

4.4. CHANNEL 6: MIDDLE (2437 MHz). Out-of-band spurious emissions in the 1-25 GHz range and inside restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

Chain A

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.38988	PH	Peak	64.77	\pm 4.00
		Average	50.50	\pm 4.00
2.48353	PH	Peak	66.27	\pm 4.00
		Average	53.01	\pm 4.00
4.87425	PV	Peak	42.15	\pm 4.00
7.30408	PV	Peak	42.72	\pm 4.00

Chain B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.38972	PH	Peak	71.93	\pm 4.00
		Average	53.78	\pm 4.00
2.48353	PH	Peak	67.85	\pm 4.00
		Average	53.91	\pm 4.00
2.59500	PH	Peak	50.53	\pm 4.00
4.87664	PV	Peak	55.61	\pm 4.00
		Average	46.32	\pm 4.00

Chain A+B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.38988	PH	Peak	62.51	\pm 4.00
		Average	48.65	\pm 4.00
2.48369	PH	Peak	65.72	\pm 4.00
		Average	50.42	\pm 4.00
4.87181	PH	Peak	52.60	\pm 4.00

4.5. CHANNEL 7 (2442 MHz). Spurious emissions in restricted band 2.4835-2.5 GHz.

Chain A

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48377	PH	Peak	58.65	\pm 4.00
		Average	47.69	\pm 4.00

Chain B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48369	PH	Peak	58.73	\pm 4.00
		Average	46.79	\pm 4.00

Chain A+B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48357	PH	Peak	65.71	\pm 4.00
		Average	51.75	\pm 4.00

4.6. CHANNEL 8 (2447 MHz). Spurious emissions in restricted band 2.4835-2.5 GHz.

Chain A

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48354	PH	Peak	56.76	\pm 4.00
		Average	45.33	\pm 4.00

Chain B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48353	PH	Peak	59.56	\pm 4.00
		Average	47.15	\pm 4.00

Chain A+B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48422	PH	Peak	65.88	\pm 4.00
		Average	51.75	\pm 4.00

4.7. CHANNEL 9 (2452 MHz). Spurious emissions in restricted band 2.4835-2.5 GHz.

Chain A

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48351	PH	Peak	56.40	\pm 4.00
		Average	45.03	\pm 4.00

Chain B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48354	PH	Peak	59.63	\pm 4.00
		Average	47.41	\pm 4.00

Chain A+B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.48351	PH	Peak	59.97	\pm 4.00
		Average	46.87	\pm 4.00

4.8. CHANNEL 10F: (2457 MHz). Out-of-band spurious emissions in the 1-25 GHz range and inside restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz. For information purposes only.

Chain A

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.37884	PH	Peak	45.16	\pm 4.00
2.48351	PH	Peak	54.36	\pm 4.00
		Average	41.75	\pm 4.00

Chain B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.38932	PH	Peak	48.14	± 4.00
2.48353	PH	Peak	58.37	± 4.00
		Average	47.18	± 4.00

Chain A+B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.38972	PH	Peak	46.08	± 4.00
2.48353	PH	Peak	58.37	± 4.00
		Average	47.18	± 4.00
4.91342	PV	Peak	36.70	± 4.00

4.9. CHANNEL 11F: (2462 MHz). Spurious emissions inside restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz. For information purposes only.

Chain A

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.37932	PH	Peak	45.08	± 4.00
2.48366	PH	Peak	60.11	± 4.00
		Average	45.04	± 4.00

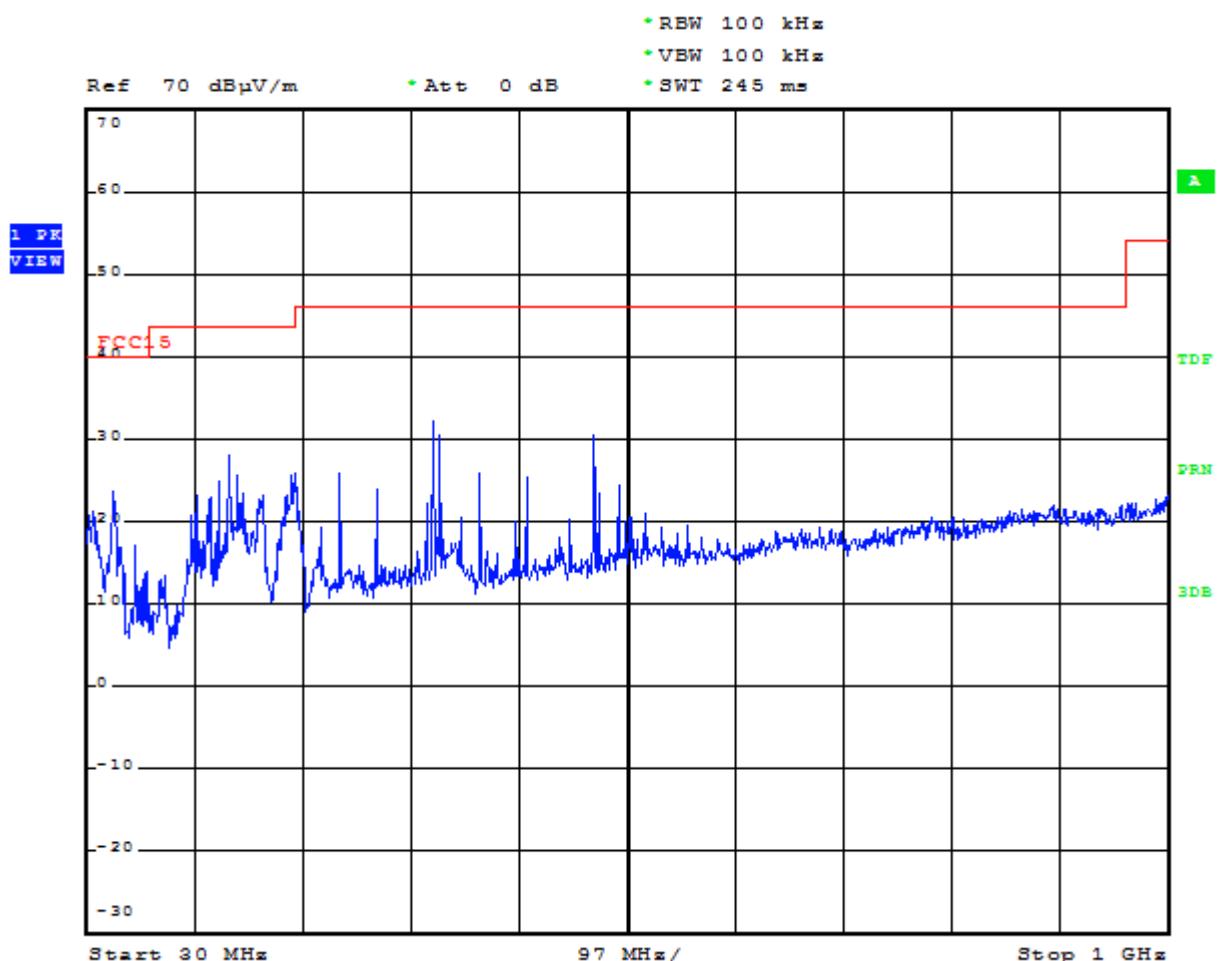
Chain B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.38465	PH	Peak	45.12	± 4.00
2.48369	PH	Peak	60.05	± 4.00
		Average	46.91	± 4.00

Chain A+B

Spurious frequency (GHz)	Polarization	Detector	Emission Level (dB μ V/m)	Measurement Uncertainty (dB)
2.38924	PH	Peak	45.61	± 4.00
2.48353	PH	Peak	60.63	± 4.00
		Average	47.40	± 4.00

FREQUENCY RANGE 30 MHz-1000 MHz.

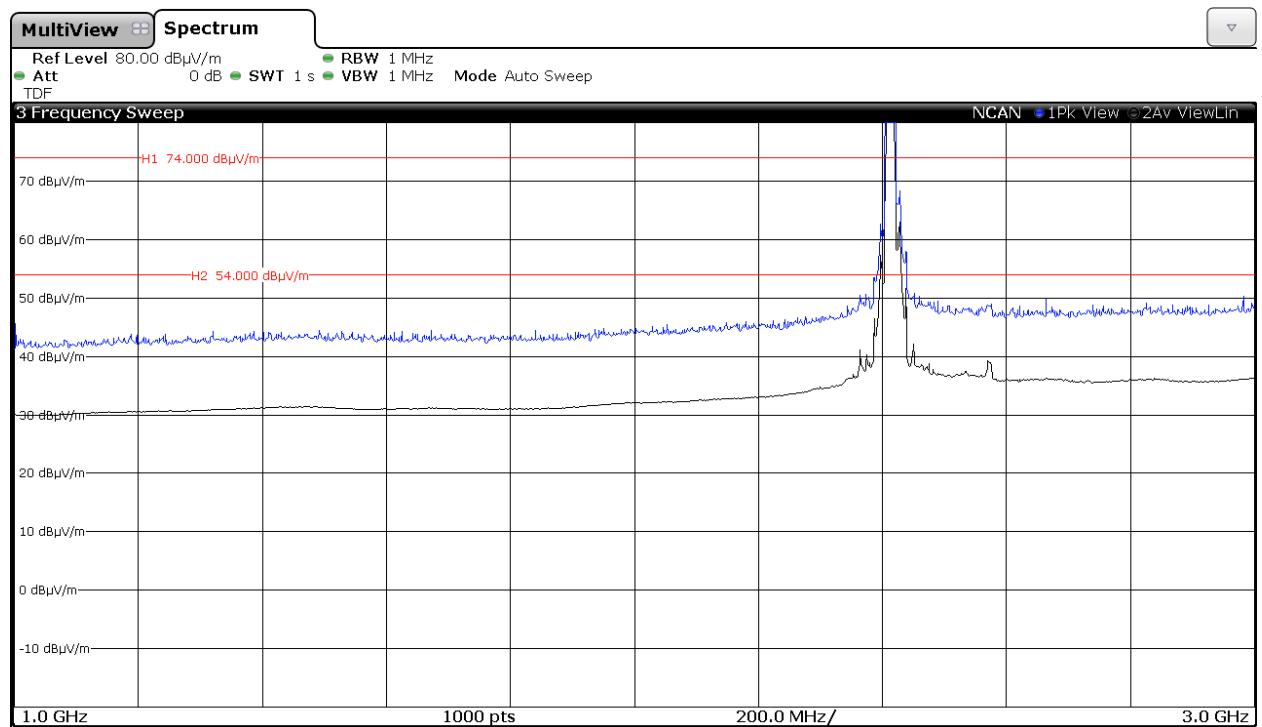


(This plot is valid for all three channels and all modulation modes).

FREQUENCY RANGE 1 GHz to 3 GHz.

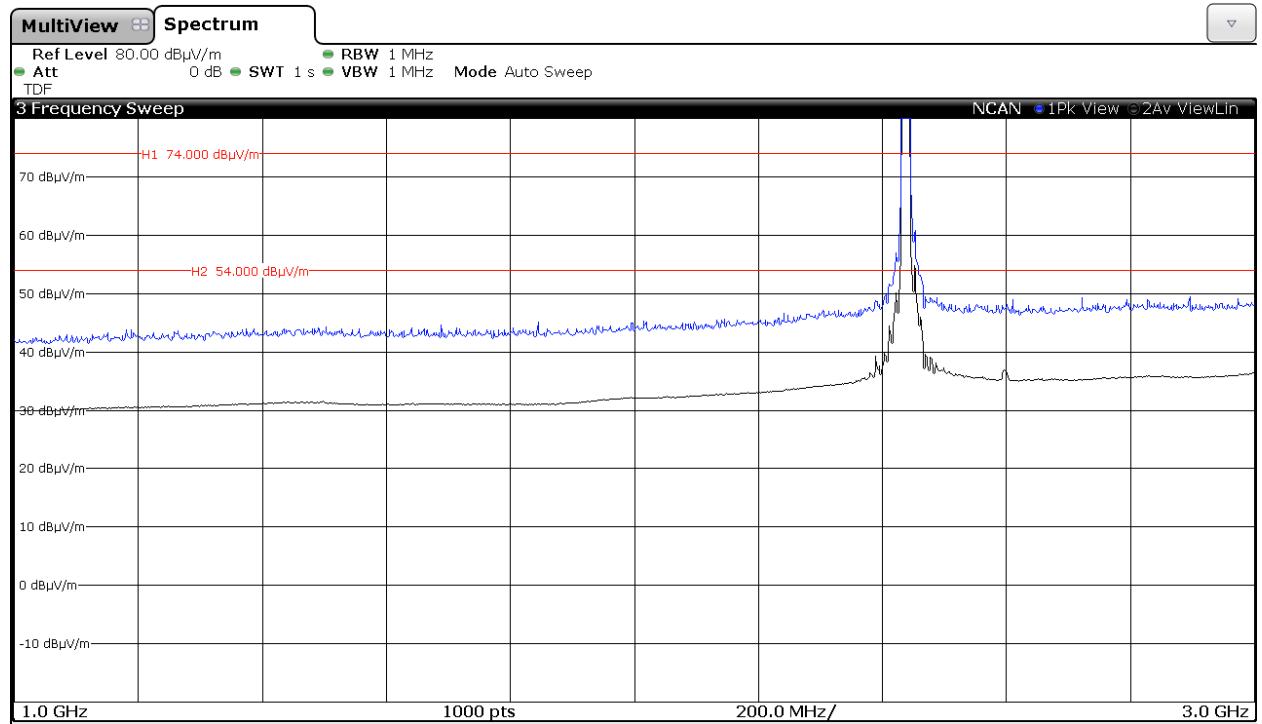
1. WiFi 2.4GHz 802.11 b mode

CHANNEL 1 (2412 MHz).



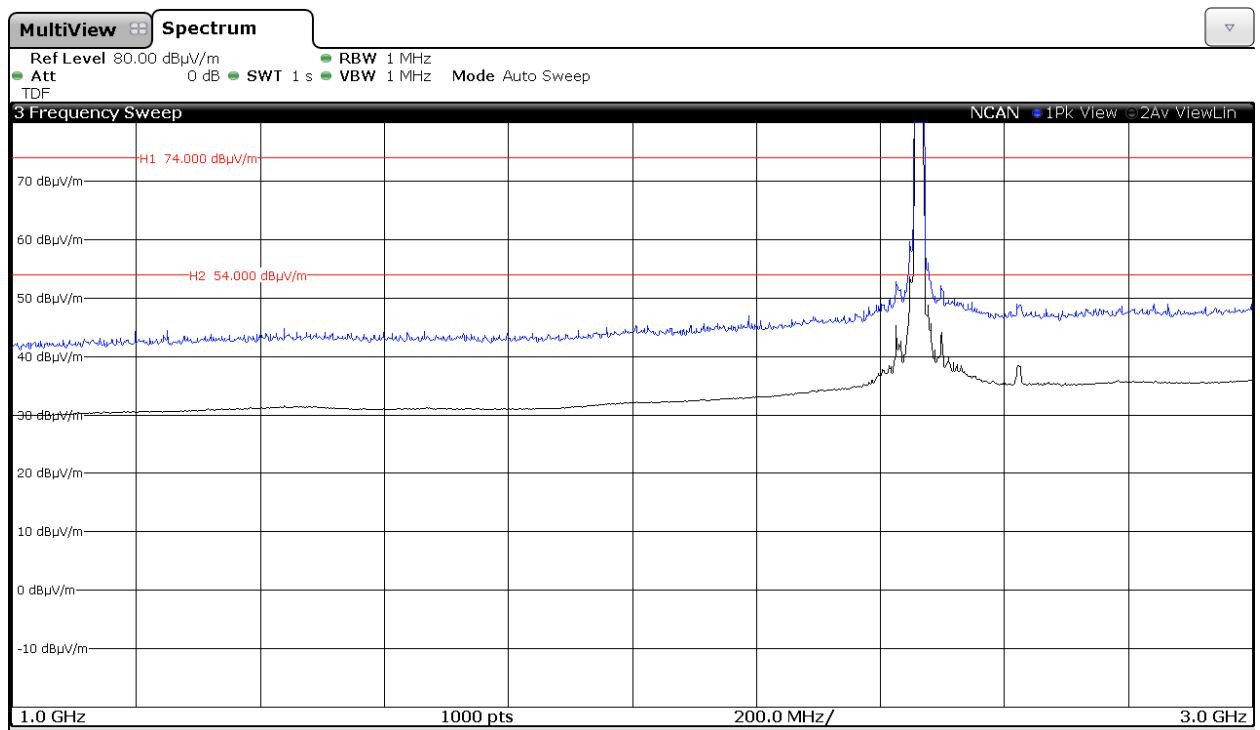
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

CHANNEL 6 (2437 MHz).



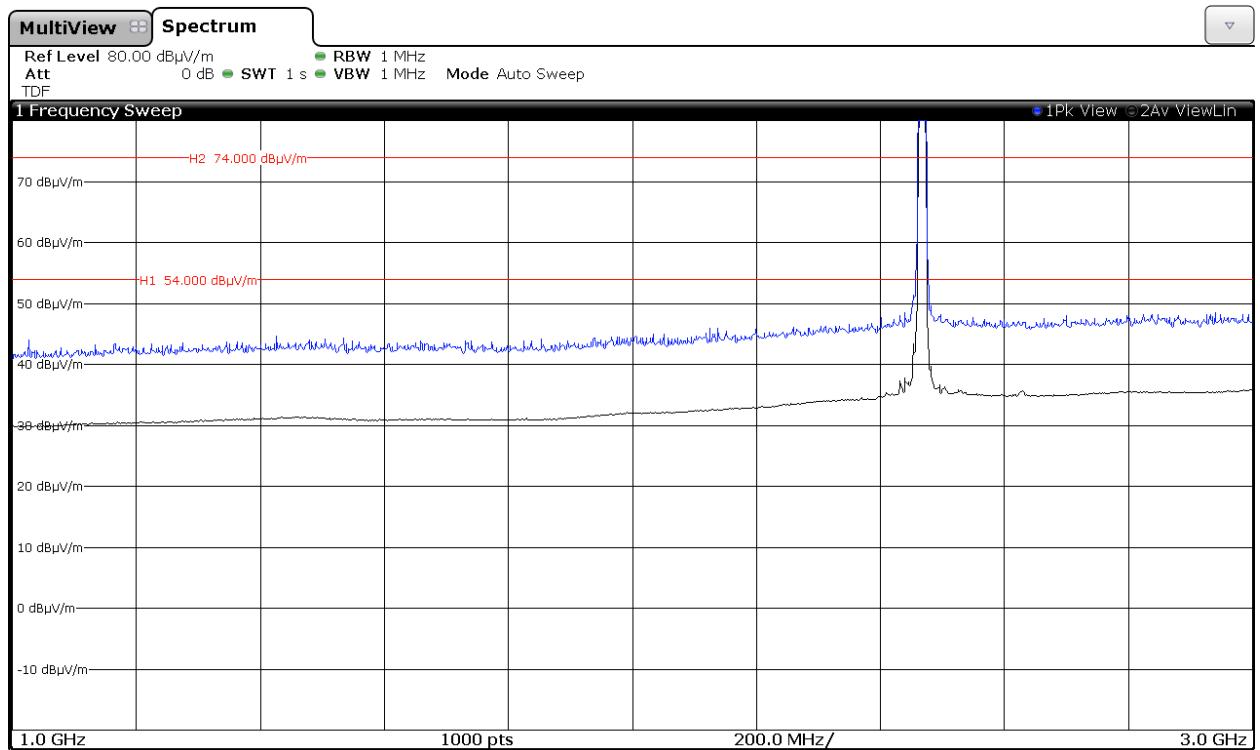
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

CHANNEL 11 (2462 MHz).



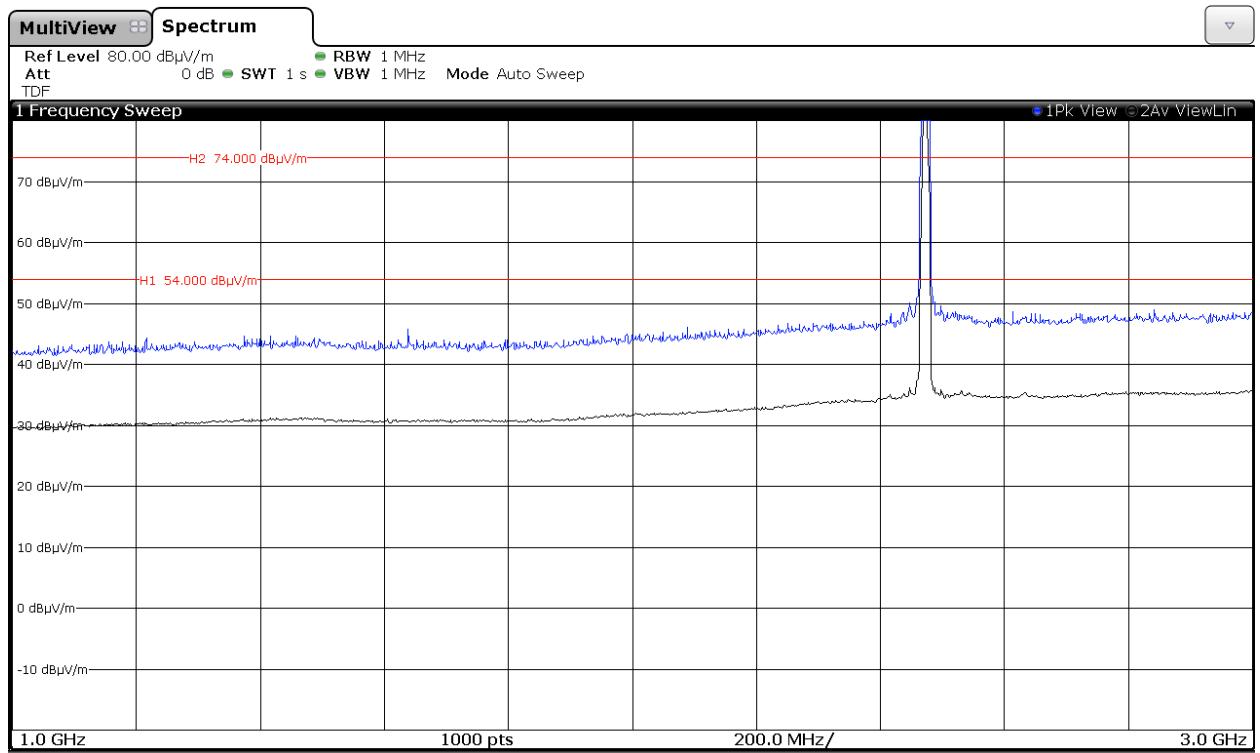
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

CHANNEL 12 (2467 MHz).



Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

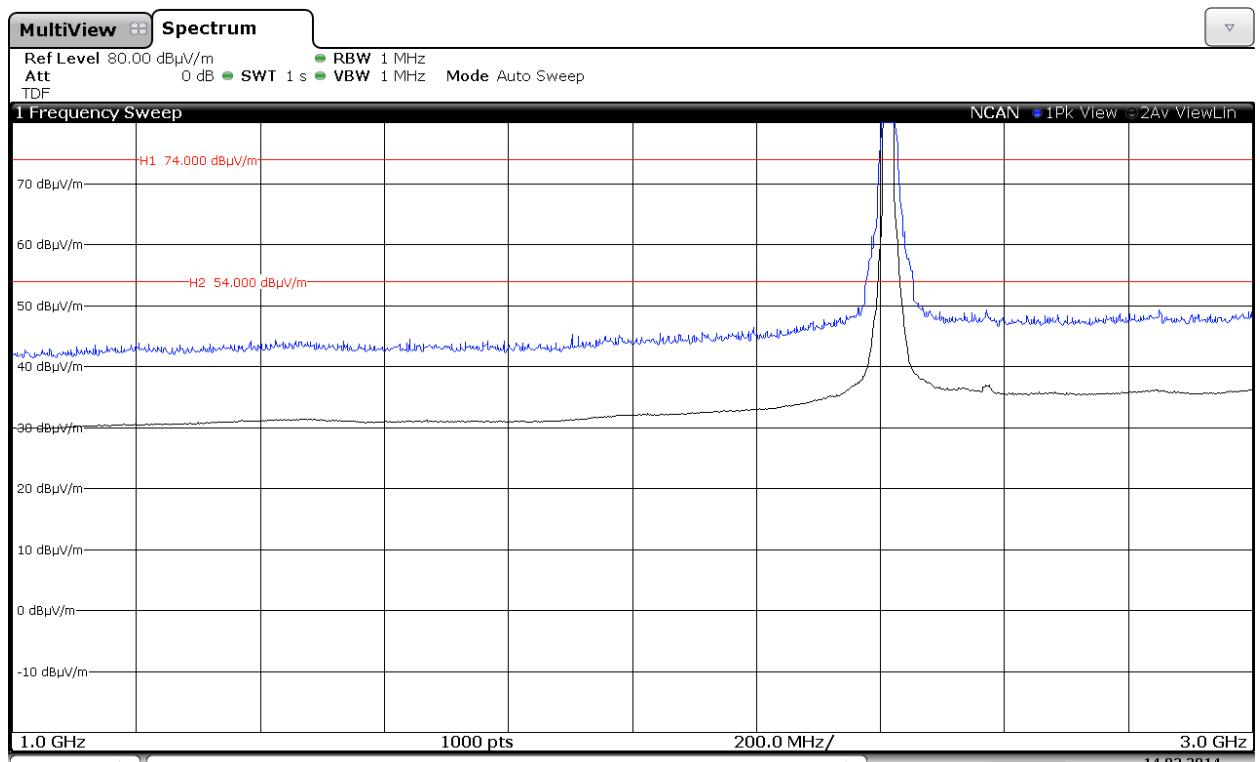
CHANNEL 13 (2472 MHz).



Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

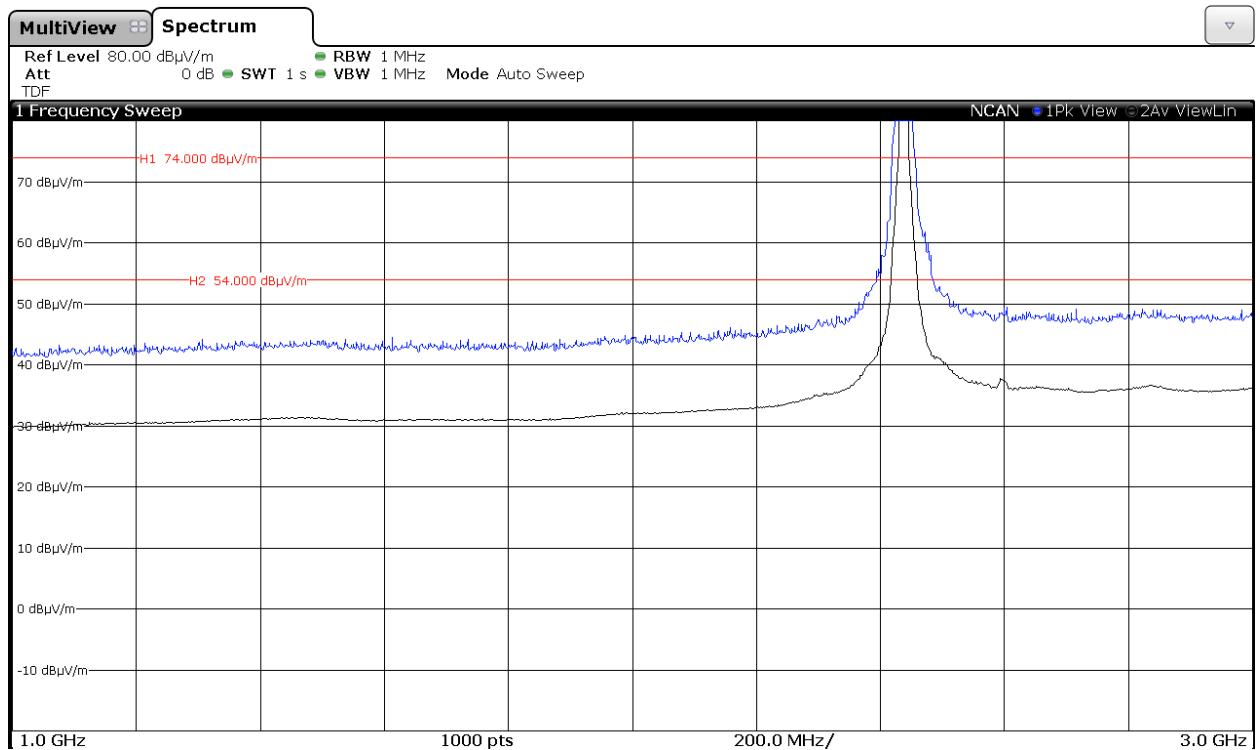
2. WiFi 2.4GHz 802.11 g mode (worst case)

CHANNEL 1 (2412 MHz).



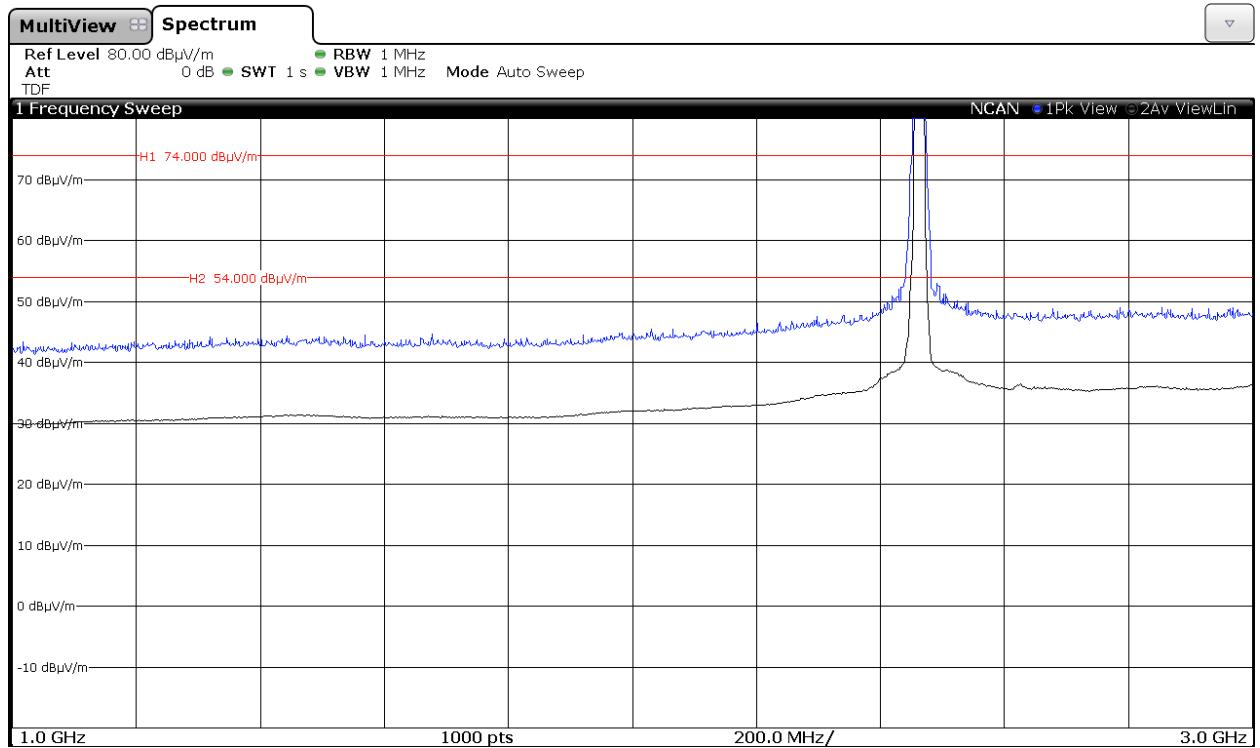
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

CHANNEL 6 (2437 MHz).



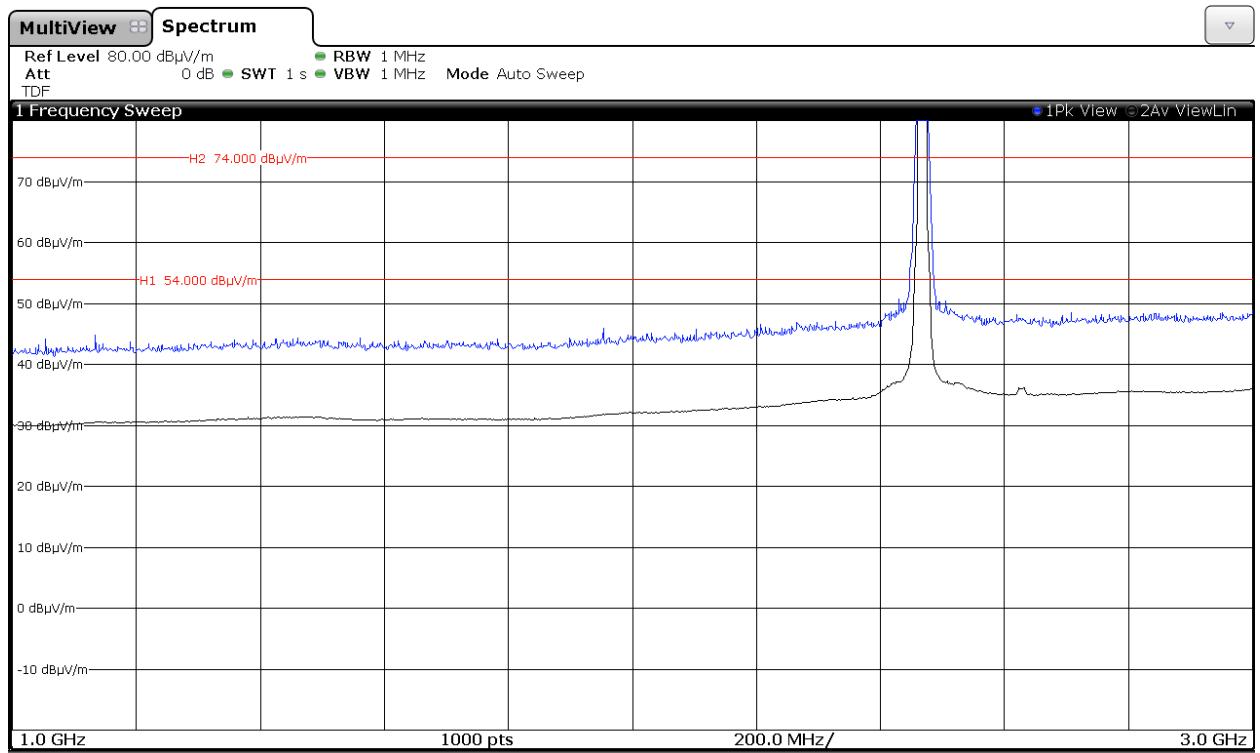
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

CHANNEL 11 (2462 MHz).



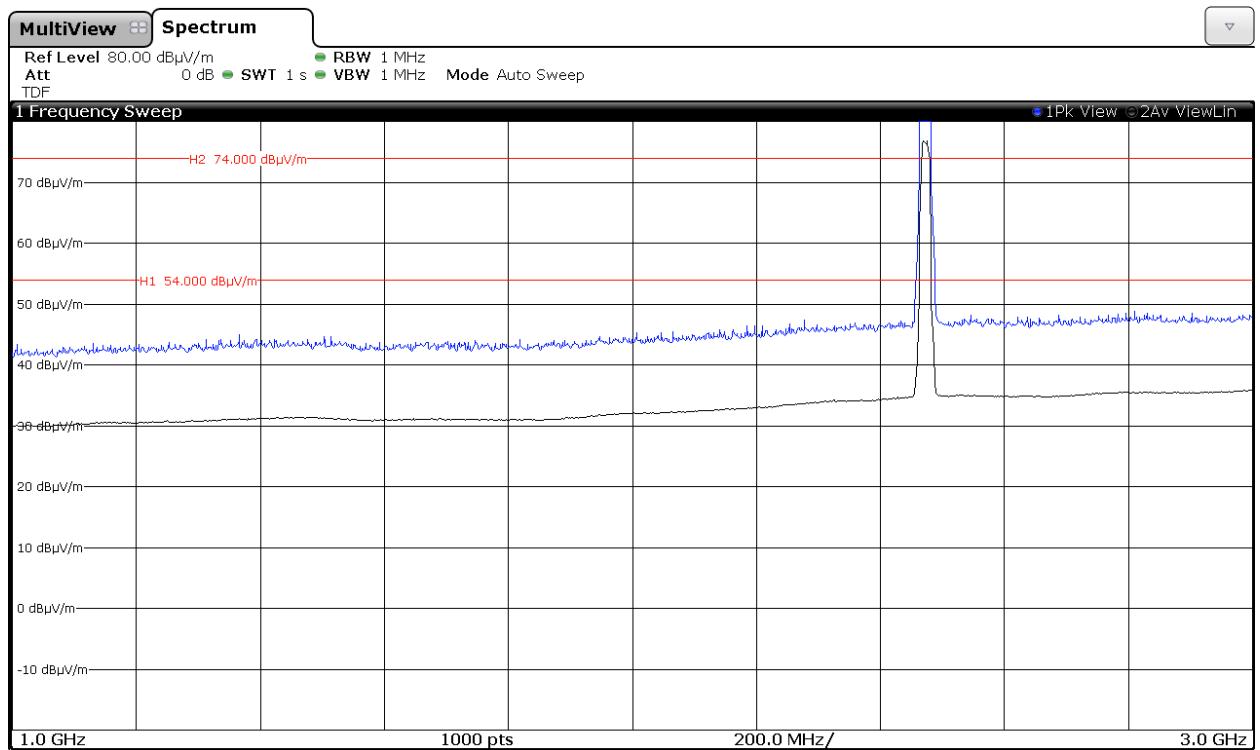
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

CHANNEL 12 (2467 MHz).



Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

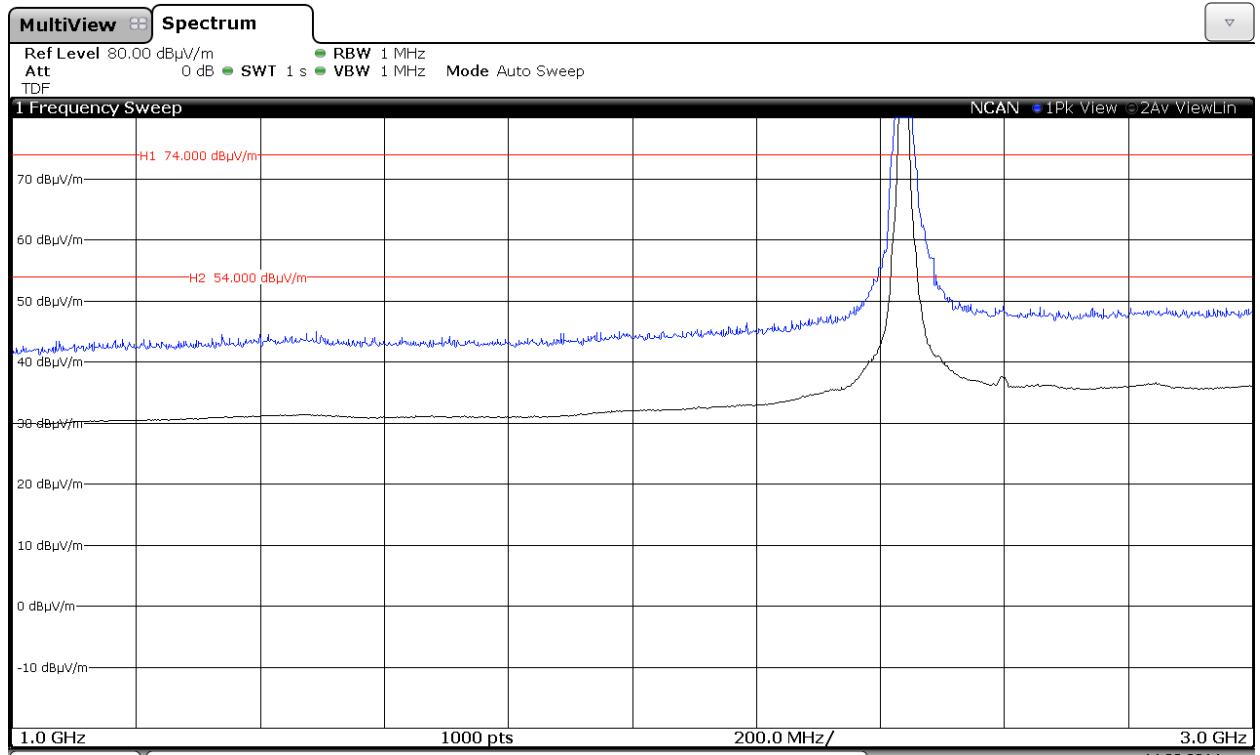
CHANNEL 13 (2472 MHz).



Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

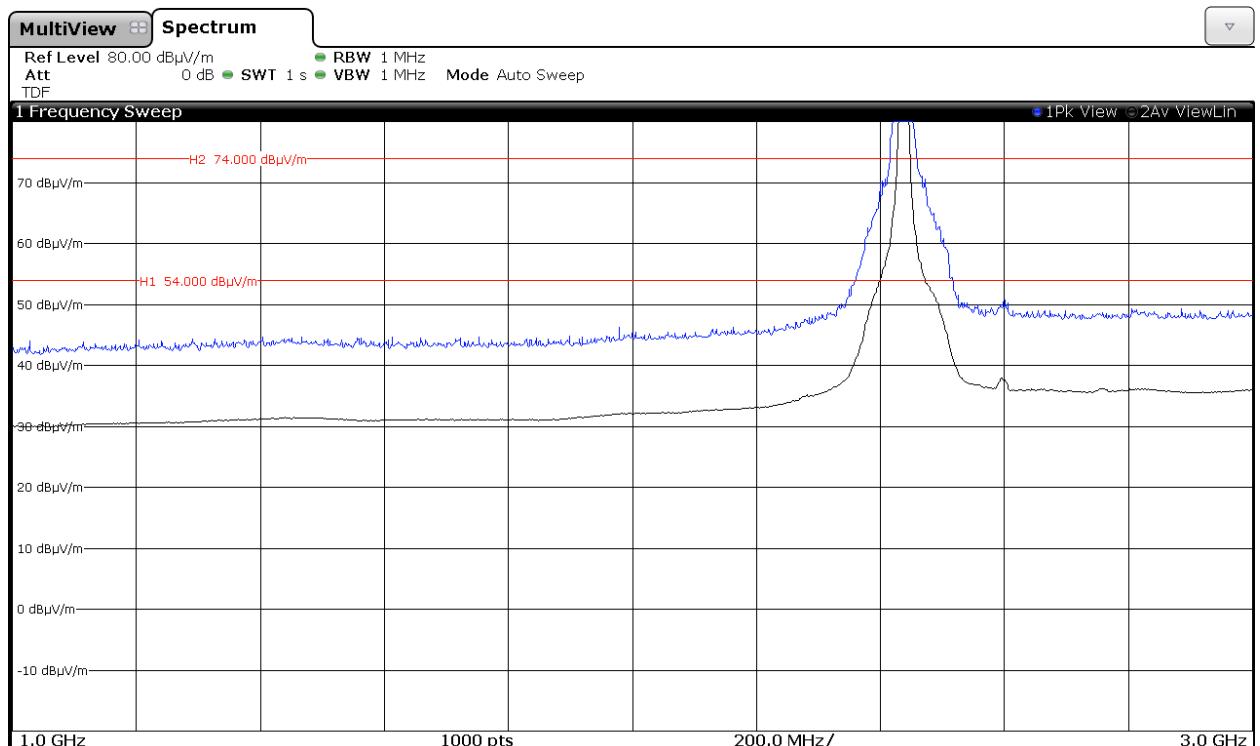
3.WiFi 2.4GHz 802.11 n20 mode

CHANNEL 6 (2437 MHz).



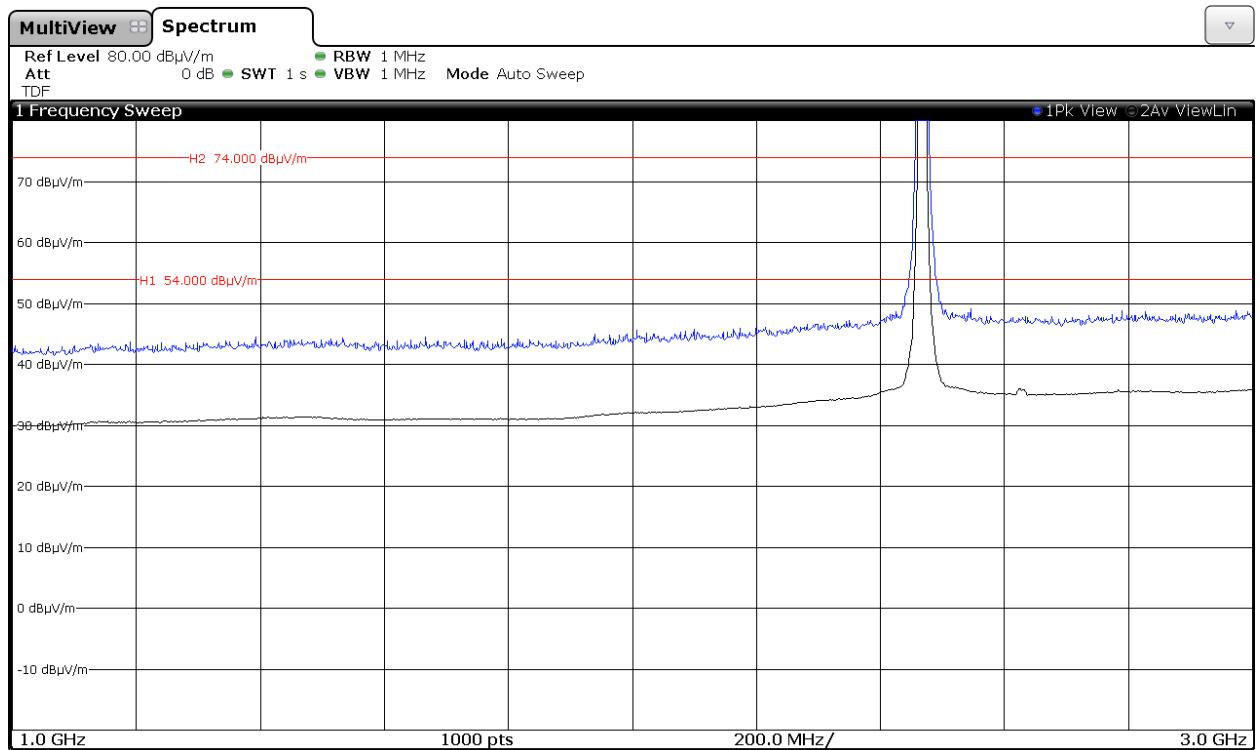
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

Chain A+B.



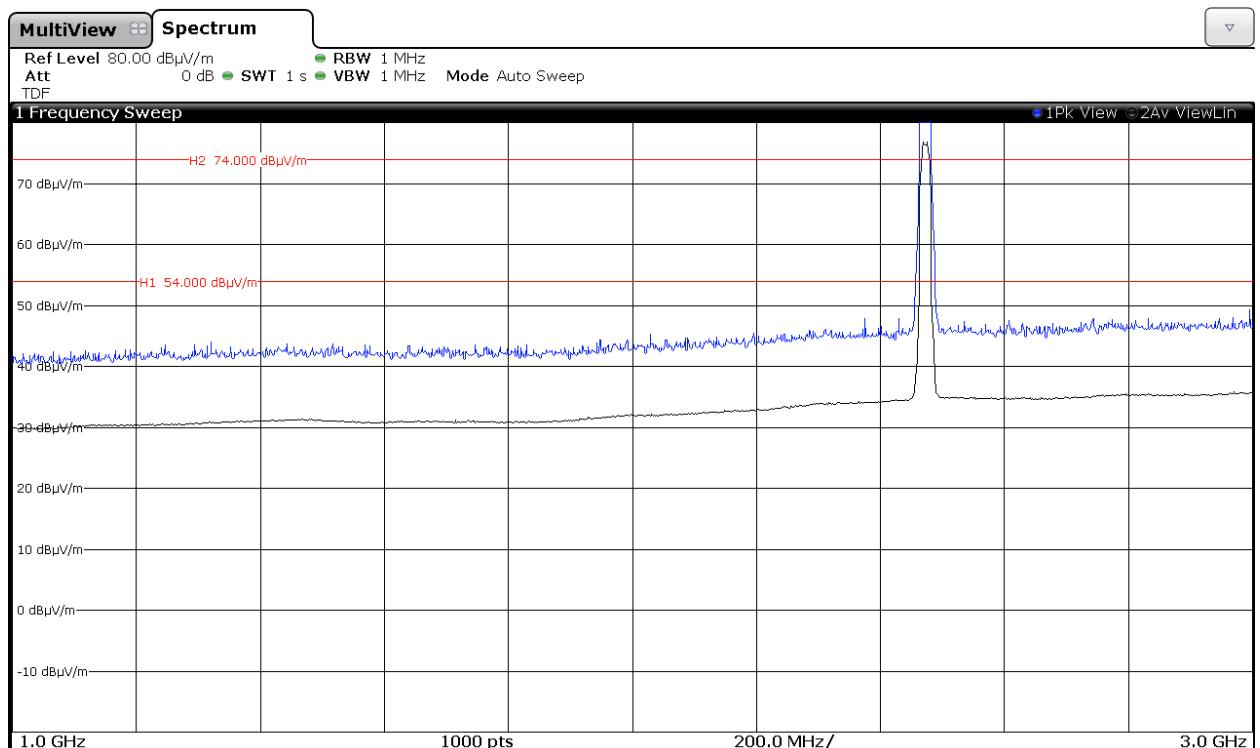
Note: The peak above the limit is the carrier frequency.

CHANNEL 12 (2467 MHz).



Note: The peak above the limit is the carrier frequency. This plot is valid for Chain A, Chain B and Chain A+B.

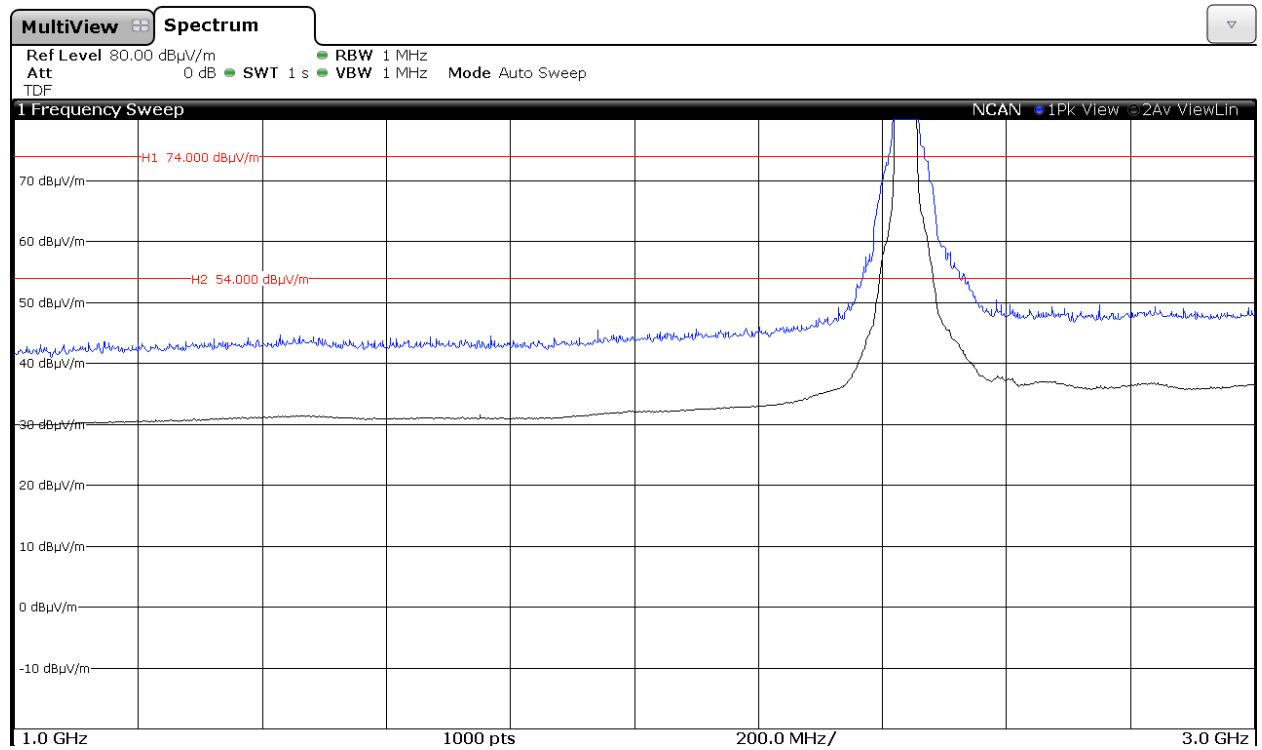
CHANNEL 13 (2472 MHz).



Note: The peak above the limit is the carrier frequency. This plot is valid for Chain A, Chain B and Chain A+B.

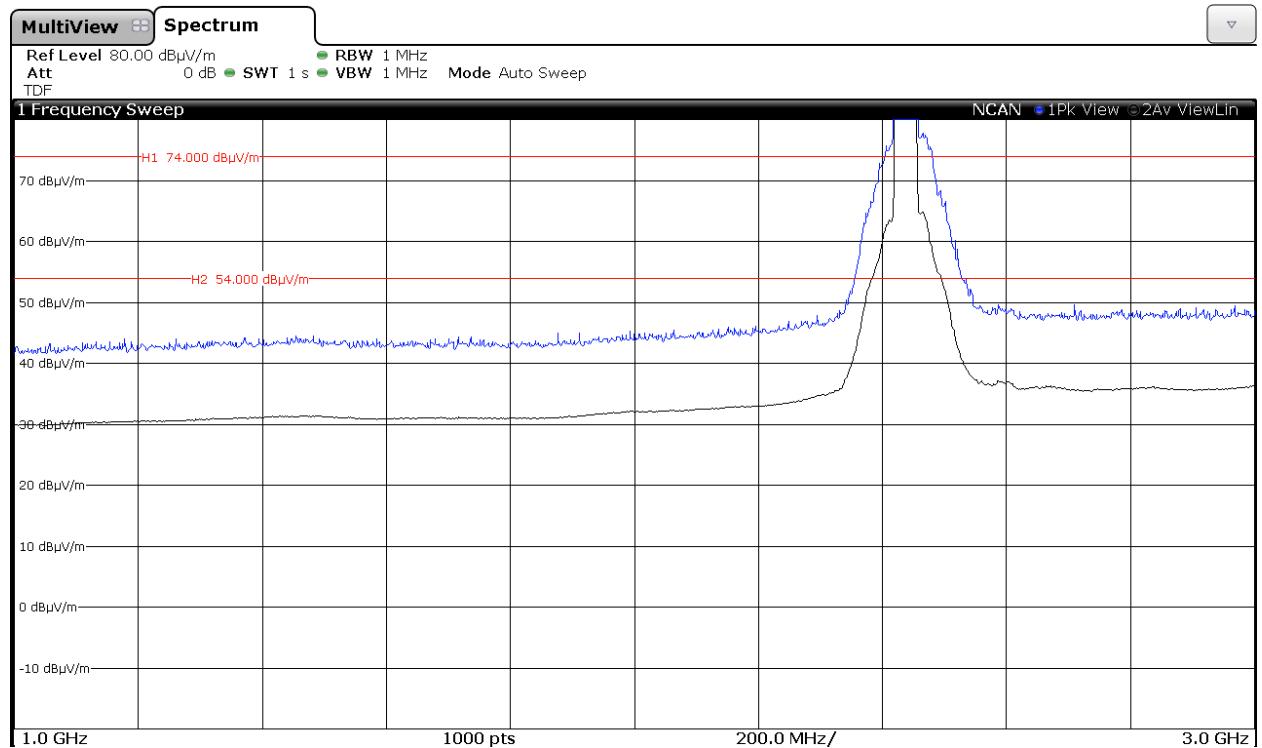
4. WiFi 2.4GHz 802.11 n40 mode

CHANNEL 6 (2437 MHz).



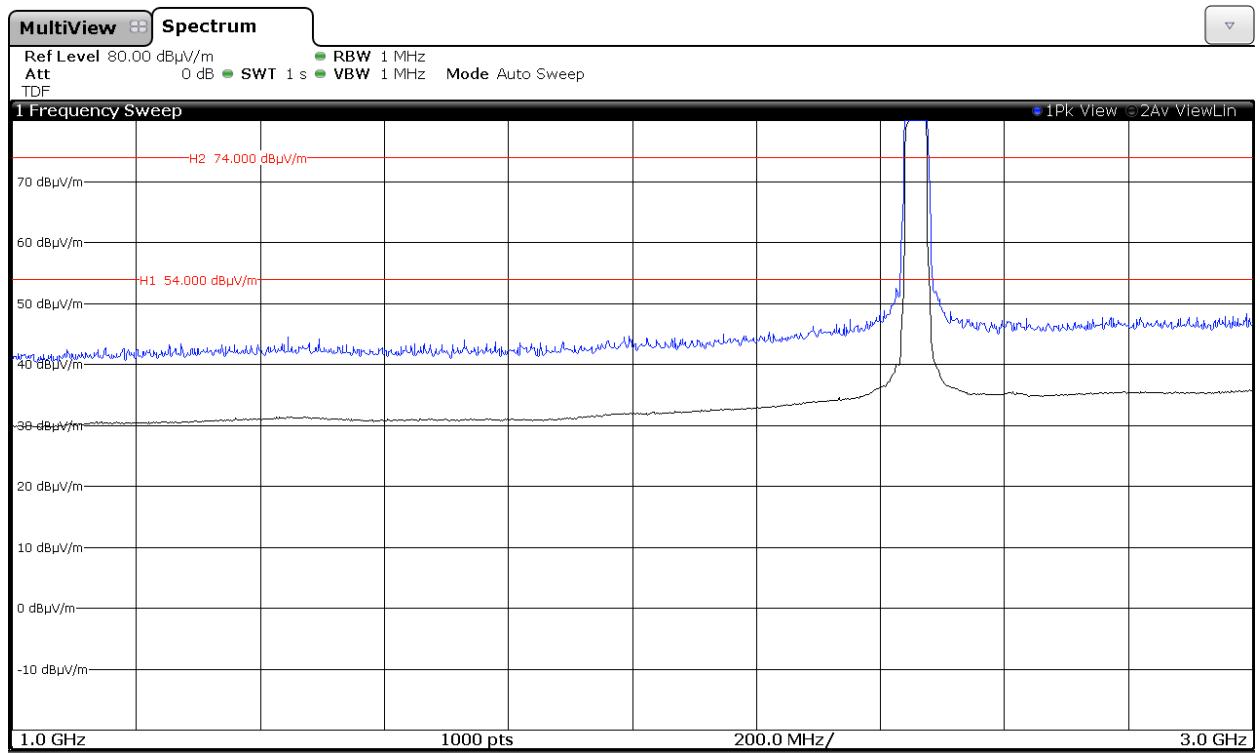
Note: The peak above the limit is the carrier frequency. This plot is valid for both Chain A and Chain B.

Chain A+B.



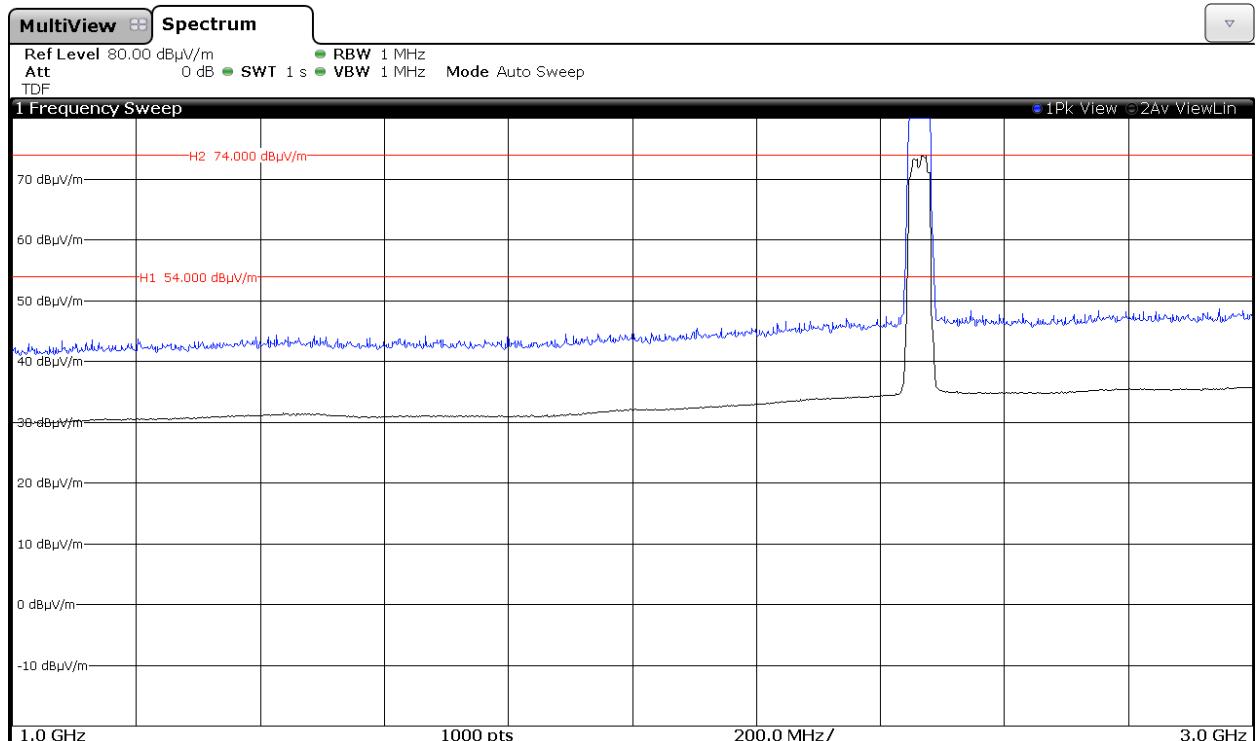
Note: The peak above the limit is the carrier frequency.

CHANNEL 10F (2457 MHz).



Note: The peak above the limit is the carrier frequency. This plot is valid for Chain A, Chain B and Chain A+B.

CHANNEL 11F (2462 MHz).



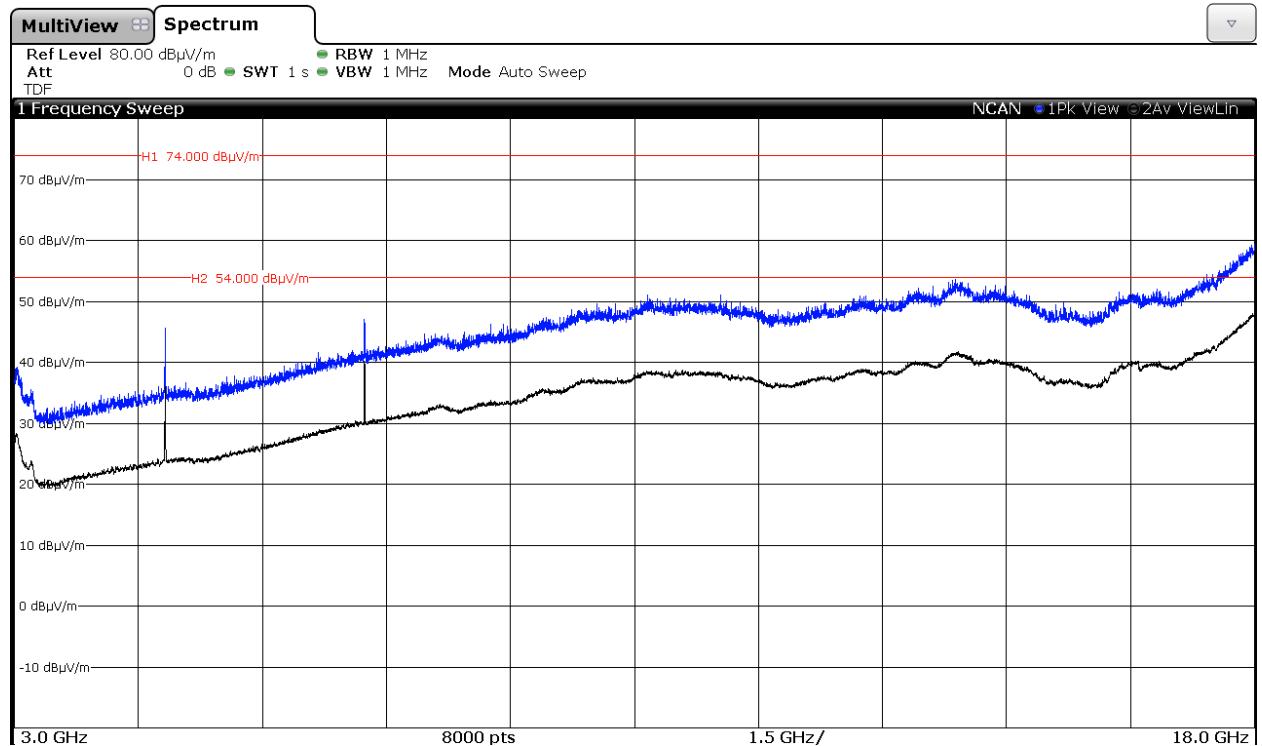
Note: The peak above the limit is the carrier frequency. This plot is valid for Chain A, Chain B and Chain A+B.

FREQUENCY RANGE 3 GHz to 18 GHz.

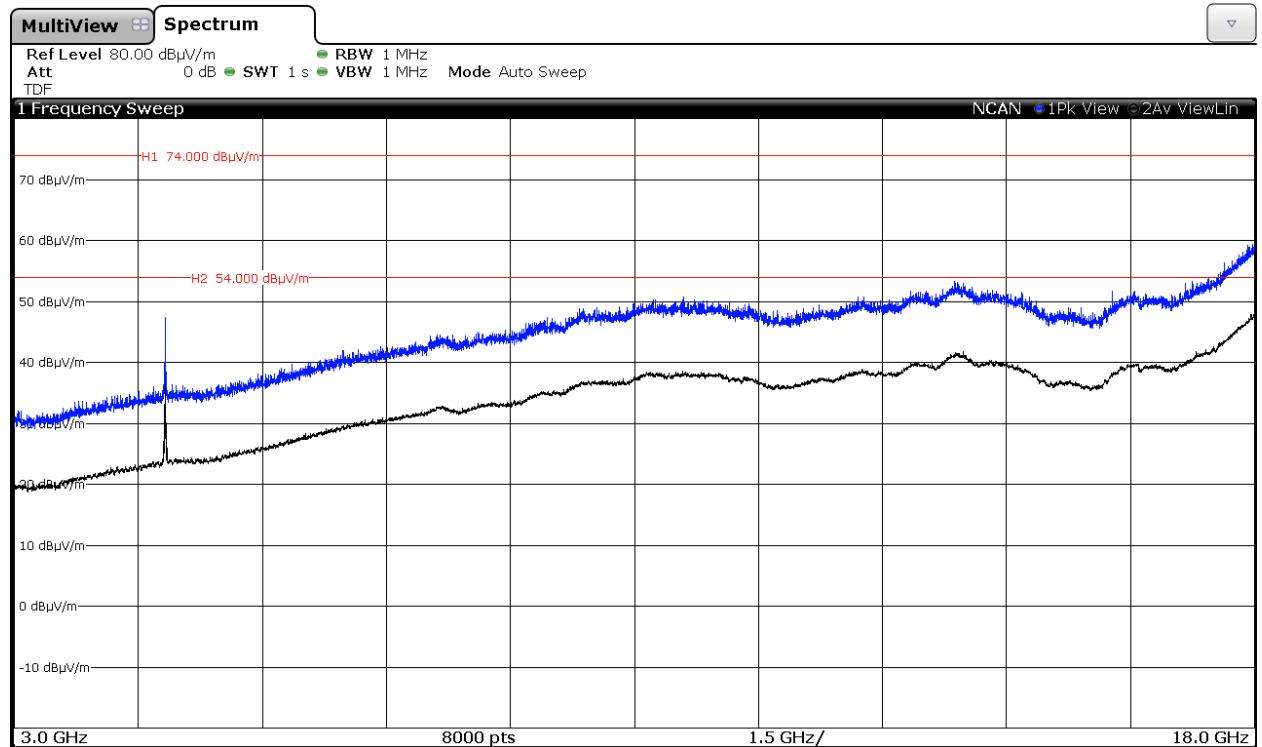
1. WiFi 2.4GHz 802.11 b mode

CHANNEL 1 (2412 MHz).

Chain A

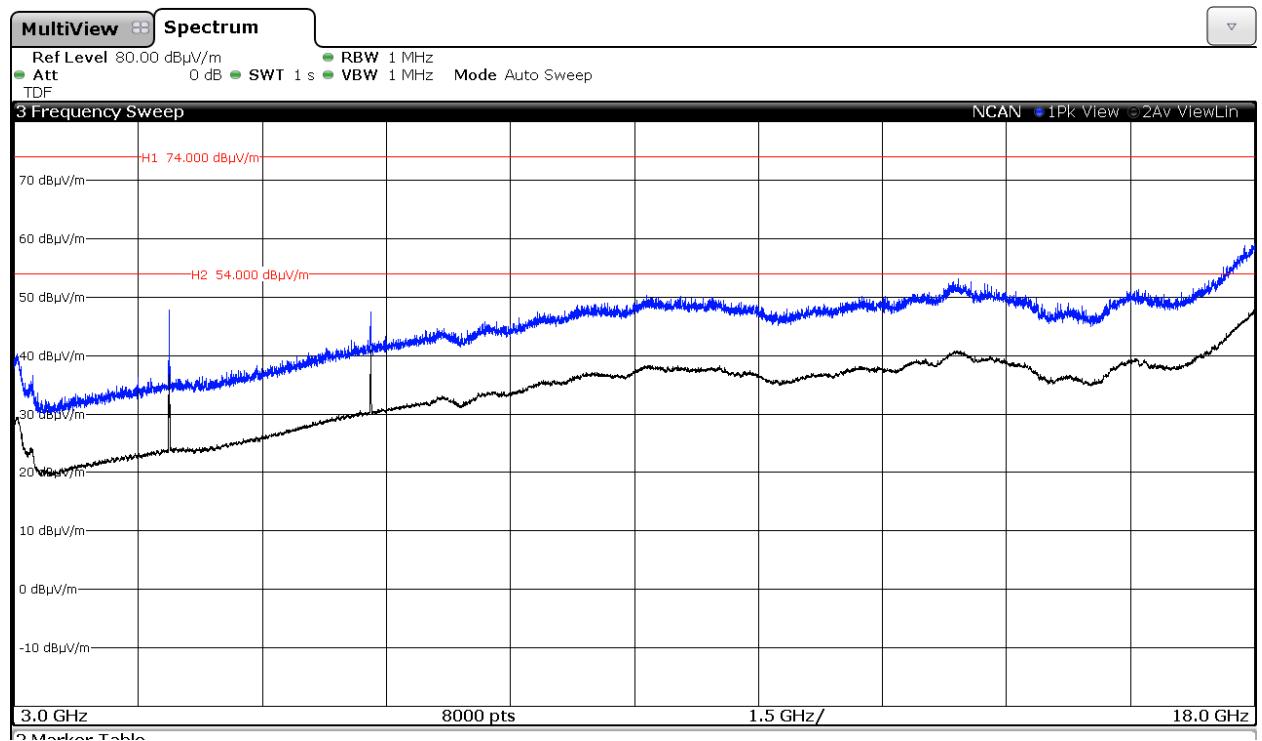


Chain B

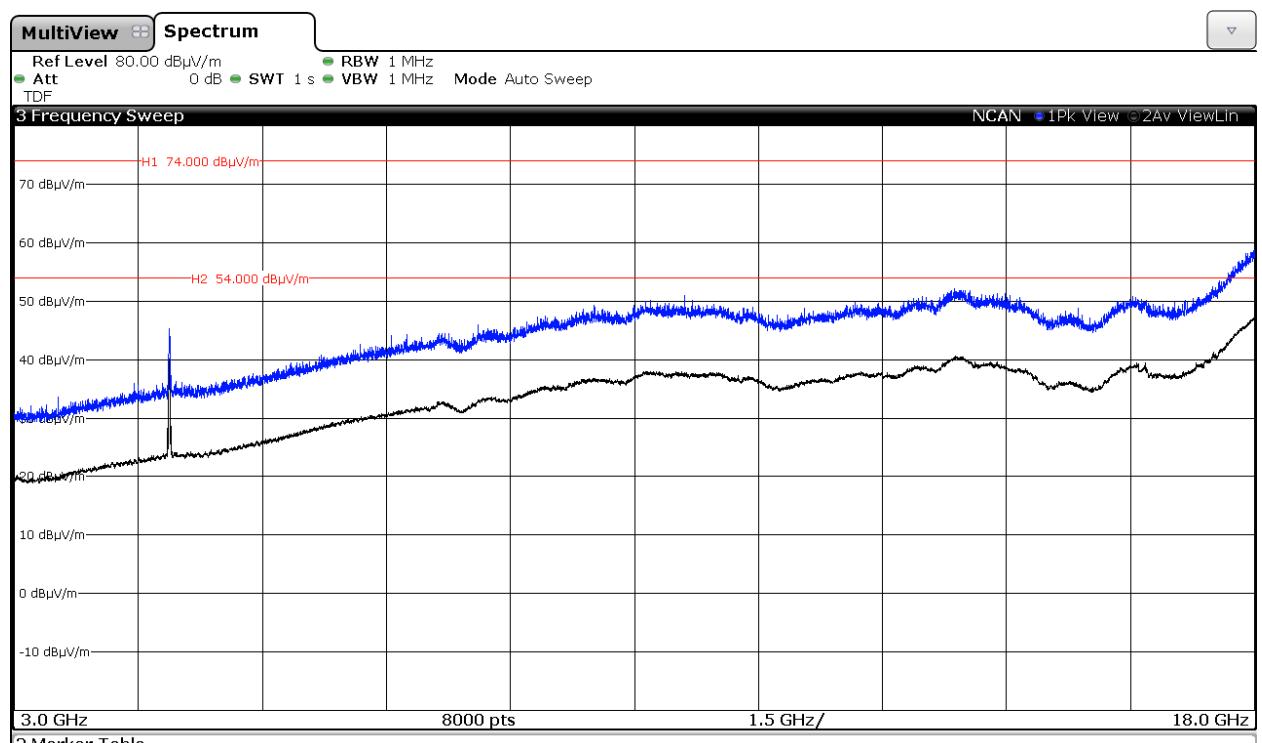


CHANNEL 6 (2437 MHz).

Chain A

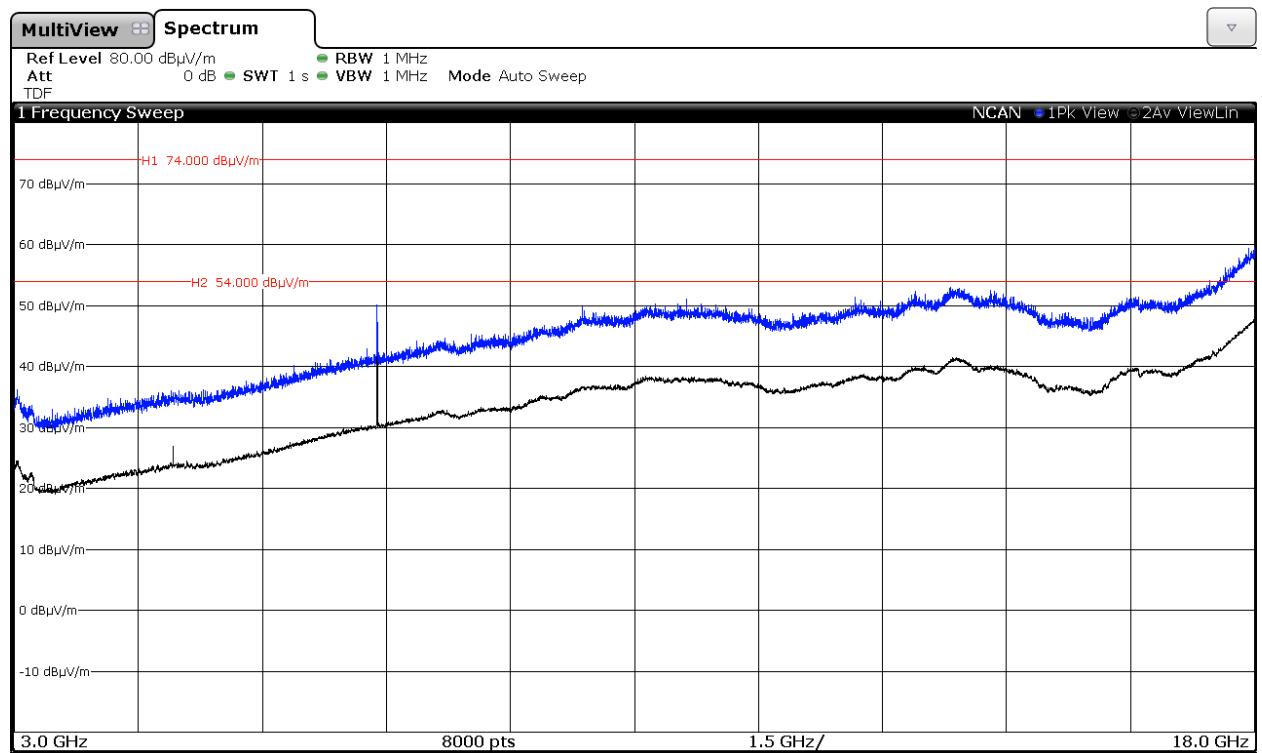


Chain B

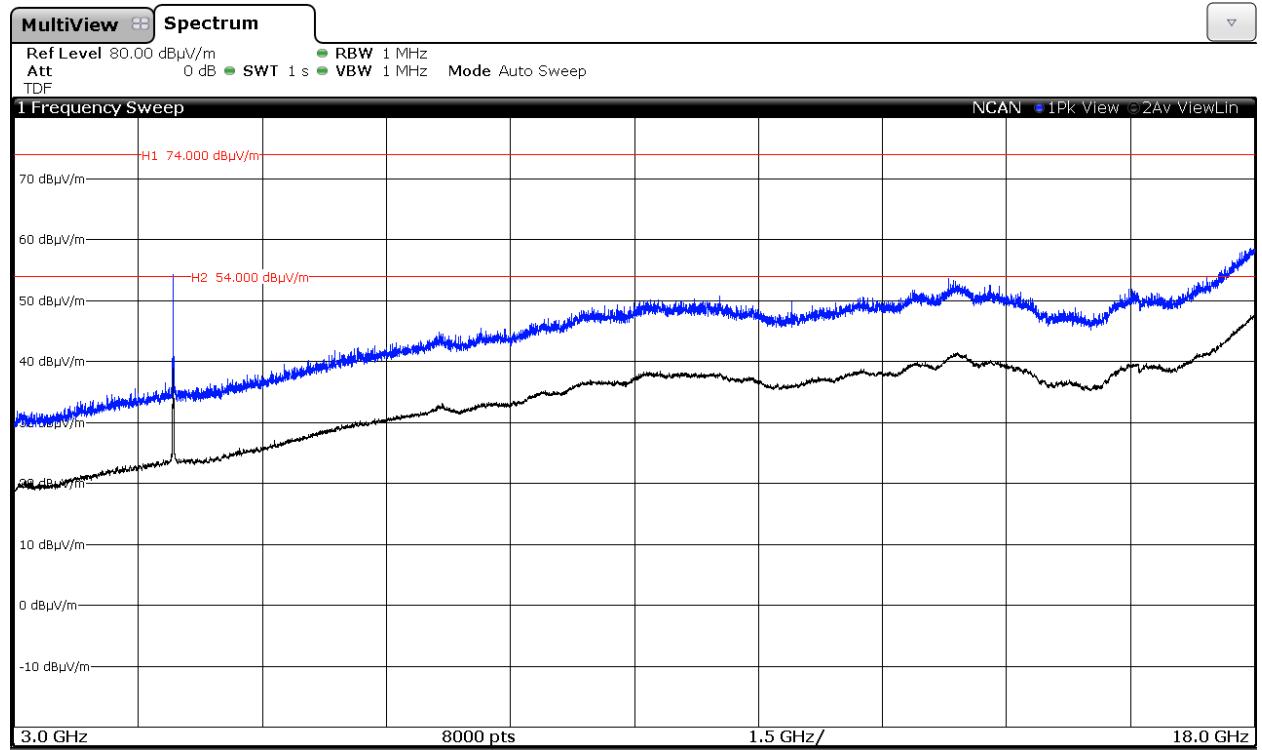


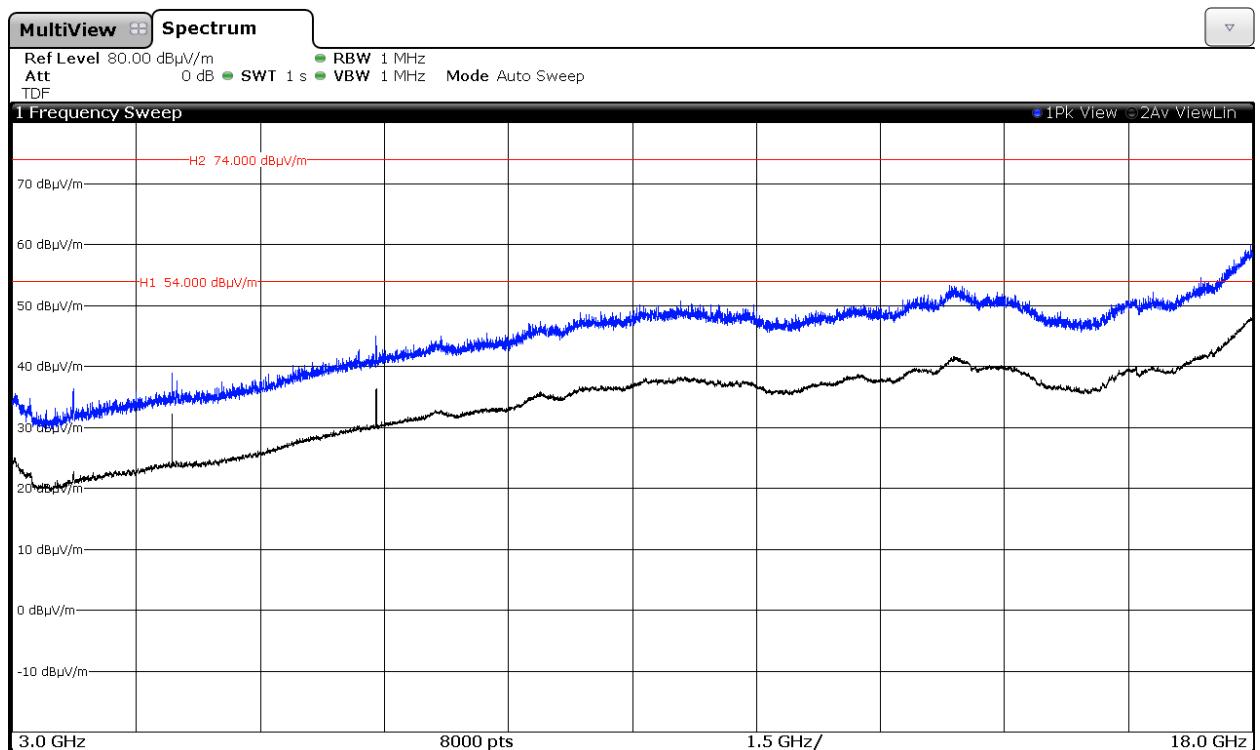
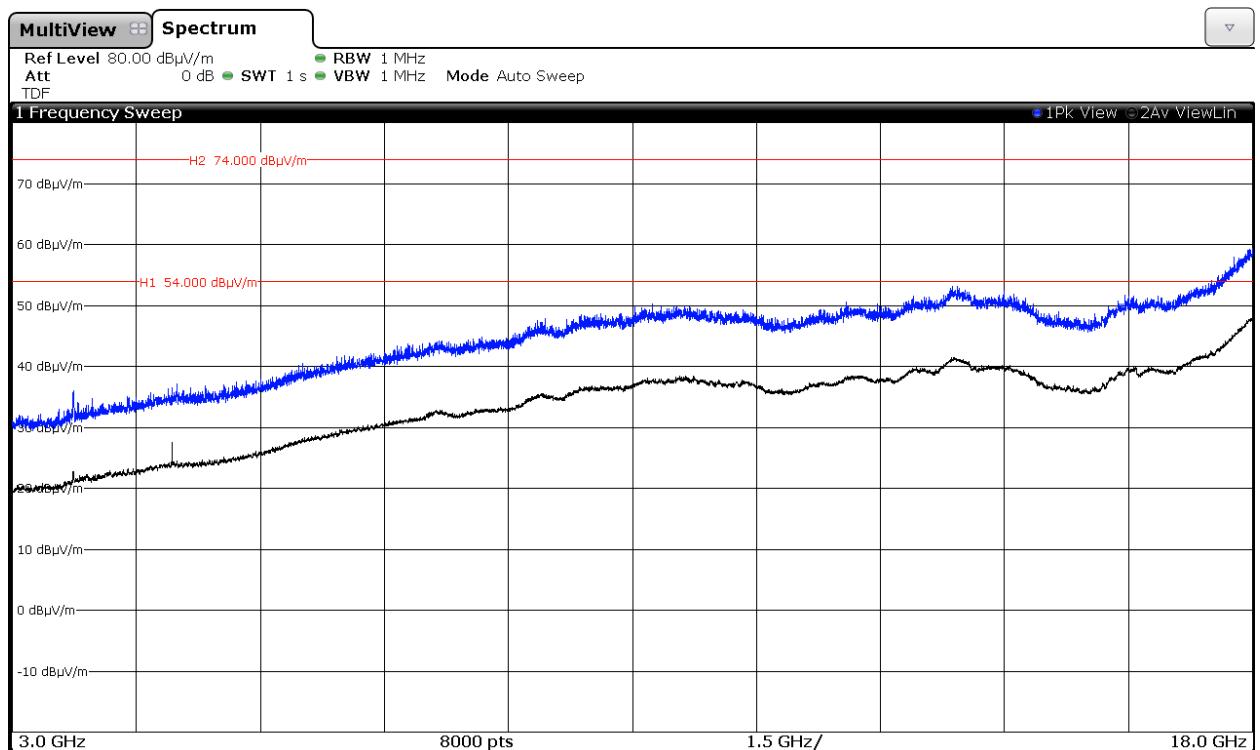
CHANNEL 11 (2462 MHz).

Chain A



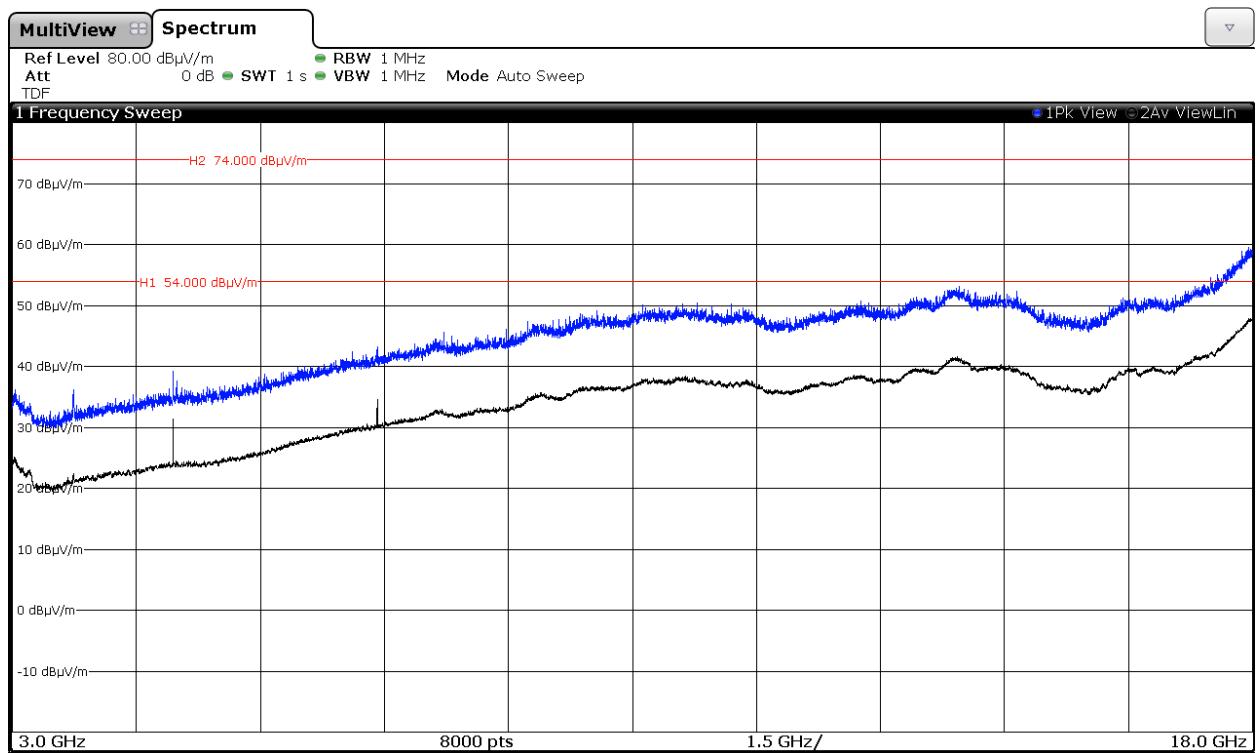
Chain B



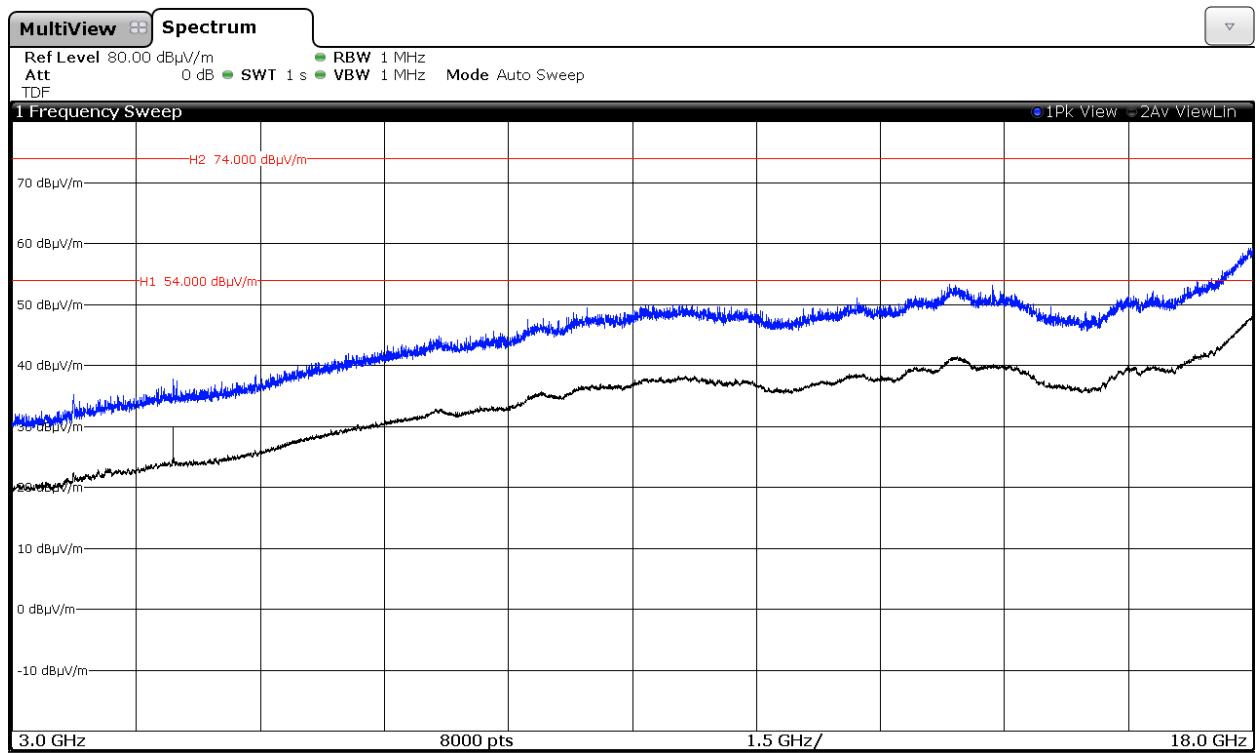
CHANNEL 12 (2467 MHz).
Chain A

Chain B


CHANNEL 13 (2472 MHz).

Chain A



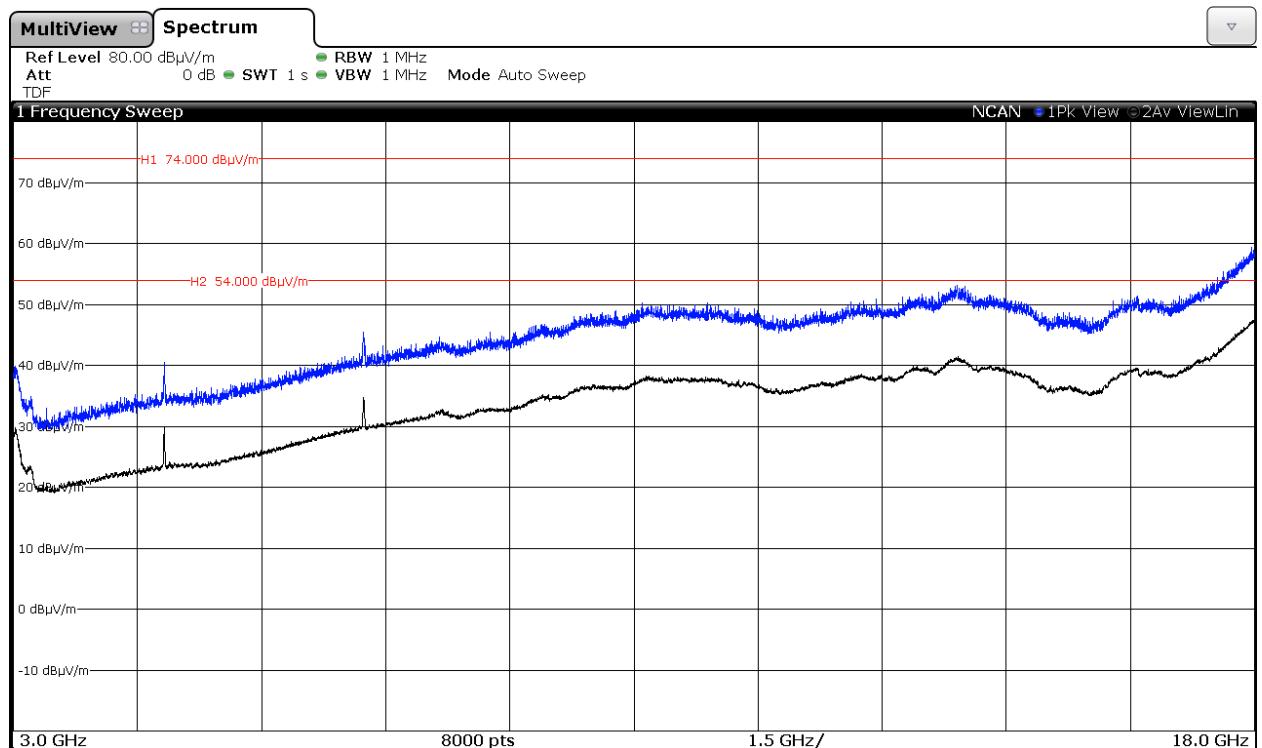
Chain B



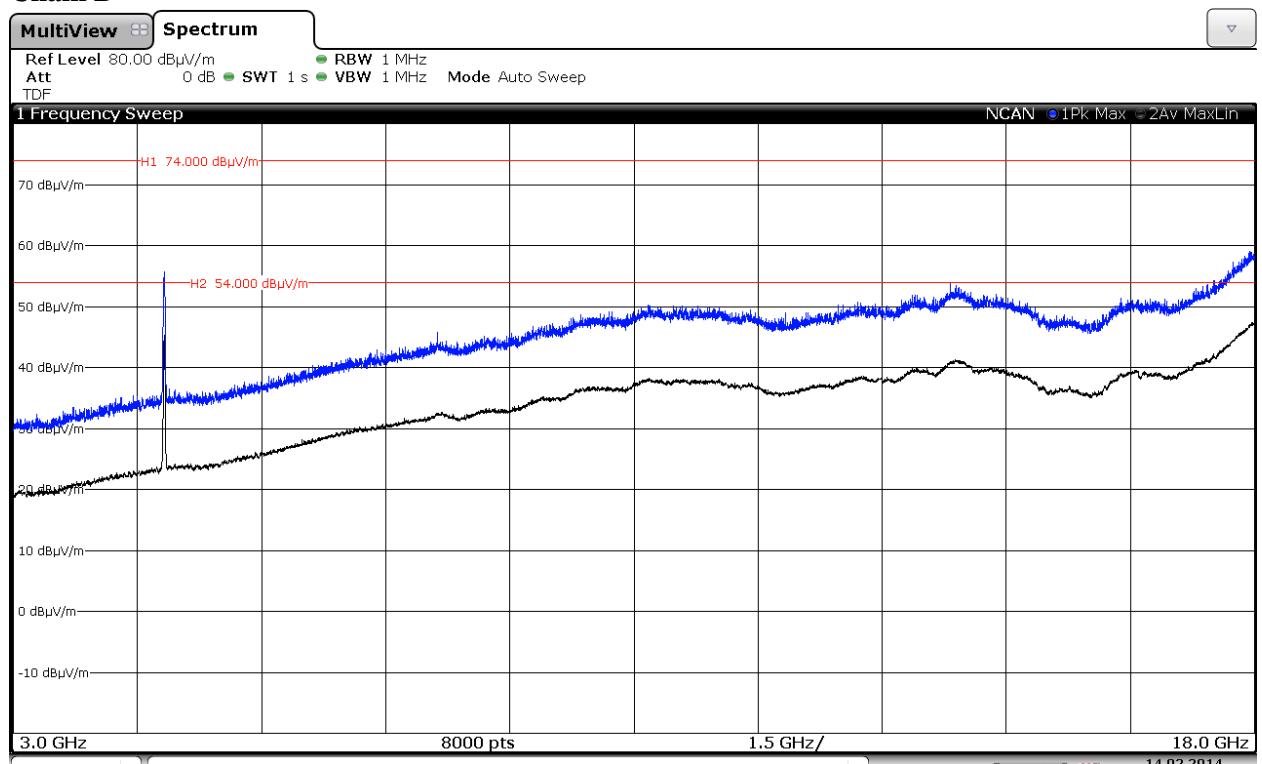
2. WiFi 2.4GHz 802.11 g mode (worst case)

CHANNEL 1 (2412 MHz).

Chain A

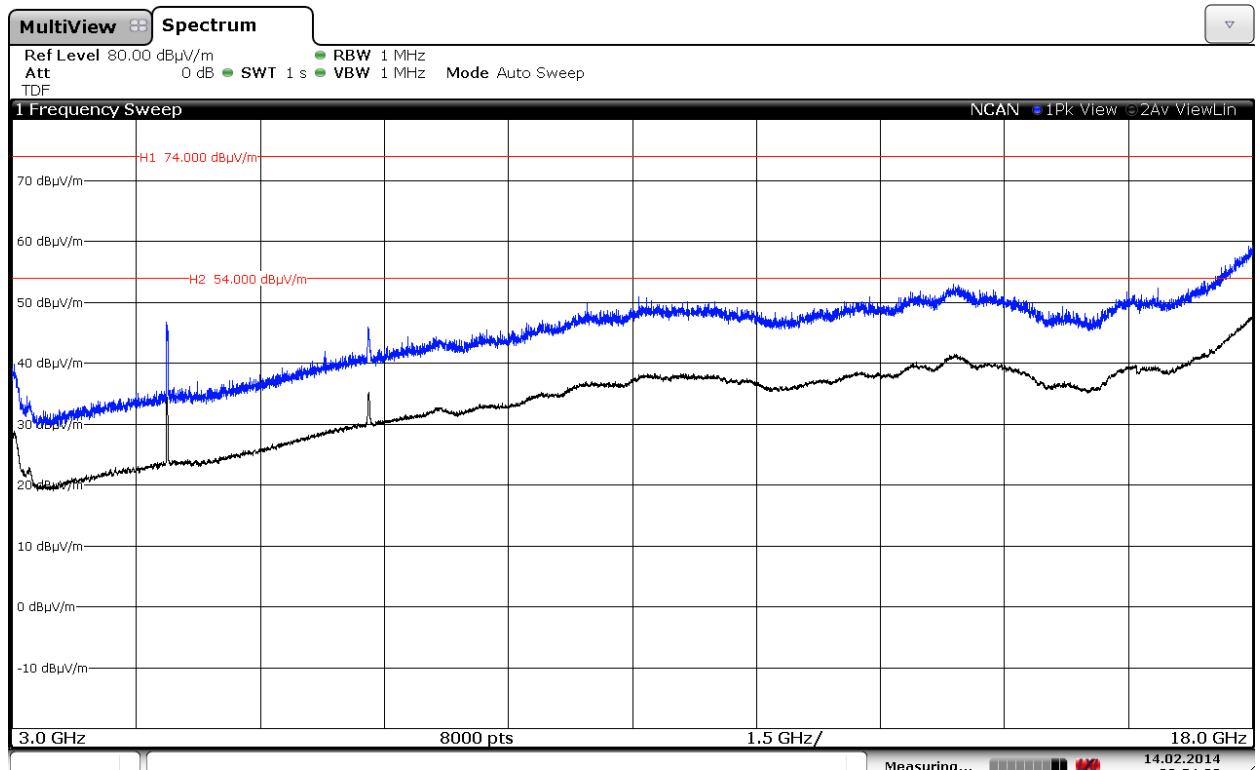


Chain B

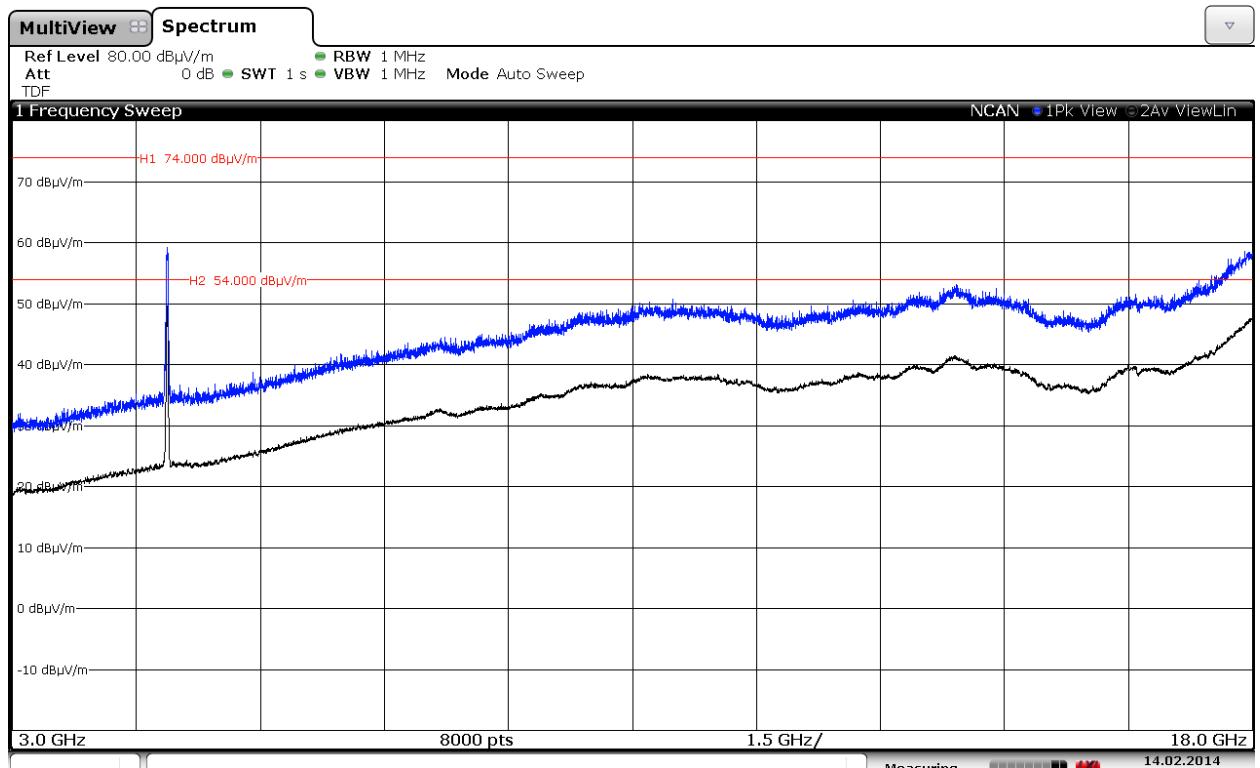


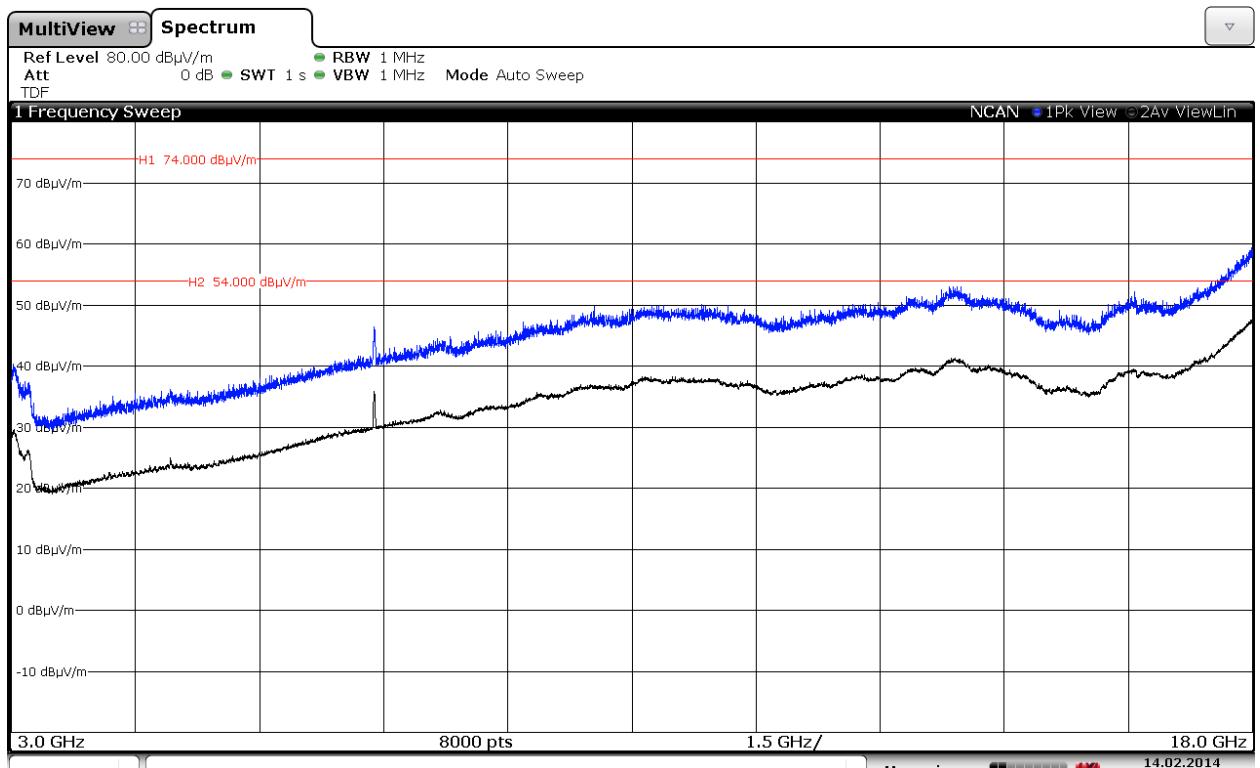
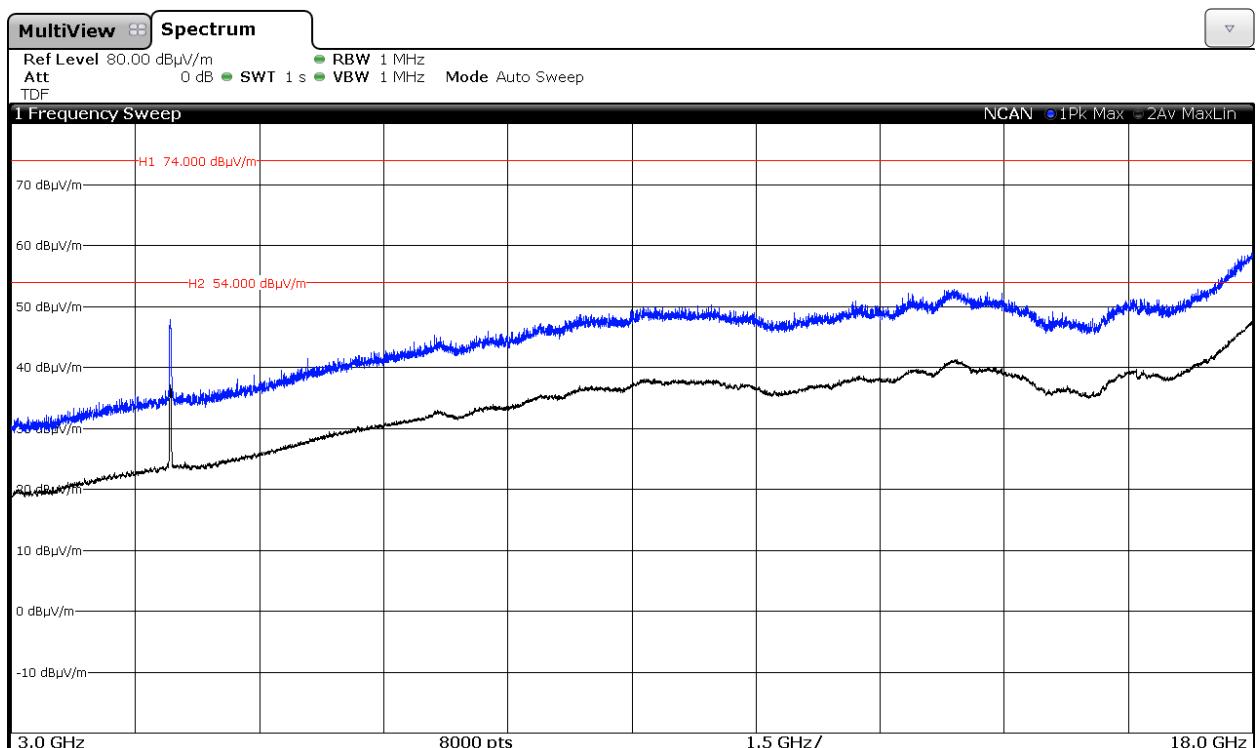
CHANNEL 6 (2437 MHz).

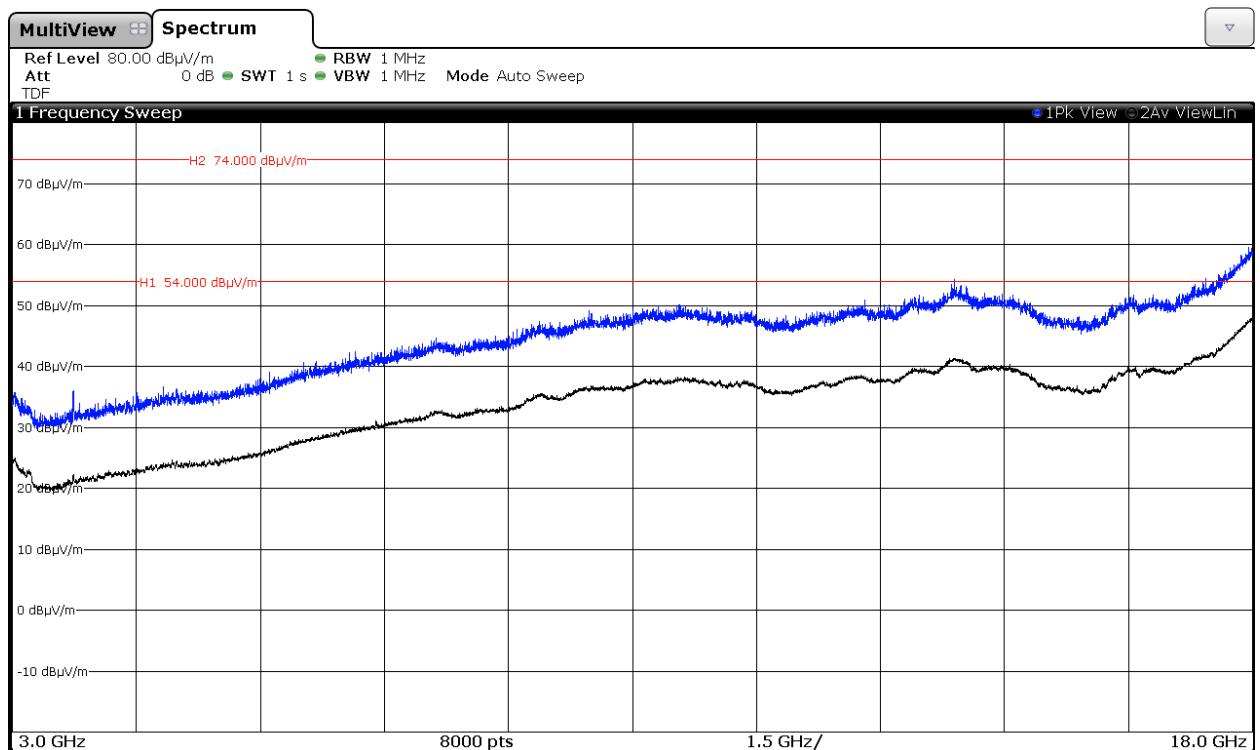
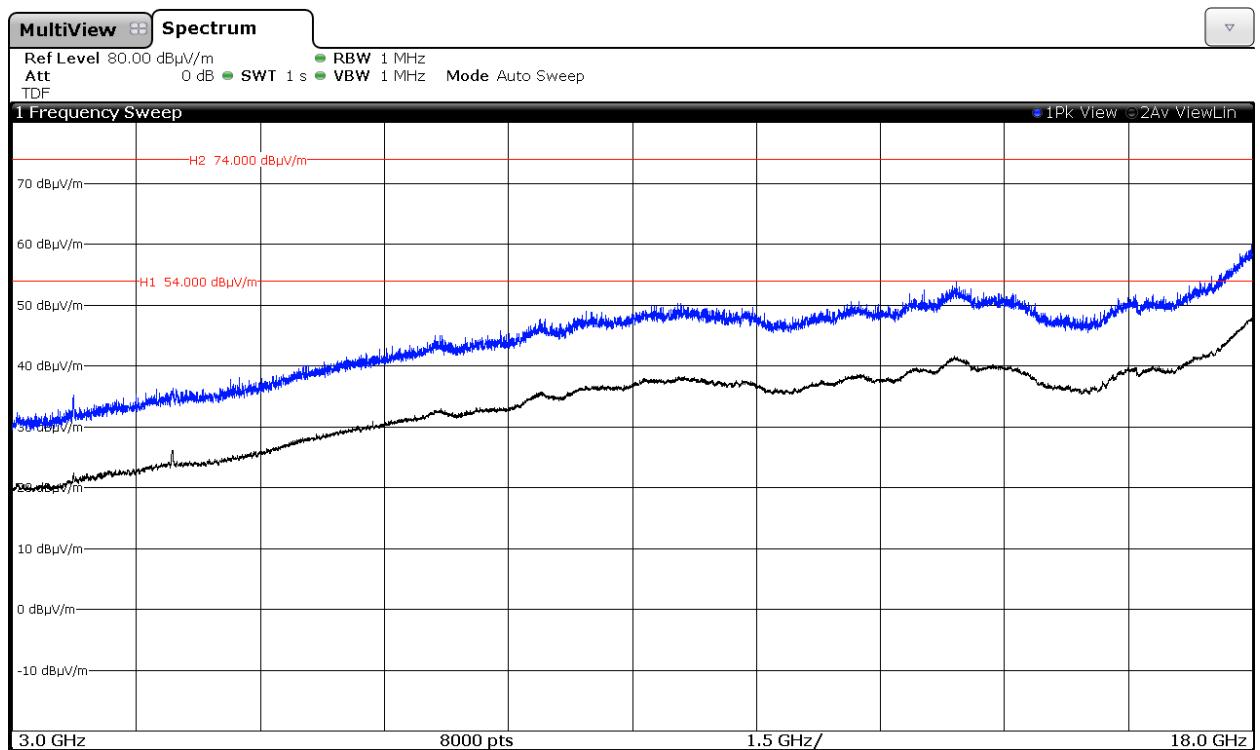
Chain A



Chain B

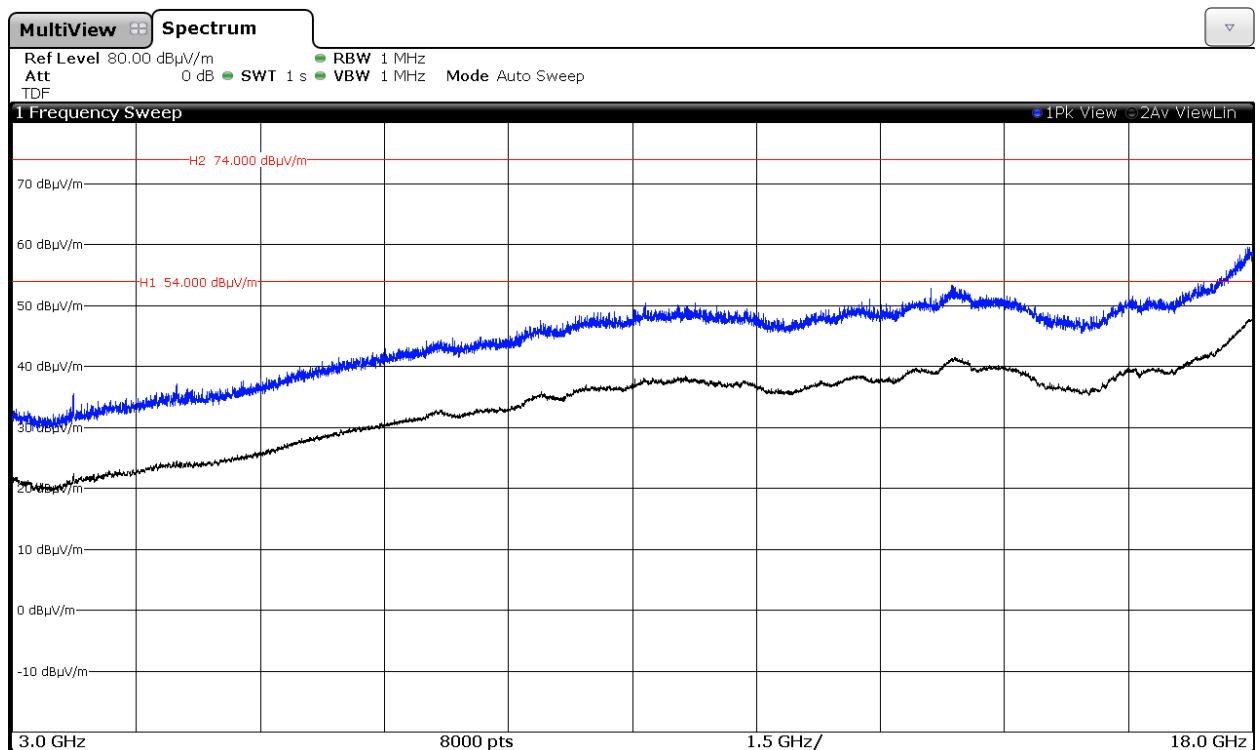


CHANNEL 11 (2462 MHz).
Chain A

Chain B


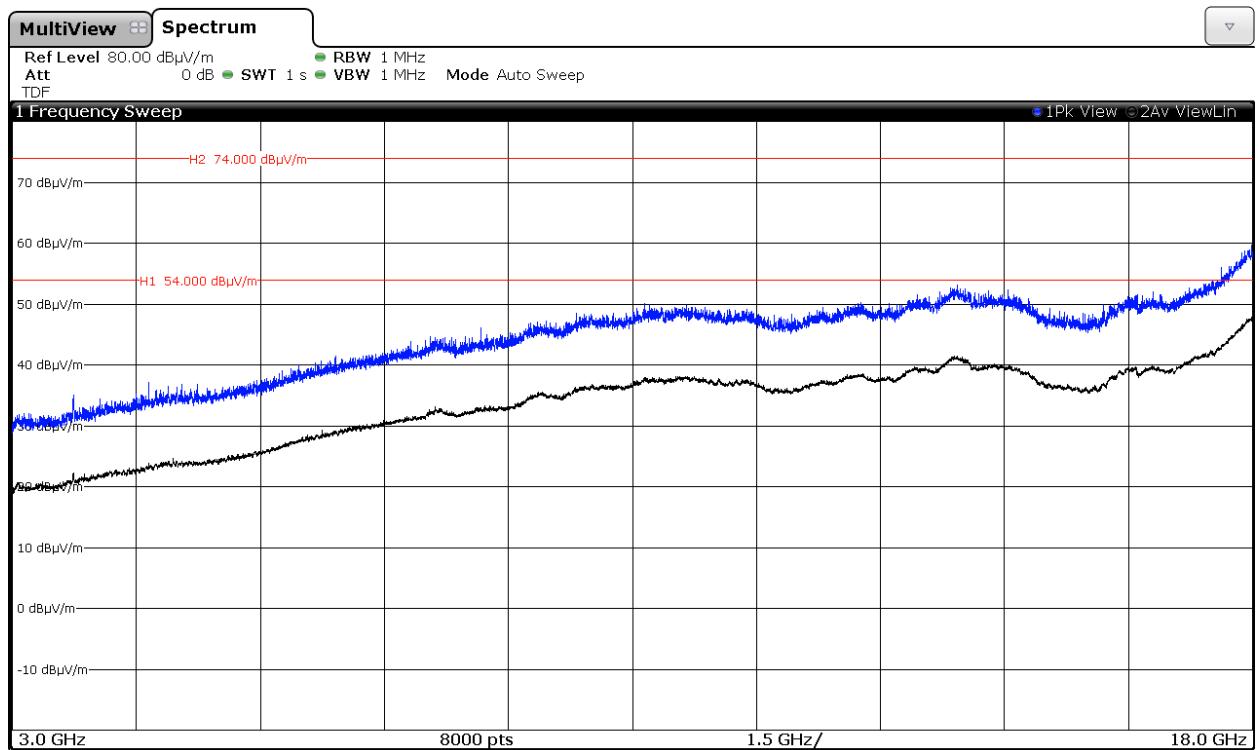
CHANNEL 12 (2467 MHz).
Chain A

Chain B


CHANNEL 13 (2472 MHz).

Chain A



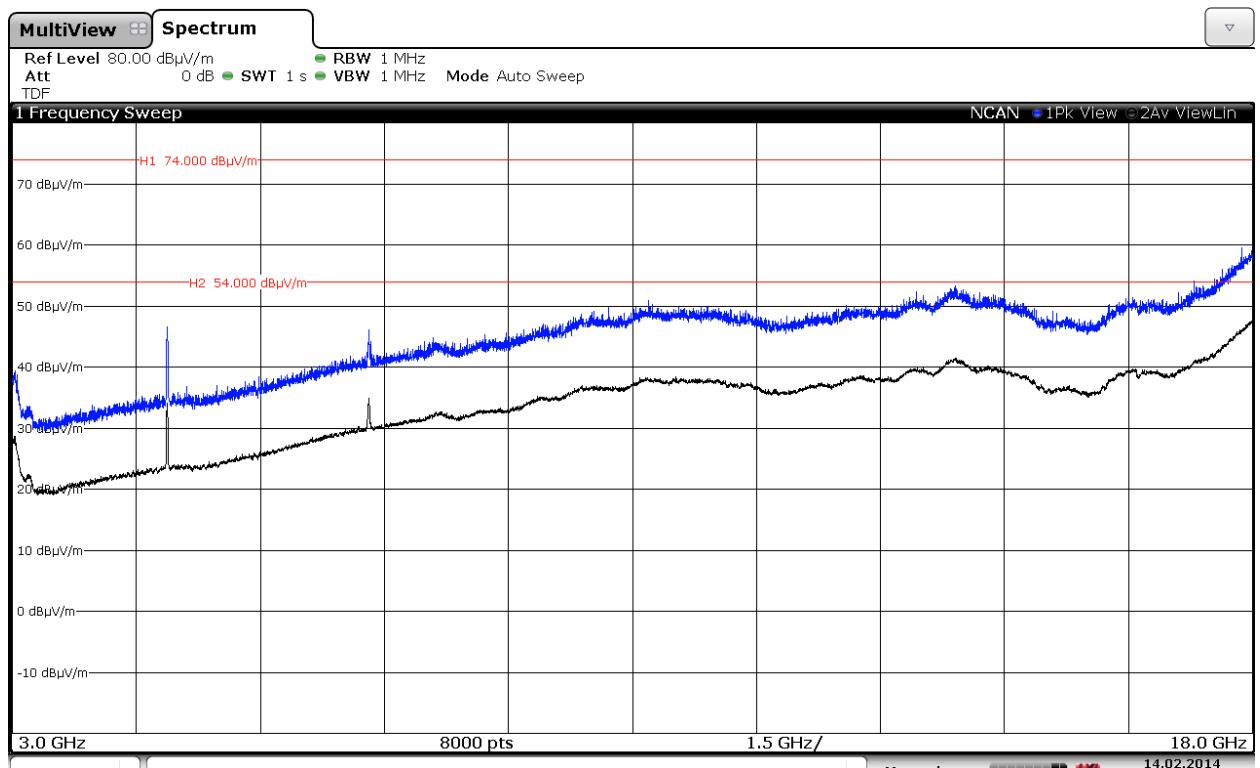
Chain B



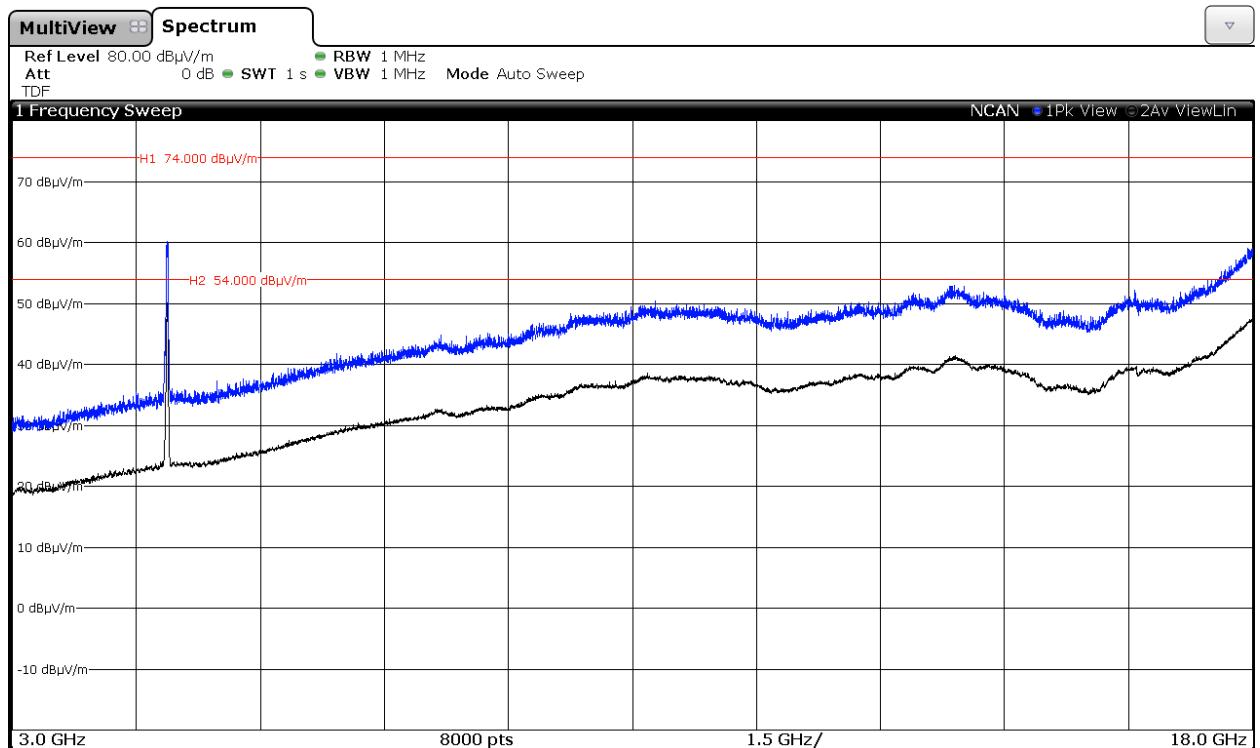
3.WiFi 2.4GHz 802.11 n20 mode

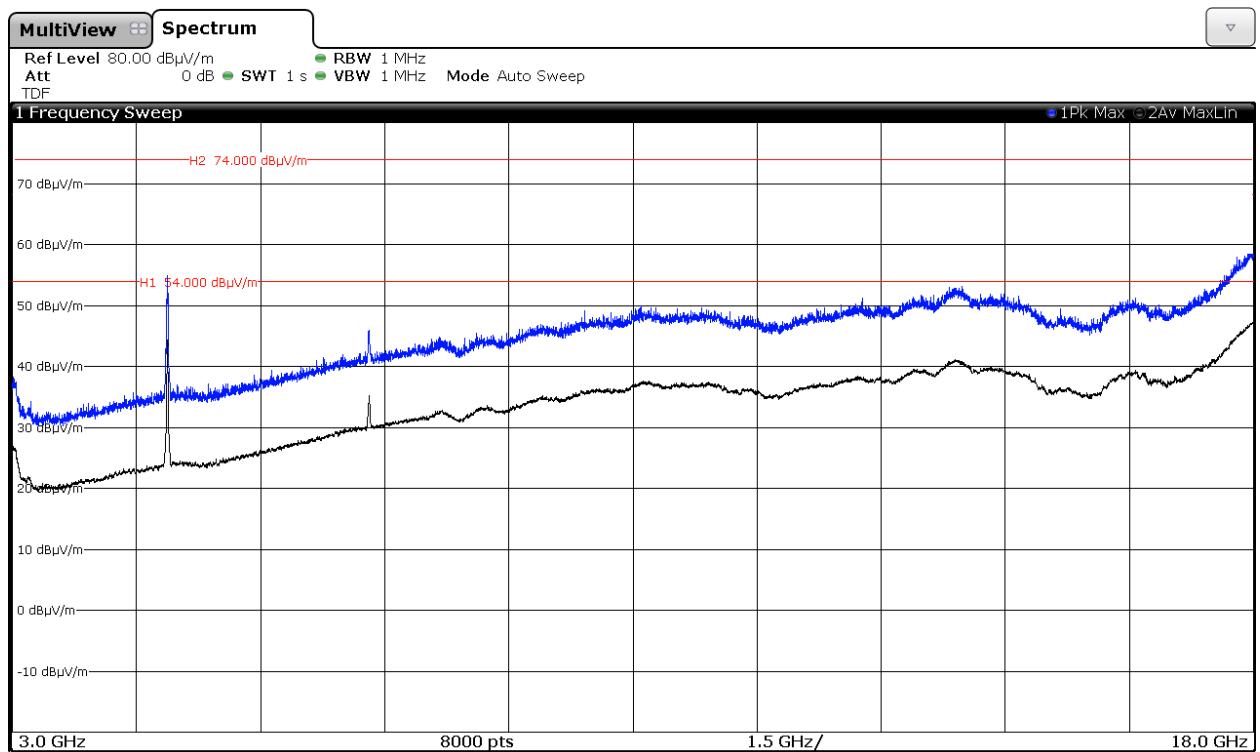
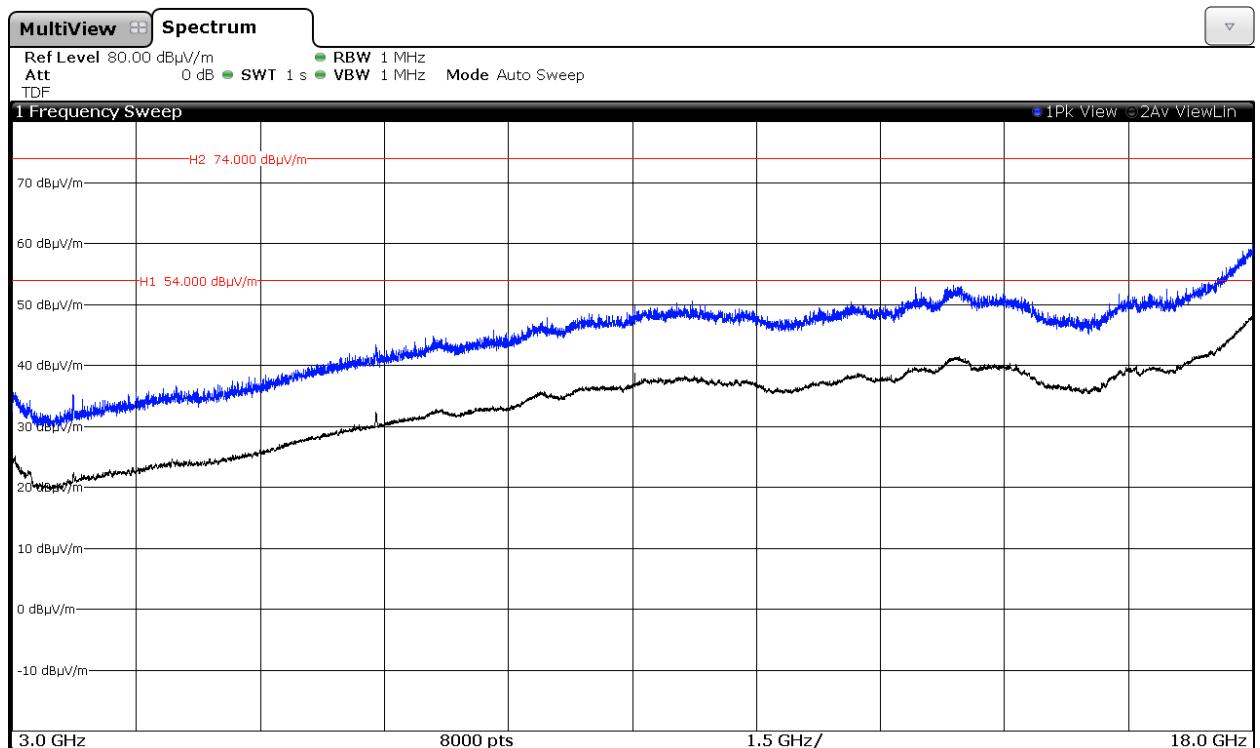
CHANNEL 6 (2437 MHz).

Chain A.

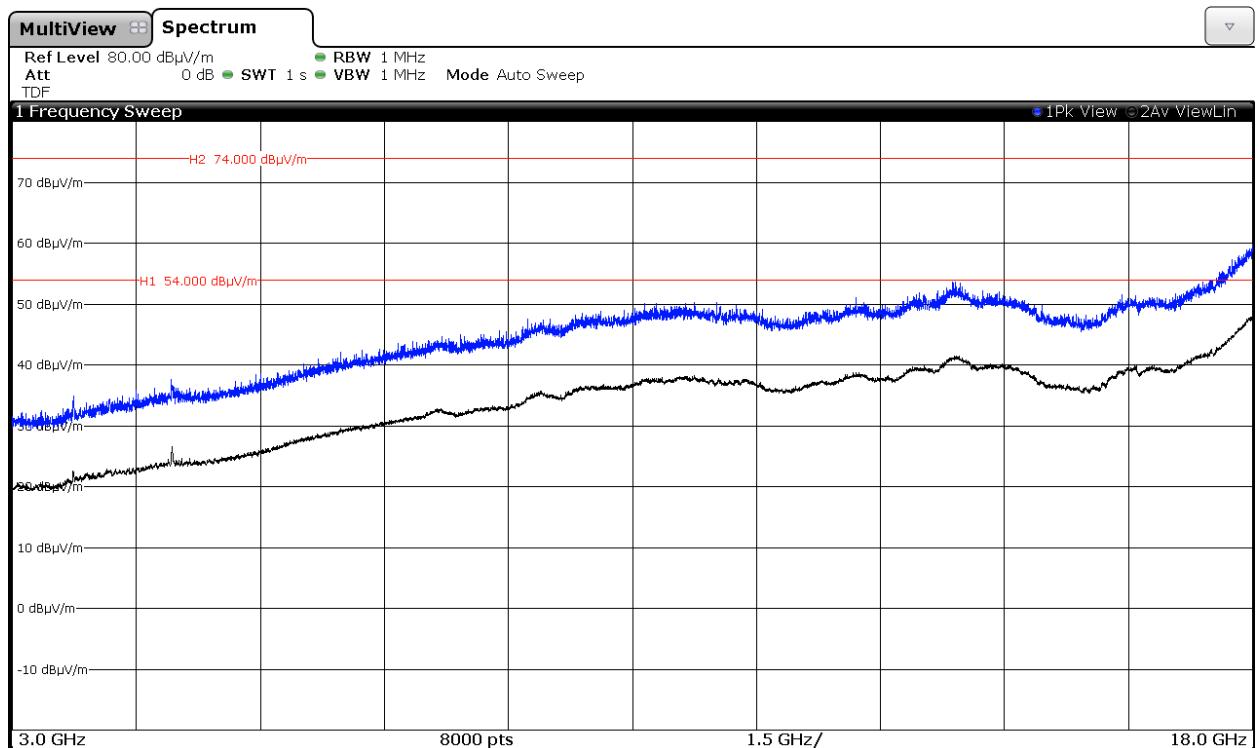


Chain B.

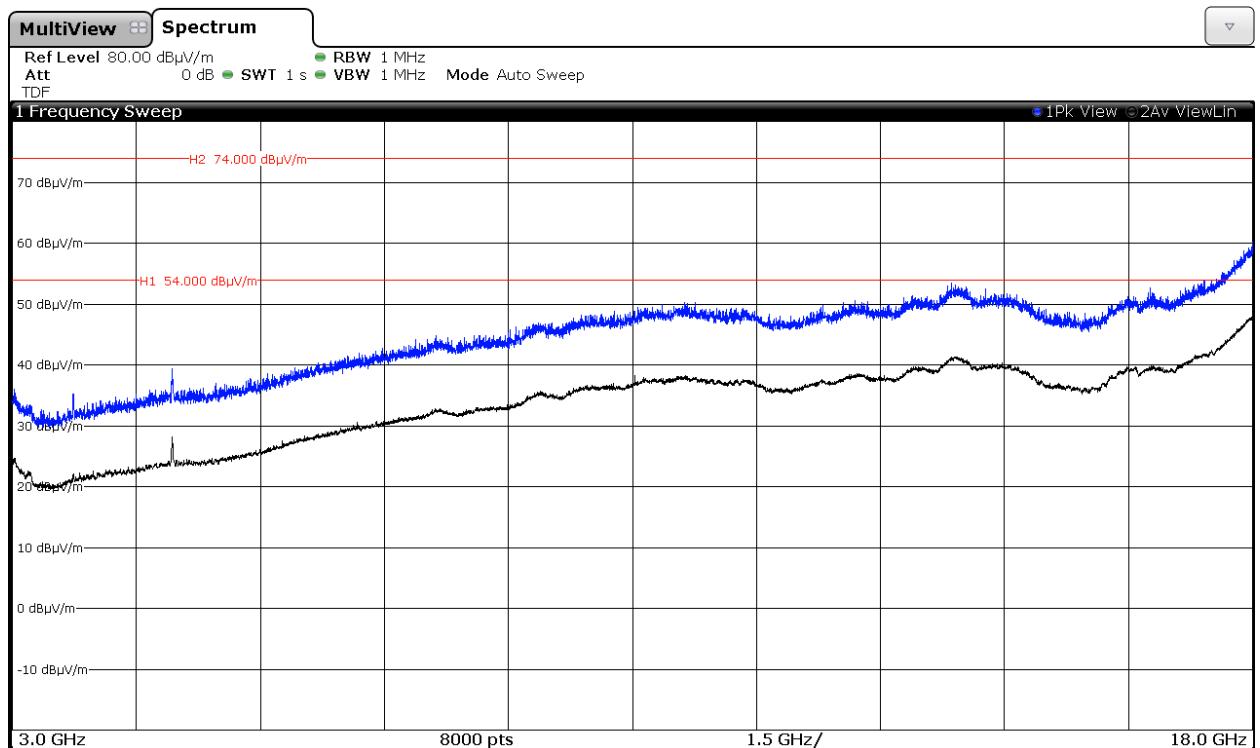


Chain A+B.

CHANNEL 12 (2467 MHz).
Chain A


Chain B

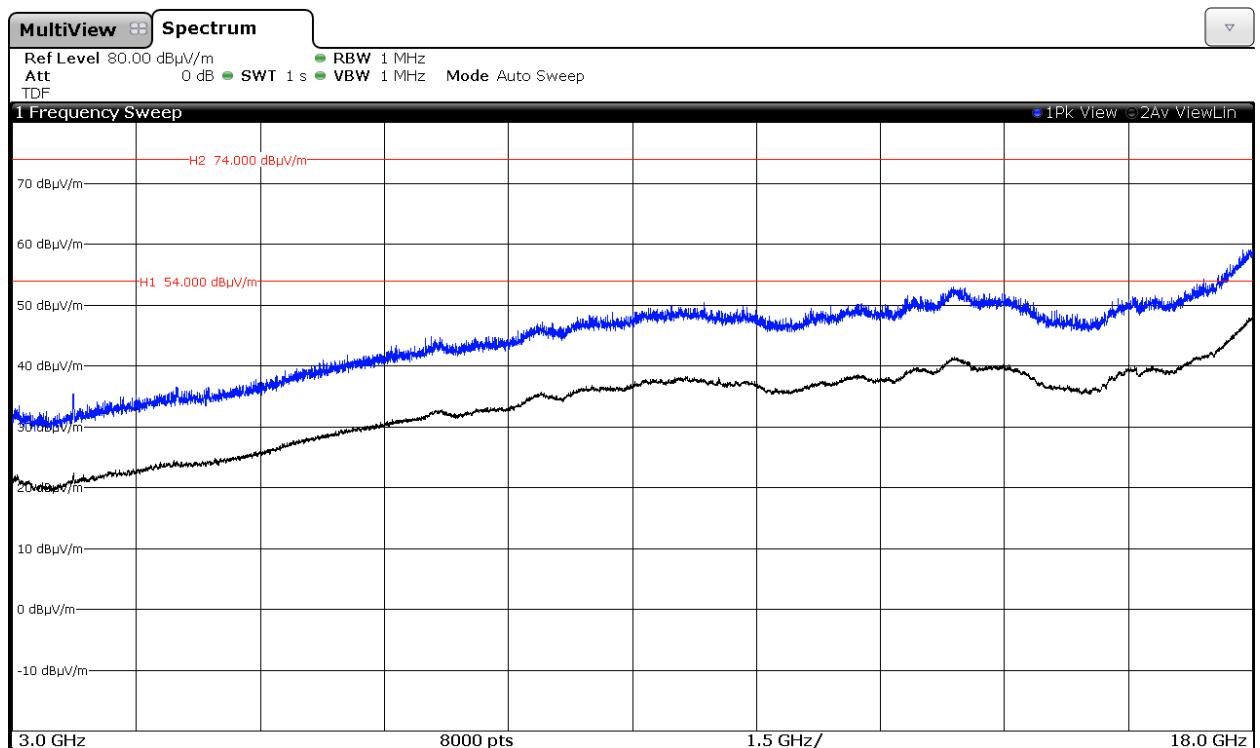


Chain A+B

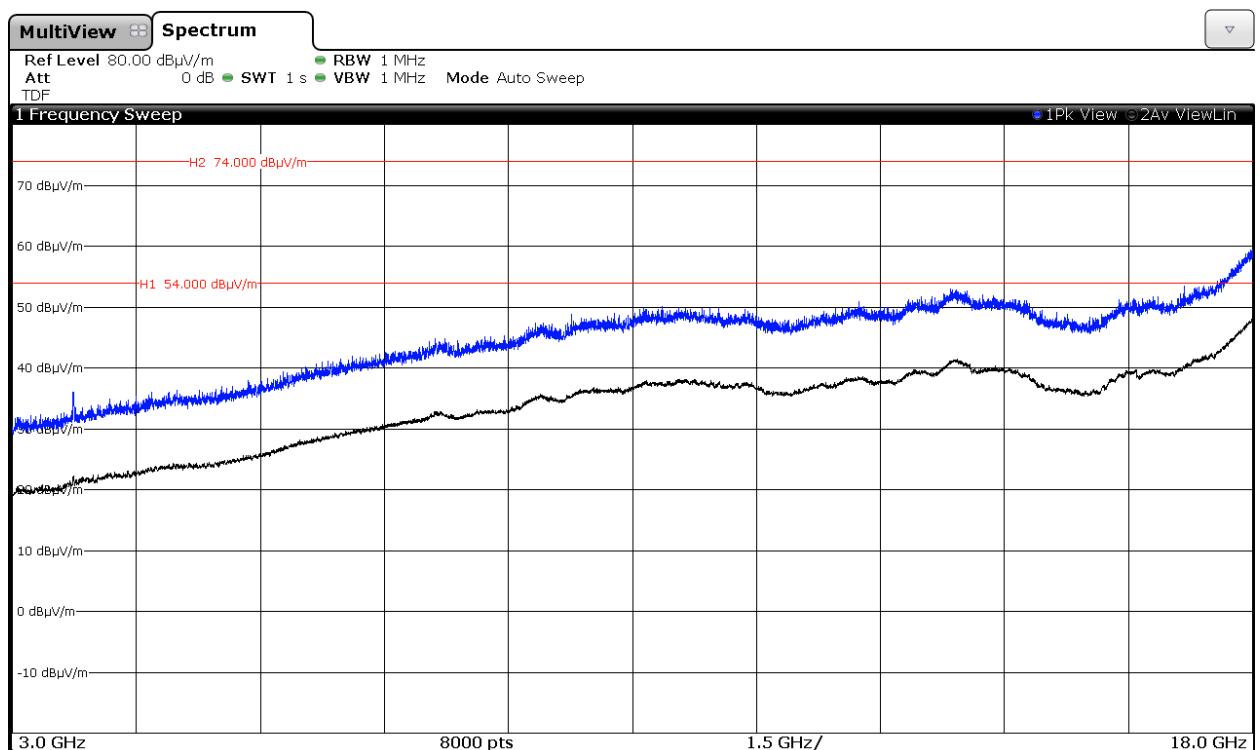


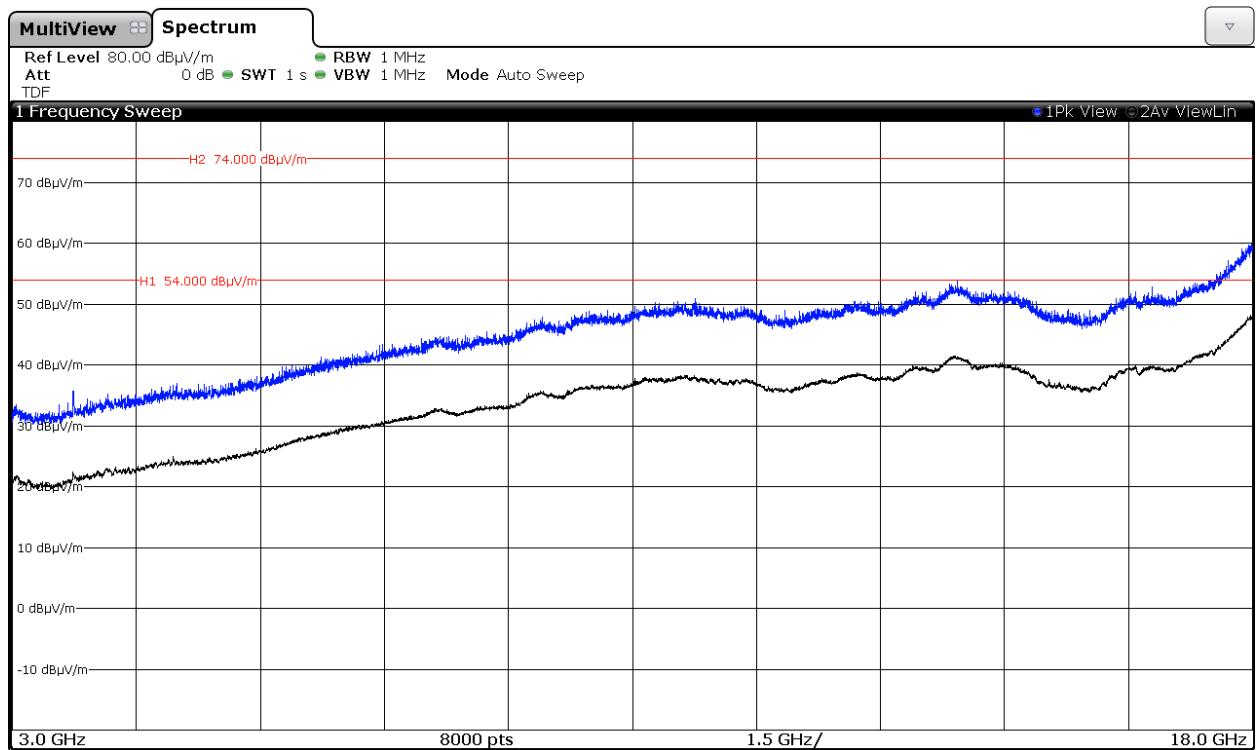
CHANNEL 13 (2472 MHz).

Chain A



Chain B

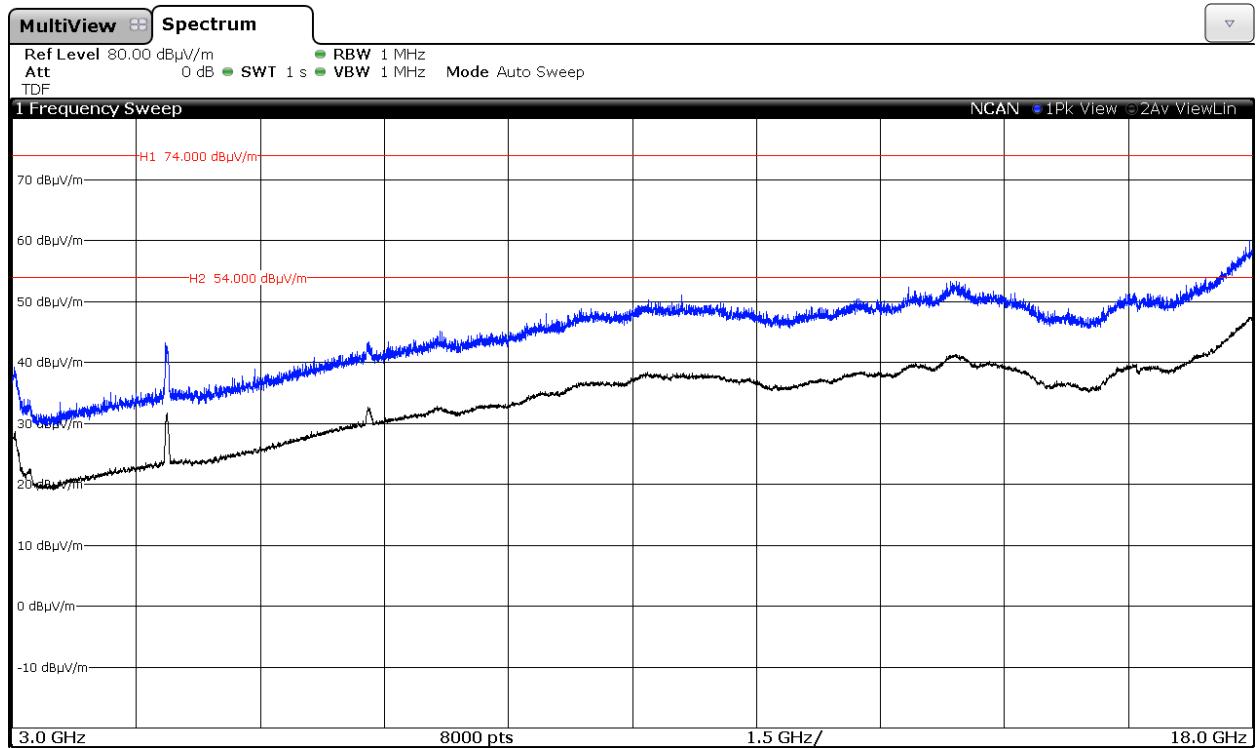


Chain A+B


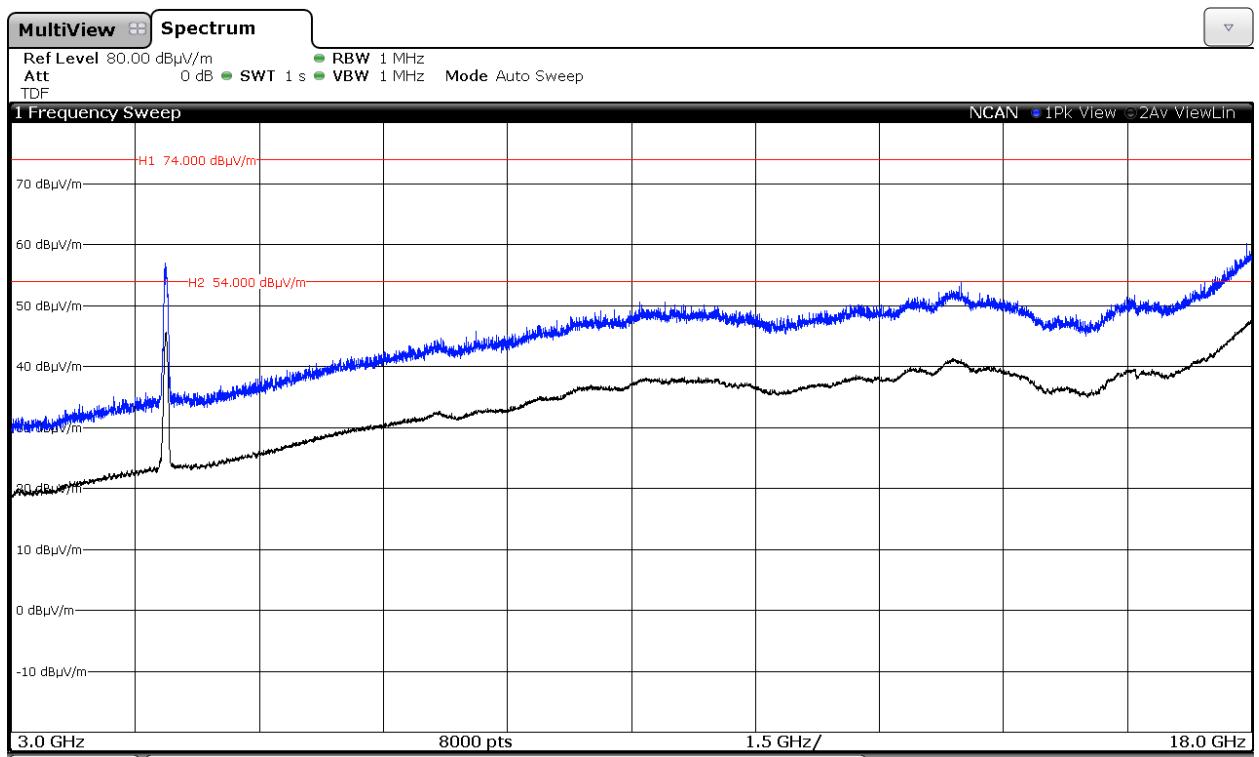
4. WiFi 2.4GHz 802.11 n40 mode

CHANNEL 6 (2437 MHz).

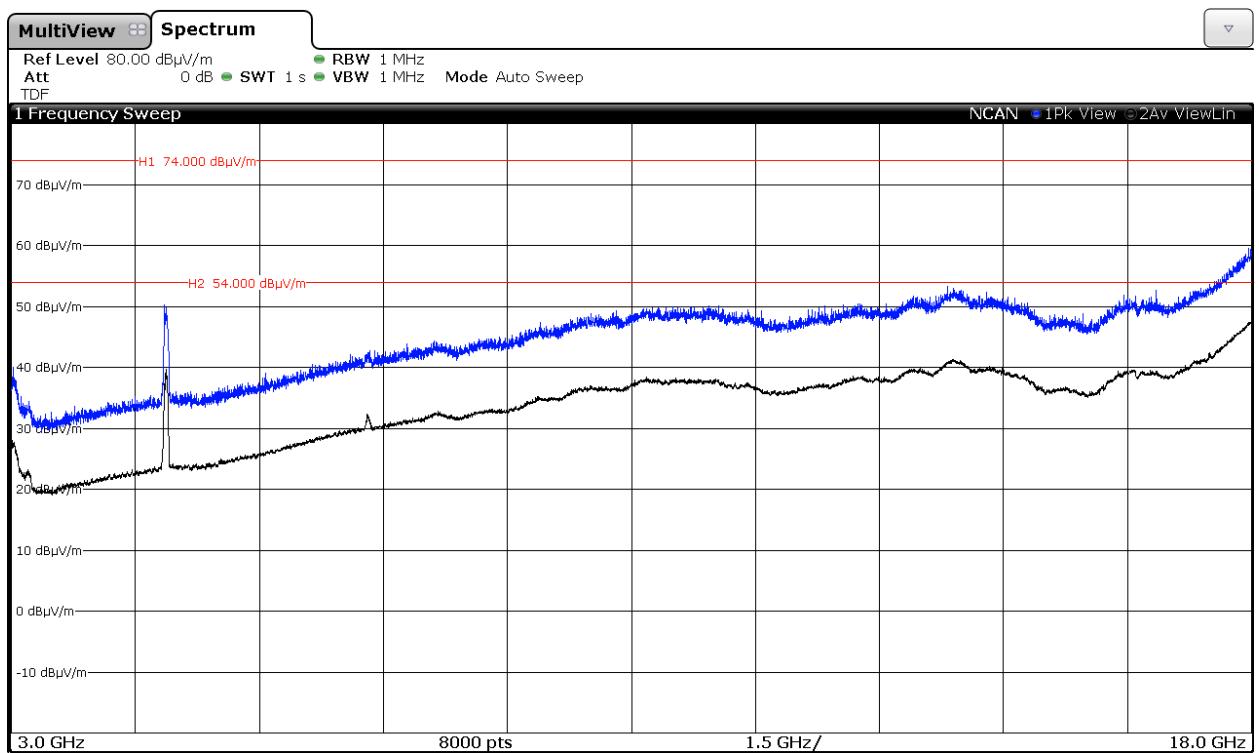
Chain A.



Chain B

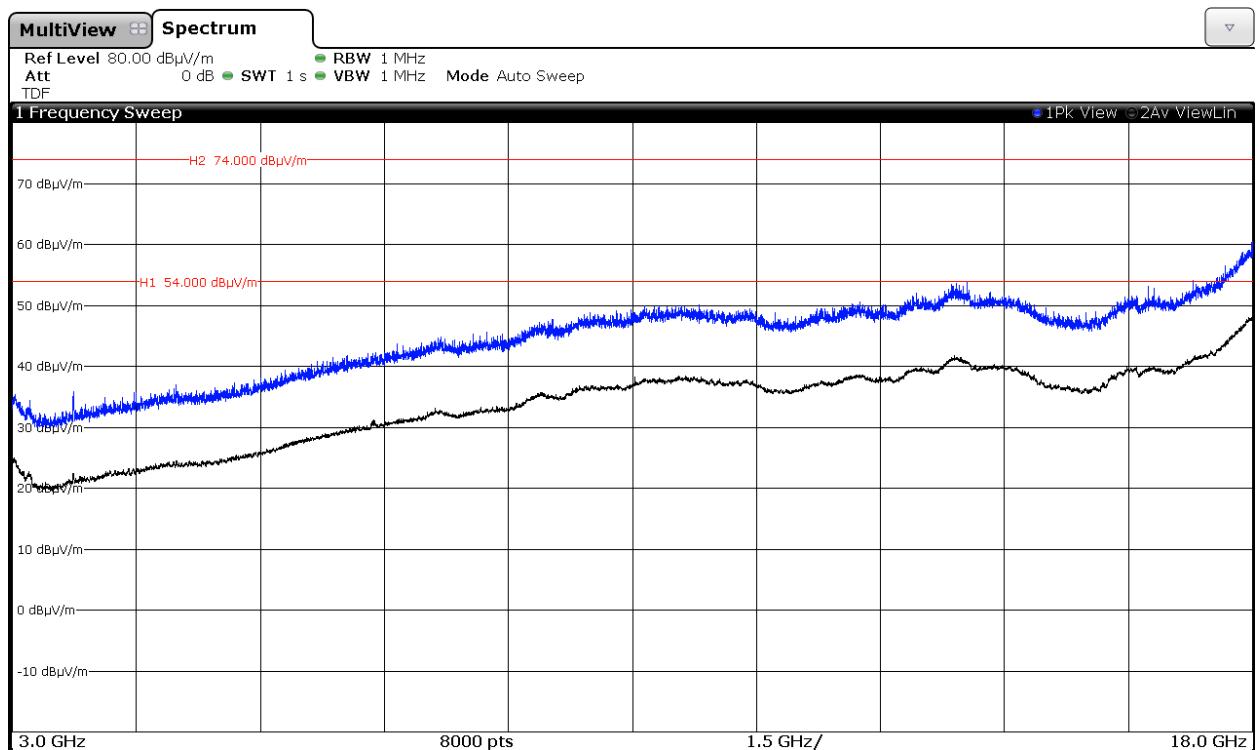


Chain A+B

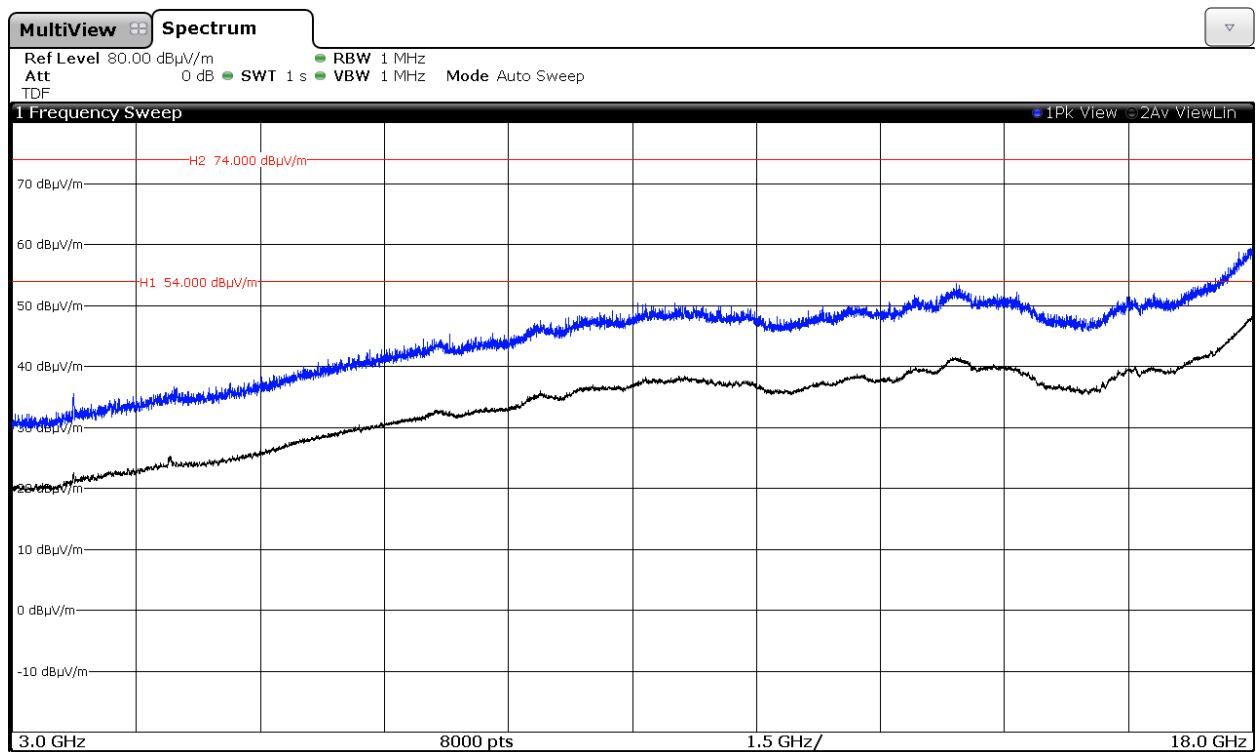


CHANNEL 10F (2457 MHz).

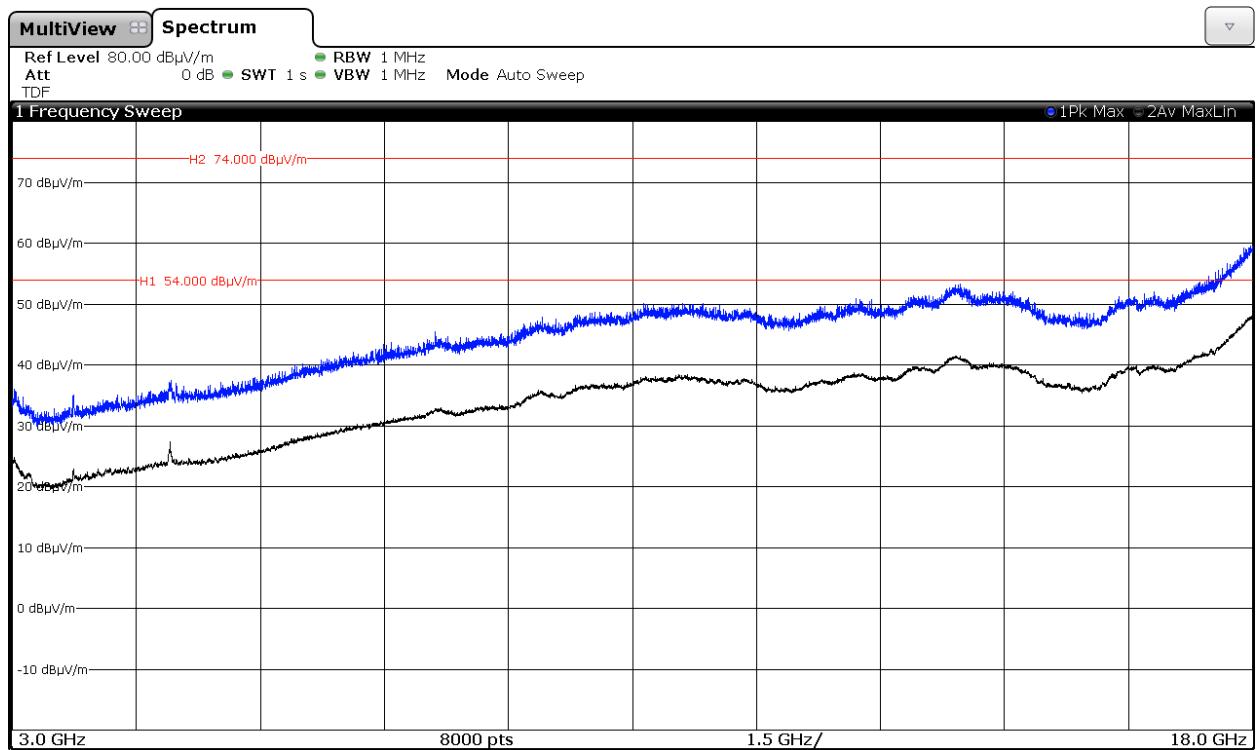
Chain A



Chain B

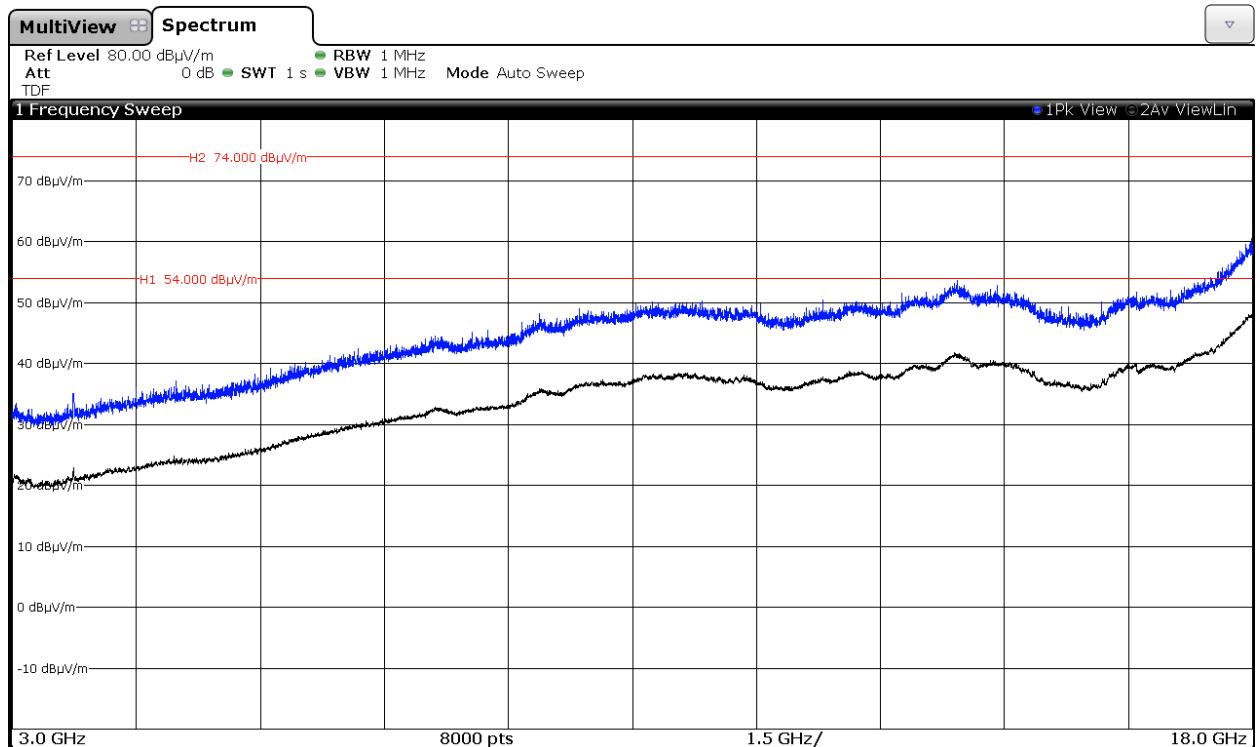


Chain A+B

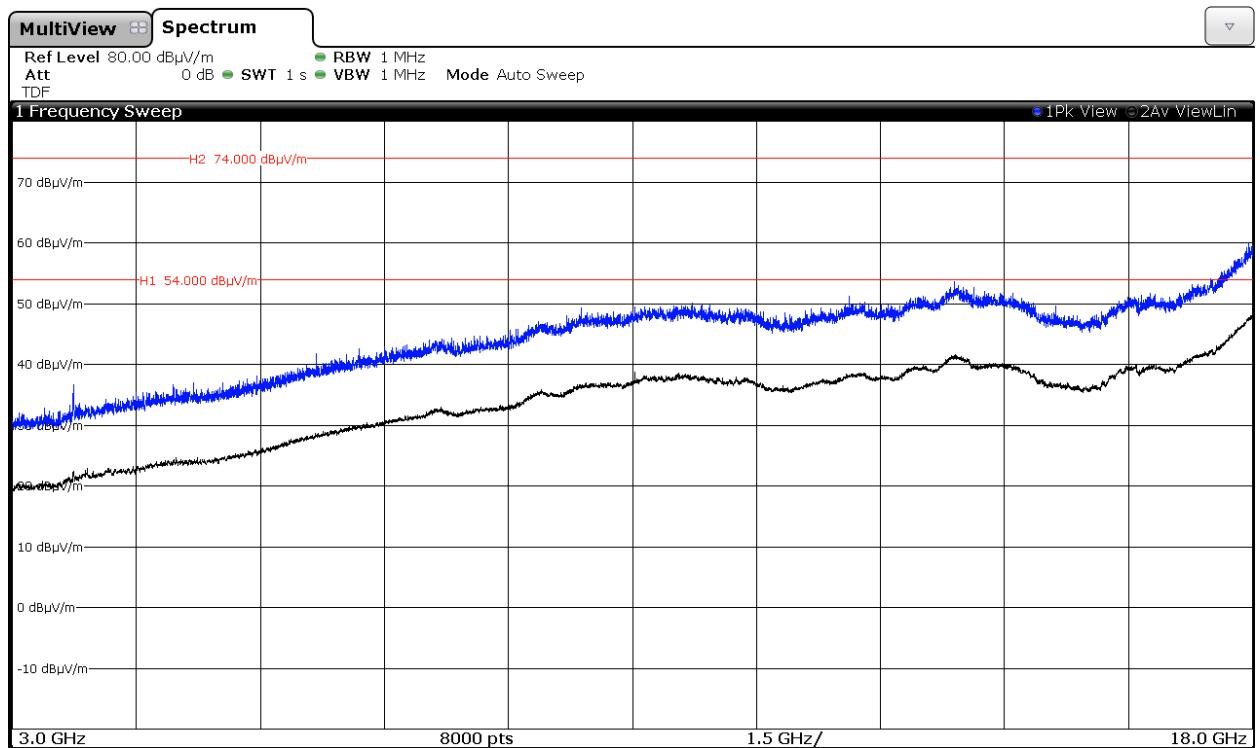


CHANNEL 11F (2462 MHz).

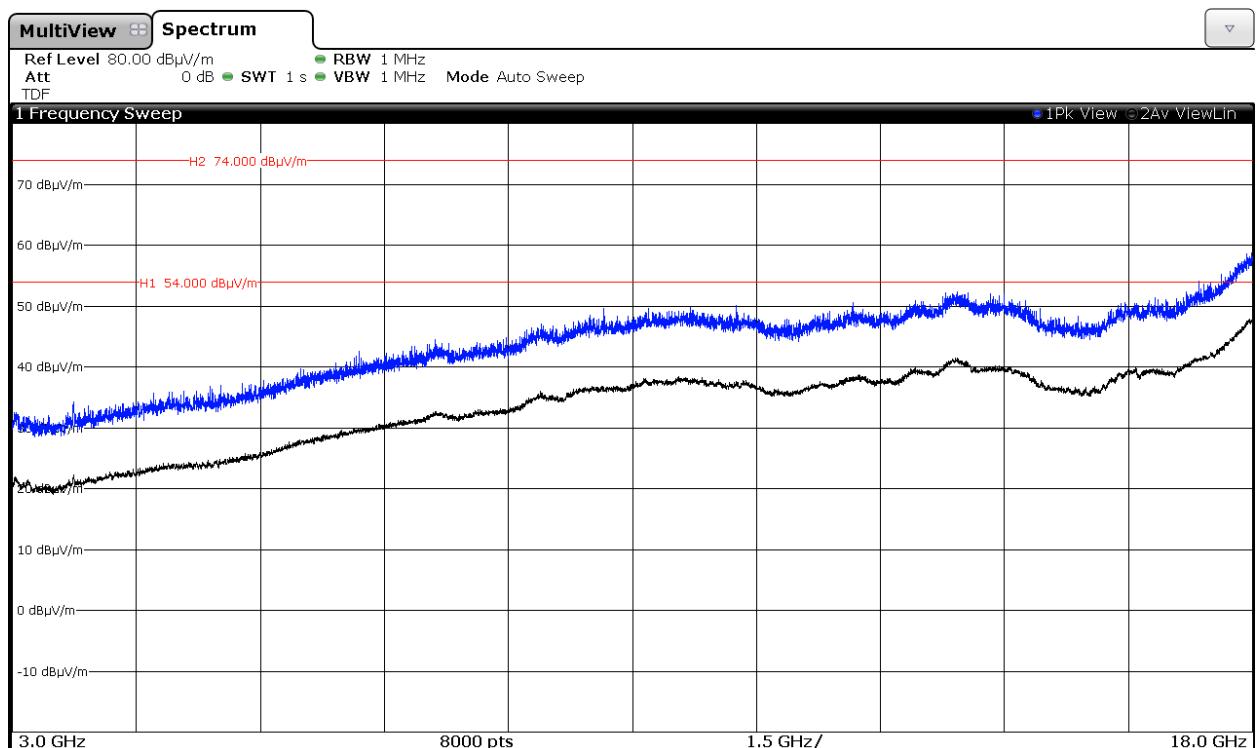
Chain A



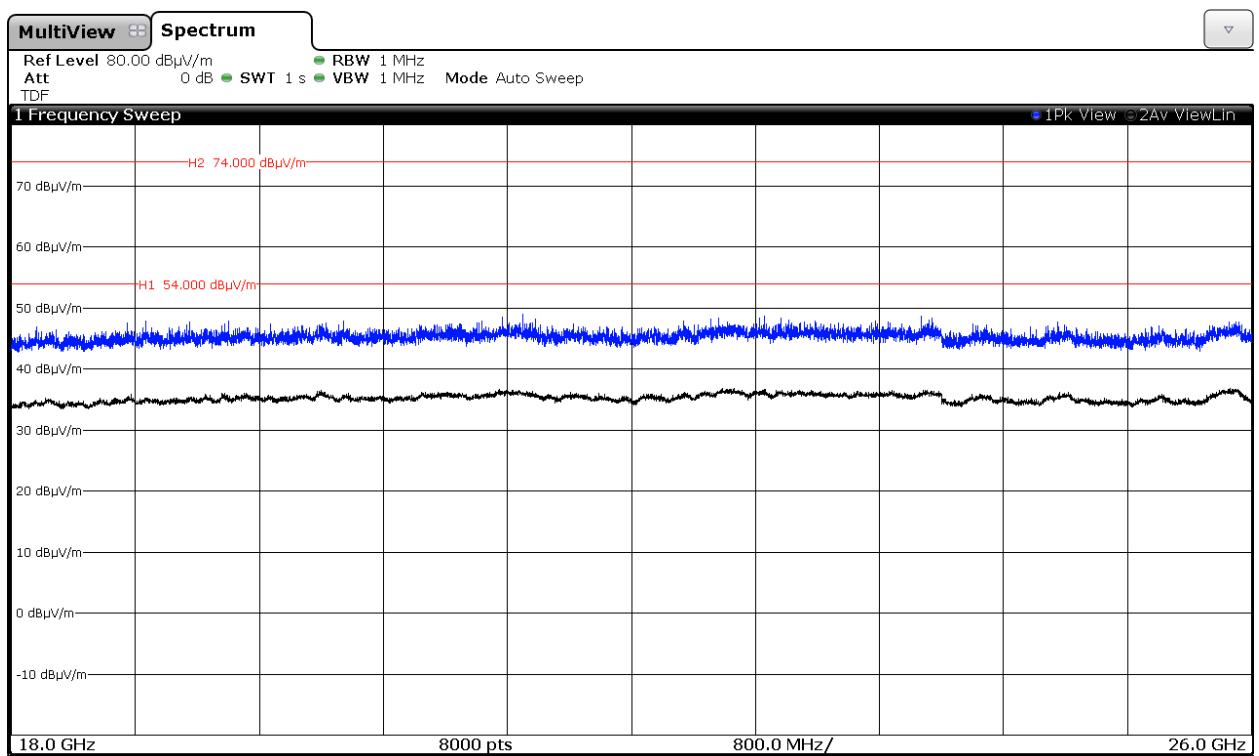
Chain B



Chain A+B



FREQUENCY RANGE 18 GHz to 25 GHz. No spurious signals were detected.



(This plot is valid for SISO and MIMO modes).

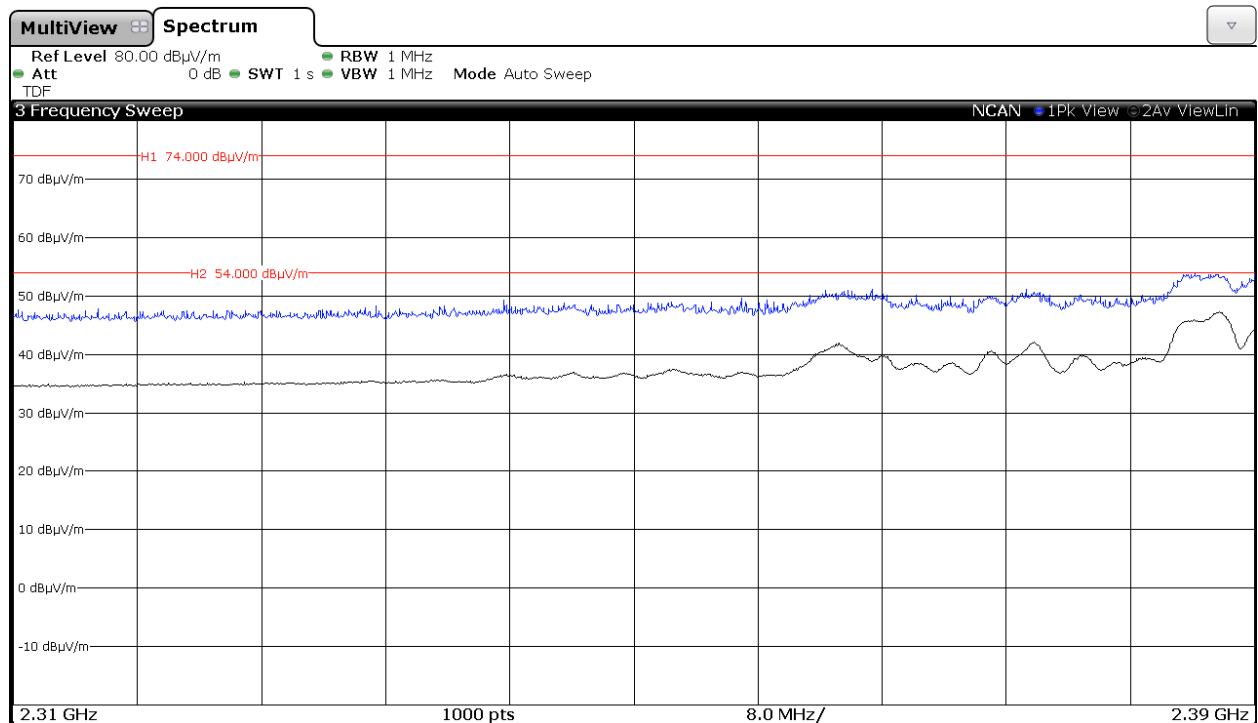
Radiated spurious emissions at band-edges and inside restricted bands 2.31-2.39 GHz and 2.4835 – 2.5 GHz.

FREQUENCY RANGE 2.31 GHz to 2.39 GHz. (RESTRICTED BAND)

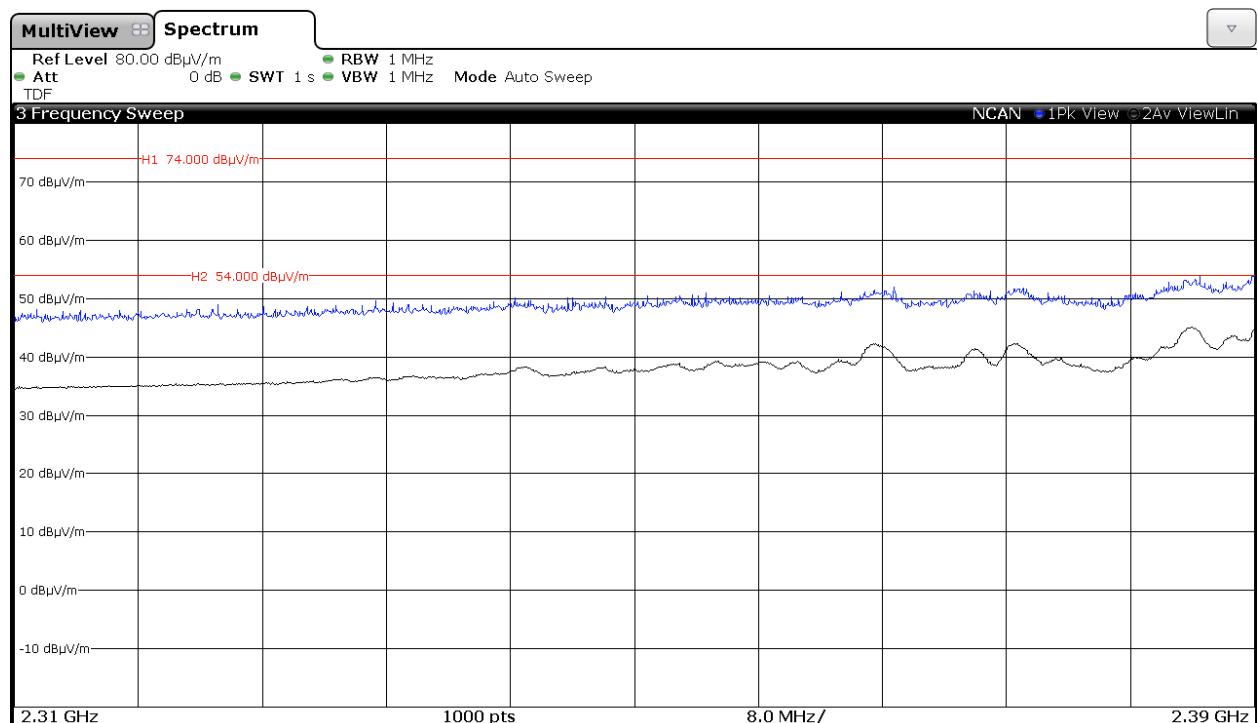
1. WiFi 2.4GHz 802.11 b mode

CHANNEL 1 (2412 MHz).

Chain A

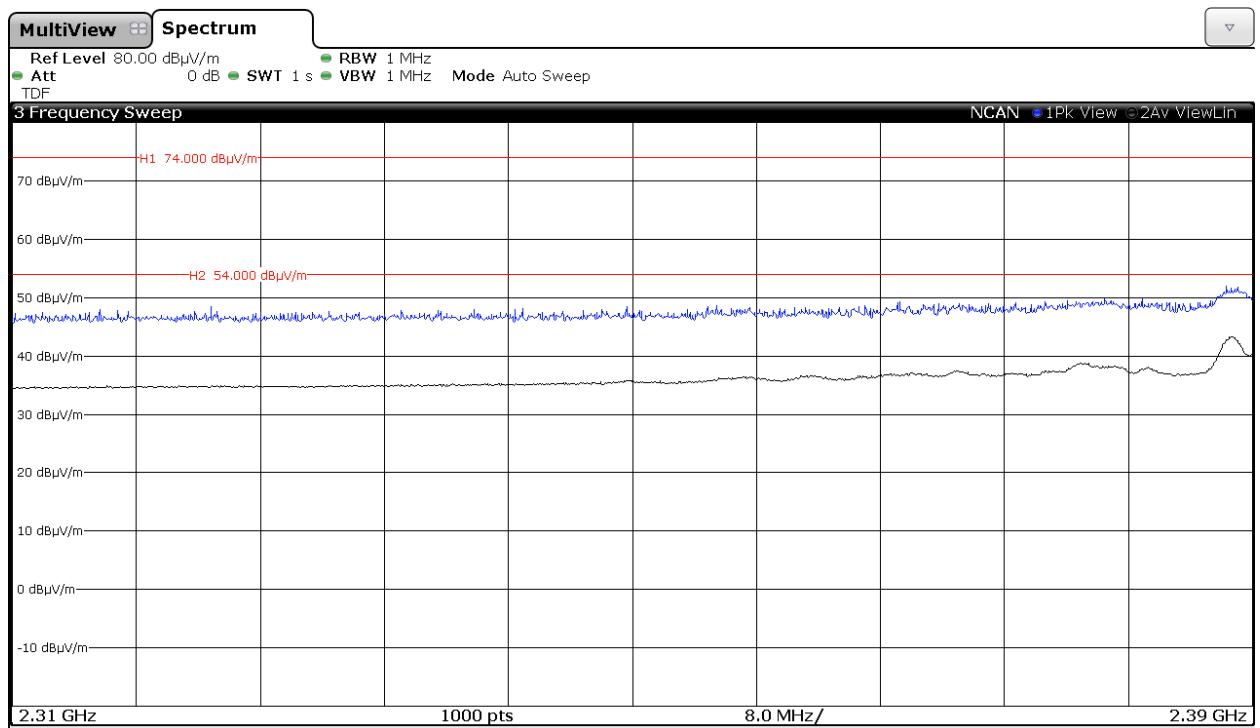


Chain B

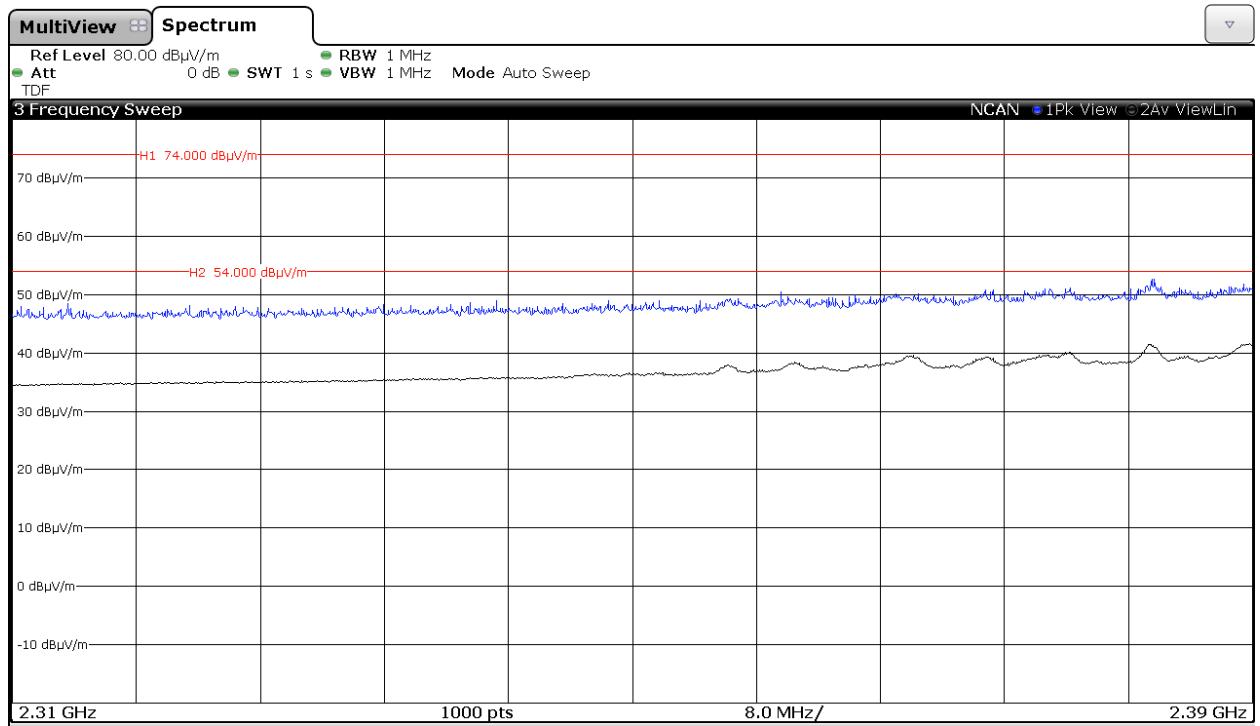


CHANNEL 6 (2437 MHz).

Chain A

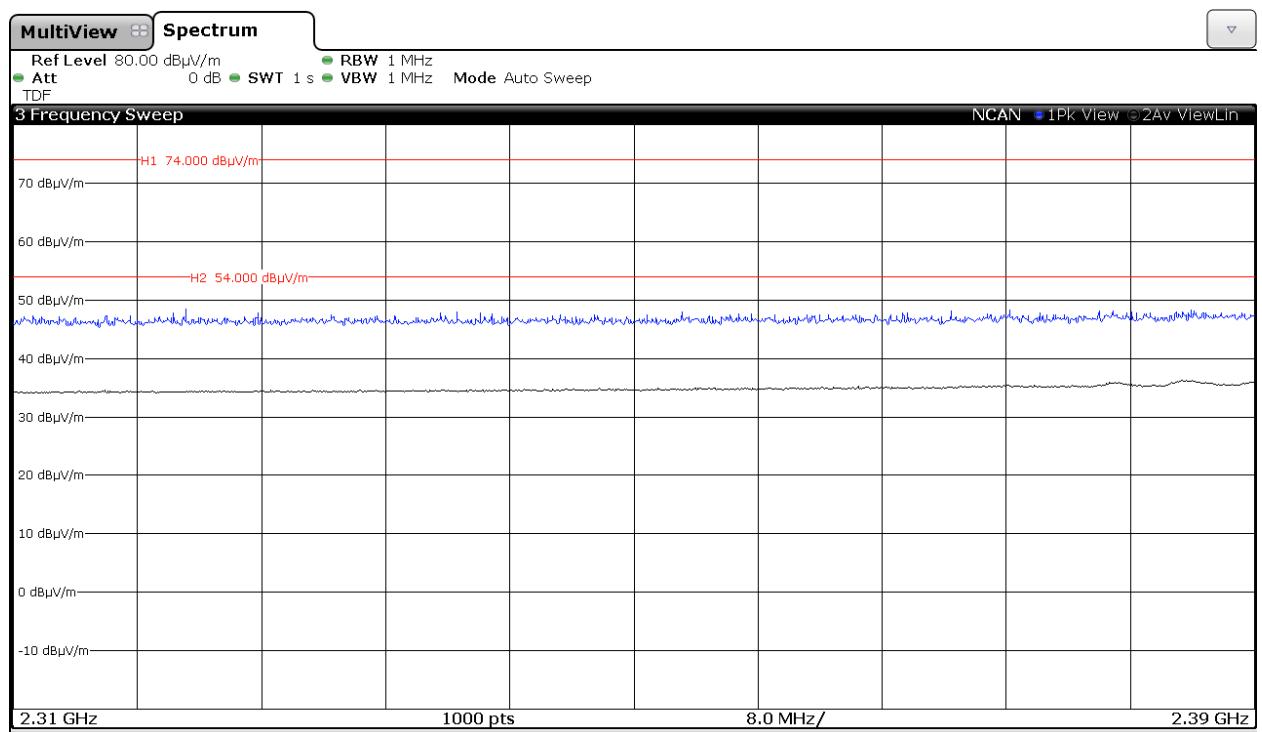


Chain B

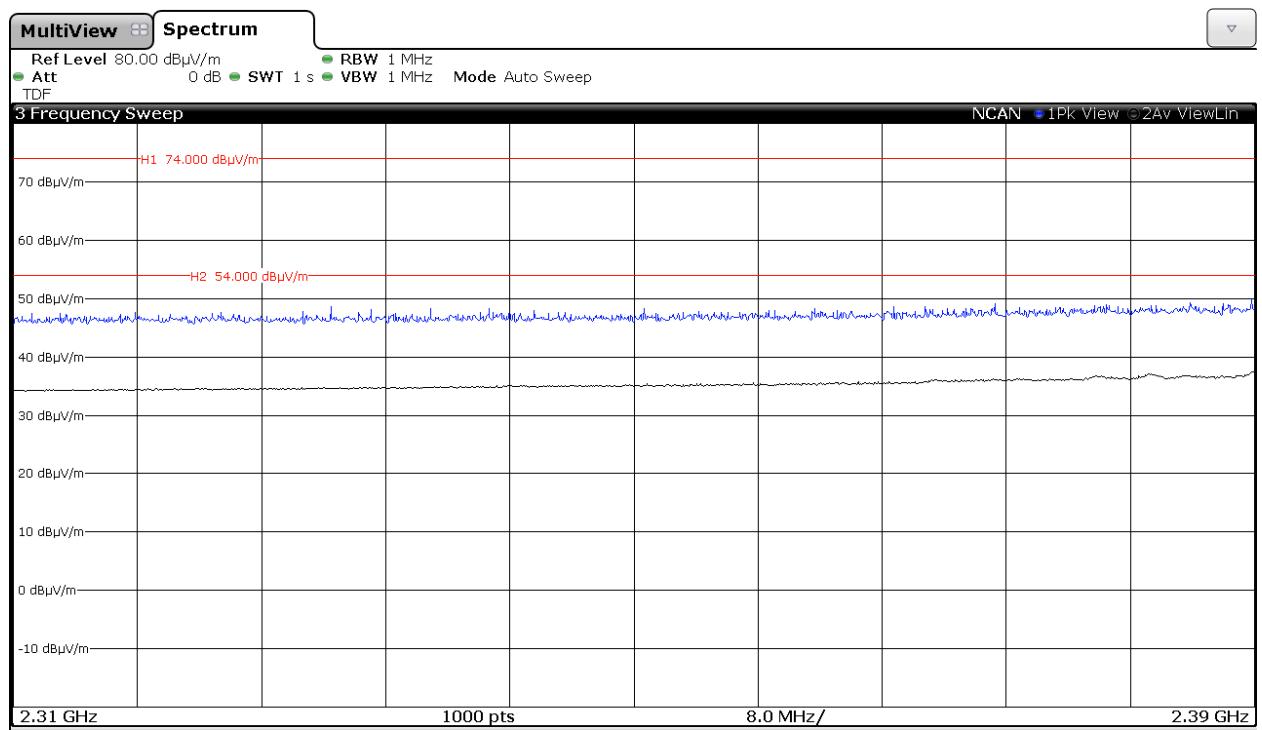


CHANNEL 11 (2462 MHz).

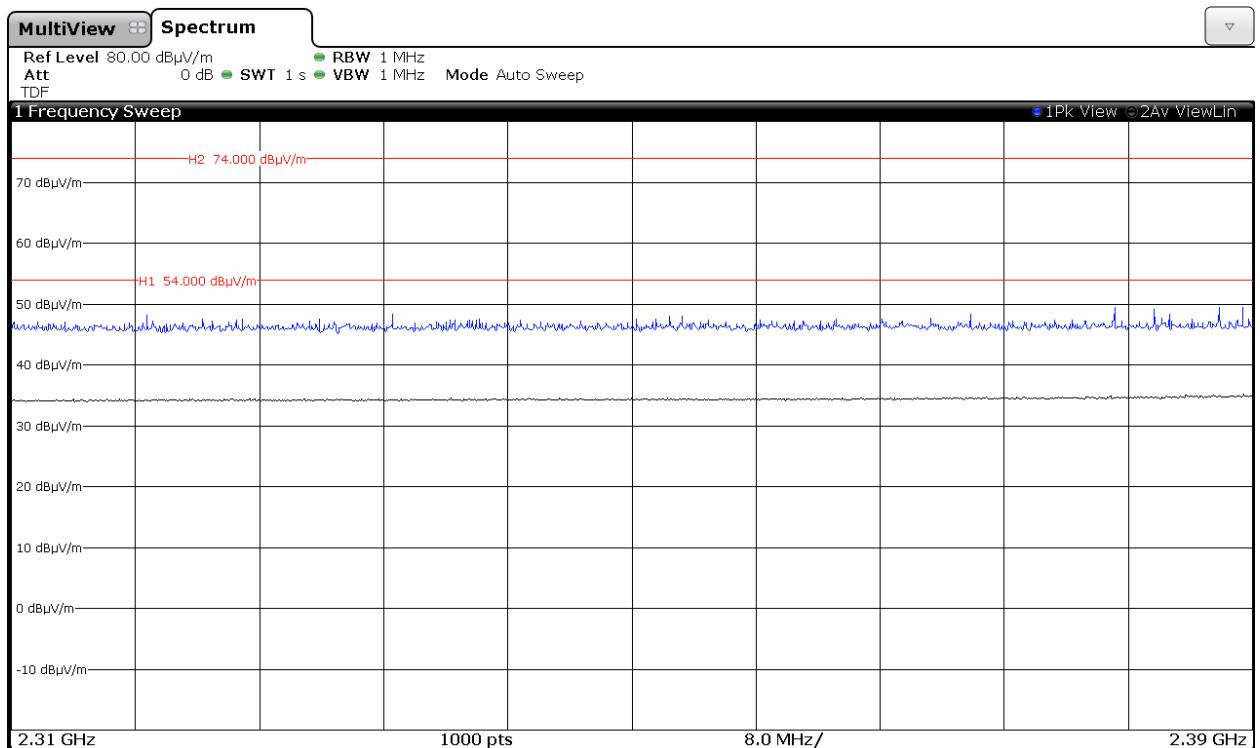
Chain A



Chain B

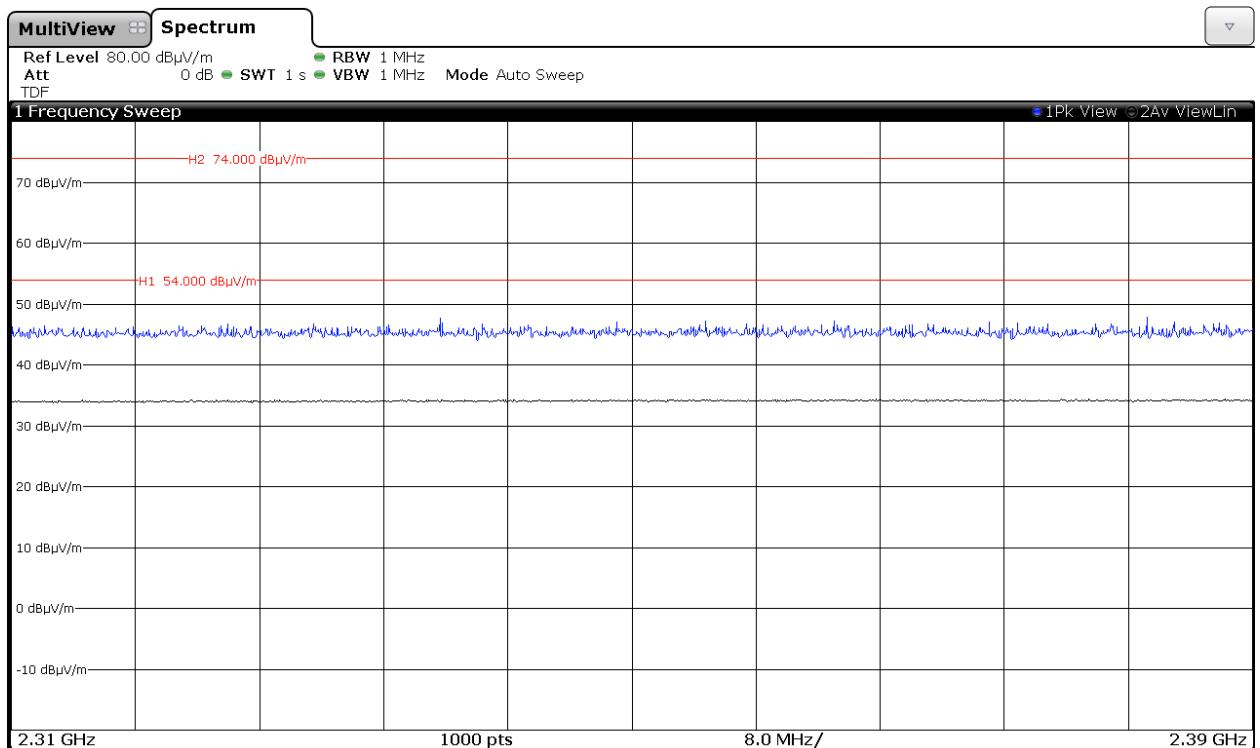


CHANNEL 12 (2467 MHz).



Note: This plot is valid for both Chain A and Chain B

CHANNEL 13 (2472 MHz).

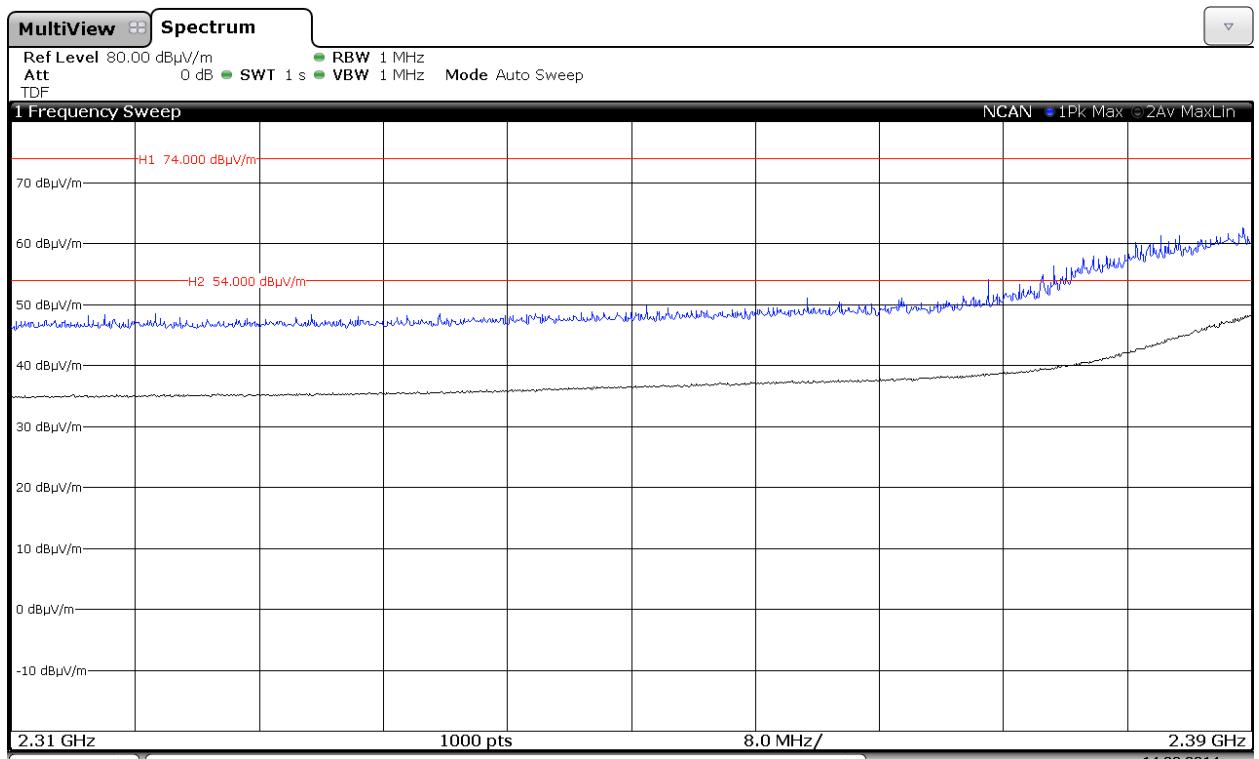


Note: This plot is valid for both Chain A and Chain B

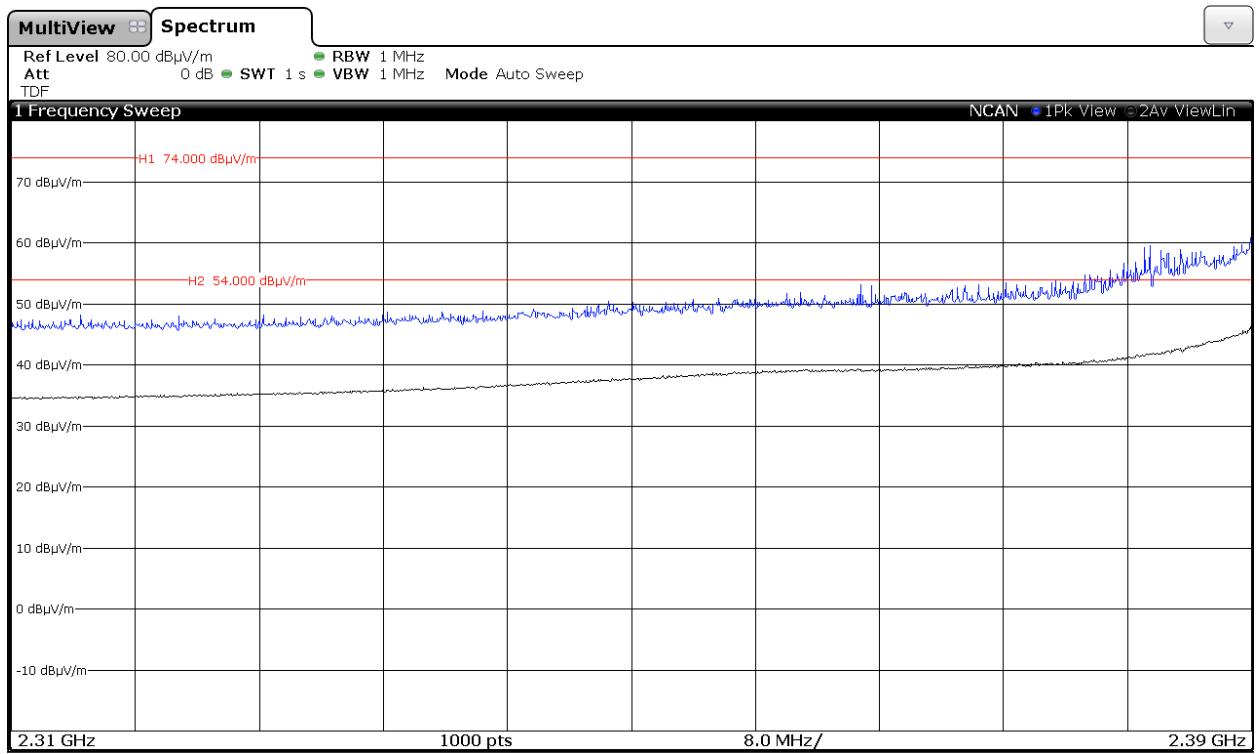
2. WiFi 2.4GHz 802.11 g mode

CHANNEL 1 (2412 MHz).

Chain A

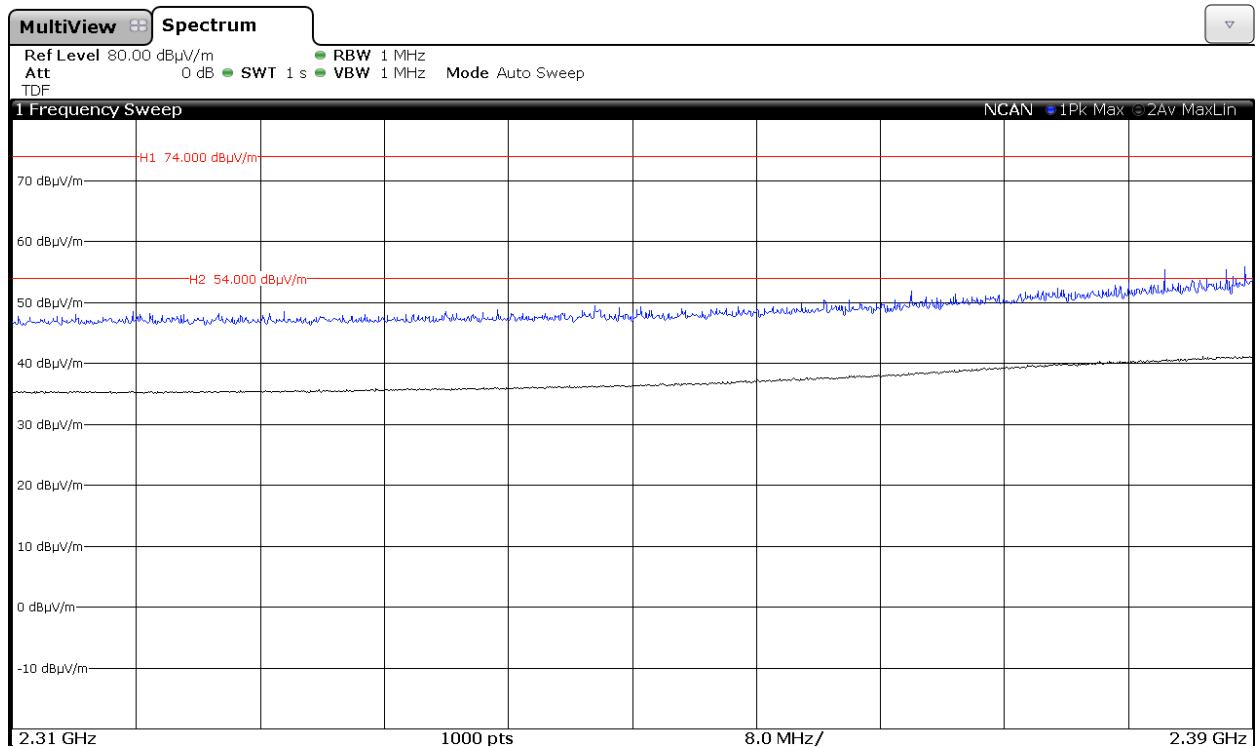


Chain B

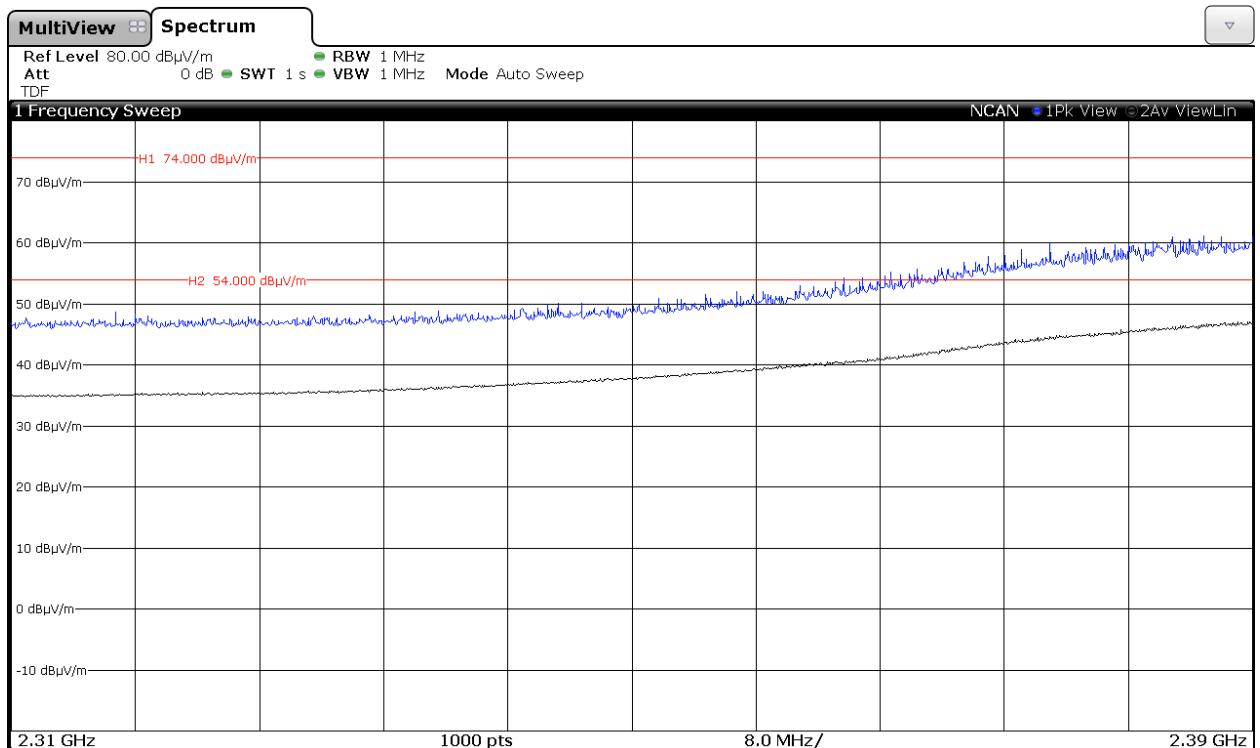


CHANNEL 6 (2437 MHz).

Chain A

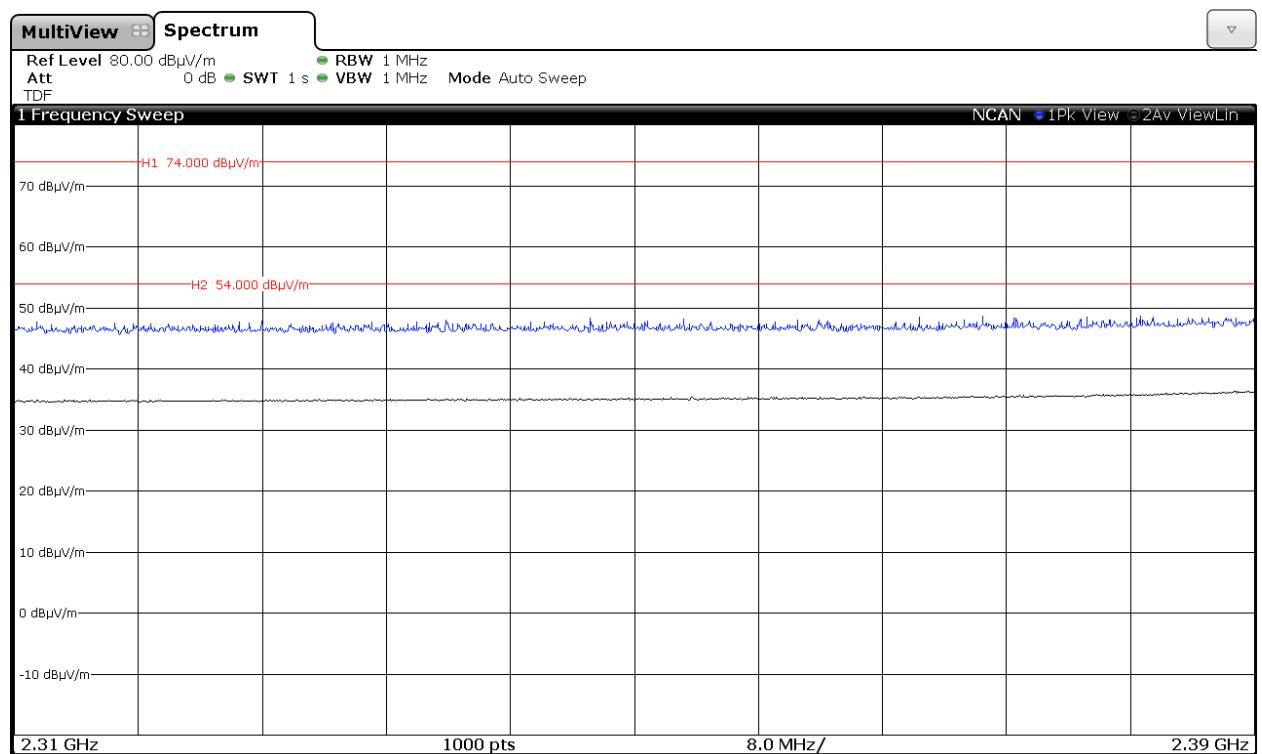


Chain B

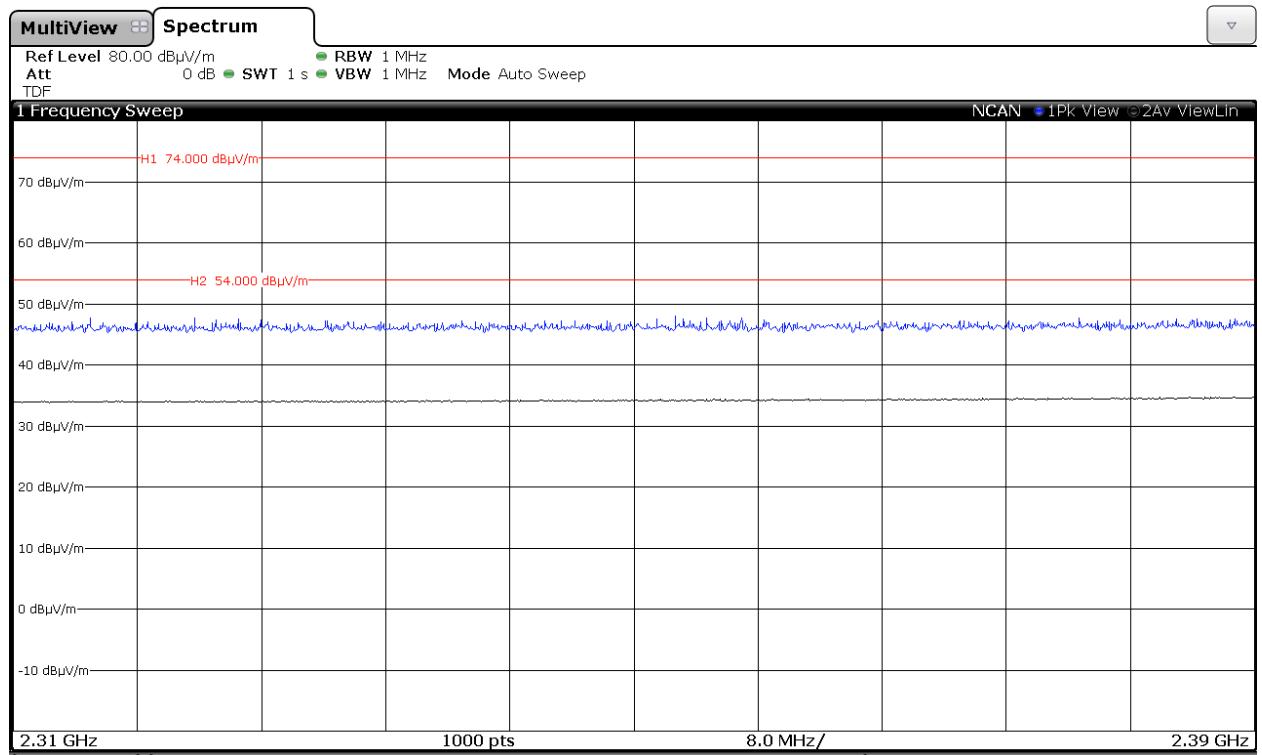


CHANNEL 11 (2462 MHz).

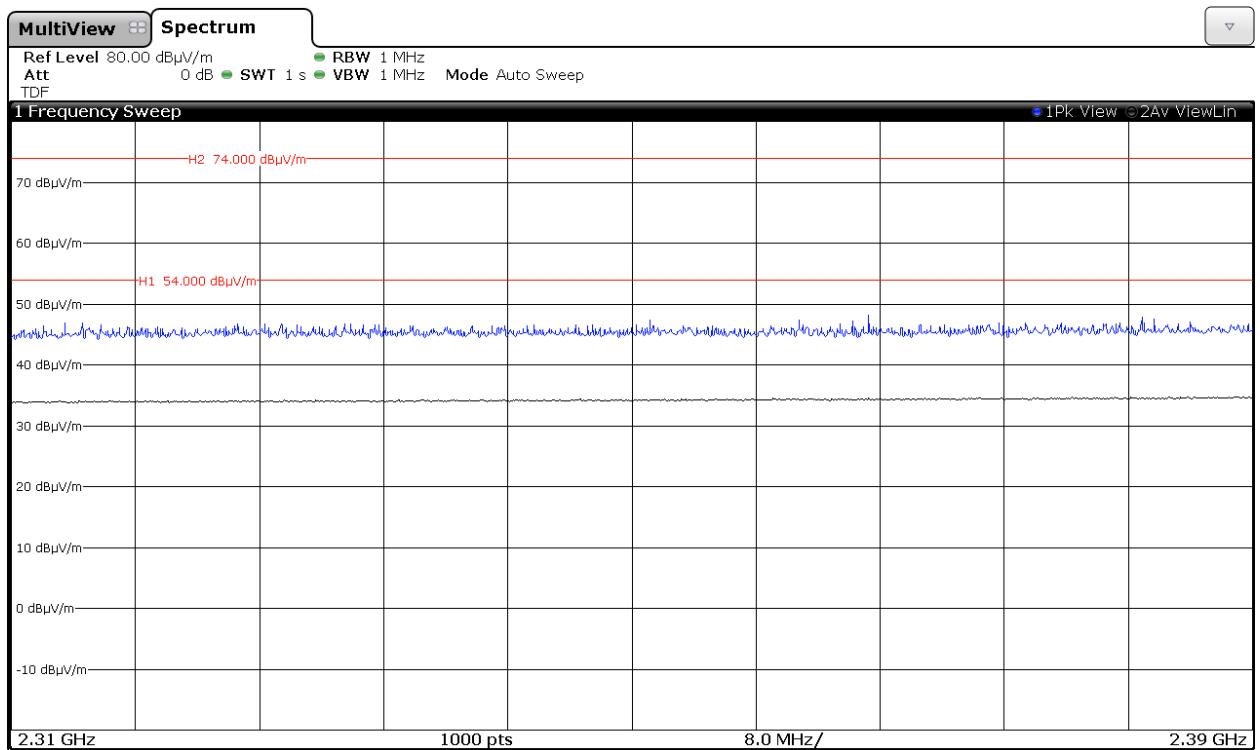
Chain A



Chain B

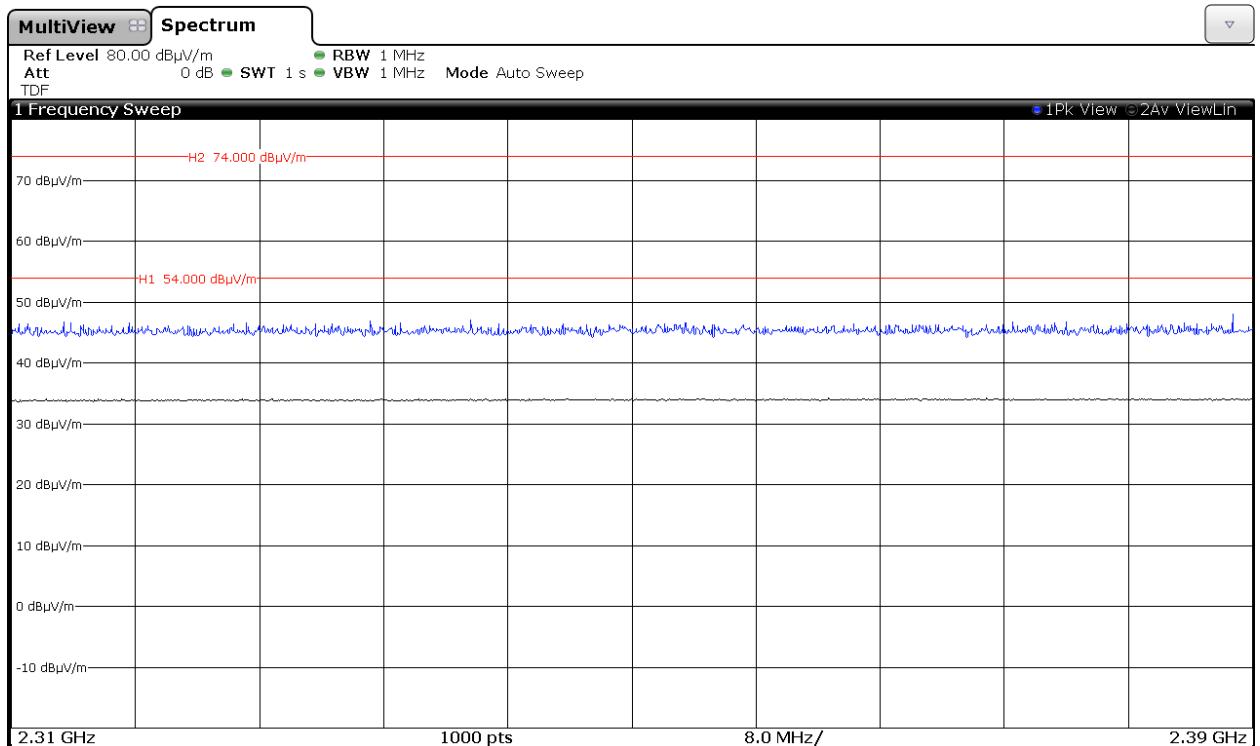


CHANNEL 12 (2467 MHz).



Note: This plot is valid for both Chain A and Chain B

CHANNEL 13 (2472 MHz).

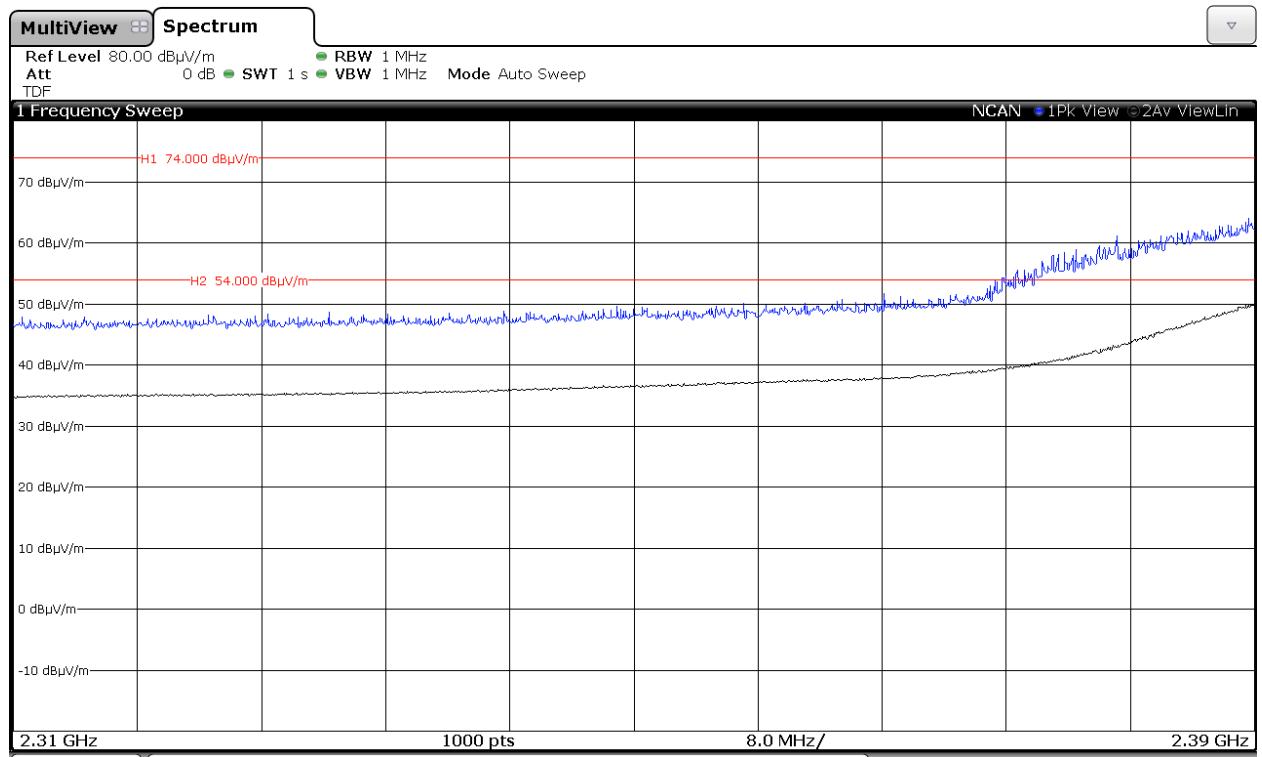


Note: This plot is valid for both Chain A and Chain B

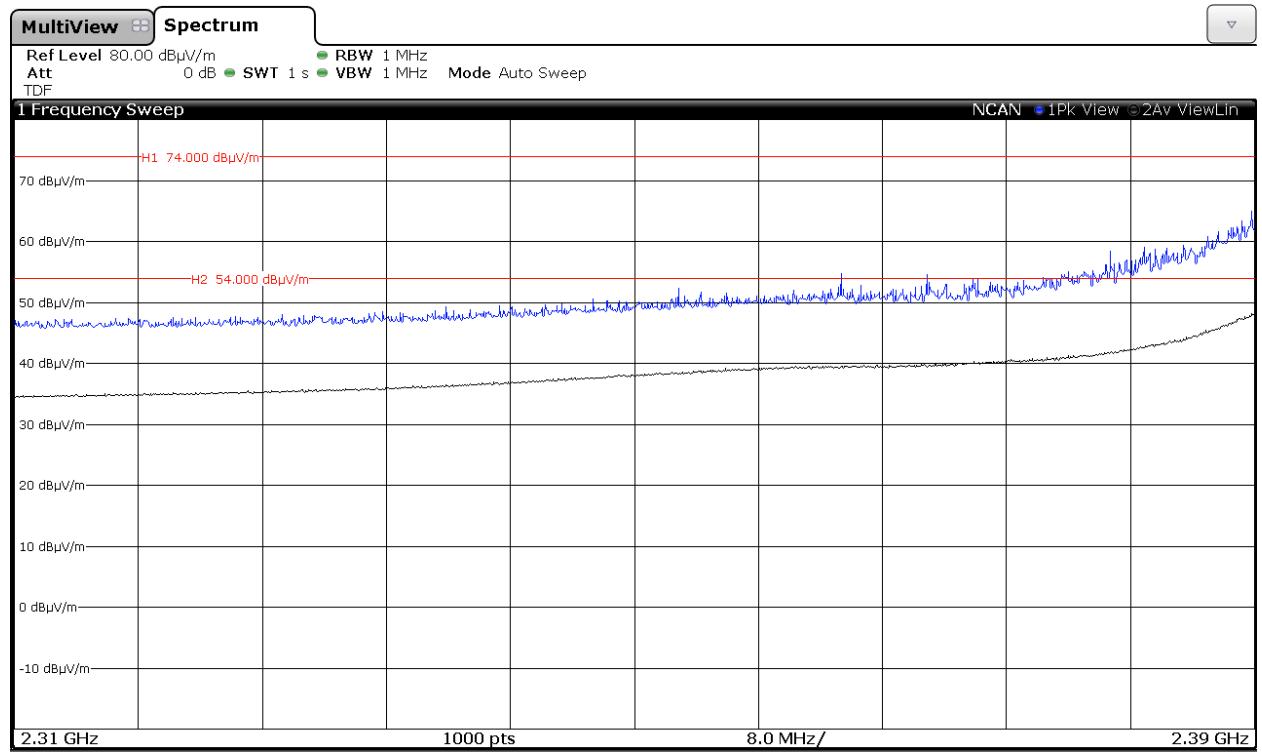
3. WiFi 2.4GHz 802.11 n20 mode

CHANNEL 1 (2412 MHz).

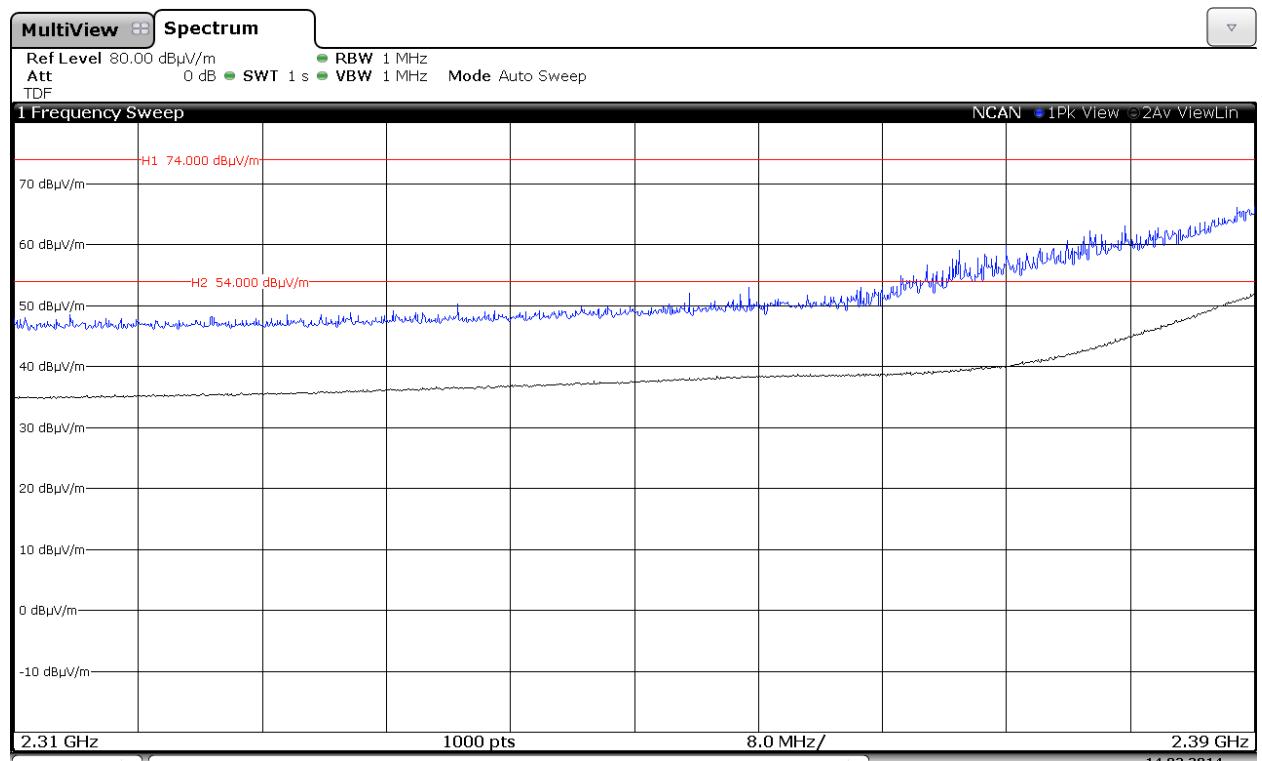
Chain A



Chain B

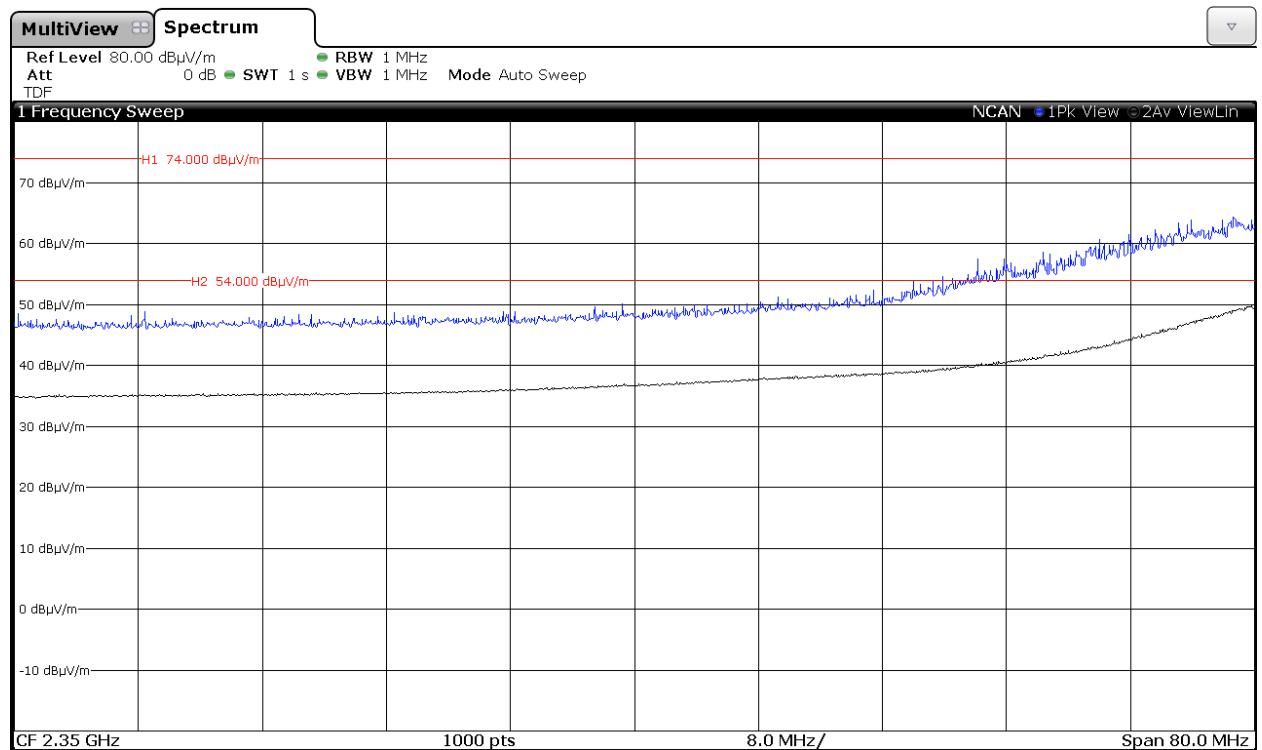


Chain A+B

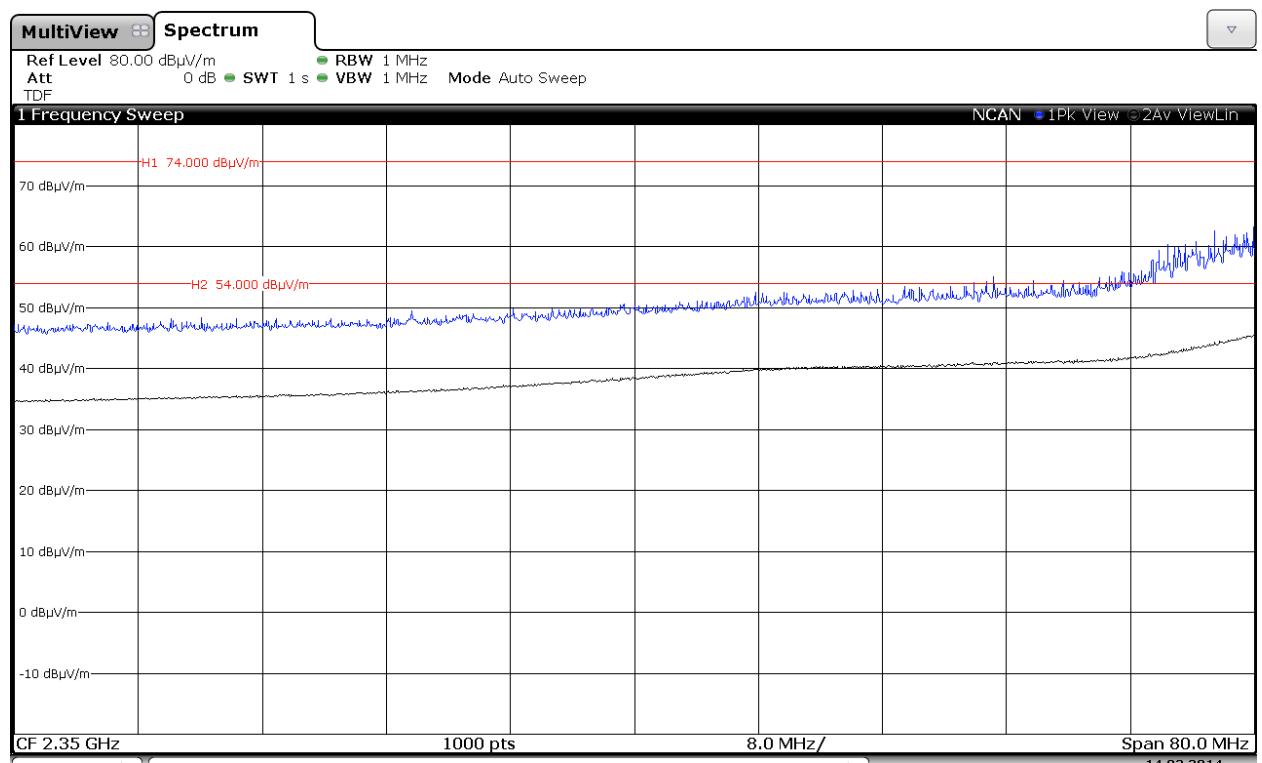


CHANNEL 2 (2417 MHz).

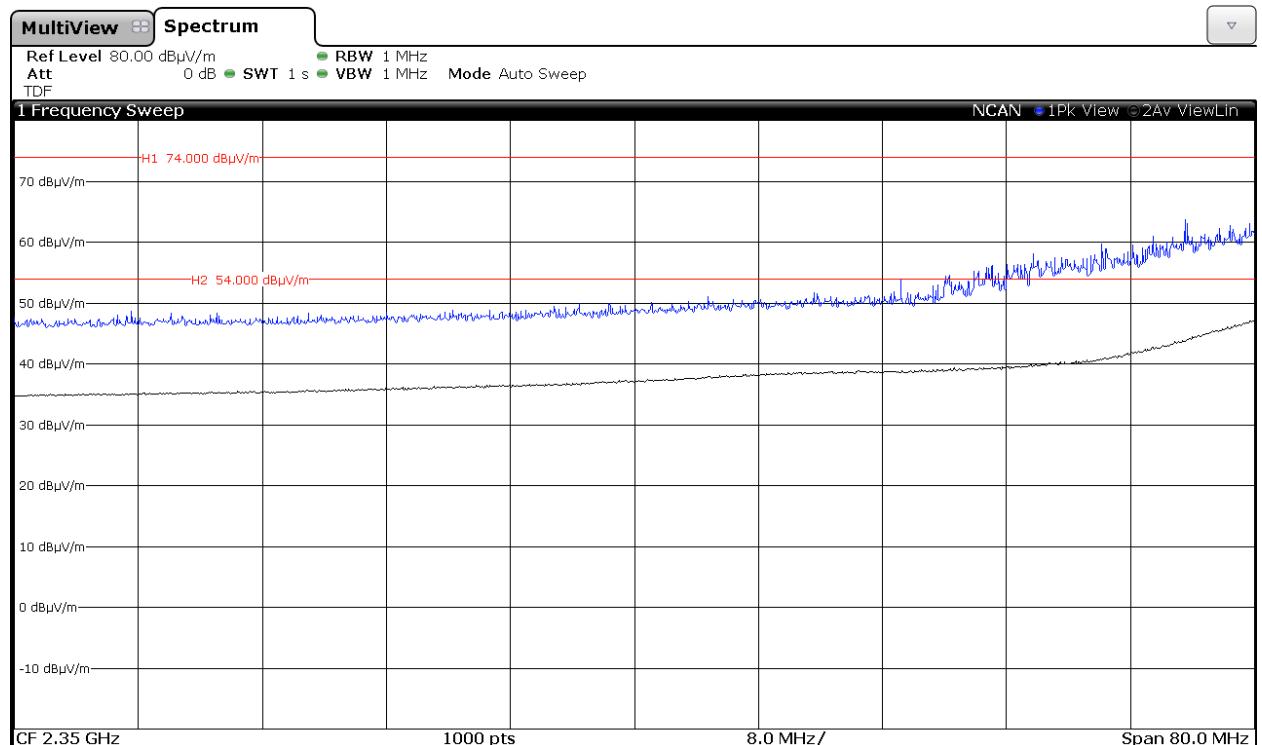
Chain A



Chain B

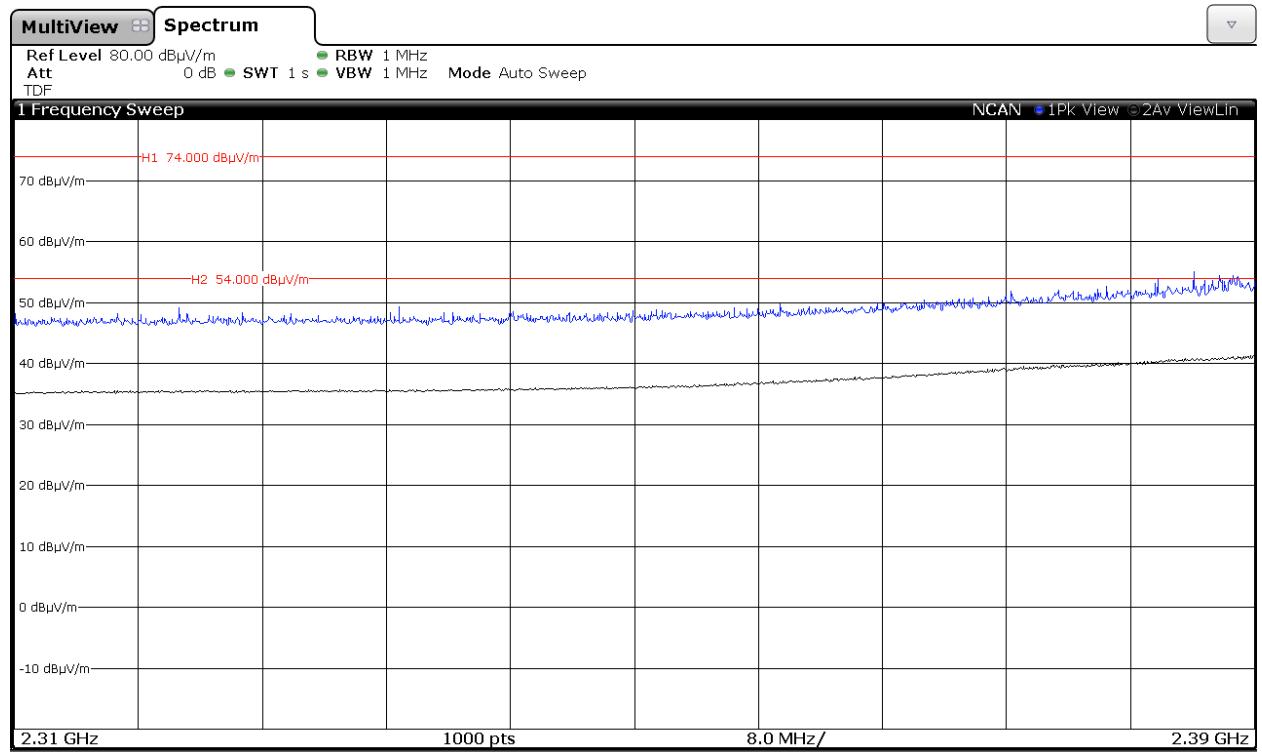


Chain A+B

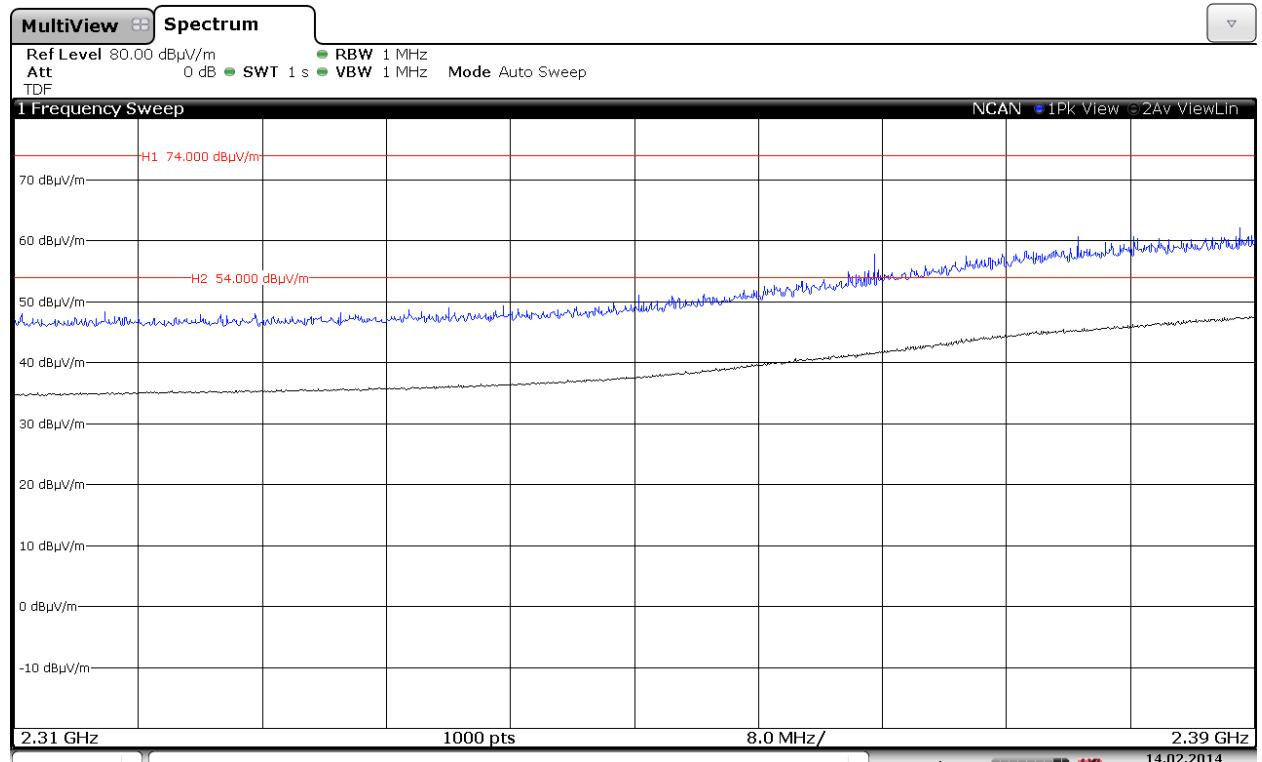


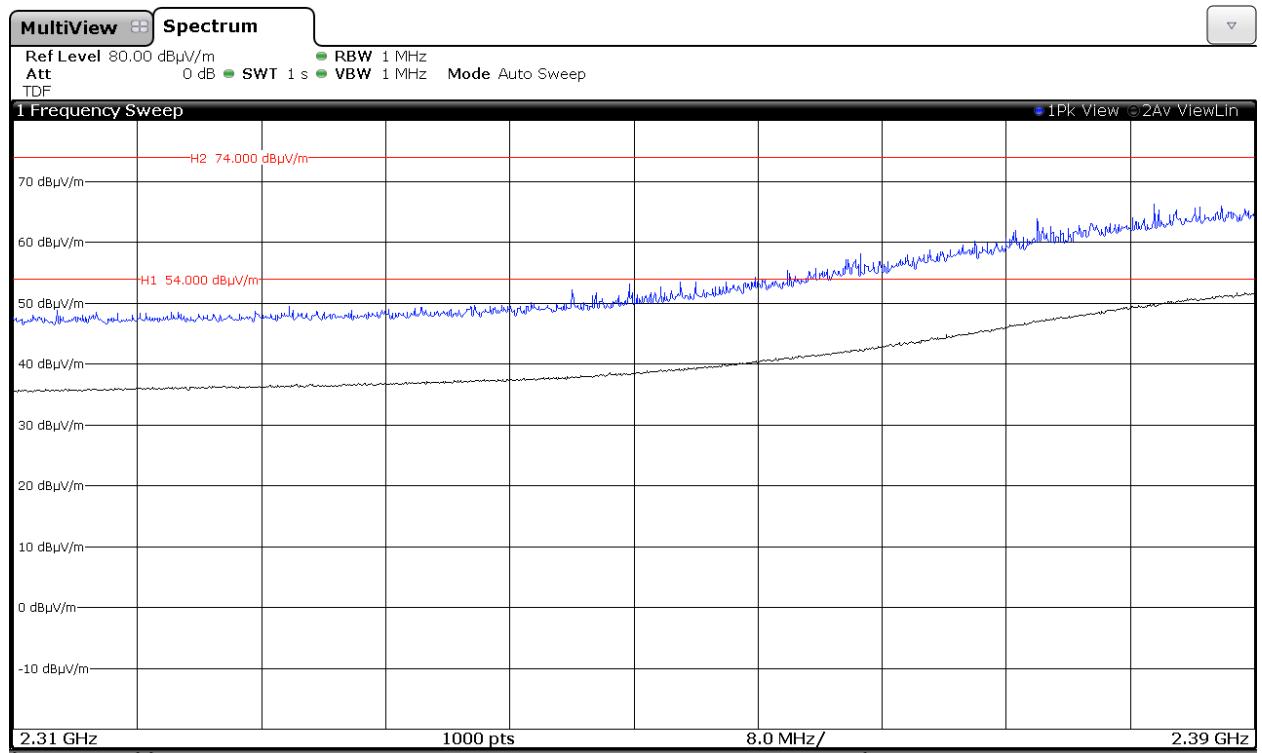
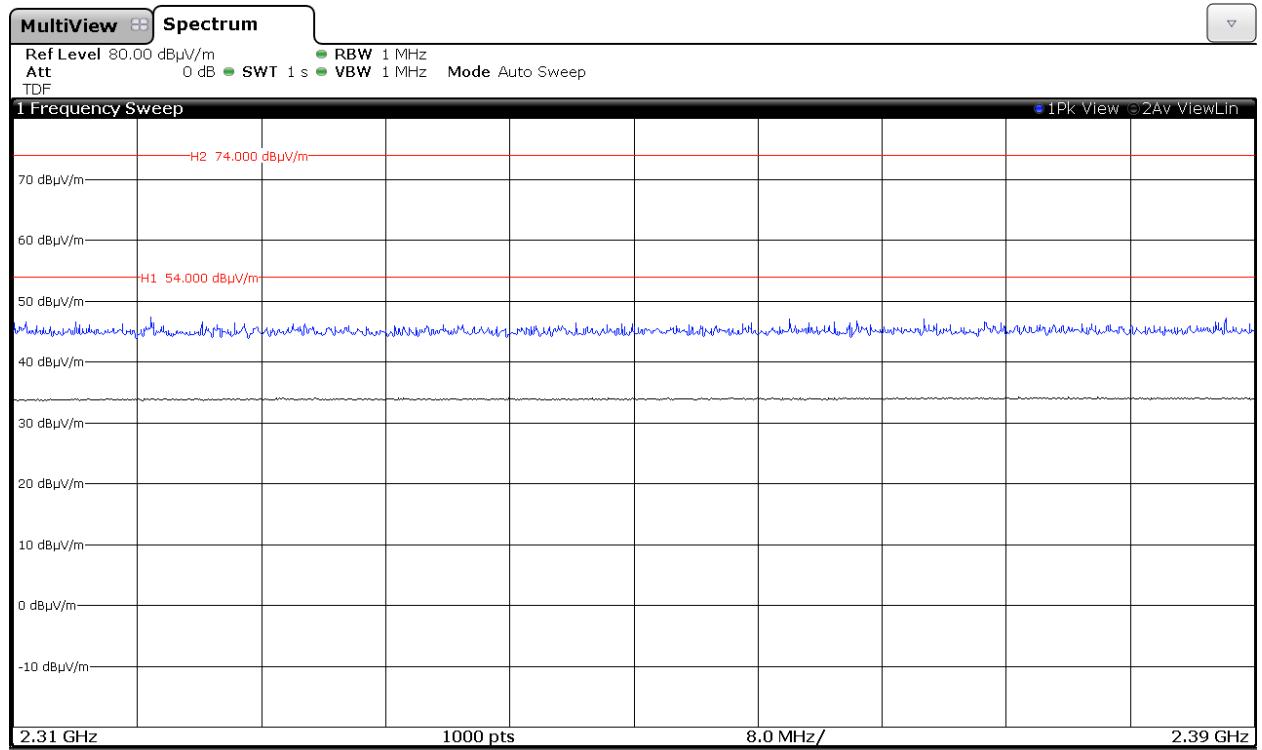
CHANNEL 6 (2437MHz).

Chain A



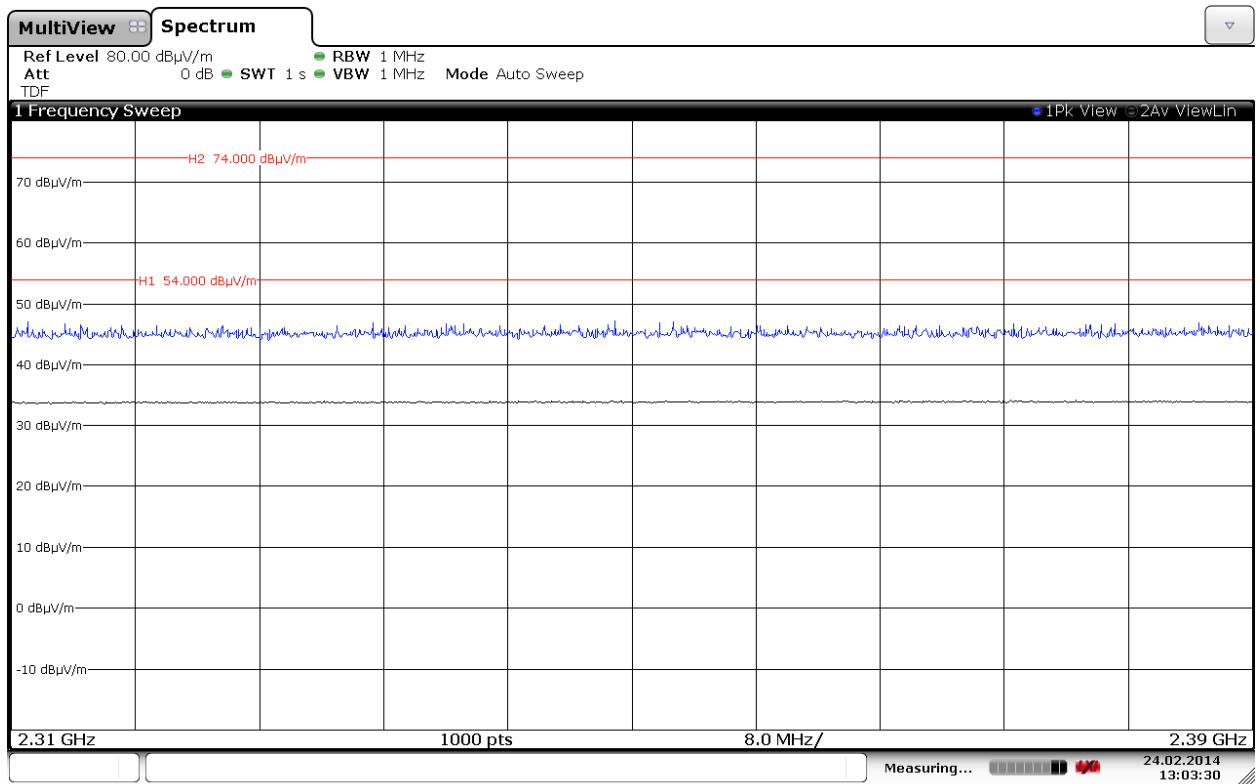
Chain B



Chain A+B

CHANNEL 12 (2467 MHz).


Note: This plot is valid for Chain A, Chain B and Chain A+B.

CHANNEL 13 (2472 MHz).



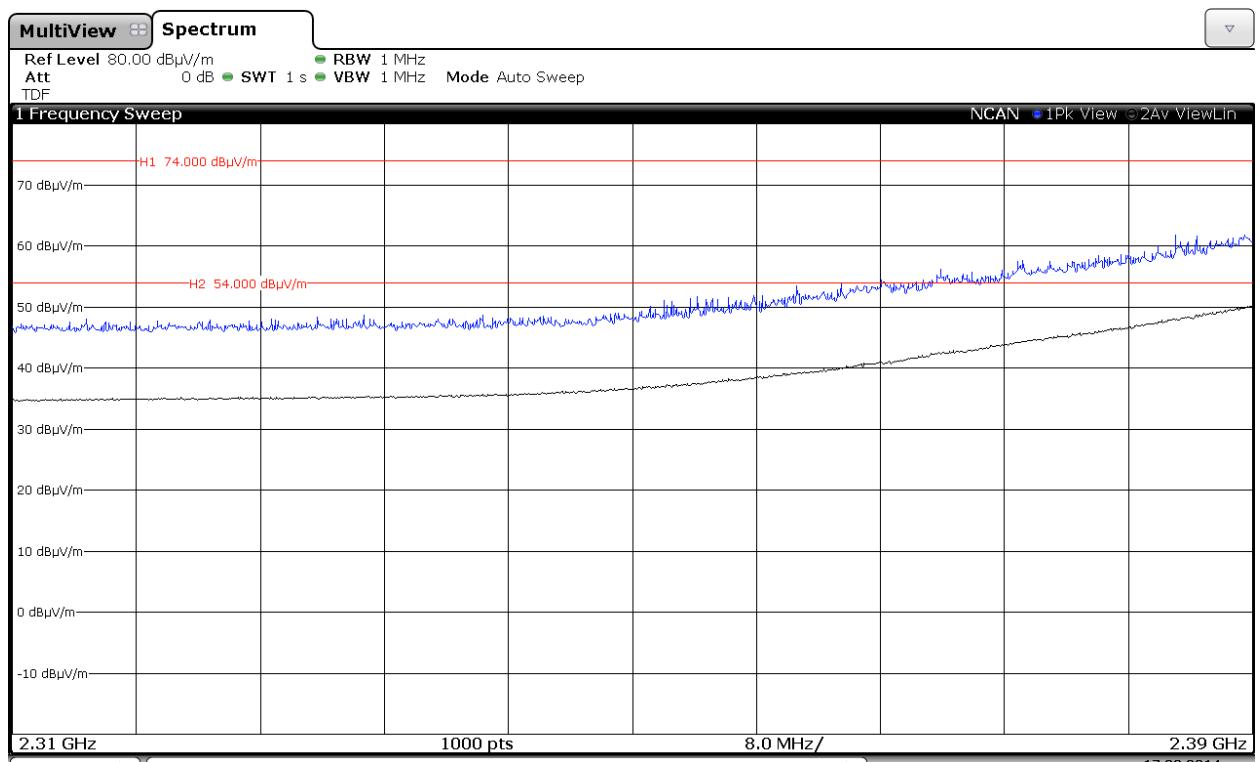
Date: 24.FEB.2014 13:03:30

Note: This plot is valid for Chain A, Chain B and Chain A+B.

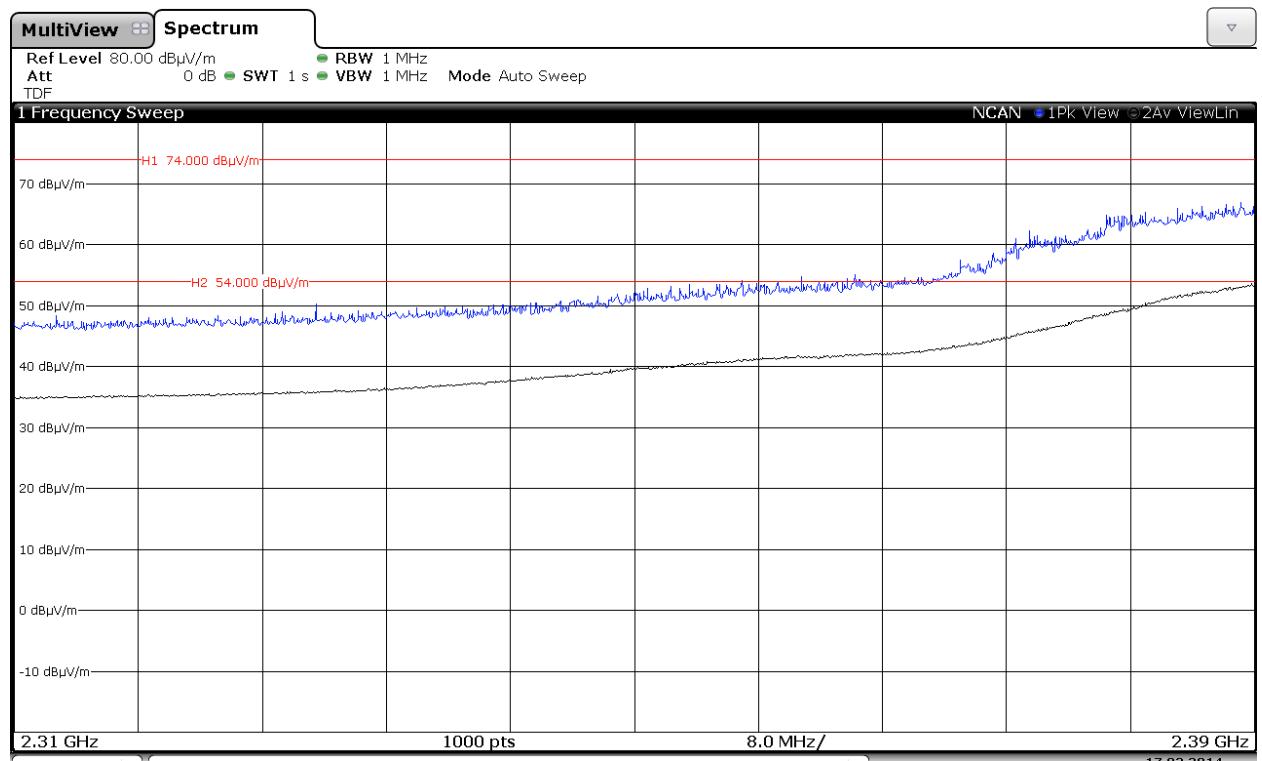
4. WiFi 2.4GHz 802.11 n40 mode

CHANNEL 3 (2422 MHz).

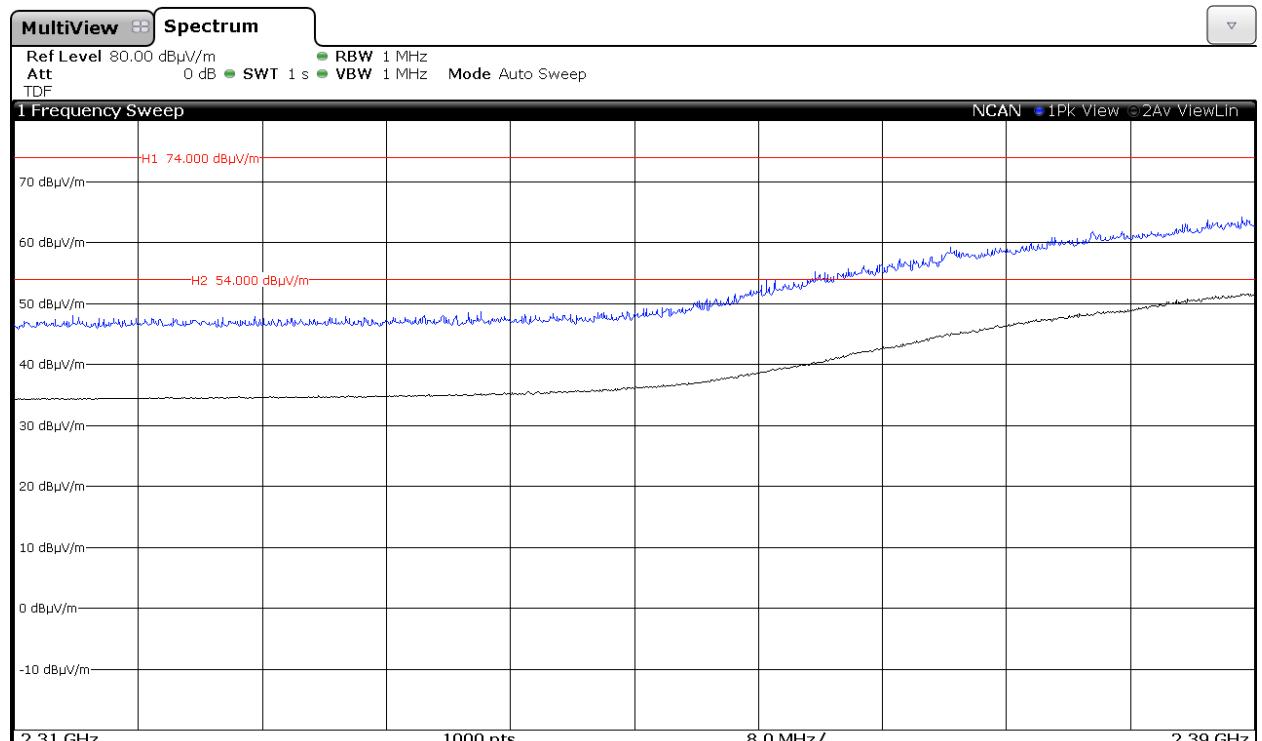
Chain A



Chain B

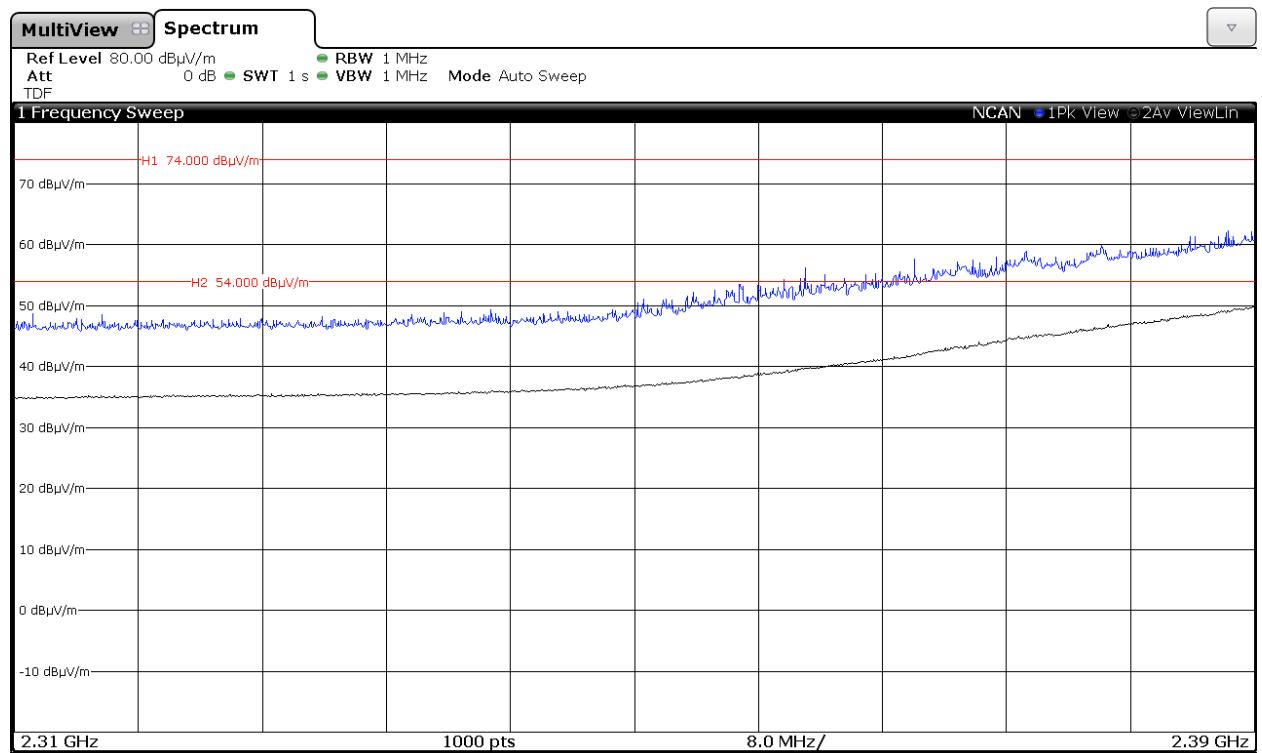


Chain A+B

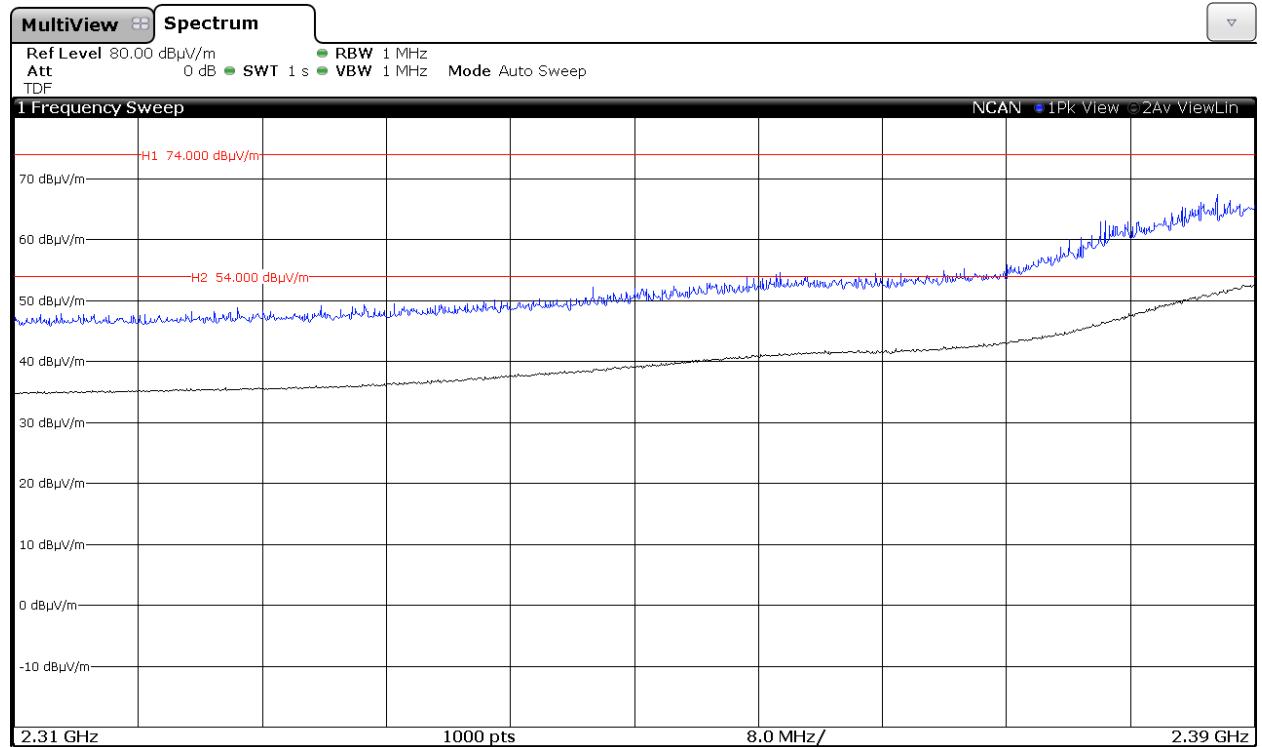


CHANNEL 4 (2427 MHz).

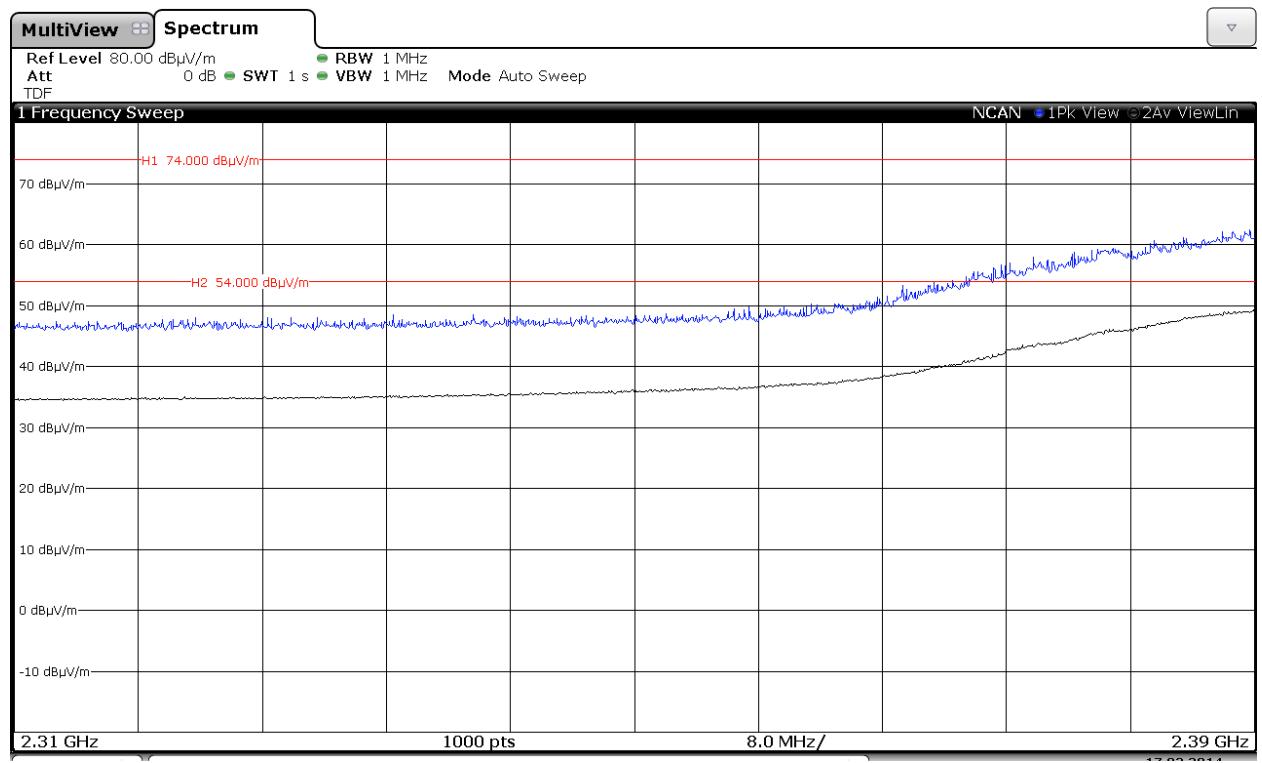
Chain A



Chain B

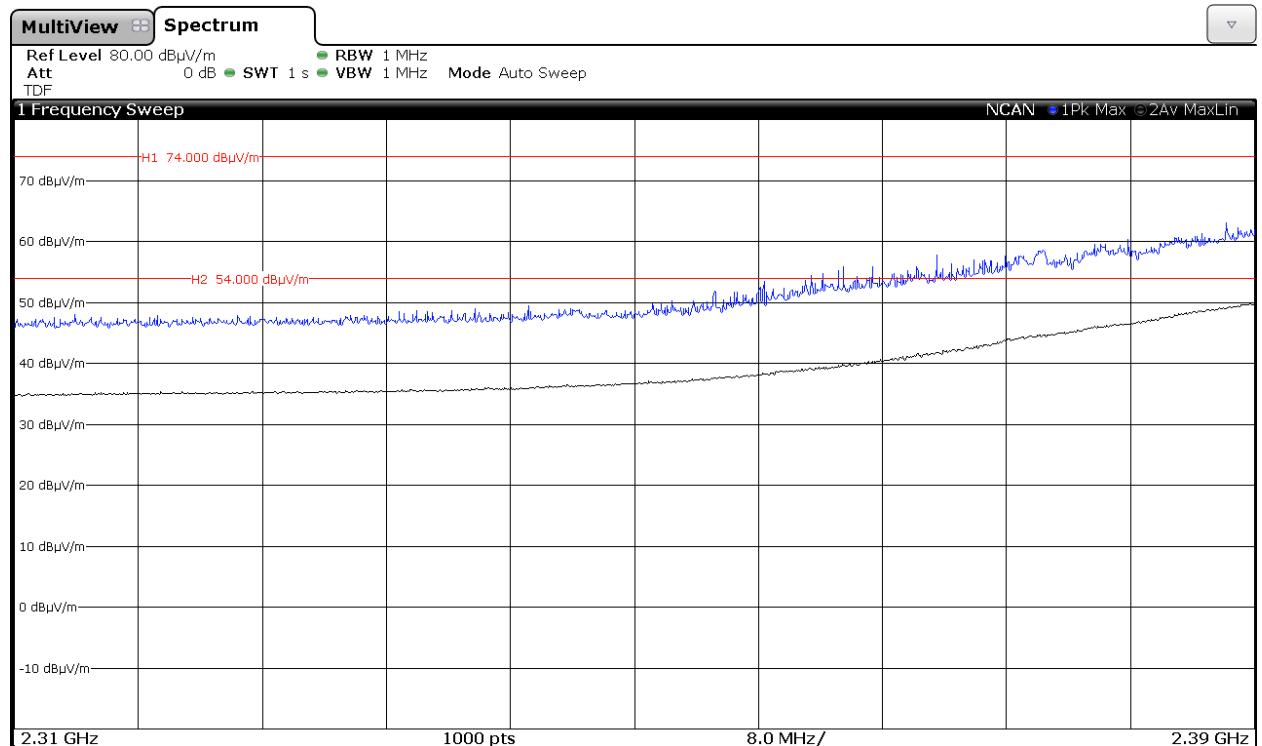


Chain A+B

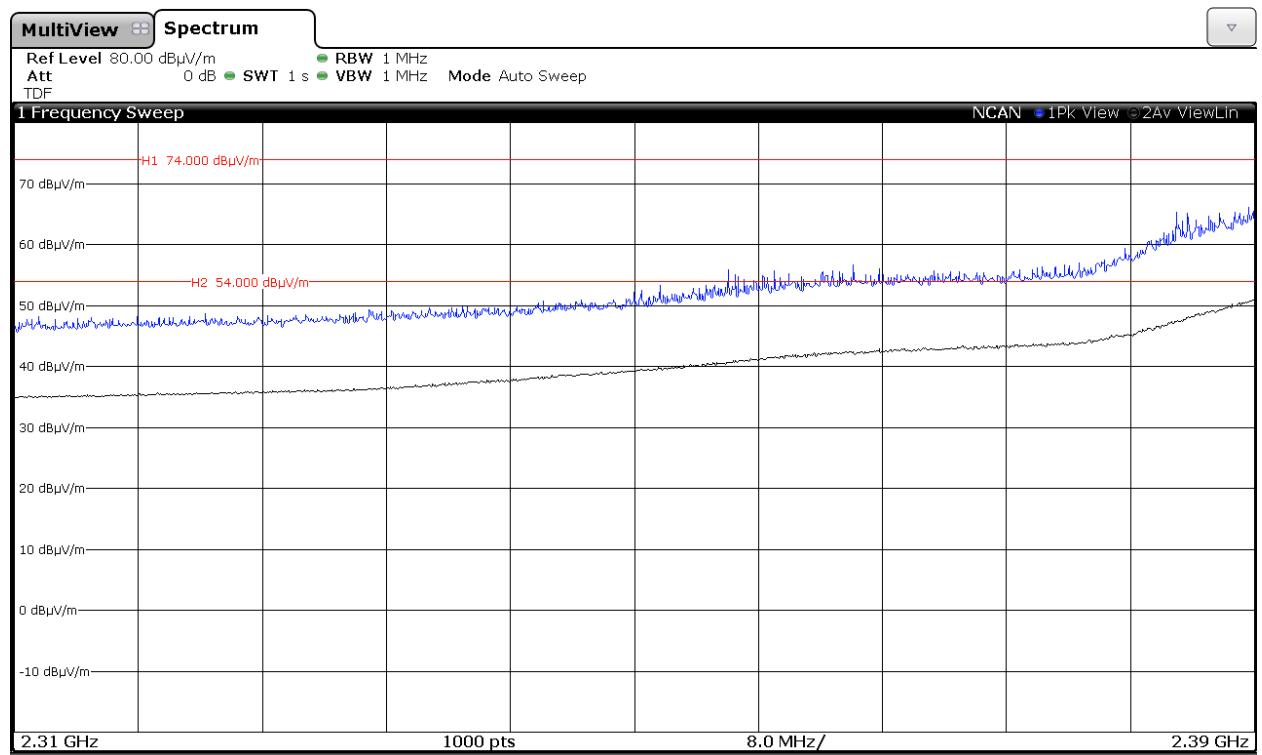


CHANNEL 5 (2432 MHz).

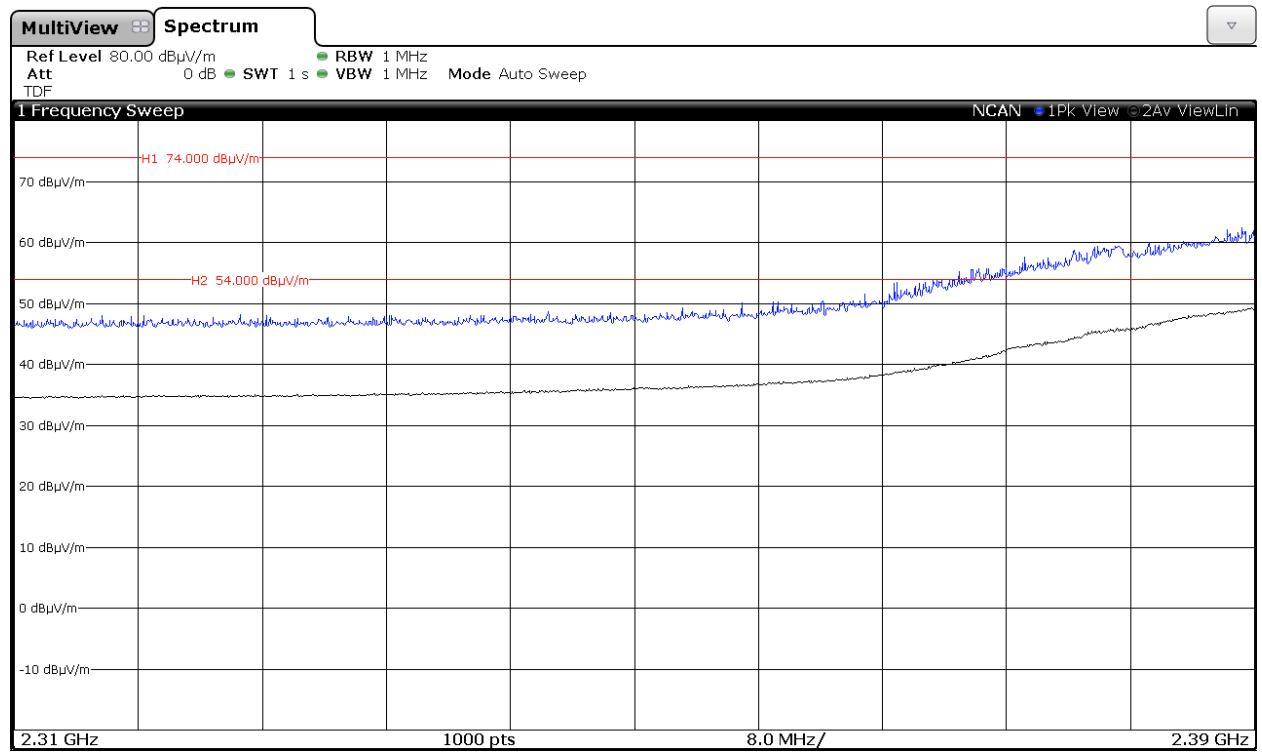
Chain A



Chain B

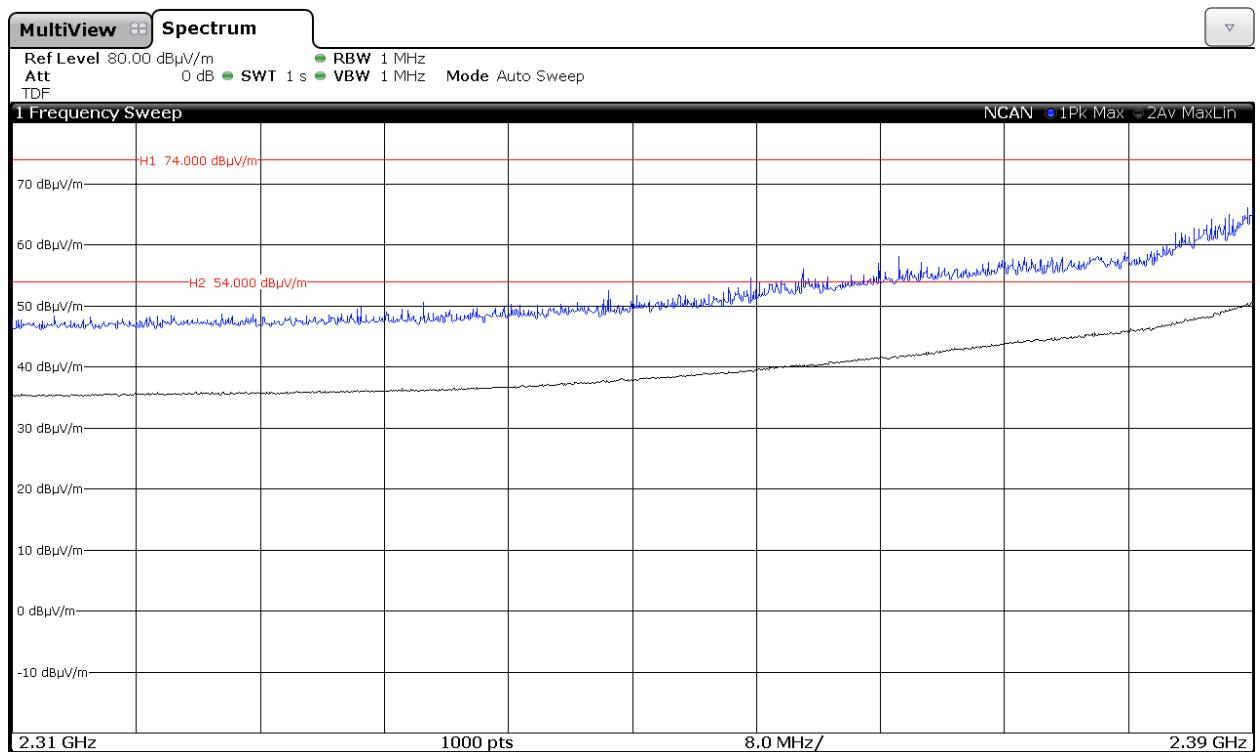


Chain A+B

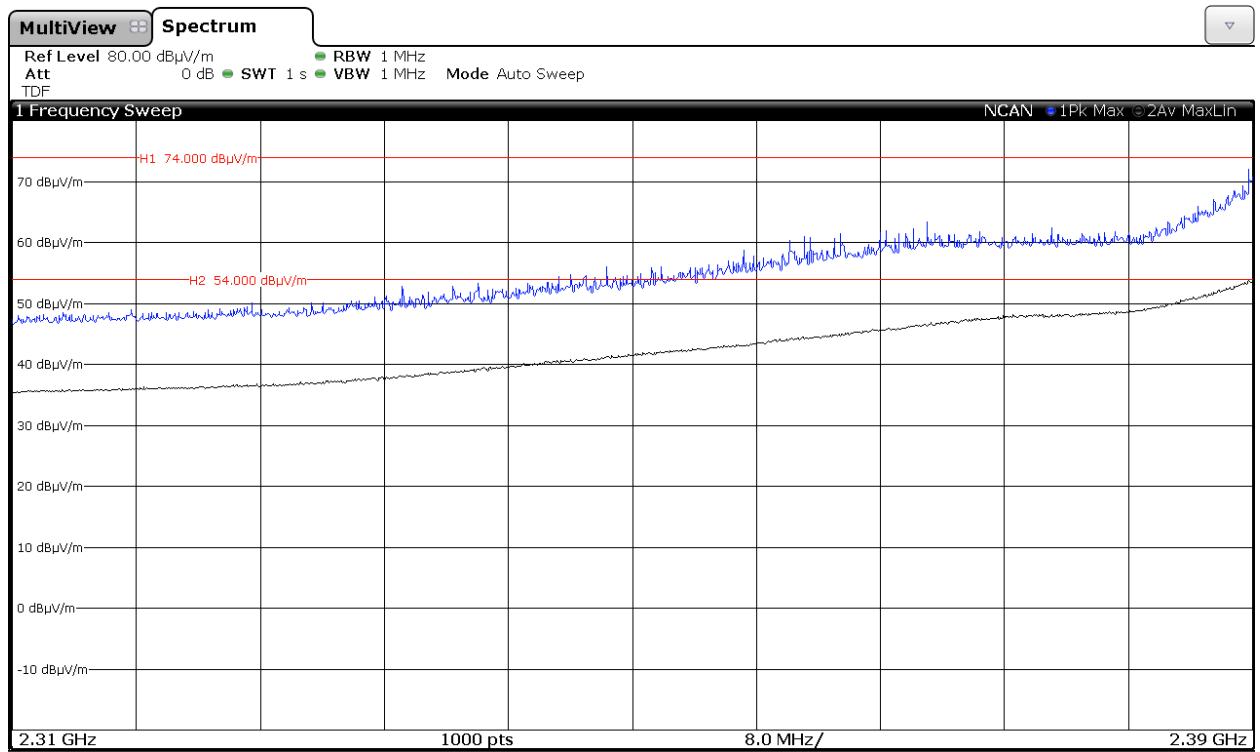


CHANNEL 6 (2437 MHz).

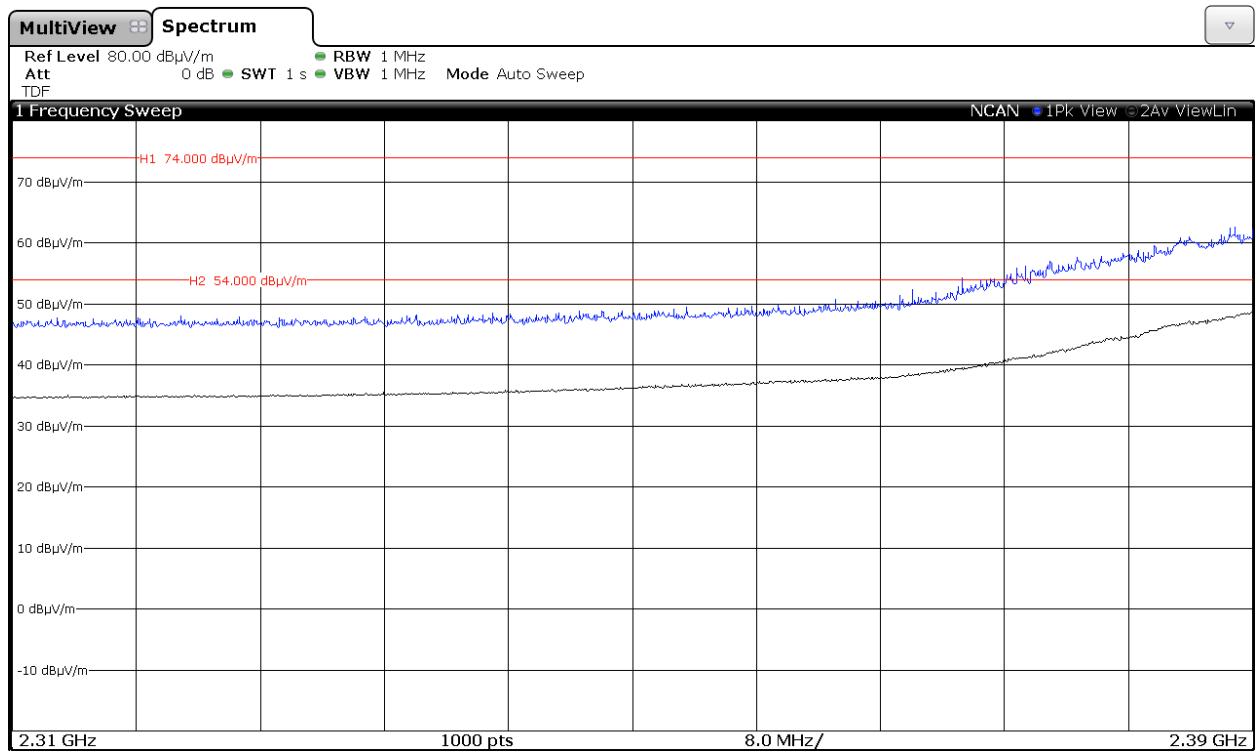
Chain A



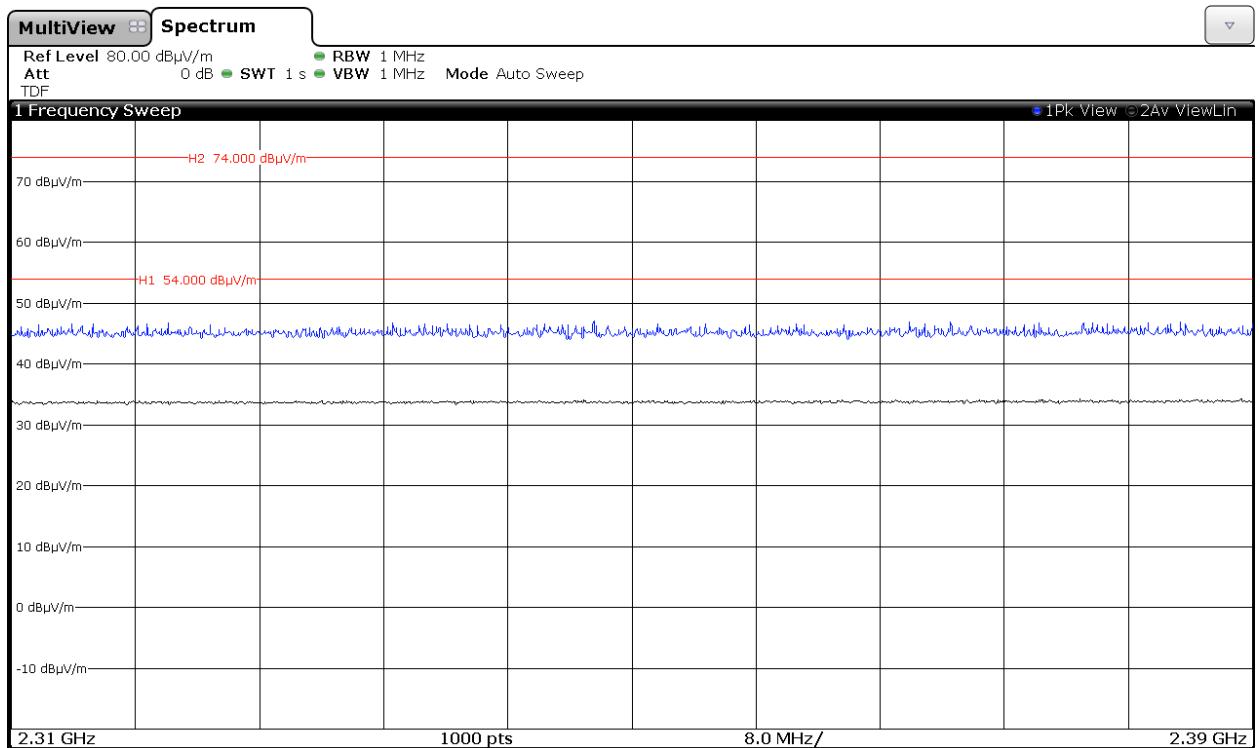
Chain B



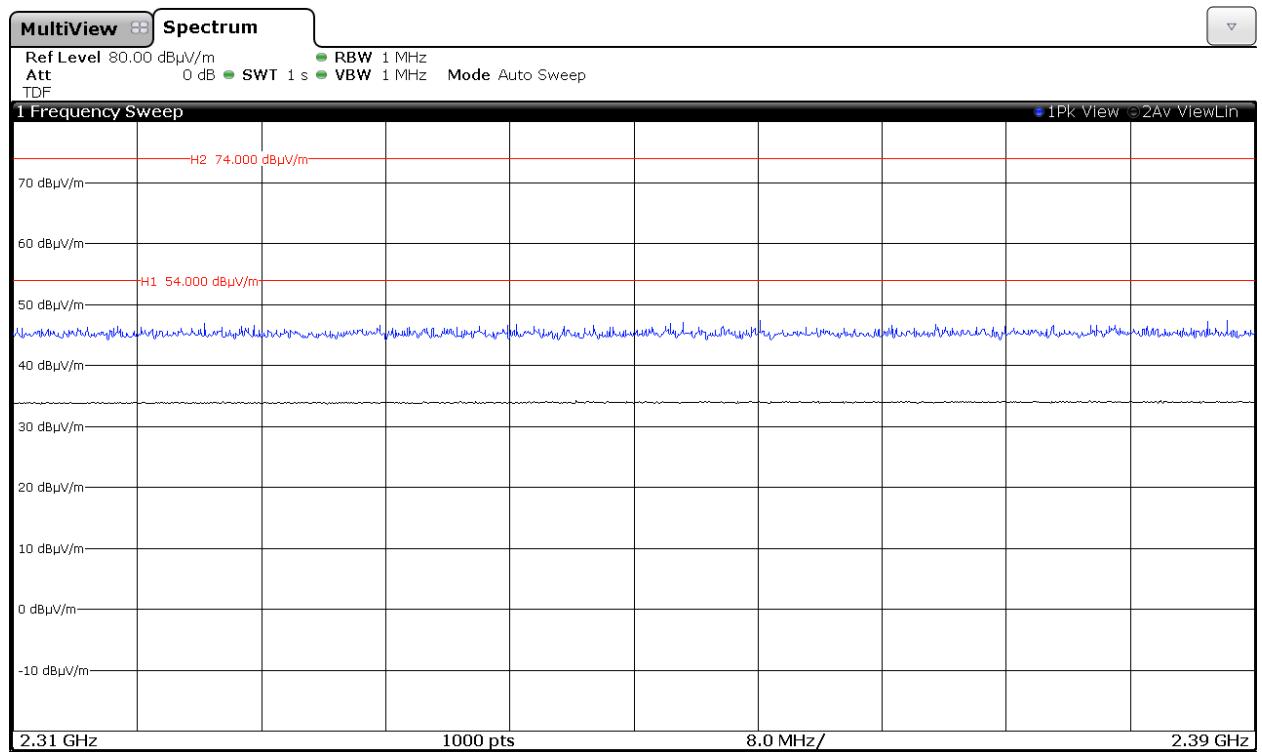
Chain A+B



CHANNEL 10F (2457 MHz).



Note: This plot is valid for Chain A, Chain B and Chain A+B.

CHANNEL 11F (2462 MHz).


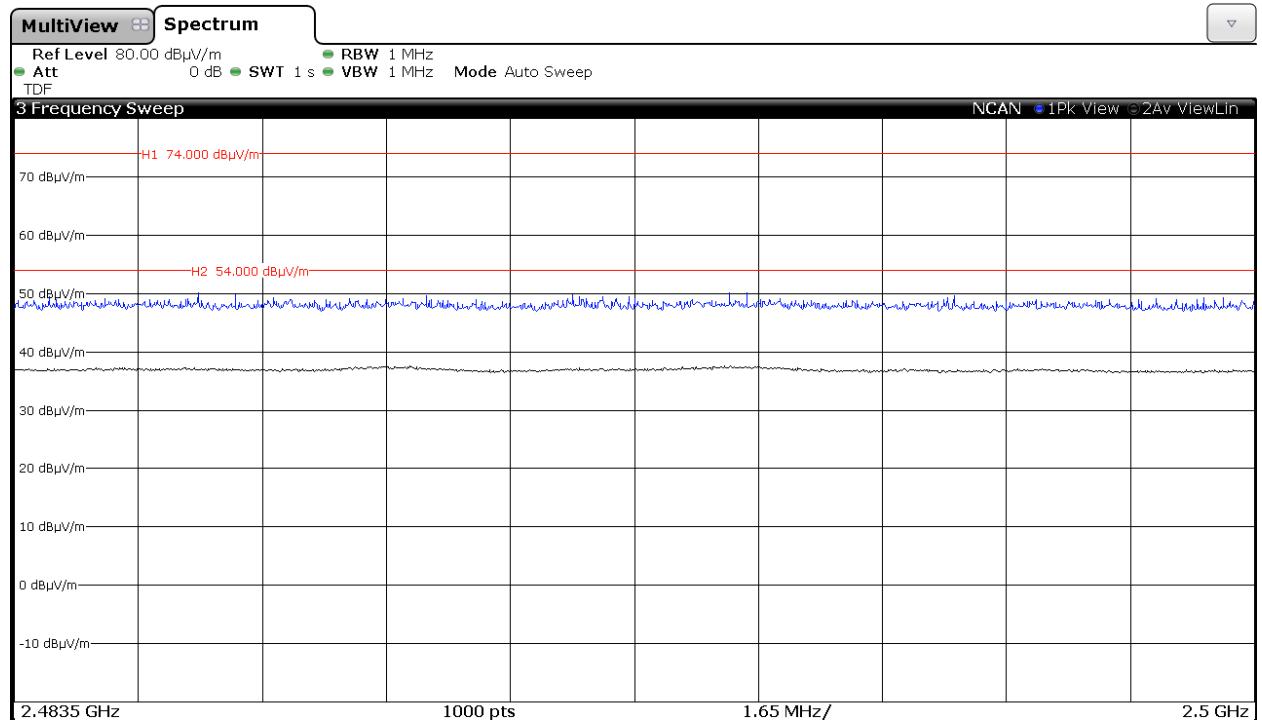
Note: This plot is valid for Chain A, Chain B and Chain A+B.

FREQUENCY RANGE 2.4835 GHz to 2.5 GHz. (RESTRICTED BAND)

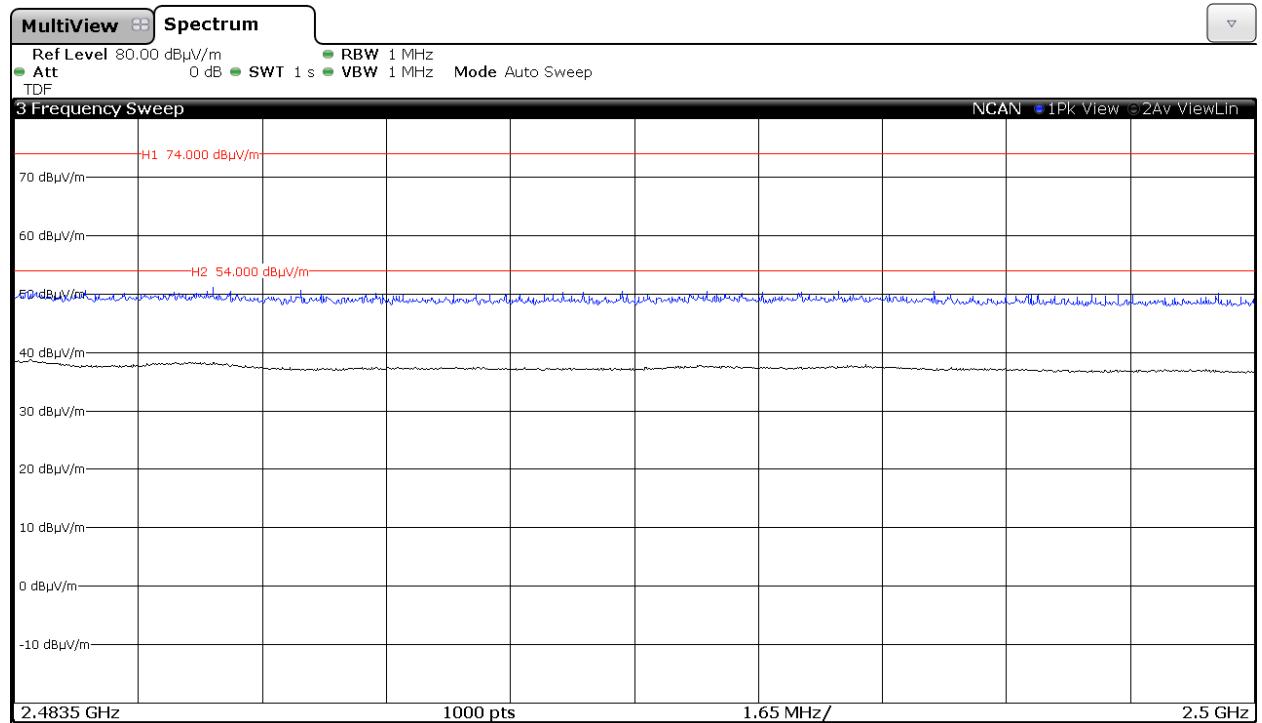
1. WiFi 2.4GHz 802.11 b mode

CHANNEL 1 (2412 MHz).

Chain A

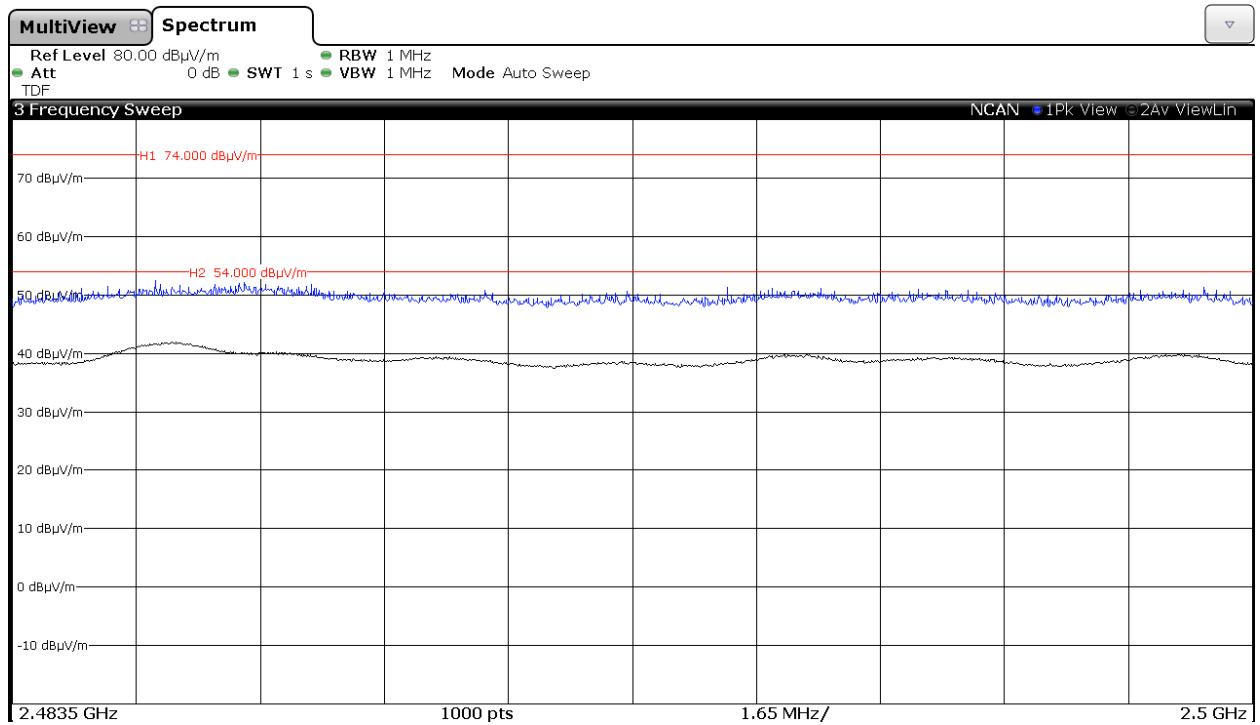


Chain B

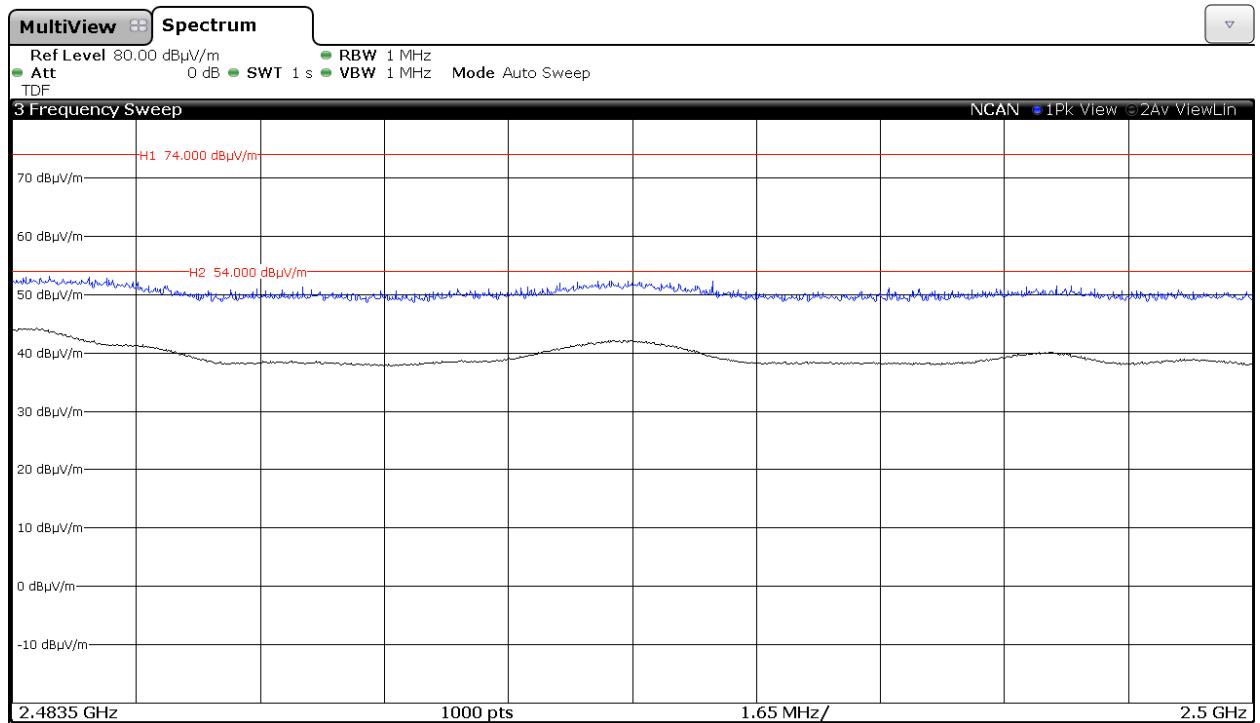


CHANNEL 6 (2437 MHz).

Chain A

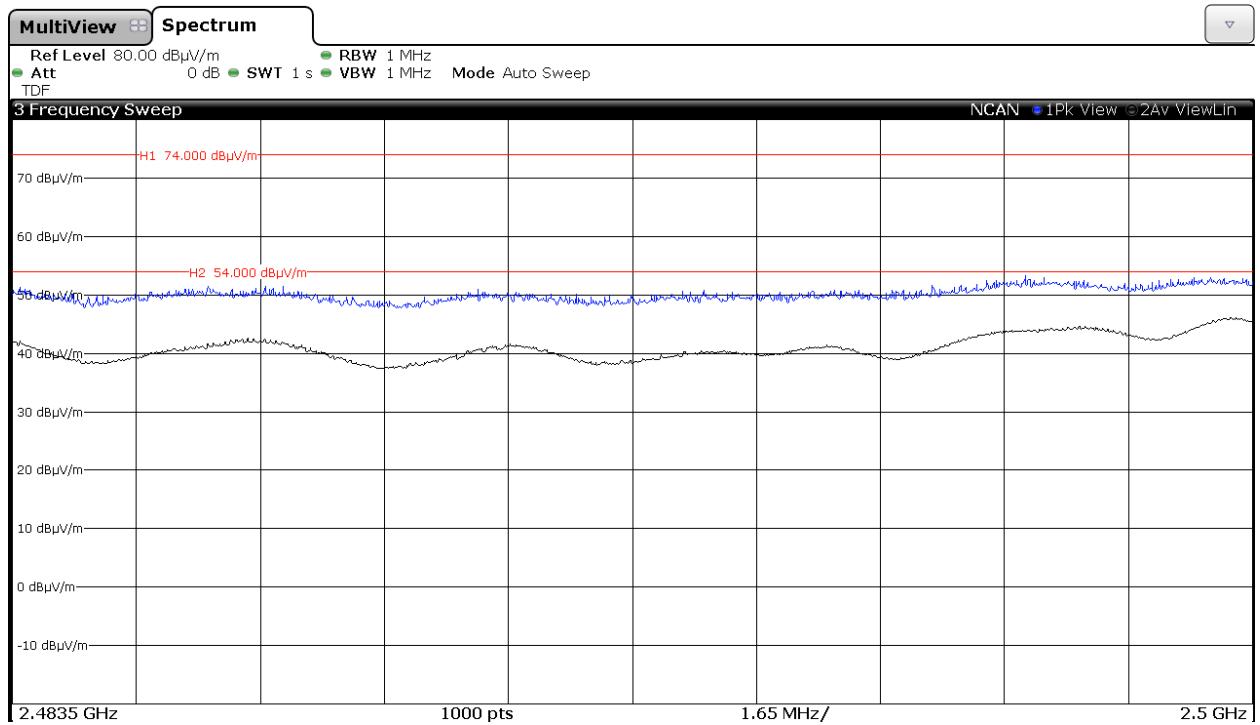


Chain B

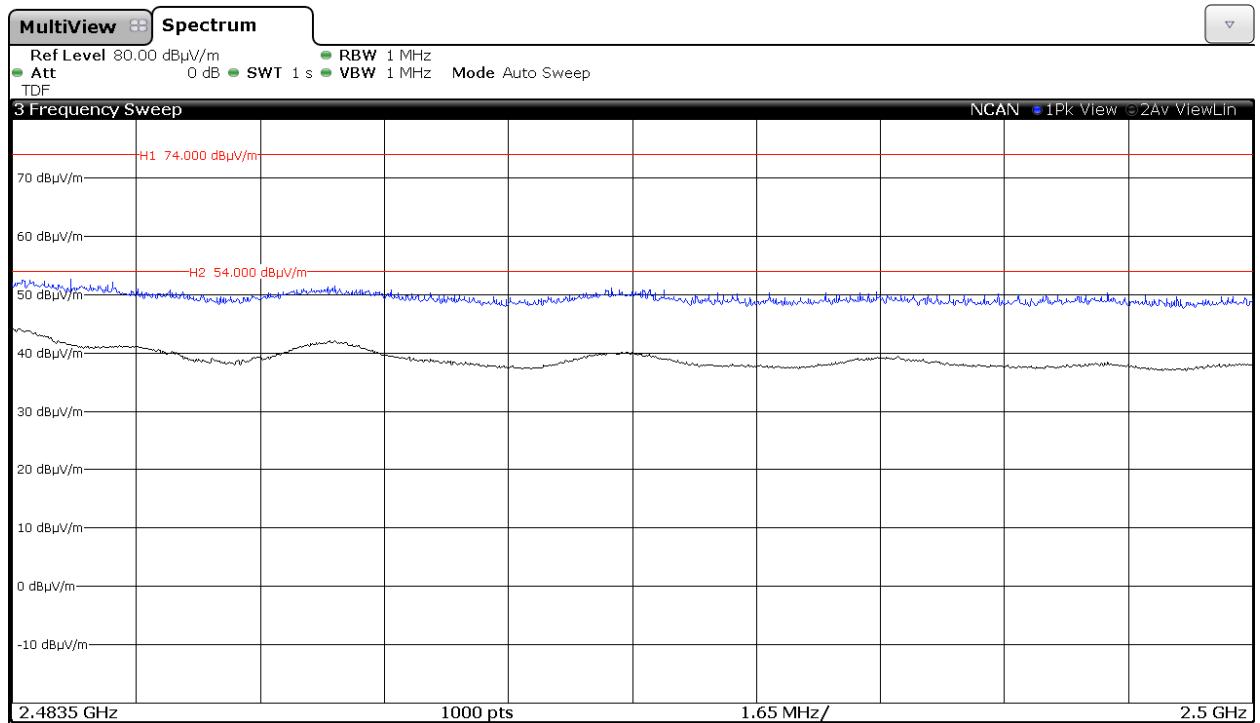


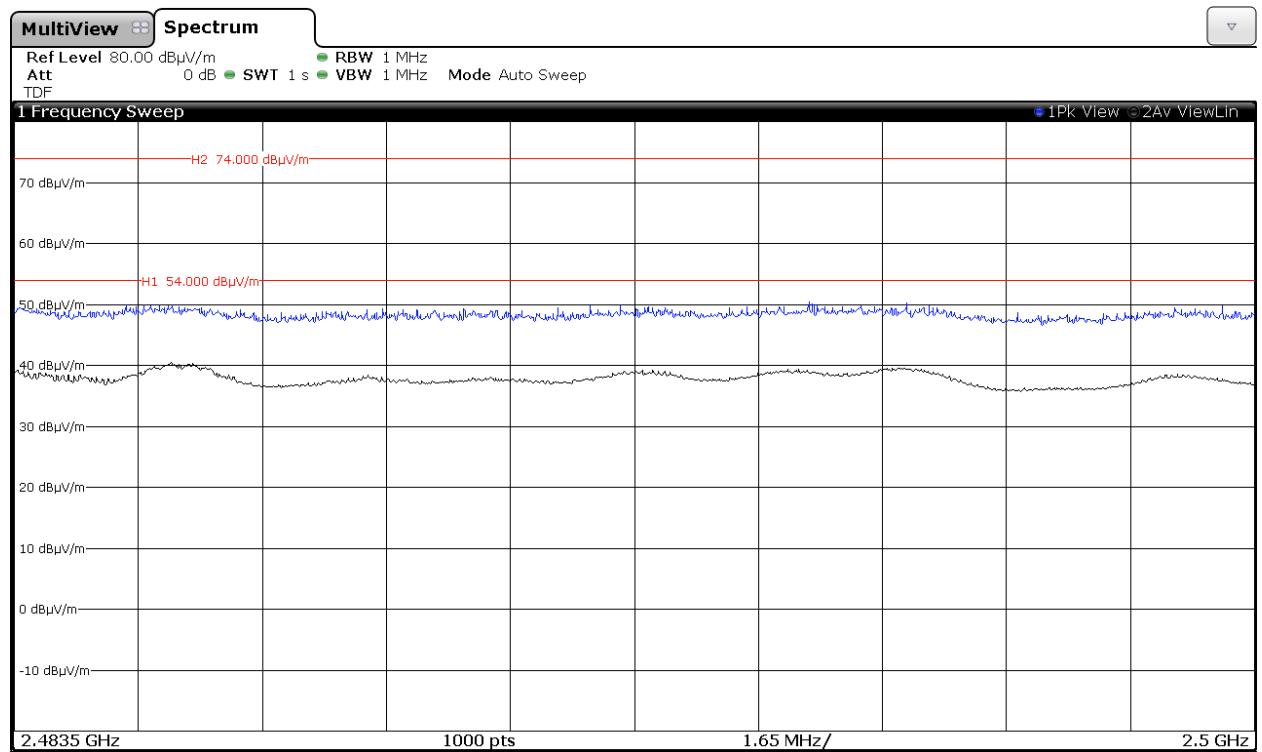
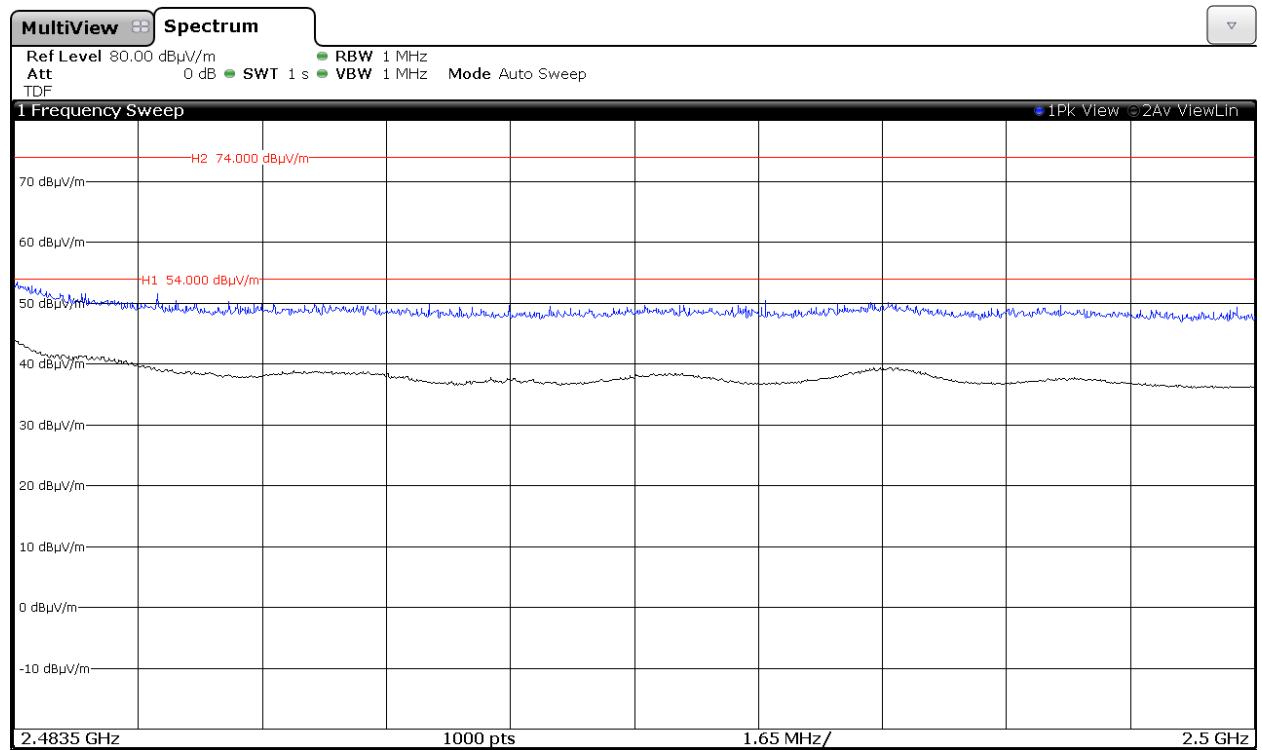
CHANNEL 11 (2462 MHz).

Chain A



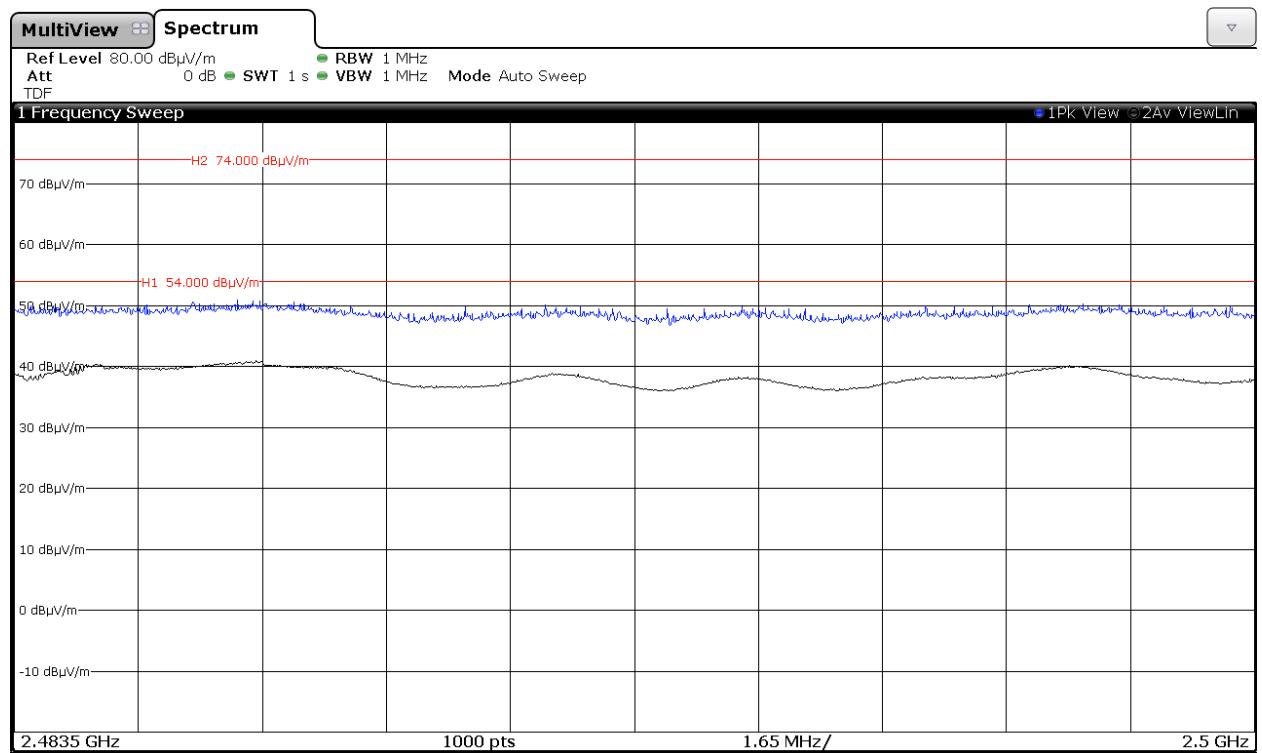
Chain B



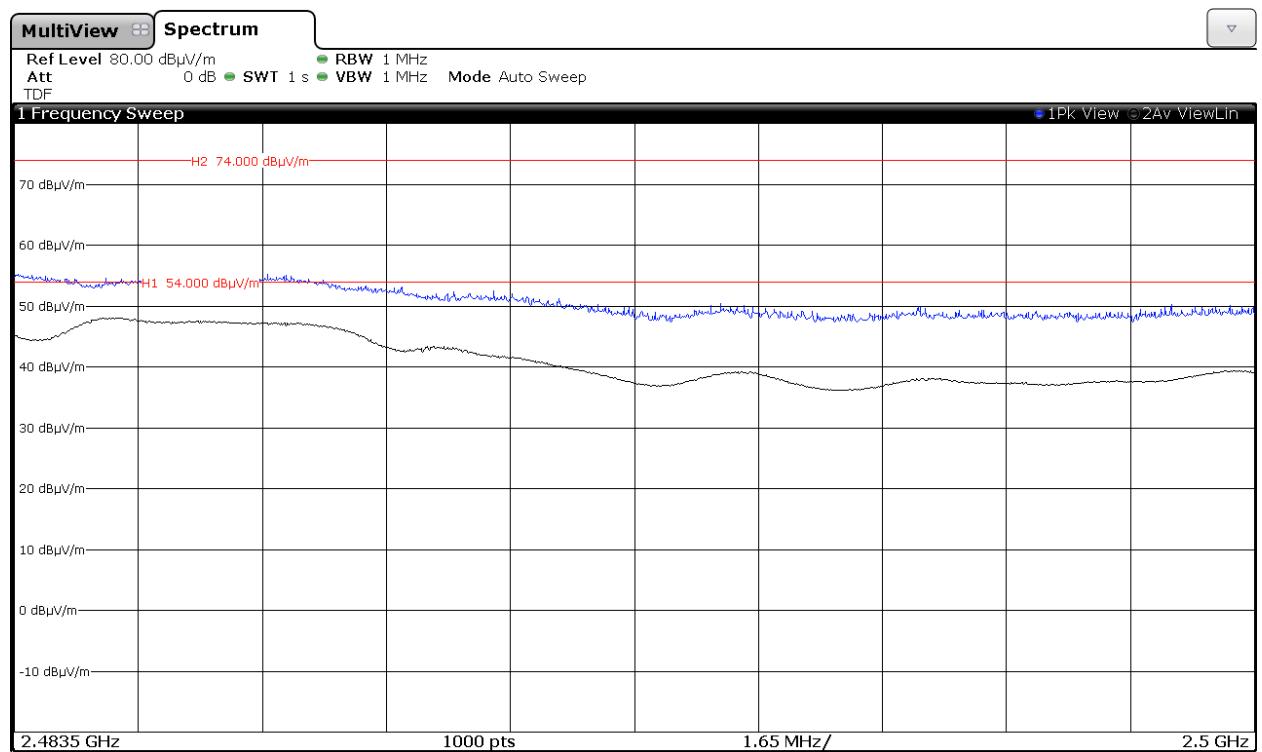
CHANNEL 12 (2467 MHz).
Chain A

Chain B


CHANNEL 13 (2472 MHz).

Chain A



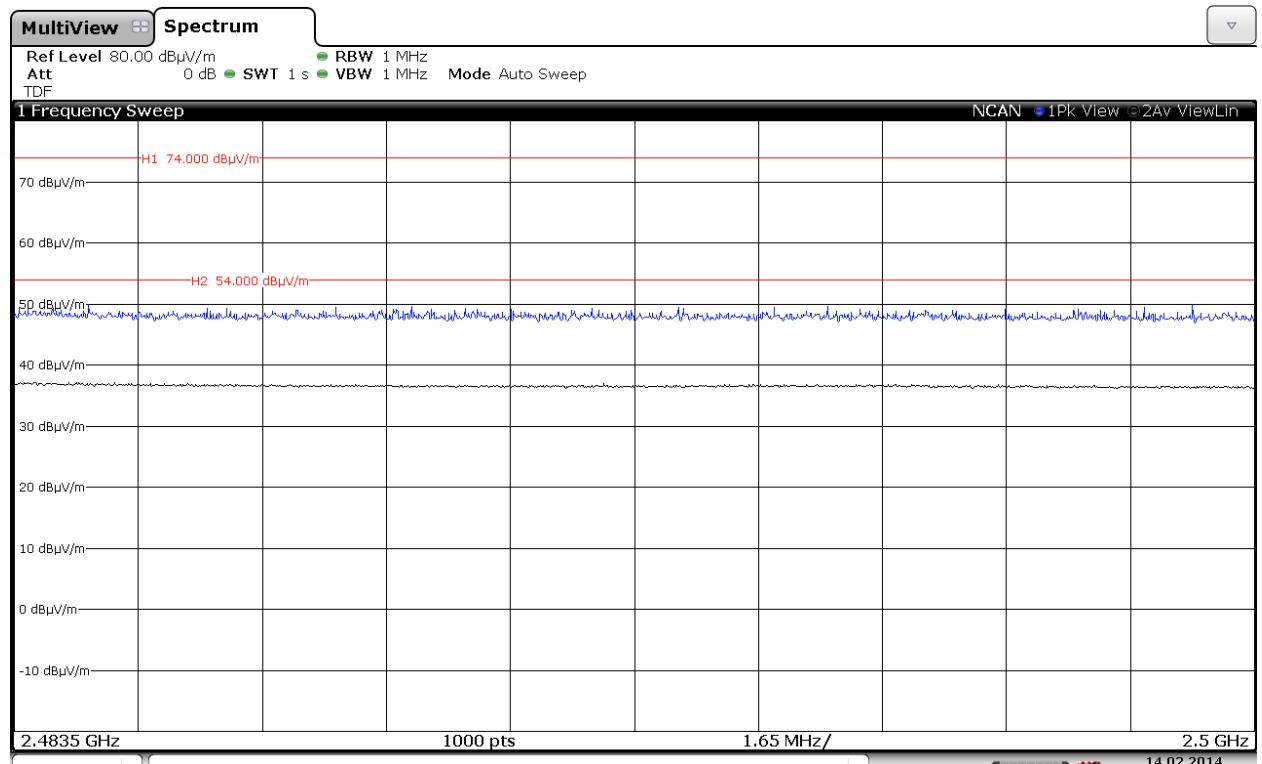
Chain B



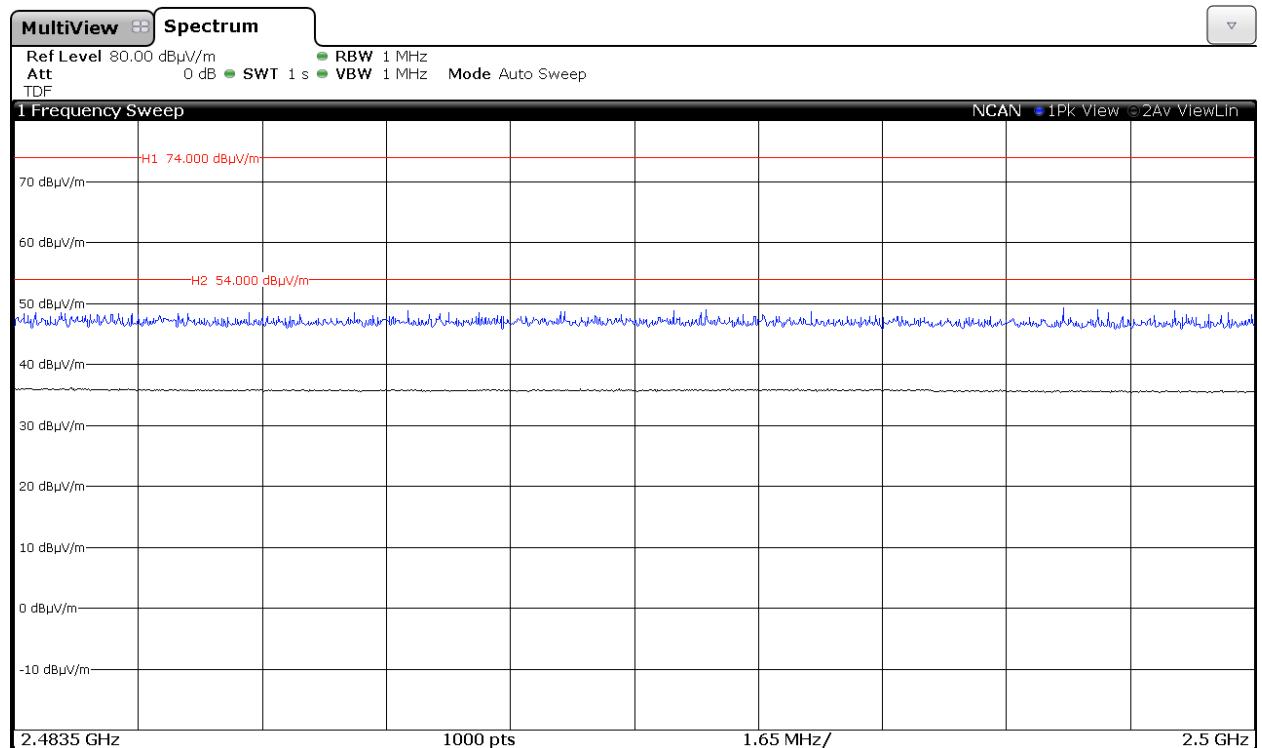
2. WiFi 2.4GHz 802.11 g mode

CHANNEL 1 (2412 MHz).

Chain A

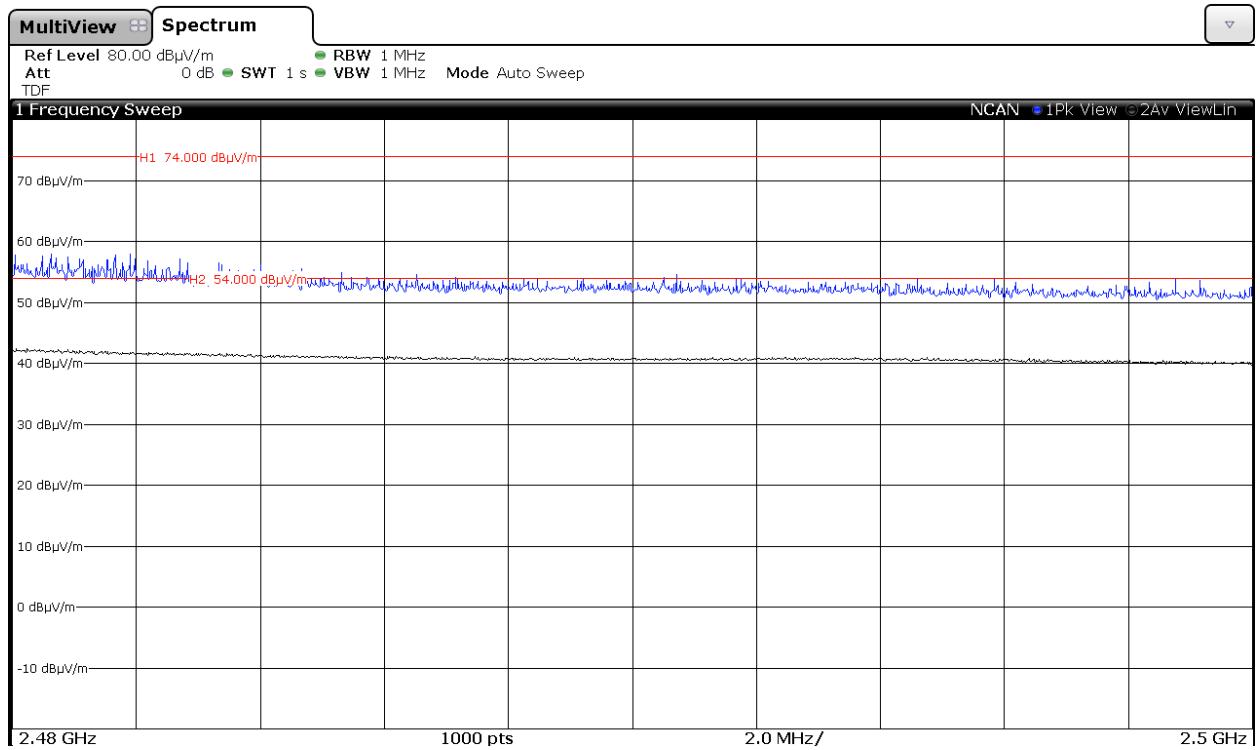


Chain B

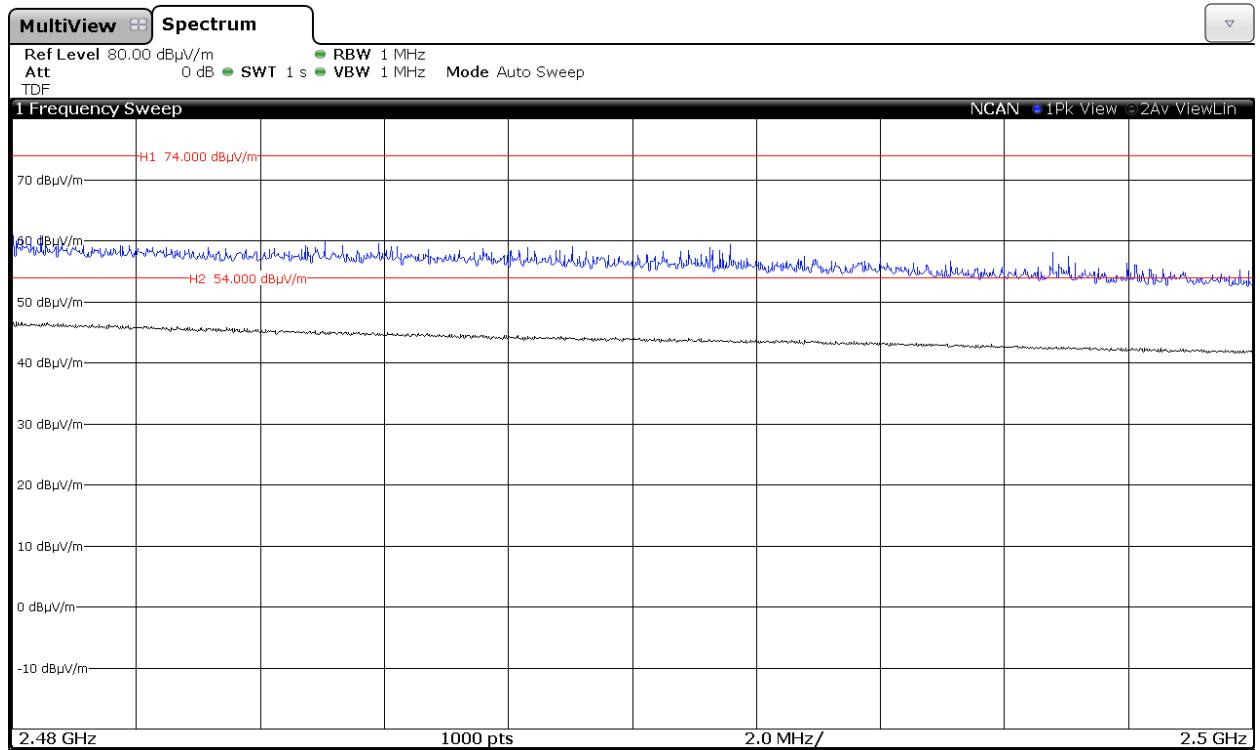


CHANNEL 6 (2437 MHz).

Chain A

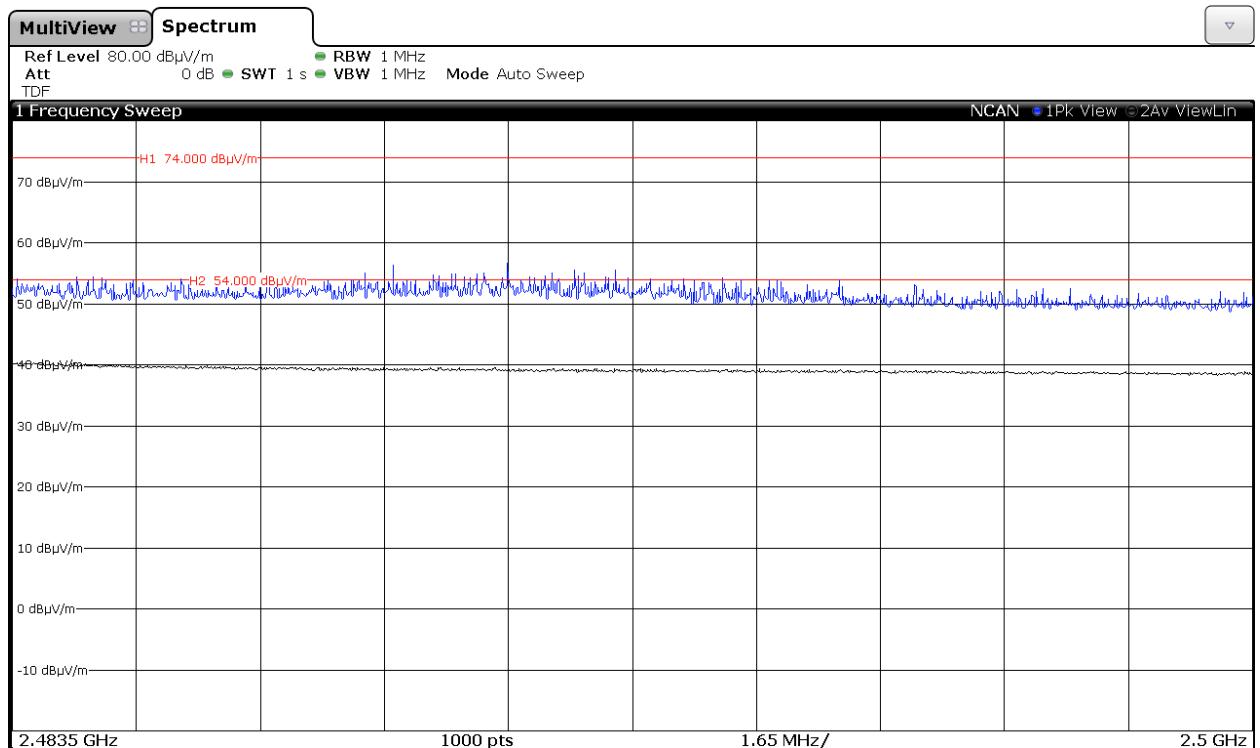


Chain B

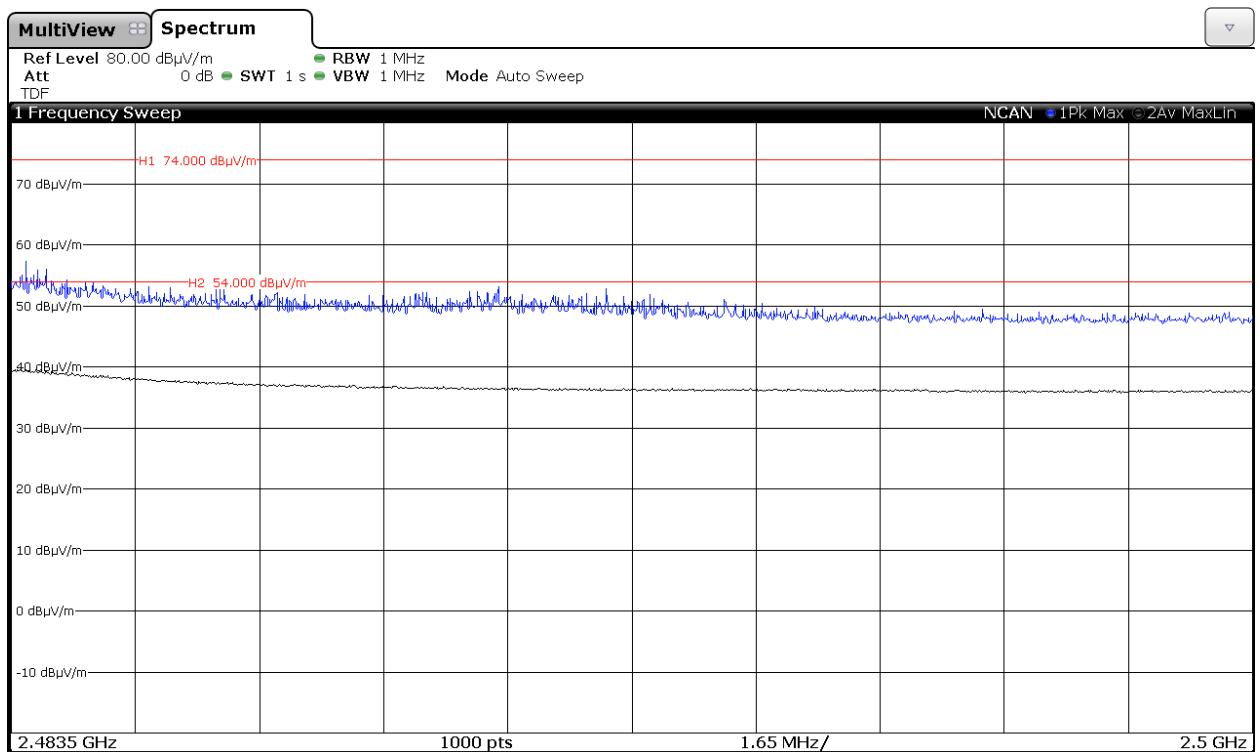


CHANNEL 11 (2462 MHz).

Chain A

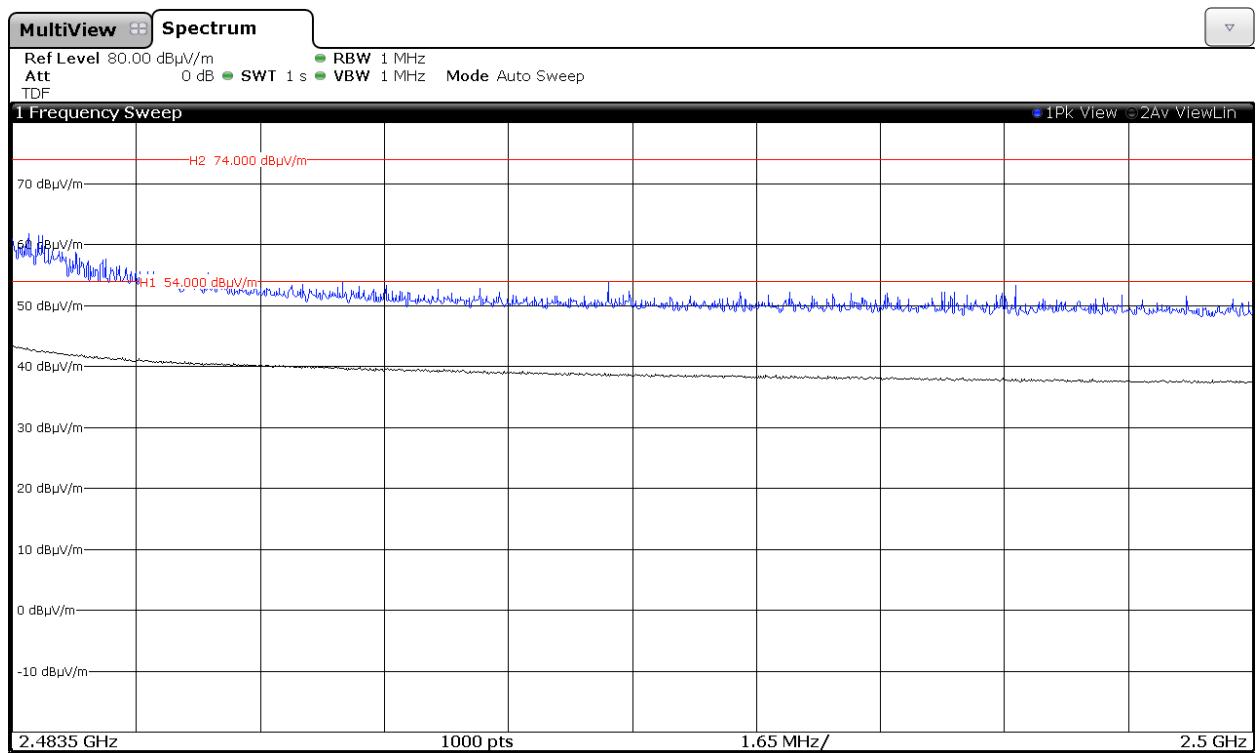


Chain B

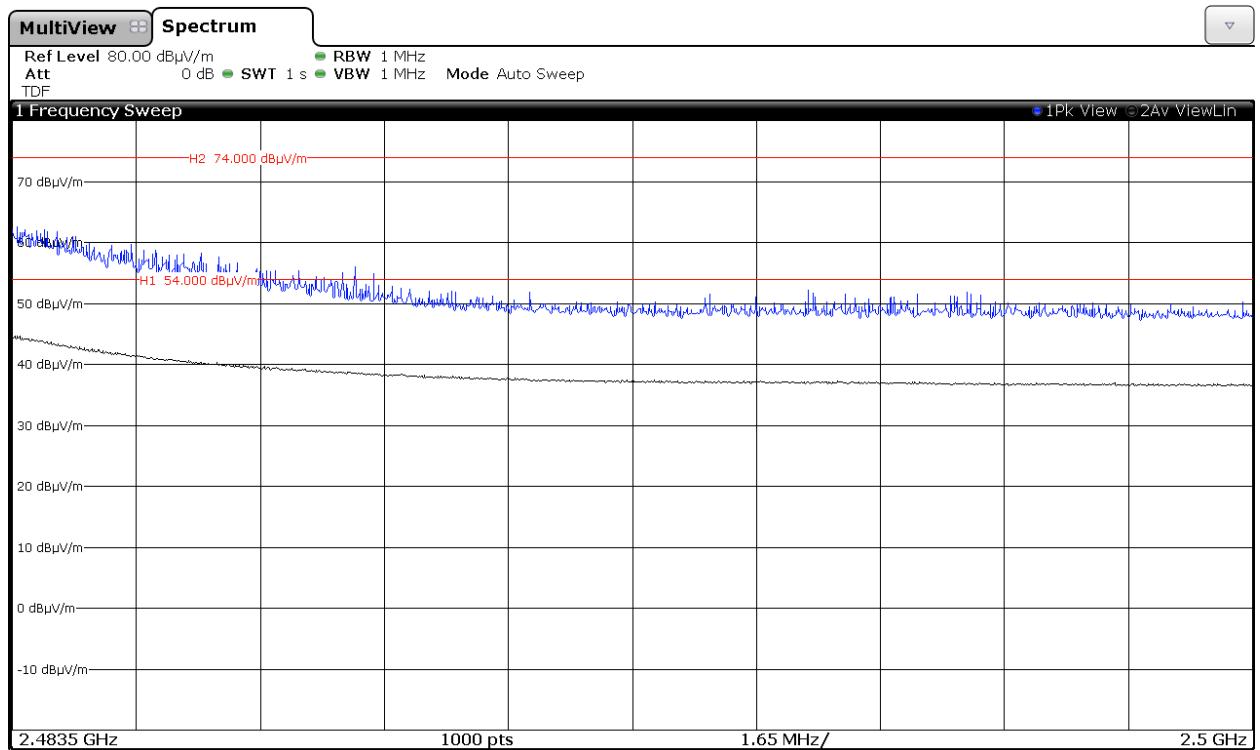


CHANNEL 12 (2467 MHz).

Chain A

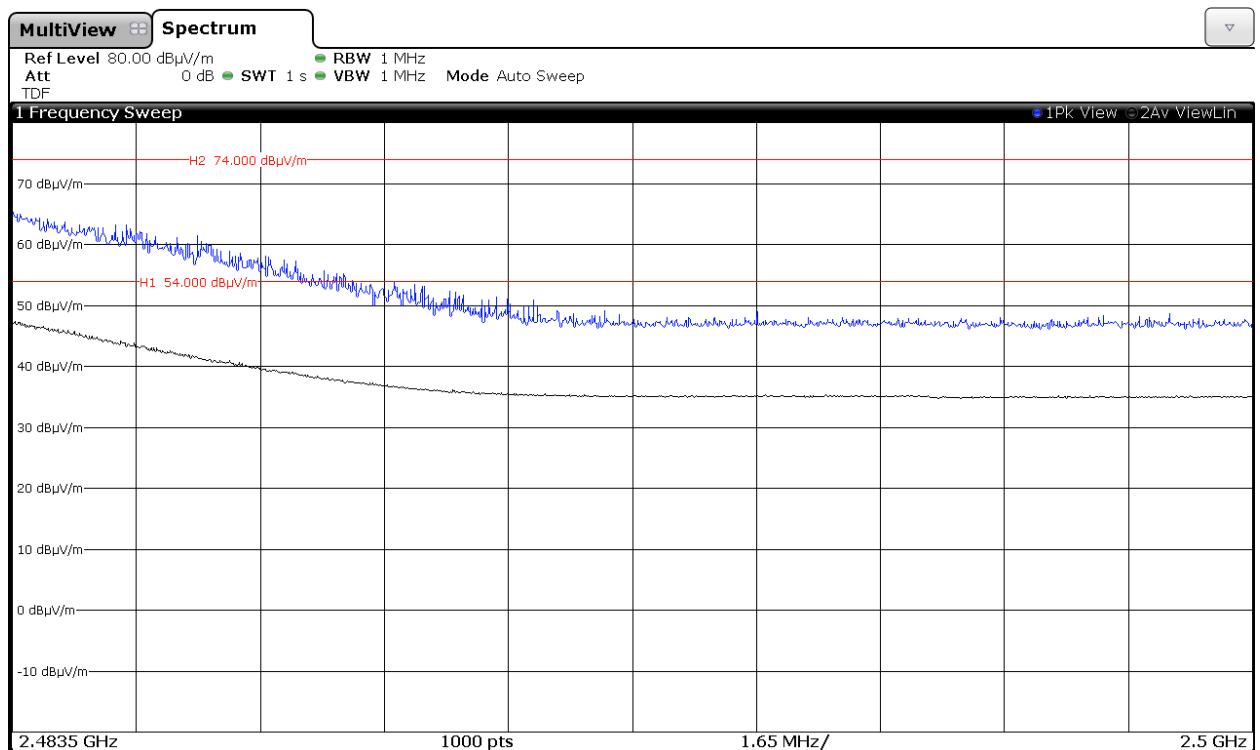


Chain B

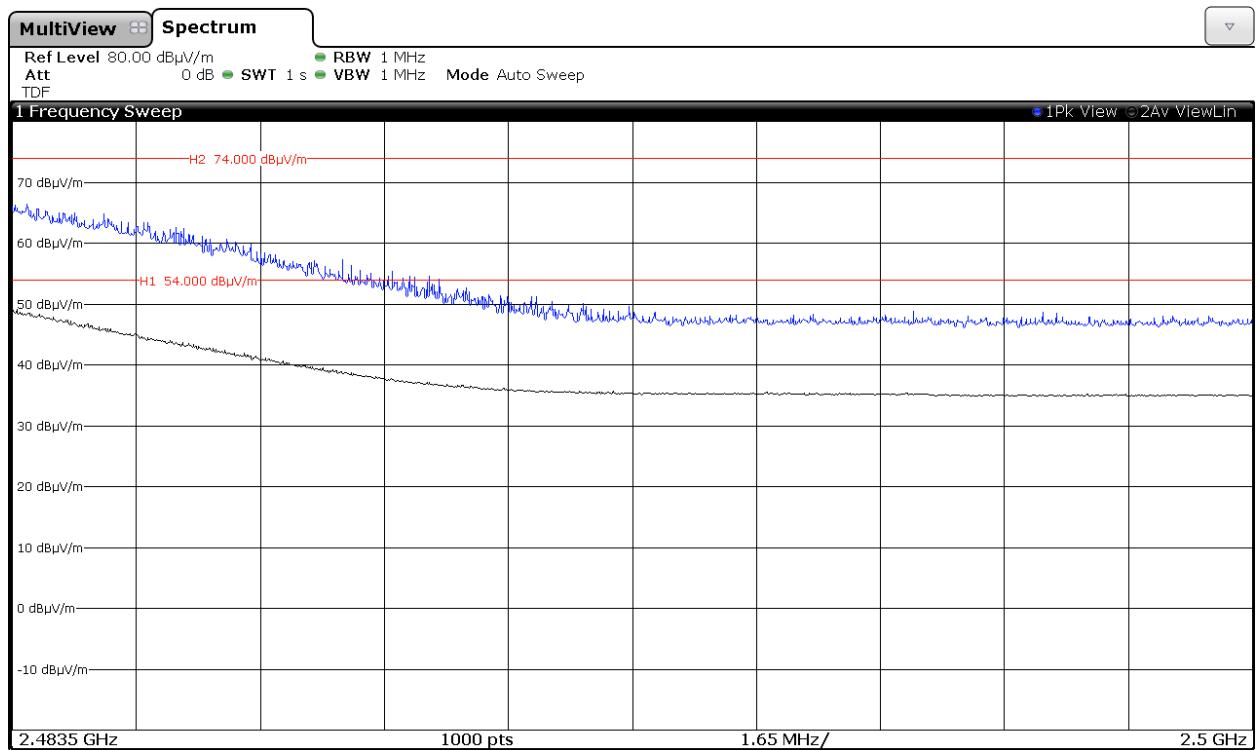


CHANNEL 13 (2472 MHz).

Chain A



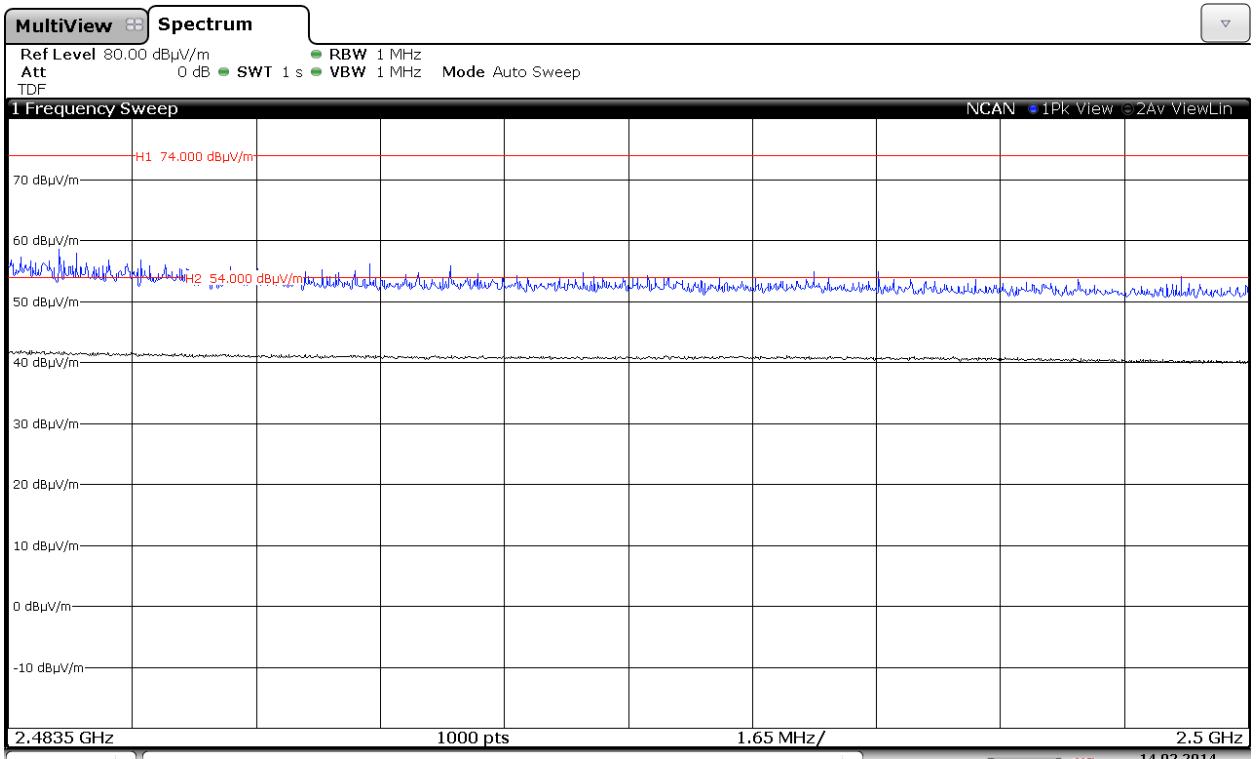
Chain B



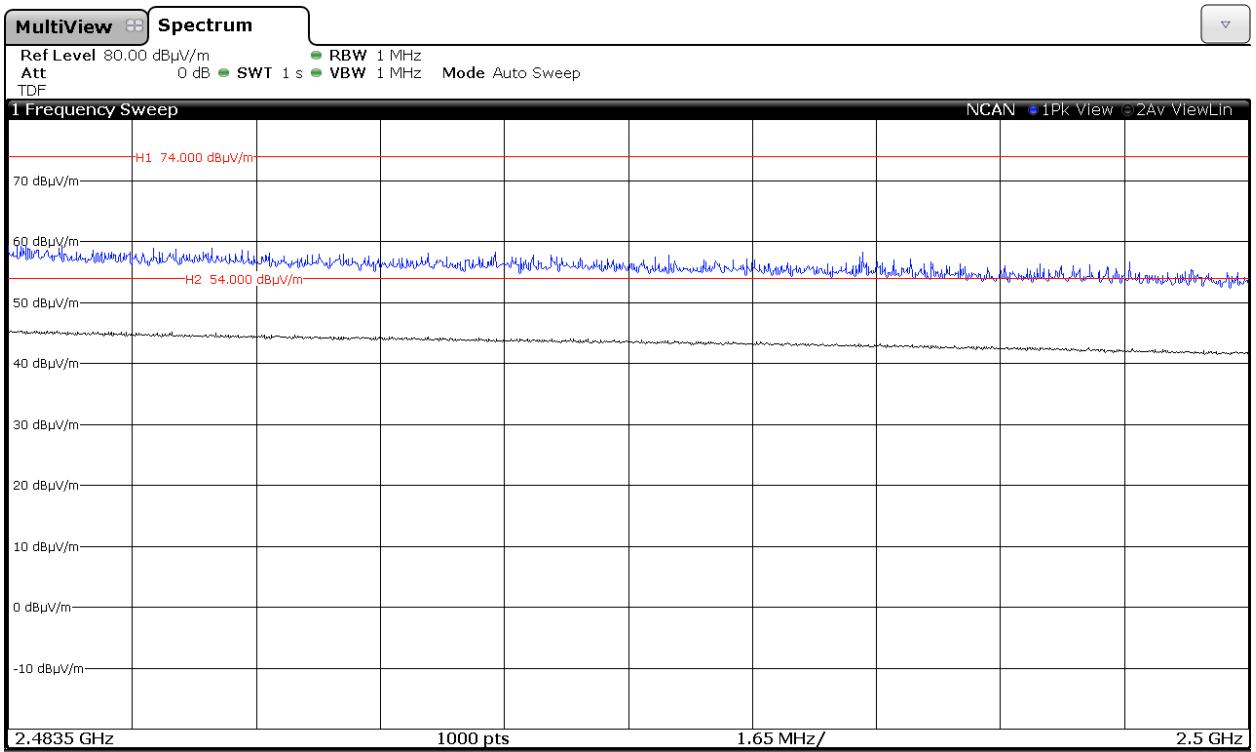
3. WiFi 2.4GHz 802.11 n20 mode

CHANNEL 6 (2437 MHz).

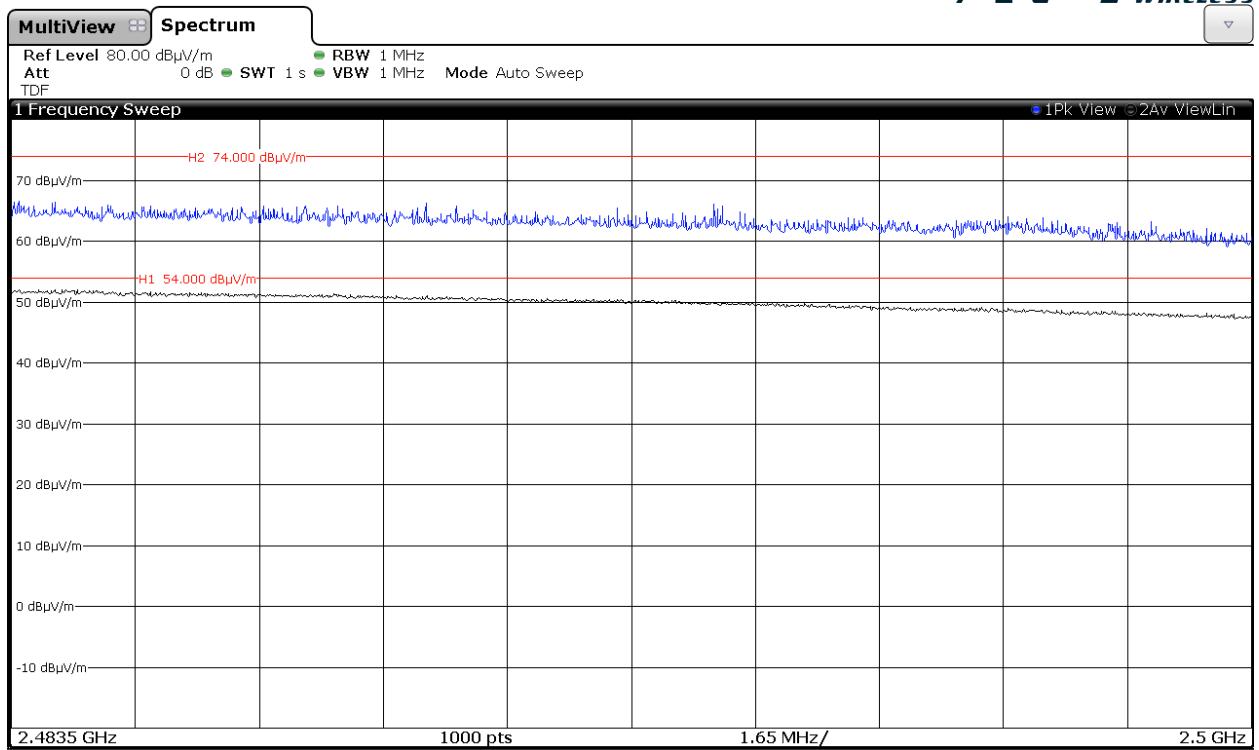
Chain A



Chain B

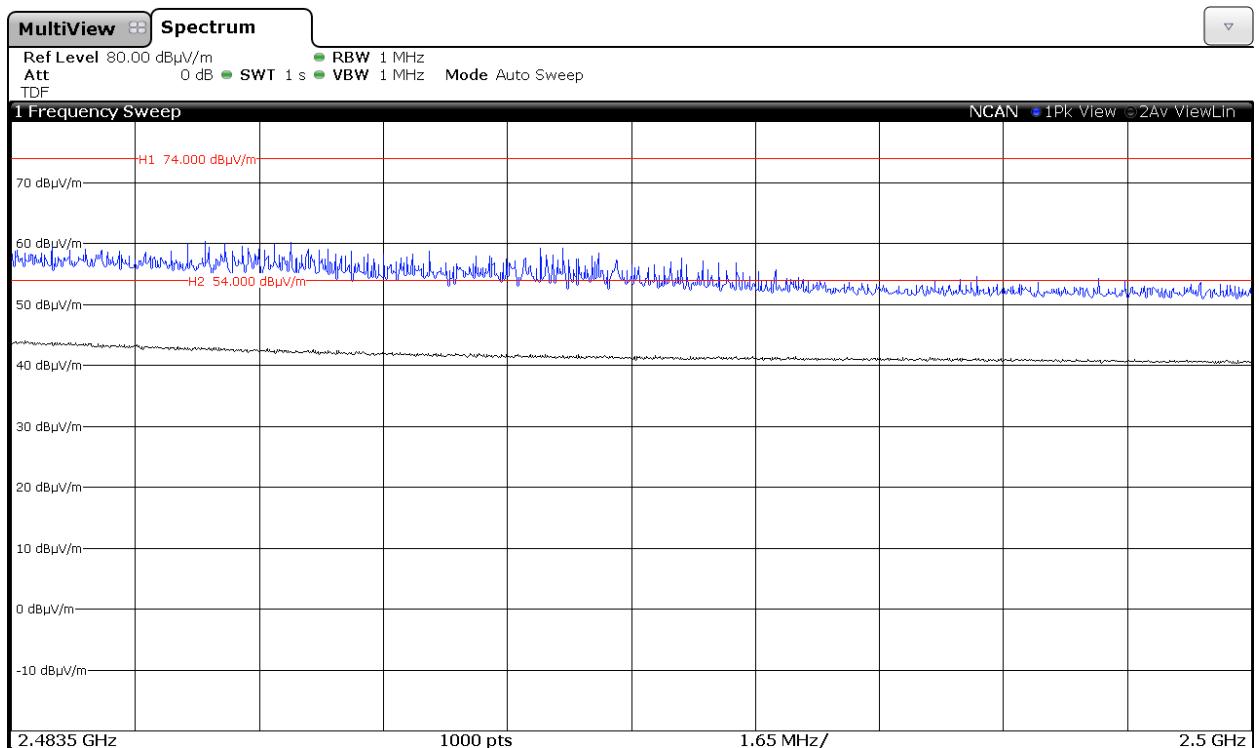


Chain A+B

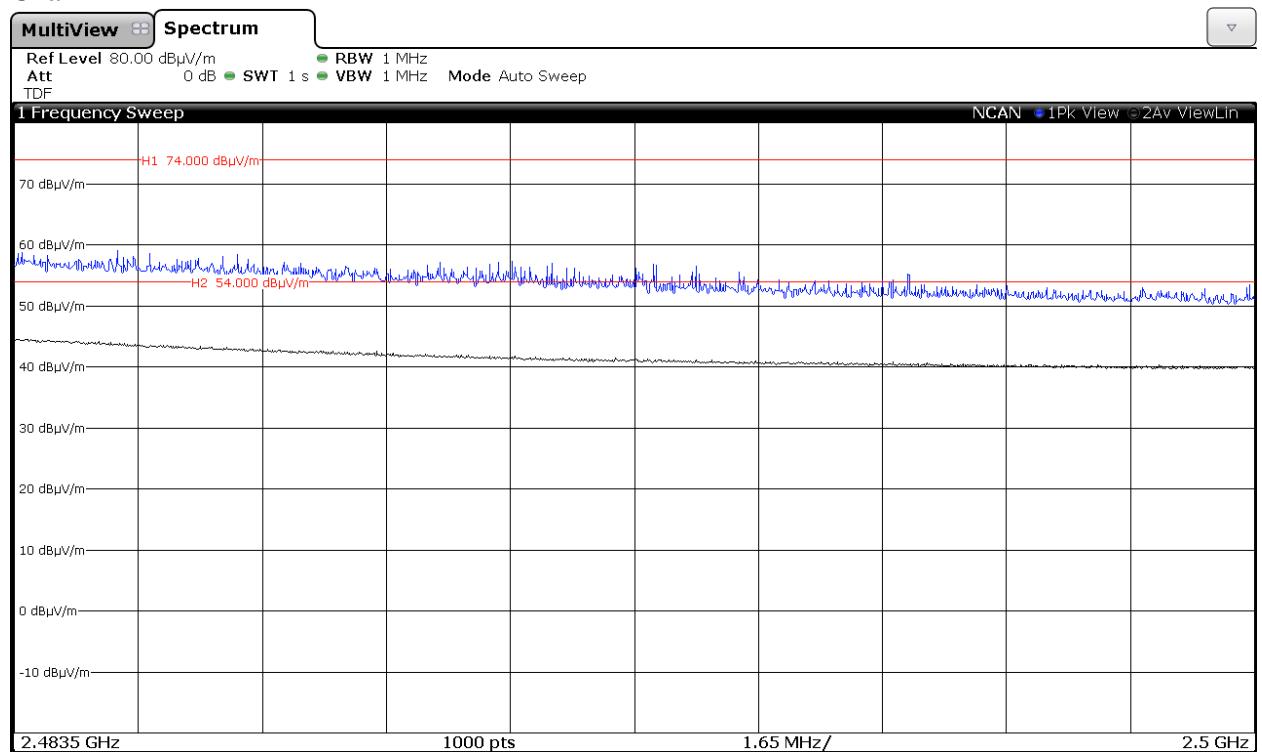


CHANNEL 10 (2457 MHz).

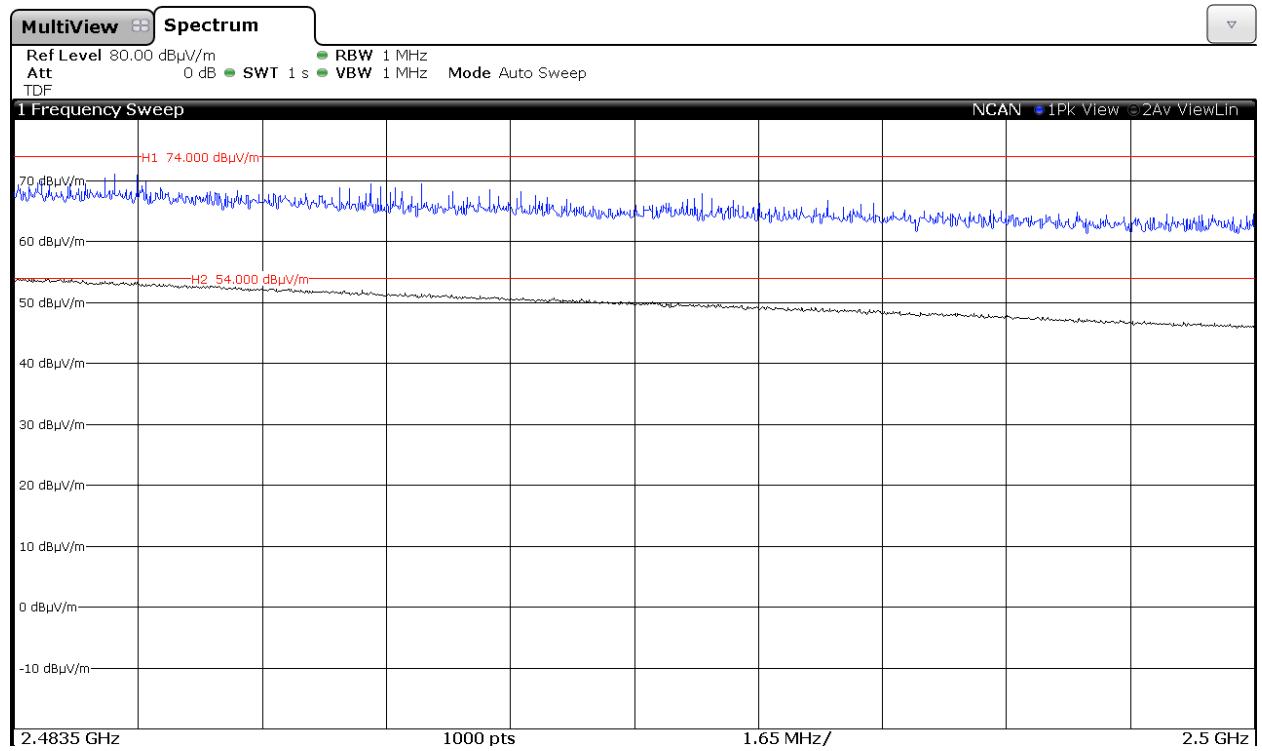
Chain A



Chain B

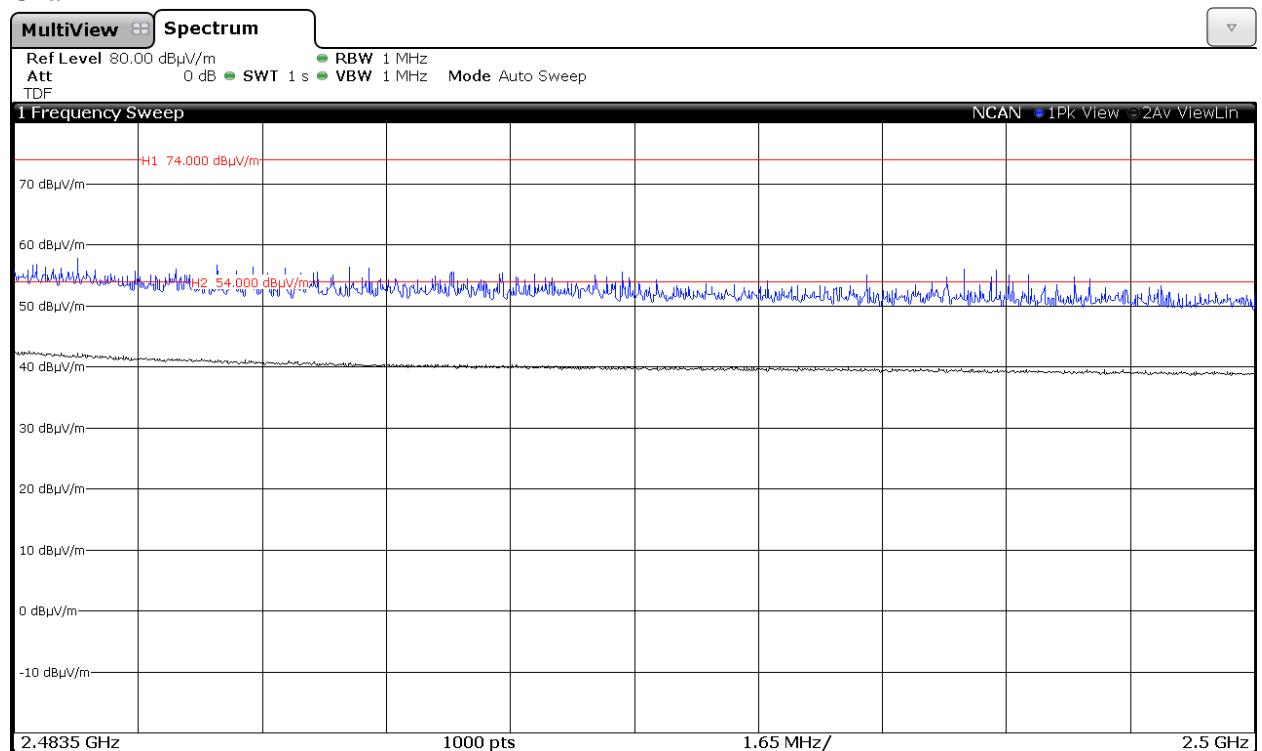


CHAIN A+B

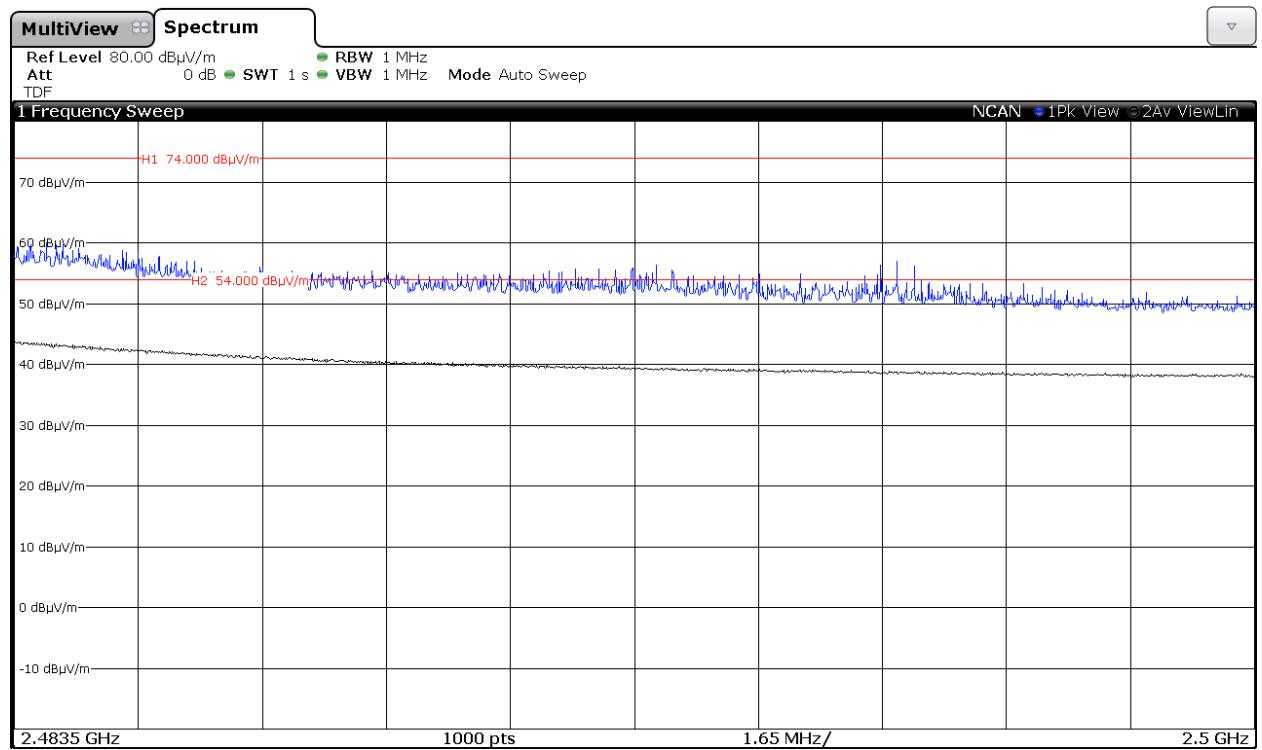


CHANNEL 11 (2462 MHz).

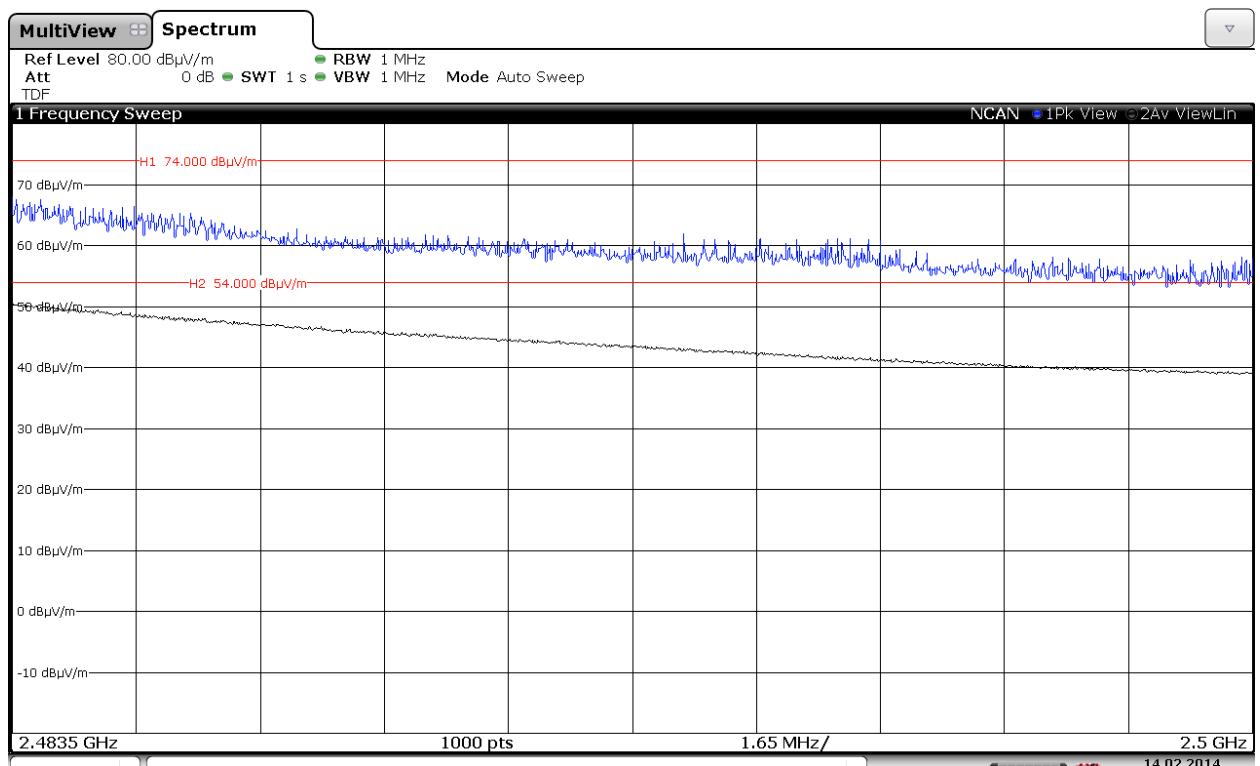
Chain A



Chain B

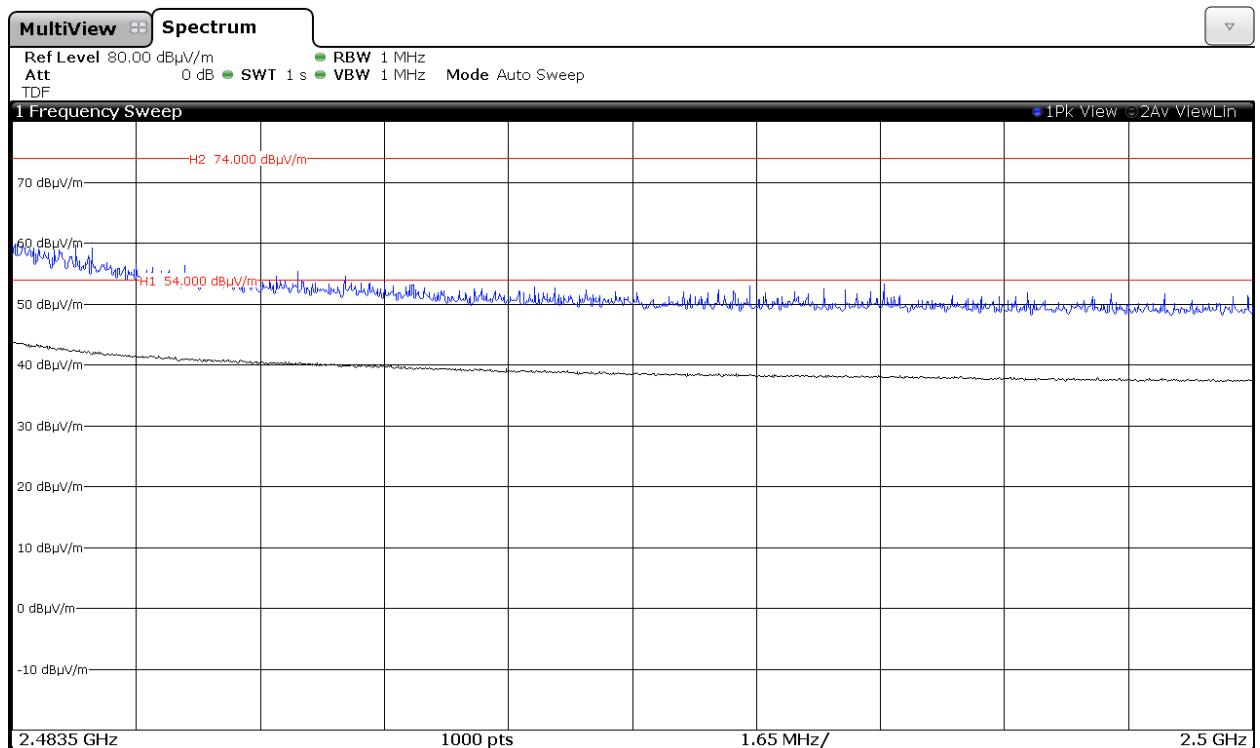


Chain A+B

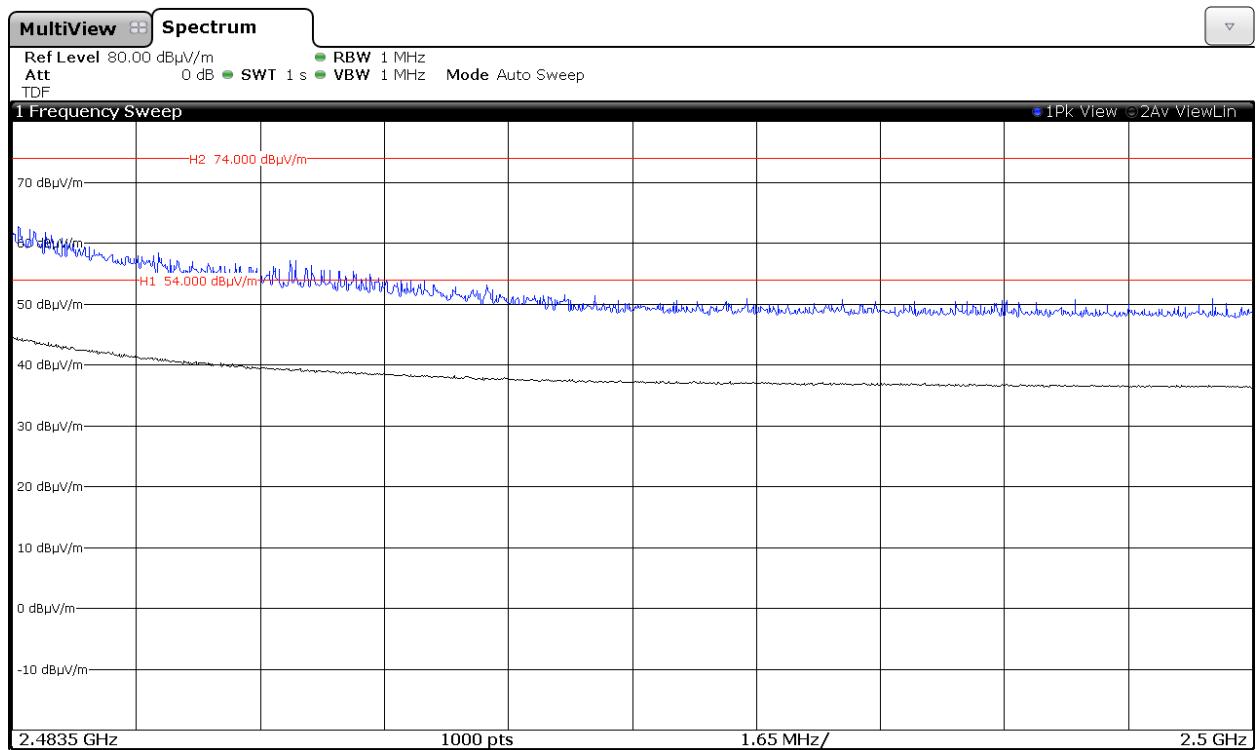


CHANNEL 12 (2467 MHz).

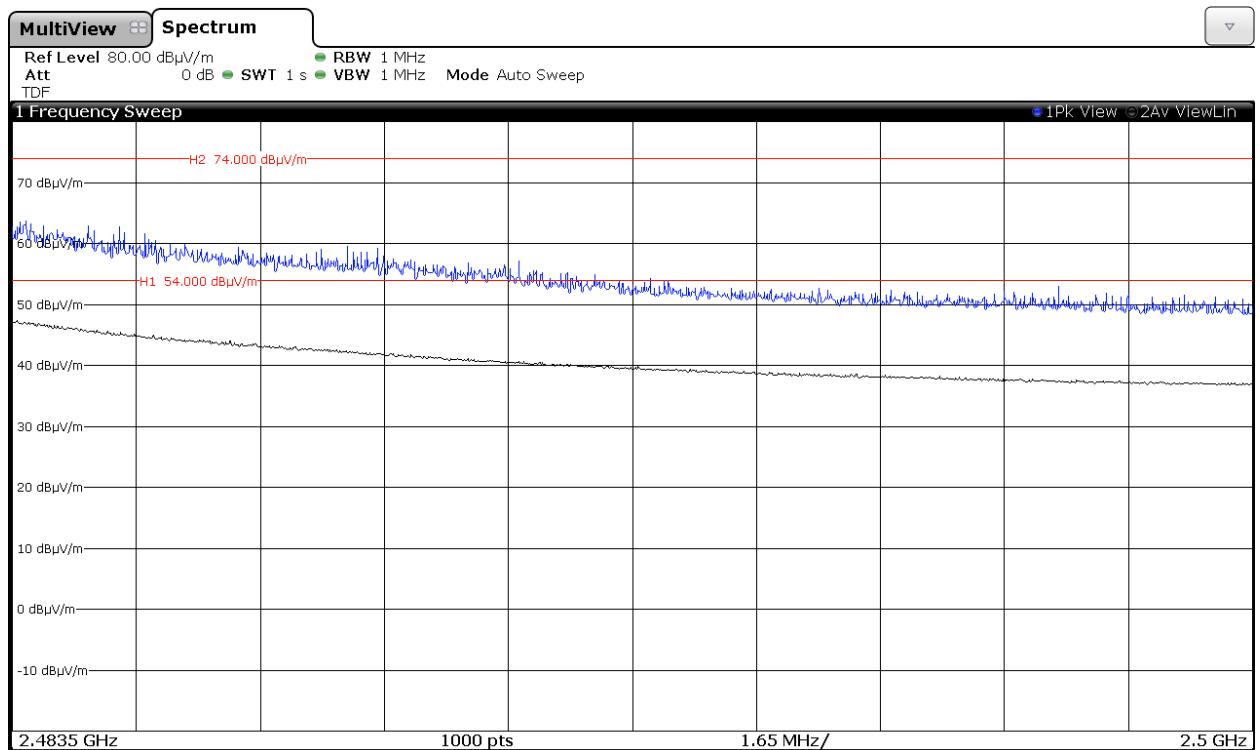
Chain A

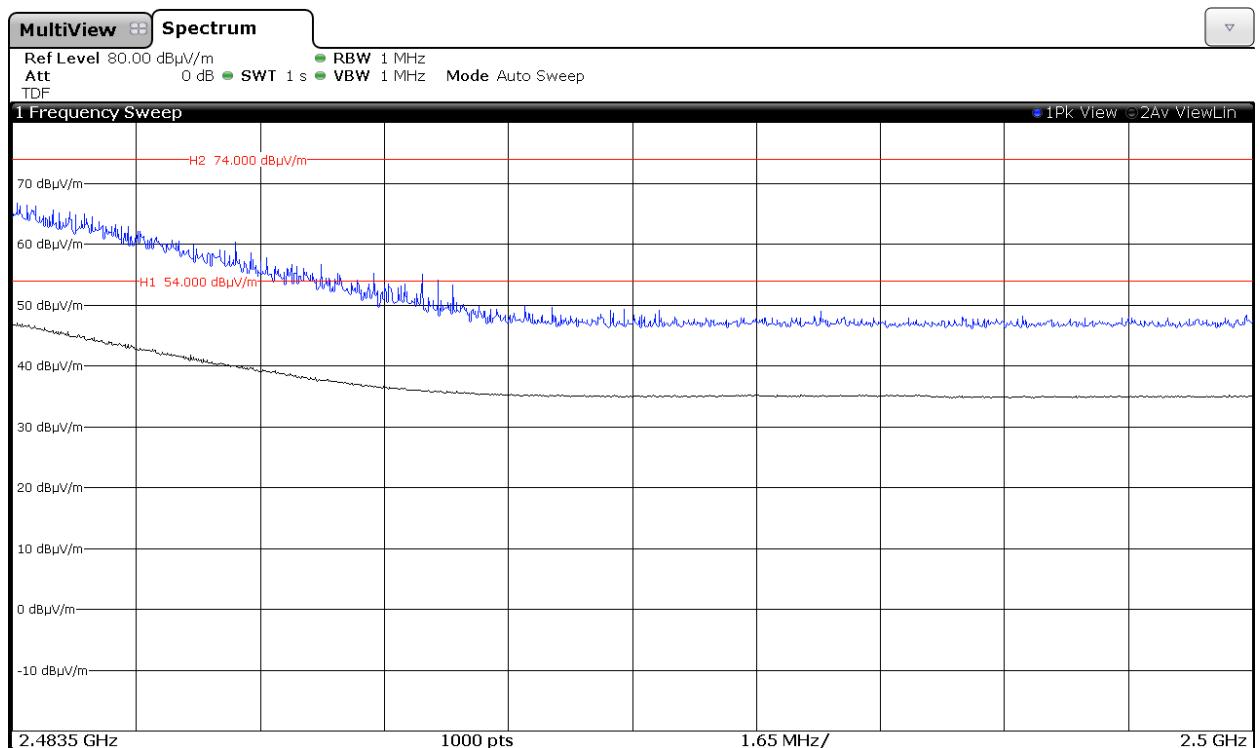
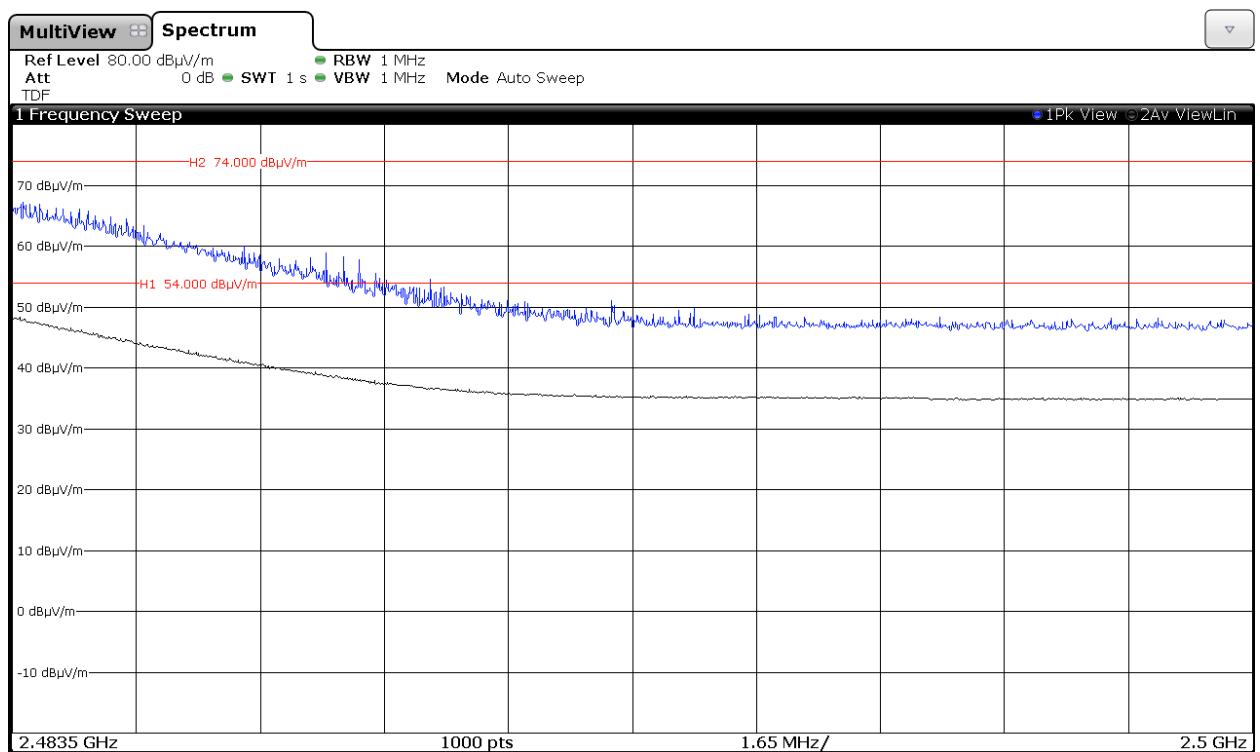


Chain B

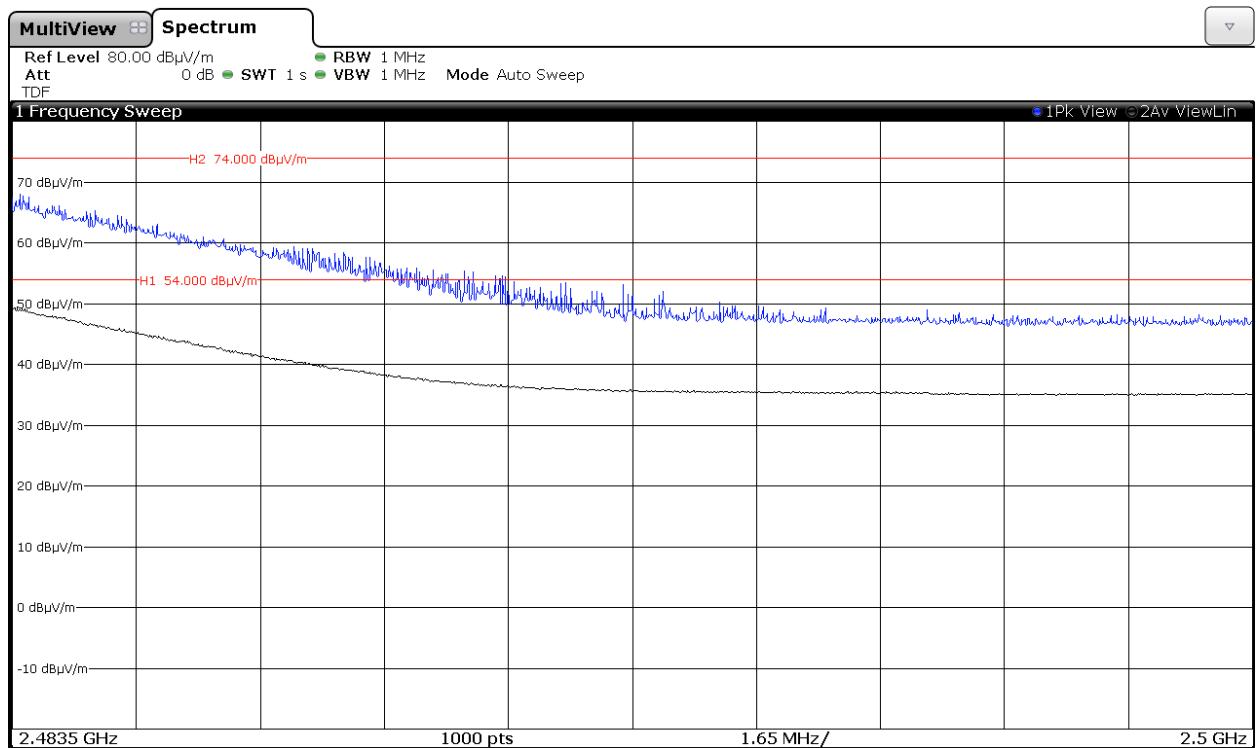


Chain A+B



CHANNEL 13 (2472 MHz).
Chain A

Chain B


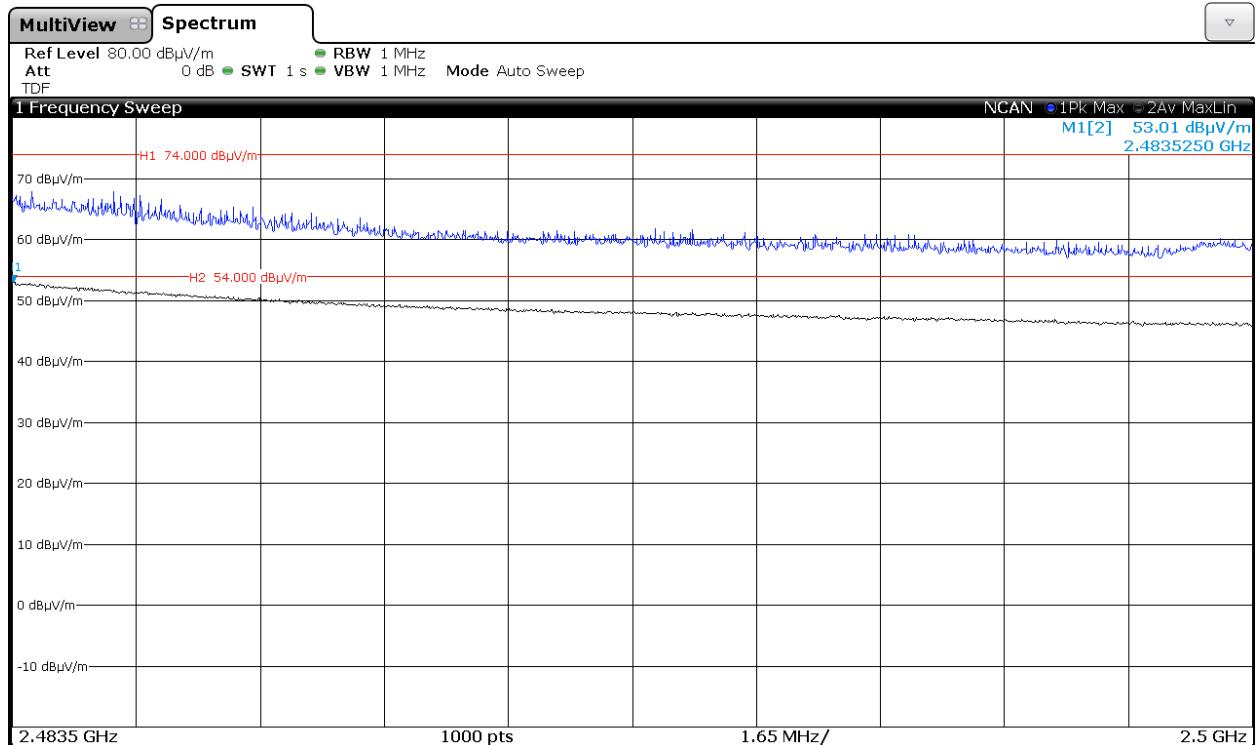
Chain A+B



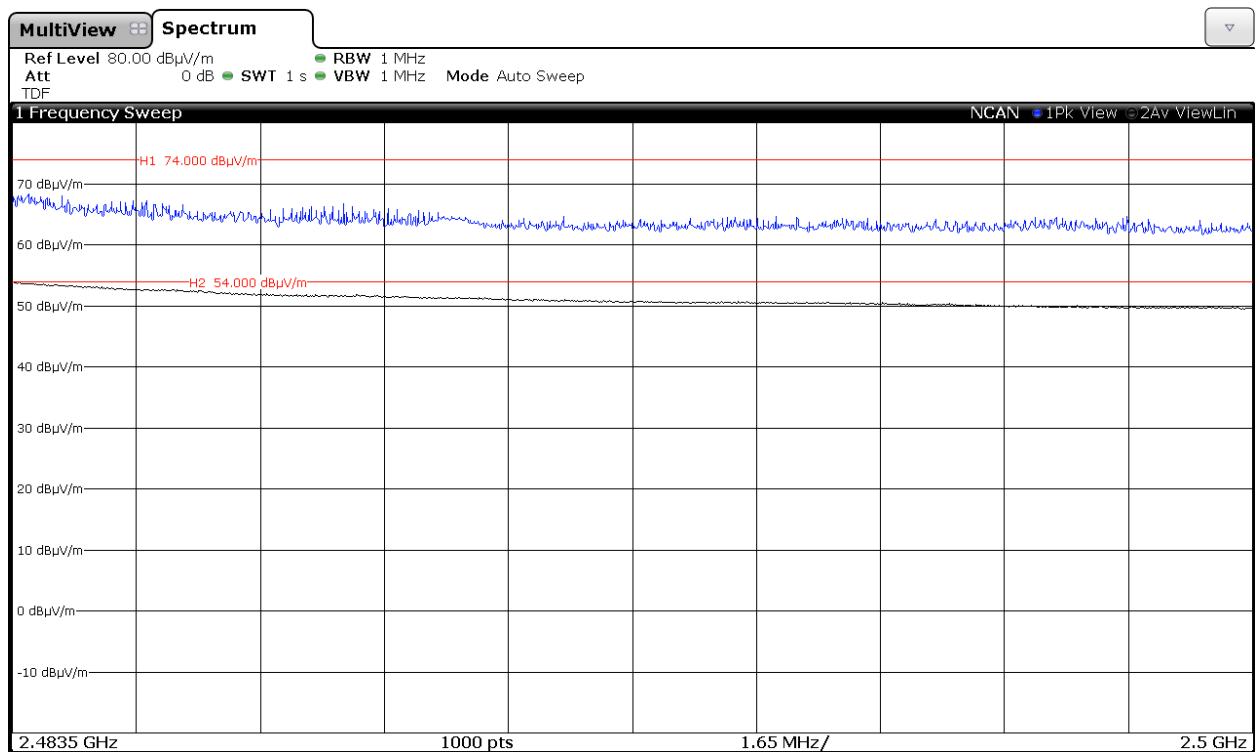
4. WiFi 2.4GHz 802.11 n40 mode

CHANNEL 6 (2437 MHz).

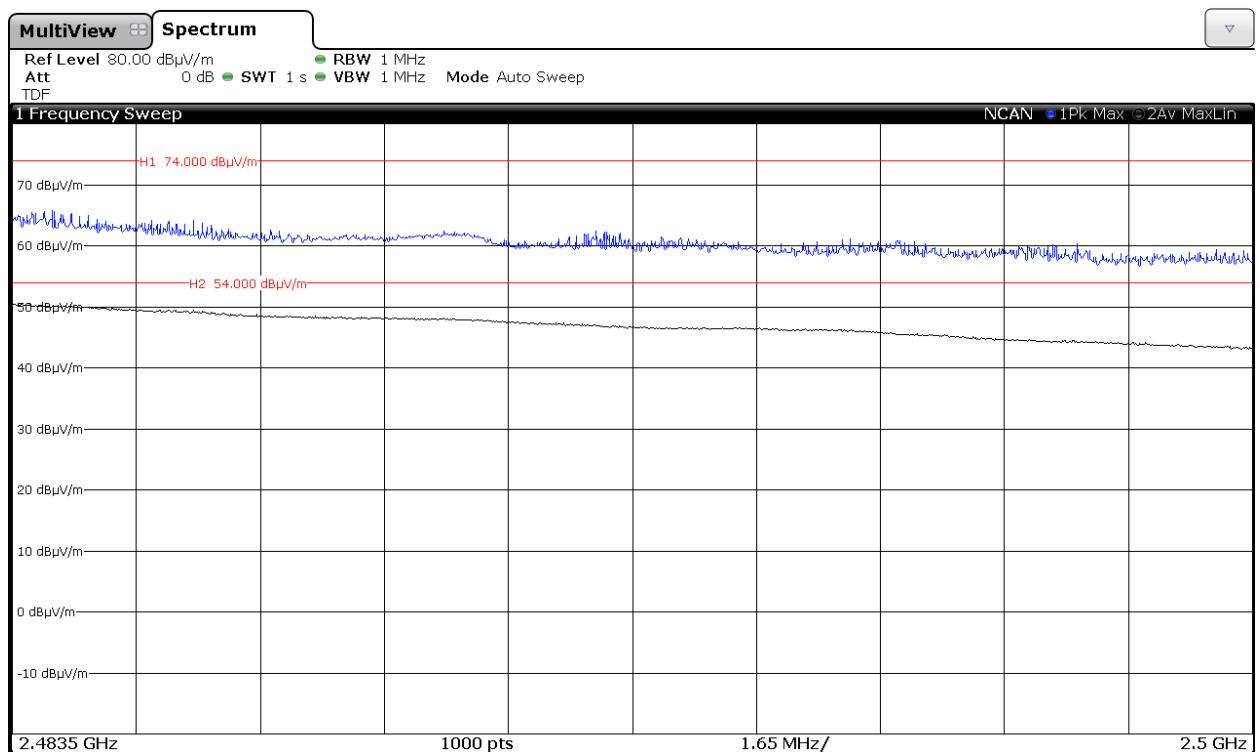
Chain A



Chain B

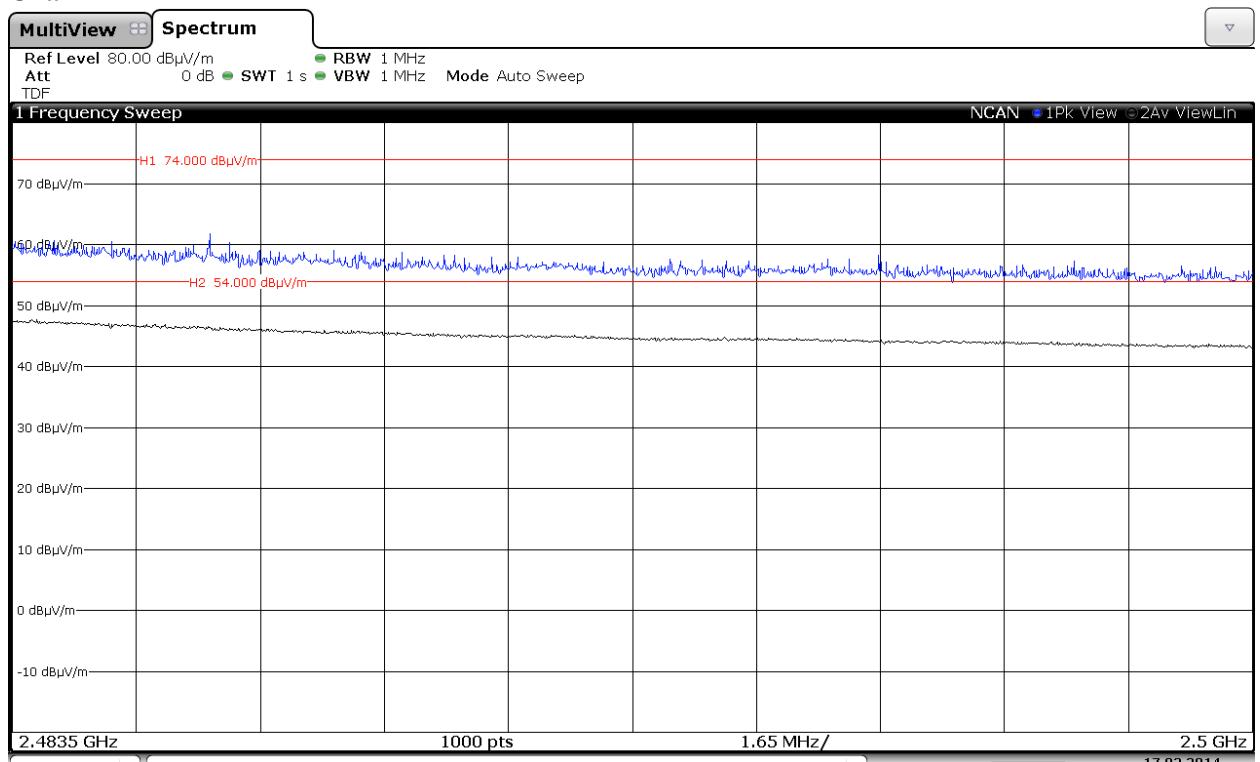


Chain A+B

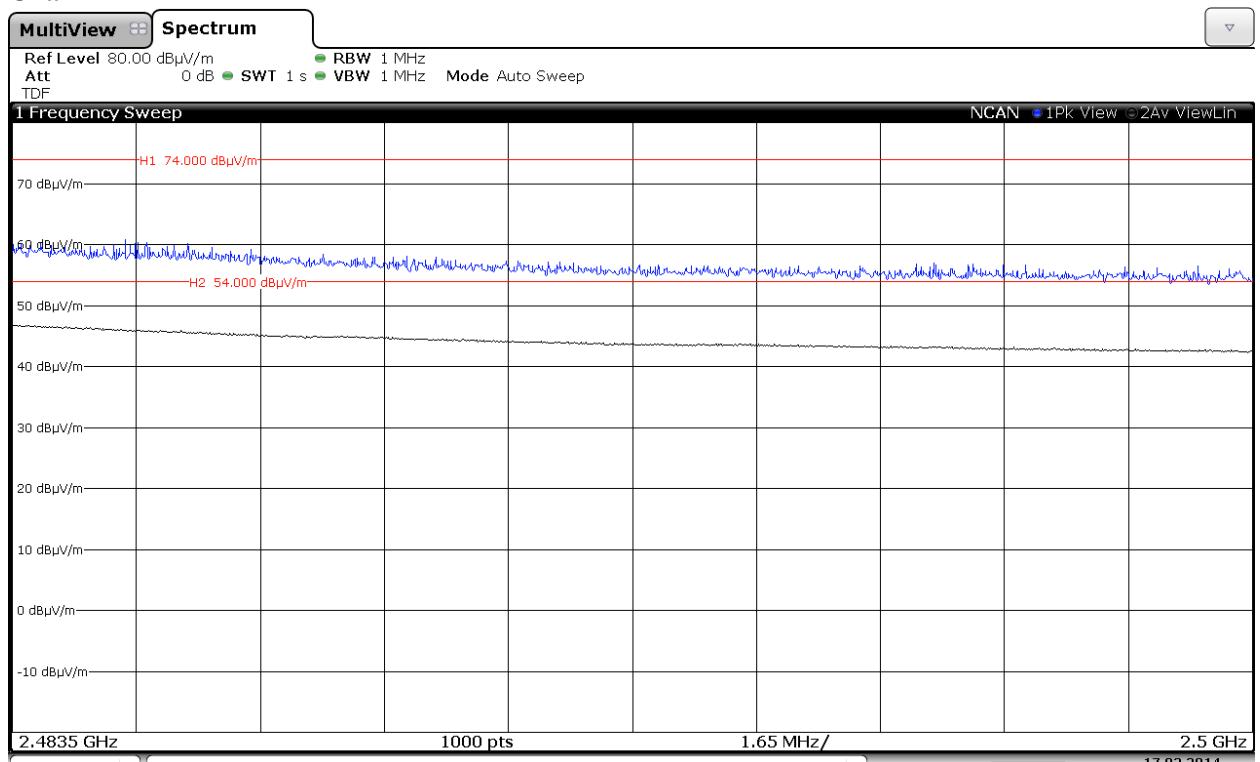


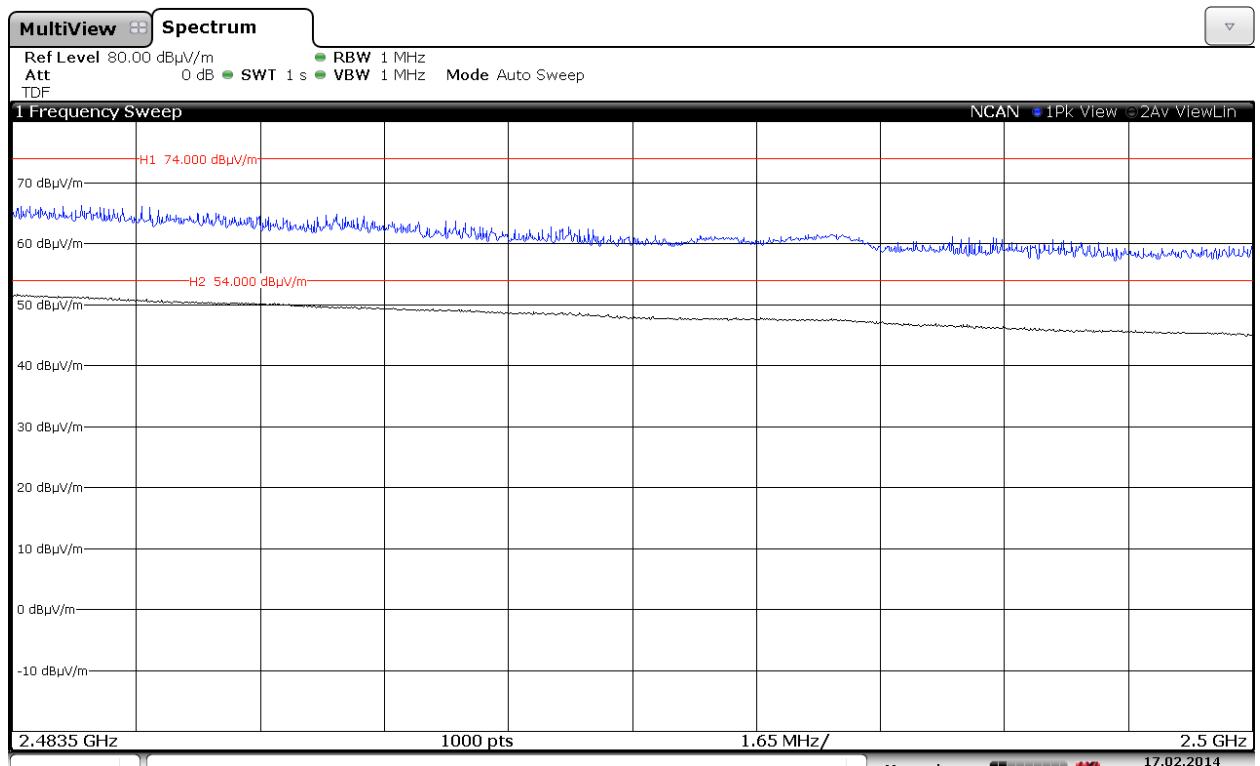
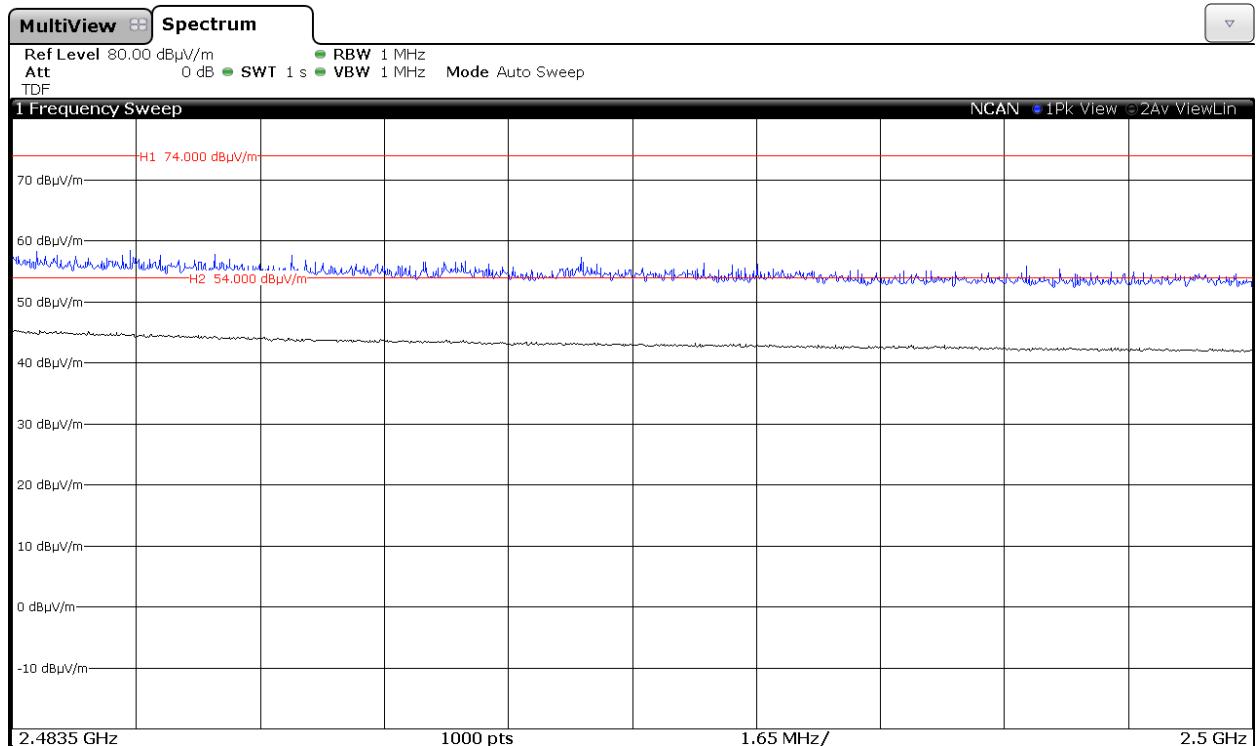
CHANNEL 7 (2442 MHz).

Chain A

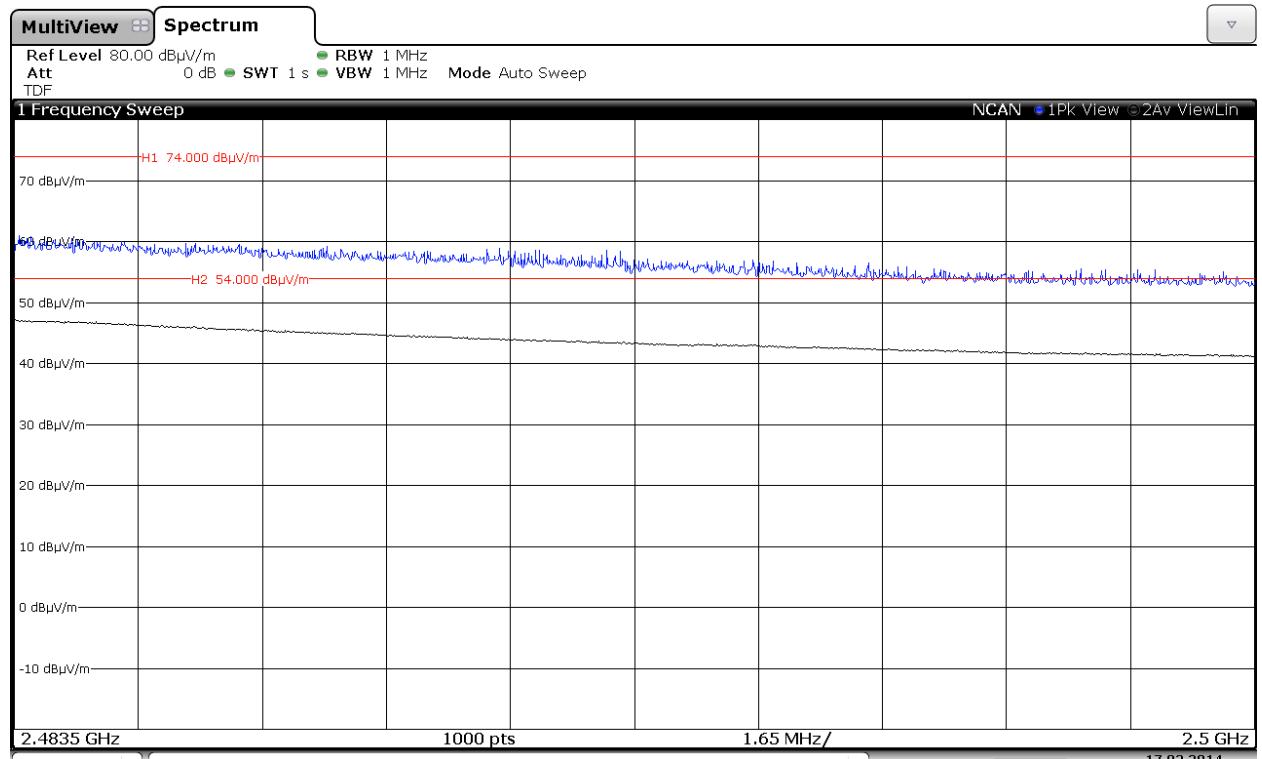


Chain B

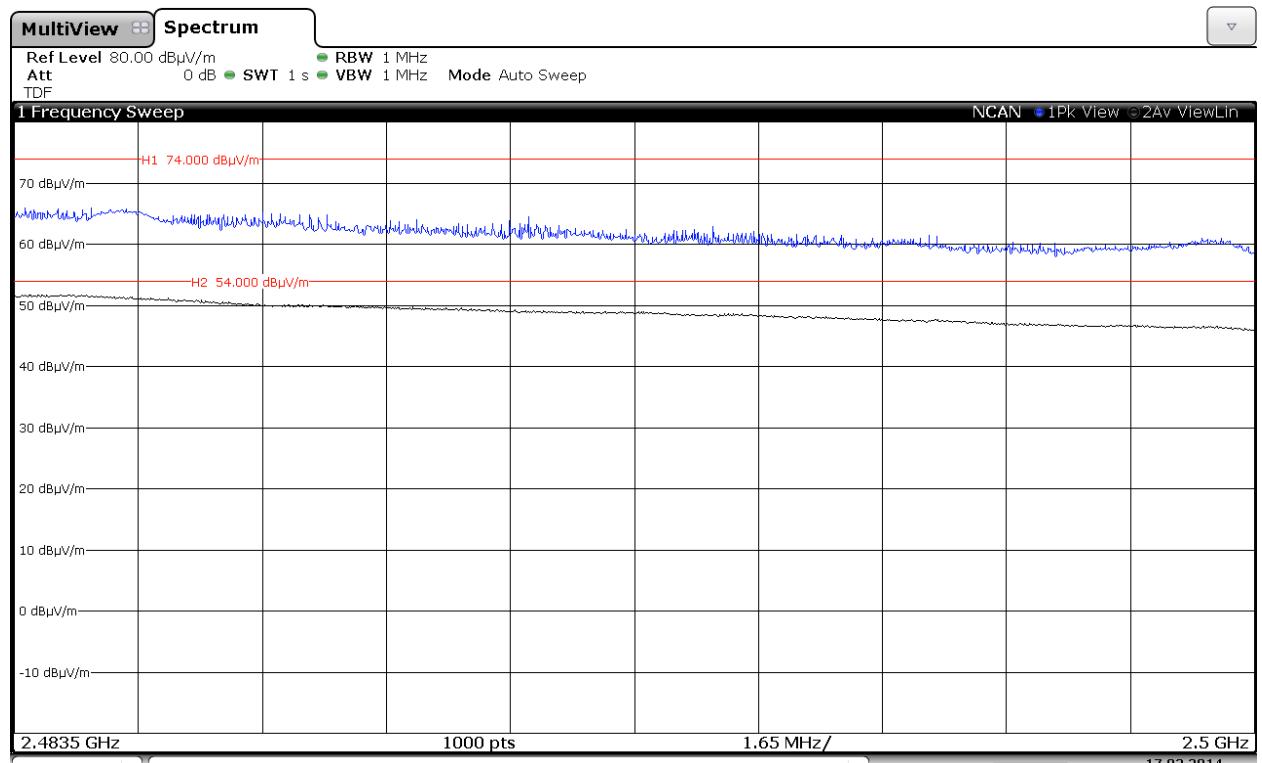


Chain A+B

CHANNEL 8 (2447 MHz).
Chain A


Chain B

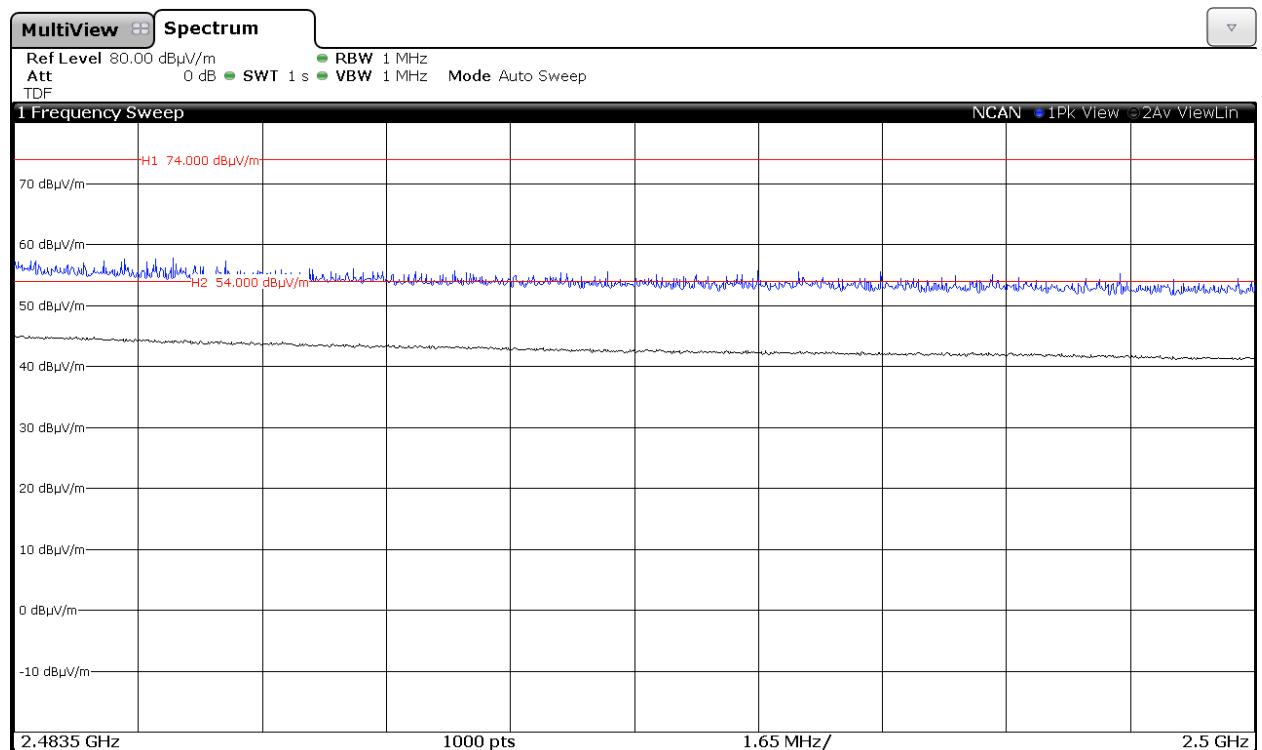


Chain A+B

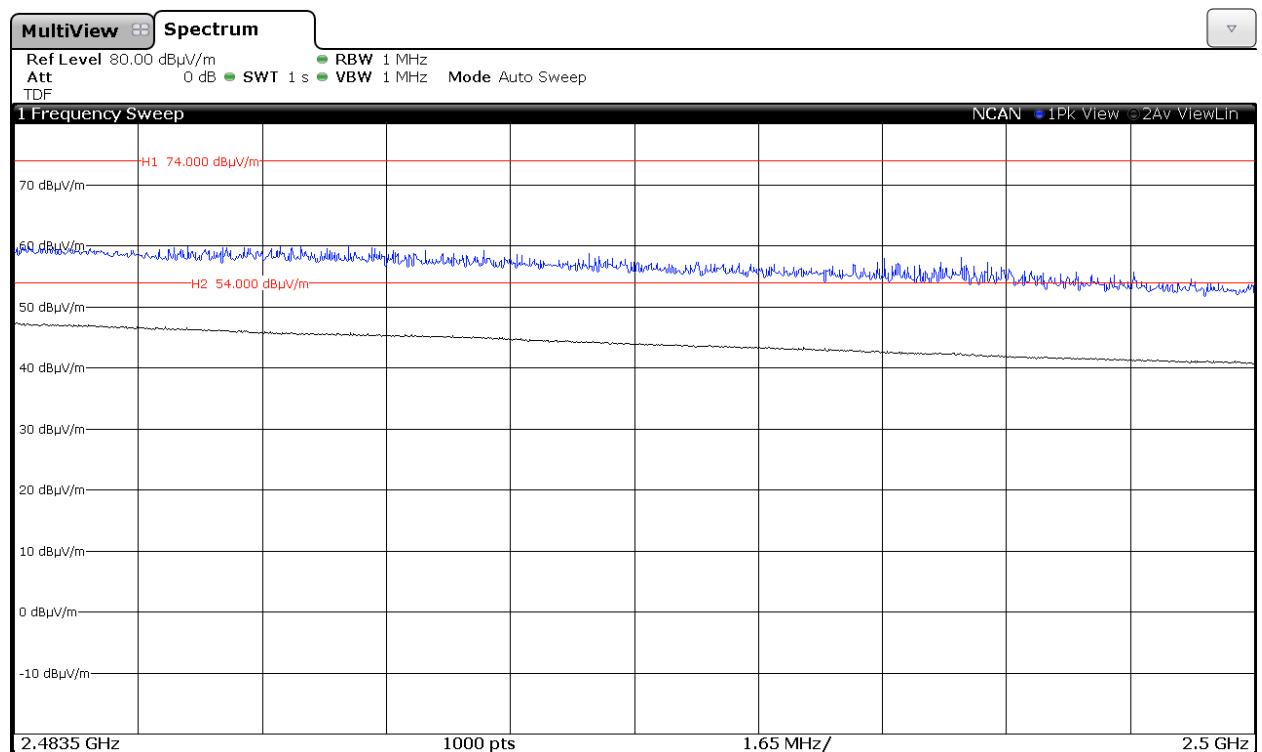


CHANNEL 9 (2452 MHz).

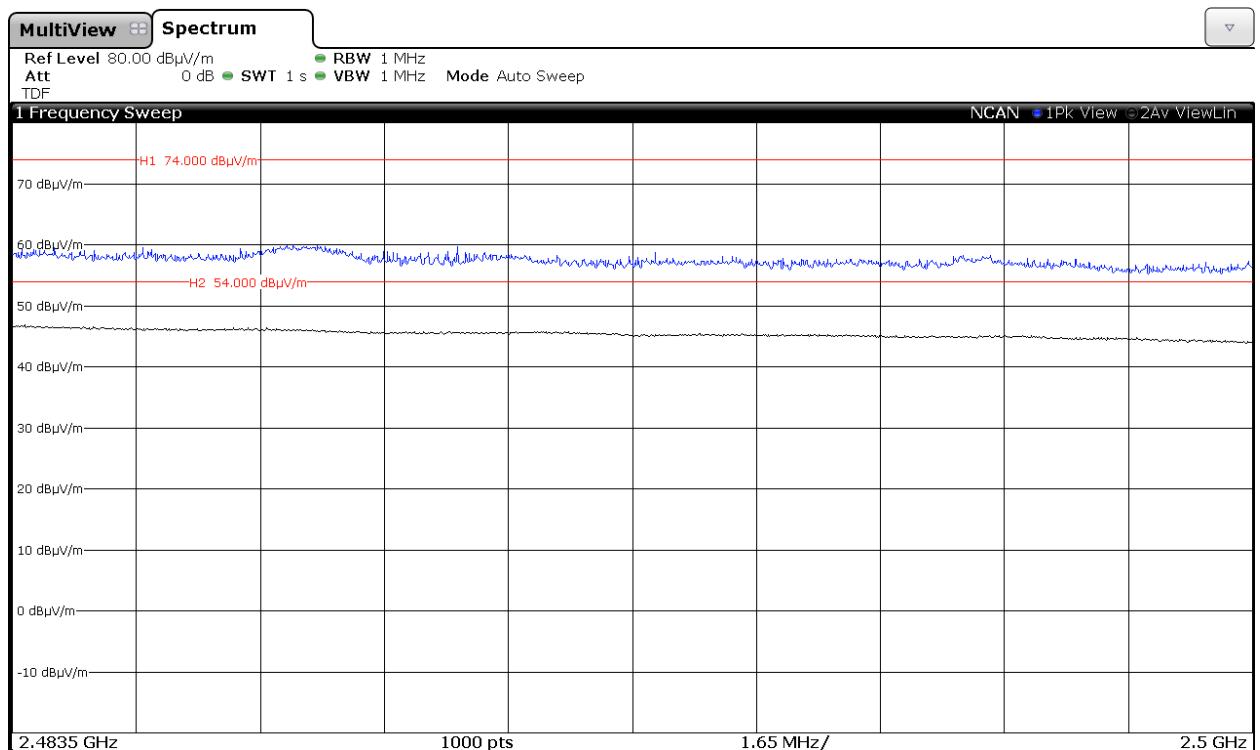
Chain A



Chain B

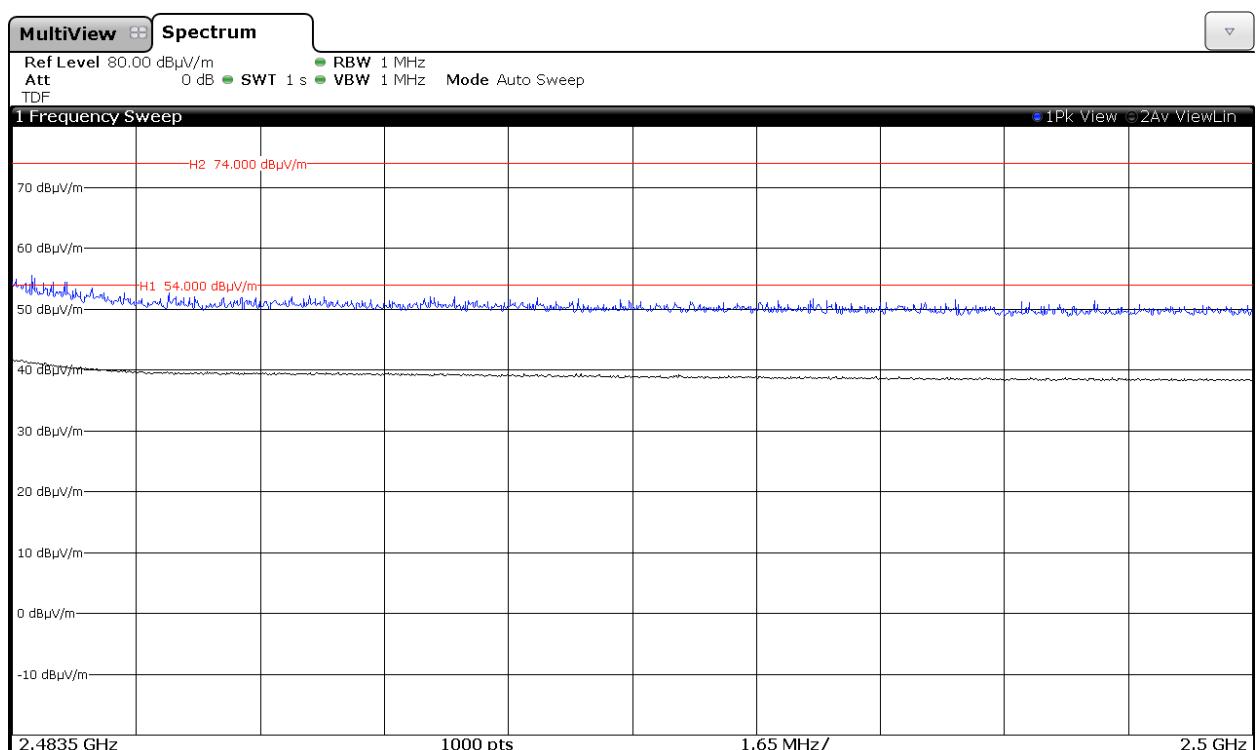


Chain A+B

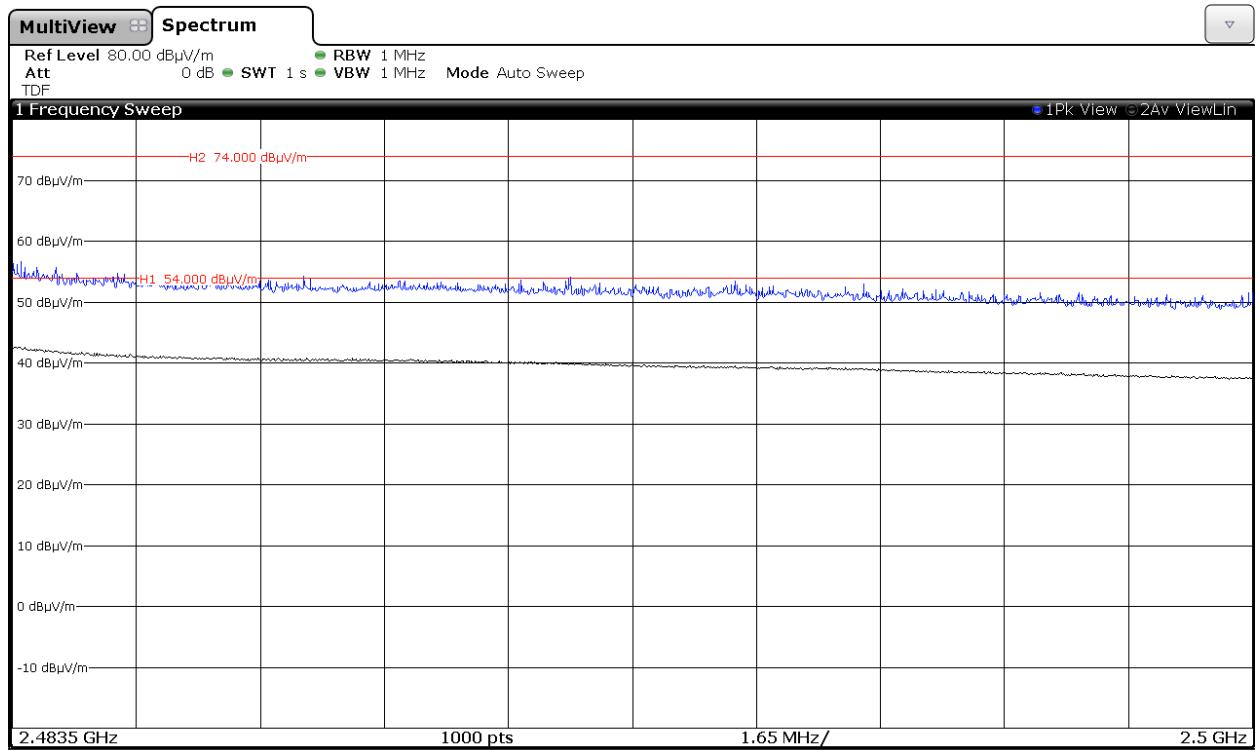


CHANNEL 10F (2457 MHz).

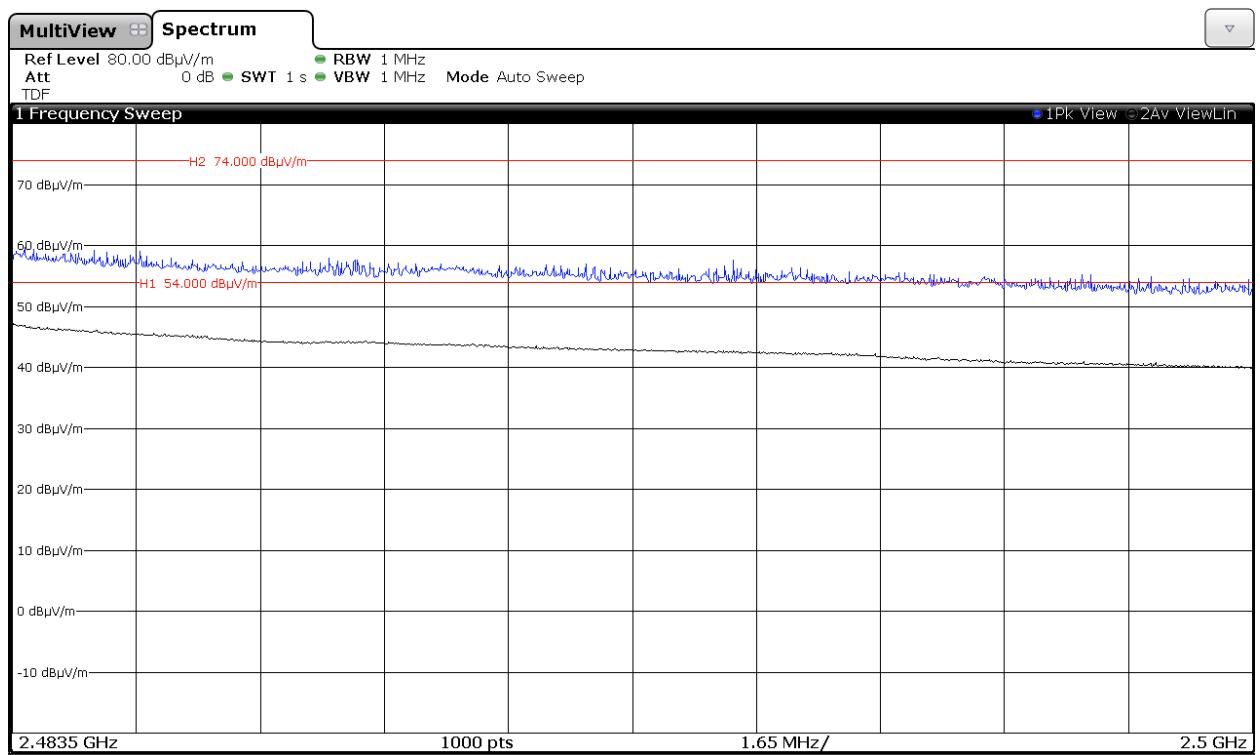
Chain A



Chain B

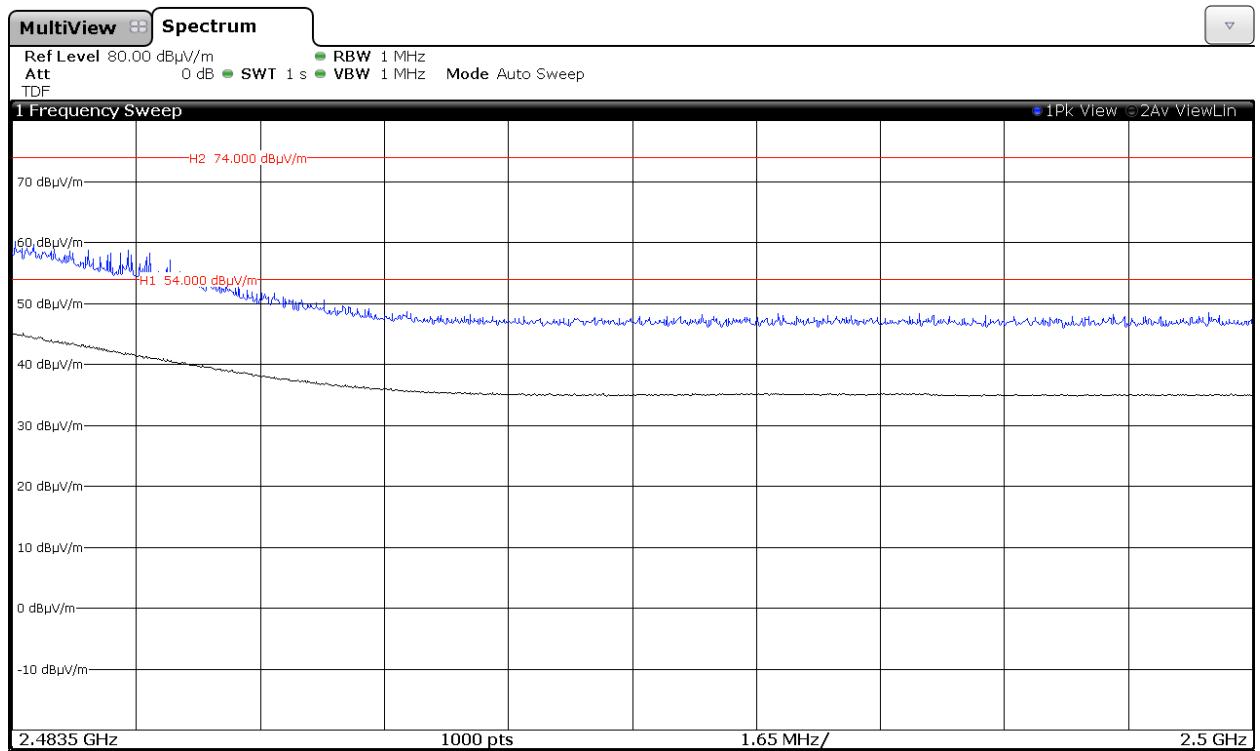


Chain A+B

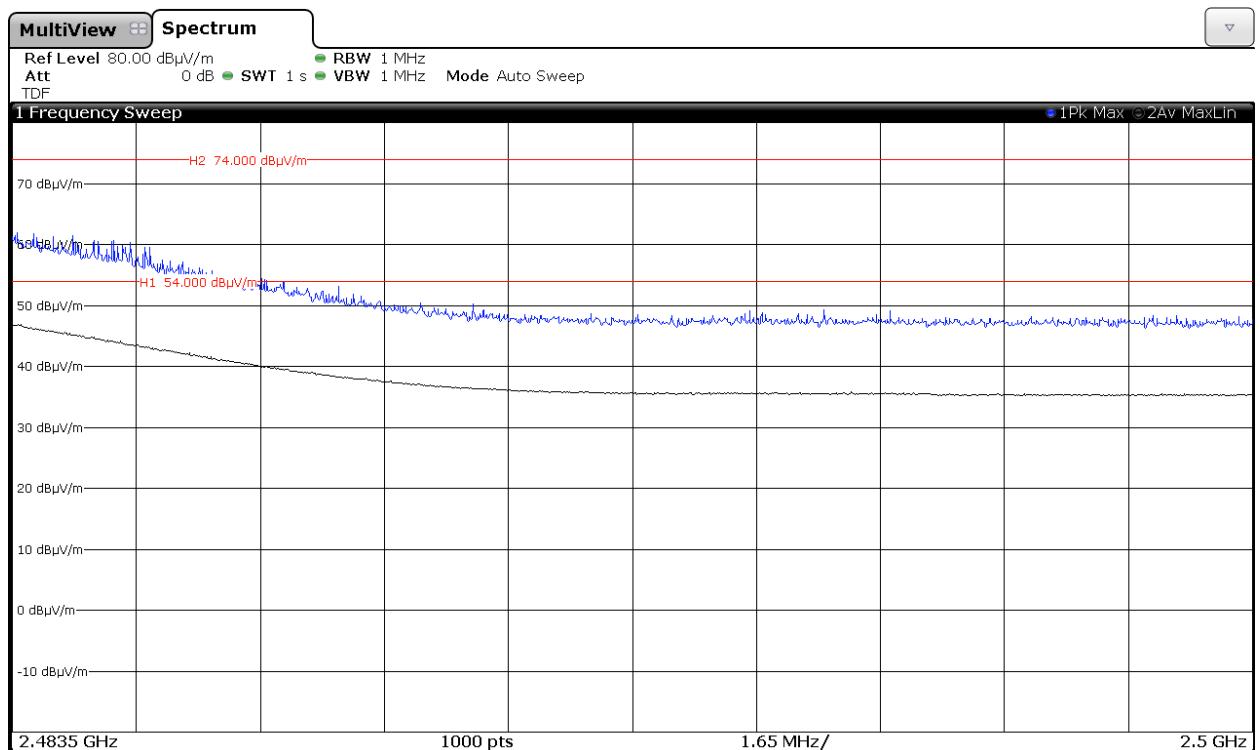


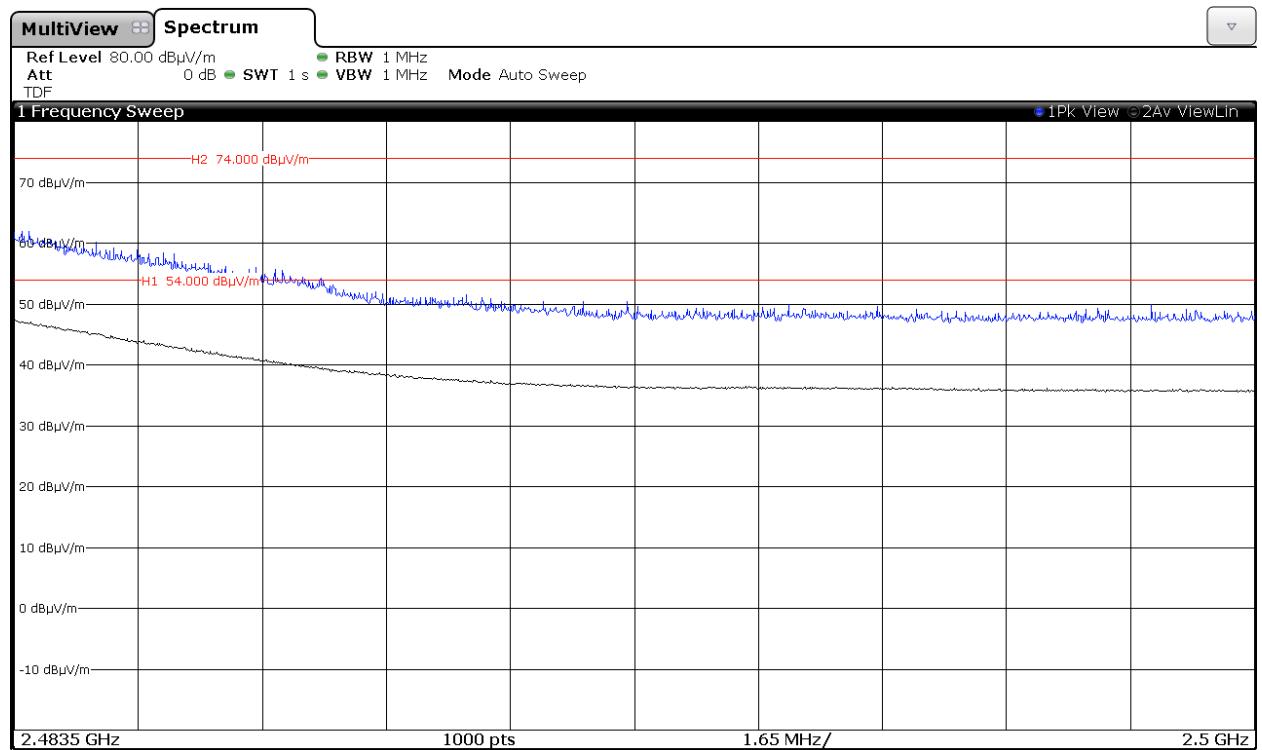
CHANNEL 11F (2462 MHz).

Chain A



Chain B



Chain A+B


APPENDIX B: Test results “WiFi 5.725-5.825 GHz (802.11a/n20/n40/ac80)”

INDEX

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TEST CONDITIONS

Power supply (V):

$$V_{\text{nominal}} = 3.3 \text{ Vdc}$$

Type of power supply = DC voltage from HMC/NGFC test board.

Type of antenna = External attachable PIFA antenna.

Declared Gain for antenna = 5 dBi

Operating frequencies in the sub-band 5.725-5.825 GHz.

-For IEEE 802.11a, the equipment uses channels 149,153,157,161,165.

-For IEEE 802.11n, there are two bandwidths:

For 20 MHz bandwidth the equipment uses channels 149,153,157,161,165.

For 40 MHz bandwidth the equipment uses channels 151 and 159.

-For IEEE 802.11ac80 (80 MHz bandwidth) the equipment uses channel 155.

TEST FREQUENCIES:

For WiFi a/n20:

Lowest channel (149): 5745 MHz

Middle channel (157): 5785 MHz

Highest channel (165): 5825 MHz

For WiFi n40:

Lowest channel (151): 5755 MHz

Highest channel (159): 5795 MHz

For WiFi ac80:

Middle channel (155): 5775 MHz

The test set-up was made in accordance to the general provisions of FCC DTS Measurement KDB 558074 D01 DTS Meas Guidance v03r01.

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

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

For radio testing purposes the card was installed in a test fixture. The test fixture is connected to a laptop computer and dc power supplied. The laptop computer was used to configure the EUT to continuously transmit at a specified output power with different modes and modulation schemes.

The PC was using the Intel test utility DRTU Version 1.7.3-859

During transmitter test the EUT was being controlled by the Intel DRTU tool to operate in a continuous transmit mode on the test channels as required and in each of the different modulation modes.

The data rates of 6Mb/s for 802.11a, HT0 (SISO)/HT8 (MIMO) for 802.11n20 and n40, and VHT0 (SISO)/(MIMO) for 802.11 ac80 were selected based on preliminary testing that identified those rates corresponding to the worst cases for output power and spurious levels at the band edges.

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 calibrated average power meter. Measured values for adjustment were within -0.2 dB/+0.3 dB respect to the Target values.

RF conducted output power target values

Mode	BW (MHz)	Channel / Freq.	SISO Chain A (dBm)	SISO Chain B (dBm)	MIMO at both ports A and B (dBm)
802.11a	20	149 / 5745	15.5	15	n/a
		157 / 5785	15.5	15	n/a
		165 / 5825	15.5	15	n/a
802.11n	20	149 / 5745	15.5	15	13.50
		157 / 5785	15.5	15	13.50
		165 / 5825	15.5	15	13.50
802.11n*	40	151 / 5755	16.5	16.5	16.50
		159 / 5795	16.5	16.5	16.50
802.11ac	80	155 / 5775	16.5	16.5	16.50

CONDUCTED MEASUREMENTS

The equipment under test was set up in a shielded room and it is connected to the spectrum analyser using a calibrated low loss RF cable. The reading in the spectrum analyser is compensated with the cable loss at each measurement frequency.

RADIATED MEASUREMENTS

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

For radiated emissions in the range 1 GHz-40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

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

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

Occupied Bandwidth

RESULTS

1. WiFi 5GHz 802.11 a mode

Occupied Bandwidth (see next plots).

	Lowest frequency		Middle frequency		Highest frequency	
	5745 MHz		5785 MHz		5825 MHz	
	Chain A	Chain B	Chain A	Chain B	Chain A	Chain B
99% bandwidth (MHz)	16.712	16.668	16.625	16.627	16.683	16.644
Measurement uncertainty (kHz)	± 21.7					

2. WiFi 5GHz 802.11 n20 mode

Occupied Bandwidth (see next plots).

	Lowest frequency		Middle frequency		Highest frequency	
	5745 MHz		5785 MHz		5825 MHz	
	Chain A	Chain B	Chain A	Chain B	Chain A	Chain B
99% bandwidth (MHz)	17.804	17.777	17.779	17.753	17.801	17.784
Measurement uncertainty (kHz)	± 21.7					

3. WiFi 5GHz 802.11 n40 mode

Occupied Bandwidth (see next plots).

	Lowest frequency		Highest frequency	
	5755 MHz		5795 MHz	
	Chain A	Chain B	Chain A	Chain B
99% bandwidth (MHz)	35.997	35.996	35.971	35.969
Measurement uncertainty (kHz)	± 21.7			

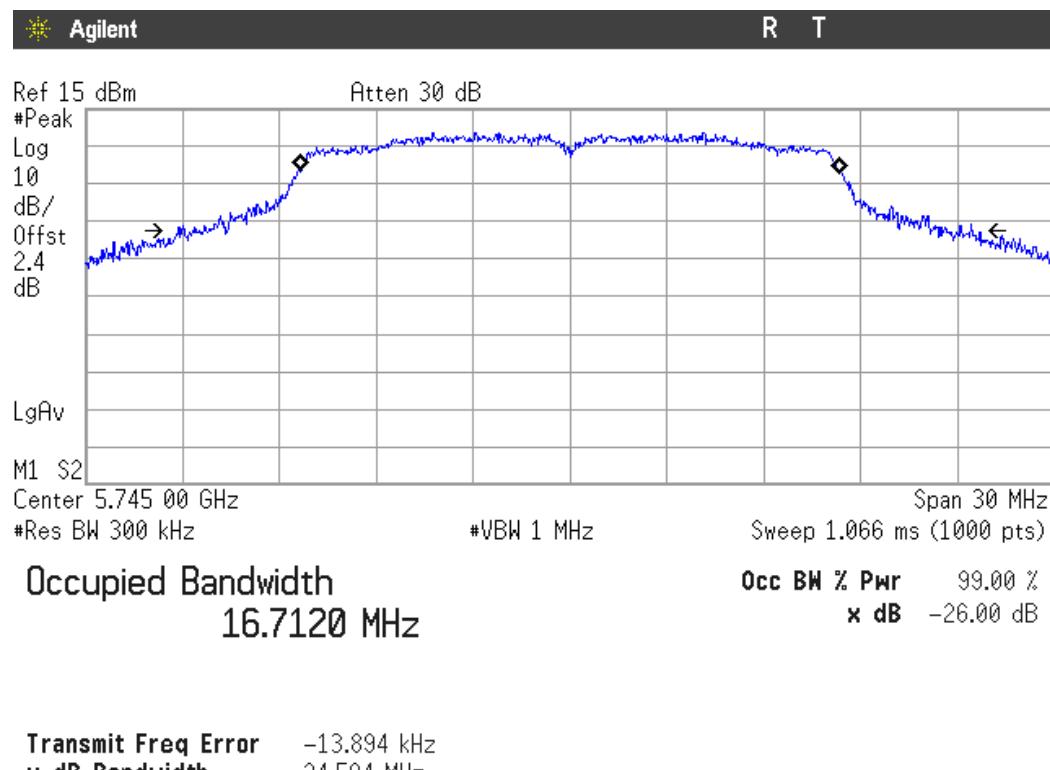
4. WiFi 5GHz 802.11 ac80 mode

Occupied Bandwidth (see next plots).

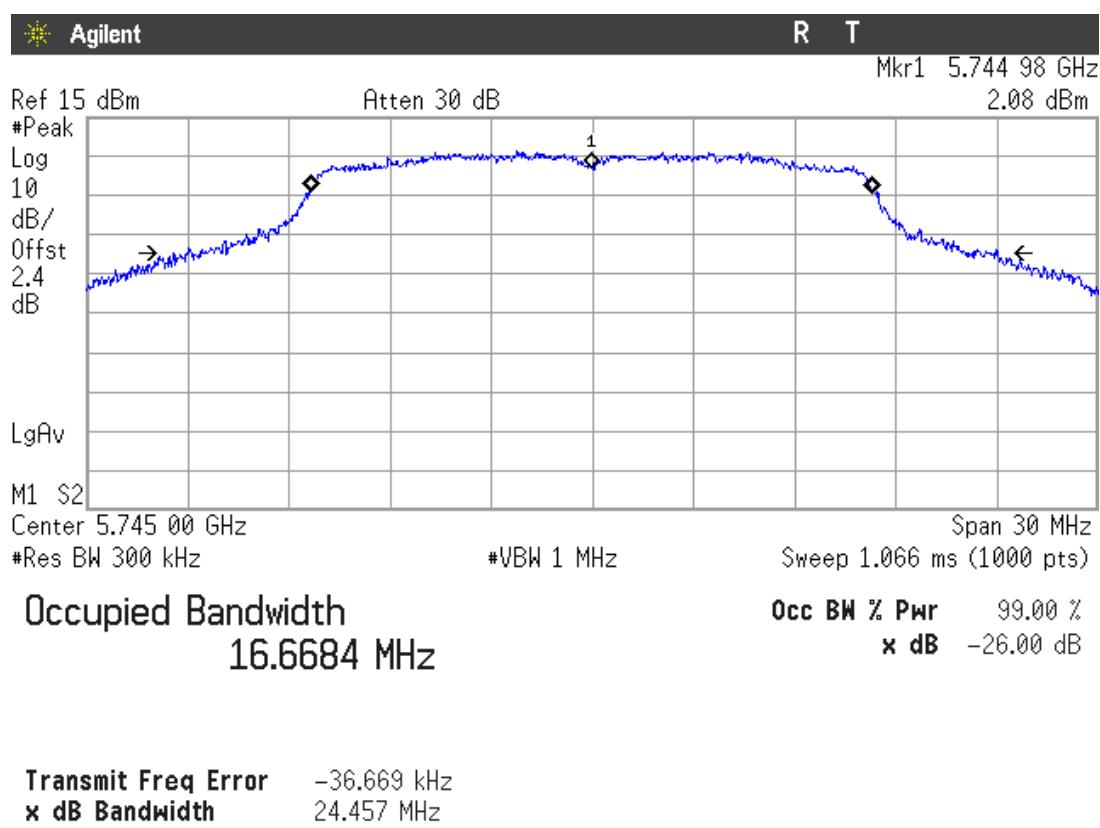
	Middle frequency	
	5775 MHz	
	Chain A	Chain B
99% bandwidth (MHz)	75.124	75.074
Measurement uncertainty (kHz)	± 21.7	

1. WiFi 5GHz 802.11 a mode

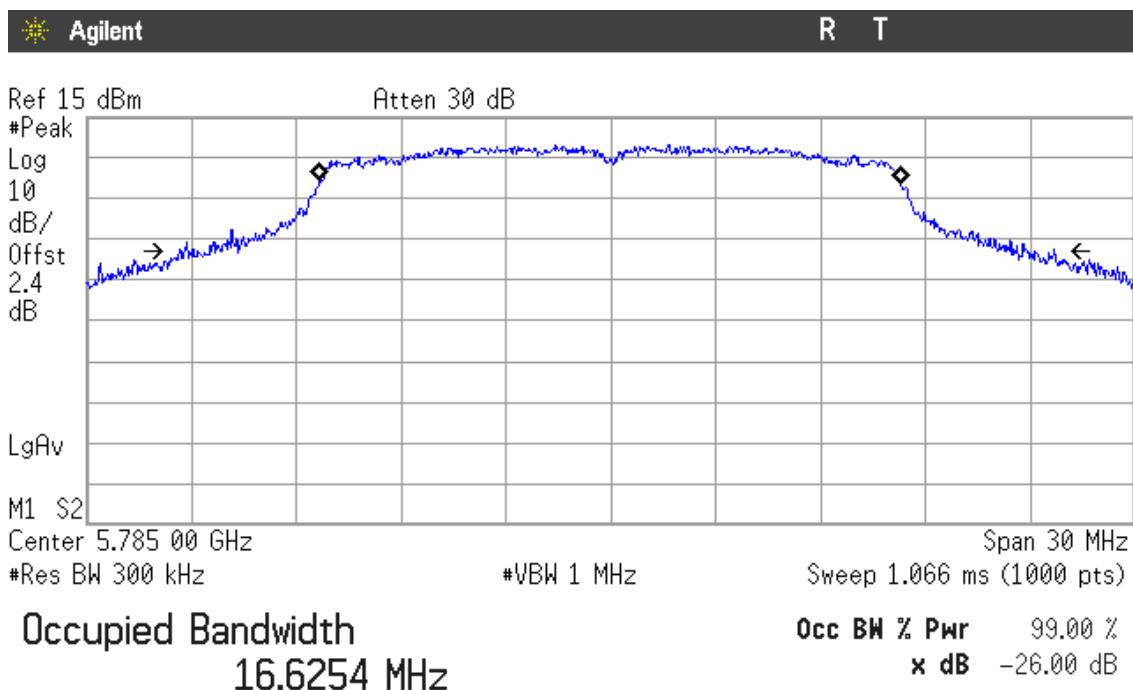
Lowest Channel: 5745 MHz. Chain A



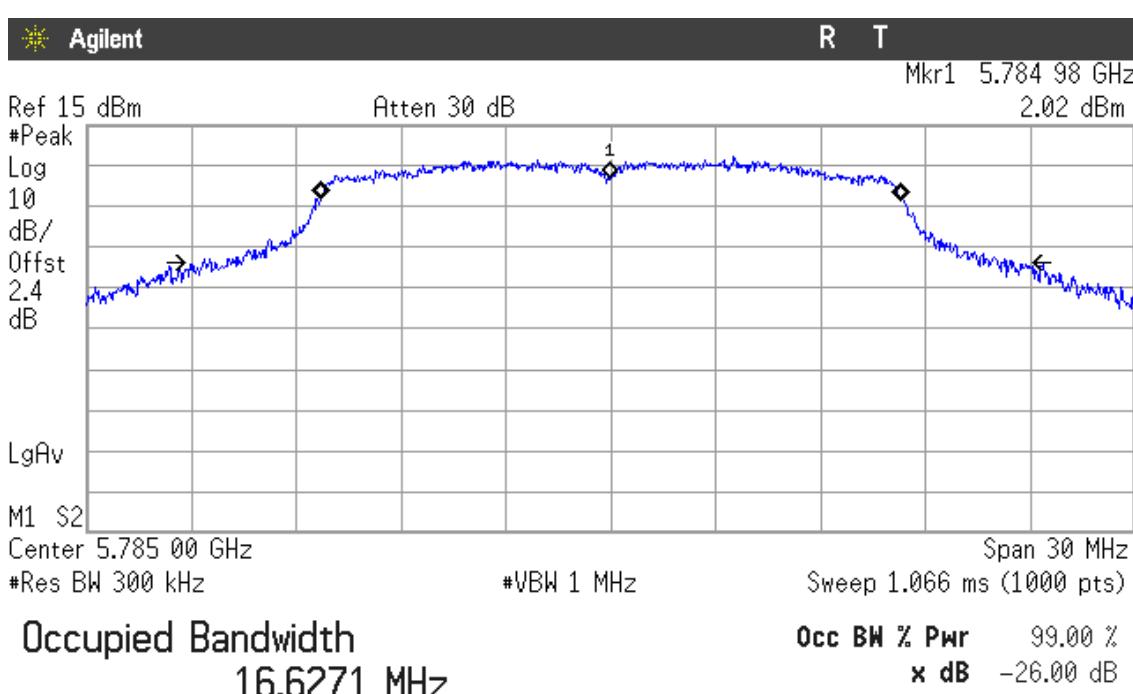
Lowest Channel: 5745 MHz. Chain B



Middle Channel: 5785 MHz. Chain A

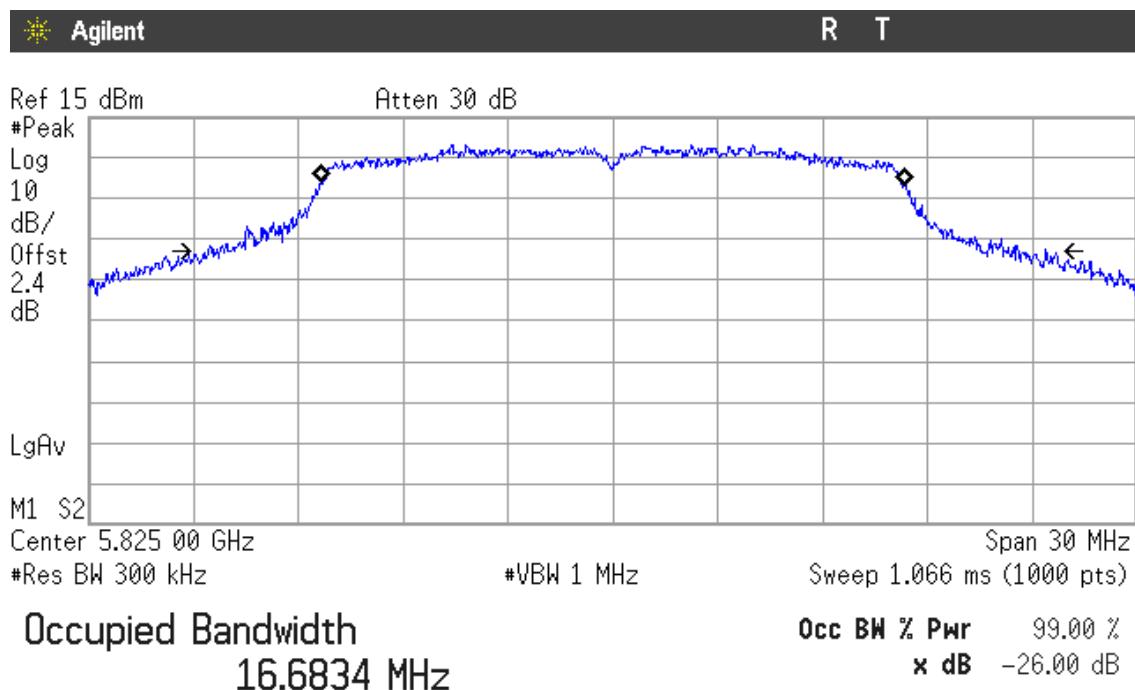


Middle Channel: 5785 MHz. Chain B

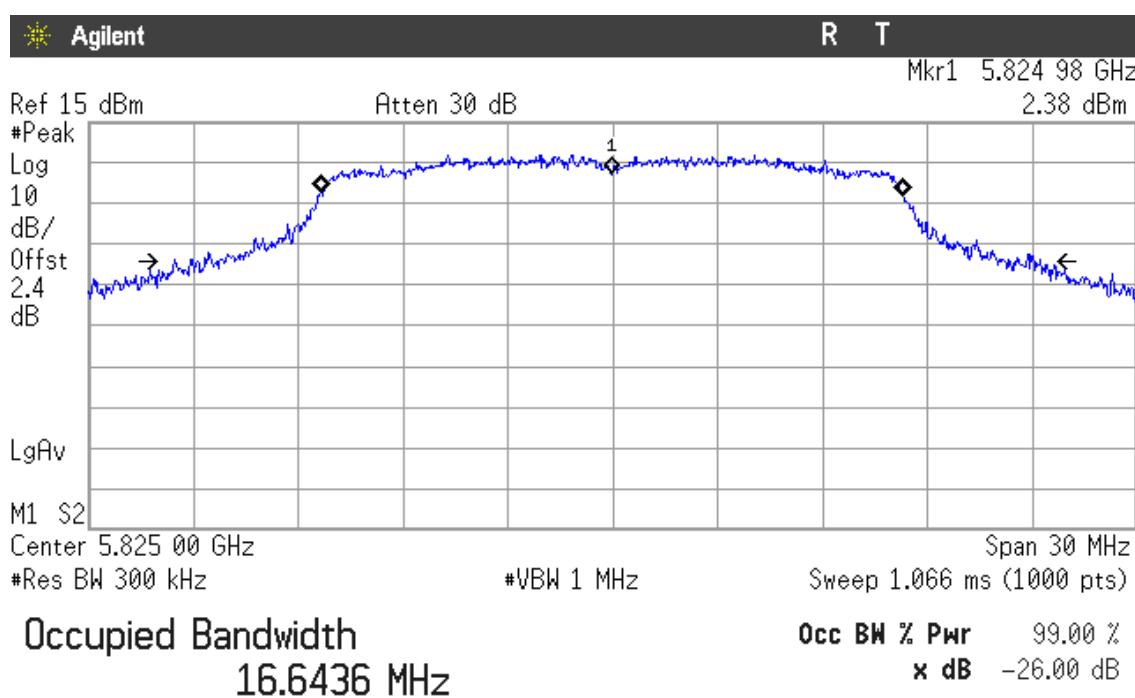


Transmit Freq Error -1.393 kHz
x dB Bandwidth 23.250 MHz

Highest Channel: 5825 MHz. Chain A



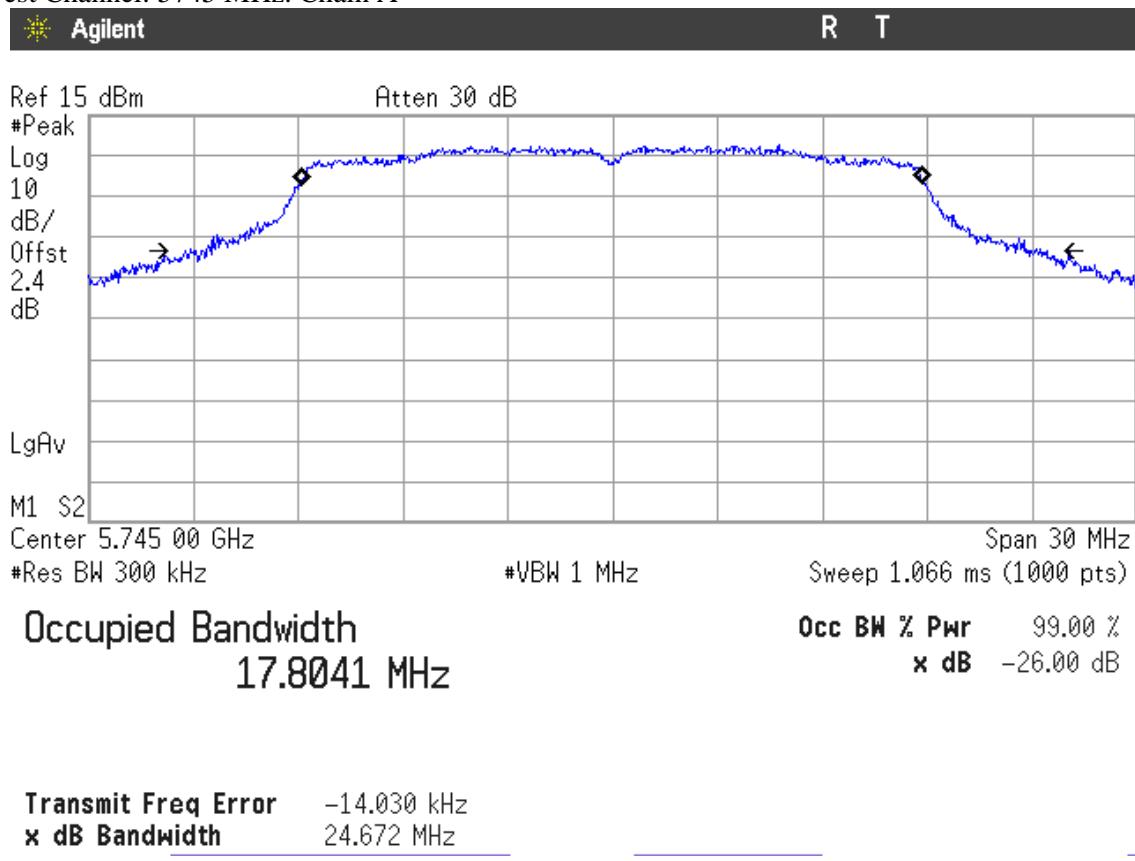
Highest Channel: 5825 MHz. Chain B



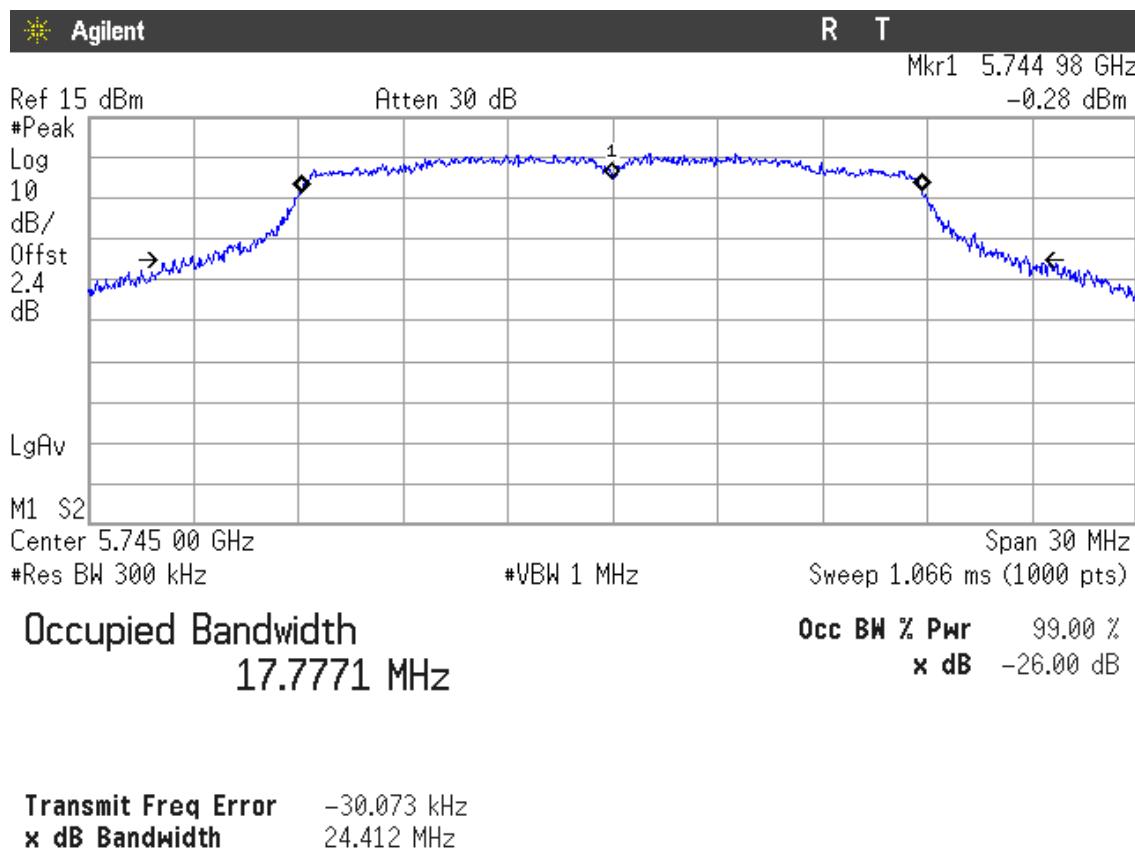
Transmit Freq Error -29.577 kHz
x dB Bandwidth 24.788 MHz

2. WiFi 5GHz 802.11 n20 mode

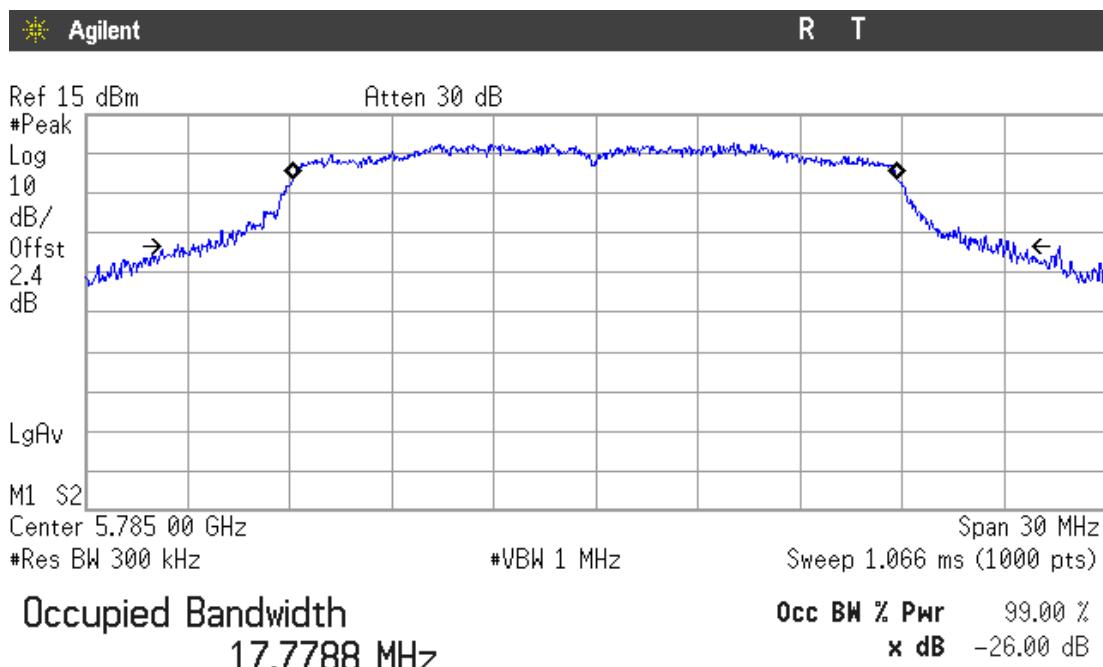
Lowest Channel: 5745 MHz. Chain A



Lowest Channel: 5745 MHz. Chain B

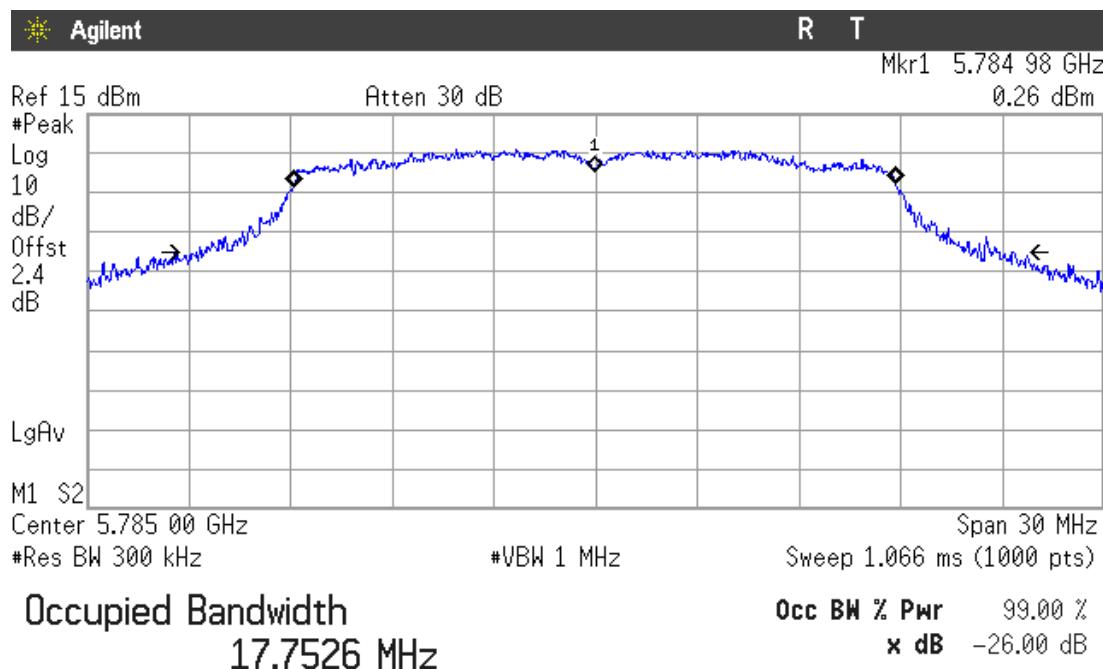


Middle Channel: 5785 MHz. Chain A



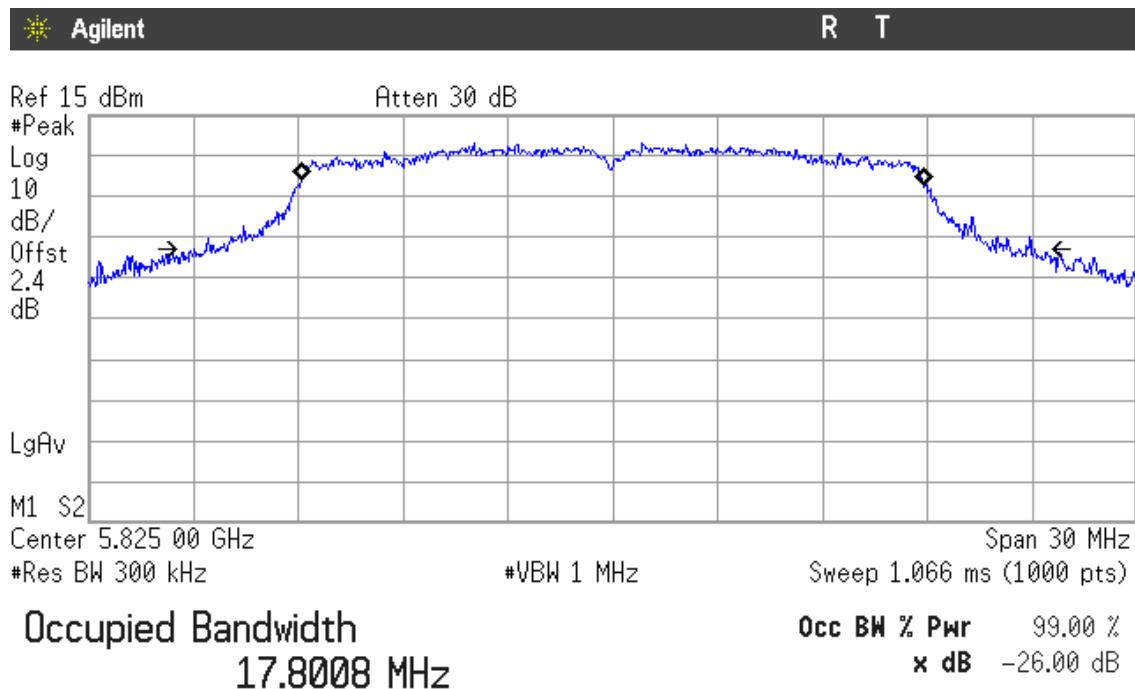
Transmit Freq Error -12.487 kHz
x dB Bandwidth 24.625 MHz

Middle Channel: 5785 MHz. Chain B

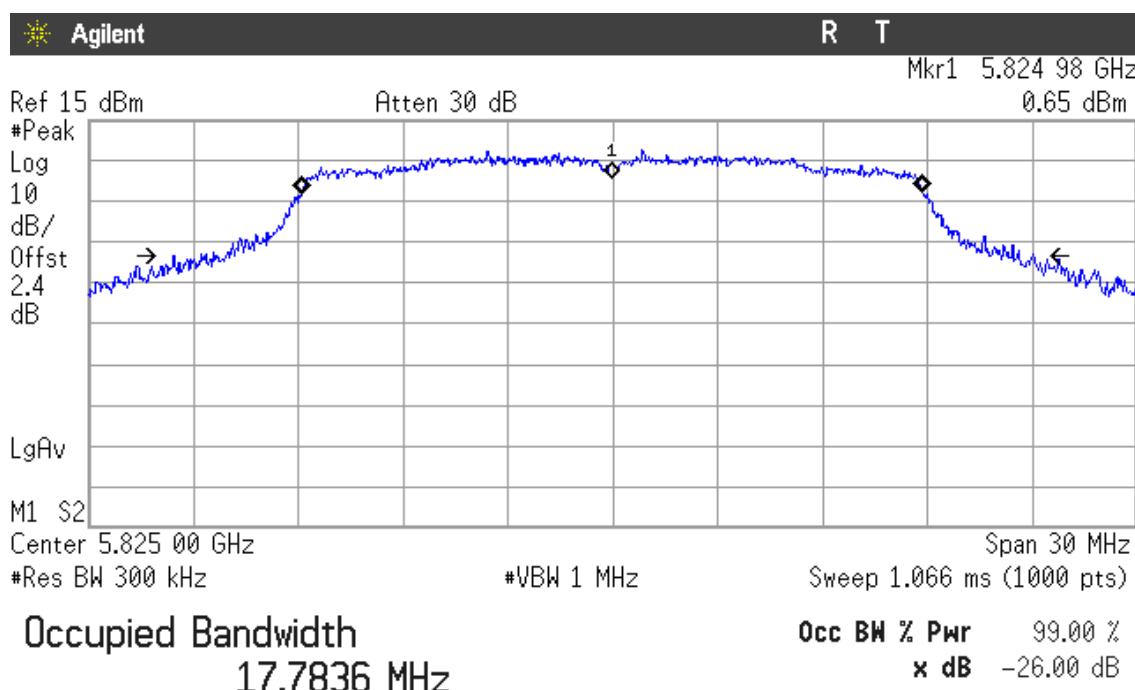


Transmit Freq Error -23.763 kHz
x dB Bandwidth 24.119 MHz

Highest Channel: 5825 MHz. Chain A



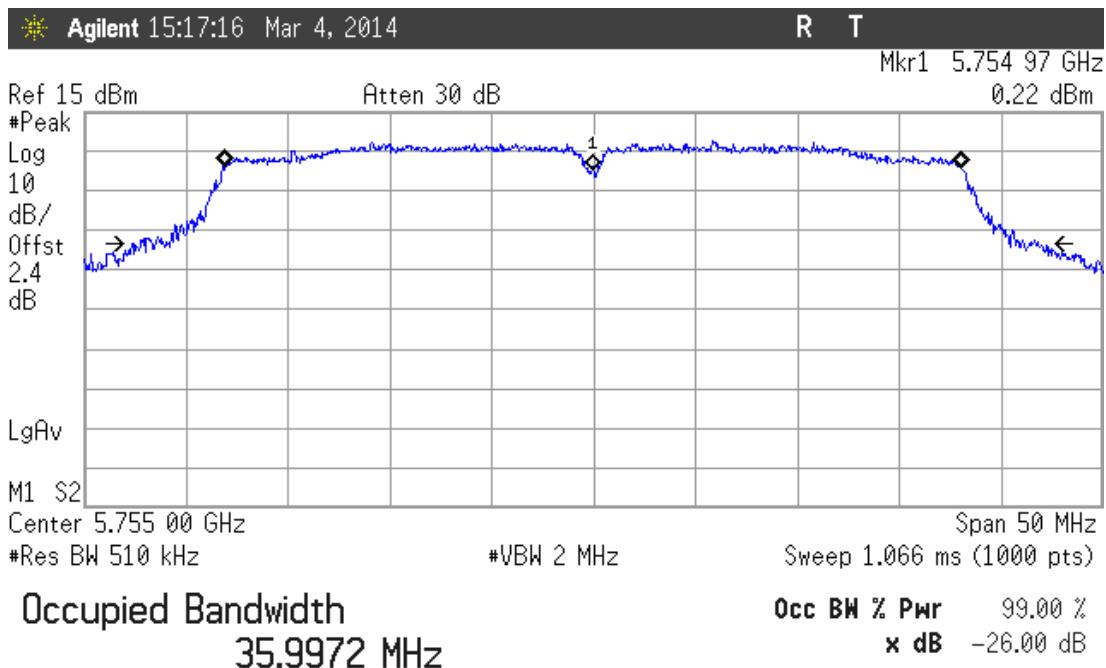
Highest Channel: 5825 MHz. Chain B



Transmit Freq Error -9.995 kHz
x dB Bandwidth 24.611 MHz

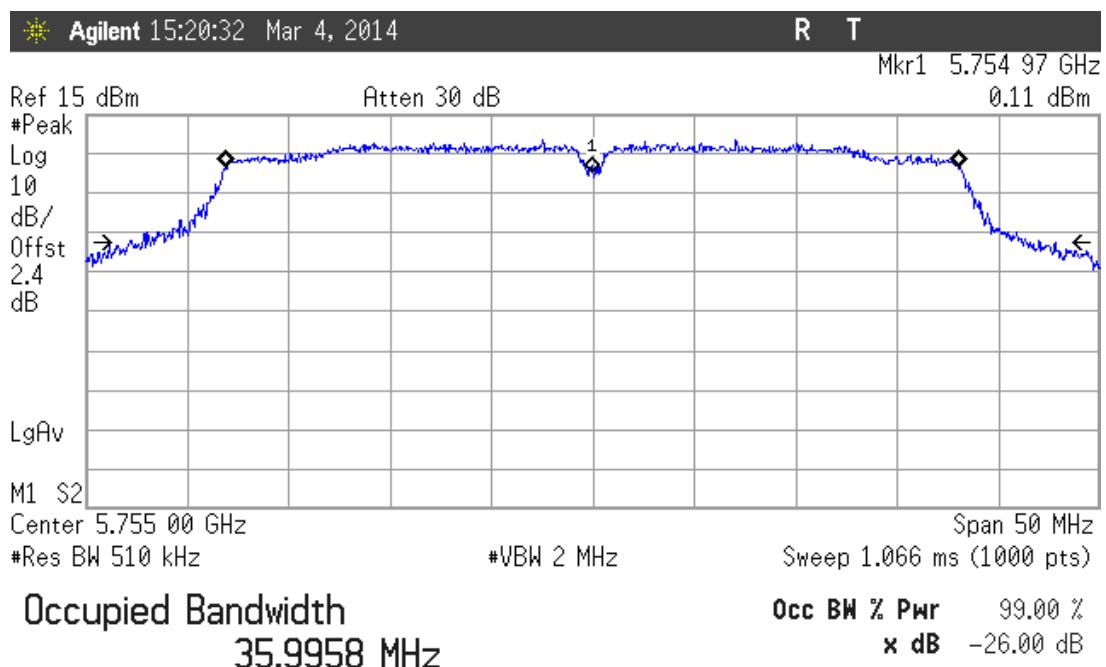
3. WiFi 5GHz 802.11 n40 mode

Lowest Channel: 5755 MHz. Chain A



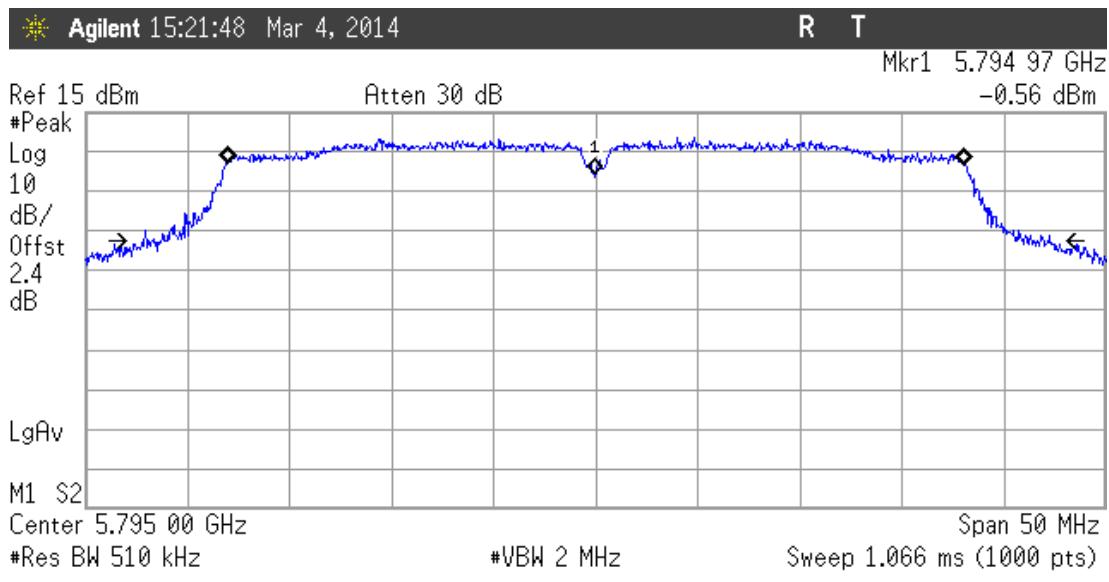
Transmit Freq Error	-30.594 kHz
x dB Bandwidth	44.074 MHz

Lowest Channel: 5755 MHz. Chain B



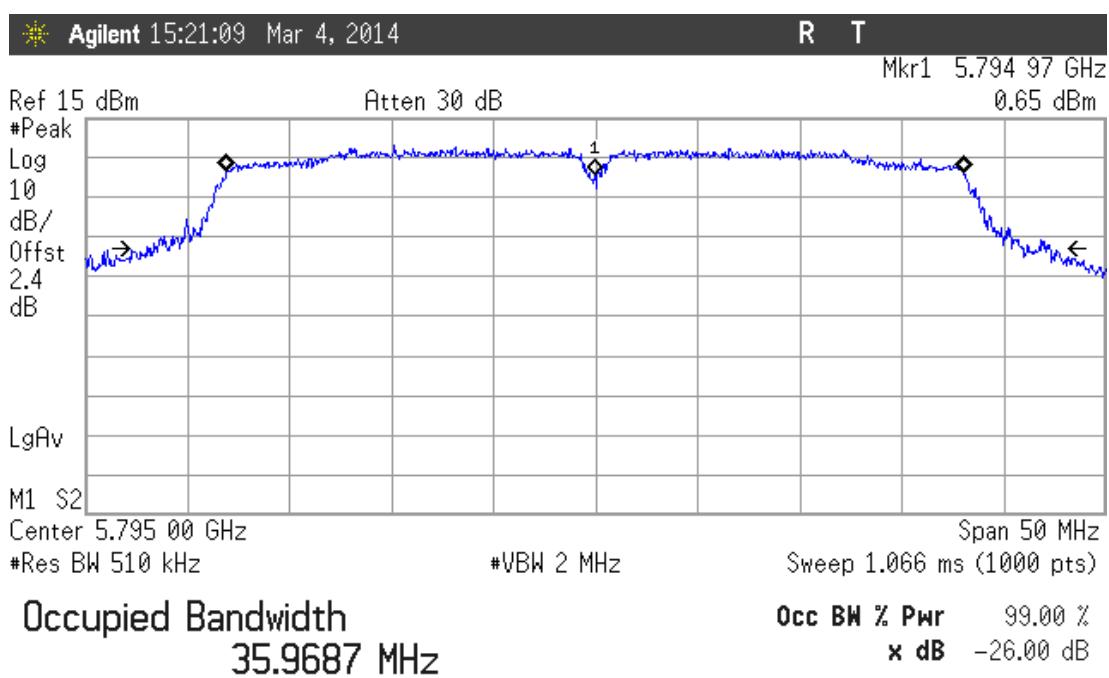
Transmit Freq Error	-15.127 kHz
x dB Bandwidth	45.672 MHz

Highest Channel: 5795 MHz. Chain A



Transmit Freq Error 3.842 kHz
x dB Bandwidth 44.381 MHz

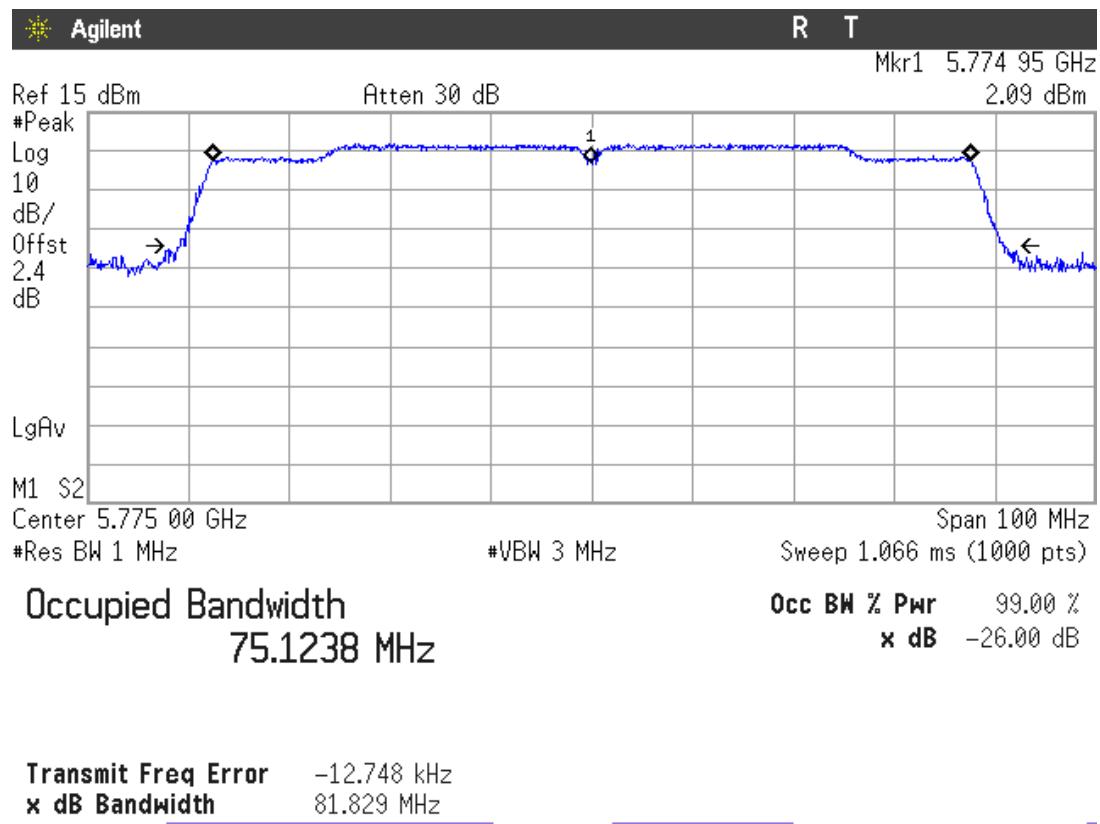
Highest Channel: 5795 MHz. Chain B



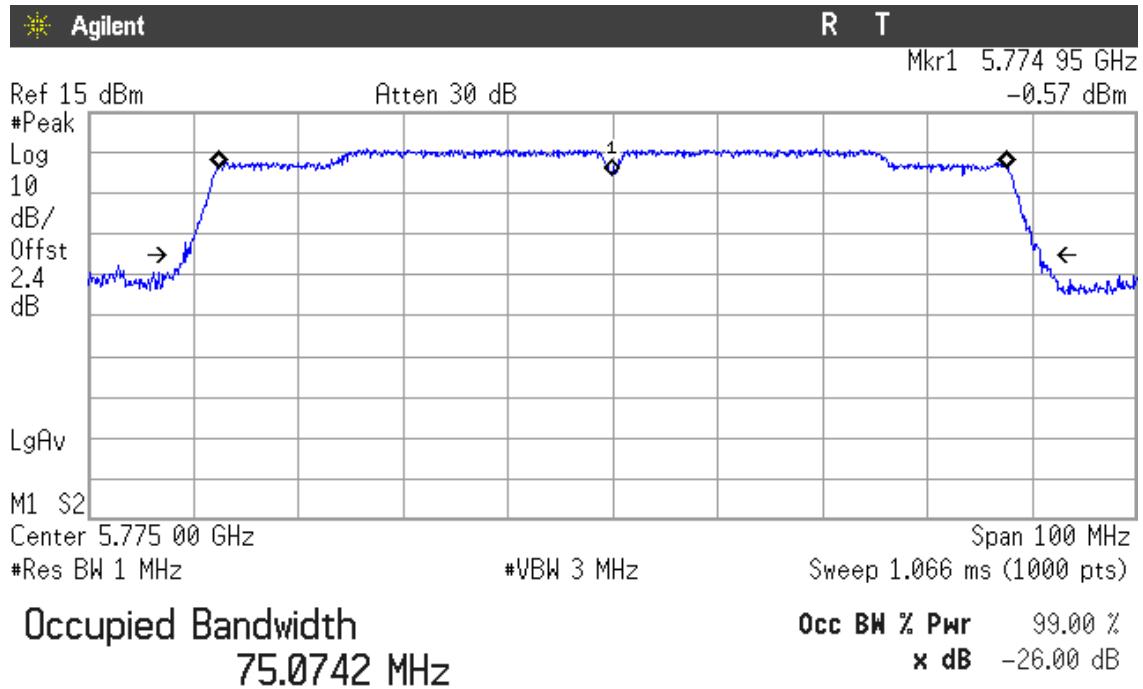
Transmit Freq Error -37.260 kHz
x dB Bandwidth 44.281 MHz

4. WiFi 5GHz 802.11 ac80 mode

Middle Channel: 5775 MHz. Chain A



Middle Channel: 5775 MHz. Chain B



Transmit Freq Error -36.161 kHz
x dB Bandwidth 81.659 MHz

Section 15.247 Subclause (a) (2) / RSS-210 A8.2. (a). 6 dB Bandwidth

SPECIFICATION

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

6 dB Bandwidth (see next plots).

1. WiFi 5GHz 802.11 a mode

	Lowest frequency		Middle frequency		Highest frequency	
	5745 MHz		5785 MHz		5825 MHz	
	Chain A	Chain B	Chain A	Chain B	Chain A	Chain B
6 dB Spectrum bandwidth (MHz)	15.160	15.353	15.321	15.160	15.128	15.128
Measurement uncertainty (kHz)	± 89					

2. WiFi 5GHz 802.11 n20 mode

	Lowest frequency		Middle frequency		Highest frequency	
	5745 MHz		5785 MHz		5825 MHz	
	Chain A	Chain B	Chain A	Chain B	Chain A	Chain B
6 dB Spectrum bandwidth (MHz)	15.128	15.321	15.128	15.481	15.096	15.128
Measurement uncertainty (kHz)	± 89					

3. WiFi 5GHz 802.11 n40 mode

	Lowest frequency		Highest frequency	
	5755 MHz		5795 MHz	
	Chain A	Chain B	Chain A	Chain B
6 dB Spectrum bandwidth (MHz)	35.128	35.128	35.128	35.128
Measurement uncertainty (kHz)	± 21.7			

4. WiFi 5GHz 802.11 ac80 mode

		Middle frequency 5775 MHz	
		Chain A	Chain B
6 dB Spectrum bandwidth (MHz)		75.256	75.256
Measurement uncertainty (kHz)		± 21.7	

Verdict: PASS

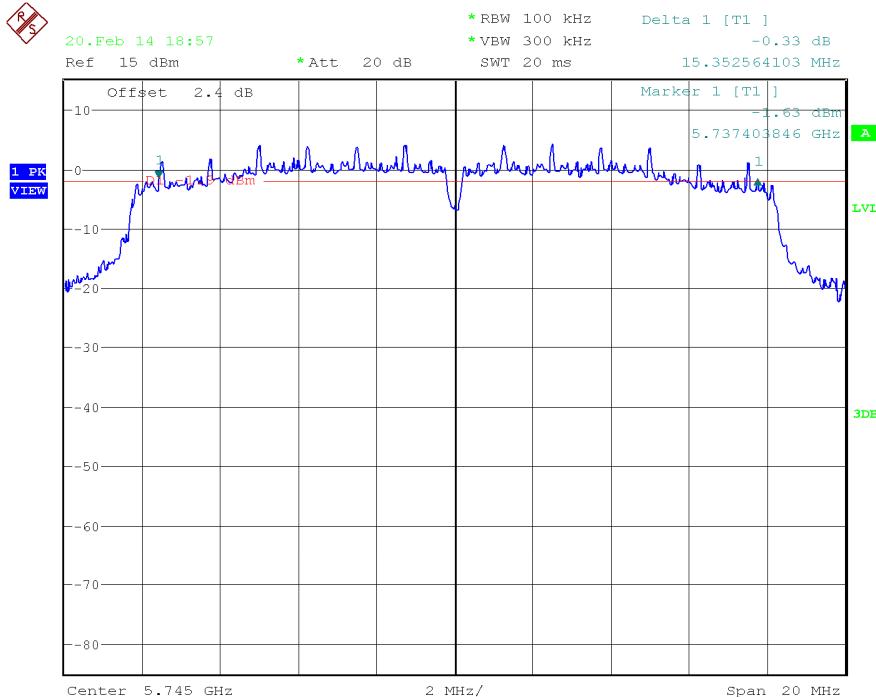
1. WiFi 5GHz 802.11 a mode

Lowest Channel: 5745 MHz. Chain A



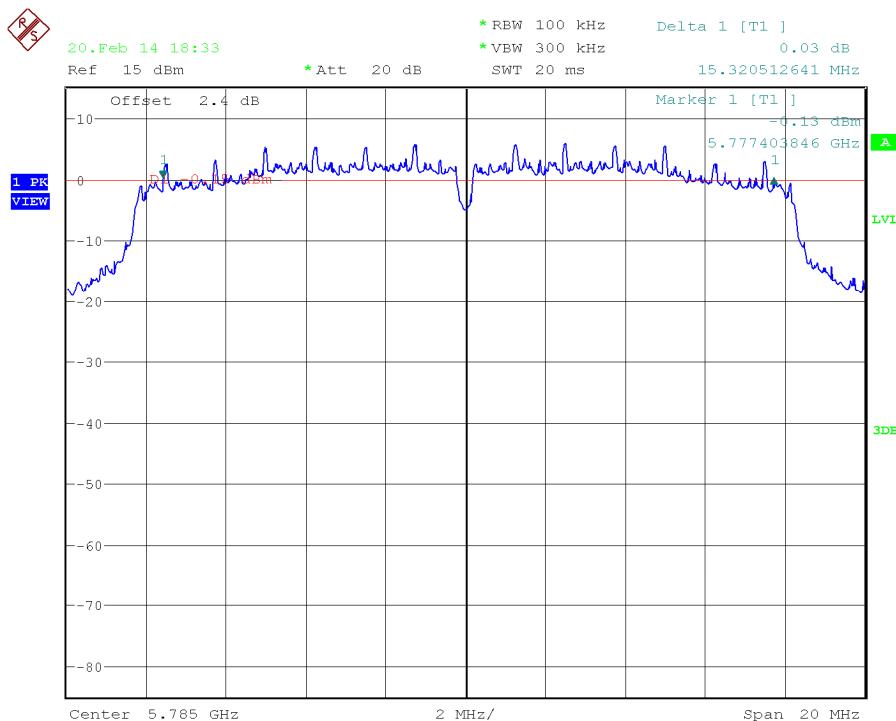
Date: 20.FEB.2014 18:29:34

Lowest Channel: 5745 MHz. Chain B



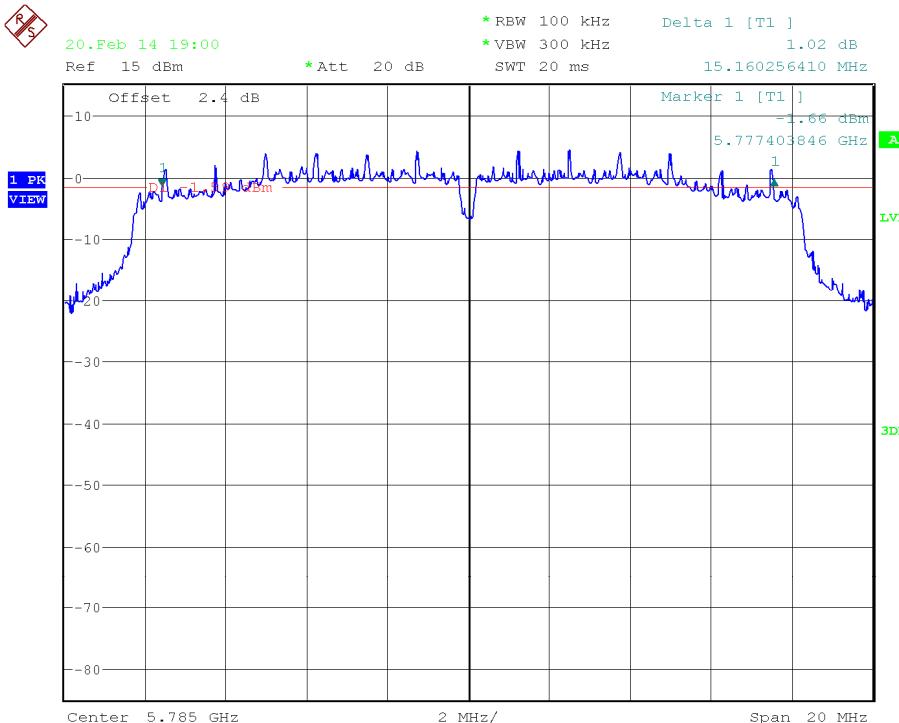
Date: 20.FEB.2014 18:57:40

Middle Channel: 5785 MHz. Chain A



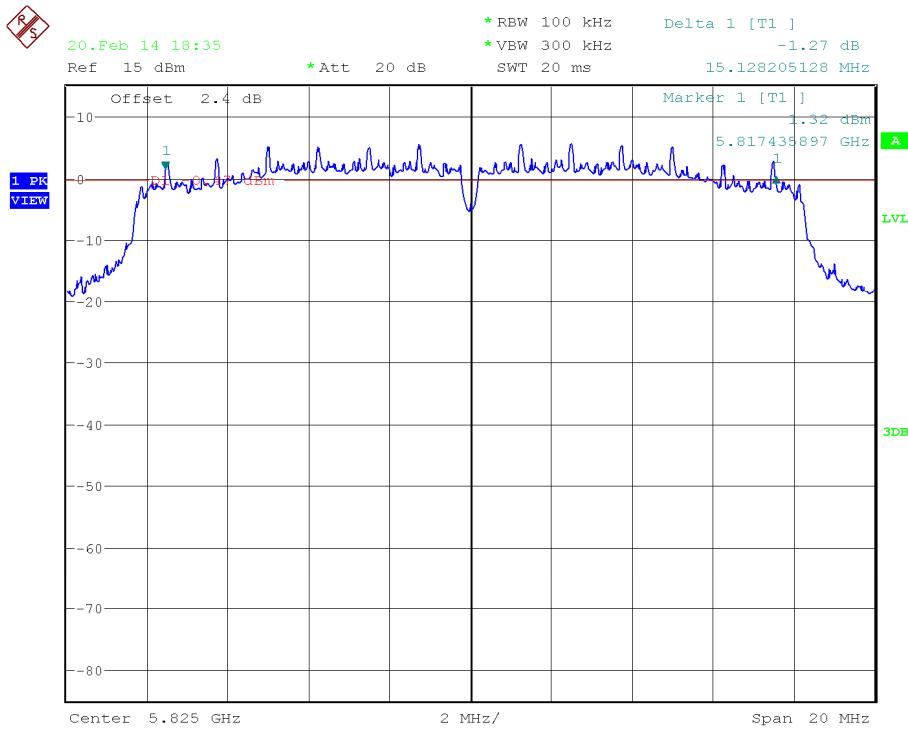
Date: 20.FEB.2014 18:33:04

Middle Channel: 5785 MHz. Chain B



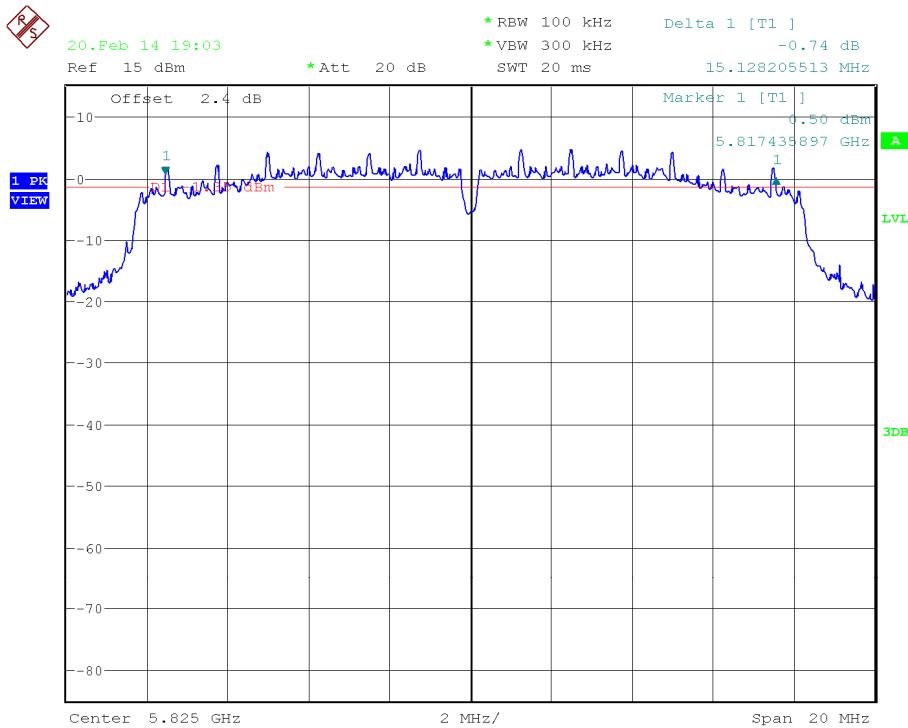
Date: 20.FEB.2014 19:00:45

Highest Channel: 5825 MHz. Chain A



Date: 20.FEB.2014 18:35:35

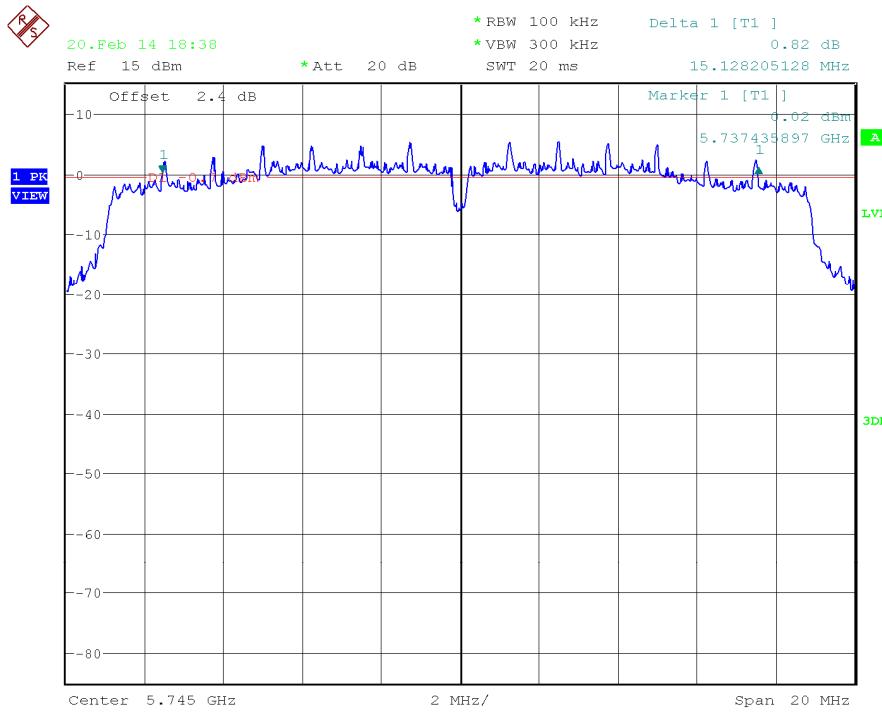
Highest Channel: 5825 MHz. Chain B



Date: 20.FEB.2014 19:03:18

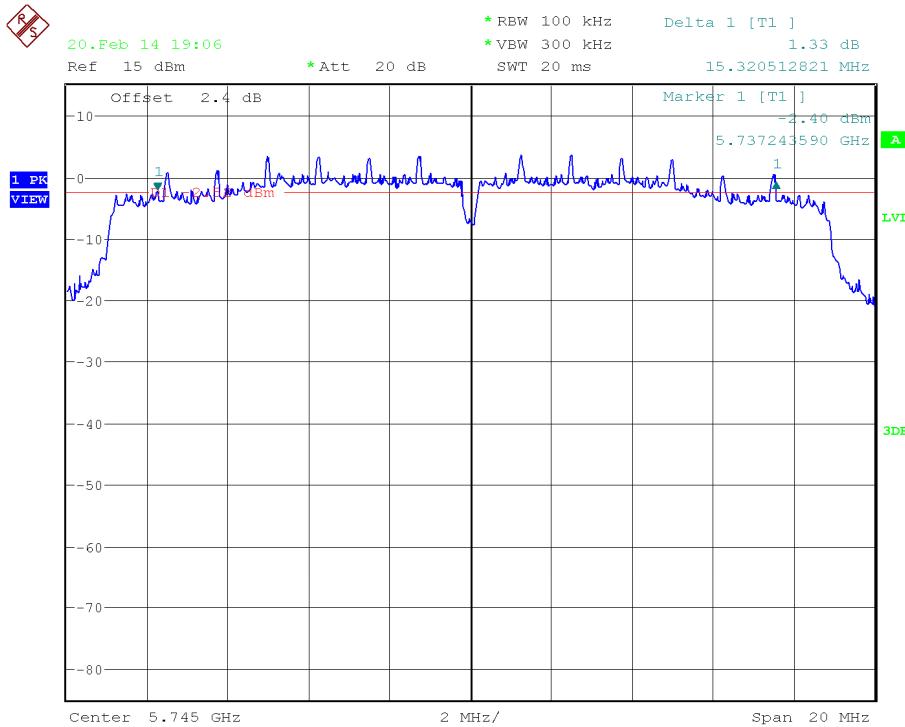
2. WiFi 5GHz 802.11 n20 mode

Lowest Channel: 5745 MHz. Chain A



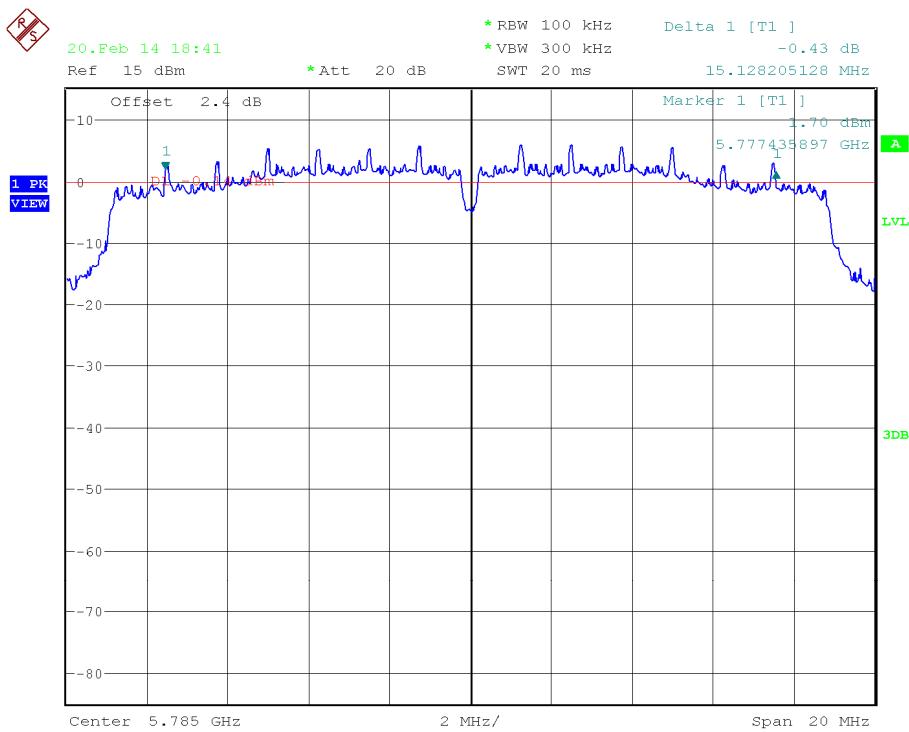
Date: 20.FEB.2014 18:38:30

Lowest Channel: 5745 MHz. Chain B



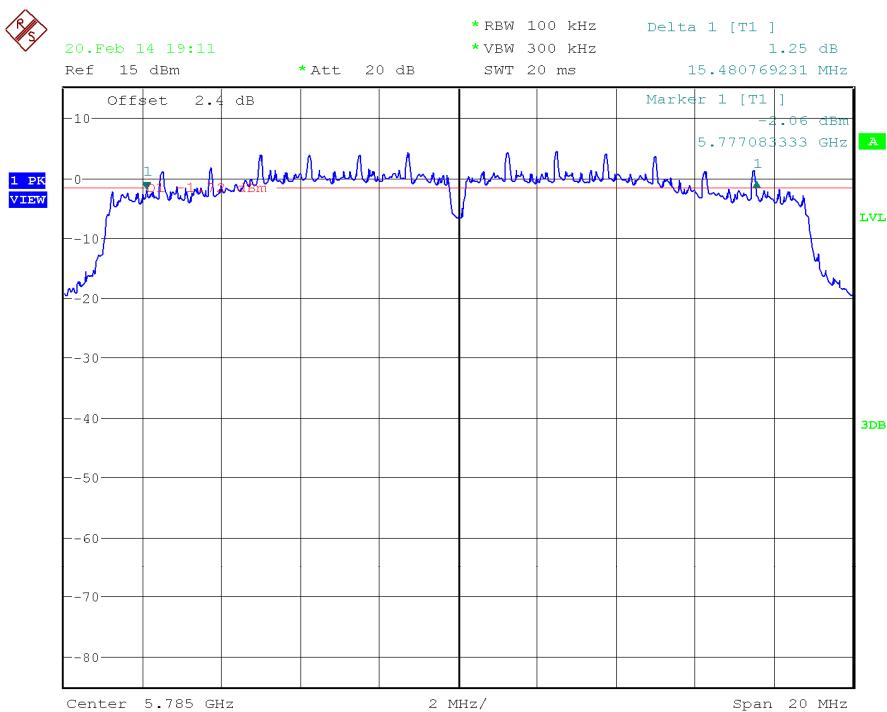
Date: 20.FEB.2014 19:06:51

Middle Channel: 5785 MHz. Chain A



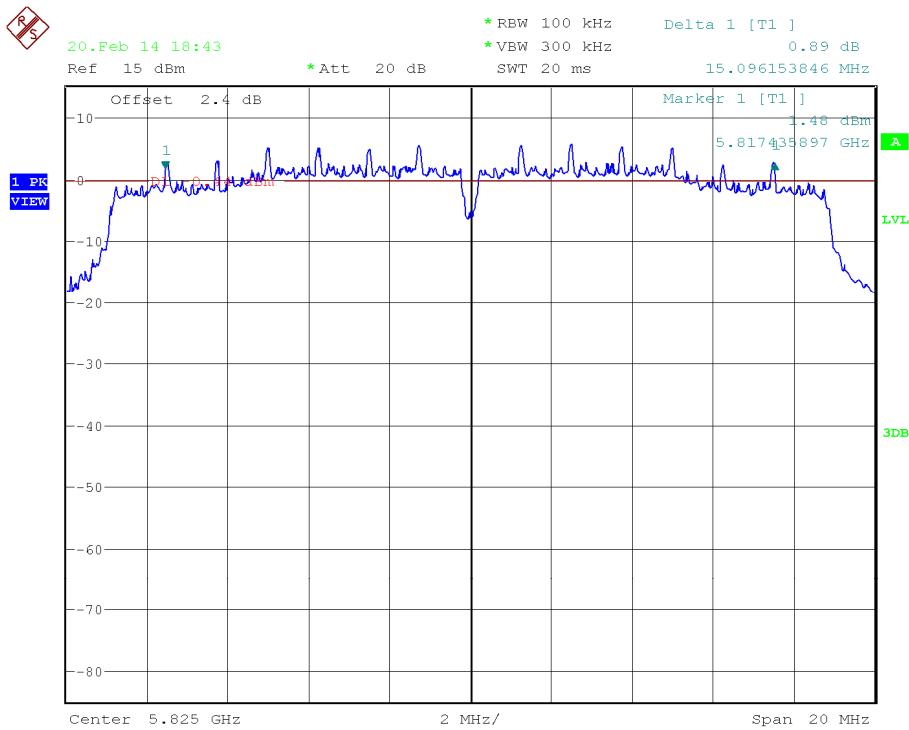
Date: 20.FEB.2014 18:41:41

Middle Channel: 5785 MHz. Chain B



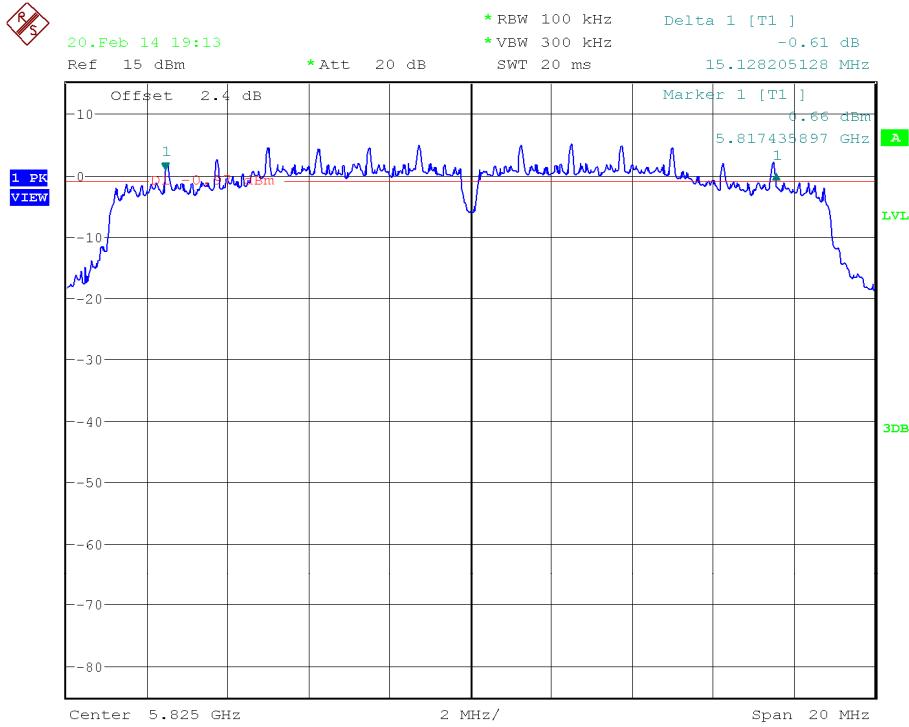
Date: 20.FEB.2014 19:11:10

Highest Channel: 5825 MHz. Chain A



Date: 20.FEB.2014 18:43:54

Highest Channel: 5825 MHz. Chain B



Date: 20.FEB.2014 19:13:39