

FCC 15.407 2015

DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

20.000 dBm (20 dBm) 0 dB

Gain Tables

20.000 dBm (20 dBm) Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\Hardware Setup

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. /, FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Emission Bandwidth 26 dB	5190.000	20.0	40.000000	PASS
RF output power	5190.000	20.0	40.000000	PASS
Power Spectral Density	5190.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5190.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5190.000	20.0	40.000000	PASS
Band Edge low	5190.000	20.0	40.000000	PASS
Emission Bandwidth 26 dB	5230.000	20.0	40.000000	PASS
RF output power	5230.000	20.0	40.000000	PASS
Power Spectral Density	5230.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5230.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5230.000	20.0	40.000000	PASS
Band Edge high	5230.000	20.0	40.000000	PASS

Emission Bandwidth 26 dB (5190 MHz; 20.000 dBm; 40 MHz)

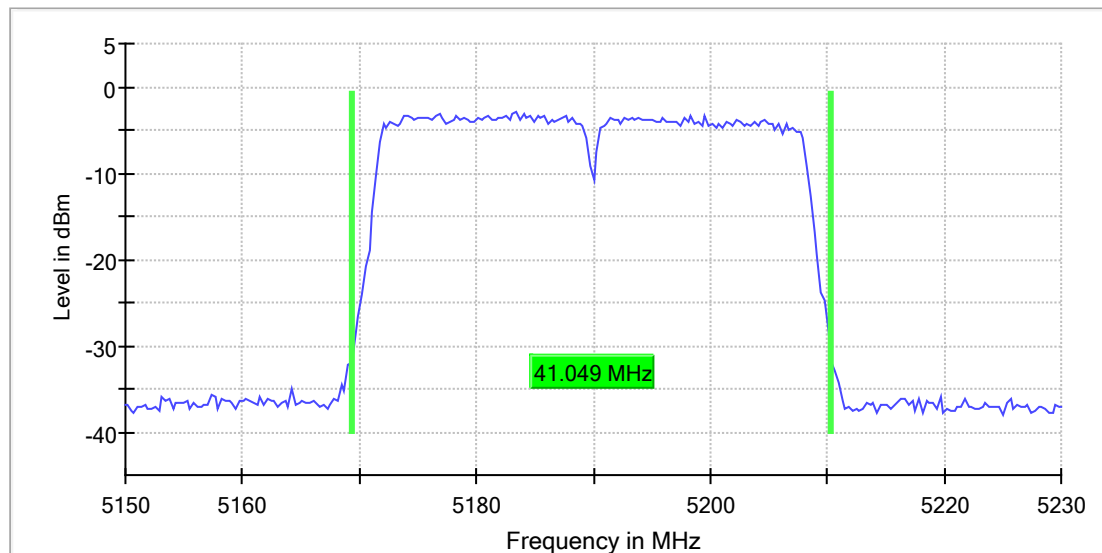
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

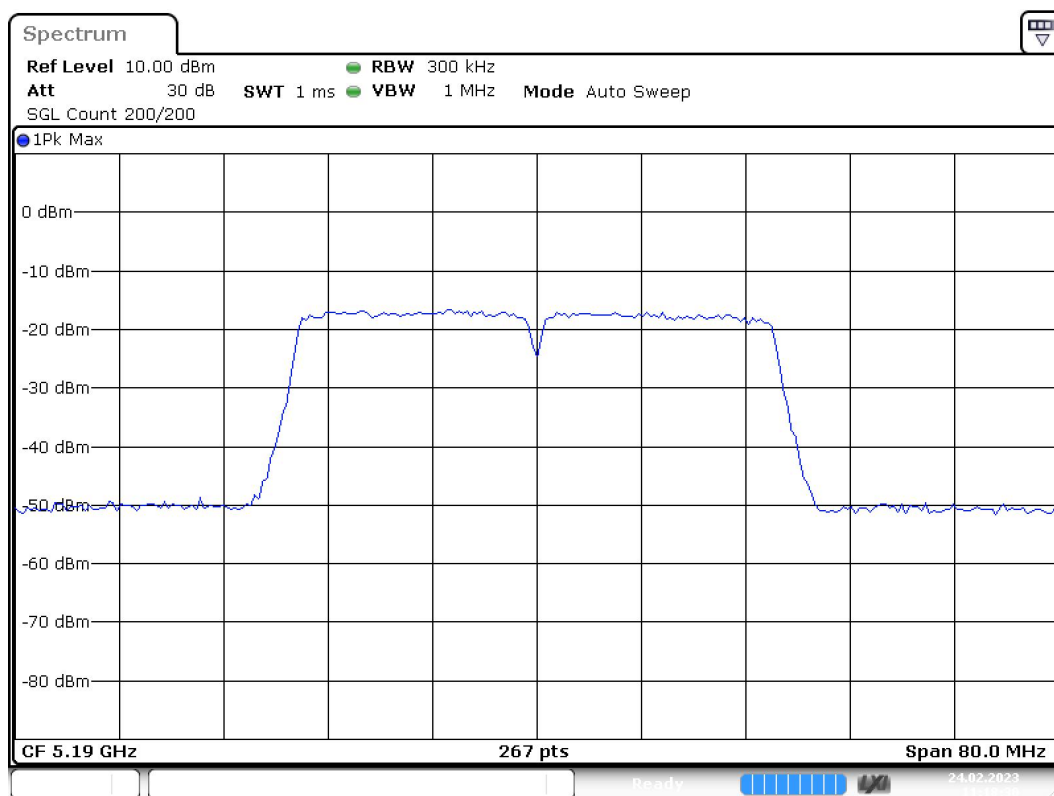
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5190.000000	41.048689	---	---	5169.325843	5210.374532

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5190.000000	-2.9	PASS



Bandwidth



Date: 24.FEB.2023 11:18:30

Measurement

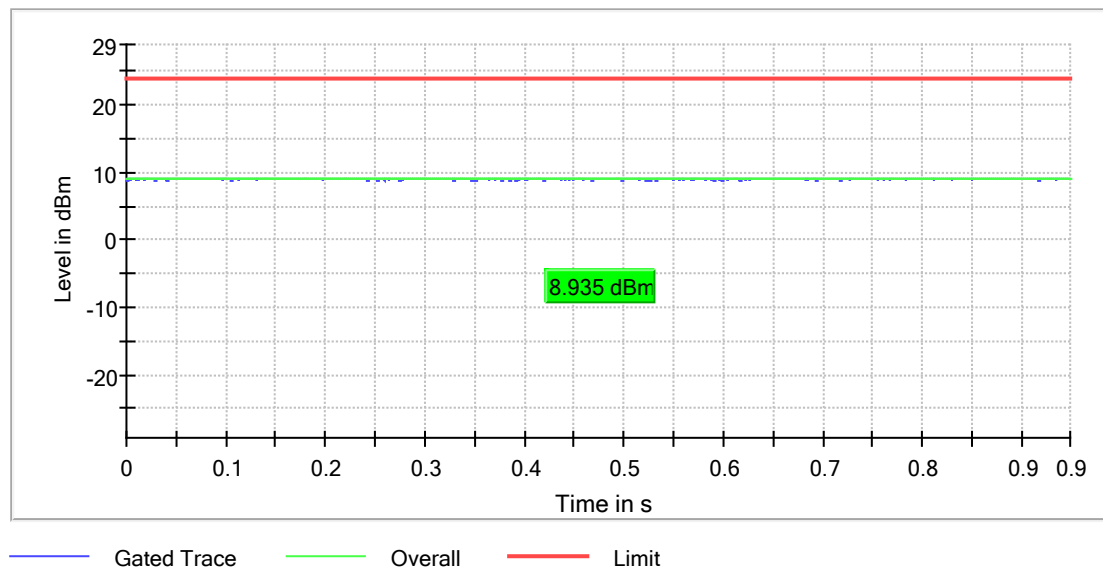
Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.23000 GHz	5.23000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	69 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.30 dB

RF output power (5190 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5190.000000	8.9	24.0	8.9	94.764	PASS



Power Spectral Density (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

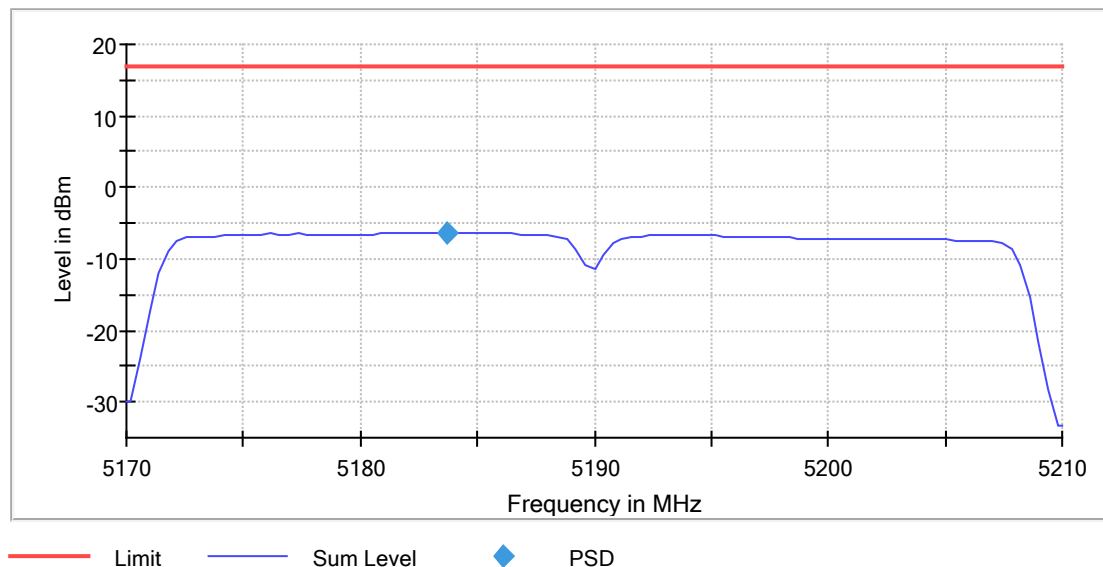
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5190.000000	5183.663366	-6.358	17.0	PASS

Ports

Port	Duty Cycle (%)
1	94.544



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.17000 GHz	5.17000 GHz
Stop Frequency	5.21000 GHz	5.21000 GHz
Span	40.000 MHz	40.000 MHz
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 80
SweepTime	2.020 s	2.020 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.01 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

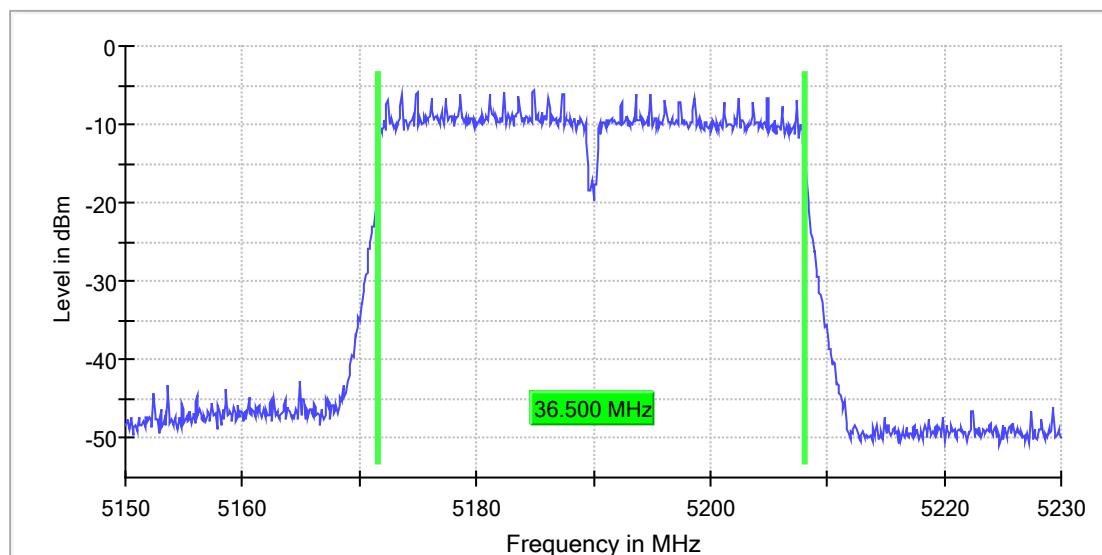
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5190.000000	36.500000	---	---	5171.650000	5208.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5190.000000	-5.6	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.23000 GHz	5.23000 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
Sweptime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	25 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.26 dB	0.30 dB

Occupied Channel Bandwidth 99% (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

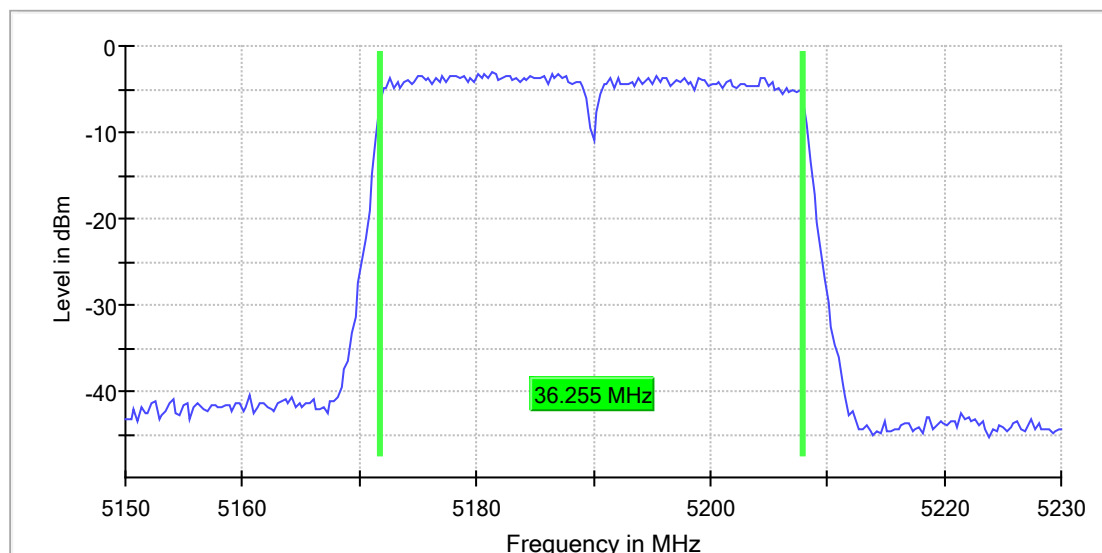
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5190.000000	36.254682	---	---	5171.722846	5207.977528

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5190.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.23000 GHz	5.23000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	33 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.26 dB	0.30 dB

Band Edge low (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

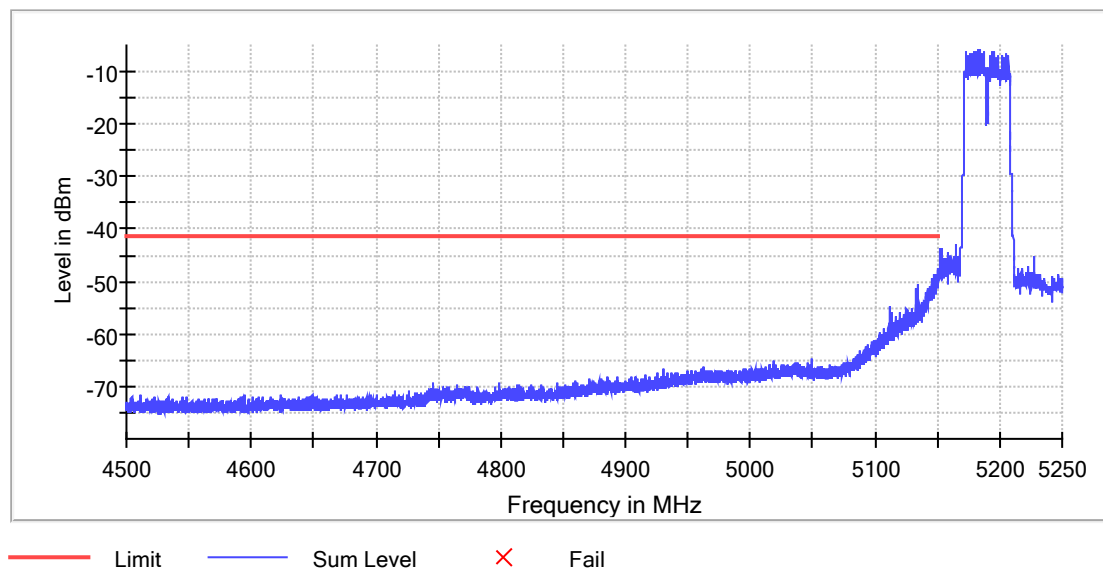
DUT Frequency (MHz)	Result
5190.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5184.875000	-5.7

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
5146.775000	-48.6	7.4	-41.2	PASS
5149.025000	-48.6	7.4	-41.2	PASS
5148.975000	-48.8	7.6	-41.2	PASS
5146.825000	-48.9	7.7	-41.2	PASS
5149.875000	-48.9	7.7	-41.2	PASS
5149.575000	-48.9	7.7	-41.2	PASS
5149.925000	-49.0	7.8	-41.2	PASS
5149.525000	-49.4	8.2	-41.2	PASS
5145.825000	-49.5	8.3	-41.2	PASS
5145.875000	-49.5	8.3	-41.2	PASS
5149.325000	-49.6	8.3	-41.2	PASS
5149.075000	-49.6	8.4	-41.2	PASS
5146.725000	-49.7	8.5	-41.2	PASS
5149.275000	-49.7	8.5	-41.2	PASS
5148.625000	-49.8	8.6	-41.2	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.25000 GHz	5.25000 GHz
Span	100.000 MHz	100.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2000	~ 2000
SweepTime	227.813 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	57 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.47 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	4.50000 GHz	4.50000 GHz
Stop Frequency	5.15000 GHz	5.15000 GHz
Span	650.000 MHz	650.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	13000	~ 13000
SweepTime	13.000 ms	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	53 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.18 dB	0.50 dB

Emission Bandwidth 26 dB (5230 MHz; 20.000 dBm; 40 MHz)

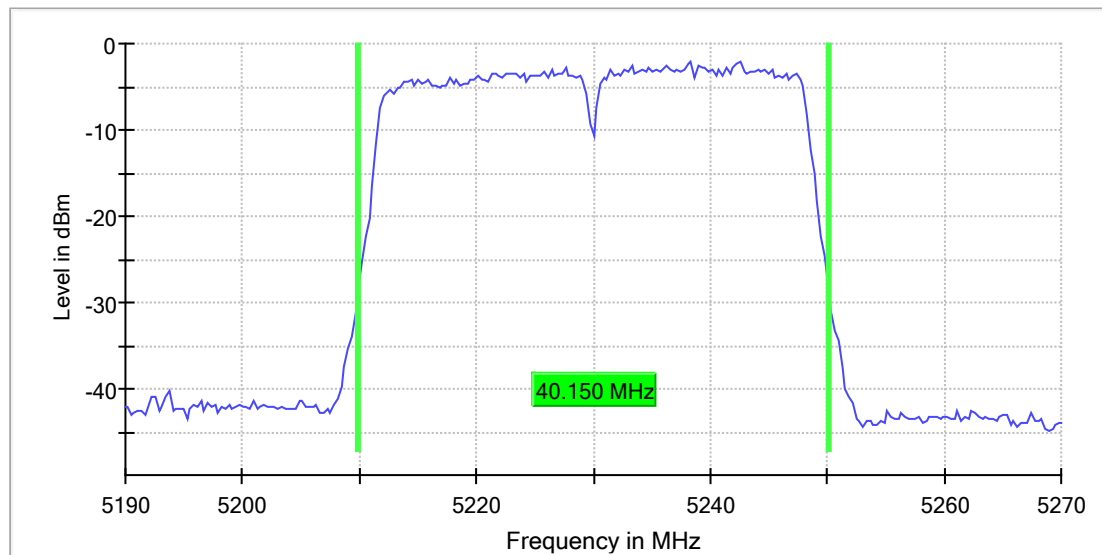
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

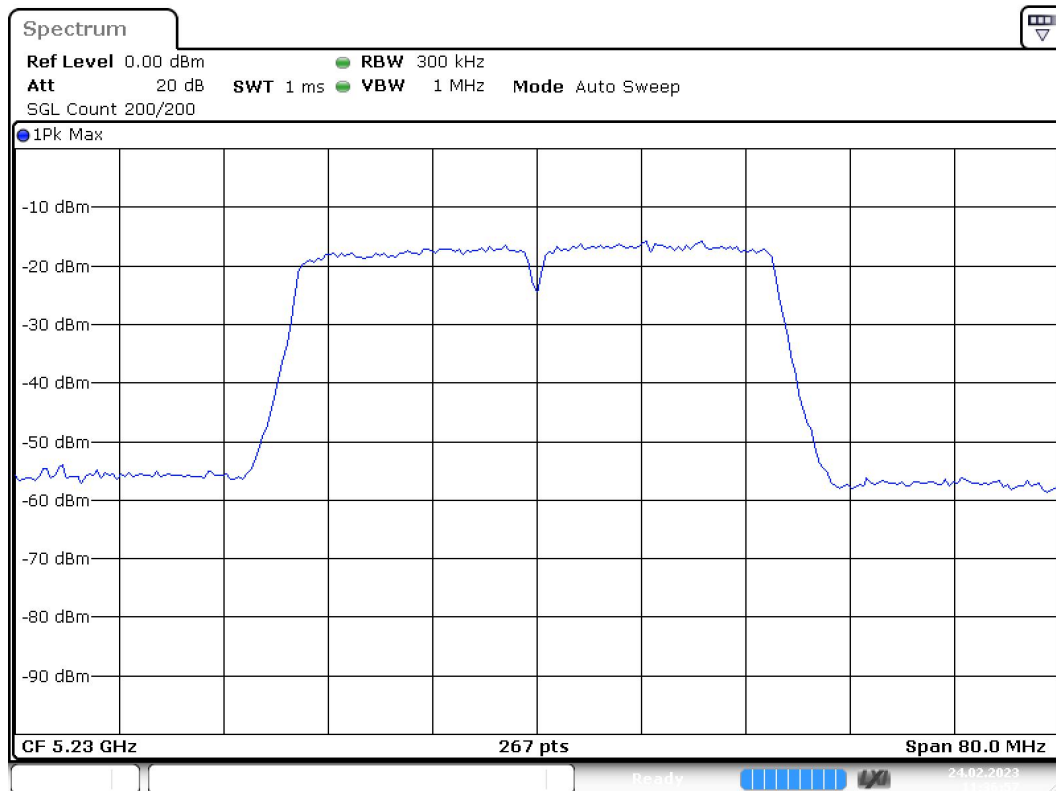
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5230.000000	40.149812	---	---	5209.925094	5250.074906

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5230.000000	-2.1	PASS



Bandwidth



Date: 24.FEB.2023 11:36:58

Measurement

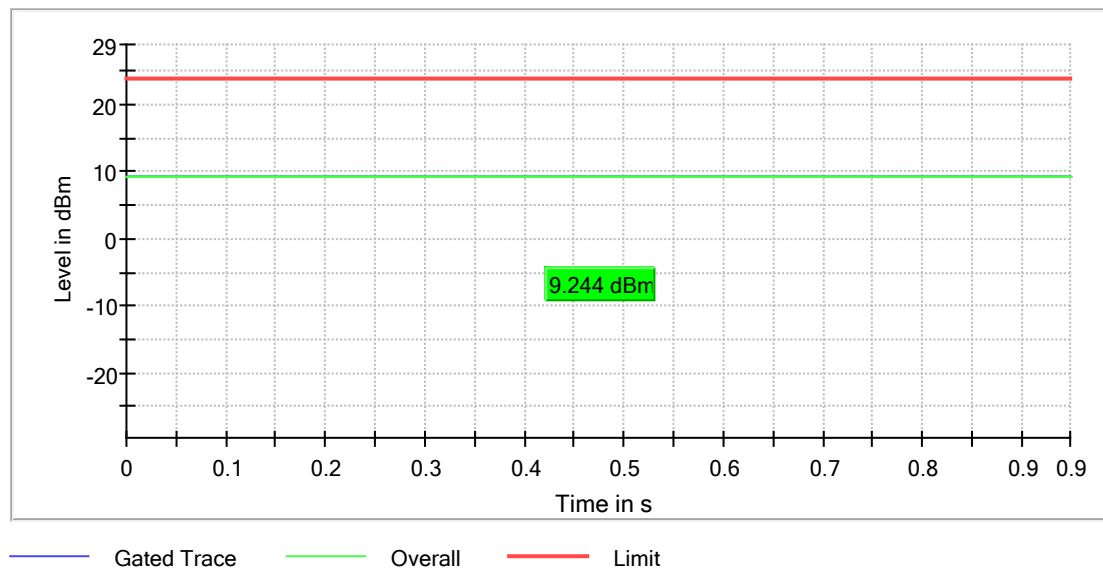
Setting	Instrument Value	Target Value
Start Frequency	5.19000 GHz	5.19000 GHz
Stop Frequency	5.27000 GHz	5.27000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	87 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.30 dB

RF output power (5230 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5230.000000	9.2	24.0	9.2	94.755	PASS



Power Spectral Density (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

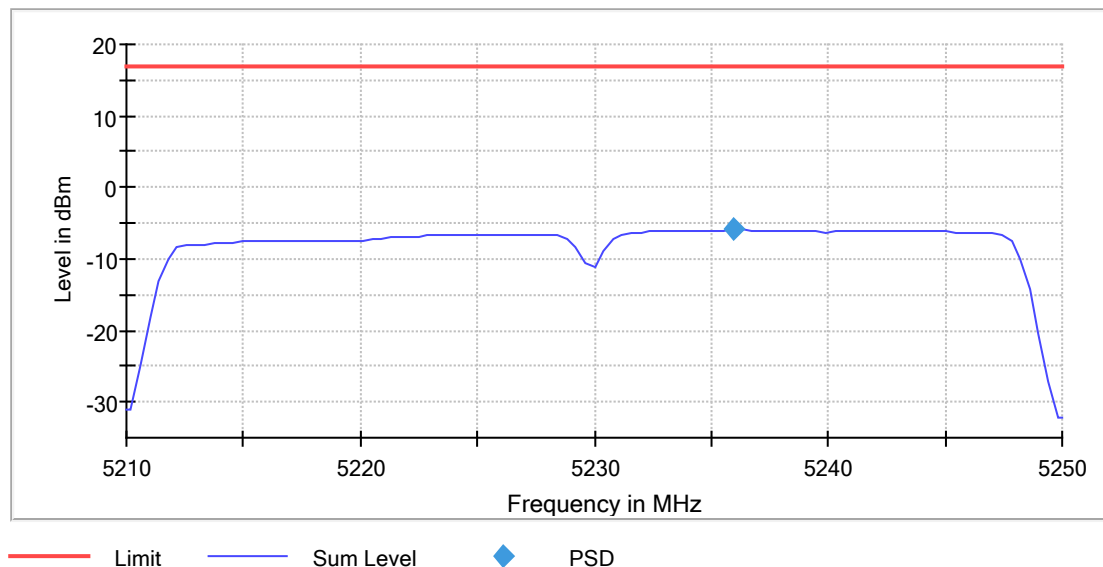
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5230.000000	5235.940594	-5.929	17.0	PASS

Ports

Port	Duty Cycle (%)
1	94.546



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.21000 GHz	5.21000 GHz
Stop Frequency	5.25000 GHz	5.25000 GHz
Span	40.000 MHz	40.000 MHz
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 80
SweepTime	2.020 s	2.020 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

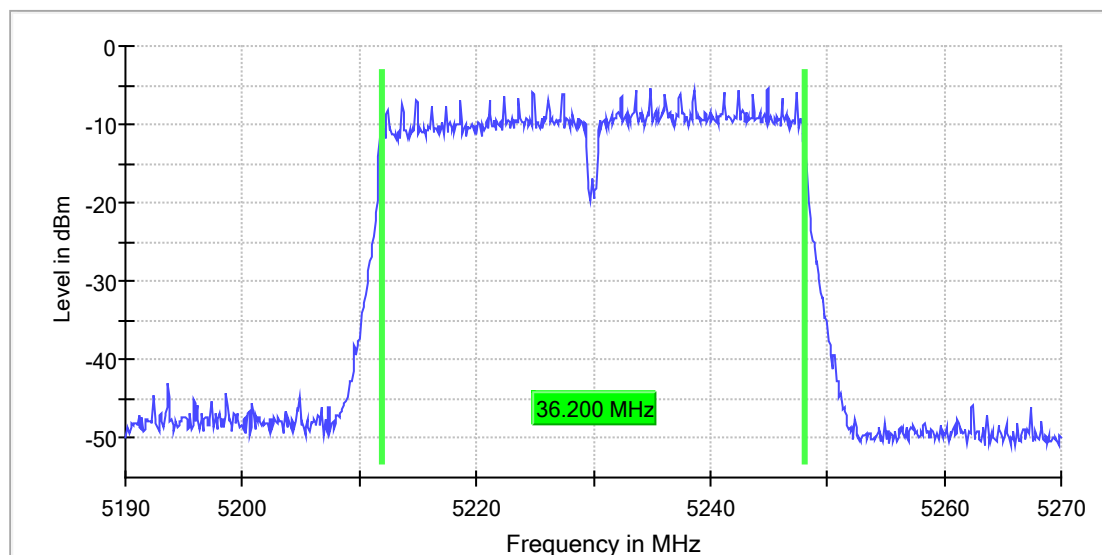
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5230.000000	36.200000	---	---	5211.950000	5248.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5230.000000	-5.3	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.19000 GHz	5.19000 GHz
Stop Frequency	5.27000 GHz	5.27000 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
Sweeptime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	11 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.29 dB	0.30 dB

Occupied Channel Bandwidth 99% (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

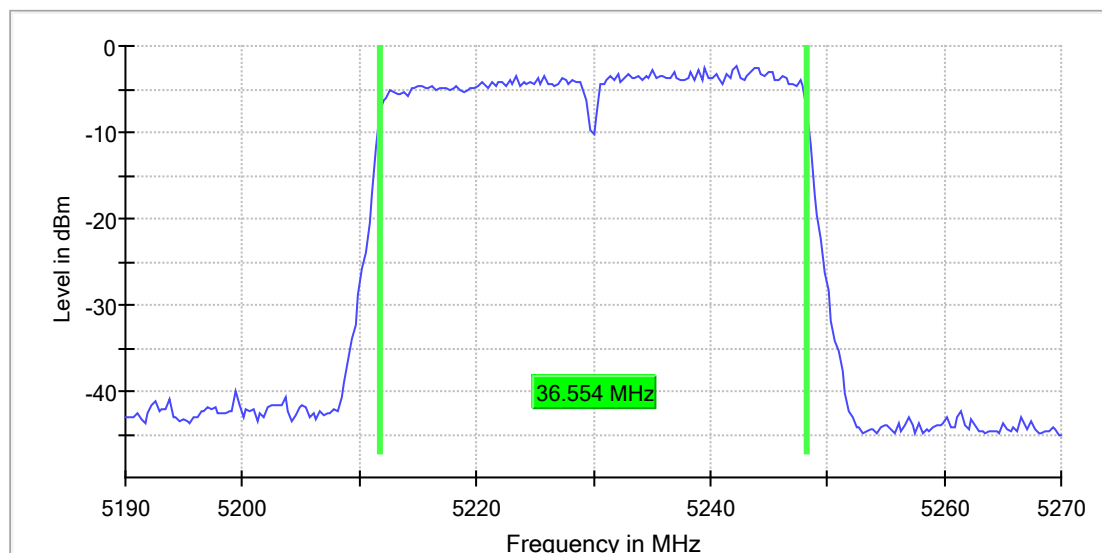
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5230.000000	36.554308	---	---	5211.722846	5248.277154

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5230.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.19000 GHz	5.19000 GHz
Stop Frequency	5.27000 GHz	5.27000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	25 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.28 dB	0.30 dB

Band Edge high (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

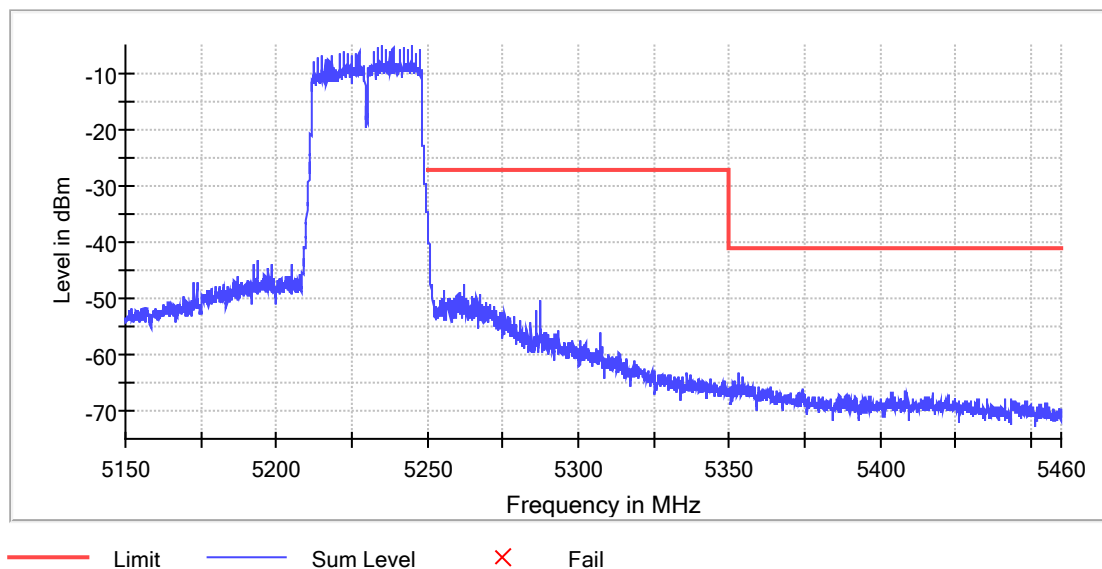
DUT Frequency (MHz)	Result
5230.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5234.875000	-5.0

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
5250.125000	-37.6	10.6	-27.0	PASS
5250.175000	-37.7	10.7	-27.0	PASS
5250.225000	-38.4	11.4	-27.0	PASS
5250.025000	-38.4	11.4	-27.0	PASS
5250.075000	-38.5	11.5	-27.0	PASS
5250.275000	-39.2	12.2	-27.0	PASS
5250.325000	-39.4	12.4	-27.0	PASS
5250.475000	-39.6	12.6	-27.0	PASS
5250.375000	-39.8	12.8	-27.0	PASS
5250.525000	-40.2	13.2	-27.0	PASS
5250.575000	-40.3	13.3	-27.0	PASS
5250.425000	-40.3	13.3	-27.0	PASS
5250.625000	-40.8	13.8	-27.0	PASS
5250.675000	-42.2	15.2	-27.0	PASS
5250.875000	-43.9	16.9	-27.0	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.25000 GHz	5.25000 GHz
Span	100.000 MHz	100.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2000	~ 2000
SweepTime	227.813 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	69 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.35 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	5.25000 GHz	5.25000 GHz
Stop Frequency	5.46000 GHz	5.46000 GHz
Span	210.000 MHz	210.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	4200	~ 4200
SweepTime	474.609 μ s	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	14 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.29 dB	0.50 dB

FCC 15.407 2015

DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

Powerstep name (value)	Beamforming gain table names
20.000 dBm (20 dBm)	BFG_'20.000 dBm'_0.000dB;

Gain Tables

Powerstep name (value)	Gain table names
20.000 dBm (20 dBm)	Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\Hardware Setup

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. /, FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Tx Spurious Emission	5190.000	20.0	40.000000	PASS
Tx Spurious Emission	5230.000	20.0	40.000000	PASS

Tx Spurious Emission (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5190.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

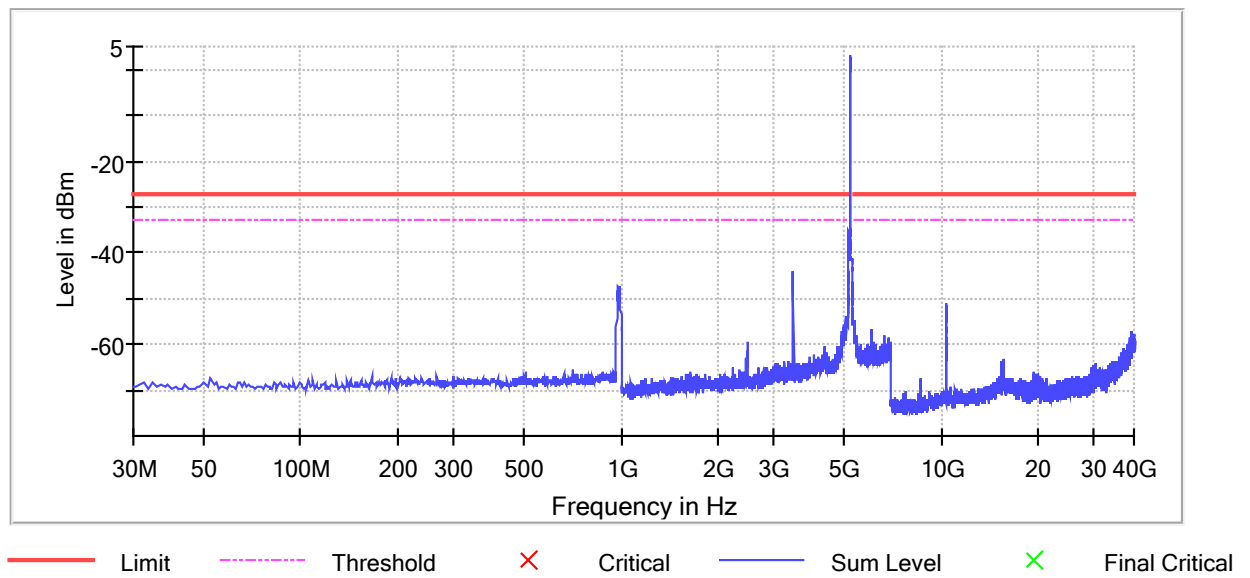
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5147.500000	-38.8	11.8	-27.0
5146.500000	-38.1	11.1	-27.0
5149.500000	-38.5	11.5	-27.0
5148.500000	-38.5	11.5	-27.0
5145.500000	-38.3	11.3	-27.0
5144.500000	-39.3	12.3	-27.0
5142.500000	-39.9	12.9	-27.0
5143.500000	-41.0	14.0	-27.0
5141.500000	-41.4	14.4	-27.0
5140.500000	-42.1	15.1	-27.0
5139.500000	-42.6	15.6	-27.0
5138.500000	-42.9	15.9	-27.0
5125.500000	-43.8	16.8	-27.0
5130.500000	-43.8	16.8	-27.0
5134.500000	-43.9	16.9	-27.0

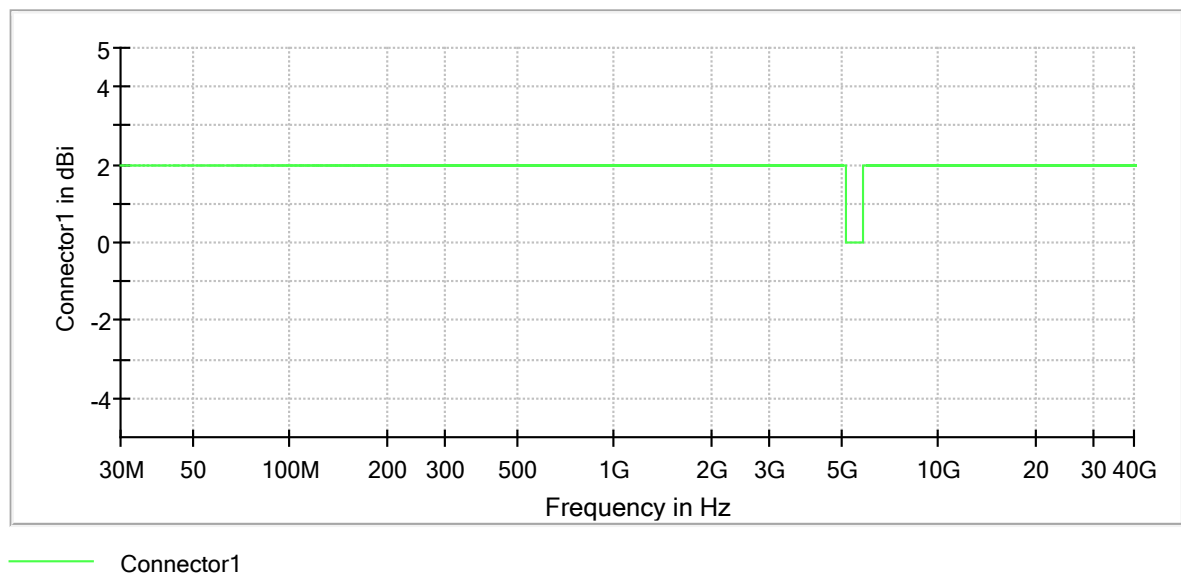
Measurement Settings

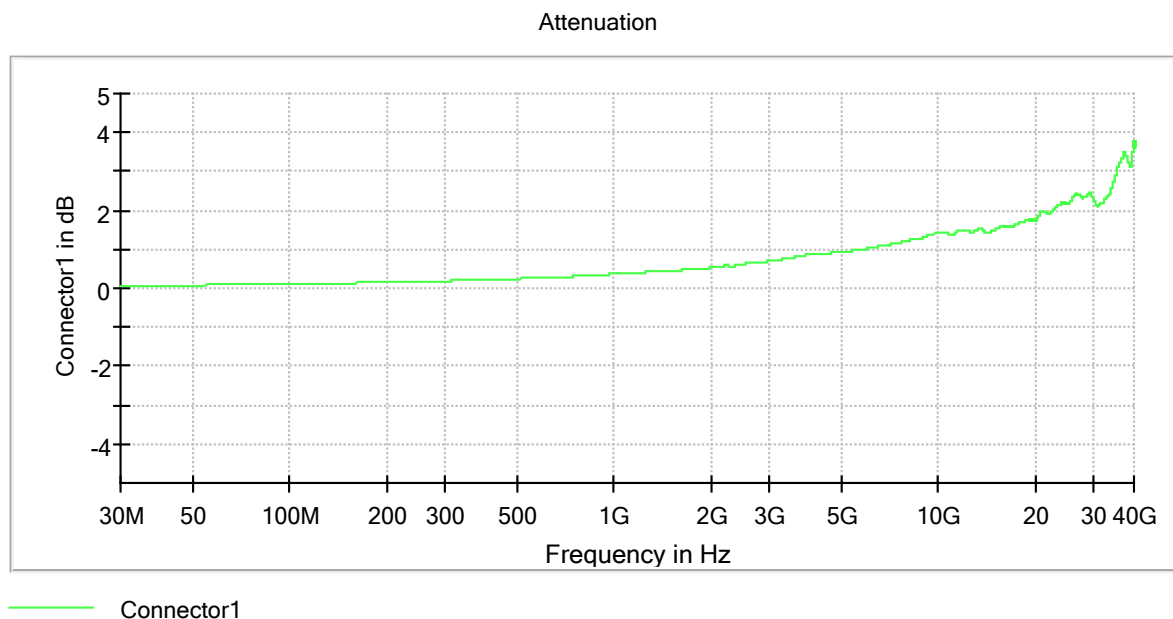
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Gain





Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	20 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.35 dB	0.50 dB

Tx Spurious Emission (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5230.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

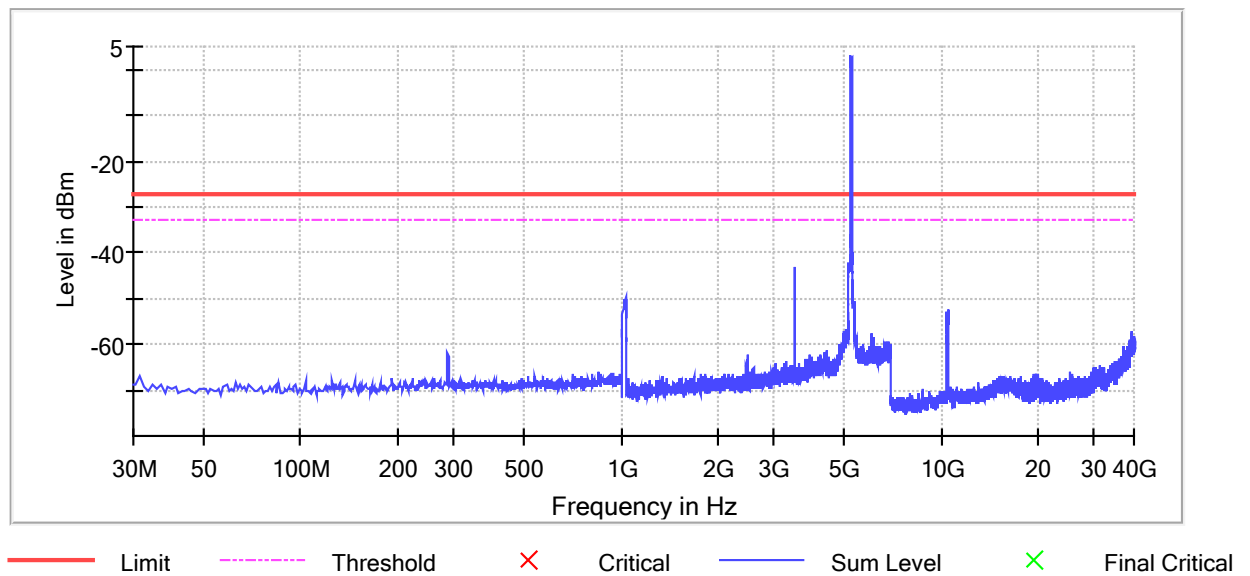
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
3487.500000	-43.1	16.1	-27.0
3486.500000	-43.6	16.6	-27.0
1030.500000	-49.8	22.8	-27.0
1026.500000	-50.2	23.2	-27.0
5149.500000	-50.3	23.3	-27.0
1037.500000	-50.3	23.3	-27.0
1027.500000	-50.4	23.4	-27.0
1028.500000	-50.4	23.4	-27.0
5148.500000	-50.6	23.6	-27.0
3488.500000	-50.7	23.7	-27.0
1024.500000	-50.7	23.7	-27.0
5147.500000	-50.8	23.8	-27.0
1029.500000	-50.9	23.9	-27.0
5144.500000	-51.1	24.1	-27.0
5145.500000	-51.2	24.2	-27.0

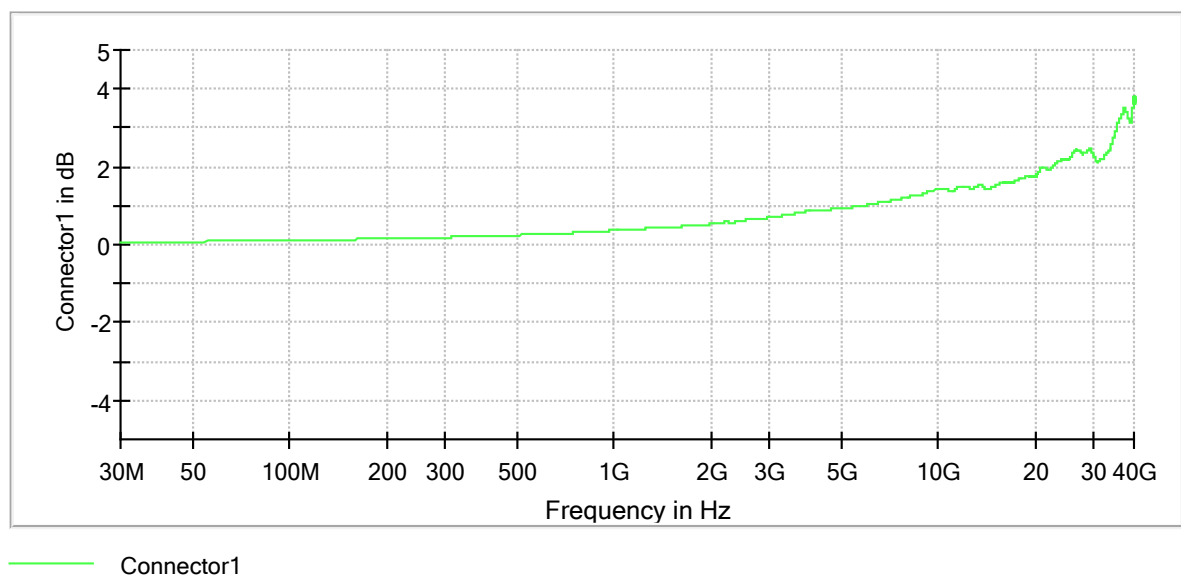
Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Attenuation



Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3

Max Stable Difference	0.00 dB	0.50 dB
-----------------------	---------	---------

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

FCC 15.407 2015

DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

20.000 dBm (20 dBm) 0 dB

Gain Tables

20.000 dBm (20 dBm) Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\TS8997

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. / , FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Emission Bandwidth 26 dB	5755.000	20.0	40.000000	PASS
RF output power	5755.000	20.0	40.000000	PASS
Power Spectral Density	5755.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5755.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5755.000	20.0	40.000000	PASS
Band Edge low	5755.000	20.0	40.000000	PASS
Emission Bandwidth 26 dB	5795.000	20.0	40.000000	PASS
RF output power	5795.000	20.0	40.000000	PASS
Power Spectral Density	5795.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5795.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5795.000	20.0	40.000000	PASS
Band Edge high	5795.000	20.0	40.000000	PASS

Emission Bandwidth 26 dB (5755 MHz; 20.000 dBm; 40 MHz)

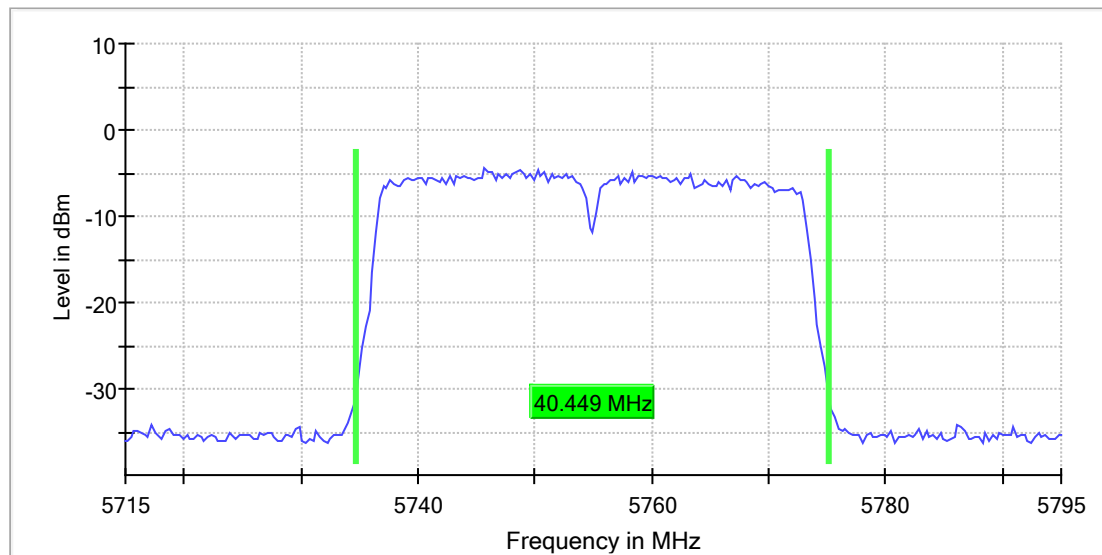
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

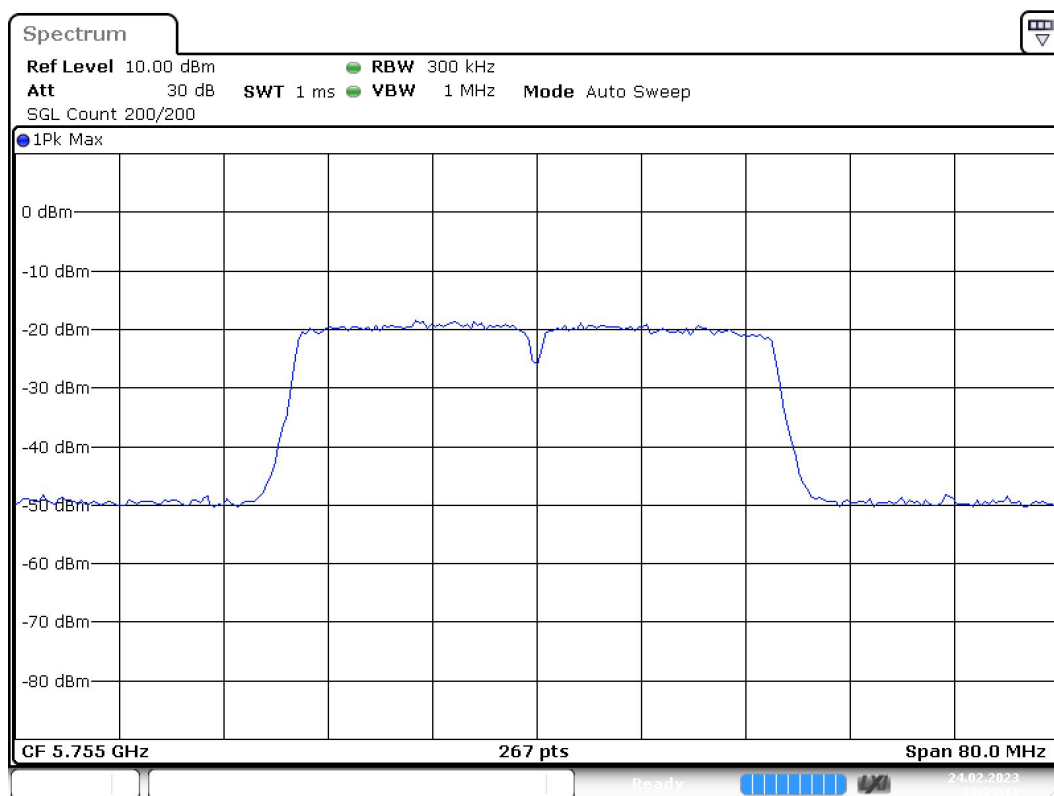
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	40.449438	---	---	5734.625468	5775.074906

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5755.000000	-4.5	PASS



Bandwidth



Date: 24.FEB.2023 10:39:12

Measurement

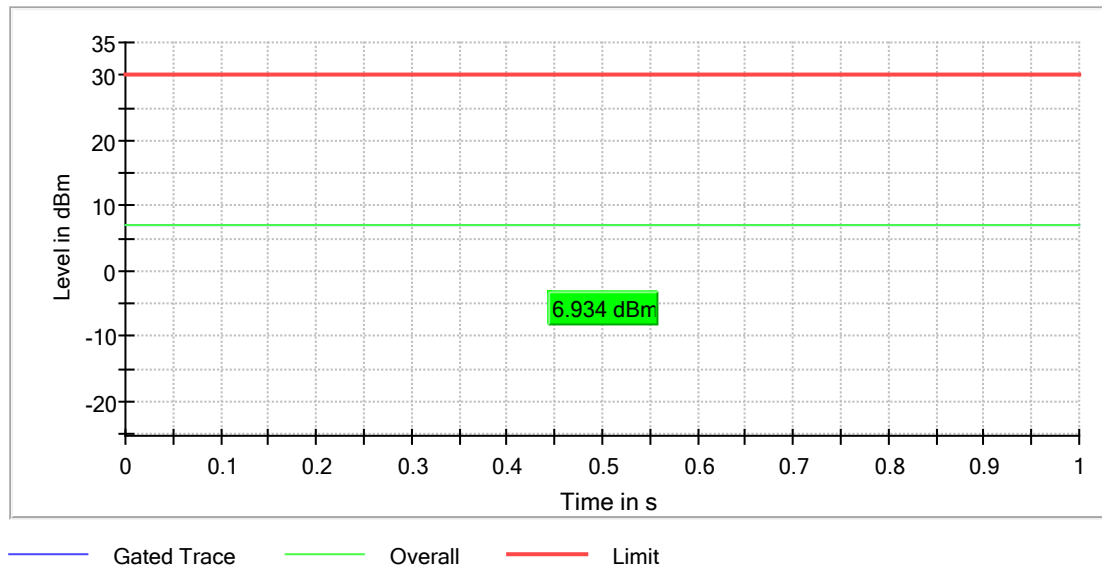
Setting	Instrument Value	Target Value
Start Frequency	5.71500 GHz	5.71500 GHz
Stop Frequency	5.79500 GHz	5.79500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	83 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.22 dB	0.30 dB

RF output power (5755 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5755.000000	6.9	30.0	6.9	100.000	PASS



Power Spectral Density (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

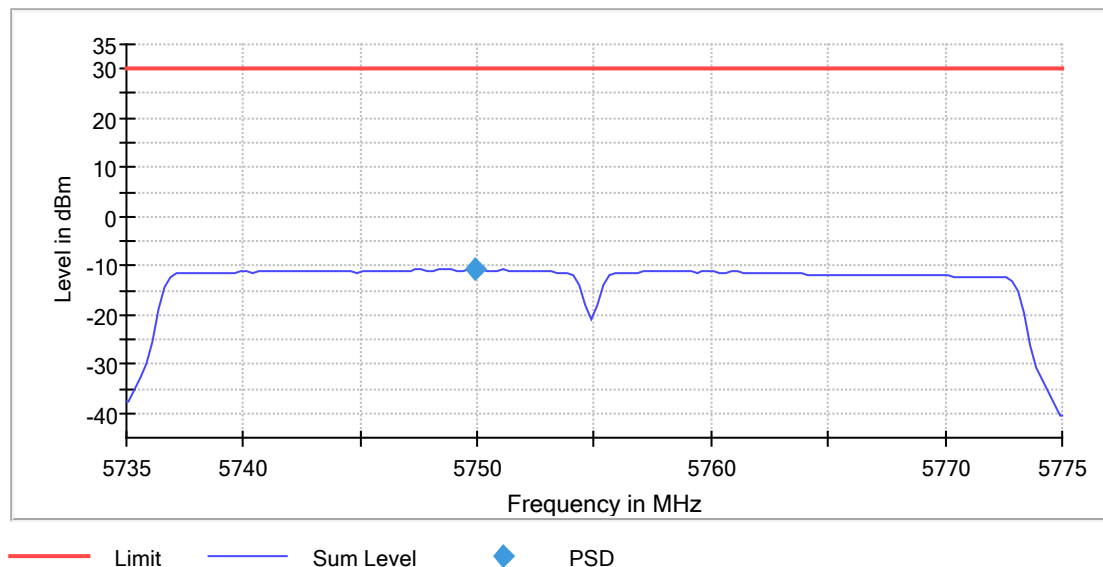
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5755.000000	5749.875000	-10.805	30.0	PASS

Ports

Port	Duty Cycle (%)
1	94.552



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.73500 GHz	5.73500 GHz
Stop Frequency	5.77500 GHz	5.77500 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	<= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	160	~ 160
SweepTime	3.200 s	3.200 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.02 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

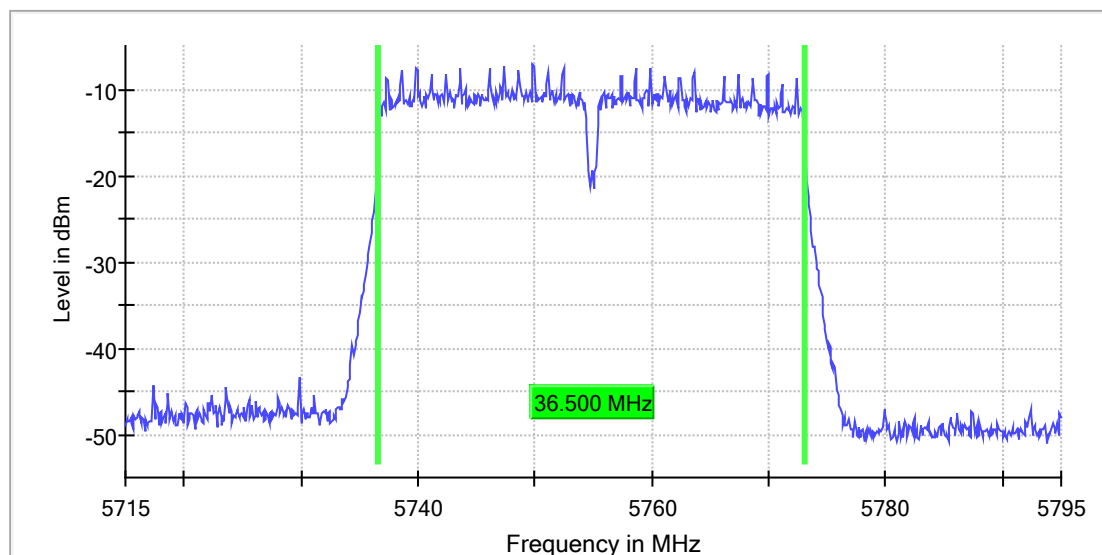
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	36.500000	0.500000	---	5736.650000	5773.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5755.000000	-7.1	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.71500 GHz	5.71500 GHz
Stop Frequency	5.79500 GHz	5.79500 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
Sweeptime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	18 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.28 dB	0.30 dB

Occupied Channel Bandwidth 99% (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

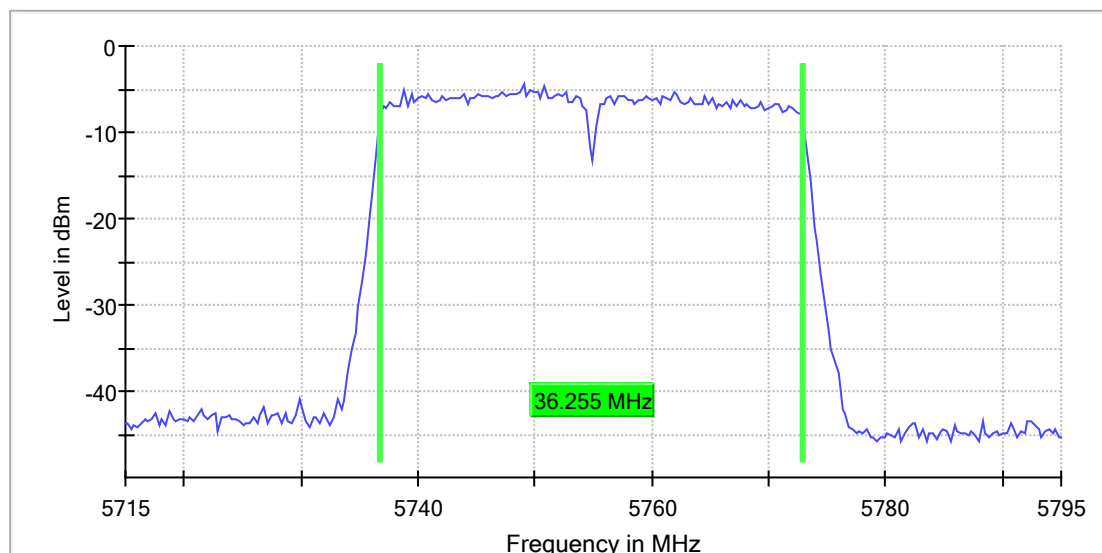
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	36.254682	---	---	5736.722846	5772.977528

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5755.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.71500 GHz	5.71500 GHz
Stop Frequency	5.79500 GHz	5.79500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	7 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.23 dB	0.30 dB

Band Edge low (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

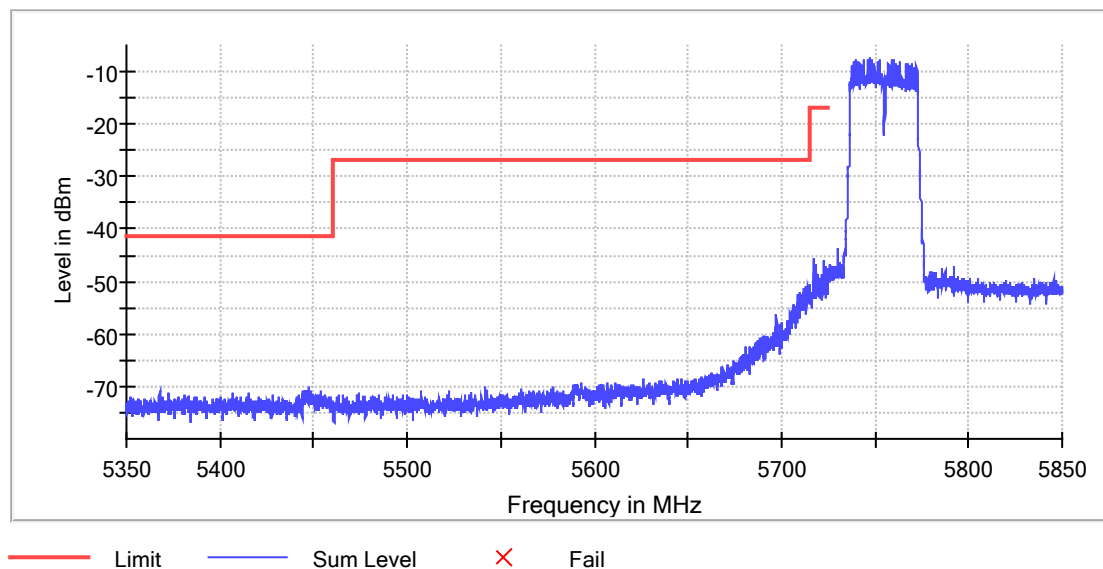
DUT Frequency (MHz)	Result
5755.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5747.375000	-7.5

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
5713.275000	-50.9	23.9	-27.0	PASS
5714.525000	-51.1	24.1	-27.0	PASS
5714.475000	-51.2	24.2	-27.0	PASS
5713.325000	-51.2	24.2	-27.0	PASS
5712.125000	-51.3	24.3	-27.0	PASS
5713.225000	-51.4	24.4	-27.0	PASS
5713.025000	-51.7	24.7	-27.0	PASS
5712.075000	-51.8	24.8	-27.0	PASS
5712.975000	-51.8	24.8	-27.0	PASS
5713.575000	-51.9	24.9	-27.0	PASS
5713.625000	-52.0	25.0	-27.0	PASS
5709.275000	-52.0	25.0	-27.0	PASS
5714.225000	-52.1	25.1	-27.0	PASS
5712.175000	-52.1	25.1	-27.0	PASS
5714.275000	-52.2	25.2	-27.0	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.72500 GHz	5.72500 GHz
Stop Frequency	5.85000 GHz	5.85000 GHz
Span	125.000 MHz	125.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2500	~ 2500
SweepTime	284.766 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	28 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.39 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	5.35000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.72500 GHz
Span	375.000 MHz	375.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	7500	~ 7500
SweepTime	835.313 μ s	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	6 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.46 dB	0.50 dB

Emission Bandwidth 26 dB (5795 MHz; 20.000 dBm; 40 MHz)

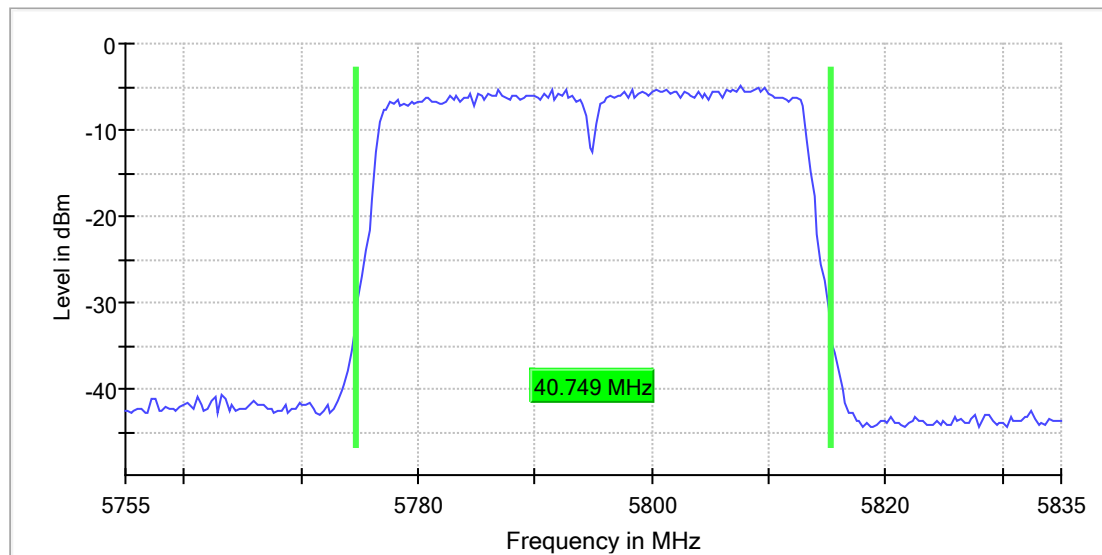
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

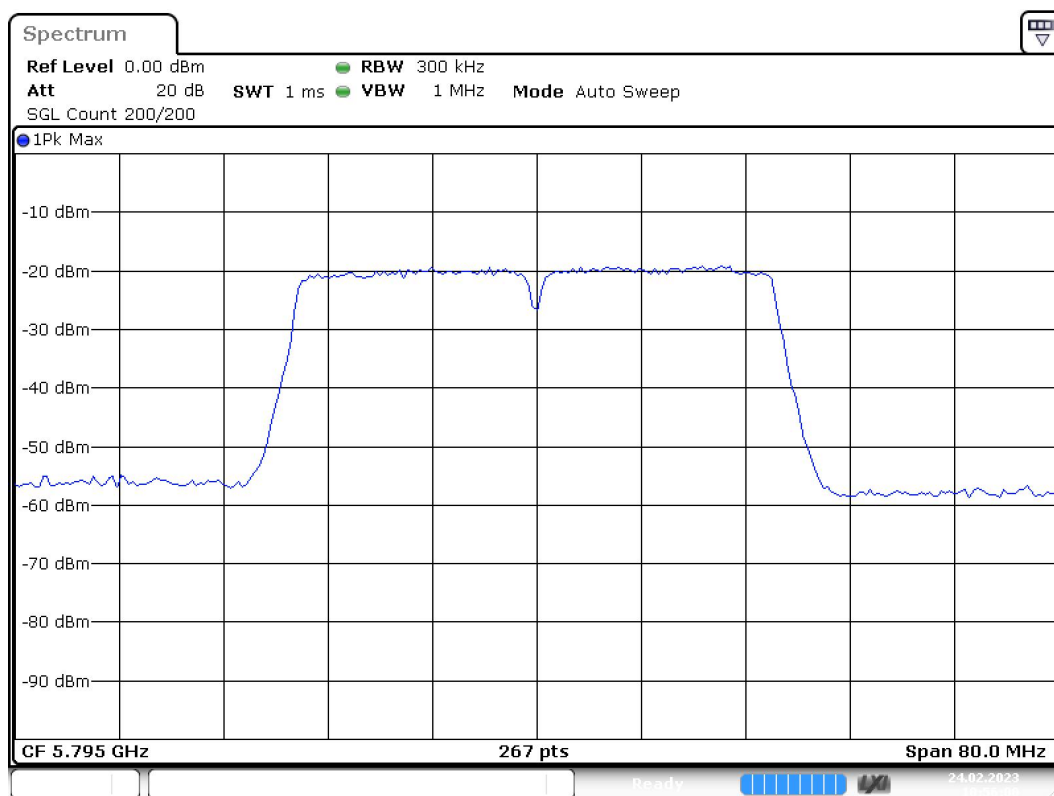
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	40.749064	---	---	5774.625468	5815.374532

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5795.000000	-5.0	PASS



Bandwidth



Date: 24.FEB.2023 10:56:01

Measurement

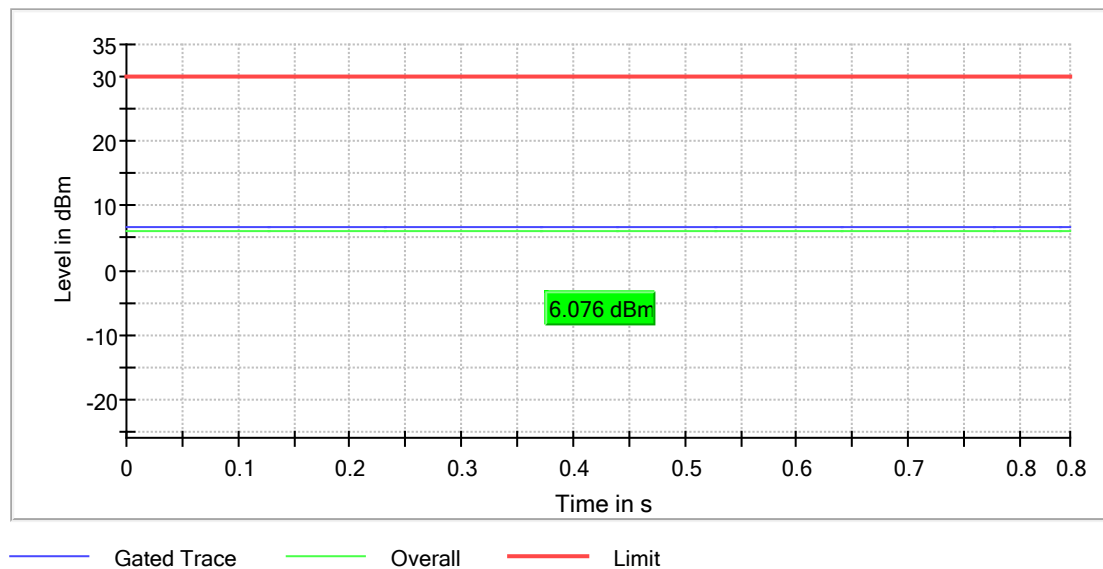
Setting	Instrument Value	Target Value
Start Frequency	5.75500 GHz	5.75500 GHz
Stop Frequency	5.83500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	68 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.30 dB

RF output power (5795 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5795.000000	6.1	30.0	6.1	100.000	PASS



Power Spectral Density (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

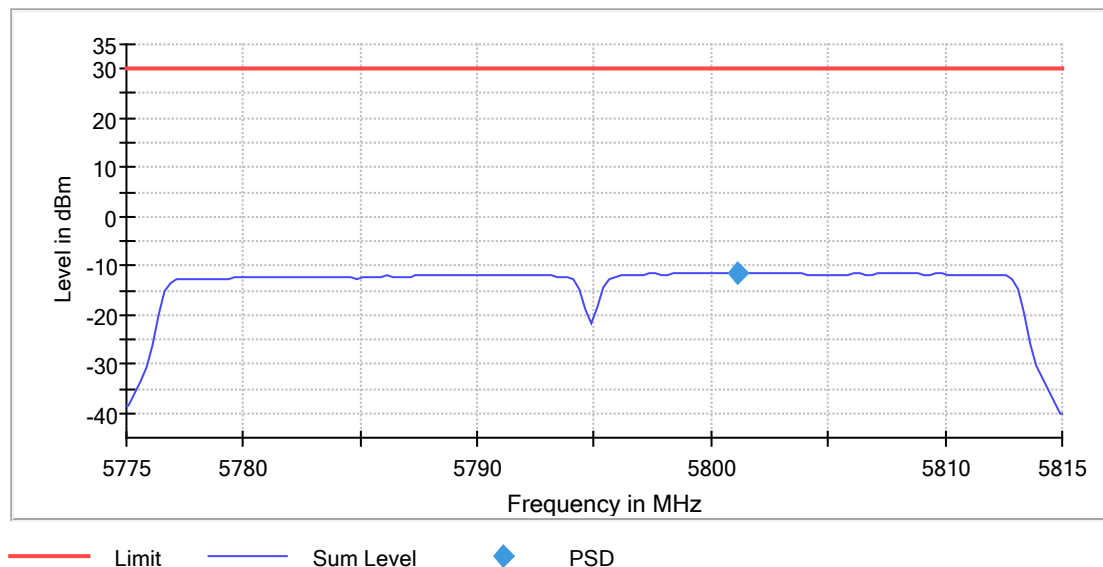
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5795.000000	5801.125000	-11.453	30.0	PASS

Ports

Port	Duty Cycle (%)
1	94.556



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.77500 GHz	5.77500 GHz
Stop Frequency	5.81500 GHz	5.81500 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	<= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	160	~ 160
SweepTime	3.200 s	3.200 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

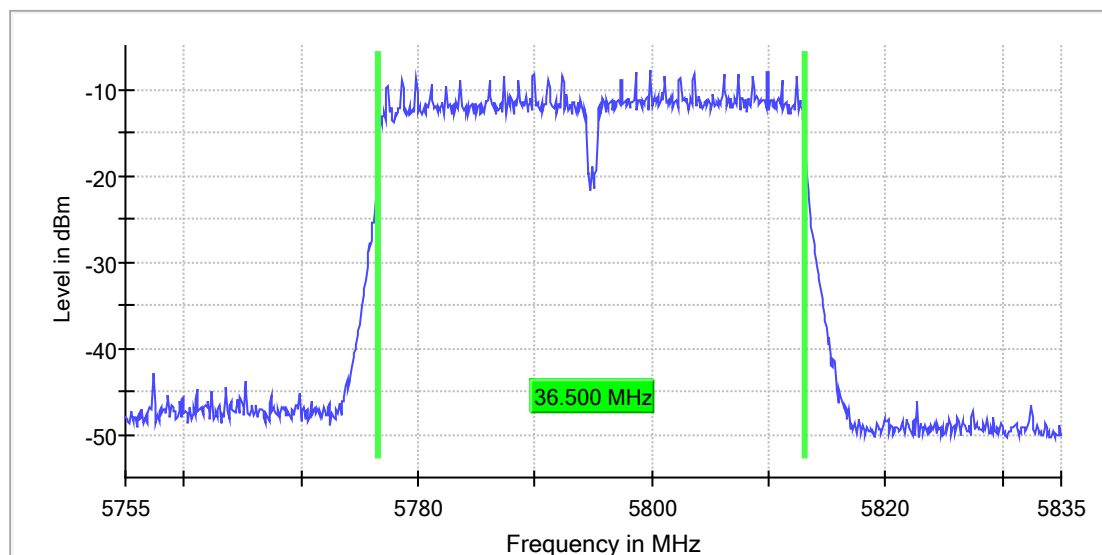
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	36.500000	0.500000	---	5776.650000	5813.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5795.000000	-7.9	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.75500 GHz	5.75500 GHz
Stop Frequency	5.83500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
SweepTime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	28 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.25 dB	0.30 dB

Occupied Channel Bandwidth 99% (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

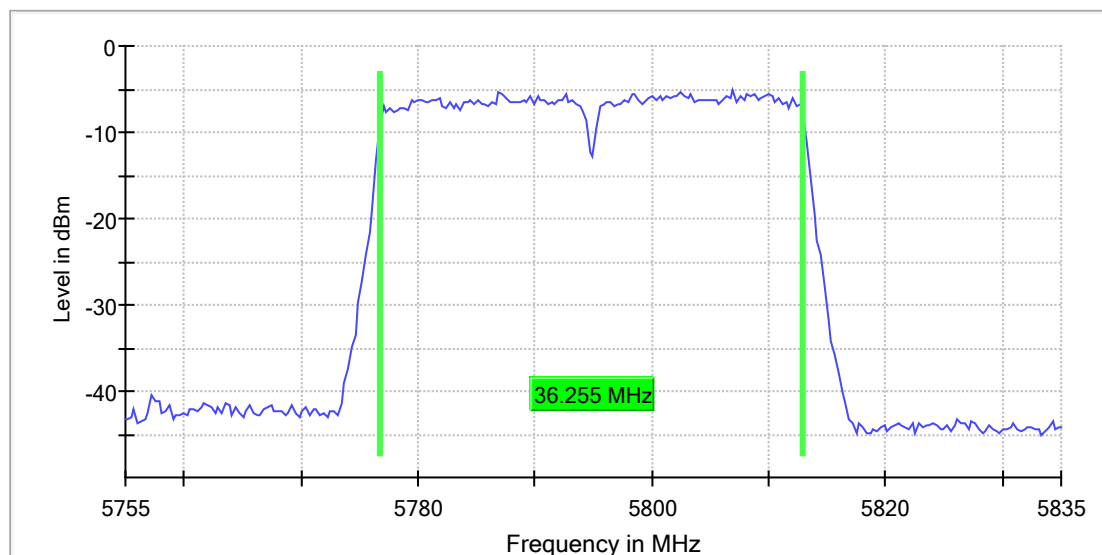
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	36.254682	---	---	5776.722846	5812.977528

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5795.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.75500 GHz	5.75500 GHz
Stop Frequency	5.83500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	28 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.22 dB	0.30 dB

Band Edge high (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

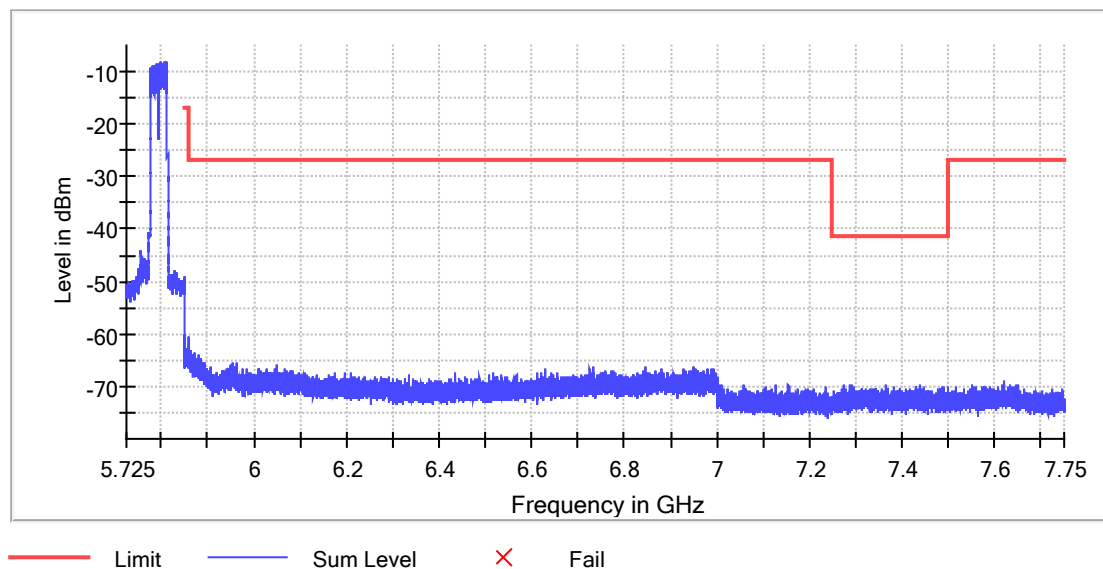
DUT Frequency (MHz)	Result
5795.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5809.875000	-8.0

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
7438.425000	-69.5	28.3	-41.2	PASS
7287.175000	-69.7	28.4	-41.2	PASS
7364.575000	-69.7	28.5	-41.2	PASS
7273.125000	-69.7	28.5	-41.2	PASS
7291.525000	-69.7	28.5	-41.2	PASS
7382.025000	-69.9	28.7	-41.2	PASS
7492.425000	-70.0	28.7	-41.2	PASS
7293.675000	-70.0	28.7	-41.2	PASS
7438.475000	-70.0	28.8	-41.2	PASS
7449.075000	-70.0	28.8	-41.2	PASS
7431.275000	-70.0	28.8	-41.2	PASS
7273.075000	-70.1	28.9	-41.2	PASS
7488.175000	-70.1	28.9	-41.2	PASS
7449.025000	-70.1	28.9	-41.2	PASS
7488.125000	-70.2	28.9	-41.2	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.72500 GHz	5.72500 GHz
Stop Frequency	5.85000 GHz	5.85000 GHz
Span	125.000 MHz	125.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2500	~ 2500
SweepTime	284.766 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	37 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.37 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	5.85000 GHz	5.85000 GHz
Stop Frequency	6.40000 GHz	6.40000 GHz
Span	550.000 MHz	550.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	11000	~ 11000
SweepTime	11.000 ms	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	2 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

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DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

Powerstep name (value)	Beamforming gain table names
20.000 dBm (20 dBm)	BFG_'20.000 dBm'_0.000dB;

Gain Tables

Powerstep name (value)	Gain table names
20.000 dBm (20 dBm)	Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\Hardware Setup

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. /, FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Tx Spurious Emission	5755.000	20.0	40.000000	PASS
Tx Spurious Emission	5795.000	20.0	40.000000	PASS

Tx Spurious Emission (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5755.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

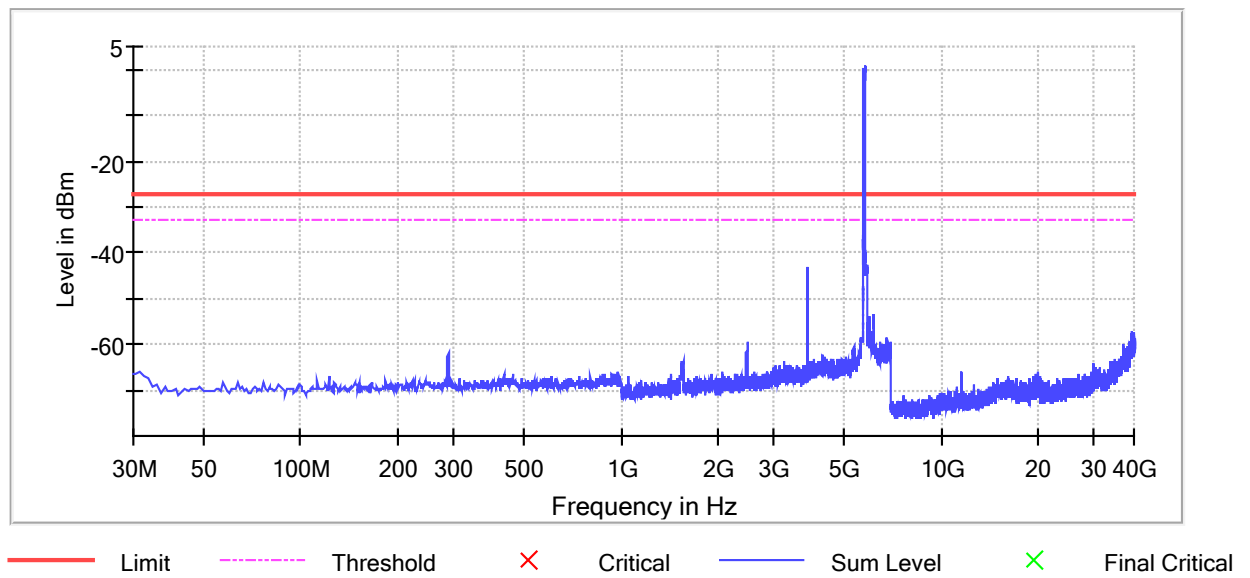
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5714.500000	-38.1	11.1	-27.0
5723.500000	-38.1	11.1	-27.0
5721.500000	-38.2	11.2	-27.0
5724.500000	-38.8	11.8	-27.0
5718.500000	-38.2	11.2	-27.0
5719.500000	-38.4	11.4	-27.0
5715.500000	-38.4	11.4	-27.0
5716.500000	-38.6	11.6	-27.0
5710.500000	-38.7	11.7	-27.0
5717.500000	-38.7	11.7	-27.0
5720.500000	-39.5	12.5	-27.0
5722.500000	-39.6	12.6	-27.0
5711.500000	-39.8	12.8	-27.0
5712.500000	-39.9	12.9	-27.0
5704.500000	-39.9	12.9	-27.0

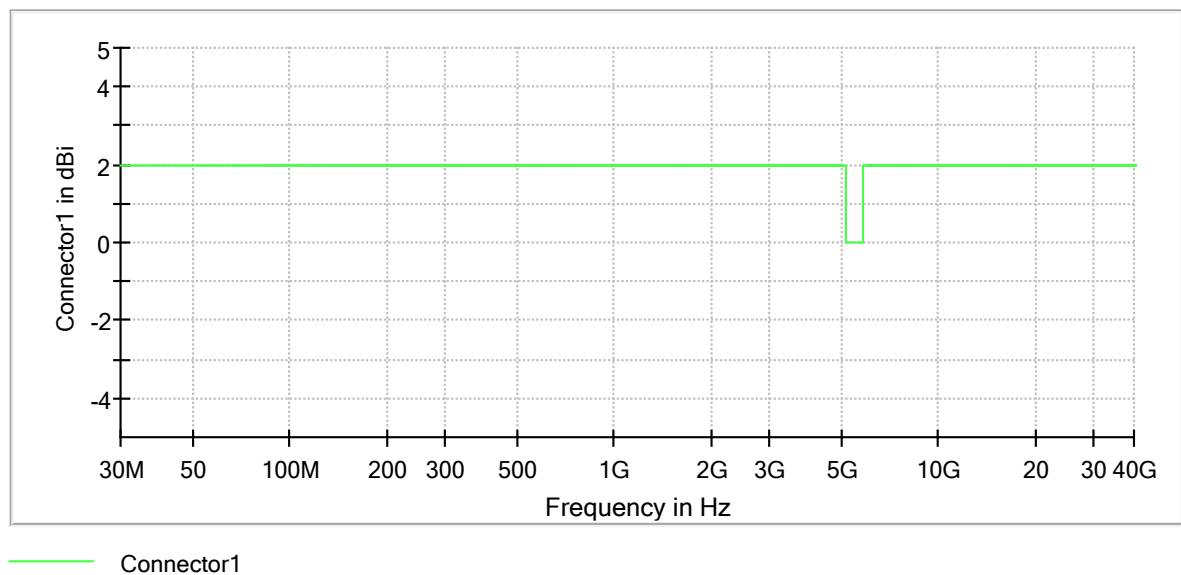
Measurement Settings

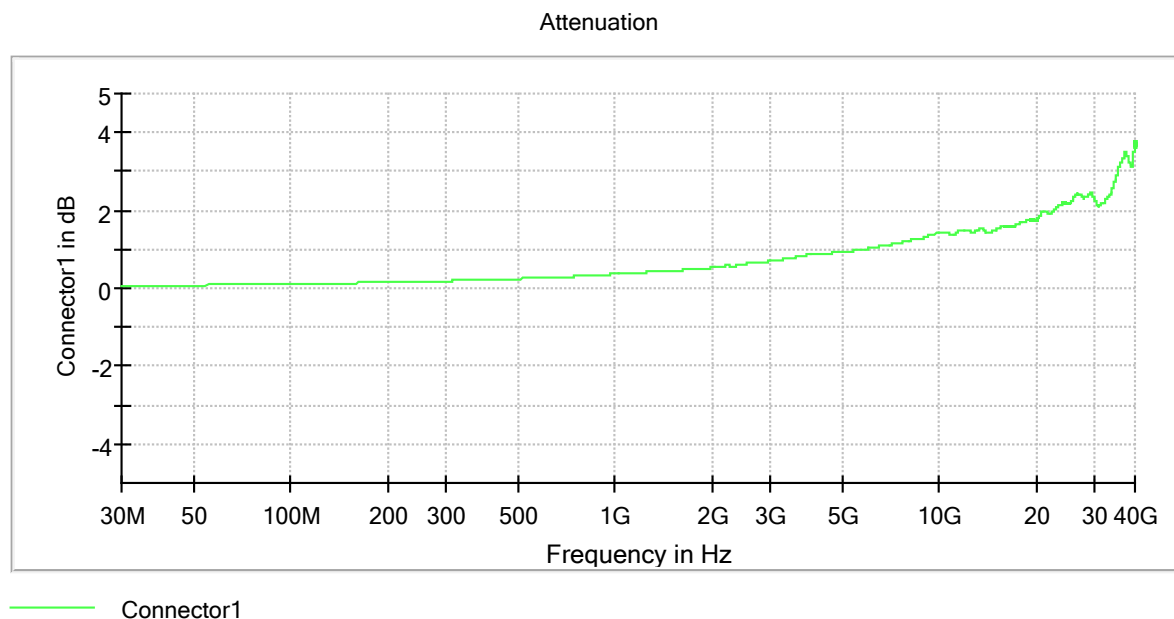
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Gain





Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Tx Spurious Emission (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5795.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

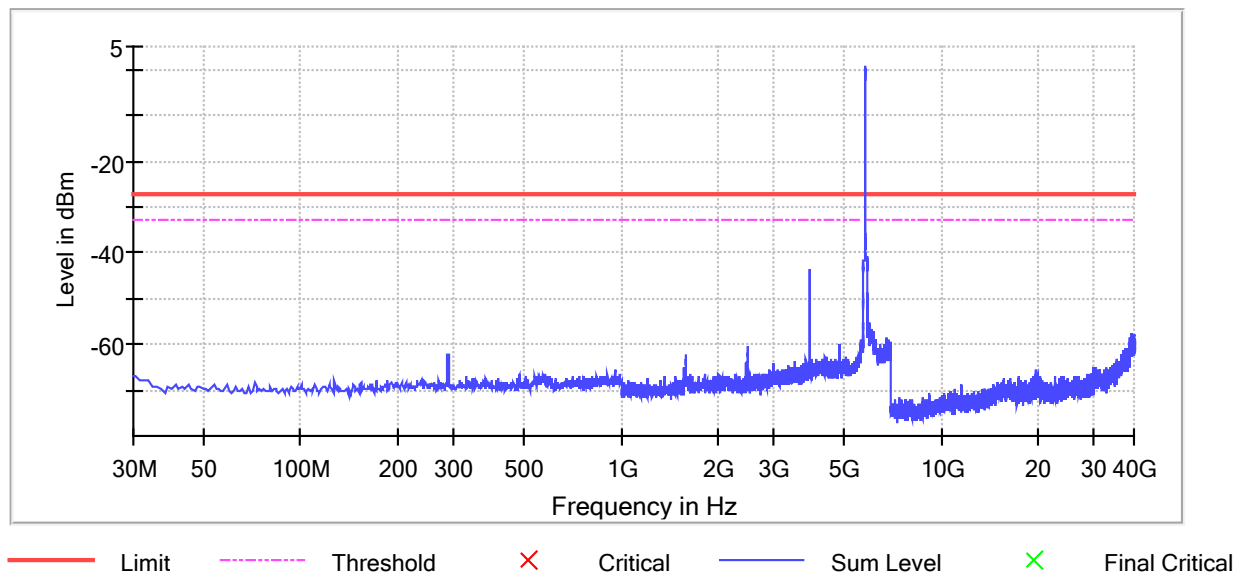
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
3863.500000	-43.7	16.7	-27.0
3864.500000	-43.8	16.8	-27.0
5855.500000	-48.8	21.8	-27.0
5723.500000	-48.8	21.8	-27.0
5722.500000	-49.3	22.3	-27.0
5859.500000	-49.9	22.9	-27.0
5721.500000	-50.0	23.0	-27.0
5719.500000	-50.3	23.3	-27.0
5865.500000	-50.4	23.4	-27.0
5716.500000	-50.5	23.5	-27.0
5718.500000	-50.6	23.6	-27.0
5866.500000	-50.7	23.7	-27.0
5853.500000	-50.9	23.9	-27.0
5724.500000	-51.0	24.0	-27.0
5867.500000	-51.0	24.0	-27.0

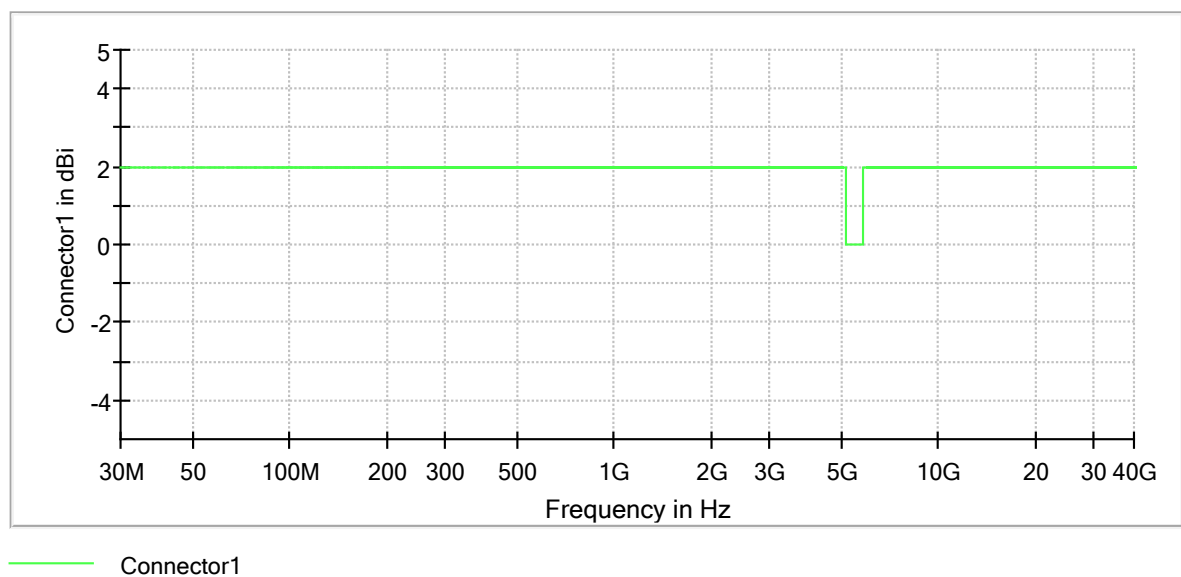
Measurement Settings

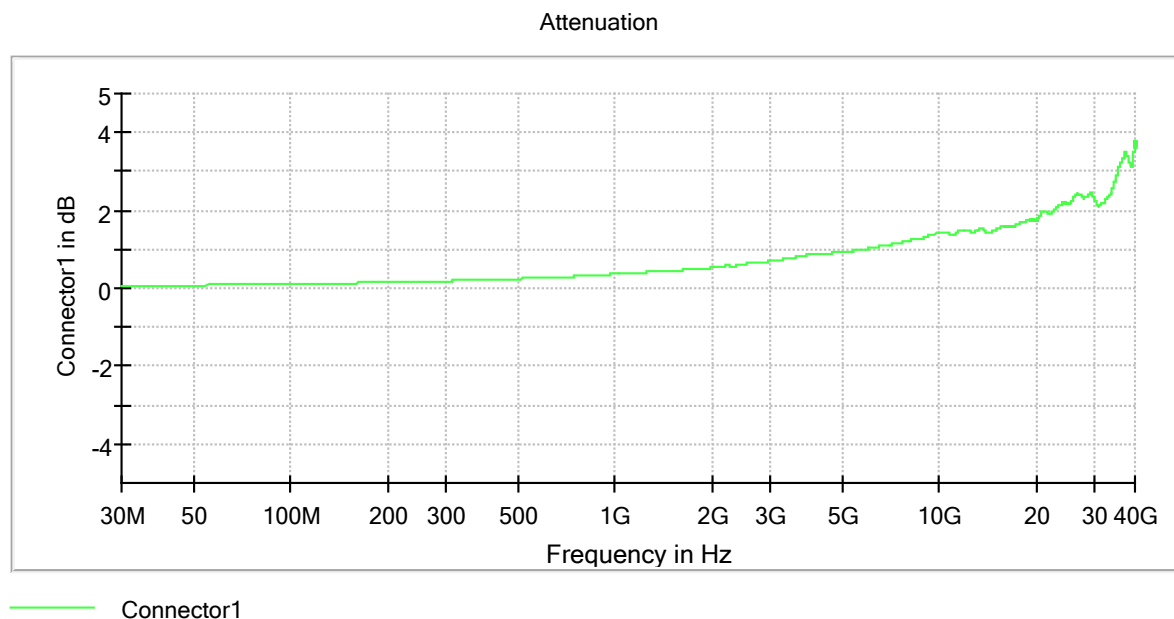
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Gain





Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

FCC 15.407 2015

DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

20.000 dBm (20 dBm) 0 dB

Gain Tables

20.000 dBm (20 dBm) Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\Hardware Setup

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. / , FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Emission Bandwidth 26 dB	5190.000	20.0	40.000000	PASS
RF output power	5190.000	20.0	40.000000	PASS
Power Spectral Density	5190.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5190.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5190.000	20.0	40.000000	PASS
Band Edge low	5190.000	20.0	40.000000	PASS
Emission Bandwidth 26 dB	5230.000	20.0	40.000000	PASS
RF output power	5230.000	20.0	40.000000	PASS
Power Spectral Density	5230.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5230.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5230.000	20.0	40.000000	PASS
Band Edge high	5230.000	20.0	40.000000	PASS

Emission Bandwidth 26 dB (5190 MHz; 20.000 dBm; 40 MHz)

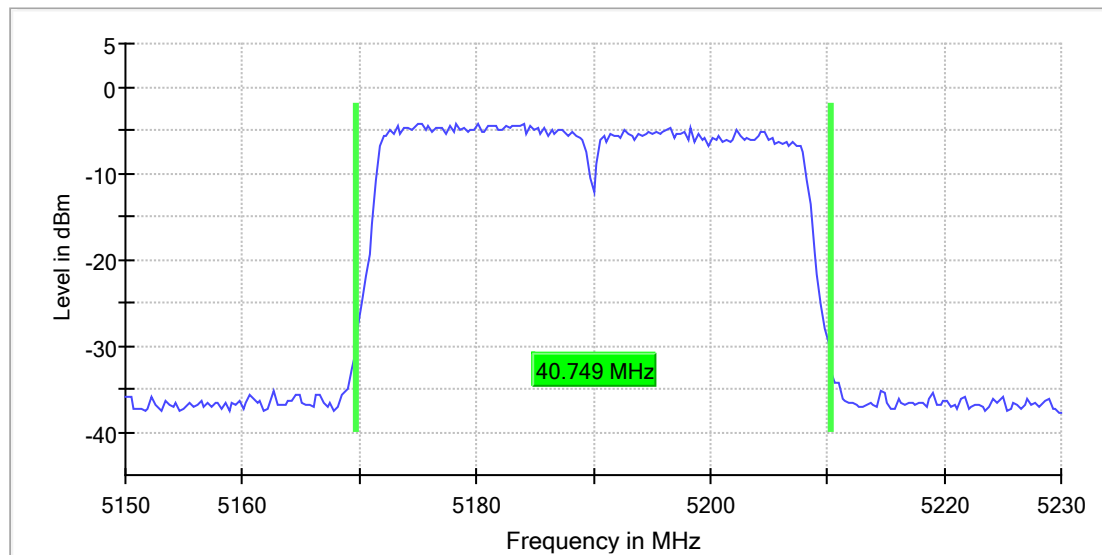
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

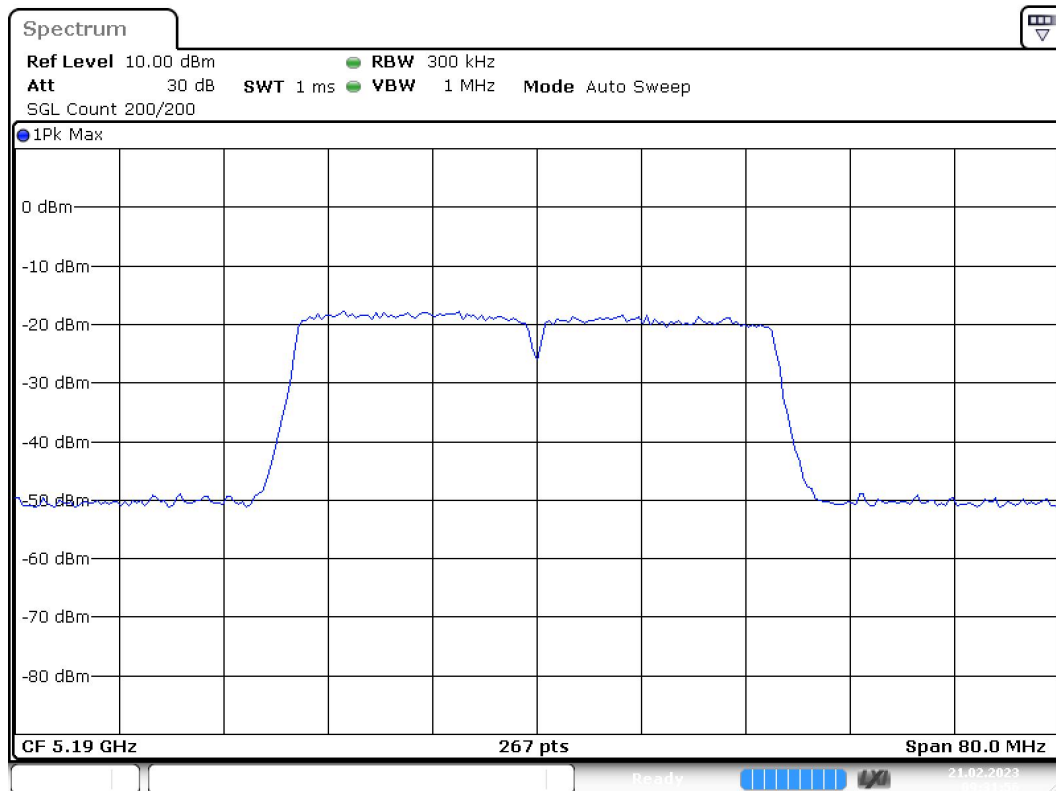
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5190.000000	40.749064	---	---	5169.625468	5210.374532

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5190.000000	-4.2	PASS



Bandwidth



Date: 21.FEB.2023 09:31:57

Measurement

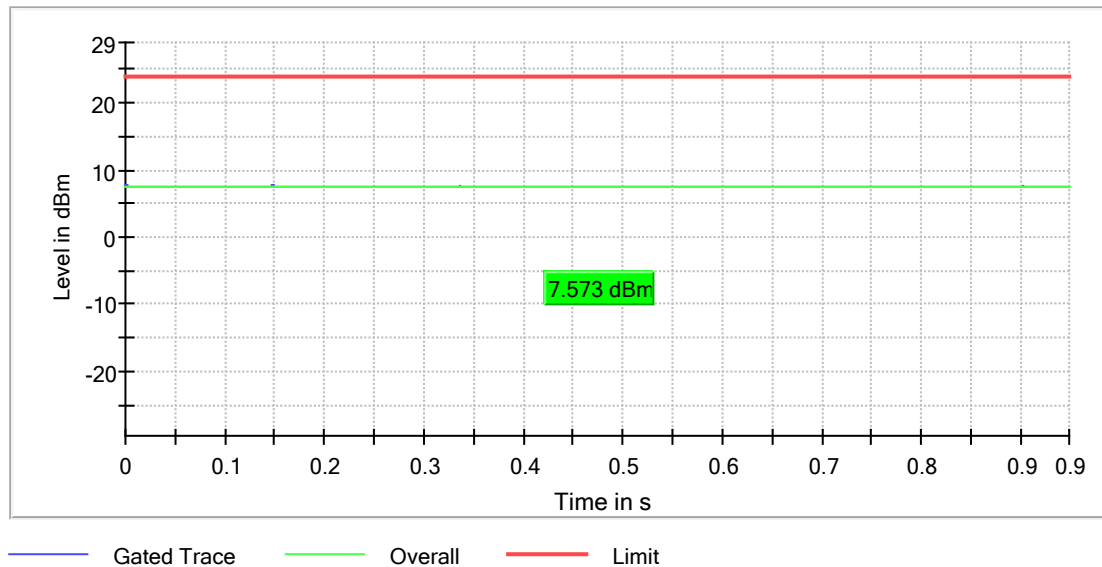
Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.23000 GHz	5.23000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	78 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.10 dB	0.30 dB

RF output power (5190 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5190.000000	7.6	24.0	7.6	94.783	PASS



Power Spectral Density (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

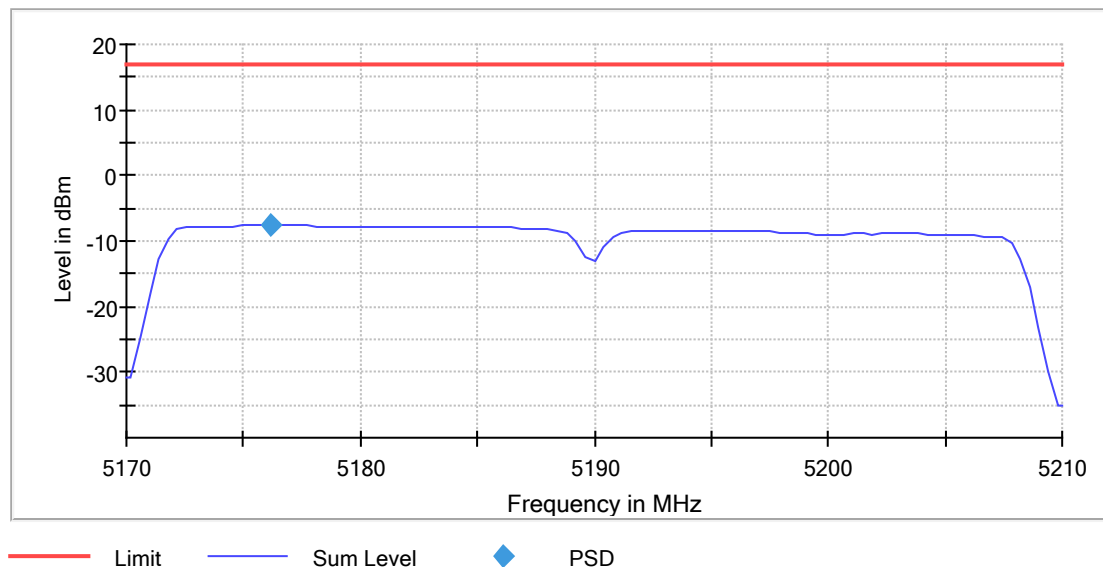
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5190.000000	5176.138614	-7.585	17.0	PASS

Ports

Port	Duty Cycle (%)
1	94.547



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.17000 GHz	5.17000 GHz
Stop Frequency	5.21000 GHz	5.21000 GHz
Span	40.000 MHz	40.000 MHz
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 80
SweepTime	2.020 s	2.020 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

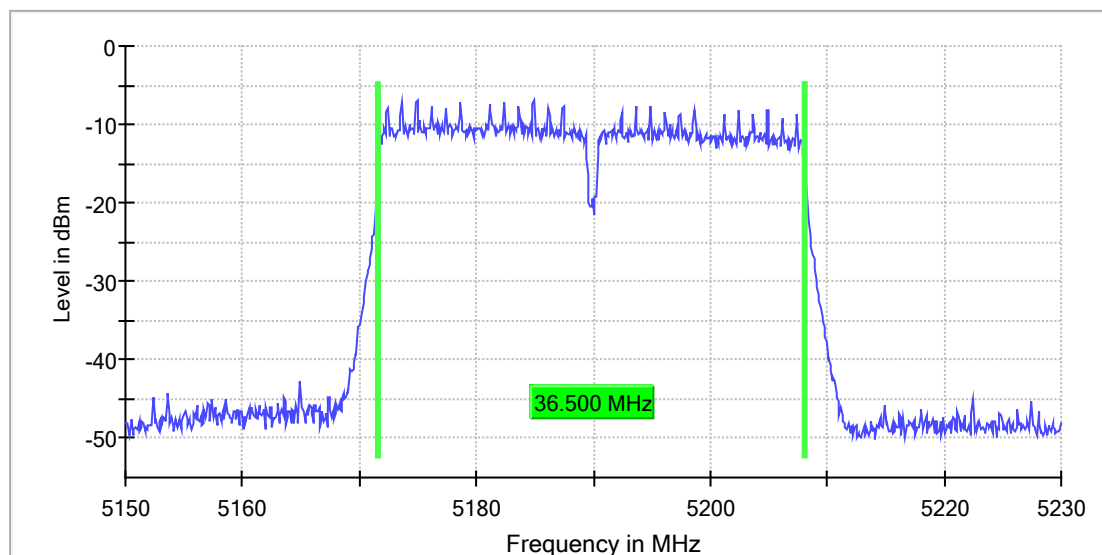
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5190.000000	36.500000	---	---	5171.650000	5208.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5190.000000	-6.9	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.23000 GHz	5.23000 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
Sweeptime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	22 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.28 dB	0.30 dB

Occupied Channel Bandwidth 99% (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

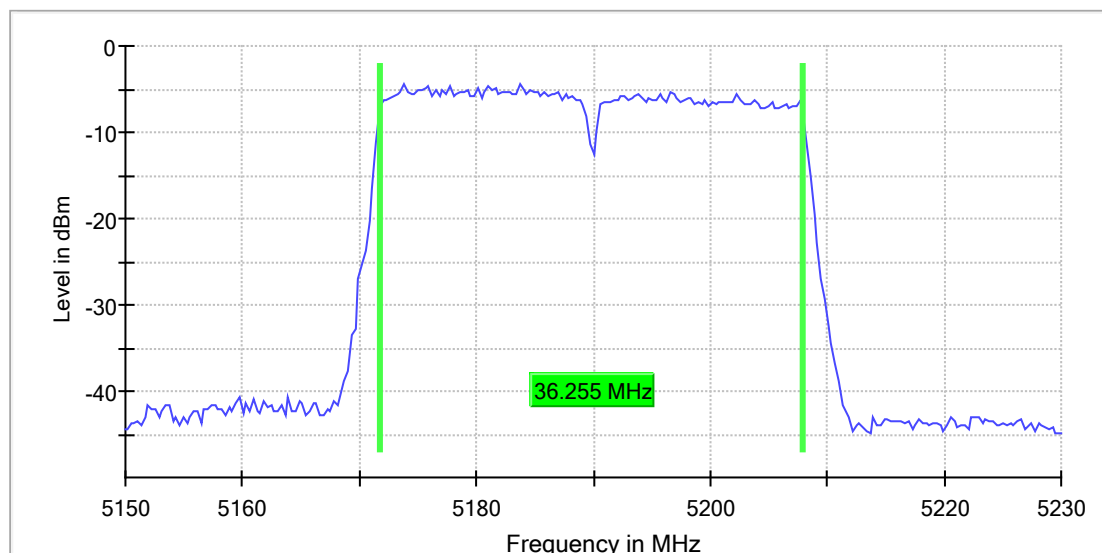
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5190.000000	36.254682	---	---	5171.722846	5207.977528

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5190.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.23000 GHz	5.23000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	13 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.26 dB	0.30 dB

Band Edge low (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

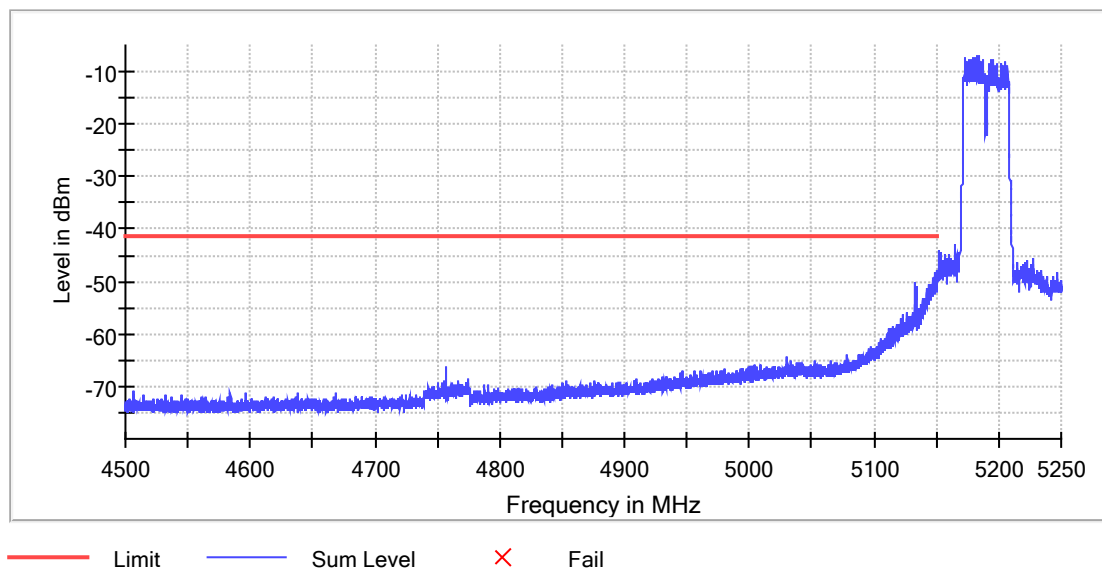
DUT Frequency (MHz)	Result
5190.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5182.375000	-7.1

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
5149.875000	-47.9	6.7	-41.2	PASS
5149.925000	-48.2	7.0	-41.2	PASS
5148.375000	-48.3	7.0	-41.2	PASS
5148.425000	-48.6	7.4	-41.2	PASS
5149.275000	-49.0	7.7	-41.2	PASS
5148.925000	-49.0	7.8	-41.2	PASS
5149.325000	-49.1	7.8	-41.2	PASS
5149.825000	-49.3	8.1	-41.2	PASS
5148.025000	-49.3	8.1	-41.2	PASS
5147.975000	-49.4	8.1	-41.2	PASS
5149.625000	-49.6	8.3	-41.2	PASS
5149.675000	-49.6	8.4	-41.2	PASS
5149.525000	-49.7	8.5	-41.2	PASS
5149.575000	-49.8	8.6	-41.2	PASS
5148.275000	-49.8	8.6	-41.2	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.25000 GHz	5.25000 GHz
Span	100.000 MHz	100.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2000	~ 2000
SweepTime	227.813 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	62 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.31 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	4.50000 GHz	4.50000 GHz
Stop Frequency	5.15000 GHz	5.15000 GHz
Span	650.000 MHz	650.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	13000	~ 13000
SweepTime	13.000 ms	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	58 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.02 dB	0.50 dB

Emission Bandwidth 26 dB (5230 MHz; 20.000 dBm; 40 MHz)

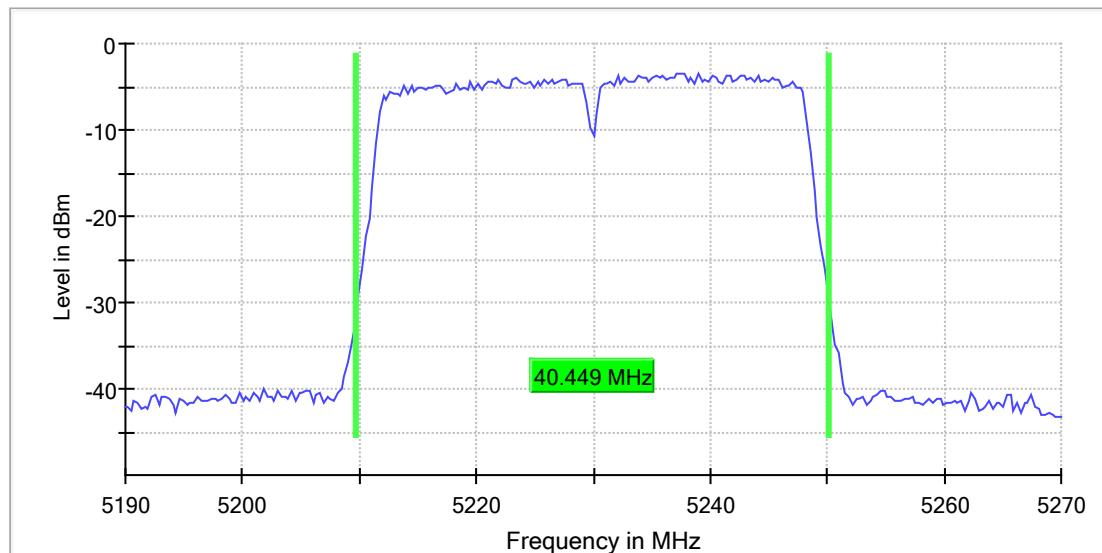
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

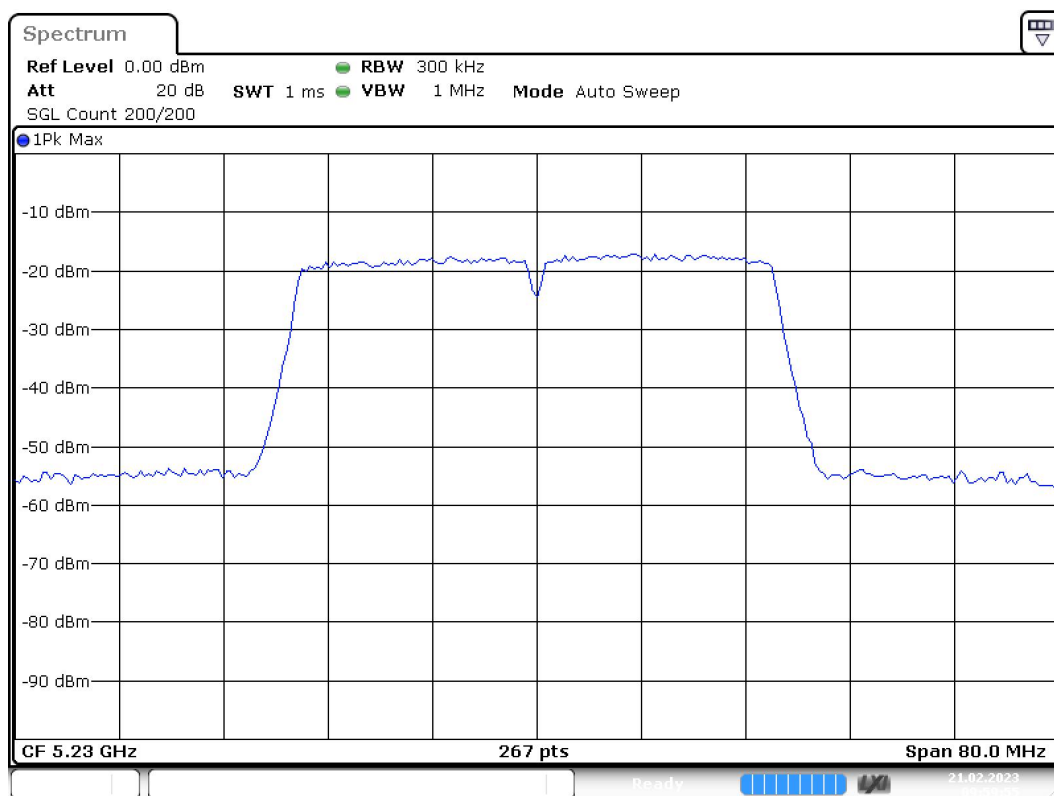
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5230.000000	40.449438	---	---	5209.625468	5250.074906

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5230.000000	-3.4	PASS



Bandwidth



Date: 21.FEB.2023 09:59:56

Measurement

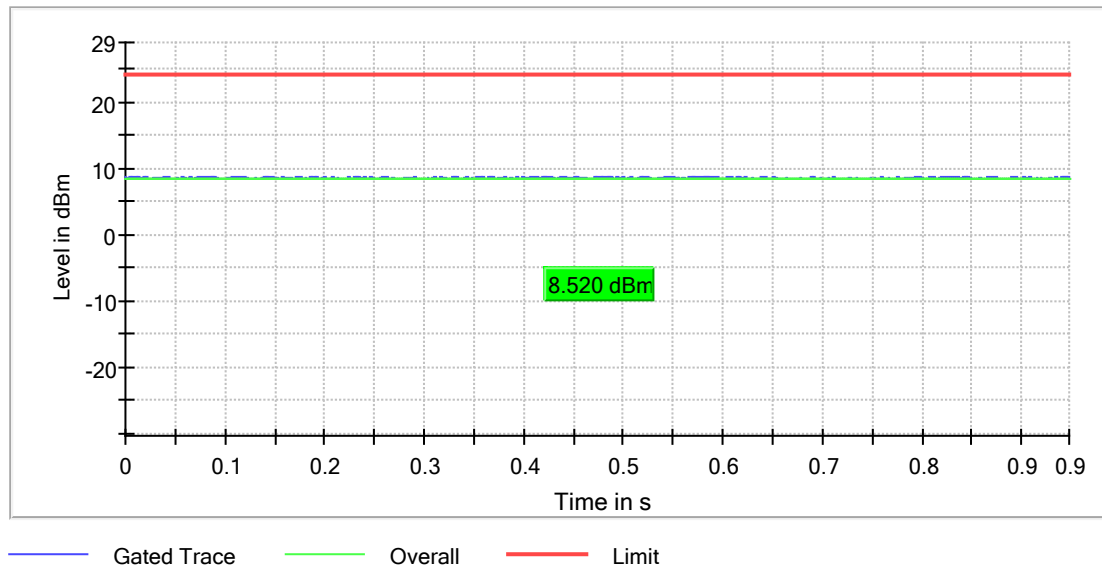
Setting	Instrument Value	Target Value
Start Frequency	5.19000 GHz	5.19000 GHz
Stop Frequency	5.27000 GHz	5.27000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	85 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.30 dB

RF output power (5230 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5230.000000	8.5	24.0	8.5	94.765	PASS



Power Spectral Density (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

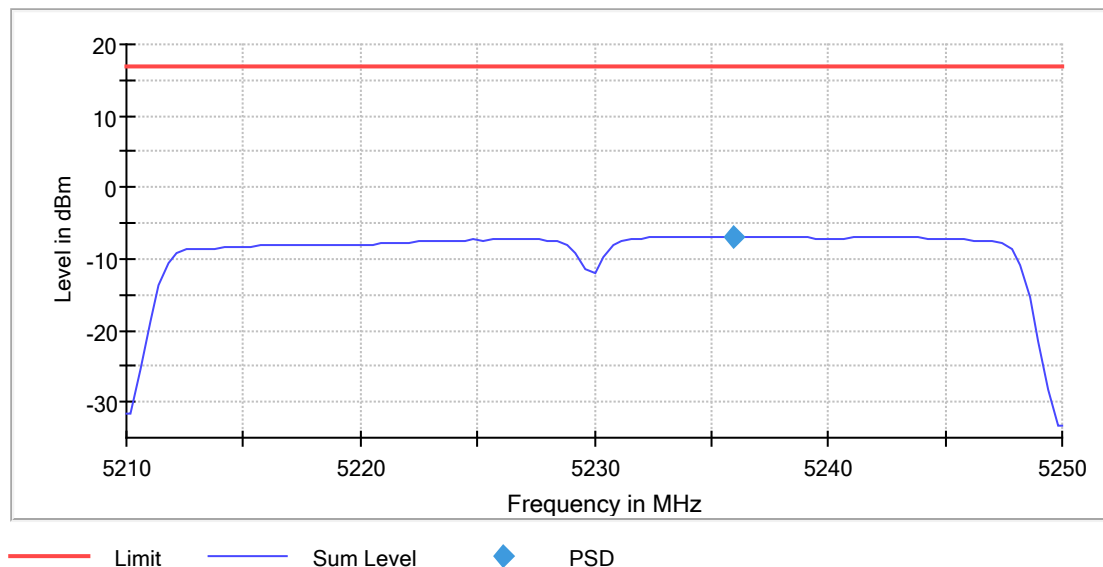
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5230.000000	5235.940594	-6.807	17.0	PASS

Ports

Port	Duty Cycle (%)
1	94.543



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.21000 GHz	5.21000 GHz
Stop Frequency	5.25000 GHz	5.25000 GHz
Span	40.000 MHz	40.000 MHz
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 80
SweepTime	2.020 s	2.020 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

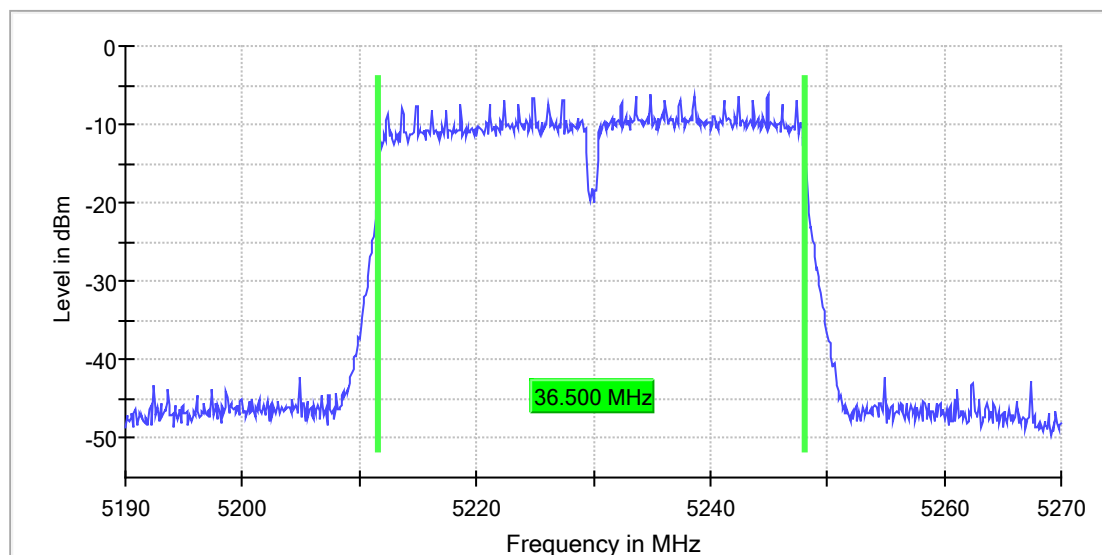
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5230.000000	36.500000	---	---	5211.650000	5248.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5230.000000	-6.1	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.19000 GHz	5.19000 GHz
Stop Frequency	5.27000 GHz	5.27000 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
SweepTime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	32 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.27 dB	0.30 dB

Occupied Channel Bandwidth 99% (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

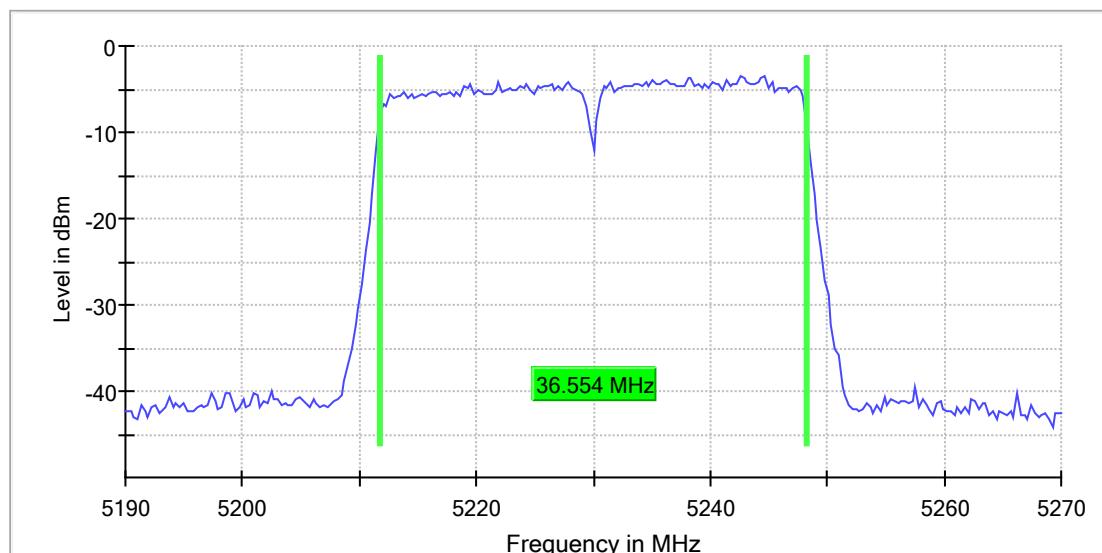
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5230.000000	36.554308	---	---	5211.722846	5248.277154

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5230.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.19000 GHz	5.19000 GHz
Stop Frequency	5.27000 GHz	5.27000 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	26 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.01 dB	0.30 dB

Band Edge high (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

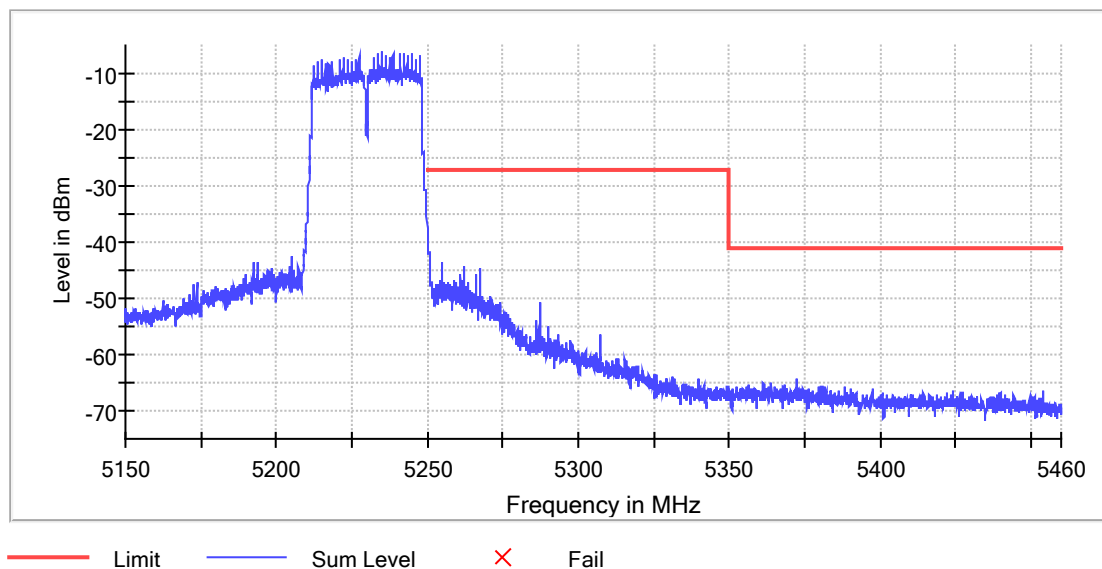
DUT Frequency (MHz)	Result
5230.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5234.875000	-6.0

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
5250.125000	-39.1	12.1	-27.0	PASS
5250.025000	-39.1	12.1	-27.0	PASS
5250.075000	-39.5	12.5	-27.0	PASS
5250.175000	-40.3	13.3	-27.0	PASS
5250.225000	-40.8	13.8	-27.0	PASS
5250.275000	-40.9	13.9	-27.0	PASS
5250.575000	-41.7	14.7	-27.0	PASS
5250.375000	-41.8	14.8	-27.0	PASS
5250.475000	-41.8	14.8	-27.0	PASS
5250.525000	-41.9	14.9	-27.0	PASS
5250.425000	-42.1	15.1	-27.0	PASS
5250.625000	-42.1	15.1	-27.0	PASS
5250.325000	-42.3	15.3	-27.0	PASS
5250.675000	-43.0	16.0	-27.0	PASS
5254.875000	-43.6	16.6	-27.0	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.15000 GHz	5.15000 GHz
Stop Frequency	5.25000 GHz	5.25000 GHz
Span	100.000 MHz	100.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2000	~ 2000
SweepTime	227.813 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	48 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.42 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	5.25000 GHz	5.25000 GHz
Stop Frequency	5.46000 GHz	5.46000 GHz
Span	210.000 MHz	210.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	4200	~ 4200
SweepTime	474.609 μ s	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.50 dB	0.50 dB

FCC 15.407 2015

DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

Powerstep name (value)	Beamforming gain table names
20.000 dBm (20 dBm)	BFG_'20.000 dBm'_0.000dB;

Gain Tables

Powerstep name (value)	Gain table names
20.000 dBm (20 dBm)	Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\Hardware Setup

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. /, FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Tx Spurious Emission	5190.000	20.0	40.000000	PASS
Tx Spurious Emission	5230.000	20.0	40.000000	PASS

Tx Spurious Emission (5190 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5190.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

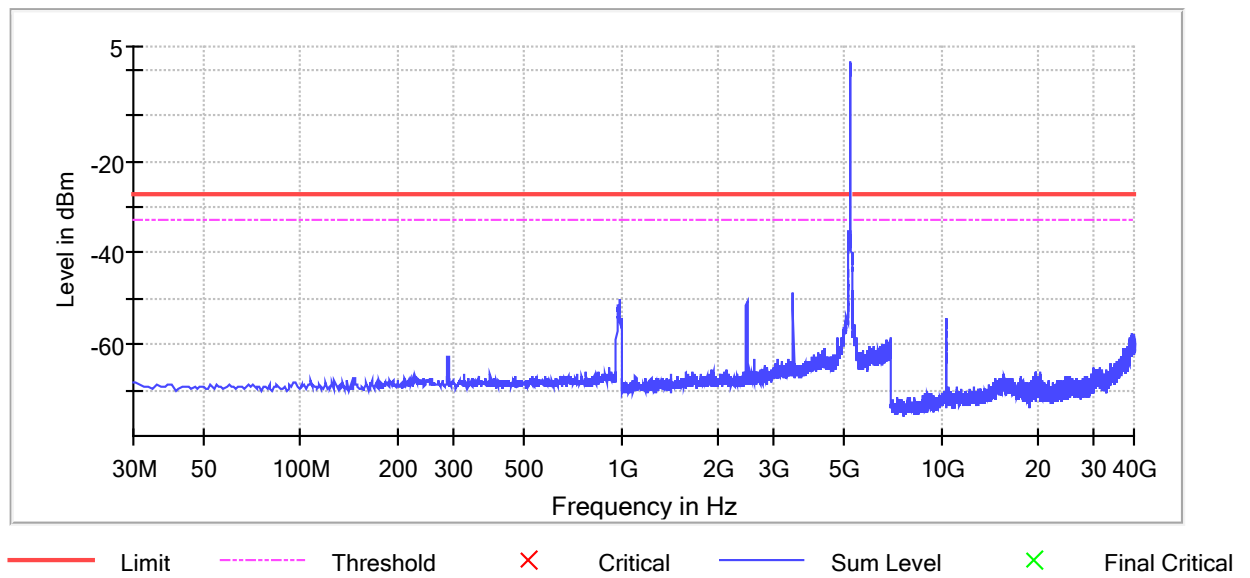
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5148.500000	-38.1	11.1	-27.0
5149.500000	-39.0	12.0	-27.0
5143.500000	-38.7	11.7	-27.0
5144.500000	-38.7	11.7	-27.0
5142.500000	-38.5	11.5	-27.0
5147.500000	-38.6	11.6	-27.0
5146.500000	-38.9	11.9	-27.0
5141.500000	-39.5	12.5	-27.0
5140.500000	-40.1	13.1	-27.0
5145.500000	-40.2	13.2	-27.0
5139.500000	-40.6	13.6	-27.0
5133.500000	-43.5	16.5	-27.0
5137.500000	-43.9	16.9	-27.0
5138.500000	-44.0	17.0	-27.0
5134.500000	-44.2	17.2	-27.0

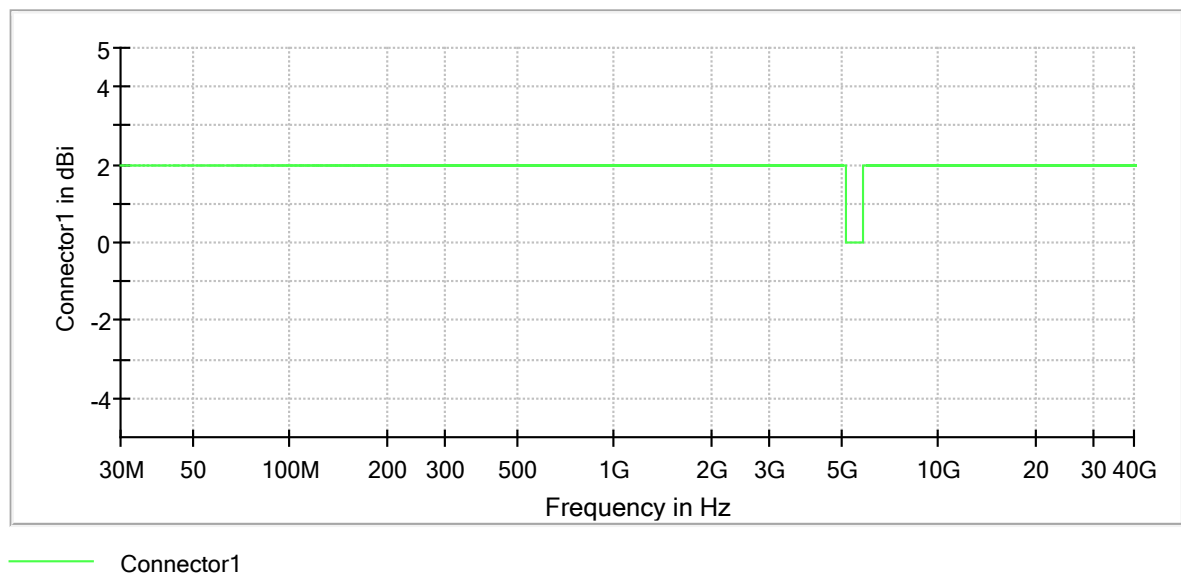
Measurement Settings

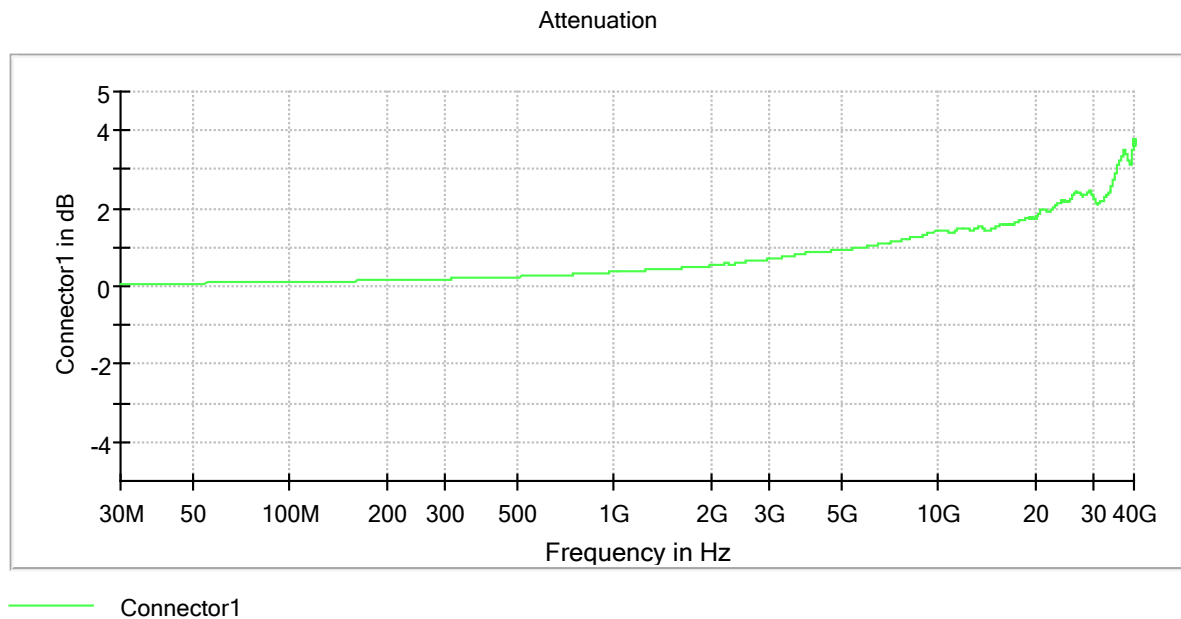
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Gain





Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	13 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.48 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	19 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.17 dB	0.50 dB

Tx Spurious Emission (5230 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5230.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

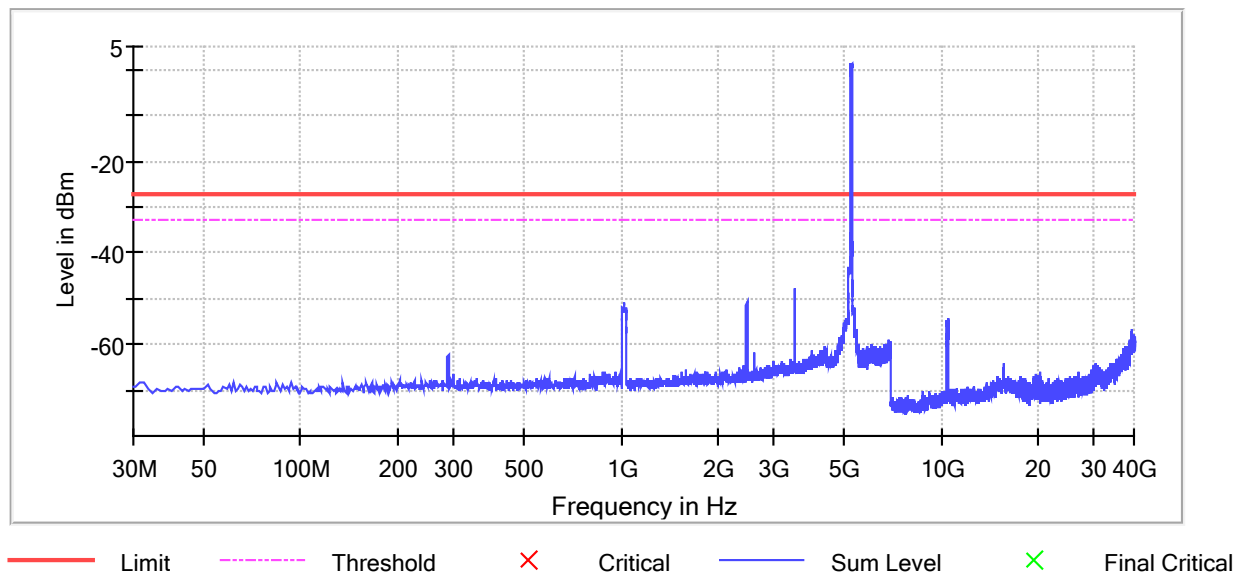
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5149.500000	-46.8	19.8	-27.0
3487.500000	-47.8	20.8	-27.0
3486.500000	-48.4	21.4	-27.0
5136.500000	-48.6	21.6	-27.0
5148.500000	-48.7	21.7	-27.0
5146.500000	-48.7	21.7	-27.0
5135.500000	-48.7	21.7	-27.0
5139.500000	-49.3	22.3	-27.0
5147.500000	-49.4	22.4	-27.0
5138.500000	-49.5	22.5	-27.0
5144.500000	-49.7	22.7	-27.0
5145.500000	-49.8	22.8	-27.0
5137.500000	-50.0	23.0	-27.0
5143.500000	-50.0	23.0	-27.0
2470.500000	-50.4	23.4	-27.0

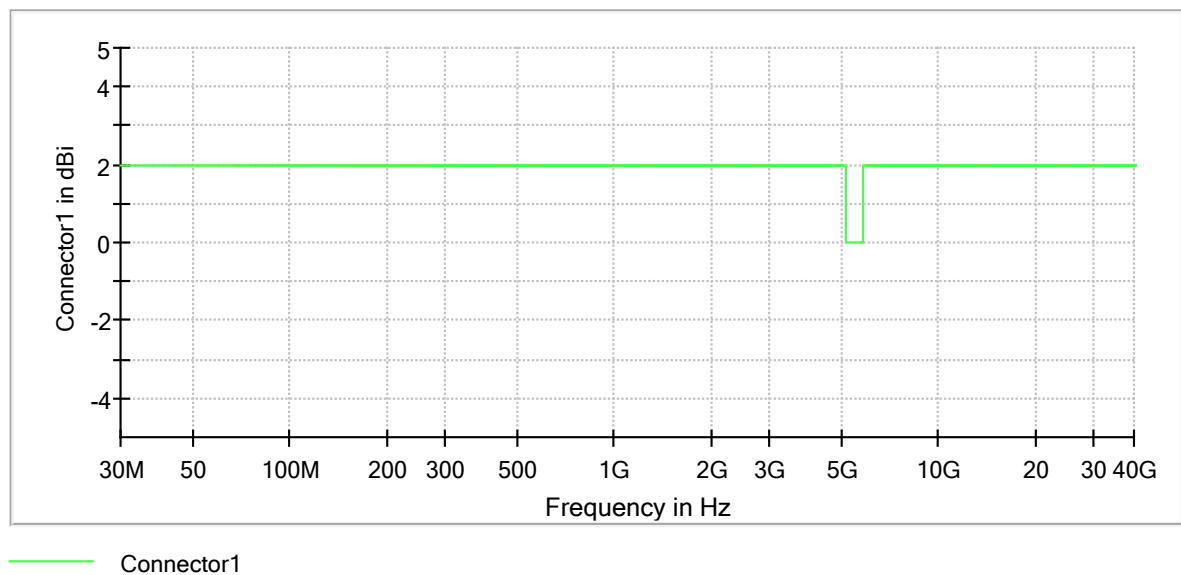
Measurement Settings

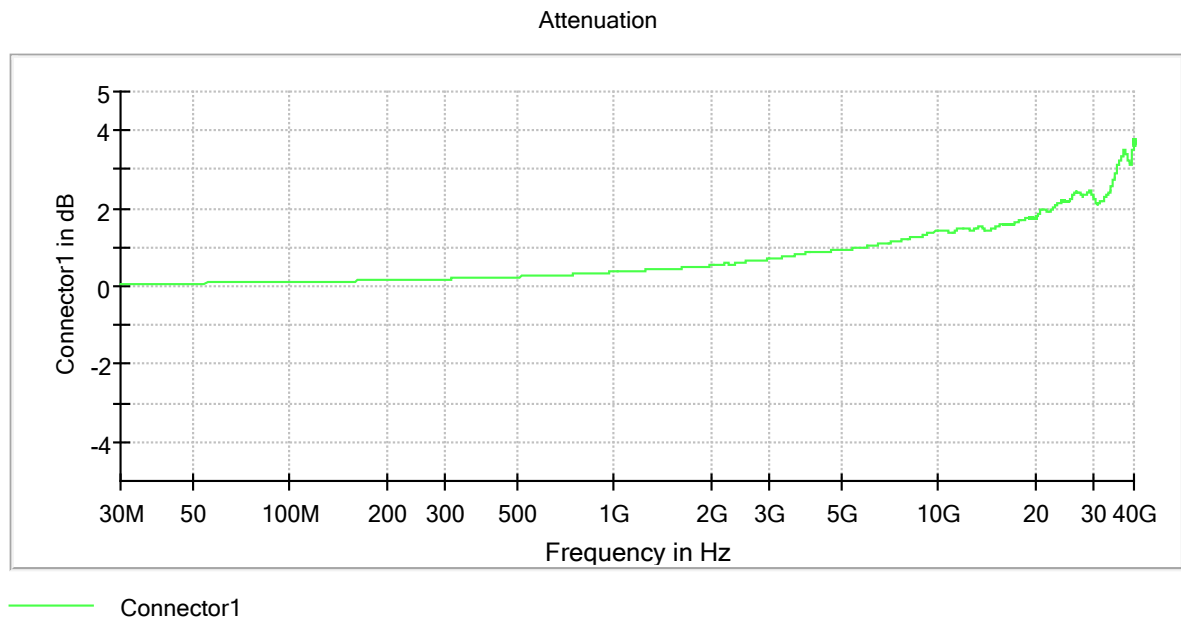
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Gain





Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	54 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.07 dB	0.50 dB

FCC 15.407 2015

DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

20.000 dBm (20 dBm) 0 dB

Gain Tables

20.000 dBm (20 dBm) Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\TS8997

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. / , FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Emission Bandwidth 26 dB	5755.000	20.0	40.000000	PASS
RF output power	5755.000	20.0	40.000000	PASS
Power Spectral Density	5755.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5755.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5755.000	20.0	40.000000	PASS
Band Edge low	5755.000	20.0	40.000000	PASS
Emission Bandwidth 26 dB	5795.000	20.0	40.000000	PASS
RF output power	5795.000	20.0	40.000000	PASS
Power Spectral Density	5795.000	20.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5795.000	20.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5795.000	20.0	40.000000	PASS
Band Edge high	5795.000	20.0	40.000000	PASS

Emission Bandwidth 26 dB (5755 MHz; 20.000 dBm; 40 MHz)

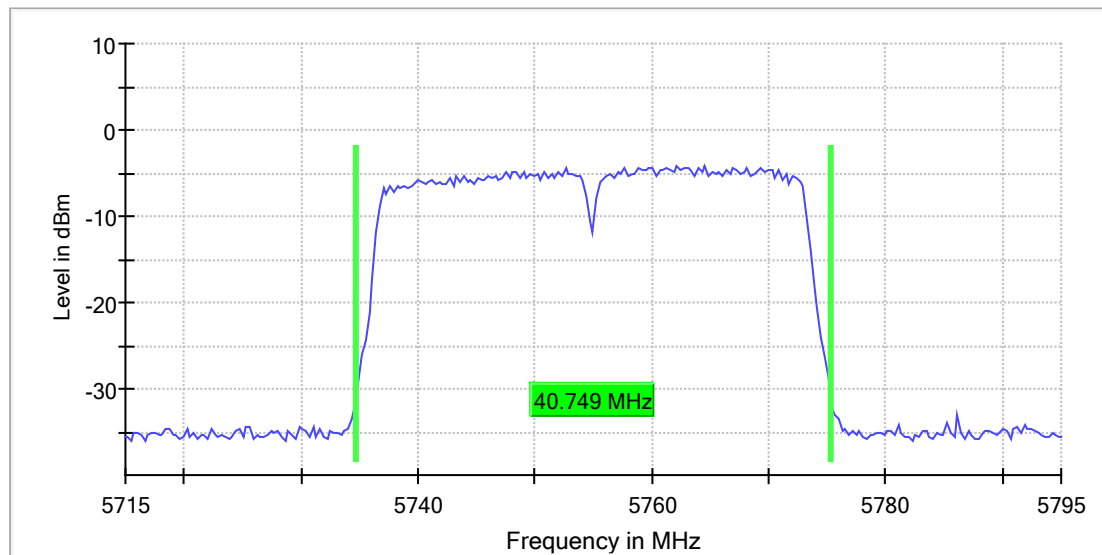
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

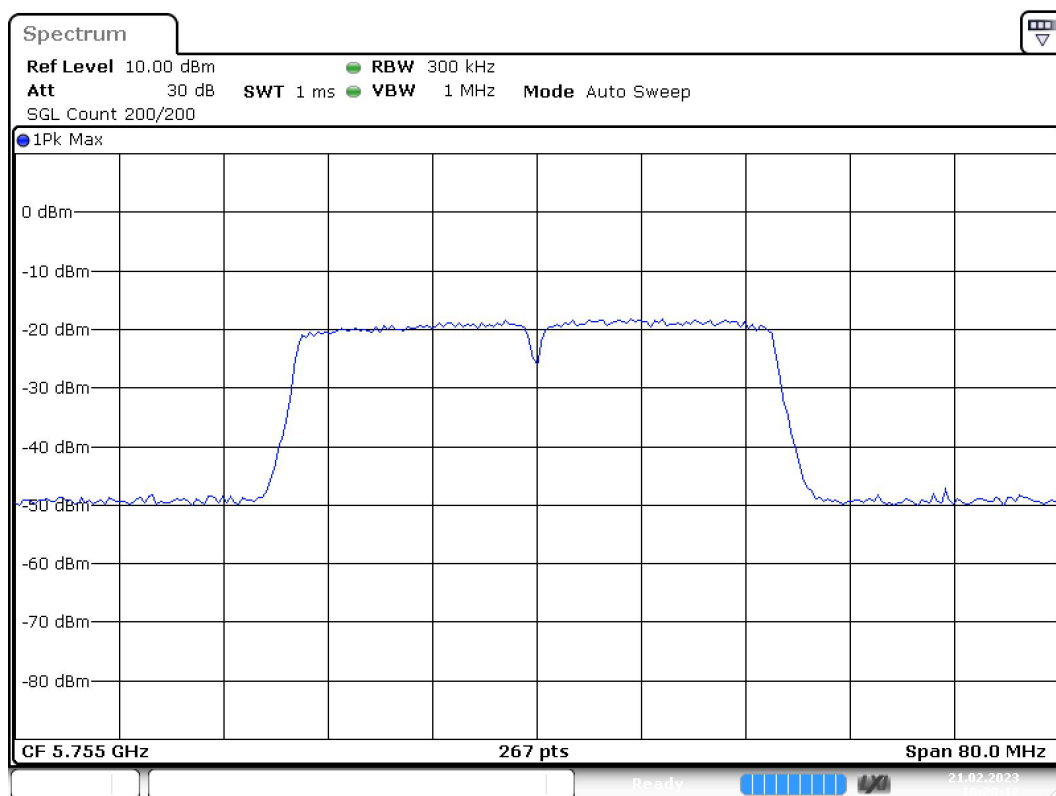
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	40.749064	---	---	5734.625468	5775.374532

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5755.000000	-4.1	PASS



Bandwidth



Date: 21.FEB.2023 10:20:13

Measurement

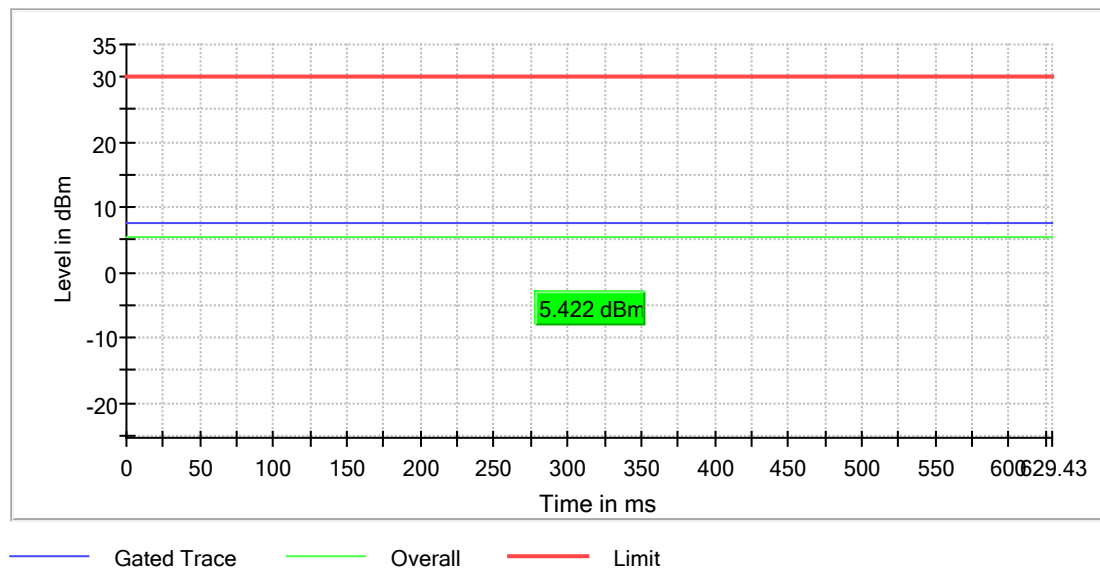
Setting	Instrument Value	Target Value
Start Frequency	5.71500 GHz	5.71500 GHz
Stop Frequency	5.79500 GHz	5.79500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	73 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.25 dB	0.30 dB

RF output power (5755 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5755.000000	5.4	30.0	5.4	100.000	PASS



Power Spectral Density (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

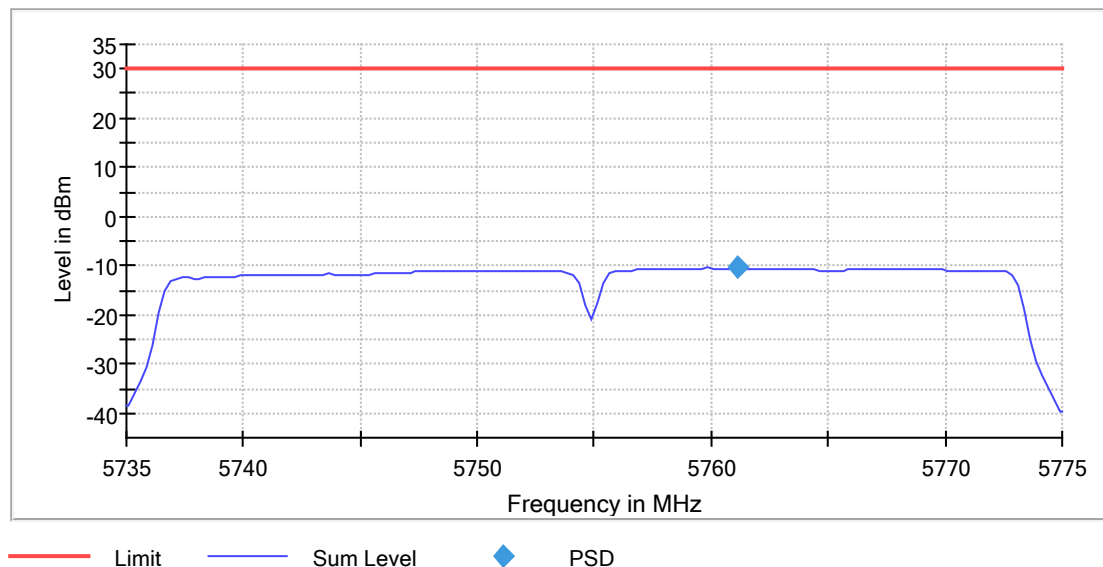
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5755.000000	5761.125000	-10.498	30.0	PASS

Ports

Port	Duty Cycle (%)
1	94.561



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.73500 GHz	5.73500 GHz
Stop Frequency	5.77500 GHz	5.77500 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	<= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	160	~ 160
SweepTime	3.200 s	3.200 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

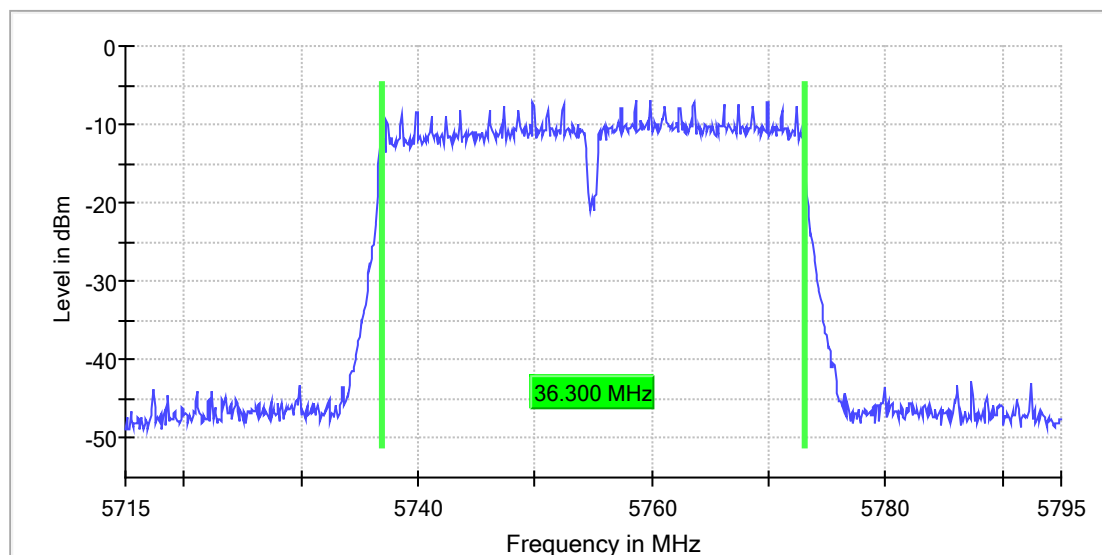
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	36.300000	0.500000	---	5736.850000	5773.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5755.000000	-6.8	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.71500 GHz	5.71500 GHz
Stop Frequency	5.79500 GHz	5.79500 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
SweepTime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	39 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.23 dB	0.30 dB

Occupied Channel Bandwidth 99% (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

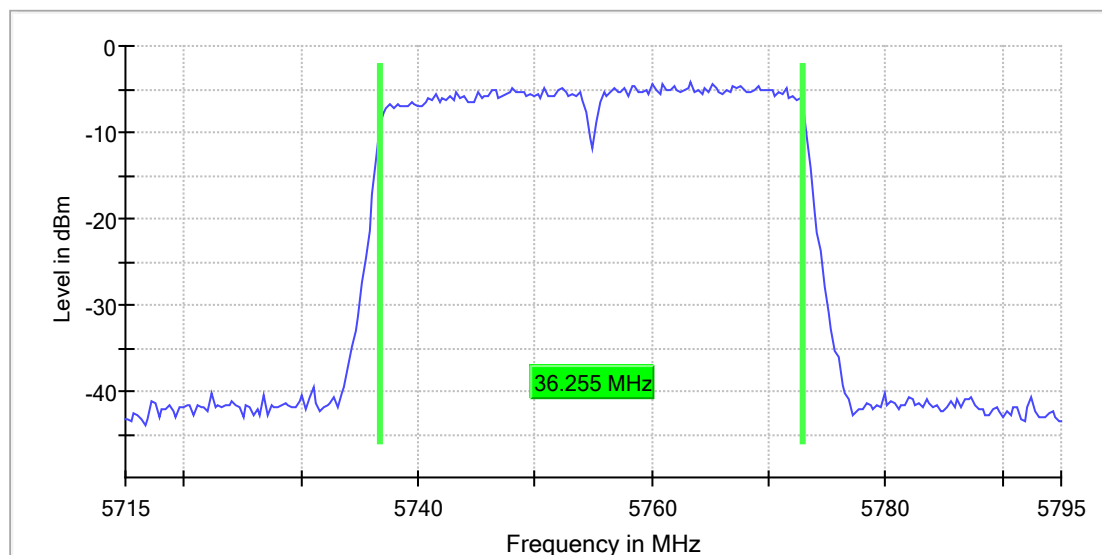
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	36.254682	---	---	5736.722846	5772.977528

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5755.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.71500 GHz	5.71500 GHz
Stop Frequency	5.79500 GHz	5.79500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	24 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.03 dB	0.30 dB

Band Edge low (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

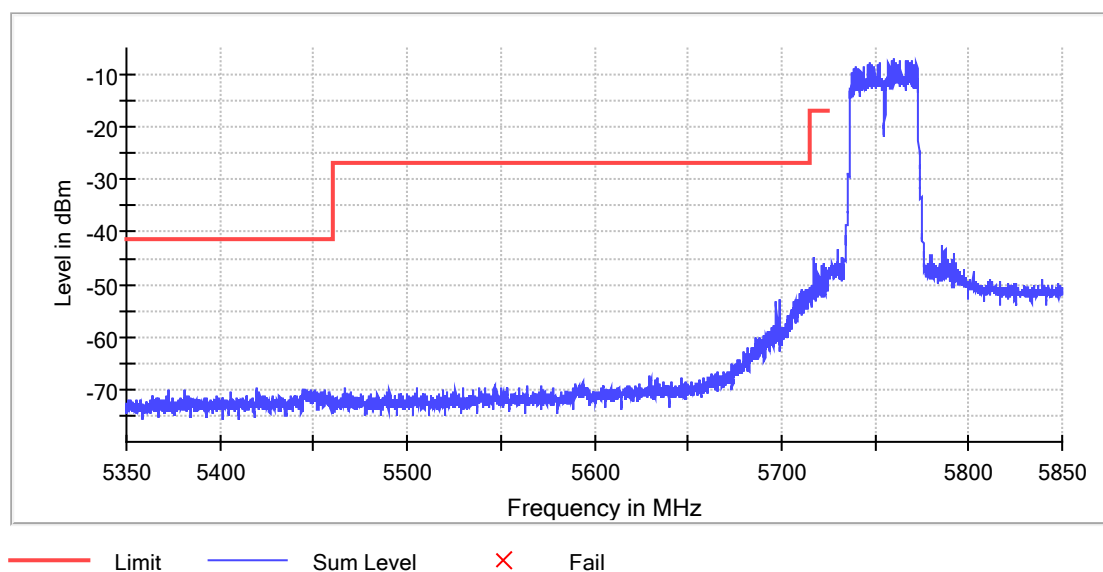
DUT Frequency (MHz)	Result
5755.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5759.875000	-6.9

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
5710.825000	-50.8	23.8	-27.0	PASS
5713.875000	-50.8	23.8	-27.0	PASS
5714.225000	-50.9	23.9	-27.0	PASS
5714.175000	-51.0	24.0	-27.0	PASS
5710.775000	-51.1	24.1	-27.0	PASS
5713.625000	-51.1	24.1	-27.0	PASS
5712.975000	-51.1	24.1	-27.0	PASS
5714.525000	-51.2	24.2	-27.0	PASS
5713.925000	-51.2	24.2	-27.0	PASS
5713.025000	-51.2	24.2	-27.0	PASS
5713.675000	-51.3	24.3	-27.0	PASS
5711.125000	-51.3	24.3	-27.0	PASS
5710.875000	-51.3	24.3	-27.0	PASS
5712.125000	-51.3	24.3	-27.0	PASS
5711.075000	-51.5	24.5	-27.0	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.72500 GHz	5.72500 GHz
Stop Frequency	5.85000 GHz	5.85000 GHz
Span	125.000 MHz	125.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2500	~ 2500
SweepTime	284.766 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	36 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.47 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	5.35000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.72500 GHz
Span	375.000 MHz	375.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	7500	~ 7500
SweepTime	835.313 μ s	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

Emission Bandwidth 26 dB (5795 MHz; 20.000 dBm; 40 MHz)

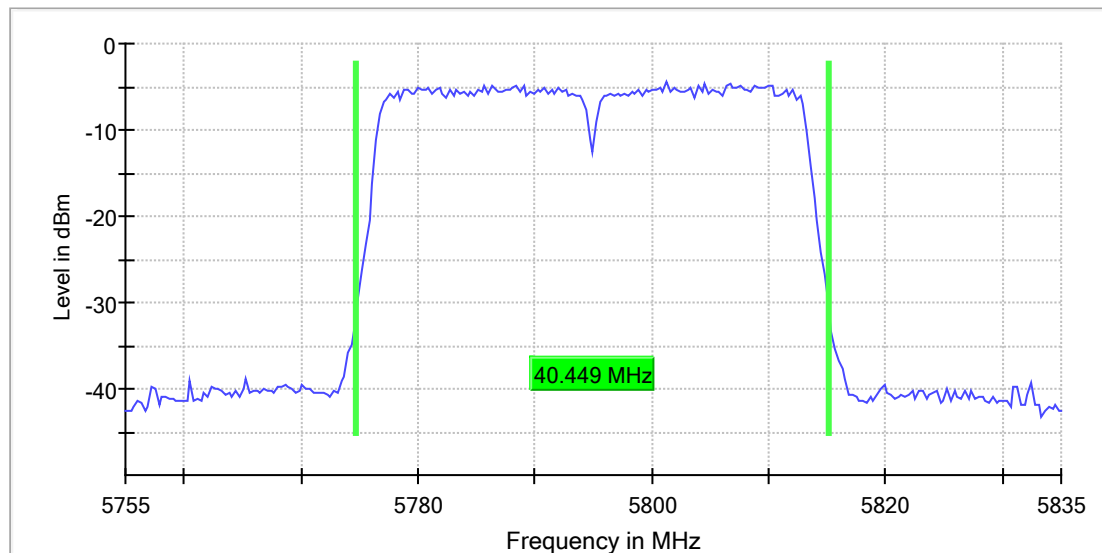
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

26 dB Bandwidth

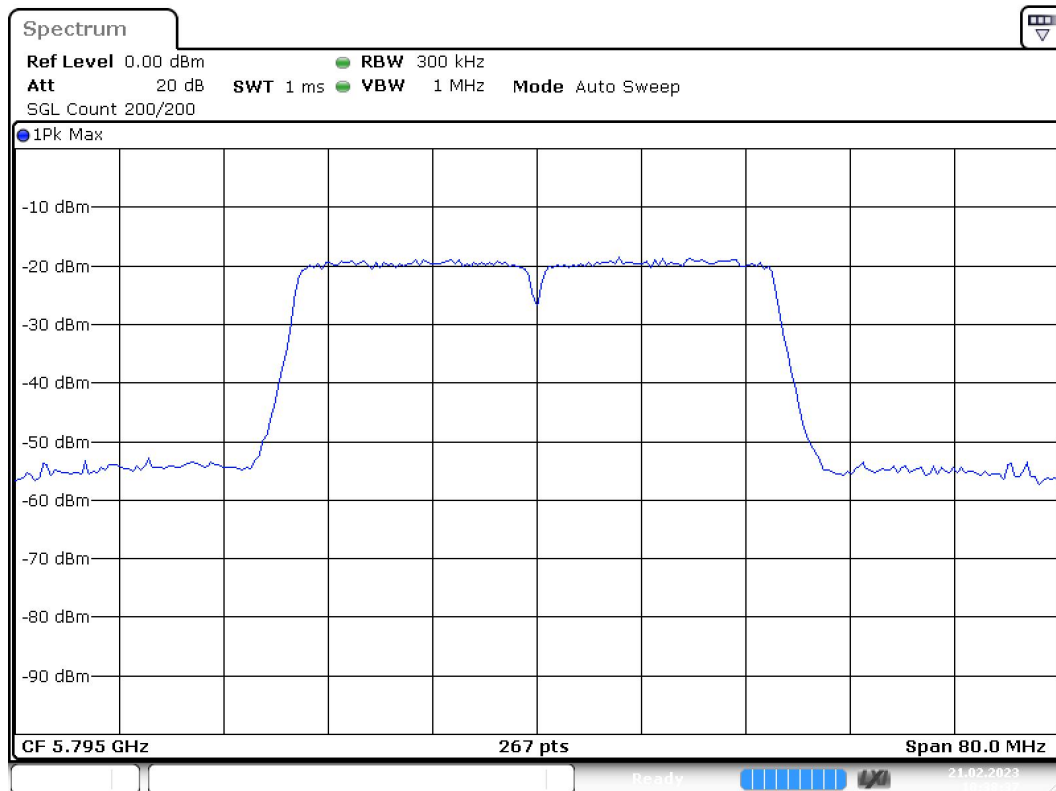
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	40.449438	---	---	5774.625468	5815.074906

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5795.000000	-4.4	PASS



Bandwidth



Date: 21.FEB.2023 10:38:38

Measurement

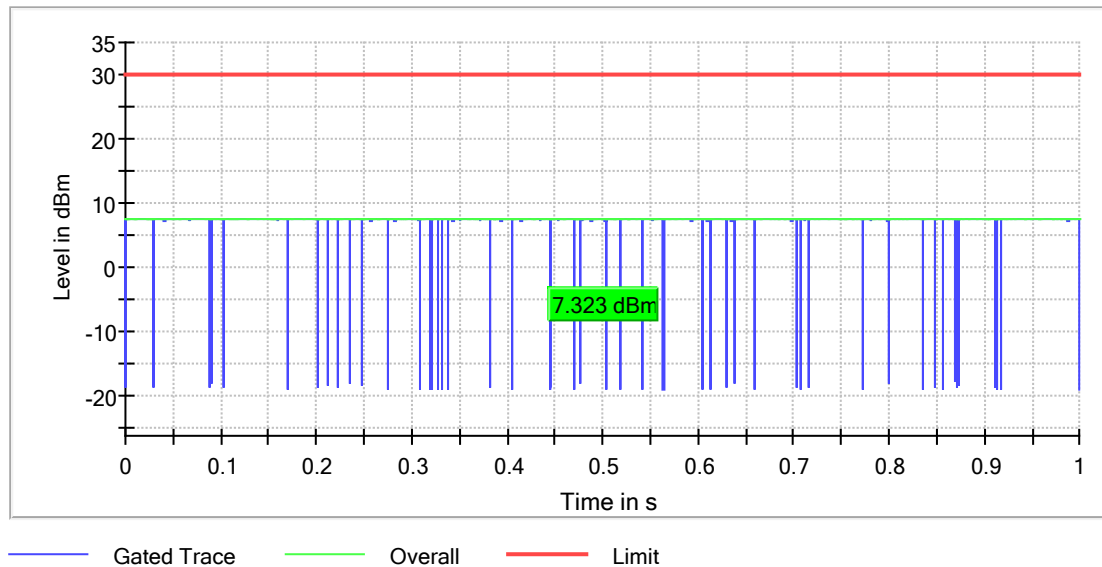
Setting	Instrument Value	Target Value
Start Frequency	5.75500 GHz	5.75500 GHz
Stop Frequency	5.83500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	~ 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	64 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.17 dB	0.30 dB

RF output power (5795 MHz; 20.000 dBm; 40 MHz)

Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5795.000000	7.3	30.0	7.3	100.000	PASS



Power Spectral Density (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

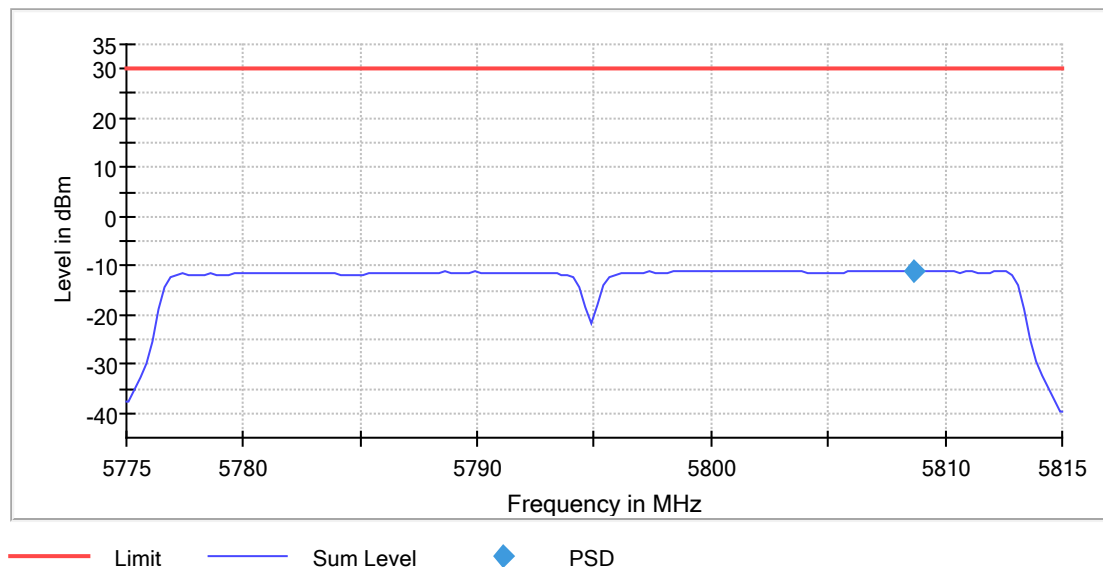
Test according to FCC title 47 part 15 §15.407(a), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5795.000000	5808.625000	-11.016	30.0	PASS

Ports

Port	Duty Cycle (%)
1	94.562



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.77500 GHz	5.77500 GHz
Stop Frequency	5.81500 GHz	5.81500 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	<= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	160	~ 160
SweepTime	3.200 s	3.200 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB

Run	2 / max. 15	max. 15
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.30 dB

Minimum Emission Bandwidth 6 dB (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

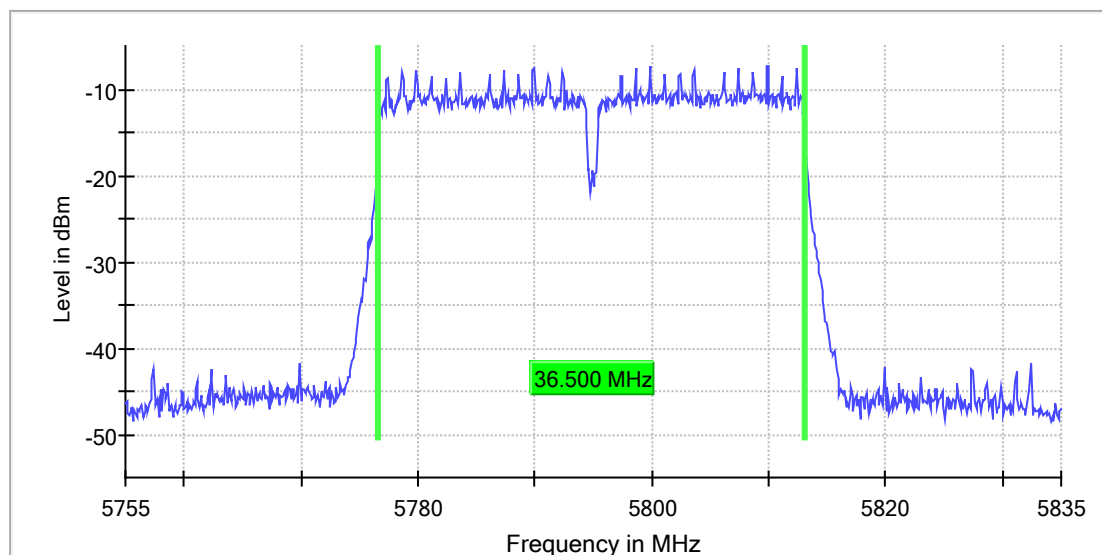
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	36.500000	0.500000	---	5776.650000	5813.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5795.000000	-7.3	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.75500 GHz	5.75500 GHz
Stop Frequency	5.83500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
SweepTime	1.070 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace

Stablevalue	0.30 dB	0.30 dB
Run	28 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.24 dB	0.30 dB

Occupied Channel Bandwidth 99% (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

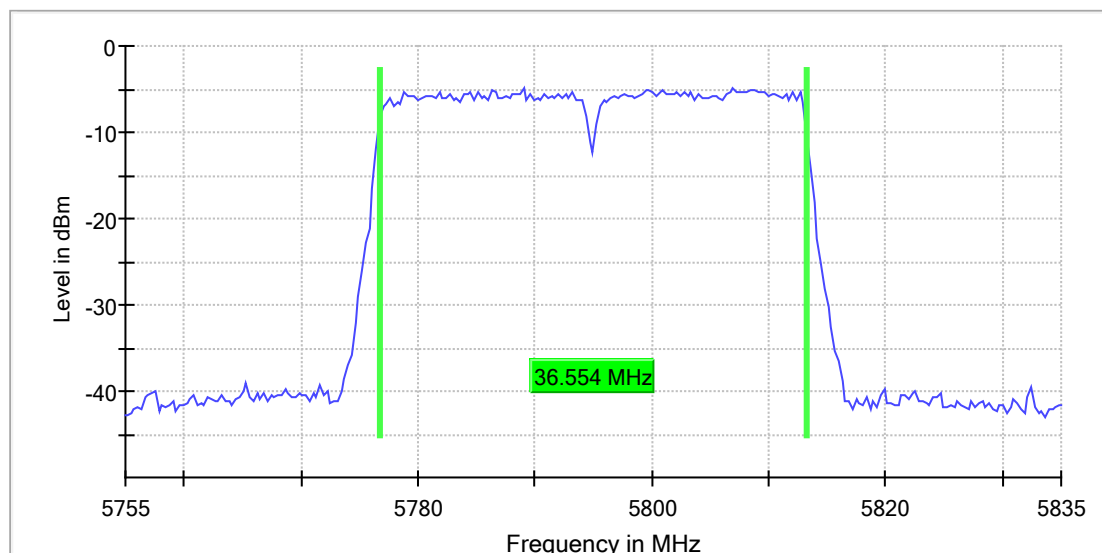
Test according to FCC title 47 part 15 §15.407(a),(e), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	36.554308	---	---	5776.722846	5813.277154

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
5795.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.75500 GHz	5.75500 GHz
Stop Frequency	5.83500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	<= 400.000 kHz
VBW	1.000 MHz	>= 900.000 kHz
SweepPoints	267	~ 267
SweepTime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	27 / max. 150	max. 150

Stable	1 / 1	1
Max Stable Difference	0.01 dB	0.30 dB

Band Edge high (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10

Result

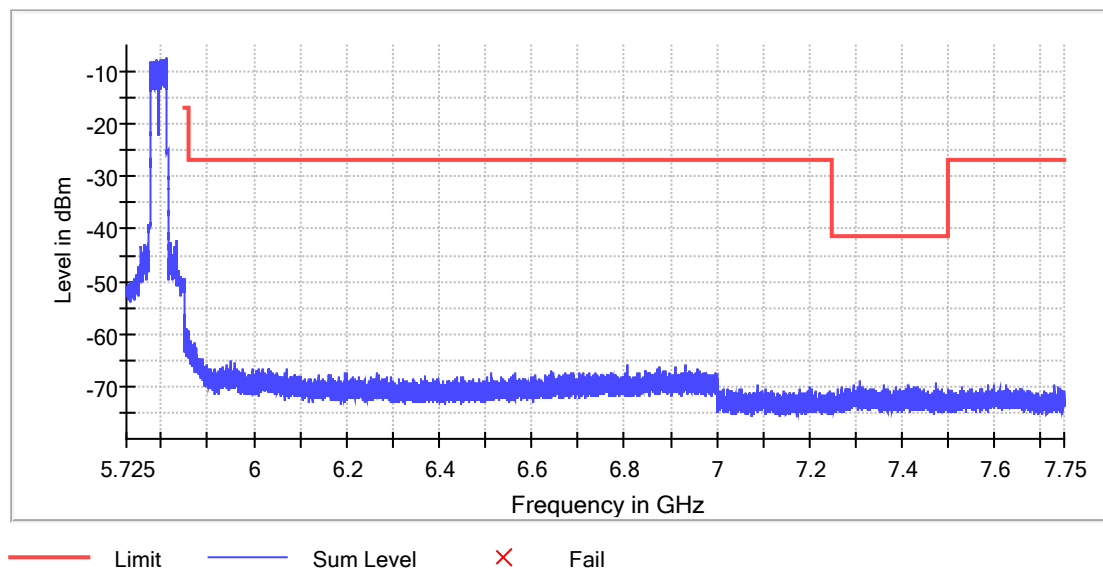
DUT Frequency (MHz)	Result
5795.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
5809.875000	-7.3

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
7308.375000	-69.0	27.8	-41.2	PASS
7474.225000	-69.3	28.1	-41.2	PASS
7474.275000	-69.3	28.1	-41.2	PASS
7294.525000	-69.7	28.5	-41.2	PASS
7361.725000	-69.8	28.5	-41.2	PASS
7412.475000	-69.8	28.6	-41.2	PASS
7361.675000	-69.9	28.6	-41.2	PASS
7434.725000	-69.9	28.7	-41.2	PASS
7308.325000	-70.0	28.7	-41.2	PASS
7295.525000	-70.0	28.8	-41.2	PASS
7314.725000	-70.0	28.8	-41.2	PASS
7424.875000	-70.1	28.8	-41.2	PASS
7269.875000	-70.1	28.9	-41.2	PASS
7428.825000	-70.1	28.9	-41.2	PASS
7388.175000	-70.1	28.9	-41.2	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	5.72500 GHz	5.72500 GHz
Stop Frequency	5.85000 GHz	5.85000 GHz
Span	125.000 MHz	125.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2500	~ 2500
SweepTime	284.766 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	27 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.48 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	5.85000 GHz	5.85000 GHz
Stop Frequency	6.40000 GHz	6.40000 GHz
Span	550.000 MHz	550.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	11000	~ 11000
SweepTime	11.000 ms	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	2 / max. 150	max. 150
Stable	1 / 1	1
Max Stable Difference	0.00 dB	0.50 dB

FCC 15.407 2015

DUT Information

Frequencies

WLAN CH 38 (5190 MHz)	WLAN CH 46 (5230 MHz)	WLAN CH 151 (5755 MHz)
WLAN CH 159 (5795 MHz)	WLAN CH 54 (5270 MHz)	WLAN CH 62 (5310 MHz)
WLAN CH 102 (5510 MHz)	WLAN CH 110 (5550 MHz)	WLAN CH 118 (5590 MHz)
WLAN CH 134 (5670 MHz)		

Bandwidths

40 MHz (40 MHz)

Power

20.000 dBm (20 dBm)

Beamforming Gain

Powerstep name (value)	Beamforming gain table names
20.000 dBm (20 dBm)	BFG_'20.000 dBm'_0.000dB;

Gain Tables

Powerstep name (value)	Gain table names
20.000 dBm (20 dBm)	Port 1: 0dBi;

DUT Settings

No. of transmission chains	1
DFS capability	Yes
DFS Mode	Master
Equipment Type	Portable
TPC	No

Hardware Setup: WMS Measurements\Hardware Setup

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.111::INST0::INSTR), SN 1321.3008K39/101229, FW 3.40
Vector Generator:	VG SMBV100B (VG SMBV100B) @ VISA (ADR TCPIP::192.168.48.29::INST0::INSTR), SN 101685, FW 4.70.006.33
Generator:	SMB100Aa (SMB100A) @ VISA (ADR TCPIP::192.168.48.30::INST0::INSTR), SN 177894, FW / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W (OSP-B157W) @ VISA (ADR TCPIP::192.168.48.157::INST0::INSTR), SN 1527.1144. /, FW 1.23.0.2

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Tx Spurious Emission	5755.000	20.0	40.000000	PASS
Tx Spurious Emission	5795.000	20.0	40.000000	PASS

Tx Spurious Emission (5755 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5755.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
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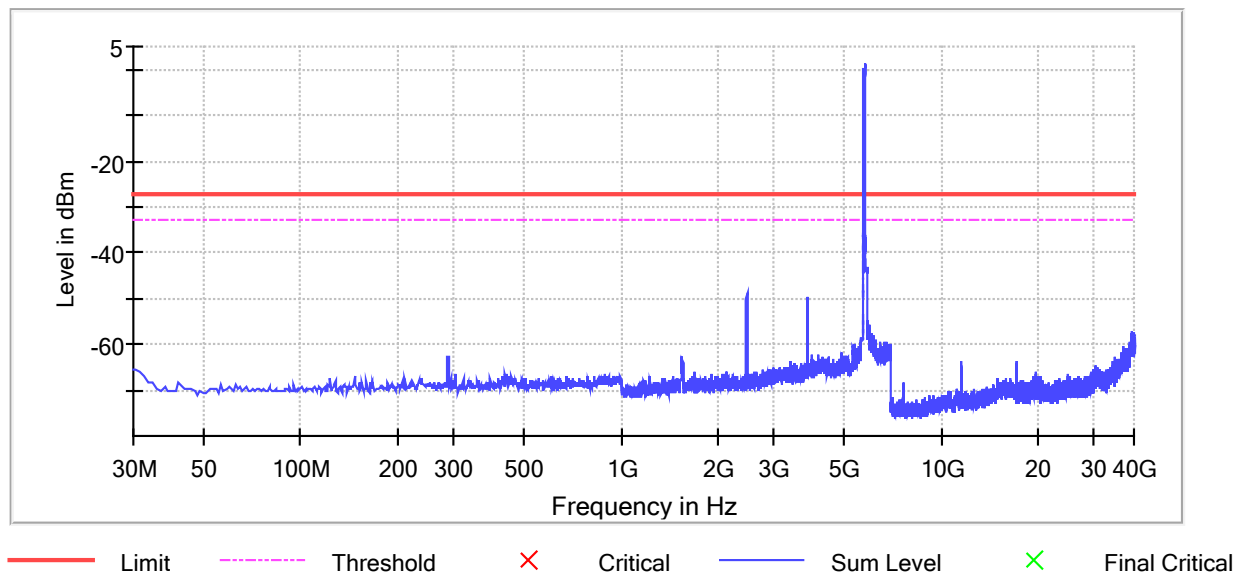
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5723.500000	-38.1	11.1	-27.0
5724.500000	-38.2	11.2	-27.0
5722.500000	-38.8	11.8	-27.0
5721.500000	-38.9	11.9	-27.0
5716.500000	-38.9	11.9	-27.0
5719.500000	-38.4	11.4	-27.0
5718.500000	-38.7	11.7	-27.0
5715.500000	-38.9	11.9	-27.0
5720.500000	-39.4	12.4	-27.0
5717.500000	-39.4	12.4	-27.0
5713.500000	-39.6	12.6	-27.0
5714.500000	-39.8	12.8	-27.0
5710.500000	-40.4	13.4	-27.0
5708.500000	-40.6	13.6	-27.0
5709.500000	-40.9	13.9	-27.0

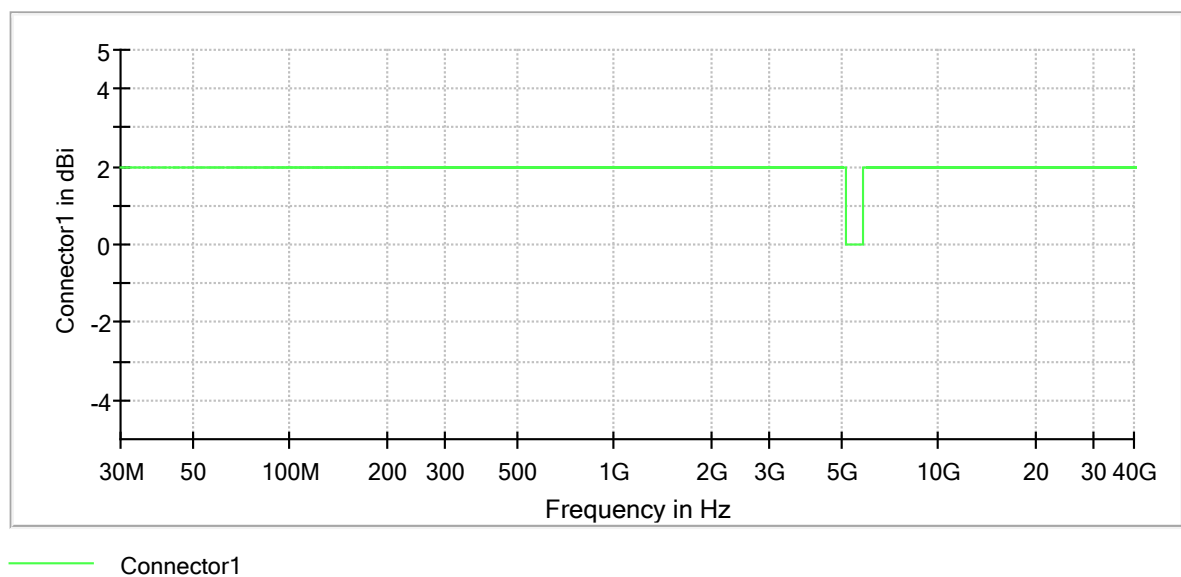
Measurement Settings

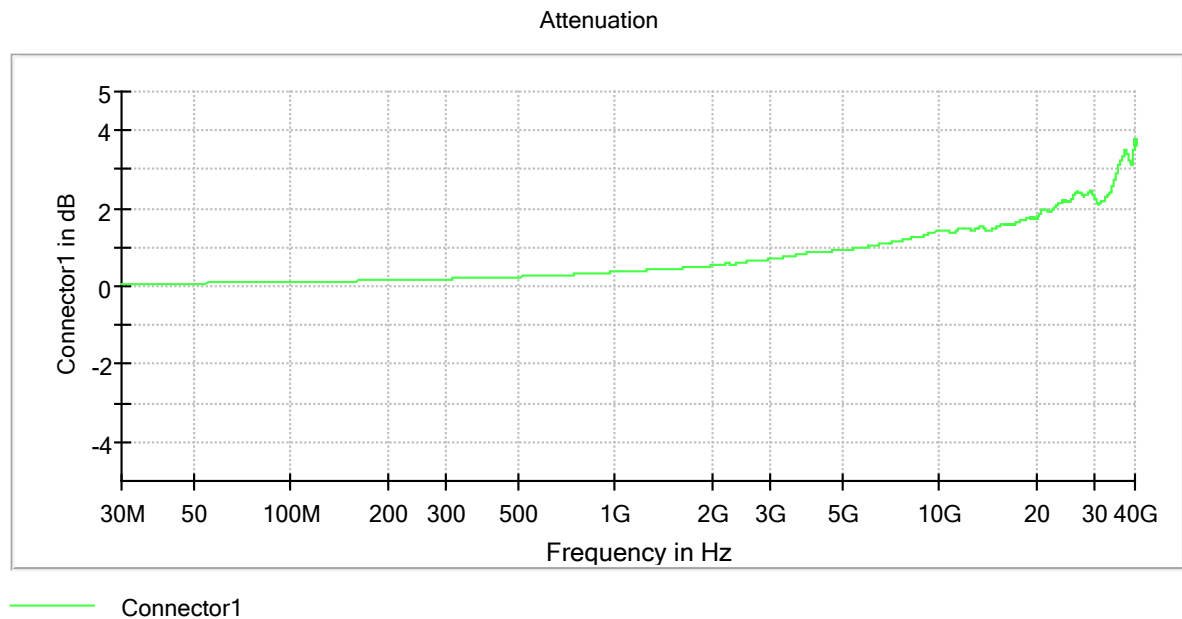
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Gain





Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Tx Spurious Emission (5795 MHz; 20.000 dBm; 40 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.407(b), KDB 789033 D02 General U-NII Test Procedures New Rules v01r03 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result
5795.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
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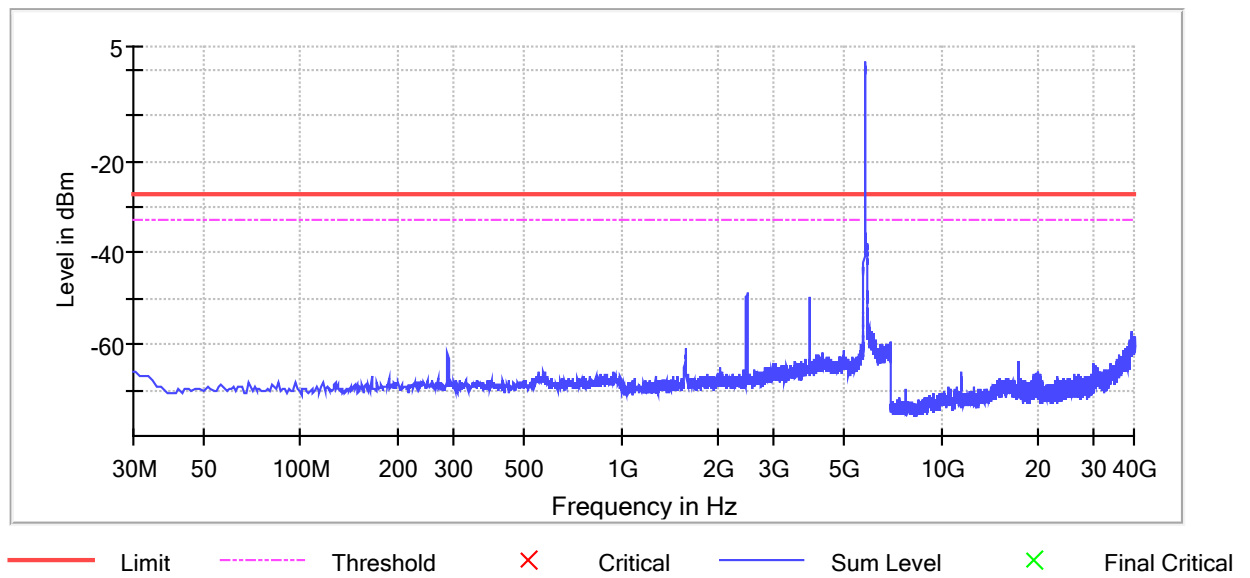
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5855.500000	-48.1	21.1	-27.0
5856.500000	-48.7	21.7	-27.0
2471.500000	-48.7	21.7	-27.0
2472.500000	-48.8	21.8	-27.0
5859.500000	-49.0	22.0	-27.0
2470.500000	-49.0	22.0	-27.0
5858.500000	-49.2	22.2	-27.0
5860.500000	-49.3	22.3	-27.0
5863.500000	-49.4	22.4	-27.0
5853.500000	-49.6	22.6	-27.0
2469.500000	-49.6	22.6	-27.0
2473.500000	-49.7	22.7	-27.0
5852.500000	-49.7	22.7	-27.0
3863.500000	-49.7	22.7	-27.0
5851.500000	-49.9	22.9	-27.0

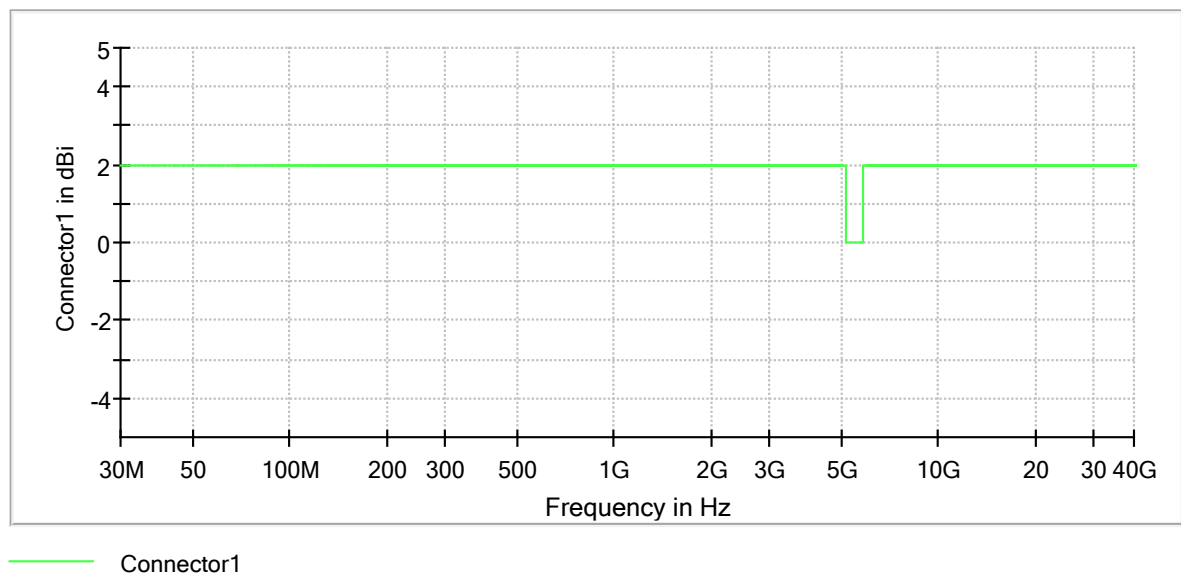
Measurement Settings

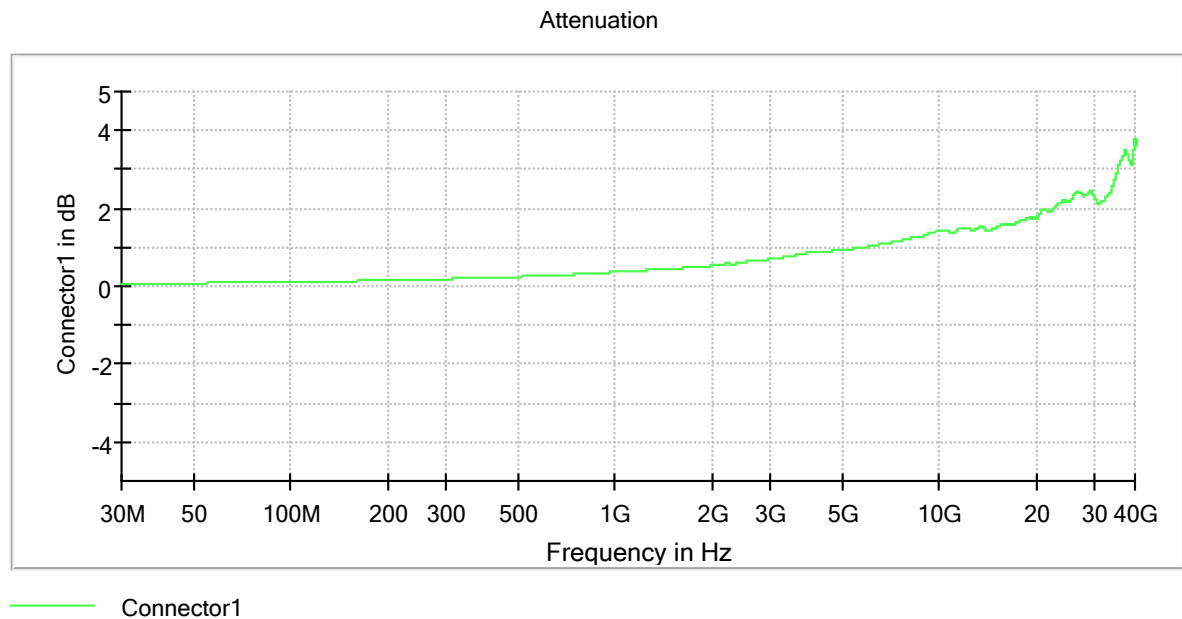
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	5150.000000	2	2
5150.000000	5250.000000	2	2
5250.000000	5350.000000	2	2
5350.000000	5470.000000	2	2
5470.000000	5725.000000	2	2
5725.000000	5850.000000	2	2
5850.000000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2
26000.000000	40000.000000	2	2

Spurious



Gain





Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	970	~ 970
SweepTime	194.000 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	QuasiPeak
SweepCount	3	3
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	≤ 1.000 MHz
VBW	3.000 MHz	≥ 3.000 MHz
SweepPoints	4150	~ 4150
SweepTime	4.150 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB