

# TEST REPORT

EUT Description	WLAN and BT, 2x2 PCIe M.2 1216 SD adapter card
Brand Name	Intel® Wi-Fi 6 AX201
Model Name	AX201D2W
FCC ID	PD9AX201D2
ISED ID	1000M-AX201D2
Date of Test Start/End	2018-08-22 / 2018-10-03
Features	802.11ax, Dual Band, 2x2 Wi-Fi + Bluetooth® 5 (see section 5)

Applicant	Intel Mobile Communications
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Reference Standards	FCC CFR Title 47 Part 15 E RSS-247 issue 2, RSS-Gen issue 5 (see section 1)
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Test Report identification	180717-03.TR03
Revision Control	Rev. 00 This test report revision replaces any previous test report revision (see section 8)

The test results relate only to the samples tested.  
The test report shall not be reproduced in full, without written approval of the laboratory.

Issued by \_\_\_\_\_ Reviewed by \_\_\_\_\_

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## 1. Standards, reference documents and applicable test methods

1. FCC 47 CFR part 15 – Subpart E – Unlicensed National Information Infrastructure Devices.
2. FCC 47 CFR part 15 - Subpart C – §15.209 Radiated emission limits; general requirements.
3. FCC OET KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 – Guidelines for compliance testing of Unlicensed National Information Infrastructure (U-NII) Devices (Part 15, Subpart E)
4. ANSI C63.10-2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.
5. RSS-247 Issue 2 - Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices.
6. RSS-Gen Issue 5 - General Requirements for Compliance of Radio Apparatus.

## 2. General conditions, competences and guarantees

- ✓ Intel Mobile Communications France SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2005 testing laboratory accredited by the American Association for Laboratory Accreditation (A2LA) with the certificate number 3478.01.
- ✓ Intel Mobile Communications France SAS Wireless RF Lab (Intel WRF Lab) is an Accredited Test Firm recognized by the FCC, with Designation Number FR0011.
- ✓ Intel Mobile Communications France SAS Wireless RF Lab (Intel WRF Lab) is a Registered Test Site listed by ISED, with ISED Assigned Code 1000Y.
- ✓ Intel WRF Lab only provides testing services and is committed to providing reliable, unbiased test results and interpretations.
- ✓ Intel WRF Lab 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.
- ✓ Intel WRF Lab has developed calibration and proficiency programs for its measurement equipment to ensure correlated and reliable results to its customers.
- ✓ This report is only referred to the item that has undergone the test.
- ✓ This report does not imply an approval of the product by the Certification Bodies or competent Authorities.

## 3. Environmental Conditions

- ✓ At the site where the measurements were performed the following limits were not exceeded during the tests:

Temperature	24 °C ±2°C
Humidity	60 % ± 5 %

#### 4. Test samples

Sample	Control #	Description	Model	Serial #	Date of receipt	Note
#1	180717-03.S04	RF MODULE	AX201D2W	WFM : 3413E8C8F81B	2018-08-17	Used for conducted tests
	180717-03.S13	EXTENDER	PCB00651_01	6510818-131	2018-08-21	
	180000-01.S04	ADAPTER	JFP ADAPTER M2	-	2017-04-10	
	170000-01.S01	LAPTOP	LATITUDE E5470	DBLMC2	2017-03-28	
#2	180717-03.S06	RF MODULE	AX201D2W	WFM : 3413E8C8EBC3	2018-08-17	Radiated Spurious emission from 30 MHz to 6.4 GHz
	180326-01.S03	EXTENDER	PCB00651_01	6510818-198	2018-03-27	
	180000-01.S02	ADAPTER	JFP ADAPTER M2	-	2017-08-09	
	170209-01.S16	LAPTOP	LATITUDE E7470	C1HTPF2	2017-02-09	
#3	180717-03.S11	RF MODULE	AX201D2W	WFM : 3413E8C8EBFA	2018-08-17	Radiated Spurious emission from 6.4 GHz to 40 GHz
	180717-03.S18	EXTENDER	PCB00651_01	6510817-133	2018-08-21	
	180000-01.S05	ADAPTER	JFP ADAPTER M2	-	2018-08-20	
	170801-01.S10	LAPTOP	LATITUDE E7470	7KNOXF2	2017-09-07	
#4	180717-03.S08	RF MODULE	AX201D2W	WFM : 3413E8C8F89D	2018-08-17	Radiated Spurious emission from 6.4 GHz to 40 GHz
	180717-03.S18	EXTENDER	PCB00651_01	6510817-133	2018-08-21	
	180000-01.S05	ADAPTER	JFP ADAPTER M2	-	2018-08-20	
	170801-01.S10	LAPTOP	LATITUDE E7470	7KNOXF2	2017-09-07	

#### 5. EUT Features

Brand Name	Intel® Wi-Fi 6 AX201
Model Name	AX201D2W
FCC ID	PD9AX201D2
ISED ID	1000M-AX201D2
Software Version	OEM DRTU_08048_11_1832_0G
Driver Version	99.0.39.1 (V010.16.t64)
Prototype / Production	Production
Supported Radios	802.11b/g/n/ax                      2.4GHz (2400.0 – 2483.5 MHz) 802.11a/n/ac/ax                    5.2GHz (5150.0 – 5350.0 MHz) 5.6GHz (5470.0 – 5725.0 MHz) 5.8GHz (5725.0 – 5850.0 MHz) Bluetooth 5                         2.4GHz (2400.0 – 2483.5 MHz)
Antenna Information	CHAIN A: PIFA antenna. WiFi 2.4GHz & 5GHz and BT CHAIN B: PIFA antenna. WiFi 2.4GHz & 5GHz
Additional Information	

#### 6. Remarks and comments

N/A

## 7. Test Verdicts summary

### 7.1. 802.11 a/n/ac/ax – U-NII- 3

FCC part	RSS part	Test name	Verdict
15.407 (a) (3)	RSS-247 Clause 6.2.4.1	Power Limits. Maximum output power	P
15.407 (a) (3)	RSS-247 Clause 6.2.4.1	Peak power spectral density	P
15.407 (b) (3)	RSS-247 Clause 6.2.4.2	Undesirable emissions limits: Band Edge (conducted)	P
15.407 (b) (3) 15.209	RSS-247 Clause 6.2.4.2 RSS-GEN Clause 8.9	Undesirable emissions limits (radiated)	P

## 8. Document Revision History

Revision #	Date	Modified by	Revision Details
Rev. 00	2018-10-03	M.Lefebvre F.Nsengiyumva	First Issue

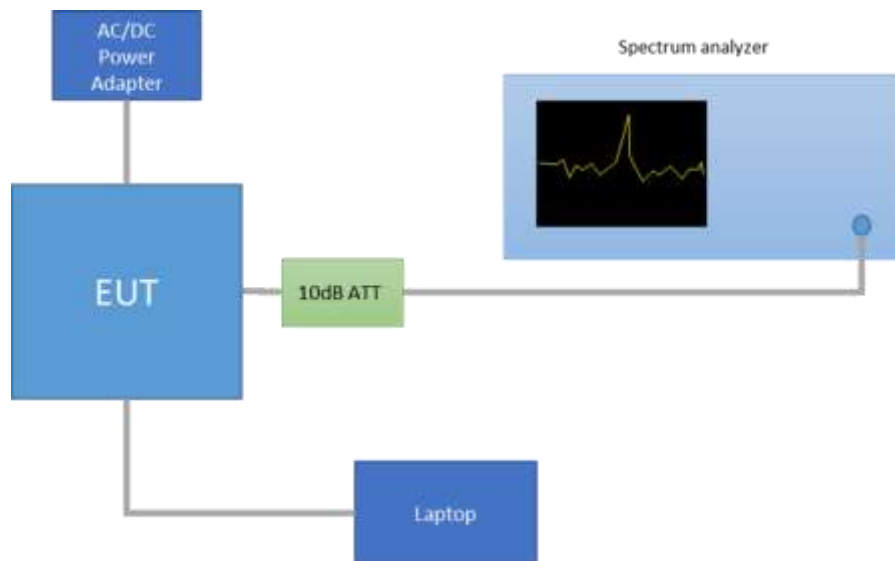
# Annex A. Test & System Description

## A.1 Measurement System

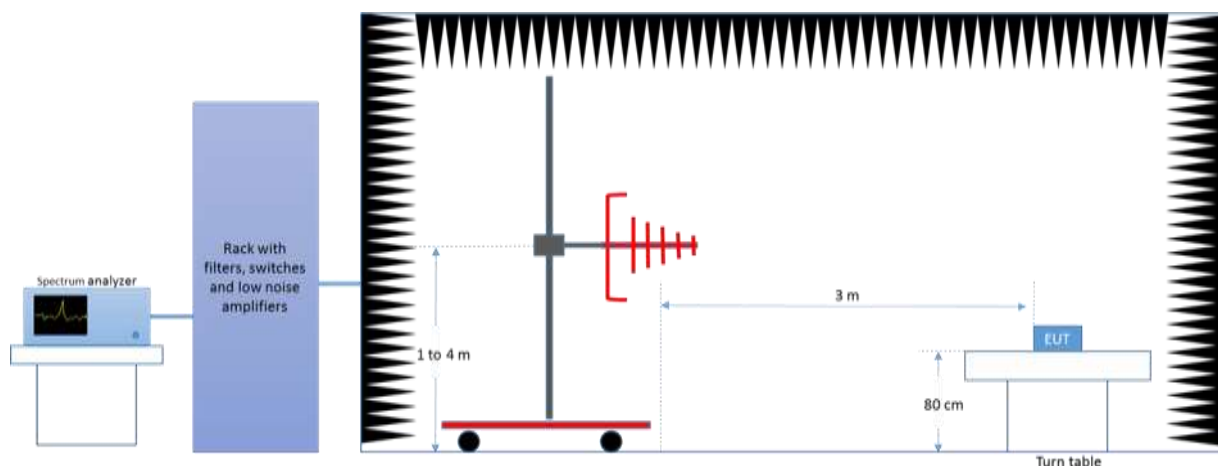
Measurements were performed using the following setups, made in accordance to the general provisions of FCC KDB 789033 D02 General UNII Test Procedures.

The DUT was installed in a test fixture and this test fixture is connected to a laptop computer and AC/DC power adapter. The laptop computer was used to configure the EUT to continuously transmit at a specified output power using all different modes and modulation schemes, using the Intel proprietary tool DRTU.

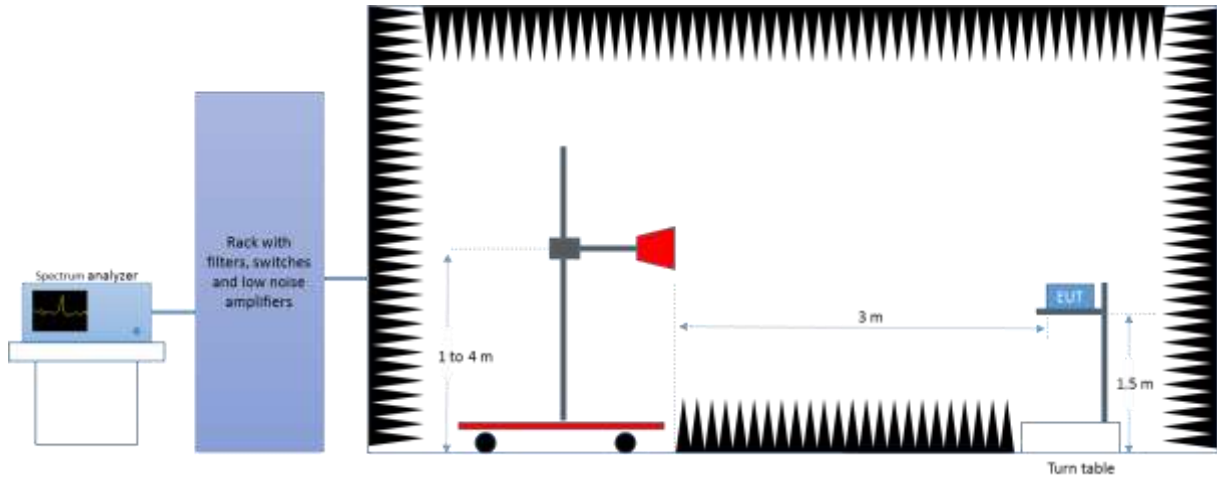
### Conducted Setup



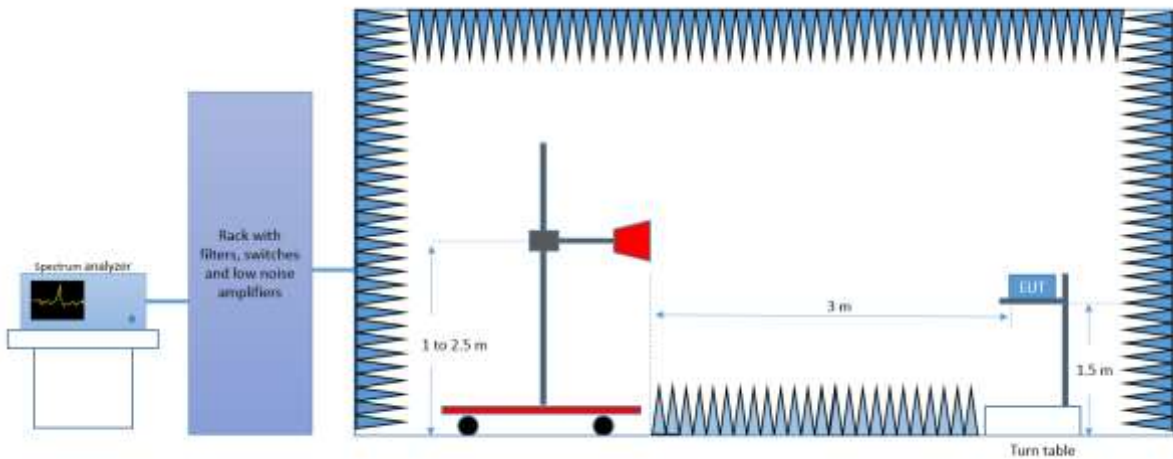
### Radiated Setup 30 MHz – 1 GHz



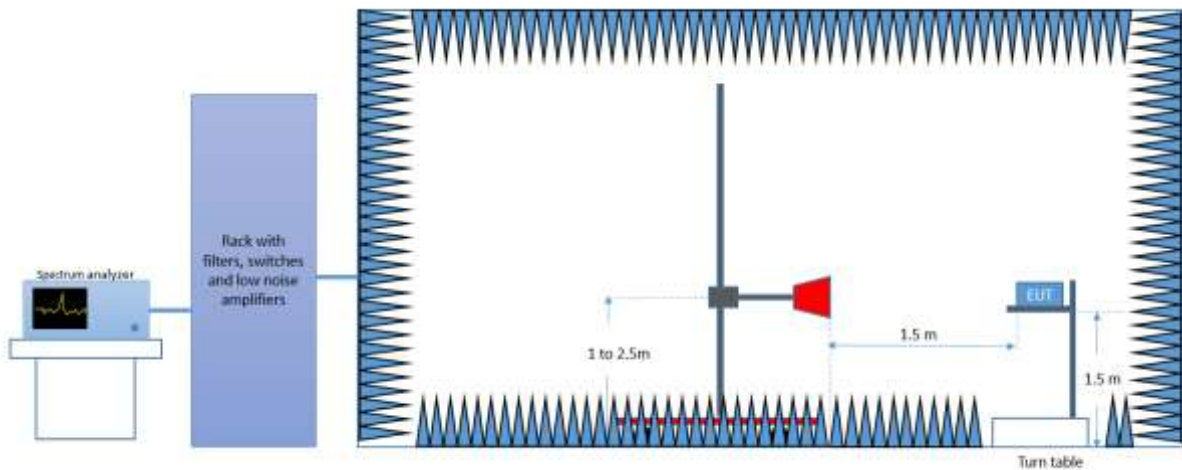
*Radiated Setup 1 GHz – 6.4 GHz*



*Radiated Setup 6.4 GHz – 18 GHz*



*Radiated Setup 18 GHz – 40 GHz*



## A.2 Test Equipment List

### Conducted Setup

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0315	Spectrum analyzer	FSV30	103307	Rohde & Schwarz	2018-04-10	2020-04-10

### Radiated Setup-1

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0420	Spectrum analyzer	FSV40	101556	Rohde & Schwarz	2018-05-17	2020-05-17
0137	Log antenna 30 MHz – 1 GHz	3142E	00156946	ETS Lindgren	2017-12-19	2019-12-19
0325	Double Ridged Horn Antenna 1 GHz – 18 GHz	3117	00157734	ETS Lindgren	2017-08-22	2019-08-22
0135	Semi Anechoic chamber	FACT 3	5720	ETS Lindgren	2018-04-18	2020-04-18
0530	Measurement Software	EMC32	100623	Rohde & Schwarz	N/A	N/A

N/A: Not Applicable

### Radiated Setup-2

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0133	Spectrum analyzer	FSV40	101358	Rohde & Schwarz	2018-04-11	2020-04-11
0141	Double Ridged Horn Antenna 1 GHz – 18 GHz	3117	00157736	ETS Lindgren	2018-05-11	2020-05-11
0334	Double Ridged Horn Antenna 18 GHz – 40 GHz	3116C-PA	00196308	ETS Lindgren	2017-08-22	2019-08-22
0337	Full Anechoic chamber	RFD_FA_100	5996	ETS Lindgren	2018-04-17	2020-04-17
0329	Measurement Software	EMC32	100401	Rohde & Schwarz	N/A	N/A

N/A: Not Applicable

### Radiated Setup - shared equipments

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0617	Power Sensor 50MHz-18GHz	NRP-Z81	104386	Rohde & Schwarz	2018-04-16	2020-04-16
0618	Power Sensor 50MHz-18GHz	NRP-Z81	104382	Rohde & Schwarz	2018-04-16	2020-04-16



### A.3 Measurement Uncertainty Evaluation

The system uncertainty evaluation is shown in the below table:

Measurement type	Uncertainty [ ±dB]
Conducted Power	±1.0
Conducted Spurious Emission	±2.9
Radiated tests <1GHz	±3.8
Radiated tests 1GHz - 40 GHz	±4.7

# Annex B. Test Results U-NII-3

## B.1 Test Conditions

For 802.11a mode the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, but not simultaneously.

For 802.11n20 & 802.11ax20 (20 MHz channel bandwidth), 802.11n40 and 802.11ax40 (40MHz channel bandwidth) 802.11ac80 & 802.11ax80 (80MHz channel bandwidth) modes the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, and also simultaneously.

The conducted RF output power at each chain was adjusted according to the client's supplied Target values (see following table) using the Intel DRTU tool and measuring the power by using a spectrum analyser with the channel integration method according to section II) E) 2) e) (Method SA-2 Alternative) of Guidance 789033 D02.

Measured values for adjustment were within +/- 0.25 dB from the declared Target values.

U-NII-3					Conducted Power, Target Value (dBm)		
Mode	BW (MHz)	Data Rate	CH #	Freq. (MHz)	SISO Chain A	SISO Chain B	MIMO at both ports A and B
802.11a	20	6Mbps	149	5745	21.00	21.50	-
			157	5785	21.50	21.50	-
			165	5825	21.50	21.50	-
802.11n	20	HT0 HT8*	149	5745	21.00	21.00	20.50
			157	5785	21.50	21.50	20.50
			165	5825	21.00	21.00	20.50
	40	HT0 HT8*	151F	5755	21.00	21.50	21.00
			159F	5795	21.00	21.00	21.00
802.11ac	80	VHT0	155ac80	5775	19.00	19.00	19.50
802.11ax	20	HE0	149	5745	21.00	21.50	20.50
			157	5785	21.50	21.50	20.50
			165	5825	21.50	21.50	20.50
	40		151F	5755	21.00	20.50	21.00
			159F	5795	21.00	21.00	21.00
			155ax80	5775	19.00	18.50	19.50

\* Note: HT8 for MIMO modes only

Overlapped channels between UNII-2C and UNII-3					Conducted Power, Target Value (dBm)		
Mode	BW (MHz)	Data Rate	CH #	Freq. (MHz)	SISO Chain A	SISO Chain B	MIMO at both ports A and B
802.11n	20	HT0 HT8*	144	5720	20.5	20.5	21.5
	40	HT0 HT8*	142F	5710	20.5	20.5	22.0
802.11ac	80	VHT0	138ac80	5690	21.0	20.5	21.5
802.11ax	20	HE0	144	5720	21.0	21.0	21.5
	40	HE0	142F	5710	20.5	21.0	22.0
	80	HE0	138ax80	5690	21.0	21.0	22.0

The following data rates were selected based on preliminary testing that identified those rates as the worst cases for output power and spurious levels at the band edges:

- 802.11a → 6Mbps
- 802.11n20 and 802.11n40 (SISO) → HT0
- 802.11n20 and 802.11n40 (MIMO) → HT8
- 802.11ac80 (SISO) → VHT0
- 802.11ac80 (MIMO) → VHT0
- 802.11ax20 and 802.11ax40 (SISO) → HE0
- 802.11ax20 and 802.11ax40 (MIMO) → HE0
- 802.11ax80 (SISO) → HE0
- 802.11ax80 (MIMO) → HE0
- 802.11he160 (SISO) → HE0
- 802.11he160 (MIMO) → HE0

Alternative channels to the lowest and highest channels per band have been also tested for Band Edge compliance

## B.2 Test Results Tables

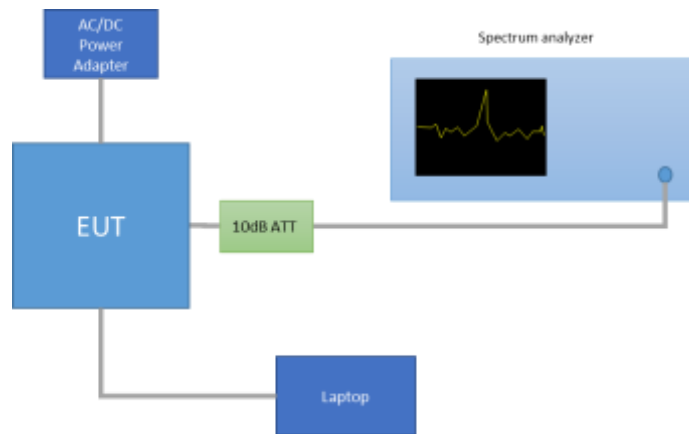
### B.2.1 6dB & 99% Bandwidth

#### Test limits

FCC part	RSS part	Limits
15.407 (e)	RSS-247 Clause 6.2.4.1	For equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

#### Test procedure

The setup below was used to measure the 6dB & 99% Bandwidth. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.



For the overlapped channels between U-NII-2C and U-NII-3 bands, and according to FCC KDB 789033 D02 v02r01 , the boundary frequency between the bands is used as one edge for defining the portion of the 6dB bandwidth that falls within a particular U-NII band. This rule is only applicable for the 6dB bandwidth and for those channels marked as overlapped.

**Results tables**

**U-NII-3 channels**

Mode	Rate	Antenna	Channel	Freq. [MHz]	6dB BW [MHz]	99% BW [MHz]
802.11a	6Mbps	SISO-A	149	5745	16.32	17.76
			157	5785	16.34	17.76
			165	5825	16.34	18.24
		SISO-B	149	5745	16.35	17.64
			157	5785	16.34	17.56
			165	5825	16.34	17.72
802.11n20	HT0	SISO-A	149	5745	17.57	18.84
			157	5785	17.58	18.64
			165	5825	17.58	18.60
		SISO-B	149	5745	17.56	18.40
			157	5785	17.58	18.40
			165	5825	17.58	18.44
	HT8	MIMO-A	149	5745	17.57	17.96
			157	5785	17.58	18.00
			165	5825	17.58	17.96
		MIMO-B	149	5745	17.57	17.96
			157	5785	17.58	17.96
			165	5825	17.59	17.96
802.11n40	HT0	SISO-A	151F	5755	36.35	37.20
			159F	5795	36.35	37.20
		SISO-B	151F	5755	36.33	37.20
			159F	5795	36.35	37.04
	HT8	MIMO-A	151F	5755	36.35	36.72
			159F	5795	36.35	36.64
		MIMO-B	151F	5755	36.35	36.40
			159F	5795	36.35	36.40
802.11ac80	VHT0	SISO-A	155ac80	5775	63.05	75.12
		SISO-B		5775	70.16	75.24
		MIMO-A		5775	70.16	75.24
		MIMO-B		5775	70.22	75.00

**Max Value**

Mode	Rate	Antenna	Channel	Freq. [MHz]	6dB BW [MHz]	99% BW [MHz]
802.11ax20	HE0	SISO-A	149	5745	18.81	19.24
			157	5785	18.78	19.36
			165	5825	18.82	19.36
		SISO-B	149	5745	18.59	19.24
			157	5785	18.48	19.24
			165	5825	18.93	19.24
		MIMO-A	149	5745	18.84	19.08
			157	5785	18.70	19.08
			165	5825	18.95	19.12
		MIMO-B	149	5745	18.69	19.12
			157	5785	18.68	19.08
			165	5825	18.67	19.08
802.11ax40	HE0	SISO-A	151F	5755	37.83	38.08
			159F	5795	37.89	38.16
		SISO-B	151F	5755	37.77	37.92
			159F	5795	37.85	38.00
		MIMO-A	151F	5755	37.97	37.84
			159F	5795	37.77	37.92
		MIMO-B	151F	5755	37.74	37.92
			159F	5795	37.85	37.92
802.11ax80	HE0	SISO-A	155ax80	5775	71.42	76.80
		SISO-B		5775	71.42	76.68
		MIMO-A		5775	70.16	76.68
		MIMO-B		5775	66.45	76.38

Max Value

Mode	Rate	Antenna	Channel	Frequency [MHz]	RU Configuration	6dB BW [MHz]	99% BW [MHz]
802.11ax20	HE0	SISO-A	149	5745	26/0	2.06	18.52
					52/37	17.02	18.44
					106/53	17.09	18.44
		SISO-B			26/0	2.08	18.56
					52/37	17.02	18.40
					106/53	17.12	18.44
		MIMO-A			26/0	2.07	18.56
					52/37	17.03	18.40
					106/53	17.12	18.36
		MIMO-B			26/0	2.01	18.36
					52/37	16.99	18.00
					106/53	17.14	18.28
802.11ax40	HE0	SISO-A	151F	5755	242/61	17.75	19.44
		SISO-B			242/61	18.67	19.36
		MIMO-A			242/61	18.73	19.20
		MIMO-B			242/61	18.75	19.12
802.11ax80	HE0	SISO-A	155ax80	5775	484/65	37.68	38.04
		SISO-B			484/65	37.61	37.92
		MIMO-B			484/65	37.61	37.92
		MIMO-A			484/65	37.61	37.92

Max Value

**Overlapped channels between U-NII-2C and U-NII-3**

Mode	Rate	Antenna	Channel	Frequency	6dB BW [MHz]	26dB BW UNII-3
802.11n20	HT0	SISO-A	144	5720	3.55	7.62
		SISO-B			<b>3.57</b>	<b>7.68</b>
	HT8	MIMO-A			<b>3.81</b>	<b>7.53</b>
		MIMO-B			3.54	7.25
802.11n40	HT0	SISO-A	142F	5710	3.17	<b>8.81</b>
		SISO-B			<b>3.18</b>	8.54
	HT8	MIMO-A			<b>3.19</b>	<b>7.91</b>
		MIMO-B			3.18	6.73
802.11ac80	VHT0	SISO-A	138ac80	5690	<b>3.22</b>	<b>10.94</b>
		SISO-B			3.22	10.70
		MIMO-A			<b>3.20</b>	<b>8.80</b>
		MIMO-B			3.20	8.23
802.11ax20		SISO-A	144	5720	<b>4.49</b>	<b>7.78</b>
		SISO-B			4.47	7.53
		MIMO-A			<b>4.52</b>	<b>7.68</b>
		MIMO-B			4.44	7.27
802.11ax40	HE0	SISO-A	142F	5710	4.02	7.27
		SISO-B			<b>4.03</b>	<b>7.54</b>
		MIMO-A			<b>4.07</b>	<b>7.01</b>
		MIMO-B			4.07	6.83
802.11ax80		SISO-A	138ax80	5690	<b>4.04</b>	<b>7.09</b>
		SISO-B			4.04	6.90
		MIMO-A			<b>4.03</b>	6.52
		MIMO-B			4.02	<b>7.47</b>

**Max Value**

Note: the 26dB bandwidth of the overlapped channels falling in U-NII-3 band is shown in the above table. These values were used to measure the maximum output power in the U-NII-3 band as specified in chapter B.2.2.

**See Section B.3.1, B.3.2, B.3.3, and Section B.3.4 for the screenshot results.**



## B.2.2 Power Limits. Maximum output power & Peak power spectral Density

### Test limits

FCC part	RSS part	Limits
15.407 (a) (3)	RSS-247 Clause 6.2.4.1	For the band 5.725-5.85 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

### Test procedure

The Maximum Conducted Output Power was measured using the channel integration method according to section E) 2) e) (Method SA-2 Alternative) of KDB 789033 D02.

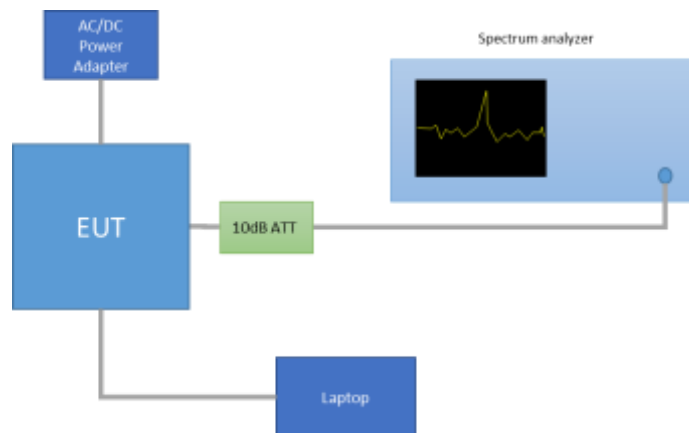
The maximum power spectral density (PSD) was measured using the method according to section F) (Method SA-2 Alternative) of KDB 789033 D02.

In the measure-and-sum approach for MIMO mode, the conducted emission level (e.g., transmit power or power in specified bandwidth) is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically in linear power units to determine the total emission level from the device.

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power.

The setup below was used to measure the maximum conducted output power and power spectral density. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.

The declared maximum antenna gain is 5dBi.



For the overlapped channels between U-NII-2C and U-NII-3, and according to FCC KDB 789033 D02 v02r01 , the power is computed based on the portion of the emission bandwidth (26dB) contained within that band. This rule is only applicable for those channels marked as overlapped.

Results tables

Duty cycle

Mode	Rate	Antenna	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
802.11a	6Mbps	SISO-A	2.07	2.13	97.38%
		SISO-B	2.07	2.13	97.38%
802.11n20	HT0	SISO-A	4.05	4.10	98.63%
		SISO-B	4.05	4.10	98.63%
	HT8	MIMO-A	3.96	4.02	98.56%
		MIMO-B	3.96	4.02	98.56%
802.11ax20	HE0	SISO-A	3.94	3.99	98.66%
		SISO-B	3.94	3.99	98.66%
		MIMO-A	3.96	4.02	98.68%
		MIMO-B	3.96	4.02	98.68%
802.11n40	HT0	SISO-A	3.96	4.01	98.67%
		SISO-B	3.96	4.01	98.67%
	HT8	MIMO-A	3.96	4.02	98.66%
		MIMO-B	3.96	4.02	98.66%
802.11ax40	HE0	SISO-A	3.95	4.00	98.67%
		SISO-B	3.95	4.00	98.67%
		MIMO-A	3.95	4.00	98.64%
		MIMO-B	3.95	4.00	98.64%
802.11ac80	VHT0	SISO-A	3.95	4.00	98.67%
		SISO-B	3.95	4.00	98.67%
		MIMO-A	3.95	4.01	98.61%
		MIMO-B	3.95	4.01	98.61%
802.11ax80	HE0	SISO-A	3.95	4.01	98.59%
		SISO-B	3.95	4.01	98.59%
		MIMO-A	3.96	4.02	98.66%
		MIMO-B	3.96	4.02	98.66%

Maximum output power – U-NII-3 Channels

Mode	Rate	Channel	Frequency (MHz)	Antenna	Average Cond. Output Power [dBm]	Max.* Cond. Output Power [dBm]	Max.* Cond. Output Power [mW]	Max.* EIRP [dBm]	
802.11a	6Mbps	149	5745	SISO-A	21.04	21.16	<b>130.48</b>	26.16	
				SISO-B	21.26	21.38	137.26	26.38	
		157	5785	SISO-A	21.24	21.36	136.62	26.36	
				SISO-B	21.31	21.43	<b>138.84</b>	26.43	
		165	5825	SISO-A	21.19	21.31	135.06	26.31	
				SISO-B	21.23	21.35	136.31	26.35	
802.11n20	HT0	149	5745	SISO-A	21.23	21.23	132.74	26.23	
				SISO-B	21.21	21.21	132.13	26.21	
		157	5785	SISO-A	21.27	21.27	133.97	26.27	
				SISO-B	21.29	21.29	<b>134.59</b>	26.29	
		165	5825	SISO-A	21.05	21.05	<b>127.35</b>	26.05	
				SISO-B	21.18	21.18	131.22	26.18	
	HT8	149	5745	MIMO-A	17.60	17.60	57.54	22.60	
				MIMO-B	17.42	17.42	55.21	22.42	
				Combined A+B	20.52	20.52	<b>112.75</b>	25.52	
		157	5785	MIMO-A	17.48	17.48	55.98	22.48	
				MIMO-B	17.53	17.53	56.62	22.53	
				Combined A+B	20.52	20.52	112.60	25.52	
	165	5825	MIMO-A	17.44	17.44	55.46	22.44		
			MIMO-B	17.32	17.32	53.95	22.32		
			Combined A+B	20.39	20.39	<b>109.41</b>	25.39		
	802.11n40	HT0	151F	5755	SISO-A	21.22	21.22	132.43	26.22
					SISO-B	21.32	21.32	<b>135.52</b>	26.32
			159F	5795	SISO-A	21.09	21.09	<b>128.53</b>	26.09
SISO-B					21.21	21.21	132.13	26.21	
HT8		151F	5755	MIMO-A	18.03	18.03	63.53	23.03	
				MIMO-B	17.92	17.92	61.94	22.92	
				Combined A+B	20.99	20.99	<b>125.48</b>	25.99	
		159F	5795	MIMO-A	17.88	17.88	61.38	22.88	
				MIMO-B	18.05	18.05	63.83	23.05	
				Combined A+B	20.98	20.98	<b>125.20</b>	25.98	
802.11ac80	VHT0	155ac80	5775	SISO-A	18.98	18.98	<b>79.07</b>	23.98	
				SISO-B	18.83	18.83	<b>76.38</b>	23.83	
				MIMO-A	16.44	16.44	44.06	21.44	
				MIMO-B	16.59	16.59	45.60	21.59	
				Combined A+B	19.53	19.53	89.66	24.53	

\* Maximum values are the duty cycle compensated values calculated from the average (measured)

**Max Value**

**Min Value**

Mode	Rate	Channel	Frequency (MHz)	Antenna	Average Cond. Output Power [dBm]	Max.* Cond. Output Power [dBm]	Max.* Cond. Output Power [mW]	Max.* EIRP [dBm]		
802.11ax20	HE0	149	5745	SISO-A	21.11	21.11	129.12	26.11		
				SISO-B	21.34	21.34	136.14	26.34		
		157	5785	SISO-A	21.38	21.38	137.40	26.38		
				SISO-B	21.37	21.37	137.09	26.37		
		165	5825	SISO-A	21.30	21.30	134.90	26.30		
				SISO-B	21.29	21.29	134.59	26.29		
		149	5745	MIMO-A	17.42	17.42	55.21	22.42		
				MIMO-B	17.54	17.54	56.75	22.54		
				Combined A+B	20.49	20.49	111.96	25.49		
		157	5785	MIMO-A	17.63	17.63	57.94	22.63		
				MIMO-B	17.59	17.59	57.41	22.59		
				Combined A+B	20.62	20.62	115.35	25.62		
		165	5825	MIMO-A	17.41	17.41	55.08	22.41		
				MIMO-B	17.44	17.44	55.46	22.44		
				Combined A+B	20.44	20.44	110.54	25.44		
		802.11ax40	HE0	151F	5755	SISO-A	21.03	21.03	126.77	26.03
						SISO-B	20.63	20.63	115.61	25.63
				159F	5795	SISO-A	21.23	21.23	132.74	26.23
SISO-B	21.11					21.11	129.12	26.11		
151F	5755			MIMO-A	17.97	17.97	62.66	22.97		
				MIMO-B	18.03	18.03	63.53	23.03		
				Combined A+B	21.01	21.01	126.19	26.01		
159F	5795			MIMO-A	17.98	17.98	62.81	22.98		
				MIMO-B	18.01	18.01	63.24	23.01		
				Combined A+B	21.01	21.01	126.05	26.01		
802.11ax80	HE0			155ax80	5775	SISO-A	18.80	18.80	75.86	23.80
						SISO-B	18.56	18.56	71.78	23.56
		MIMO-A	16.44			16.44	44.06	21.44		
		MIMO-B	16.37			16.37	43.35	21.37		
		Combined A+B	19.42			19.42	87.41	24.42		

\* Maximum values are the duty cycle compensated values calculated from the average (measured)

Max Value

Min Value

Mode	Rate	Antenna	Channel	Freq. [MHz]	RU Config.	Average Conducted Output Power [dBm]	Maximum* Conducted Output Power [dBm]	Maximum* Conducted Output Power [mW]	Max of EIRP [dBm]
802.11ax20	HEO	SISO-A	149	5745	26/0	15.35	15.35	34.28	20.35
		SISO-A			52/37	18.25	18.25	66.83	23.25
		SISO-A			106/53	21.04	21.04	127.06	26.04
		SISO-B			26/0	15.39	15.39	34.59	20.39
		SISO-B			52/40	18.28	18.28	67.30	23.28
		SISO-B			106/53	21.08	21.08	128.23	26.08
		MIMO-A			26/0	12.52	12.52	17.86	17.52
		MIMO-B				12.41	12.41	17.42	17.41
		Combined A+B				15.48	15.48	35.28	20.48
		MIMO-A			52/37	15.38	15.38	34.51	20.38
		MIMO-B				15.40	15.40	34.67	20.40
		Combined A+B				18.40	18.40	69.19	23.40
		MIMO-A			106/53	18.20	18.20	66.07	23.20
		MIMO-B				18.21	18.21	66.22	23.21
		Combined A+B				21.22	21.22	132.29	26.22
802.11ax40	HEO	SISO-A	151F	5755	242/61	21.04	21.04	127.06	26.04
		SISO-B				21.04	21.04	127.06	26.04
		MIMO-B				17.90	17.90	61.66	22.90
		MIMO-A				17.95	17.95	62.37	22.95
		Combined A+B				20.93	20.93	123.75	25.93
802.11ax80	HEO	SISO-A	155ax80	5775	484/65	20.36	20.36	108.64	25.36
		SISO-B				19.96	19.96	99.08	24.96
		MIMO-A				18.11	18.11	64.71	23.11
		MIMO-B				18.14	18.14	65.16	23.14
		Combined A+B				21.14	21.14	129.88	26.14

\* Maximum values are the duty cycle compensated values calculated from the average (measured)

Max Value

Min Value

Maximum output power – Overlapped channels between U-NII-2C and U-NII-3

Mode	Rate	Channel	Freq.	Antenna	Average Cond. Output Power UNII-3 [dBm]	Max.* Cond. Output Power UNII-3 [dBm]	Max.* Cond. Output Power UNII-3 [mW]	Max.* EIRP UNII-3 [dBm]
802.11n20	HT0	144	5720	SISO-A	14.08	14.14	<b>25.94</b>	19.14
				SISO-B	13.99	14.05	25.41	19.05
	HT8			MIMO-A	11.76	11.82	15.22	16.82
				MIMO-B	11.58	11.64	14.60	16.64
				Combined A+B	14.68	14.74	29.82	19.74
802.11n40	HT0	142F	5710	SISO-A	11.32	11.38	<b>13.74</b>	16.38
				SISO-B	10.10	10.16	10.37	15.16
	HT8			MIMO-A	8.84	8.90	7.76	13.90
				MIMO-B	8.65	8.71	7.43	13.71
				Combined A+B	11.76	11.82	15.19	16.82
802.11ac80	VHT0	138ac80	5690	SISO-A	3.99	4.05	2.54	9.05
				SISO-B	4.93	4.99	<b>3.15</b>	9.99
				MIMO-A	1.93	1.99	1.58	6.99
				MIMO-B	2.67	2.73	1.88	7.73
				Combined A+B	5.33	5.39	3.46	10.39
802.11ax20	HE0	144	5720	SISO-A	14.67	14.73	<b>29.71</b>	19.73
				SISO-B	14.49	14.55	28.50	19.55
				MIMO-A	12.22	12.28	16.90	17.28
				MIMO-B	12.06	12.12	16.29	17.12
				Combined A+B	15.15	15.21	33.18	20.21
802.11ax40		142F	5710	SISO-A	10.74	10.80	12.02	15.80
				SISO-B	10.98	11.04	<b>12.70</b>	16.04
				MIMO-A	9.48	9.54	8.99	14.54
				MIMO-B	9.23	9.29	8.49	14.29
				Combined A+B	12.37	12.43	17.48	17.43
802.11ax80	138ax80	5690	SISO-A	5.35	5.41	<b>3.47</b>	10.41	
			SISO-B	5.26	5.32	3.40	10.32	
			MIMO-A	2.83	2.89	1.94	7.89	
			MIMO-B	3.28	3.34	2.16	8.34	
			Combined A+B	6.07	6.13	4.10	11.13	

\* Maximum values are the duty cycle compensated values calculated from the measured average values

**Max Value**

**Min Value**

Maximum Power Spectral Density (PSD) – U-NII-3 channels

Mode	Rate	Channel	Freq. [MHz]	Antenna	Average conducted PSD [dBm/500kHz]	Max.* conducted PSD [dBm/500kHz]	
802.11a	6Mbps	149	5745	SISO-A	6.24	6.36	
				SISO-B	6.47	6.59	
		157	5785	SISO-A	6.45	6.57	
				SISO-B	6.56	<b>6.68</b>	
		165	5825	SISO-A	6.43	6.55	
				SISO-B	6.46	6.58	
802.11n20	HT0	149	5745	SISO-A	6.11	6.11	
				SISO-B	6.20	6.20	
		157	5785	SISO-A	6.22	6.22	
				SISO-B	6.25	<b>6.25</b>	
		165	5825	SISO-A	6.03	6.03	
				SISO-B	6.10	6.10	
	HT8	149	5745	MIMO-A	2.52	2.52	
				MIMO-B	2.37	2.37	
				Combined A+B	5.46	5.46	
		157	5785	MIMO-A	2.43	2.43	
				MIMO-B	2.49	2.49	
				Combined A+B	5.47	<b>5.47</b>	
	165	5825	MIMO-A	2.37	2.37		
			MIMO-B	2.28	2.28		
			Combined A+B	5.34	5.34		
	802.11n40	HT0	151F	5755	SISO-A	3.10	3.10
					SISO-B	3.19	<b>3.19</b>
			159F	5795	SISO-A	3.03	3.03
SISO-B					3.05	3.05	
HT8		151F	5755	MIMO-A	-0.16	-0.16	
				MIMO-B	-0.14	-0.20	
				Combined A+B	2.86	2.86	
		159F	5795	MIMO-A	-0.20	-0.20	
				MIMO-B	-0.06	-0.06	
				Combined A+B	2.88	<b>2.88</b>	
802.11ac80	VHT0	155ac80	5775	SISO-A	-1.54	<b>-1.54</b>	
				SISO-B	-1.76	-1.76	
				MIMO-A	-4.04	-4.04	
				MIMO-B	-3.86	-3.86	
				Combined A+B	-0.94	<b>-0.94</b>	

\* Maximum values are the duty cycle compensated values calculated from the average (measured)

**Max Value**

Mode	Rate	Channel	Freq. [MHz]	Antenna	Average conducted PSD [dBm/500kHz]	Max.* conducted PSD [dBm/500kHz]
802.11ax20	HE0	149	5745	SISO-A	5.79	5.79
				SISO-B	5.98	5.98
		157	5785	SISO-A	6.01	<b>6.01</b>
				SISO-B	6.01	6.01
		165	5825	SISO-A	5.94	5.94
				SISO-B	5.94	5.94
		149	5745	MIMO-A	2.14	2.14
				MIMO-B	2.14	2.14
				Combined A+B	5.15	5.15
		157	5785	MIMO-A	2.34	2.34
				MIMO-B	2.21	2.21
				Combined A+B	5.29	<b>5.29</b>
		165	5825	MIMO-A	2.04	2.04
				MIMO-B	2.08	2.08
				Combined A+B	5.07	5.07
802.11ax40	HE0	151F	5755	SISO-A	2.69	2.69
				SISO-B	2.27	2.27
		159F	5795	SISO-A	2.88	<b>2.88</b>
				SISO-B	2.75	2.75
		151F	5755	MIMO-A	-0.45	-0.45
				MIMO-B	-0.37	-0.37
				Combined A+B	2.60	2.60
		159F	5795	MIMO-A	-0.42	-0.42
				MIMO-B	-0.34	-0.34
Combined A+B	2.63			<b>2.63</b>		
802.11ax80	HE0	155ax80	5775	SISO-A	-1.87	<b>-1.87</b>
				SISO-B	-2.14	-2.14
				MIMO-A	-4.21	-4.21
				MIMO-B	-4.30	-4.30
				Combined A+B	-1.24	<b>-1.24</b>

\* Maximum values are the duty cycle compensated values calculated from the average (measured)

**Max Value**



Mode	Rate	Antenna	Channel	Frequency [MHz]	RU Configuration	Average conducted PSD [dBm/MHz]	Maximum* conducted PSD [dBm/MHz]
802.11ax20	HE0	SISO-A	149	5745	26/0	8.51	8.51
		SISO-A			52/37	9.38	9.38
		SISO-A			106/53	9.19	9.19
		SISO-B			26/0	9.61	9.61
		SISO-B			52/37	9.43	9.43
		SISO-B			106/53	9.19	9.19
		MIMO-A			26/0	6.76	6.76
		MIMO-B				6.69	6.69
		Combined A+B				9.74	9.74
		MIMO-A			53/37	6.62	6.62
		MIMO-B				6.59	6.59
		Combined A+B				9.62	9.62
		MIMO-A			106/53	6.37	6.37
		MIMO-B				6.29	6.29
		Combined A+B				9.34	9.34
		802.11ax40			HE0	SISO-A	151F
SISO-B	5.64		5.64				
MIMO-B	2.48		2.48				
MIMO-A	2.53		2.53				
Combined A+B	5.52		5.52				
802.11ax80	HE0	SISO-A	106he80	5530	484/65	2.04	2.04
		SISO-B				1.66	1.66
		MIMO-B				-0.16	-0.16
		MIMO-A				-0.19	-0.19
		Combined A+B				2.84	2.84

Maximum Power Spectral Density (PSD) – Overlapped channels between U-NII-2C and U-NII-3

Mode	Rate	Channel	Freq. [MHz]	Antenna	Average conducted PSD UNII-2C [dBm/MHz]	Maximum* conducted PSD UNII-2C [dBm/MHz]
802.11n20	HT0	144	5720	SISO-A	5.46	<b>5.52</b>
				SISO-B	5.33	5.39
	HT8			MIMO-A	3.20	3.26
				MIMO-B	3.10	3.16
				Combined A+B	6.16	<b>6.22</b>
802.11n40	HT0	142F	5710	SISO-A	2.30	<b>2.36</b>
				SISO-B	2.27	2.33
	HT8			MIMO-A	0.91	0.97
				MIMO-B	0.79	0.85
				Combined A+B	3.86	<b>3.92</b>
802.11ac80	VHT0	138ac80	5690	SISO-A	-3.51	<b>-3.45</b>
				SISO-B	-3.54	-3.48
				MIMO-A	-5.41	-5.35
				MIMO-B	-4.97	-4.91
				Combined A+B	-2.17	<b>-2.11</b>
802.11ax20	HE0	144	5720	SISO-A	5.49	<b>5.55</b>
				SISO-B	5.25	5.31
				MIMO-A	3.02	3.08
				MIMO-B	2.93	2.99
				Combined A+B	5.99	<b>6.04</b>
802.11ax40	HE0	142F	5710	SISO-A	2.13	2.19
				SISO-B	2.33	<b>2.39</b>
				MIMO-A	0.74	0.80
				MIMO-B	0.57	0.63
				Combined A+B	3.67	<b>3.72</b>
802.11ax80	HE0	138ax80	5690	SISO-A	-3.36	<b>-3.30</b>
				SISO-B	-3.73	-3.67
				MIMO-A	-5.54	-5.48
				MIMO-B	-5.47	-5.41
				Combined A+B	-2.50	<b>-2.44</b>

\* Maximum values are the duty cycle compensated values calculated from the average (measured) values

**Max Value**

**See Section B.3.5, B.3.6, B.3.7, and Section B.3.8 for the screenshot results**

### B.2.3 Undesirable emission limits : Band Edge (Conducted)

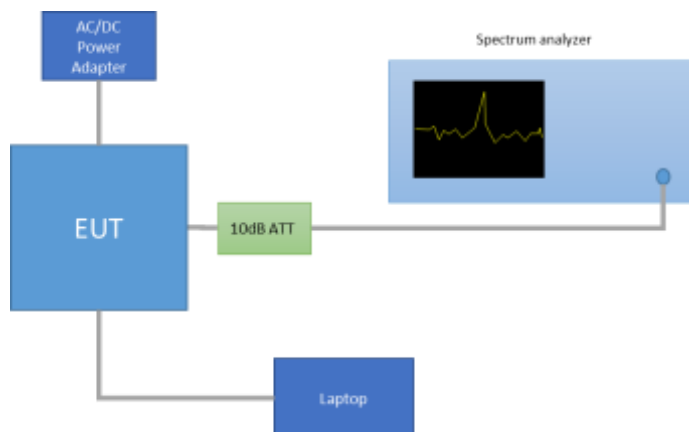
Test limits

FCC part	RSS part	Limits
15.407 (b) (4)	RSS-247 Clause 6.2.4.2	For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Test procedure

The setup below was used to measure undesirable emissions on the Band Edge domain. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss and the declared Antenna Gain.

The declared maximum antenna gain is 5dBi.



**See Section B.3.9 for the screenshot results.**

## B.2.4 Radiated spurious emission

### Standard references

FCC part	RSS part	Limits																				
15.407 (b) (4)	RSS-247 Clause 6.2.4.2	For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.																				
15.209	RSS-GEN, Clause 8.9	<p>Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a):</p> <table border="1"> <thead> <tr> <th>Freq Range (MHz)</th> <th>Field Strength (µV/m)</th> <th>Field Strength (dBµV/m)</th> <th>Meas. Distance (m)</th> </tr> </thead> <tbody> <tr> <td>30-88</td> <td>100</td> <td>40</td> <td>3</td> </tr> <tr> <td>88-216</td> <td>150</td> <td>43.5</td> <td>3</td> </tr> <tr> <td>216-960</td> <td>200</td> <td>46</td> <td>3</td> </tr> <tr> <td>Above 960</td> <td>500</td> <td>54</td> <td>3</td> </tr> </tbody> </table> <p>The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> <p>For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.</p>	Freq Range (MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Meas. Distance (m)	30-88	100	40	3	88-216	150	43.5	3	216-960	200	46	3	Above 960	500	54	3
Freq Range (MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Meas. Distance (m)																			
30-88	100	40	3																			
88-216	150	43.5	3																			
216-960	200	46	3																			
Above 960	500	54	3																			

### Test procedure

The setup below was used to measure the radiated spurious emissions.

Depending of the frequency range and bands being tested, different antennas and filters were used.

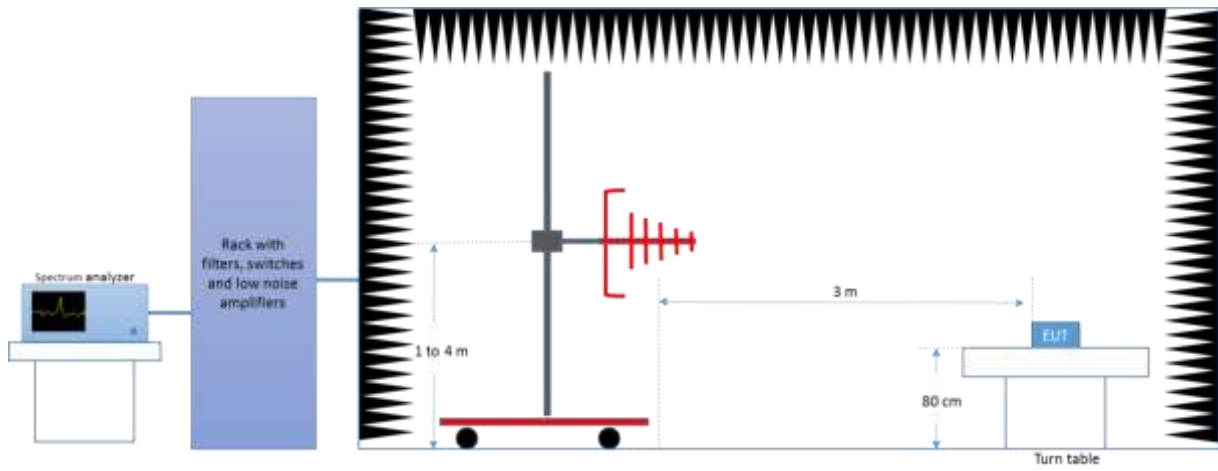
The final measurement is done by varying the antenna height, the EUT azimuth over 360° and for both Vertical and Horizontal polarizations.

The radiated spurious emission was measured on the worst case configuration selected from the chapter B.2.2 and using the low, middle and high channel.

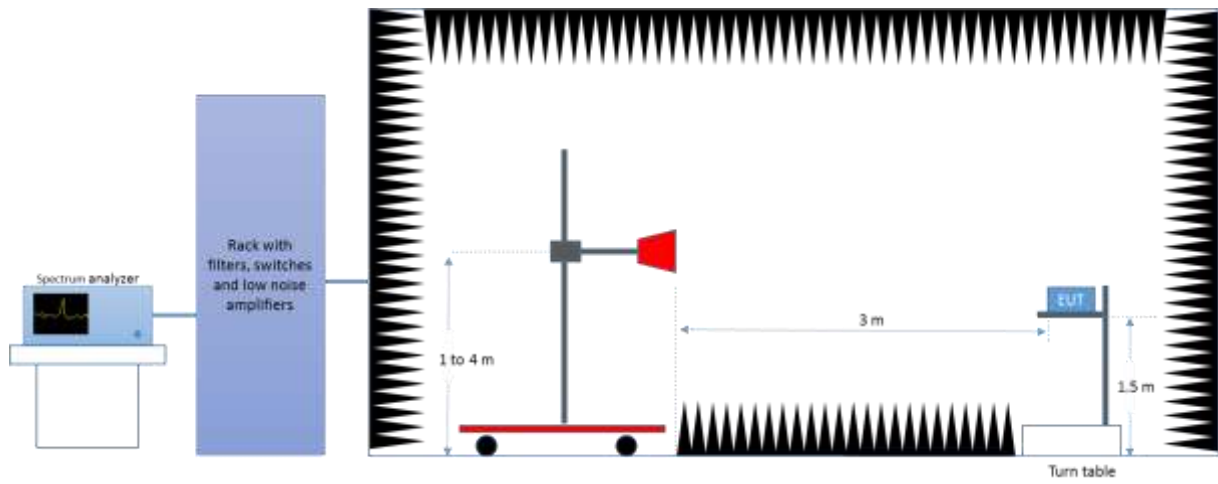
For technologies 802.11ax20, 802.11ax40, 802.11ax80 and 802.11ax160, the worst case spurious emission result among the low, mid and high channels tested separately on Chain A and B is used to perform the test on MIMO mode (Chain A+B).

For 802.11n20, 802.11n40, 802.11ac80 and 802.11ac160 the worst channel found among all 802.11ax modes mentioned above is chosen to perform the test in Chain A, B ,and MIMO (Chain A+B).

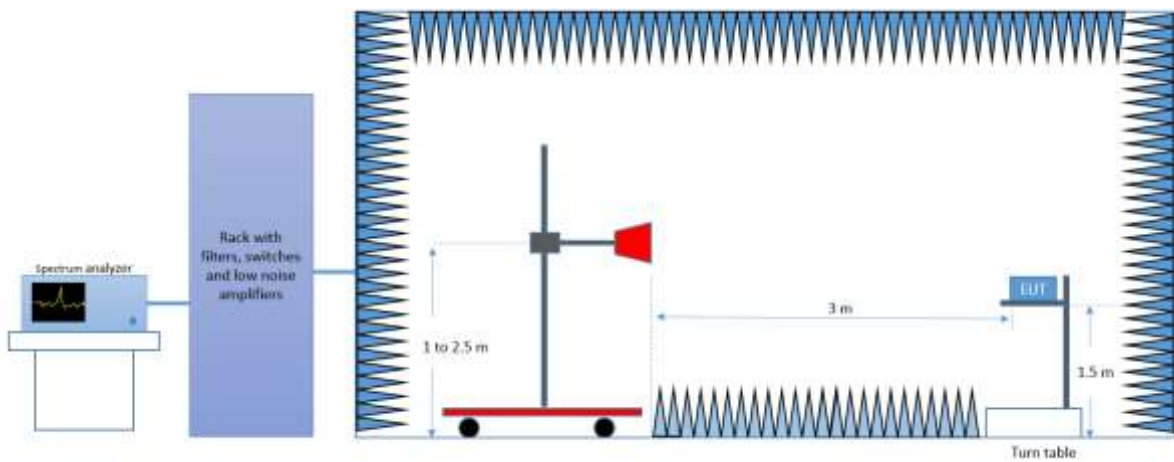
*Radiated Setup 30 MHz- 1 GHz*

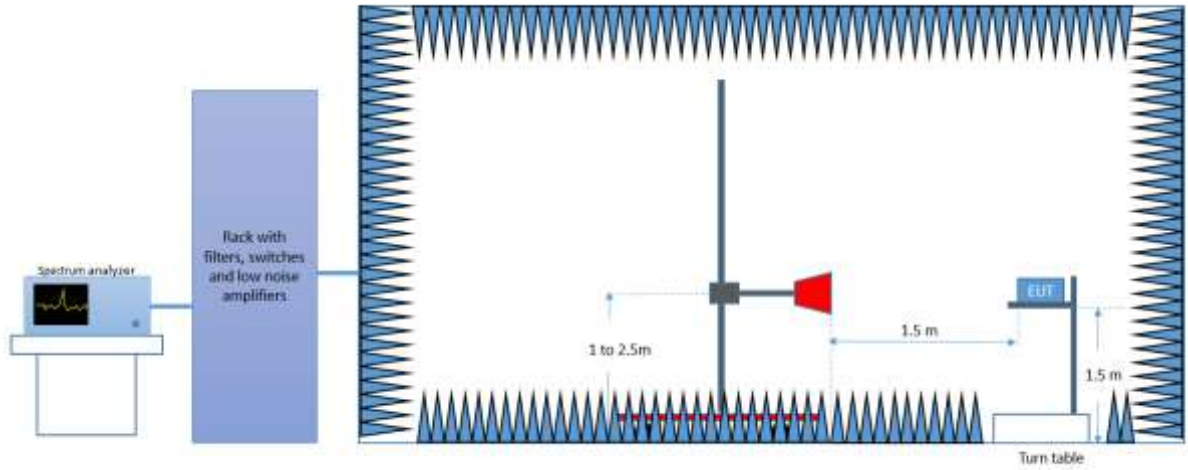


*Radiated Setup 1 GHz- 6.4 GHz*



*Radiated Setup 6.4 GHz - 18 GHz*





Sample Calculation

The field strength is deduced from the radiated measurement using the following equation:

$$E = 126.8 - 20\log(\lambda) + P - G$$

where

*E* is the field strength of the emission at the measurement distance, in dB $\mu$ V/m

*P* is the power measured at the output of the test antenna, in dBm

$\lambda$  is the wavelength of the emission under investigation [ $300/f_{MHz}$ ], in m

*G* is the gain of the test antenna, in dBi

NOTE – The measured power *P* includes all applicable instrument correction factors up to the connection to the test Antenna e.g. cable losses, amplifier gains.

For field strength measurements made at other than the distance at which the applicable limit is specified, the field strength of the emission at the distance specified by the limit is deduced as follows:

$$E_{SpecLimit} = E_{Meas} + 20\log(D_{Meas}/D_{SpecLimit})$$

where

*E<sub>SpecLimit</sub>* is the field strength of the emission at the distance specified by the limit, in dB $\mu$ V/m

*E<sub>Meas</sub>* is the field strength of the emission at the measurement distance, in dB $\mu$ V/m

*D<sub>Meas</sub>* is the measurement distance, in m

*D<sub>SpecLimit</sub>* is the distance specified by the limit, in m

## Test Results

**30 MHz – 40 GHz, 802.11a, 6Mbps, Chain A**
**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	26.3	---	43.6	17.2
6326.5	56.3	---	74.0	17.7
6366.0	---	42.4	54.0	11.6
11488.5	57.1	---	74.0	16.9
11491.4	---	47.8	54.0	6.2
22979.9	---	45.5	54.0	8.5
22980.7	56.5	---	74.0	17.5

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	26.8	---	43.6	16.8
6157.5	53.2	---	74.0	20.8
6185.0	---	42.1	54.0	11.9
11571.2	60.4	---	74.0	13.6
11571.2	---	50.7	54.0	3.3
23140.1	---	44.7	54.0	9.3
39484.5	59.8	---	74.0	14.2



**Radiated Spurious – CH165**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	26.1	---	43.6	17.4
6316.0	56.2	---	74.0	17.8
6318.0	---	43.2	54.0	10.8
11650.5	---	50.7	54.0	3.3
11650.9	57.5	---	74.0	16.5
23299.8	---	45.8	54.0	8.2
23300.0	55.3	---	74.0	18.7

**30 MHz – 40 GHz, 802.11a, 6Mbps, Chain B**
**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	27.0	---	43.6	16.5
6309.0	56.2	---	74.0	17.8
6318.5	---	43.3	54.0	10.7
11491.0	---	39.0	54.0	15.0
11500.1	50.2	---	74.0	23.8
22972.8	56.1	---	74.0	17.9
22978.9	---	45.6	54.0	8.4

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	26.1	---	43.6	17.4
6315.5	56.0	---	74.0	18.0
6339.5	---	42.6	54.0	11.4
11573.6	---	45.6	54.0	8.4
11580.9	55.5	---	74.0	18.5
23140.1	52.8	---	74.0	21.2
23140.1	---	46.5	54.0	7.5

**Radiated Spurious – CH165**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	25.8	---	43.6	17.8
6297.0	54.8	---	74.0	19.2
6318.0	---	43.0	54.0	11.0
11649.0	58.9	---	74.0	15.1
11649.0	---	47.4	54.0	6.6
23300.0	---	44.5	54.0	9.5
39670.1	59.9	---	74.0	14.1

**30 MHz – 40 GHz, 802.11n20, HT0, Chain A**
**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	37.8	---	43.6	5.8
6317.5	55.6	---	74.0	18.4
6318.5	---	43.3	54.0	10.7
11490.0	52.5	---	74.0	21.5
11491.9	---	45.8	54.0	8.2
22973.8	56.2	---	74.0	17.8
22981.0	---	45.2	54.0	8.8

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	27.1	---	43.6	16.4
2364.5	48.0	---	74.0	26.0
2415.0	---	37.2	54.0	16.8
11570.7	60.5	---	74.0	13.5
11571.7	---	50.1	54.0	3.9
23140.1	53.5	---	74.0	20.5
23140.4	---	44.3	54.0	9.7

**30 MHz – 40 GHz, 802.11n20, HT0, Chain B**

**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	38.3	---	43.6	5.3
6298.5	55.8	---	74.0	18.2
6300.5	---	43.0	54.0	11.0
11486.6	---	38.3	54.0	15.7
11488.1	50.7	---	74.0	23.3
22977.5	54.6	---	74.0	19.4
22980.2	---	46.0	54.0	8.0

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
216.0	25.3	---	46.0	20.7
2413.5	---	37.2	54.0	16.8
2414.0	47.3	---	74.0	26.7
11572.6	---	45.2	54.0	8.8
11573.1	55.8	---	74.0	18.2
23139.8	53.0	---	74.0	21.0
23140.1	---	45.1	54.0	8.9

**30 MHz – 40 GHz, 802.11n20, HT8, Chain A+B**

**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	38.6	---	43.6	5.0
6298.5	55.8	---	74.0	18.2
6312.5	---	43.1	54.0	10.9
11487.6	61.4	---	74.0	12.6
11490.0	---	49.5	54.0	4.5
22981.0	---	46.6	54.0	7.4
22984.5	56.9	---	74.0	17.1

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	25.6	---	43.6	17.9
2413.5	47.3	---	74.0	26.7
2414.5	---	37.5	54.0	16.5
6318.0	---	43.3	54.0	10.7
11569.7	---	50.6	54.0	3.4
17354.3	---	37.5	54.0	16.5
23139.8	53.3	---	74.0	20.7
23140.1	---	46.6	54.0	7.4

**30 MHz – 40 GHz, 802.11ax20, HE0, Chain A**

**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
187.5	25.9	---	43.6	17.6
1240.0	47.6	---	74.0	26.4
1243.0	---	30.1	54.0	23.9
6220.5	---	41.9	54.0	12.1
6303.0	55.3	---	74.0	18.7
11473.1	---	51.5	54.0	2.5
11474.0	60.4	---	74.0	13.6
22946.2	---	50.4	54.0	3.6
22947.3	61.9	---	74.0	12.1
22980.2	---	43.9	54.0	10.1

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	33.2	---	43.6	10.3
1242.0	48.0	---	74.0	26.1
1245.0	---	29.9	54.0	24.1
6281.0	54.8	---	74.0	19.2
6333.0	---	43.0	54.0	11.0
11552.3	57.0	---	74.0	17.0
11553.3	---	50.4	54.0	3.6
23106.6	---	45.9	54.0	8.1
23108.5	56.1	---	74.0	17.9
23140.4	---	43.5	54.0	10.5

**Radiated Spurious – CH165**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	33.6	---	43.6	10.0
1236.0	---	30.1	54.0	23.9
1245.0	46.7	---	74.0	27.3
6175.0	55.0	---	74.0	19.0
6316.0	---	43.3	54.0	10.7
11633.1	---	50.8	54.0	3.2
11634.0	56.3	---	74.0	17.7
11651.4	---	39.0	54.0	15.0
23266.5	59.6	---	74.0	14.4
23266.5	---	49.2	54.0	4.8
23299.8	---	44.1	54.0	9.9

**30 MHz – 40 GHz, 802.11ax20, HE0, Chain B**

**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
216.0	24.9	---	46.0	21.1
1240.0	49.9	---	74.0	24.1
1244.0	---	30.2	54.0	23.8
6318.0	---	43.1	54.0	10.9
6367.0	55.0	---	74.0	19.0
11473.6	---	45.0	54.0	9.0
11474.0	55.7	---	74.0	18.3
22953.6	60.0	---	74.0	14.0
22961.3	---	47.5	54.0	6.5
22980.2	---	45.6	54.0	8.4

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	34.9	---	43.6	8.7
1243.5	48.1	---	74.0	26.0
1245.0	---	30.7	54.0	23.3
2402.5	46.7	---	74.0	27.3
2415.0	---	37.1	54.0	16.9
11559.6	---	47.8	54.0	6.2
11559.6	55.6	---	74.0	18.4
11571.7	---	44.7	54.0	9.3
11573.1	54.8	---	74.0	19.2
23106.6	---	43.7	54.0	10.3
23107.4	55.1	---	74.0	18.9
23140.1	---	45.7	54.0	8.3

**Radiated Spurious – CH165**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	33.3	---	43.6	10.3
1241.0	---	29.7	54.0	24.3
1243.0	49.4	---	74.0	24.6
6255.5	55.3	---	74.0	18.8
6286.0	---	42.5	54.0	11.5
11633.1	---	50.6	54.0	3.4
11633.5	59.8	---	74.0	14.2
23267.3	---	43.5	54.0	10.5
23300.0	---	46.8	54.0	7.2
23300.5	53.1	---	74.0	20.9

**30 MHz – 40 GHz, 802.11ax20, HE0, Chain A+B**

**Radiated Spurious – CH149**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	38.0	---	43.6	5.6
6035.5	---	42.0	54.0	12.0
6055.0	55.3	---	74.0	18.7
11473.1	---	49.5	54.0	4.5
11473.6	61.0	---	74.0	13.0
22946.5	---	47.7	54.0	6.3
22949.1	58.5	---	74.0	15.5
28681.9	58.1	---	74.0	15.9
28683.2	---	46.0	54.0	8.0

**Radiated Spurious – CH157**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
158.0	40.3	---	43.6	3.3
1242.0	48.8	---	74.0	25.2
1244.0	---	30.7	54.0	23.3
2413.5	45.3	---	74.0	28.7
2414.0	---	36.3	54.0	17.7
11560.1	---	51.8	54.0	2.2
11560.1	58.3	---	74.0	15.7
23106.1	---	47.2	54.0	6.8
23107.7	57.4	---	74.0	16.6
23140.4	---	45.1	54.0	8.9

**30 MHz – 40 GHz, 802.11n40, HT0, Chain A**
**Radiated Spurious – CH159F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	33.9	---	43.6	9.6
1242.5	49.7	---	74.0	24.3
1245.0	---	30.3	54.0	23.7
6192.5	55.4	---	74.0	18.6
6239.5	---	41.9	54.0	12.1
11553.8	---	51.6	54.0	2.4
11555.2	58.0	---	74.0	16.0
23180.0	---	45.3	54.0	8.7
39467.6	59.9	---	74.0	14.1



**30 MHz – 40 GHz, 802.11n40, HT0, Chain B**

**Radiated Spurious – CH159F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	34.0	---	43.6	9.5
1243.5	50.2	---	74.0	23.8
1244.0	---	30.6	54.0	23.4
6218.0	55.3	---	74.0	18.7
6264.5	---	42.5	54.0	11.5
11598.7	54.6	---	74.0	19.4
11599.7	---	43.6	54.0	10.4
23176.5	53.4	---	74.0	20.6
23180.0	---	46.2	54.0	7.8

**30 MHz – 40 GHz, 802.11n40, HT8, Chain A+B**

**Radiated Spurious – CH159F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	37.8	---	43.6	5.8
1242.5	47.9	---	74.0	26.1
1242.5	---	30.3	54.0	23.7
6251.0	54.5	---	74.0	19.5
6289.0	---	42.8	54.0	11.2
11554.3	60.4	---	74.0	13.6
11554.3	---	52.0	54.0	2.0
23180.2	---	46.3	54.0	7.7
23180.5	53.3	---	74.0	20.7

**30 MHz – 40 GHz, 802.11ax40, HE0, Chain A**

**Radiated Spurious – CH151F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	34.9	---	43.6	8.6
1233.5	---	29.7	54.0	24.3
1246.5	48.7	---	74.0	25.3
6188.0	55.5	---	74.0	18.5
6202.0	---	41.8	54.0	12.2
11474.0	---	49.0	54.0	5.0
11474.5	55.9	---	74.0	18.1
11489.0	---	37.2	54.0	16.8
11497.2	53.1	---	74.0	20.9
11497.2	---	39.1	54.0	14.9
11510.3	---	37.3	54.0	16.7
22947.8	---	50.4	54.0	3.6
22949.9	60.8	---	74.0	13.2

**Radiated Spurious – CH159F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	34.3	---	43.6	9.3
1241.5	---	30.2	54.0	23.8
1244.0	50.4	---	74.0	23.6
6262.0	---	42.4	54.0	11.6
6269.0	55.5	---	74.0	18.5
11553.8	---	51.6	54.0	2.4
11555.2	58.0	---	74.0	16.0
23108.5	---	45.5	54.0	8.5
23109.8	56.2	---	74.0	17.8
23180.2	---	45.2	54.0	8.8

**30 MHz – 40 GHz, 802.11ax40, HE0, Chain B**

**Radiated Spurious – CH151F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	35.2	---	43.6	8.4
1247.0	48.7	---	74.0	25.3
1255.5	---	30.0	54.0	24.0
6261.5	55.0	---	74.0	19.0
6289.5	---	42.7	54.0	11.3
11473.6	---	44.8	54.0	9.2
11474.5	57.6	---	74.0	16.4
22947.0	59.5	---	74.0	14.5
22948.6	---	49.7	54.0	4.3
23020.0	---	45.6	54.0	8.4

**Radiated Spurious – CH159F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	35.5	---	43.6	8.1
6315.5	---	43.2	54.0	10.8
6317.5	56.7	---	74.0	17.3
11554.3	---	50.2	54.0	3.8
11554.3	57.2	---	74.0	16.8
23180.5	---	44.9	54.0	9.1
23185.3	53.4	---	74.0	20.6

**30 MHz – 40 GHz, 802.11ax40, HE0, Chain A+B**

**Radiated Spurious – CH159F**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	37.0	---	43.6	6.6
6314.0	---	43.1	54.0	10.9
6316.0	55.7	---	74.0	18.3
11554.3	60.4	---	74.0	13.6
11554.3	---	52.0	54.0	2.0
23108.8	---	48.2	54.0	5.8
23180.5	---	44.1	54.0	9.9

**30 MHz – 40 GHz, 802.11ac80, VHT0, Chain A**

**Radiated Spurious – CH155ac80**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	34.9	---	43.6	8.6
6314.0	55.8	---	74.0	18.2
6321.5	---	43.4	54.0	10.6
11563.0	57.9	---	74.0	16.1
11578.9	---	47.2	54.0	6.8
23100.0	---	43.9	54.0	10.1
39479.4	59.3	---	74.0	14.7

**30 MHz – 40 GHz, 802.11ac80, VHT0, Chain B**

**Radiated Spurious – CH155ac80**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	34.8	---	43.6	8.8
6295.5	55.0	---	74.0	19.0
6315.5	---	43.2	54.0	10.8
11579.4	---	42.1	54.0	11.9
11586.7	53.5	---	74.0	20.5
23100.0	52.9	---	74.0	21.1
23100.3	---	46.9	54.0	7.1

**30 MHz – 40 GHz, 802.11ac80, VHT0, Chain A+B**

**Radiated Spurious – CH155ac80**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	38.5	---	43.6	5.0
6286.5	55.7	---	74.0	18.3
6301.5	---	43.0	54.0	11.0
11584.7	---	48.0	54.0	6.1
11592.5	58.8	---	74.0	15.2
23100.0	53.7	---	74.0	20.3
23100.5	---	43.9	54.0	10.1

**30 MHz – 40 GHz, 802.11ax80, HE0, Chain A**

**Radiated Spurious – CH155ac80**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
158.1	37.2	---	43.6	6.3
174.7	35.3	---	43.6	8.3
6289.0	55.0	---	74.0	19.0
6298.5	---	42.6	54.0	11.4
11474.5	---	49.9	54.0	4.1
11475.0	56.6	---	74.0	17.4
22947.3	---	49.5	54.0	4.5
22950.5	60.7	---	74.0	13.3
23100.5	---	44.6	54.0	9.4

**30 MHz – 40 GHz, 802.11ax80, HE0, Chain B**

**Radiated Spurious – CH155ac80**

Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
174.7	35.1	---	43.6	8.4
6301.5	---	42.9	54.0	11.1
6302.5	55.4	---	74.0	18.6
11474.0	---	40.1	54.0	13.9
11475.0	52.6	---	74.0	21.4
22948.1	---	50.1	54.0	3.9
22948.6	61.2	---	74.0	12.8
23100.0	---	45.2	54.0	8.8

**30 MHz – 40 GHz, 802.11ax80, HE0, Chain A+B****Radiated Spurious – CH155ac80**

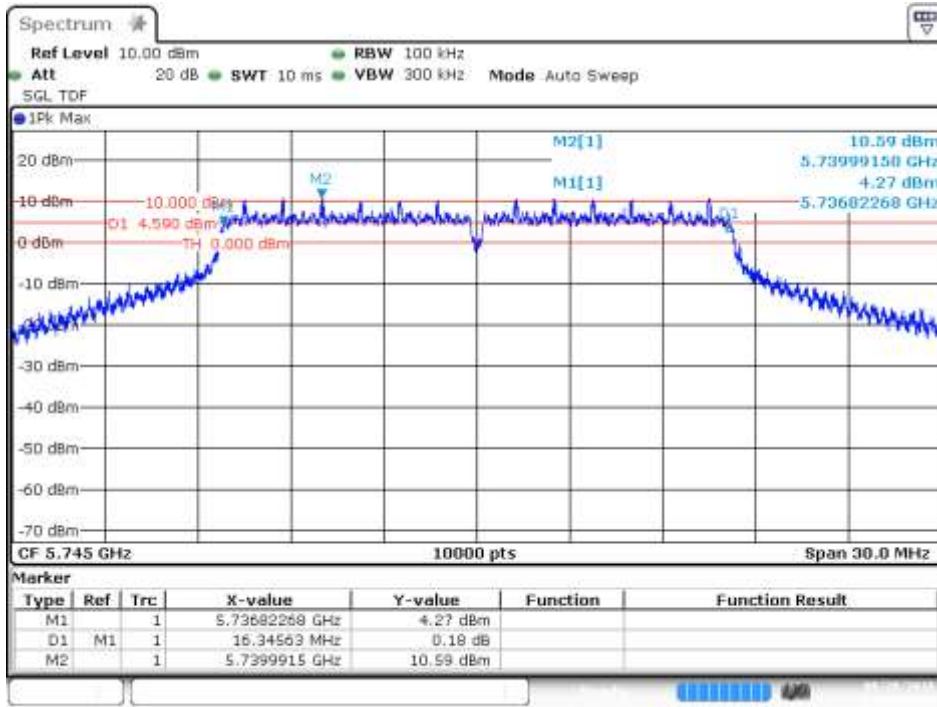
Frequency	MaxPeak	Avg	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
158.1	40.1	---	43.6	3.4
6312.5	55.9	---	74.0	18.1
6318.0	---	43.4	54.0	10.6
11474.0	---	46.7	54.0	7.3
11475.5	52.8	---	74.0	21.3
22948.1	---	51.8	54.0	2.2
22948.9	62.0	---	74.0	12.0
23100.5	---	44.0	54.0	10.0

### B.3 Test Results Screenshot

#### B.3.1 6dB Bandwidth

## SISO-B, 802.11a, 6Mbps

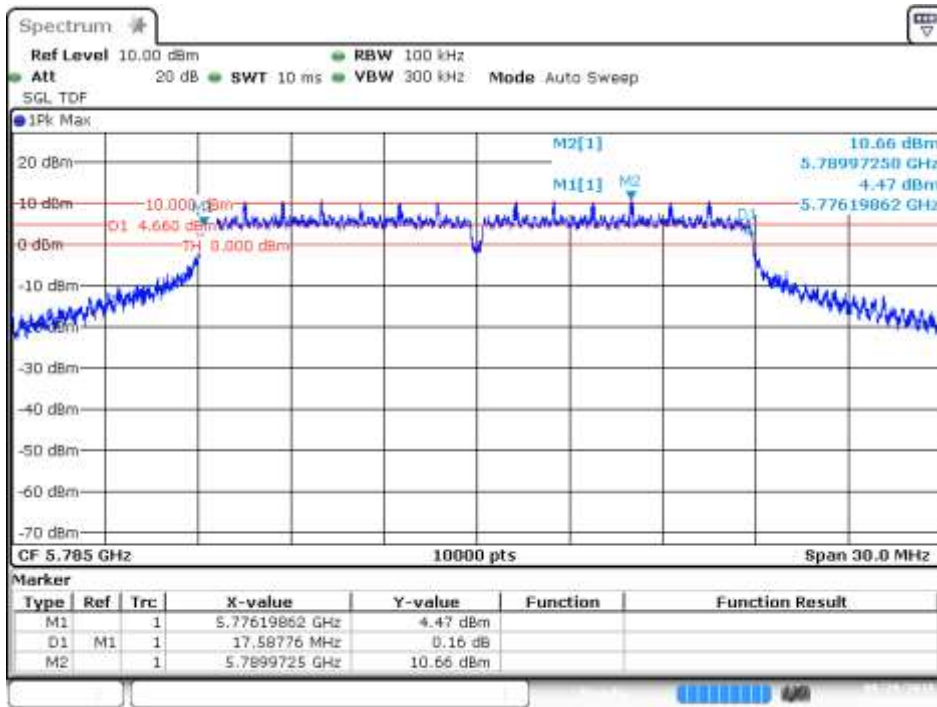
Channel 149



Date: 28.AUG.2018 16:02:39

## SISO-A, 802.11n20, HT0

Channel 157

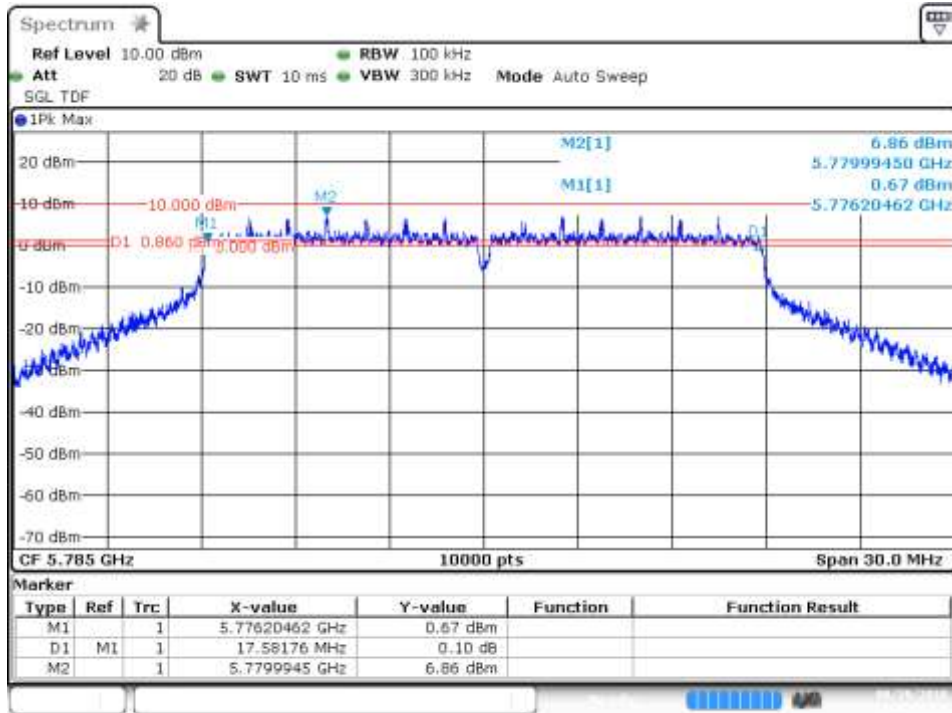


Date: 29.AUG.2018 12:05:54



### MIMO-A 802.11n20, HT8

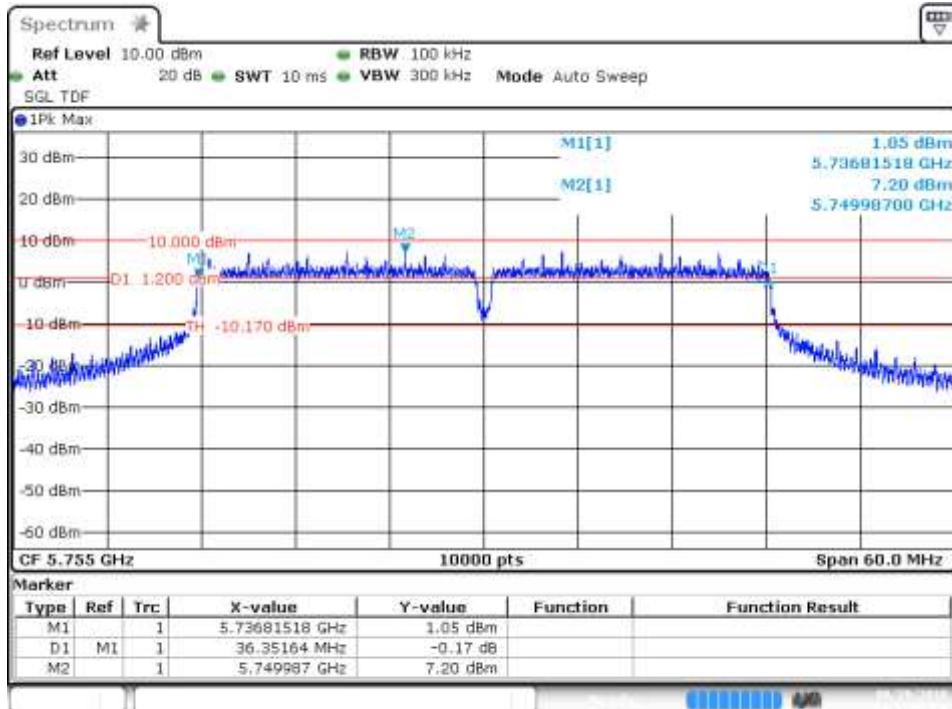
Channel 157



Date: 29.AUG.2018 12:40:24

### SISO-A, 802.11n40, HT0

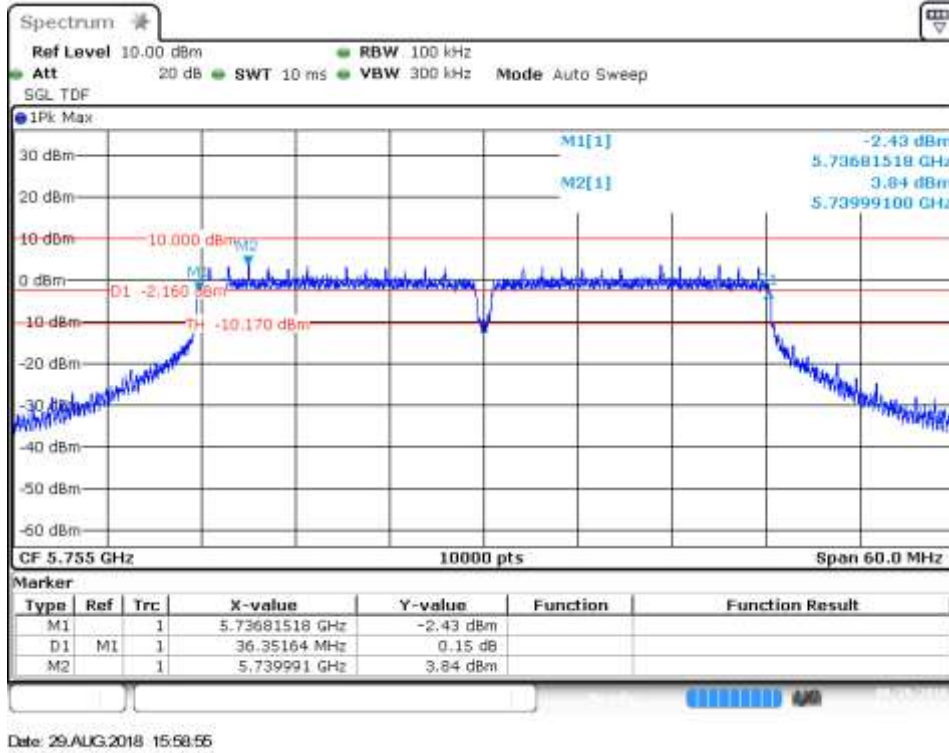
Channel 151F



Date: 29.AUG.2018 14:33:59

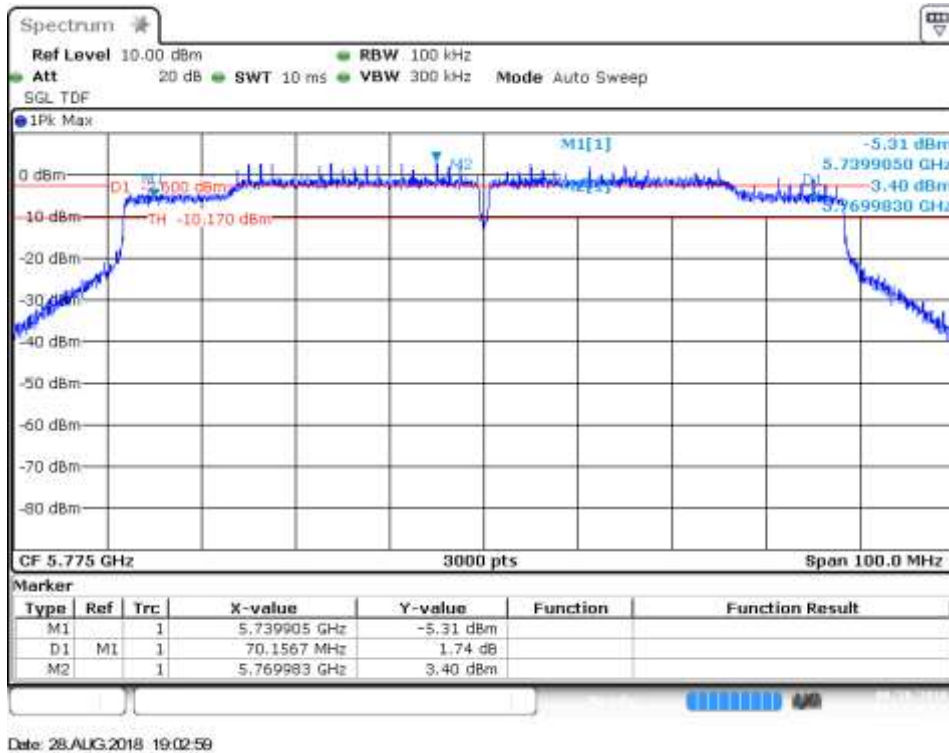
## MIMO-A, 802.11n40, HT8

Channel 151F



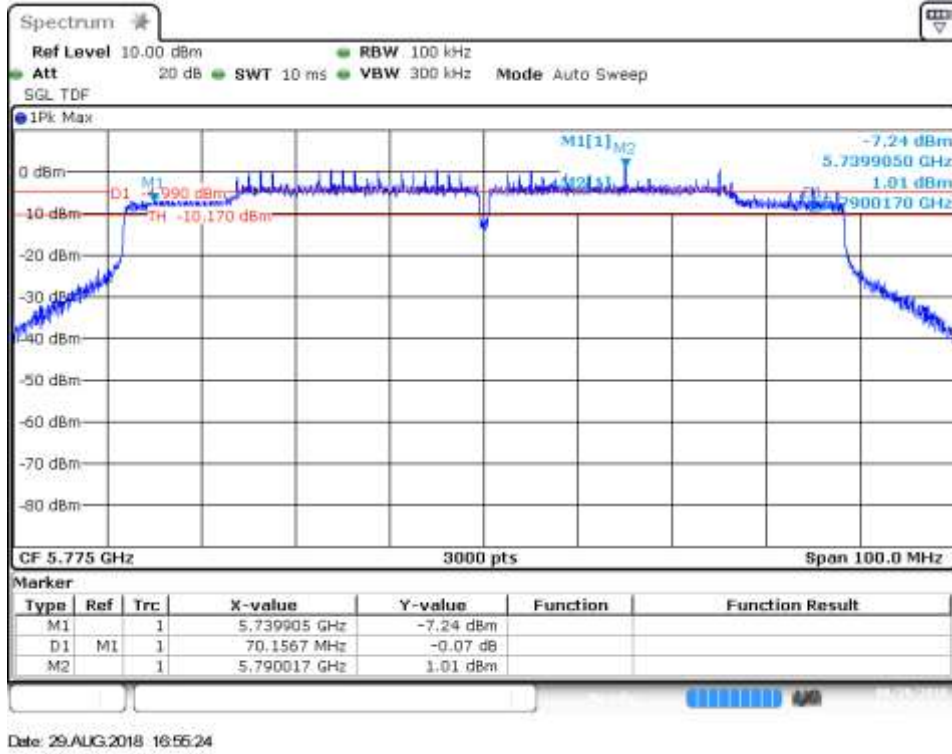
## SISO-B, 802.11ac80, VHT0

Channel 155ac80



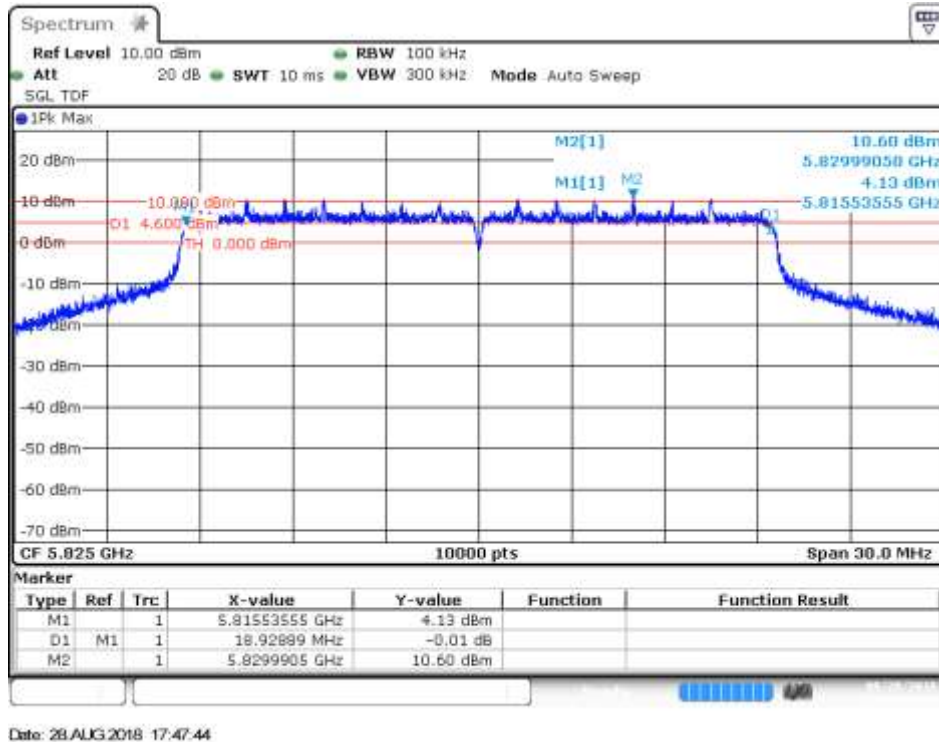
## MIMO-A, 802.11ac80, VHT0

Channel 155ac80



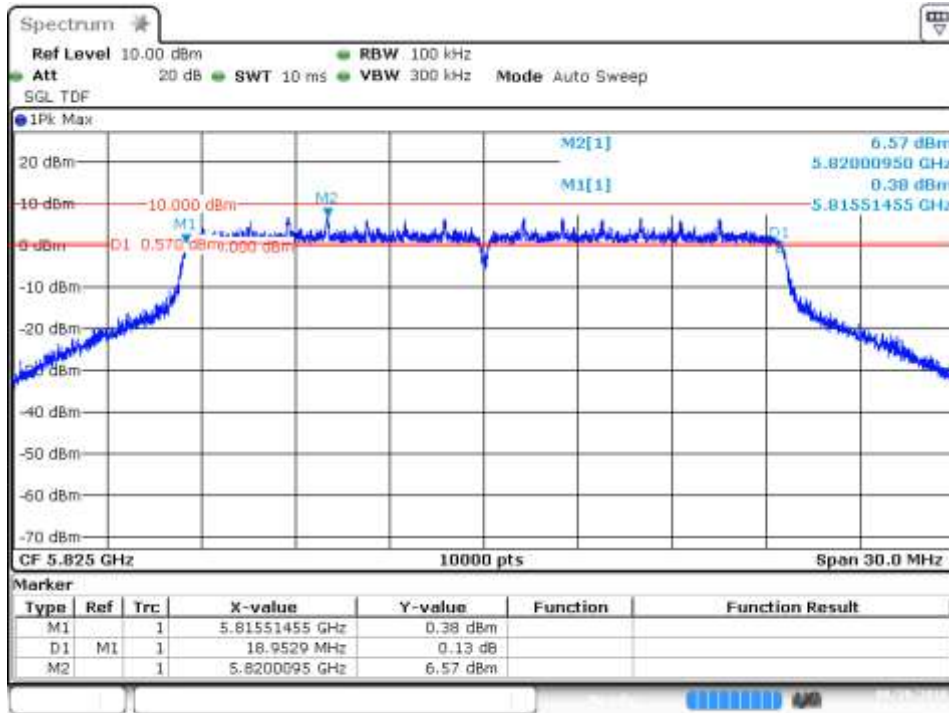
## SISO-B, 802.11ax20, HE0

Channel 165



### MIMO-A, 802.11ax20, HE0

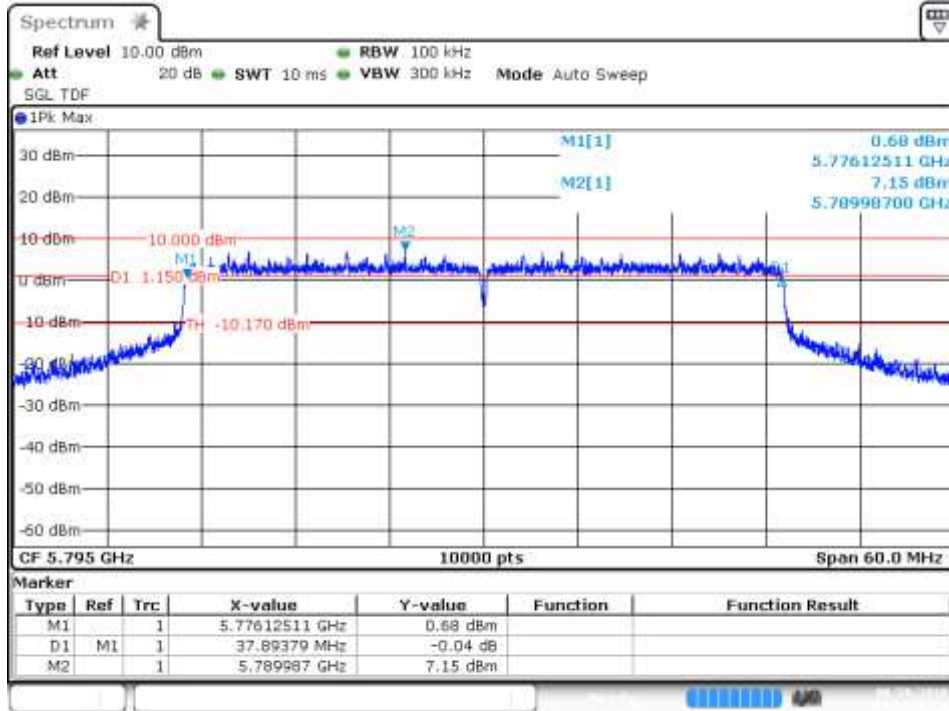
Channel 165



Date: 29.AUG.2018 14:06:58

### SISO-A, 802.11ax40, HE0

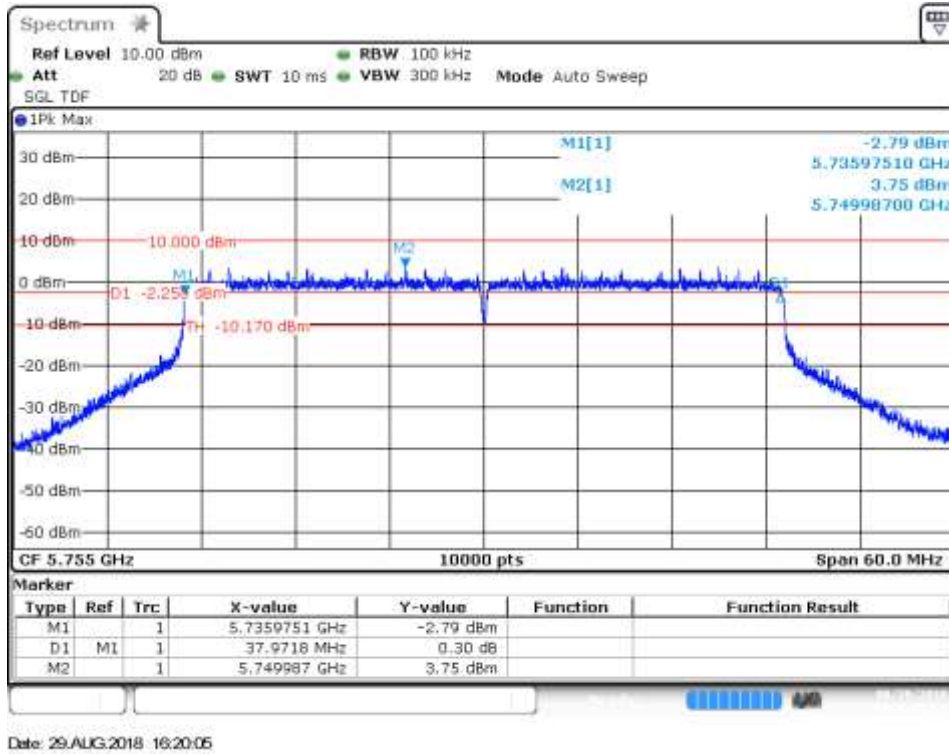
Channel 159F



Date: 29.AUG.2018 16:14:56

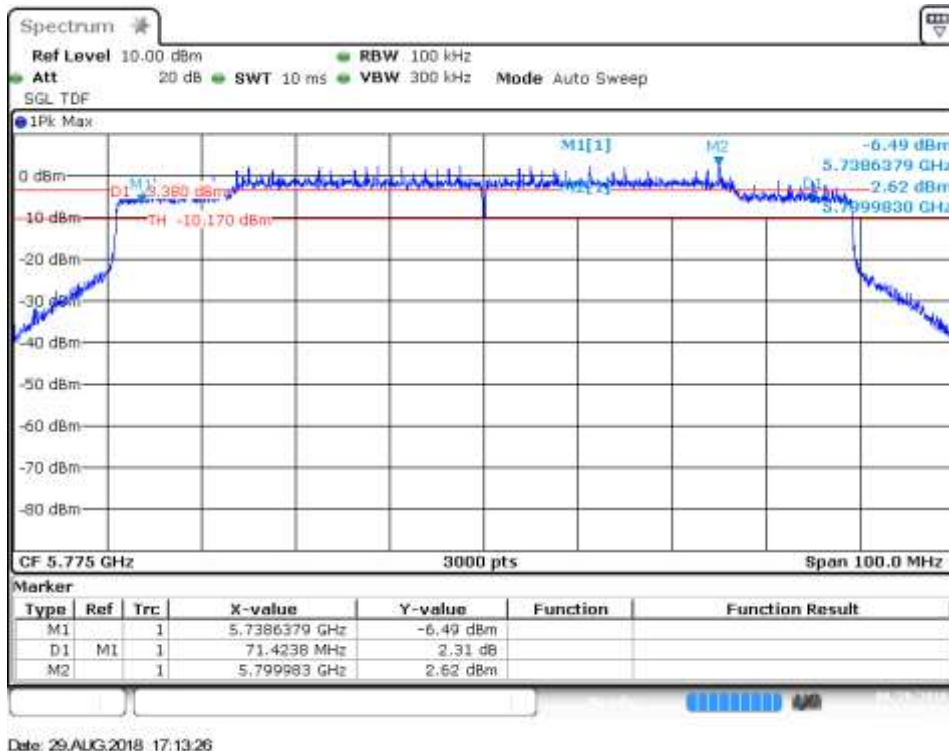
## MIMO-A, 802.11ax40, HE0

Channel 151F



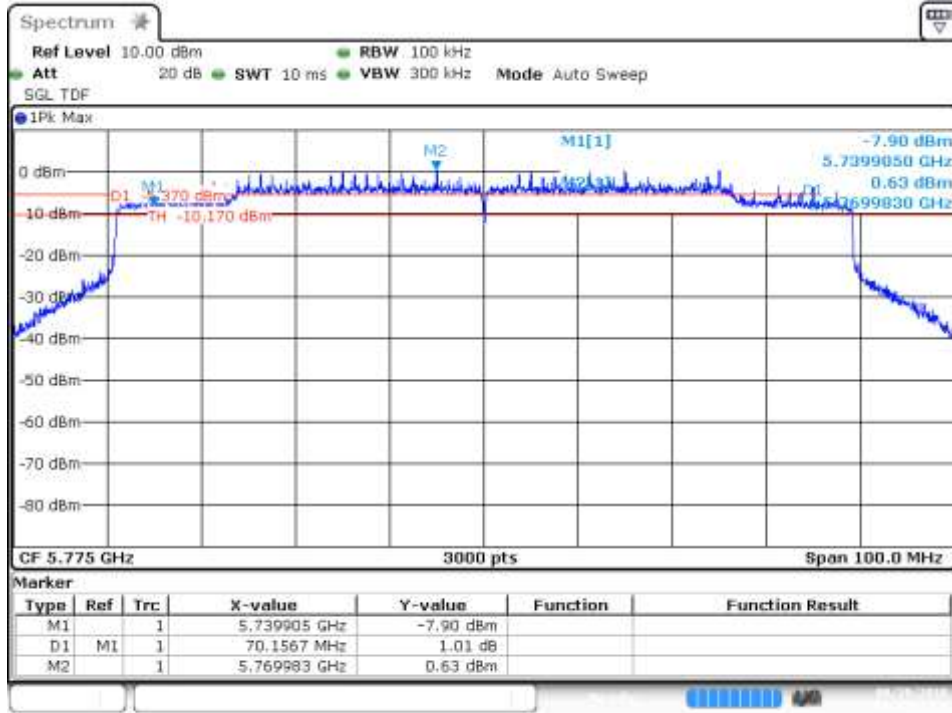
## SISO-A, 802.11ax80, HE0

Channel 155ax80



# MIMO-A, 802.11ax80, HE0

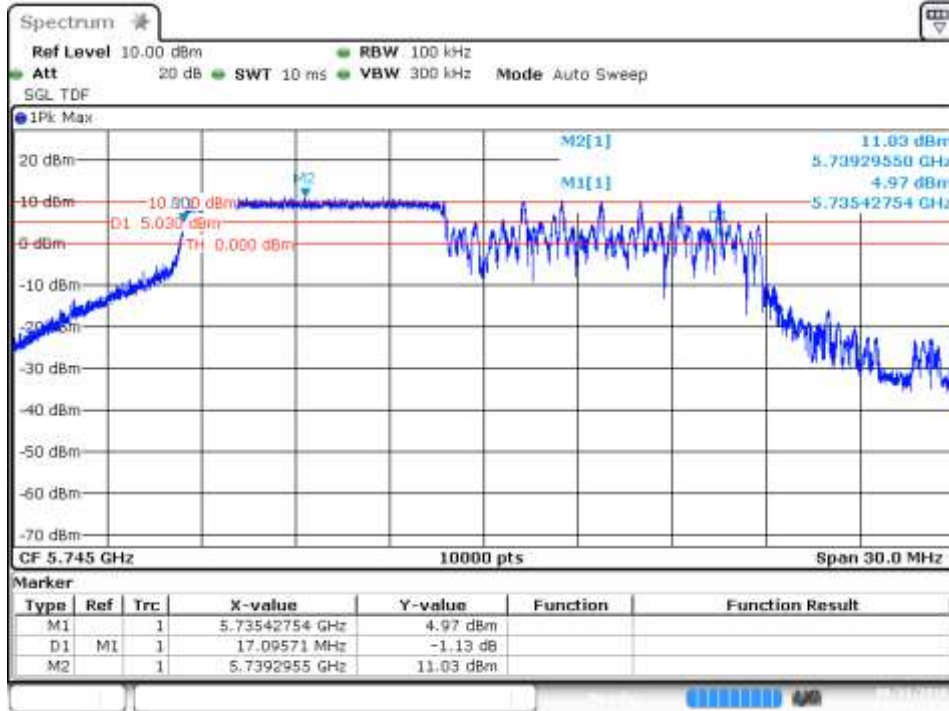
Channel 155ax80



Date: 29.AUG.2018 17:22:23

## SISO-A, 802.11ax20, HE0, RU 106/53

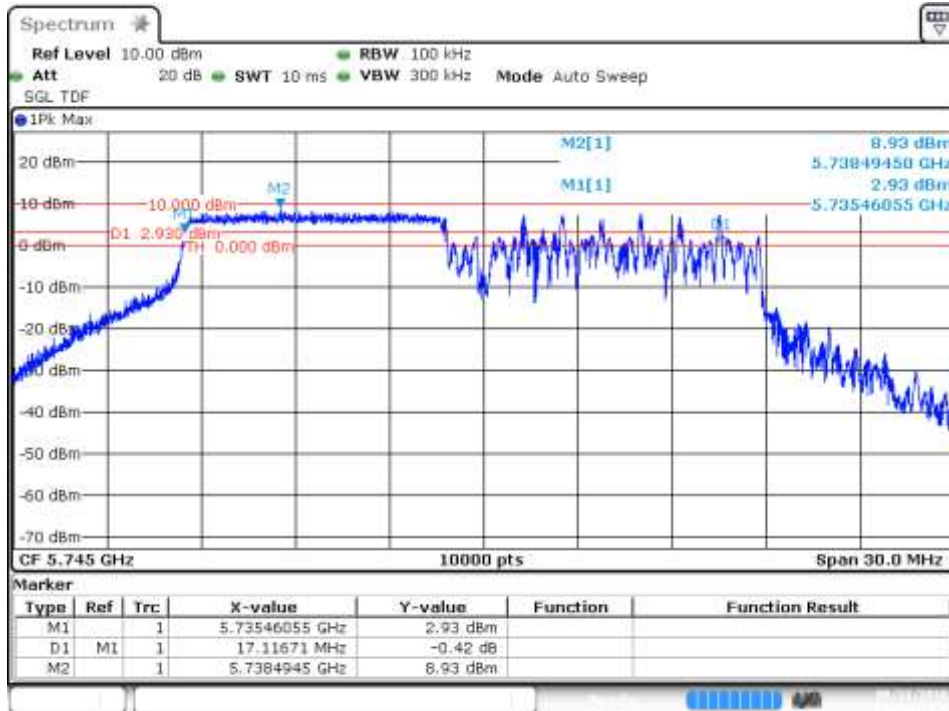
Channel 149



Date: 31.AUG.2018 17:15:53

## MIMO-A, 802.11ax20, HE0, RU 106/53

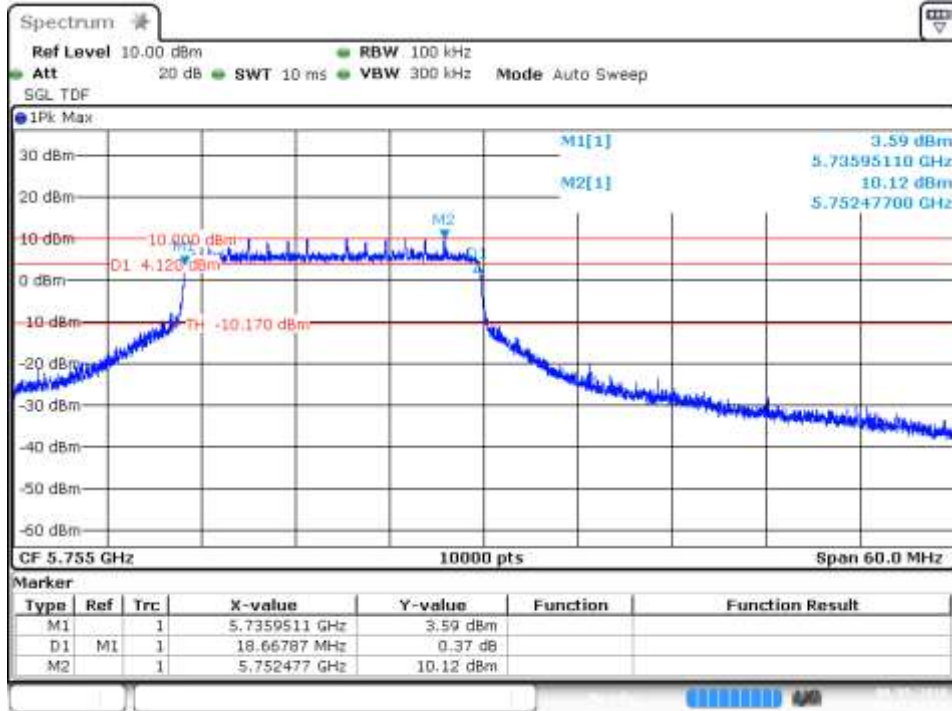
Channel 149



Date: 31.AUG.2018 17:42:33

## SISO-B, 802.11ax40, HE0, RU 242/61

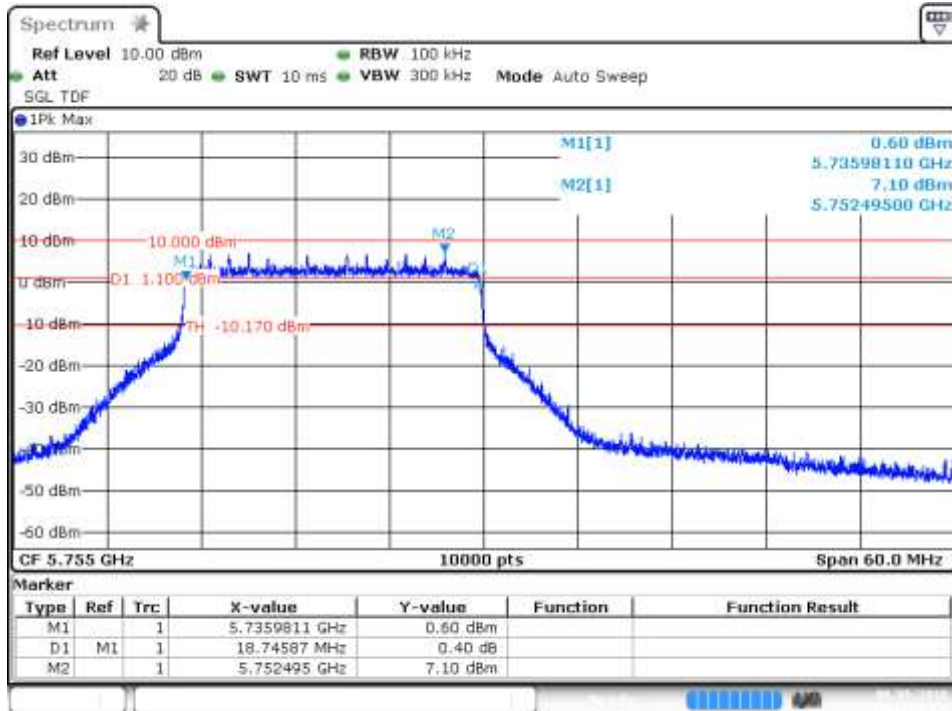
Channel 151F



Date: 5.SEP.2018 17:22:14

## MIMO-B, 802.11ax20, HE0, RU 242/61

Channel 151F

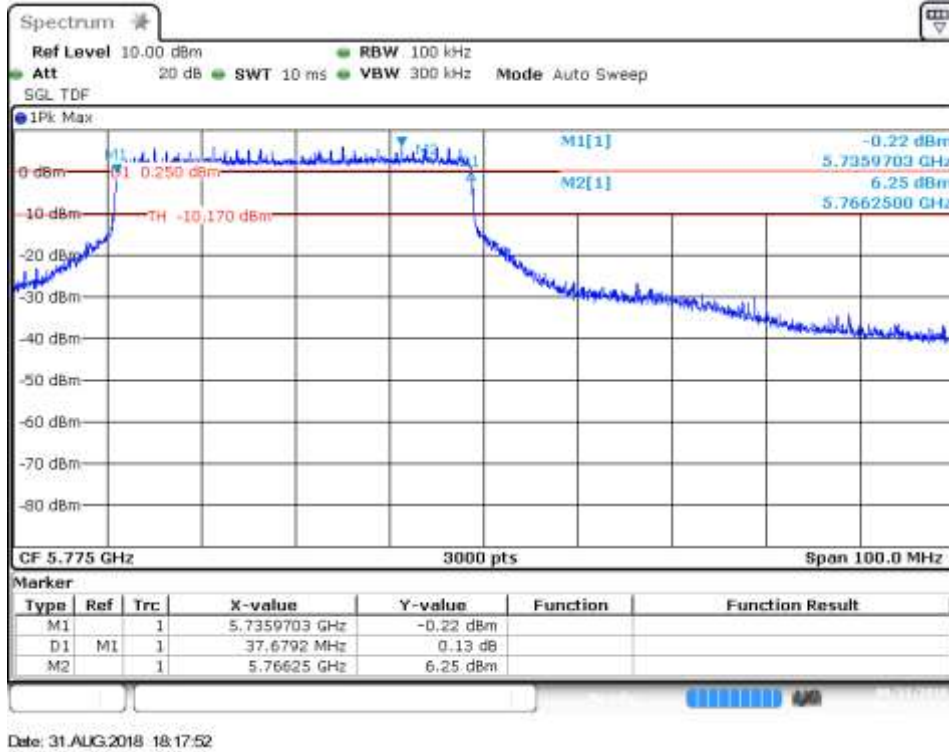


Date: 5.SEP.2018 17:28:23



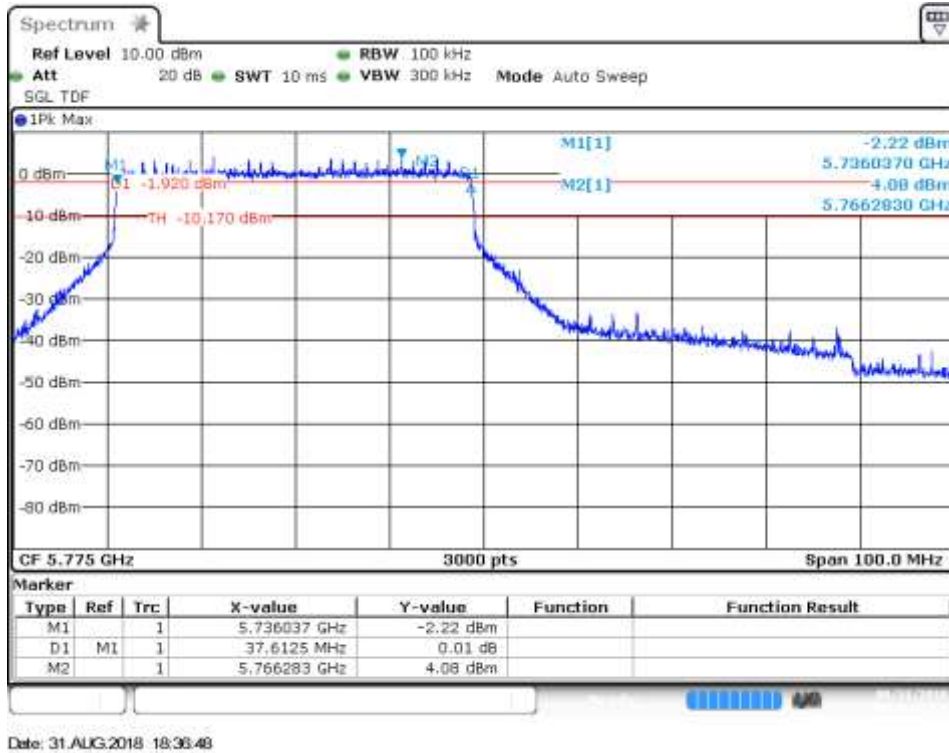
## SISO-A, 802.11ax80, HE0, RU 484/65

Channel 155ax80



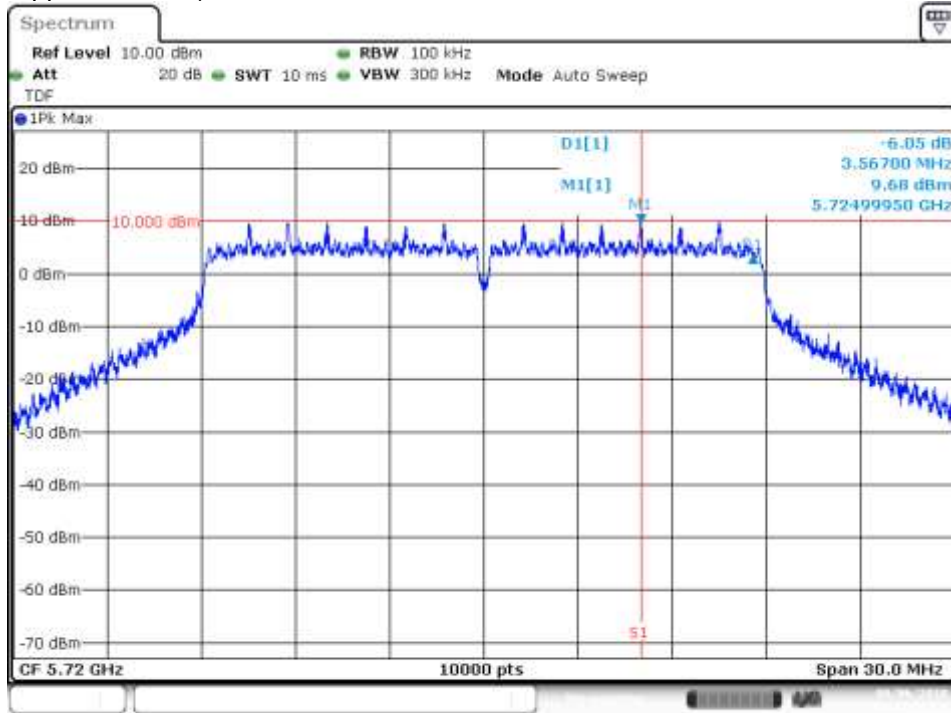
## MIMO-A, , 802.11ax80, HE0, RU 484/65

Channel 155ax80



**B.3.2 6dB Bandwidth (Overlapped Channel)****SISO-B, 802.11n20, HT8**

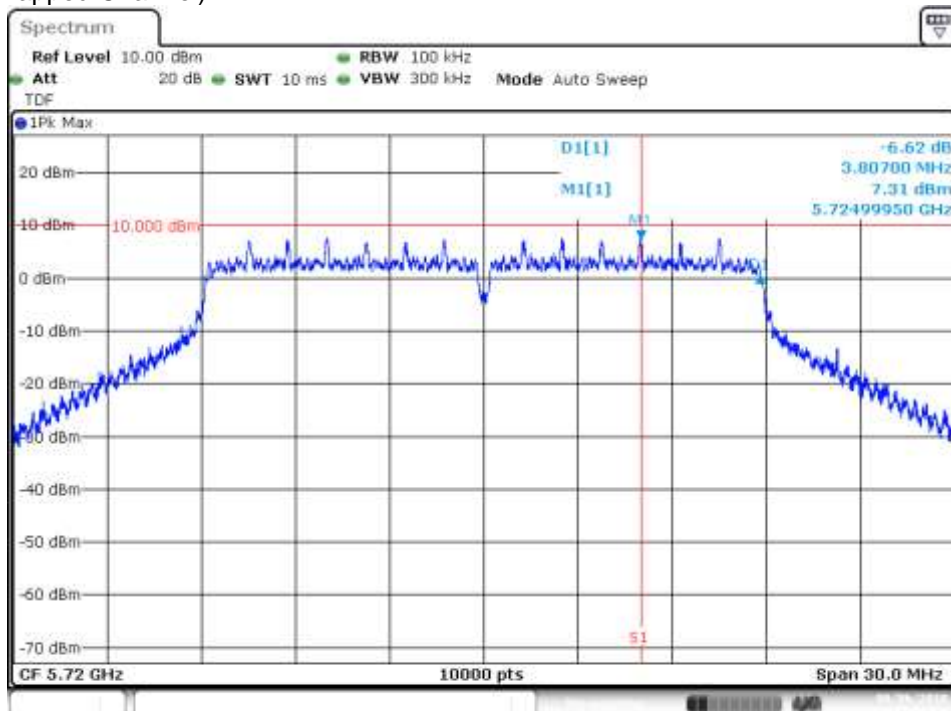
Channel 144 (Overlapped Channel)



Date: 6.SEP.2018 19:22:48

**MIMO-A, 802.11n20, HT8**

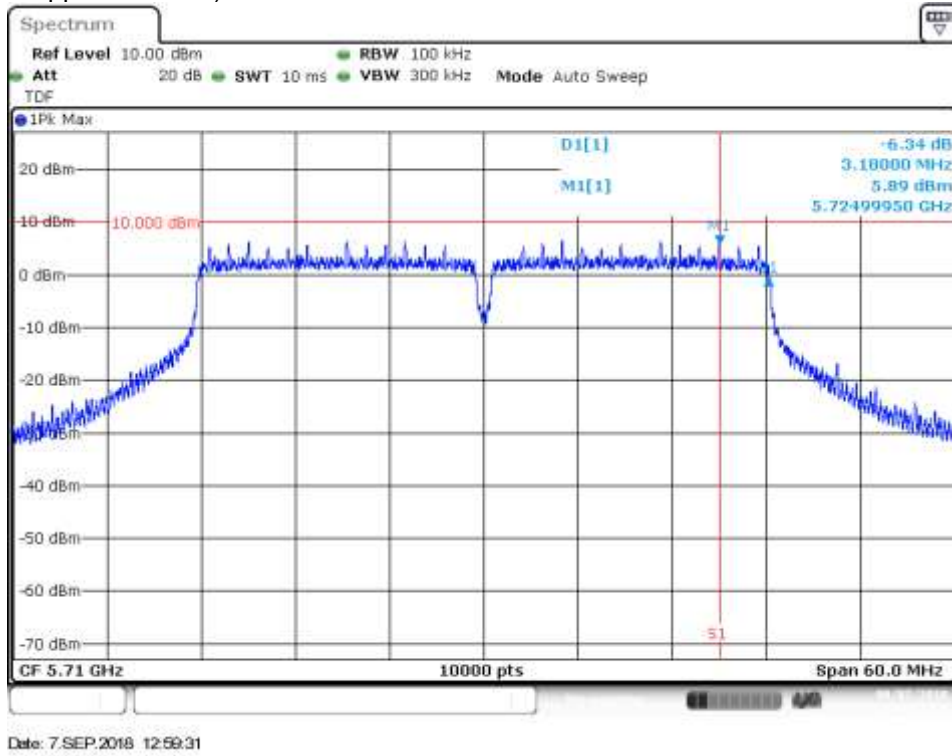
Channel 144 (Overlapped Channel)



Date: 6.SEP.2018 18:57:50

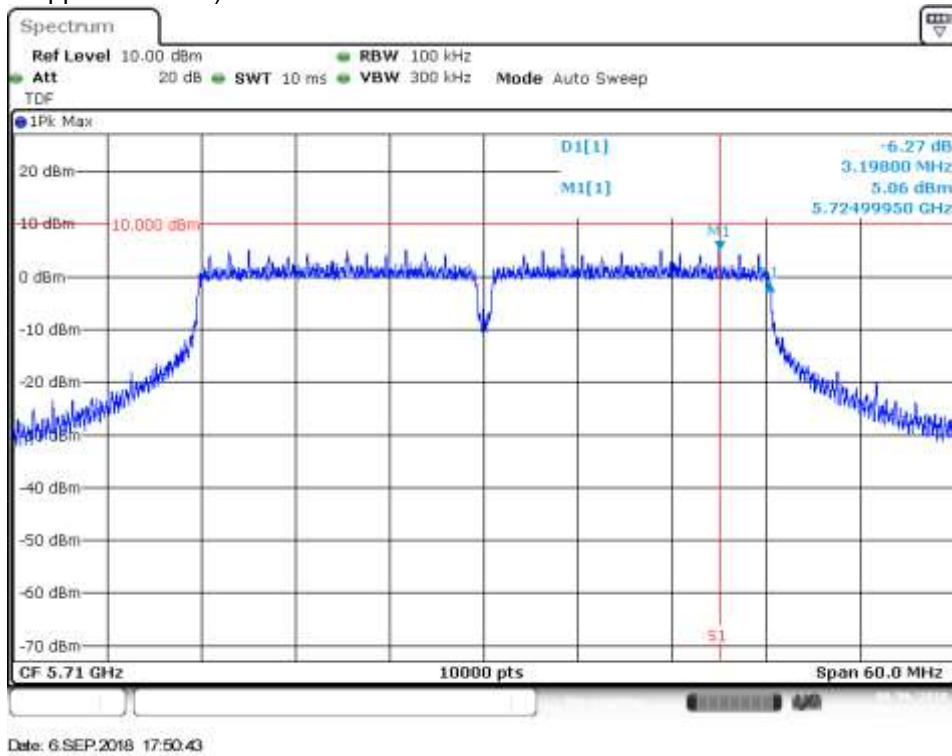
### SISO-B, 802.11n40, HT8

Channel 142F (Overlapped Channel)



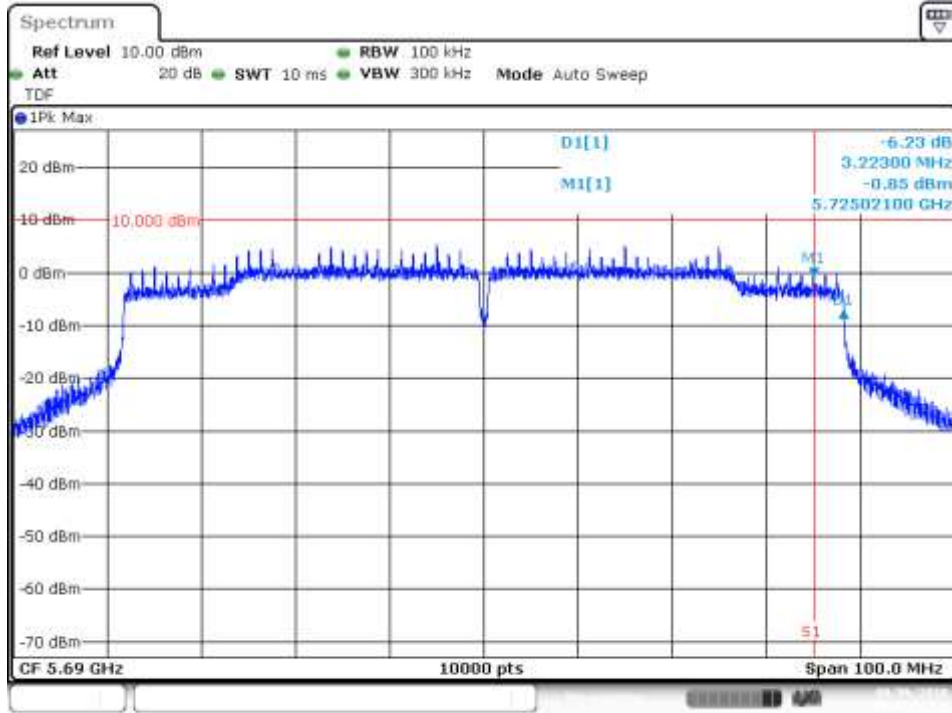
### MIMO-A, 802.11n40, HT8

Channel 142F (Overlapped Channel)



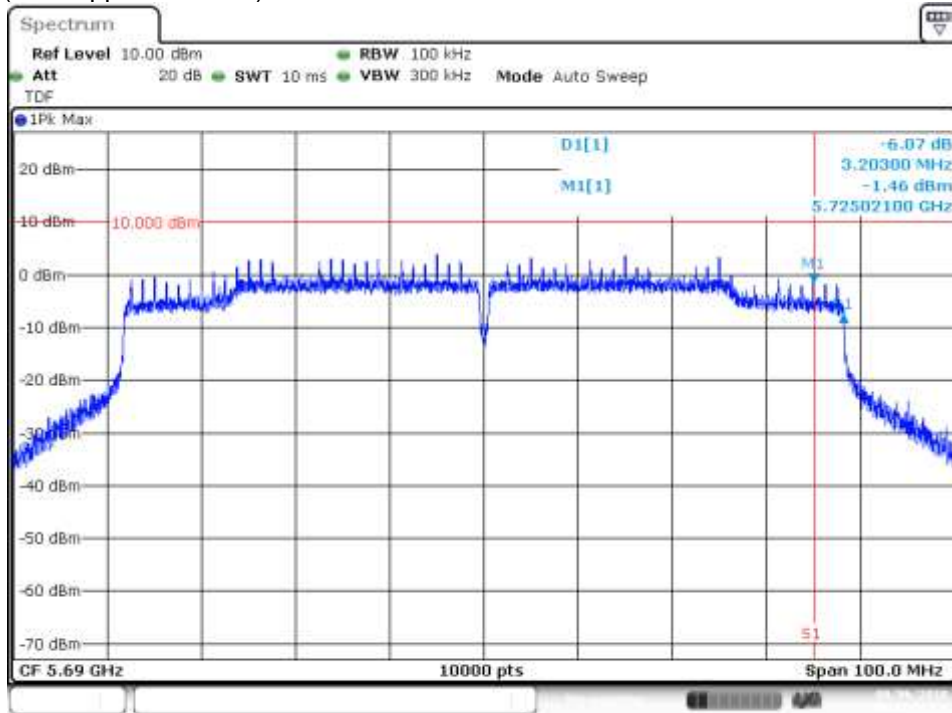
# SISO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



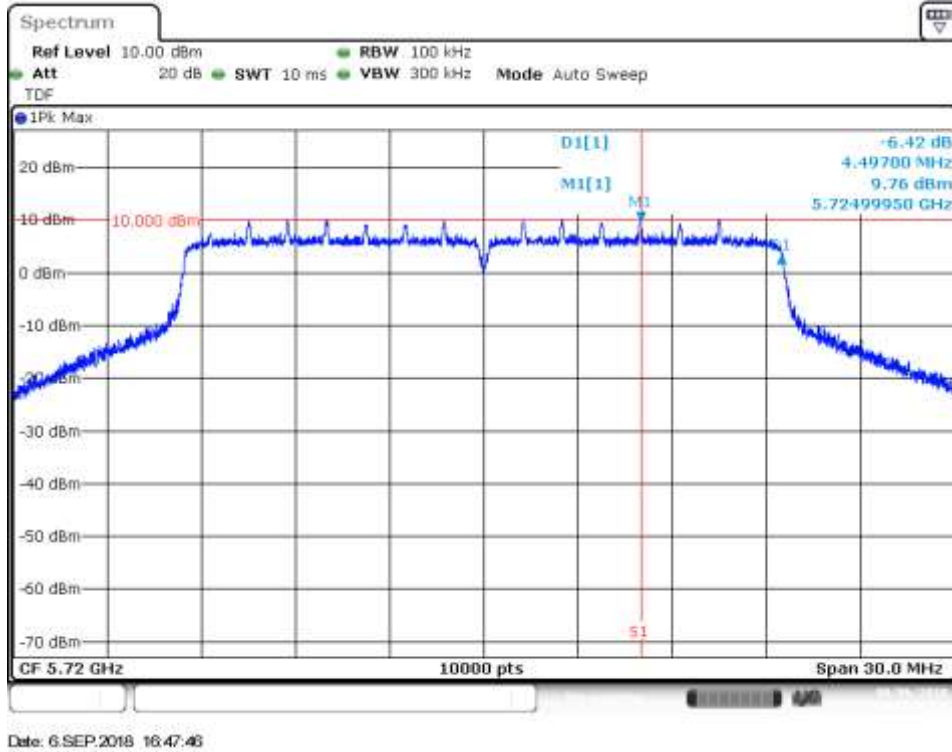
# MIMO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



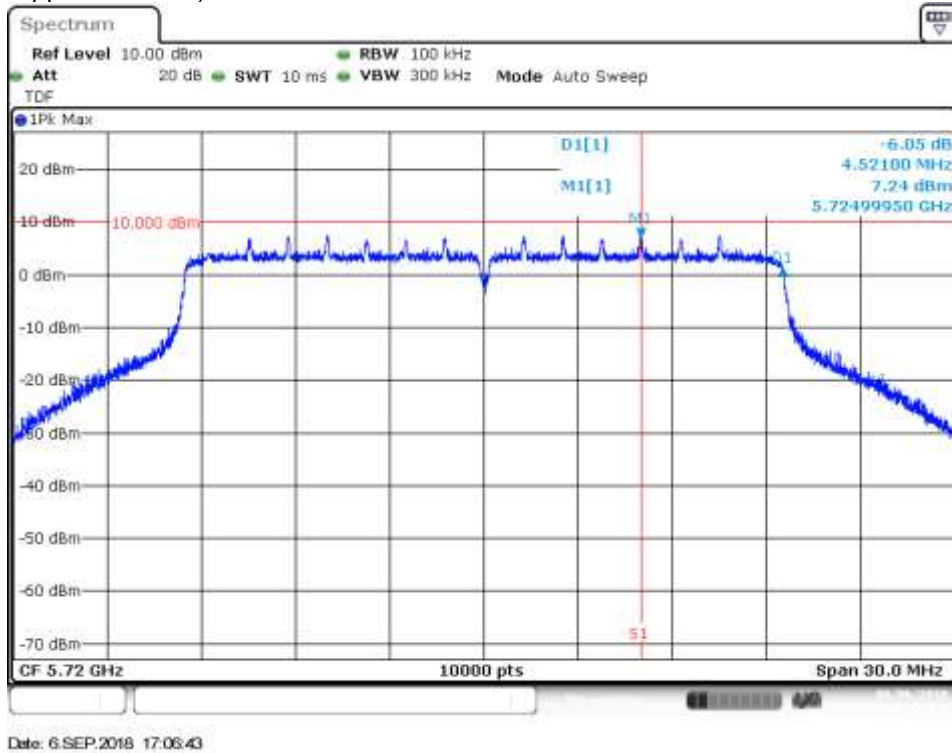
# SISO-A, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



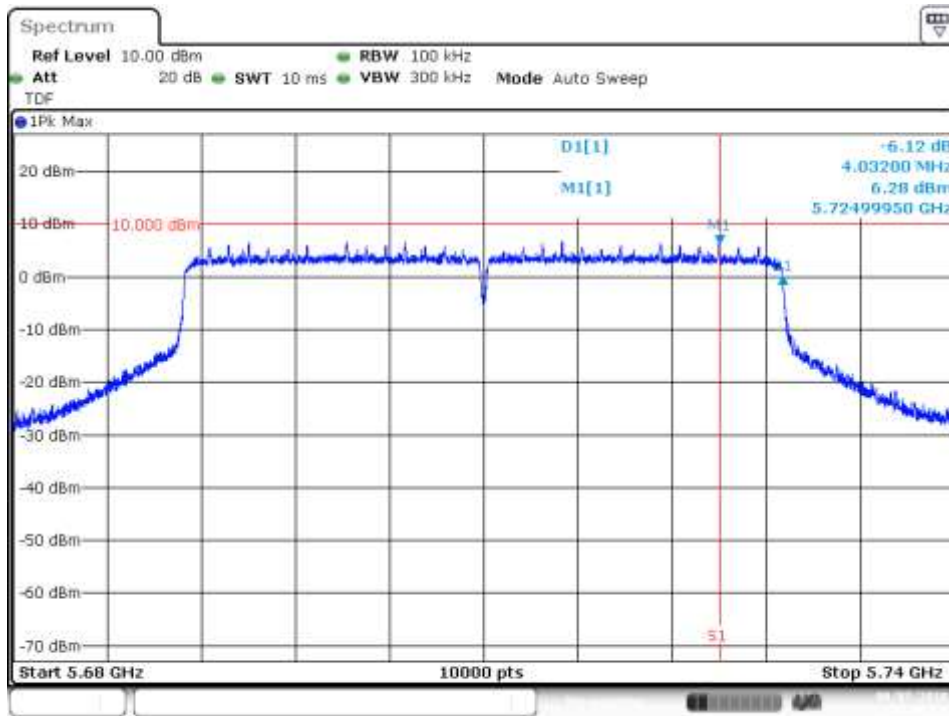
# MIMO-A, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



# SISO-B, 802.11ax40, HE0

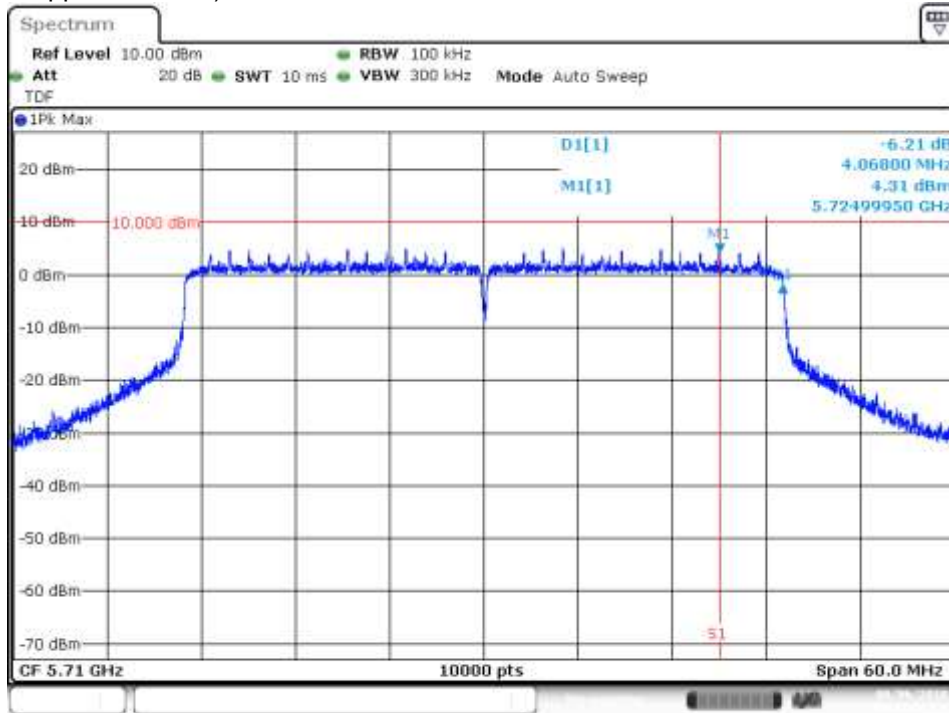
Channel 142F (Overlapped Channel)



Date: 7.SEP.2018 12:52:01

# MIMO-A, 802.11ax40, HE0

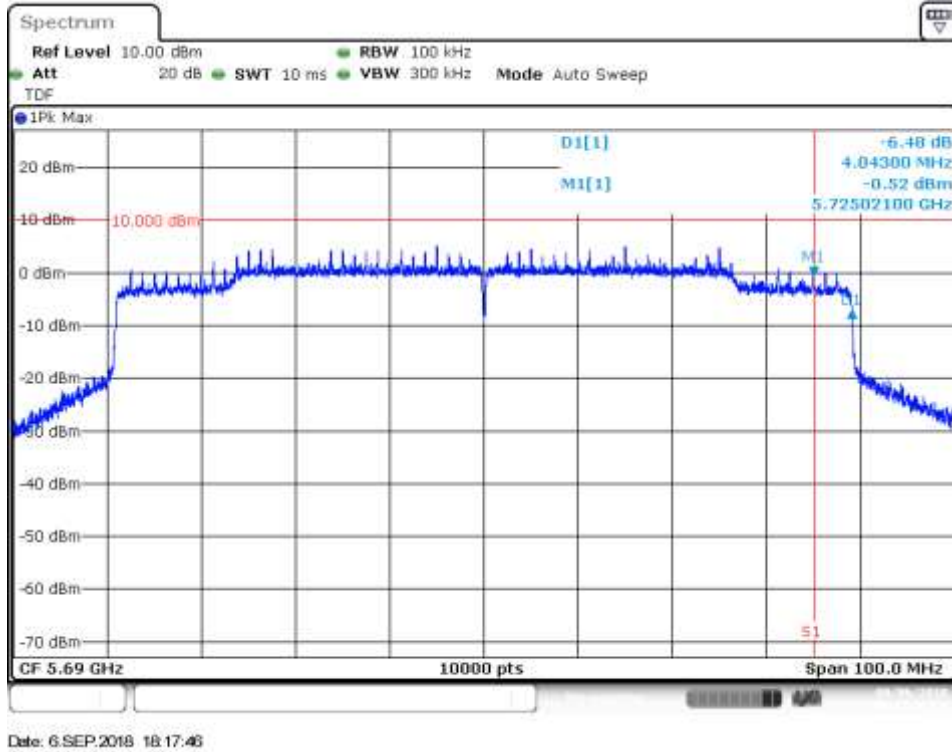
Channel 142F (Overlapped Channel)



Date: 6.SEP.2018 17:59:09

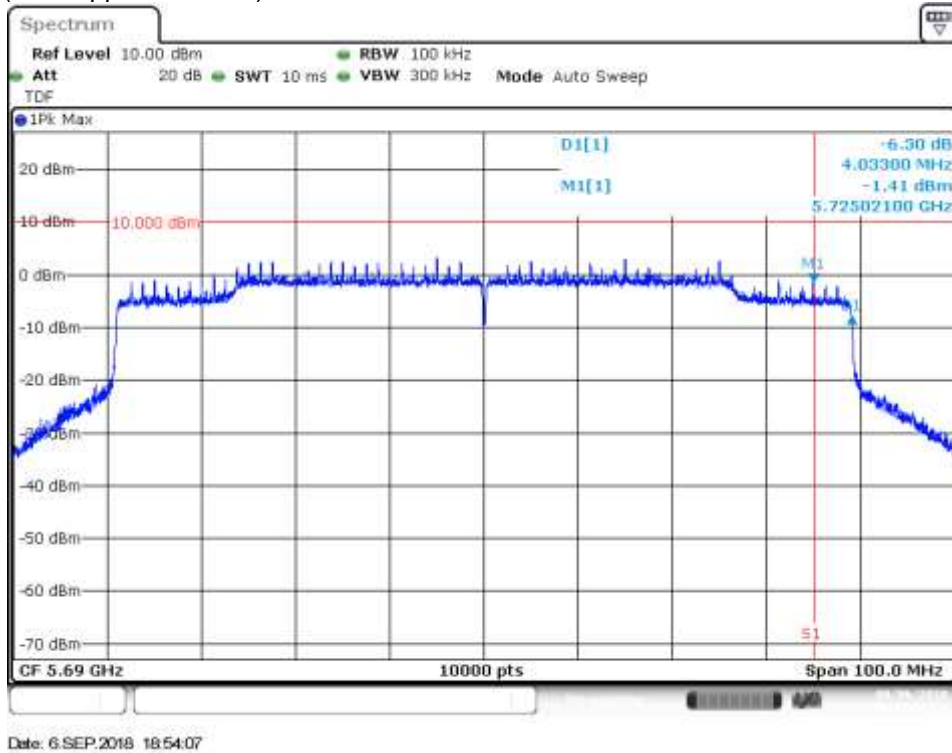
# SISO-A, 802.11ax80, HE0

Channel 138ax80 (Overlapped Channel)



# MIMO-A, 802.11ax80, HE0

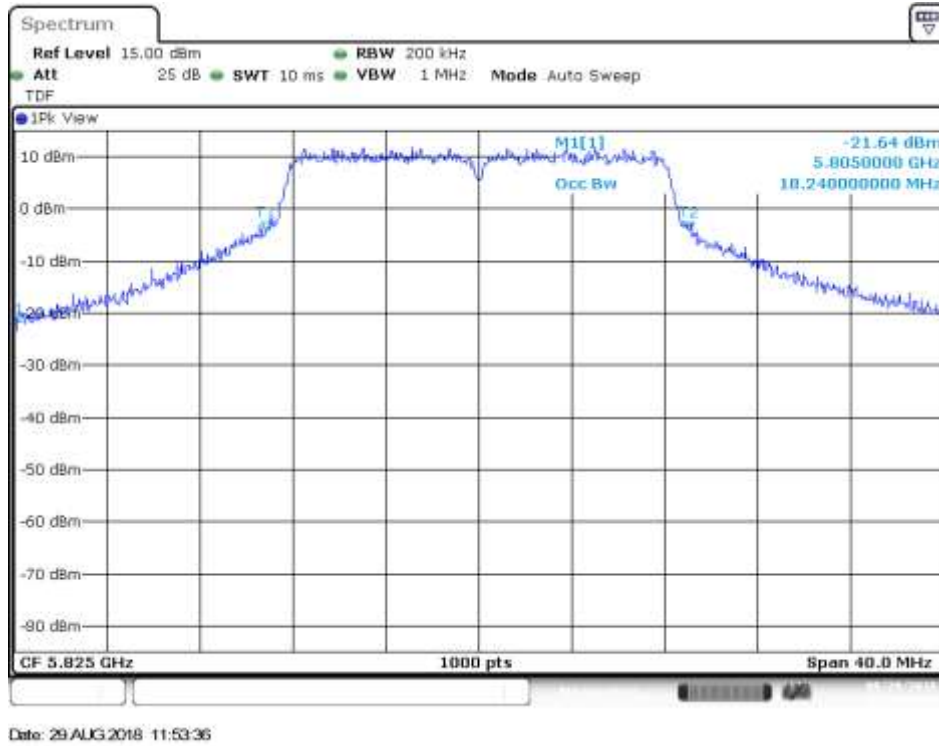
Channel 138ax80 (Overlapped Channel)



### B.3.3 99% Bandwidth

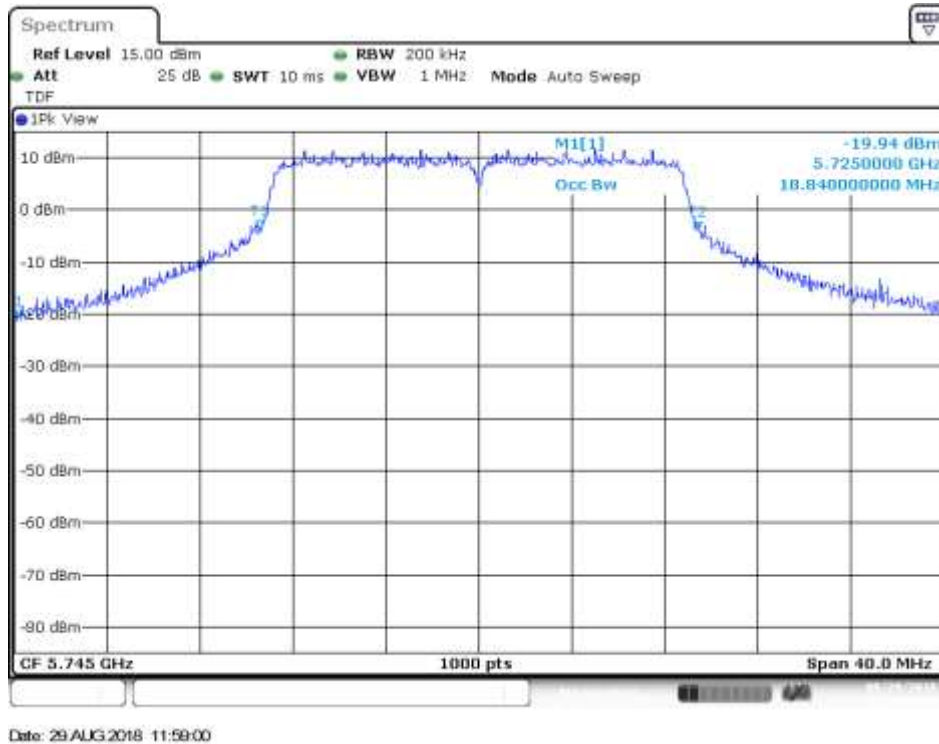
## SISO-A, 802.11a, 6Mbps

Channel 169



## SISO-A, 802.11n20, HT0

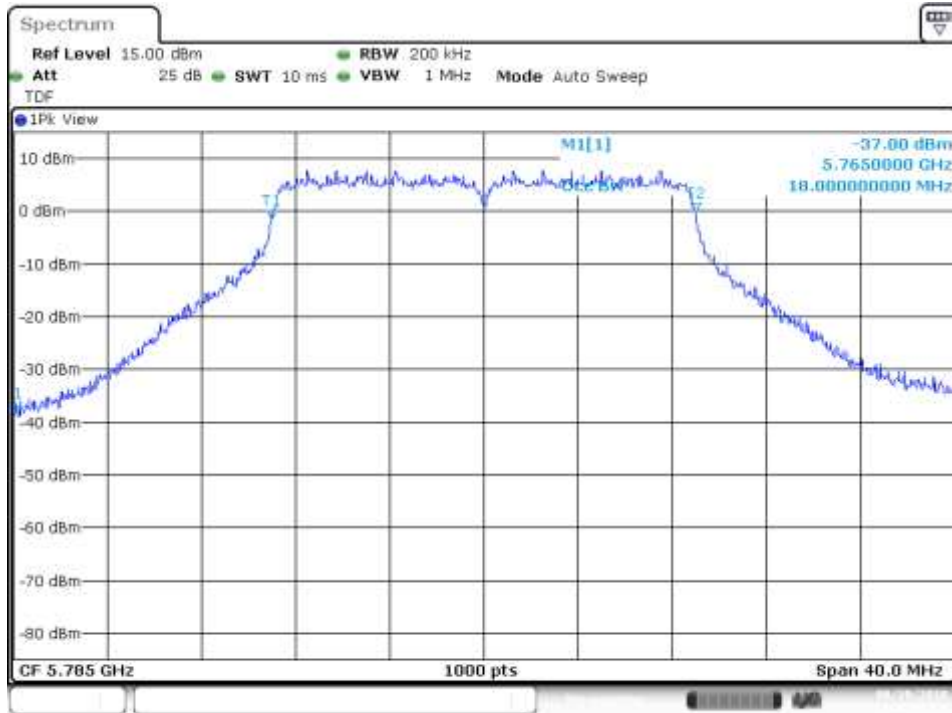
Channel 149





### MIMO-A 802.11n20, HT8

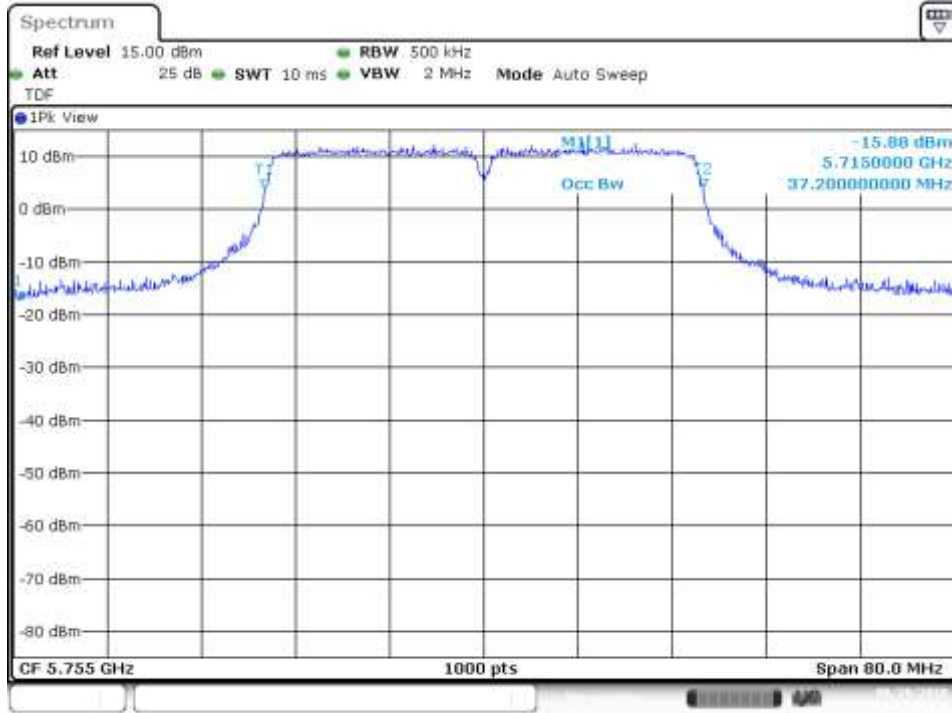
Channel 157



Date: 29.AUG.2018 12:39:29

### SISO-A, 802.11n40, HT0

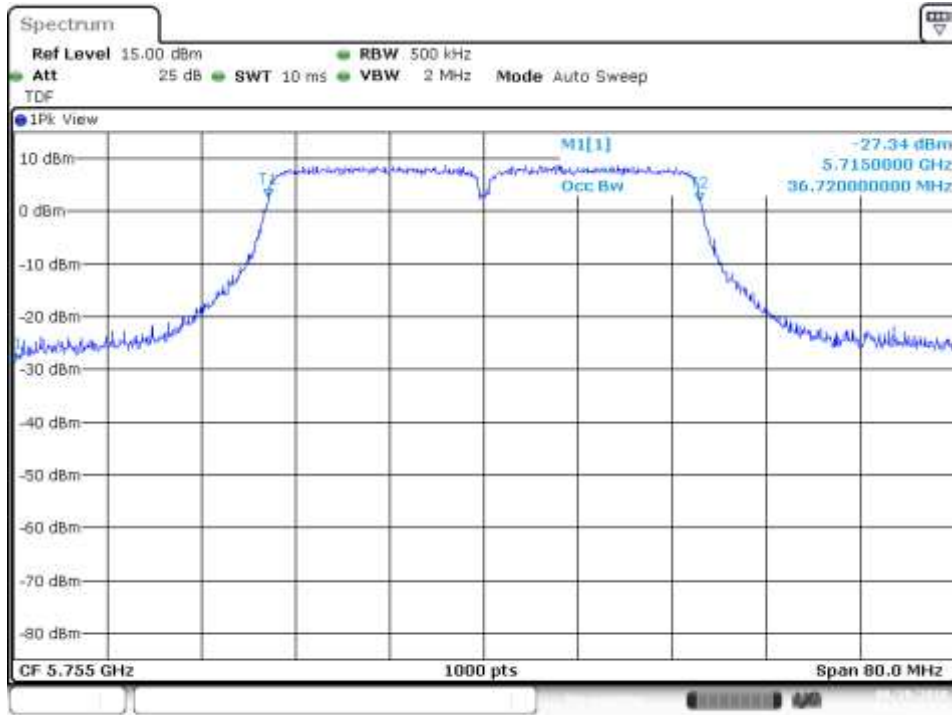
Channel 151F



Date: 29.AUG.2018 14:33:04

# MIMO-A, 802.11n40, HT8

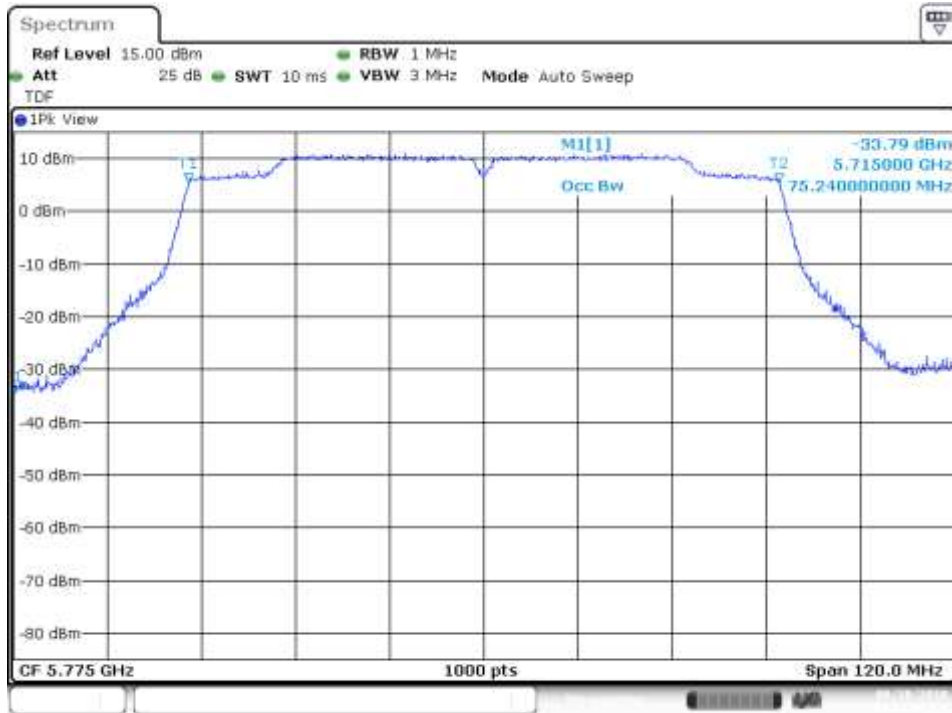
Channel 151F



Date: 29.AUG.2018 15:58:00

# SISO-B, 802.11ac80, VHT0

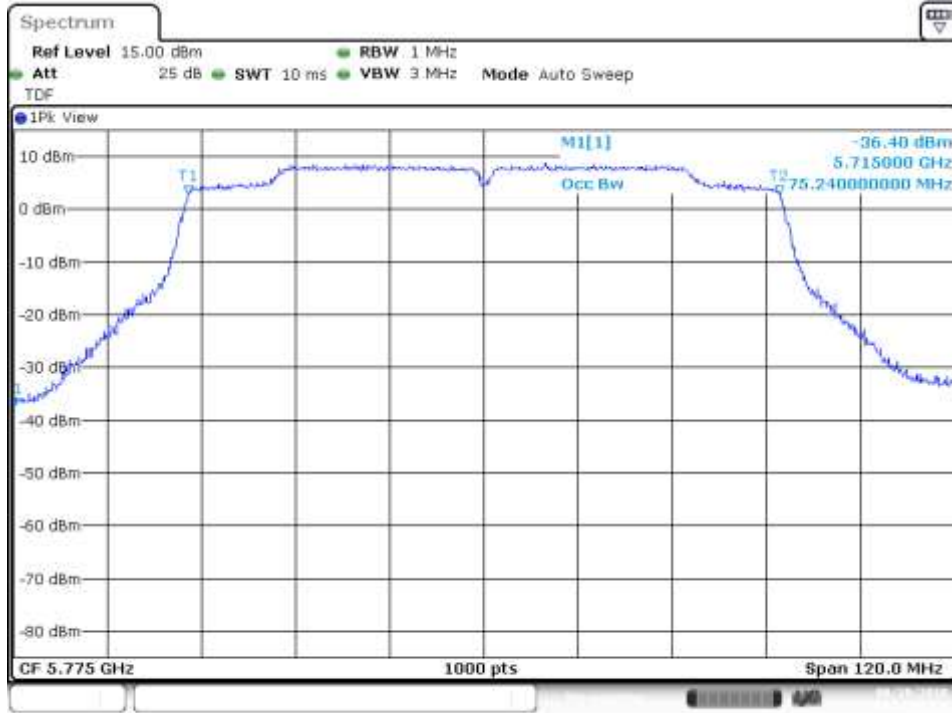
Channel 155ac80



Date: 28.AUG.2018 19:02:09

# MIMO-A, 802.11ac80, VHT0

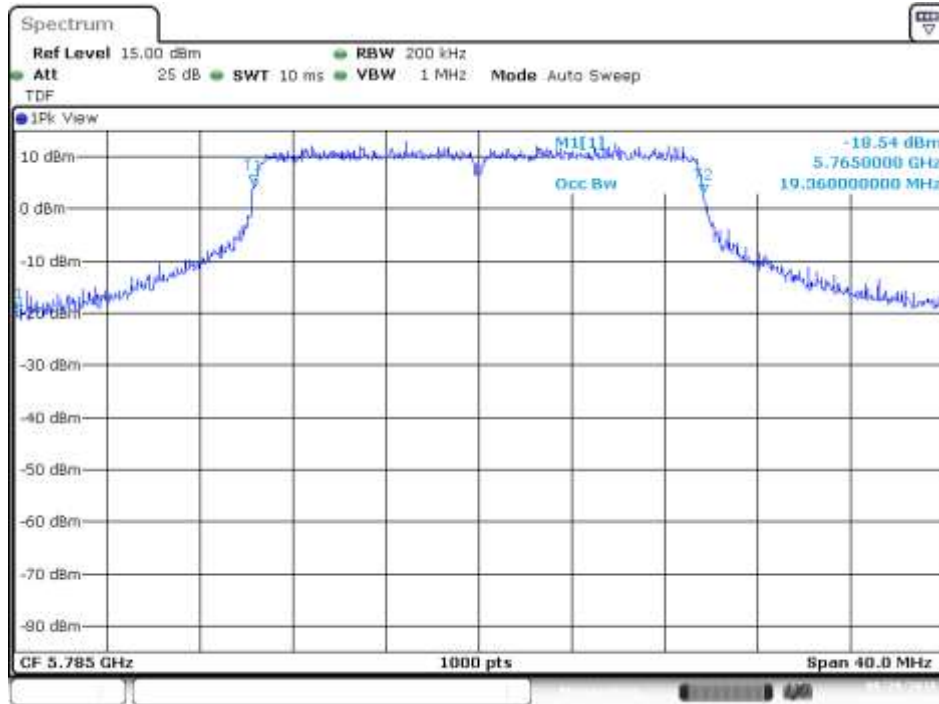
Channel 155ac80



Date: 29.AUG.2018 16:53:38

# SISO-A, 802.11ax20, HE0

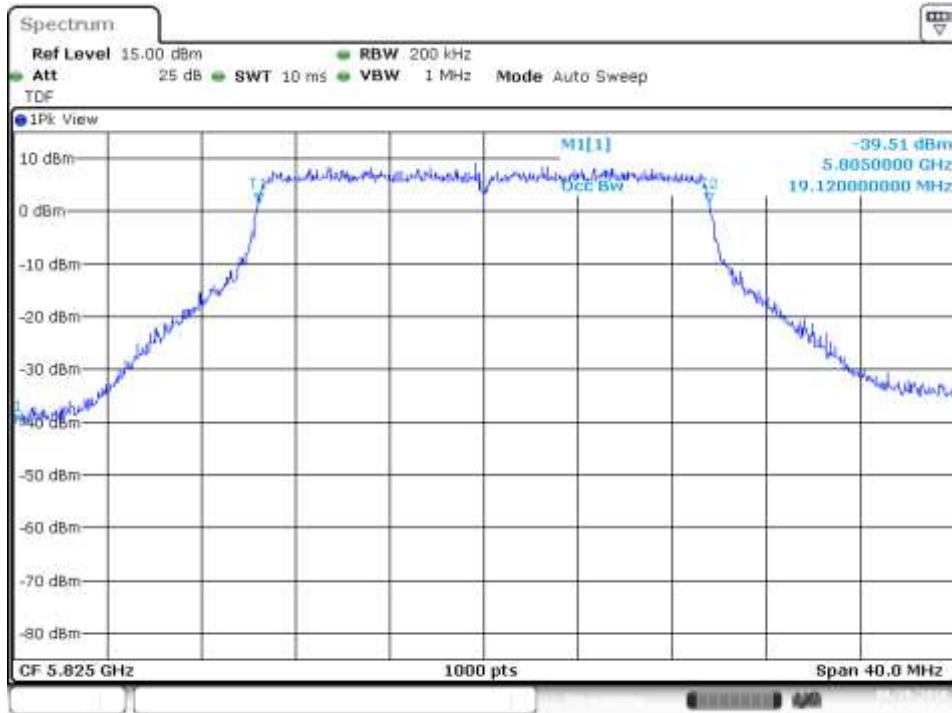
Channel 157



Date: 29.AUG.2018 13:00:54

### MIMO-A, 802.11ax20, HE0

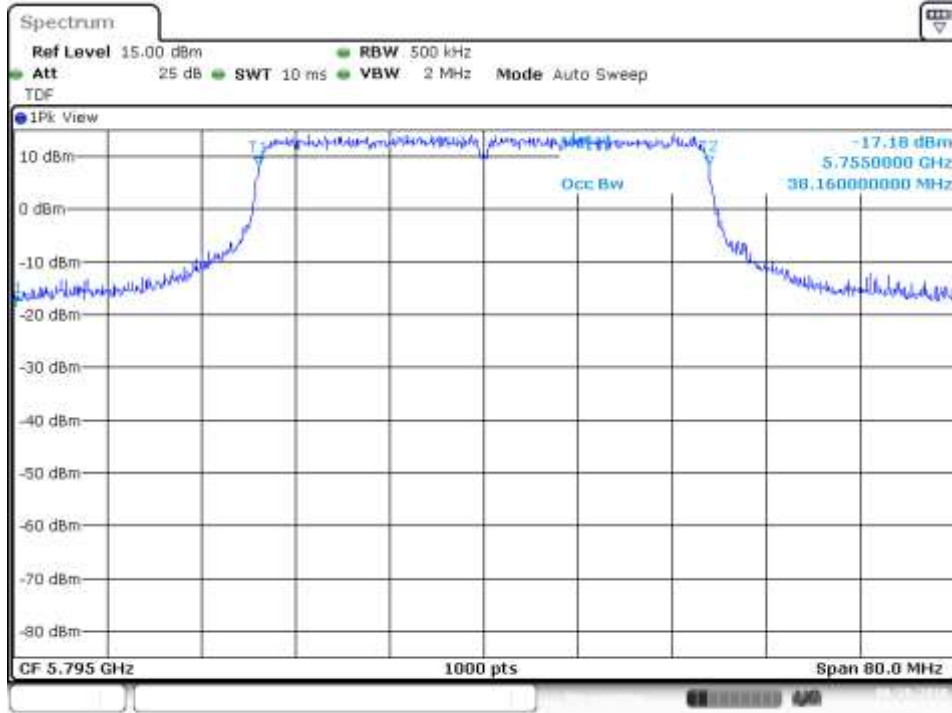
Channel 165



Date: 29.AUG.2018 14:06:04

### SISO-A, 802.11ax40, HE0

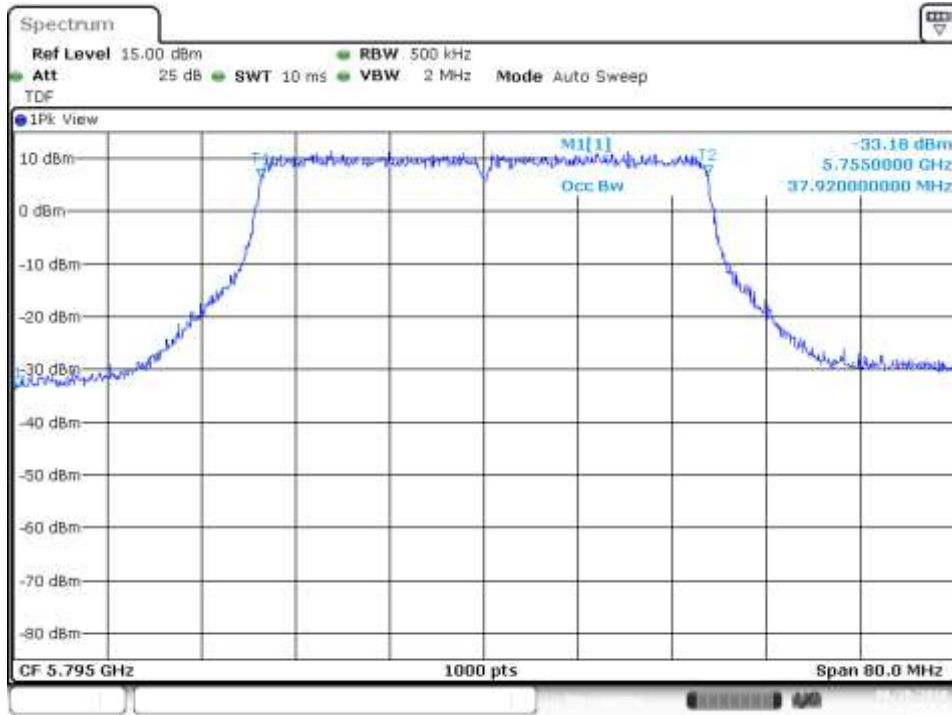
Channel 159F



Date: 29.AUG.2018 16:14:02

# MIMO-A, 802.11ax40, HE0

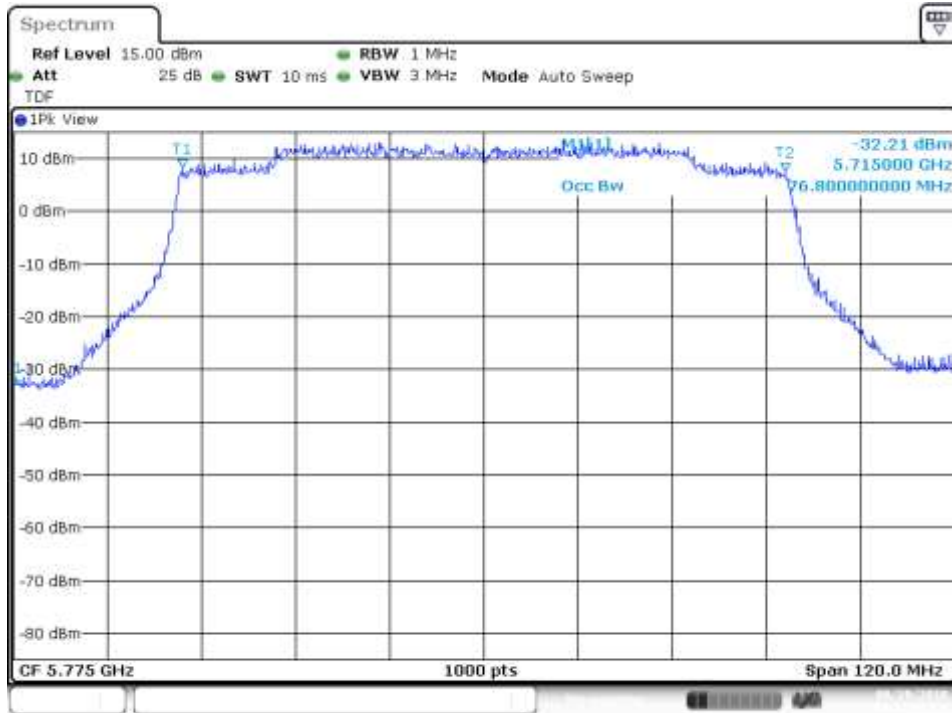
Channel 159F



Date: 29.AUG.2018 16:26:25

# SISO-A, 802.11ax80, HE0

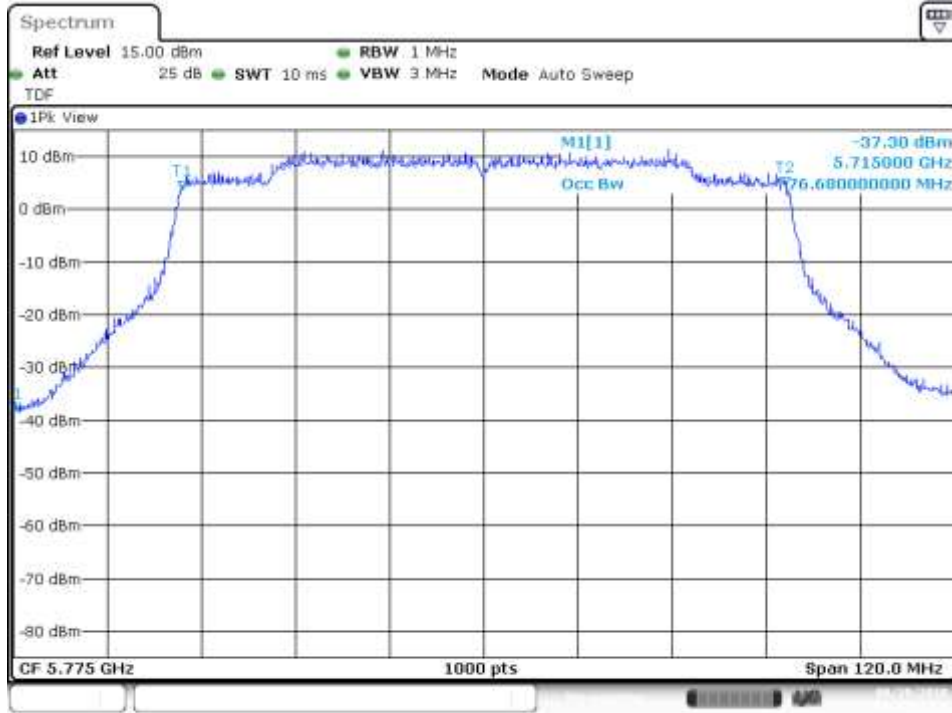
Channel 155ax80



Date: 29.AUG.2018 17:12:33

# MIMO-A, 802.11ax80, HE0

Channel 155ax80



Date: 29.AUG.2018 17:21:02

### SISO-A, 802.11ax20, HE0, RU 26/0

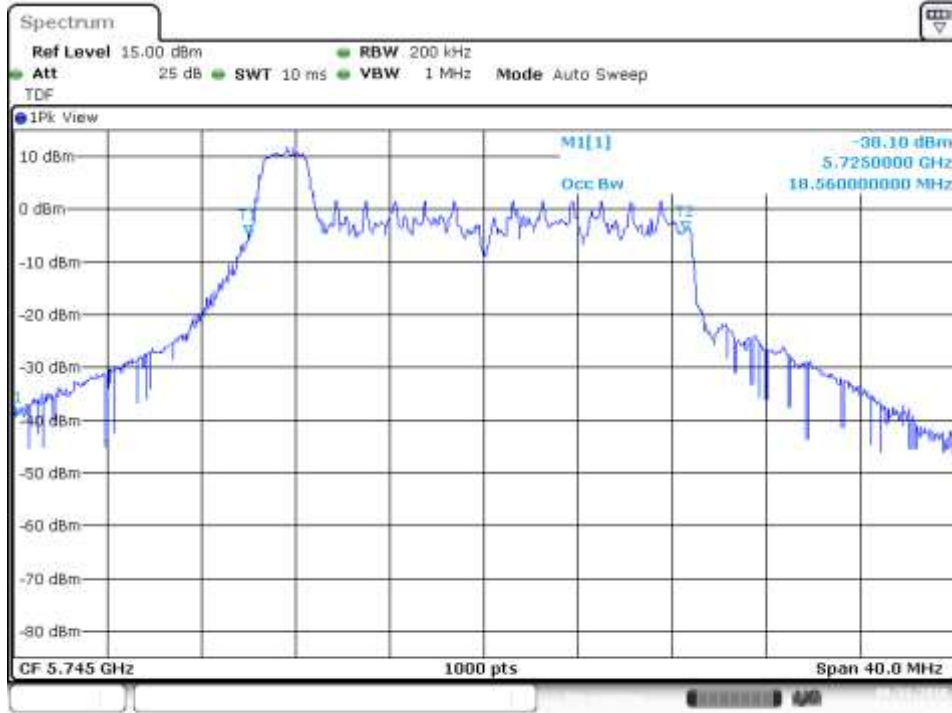
Channel 149



Date: 5 SEP.2018 16:35:52

### MIMO-A, 802.11ax20, HE0, RU 26/0

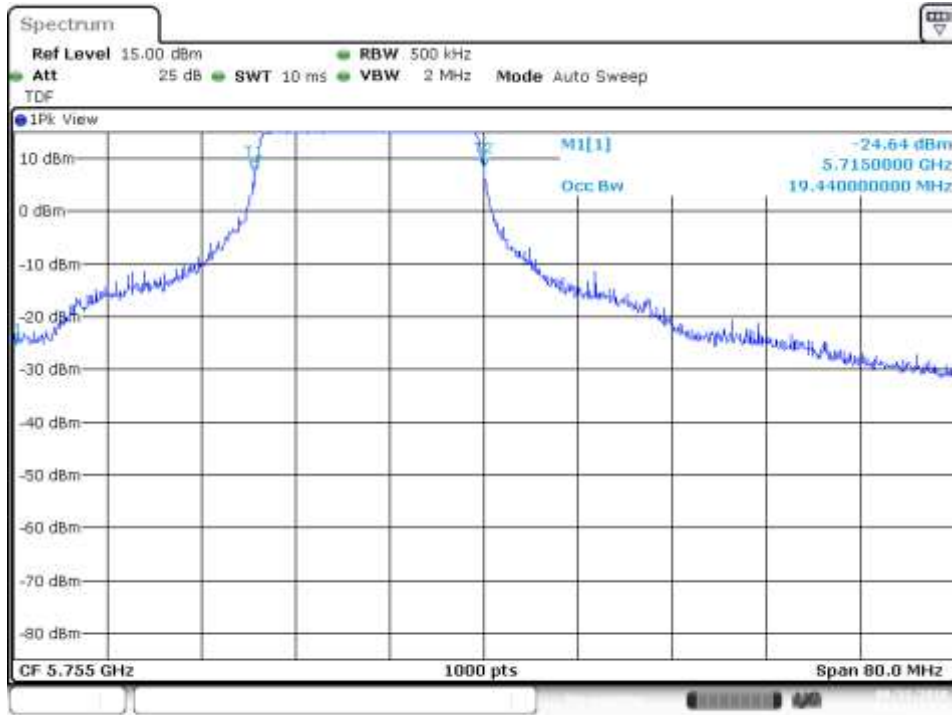
Channel 149



Date: 31 AUG.2018 17:31:30

# SISO-A, 802.11ax40, HE0, RU 242/61

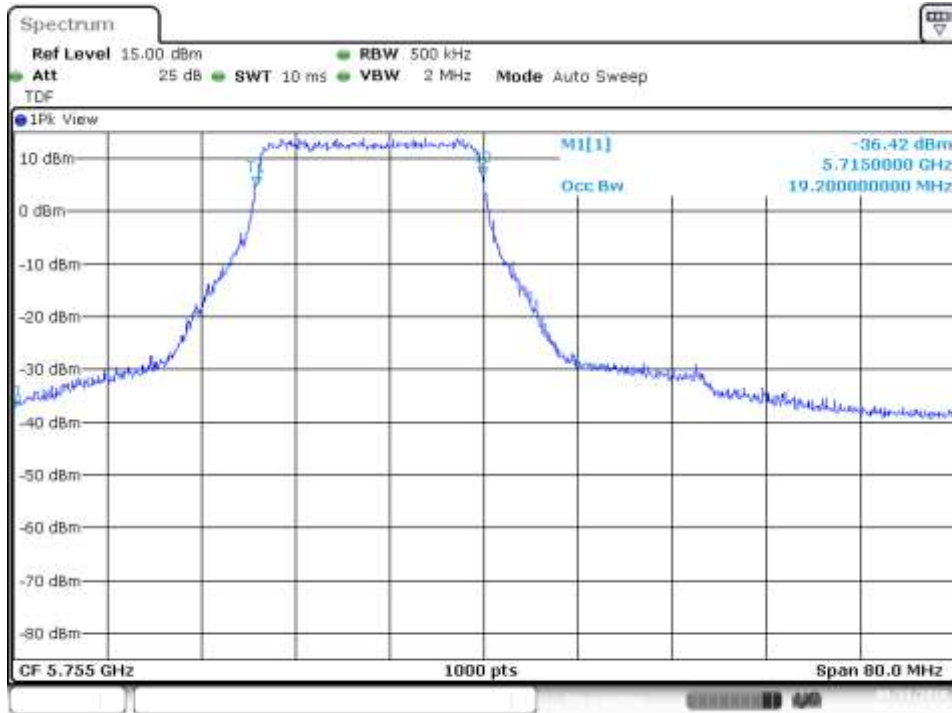
Channel 151F



Date: 31.AUG.2018 17:58:12

# MIMO-A, 802.11ax20, HE0, RU 242/61

Channel 151F

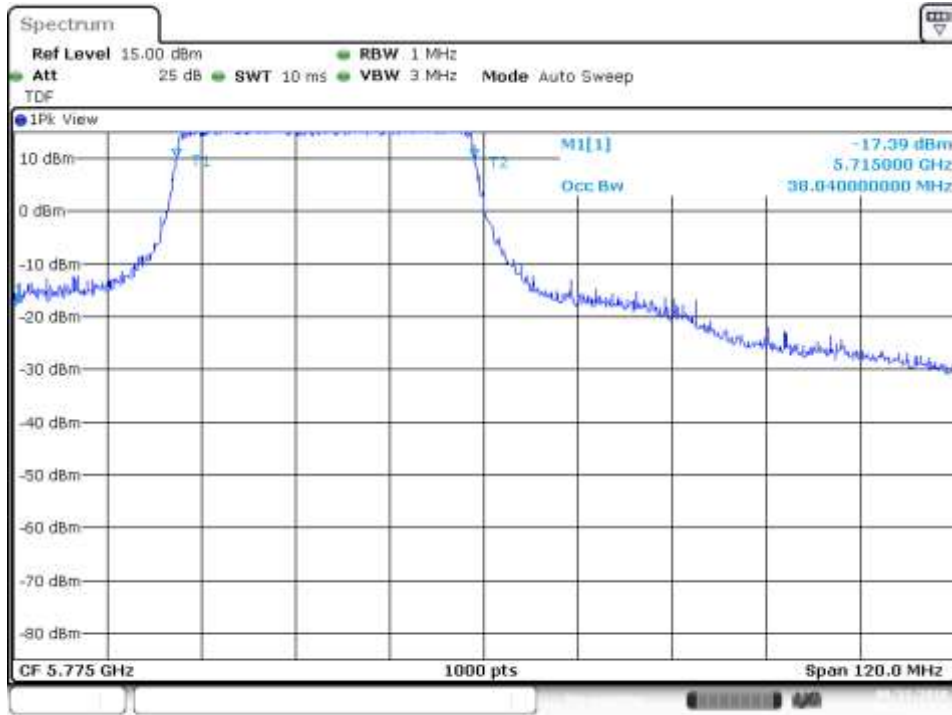


Date: 31.AUG.2018 18:04:21



# SISO-A, 802.11ax80, HE0, RU 484/65

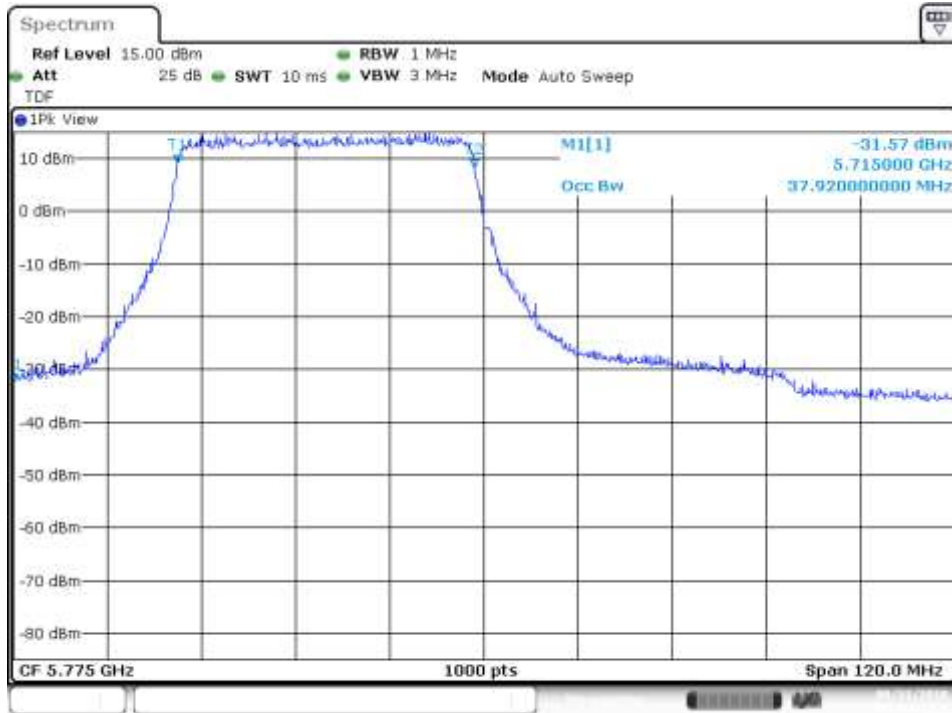
Channel 155ax80



Date: 31.AUG.2018 18:17:15

# MIMO-A, , 802.11ax80, HE0, RU 484/65

Channel 155ax80

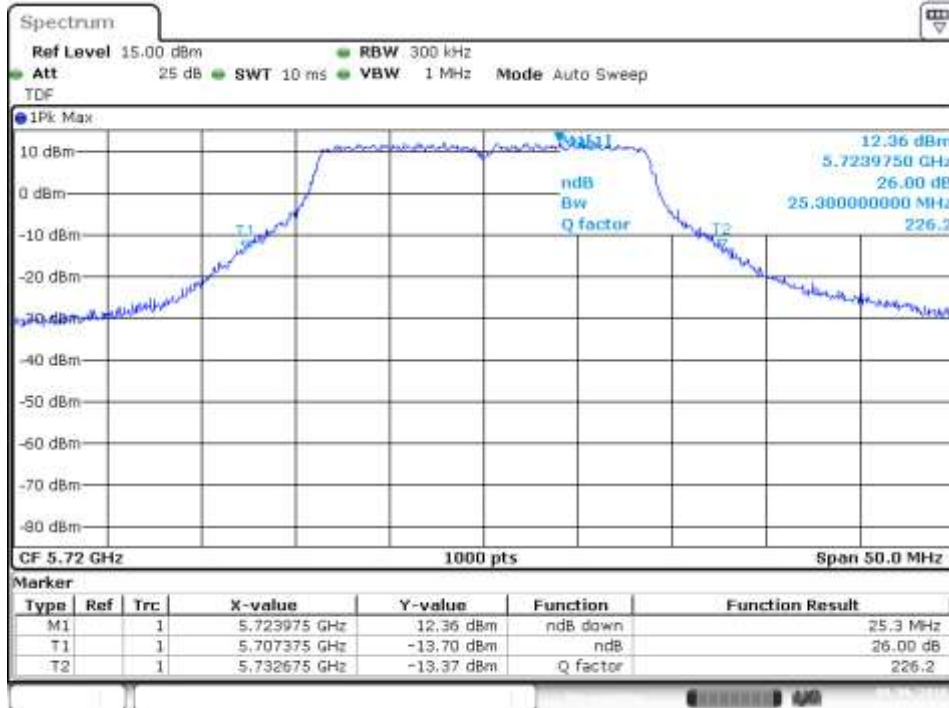


Date: 31.AUG.2018 18:38:04

**B.3.4 26dB Bandwidth (Overlapped Channel)**

**SISO-B, 802.11n20, HT8**

Channel 144 (Overlapped Channel)



Date: 6.SEP.2018 19:20:41

**MIMO-A, 802.11n20, HT8**

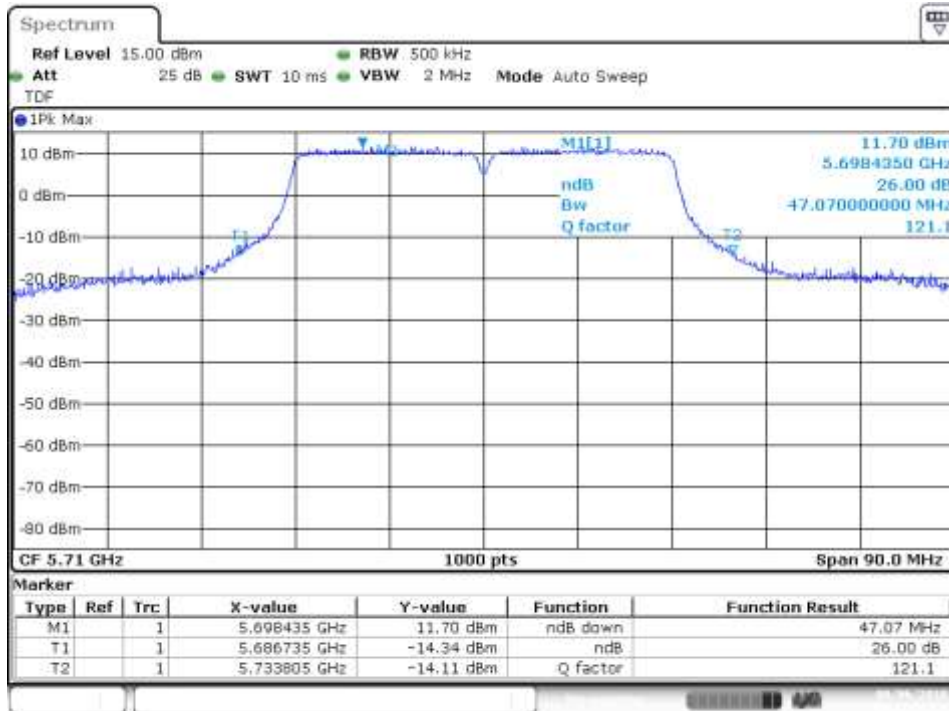
Channel 144 (Overlapped Channel)



Date: 6.SEP.2018 18:52:16

## SISO-A, 802.11n40, HT8

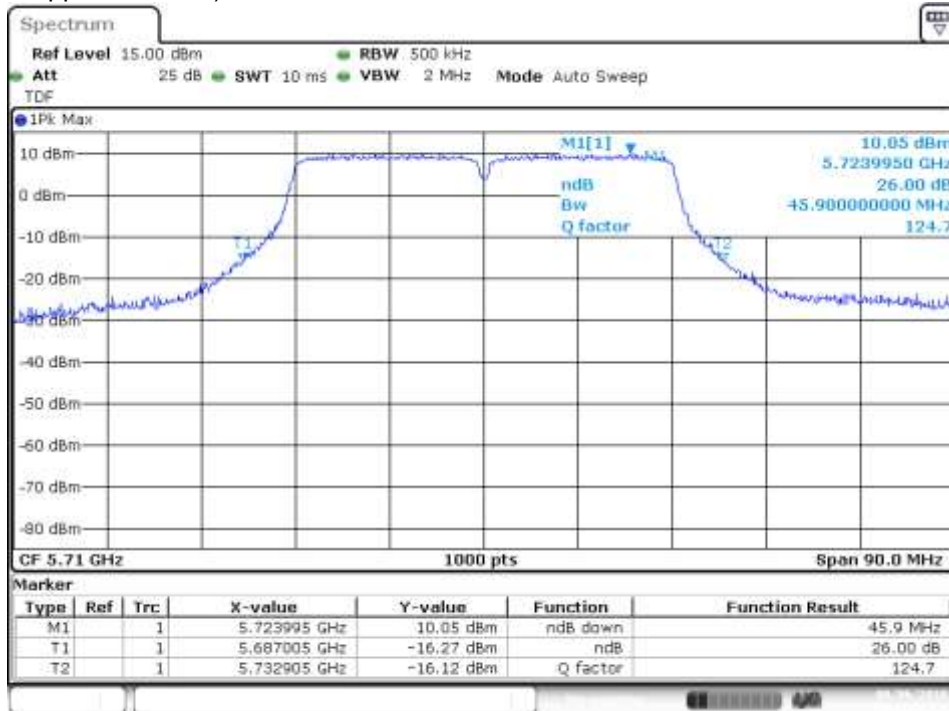
Channel 142F (Overlapped Channel)



Date: 6.SEP.2018 17:21:33

## MIMO-A, 802.11n40, HT8

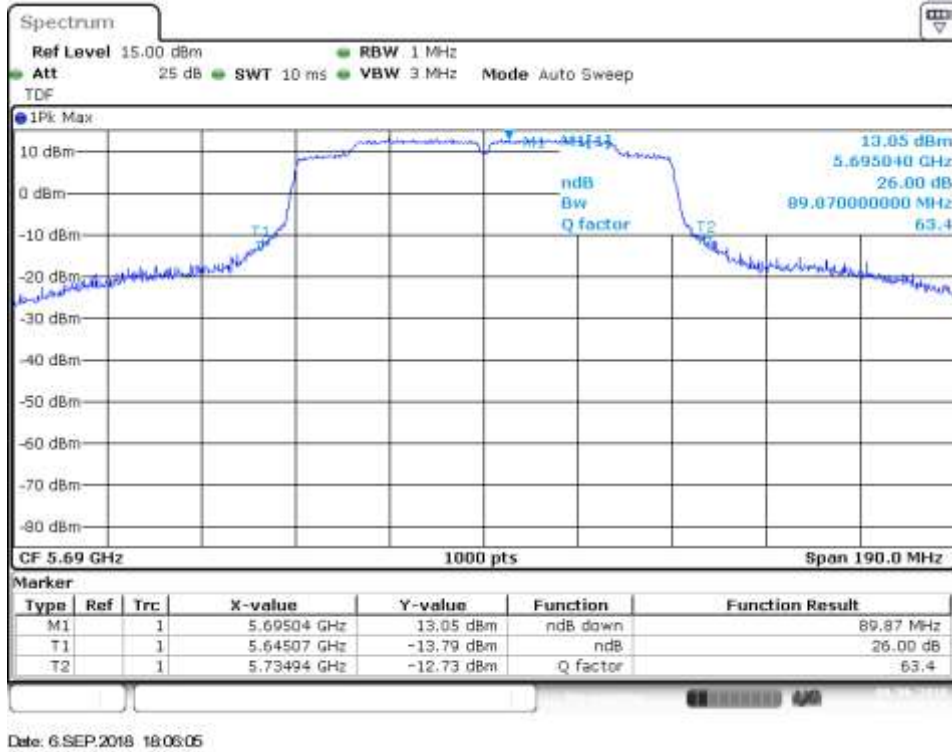
Channel 142F (Overlapped Channel)



Date: 6.SEP.2018 17:48:09

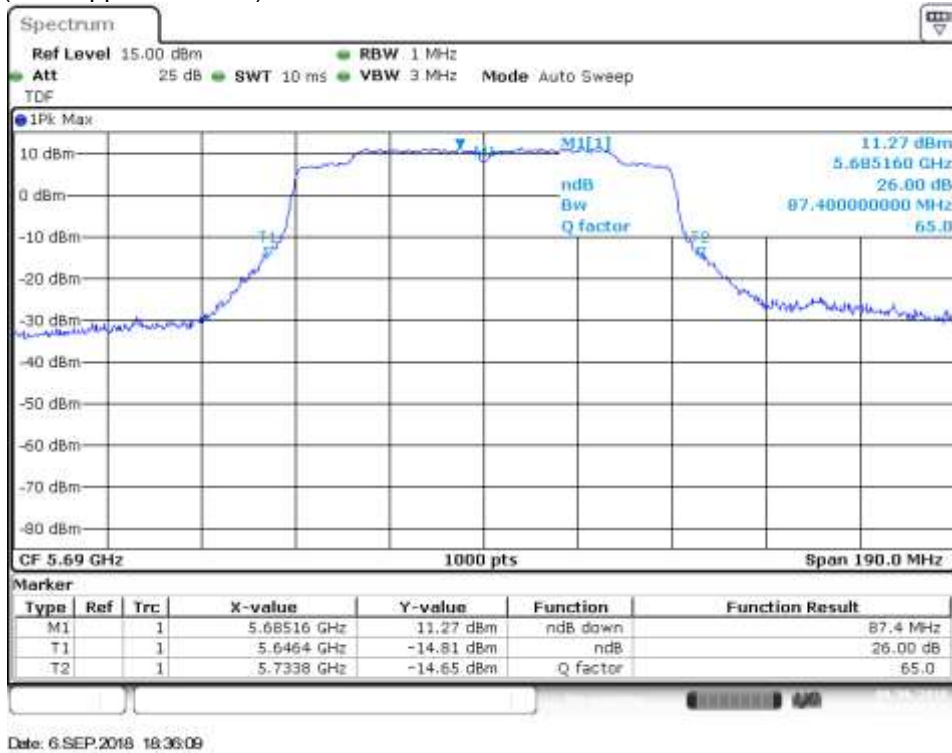
## SISO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



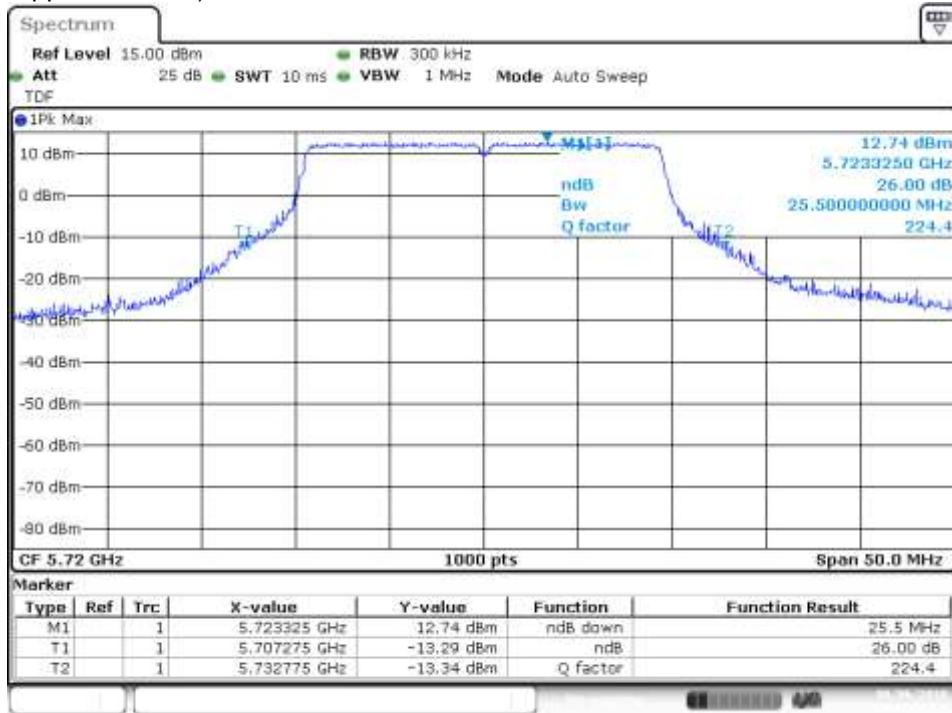
## MIMO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



## SISO-A, 802.11ax20, HE0

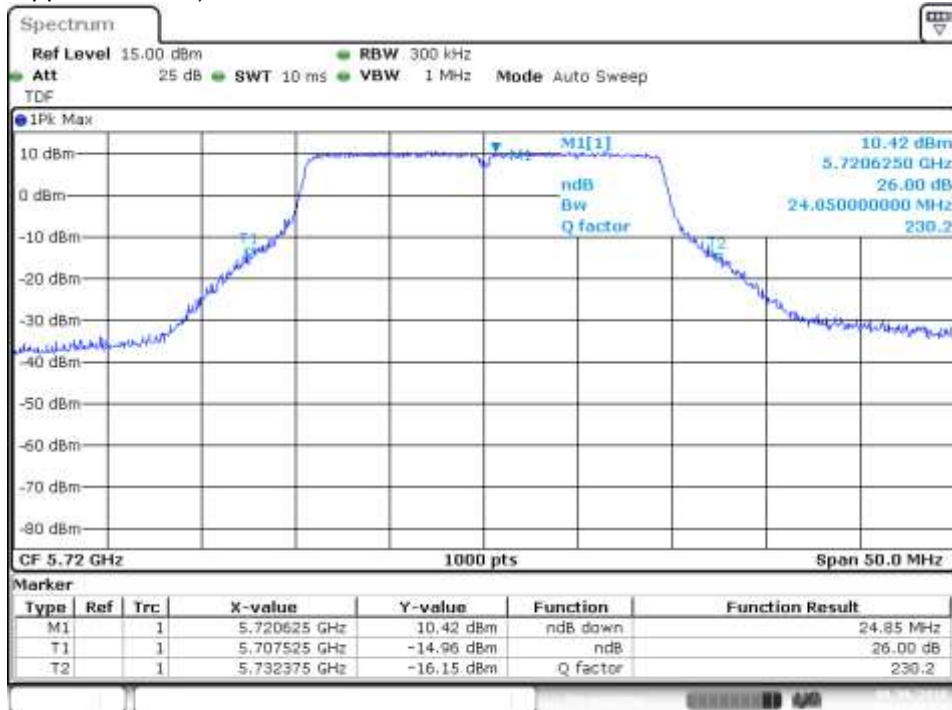
Channel 144 (Overlapped Channel)



Date: 6.SEP.2018 16:40:44

## MIMO-A, 802.11ax20, HE0

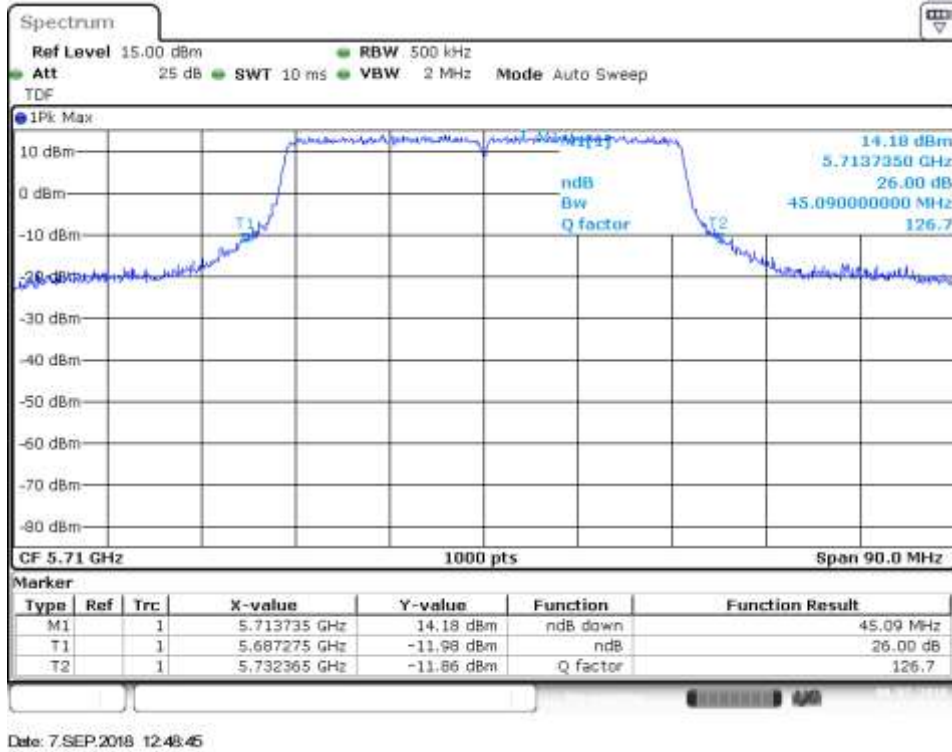
Channel 144 (Overlapped Channel)



Date: 6.SEP.2018 17:00:06

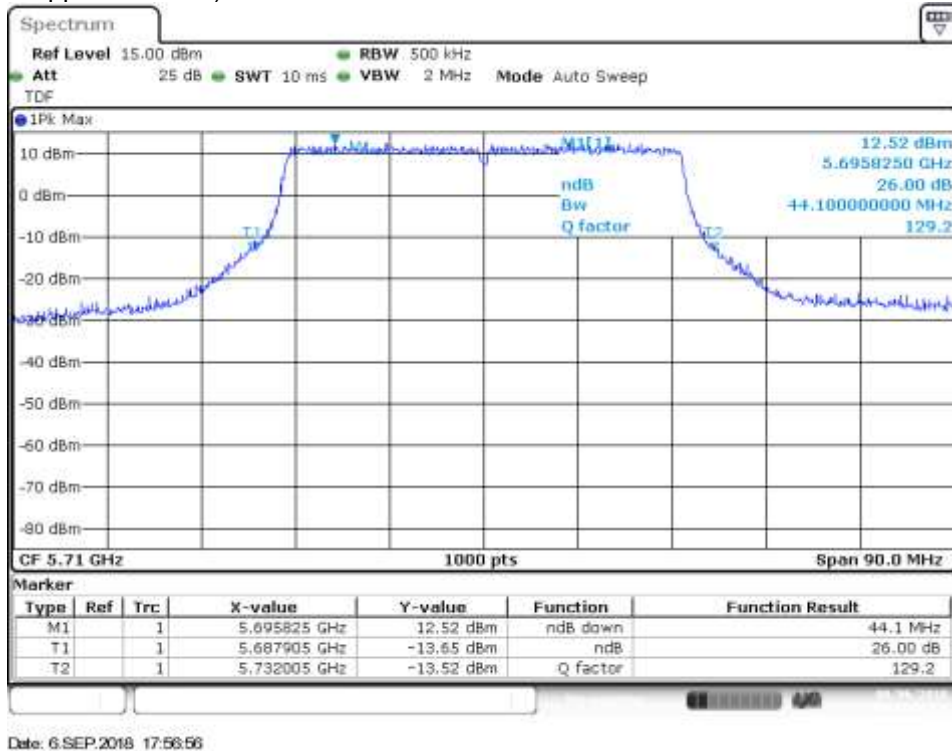
## SISO-B, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



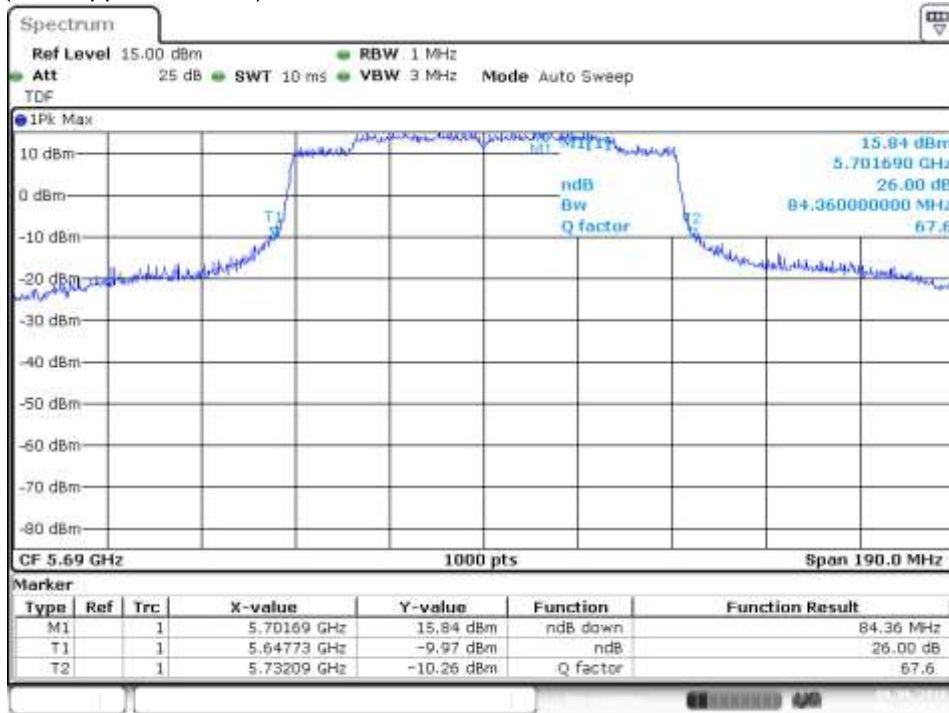
## MIMO-A, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



## SISO-A, 802.11ax80, HE0

Channel 138ax80 (Overlapped Channel)



Date: 6 SEP.2018 18:16:06

## MIMO-A, 802.11ax80, HE0

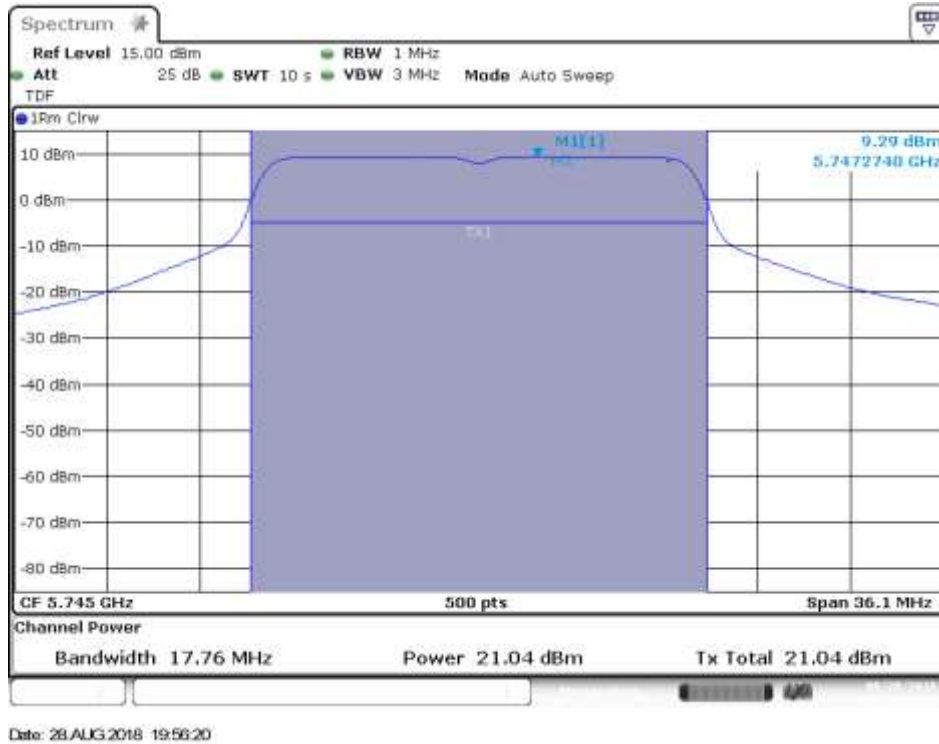
Channel 138ax80 (Overlapped Channel)



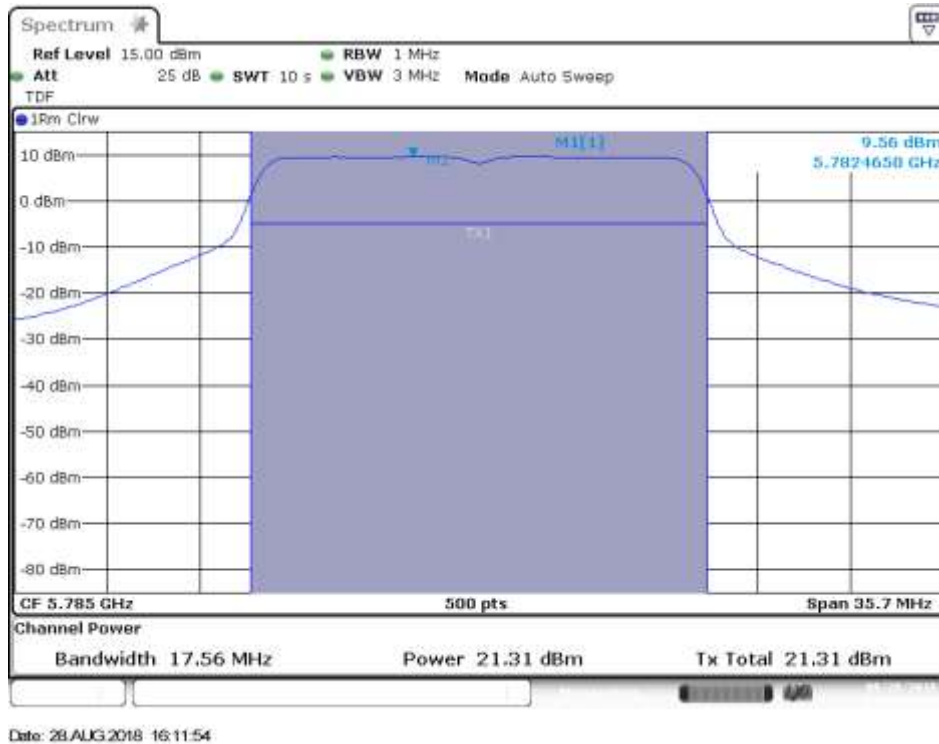
Date: 6 SEP.2018 18:51:52

**B.3.5 Maximum output power****SISO-A, 802.11a, 6Mbps**

Channel 149

**SISO-B, 802.11a, 6Mbps**

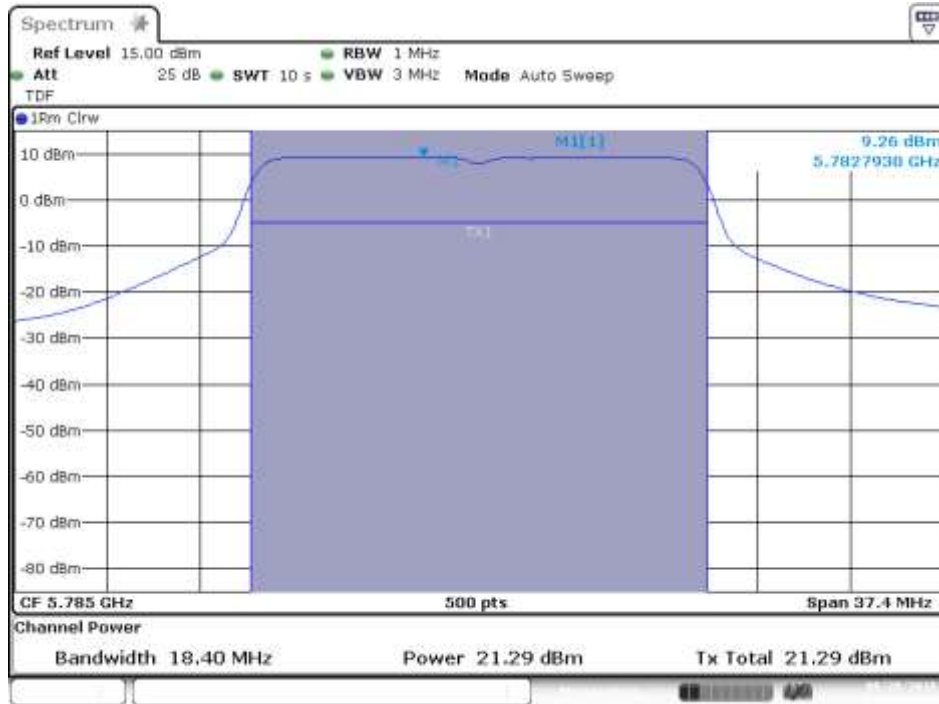
Channel 157





### SISO-B, 802.11n20, HT0

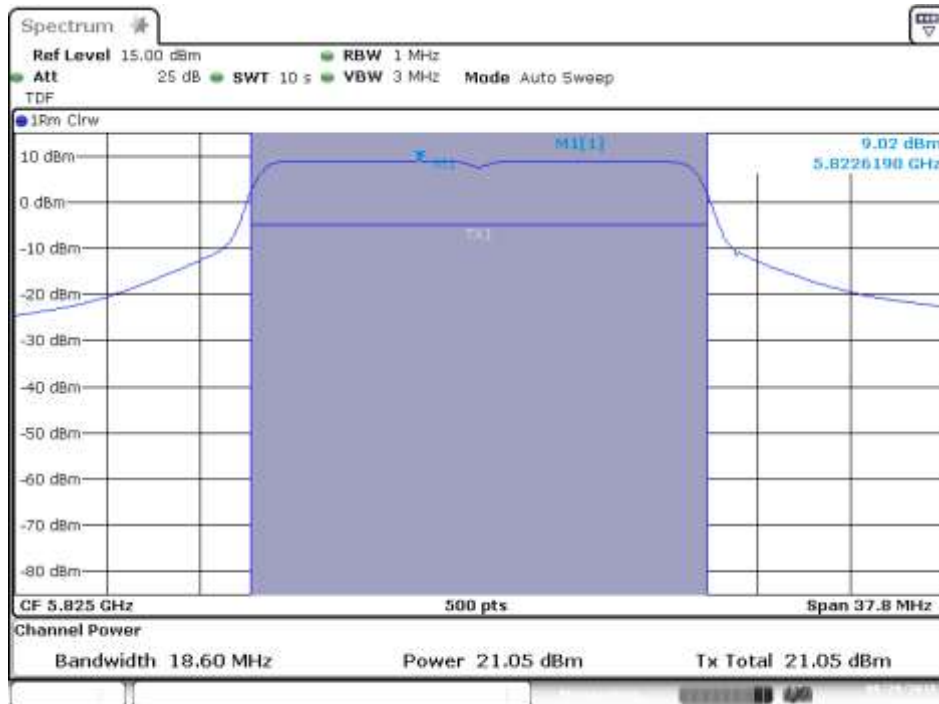
Channel 157



Date: 28 AUG 2018 16:27:03

### SISO-A, 802.11n20, HT0

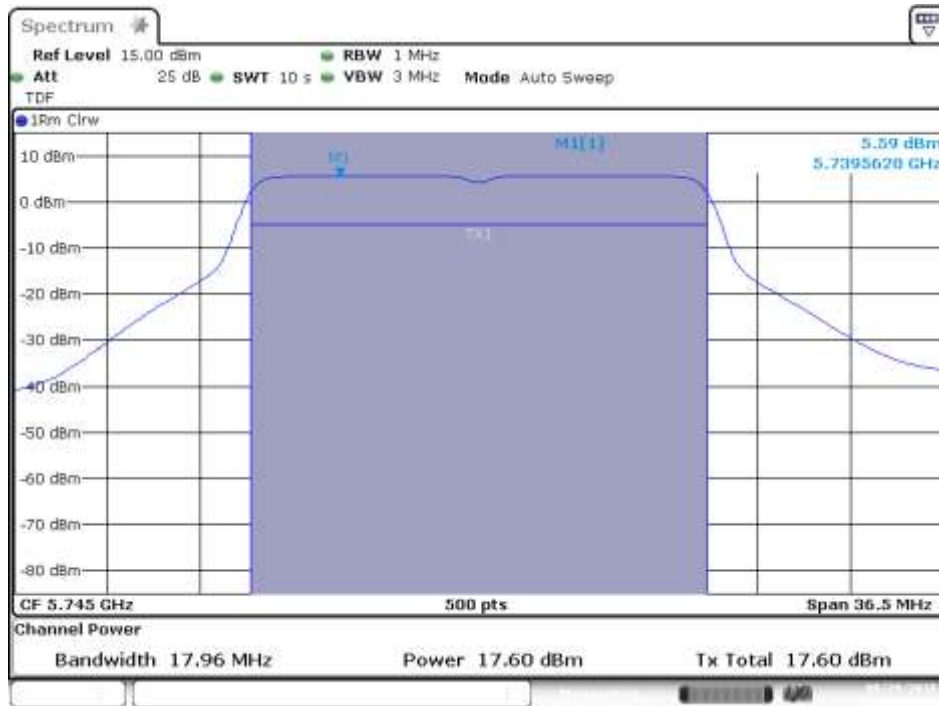
Channel 165



Date: 29 AUG 2018 12:12:05

## MIMO-A, 802.11n20, HT8

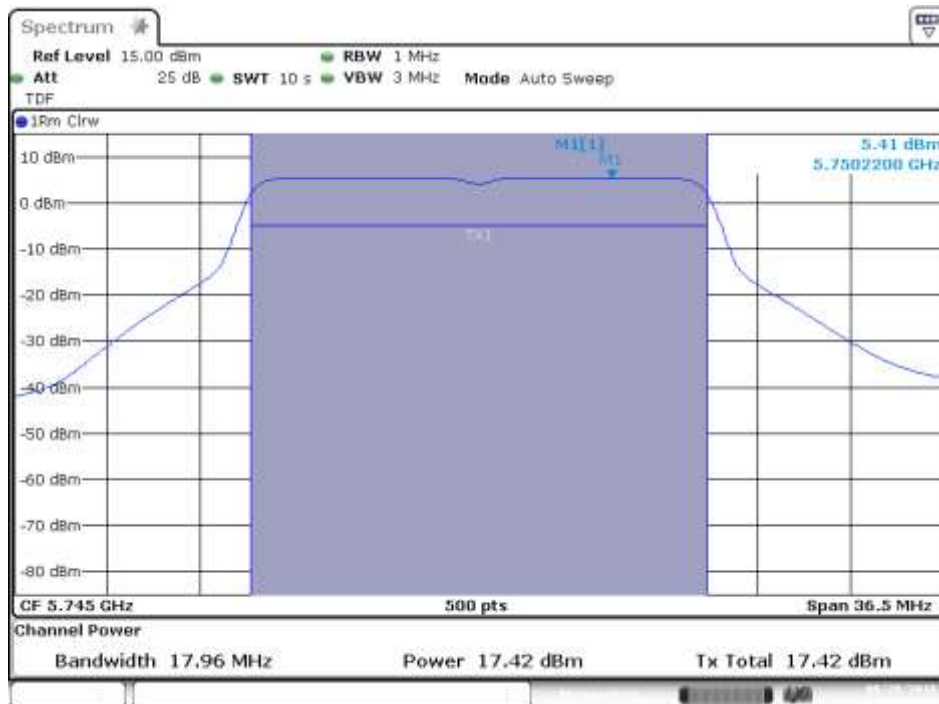
Channel 149



Date: 29 AUG 2018 12:33:34

## MIMO-B, 802.11n20, HT8

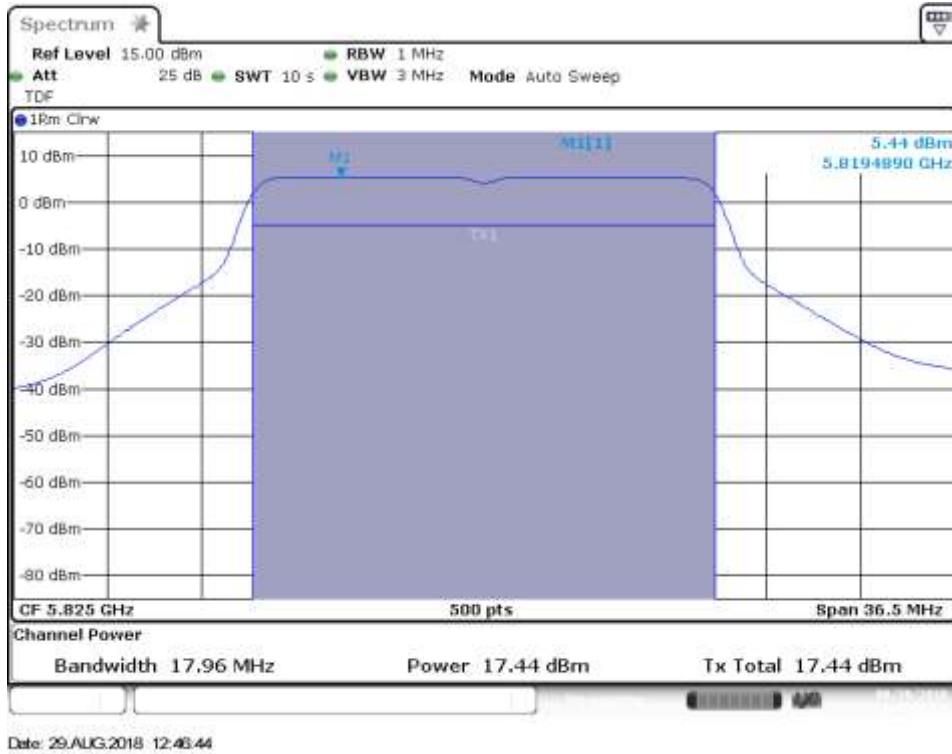
Channel 149



Date: 29 AUG 2018 16:49:33

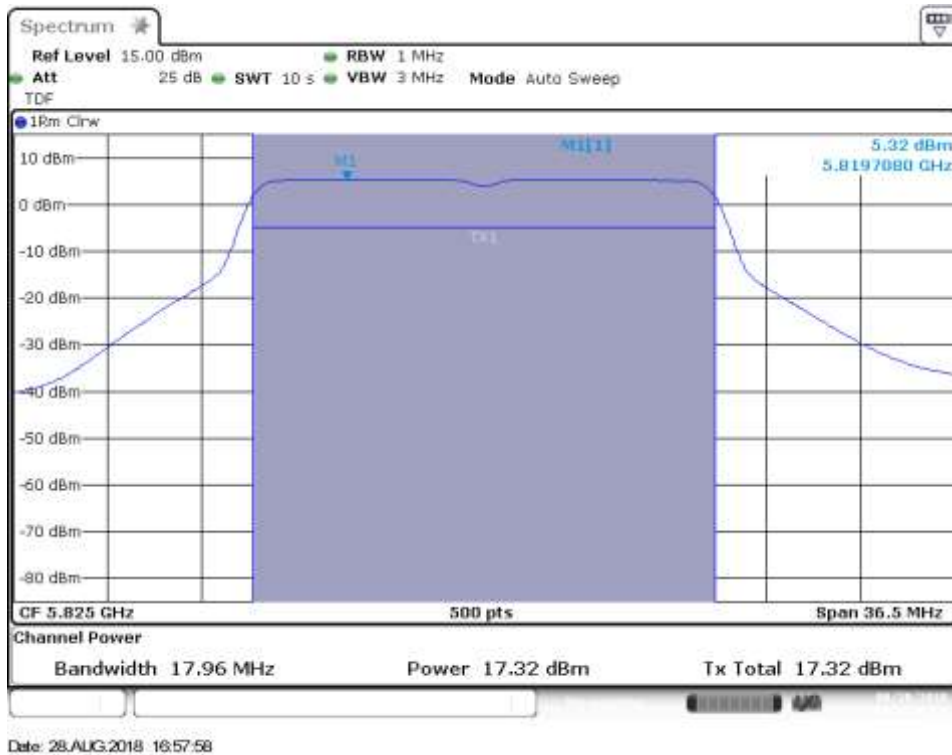
# MIMO-A, 802.11n20, HT8

Channel 165



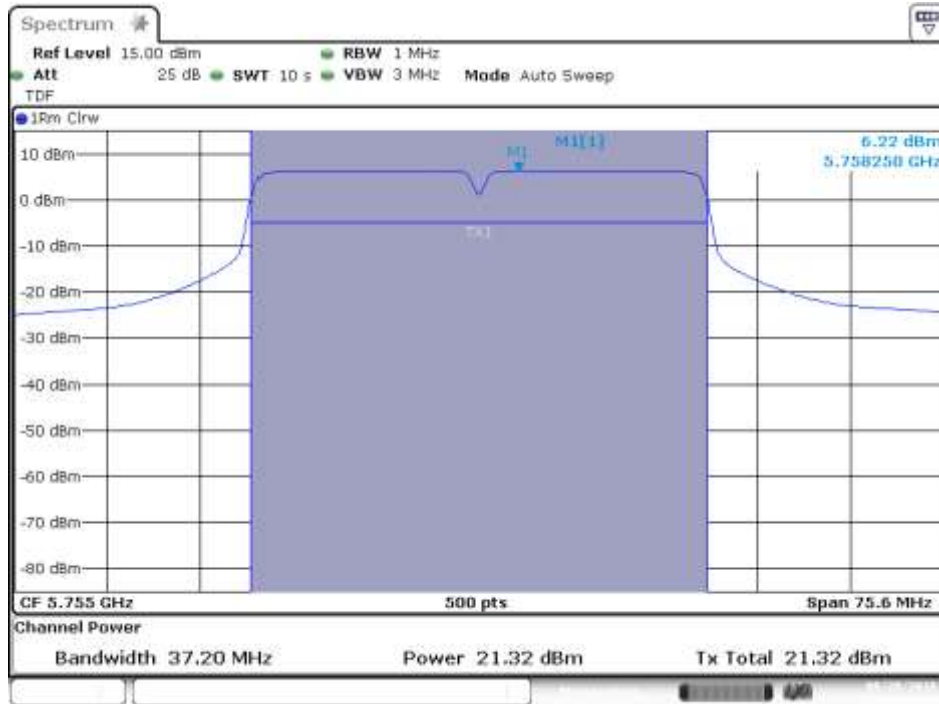
# MIMO-B, 802.11n20, HT8

Channel 165



# SISO-B, 802.11n40, HT0

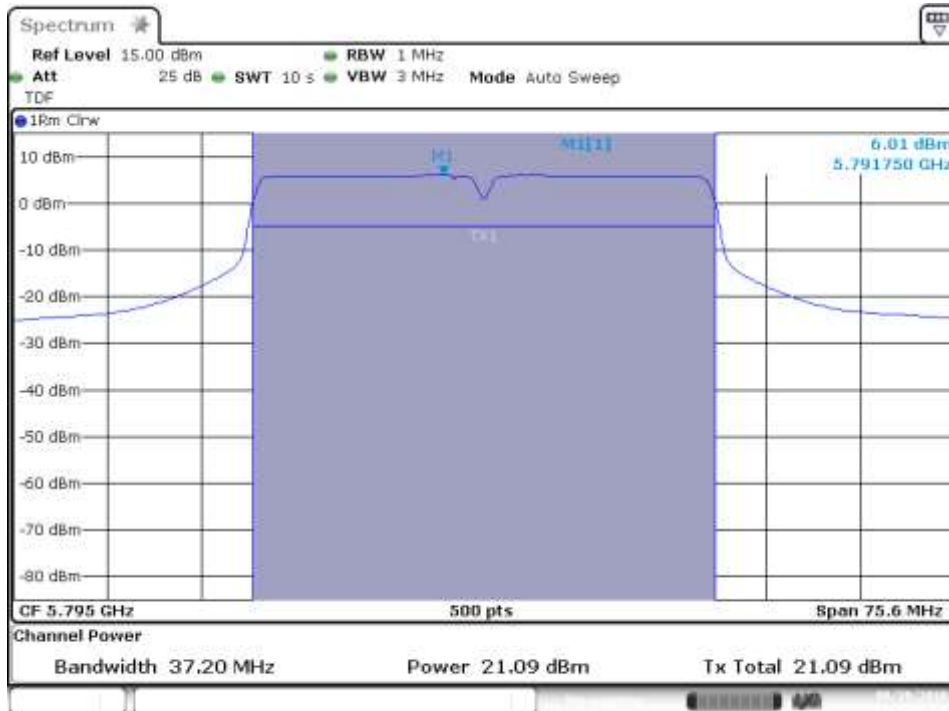
Channel 151F



Date: 28.AUG.2018 17:03:06

# SISO-A, 802.11n40, HT0

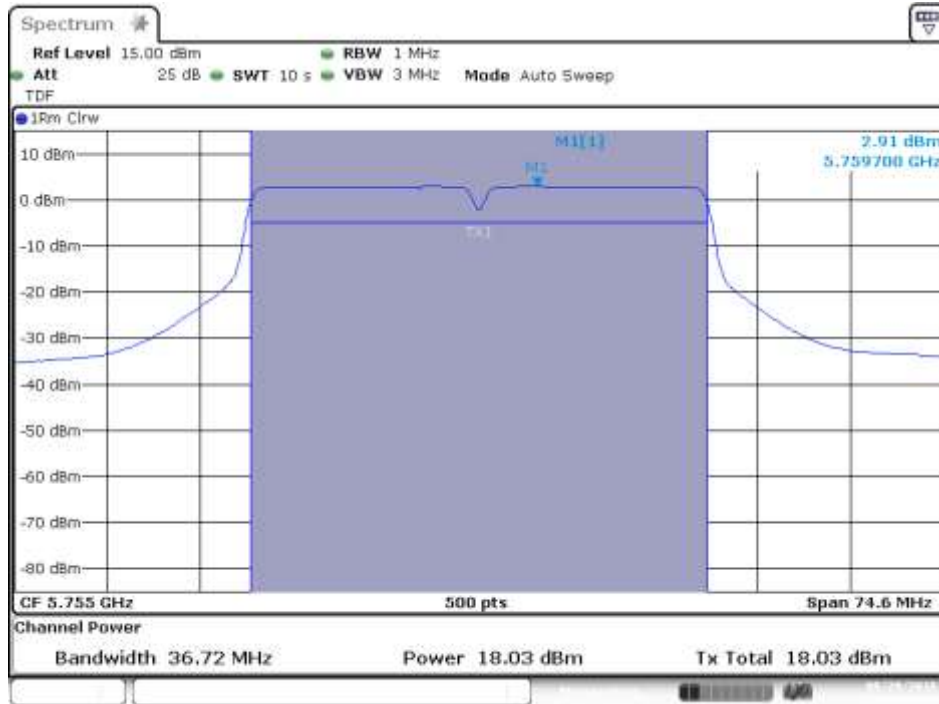
Channel 159F



Date: 29.AUG.2018 14:40:28

## MIMO-A, 802.11n40, HT8

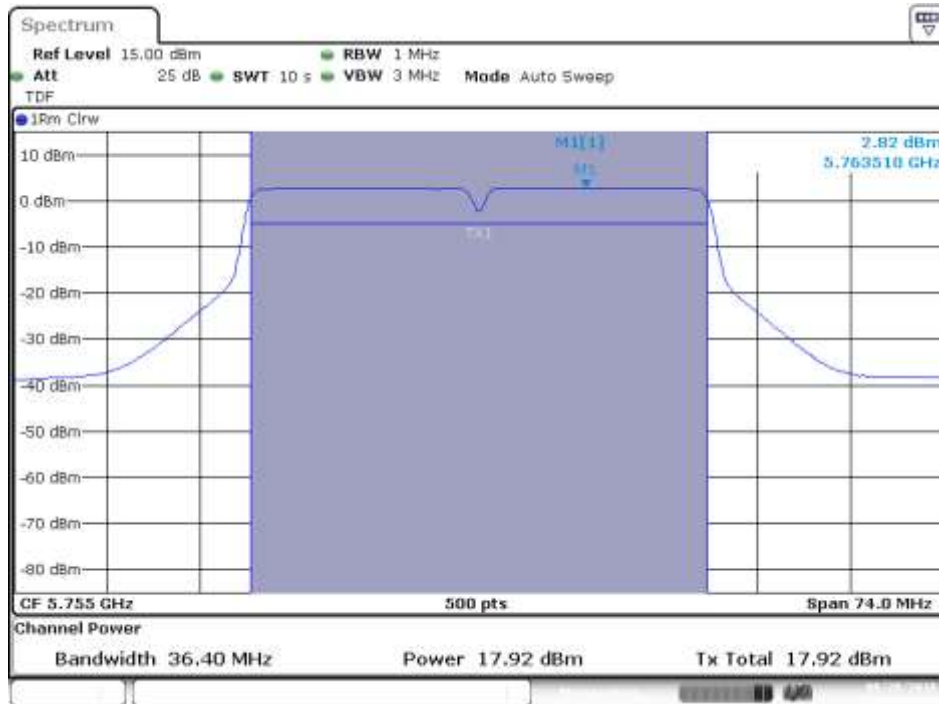
Channel 151F



Date: 29 AUG 2018 15:58:24

## MIMO-B, 802.11n40, HT8

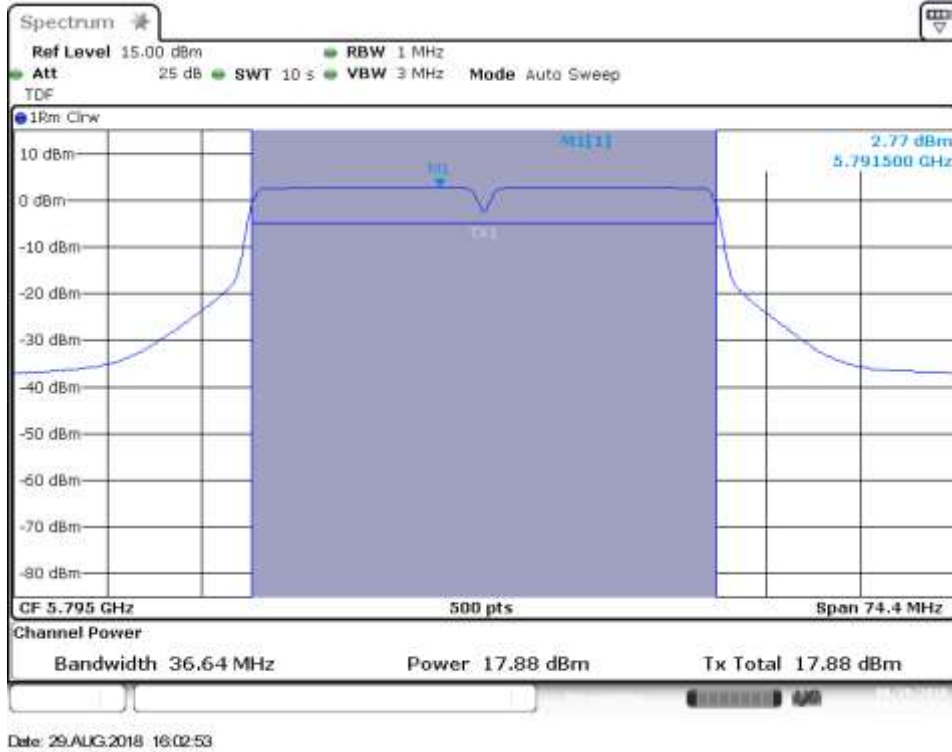
Channel 151F



Date: 28 AUG 2018 17:15:00

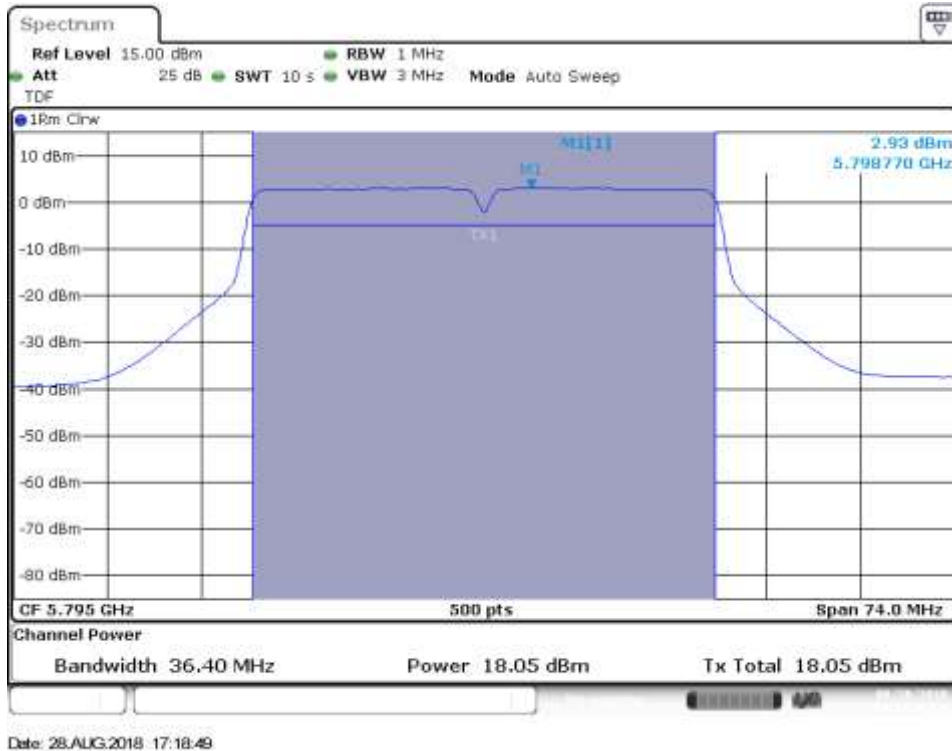
# MIMO-A, 802.11n40, HT8

Channel 159F



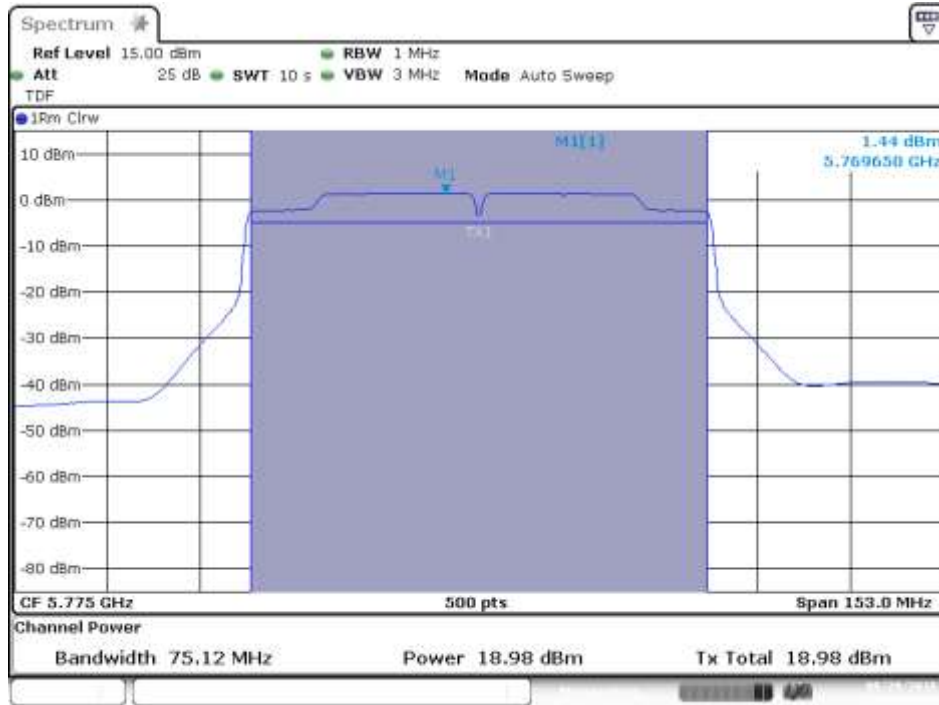
# MIMO-B, 802.11n40, HT8

Channel 159F



# SISO-A, 802.11ac80, VHT0

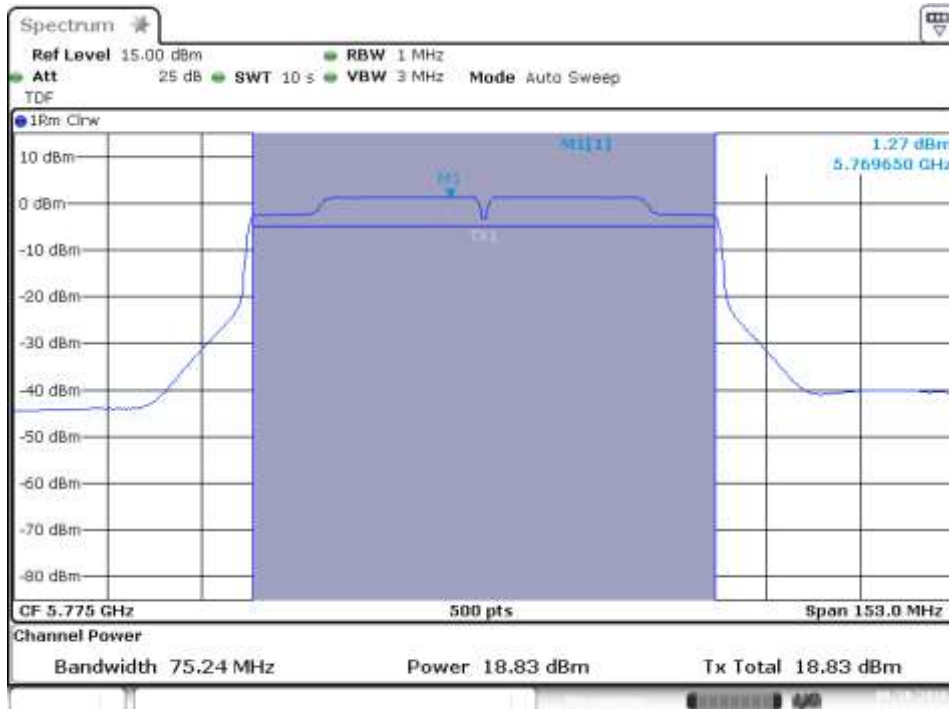
Channel 155ac80



Date: 29.AUG.2018 17:03:48

# SISO-B, 802.11ac80, VHT0

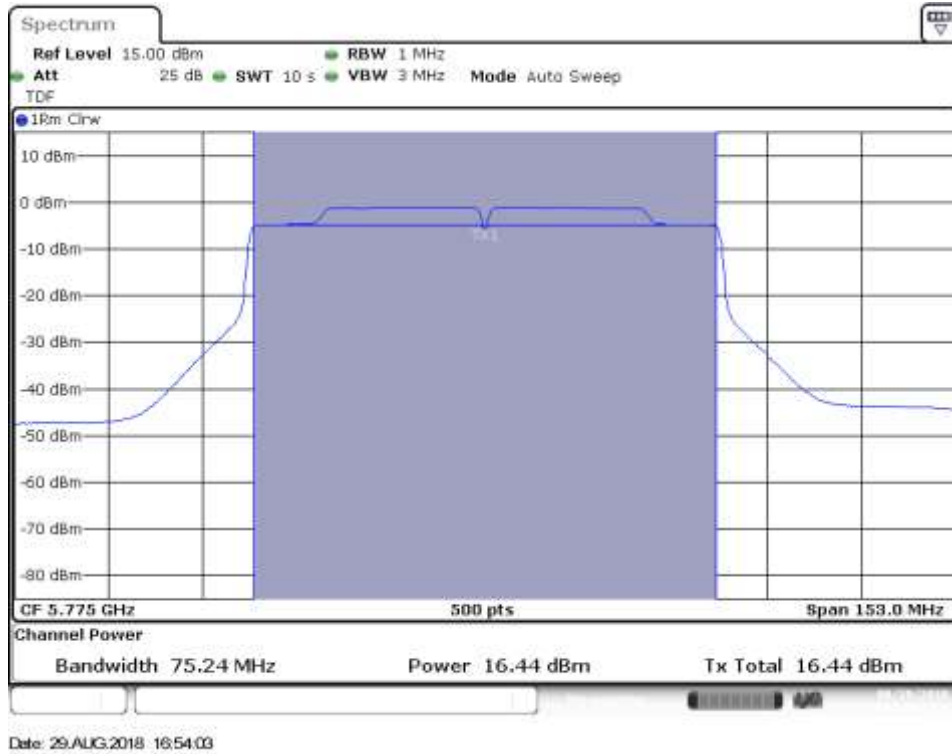
Channel 155ac80



Date: 28.AUG.2018 19:02:32

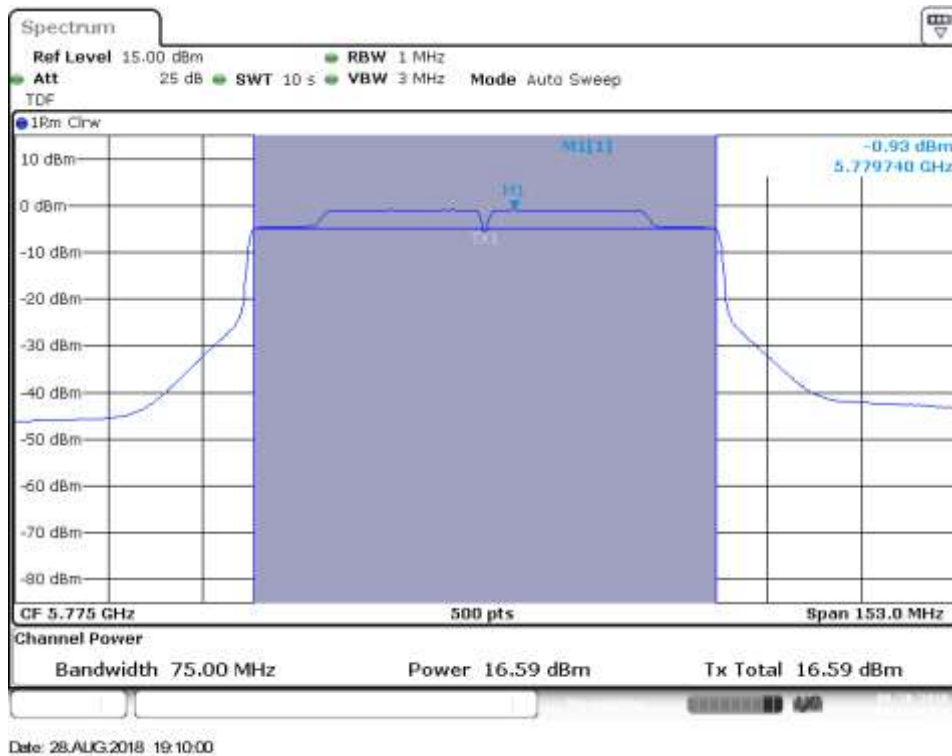
## MIMO-A, 802.11ac80, VHT0

Channel 155ac80



## MIMO-B, 802.11ac80, VHT0

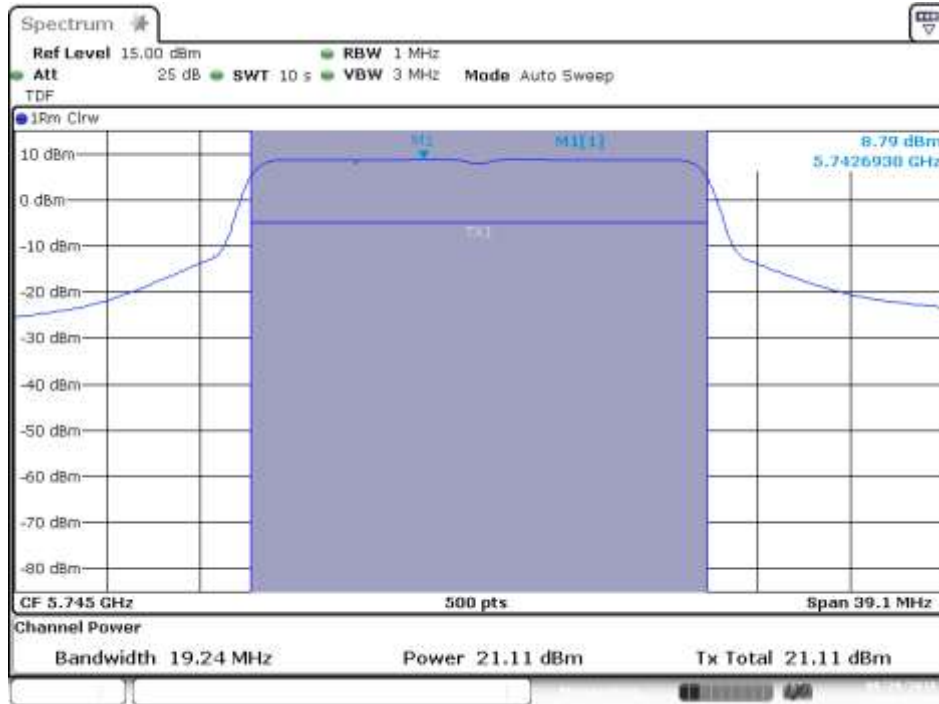
Channel 155ac80





# SISO-A, 802.11ax20, HE0

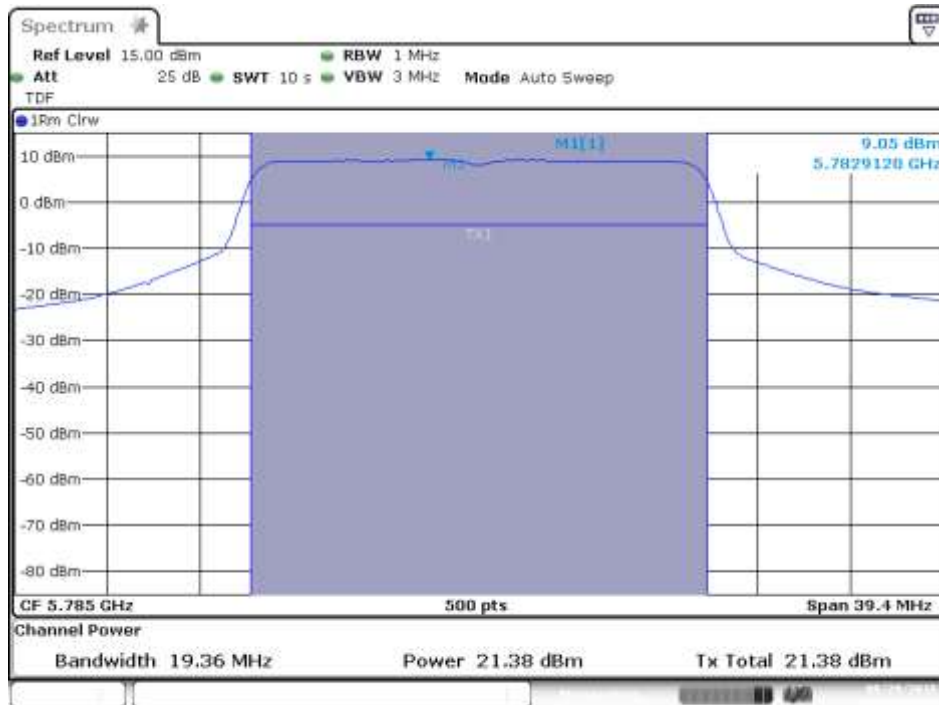
Channel 149



Date: 29 AUG 2018 12:56:15

# SISO-A, 802.11ax20, HE0

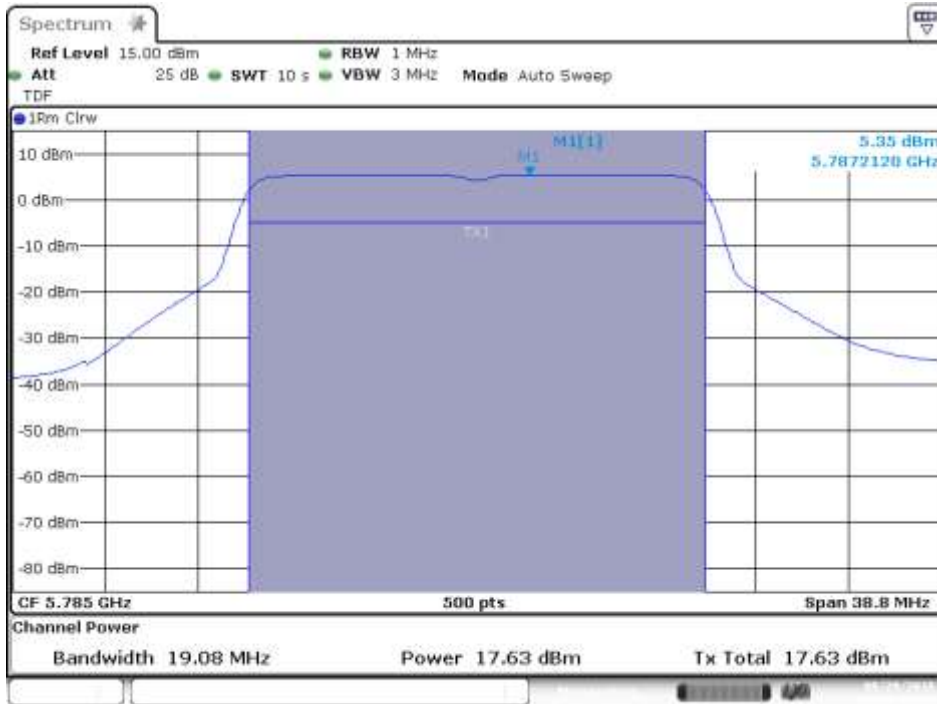
Channel 157



Date: 29 AUG 2018 13:01:19

### MIMO-A, 802.11ax20, HE0

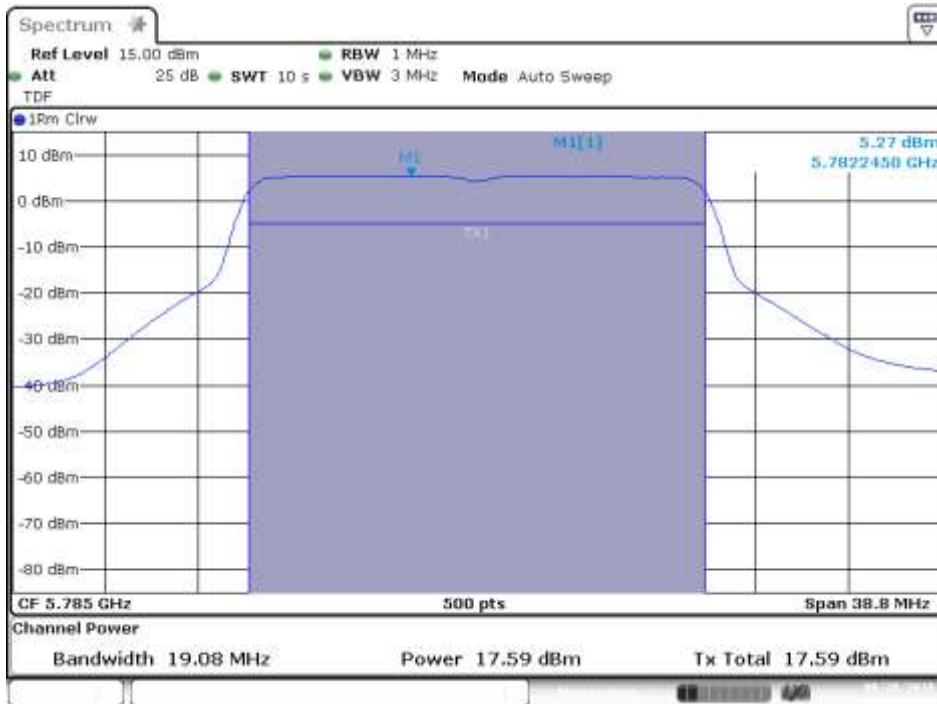
Channel 157



Date: 29 AUG 2018 13:58:09

### MIMO-B, 802.11ax20, HE0

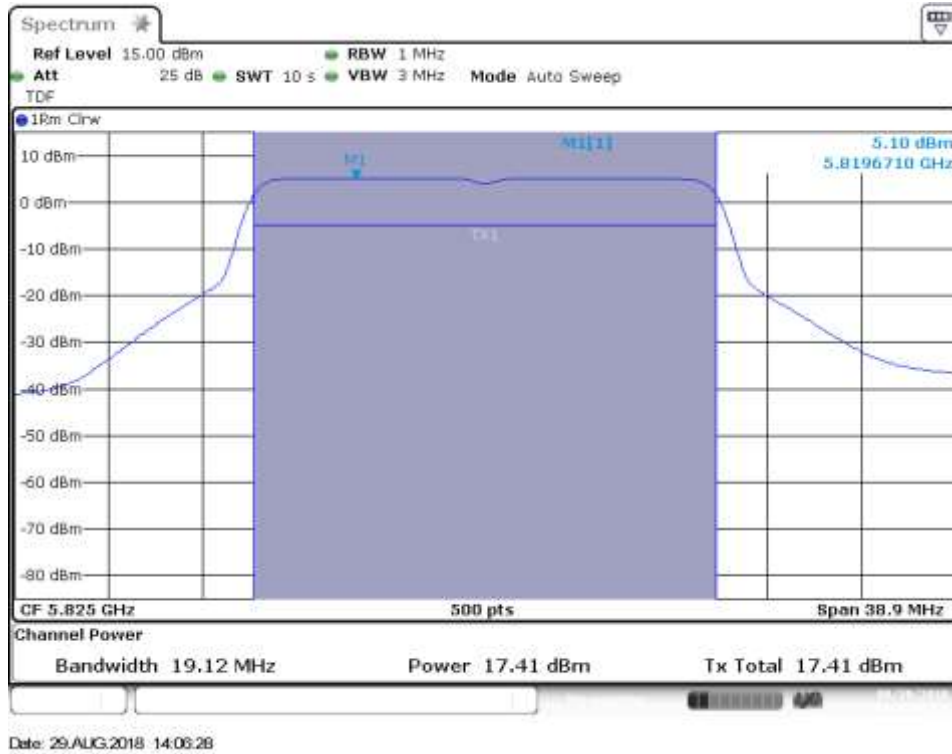
Channel 157



Date: 29 AUG 2018 18:09:44

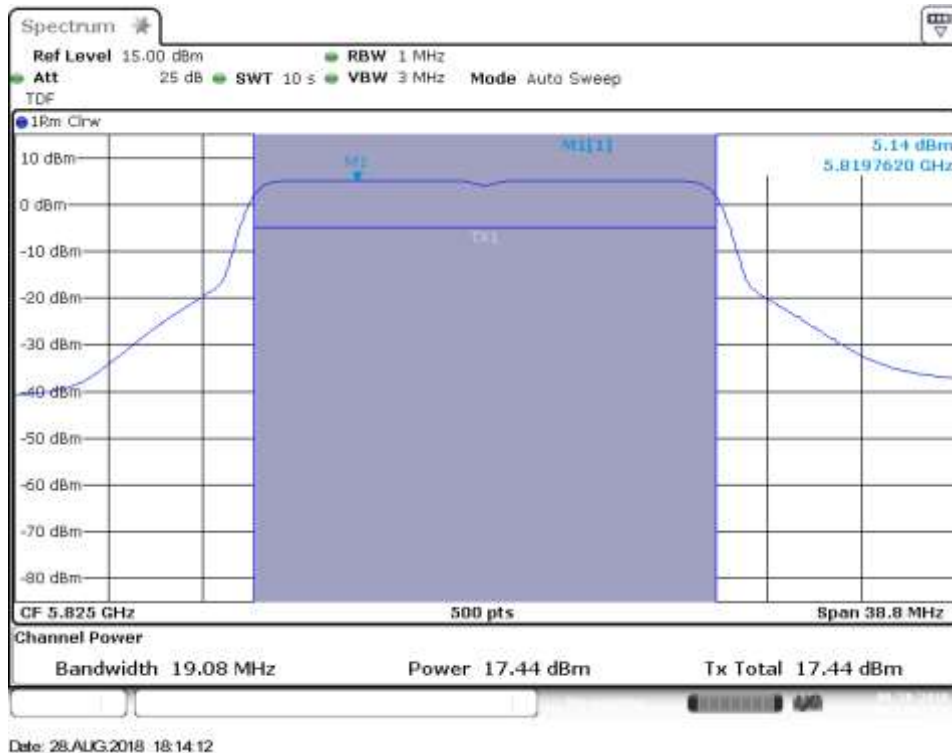
## MIMO-A, 802.11ax20, HE0

Channel 165



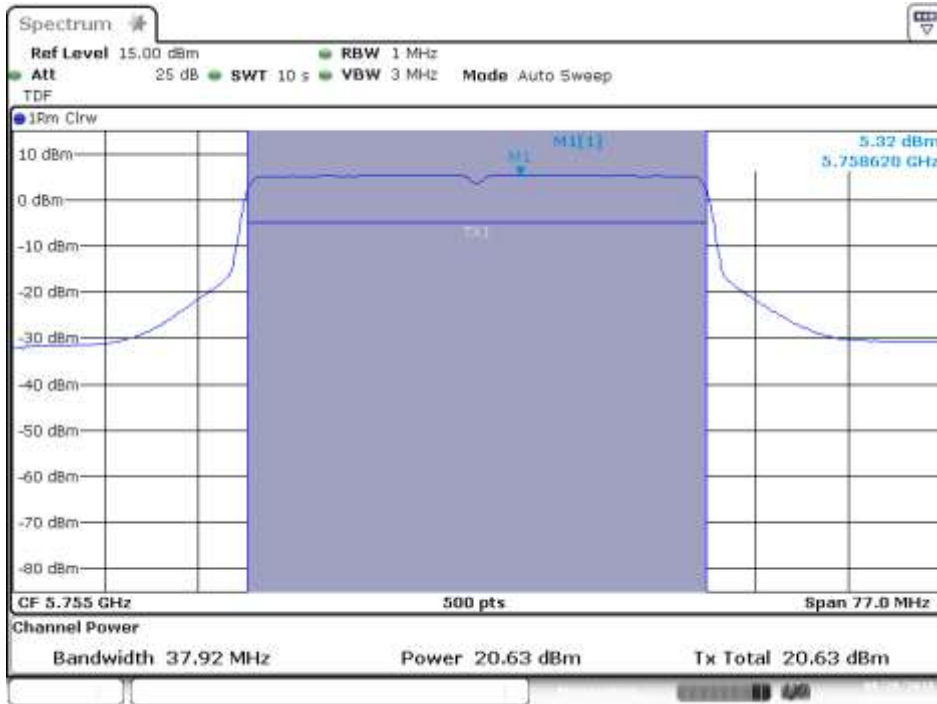
## MIMO-B, 802.11ax20, HE0

Channel 165



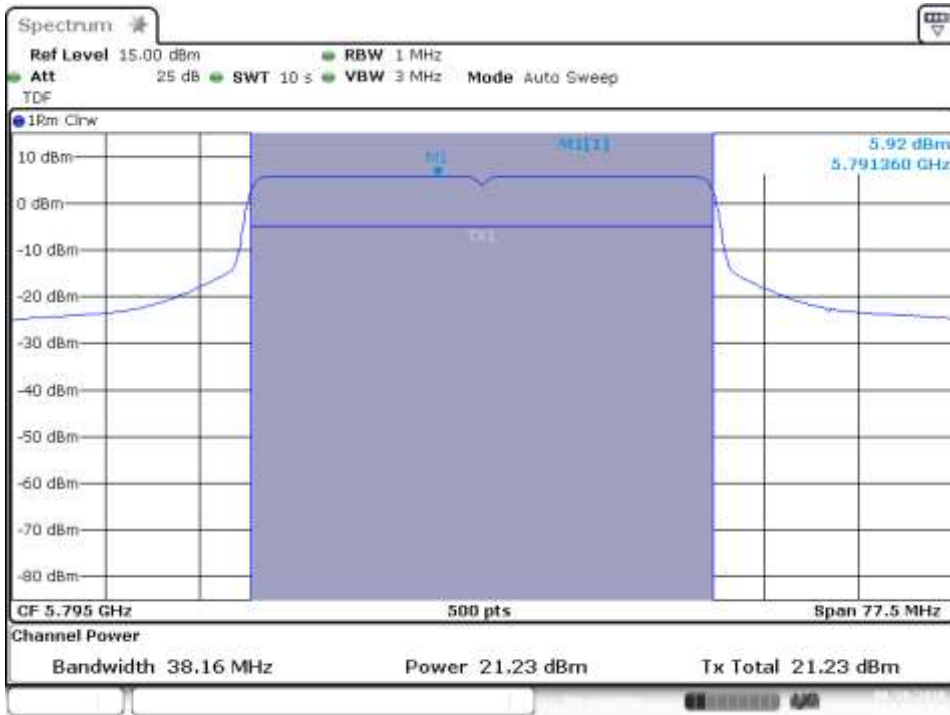
### SISO-B, 802.11ax40, HE0

Channel 151F



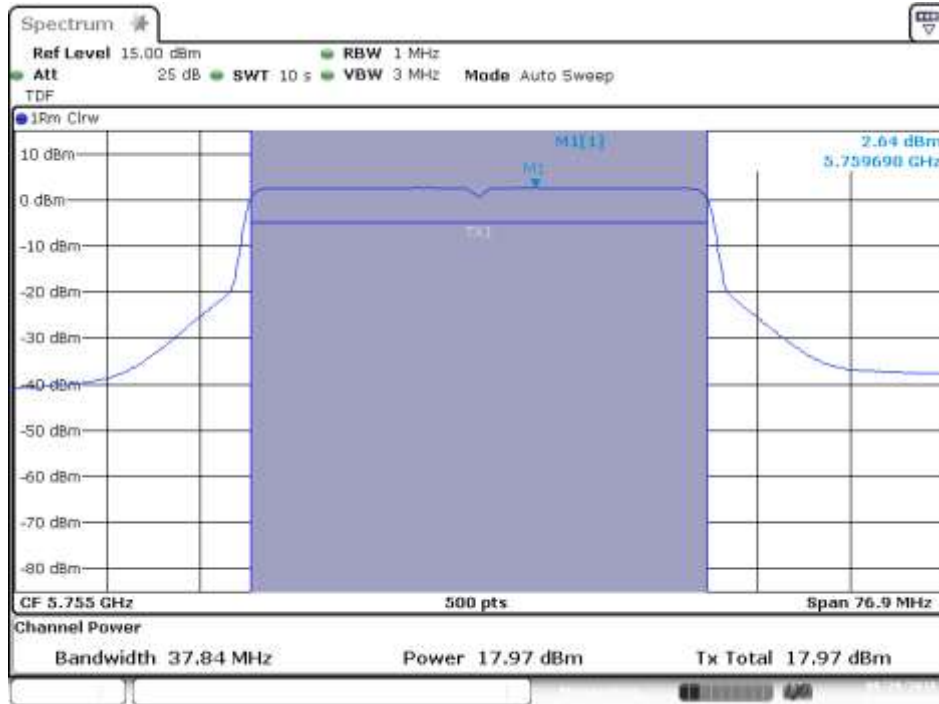
### SISO-A, 802.11ax40, HE0

Channel 159F



# MIMO-A, 802.11ax40, HE0

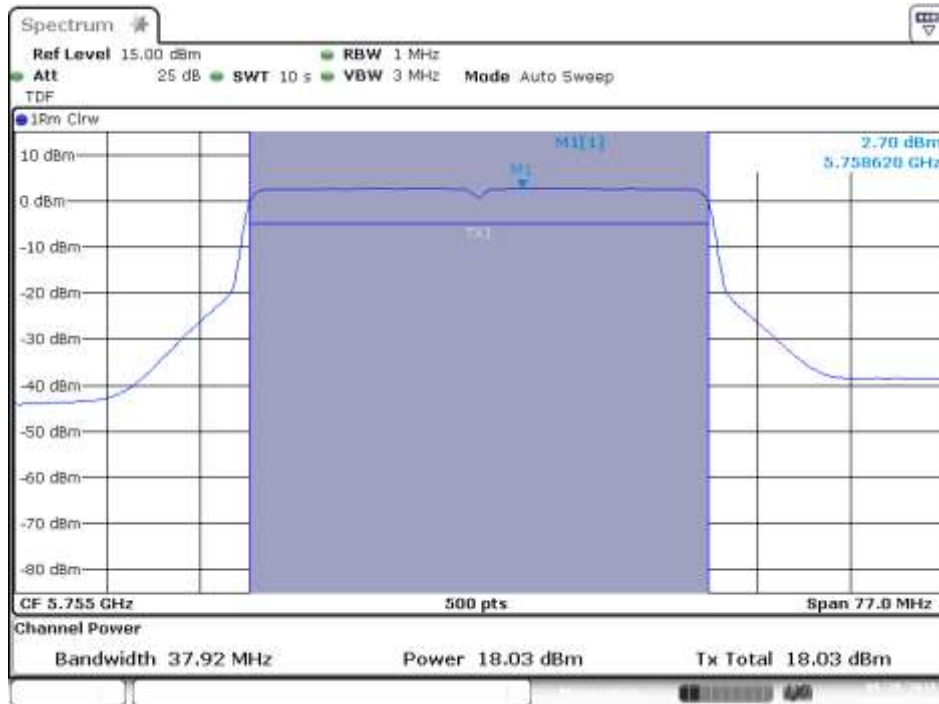
Channel 151F



Date: 29 AUG 2018 16:19:36

# MIMO-B, 802.11ax40, HE0

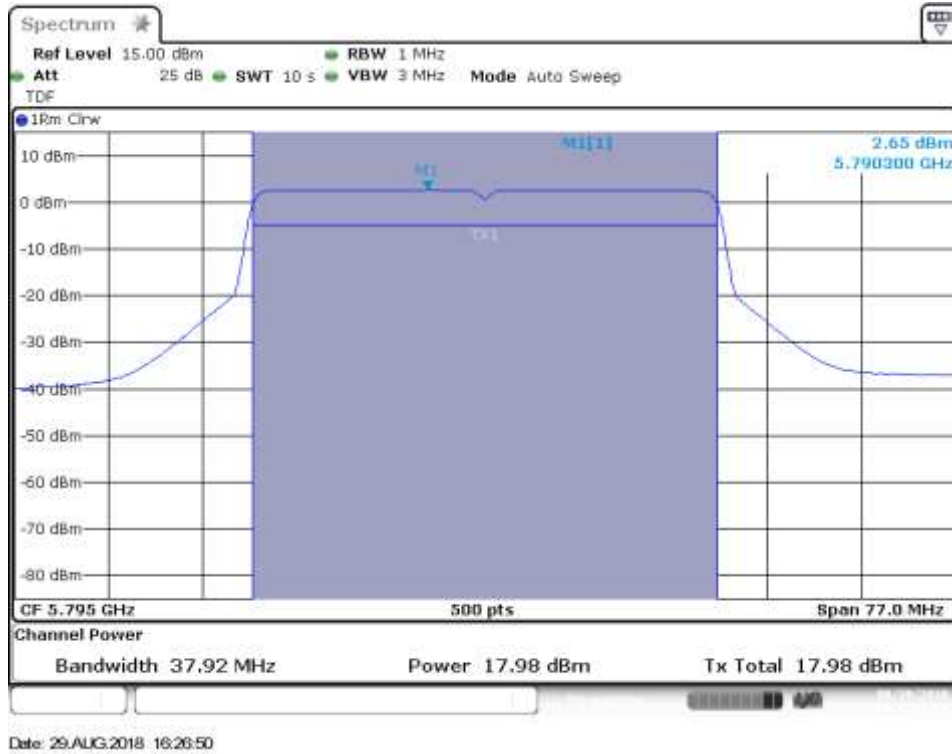
Channel 151F



Date: 28 AUG 2018 18:43:51

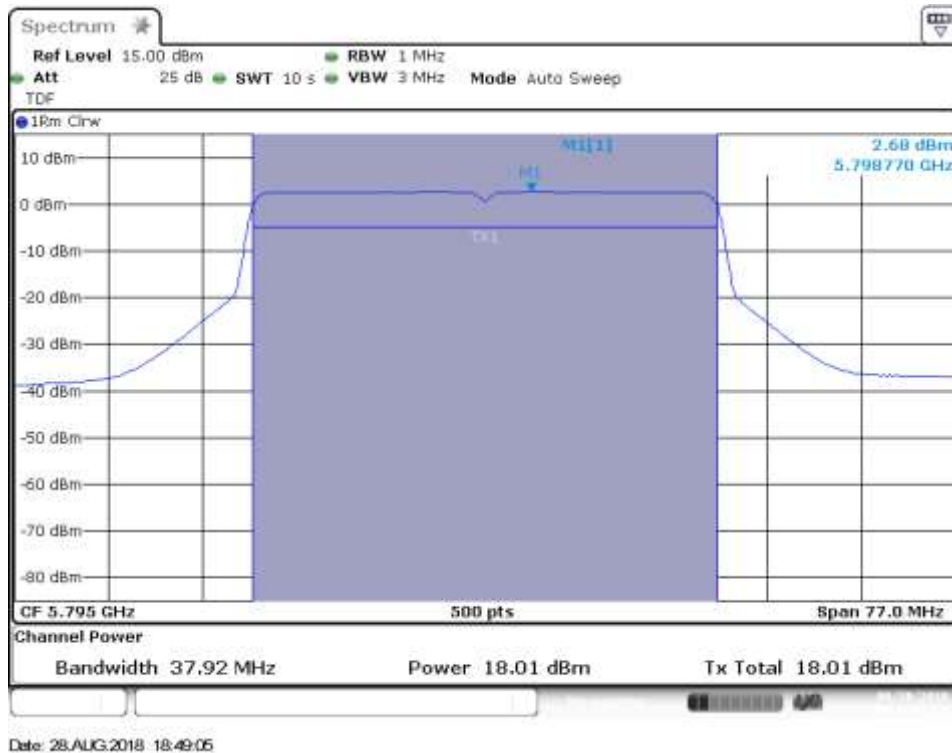
## MIMO-A, 802.11ax40, HE0

Channel 159F



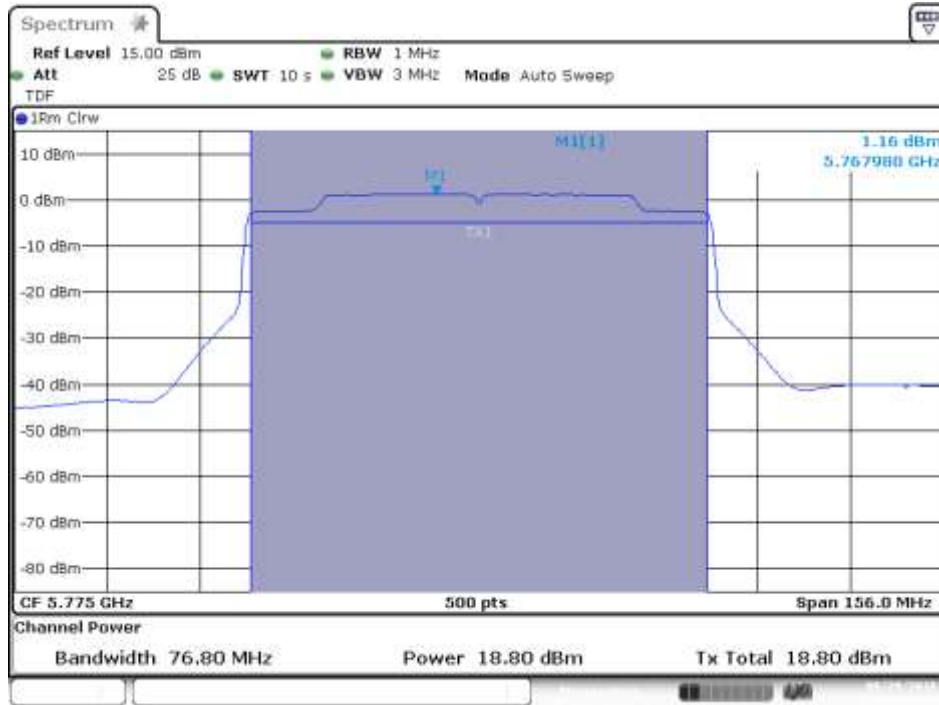
## MIMO-B, 802.11ax40, HE0

Channel 159F



# SISO-A, 802.11ax80, HE0

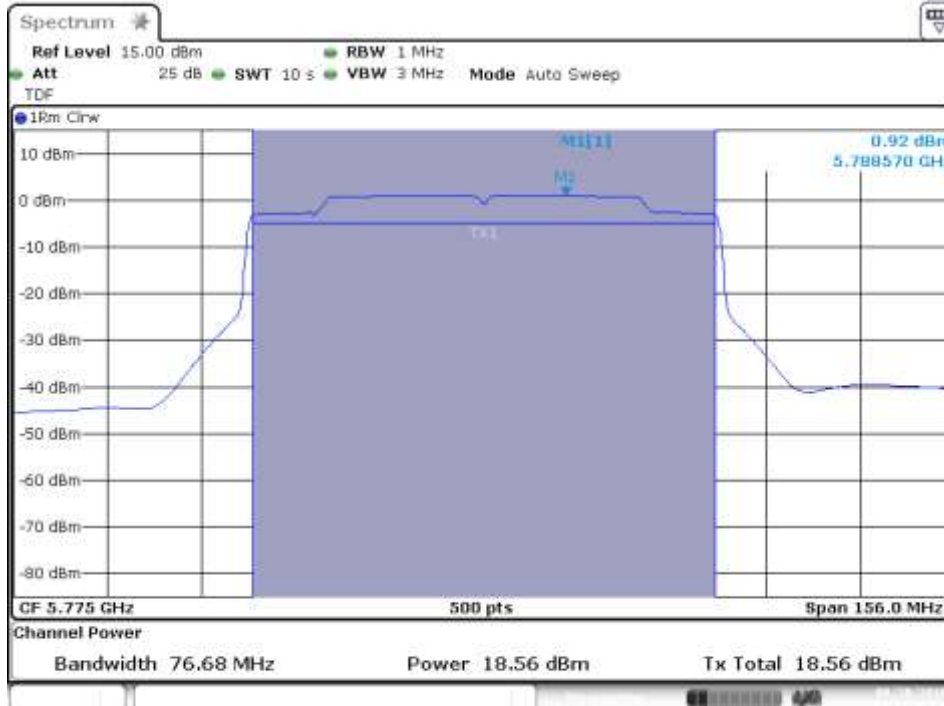
Channel 155ax80



Date: 29.AUG.2018 17:12:59

# SISO-B, 802.11ax80, HE0

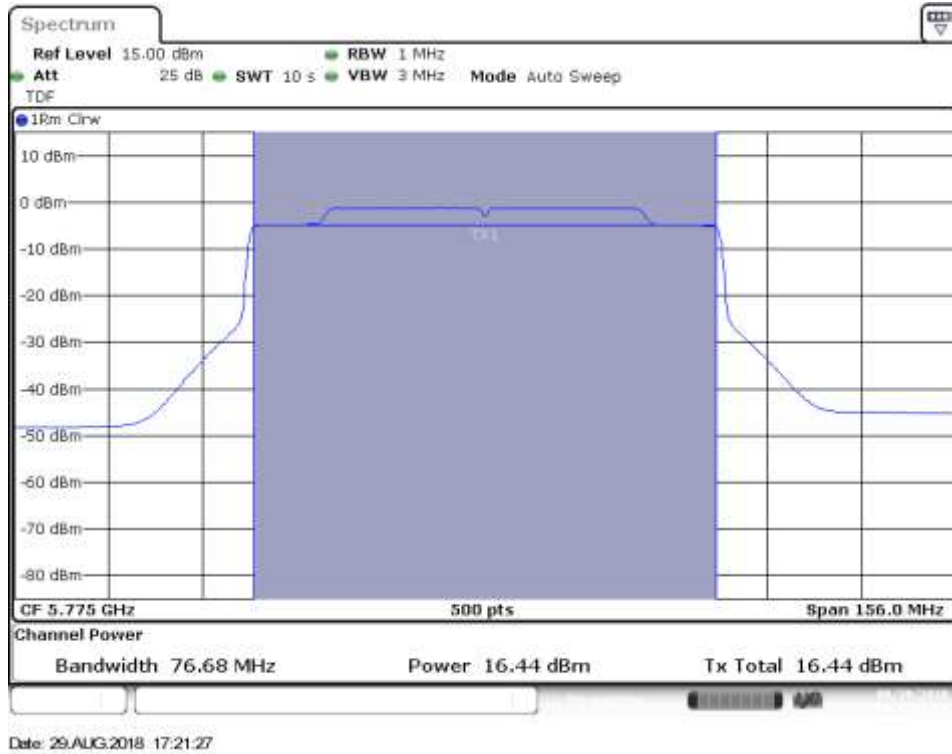
Channel 155ax80



Date: 28.AUG.2018 19:19:46

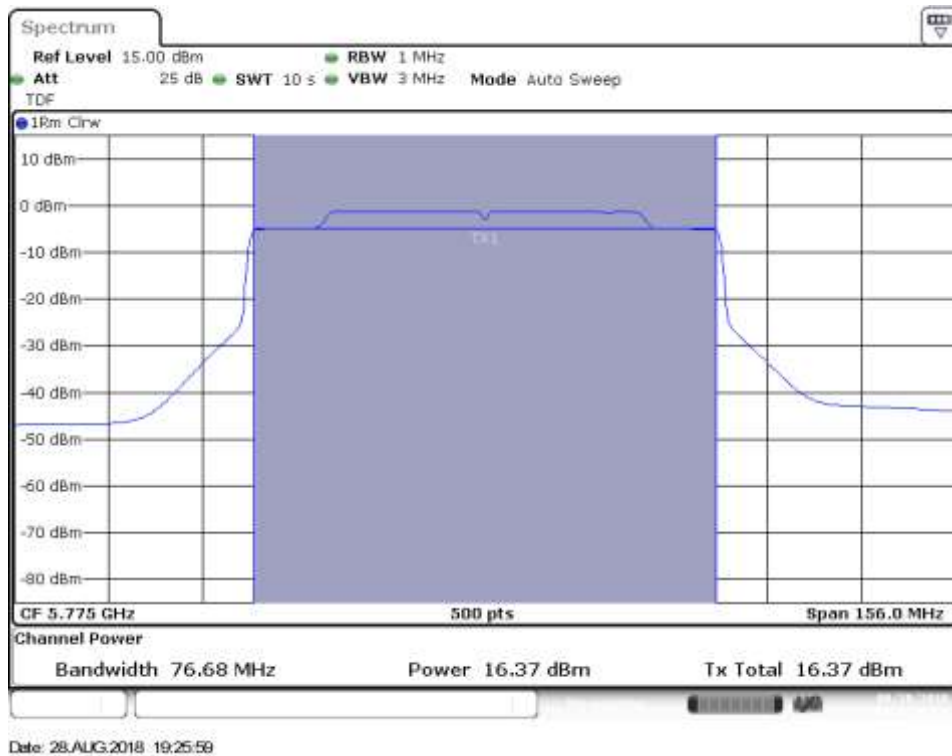
## MIMO-A, 802.11ax80, HE0

Channel 155ax80



## MIMO-B, 802.11ax80, HE0

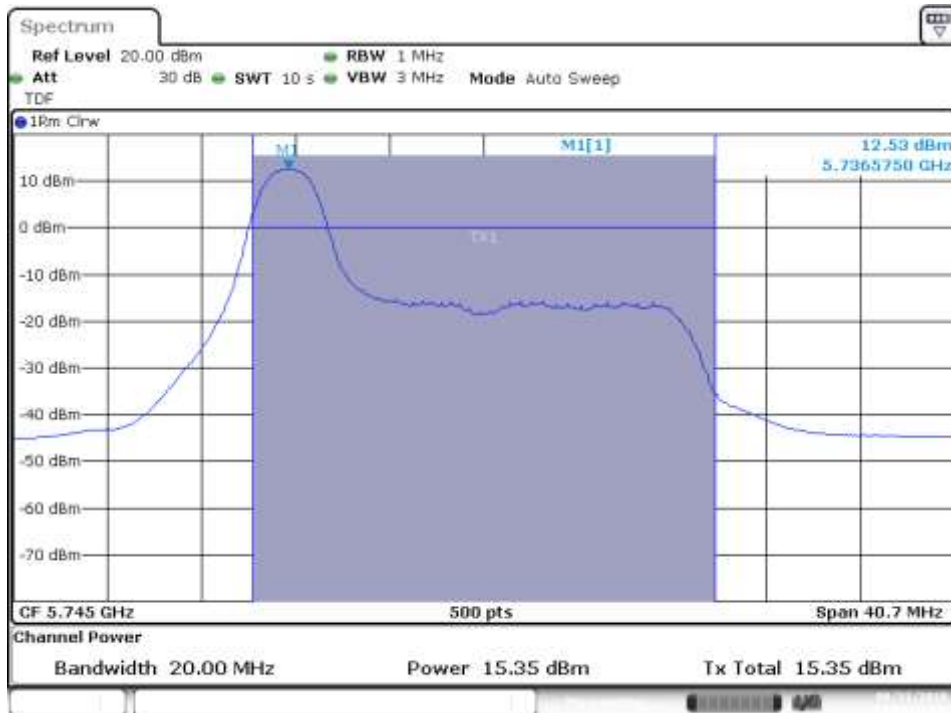
Channel 155ax80





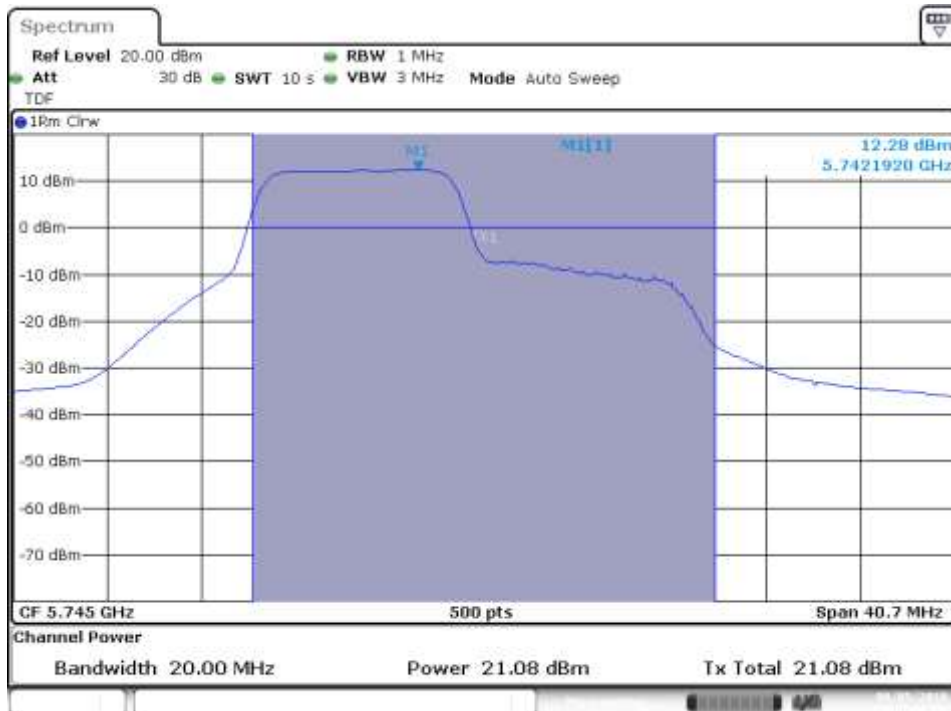
## SISO-A, 802.11ax20, HE0, RU 26/0

Channel 149



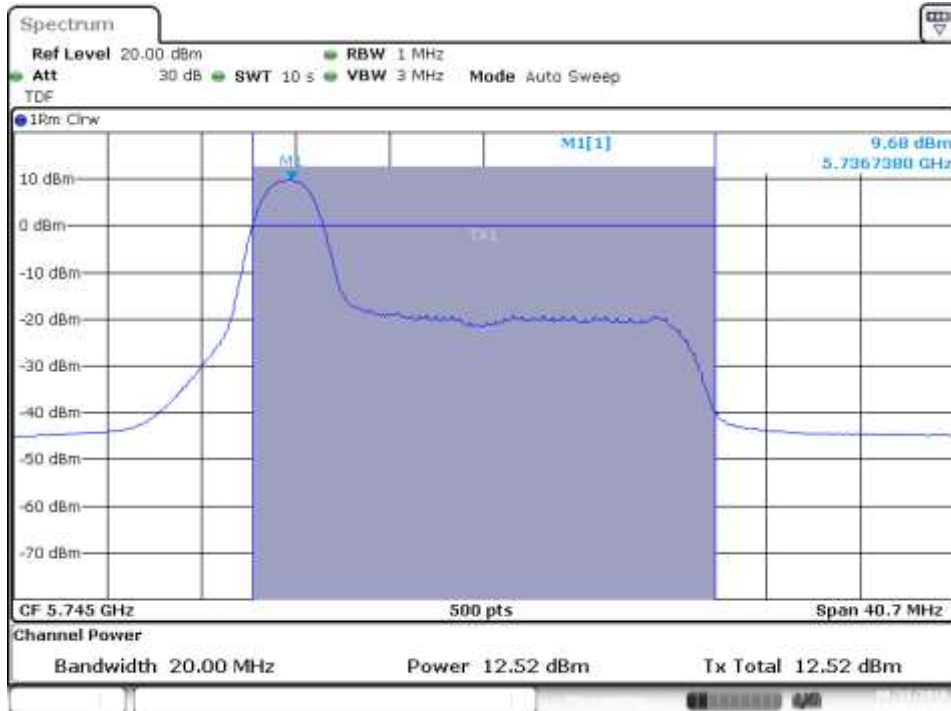
## SISO-B, 802.11ax20, HE0, RU 106/53

Channel 149



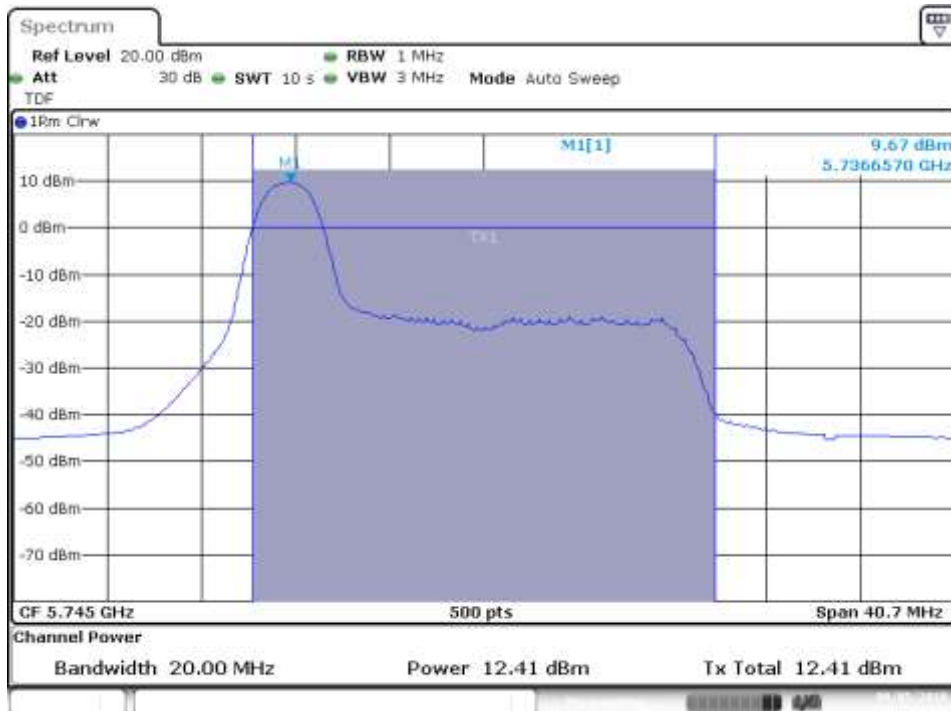
## MIMO-A, 802.11ax20, HE0, RU 26/0

Channel 149



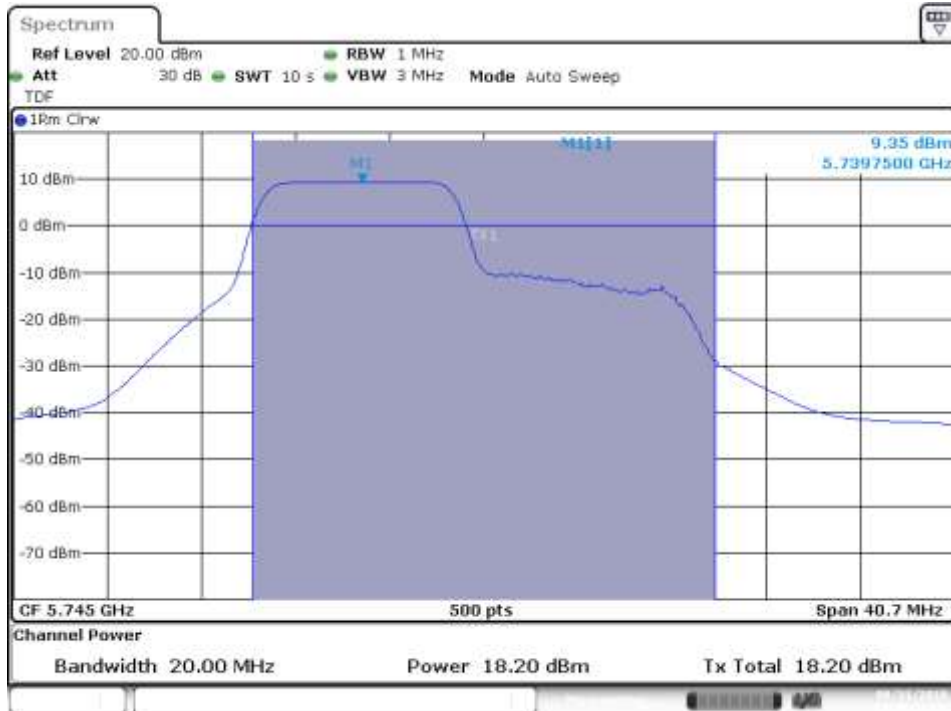
## MIMO-B, 802.11ax20, HE0, RU 26/0

Channel 149



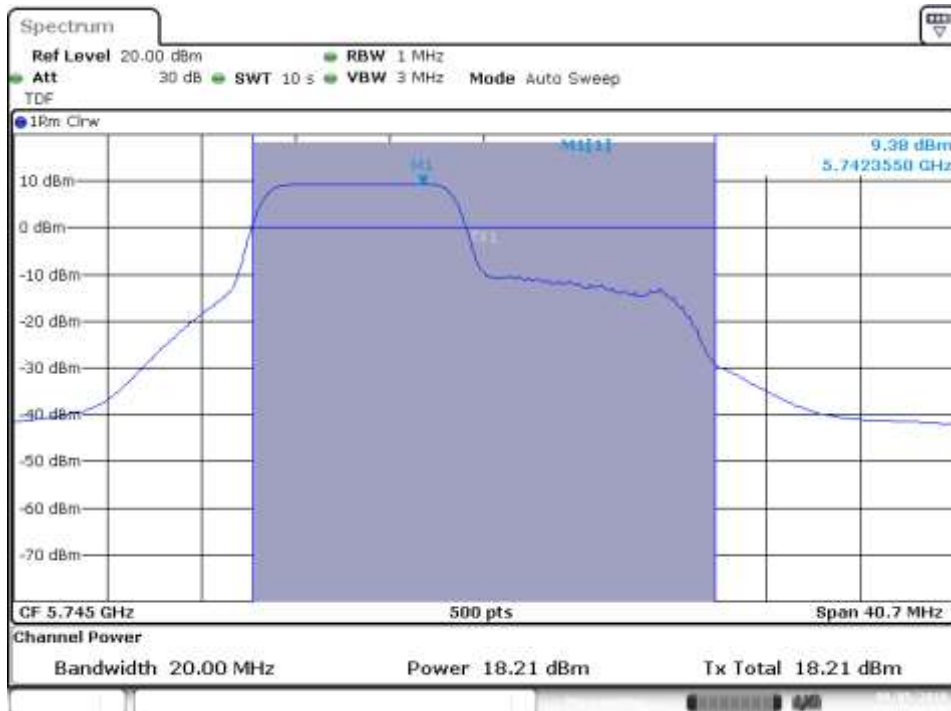
## MIMO-A, 802.11ax20, HE0, RU 106/53

Channel 149



## MIMO-B, 802.11ax20, HE0, RU 106/53

Channel 149



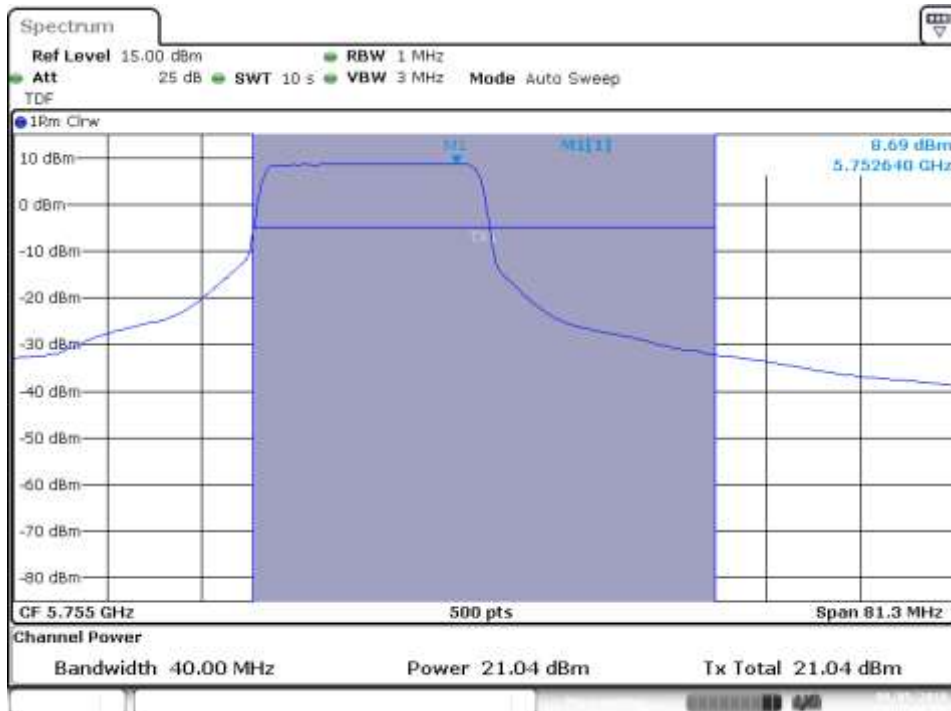
## SISO-A, 802.11ax40, HE0, RU 242/61

Channel 151F



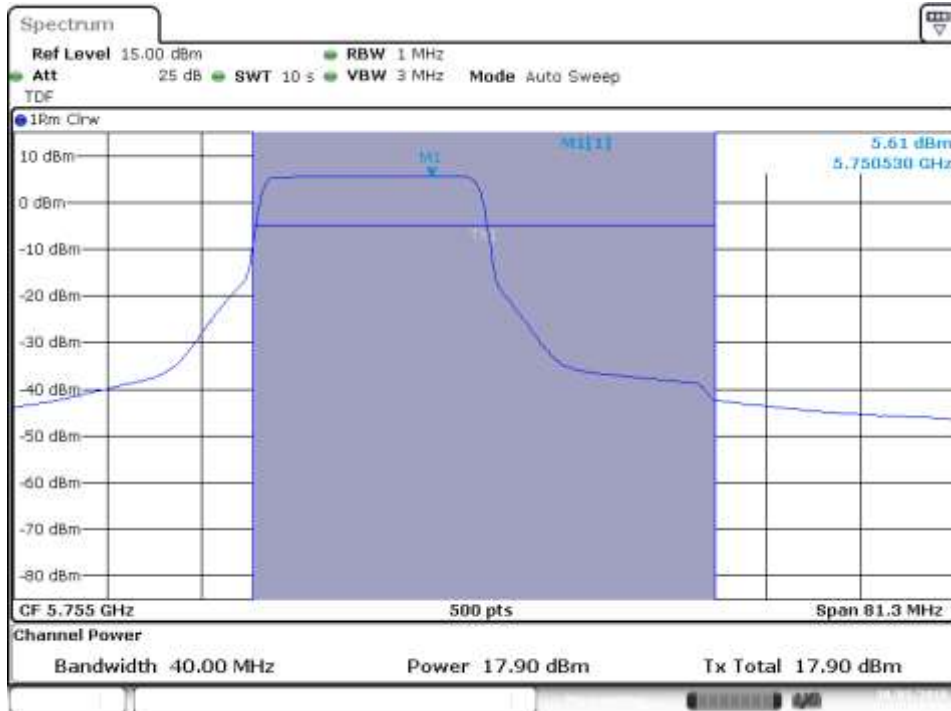
## SISO-B, 802.11ax40, HE0, RU 242/61

Channel 151F



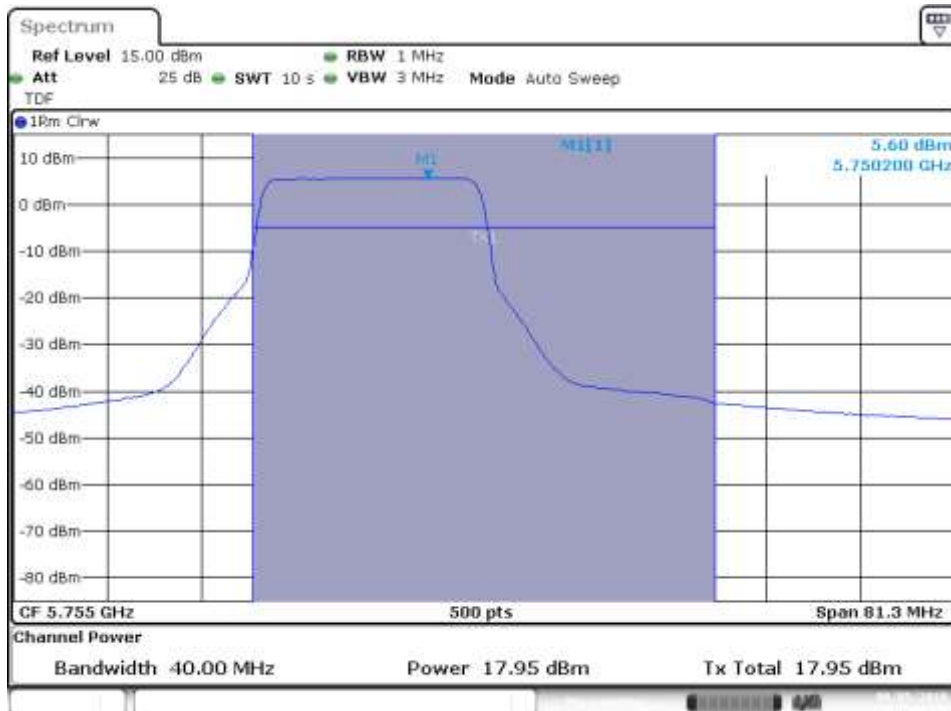
## MIMO-A, 802.11ax40, HE0, RU 242/61

Channel 151F



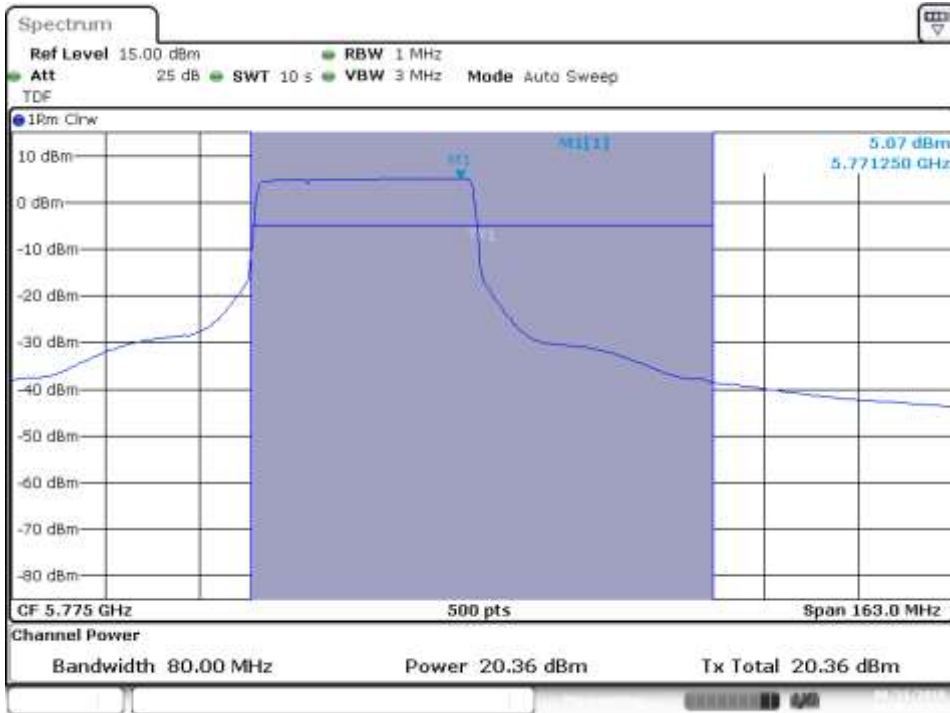
## MIMO-B, 802.11ax40, HE0, RU 242/61

Channel 151F



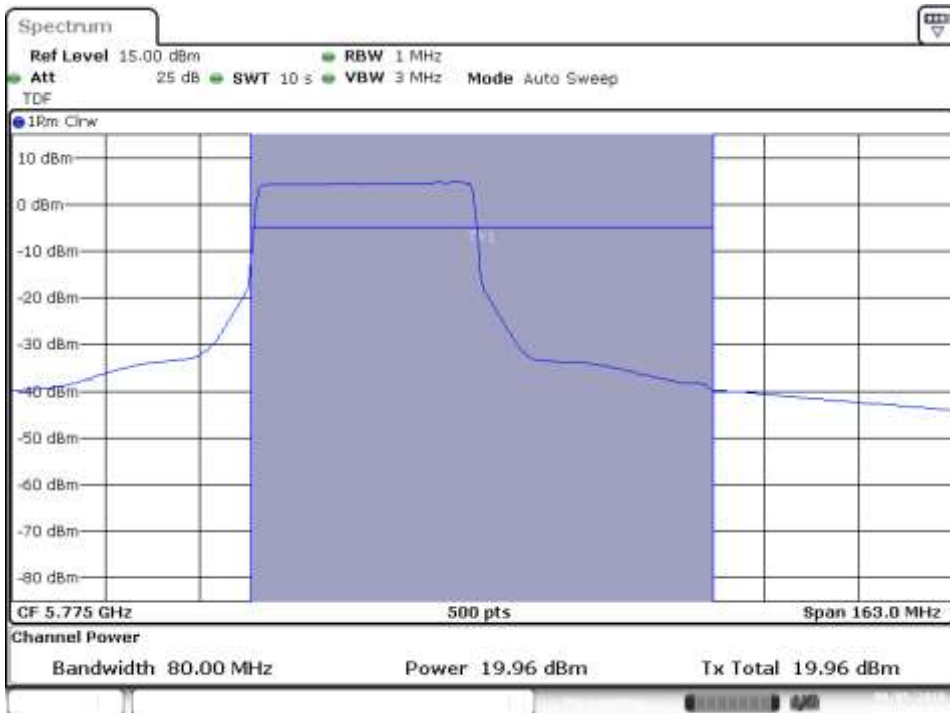
## SISO-A, 802.11ax80, HE0, RU 484/65

Channel 155ax80



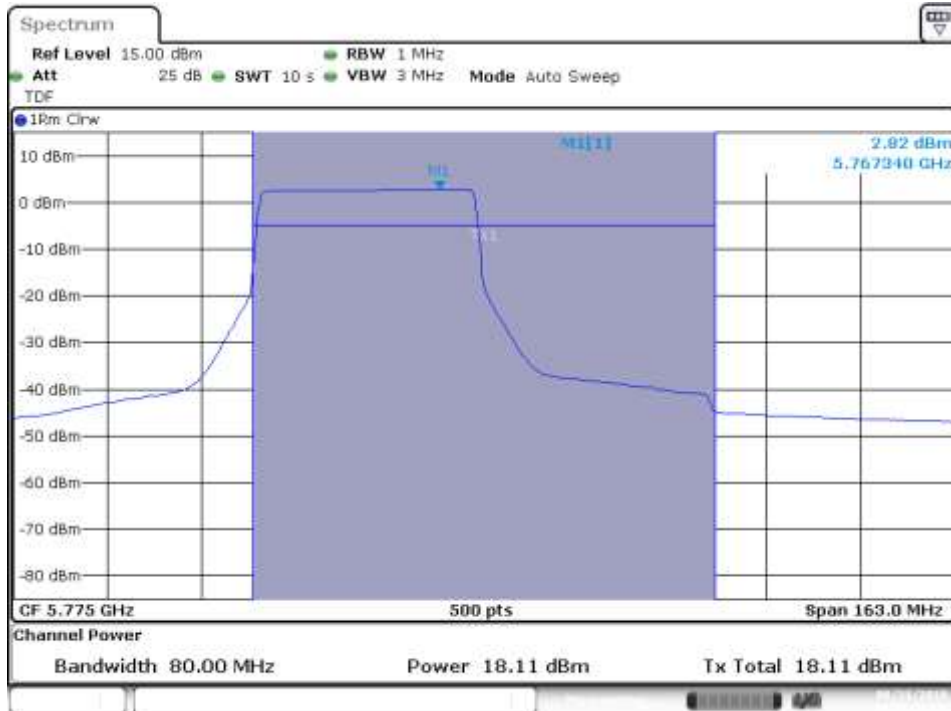
## SISO-B, 802.11ax80, HE0, RU 484/65

Channel 155ax80



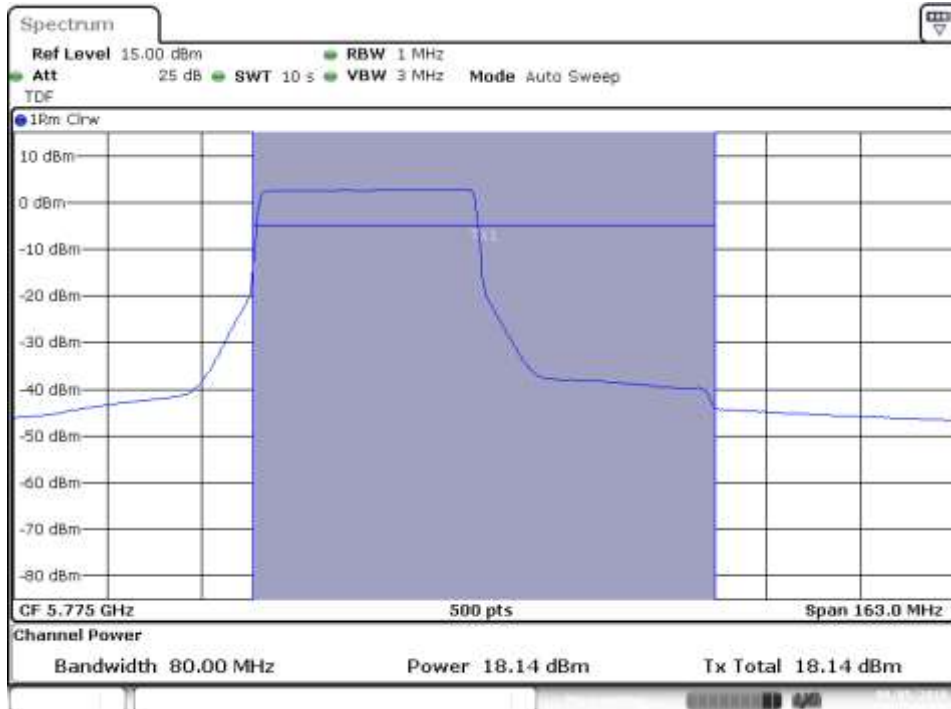
## MIMO-A, 802.11ax80, HE0, RU 484/65

Channel 155ax80



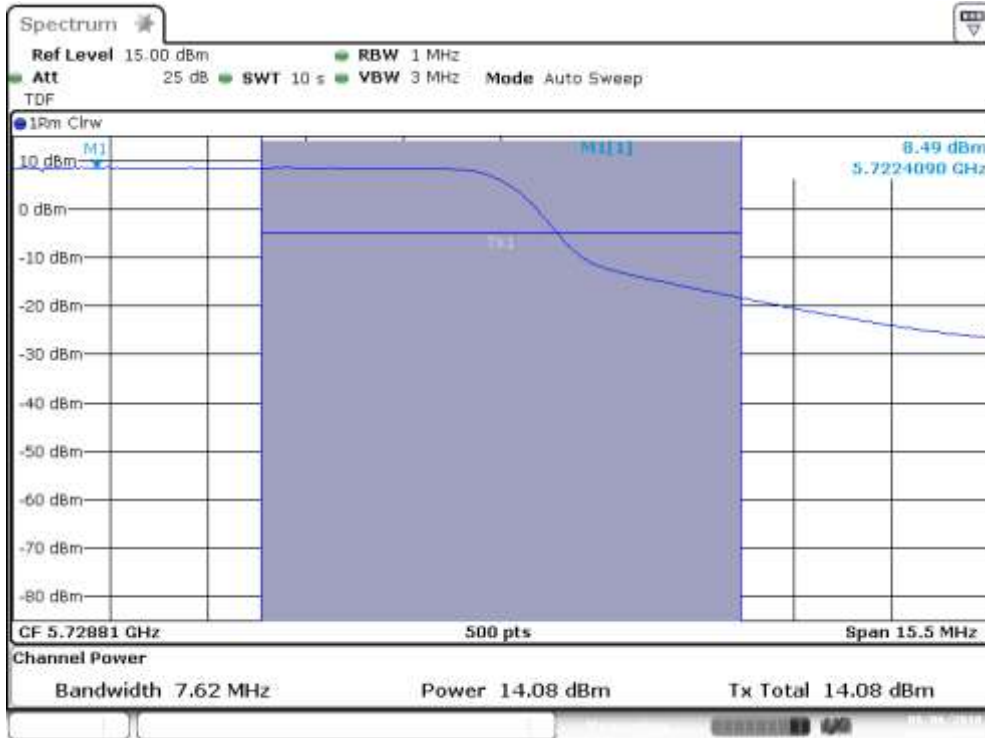
## MIMO-B, 802.11ax80, HE0, RU 484/65

Channel 155ax80

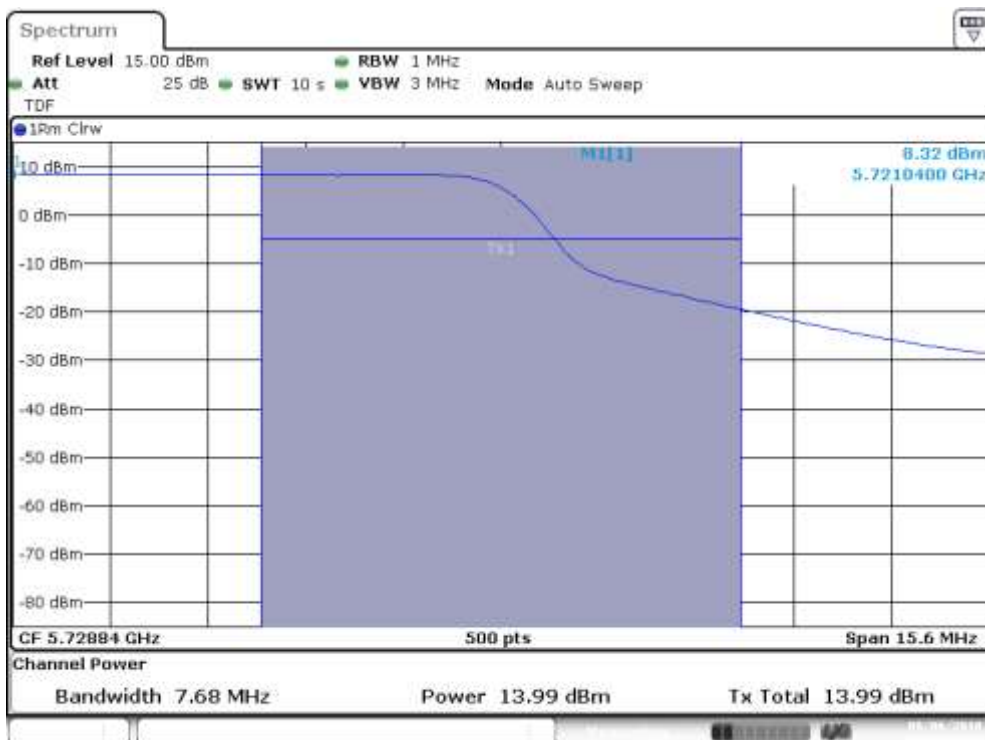


**B.3.6 Maximum output power (Overlapped Channel)****SISO-A, 802.11n20, HT0**

Channel 144 (Overlapped Channel)

**SISO-B, 802.11n20, HT0**

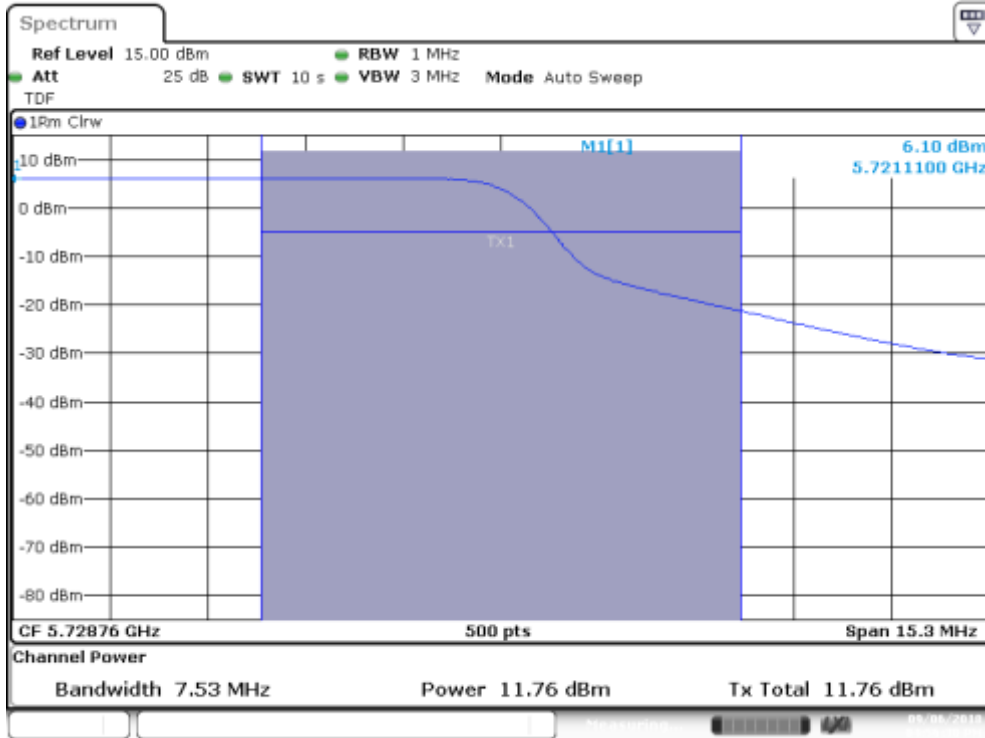
Channel 144 (Overlapped Channel)





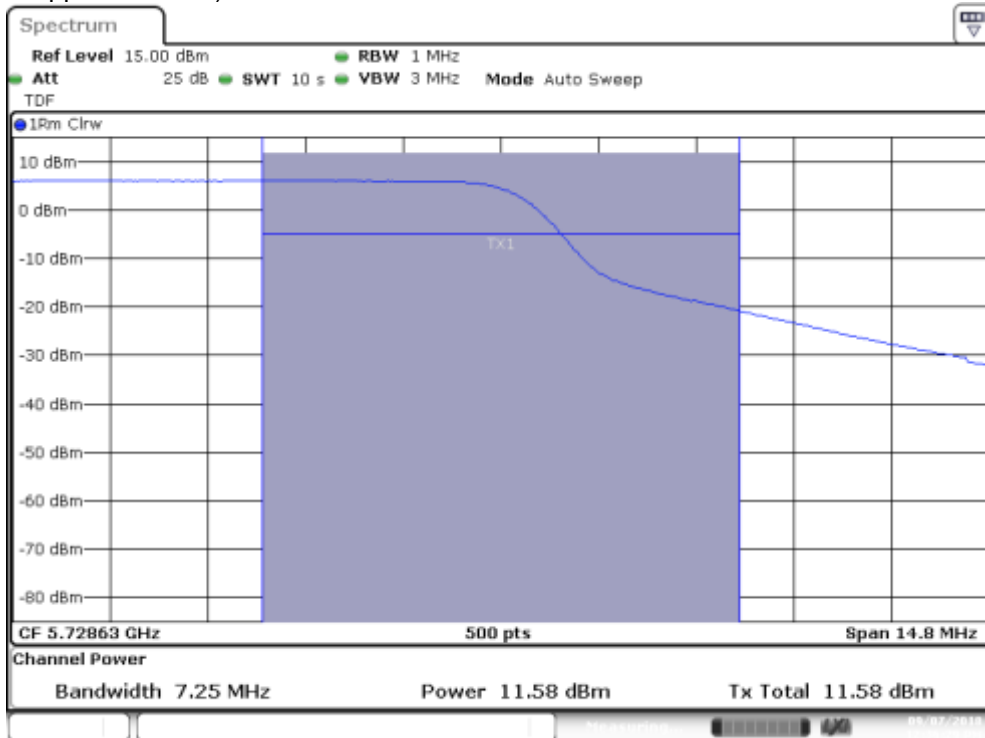
# MIMO-A, 802.11n20, HT8

Channel 144 (Overlapped Channel)



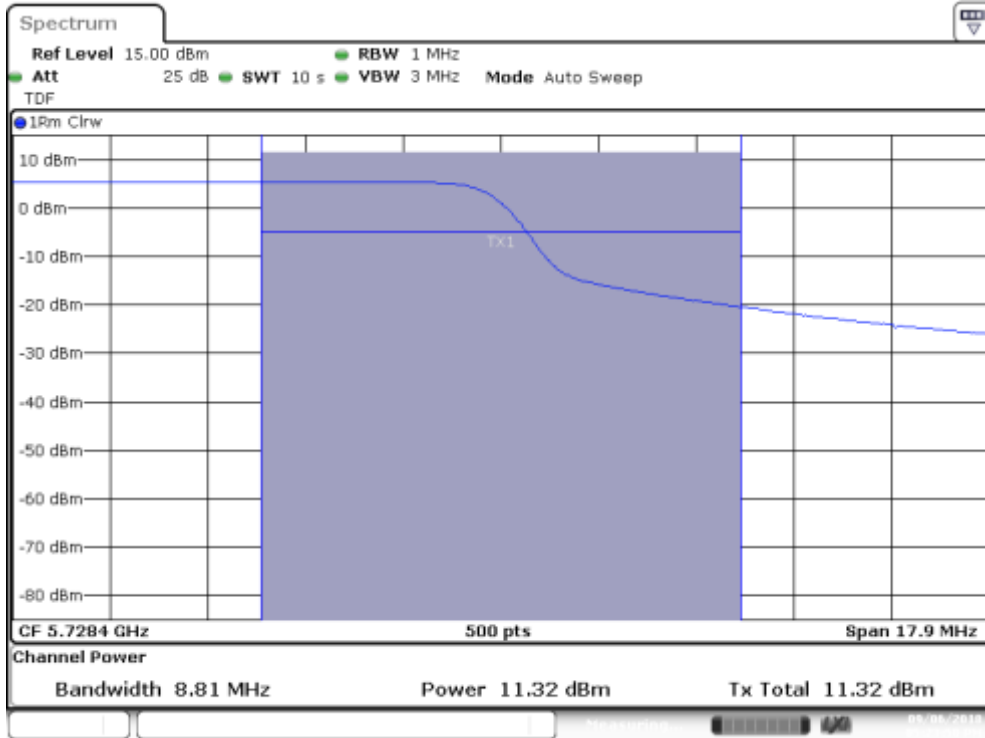
# MIMO-B, 802.11n20, HT8

Channel 144 (Overlapped Channel)



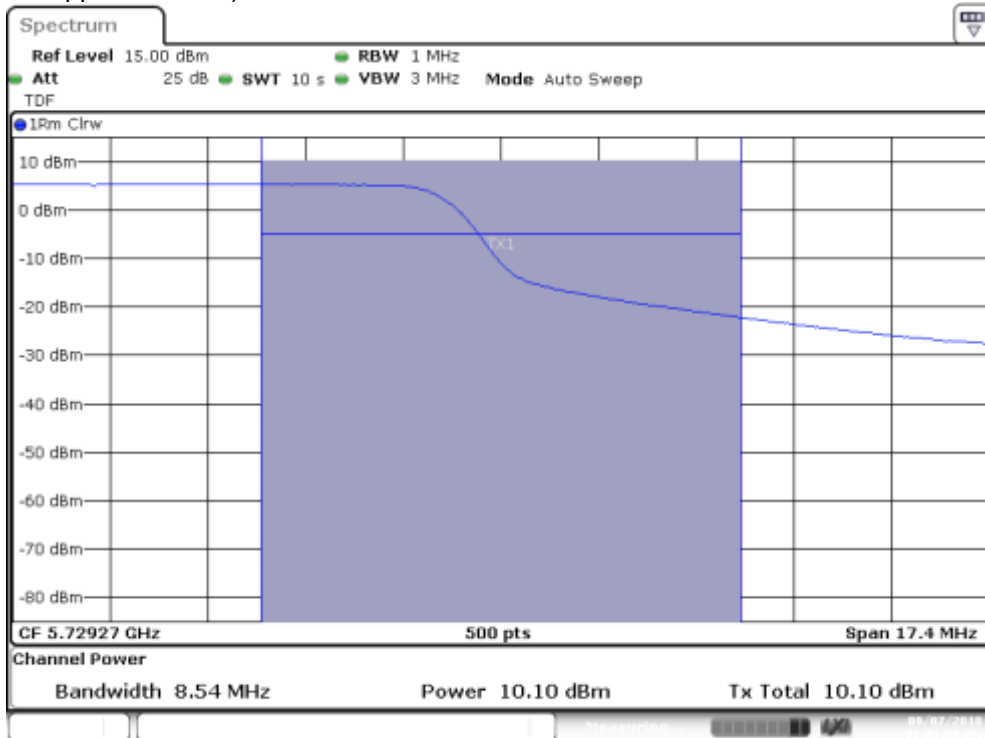
### SISO-A, 802.11n40, HT0

Channel 142F (Overlapped Channel)



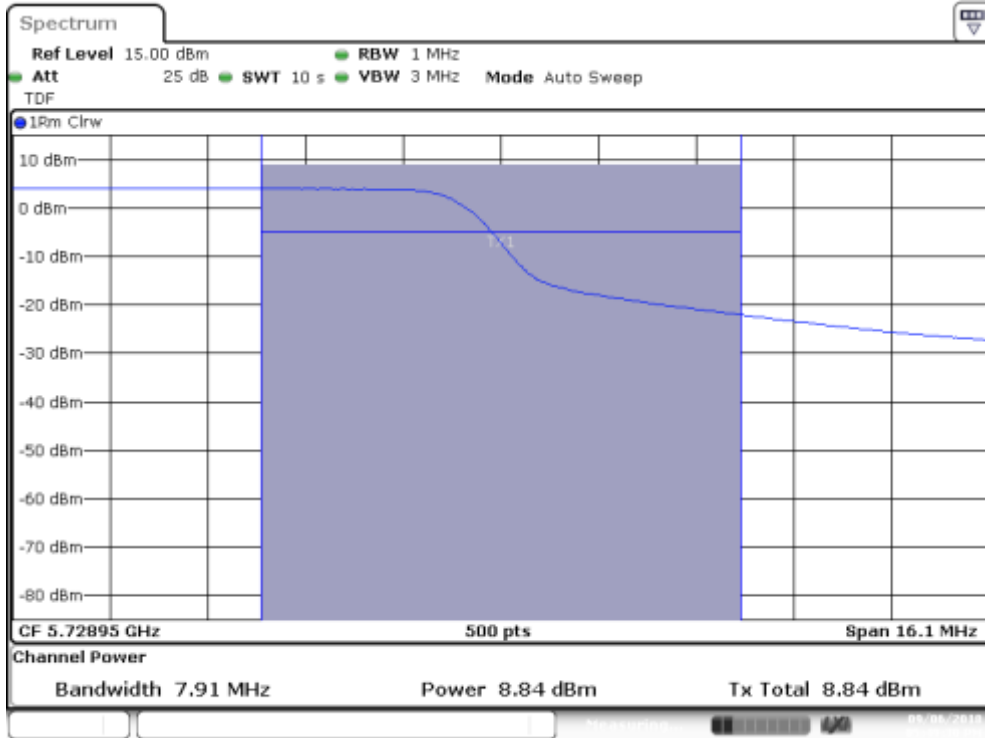
### SISO-B, 802.11n40, HT0

Channel 142F (Overlapped Channel)



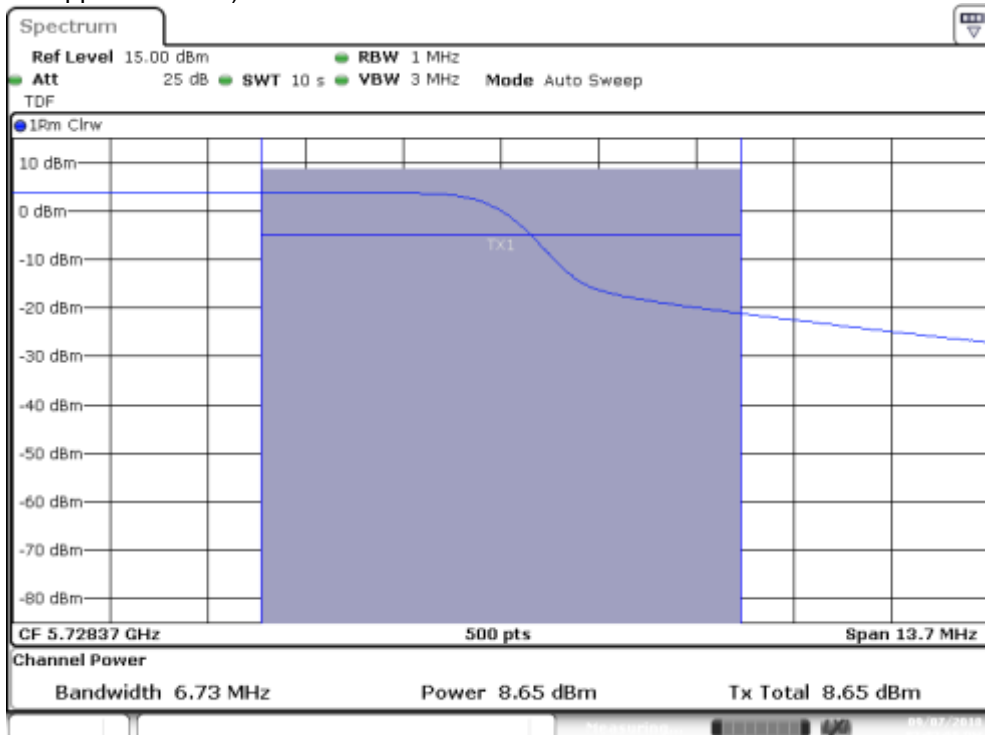
## MIMO-A, 802.11n40, HT8

Channel 142F (Overlapped Channel)



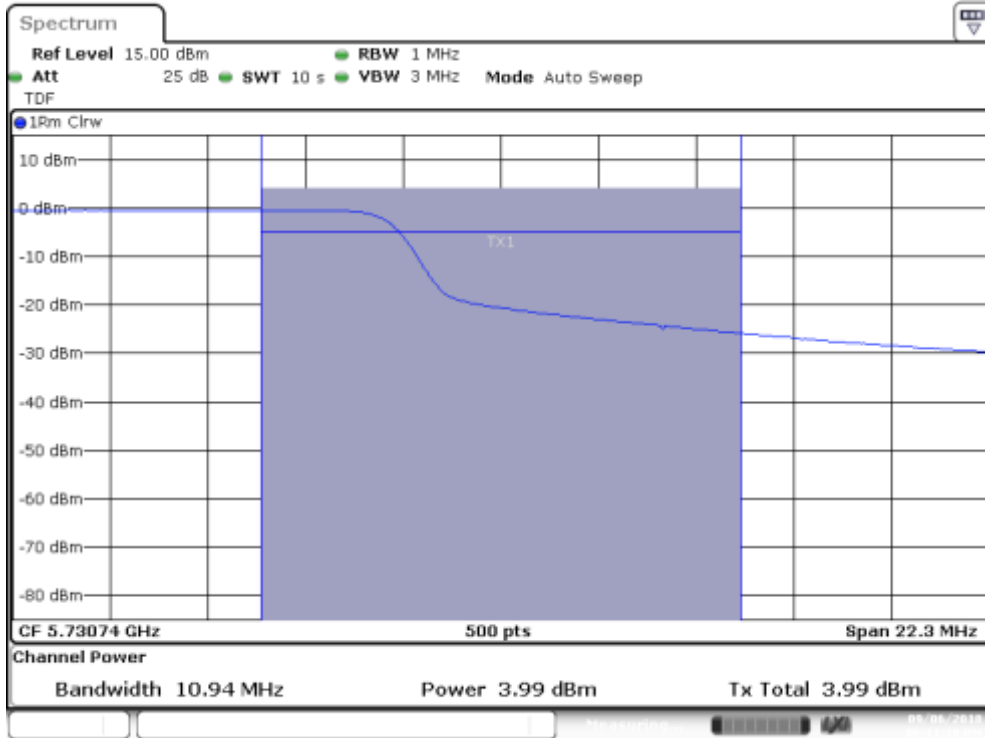
## MIMO-B, 802.11n40, HT8

Channel 142F (Overlapped Channel)



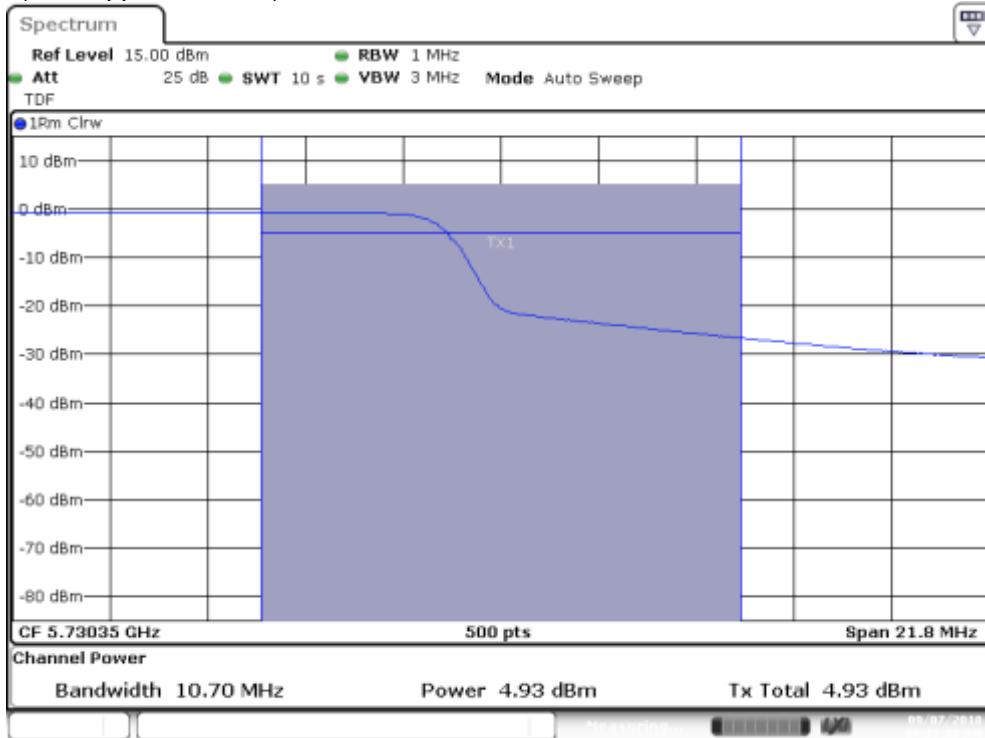
### SISO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



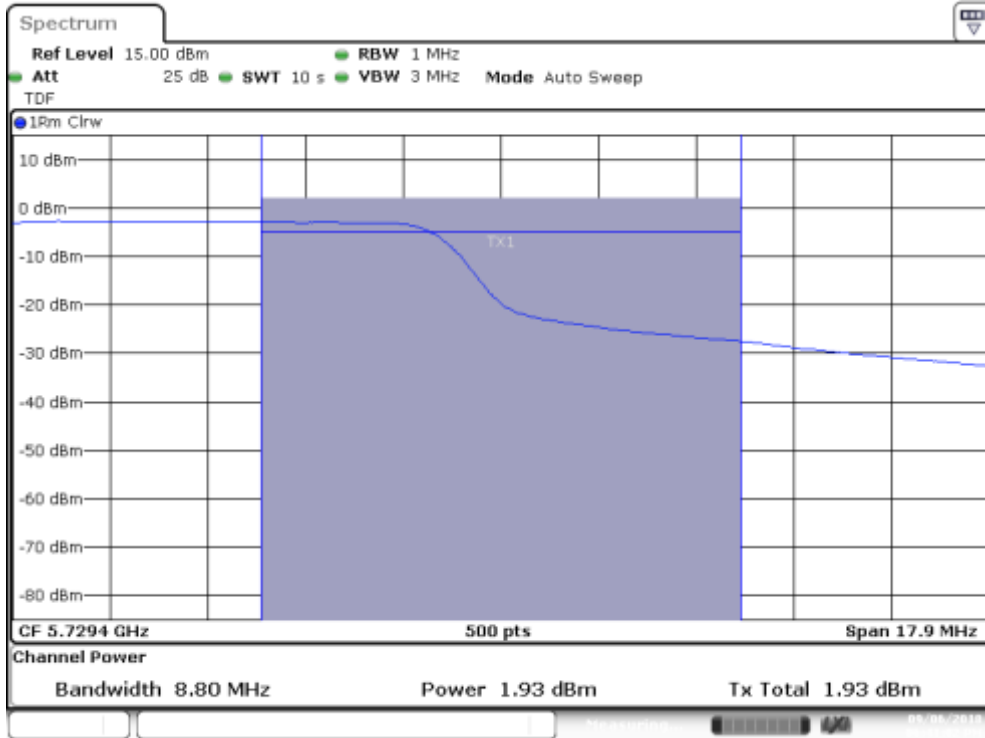
### SISO-B, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



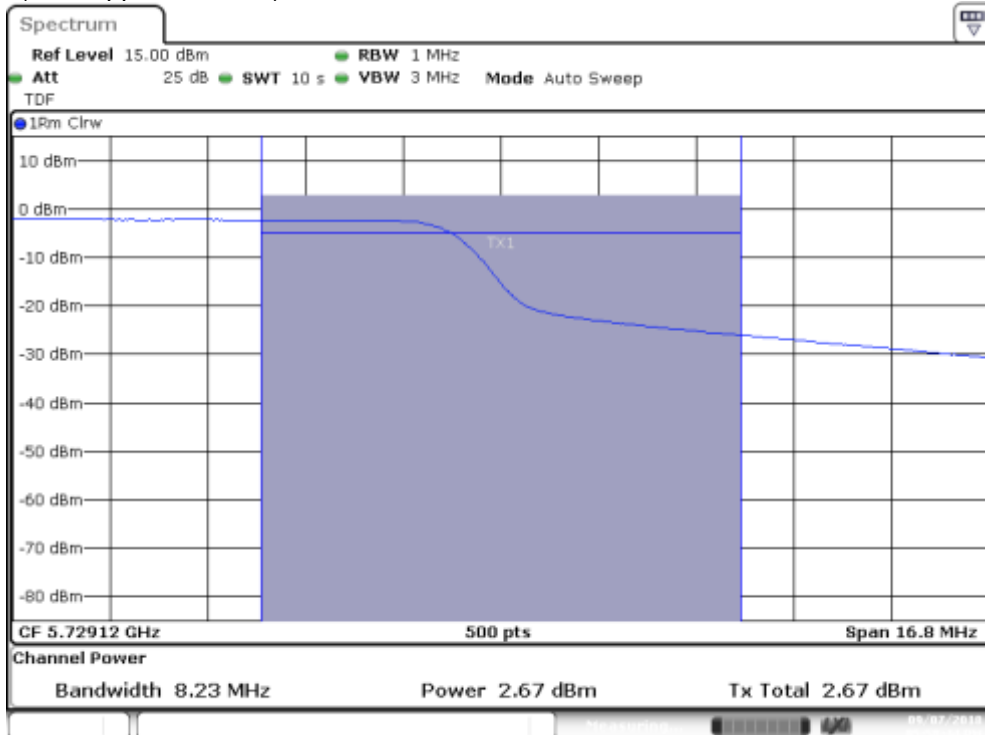
### MIMO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



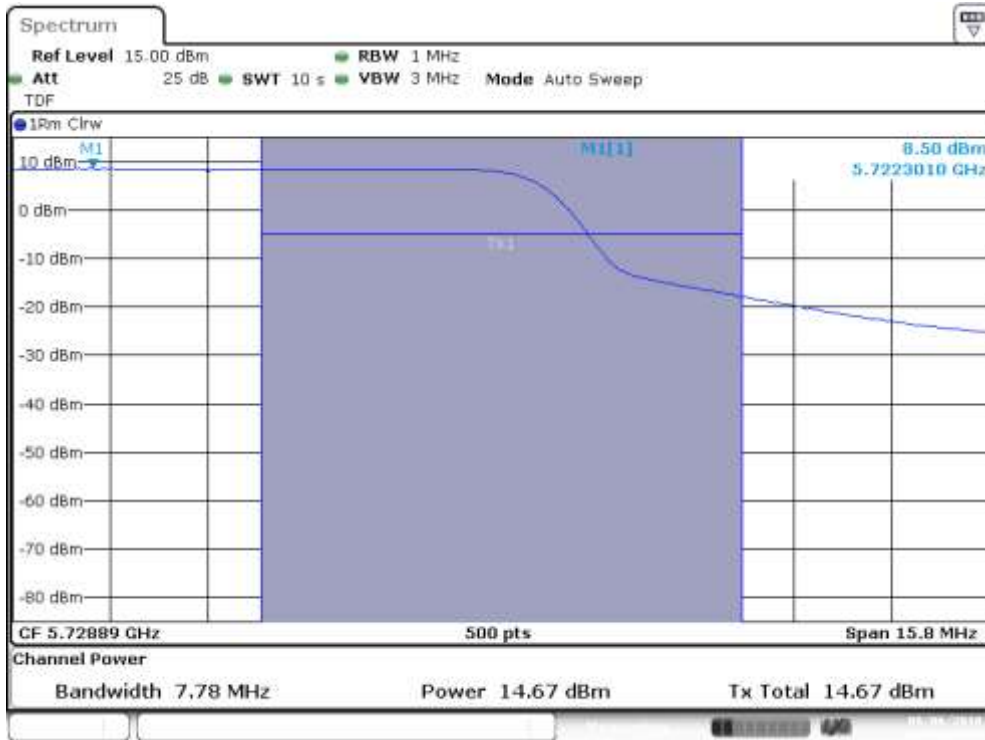
### MIMO-B, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



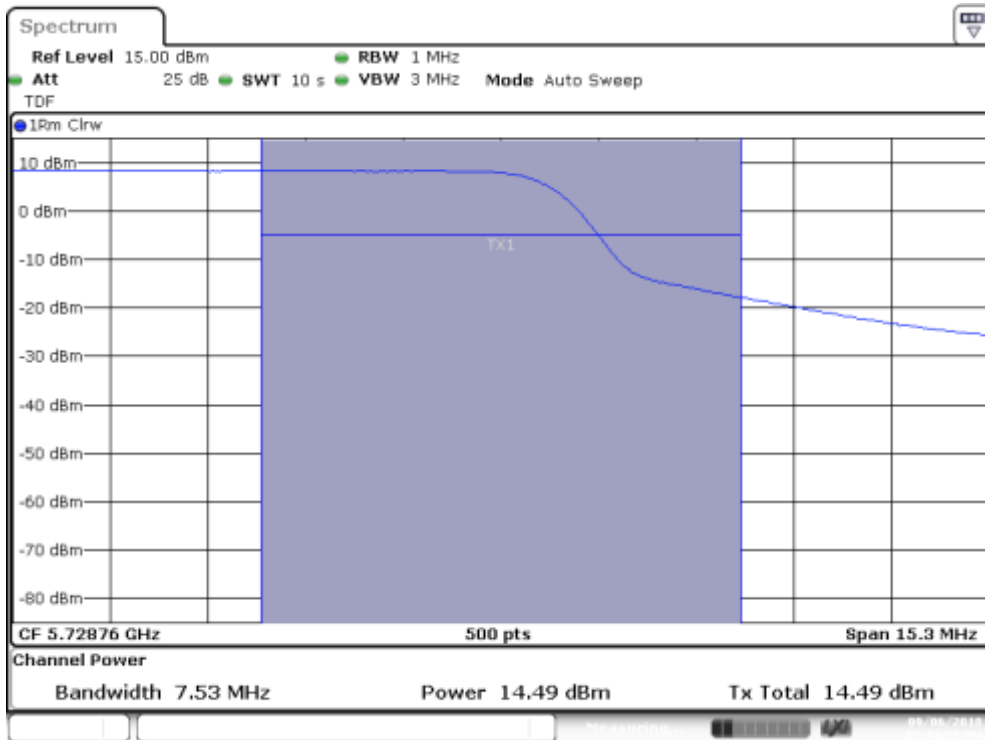
### SISO-A, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



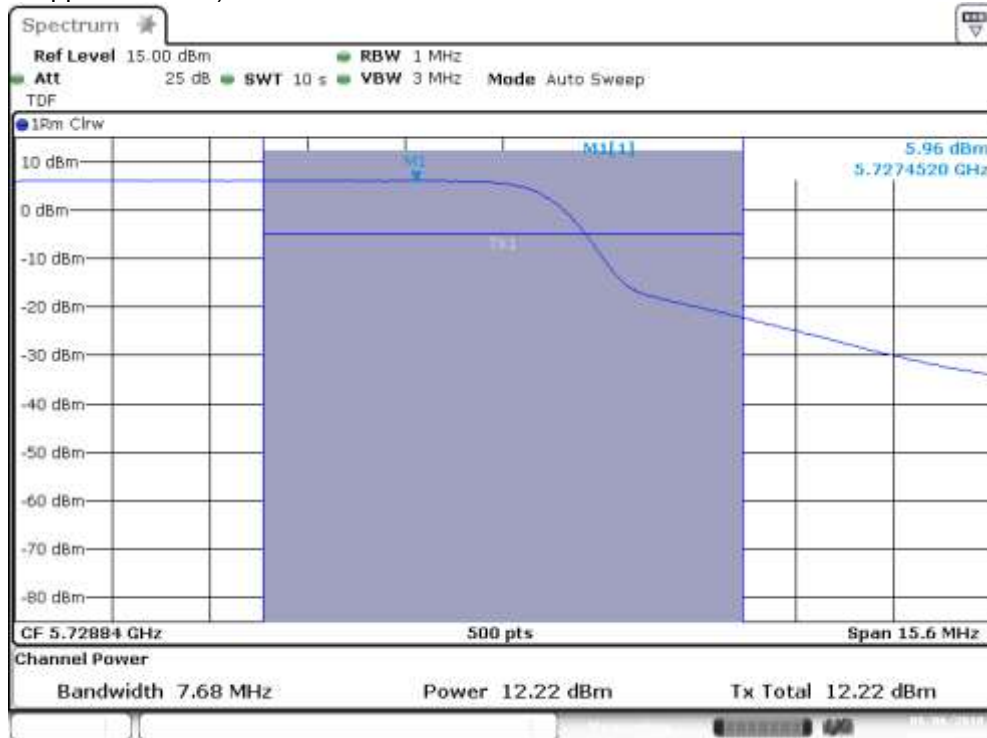
### SISO-B, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



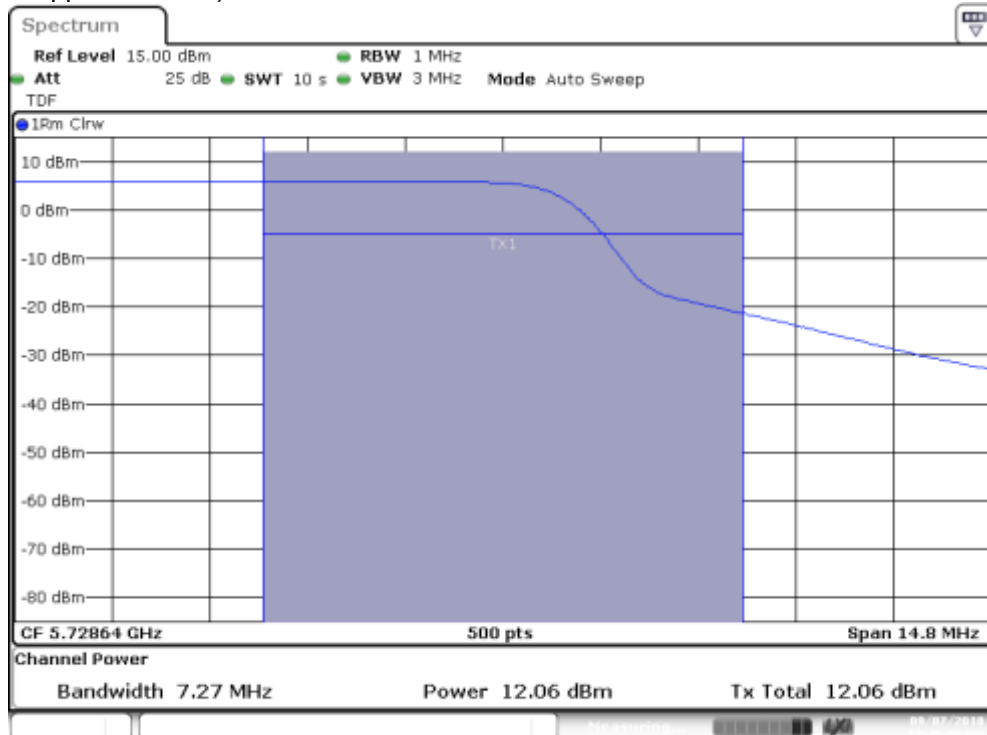
## MIMO-A, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



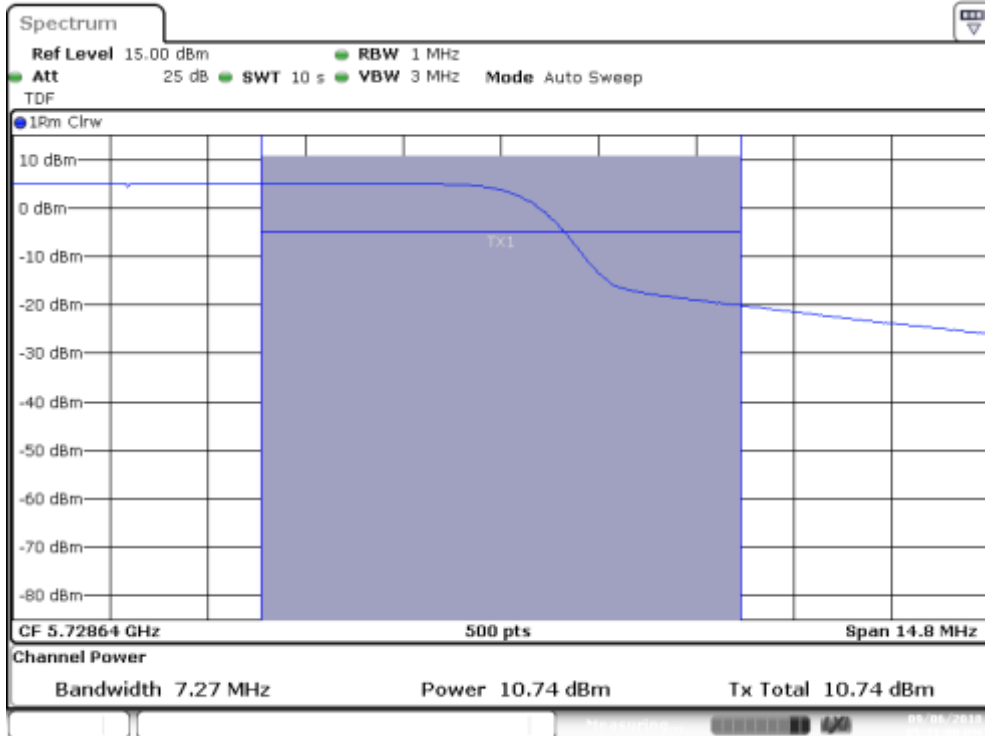
## MIMO-B, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



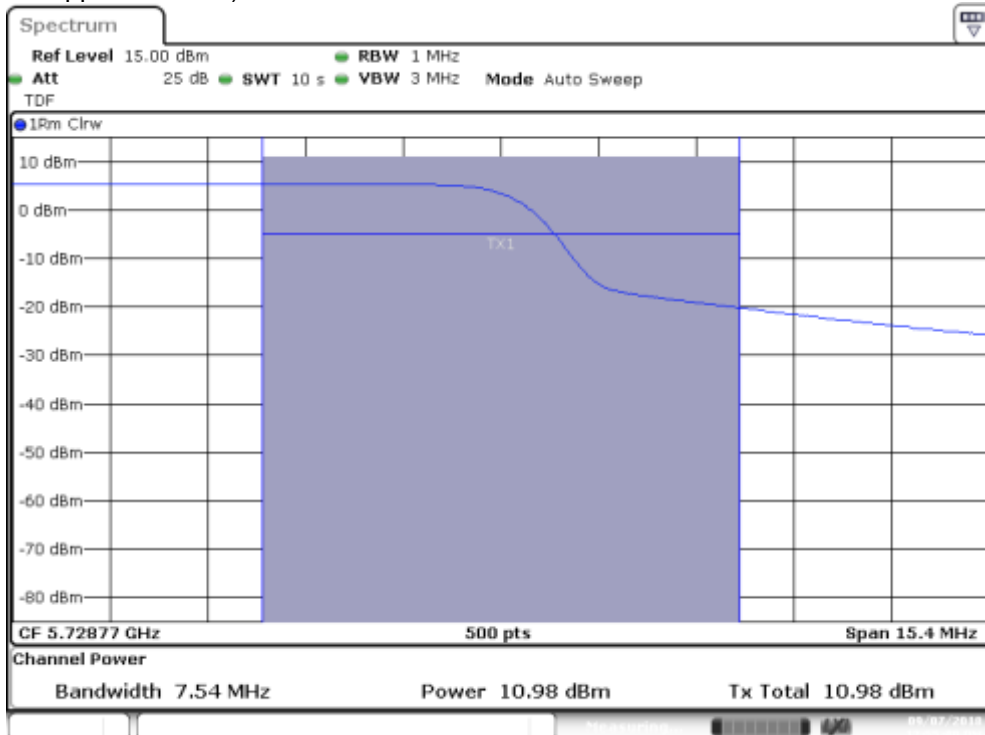
## SISO-A, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



## SISO-B, 802.11ax40, HE0

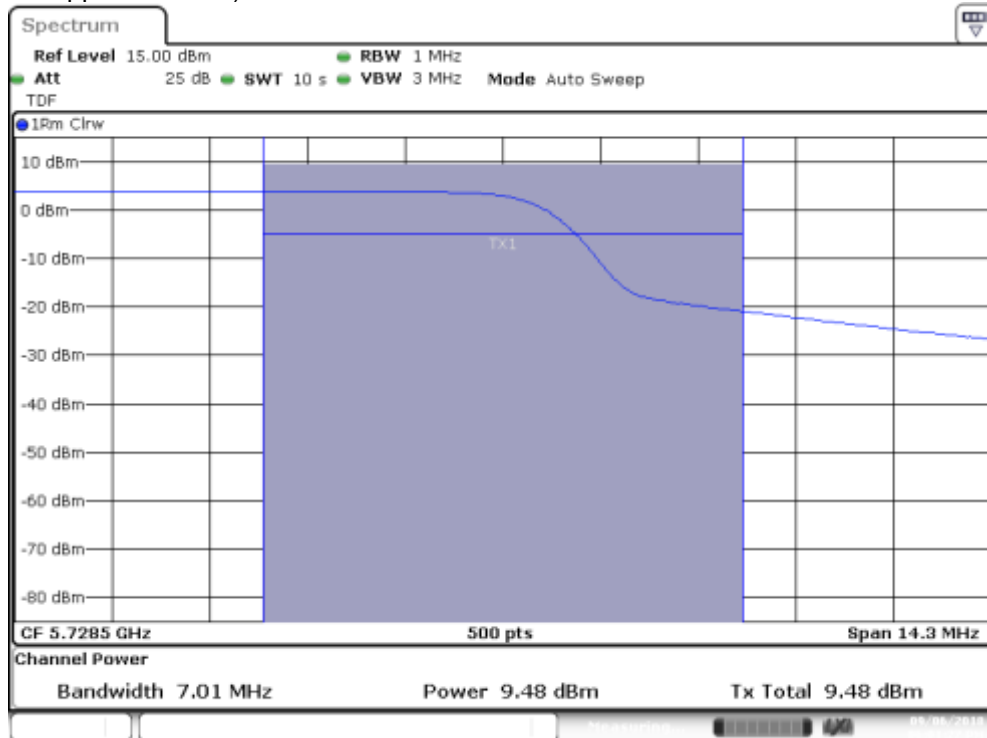
Channel 142F (Overlapped Channel)





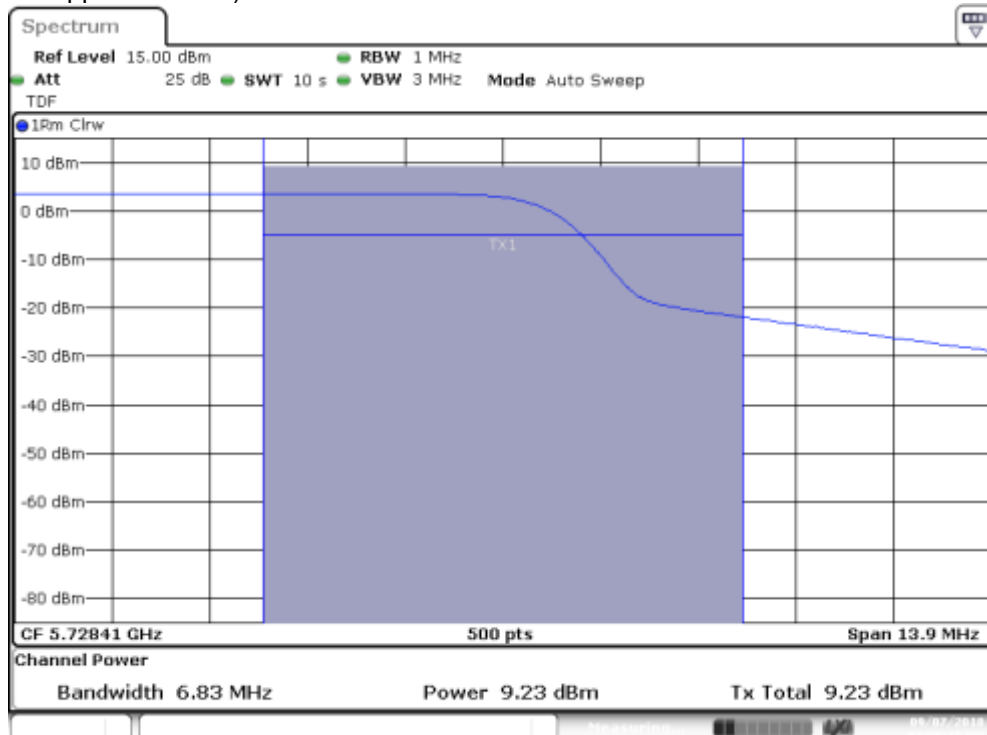
## MIMO-A, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



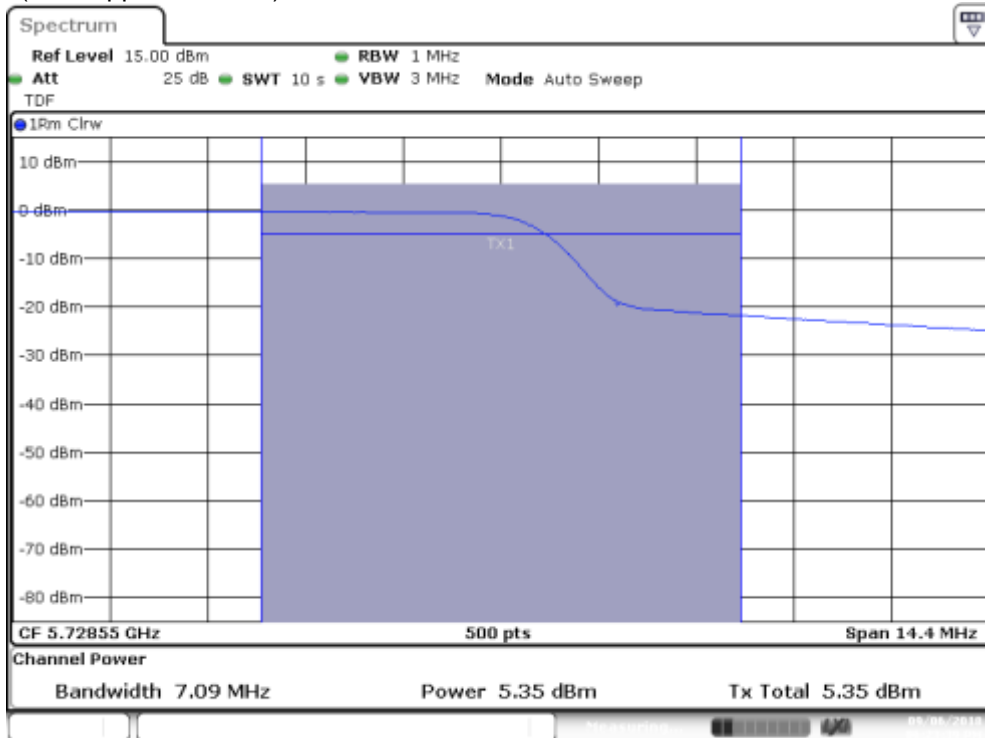
## MIMO-B, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



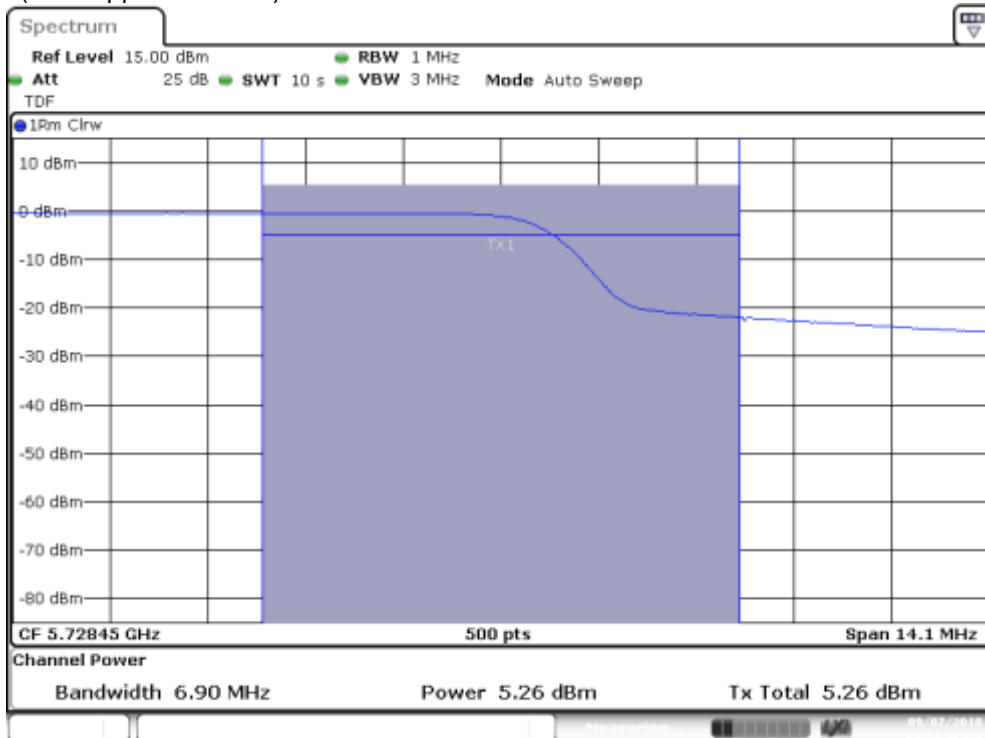
## SISO-A, 802.11ax80, HE0

Channel 138ax80 (Overlapped Channel)



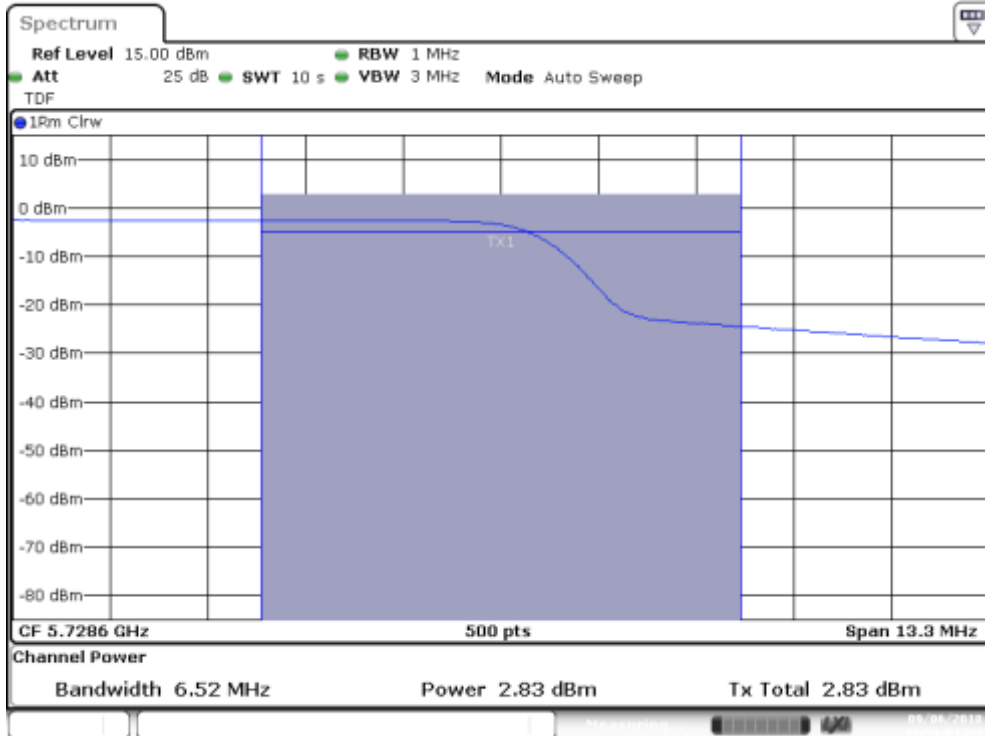
## SISO-B, 802.11ax80, HE0

Channel 138ax80 (Overlapped Channel)



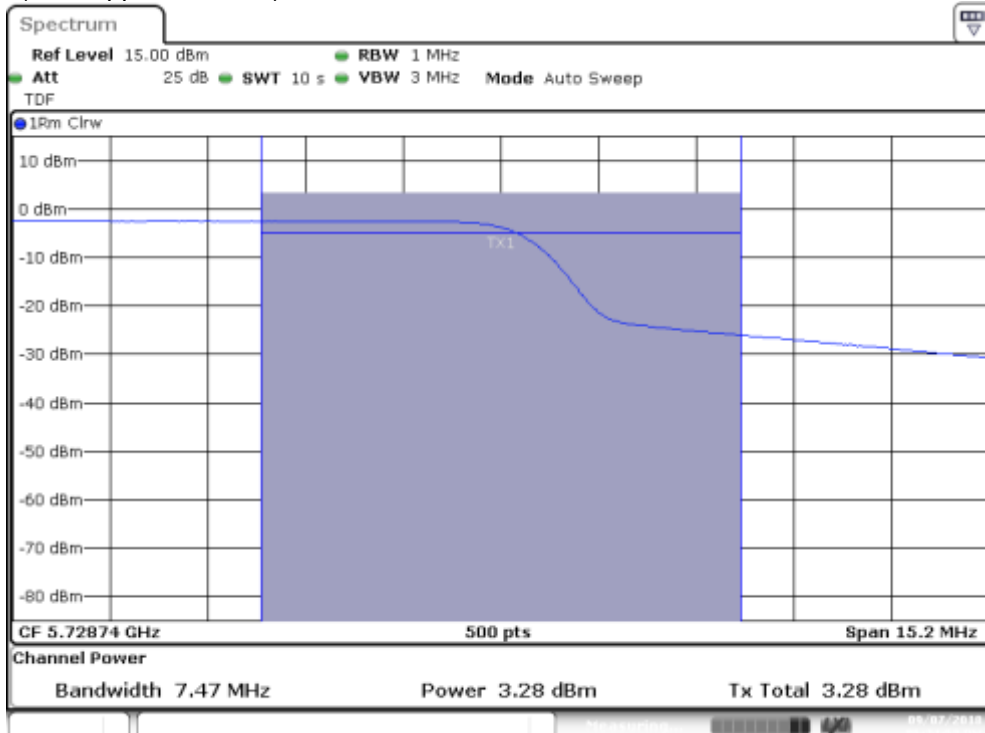
## MIMO-A, 802.11ax80, HE0

Channel 138ax80 (Overlapped Channel)



## MIMO-B, 802.11ax80, HE0

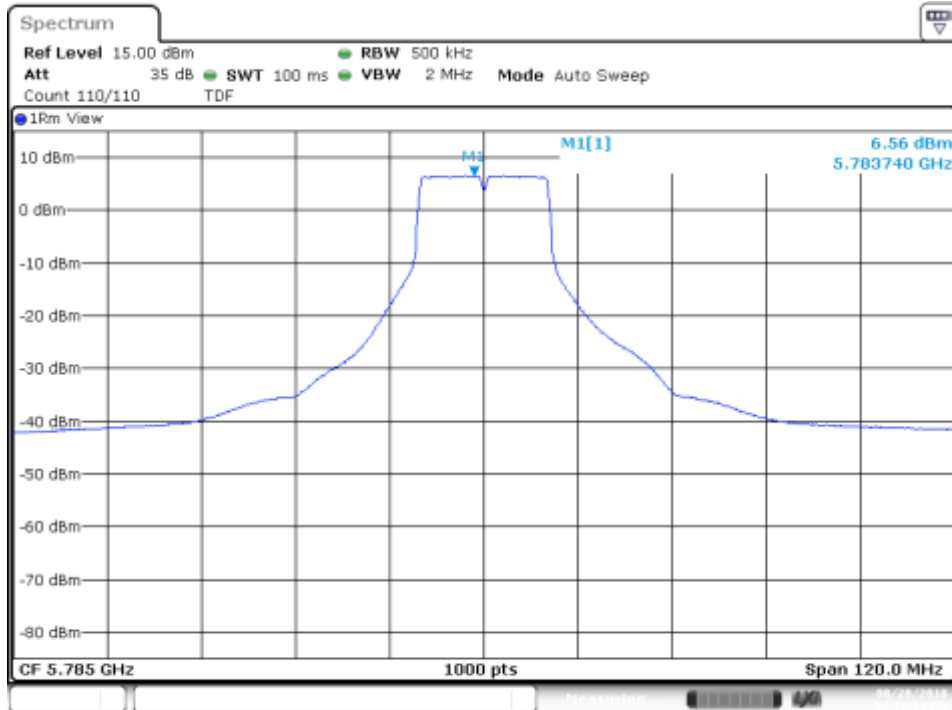
Channel 138ax80 (Overlapped Channel)



### B.3.7 Peak power spectral Density

## SISO-B, 802.11a, 6Mbps

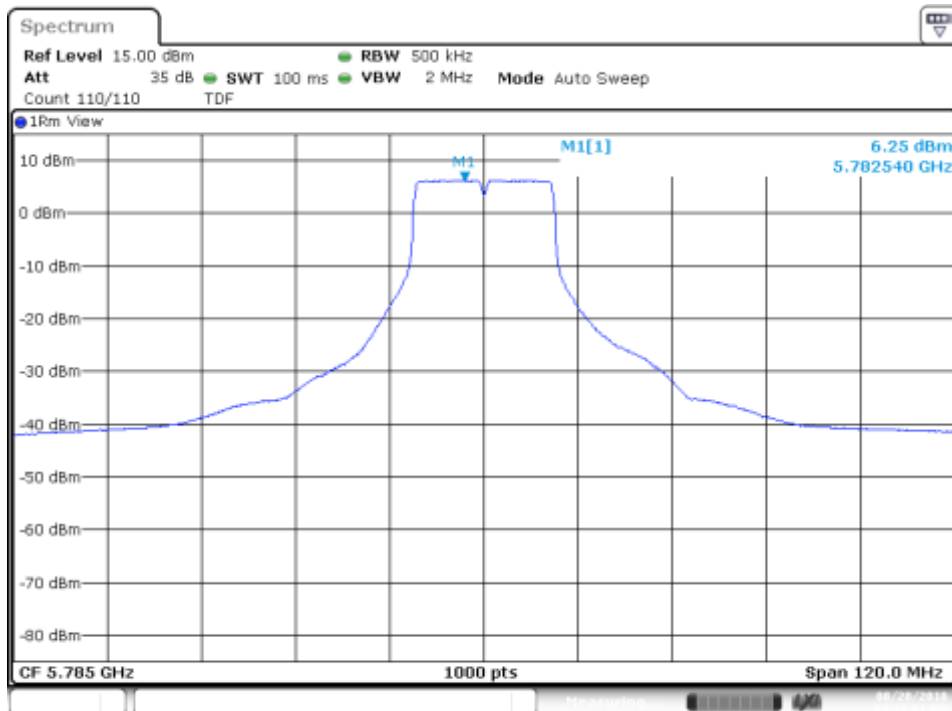
Channel 157



Date: 28.AUG.2018 16:12:54

## SISO-B, 802.11n20, HT0

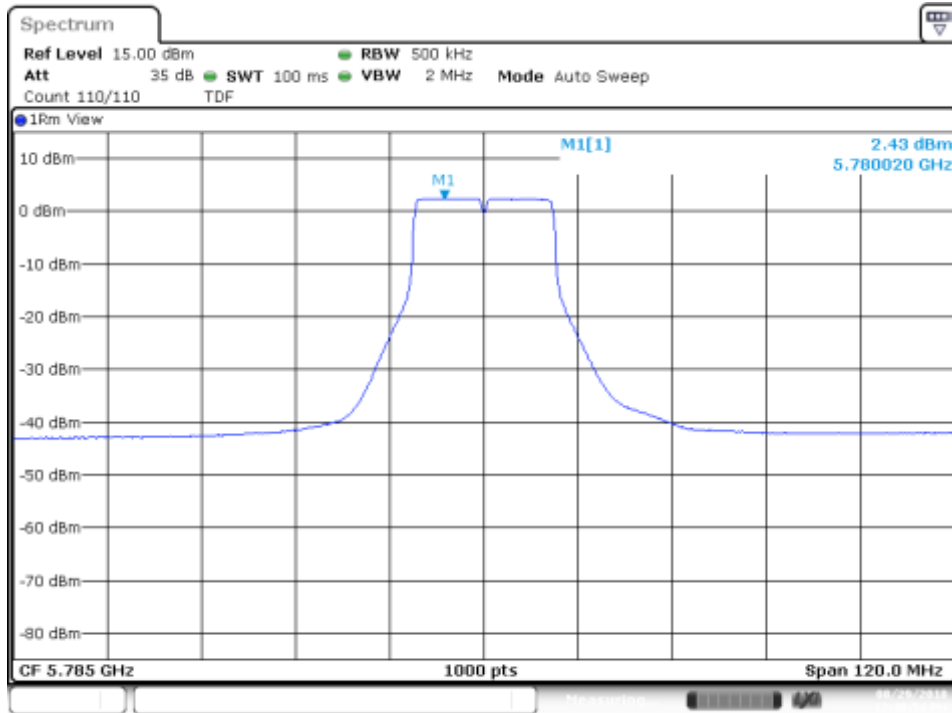
Channel 157



Date: 28.AUG.2018 16:28:02

### MIMO-A, 802.11n20, HT8

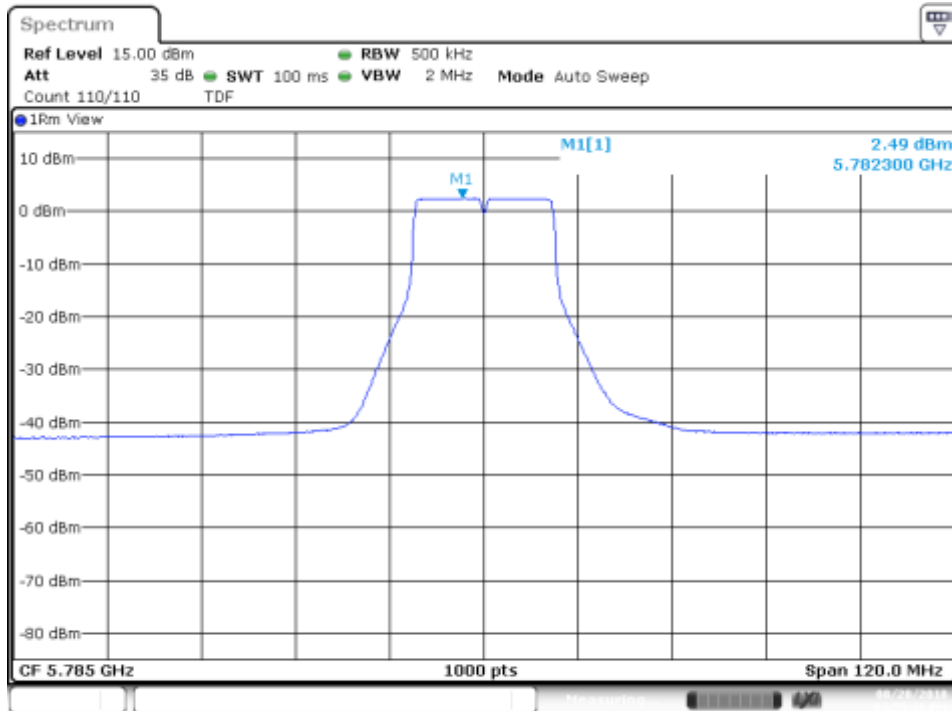
Channel 157



Date: 29.AUG.2018 12:40:54

### MIMO-B, 802.11n20, HT8

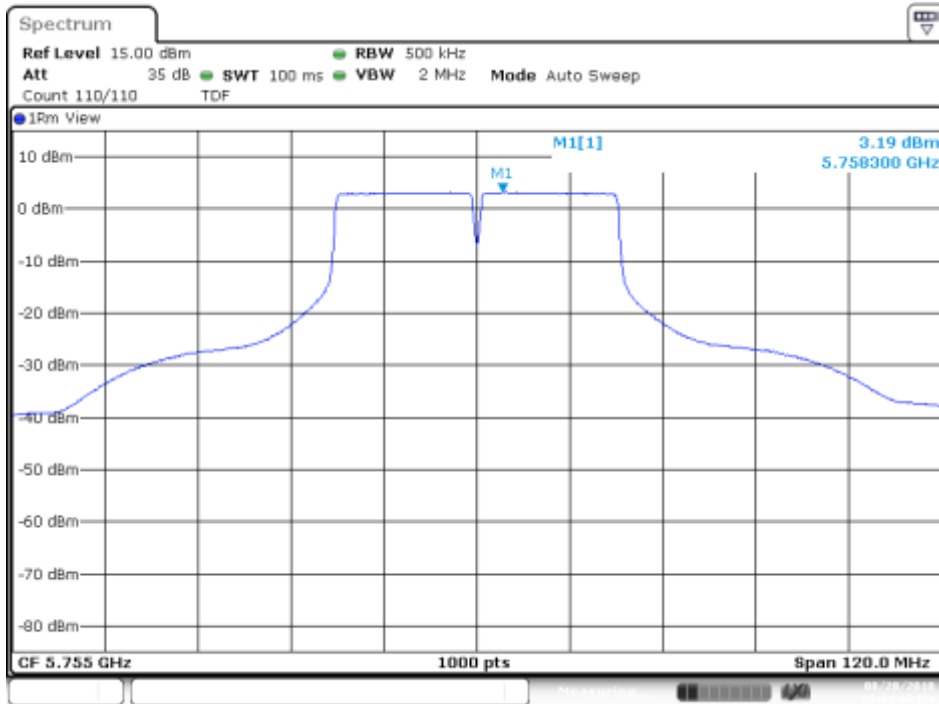
Channel 157



Date: 28.AUG.2018 16:55:26

# SISO-B, 802.11n40, HT0

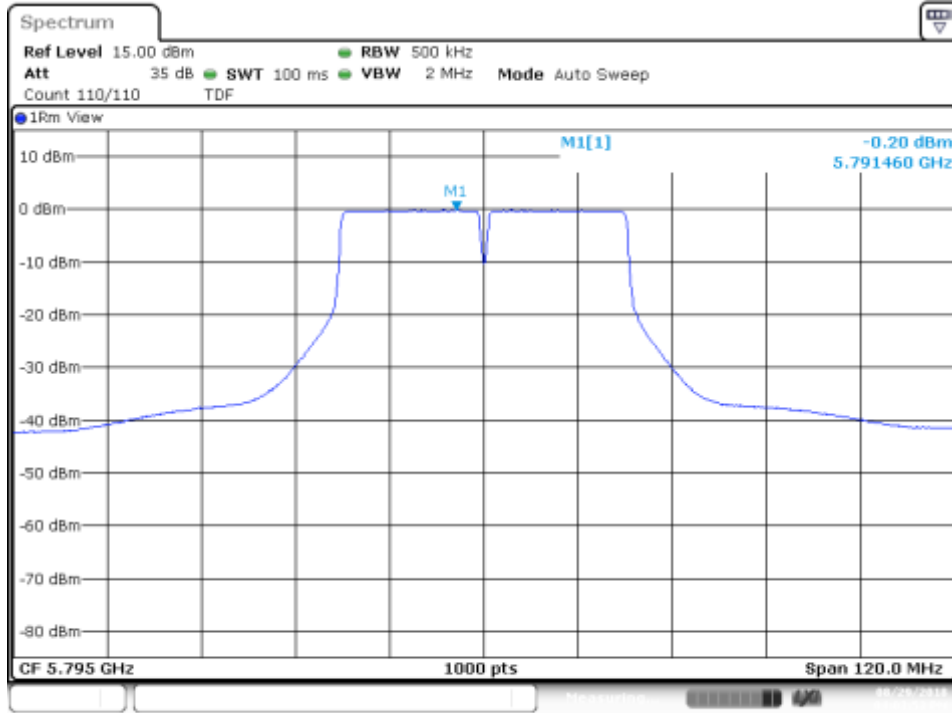
Channel 151F



Date: 28.AUG.2018 17:04:07

### MIMO-A, 802.11n40, HT8

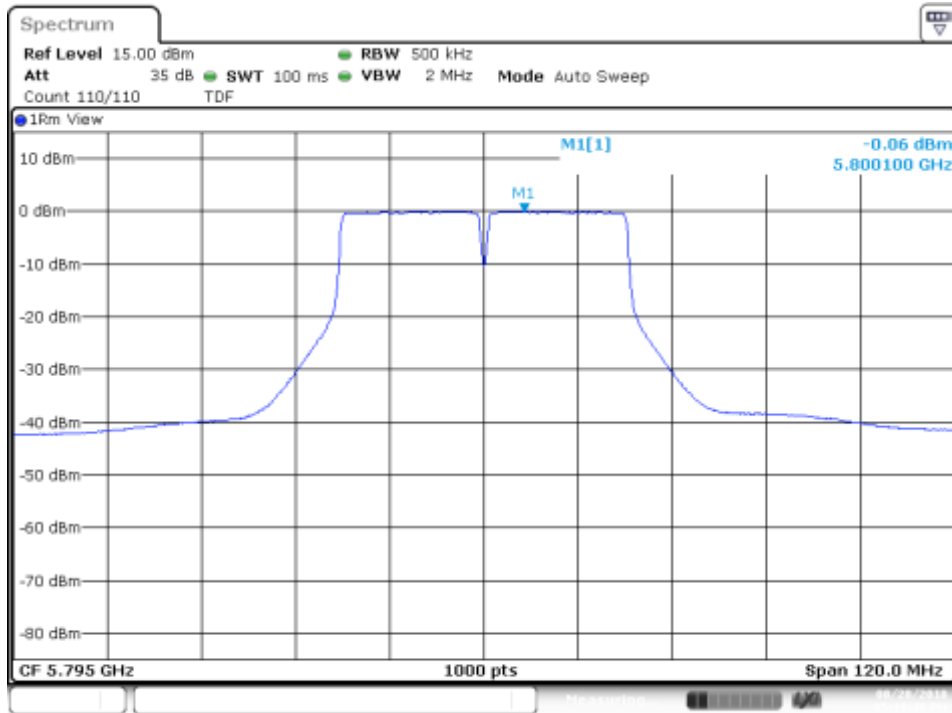
Channel 159F



Date: 29.AUG.2018 16:03:53

### MIMO-B, 802.11n40, HT8

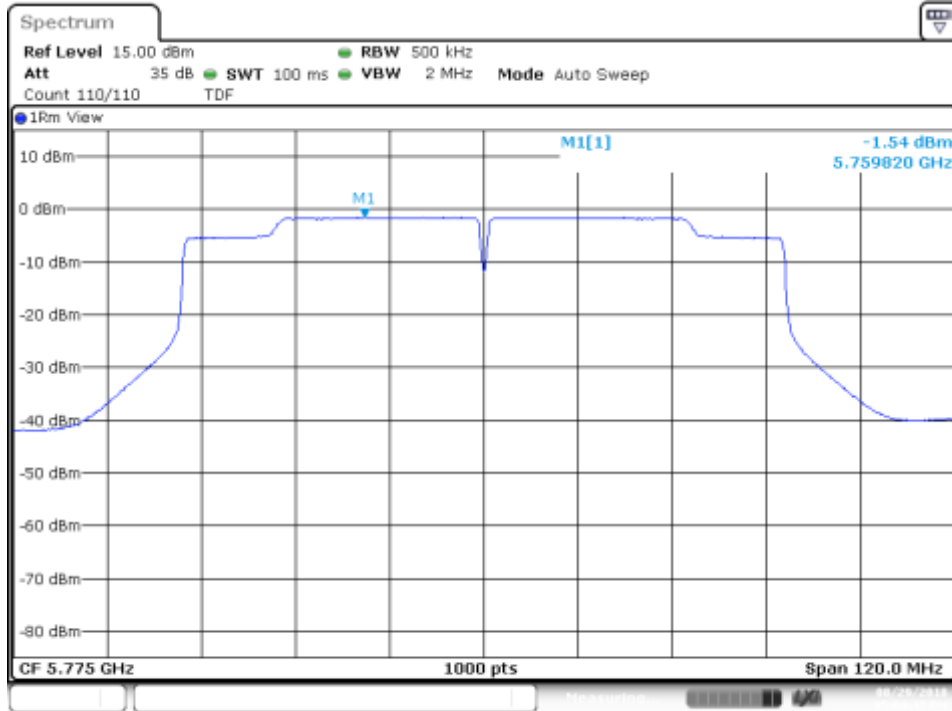
Channel 159F



Date: 28.AUG.2018 17:19:49

# SISO-A, 802.11ac80, VHT0

Channel 155ac80

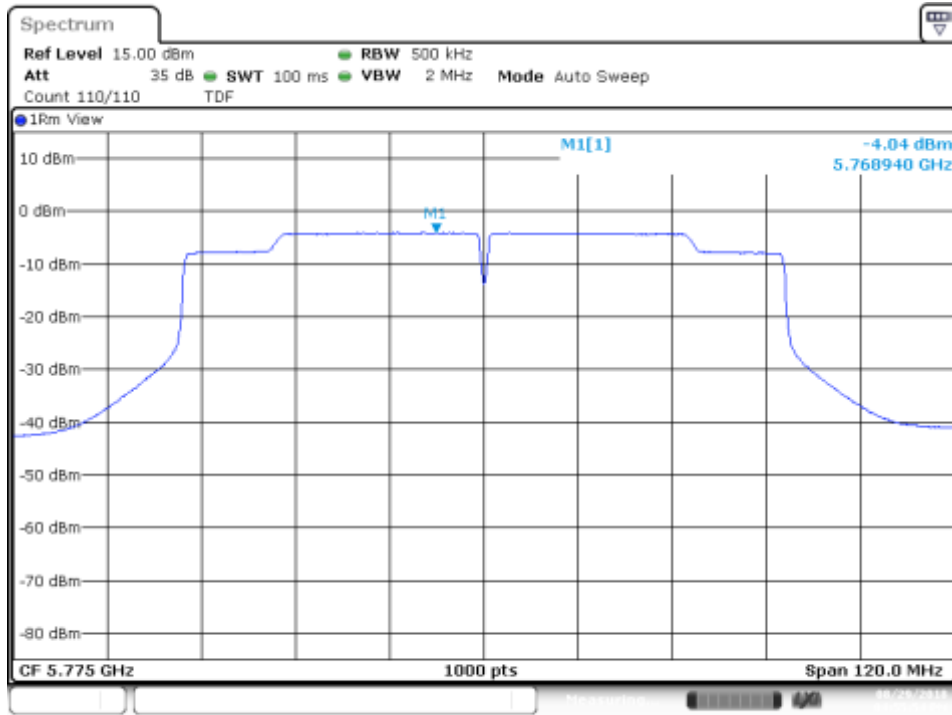


Date: 29.AUG.2018 17:04:47



### MIMO-A, 802.11 ac80, VHT0

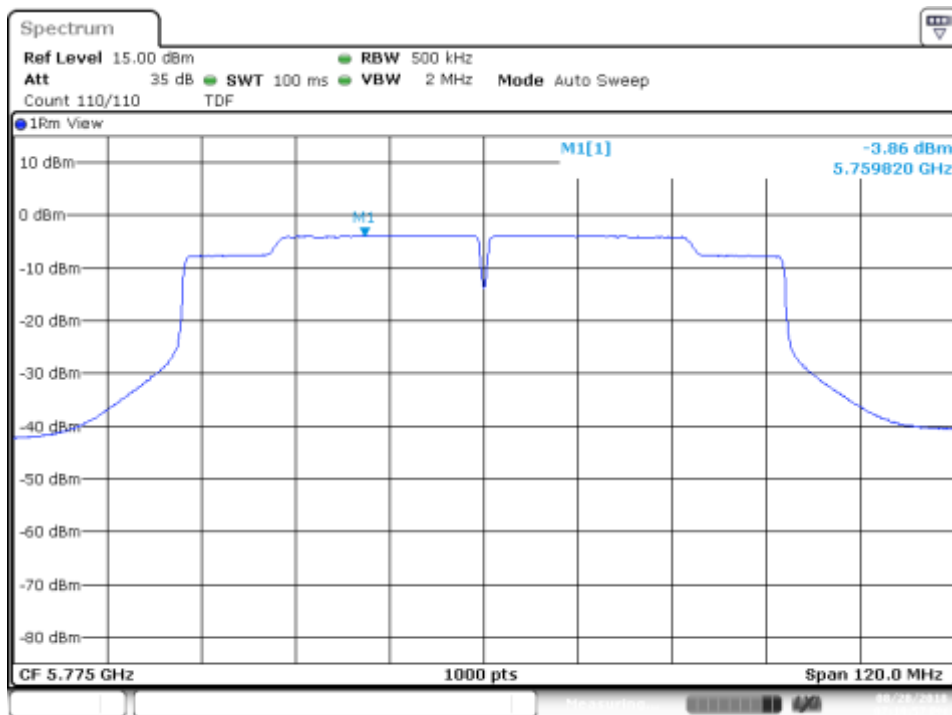
Channel 155ac80



Date: 29.AUG.2018 16:55:54

### MIMO-B, 802.11 ac80, VHT0

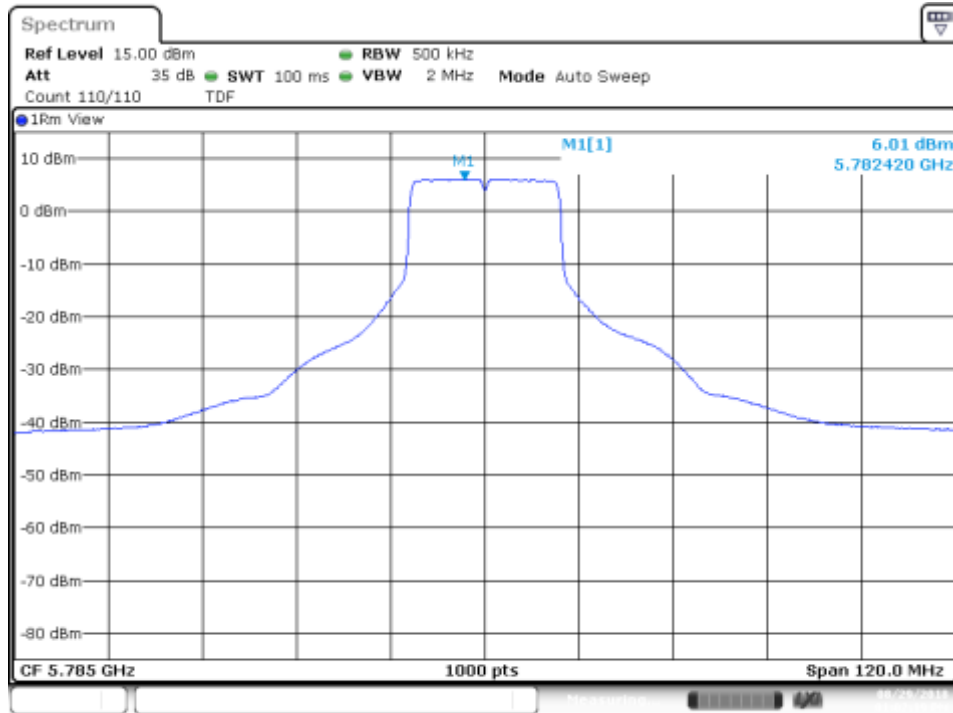
Channel 155ac80



Date: 28.AUG.2018 19:10:57

# SISO-A, 802.11ax20, HE0

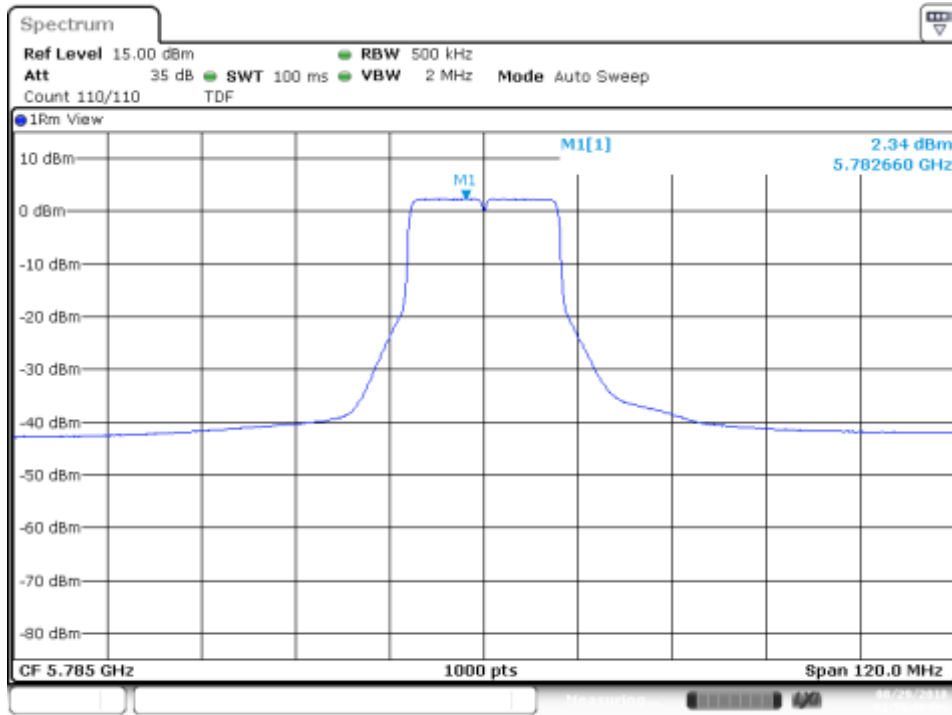
Channel 157



Date: 29.AUG.2018 13:02:19

### MIMO-A, 802.11ax20, HE0

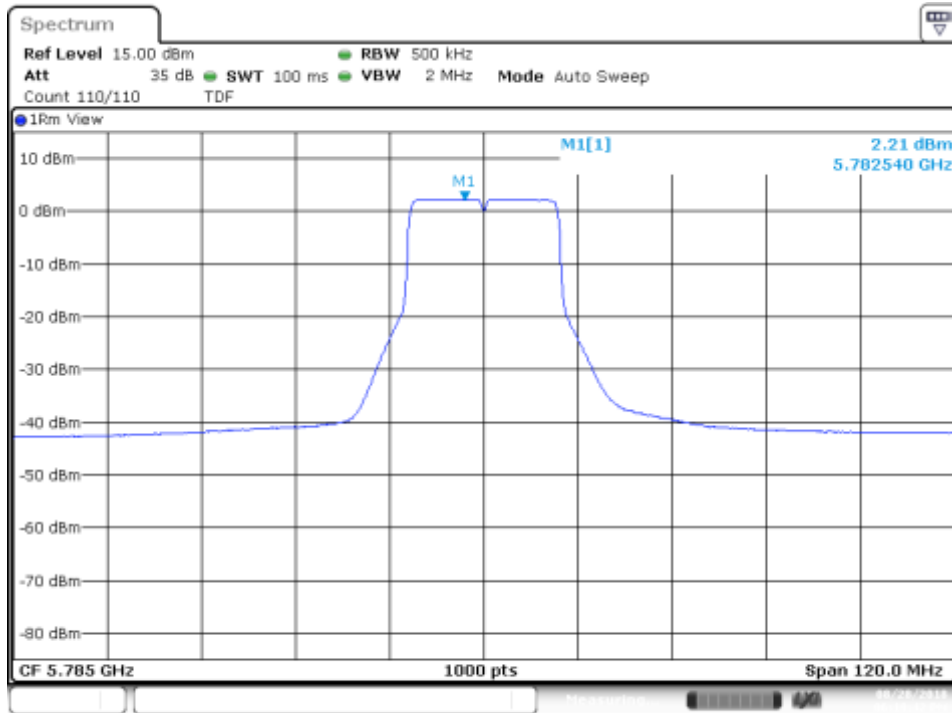
Channel 157



Date: 29.AUG.2018 13:59:08

### MIMO-B, 802.11ax20, HE0

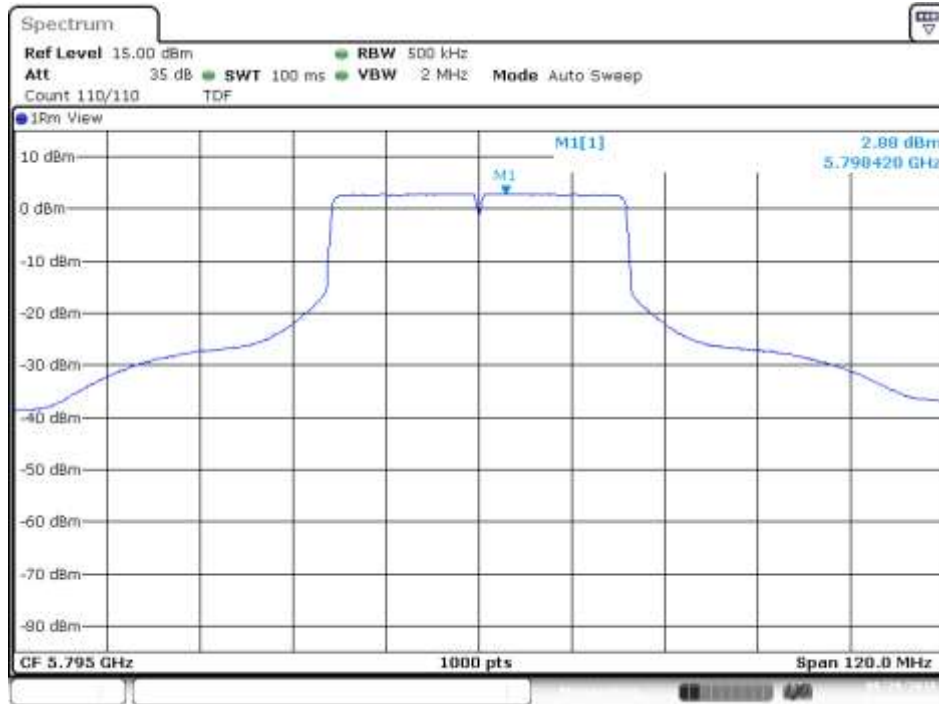
Channel 157



Date: 28.AUG.2018 18:10:42

# SISO-A, 802.11ax40, HE0

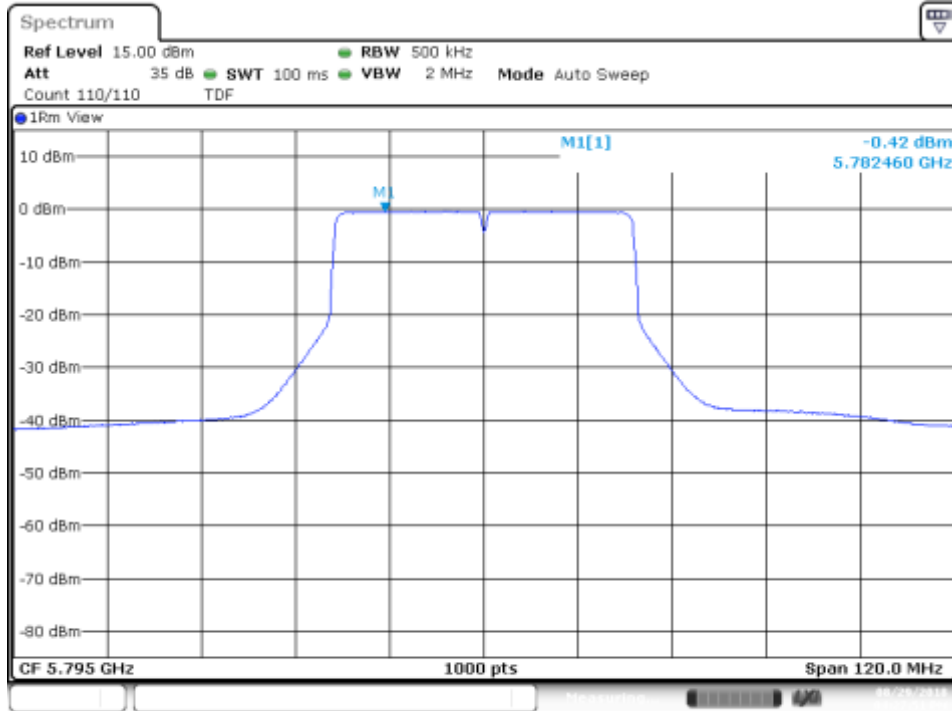
Channel 159F



Date: 29 AUG 2018 16:15:26

### MIMO-A, 802.11ax40, HE0

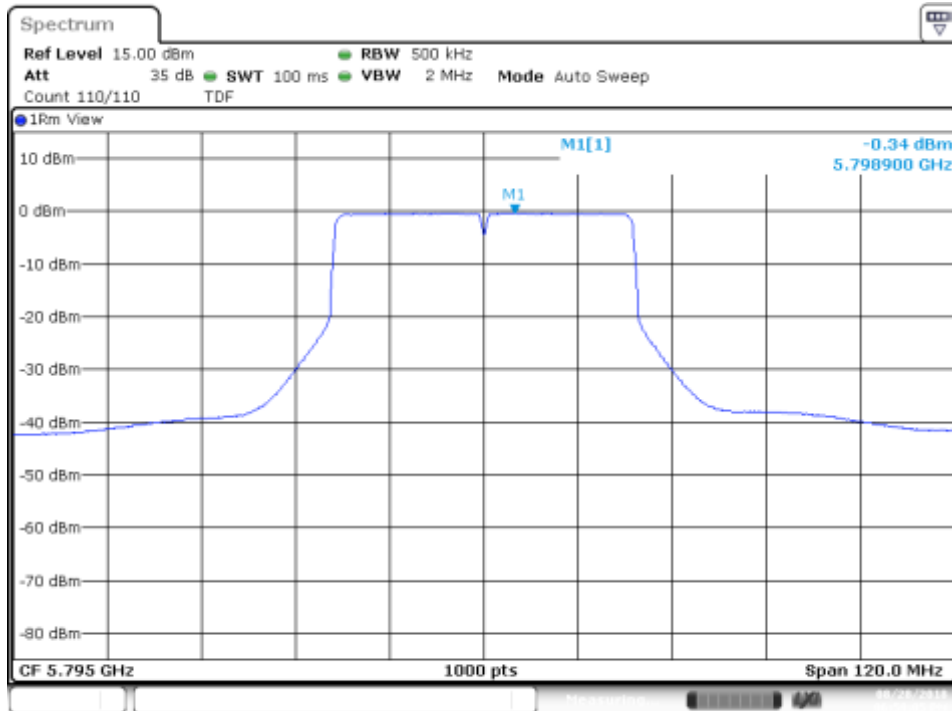
Channel 159F



Date: 29.AUG.2018 16:27:51

### MIMO-B, 802.11ax40, HE0

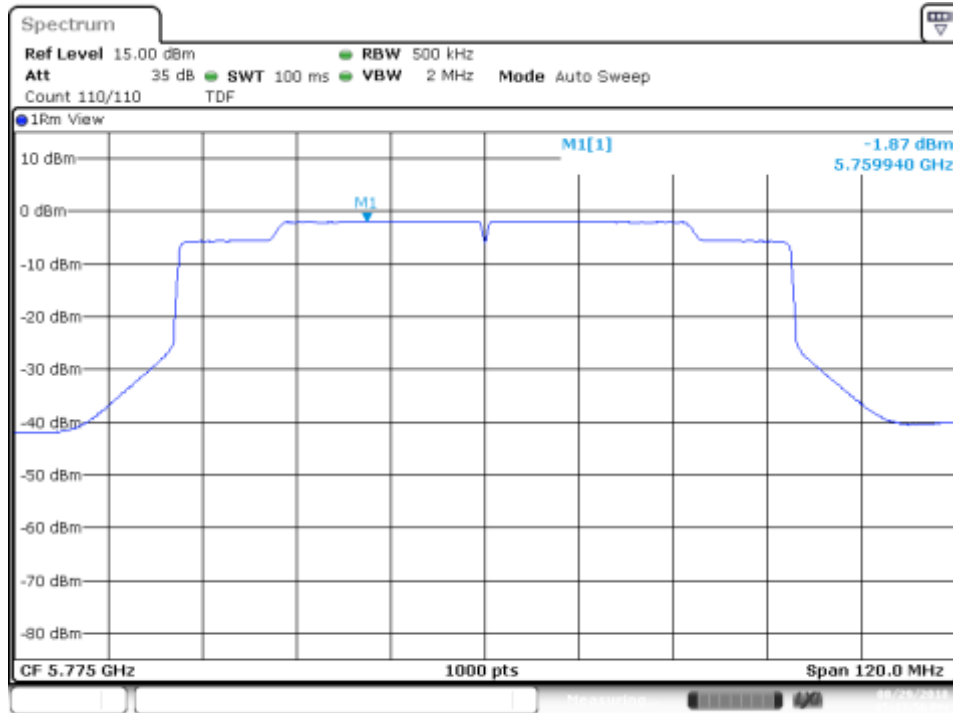
Channel 159F



Date: 28.AUG.2018 18:50:05

# SISO-A, 802.11ax80, HE0

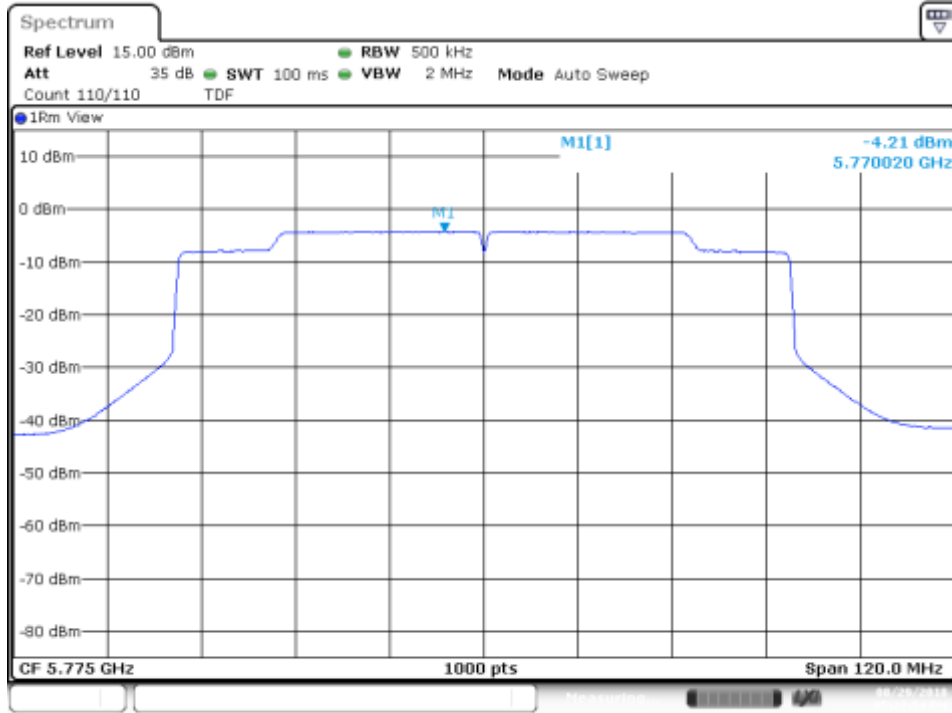
Channel 155ax80



Date: 29.AUG.2018 17:13:56

# MIMO-A, 802.11ax80, HE0

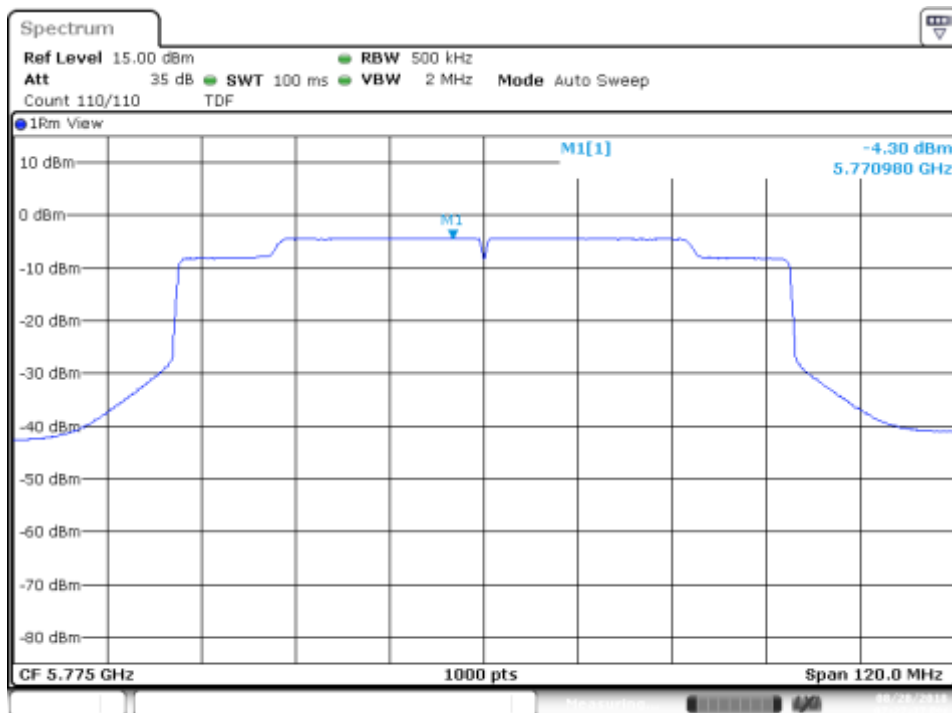
Channel 155ax80



Date: 29.AUG.2018 17:22:54

# MIMO-B, 802.11ax80, HE0

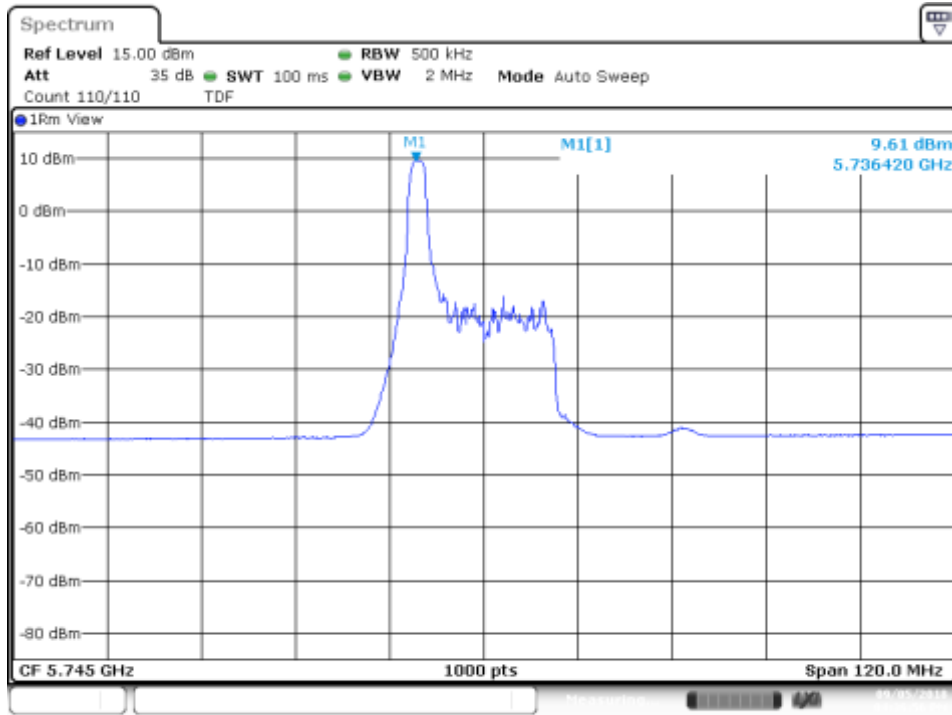
Channel 155ax80



Date: 28.AUG.2018 19:27:37

# SISO-B, 802.11ax20, HE0, RU 26/0

Channel 149

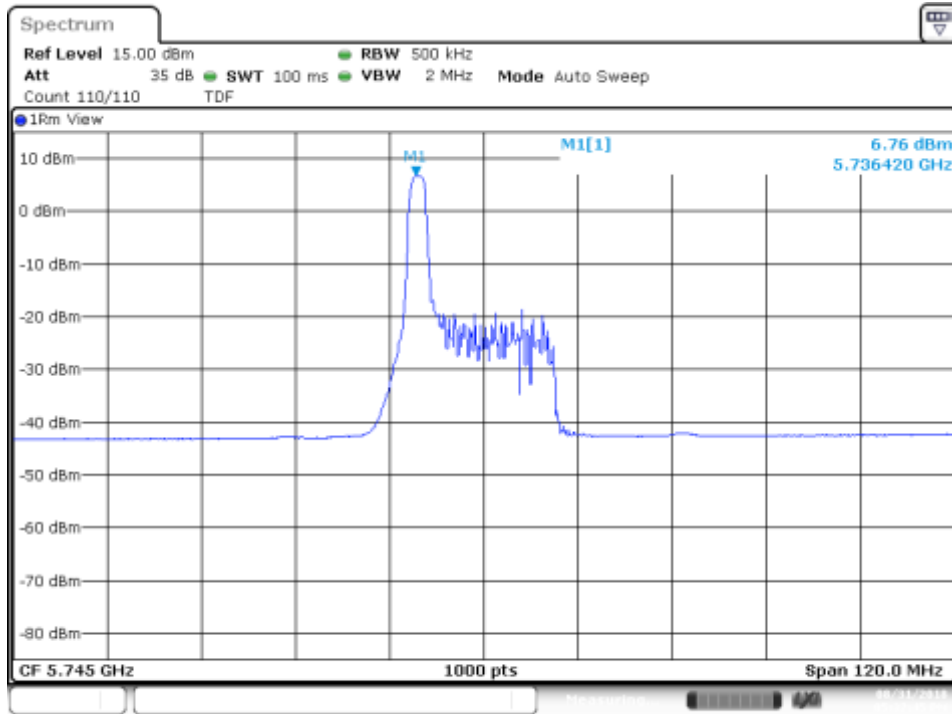


Date: 5.SEP.2018 16:36:56



### MIMO-A, 802.11ax20, HE0, RU 26/0

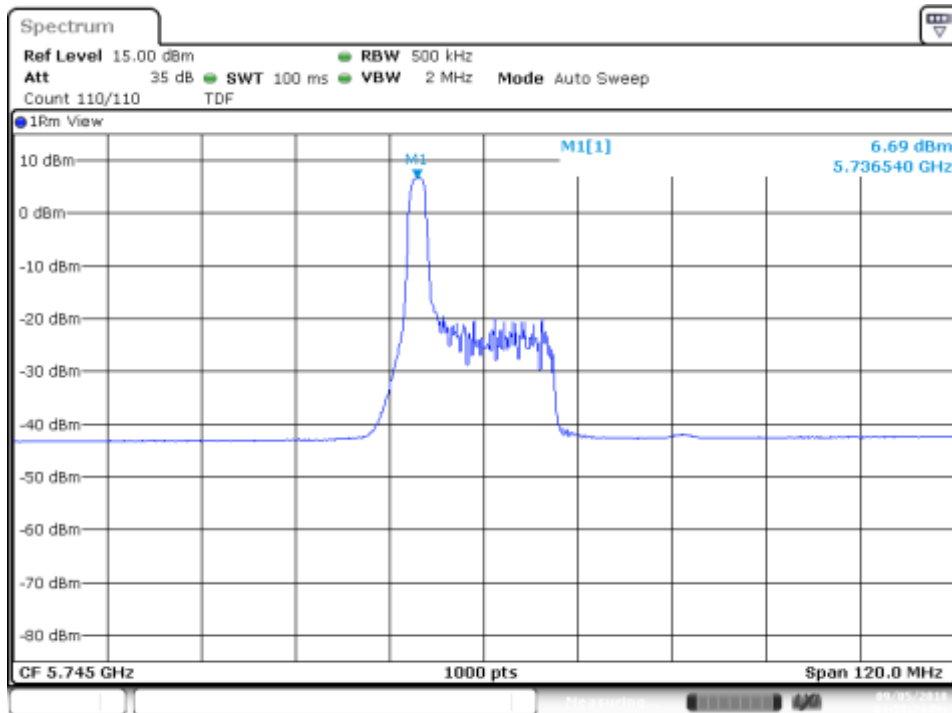
Channel 149



Date: 31.AUG.2018 17:32:46

### MIMO-B, 802.11ax20, HE0, RU 26/0

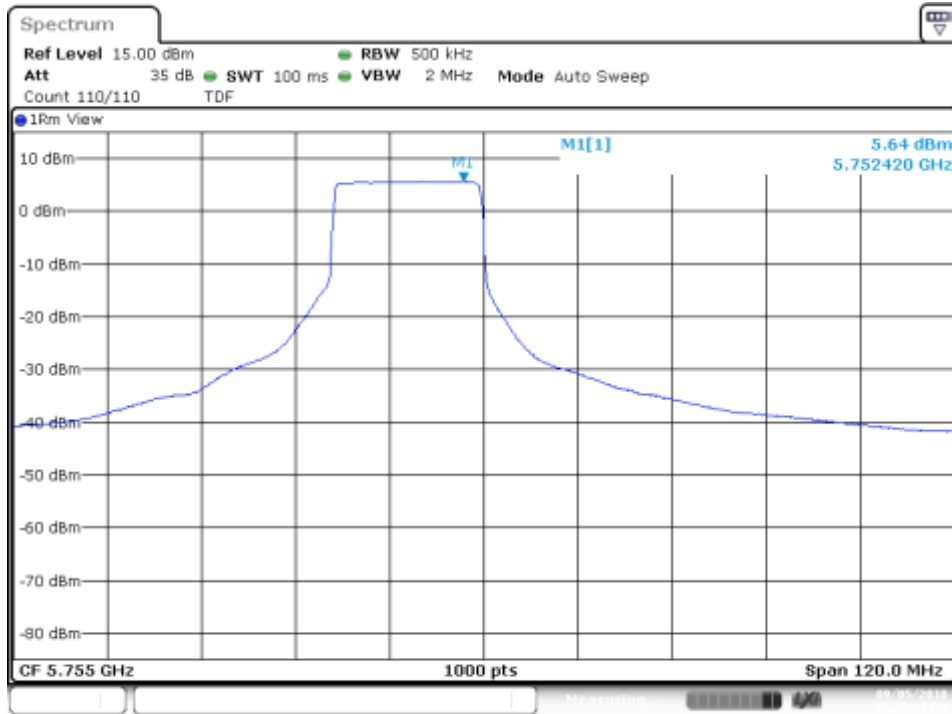
Channel 149



Date: 5.SEP.2018 16:58:25

# SISO-B, 802.11ax40, HE0, RU 242/61

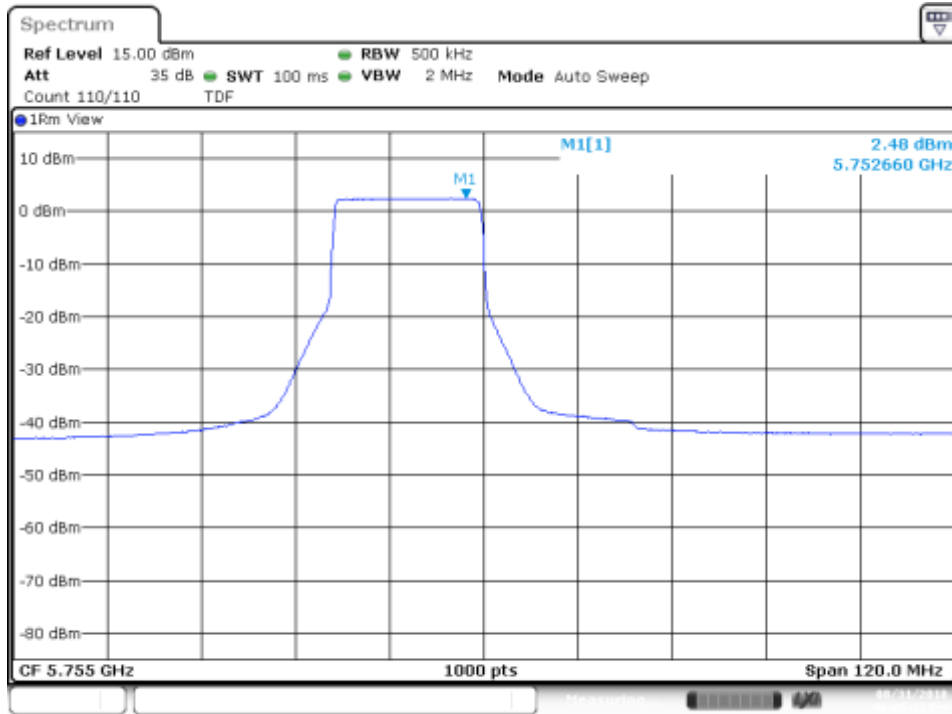
Channel 151F



Date: 5.SEP.2018 17:22:44

### MIMO-A, 802.11ax40, HE0, RU 242/61

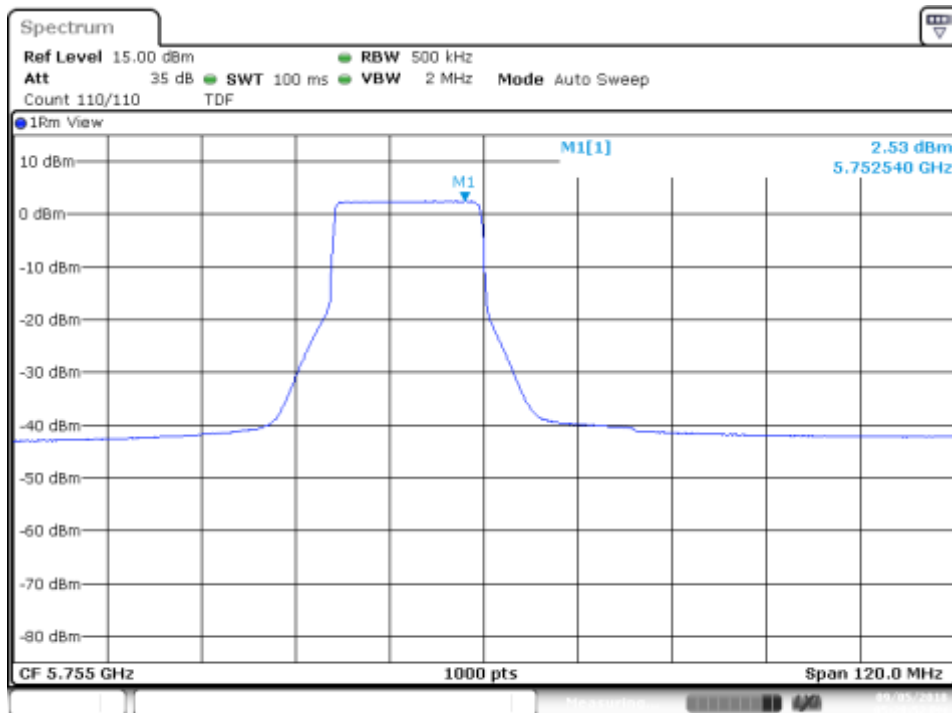
Channel 151F



Date: 31.AUG.2018 18:05:33

### MIMO-B, 802.11ax40, HE0, RU 242/61

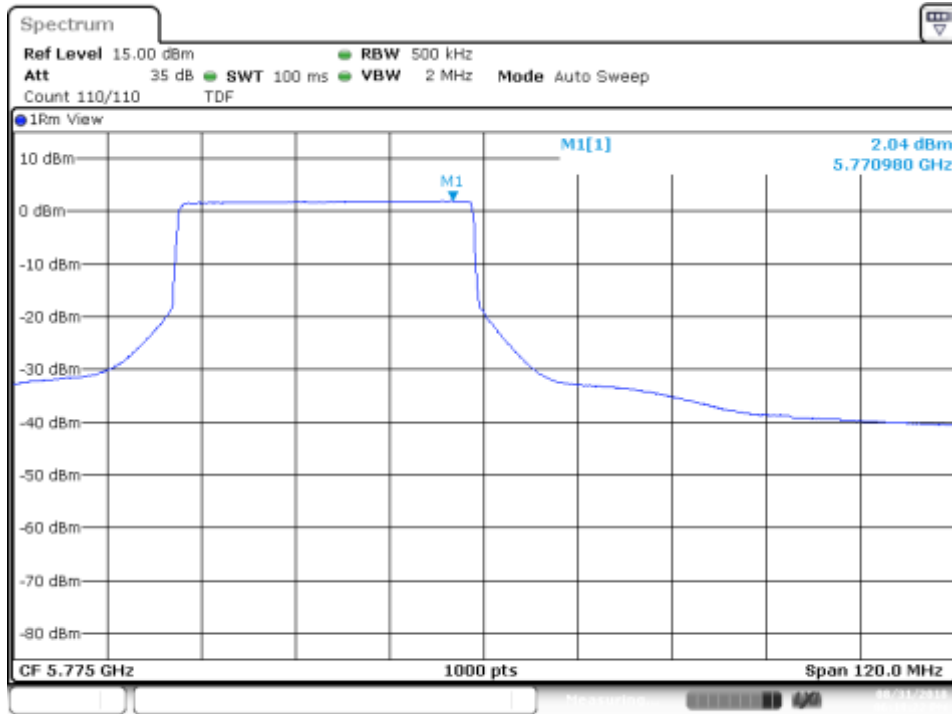
Channel 151F



Date: 5.SEP.2018 17:28:53

# SISO-A, 802.11ax80, HE0, RU 484/65

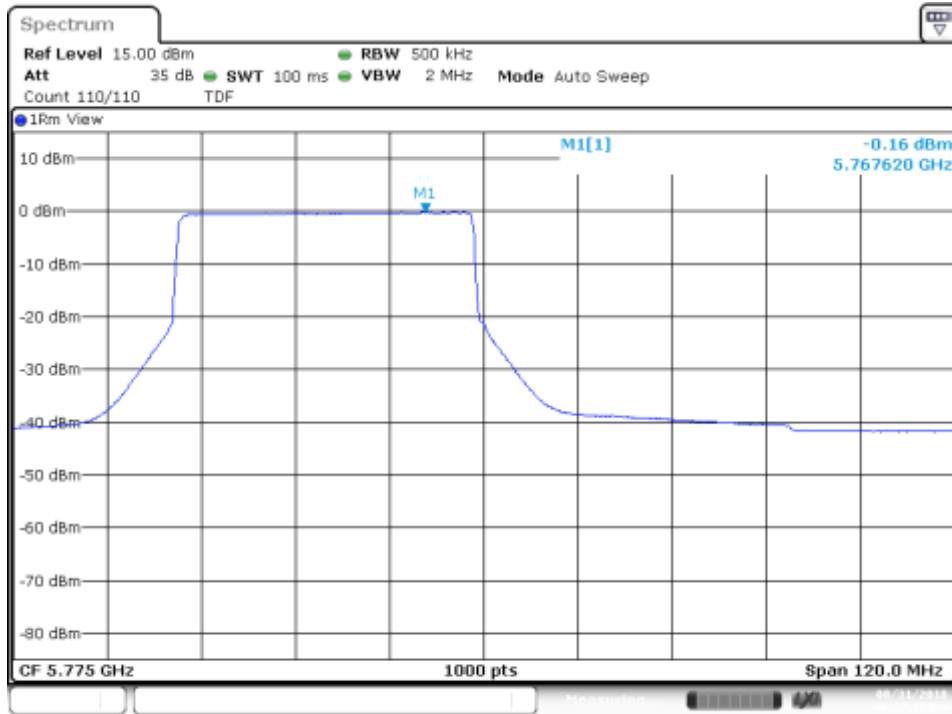
Channel 155ax80



Date: 31.AUG.2018 18:18:22

## MIMO-A, 802.11ax80, HE0, RU 484/65

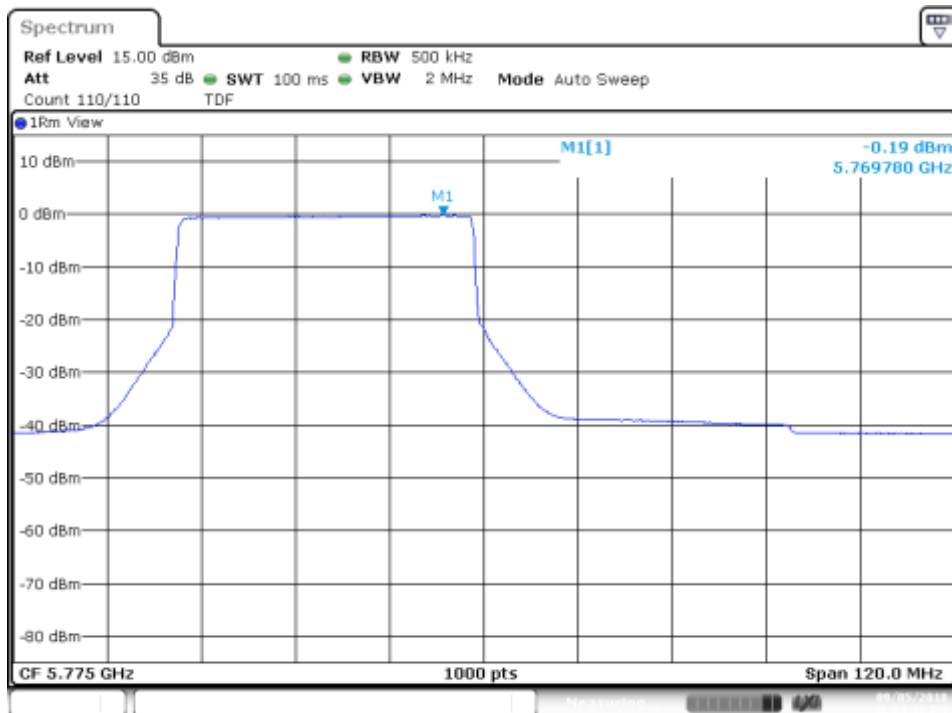
Channel 155ax80



Date: 31.AUG.2018 18:37:18

## MIMO-B, 802.11ax80, HE0, RU 484/65

Channel 155ax80

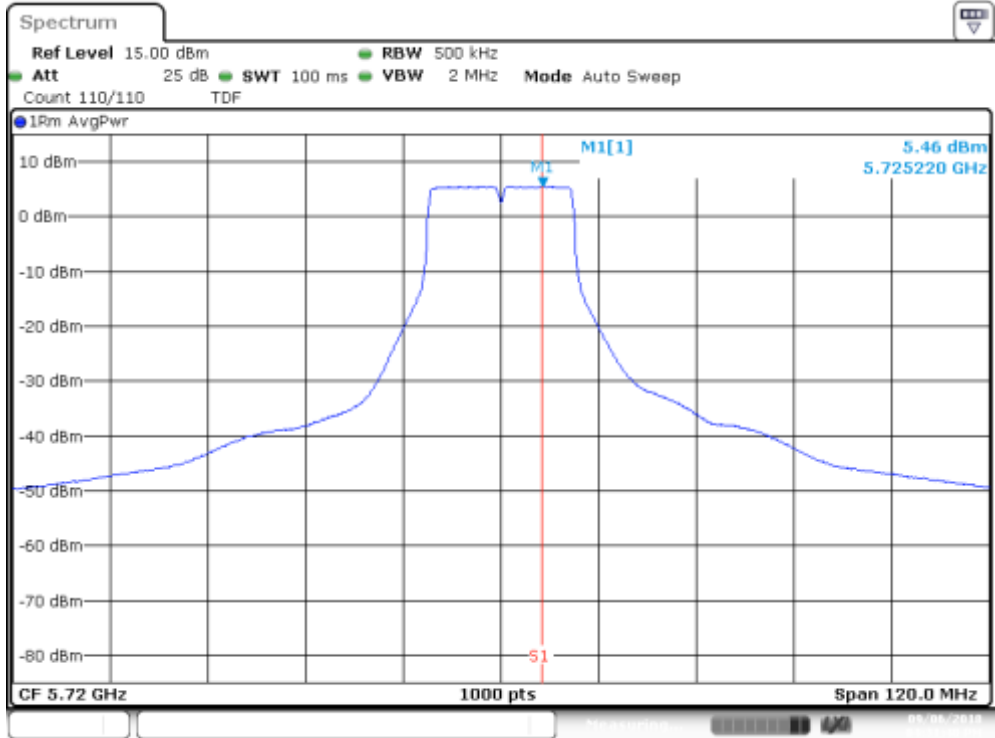


Date: 5.SEP.2018 18:04:09

### B.3.8 Peak power spectral Density (Overlapped Channel)

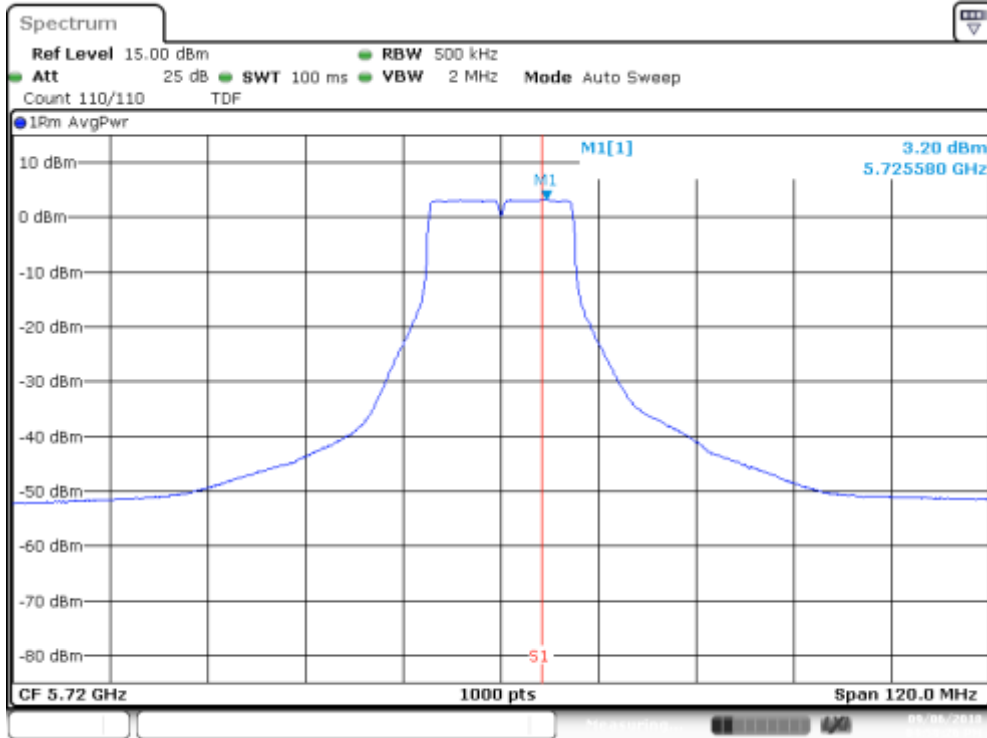
## SISO-A, 802.11n20, HT0

Channel 144 (Overlapped Channel)



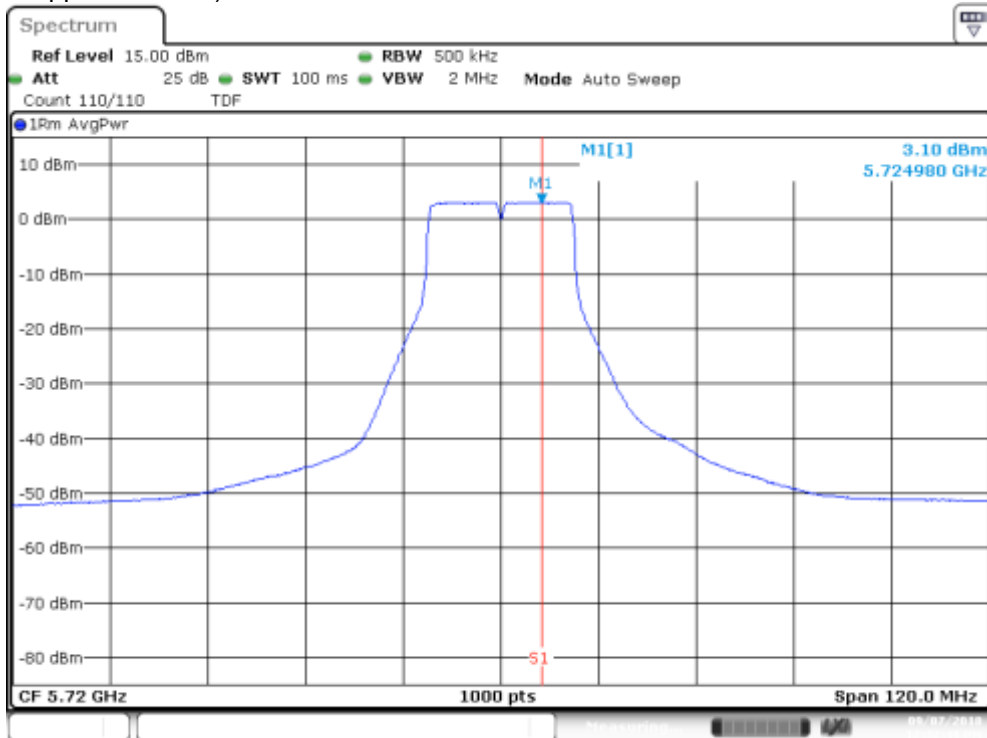
# MIMO-A, 802.11n20, HT8

Channel 144 (Overlapped Channel)



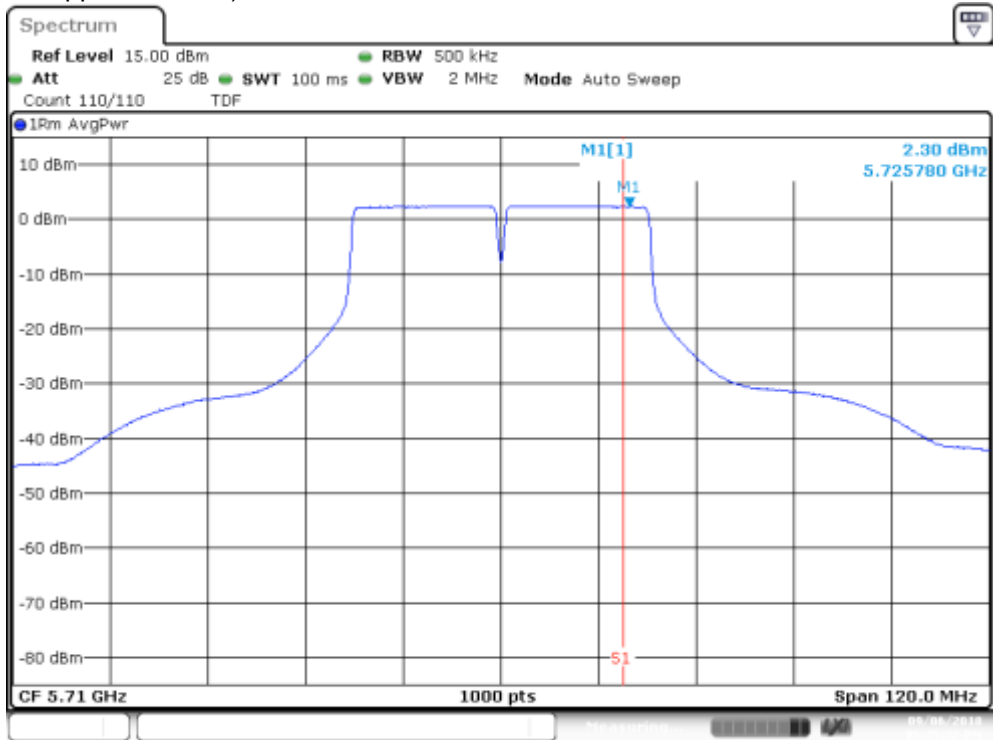
# MIMO-B, 802.11n20, HT8

Channel 144 (Overlapped Channel)



# SISO-A, 802.11n40, HT0

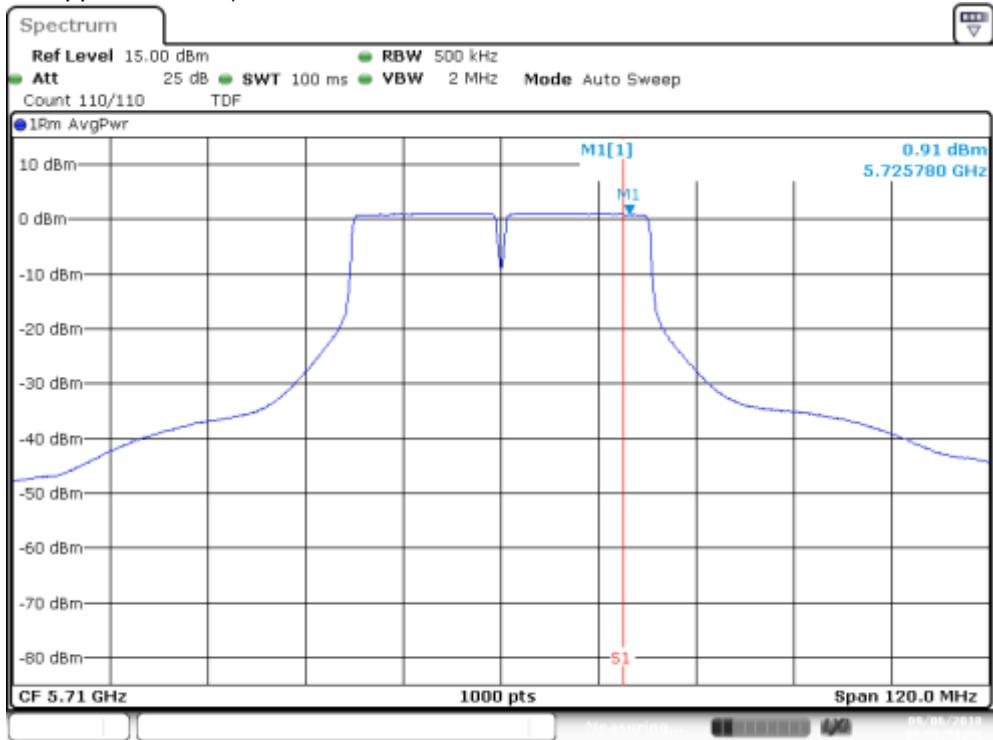
Channel 142F (Overlapped Channel)





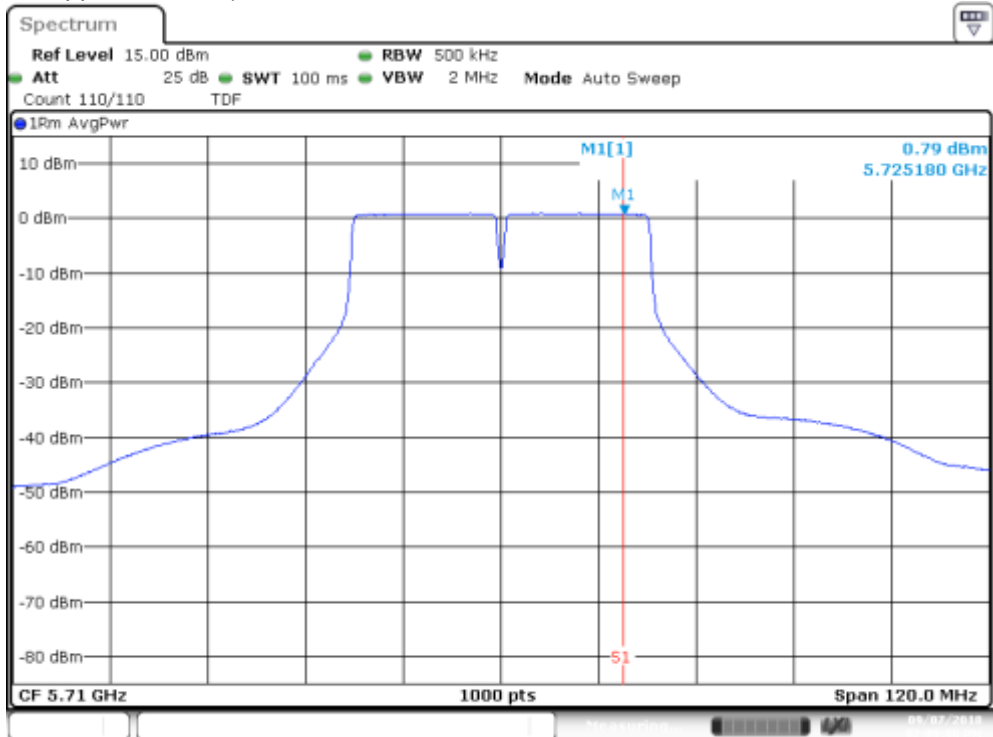
### MIMO-A, 802.11n40, HT8

Channel 142F (Overlapped Channel)



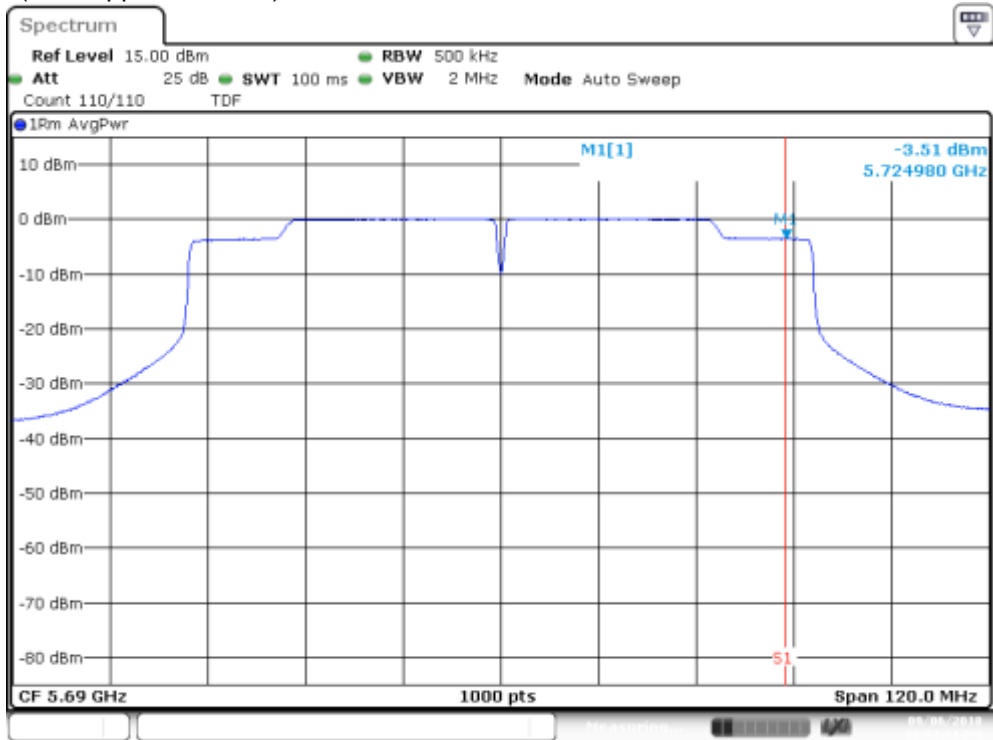
### MIMO-B, 802.11n40, HT8

Channel 142F (Overlapped Channel)



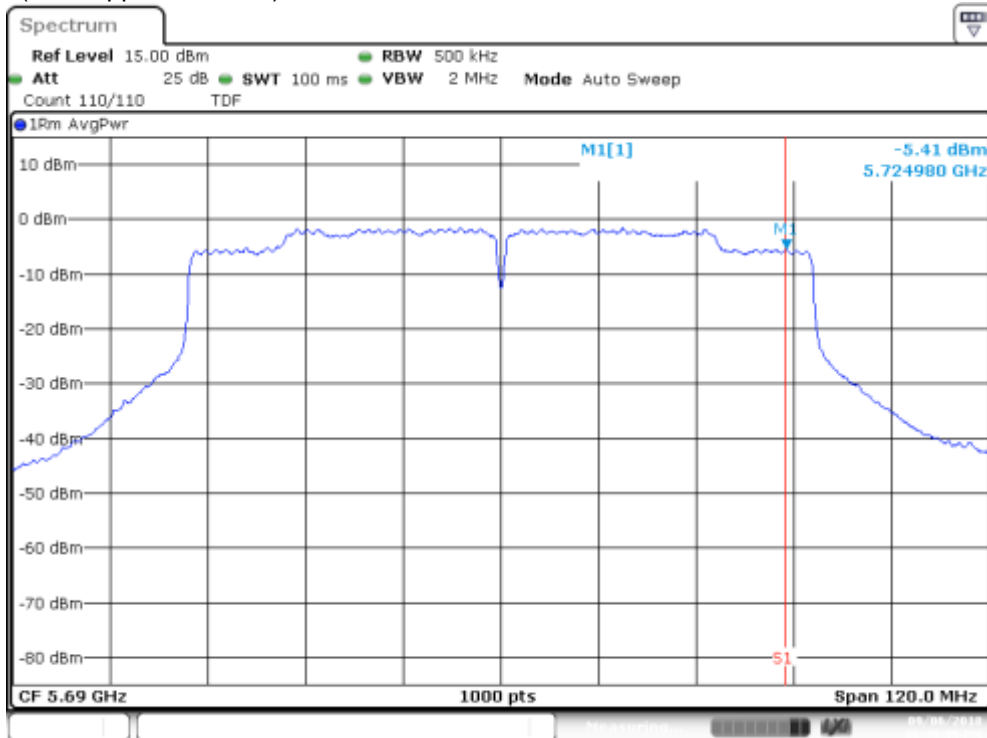
# SISO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



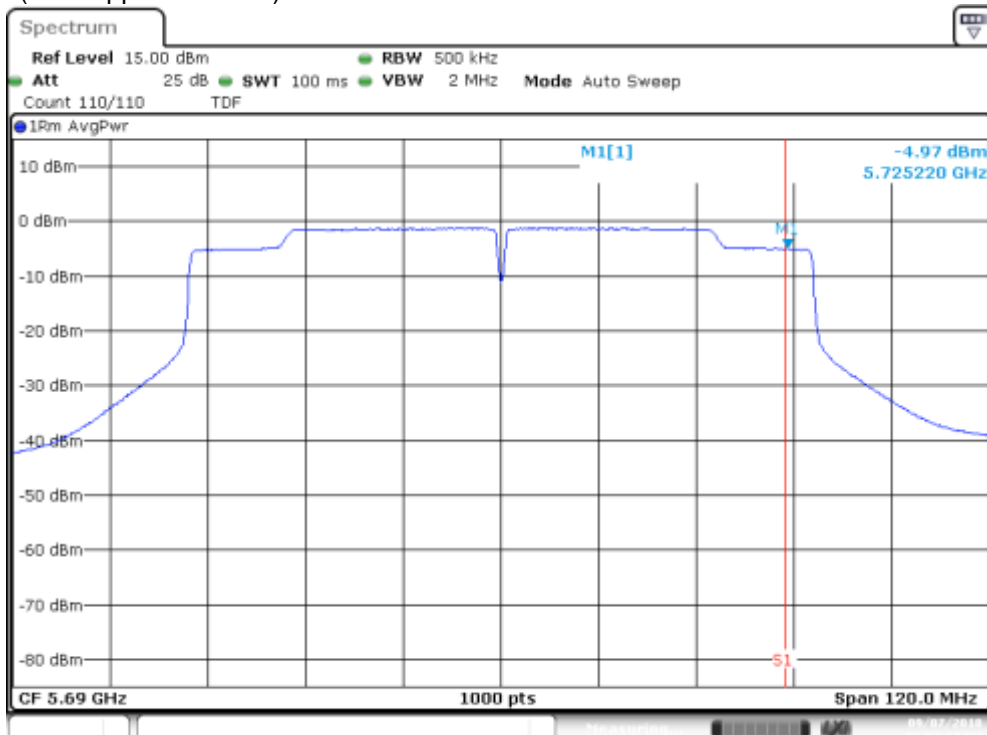
# MIMO-A, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



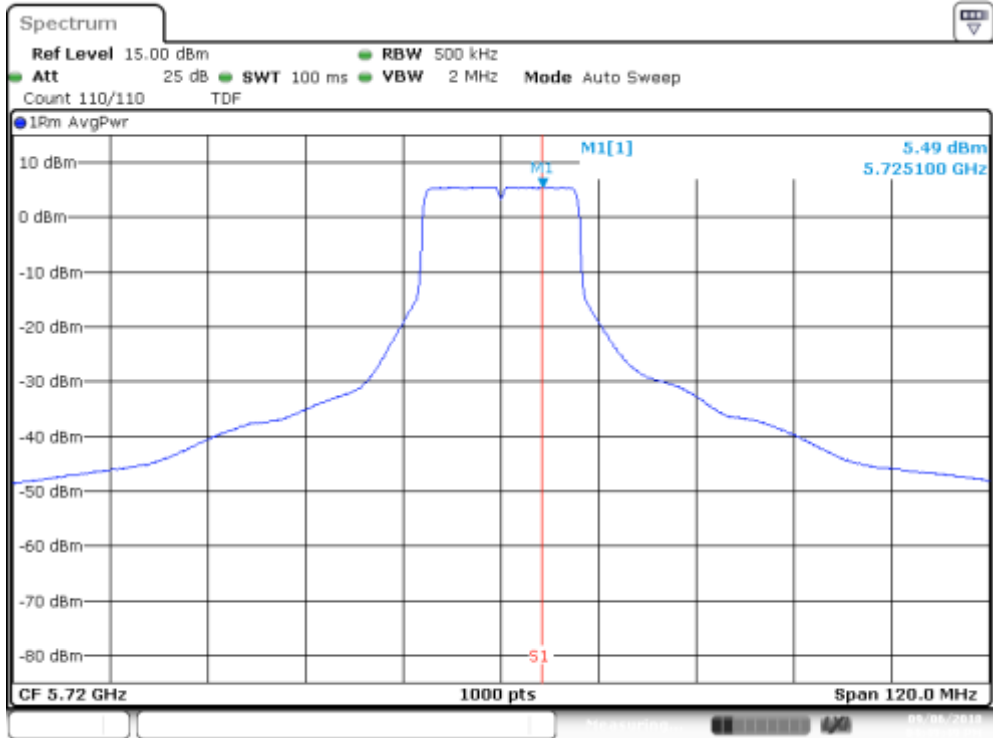
# MIMO-B, 802.11ac80, VHT0

Channel 138ac80 (Overlapped Channel)



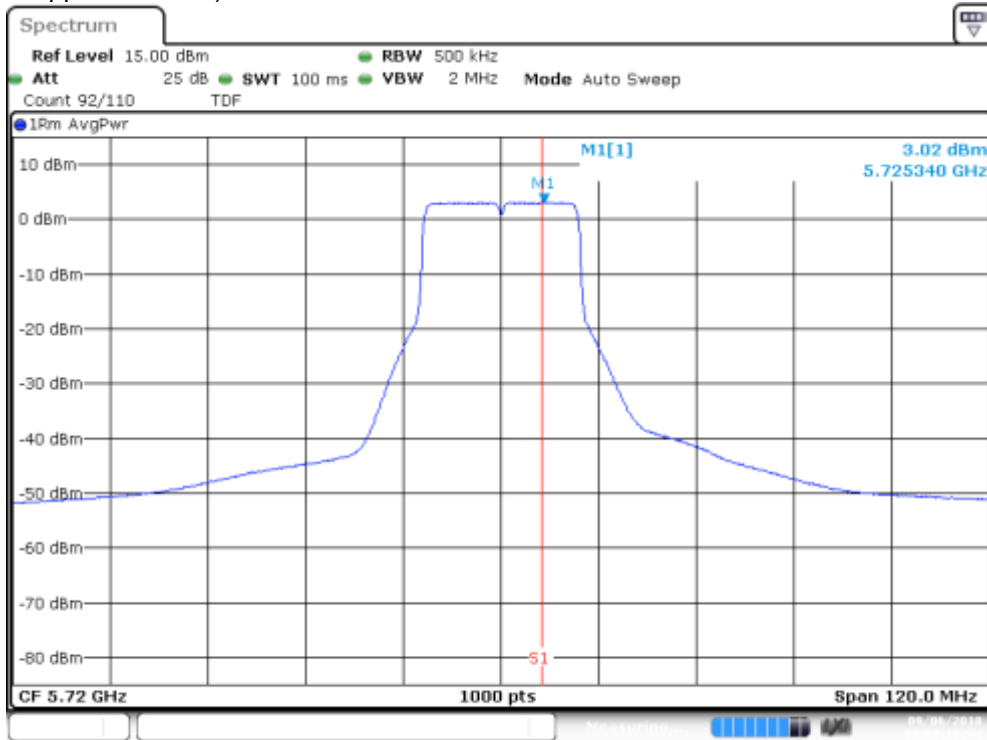
# SISO-A, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



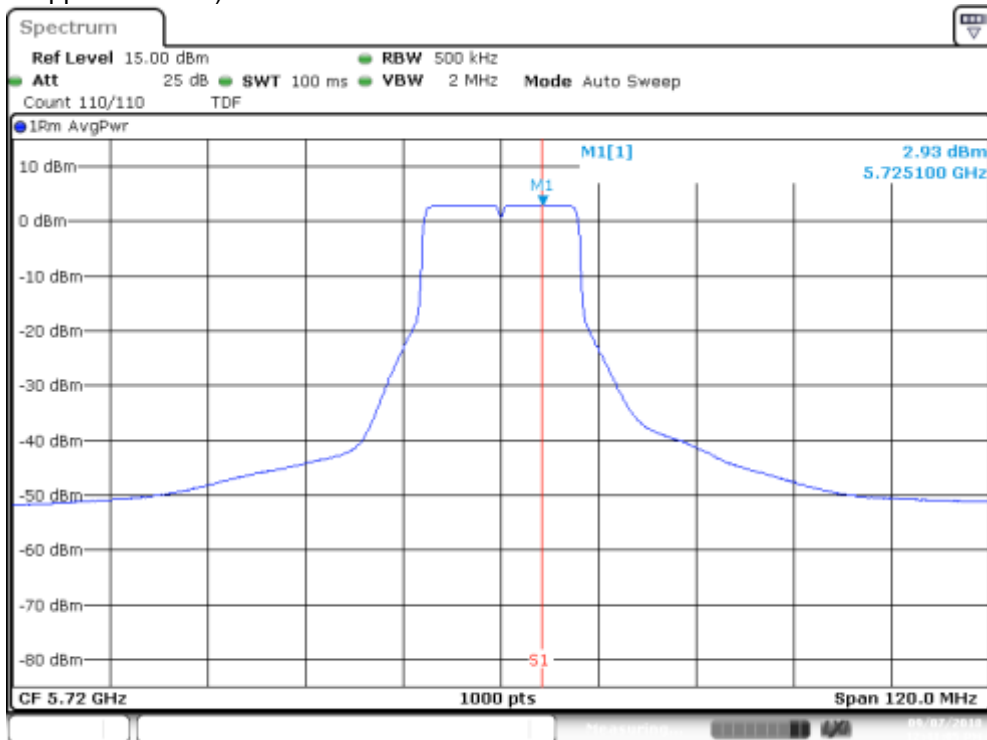
# MIMO-A, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



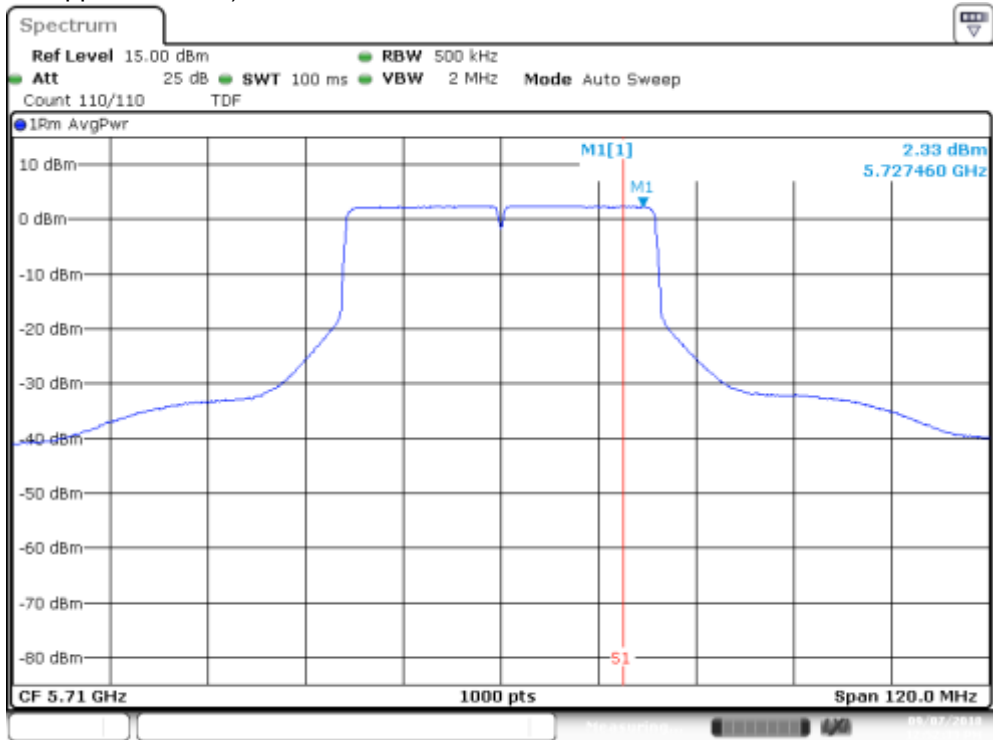
# MIMO-B, 802.11ax20, HE0

Channel 144 (Overlapped Channel)



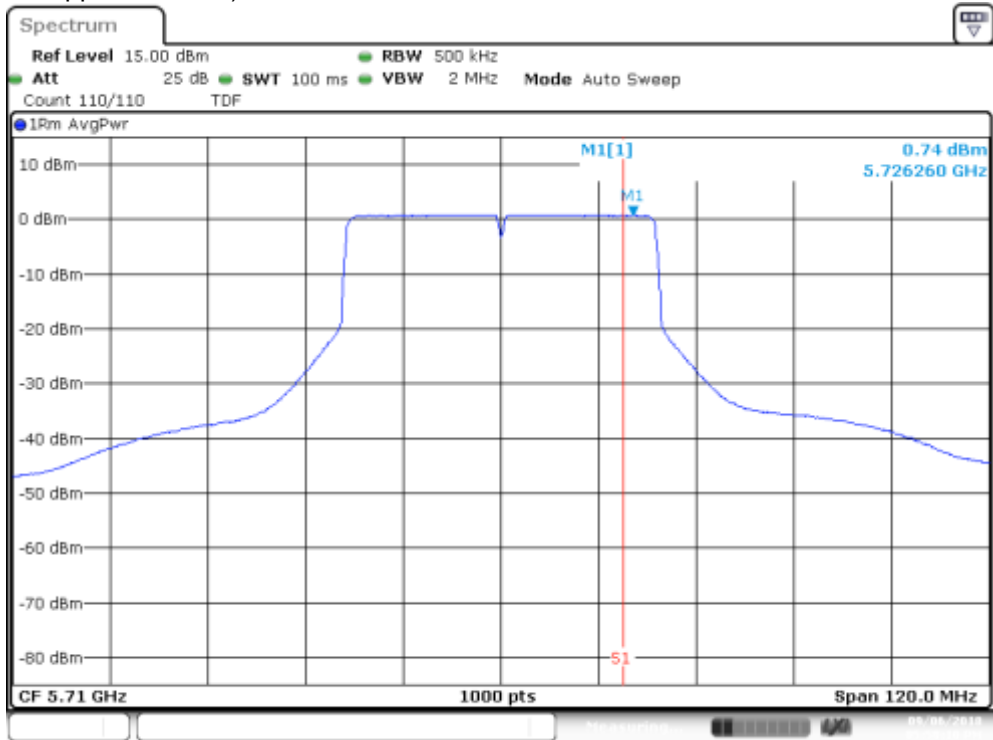
# SISO-B, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



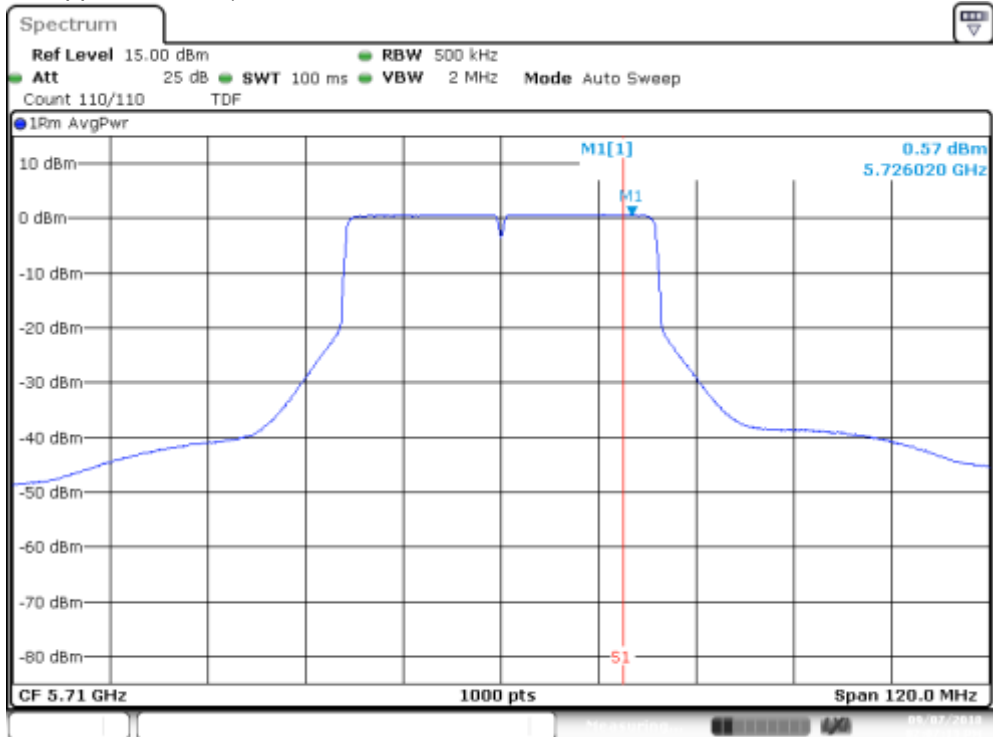
### MIMO-A, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



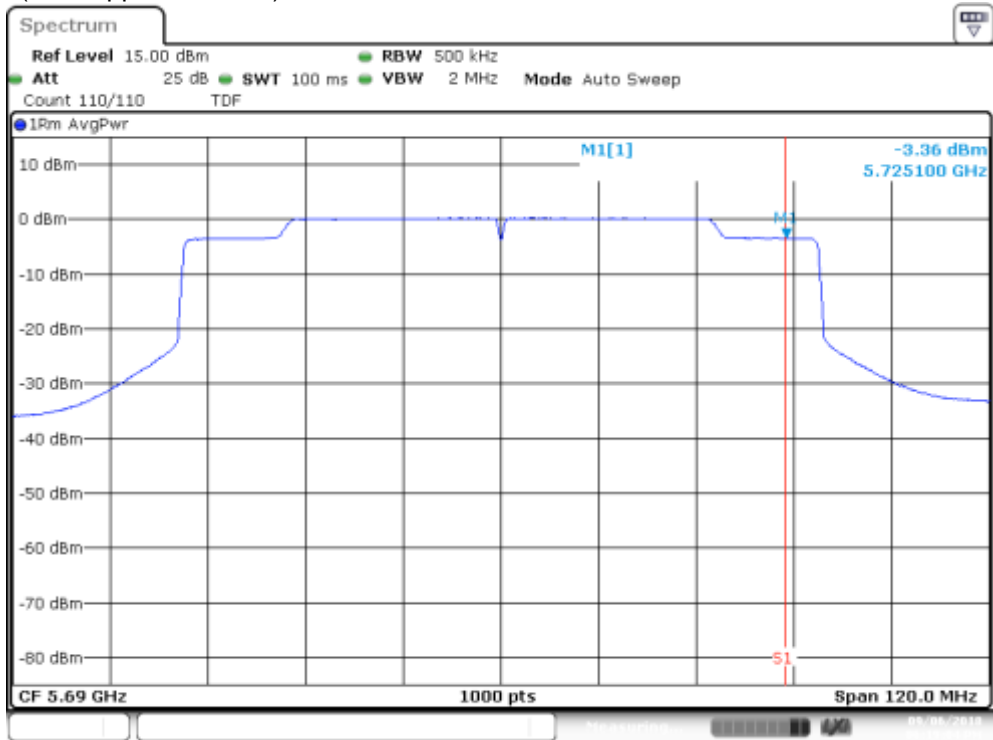
### MIMO-B, 802.11ax40, HE0

Channel 142F (Overlapped Channel)



# SISO-A, 802.11ax80, HE0

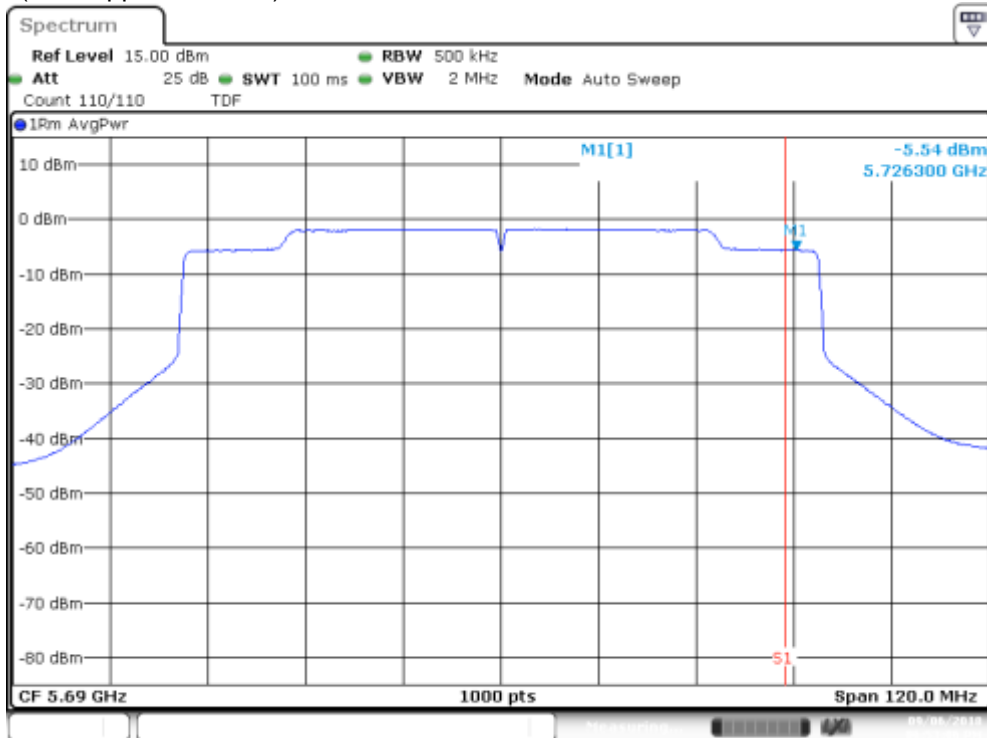
Channel 138ax80 (Overlapped Channel)





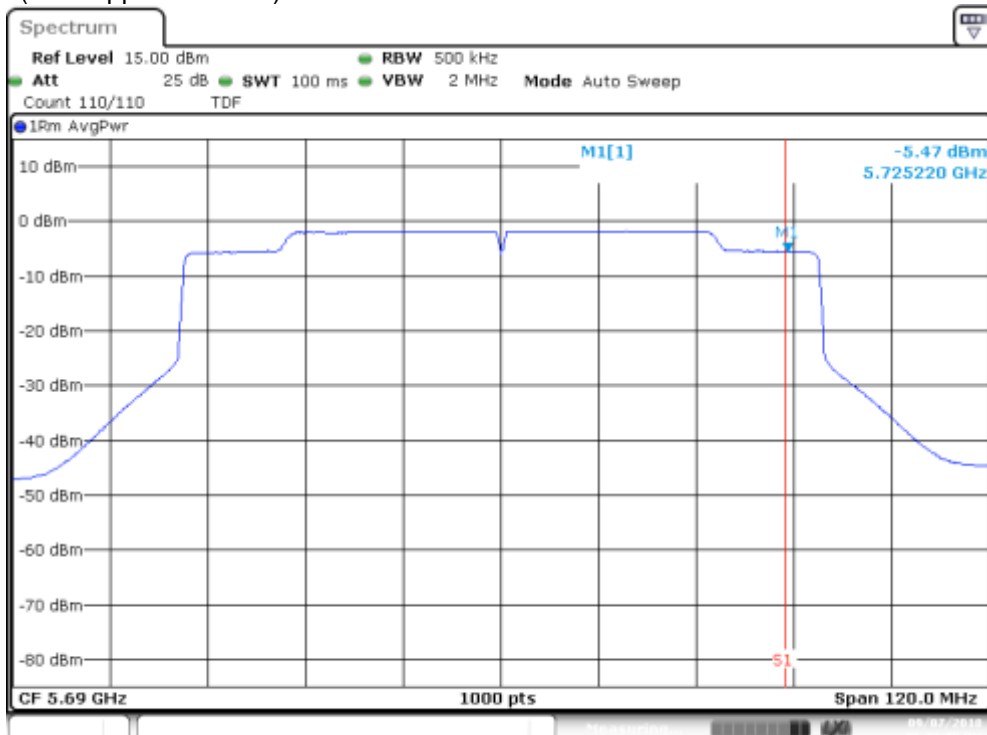
# MIMO-A, 802.11ax80, HE0

Channel 138ax80 (Overlapped Channel)



# MIMO-B, 802.11ax80, HE0

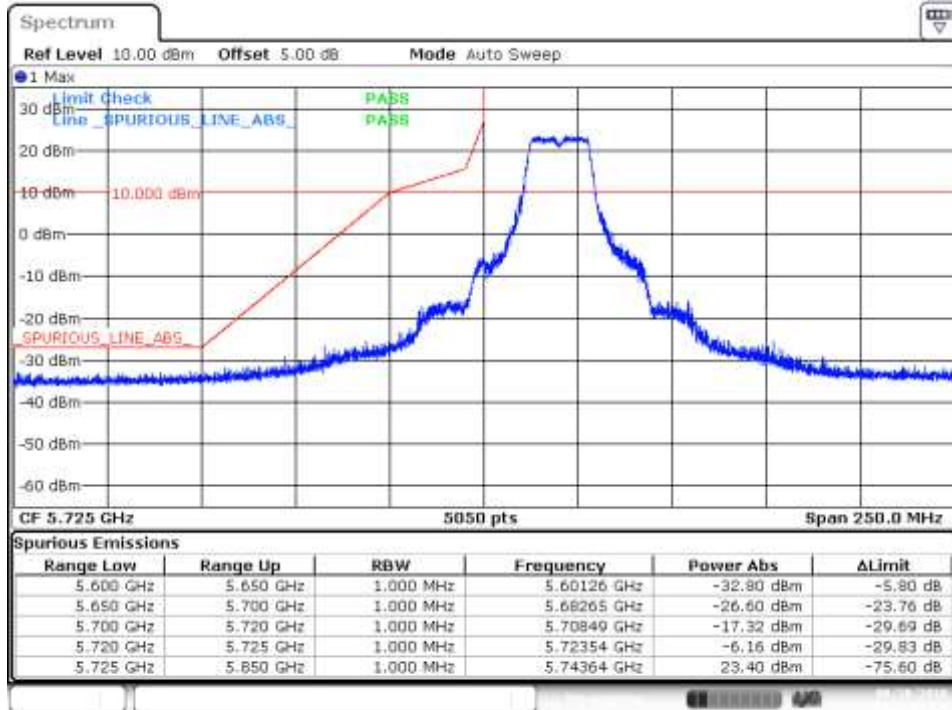
Channel 138ax80 (Overlapped Channel)



**B.3.9 Undesirable emission limits : Band Edge (Conducted)**

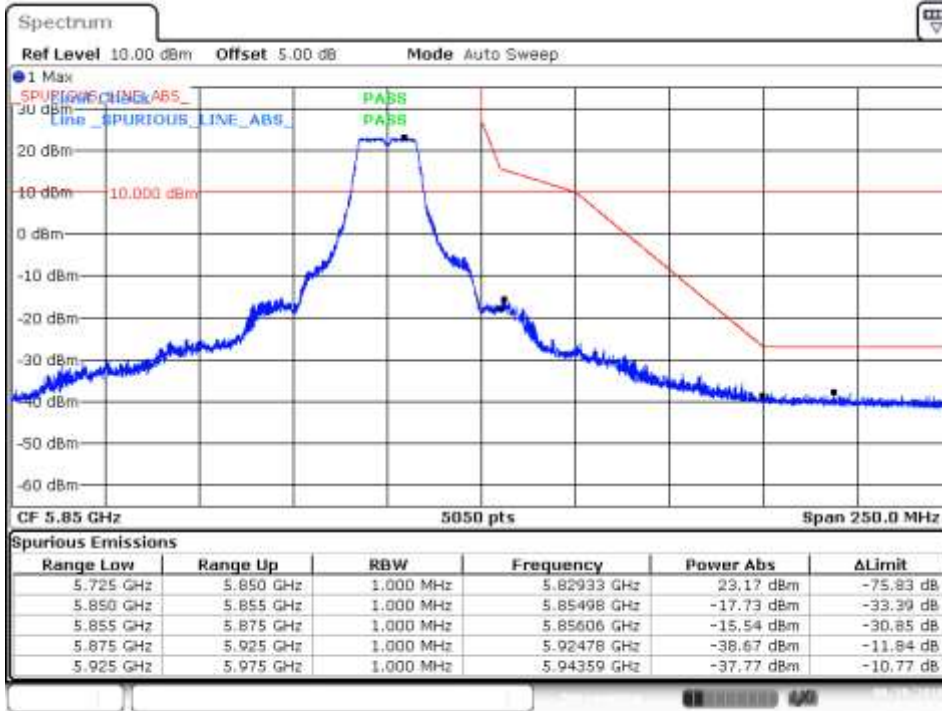
**802.11a, 6Mbps – Chain A**

**BE Low Freq Section, Peak – CH149**



Date: 28.AUG.2018 19:55:33

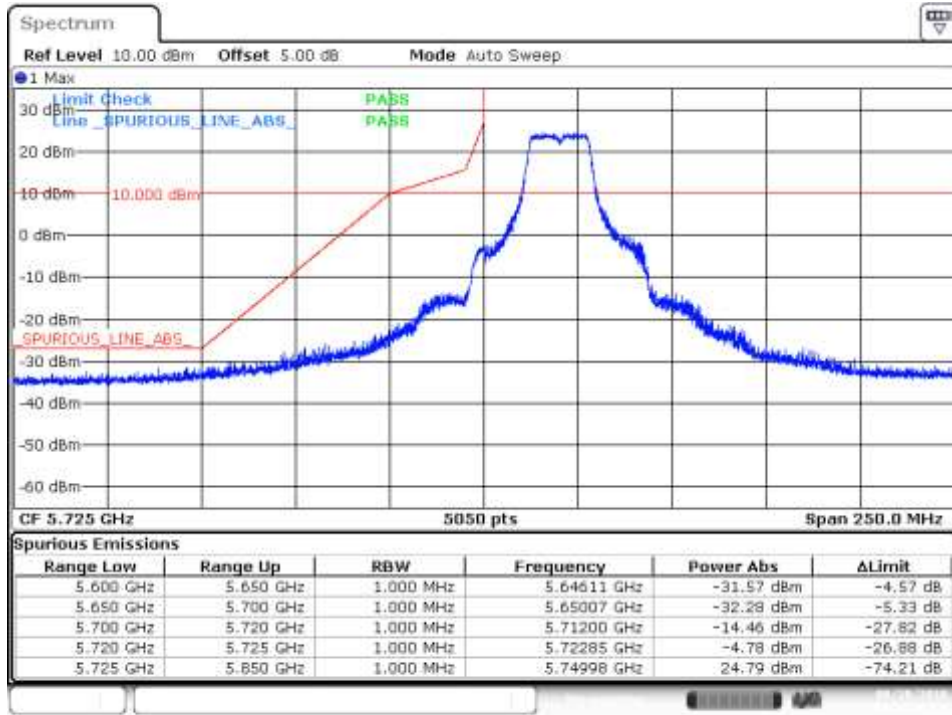
**BE High Freq Section, Peak – CH165**



Date: 29.AUG.2018 11:49:49

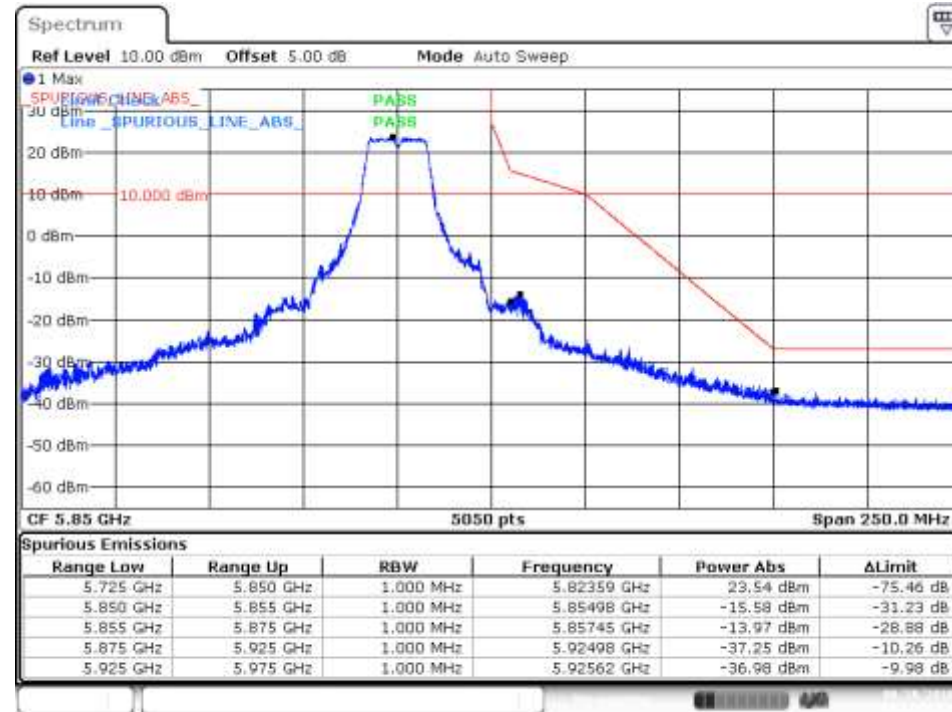
## 802.11a, 6Mbps – Chain B

### BE Low Freq Section, Peak – CH149



Date: 28.AUG.2018 15:58:50

### BE High Freq Section, Peak – CH165



Date: 28.AUG.2018 16:14:34