

Measurement Results

No.1-3977/22-03-04_Annex_MR_A4

Test logging

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Document authorized:

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FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-3	236
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FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-2A	369
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FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-2A	374
FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-2A	378
FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-2A	381
FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-2A	385
FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-2A	388
FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-2A	392
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FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-2A	399

EUT Information

EUT DEFINITION

Manufacturer	SAGEMCOM BROADBAND SAS
Type	F5688W
Serial Number	QS2212959002927
Setup Number	1.0
Version SW	NI
Version FW	NI
Version HW	NI
Comment 1	
Comment 2	
Temperature [°C] Min	0
Temperature [°C] Nom	20
Temperature [°C] Max	50
Voltage [V] Min	120
Voltage [V] Nom	120
Voltage [V] Max	120

FCC 15.247 # MIMO Power PSD Calculator ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:34:29
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC MIMO_Power_PSD_Calculator - WLAN5Gx ac-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	None

Test Equipment

Test at TX 5180 MHz

RESULT Power

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 Max Output Power DC corrected	--	--	19.51	dBm	INFO
Ant:1 BW 26dB	--	--	20.680	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	19.92	dBm	INFO
Ant:2 BW 26dB	--	--	20.760	MHz	INFO
Ant:3 Max Output Power DC corrected	--	--	19.8	dBm	INFO
Ant:3 BW 26dB	--	--	20.800	MHz	INFO
Ant:4 Max Output Power DC corrected	--	--	19.46	dBm	INFO
Ant:4 BW 26dB	--	--	20.560	MHz	INFO
Σ Limit absolute	--	30	25.7	dBm	PASS
Σ Limit: 11 dBm + 10 log 20.56	--	24.13	25.7	dBm	na

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	8.08	dBm/1MHz	INFO
Ant:2 PSD	--	--	8.07	dBm/1MHz	INFO
Ant:3 PSD	--	--	8.5	dBm/1MHz	INFO
Ant:4 PSD	--	--	7.91	dBm/1MHz	INFO
Σ	--	17	14.17	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:33:30
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	16.31	dBm	INFO
Ref. Frequency	--	--	5185.790	MHz	INFO

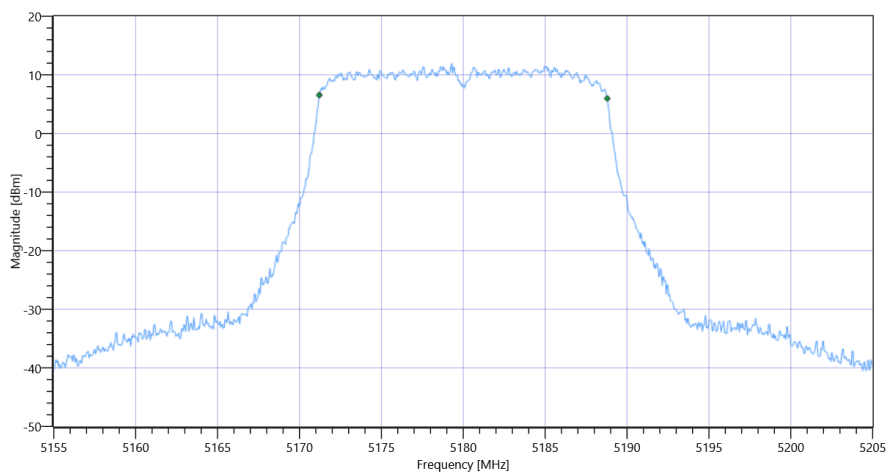
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	24.31 5.09 35
Start [MHz] Stop [MHz]	5155.000 5205.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

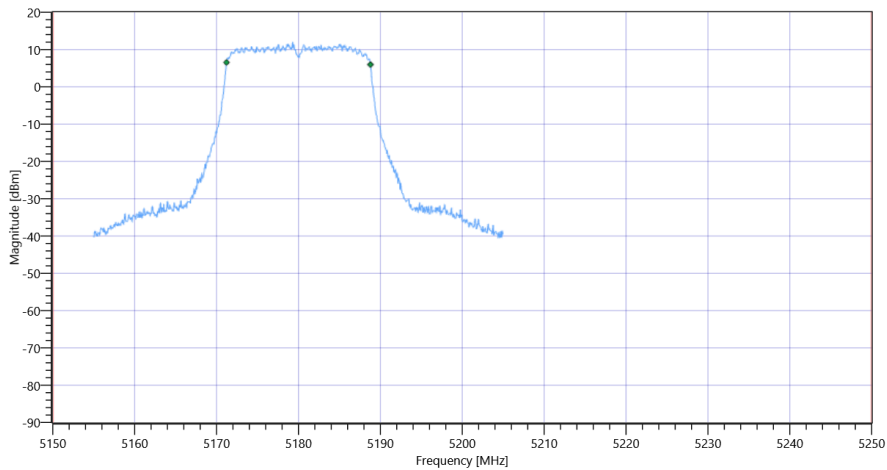
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	17.582	MHz	INFO
T1 99%	5150.000000	--	5171.2088	MHz	PASS
T2 99%	--	5250.000000	5188.7912	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

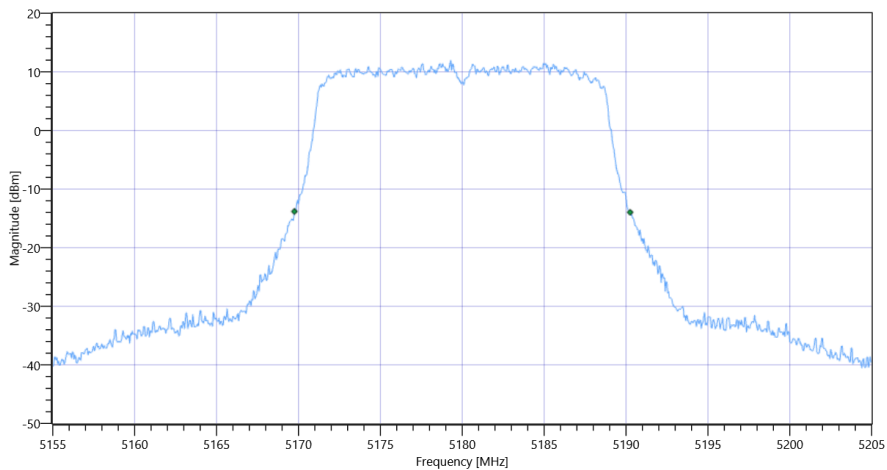


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

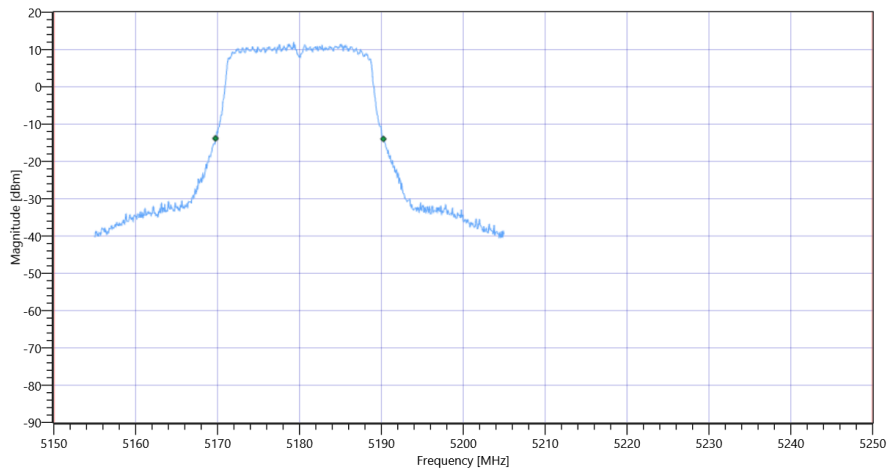
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.5	MHz	INFO
T1 26dB	5150.000000	---	5169.7500	MHz	PASS
T2 26dB	---	5250.000000	5190.2500	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:31:50
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1

Add. Information

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	17.68	dBm	INFO
Ref. Frequency	--	--	5179.200	MHz	INFO

Evaluation max. Duty Cycle

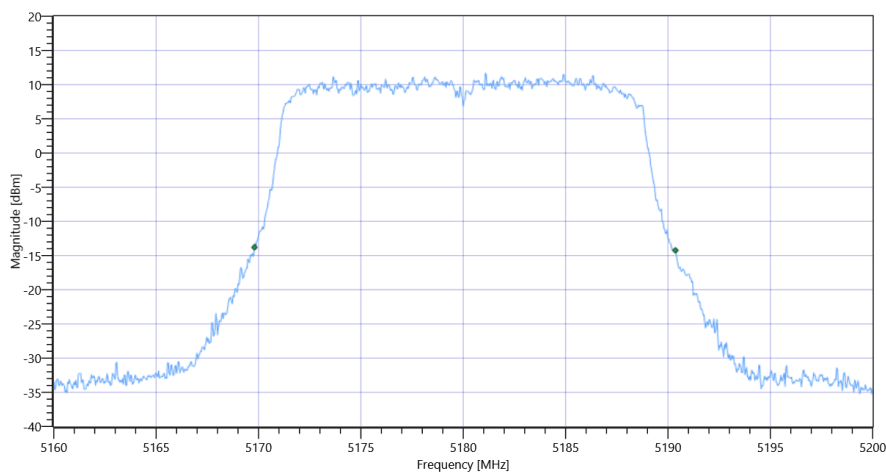
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	--	--	20.56	MHz	INFO
T1 26dB	--	--	5169.8000	MHz	INFO
T2 26dB	--	--	5190.3600	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

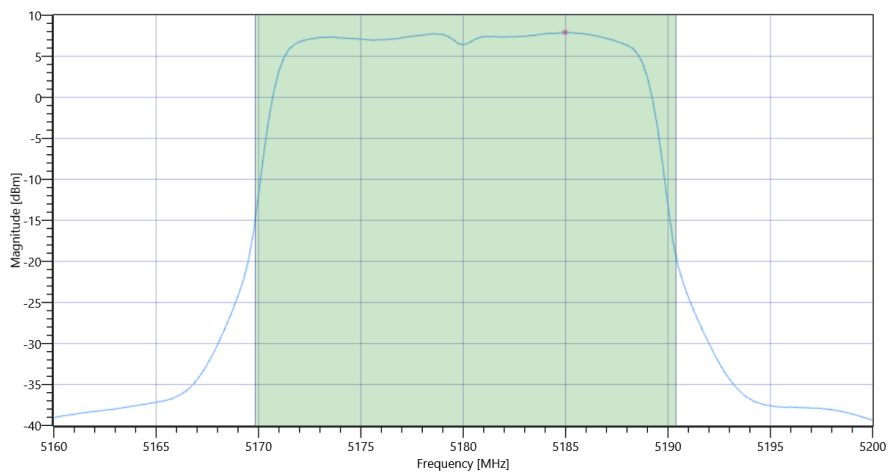
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	29.68 5.09 40
Start [MHz] Stop [MHz]	5160.000 5200.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	19.46	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	30	19.46	dBm	PASS
Limit: 11 dBm + 10 log 20.56					
Max Output Power DC corrected	---	24.13	19.46	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	7.91	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	17	7.91	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:30:51
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	16.31	dBm	INFO
Ref. Frequency	---	---	5178.600	MHz	INFO

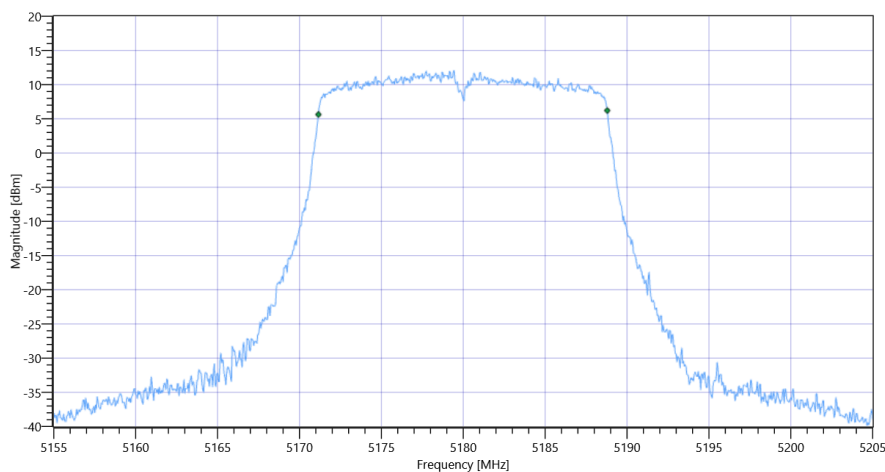
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	24.31 5.09 35
Start [MHz] Stop [MHz]	5155.000 5205.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

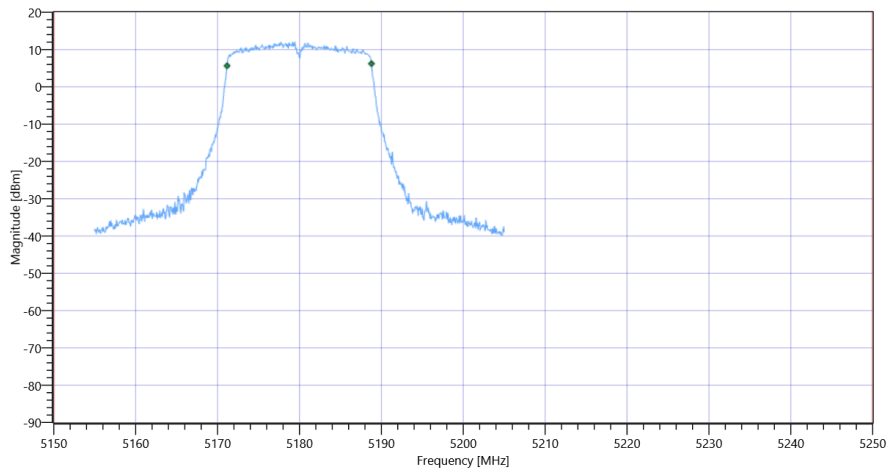
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.632	MHz	INFO
T1 99%	5150.000000	---	5171.1588	MHz	PASS
T2 99%	---	5250.000000	5188.7912	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

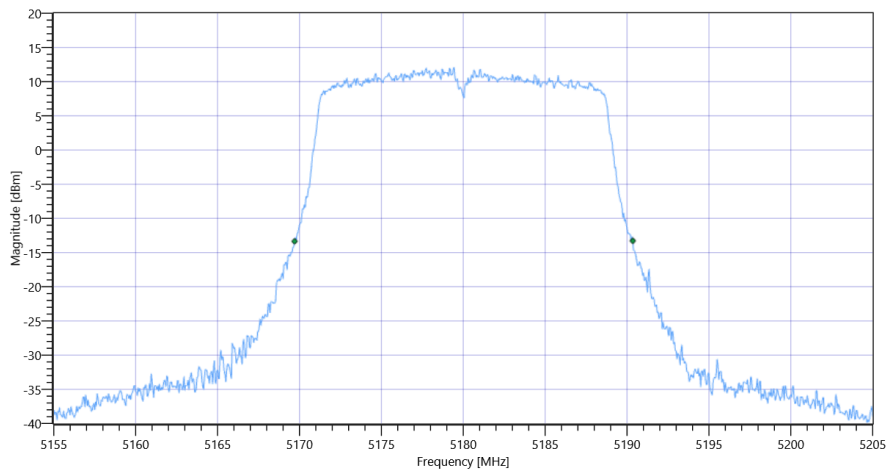


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

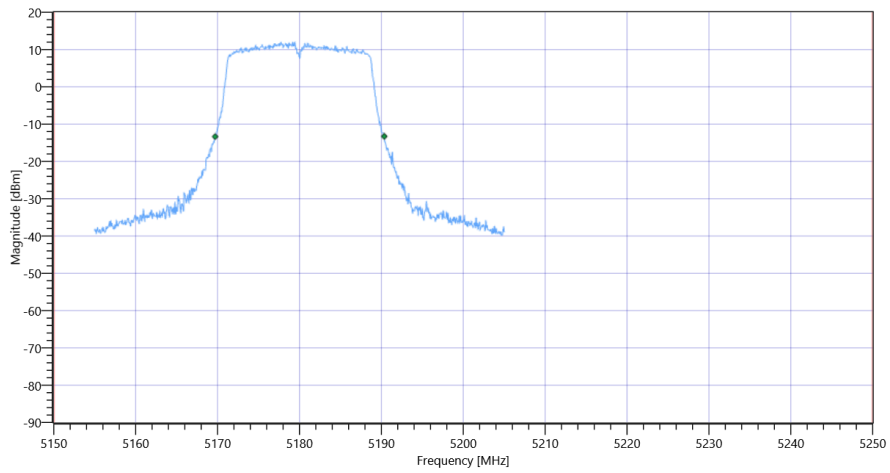
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.65	MHz	INFO
T1 26dB	5150.000000	---	5169.7000	MHz	PASS
T2 26dB	---	5250.000000	5190.3500	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:29:09
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	16.54	dBm	INFO
Ref. Frequency	--	--	5176.800	MHz	INFO

Evaluation max. Duty Cycle

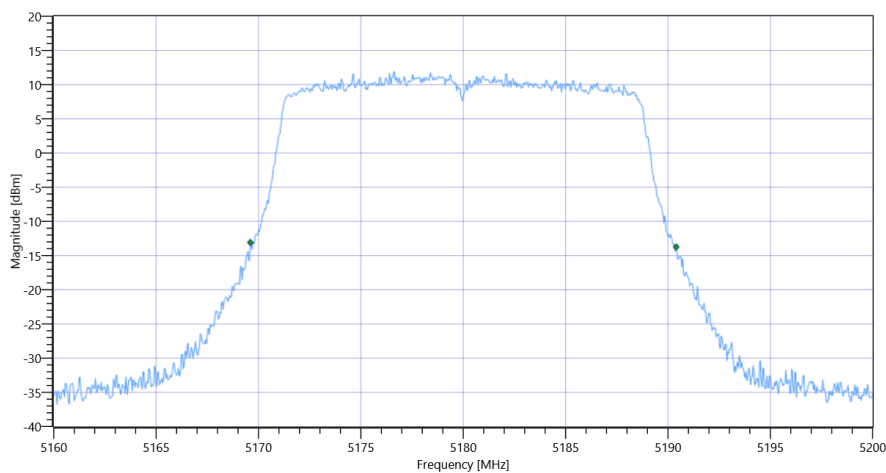
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	--	--	20.8	MHz	INFO
T1 26dB	--	--	5169.6000	MHz	INFO
T2 26dB	--	--	5190.4000	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

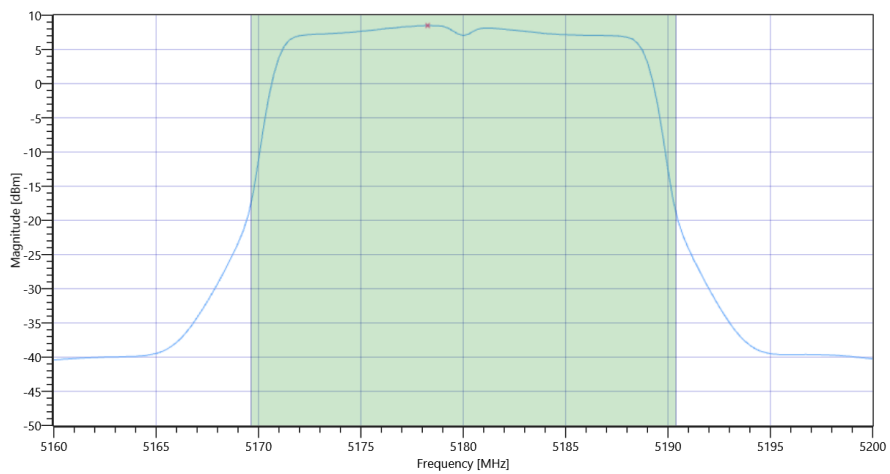
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.54 5.09 40
Start [MHz] Stop [MHz]	5160.000 5200.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	19.8	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	30	19.8	dBm	PASS
Limit: 11 dBm + 10 log 20.8					
Max Output Power DC corrected	--	24.18	19.8	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	8.5	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	17	8.5	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:27:48
Ambit Temp [°C] Humidity [rel%]	25.5 20
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	16.28	dBm	INFO
Ref. Frequency	--	--	5178.000	MHz	INFO

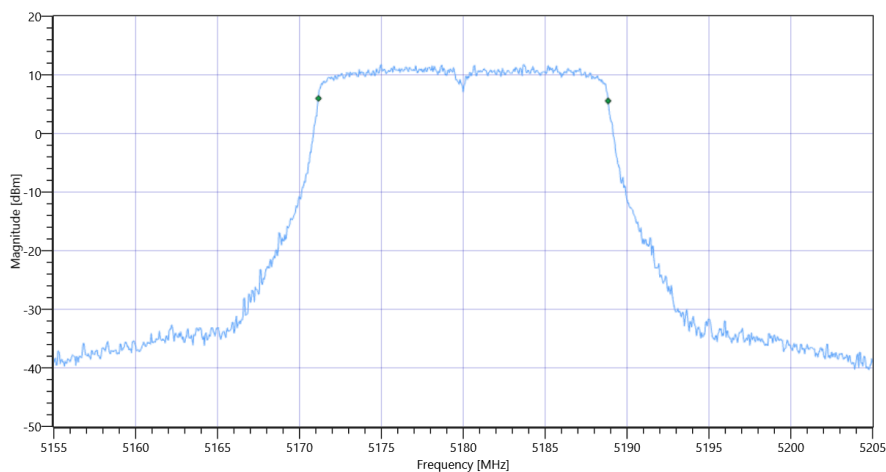
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	24.28 5.09 35
Start [MHz] Stop [MHz]	5155.000 5205.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

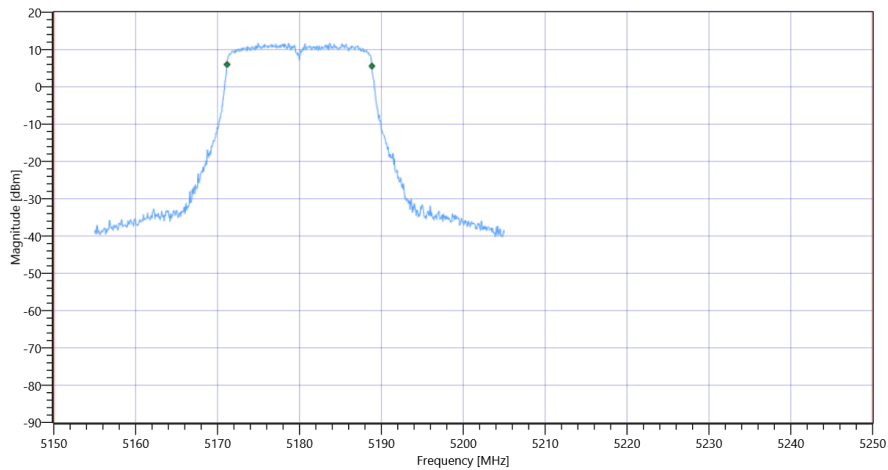
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	--	--	17.682	MHz	INFO
T1 99%	5150.000000	--	5171.1588	MHz	PASS
T2 99%	--	5250.000000	5188.8412	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

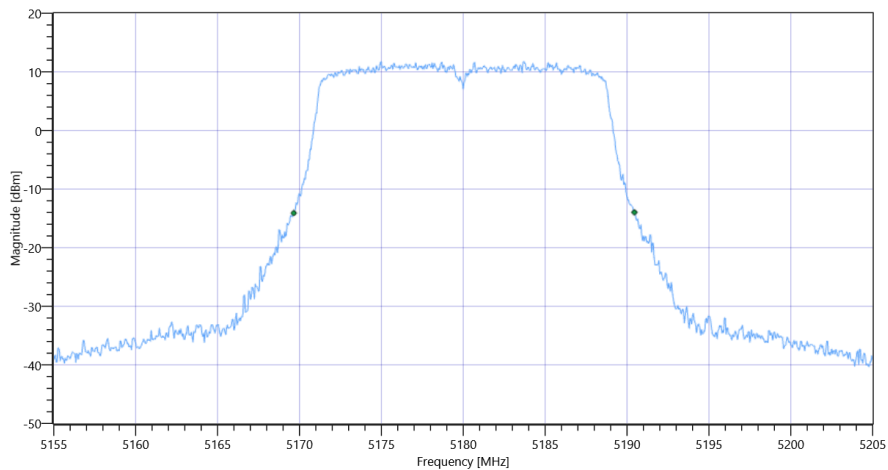


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

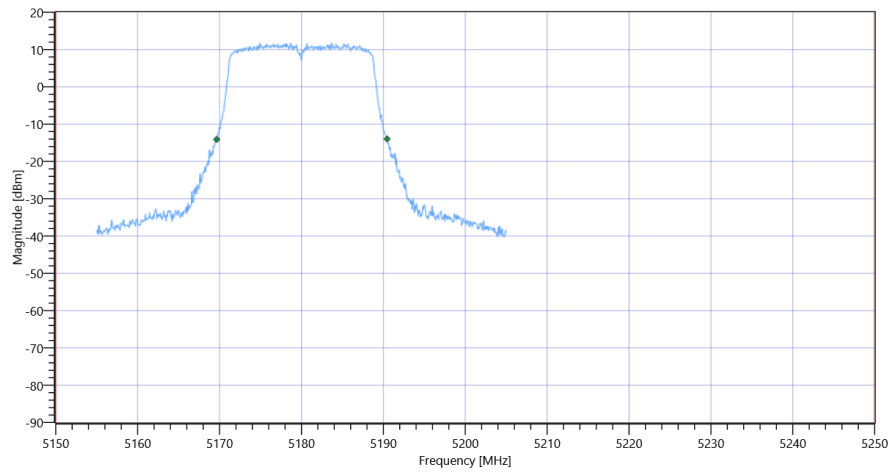
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.8	MHz	INFO
T1 26dB	5150.000000	---	5169.6500	MHz	PASS
T2 26dB	---	5250.000000	5190.4500	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:26:07
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F., E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	16.24	dBm	INFO
Ref. Frequency	--	--	5177.400	MHz	INFO

Evaluation max. Duty Cycle

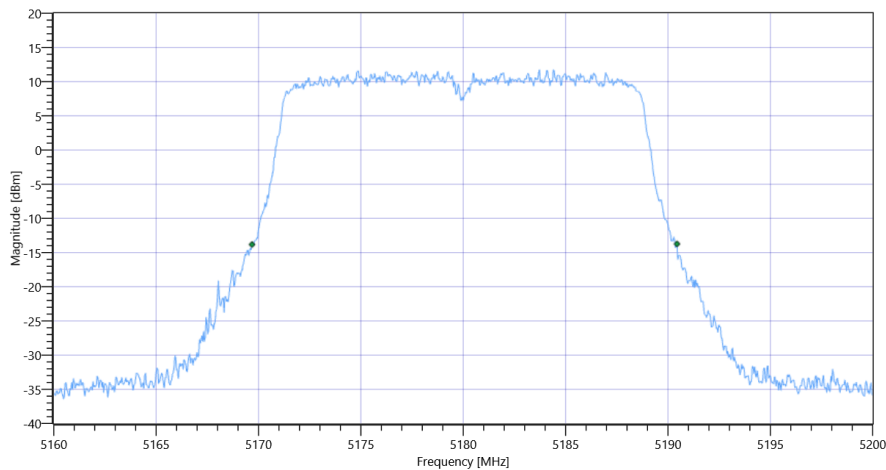
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	--	--	20.76	MHz	INFO
T1 26dB	--	--	5169.6800	MHz	INFO
T2 26dB	--	--	5190.4400	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

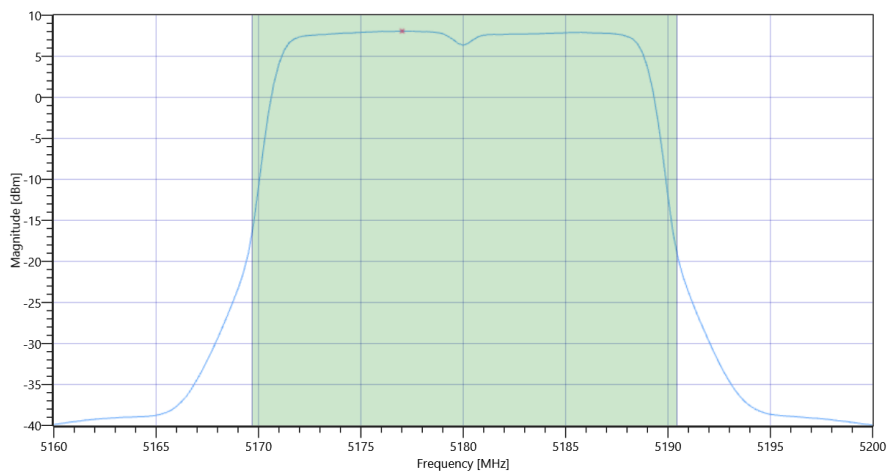
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.24 5.09 40
Start [MHz] Stop [MHz]	5160.000 5200.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	19.92	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	30	19.92	dBm	PASS
Limit: 11 dBm + 10 log 20.76					
Max Output Power DC corrected	---	24.17	19.92	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	8.07	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	17	8.07	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:25:09
Ambit Temp [°C] Humidity [rel%]	25.5 20
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	17.11	dBm	INFO
Ref. Frequency	---	---	5178.800	MHz	INFO

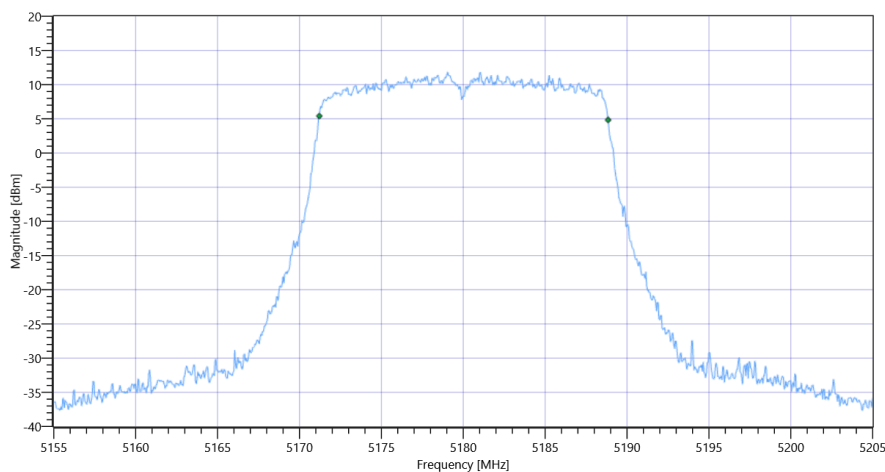
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	25.11 5.09 40
Start [MHz] Stop [MHz]	5155.000 5205.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

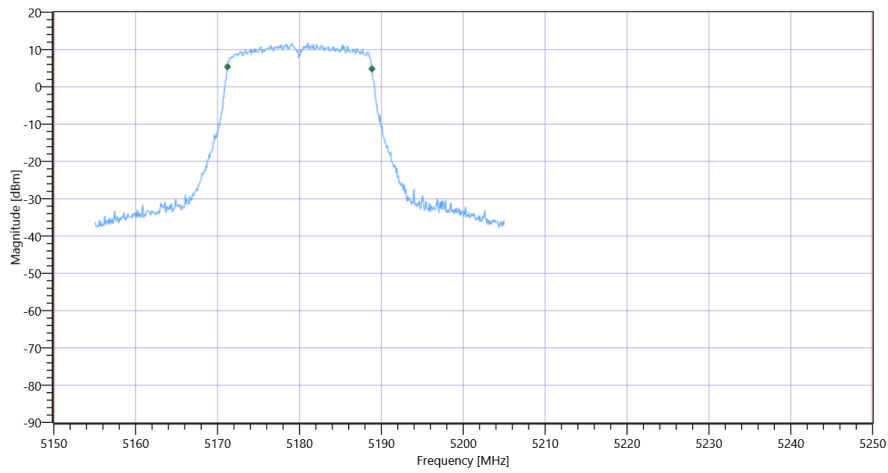
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.632	MHz	INFO
T1 99%	5150.000000	---	5171.2088	MHz	PASS
T2 99%	---	5250.000000	5188.8412	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

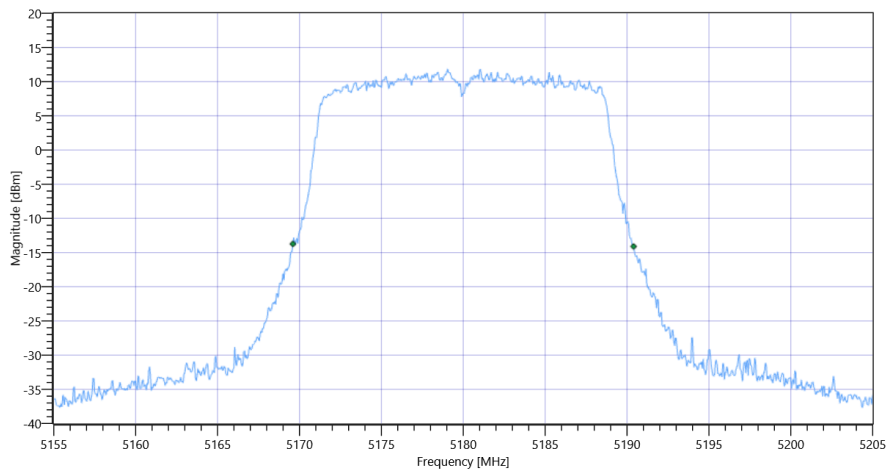


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

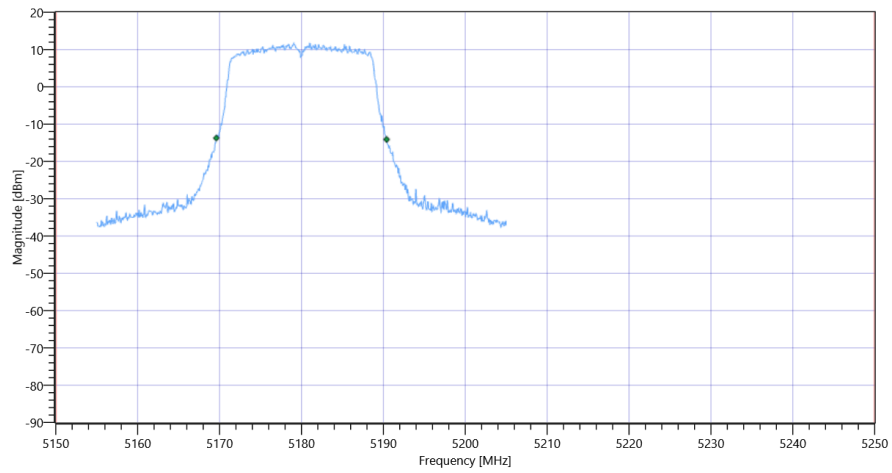
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.8	MHz	INFO
T1 26dB	5150.000000	---	5169.6000	MHz	PASS
T2 26dB	---	5250.000000	5190.4000	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:23:29
Ambit Temp [°C] Humidity [rel%]	25.5 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1

Add. Information

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	True Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5180 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	--	--	16.05	dBm	INFO
Ref. Frequency	--	--	5178.000	MHz	INFO

Evaluation max. Duty Cycle

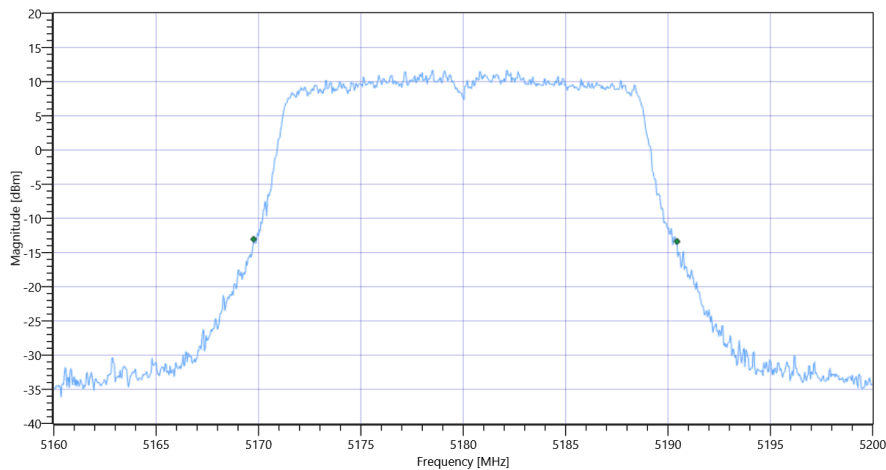
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	--	--	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	--	--	20.68	MHz	INFO
T1 26dB	--	--	5169.7600	MHz	INFO
T2 26dB	--	--	5190.4400	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

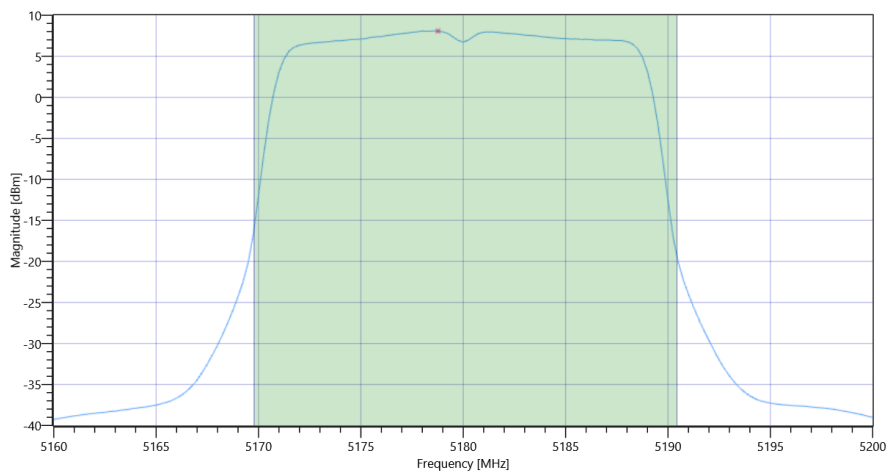
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	28.05 5.09 40
Start [MHz] Stop [MHz]	5160.000 5200.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	19.51	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	30	19.51	dBm	PASS
Limit: 11 dBm + 10 log 20.68					
Max Output Power DC corrected	---	24.16	19.51	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	8.08	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	17	8.08	dBm/1MHz	PASS

FCC 15.247 # MIMO Power PSD Calculator ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:47:16
Ambit Temp [°C] Humidity [rel%]	25.6 19
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC MIMO_Power_PSD_Calculator - WLAN5Gx ac-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	None

Test Equipment

Test at TX 5200 MHz

RESULT Power

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 Max Output Power DC corrected	--	--	21.66	dBm	INFO
Ant:1 BW 26dB	--	--	20.840	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	22.04	dBm	INFO
Ant:2 BW 26dB	--	--	21.480	MHz	INFO
Ant:3 Max Output Power DC corrected	--	--	22.52	dBm	INFO
Ant:3 BW 26dB	--	--	21.400	MHz	INFO
Ant:4 Max Output Power DC corrected	--	--	22.21	dBm	INFO
Ant:4 BW 26dB	--	--	21.400	MHz	INFO
Σ Limit absolute	--	30	28.14	dBm	PASS
Σ Limit: 11 dBm + 10 log 20.84	--	24.19	28.14	dBm	na

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	10.26	dBm/1MHz	INFO
Ant:2 PSD	--	--	10.41	dBm/1MHz	INFO
Ant:3 PSD	--	--	10.86	dBm/1MHz	INFO
Ant:4 PSD	--	--	10.85	dBm/1MHz	INFO
Σ	--	17	16.62	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:46:17
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	19.25	dBm	INFO
Ref. Frequency	---	---	5196.400	MHz	INFO

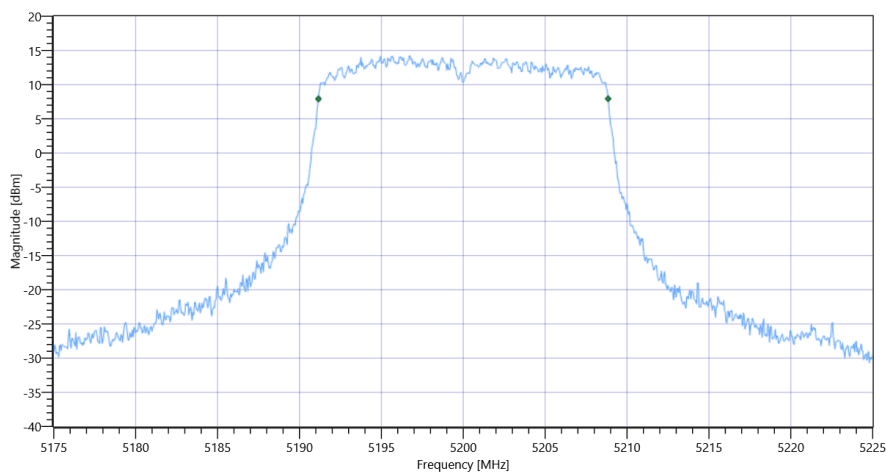
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.25 5.01 40
Start [MHz] Stop [MHz]	5175.000 5225.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

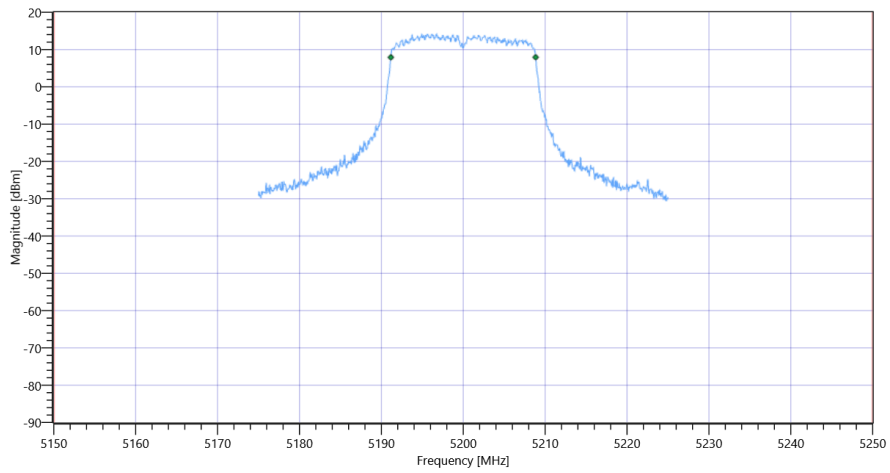
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.682	MHz	INFO
T1 99%	5150.000000	---	5191.1588	MHz	PASS
T2 99%	---	5250.000000	5208.8412	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

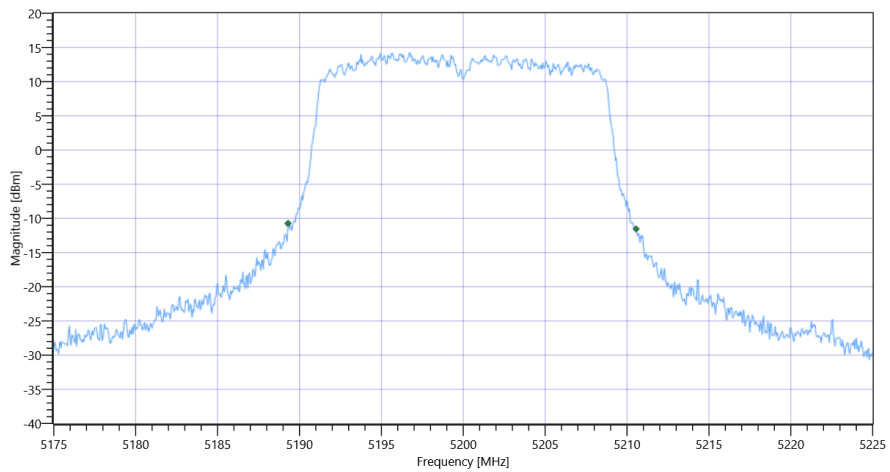


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

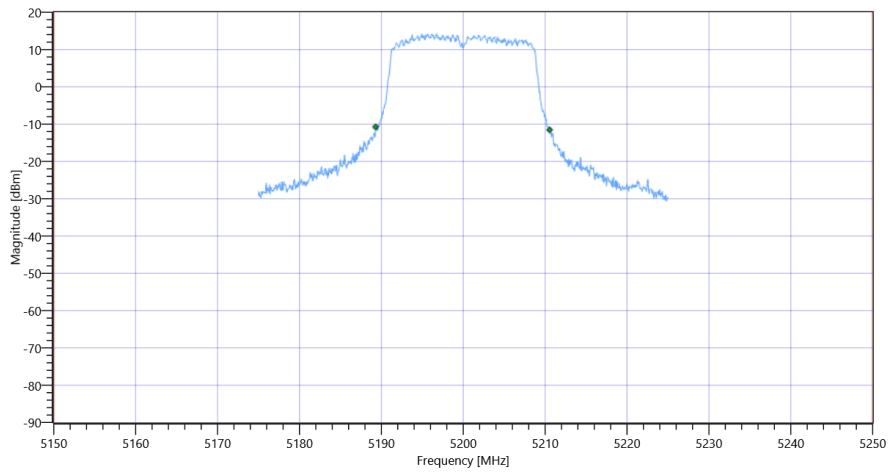
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.25	MHz	INFO
T1 26dB	5150.000000	---	5189.3000	MHz	PASS
T2 26dB	---	5250.000000	5210.5500	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:44:40
Ambit Temp [°C] Humidity [rel%]	25.6 19
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1

Add. Information

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	19.60	dBm	INFO
Ref. Frequency	---	---	5204.000	MHz	INFO

Evaluation max. Duty Cycle

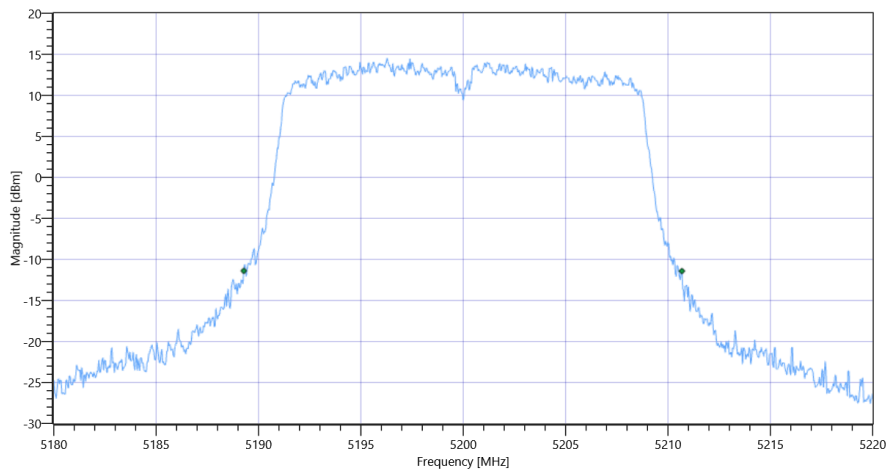
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	---	---	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.4	MHz	INFO
T1 26dB	---	---	5189.2800	MHz	INFO
T2 26dB	---	---	5210.6800	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

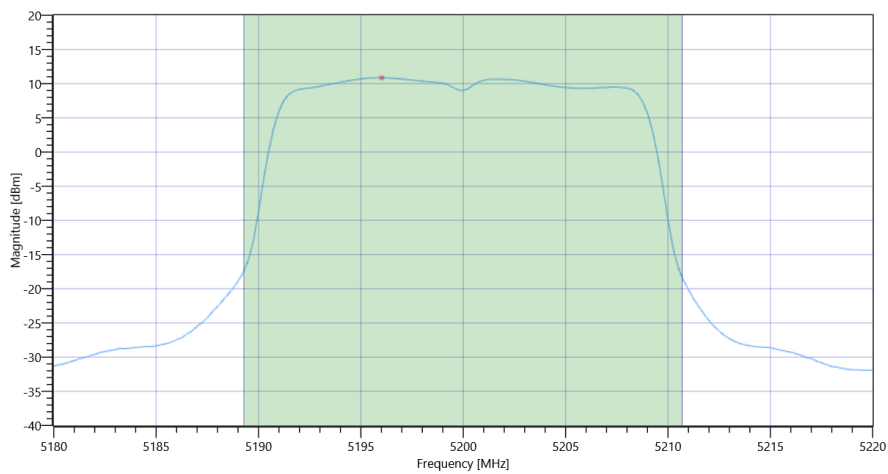
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	31.60 5.01 45
Start [MHz] Stop [MHz]	5180.000 5220.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	22.21	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	30	22.21	dBm	PASS
Limit: 11 dBm + 10 log 21.4					
Max Output Power DC corrected	--	24.3	22.21	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	10.85	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	17	10.85	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:43:41
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	19.09	dBm	INFO
Ref. Frequency	---	---	5202.000	MHz	INFO

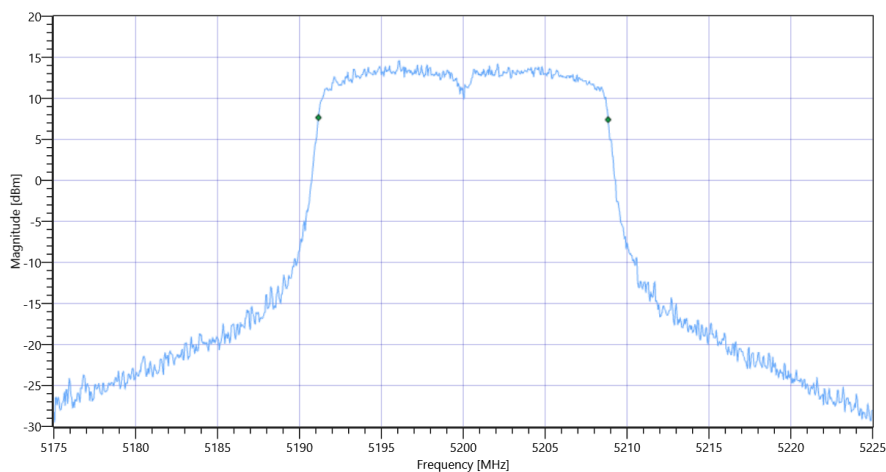
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.09 5.01 40
Start [MHz] Stop [MHz]	5175.000 5225.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

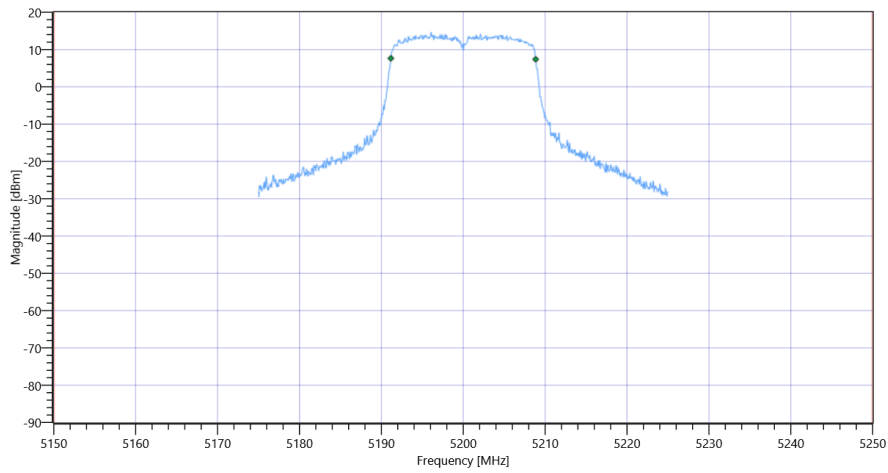
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.682	MHz	INFO
T1 99%	5150.000000	---	5191.1588	MHz	PASS
T2 99%	---	5250.000000	5208.8412	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

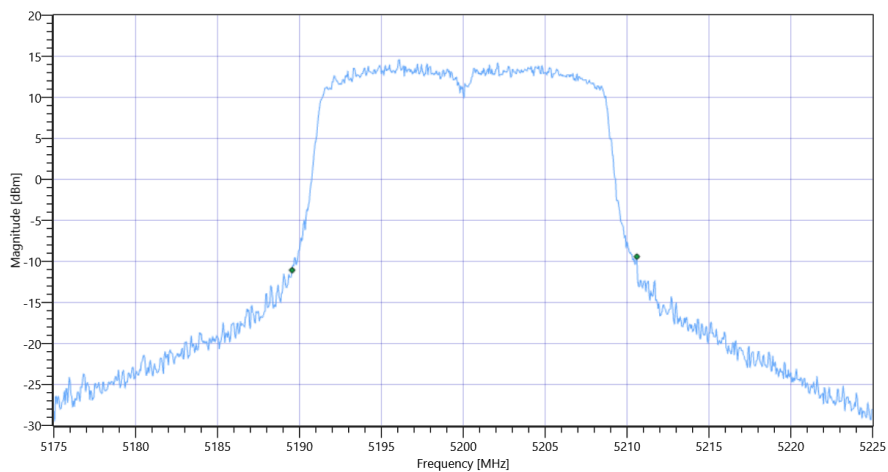


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

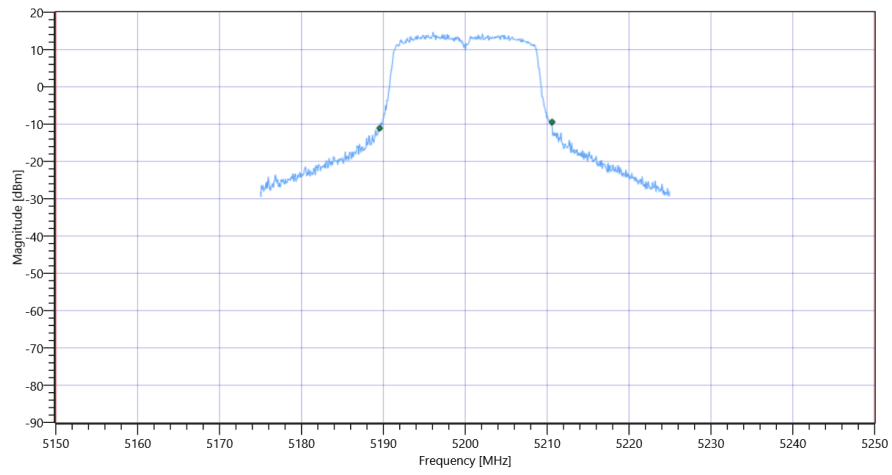
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.05	MHz	INFO
T1 26dB	5150.000000	---	5189.5500	MHz	PASS
T2 26dB	---	5250.000000	5210.6000	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:42:02
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	19.49	dBm	INFO
Ref. Frequency	---	---	5194.410	MHz	INFO

Evaluation max. Duty Cycle

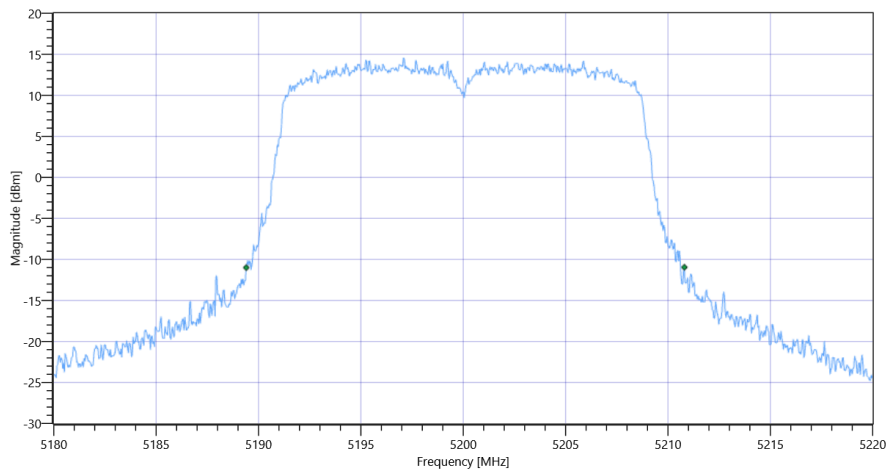
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	---	---	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.4	MHz	INFO
T1 26dB	---	---	5189.4000	MHz	INFO
T2 26dB	---	---	5210.8000	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

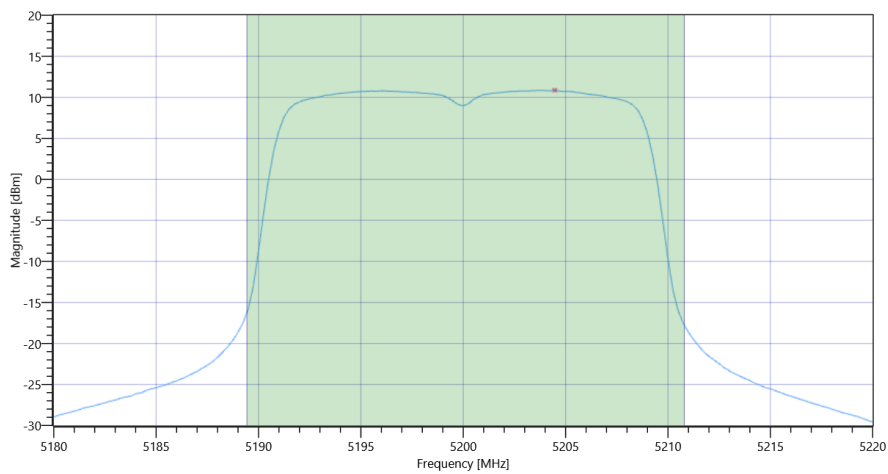
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	31.49 5.01 45
Start [MHz] Stop [MHz]	5180.000 5220.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	22.52	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	30	22.52	dBm	PASS
Limit: 11 dBm + 10 log 21.4					
Max Output Power DC corrected	---	24.3	22.52	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	10.86	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	17	10.86	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:41:04
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.90	dBm	INFO
Ref. Frequency	---	---	5205.190	MHz	INFO

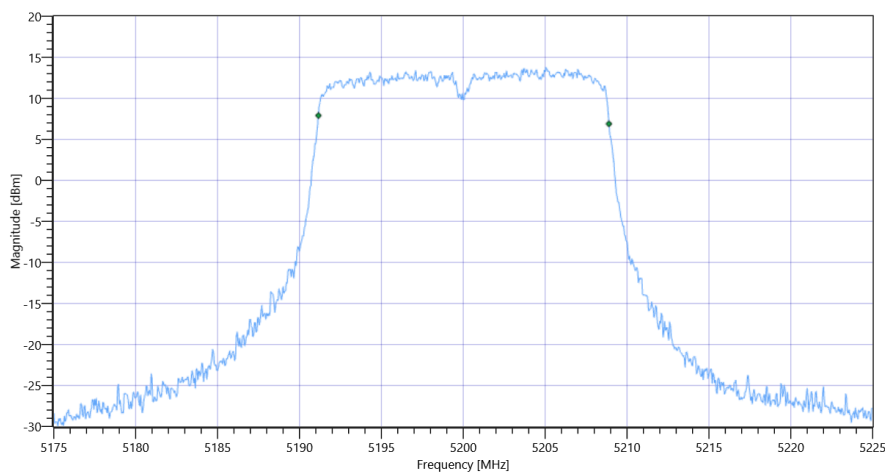
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.90 5.01 40
Start [MHz] Stop [MHz]	5175.000 5225.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

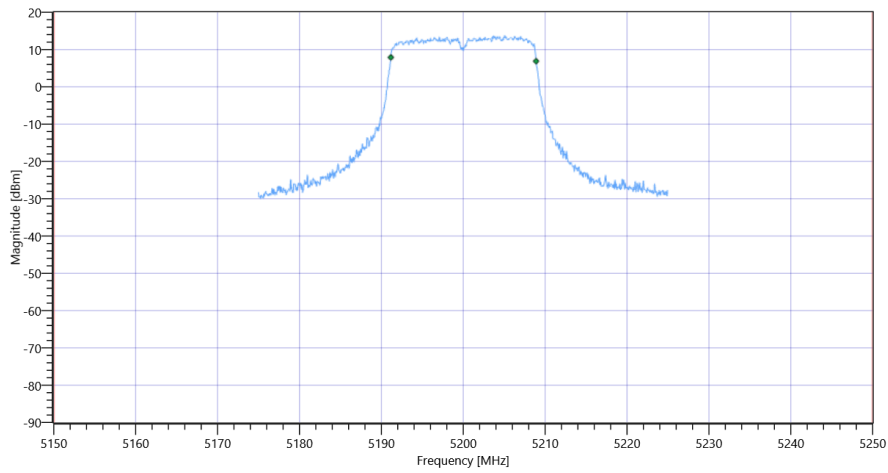
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.732	MHz	INFO
T1 99%	5150.000000	---	5191.1588	MHz	PASS
T2 99%	---	5250.000000	5208.8911	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

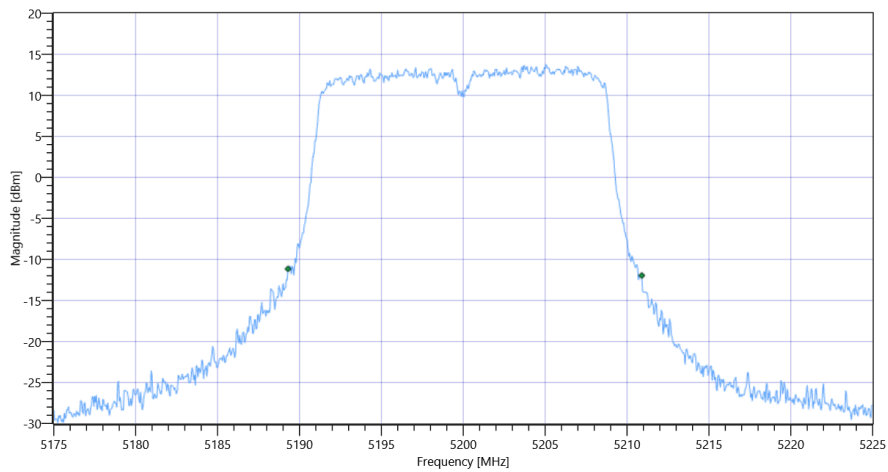


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

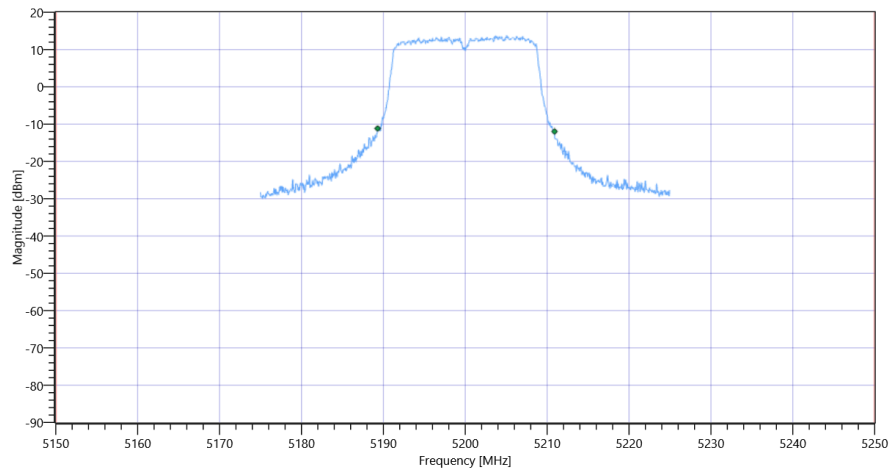
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.6	MHz	INFO
T1 26dB	5150.000000	---	5189.3000	MHz	PASS
T2 26dB	---	5250.000000	5210.9000	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:39:26
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1

Add. Information

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.58	dBm	INFO
Ref. Frequency	---	---	5207.390	MHz	INFO

Evaluation max. Duty Cycle

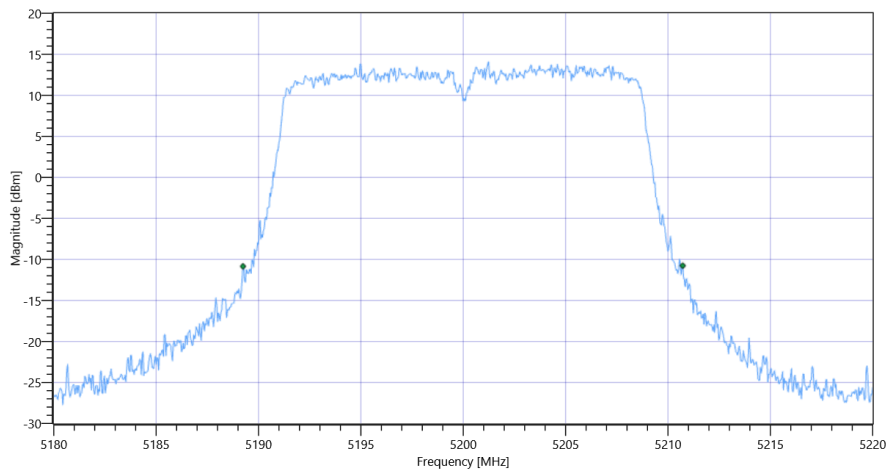
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	---	---	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.48	MHz	INFO
T1 26dB	---	---	5189.2400	MHz	INFO
T2 26dB	---	---	5210.7200	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

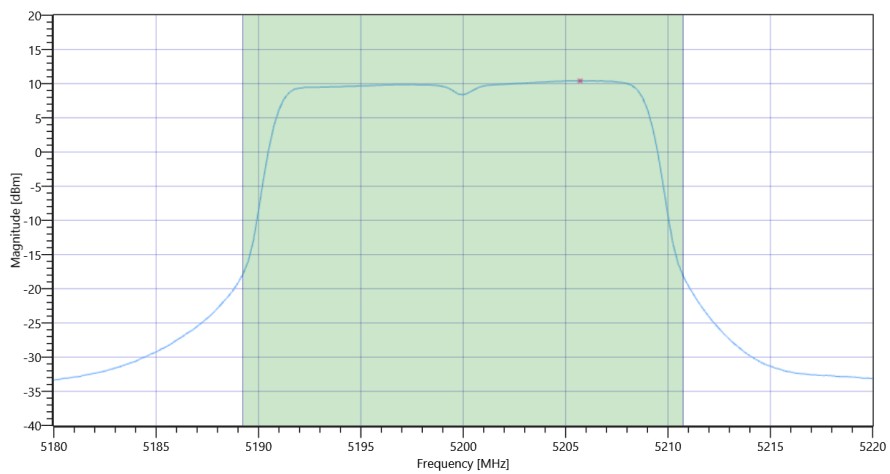
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	30.58 5.01 40
Start [MHz] Stop [MHz]	5180.000 5220.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	22.04	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	30	22.04	dBm	PASS
Limit: 11 dBm + 10 log 21.48					
Max Output Power DC corrected	--	24.32	22.04	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	10.41	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	17	10.41	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:38:27
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	19.03	dBm	INFO
Ref. Frequency	---	---	5199.200	MHz	INFO

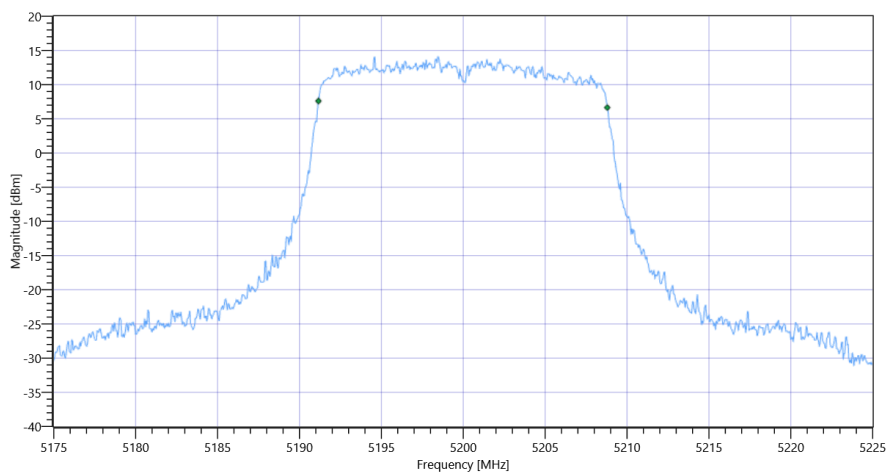
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	27.03 5.01 40
Start [MHz] Stop [MHz]	5175.000 5225.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

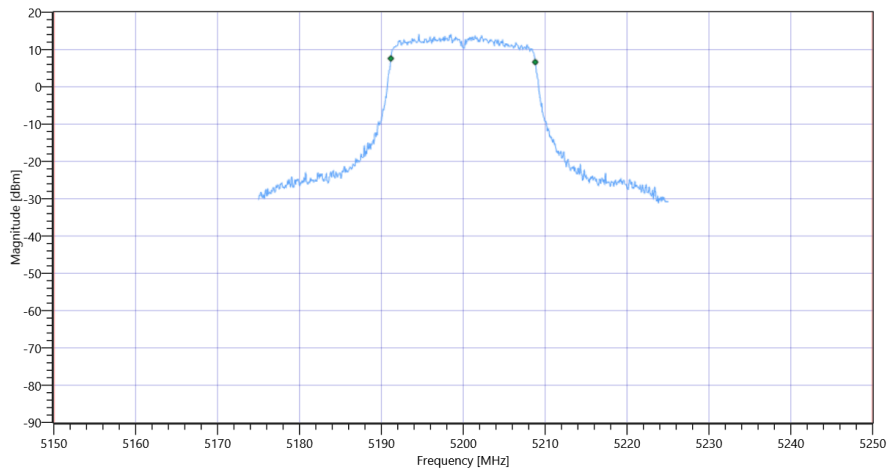
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.632	MHz	INFO
T1 99%	5150.000000	---	5191.1588	MHz	PASS
T2 99%	---	5250.000000	5208.7912	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISSED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

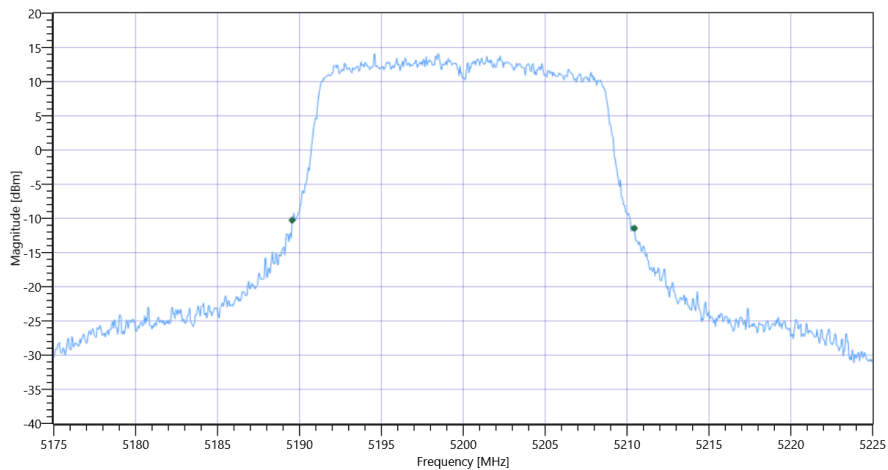


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

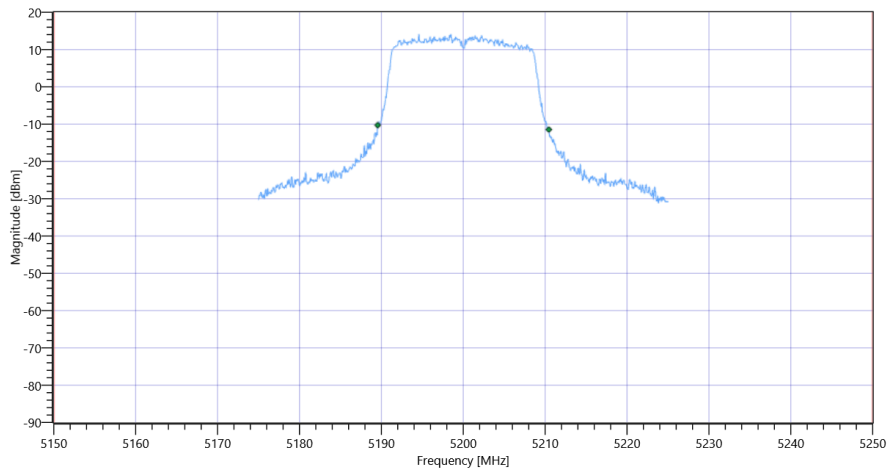
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.9	MHz	INFO
T1 26dB	5150.000000	---	5189.5500	MHz	PASS
T2 26dB	---	5250.000000	5210.4500	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:36:49
Ambit Temp [°C] Humidity [rel%]	25.6 20
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	True Freq [MHz] 5200
Frequency high to test	False Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5200 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.30	dBm	INFO
Ref. Frequency	---	---	5197.200	MHz	INFO

Evaluation max. Duty Cycle

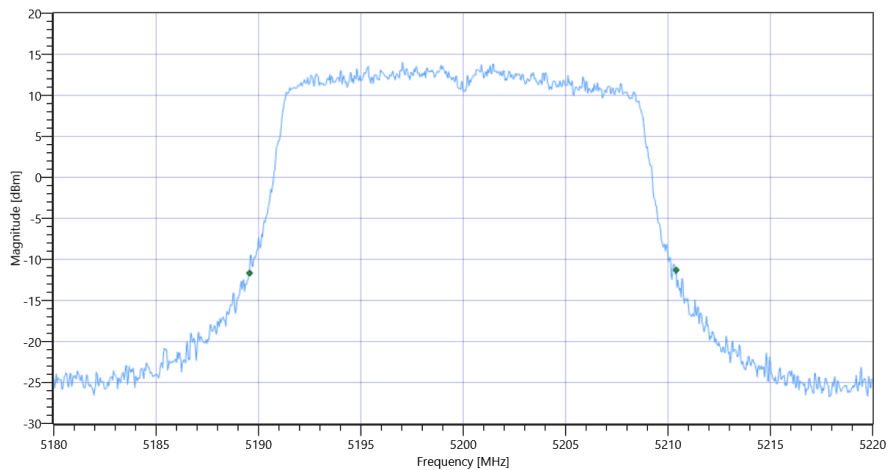
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	---	---	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.84	MHz	INFO
T1 26dB	---	---	5189.5600	MHz	INFO
T2 26dB	---	---	5210.4000	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

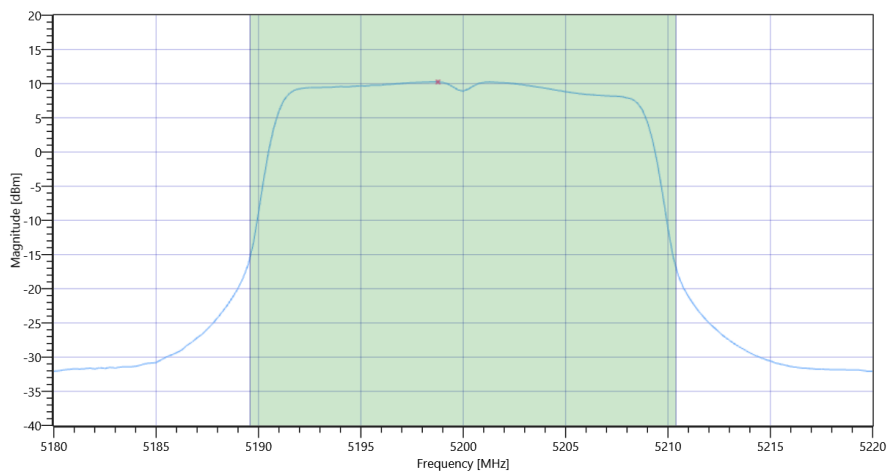
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	30.30 5.01 40
Start [MHz] Stop [MHz]	5180.000 5220.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	21.66	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	30	21.66	dBm	PASS
Limit: 11 dBm + 10 log 20.84					
Max Output Power DC corrected	---	24.19	21.66	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	10.26	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	17	10.26	dBm/1MHz	PASS

FCC 15.247 # MIMO Power PSD Calculator ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:59:42
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	
TC Version	0.0.1
My Description	FCC MIMO_Power_PSD_Calculator - WLAN5Gx ac-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
Switched Path	None

Test Equipment

Test at TX 5240 MHz

RESULT Power

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 Max Output Power DC corrected	--	--	21.57	dBm	INFO
Ant:1 BW 26dB	--	--	20.960	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	21.71	dBm	INFO
Ant:2 BW 26dB	--	--	21.440	MHz	INFO
Ant:3 Max Output Power DC corrected	--	--	21.15	dBm	INFO
Ant:3 BW 26dB	--	--	21.200	MHz	INFO
Ant:4 Max Output Power DC corrected	--	--	21.79	dBm	INFO
Ant:4 BW 26dB	--	--	20.680	MHz	INFO
Σ Limit absolute	--	30	27.58	dBm	PASS
Σ Limit: 11 dBm + 10 log 20.68	--	24.16	27.58	dBm	na

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	10.1	dBm/1MHz	INFO
Ant:2 PSD	--	--	10.26	dBm/1MHz	INFO
Ant:3 PSD	--	--	9.6	dBm/1MHz	INFO
Ant:4 PSD	--	--	10.74	dBm/1MHz	INFO
Σ	--	17	16.21	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:58:49
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5240 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.84	dBm	INFO
Ref. Frequency	---	---	5242.600	MHz	INFO

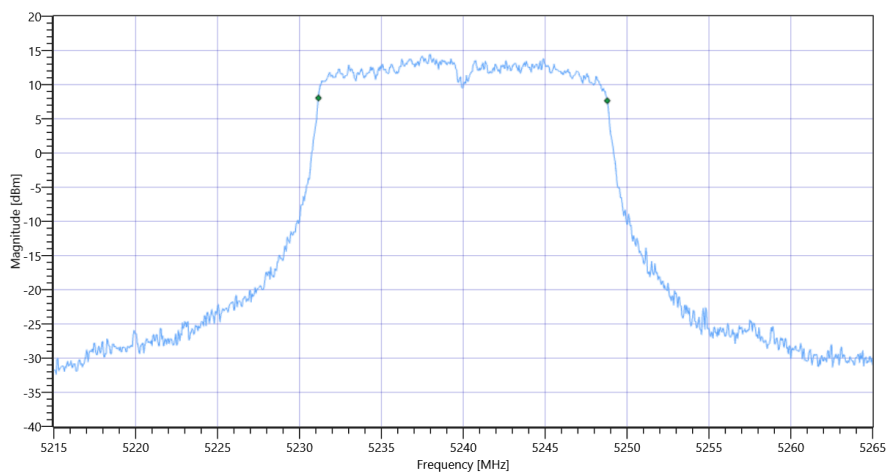
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.84 5.07 40
Start [MHz] Stop [MHz]	5215.000 5265.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

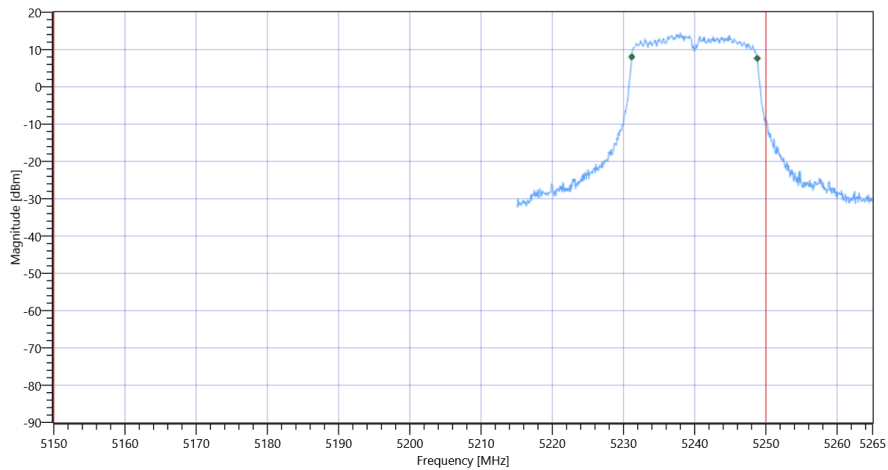
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.632	MHz	INFO
T1 99%	5150.000000	---	5231.1588	MHz	PASS
T2 99%	---	5250.000000	5248.7912	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

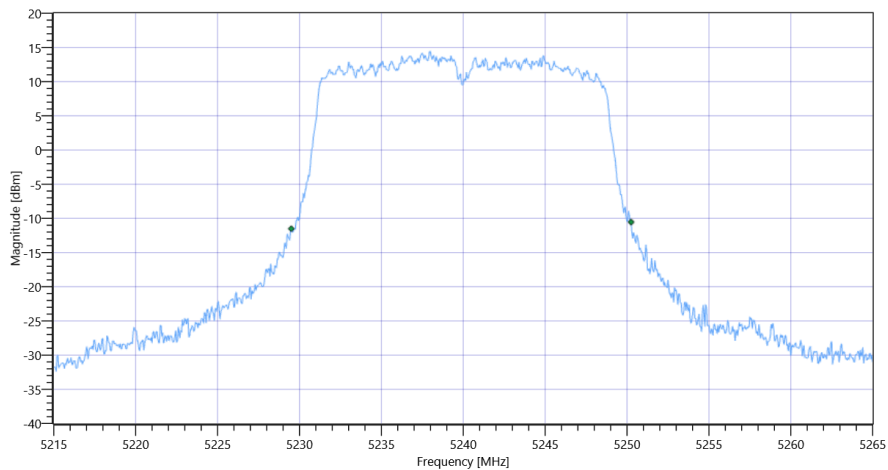


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

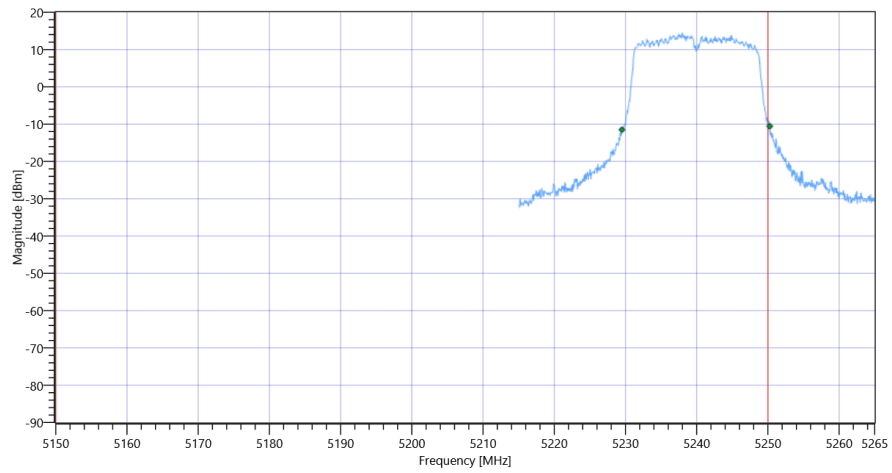
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.75	MHz	INFO
T1 26dB	5150.000000	---	5229.5000	MHz	PASS
T2 26dB	---	5250.000000	5250.2500	MHz	DFS required

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:57:12
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1

Add. Information

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	4
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5240 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	19.34	dBm	INFO
Ref. Frequency	---	---	5244.200	MHz	INFO

Evaluation max. Duty Cycle

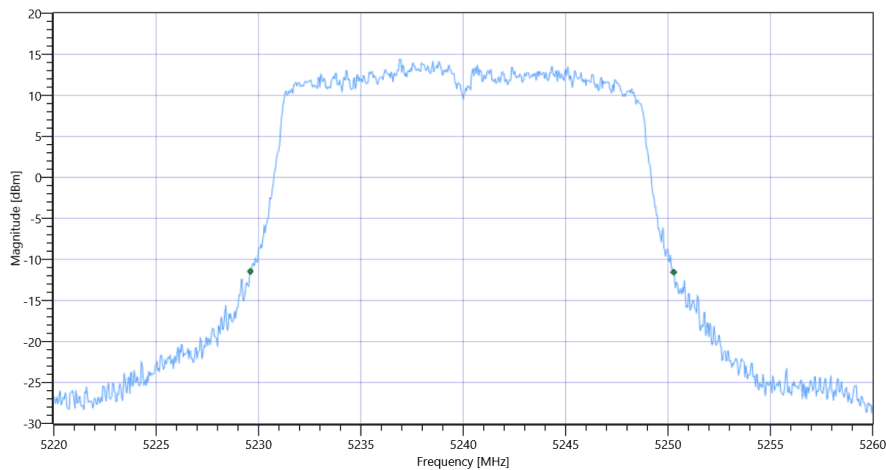
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	---	---	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	20.68	MHz	INFO
T1 26dB	---	---	5229.6000	MHz	INFO
T2 26dB	---	---	5250.2800	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

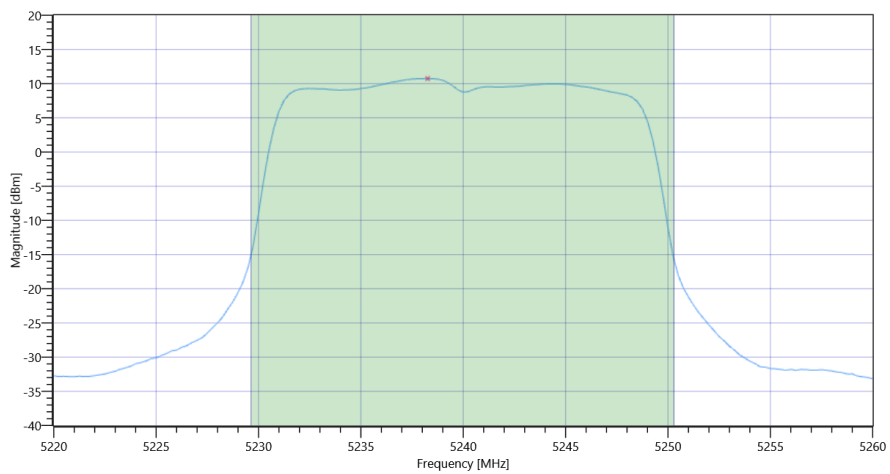
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	31.34 5.07 45
Start [MHz] Stop [MHz]	5220.000 5260.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	21.79	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	30	21.79	dBm	PASS
Limit: 11 dBm + 10 log 20.68					
Max Output Power DC corrected	--	24.16	21.79	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	10.74	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	17	10.74	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:56:19
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5240 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.29	dBm	INFO
Ref. Frequency	---	---	5238.600	MHz	INFO

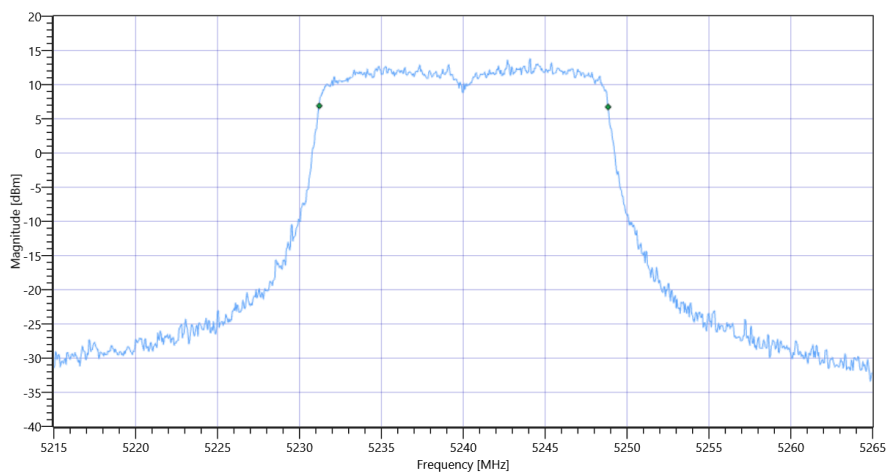
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.29 5.07 40
Start [MHz] Stop [MHz]	5215.000 5265.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

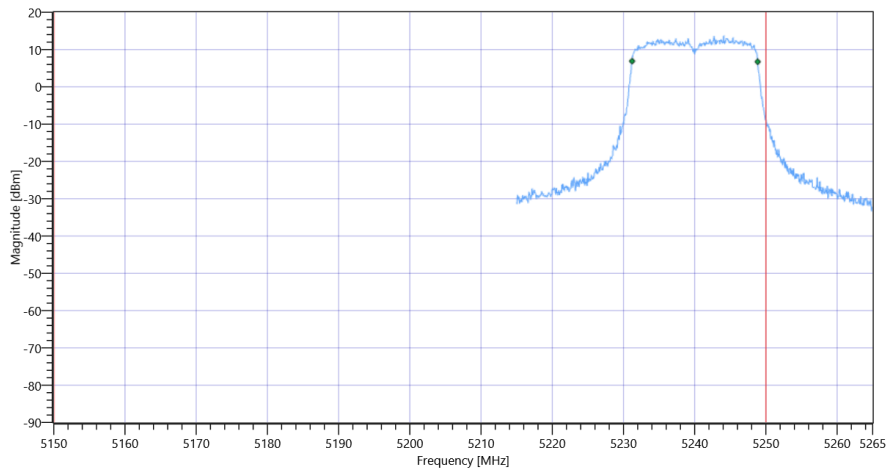
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.632	MHz	INFO
T1 99%	5150.000000	---	5231.2088	MHz	PASS
T2 99%	---	5250.000000	5248.8412	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

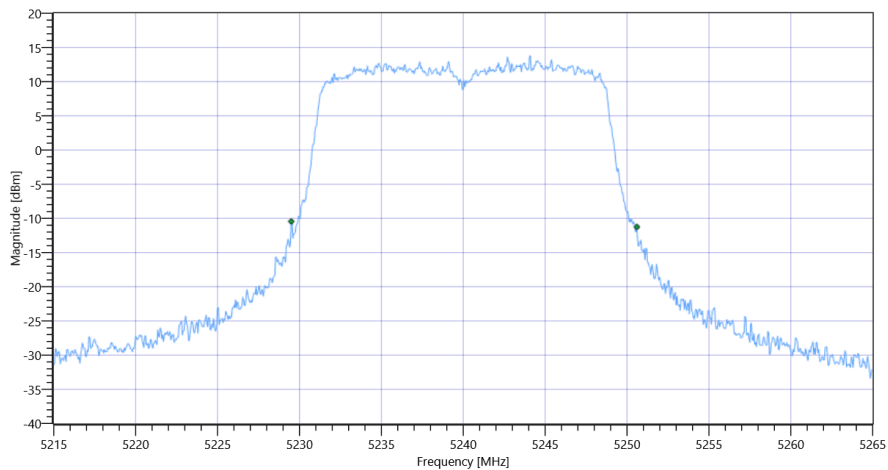


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

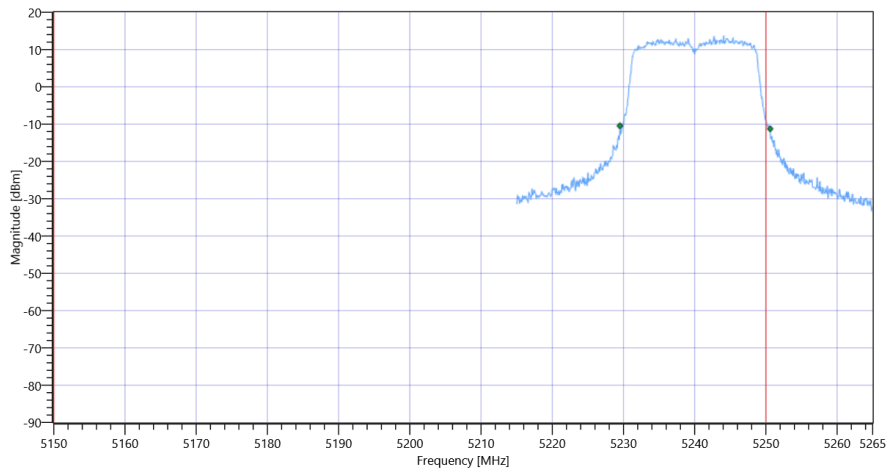
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.1	MHz	INFO
T1 26dB	5150.000000	---	5229.5000	MHz	PASS
T2 26dB	---	5250.000000	5250.6000	MHz	DFS required

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:54:41
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F., E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1

Add. Information

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	3
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5240 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.62	dBm	INFO
Ref. Frequency	---	---	5244.800	MHz	INFO

Evaluation max. Duty Cycle

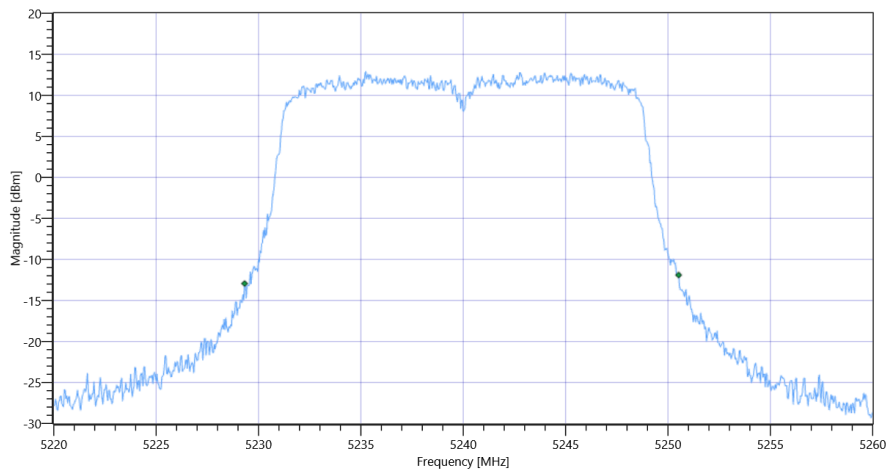
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	---	---	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.2	MHz	INFO
T1 26dB	---	---	5229.3200	MHz	INFO
T2 26dB	---	---	5250.5200	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

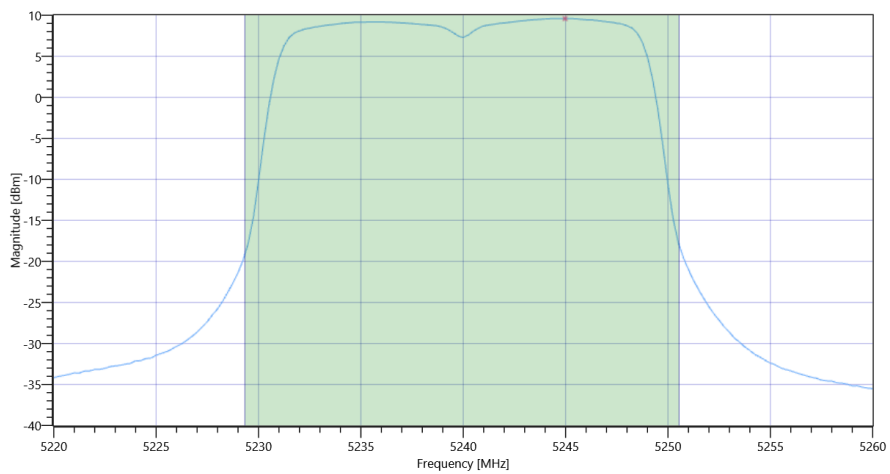
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	30.62 5.07 40
Start [MHz] Stop [MHz]	5220.000 5260.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	21.15	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	30	21.15	dBm	PASS
Limit: 11 dBm + 10 log 21.2					
Max Output Power DC corrected	---	24.26	21.15	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	9.6	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	17	9.6	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:53:49
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5240 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.71	dBm	INFO
Ref. Frequency	---	---	5242.200	MHz	INFO

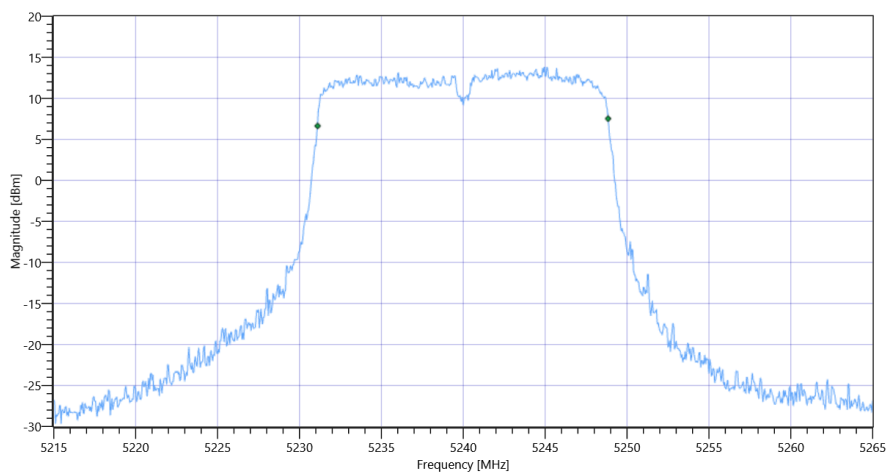
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.71 5.07 40
Start [MHz] Stop [MHz]	5215.000 5265.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

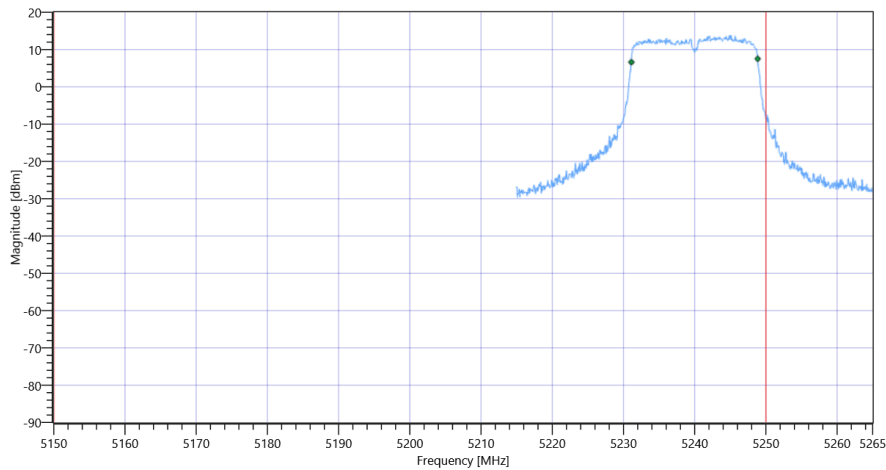
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.732	MHz	INFO
T1 99%	5150.000000	---	5231.1089	MHz	PASS
T2 99%	---	5250.000000	5248.8412	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band

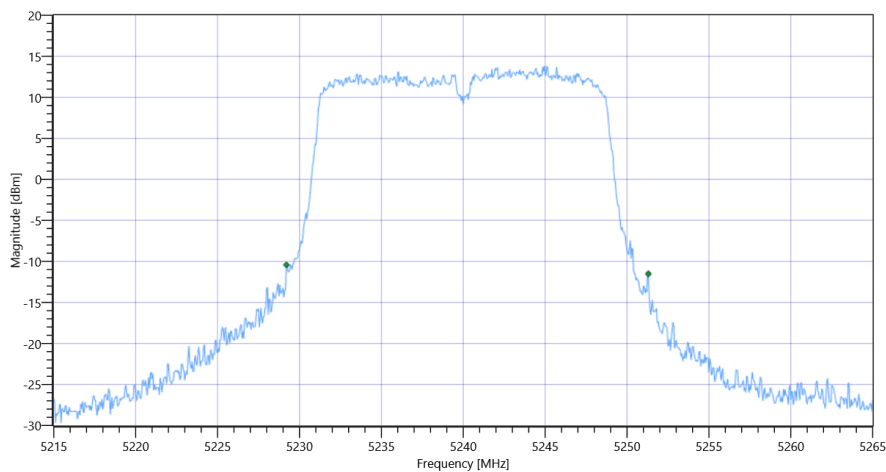


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

RESULT

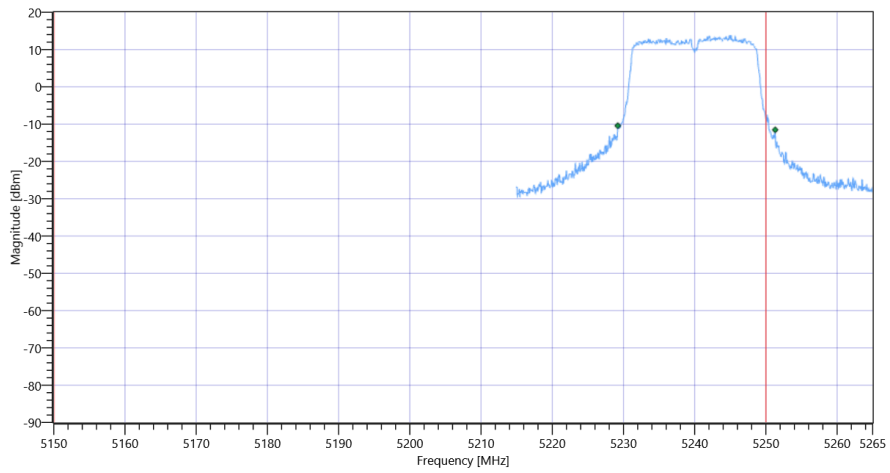
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	22.1	MHz	INFO
T1 26dB	5150.000000	---	5229.2000	MHz	PASS
T2 26dB	---	5250.000000	5251.3000	MHz	DFS required

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:52:12
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
Test Specification	FCC 15.247 -
Test Method	KDB789033 D02, F, E.2.e.
TC Version	0.0.1
My Description	FCC 15.407 Max Output Power & PSD - WLAN5Gx ac-VHT20 mode U-NII-1

Add. Information

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5240 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.57	dBm	INFO
Ref. Frequency	---	---	5236.400	MHz	INFO

Evaluation max. Duty Cycle

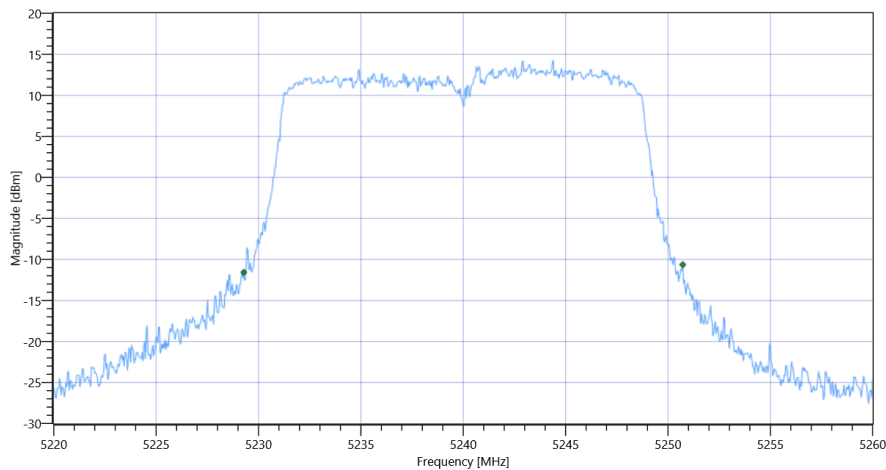
Duty Cycle evaluation

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Duty Cycle min	---	---	0	dB	DC > 98% defined

Evaluation Bandwidth

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	21.44	MHz	INFO
T1 26dB	---	---	5229.2800	MHz	INFO
T2 26dB	---	---	5250.7200	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1_BW

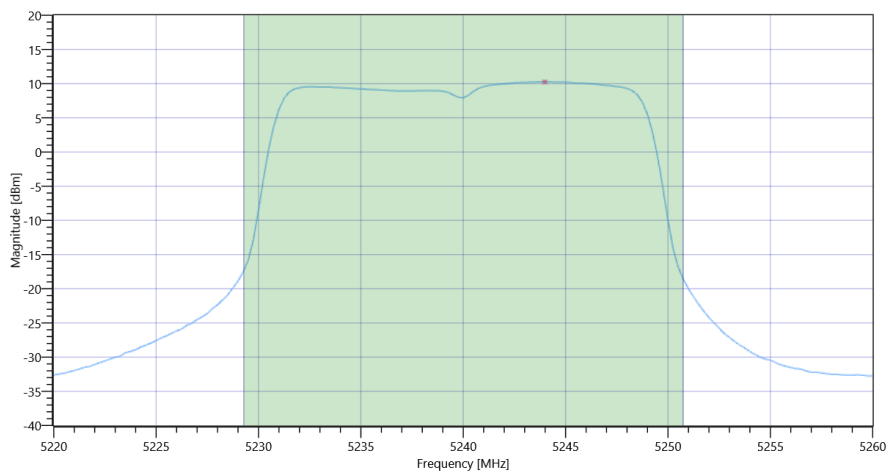
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	30.57 5.07 40
Start [MHz] Stop [MHz]	5220.000 5260.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	53700 1 161 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	--	--	21.71	dBm	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	--	30	21.71	dBm	PASS
Limit: 11 dBm + 10 log 21.44					
Max Output Power DC corrected	--	24.31	21.71	dBm	na



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT20 mode U-NII-1 Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	--	--	10.26	dBm/1MHz	INFO
Duty Cycle Correction	--	--	0	dB	INFO
Power Spectral Density DC corrected	--	17	10.26	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1

Test References

TC Start	13.12.2022 13:51:20
Ambit Temp [°C] Humidity [rel%]	25.7 19
System Version	3.3.3.0
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-VHT20 mode U-NII-1
Add. Information	

EUT Common Settings WLAN5Gx

Number of Antenna Ports	1
User Interaction	No
Device Class UNII_1	AP indoor
Limit W52 Japan	Standard

Test Parameter

Technology to test	WLAN5Gx ac-VHT20 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 5180
Frequency mid to test	False Freq [MHz] 5200
Frequency high to test	True Freq [MHz] 5240
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-10
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 5240 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	18.09	dBm	INFO
Ref. Frequency	---	---	5235.000	MHz	INFO

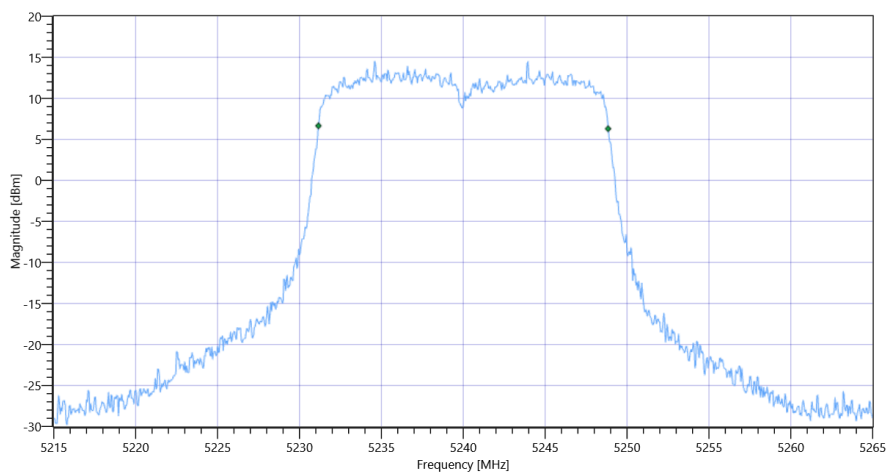
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	26.09 5.07 40
Start [MHz] Stop [MHz]	5215.000 5265.000
RBW [MHz] VBW [MHz]	0.300000 1.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	17.682	MHz	INFO
T1 99%	5150.000000	---	5231.1588	MHz	PASS
T2 99%	---	5250.000000	5248.8412	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT20 mode U-NII-1 99PCT

Plot: Bandwidth within Band