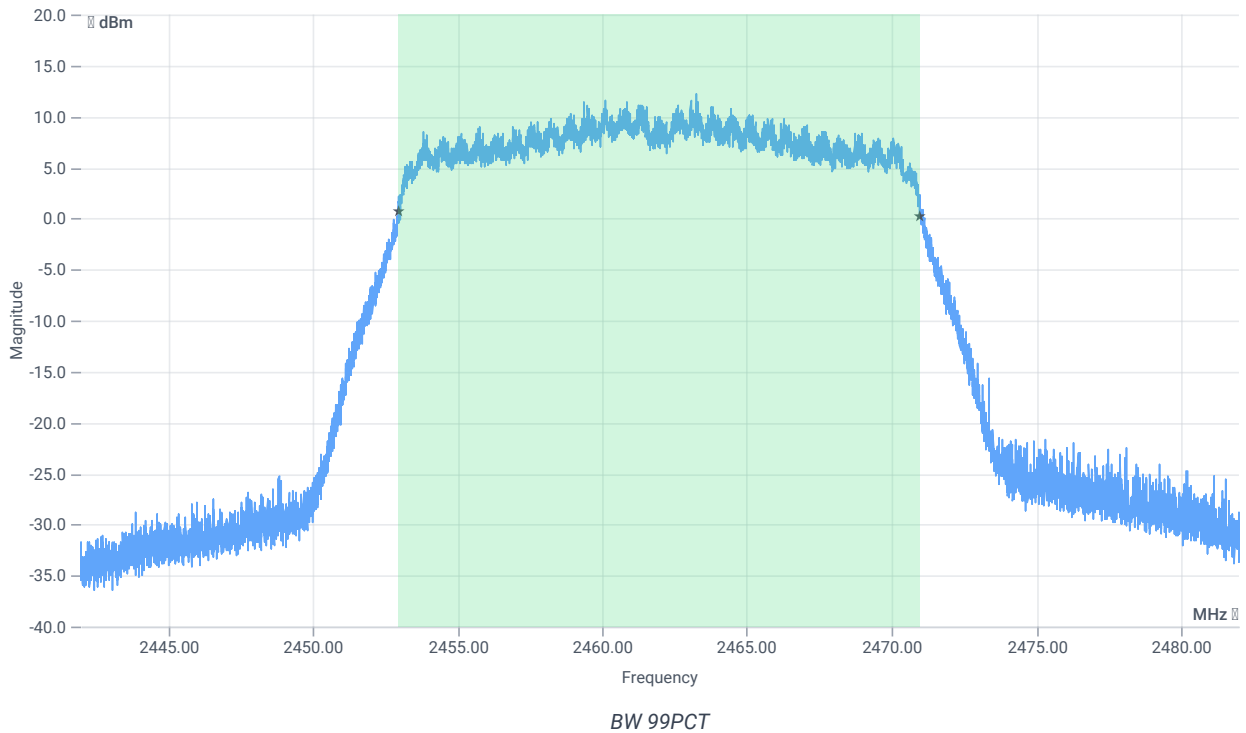
## Test at TX 2462 MHz

RESULT: Reference Power cond.

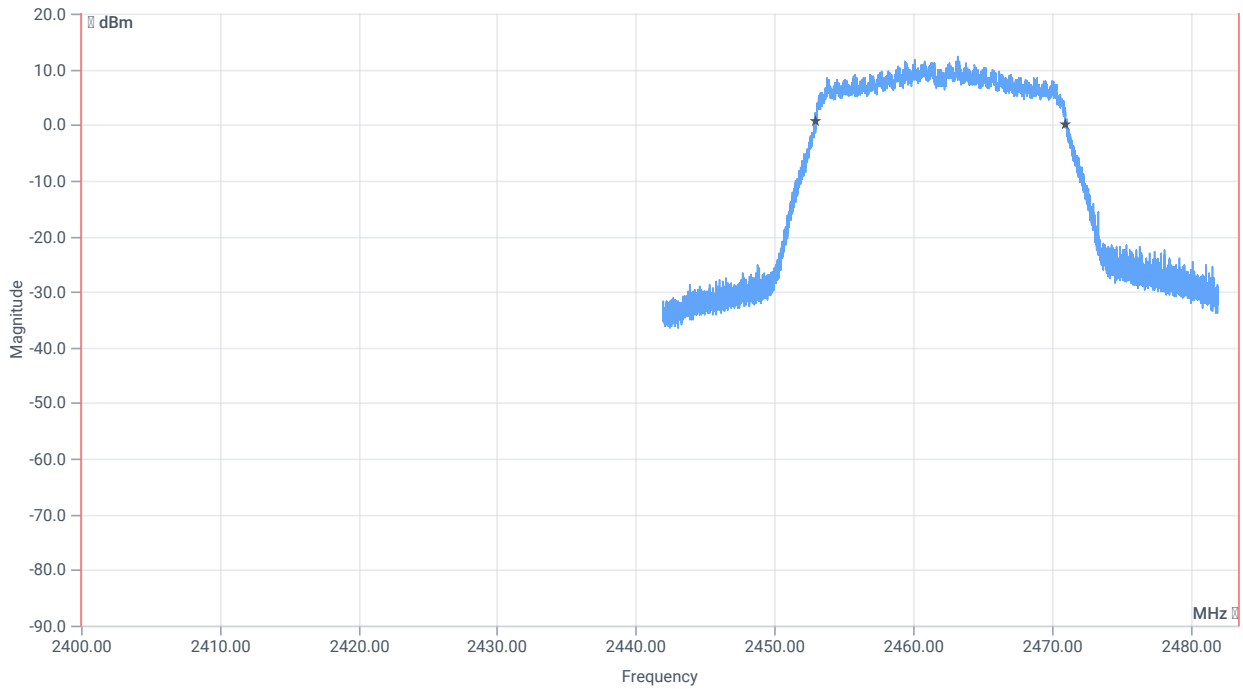
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	12.73	dBm	INFO
Ref. Frequency	--	--	2461.100	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	17.73   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



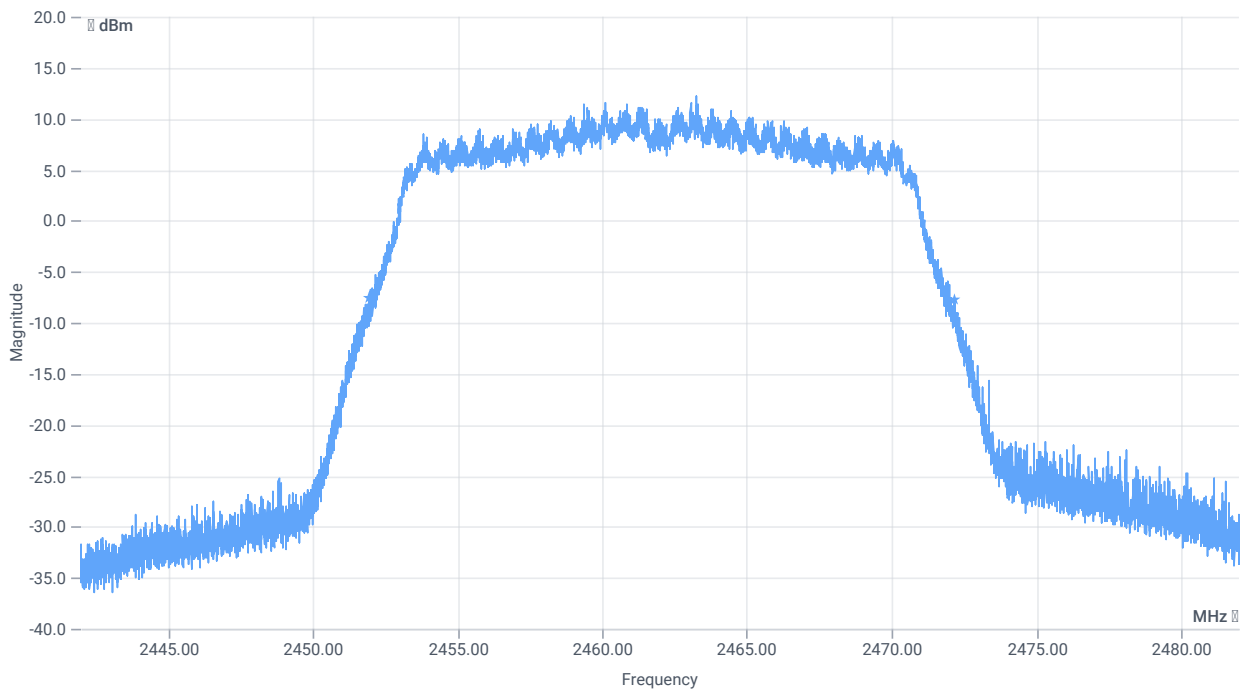




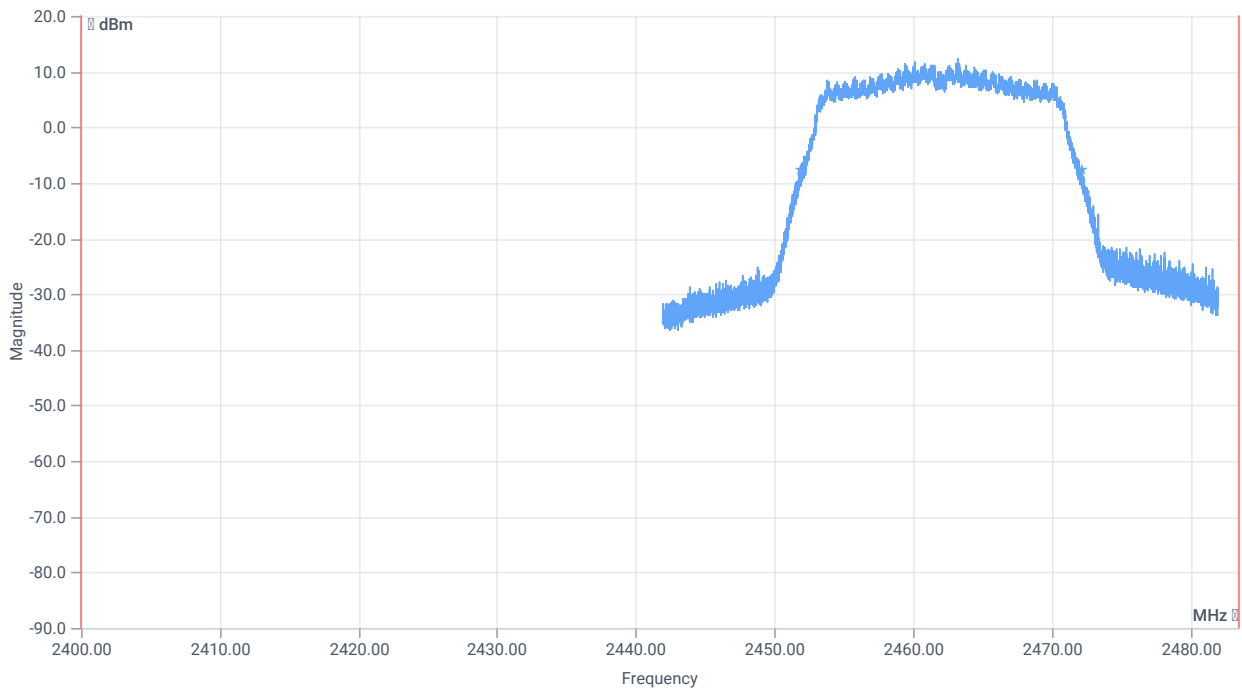
BW within Band 99PCT

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18006.000	kHz	INFO
T1 99%	2400.000000	--	2452.9929	MHz	PASS
T2 99%	--	2483.500000	2470.9991	MHz	PASS



BW 20dB



BW within Band 20dB

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20208	kHz	INFO
T1 20dB	2400.000000	--	2451.9480	MHz	PASS
T2 20dB	--	2483.500000	2472.1560	MHz	PASS

Verdict

PASS

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

## References

TC start	15.01.2024 11:18:46
Ambit temp [°C]   humidity [rel%]	21.3   28
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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
Full path name   type	EUT - SignalingUnit - SpectrumAnalyzer

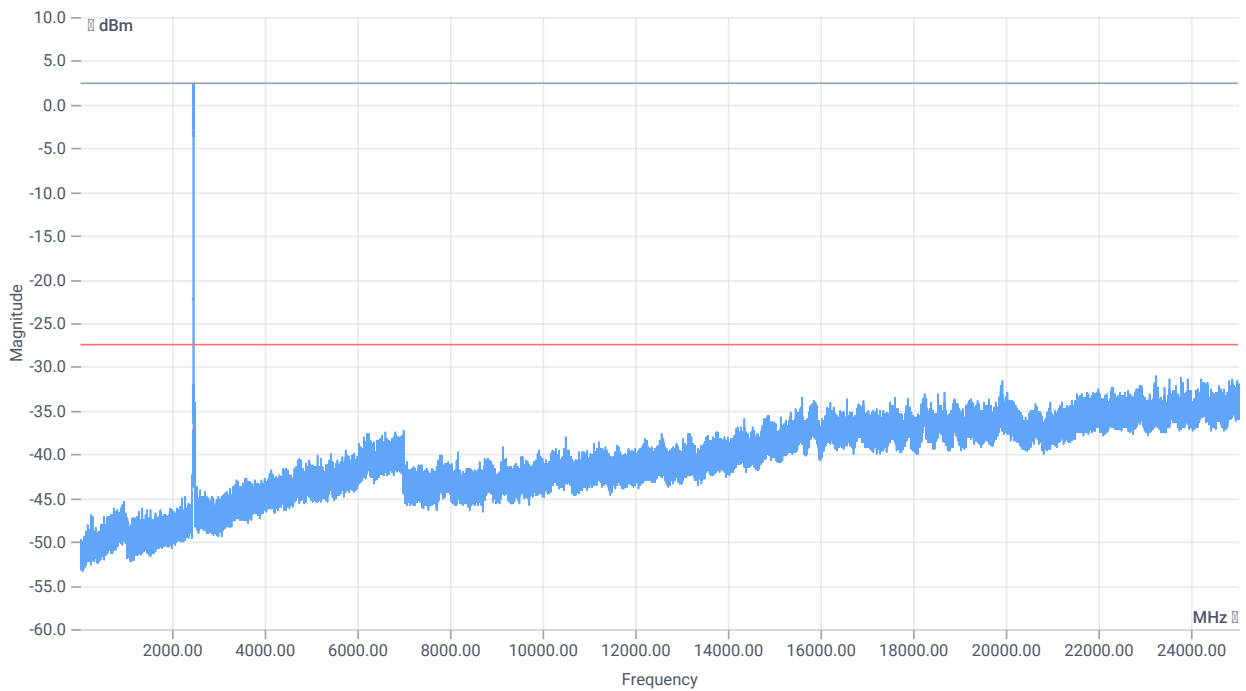
## Equipment

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

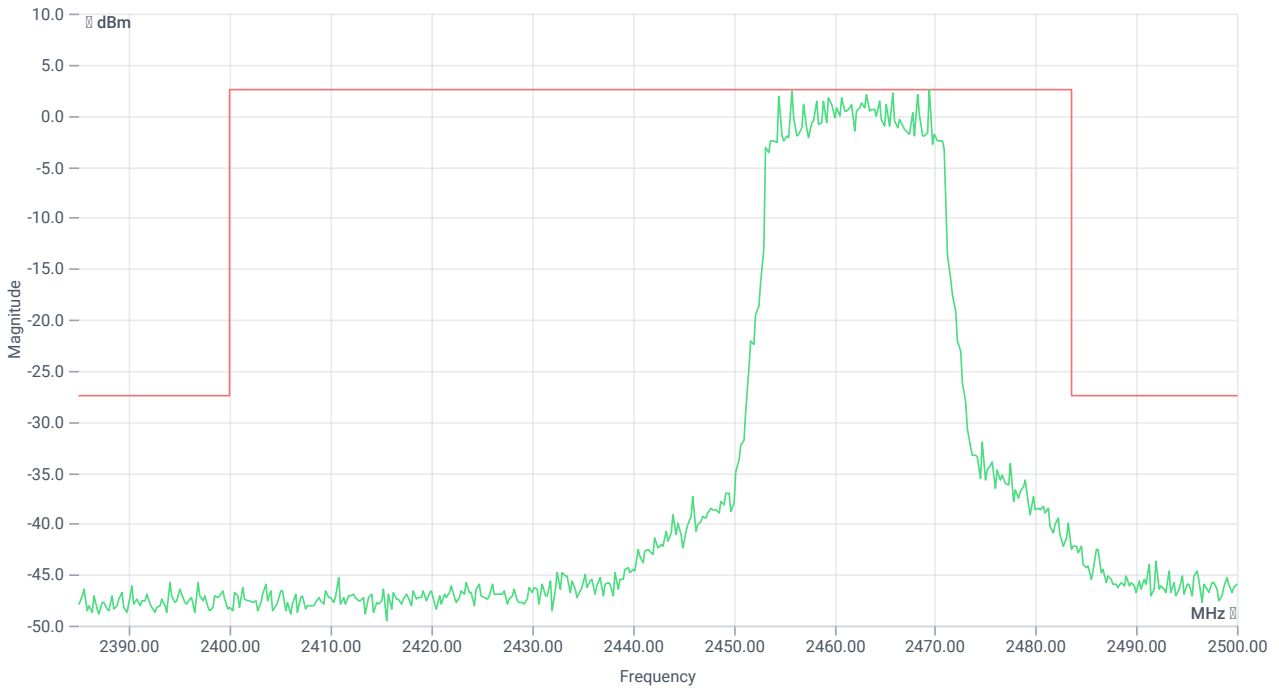
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	11.89	dBm	INFO
Ref. Frequency	--	--	2459.800	MHz	INFO



### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	11.89   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 @ 2469.50 MHz	--	--	2.50	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 23246.25 MHz	0	--	3.48	dB	INFO

Verdict

PASS

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

### References

TC start	15.01.2024 11:25:30
Ambit temp [°C]   humidity [rel%]	21.2   28
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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

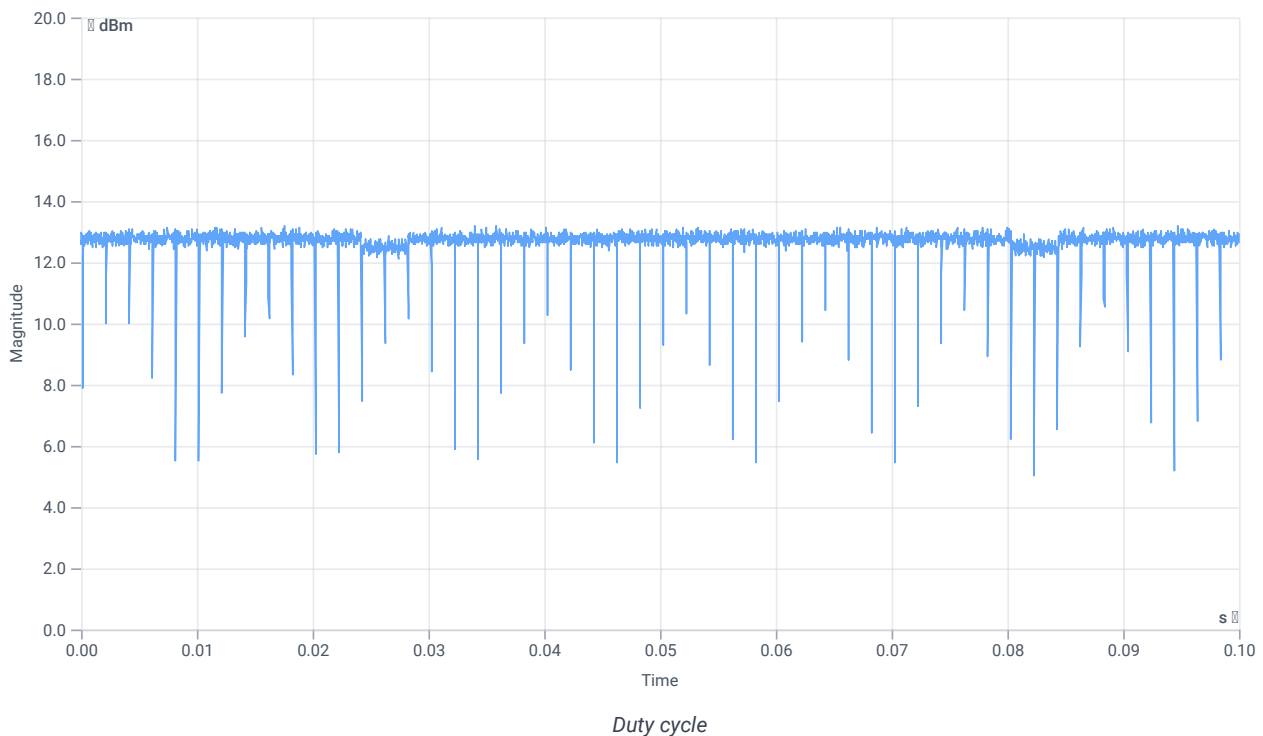
RESULT: Reference Power cond.

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



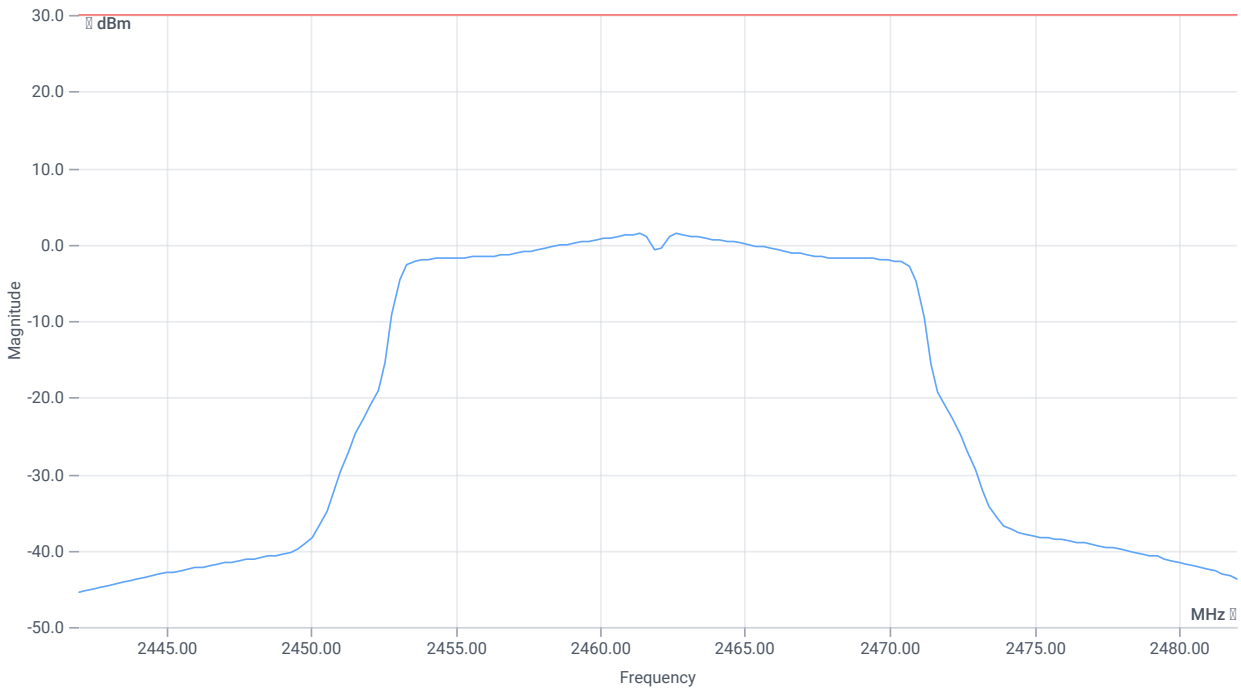
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	23.27   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	--	--	14.71	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	14.71	dBm	PASS

Verdict

PASS



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

### References

TC start	15.01.2024 11:26:46
Ambit temp [°C]   humidity [rel%]	21.3   28
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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.	--	--	15.05	dBm	INFO
Ant:2 Avg power DC corr.	--	--	14.71	dBm	INFO
$\Sigma$ Avg output power DC corr.	--	30	17.89	dBm	PASS

### Verdict

PASS

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

### References

TC start	15.01.2024 11:27:07
Ambit temp [°C]   humidity [rel%]	21.3   28
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 2412
Frequency mid to test	False   Freq [MHz] 2437
Frequency high to test	True   Freq [MHz] 2462
Auto control enabled power supply   Climatic Box	No   No
Additional path loss [dB]	0.7
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	--	--	-18.34	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-18.94	dBm/3kHz	INFO
$\Sigma$ Avg psd DC corr	--	8	-15.62	dBm/3kHz	PASS

Verdict

PASS

## NA # Message with SA scan ~

### References

TC start	16.01.2024 12:11:05
Ambit temp [°C]   humidity [rel%]	23.1   26
System version	4.7.1.5
Standard   Version	NA   NI
Method	
Description	Message with SA Scan n-HT20 mode
Information	ac20-mode

### Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	16.01.2024 12:11:05
Message	set WLAN2G4 to n-HT20 mode, 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 n-HT20 mode

### References

TC start	16.01.2024 12:11:14
Ambit temp [°C]   humidity [rel%]	23.1   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

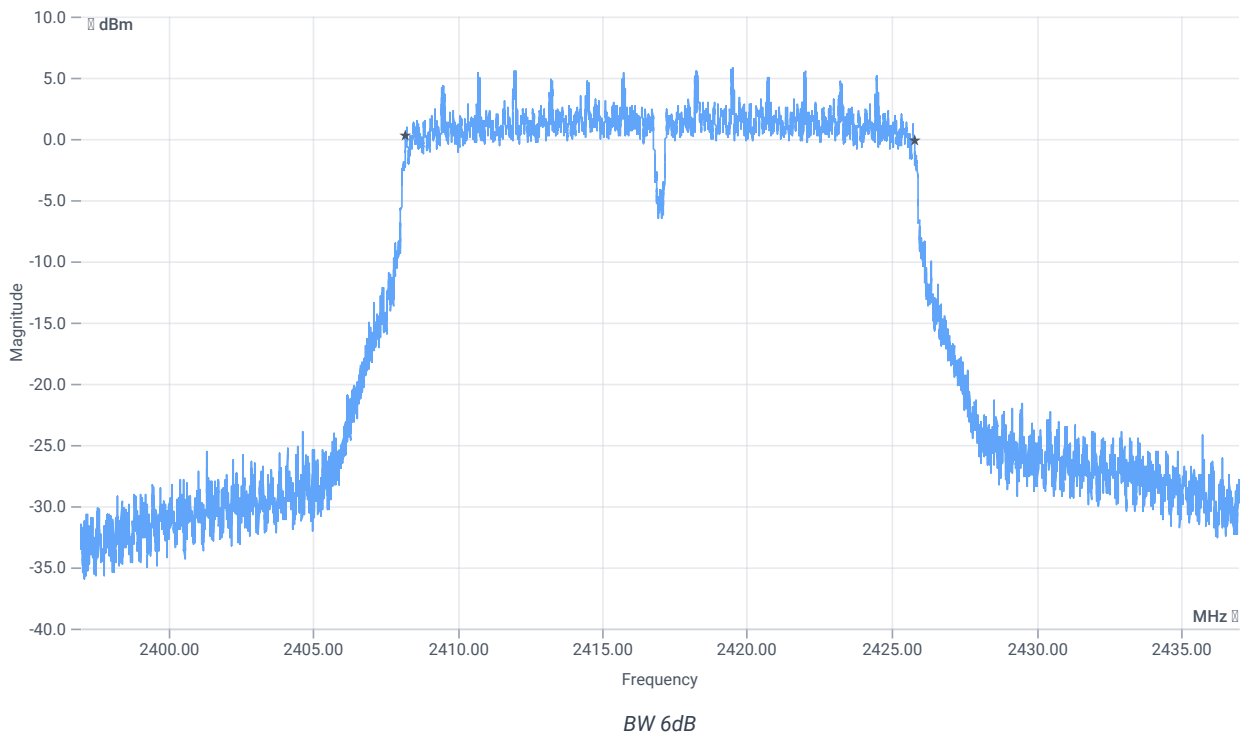
## Test at TX 2417 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.43	dBm	INFO
Ref. Frequency	--	--	2418.100	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]	0.100000   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	--	17572	kHz	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:11:47
Ambit temp [°C]   humidity [rel%]	23.1   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

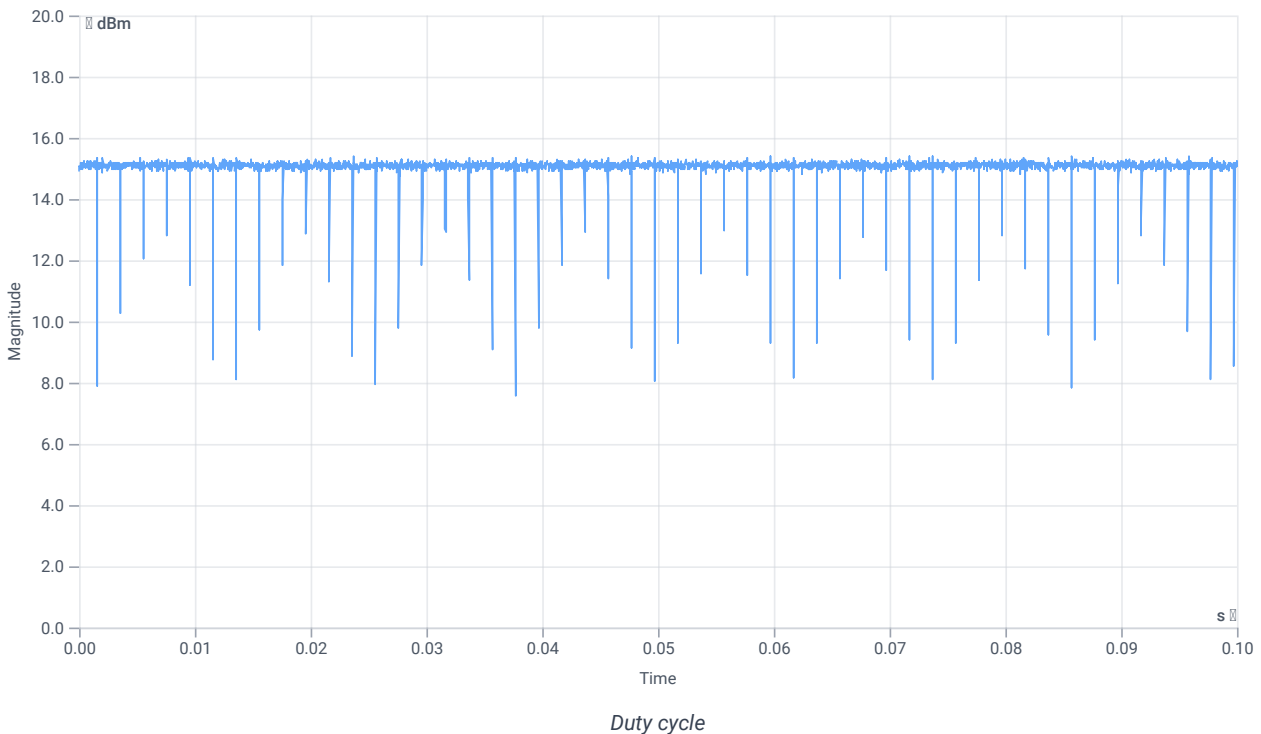
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.65	dBm	INFO
Ref. Frequency	--	--	2419.200	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



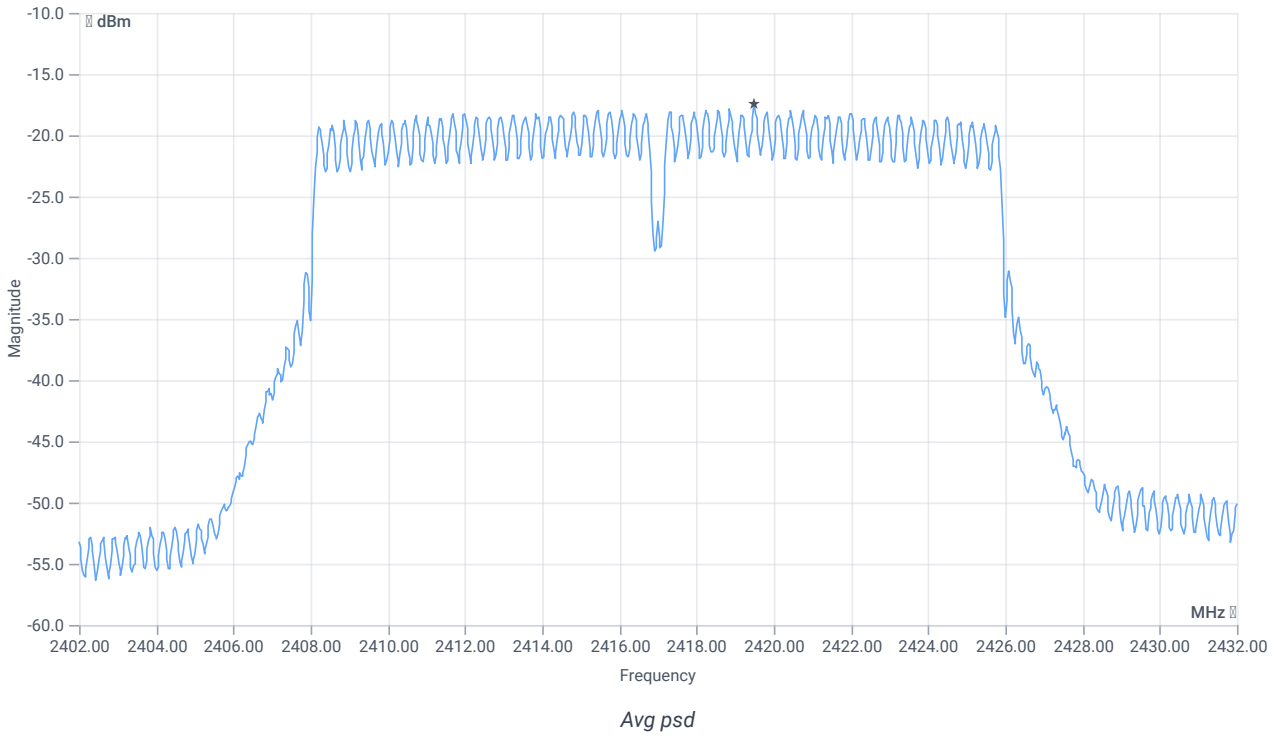
## Avg. psd

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.65   13.88   20
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	--	--	-17.49	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-17.49	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	16.01.2024 12:12:51
Ambit temp [°C]   humidity [rel%]	23.0   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

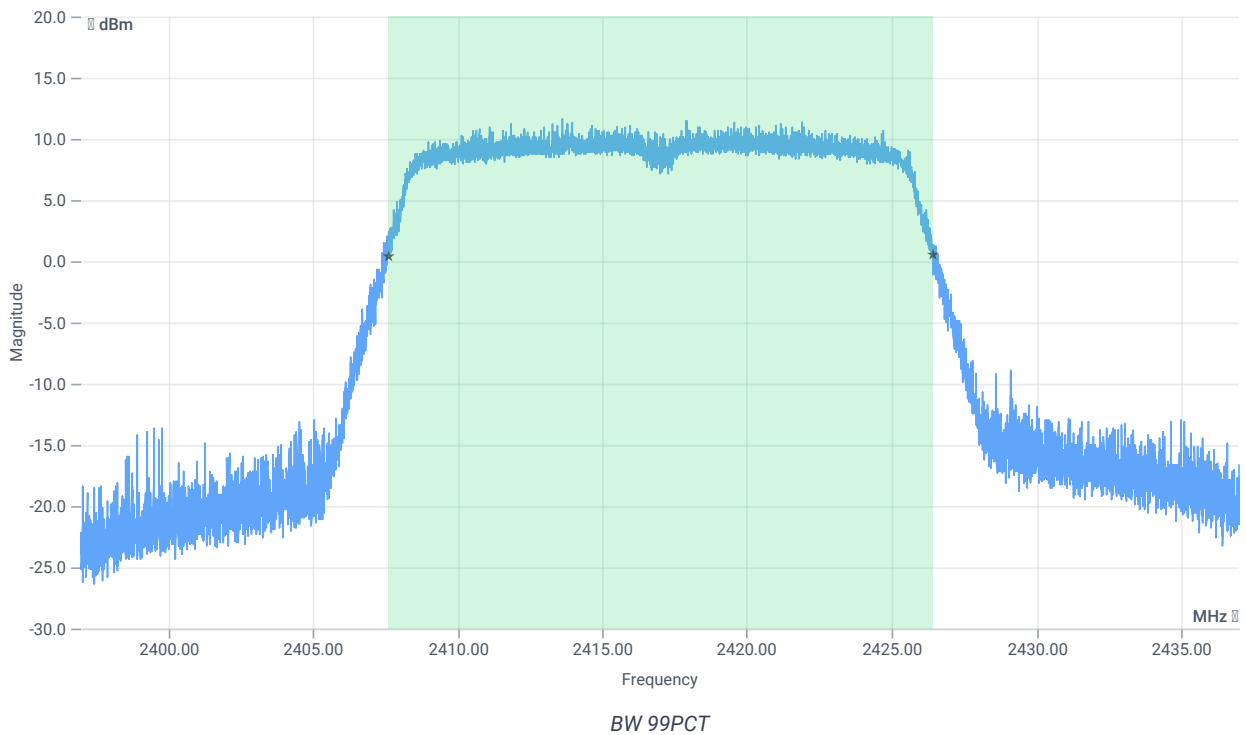
## Test at TX 2417 MHz

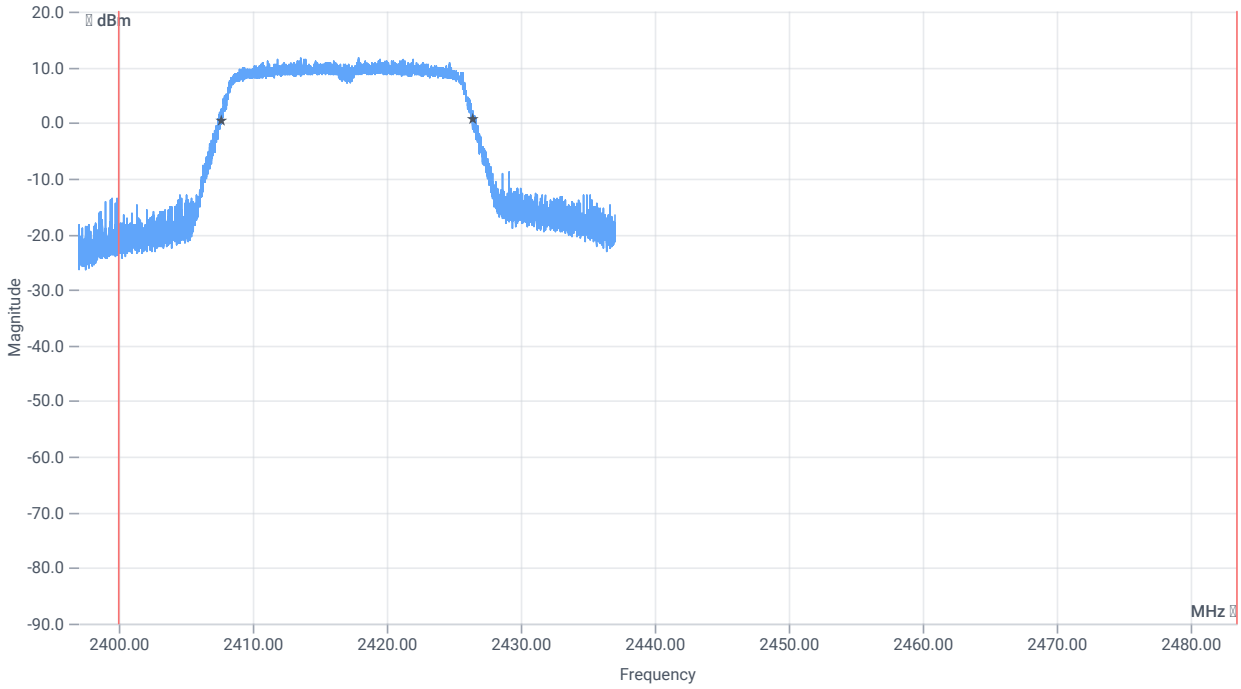
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.47	dBm	INFO
Ref. Frequency	--	--	2412.900	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.47   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

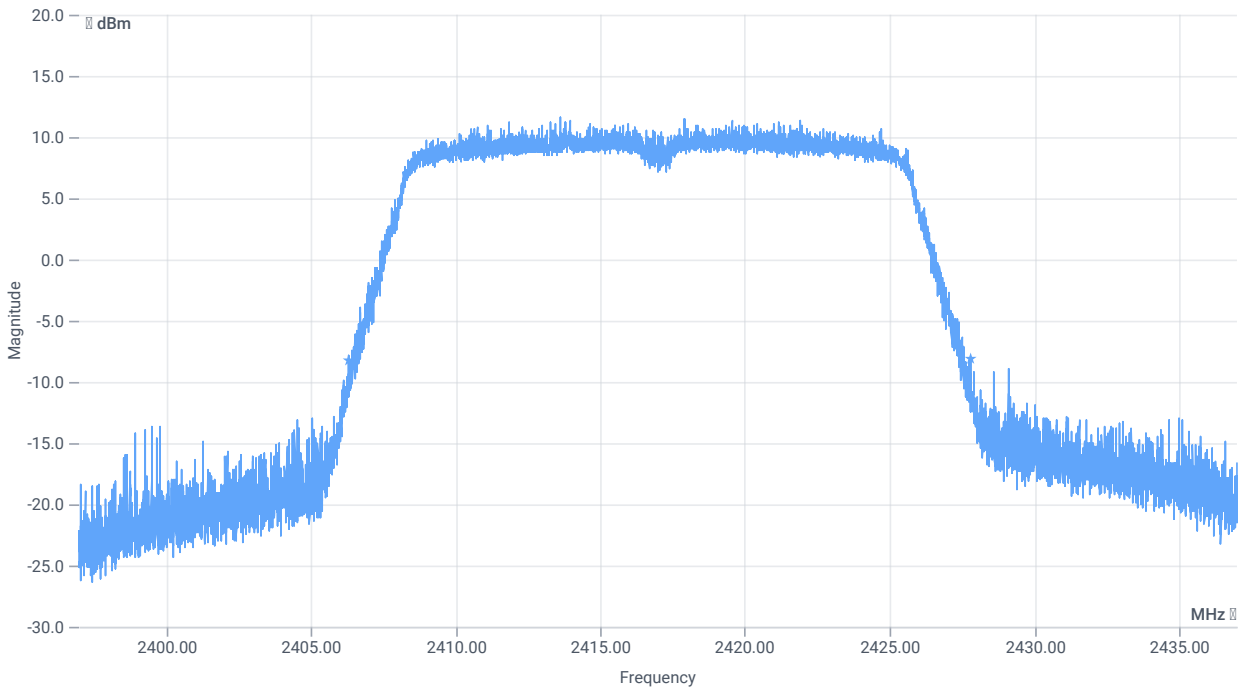




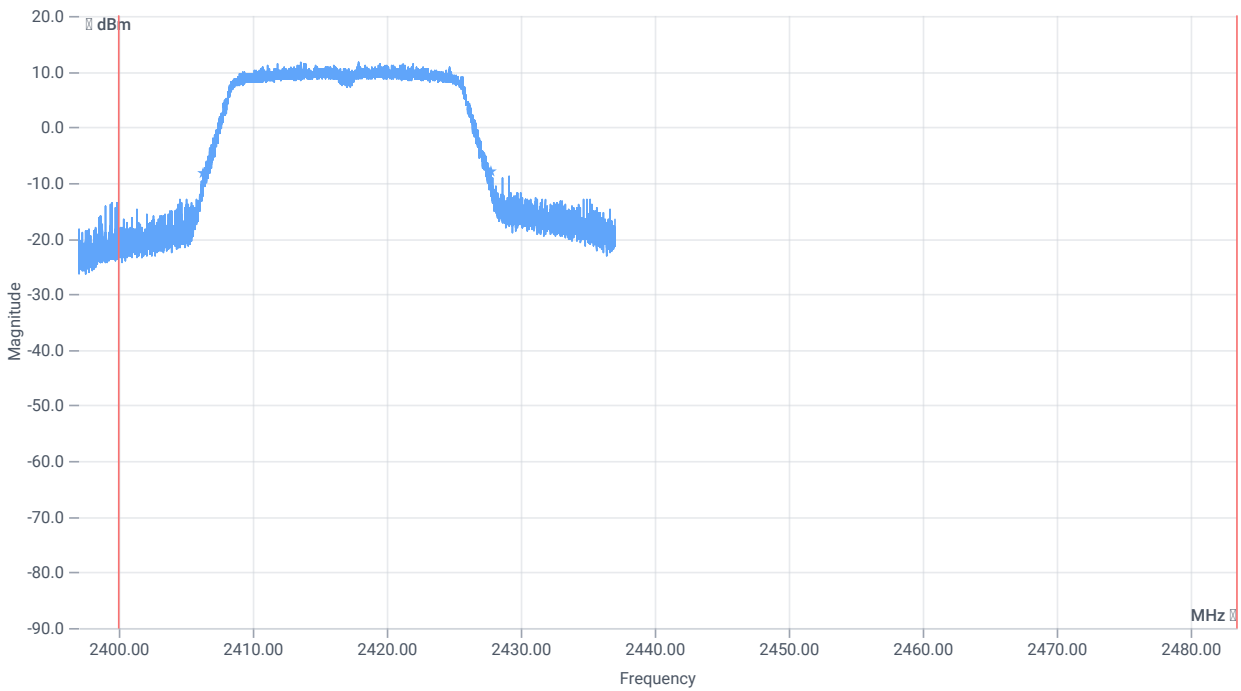
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18814.000	kHz	INFO
T1 99%	2400.000000	--	2407.6409	MHz	PASS
T2 99%	--	2483.500000	2426.4551	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21468	kHz	INFO
T1 20DB	2400.000000	--	2406.3160	MHz	PASS
T2 20dB	--	2483.500000	2427.7840	MHz	PASS

Verdict

PASS

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

## References

TC start	16.01.2024 12:13:30
Ambit temp [°C]   humidity [rel%]	23.0   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

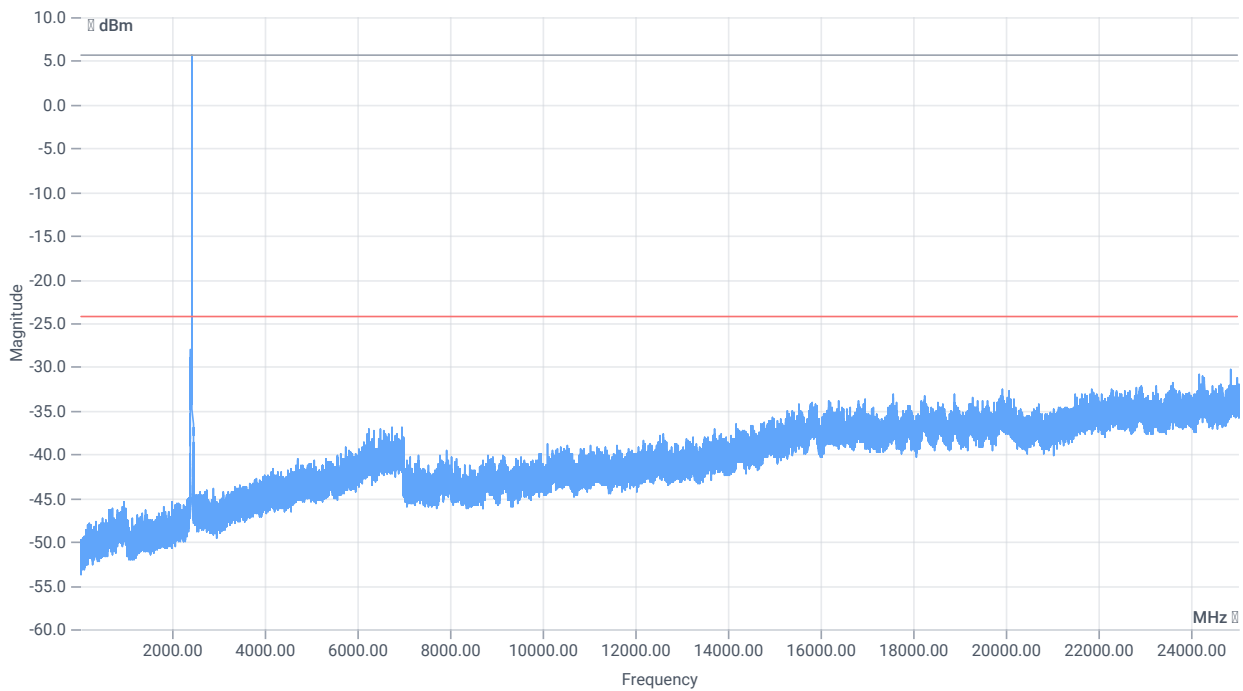
## Equipment

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	--	--	2415.500	MHz	INFO

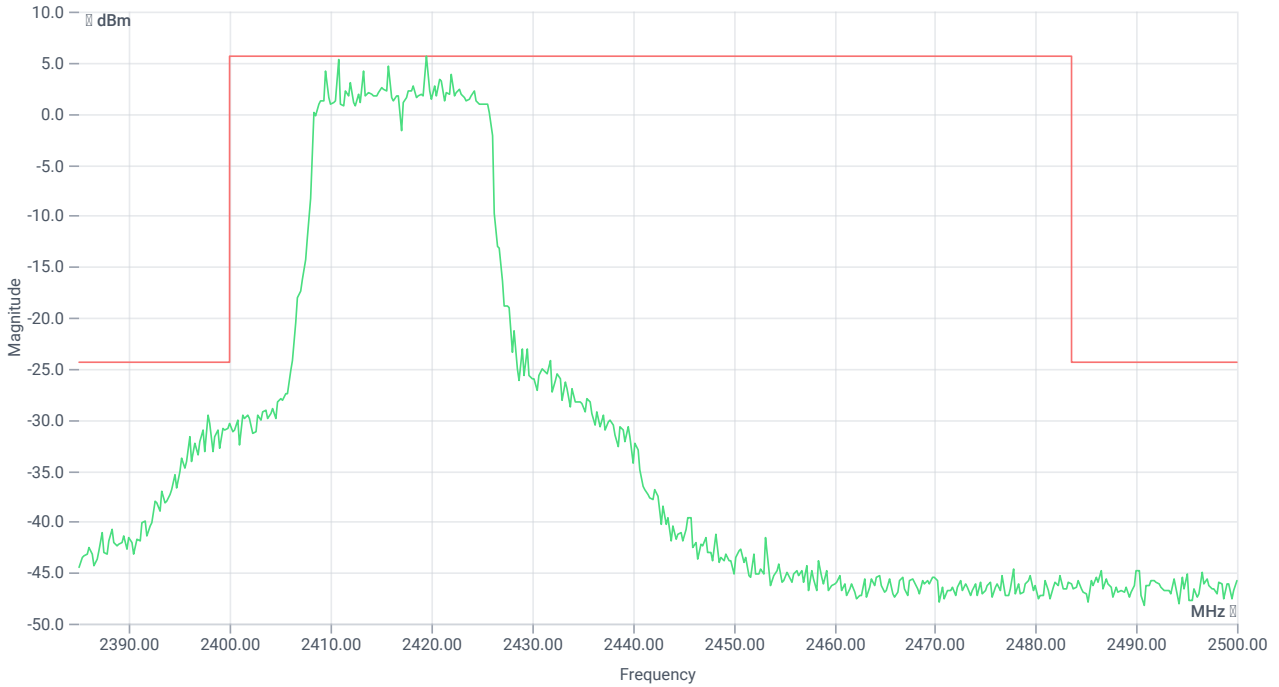


TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	13.43   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 @ 2419.50 MHz	--	--	5.67	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 30 MHz	0	--	-148.07	dB	INFO

Verdict

PASS

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

### References

TC start	16.01.2024 12:20:14
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

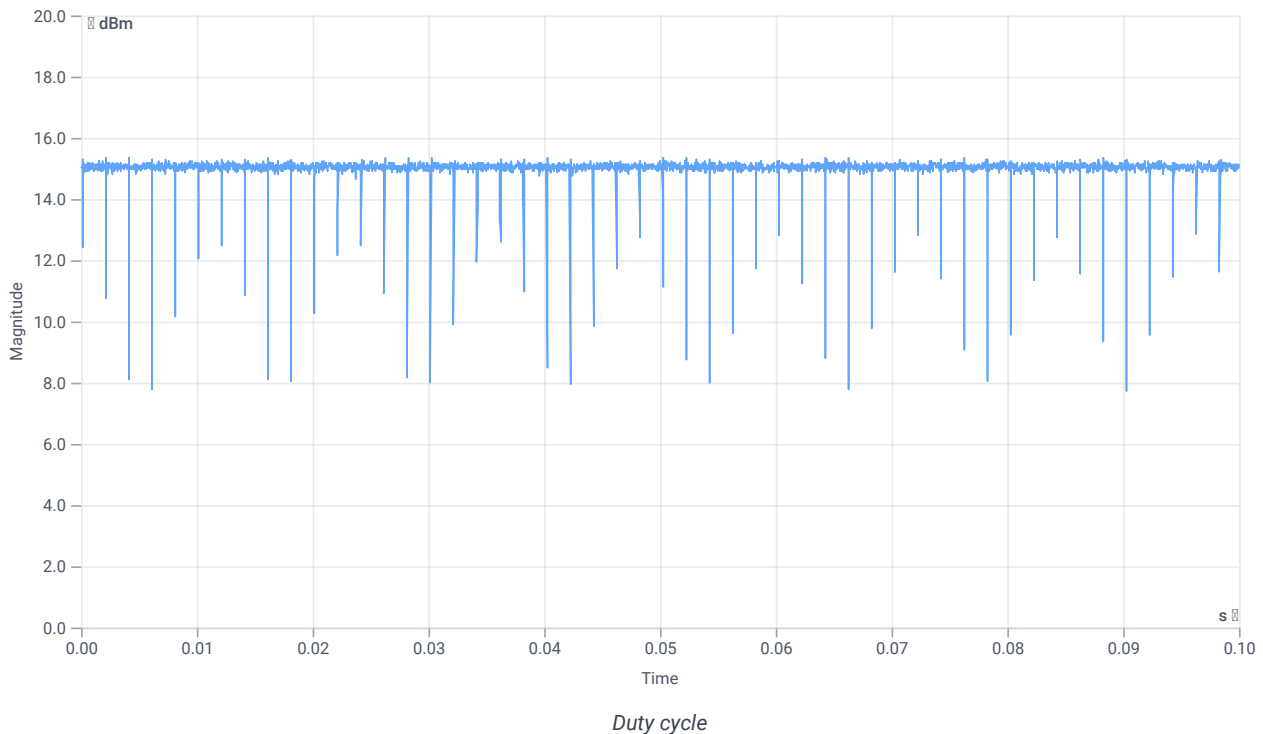
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.30	dBm	INFO
Ref. Frequency	--	--	2412.300	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



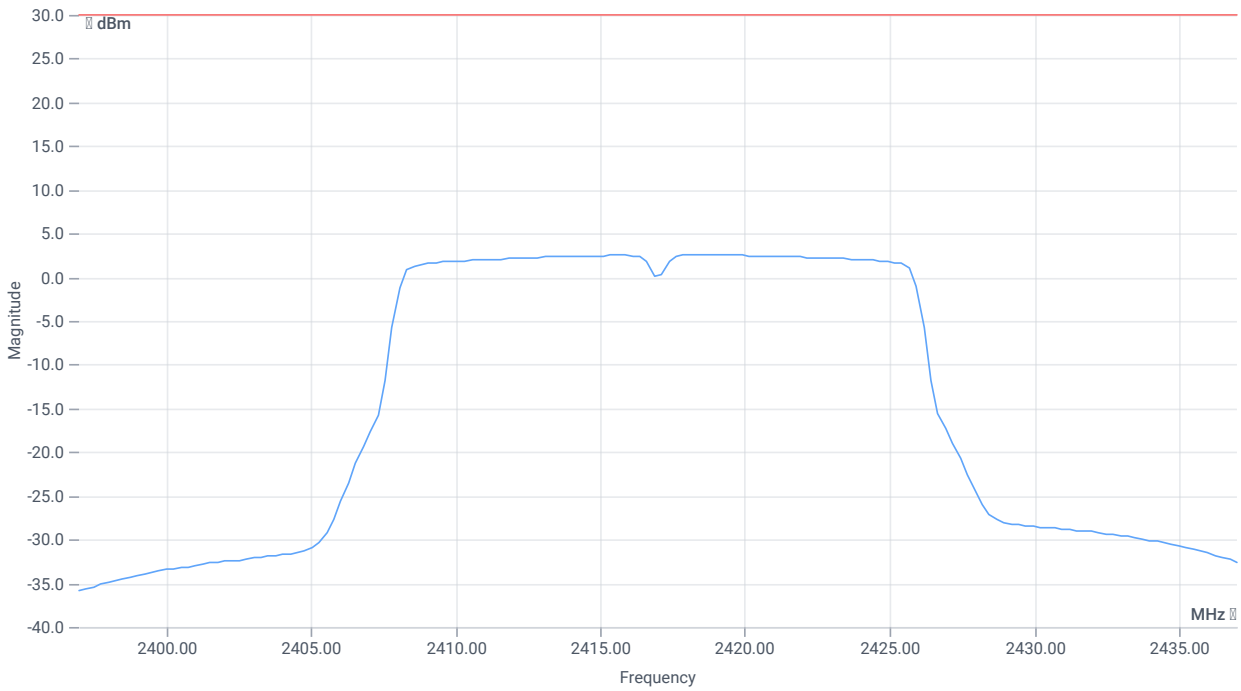
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	23.30   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	--	--	17.37	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	17.37	dBm	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:21:29
Ambit temp [°C]   humidity [rel%]	23.0   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

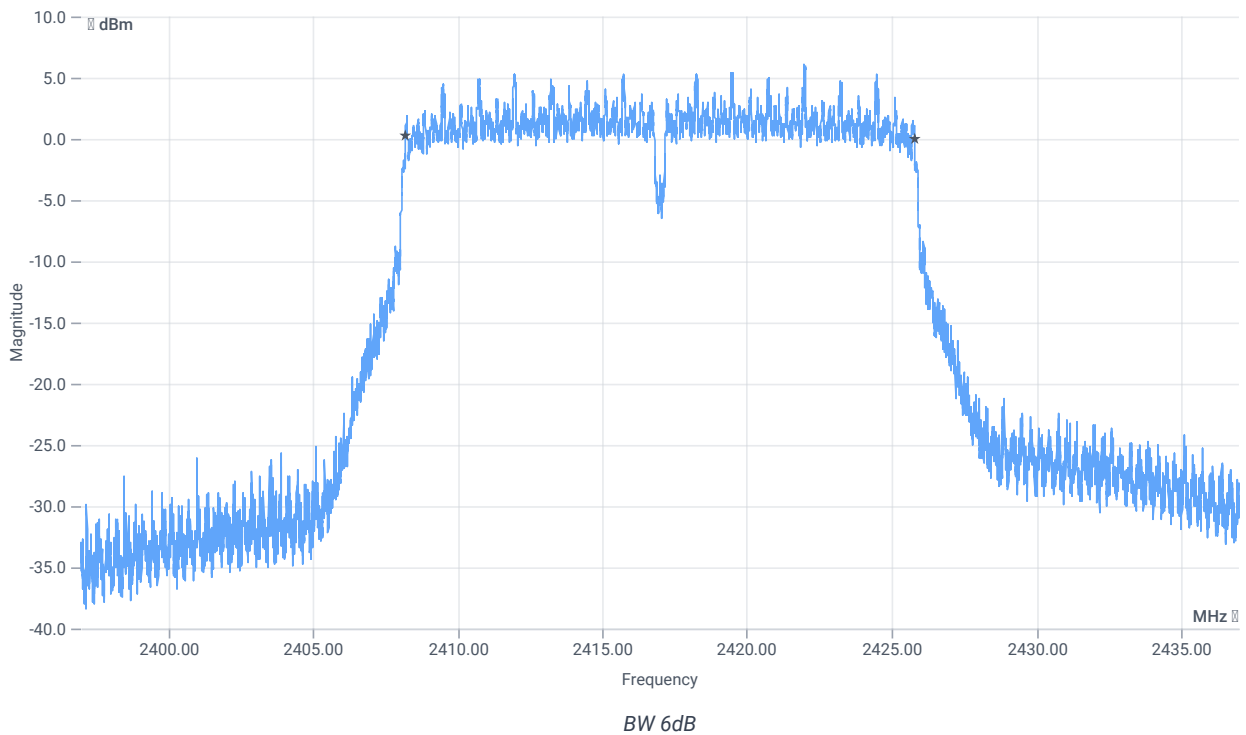
## Test at TX 2417 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.08	dBm	INFO
Ref. Frequency	--	--	2422.090	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.08   13.88   25
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	--	17580	kHz	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:22:02
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 11.10.5 or.3
Description	FCC 15.247 Avg psd DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

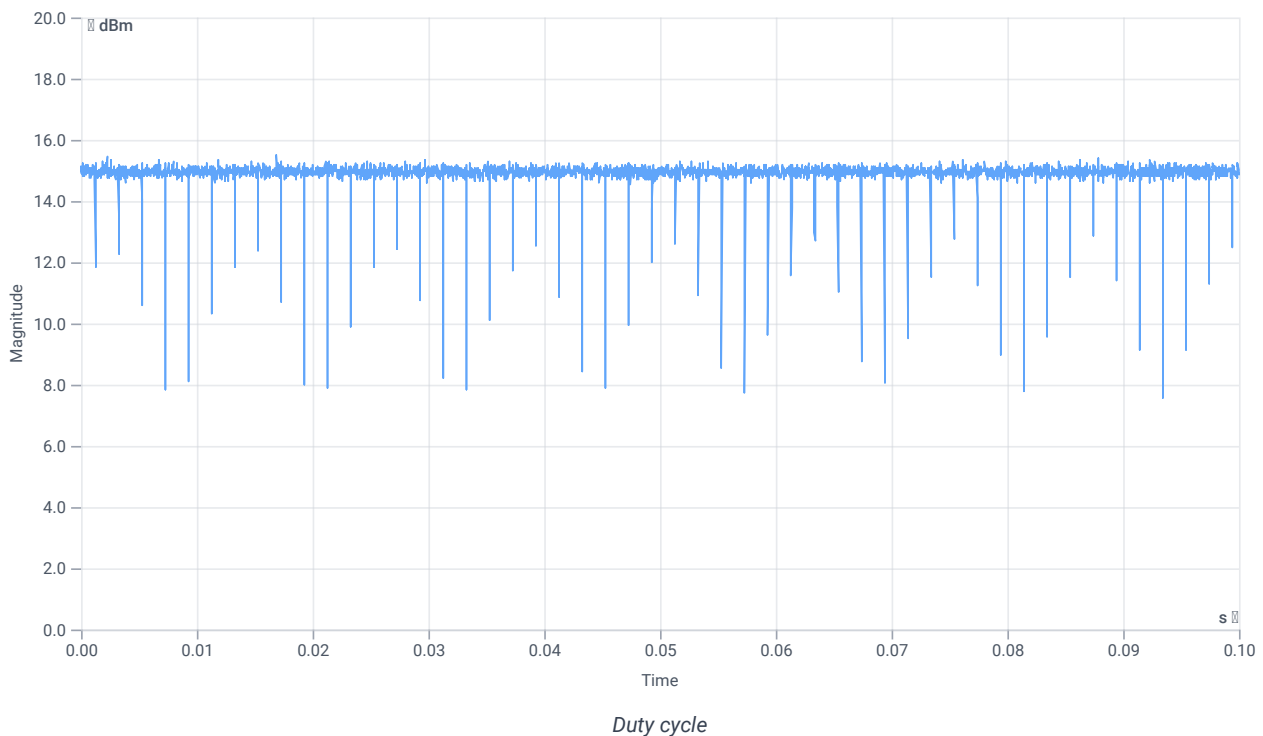
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.06	dBm	INFO
Ref. Frequency	--	--	2415.900	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

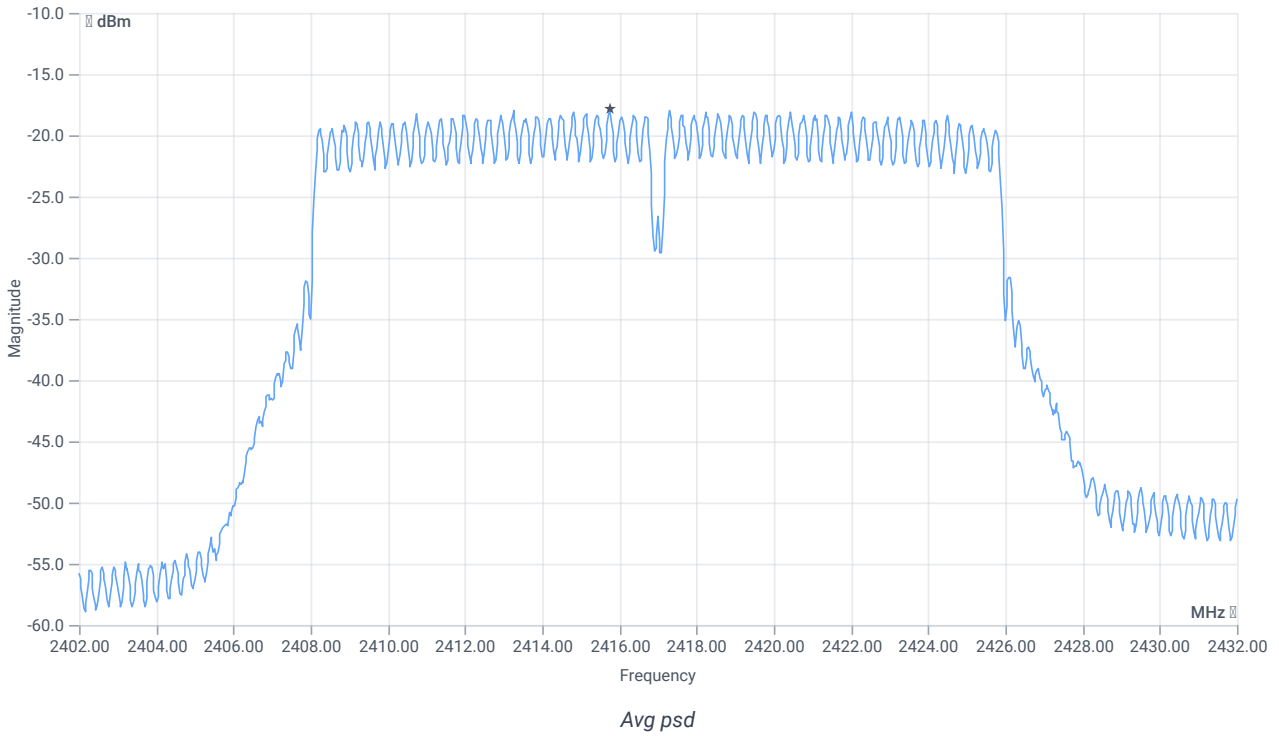
### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.06   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	--	--	-17.85	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-17.85	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	16.01.2024 12:23:07
Ambit temp [°C]   humidity [rel%]	23.0   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

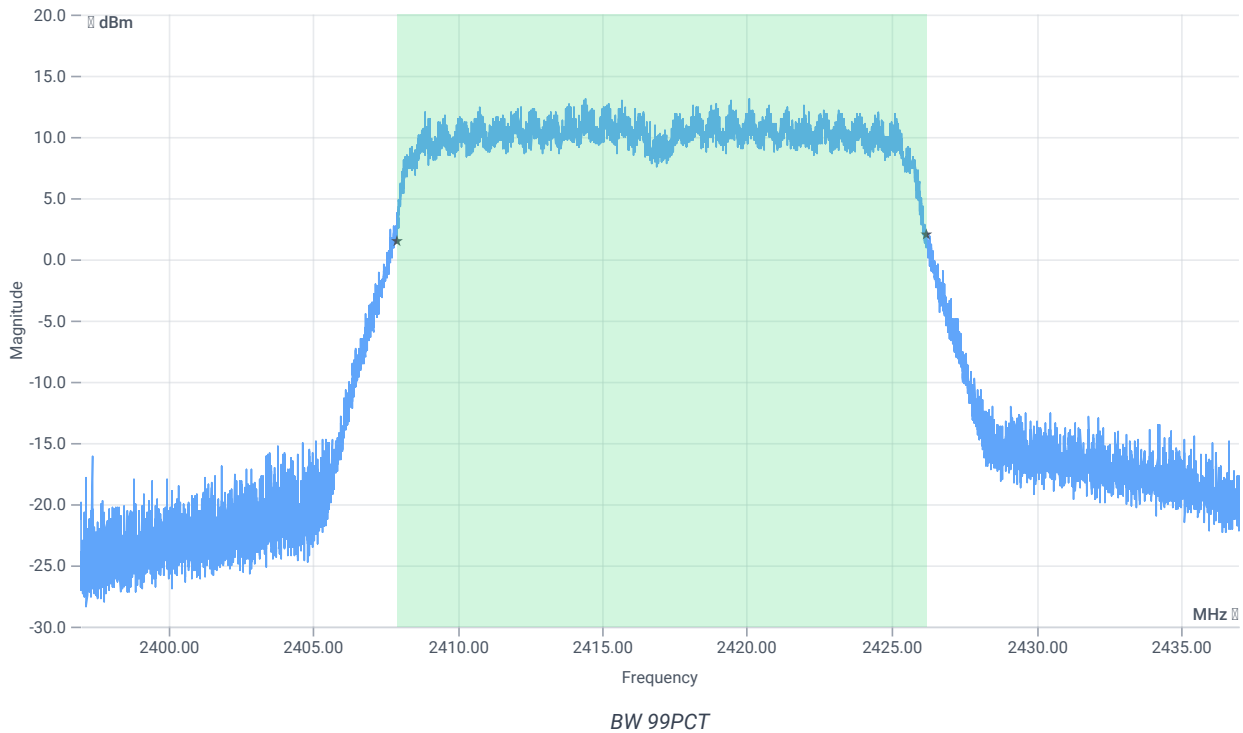
## Test at TX 2417 MHz

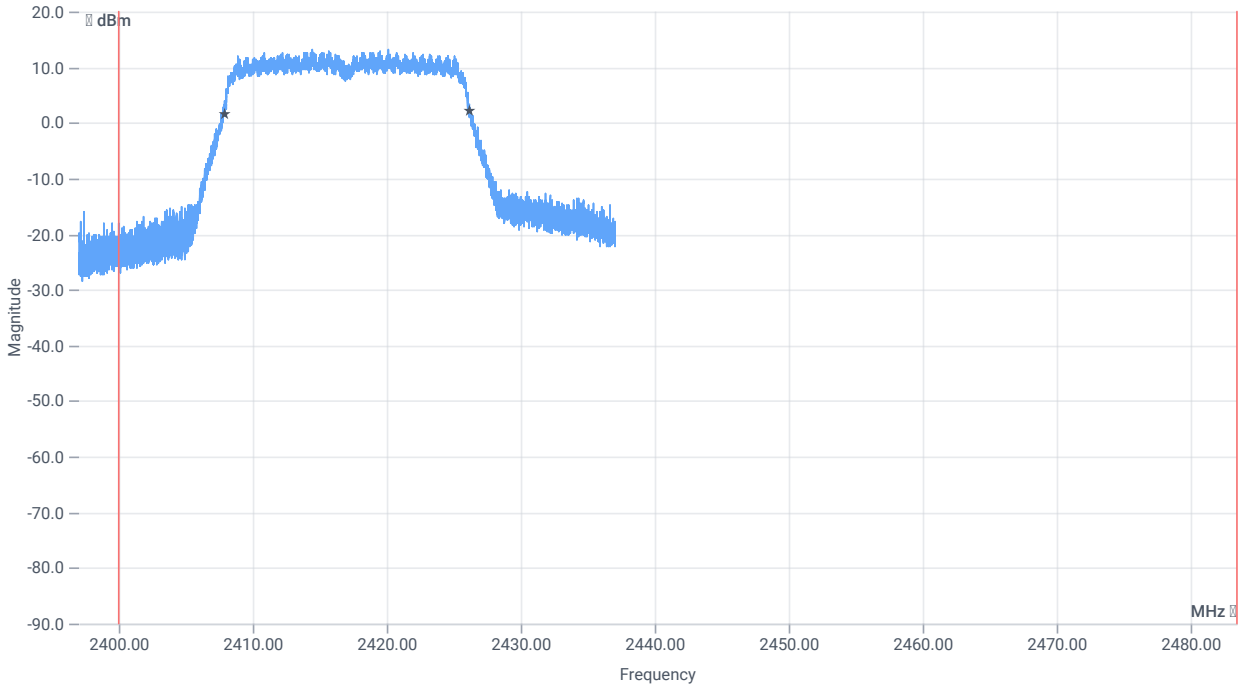
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.07	dBm	INFO
Ref. Frequency	--	--	2418.500	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.07   13.88   25
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

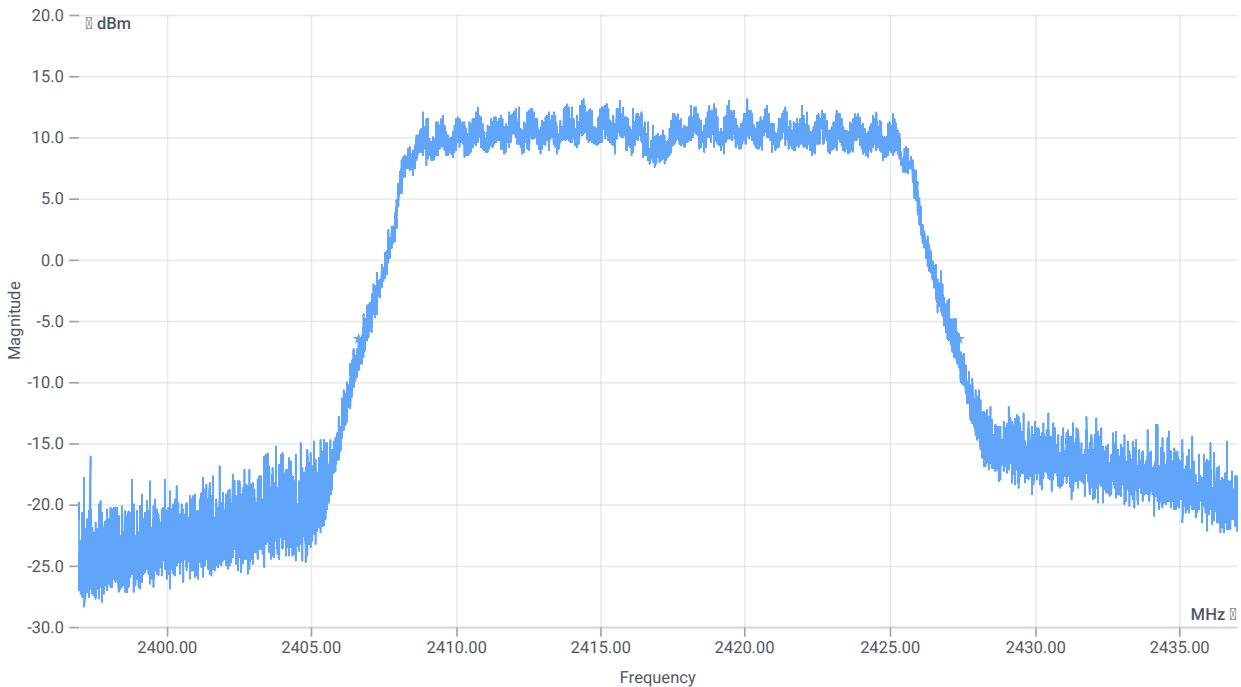




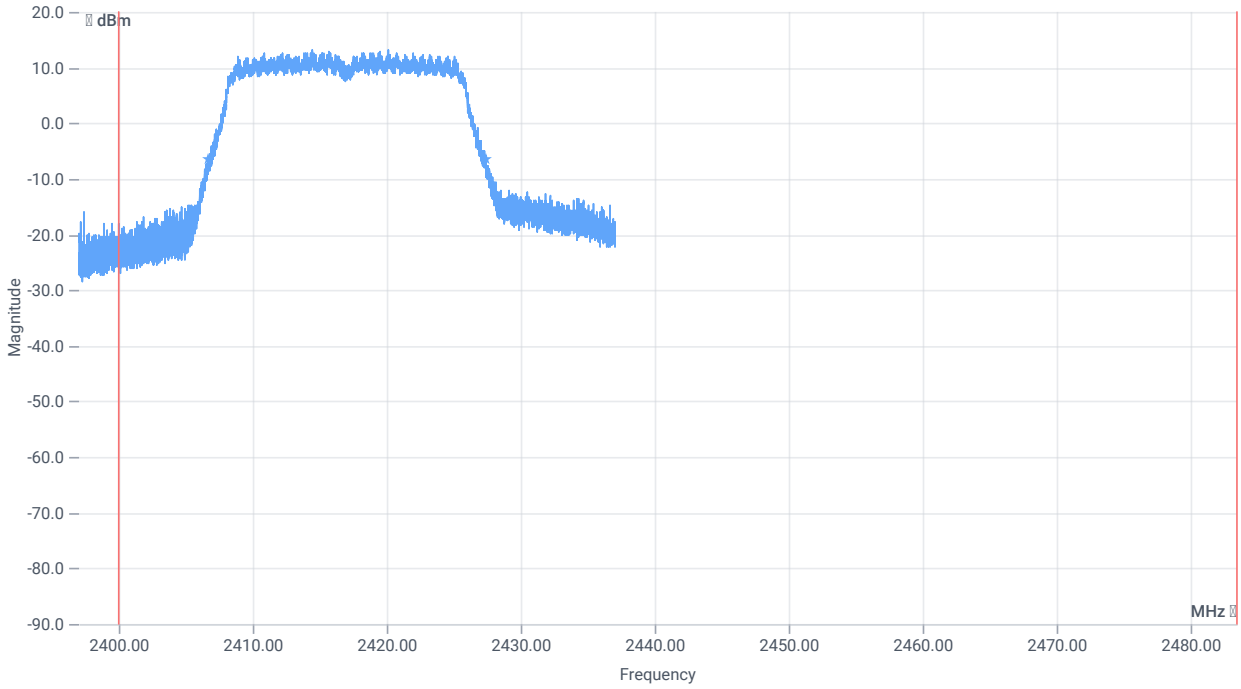
BW within Band 99PCT

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18282.000	kHz	INFO
T1 99%	2400.000000	--	2407.9009	MHz	PASS
T2 99%	--	2483.500000	2426.1831	MHz	PASS



BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20752	kHz	INFO
T1 20DB	2400.000000	--	2406.6640	MHz	PASS
T2 20dB	--	2483.500000	2427.4160	MHz	PASS

Verdict

PASS

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

## References

TC start	16.01.2024 12:23:45
Ambit temp [°C]   humidity [rel%]	23.0   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

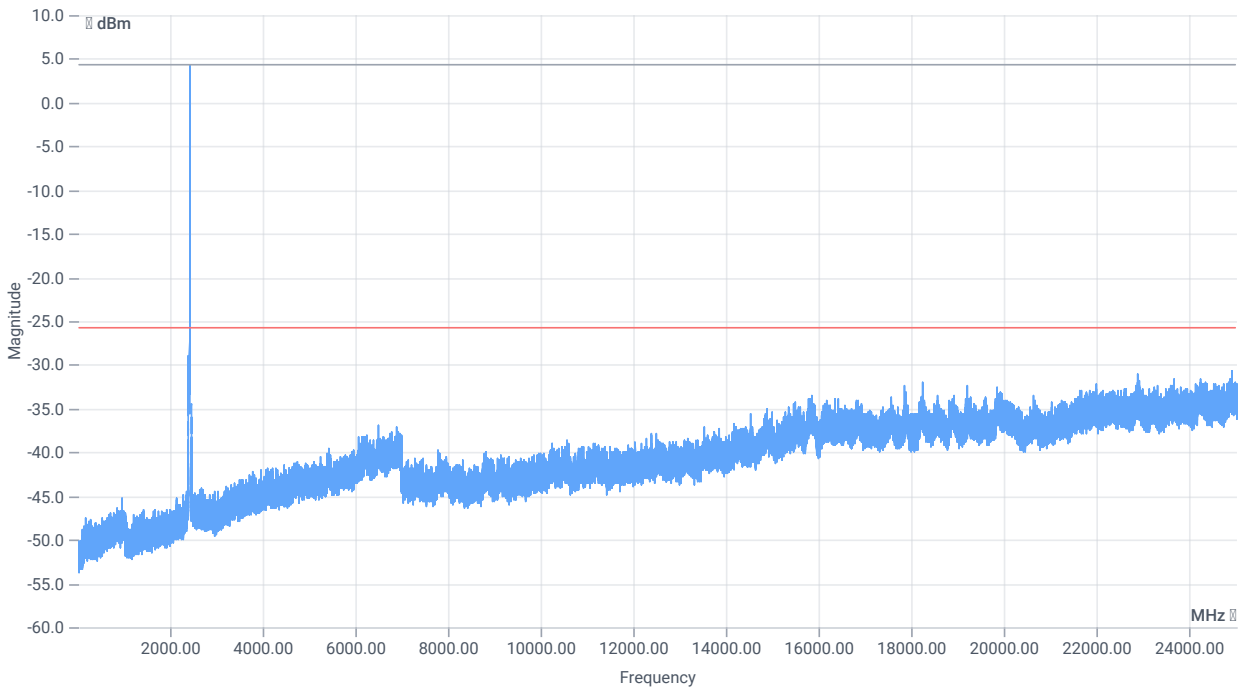
## Equipment

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.

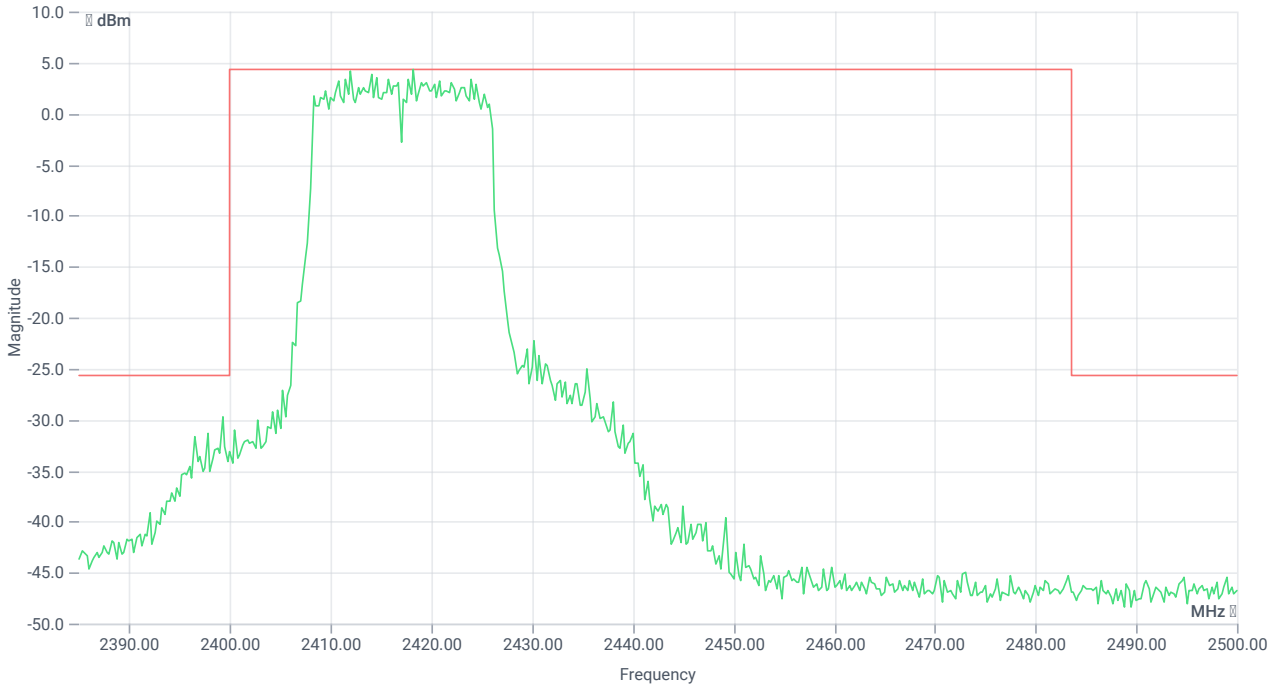
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.34	dBm	INFO
Ref. Frequency	--	--	2415.100	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	14.34   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 @ 2418.25 MHz	--	--	4.27	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 2399.25 MHz	0	--	4.04	dB	INFO

Verdict

PASS



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

### References

TC start	16.01.2024 12:30:29
Ambit temp [°C]   humidity [rel%]	23.1   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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

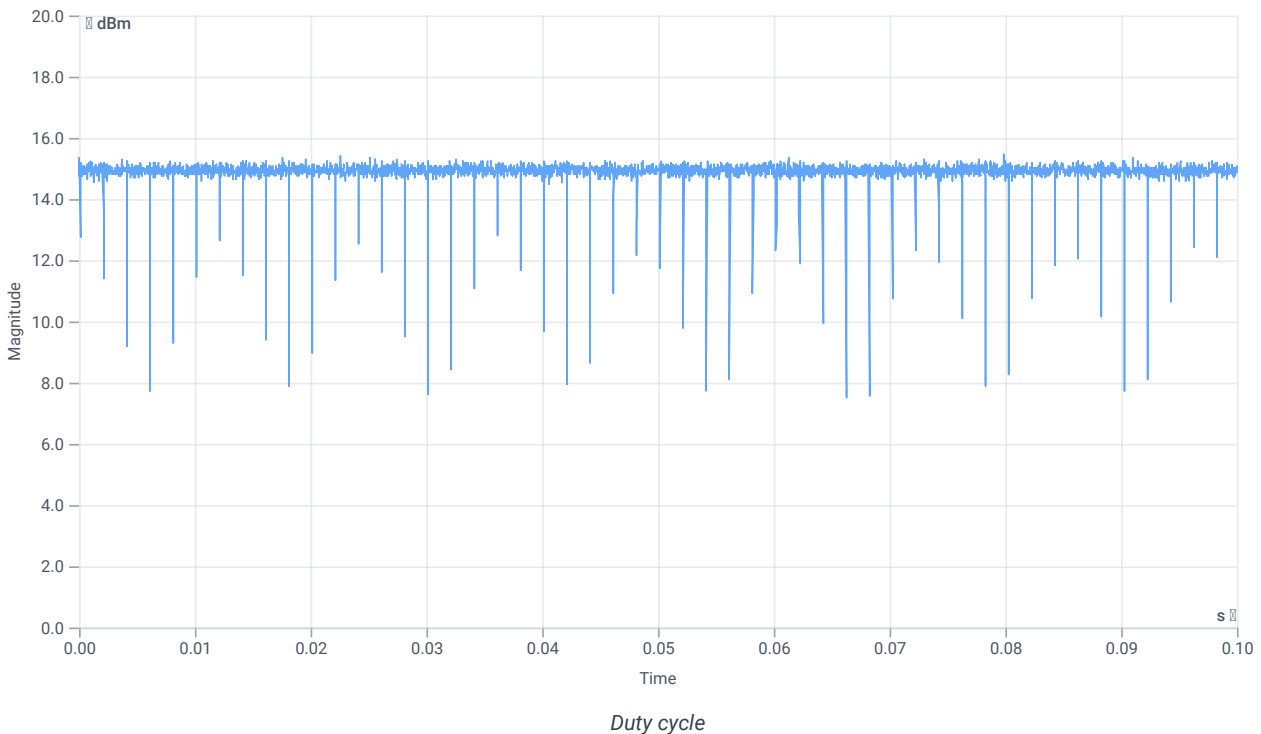
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	15.12	dBm	INFO
Ref. Frequency	--	--	2419.000	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



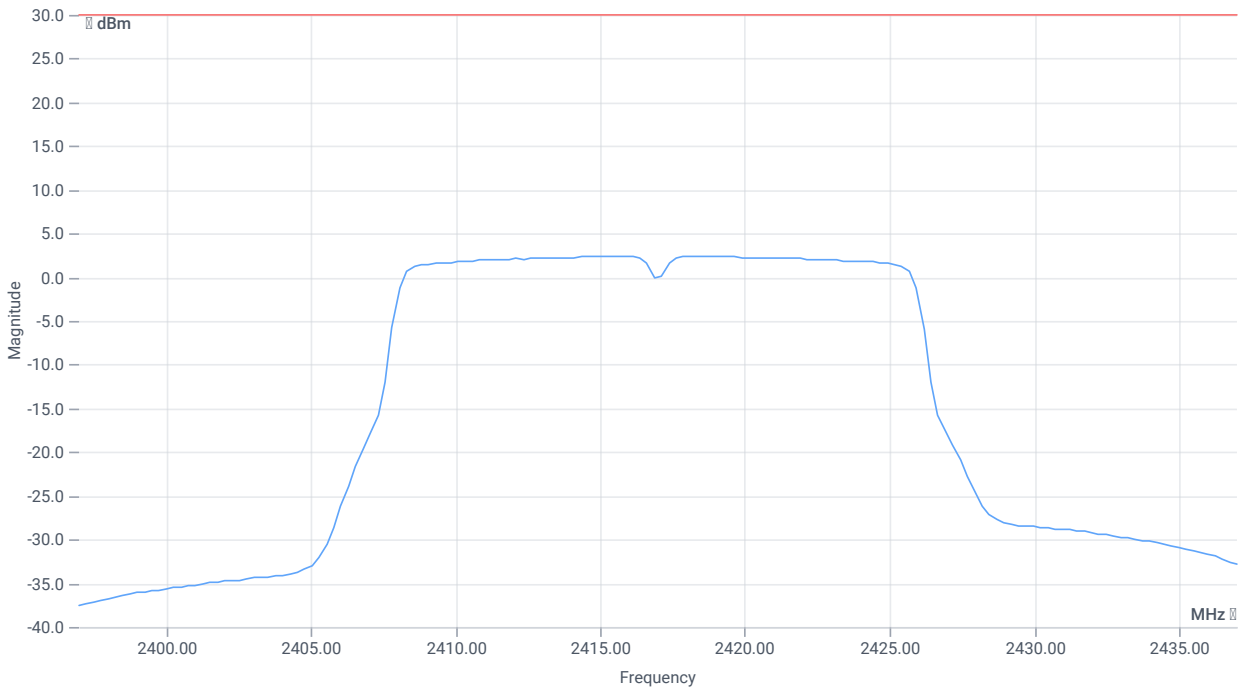
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	25.12   13.88   30
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	--	--	17.21	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	17.21	dBm	PASS

Verdict

PASS

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

## References

TC start	16.01.2024 12:31:44
Ambit temp [°C]   humidity [rel%]	23.1   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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.	--	--	17.37	dBm	INFO
Ant:2 Avg power DC corr.	--	--	17.21	dBm	INFO
$\Sigma$ Avg output power DC corr.	--	30	20.3	dBm	PASS

### Verdict

PASS

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

### References

TC start	16.01.2024 12:36:48
Ambit temp [°C]   humidity [rel%]	23.1   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 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	--	--	-17.49	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-17.85	dBm/3kHz	INFO
$\Sigma$ Avg psd DC corr	--	8	-14.66	dBm/3kHz	PASS

Verdict

PASS

## NA # Message with SA scan ~

### References

TC start	16.01.2024 12:37:00
Ambit temp [°C]   humidity [rel%]	23.1   26
System version	4.7.1.5
Standard   Version	NA   NI
Method	
Description	Message with SA Scan n-HT20 mode
Information	ac20-mode

### Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	16.01.2024 12:37:01
Message	set WLAN2G4 to n-HT20 mode, 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 n-HT20 mode

### References

TC start	16.01.2024 12:38:16
Ambit temp [°C]   humidity [rel%]	23.1   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

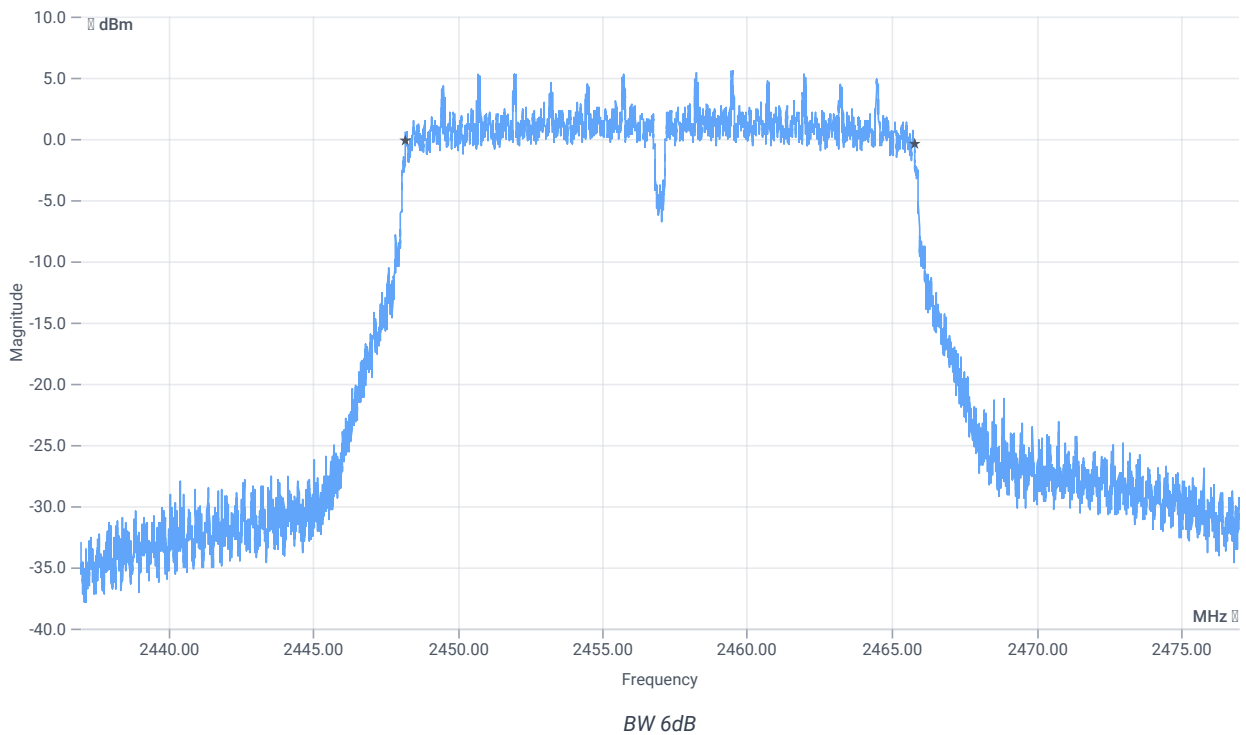
## Test at TX 2457 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.29	dBm	INFO
Ref. Frequency	--	--	2455.700	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.29   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	--	17564	kHz	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:38:52
Ambit temp [°C]   humidity [rel%]	23.1   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

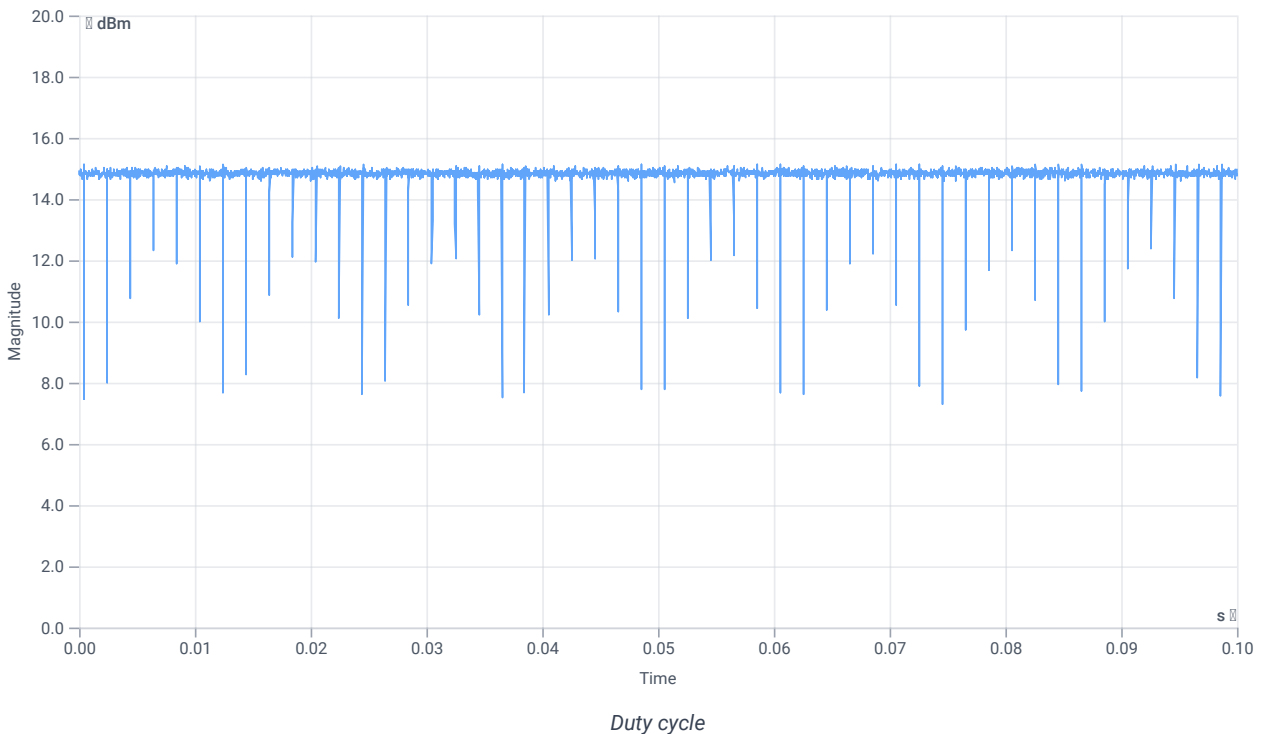
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.84	dBm	INFO
Ref. Frequency	--	--	2459.200	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



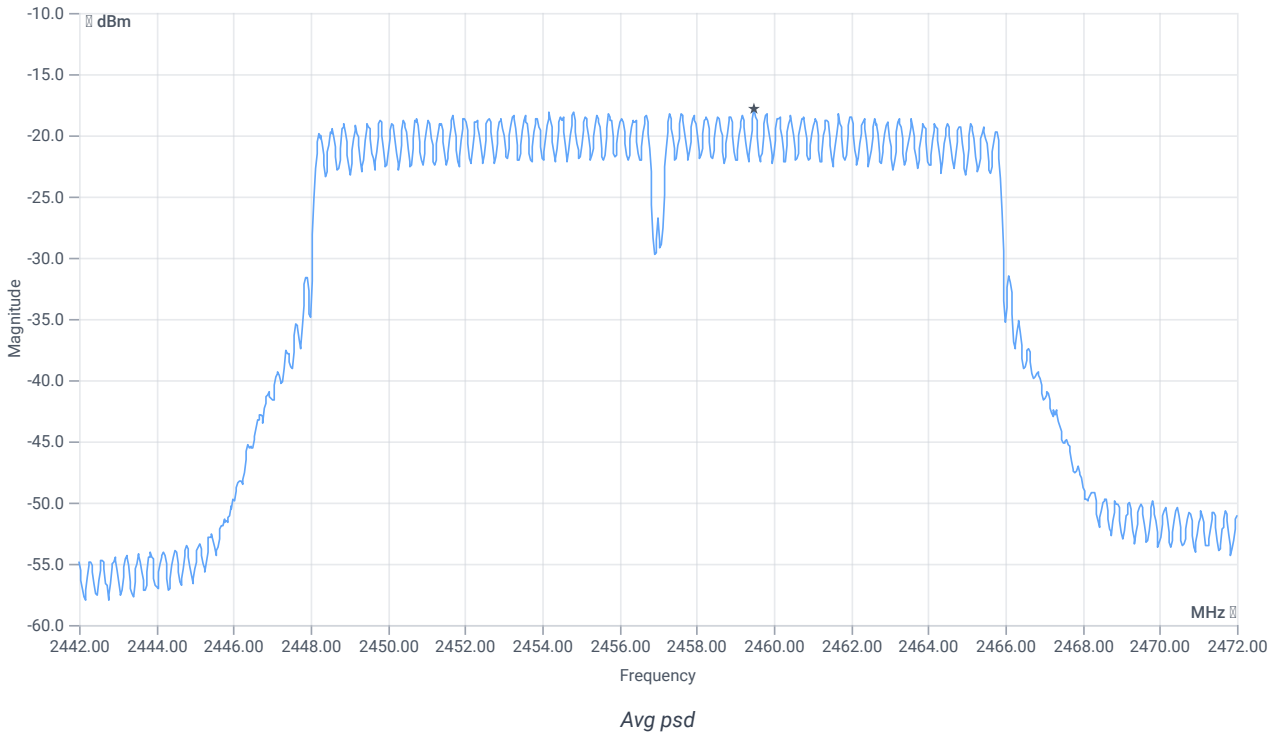
## Avg. psd

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.84   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	--	--	-17.79	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-17.79	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	16.01.2024 12:39:55
Ambit temp [°C]   humidity [rel%]	23.1   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

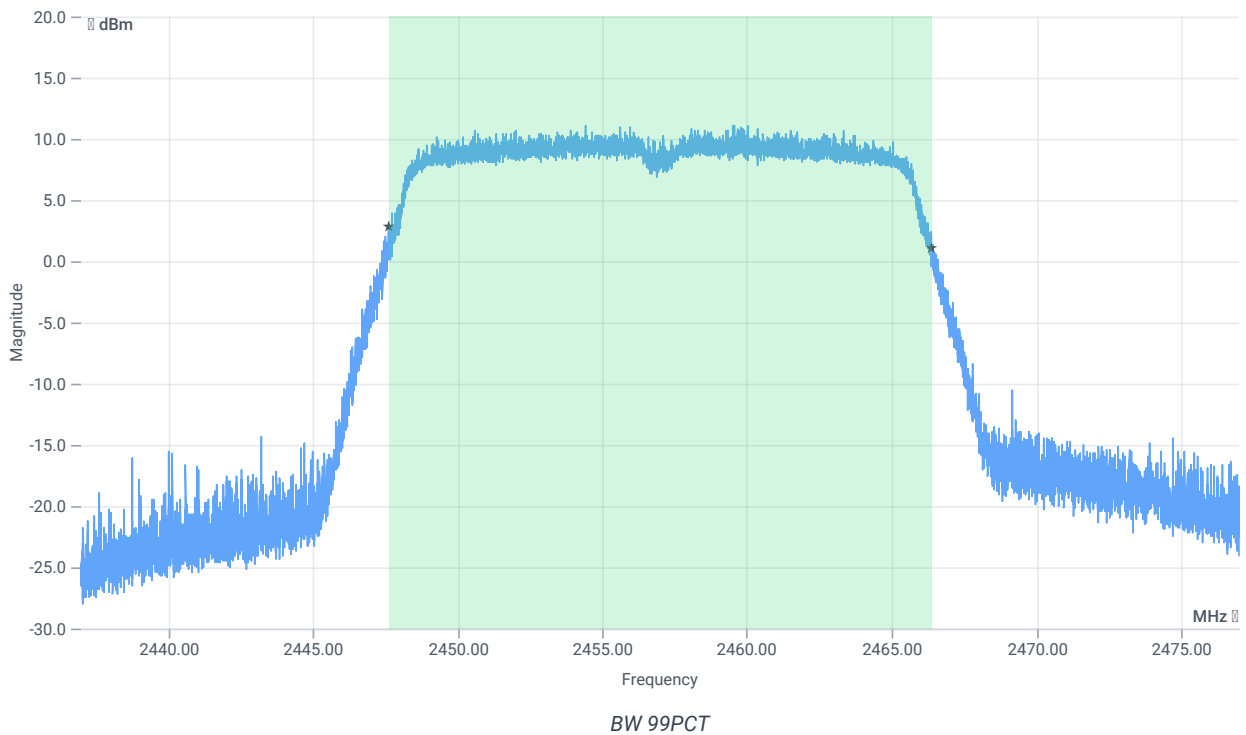
## Test at TX 2457 MHz

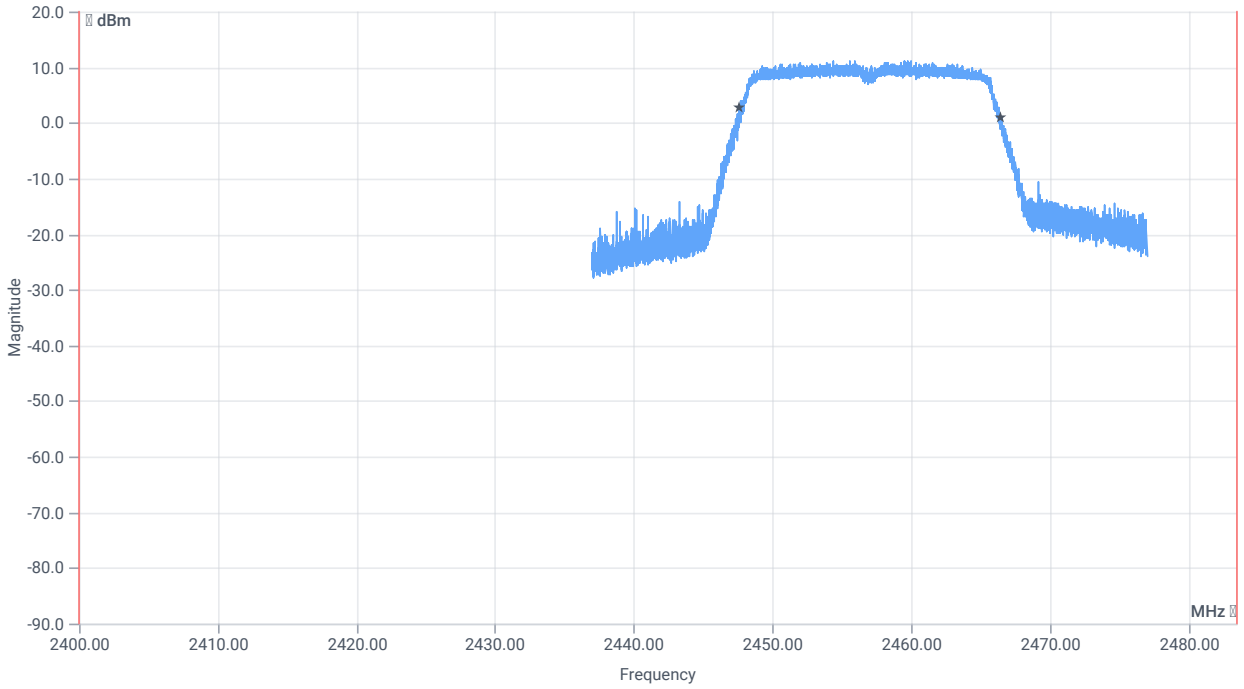
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.44	dBm	INFO
Ref. Frequency	--	--	2458.400	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.44   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

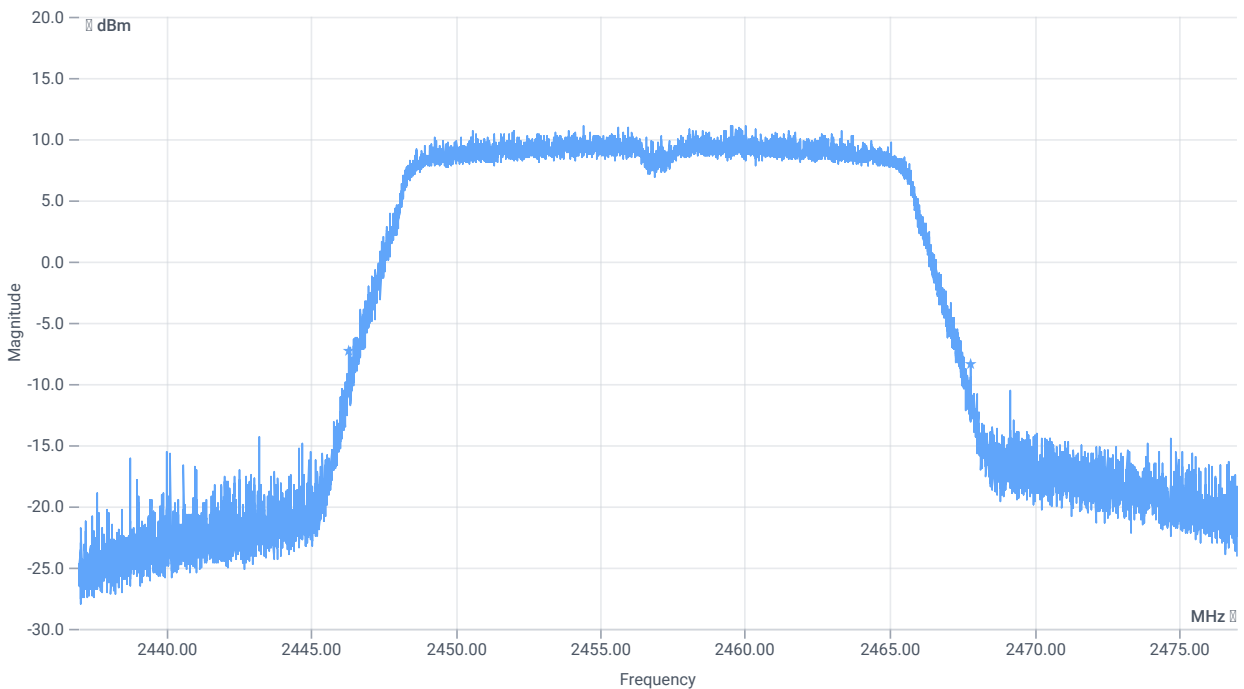




*BW within Band 99PCT*

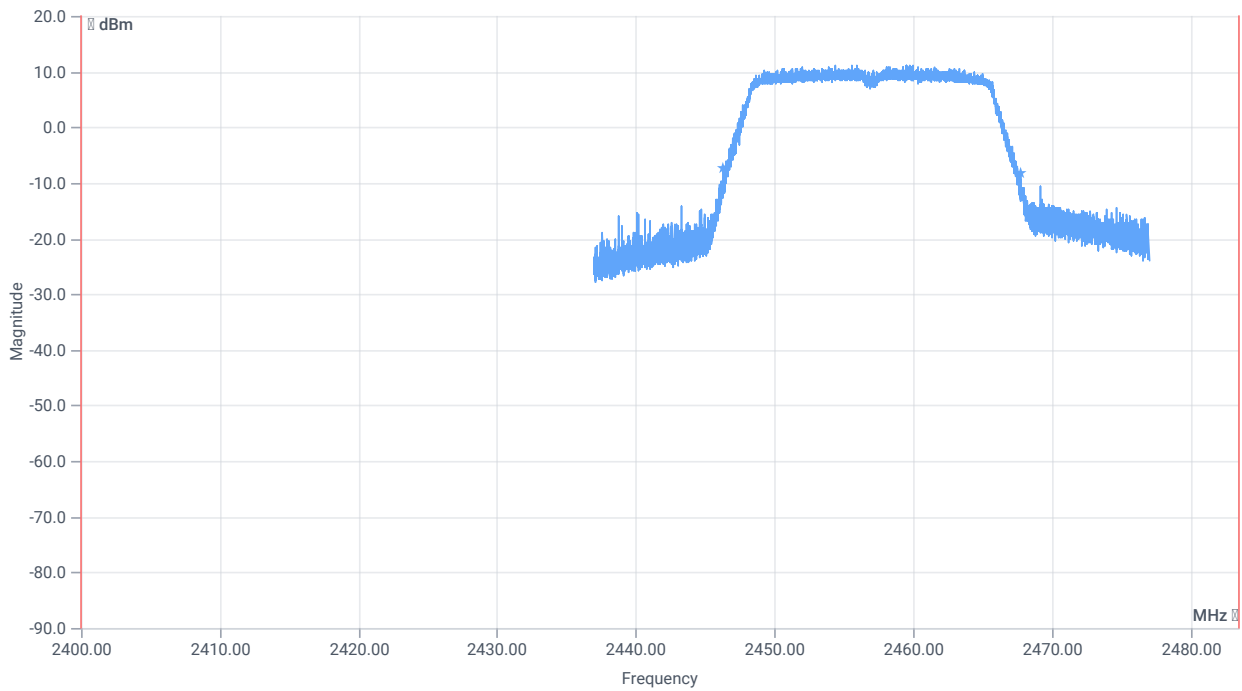
## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18754.000	kHz	INFO
T1 99%	2400.000000	--	2447.6409	MHz	PASS
T2 99%	--	2483.500000	2466.3951	MHz	PASS





BW 20dB



BW within Band 20dB

RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	21436	kHz	INFO
T1 20DB	2400.000000	--	2446.3400	MHz	PASS
T2 20dB	--	2483.500000	2467.7760	MHz	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:40:32
Ambit temp [°C]   humidity [rel%]	23.1   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

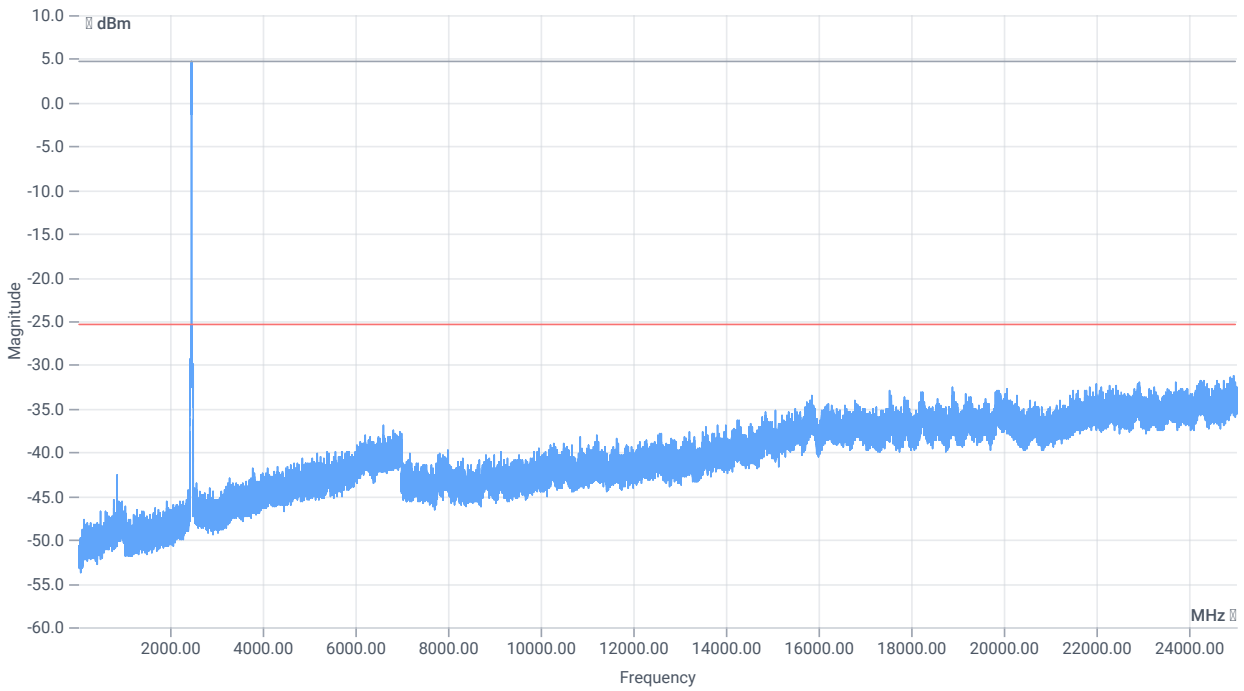
### Equipment

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.

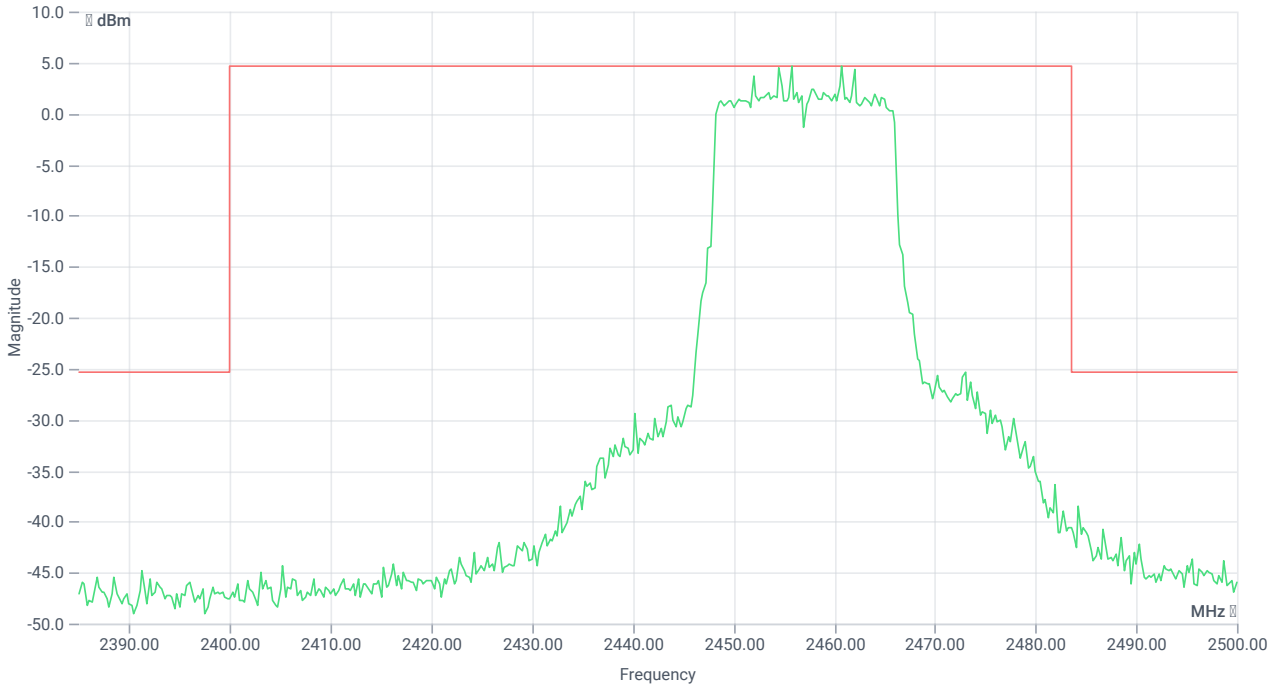
DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.29	dBm	INFO
Ref. Frequency	--	--	2459.700	MHz	INFO



TX emissions

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	13.29   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	--	--	4.67	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24958 MHz	0	--	5.97	dB	INFO

Verdict

PASS

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

### References

TC start	16.01.2024 12:47:18
Ambit temp [°C]   humidity [rel%]	23.2   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

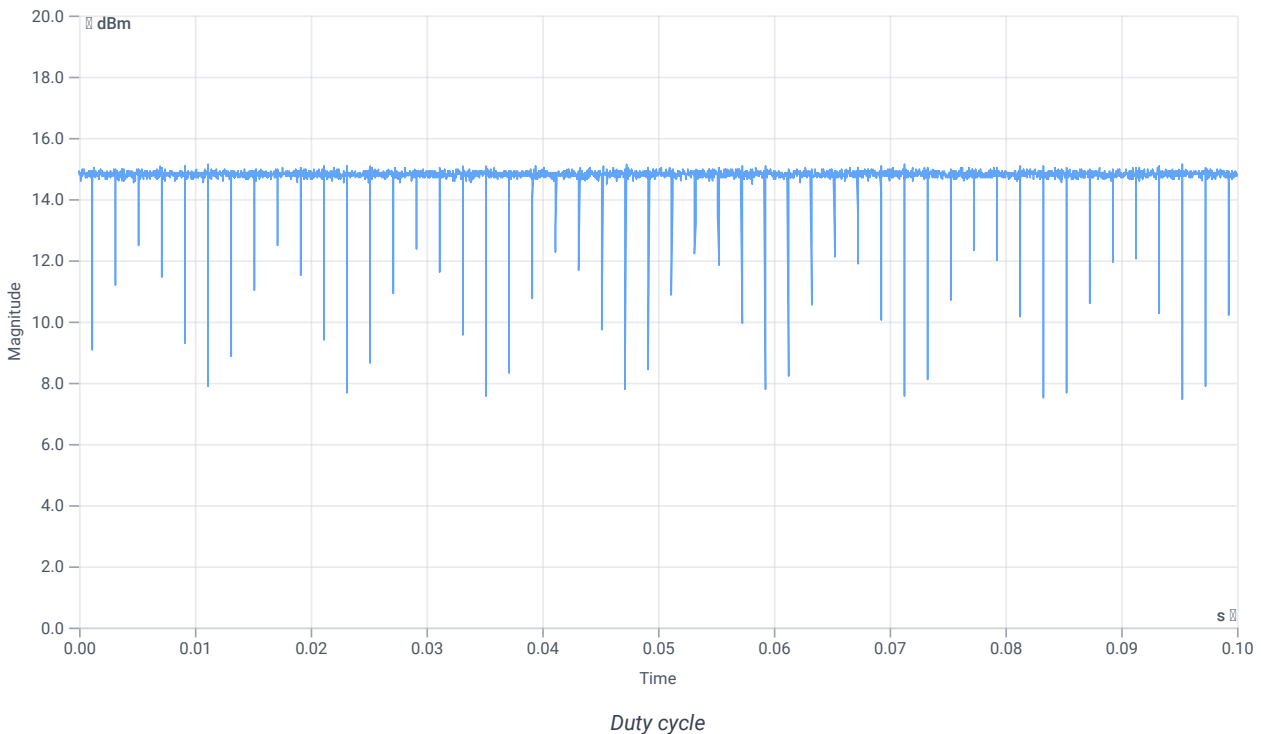
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.32	dBm	INFO
Ref. Frequency	--	--	2454.800	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



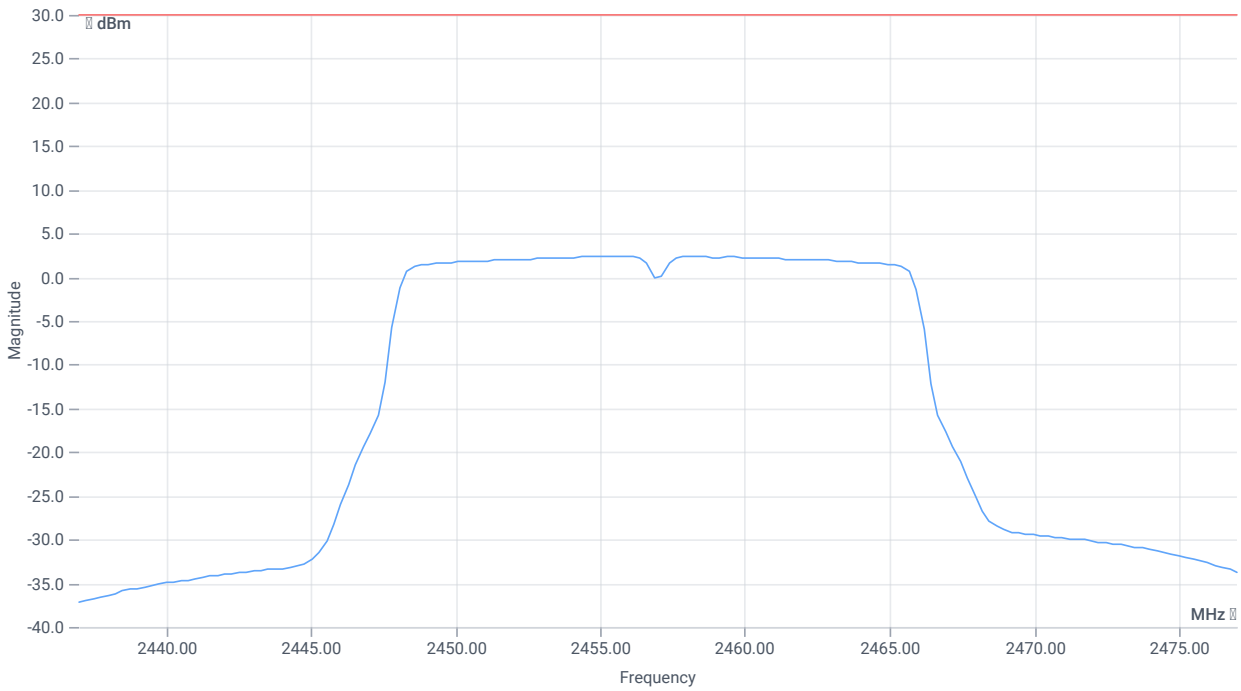
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	23.32   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	--	--	17.18	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	17.18	dBm	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:48:33
Ambit temp [°C]   humidity [rel%]	23.2   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	FCC 15.247 Bandwidth 6dB DTS - WLAN2G4 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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



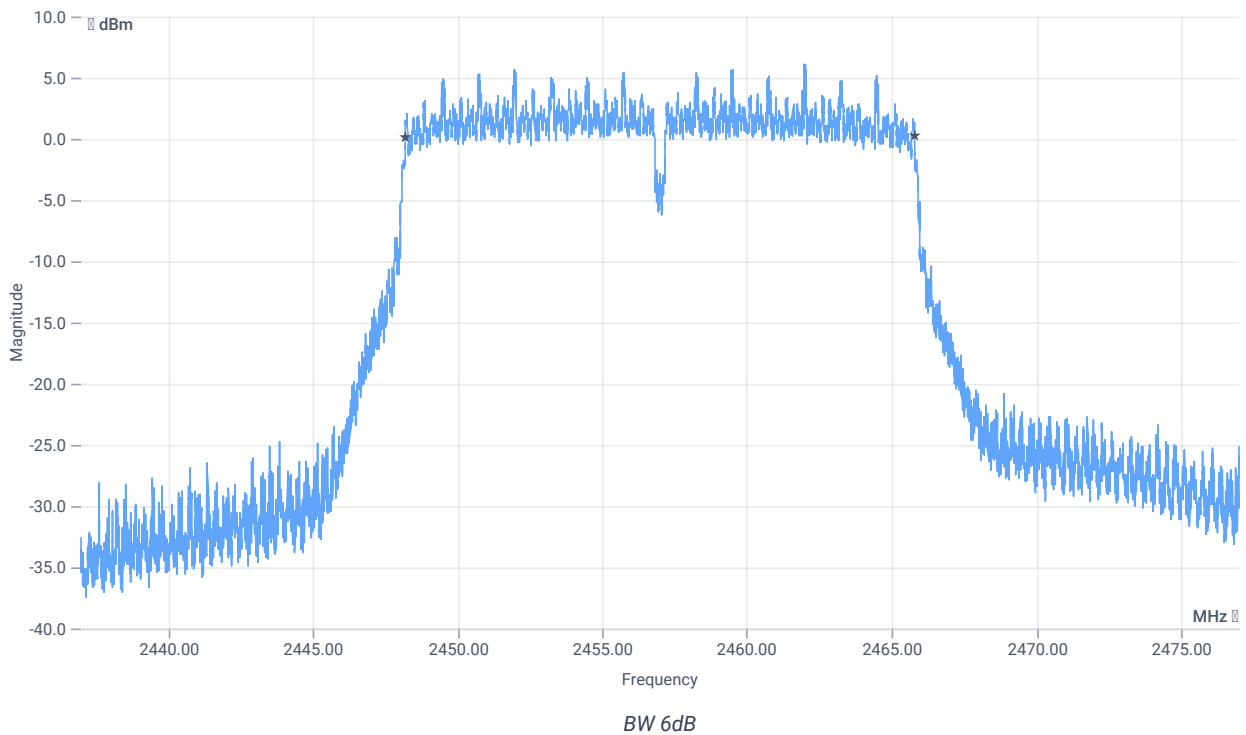
## Test at TX 2457 MHz

RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.90	dBm	INFO
Ref. Frequency	--	--	2452.300	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.90   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	--	17584	kHz	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:49:06
Ambit temp [°C]   humidity [rel%]	23.2   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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

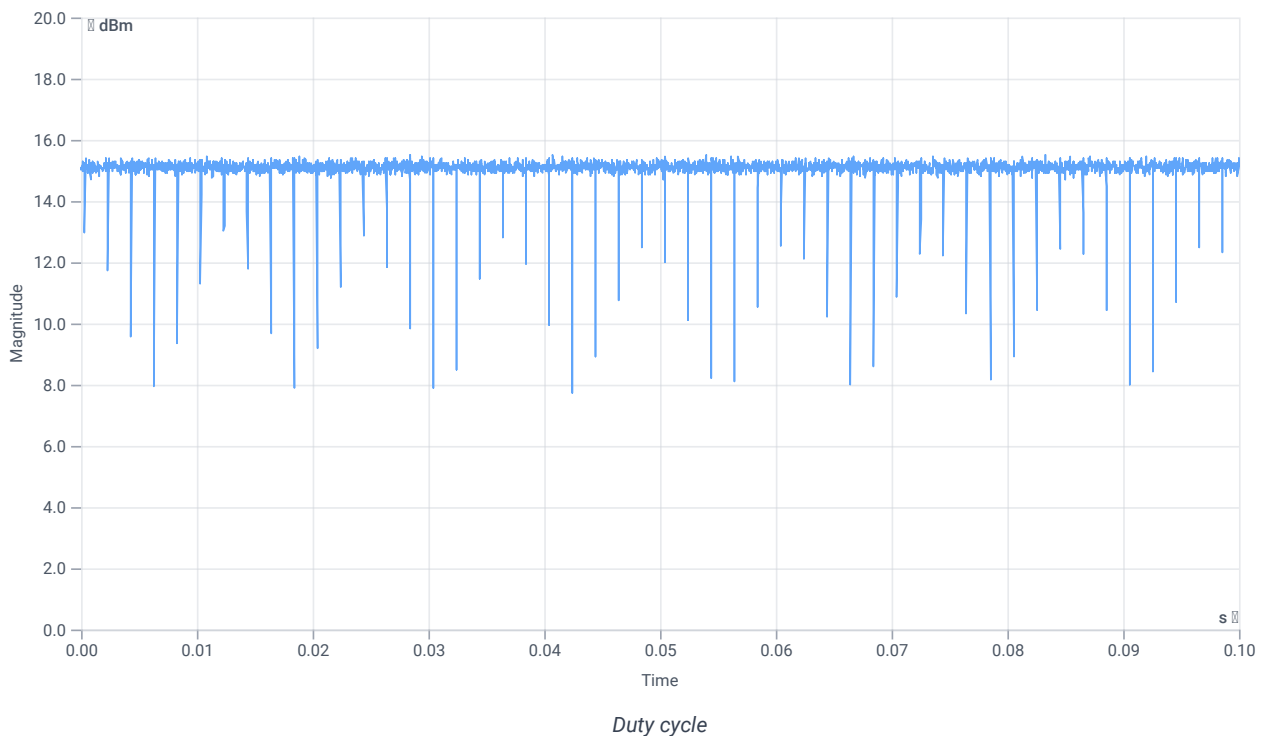
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	13.93	dBm	INFO
Ref. Frequency	--	--	2454.900	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



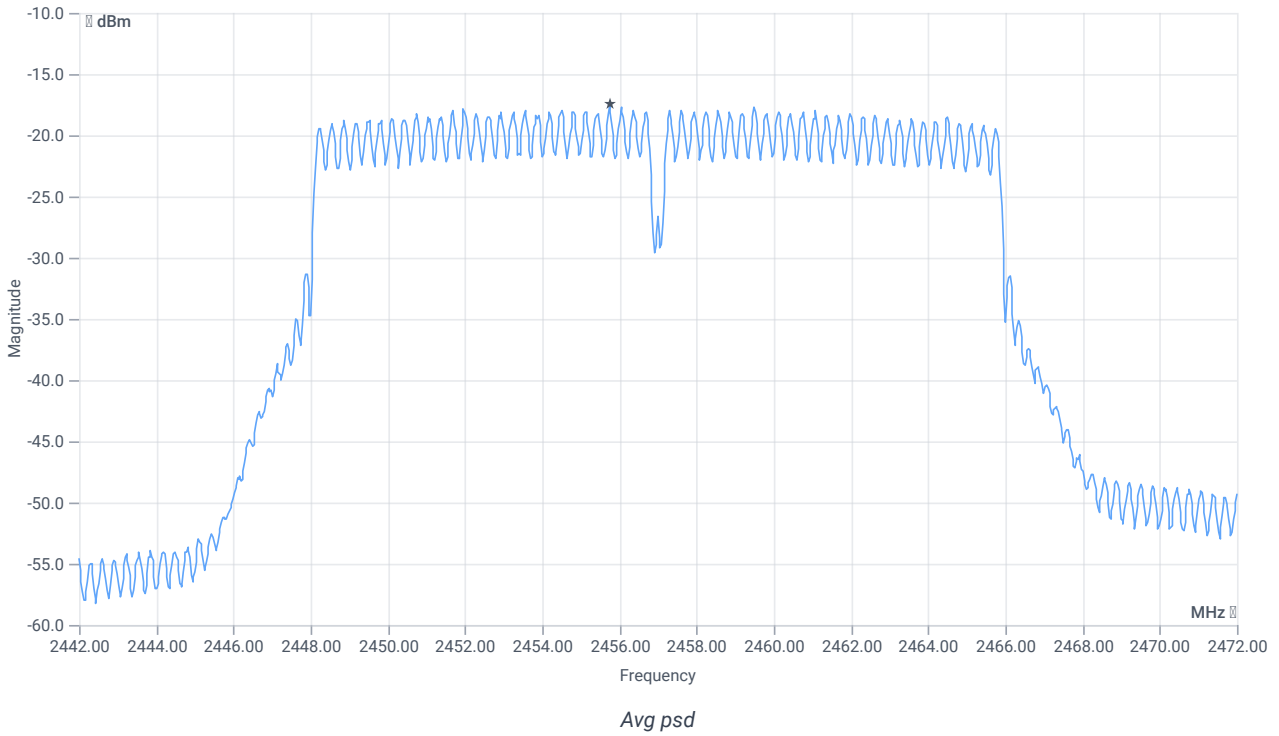
## Avg. psd

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	18.93   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	--	--	-17.41	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg psd DC corrected	--	8	-17.41	dBm/3kHz	PASS

Verdict

PASS

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

## References

TC start	16.01.2024 12:50:11
Ambit temp [°C]   humidity [rel%]	23.1   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

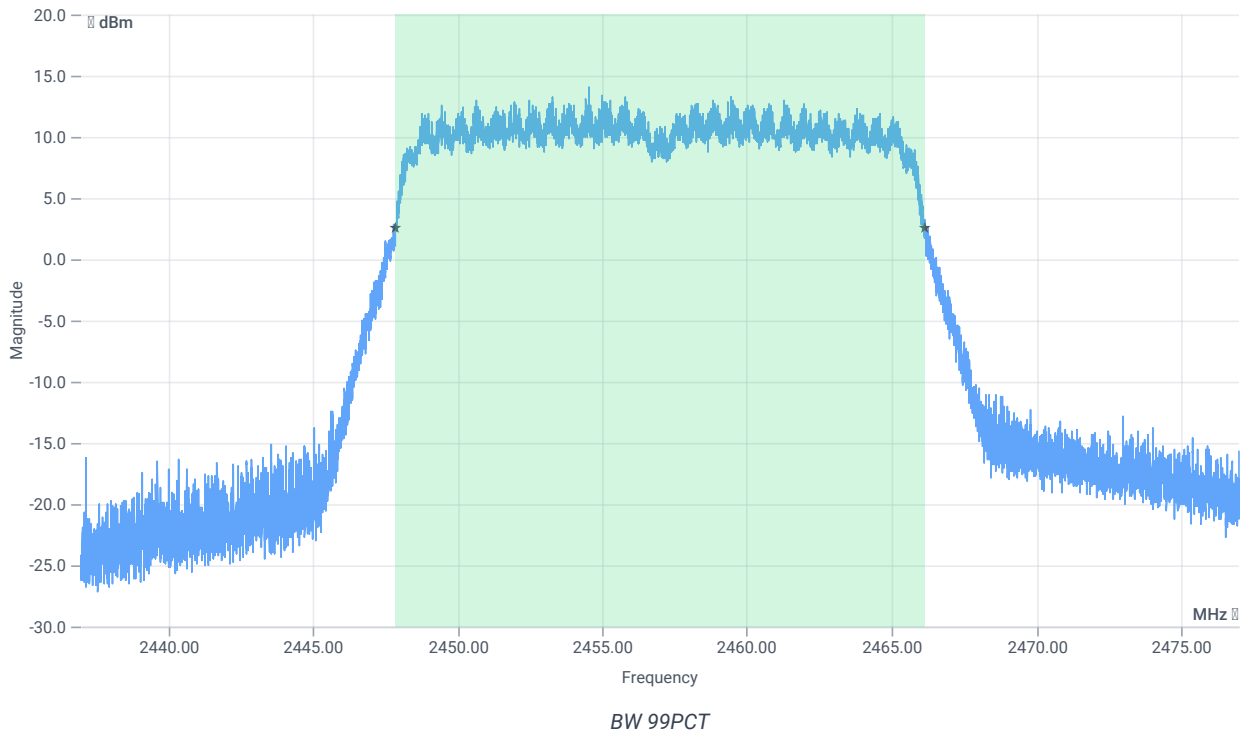
## Test at TX 2457 MHz

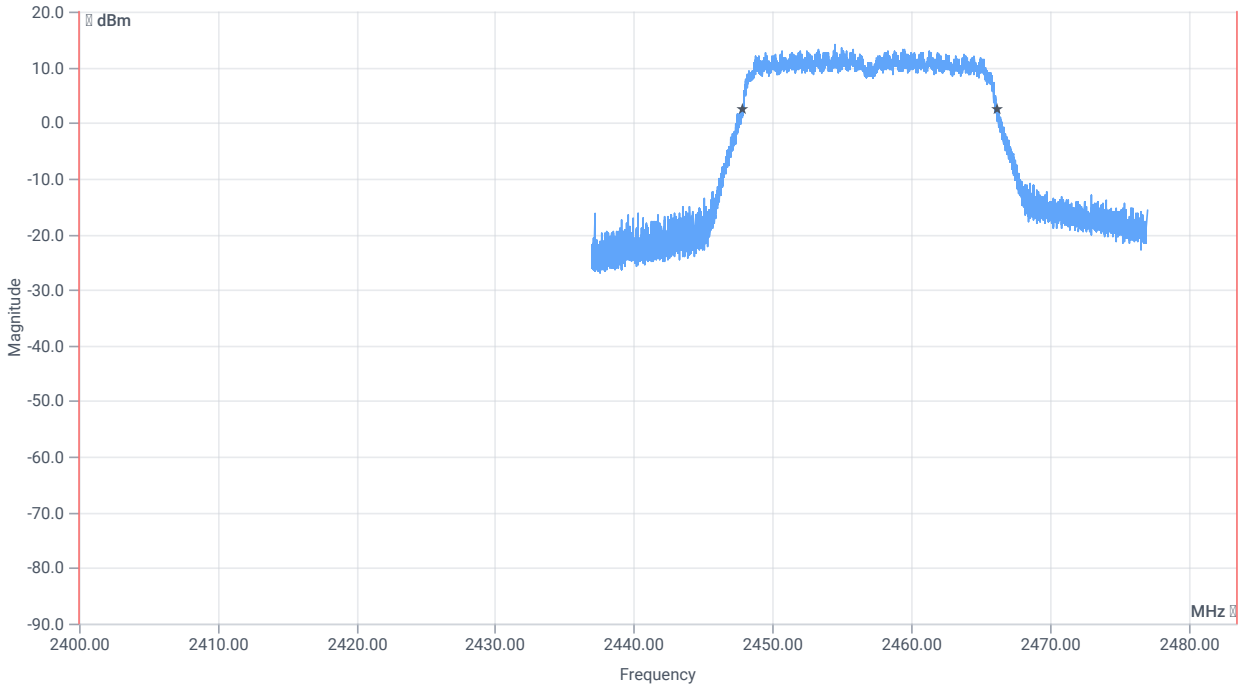
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.42	dBm	INFO
Ref. Frequency	--	--	2458.500	MHz	INFO

### READ SA SETTINGS:

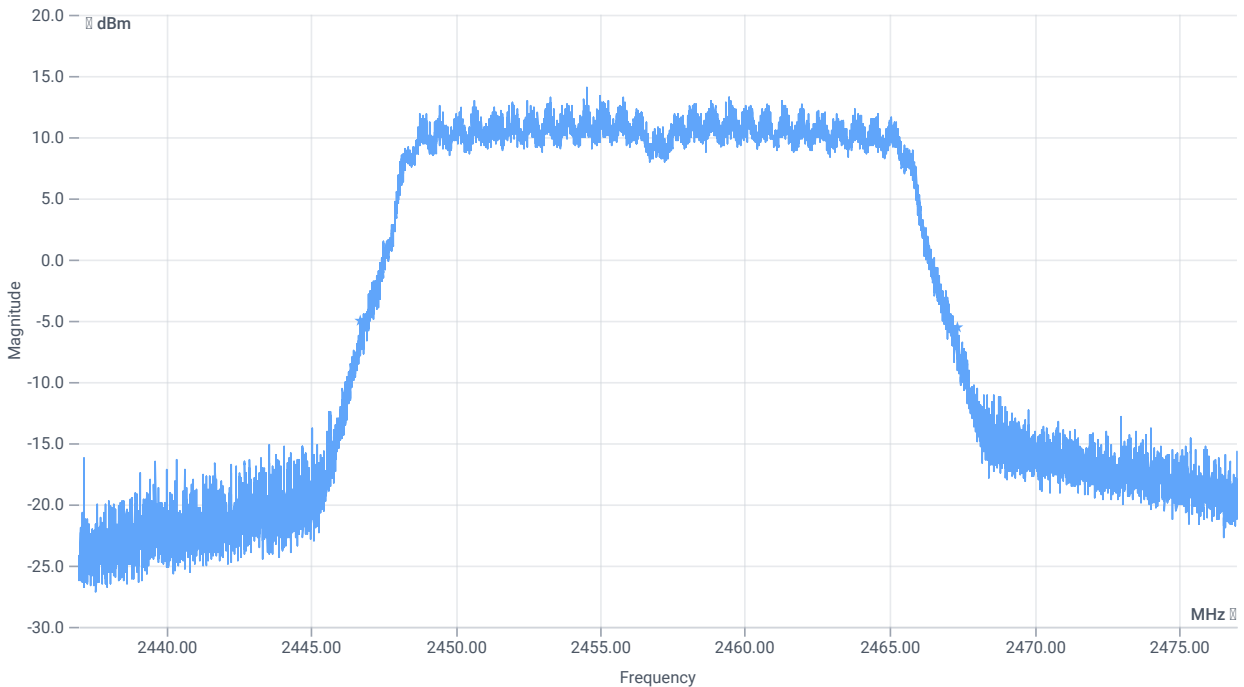
RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.42   14.13   25
Start [MHz]   Stop [MHz]	2437.000   2477.000
RBW [MHz]   VBW [MHz]	0.500000   2.000000
Detector   TraceMode	POS   MAXH
Sweep: time [ms]   count   points per Section   type	50   200   10001   SWE



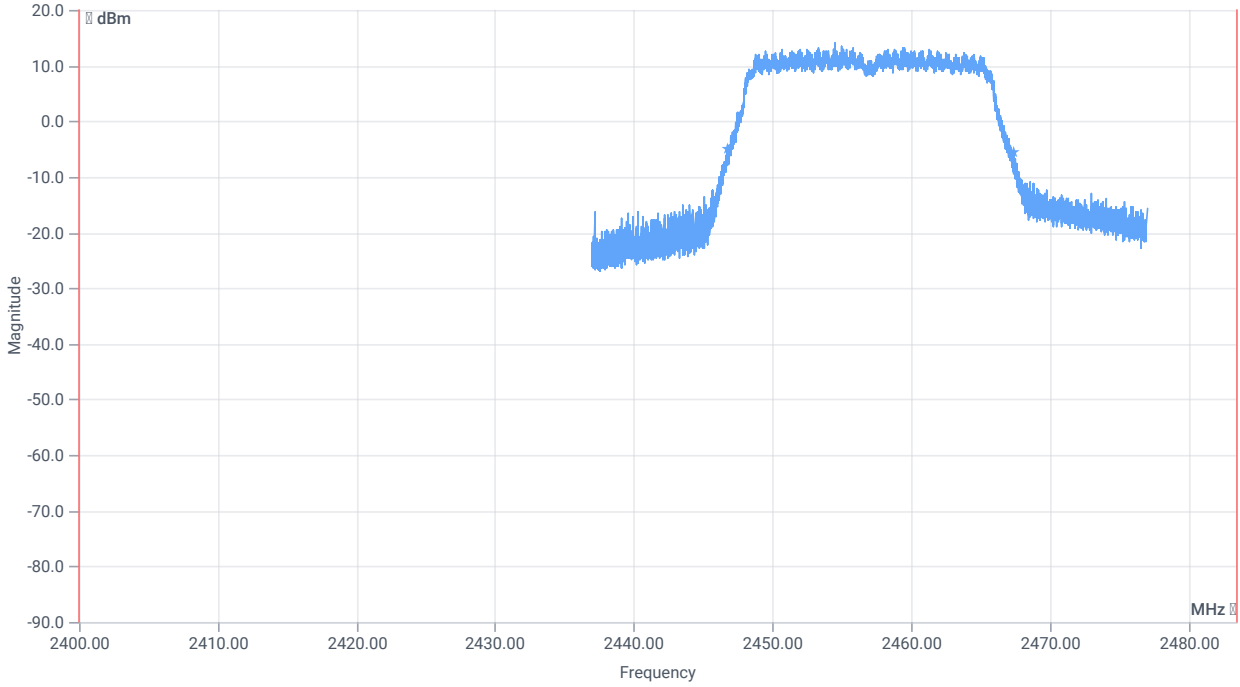


## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 99%	--	--	18294.000	kHz	INFO
T1 99%	2400.000000	--	2447.8769	MHz	PASS
T2 99%	--	2483.500000	2466.1711	MHz	PASS



BW 20dB



BW within Band 20dB

## RESULT

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Bandwidth 20dB	--	--	20612	kHz	INFO
T1 20dB	2400.000000	--	2446.7280	MHz	PASS
T2 20dB	--	2483.500000	2467.3400	MHz	PASS

Verdict

PASS



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

## References

TC start	16.01.2024 12:50:48
Ambit temp [°C]   humidity [rel%]	23.1   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 n-HT20 mode
Information	ac20-mode

## EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

## Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

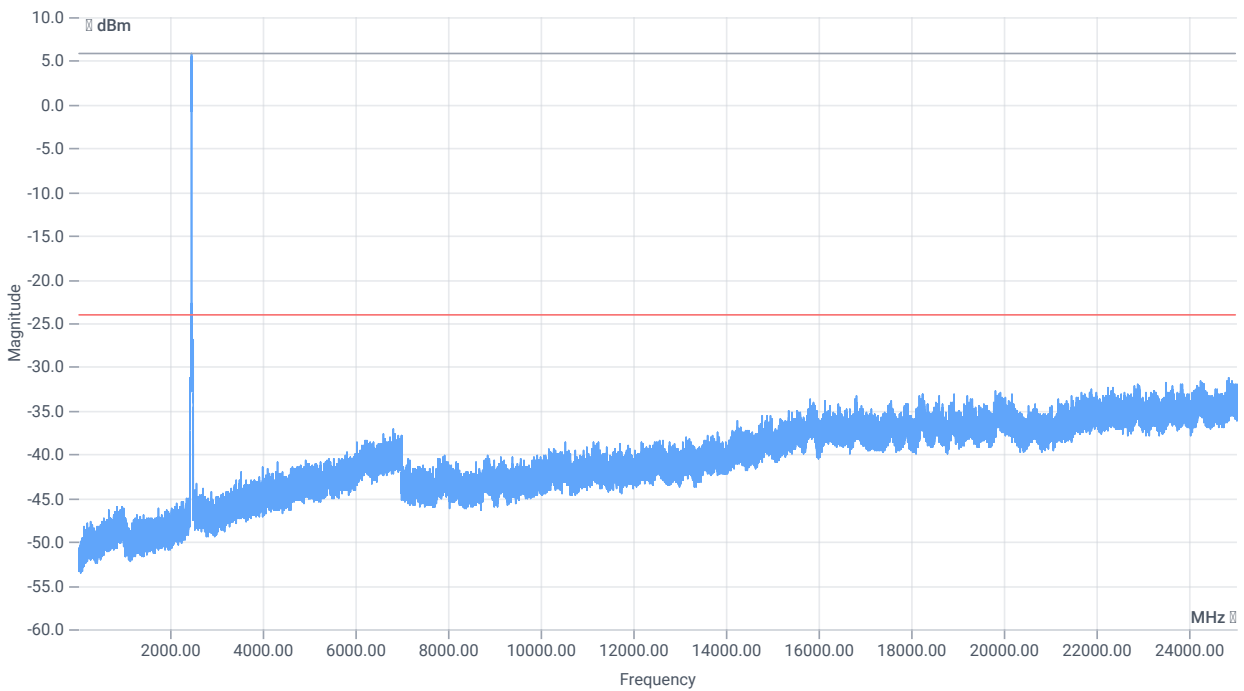
## Equipment

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

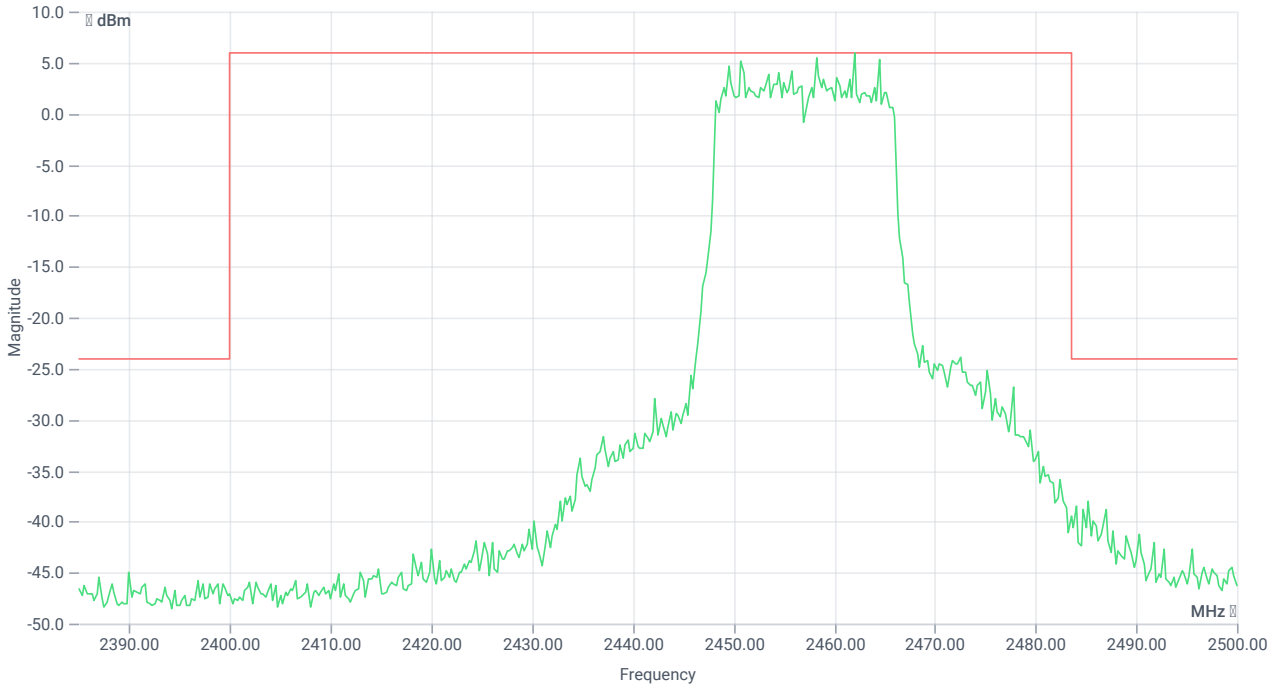
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.17	dBm	INFO
Ref. Frequency	--	--	2449.210	MHz	INFO



### 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 @ 2462.00 MHz	--	--	5.88	dBm	INFO
No peaks detected	--	--			PASS
Lowest margin to limit 24850.75 MHz	0	--	7.19	dB	INFO

Verdict

PASS

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

### References

TC start	16.01.2024 12:57:33
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 n-HT20 mode
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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

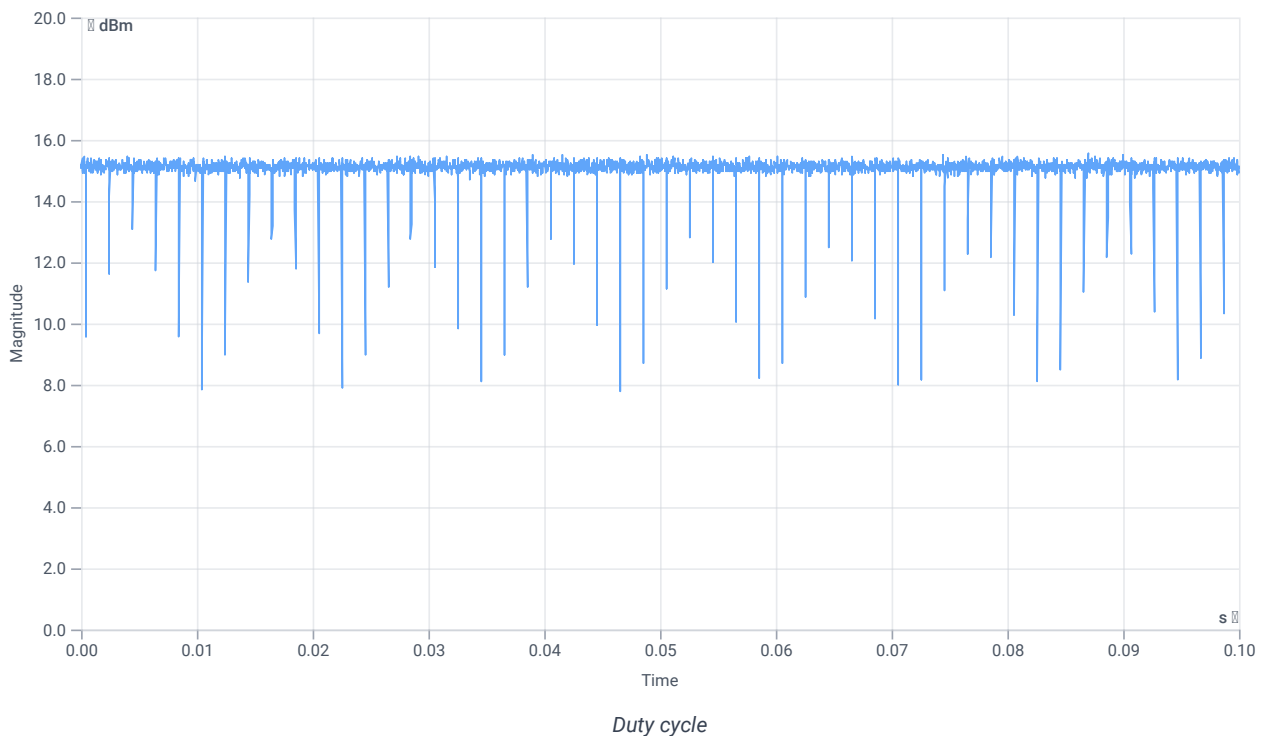
RESULT: Reference Power cond.

DESCRIPTION	LOWER LIMIT	UPPER LIMIT	MEASURED	UNIT	VERDICT
Ref. Power 1MHz/1MHz cond.	--	--	14.34	dBm	INFO
Ref. Frequency	--	--	2460.600	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



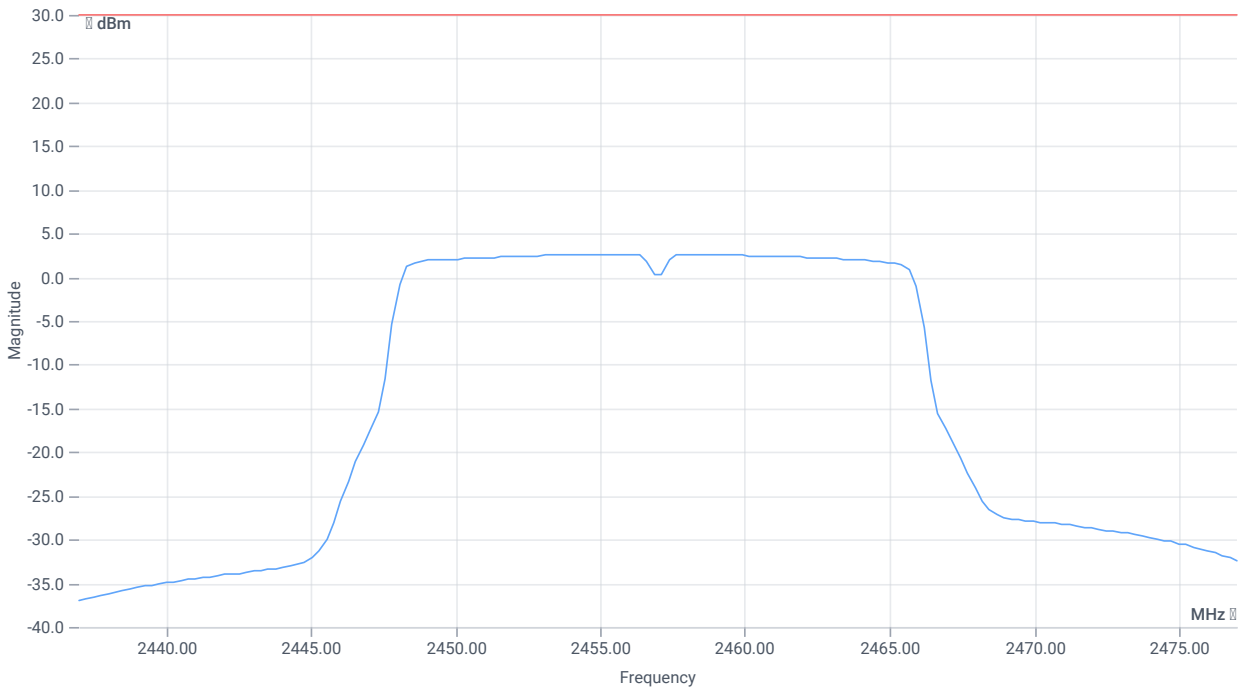
## Avg output power SA DTS

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	24.34   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	--	--	17.48	dBm	INFO
Duty cycle correction	--	--	0	dB	INFO
Avg power DC corrected	--	30	17.48	dBm	PASS

Verdict

PASS

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

### References

TC start	16.01.2024 12:58:48
Ambit temp [°C]   humidity [rel%]	23.0   26
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg output power SA DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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.	--	--	17.18	dBm	INFO
Ant:2 Avg power DC corr.	--	--	17.48	dBm	INFO
$\Sigma$ Avg output power DC corr.	--	30	20.34	dBm	PASS

### Verdict

PASS



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

### References

TC start	16.01.2024 14:01:59
Ambit temp [°C]   humidity [rel%]	22.8   27
System version	4.7.1.5
Standard   Version	FCC 15.247   NI
Method	
Description	MIMO $\Sigma$ FCC Avg psd DTS - WLAN2G4 n-HT20 mode 2400-2483.5 MHz
Information	ac20-mode

### EUT Common Settings WLAN2G4

Number of Antenna Ports	2
User Interaction	No

### Test Parameter

Technology to test	WLAN2G4 n-HT20 mode
Antenna port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 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	--	--	-17.79	dBm/3kHz	INFO
Ant:2 Avg psd DC corr	--	--	-17.41	dBm/3kHz	INFO
$\Sigma$ Avg psd DC corr	--	8	-14.59	dBm/3kHz	PASS

Verdict

PASS

- END OF DOCUMENT -