

Measurement Results

No.1-5761/23-01-05_Annex_MR_17

Test logging

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Document authorized:

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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 14:28:35
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 WLAN5Gx ax-HE40 U-NII-1
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.03.2023 14:28:36
Message	set WLAN5Gx to WLAN5Gx ax-HE40 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 ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:29:43
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 ax-HE40 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 ax-HE40
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

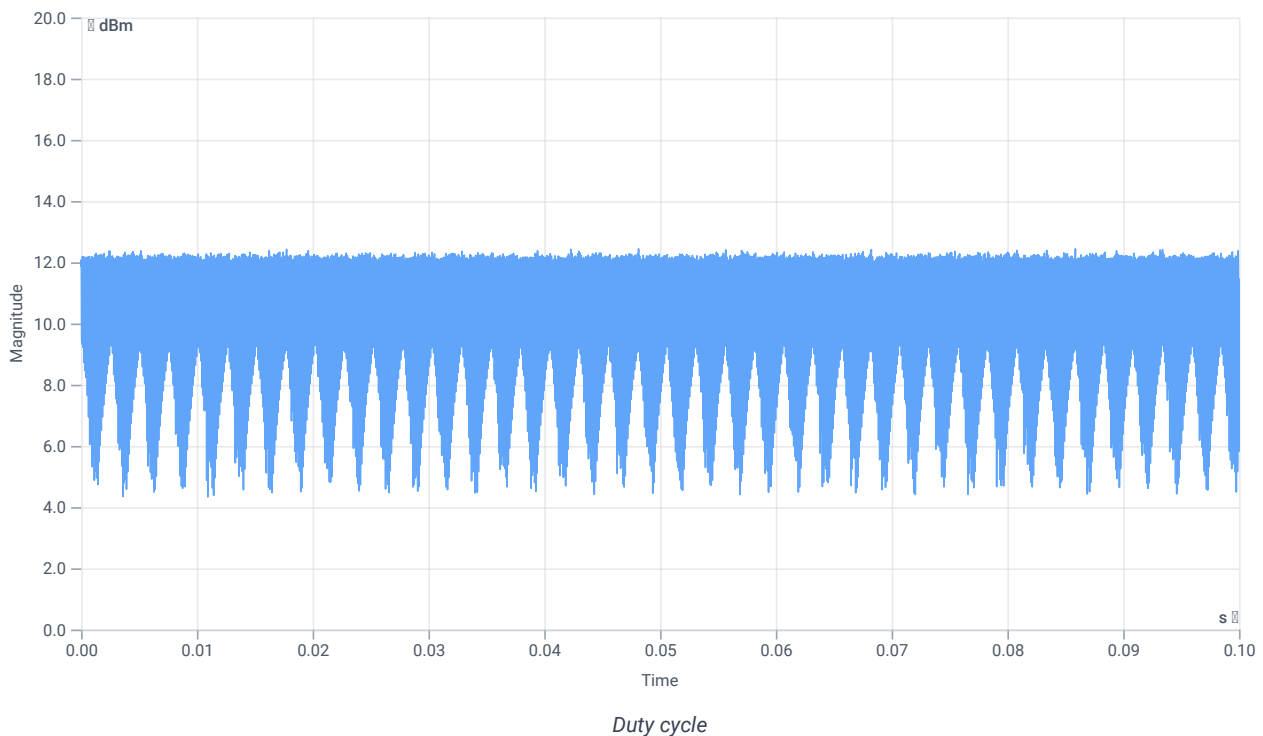
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	11.99	dBm	INFO
Ref. Frequency	--	--	5181.810	MHz	INFO

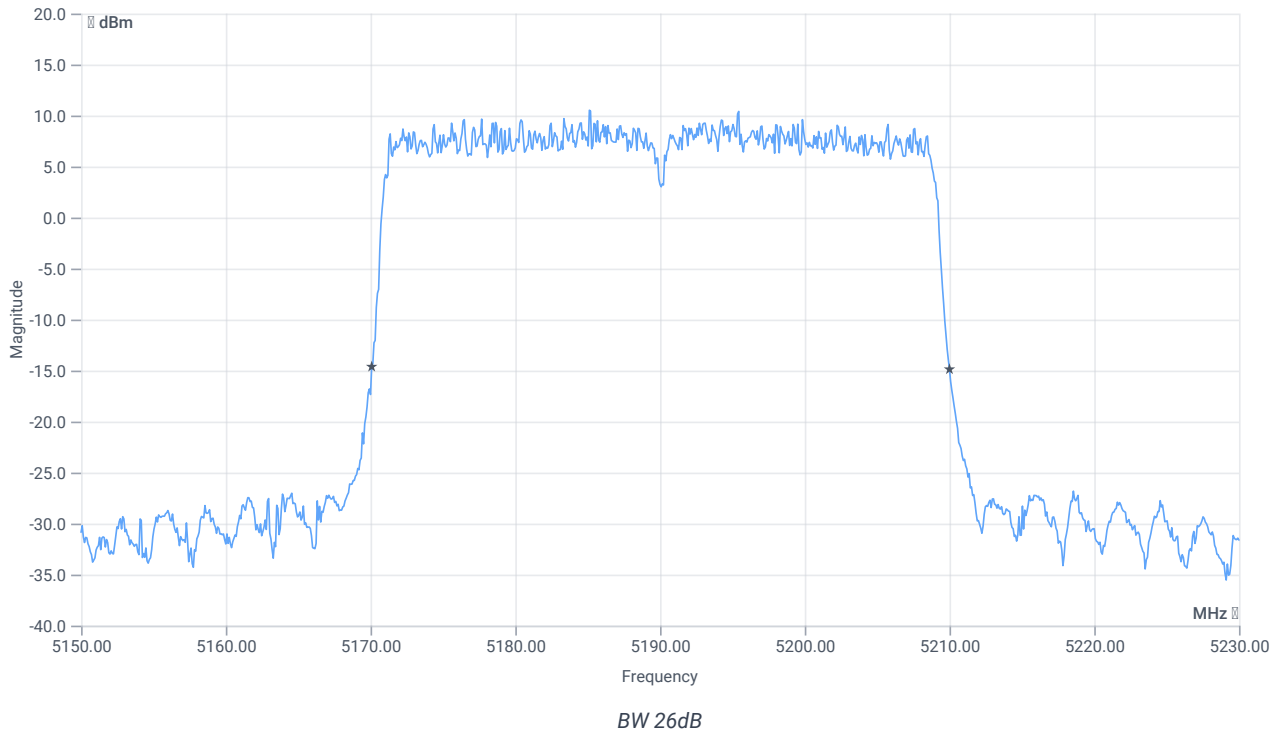
Evaluation max. Duty Cycle

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



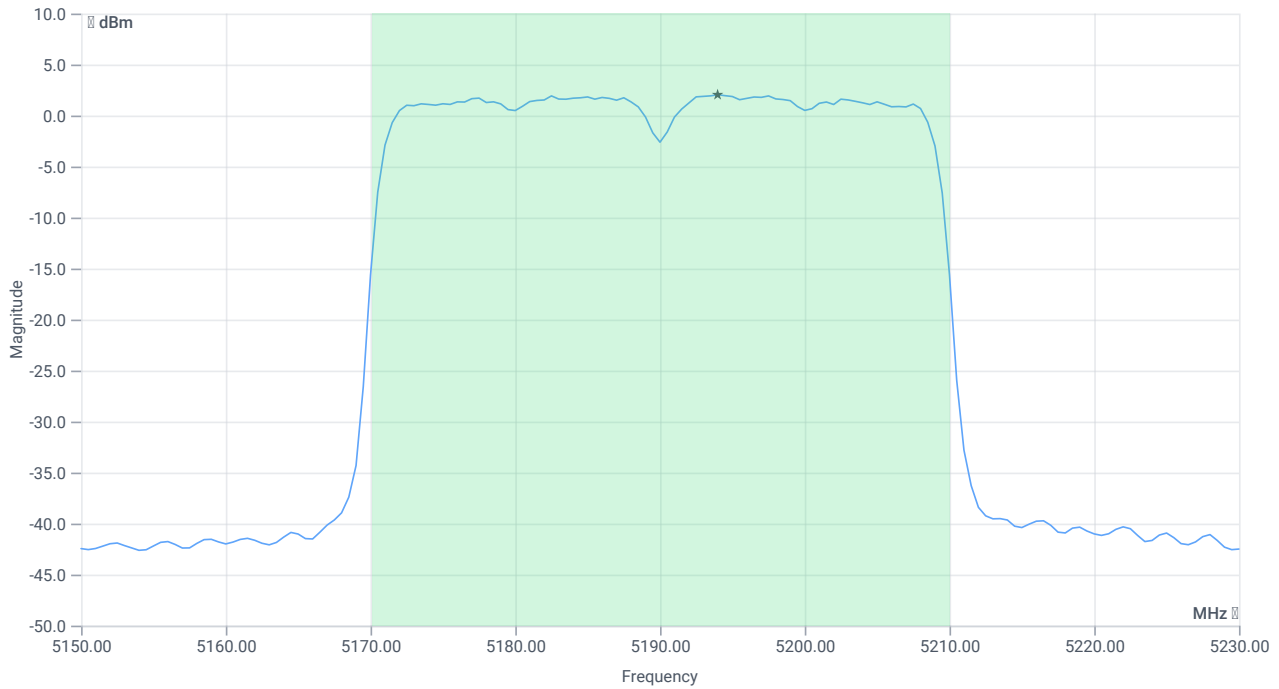
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.92	MHz	INFO
T1 26dB	---	---	5170.0800	MHz	INFO
T2 26dB	---	---	5210.0000	MHz	INFO

Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.99 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	--	--	16.69	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	16.69	dBm	PASS
Limit: 11 dBm + 10 log 39.92					
Max Output Power DC corrected	--	27.01	16.69	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	2.04	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	2.04	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:31:13
Ambit Temp [°C] Humidity [rel%]	22.6 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 ax-HE40 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 ax-HE40
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

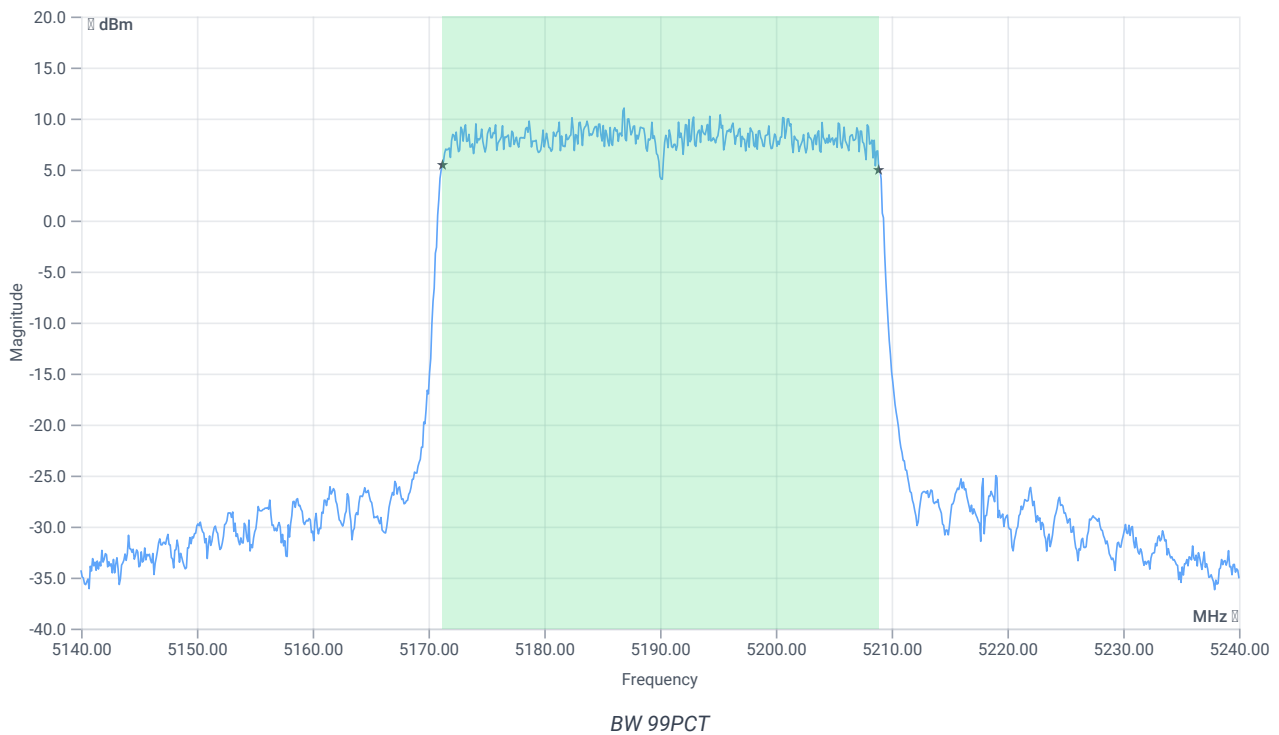
Test at TX 5190 MHz

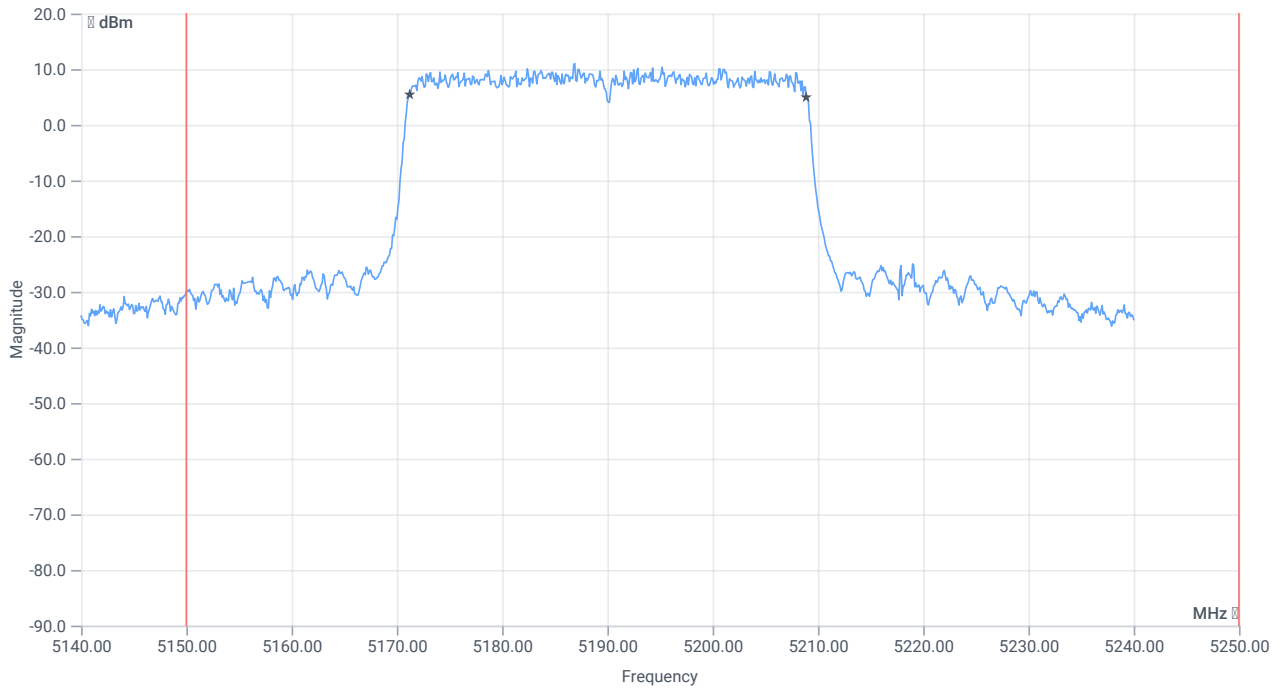
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	13.85	dBm	INFO
Ref. Frequency	--	--	5194.200	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.85 16.45 25
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

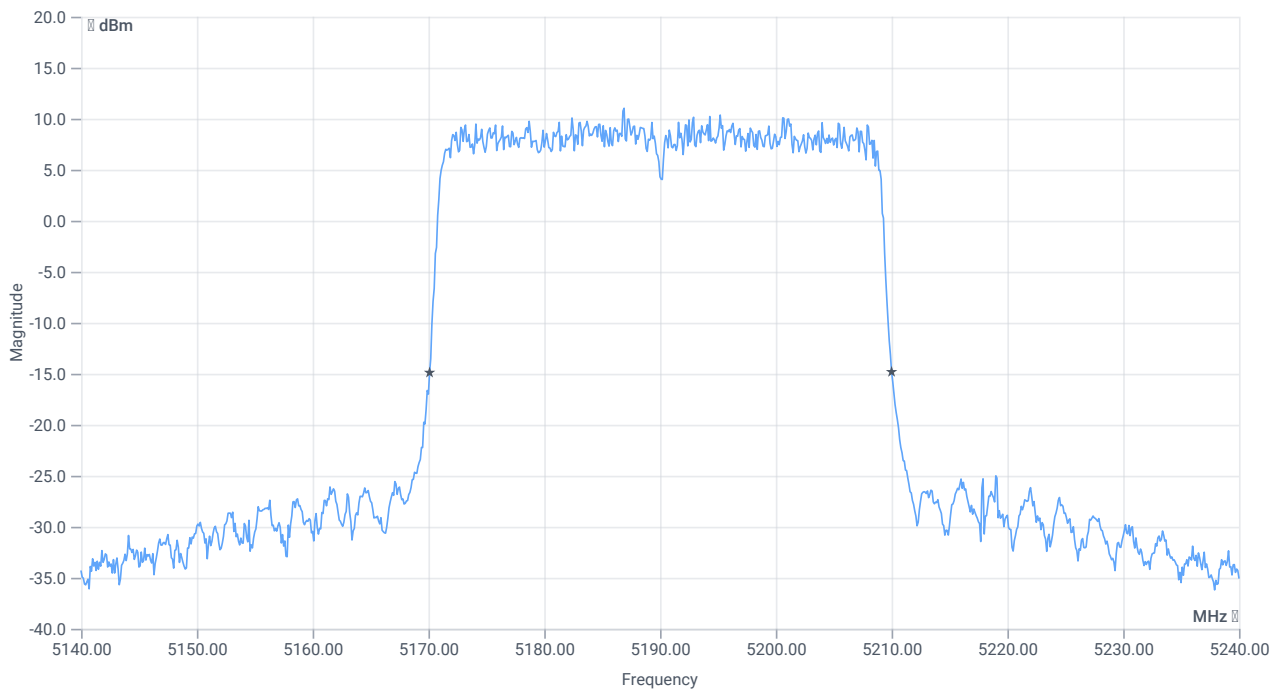




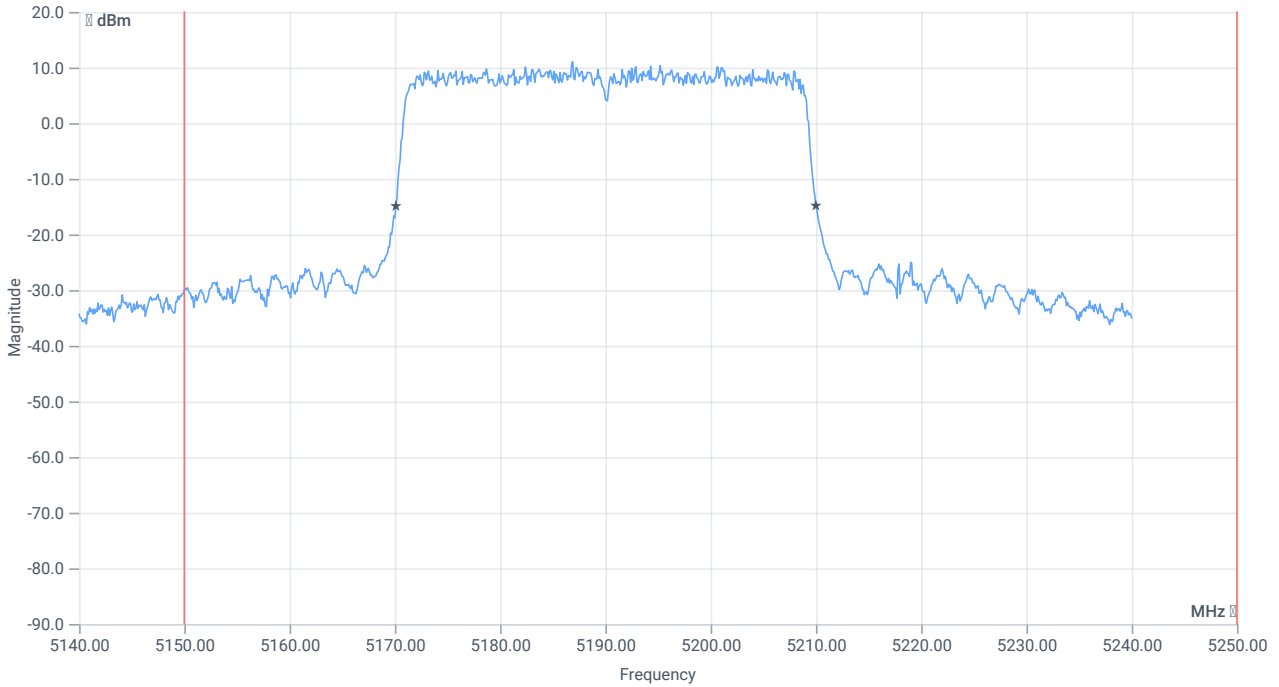
BW within Band 99PCT

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	37.662	MHz	INFO
T1 99%	5150.000000	--	5171.2188	MHz	PASS
T2 99%	--	5250.000000	5208.8811	MHz	PASS



BW 26dB



BW within Band 26dB

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.9	MHz	INFO
T1 26dB	5150.000000	---	5170.1000	MHz	PASS
T2 26dB	---	5250.000000	5210.0000	MHz	PASS

Verdict

PASS

FCC 15.407 # Max output power and psd ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:31:48
Ambit Temp [°C] Humidity [rel%]	22.6 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 ax-HE40 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 ax-HE40
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

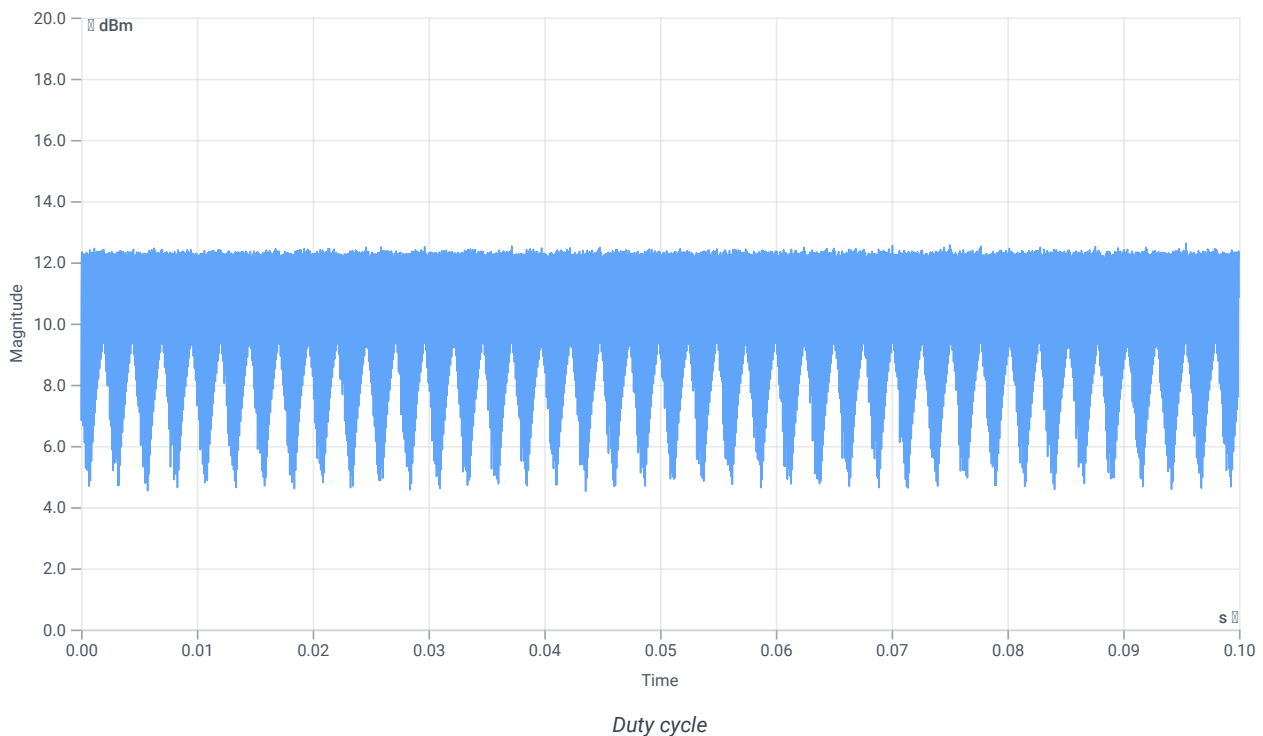
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	11.15	dBm	INFO
Ref. Frequency	--	--	5200.790	MHz	INFO

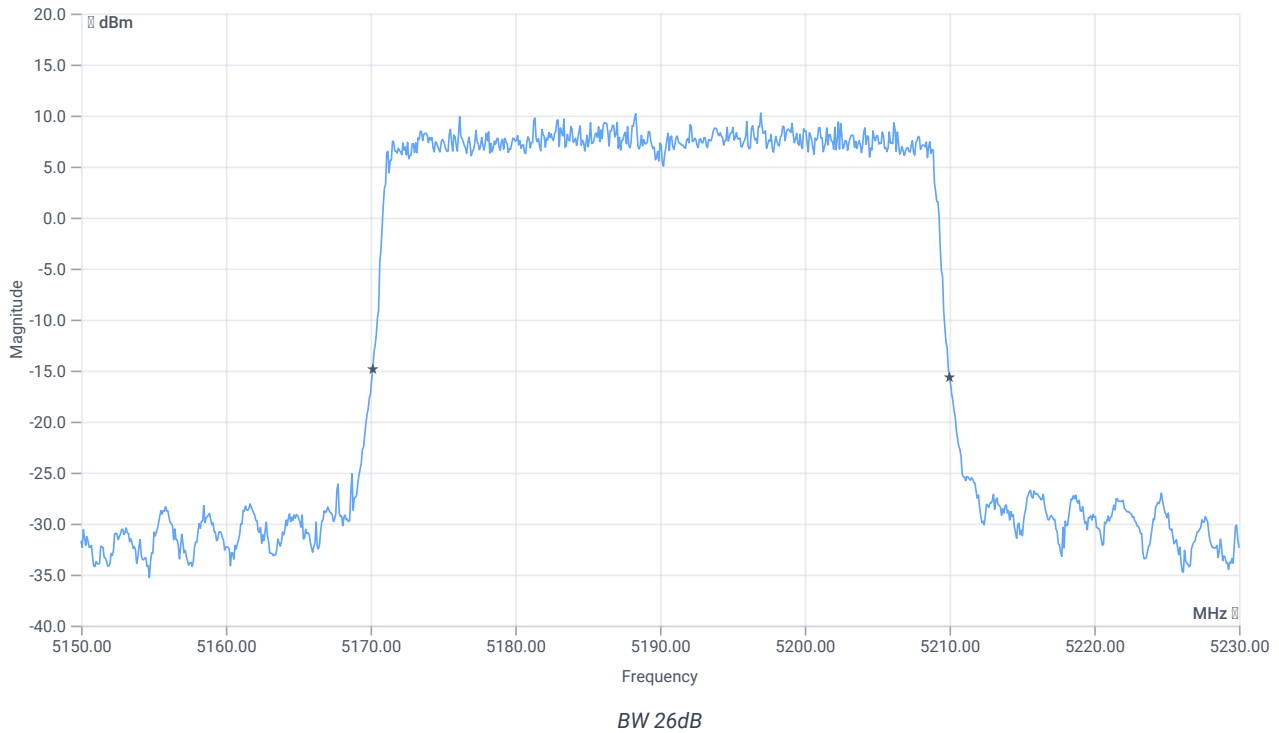
Evaluation max. Duty Cycle

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



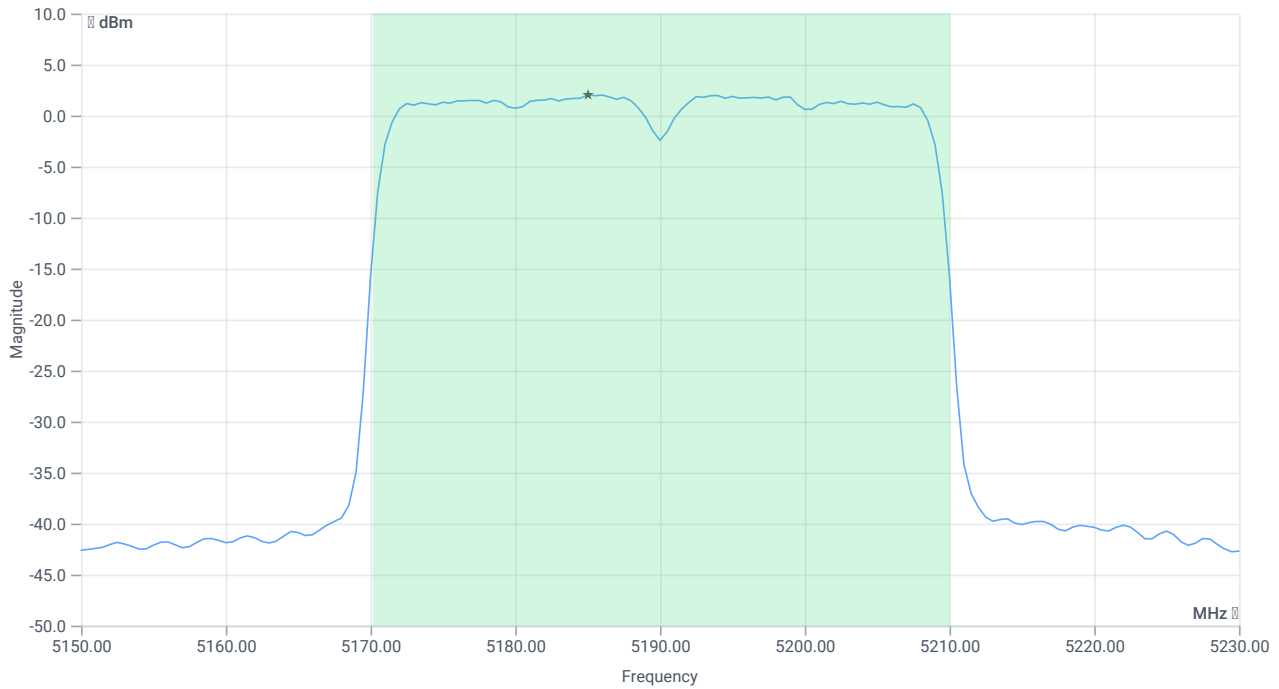
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.84	MHz	INFO
T1 26dB	---	---	5170.1600	MHz	INFO
T2 26dB	---	---	5210.0000	MHz	INFO

Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.15 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	--	--	16.71	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	16.71	dBm	PASS
Limit: 11 dBm + 10 log 39.84					
Max Output Power DC corrected	--	27	16.71	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	2.03	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	2.03	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:33:18
Ambit Temp [°C] Humidity [rel%]	22.6 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 ax-HE40 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 ax-HE40
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

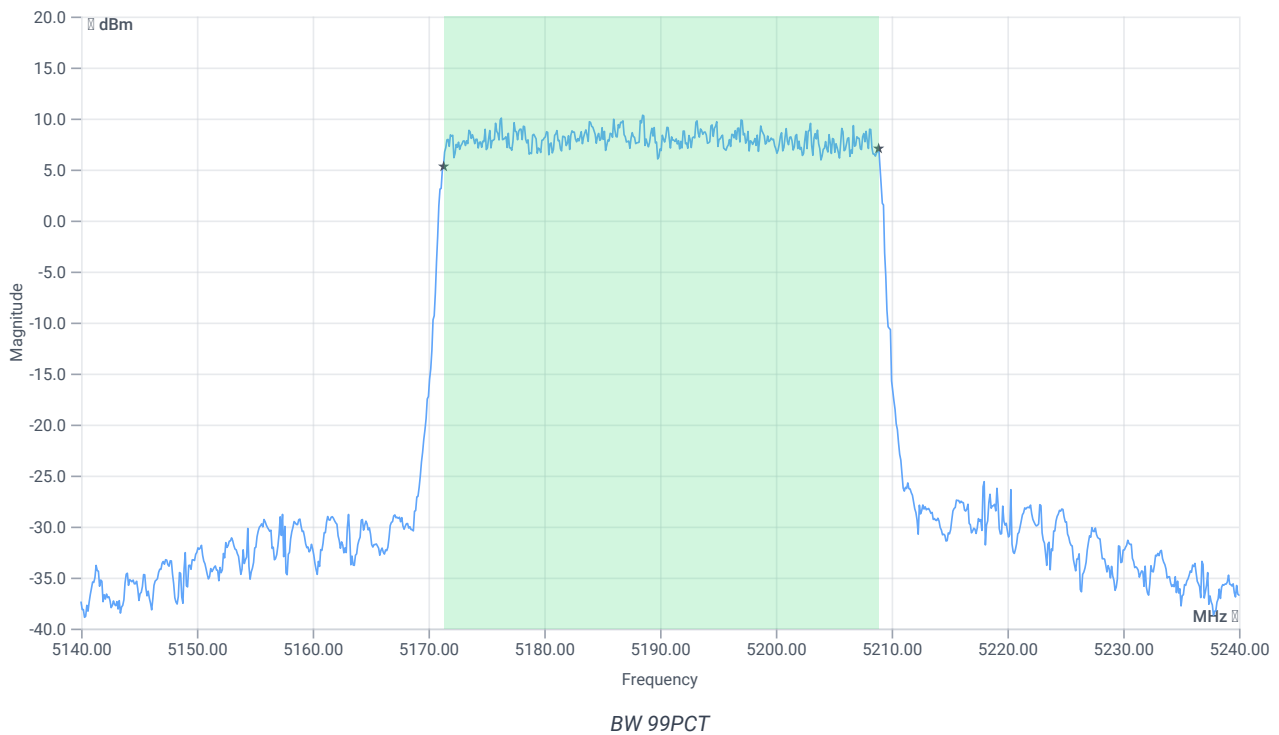
Test at TX 5190 MHz

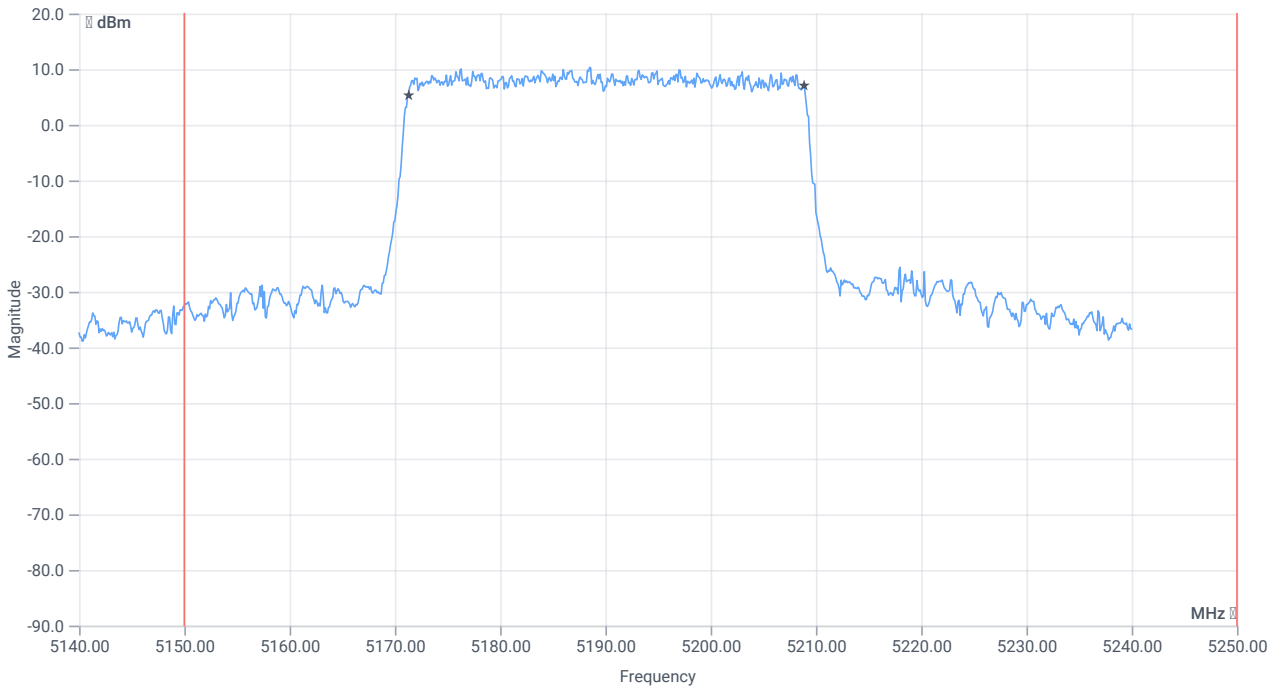
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	12.26	dBm	INFO
Ref. Frequency	--	--	5177.810	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.26 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

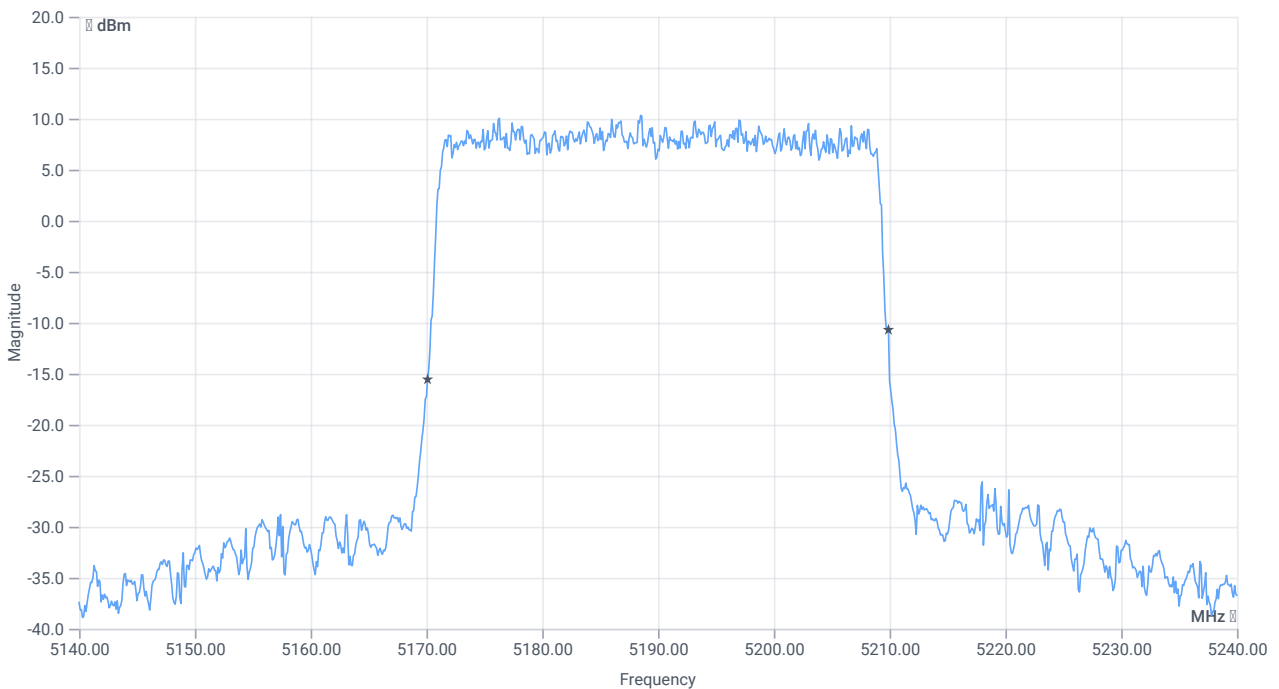




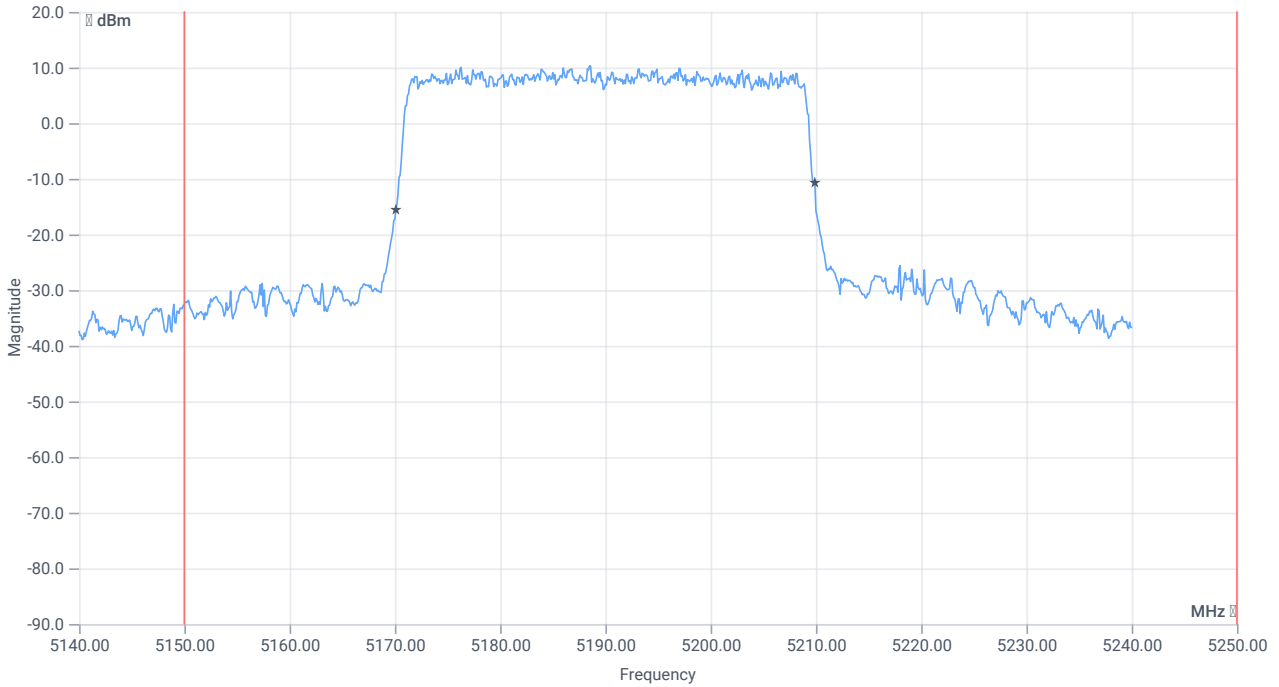
BW within Band 99PCT

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	37.562	MHz	INFO
T1 99%	5150.000000	--	5171.3187	MHz	PASS
T2 99%	--	5250.000000	5208.8811	MHz	PASS



BW 26dB



BW within Band 26dB

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.8	MHz	INFO
T1 26dB	5150.000000	---	5170.1000	MHz	PASS
T2 26dB	---	5250.000000	5209.9000	MHz	PASS

Verdict

PASS

FCC 15.407 # MIMO Σ Max output power and psd ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:33:54
Ambit Temp [°C] Humidity [rel%]	22.6 33
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Power & psd - WLAN5Gx ax-HE40 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 ax-HE40
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	--	--	16.69	dBm	INFO
Ant:1 BW 26dB	--	--	39.920	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	16.71	dBm	INFO
Ant:2 BW 26dB	--	--	39.840	MHz	INFO
Σ Limit absolute	--	24	19.71	dBm	PASS
Σ Limit: 11 dBm + 10 log 39.84	--	27	19.71	dBm	na

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	2.04	dBm/1MHz	INFO
Ant:2 PSD	--	--	2.03	dBm/1MHz	INFO
Σ	--	11	5.05	dBm/1MHz	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	15.03.2023 14:34:10
Ambit Temp [°C] Humidity [rel%]	22.6 33
System Version	3.5.0.9
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA WLAN5Gx ax-HE40 U-NII-1
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.03.2023 14:34:10
Message	set WLAN5Gx to WLAN5Gx ax-HE40 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 ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:34:59
Ambit Temp [°C] Humidity [rel%]	22.6 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 ax-HE40 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 ax-HE40
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

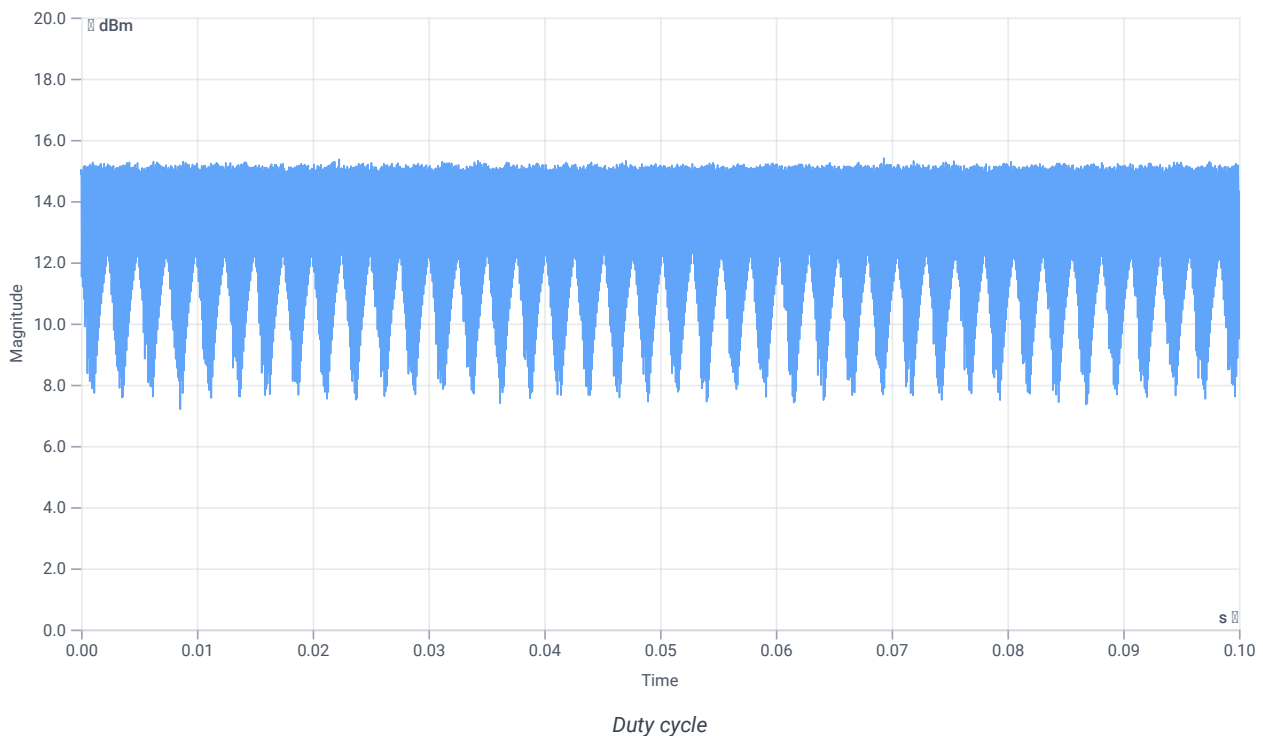
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	14.19	dBm	INFO
Ref. Frequency	--	--	5216.610	MHz	INFO

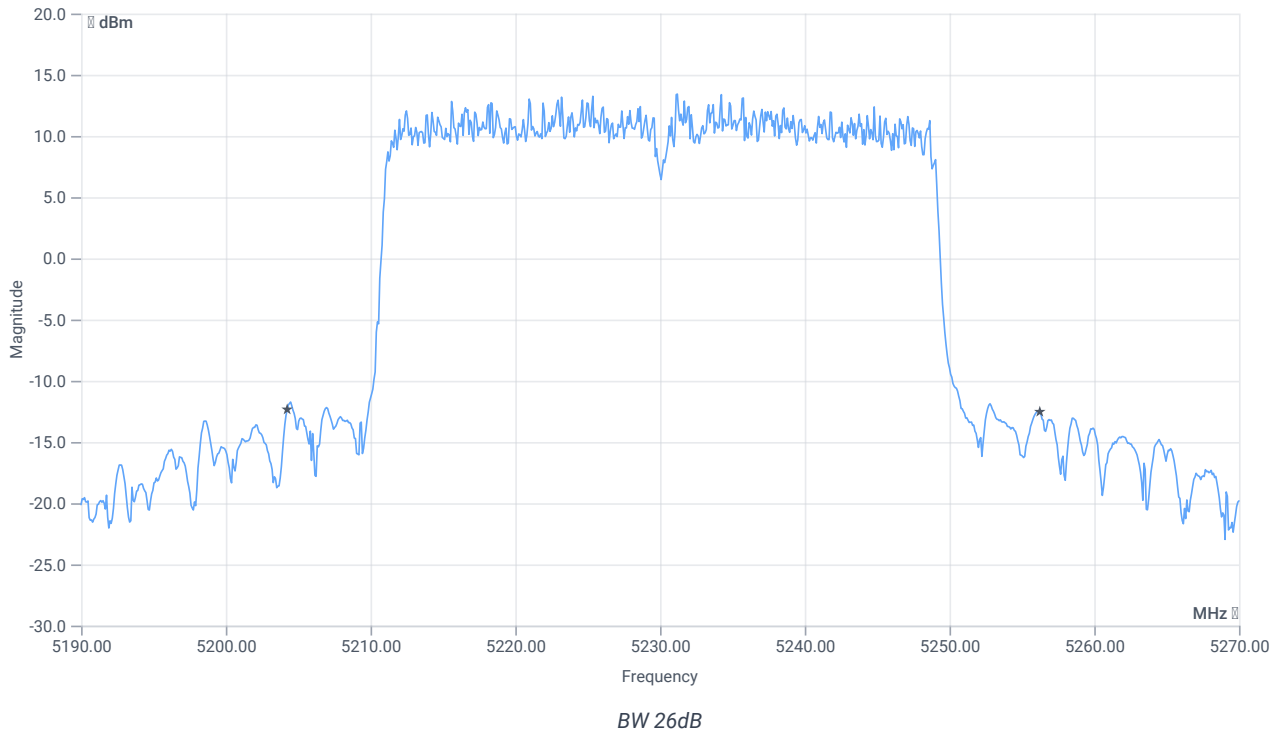
Evaluation max. Duty Cycle

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



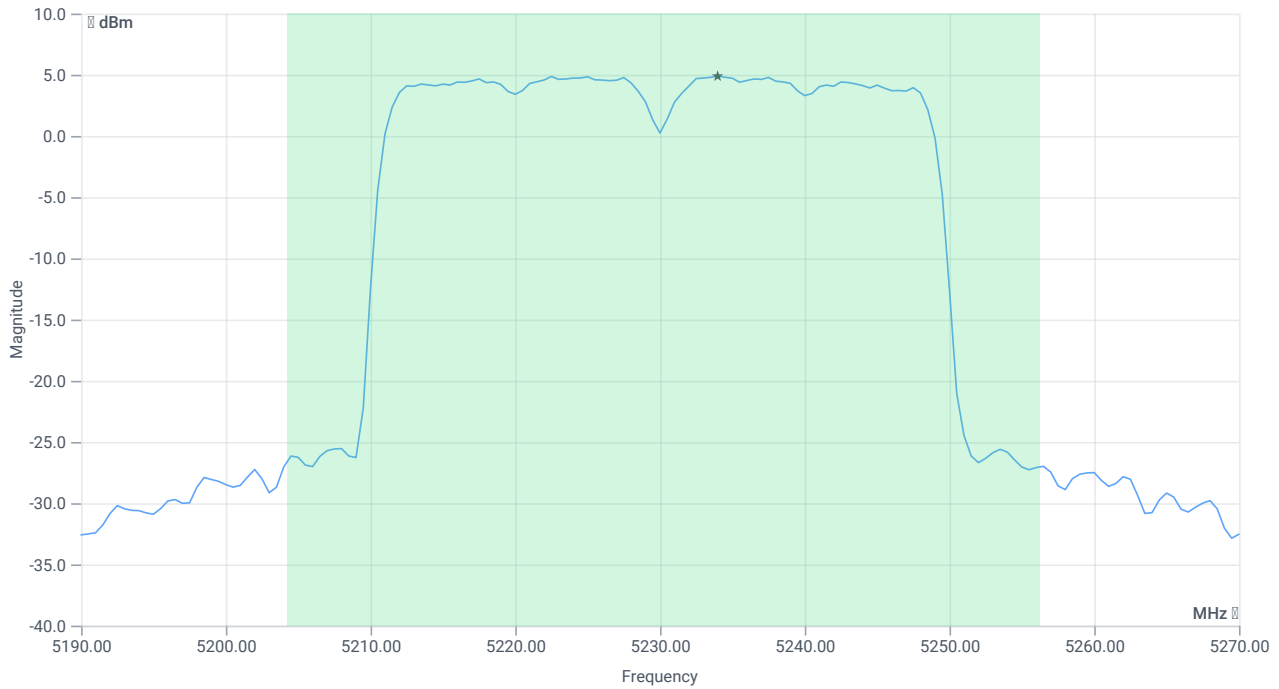
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	52	MHz	INFO
T1 26dB	---	---	5204.2400	MHz	INFO
T2 26dB	---	---	5256.2400	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	--	--	19.61	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	19.61	dBm	PASS
Limit: 11 dBm + 10 log 52					
Max Output Power DC corrected	--	28.16	19.61	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	4.88	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	4.88	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:36:29
Ambit Temp [°C] Humidity [rel%]	22.7 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 ax-HE40 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 ax-HE40
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

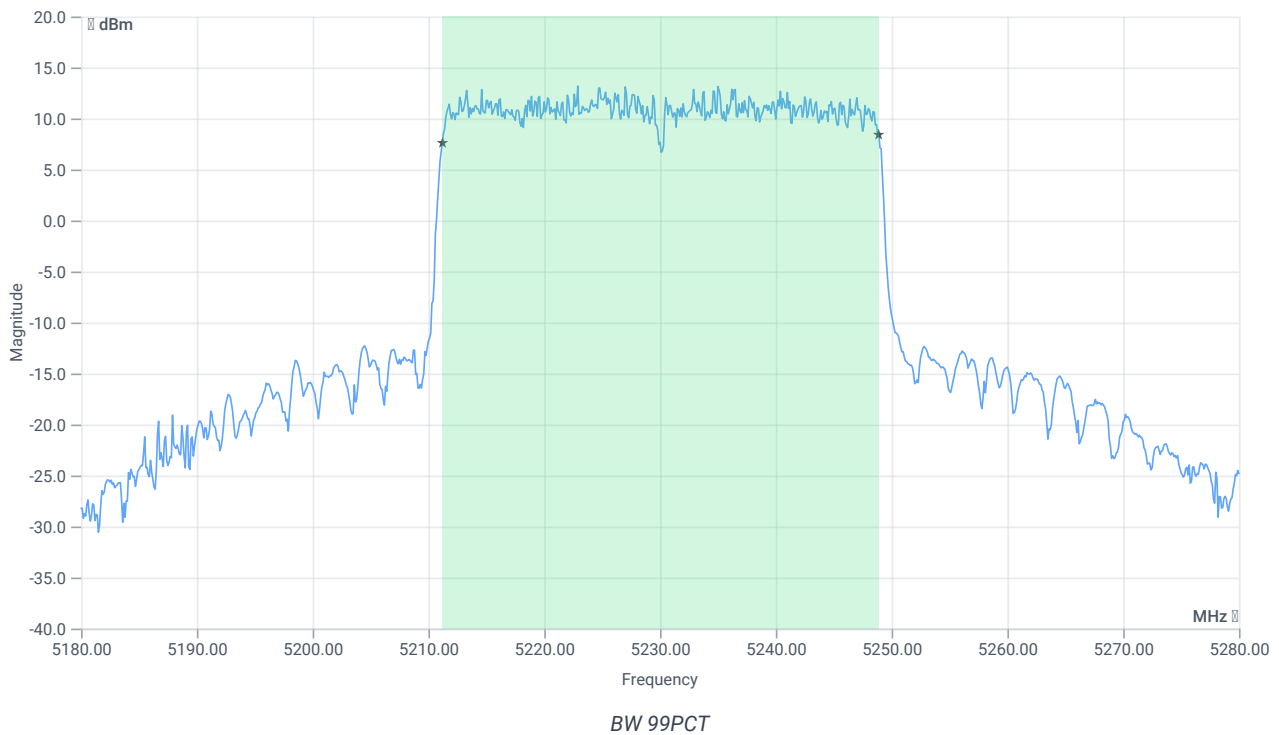
Test at TX 5230 MHz

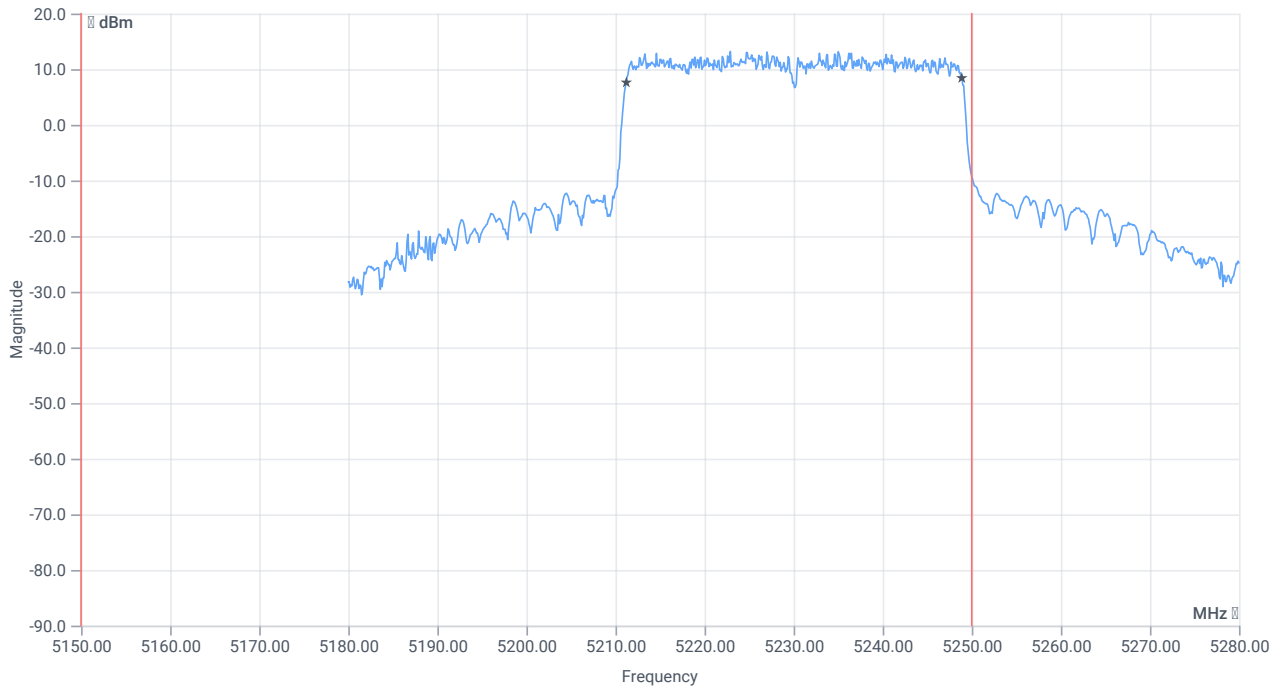
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	14.74	dBm	INFO
Ref. Frequency	--	--	5245.180	MHz	INFO

READ SA SETTINGS:

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

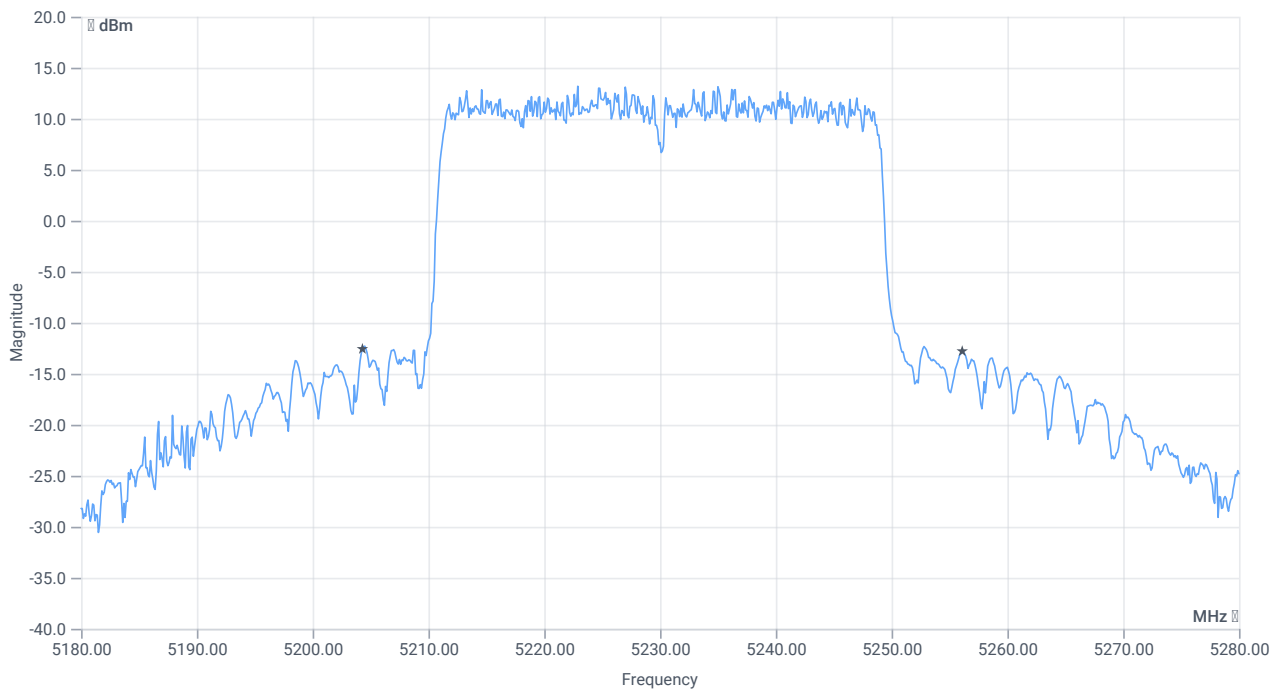




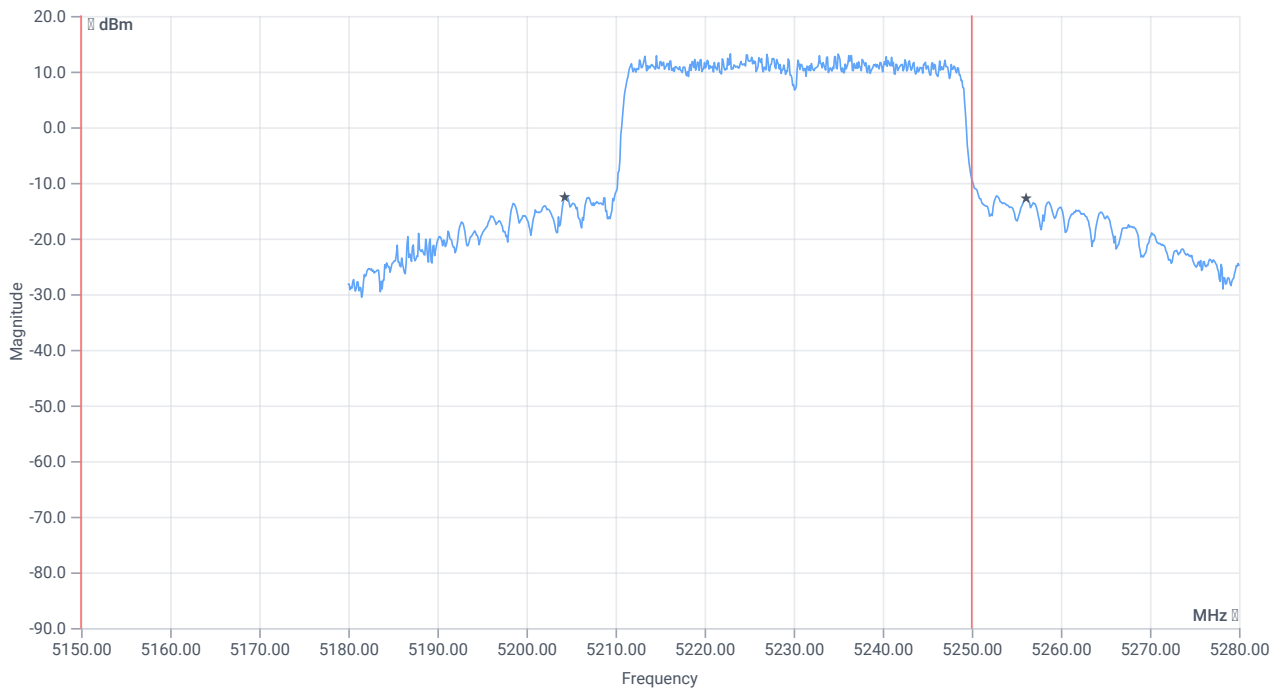
BW within Band 99PCT

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	37.662	MHz	INFO
T1 99%	5150.000000	--	5211.2188	MHz	PASS
T2 99%	--	5250.000000	5248.8811	MHz	PASS



BW 26dB



BW within Band 26dB

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	--	--	51.8	MHz	INFO
T1 26dB	5150.000000	--	5204.3000	MHz	PASS
T2 26dB	--	5250.000000	5256.1000	MHz	DFS required

Verdict

PASS

FCC 15.407 # Max output power and psd ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:37:05
Ambit Temp [°C] Humidity [rel%]	22.7 32
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 ax-HE40 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 ax-HE40
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

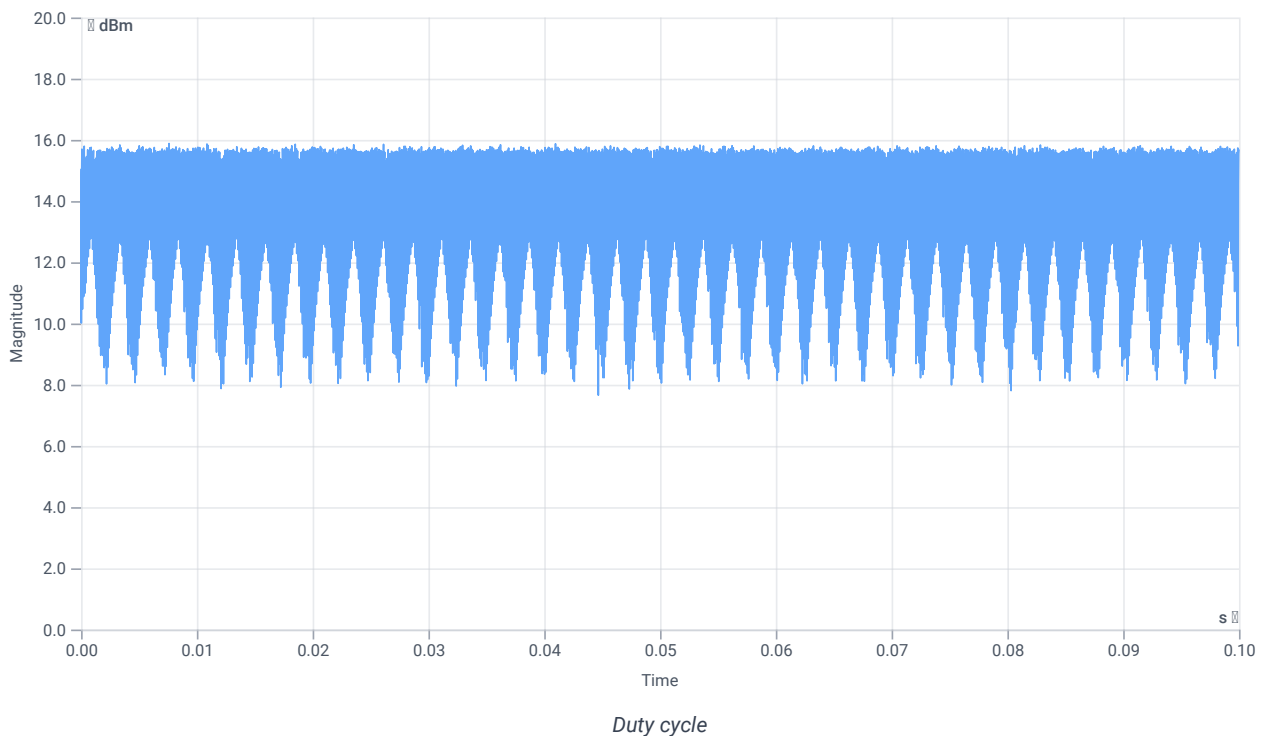
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	16.51	dBm	INFO
Ref. Frequency	--	--	5219.410	MHz	INFO

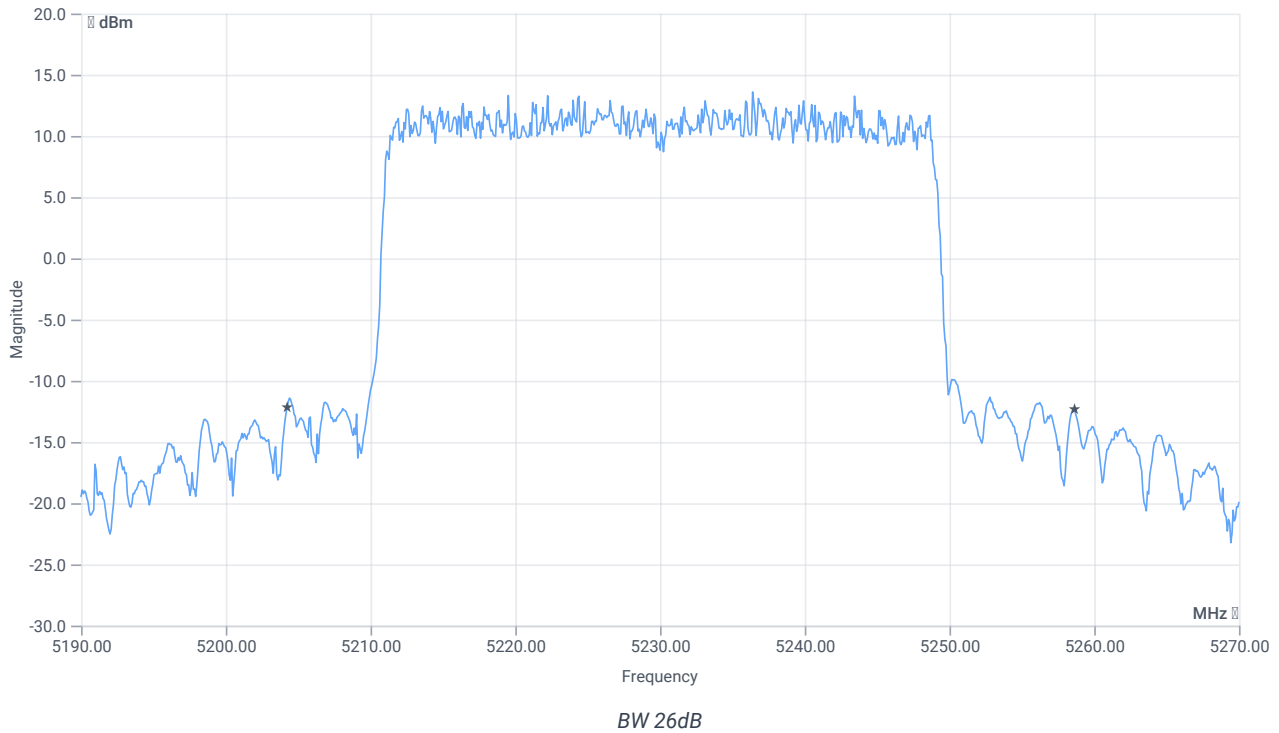
Evaluation max. Duty Cycle

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



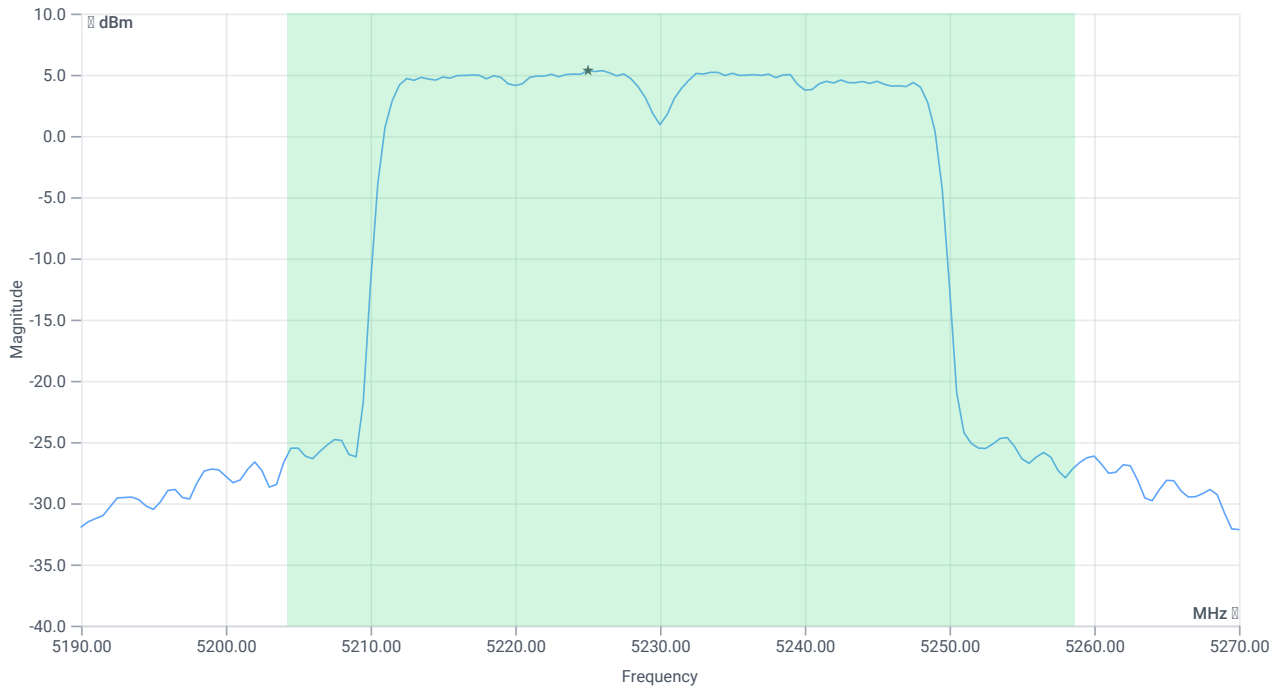
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	54.4	MHz	INFO
T1 26dB	---	---	5204.2400	MHz	INFO
T2 26dB	---	---	5258.6400	MHz	INFO

Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.51 16.45 30
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	--	--	20.03	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	20.03	dBm	PASS
Limit: 11 dBm + 10 log 54.4					
Max Output Power DC corrected	--	28.36	20.03	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	5.34	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	5.34	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:38:35
Ambit Temp [°C] Humidity [rel%]	22.7 32
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 ax-HE40 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 ax-HE40
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

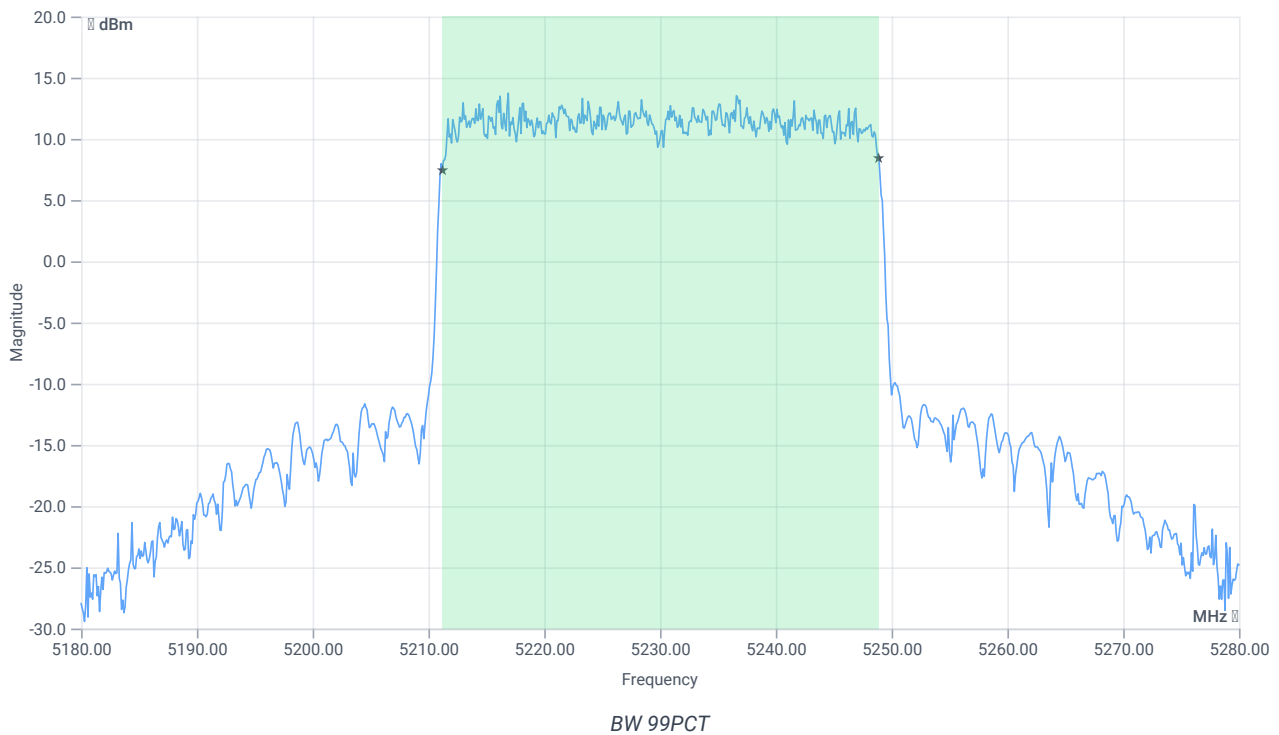
Test at TX 5230 MHz

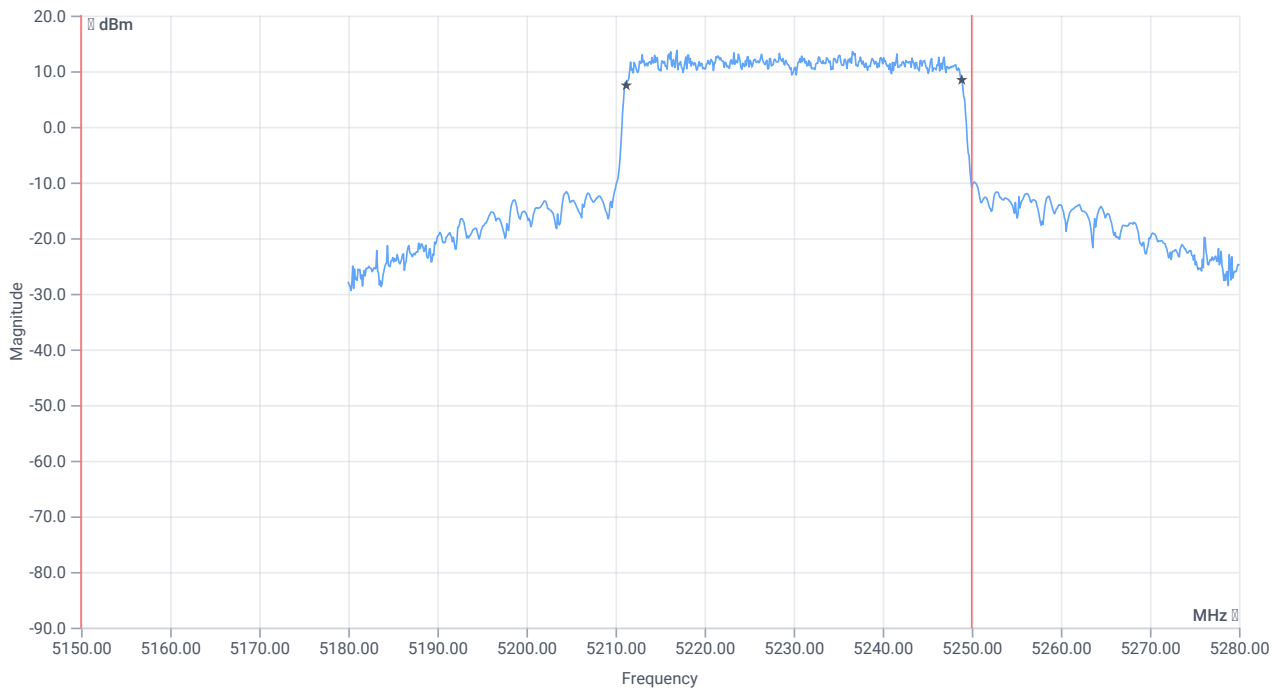
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	15.44	dBm	INFO
Ref. Frequency	--	--	5220.210	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.44 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

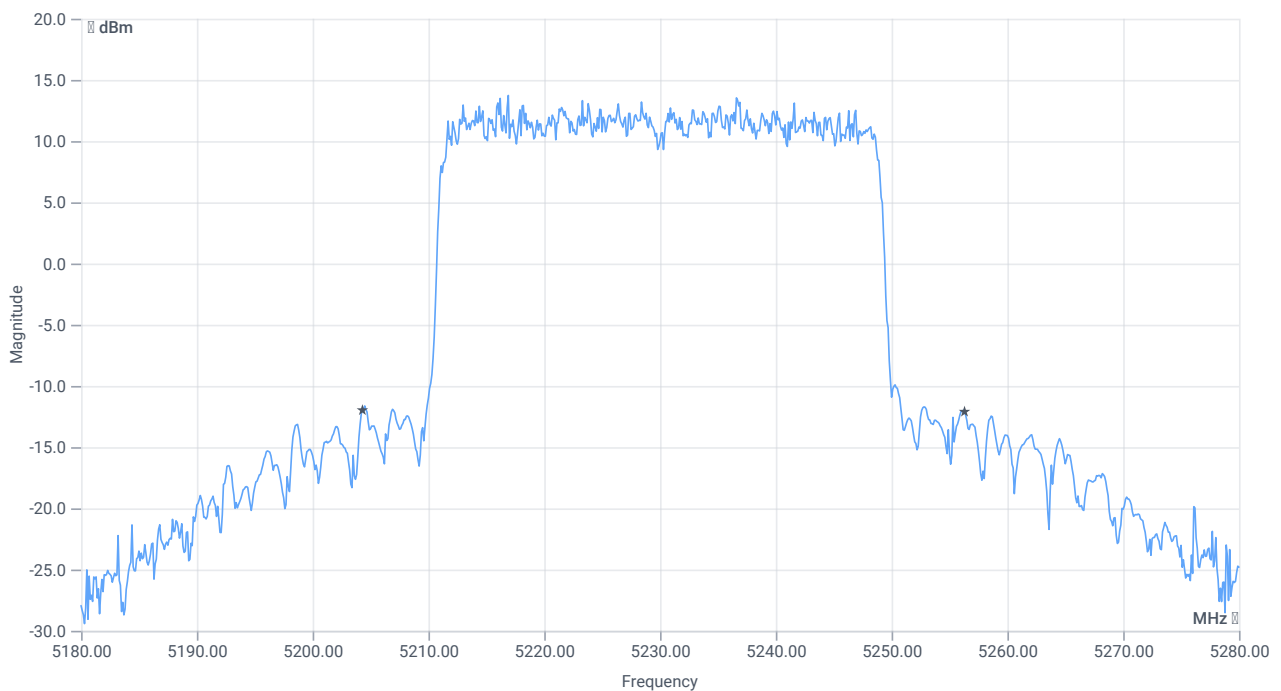




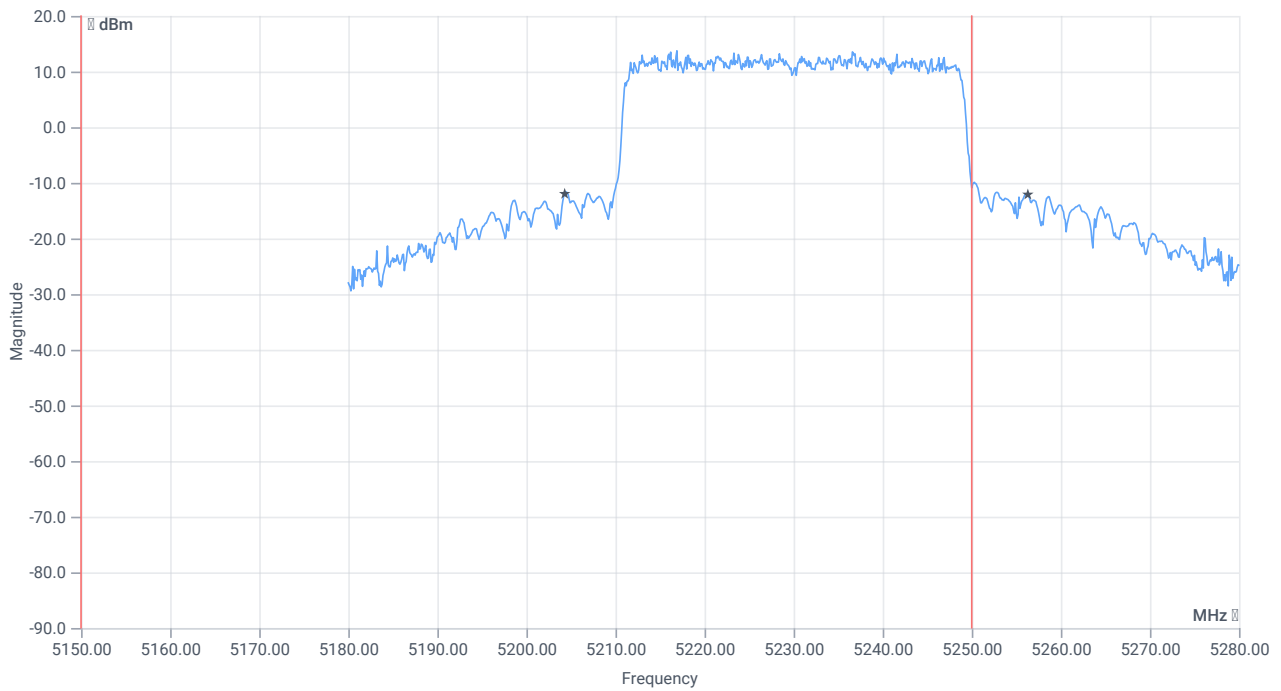
BW within Band 99PCT

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	37.662	MHz	INFO
T1 99%	5150.000000	--	5211.2188	MHz	PASS
T2 99%	--	5250.000000	5248.8811	MHz	PASS



BW 26dB



BW within Band 26dB

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	52	MHz	INFO
T1 26dB	5150.000000	---	5204.3000	MHz	PASS
T2 26dB	---	5250.000000	5256.3000	MHz	DFS required

Verdict

PASS

FCC 15.407 # MIMO Σ Max output power and psd ~ WLAN5Gx ax-HE40 U-NII-1

Test References

TC Start	15.03.2023 14:39:11
Ambit Temp [°C] Humidity [rel%]	22.7 32
System Version	3.5.0.9
Test Specification	FCC 15.407 -
Test Method	
TC Version	0.0.1
My Description	MIMO Σ FCC Power & psd - WLAN5Gx ax-HE40 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 ax-HE40
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	--	--	19.61	dBm	INFO
Ant:1 BW 26dB	--	--	52.000	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	20.03	dBm	INFO
Ant:2 BW 26dB	--	--	54.400	MHz	INFO
∑ Limit absolute	--	24	22.84	dBm	PASS
∑ Limit: 11 dBm + 10 log 52	--	28.16	22.84	dBm	na

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	4.88	dBm/1MHz	INFO
Ant:2 PSD	--	--	5.34	dBm/1MHz	INFO
∑	--	11	8.13	dBm/1MHz	PASS

Verdict

PASS

- END OF DOCUMENT -