

Measurement Results

No.1-3977/22-03-04_Annex_MR_A7

Test logging

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Document authorized:

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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-VHT160 mode U-NII-1_2A

Test References

TC Start	15.12.2022 16:40:22
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-1_2A
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-VHT160 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5250
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
Switched Path	None

Test Equipment

Test at TX 5250 MHz

RESULT Power

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 Max Output Power DC corrected	--	--	20.15	dBm	INFO
Ant:1 BW 26dB	--	--	162.560	MHz	INFO
Ant:2 Max Output Power DC corrected	--	--	20.1	dBm	INFO
Ant:2 BW 26dB	--	--	163.520	MHz	INFO
Σ Limit absolute	--	24	23.14	dBm	PASS
Σ Limit: 11 dBm + 10 log 162.56	--	33.11	23.14	dBm	PASS

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:1 PSD	--	--	0.16	dBm/1MHz	INFO
Ant:2 PSD	--	--	-0.16	dBm/1MHz	INFO
Σ	--	11	3.01	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

Test References

TC Start	15.12.2022 16:39:13
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-1_2A
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-VHT160 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5250
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5250 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.88	dBm	INFO
Ref. Frequency	---	---	5229.620	MHz	INFO

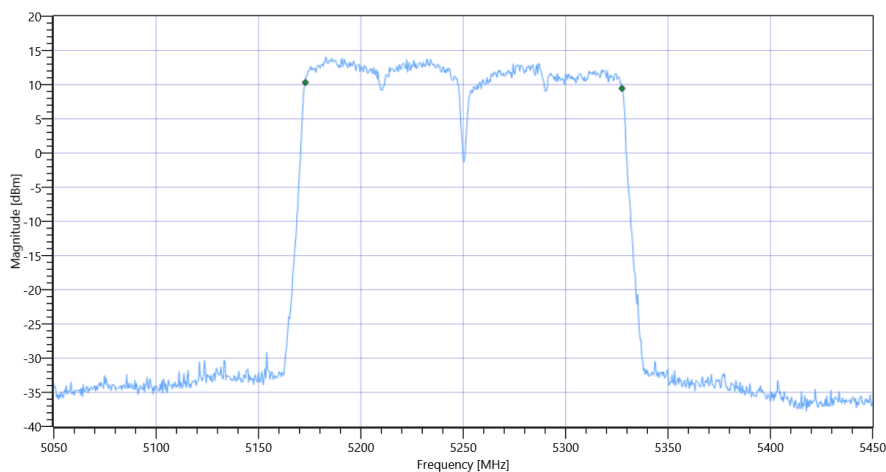
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.88 11.59 25
Start [MHz] Stop [MHz]	5050.000 5450.000
RBW [MHz] VBW [MHz]	2.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

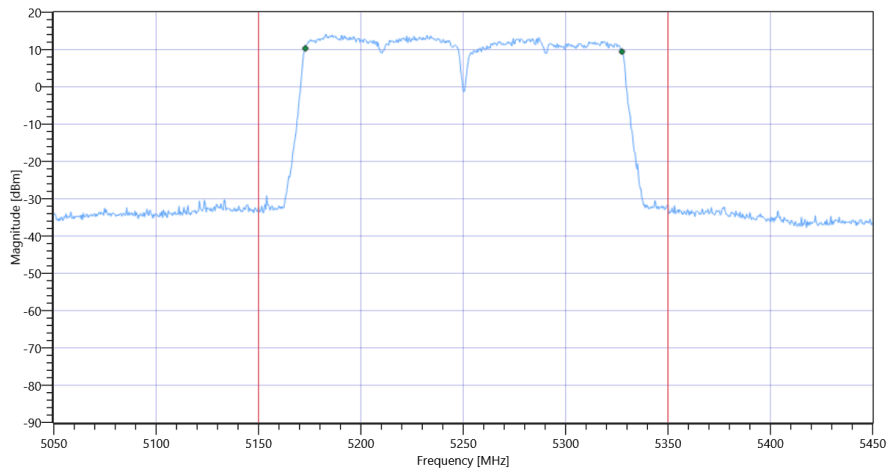
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	154.645	MHz	INFO
T1 99%	5150.000000	---	5172.8771	MHz	PASS
T2 99%	---	5350.000000	5327.5225	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A 99PCT

Plot: Bandwidth within Band

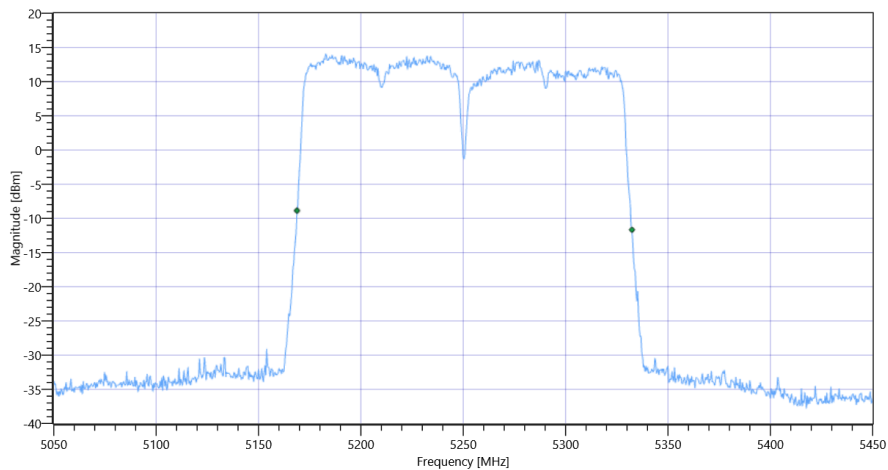


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

RESULT

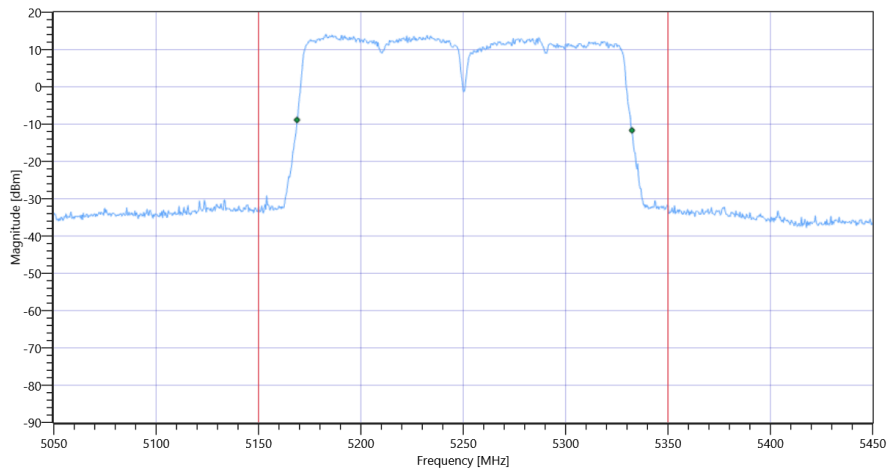
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	163.6	MHz	INFO
T1 26dB	5150.000000	---	5168.8000	MHz	PASS
T2 26dB	---	5350.000000	5332.4000	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

Test References

TC Start	15.12.2022 16:34:34
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-1_2A

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-VHT160 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5250
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5250 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.09	dBm	INFO
Ref. Frequency	---	---	5185.060	MHz	INFO

Evaluation max. Duty Cycle

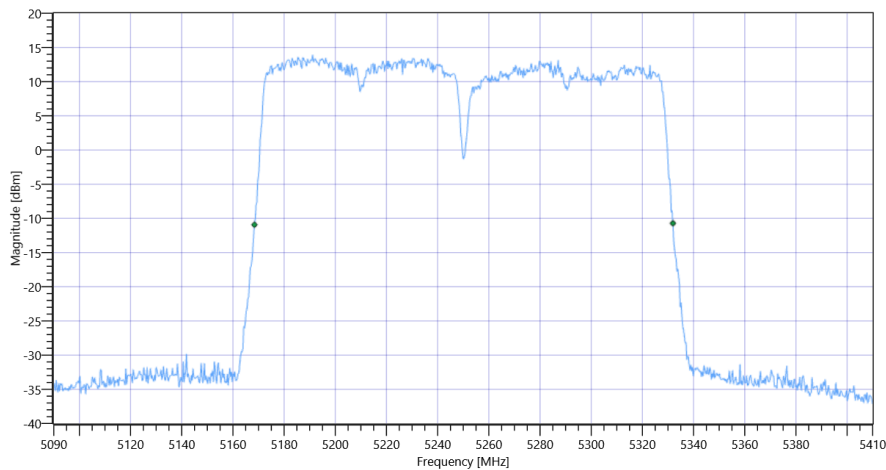
Duty Cycle evaluation

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	---	---	163.52	MHz	INFO
T1 26dB	---	---	5168.4000	MHz	INFO
T2 26dB	---	---	5331.9200	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A_BW

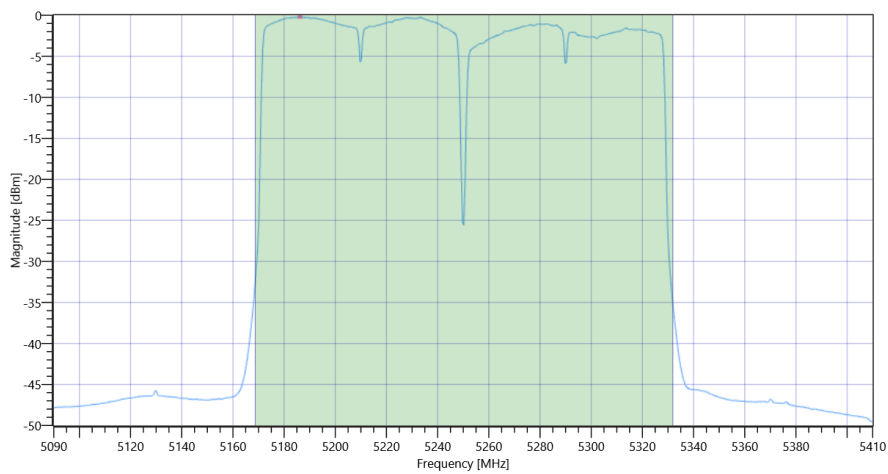
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.09 11.59 25
Start [MHz] Stop [MHz]	5090.000 5410.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	214000 1 640 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	20.1	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	24	20.1	dBm	PASS
Limit: 11 dBm + 10 log 163.52					
Max Output Power DC corrected	---	33.14	20.1	dBm	PASS



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	-0.16	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	11	-0.16	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

Test References

TC Start	15.12.2022 16:33:25
Ambit Temp [°C] Humidity [rel%]	24.3 22
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-VHT160 mode U-NII-1_2A
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-VHT160 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5250
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5250 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.43	dBm	INFO
Ref. Frequency	---	---	5274.180	MHz	INFO

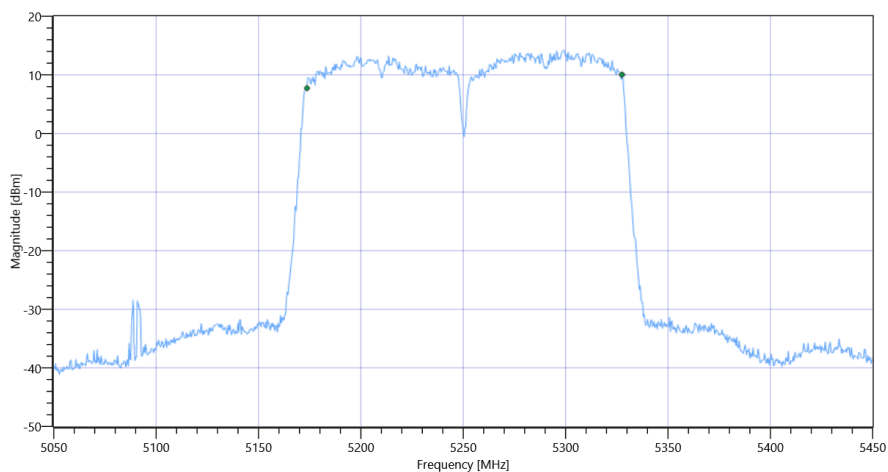
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.43 11.59 20
Start [MHz] Stop [MHz]	5050.000 5450.000
RBW [MHz] VBW [MHz]	2.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

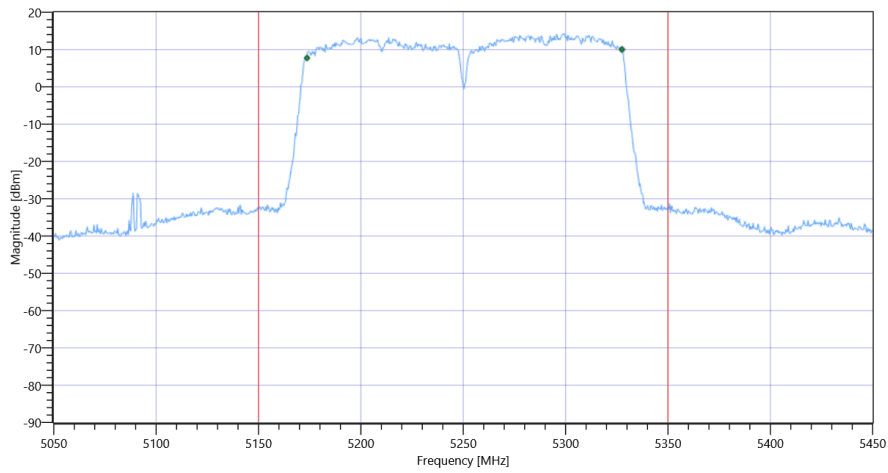
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	153.846	MHz	INFO
T1 99%	5150.000000	---	5173.6763	MHz	PASS
T2 99%	---	5350.000000	5327.5225	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A 99PCT

Plot: Bandwidth within Band

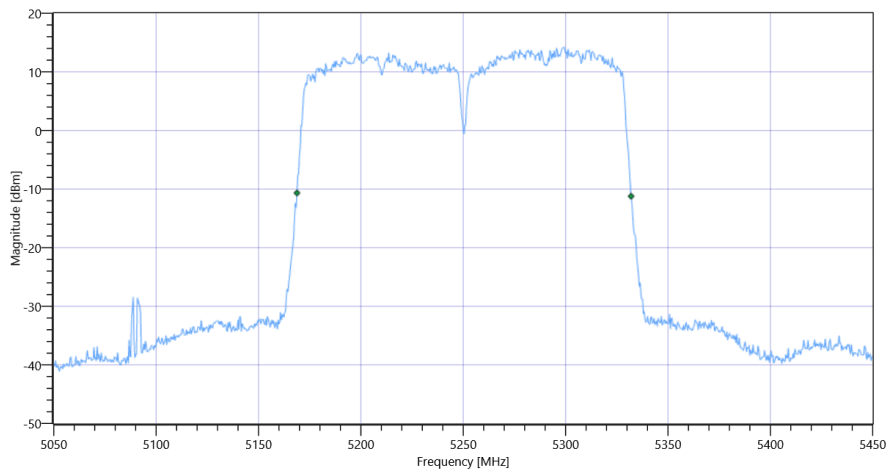


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

RESULT

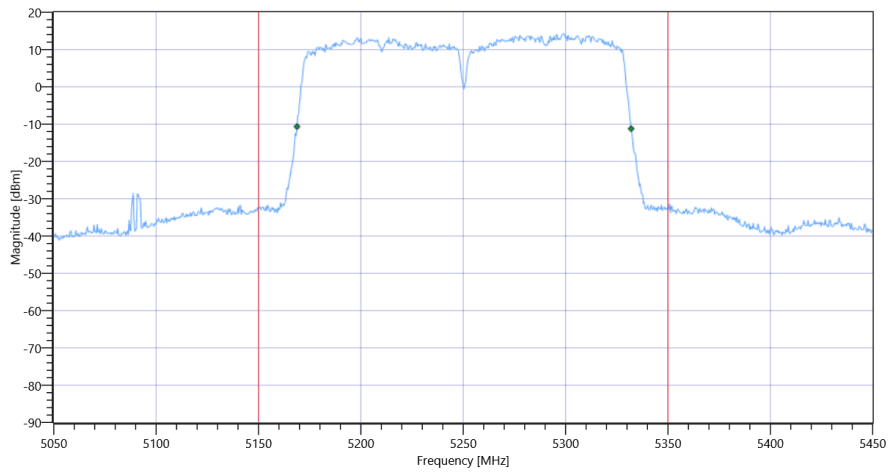
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	163.2	MHz	INFO
T1 26dB	5150.000000	---	5168.8000	MHz	PASS
T2 26dB	---	5350.000000	5332.0000	MHz	PASS

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A

Test References

TC Start	15.12.2022 16:28:47
Ambit Temp [°C] Humidity [rel%]	24.3 22
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-VHT160 mode U-NII-1_2A

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-VHT160 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5250
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5250 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.50	dBm	INFO
Ref. Frequency	---	---	5300.350	MHz	INFO

Evaluation max. Duty Cycle

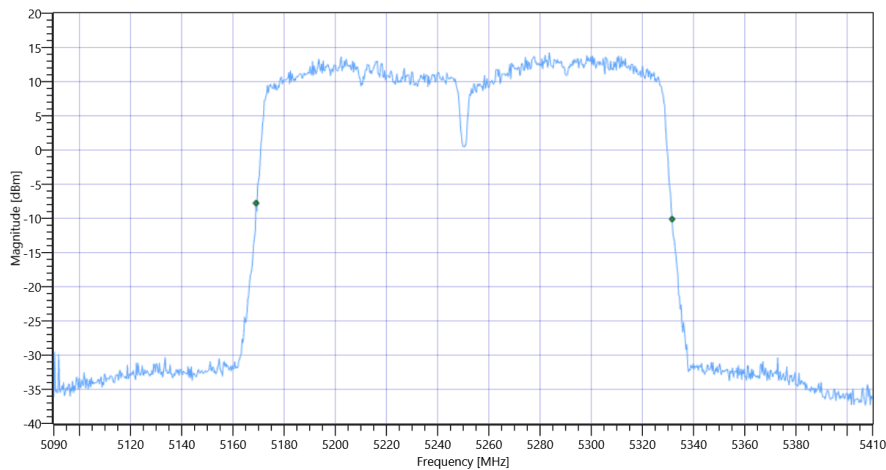
Duty Cycle evaluation

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	---	---	162.56	MHz	INFO
T1 26dB	---	---	5169.0400	MHz	INFO
T2 26dB	---	---	5331.6000	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A_BW

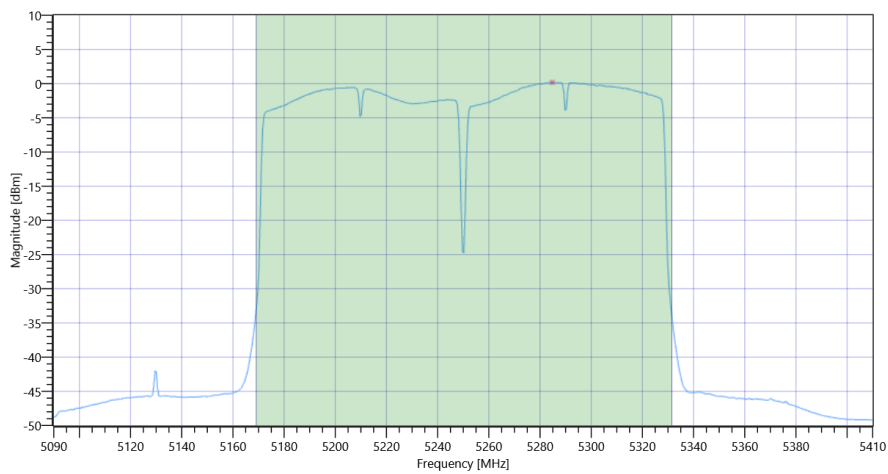
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	20.50 11.59 25
Start [MHz] Stop [MHz]	5090.000 5410.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	214000 1 640 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	20.15	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	24	20.15	dBm	PASS
Limit: 11 dBm + 10 log 162.56					
Max Output Power DC corrected	---	33.11	20.15	dBm	PASS



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-1_2A Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	0.16	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	11	0.16	dBm/1MHz	PASS

FCC 15.247 # MIMO Power PSD Calculator ~ WLAN5Gx ac-VHT160 mode U-NII-2C

Test References

TC Start	15.12.2022 17:07:23
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-2C
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-VHT160 mode
Antenna Port used	several
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5570
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
Switched Path	None

Test Equipment

Test at TX 5570 MHz

RESULT Power

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:2 Max Output Power DC corrected	--	--	20.1	dBm	INFO
Ant:2 BW 26dB	--	--	162.880	MHz	INFO
Ant:1 Max Output Power DC corrected	--	--	20.59	dBm	INFO
Ant:1 BW 26dB	--	--	163.520	MHz	INFO
Σ Limit absolute	--	24	23.36	dBm	PASS
Σ Limit: 11 dBm + 10 log 162.88	--	33.12	23.36	dBm	PASS

RESULT PSD

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ant:2 PSD	--	--	-0.06	dBm/1MHz	INFO
Ant:1 PSD	--	--	0.92	dBm/1MHz	INFO
Σ	--	11	3.47	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C

Test References

TC Start	15.12.2022 17:06:16
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-2C
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-VHT160 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5570
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5570 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	8.85	dBm	INFO
Ref. Frequency	---	---	5618.750	MHz	INFO

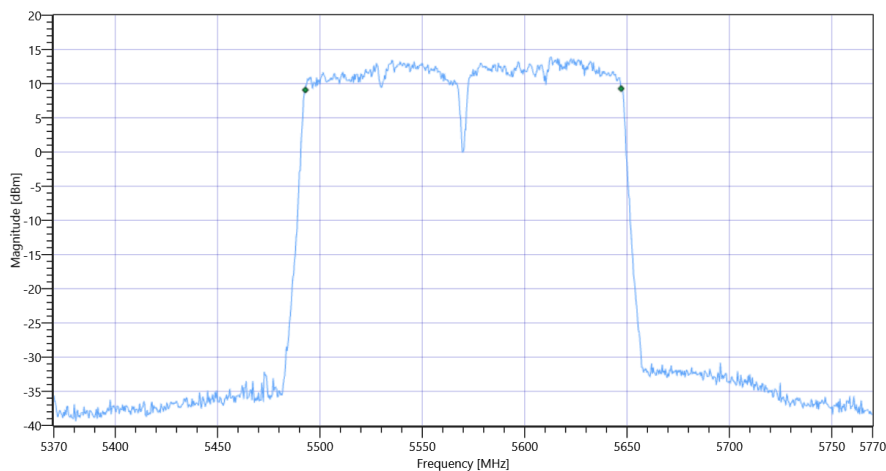
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	16.85 12.07 20
Start [MHz] Stop [MHz]	5370.000 5770.000
RBW [MHz] VBW [MHz]	2.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

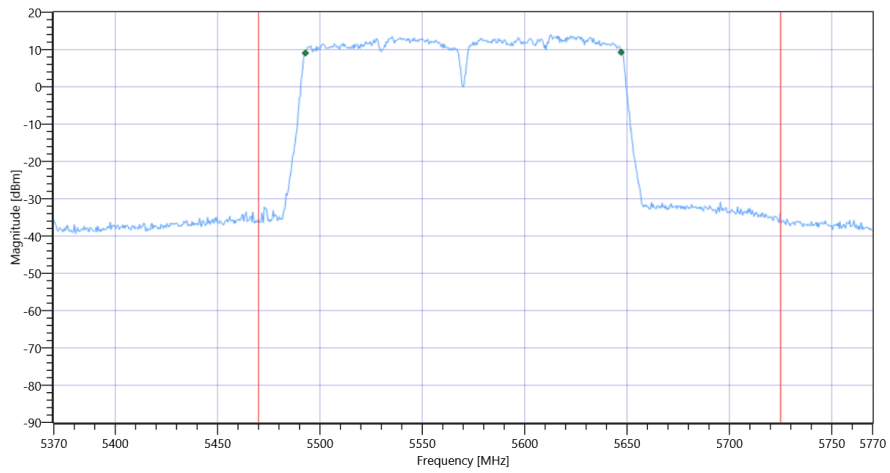
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	154.246	MHz	INFO
T1 99%	5470.000000	---	5492.8771	MHz	PASS since U-NII-3 is supported
T2 99%	---	5725.000000	5647.1229	MHz	

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C 99PCT

Plot: Bandwidth within Band

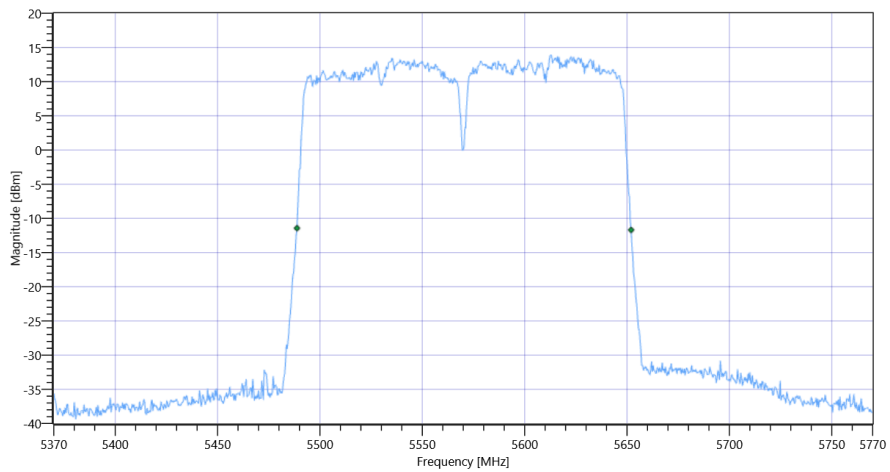


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C

RESULT

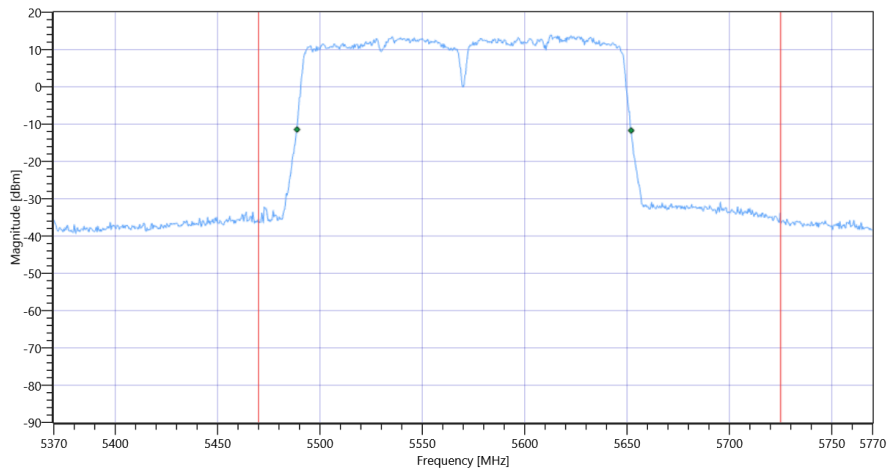
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	163.2	MHz	INFO
T1 26dB	5470.000000	---	5488.8000	MHz	PASS since U-NII-3 is supported
T2 26dB	---	5725.000000	5652.0000	MHz	

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-2C

Test References

TC Start	15.12.2022 17:01:44
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-2C
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-VHT160 mode
Antenna Port used	2
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5570
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5570 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.85	dBm	INFO
Ref. Frequency	---	---	5622.350	MHz	INFO

Evaluation max. Duty Cycle

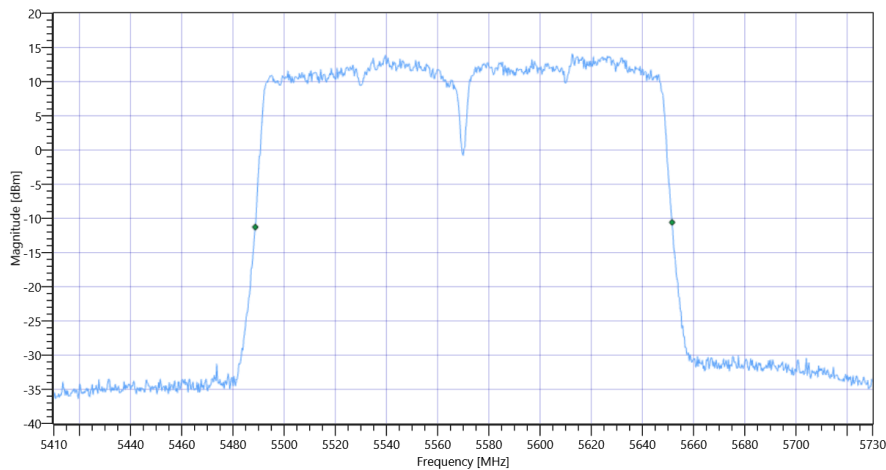
Duty Cycle evaluation

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	---	---	162.88	MHz	INFO
T1 26dB	---	---	5488.7200	MHz	INFO
T2 26dB	---	---	5651.6000	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-2C_BW

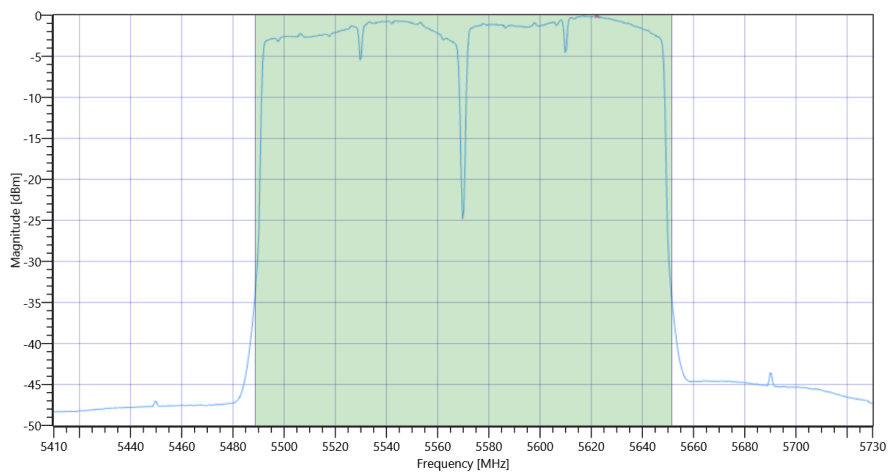
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.85 12.07 25
Start [MHz] Stop [MHz]	5410.000 5730.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	214000 1 640 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	20.1	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	24	20.1	dBm	PASS
Limit: 11 dBm + 10 log 162.88					
Max Output Power DC corrected	---	33.12	20.1	dBm	PASS



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-2C Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	-0.06	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	11	-0.06	dBm/1MHz	PASS

FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C

Test References

TC Start	15.12.2022 17:00:39
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-2C
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-VHT160 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5570
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5570 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.21	dBm	INFO
Ref. Frequency	---	---	5586.180	MHz	INFO

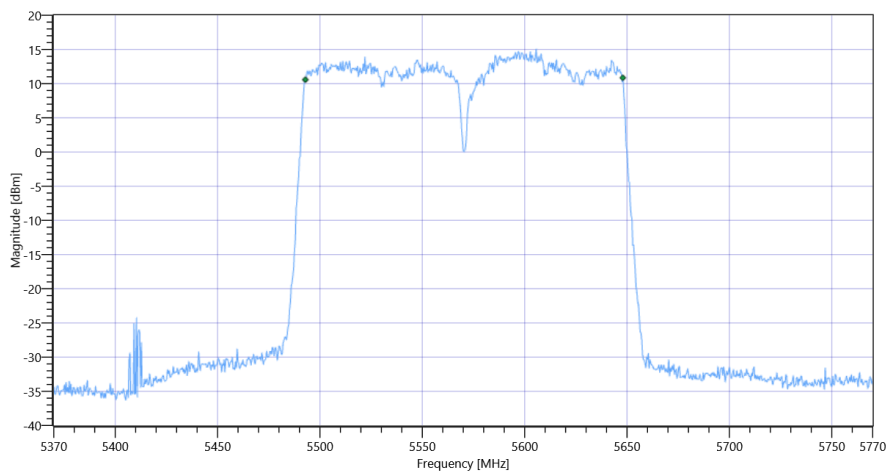
READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	17.21 12.07 25
Start [MHz] Stop [MHz]	5370.000 5770.000
RBW [MHz] VBW [MHz]	2.000000 10.000000
Detector TraceMode	POS MAXH
Sweep: Time [ms] Count Points per Section Type	1 2500 1001 SWE

RESULT

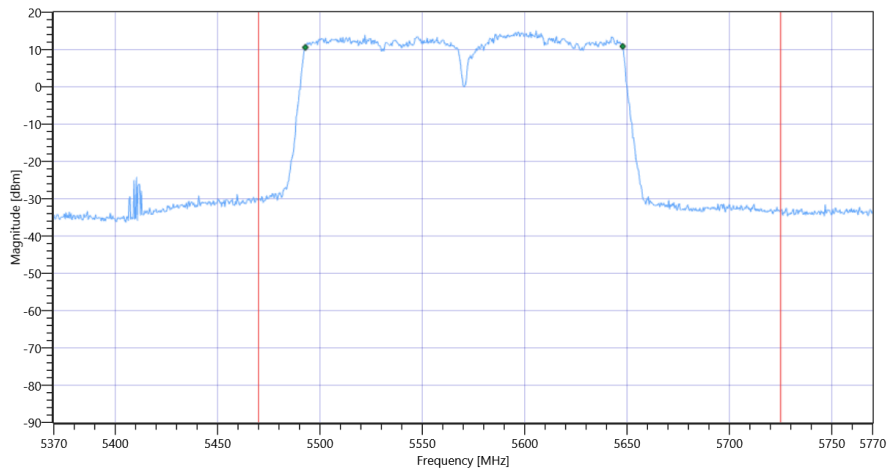
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 99%	---	---	155.045	MHz	INFO
T1 99%	5470.000000	---	5492.8771	MHz	PASS since U-NII-3 is supported
T2 99%	---	5725.000000	5647.9221	MHz	

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C 99PCT

Plot: Bandwidth within Band

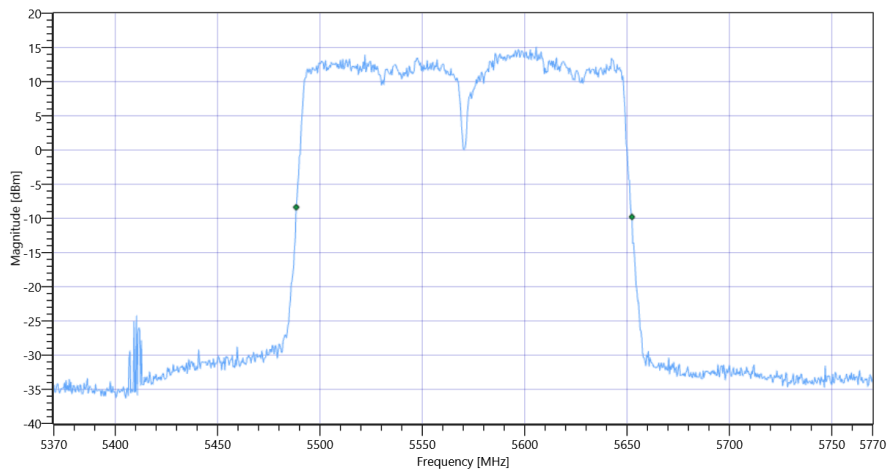


FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C

RESULT

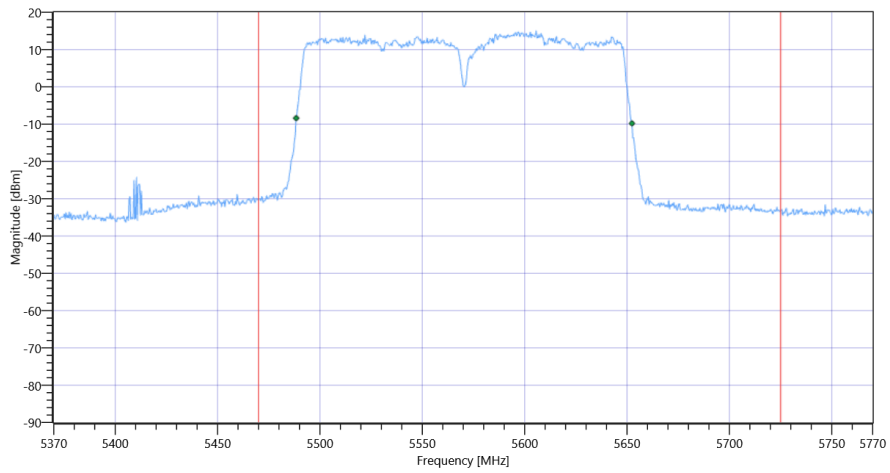
Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Bandwidth 26dB	---	---	164	MHz	INFO
T1 26dB	5470.000000	---	5488.4000	MHz	PASS since U-NII-3 is supported
T2 26dB	---	5725.000000	5652.4000	MHz	

Plot: Bandwidth only



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C 26dB

Plot: Bandwidth within Band



FCC 15.407, ISED RSS247 # Bandwidths 99PCT and 26dB ~ WLAN5Gx ac-VHT160 mode U-NII-2C

FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-2C

Test References

TC Start	15.12.2022 16:56:07
Ambit Temp [°C] Humidity [rel%]	24.2 22
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-VHT160 mode U-NII-2C
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-VHT160 mode
Antenna Port used	1
Temperature	nom
Voltage	nom
Frequency low to test	False Freq [MHz] 0
Frequency mid to test	True Freq [MHz] 5570
Frequency high to test	False Freq [MHz] 0
Auto Control enabled Power Supply Climatic Box	No No
Additional Path Loss [dB]	-3.5
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 5570 MHz

RESULT: Reference Power cond.

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Ref. Power 1MHz/1MHz cond.	---	---	9.29	dBm	INFO
Ref. Frequency	---	---	5605.360	MHz	INFO

Evaluation max. Duty Cycle

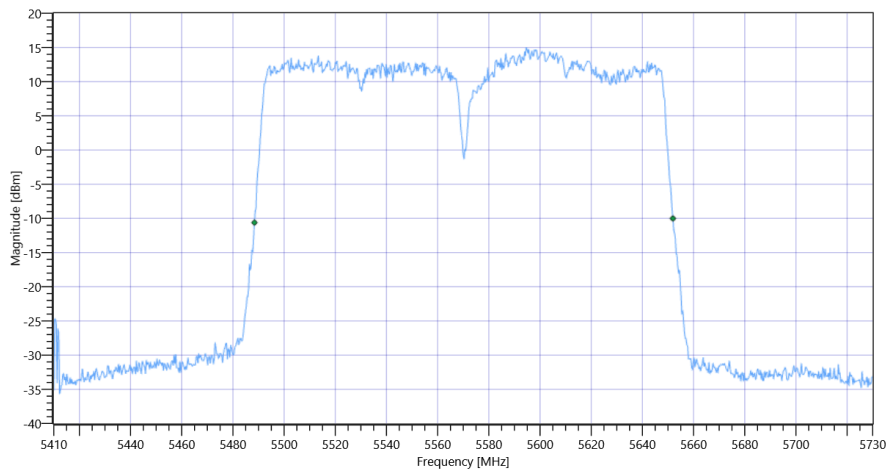
Duty Cycle evaluation

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	---	---	163.52	MHz	INFO
T1 26dB	---	---	5488.4000	MHz	INFO
T2 26dB	---	---	5651.9200	MHz	INFO



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-2C_BW

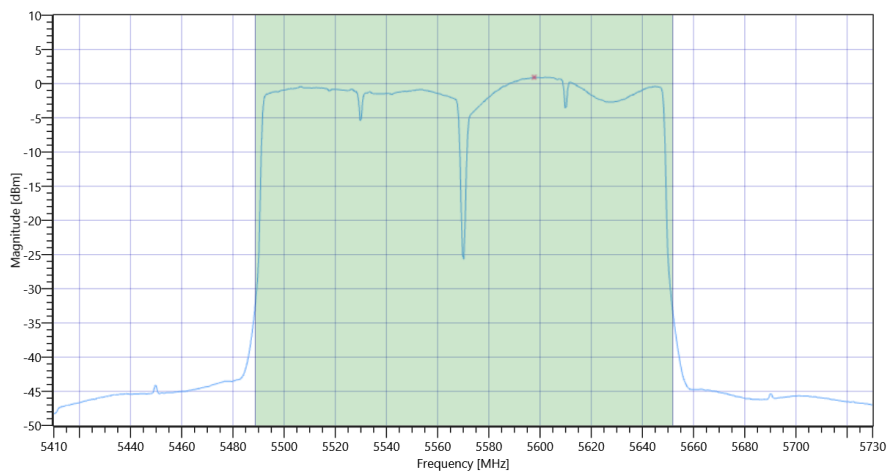
Maximum Output Power

READ SA SETTINGS:

RefLevel [dBm] RefLevelOffset [dB] InpAtt [dB]	21.29 12.07 25
Start [MHz] Stop [MHz]	5410.000 5730.000
RBW [MHz] VBW [MHz]	1.000000 3.000000
Detector TraceMode	RMS MAXH
Sweep: Time [ms] Count Points per Section Type	214000 1 640 SWE

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Max Output Power	---	---	20.59	dBm	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Limit absolute					
Max Output Power DC corrected	---	24	20.59	dBm	PASS
Limit: 11 dBm + 10 log 163.52					
Max Output Power DC corrected	---	33.14	20.59	dBm	PASS



FCC 15.247 # Max output power and psd ~ WLAN5Gx ac-VHT160 mode U-NII-2C Max OP and PSD

Power Spectral Density

RESULT

Test Description	Lower Limit	Upper Limit	Measured	Unit	Verdict
Power Spectral Density	---	---	0.92	dBm/1MHz	INFO
Duty Cycle Correction	---	---	0	dB	INFO
Power Spectral Density DC corrected	---	11	0.92	dBm/1MHz	PASS

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