

# Measurement Results

No.1-5761/23-01-05\_Annex\_MR\_16

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## Test logging

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## Table of Content

EUT Information	3
# Message with SA scan ~	4
FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1	5
FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1	9
FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1	13
FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1	17
FCC 15.407 # MIMO $\Sigma$ Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1	21
# Message with SA scan ~	23
FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1	24
FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1	28
FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1	32
FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1	36
FCC 15.407 # MIMO $\Sigma$ Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1	40

## EUT Information

### EUT DEFINITION

Manufacturer	Sagemcom
Type	NI
Serial Number	Config#1 (conducted)
Setup Number	1.0
Version SW	NI
Version FW	NI
Version HW	NI
Comment 1	
Comment 2	
Temperature [°C] Min	-20
Temperature [°C] Nom	20
Temperature [°C] Max	55
Voltage [V] Min	3.3
Voltage [V] Nom	3.8
Voltage [V] Max	4.2

## # Message with SA scan ~

### Test References

TC Start	15.03.2023 14:14:17
Ambit Temp [°C]   Humidity [rel%]	22.4   33
System Version	3.5.0.9
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan ac_VHT40_U_NII_1
Add. Information	

### Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.03.2023 14:14:18
Message	set WLAN5Gx to ac_VHT40_U_NII_1, Frequency [MHz] 5190 ,

### Test Equipment

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

### Verdict

INFO

## FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:15:27
Ambit Temp [°C]   Humidity [rel%]	22.4   33
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	False   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

## Test at TX 5190 MHz

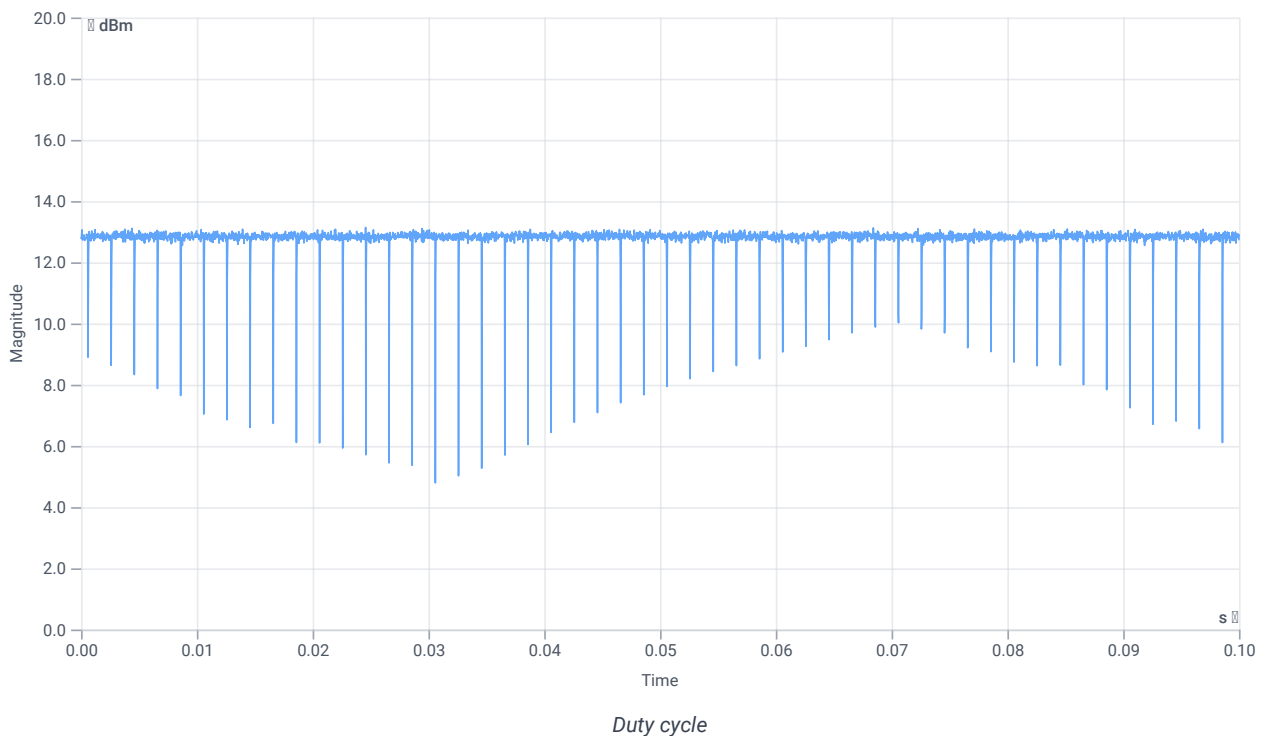
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	11.66	dBm	INFO
Ref. Frequency	--	--	5191.400	MHz	INFO

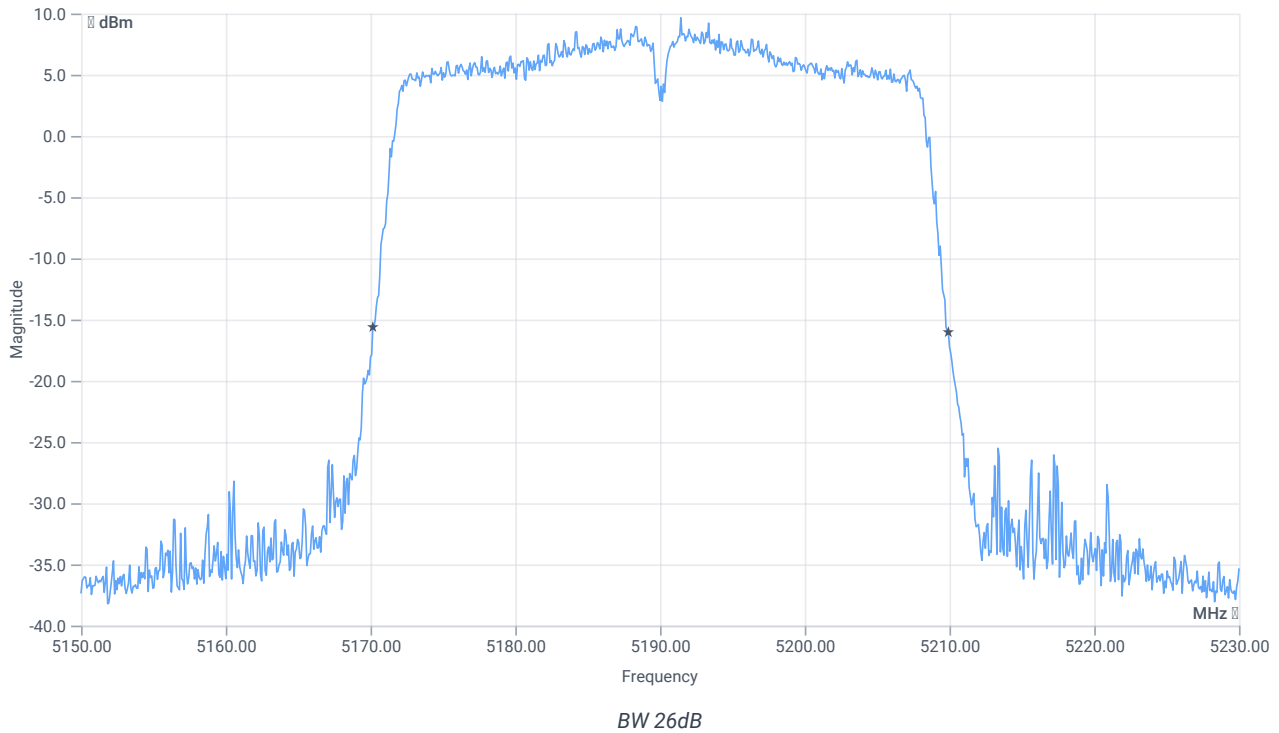
## Evaluation max. Duty Cycle

### Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	INFO
Duty Cycle max	--	--	0	dB	INFO
Duty Cycle (Burst Ratio) min	--	--	1	--	INFO
Duty Cycle min	--	--	0	dB	INFO



## Evaluation Bandwidth



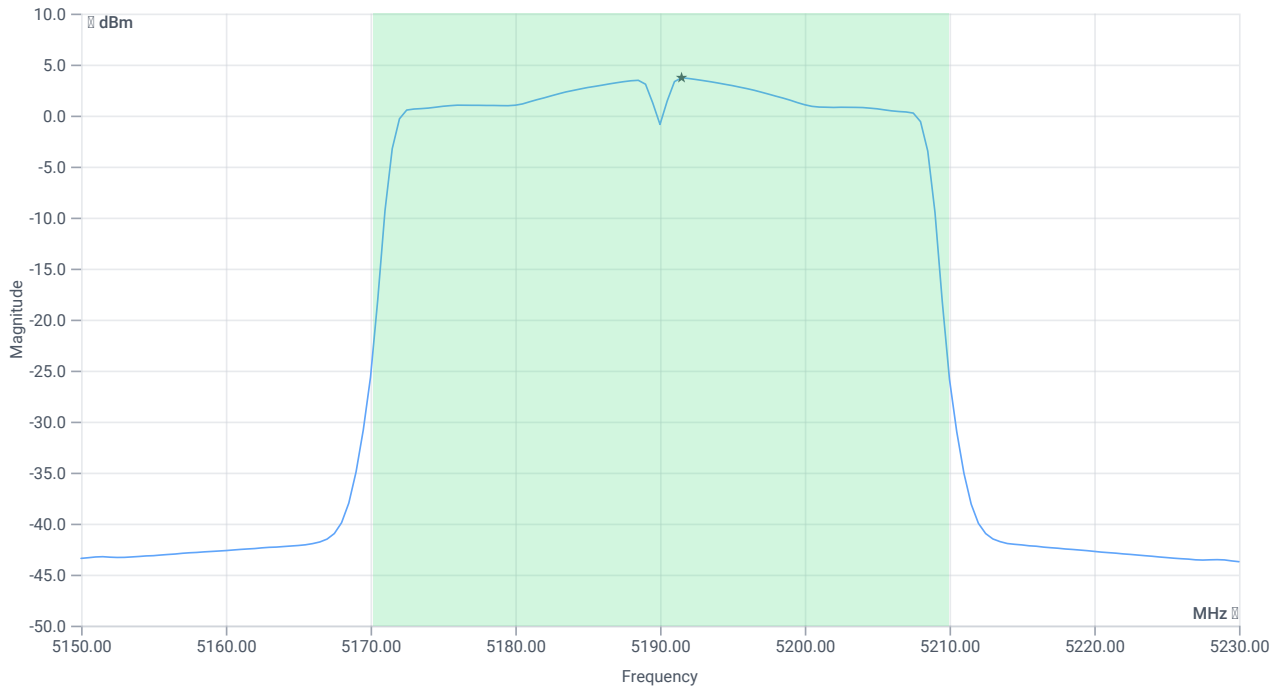
## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.76	MHz	INFO
T1 26dB	---	---	5170.1600	MHz	INFO
T2 26dB	---	---	5209.9200	MHz	INFO

## Maximum Output Power

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	23.66   16.45   25
Start [MHz]   Stop [MHz]	5150.000   5230.000
RBW [MHz]   VBW [MHz]	1.000000   3.000000
Detector   TraceMode	RMS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	53700   1   161   SWE



Max OP and PSD

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	17.17	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	17.17	dBm	PASS
Limit: 11 dBm + 10 log 39.76					
Max Output Power DC corrected	--	26.99	17.17	dBm	na

## Power Spectral Density

### RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	3.71	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	3.71	dBm/1MHz	PASS

Verdict

PASS



## FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:16:57
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407, ISED RSS247 -
Test Method	26dB Bandwidth KDB789033 D02, C.1 / ISED RSS-GEN
TC Version	0.0.1
My Description	FCC 15.407 Bandwidths - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	False   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

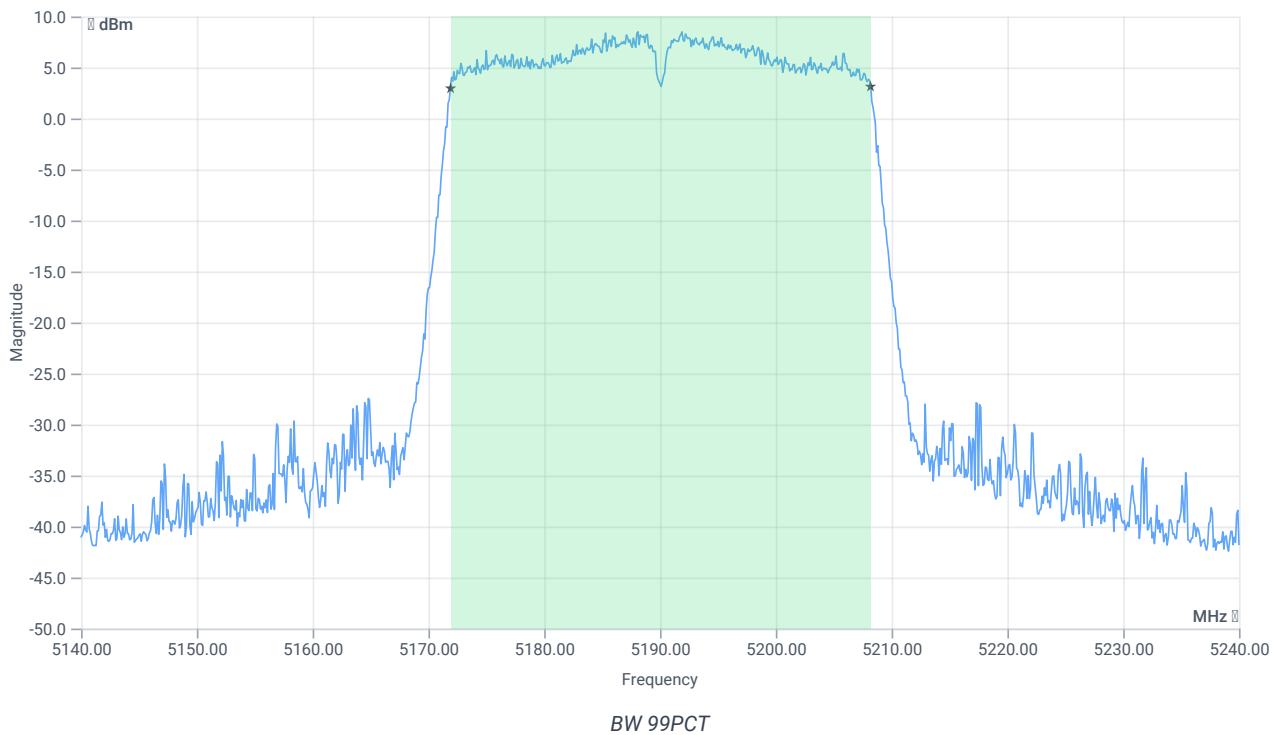
## Test at TX 5190 MHz

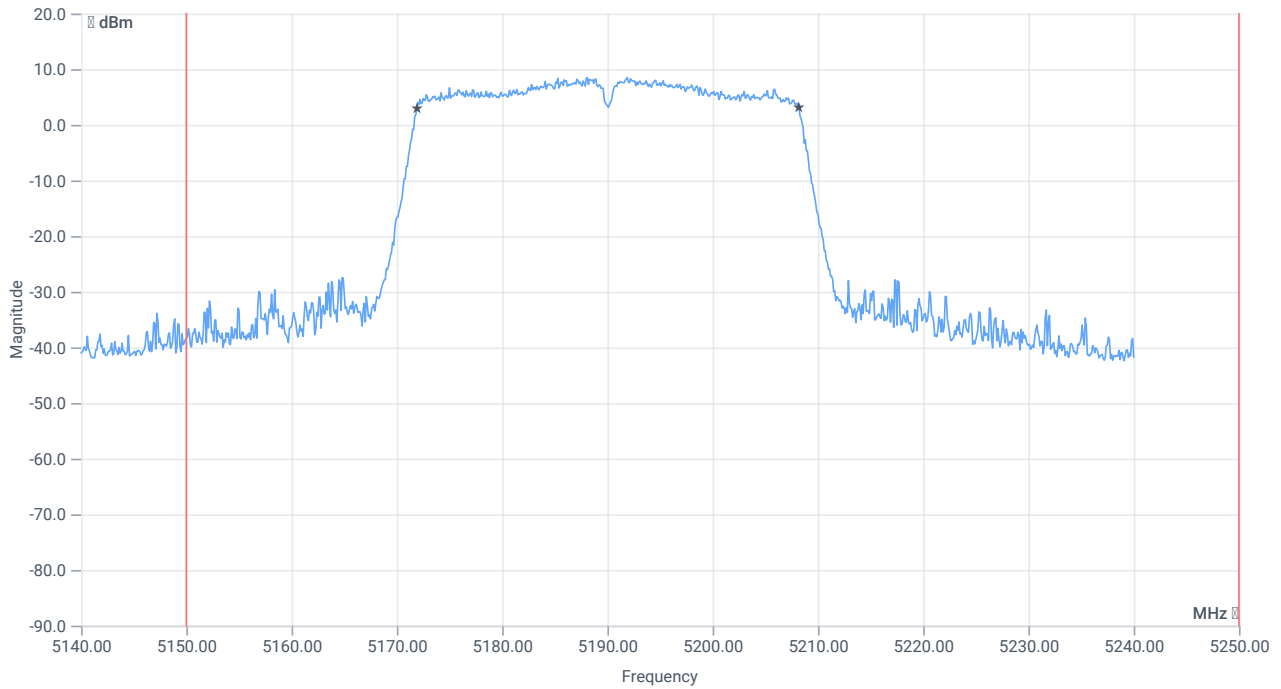
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	11.76	dBm	INFO
Ref. Frequency	--	--	5192.000	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.76   16.45   20
Start [MHz]   Stop [MHz]	5140.000   5240.000
RBW [MHz]   VBW [MHz]	0.500000   3.000000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	1   2500   1001   SWE

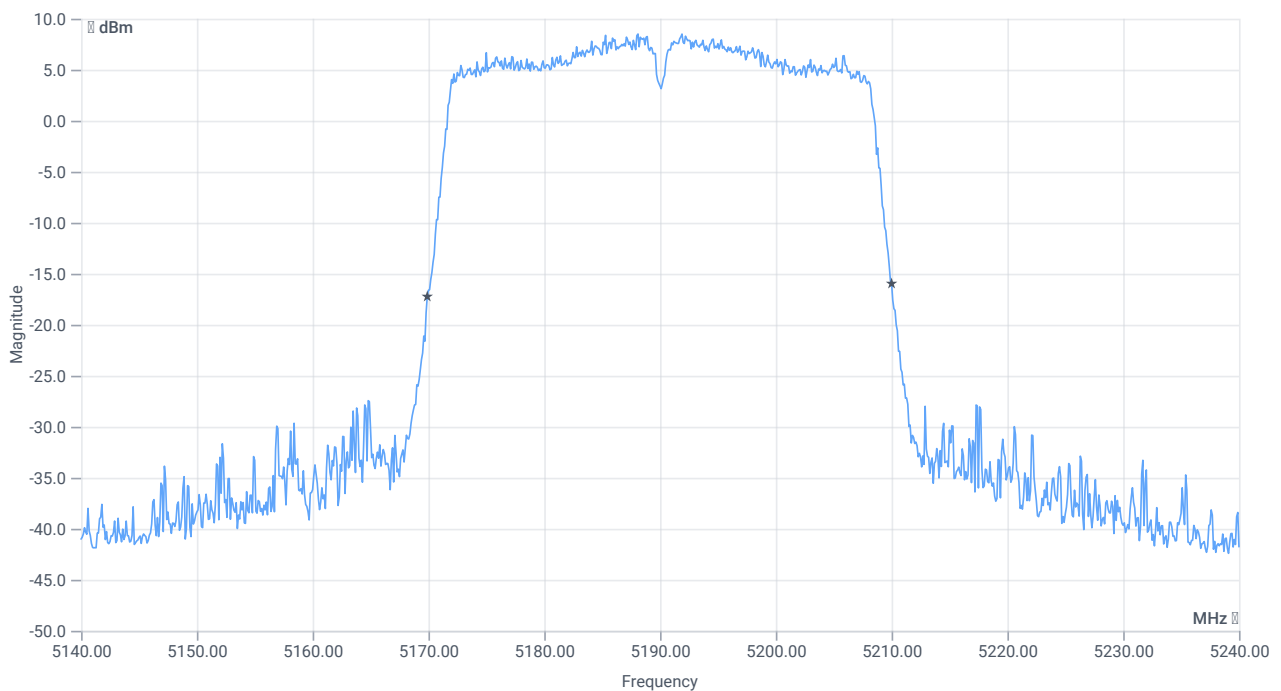




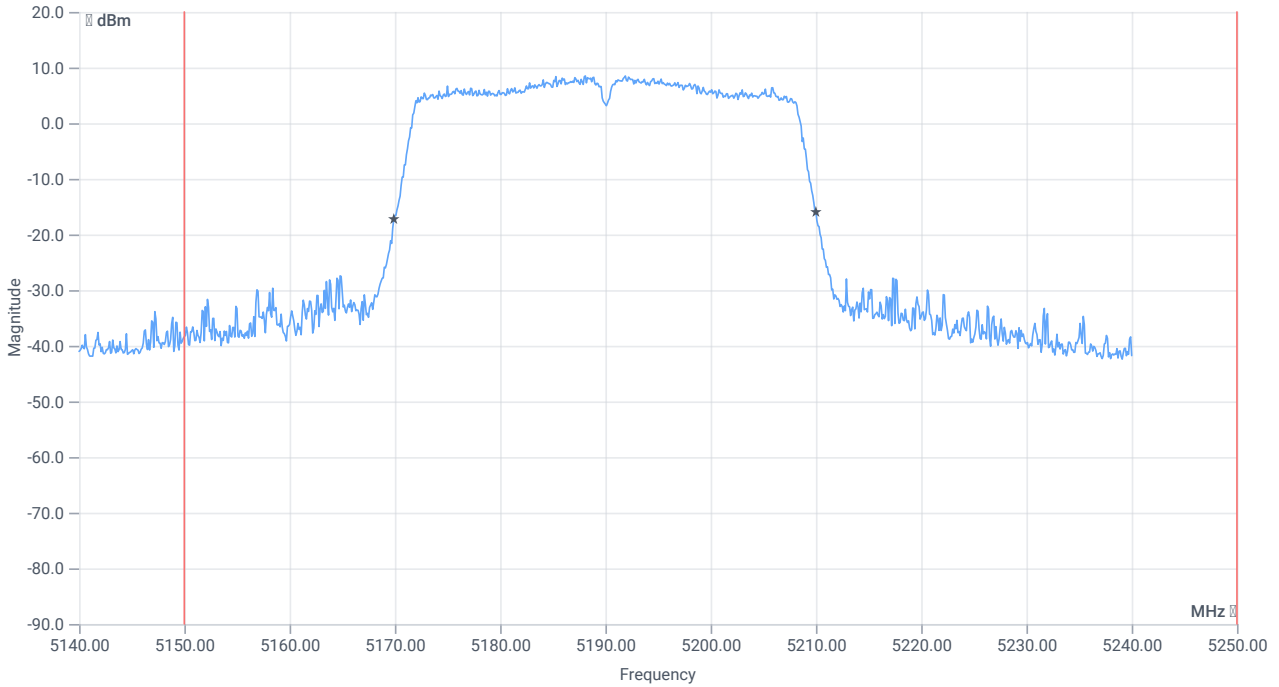
BW within Band 99PCT

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	36.264	MHz	INFO
T1 99%	5150.000000	--	5171.9181	MHz	PASS
T2 99%	--	5250.000000	5208.1818	MHz	PASS



BW 26dB



BW within Band 26dB

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	--	--	40.1	MHz	INFO
T1 26dB	5150.000000	--	5169.9000	MHz	PASS
T2 26dB	--	5250.000000	5210.0000	MHz	PASS

Verdict

PASS

## FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:17:33
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT40 mode U-NII-1

Add. Information

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	False   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

## Test at TX 5190 MHz

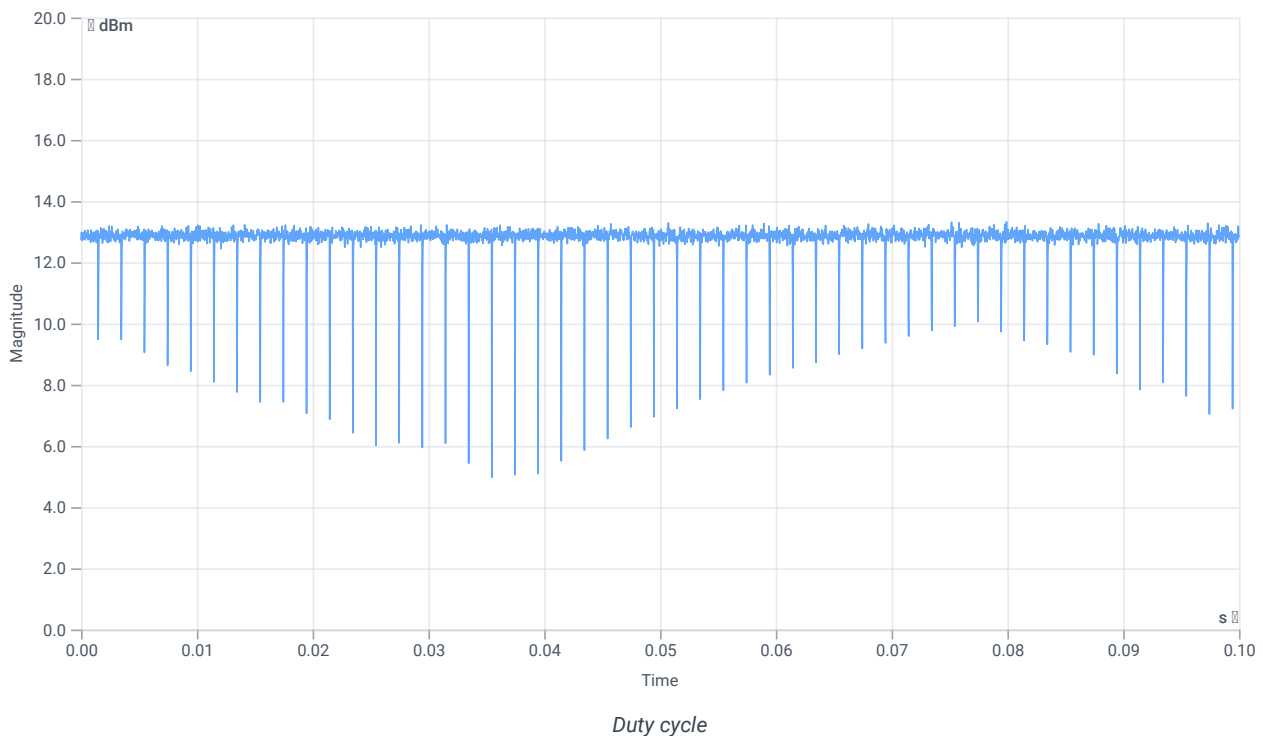
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	12.47	dBm	INFO
Ref. Frequency	--	--	5191.600	MHz	INFO

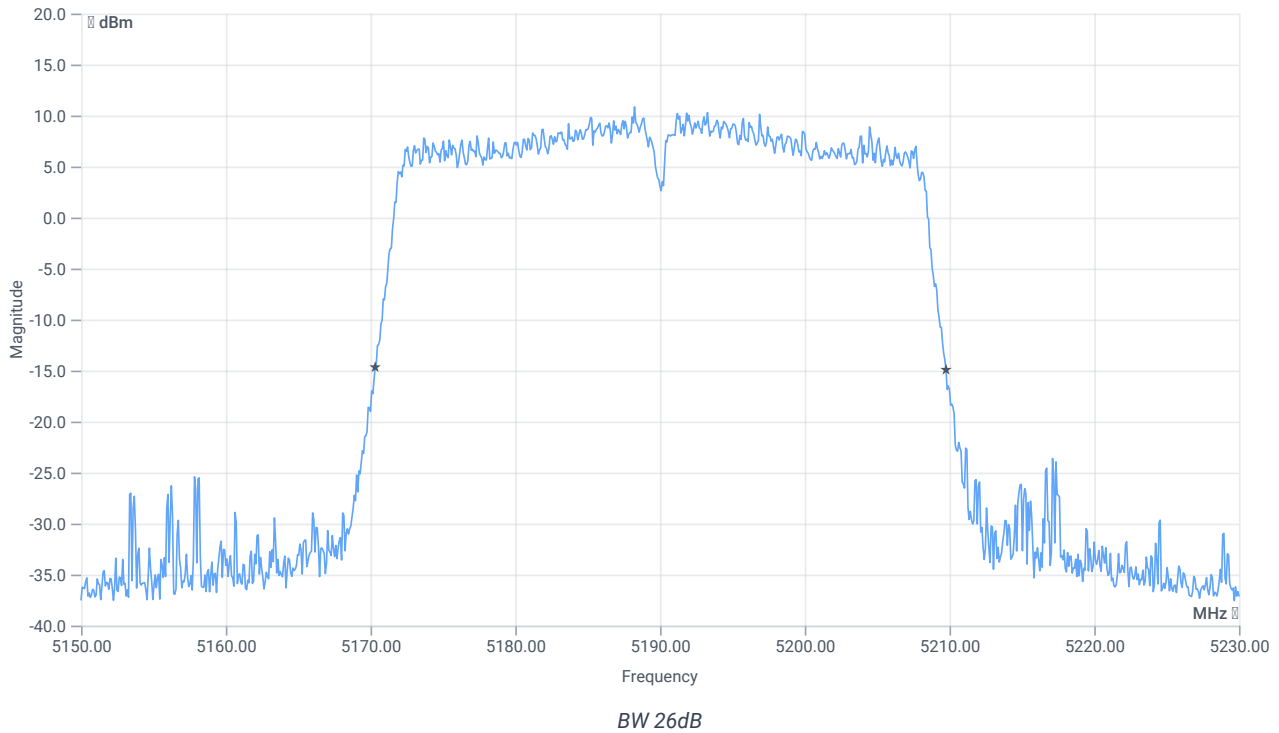
## Evaluation max. Duty Cycle

### Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	INFO
Duty Cycle max	--	--	0	dB	INFO
Duty Cycle (Burst Ratio) min	--	--	1	--	INFO
Duty Cycle min	--	--	0	dB	INFO



## Evaluation Bandwidth



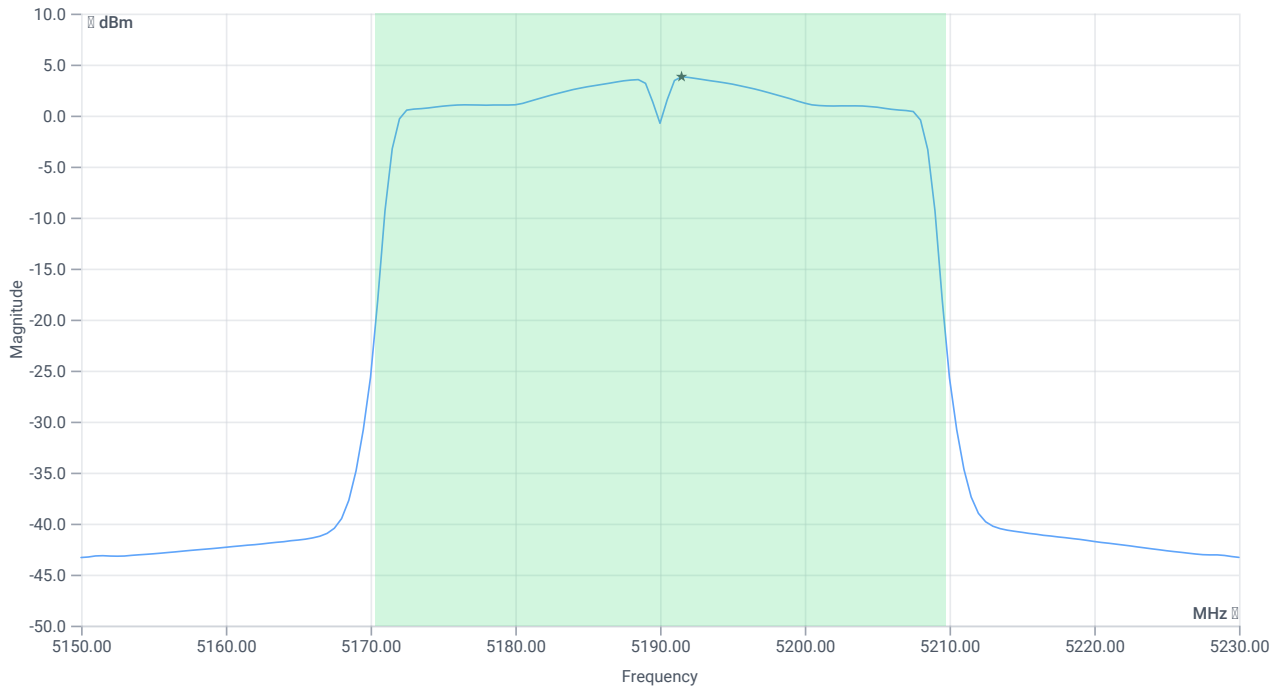
## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.44	MHz	INFO
T1 26dB	---	---	5170.3200	MHz	INFO
T2 26dB	---	---	5209.7600	MHz	INFO

## Maximum Output Power

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	24.47   16.45   25
Start [MHz]   Stop [MHz]	5150.000   5230.000
RBW [MHz]   VBW [MHz]	1.000000   3.000000
Detector   TraceMode	RMS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	53700   1   161   SWE



Max OP and PSD

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	17.26	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	17.26	dBm	PASS
Limit: 11 dBm + 10 log 39.44					
Max Output Power DC corrected	--	26.96	17.26	dBm	na

## Power Spectral Density

### RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	3.81	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	3.81	dBm/1MHz	PASS

Verdict

PASS



## FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:19:03
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407, ISED RSS247 -
Test Method	26dB Bandwidth KDB789033 D02, C.1 / ISED RSS-GEN
TC Version	0.0.1
My Description	FCC 15.407 Bandwidths - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	False   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

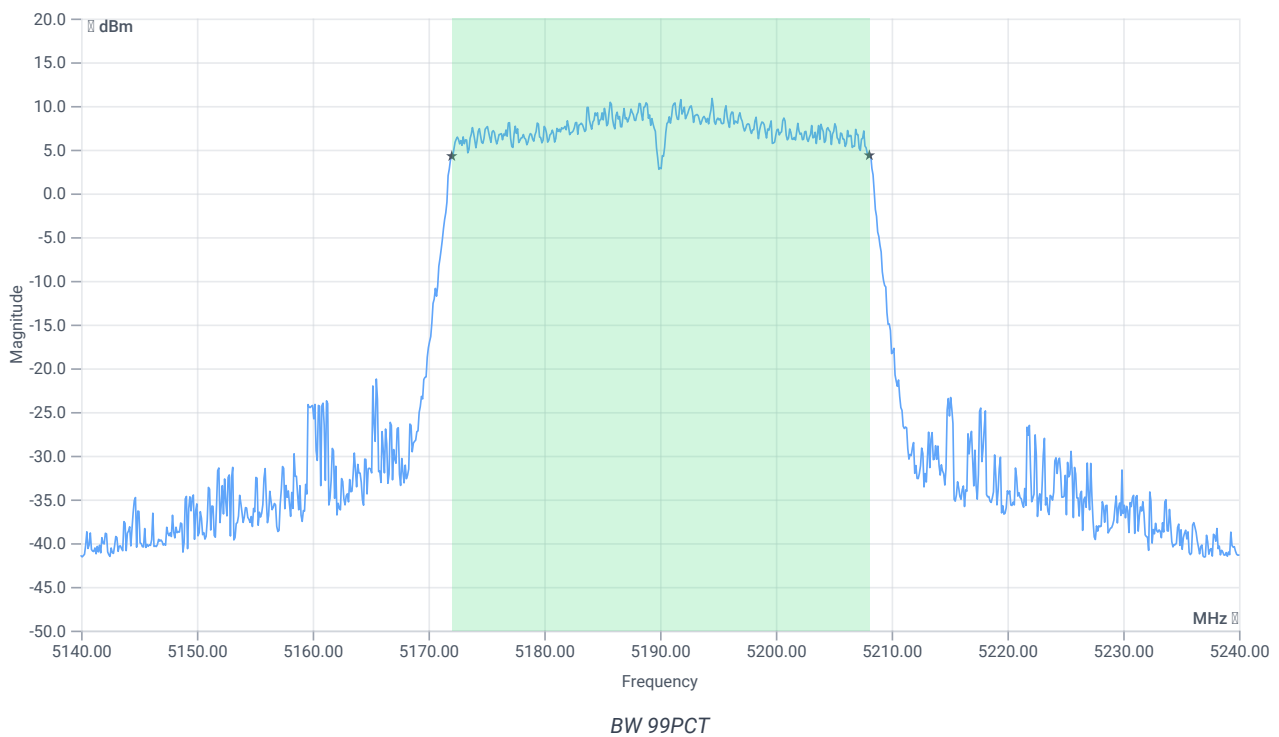
## Test at TX 5190 MHz

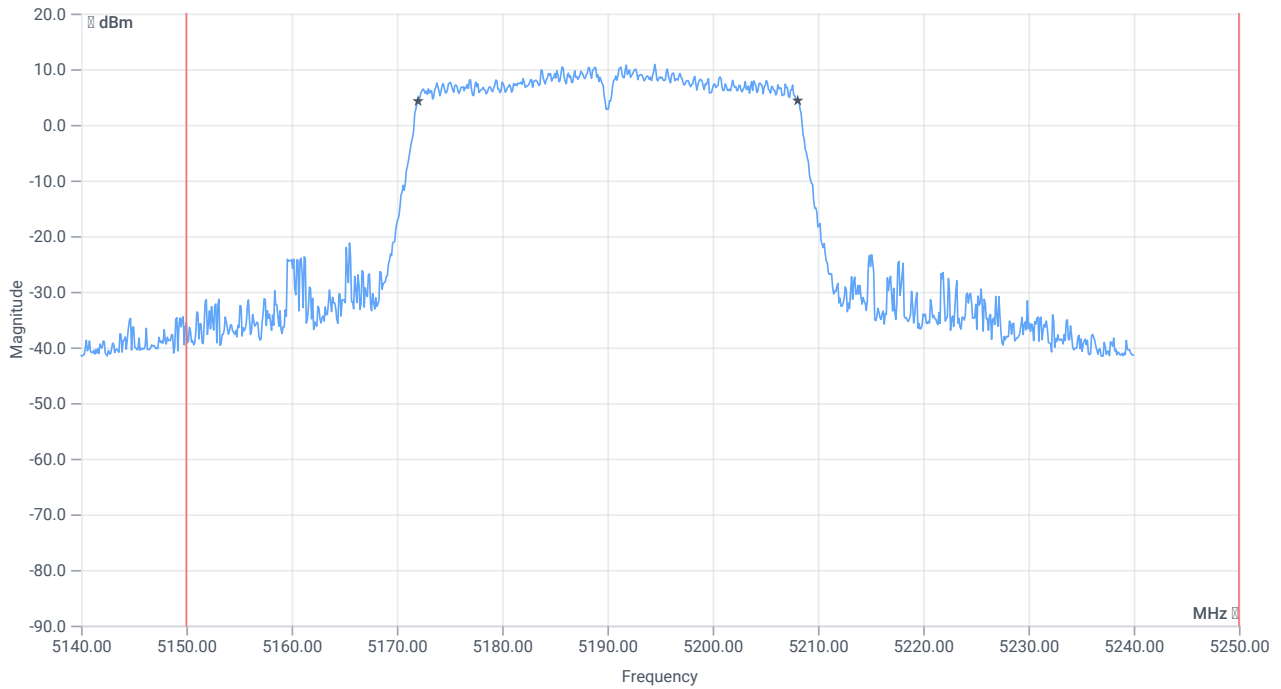
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	11.55	dBm	INFO
Ref. Frequency	--	--	5188.200	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	19.55   16.45   20
Start [MHz]   Stop [MHz]	5140.000   5240.000
RBW [MHz]   VBW [MHz]	0.500000   3.000000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	1   2500   1001   SWE

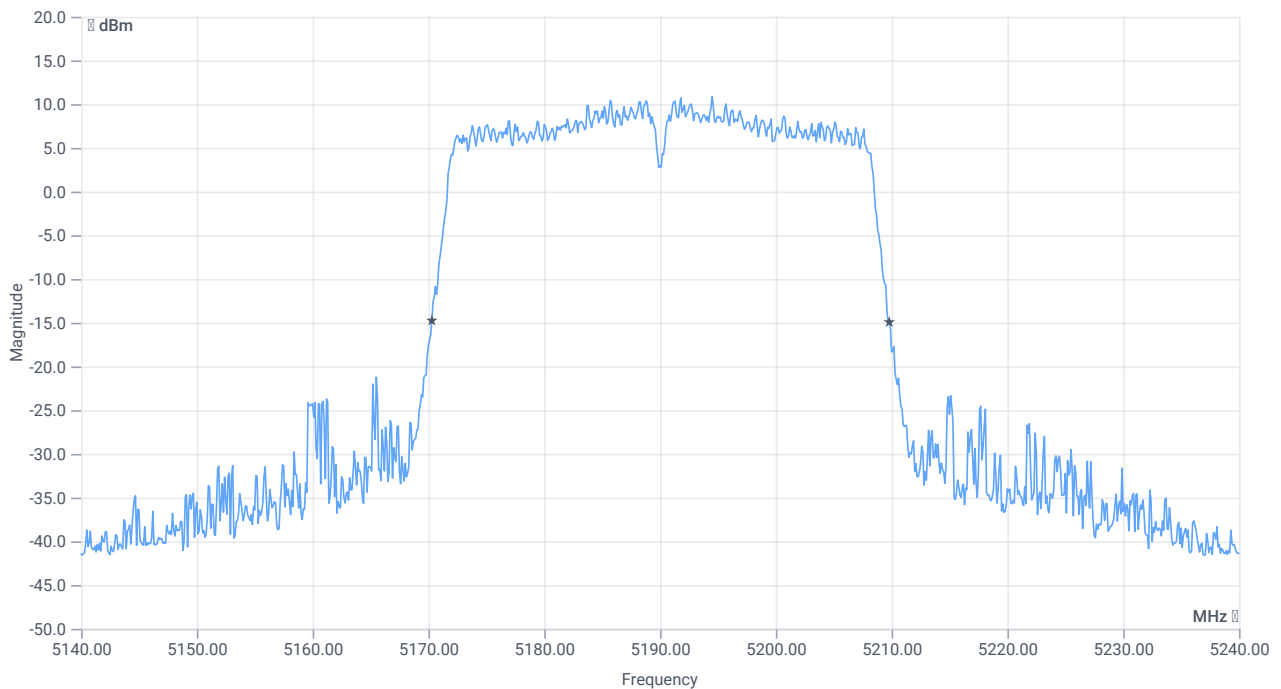




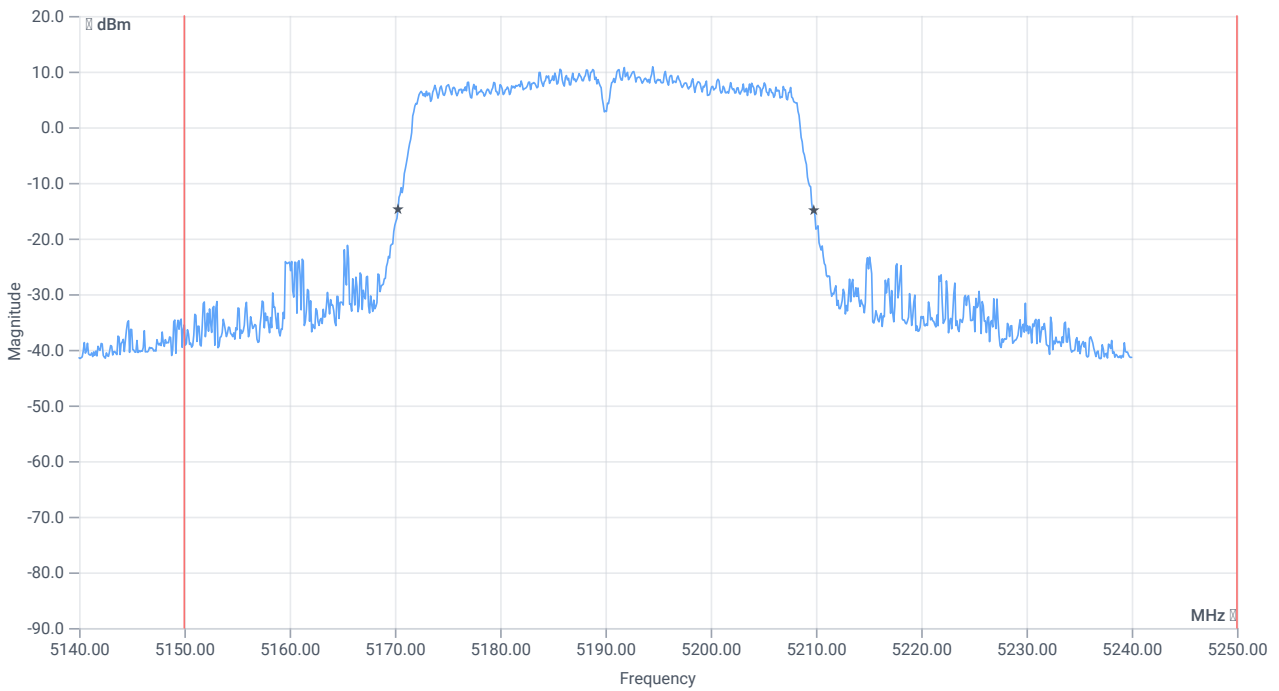
BW within Band 99PCT

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	36.064	MHz	INFO
T1 99%	5150.000000	--	5172.0180	MHz	PASS
T2 99%	--	5250.000000	5208.0819	MHz	PASS



BW 26dB



BW within Band 26dB

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.5	MHz	INFO
T1 26dB	5150.000000	---	5170.3000	MHz	PASS
T2 26dB	---	5250.000000	5209.8000	MHz	PASS

Verdict

PASS

## FCC 15.407 # MIMO $\Sigma$ Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:19:38
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	
TC Version	0.0.1
My Description	MIMO $\Sigma$ FCC Power & psd - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	False   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	None

### Test Equipment

## Test at TX 5190 MHz

### RESULT Power

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 Max Output Power DC corrected	--	--	17.17	dBm	INFO
Ant:1 BW 26dB	--	--	39.760	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	17.26	dBm	INFO
Ant:2 BW 26dB	--	--	39.440	MHz	INFO
Σ Limit absolute	--	24	20.23	dBm	PASS
Σ Limit: 11 dBm + 10 log 39.44	--	26.96	20.23	dBm	na

### RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	3.71	dBm/1MHz	INFO
Ant:2 PSD	--	--	3.81	dBm/1MHz	INFO
Σ	--	11	6.77	dBm/1MHz	PASS

### Verdict

PASS

## # Message with SA scan ~

### Test References

TC Start	15.03.2023 14:19:55
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan ac_VHT40_U_NII_1
Add. Information	

### Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.03.2023 14:19:56
Message	set WLAN5Gx to ac_VHT40_U_NII_1, Frequency [MHz] 5230

### Test Equipment

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

### Verdict

INFO

## FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:21:53
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	True   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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



## Test at TX 5230 MHz

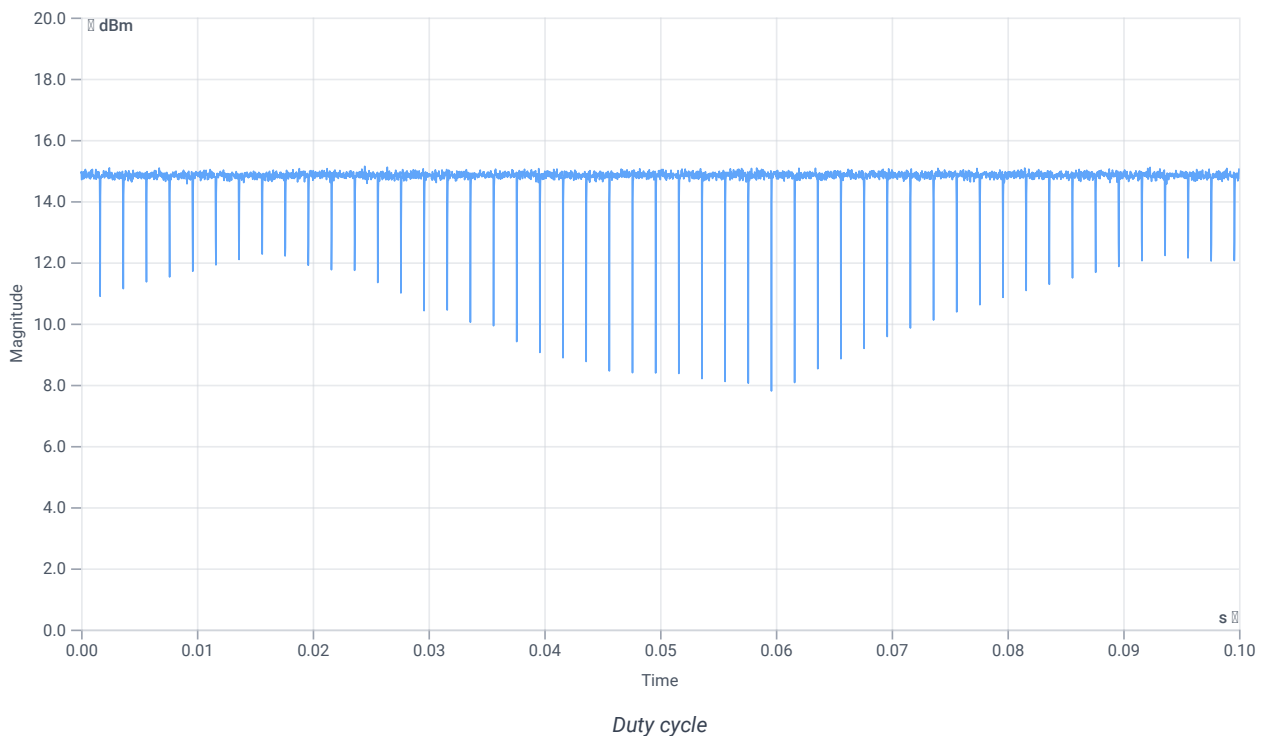
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	13.42	dBm	INFO
Ref. Frequency	--	--	5226.400	MHz	INFO

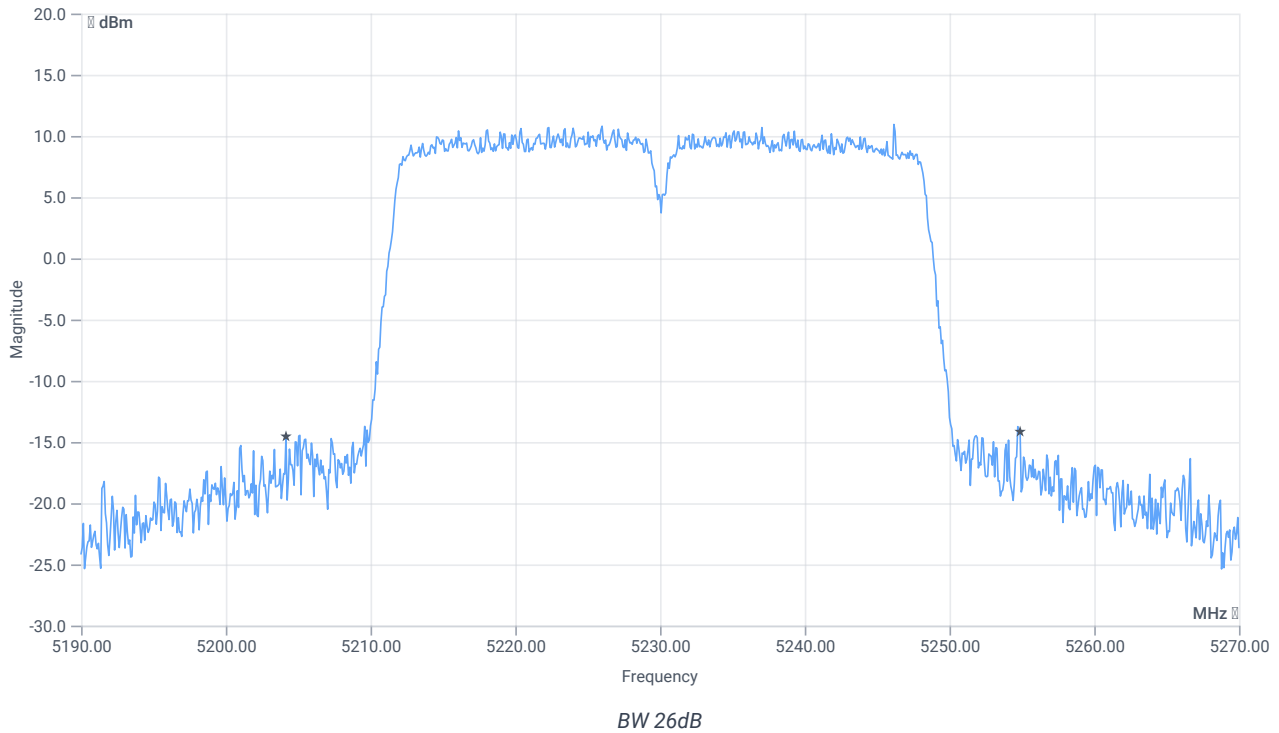
## Evaluation max. Duty Cycle

### Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	INFO
Duty Cycle max	--	--	0	dB	INFO
Duty Cycle (Burst Ratio) min	--	--	1	--	INFO
Duty Cycle min	--	--	0	dB	INFO



## Evaluation Bandwidth



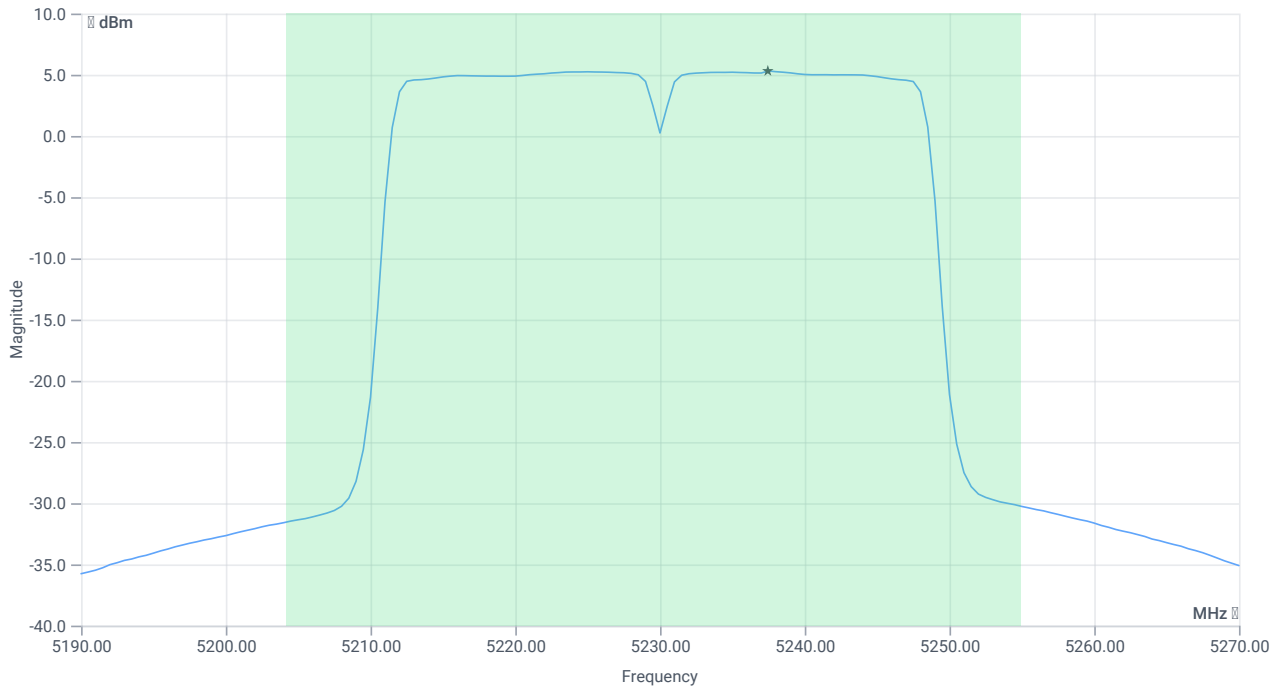
## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	50.72	MHz	INFO
T1 26dB	---	---	5204.1600	MHz	INFO
T2 26dB	---	---	5254.8800	MHz	INFO

## Maximum Output Power

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	25.42   16.45   25
Start [MHz]   Stop [MHz]	5190.000   5270.000
RBW [MHz]   VBW [MHz]	1.000000   3.000000
Detector   TraceMode	RMS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	53700   1   161   SWE



Max OP and PSD

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	20.24	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	20.24	dBm	PASS
Limit: 11 dBm + 10 log 50.72					
Max Output Power DC corrected	--	28.05	20.24	dBm	na

## Power Spectral Density

### RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	5.31	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	5.31	dBm/1MHz	PASS

Verdict

PASS

## FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:23:24
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407, ISED RSS247 -
Test Method	26dB Bandwidth KDB789033 D02, C.1 / ISED RSS-GEN
TC Version	0.0.1
My Description	FCC 15.407 Bandwidths - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	True   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

## Test at TX 5230 MHz

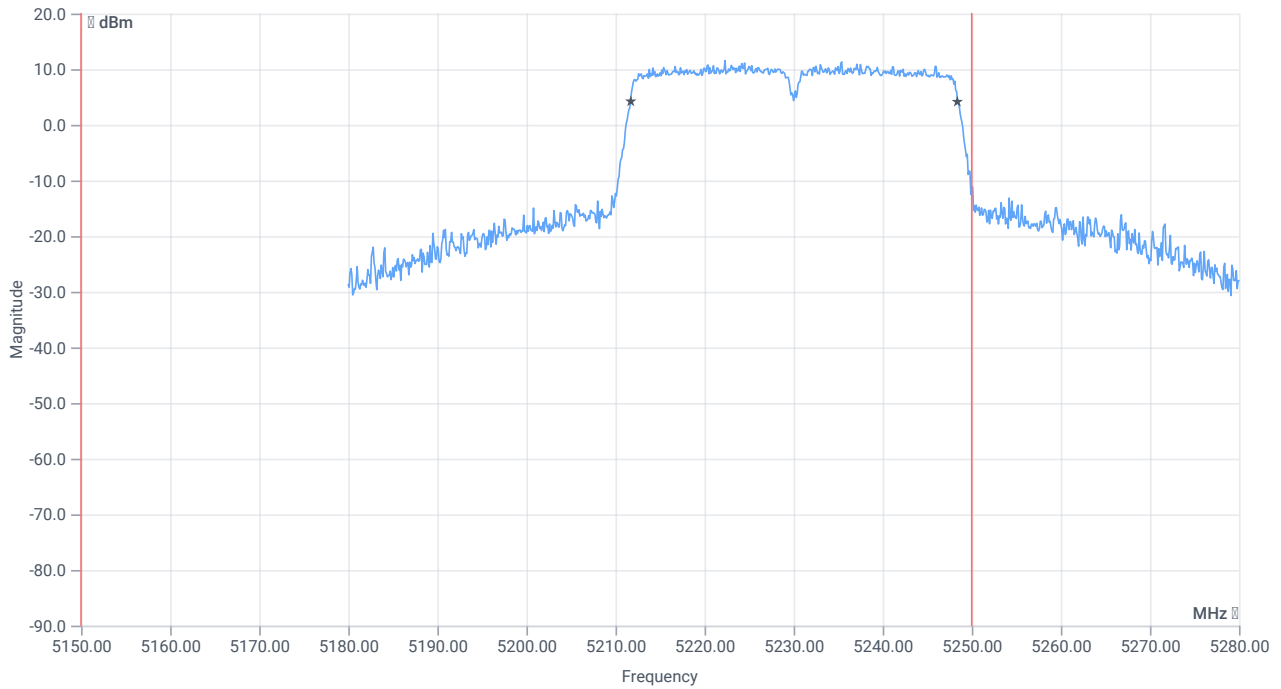
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	13.27	dBm	INFO
Ref. Frequency	--	--	5226.600	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	21.27   16.45   20
Start [MHz]   Stop [MHz]	5180.000   5280.000
RBW [MHz]   VBW [MHz]	0.500000   3.000000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	1   2500   1001   SWE

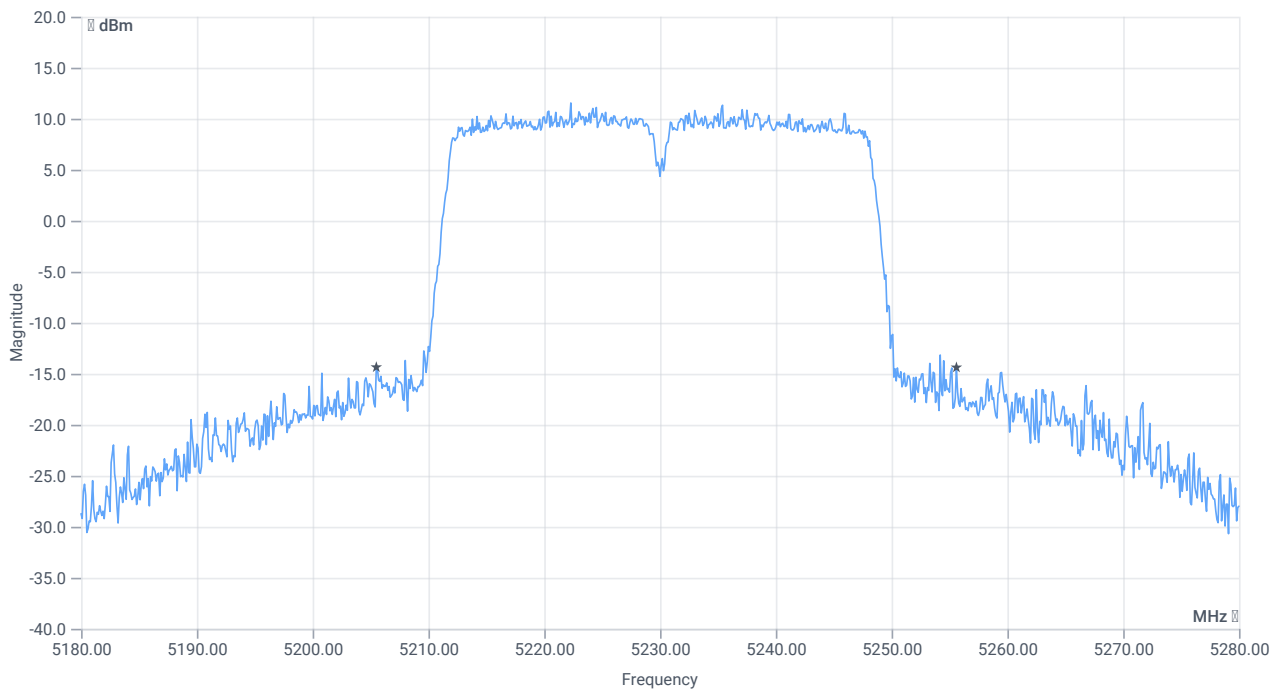




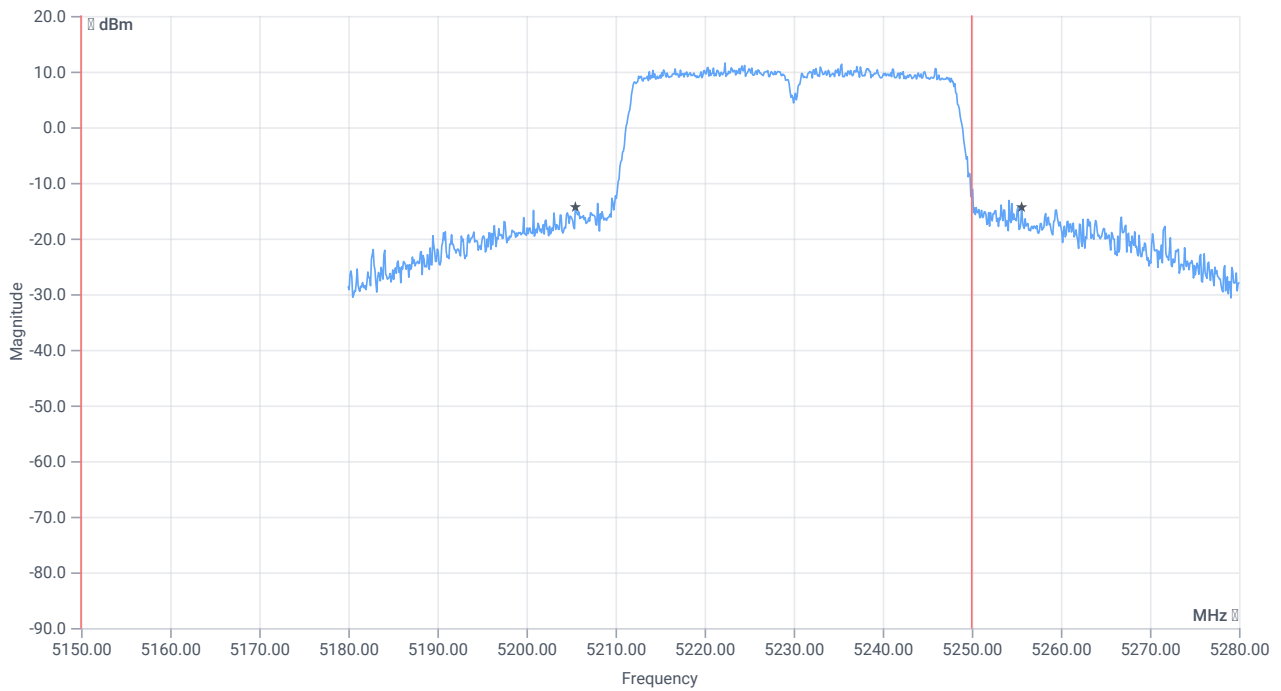
BW within Band 99PCT

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	36.663	MHz	INFO
T1 99%	5150.000000	--	5211.7183	MHz	PASS
T2 99%	--	5250.000000	5248.3816	MHz	PASS



BW 26dB



BW within Band 26dB

**RESULT**

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	50.1	MHz	INFO
T1 26dB	5150.000000	---	5205.5000	MHz	PASS
T2 26dB	---	5250.000000	5255.6000	MHz	DFS required

Verdict

PASS

# FCC 15.407 # Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1

## Test References

TC Start	15.03.2023 14:23:59
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

## EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

## Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	True   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

## Test Equipment

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



## Test at TX 5230 MHz

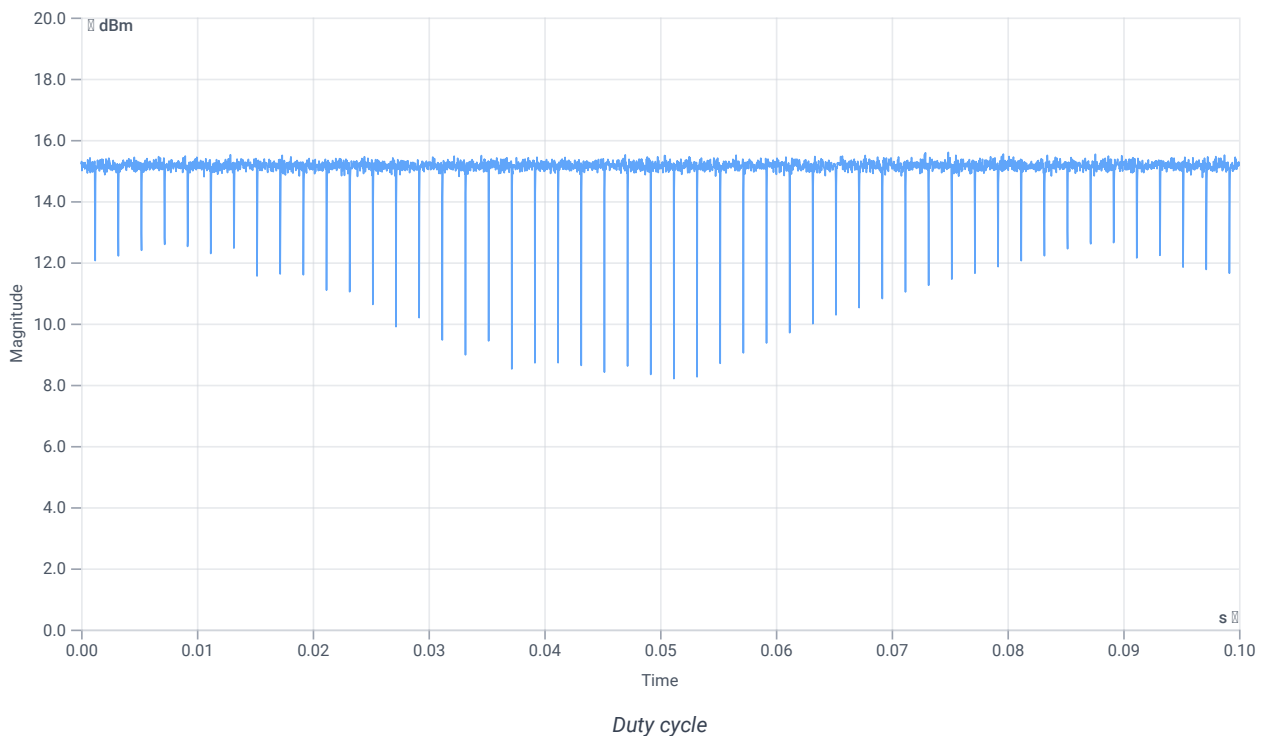
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	14.19	dBm	INFO
Ref. Frequency	--	--	5226.400	MHz	INFO

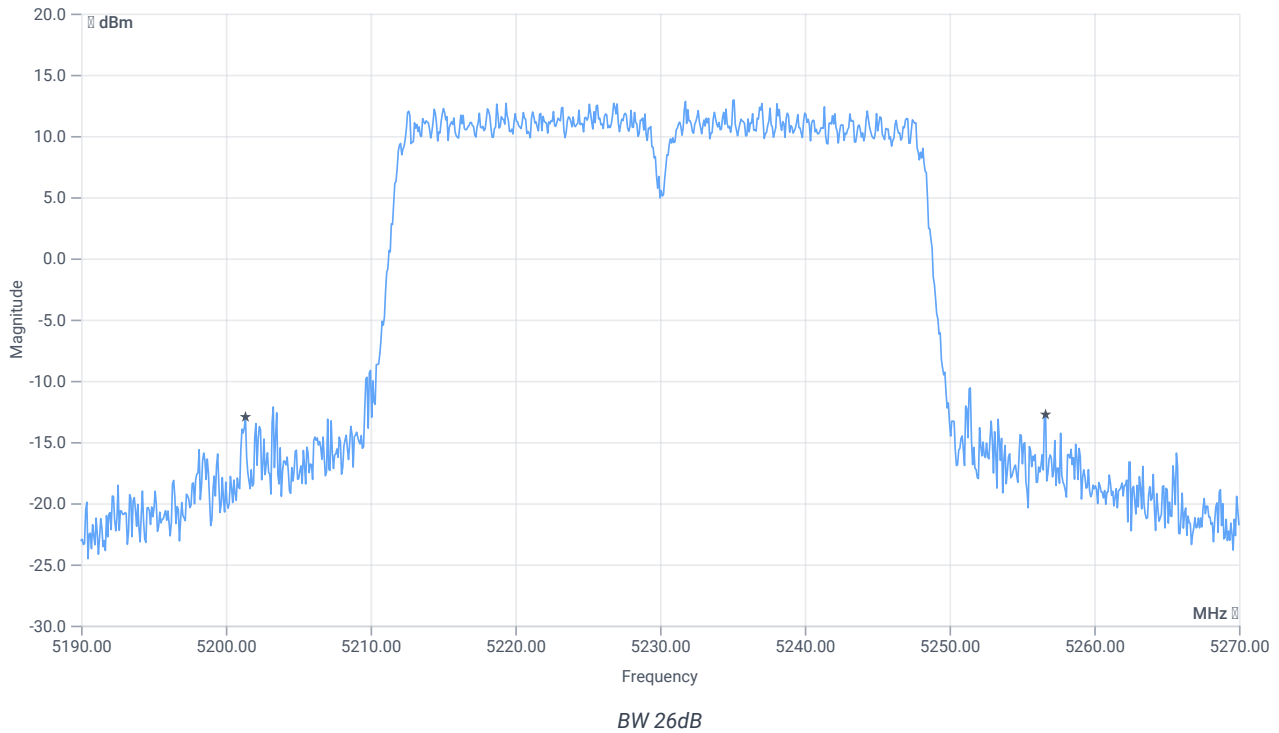
## Evaluation max. Duty Cycle

### Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
No enough Bursts detected, Duty Cycle Burst Ratio set to 1					
Duty Cycle (Burst Ratio) max	--	--	1	--	INFO
Duty Cycle max	--	--	0	dB	INFO
Duty Cycle (Burst Ratio) min	--	--	1	--	INFO
Duty Cycle min	--	--	0	dB	INFO



## Evaluation Bandwidth



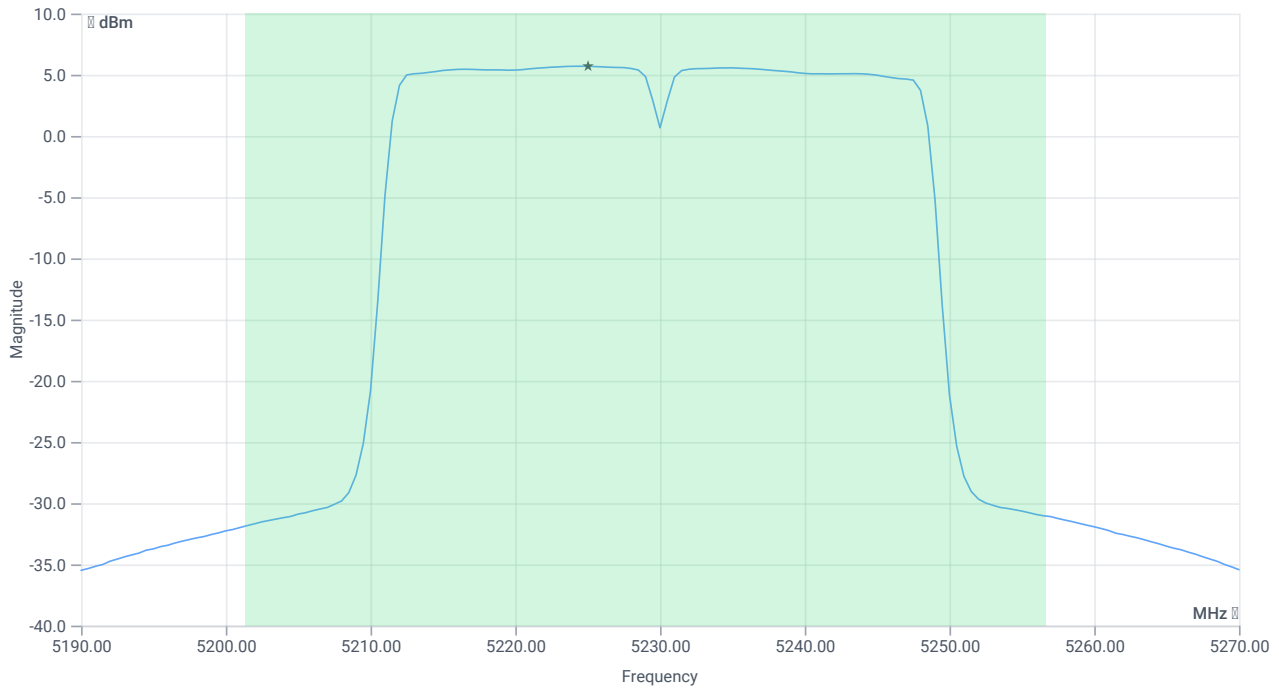
## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	55.28	MHz	INFO
T1 26dB	---	---	5201.3600	MHz	INFO
T2 26dB	---	---	5256.6400	MHz	INFO

## Maximum Output Power

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	26.19   16.45   25
Start [MHz]   Stop [MHz]	5190.000   5270.000
RBW [MHz]   VBW [MHz]	1.000000   3.000000
Detector   TraceMode	RMS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	53700   1   161   SWE



Max OP and PSD

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	20.58	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	20.58	dBm	PASS
Limit: 11 dBm + 10 log 55.28					
Max Output Power DC corrected	--	28.43	20.58	dBm	na

## Power Spectral Density

### RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	5.7	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	5.7	dBm/1MHz	PASS

Verdict

PASS

## FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:25:29
Ambit Temp [°C]   Humidity [rel%]	22.5   33
System Version	3.5.0.9
Test Specification	FCC 15.407, ISED RSS247 -
Test Method	26dB Bandwidth KDB789033 D02, C.1 / ISED RSS-GEN
TC Version	0.0.1
My Description	FCC 15.407 Bandwidths - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	True   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	EUT - SignalingUnit - SpectrumAnalyzer

### Test Equipment

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

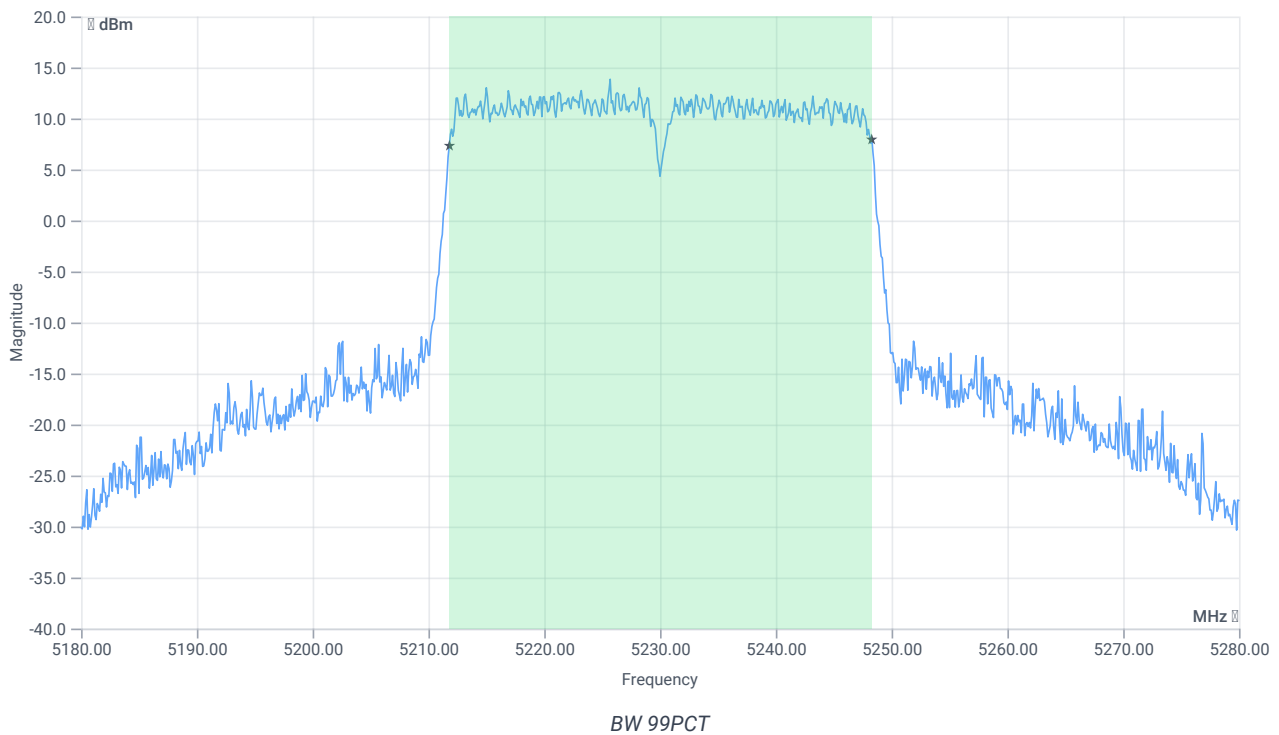
## Test at TX 5230 MHz

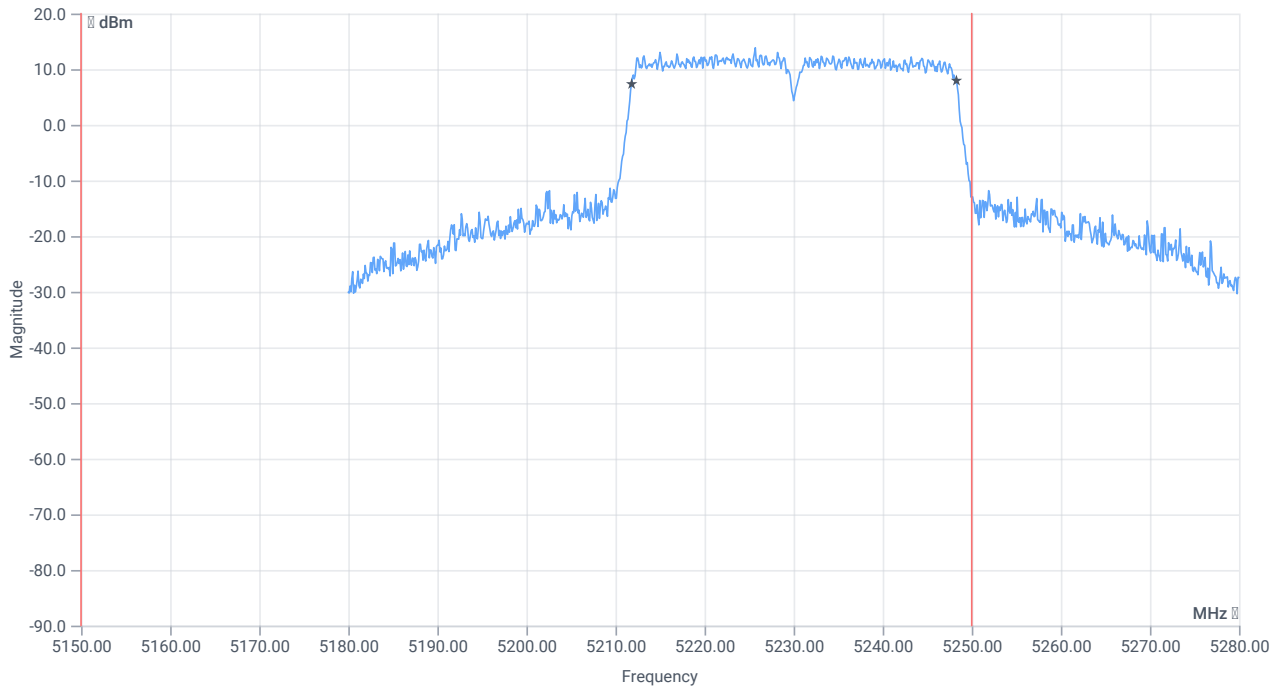
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	14.63	dBm	INFO
Ref. Frequency	--	--	5220.010	MHz	INFO

### READ SA SETTINGS:

RefLevel [dBm]   RefLevelOffset [dB]   InpAtt [dB]	22.63   16.45   25
Start [MHz]   Stop [MHz]	5180.000   5280.000
RBW [MHz]   VBW [MHz]	0.500000   3.000000
Detector   TraceMode	POS   MAXH
Sweep: Time [ms]   Count   Points per Section   Type	1   2500   1001   SWE

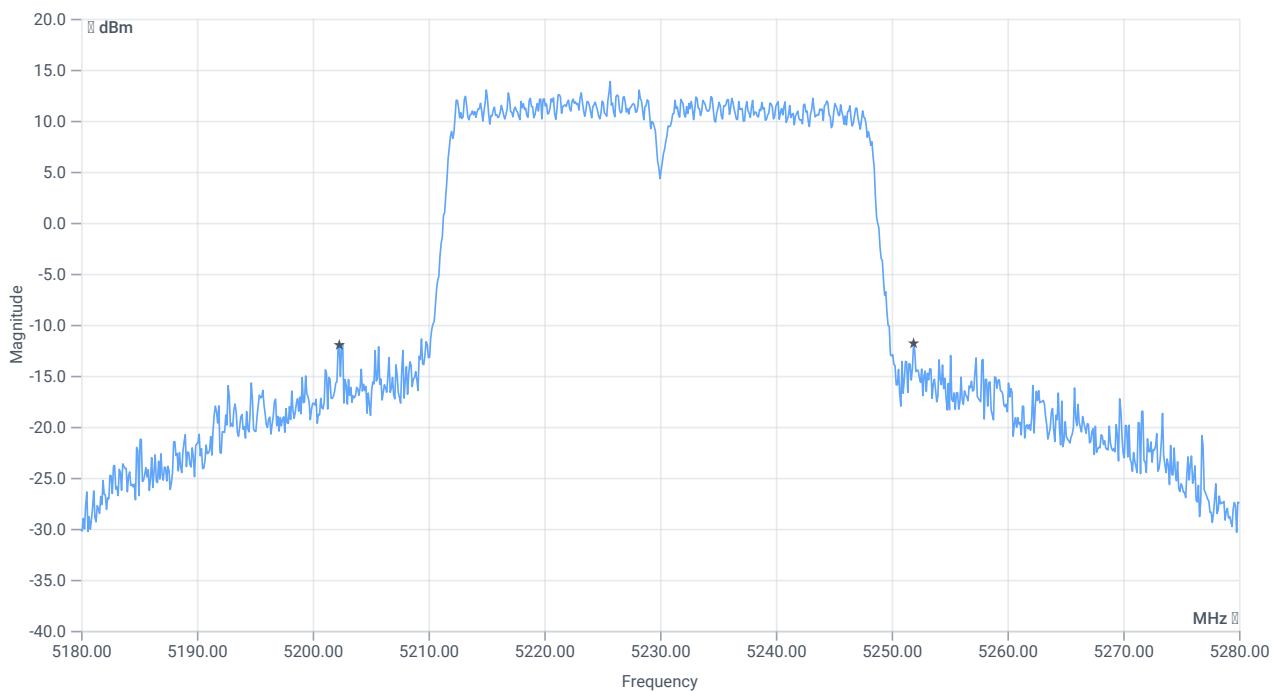




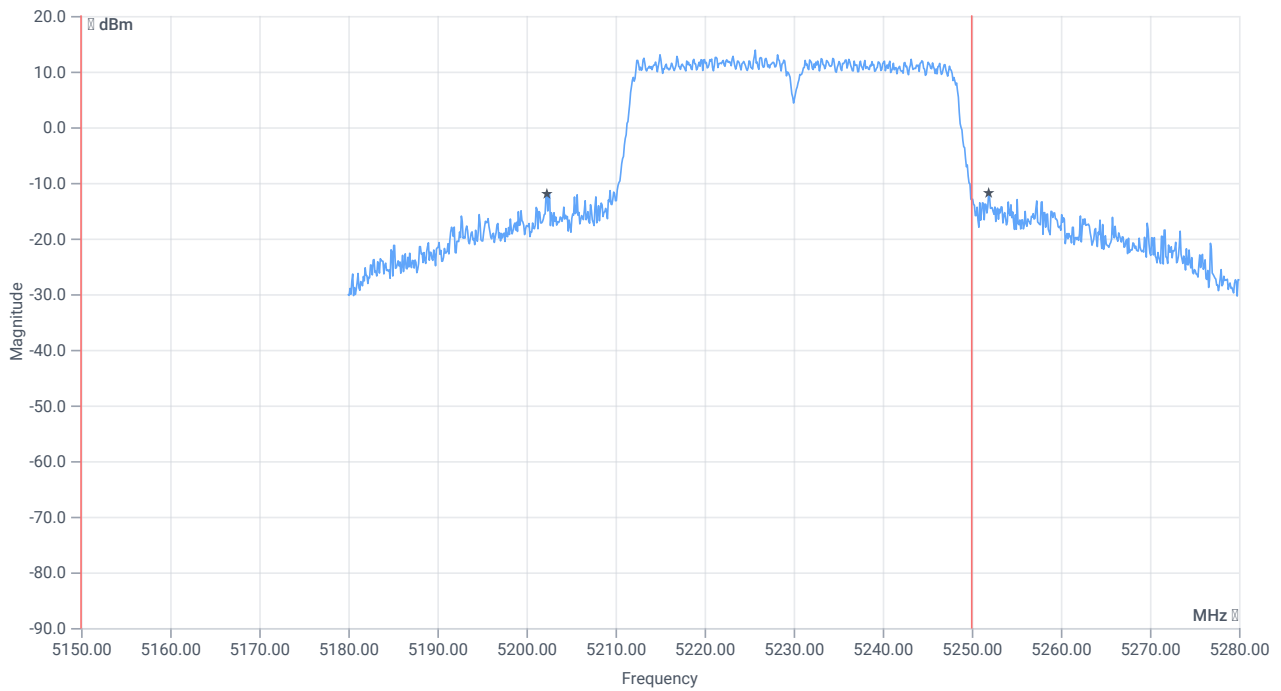
BW within Band 99PCT

## RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	36.464	MHz	INFO
T1 99%	5150.000000	--	5211.8182	MHz	PASS
T2 99%	--	5250.000000	5248.2817	MHz	PASS



BW 26dB



BW within Band 26dB

**RESULT**

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	--	--	49.6	MHz	INFO
T1 26dB	5150.000000	--	5202.3000	MHz	PASS
T2 26dB	--	5250.000000	5251.9000	MHz	DFS required

Verdict

PASS

## FCC 15.407 # MIMO $\Sigma$ Max output power and psd ~ WLAN5Gx ac-VHT40 mode U-NII-1

### Test References

TC Start	15.03.2023 14:26:04
Ambit Temp [°C]   Humidity [rel%]	22.4   33
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	
TC Version	0.0.1
My Description	MIMO $\Sigma$ FCC Power & psd - WLAN5Gx ac-VHT40 mode U-NII-1
Add. Information	

### EUT Common Settings WLAN5Gx

Number of Antenna Ports	2
User Interaction	No
Device Class UNII_1	Client
Limit W52 Japan	Standard

### Test Parameter

Technology to test	WLAN5Gx ac-VHT40 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False   Freq [MHz] 5190
Frequency mid to test	False   Freq [MHz] 0
Frequency high to test	True   Freq [MHz] 5230
Auto Control enabled Power Supply   Climatic Box	No   No
Additional Path Loss [dB]	1.4
Switched Path	None

### Test Equipment



## Test at TX 5230 MHz

### RESULT Power

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 Max Output Power DC corrected	--	--	20.24	dBm	INFO
Ant:1 BW 26dB	--	--	50.720	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	20.58	dBm	INFO
Ant:2 BW 26dB	--	--	55.280	MHz	INFO
Σ Limit absolute	--	24	23.42	dBm	PASS
Σ Limit: 11 dBm + 10 log 50.72	--	28.05	23.42	dBm	na

### RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	5.31	dBm/1MHz	INFO
Ant:2 PSD	--	--	5.7	dBm/1MHz	INFO
Σ	--	11	8.52	dBm/1MHz	PASS

### Verdict

PASS

- END OF DOCUMENT -