



FCC LISTED, REGISTRATION
NUMBER: 2764.01

ISED LISTED REGISTRATION
NUMBER: 23595-1

Test Report No:

4381ERM.019A1

Partial Test report

USA FCC Part 15.407 (U-NII), 15.209; & CANADA RSS-247, RSS-Gen
Unlicensed National Information Infrastructure Devices. General technical requirements.
License-Exempt Radio Apparatus (All Frequency Bands): Category I Equipment.
General Requirements and Information for the Certification of Radio Apparatus.

(*) Identification of item tested	Motorcycle cockpit domain controller, called Infotainment Front Control Unit (IFCU) of 12.3 inch
(*) Trademark	Visteon
(*) Model and /or type reference	HARLEYIFCU
(*) Derived model not tested	Hw version: 2.F / 2.G
Other identification of the product	FCC ID: NT8- HARLEYIFCU IC: 3043A- HARLEYIFCU FVIN: 2.0 HVIN: 2.E
(*) Features	Audio, Bluetooth (Dual HFP), Wi-Fi (Access Point / Master 5GHz - STA / Slave mode 2.4GHz & 5GHz), A2B (RF Link), GNSS, Display (Capacitive, 12.7") 2.E Variant: AM/FM HD, Tuner and water band 2.G Variant: AM/FM, Tuner 2.F: AM/FM, DAB Tuner and Radio
Manufacturer	Visteon Corporation One Village Center Drive, Van Buren Township, MI 48111, USA
Test method requested, standard	USA FCC Part 15.407 10-1-22 Edition: Unlicensed National Information Infrastructure Devices. General technical requirements. USA FCC Part 15.209 10-1-22 Edition: Radiated emission limits; general requirements. CANADA RSS-247 Issue 3 (August 2023). CANADA RSS-Gen Issue 5 (April 2018). 789033 D02 General UNII Test Procedures New Rules v02r01 Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.
Summary	See Appendix A
Approved by (name / position & signature)	Domingo Galvez EMC&RF Lab Manager
Date of issue	09-10-2024
Report template No	FDT08_23 (*) "Data provided by the client"

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APPENDIX A: TEST RESULTS. WI-FI 5GHZ12

Acronyms

Acronym ID	Acronym Description
	Emission Bandwidth
# of Tx Chains	Number of Transmission Chains
Avg Power	Maximum Average Conducted Output Power
DC	Duty Cycle
Freq	Frequency
Max EIRP	Maximum Burst EIRP
Mod	Modulation
Mode	Mode
Occ Ch BW	Occupied Channel Bandwidth
Operation Band	Operation Band
PSD	Power Spectrum Density
Port	Active Port
TPC	TPC

Competences and guarantees

DEKRA Certification Inc. is a testing laboratory accredited by A2LA (The American Association for Laboratory Accreditation), to perform the tests indicated in the Certificate 2764.01 and CAB ID US0215.

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

DEKRA Certification Inc. 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 Certification at the time of performance of the test.

DEKRA Certification Inc. 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.

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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 Certification Inc.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Certification Inc. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Certification internal document PODT000.

Test case	Frequency (MHz)	U (k=2)	Units
RF Power and PSD	5150-5850	0.88	dB
Occupied Bandwidth		1.87	%
Band Edge		0.64	dB
Radiated Spurious Emission	30-180	4.27	dB
	180-1000	3.14	dB
	1000-18000	3.30	dB
	18000-40000	3.49	dB

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 consists of Instrument cluster functionality with Speedometer, Tachometer, Battery, Fuel Main Gages plus common warning lights. Infotainment functionality as included HD Radio NA, DAB Radio EU, or FM/AM Radio RoW, plus connectivity (USB, Bluetooth and Wi-Fi connections for Cellphone and Helmets).
3. Applicant's declaration letter shown below for model similarity.

Visteon

Name
Heidi Sepanik
Corporate Secretary

Visteon Corporation
One Village Center Drive
Van Buren Township, MI, 48111
Tel 734.710.4672
Fax 734.736.5540
hdiebol@visteon.com

Date: July 18th, 2024

To: Regulatory Certification Body DEKRA Testing and Certification, S.A.U. Parque Tecnológico de Andalucía C/ Severo Ochoa 2 & 6, 29590,Málaga, España	From: Visteon Corporation One Village Center Drive, Van Buren Township, MI, USA. Postcode/Zip Code: 48111
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Ref: EU-TEC/FCC/ISED update related to product:

Type of equipment:	Infotainment Control Unit
Brand name:	Visteon
Model name:	HARLEYFCU

To whom it may concern,

		CHANGES
Model name/PMN:	HARLEYFCU	Same for 3 HW versions
HW versión / HVIN:	2.E	Audio Hub, Audio Processing, HD digital radio and weather band
HW versión / HVIN:	2.F	Audio Hub, Audio Processing, DAB digital radio and Radion
HW versión / HVIN:	2.G	Audio Hub and Audio Processing
SW version:	V2239	Same for 3 HW versions
FWIN:	2.0	Same for 3 HW versions

*Same PCB, different Tunner Specs, weather band only populated on 2.E variant and Radion only populated on 2.F variant.
*Same electrical and mechanical features.
*Same PCB board is used on the 3 Hardware versions. However, only the 2.F Hardware has the DAB digital radio populated and therefore is being considered as the most complex hardware for RED certification. 2.E hardware has HD radio and water band, which make if the most complex one for FCC.
*For RED certification, partial tests have been performed over 2.E and 2.G hardware to corroborate the behaviour is the same as on 2.F hardware, test report results for 2.F product version are valid and representative for the rest of hardware versions 2.E and 2.G and partial test reports were performer for each variant depending on the product features.
*For FCC/ISED certification, partial tests have been performed over 2.F and 2.G hardware to corroborate the behaviour is the same as on 2.E hardware, test report results for 2.E product version are valid and representative for the rest of hardware versions 2.F and 2.G and partial test reports were performer for each variant depending on the product features.
*According to the geolocation of the product, the features available will be automatically activates or deactivated.

Sincerely,

By:	Heidi Sepanik	
Title:	Corporate Secretary	
Company:	Visteon Corporation	
Telephone:	734.710.4672	
e-mail:	hdiebol@visteon.com	Signature



DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples undergoing test have been selected by: The client.

Sample S/01 is composed of the following elements, accessories and auxiliary equipment:

Id	Control Number	Description	Manufacturer / Model	Serial N°	Date of Reception	Application
S/01	4381/21	IFCU (NA)	Visteon / HARLEYIFCU	P70901090B_41330194	2024-12-07	Element Under Test
S/01	3492/71	Display 12.7"	-	220505003086	2022-11-14	Element Under Test
S/01	3492/79	Break out board & Main harness	-	-	2022-11-14	Accessory
S/01	3492/13	HSD to USB Cable	Visteon	-	2022-11-14	Accessory
S/01	3492/19	USB type A (male) to USB type A (male) Cable	-	-	2022-11-14	Accessory
S/01	3492/85	VCAN	V-CAN / FV 5.2	4300922	2022-11-14	Accessory
S/01	3492/82	Coaxial cable	-	-	2022-11-14	Accessory
S/01	3492/83	Coaxial cable	-	-	2022-11-14	Accessory
S/01	3492/84	Coaxial cable	-	-	2022-11-14	Accessory
S/01	3492/59	USB type A (male) to USB type A (Female) Cable	-	-	2022-11-14	Accessory
S/01	1482	Laptop	LENOVO / V14 G2 ITL	PF3QAFFH	-	Auxiliary

1. Sample S/01, was used for the following test(s): All Conducted tests indicated in appendix A.

Test sample description

Test Sample description (compulsory information for EMC and RF testing services)

Ports..... :	Port name and description		Cable				
			Specified length [m]	Attached during test	Shielded	Coupled to patient	
	Main Connector Harness		1.5	☒	☐	☐	
	AM/FM Antenna Connector		0.1	☒	☐	☐	
	GPS Antenna Connector		0.1	☒	☐	☐	
	USB Connector		0.1	☒	☐	☐	
			☐	☐	☐		
Supplementary information to the ports..... :	No Data Provided						
Rated power supply :	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☐	AC:	☐	☐	☐	☐	☐
	☐	AC:	☐	☐	☐	☐	☐
	☒	DC: 13.5 V					
☐	DC:						
Rated Power :	13.5V						
Clock frequencies :	40 MHz, 8MHz, 38.4MHz, 55.4667MHz						
Other parameters..... :	No Data Provided						
Software version :	v2239						
Hardware version..... :	2.E						
Dimensions in cm (W x H x D)..... :	36.8 x 15.4 x 6.3						
Mounting position..... :	☐	Table top equipment					
	☐	Wall/Ceiling mounted equipment					
	☐	Floor standing equipment					
	☐	Hand-held equipment					
	☒	Other: Installed in a Motorcycle					
Modules/parts :	Module/parts of test item		Type		Manufacturer		
	No Data Provided						
Accessories (not part of the test item) :	Description		Type		Manufacturer		
	Break Out Board + Main harness						
	Amplifier + Amplifier Harness + Speaker						
	AM/FM or AM/FM/DAF Antenna						
	GPS Antenna						
	VCAN + VCAN Connection						
	Wireless Headset						
Description		File name		Issue date			

Documents as provided by the applicant	Declaration Equipment Data	FDT30_18 Declaration Equipment Data – R2	07/22/2024
	Test Instructions		
	Technical Files		
	DUT Manual		

Copy of marking plate:

Harley Davidson Motor Co., Inc.

INFOTAINMENT CONTROL UNIT

品名: 信息娱乐控制单元

Milwaukee, WI, US 53201

IC: 3043A- HARLEYIFCU

FCC ID: NT8- HARLEYIFCU

型号 / MODEL: HARLEYIFCU

UK

CE

SERIAL NUMBER: P70901080B_41320051

SUPP. PART NUMBER: VPSVWWF-10E889-EA

输入 / INPUT: DC 13.5V 18A

MADE IN MEXICO

MIN. SW LEVEL 00.22.37

墨西哥制造

5/11/2024 4:03:27 PM

(#0 RADIO)

E24

10R-06 4719

IFT: HAVIHA23-25235

CCAH23LP5740T5

CMIIT ID: 2023AJ10821

R-RVC1-HARLEYIFCU

NOM

NYCI

Identification of the client

VISTEON CORPORATION
One Village Center Drive,
Van Buren Township, MI 48111,
USA

Testing period and place

Test Location	DEKRA Certification Inc.
Date (start)	07-19-2024
Date (finish)	07-22-2024

Document history

Report number	Date	Description
4381ERM.019	08-15-2024	First release.
4381ERM.019A1	09-10-2024	Second release. The RSS 247 issue number is updated. This modified test report cancels and replaces the test report 4381ERM.019.

Environmental conditions

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

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

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

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

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

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

Remarks and comments

The tests have been performed by the technical personnel: Ivy Yousuf Moutushi and Yuri Barone

List of equipment used during the test

Conducted Measurements

CONTROL NUMBER	DESCRIPTION	Serial No	LAST CALIBRATION	NEXT CALIBRATION
897	Power supply (AMETEK / PROG-DC-PS)	1707A01906	N/A	N/A
1039	Fsv40 Signal Analyzer 40GHz	101627	2022-11-01	2024-11-01
1041	SMB100A Signal Generator	180180	2022-10-06	2024-10-06
1042	SMBV100A Vector Signal Generator	262575	2024-06-06	2026-06-06
1107	Ethernet SNMP Thermometer	60038026952	2022-08-16	2024-10-18
1313	Wireless Measurement Software R&S WMS32	-	N/A	N/A

Testing verdicts

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

Summary

FCC PART 15 PARAGRAPH / RSS-247			
Requirement	Test case	Verdict	Remark
FCC 15.407 (a) / RSS-247 6.2	Power Limits. Maximum Output Power	P	N/A
FCC 15.407 (a) / RSS-247 6.2	Maximum Power Spectral Density	N/M	Refer 1
FCC 2.1049 / RSS-Gen 6.7	99% Occupied Bandwidth	N/M	Refer 1
FCC 15.403 / RSS-Gen 6.7	26 dB Emission Bandwidth	N/M	Refer 1
FCC 15.407 (b) / RSS-247 6.2	Band-edge Conducted Emissions	N/M	Refer 1
FCC 15.407 (e) / RSS 247 6.2.4.1	6 dB Emission Bandwidth	N/M	Refer 1
FCC 15.407 (b)(6)15.207 / RSS Gen 8.8	Emission limitations Conducted	N/M	N/A
FCC 15.407 (b), 15.205 & 15.209 / RSS-Gen 8.9 & 8.10	Undesirable radiated emissions	N/M	Refer 1
FCC 15.407 (g) / RSS-Gen 6.11 & 8.11	Frequency Stability	N/M	Refer 1
<u>Supplementary information and remarks:</u> 1. Partial testing has been requested.			

Appendix A: Test results. Wi-Fi 5GHz

Appendix A

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FCC 15.407 (a) / RSS-247 6.2 Power Limits. Maximum Output Power.....20

PRODUCT INFORMATION

(*): The following information is provided by the client:

Information	Description
Equipment type	Wi-Fi 5GHz
DFS Operating Mode	Slave without Radar detection
TPC Function	Yes
Antenna Specification	Integral
Operating Frequency Range	5150 - 5825 MHz
Nominal Channel Bandwidth	20/ 40/ 80 MHz
Antenna type	SISO: Radio A
RF Output Power	21 dBm
Antenna gain	2.6 dBi
Supply Voltage	13.5 Vdc
Modulation:	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Transmit Data Rate:	802 .11 a/n/ac/ax Rates: IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, & 54 Mbps IEEE 802.11n: HT20 (OFDM MCS0-MCS23) HT40 (OFDM MCS0-MCS23) IEEE 802.11ac: VHT20 SS1 (OFDM MCS0-MCS9) VHT40 SS1 (OFDM MCS0-MCS9) VHT80 SS1 (OFDM MCS0-MCS9) IEEE 802.11ax: HE20 (OFDMA MCS0-MCS11) HE40 SS1 (OFDMA MCS0-MCS11) HE80 SS1 (OFDM MCS0-MCS11)

TEST CONDITIONS

(*): Data provided by the client.

TEST CONDITIONS	DESCRIPTION
TC#01 ^{(1) (2)} (a mode)	<u>Power supply (V):</u> $V_{nominal} = 13.5 \text{ Vdc}$ <u>Channel Bandwidth: 20 MHz</u> <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5200,5280,5580,5825 MHz
TC#02 ^{(1) (2)} (n mode)	<u>Power supply (V):</u> $V_{nominal} = 13.5 \text{ Vdc}$ <u>Channel Bandwidth: 20 MHz</u> <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5200,5280,5580,5825 MHz <u>Channel Bandwidth: 40 MHz</u> <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5190, 5270, 5510, 5795 MHz
TC#03 ^{(1) (2)} (ac mode)	<u>Power supply (V):</u> $V_{nominal} = 13.5 \text{ Vdc}$ <u>Channel Bandwidth: 20 MHz</u> <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5200,5280,5580,5825 MHz <u>Channel Bandwidth:40 MHz</u> <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5190, 5270, 5510, 5795 MHz <u>Channel Bandwidth: 80 MHz</u> <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5210, 5290, 5610, 5775 MHz

TEST CONDITIONS	DESCRIPTION
TC#04 ⁽¹⁾⁽²⁾ (ax mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 13.5 \text{ Vdc}$ <u>Channel Bandwidth:</u> 20 MHz <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5200, 5280, 5700, 5785 MHz <u>Channel Bandwidth:</u> 40 MHz <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5190, 5270, 5670, 5755 MHz <u>Channel Bandwidth:</u> 80 MHz <u>Test Frequencies for Conducted tests: (Radio A)</u> <u>UNII 1-3</u> Frequencies: 5210, 5290, 5610, 5775 MHz

Note (1): 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/modulation types.
- Preliminary tests for 26 dB and Occupied bandwidth determined the SISO worst case: Port A.
- For spurious emissions for OFDM modes 802.11a, 802.11n20/40, 802.11ac20/40/80, and 11ax20/40/80 a preliminary scan was performed to determine the worst case. The following tables and plots show the results for the worst case.
- The data rates of 24Mb/s for 802.11a, MCS 7 for 802.11n, MCS8 for 802.11ac20 and MCS9 for 802.11ac40/80, MCS8 for ax20, MCS 9 for ax40 and MCS11 for ax80 were selected based on preliminary testing that identified those rates corresponding to the worst cases.
- 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.
- Beamforming mode is only supported with OFDMA Full RU according to manufacturer specifications (see annex B.2).

Note (2): Preliminary measurements determined the PSD levels of partial RU is higher than the full RU in ax mode. RU 26 tone was identified as the worst-case RU (Resource Unit) carrier allocation for all non-beamforming ax mode testing.

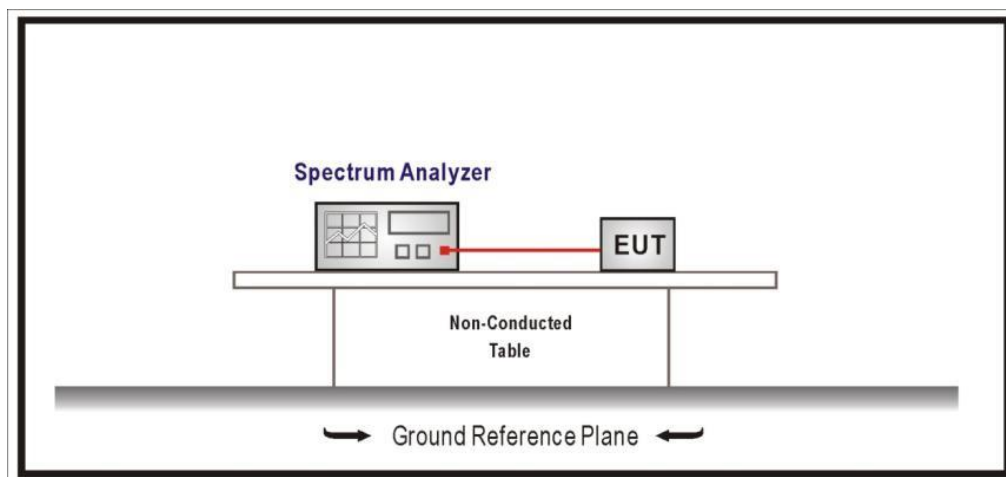
The worst-case RU combinations used in the ax mode SISO/MIMO measurement (all test cases except Band Edge testing) are indicated as follows:

- 20 MHz BW - RU26 offset 0(low tone)
- 20 MHz BW - RU242 offset 61(full tone)
- 40 MHz BW - RU26 offset 17(high tone)
- 80 MHz BW – RU26 offset 0(low tone)
- 80 MHz BW – RU1992 offset 196(full tone)

See below the comparison table between previous test results (test report 3492ERM.024A1) and test results with the new sample shown in this test report:

Bandwidth (MHz)	U-NII Sub-Band	Mode	Frequency (MHz)	Maximum conducted power (dBm)		Delta
				3492 (test report 3492ERM.024A1)	4381	
20	U-NII-1	a	5200	16.2	15.4	-0.8
		n	5200	16.4	15.4	-1.0
		ac	5200	16.6	15.3	-1.3
		ax	5200	2.0	2.7	0.7
	U-NII-2A	a	5280	13.7	14.7	1.0
		n	5280	14.0	14.5	0.5
		ac	5280	14.0	14.6	0.6
		ax	5280	1.3	2.5	1.2
	U-NII-2C	a	5580	8.1	8.7	0.6
		n	5580	8.2	8.6	0.4
		ac	5580	8.2	8.6	0.4
		ax	5700	1.3	2.0	0.7
	U-NII-3	a	5825	7.4	6.9	-0.5
		n	5825	7.5	7.0	-0.5
		ac	5825	7.4	6.9	-0.5
		ax	5785	2.3	2.9	0.6
40	U-NII-1	n	5190	16.2	16.0	-0.2
		ac	5190	16.1	15.3	-0.8
		ax	5190	0.6	1.0	0.4
	U-NII-2A	n	5270	13.7	14.2	0.5
		ac	5270	13.7	14.8	1.1
		ax	5270	0.1	1.6	1.5
	U-NII-2C	n	5510	8.3	9.4	1.1
		ac	5510	8.3	8.9	0.6
		ax	5670	-0.6	0.4	1.0
	U-NII-3	n	5795	6.0	6.0	0.0
		ac	5795	5.8	6.5	0.7
		ax	5755	1.1	2.6	1.5
80	U-NII-1	ac	5210	11.5	12.4	0.9
		ax	5210	0.7	1.2	0.5
	U-NII-2A	ac	5290	10.4	10.8	0.4
		ax	5290	0.5	1.6	1.1
	U-NII-2C	ac	5610	8.1	9.3	1.2
		ax	5610	-2.5	-1.3	1.2
	U-NII-3	ac	5775	5.5	6.5	1.0
		ax	5775	-0.9	0.0	0.9

CONDUCTED MEASUREMENTS:



TEST CASES DETAILS

FCC 15.407 (a) / RSS-247 6.2 Power Limits. Maximum Output Power

Limits

For an outdoor 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 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.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. 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 OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or $1.76 + 10 \log_{10} B$, dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For devices other than devices installed in vehicles:

For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW (23 dBm) or $10 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

For the 5.25-5.35 GHz, 5.470-5.6 GHz, and 5.650-5.725 GHz bands, the maximum conducted output power shall not exceed 250 mW (24 dBm) or $11 + 10 \log_{10} B$, dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10} B$, dBm, whichever is less

For the band 5.725-5.850 GHz, the maximum conducted output power shall not exceed 1 W. 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.

Maximum declared antenna gain: 2.6 dBi

Note: The following test results are shown based on KDB 662911 D01 Multiple Transmitter Output v02r01 E) 1) In-Band Power Measurements.

Mode: SISO

Modulation: 802.11a (OFDM 24 Mbit/s)

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5200.000	15.4	18.0
5280.000	14.7	17.3
5580.000	8.7	11.3
5825.000	6.9	9.5

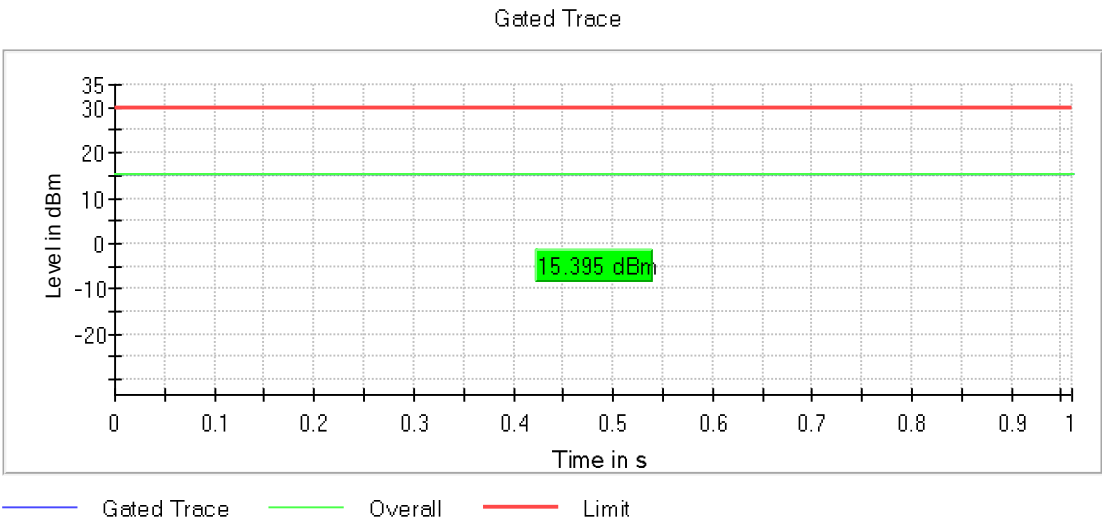
Verdict

Pass

Attachments

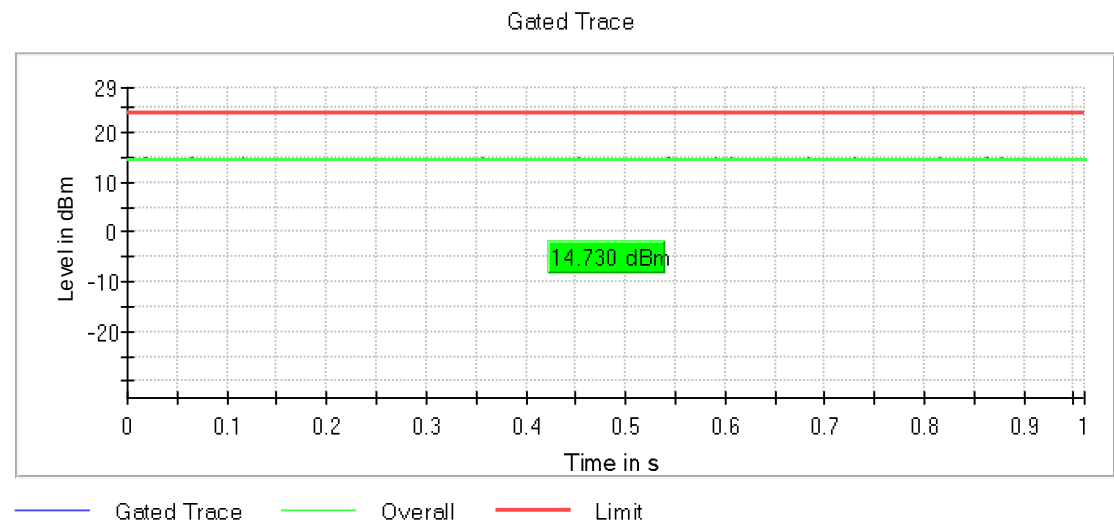
Frequency MHz = 5200.00000 Modulation = 802.11a (OFDM 24 Mbit/s)

Images:



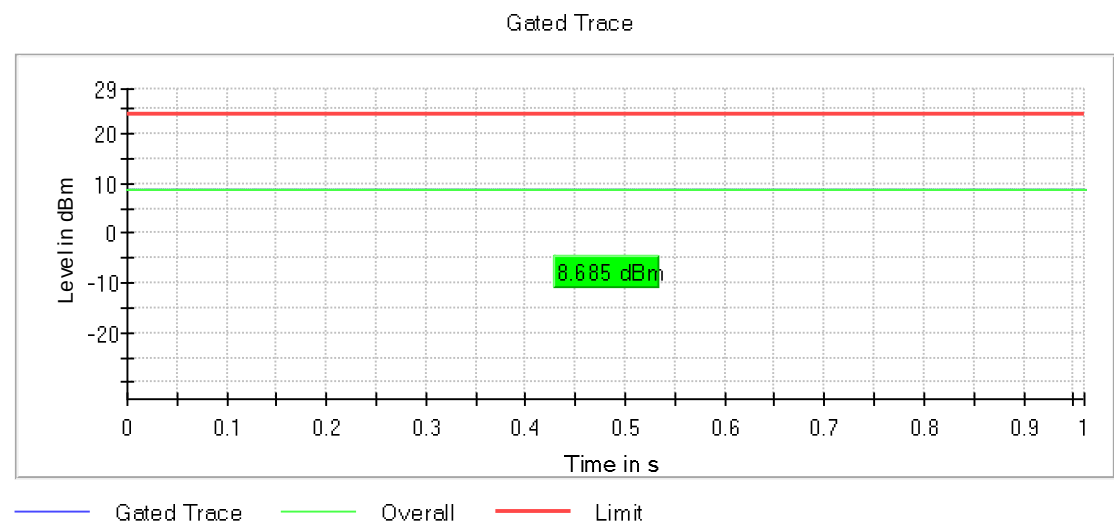
Frequency MHz = 5280.00000 Modulation = 802.11a (OFDM 24 Mbit/s)

Images:



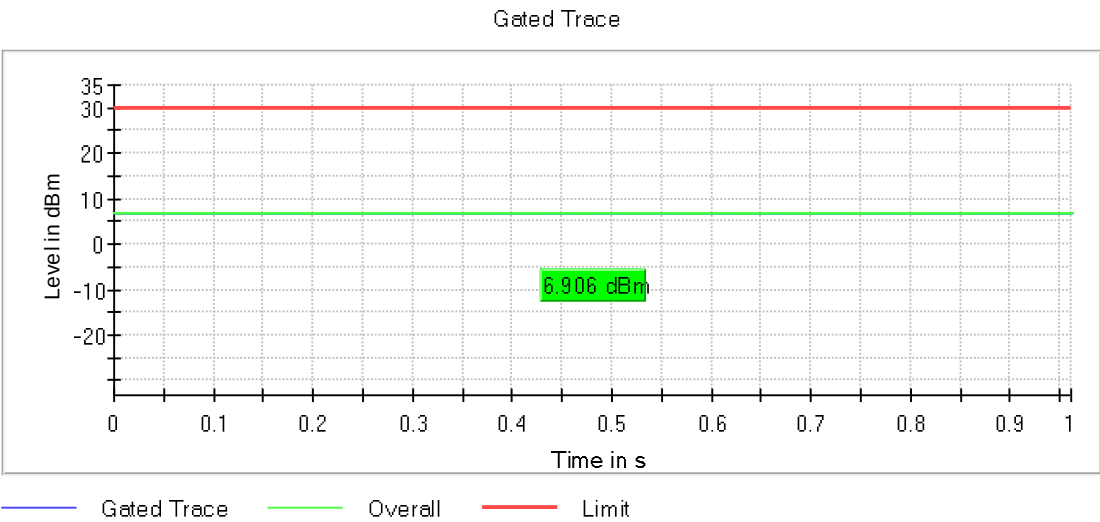
Frequency MHz = 5580.00000 Modulation = 802.11a (OFDM 24 Mbit/s)

Images:



Frequency MHz = 5825.00000 Modulation = 802.11a (OFDM 24 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11n HT20 (OFDM MCS7)

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5200.000	15.4	18.0
5280.000	14.5	17.1
5580.000	8.6	11.2
5825.000	7.0	9.6

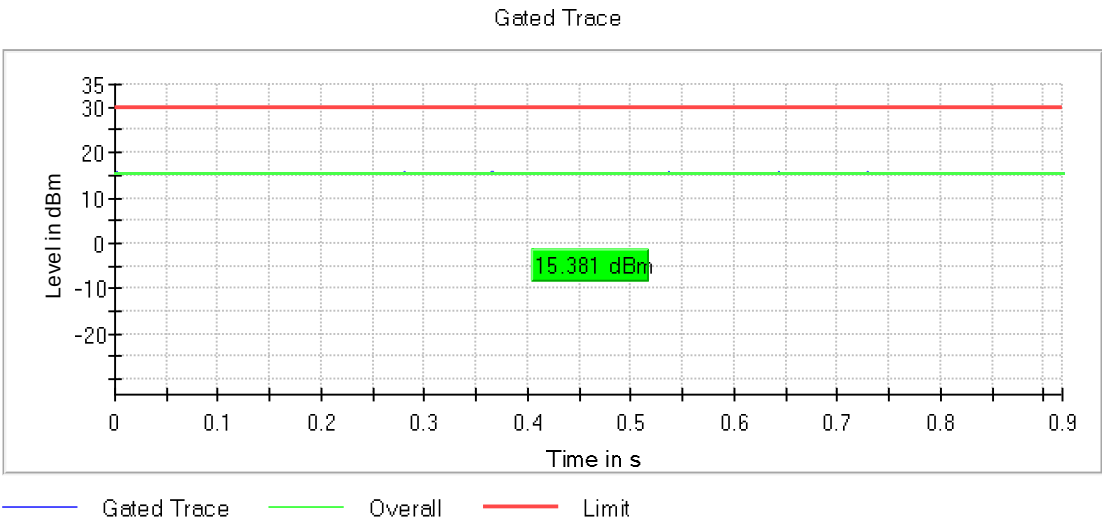
Verdict

Pass

Attachments

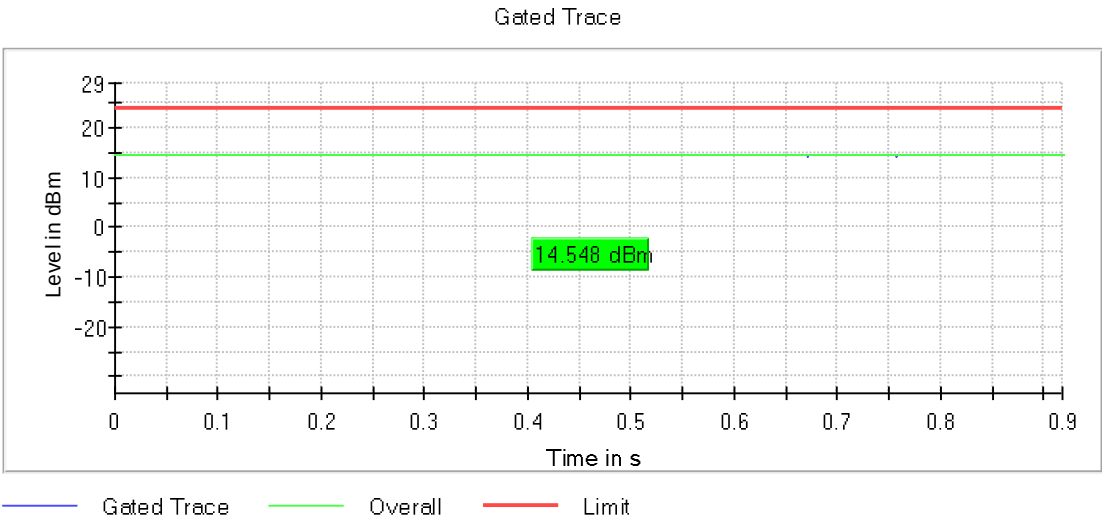
Frequency MHz = 5200.00000 Modulation = 802.11n HT20 (OFDM MCS7)

Images:



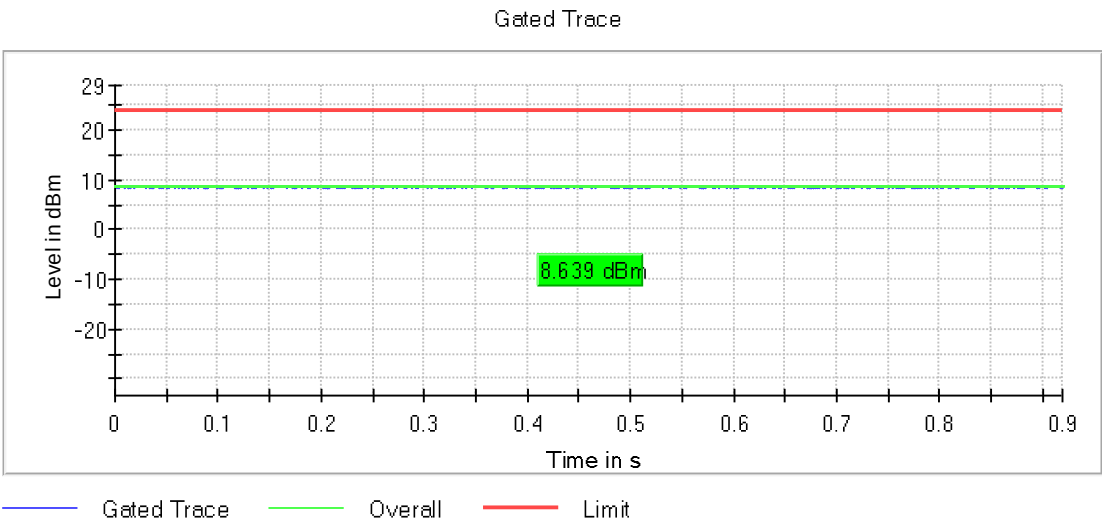
Frequency MHz = 5280.00000 Modulation = 802.11n HT20 (OFDM MCS7)

Images:



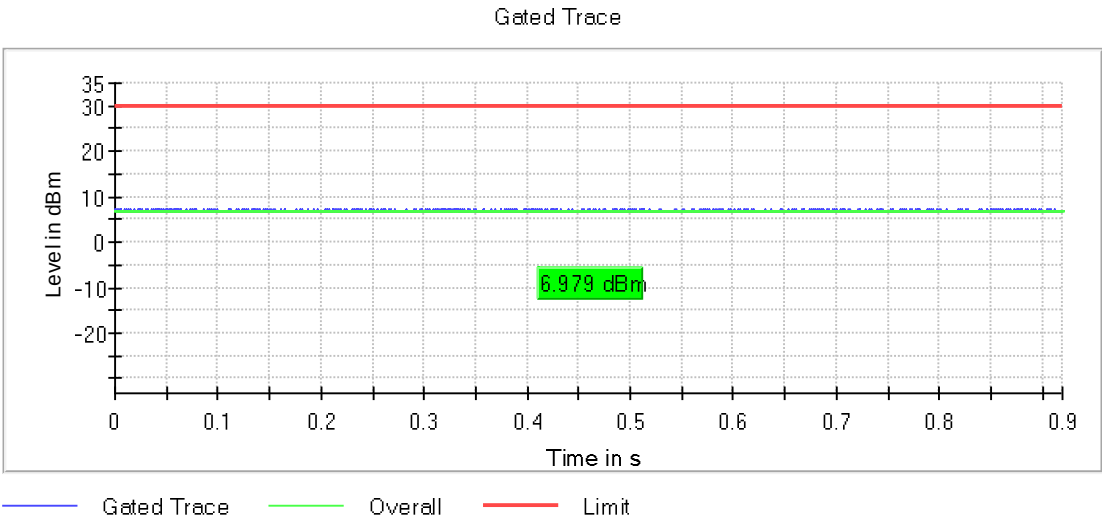
Frequency MHz = 5580.00000 Modulation = 802.11n HT20 (OFDM MCS7)

Images:



Frequency MHz = 5825.00000 Modulation = 802.11n HT20 (OFDM MCS7)

Images:



Tables:
Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11n HT40 (OFDM MCS7)

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5190.000	16.0	18.6
5270.000	14.2	16.8
5510.000	9.4	12.0
5795.000	6.0	8.6

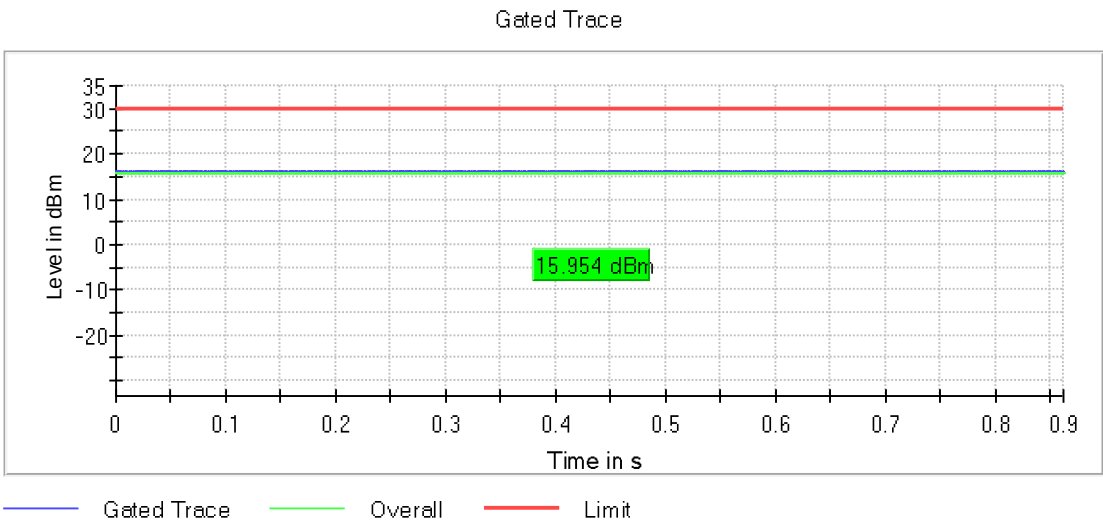
Verdict

Pass

Attachments

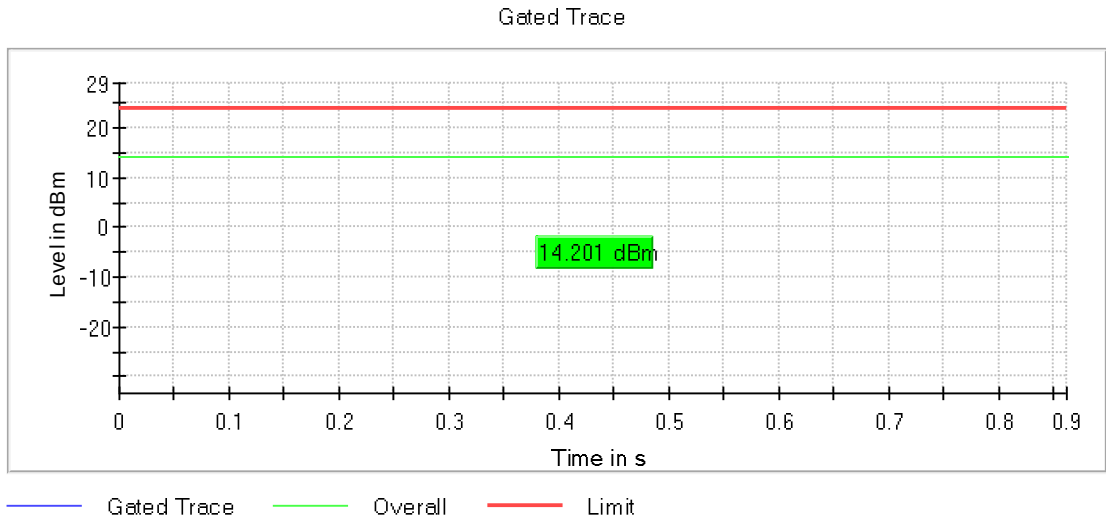
Frequency MHz = 5190.00000 Modulation = 802.11n HT40 (OFDM MCS7)

Images:



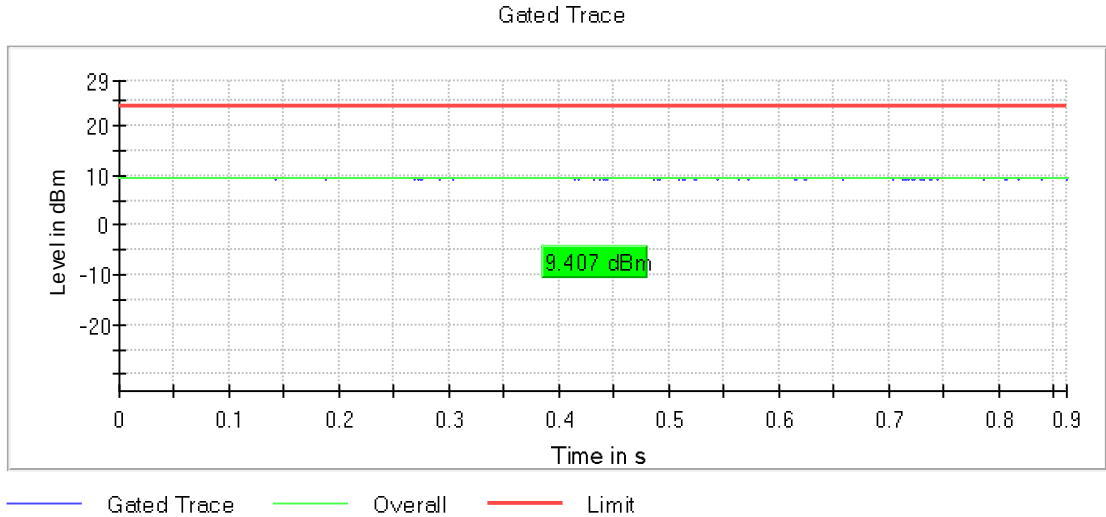
Frequency MHz = 5270.00000 Modulation = 802.11n HT40 (OFDM MCS7)

Images:



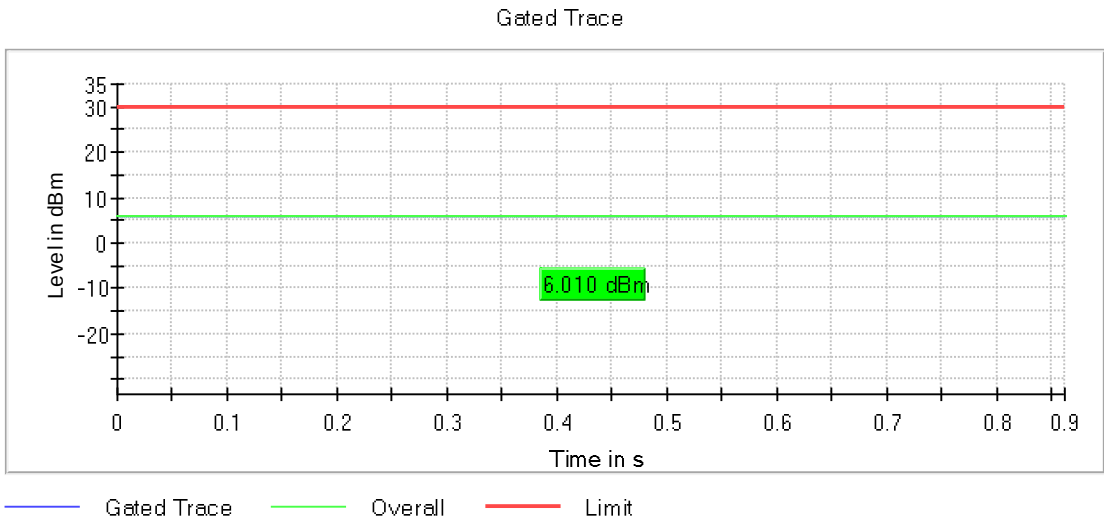
Frequency MHz = 5510.00000 Modulation = 802.11n HT40 (OFDM MCS7)

Images:



Frequency MHz = 5795.00000 Modulation = 802.11n HT40 (OFDM MCS7)

Images:



Tables:

Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11ac VHT20 SS1 (OFDM MCS8)

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5200.000	15.3	17.9
5280.000	14.6	17.2
5580.000	8.6	11.2
5825.000	6.9	9.5

Verdict

Pass

Attachments

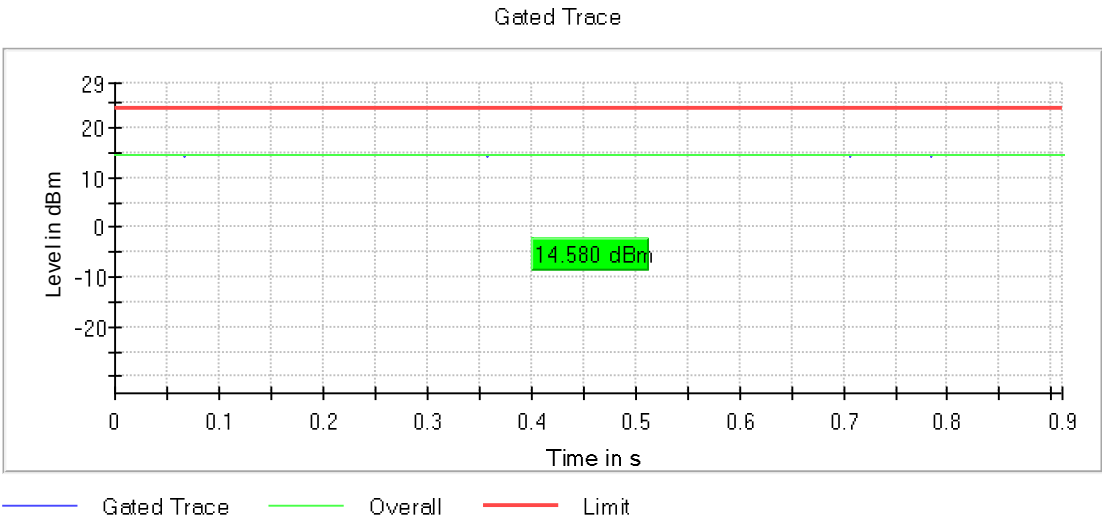
Frequency MHz = 5200.00000 Modulation = 802.11ac VHT20 SS1 (OFDM MCS8)

Images:



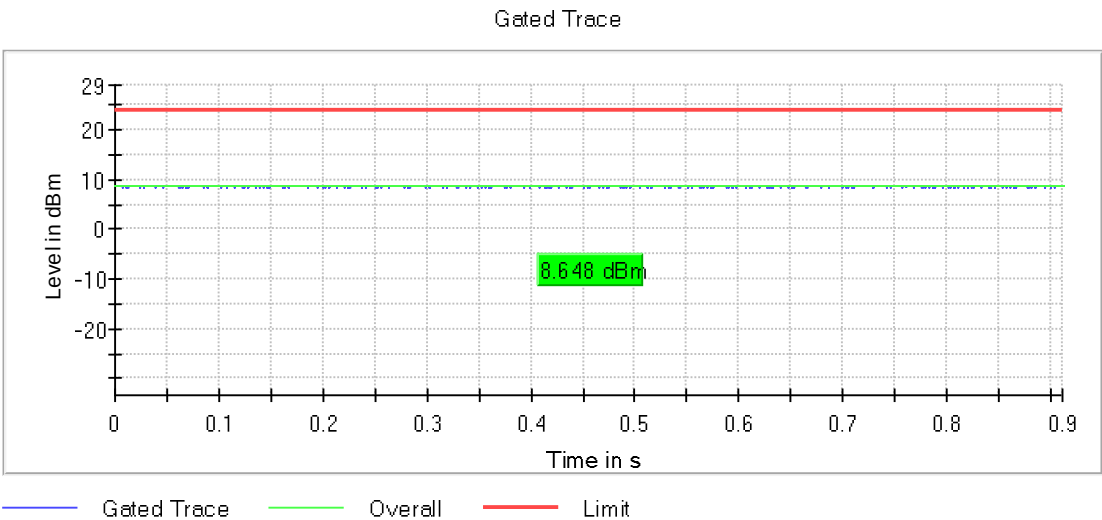
Frequency MHz = 5280.00000 Modulation = 802.11ac VHT20 SS1 (OFDM MCS8)

Images:



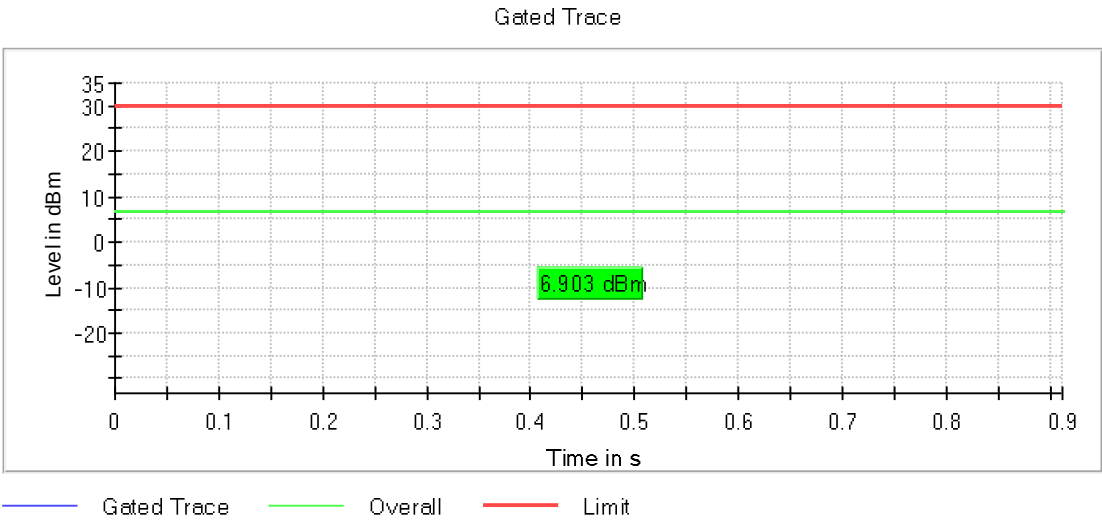
Frequency MHz = 5580.00000 Modulation = 802.11ac VHT20 SS1 (OFDM MCS8)

Images:



Frequency MHz = 5825.00000 Modulation = 802.11ac VHT20 SS1 (OFDM MCS8)

Images:



Tables:
Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11ac VHT40 SS1 (OFDM MCS9)

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5190.00000	15.3	17.9
5270.00000	14.8	17.4
5510.00000	8.9	11.5
5795.00000	6.5	9.1

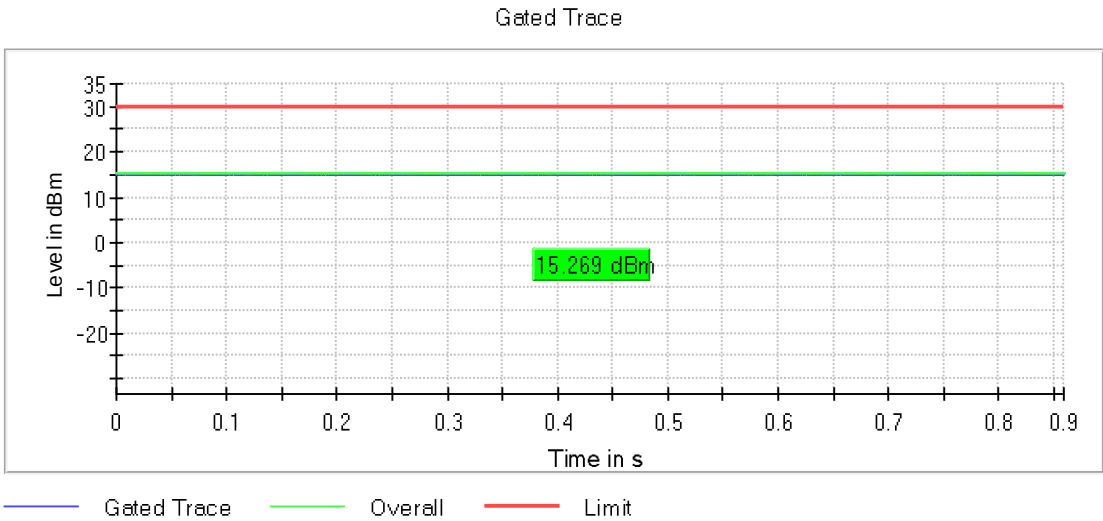
Verdict

Pass

Attachments

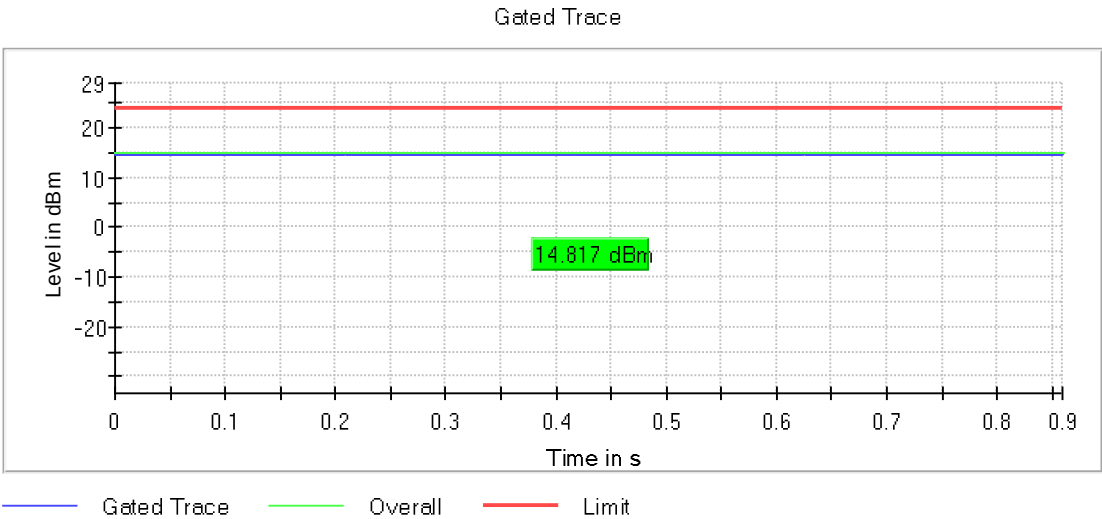
Frequency MHz = 5190.00000 Modulation = 802.11ac VHT40 SS1 (OFDM MCS9)

Images:



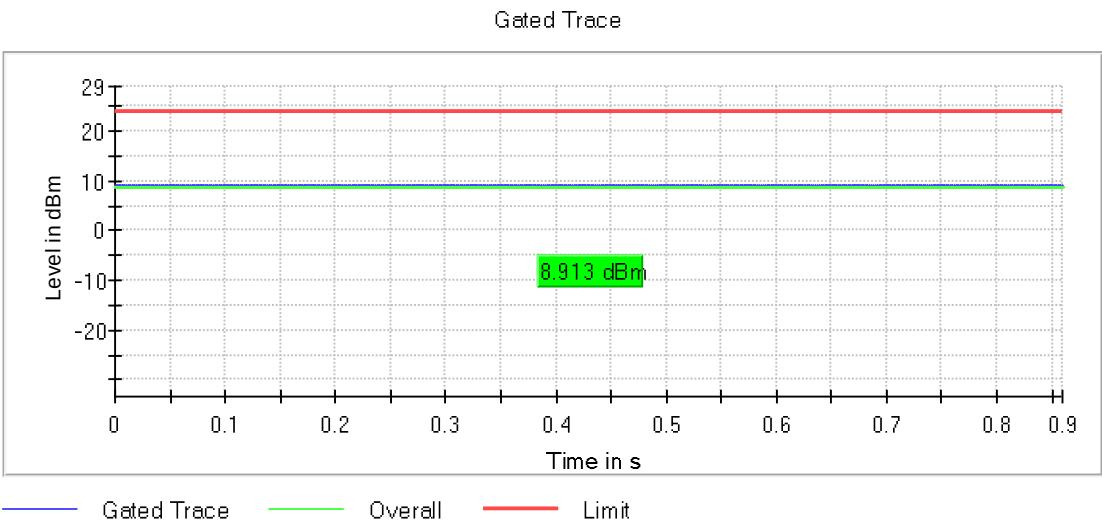
Frequency MHz = 5270.00000 Modulation = 802.11ac VHT40 SS1 (OFDM MCS9)

Images:



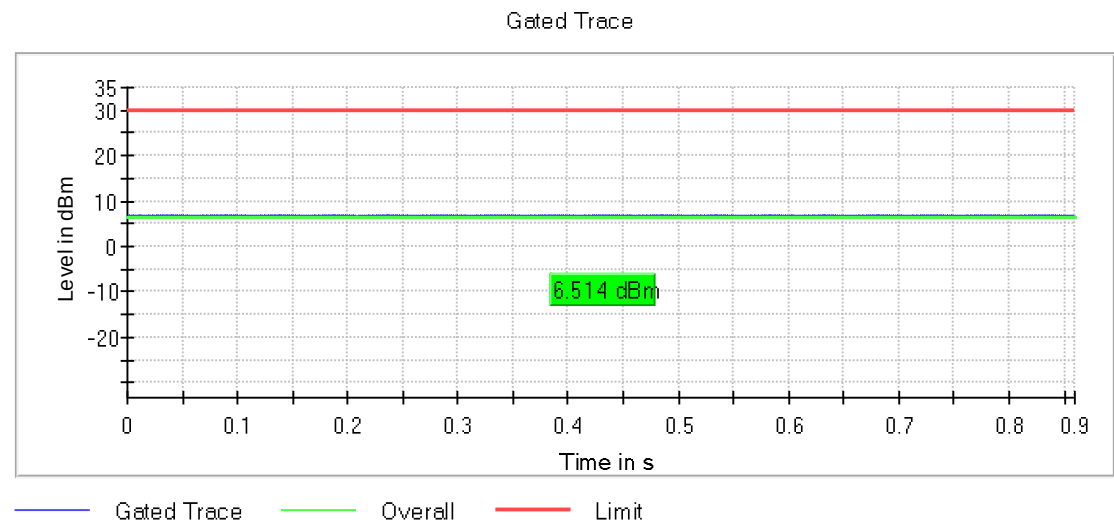
Frequency MHz = 5510.00000 Modulation = 802.11ac VHT40 SS1 (OFDM MCS9)

Images:



Frequency MHz = 5795.00000 Modulation = 802.11ac VHT40 SS1 (OFDM MCS9)

Images:



Tables:
Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11ac VHT80 SS1 (OFDM MCS9)

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5210.00000	12.4	15.0
5290.00000	10.8	13.4
5610.00000	9.3	11.9
5775.00000	6.5	9.1

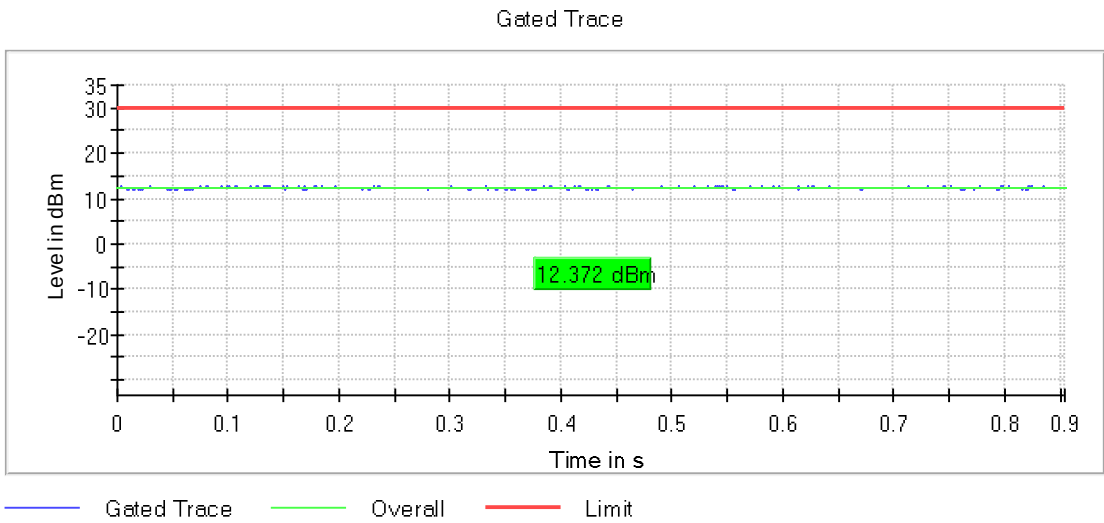
Verdict

Pass

Attachments

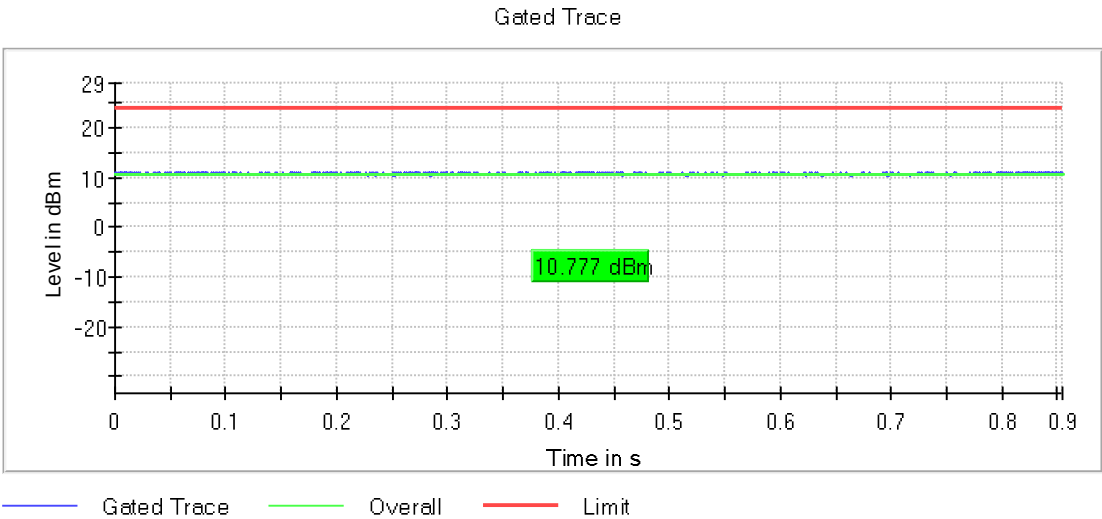
Frequency MHz = 5210.00000 Modulation = 802.11ac VHT80 SS1 (OFDM MCS9)

Images:



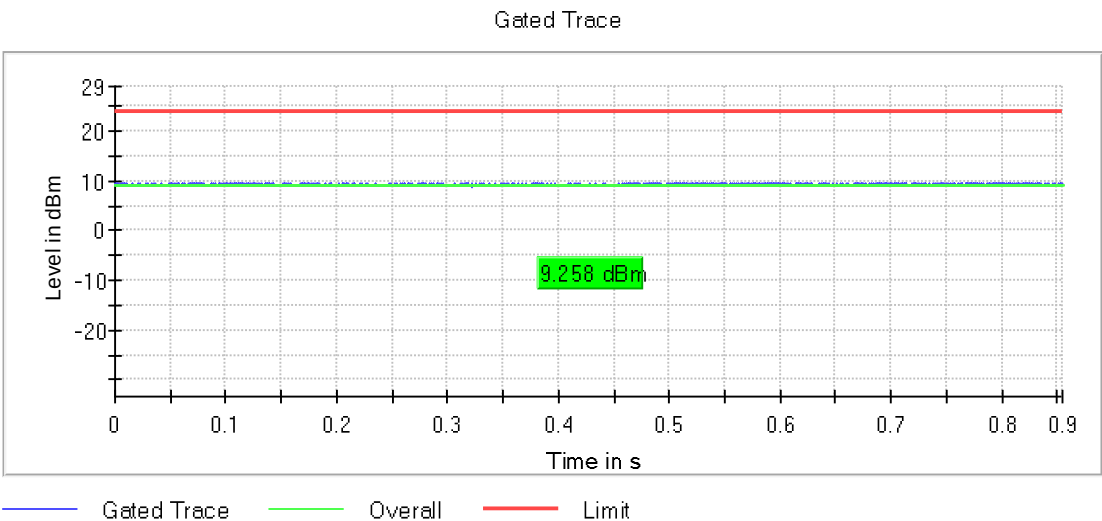
Frequency MHz = 5290.00000 Modulation = 802.11ac VHT80 SS1 (OFDM MCS9)

Images:



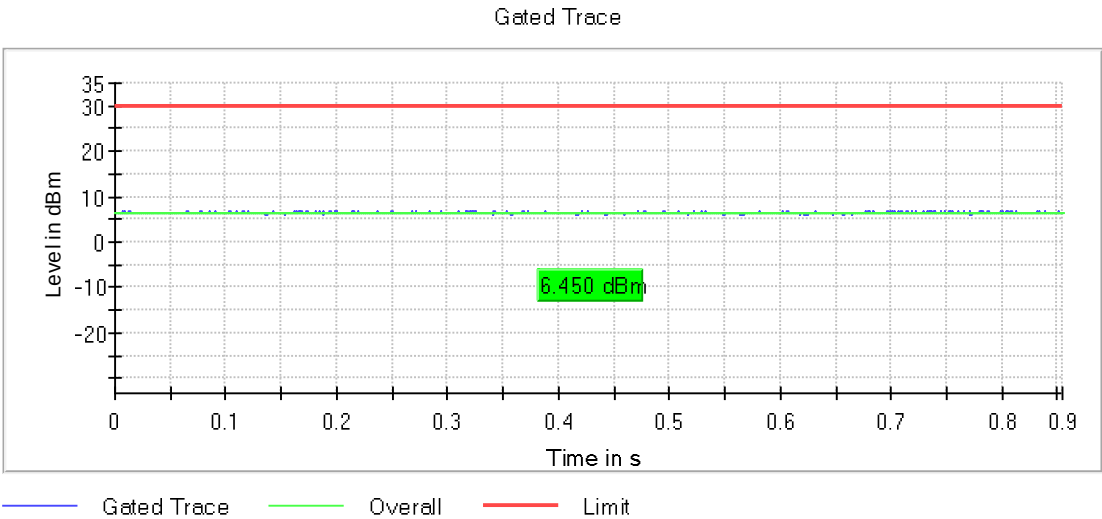
Frequency MHz = 5610.00000 Modulation = 802.11ac VHT80 SS1 (OFDM MCS9)

Images:



Frequency MHz = 5775.00000 Modulation = 802.11ac VHT80 SS1 (OFDM MCS9)

Images:



Tables:

Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11ax HE20 (OFDMA MCS8) – Full RU, 802.11ax HE20 SS1 (OFDMA MCS8) – Partial RU

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5200.00000	2.7	5.3
5280.00000	2.5	5.1
5700.00000	2.0	4.6
5785.00000	2.9	5.5

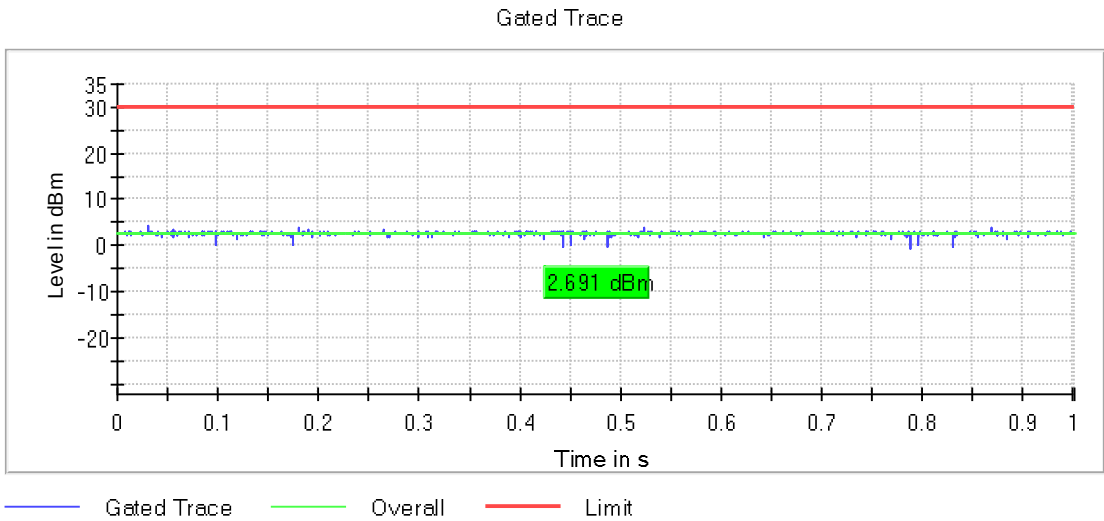
Verdict

Pass

Attachments

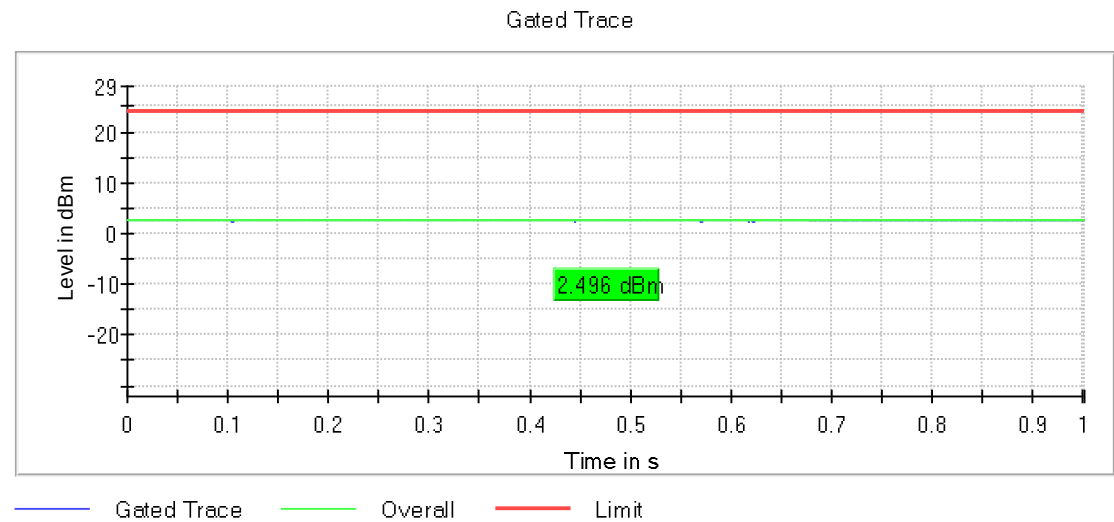
Frequency MHz = 5200.00000 Modulation = 802.11ax HE20 SS1 (OFDMA MCS8) – Partial RU

Images:



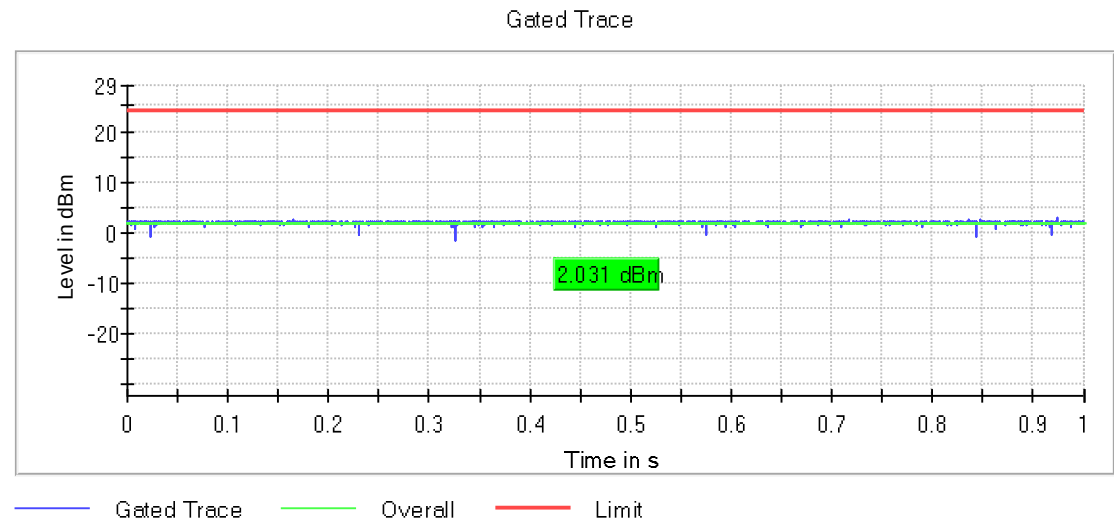
Frequency MHz = 5280.00000 Modulation = 802.11ax HE20 (OFDMA MCS8) – Full RU

Images:



Frequency MHz = 5700.00000 Modulation = 802.11ax HE20 SS1 (OFDMA MCS8) – Partial RU

Images:



Frequency MHz = 5785.00000 Modulation = 802.11ax HE20 (OFDMA MCS8) – Full RU

Images:



Tables:
Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11ax HE40 SS1 (OFDMA MCS9) – Partial RU

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5190.00000	1.0	3.6
5270.00000	1.6	4.2
5670.00000	0.4	3.0
5755.00000	2.6	5.2

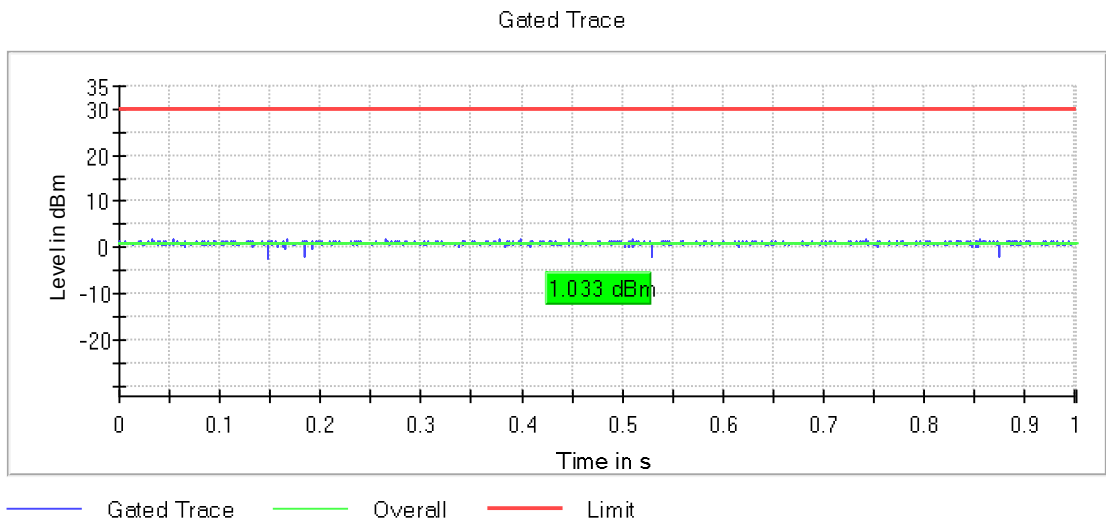
Verdict

Pass

Attachments

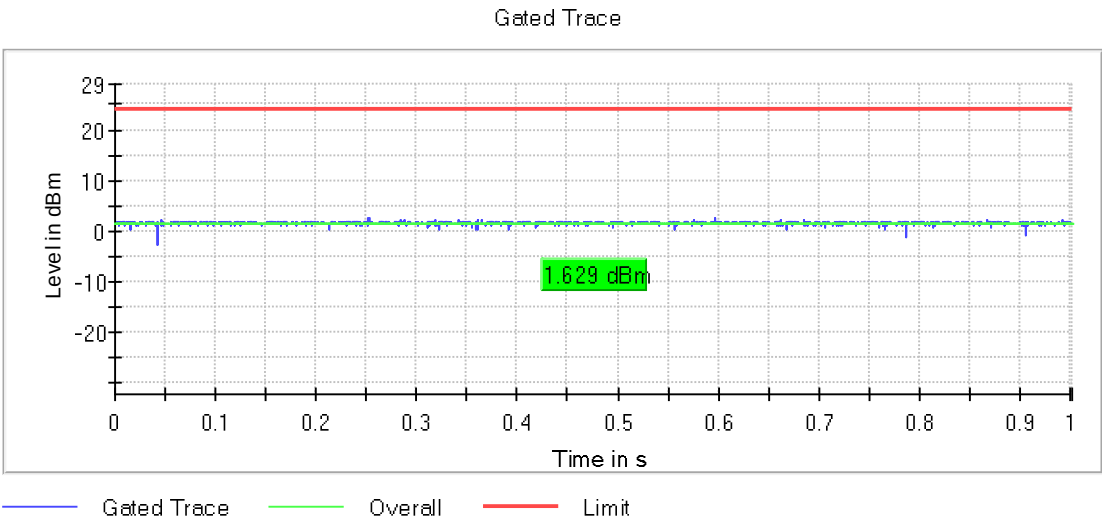
Frequency MHz = 5190.00000 Modulation = 802.11ax HE40 SS1 (OFDMA MCS9) – Partial RU

Images:



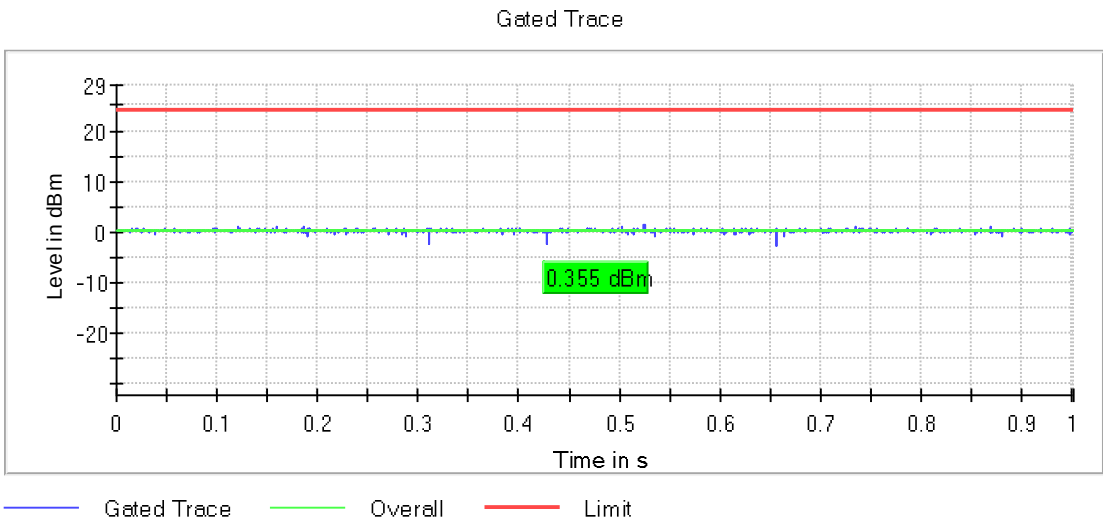
Frequency MHz = 5270.00000 Modulation = 802.11ax HE40 SS1 (OFDMA MCS9) – Partial RU

Images:



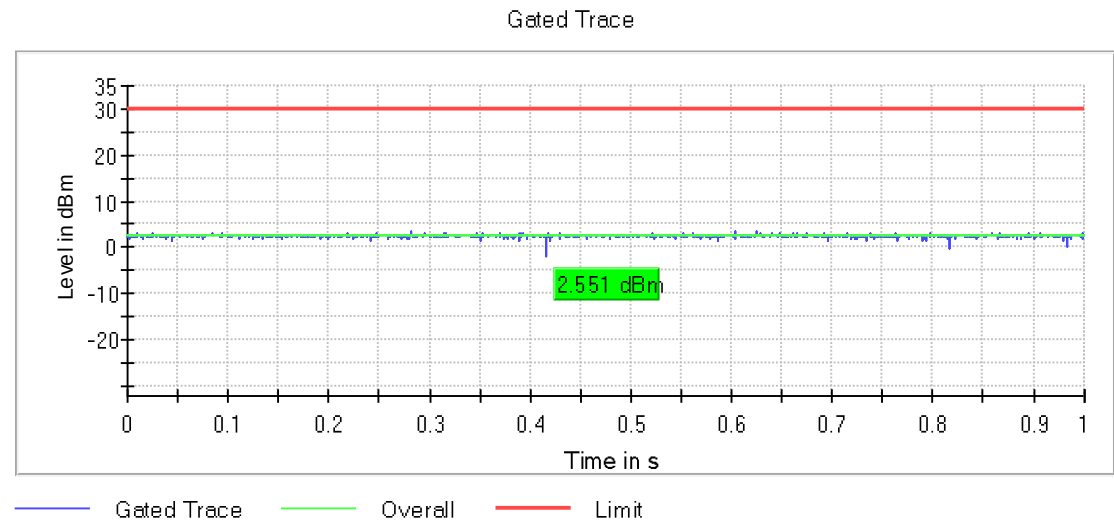
Frequency MHz = 5670.00000 Modulation = 802.11ax HE40 SS1 (OFDMA MCS9) – Partial RU

Images:



Frequency MHz = 5755.00000 Modulation = 802.11ax HE40 SS1 (OFDMA MCS9) – Partial RU

Images:



Tables:
Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs

Mode: SISO

Modulation: 802.11ax HE80 SS1 (OFDMA MCS11) – Full RU, 802.11ax HE80 SS1 (OFDMA MCS11) – Partial RU

Results

Freq (MHz)	Avg Power (dBm)	Max EIRP (dBm)
5210.00000	1.2	3.8
5290.00000	1.6	4.2
5610.00000	-1.3	1.3
5775.00000	0.0	2.6

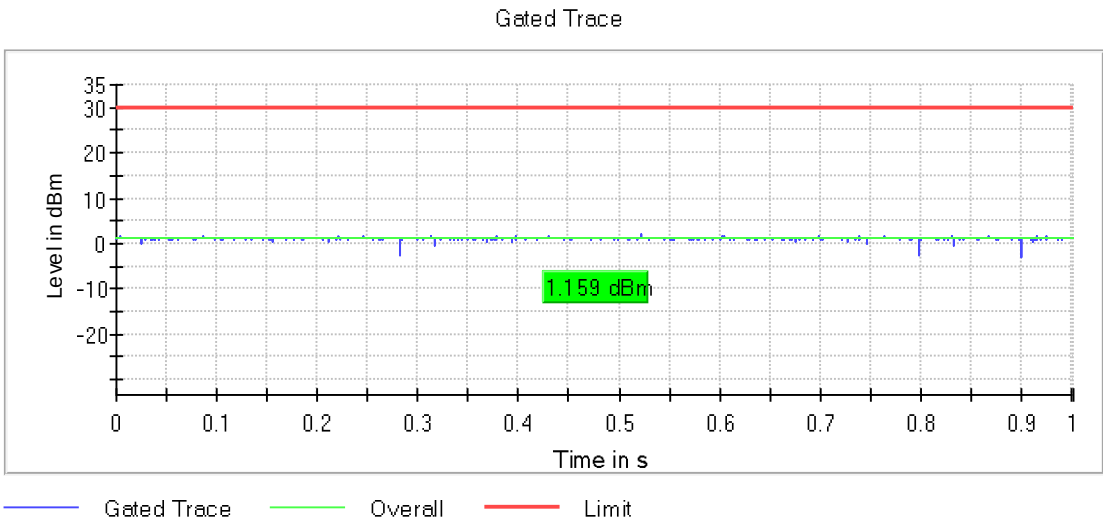
Verdict

Pass

Attachments

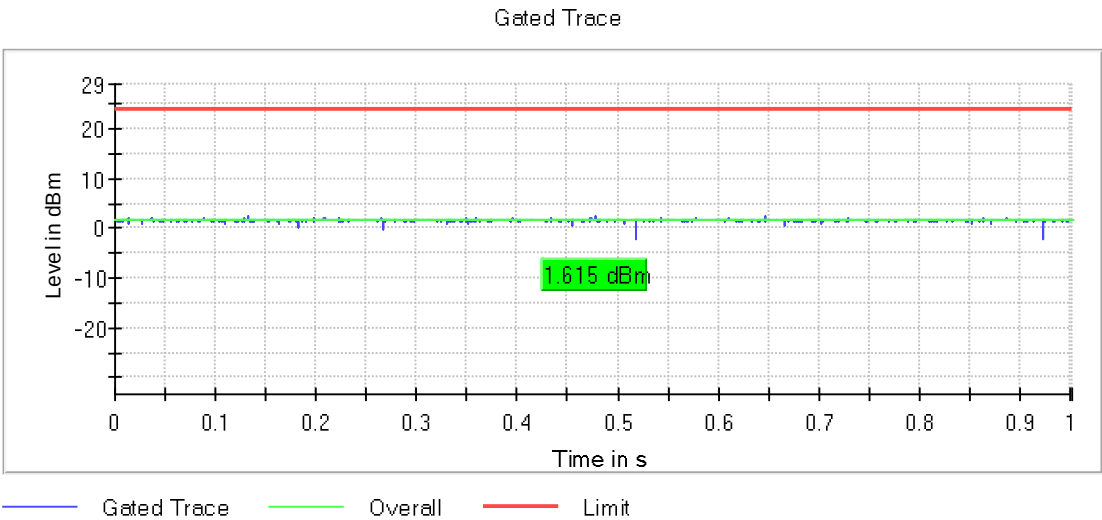
Frequency MHz = 5210.00000 Modulation = 802.11ax HE80 SS1 (OFDMA MCS11) – Partial RU

Images:



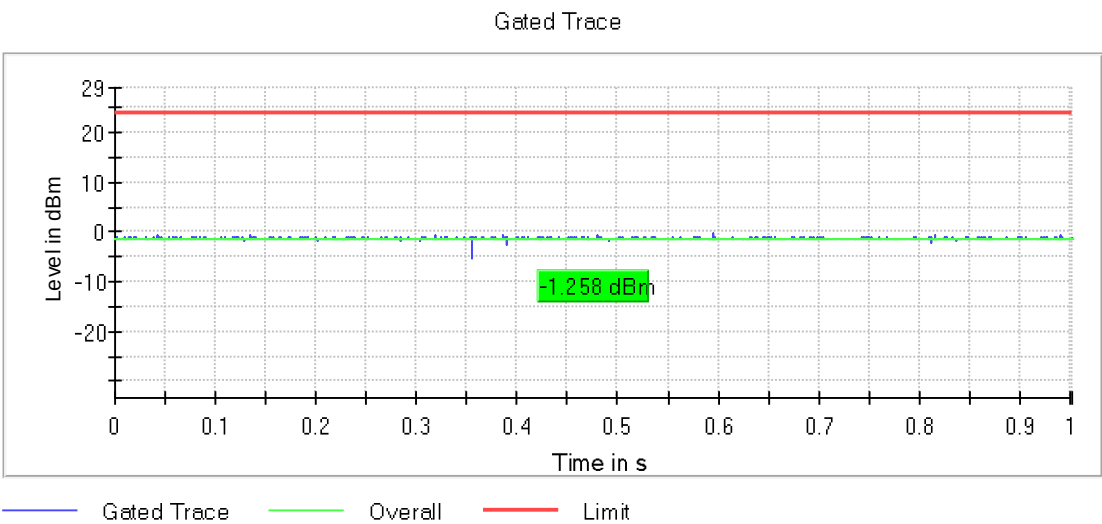
Frequency MHz = 5290.00000 Modulation = 802.11ax HE80 SS1 (OFDMA MCS11) – Partial RU

Images:



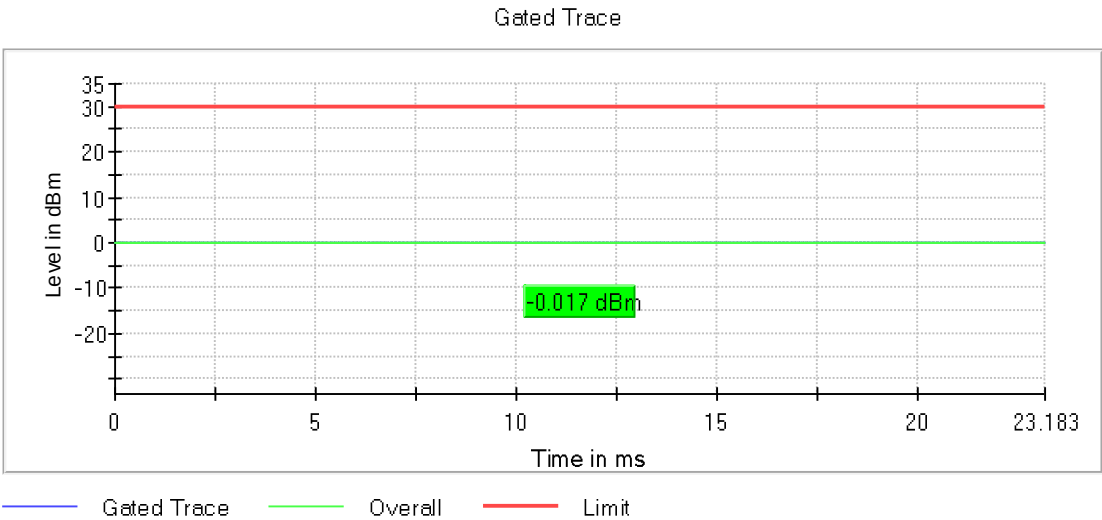
Frequency MHz = 5610.00000 Modulation = 802.11ax HE80 SS1 (OFDMA MCS11) – Partial RU

Images:



Frequency MHz = 5775.00000 Modulation = 802.11ax HE80 SS1 (OFDMA MCS11) – Full RU

Images:



Tables:
Spectrum Analyzer Parameters

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 μs	1.000 μs