DEKRA Testing and Certification, S.A.U.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2 · 29590 Campanillas · Málaga · España
C.I.F. A29507456

ISED CABid: ES1909

Test Report No:
NIE: 67442RRF.007

Partial Test Report

USA FCC Part 15.407, 15.209

CANADA RSS-247, RSS-Gen

(*) Identification of item tested	Communications Device
(*) Trademark	Ring LLC
(*) Model and / or type reference	5AT3T3
Other identification of the product	FCC ID: 2AEUPBHAXN001 IC: 20271-BHAXN001
(*) Features	--
Applicant	Ring LLC 1523 26th Street, Santa Monica, 90404, California, United States of America
Test method requested, standard	USA FCC Part 15.407 (10-1-20) Edition: Unlicensed National Information Infrastructure (U-NII) Devices. General technical requirements. USA FCC Part 15.209 (10-1-20) Edition: Radiated emission limits; general requirements. CANADA RSS-247 Issue 2 (February 2017). CANADA RSS-Gen Issue 5 Amendment 1 (March 2019). Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices 789033 D02 General U-NII Test Procedures New Rules v02r01 dated Dec 14, 2017. Guidance for Emission Testing of Transmitters with Multiple Outputs in the Same Band 662911 D01 Multiple Transmitter Output v02r01 dated 10/31/2013 ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.
Approved by (name / position & signature)	José Manuel Gómez Industrial & Automotive EMC Lab. Manager Firmado digitalmente por 53680346W JOSE MANUEL GOMEZ (C:A29507456) Fecha: 2021.08.27 11:41:57 +02'00'
Date of issue	2021-08-27
Report template No	FDT08_23 (*) “Data provided by the client”

Index

Competences and guarantees

DEKRA Testing and Certification S.A.U. is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 51/LE 147.

DEKRA Testing and Certification S.A.U. is an FCC-recognized accredited testing laboratory with the appropriate scope of accreditation that covers the performed test in this report.

DEKRA Testing and Certification S.A.U. is an ISED-recognized accredited testing laboratory, CABid: ES1909, with the appropriate scope of accreditation that covers the performed tests in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification S.A.U. has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification S.A.U. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification S.A.U. at the time of performance of the test.

DEKRA Testing and Certification S.A.U. is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

General Conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification S.A.U.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification S.A.U. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor k=2) was calculated according to the DEKRA Testing and Certification S.A.U. internal document PODT000.

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").

2. The sample of the model 5AT3T3 is a communications device with wireless technologies.

DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of result.

Usage of samples

Samples undergoing test have been selected by: The client.

- Sample S/01 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Reception
67442/029	Communications Device	5AT3T3	GCB1ES001136000G	2021/05/03

Auxiliary elements used with the Sample S/01:

Control Nº	Description	Model	Serial Nº	Reception
67442/020	AC/DC Power Adapter	DSA-36PDB FUS	GB51PR011077003M	2021/04/13

Sample S/01 has undergone the test(s): The SISO WLAN1 Radiated tests indicated in the Appendix A.

- Sample S/02 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Reception
67442/017	Communications Device	5AT3T3	GCB1ES0012150057	2021/04/13

Auxiliary elements used with the Sample S/02:

Control Nº	Description	Model	Serial Nº	Reception
67442/019	AC/DC Power Adapter	DSA-36PDB FUS	GB51PR011077003L	2021/04/13

Sample S/02 has undergone the test(s): The MIMO WLAN12 Radiated tests indicated in the Appendix A.

- Sample S/03 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Reception
67442/029	Communications Device	5AT3T3	GCB1ES001136000G	2021/05/03

Auxiliary elements used with the Sample S/03:

Control Nº	Description	Model	Serial Nº	Reception
67442/020	AC/DC Power Adapter	DSA-36PDB FUS	GB51PR011077003M	2021/04/13

Sample S/03 has undergone the test(s): The MIMO WLAN12 Radiated tests indicated in the Appendix A.

- Sample S/04 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Reception
67442/028	Communications Device	5AT3T3	GCB1ES0011360001	2021/05/03

Auxiliary elements used with the Sample S/04:

Control Nº	Description	Model	Serial Nº	Reception
67442/018	AC/DC Power Adapter	DSA-36PDB FUS	GB51PR011077003K	2021/04/13

Sample S/04 has undergone the test(s): All Conducted tests indicated in the Appendix A.

Test sample description

Ports…… :	Port name and description	Cable					
		Specified max length [m]	Attached during test	Shielded	Coupled to patient		
	AC power port	>3m	Yes	No			
	USB power port	<3m	Yes	Yes			
	Ethernet ports	>3m	Yes	No			
Supplementary information to the ports…… :							
Rated power supply .....:	Voltage and Frequency			Reference poles			
				L1	L2	L3	N	PE
	X	AC: 110V (60Hz).		X			X	
	X	DC: 12V, 3A						
Rated Power .....:	Not provided.						
Clock frequencies.....:	Not provided.						
Other parameters .....:	Not provided.						
Software version .....:	Not provided.						
Hardware version .....:	Not provided.						
Dimensions in cm (W x H x D) ....:	Not provided.						
Mounting position .....:	X	Table top equipment					
		Wall/Ceiling mounted equipment					
		Floor standing equipment					
		Hand-held equipment					
		Other:					
Modules/parts.....:	Module/parts of test item			Type		Manufacturer	
Accessories (not part of the test item) .....:	Description			Type		Manufacturer	
Documents as provided by the applicant .....:	Description			File name		Issue date	

Identification of the client

Ring LLC

1523 26th Street, Santa Monica, 90404, California, United States

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2021-05-05
Date (finish)	2021-06-18

Document history

Report number	Date	Description
67442RRF.007	2021-08-27	First release.

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %

Remarks and comments

The tests have been performed by the technical personnel: Daniel Mejías, Jaime Barranquero and Antonio Manuel Sánchez.

Used instrumentation:

Radiated Measurements:

		Last Calibration	Due Calibration
1.	Semianechoic Absorber Lined Chamber ETS LINDGREN FACT 3 200 STP	N/A	N/A
2.	Shielded Room ETS LINDGREN S101	N/A	N/A
3.	Semianechoic Absorber Lined Chamber ALBATROSS P29419	2020/01	2023/01
4.	Shielded Room ALBATROSS PROJECTS GMBH P29419	N.A.	N.A.
5.	Hybrid Biconical/Log Antenna 30 MHz - 6 GHz ETS LINDGREN 3142E	2019/02	2022/02
6.	EMI Test Receiver 2 Hz - 44 GHz ROHDE AND SCHWARZ ESW44	2020/02	2022/02
7.	Horn Antenna 1-18 GHz SCHWARZBECK MESS-ELEKTRONIK BBHA 9120 D	2019/11	2022/11
8.	Horn Antenna 18 - 40 GHz SCHWARZBECK MESS-ELEKTRONIK BBHA 9170	2021/03	2024/03
9.	Preamplifier 30 dB 500MHz-18GHz, SCHWARZBECK BBV 9718 C	2021/02	2022/02
10.	Preamplifier G>30 dB 18-40GHz BONN ELEKTRONIK BLMA 1840-3G	2019/11	2021/11
11.	EMI Test Receiver 2Hz-44GHz, ROHDE AND SCHWARZ ESW44	2019/10	2021/10

Conducted Measurements

		Last Calibration	Due Calibration
1.	Shielded Room ETS LINDGREN S101	N/A	N/A
2.	Spectrum Analyzer 9kHz-6GHz ROHDE AND SCHWARZ FSL6	2021/04	2023/04
3.	Vector Signal Generator 100 KHz-6GHz ROHDE AND SCHWARZ SMU200A	2021/04	2023/04
4.	Signal Generator 9 KHz-6 GHz, ROHDE AND SCHWARZ SMB100A	2019/10	2021/10
5.	Open Switch and Control Platform ROHDE & SCHWARZ OSP-B157W8	2021/03	2023/03

Testing verdicts

Not applicable:	N/A
Pass:	P
Fail:	F
Not measured:	N/M

Summary

A. U-NII-1: 5.15 GHz – 5.25 GHz Band:

FCC PART 15 PARAGRAPH / RSS-247 Requirement – Test case		Verdict	Remark
FCC 15.407 (a)(1)(ii) / RSS-247 6.2.1.1	Transmitter Maximum Conducted Output Power Transmitter Maximum Equivalent Isotropically Radiated Power	P	
FCC 15.407 (a)(1)(ii) / RSS-247 6.2.1.1	Transmitter Maximum Power Spectral Density Transmitter EIRP Spectral Density	P	
FCC 15.407 (b)(1) / RSS-247 6.2.1.2	Transmitter Out of Band Radiated Emissions	P	
FCC 15.407 (b)(1) / RSS-247 6.2.1.2	Transmitter Band Edge Radiated Emissions	P	
Supplementary information and remarks: None.			

Appendix A: Tests results for the U-NII-1: 5.15 GHz – 5.25 GHz Band

INDEX

TEST CONDITIONS

(*) Declared by the Client.

POWER SUPPLY (*):

Vnominal:	110 Vac
Type of Power Supply:	AC/DC Adapter.

ANTENNA (*):

Type of Antennas:	Integral (stamped metal).
Maximum Declared Antenna Gain WLAN1 U-NII-1:	+3.5 dBi
Maximum Declared Antenna Gain WLAN2 U-NII-1:	+2.8 dBi

Directional Antenna Gain Calculations for CDD MIMO:

U-NII-1:

- For 2Tx CDD MIMO modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii), directional gain was calculated as (worst case):

  N_{SS} = 1, N_{ANT} = 2, G_{WLAN1} = 3.5 dBi, G_{WLAN2} = 2.8 dBi

$$\text{Directional Gain} = 10\log\left[\frac{\sum_{j=1}^{N_{SS}}\left(\sum_{k=1}^{N_{ANT}} g_{j,k}\right)^2}{N_{ANT}}\right] = 10\log\left[\frac{\sum_{j=1}^{1}\left(\sum_{k=1}^{3} g_{j,k}\right)^2}{2}\right]$$

$$= 10\log\left[\frac{\left(g_{1,1}+g_{1,2}\right)^2}{2}\right] = 10\log\left[\frac{\left(10^{\frac{G_1}{20}}+10^{\frac{G_2}{20}}\right)^2}{2}\right] = 10\log\left[\frac{\left(10^{\frac{2.8}{20}}+10^{\frac{3.5}{20}}\right)^2}{2}\right] = 6.17\ \text{dBi}$$

TEST FREQUENCIES (*):
U-NII-1 Band:

Technology Tested:	WLAN (IEEE 802.11 a20 / n2040 / ac204080 / ax204080 2x2)	
Modes:	802.11a: 6, 9, 12, 18, 24, 36, 48 & 54 Mbps (SISO, or MIMO with CDD)	
	802.11n HT20: MCS0 to MCS23 (1 or 2 spatial stream with either SISO or 2 chain MIMO CDD)	
	802.11n HT40: MCS0 to MCS23 (1 or 2 spatial stream with either SISO or 2 chain MIMO CDD)	
	802.11ac VHT20: MCS0 to MCS9 (1 or 2 spatial stream) (SISO, or MIMO with CDD without TxBF)	
	802.11ac VHT40: MCS0 to MCS9 (1 or 2 spatial stream) (SISO, or MIMO with CDD without TxBF)	
	802.11ac VHT80: MCS0 to MCS9 (1 or 2 spatial stream) (SISO, or MIMO with CDD without TxBF)	
	802.11ax HE20: MCS0 to MCS9 (1 or 2 spatial stream) (SISO, or MIMO with CDD without TxBF)	
	802.11ax HE40: MCS0 to MCS9 (1 or 2 spatial stream) (SISO, or MIMO with CDD without TxBF)	
	802.11ax HE80: MCS0 to MCS9 (1 or 2 spatial stream) (SISO, or MIMO with CDD without TxBF)	
Setting of cores / ports:	WLAN1, WLAN2, WLAN12	
Beamforming:	No.	
Frequency Range:	5150 - 5250 MHz	
Operating Channel Bandwidth:	20 MHz	
Transmission Channels:	Channels	Channel Frequency (MHz)
	Lowest (36)	5180
	Middle (40)	5200
	44	5220
	Highest (48)	5240
Operating Channel Bandwidth:	40 MHz	
Transmission Channels:	Channels	Channel Frequency (MHz)
	Lowest (38)	5190
	Highest (46)	5230
Operating Channel Bandwidth:	80 MHz	
Transmission Channels:	Channels	Channel Frequency (MHz)
	Single (42)	5210

POWER SETTINGS (*):

U-NII-1. FCC:

WLAN1

Channel	Frequency	11a	11n	11ac	11he
36	5180 MHz	24.5	24.5	24.5	24.5
40	5200 MHz	27	26.5	27	25
44	5220 MHz	30	25	29	25
48	5240 MHz	30	25	28.5	25.5
38	5190 MHz		19	18	18,5
46	5230 MHz		23.5	24.5	24.5
42	5210 MHz			19	19

WLAN2

Channel	Frequency	11a	11n	11ac	11he
36	5180 MHz	24	24	24	24
40	5200 MHz	27	27	27	26.5
44	5220 MHz	28	28	28	28
48	5240 MHz	30	30	30	30
38	5190 MHz		17	17.5	18
46	5230 MHz		25	25.5	25.5
42	5210 MHz			18	18

WLAN12

Channel	Frequency	11a	11n	11ac	11he
36	5180 MHz	24	24	24	24
40	5200 MHz	27	27	27	26.5
44	5220 MHz	28	28	28	28
48	5240 MHz	30	30	30	27.5
38	5190 MHz		17	17.5	18
46	5230 MHz		25	25.5	25.5
42	5210 MHz			18	18

U-NII-1. Canada:

WLAN1

Channel	Frequency	11a	11n	11ac	11he
36	5180 MHz	18.5	18.5	18.5	18.5
40	5200 MHz	18.5	18.5	18.5	18.5
44	5220 MHz	18.5	18.5	18.5	18.5
48	5240 MHz	18.5	18.5	18.5	18.5
38	5190 MHz		19	18	18.5
46	5230 MHz		18.5	18	18.5
42	5210 MHz			19	19

WLAN2

Channel	Frequency	11a	11n	11ac	11he
36	5180 MHz	18.5	18.5	18.5	18.5
40	5200 MHz	18.5	18.5	18.5	18.5
44	5220 MHz	18.5	18.5	18.5	18.5
48	5240 MHz	18.5	18.5	18.5	18.5
38	5190 MHz		17	17.5	18
46	5230 MHz		19	19	19.5
42	5210 MHz			18	18.5

WLAN12

Channel	Frequency	11a	11n	11ac	11he
36	5180 MHz	12.5	13	13	13
40	5200 MHz	12.5	13	13	13
44	5220 MHz	12.5	13	13	13
48	5240 MHz	12.5	13	13	13
38	5190 MHz		12	12.5	13
46	5230 MHz		12	12.5	13
42	5210 MHz			12.5	12.5

The test set-up was made in accordance to the general provisions of FCC Unlicensed National Information Infrastructure (U-NII) Devices 789033 D02 General U-NII Test Procedures New Rules v02r01 dated Dec 14, 2017.

The EUT was tested in the following operating mode:

- Continuously transmitting with a modulated carrier at maximum power in all required channels using the supported data rates/modulations types.

The field strength at the band edges was evaluated for each mode on the lowest and highest channels at the rated power for the channel under test.

For all modes, the EUT was configured in test mode using a software application. The application was used to enable a continuous transmission and to select the test channels as required. The client supplied instructions to configure the EUT. The customer supplied a document containing the setup instructions.

The worst-cases for testing were identified for output power and spurious levels at the band edges which were selected based on preliminary testing that correspond to next data rates:

- 802.11a:	6 Mbps SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11n HT20:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11n HT40:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11ac VHT20:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11ac VHT40:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11ac VHT80:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11ax HE20:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11ax HE40:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.
- 802.11ax HE80:	MCS0 SISO 1Tx on WLAN1 / MIMO 2Tx on WLAN12.

CONDUCTED MEASUREMENTS:

The equipment under test was set up in a shielded room and connected to the spectrum analyzer using a low loss RF cable. The reading in the spectrum analyzer is corrected taking into account the internal and external RF cable loss.

For all modes:

RADIATED MEASUREMENTS:

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna (Bilog antenna for the range between 30 MHz to 1000 MHz) and 1 GHz-18 GHz Double ridge horn antenna is situated at a distance of 3 m and a distance of 1 m for the frequency range 17 GHz-40 GHz (18 GHz-40 GHz horn antenna).

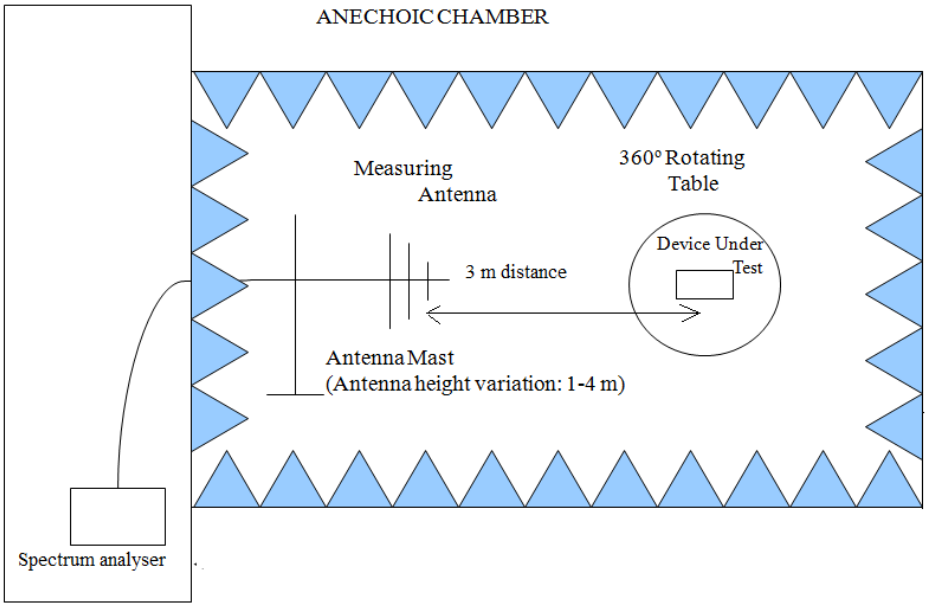
For radiated emissions in the range 17 GHz-40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360º and the antenna height (Bilog antenna and Double ridge horn antenna) was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

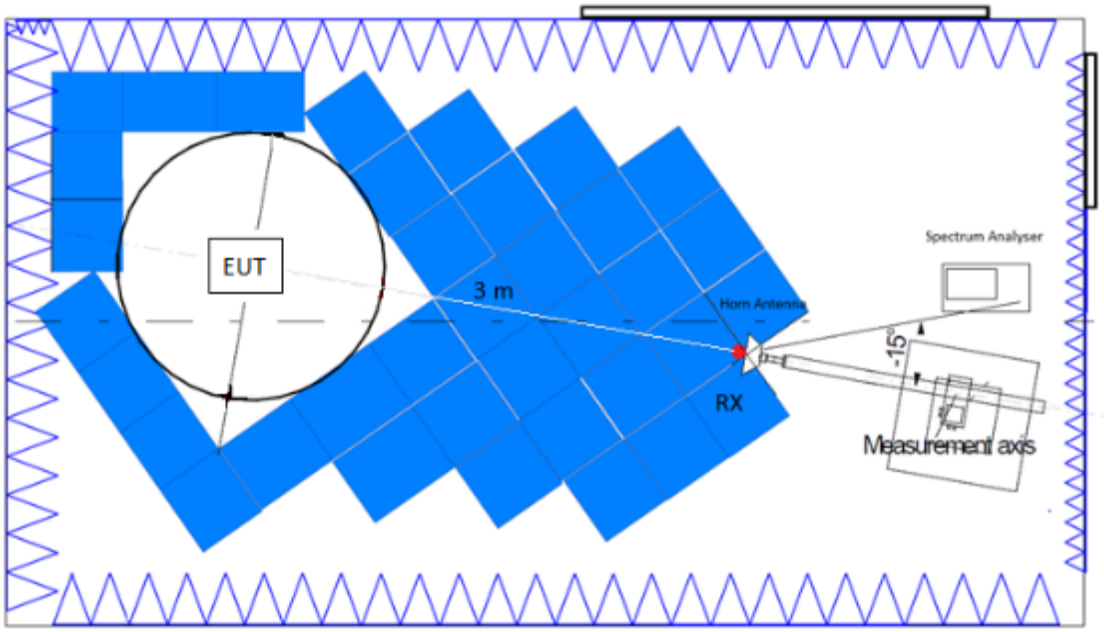
The final measured value, for the given emission, in the tables below incorporates the calibrated antenna factor and cable loss.

Radiated measurements setup f < 1 GHz:

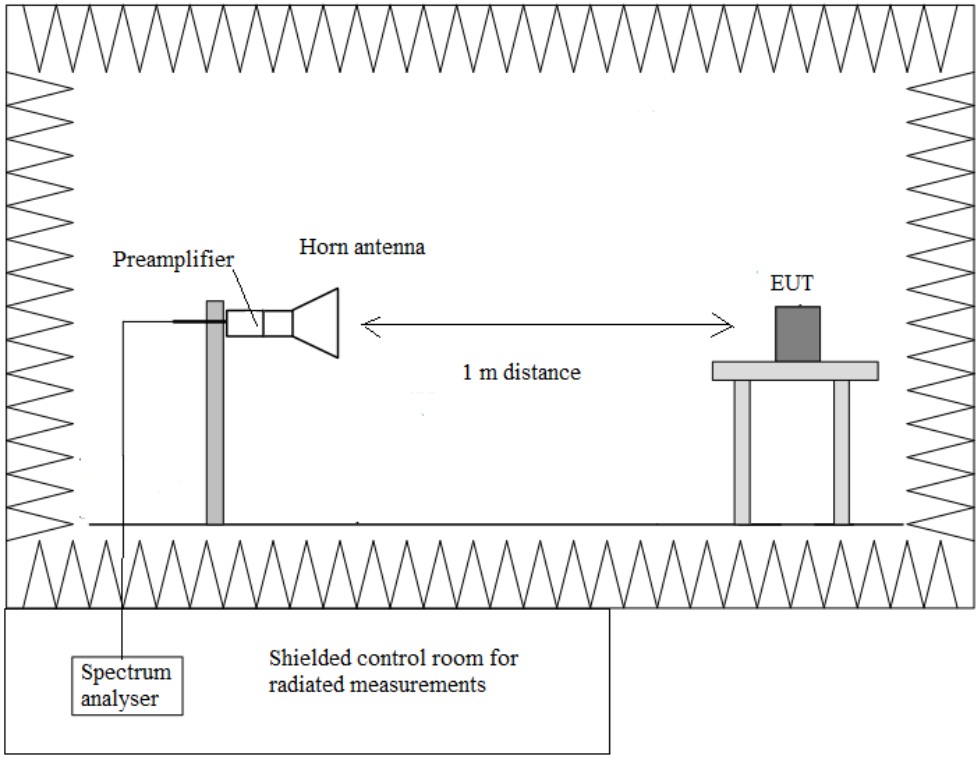


Shielded Control Room For Radiated Measurements

Radiated measurements setup from 1 GHz to 17 GHz:



Radiated measurements setup f > 17 GHz:



FCC 15.407 (a)(1)(ii) Transmitter Maximum Conducted Output Power / RSS-247 6.2.1.1 Transmitter Maximum Equivalent Isotropically Radiated Power

SPECIFICATION:

* FCC 15.407: For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

* RSS-247: For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

RESULTS:

The maximum conducted output power was measured using the method according to point E) 3) b) (Method PM-G) of 789033 D02 General UNII Test Procedures New Rules v02r01.

The e.i.r.p. levels are calculated by adding the declared maximum antenna gain (dBi).

- Preliminary tests determined the SISO worst-case: WLAN1.
- Preliminary tests determined the MIMO worst-case: WLAN12.

Maximum Declared Antenna Gain:

- SISO Antenna – WLAN1: +3.5 dBi
- MIMO Antennas – WLAN1 & WLAN2:
  - WLAN1: +3.5 dBi
  - WLAN2: +2.8 dBi
  - WLAN12: + 6.17 dBi

FCC power setting

SISO 802.11 a20:

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	24.3	27.0	28.8	28.7
Maximum EIRP Corrected Conducted Power (dBm)	27.8	30.5	32.3	32.2
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	23.9	26.2	24.7	24.8
Maximum EIRP Corrected Conducted Power (dBm)	27.4	29.7	28.2	28.3
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	23.9	26.7	28.8	28.6
Maximum EIRP Corrected Conducted Power (dBm)	27.4	30.2	32.3	32.1
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	23.7	24.5	24.6	25.3
Maximum EIRP Corrected Conducted Power (dBm)	27.2	28.0	28.1	28.8
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	19.5	24.1
Maximum EIRP Corrected Conducted Power (dBm)	23	27.6
Measurement uncertainty (dB)	<± 1 dB	

SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	18.4	25.1
Maximum EIRP Corrected Conducted Power (dBm)	21.9	28.6
Measurement uncertainty (dB)	<± 1 dB	

SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	18.6	24.7
Maximum EIRP Corrected Conducted Power (dBm)	22.1	28.2
Measurement uncertainty (dB)	<± 1 dB	

SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	19.3
Maximum EIRP Corrected Conducted Power (dBm)	22.8
Measurement uncertainty (dB)	<± 1 dB

SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	19.1
Maximum EIRP Corrected Conducted Power (dBm)	22.6
Measurement uncertainty (dB)	<± 1 dB

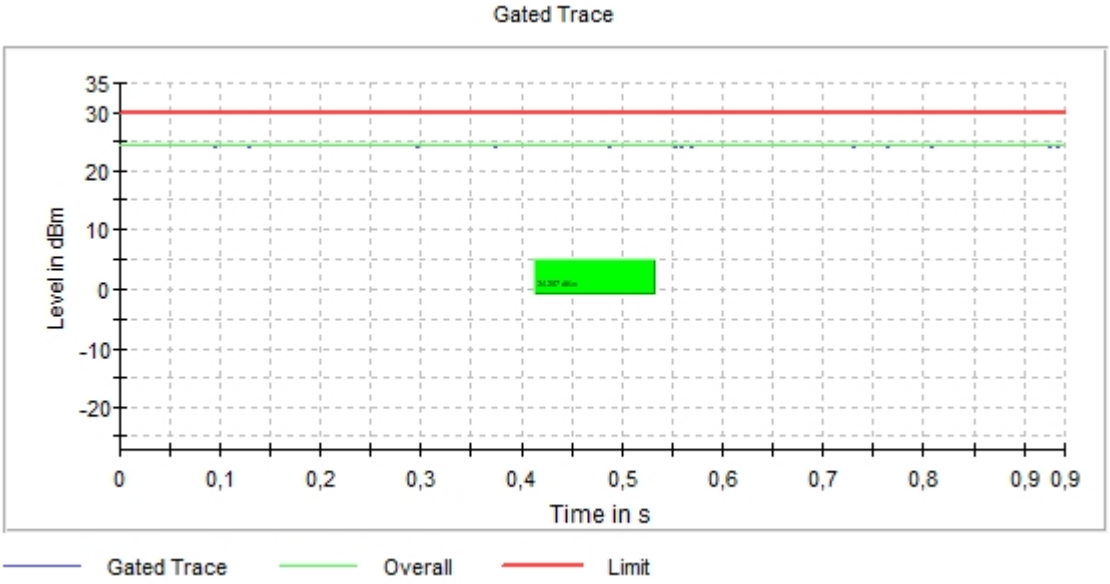
Verdict: PASS

SISO worst-case:

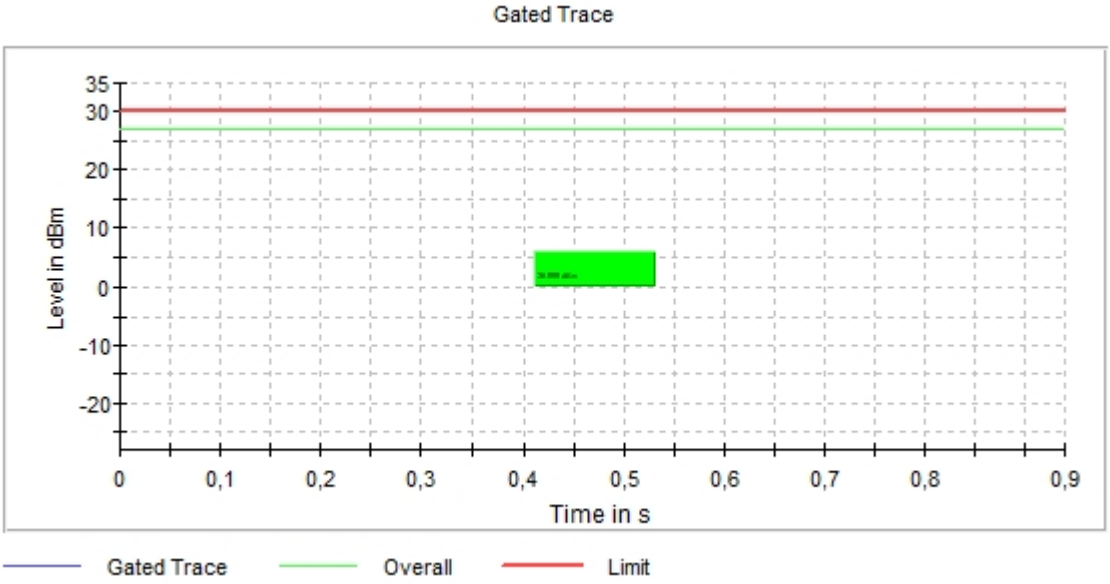
SISO 802.11 a20:

U-NII-1 (5150-5250 MHz)

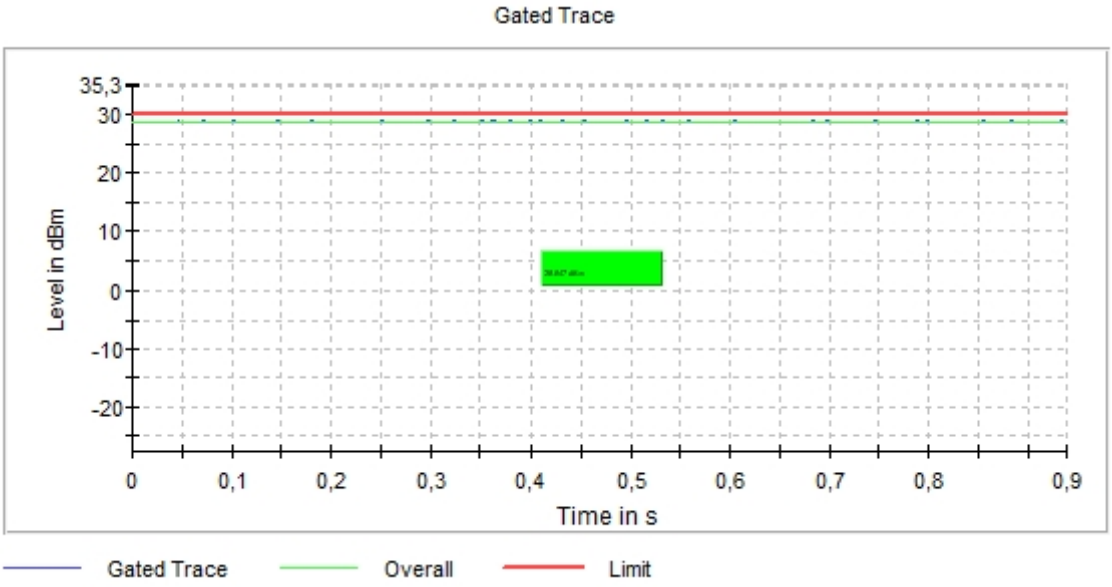
- Low Channel 36 (5180 MHz):



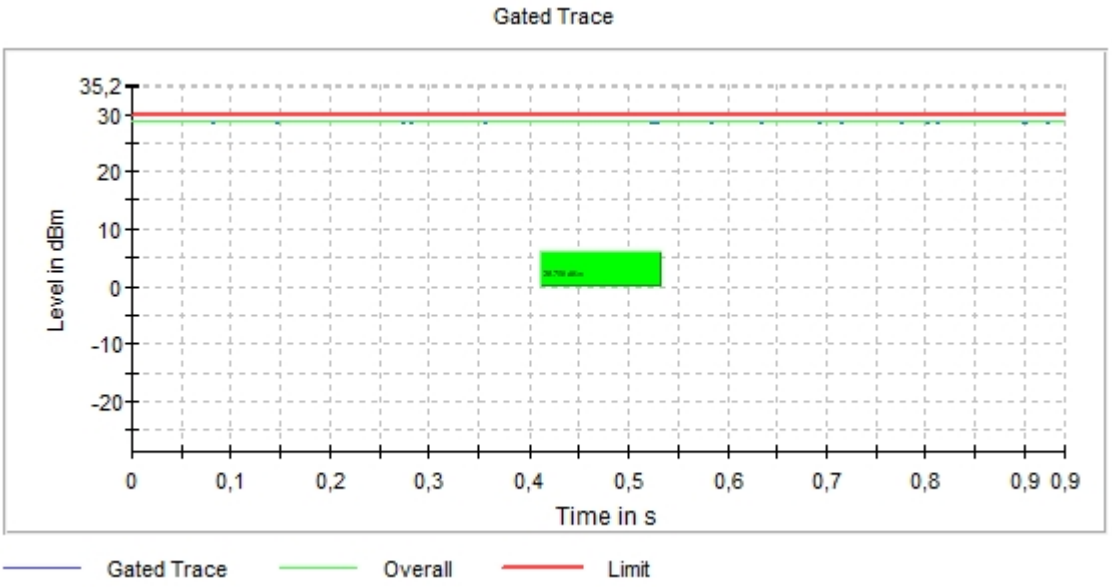
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



- High Channel 48 (5240 MHz):



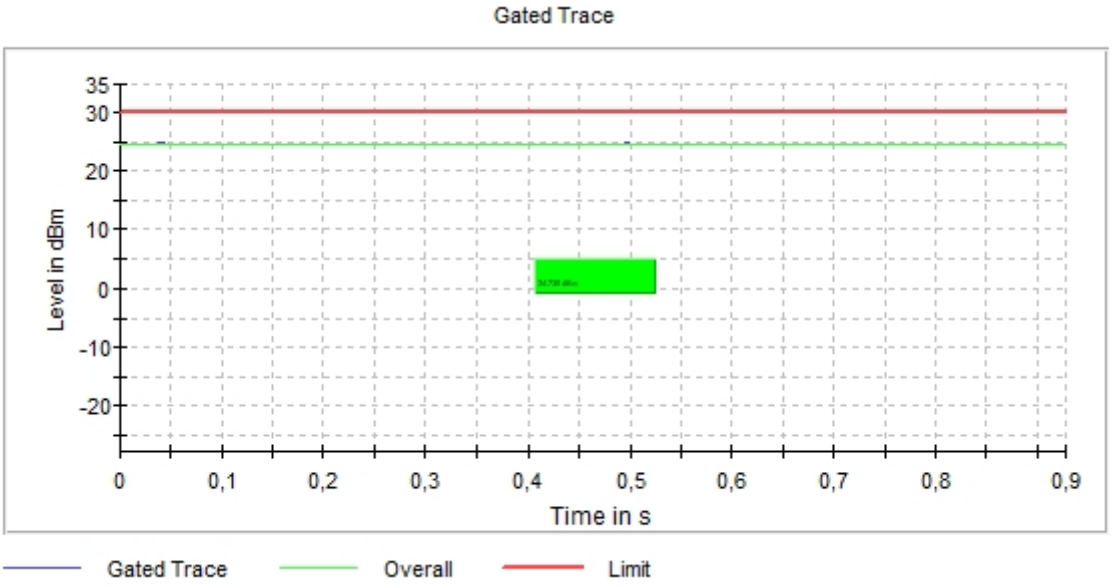
SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz)

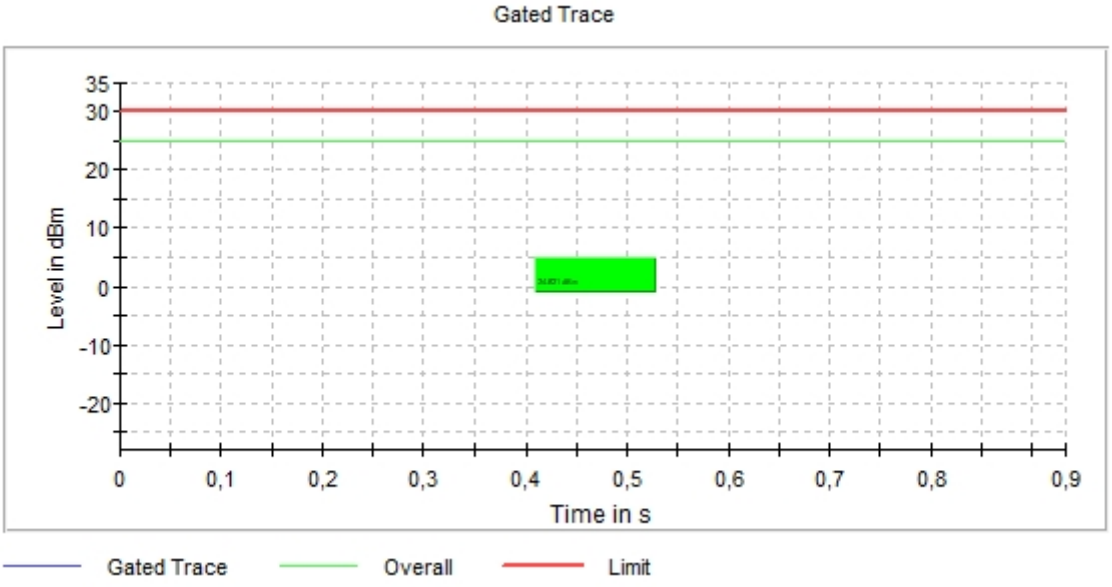
- Low Channel 36 (5180 MHz):

- Middle Channel 40 (5200 MHz):

- Channel 44 (5220 MHz):



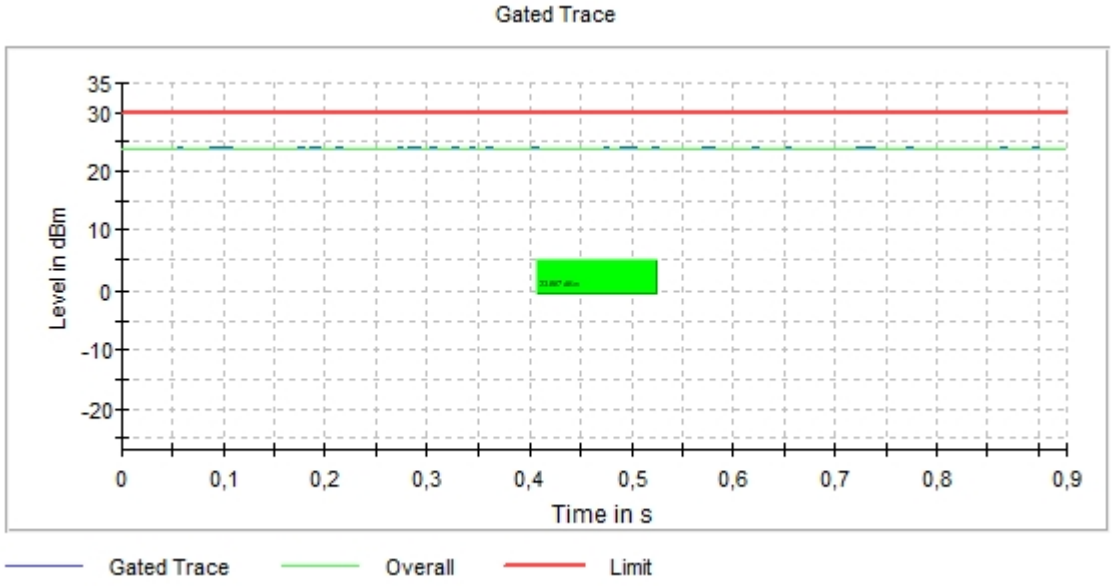
- High Channel 48 (5240 MHz):



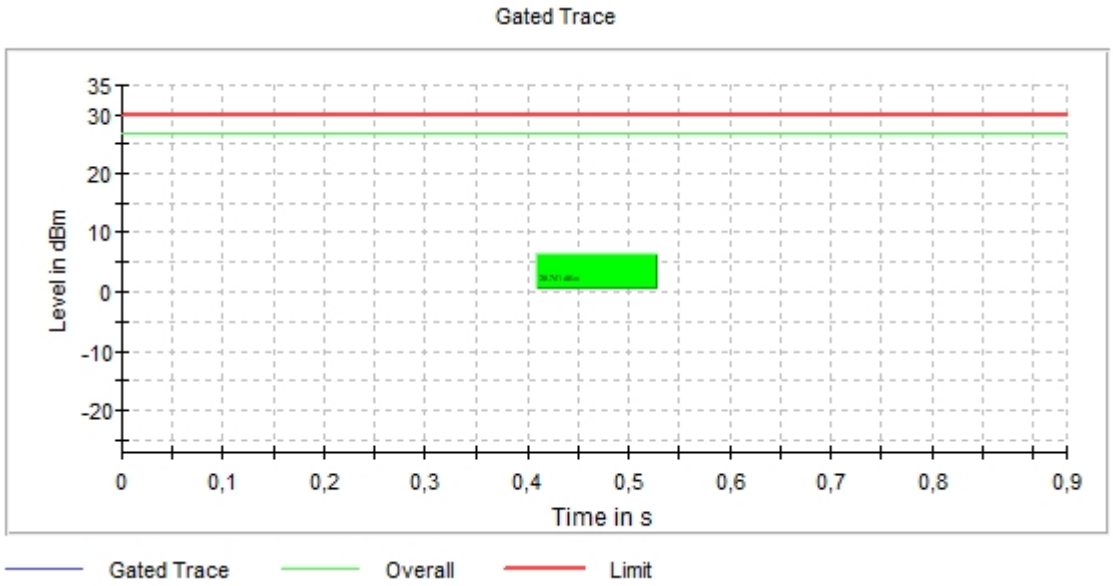
SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz)

- Low Channel 36 (5180 MHz):



- Middle Channel 40 (5200 MHz):



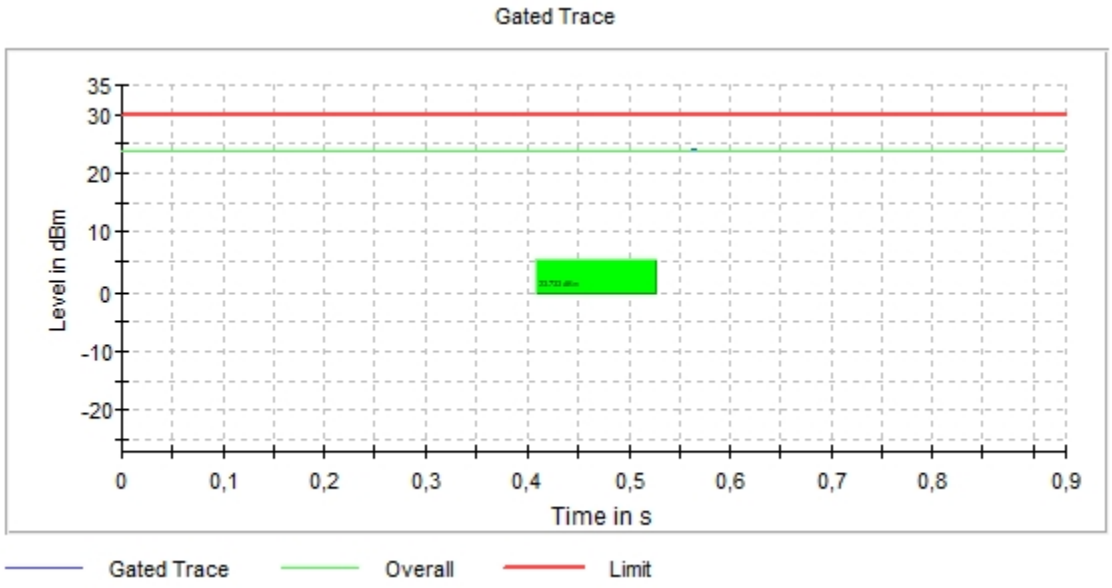
- Channel 44 (5220 MHz):

- High Channel 48 (5240 MHz):

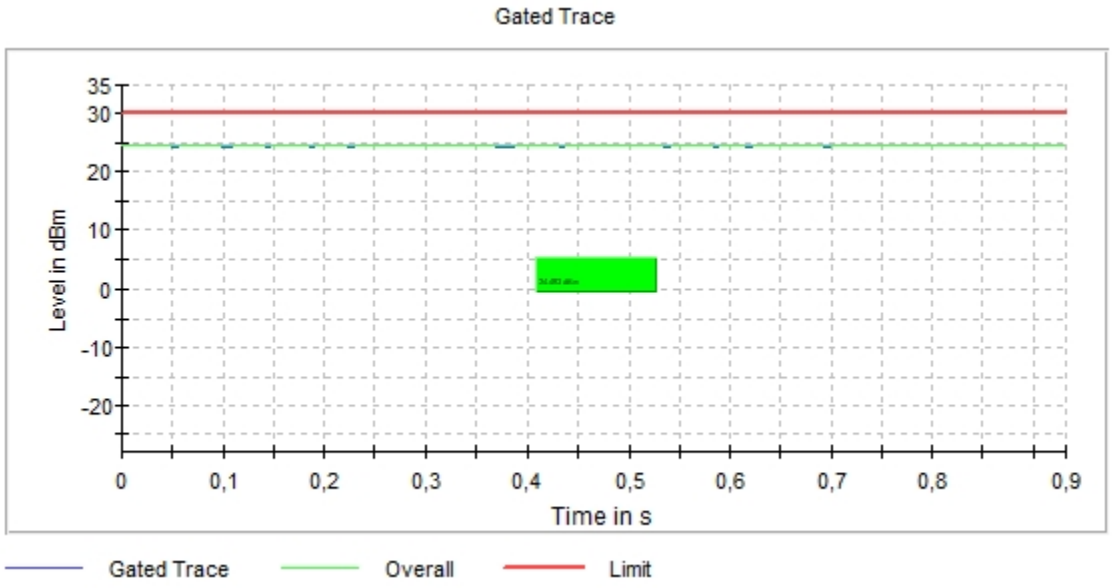
SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz)

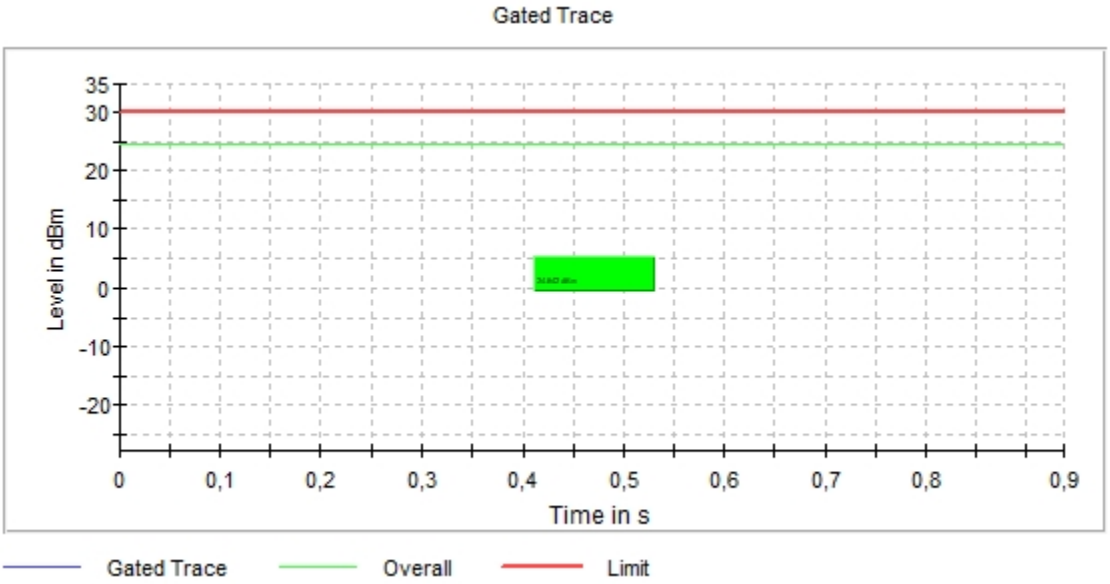
- Low Channel 36 (5180 MHz):



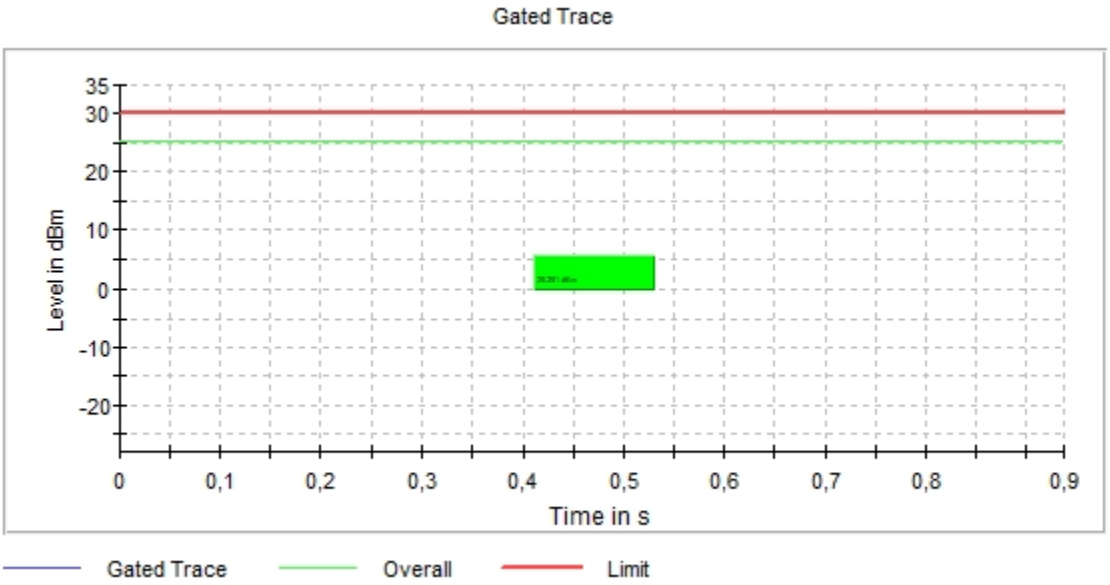
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



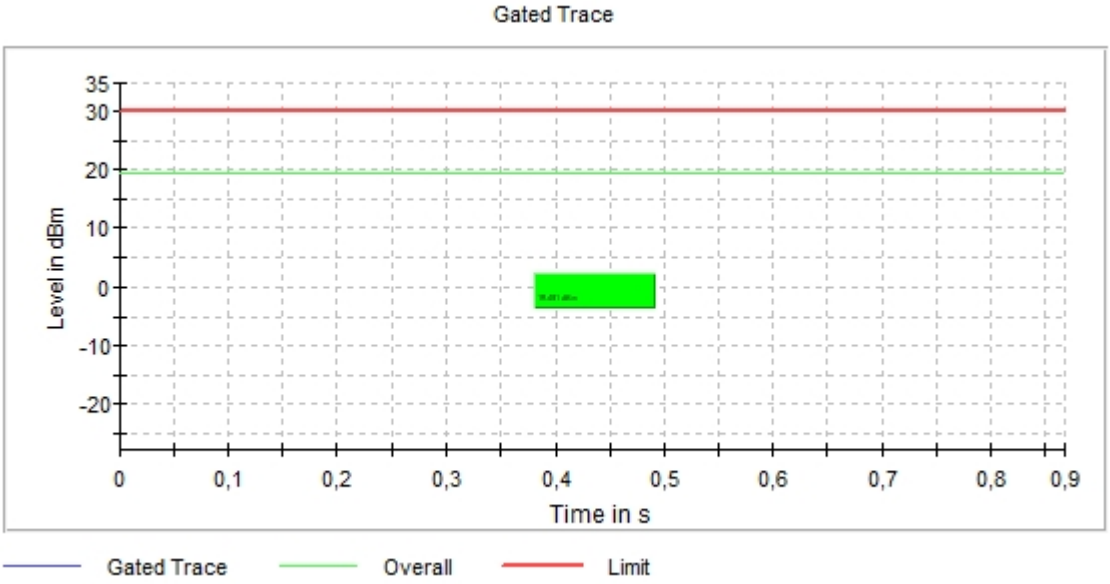
- High Channel 48 (5240 MHz):



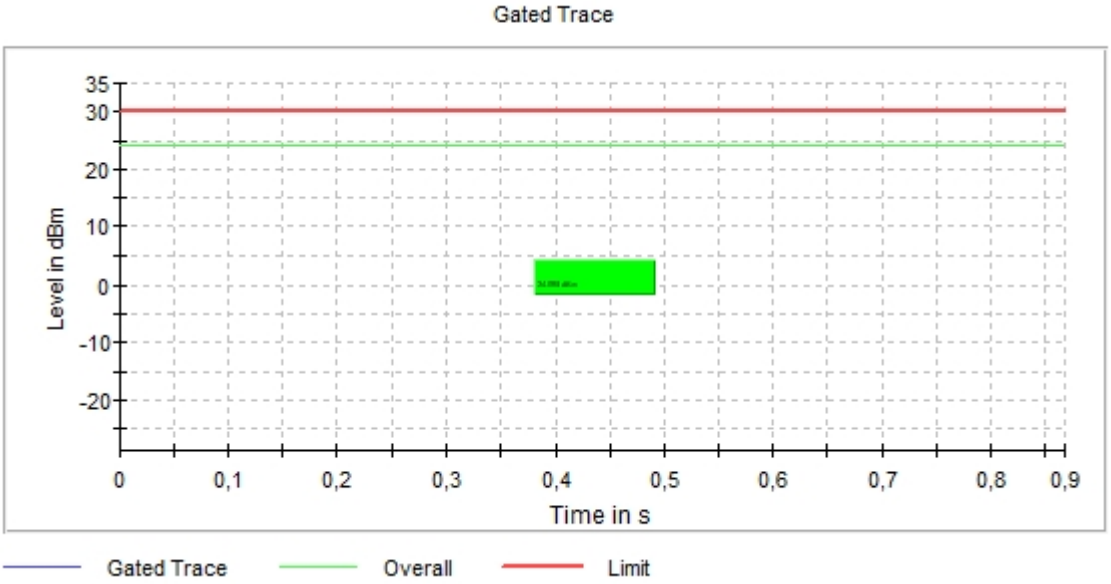
SISO 802.11 n40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



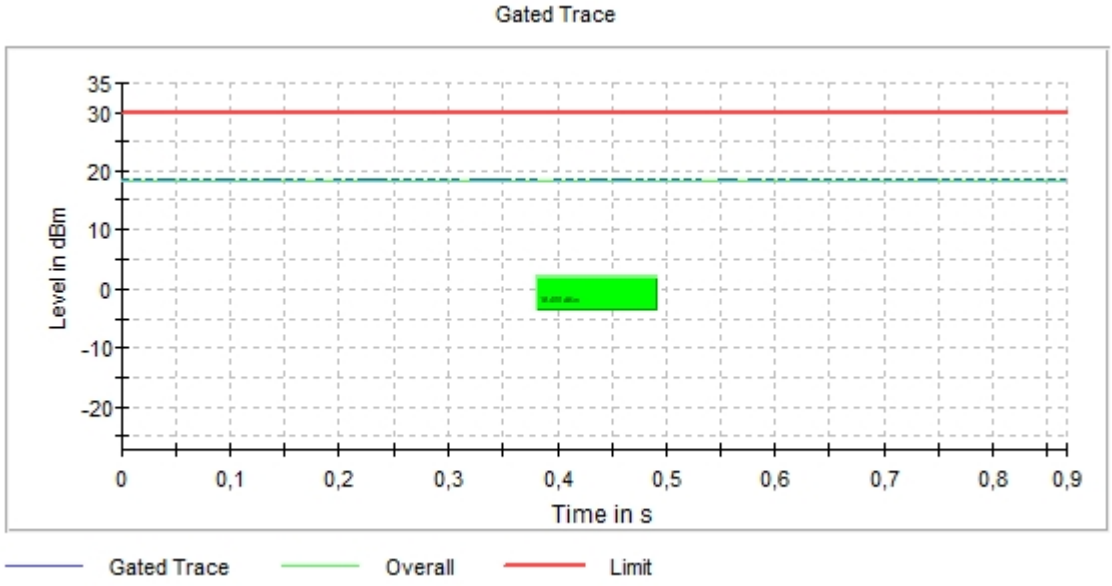
- High Channel 46 (5230 MHz):



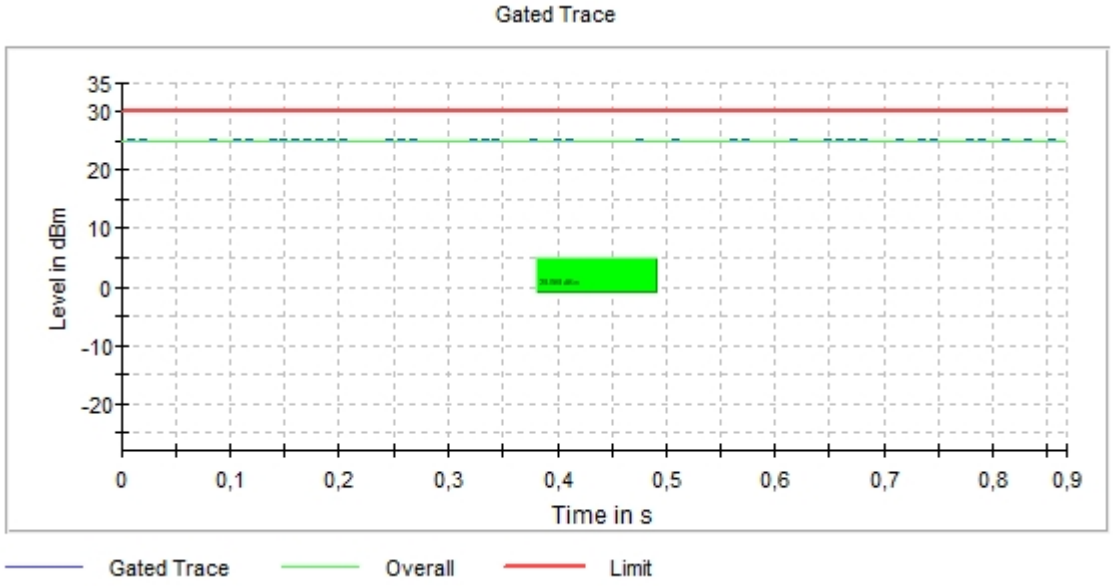
SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



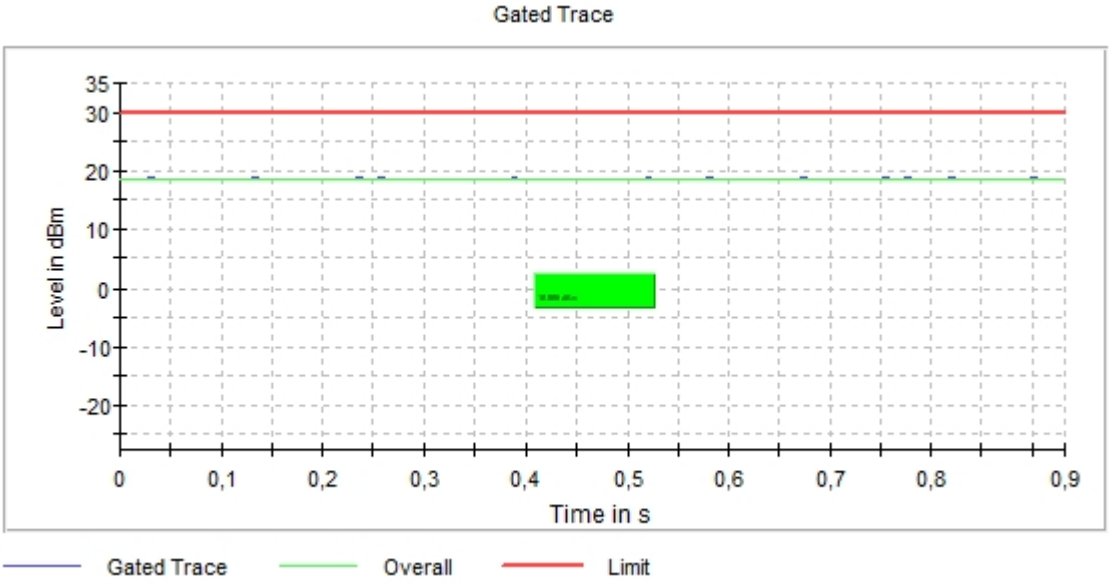
- High Channel 46 (5230 MHz):



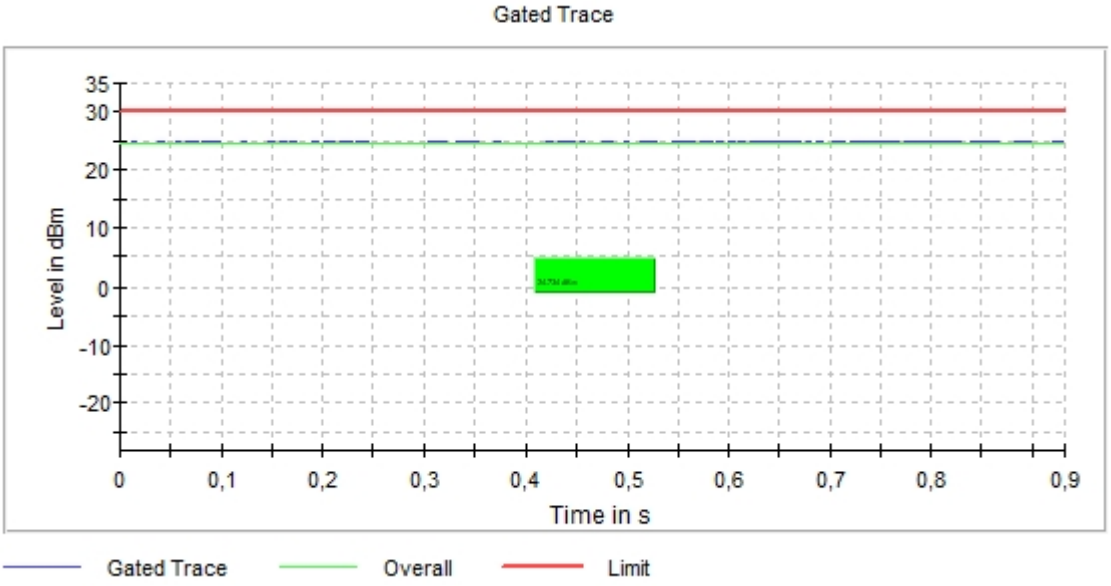
SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



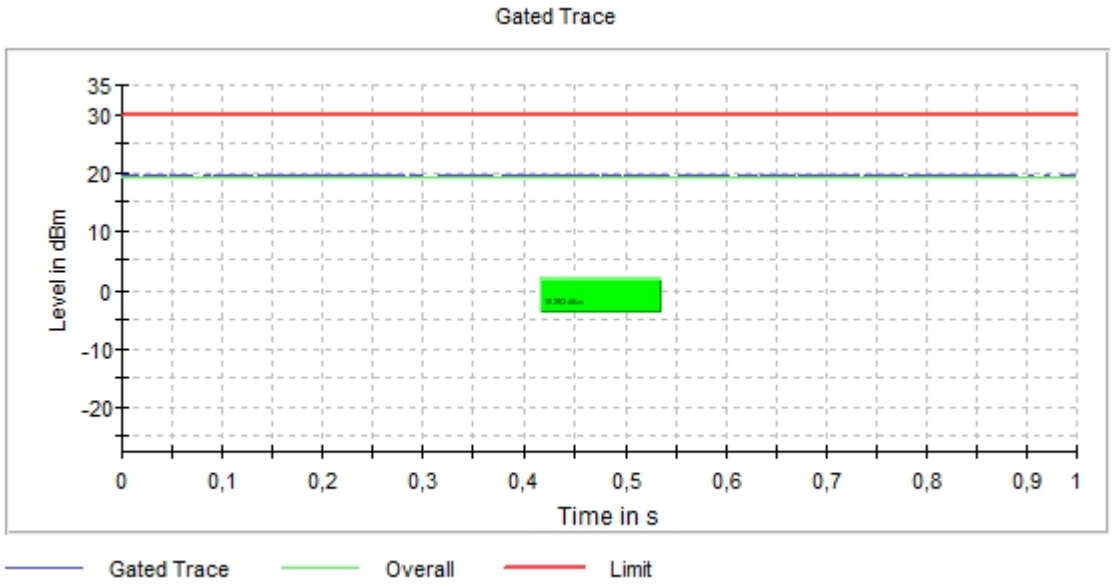
- High Channel 46 (5230 MHz):



SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz)

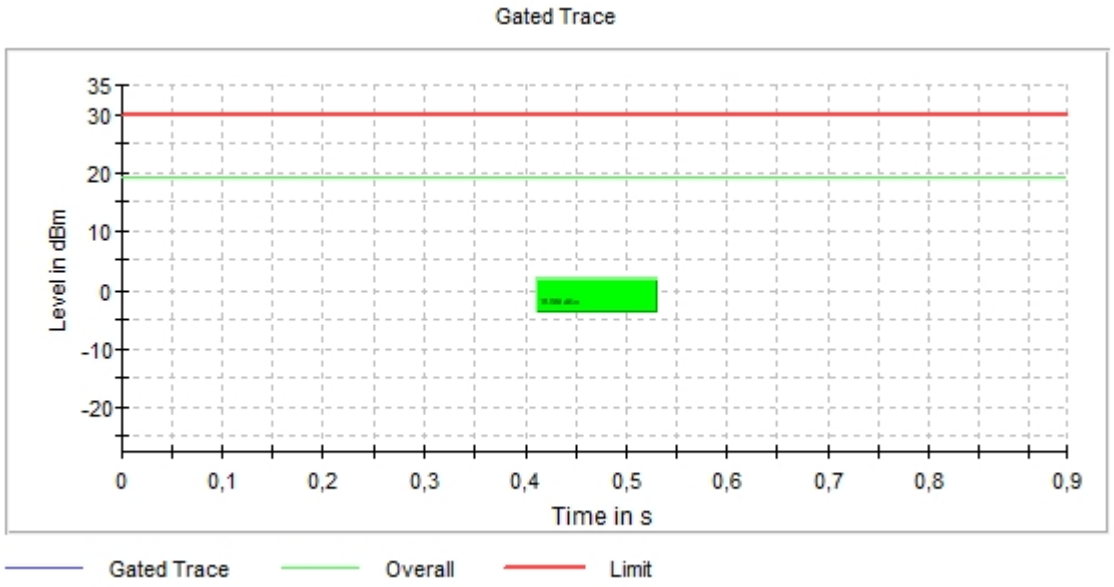
- Single Channel 42 (5210 MHz):



SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



CANADA power setting

SISO worst-case:

SISO 802.11 a20:

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	18.4	18.8	19.1	18.6
Maximum EIRP Corrected Conducted Power (dBm)	21.9	22.3	22.6	22.1
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	19.0	19.1	19.1	18.8
Maximum EIRP Corrected Conducted Power (dBm)	22.5	22.6	22.6	22.3
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	19.0	19.1	19.1	18.8
Maximum EIRP Corrected Conducted Power (dBm)	22.5	22.6	22.6	22.3
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	18.9	19.0	18.9	18.7
Maximum EIRP Corrected Conducted Power (dBm)	22.4	22.5	22.4	22.2
Measurement uncertainty (dB)	<± 1 dB			

SISO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	18.9	19.0
Maximum EIRP Corrected Conducted Power (dBm)	22.4	22.5
Measurement uncertainty (dB)	<± 1 dB	

SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	18.4	19.4
Maximum EIRP Corrected Conducted Power (dBm)	21.9	22.9
Measurement uncertainty (dB)	<± 1 dB	

SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	18.5	18.9
Maximum EIRP Corrected Conducted Power (dBm)	22.0	22.4
Measurement uncertainty (dB)	<± 1 dB	

SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	19.3
Maximum EIRP Corrected Conducted Power (dBm)	22.8
Measurement uncertainty (dB)	<± 1 dB

SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	19.1
Maximum EIRP Corrected Conducted Power (dBm)	22.6
Measurement uncertainty (dB)	<± 1 dB

Verdict: PASS

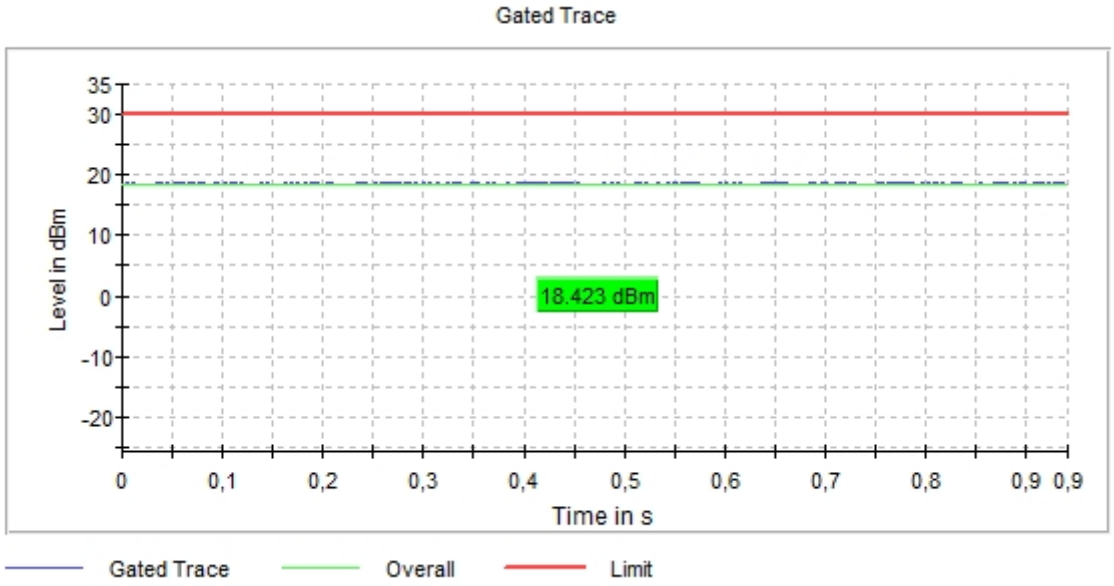
CANADA power setting

SISO worst-case:

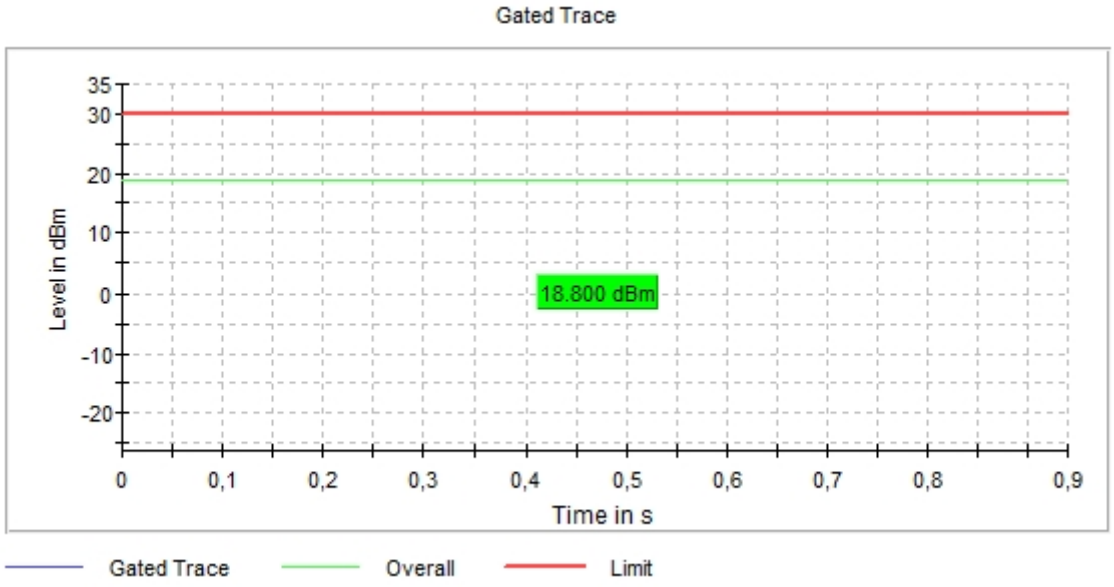
SISO 802.11 a20:

U-NII-1 (5150-5250 MHz)

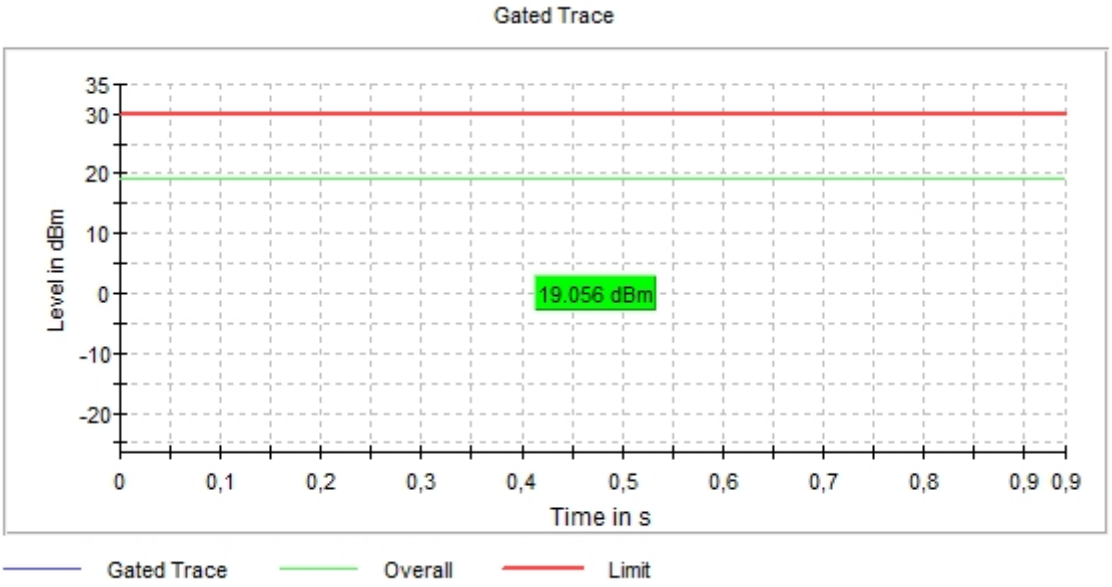
- Low Channel 36 (5180 MHz):



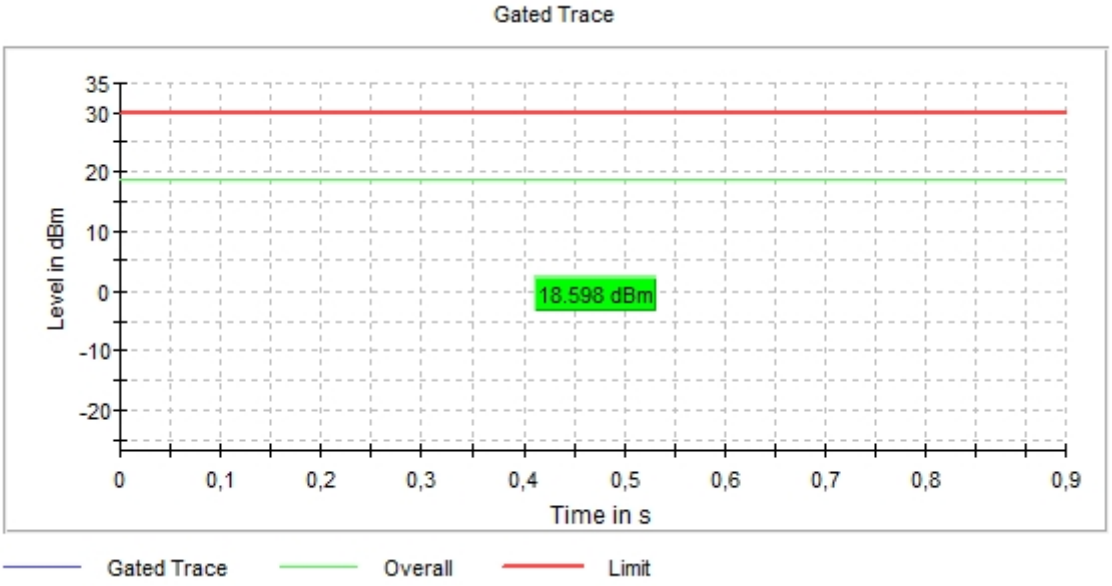
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



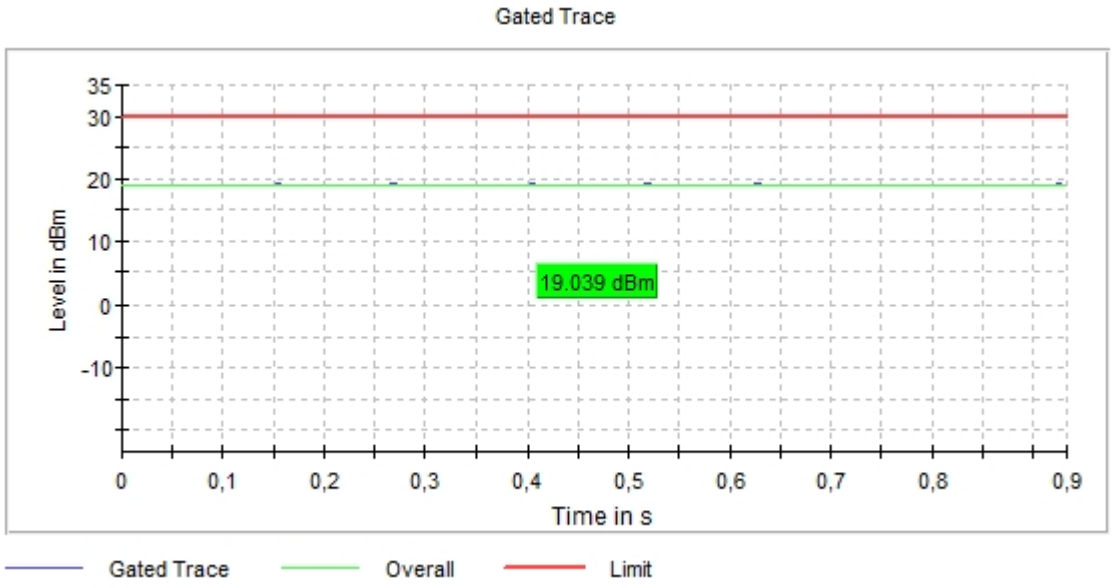
- High Channel 48 (5240 MHz):



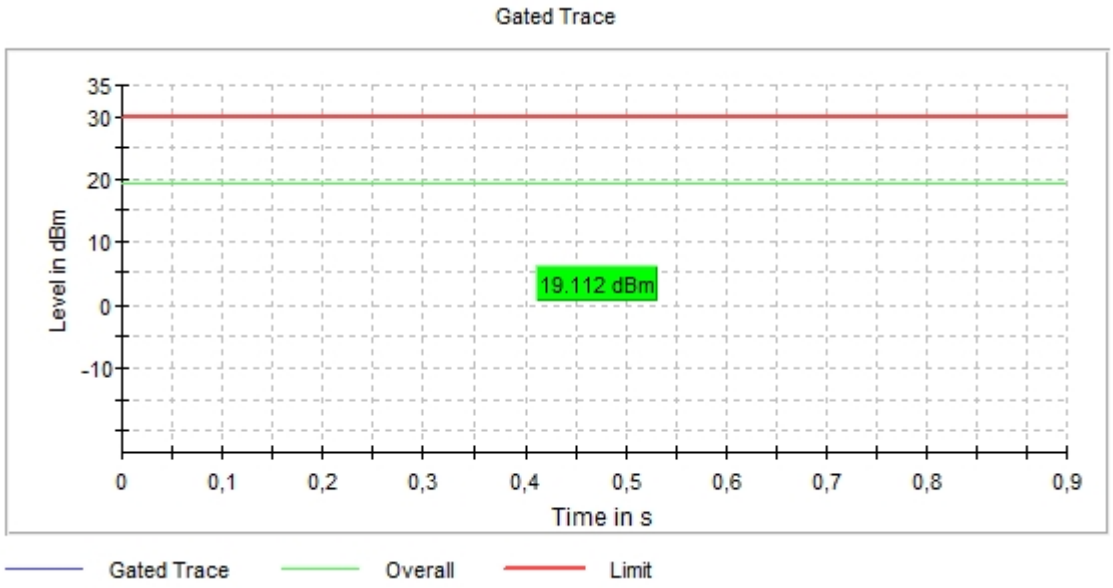
SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz)

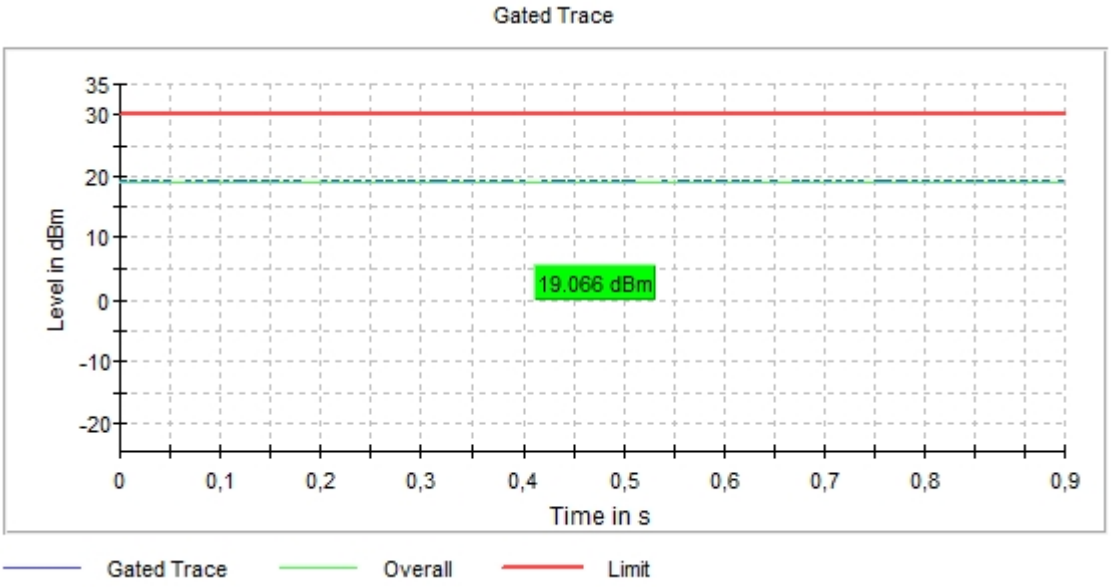
- Low Channel 36 (5180 MHz):



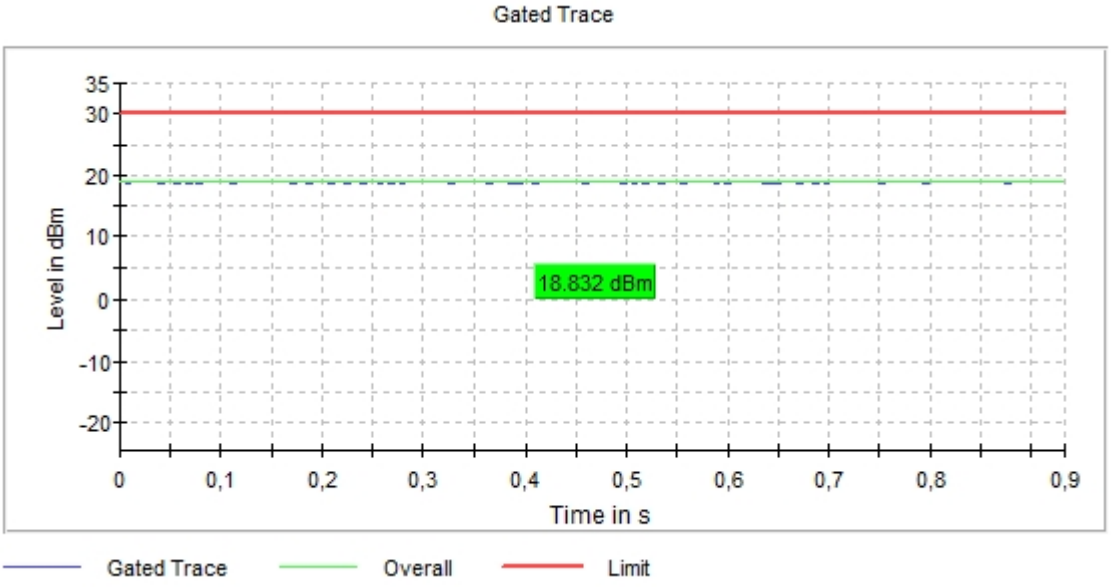
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



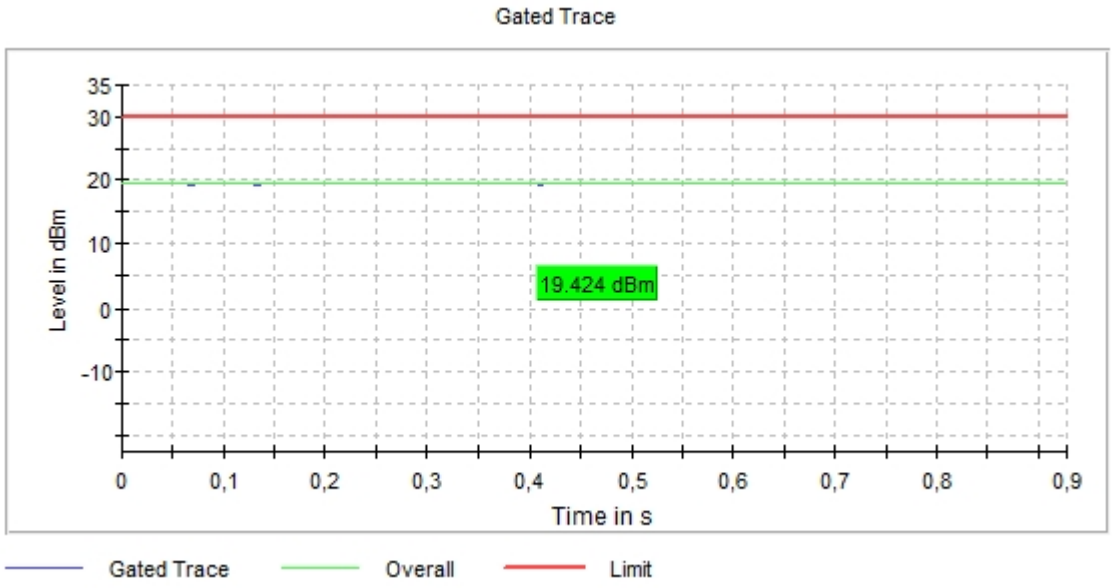
- High Channel 48 (5240 MHz):



SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz)

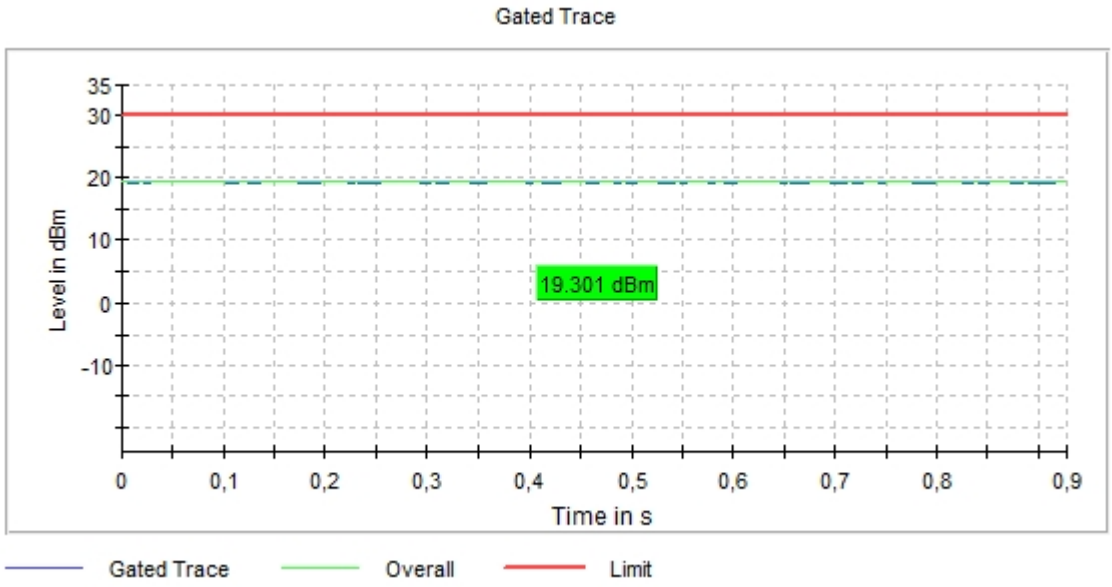
- Low Channel 36 (5180 MHz):



- Middle Channel 40 (5200 MHz):

- Channel 44 (5220 MHz):

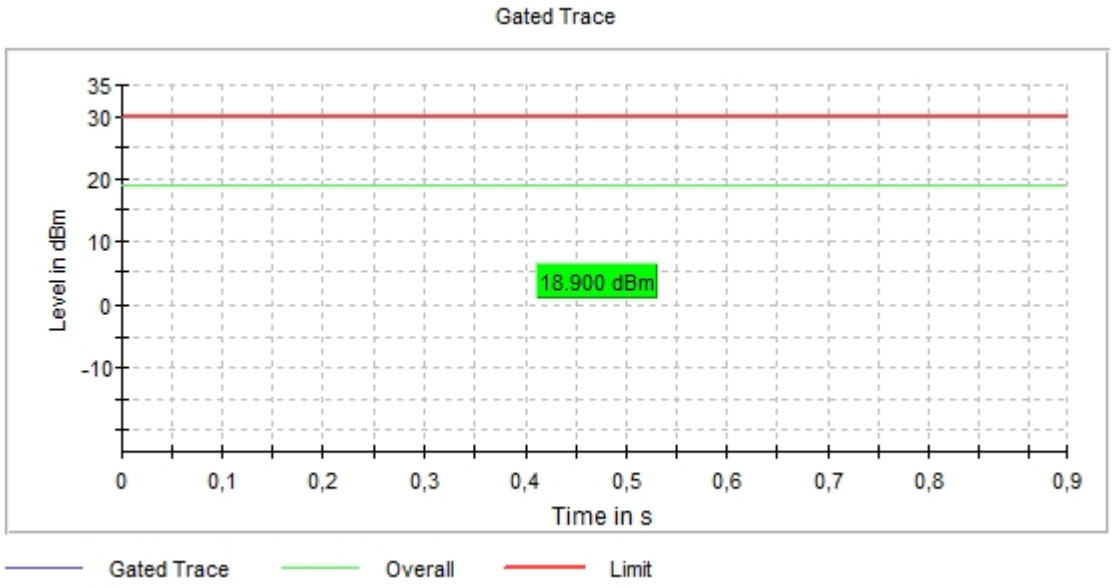
- High Channel 48 (5240 MHz):



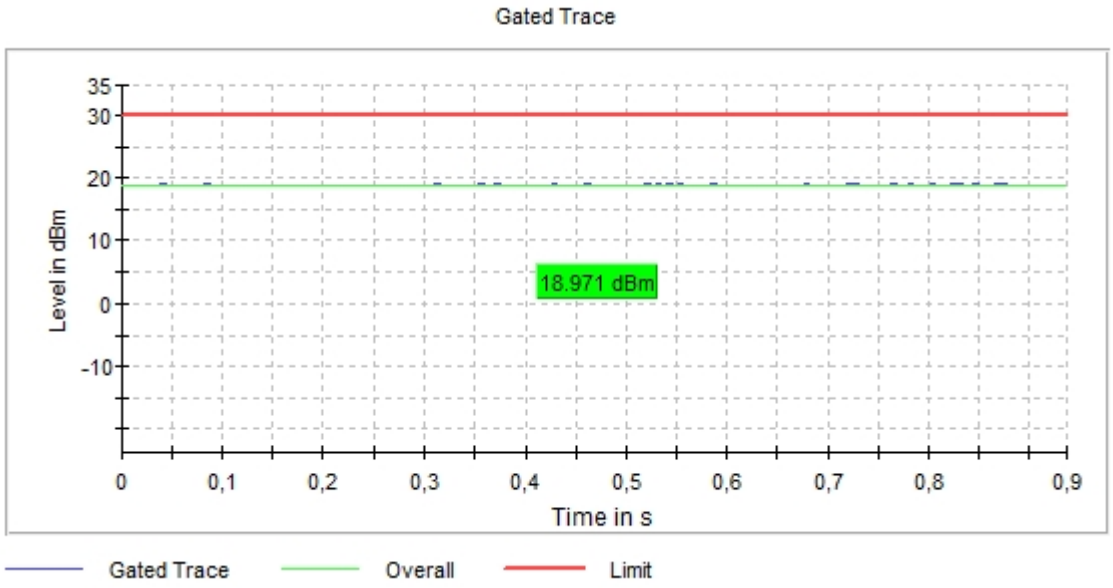
SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz)

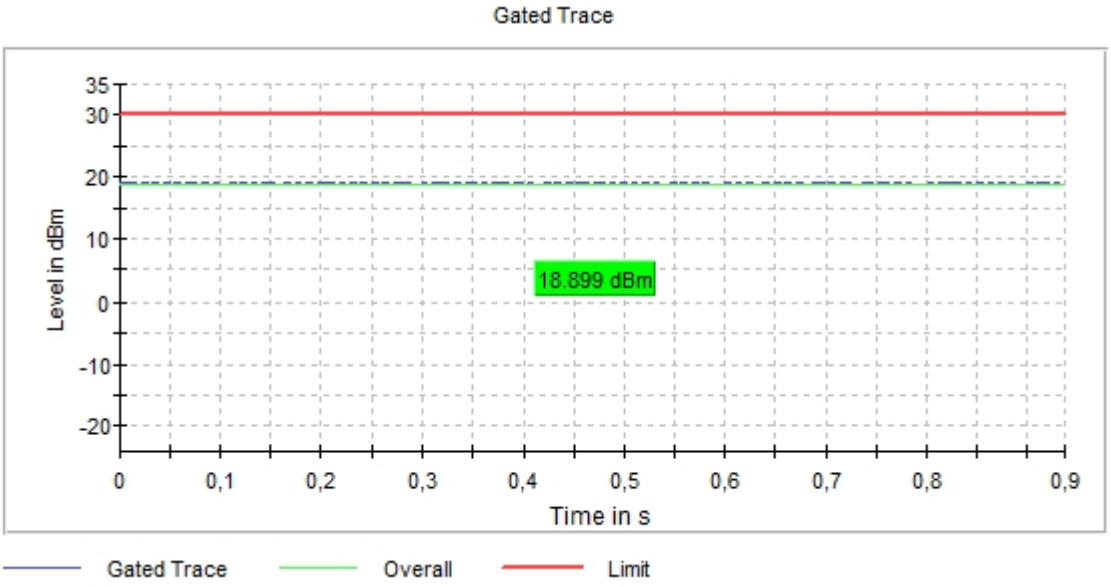
- Low Channel 36 (5180 MHz):



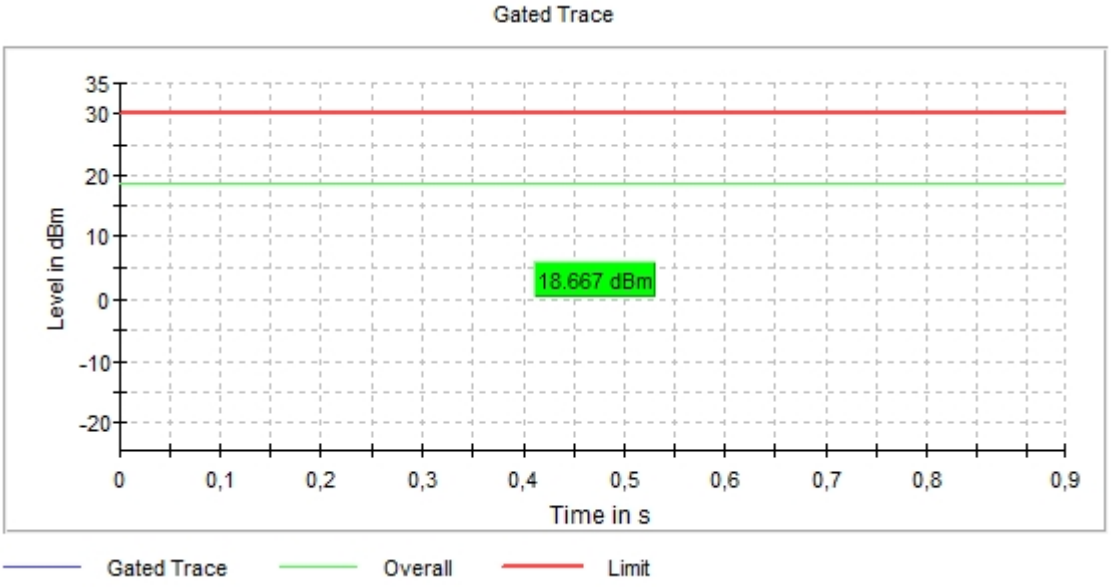
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



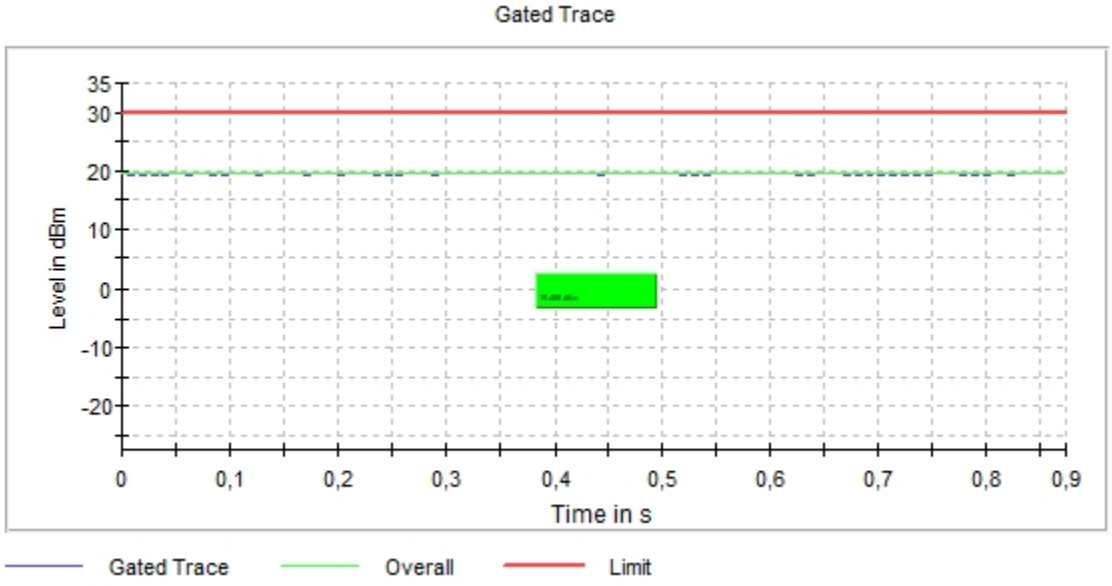
- High Channel 48 (5240 MHz):



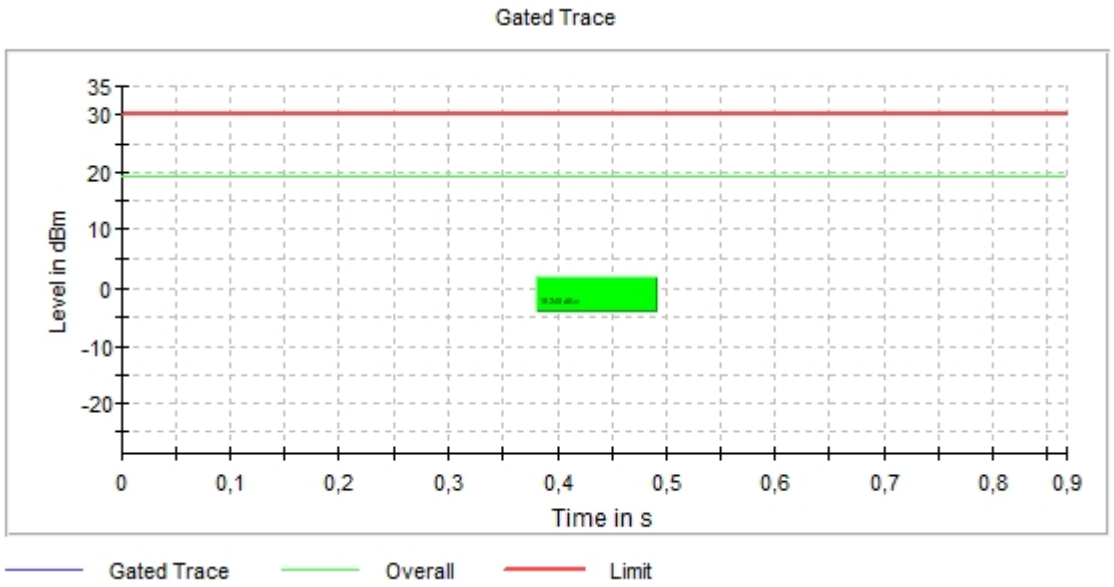
SISO 802.11 n40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



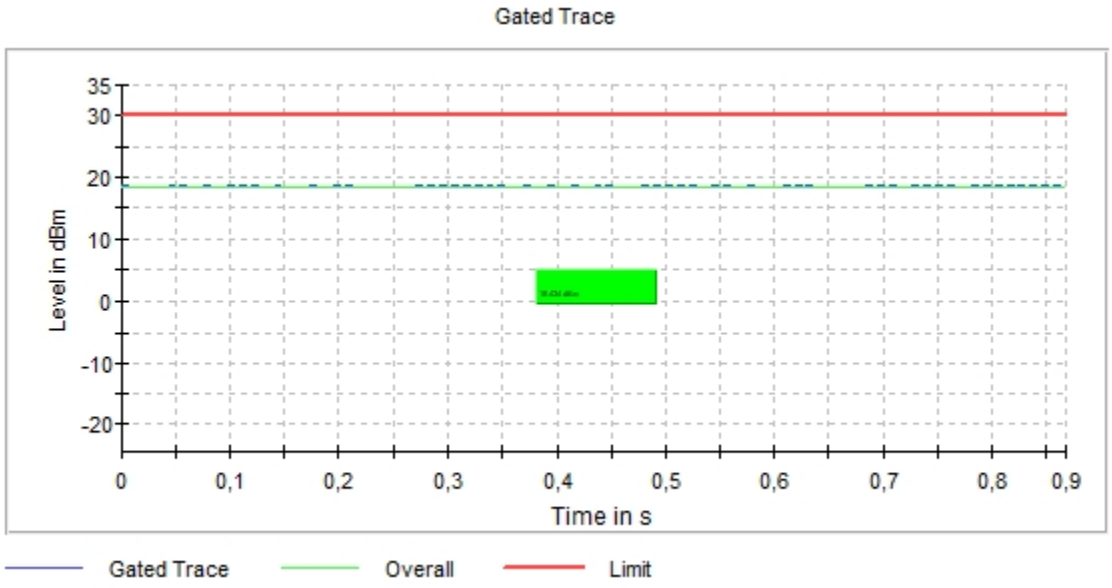
- High Channel 46 (5230 MHz):



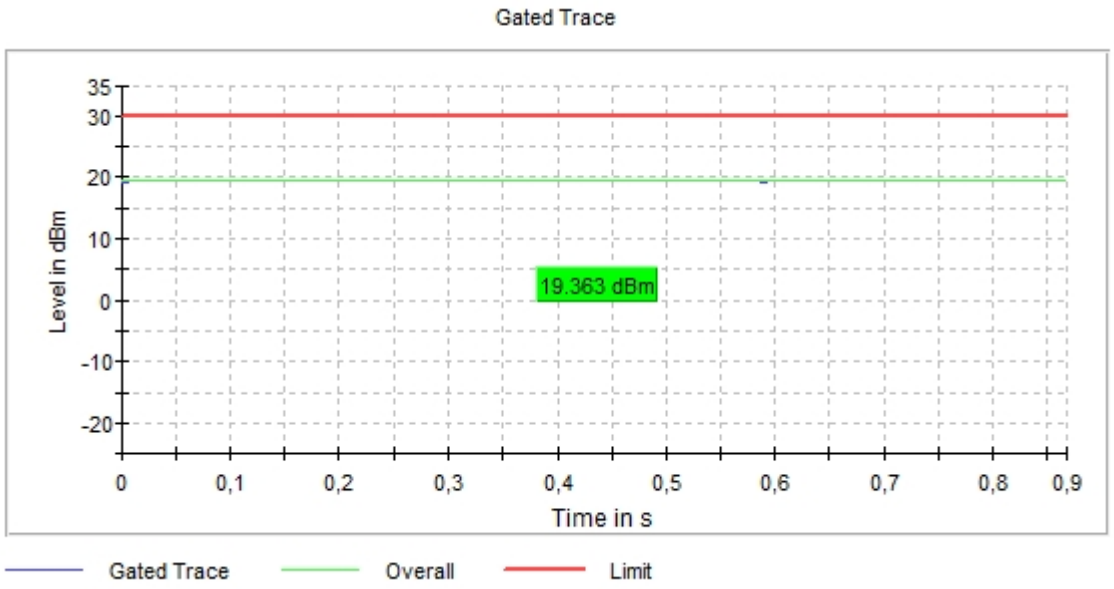
SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



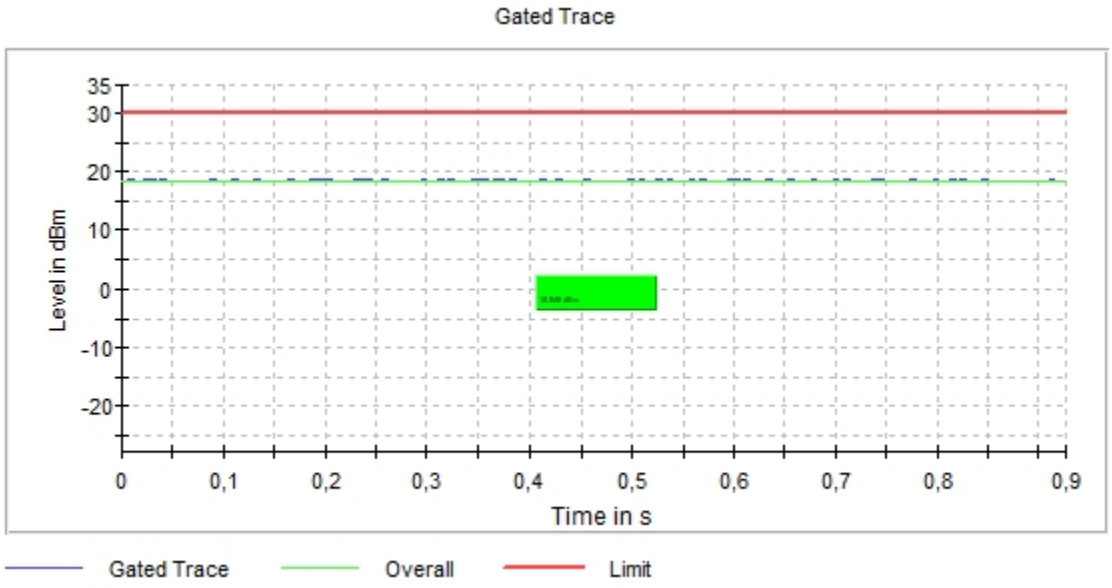
- High Channel 46 (5230 MHz):



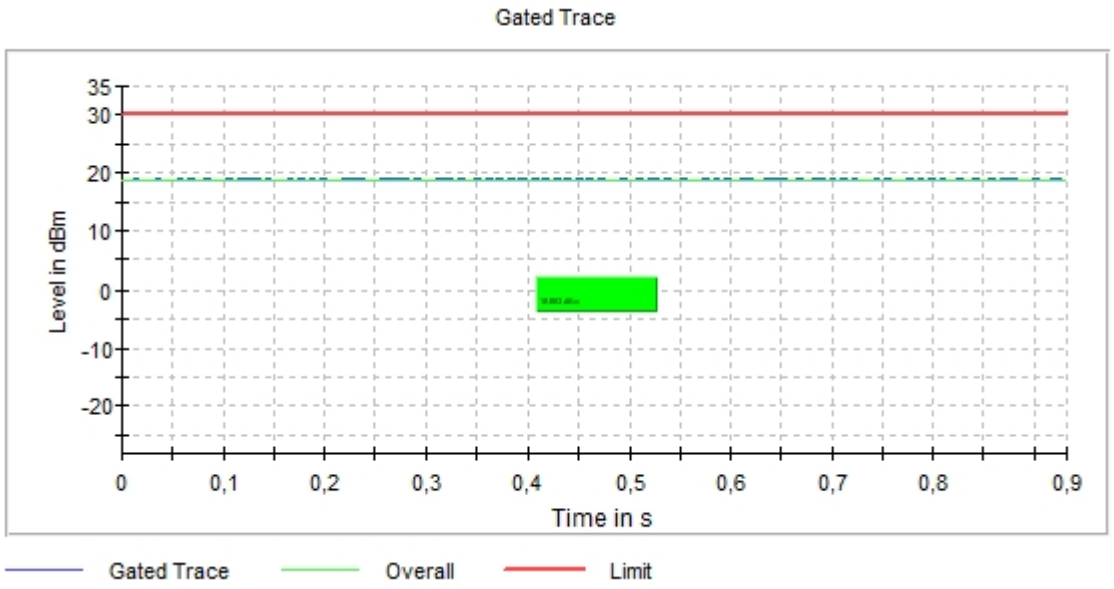
SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



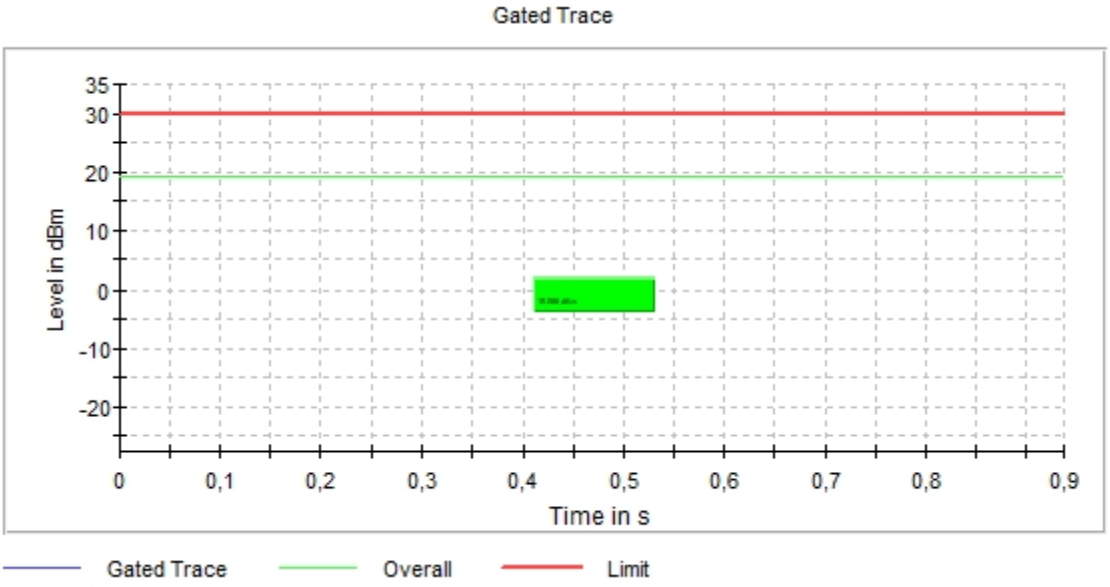
- High Channel 46 (5230 MHz):



SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz)

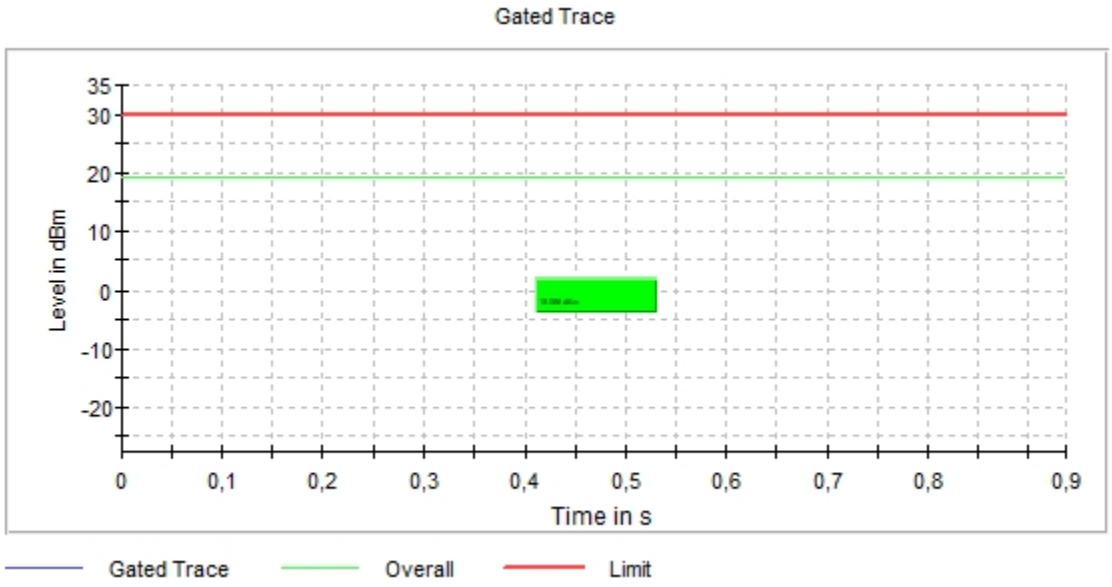
- Single Channel 42 (5210 MHz):



SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



FCC power setting

MIMO worst-case:

MIMO 802.11 a20:

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	26.3	29.2	29.3	29.3
Maximum EIRP Corrected Conducted Power (dBm)	32.47	35.37	35.47	35.47
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	23.9	26.2	24.7	24.8
Maximum EIRP Corrected Conducted Power (dBm)	30.07	32.37	30.87	30.97
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	26.9	28.8	29.0	29.0
Maximum EIRP Corrected Conducted Power (dBm)	33.07	34.97	35.17	35.17
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	26.2	28.7	29.3	29.5
Maximum EIRP Corrected Conducted Power (dBm)	32.37	34.87	35.47	35.67
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	20.6	28.3
Maximum EIRP Corrected Conducted Power (dBm)	26.77	34.47
Measurement uncertainty (dB)	<± 1 dB	

MIMO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	20.6	28.2
Maximum EIRP Corrected Conducted Power (dBm)	26.77	34.37
Measurement uncertainty (dB)	<± 1 dB	

MIMO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	20.2	27.9
Maximum EIRP Corrected Conducted Power (dBm)	26.37	34.07
Measurement uncertainty (dB)	<± 1 dB	

MIMO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	20.3
Maximum EIRP Corrected Conducted Power (dBm)	26.47
Measurement uncertainty (dB)	<± 1 dB

MIMO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	20.2
Maximum EIRP Corrected Conducted Power (dBm)	26.37
Measurement uncertainty (dB)	<± 1 dB

Verdict: PASS

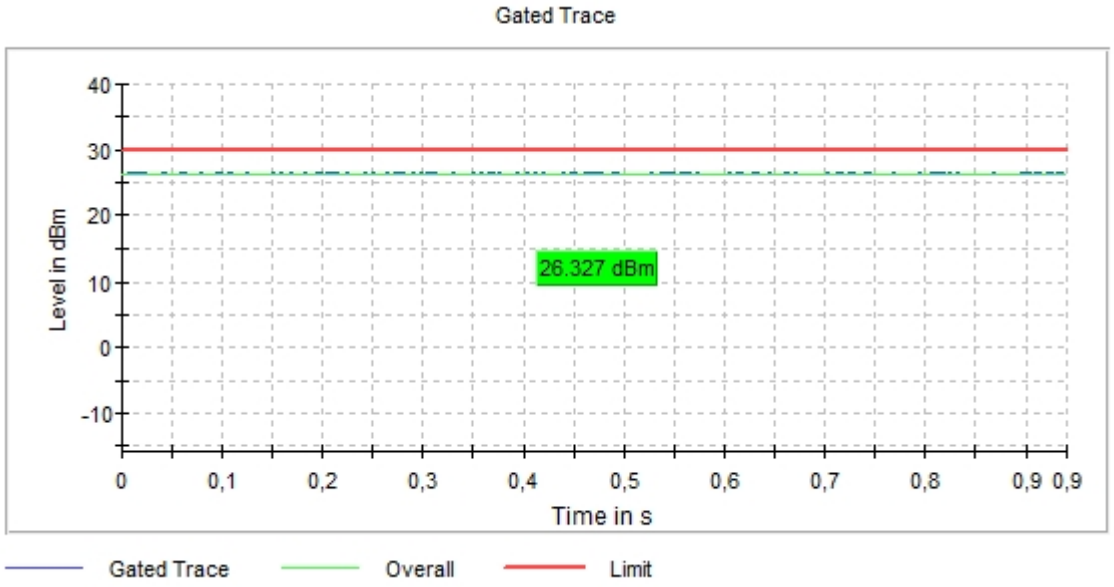
FCC power setting

MIMO worst-case:

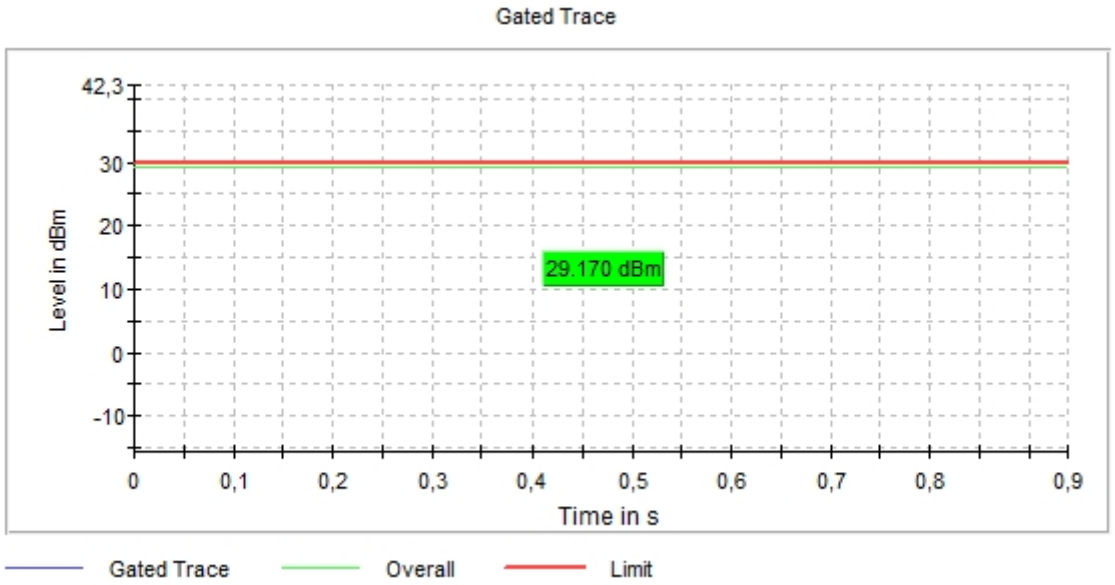
MIMO 802.11 a20:

U-NII-1 (5150-5250 MHz)

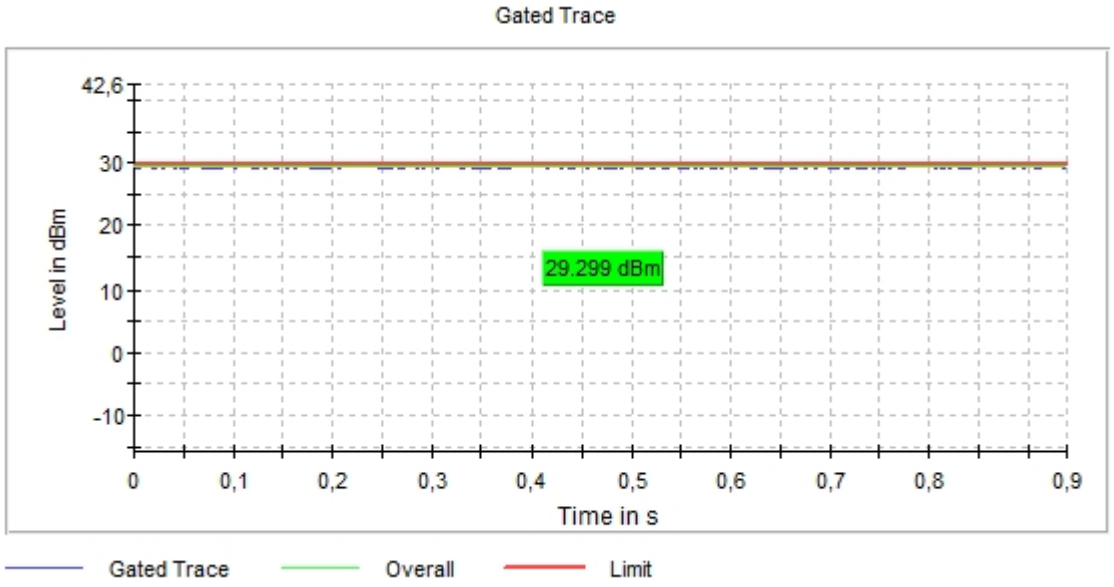
- Low Channel 36 (5180 MHz):



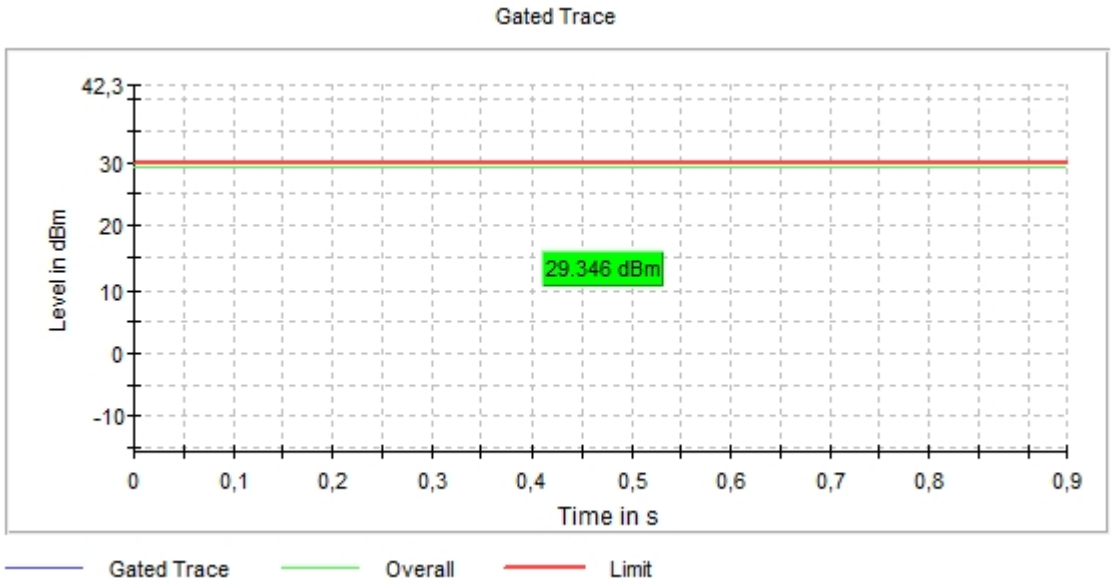
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



- High Channel 48 (5240 MHz):



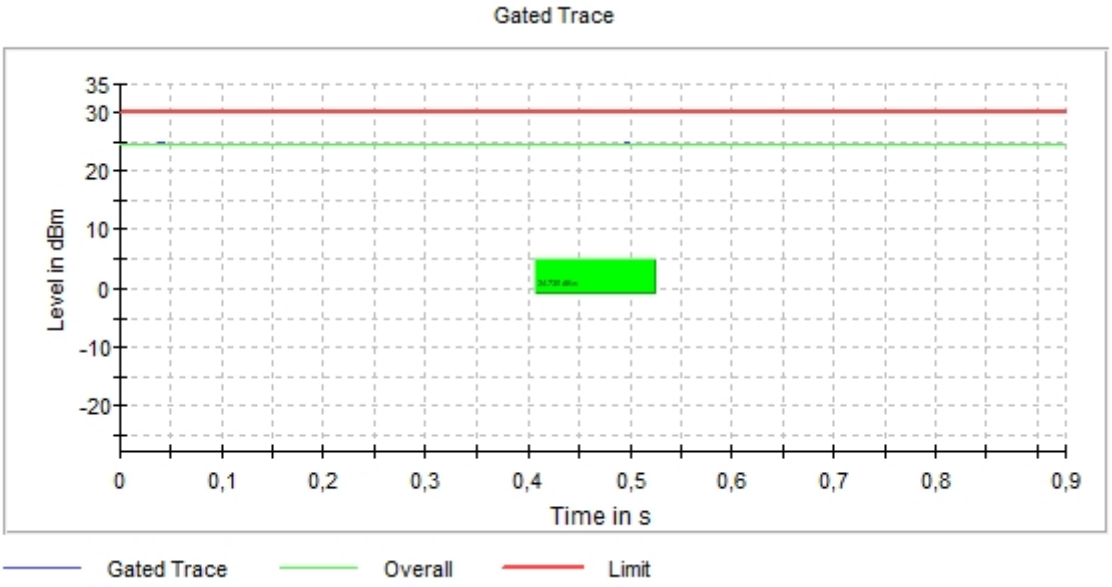
MIMO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz)

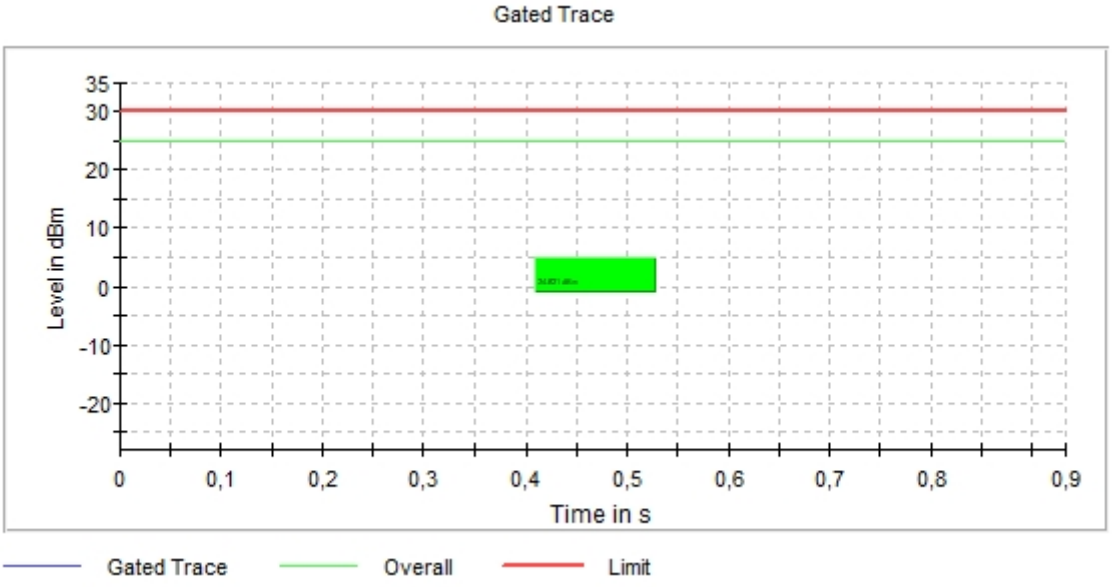
- Low Channel 36 (5180 MHz):

- Middle Channel 40 (5200 MHz):

- Channel 44 (5220 MHz):



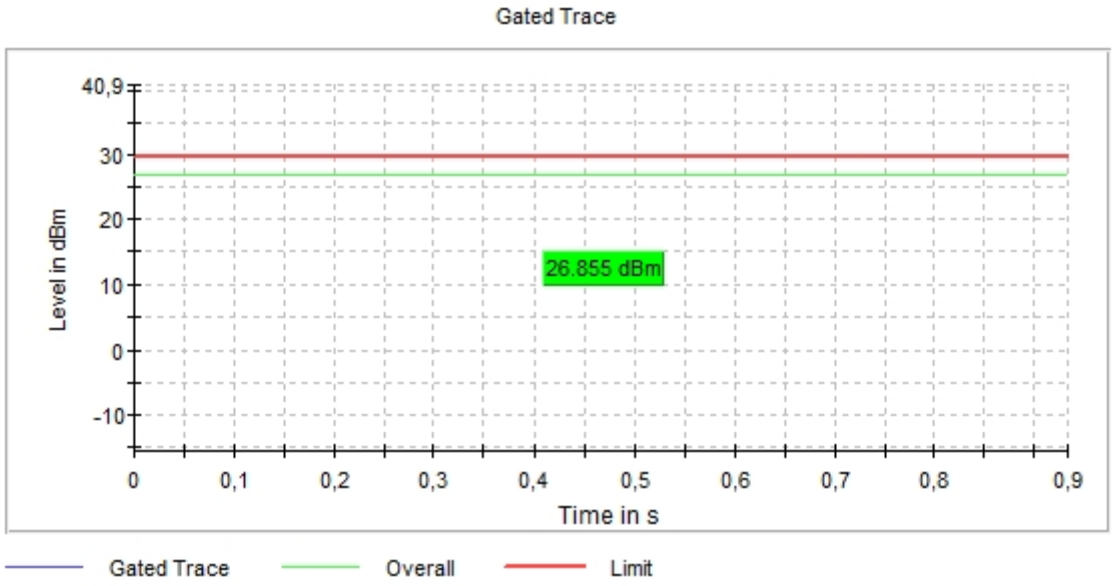
- High Channel 48 (5240 MHz):



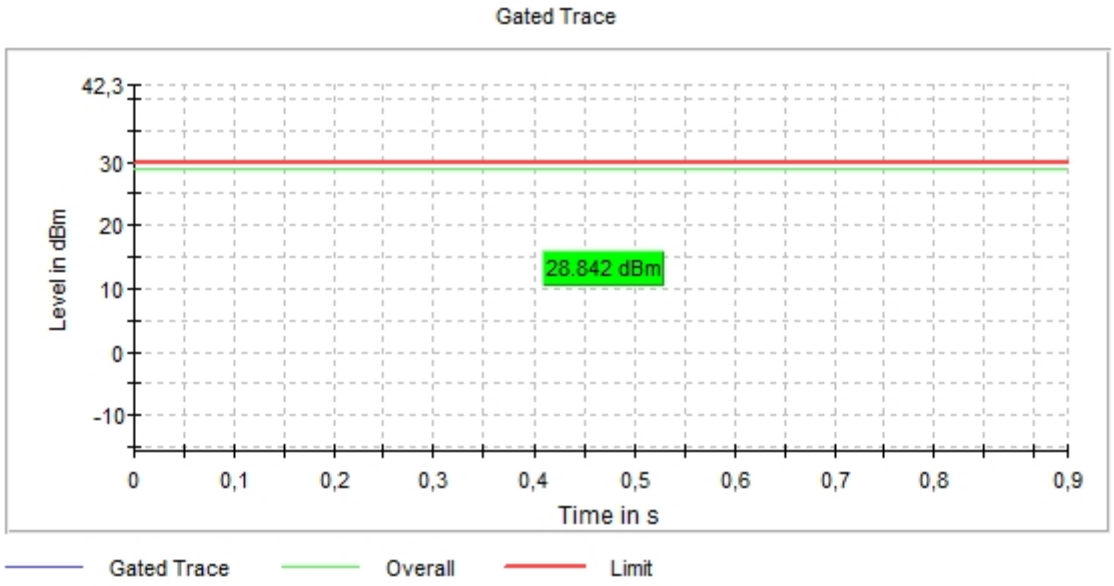
MIMO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz)

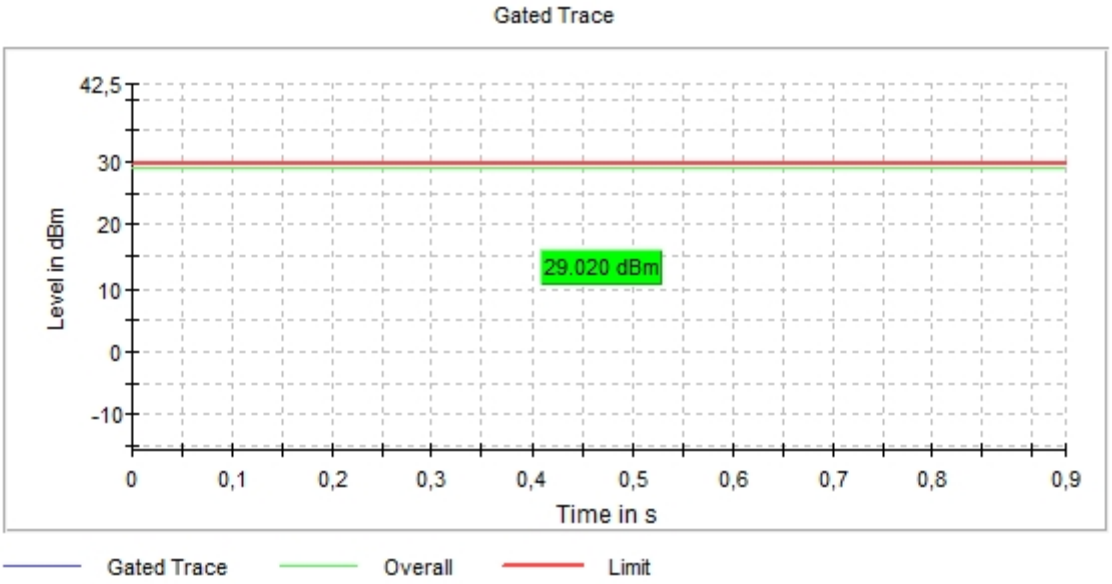
- Low Channel 36 (5180 MHz):



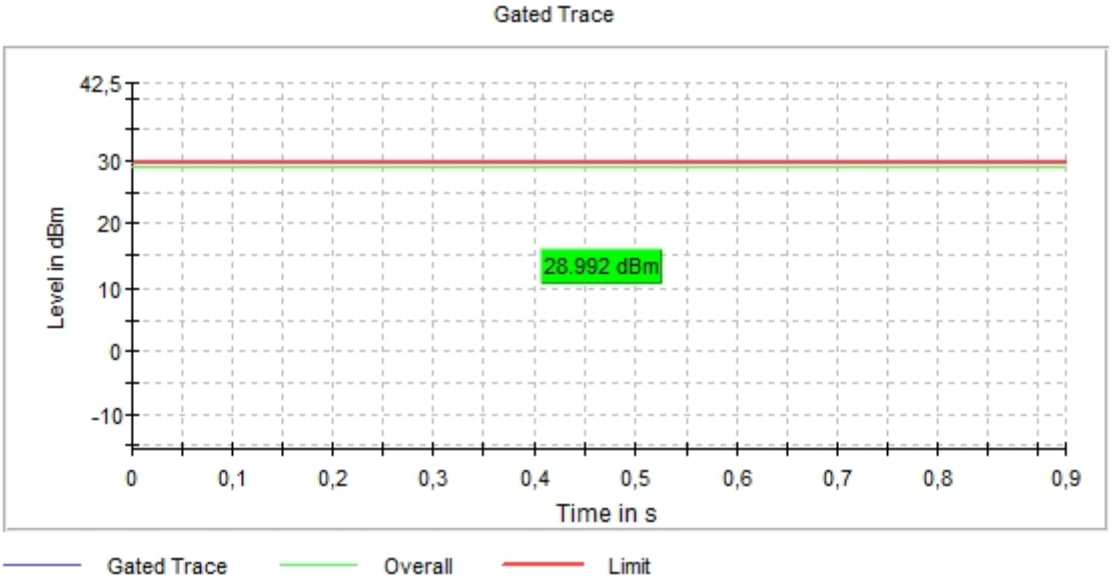
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



- High Channel 48 (5240 MHz):

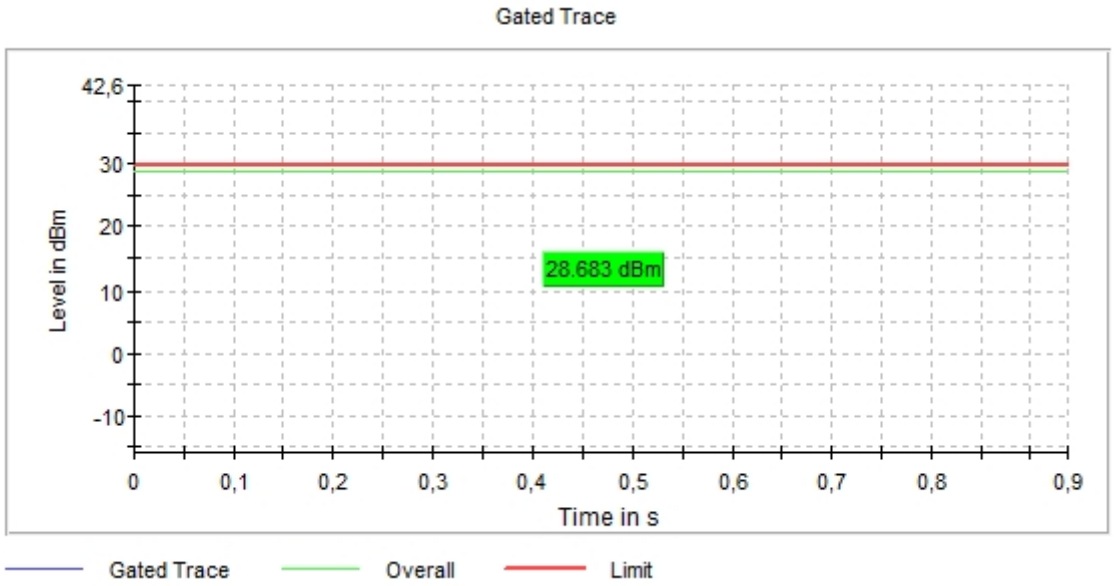


MIMO 802.11 ax20 (HE20):

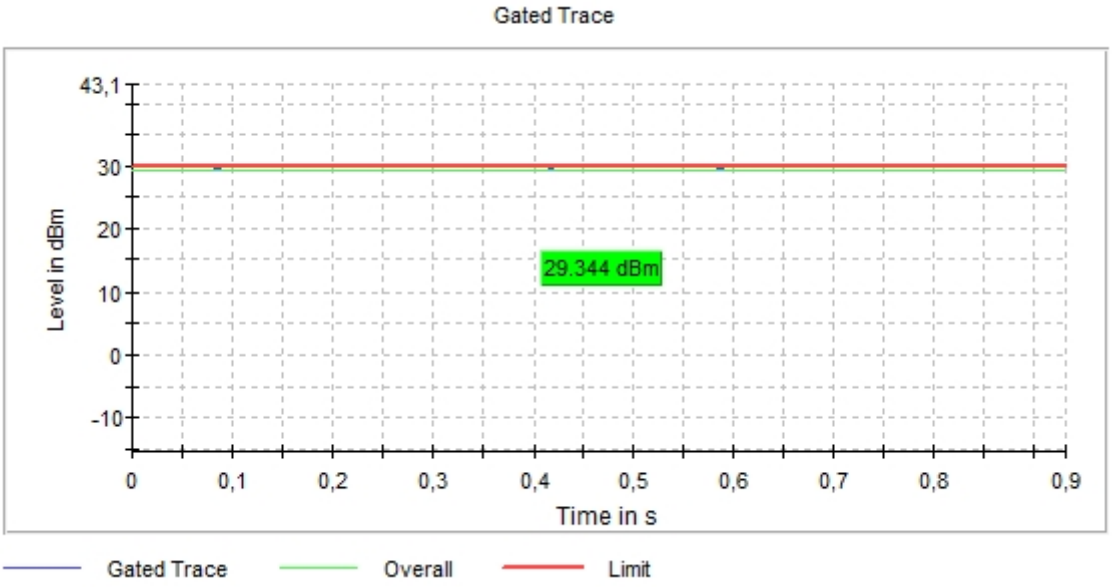
U-NII-1 (5150-5250 MHz)

- Low Channel 36 (5180 MHz):

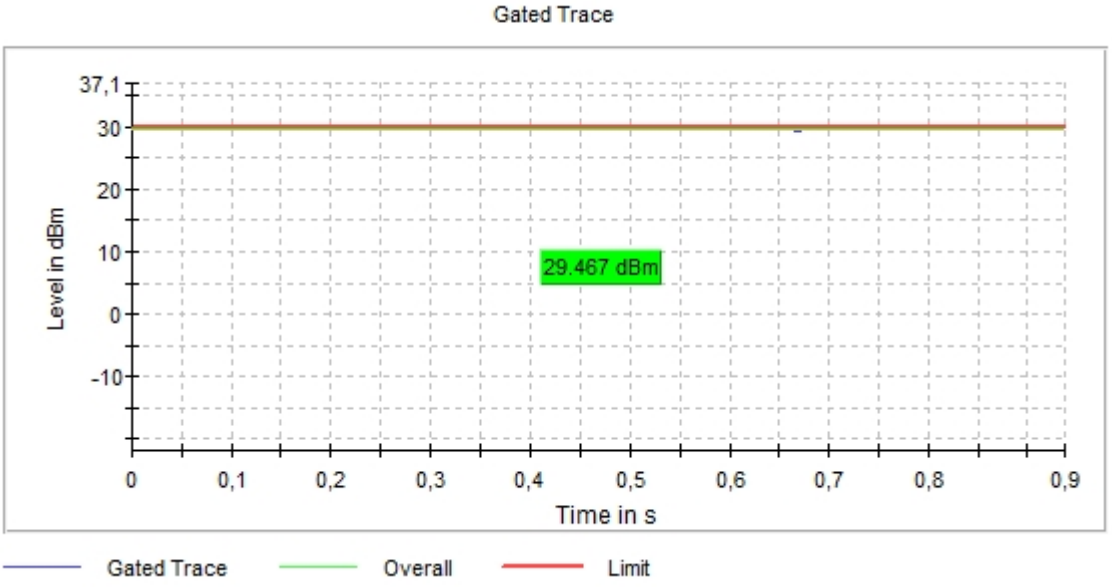
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



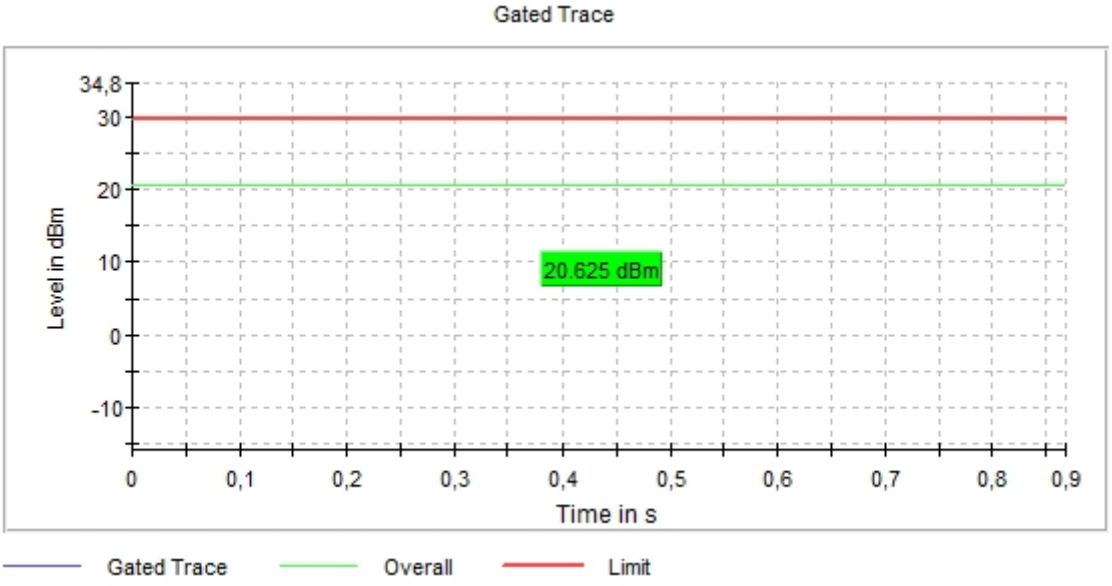
- High Channel 48 (5240 MHz):



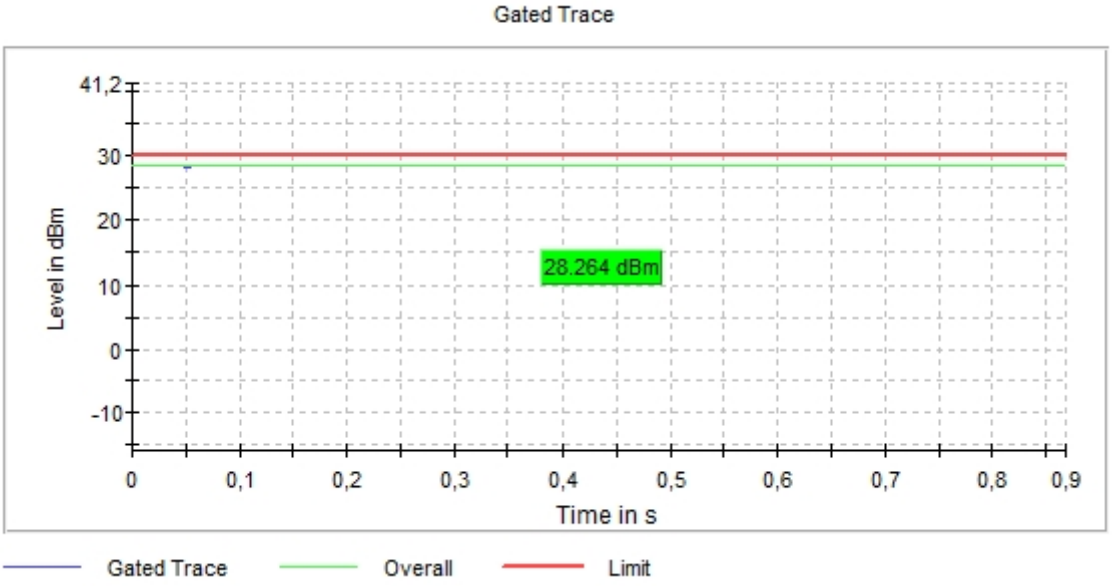
MIMO 802.11 n40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



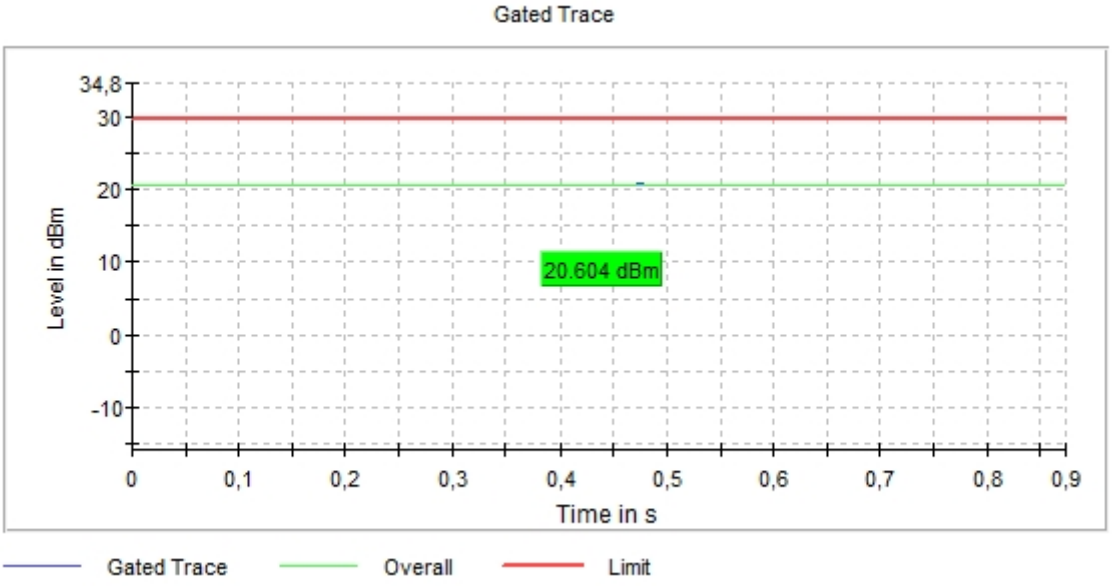
- High Channel 46 (5230 MHz):



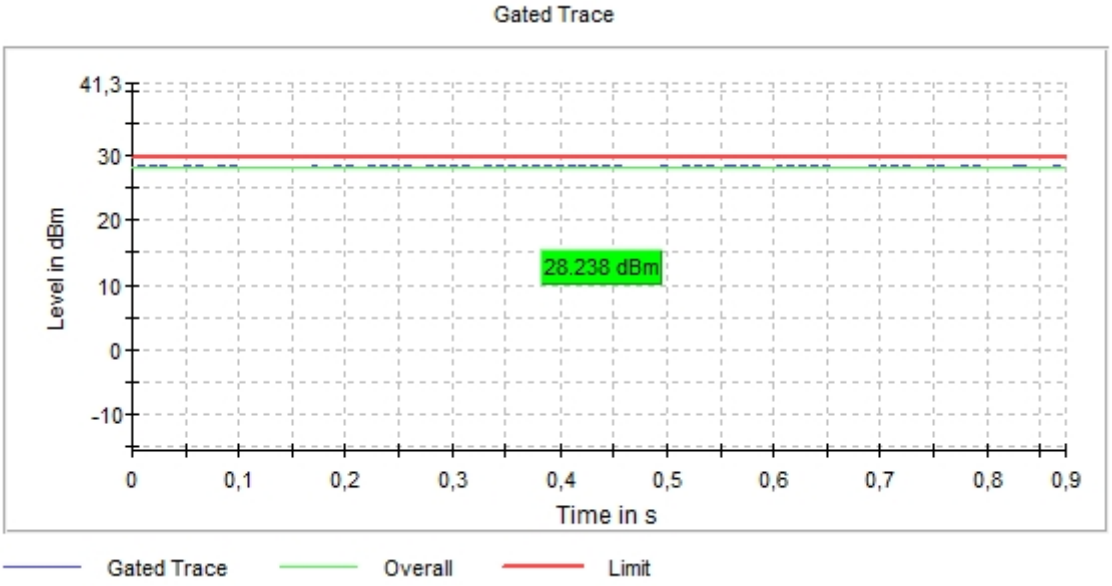
MIMO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



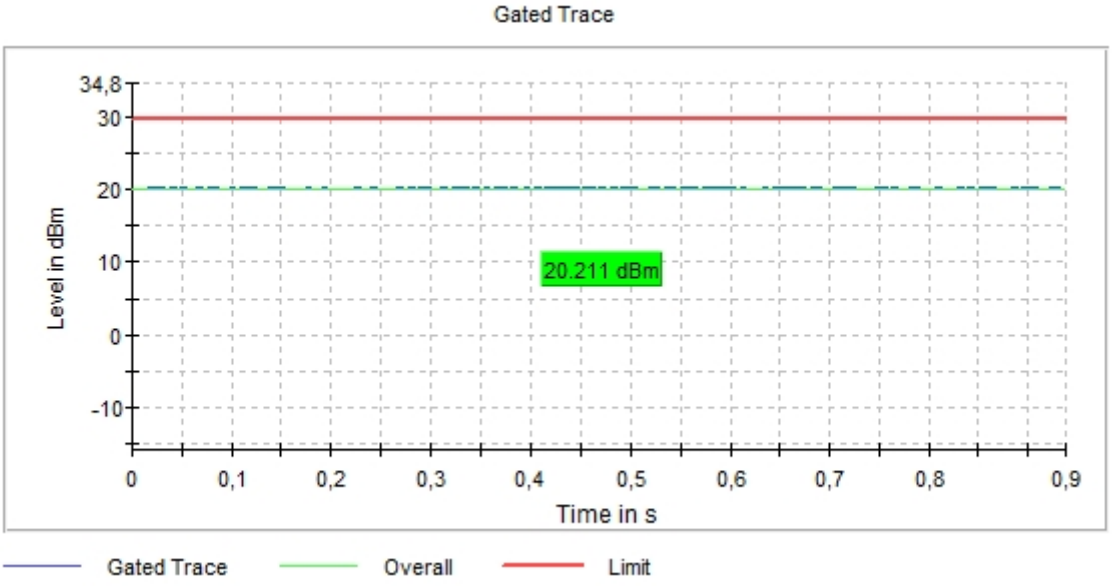
- High Channel 46 (5230 MHz):



MIMO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):

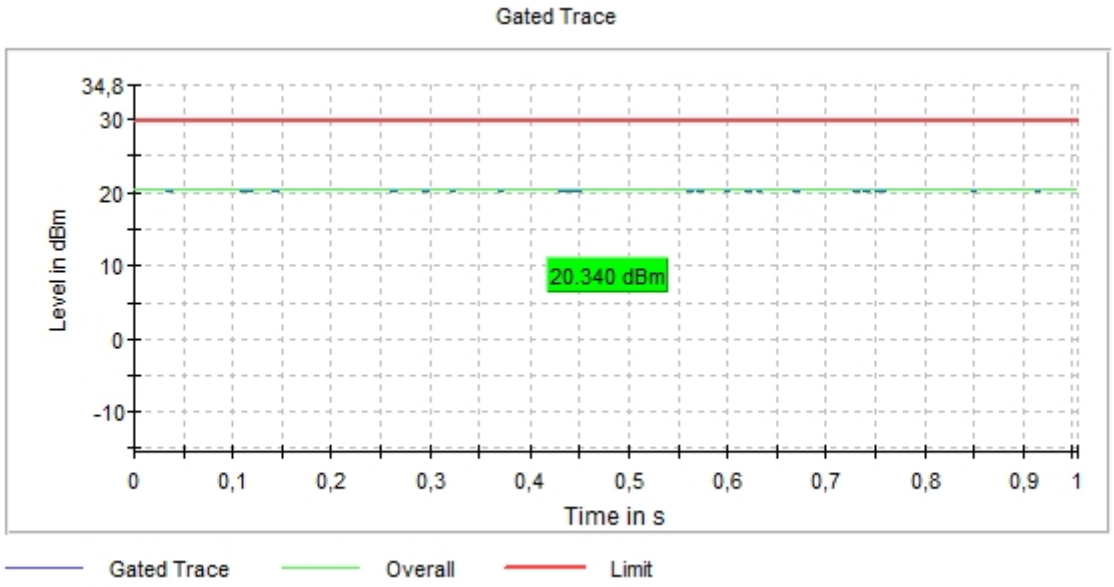


- High Channel 46 (5230 MHz):

MIMO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz)

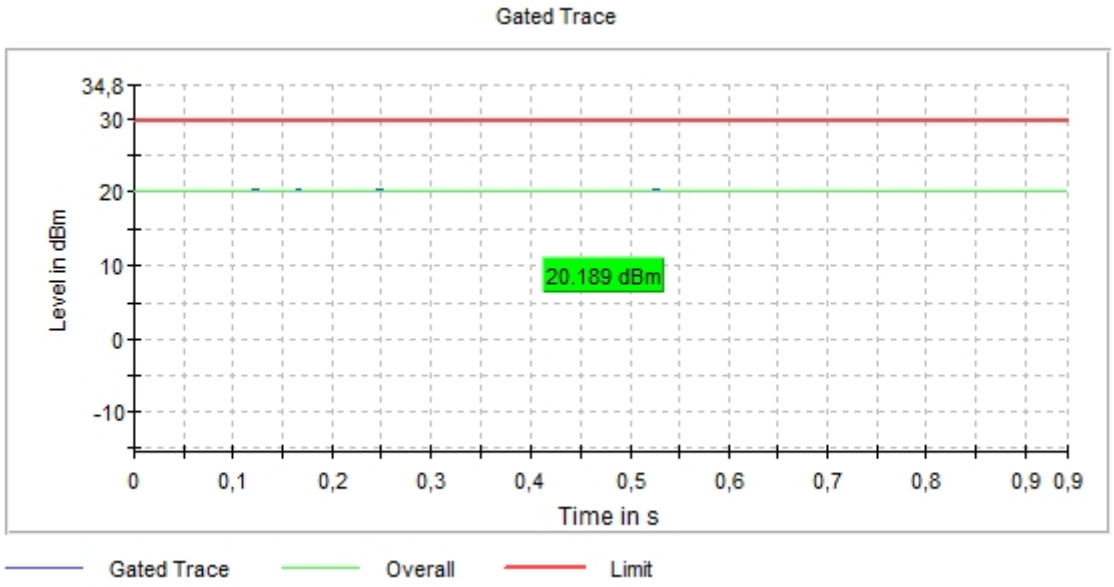
- Single Channel 42 (5210 MHz):



MIMO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



Canada power setting

MIMO worst-case:

MIMO 802.11 a20:

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	15.641	15.686	15.929	16.151
Maximum EIRP Corrected Conducted Power (dBm)	21.811	21.856	22.099	22.321
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	15.877	15.777	15.906	16.198
Maximum EIRP Corrected Conducted Power (dBm)	22.047	21.947	22.076	22.368
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	15.856	15.805	16.067	16.217
Maximum EIRP Corrected Conducted Power (dBm)	22.026	21.975	22.237	22.387
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted Power (dBm)	16.331	16.188	16.347	16.016
Maximum EIRP Corrected Conducted Power (dBm)	22.501	22.358	22.517	22.186
Measurement uncertainty (dB)	<± 1 dB			

MIMO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	16.3	16.2
Maximum EIRP Corrected Conducted Power (dBm)	22.5	22.3
Measurement uncertainty (dB)	<± 1 dB	

MIMO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	16.5	16.4
Maximum EIRP Corrected Conducted Power (dBm)	22.7	22.6
Measurement uncertainty (dB)	<± 1 dB	

MIMO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted Power (dBm)	16.6	16.5
Maximum EIRP Corrected Conducted Power (dBm)	22.8	22.6
Measurement uncertainty (dB)	<± 1 dB	

MIMO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	16.2
Maximum EIRP Corrected Conducted Power (dBm)	22.4
Measurement uncertainty (dB)	<± 1 dB

MIMO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted Power (dBm)	16.2
Maximum EIRP Corrected Conducted Power (dBm)	22.3
Measurement uncertainty (dB)	<± 1 dB

Verdict: PASS

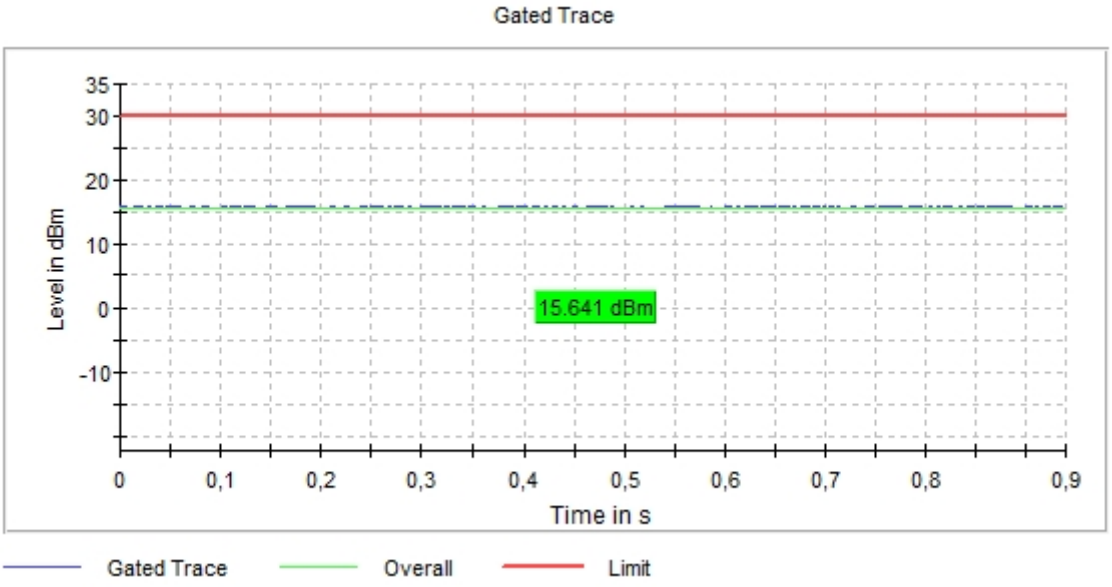
Canada power setting

MIMO worst-case:

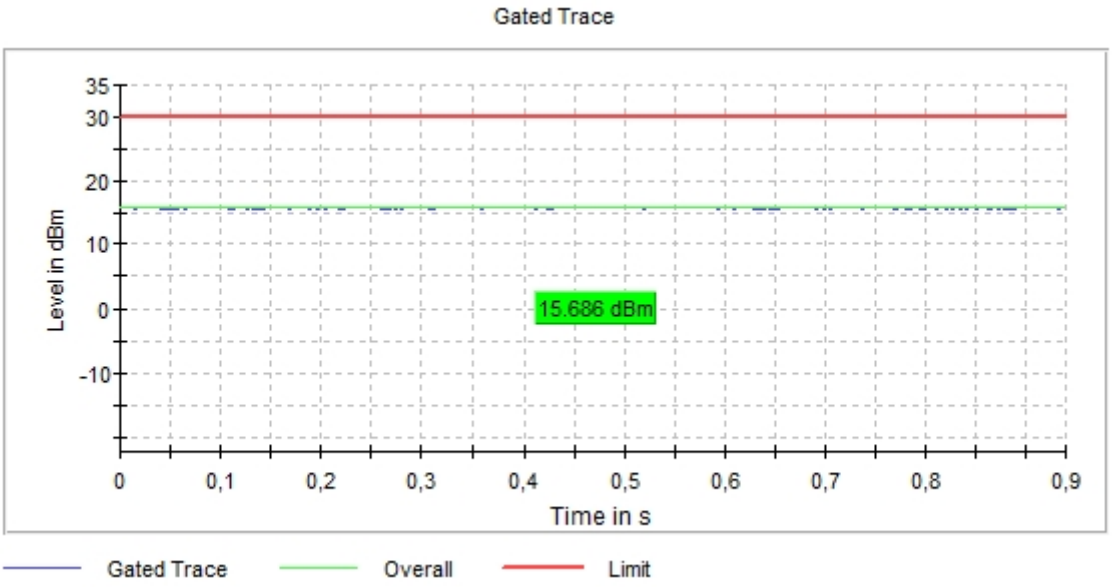
MIMO 802.11 a20:

U-NII-1 (5150-5250 MHz)

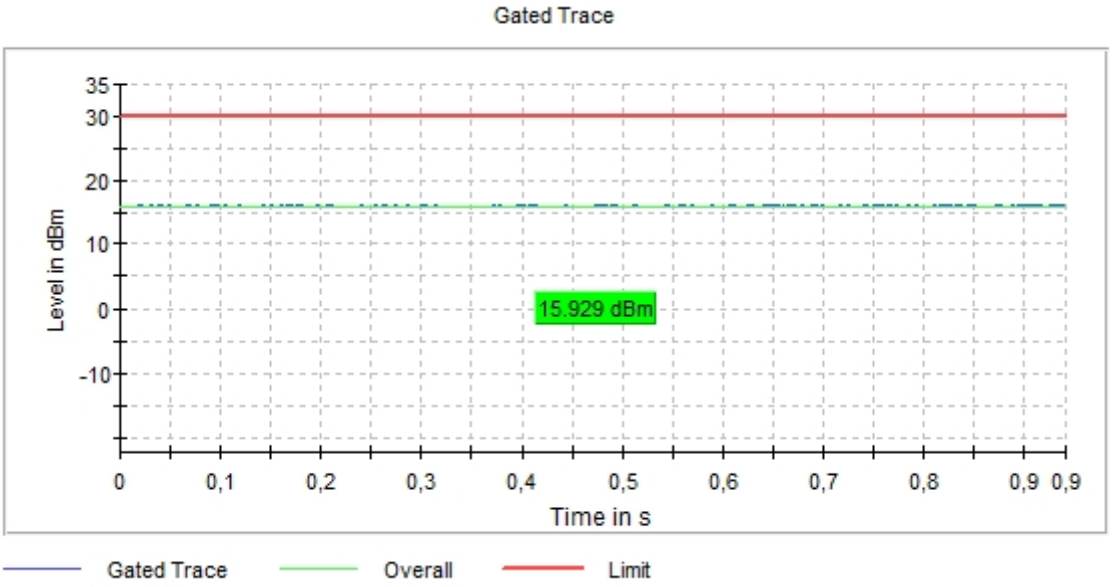
- Low Channel 36 (5180 MHz):



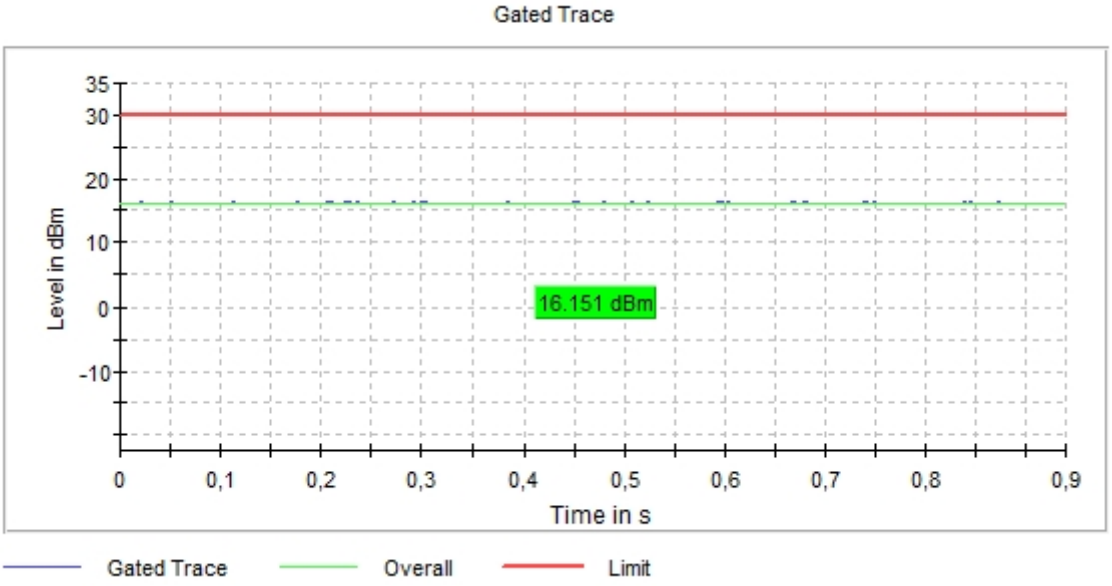
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



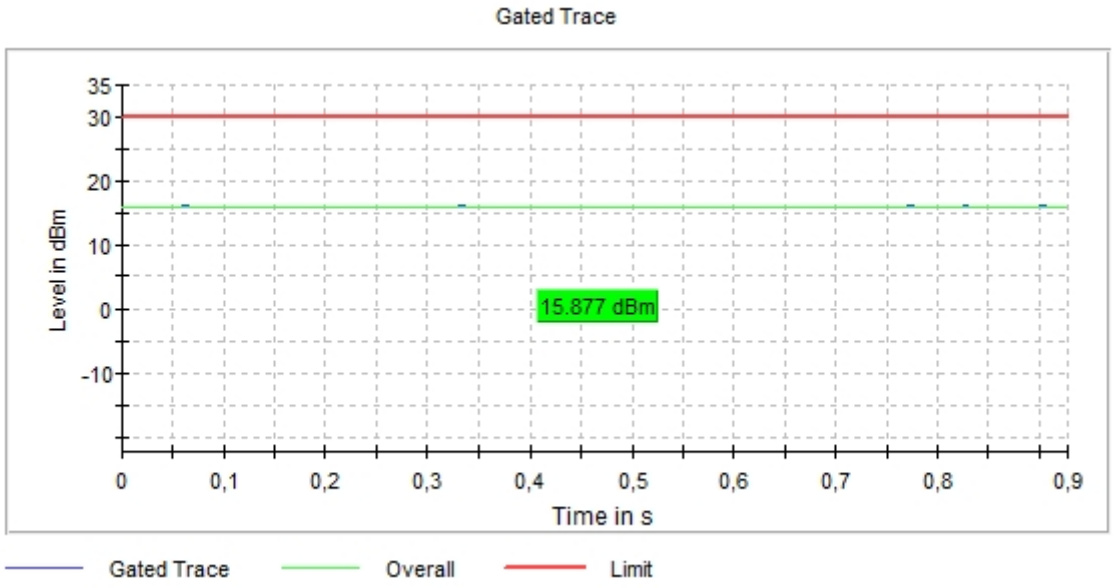
- High Channel 48 (5240 MHz):



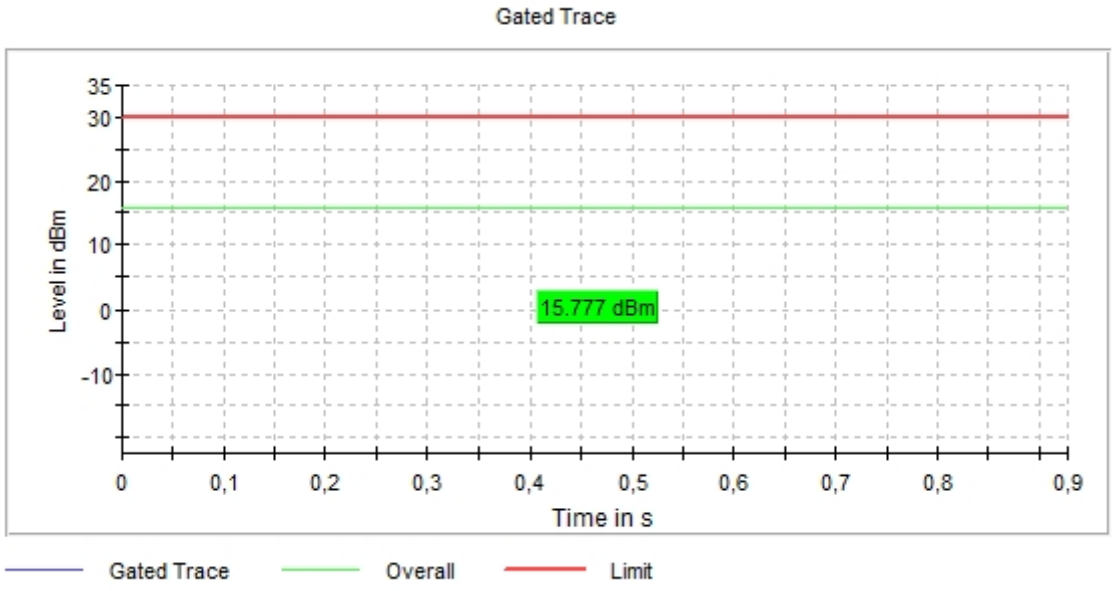
MIMO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz)

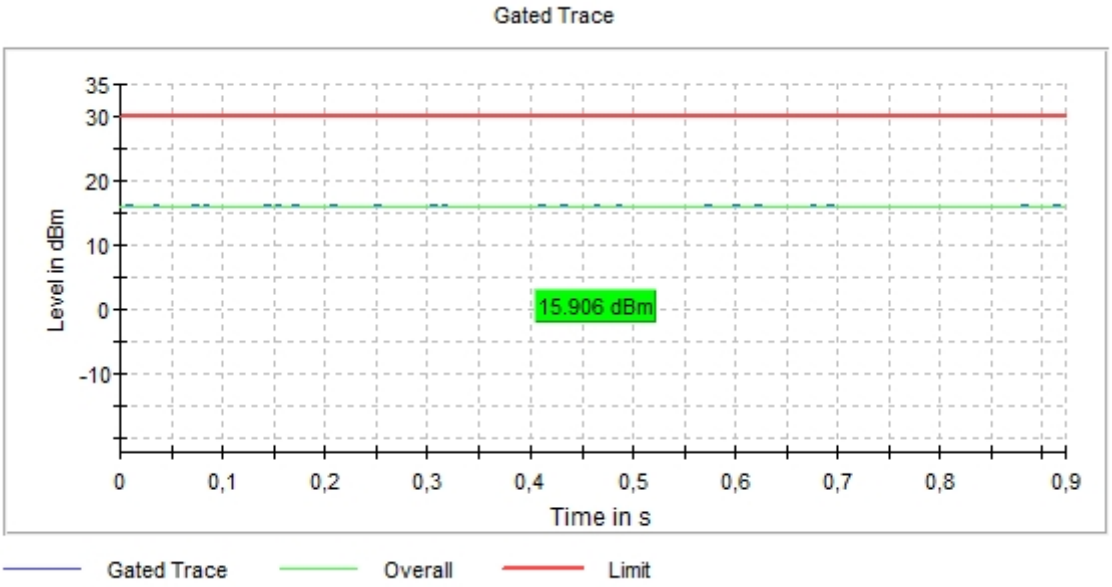
- Low Channel 36 (5180 MHz):



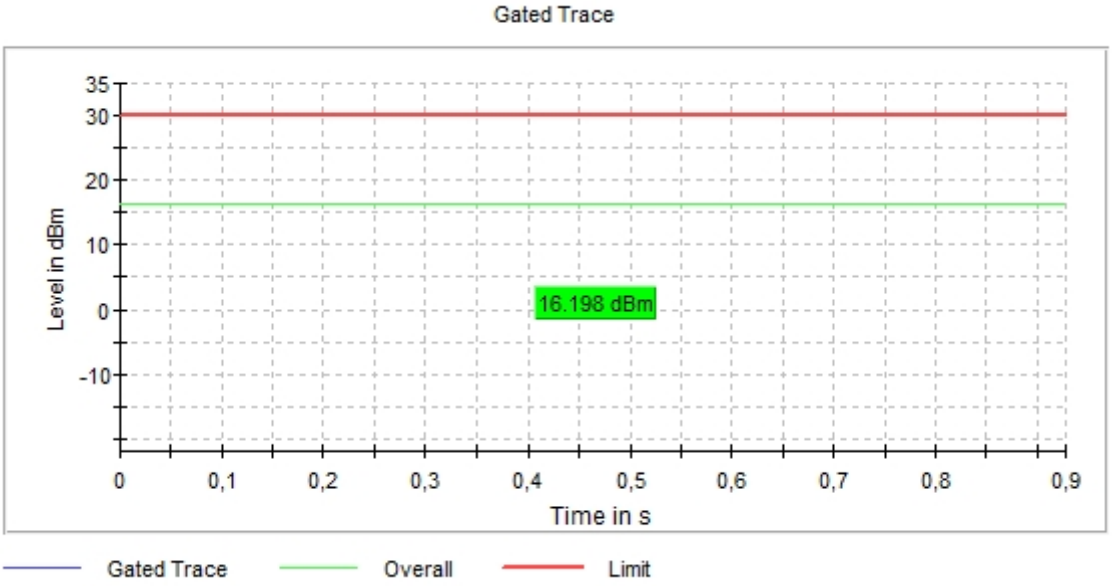
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



- High Channel 48 (5240 MHz):

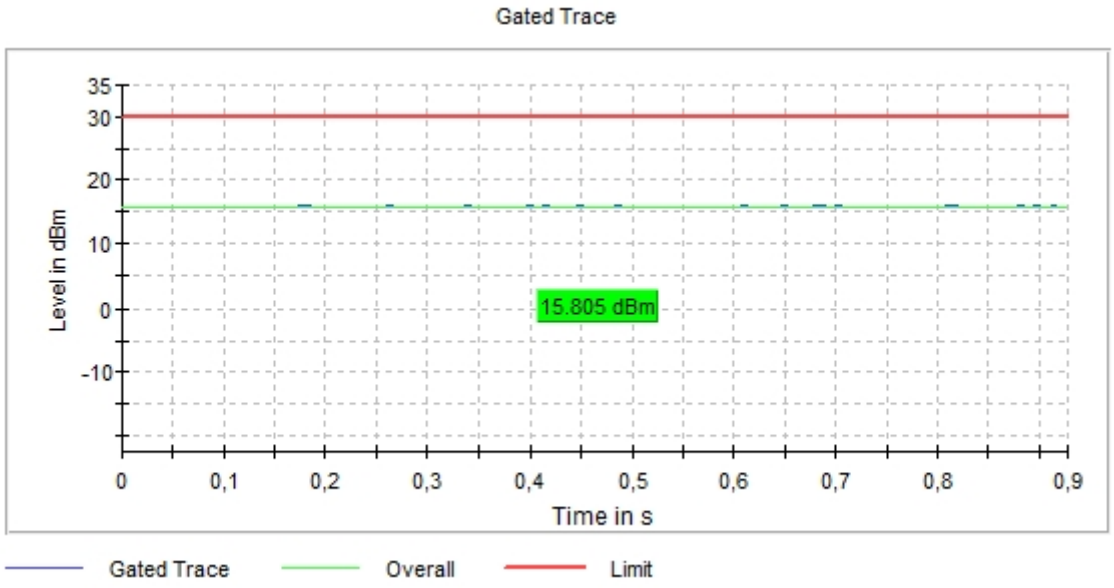


MIMO 802.11 ac20 (VHT20):

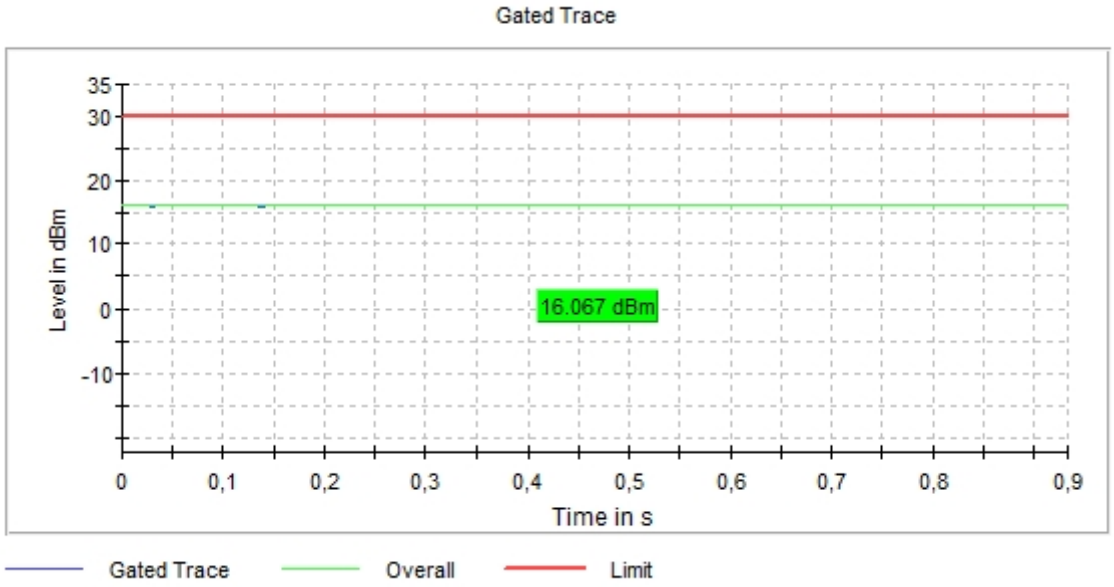
U-NII-1 (5150-5250 MHz)

- Low Channel 36 (5180 MHz):

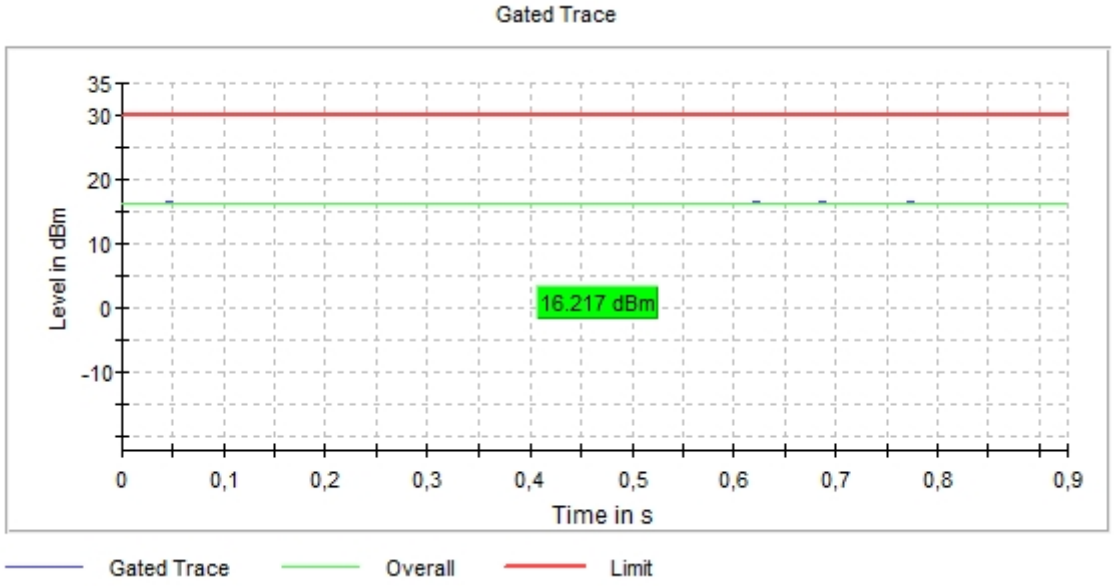
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



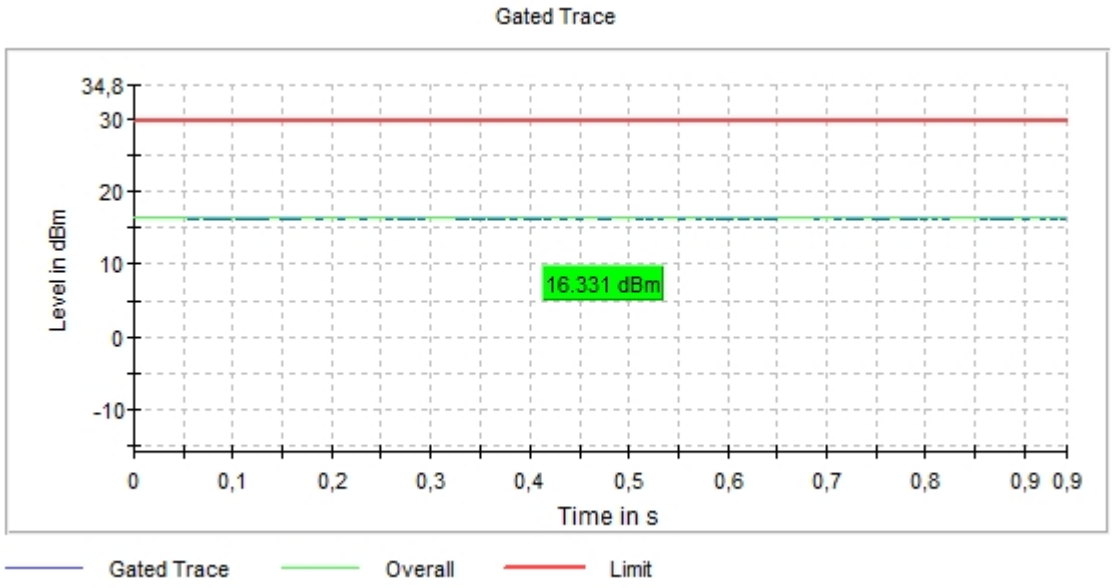
- High Channel 48 (5240 MHz):



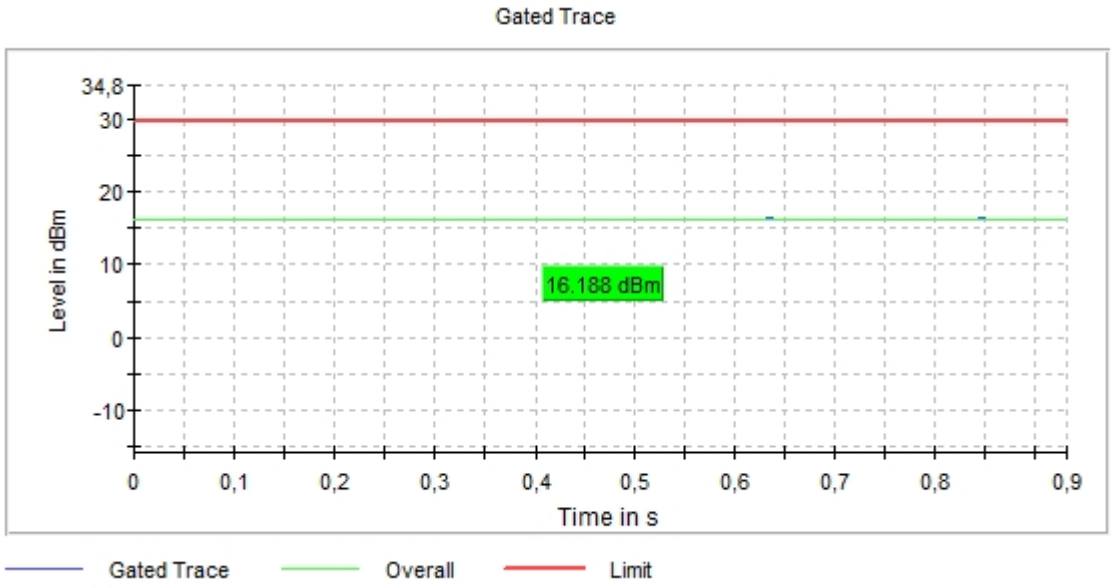
MIMO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz)

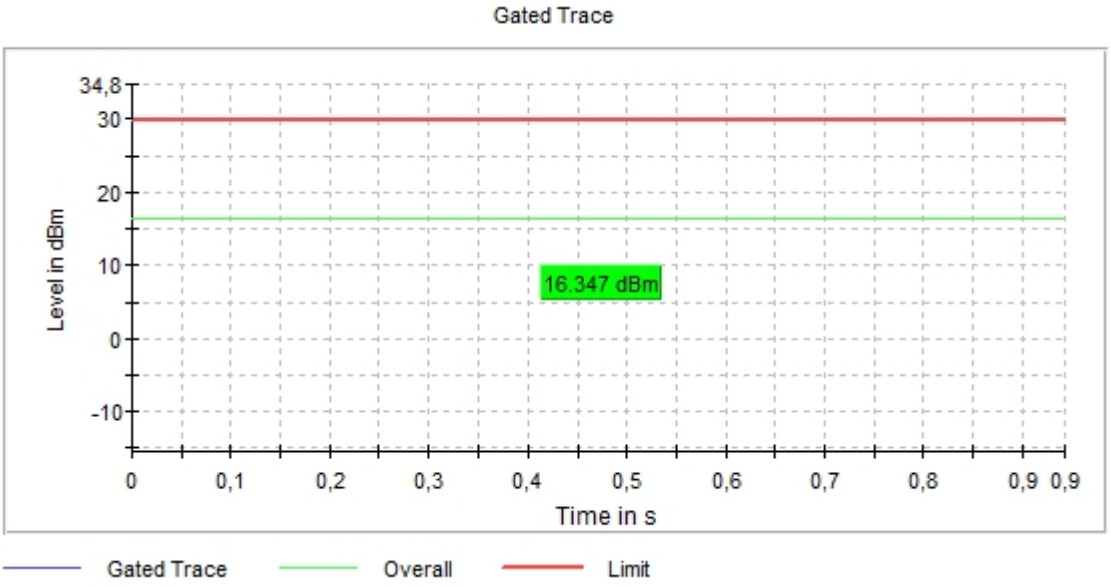
- Low Channel 36 (5180 MHz):



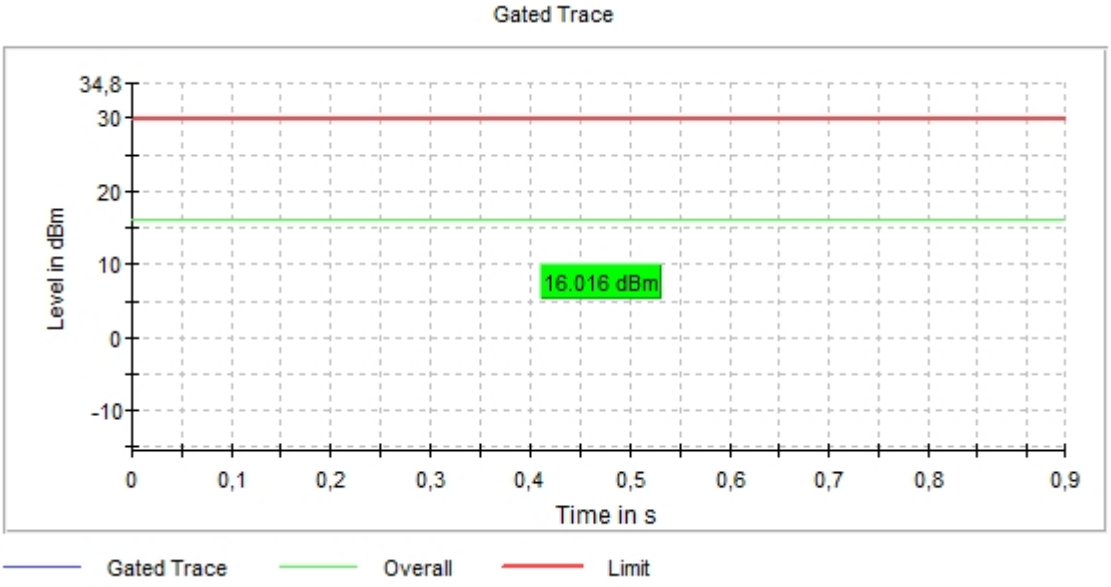
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



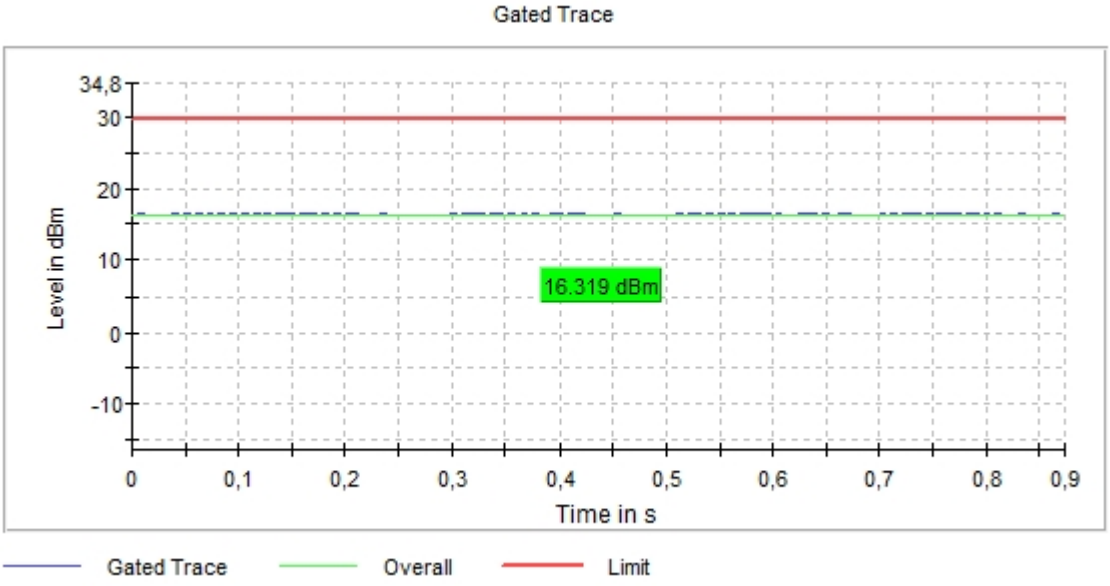
- High Channel 48 (5240 MHz):



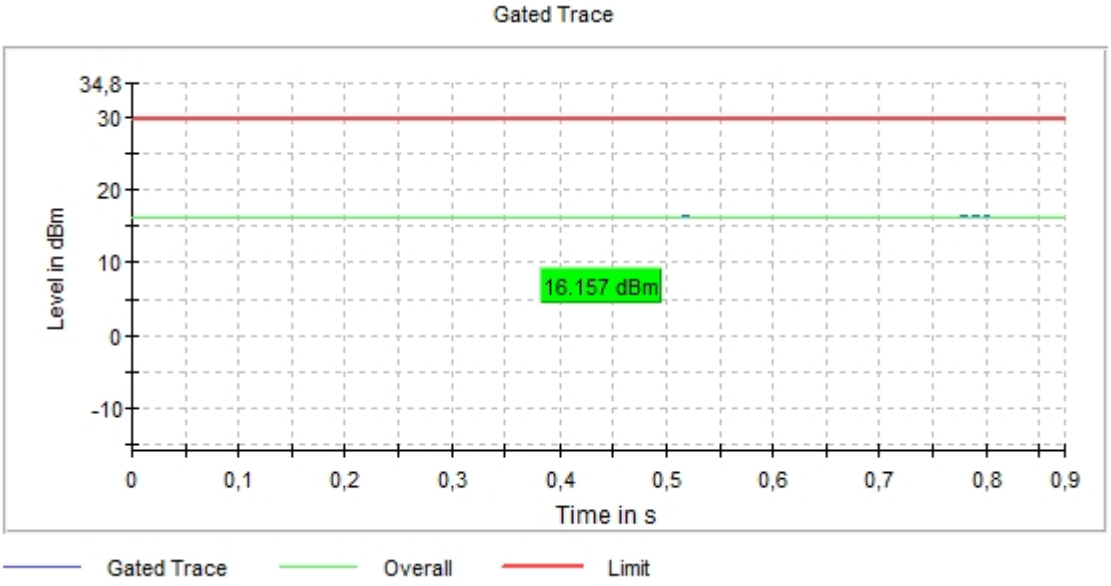
MIMO 802.11 n40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



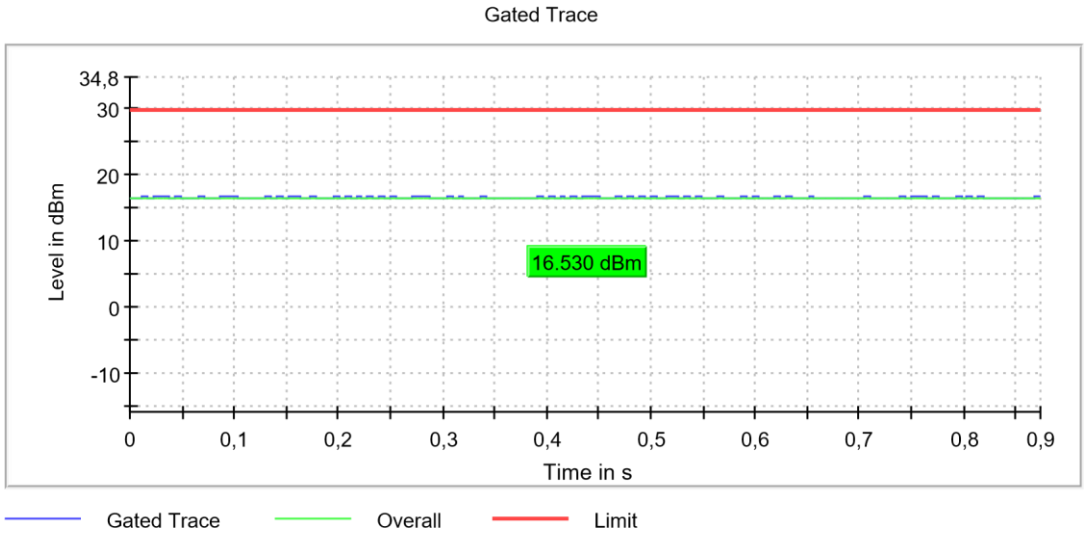
- High Channel 46 (5230 MHz):



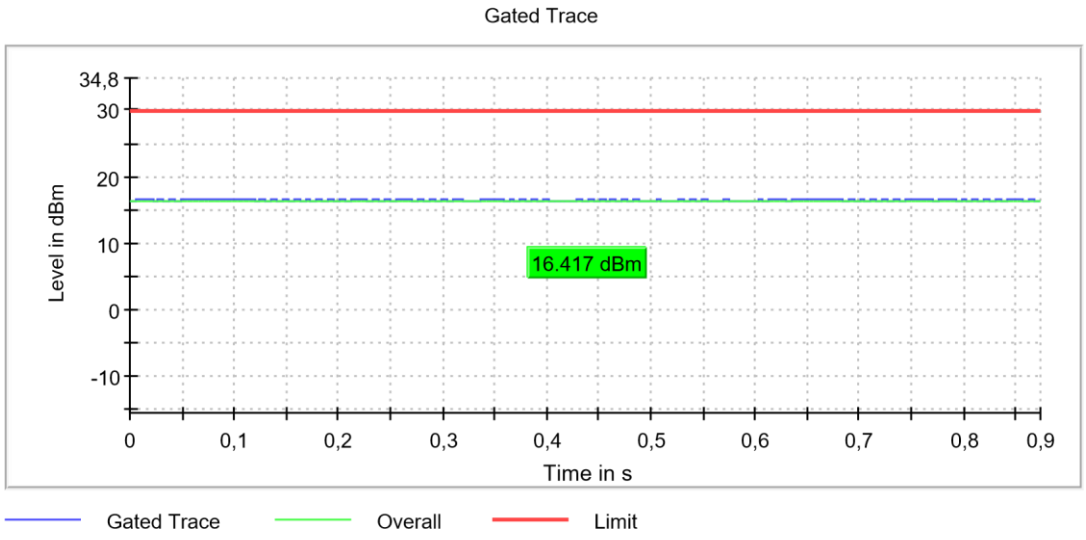
MIMO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



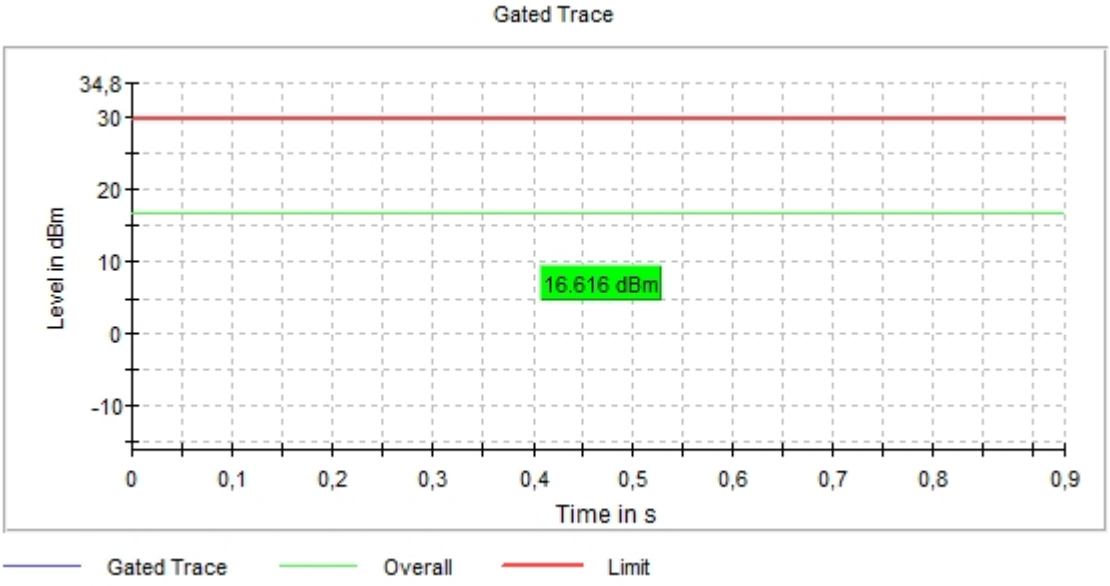
- High Channel 46 (5230 MHz):



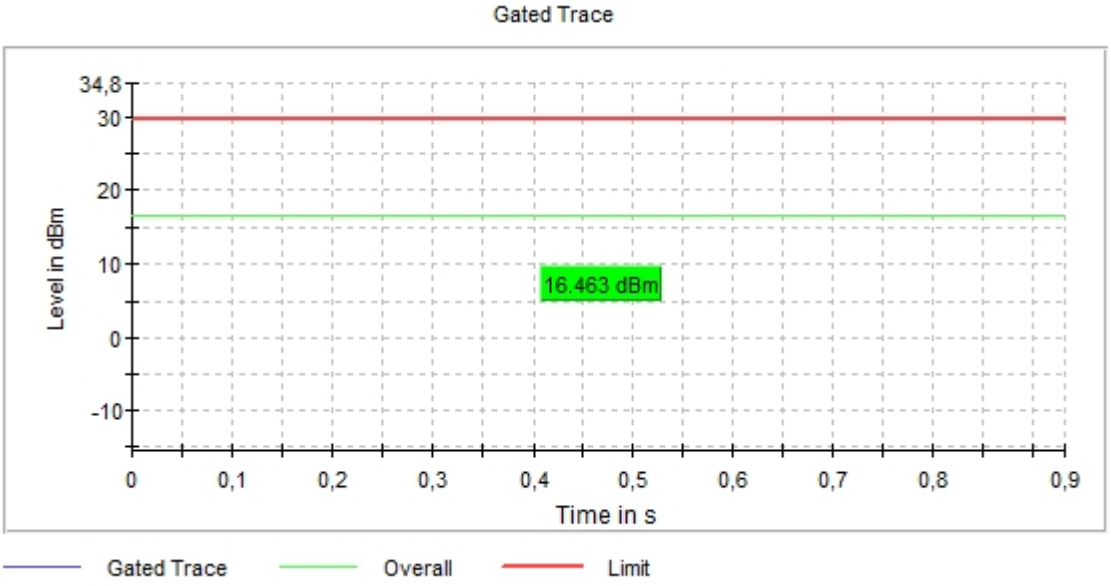
MIMO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



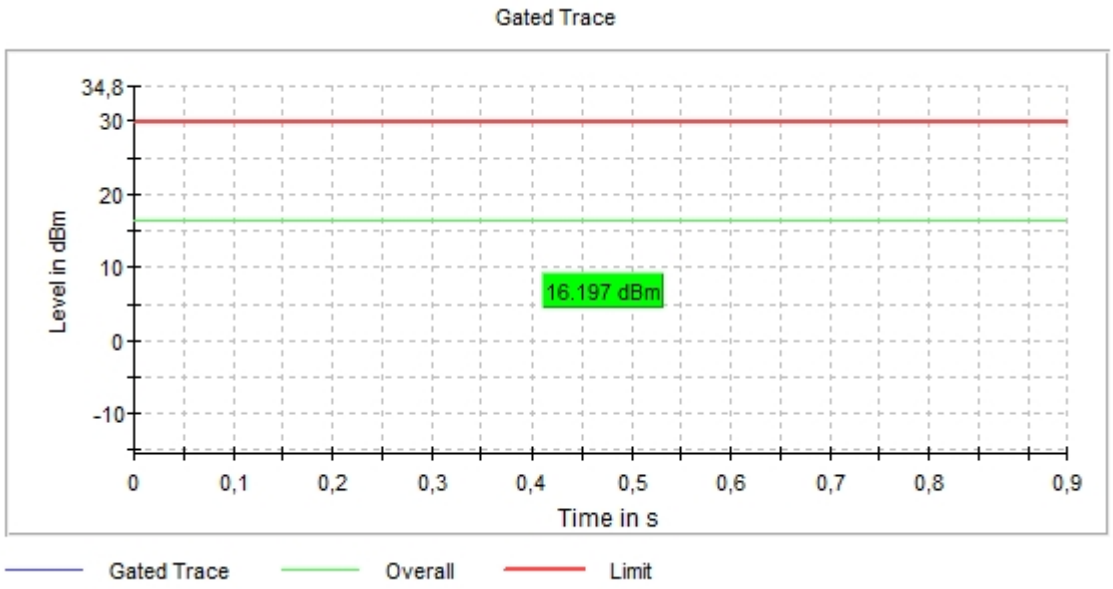
- High Channel 46 (5230 MHz):



MIMO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz)

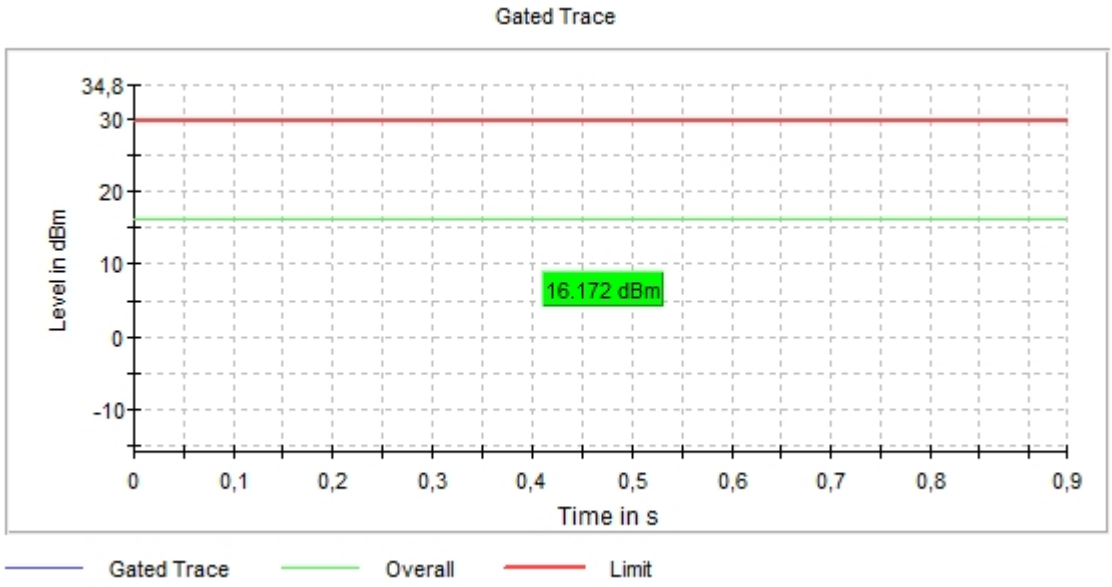
- Single Channel 42 (5210 MHz):



MIMO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



FCC 15.407 (a)(1)(ii) Transmitter Maximum Power Spectral Density / RSS-247 6.2.1.1. Transmitter EIRP Spectral Density

SPECIFICATION:

* FCC 15.407: For an indoor access point operating in the band 5.15-5.25 GHz. the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition. the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used. both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

* RSS-247: For other devices different of OEM devices installed in vehicles. the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B. dBm. whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

RESULTS:

The maximum Power Spectral Density (PSD) was measured using the method according to point F) referencing E.2.b) (Method SA-1) of Guidance 789033 D02 General UNII Test Procedures New Rules v02r01.

The result of the Peak PSD was measured by colocating a marker on the peak of the signal and the results are in the tables below.

The e.i.r.p. levels are calculated by adding the declared maximum antenna gain (dBi).

- Preliminary tests determined the SISO worst-case: WLAN1.
- Preliminary tests determined the MIMO worst-case: WLAN12.

Maximum Declared Antenna Gain:

- SISO Antenna – WLAN1: +3.5 dBi
- MIMO Antennas – WLAN1 & WLAN2:
  - WLAN1: +3.5 dBi
  - WLAN2: +2.8 dBi
  - WLAN12: + 6.17 dBi

FCC power setting

SISO worst-case:

SISO 802.11 a20:

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	11.125	13.631	15.863	15.356
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	10.297	12.559	11.758	11.603
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	10.410	12.891	15.779	15.359
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	10.060	10.512	11.308	11.739
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted PSD (dBm)	2.496	7.719
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted PSD (dBm)	1.326	8.841
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted PSD (dBm)	1.661	8.453
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted PSD (dBm)	0.222
Measurement uncertainty (dB)	<±1.3

SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted PSD (dBm)	-0.164
Measurement uncertainty (dB)	<±1.3

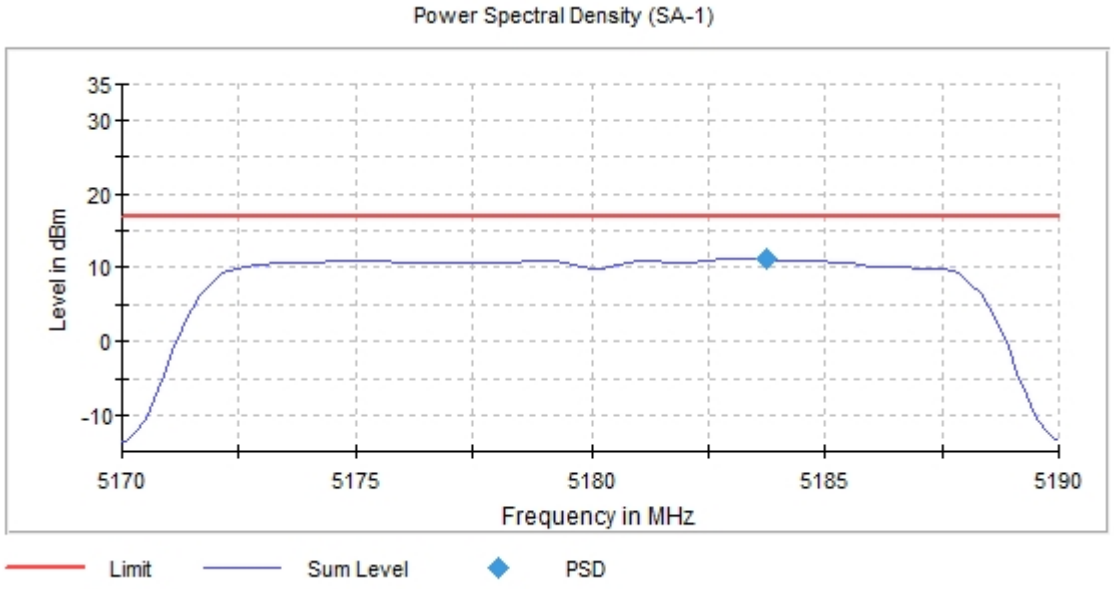
Verdict: PASS

SISO worst-case:

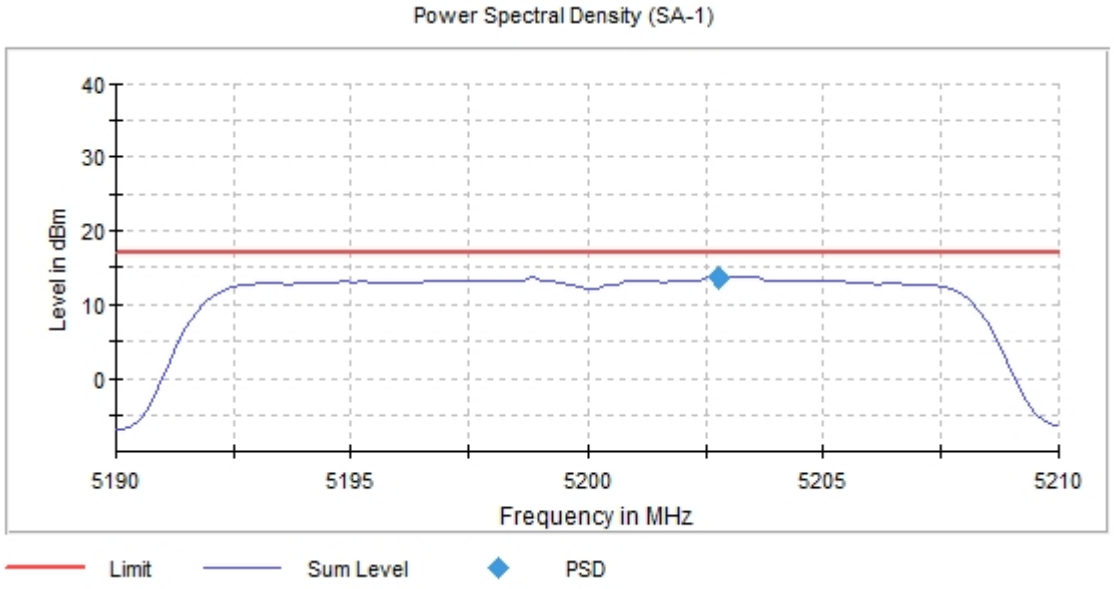
SISO 802.11 a20:

U-NII-1 (5150-5250 MHz)

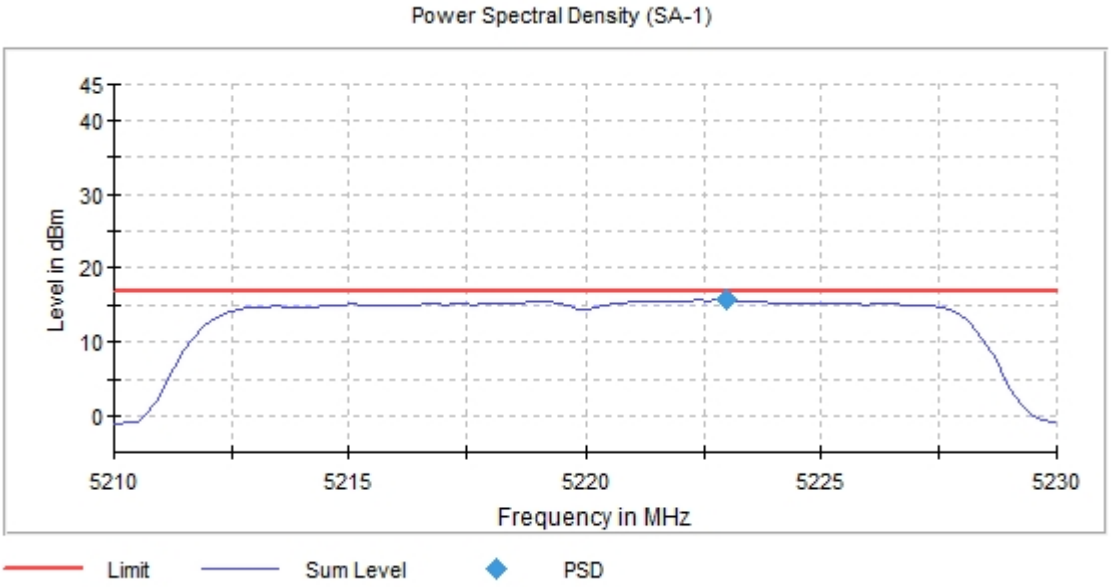
- Low Channel 36 (5180 MHz):



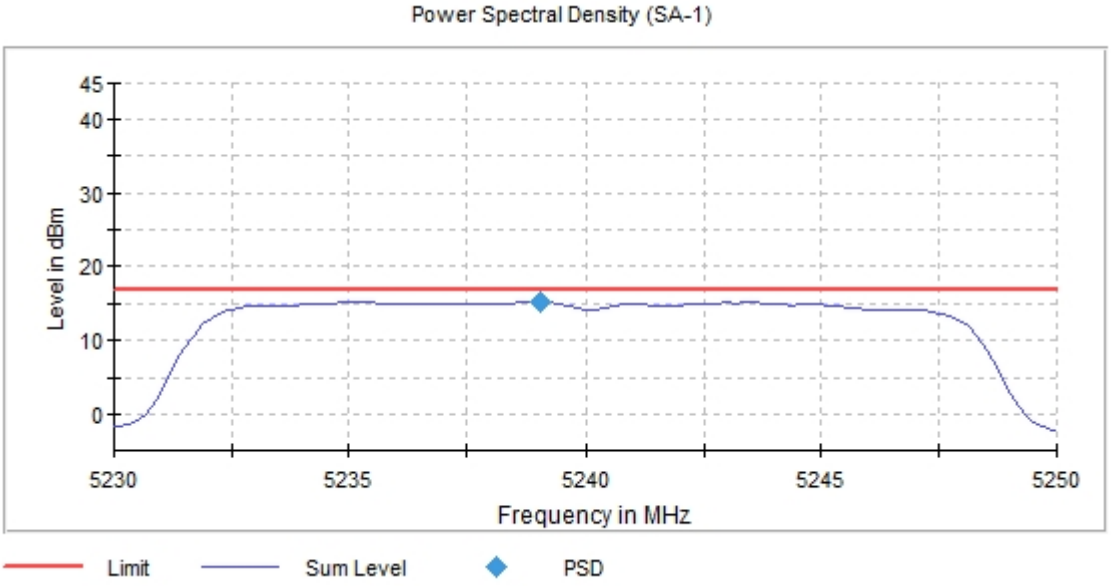
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



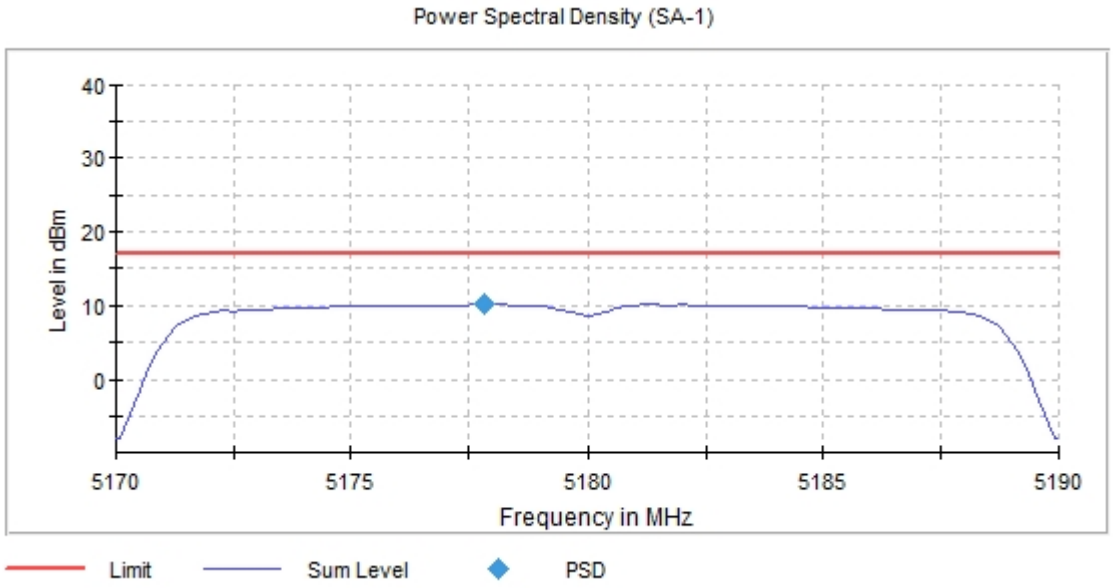
- High Channel 48 (5240 MHz):



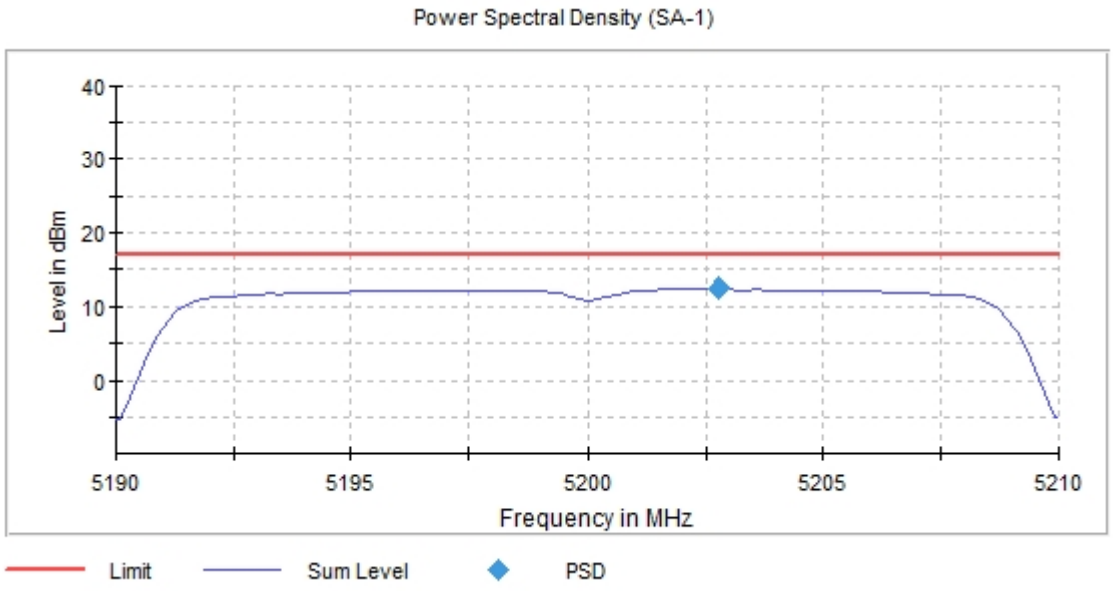
SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz)

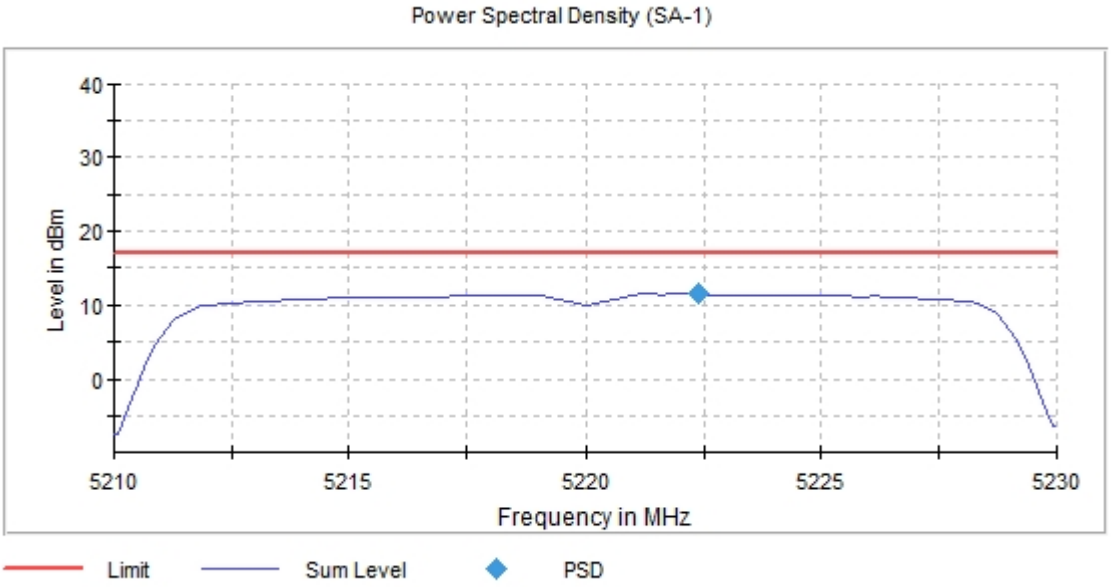
- Low Channel 36 (5180 MHz):



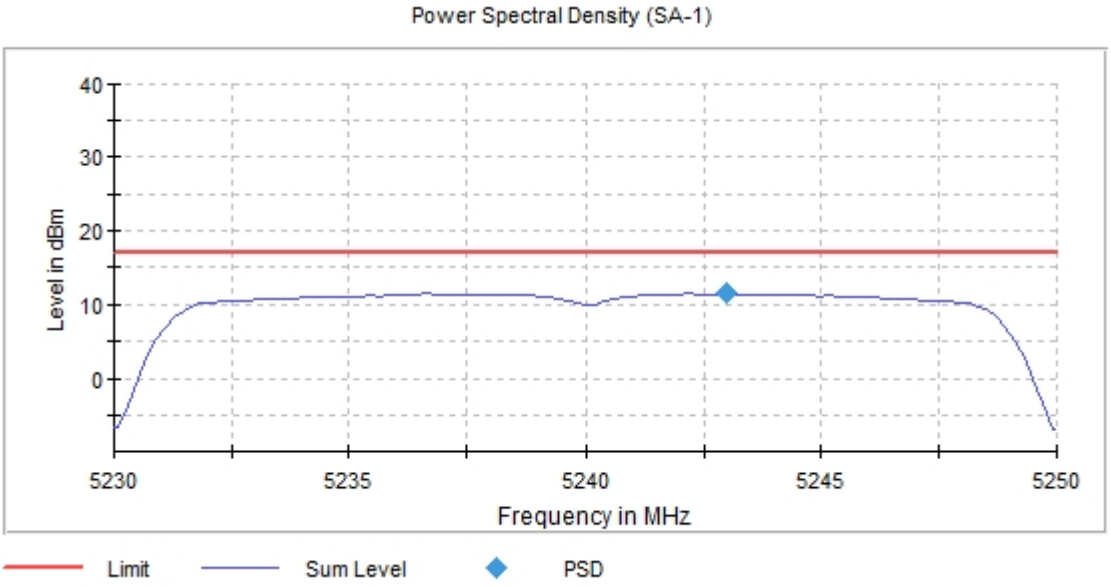
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



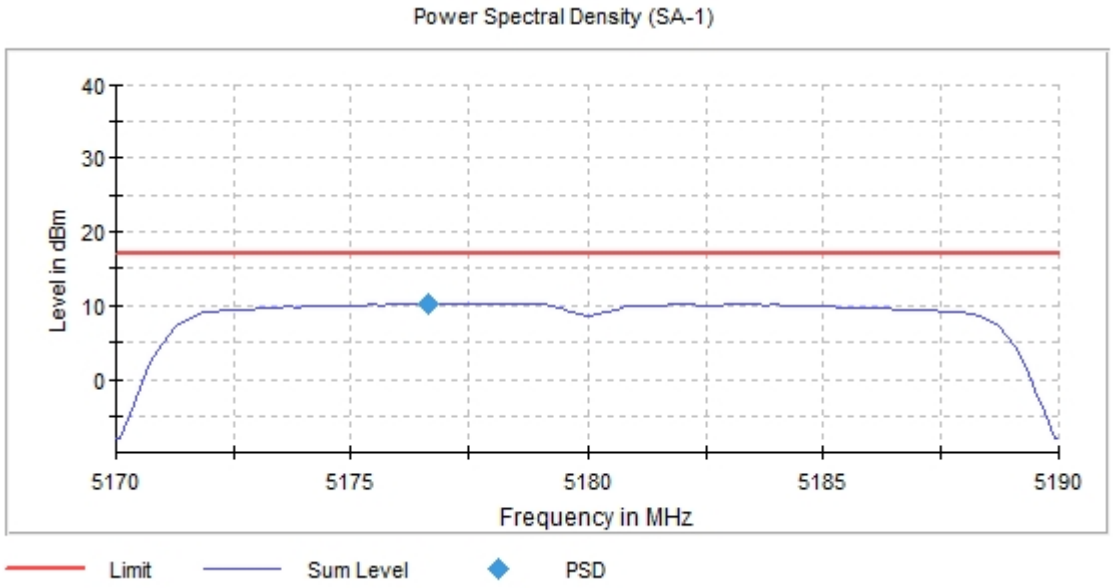
- High Channel 48 (5240 MHz):



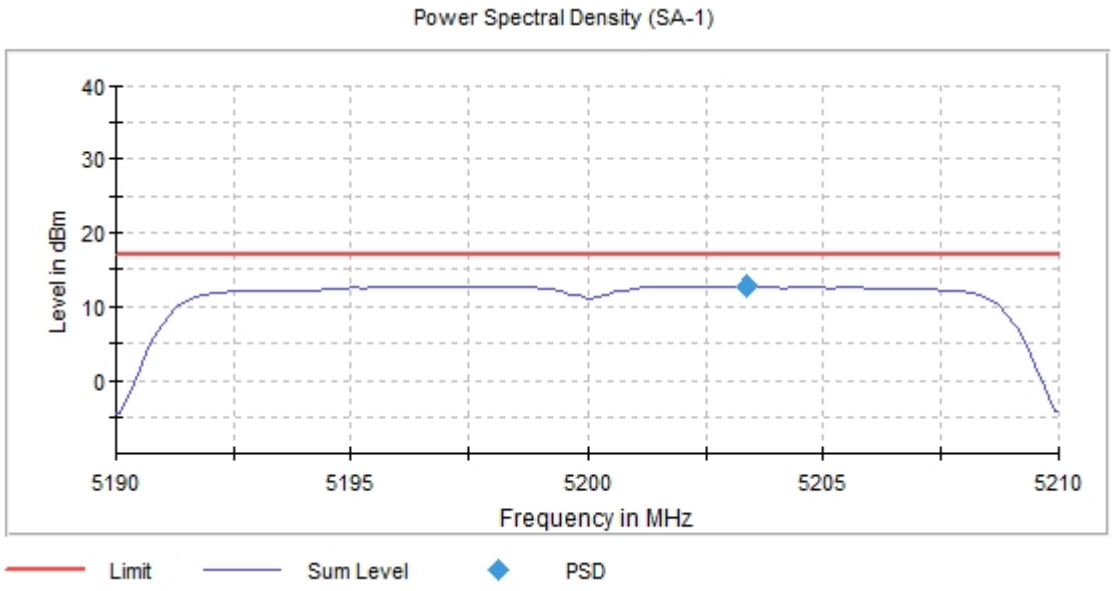
SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz)

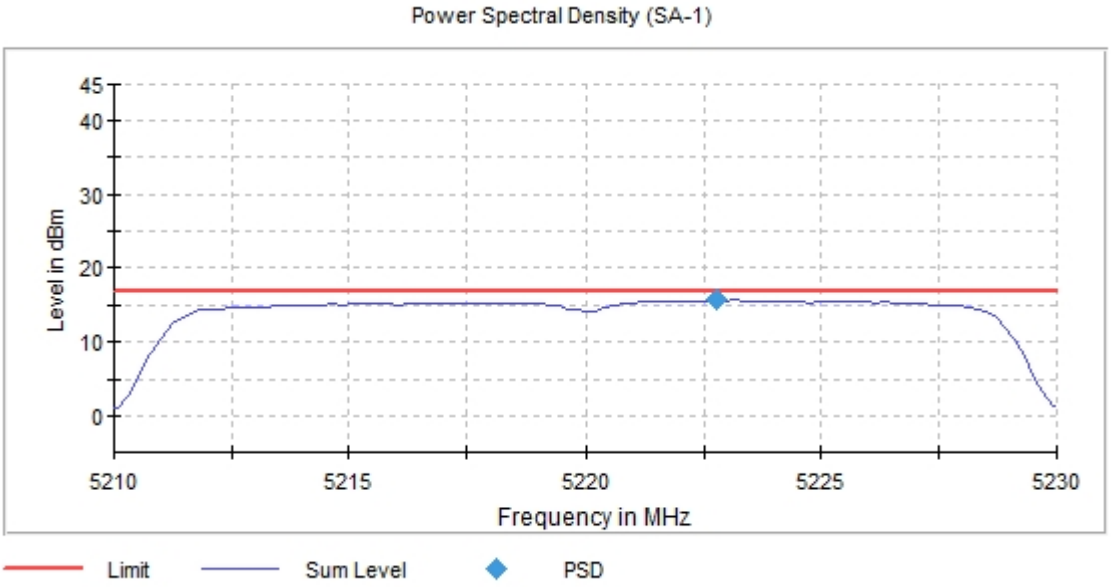
- Low Channel 36 (5180 MHz):



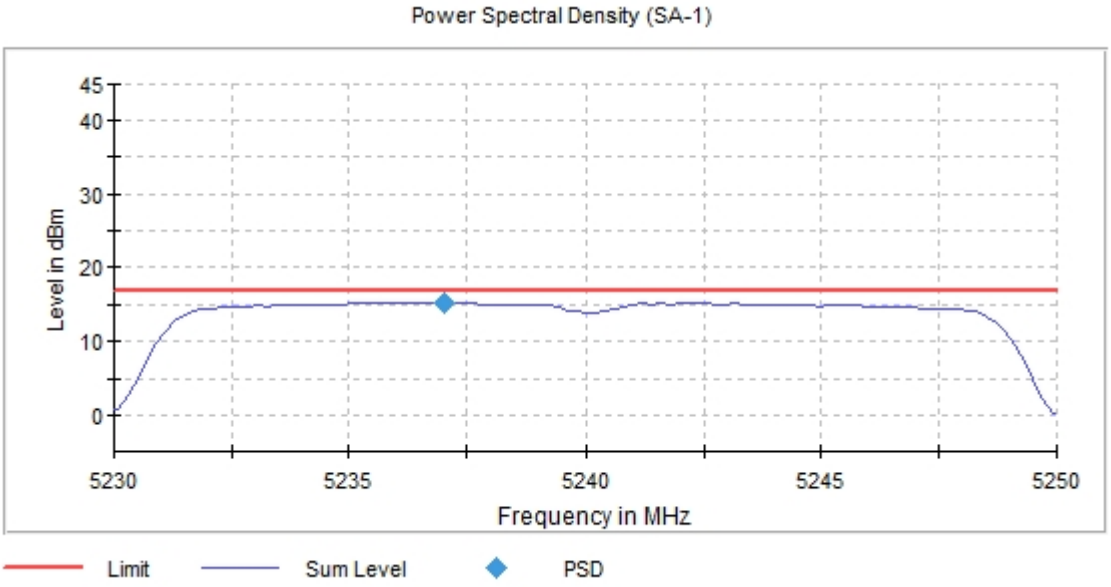
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



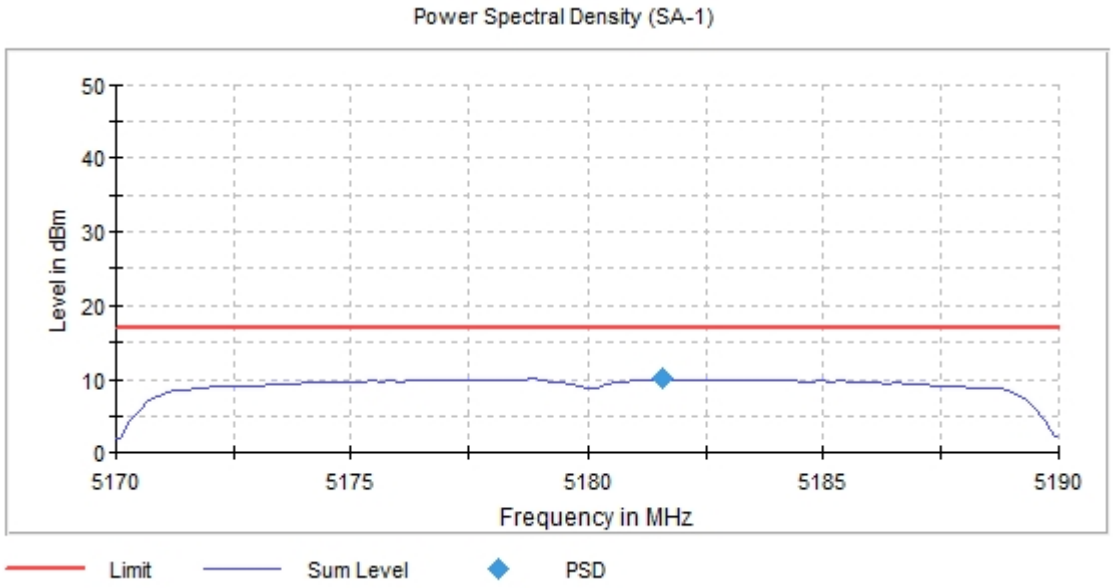
- High Channel 48 (5240 MHz):



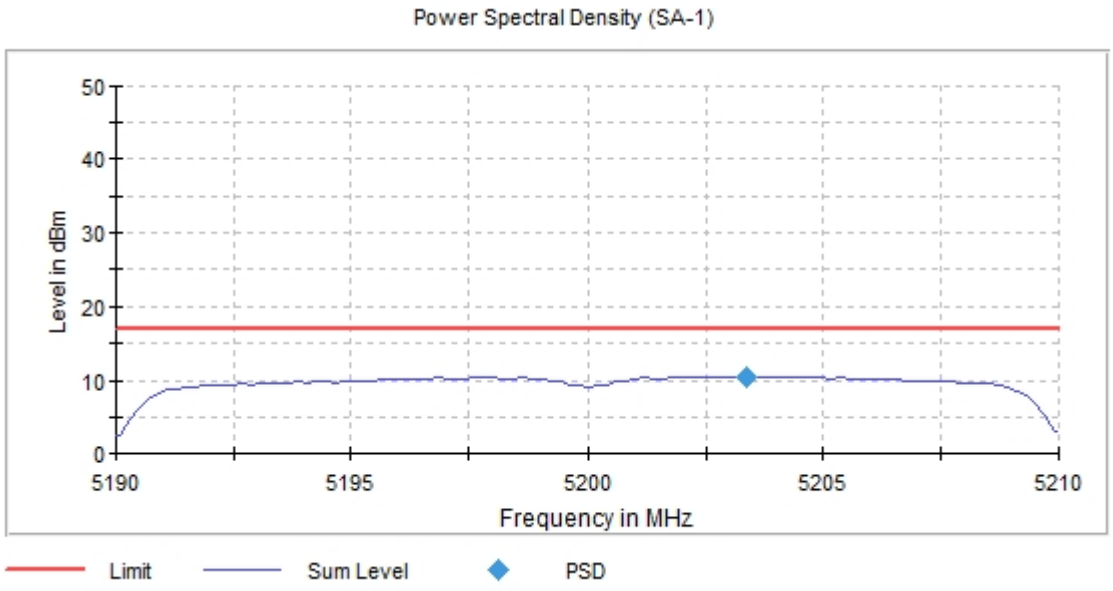
SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz)

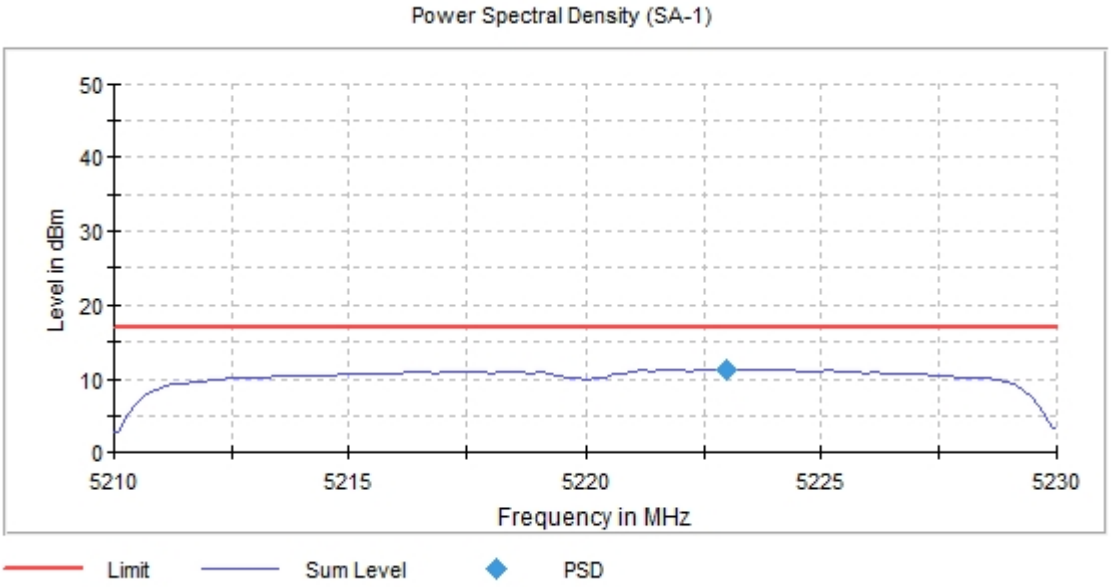
- Low Channel 36 (5180 MHz):



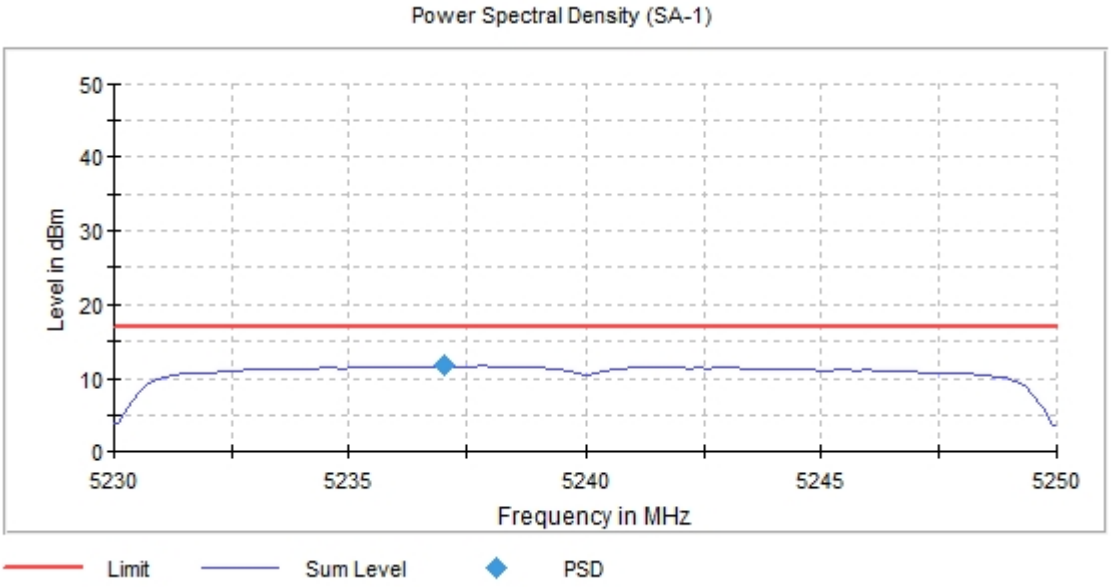
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



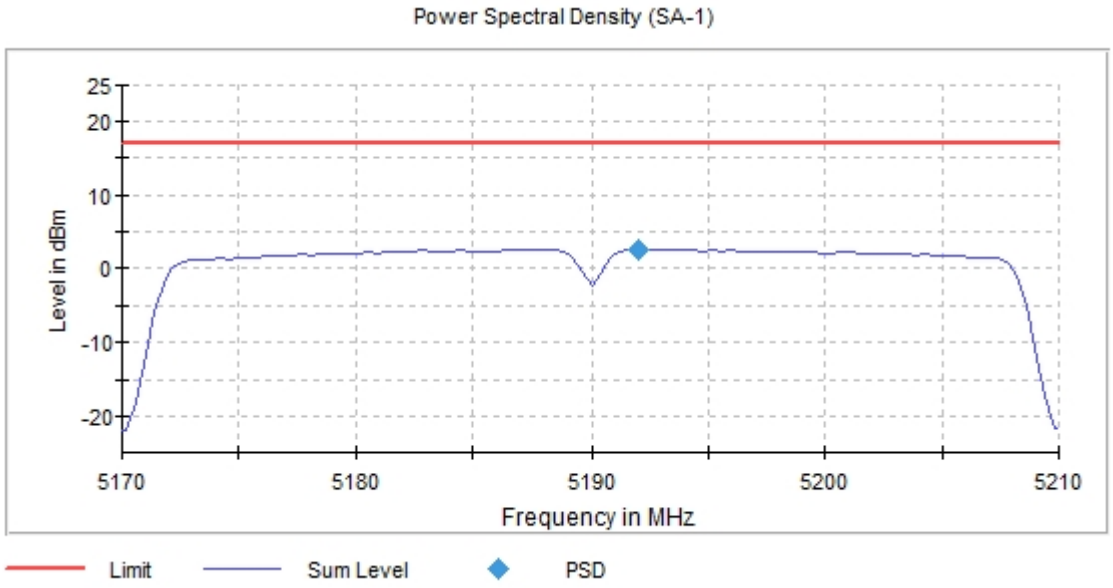
- High Channel 48 (5240 MHz):



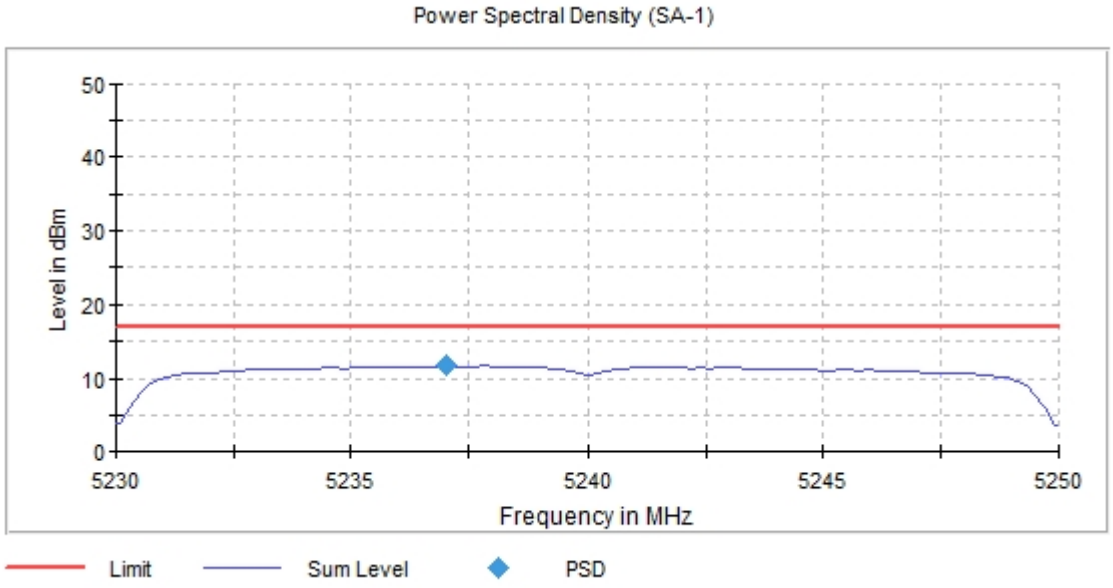
SISO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



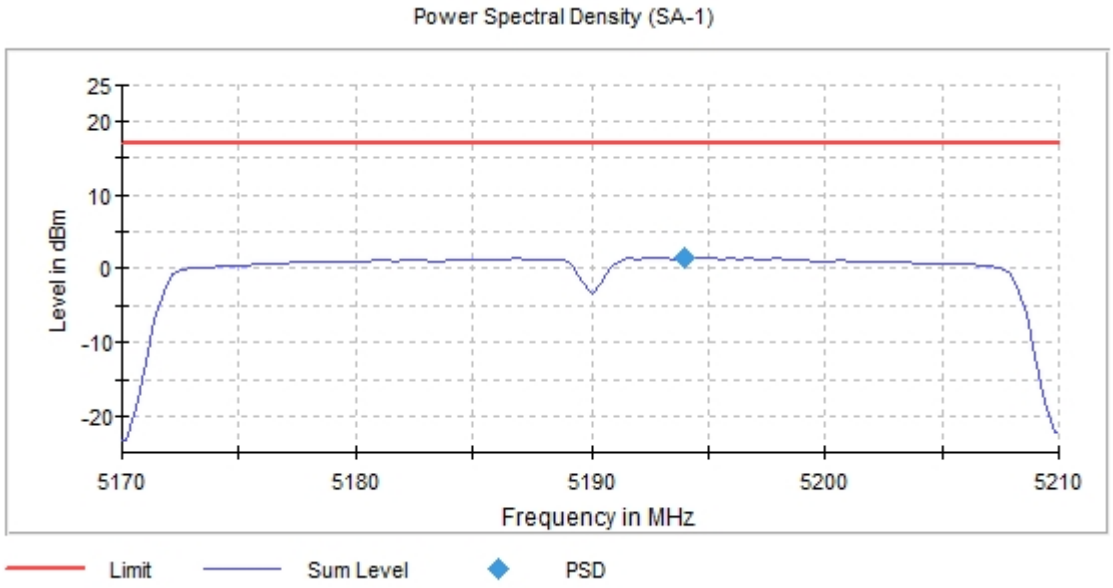
- High Channel 46 (5230 MHz):



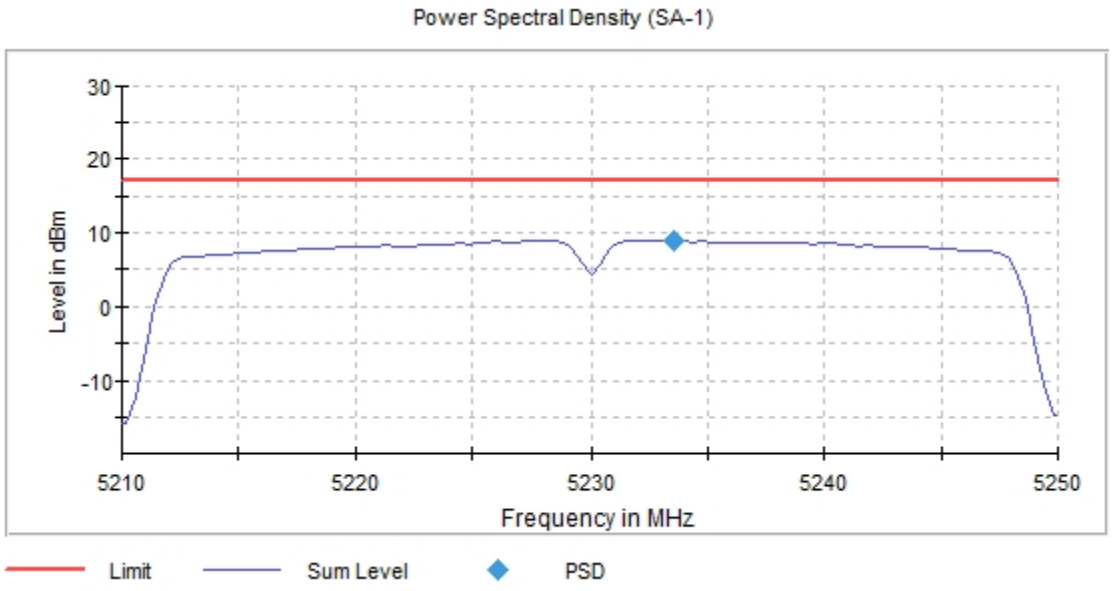
SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



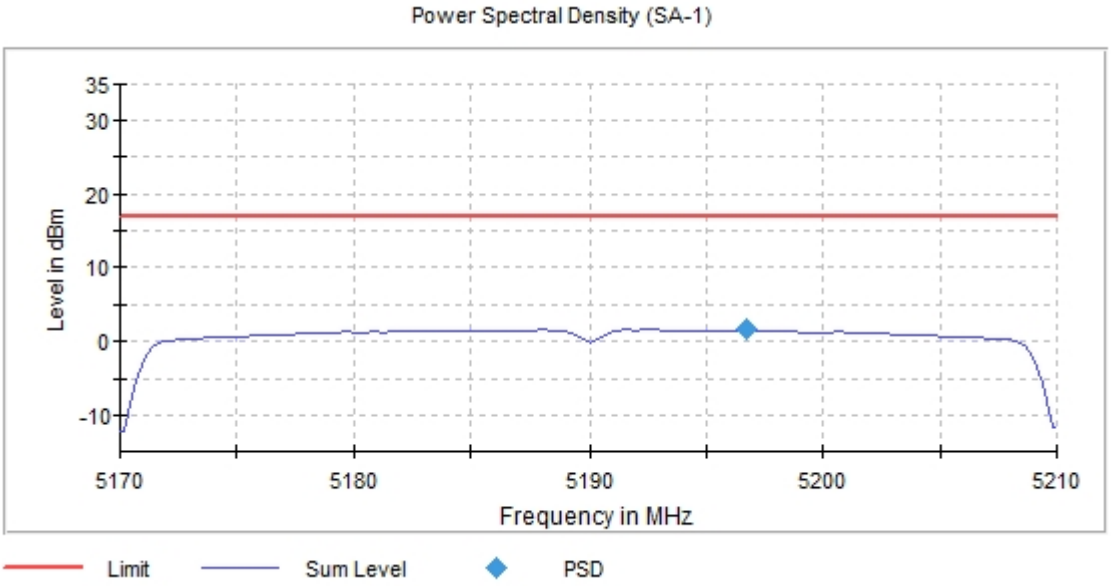
- High Channel 46 (5230 MHz):



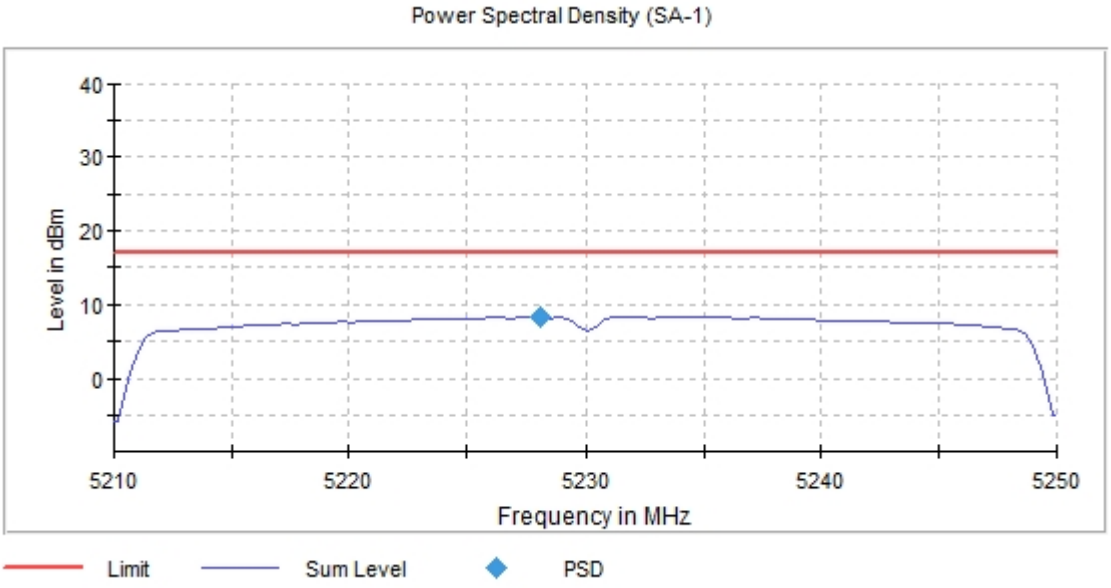
SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



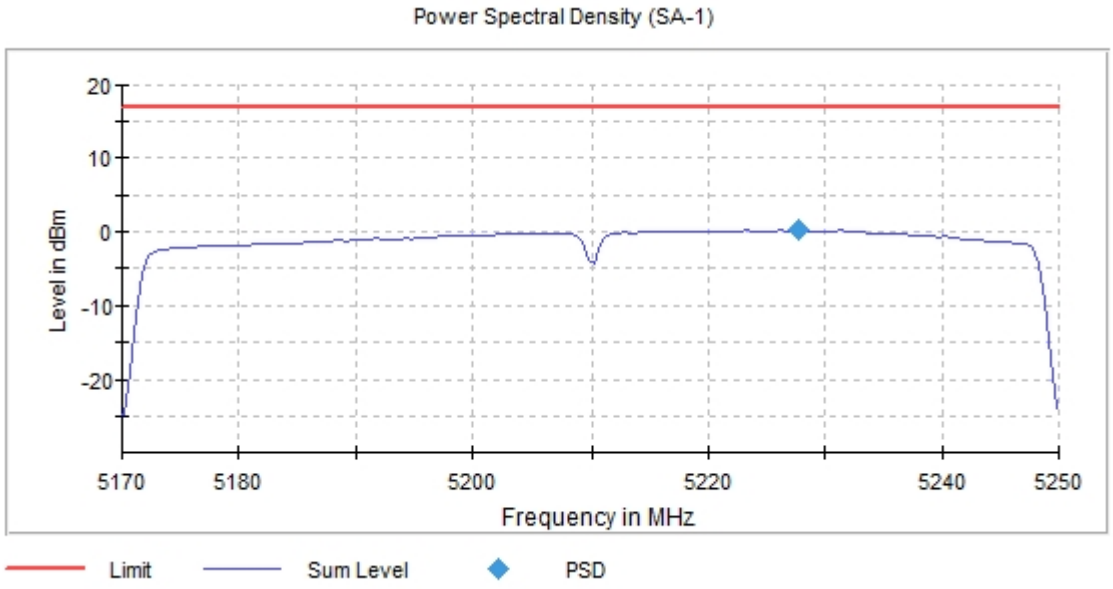
- High Channel 46 (5230 MHz):



SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz)

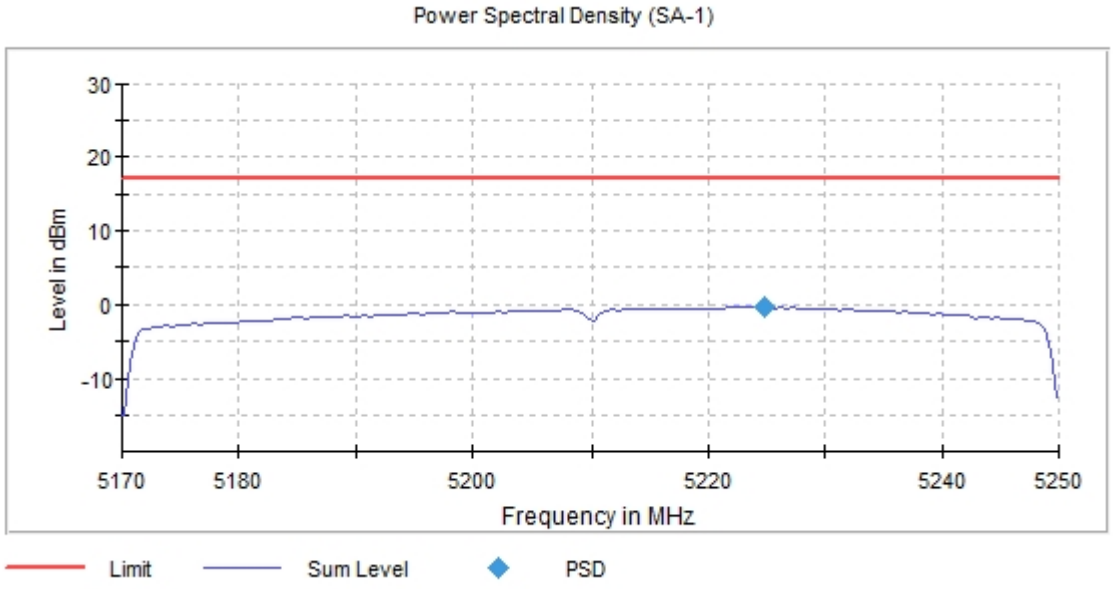
- Single Channel 42 (5210 MHz):



SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



Canada power setting

SISO worst-case:

SISO 802.11 a20:

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	5.460	5.542	6.245	5.864
Maximum EIRP Corrected Conducted PSD (dBm)	8.960	9.042	9.745	9.364
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	4.864	5.016	5.492	5.791
Maximum EIRP Corrected Conducted PSD (dBm)	8.364	8.516	8.992	9.291
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	4.709	4.890	5.503	5.629
Maximum EIRP Corrected Conducted PSD (dBm)	8.209	8.490	9.003	9.129
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 36 (5180 MHz)	Middle Channel 40 (5200 MHz)	Channel 44 (5220 MHz)	High Channel 48 (5240 MHz)
Maximum Corrected Conducted PSD (dBm)	4.397	4.528	5.086	5.226
Maximum EIRP Corrected Conducted PSD (dBm)	7.897	8.028	8.586	8.726
Measurement uncertainty (dB)	<±1.3			

SISO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted PSD (dBm)	2.754	3.215
Maximum EIRP Corrected Conducted PSD (dBm)	6.254	6.715
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted PSD (dBm)	1.728	2.591
Maximum EIRP Corrected Conducted PSD (dBm)	5.228	6.091
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz):

Channels	Low Channel 38 (5190 MHz)	High Channel 46 (5230 MHz)
Maximum Corrected Conducted PSD (dBm)	1.937	2.693
Maximum EIRP Corrected Conducted PSD (dBm)	5.437	6.193
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted PSD (dBm)	0.162
Maximum EIRP Corrected Conducted PSD (dBm)	3.662
Measurement uncertainty (dB)	<±1.3

SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz):

Channel	Single Channel 42 (5210 MHz)
Maximum Corrected Conducted PSD (dBm)	-0.179
Maximum EIRP Corrected Conducted PSD (dBm)	3.321
Measurement uncertainty (dB)	<±1.3

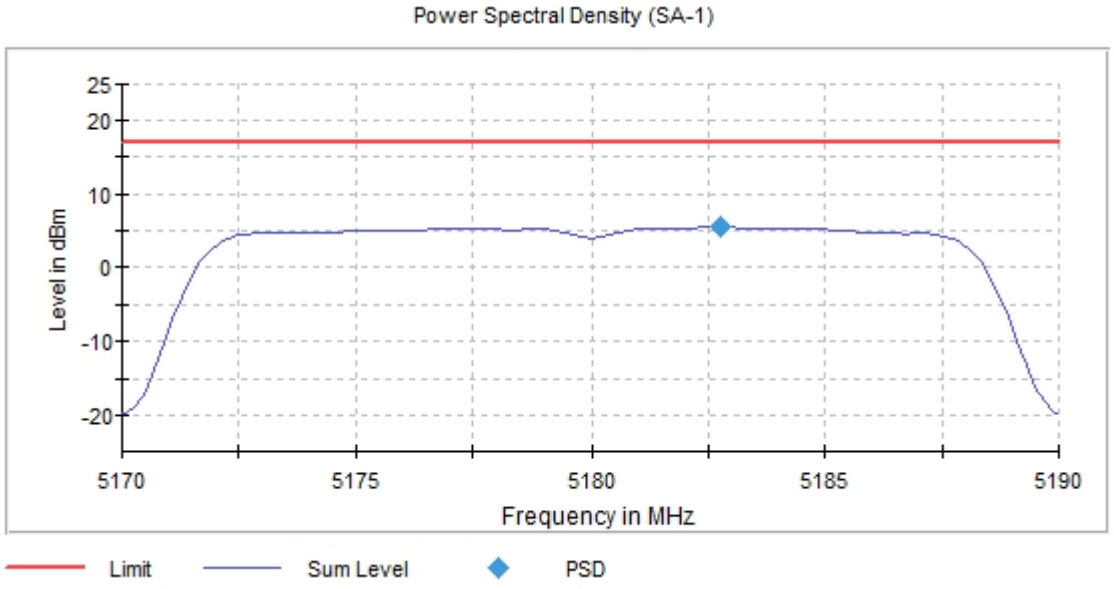
Verdict: PASS

SISO worst-case:

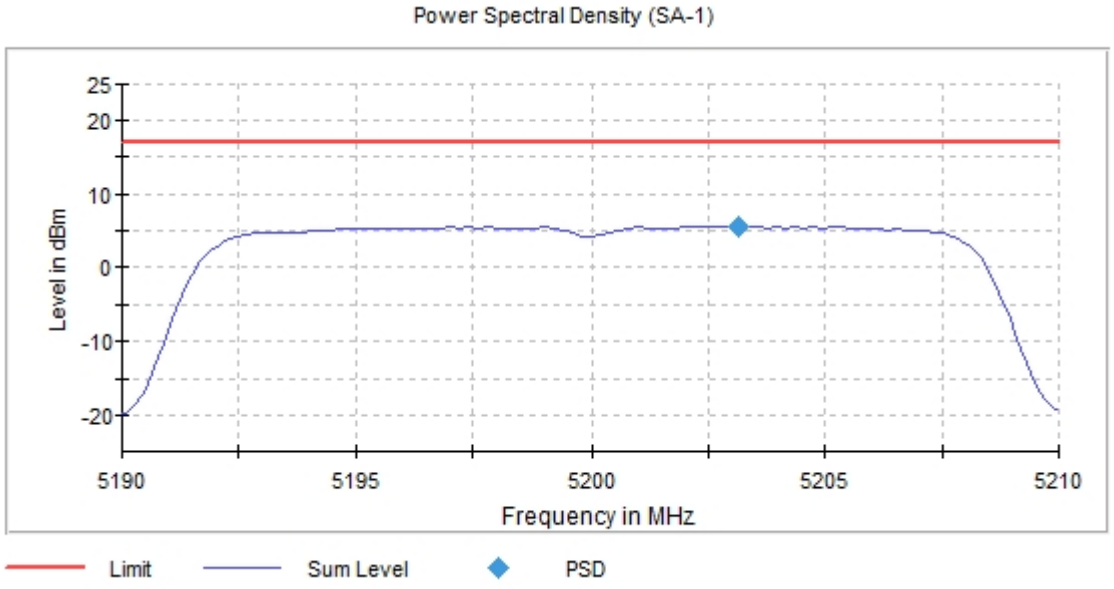
SISO 802.11 a20:

U-NII-1 (5150-5250 MHz)

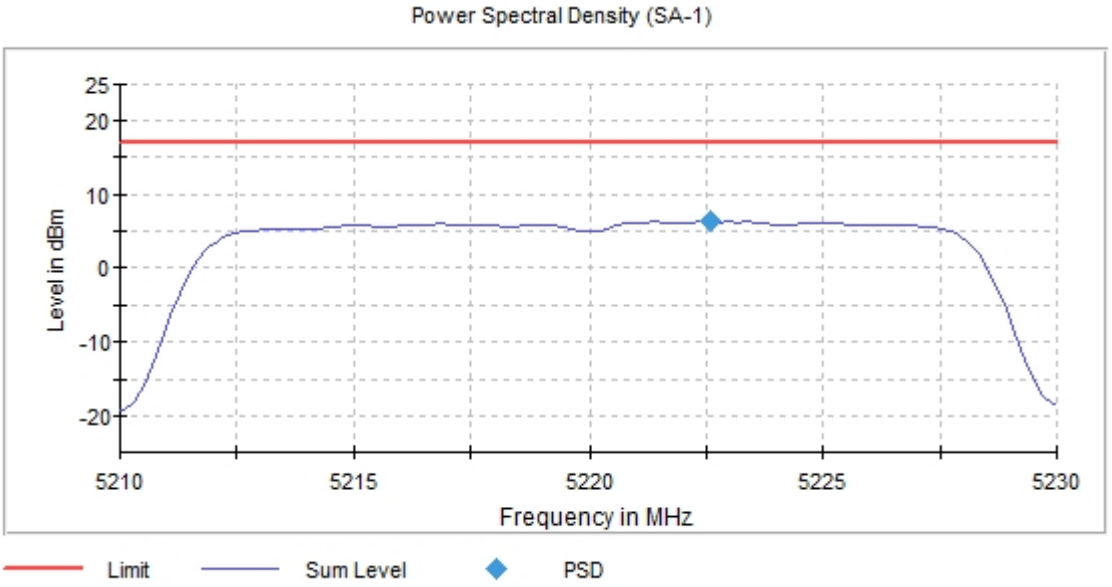
- Low Channel 36 (5180 MHz):



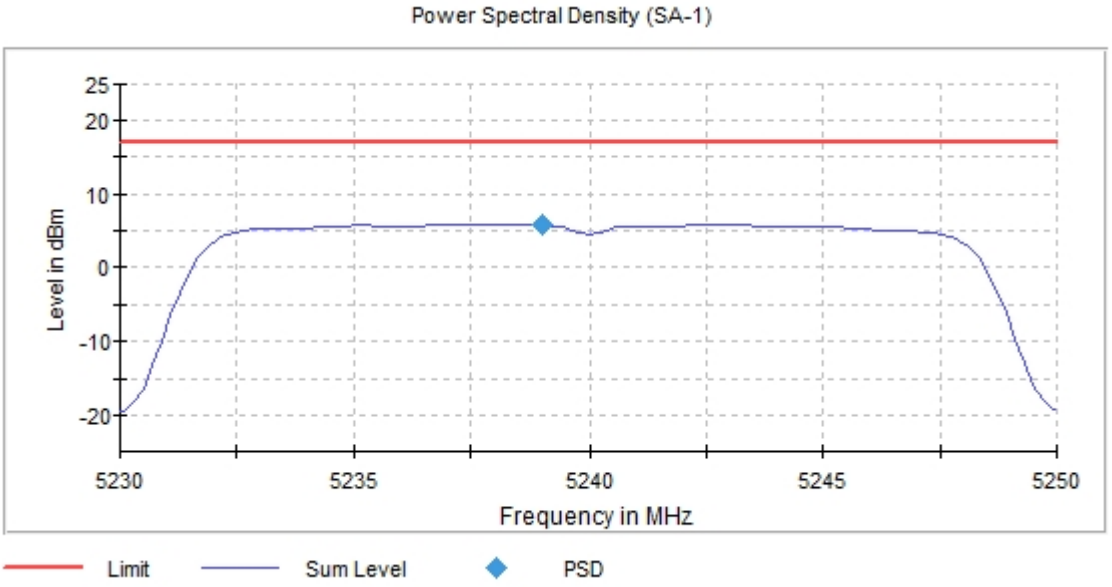
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



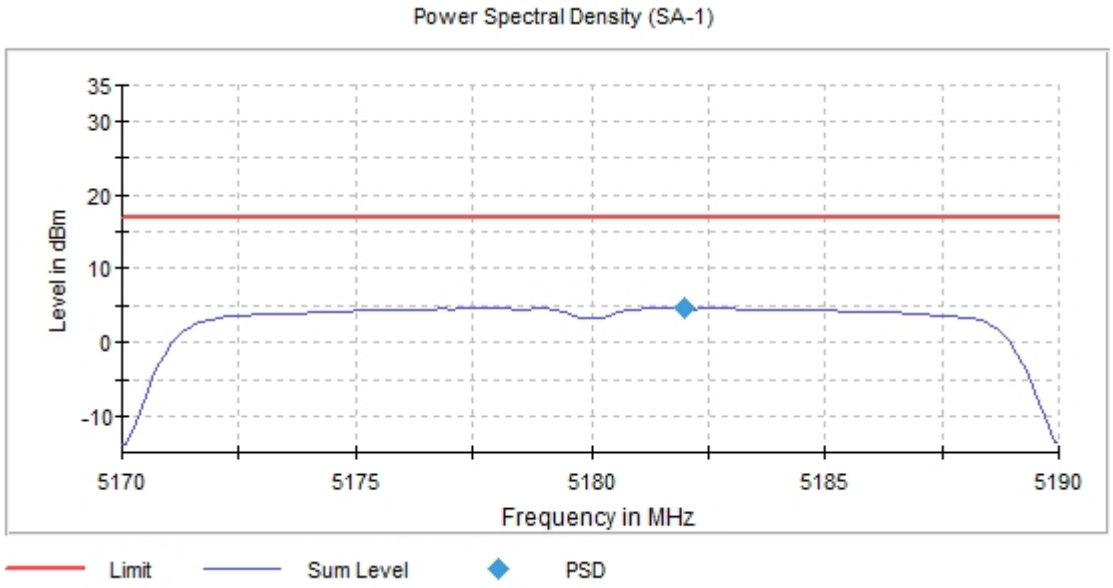
- High Channel 48 (5240 MHz):



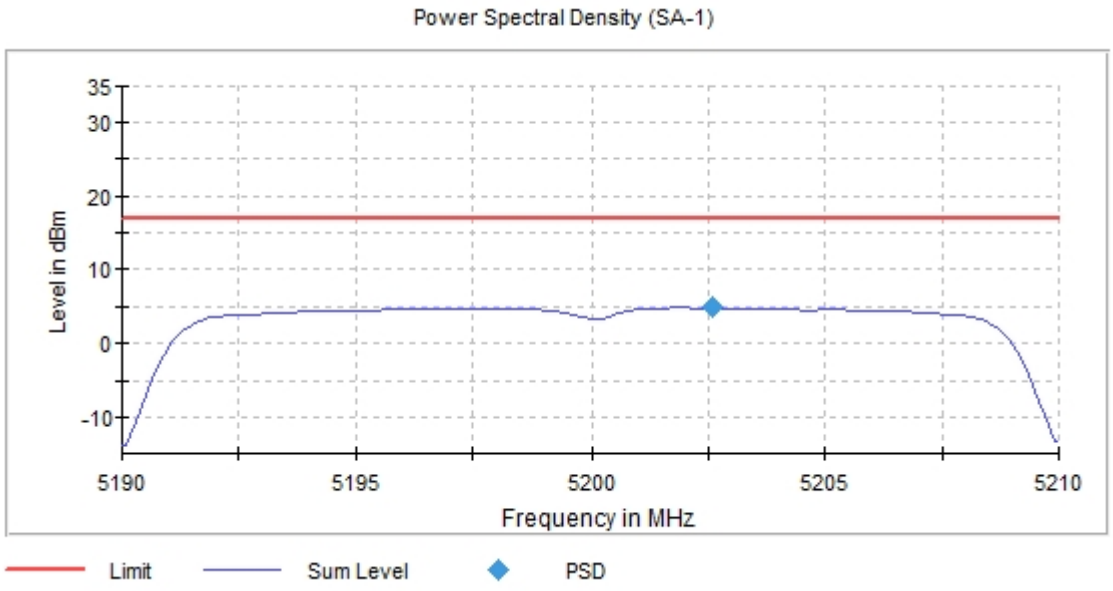
SISO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz)

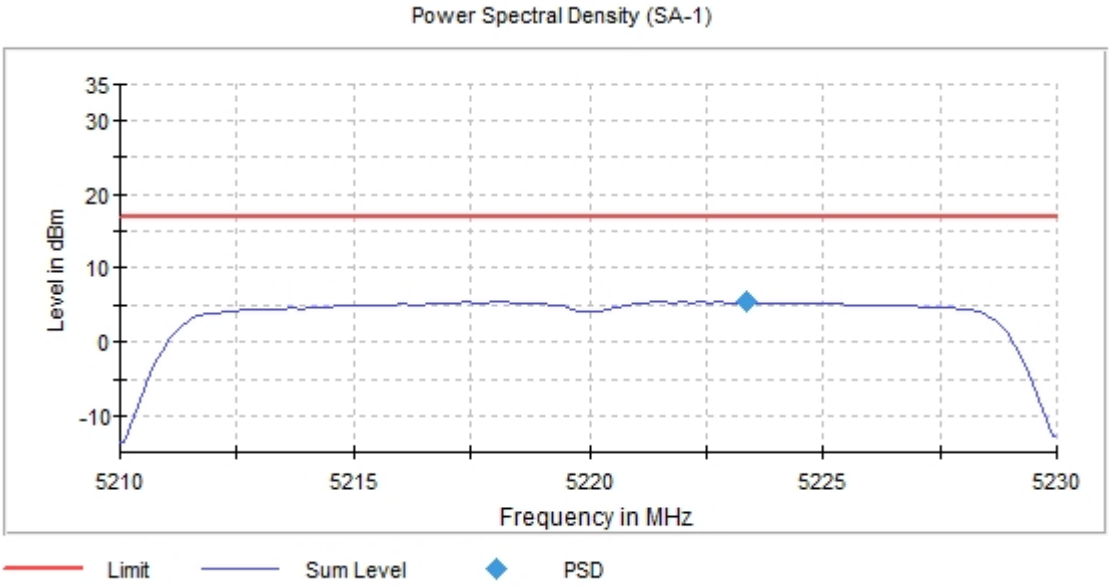
- Low Channel 36 (5180 MHz):



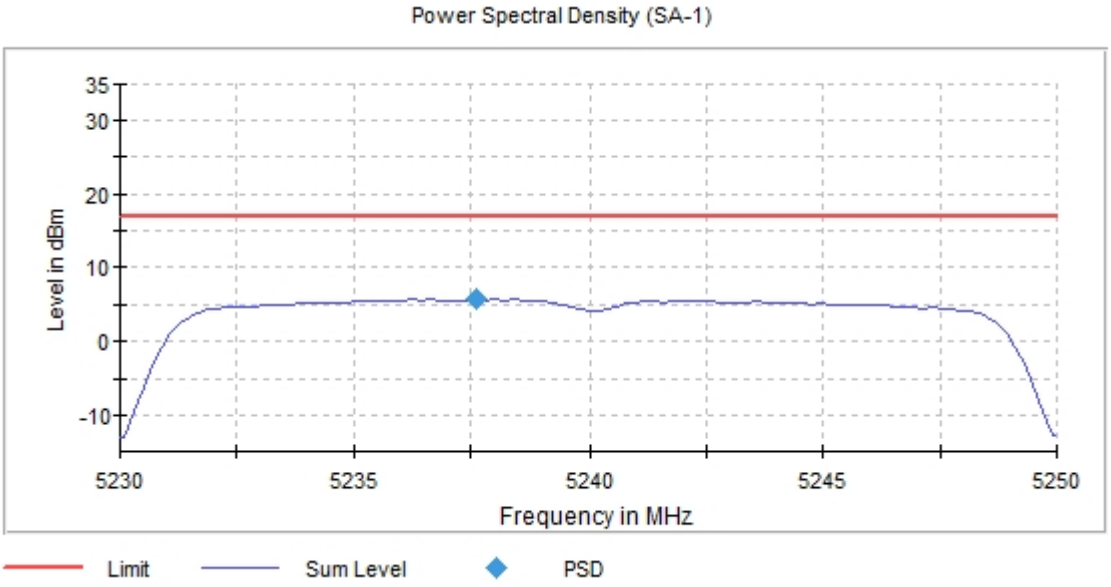
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



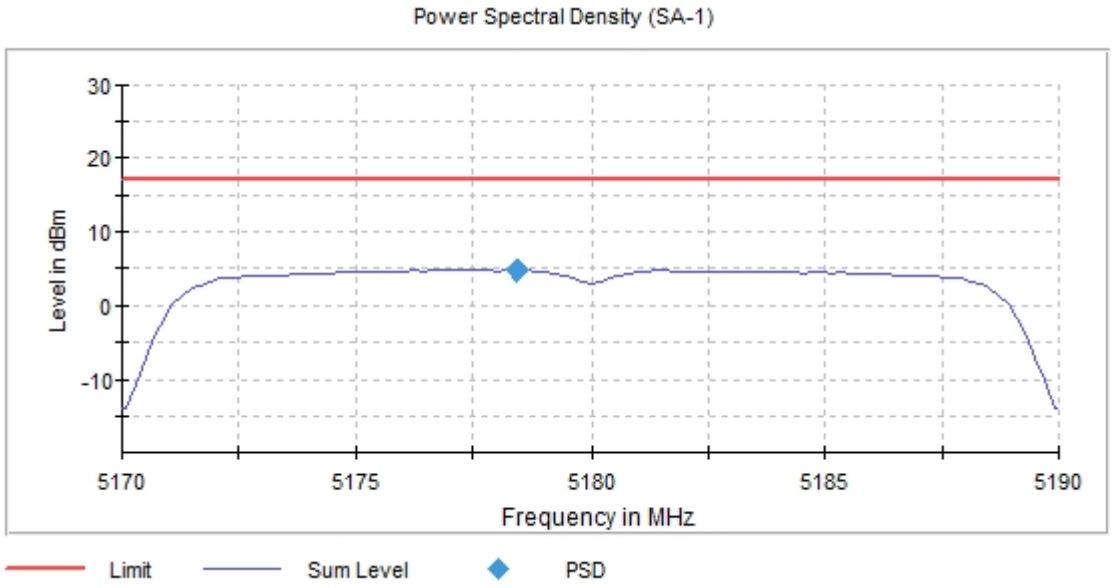
- High Channel 48 (5240 MHz):



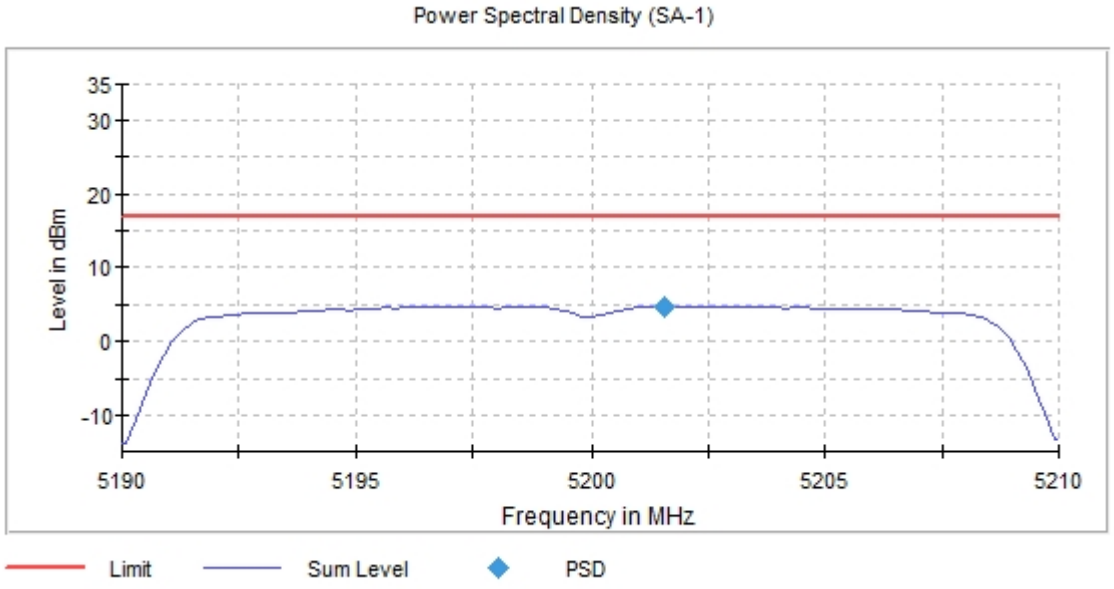
SISO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz)

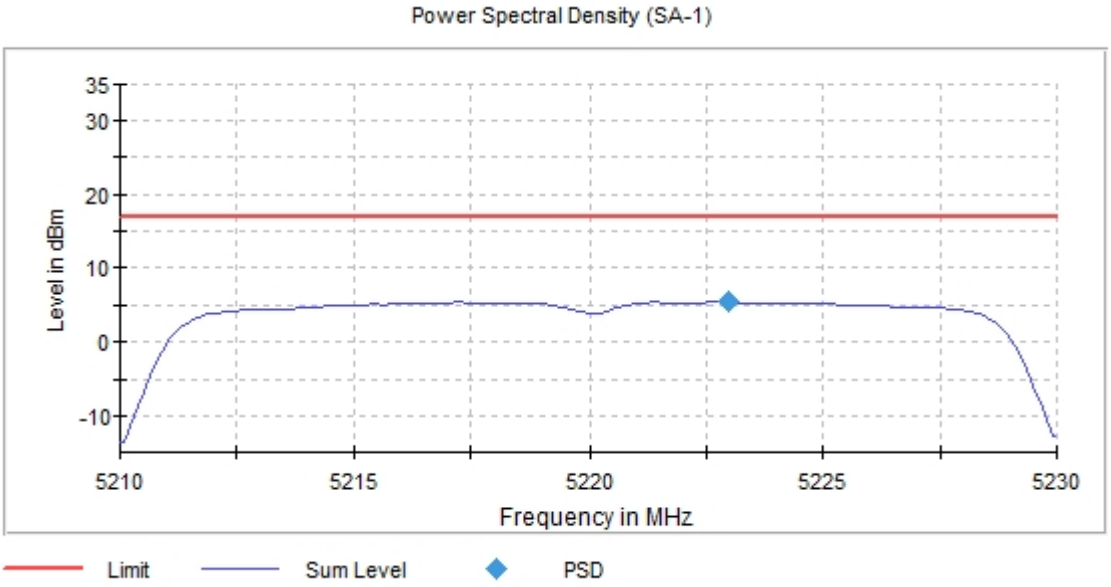
- Low Channel 36 (5180 MHz):



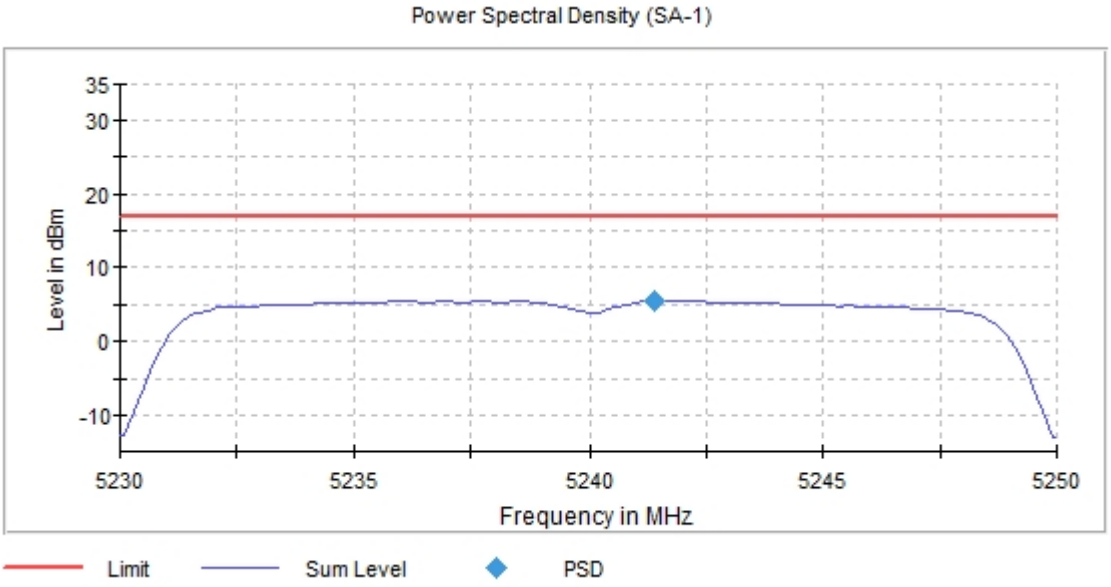
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



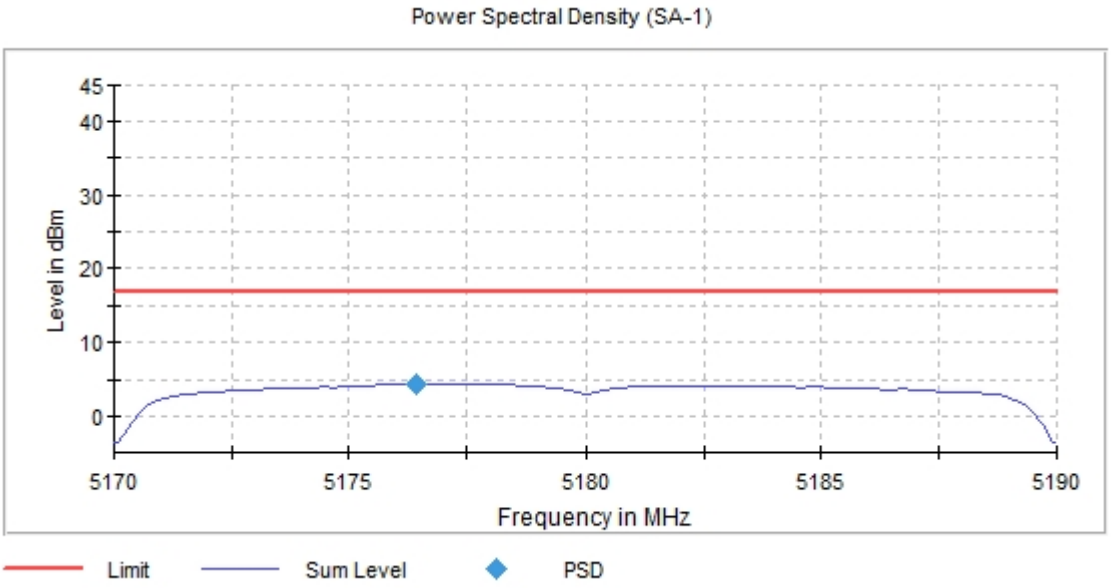
- High Channel 48 (5240 MHz):



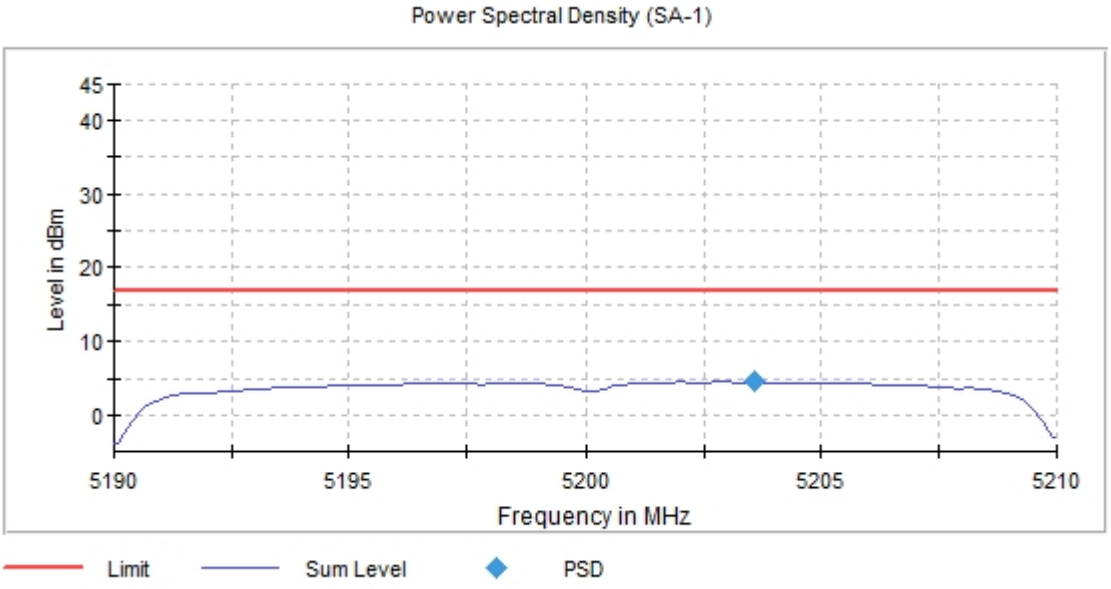
SISO 802.11 ax20 (HE20):

U-NII-1 (5150-5250 MHz)

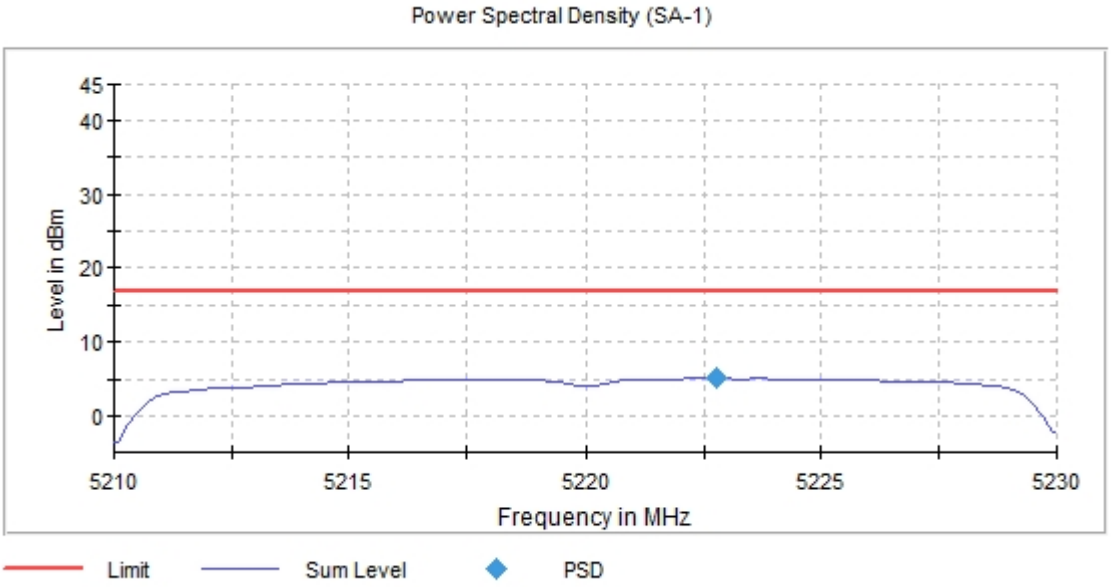
- Low Channel 36 (5180 MHz):



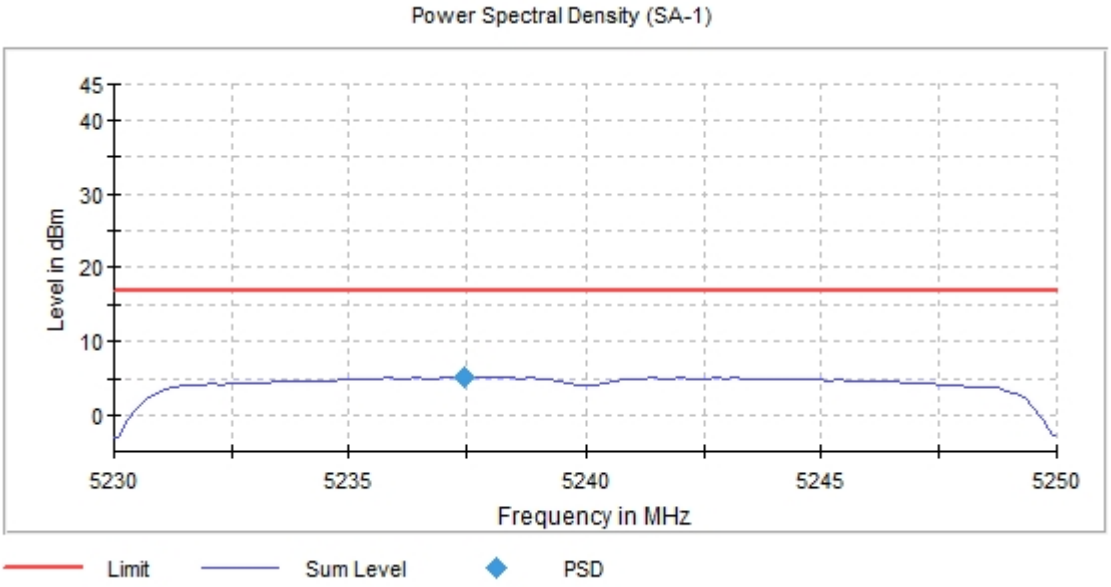
- Middle Channel 40 (5200 MHz):



- Channel 44 (5220 MHz):



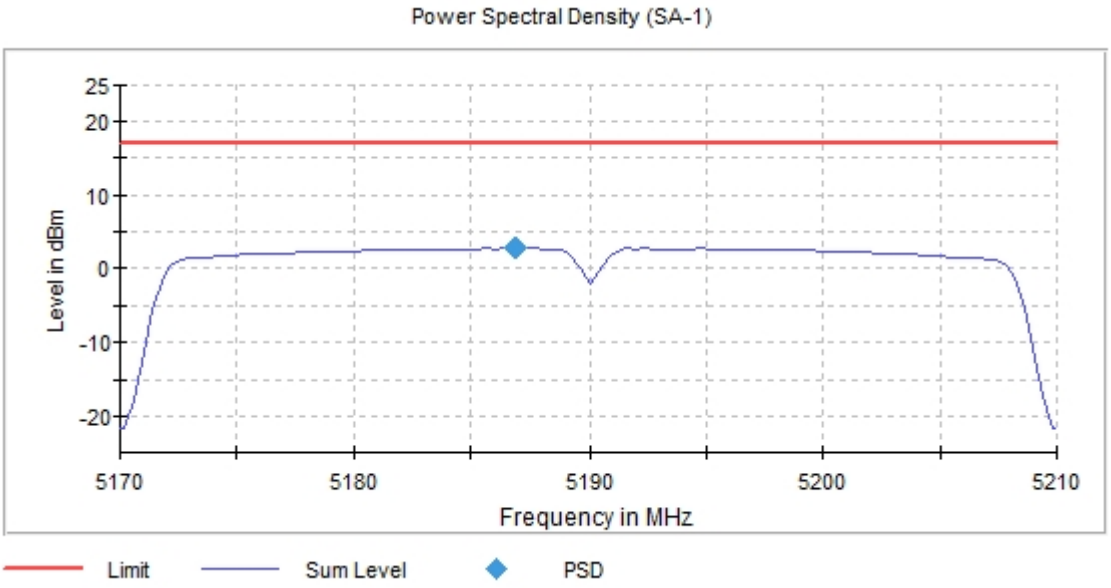
- High Channel 48 (5240 MHz):



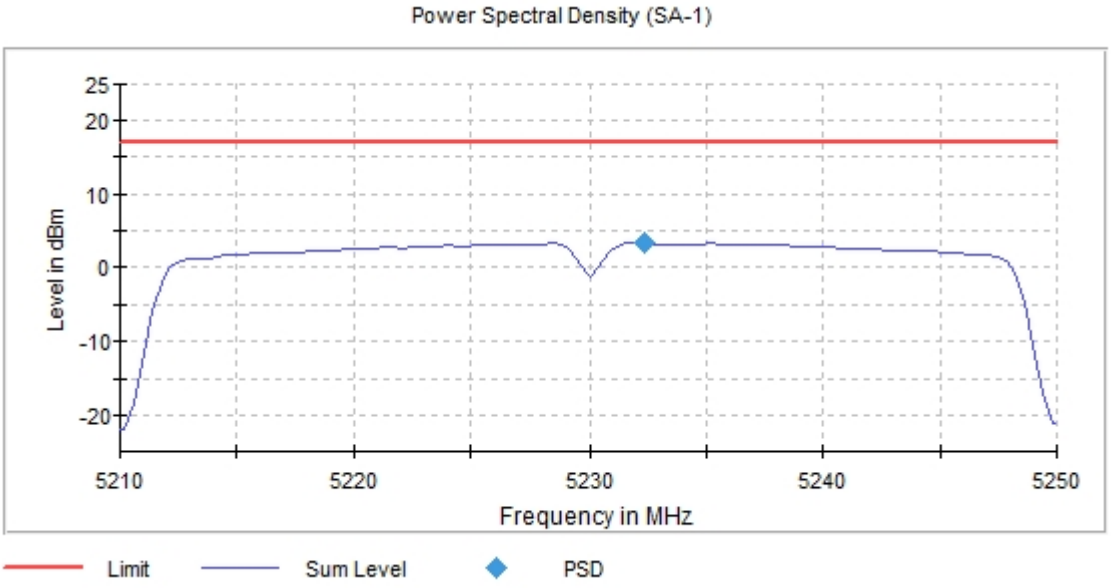
SISO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



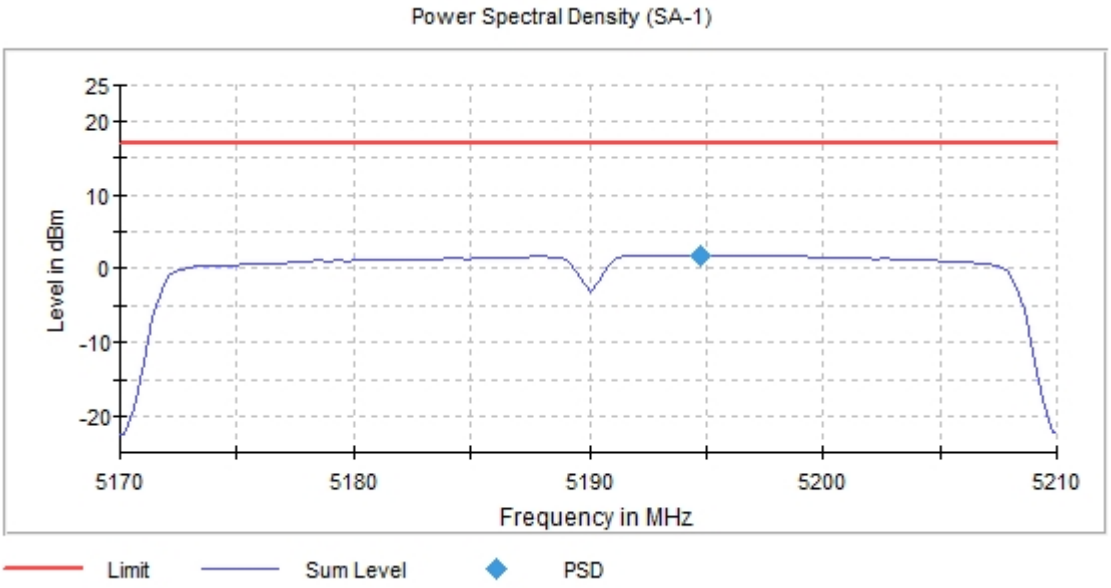
- High Channel 46 (5230 MHz):



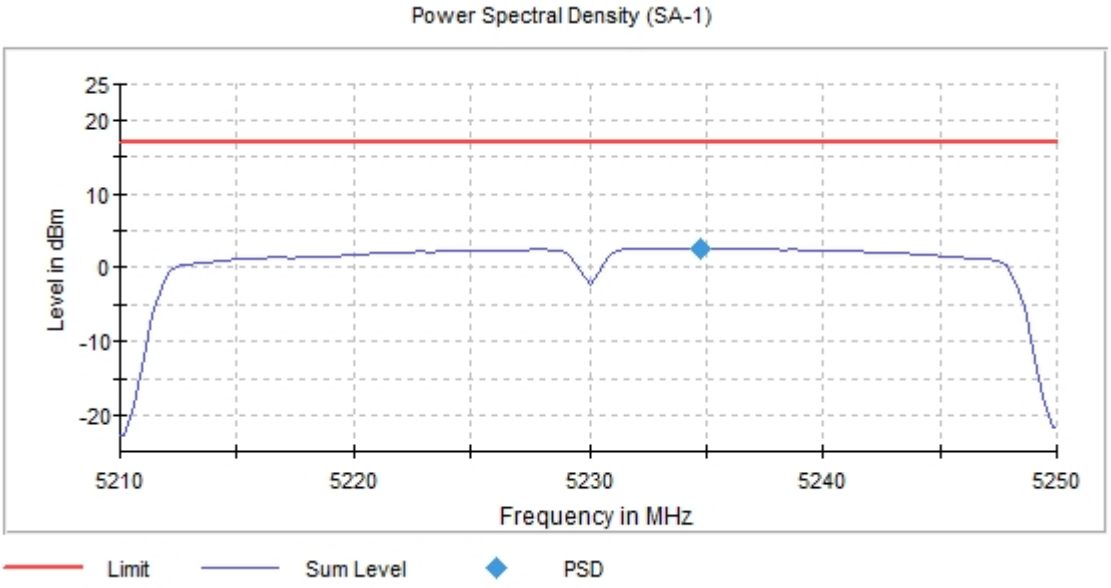
SISO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



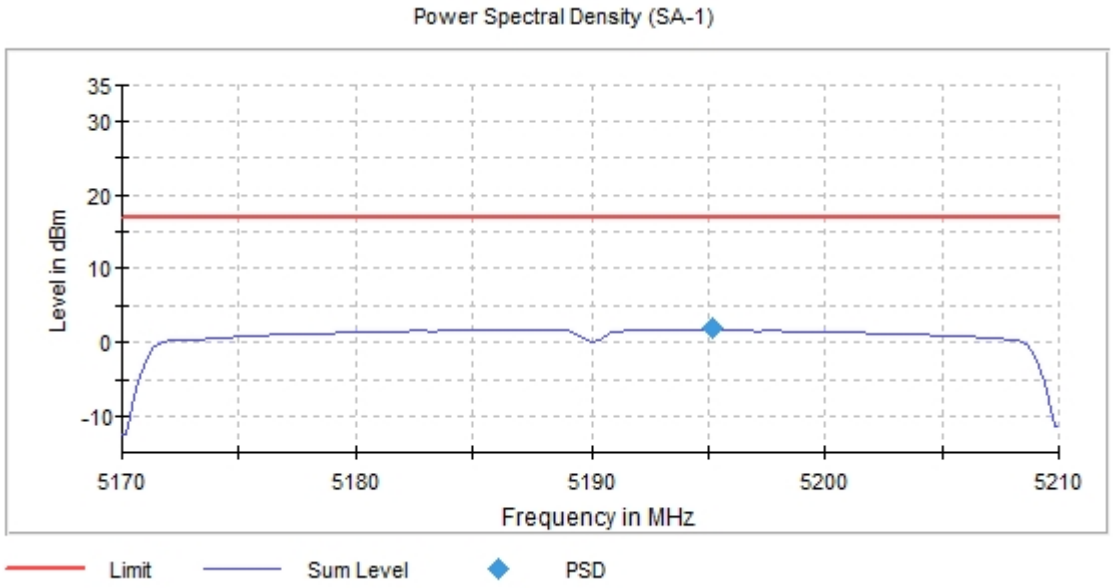
- High Channel 46 (5230 MHz):



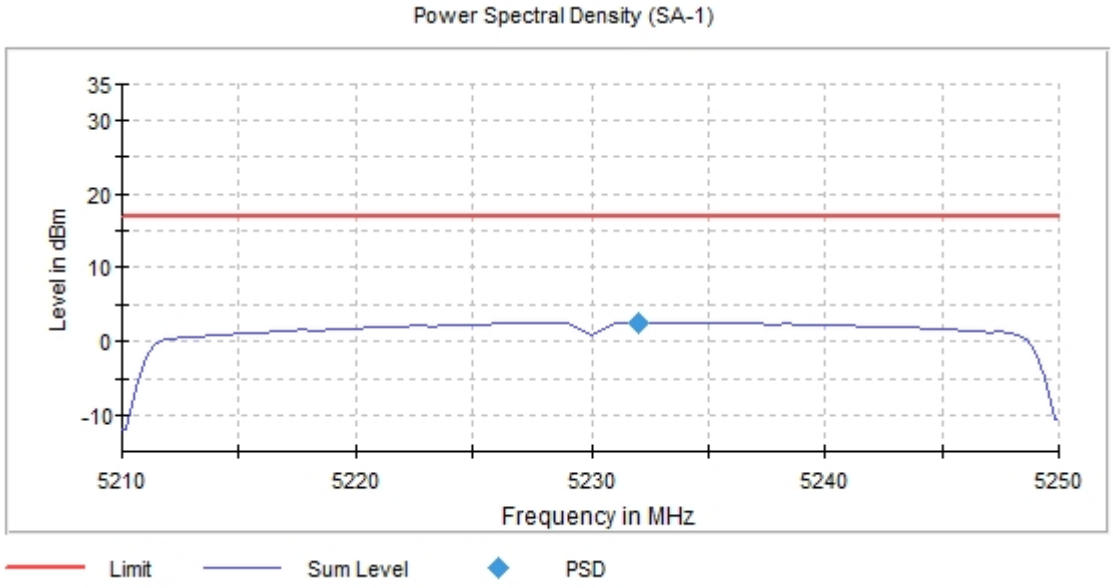
SISO 802.11 ax40 (HE40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):



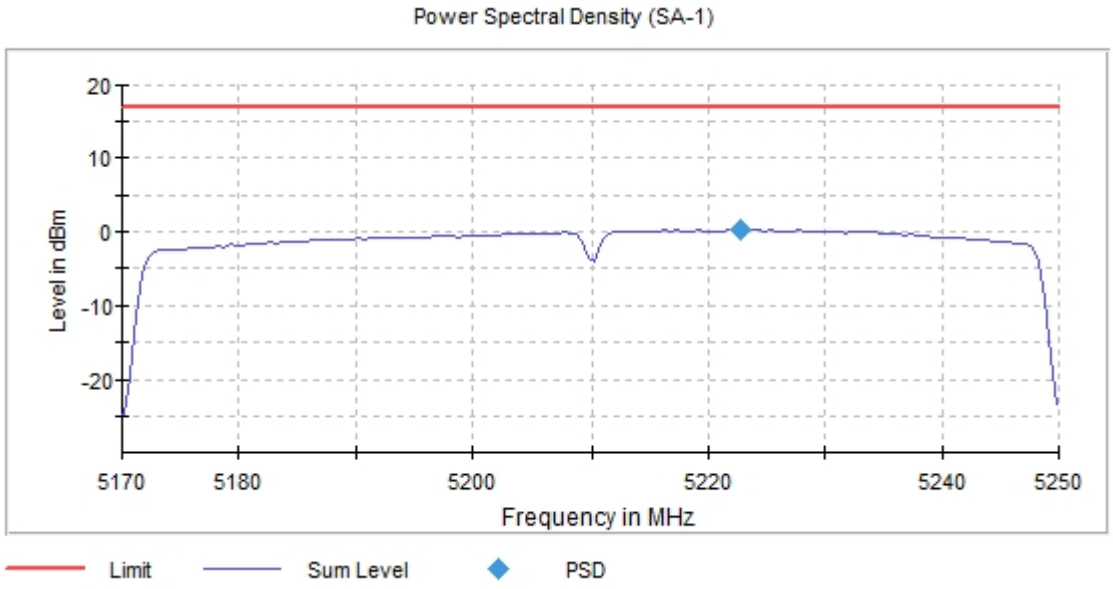
- High Channel 46 (5230 MHz):



SISO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



SISO 802.11 ax80 (HE80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):