FCC Test Report

Equipment	:	E700
Brand Name	:	Cambium Networks
Model No.	:	cnPilot e700 Outdoor
FCC ID	:	Z8H89FT0027
Standard	:	47 CFR FCC Part 15.407
Operating Band	:	5150 MHz – 5250 MHz 5725 MHz – 5850 MHz
Applicant	:	Cambium Networks Inc. 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA
Manufacturer	:	Cambium Networks Inc. 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA
Function	:	☒ Outdoor; ☐ Indoor; ☐ Fixed P2P ☐ Client

The product sample received on Feb. 13, 2018 and completely tested on May 07, 2018. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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TEST PHOTOS

PHOTOGRAPHS OF EUT V01

Summary of Test Result

Conformance Test Specifications			
Report Clause	**Ref. Std. Clause**	**Description**	**Result**
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	Maximum Conducted Output Power	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Unwanted Emissions	Complied
3.6	15.407(g)	Frequency Stability	Complied

Revision History

Report No.	Version	Description	Issued Date
FR830844AB	Rev. 01	Initial issue of report	Mar. 16, 2018
FR830844AB	Rev. 02	Adding the angle above 30 degrees test results for Band 1 output power	May 15, 2018

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	n (HT20), ac (VHT20)	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX

Note:
- HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20 and VHT80use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
						2.4GHz	5GHz
1	1	Cambium Networks	P005954	Printed Antenna	I-PEX	8	-
2	2	Cambium Networks	P005954	Printed Antenna	I-PEX	8	-
3	1	Cambium Networks	P005957	Printed Antenna	I-PEX	-	8
4	2	Cambium Networks	P005989	Printed Antenna	I-PEX	-	8

Note: The EUT has four antennas. Array gain: 0dBi

For 2.4GHz function:
For IEEE 802.11n/ac mode (2TX/2RX)
Ant 1 (Port 1) and Ant. 2 (Port 2) can be used as transmitting/receiving antenna.
Ant 1 (Port 1) and Ant. 2 (Port 2) could transmit/receive simultaneously.
For 5GHz function:
For IEEE 802.11n/ac mode (2TX/2RX)
Ant 3 (Port 1) and Ant. 4 (Port 2) can be used as transmitting/receiving antenna.
Ant 3 (Port 1) and Ant. 4 (Port 2) could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20	0.99	0.044	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT80	0.95	0.223	1.137m	1k

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Test Software Version	QCARCT Version: 3.0.265.0			

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 789033 D02 v02r01
- FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location							
☐	HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.			
		TEL	:	886-3-327-3456	FAX	:	886-3-318-0055
☒	JHUBEI	ADD	:	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.			
		TEL	:	886-3-656-9065	FAX	:	886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li / Eddie Weng	22°C / 54%	Feb. 13, 2018~May 07, 2018
Radiated	03CH01-CB	Caster Chang / Lance Wu / Cola Fan	22°C / 54%	Mar. 01, 2018~Mar. 06, 2018
AC Conduction	CO01-CB	Wei Li	23°C / 60%	Mar. 06, 2018

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5180MHz	20
5200MHz	22
5240MHz	21.5
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	15
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5745MHz	24
5785MHz	24
5825MHz	24
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5775MHz	18

Note:
- VHT20 covers HT20, due to same modulation. The power setting for 802.11n HT20 are the same or lower than 802.11ac VHT20.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	CTX-2.4GHz
2	CTX-5GHz
For operating mode 2 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density Frequency Stability Unwanted Emissions
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	CTX-2.4GHz
2	CTX-5GHz
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+WLAN 5GHz
Refer to Sporton Test Report No.: FA830844 for Co-location RF Exposure Evaluation.	

Note 1: The EUT can only be used in Y axis position.
Note 2: PoE information as below:
The EUT was powered by PoE, and the PoE was for measurement only, would not be marked.

Support Unit	Brand Name	Model Name
PoE	LEI	NU60A5550111-I3

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories
Wall-mounted rack*2

2.5 Support Equipment

For Test Site No: CO01-CB

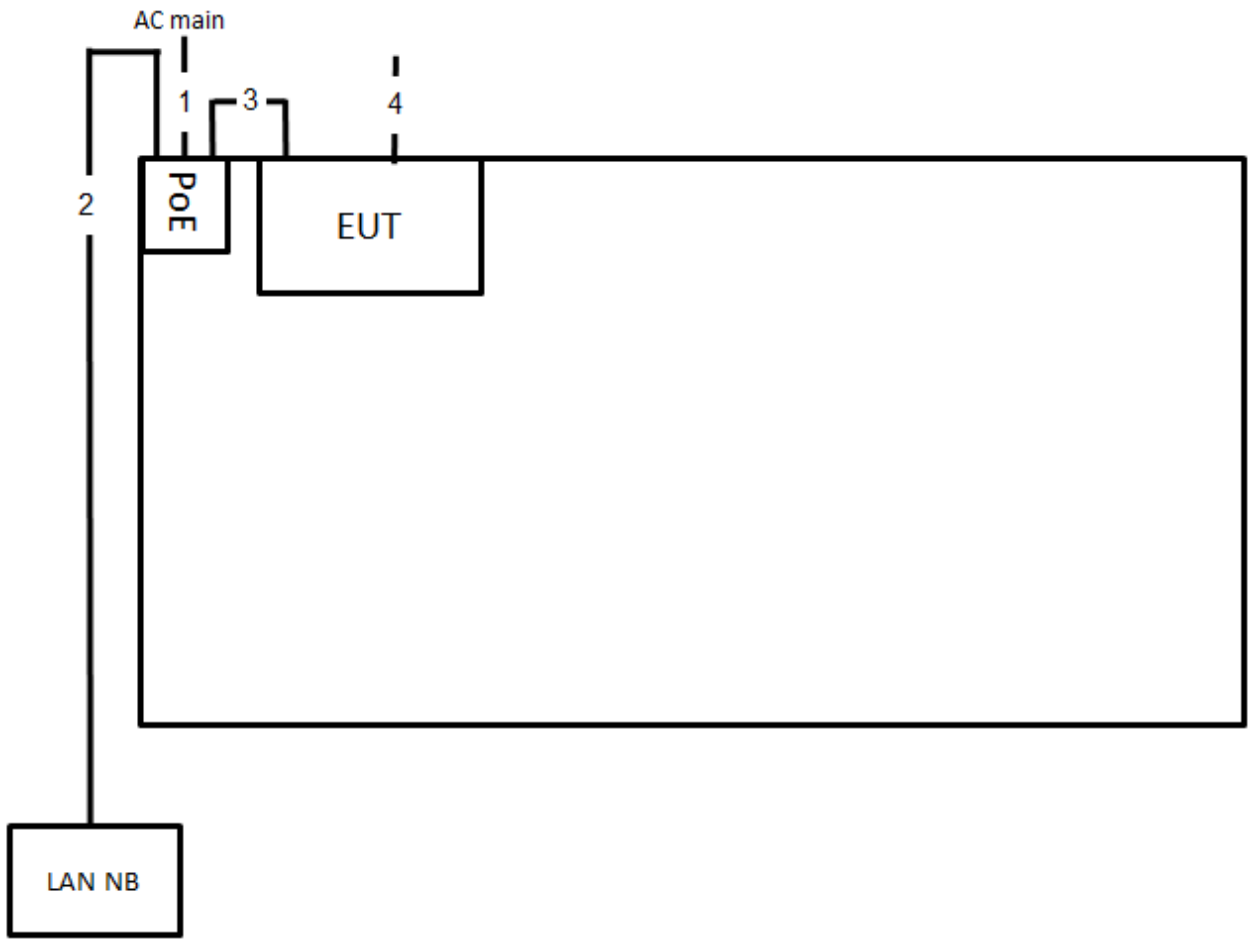
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E6430	DoC
2	PoE	LEI	NU60A5550111-I3	DoC

For Test Site No: 03CH01-CB / TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC
2	PoE	LEI	NU60A5550111-I3	DoC

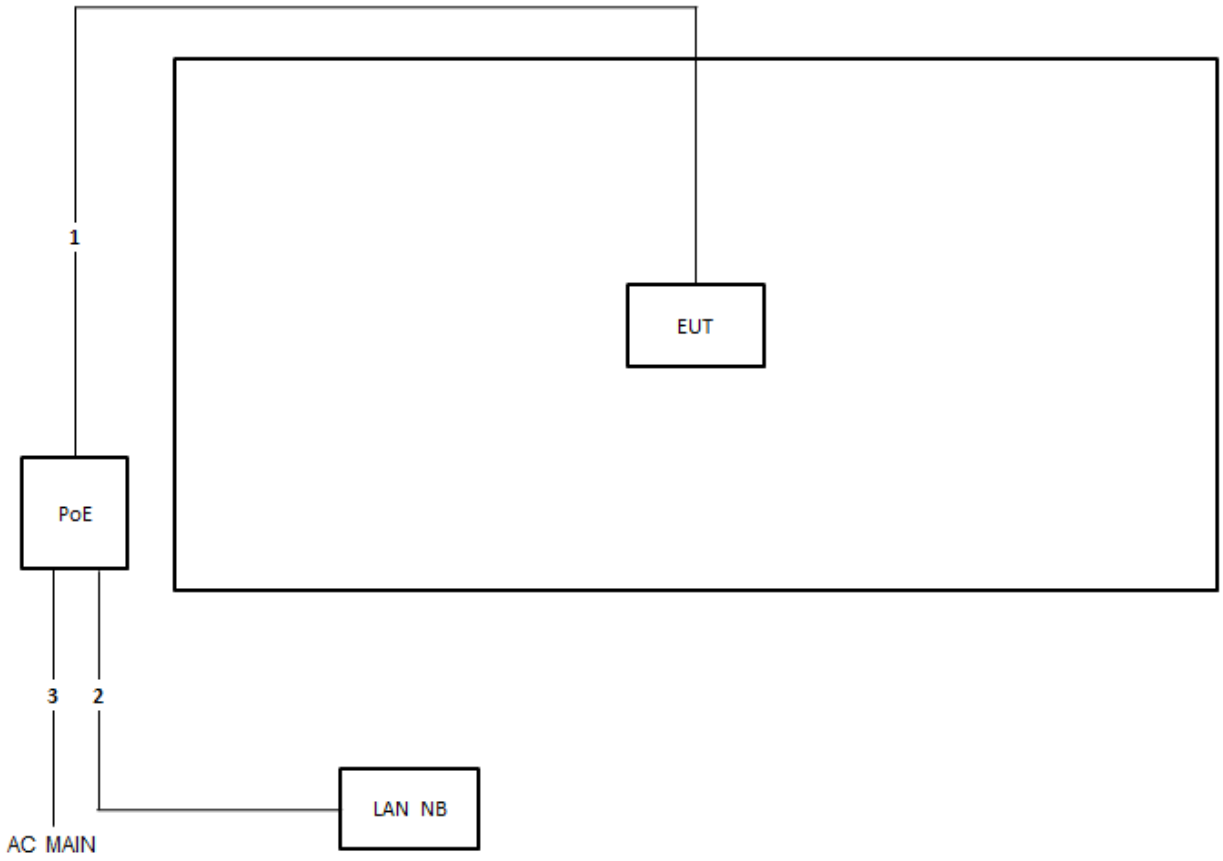
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1m
4	Ground cable	No	1.5m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	0.5m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

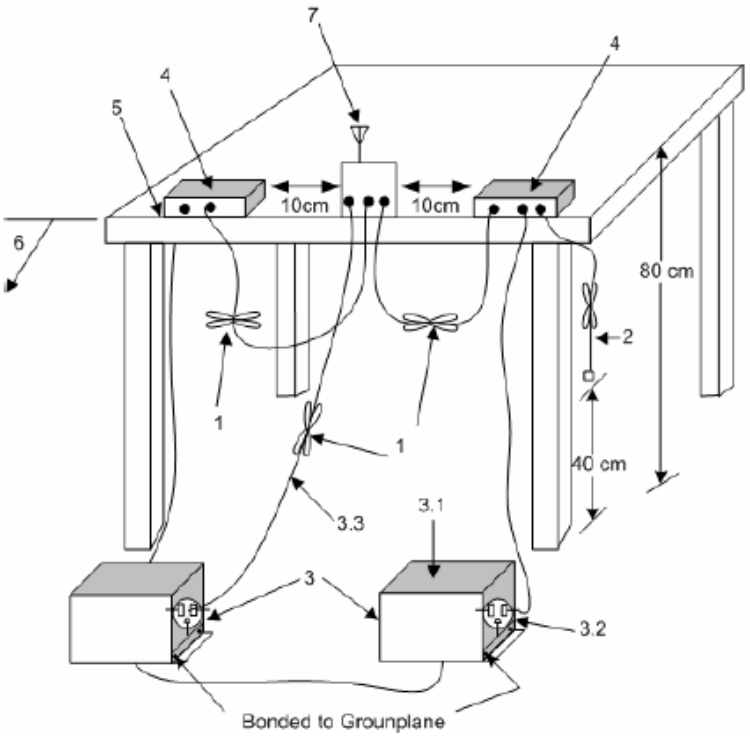
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band, N/A
☐	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☐	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.
LE-LAN Devices	
☐	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.

3.2.2 Measuring Instruments

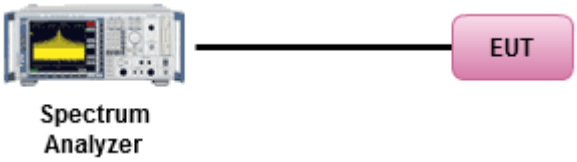
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method		
▪	For the emission bandwidth shall be measured using one of the options below:	
	☒	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
	☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
	☐	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6). e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm]
	▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6)
	▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W If G_{TX} > 23 dBi, then P_{Out} = 30 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☐	For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☐	For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☒	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
	☐ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
	☒ Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

RF Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 23 dBi, then P_{Out} = 17 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6)..
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☐	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☒	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
	▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for 0° ≤ θ < 8° ; -13 − 0.716 (θ-8) dBW/MHz for 8° ≤ θ < 40° -35.9 − 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45° ; -42 dBW/MHz for θ > 45°
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

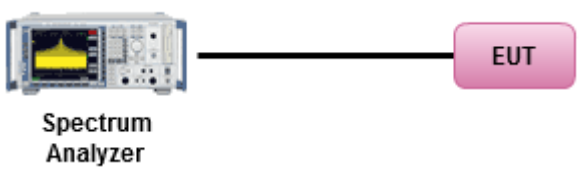
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method	
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐ Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth	
[duty cycle ≥ 98% or external video / power trigger]	
☒ Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)	
duty cycle < 98% and average over on/off periods with duty factor	
☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
▪ For conducted measurement.	
▪ If the EUT supports multiple transmit chains using options given below:	
☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	
☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	
☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.	
▪	If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \ldots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
☒ 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.725 - 5.85 GHz	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.

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.5.2 Measuring Instruments

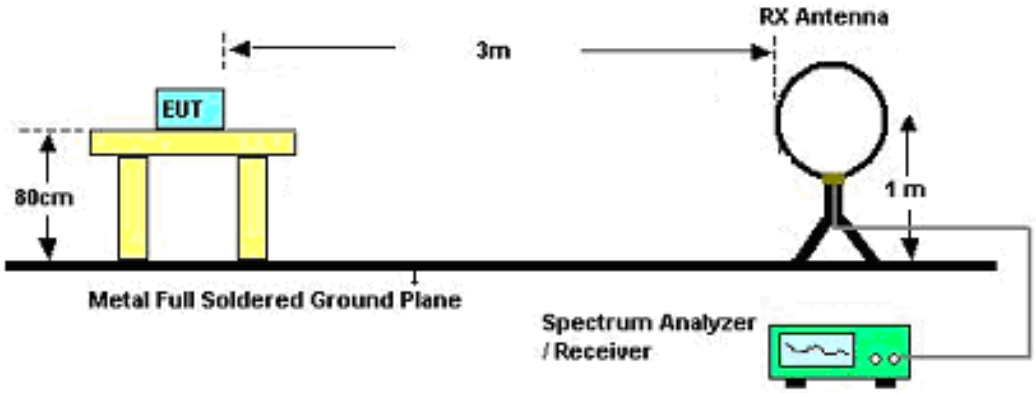
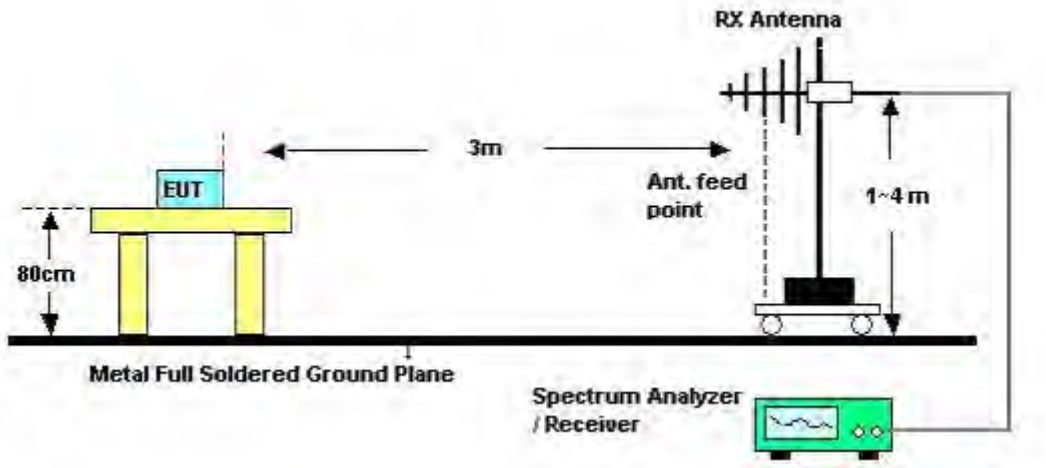
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

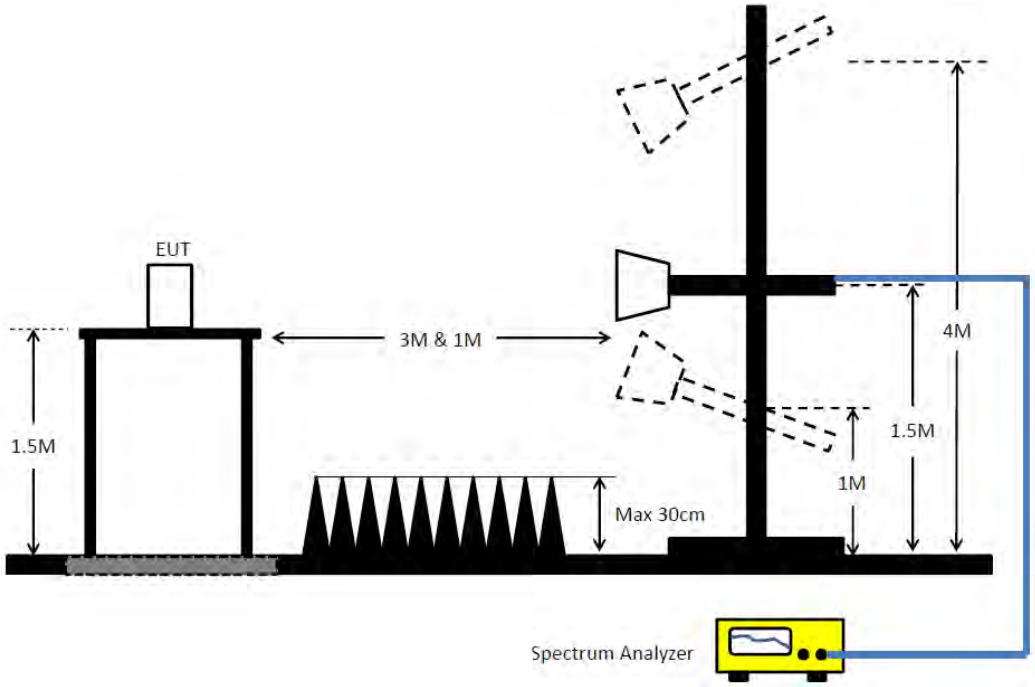
Test Method		
▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.	
	▪ Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
		☒ Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
		☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		☒ Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
▪ For radiated measurement.		
	▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
▪ The any unwanted emissions level shall not exceed the fundamental emission level.		
▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.		

Test Method	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 789033, clause H)3).	
	▪ For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

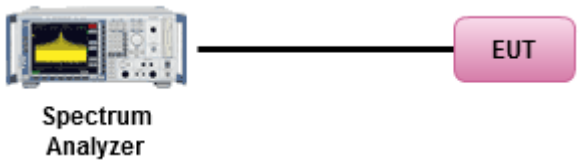
3.5.4 Test Setup

Transmitter Radiated Unwanted Emissions
9kHz ~30MHz

30MHz~1GHz


Above 1GHz



Transmitter Conducted Unwanted Emissions



3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

Frequency Stability Limit
UNII Devices
▪ In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
LE-LAN Devices
▪ N/A
IEEE Std. 802.11
▪ The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.

3.6.2 Measuring Instruments

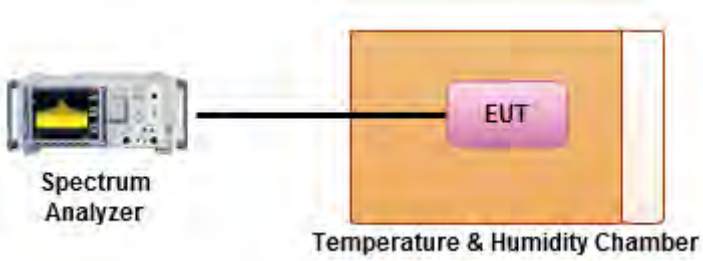
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
▪ Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	▪ Frequency stability with respect to ambient temperature
	▪ Frequency stability when varying supply voltage
	▪ Extreme temperature is -30˚C~50˚C.

3.6.4 Test Setup

Frequency Stability



3.6.5 Test Result of Frequency Stability

Refer as Appendix F

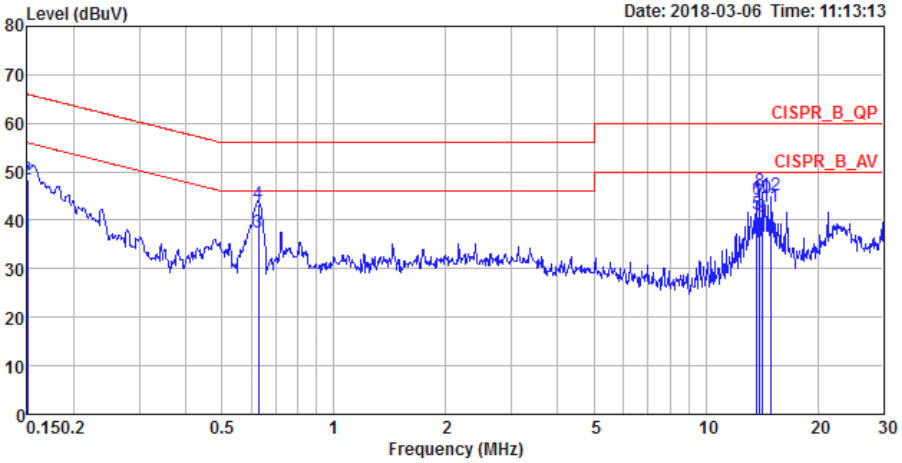
4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 31, 2018	Jan. 30, 2019	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 20, 2017	Dec. 19, 2018	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 29, 2017	Dec. 28, 2018	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	May 22, 2018	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB))
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2017	Jun. 01, 2018	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.
"*" Calibration Interval of instruments listed above is two years.
N.C.R. means Non-Calibration required.

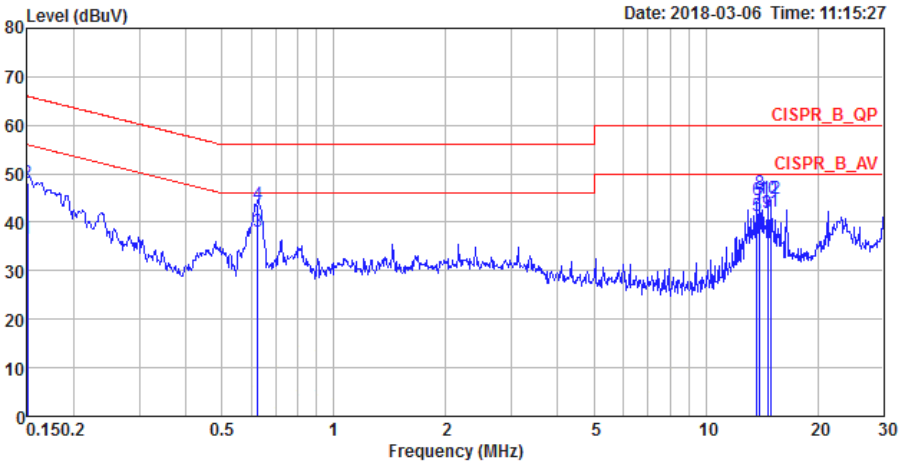
AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Neutral
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1502	36.72	-19.27	55.99	26.46	10.10	0.16	Average	NEUTRAL
2	0.1502	48.29	-17.70	65.99	38.03	10.10	0.16	QP	NEUTRAL
3	0.6268	37.56	-8.44	46.00	27.28	10.18	0.10	Average	NEUTRAL
4	0.6268	43.34	-12.66	56.00	33.06	10.18	0.10	QP	NEUTRAL
5	13.6968	41.38	-8.62	50.00	30.95	10.25	0.18	Average	NEUTRAL
6	13.6968	44.38	-15.62	60.00	33.95	10.25	0.18	QP	NEUTRAL
7	13.9372	43.71	-6.29	50.00	33.28	10.25	0.18	Average	NEUTRAL
8	13.9372	46.17	-13.83	60.00	35.74	10.25	0.18	QP	NEUTRAL
9	14.1790	40.65	-9.35	50.00	30.21	10.26	0.18	Average	NEUTRAL
10	14.1790	44.49	-15.51	60.00	34.05	10.26	0.18	QP	NEUTRAL
11	14.8982	42.79	-7.21	50.00	32.33	10.27	0.19	Average	NEUTRAL
12	14.8982	45.19	-14.81	60.00	34.73	10.27	0.19	QP	NEUTRAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Line
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	36.62	-19.38	56.00	26.46	10.00	0.16	Average	LINE
2	0.1500	47.99	-18.01	66.00	37.83	10.00	0.16	QP	LINE
3	0.6235	38.12	-7.88	46.00	28.07	9.95	0.10	Average	LINE
4	0.6235	43.63	-12.37	56.00	33.58	9.95	0.10	QP	LINE
5	13.6974	41.36	-8.64	50.00	30.97	10.21	0.18	Average	LINE
6	13.6974	44.49	-15.51	60.00	34.10	10.21	0.18	QP	LINE
7	13.9374	43.37	-6.63	50.00	32.98	10.21	0.18	Average	LINE
8	13.9374	45.99	-14.01	60.00	35.60	10.21	0.18	QP	LINE
9	14.6584	42.01	-7.99	50.00	31.59	10.23	0.19	Average	LINE
10	14.6584	44.85	-15.15	60.00	34.43	10.23	0.19	QP	LINE
11	14.8980	42.27	-7.73	50.00	31.85	10.23	0.19	Average	LINE
12	14.8980	44.80	-15.20	60.00	34.38	10.23	0.19	QP	LINE

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	21.125M	17.641M	17M6D1D	20.525M	17.616M
802.11ac VHT80_Nss1,(MCS0)_2TX	83.4M	75.962M	76M0D1D	83.3M	75.662M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

Result

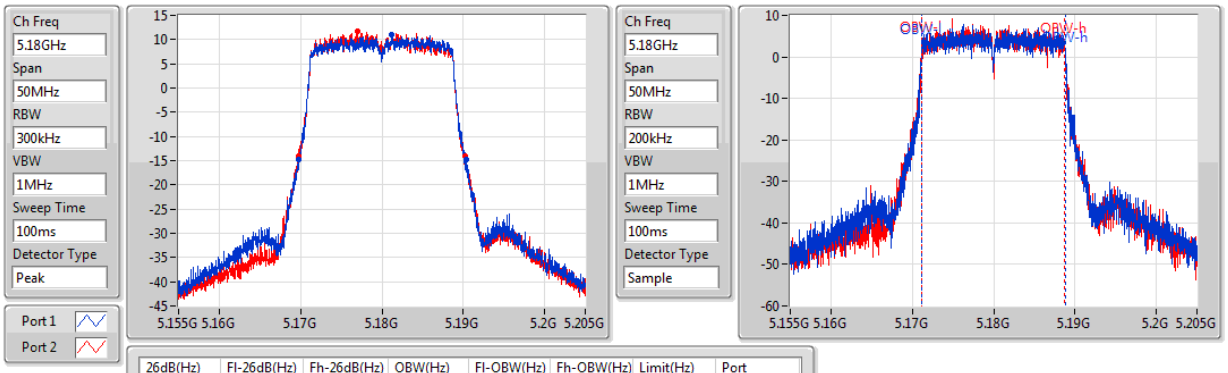
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.525M	17.641M	20.525M	17.616M
5200MHz	Pass	Inf	20.975M	17.641M	21.125M	17.616M
5240MHz	Pass	Inf	21M	17.616M	20.7M	17.616M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	83.4M	75.662M	83.3M	75.962M

Port X-N dB = Port **X** 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X** 99% occupied bandwidth;

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW

5180MHz

22/02/2018

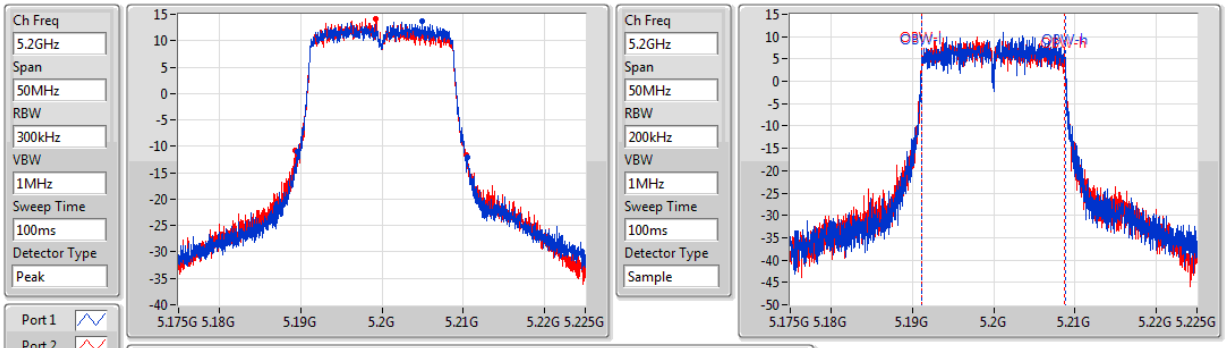


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.525M	5.1698G	5.190325G	17.641M	5.171154G	5.188796G	Inf	1
20.525M	5.1697G	5.190225G	17.616M	5.171154G	5.188771G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW

5200MHz

22/02/2018

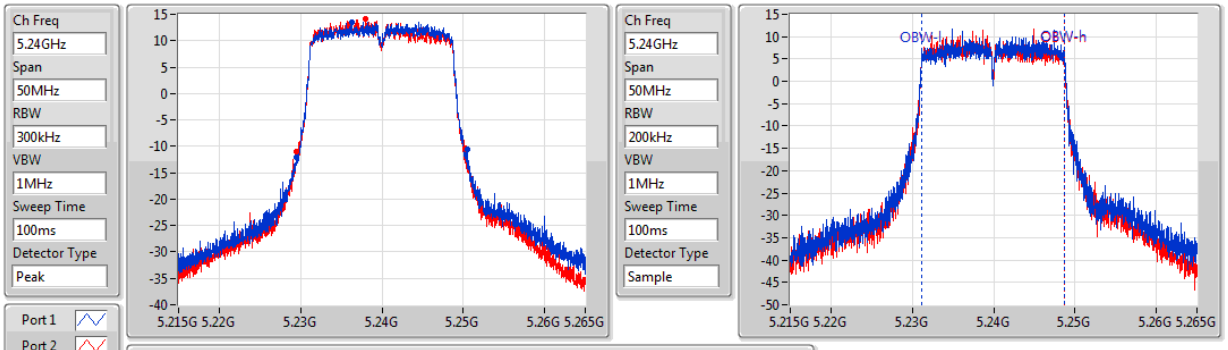


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.975M	5.189575G	5.21055G	17.641M	5.191154G	5.208796G	Inf	1
21.125M	5.1893G	5.210425G	17.616M	5.191154G	5.208771G	Inf	2

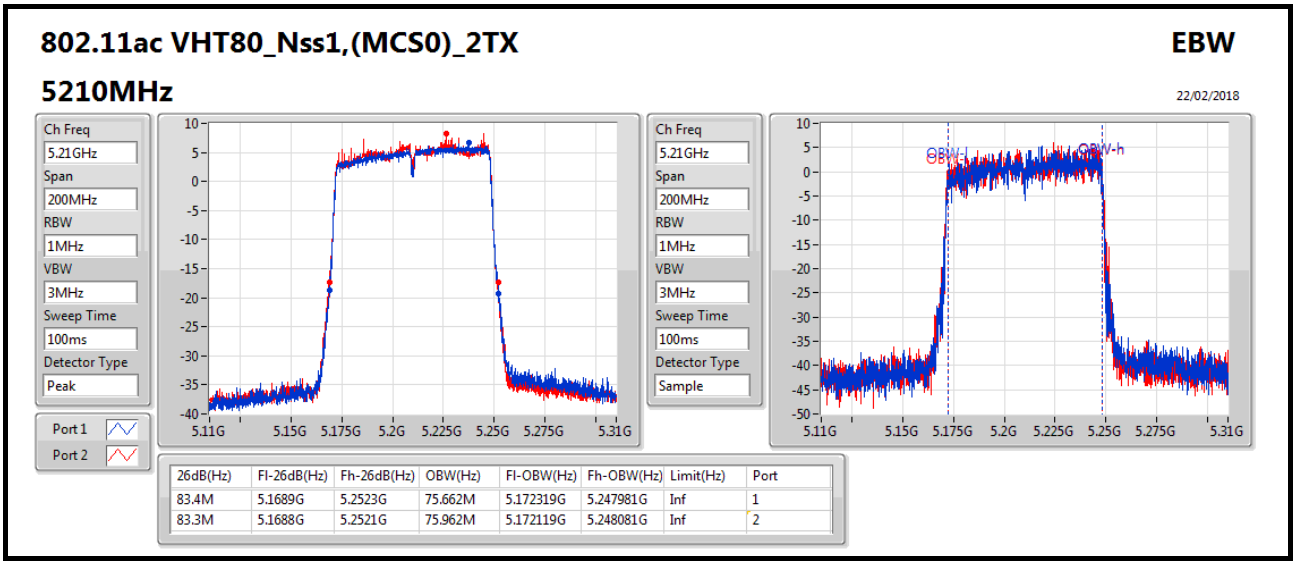
802.11ac VHT20_Nss1,(MCS0)_2TX
EBW

5240MHz

05/05/2018



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21M	5.22945G	5.25045G	17.616M	5.231129G	5.248746G	Inf	1
20.7M	5.22955G	5.25025G	17.616M	5.231129G	5.248746G	Inf	2



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
83.4M	5.1689G	5.2523G	75.662M	5.172319G	5.247981G	Inf	1
83.3M	5.1688G	5.2521G	75.962M	5.172119G	5.248081G	Inf	2

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	17.575M	23.638M	23M6D1D	14.925M	17.666M
802.11ac VHT80_Nss1,(MCS0)_2TX	76M	75.862M	75M9D1D	75.7M	75.562M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5745MHz	Pass	500k	17.15M	19.09M	16.9M	17.666M
5785MHz	Pass	500k	17.575M	23.038M	17.575M	17.841M
5825MHz	Pass	500k	17.575M	23.638M	14.925M	18.166M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5775MHz	Pass	500k	76M	75.862M	75.7M	75.562M

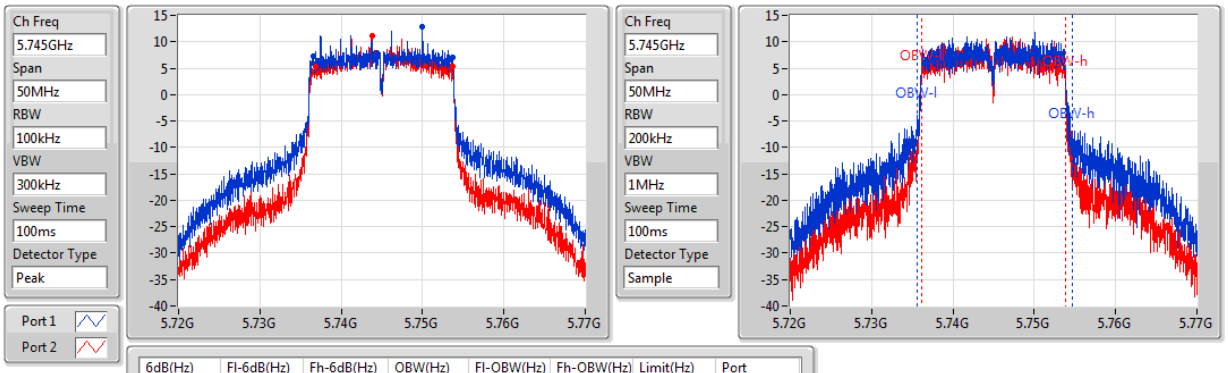
Port X-N dB = Port **X** 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X** 99% occupied bandwidth;

802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5745MHz

14/02/2018



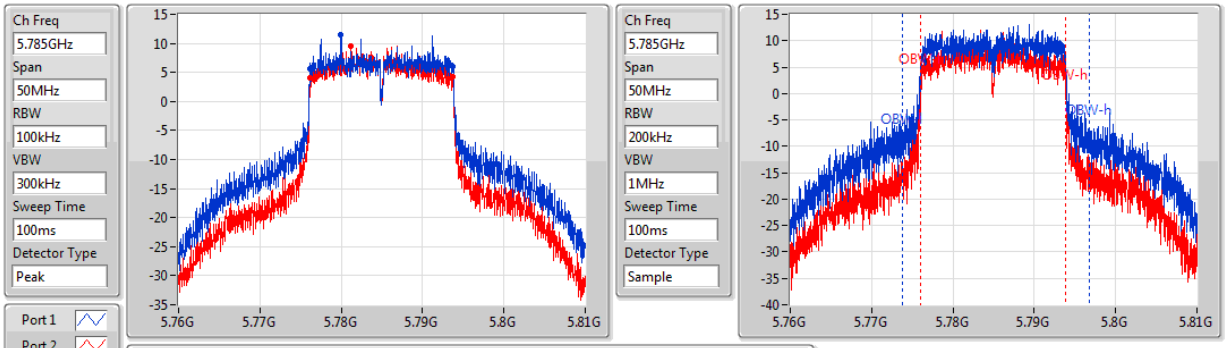
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.15M	5.7366G	5.75375G	19.09M	5.73558G	5.75467G	500k	1
16.9M	5.736825G	5.753725G	17.666M	5.736129G	5.753796G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5785MHz

14/02/2018



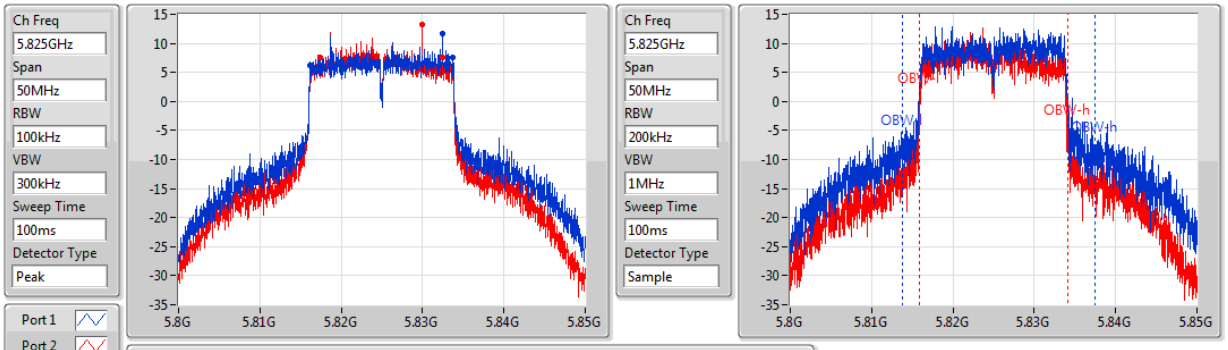
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	5.776175G	5.79375G	23.038M	5.773731G	5.796769G	500k	1
17.575M	5.776175G	5.79375G	17.841M	5.776054G	5.793896G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX

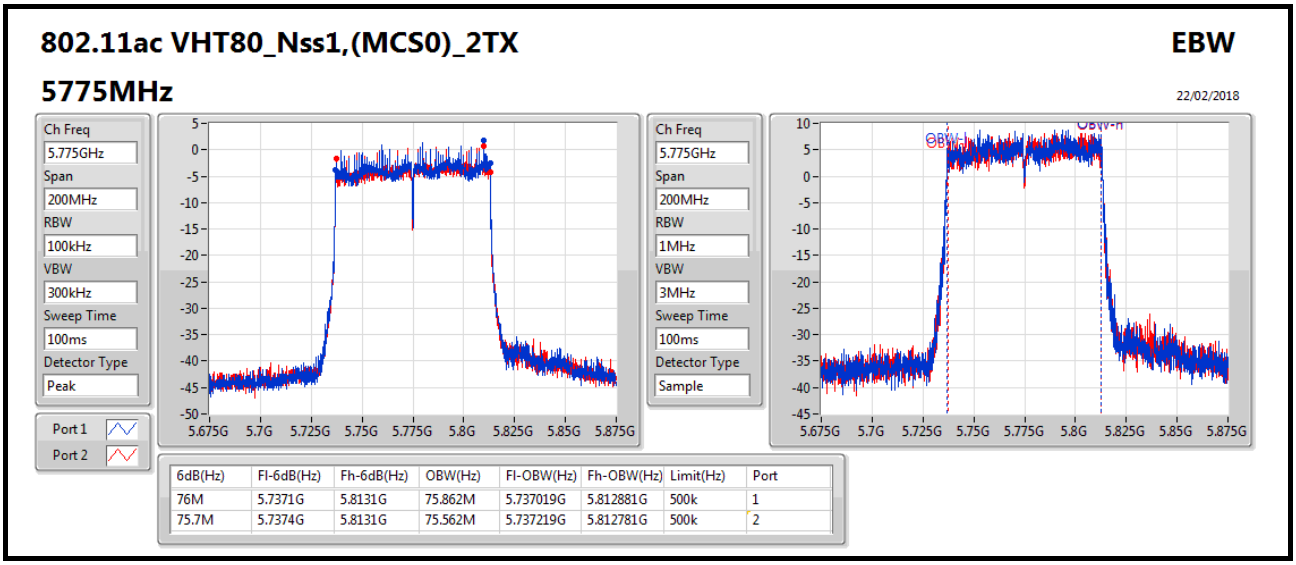
EBW

5825MHz

14/02/2018



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	5.816175G	5.83375G	23.638M	5.813806G	5.837444G	500k	1
14.925M	5.817475G	5.8324G	18.166M	5.815905G	5.83407G	500k	2



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76M	5.7371G	5.8131G	75.862M	5.737019G	5.812881G	500k	1
75.7M	5.7374G	5.8131G	75.562M	5.737219G	5.812781G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP /EIRP-Elevation 30° (dBm)	EIRP /EIRP-Elevation 30° (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	24.85	0.30549	32.85/20.95	1.92752/0.12445
802.11ac VHT80_Nss1,(MCS0)_2TX	18.15	0.06531	26.15/14.25	0.41210/0.02660

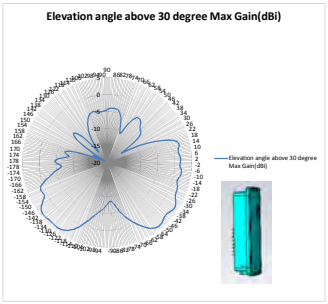
Result

Mode	Result	Directional Gain (Output Power) / Gain-Elevation 30° (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP /EIRP-Elevation 30° (dBm)	EIRP Limit / EIRP Limit-Elevation 30° (dBm)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	8.00	19.66	19.37	22.53	28.00	30.53/18.63	36.00/21.00
5200MHz	Pass	8.00	21.79	21.88	24.85	28.00	32.85/20.95	36.00/21.00
5240MHz	Pass	8.00	21.75	21.71	24.74	28.00	32.74/20.84	36.00/21.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.00	15.29	14.99	18.15	28.00	26.15/14.25	36.00/21.00

DG = Directional Gain;**Port X** = Port X output power

SPORTON International Inc.
No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.
Ph: 886-3-656-9065 / FAX: 886-3-656-9085 / www.sporton.com.tw

Elevation angle above 30 degree Max Gain(dBi)		-3.9
Freq. (MHz)	5180	Elevation Angle Define
H-Plan angle(Degree)	Gain(dBm)	
90	-4.4	
89	-4.3	
88	-4.2	
87	-4	
86	-3.9	
85	-3.9	
84	-4	
83	-3.9	
82	-3.9	
81	-4	
80	-4	
79	-4	
78	-4.2	
77	-4.5	
76	-4.8	
75	-5.2	
74	-5.7	
73	-6.2	
72	-6.9	
71	-7.7	
70	-8.5	
69	-9.3	
68	-10	
67	-10.5	
66	-10.6	
65	-10.3	
64	-9.6	
63	-8.7	
62	-7.7	
61	-6.8	
60	-6	Above 30 degree
59	-5.3	
58	-4.8	
57	-4.3	
56	-4	
55	-4	
54	-3.9	
53	-4	
52	-4.1	
51	-4.3	
50	-4.6	
49	-5	
48	-5.4	
47	-5.7	
46	-6	
45	-6.2	
44	-6.3	
43	-6.4	
42	-6.6	
41	-6.8	
40	-7.2	
39	-7.8	
38	-8.6	
37	-9.7	
36	-11.1	
35	-12.7	
34	-14.2	
33	-14.9	
32	-14.4	
31	-13.1	
30	-11.7	
29	-10.5	
28	-9.5	
27	-8.5	
26	-7.5	
25	-6.4	
24	-5.3	
23	-4	
22	-2.8	
21	-1.7	
20	-0.7	
19	0.1	
18	0.8	
17	1.3	
16	1.6	
15	1.8	
14	1.9	
13	1.8	
12	1.6	
11	1.4	
10	1.3	
9	1.2	
8	1.2	
7	1.3	
6	1.4	
5	1.5	
4	1.6	
3	1.7	
2	1.7	
1	1.6	
0	1.6	
-1	1.5	
-2	1.5	
-3	1.5	
-4	1.7	
-5	1.8	
-6	2	
-7	2.1	
-8	2.1	
-9	2.1	
-10	2	
-11	1.8	
-12	1.6	
-13	1.5	
-14	1.4	
-15	1.3	
-16	1.4	
-17	1.6	
-18	1.7	
-19	1.9	
-20	2	
-21	2.1	
-22	2.1	
-23	2.2	
-24	2.2	
-25	2.2	
-26	2.3	
-27	2.5	
-28	2.7	
-29	3	
-30	3.3	
-31	3.5	
-32	3.7	
-33	3.9	
-34	3.9	
-35	3.9	
-36	3.9	
-37	3.7	
-38	3.6	
-39	3.4	
-40	3.3	
-41	3.2	
-42	3.2	
-43	3.2	
-44	3.3	
-45	3.5	
-46	3.6	
-47	3.8	
-48	4	
-49	4.1	
-50	4.1	
-51	4.2	
-52	4.1	
-53	4	
-54	3.9	
-55	3.7	
-56	3.5	
-57	3.2	
-58	2.9	
-59	2.5	
-60	2.1	
-61	1.7	
-62	1.3	
-63	0.9	
-64	0.4	
-65	0	
-66	-0.5	
-67	-0.9	
-68	-1.4	
-69	-1.8	
-70	-2.3	
-71	-2.7	
-72	-3.2	
-73	-3.7	
-74	-4.1	
-75	-4.6	
-76	-5.1	
-77	-5.6	
-78	-6.2	
-79	-6.6	
-80	-7.1	
-81	-7.5	
-82	-7.9	
-83	-8.2	
-84	-8.4	
-85	-8.5	
-86	-8.5	
-87	-8.4	
-88	-8.2	
-89	-8	
-90	-7.7	
-91	-7.5	
-92	-7.2	
-93	-6.9	
-94	-6.6	
-95	-6.4	
-96	-6.1	



-97	-5.9	
-98	-5.6	
-99	-5.4	
-100	-5.2	
-101	-4.9	
-102	-4.6	
-103	-4.3	
-104	-4	
-105	-3.6	
-106	-3.2	
-107	-2.8	
-108	-2.3	
-109	-1.9	
-110	-1.4	
-111	-0.9	
-112	-0.4	
-113	0.1	
-114	0.6	
-115	1.1	
-116	1.5	
-117	1.9	
-118	2.3	
-119	2.6	
-120	2.9	
-121	3.2	
-122	3.4	
-123	3.6	
-124	3.8	
-125	3.9	
-126	4	
-127	4.1	
-128	4.1	
-129	4.1	
-130	4.1	
-131	4.1	
-132	4	
-133	4	
-134	4	
-135	4	
-136	4	
-137	4.1	
-138	4.2	
-139	4.2	
-140	4.3	
-141	4.3	
-142	4.3	
-143	4.2	
-144	4.1	
-145	3.9	
-146	3.6	
-147	3.3	
-148	2.9	
-149	2.4	
-150	1.9	
-151	1.5	
-152	1.1	
-153	0.9	
-154	0.8	
-155	0.9	
-156	1	
-157	1.1	
-158	1.2	
-159	1.1	
-160	1	
-161	0.7	
-162	0.3	
-163	-0.2	
-164	-0.7	
-165	-1.3	
-166	-2	
-167	-2.5	
-168	-3	
-169	-3.5	
-170	-3.9	
-171	-4.3	
-172	-4.8	
-173	-5.4	
-174	-5.9	
-175	-6.3	
-176	-6.5	
-177	-6.4	
-178	-6.1	
-179	-5.6	
180	-5.1	
179	-4.8	
178	-4.6	
177	-4.7	
176	-5	
175	-5.5	
174	-6.2	
173	-7	
172	-7.8	
171	-8.4	
170	-8.6	
169	-8.4	
168	-8	
167	-7.6	
166	-7.3	
165	-7.2	
164	-7.5	
163	-8	
162	-8.8	
161	-10	
160	-11.6	
159	-13.5	
158	-15.7	
157	-17.3	
156	-17.7	
155	-16.9	
154	-16	
153	-15.4	
152	-15.4	
151	-15.8	
150	-16.8	
149	-18.2	
148	-19.1	
147	-18.3	
146	-16.1	
145	-13.7	
144	-11.7	
143	-10.1	
142	-8.9	
141	-8	
140	-7.3	
139	-7	
138	-6.9	
137	-7	
136	-7.3	
135	-7.8	
134	-8.6	
133	-9.6	
132	-10.9	
131	-12.3	
130	-13.9	
129	-15.2	
128	-16	
127	-15.7	
126	-14.8	
125	-13.7	
124	-12.6	
123	-11.7	
122	-10.9	
121	-10.1	
120	-9.5	Above 30 degree
119	-8.9	
118	-8.4	
117	-7.9	
116	-7.4	
115	-6.9	
114	-6.5	
113	-6.1	
112	-5.7	
111	-5.4	
110	-5.1	
109	-4.9	
108	-4.7	
107	-4.6	
106	-4.5	
105	-4.4	
104	-4.4	
103	-4.5	
102	-4.5	
101	-4.6	
100	-4.7	
99	-4.8	
98	-4.8	
97	-4.9	
96	-4.9	
95	-4.9	
94	-4.9	
93	-4.8	
92	-4.7	
91	-4.6	
90	-4.6	

Summary

Mode	Total Power (dBm)	Total Power (W)
5.725-5.85GHz	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	27.96	0.62517
802.11ac VHT80_Nss1,(MCS0)_2TX	21.62	0.14521

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5745MHz	Pass	8.00	25.03	24.78	27.92	28.00
5785MHz	Pass	8.00	25.09	24.81	27.96	28.00
5825MHz	Pass	8.00	25.04	24.74	27.90	28.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5775MHz	Pass	8.00	18.68	18.54	21.62	28.00

DG = Directional Gain;**Port X** = Port X output power

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT20_Nss1,(MCS0)_2TX	11.81
802.11ac VHT80_Nss1,(MCS0)_2TX	-0.50

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

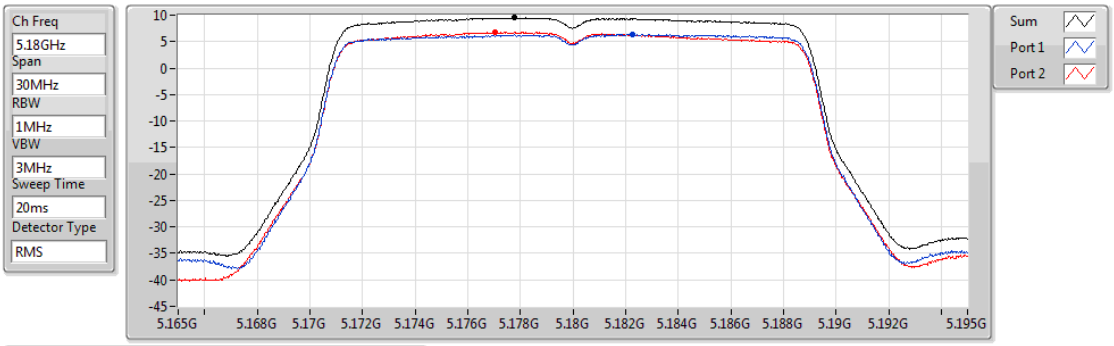
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.00	6.37	6.81	9.51	15.00
5200MHz	Pass	8.00	8.74	9.05	11.81	15.00
5240MHz	Pass	8.00	8.55	8.74	11.61	15.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	8.00	-3.71	-3.21	-0.50	15.00

DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

5180MHz

22/02/2018

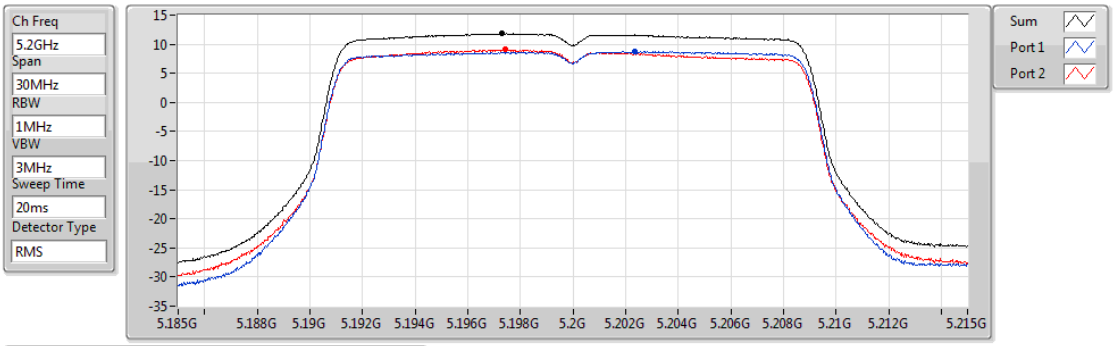


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.51	9.51	6.37	6.81

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

5200MHz

22/02/2018

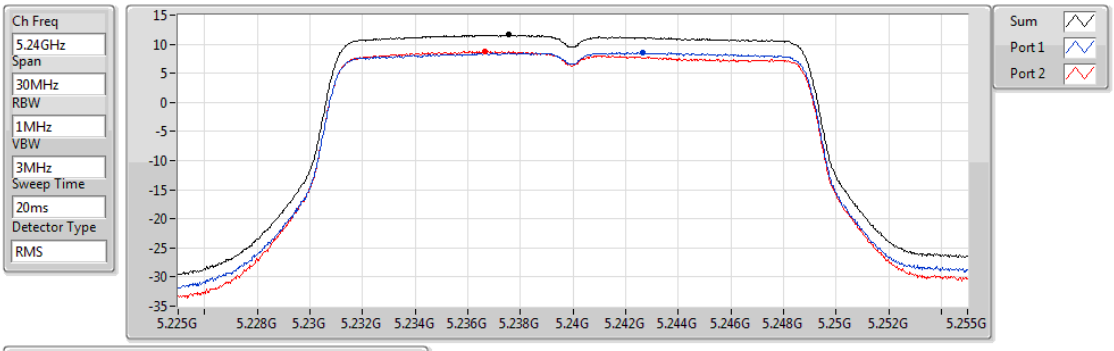


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.81	11.81	8.74	9.05

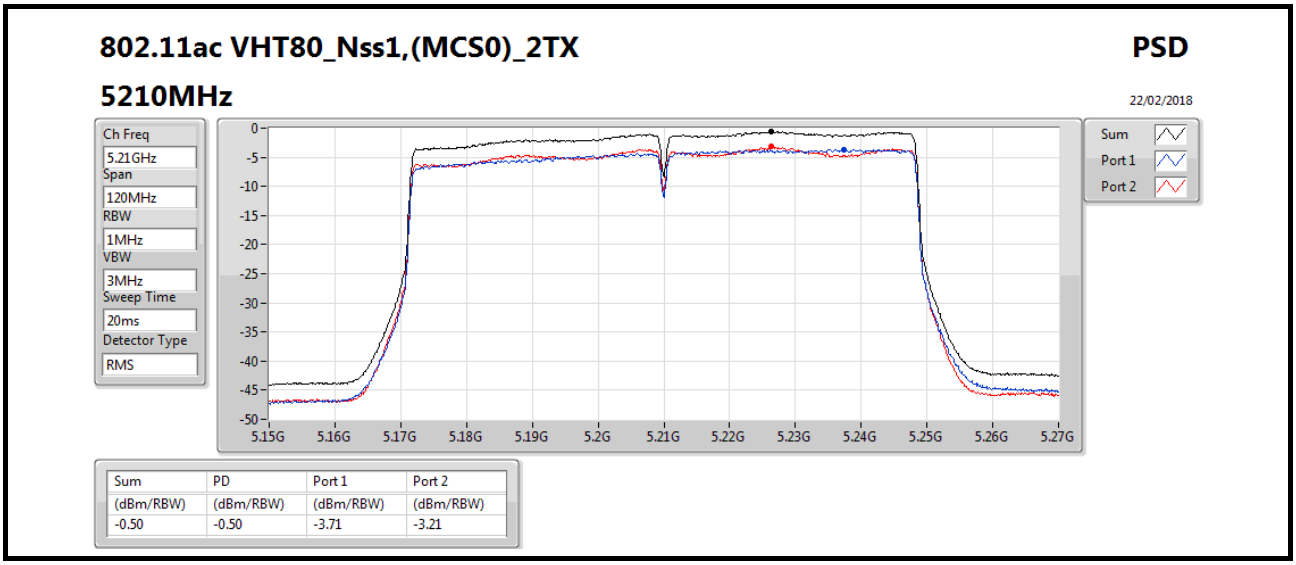
802.11ac VHT20_Nss1,(MCS0)_2TX PSD

5240MHz

05/05/2018



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.61	11.61	8.55	8.74


802.11ac VHT80_Nss1,(MCS0)_2TX
PSD
5210MHz
22/02/2018
Ch Freq
5.21GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
5.15G
5.16G
5.17G
5.18G
5.19G
5.2G
5.21G
5.22G
5.23G
5.24G
5.25G
5.26G
5.27G
Sum
Port 1
Port 2
Sum | PD | Port 1 | Port 2
(dBm/RBW) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW)
-0.50 | -0.50 | -3.71 | -3.21

Summary

Mode	PD (dBm/RBW)
5.725-5.85GHz	-
802.11ac VHT20_Nss1,(MCS0)_2TX	11.08
802.11ac VHT80_Nss1,(MCS0)_2TX	0.85

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

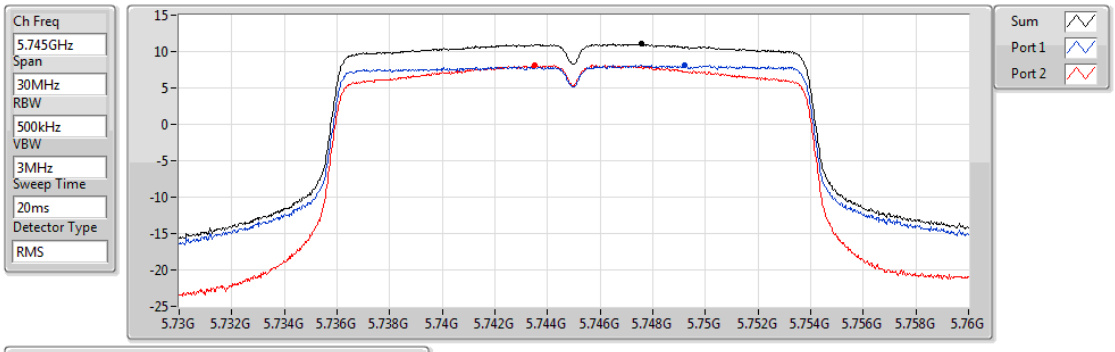
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5745MHz	Pass	8.00	8.12	8.12	11.03	28.00
5785MHz	Pass	8.00	8.12	8.20	11.08	28.00
5825MHz	Pass	8.00	7.90	8.41	11.01	28.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5775MHz	Pass	8.00	-1.71	-2.44	0.85	28.00

DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

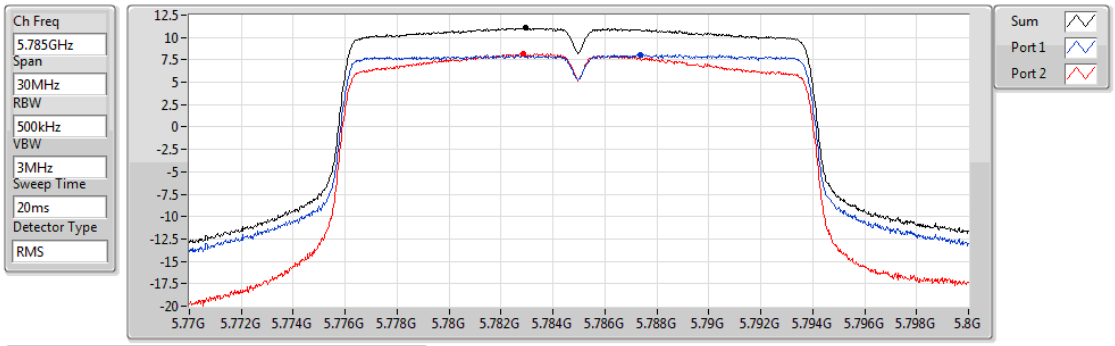
5745MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.03	11.03	8.12	8.12

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

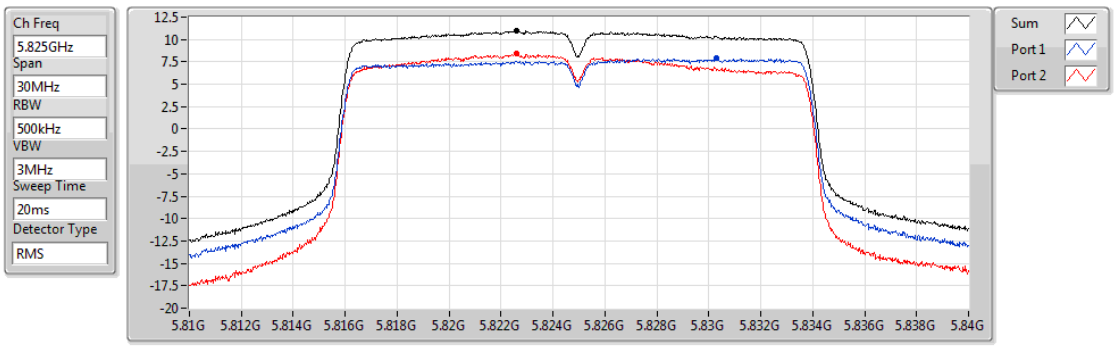
5785MHz



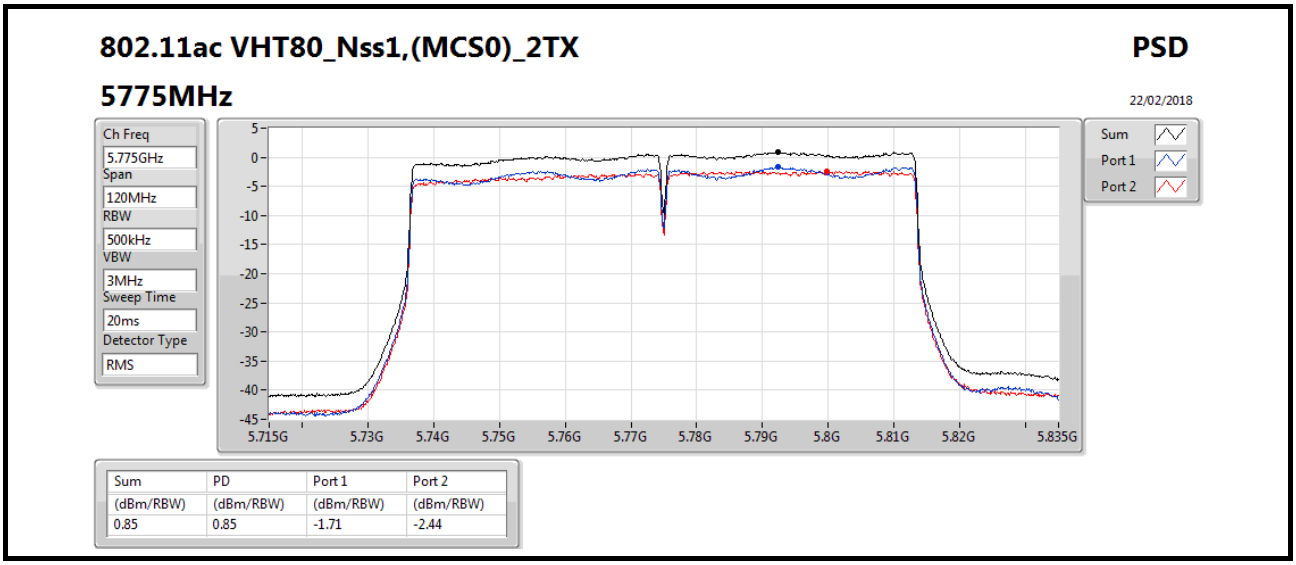
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.08	11.08	8.12	8.20

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

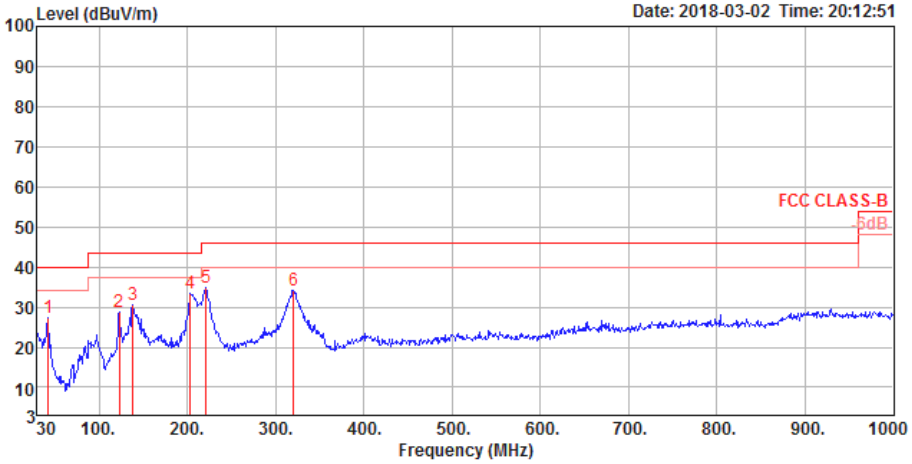
5825MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.01	11.01	7.90	8.41


802.11ac VHT80_Nss1,(MCS0)_2TX
PSD
5775MHz
22/02/2018
Ch Freq
5.775GHz
Span
120MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5.715G
5.73G
5.74G
5.75G
5.76G
5.77G
5.78G
5.79G
5.8G
5.81G
5.82G
5.835G
Sum
Port 1
Port 2
Sum PD Port 1 Port 2
(dBm/RBW) (dBm/RBW) (dBm/RBW) (dBm/RBW)
0.85 0.85 -1.71 -2.44

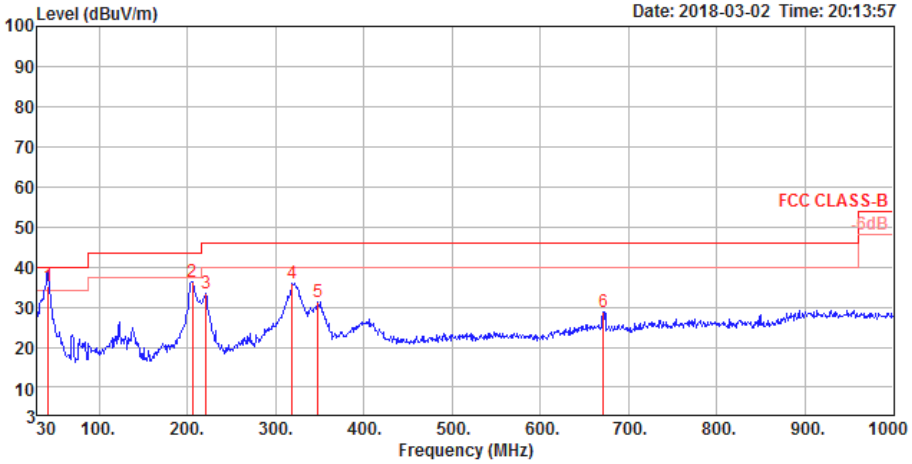
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Horizontal
Operating Function	CTX		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	42.61	27.21	40.00	-12.79	40.03	1.28	18.32	32.42	200	255	Peak	HORIZONTAL
2	123.12	28.89	43.50	-14.61	41.47	1.15	18.63	32.36	150	357	Peak	HORIZONTAL
3	138.64	30.71	43.50	-12.79	44.11	1.17	17.78	32.35	200	119	Peak	HORIZONTAL
4	203.63	33.39	43.50	-10.11	47.38	1.98	16.34	32.31	150	197	Peak	HORIZONTAL
5	221.09	34.70	46.00	-11.30	48.35	2.14	16.51	32.30	150	256	Peak	HORIZONTAL
6	320.03	34.27	46.00	-11.73	44.16	2.11	20.27	32.27	100	152	Peak	HORIZONTAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	CTX		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	42.61	35.17	40.00	-4.83	47.99	1.28	18.32	32.42	100	113	QP	VERTICAL
2	205.57	36.34	43.50	-7.16	50.29	2.00	16.36	32.31	100	292	Peak	VERTICAL
3	221.09	33.46	46.00	-12.54	47.11	2.14	16.51	32.30	100	0	Peak	VERTICAL
4	319.06	35.94	46.00	-10.06	45.83	2.14	20.24	32.27	150	76	Peak	VERTICAL
5	348.16	31.17	46.00	-14.83	40.99	1.42	21.04	32.28	150	316	Peak	VERTICAL
6	671.17	28.84	46.00	-17.16	32.30	3.46	25.44	32.36	100	176	Peak	VERTICAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

For Conducted Spurious Emission

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-87.29	-87.54	-76.40	-41.25	35.15
5200	-84.85	-84.87	-73.85	-41.25	32.60
5240	-70.35	-78.79	-61.77	-41.25	20.52
5745	-86.67	-86.65	-75.65	-41.25	34.40
5785	-86.49	-86.60	-75.53	-41.25	34.28
5825	-86.50	-86.72	-75.60	-41.25	34.35

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-75.95	-75.34	-64.62	-21.25	43.37
5200	-72.55	-72.10	-61.31	-21.25	40.06
5240	-53.54	-62.60	-45.03	-21.25	23.78
5745	-73.49	-73.96	-62.71	-21.25	41.46
5785	-74.10	-73.48	-62.77	-21.25	41.52
5825	-73.32	-73.88	-62.58	-21.25	41.33

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-84.83	-84.76	-73.78	-41.25	32.53
5775	-86.56	-86.70	-75.62	-41.25	34.37

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-70.23	-72.63	-60.26	-21.25	39.01
5775	-73.95	-73.64	-62.78	-21.25	41.53

Temperature	22 ℃	Humidity	54%
Test Engineer	Serway Li / Eddie Weng	Configurations	VHT20 / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-54.40	-57.82	-44.77	-41.25	3.52
5200	-57.06	-59.78	-47.20	-41.25	5.95
5240	-56.06	-58.43	-46.07	-41.25	4.82
5745	-55.73	-56.25	-44.97	-41.25	3.72
5785	-58.69	-58.64	-47.65	-41.25	6.40
5825	-50.61	-56.48	-41.61	-41.25	0.36

Temperature	22 ℃	Humidity	54%
Test Engineer	Serway Li / Eddie Weng	Configurations	VHT20 / Peak / Port 1 + Port 2 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-47.73	-47.83	-36.77	-21.25	15.52
5200	-48.65	-48.61	-37.62	-21.25	16.37
5240	-45.94	-46.88	-35.37	-21.25	14.12
5745	-42.00	-44.31	-31.99	-21.25	10.74
5785	-46.39	-45.90	-35.13	-21.25	13.88
5825	-36.19	-44.93	-27.65	-21.25	6.40

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-56.55	-55.63	-45.06	-41.25	3.81
5775	-53.37	-54.97	-43.09	-41.25	1.84

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Peak / Port 1 + Port 2 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-41.85	-42.80	-31.29	-21.25	10.04
5775	-41.47	-42.04	-30.74	-21.25	9.49

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Average / Port 1 + Port 2 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-83.49	-83.51	-72.49	-41.25	31.24
5200	-51.69	-54.81	-41.97	-41.25	0.72
5240	-56.13	-58.30	-46.07	-41.25	4.82
5745	-61.14	-62.04	-50.56	-41.25	9.31
5785	-61.94	-59.97	-49.83	-41.25	8.58
5825	-59.19	-58.10	-47.60	-41.25	6.35

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Peak / Port 1 + Port 2 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-46.82	-49.54	-36.96	-21.25	15.71
5200	-50.60	-53.90	-40.93	-21.25	19.68
5240	-53.57	-55.93	-43.58	-21.25	22.33
5745	-48.38	-50.09	-38.14	-21.25	16.89
5785	-49.76	-48.26	-37.94	-21.25	16.69
5825	-47.25	-46.18	-35.67	-21.25	14.42

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Average / Port 1 + Port 2 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-53.25	-54.56	-42.85	-41.25	1.60
5775	-59.88	-60.33	-49.09	-41.25	7.84

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Peak / Port 1 + Port 2 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-52.27	-52.81	-41.52	-21.25	20.27
5775	-48.16	-48.22	-37.18	-21.25	15.93

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Average / Port 1 + Port 2 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-77.58	-77.43	-66.49	-41.25	25.24
5200	-77.45	-77.34	-66.38	-41.25	25.13
5240	-77.35	-77.32	-66.32	-41.25	25.07
5745	-78.96	-78.82	-67.88	-41.25	26.63
5785	-78.74	-78.80	-67.76	-41.25	26.51
5825	-78.84	-78.88	-67.85	-41.25	26.60

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Peak / Port 1 + Port 2 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-65.31	-65.61	-54.45	-21.25	33.20
5200	-64.87	-65.38	-54.11	-21.25	32.86
5240	-64.67	-65.56	-54.08	-21.25	32.83
5745	-66.98	-67.34	-56.15	-21.25	34.90
5785	-66.46	-66.79	-55.61	-21.25	34.36
5825	-66.84	-66.68	-55.75	-21.25	34.50

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Average / Port 1 + Port 2 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-77.39	-76.90	-66.13	-41.25	24.88
5775	-78.92	-78.86	-67.88	-41.25	26.63

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Peak / Port 1 + Port 2 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-65.04	-65.85	-54.42	-21.25	33.17
5775	-66.18	-64.42	-54.20	-21.25	32.95

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Average / Port 1 + Port 2 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-73.27	-73.37	-62.31	-41.25	21.06
5200	-73.14	-73.36	-62.24	-41.25	20.99
5240	-73.31	-73.23	-62.26	-41.25	21.01
5745	-73.79	-73.81	-62.79	-41.25	21.54
5785	-73.65	-73.78	-62.70	-41.25	21.45
5825	-73.72	-73.79	-62.74	-41.25	21.49

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Peak / Port 1 + Port 2 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-61.77	-61.34	-50.54	-21.25	29.29
5200	-61.06	-61.51	-50.27	-21.25	29.02
5240	-61.41	-61.35	-50.37	-21.25	29.12
5745	-61.97	-62.12	-51.03	-21.25	29.78
5785	-61.14	-62.26	-50.65	-21.25	29.40
5825	-61.87	-59.67	-49.62	-21.25	28.37

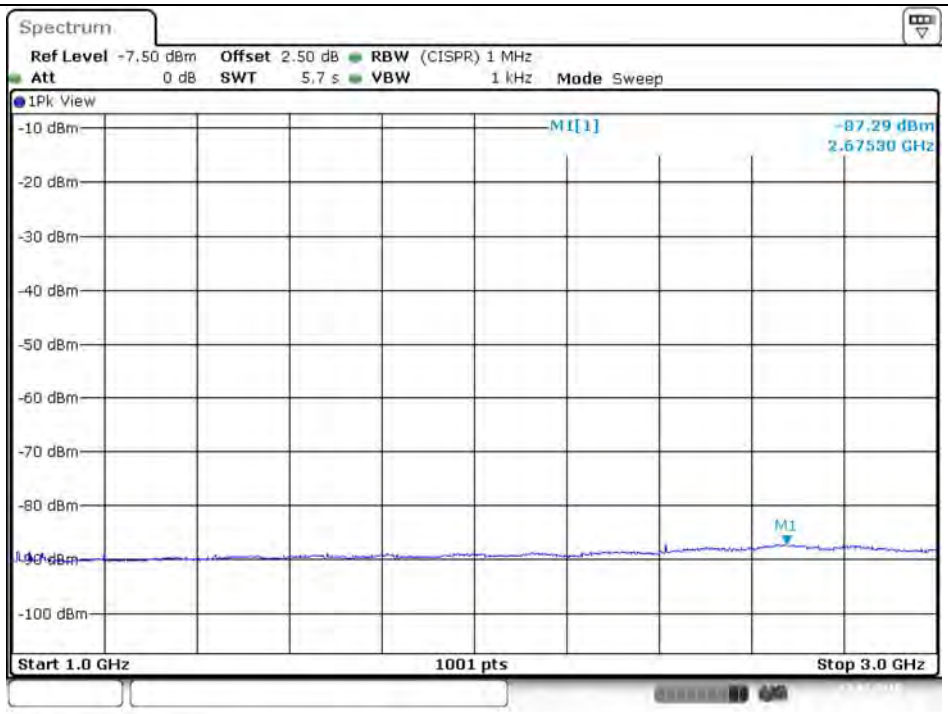
Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Average / Port 1 + Port 2 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-73.24	-73.39	-62.30	-41.25	21.05
5775	-73.73	-73.69	-62.70	-41.25	21.45

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Peak / Port 1 + Port 2 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-62.09	-61.24	-50.63	-21.25	29.38
5775	-61.26	-61.85	-50.53	-21.25	29.28

Plot on Configuration VHT20 / 5180 MHz / Average / Port 1 / 1GHz~3GHz



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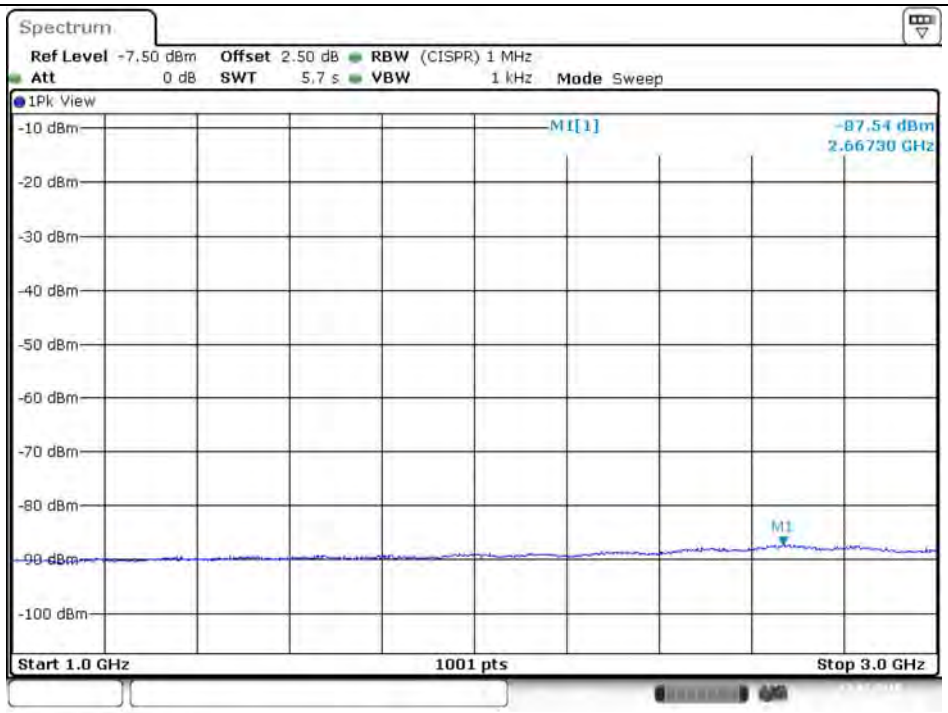
Plot on Configuration VHT20 / 5180 MHz / Average / Port 2 / 1GHz~3GHz



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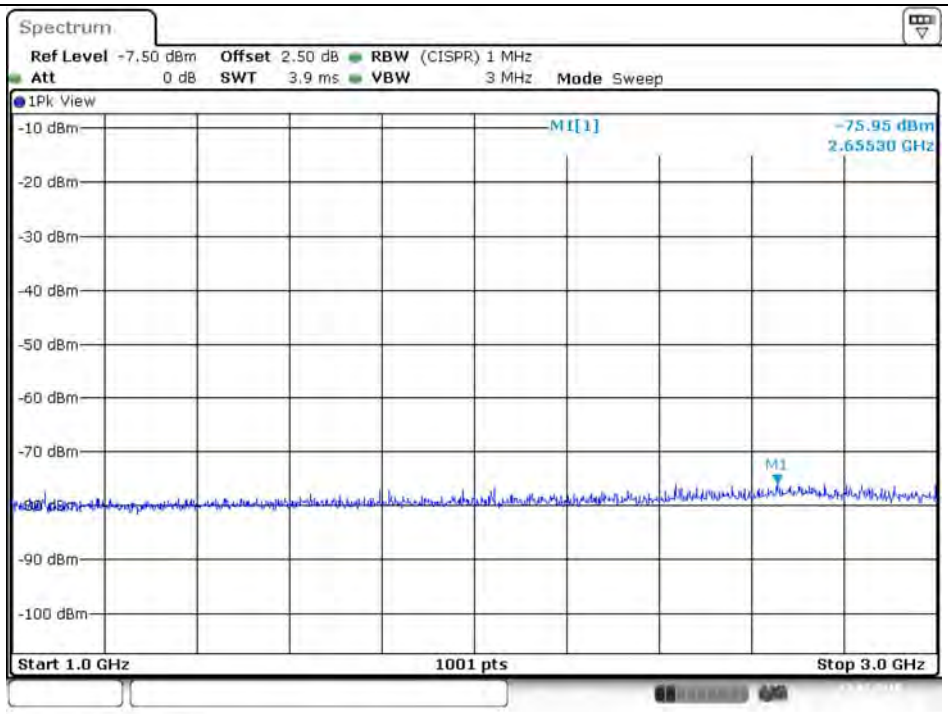
Plot on Configuration VHT20 / 5180 MHz / Peak / Port 1 / 1GHz~3GHz



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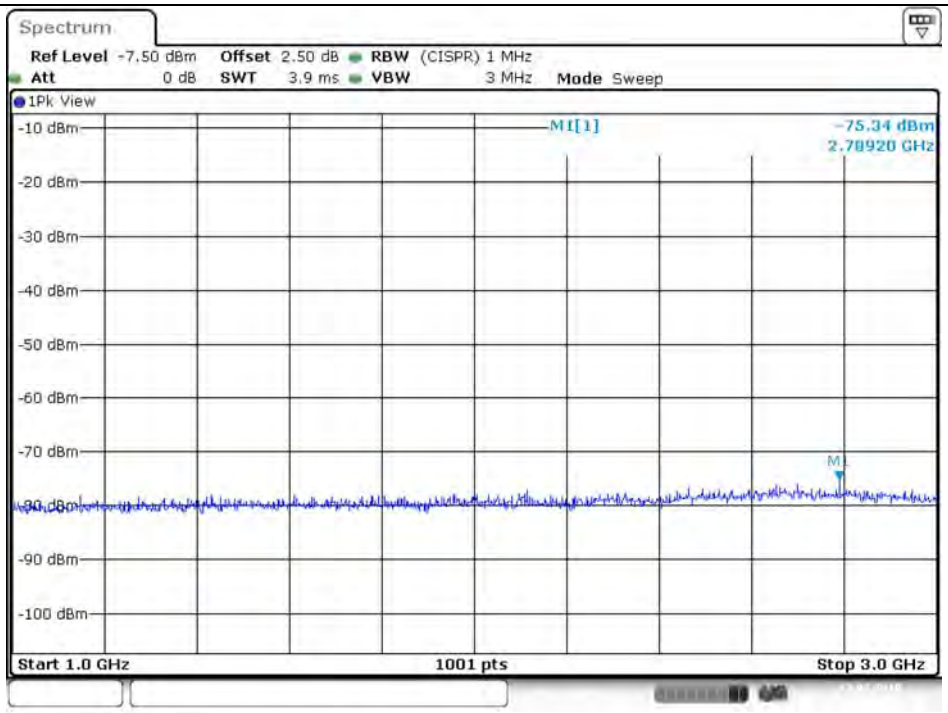
Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 / 1GHz~3GHz



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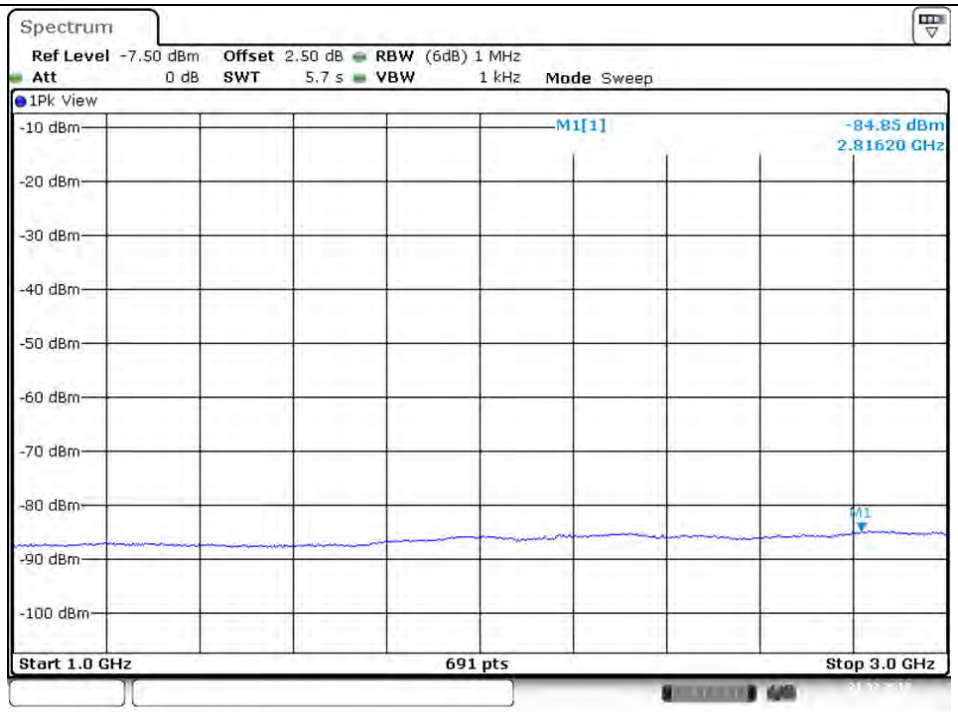
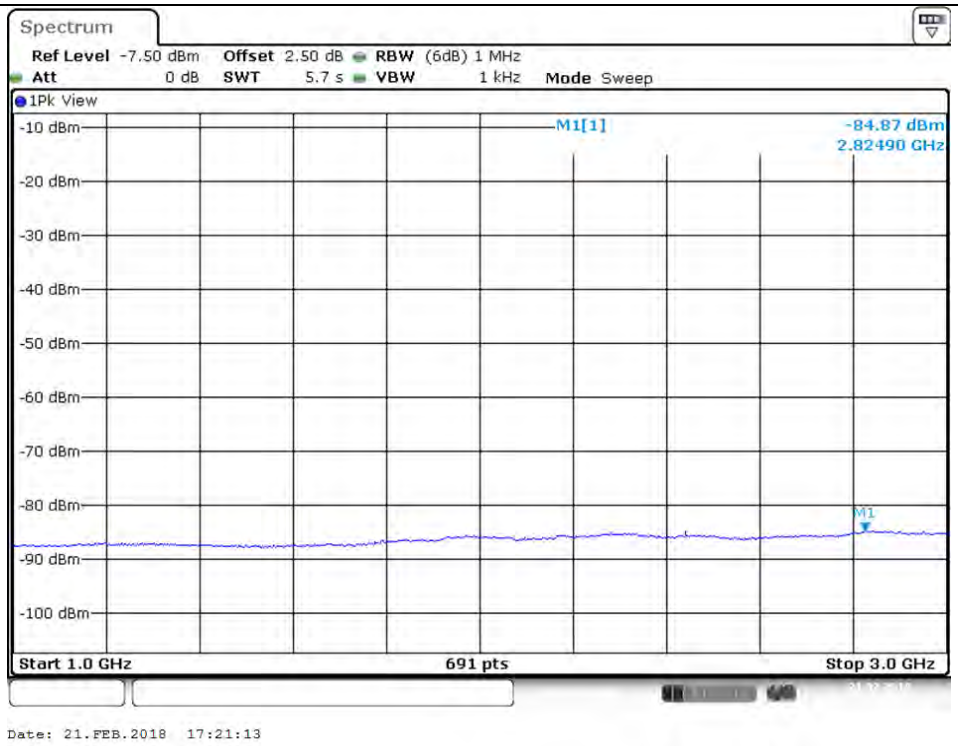
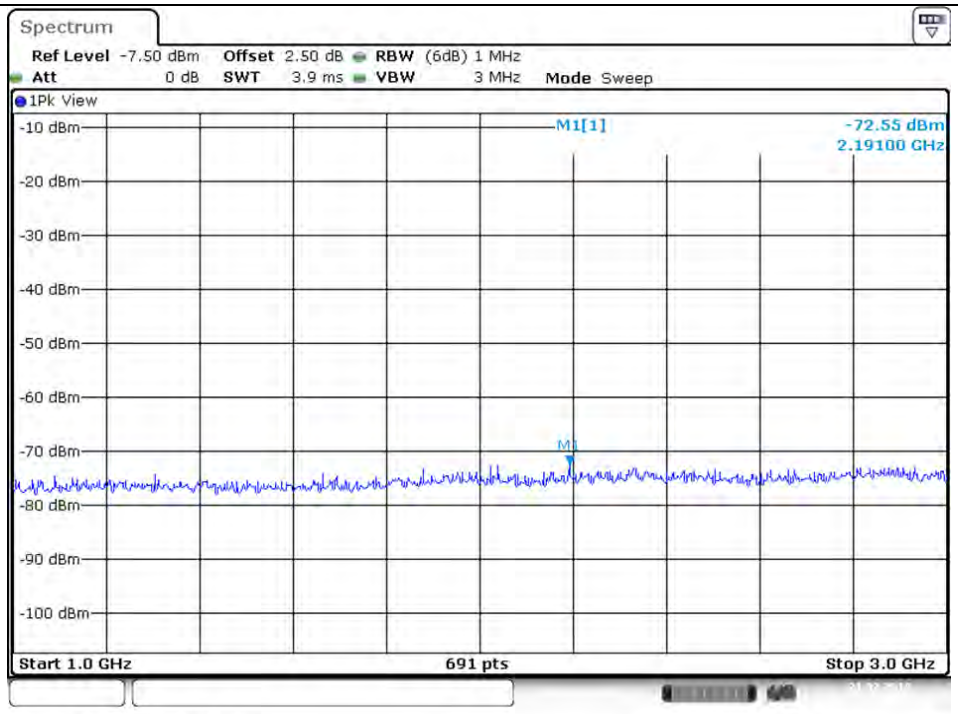
Plot on Configuration VHT20 / 5200 MHz / Average / Port 1 / 1GHz~3GHz



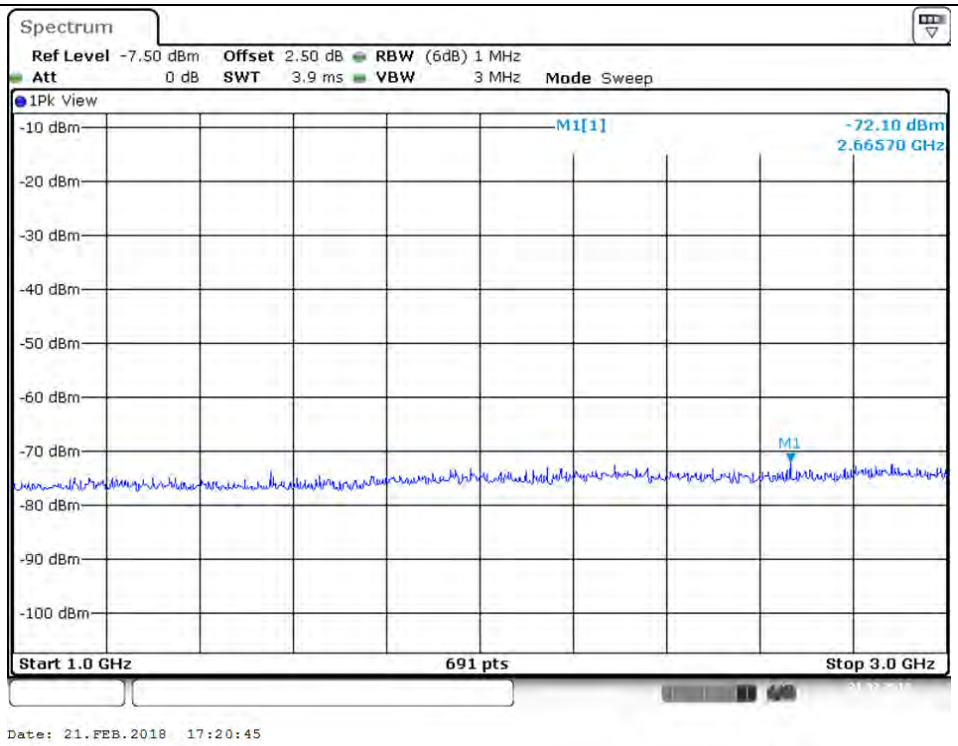
Plot on Configuration VHT20 / 5200 MHz / Average / Port 2 / 1GHz~3GHz



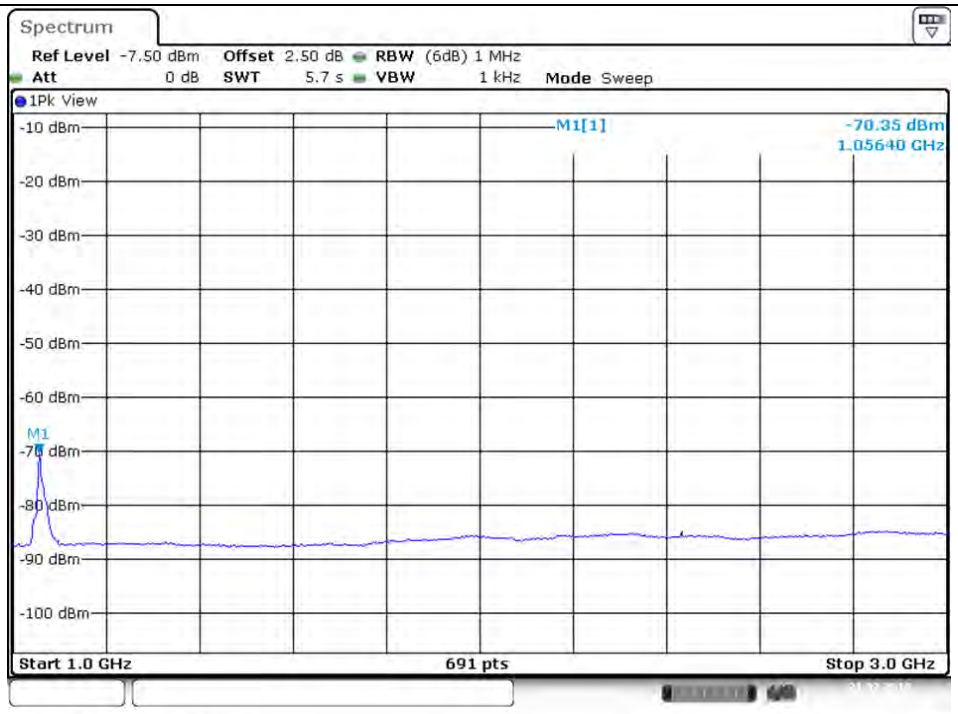
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 1 / 1GHz~3GHz



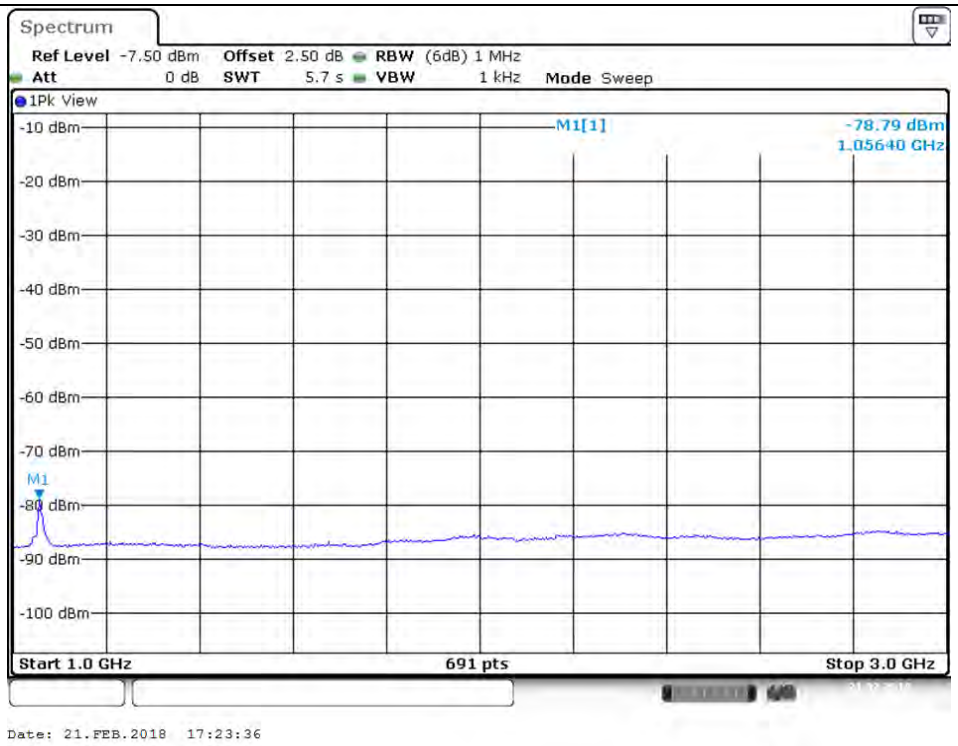
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 2 / 1GHz~3GHz



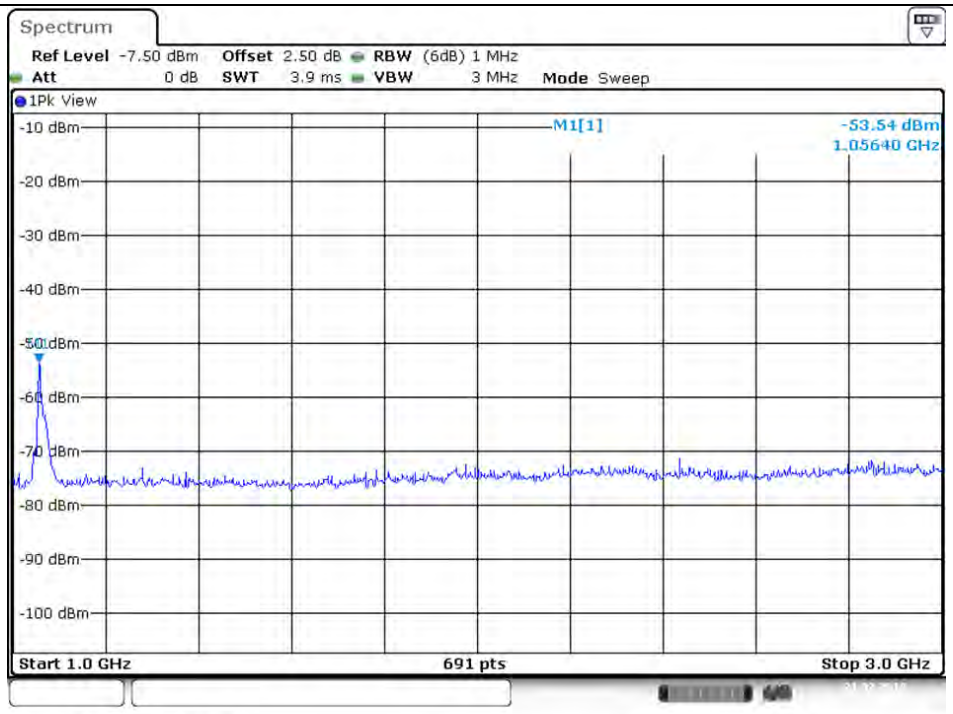
Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 / 1GHz~3GHz



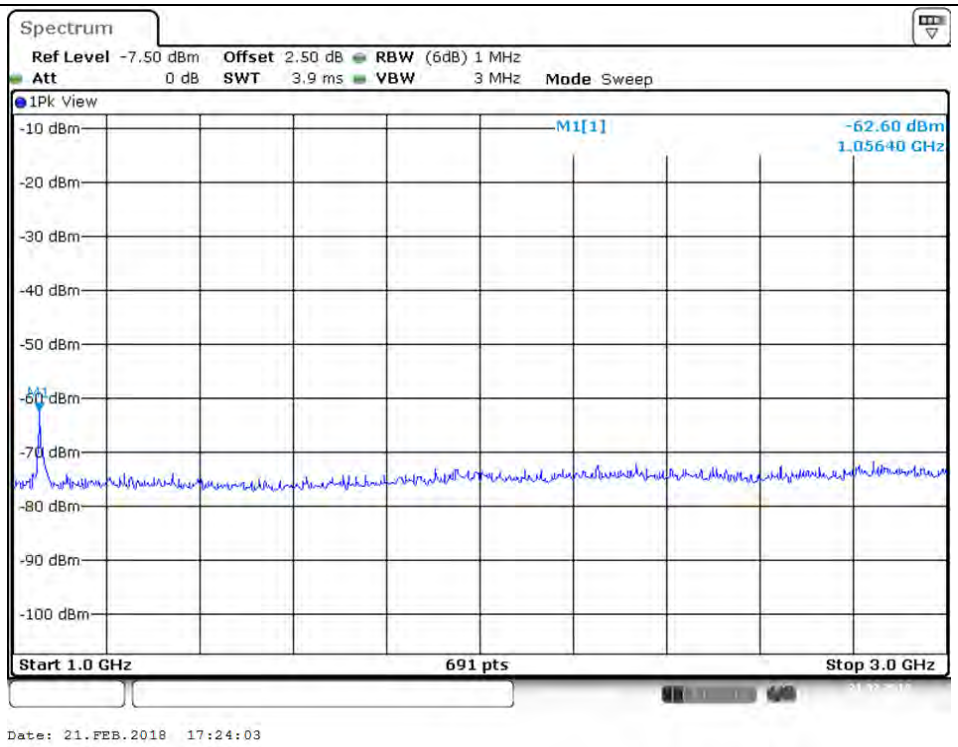
Plot on Configuration VHT20 / 5240 MHz / Average / Port 2 / 1GHz~3GHz



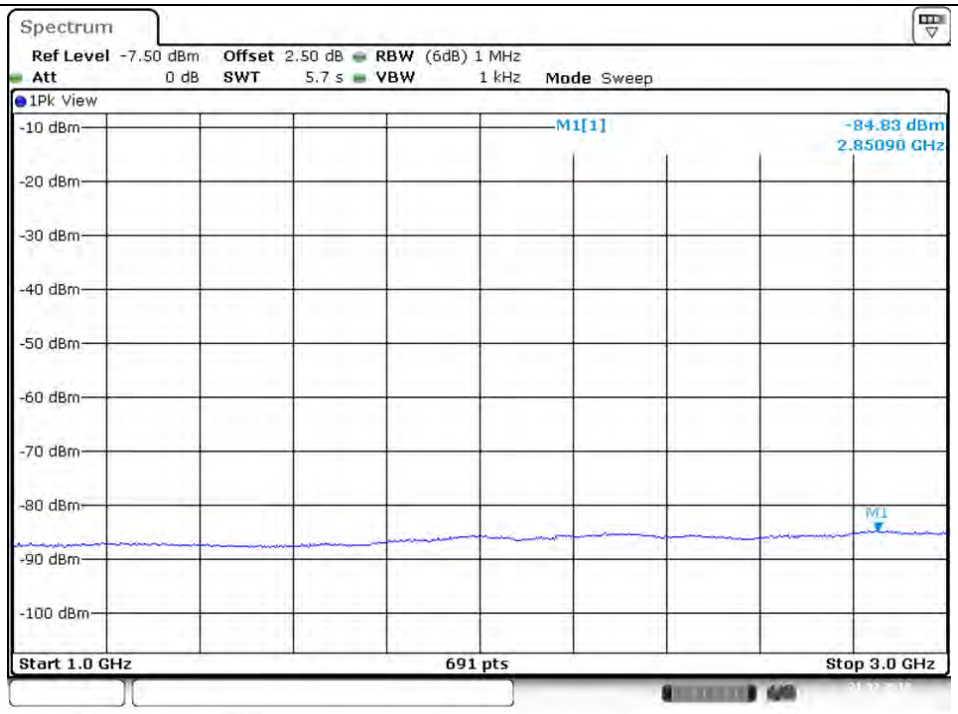
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 1 / 1GHz~3GHz



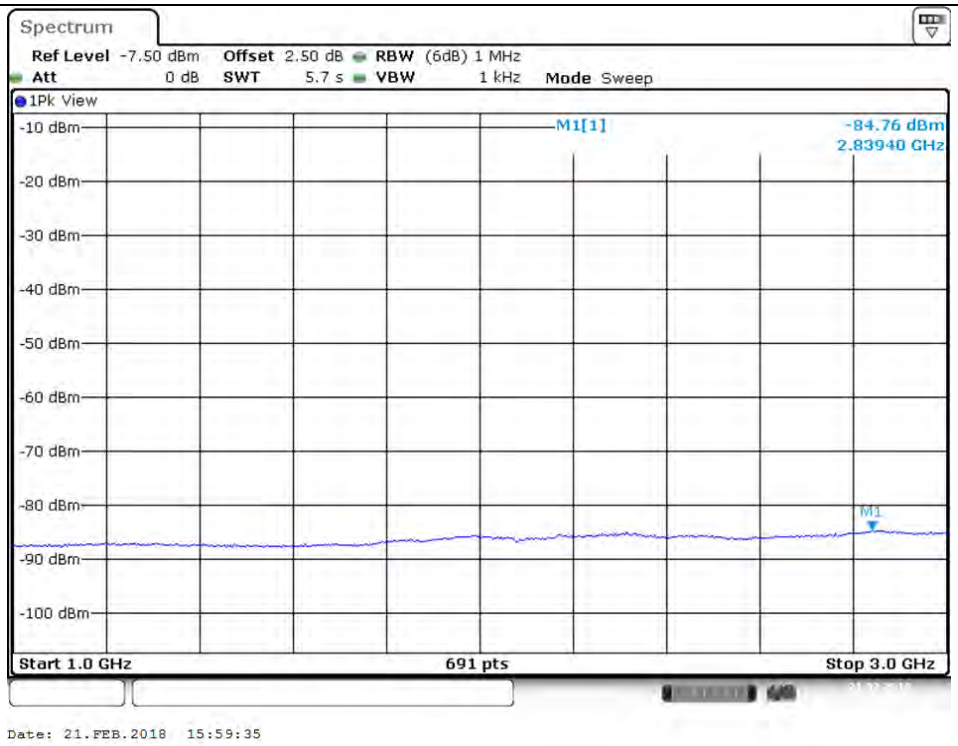
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 / 1GHz~3GHz



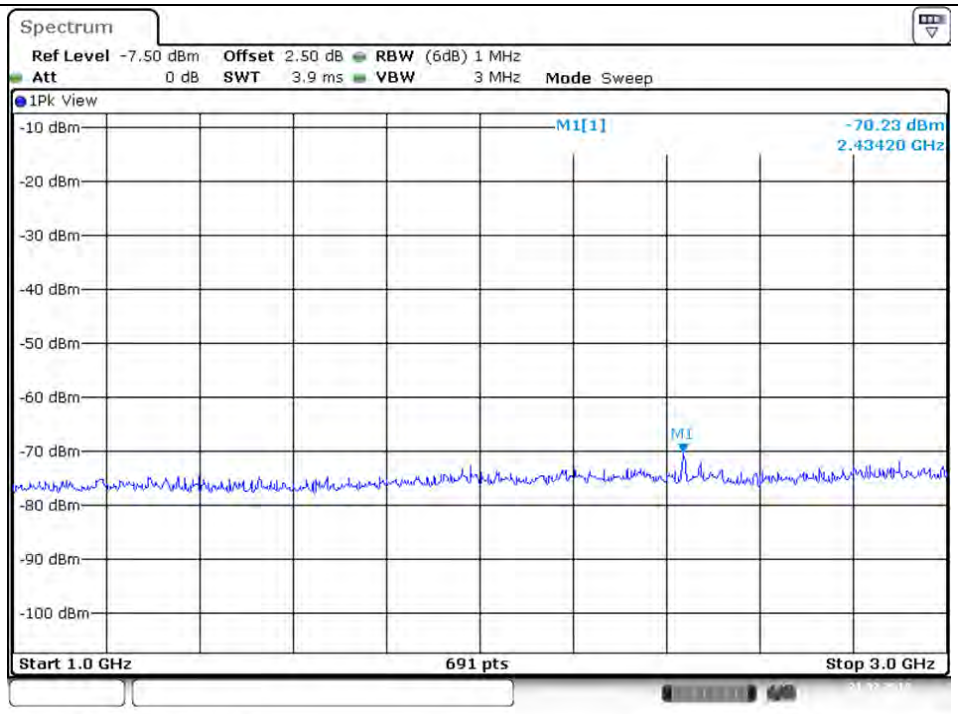
Plot on Configuration VHT80 / 5210 MHz / Average / Port 1 / 1GHz~3GHz



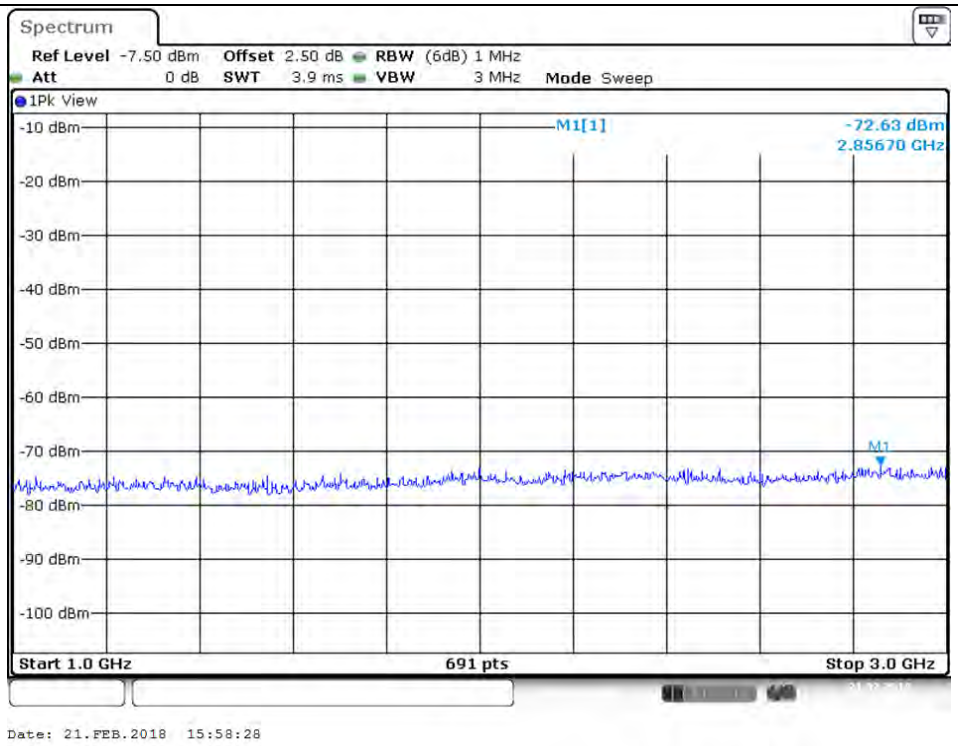
Plot on Configuration VHT80 / 5210 MHz / Average / Port 2 / 1GHz~3GHz



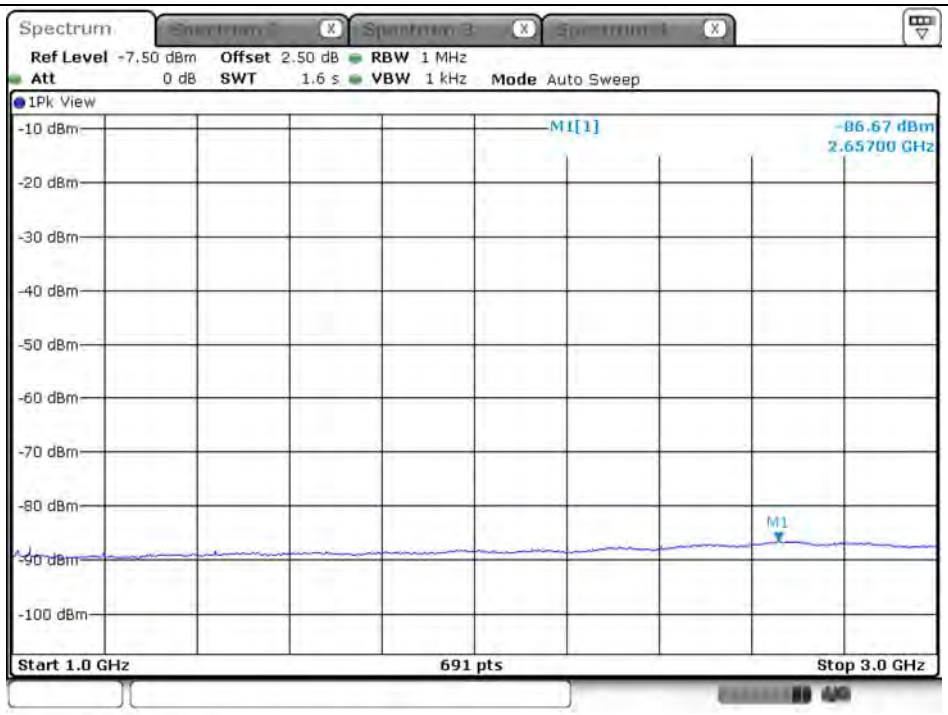
Plot on Configuration VHT80 / 5210 MHz / Peak / Port 1 / 1GHz~3GHz



Plot on Configuration VHT80 / 5210 MHz / Peak / Port 2 / 1GHz~3GHz

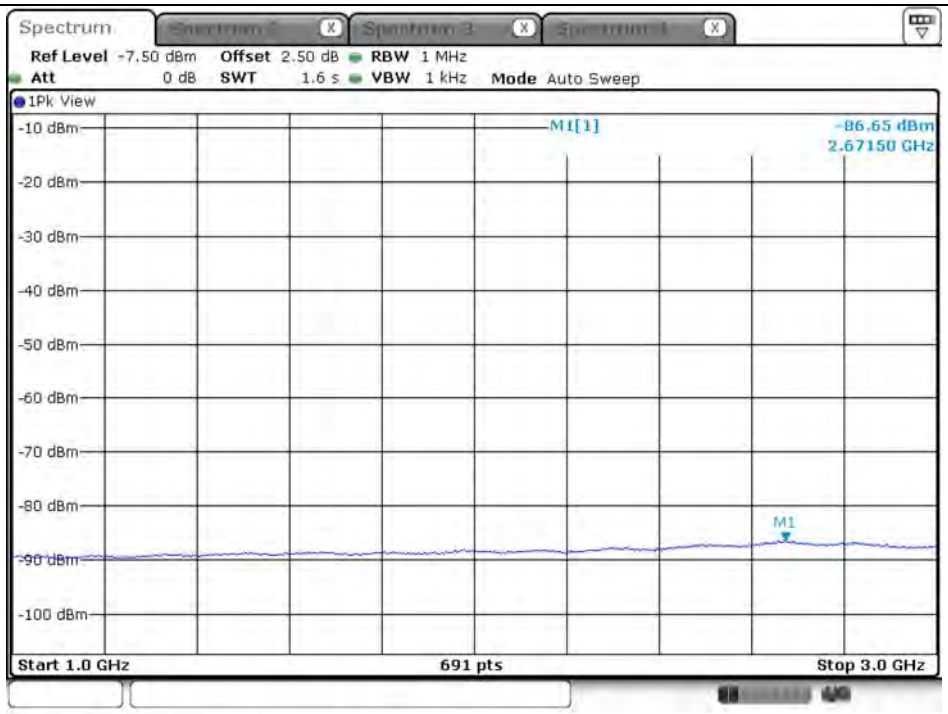


Plot on Configuration VHT20 / 5745 MHz / Average / Port 1 / 1GHz~3GHz



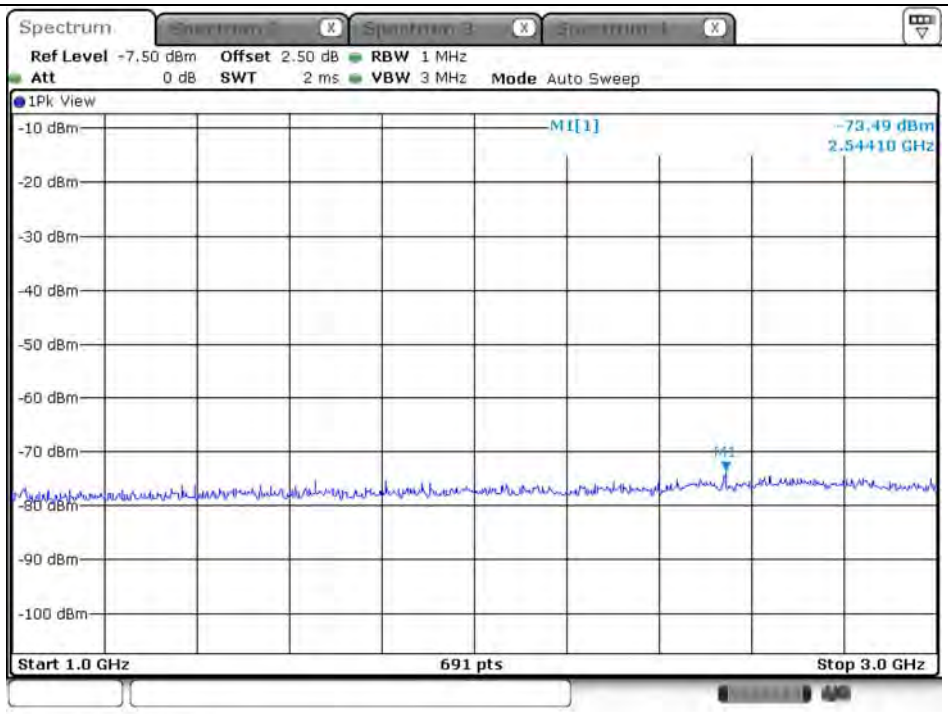
Date: 13.FEB.2018 19:57:45

Plot on Configuration VHT20 / 5745 MHz / Average / Port 2 / 1GHz~3GHz



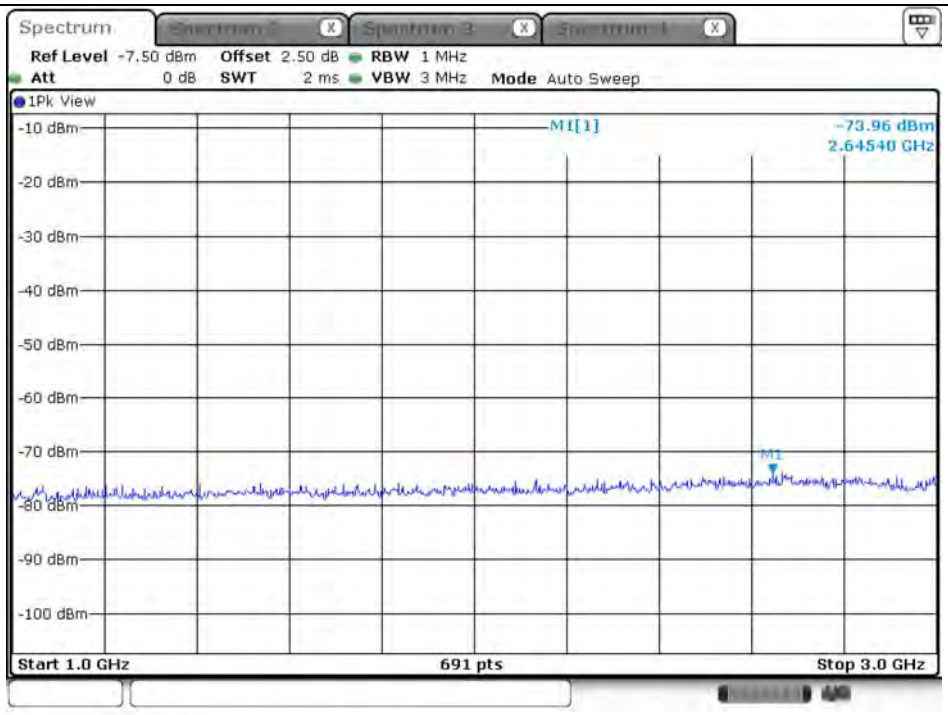
Date: 13.FEB.2018 20:07:58

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 1 / 1GHz~3GHz



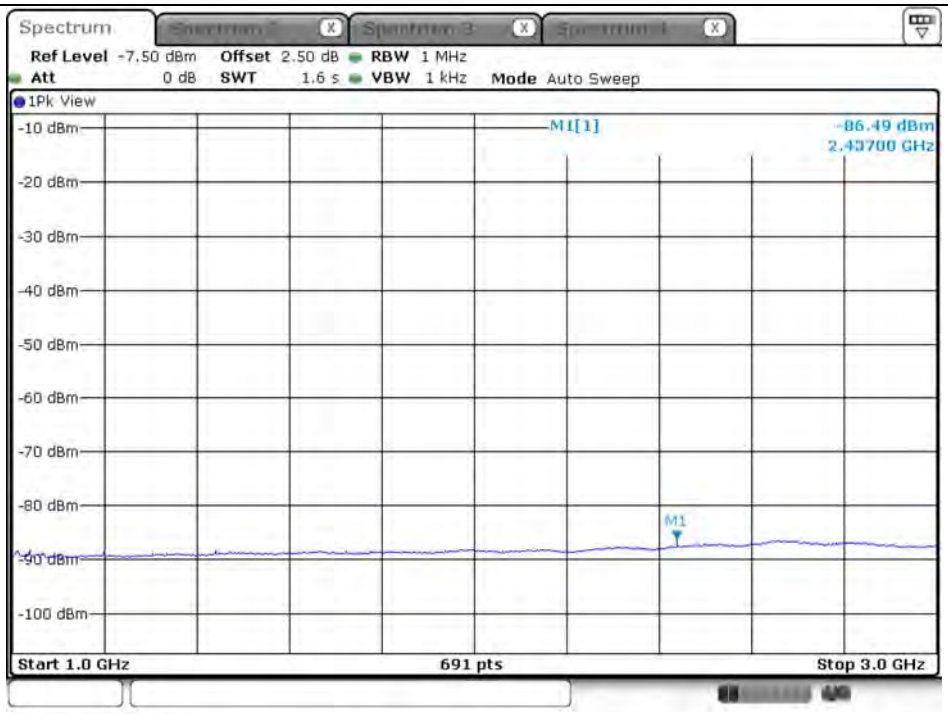
Date: 13.FEB.2018 19:58:55

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 2 / 1GHz~3GHz



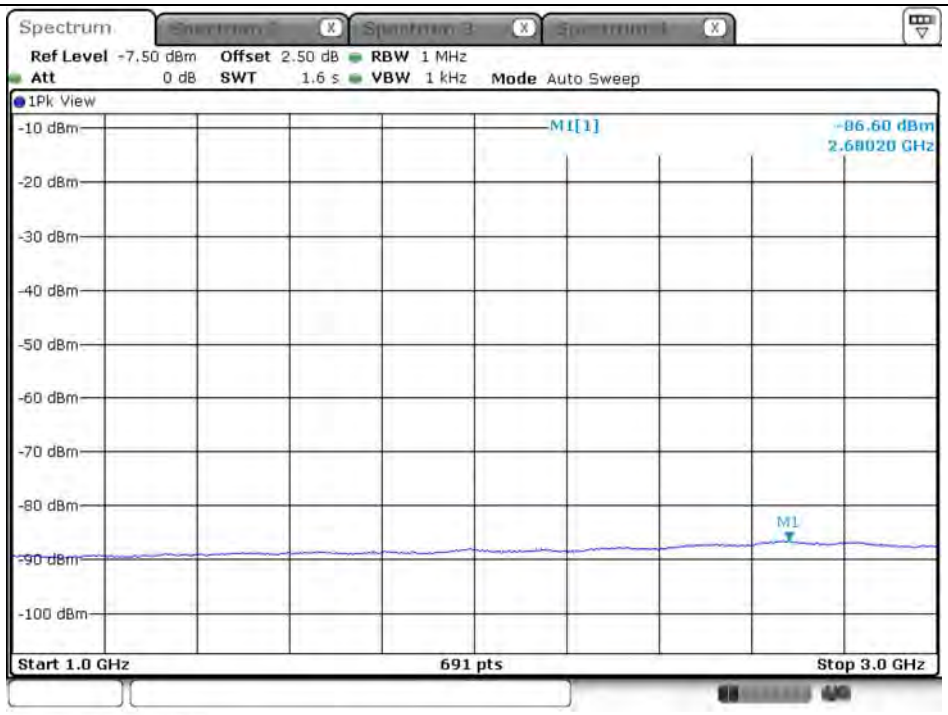
Date: 13.FEB.2018 20:08:42

Plot on Configuration VHT20 / 5785 MHz / Average / Port 1 / 1GHz~3GHz



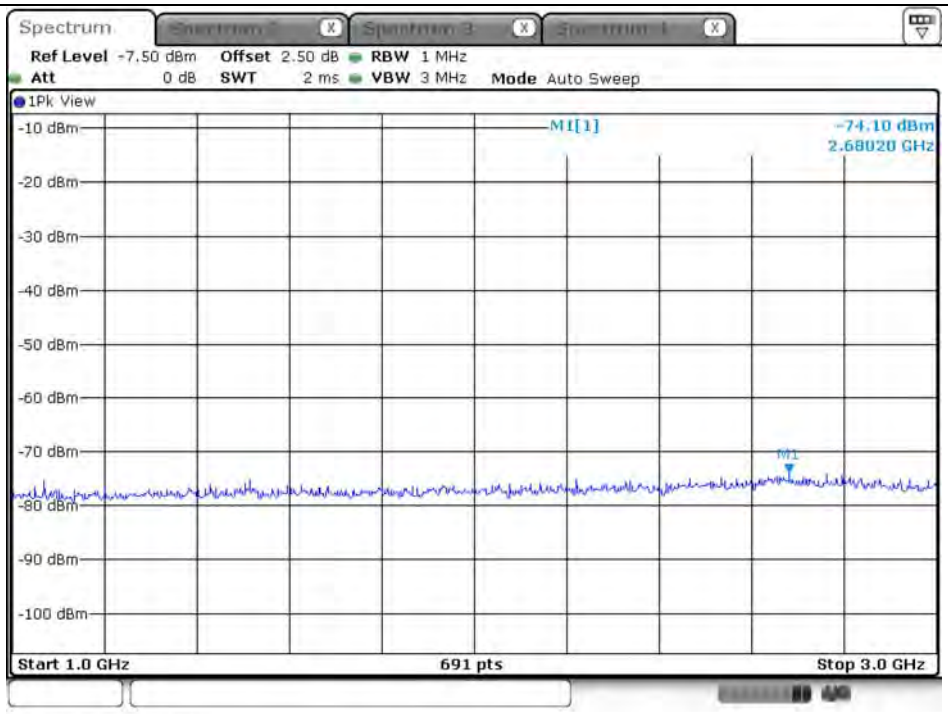
Date: 13.FEB.2018 20:11:47

Plot on Configuration VHT20 / 5785 MHz / Average / Port 2 / 1GHz~3GHz



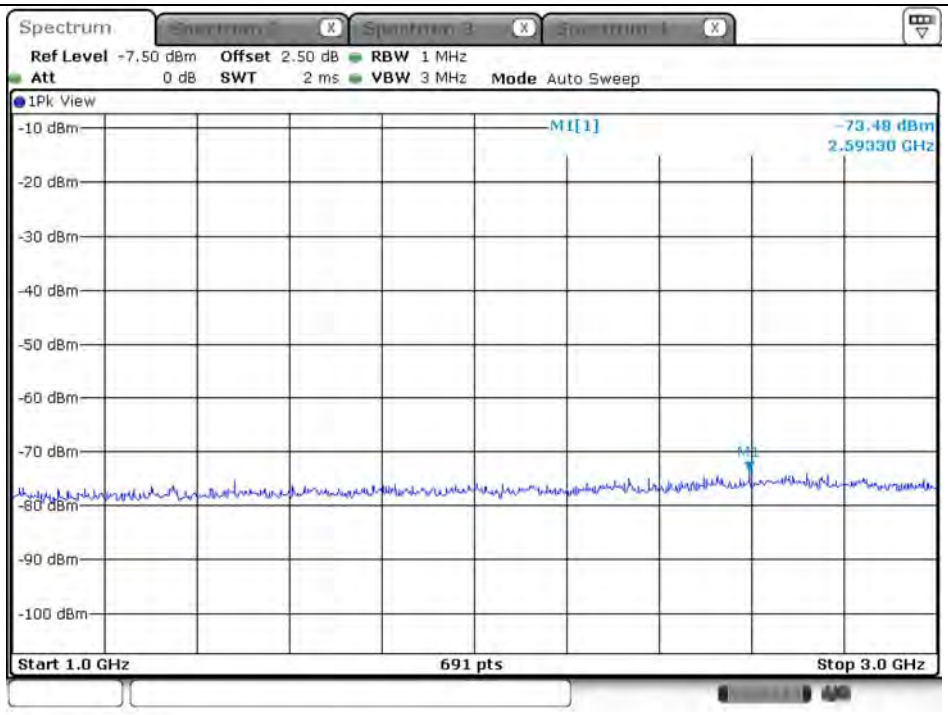
Date: 13.FEB.2018 20:26:46

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 1 / 1GHz~3GHz



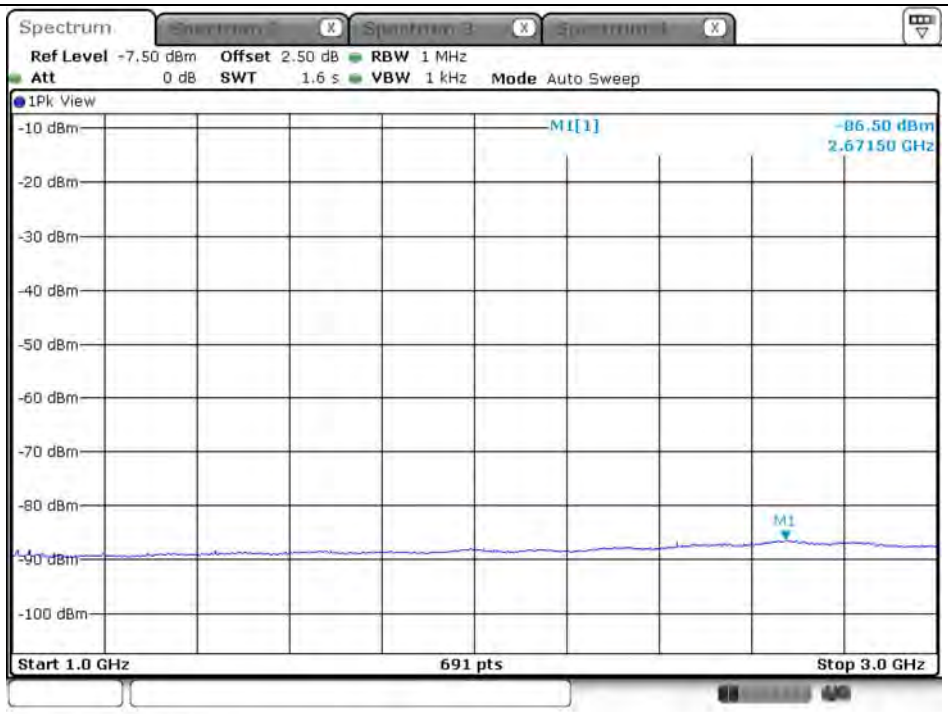
Date: 13.FEB.2018 20:12:54

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 2 / 1GHz~3GHz



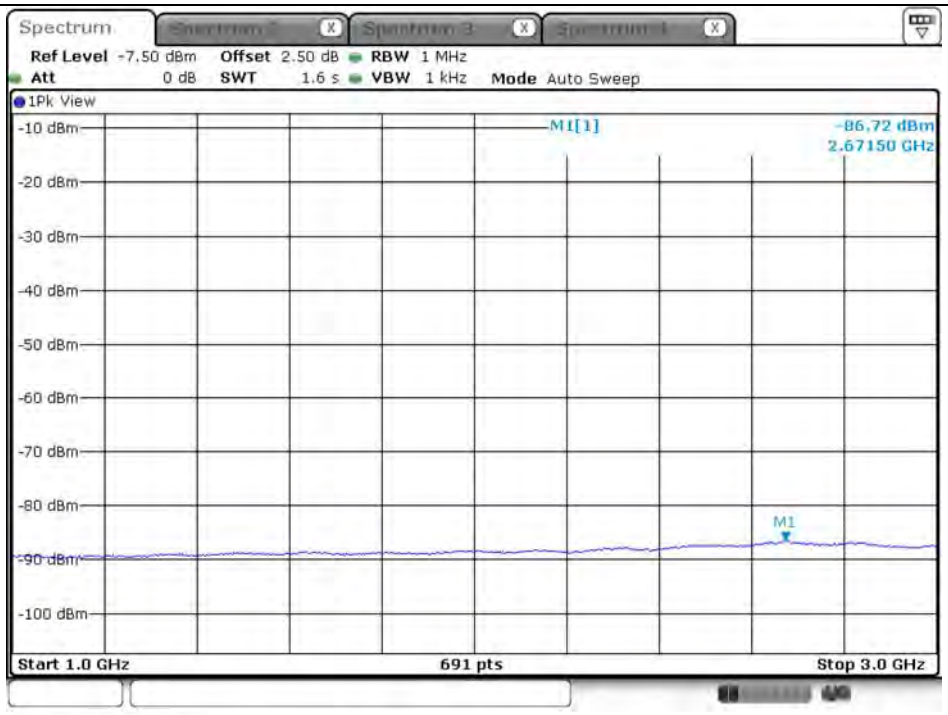
Date: 13.FEB.2018 20:27:37

Plot on Configuration VHT20 / 5825 MHz / Average / Port 1 / 1GHz~3GHz



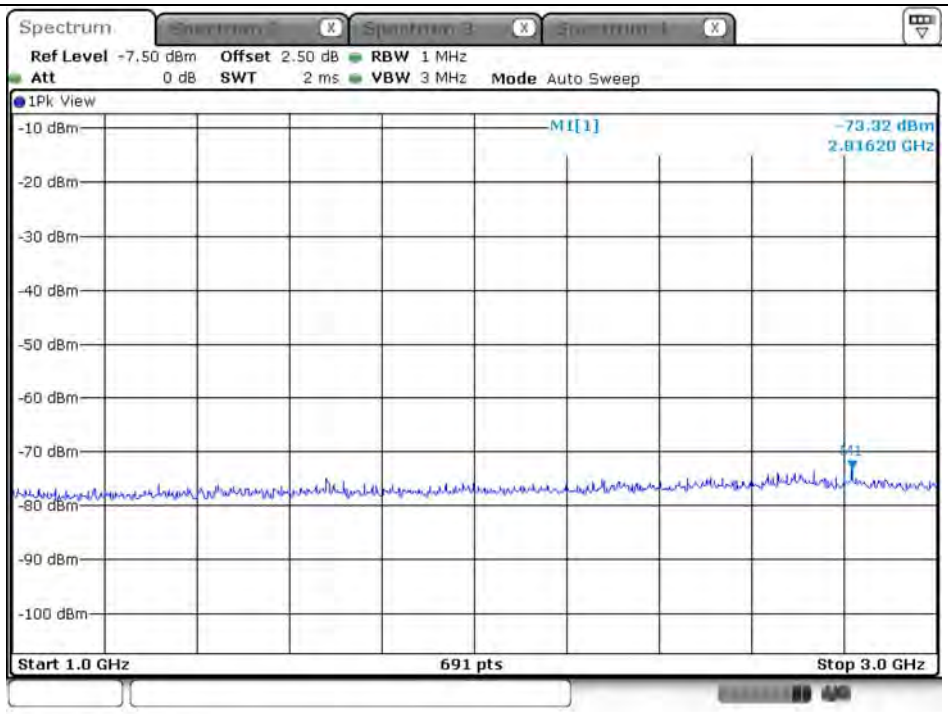
Date: 13.FEB.2018 20:30:18

Plot on Configuration VHT20 / 5825 MHz / Average / Port 2 / 1GHz~3GHz



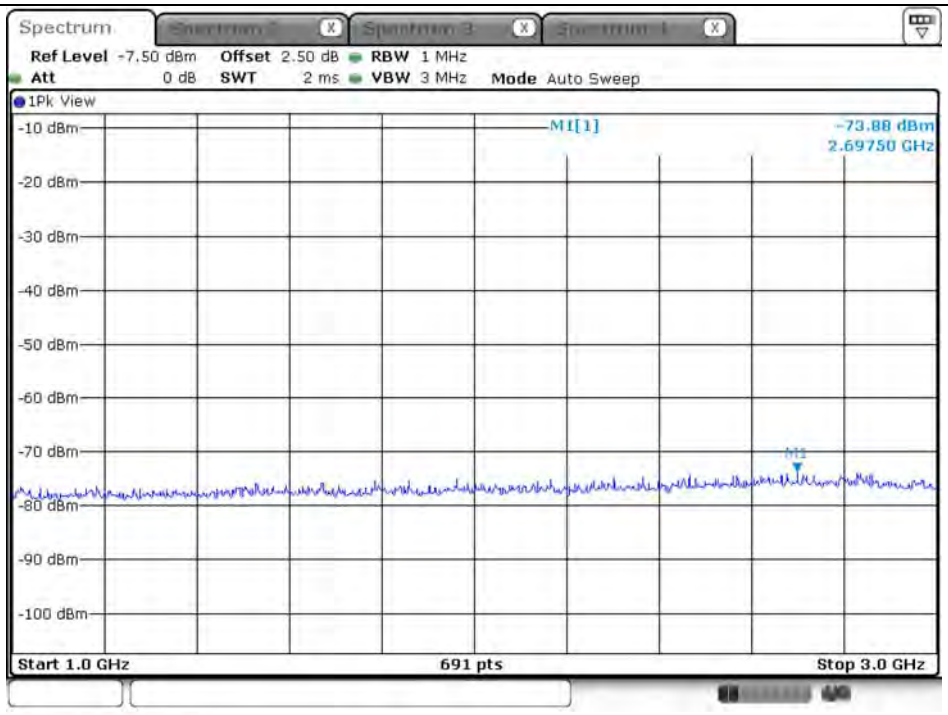
Date: 13.FEB.2018 20:50:26

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 1 / 1GHz~3GHz



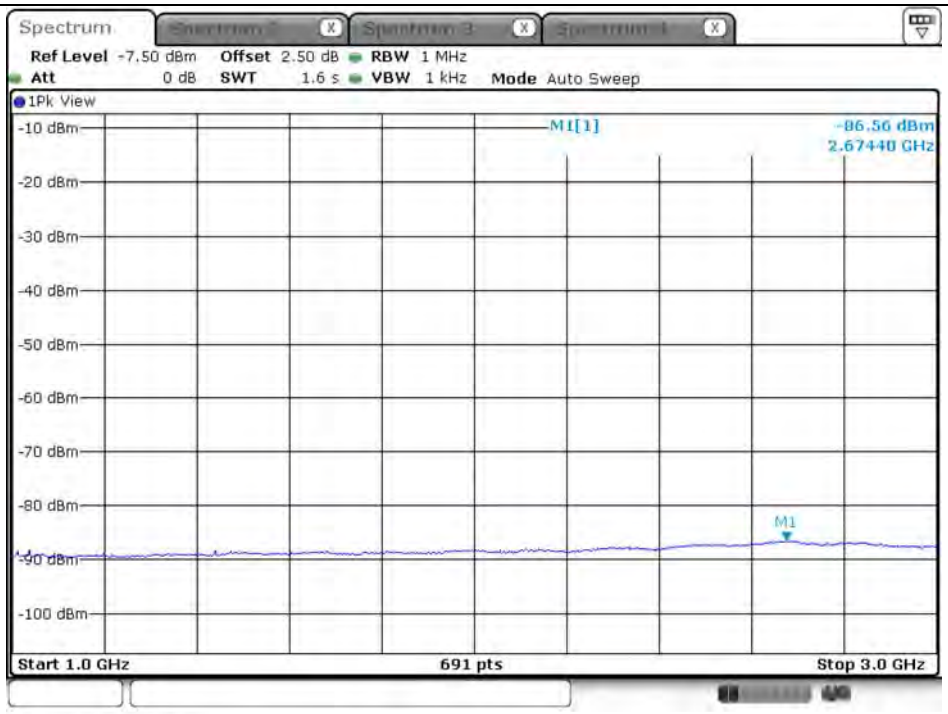
Date: 13.FEB.2018 20:31:35

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 2 / 1GHz~3GHz



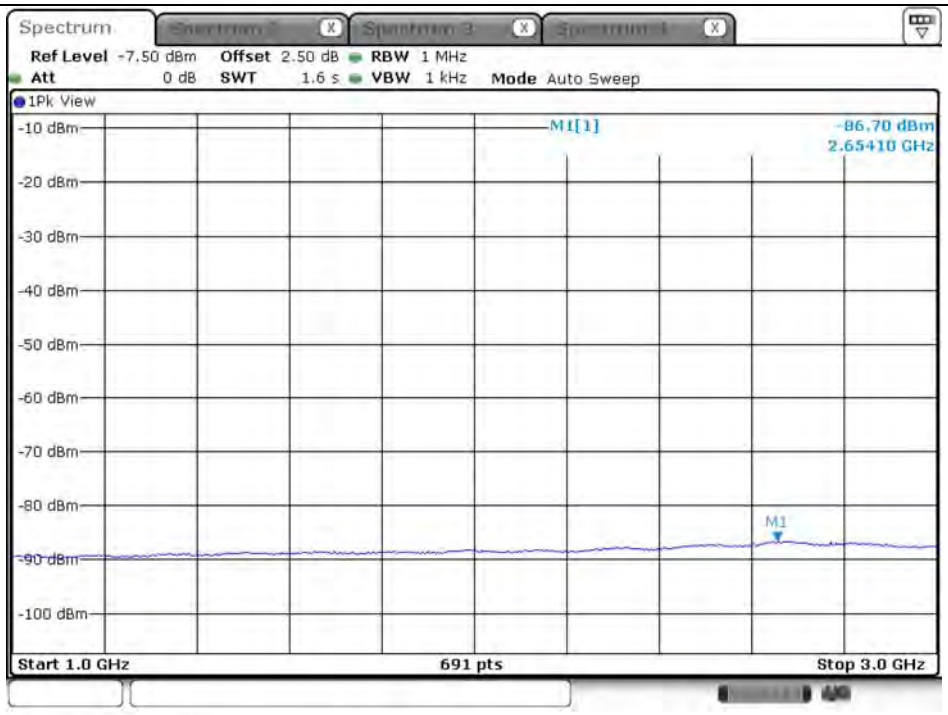
Date: 13.FEB.2018 20:51:42

Plot on Configuration VHT80 / 5775 MHz / Average / Port 1 / 1GHz~3GHz



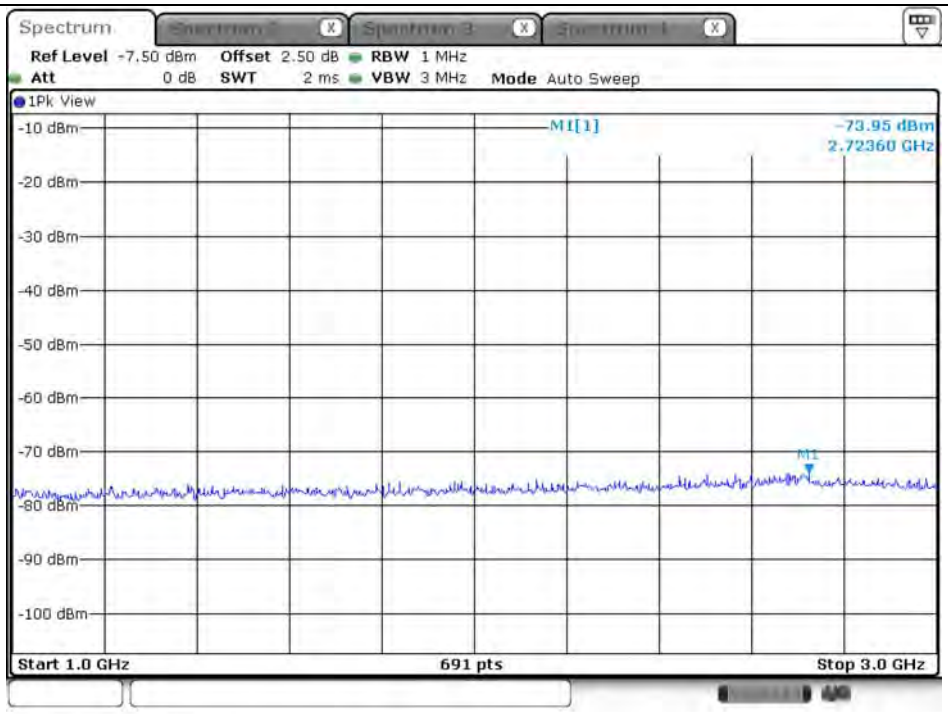
Date: 13.FEB.2018 21:05:30

Plot on Configuration VHT80 / 5775 MHz / Average / Port 2 / 1GHz~3GHz



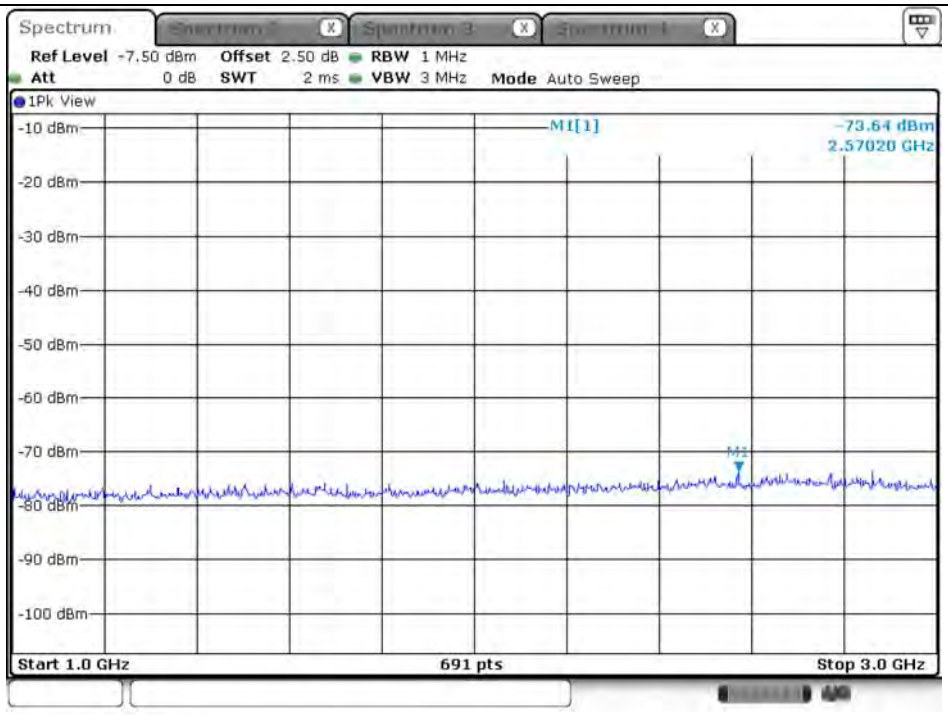
Date: 13.FEB.2018 21:20:54

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 13.FEB.2018 21:06:29

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 2 / 1GHz~3GHz

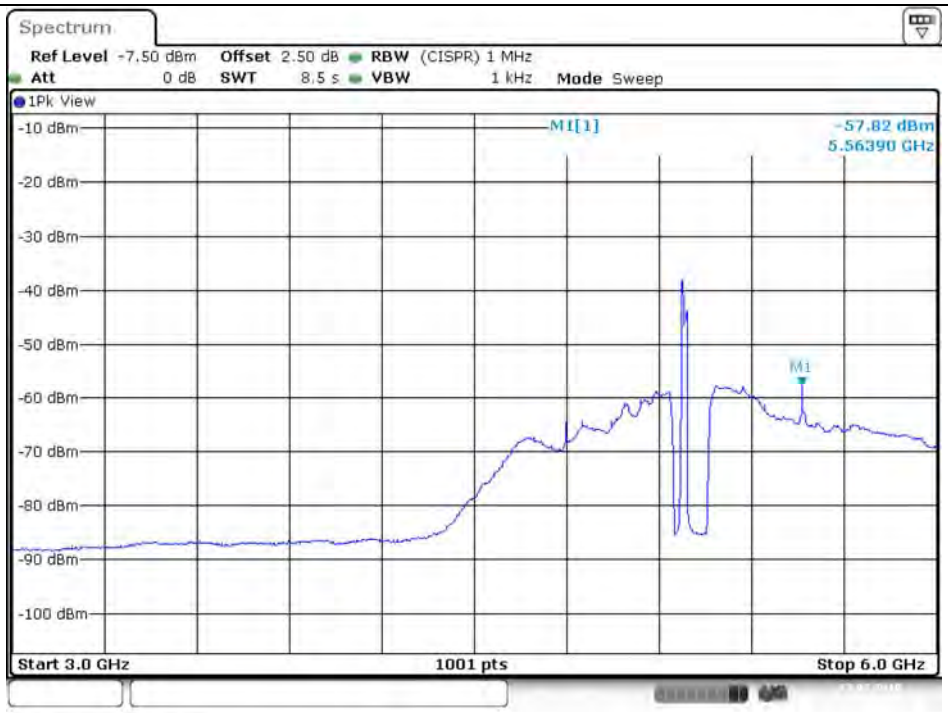


Date: 13.FEB.2018 21:22:00

Plot on Configuration VHT20 / 5180 MHz / Average / Port 1 / 3GHz~6GHz

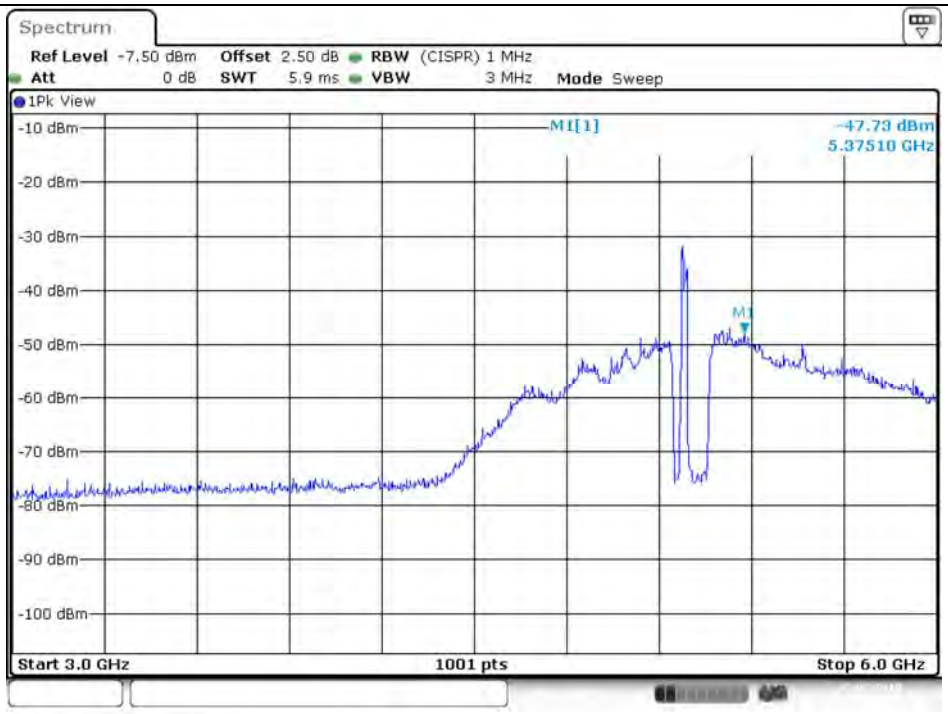
Date: 22.FEB.2018 21:49:55

Plot on Configuration VHT20 / 5180 MHz / Average / Port 2 / 3GHz~6GHz



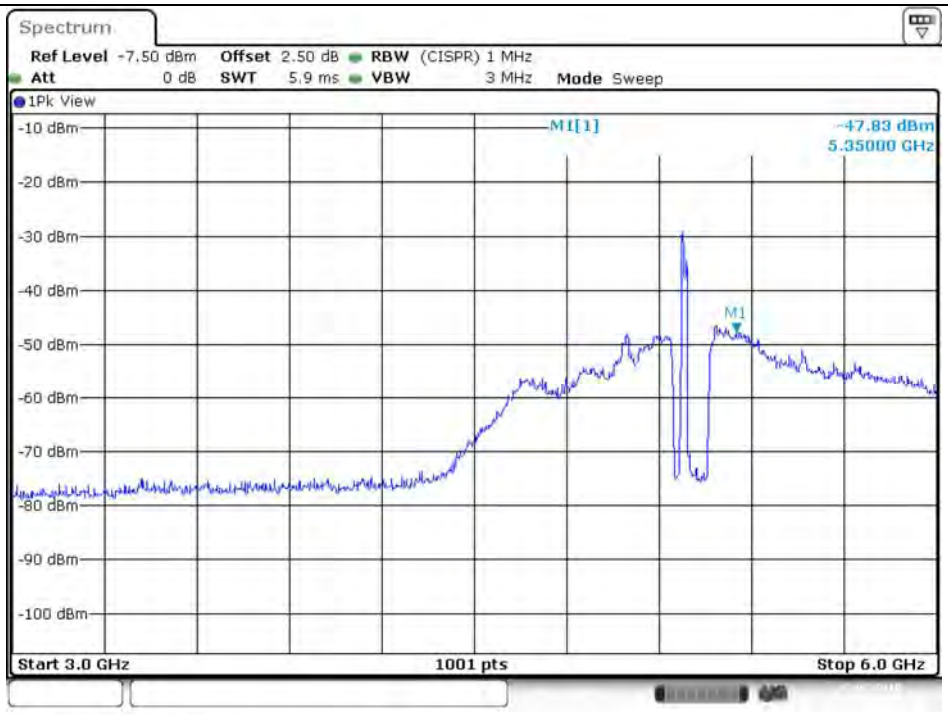
Date: 22.FEB.2018 21:46:47

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 1 / 3GHz~6GHz



Date: 22.FEB.2018 21:48:57

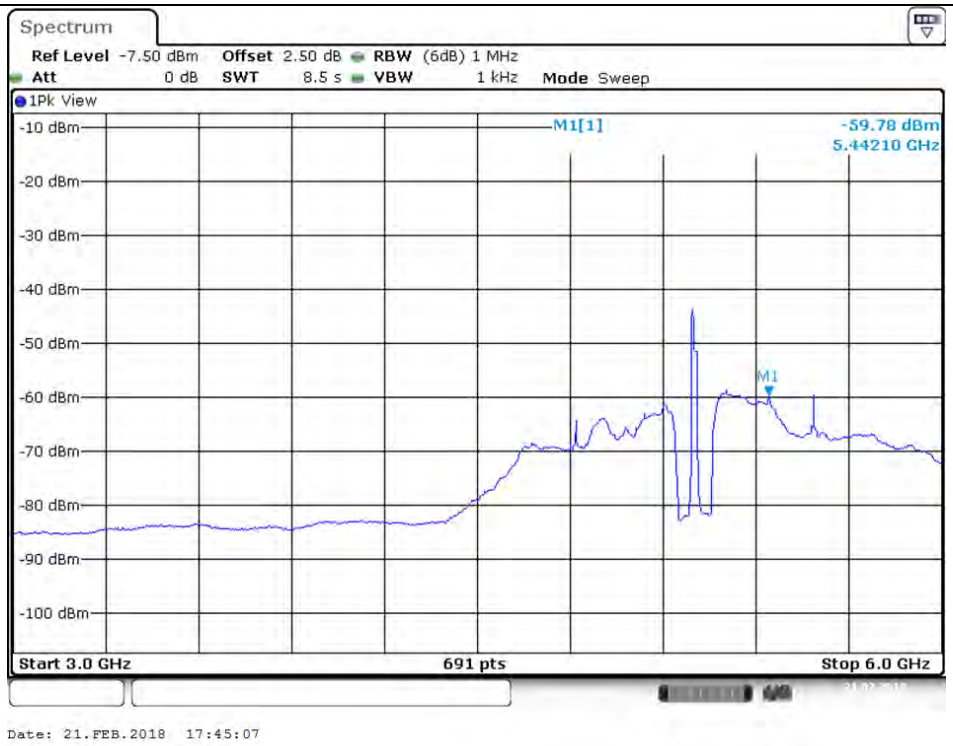
Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 / 3GHz~6GHz



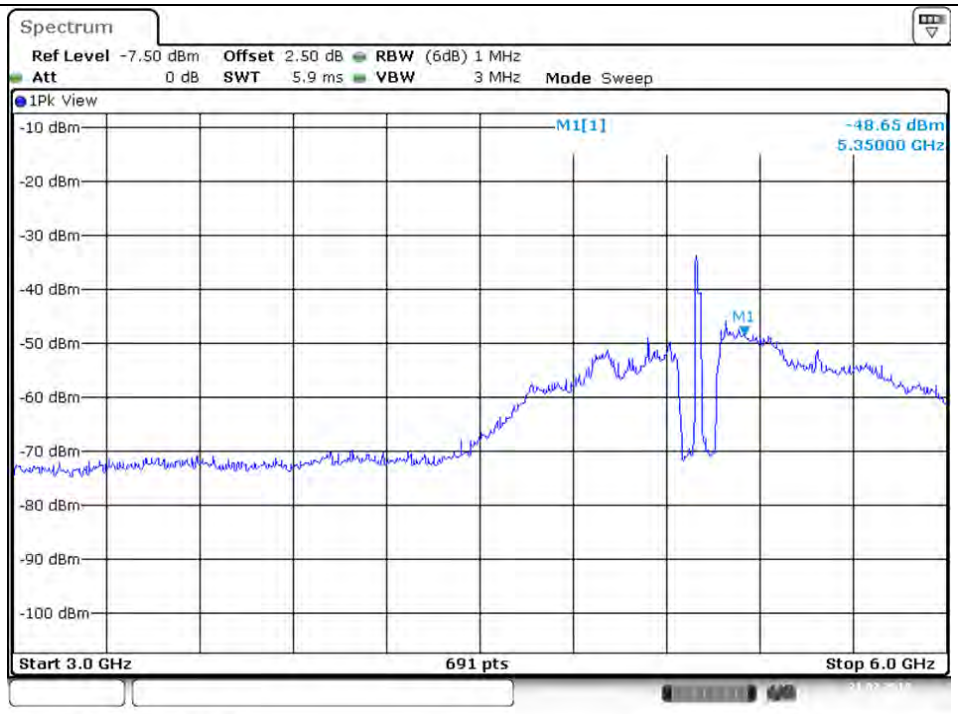
Date: 22.FEB.2018 21:47:36

Plot on Configuration VHT20 / 5200 MHz / Average / Port 1 / 3GHz~6GHz

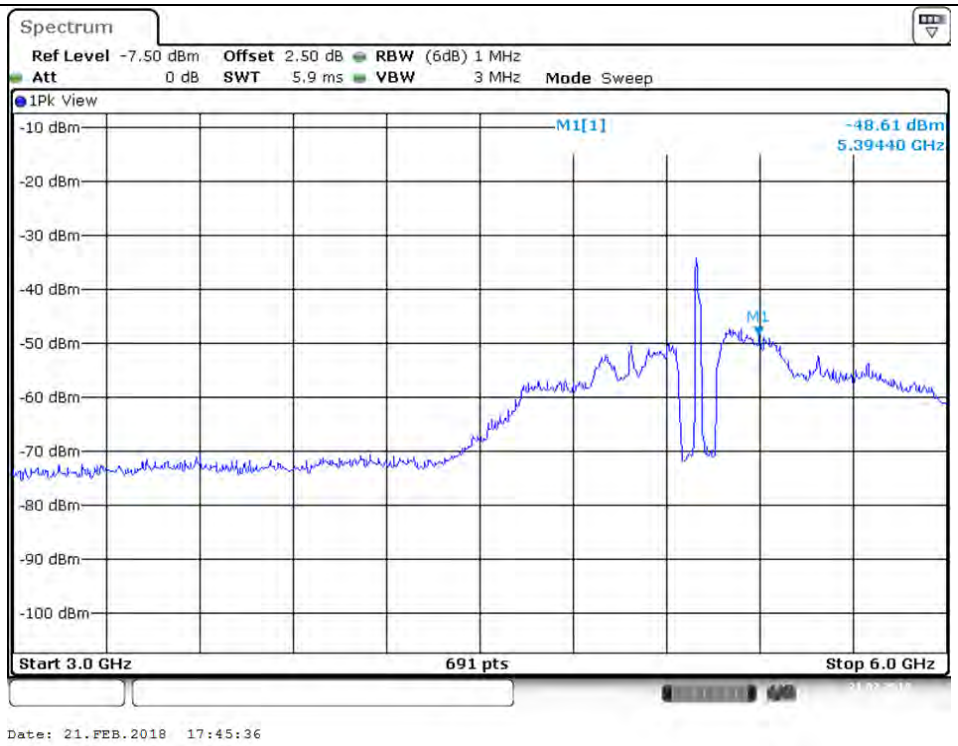
Plot on Configuration VHT20 / 5200 MHz / Average / Port 2 / 3GHz~6GHz



Plot on Configuration VHT20 / 5200 MHz / Peak / Port 1 / 3GHz~6GHz



Plot on Configuration VHT20 / 5200 MHz / Peak / Port 2 / 3GHz~6GHz



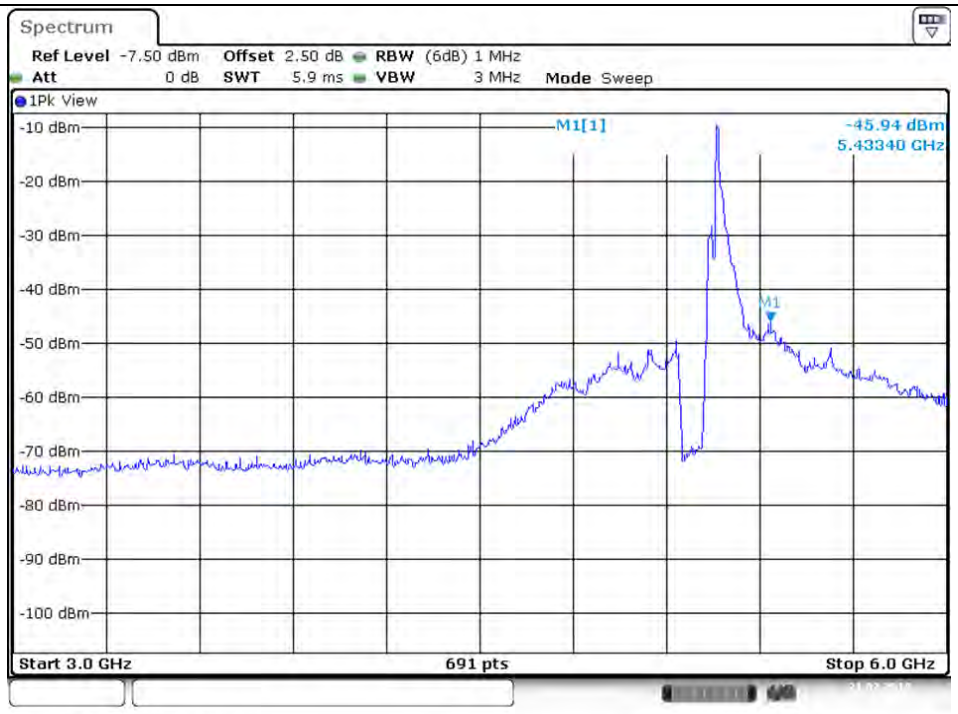
Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 / 3GHz~6GHz

Date: 21.FEB.2018 17:51:17

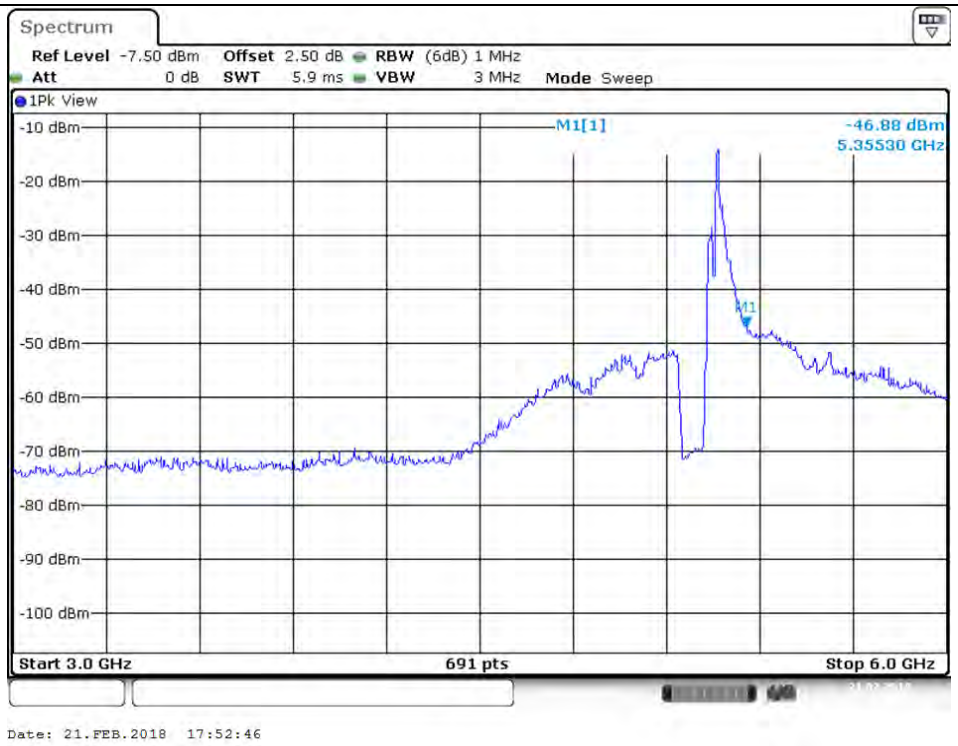
Plot on Configuration VHT20 / 5240 MHz / Average / Port 2 / 3GHz~6GHz

Date: 21.FEB.2018 17:54:38

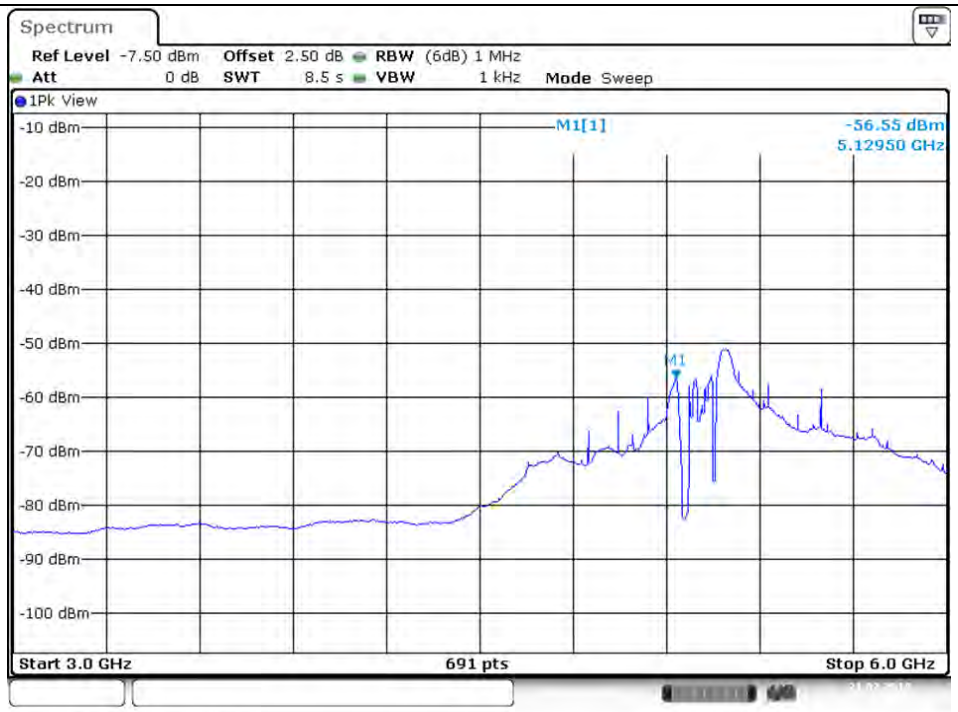
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 1 / 3GHz~6GHz



Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 / 3GHz~6GHz

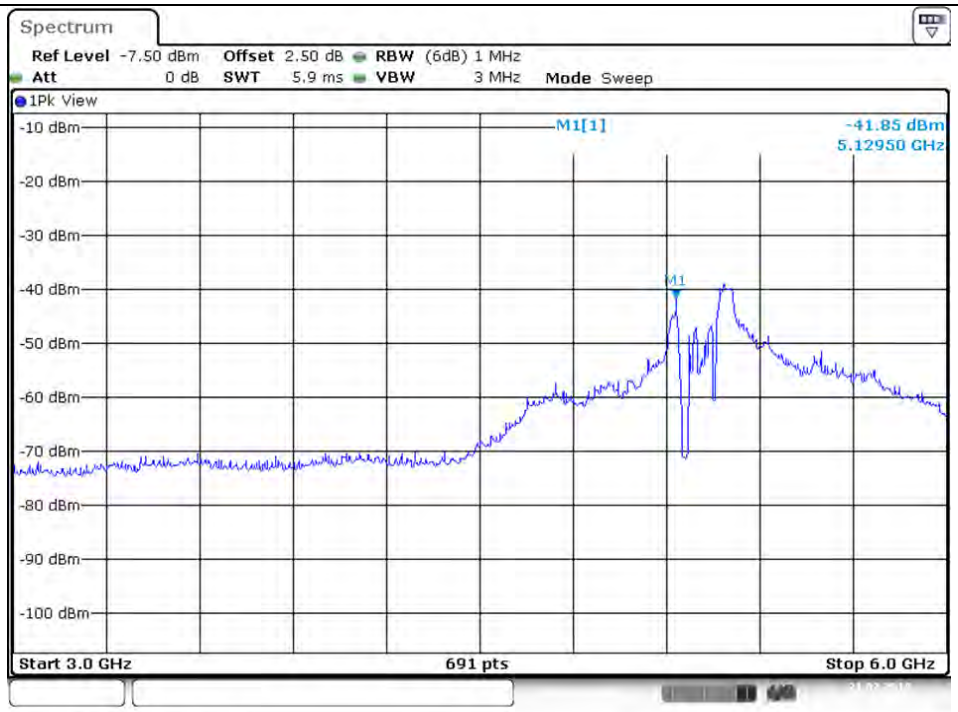


Plot on Configuration VHT80 / 5210 MHz / Average / Port 1 / 3GHz~6GHz

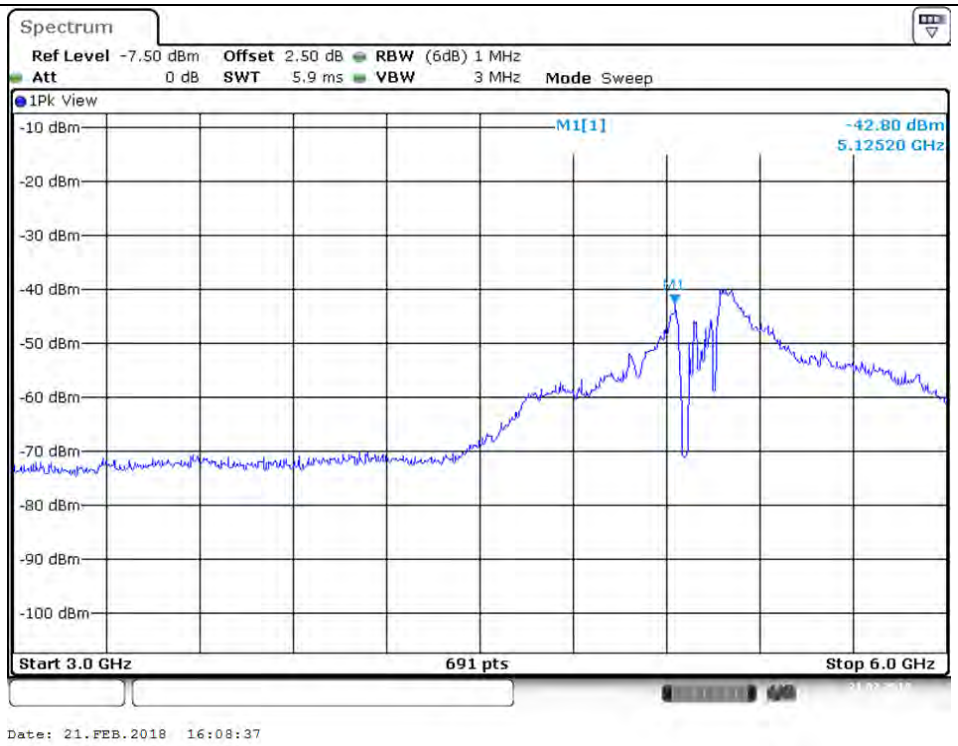


Plot on Configuration VHT80 / 5210 MHz / Average / Port 2 / 3GHz~6GHz

Plot on Configuration VHT80 / 5210 MHz / Peak / Port 1 / 3GHz~6GHz



Plot on Configuration VHT80 / 5210 MHz / Peak / Port 2 / 3GHz~6GHz



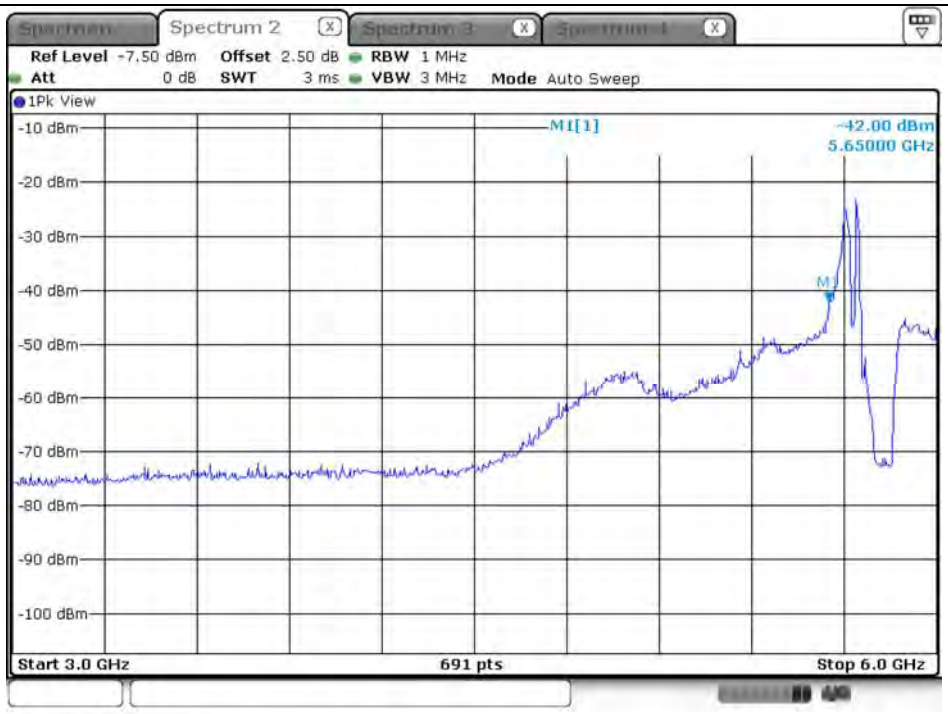
Plot on Configuration VHT20 / 5745 MHz / Average / Port 1 / 3GHz~6GHz

Date: 13.FEB.2018 19:54:38

Plot on Configuration VHT20 / 5745 MHz / Average / Port 2 / 3GHz~6GHz

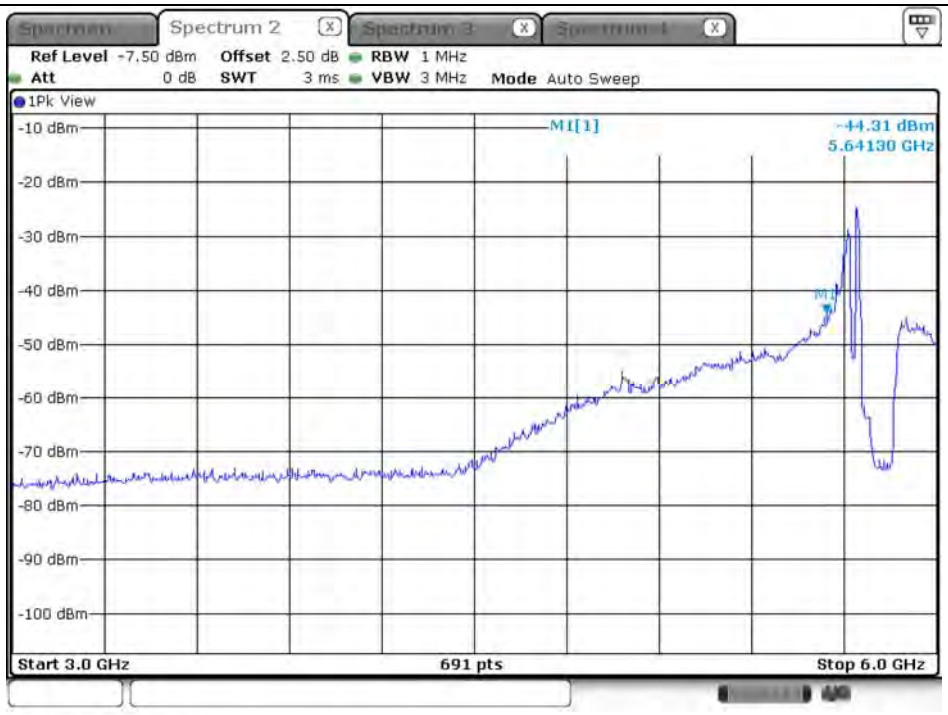
Date: 13.FEB.2018 20:05:11

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 1 / 3GHz~6GHz



Date: 13.FEB.2018 19:56:35

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 2 / 3GHz~6GHz



Date: 13.FEB.2018 20:06:58

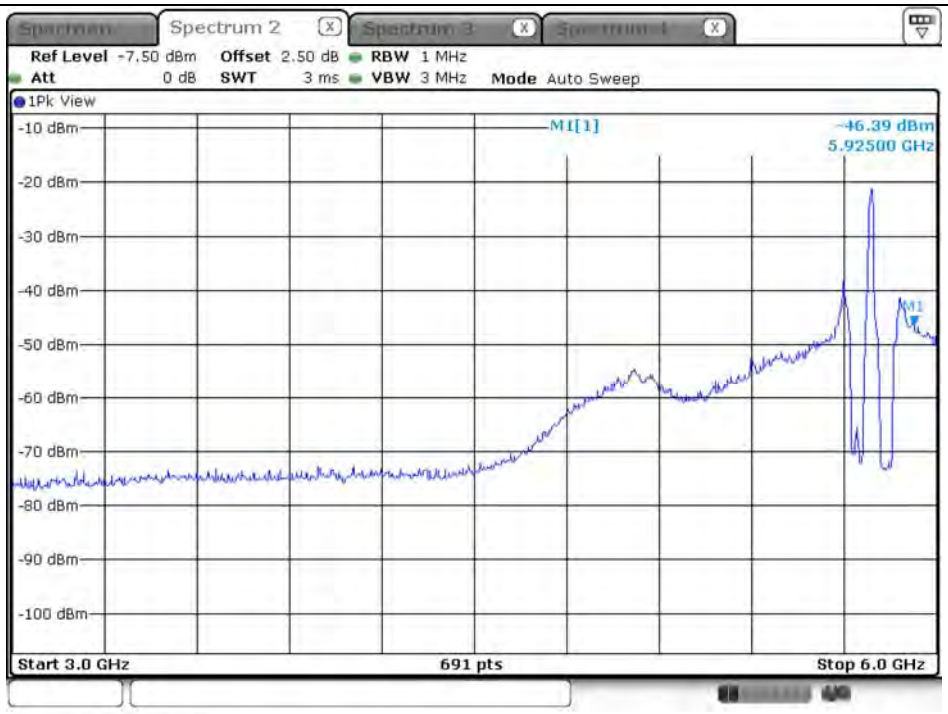
Plot on Configuration VHT20 / 5785 MHz / Average / Port 1 / 3GHz~6GHz

Date: 13.FEB.2018 20:15:06

Plot on Configuration VHT20 / 5785 MHz / Average / Port 2 / 3GHz~6GHz

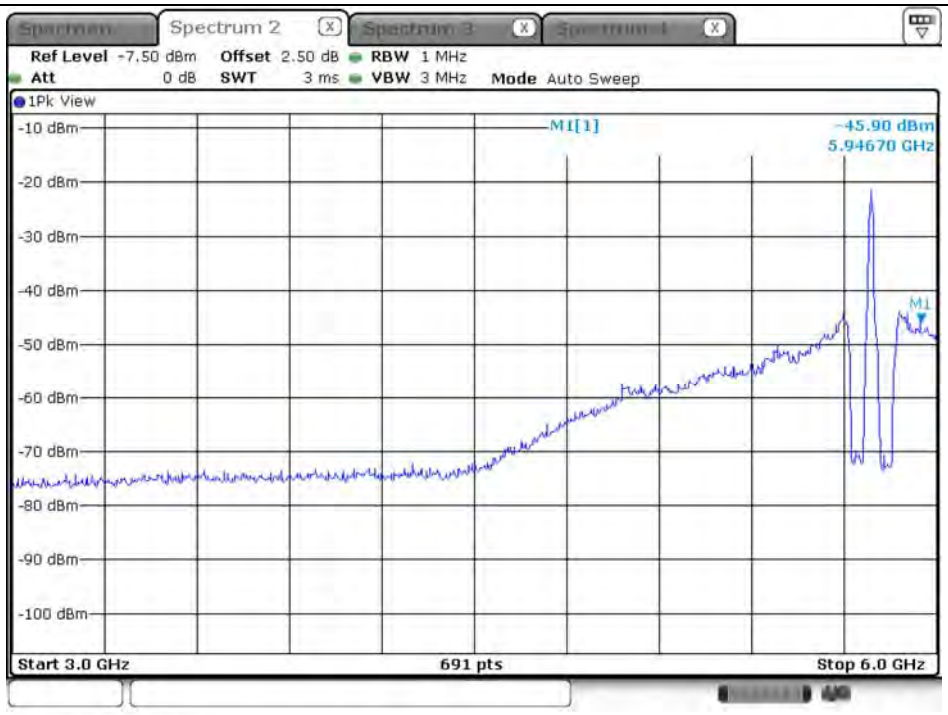
Date: 13.FEB.2018 20:23:39

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 1 / 3GHz~6GHz



Date: 13.FEB.2018 20:16:34

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 2 / 3GHz~6GHz



Date: 13.FEB.2018 20:25:24

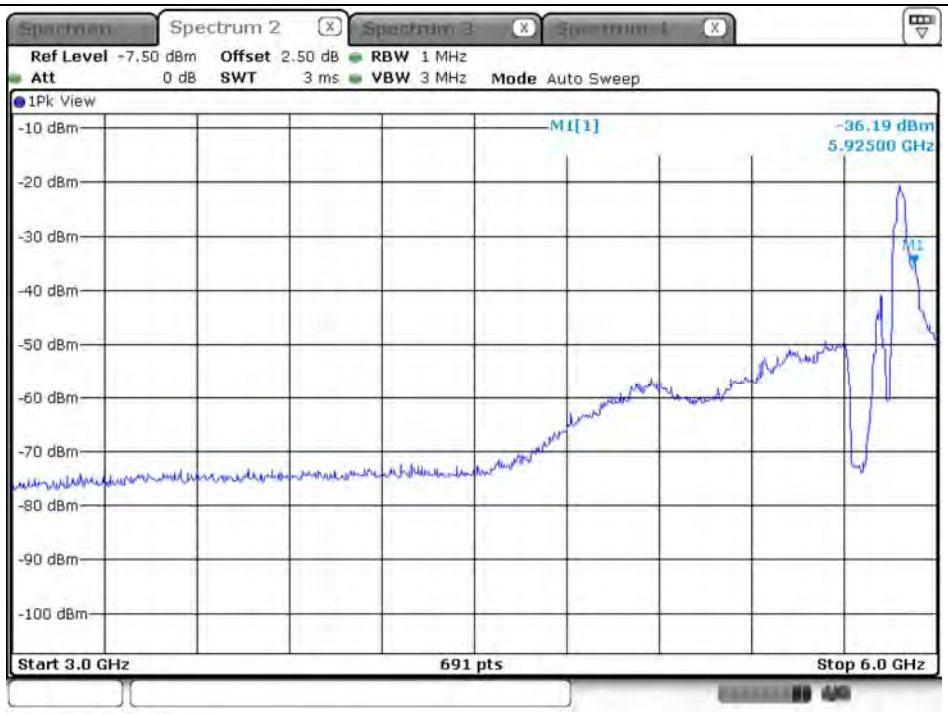
Plot on Configuration VHT20 / 5825 MHz / Average / Port 1 / 3GHz~6GHz

Date: 13.FEB.2018 20:54:15

Plot on Configuration VHT20 / 5825 MHz / Average / Port 2 / 3GHz~6GHz

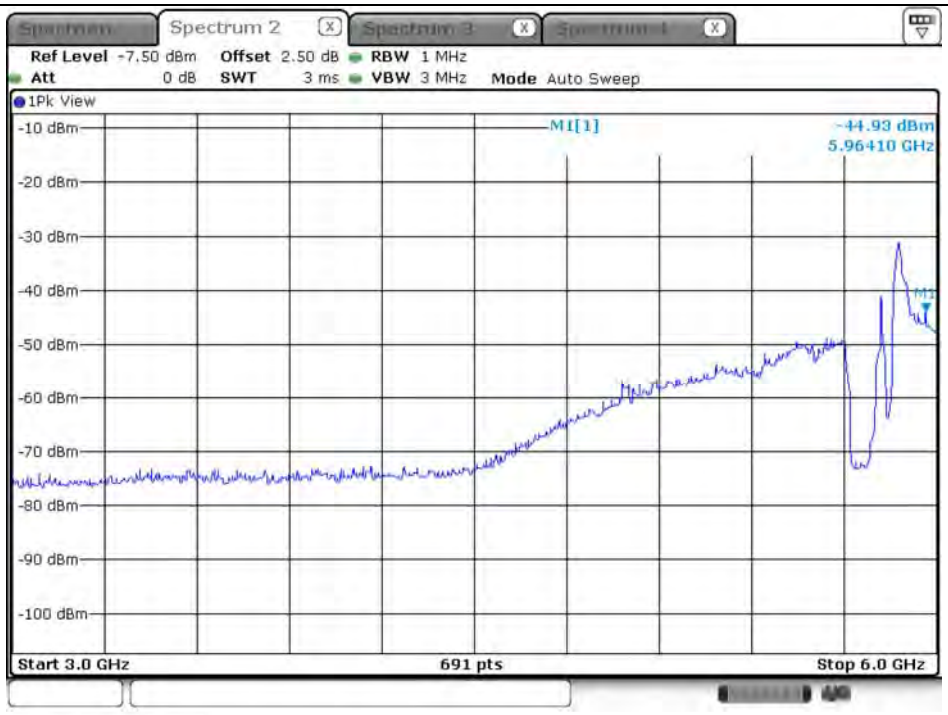
Date: 13.FEB.2018 20:47:08

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 1 / 3GHz~6GHz



Date: 13.FEB.2018 20:55:46

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 2 / 3GHz~6GHz



Date: 13.FEB.2018 20:49:23

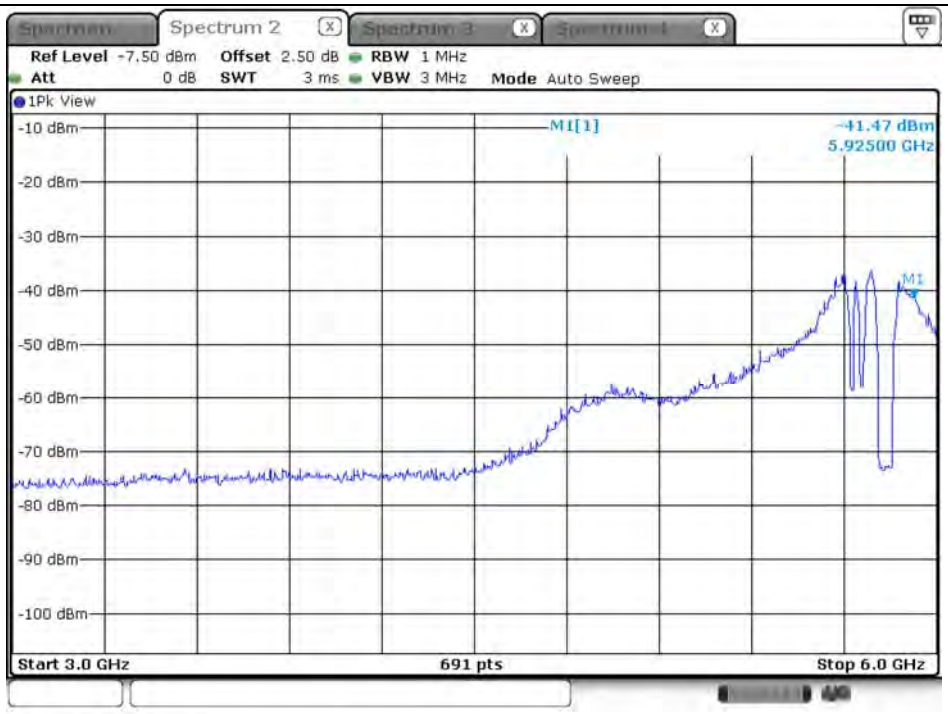
Plot on Configuration VHT80 / 5775 MHz / Average / Port 1 / 3GHz~6GHz

Date: 13.FEB.2018 21:08:20

Plot on Configuration VHT80 / 5775 MHz / Average / Port 2 / 3GHz~6GHz

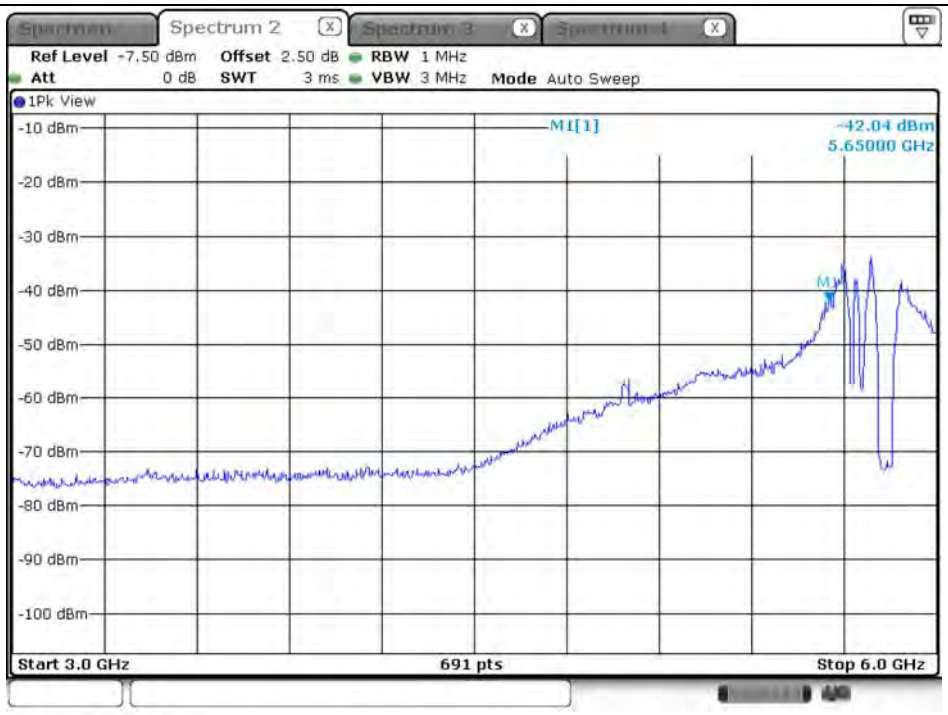
Date: 13.FEB.2018 21:15:20

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 1 / 3GHz~6GHz



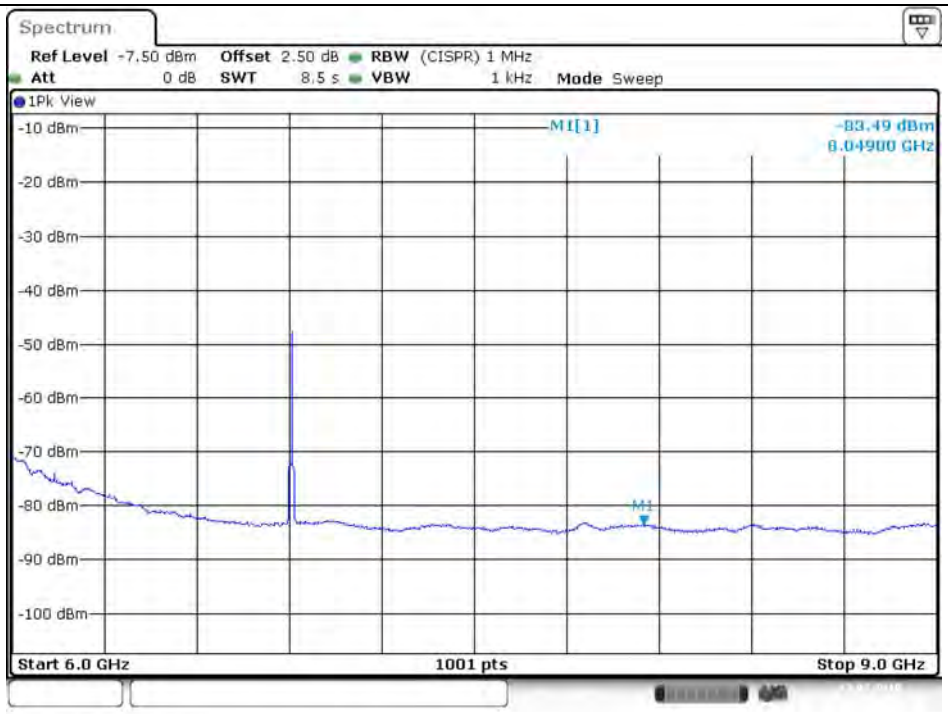
Date: 13.FEB.2018 21:09:39

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 2 / 3GHz~6GHz



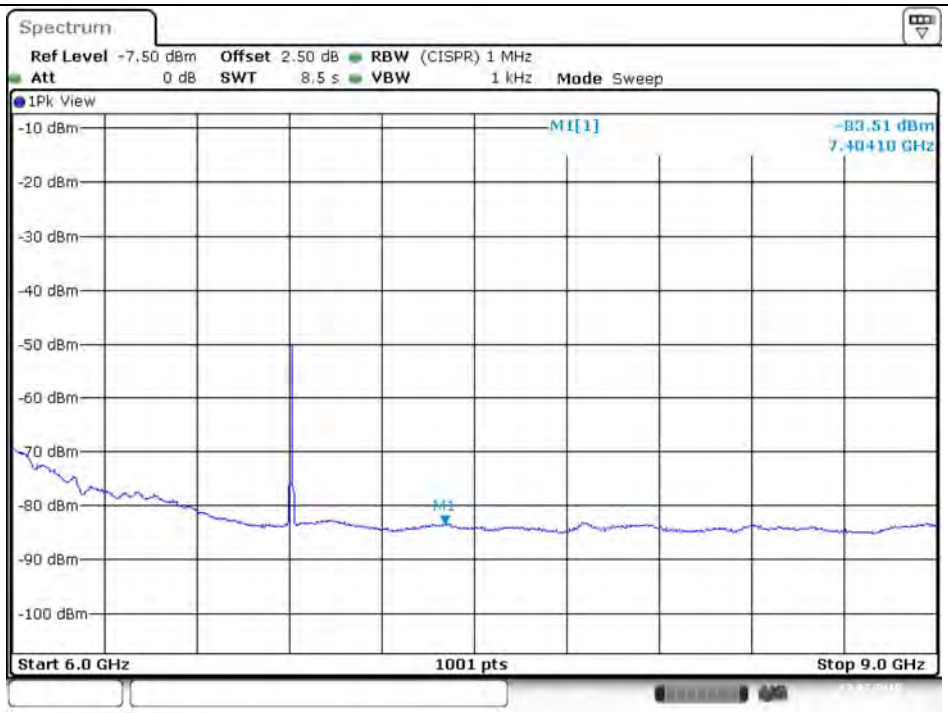
Date: 13.FEB.2018 21:16:41

Plot on Configuration VHT20 / 5180 MHz / Average / Port 1 / 6GHz~9GHz



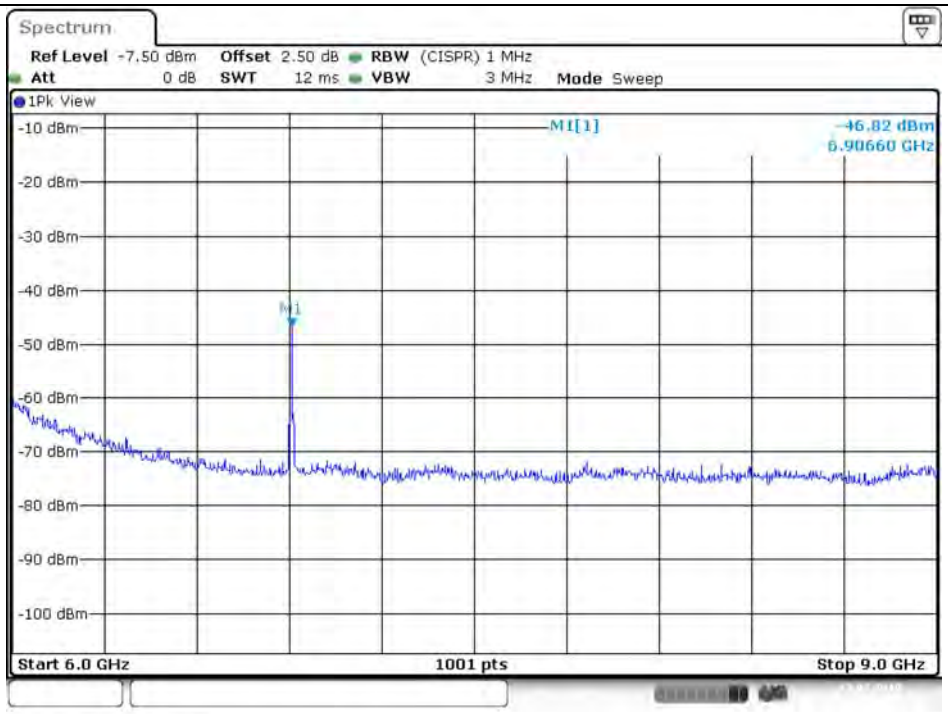
Date: 22.FEB.2018 21:55:46

Plot on Configuration VHT20 / 5180 MHz / Average / Port 2 / 6GHz~9GHz



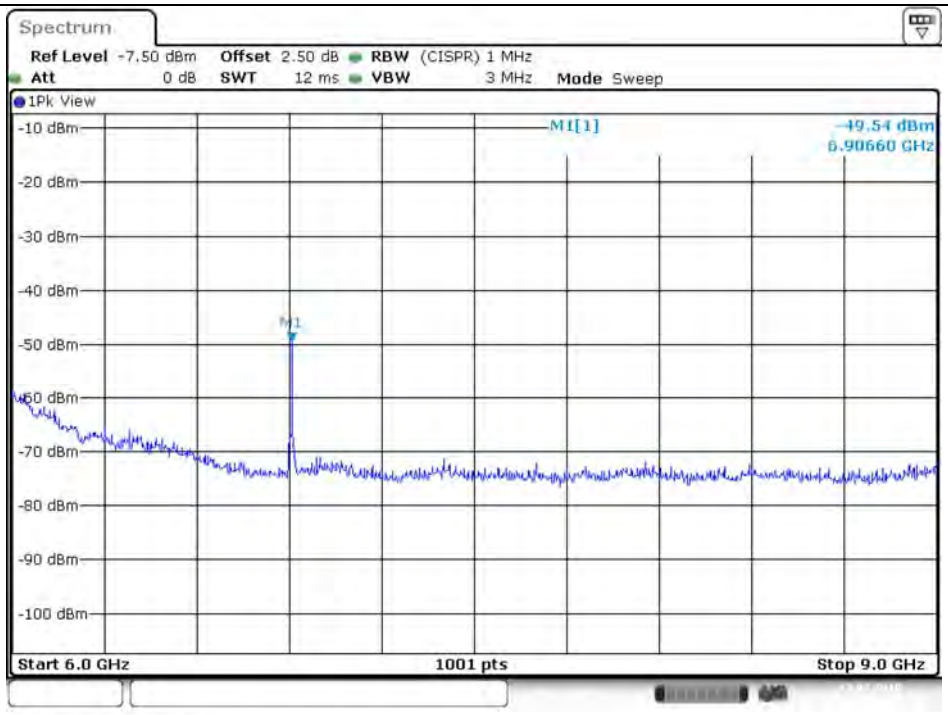
Date: 22.FEB.2018 22:00:04

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 1 / 6GHz~9GHz



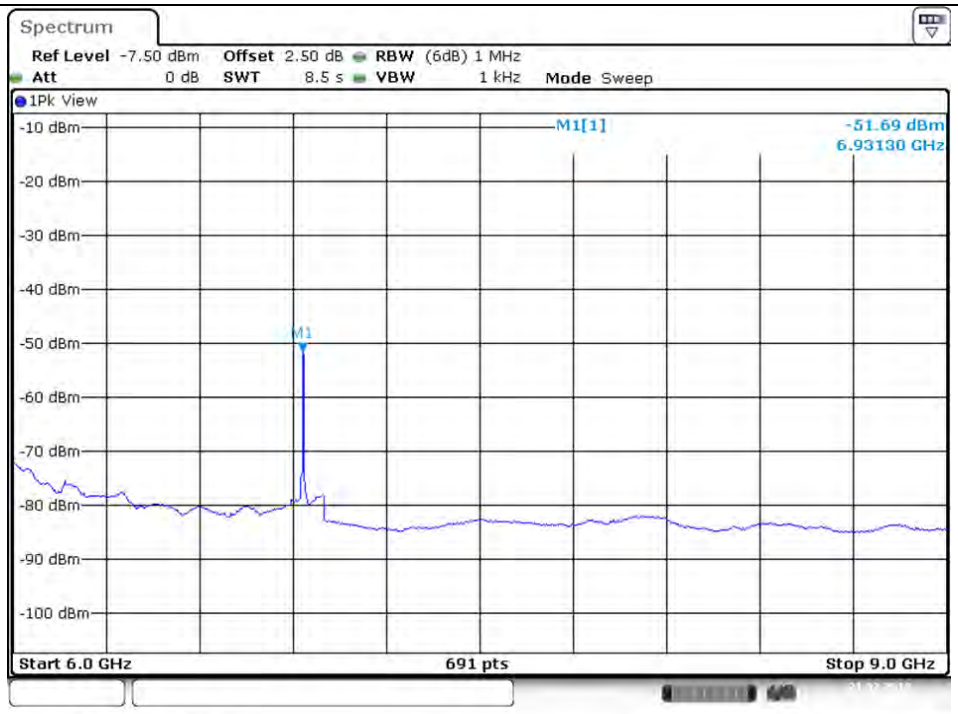
Date: 22.FEB.2018 21:56:07

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 / 6GHz~9GHz

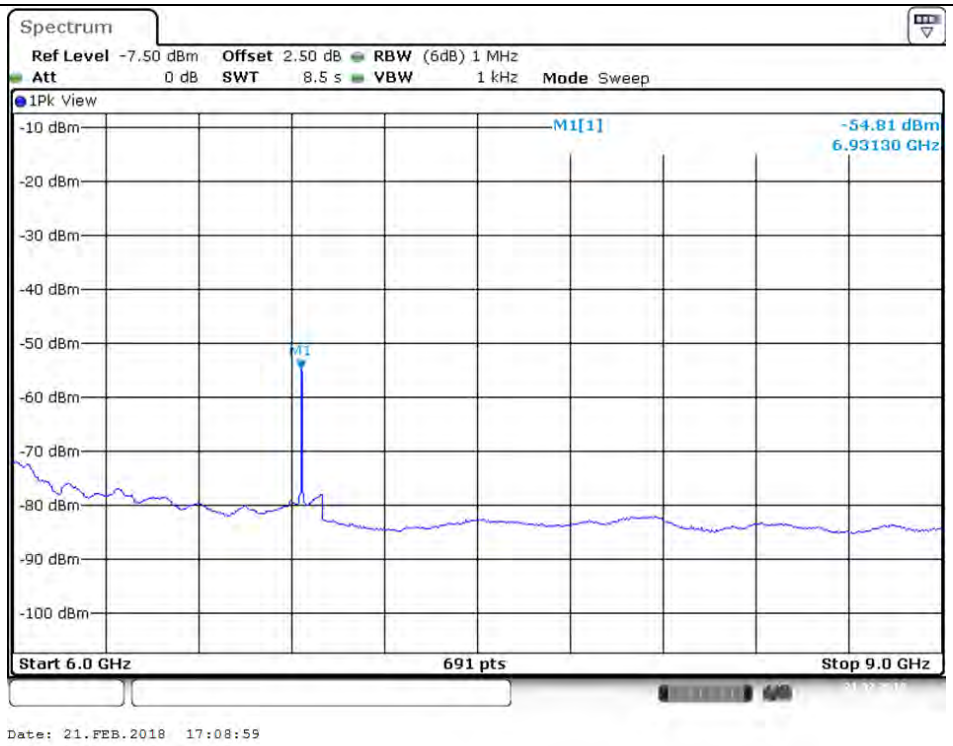


Date: 22.FEB.2018 21:57:45

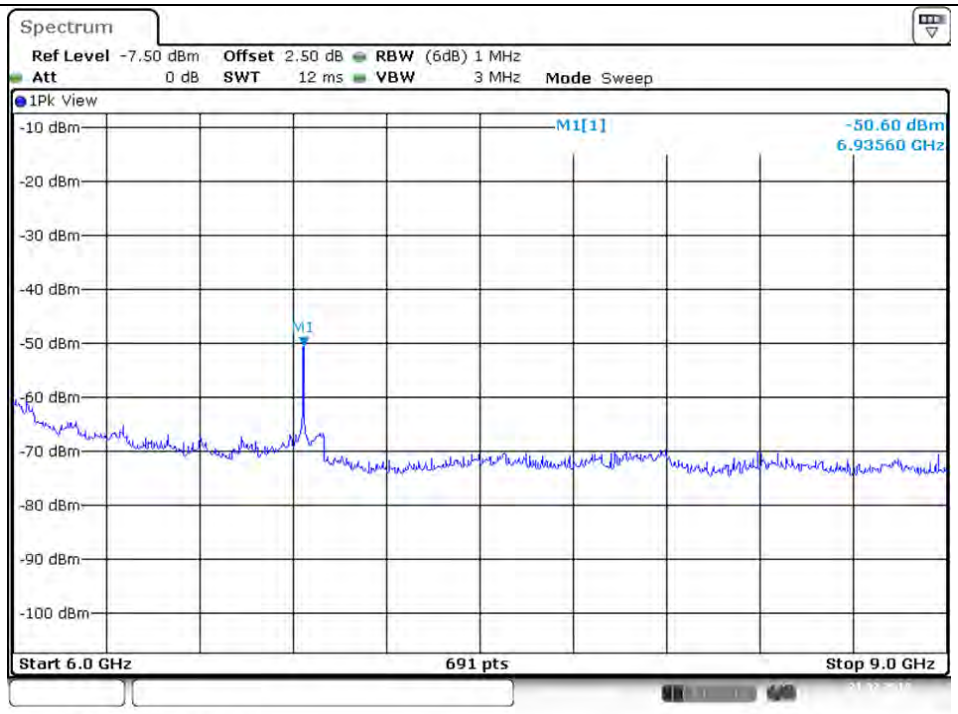
Plot on Configuration VHT20 / 5200 MHz / Average / Port 1 / 6GHz~9GHz



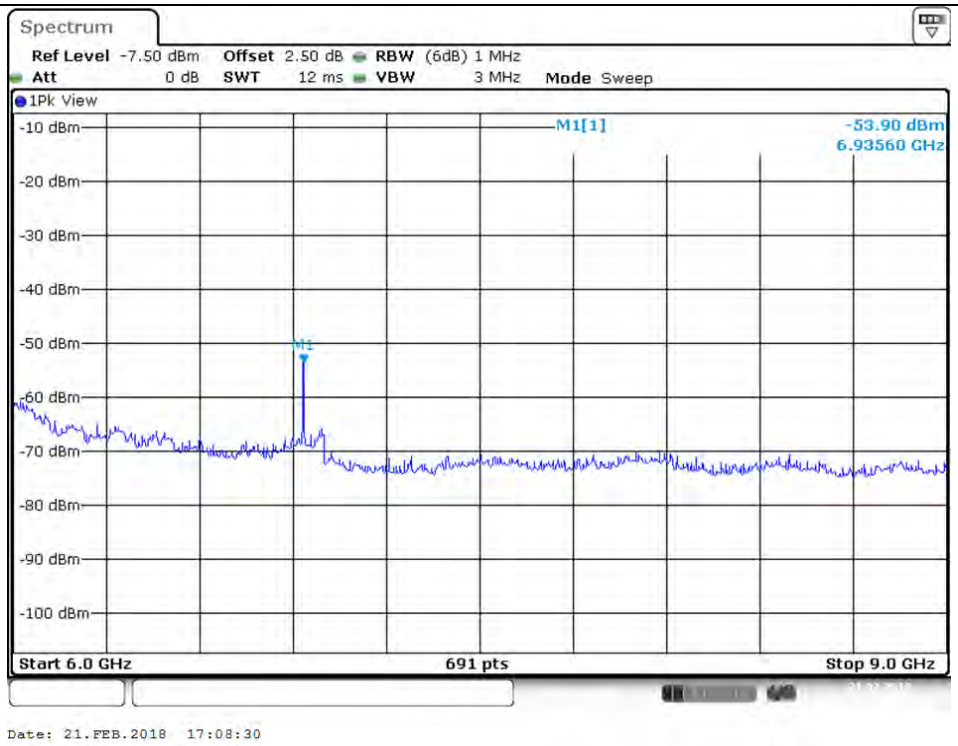
Plot on Configuration VHT20 / 5200 MHz / Average / Port 2 / 6GHz~9GHz



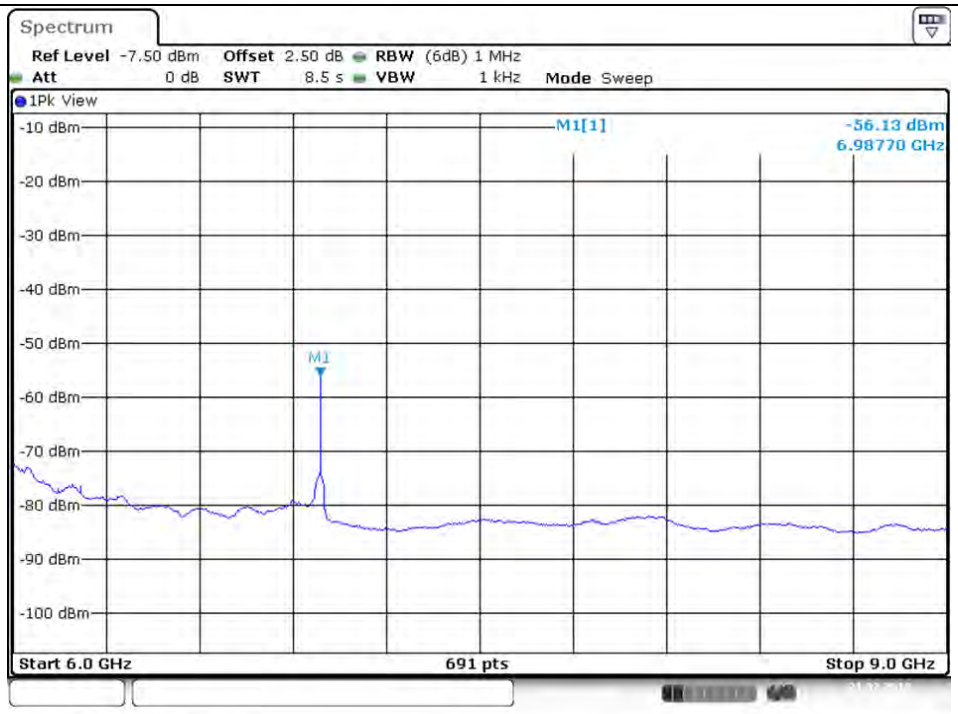
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 1 / 6GHz~9GHz



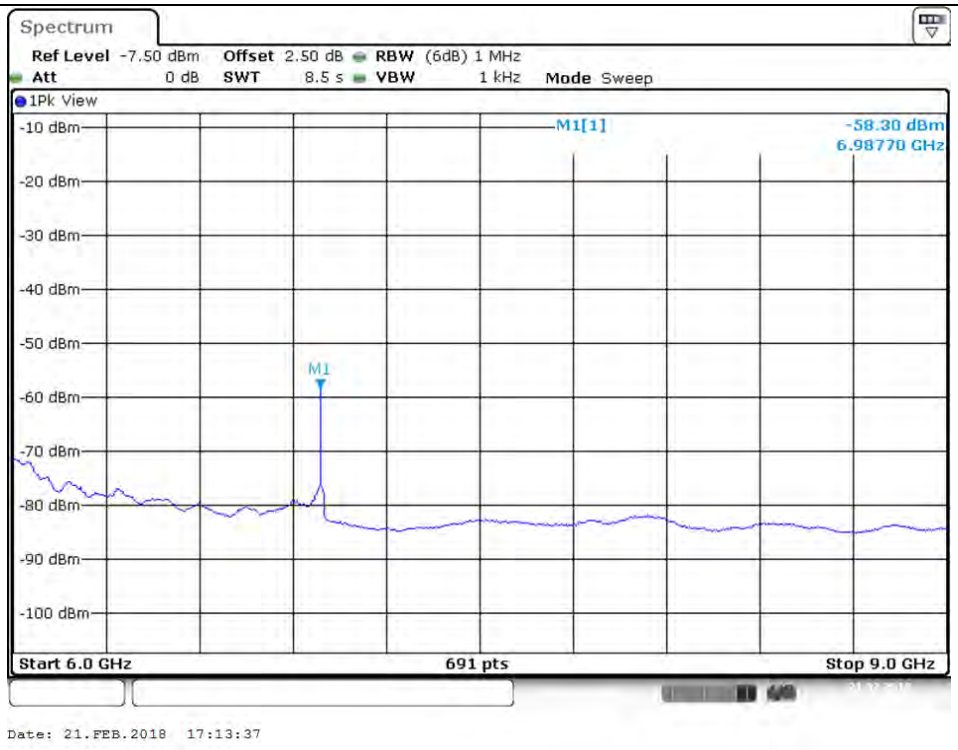
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 2 / 6GHz~9GHz



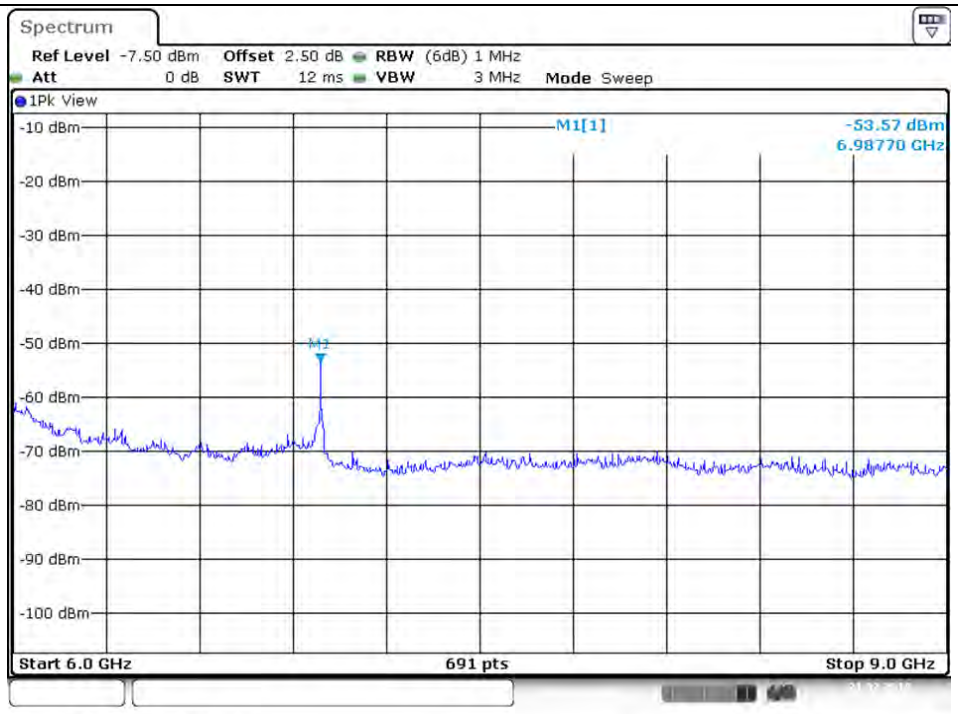
Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 / 6GHz~9GHz



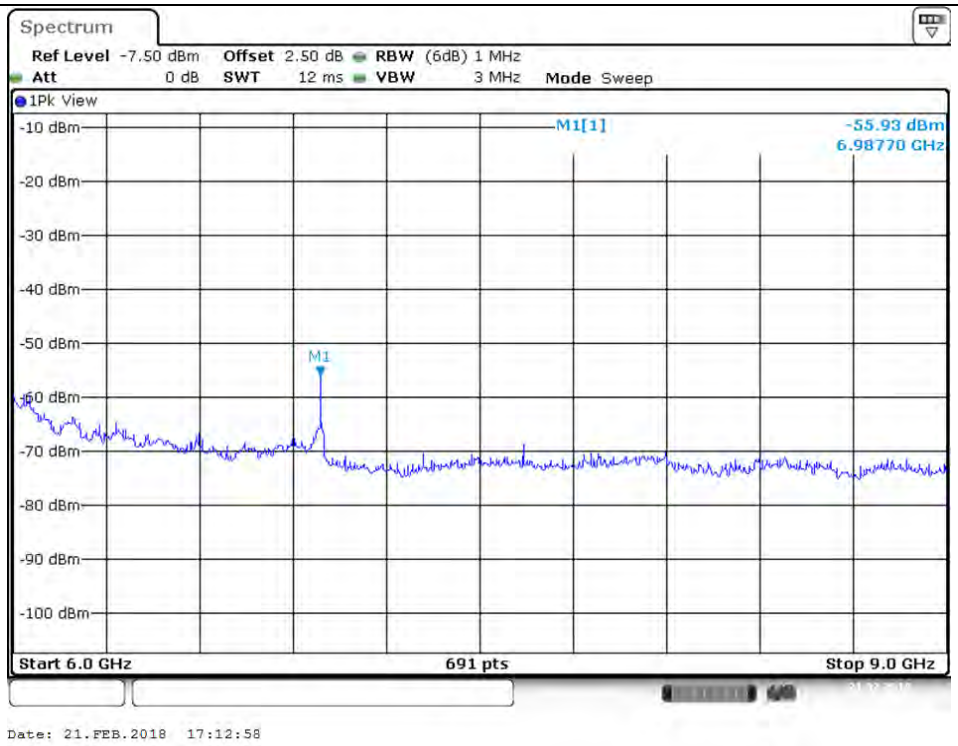
Plot on Configuration VHT20 / 5240 MHz / Average / Port 2 / 6GHz~9GHz



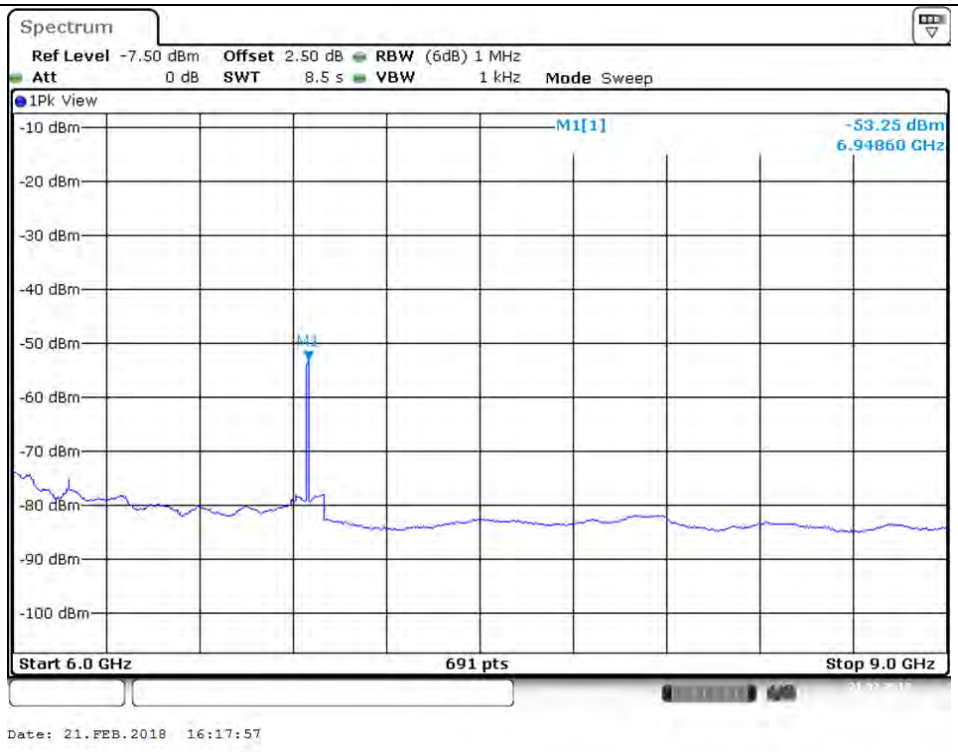
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 1 / 6GHz~9GHz



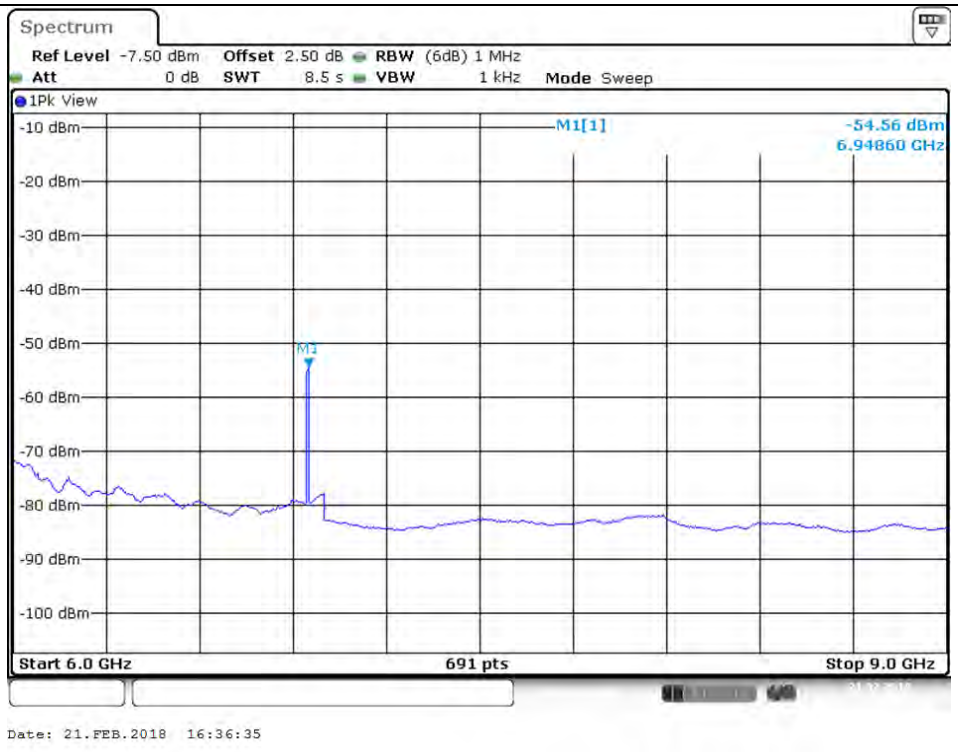
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 / 6GHz~9GHz



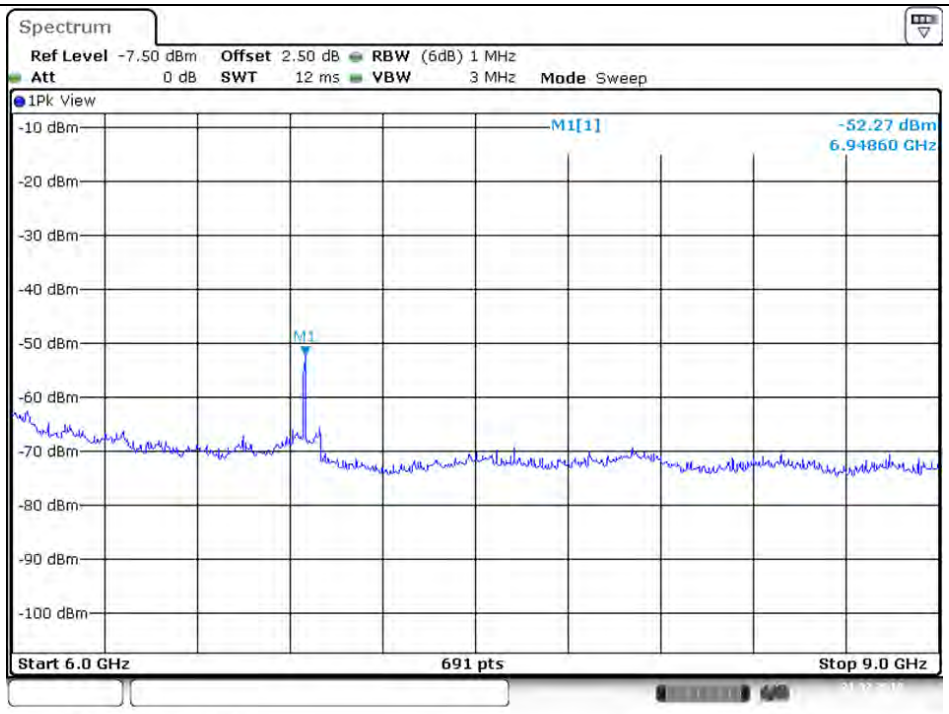
Plot on Configuration VHT80 / 5210 MHz / Average / Port 1 / 6GHz~9GHz



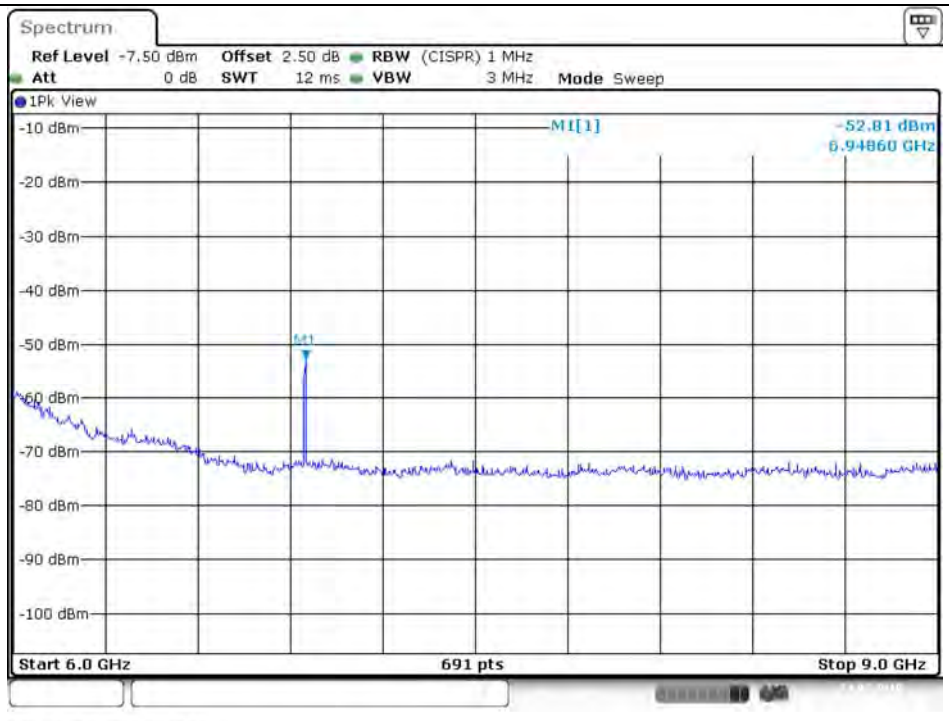
Plot on Configuration VHT80 / 5210 MHz / Average / Port 2 / 6GHz~9GHz



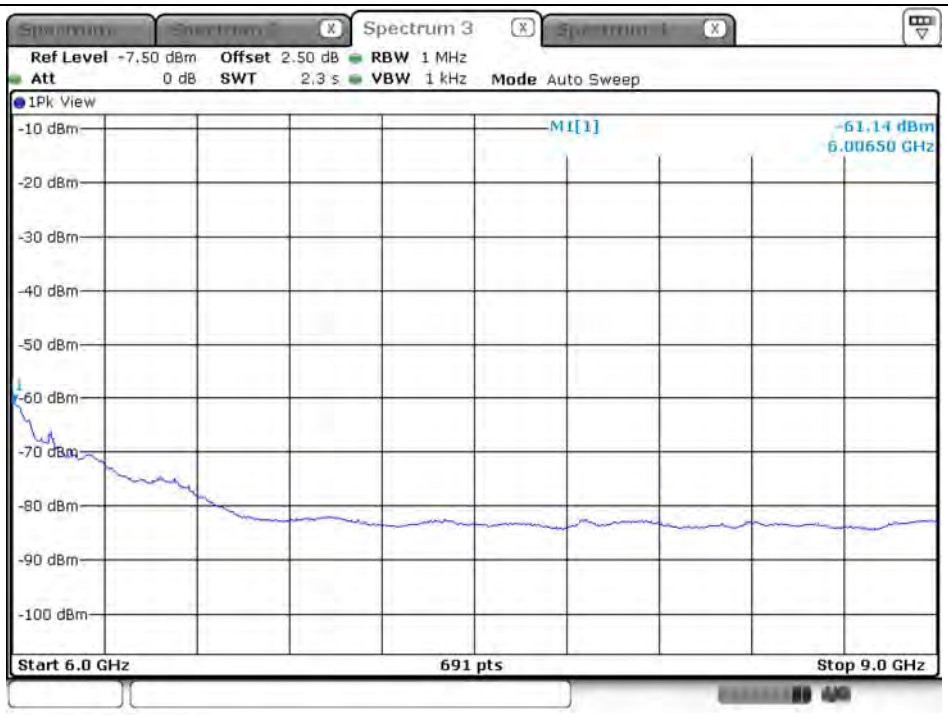
Plot on Configuration VHT80 / 5210 MHz / Peak / Port 1 / 6GHz~9GHz



Plot on Configuration VHT80 / 5210 MHz / Peak / Port 2 / 6GHz~9GHz

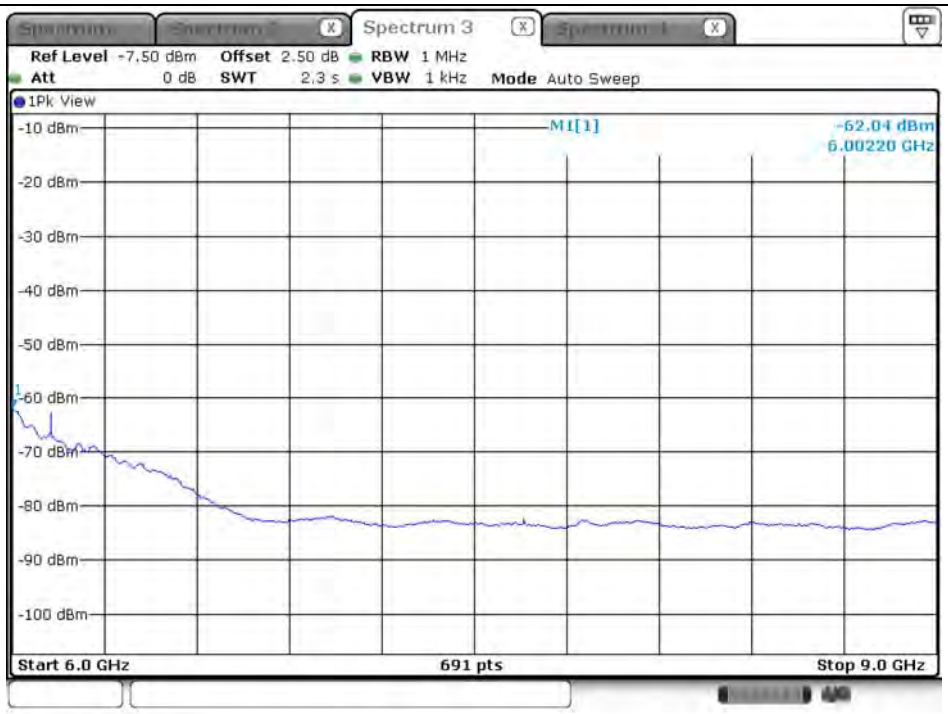


Plot on Configuration VHT20 / 5745 MHz / Average / Port 1 / 6GHz~9GHz



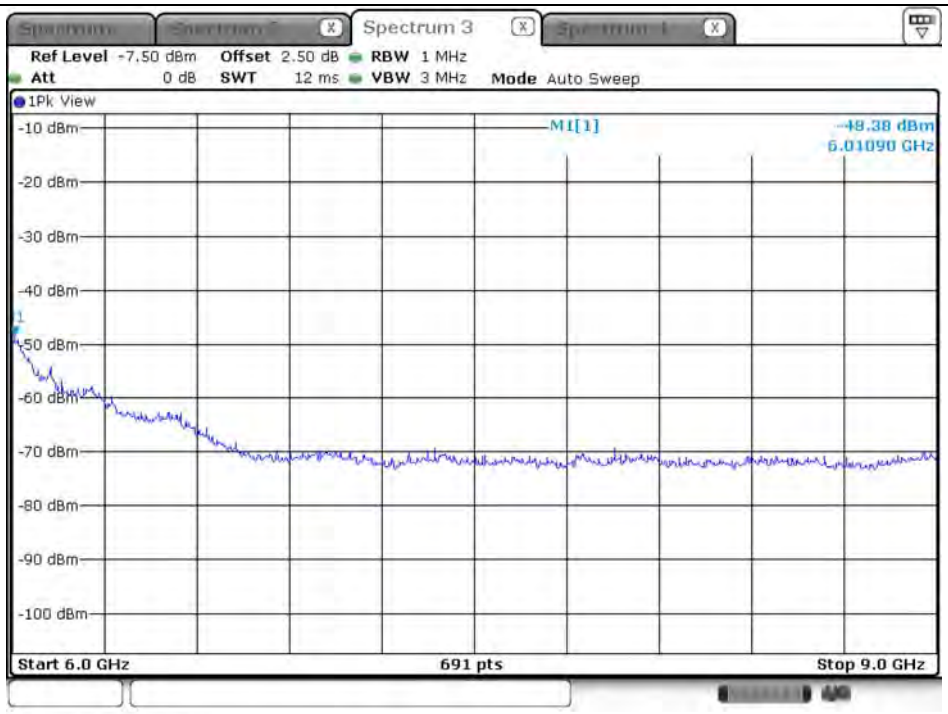
Date: 13.FEB.2018 19:59:42

Plot on Configuration VHT20 / 5745 MHz / Average / Port 2 / 6GHz~9GHz



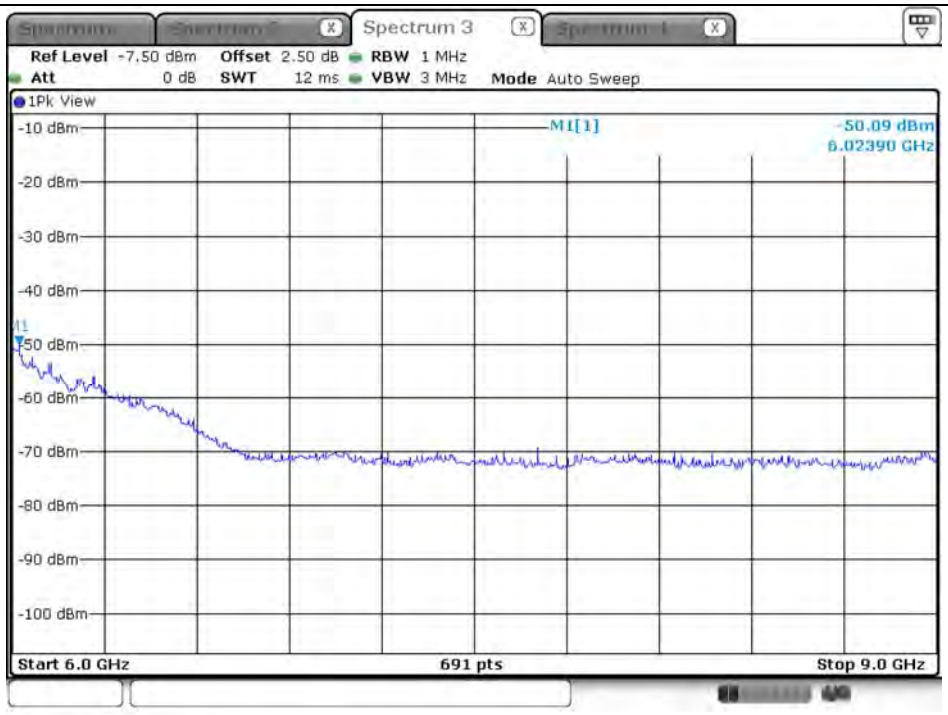
Date: 13.FEB.2018 20:02:28

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 1 / 6GHz~9GHz



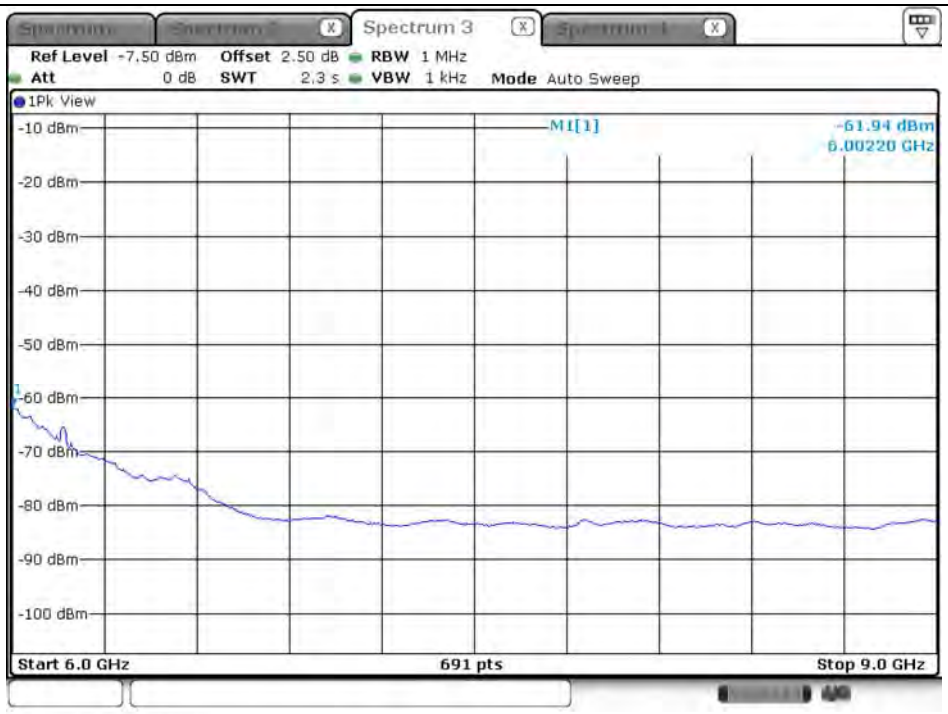
Date: 13.FEB.2018 20:00:44

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 2 / 6GHz~9GHz



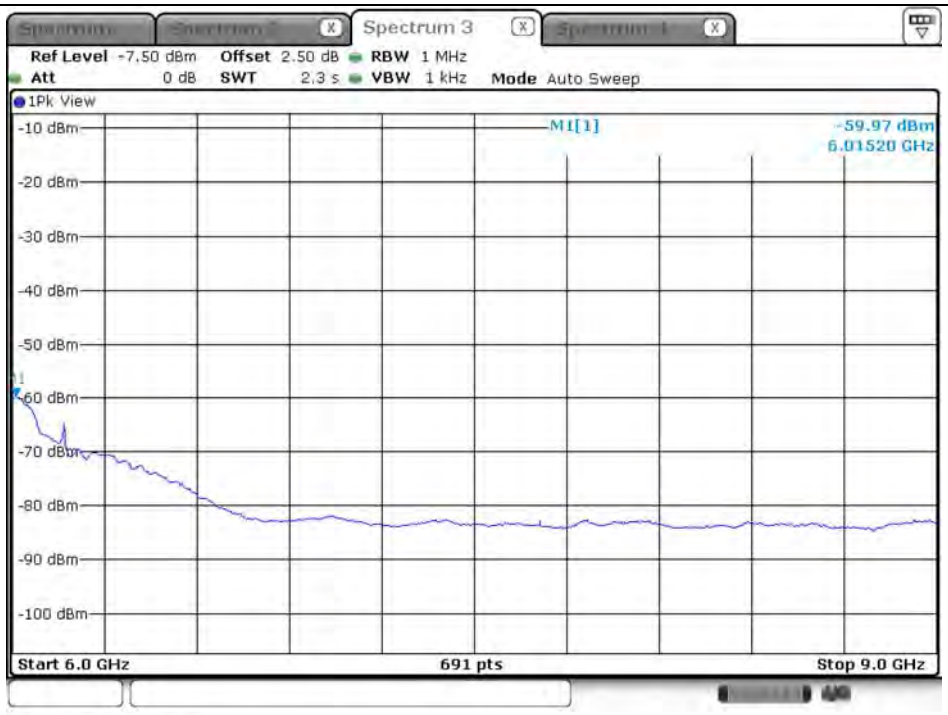
Date: 13.FEB.2018 20:03:21

Plot on Configuration VHT20 / 5785 MHz / Average / Port 1 / 6GHz~9GHz



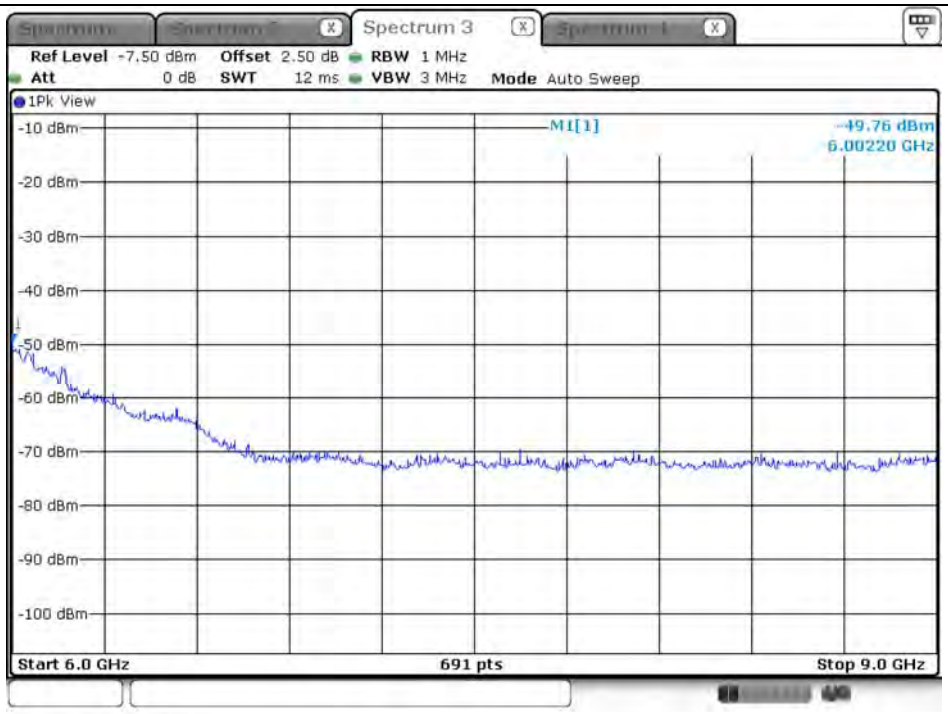
Date: 13.FEB.2018 20:18:25

Plot on Configuration VHT20 / 5785 MHz / Average / Port 2 / 6GHz~9GHz



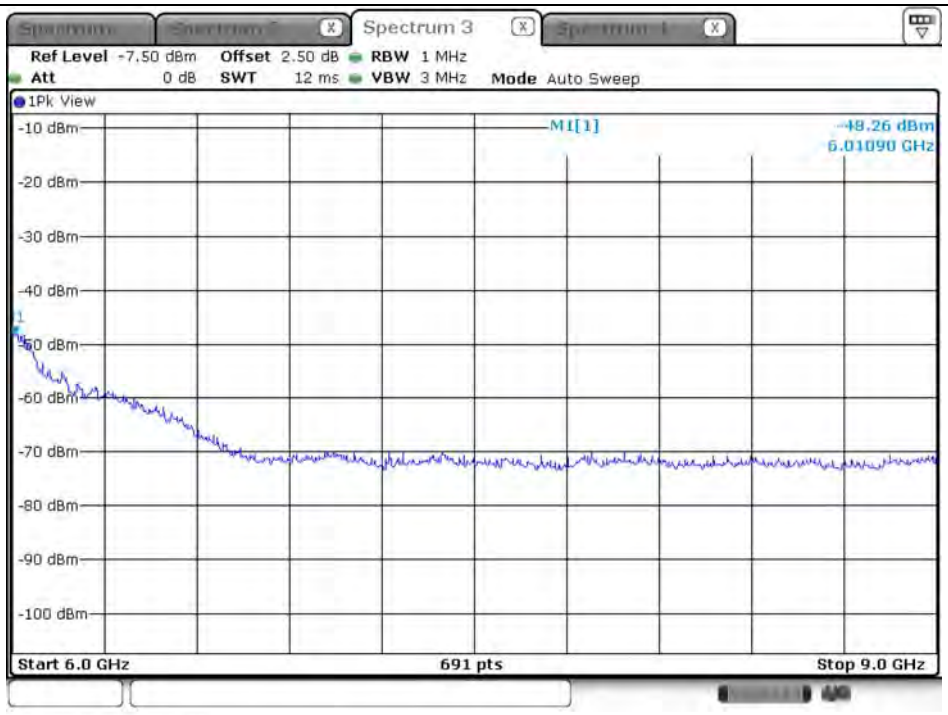
Date: 13.FEB.2018 20:20:46

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 1 / 6GHz~9GHz



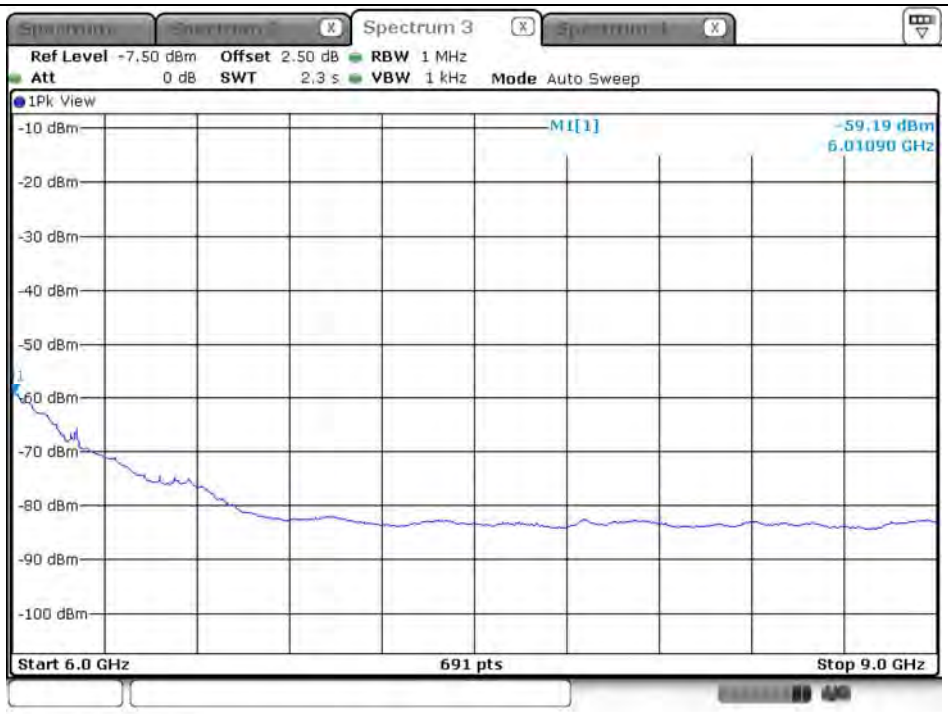
Date: 13.FEB.2018 20:19:18

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 2 / 6GHz~9GHz



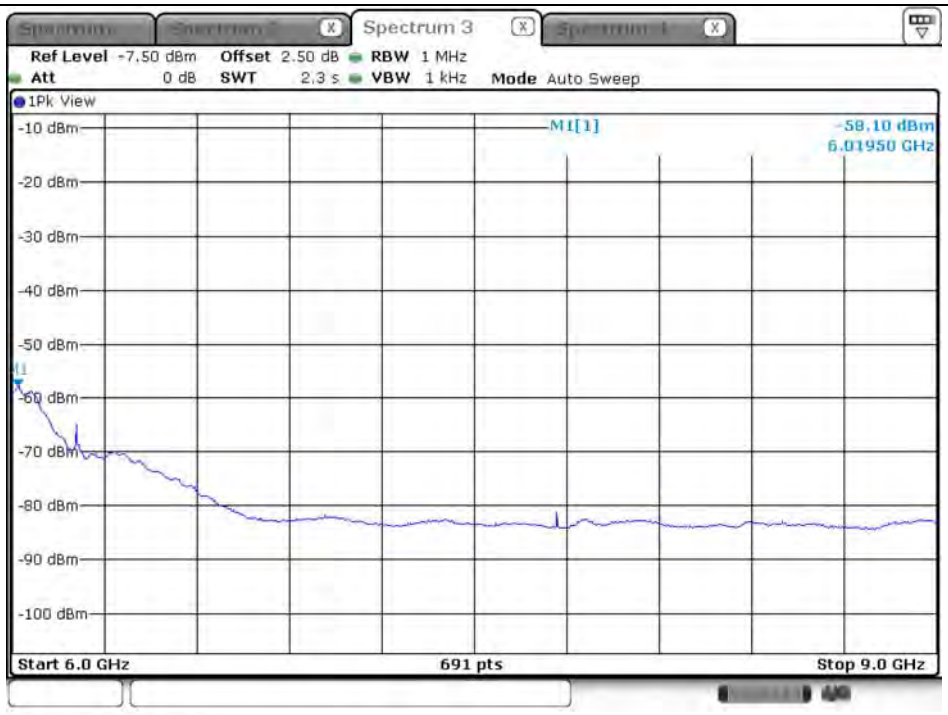
Date: 13.FEB.2018 20:21:40

Plot on Configuration VHT20 / 5825 MHz / Average / Port 1 / 6GHz~9GHz



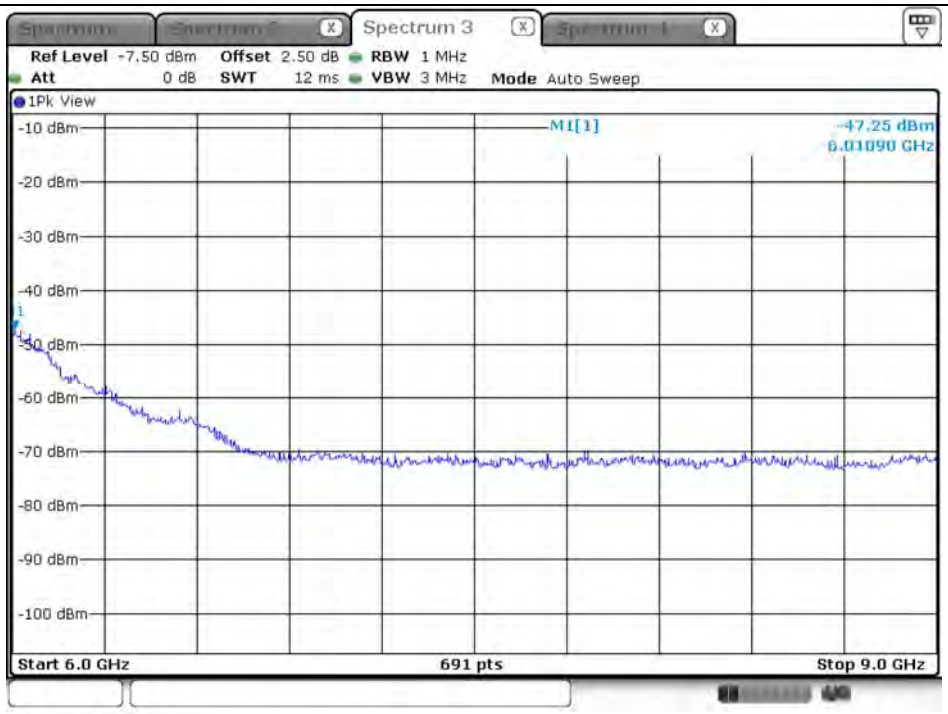
Date: 13.FEB.2018 20:38:29

Plot on Configuration VHT20 / 5825 MHz / Average / Port 2 / 6GHz~9GHz



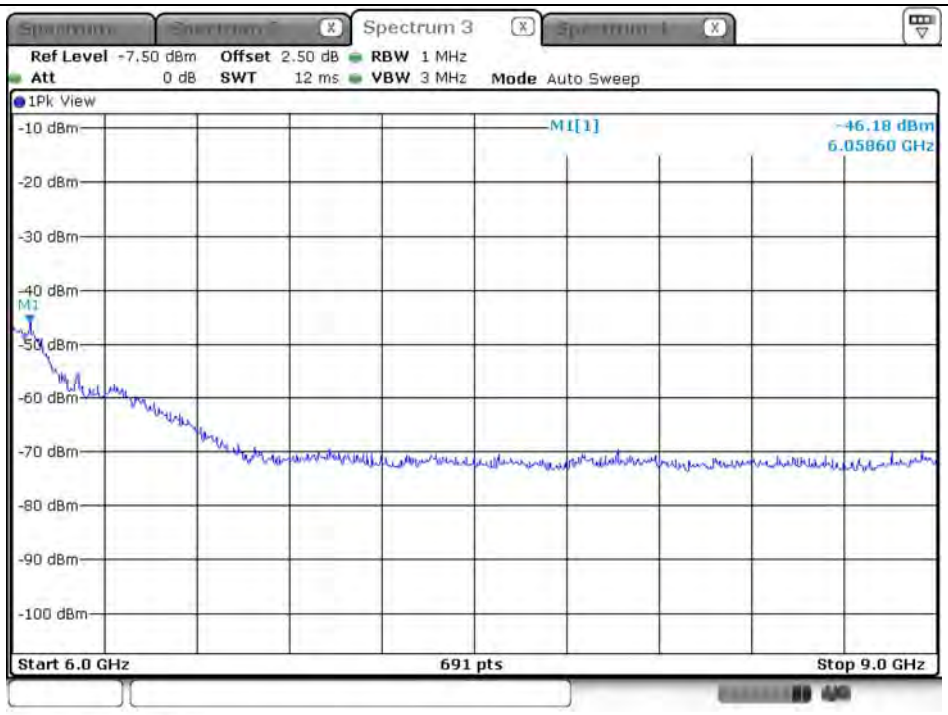
Date: 13.FEB.2018 20:41:23

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 1 / 6GHz~9GHz



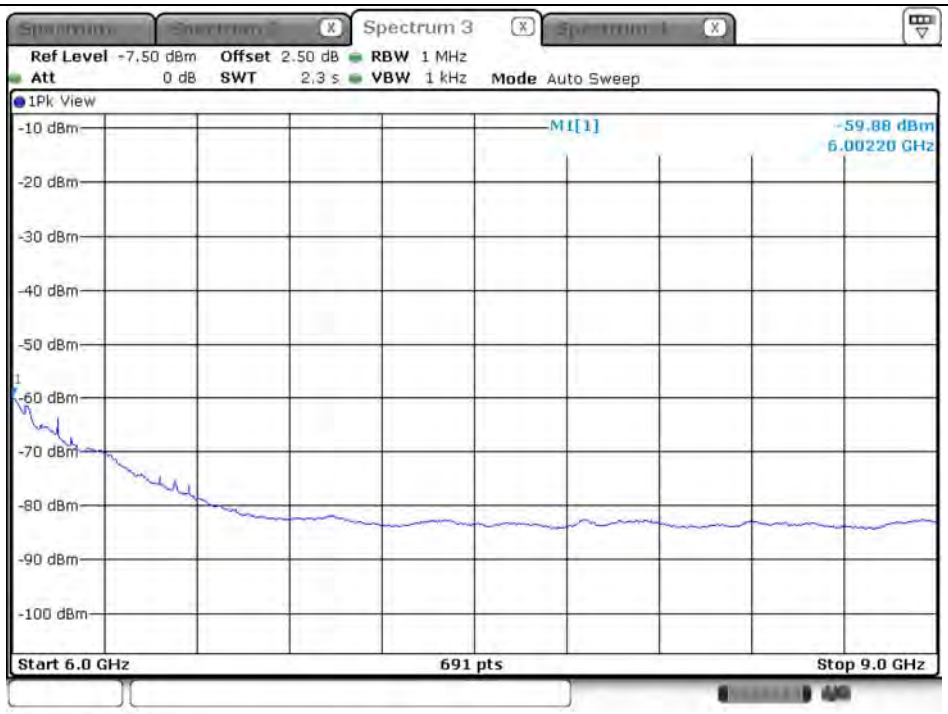
Date: 13.FEB.2018 20:39:24

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 2 / 6GHz~9GHz



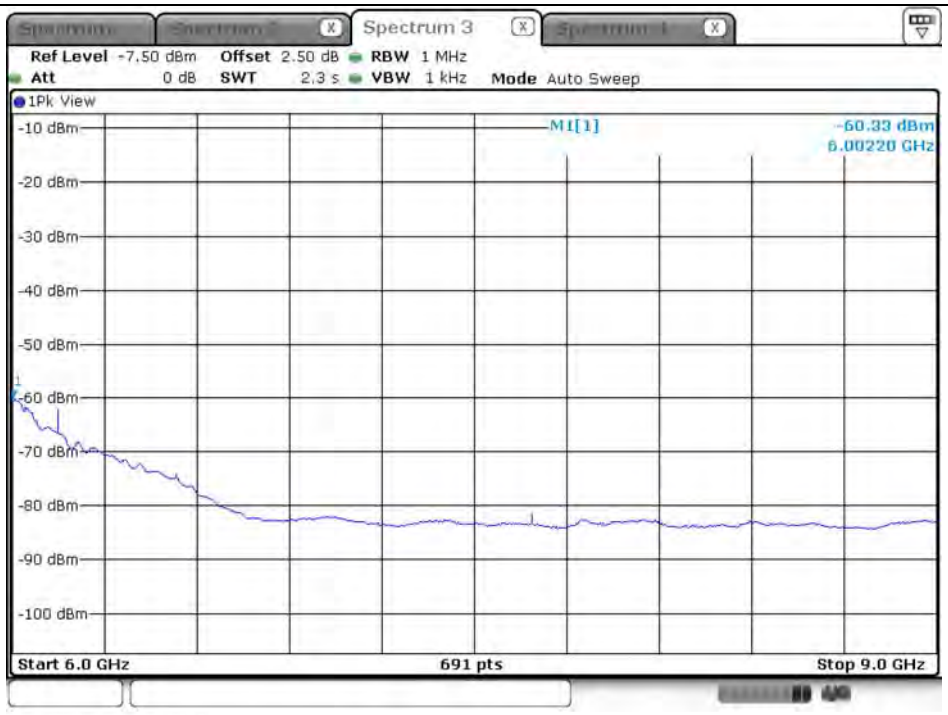
Date: 13.FEB.2018 20:42:06

Plot on Configuration VHT80 / 5775 MHz / Average / Port 1 / 6GHz~9GHz



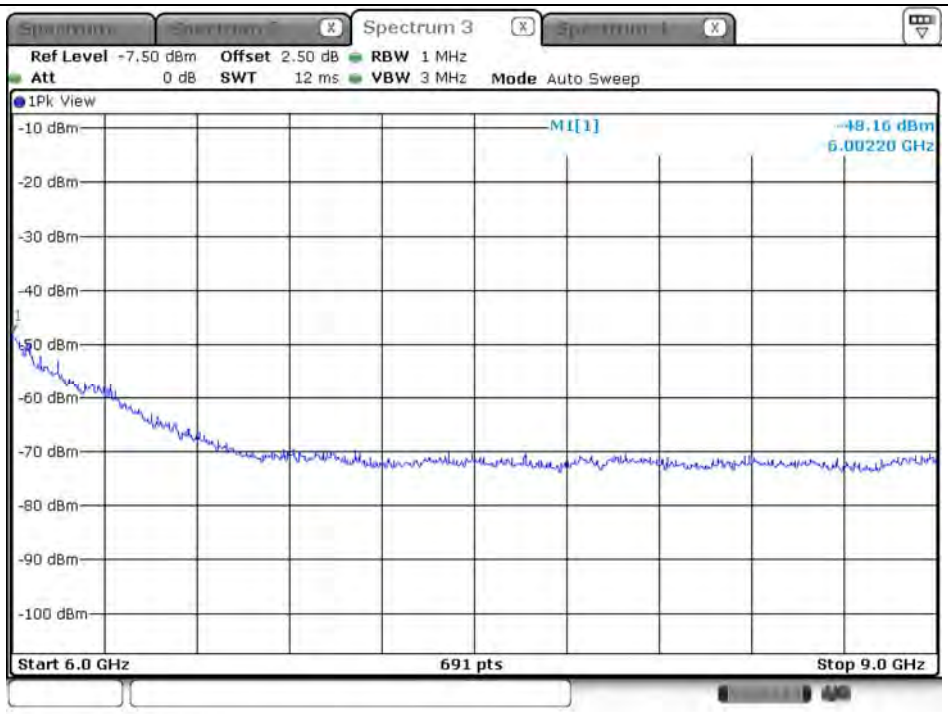
Date: 13.FEB.2018 21:10:40

Plot on Configuration VHT80 / 5775 MHz / Average / Port 2 / 6GHz~9GHz



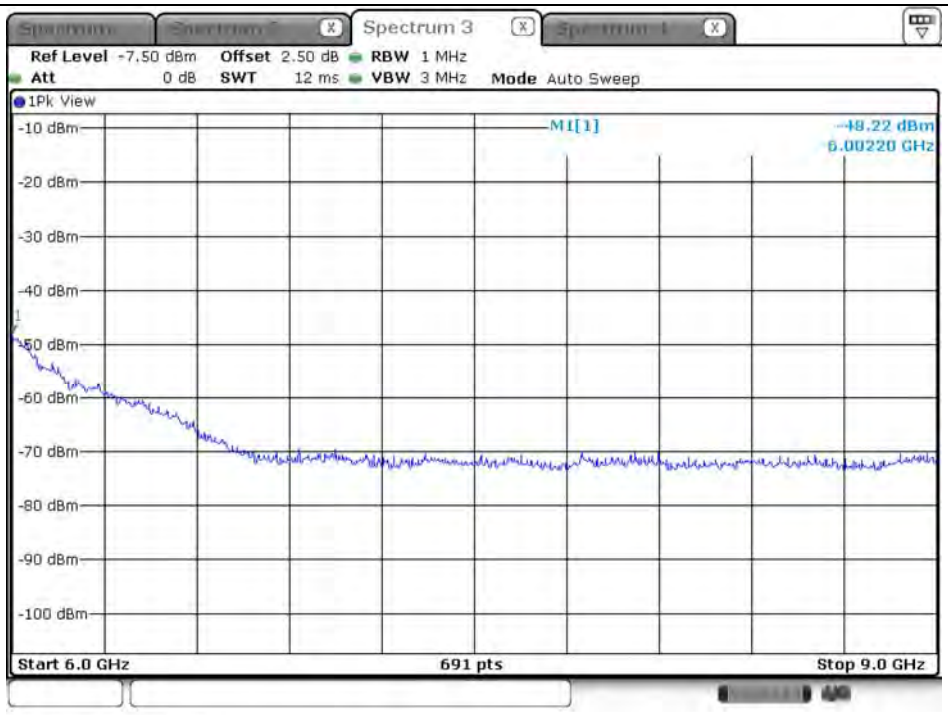
Date: 13.FEB.2018 21:13:14

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 1 / 6GHz~9GHz



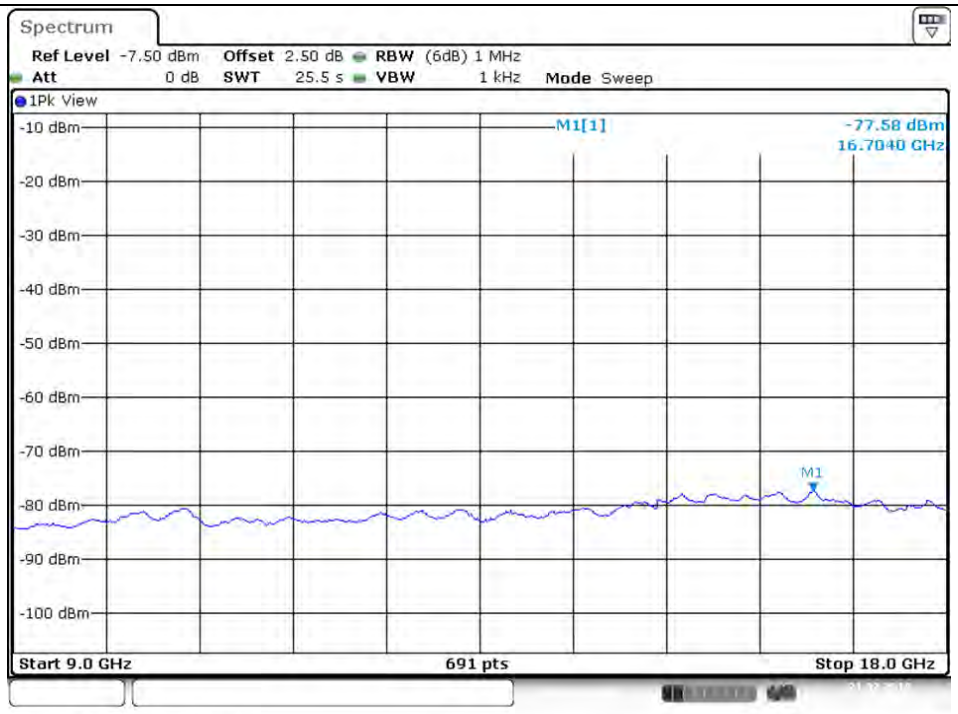
Date: 13.FEB.2018 21:11:44

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 2 / 6GHz~9GHz

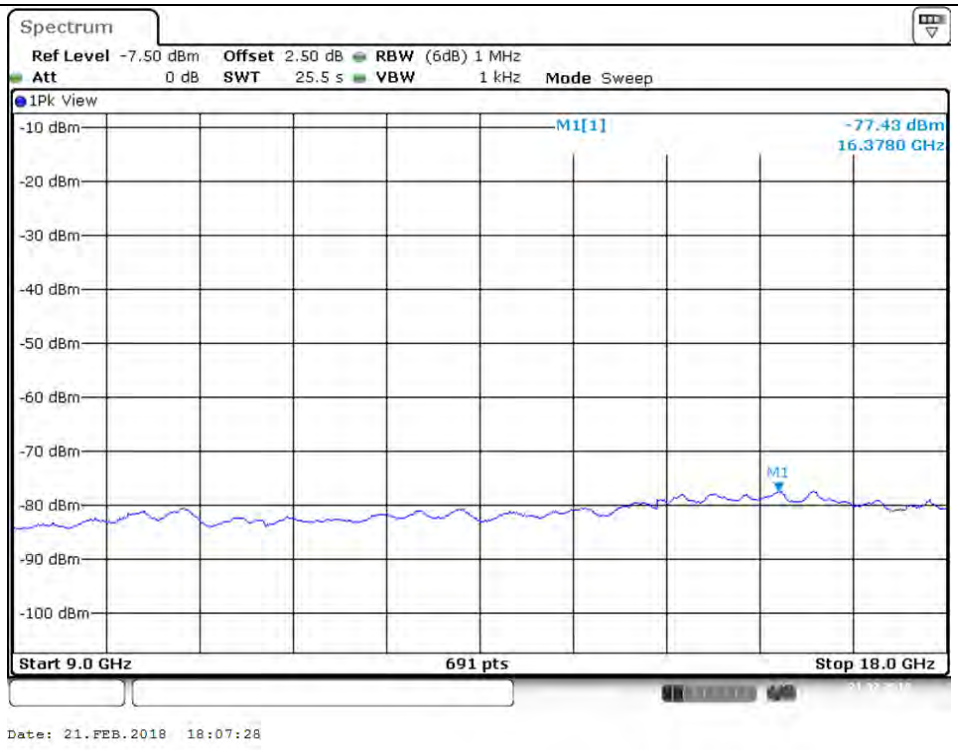


Date: 13.FEB.2018 21:14:06

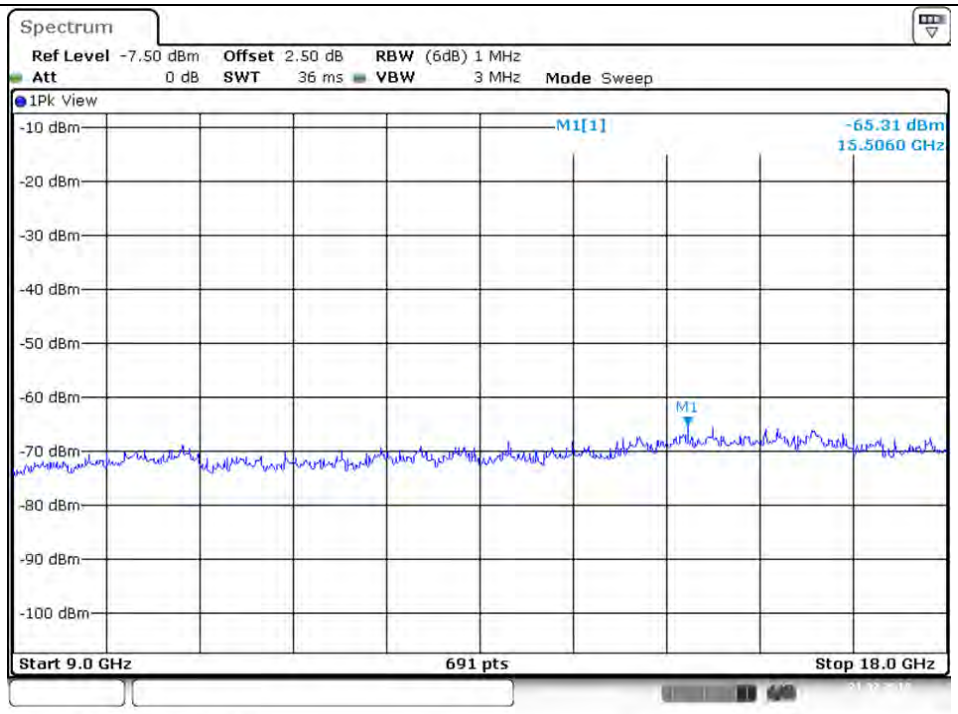
Plot on Configuration VHT20 / 5180 MHz / Average / Port 1 / 9GHz~18GHz



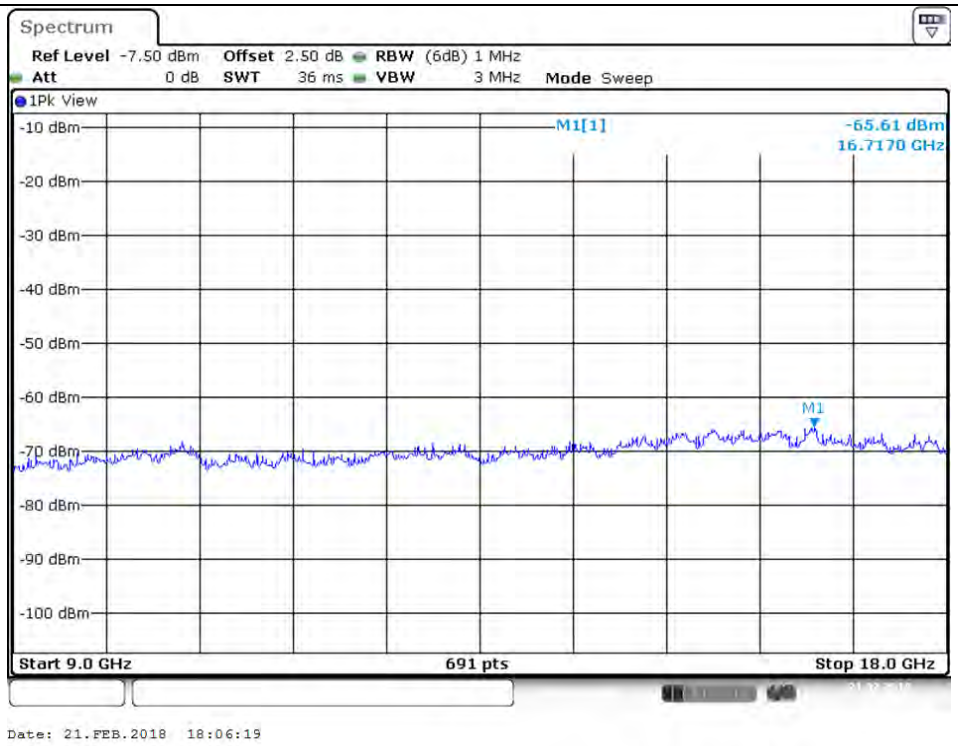
Plot on Configuration VHT20 / 5180 MHz / Average / Port 2 / 9GHz~18GHz



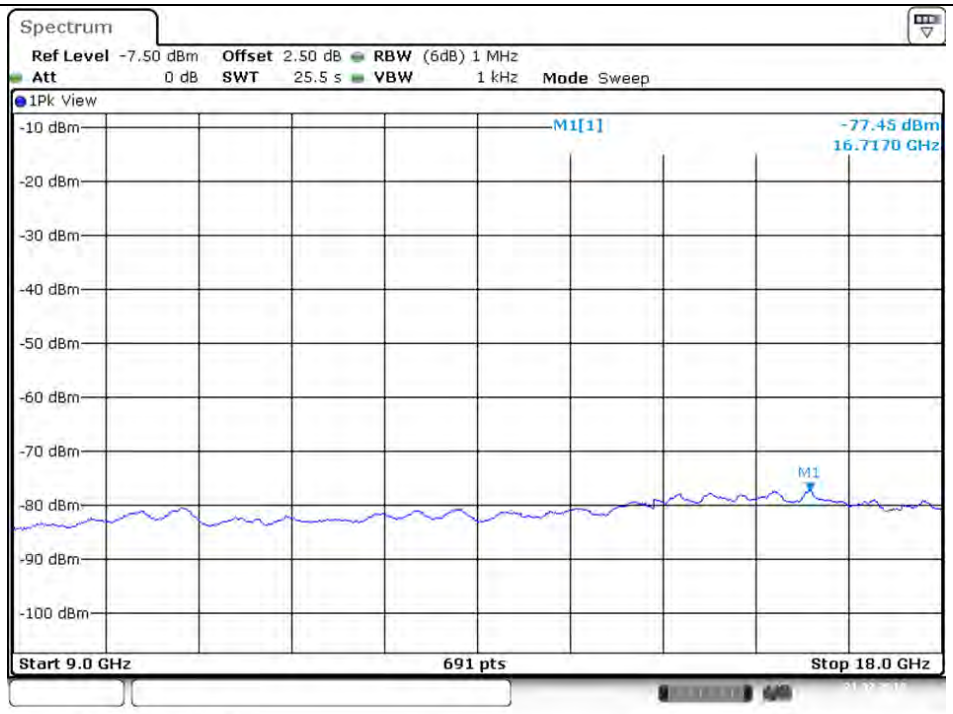
Plot on Configuration VHT20 / 5180 MHz / Peak / Port 1 / 9GHz~18GHz



Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 / 9GHz~18GHz

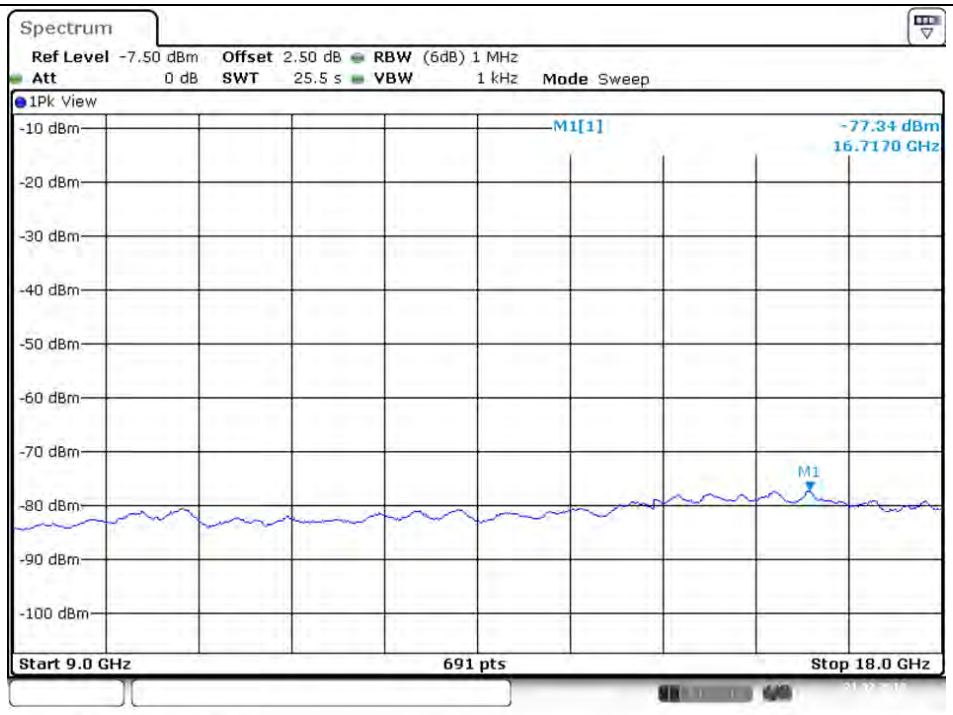


Plot on Configuration VHT20 / 5200 MHz / Average / Port 1 / 9GHz~18GHz



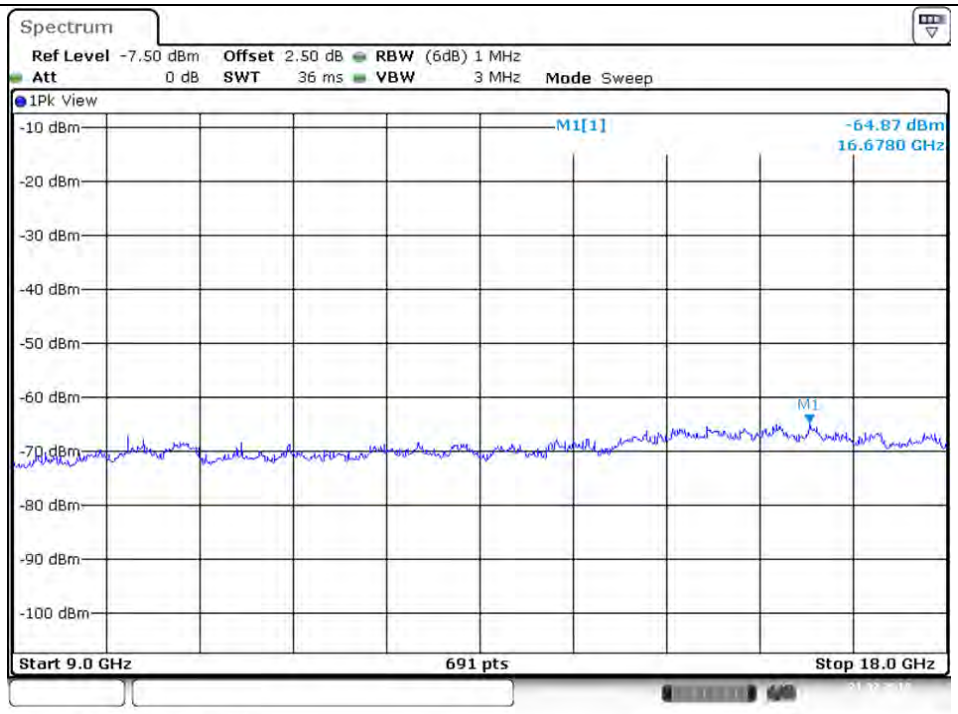
Date: 21.FEB.2018 18:37:17

Plot on Configuration VHT20 / 5200 MHz / Average / Port 2 / 9GHz~18GHz

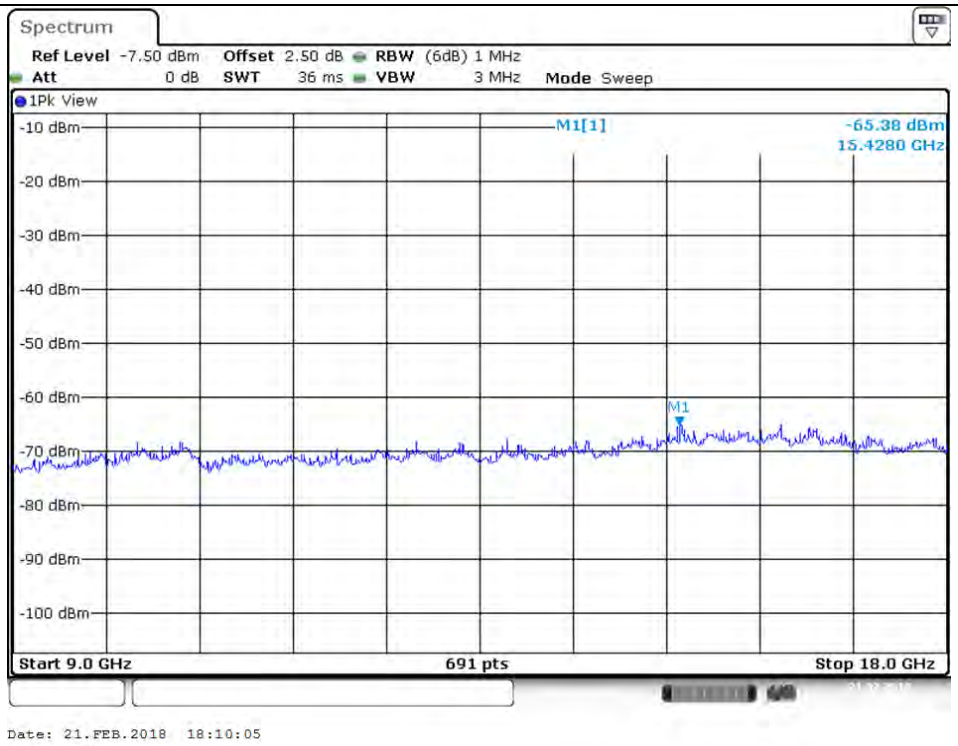


Date: 21.FEB.2018 18:09:46

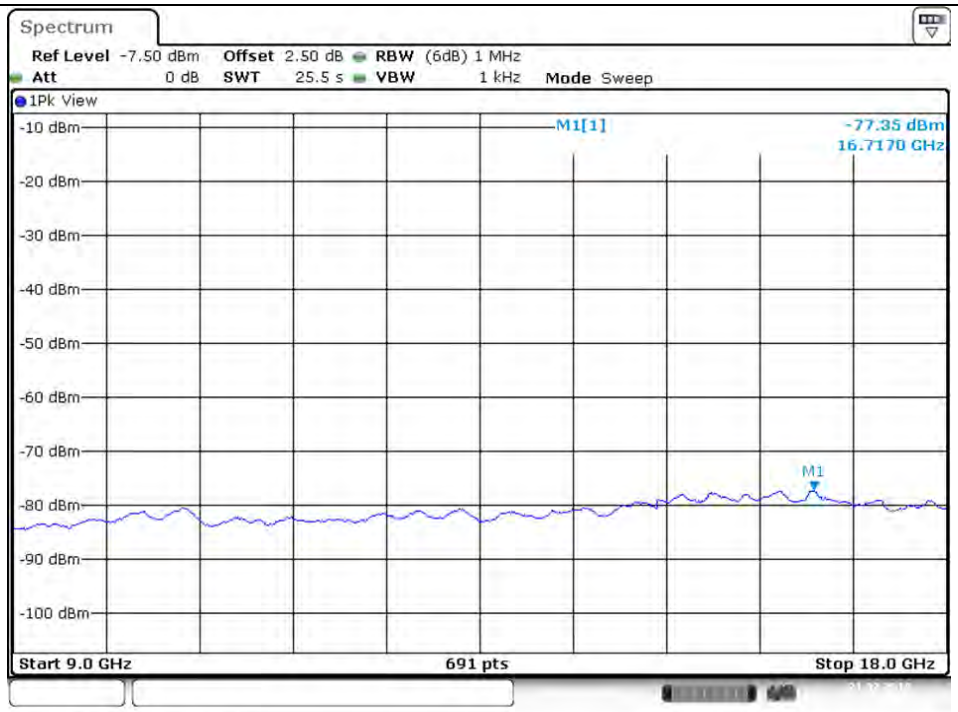
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 1 / 9GHz~18GHz



Plot on Configuration VHT20 / 5200 MHz / Peak / Port 2 / 9GHz~18GHz

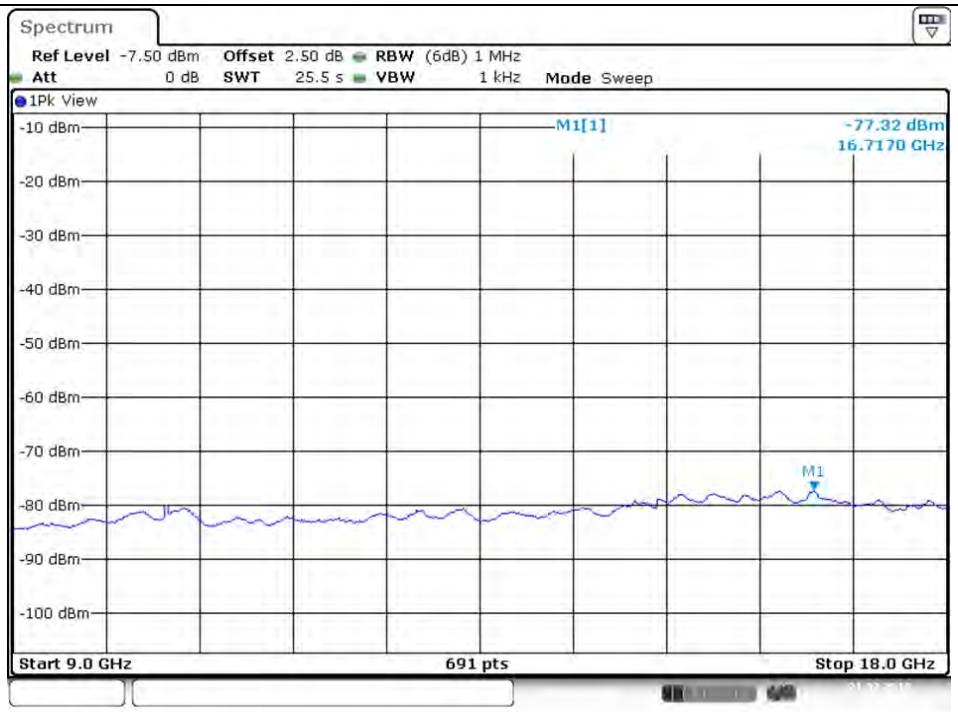


Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 / 9GHz~18GHz



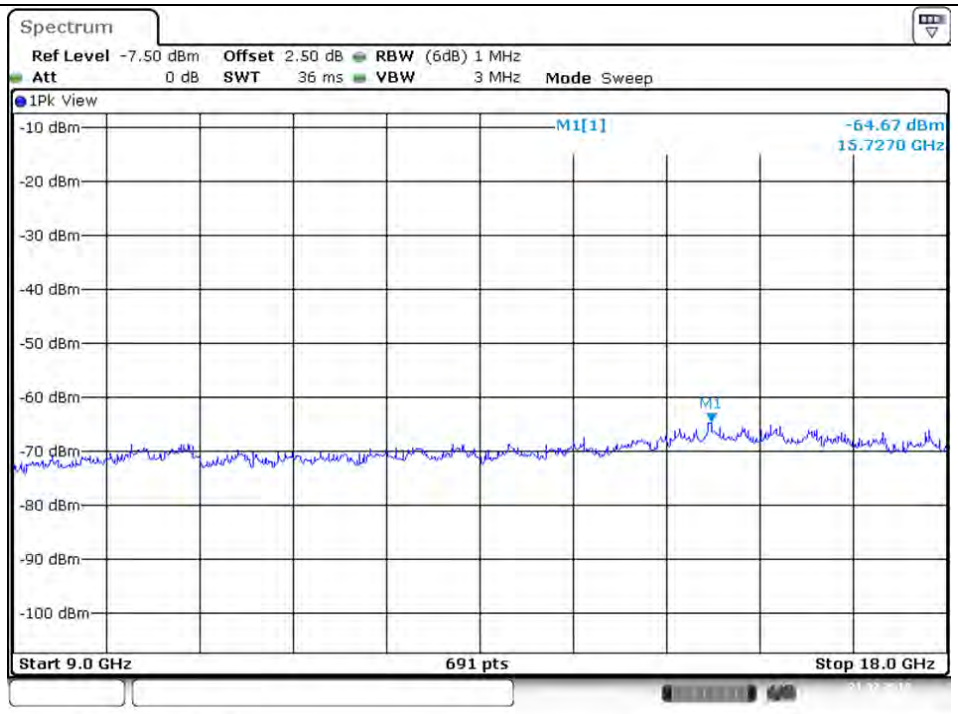
Date: 21.FEB.2018 18:39:53

Plot on Configuration VHT20 / 5240 MHz / Average / Port 2 / 9GHz~18GHz

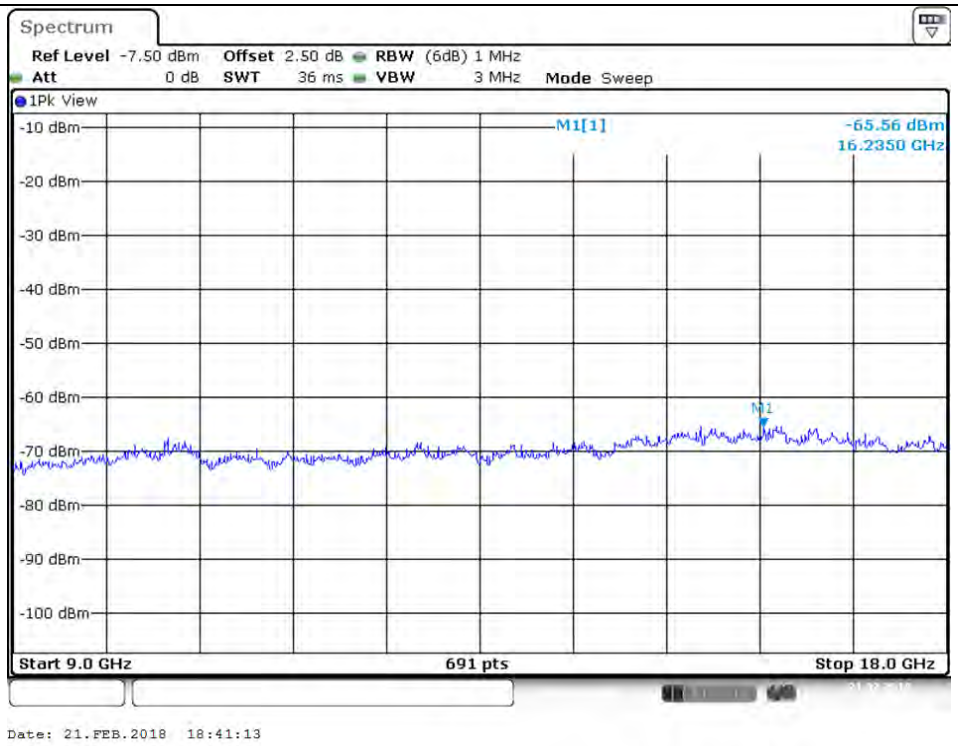


Date: 21.FEB.2018 18:42:31

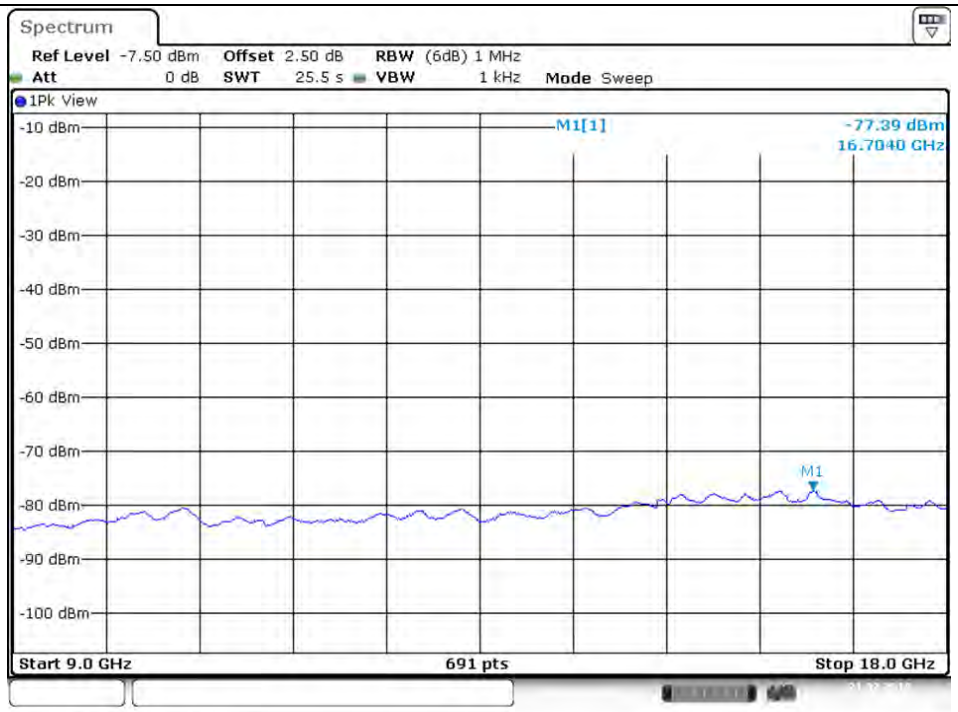
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 1 / 9GHz~18GHz



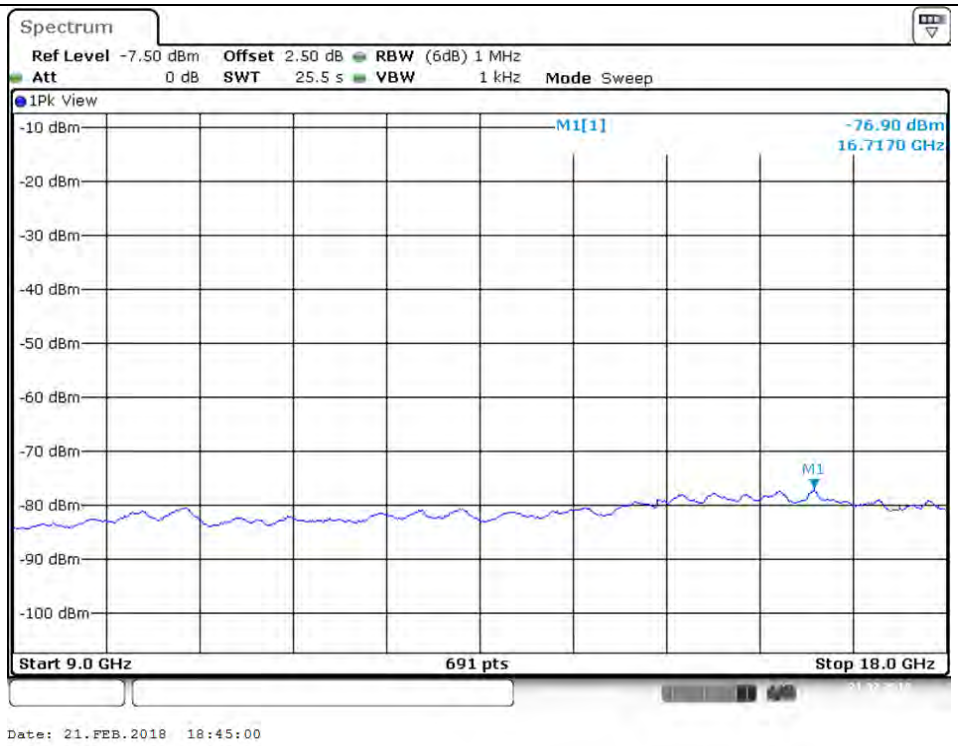
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 / 9GHz~18GHz



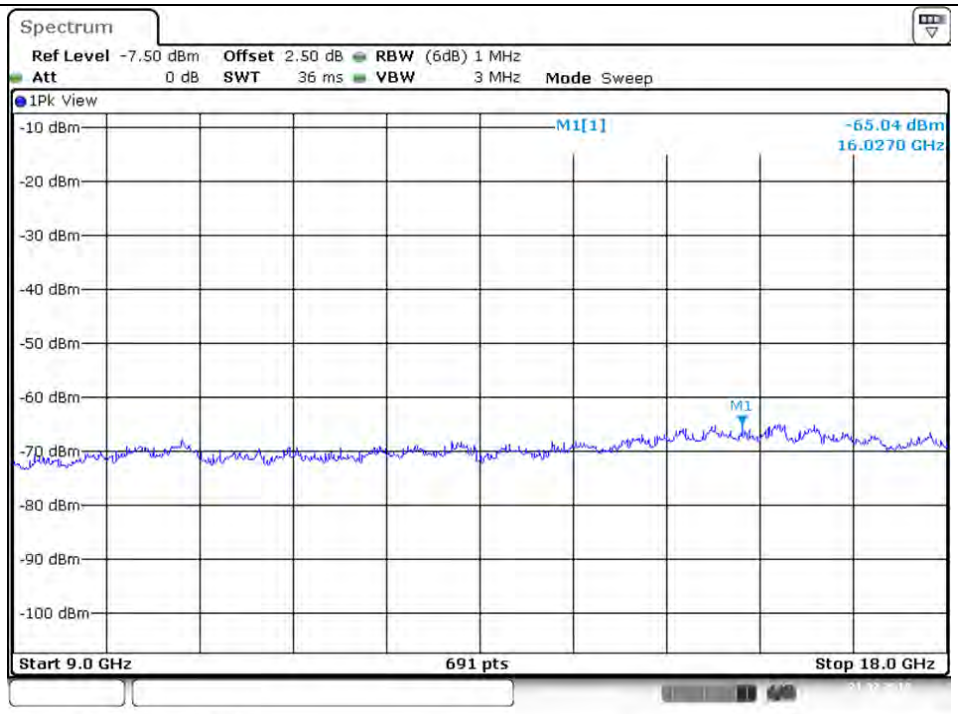
Plot on Configuration VHT80 / 5210 MHz / Average / Port 1 / 9GHz~18GHz



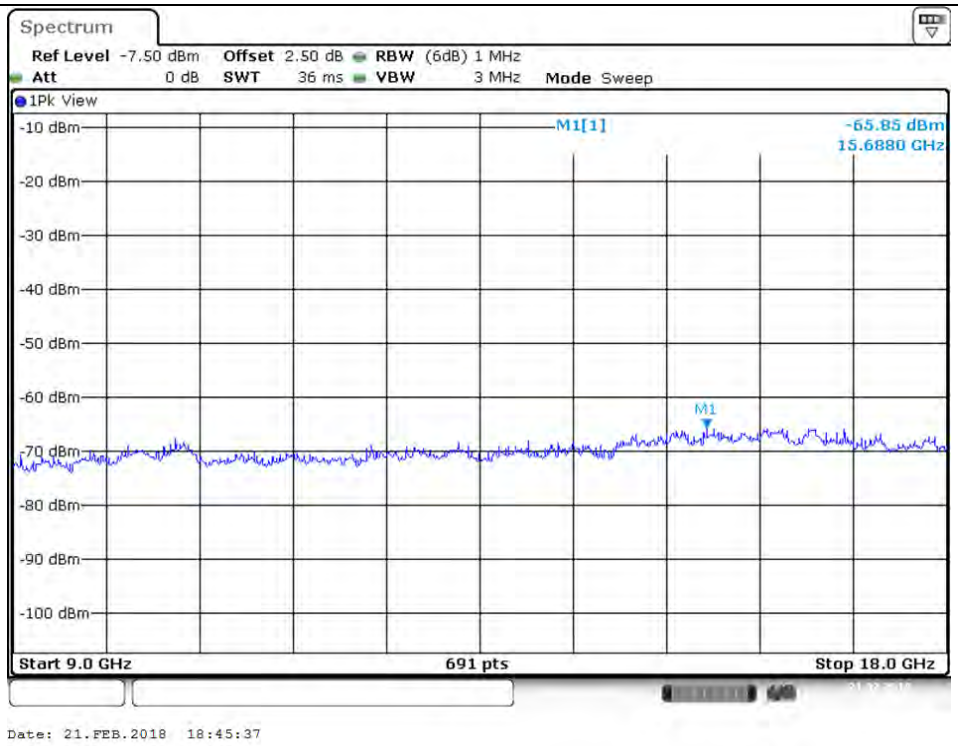
Plot on Configuration VHT80 / 5210 MHz / Average / Port 2 / 9GHz~18GHz



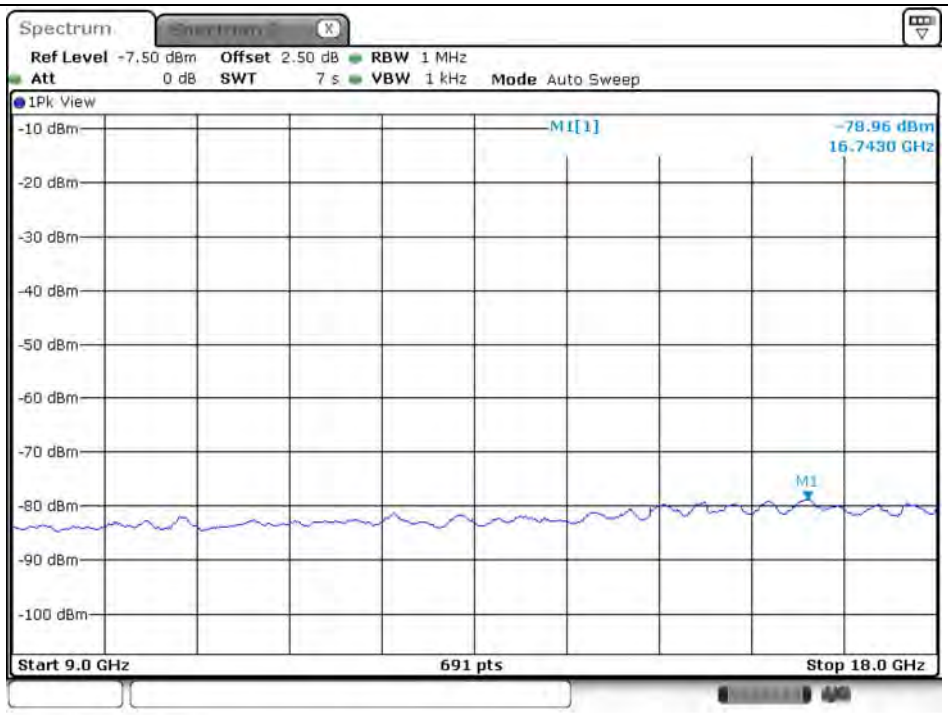
Plot on Configuration VHT80 / 5210 MHz / Peak / Port 1 / 9GHz~18GHz



Plot on Configuration VHT80 / 5210 MHz / Peak / Port 2 / 9GHz~18GHz

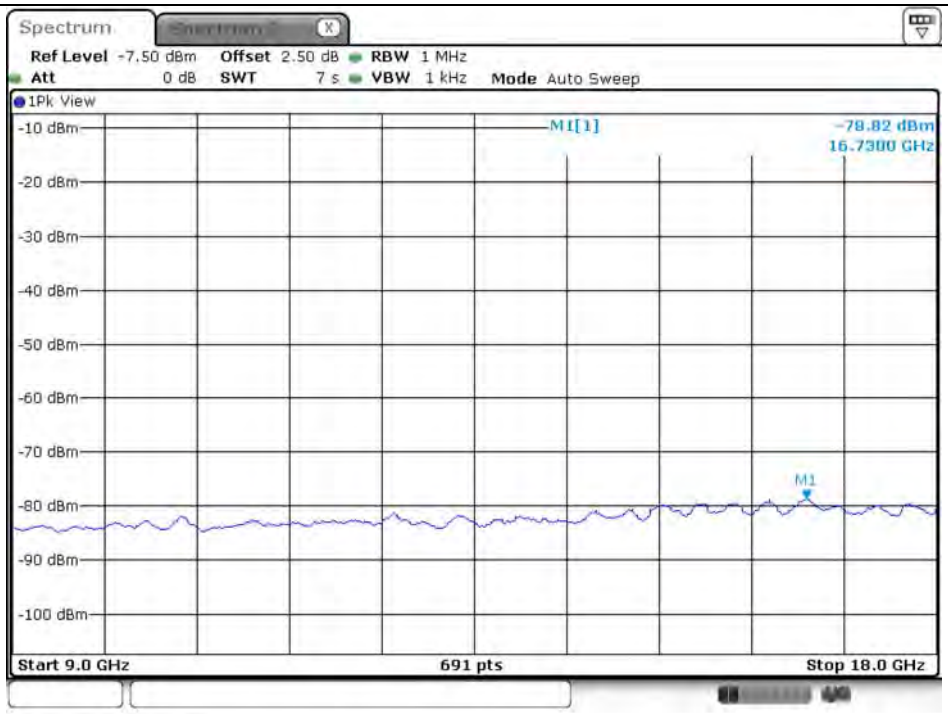


Plot on Configuration VHT20 / 5745 MHz / Average / Port 1 / 9GHz~18GHz



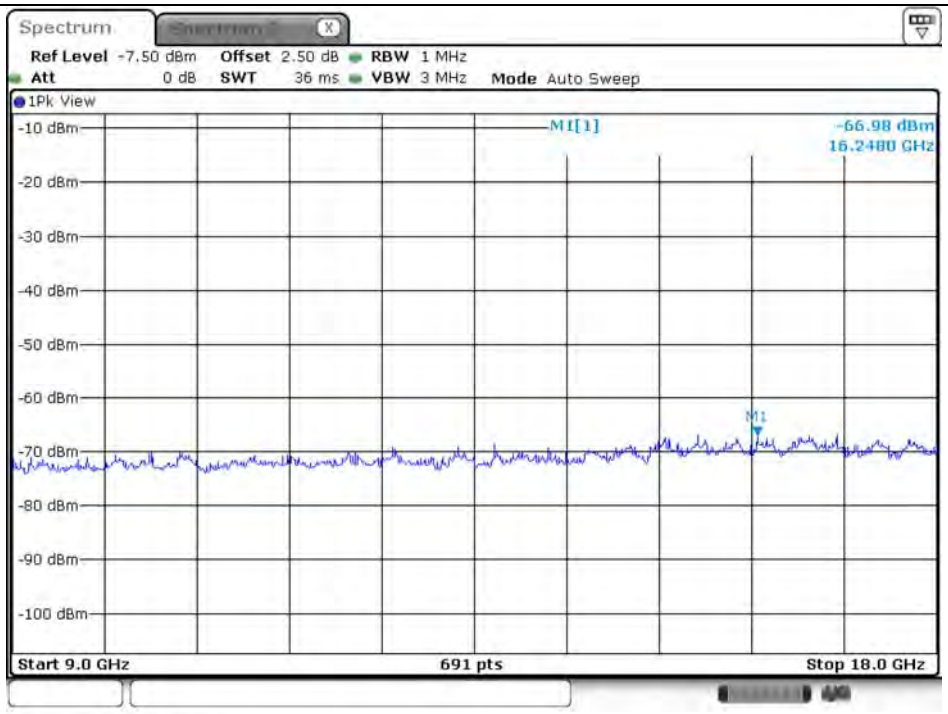
Date: 14.FEB.2018 10:56:39

Plot on Configuration VHT20 / 5745 MHz / Average / Port 2 / 9GHz~18GHz



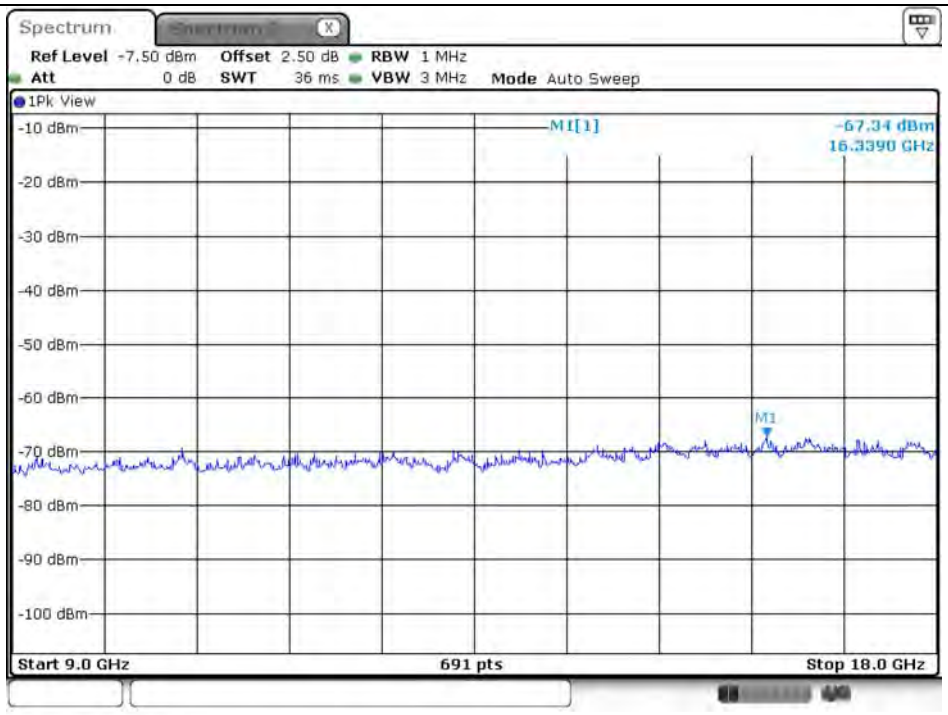
Date: 14.FEB.2018 11:02:50

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 1 / 9GHz~18GHz



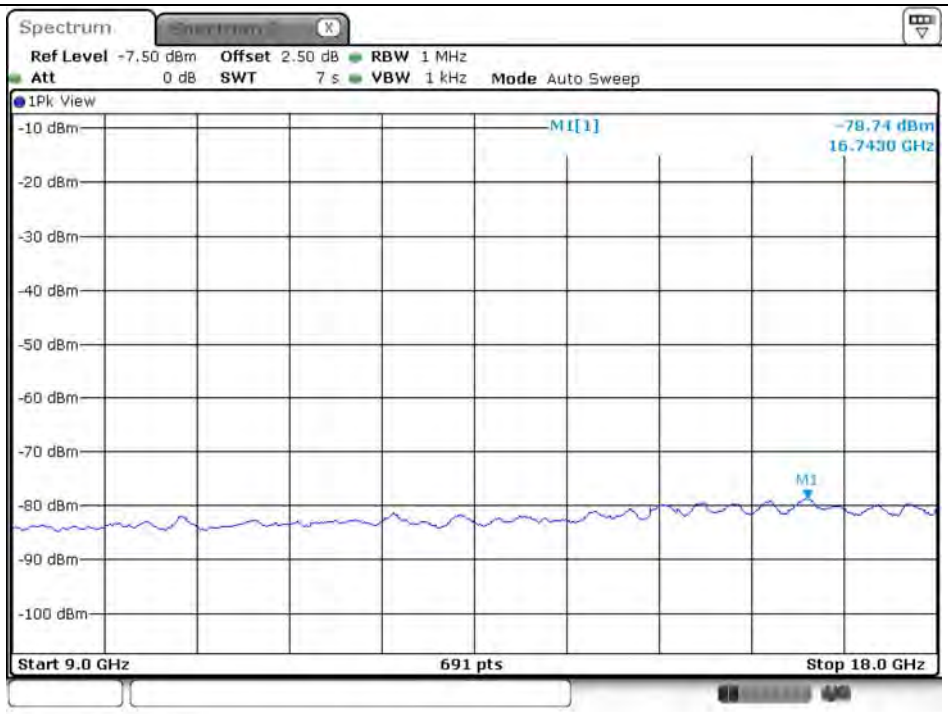
Date: 14.FEB.2018 10:57:53

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 2 / 9GHz~18GHz



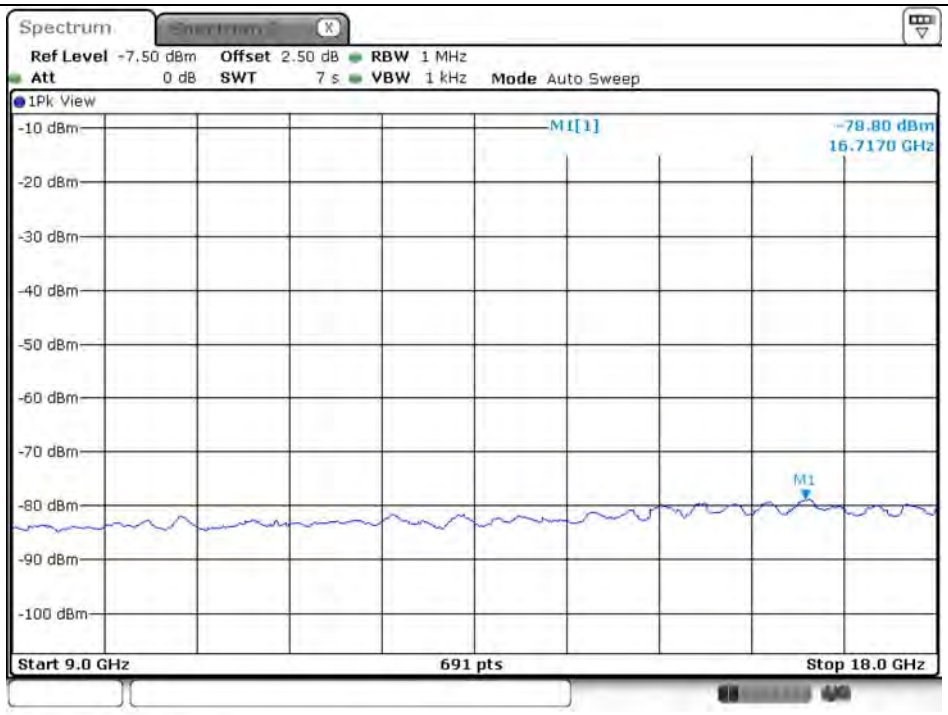
Date: 14.FEB.2018 11:03:30

Plot on Configuration VHT20 / 5785 MHz / Average / Port 1 / 9GHz~18GHz



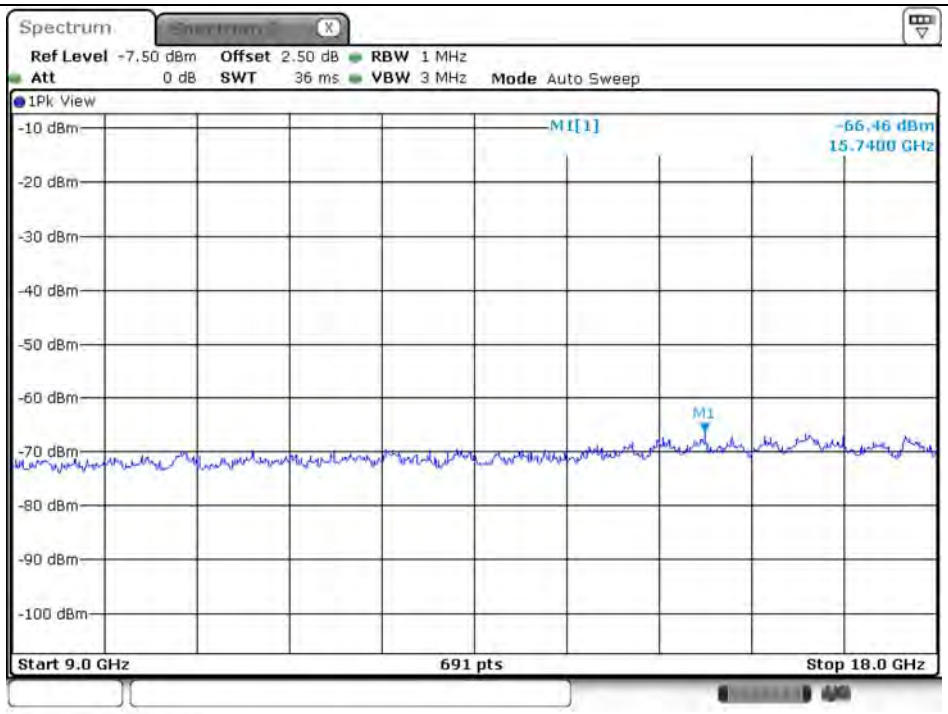
Date: 14.FEB.2018 11:06:04

Plot on Configuration VHT20 / 5785 MHz / Average / Port 2 / 9GHz~18GHz



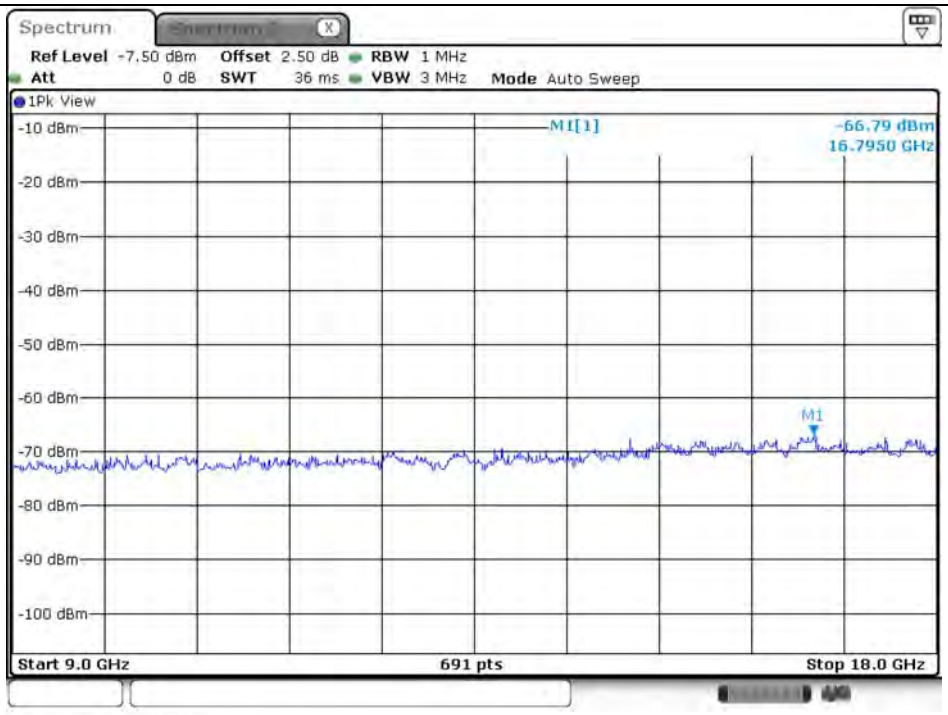
Date: 14.FEB.2018 11:11:06

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 1 / 9GHz~18GHz



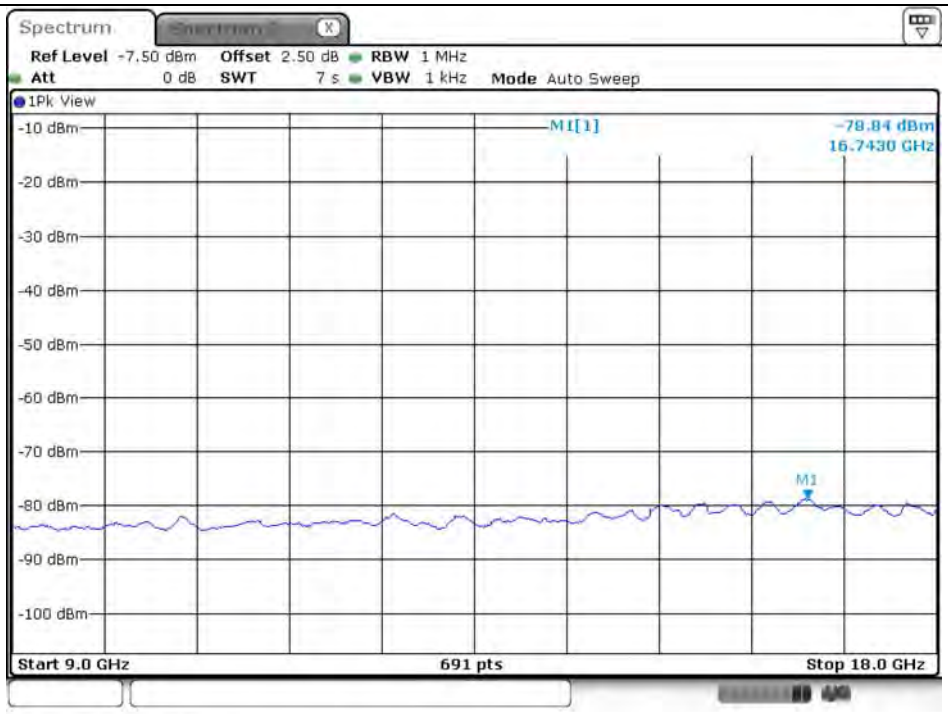
Date: 14.FEB.2018 11:06:47

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 2 / 9GHz~18GHz



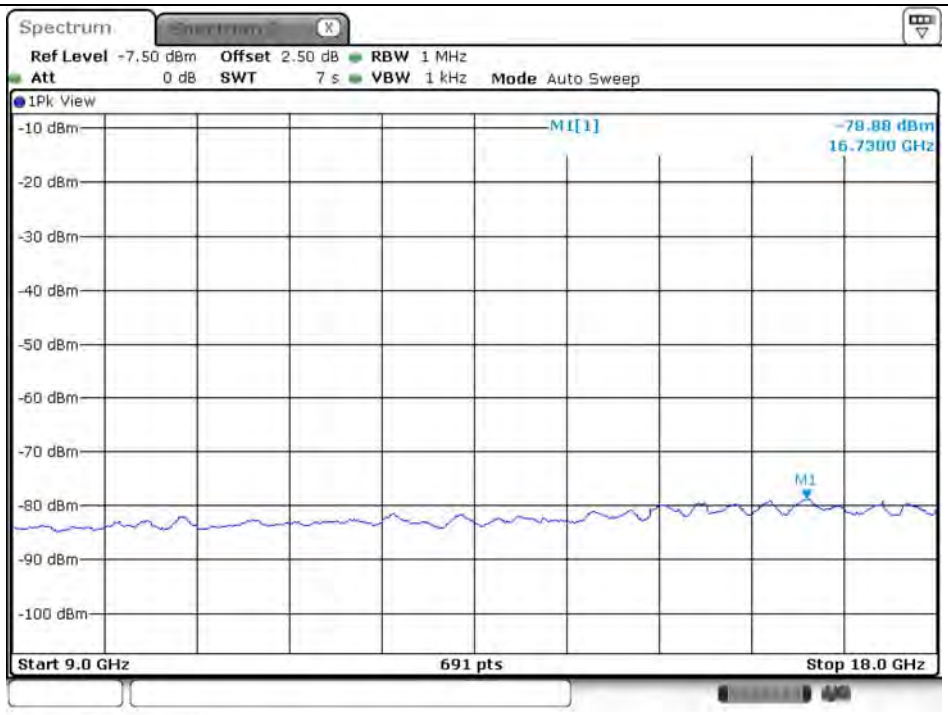
Date: 14.FEB.2018 11:11:42

Plot on Configuration VHT20 / 5825 MHz / Average / Port 1 / 9GHz~18GHz



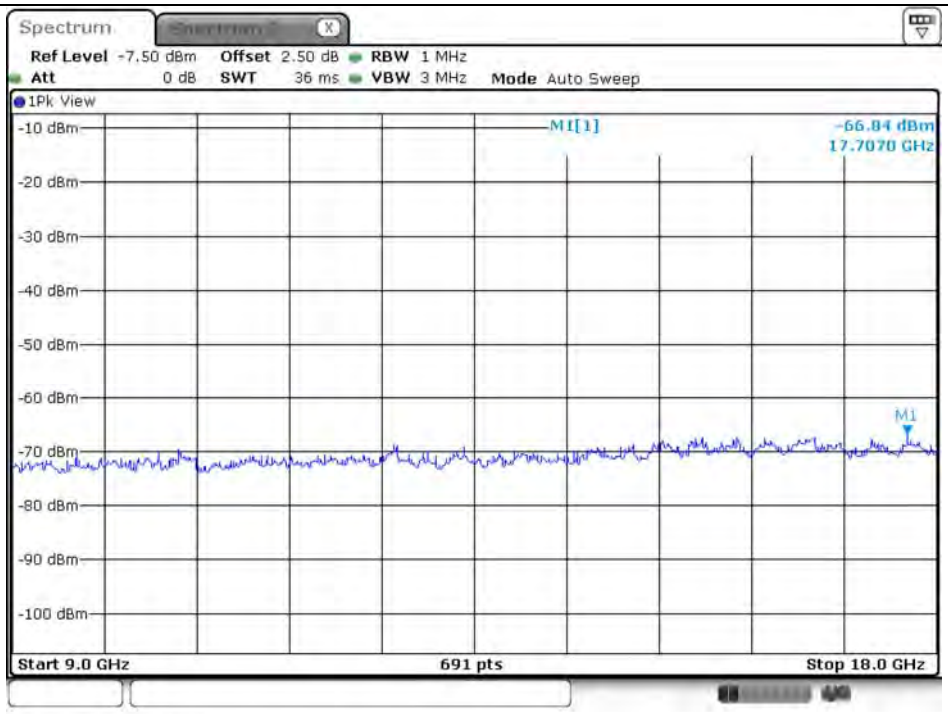
Date: 14.FEB.2018 11:13:19

Plot on Configuration VHT20 / 5825 MHz / Average / Port 2 / 9GHz~18GHz



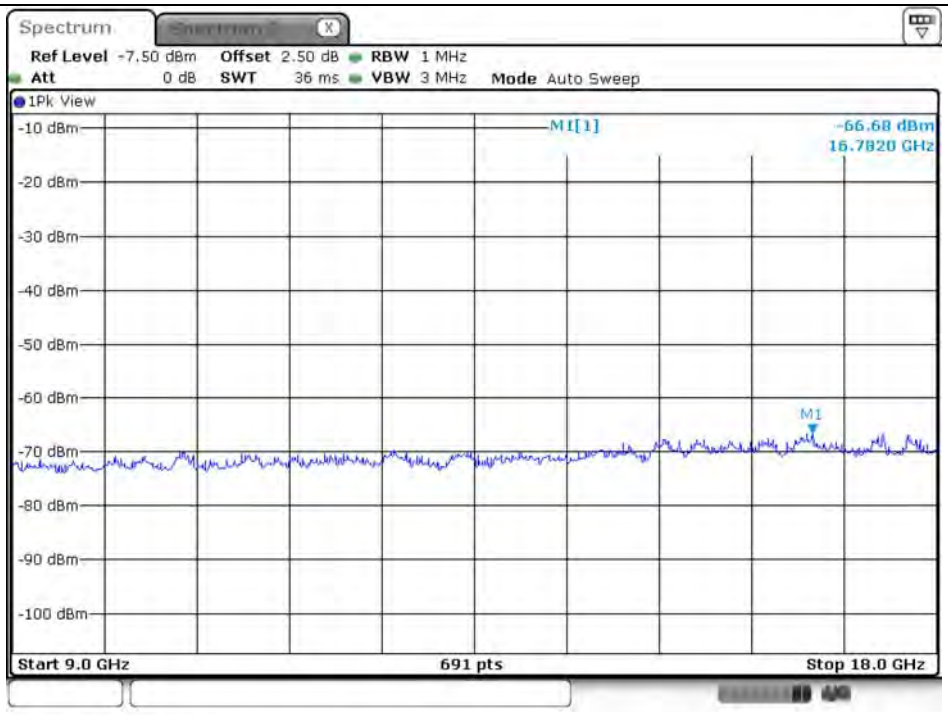
Date: 14.FEB.2018 11:18:54

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 1 / 9GHz~18GHz



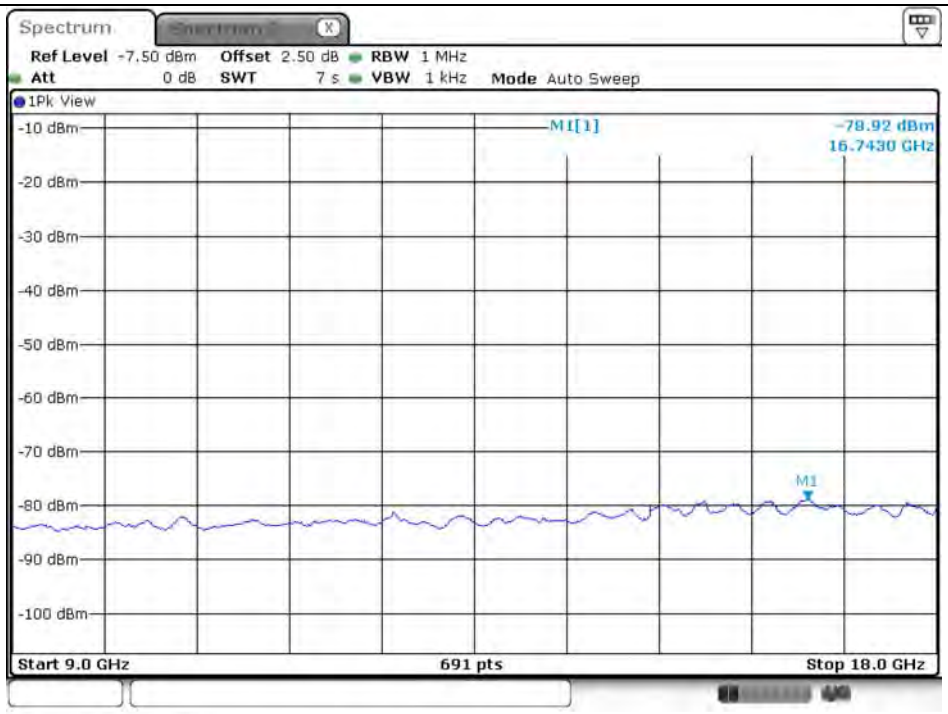
Date: 14.FEB.2018 11:14:01

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 2 / 9GHz~18GHz



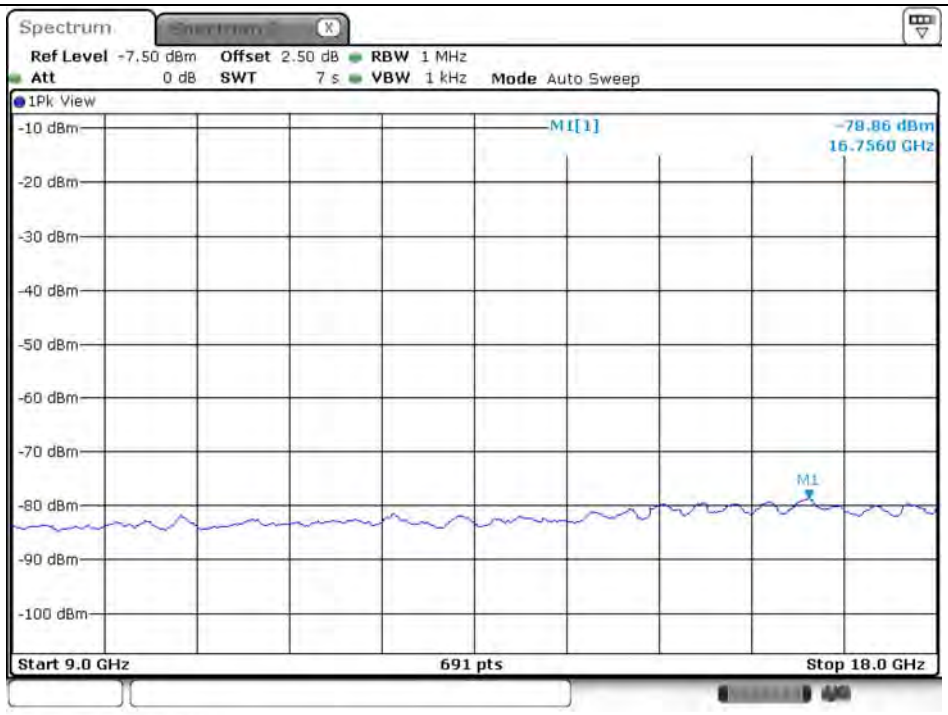
Date: 14.FEB.2018 11:19:24

Plot on Configuration VHT80 / 5775 MHz / Average / Port 1 / 9GHz~18GHz



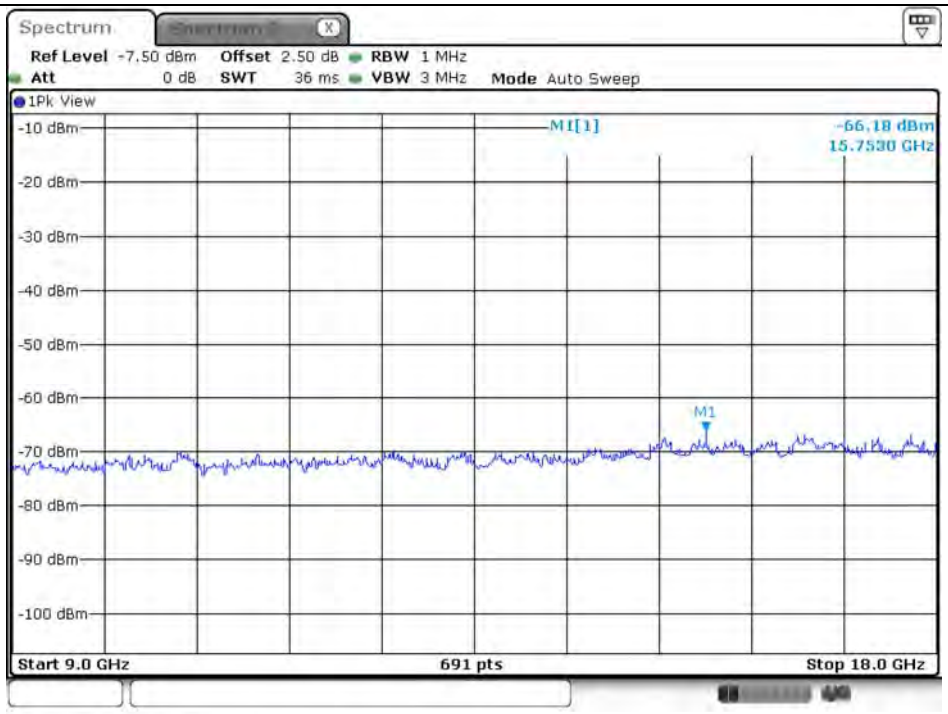
Date: 14.FEB.2018 11:21:42

Plot on Configuration VHT80 / 5775 MHz / Average / Port 2 / 9GHz~18GHz



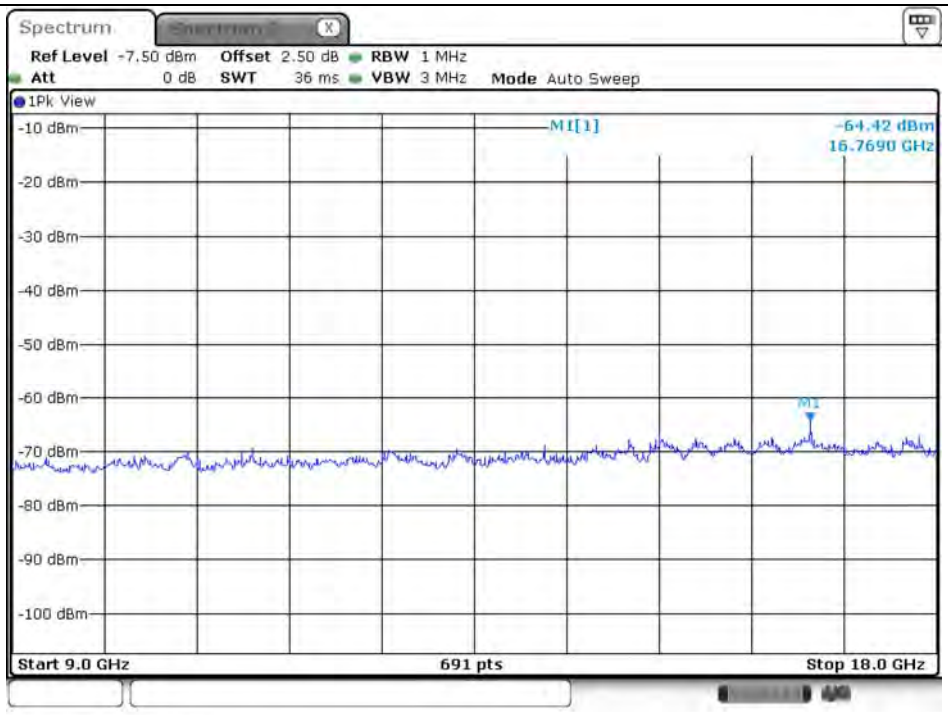
Date: 14.FEB.2018 11:27:44

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 1 / 9GHz~18GHz



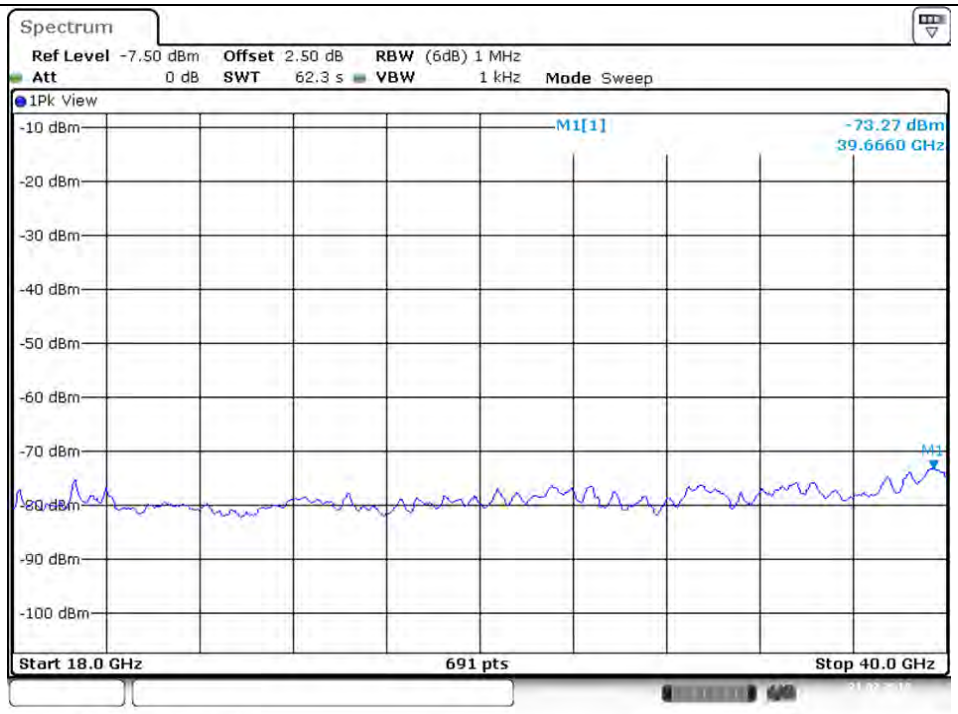
Date: 14.FEB.2018 11:22:19

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 2 / 9GHz~18GHz

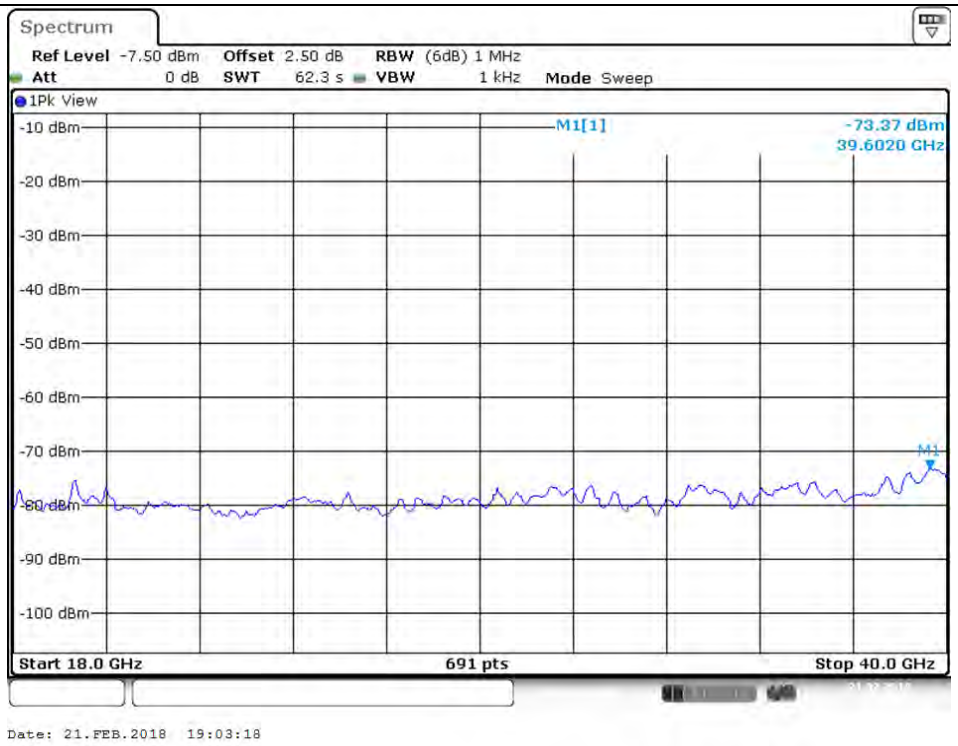


Date: 14.FEB.2018 11:28:19

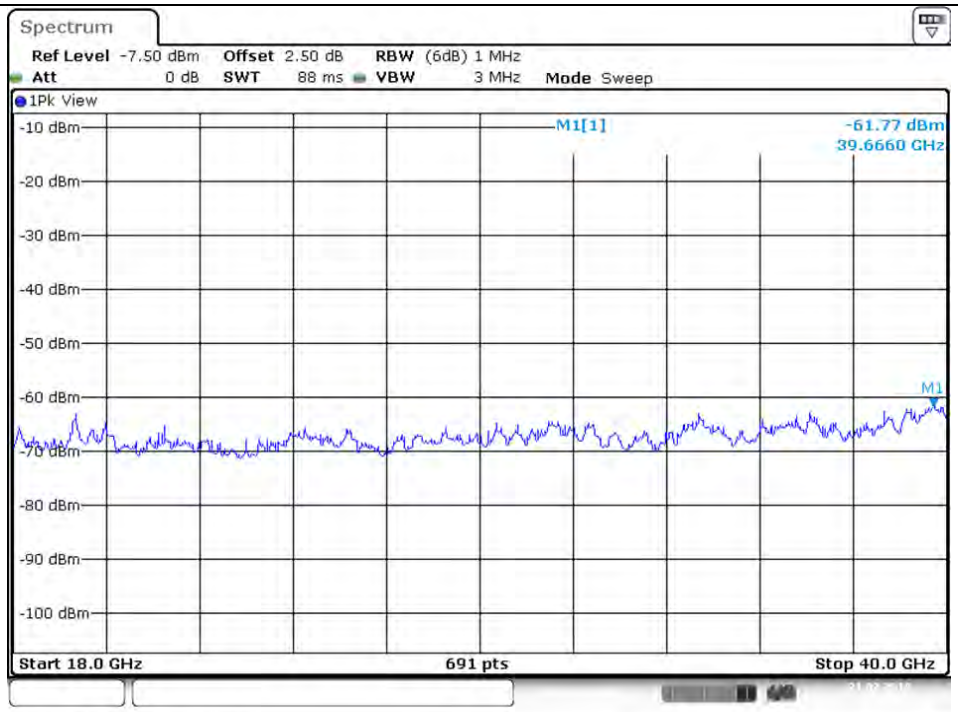
Plot on Configuration VHT20 / 5180 MHz / Average / Port 1 / 18GHz~40GHz



Plot on Configuration VHT20 / 5180 MHz / Average / Port 2 / 18GHz~40GHz

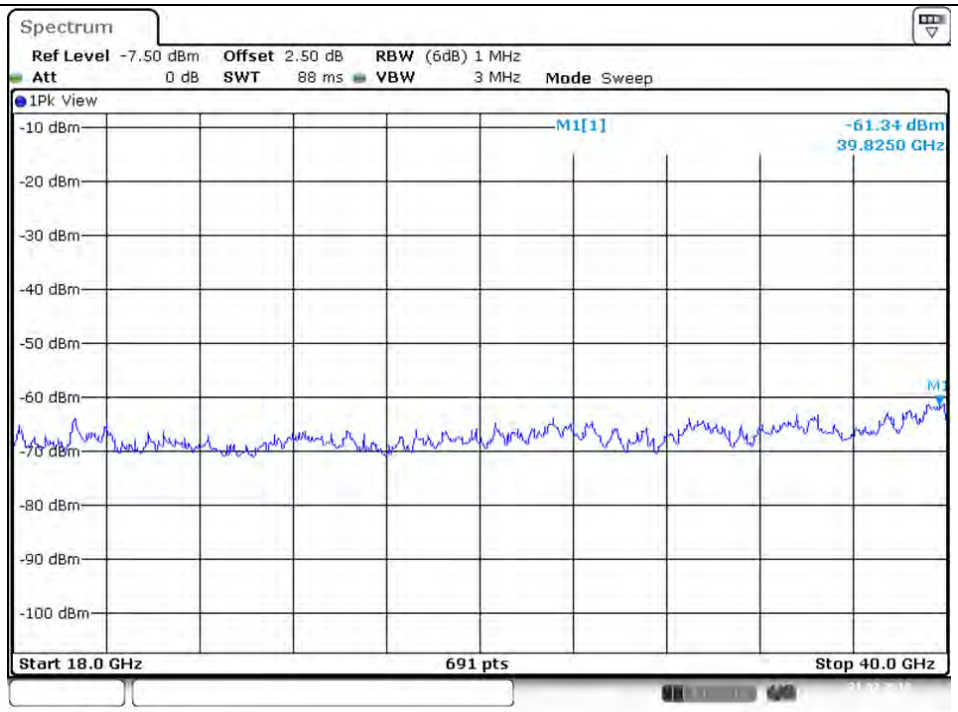


Plot on Configuration VHT20 / 5180 MHz / Peak / Port 1 / 18GHz~40GHz



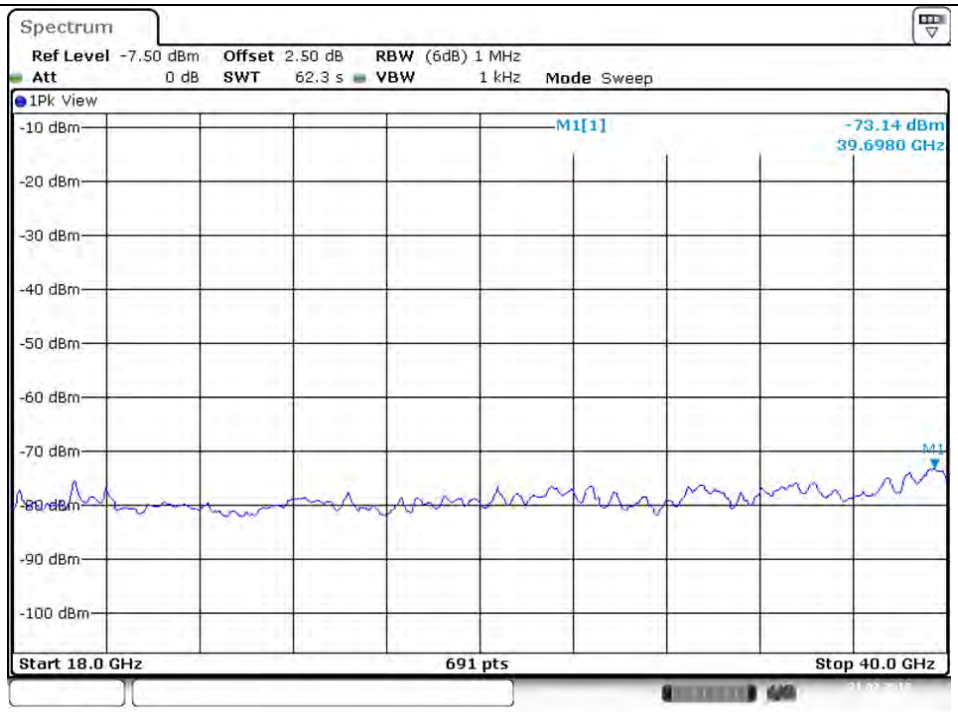
Date: 21.FEB.2018 19:05:28

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 / 18GHz~40GHz

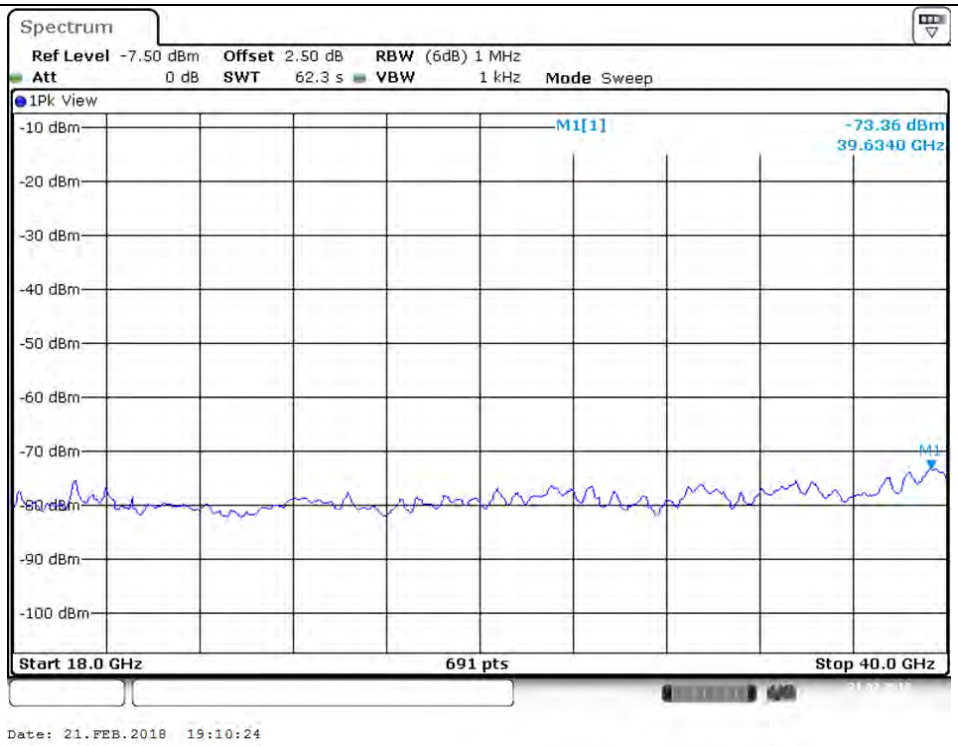


Date: 21.FEB.2018 19:00:48

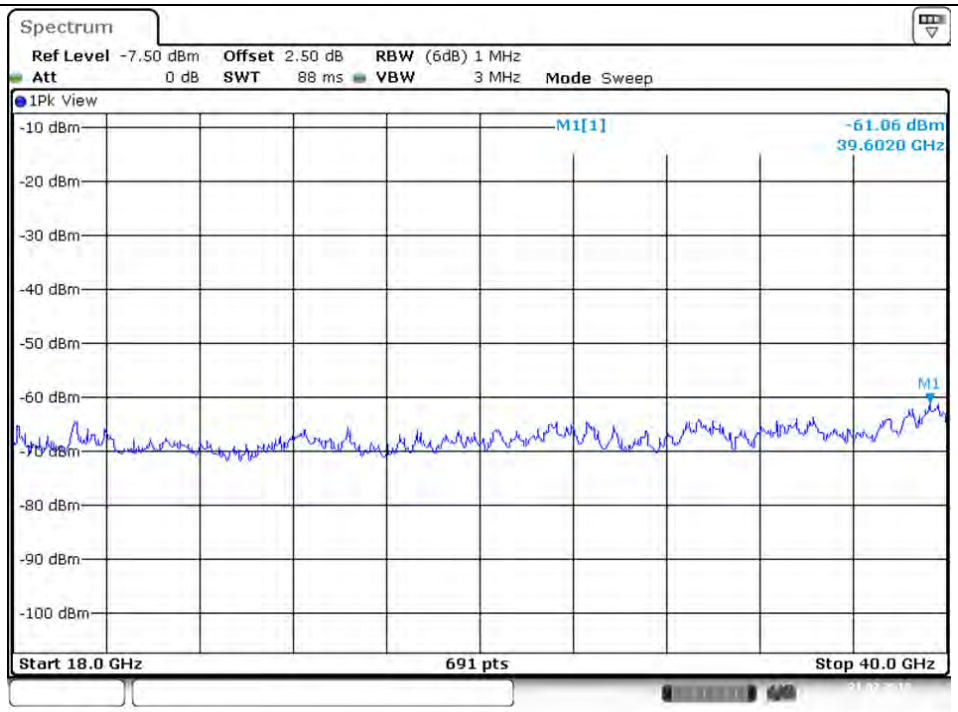
Plot on Configuration VHT20 / 5200 MHz / Average / Port 1 / 18GHz~40GHz



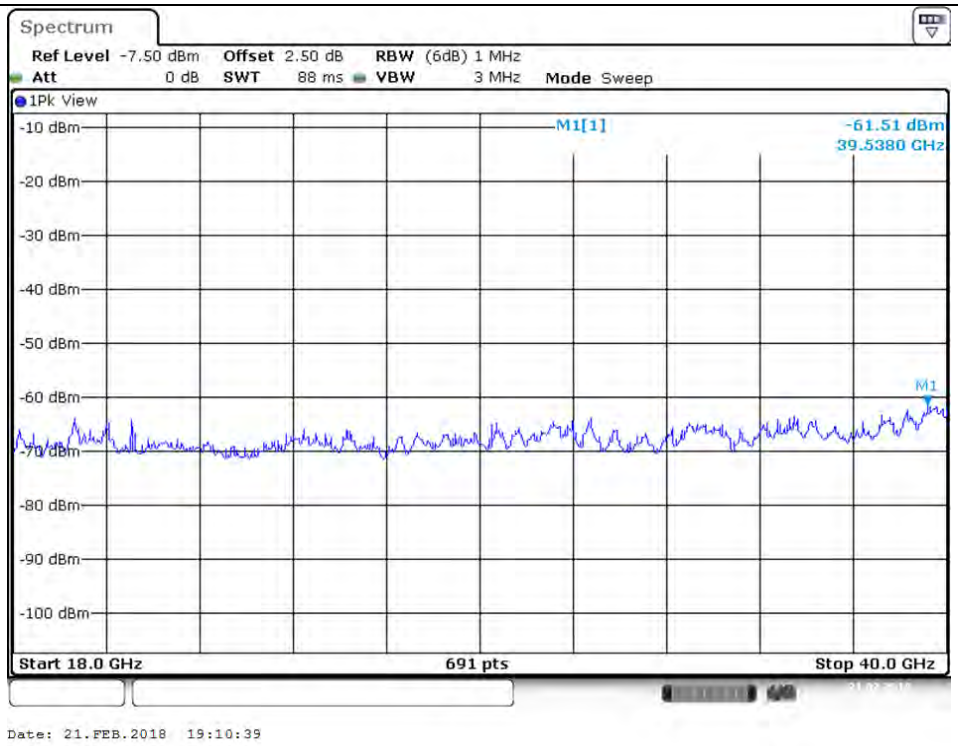
Plot on Configuration VHT20 / 5200 MHz / Average / Port 2 / 18GHz~40GHz



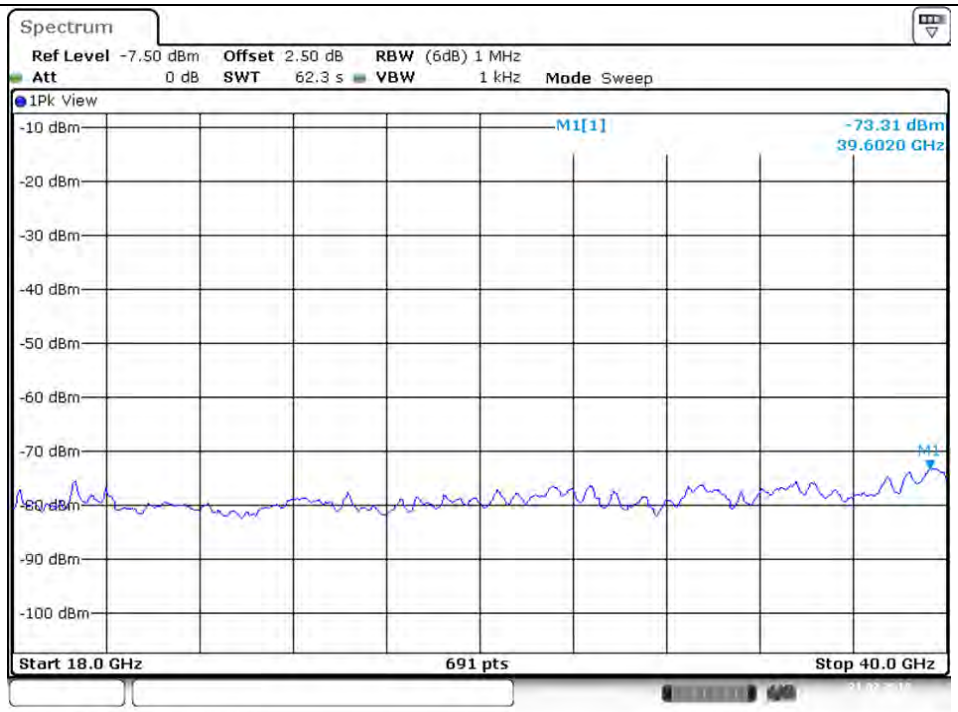
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 1 / 18GHz~40GHz



Plot on Configuration VHT20 / 5200 MHz / Peak / Port 2 / 18GHz~40GHz

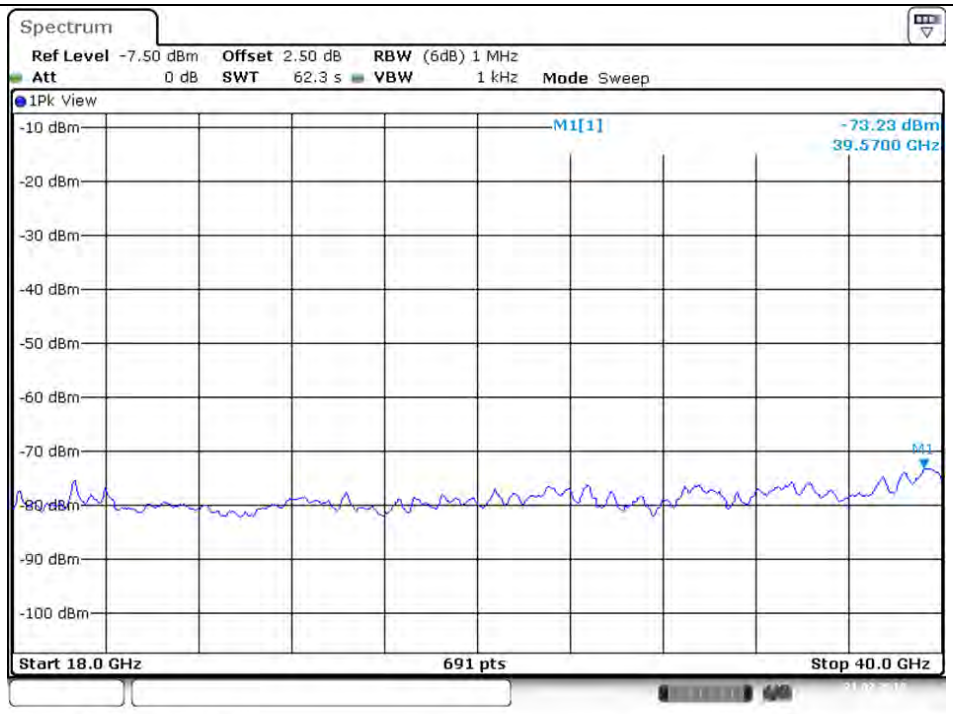


Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 / 18GHz~40GHz



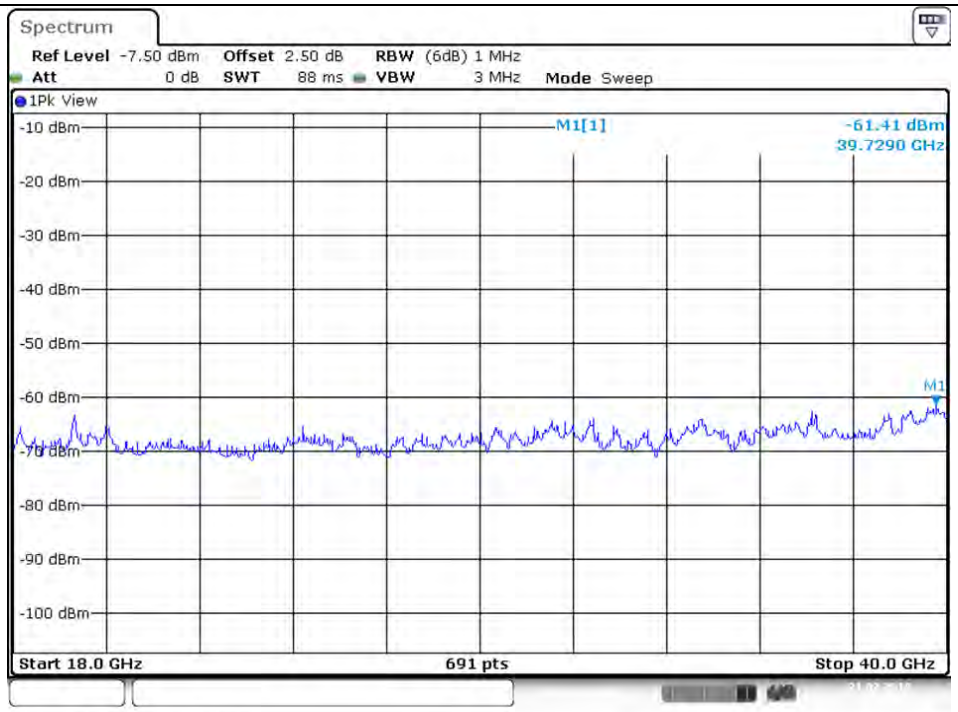
Date: 21.FEB.2018 19:15:11

Plot on Configuration VHT20 / 5240 MHz / Average / Port 2 / 18GHz~40GHz

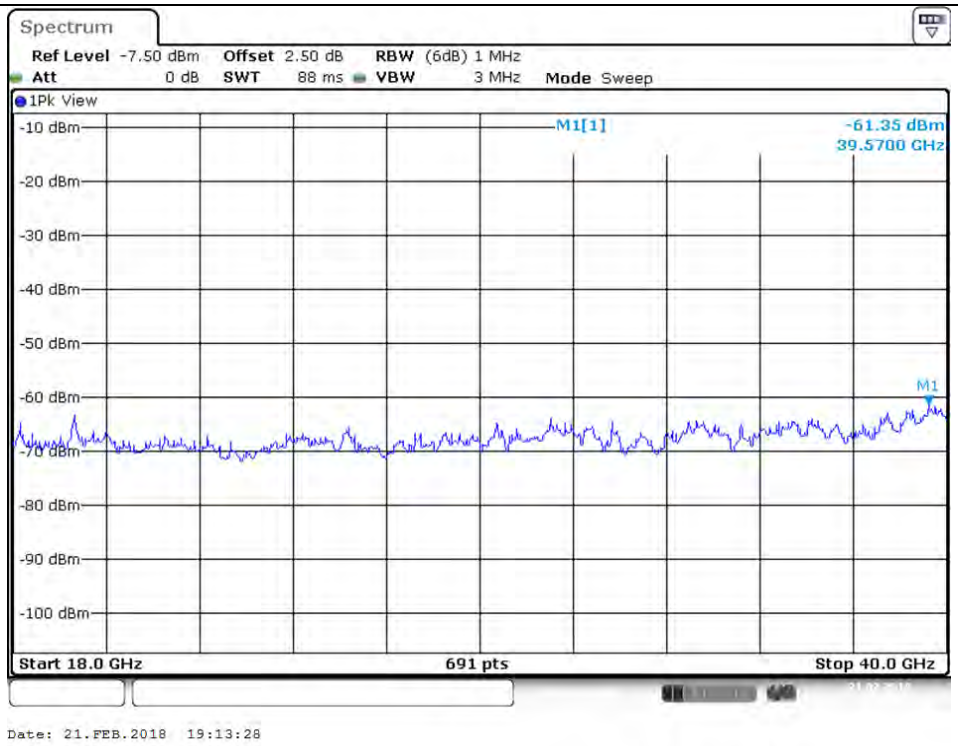


Date: 21.FEB.2018 19:13:12

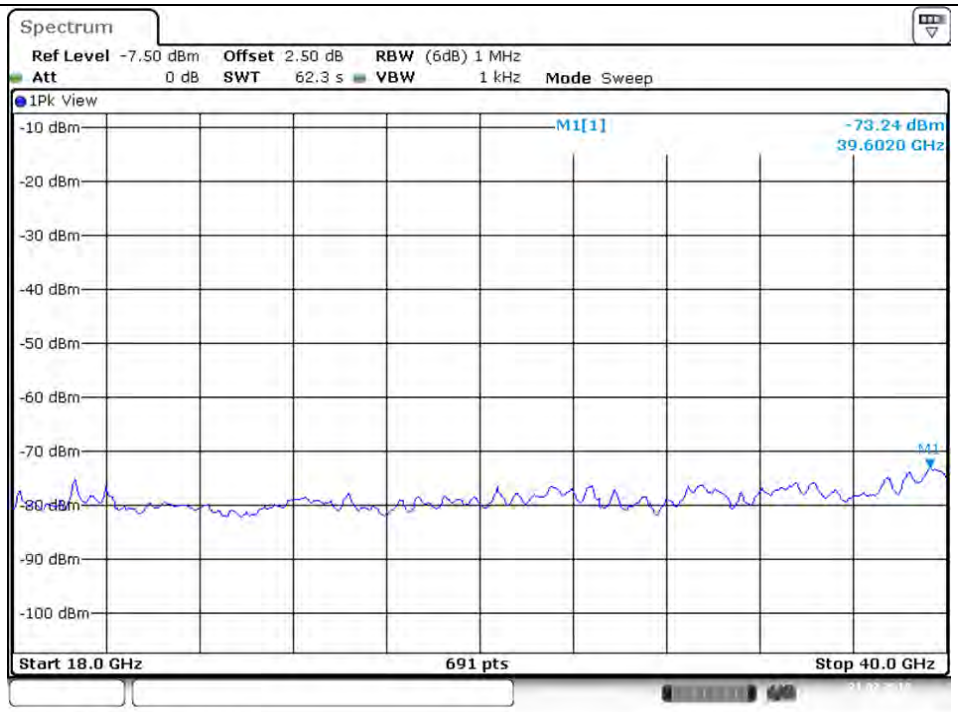
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 1 / 18GHz~40GHz



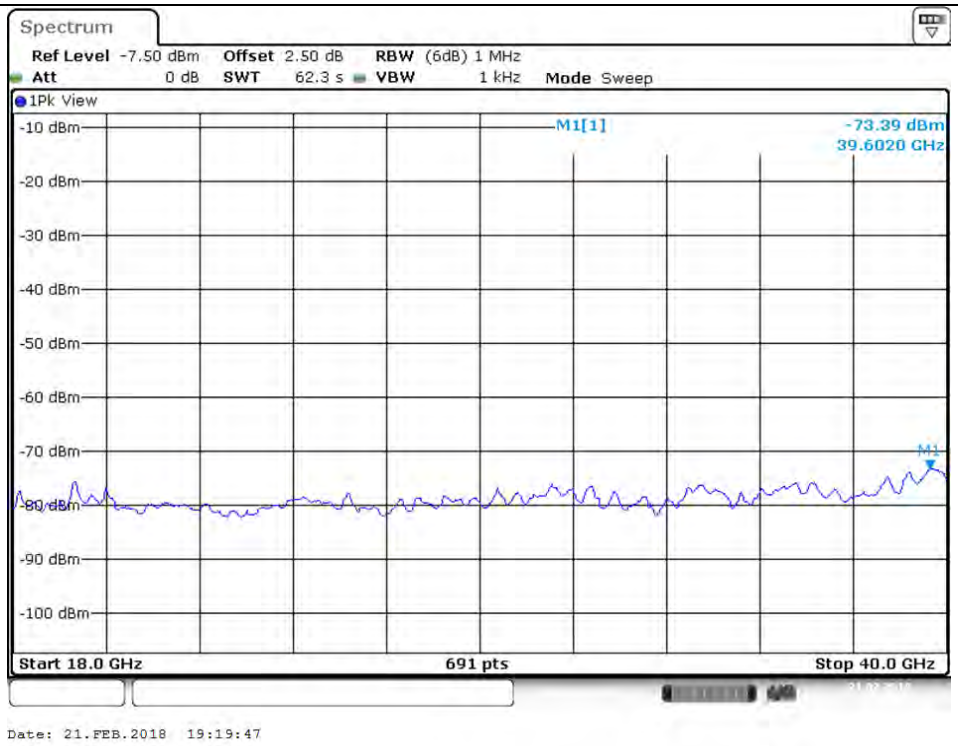
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 / 18GHz~40GHz



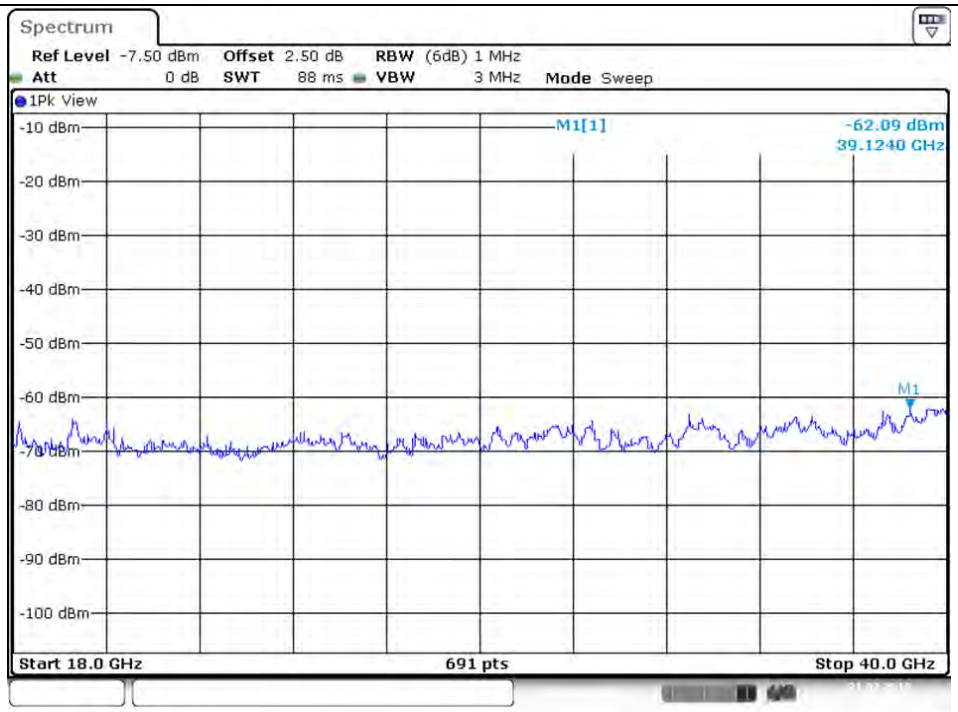
Plot on Configuration VHT80 / 5210 MHz / Average / Port 1 / 18GHz~40GHz



Plot on Configuration VHT80 / 5210 MHz / Average / Port 2 / 18GHz~40GHz

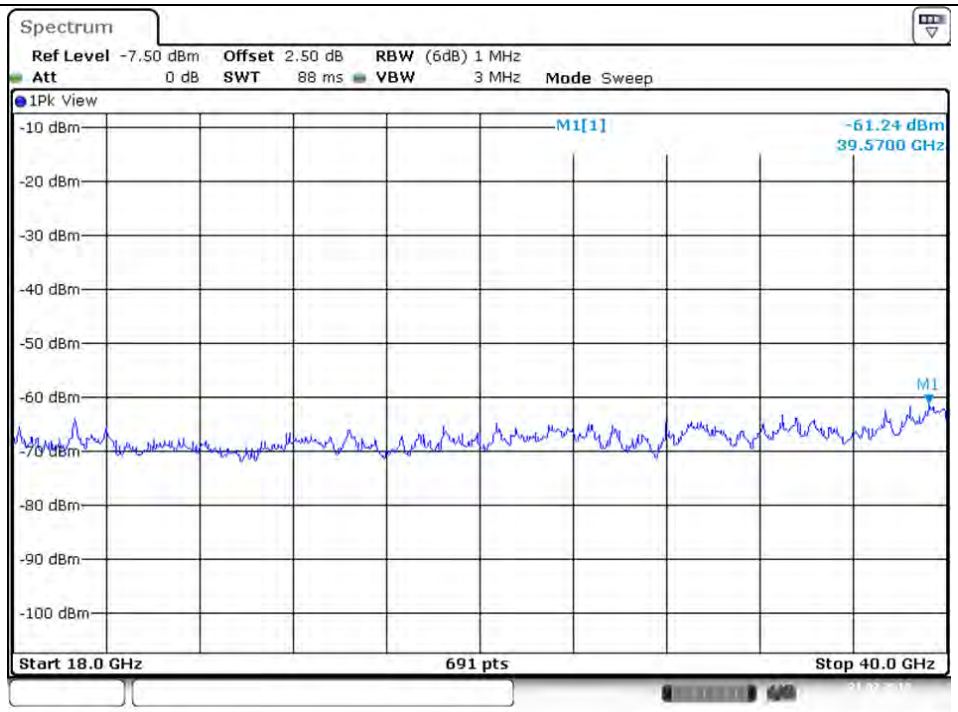


Plot on Configuration VHT80 / 5210 MHz / Peak / Port 1 / 18GHz~40GHz



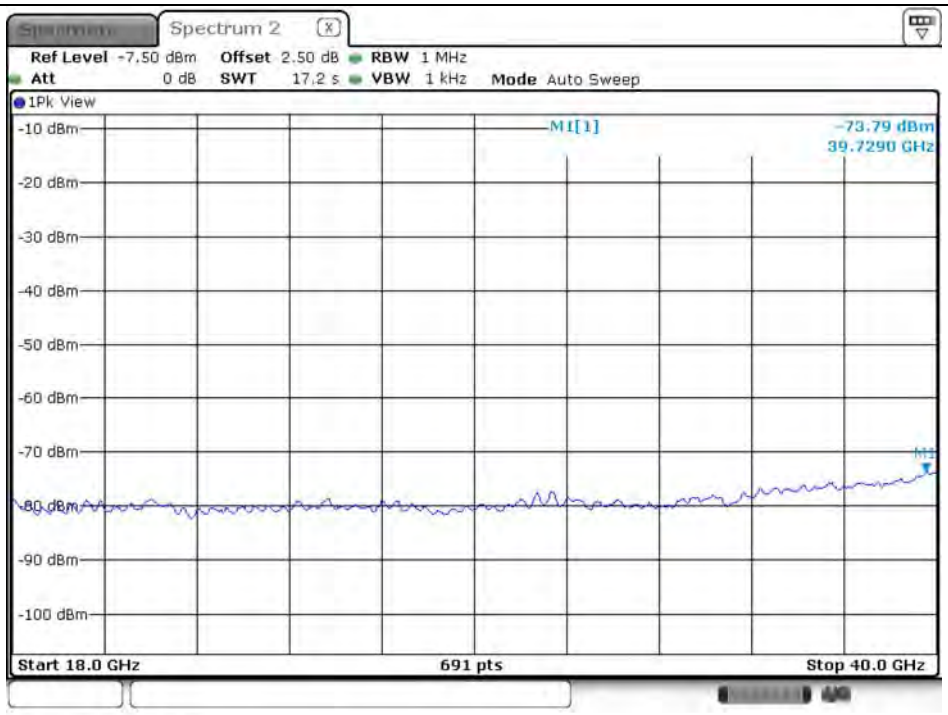
Date: 21.FEB.2018 19:17:25

Plot on Configuration VHT80 / 5210 MHz / Peak / Port 2 / 18GHz~40GHz



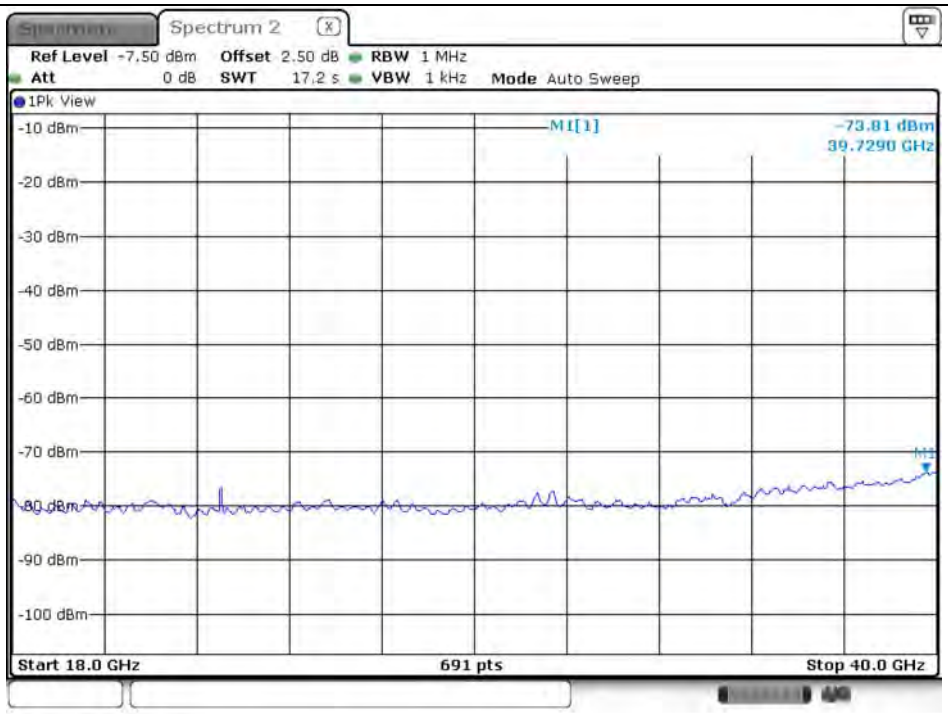
Date: 21.FEB.2018 19:17:55

Plot on Configuration VHT20 / 5745 MHz / Average / Port 1 / 18GHz~40GHz



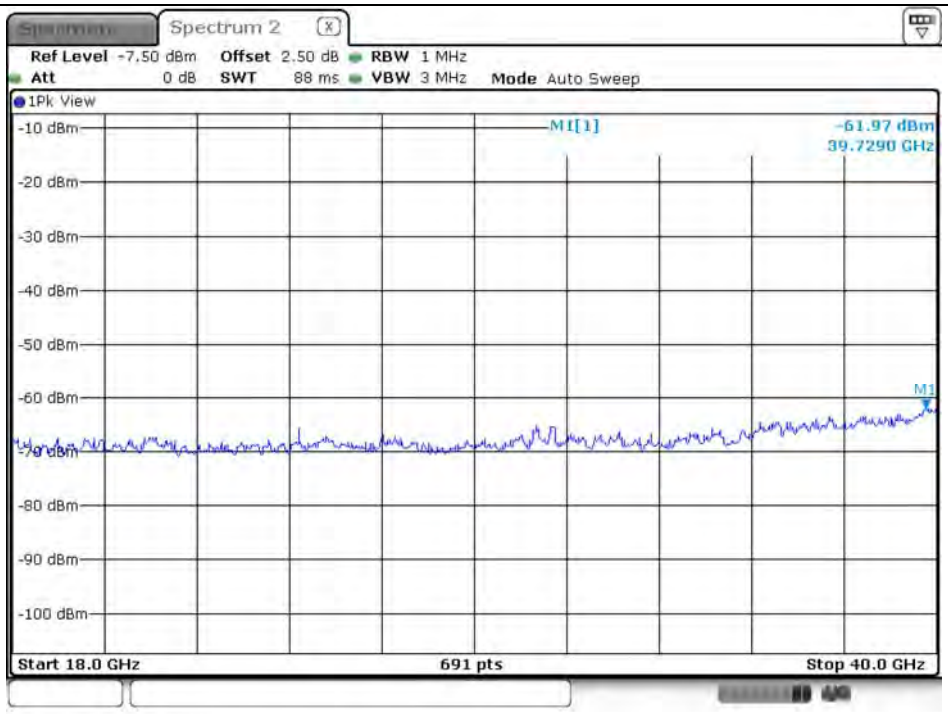
Date: 14.FEB.2018 10:58:48

Plot on Configuration VHT20 / 5745 MHz / Average / Port 2 / 18GHz~40GHz



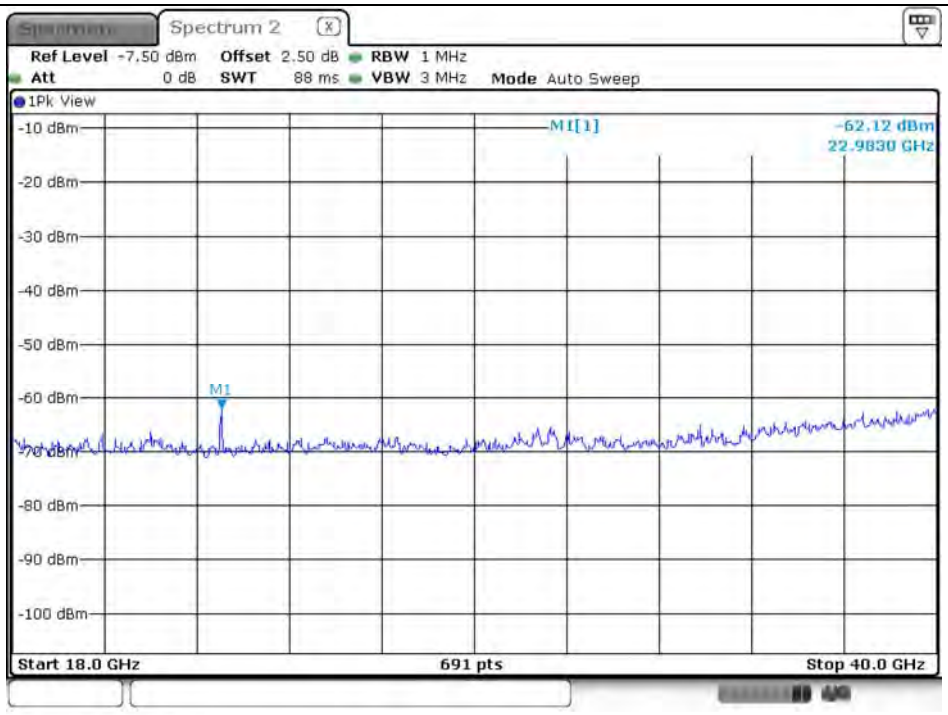
Date: 14.FEB.2018 11:00:59

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 1 / 18GHz~40GHz



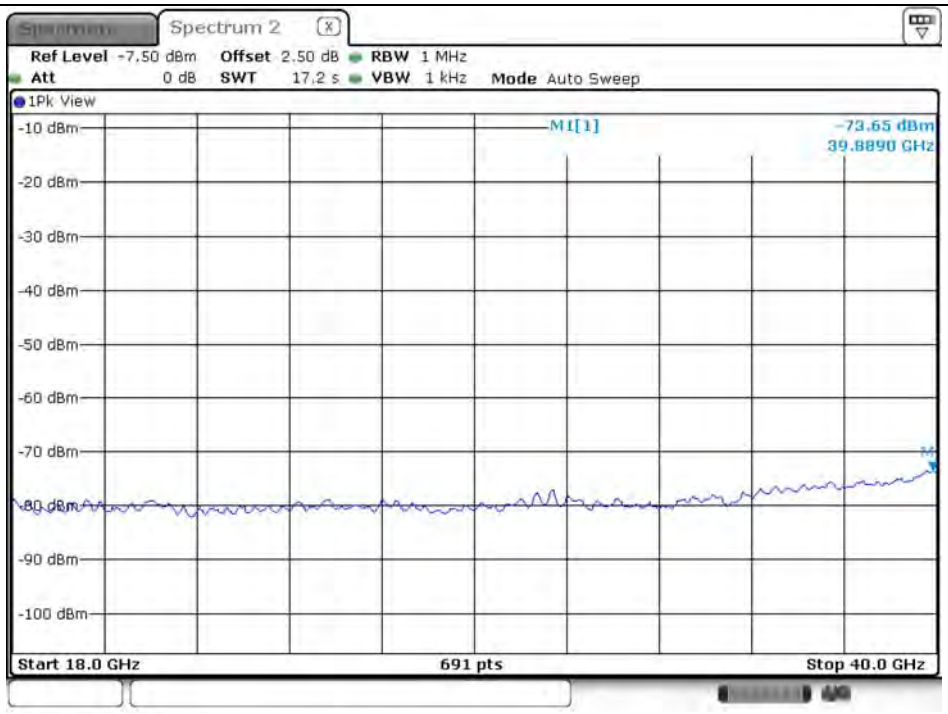
Date: 14.FEB.2018 10:59:32

Plot on Configuration VHT20 / 5745 MHz / Peak / Port 2 / 18GHz~40GHz



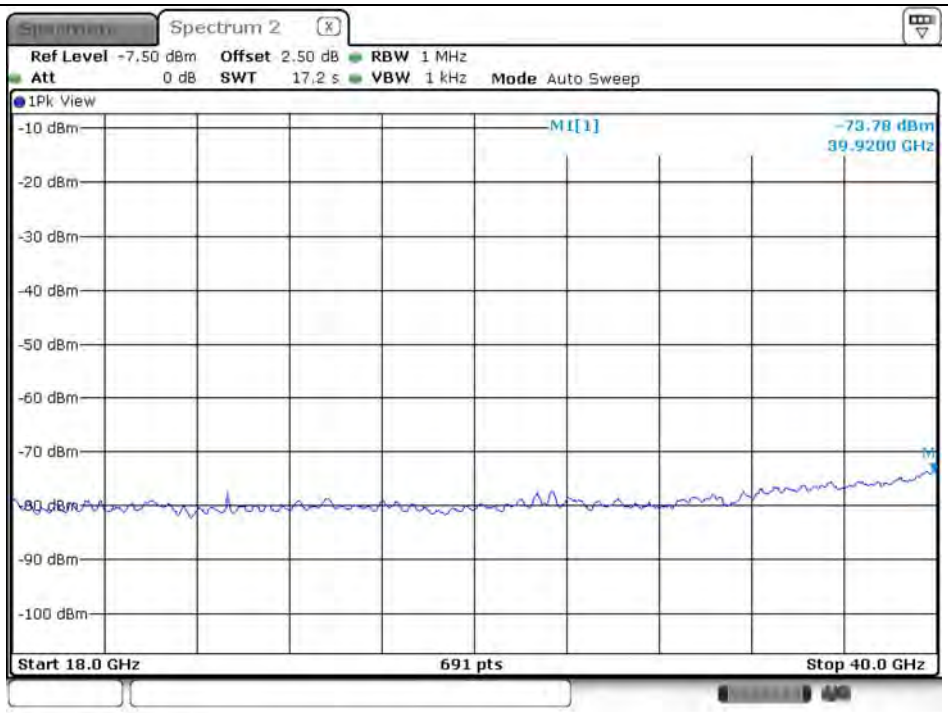
Date: 14.FEB.2018 11:01:31

Plot on Configuration VHT20 / 5785 MHz / Average / Port 1 / 18GHz~40GHz



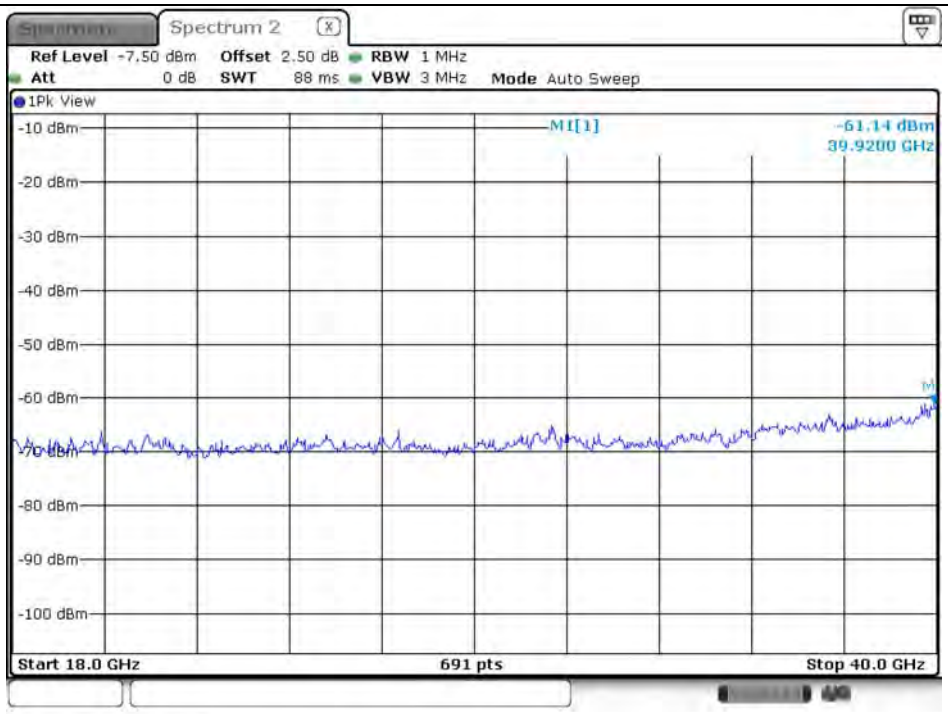
Date: 14.FEB.2018 11:07:39

Plot on Configuration VHT20 / 5785 MHz / Average / Port 2 / 18GHz~40GHz



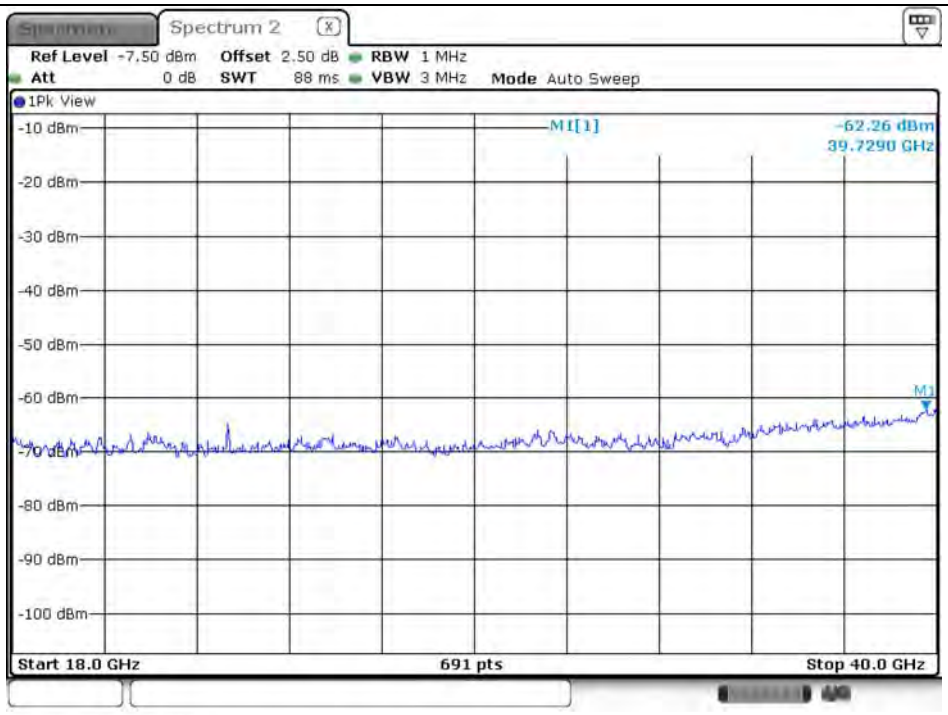
Date: 14.FEB.2018 11:09:45

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 1 / 18GHz~40GHz



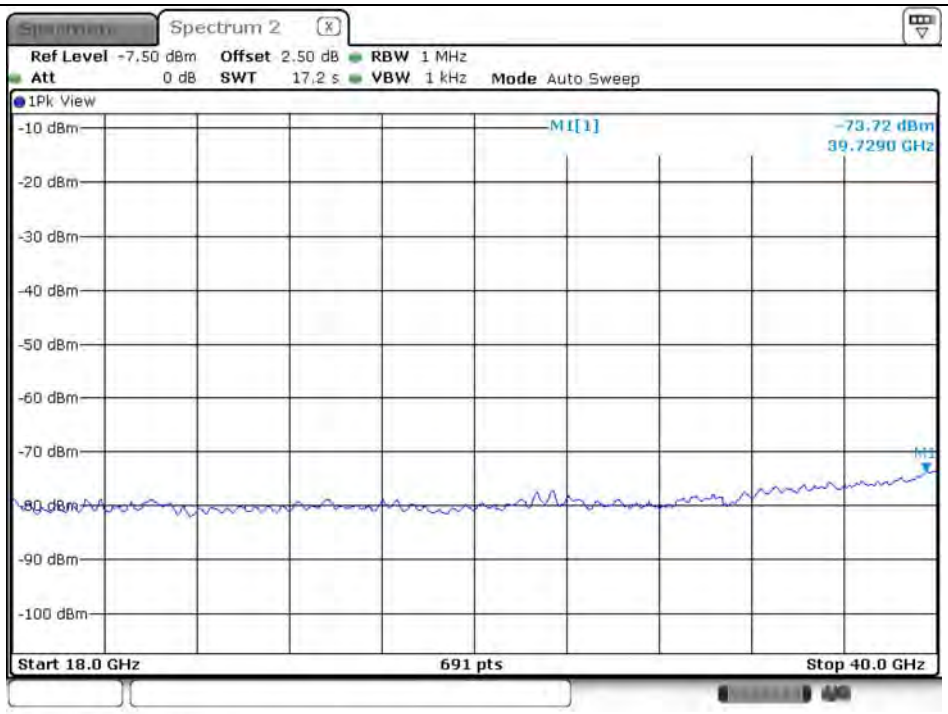
Date: 14.FEB.2018 11:08:26

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 2 / 18GHz~40GHz



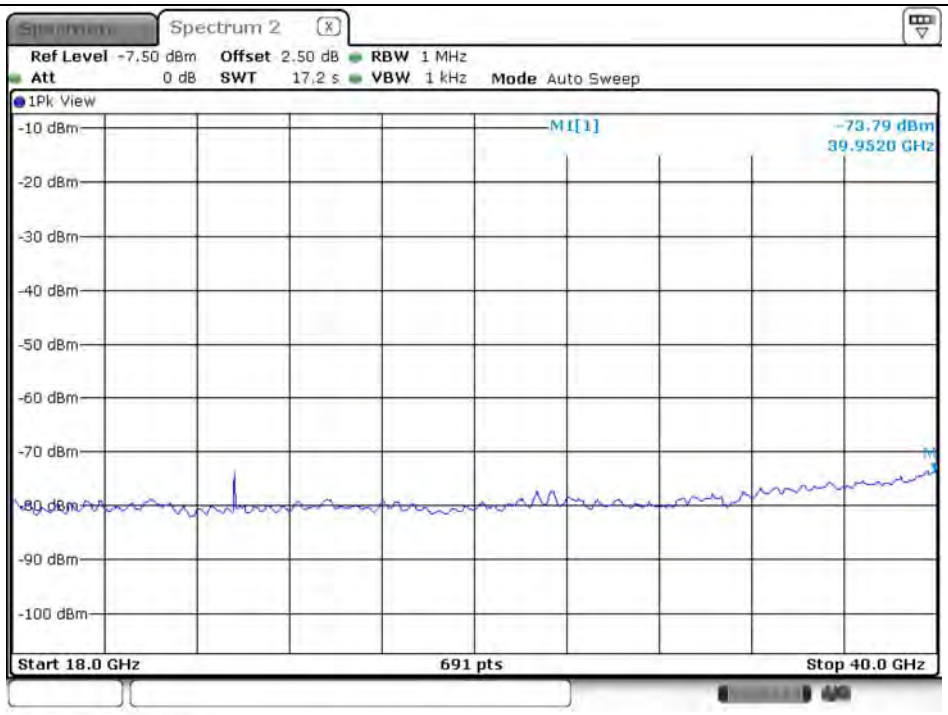
Date: 14.FEB.2018 11:10:24

Plot on Configuration VHT20 / 5825 MHz / Average / Port 1 / 18GHz~40GHz



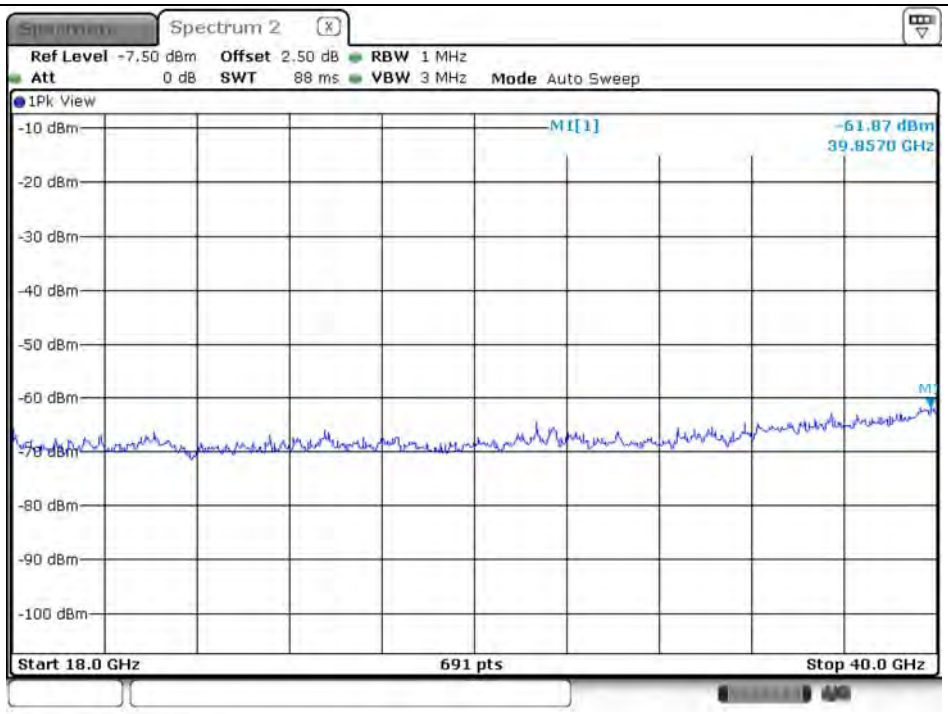
Date: 14.FEB.2018 11:14:59

Plot on Configuration VHT20 / 5825 MHz / Average / Port 2 / 18GHz~40GHz



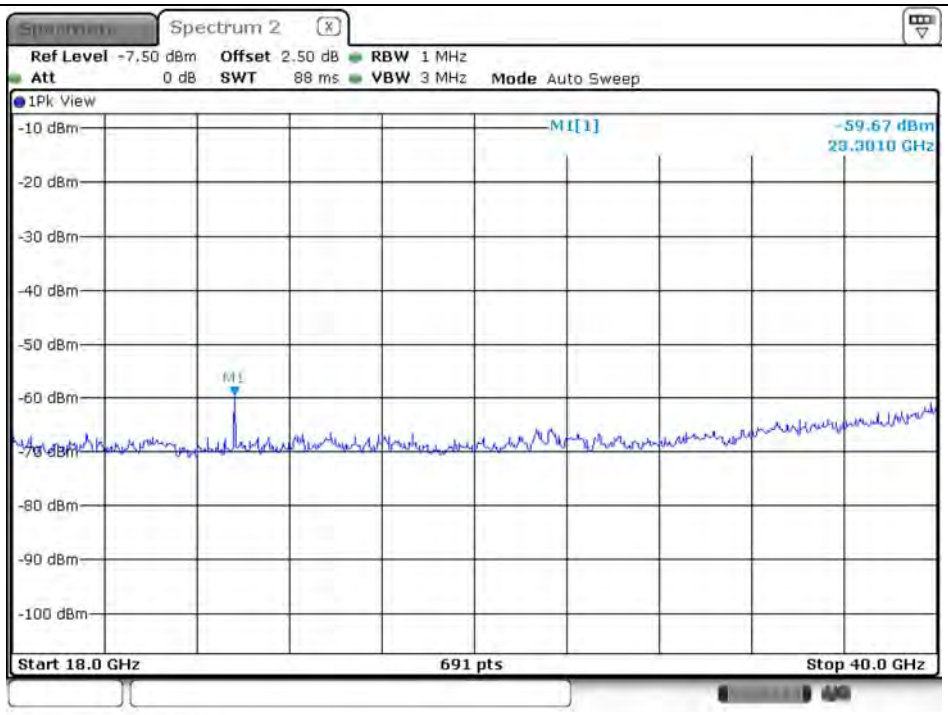
Date: 14.FEB.2018 11:17:12

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 1 / 18GHz~40GHz



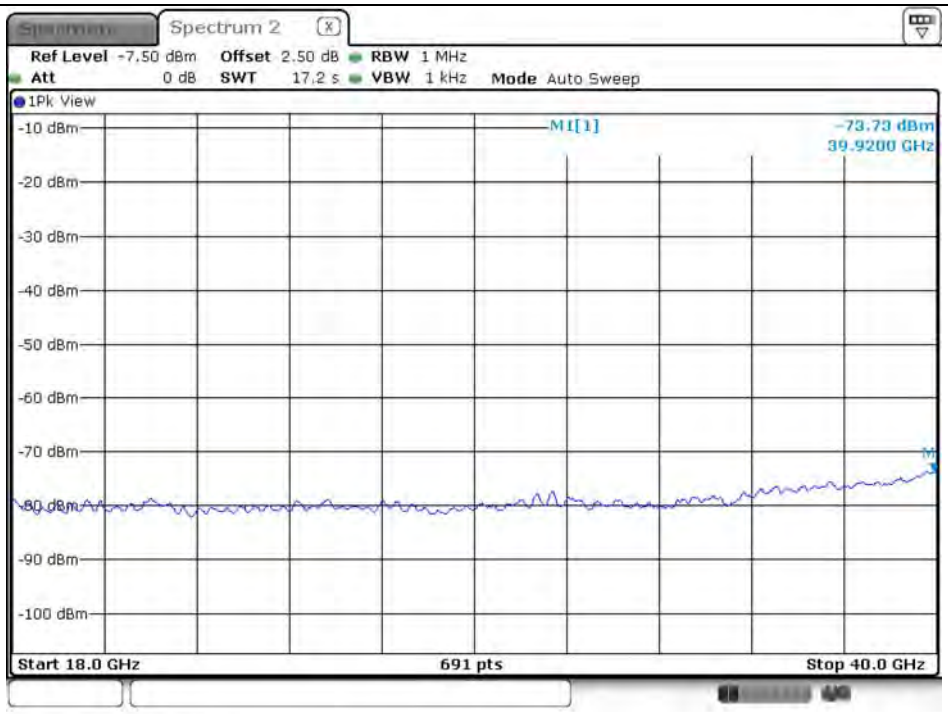
Date: 14.FEB.2018 11:15:42

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 2 / 18GHz~40GHz



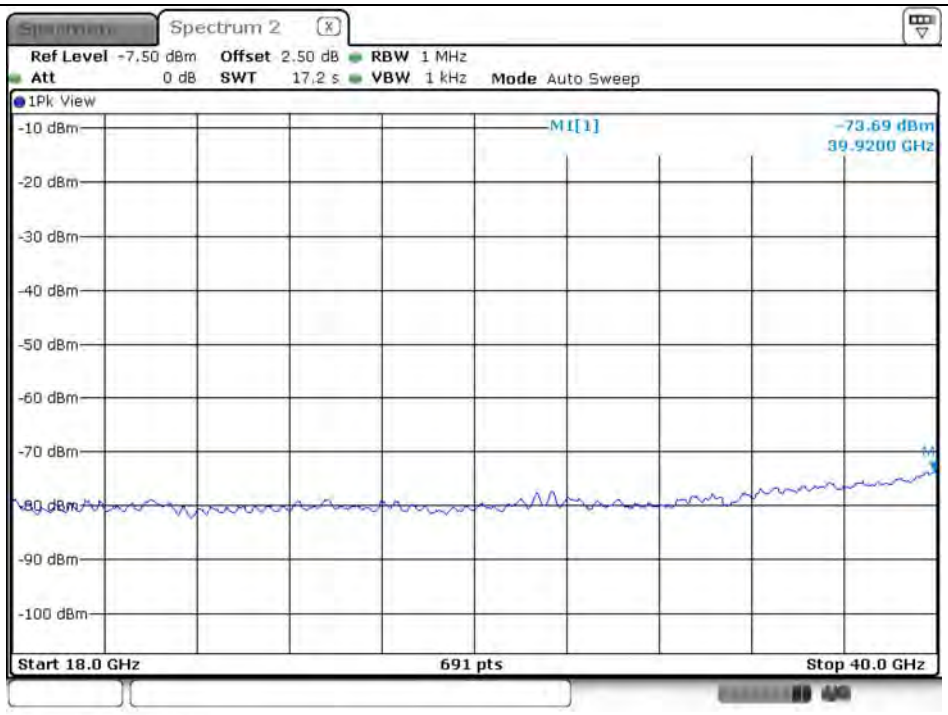
Date: 14.FEB.2018 11:17:54

Plot on Configuration VHT80 / 5775 MHz / Average / Port 1 / 18GHz~40GHz



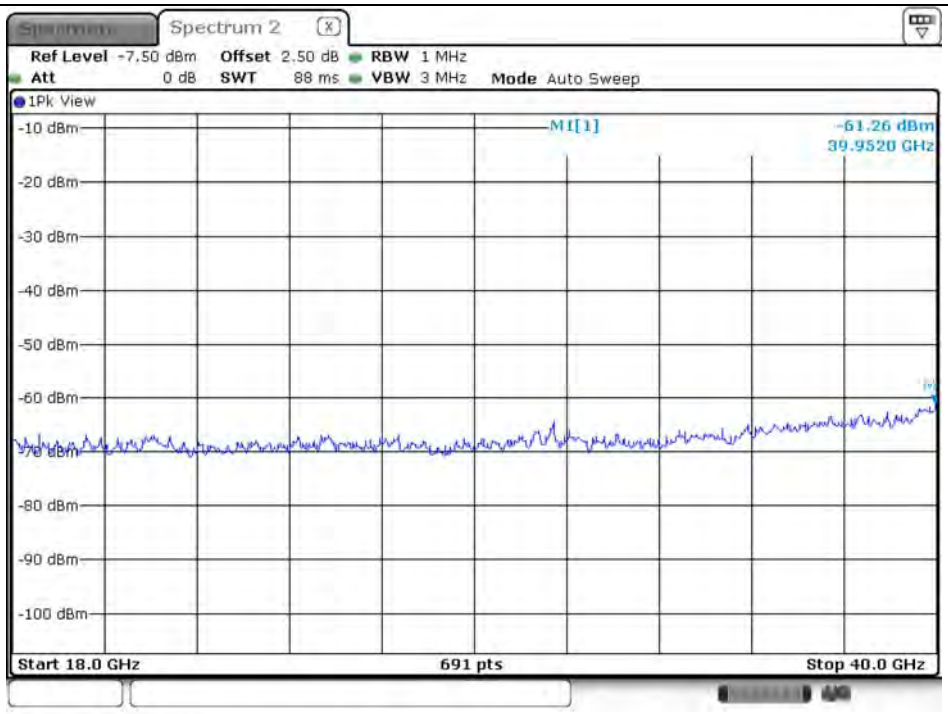
Date: 14.FEB.2018 11:23:39

Plot on Configuration VHT80 / 5775 MHz / Average / Port 2 / 18GHz~40GHz



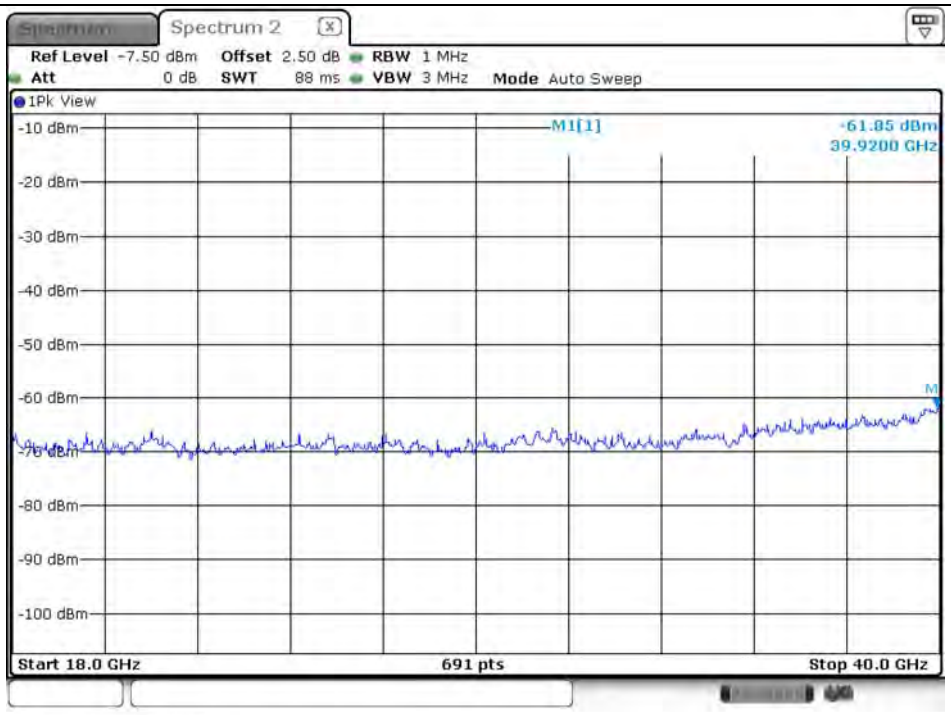
Date: 14.FEB.2018 11:26:16

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 1 / 18GHz~40GHz



Date: 14.FEB.2018 11:24:17

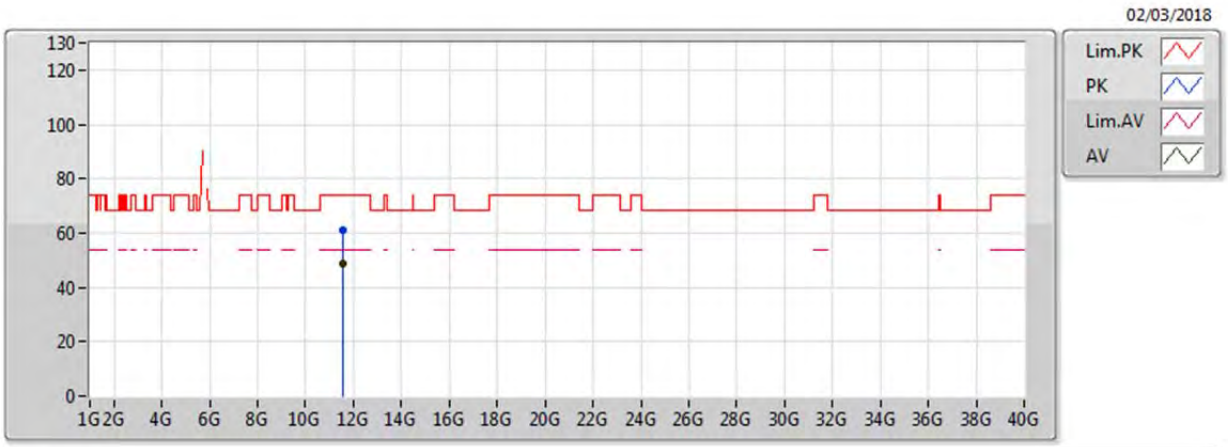
Plot on Configuration VHT80 / 5775 MHz / Peak / Port 2 / 18GHz~40GHz



Date: 14.FEB.2018 11:26:58

For Cabinet:

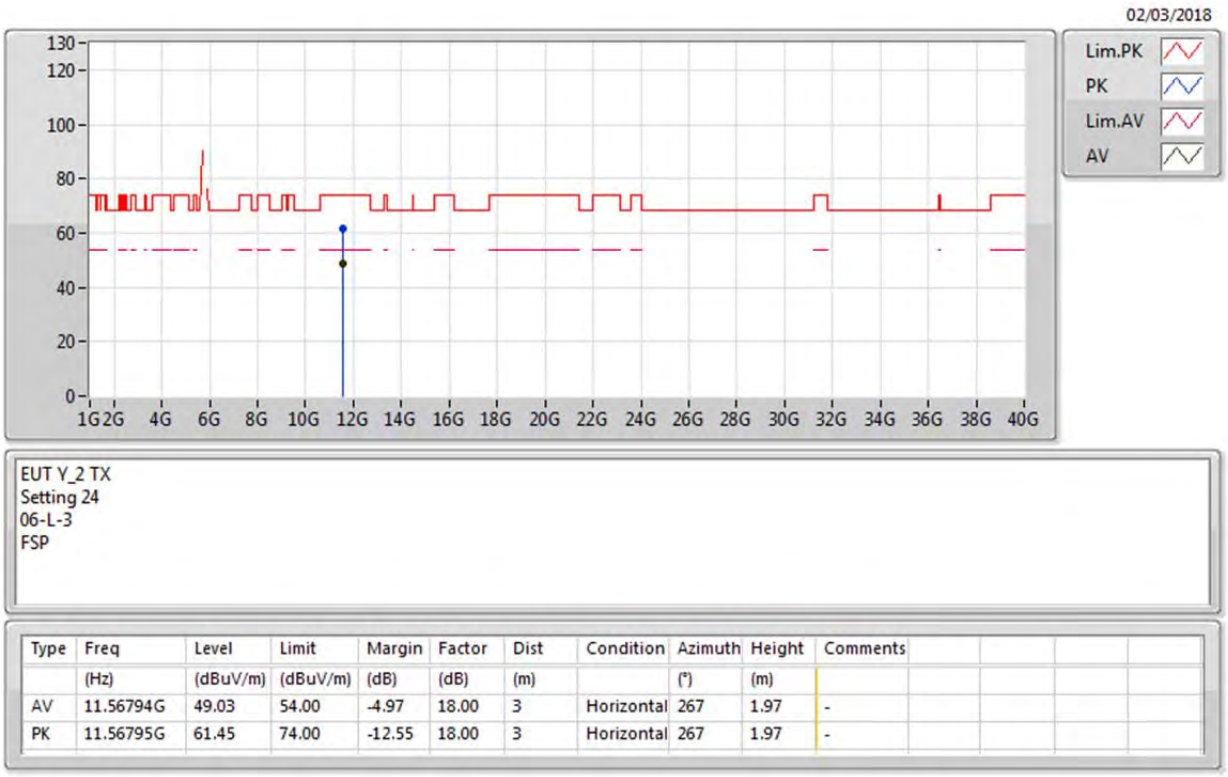
Cabinet CTX



EUT Y_2 TX
Setting 24
06-L-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.5675G	49.03	54.00	-4.97	18.00	3	Vertical	0	1.50	-
PK	11.56816G	61.15	74.00	-12.85	18.00	3	Vertical	0	1.50	-

Cabinet CTX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.56794G	49.03	54.00	-4.97	18.00	3	Horizontal	267	1.97	-
PK	11.56795G	61.45	74.00	-12.55	18.00	3	Horizontal	267	1.97	-

For Conducted Bandedge:

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Average / Port 1 + Port 2

Frequency(MHz)	Port 1 (TX1) Bandedge Level (dBm)	Port 2 (TX2) Bandedge Level (dBm)	Total Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
5180	-52.46	-53.16	-41.79	-41.25	0.54
5200	-52.67	-52.75	-41.70	-41.25	0.45
5240	-54.31	-53.04	-42.62	-41.25	1.37

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Peak / Port 1 + Port 2

Frequency(MHz)	Port 1 (TX1) Bandedge Level (dBm)	Port 2 (TX2) Bandedge Level (dBm)	Total Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
5180	-42.14	-41.87	-30.99	-21.25	9.74
5200	-41.15	-39.17	-29.04	-21.25	7.79
5240	-41.72	-39.22	-29.28	-21.25	8.03
5745	-40.53	-42.59	-30.43	-27.00	3.43
5785	-42.83	-42.57	-31.69	-27.00	4.69
5825	-38.78	-40.96	-28.72	-27.00	1.72

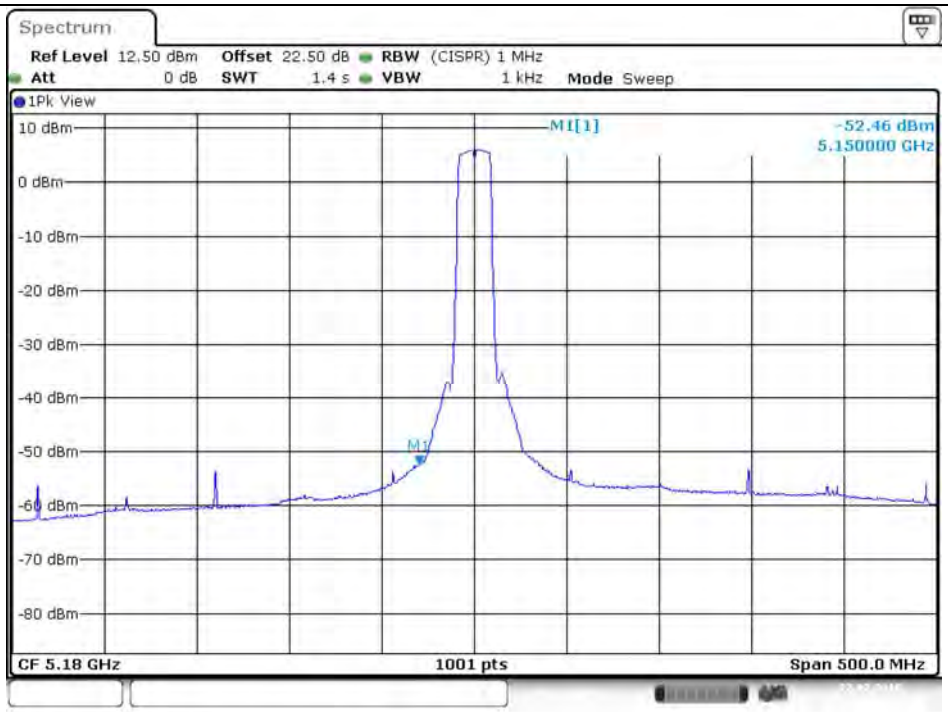
Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT80 / Average / Port 1 + Port 2

Frequency(MHz)	Port 1 (TX1) Bandedge Level (dBm)	Port 2 (TX2) Bandedge Level (dBm)	Total Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
5210	-53.81	-52.37	-42.02	-41.25	0.77

Temperature	22 ℃	**Humidity**	54%
Test Engineer	Serway Li / Eddie Weng	**Configurations**	VHT20 / Peak / Port 1 + Port 2

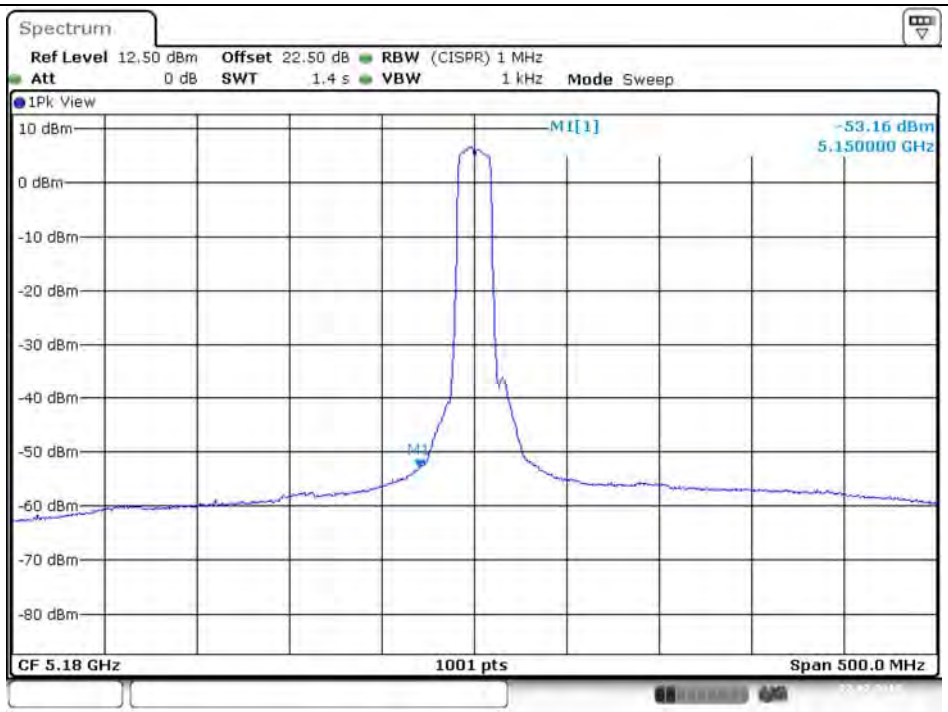
Frequency(MHz)	Port 1 (TX1) Bandedge Level (dBm)	Port 2 (TX2) Bandedge Level (dBm)	Total Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
5210	-40.33	-40.72	-29.51	-21.25	8.26
5775	-38.88	-38.27	-27.55	-27.00	0.55

Plot on Configuration VHT20 / 5180 MHz / Average / Port 1 (TX1)



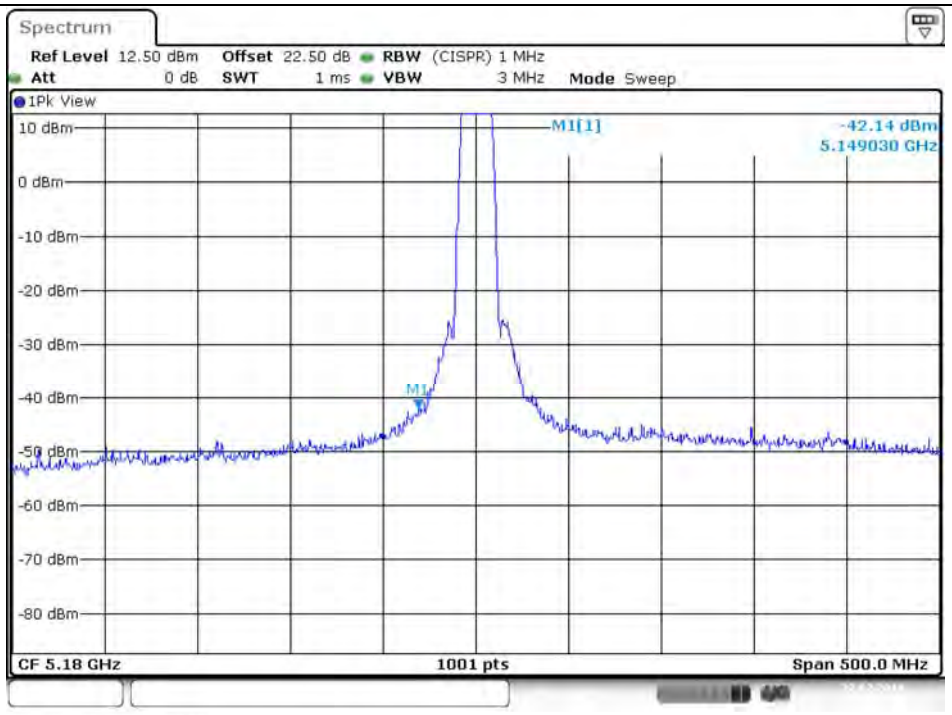
Date: 22.FEB.2018 21:26:44

Plot on Configuration VHT20 / 5180 MHz / Average / Port 2 (TX2)



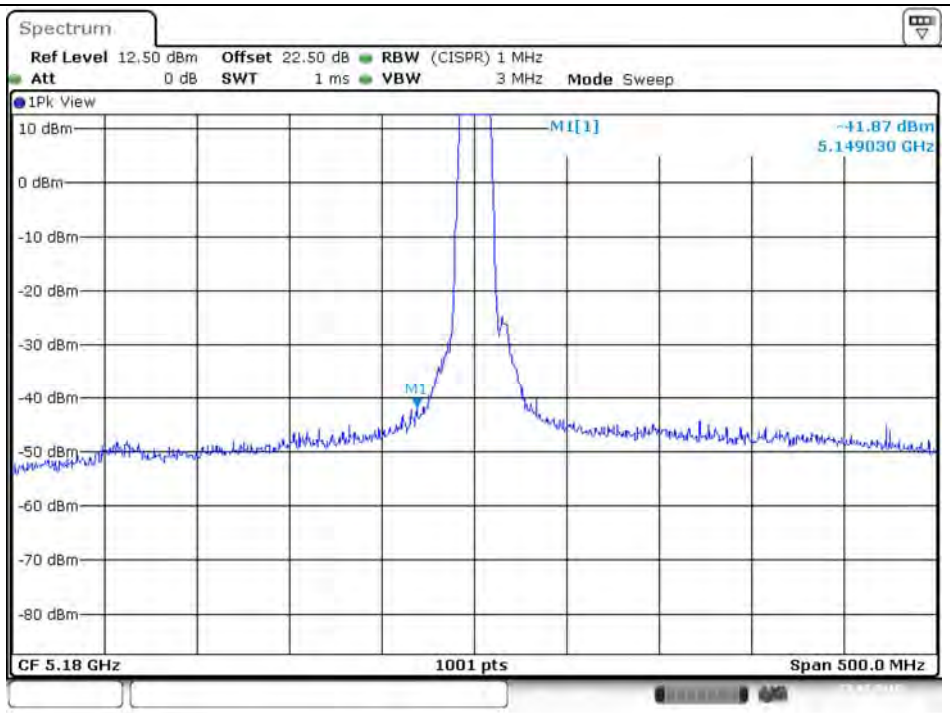
Date: 22.FEB.2018 21:24:28

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 1 (TX1)



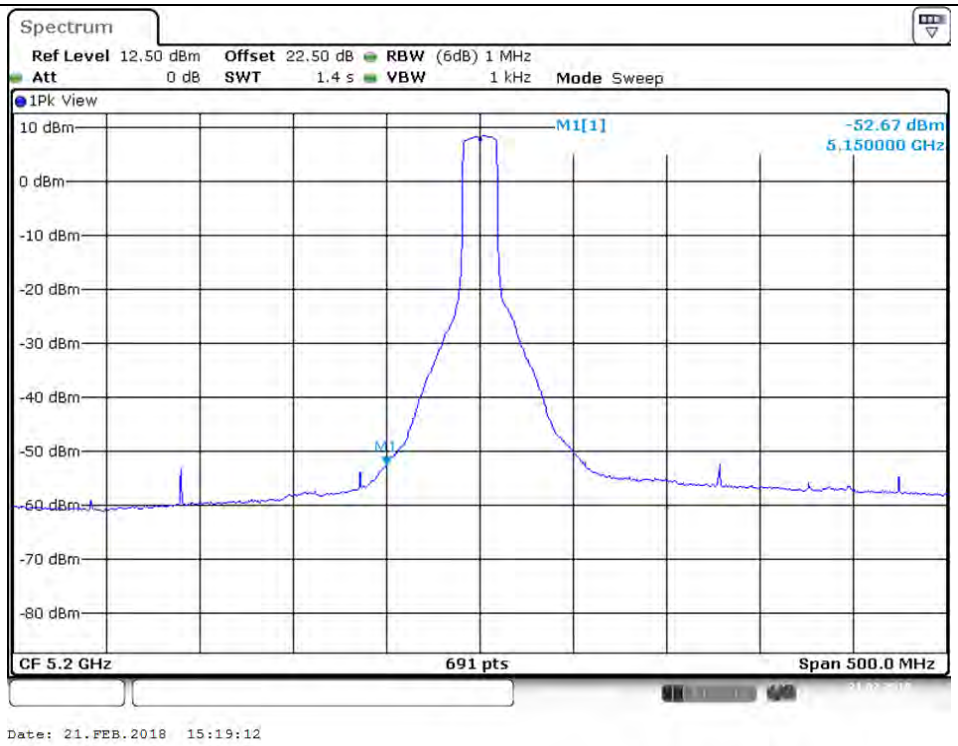
Date: 22.FEB.2018 21:36:11

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 (TX2)

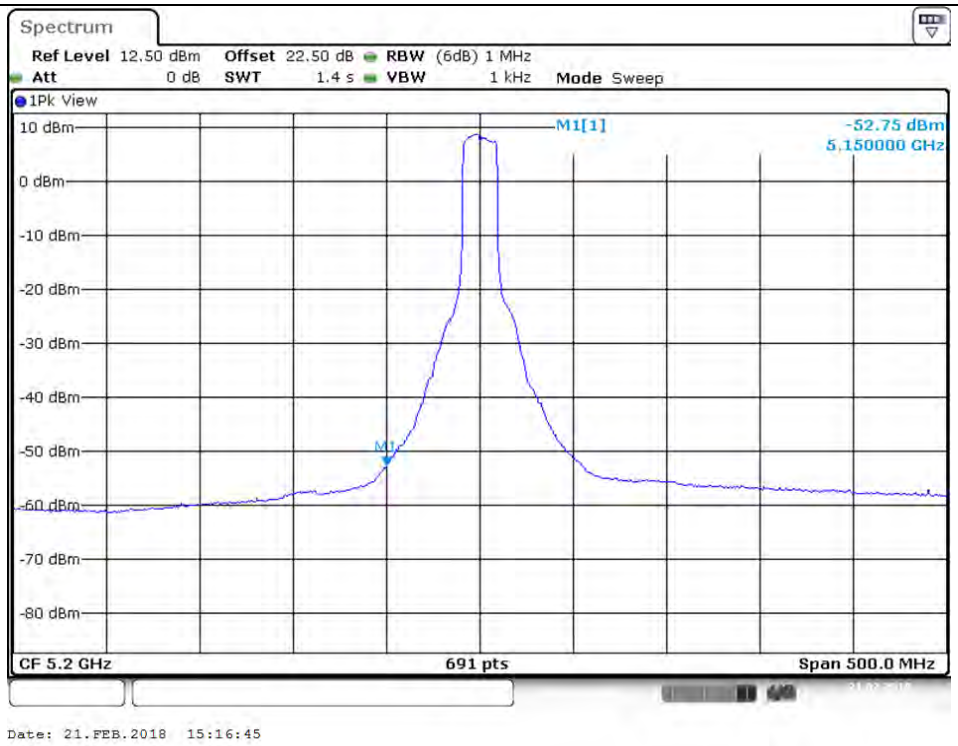


Date: 22.FEB.2018 21:35:04

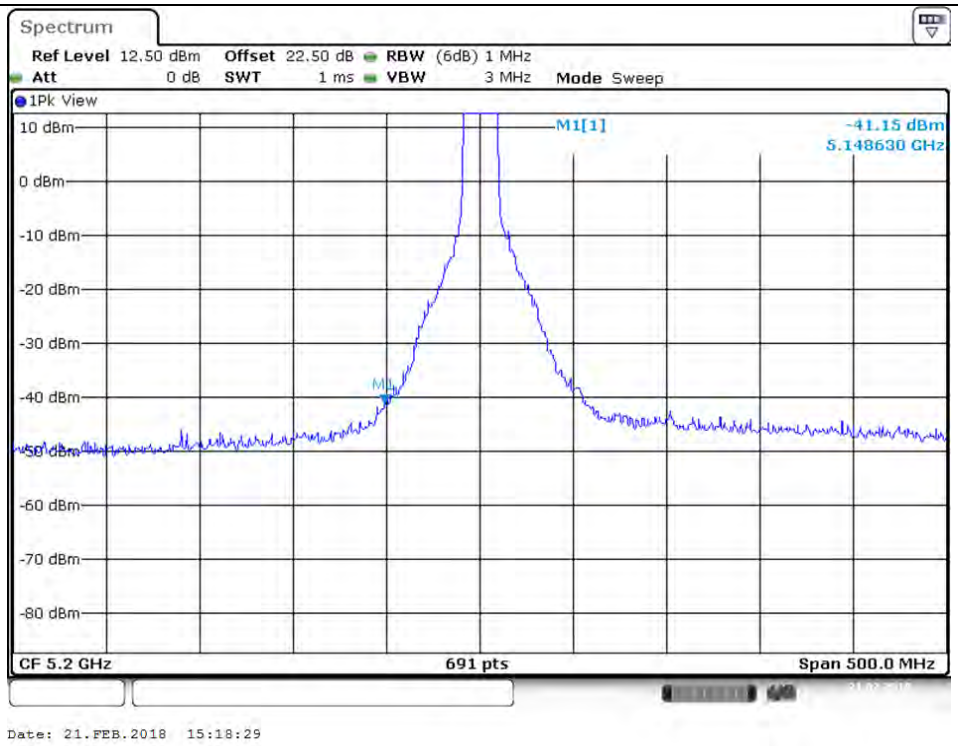
Plot on Configuration VHT20 / 5200 MHz / Average / Port 1 (TX1)



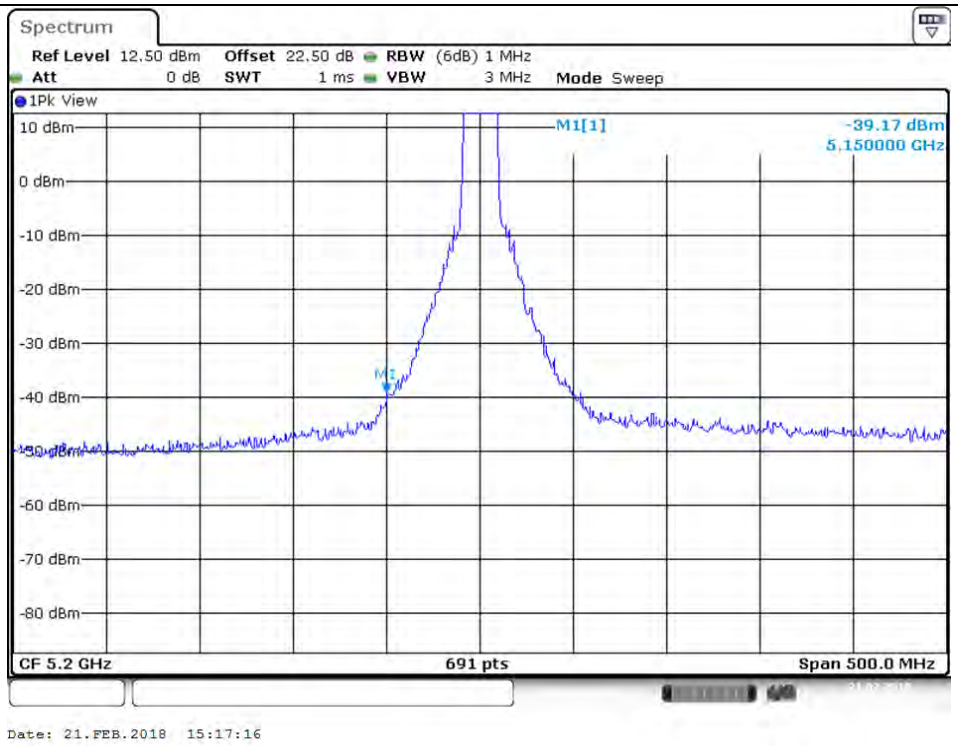
Plot on Configuration VHT20 / 5200 MHz / Average / Port 2 (TX2)



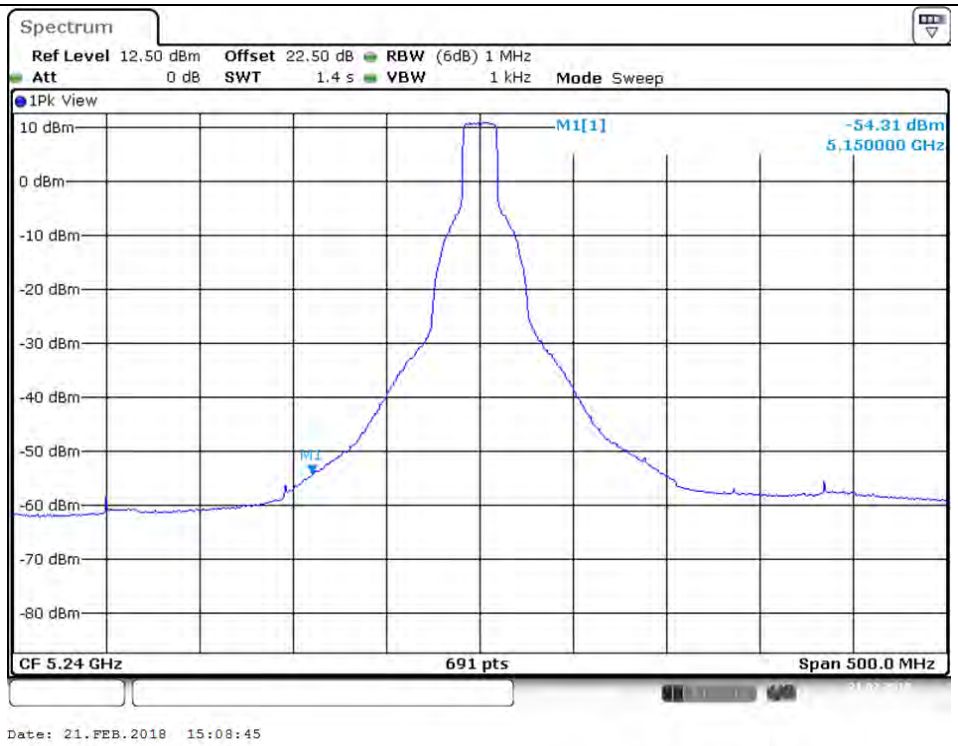
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 1 (TX1)



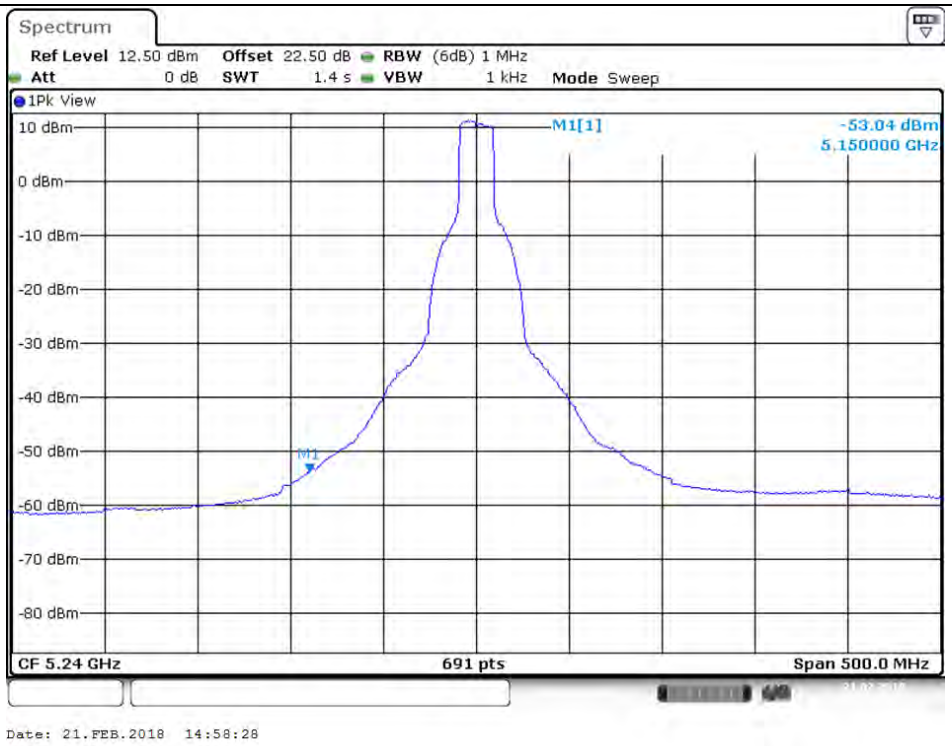
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 2 (TX2)



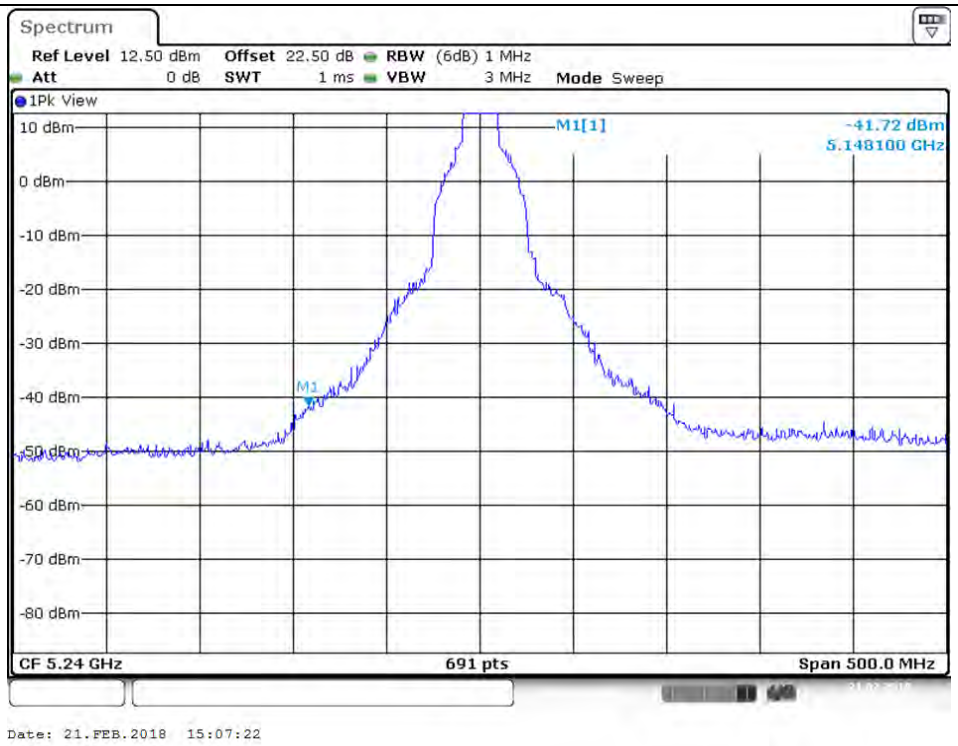
Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 (TX1)



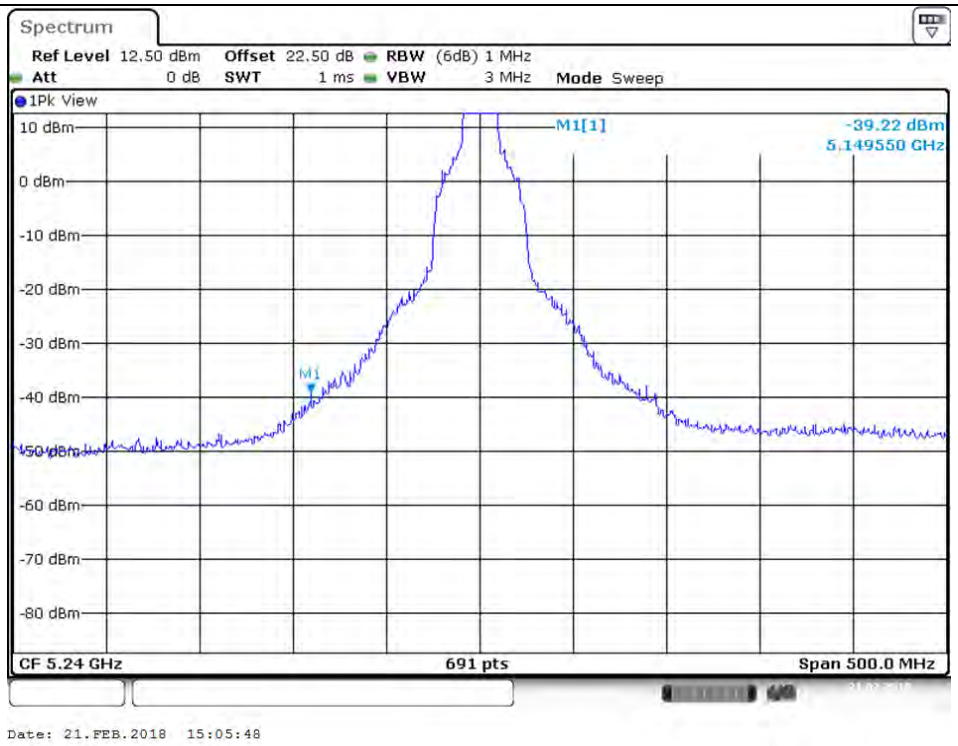
Plot on Configuration VHT20 / 5240 MHz / Average / Port 2 (TX2)



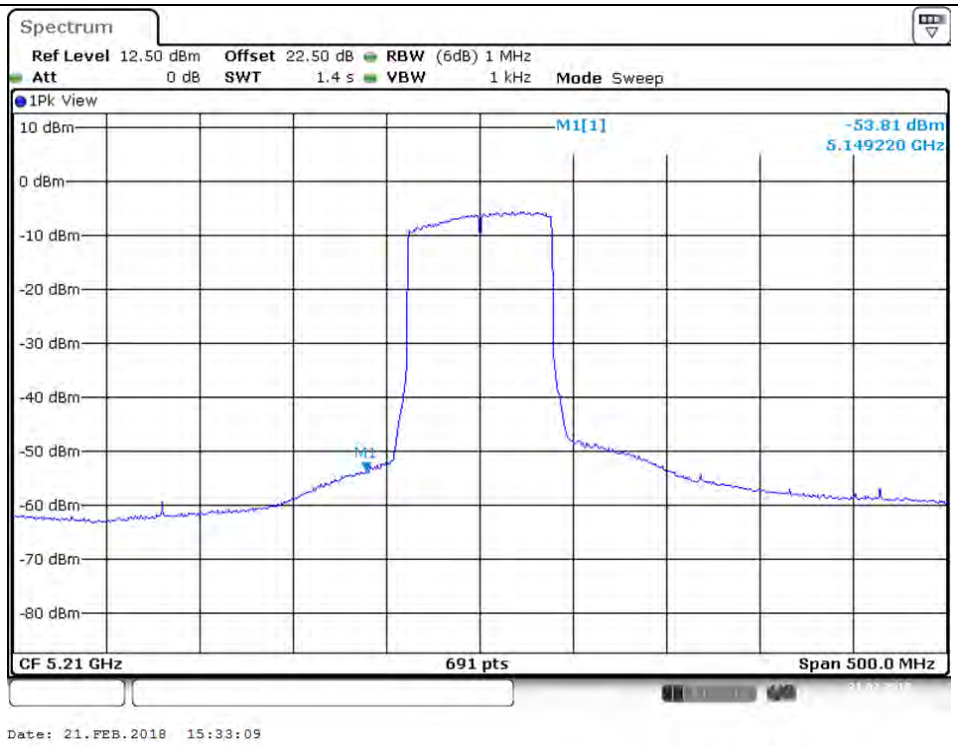
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 1 (TX1)



Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 (TX2)

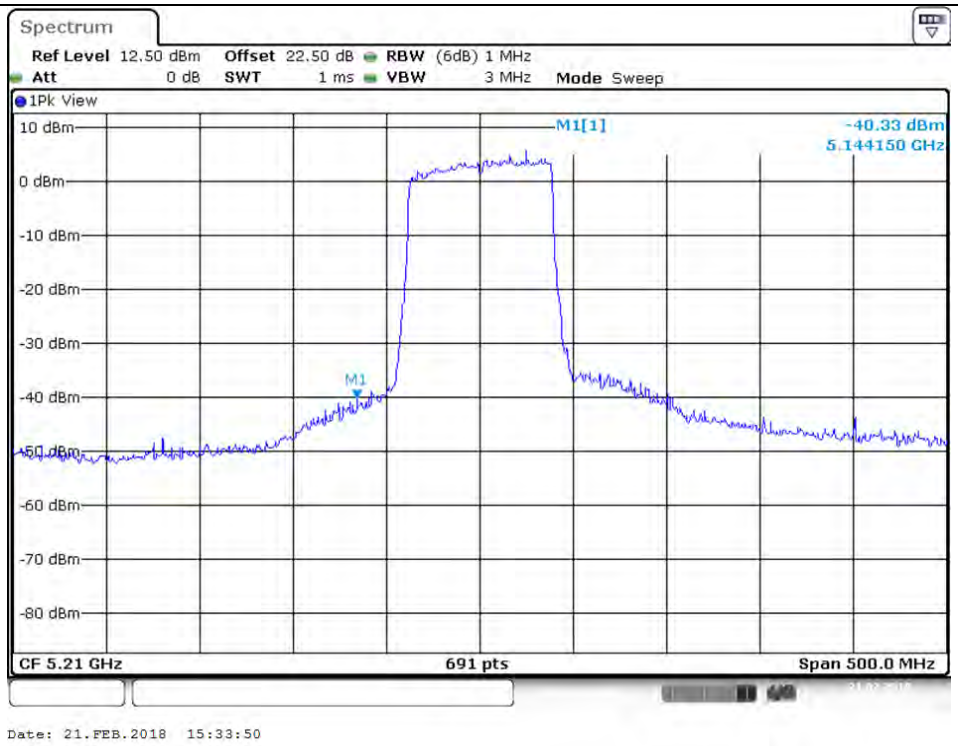


Plot on Configuration VHT80 / 5210 MHz / Average / Port 1 (TX1)

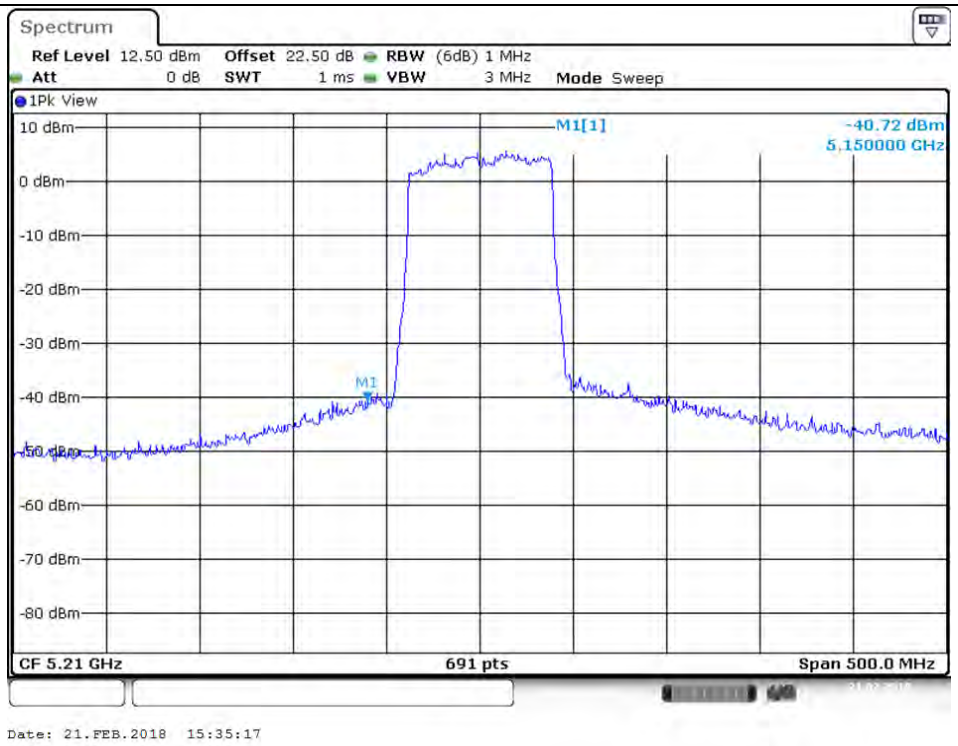


Plot on Configuration VHT80 / 5210 MHz / Average / Port 2 (TX2)

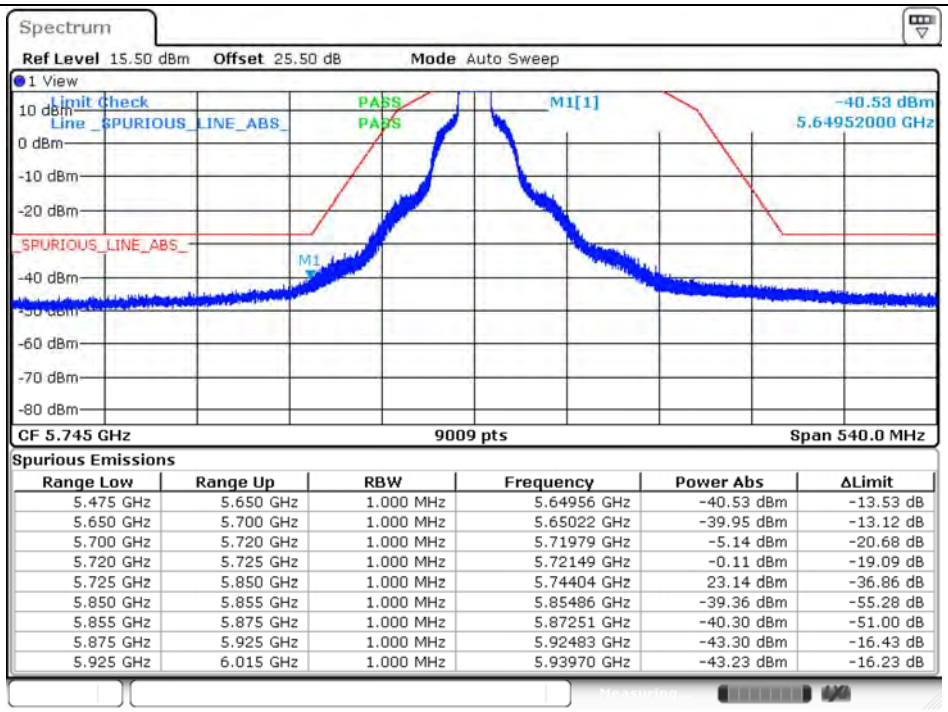
Plot on Configuration VHT80 / 5210 MHz / Peak / Port 1 (TX1)



Plot on Configuration VHT80 / 5210 MHz / Peak / Port 2 (TX2)



Plot on Configuration VHT20 / 5745 MHz / Peak / Port 1 (TX1)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.475 GHz	5.650 GHz	1.000 MHz	5.64956 GHz	-40.53 dBm	-13.53 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65022 GHz	-39.95 dBm	-13.12 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.71979 GHz	-5.14 dBm	-20.68 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72149 GHz	-0.11 dBm	-19.09 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.74404 GHz	23.14 dBm	-36.86 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85486 GHz	-39.36 dBm	-55.28 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.87251 GHz	-40.30 dBm	-51.00 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.92483 GHz	-43.30 dBm	-16.43 dB
5.925 GHz	6.015 GHz	1.000 MHz	5.93970 GHz	-43.23 dBm	-16.23 dB

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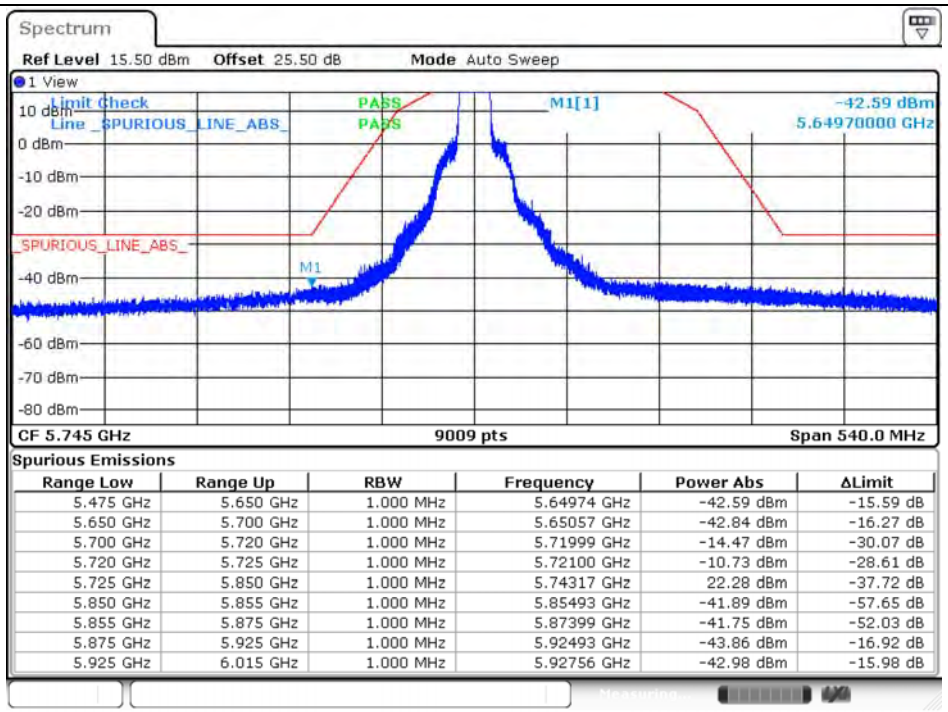
Plot on Configuration VHT20 / 5745 MHz / Peak / Port 2 (TX2)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.475 GHz	5.650 GHz	1.000 MHz	5.64974 GHz	-42.59 dBm	-15.59 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65057 GHz	-42.84 dBm	-16.27 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.71999 GHz	-14.47 dBm	-30.07 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72100 GHz	-10.73 dBm	-28.61 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.74317 GHz	22.28 dBm	-37.72 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85493 GHz	-41.89 dBm	-57.65 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.87399 GHz	-41.75 dBm	-52.03 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.92493 GHz	-43.86 dBm	-16.92 dB
5.925 GHz	6.015 GHz	1.000 MHz	5.92756 GHz	-42.98 dBm	-15.98 dB

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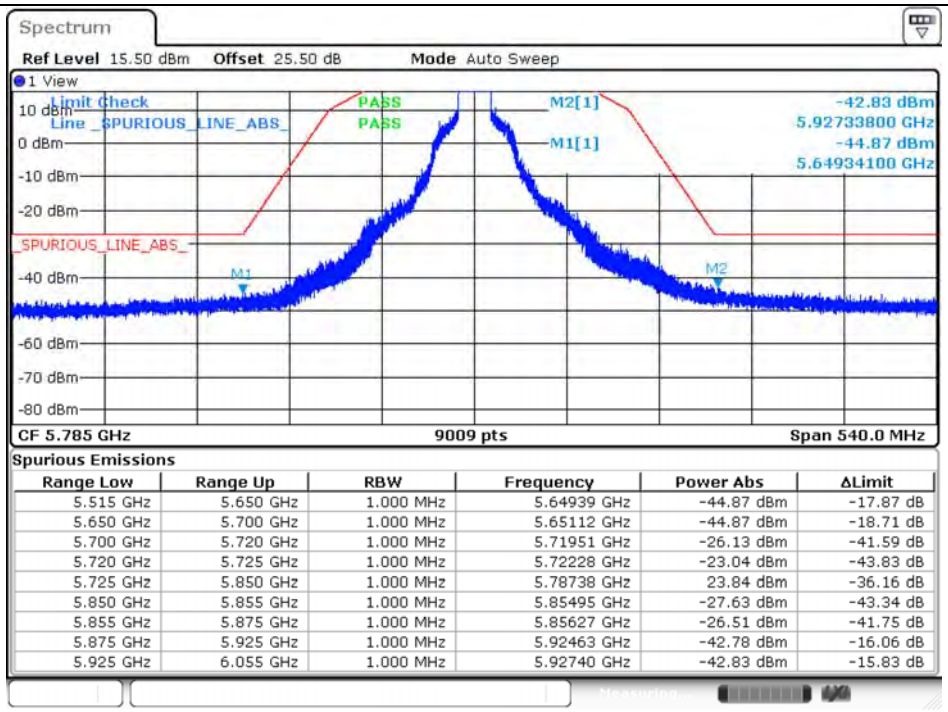
Plot on Configuration VHT20 / 5785 MHz / Peak / Port 1 (TX1)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.515 GHz	5.650 GHz	1.000 MHz	5.64939 GHz	-44.87 dBm	-17.87 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65112 GHz	-44.87 dBm	-18.71 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.71951 GHz	-26.13 dBm	-41.59 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72228 GHz	-23.04 dBm	-43.83 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.78738 GHz	23.84 dBm	-36.16 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85495 GHz	-27.63 dBm	-43.34 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.85627 GHz	-26.51 dBm	-41.75 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.92463 GHz	-42.78 dBm	-16.06 dB
5.925 GHz	6.055 GHz	1.000 MHz	5.92740 GHz	-42.83 dBm	-15.83 dB

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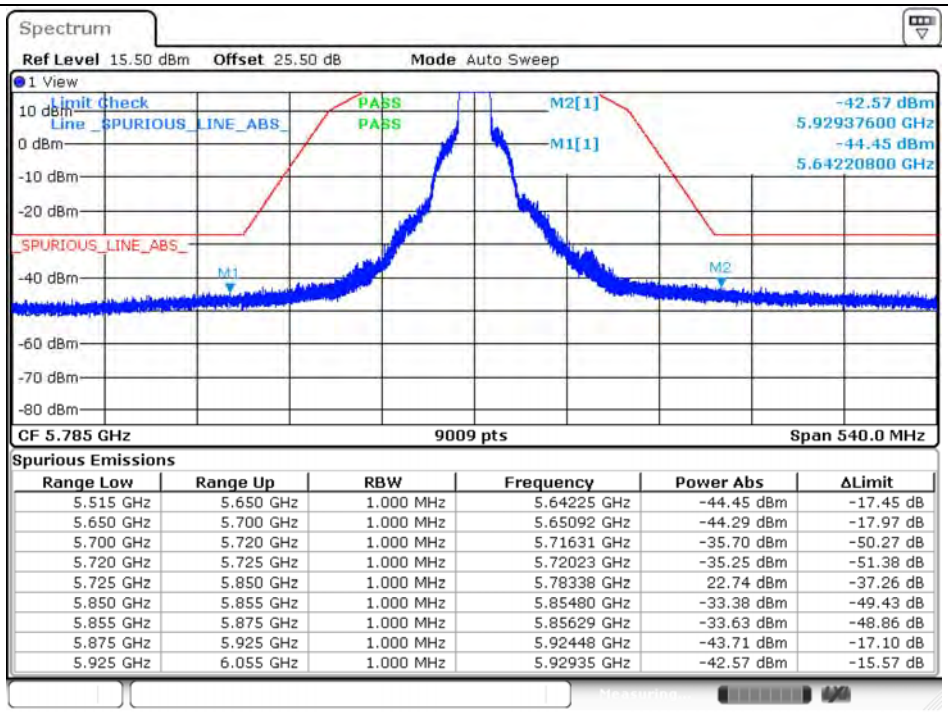
Plot on Configuration VHT20 / 5785 MHz / Peak / Port 2 (TX2)

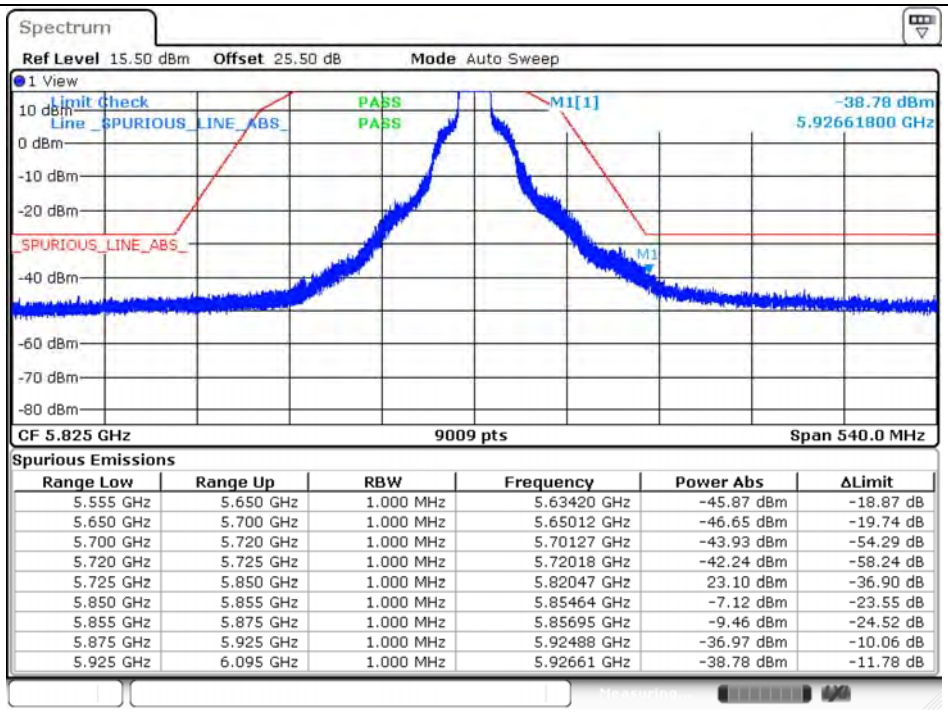


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.515 GHz	5.650 GHz	1.000 MHz	5.64225 GHz	-44.45 dBm	-17.45 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65092 GHz	-44.29 dBm	-17.97 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.71631 GHz	-35.70 dBm	-50.27 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72023 GHz	-35.25 dBm	-51.38 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.78338 GHz	22.74 dBm	-37.26 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85480 GHz	-33.38 dBm	-49.43 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.85629 GHz	-33.63 dBm	-48.86 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.92448 GHz	-43.71 dBm	-17.10 dB
5.925 GHz	6.055 GHz	1.000 MHz	5.92935 GHz	-42.57 dBm	-15.57 dB

Date: 13.FEB.2018 17:52:12

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 1 (TX1)

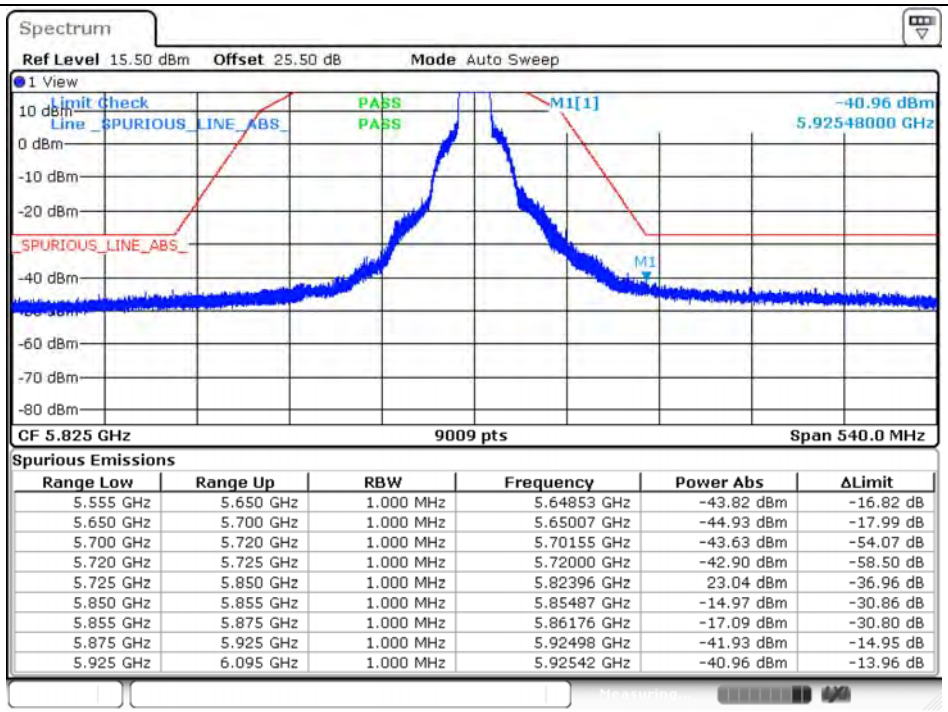


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.555 GHz	5.650 GHz	1.000 MHz	5.63420 GHz	-45.87 dBm	-18.87 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65012 GHz	-46.65 dBm	-19.74 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.70127 GHz	-43.93 dBm	-54.29 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72018 GHz	-42.24 dBm	-58.24 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.82047 GHz	23.10 dBm	-36.90 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85464 GHz	-7.12 dBm	-23.55 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.85695 GHz	-9.46 dBm	-24.52 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.92488 GHz	-36.97 dBm	-10.06 dB
5.925 GHz	6.095 GHz	1.000 MHz	5.92661 GHz	-38.78 dBm	-11.78 dB

Date: 13.FEB.2018 18:38:43

Plot on Configuration VHT20 / 5825 MHz / Peak / Port 2 (TX2)

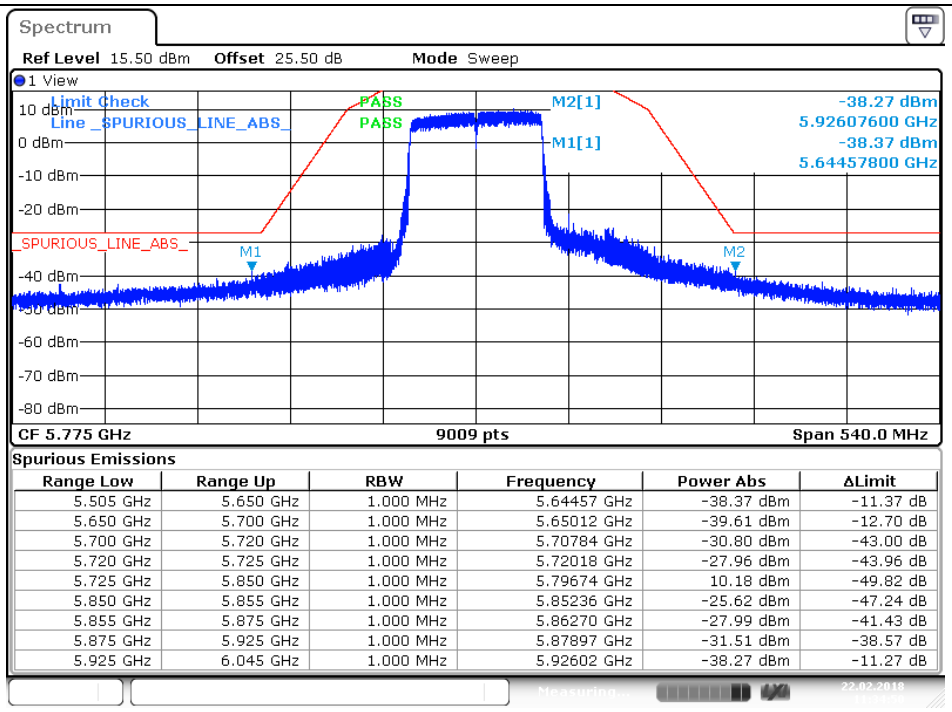


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.555 GHz	5.650 GHz	1.000 MHz	5.64853 GHz	-43.82 dBm	-16.82 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65007 GHz	-44.93 dBm	-17.99 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.70155 GHz	-43.63 dBm	-54.07 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72000 GHz	-42.90 dBm	-58.50 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.82396 GHz	23.04 dBm	-36.96 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85487 GHz	-14.97 dBm	-30.86 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.86176 GHz	-17.09 dBm	-30.80 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.92498 GHz	-41.93 dBm	-14.95 dB
5.925 GHz	6.095 GHz	1.000 MHz	5.92542 GHz	-40.96 dBm	-13.96 dB

Date: 13.FEB.2018 18:43:21

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 1 (TX1)

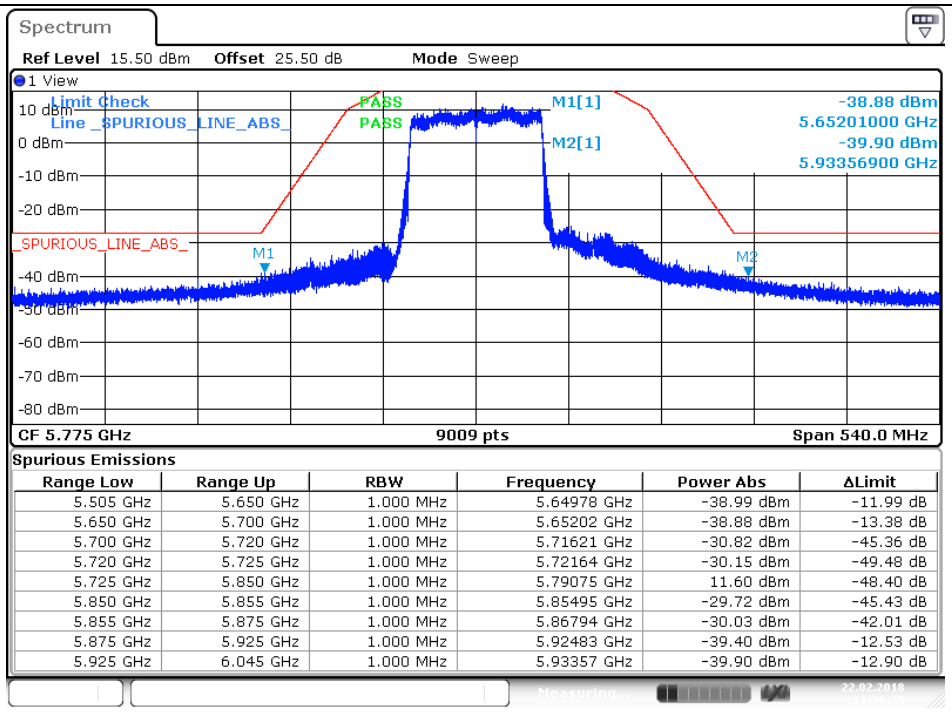


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.505 GHz	5.650 GHz	1.000 MHz	5.64457 GHz	-38.37 dBm	-11.37 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65012 GHz	-39.61 dBm	-12.70 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.70784 GHz	-30.80 dBm	-43.00 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72018 GHz	-27.96 dBm	-43.96 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.79674 GHz	10.18 dBm	-49.82 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85236 GHz	-25.62 dBm	-47.24 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.86270 GHz	-27.99 dBm	-41.43 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.87897 GHz	-31.51 dBm	-38.57 dB
5.925 GHz	6.045 GHz	1.000 MHz	5.92602 GHz	-38.27 dBm	-11.27 dB

Date: 22.FEB.2018 11:34:50

Plot on Configuration VHT80 / 5775 MHz / Peak / Port 2 (TX2)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
5.505 GHz	5.650 GHz	1.000 MHz	5.64978 GHz	-38.99 dBm	-11.99 dB
5.650 GHz	5.700 GHz	1.000 MHz	5.65202 GHz	-38.88 dBm	-13.38 dB
5.700 GHz	5.720 GHz	1.000 MHz	5.71621 GHz	-30.82 dBm	-45.36 dB
5.720 GHz	5.725 GHz	1.000 MHz	5.72164 GHz	-30.15 dBm	-49.48 dB
5.725 GHz	5.850 GHz	1.000 MHz	5.79075 GHz	11.60 dBm	-48.40 dB
5.850 GHz	5.855 GHz	1.000 MHz	5.85495 GHz	-29.72 dBm	-45.43 dB
5.855 GHz	5.875 GHz	1.000 MHz	5.86794 GHz	-30.03 dBm	-42.01 dB
5.875 GHz	5.925 GHz	1.000 MHz	5.92483 GHz	-39.40 dBm	-12.53 dB
5.925 GHz	6.045 GHz	1.000 MHz	5.93357 GHz	-39.90 dBm	-12.90 dB

Date: 22.FEB.2018 11:36:39

Mode: 20 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9691	5199.9690	5199.9687	5199.9679
110.00	5199.9687	5199.9686	5199.9680	5199.9671
93.50	5199.9684	5199.9676	5199.9674	5199.9664
Max. Deviation (MHz)	0.0316	0.0324	0.0326	0.0336
Max. Deviation (ppm)	6.08	6.23	6.27	6.46
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5199.9732	5199.9724	5199.9715	5199.9711
-20	5199.9718	5199.9716	5199.9711	5199.9706
-10	5199.9707	5199.9698	5199.9692	5199.9687
0	5199.9706	5199.9696	5199.9689	5199.9684
10	5199.9695	5199.9686	5199.9684	5199.9674
20	5199.9687	5199.9684	5199.9679	5199.9674
30	5199.9673	5199.9668	5199.9665	5199.9656
40	5199.9656	5199.9653	5199.9643	5199.9634
50	5199.9645	5199.9643	5199.9634	5199.9624
Max. Deviation (MHz)	0.0355	0.0357	0.0366	0.0376
Max. Deviation (ppm)	6.83	6.87	7.04	7.23
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9695	5784.9687	5784.9680	5784.9674
110.00	5784.9687	5784.9679	5784.9671	5784.9666
93.50	5784.9680	5784.9675	5784.9667	5784.9666
Max. Deviation (MHz)	0.0320	0.0325	0.0333	0.0334
Max. Deviation (ppm)	5.53	5.62	5.76	5.77
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5784.9753	5784.9748	5784.9739	5784.9731
-20	5784.9738	5784.9732	5784.9727	5784.9721
-10	5784.9721	5784.9716	5784.9714	5784.9704
0	5784.9710	5784.9706	5784.9705	5784.9704
10	5784.9707	5784.9701	5784.9692	5784.9690
20	5784.9687	5784.9683	5784.9674	5784.9664
30	5784.9673	5784.9663	5784.9657	5784.9649
40	5784.9661	5784.9652	5784.9642	5784.9641
50	5784.9651	5784.9644	5784.9642	5784.9638
Max. Deviation (MHz)	0.0349	0.0356	0.0358	0.0362
Max. Deviation (ppm)	6.03	6.15	6.19	6.26
Result	Pass			

Mode: 80 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9692	5209.9686	5209.9682	5209.9677
110.00	5209.9687	5209.9685	5209.9678	5209.9674
93.50	5209.9677	5209.9675	5209.9667	5209.9660
Max. Deviation (MHz)	0.0323	0.0325	0.0333	0.0340
Max. Deviation (ppm)	6.20	6.24	6.39	6.53
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5209.9739	5209.9730	5209.9726	5209.9718
-20	5209.9720	5209.9718	5209.9714	5209.9705
-10	5209.9708	5209.9701	5209.9700	5209.9693
0	5209.9697	5209.9690	5209.9688	5209.9685
10	5209.9690	5209.9686	5209.9685	5209.9676
20	5209.9687	5209.9683	5209.9680	5209.9675
30	5209.9673	5209.9668	5209.9660	5209.9651
40	5209.9654	5209.9648	5209.9647	5209.9642
50	5209.9649	5209.9645	5209.9640	5209.9630
Max. Deviation (MHz)	0.0351	0.0355	0.0360	0.0370
Max. Deviation (ppm)	6.74	6.81	6.91	7.10
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9688	5774.9678	5774.9669	5774.9663
110.00	5774.9687	5774.9685	5774.9680	5774.9674
93.50	5774.9677	5774.9676	5774.9667	5774.9665
Max. Deviation (MHz)	0.0323	0.0324	0.0333	0.0337
Max. Deviation (ppm)	5.59	5.61	5.77	5.84
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5774.9747	5774.9740	5774.9738	5774.9732
-20	5774.9732	5774.9727	5774.9718	5774.9714
-10	5774.9716	5774.9706	5774.9699	5774.9696
0	5774.9698	5774.9690	5774.9681	5774.9676
10	5774.9696	5774.9693	5774.9687	5774.9677
20	5774.9687	5774.9684	5774.9679	5774.9669
30	5774.9673	5774.9665	5774.9664	5774.9654
40	5774.9665	5774.9661	5774.9654	5774.9650
50	5774.9662	5774.9655	5774.9649	5774.9643
Max. Deviation (MHz)	0.0338	0.0345	0.0351	0.0357
Max. Deviation (ppm)	5.85	5.97	6.08	6.18
Result	Pass			