

Measurement Results

No.1-5761/23-01-05_Annex_MR_15

Test logging

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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 13:58:46
Ambit Temp [°C] Humidity [rel%]	22.2 34
System Version	3.5.0.9
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan n_HT40_U_NII_1
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.03.2023 13:58:46
Message	set WLAN5Gx to n_HT40_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 n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 13:59:26
Ambit Temp [°C] Humidity [rel%]	22.2 34
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 n-HT40 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 n-HT40 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

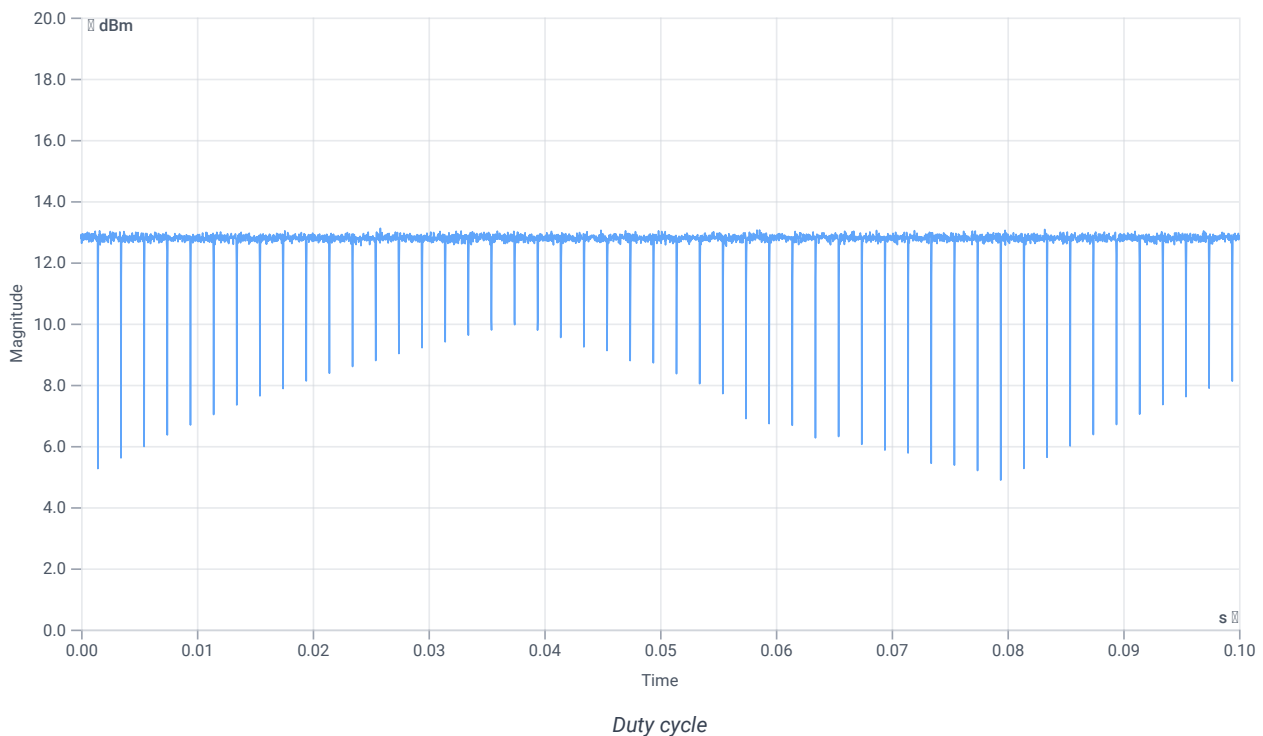
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	11.43	dBm	INFO
Ref. Frequency	--	--	5191.400	MHz	INFO

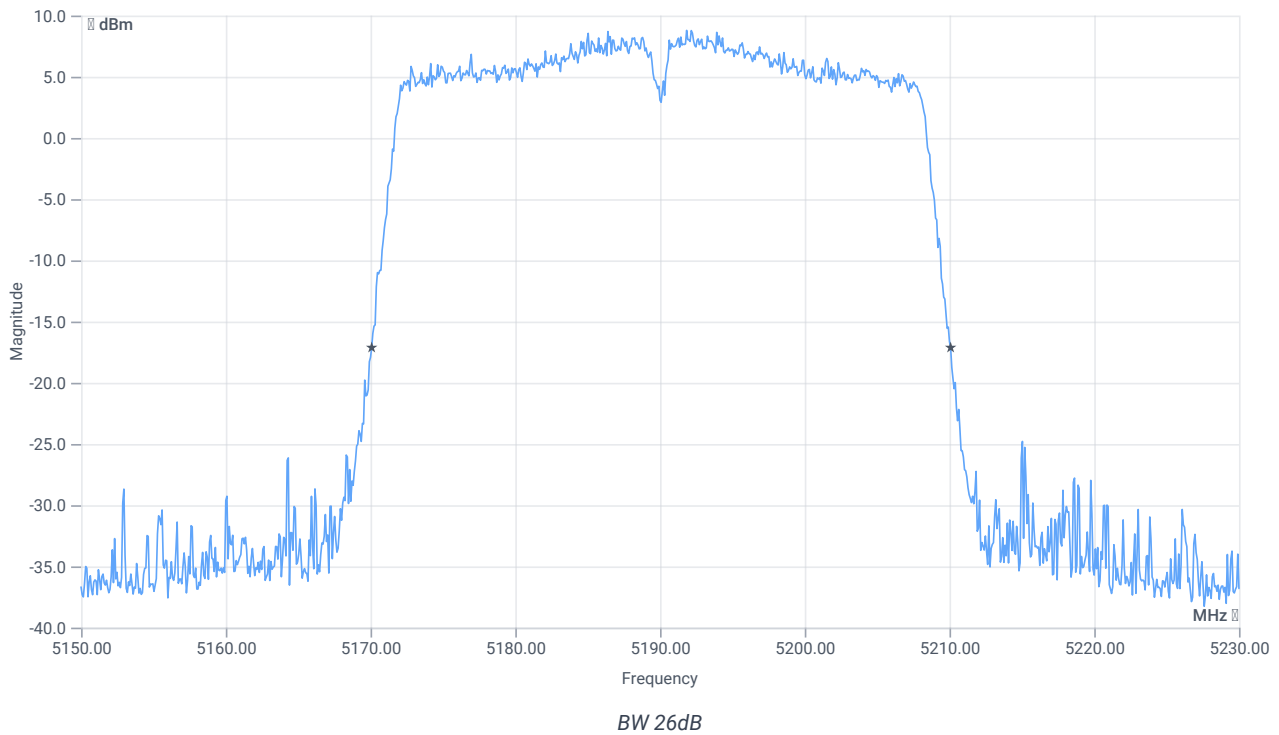
Evaluation max. Duty Cycle

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



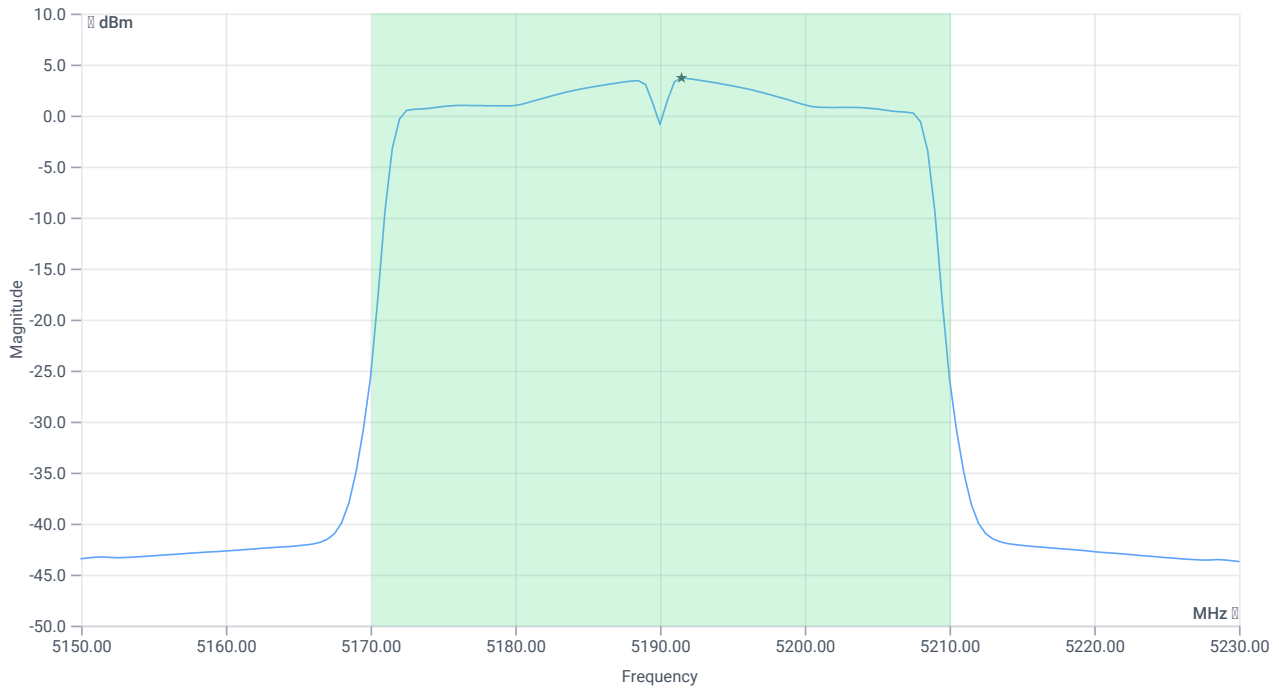
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	40	MHz	INFO
T1 26dB	---	---	5170.0800	MHz	INFO
T2 26dB	---	---	5210.0800	MHz	INFO

Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	23.43 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	--	--	17.15	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	17.15	dBm	PASS
Limit: 11 dBm + 10 log 40					
Max Output Power DC corrected	--	27.02	17.15	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	3.69	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	3.69	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:00:56
Ambit Temp [°C] Humidity [rel%]	22.2 34
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 n-HT40 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 n-HT40 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

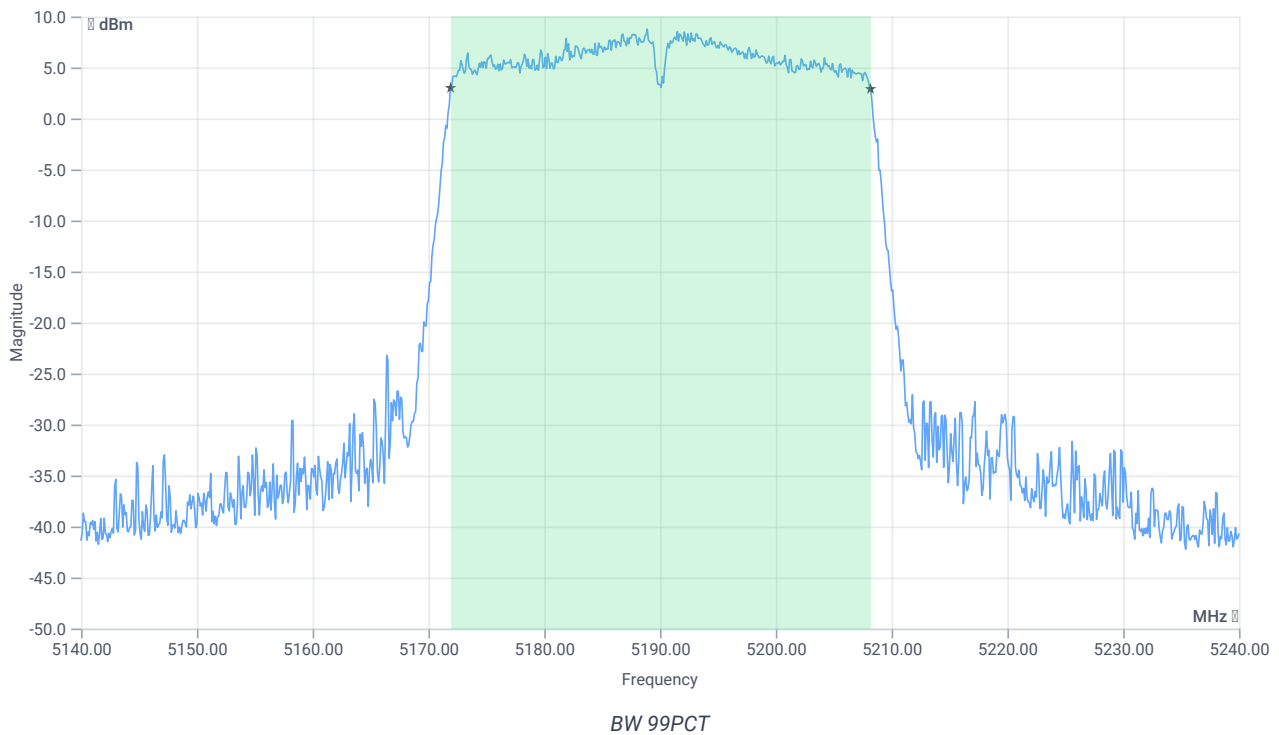
Test at TX 5190 MHz

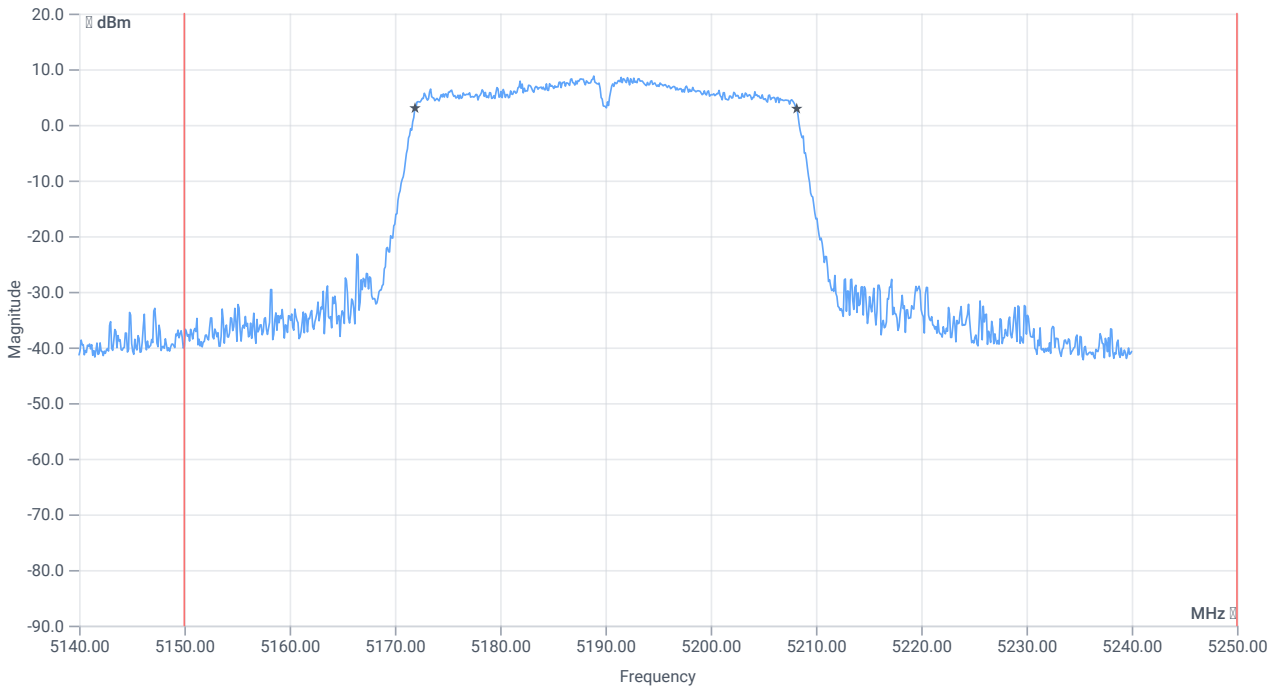
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	11.69	dBm	INFO
Ref. Frequency	--	--	5187.600	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	19.69 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

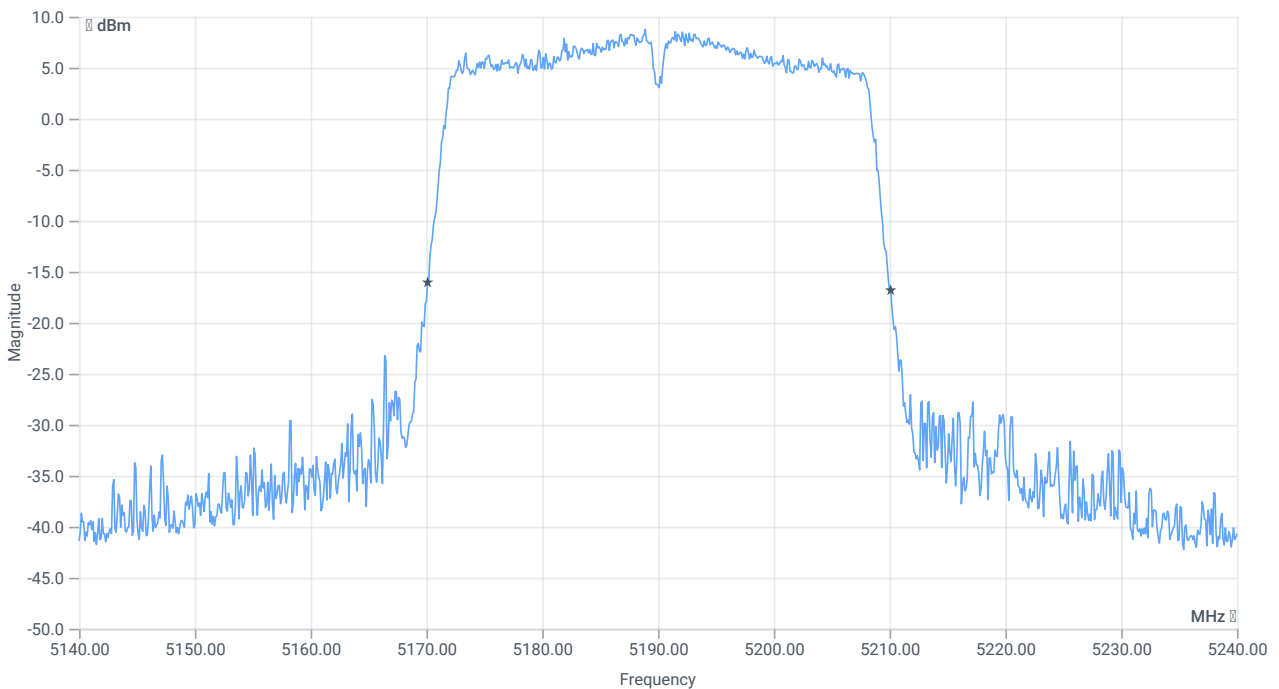




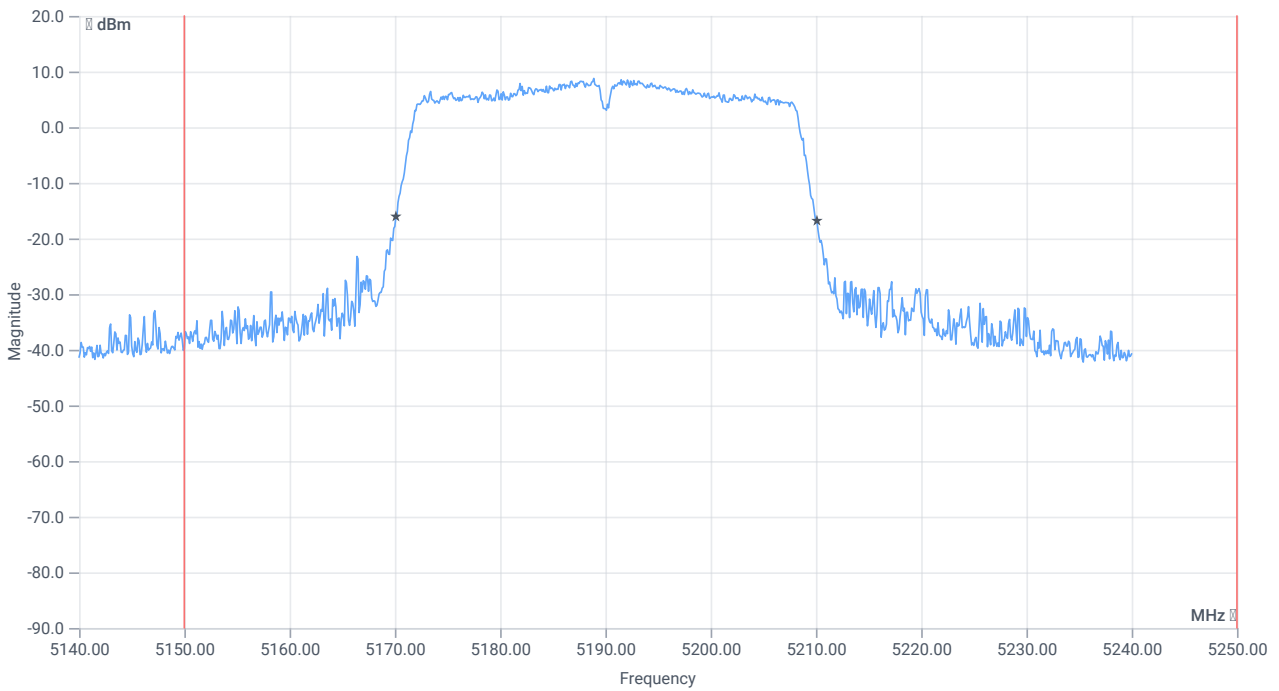
BW within Band 99PCT

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	MHz	INFO
T1 26dB	5150.000000	---	5170.1000	MHz	PASS
T2 26dB	---	5250.000000	5210.1000	MHz	PASS

Verdict

PASS

FCC 15.407 # Max output power and psd ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:01:31
Ambit Temp [°C] Humidity [rel%]	22.2 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 n-HT40 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 n-HT40 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

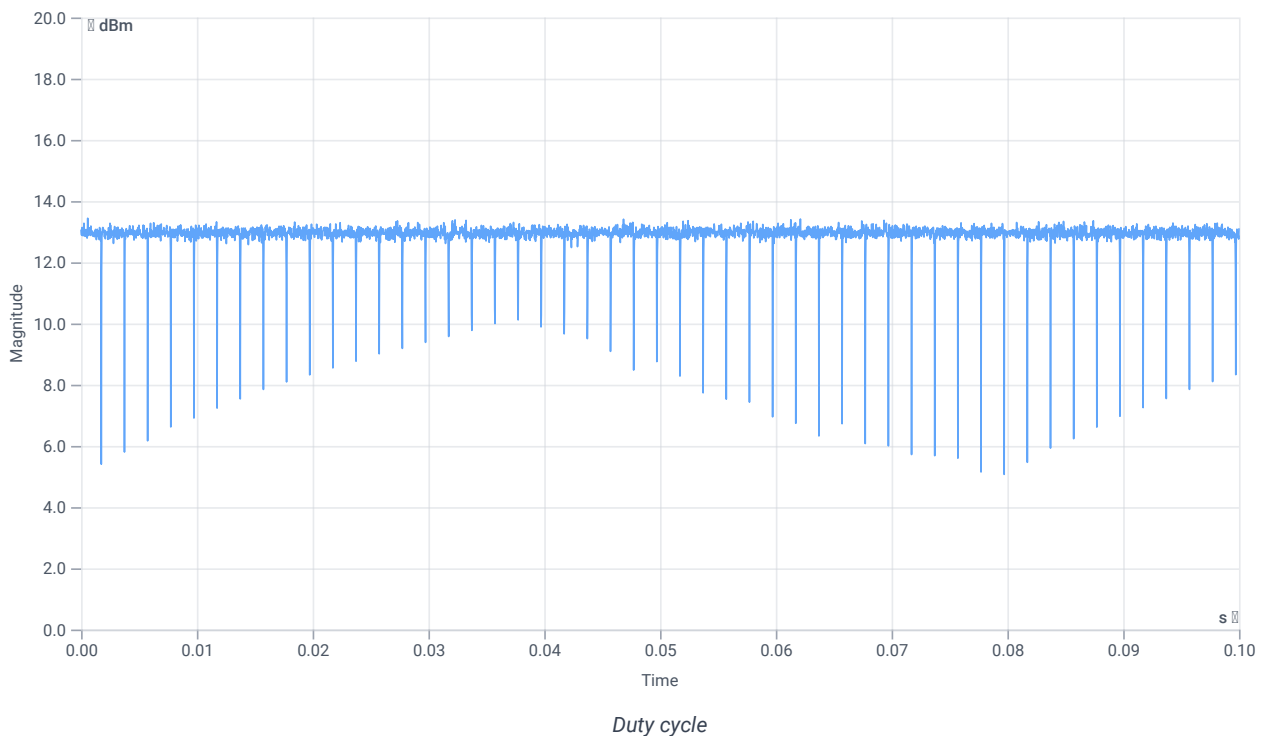
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	12.16	dBm	INFO
Ref. Frequency	--	--	5193.200	MHz	INFO

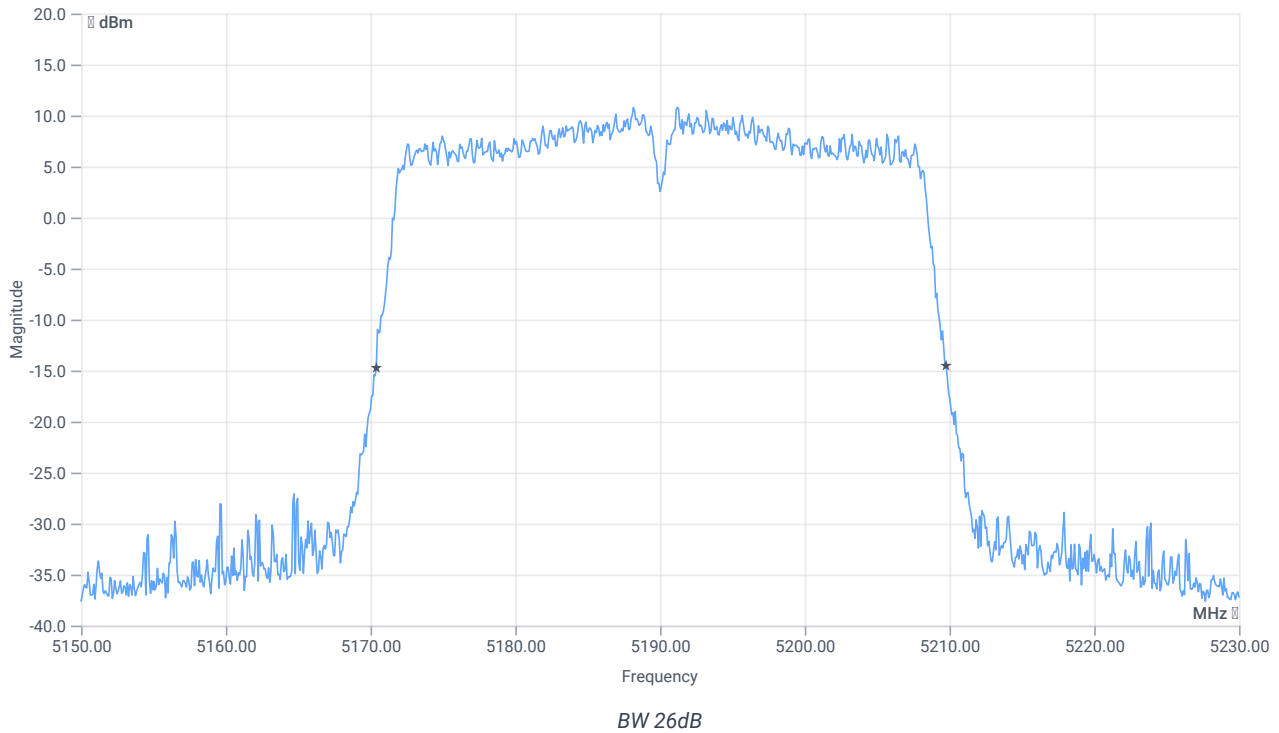
Evaluation max. Duty Cycle

Duty Cycle evaluation

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



Evaluation Bandwidth



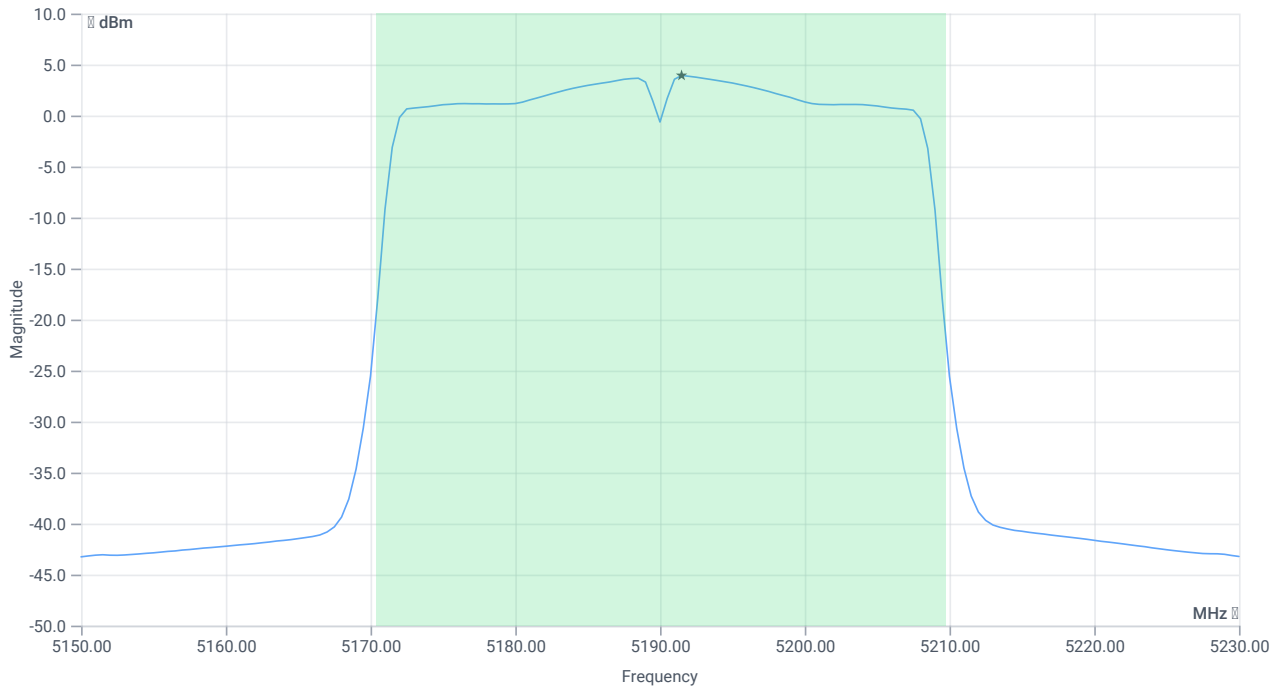
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	39.36	MHz	INFO
T1 26dB	---	---	5170.4000	MHz	INFO
T2 26dB	---	---	5209.7600	MHz	INFO

Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	24.16 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	--	--	17.38	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	17.38	dBm	PASS
Limit: 11 dBm + 10 log 39.36					
Max Output Power DC corrected	--	26.95	17.38	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	3.93	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	3.93	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:03:01
Ambit Temp [°C] Humidity [rel%]	22.2 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 n-HT40 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 n-HT40 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

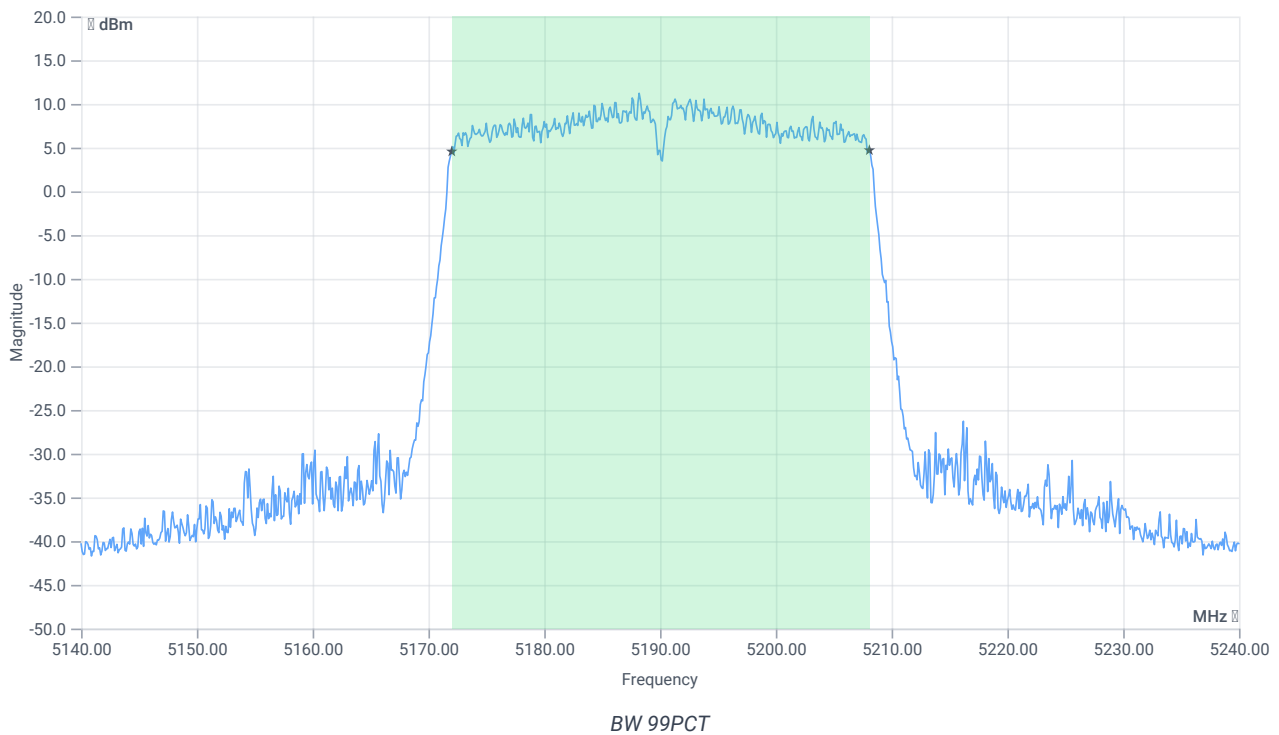
Test at TX 5190 MHz

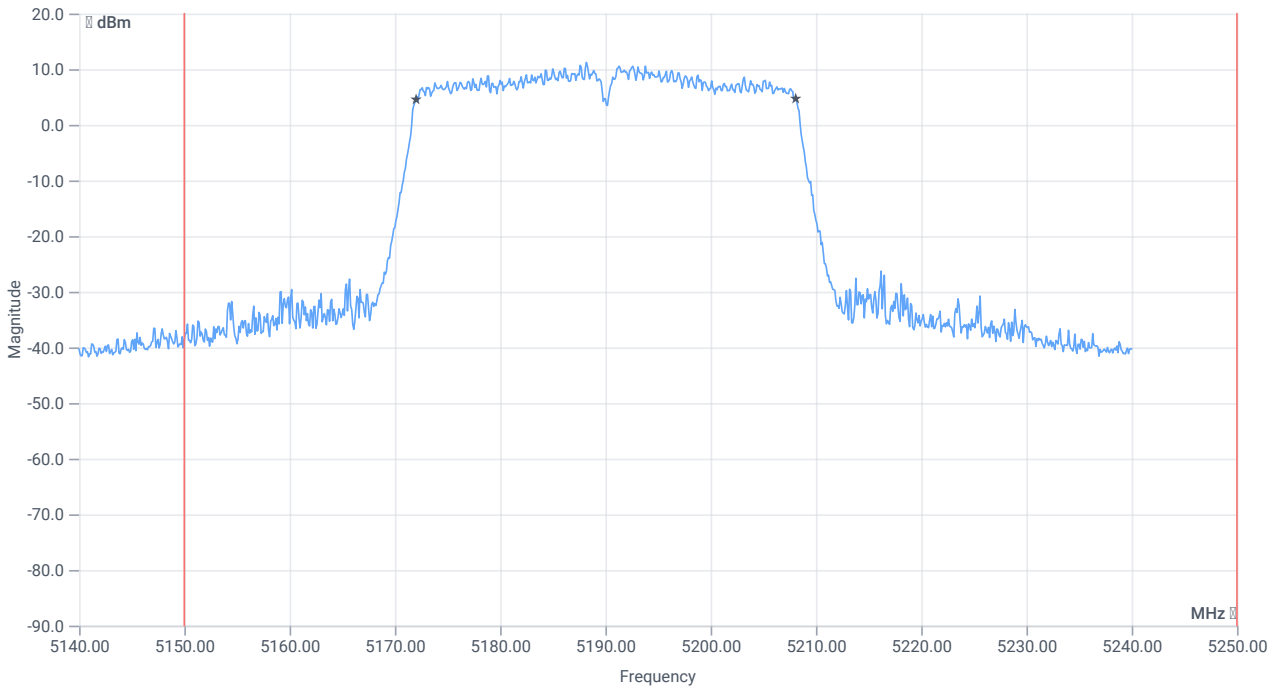
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	12.31	dBm	INFO
Ref. Frequency	--	--	5192.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.31 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

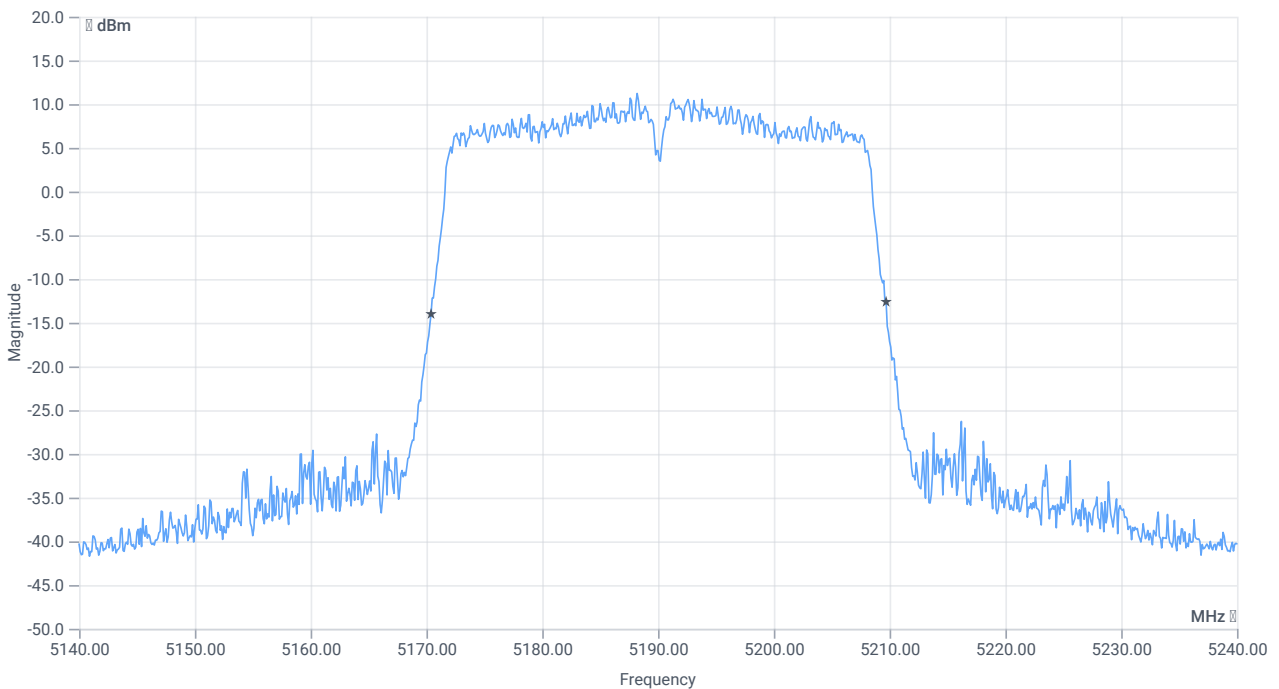




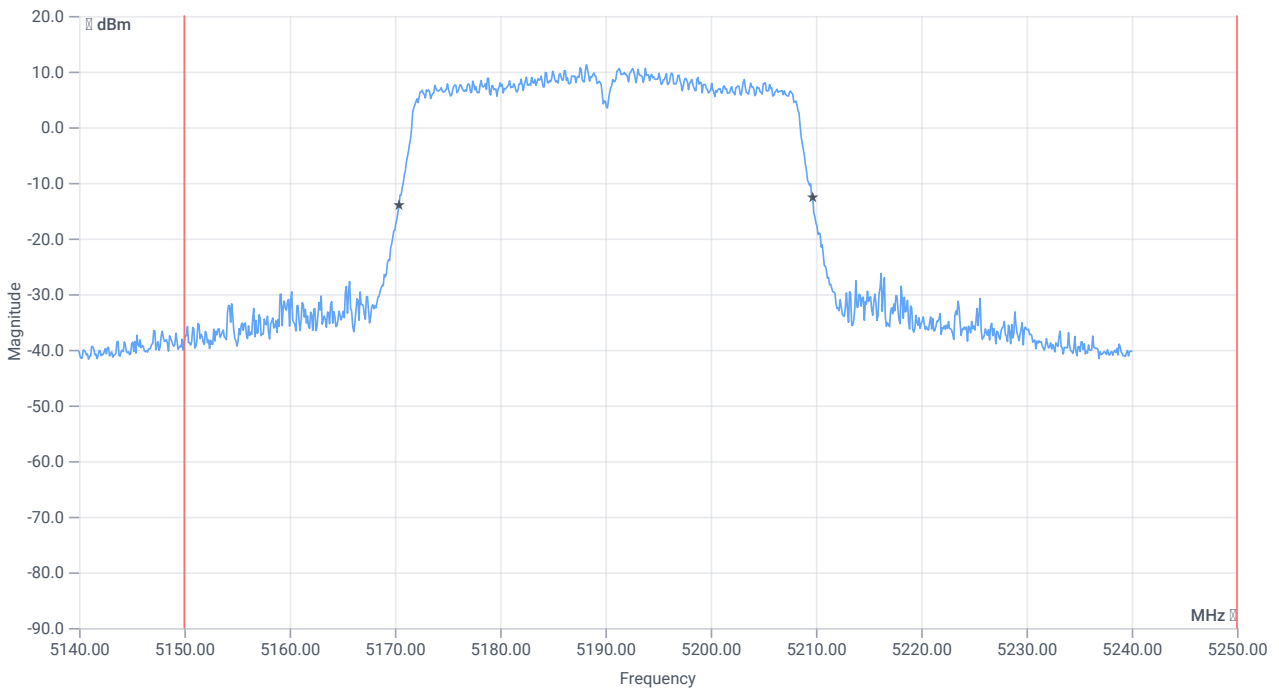
BW within Band 99PCT

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	---	---	39.3	MHz	INFO
T1 26dB	5150.000000	---	5170.4000	MHz	PASS
T2 26dB	---	5250.000000	5209.7000	MHz	PASS

Verdict

PASS

FCC 15.407 # MIMO Σ Max output power and psd ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:03:36
Ambit Temp [°C] Humidity [rel%]	22.2 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 n-HT40 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 n-HT40 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	--	--	17.15	dBm	INFO
Ant:1 BW 26dB	--	--	40.000	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	17.38	dBm	INFO
Ant:2 BW 26dB	--	--	39.360	MHz	INFO
Σ Limit absolute	--	24	20.28	dBm	PASS
Σ Limit: 11 dBm + 10 log 39.36	--	26.95	20.28	dBm	na

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	3.69	dBm/1MHz	INFO
Ant:2 PSD	--	--	3.93	dBm/1MHz	INFO
Σ	--	11	6.82	dBm/1MHz	PASS

Verdict

PASS

Message with SA scan ~

Test References

TC Start	15.03.2023 14:06:56
Ambit Temp [°C] Humidity [rel%]	22.2 33
System Version	3.5.0.9
Test Specification	-
Test Method	
TC Version	0.0.1
My Description	Message with SA Scan n_HT40_U_NII_1
Add. Information	

Test Parameter

Switched Path	EUT - SignalingUnit - SpectrumAnalyzer
Message start	15.03.2023 14:06:56
Message	set WLAN5Gx to n_HT40_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 n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:07:58
Ambit Temp [°C] Humidity [rel%]	22.2 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 n-HT40 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 n-HT40 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

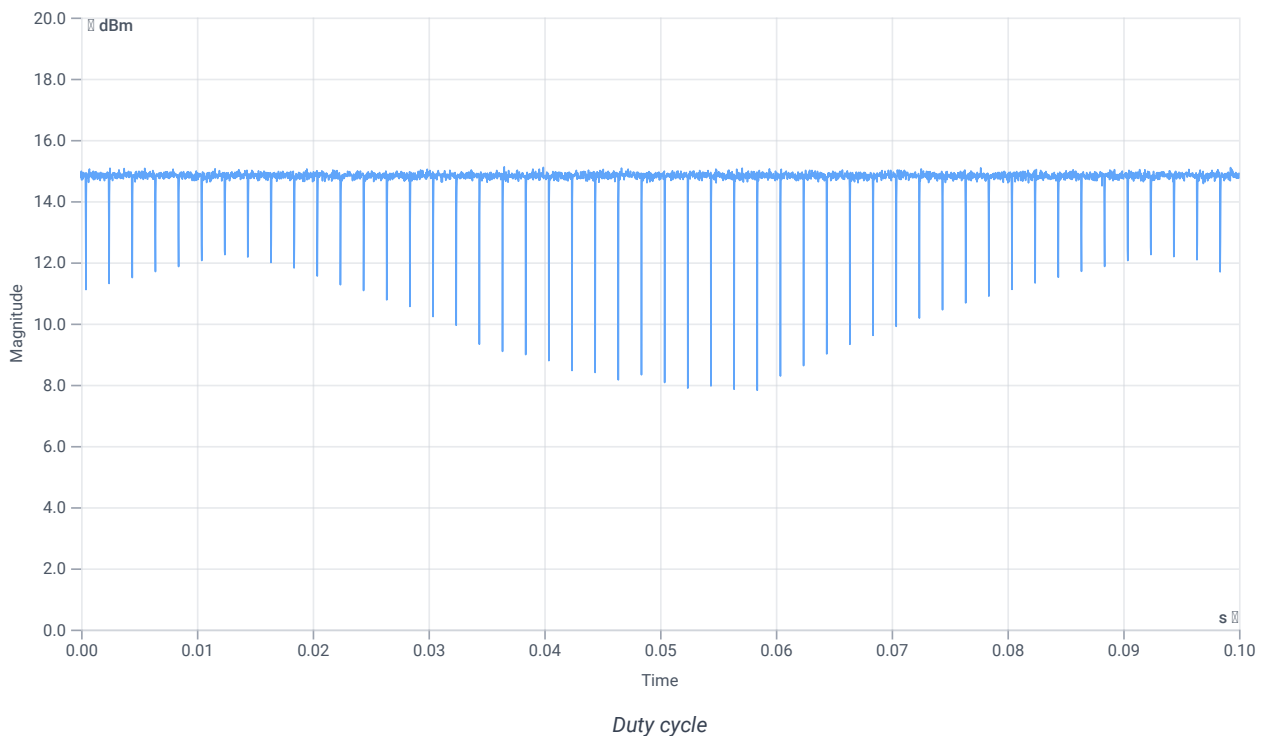
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	13.37	dBm	INFO
Ref. Frequency	--	--	5234.200	MHz	INFO

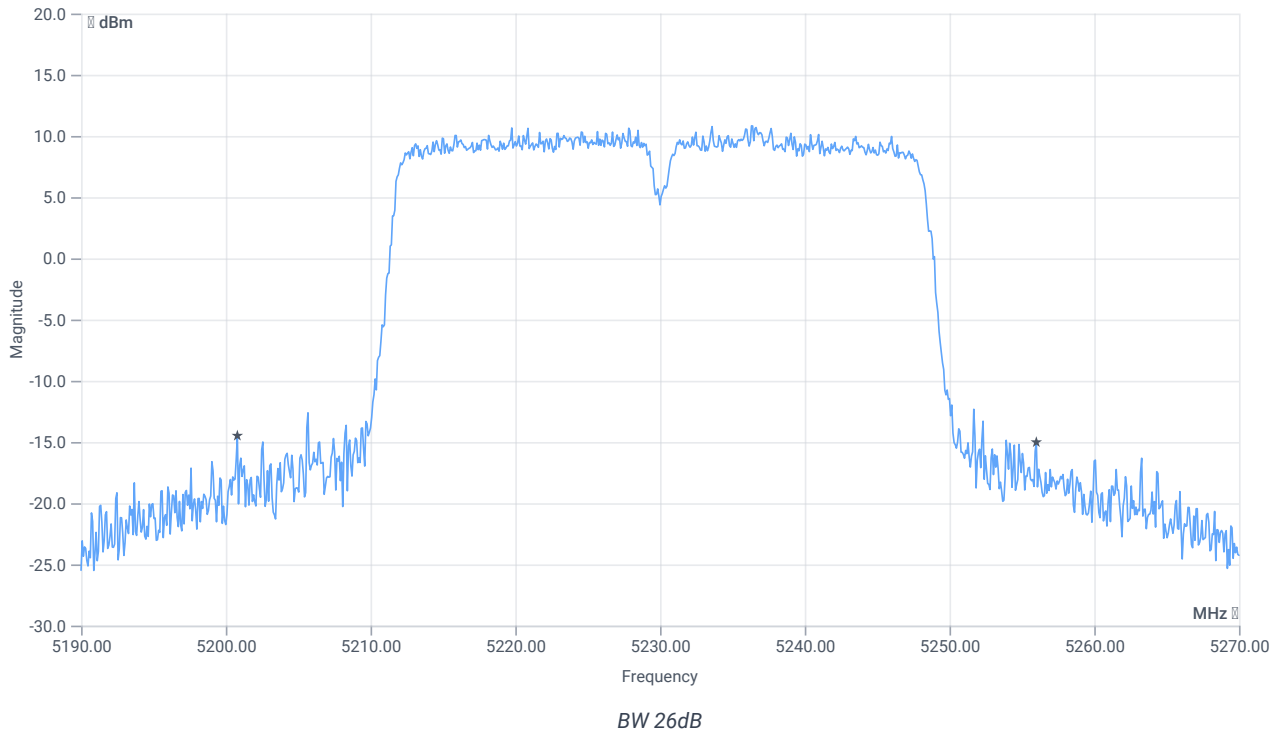
Evaluation max. Duty Cycle

Duty Cycle evaluation

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



Evaluation Bandwidth



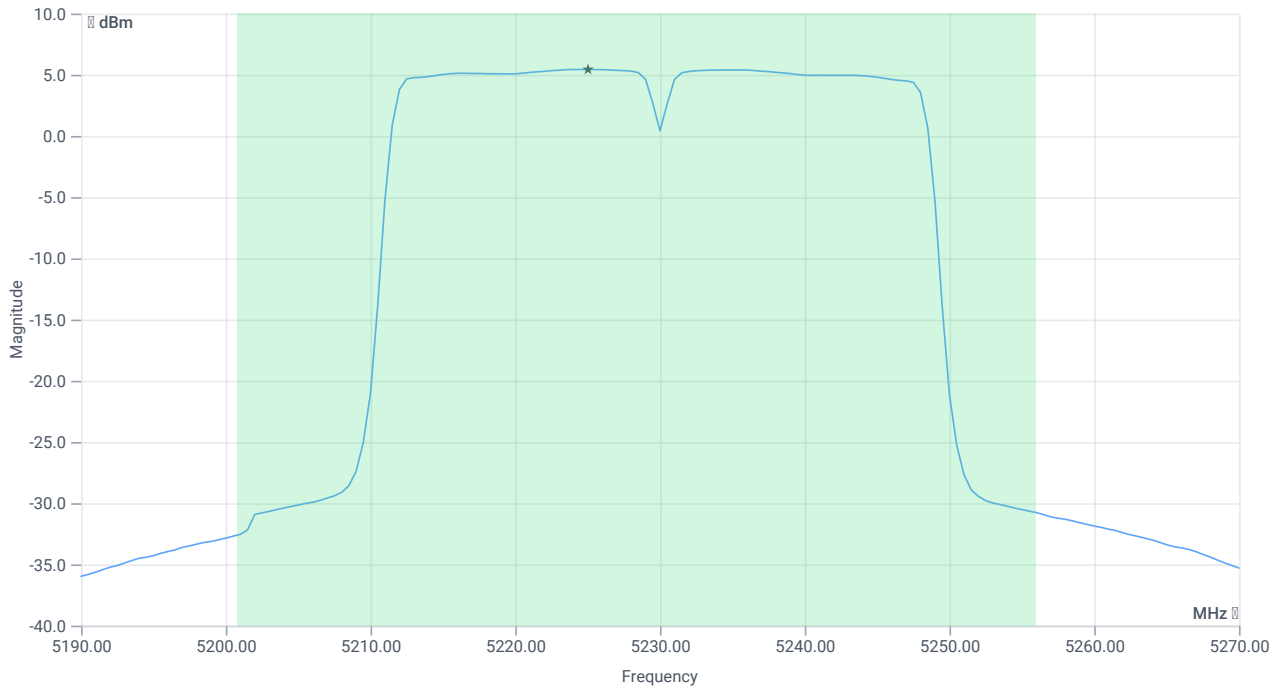
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	55.2	MHz	INFO
T1 26dB	---	---	5200.8000	MHz	INFO
T2 26dB	---	---	5256.0000	MHz	INFO

Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	25.37 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	--	--	20.36	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	20.36	dBm	PASS
Limit: 11 dBm + 10 log 55.2					
Max Output Power DC corrected	--	28.42	20.36	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	5.43	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	5.43	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:09:28
Ambit Temp [°C] Humidity [rel%]	22.2 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 n-HT40 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 n-HT40 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

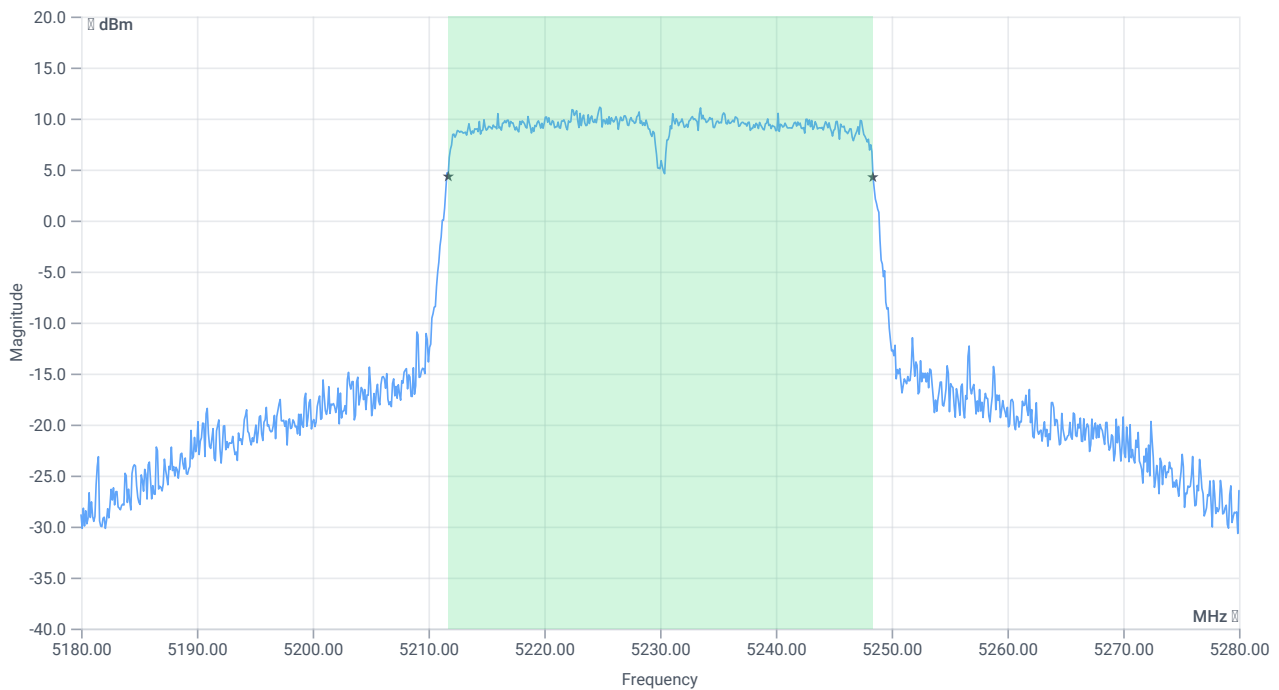
Test at TX 5230 MHz

RESULT: Reference Power cond.

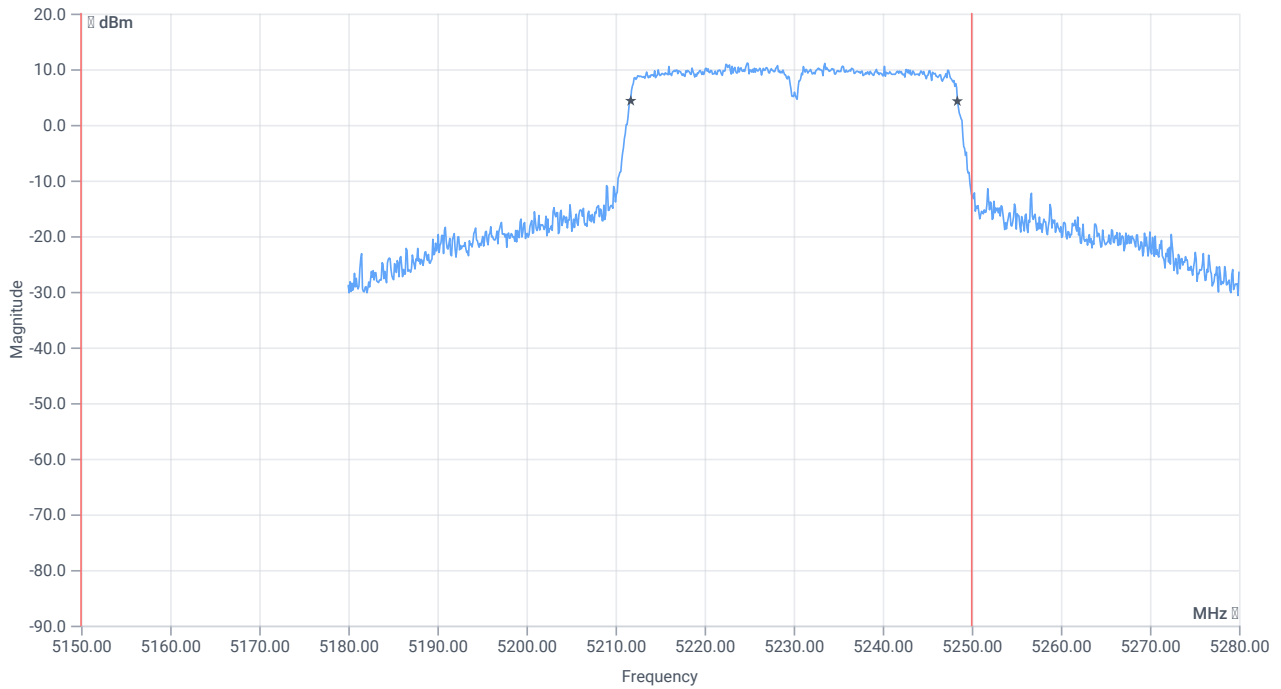
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	13.18	dBm	INFO
Ref. Frequency	--	--	5234.400	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.18 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



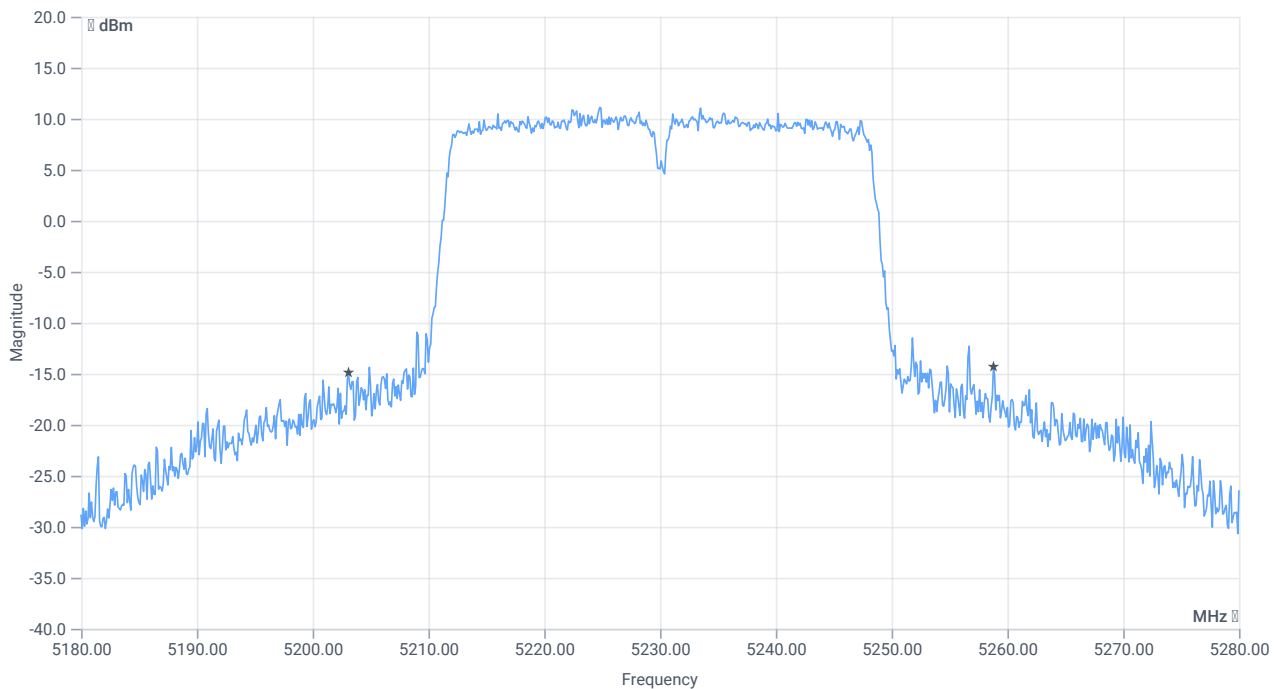
BW 99PCT



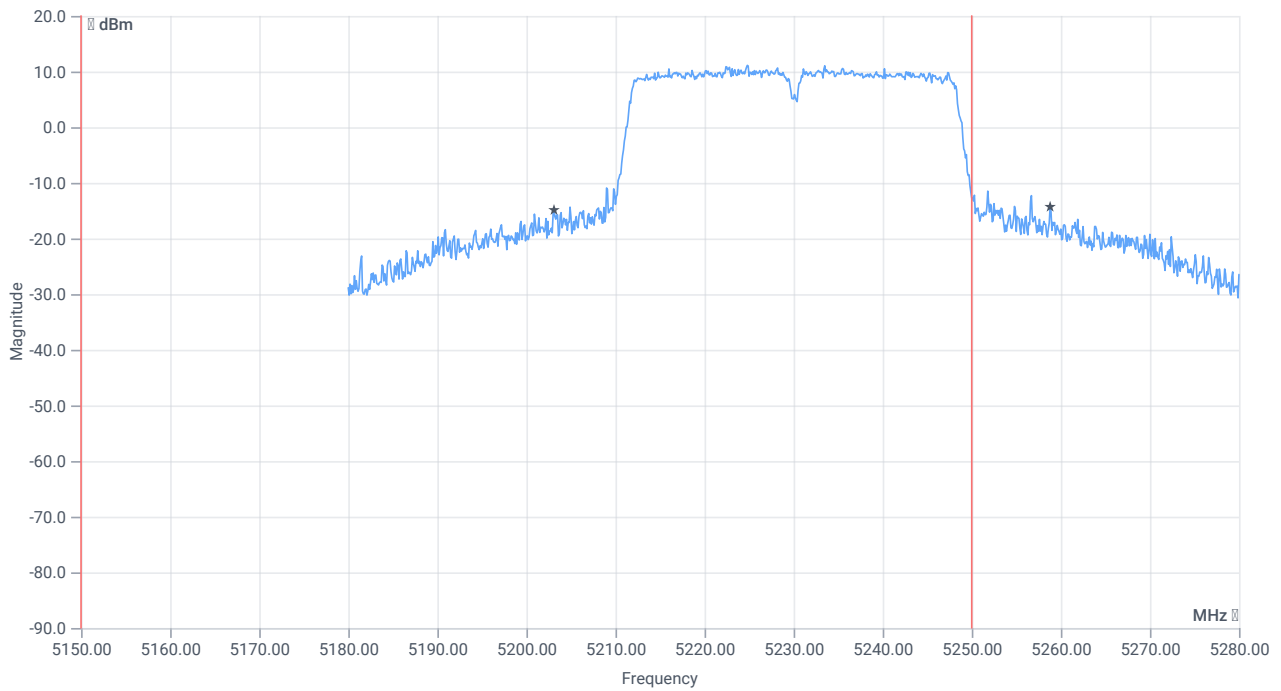
BW within Band 99PCT

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	---	---	55.7	MHz	INFO
T1 26dB	5150.000000	---	5203.1000	MHz	PASS
T2 26dB	---	5250.000000	5258.8000	MHz	DFS required

Verdict

PASS

FCC 15.407 # Max output power and psd ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:10:03
Ambit Temp [°C] Humidity [rel%]	22.3 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 n-HT40 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 n-HT40 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

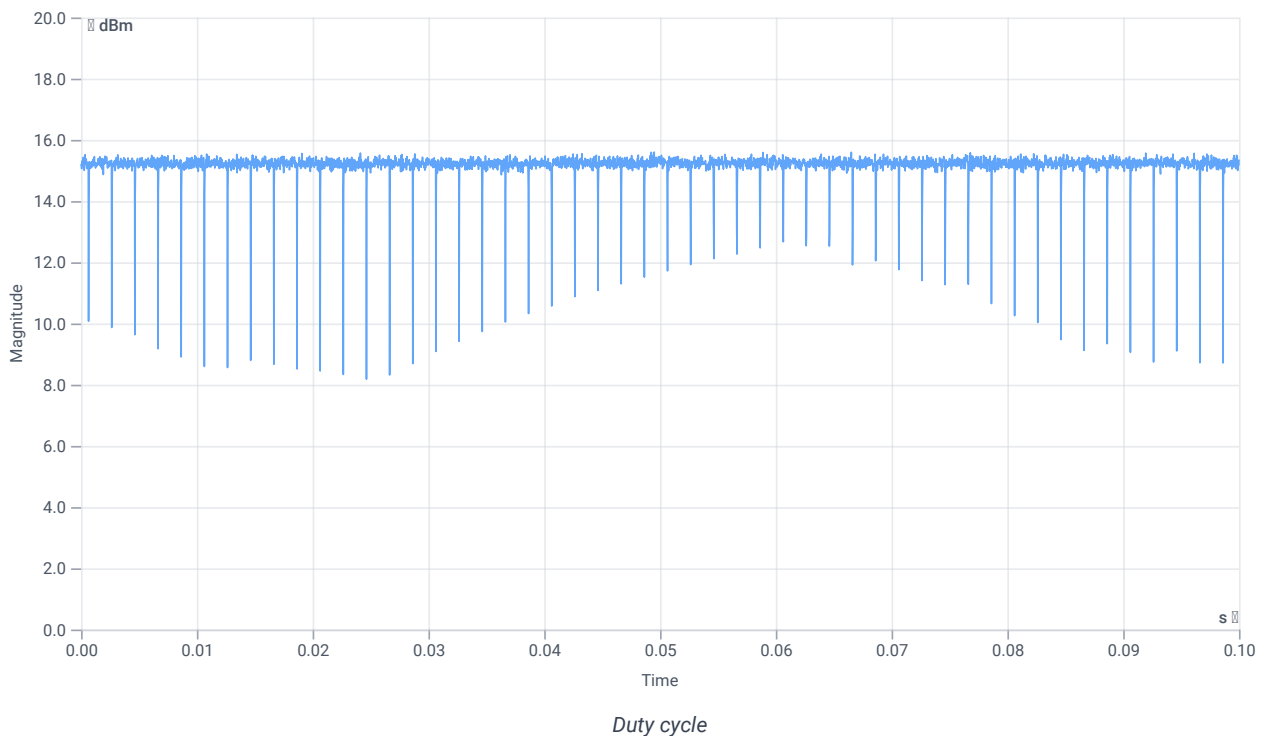
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	14.37	dBm	INFO
Ref. Frequency	--	--	5234.600	MHz	INFO

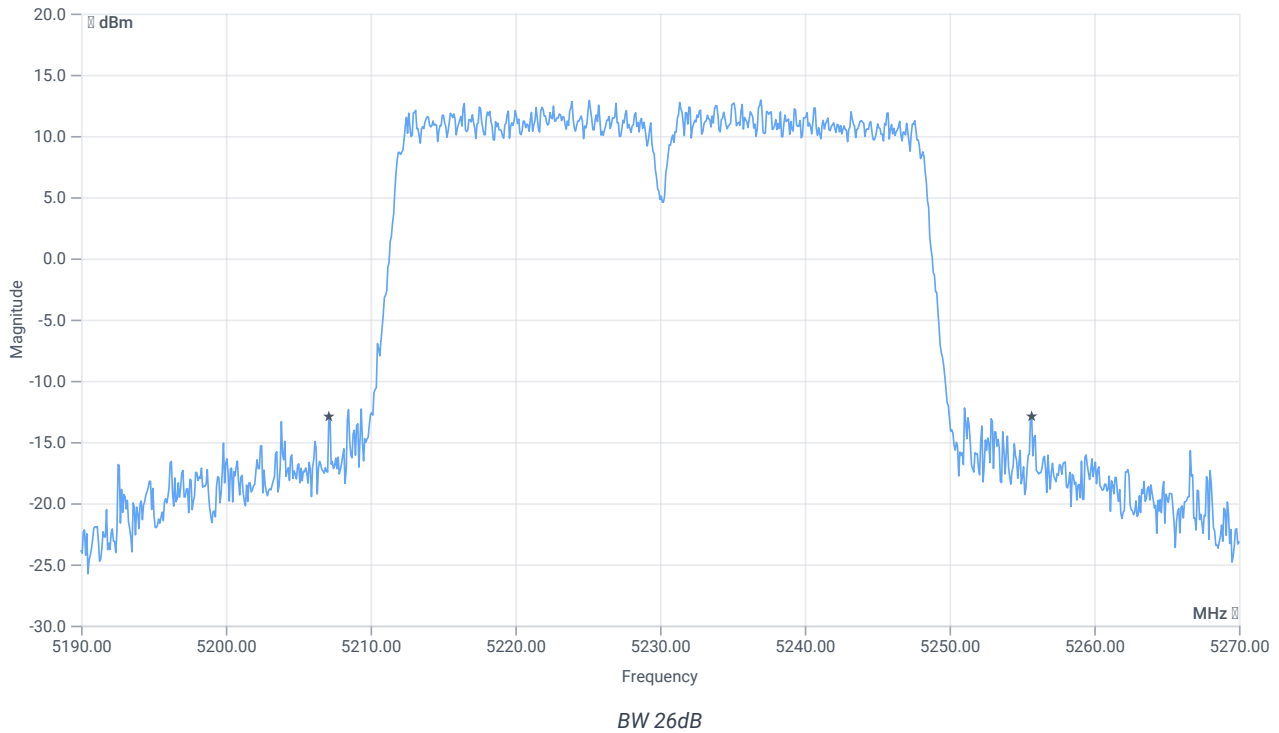
Evaluation max. Duty Cycle

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



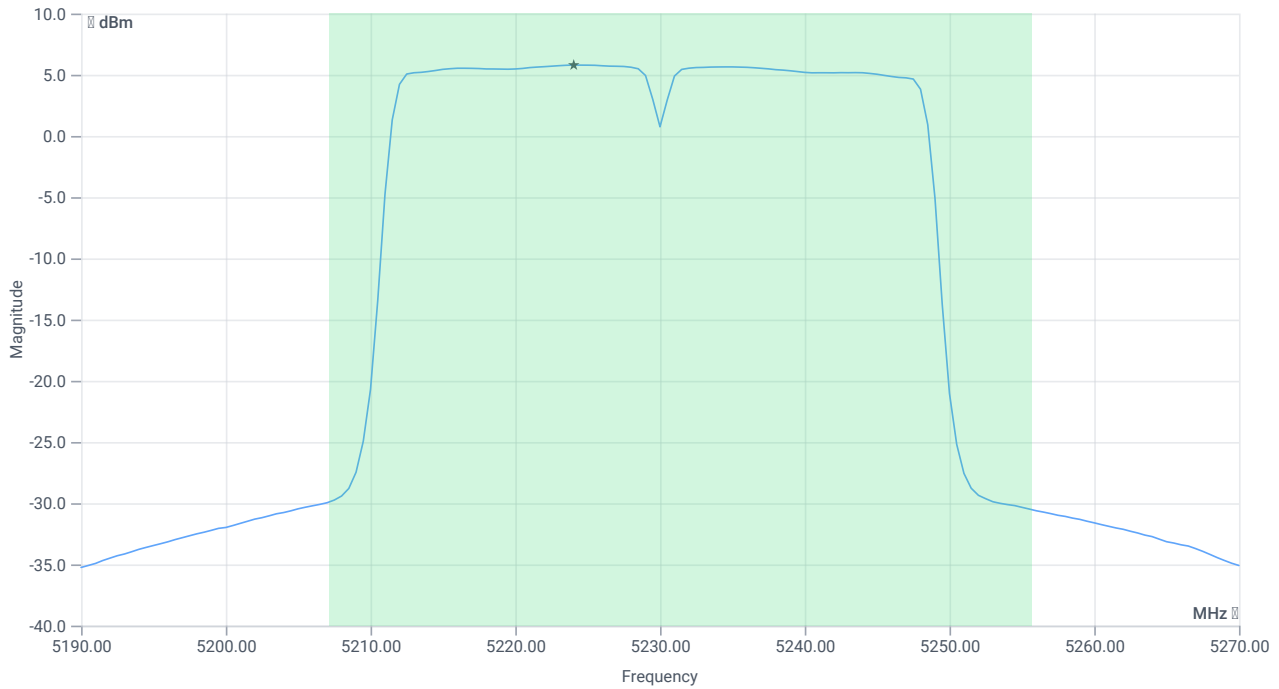
RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	48.56	MHz	INFO
T1 26dB	---	---	5207.1200	MHz	INFO
T2 26dB	---	---	5255.6800	MHz	INFO

Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.37 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	--	--	20.67	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	24	20.67	dBm	PASS
Limit: 11 dBm + 10 log 48.56					
Max Output Power DC corrected	--	27.86	20.67	dBm	na

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	5.79	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	11	5.79	dBm/1MHz	PASS

Verdict

PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:11:34
Ambit Temp [°C] Humidity [rel%]	22.4 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 n-HT40 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 n-HT40 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

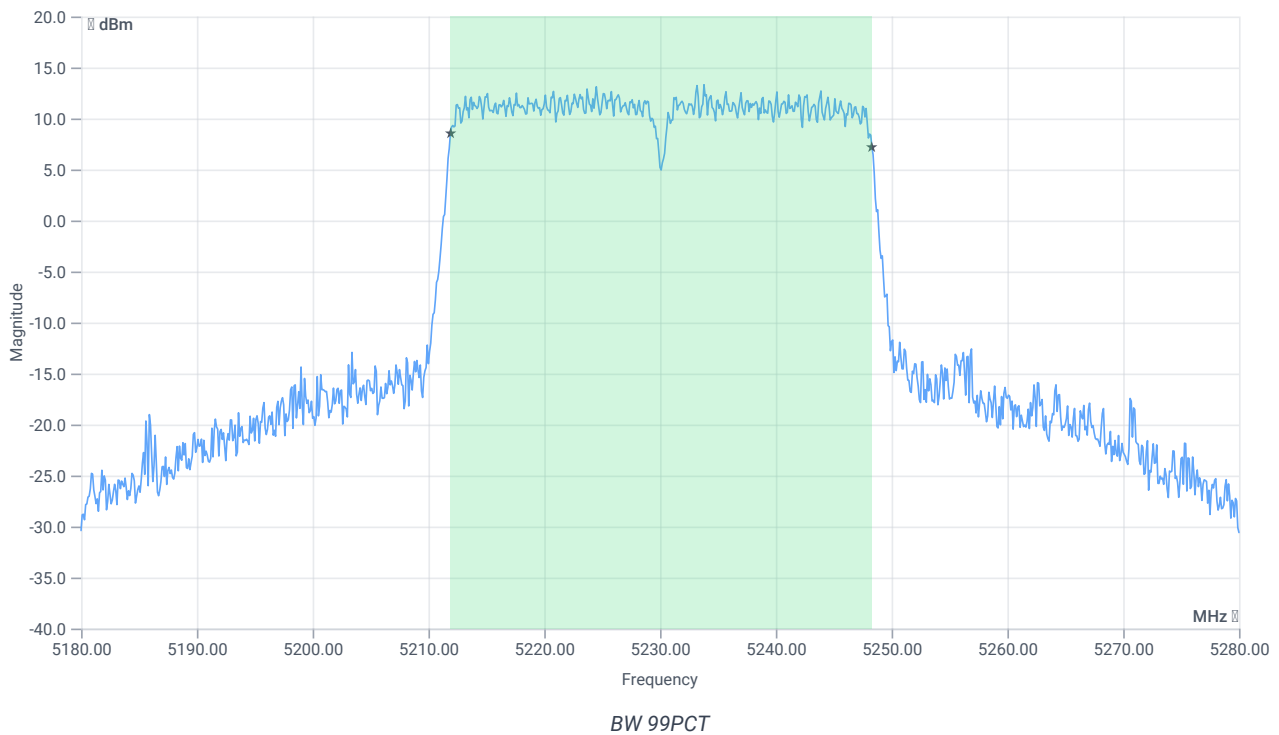
Test at TX 5230 MHz

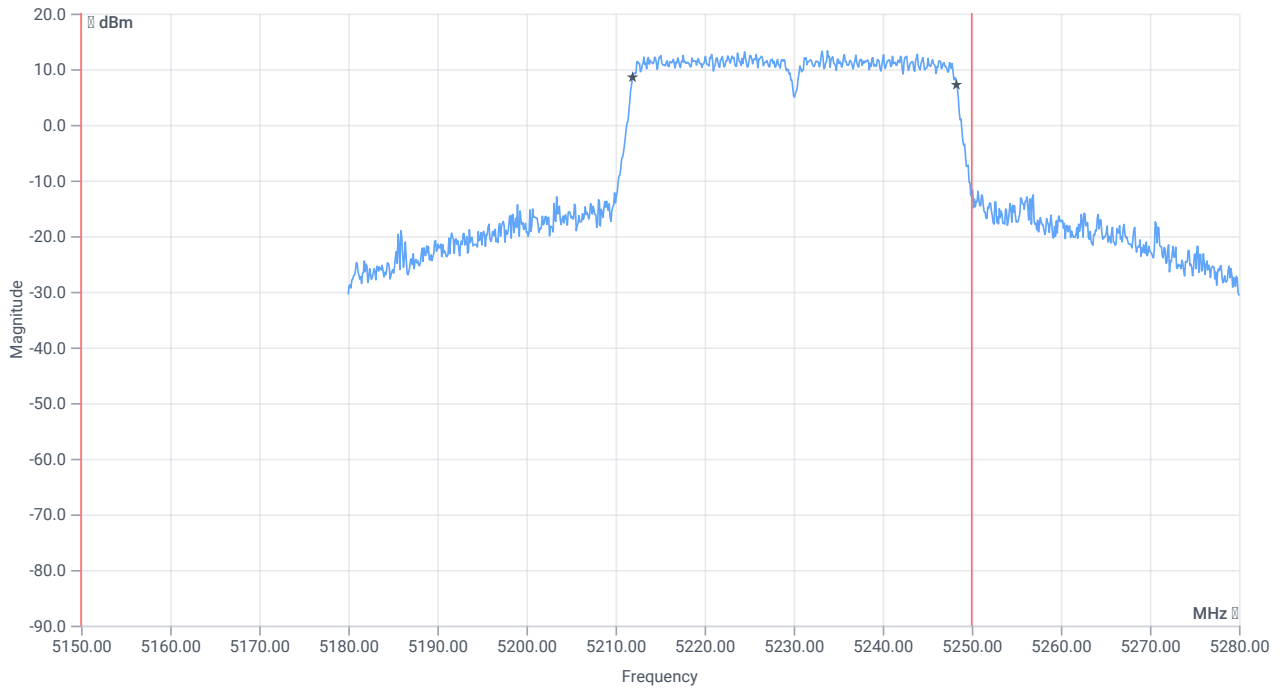
RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	14.28	dBm	INFO
Ref. Frequency	--	--	5220.010	MHz	INFO

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	22.28 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

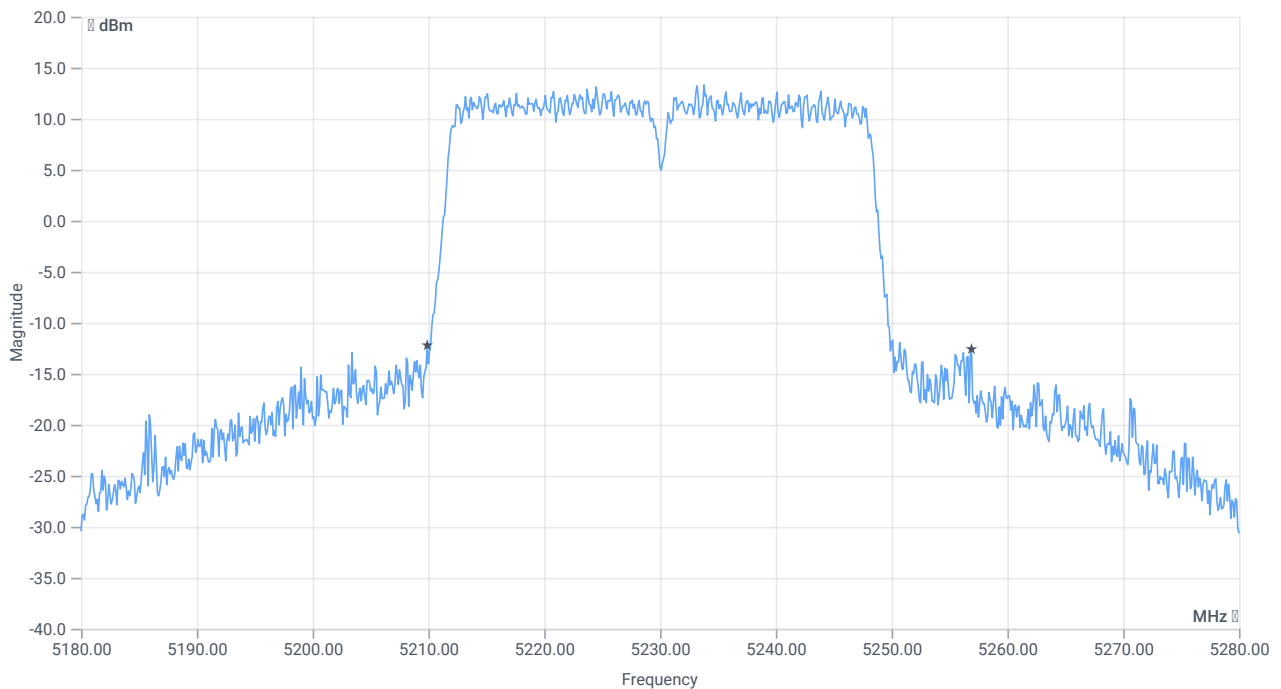




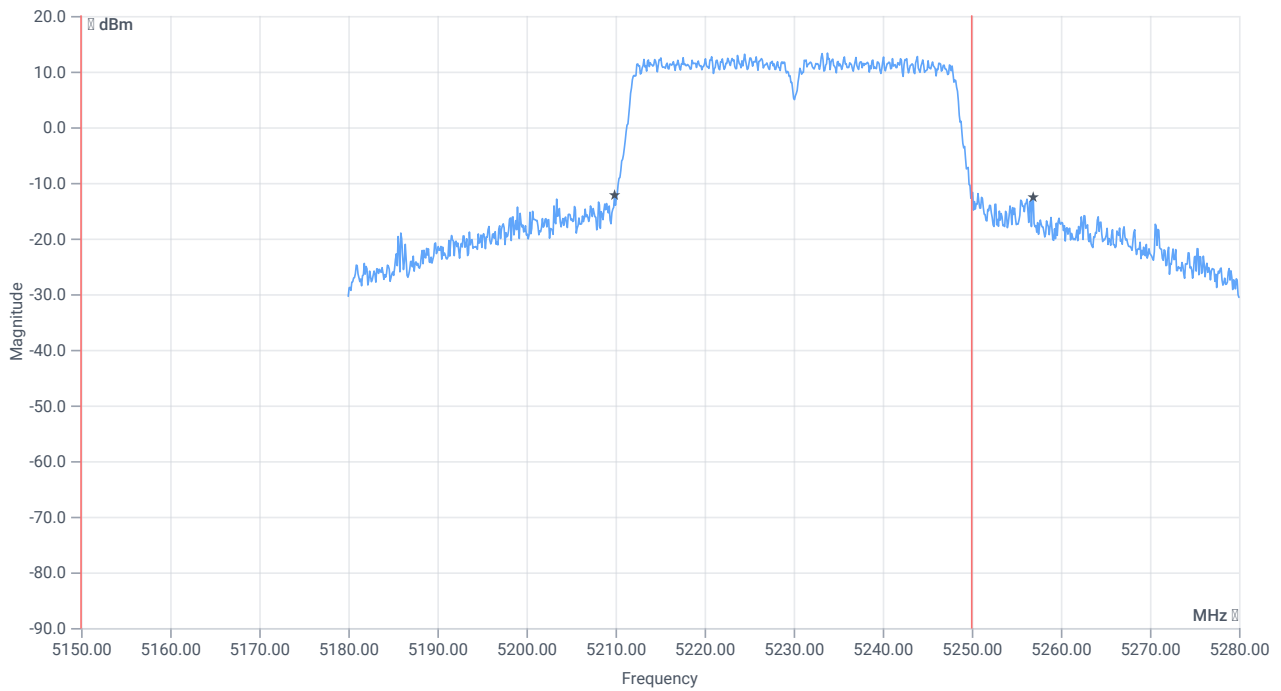
BW within Band 99PCT

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	36.364	MHz	INFO
T1 99%	5150.000000	--	5211.9181	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	---	---	47	MHz	INFO
T1 26dB	5150.000000	---	5209.9000	MHz	PASS
T2 26dB	---	5250.000000	5256.9000	MHz	DFS required

Verdict

PASS

FCC 15.407 # MIMO Σ Max output power and psd ~ WLAN5Gx n-HT40 mode U-NII-1

Test References

TC Start	15.03.2023 14:12:09
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 Σ FCC Power & psd - WLAN5Gx n-HT40 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 n-HT40 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	--	--	20.36	dBm	INFO
Ant:1 BW 26dB	--	--	55.200	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	20.67	dBm	INFO
Ant:2 BW 26dB	--	--	48.560	MHz	INFO
Σ Limit absolute	--	24	23.53	dBm	PASS
Σ Limit: 11 dBm + 10 log 48.56	--	27.86	23.53	dBm	na

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	5.43	dBm/1MHz	INFO
Ant:2 PSD	--	--	5.79	dBm/1MHz	INFO
Σ	--	11	8.62	dBm/1MHz	PASS

Verdict

PASS

- END OF DOCUMENT -