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.010

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.
Summary	IN COMPLIANCE
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 07:40:15 +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.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA Testing and Certification S.A.U.

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
67442/036	Communications Device	5AT3T3	GCB1ES0011370003	2021/06/01

Auxiliary elements used with the Sample S/01:

Control Nº	Description	Model	Serial Nº	Reception
67442/037	AC/DC Power Adapter	DSA-36PDB FUS	GB51PR0110770SEX	2021/06/01

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
67442/019	AC/DC Power Adapter	DSA-36PDB FUS	GB51PR011077003L	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	GB51PR0110770003K	2021/04/13

Sample S/04 has undergone the test(s): The SISO WLAN1 and MIMO WLAN12 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)	2021-05-22
Date (finish)	2021-08-25

Document history

Report number	Date	Description
67442RRF.010	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, Antonio Manuel Sánchez and Victoria Olmedo and Jaime Barranquero.

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.	Hybrid Biconical/Log Antenna 30 MHz - 6 GHz ETS LINDGREN 3142E	2019/02	2022/02
4.	EMI Test Receiver 2 Hz - 44 GHz ROHDE AND SCHWARZ ESW44	2020/02	2022/02
5.	Horn Antenna 1-18 GHz SCHWARZBECK MESS-ELEKTRONIK BBHA 9120 D	2019/11	2022/11
6.	Horn Antenna 18 - 40 GHz SCHWARZBECK MESS-ELEKTRONIK BBHA 9170	2021/03	2024/03
7.	Preamplifier 30 dB 500MHz-18GHz, SCHWARZBECK BBV 9718 C	2021/02	2022/02
8.	Preamplifier G>30 dB 18-40GHz BONN ELEKTRONIK BLMA 1840-3G	2019/11	2021/11
9.	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-3: 5.725 GHz – 5.85 GHz Band:

FCC PART 15 PARAGRAPH / RSS-247			
Requirement – Test case		**Verdict**	**Remark**
FCC 15.407 (e) / RSS-247 6.2.4.1	6 dB Bandwidth	P	
FCC 15.407 (a)(3)(i) / RSS-247 6.2.4.1	Transmitter Maximum Conducted Output Power	P	
FCC 15.407 (a)(3)(i) / RSS-247 6.2.4.1	Transmitter Maximum Power Spectral Density	P	
FCC 15.407 (b)(4) / RSS-247 6.2.4.2	Transmitter Out of Band Radiated Emissions	P	
FCC 15.407 (b)(4) / RSS-247 6.2.4.2	Transmitter Band Edge Radiated Emissions	P	
Supplementary information and remarks: None.			

Appendix A: Tests results for the U-NII-3: 5.725 GHz – 5.85 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-3:	+5.2 dBi
Maximum Declared Antenna Gain WLAN2 U-NII-3:	+4.9 dBi

Directional Antenna Gain Calculations for CDD MIMO:

U-NII-3:

- 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} = 5.2 dBi, G_{WLAN2} = 4.9 dBi

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

$$= 10\log\left[\frac{\left(g_{1,1}+g_{1,2}\right)^2}{2}\right] = 10\log\left[\frac{\left(10^{\frac{G_1}{20}}+10^{\frac{G_2}{20}}\right)^2}{2}\right] = 10\log\left[\frac{\left(10^{\frac{4.9}{20}}+10^{\frac{5.2}{20}}\right)^2}{2}\right] = 8.06\ \text{dBi}$$

TEST FREQUENCIES (*):
U-NII-3:

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:	5725 MHz to 5850 MHz	
Operating Channel Bandwidth:	20 MHz	
Transmission Channels:	Channel	Channel Frequency (MHz)
	Lowest (149)	5745
	153	5765
	Middle (157)	5785
	161	5805
	Highest (165)	5825
Operating Channel Bandwidth:	40 MHz	
Transmission Channels:	Channel	Channel Frequency (MHz)
	Lowest (151)	5755
	Highest (159)	5795
Operating Channel Bandwidth:	80 MHz	
Transmission Channels:	Single (155)	5775

POWER SETTINGS (*):

U-NII-3. FCC & CANADA:

WLAN1

Channel	Frequency	11a	11n	11ac	11he
149	5745 MHz	25	26	22	25.5
153	5765 MHz	25	23	18	24
157	5785 MHz	27	24	26	30
161	5805 MHz	21	23	21.5	20.5
165	5825 MHz	21	24.5	21.5	21
151	5755 MHz		16.5	17	16.5
159	5795 MHz		22	24	23
155	5775 MHz			17	17.5

WLAN2

Channel	Frequency	11a	11n	11ac	11he
149	5745 MHz	29	30	28	30
153	5765 MHz	30	30	30	30
157	5785 MHz	30	30	30	30
161	5805 MHz	30	30	30	30
165	5825 MHz	27.5	26.5	27	27.5
151	5755 MHz		26	26	26.5
159	5795 MHz		26	26	26.5
155	5775 MHz			21.5	21.5

WLAN12

Channel	Frequency	11a	11n	11ac	11he
149	5745 MHz	24	25.5	25	25.5
153	5765 MHz	25	24	25	24
157	5785 MHz	25	24	25	25.5
161	5805 MHz	24.5	20	25	18.5
165	5825 MHz	24	25	25	20
151	5755 MHz		13	17	14
159	5795 MHz		18	24	24
155	5775 MHz			19	18.5

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).

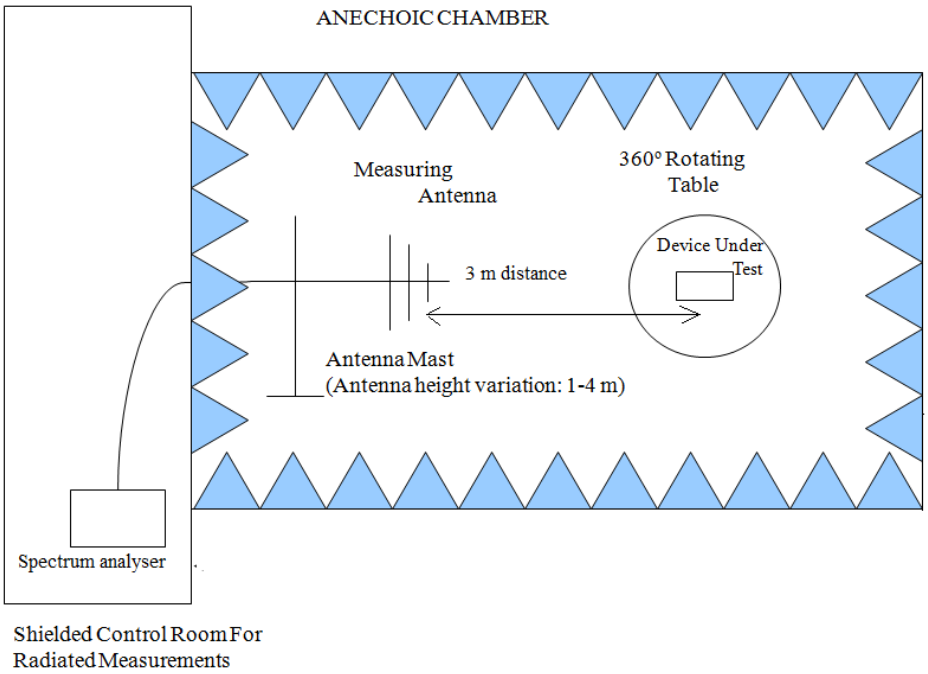
For radiated emissions in the range 17 GHz-40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

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.

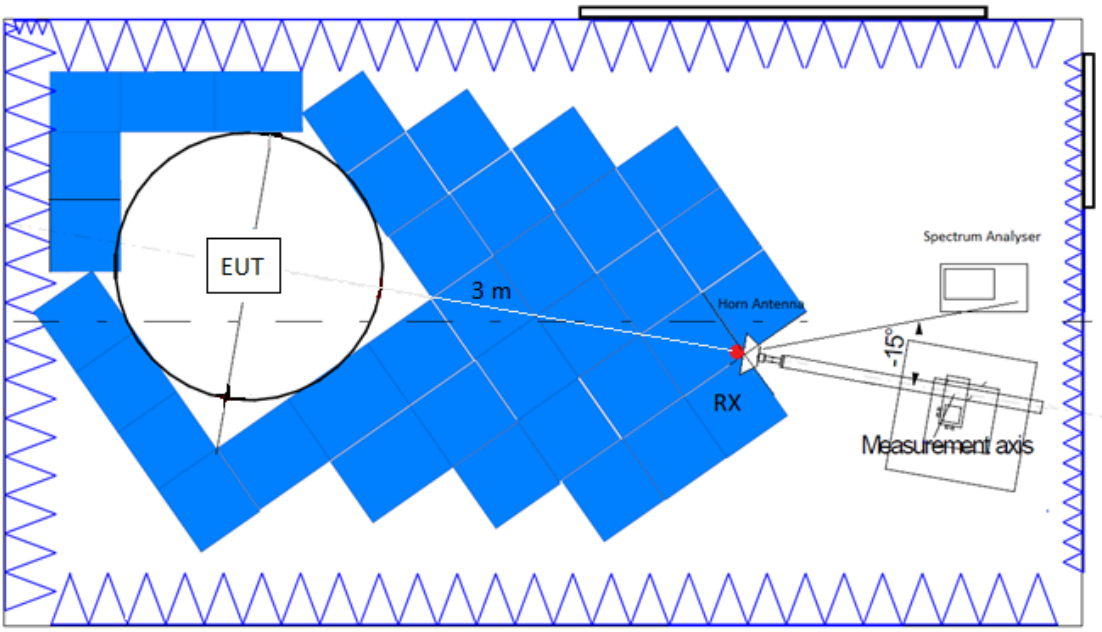
Measurements were made in both horizontal and vertical planes of polarization.

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

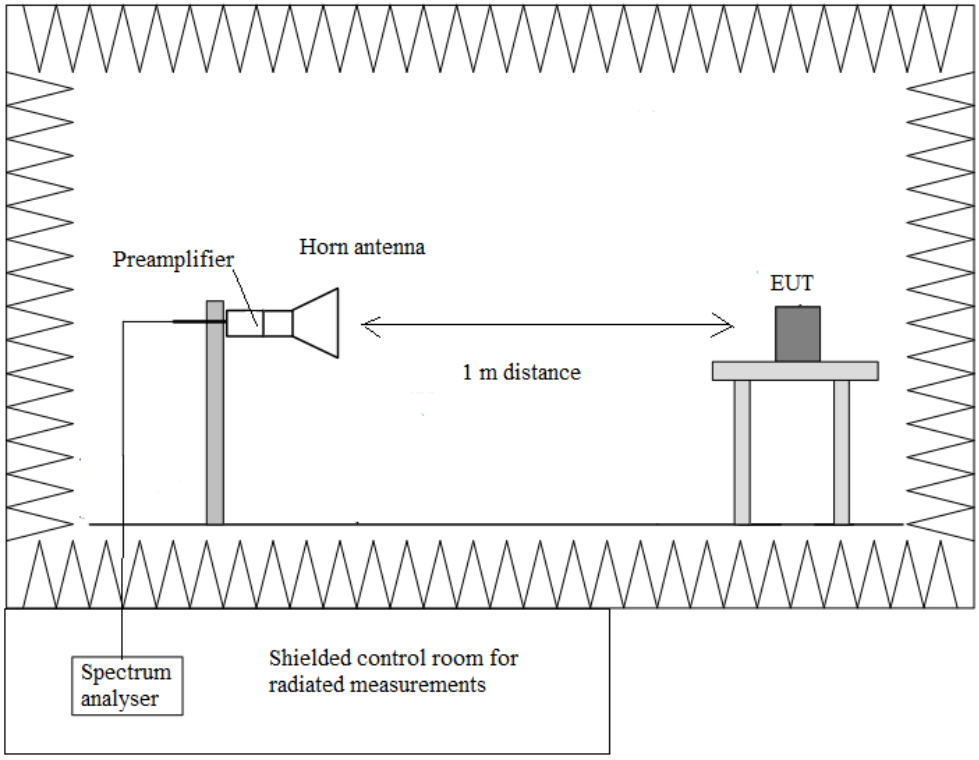
Radiated measurements setup f < 1 GHz:



Radiated measurements setup from 1 GHz to 17 GHz:



Radiated measurements setup f > 17 GHz:



FCC 15.407 (e) / RSS-247 6.2.4.1. 6 dB Bandwidth

SPECIFICATION:

* FCC 15.407: The minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

* RSS-247: For equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS:

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

Maximum Declared Antenna Gain:

- SISO Antenna – WLAN1: +5.2 dBi
- MIMO Antennas – WLAN1 & WLAN2:
  - WLAN1: +5.2 dBi
  - WLAN2: +4.9 dBi
  - WLAN12: +8.06 dBi

SISO worst case:

SISO 802.11 a20:

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	16.100000	15.750000	15.450000	15.850000	15.650000
Measurement uncertainty (kHz)	<±23.02				

SISO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	17.000000	16.100000	17.000000	16.050000	16.600000
Measurement uncertainty (kHz)	<±23.02				

SISO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	16.750000	16.750000	15.550000	16.850000	16.350000
Measurement uncertainty (kHz)	<±23.02				

SISO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	18.150000	17.900000	18.600000	17.900000	18.550000
Measurement uncertainty (kHz)	<±23.02				

SISO 802.11 n40 (HT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
6 dB Bandwidth (MHz)	36.450000	35.750000
Measurement uncertainty (kHz)	<±53.05	

SISO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
6 dB Bandwidth (MHz)	36.400000	36.000000
Measurement uncertainty (kHz)	<±53.05	

SISO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
6 dB Bandwidth (MHz)	38.100000	37.650000
Measurement uncertainty (kHz)	<±53.05	

SISO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
6 dB Bandwidth (MHz)	75.550000
Measurement uncertainty (kHz)	<±103.10

SISO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
6 dB Bandwidth (MHz)	77.450000
Measurement uncertainty (kHz)	<±103.10

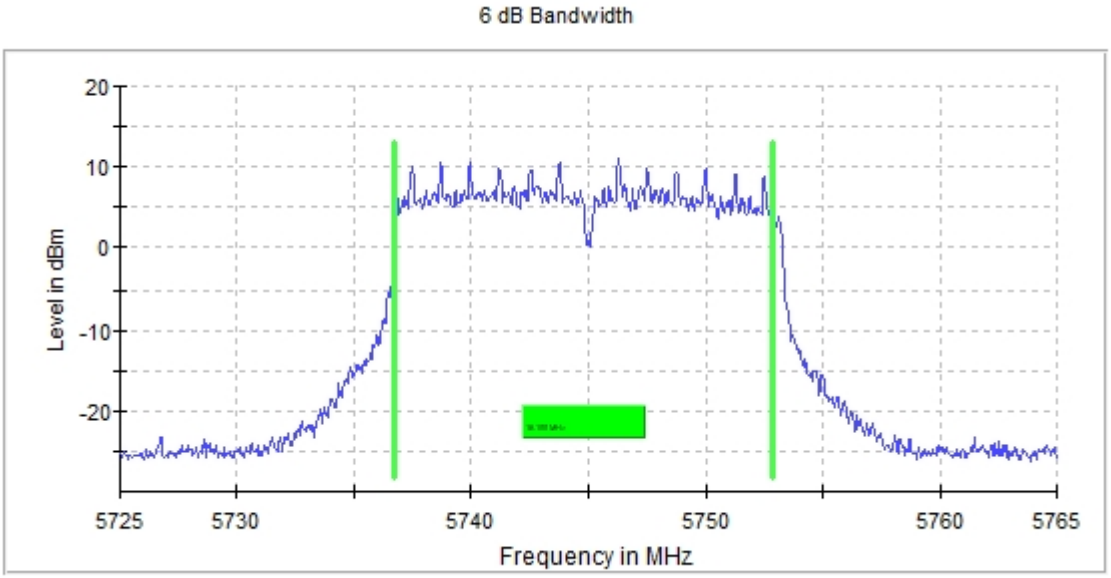
Verdict: PASS

SISO worst-case:

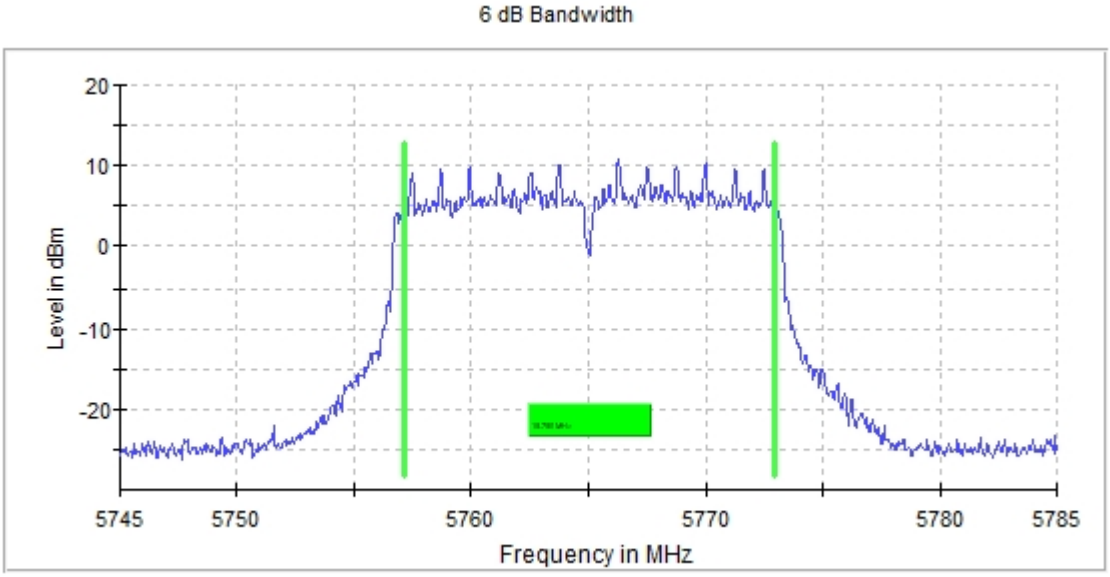
SISO 802.11 a20:

U-NII-3 (5725-5850 MHz)

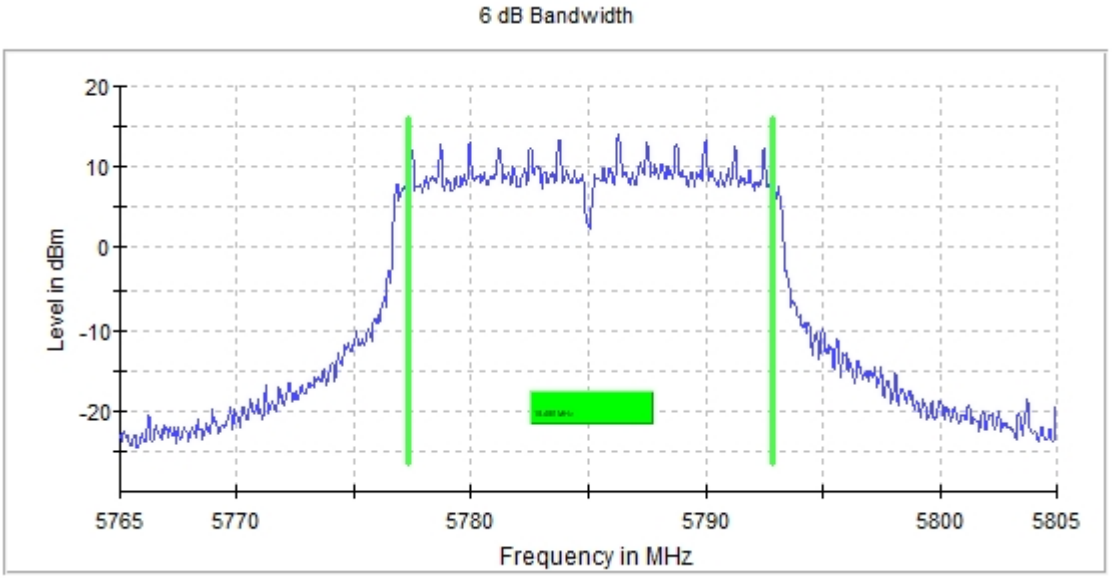
- Low Channel 149 (5745 MHz):



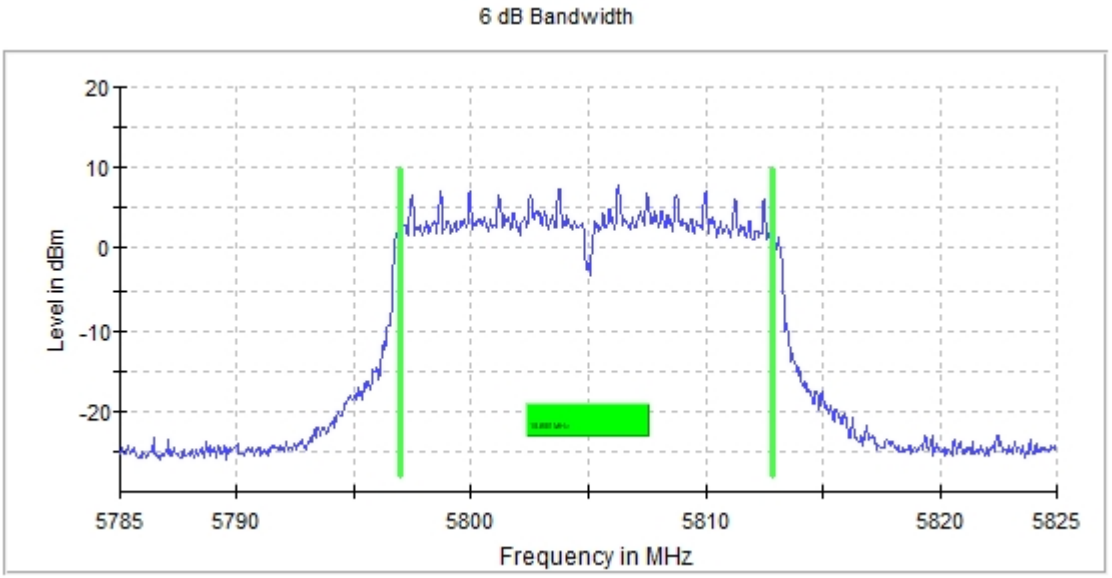
- Channel 153 (5765 MHz):



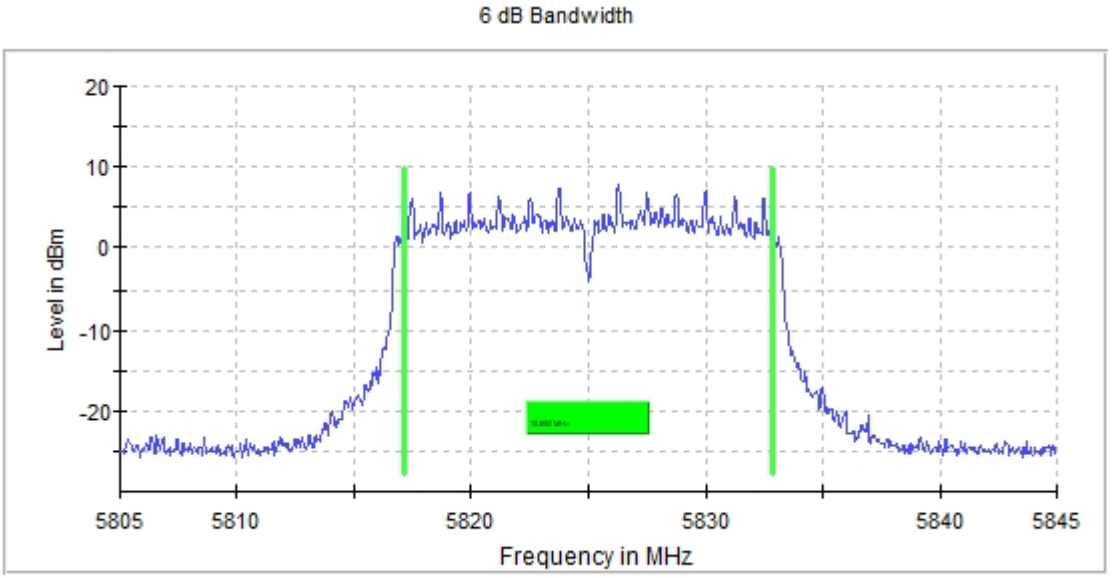
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



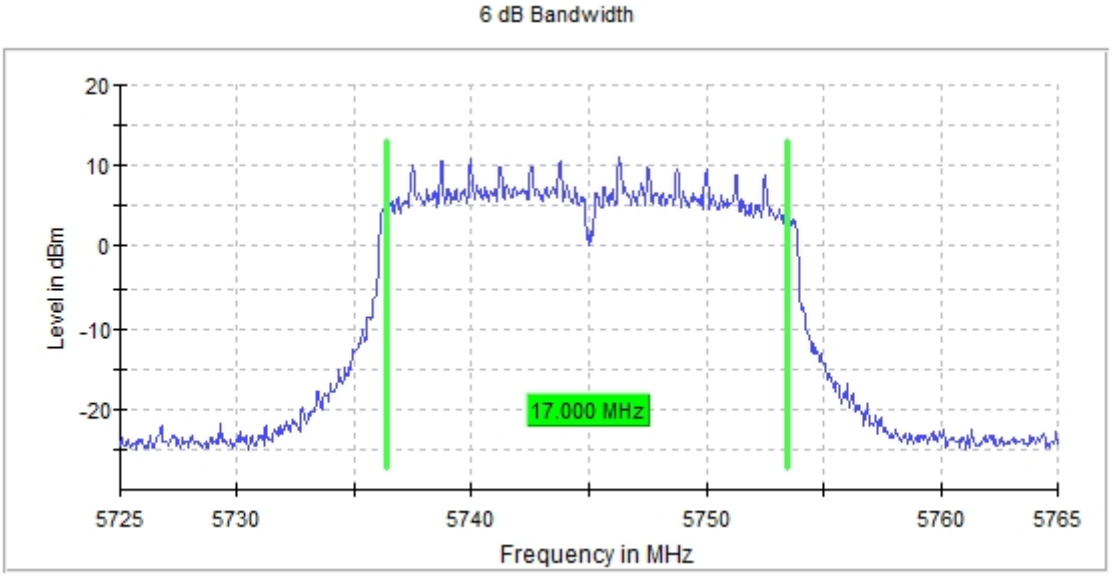
- High Channel 165 (5825 MHz):



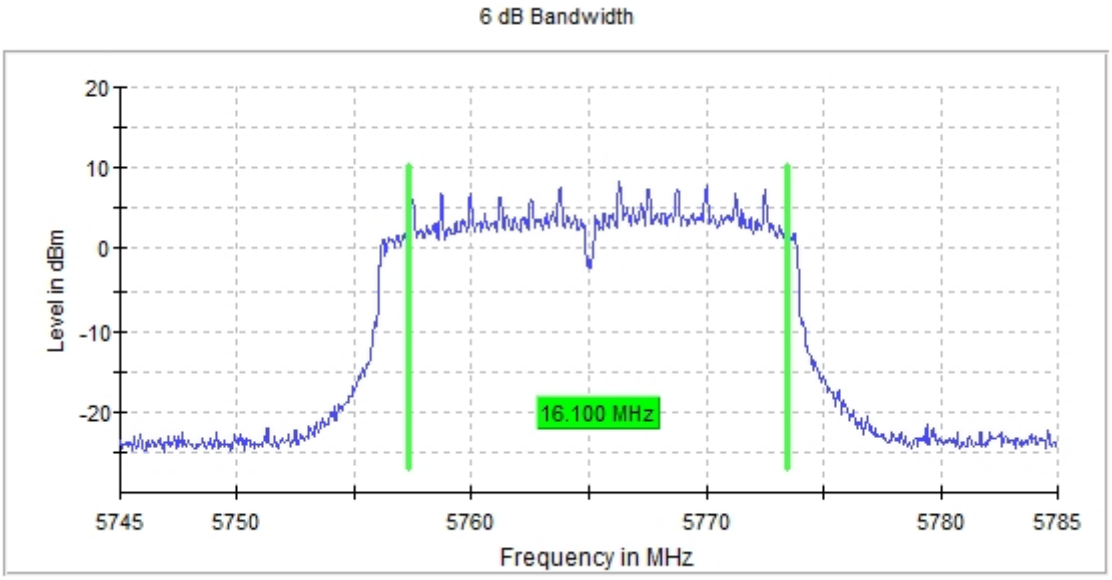
SISO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz)

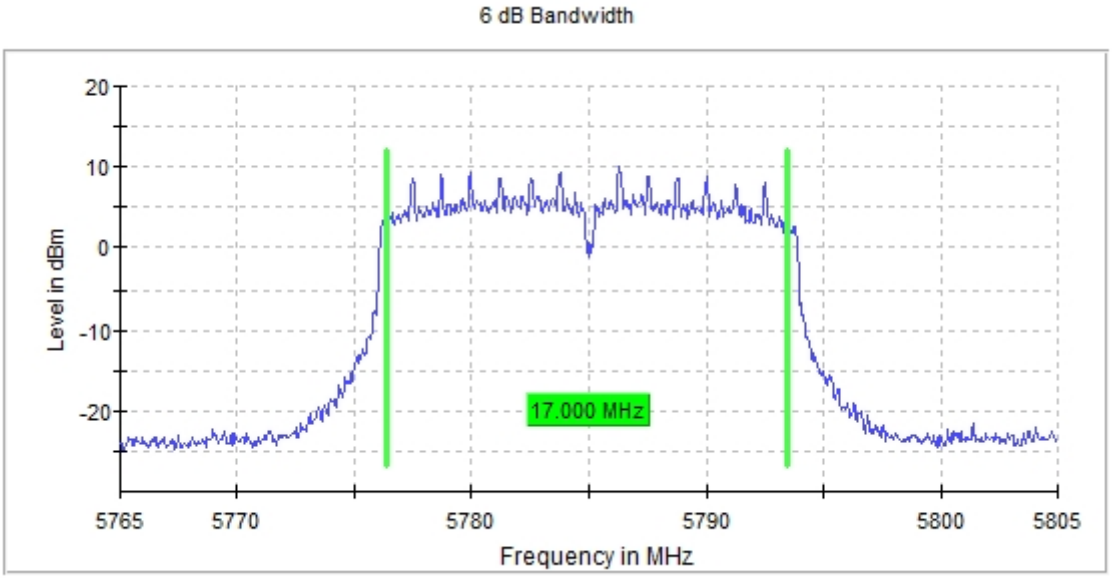
- Low Channel 149 (5745 MHz):



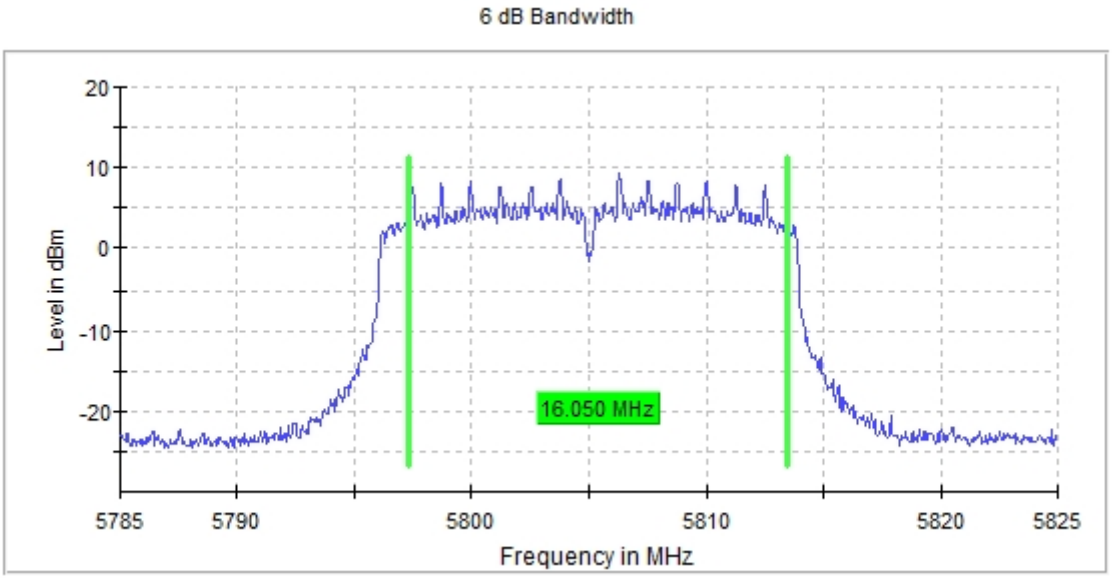
- Channel 153 (5765 MHz):



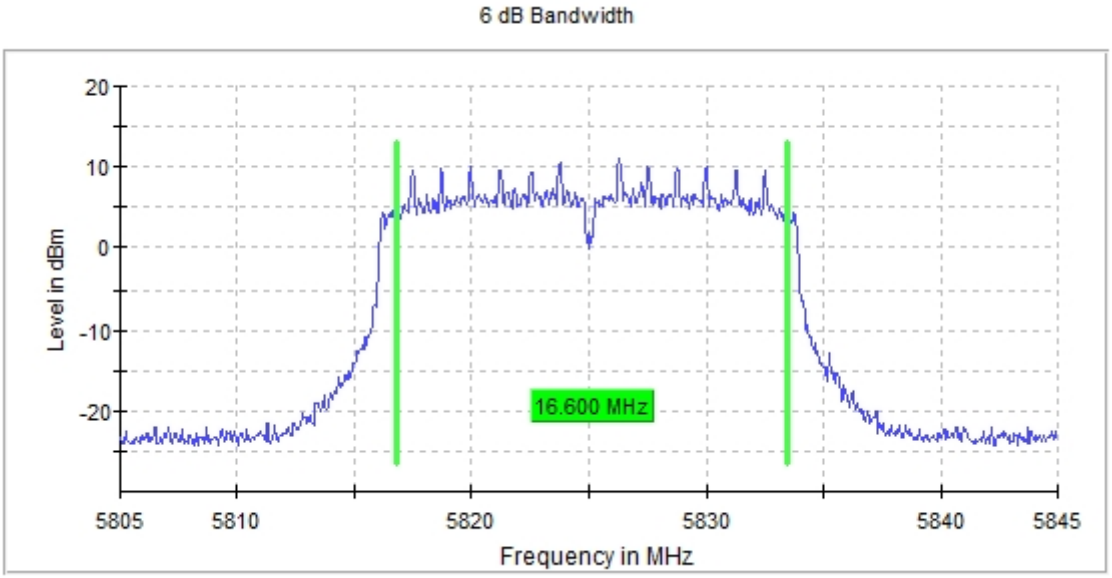
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



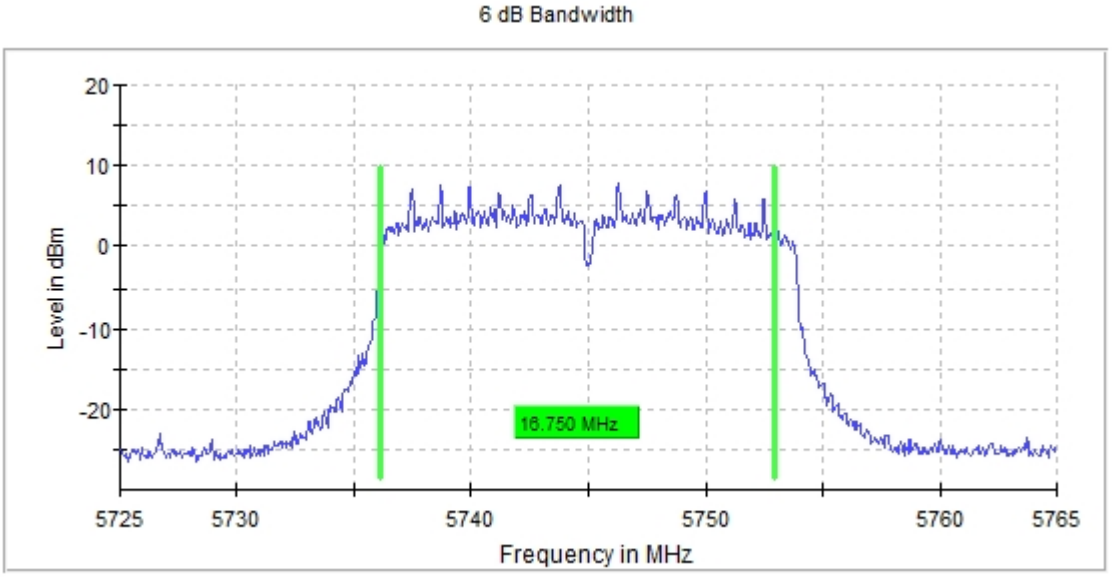
- High Channel 165 (5825 MHz):



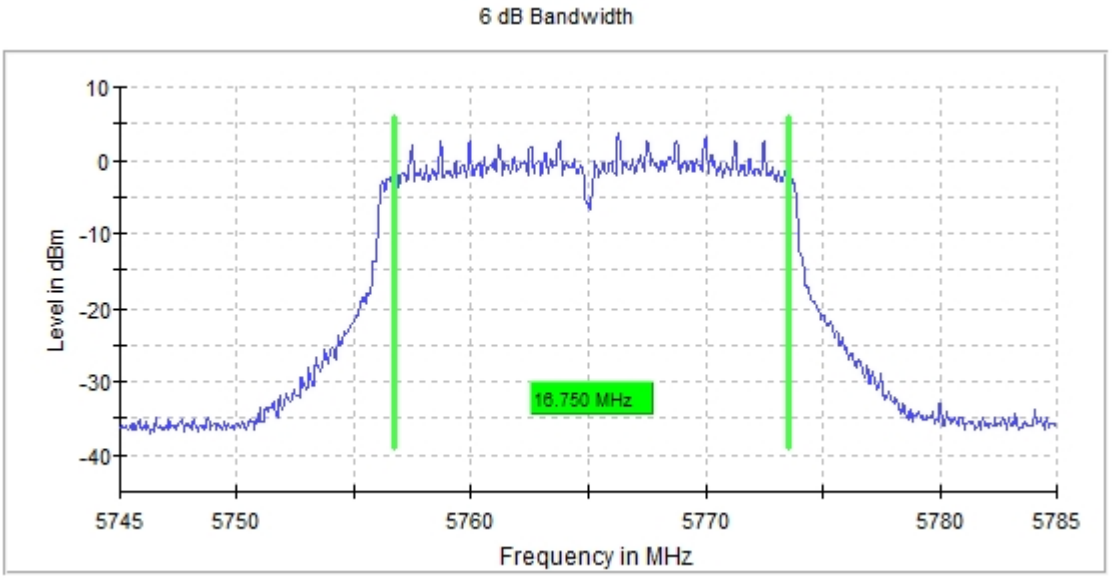
SISO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz)

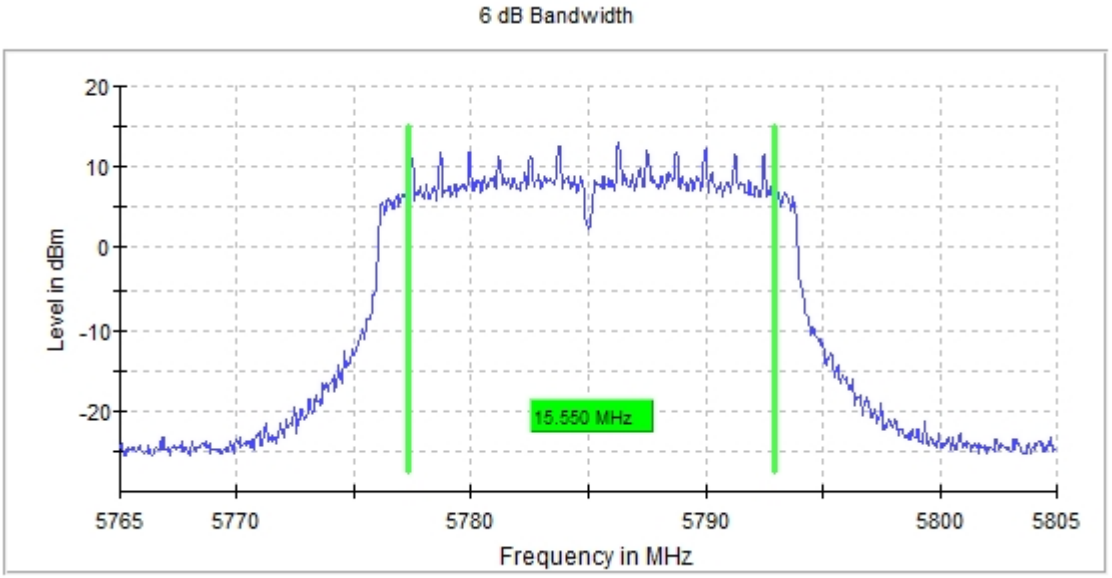
- Low Channel 149 (5745 MHz):



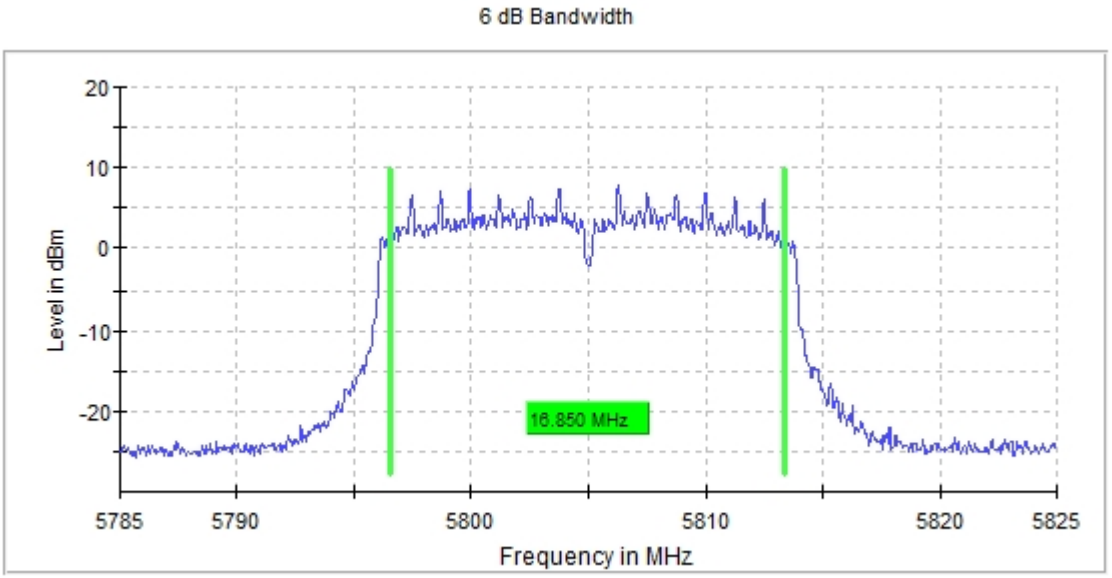
- Channel 153 (5765 MHz):



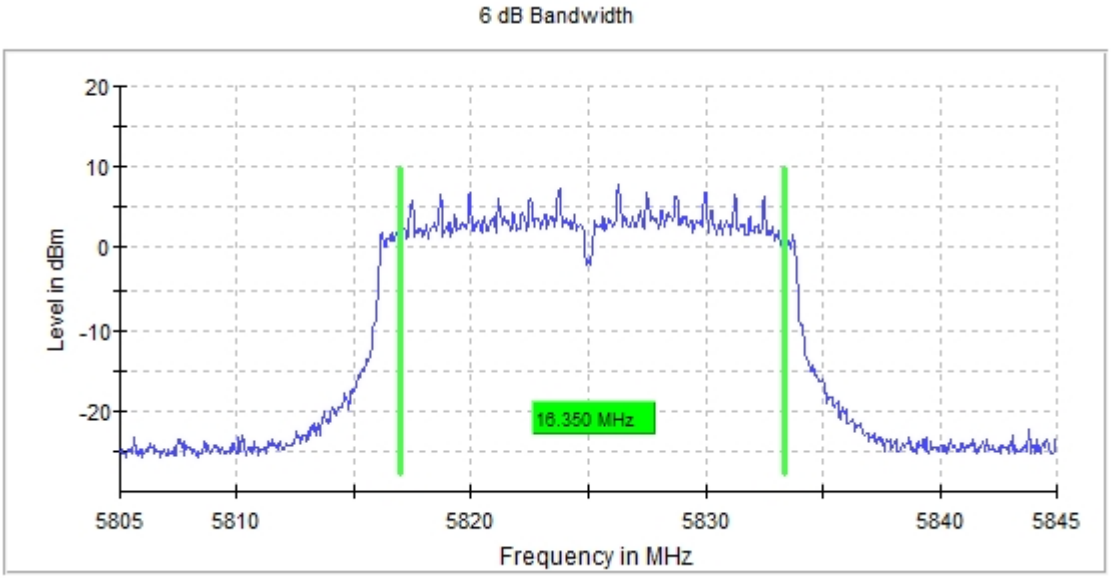
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



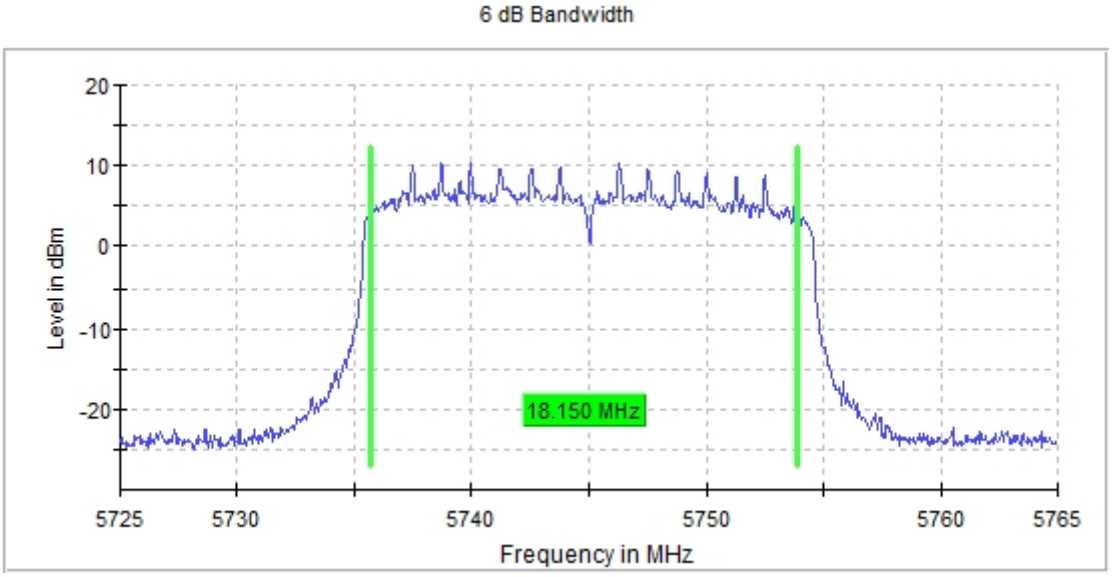
- High Channel 165 (5825 MHz):



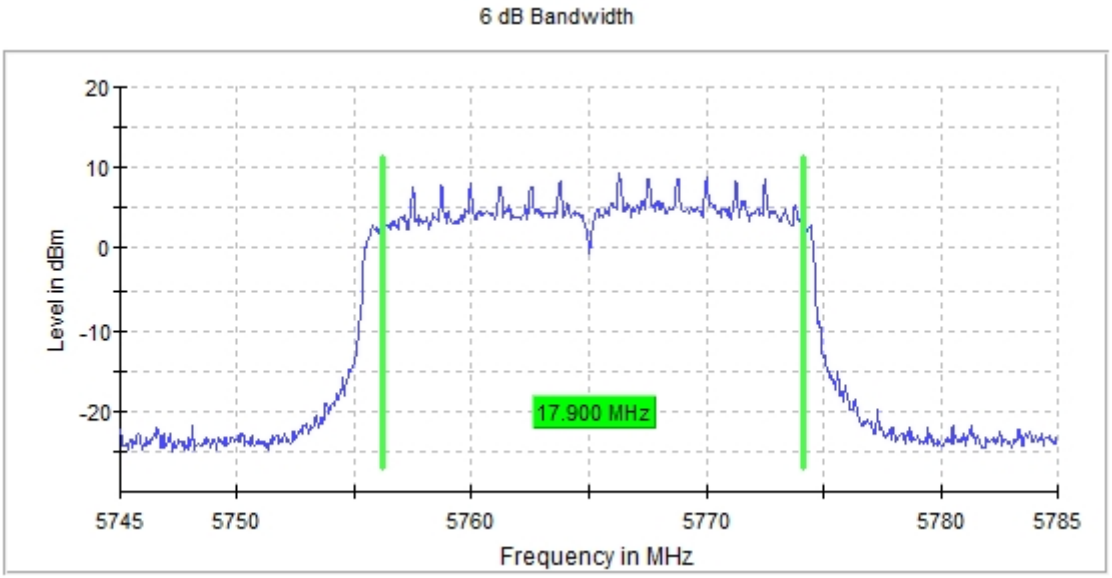
SISO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz)

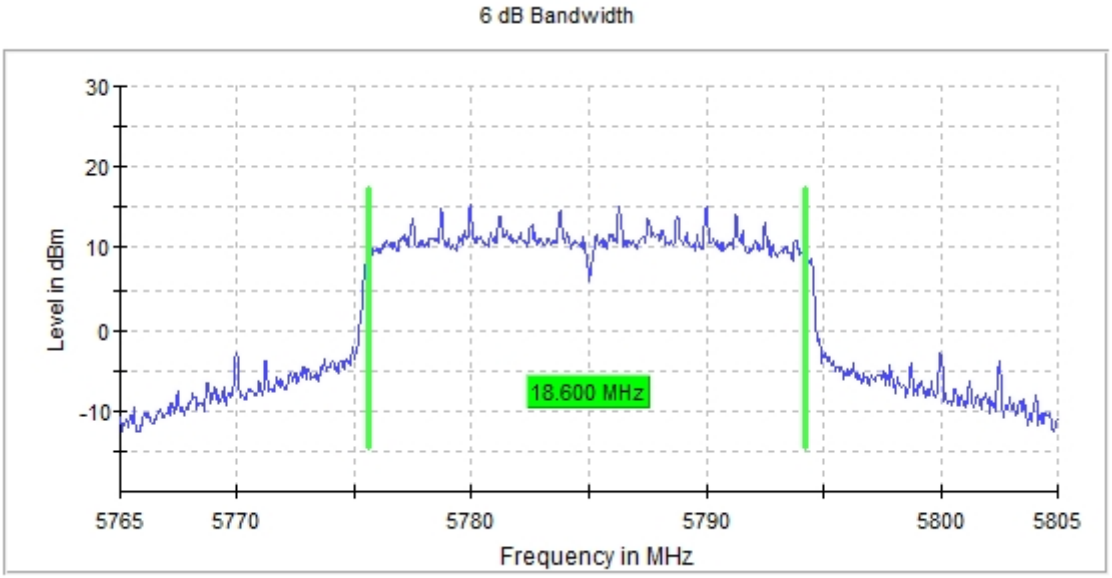
- Low Channel 149 (5745 MHz):



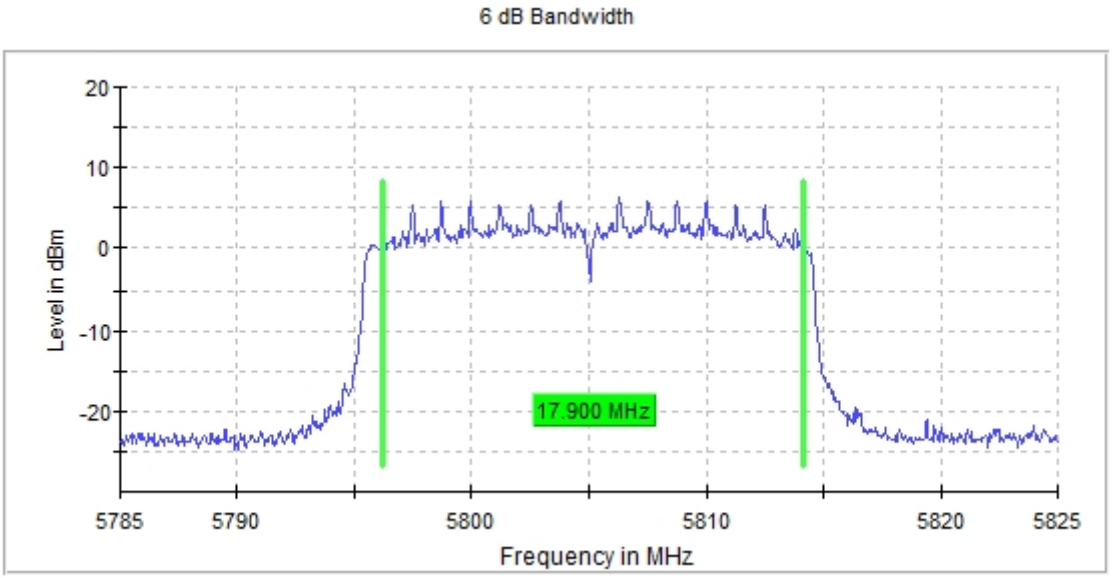
- Channel 153 (5765 MHz):



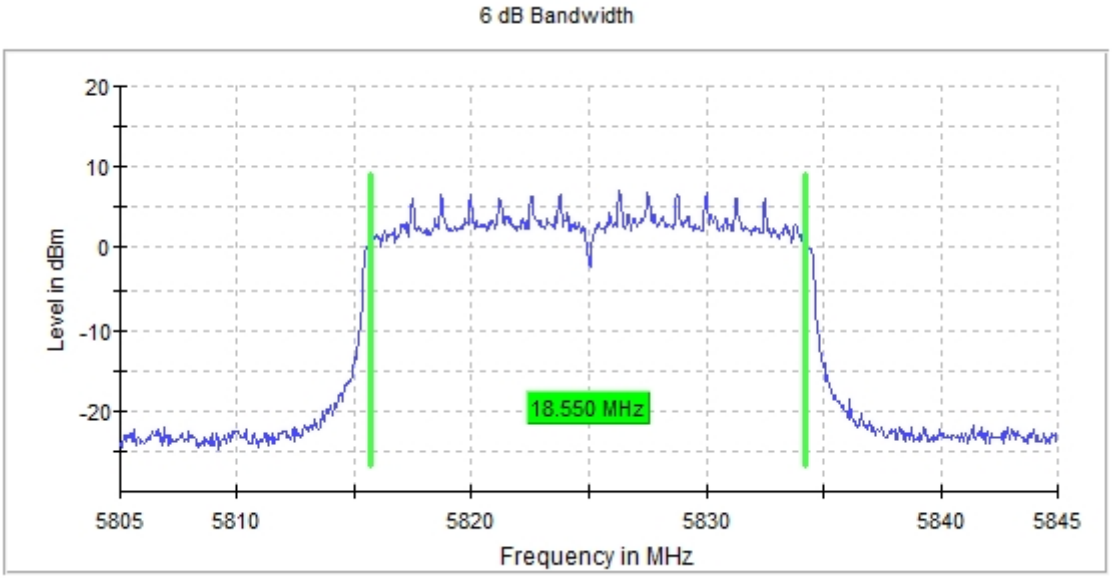
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



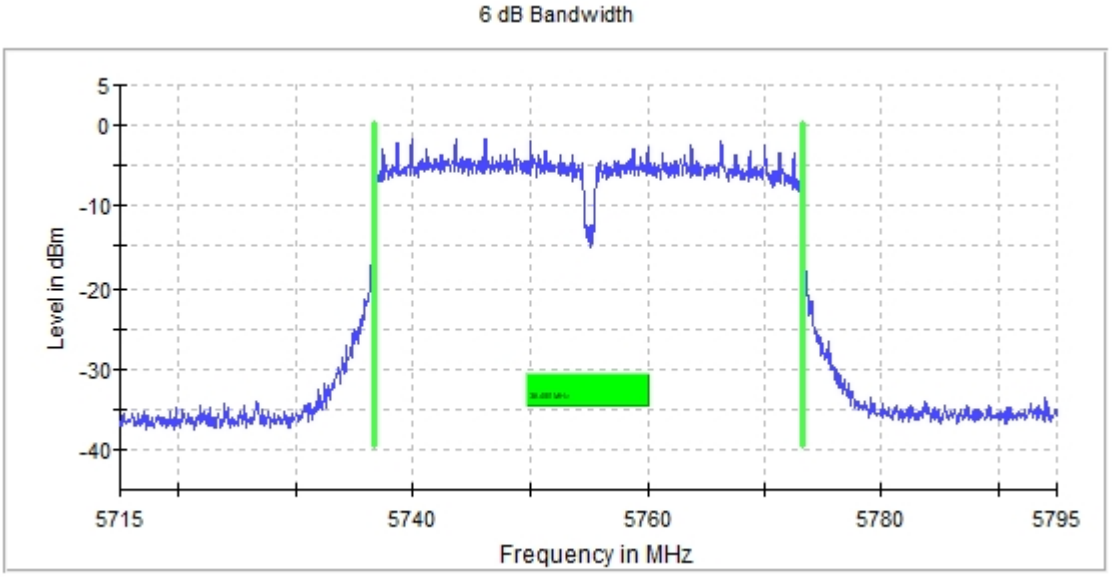
- High Channel 165 (5825 MHz):



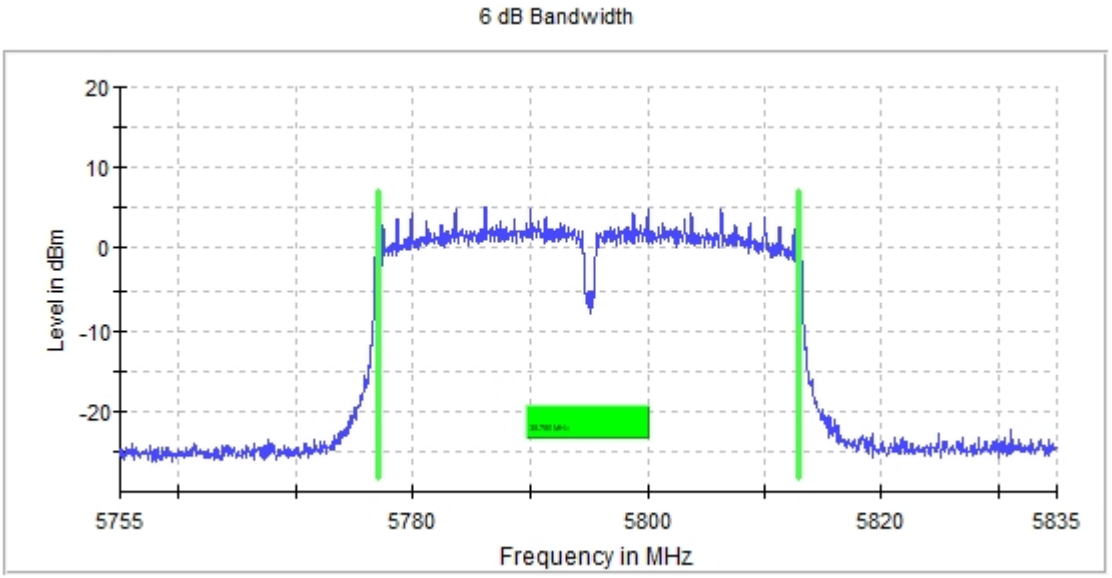
SISO 802.11 n40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



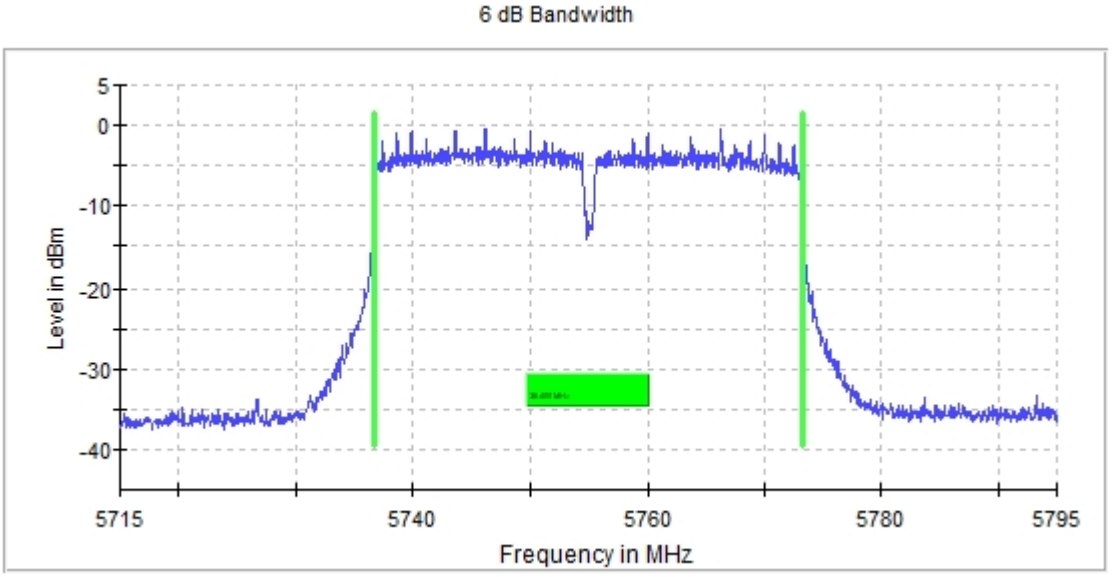
- High Channel 159 (5795 MHz):



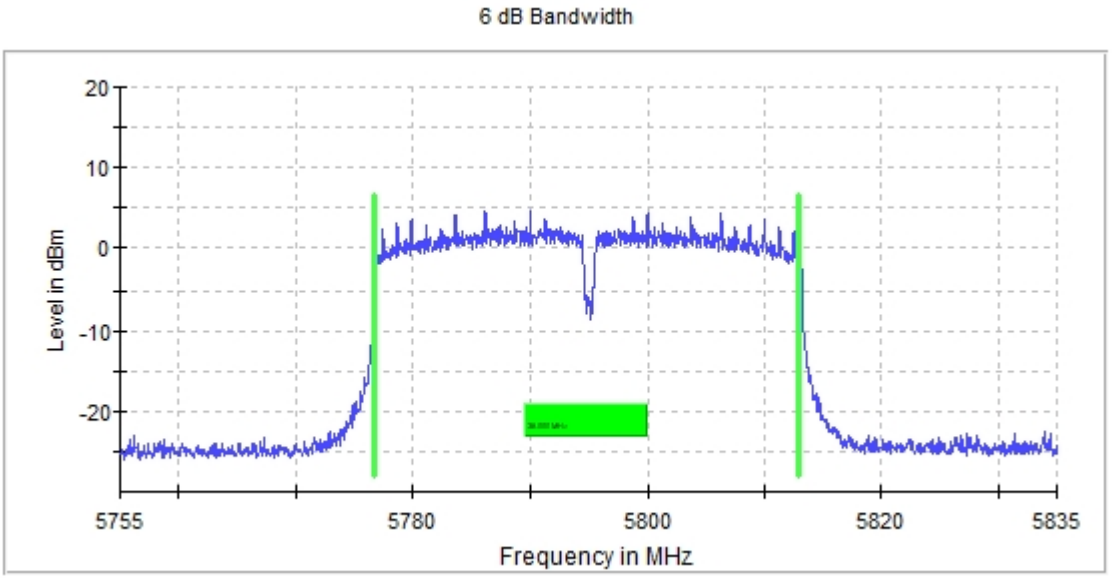
SISO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



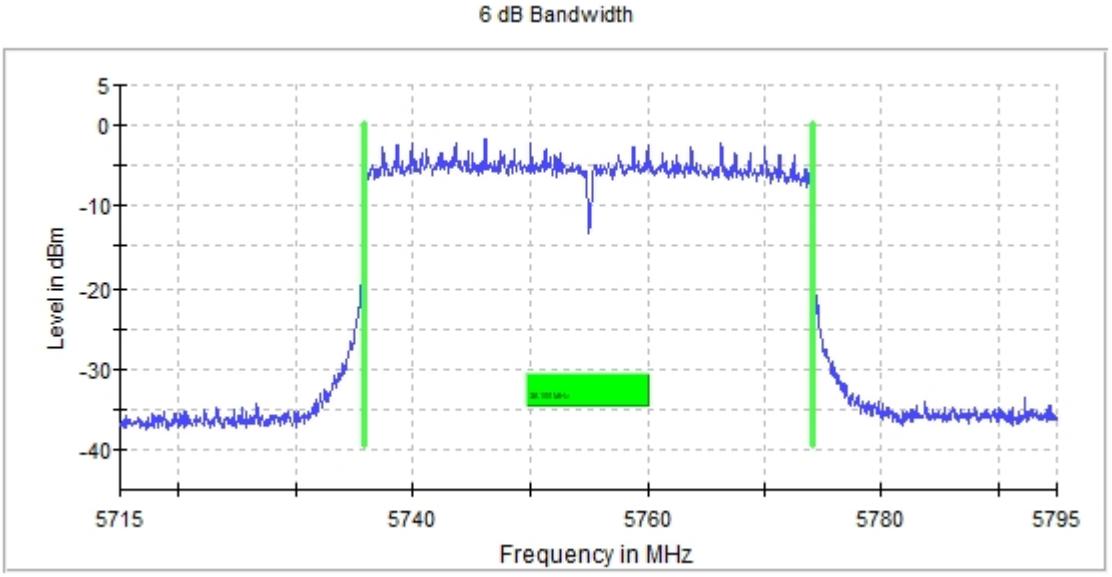
- High Channel 159 (5795 MHz):



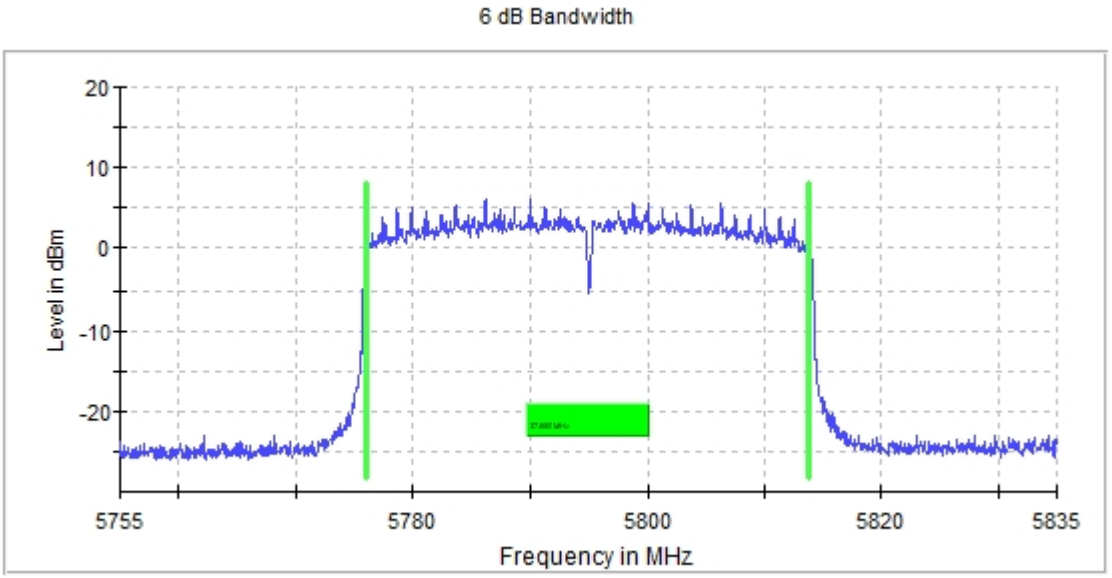
SISO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



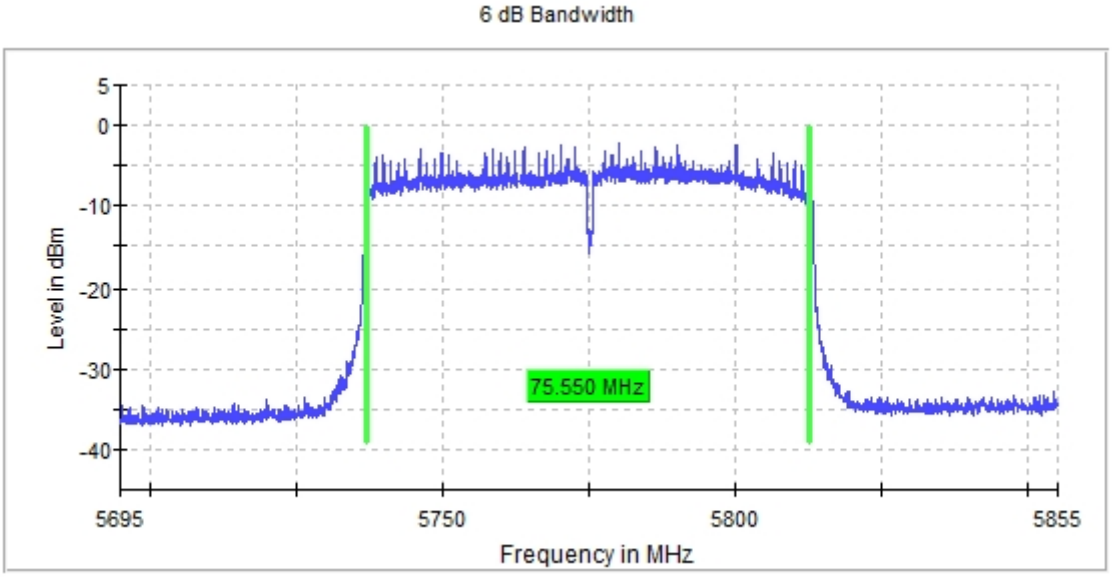
- High Channel 159 (5795 MHz):



SISO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz)

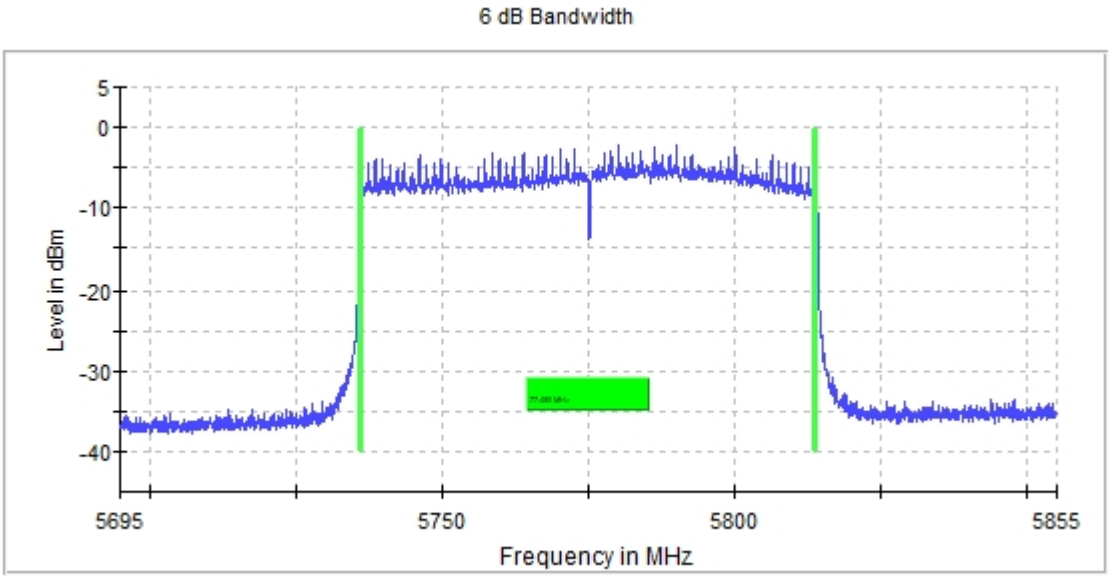
- Single Channel 155 (5775 MHz):



SISO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz)

- Single Channel 155 (5775 MHz):



MIMO worst-case:

MIMO 802.11 a20:

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	16.400000	16.400000	16.400000	16.400000	16.400000
Measurement uncertainty (kHz)	<±23.02				

MIMO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	16.650000	16.200000	15.450000	17.000000	16.350000
Measurement uncertainty (kHz)	<±23.02				

MIMO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	16.650000	16.600000	16.050000	16.150000	16.600000
Measurement uncertainty (kHz)	<±23.02				

MIMO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
6 dB Bandwidth (MHz)	18.100000	18.450000	17.900000	18.200000	18.350000
Measurement uncertainty (kHz)	<±23.02				

MIMO 802.11 n40 (HT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
6 dB Bandwidth (MHz)	36.400000	36.000000
Measurement uncertainty (kHz)	<±53.05	

MIMO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
6 dB Bandwidth (MHz)	36.400000	36.400000
Measurement uncertainty (kHz)	<±53.05	

MIMO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
6 dB Bandwidth (MHz)	37.900000	37.850000
Measurement uncertainty (kHz)	<±53.05	

MIMO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
6 dB Bandwidth (MHz)	75.200000
Measurement uncertainty (kHz)	<±103.10

MIMO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
6 dB Bandwidth (MHz)	77.550000
Measurement uncertainty (kHz)	<±103.10

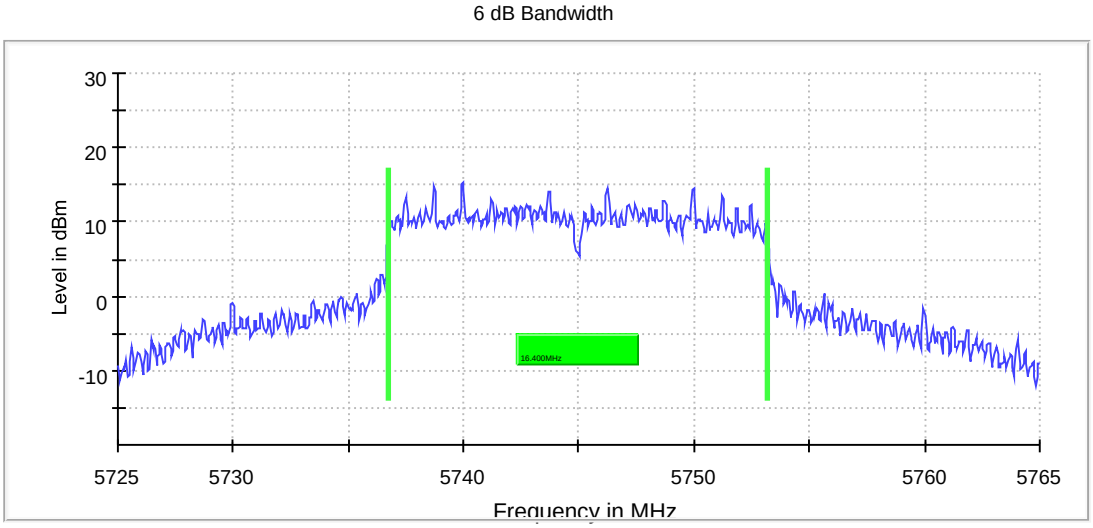
Verdict: PASS

MIMO worst-case:

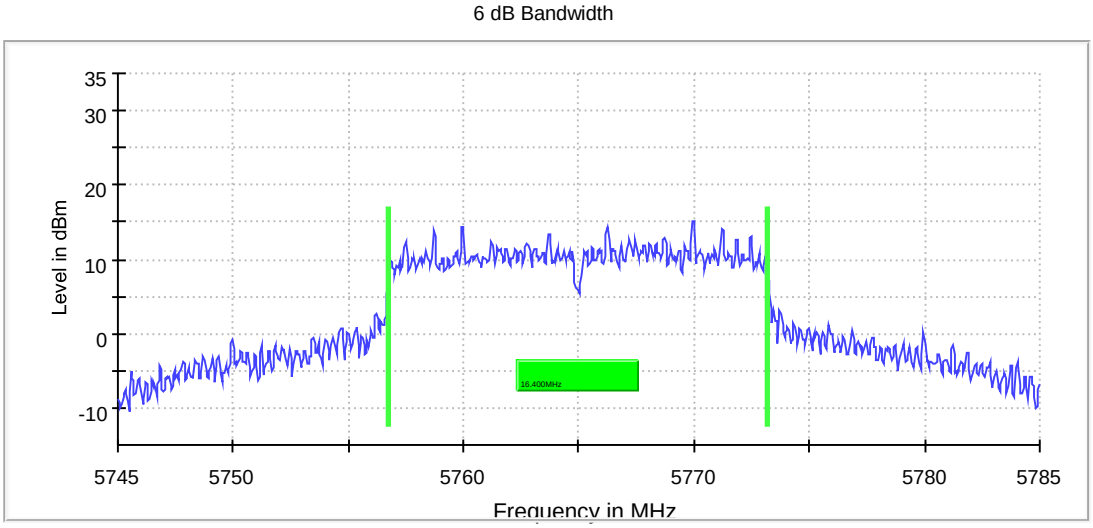
MIMO 802.11 a20:

U-NII-3 (5725-5850 MHz)

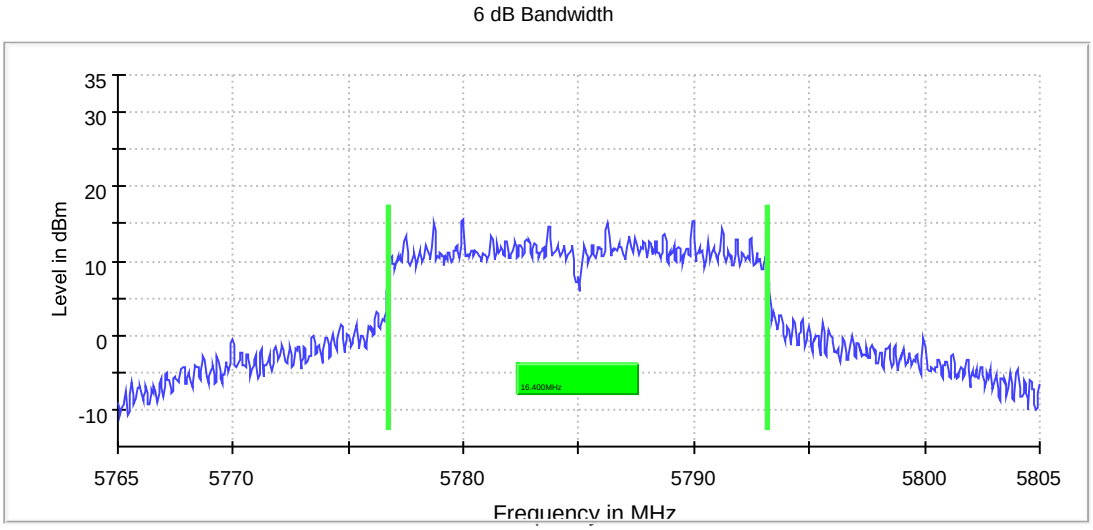
- Low Channel 149 (5745 MHz):



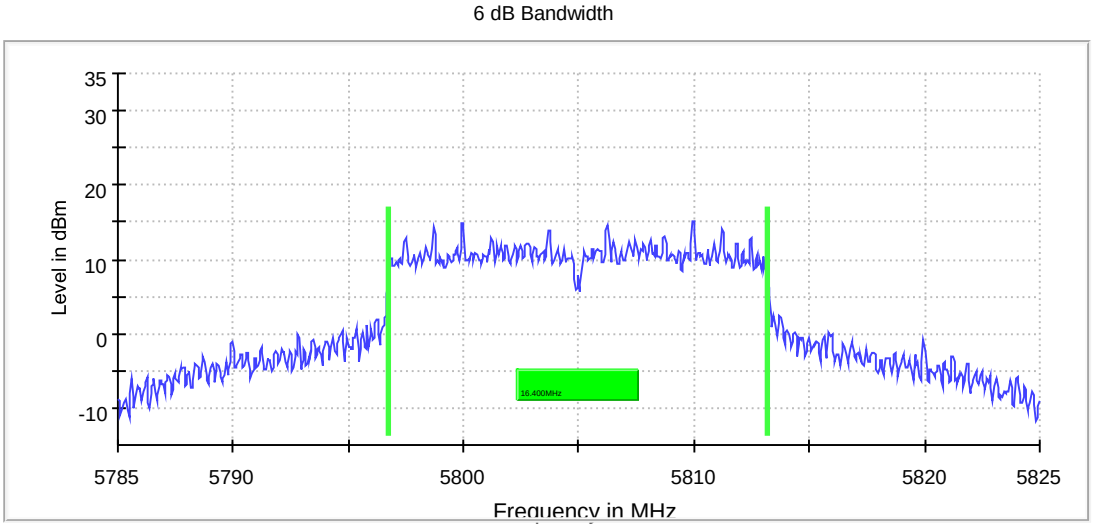
- Channel 153 (5765 MHz):



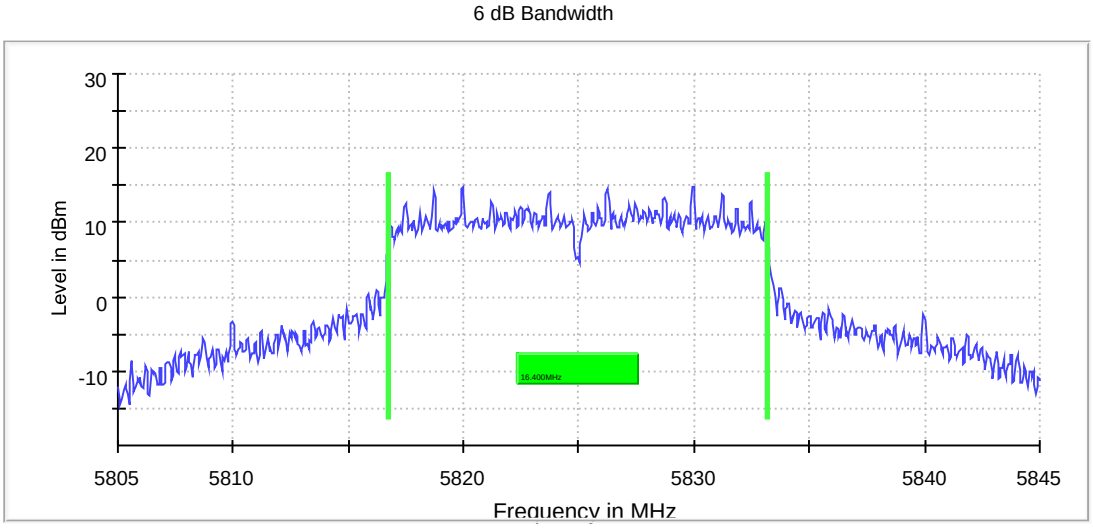
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



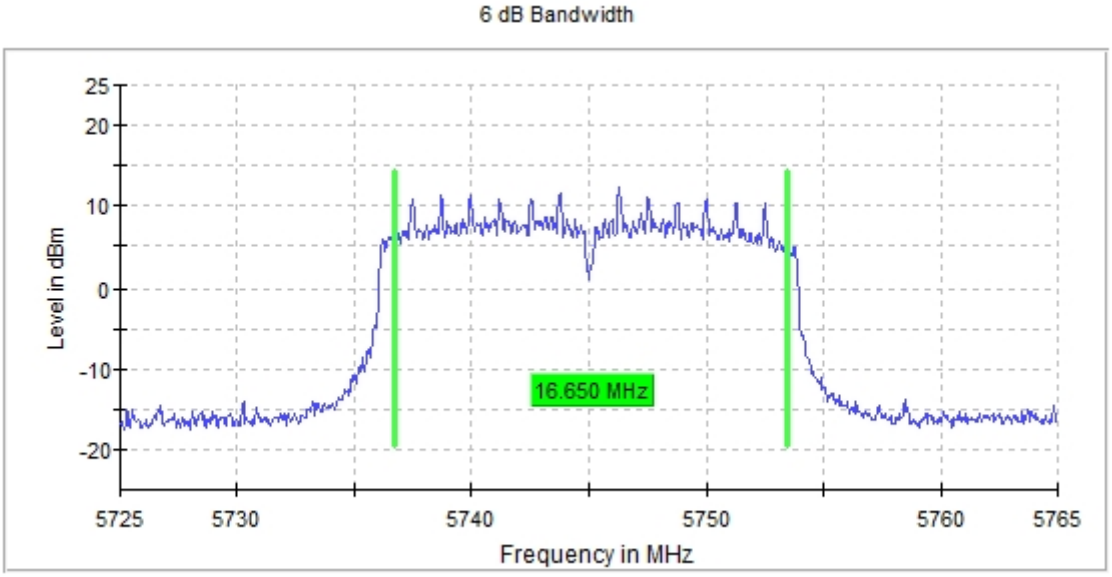
- High Channel 165 (5825 MHz):



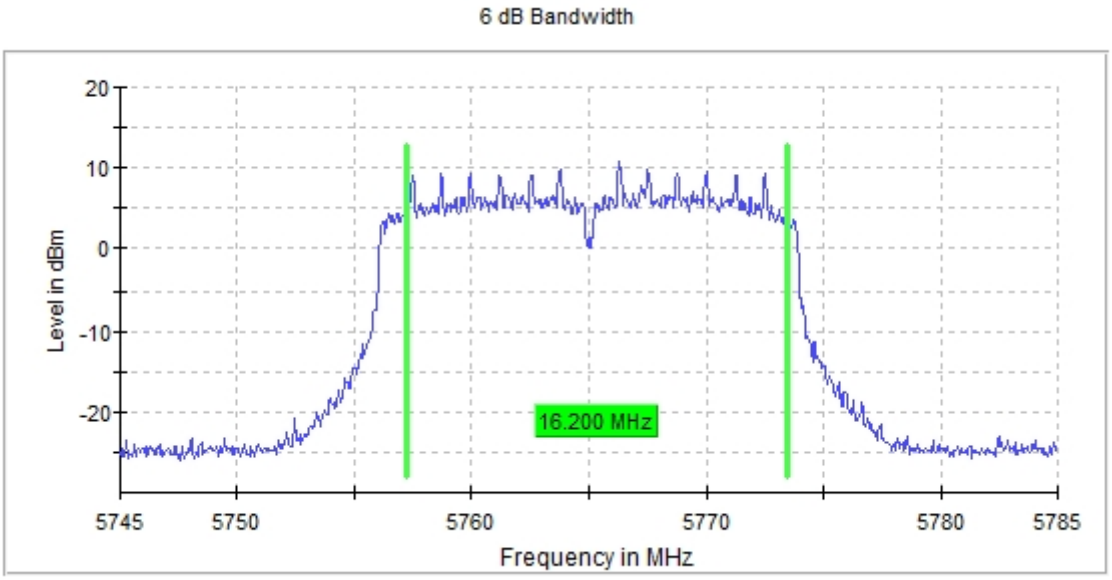
MIMO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz)

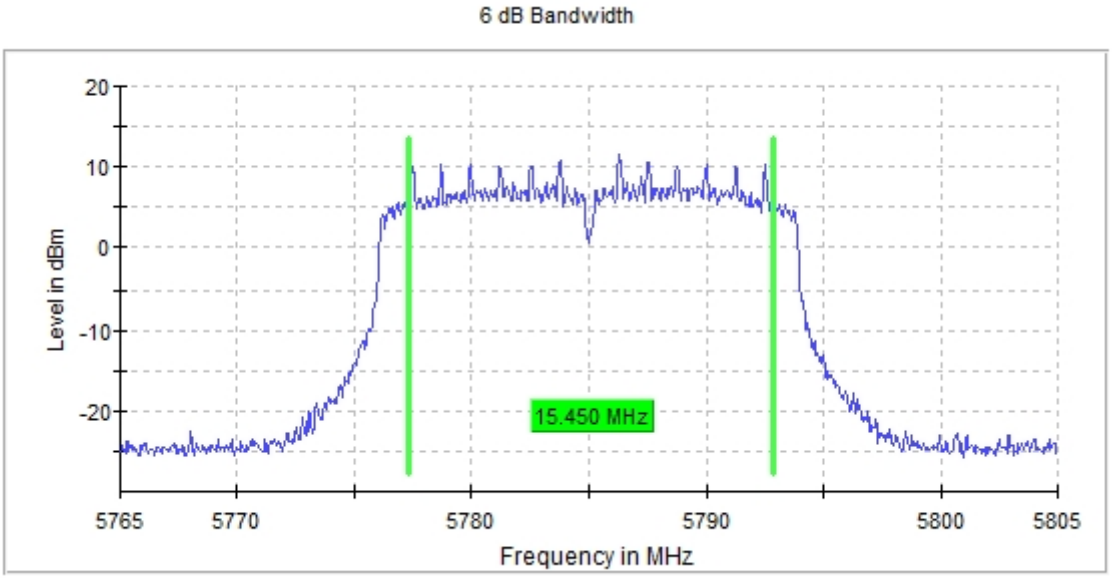
- Low Channel 149 (5745 MHz):



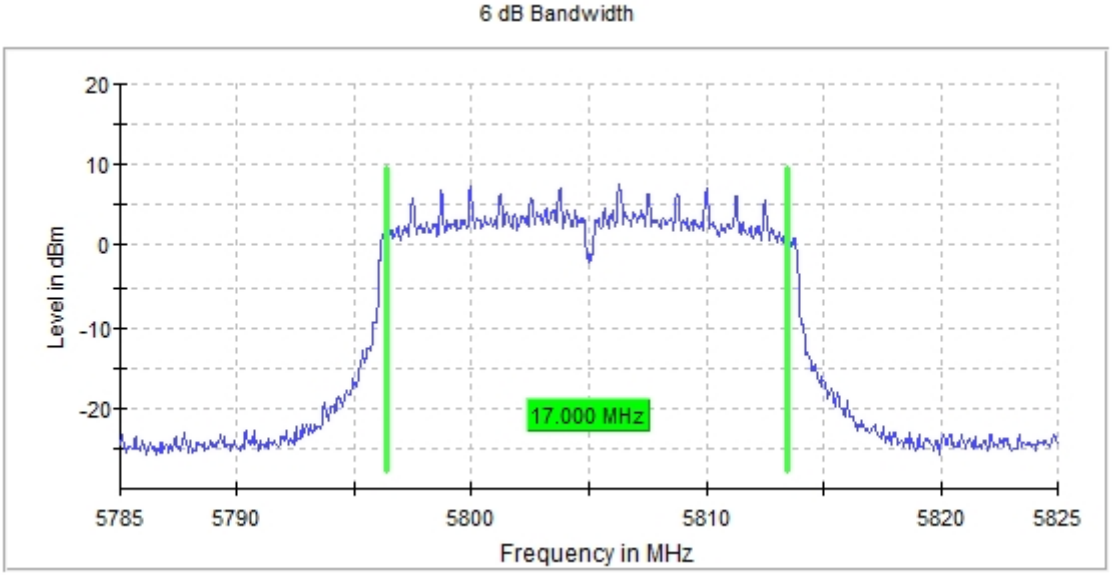
- Channel 153 (5765 MHz):



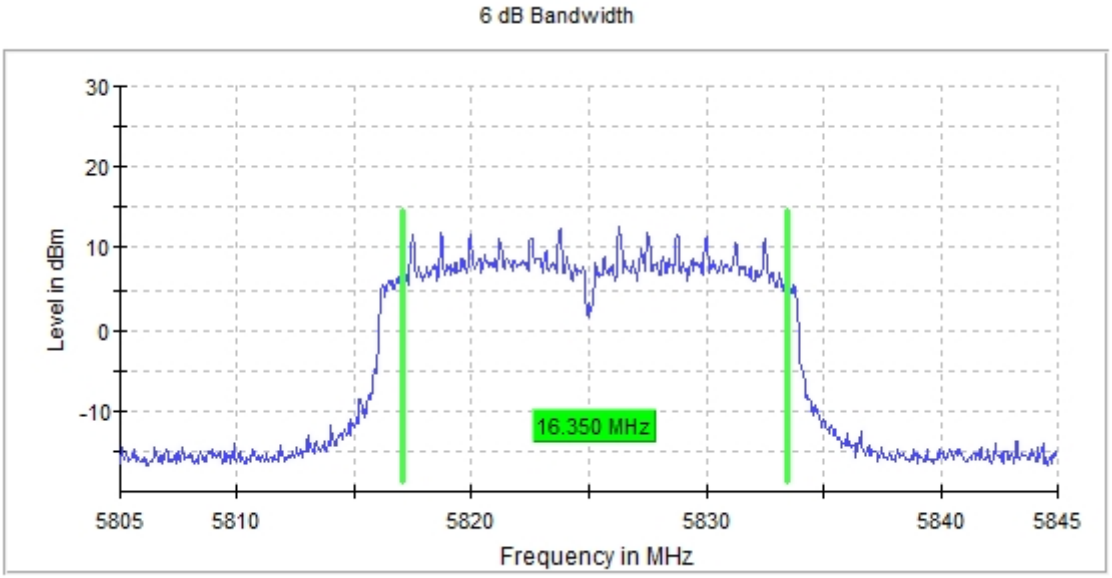
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



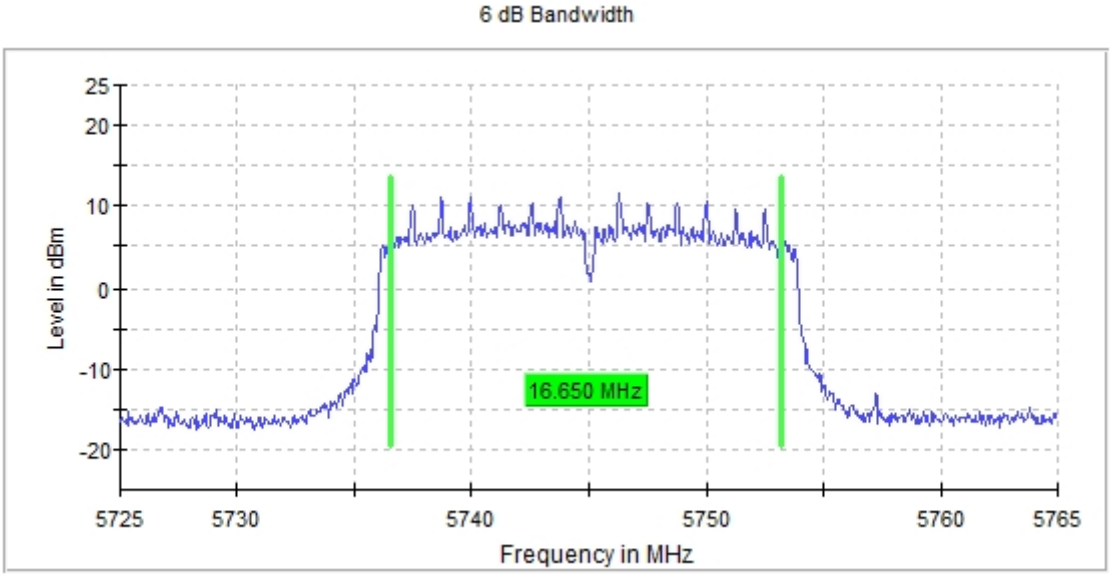
- High Channel 165 (5825 MHz):



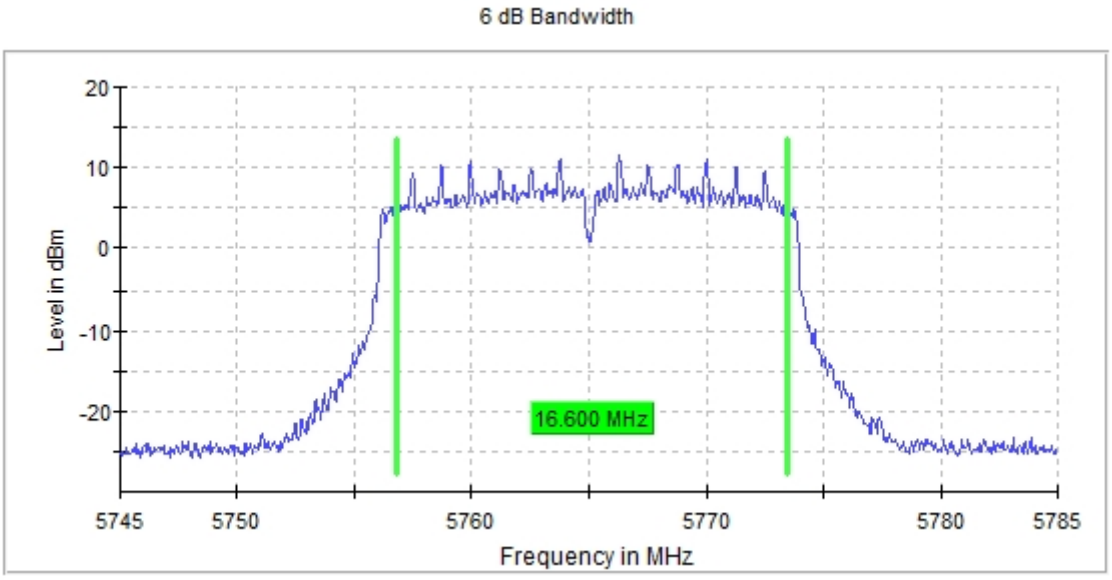
MIMO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz)

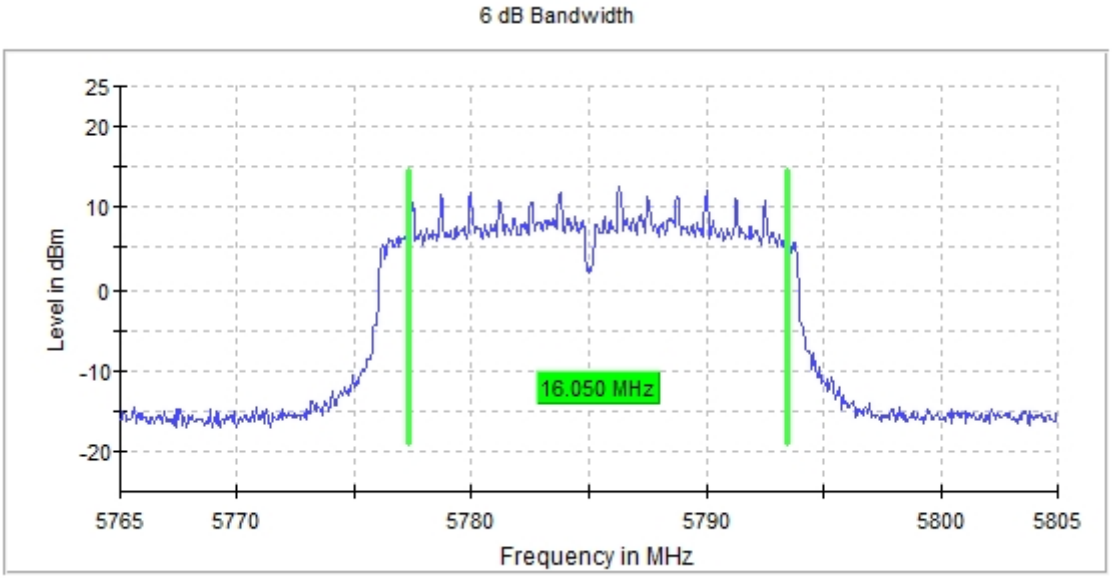
- Low Channel 149 (5745 MHz):



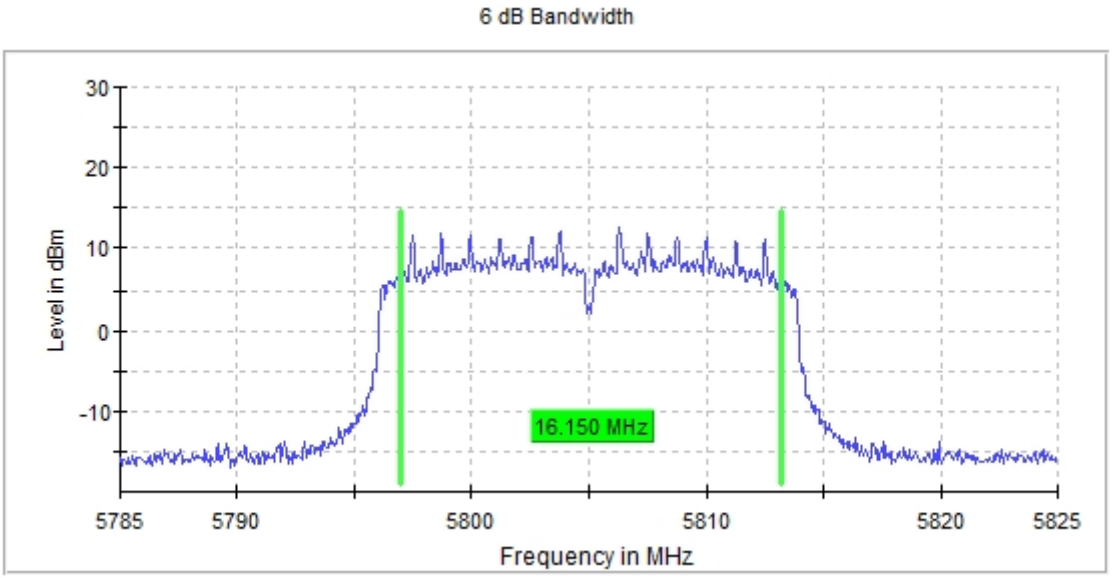
- Channel 153 (5765 MHz):



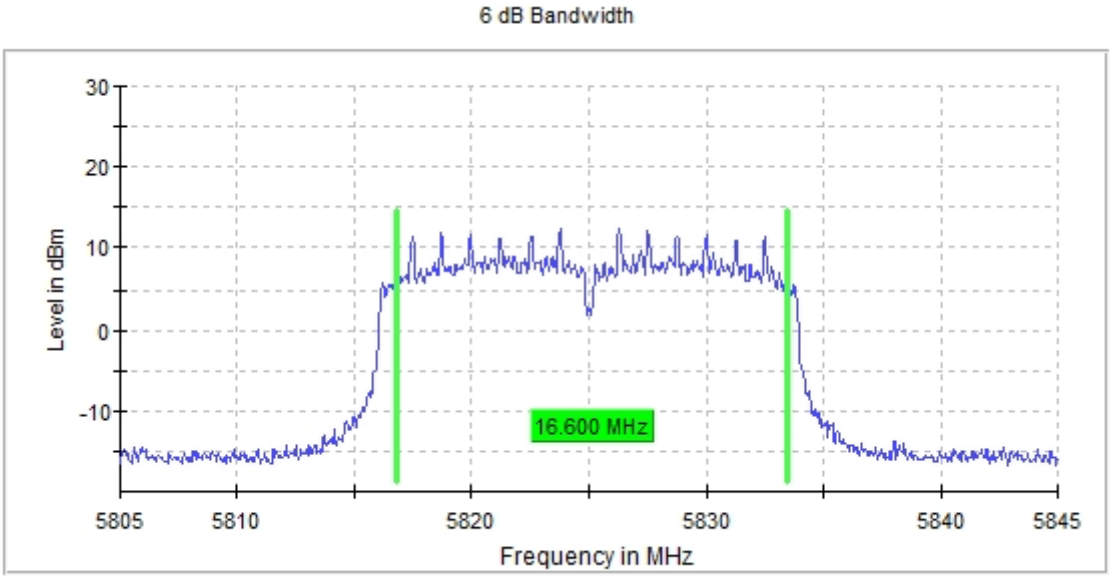
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



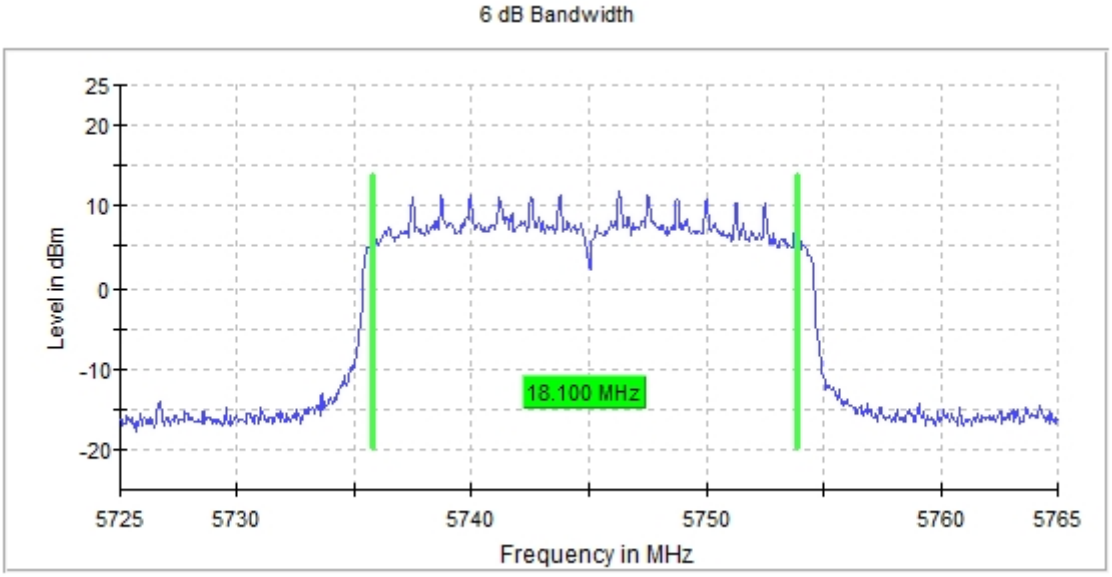
- High Channel 165 (5825 MHz):



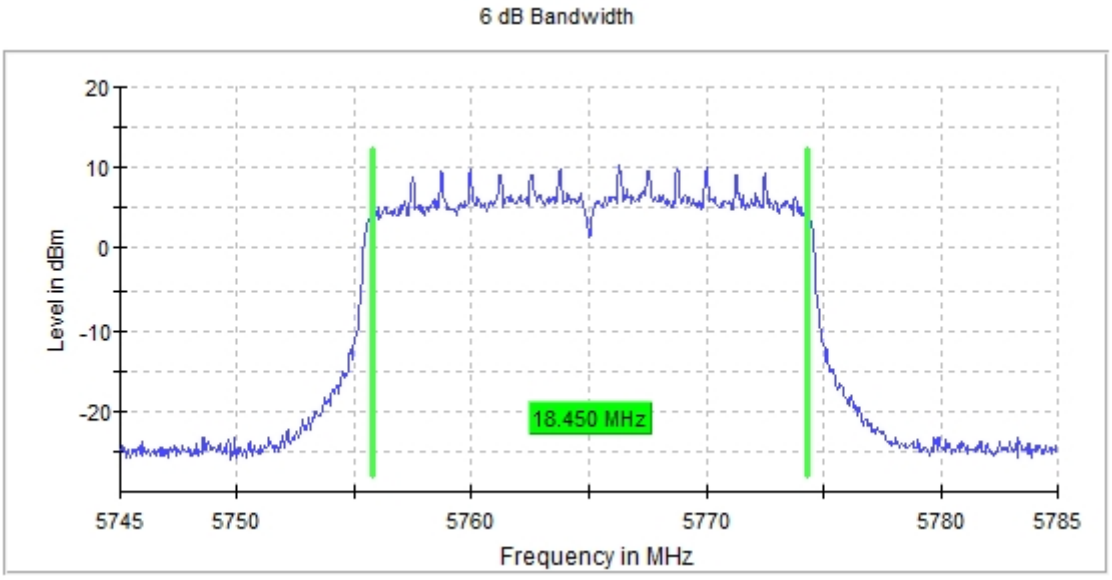
MIMO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz)

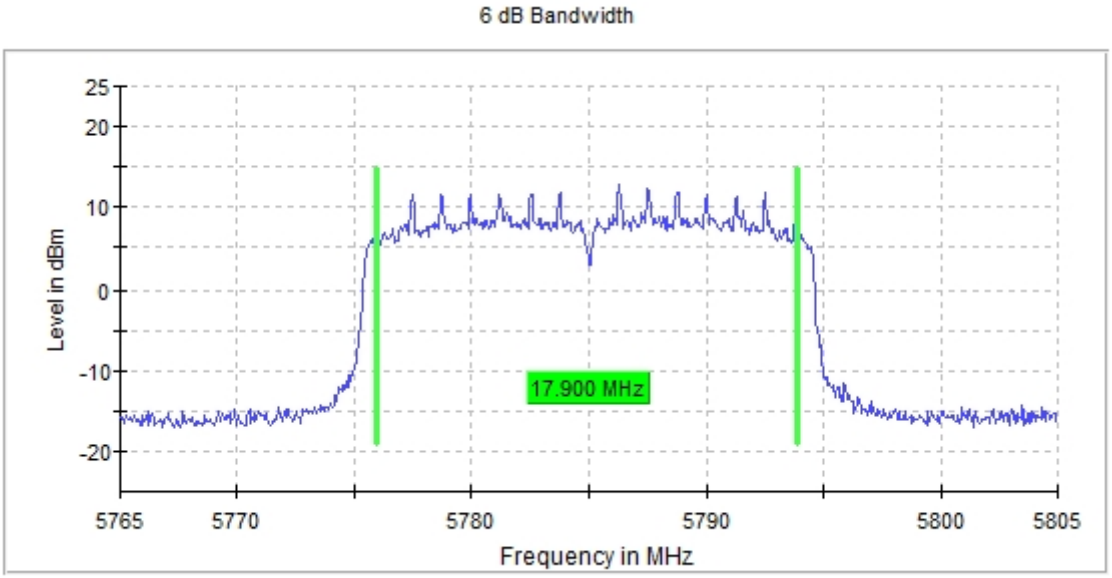
- Low Channel 149 (5745 MHz):



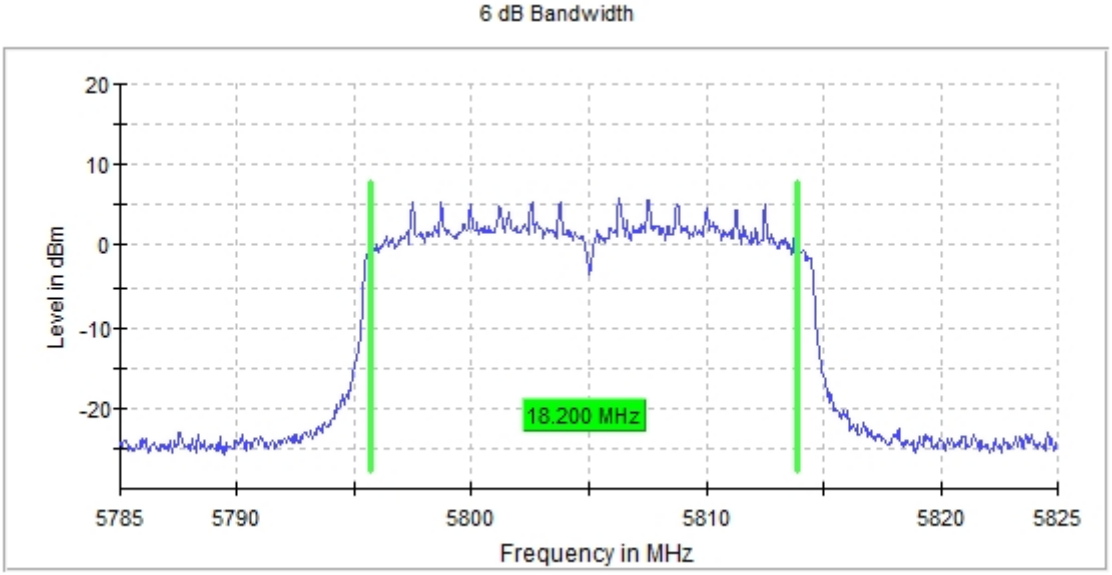
- Channel 153 (5765 MHz):



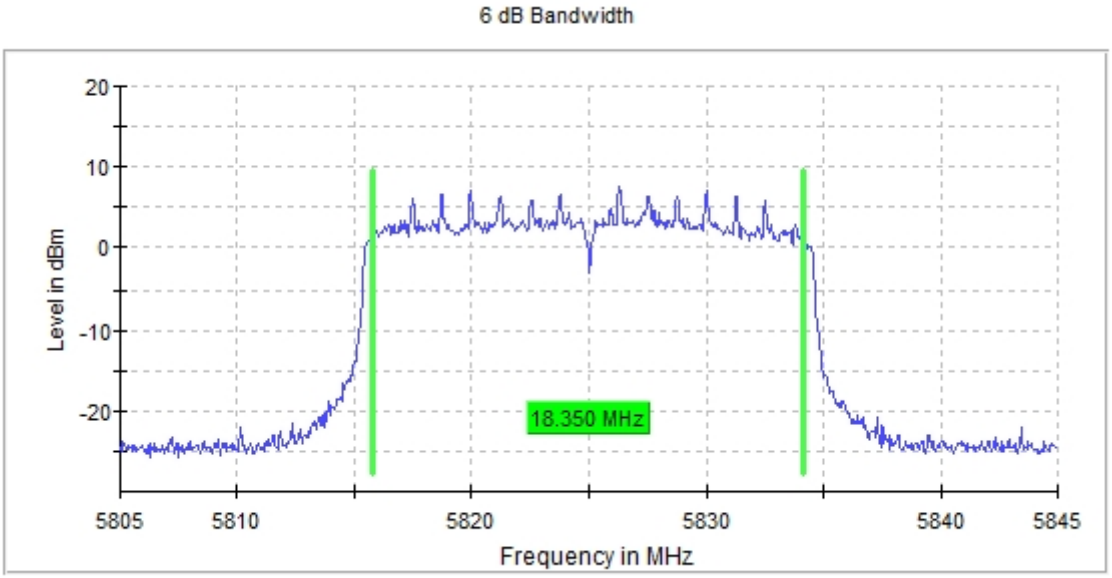
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



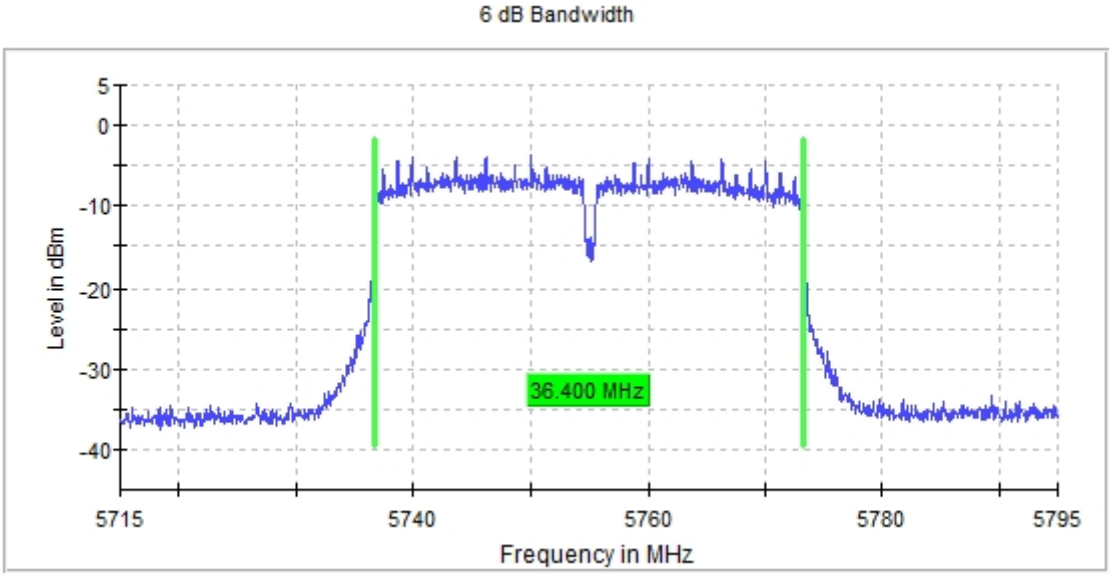
- High Channel 165 (5825 MHz):



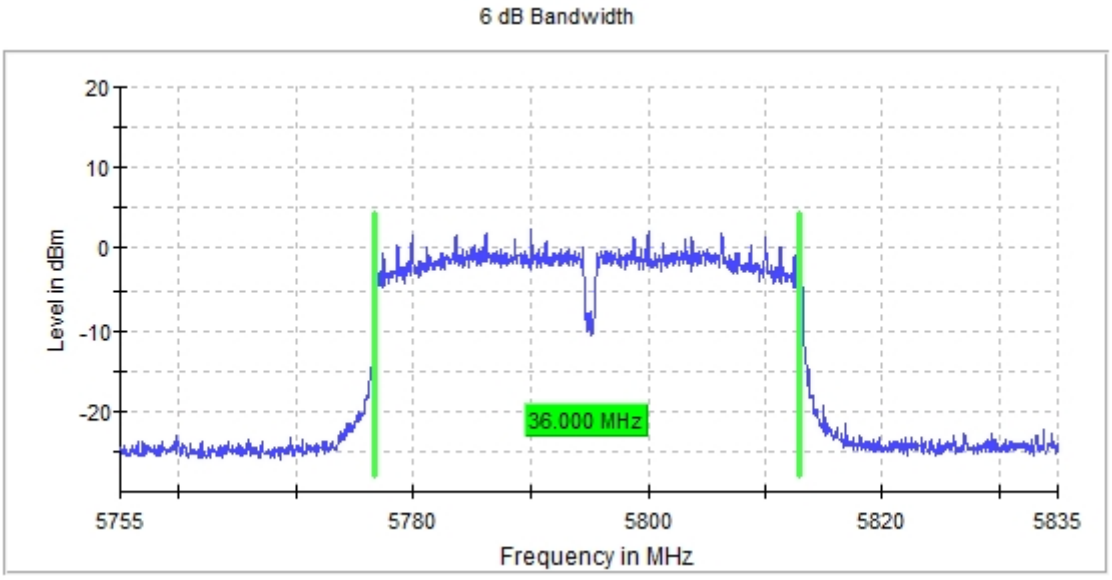
MIMO 802.11 n40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



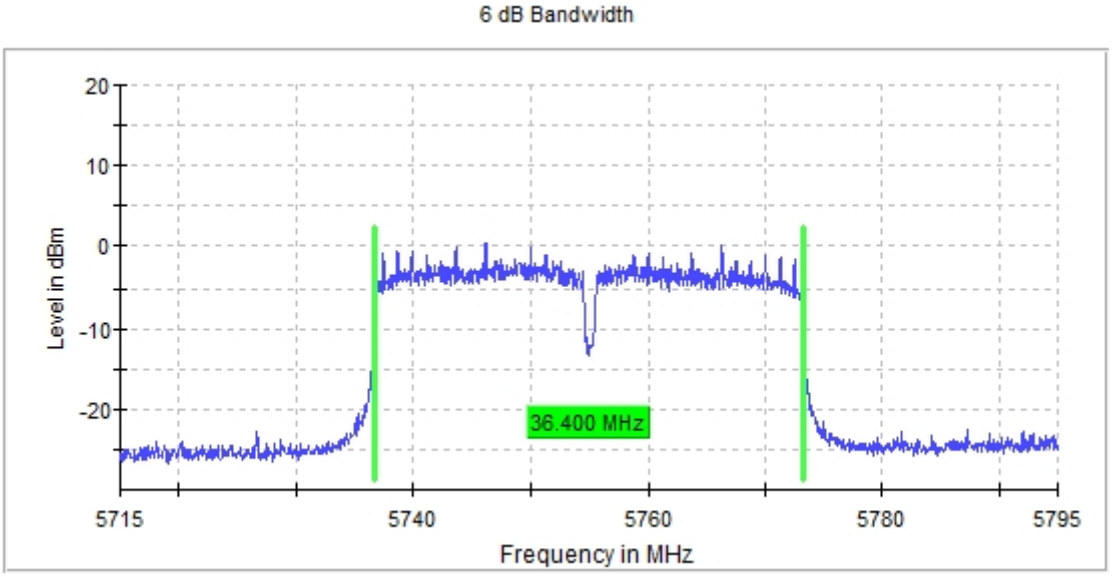
- High Channel 159 (5795 MHz):



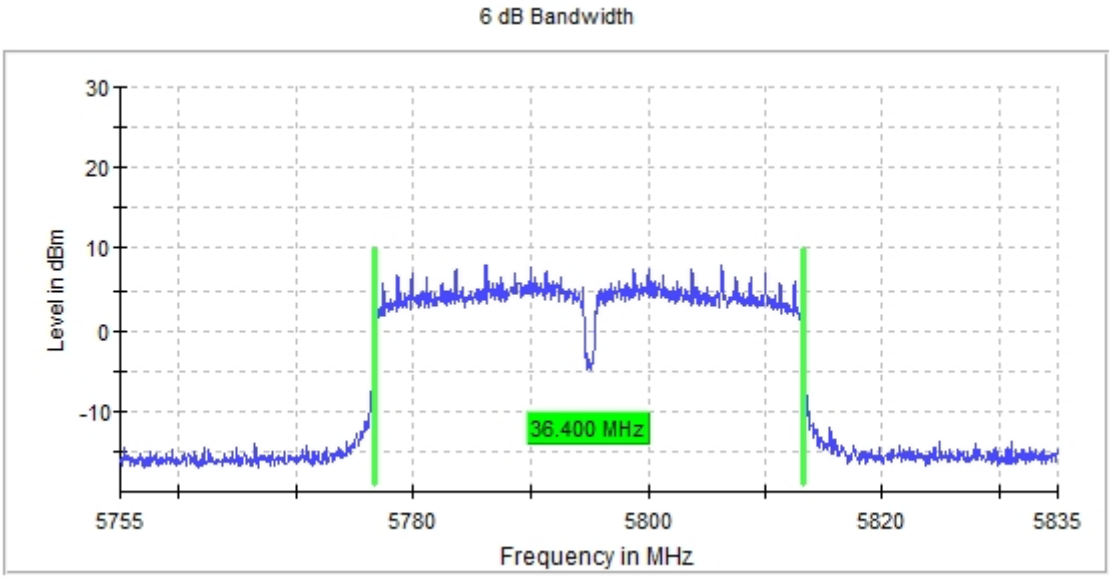
MIMO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



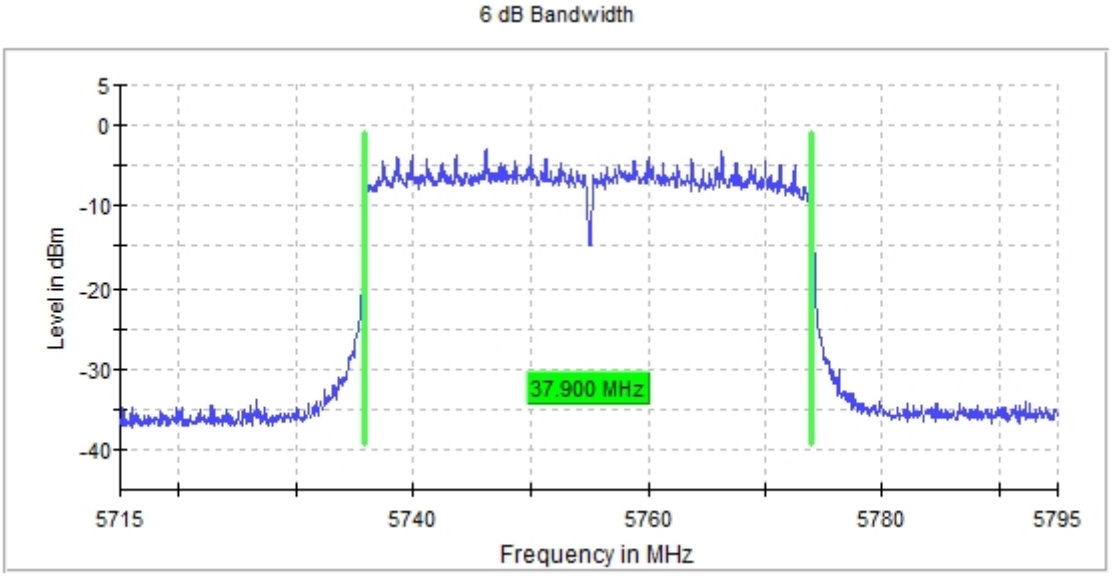
- High Channel 159 (5795 MHz):



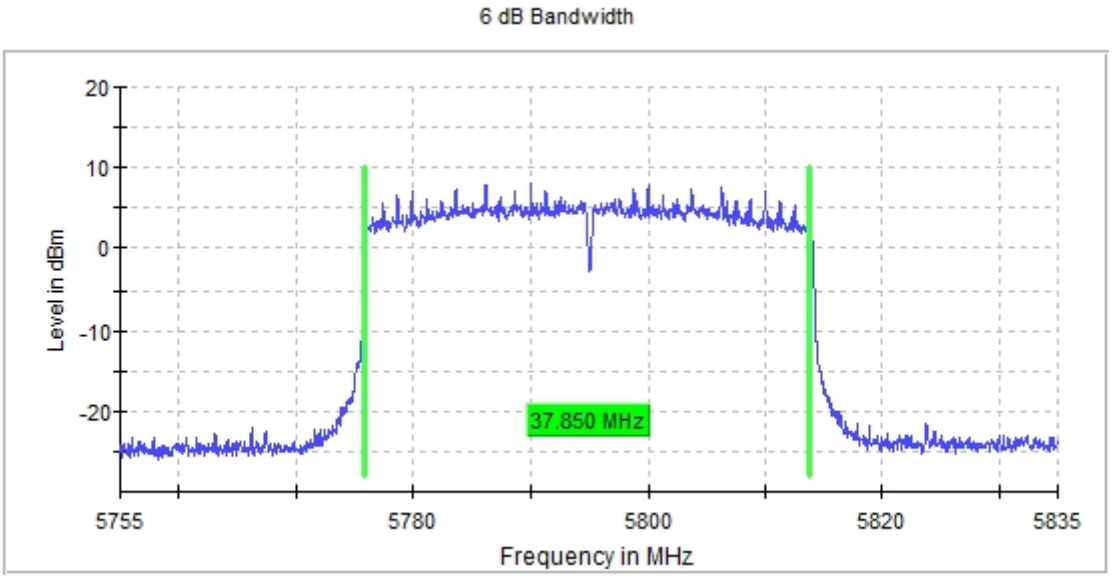
MIMO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



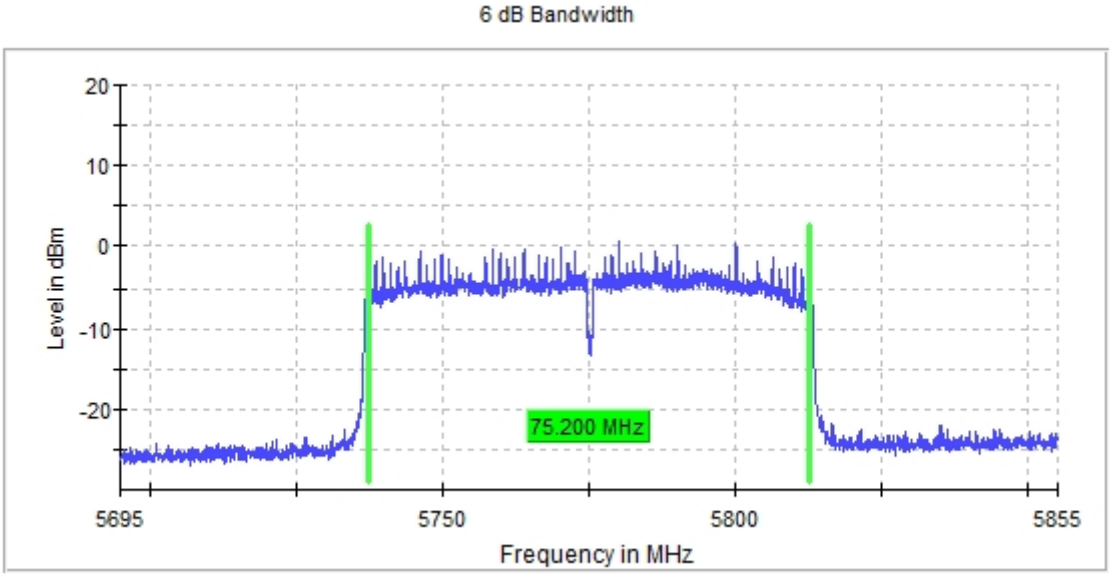
- High Channel 159 (5795 MHz):



MIMO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz)

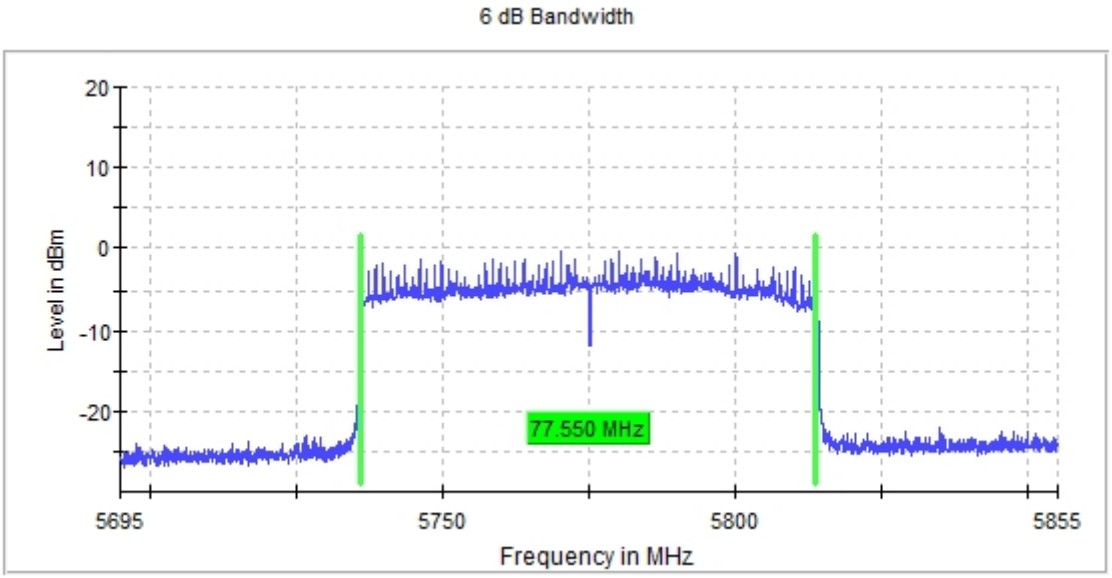
- Single Channel 155 (5775 MHz):



MIMO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz)

- Single Channel 155 (5775 MHz):



FCC 15.407 (a)(3)(i) Transmitter Maximum Conducted Output Power / RSS-247 6.2.4.1 Transmitter Maximum Equivalent Isotropically Radiated Power

SPECIFICATION:

* FCC 15.407: For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

* RSS-247: The maximum conducted output power shall not exceed 1 W. The output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipointFootnote3 systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

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.

SISO worst-case:

SISO 802.11 a20:

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	24.5	24.1	26.5	21.0	20.5
Maximum EIRP Corrected Conducted Power (dBm)	29.7	29.3	31.7	26.2	25.7
Measurement uncertainty (dB)	<±1				

SISO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	24.4	21.6	22.8	22.3	23.6
Maximum EIRP Corrected Conducted Power (dBm)	29.6	26.8	28	27.5	28.8
Measurement uncertainty (dB)	<±1				

SISO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	21.0	16.8	25.1	20.5	20.0
Maximum EIRP Corrected Conducted Power (dBm)	26.2	22	30.3	25.7	25.2
Measurement uncertainty (dB)	<±1				

SISO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	23.7	22.4	28.1	19.6	20.1
Maximum EIRP Corrected Conducted Power (dBm)	28.9	27.6	33.3	24.8	25.3
Measurement uncertainty (dB)	<±1				

SISO 802.11 n40 (HT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted Power (dBm)	15.7	21.8
Maximum EIRP Corrected Conducted Power (dBm)	20.9	27
Measurement uncertainty (dB)	<±1	

SISO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted Power (dBm)	16.7	21.2
Maximum EIRP Corrected Conducted Power (dBm)	21.9	26.4
Measurement uncertainty (dB)	<±1	

SISO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted Power (dBm)	15.3	22.4
Maximum EIRP Corrected Conducted Power (dBm)	20.5	27.6
Measurement uncertainty (dB)	<±1	

SISO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
Maximum Corrected Conducted Power (dBm)	16.2
Maximum EIRP Corrected Conducted Power (dBm)	21.4
Measurement uncertainty (dB)	<±1

SISO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
Maximum Corrected Conducted Power (dBm)	16.9
Maximum EIRP Corrected Conducted Power (dBm)	22.1
Measurement uncertainty (dB)	<±1

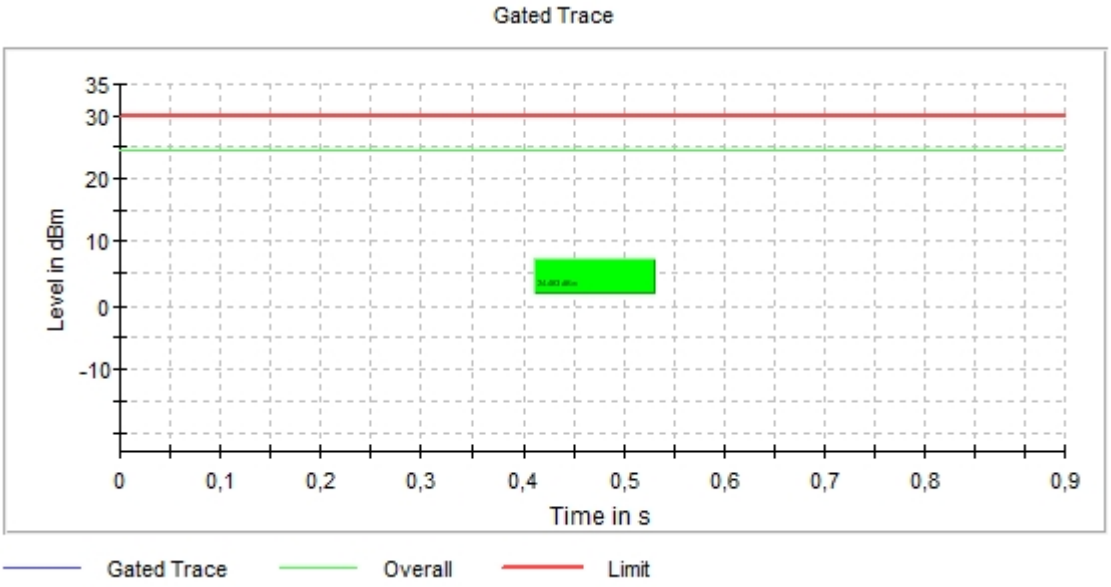
Verdict: PASS

SISO worst-case:

SISO 802.11 a20:

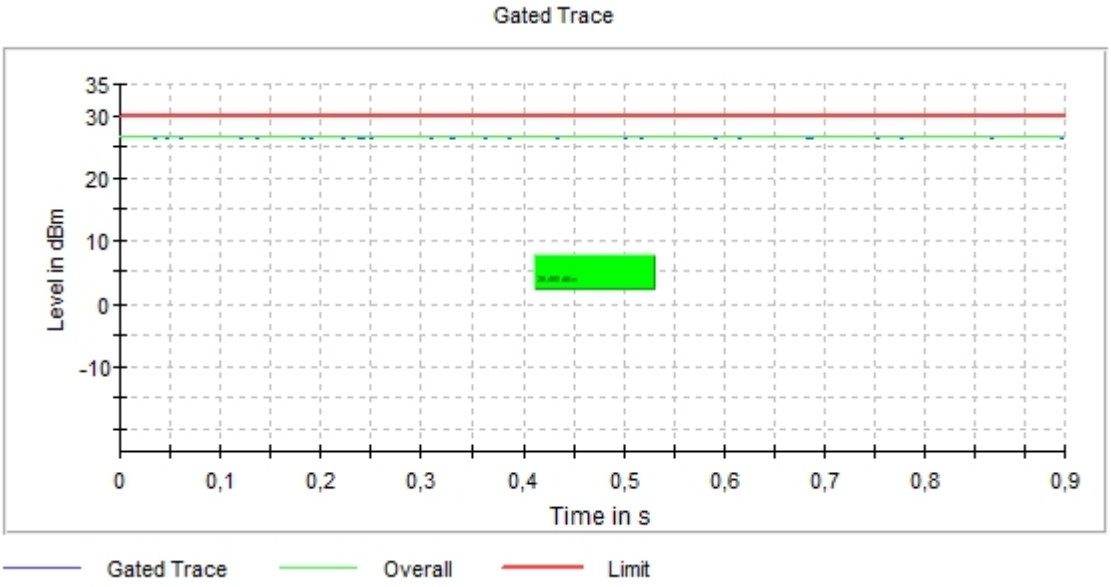
U-NII-3 (5725-5850 MHz)

- Low Channel 149 (5745 MHz):

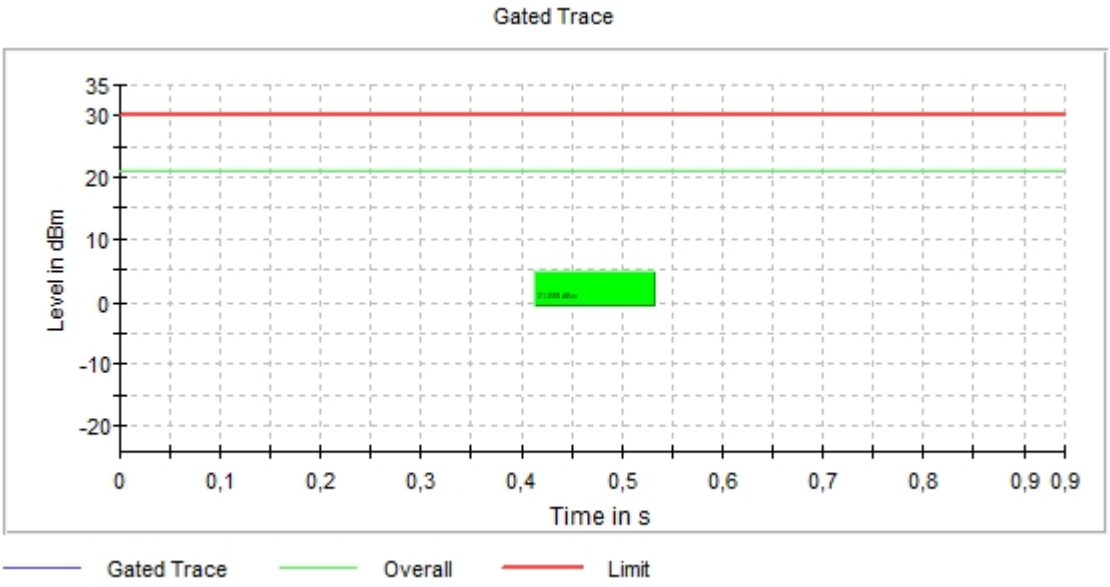


- Channel 153 (5765 MHz):

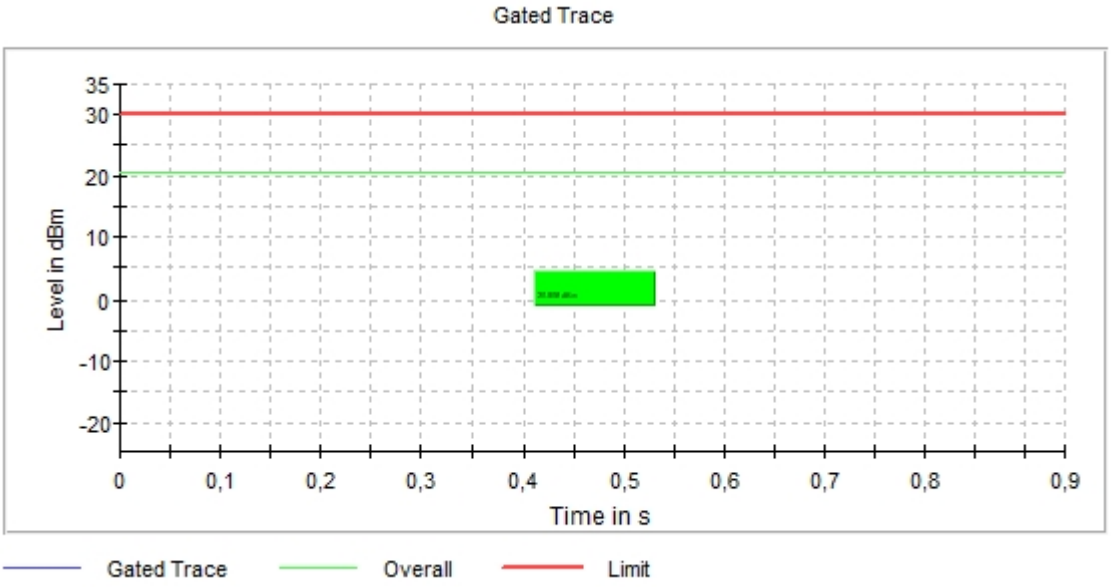
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



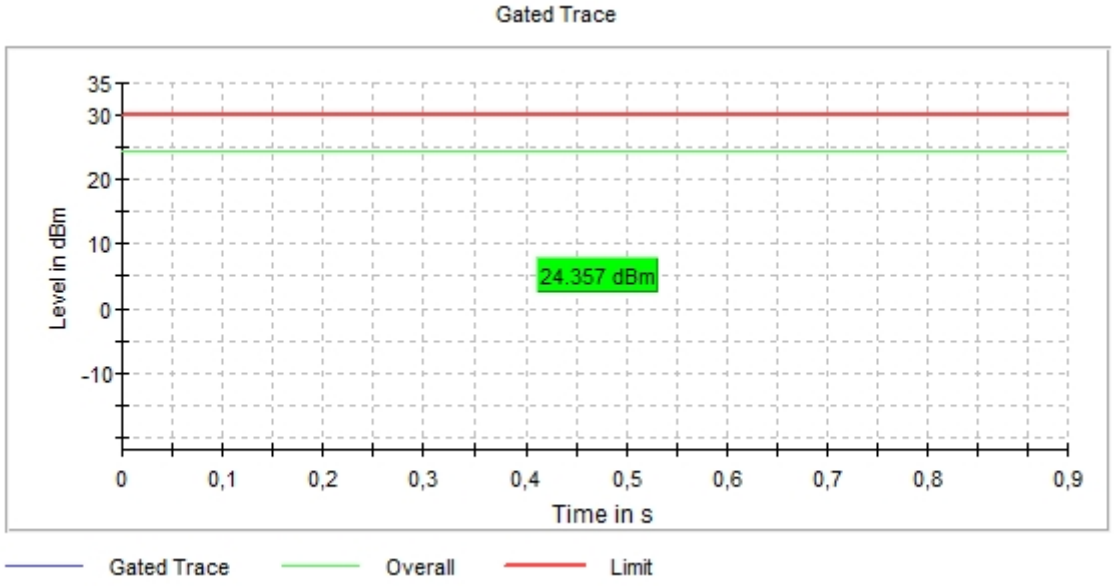
- High Channel 165 (5825 MHz):



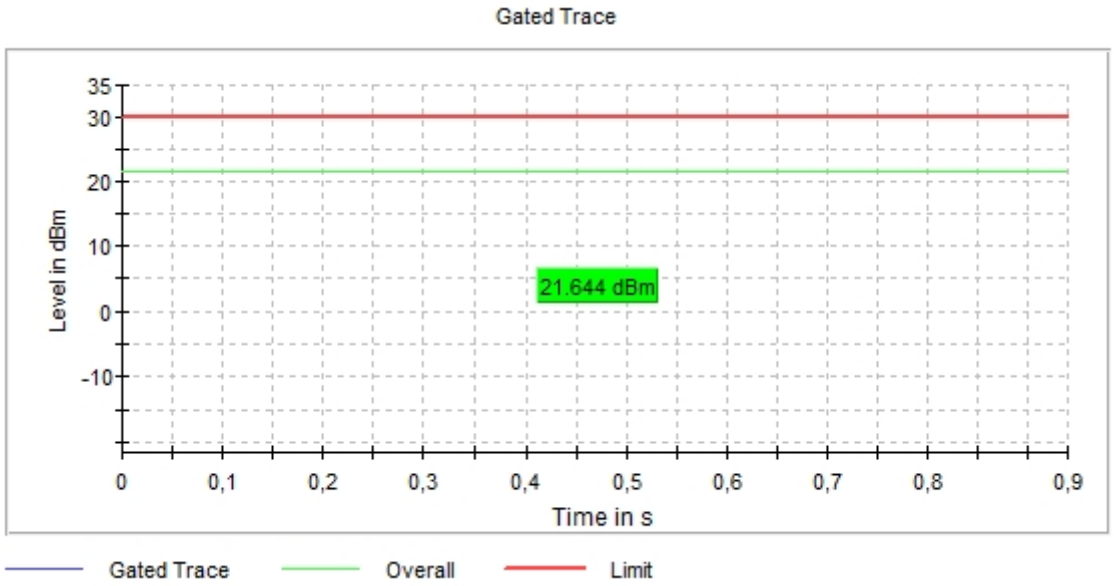
SISO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz)

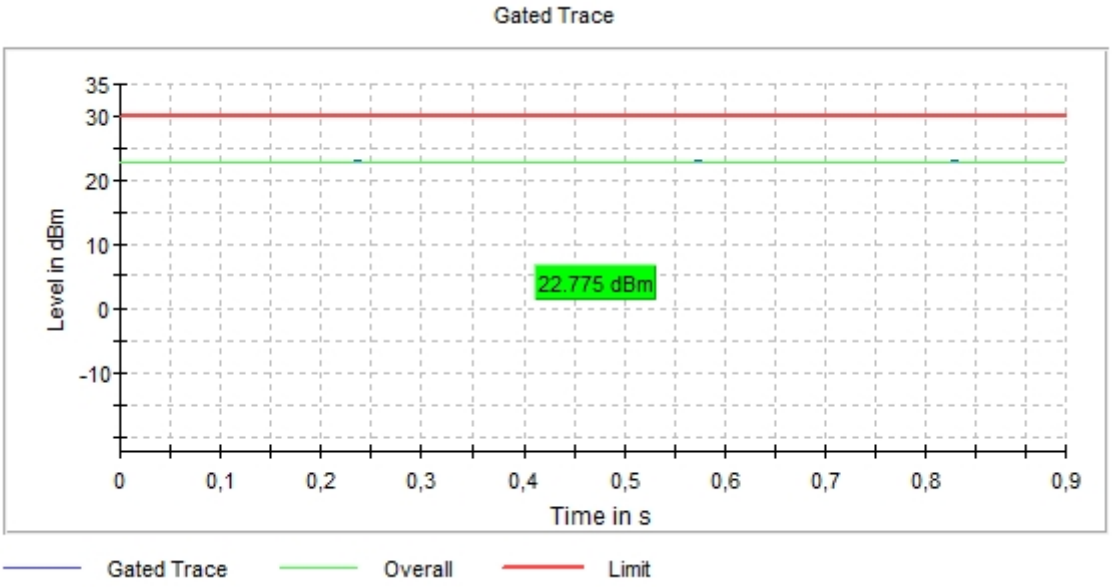
- Low Channel 149 (5745 MHz):



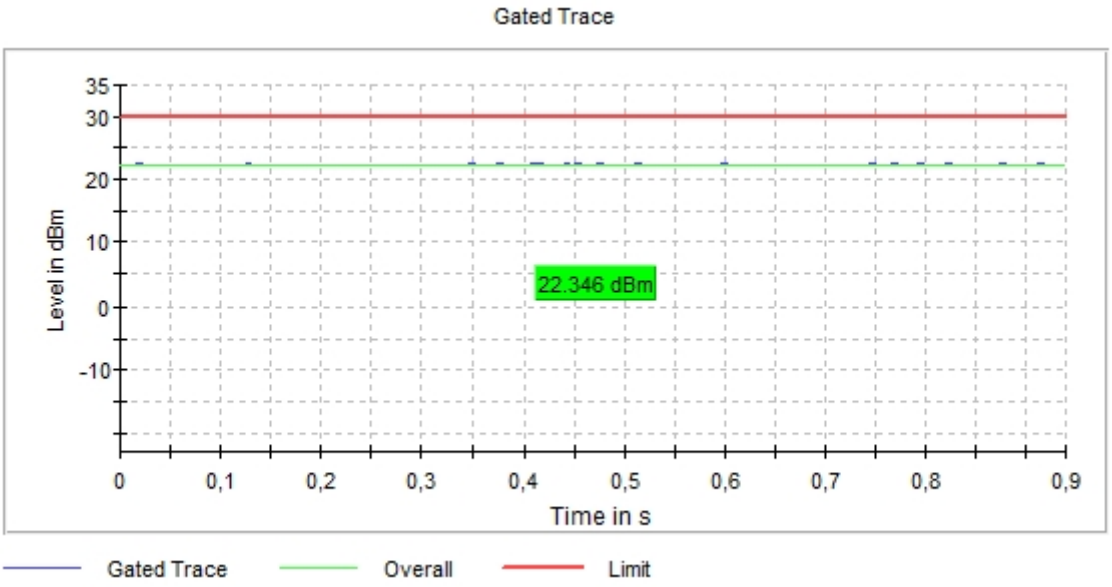
- Channel 153 (5765 MHz):



- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):

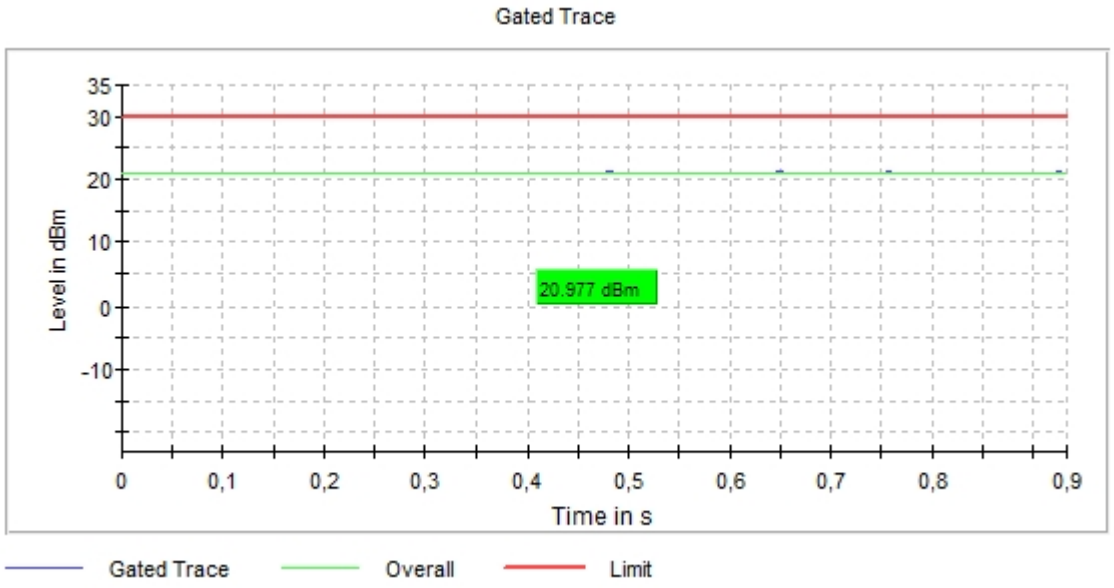


- High Channel 165 (5825 MHz):

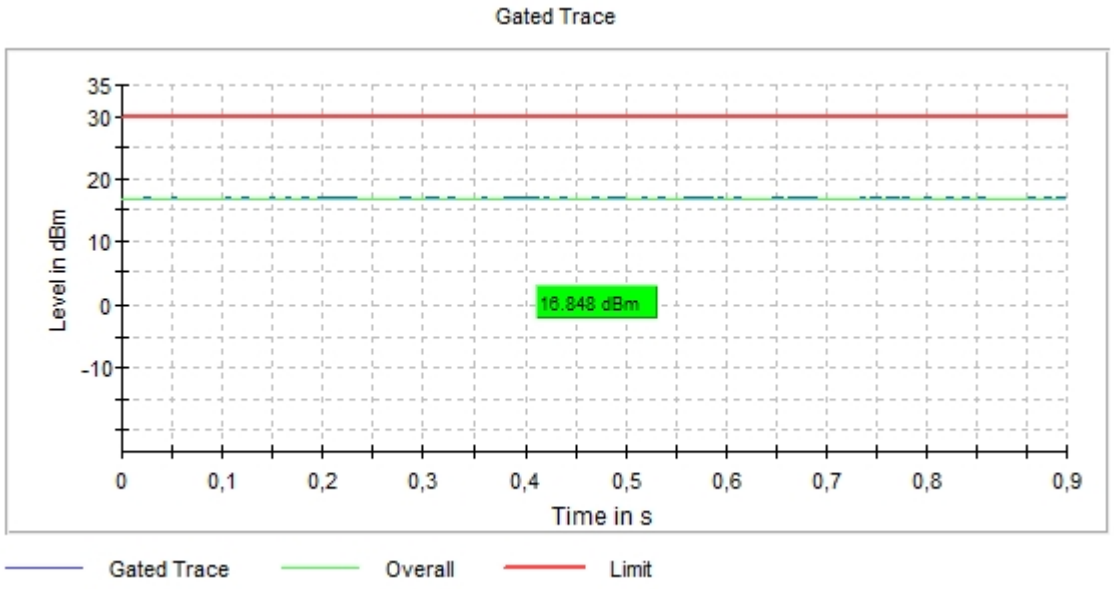
SISO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz)

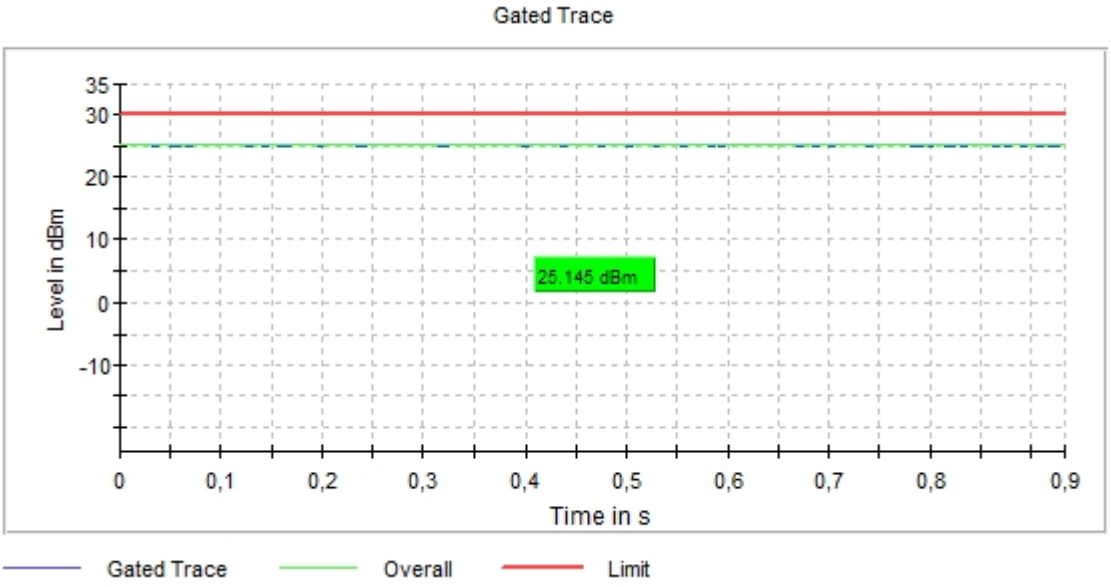
- Low Channel 149 (5745 MHz):



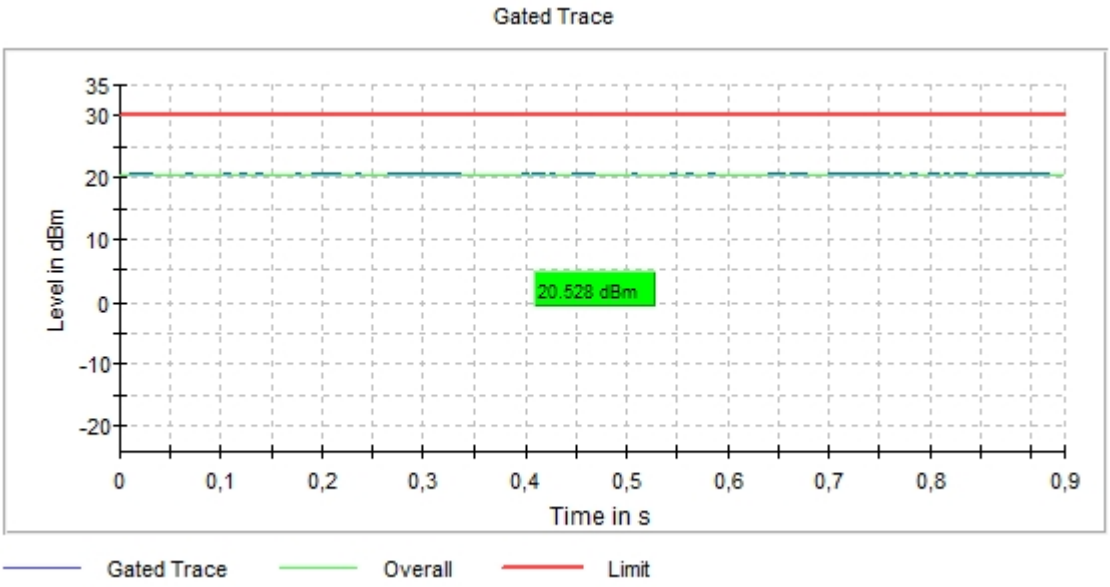
- Channel 153 (5765 MHz):



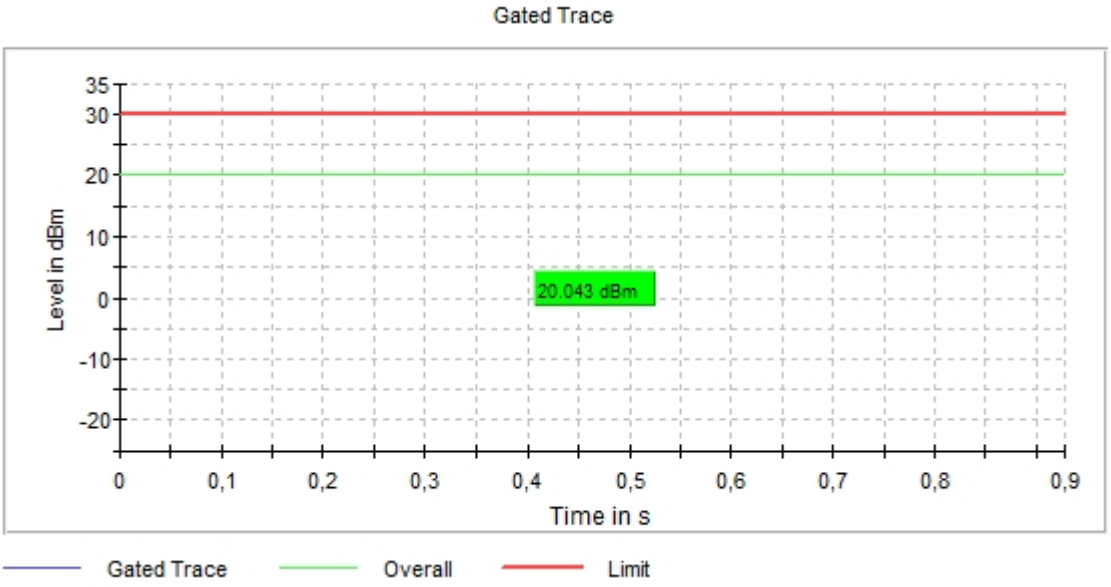
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



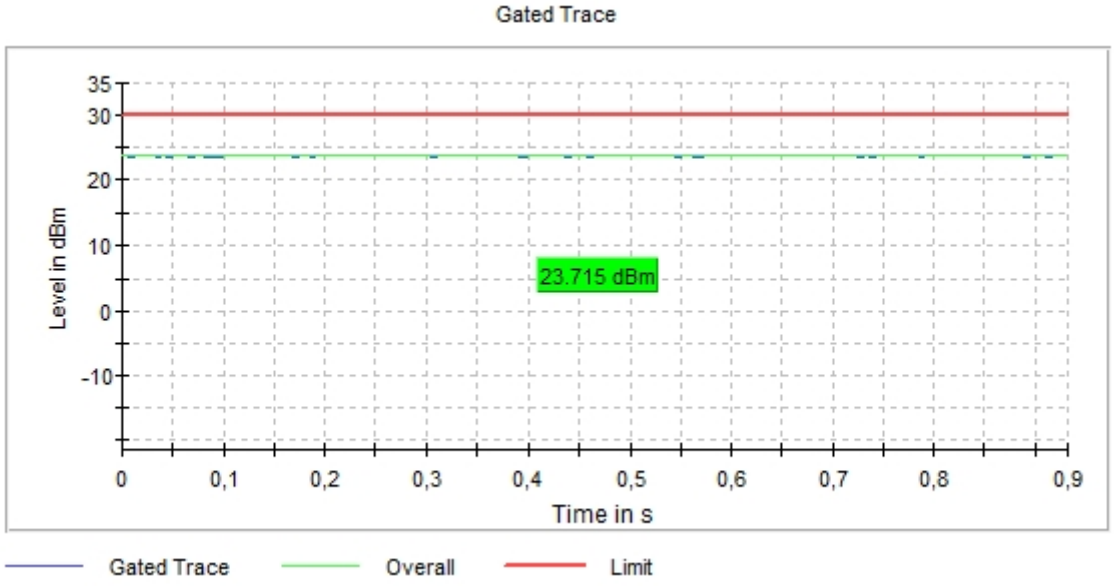
- High Channel 165 (5825 MHz):



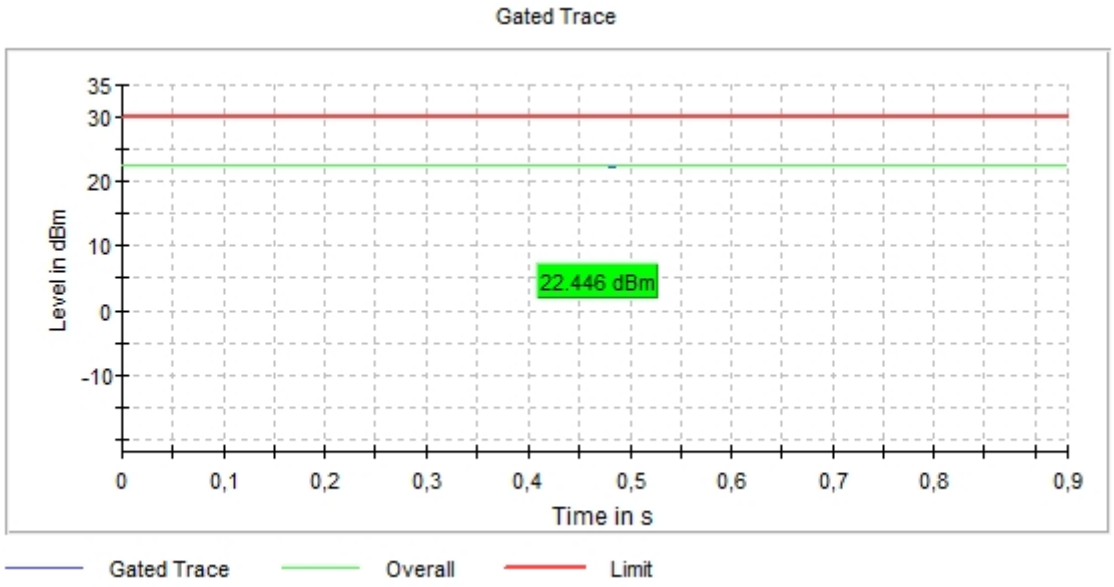
SISO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz)

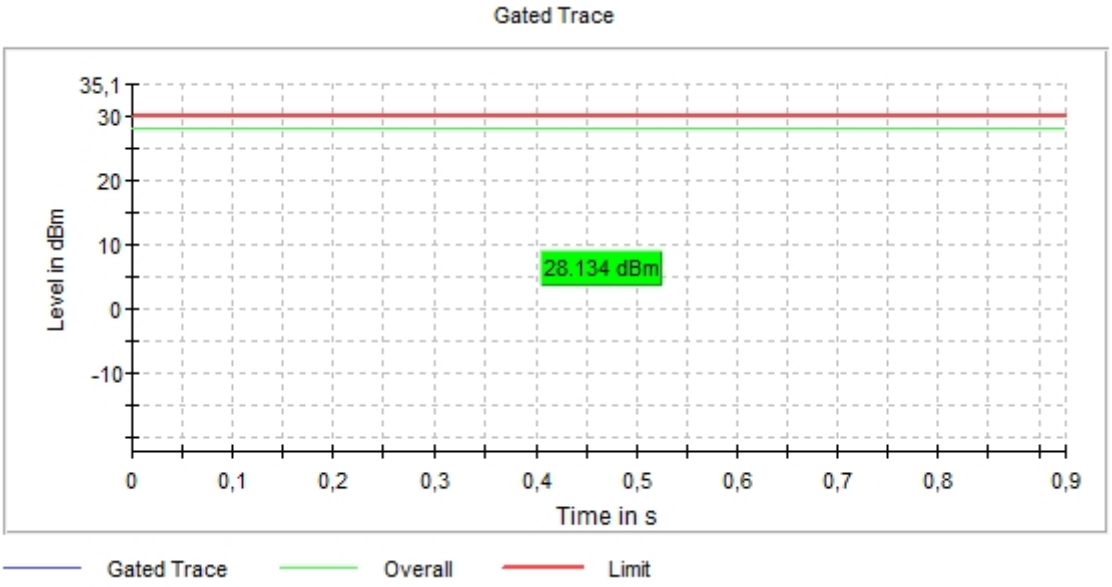
- Low Channel 149 (5745 MHz):



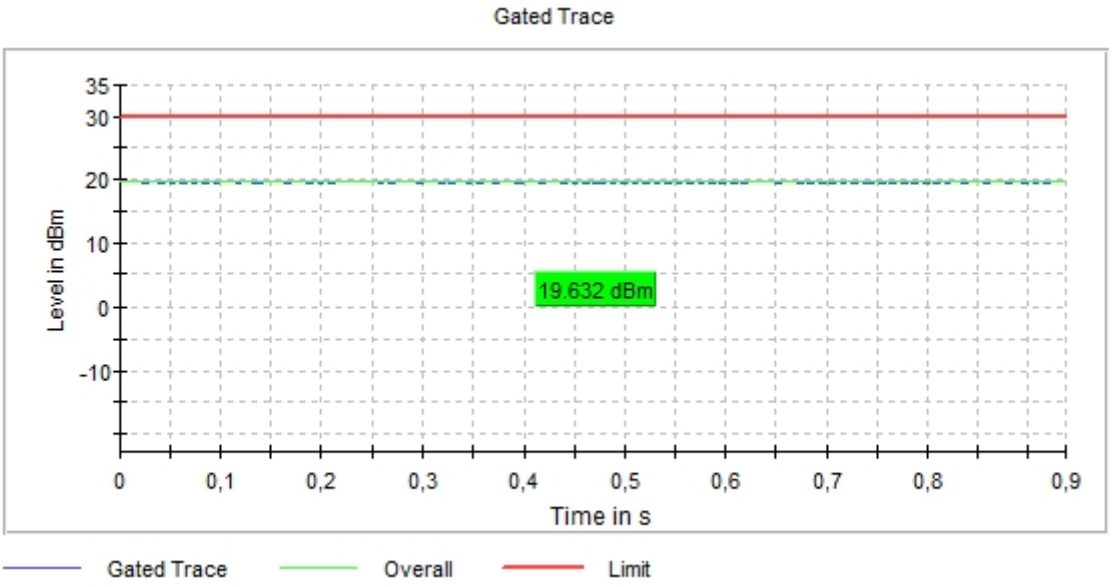
- Channel 153 (5765 MHz):



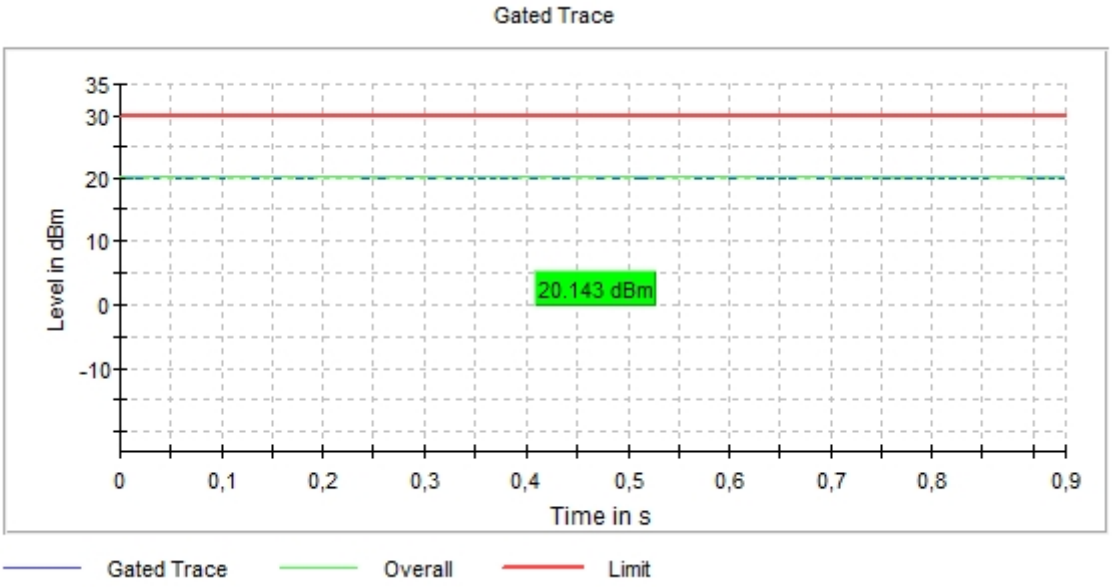
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



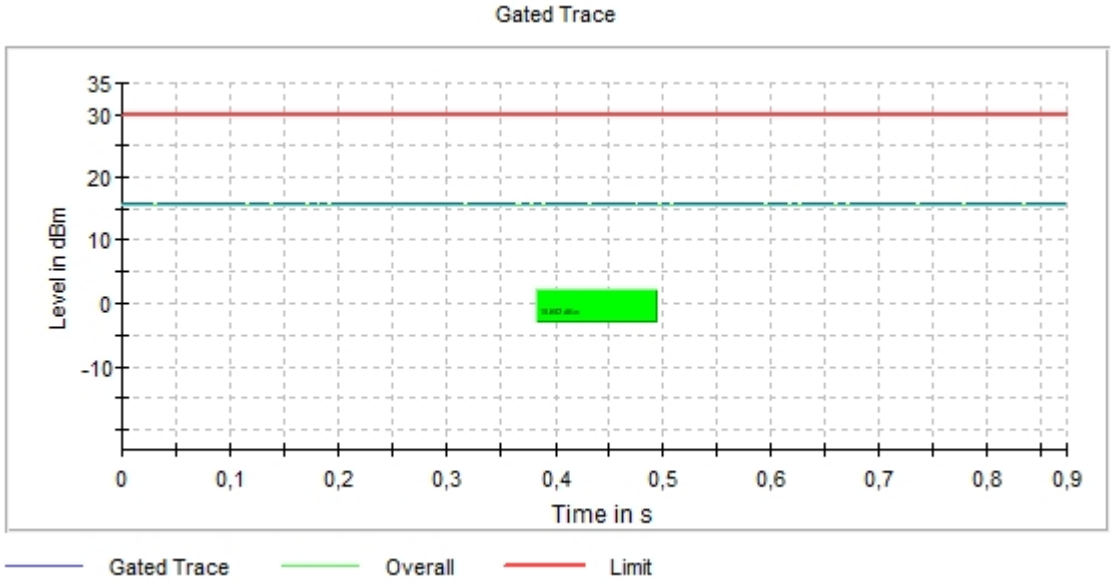
- High Channel 165 (5825 MHz):



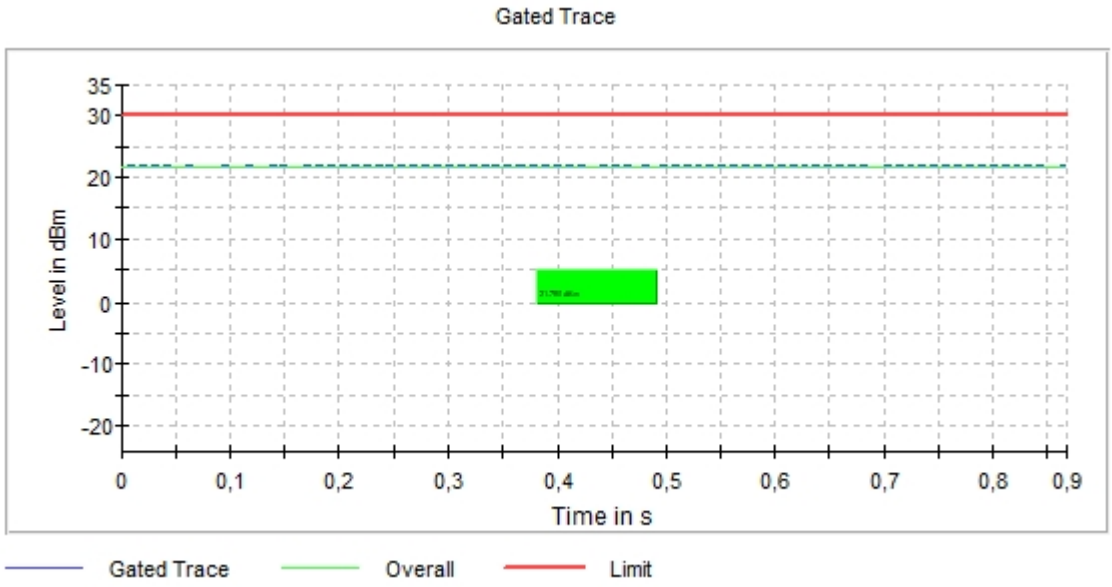
SISO 802.11 n40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



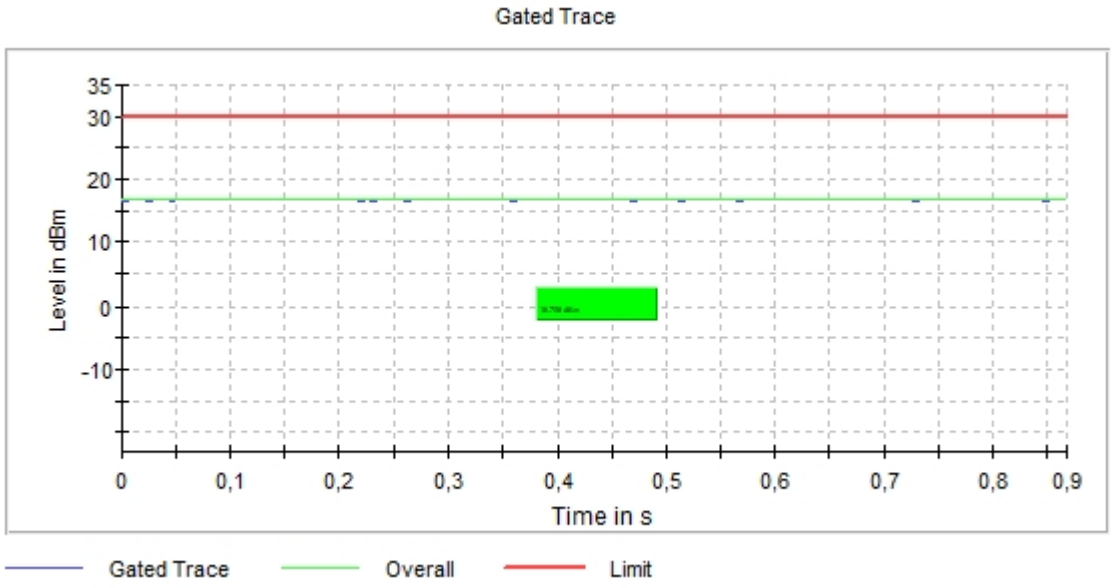
- High Channel 159 (5795 MHz):



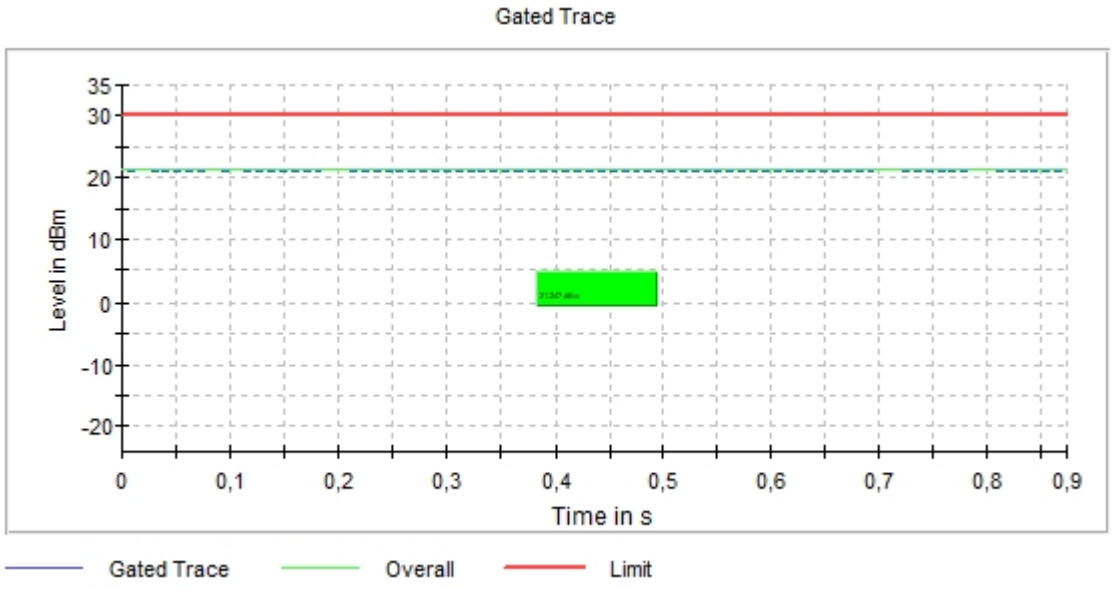
SISO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



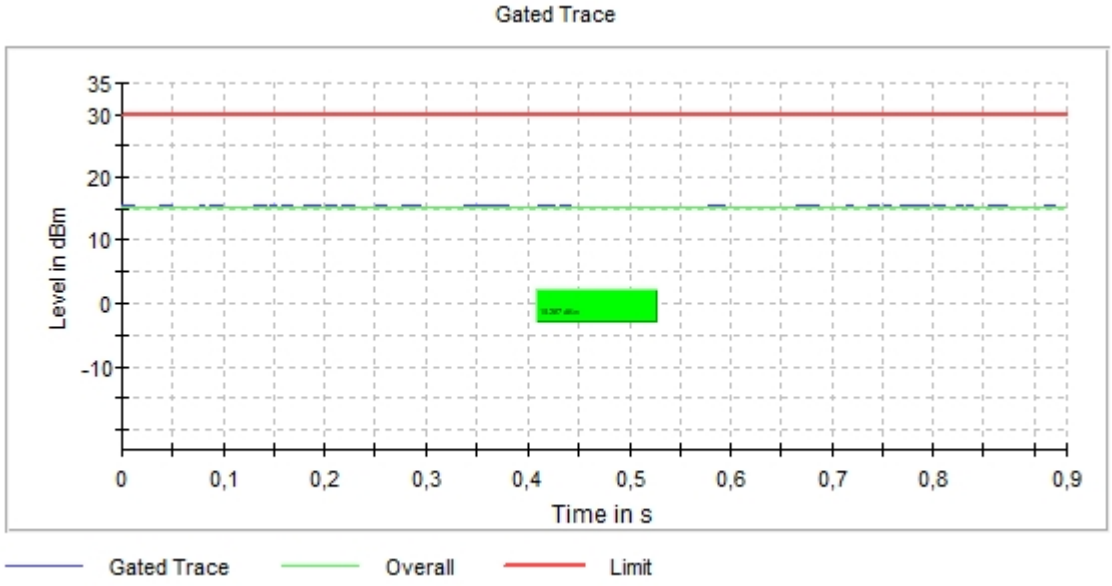
- High Channel 159 (5795 MHz):



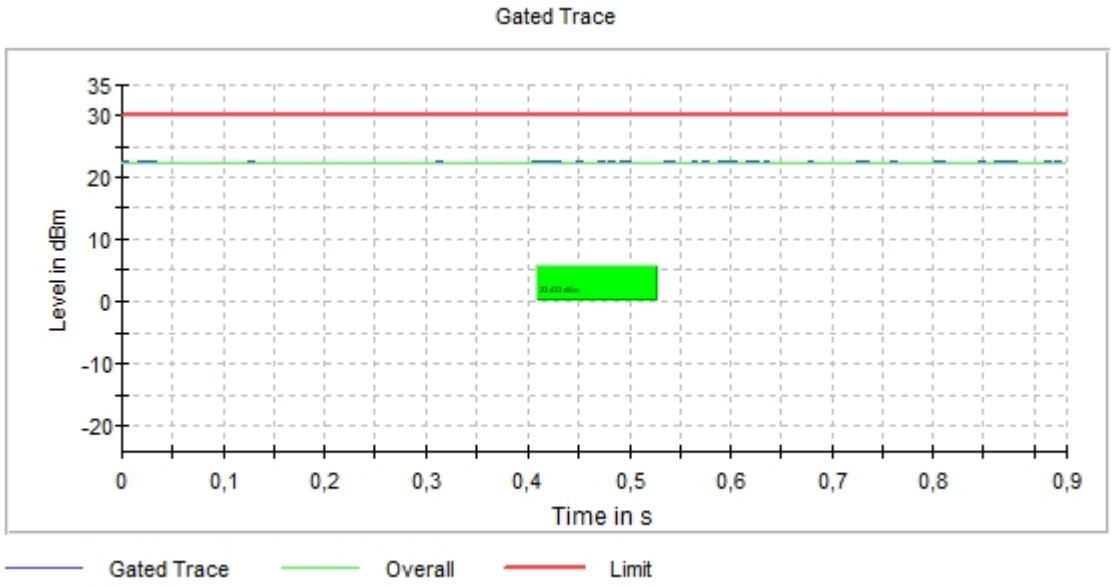
SISO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



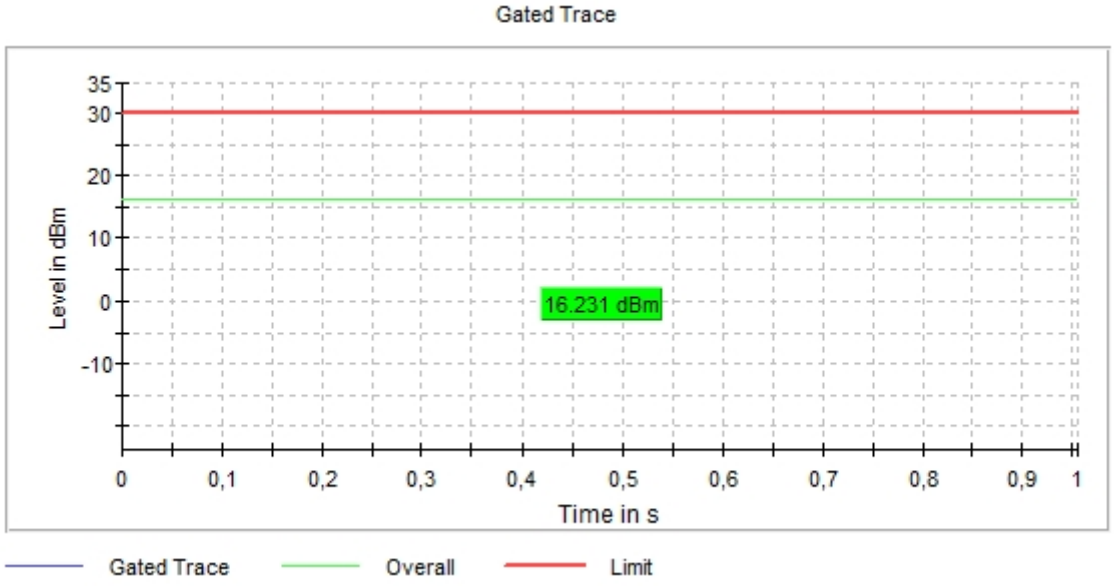
- High Channel 159 (5795 MHz):



SISO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz)

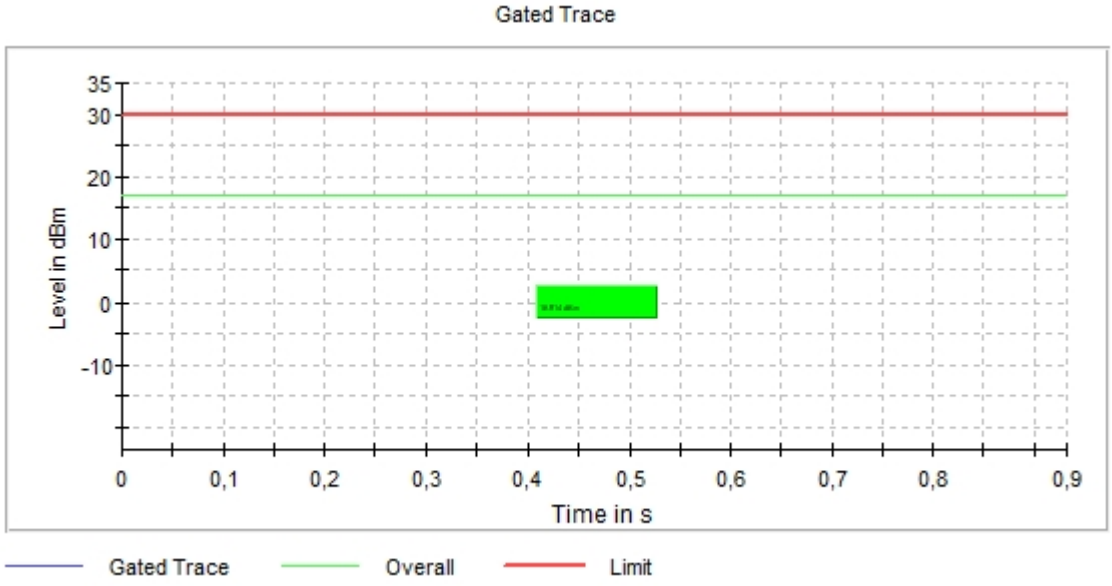
- Single Channel 155 (5775 MHz):



SISO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz)

- Single Channel 155 (5775 MHz):



MIMO worst-case:

MIMO 802.11 a20:

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	26.8	27.6	27.7	27.7	27.3
Maximum EIRP Corrected Conducted Power (dBm)	34.86	35.66	35.76	35.76	35.36
Measurement uncertainty (dB)	<±1				

MIMO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	27.8	26.3	26.7	22.9	27.8
Maximum EIRP Corrected Conducted Power (dBm)	35.86	34.36	34.76	30.96	35.86
Measurement uncertainty (dB)	<±1				

MIMO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	27.3	27.2	27.6	27.8	27.8
Maximum EIRP Corrected Conducted Power (dBm)	35.36	35.26	35.66	35.86	35.86
Measurement uncertainty (dB)	<±1				

MIMO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted Power (dBm)	27.6	26.1	27.8	21.3	22.8
Maximum EIRP Corrected Conducted Power (dBm)	35.66	34.16	35.86	29.36	30.86
Measurement uncertainty (dB)	<±1				

MIMO 802.11 n40 (HT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted Power (dBm)	16.1	21.4
Maximum EIRP Corrected Conducted Power (dBm)	24.16	29.46
Measurement uncertainty (dB)	<±1	

MIMO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted Power (dBm)	20.1	27.5
Maximum EIRP Corrected Conducted Power (dBm)	28.16	35.56
Measurement uncertainty (dB)	<±1	

MIMO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted Power (dBm)	16.6	27.2
Maximum EIRP Corrected Conducted Power (dBm)	24.66	35.26
Measurement uncertainty (dB)	<±1	

MIMO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
Maximum Corrected Conducted Power (dBm)	21.9
Maximum EIRP Corrected Conducted Power (dBm)	29.96
Measurement uncertainty (dB)	<±1

MIMO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
Maximum Corrected Conducted Power (dBm)	21.2
Maximum EIRP Corrected Conducted Power (dBm)	29.26
Measurement uncertainty (dB)	<±1

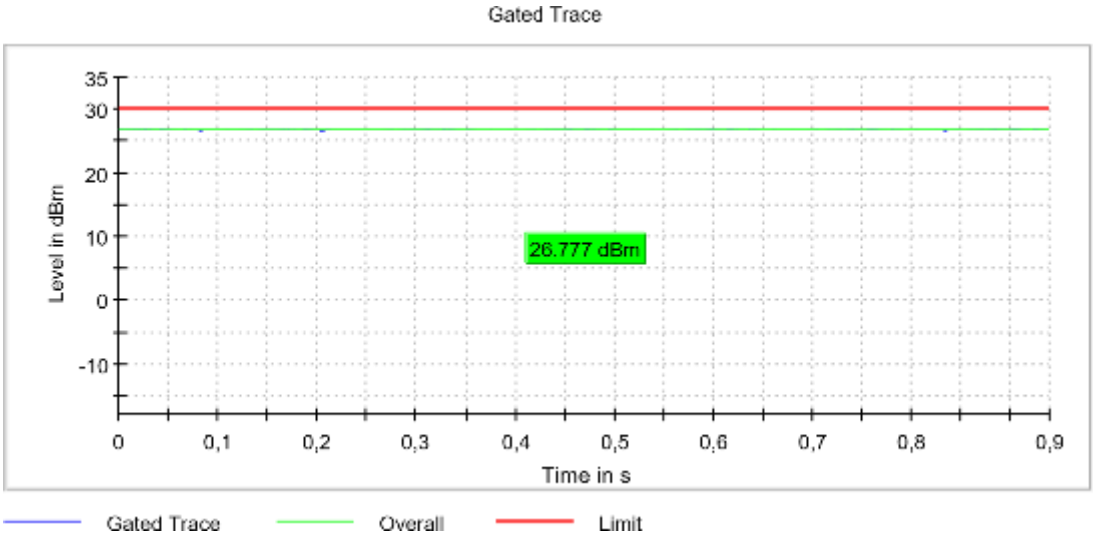
Verdict: PASS

MIMO worst-case:

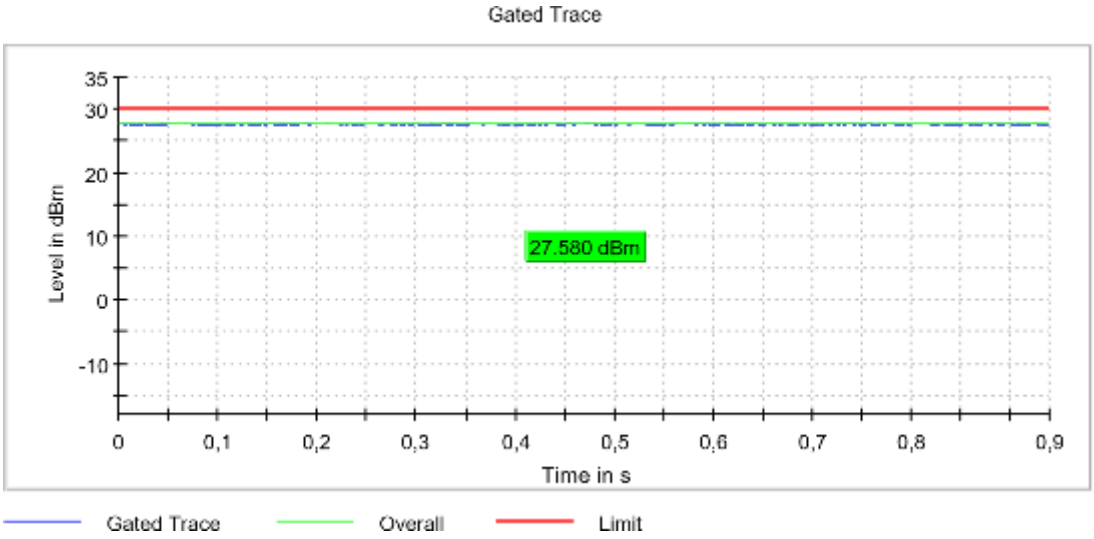
MIMO 802.11 a20:

U-NII-3 (5725-5850 MHz)

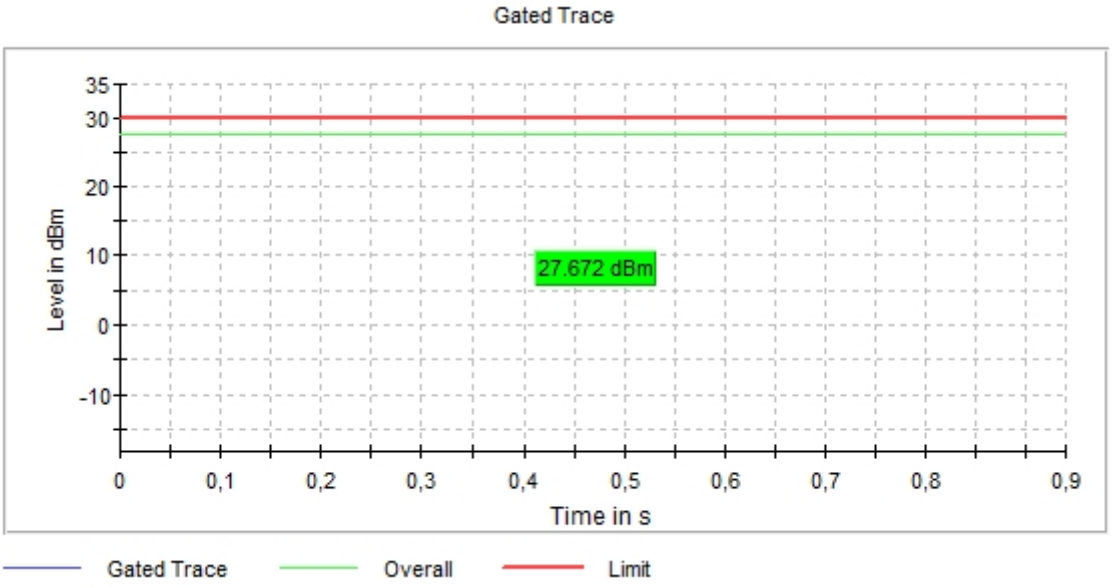
- Low Channel 149 (5745 MHz):



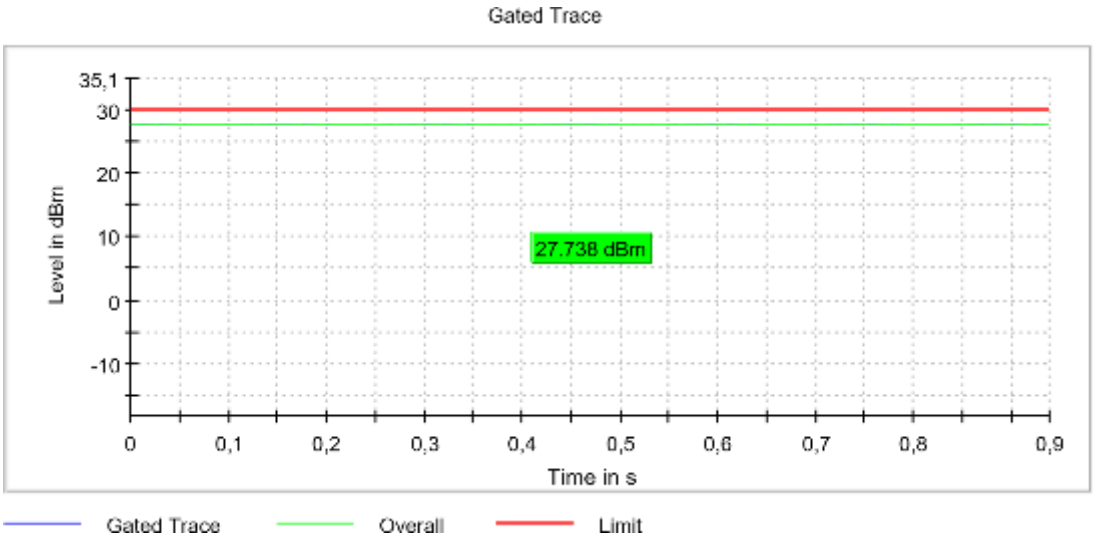
- Channel 153 (5765 MHz):



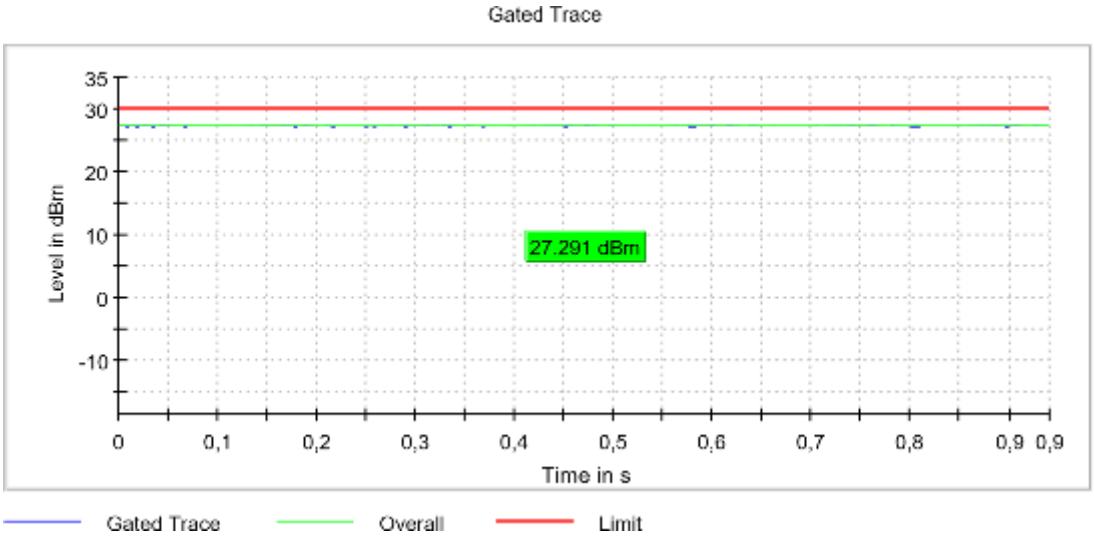
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



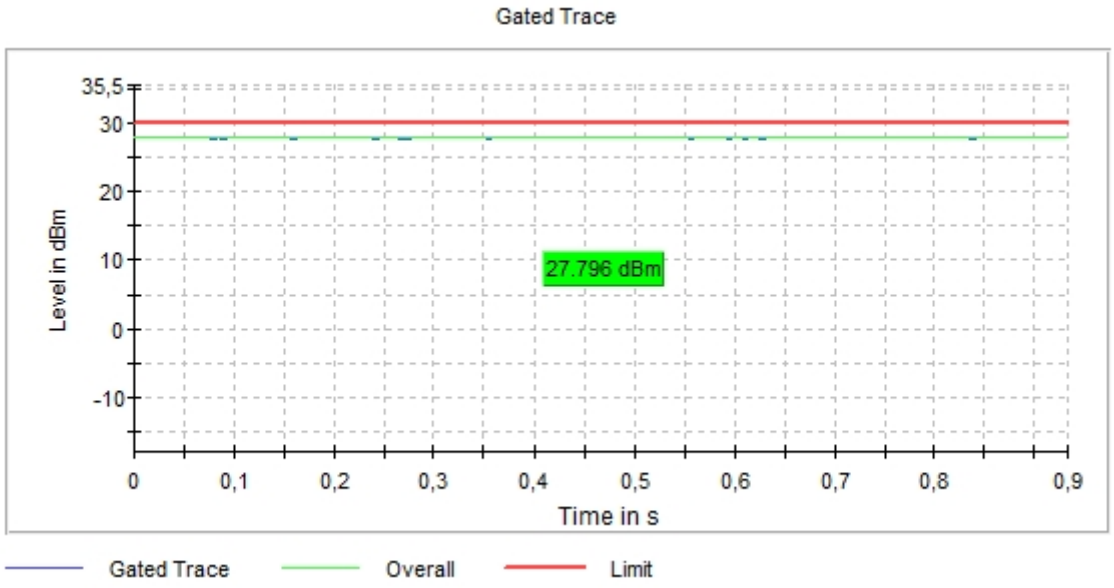
- High Channel 165 (5825 MHz):


Gated Trace
35
30
20
10
0
-10
Level in dBm
27.291 dBm
0
0,1
0,2
0,3
0,4
0,5
0,6
0,7
0,8
0,9
0,9
Time in s
Gated Trace
Overall
Limit

MIMO 802.11 n20 (HT20):

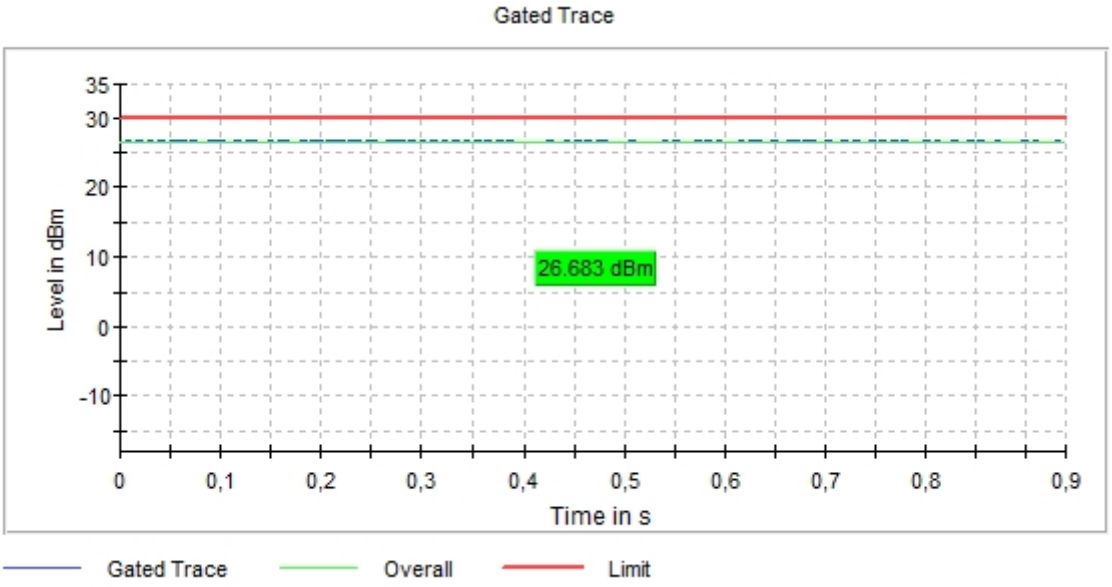
U-NII-3 (5725-5850 MHz)

- Low Channel 149 (5745 MHz):

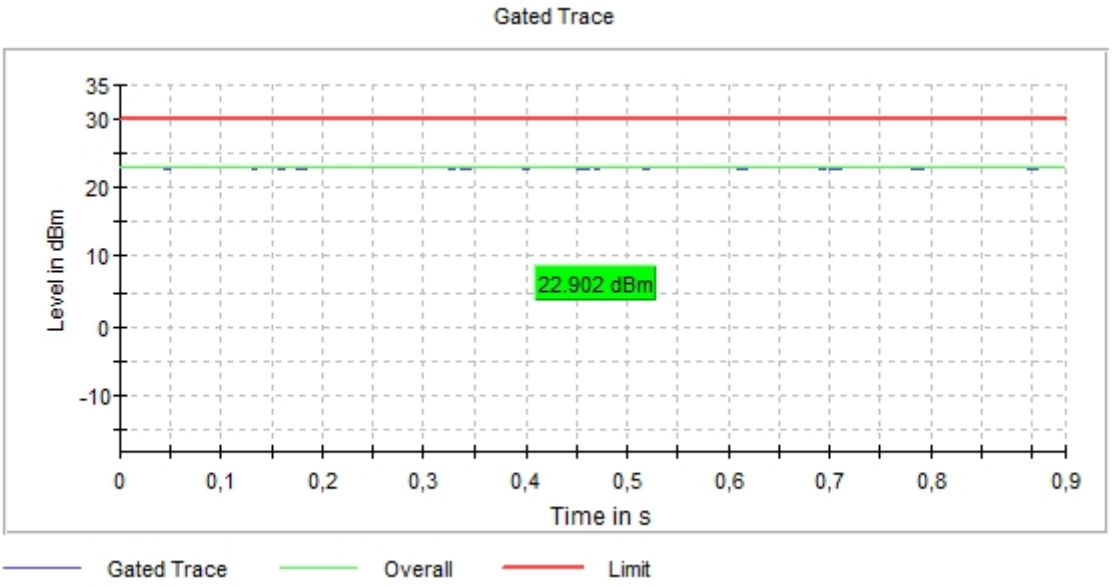


- Channel 153 (5765 MHz):

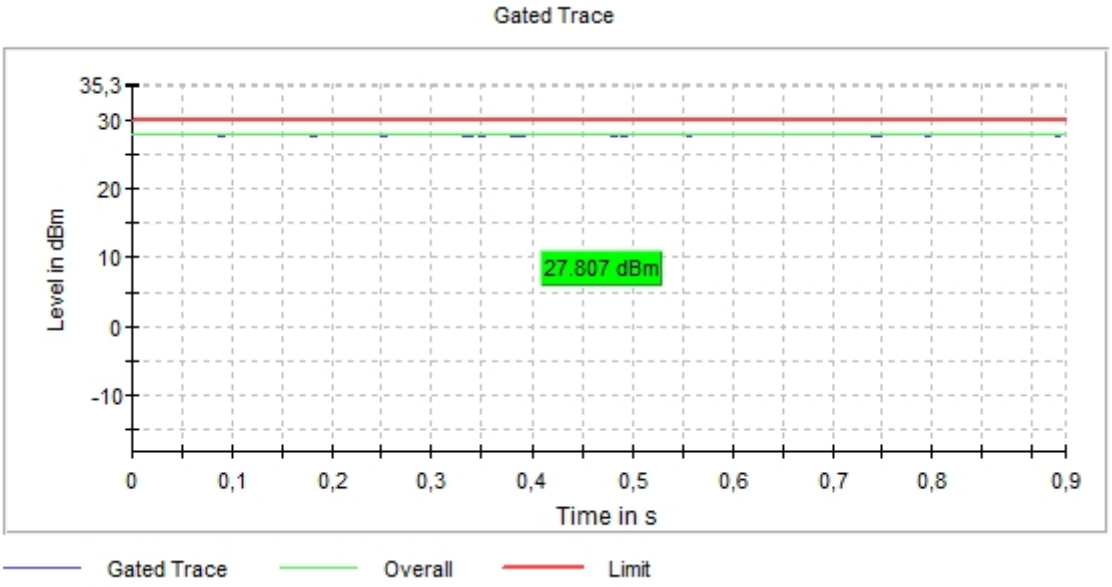
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



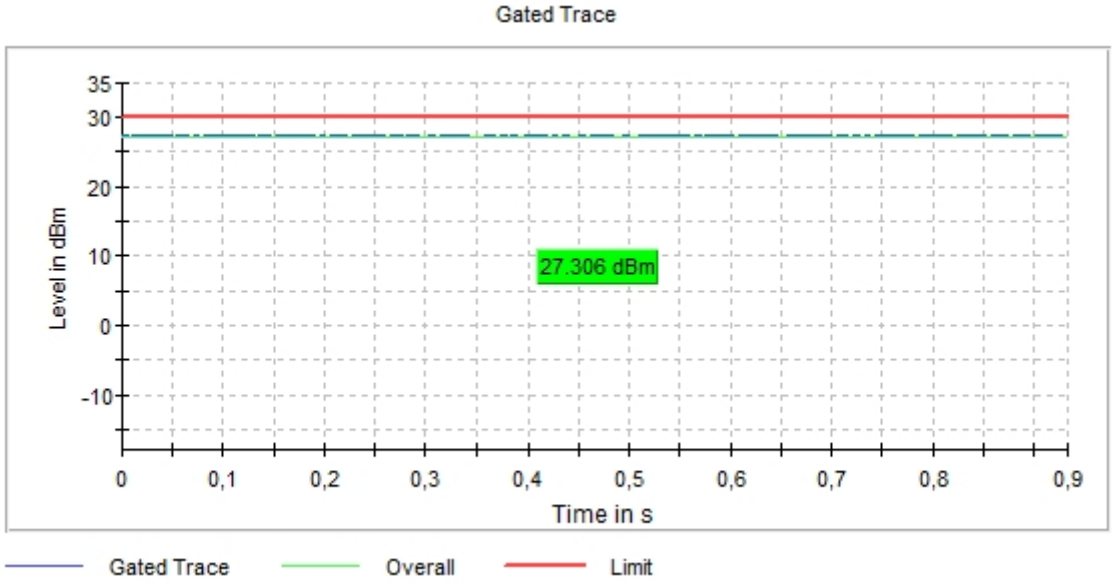
- High Channel 165 (5825 MHz):



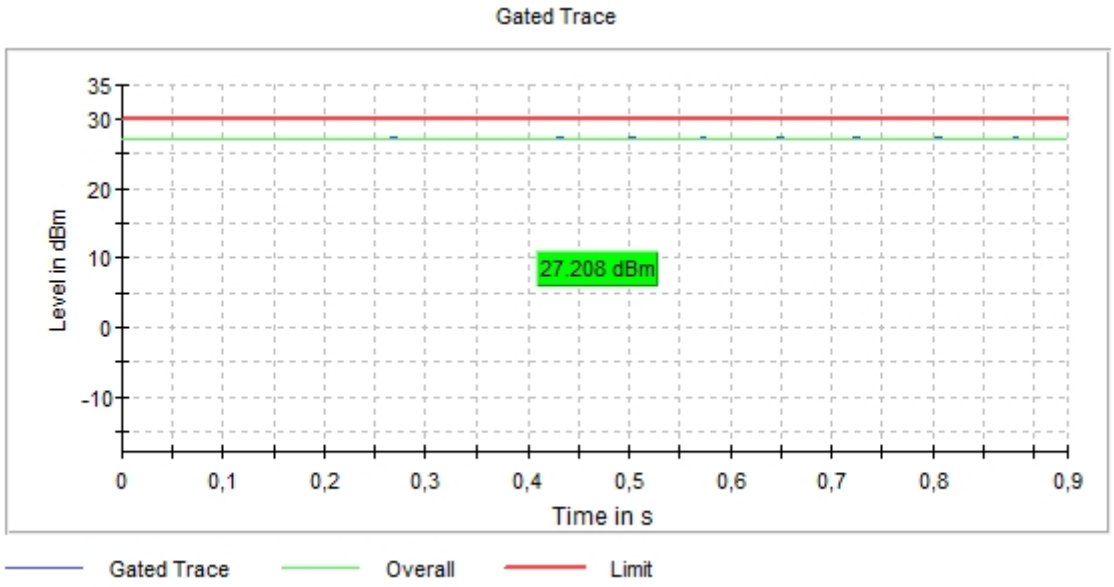
MIMO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz)

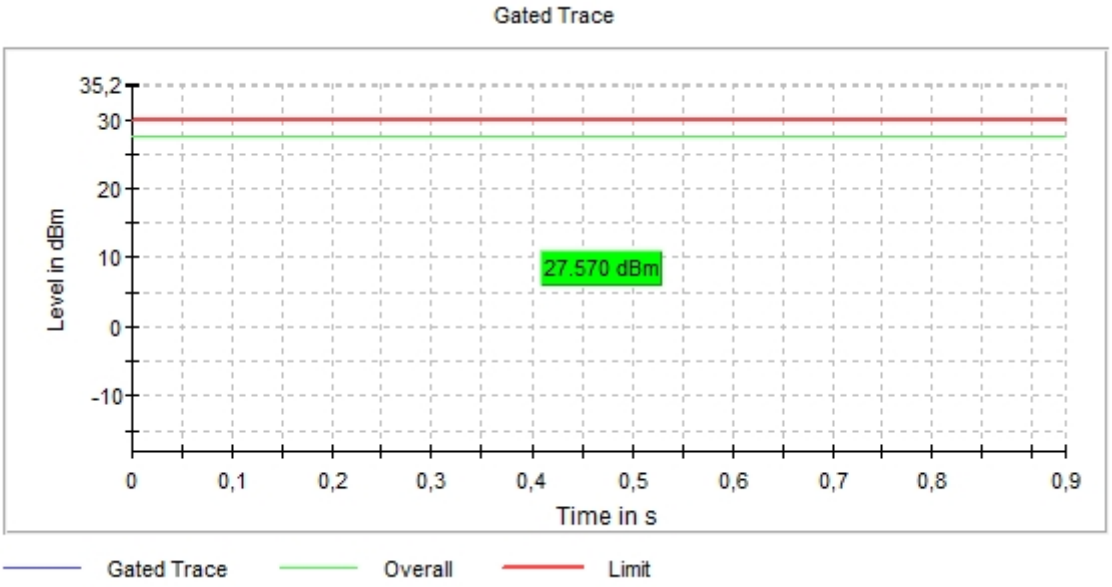
- Low Channel 149 (5745 MHz):



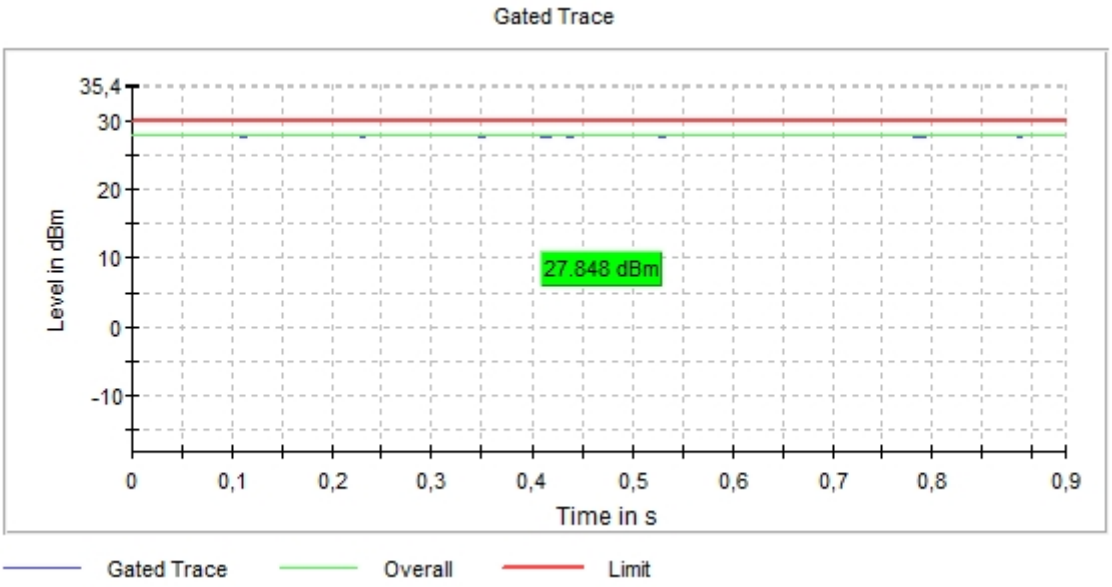
- Channel 153 (5765 MHz):



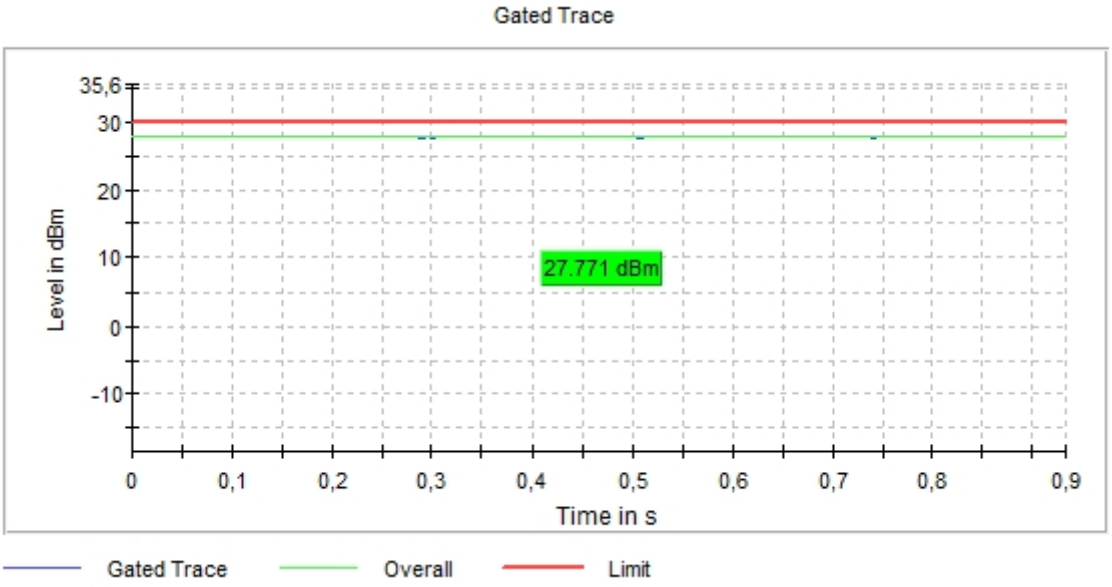
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



- High Channel 165 (5825 MHz):

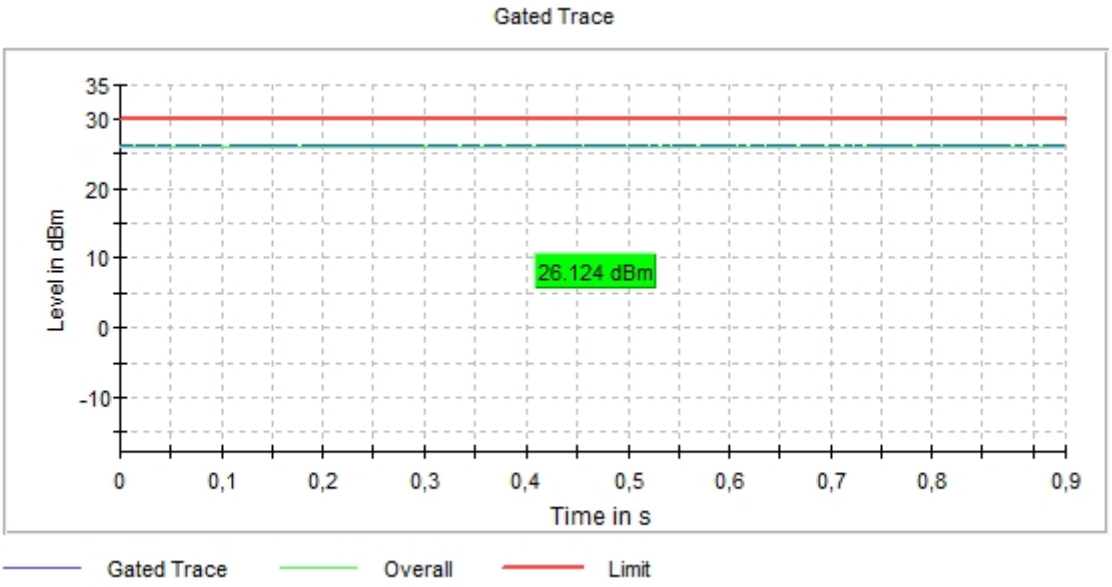


MIMO 802.11 ax20 (HE20):

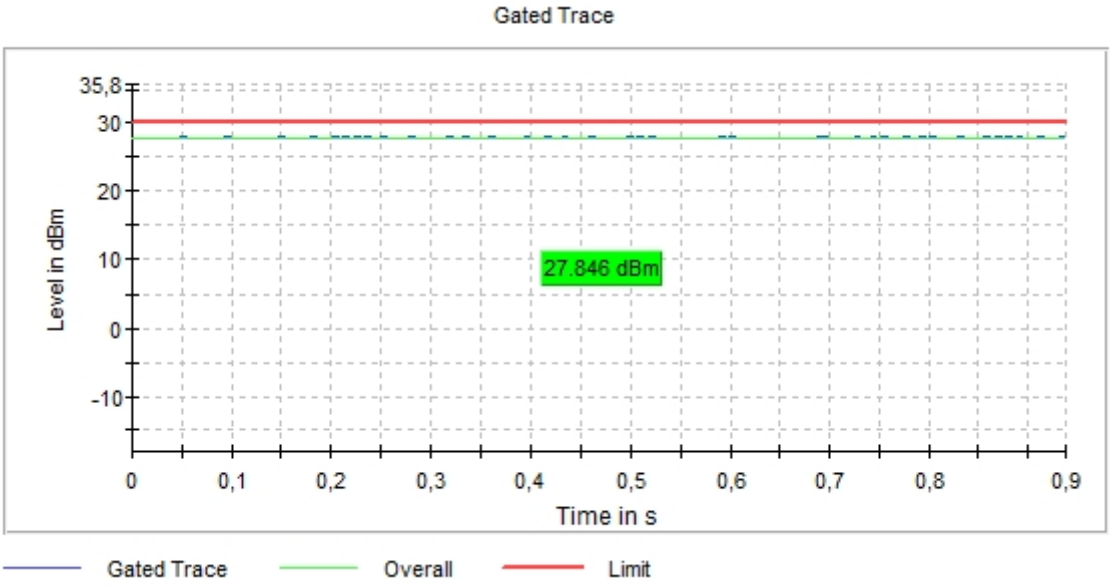
U-NII-3 (5725-5850 MHz)

- Low Channel 149 (5745 MHz):

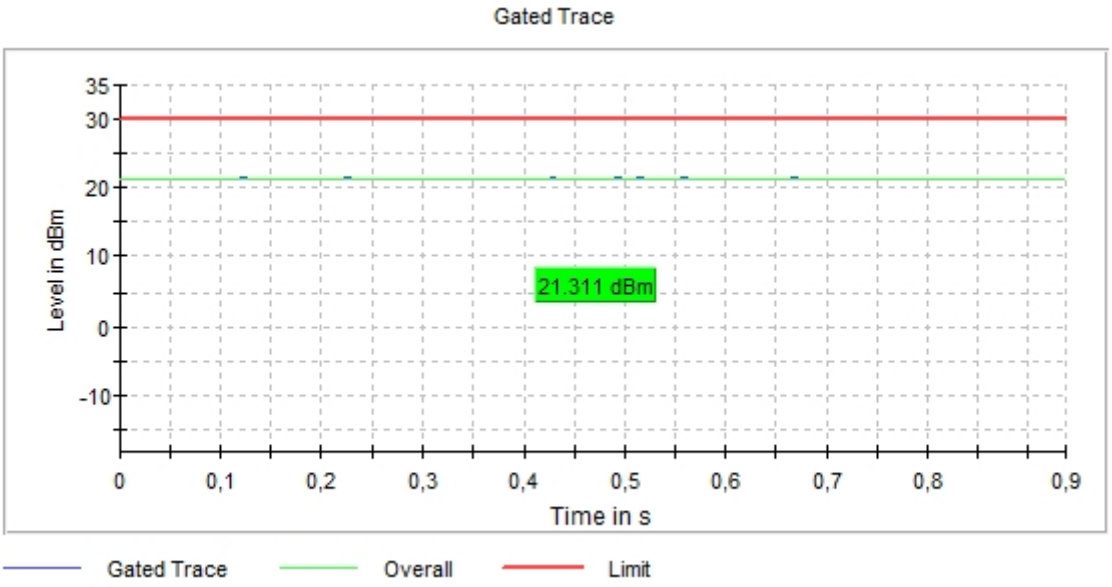
- Channel 153 (5765 MHz):



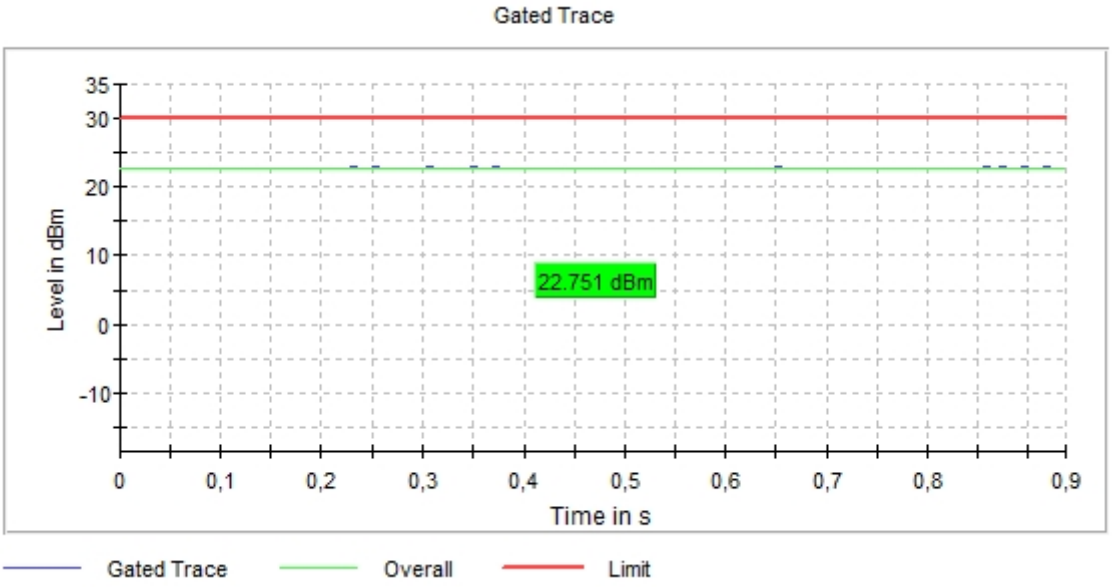
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



- High Channel 165 (5825 MHz):

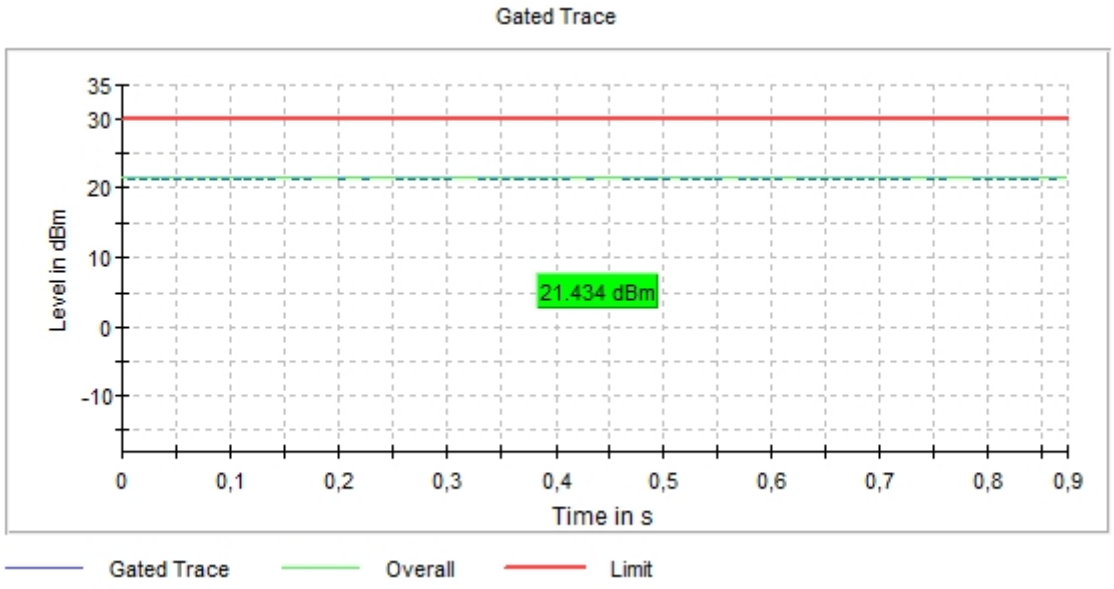


MIMO 802.11 n40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):

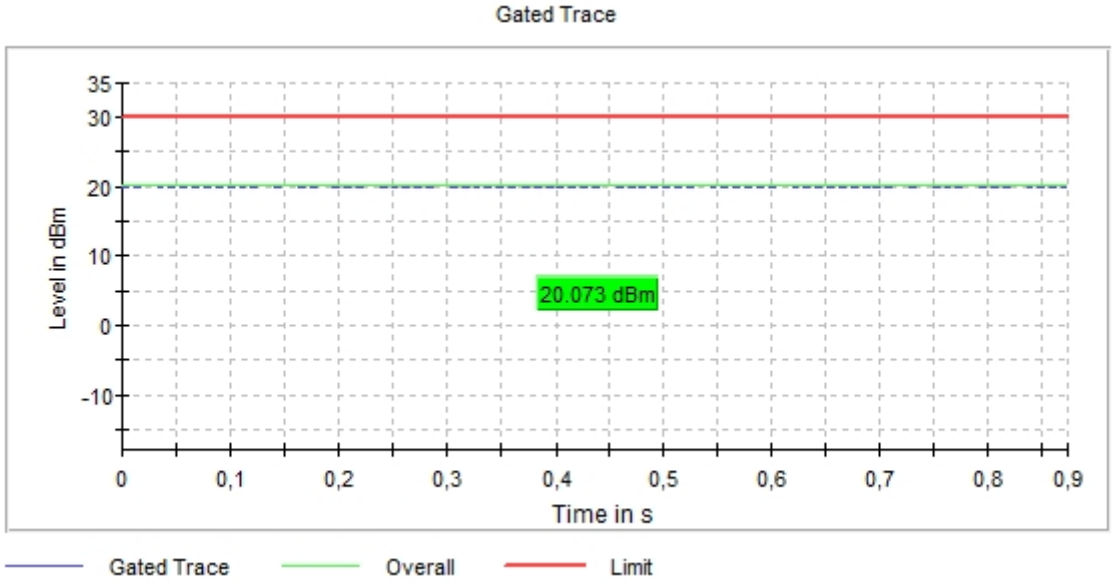
- High Channel 159 (5795 MHz):



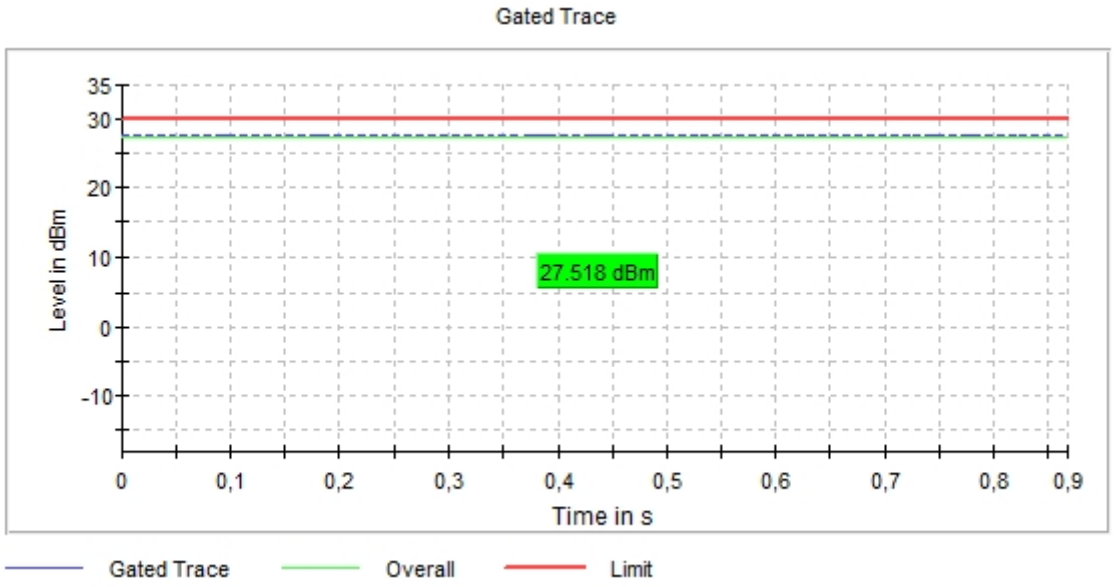
MIMO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



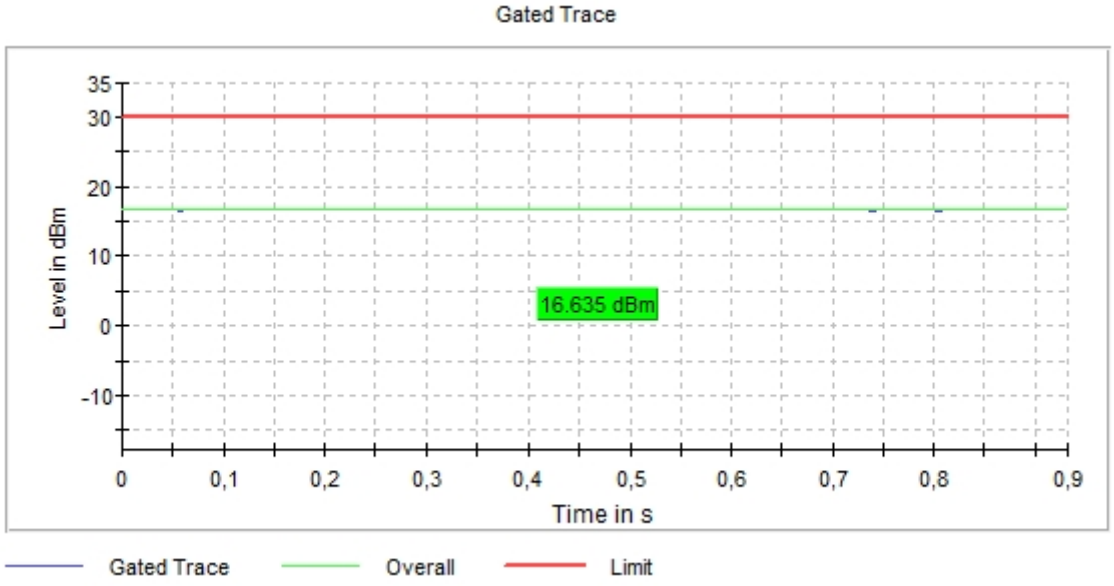
- High Channel 159 (5795 MHz):



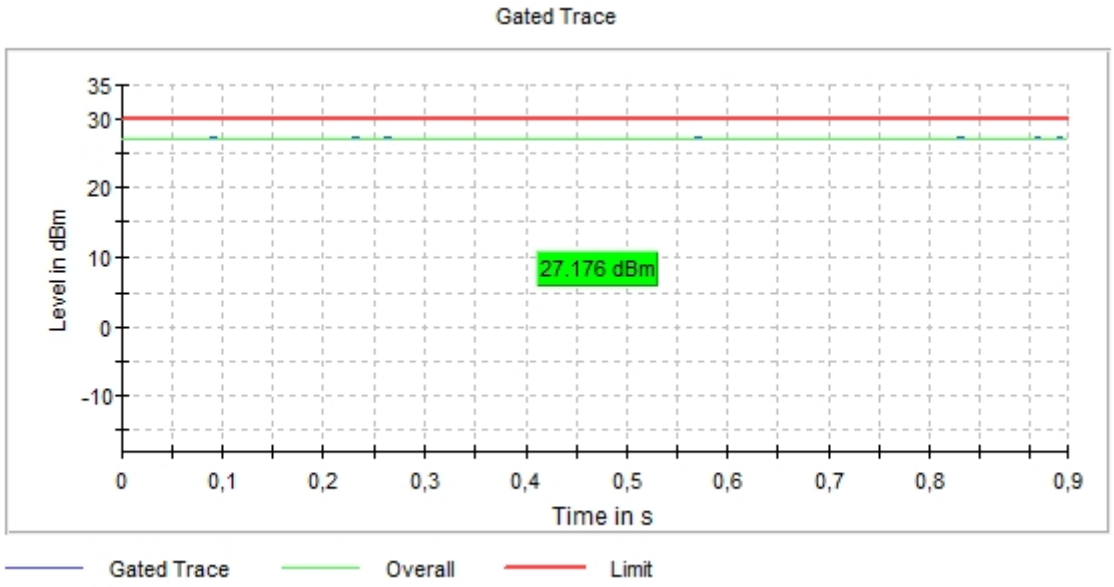
MIMO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



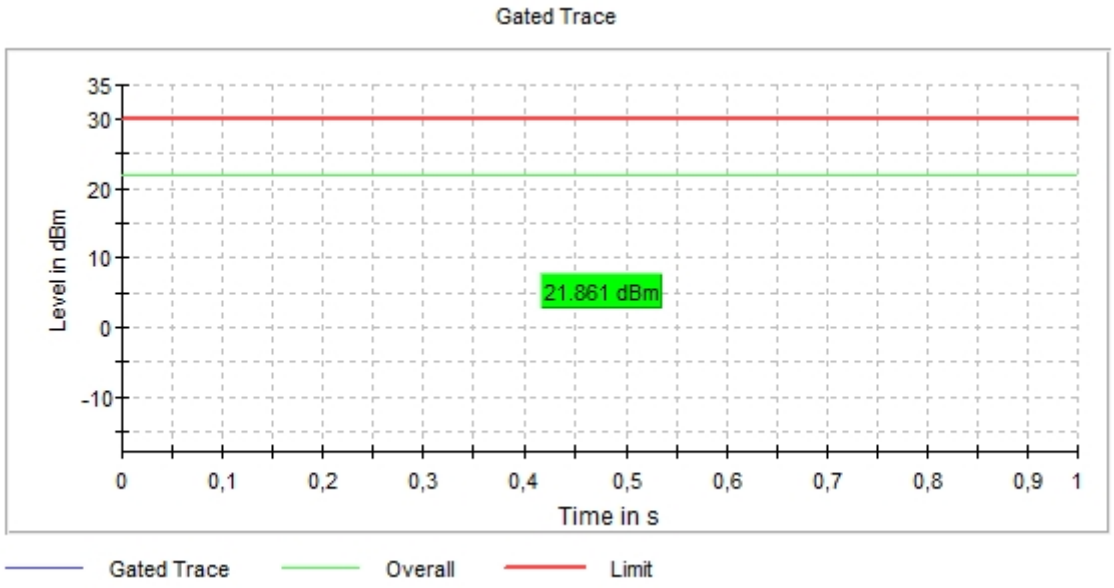
- High Channel 159 (5795 MHz):



MIMO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz)

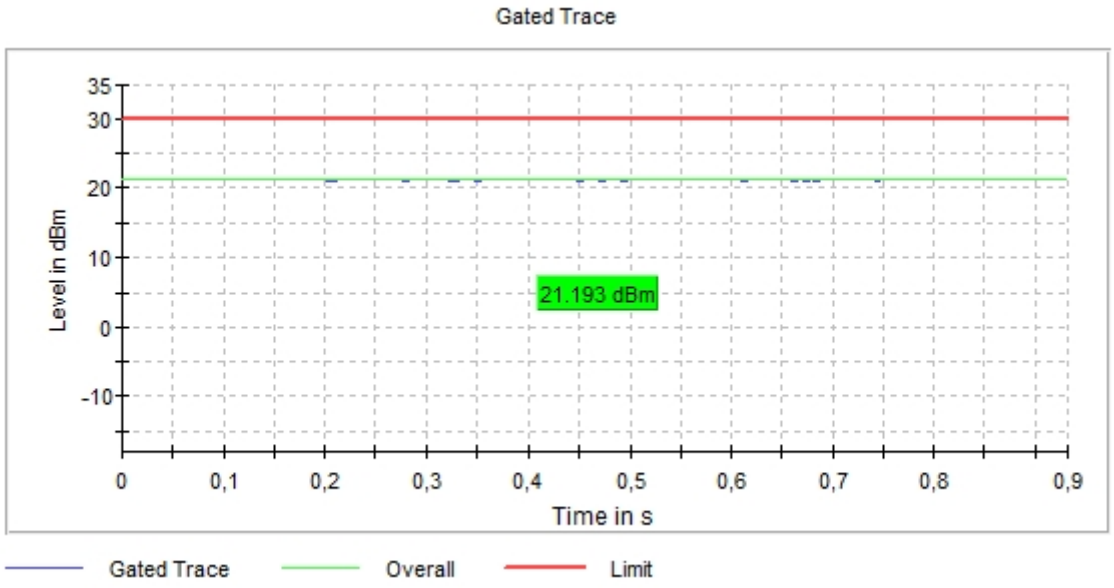
- Single Channel 155 (5775 MHz):



MIMO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz)

- Single Channel 155 (5775 MHz):



FCC 15.407 (a)(3)(i) Transmitter Maximum Power Spectral Density / RSS-247 6.2.4.1. Transmitter EIRP Spectral Density

SPECIFICATION:

* FCC 15.407: For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

* RSS-247: The maximum conducted output power shall not exceed 1 W. The output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipointFootnote3 systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

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 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: +5.2 dBi
- MIMO Antennas – WLAN1 & WLAN2:
  - WLAN1: +5.2 dBi
  - WLAN2: +4.9 dBi
  - WLAN12: +8.06 dBi

SISO worst-case:

SISO 802.11 a20:

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted PSD (dBm)	8.294	8.086	9.965	4.533	4.186
Maximum EIRP Corrected Conducted PSD (dBm)	13.494	13.286	15.165	9.733	9.386
Measurement uncertainty (dB)	<±1.3				

SISO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted PSD (dBm)	7.953	5.288	6.495	5.751	6.939
Maximum EIRP Corrected Conducted PSD (dBm)	13.153	10.488	11.695	10.951	12.139
Measurement uncertainty (dB)	<±1.3				

SISO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted PSD (dBm)	4.246	0.606	8.369	4.376	3.999
Maximum EIRP Corrected Conducted PSD (dBm)	9.446	5.806	13.569	9.576	9.199
Measurement uncertainty (dB)	<±1.3				

SISO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 149 (5745 MHz)	Channel 153 (5765 MHz)	Middle Channel 157 (5785 MHz)	Channel 161 (5805 MHz)	High Channel 165 (5825 MHz)
Maximum Corrected Conducted PSD (dBm)	7.214	5.851	11.527	3.084	3.192
Maximum EIRP Corrected Conducted PSD (dBm)	12.414	11.051	16.727	8.284	8.392
Measurement uncertainty (dB)	<±1.3				

SISO 802.11 n40 (HT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted PSD (dBm)	-3.876	1.996
Maximum EIRP Corrected Conducted PSD (dBm)	1.324	7.196
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted PSD (dBm)	-3.313	4.017
Maximum EIRP Corrected Conducted PSD (dBm)	1.887	9.217
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ax40 (HE40):

U-NII-3 (5725-5850 MHz):

Channels	Low Channel 151 (5755 MHz)	High Channel 159 (5795 MHz)
Maximum Corrected Conducted PSD (dBm)	-2.679	2.716
Maximum EIRP Corrected Conducted PSD (dBm)	2.521	7.916
Measurement uncertainty (dB)	<±1.3	

SISO 802.11 ac80 (VHT80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
Maximum Corrected Conducted PSD (dBm)	-5.533
Maximum EIRP Corrected Conducted PSD (dBm)	-0.333
Measurement uncertainty (dB)	<±1.3

SISO 802.11 ax80 (HE80):

U-NII-3 (5725-5850 MHz):

Channel	Single Channel 155 (5775 MHz)
Maximum Corrected Conducted PSD (dBm)	-5.232
Maximum EIRP Corrected Conducted PSD (dBm)	-0.032
Measurement uncertainty (dB)	<±1.3

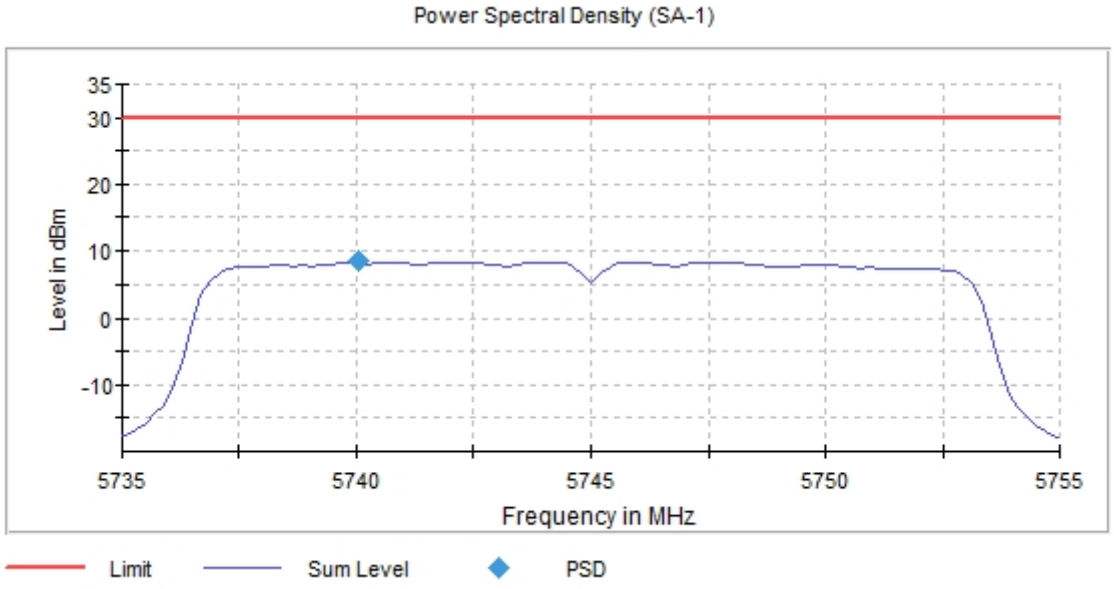
Verdict: PASS

SISO worst-case:

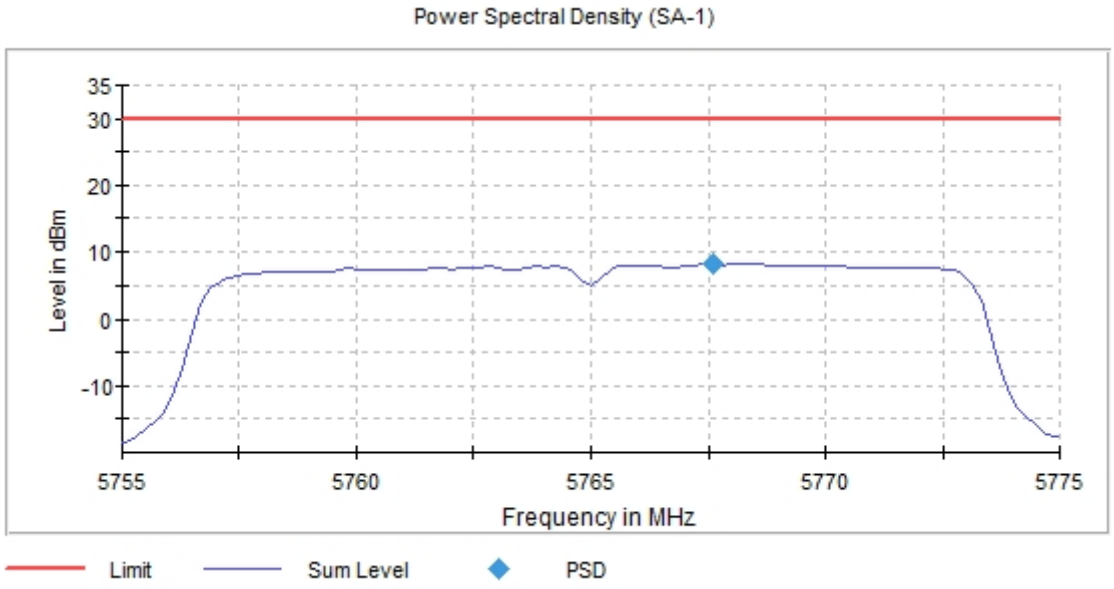
SISO 802.11 a20:

U-NII-3 (5725-5850 MHz)

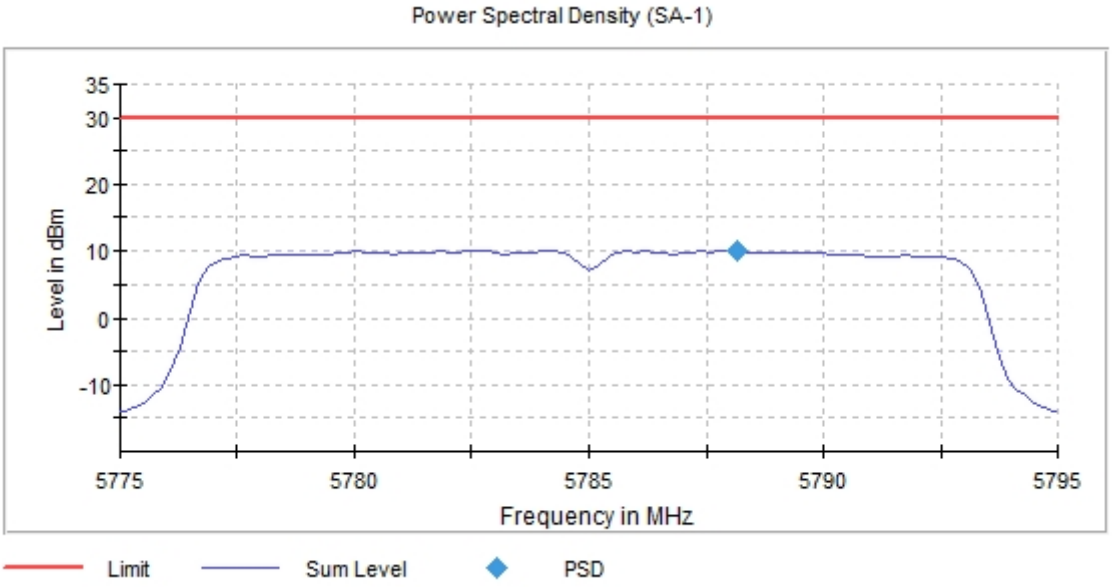
- Low Channel 149 (5745 MHz):



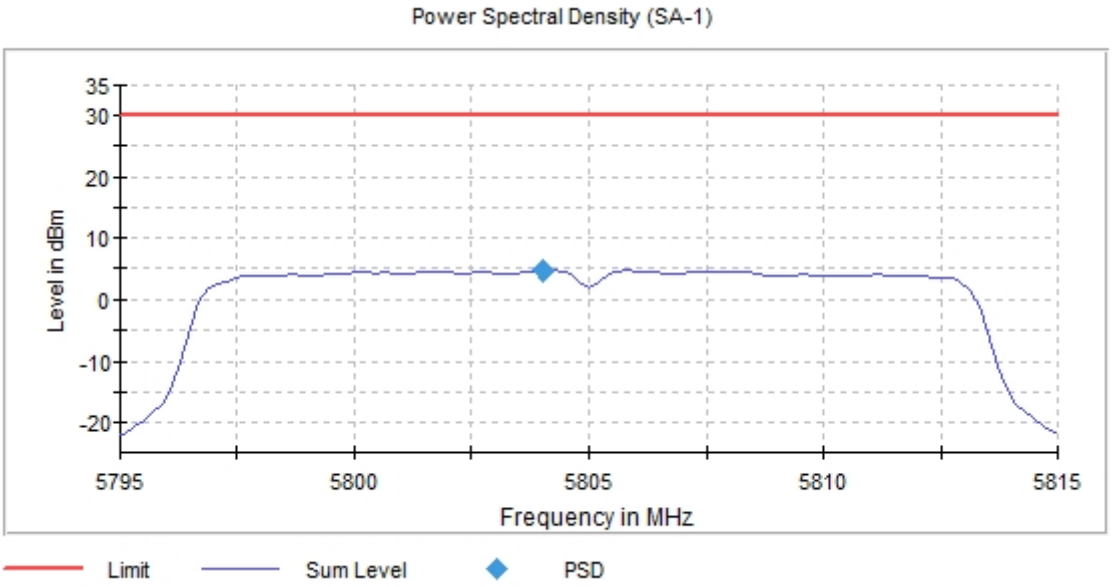
- Channel 153 (5765 MHz):



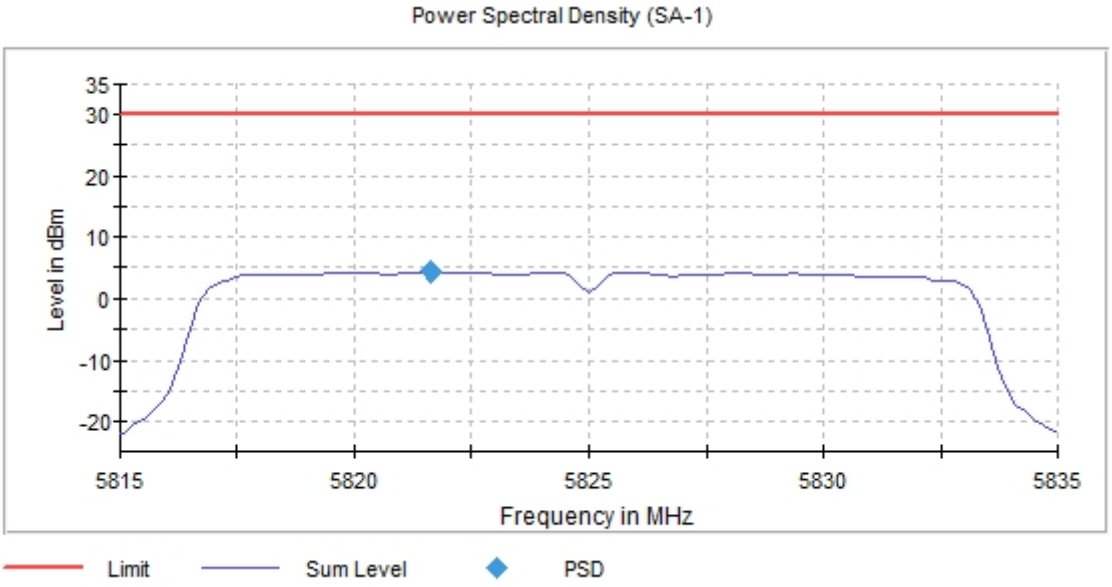
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



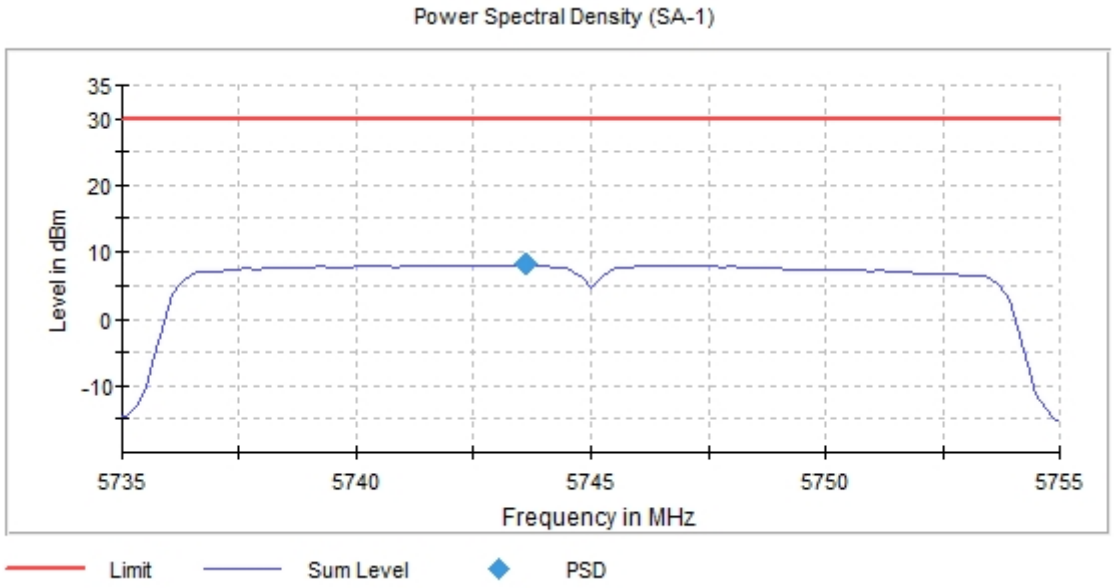
- High Channel 165 (5825 MHz):



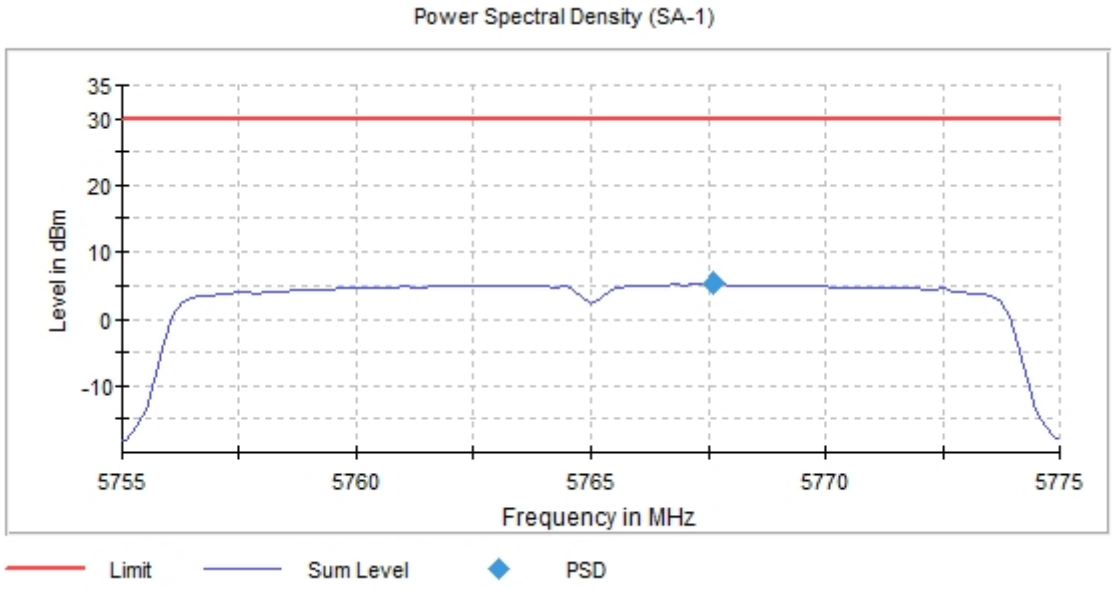
SISO 802.11 n20 (HT20):

U-NII-3 (5725-5850 MHz)

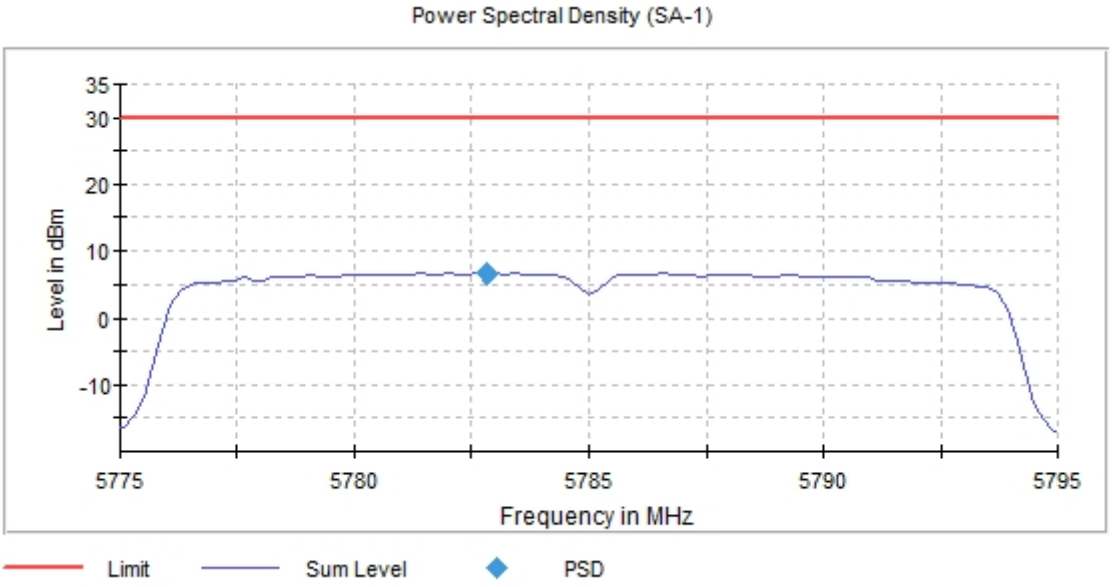
- Low Channel 149 (5745 MHz):



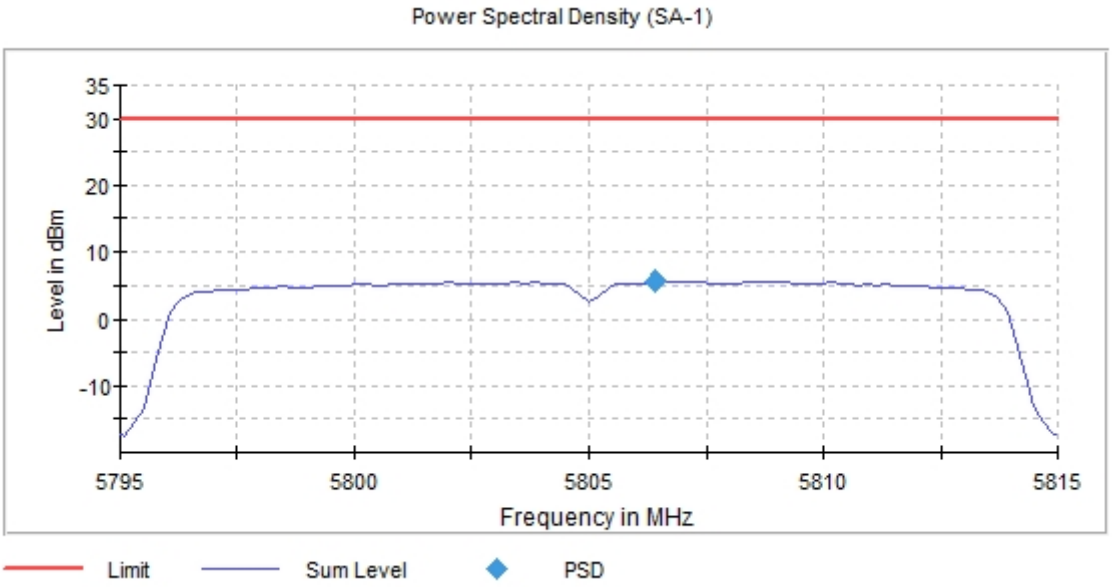
- Channel 153 (5765 MHz):



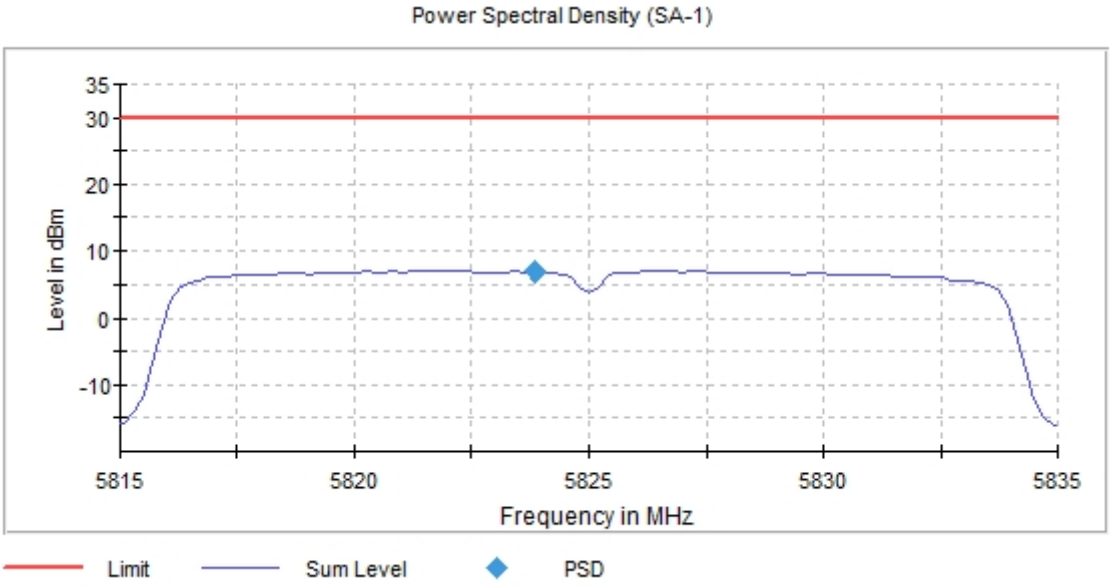
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



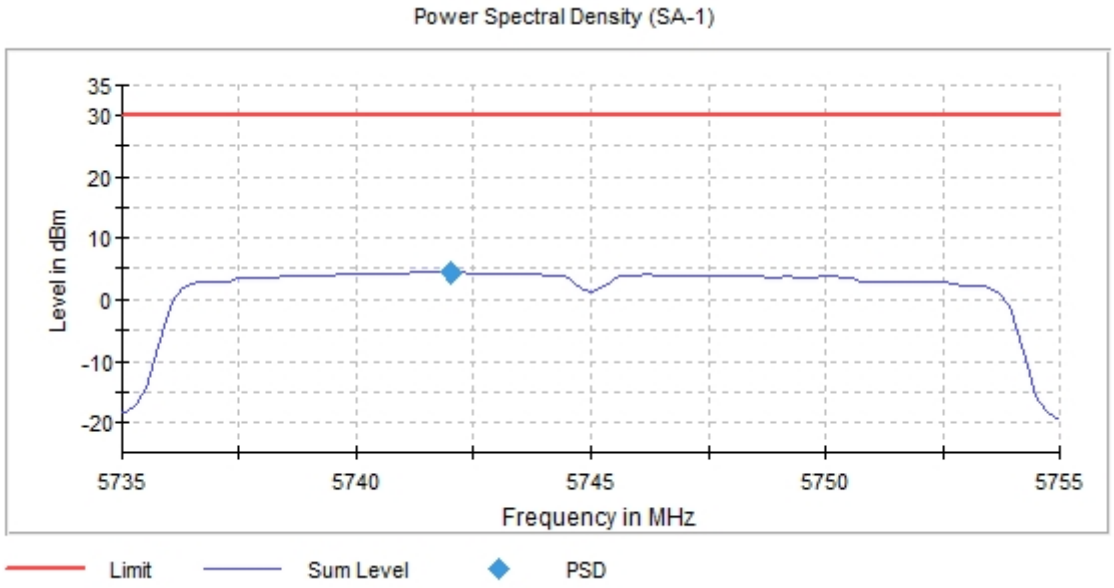
- High Channel 165 (5825 MHz):



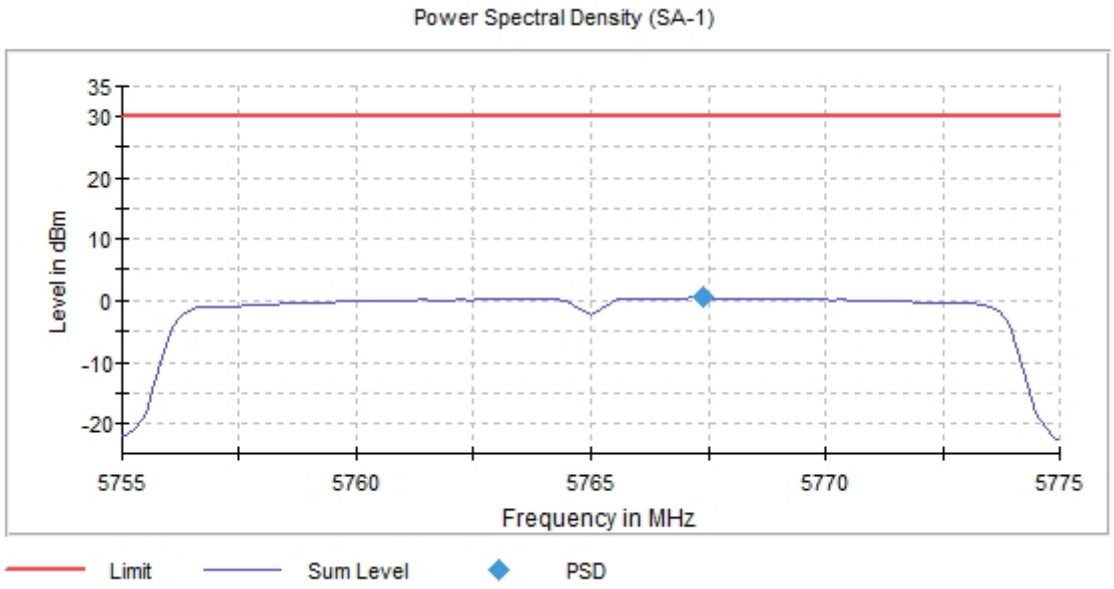
SISO 802.11 ac20 (VHT20):

U-NII-3 (5725-5850 MHz)

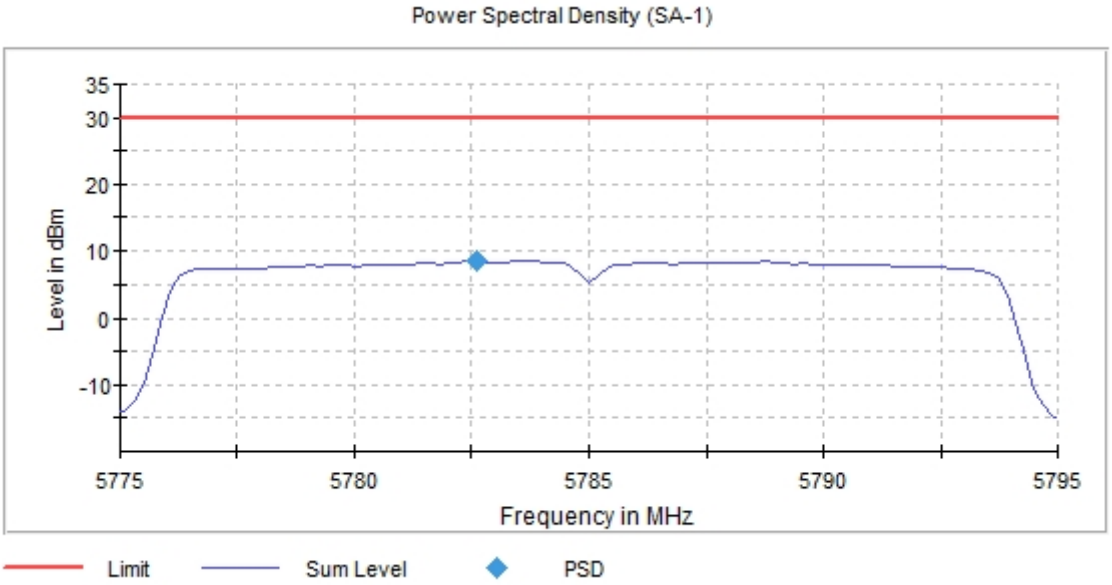
- Low Channel 149 (5745 MHz):



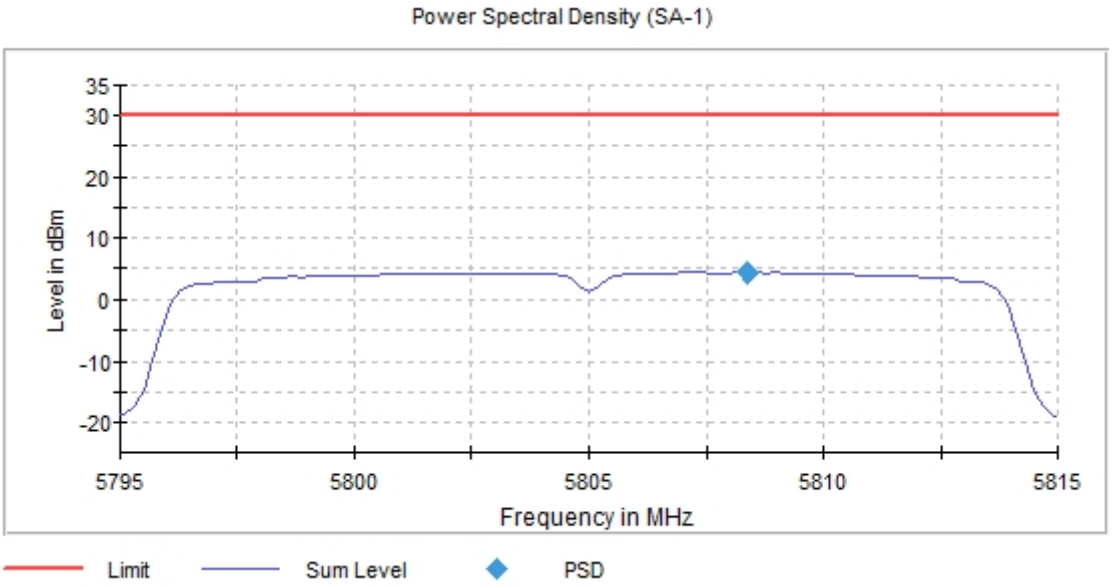
- Channel 153 (5765 MHz):



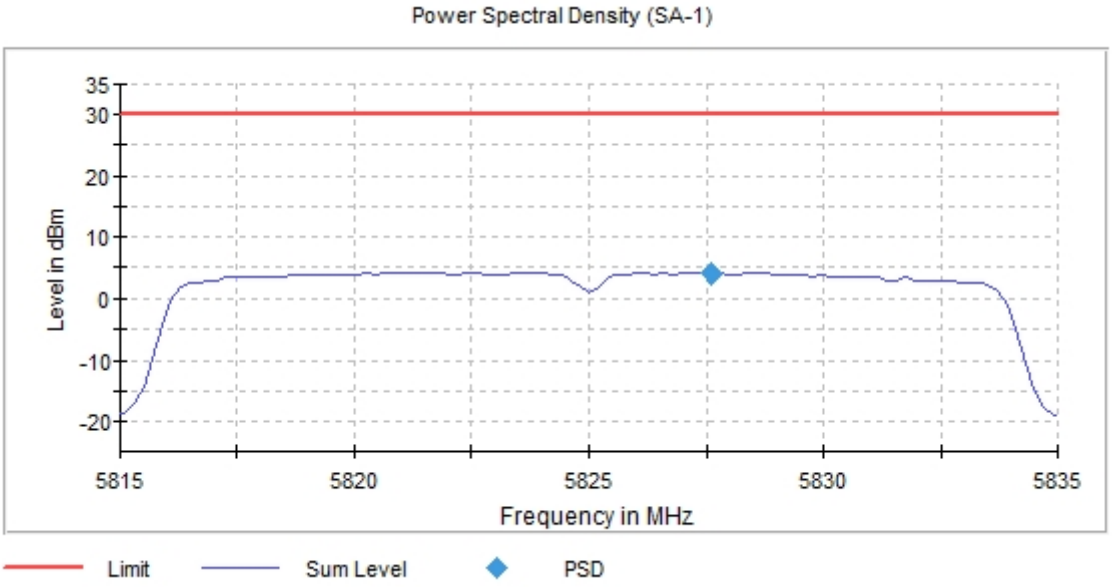
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



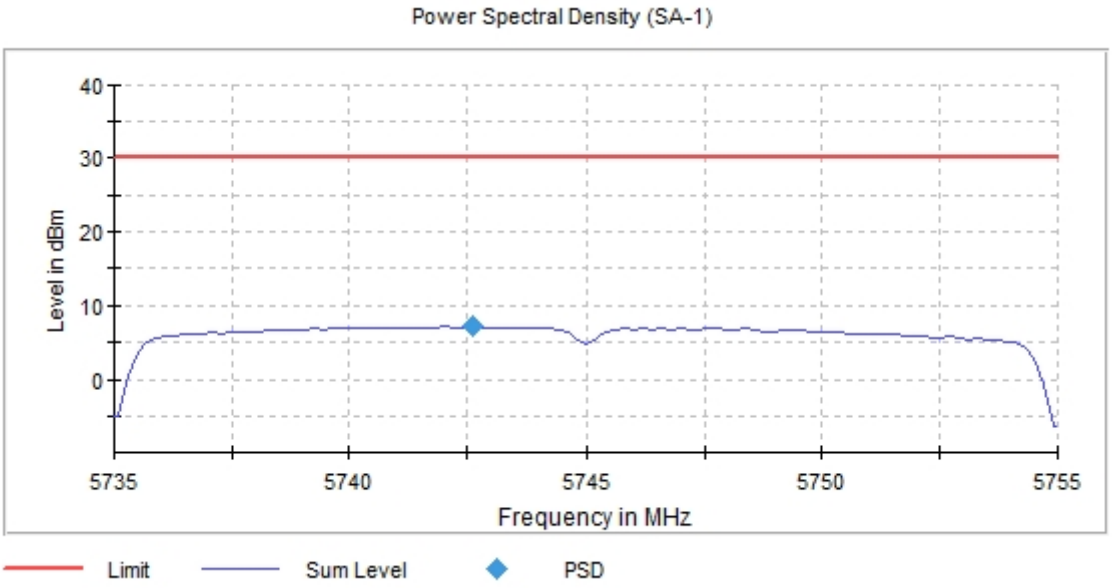
- High Channel 165 (5825 MHz):



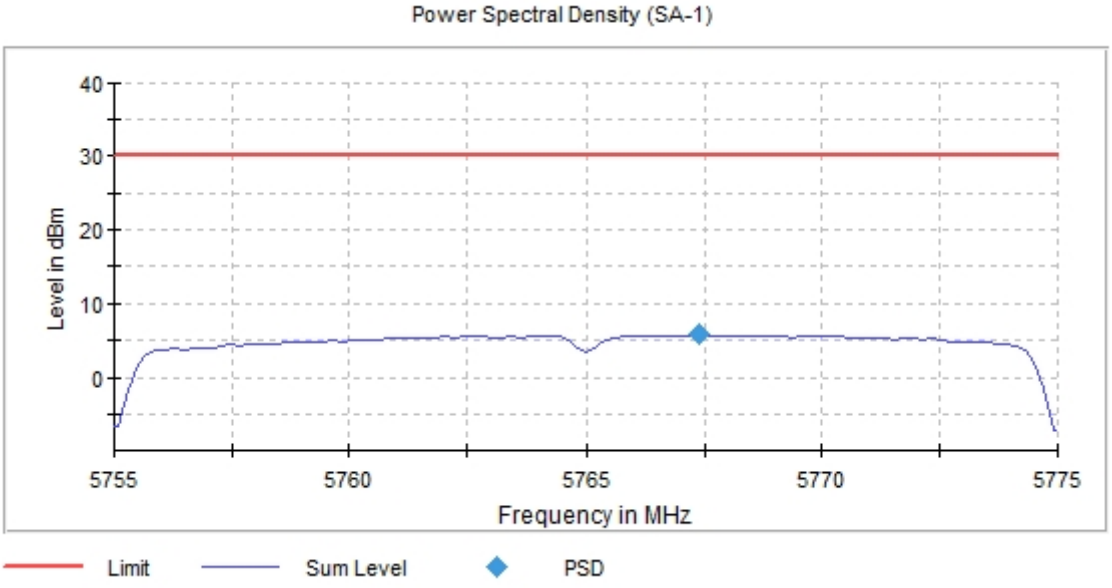
SISO 802.11 ax20 (HE20):

U-NII-3 (5725-5850 MHz)

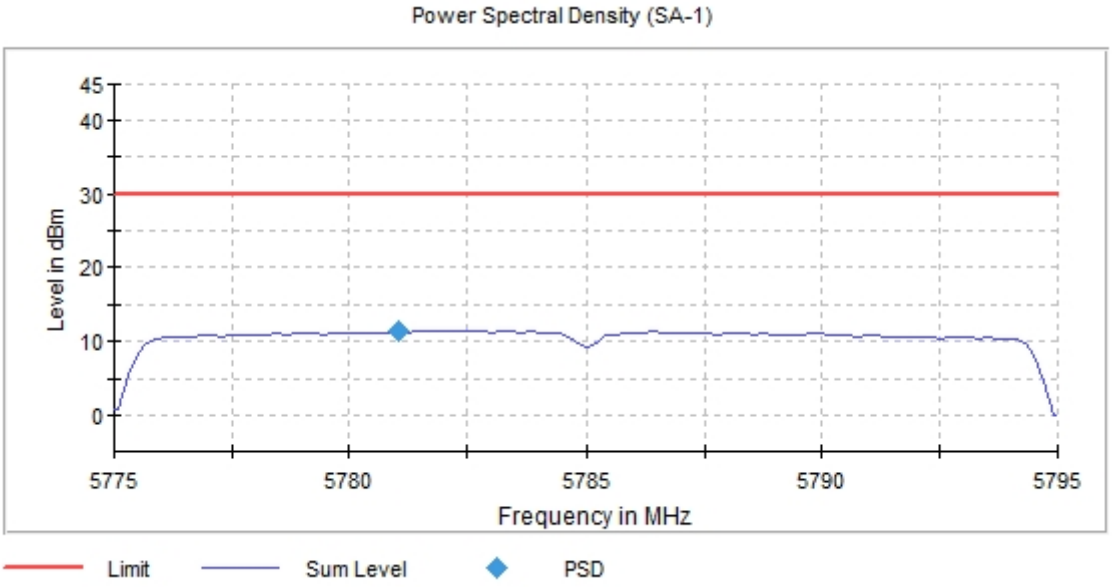
- Low Channel 149 (5745 MHz):



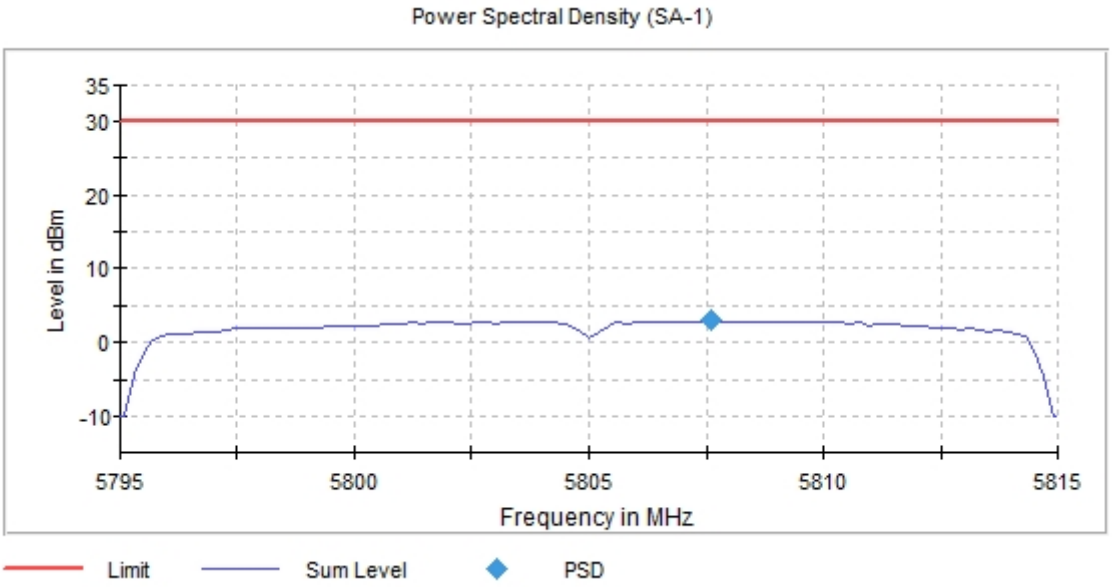
- Channel 153 (5765 MHz):



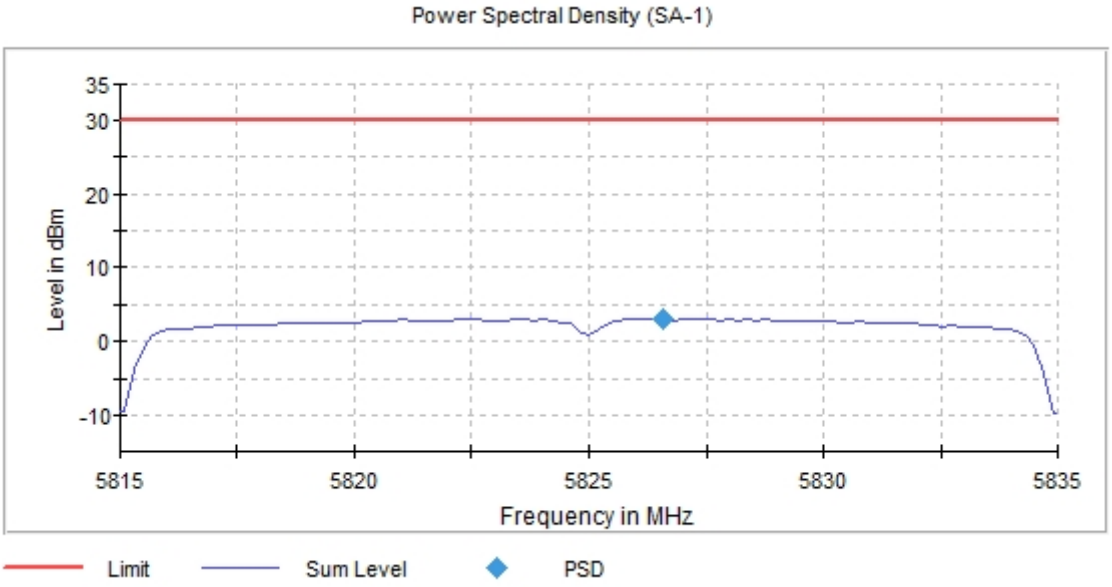
- Middle Channel 157 (5785 MHz):



- Channel 161 (5805 MHz):



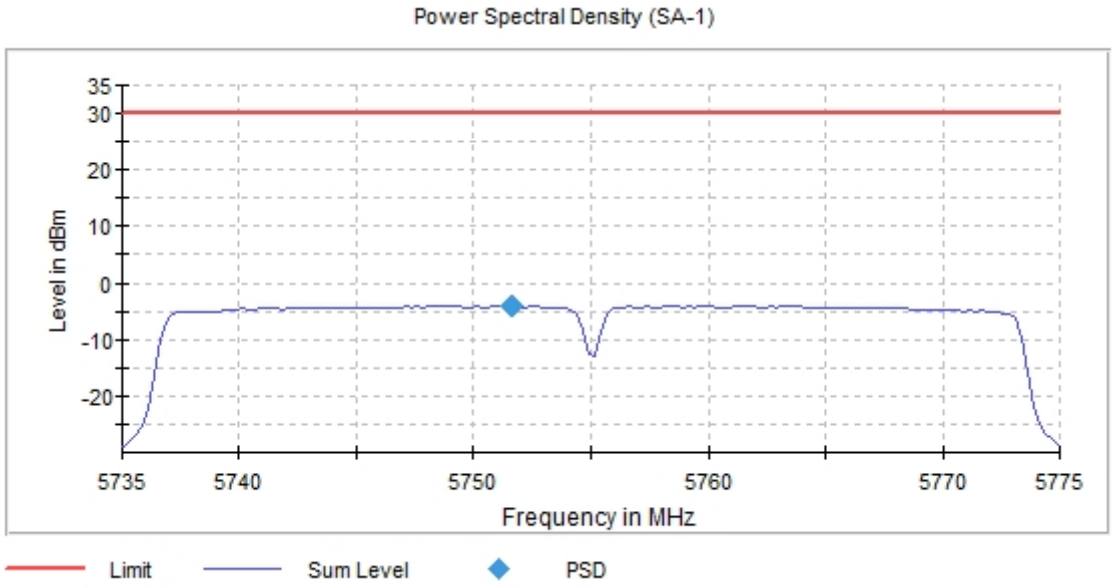
- High Channel 165 (5825 MHz):



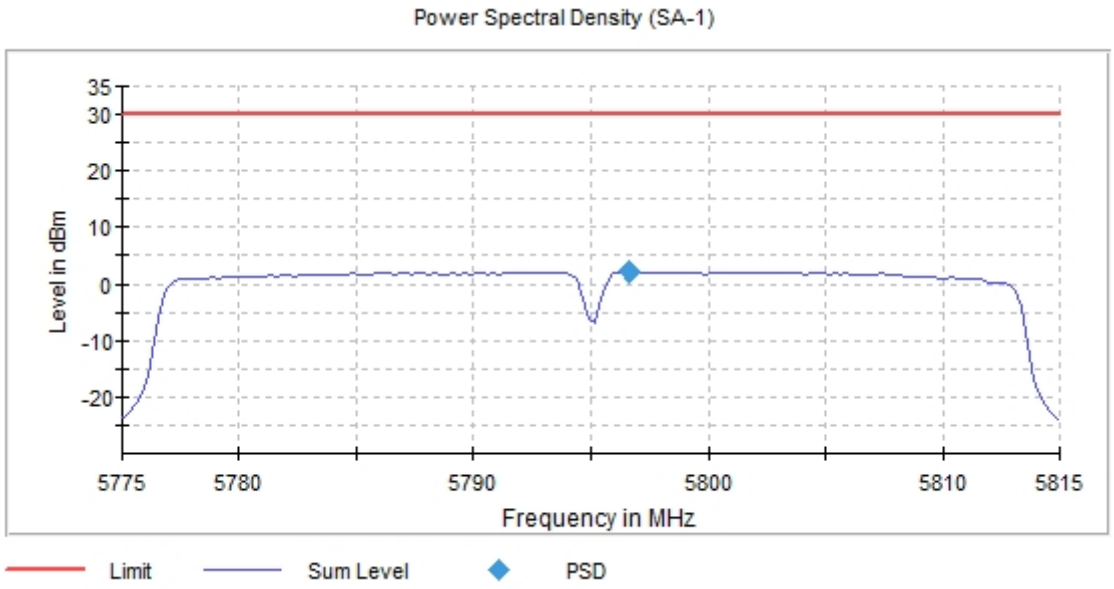
SISO 802.11 n40 (HT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



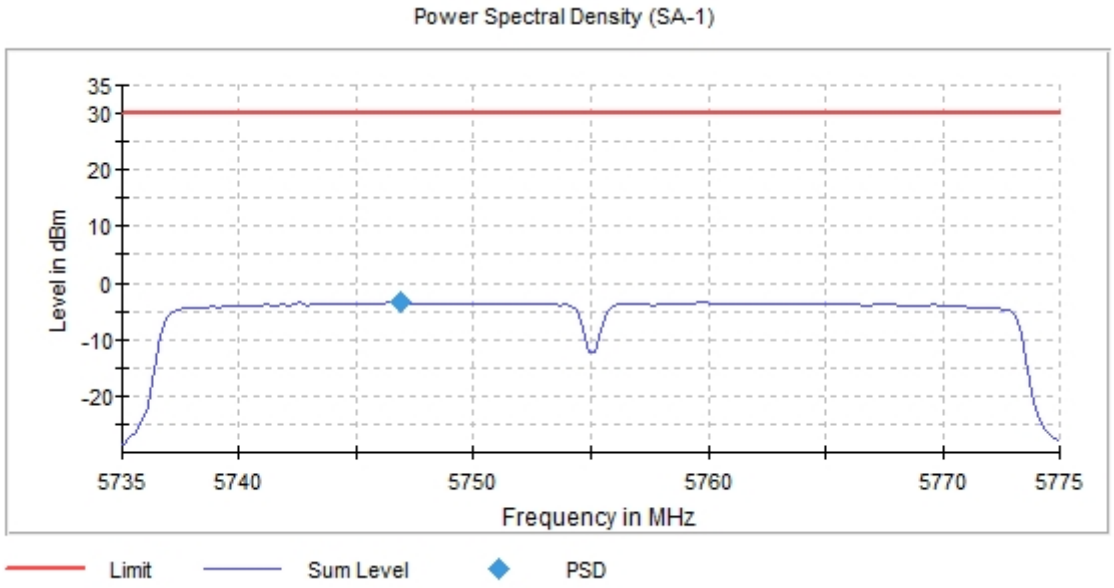
- High Channel 159 (5795 MHz):



SISO 802.11 ac40 (VHT40):

U-NII-3 (5725-5850 MHz)

- Low Channel 151 (5755 MHz):



- High Channel 159 (5795 MHz):