



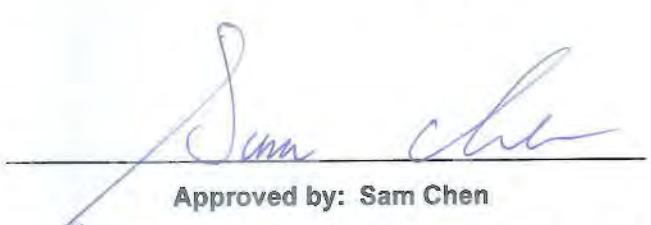
# FCC RADIO TEST REPORT

**FCC ID** : Z8H89FT0027  
**Equipment** : E700  
**Brand Name** : Cambium Networks  
**Model Name** : cnPilot e700 Outdoor  
**Applicant** : Cambium Networks Inc.  
3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA  
**Manufacturer** : Cambium Networks, Ltd.  
Ashburton, TQ13 7UP, UK  
**Standard** : 47 CFR FCC Part 15.407

The product was received on Feb. 13, 2018, and testing was started from Feb. 21, 2018 and completed on Apr. 26, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Sam Chen

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**  
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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**Appendix A. Test Results of Emission Bandwidth**

**Appendix B. Test Results of Maximum Conducted Output Power**

**Appendix C. Test Results of Peak Power Spectral Density**

**Appendix D. Test Results of Unwanted Emissions**

**Appendix E. Test Photos**

**Photographs of EUT v01**



## History of this test report



## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.407(a)	Emission Bandwidth	PASS	-
3.2	15.407(a)	Maximum Conducted Output Power	PASS	-
3.3	15.407(a)	Peak Power Spectral Density	PASS	-
3.4	15.407(b)	Unwanted Emissions	PASS	-

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Viola Huang



## 1 General Description

### 1.1 Information

#### 1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5250-5350	n (HT20), ac (VHT20)	5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [9]
5250-5350	n (HT40), ac (VHT40)	5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [4]

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11n HT20	20	2TX
5.25-5.35GHz	802.11ac VHT20	20	2TX
5.25-5.35GHz	802.11n HT40	40	2TX
5.25-5.35GHz	802.11ac VHT40	40	2TX
5.47-5.725GHz	802.11n HT20	20	2TX
5.47-5.725GHz	802.11ac VHT20	20	2TX
5.47-5.725GHz	802.11n HT40	40	2TX
5.47-5.725GHz	802.11ac VHT40	40	2TX

**Note:**

- HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 use 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 (WLAN)	5GHz (WLAN)	Bluetooth
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	8
4	2	Cambium Networks	P005989	Printed Antenna	I-PEX	-	8	-

Note: The above information was declared by manufacturer.

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.

**For Bluetooth function:**

Only Ant. 3 (Port 1) can be used as transmitting/receiving functions.



### 1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20	0.988	0.05	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40	0.987	0.06	n/a (DC>=0.98)	n/a (DC>=0.98)

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

### 1.1.4 EUT Operational Condition

EUT Power Type	From PoE		
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/> Without beamforming
Weather Band	<input type="checkbox"/>	With 5600~5650MHz	<input checked="" type="checkbox"/> Without 5600~5650MHz
Function	<input checked="" type="checkbox"/>	Outdoor P2M	<input type="checkbox"/> Indoor P2M
	<input type="checkbox"/>	Fixed P2P	<input type="checkbox"/> Client
TPC Function	<input checked="" type="checkbox"/>	With TPC	<input type="checkbox"/> Without TPC
Test Software Version	QCARCT Version: 3.0.265.0		

Note: The above information was declared by manufacturer.

### 1.1.5 Table for Class III Change

This product is an extension of original one reported under Sporton project number: FR830844AB

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Adding Band 2 and Band 3 (5250~5350 MHz, 5470~5725 MHz) for this device only supports 20MHz and 40MHz functions.	1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 4. Unwanted Emissions <Above 1GHz>
2. Adding Bluetooth Function via software change 3. Updating Manufacturer to "Cambium Networks, Ltd." and "Ashburton, TQ13 7UP, UK" from "Cambium Networks Inc." and "3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA"	There's no influence in this test report.



## 1.2 Applicable 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
- ◆ FCC KDB 412172 D01 v01r01

## 1.3 Testing Location Information

Testing Location				
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973		
<input checked="" type="checkbox"/>	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	20MHz: Serway Li / Eddie Weng 40MHz: Brian Sun	20MHz: 22°C / 54% 40MHz: 22~24°C / 50~60%	20MHz: Feb. 21, 2018~Feb. 28, 2018 40MHz: Apr. 25, 2019~Apr. 26, 2019
Radiated	03CH01-CB	Joy Tseng / Ekko Hsieh	22°C / 54%	Feb. 21, 2018~Apr. 17, 2018

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086B 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
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 x10 <sup>-8</sup>	Confidence levels of 95%



## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

Mode	PowerSetting
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5260MHz	18.5
5300MHz	18
5320MHz	18.5
5500MHz	18.5
5580MHz	18.5
5700MHz	17
5720MHz Straddle 5.47-5.725GHz	19
5720MHz Straddle 5.725-5.85GHz	19
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5270MHz	18
5310MHz	14
5510MHz	18.5
5550MHz	18.5
5670MHz	19
5710MHz Straddle 5.47-5.725GHz	19
5710MHz Straddle 5.725-5.85GHz	19

Note:

- VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.



## 2.2 The Worst Case Measurement Configuration

### The Worst Case Mode for Following Conformance Tests

<b>Tests Item</b>	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density Unwanted Emissions
<b>Test Condition</b>	Conducted measurement at transmit chains

### The Worst Case Mode for Following Conformance Tests

<b>Tests Item</b>	Unwanted Emissions
<b>Test Condition</b>	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.
<b>Operating Mode &gt; 1GHz</b>	CTX

### The Worst Case Mode for Following Conformance Tests

<b>Tests Item</b>	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
<b>Operating Mode</b>	
1	WLAN 2.4GHz + Bluetooth
2	WLAN 2.4GHz + WLAN 5GHz

Refer to Sporton Test Report No.: FA830844-02 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	NU60A5550111-13

## 2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.



## 2.4 Accessories

Accessories
Wall-mounted rack*2

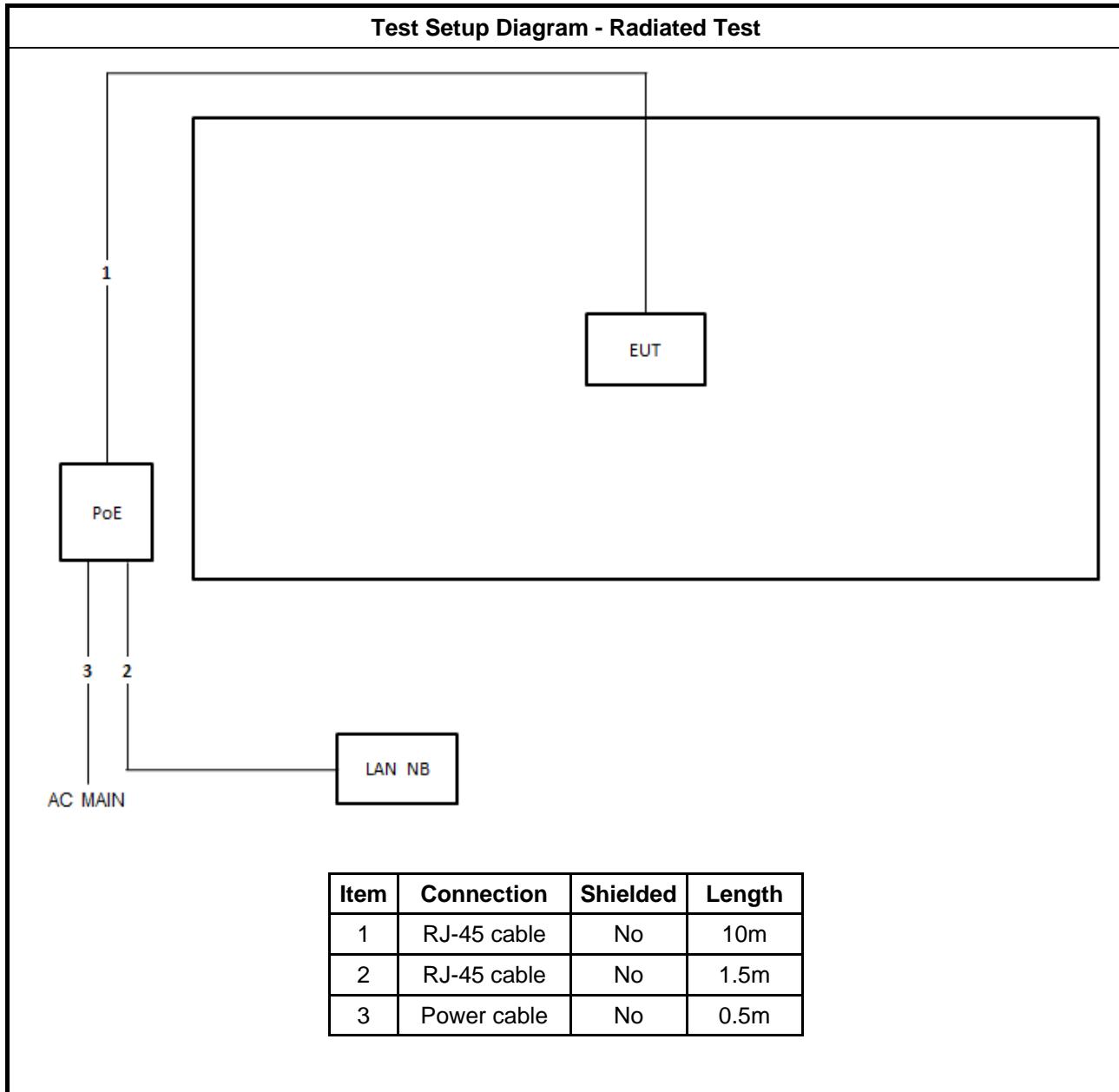
## 2.5 Support Equipment

For RF Conducted and Radiated (above 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	PoE	LEI	NU60A5550111-I3	N/A



## 2.6 Test Setup Diagram





## 3 Transmitter Test Result

### 3.1 Emission Bandwidth

#### 3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
<b>UNII Devices</b>	
<input type="checkbox"/> For the 5.15-5.25 GHz band, N/A	
<input checked="" type="checkbox"/> 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.	
<input checked="" type="checkbox"/> 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.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.	
<b>LE-LAN Devices</b>	
<input type="checkbox"/> 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.	
<input type="checkbox"/> 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	
<input type="checkbox"/> 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	
<input type="checkbox"/> For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.	

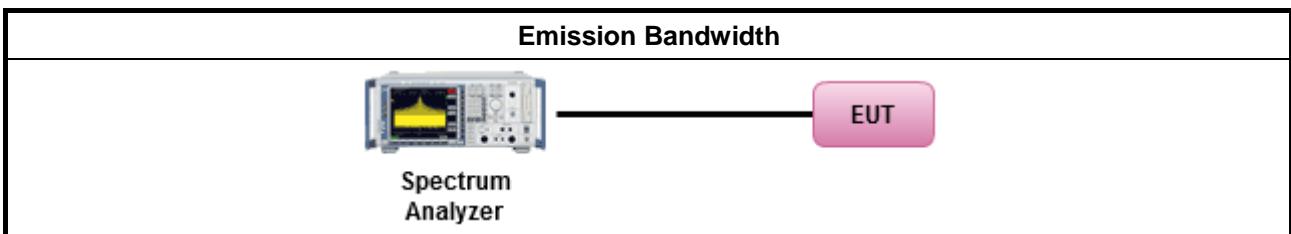
#### 3.1.2 Measuring Instruments

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

#### 3.1.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.	
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.	
<input type="checkbox"/> Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.	

#### 3.1.4 Test Setup





### 3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A



## 3.2 Maximum Conducted Output Power

### 3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
<b>UNII Devices</b>	
<input type="checkbox"/> For the 5.15-5.25 GHz band:	<ul style="list-style-type: none"><li>▪ Outdoor AP: the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{out} = 30 - (G_{TX} - 6)</math>. e.i.r.p. at any elevation angle above 30 degrees <math>\leq 125</math>mW [21dBm]</li><li>▪ Indoor AP: the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{out} = 30 - (G_{TX} - 6)</math></li><li>▪ Point-to-point AP: the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 23</math> dBi, then <math>P_{out} = 30 - (G_{TX} - 23)</math>.</li><li>▪ Mobile or Portable Client: the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 250 mW. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{out} = 24 - (G_{TX} - 6)</math>.</li></ul>
<input checked="" type="checkbox"/> 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 $P_{out} = 24 - (G_{TX} - 6)$ .	
<input checked="" type="checkbox"/> 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 $P_{out} = 24 - (G_{TX} - 6)$ .	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none"><li>▪ Point-to-multipoint systems (P2M): the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{out} = 30 - (G_{TX} - 6)</math>.</li><li>▪ Point-to-point systems (P2P): the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 1 W.</li></ul>
<b>LE-LAN Devices</b>	
<input type="checkbox"/> 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.	
<input type="checkbox"/> 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	
<input type="checkbox"/> 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	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none"><li>▪ Point-to-multipoint systems (P2M): the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{out} = 30 - (G_{TX} - 6)</math>.</li><li>▪ Point-to-point systems (P2P): the maximum conducted output power (<math>P_{out}</math>) shall not exceed the lesser of 1 W.</li></ul>
$P_{out}$ = maximum conducted output power in dBm, $G_{TX}$ = the maximum transmitting antenna directional gain in dBi.	



### 3.2.2 Measuring Instruments

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

### 3.2.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).	
<input type="checkbox"/> 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	
<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).	
▪ For conducted measurement.	
	<ul style="list-style-type: none"><li>▪ 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.</li><li>▪ If multiple transmit chains, EIRP calculation could be following as methods: <math>P_{total} = P_1 + P_2 + \dots + P_n</math> (calculated in linear unit [mW] and transfer to log unit [dBm]) <math>EIRP_{total} = P_{total} + DG</math></li></ul>

### 3.2.4 Test Setup

#### For straddle channel

##### RF Output Power (Spectrum Analyzer)



#### For other channel

##### RF Output Power (Power Meter)



### 3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B



### 3.3 Peak Power Spectral Density

#### 3.3.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
<b>UNII Devices</b>	
<input type="checkbox"/> For the 5.15-5.25 GHz band:	<ul style="list-style-type: none"><li>▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 6)</math>.</li><li>▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 6)</math>.</li><li>▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 23</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 23)</math>.</li><li>▪ Mobile or Portable Client: the peak power spectral density (PPSD) <math>\leq 11</math> dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then PPSD= <math>11 - (G_{TX} - 6)</math>.</li></ul>
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then PPSD= $11 - (G_{TX} - 6)$ .	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then PPSD= $11 - (G_{TX} - 6)$ .	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none"><li>▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz. If <math>G_{TX} &gt; 6</math> dBi, then PPSD= <math>30 - (G_{TX} - 6)</math>.</li><li>▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz.</li></ul>
<b>LE-LAN Devices</b>	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) $\leq 10$ dBm/MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz.	
<input type="checkbox"/> e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where $\theta$ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$ ; -13 – 0.716 ( $\theta$ -8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 – 1.22 ( $\theta$ -40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$ ; -42 dBW/MHz for $\theta > 45^\circ$	
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz.	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none"><li>▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz. If <math>G_{TX} &gt; 6</math> dBi, then PPSD= <math>30 - (G_{TX} - 6)</math>.</li><li>▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz.</li></ul>
<b>PPSD</b> = 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 <b>G<sub>TX</sub></b> = 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.

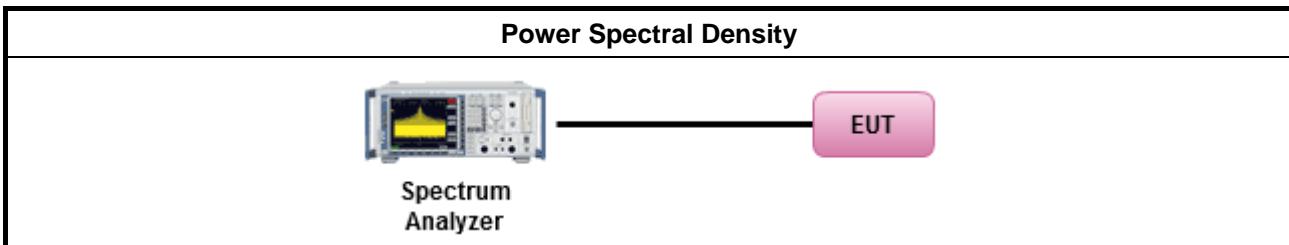


### 3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"><li>▪ 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:</li></ul>	
<p><input type="checkbox"/> Refer as FCC KDB 789033, F5) power spectral density can be measured using resolution bandwidths &lt; 1 MHz provided that the results are integrated over 1 MHz bandwidth [duty cycle <math>\geq</math> 98% or external video / power trigger]</p>	
<p><input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).</p>	
<p><input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed) duty cycle &lt; 98% and average over on/off periods with duty factor</p>	
<p><input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).</p>	
<p><input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)</p>	
<ul style="list-style-type: none"><li>▪ For conducted measurement.</li></ul>	
<ul style="list-style-type: none"><li>▪ If the EUT supports multiple transmit chains using options given below:</li></ul>	
<p><input checked="" type="checkbox"/> 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.</p>	
<p><input type="checkbox"/> 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,</p>	
<p><input type="checkbox"/> Option 3: Measure and add <math>10 \log(N)</math> 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 <math>10 \log(N)</math>. Or each transmit chains shall be add <math>10 \log(N)</math> to compared with the limit.</p>	
<ul style="list-style-type: none"><li>▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods: <math display="block">\text{PPSD}_{\text{total}} = \text{PPSD}_1 + \text{PPSD}_2 + \dots + \text{PPSD}_n</math>(calculated in linear unit [mW] and transfer to log unit [dBm]) <math display="block">\text{EIRP}_{\text{total}} = \text{PPSD}_{\text{total}} + \text{DG}</math></li></ul>	



### 3.3.4 Test Setup



### 3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C



### 3.4 Unwanted Emissions

#### 3.4.1 Transmitter 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
<input type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 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).



linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

### 3.4.2 Measuring Instruments

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

### 3.4.3 Test Procedures

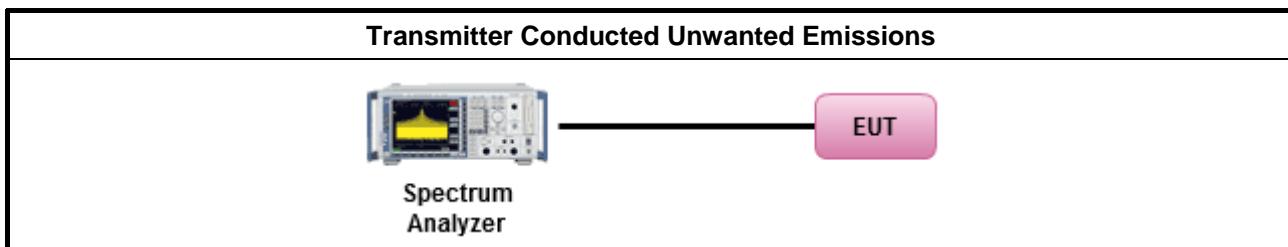
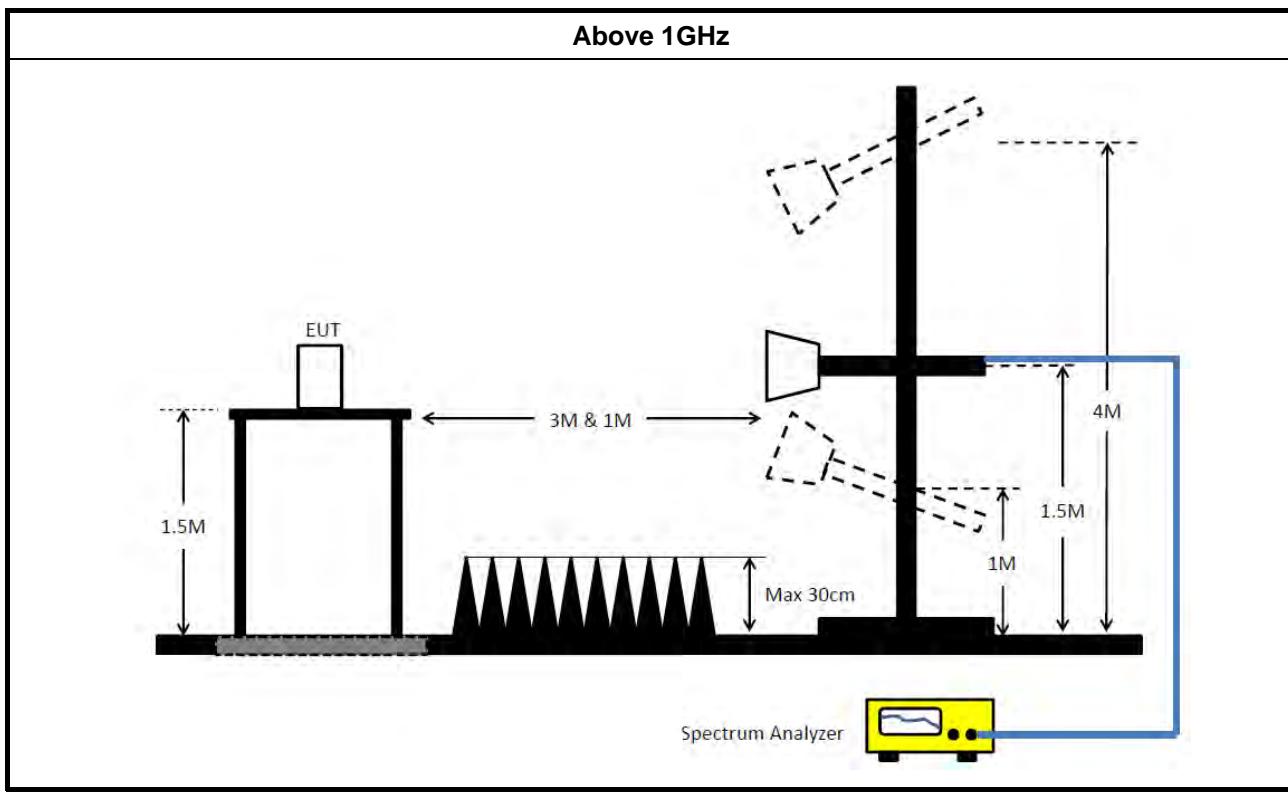
Test Method
<ul style="list-style-type: none"><li>▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance 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).</li></ul>
<ul style="list-style-type: none"><li>▪ The average emission levels shall be measured in [duty cycle <math>\geq</math> 98 or duty factor].</li></ul>
<ul style="list-style-type: none"><li>▪ For the transmitter unwanted emissions shall be measured using following options below:</li></ul>
<ul style="list-style-type: none"><li>▪ Refer as FCC KDB 789033, clause G2) for unwanted emissions into non-restricted bands.</li><li>▪ Refer as FCC KDB 789033, clause G1) for unwanted emissions into restricted bands.<ul style="list-style-type: none"><li><input type="checkbox"/> Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).</li><li><input checked="" type="checkbox"/> Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).</li><li><input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW <math>\geq</math> 1/T, where T is pulse time.</li><li><input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.</li><li><input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.</li><li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.</li></ul></li></ul>
<ul style="list-style-type: none"><li>▪ For radiated measurement.</li></ul>
<ul style="list-style-type: none"><li>▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.</li><li>▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.</li><li>▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.</li></ul>
<ul style="list-style-type: none"><li>▪ The any unwanted emissions level shall not exceed the fundamental emission level.</li></ul>
<ul style="list-style-type: none"><li>▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.</li></ul>



Test Method	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 789033, clause G)3).	
	<ul style="list-style-type: none"><li>▪ 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 <math>10 \log(N)</math> if the measurements are made relative to the in-band emissions on the individual outputs.</li><li>▪ 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 <math>10 \log(N)</math> dB</li><li>▪ 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.</li></ul>



### 3.4.4 Test Setup



### 3.4.5 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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	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)
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)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Feb. 25, 2019	Feb. 24, 2020	Conducted (TH01-CB)
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-06	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	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-07	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	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-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	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-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	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)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-CB)

**FCC RADIO TEST REPORT**

Report No. : FR830844-02AA

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	21M	17.666M	17M7D1D	20.425M	17.591M
802.11ac VHT40_Nss1,(MCS0)_2TX	40M	35.932M	35M9D1D	39.45M	35.882M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	21.075M	17.666M	17M7D1D	15.21M	13.808M
802.11ac VHT40_Nss1,(MCS0)_2TX	40.05M	36.032M	36M0D1D	34.825M	32.779M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	3.74M	3.918M	3M92D1D	3.74M	3.898M
802.11ac VHT40_Nss1,(MCS0)_2TX	3.16M	3.518M	3M52D1D	3.12M	3.478M

**Max-N dB** = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

**Max-OBW** = Maximum99% 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

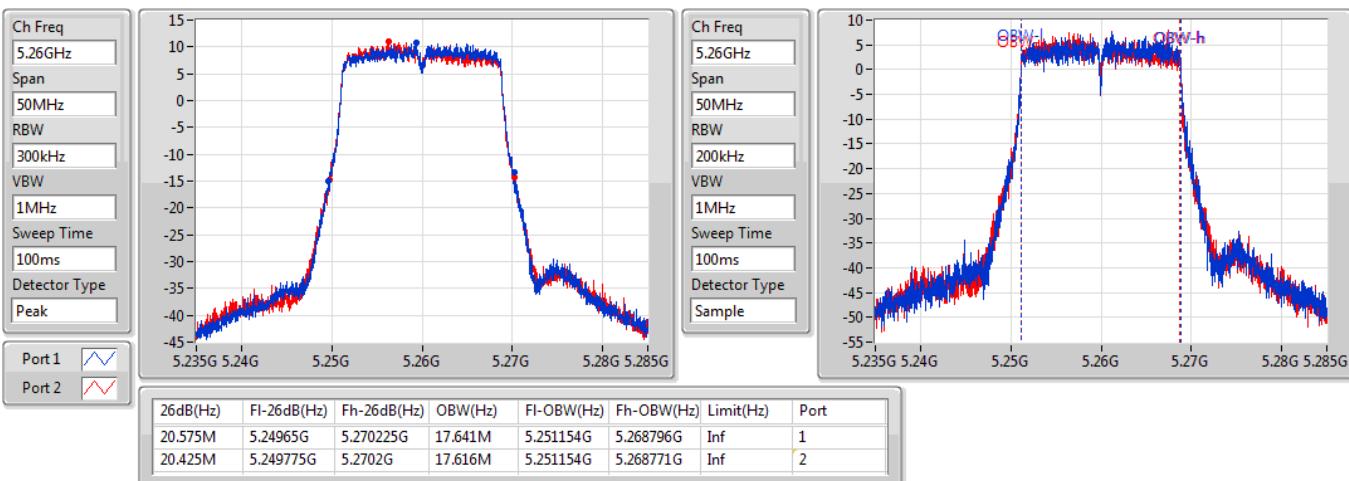
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	20.575M	17.641M	20.425M	17.616M
5300MHz	Pass	Inf	20.55M	17.591M	20.65M	17.641M
5320MHz	Pass	Inf	20.575M	17.641M	21M	17.666M
5500MHz	Pass	Inf	20.325M	17.591M	21.025M	17.666M
5580MHz	Pass	Inf	20.475M	17.616M	20.55M	17.591M
5700MHz	Pass	Inf	21.075M	17.616M	20.55M	17.591M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.375M	13.808M	15.21M	13.808M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.74M	3.898M	3.74M	3.918M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40M	35.882M	39.65M	35.932M
5310MHz	Pass	Inf	39.7M	35.932M	39.45M	35.882M
5510MHz	Pass	Inf	39.8M	35.932M	39.55M	35.882M
5550MHz	Pass	Inf	40.05M	35.932M	39.65M	35.882M
5670MHz	Pass	Inf	40.05M	35.982M	39.9M	36.032M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.825M	32.779M	34.86M	32.814M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.478M	3.16M	3.518M

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

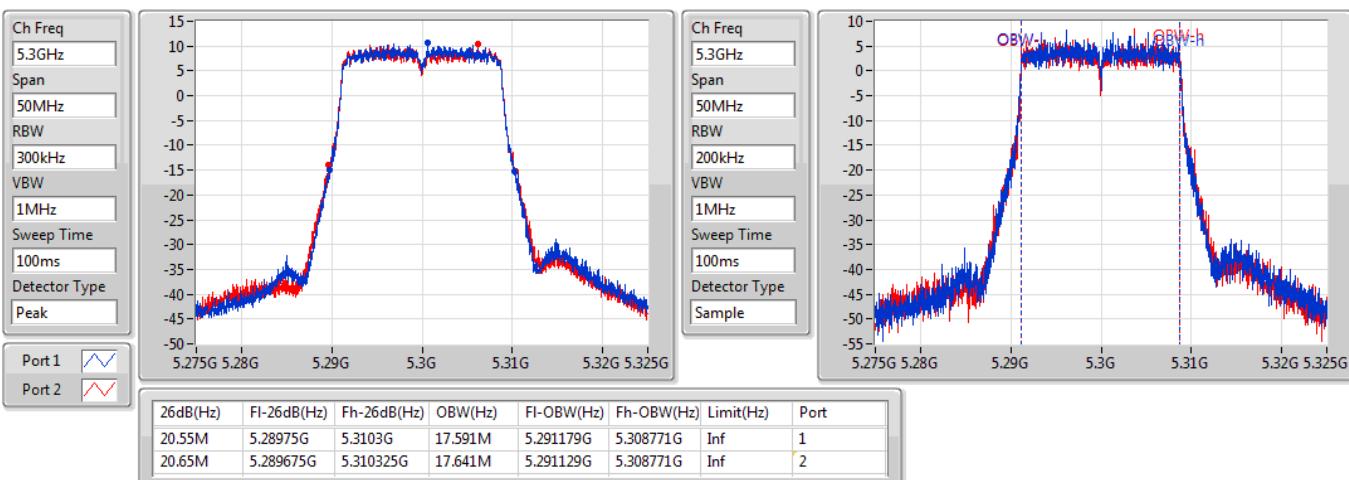
Port X-OBW = Port X 99% occupied bandwidth;

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5260MHz**

24/02/2018

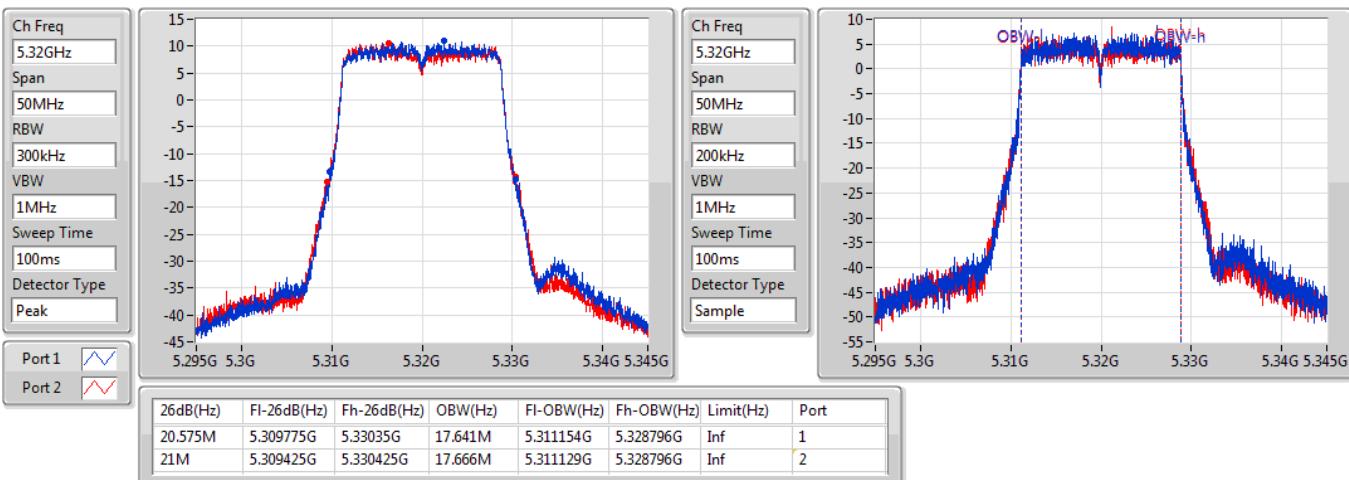

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5300MHz**

24/02/2018

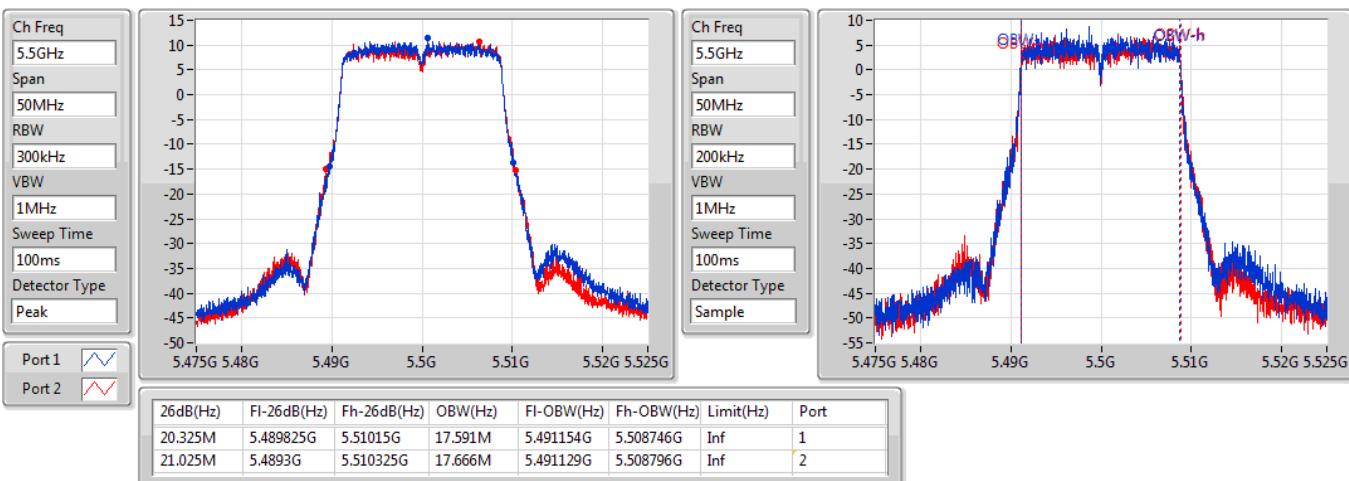


**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5320MHz**

24/02/2018

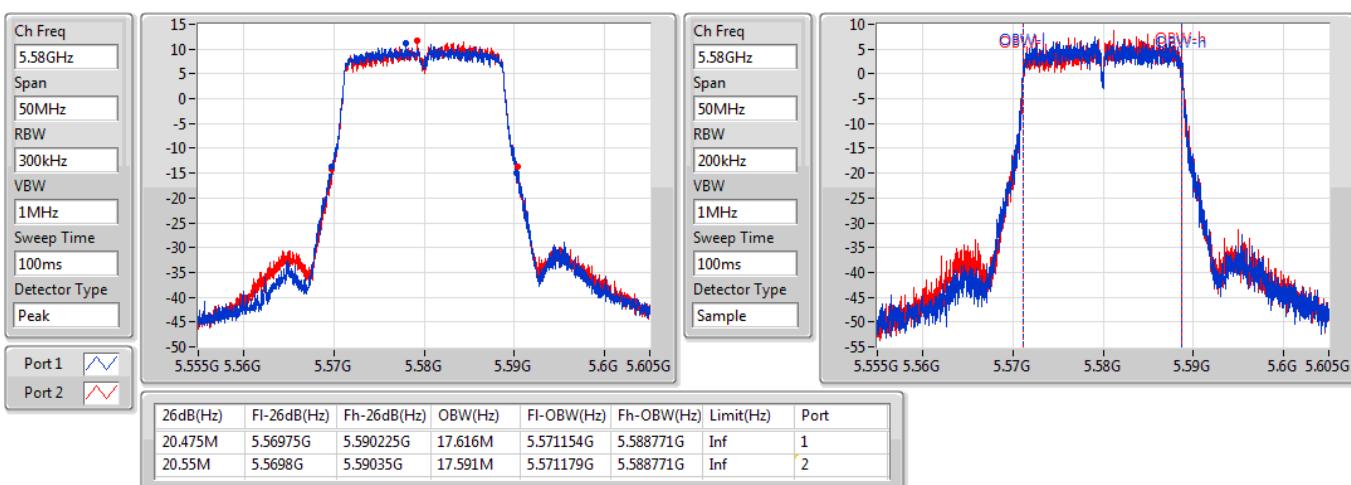

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5500MHz**

24/02/2018

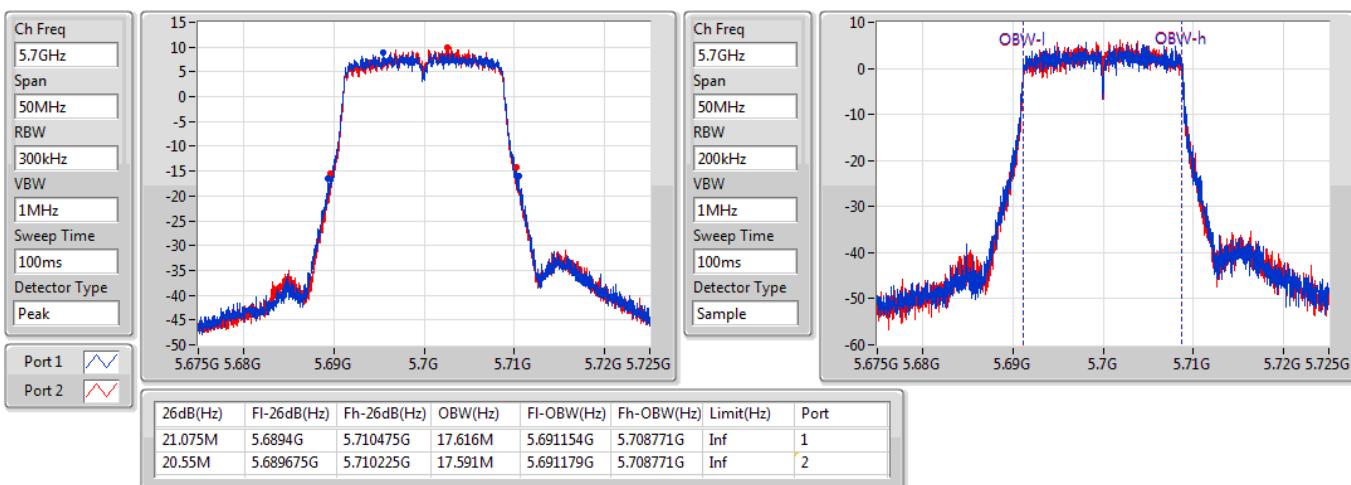


**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5580MHz**

24/02/2018

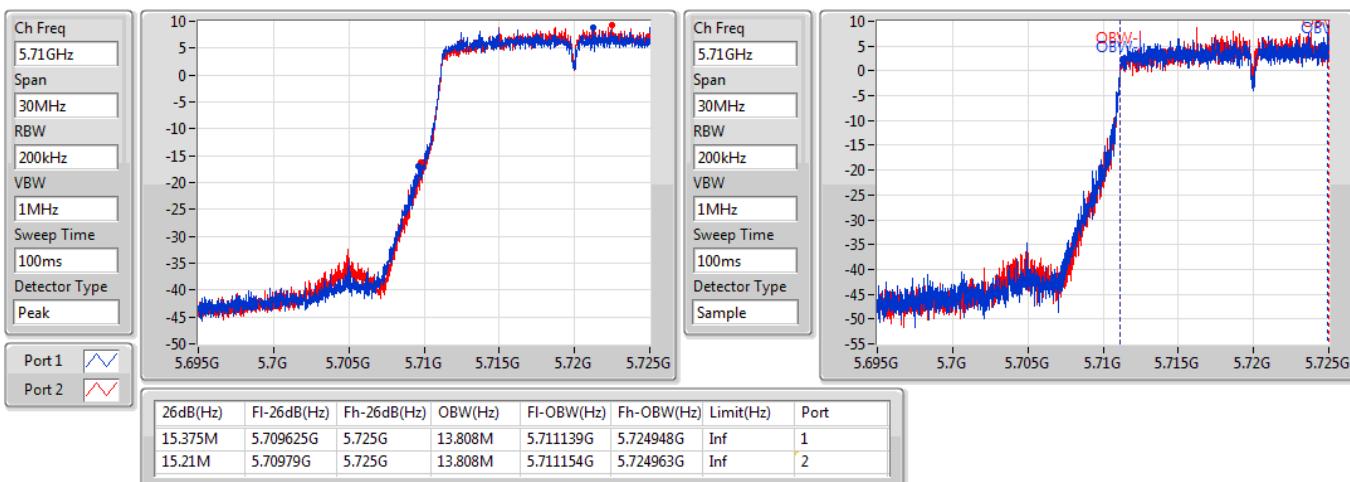

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5700MHz**

24/02/2018

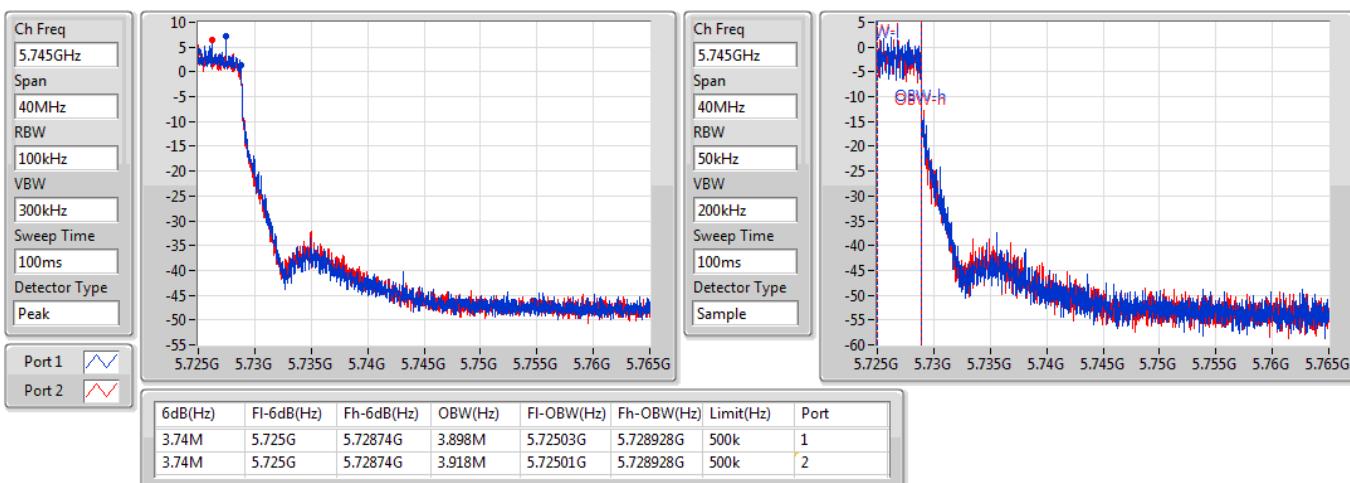


**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5720MHz Straddle 5.47-5.725GHz**

24/02/2018

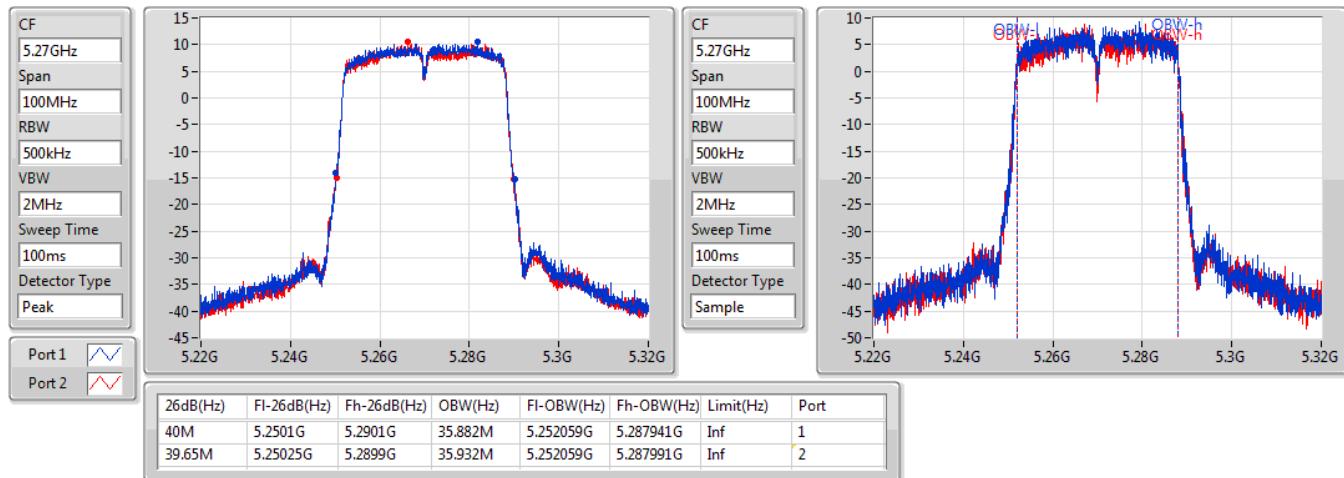

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**EBW**
**5720MHz Straddle 5.725-5.85GHz**

24/02/2018

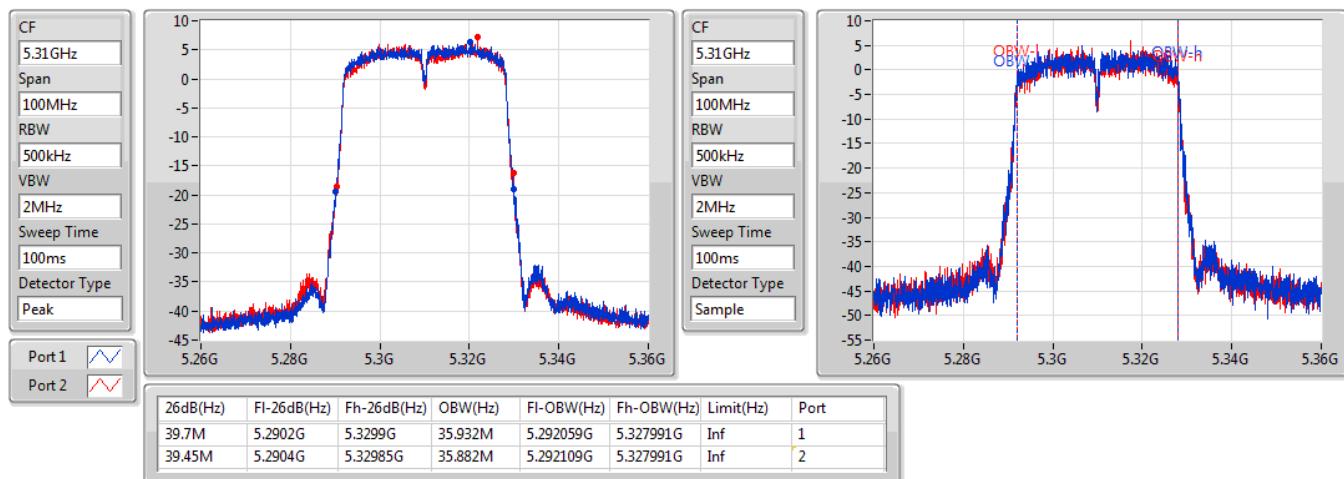


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**EBW**
**5270MHz**

26/04/2019

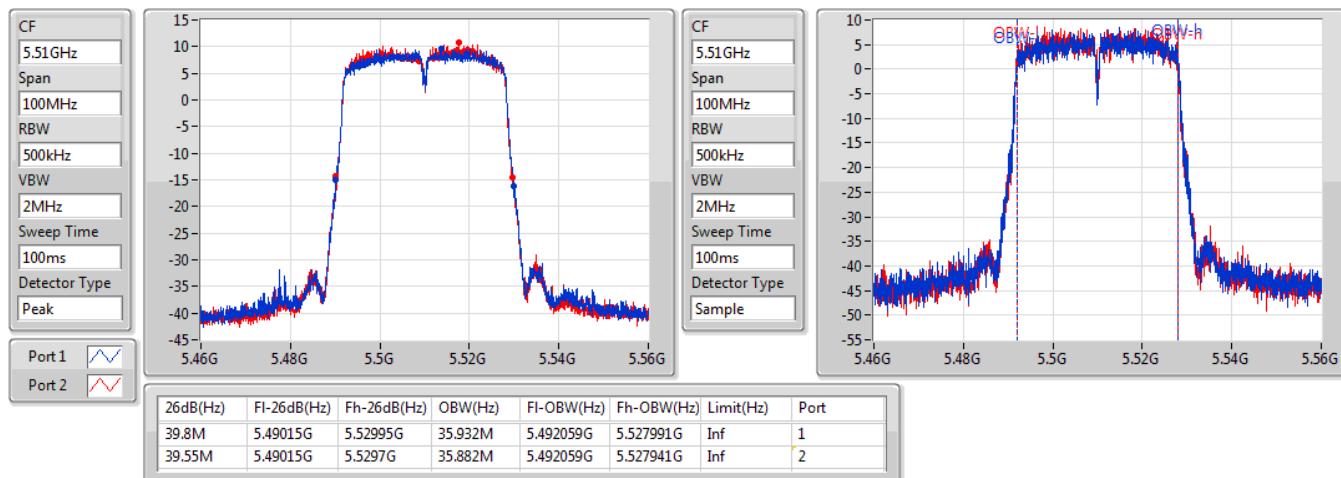

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**EBW**
**5310MHz**

26/04/2019

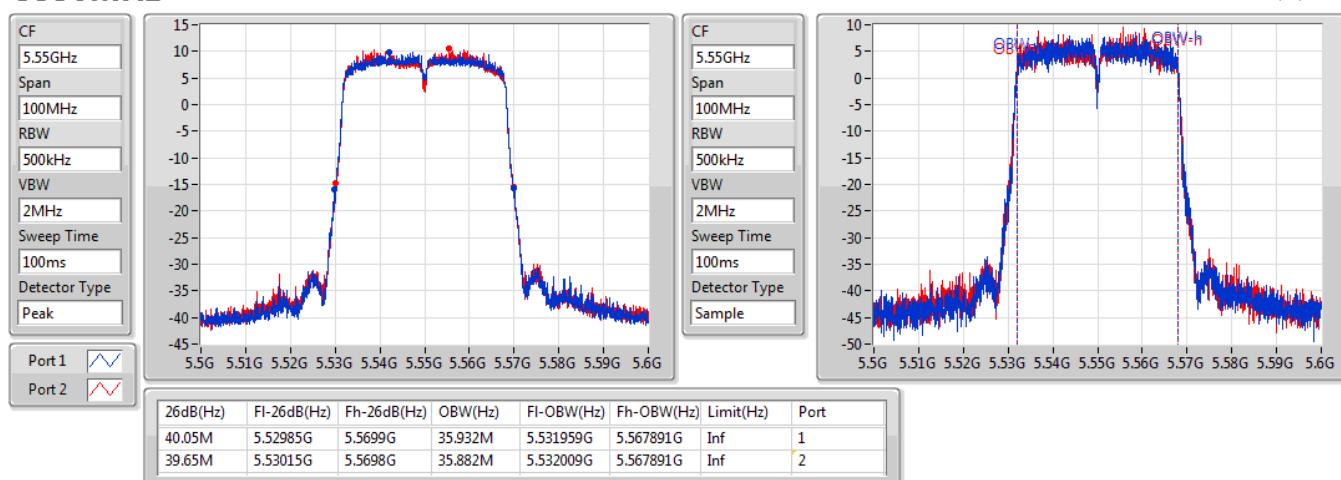


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**EBW**
**5510MHz**

26/04/2019

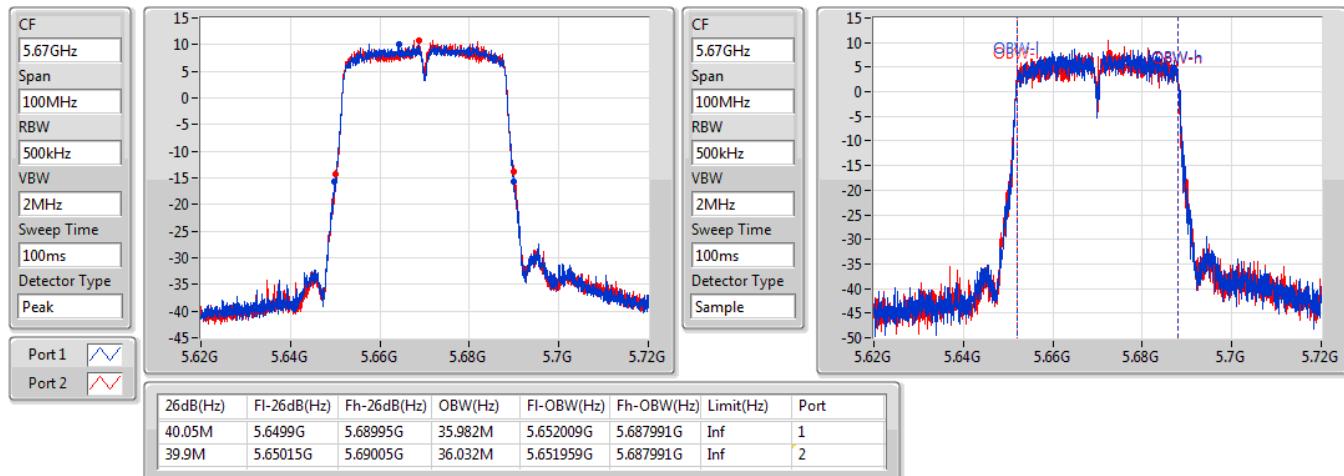

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**EBW**
**5550MHz**

26/04/2019

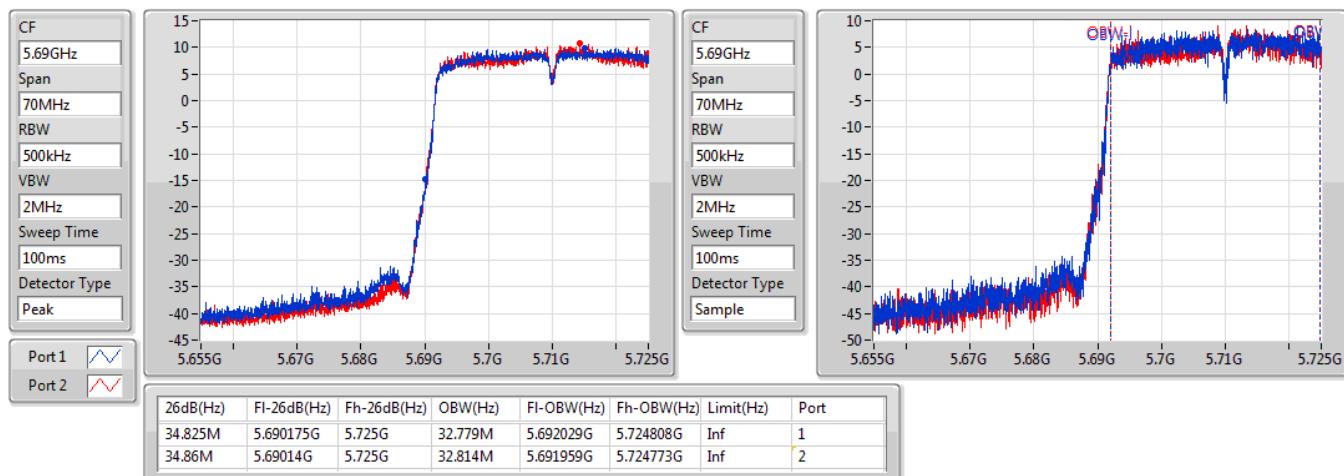


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**EBW**
**5670MHz**

26/04/2019

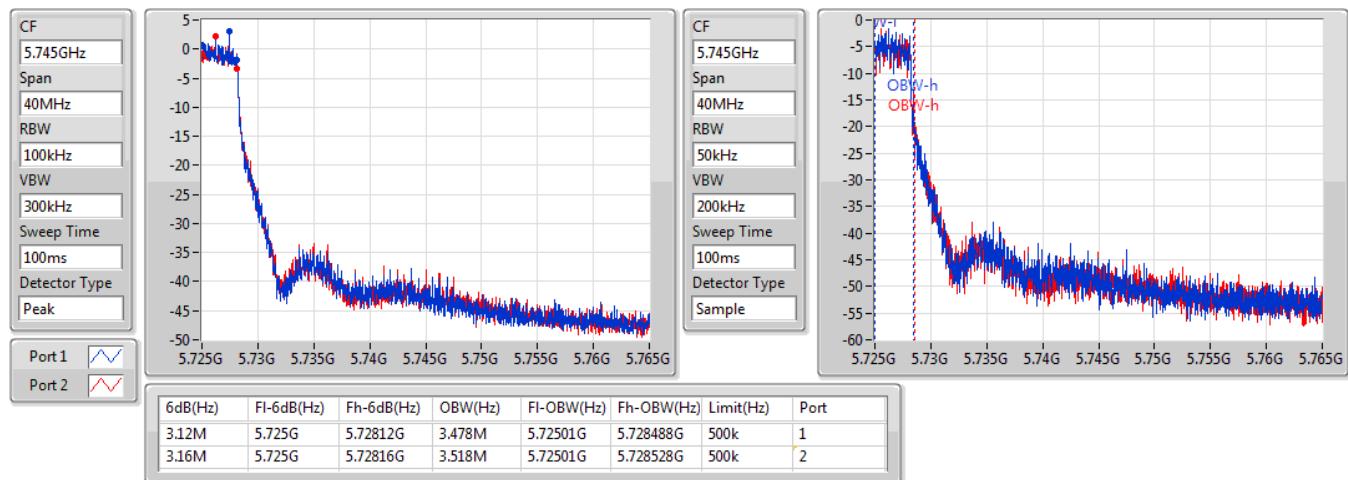

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**EBW**
**5710MHz Straddle 5.47-5.725GHz**

26/04/2019



**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**EBW**
**5710MHz Straddle 5.725-5.85GHz**

26/04/2019



**Summary**

Mode	Total Power (dBm)	Total Power (W)
5.25-5.35GHz	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	21.93	0.15596
802.11ac VHT40_Nss1,(MCS0)_2TX	21.88	0.15417
5.47-5.725GHz	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	21.96	0.15704
802.11ac VHT40_Nss1,(MCS0)_2TX	21.87	0.15382
5.725-5.85GHz	-	-
802.11ac VHT20_Nss1,(MCS0)_2TX	14.90	0.03090
802.11ac VHT40_Nss1,(MCS0)_2TX	11.01	0.01262



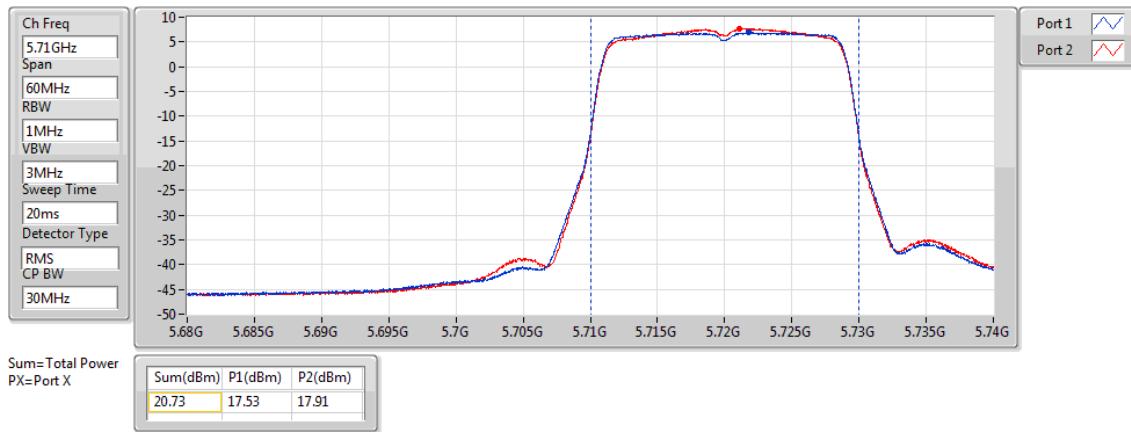
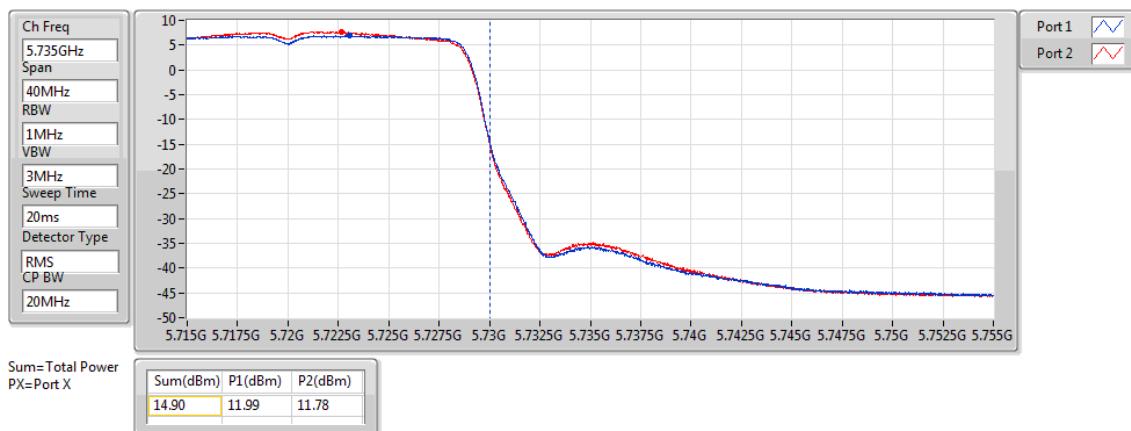
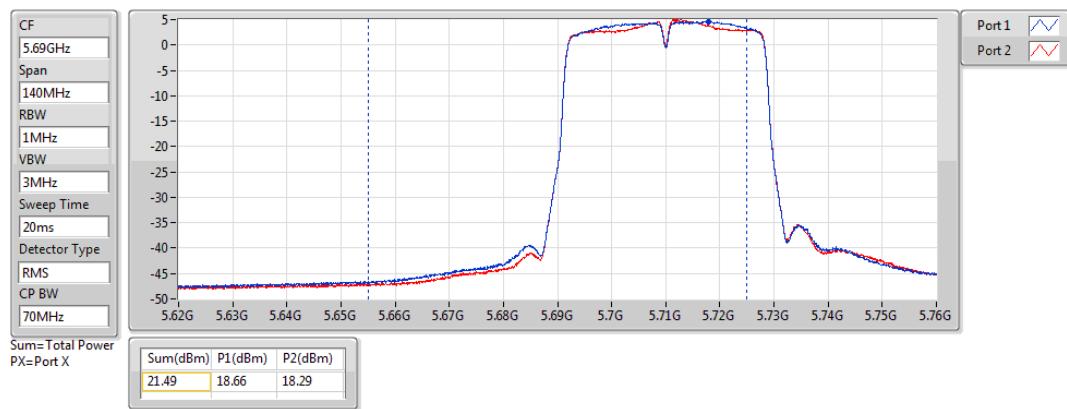
## Average Power

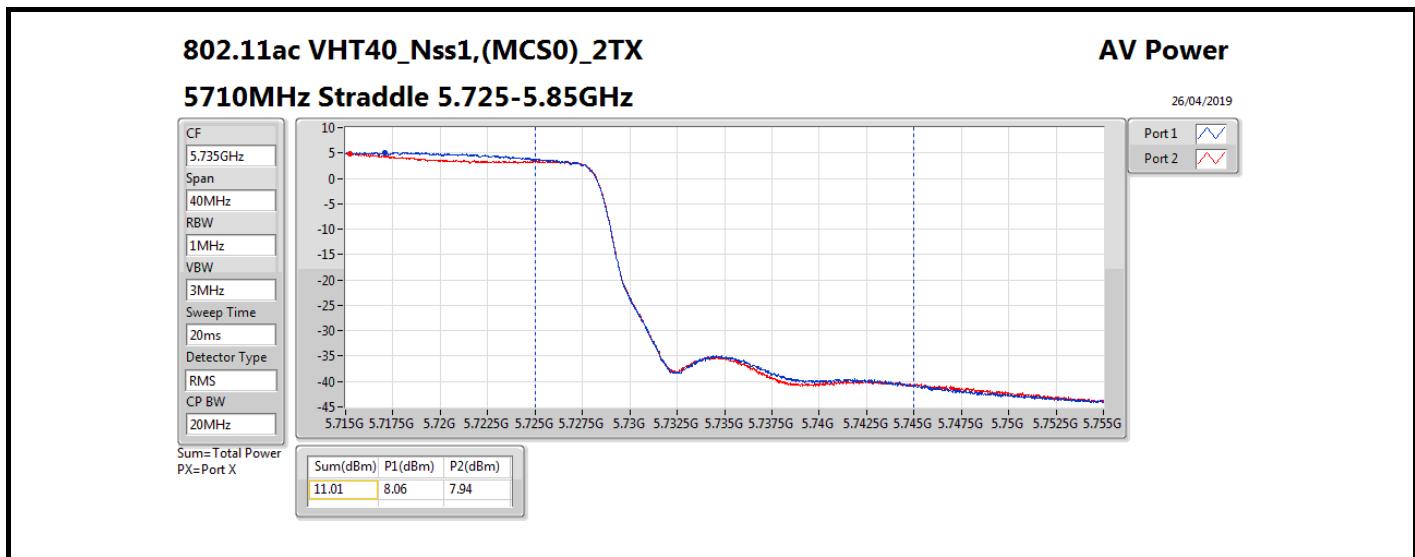
## Appendix B

### Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	8.00	18.85	18.98	21.93	21.98
5300MHz	Pass	8.00	18.76	18.62	21.70	21.98
5320MHz	Pass	8.00	18.91	18.86	21.90	21.98
5500MHz	Pass	8.00	19.03	18.83	21.94	21.98
5580MHz	Pass	8.00	18.93	18.97	21.96	21.98
5700MHz	Pass	8.00	17.42	17.61	20.53	21.98
5720MHz Straddle 5.47-5.725GHz	Pass	8.00	17.53	17.91	20.73	20.82
5720MHz Straddle 5.725-5.85GHz	Pass	8.00	11.99	11.78	14.90	28.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	8.00	19.05	18.68	21.88	21.98
5310MHz	Pass	8.00	14.99	14.53	17.78	21.98
5510MHz	Pass	8.00	18.36	18.69	21.54	21.98
5550MHz	Pass	8.00	18.71	18.68	21.71	21.98
5670MHz	Pass	8.00	19.01	18.71	21.87	21.98
5710MHz Straddle 5.47-5.725GHz	Pass	8.00	18.66	18.29	21.49	21.98
5710MHz Straddle 5.725-5.85GHz	Pass	8.00	8.06	7.94	11.01	28.00

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

**802.11ac VHT20\_Nss1,(MCS0)\_2TX  
5720MHz Straddle 5.47-5.725GHz**
**AV Power**

**802.11ac VHT20\_Nss1,(MCS0)\_2TX  
5720MHz Straddle 5.725-5.85GHz**
**AV Power**

**802.11ac VHT40\_Nss1,(MCS0)\_2TX  
5710MHz Straddle 5.47-5.725GHz**
**AV Power**




**Summary**

Mode	PD (dBm/RBW)
5.25-5.35GHz	-
802.11ac VHT20_Nss1,(MCS0)_2TX	8.87
802.11ac VHT40_Nss1,(MCS0)_2TX	7.66
5.47-5.725GHz	-
802.11ac VHT20_Nss1,(MCS0)_2TX	8.82
802.11ac VHT40_Nss1,(MCS0)_2TX	7.82
5.725-5.85GHz	-
802.11ac VHT20_Nss1,(MCS0)_2TX	6.76
802.11ac VHT40_Nss1,(MCS0)_2TX	3.58

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



## Result

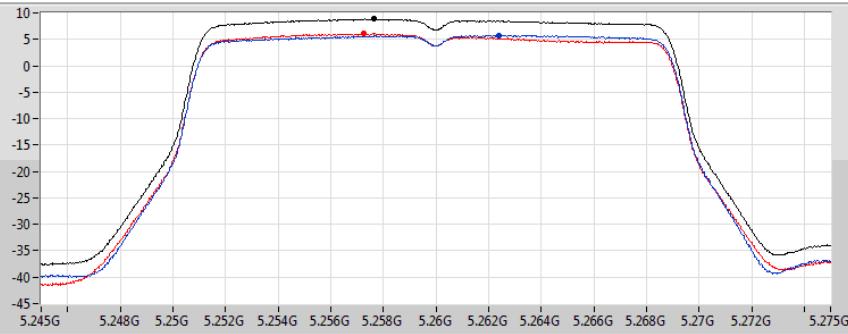
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	8.00	5.77	6.11	8.87	9.00
5300MHz	Pass	8.00	5.70	5.54	8.51	9.00
5320MHz	Pass	8.00	6.09	5.80	8.74	9.00
5500MHz	Pass	8.00	5.96	5.83	8.71	9.00
5580MHz	Pass	8.00	5.52	6.12	8.82	9.00
5700MHz	Pass	8.00	4.11	4.77	7.42	9.00
5720MHz Straddle 5.47-5.725GHz	Pass	8.00	5.40	6.21	8.79	9.00
5720MHz Straddle 5.725-5.85GHz	Pass	8.00	3.69	3.97	6.76	28.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	8.00	4.81	4.76	7.66	9.00
5310MHz	Pass	8.00	0.61	0.49	3.47	9.00
5510MHz	Pass	8.00	4.04	4.89	7.46	9.00
5550MHz	Pass	8.00	4.20	4.69	7.34	9.00
5670MHz	Pass	8.00	4.63	5.08	7.82	9.00
5710MHz Straddle 5.47-5.725GHz	Pass	8.00	4.54	5.00	7.72	9.00
5710MHz Straddle 5.725-5.85GHz	Pass	8.00	0.84	0.31	3.58	28.00

**DG** = Directional Gain; **RBW** = 500 kHz 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 X power density;

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**5260MHz**

Ch Freq
5.26GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS


**PSD**

24/02/2018

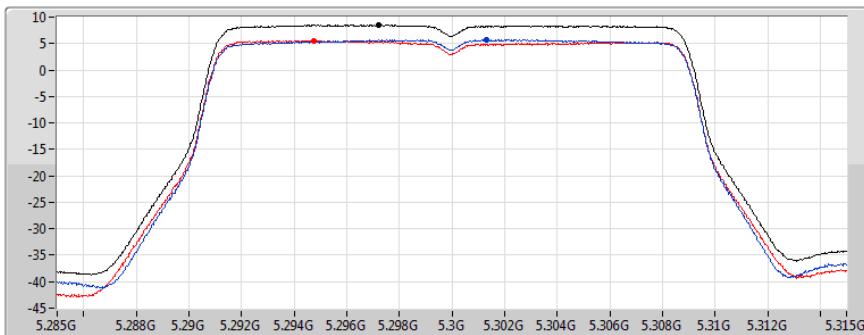
Sum
PD
(dBm/RBW)
8.87

Port 1
(dBm/RBW)
5.77

Port 2
(dBm/RBW)
6.11

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**5300MHz**

Ch Freq
5.3GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS


**PSD**

24/02/2018

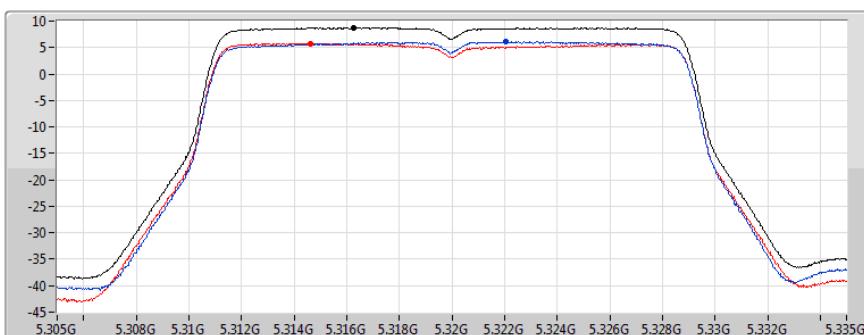
Sum
PD
(dBm/RBW)
8.51

Port 1
(dBm/RBW)
5.70

Port 2
(dBm/RBW)
5.54

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**5320MHz**

Ch Freq
5.32GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS

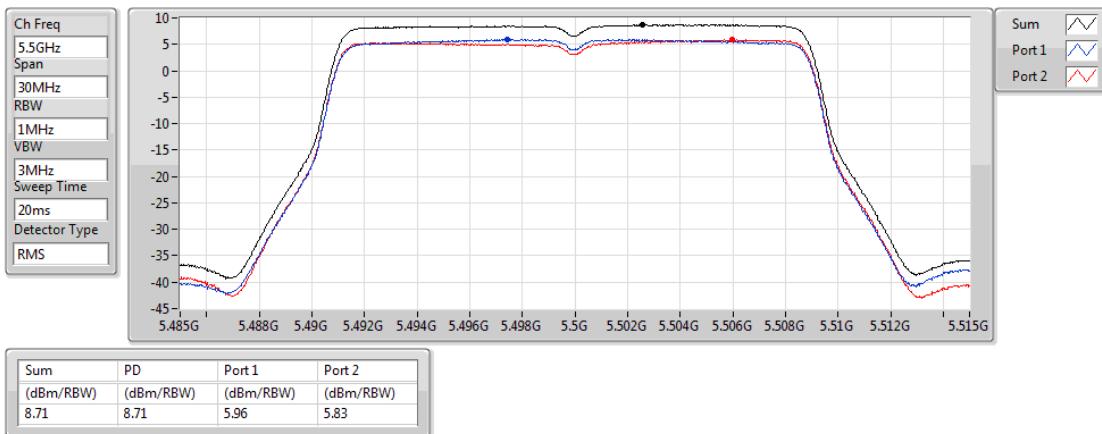
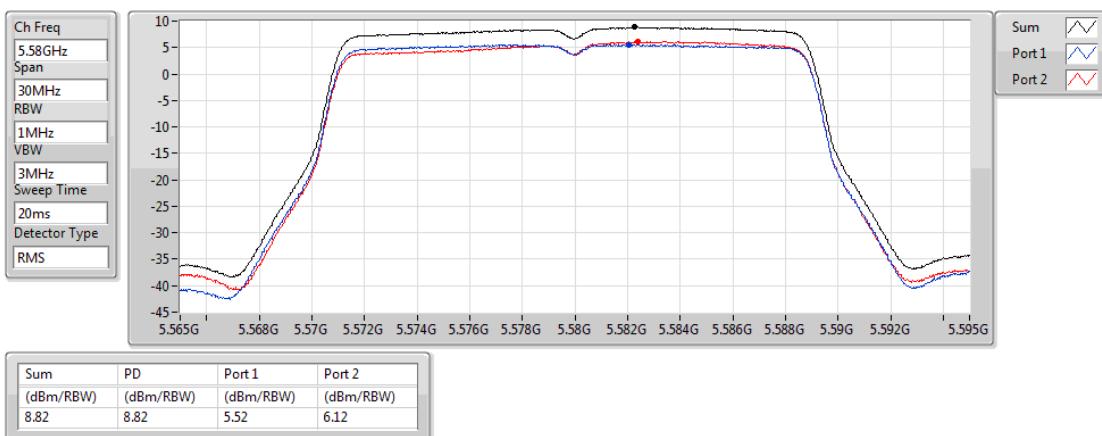
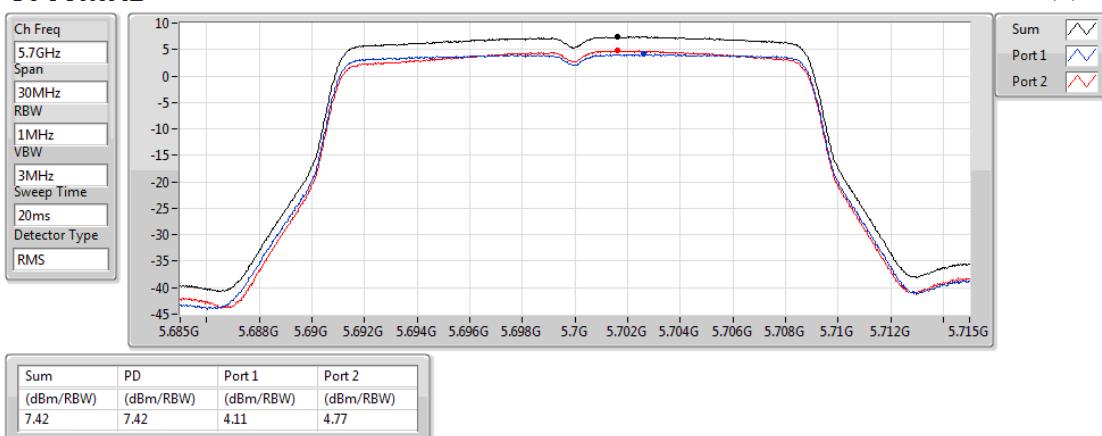

**PSD**

24/02/2018

Sum
PD
(dBm/RBW)
8.74

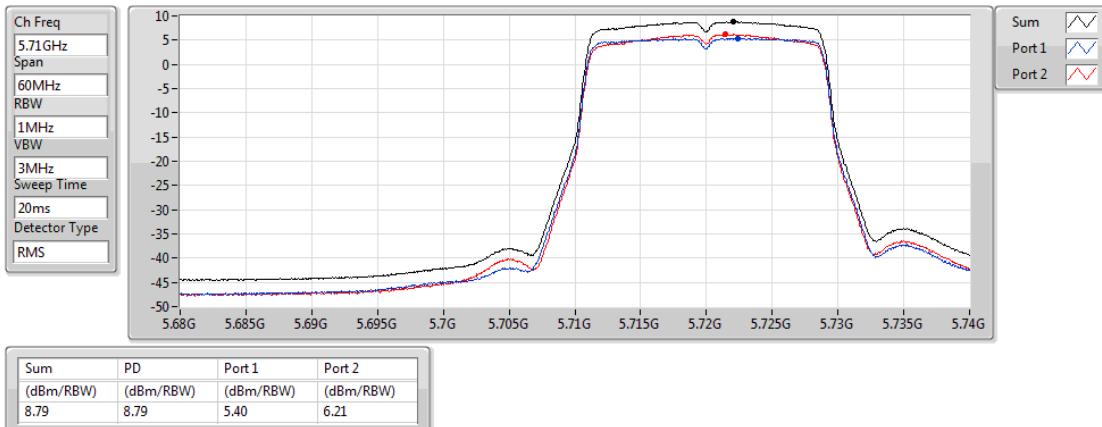
Port 1
(dBm/RBW)
6.09

Port 2
(dBm/RBW)
5.80

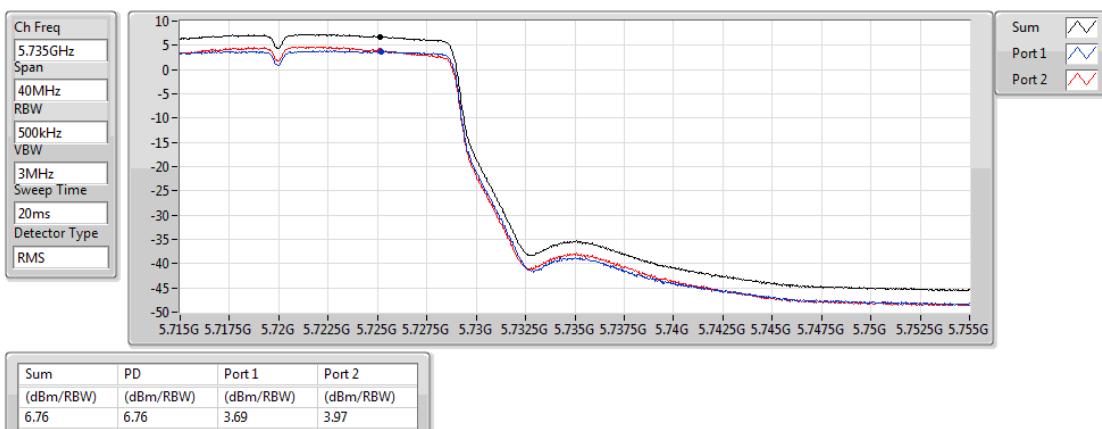
**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**PSD**
**5500MHz**

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**PSD**
**5580MHz**

**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**PSD**
**5700MHz**


**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**PSD**
**5720MHz Straddle 5.47-5.725GHz**

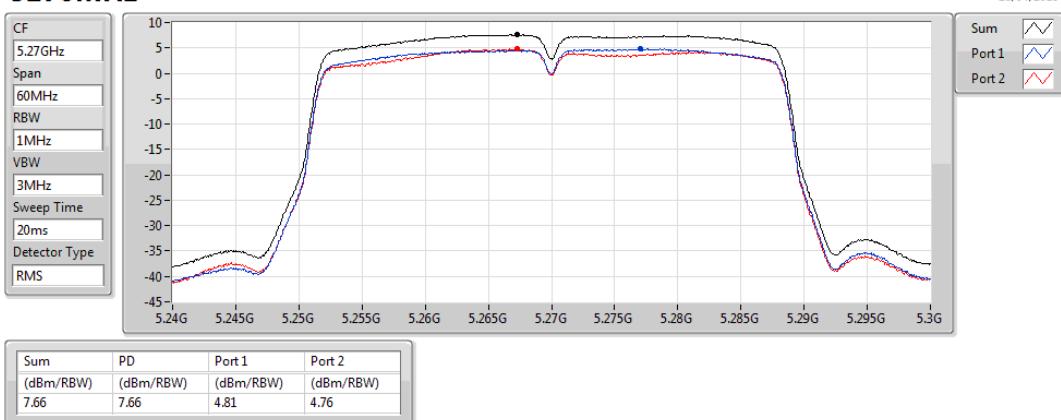
24/02/2018


**802.11ac VHT20\_Nss1,(MCS0)\_2TX**
**PSD**
**5720MHz Straddle 5.725-5.85GHz**

24/02/2018

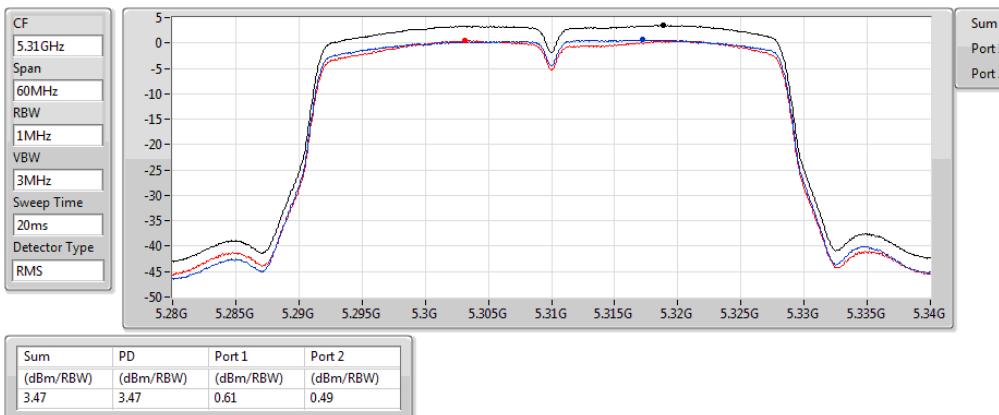

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**PSD**
**5270MHz**

26/04/2019

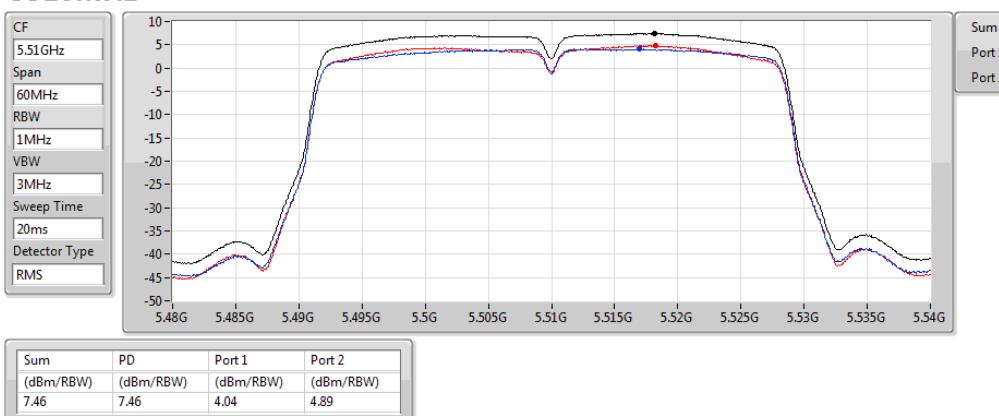


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**PSD**
**5310MHz**

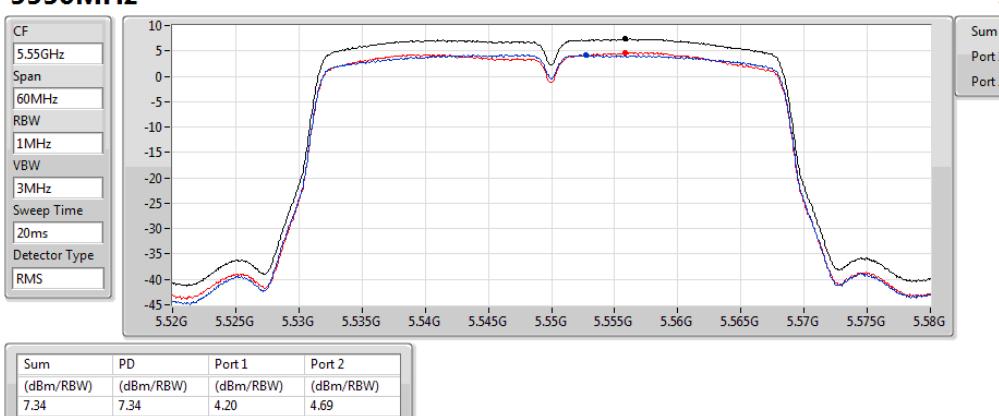
26/04/2019


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**PSD**
**5510MHz**

26/04/2019

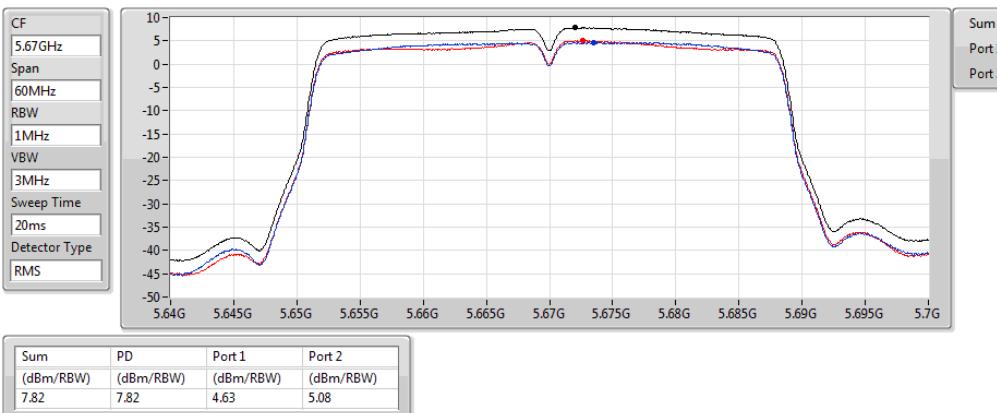

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**PSD**
**5550MHz**

26/04/2019

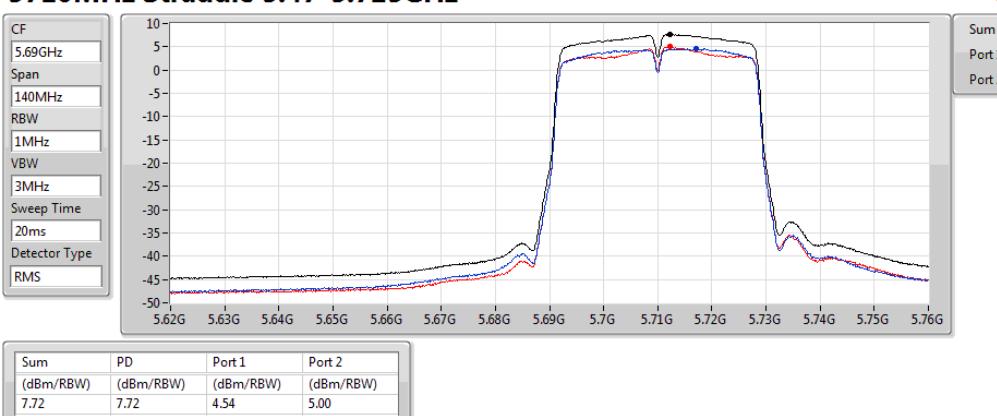


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**PSD**
**5670MHz**

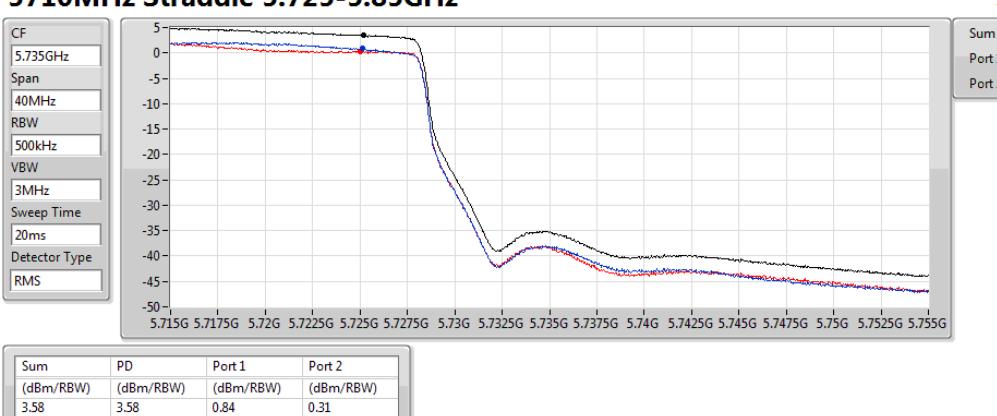
26/04/2019


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**PSD**
**5710MHz Straddle 5.47-5.725GHz**

26/04/2019

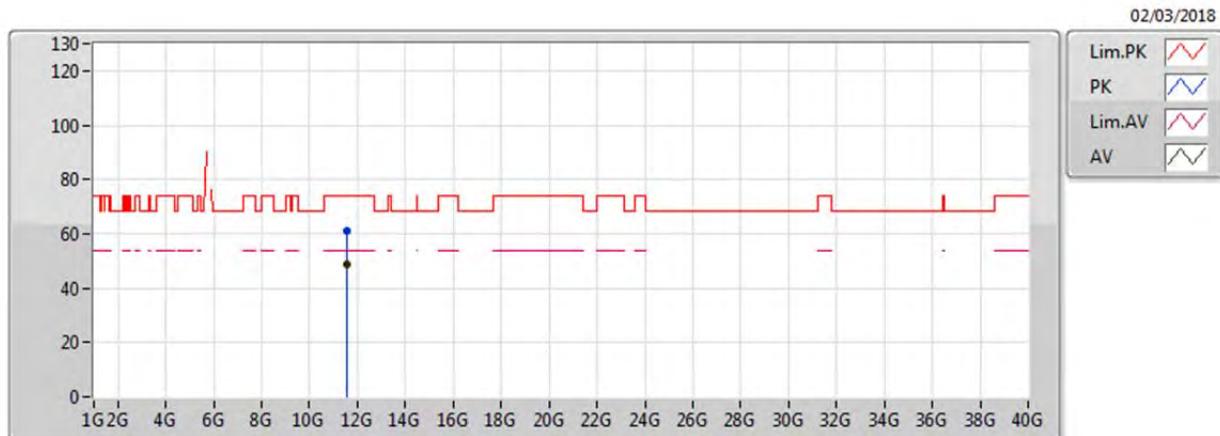

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**PSD**
**5710MHz Straddle 5.725-5.85GHz**

26/04/2019



For Cabinet:

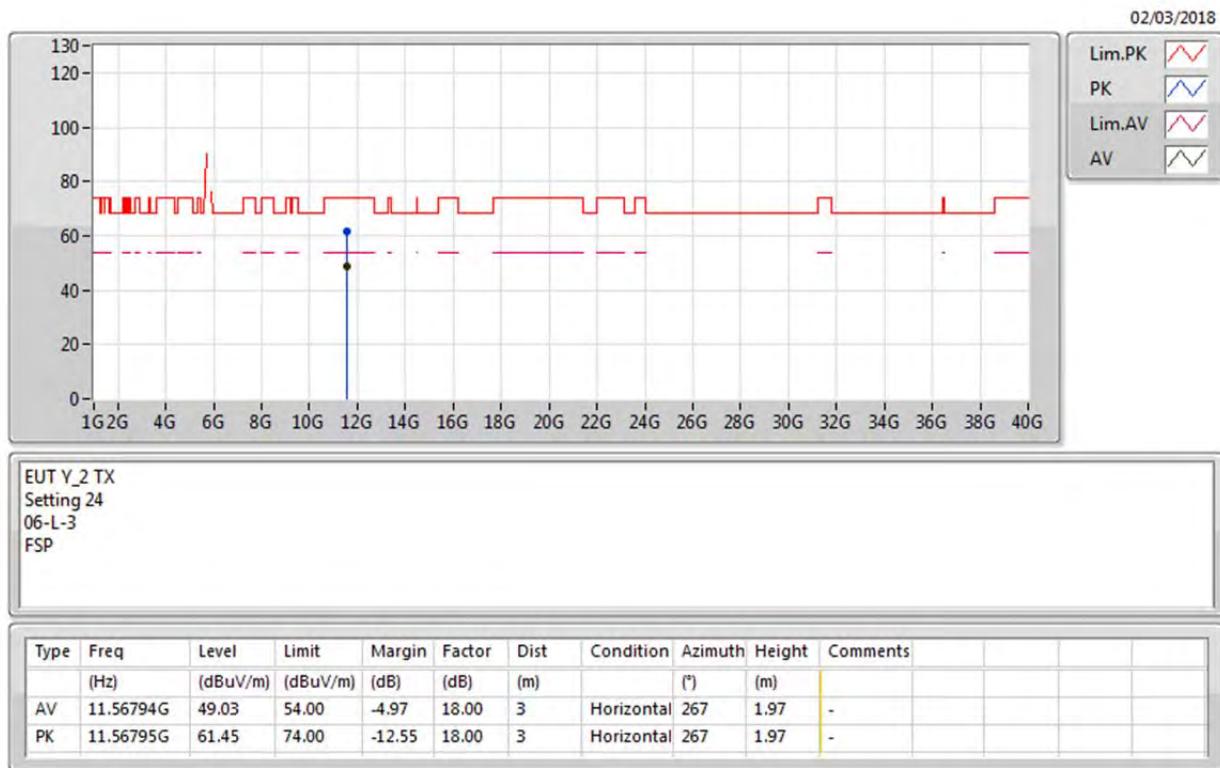
### Cabinet CTX



EUT Y\_2 TX  
Setting 24  
06-L-3  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
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



**For Conducted Spurious Emission  
For 20MHz**

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-89.53	-89.63	-78.57	-41.25	37.32
5300	-89.50	-89.67	-78.57	-41.25	37.32
5320	-89.65	-89.56	-78.59	-41.25	37.34
5500	-83.24	-84.95	-73.00	-41.25	31.75
5580	-83.80	-85.29	-73.47	-41.25	32.22
5700	-81.75	-85.75	-72.29	-41.25	31.04
5720 (Straddle Channel)	-71.02	-71.86	-60.41	-41.25	19.16

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-76.85	-76.11	-65.45	-21.25	44.20
5300	-75.62	-75.79	-64.69	-21.25	43.44
5320	-76.31	-76.31	-65.30	-21.25	44.05
5500	-66.90	-72.54	-57.85	-21.25	36.60
5580	-69.26	-71.07	-59.06	-21.25	37.81
5700	-72.29	-69.37	-59.58	-21.25	38.33
5720 (Straddle Channel)	-57.30	-54.75	-44.83	-21.25	23.58



## TX Above 1GHz Result 20MHz

Appendix D.2

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-56.02	-58.16	-45.95	-41.25	4.70
5300	-54.91	-58.49	-45.33	-41.25	4.08
5320	-55.73	-56.98	-45.30	-41.25	4.05
5500	-59.56	-62.24	-49.69	-41.25	8.44
5580	-61.17	-62.36	-50.71	-41.25	9.46
5700	-60.00	-60.74	-49.34	-41.25	8.09
5720 (Straddle Channel)	-56.60	-55.09	-44.77	-41.25	3.52

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-47.27	-47.72	-36.48	-21.25	15.23
5300	-46.25	-48.05	-36.05	-21.25	14.80
5320	-46.72	-47.00	-35.85	-21.25	14.60
5500	-50.60	-50.79	-39.68	-21.25	18.43
5580	-48.97	-49.69	-38.30	-21.25	17.05
5700	-49.42	-48.72	-38.05	-21.25	16.80
5720 (Straddle Channel)	-41.38	-38.50	-28.70	-21.25	7.45



Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-58.22	-59.99	-48.01	-41.25	6.76
5300	-60.32	-62.71	-50.34	-41.25	9.09
5320	-63.80	-64.20	-52.99	-41.25	11.74
5500	-68.63	-68.44	-57.52	-41.25	16.27
5580	-72.61	-71.85	-61.20	-41.25	19.95
5700	-66.75	-61.20	-52.13	-41.25	10.88
5720 (Straddle Channel)	-65.59	-64.79	-54.16	-41.25	12.91

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-56.01	-57.94	-45.86	-21.25	24.61
5300	-58.80	-58.36	-47.56	-21.25	26.31
5320	-60.56	-58.13	-48.17	-21.25	26.92
5500	-55.97	-56.52	-45.23	-21.25	23.98
5580	-60.83	-59.19	-48.92	-21.25	27.67
5700	-56.08	-54.05	-43.94	-21.25	22.69
5720 (Straddle Channel)	-53.92	-54.78	-43.32	-21.25	22.07



Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-79.94	-79.60	-68.76	-41.25	27.51
5300	-80.27	-80.32	-69.28	-41.25	28.03
5320	-80.31	-80.29	-69.29	-41.25	28.04
5500	-80.14	-80.18	-69.15	-41.25	27.90
5580	-74.84	-79.24	-65.49	-41.25	24.24
5700	-80.12	-80.01	-69.05	-41.25	27.80
5720 (Straddle Channel)	-79.87	-79.49	-68.67	-41.25	27.42

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	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)
5260	-67.87	-66.78	-56.28	-21.25	35.03
5300	-67.83	-67.90	-56.85	-21.25	35.60
5320	-68.19	-67.82	-56.99	-21.25	35.74
5500	-67.64	-68.08	-56.84	-21.25	35.59
5580	-61.47	-67.65	-52.53	-21.25	31.28
5700	-68.04	-67.91	-56.96	-21.25	35.71
5720 (Straddle Channel)	-67.94	-67.46	-56.68	-21.25	35.43

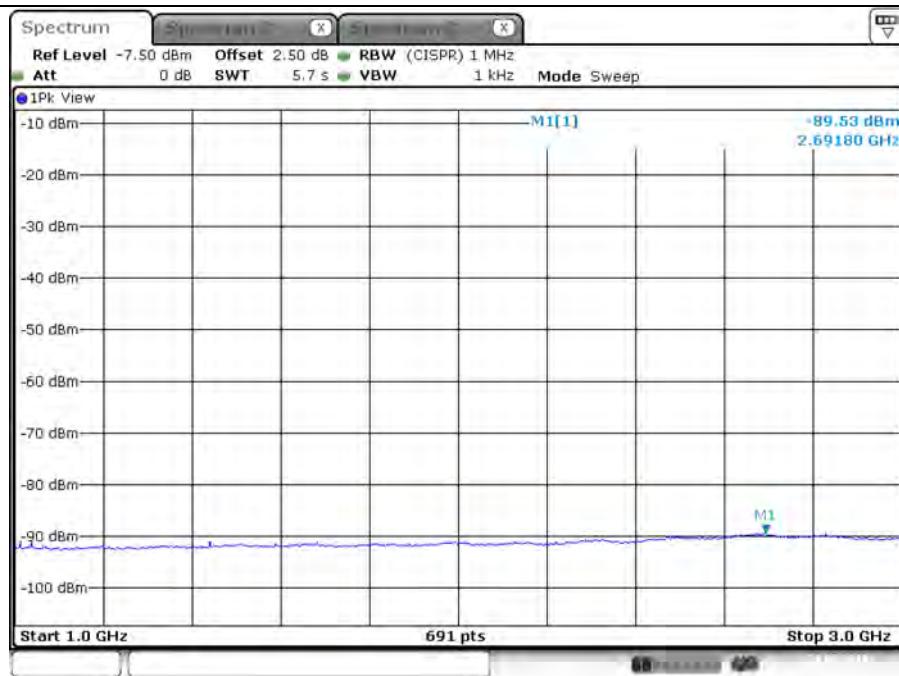
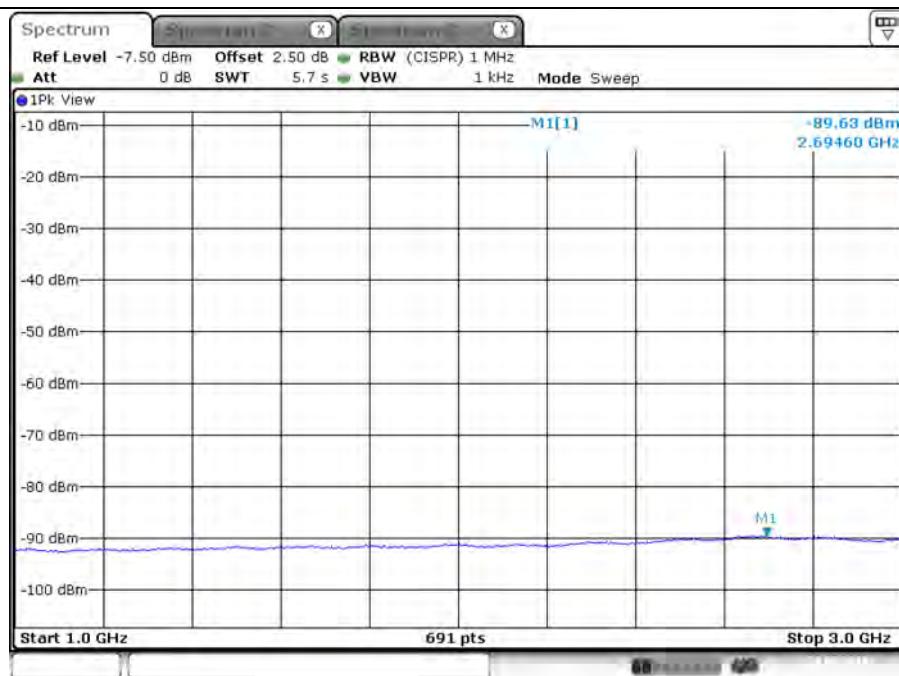


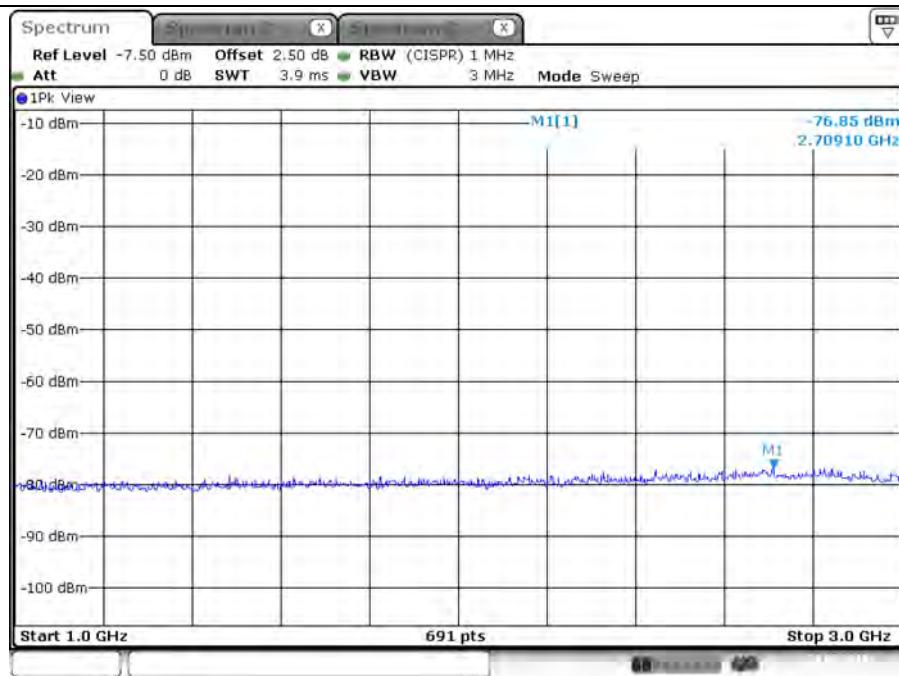
Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	Configurations	VHT20 / Average / Port 1 + Port 2 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5260	-75.05	-70.94	-61.52	-41.25	20.27
5300	-75.07	-75.05	-64.05	-41.25	22.80
5320	-75.09	-74.92	-63.99	-41.25	22.74
5500	-74.79	-74.79	-63.78	-41.25	22.53
5580	-74.66	-67.72	-58.92	-41.25	17.67
5700	-74.65	-74.66	-63.64	-41.25	22.39
5720 (Straddle Channel)	-74.74	-71.25	-61.64	-41.25	20.39

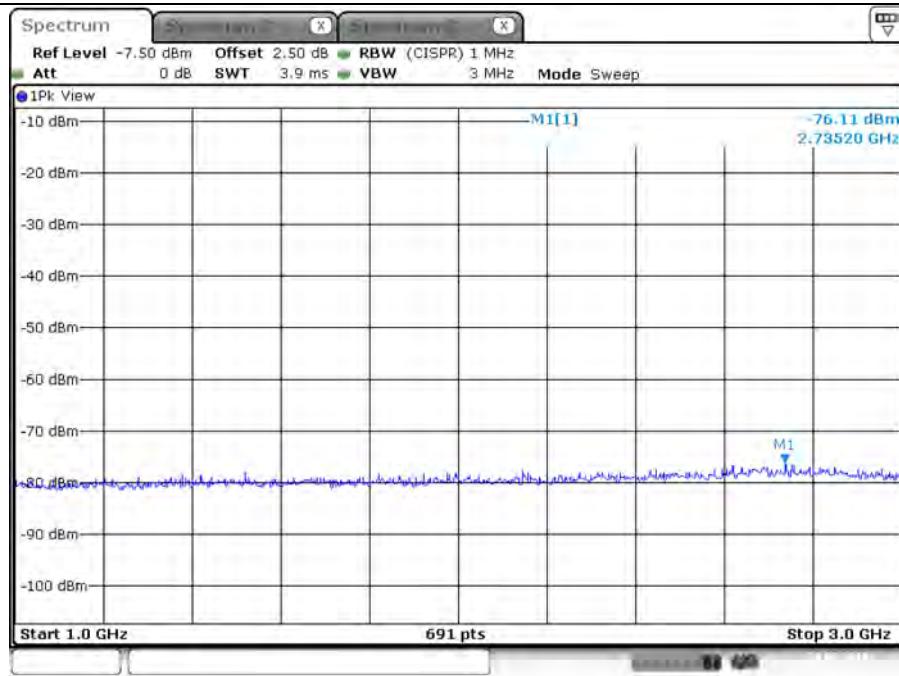
Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	Configurations	VHT20 / Peak / Port 1 + Port 2 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5260	-62.82	-58.27	-48.96	-21.25	27.71
5300	-62.20	-62.64	-51.40	-21.25	30.15
5320	-62.60	-62.69	-51.63	-21.25	30.38
5500	-63.01	-63.02	-52.00	-21.25	30.75
5580	-61.81	-55.67	-46.72	-21.25	25.47
5700	-62.07	-61.86	-50.95	-21.25	29.70
5720 (Straddle Channel)	-62.29	-60.52	-50.31	-21.25	29.06

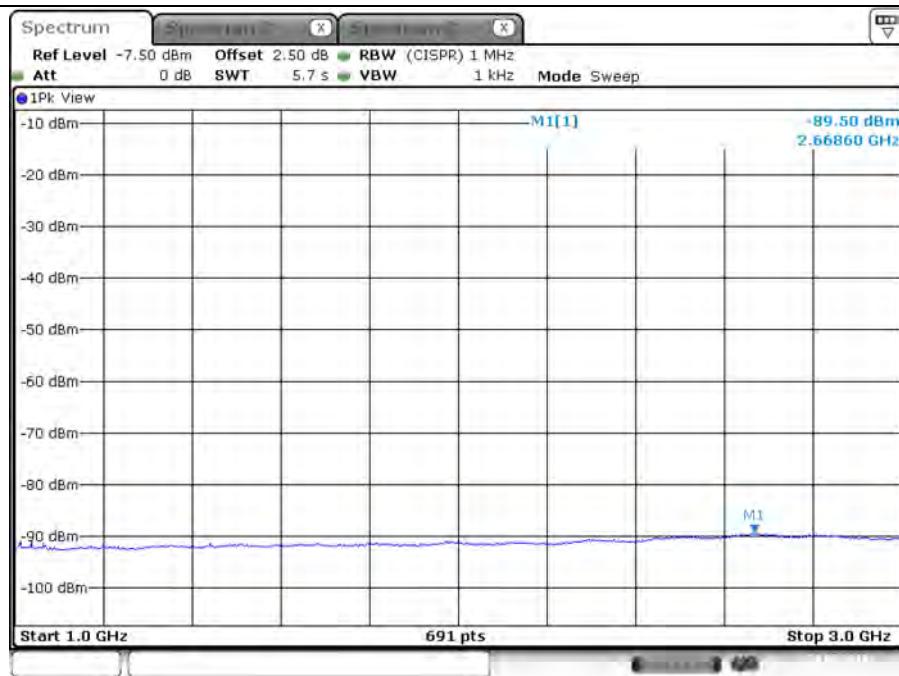
**Plot on Configuration VHT20 / 5260 MHz / Average / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5260 MHz / Average / Port 2 / 1GHz~3GHz**


**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 1 / 1GHz~3GHz**


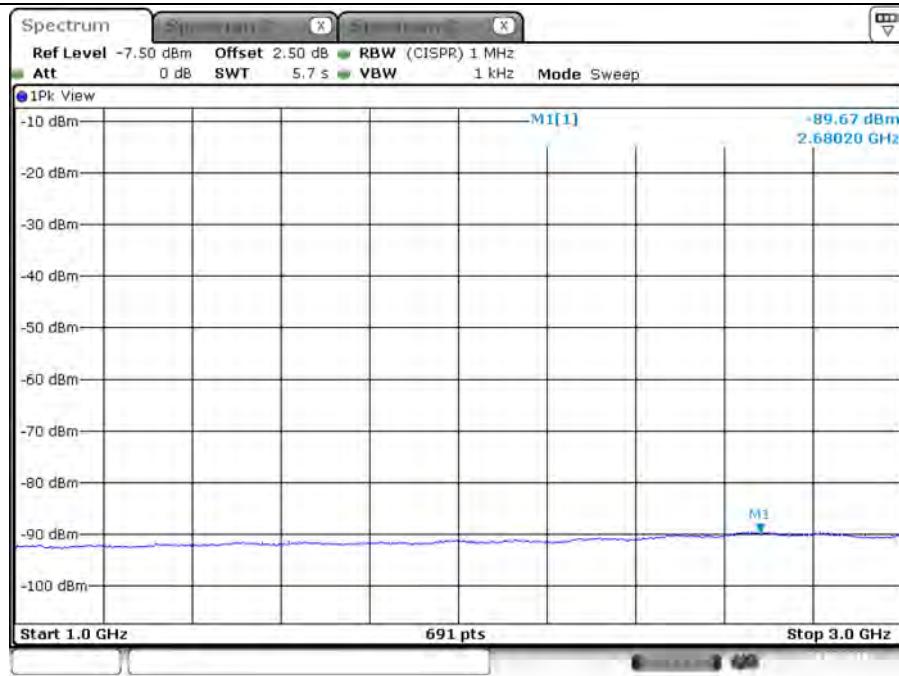
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**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 2 / 1GHz~3GHz**


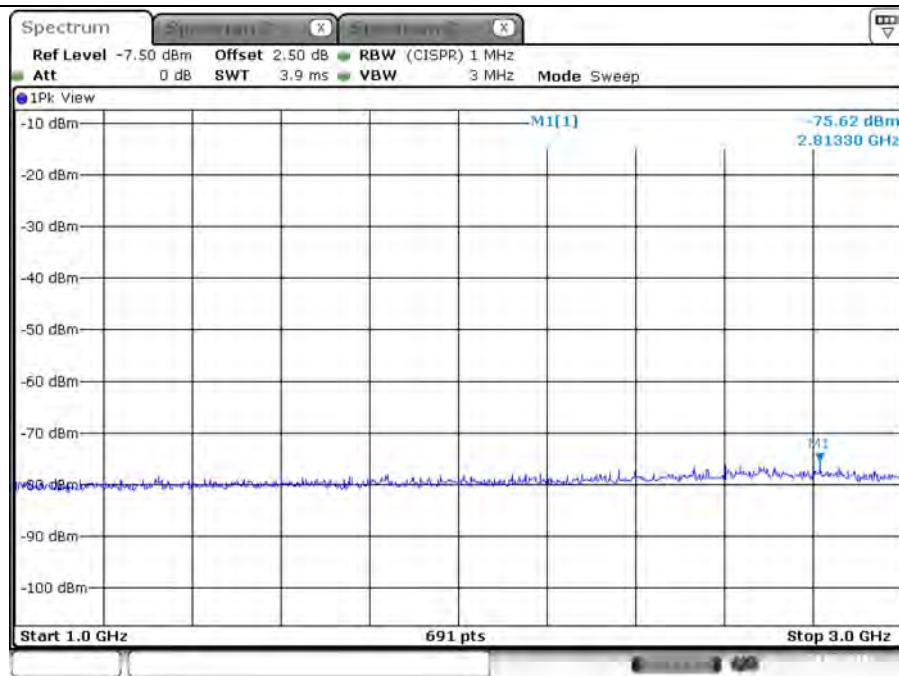
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**Plot on Configuration VHT20 / 5300 MHz / Average / Port 1 / 1GHz~3GHz**


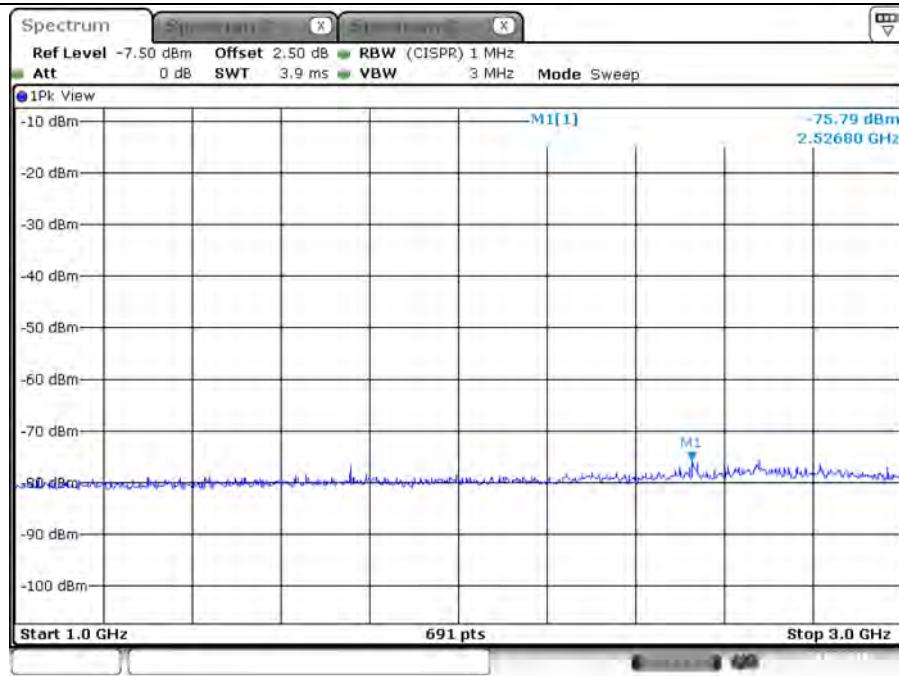
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**Plot on Configuration VHT20 / 5300 MHz / Average / Port 2 / 1GHz~3GHz**


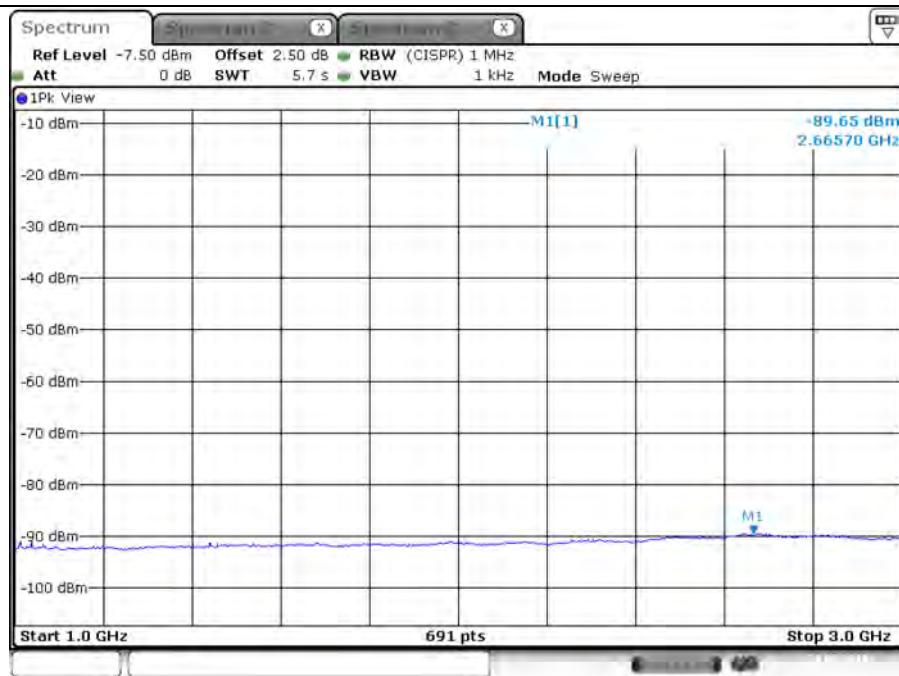
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**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 1 / 1GHz~3GHz**


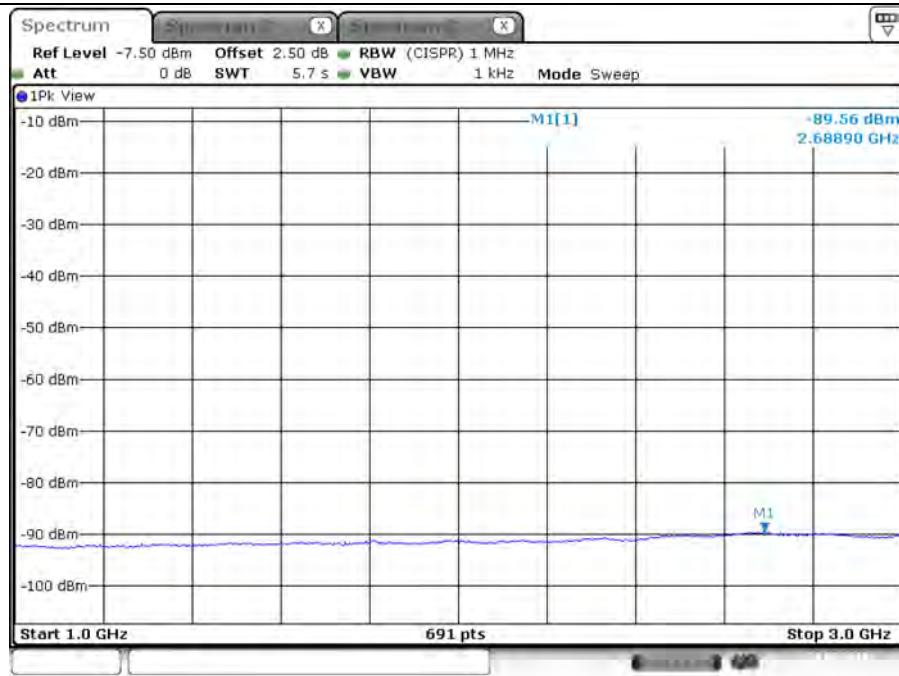
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**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 2 / 1GHz~3GHz**


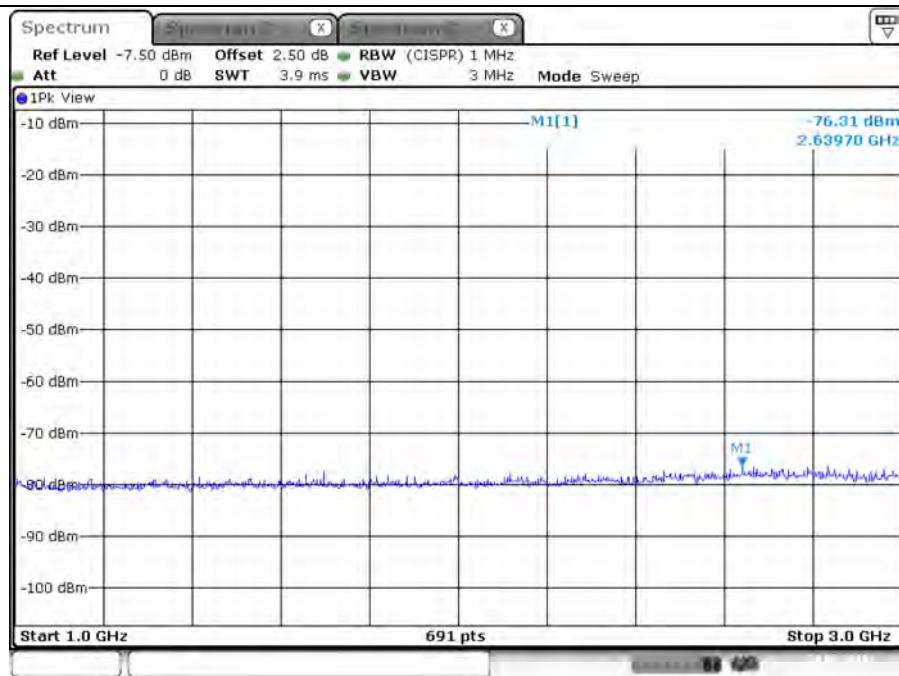
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**Plot on Configuration VHT20 / 5320 MHz / Average / Port 1 / 1GHz~3GHz**


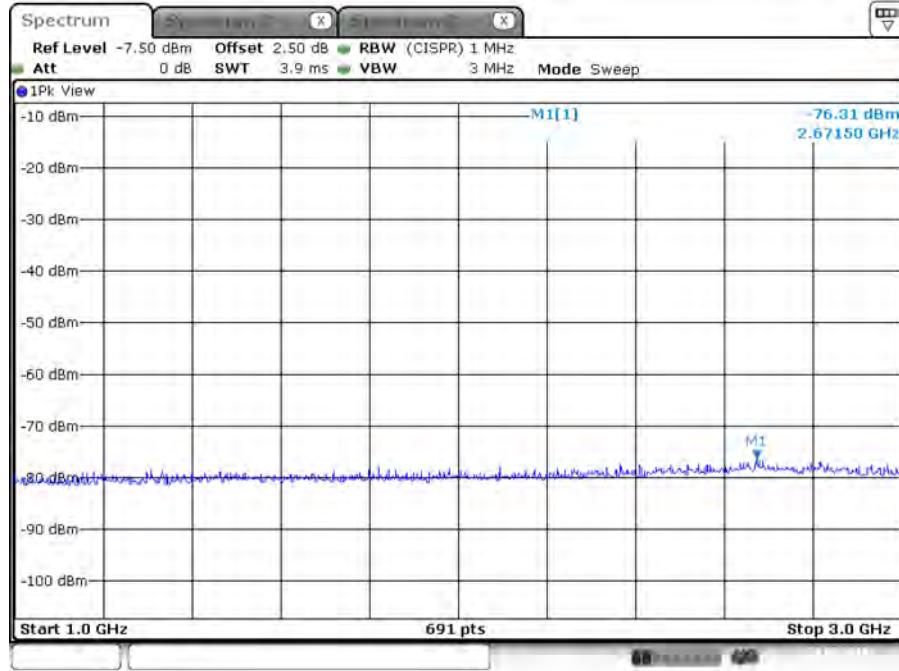
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**Plot on Configuration VHT20 / 5320 MHz / Average / Port 2 / 1GHz~3GHz**


Date: 23.FEB.2018 12:04:07

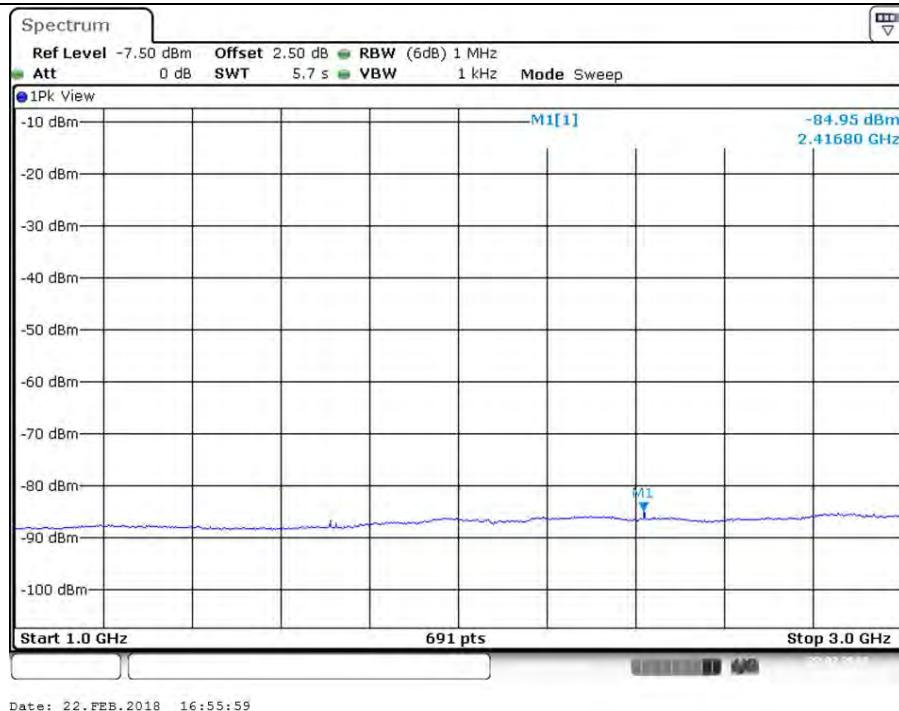
**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 1 / 1GHz~3GHz**


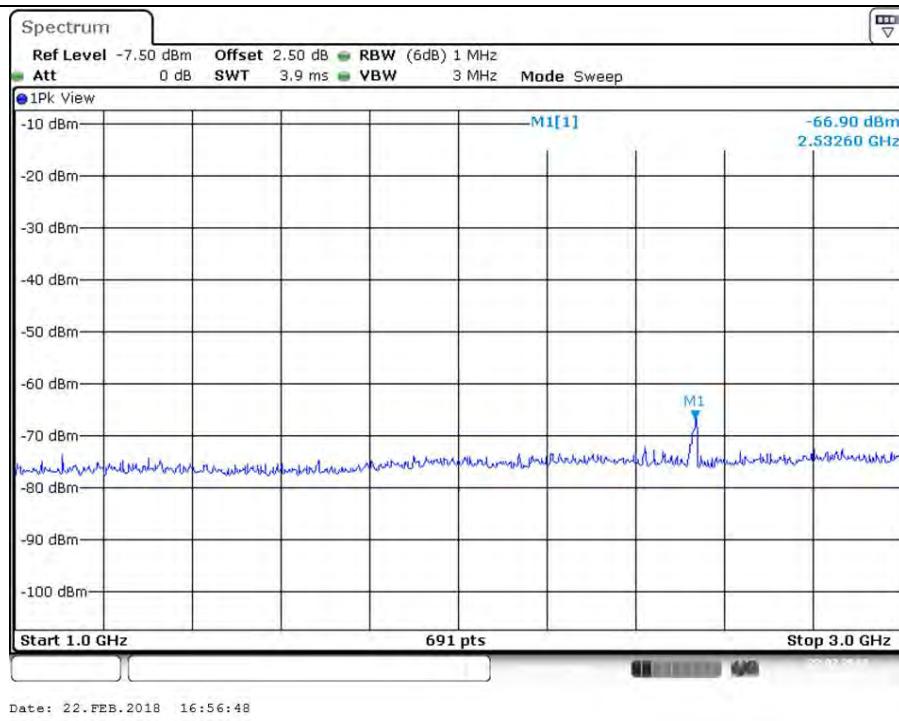
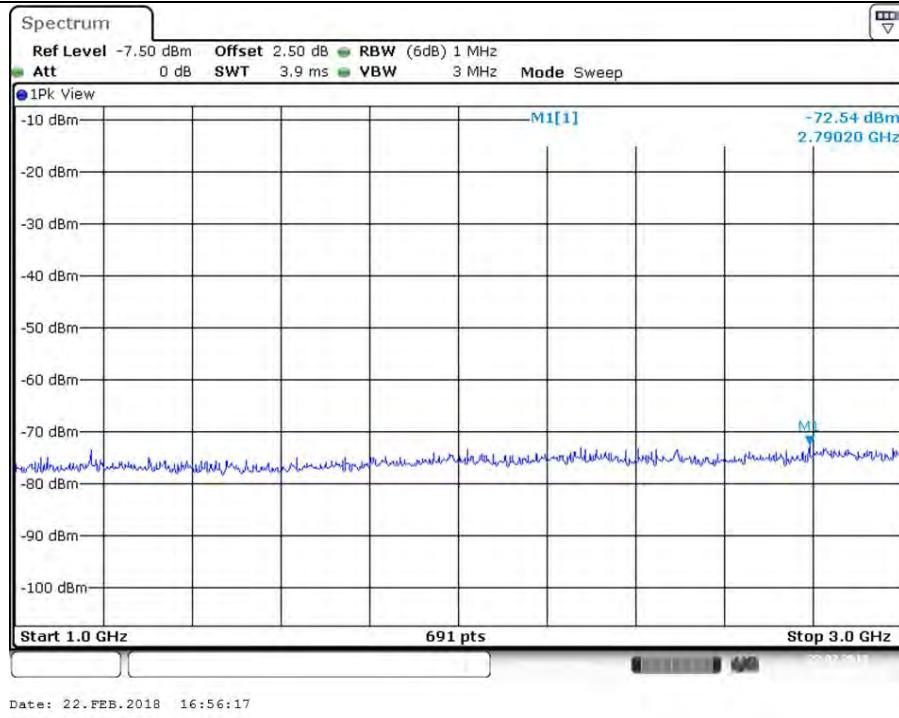
Date: 23.FEB.2018 11:53:23

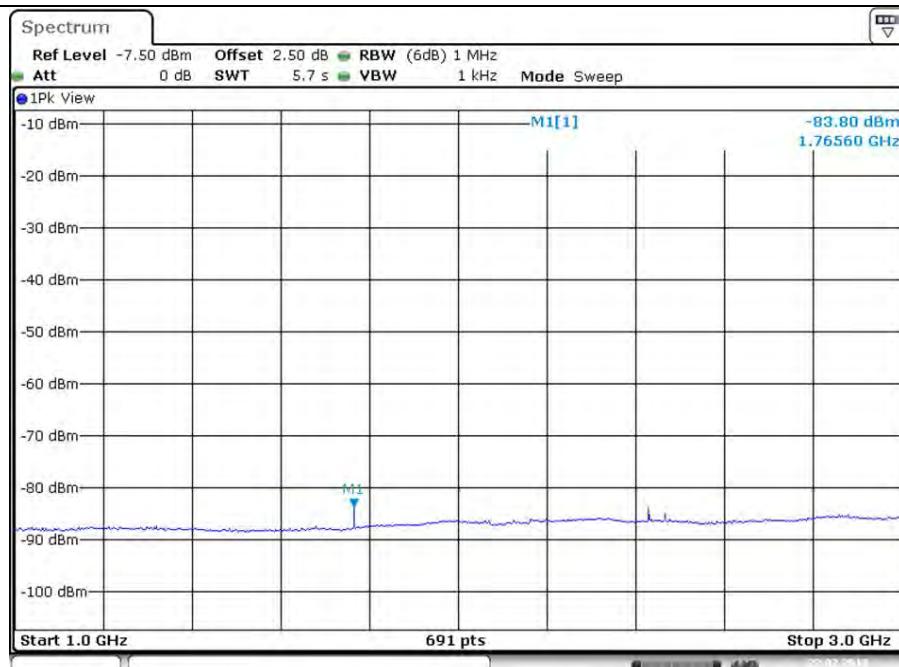
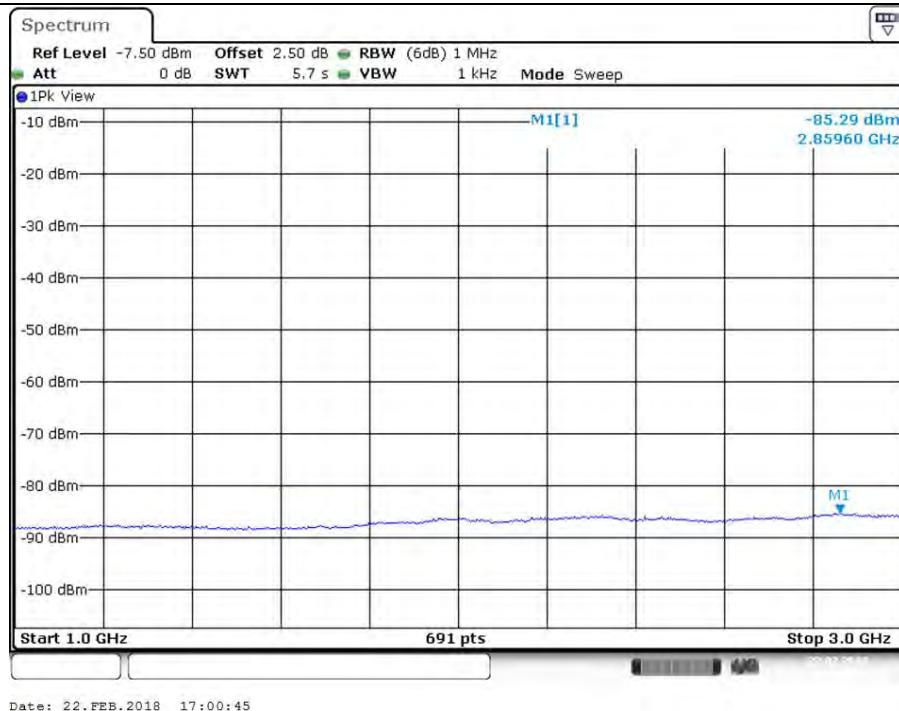
**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 2 / 1GHz~3GHz**


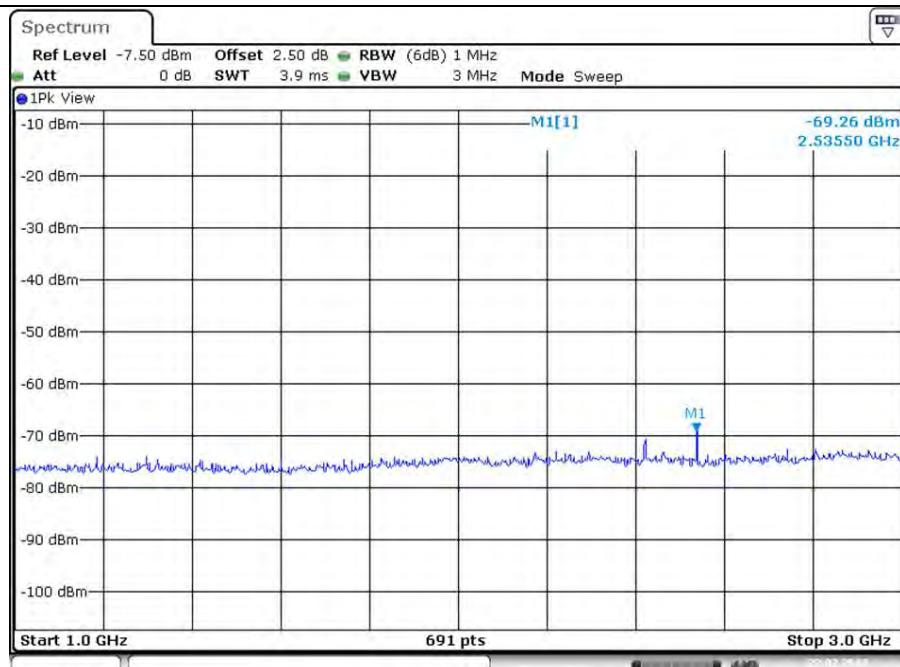
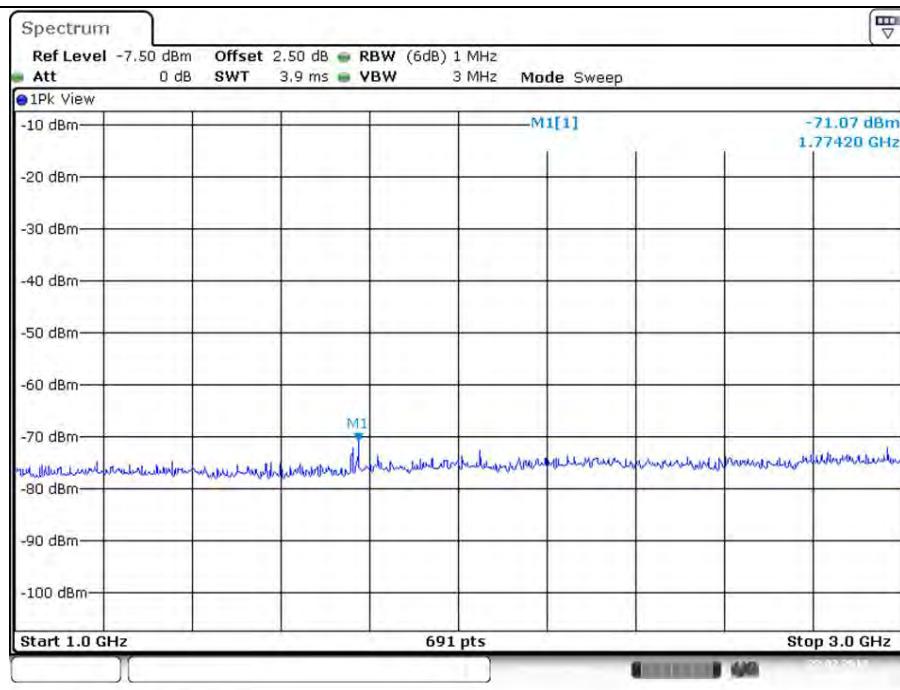
Date: 23.FEB.2018 12:04:54

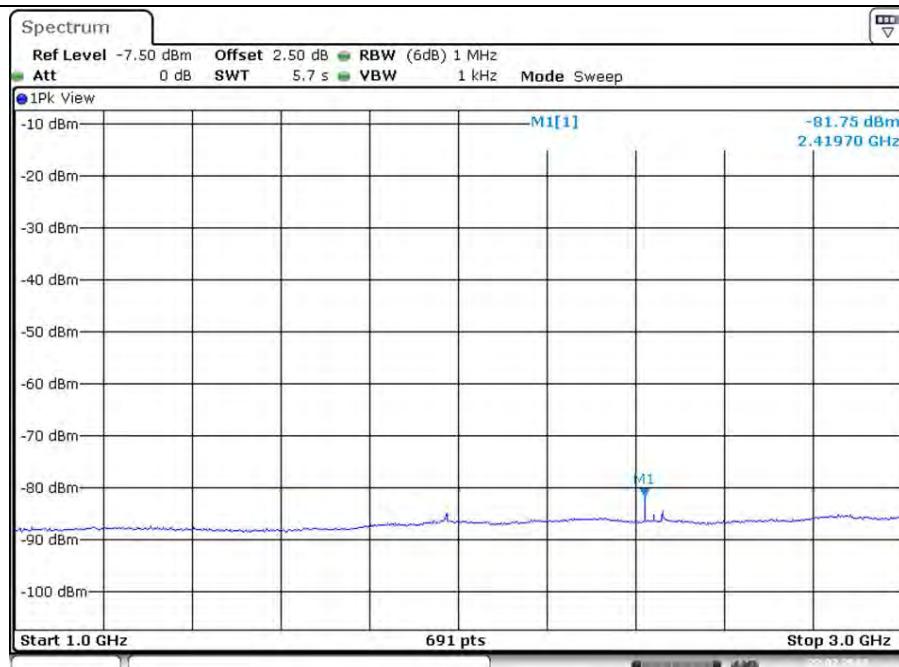
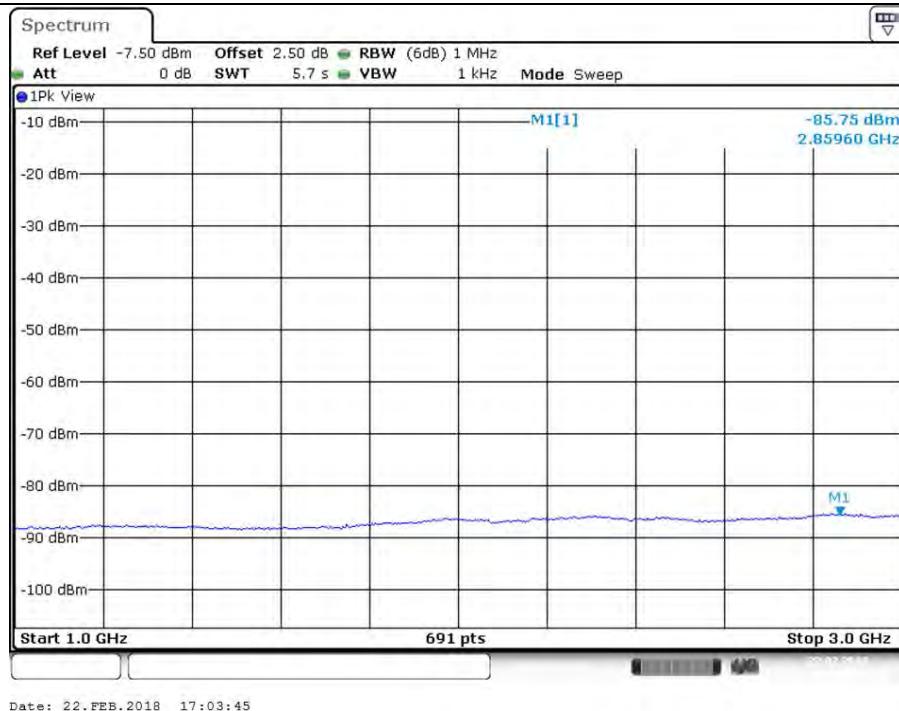
**Plot on Configuration VHT20 / 5500 MHz / Average / Port 1 / 1GHz~3GHz**

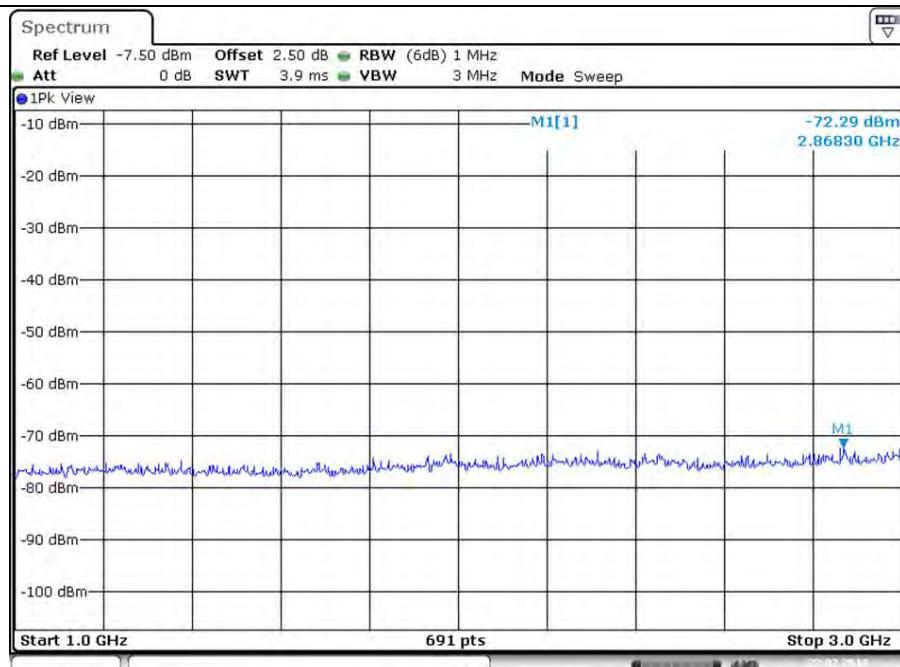
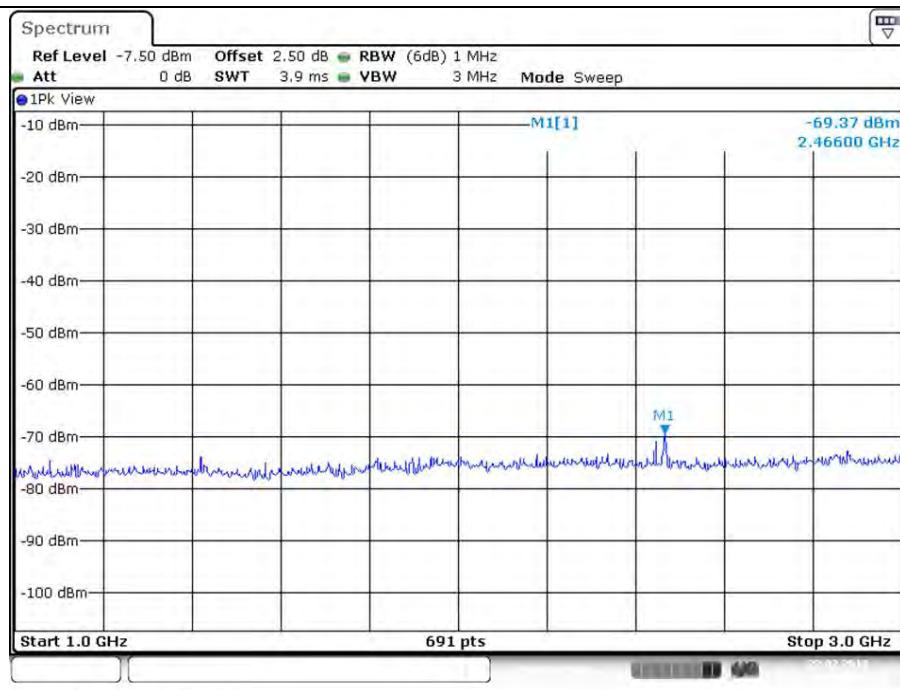
**Plot on Configuration VHT20 / 5500 MHz / Average / Port 2 / 1GHz~3GHz**


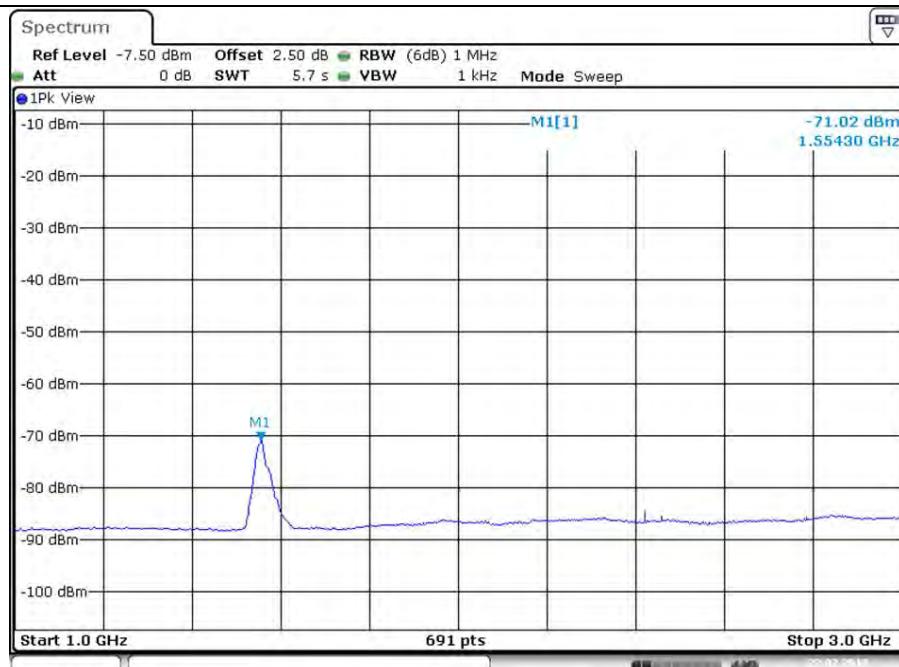
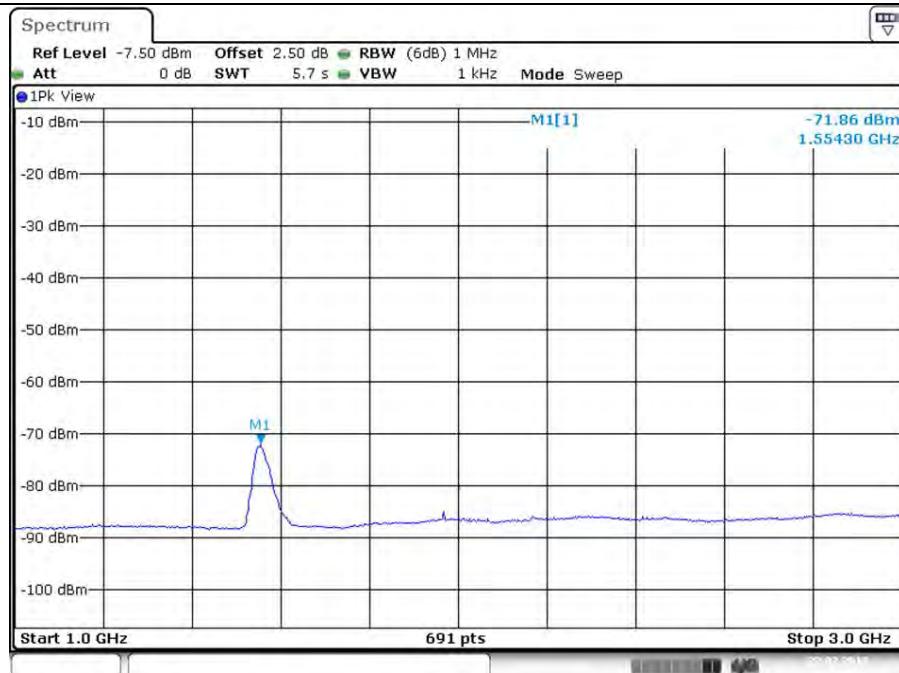
**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 2 / 1GHz~3GHz**


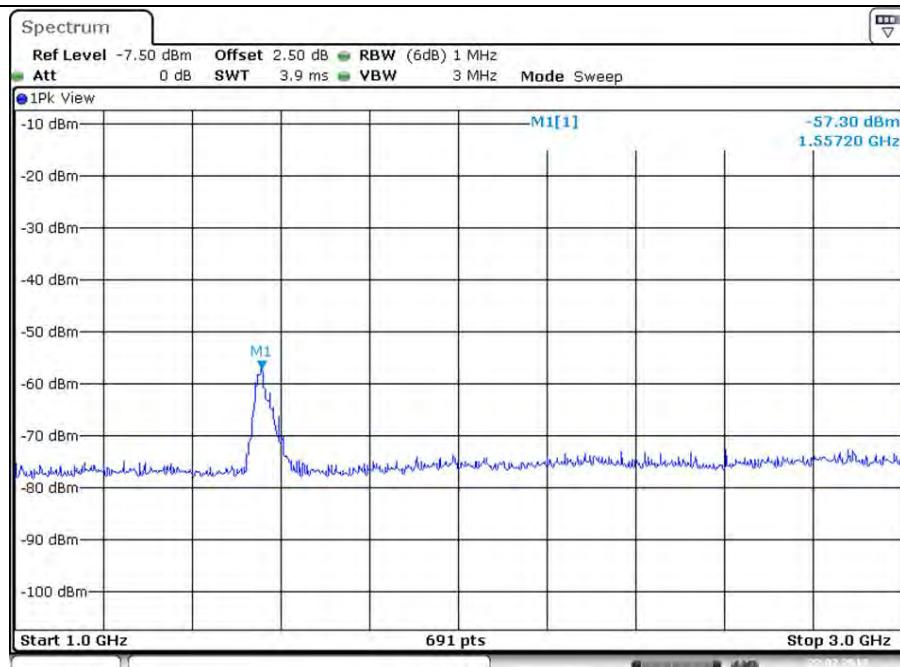
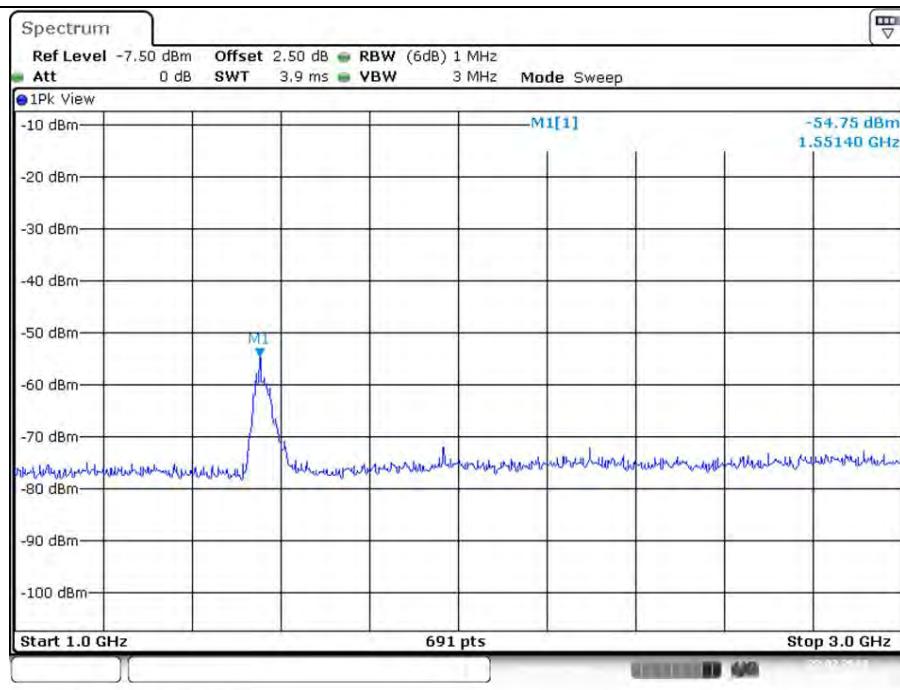
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5580 MHz / Average / Port 2 / 1GHz~3GHz**


**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 2 / 1GHz~3GHz**


**Plot on Configuration VHT20 / 5700 MHz / Average / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5700 MHz / Average / Port 2 / 1GHz~3GHz**


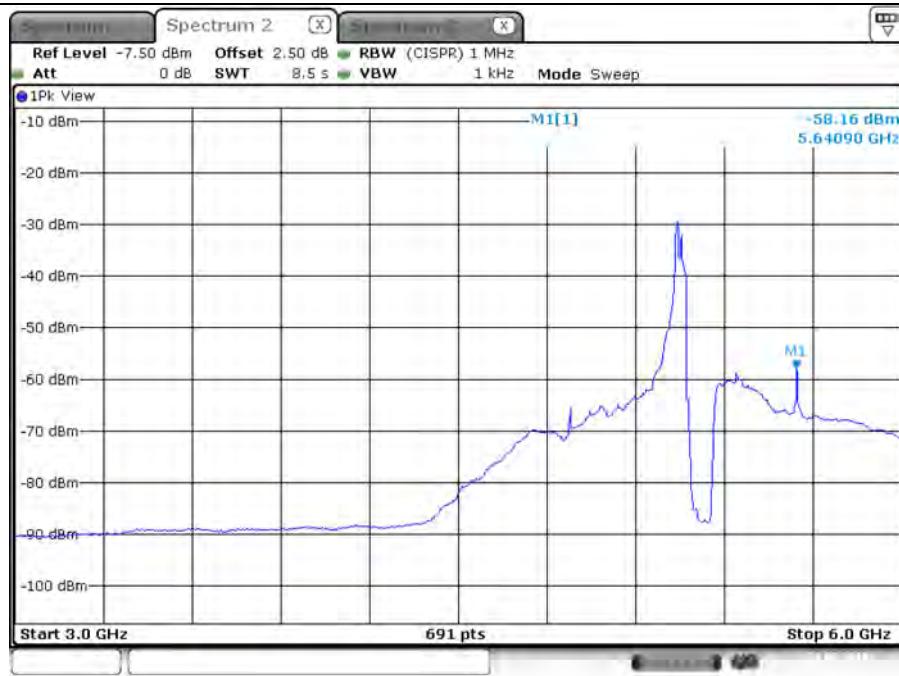
**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 2 / 1GHz~3GHz**


**Plot on Configuration VHT20 / 5720 MHz / Average / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 2 / 1GHz~3GHz**


**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 1 / 1GHz~3GHz**

**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 2 / 1GHz~3GHz**


**Plot on Configuration VHT20 / 5260 MHz / Average / Port 1 / 3GHz~6GHz**


Date: 23.FEB.2018 11:00:45

**Plot on Configuration VHT20 / 5260 MHz / Average / Port 2 / 3GHz~6GHz**


Date: 23.FEB.2018 11:17:51

**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 1 / 3GHz~6GHz**


Date: 23.FEB.2018 11:02:04

**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 2 / 3GHz~6GHz**

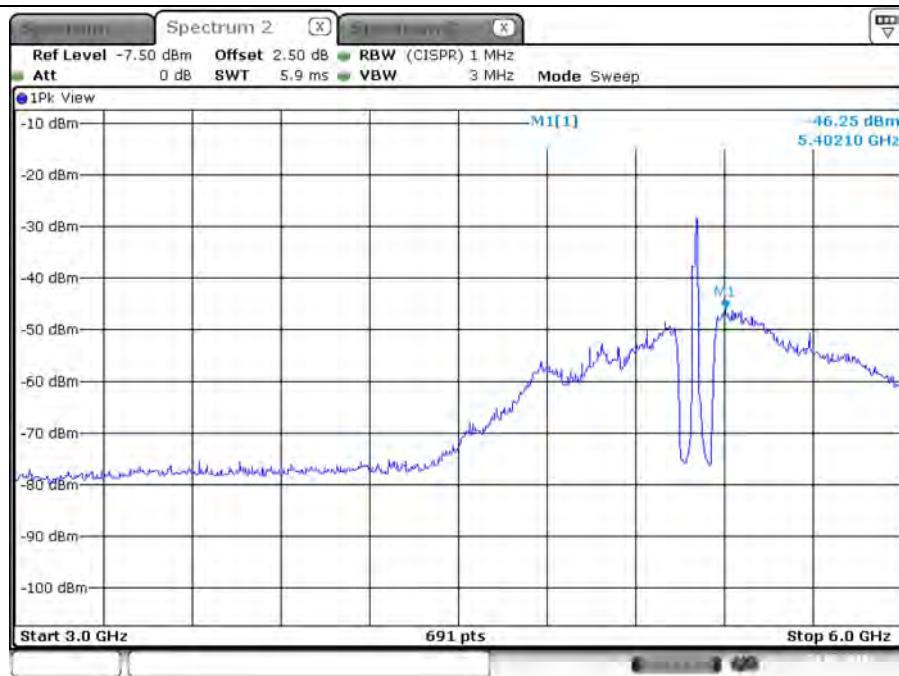

Date: 23.FEB.2018 11:19:39

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 1 / 3GHz~6GHz**

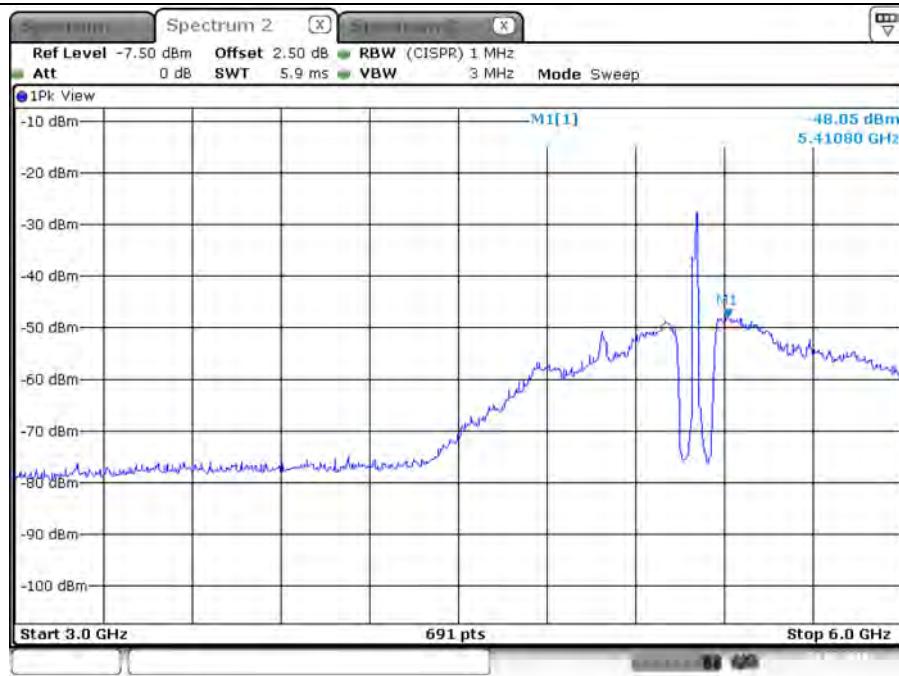

Date: 23.FEB.2018 11:31:02

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 2 / 3GHz~6GHz**

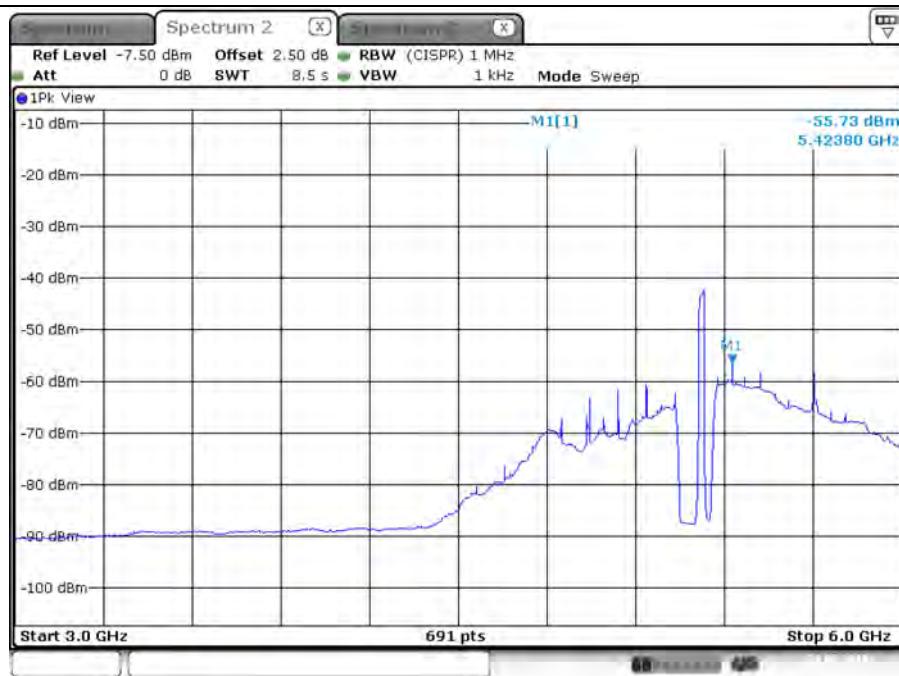

Date: 23.FEB.2018 11:40:55

**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 1 / 3GHz~6GHz**


Date: 23.FEB.2018 11:32:27

**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 2 / 3GHz~6GHz**


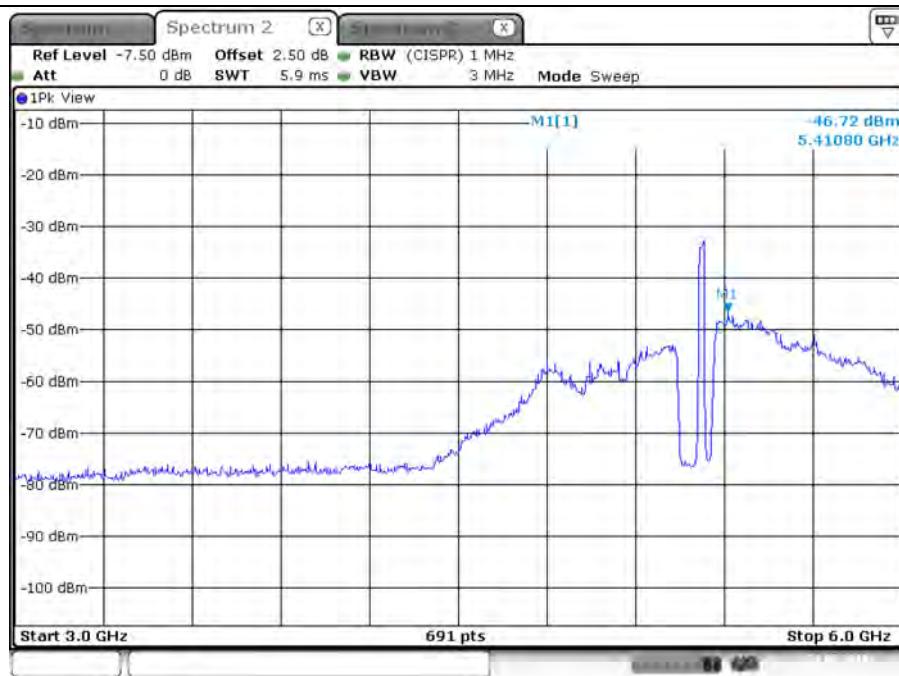
Date: 23.FEB.2018 11:43:17

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 1 / 3GHz~6GHz**


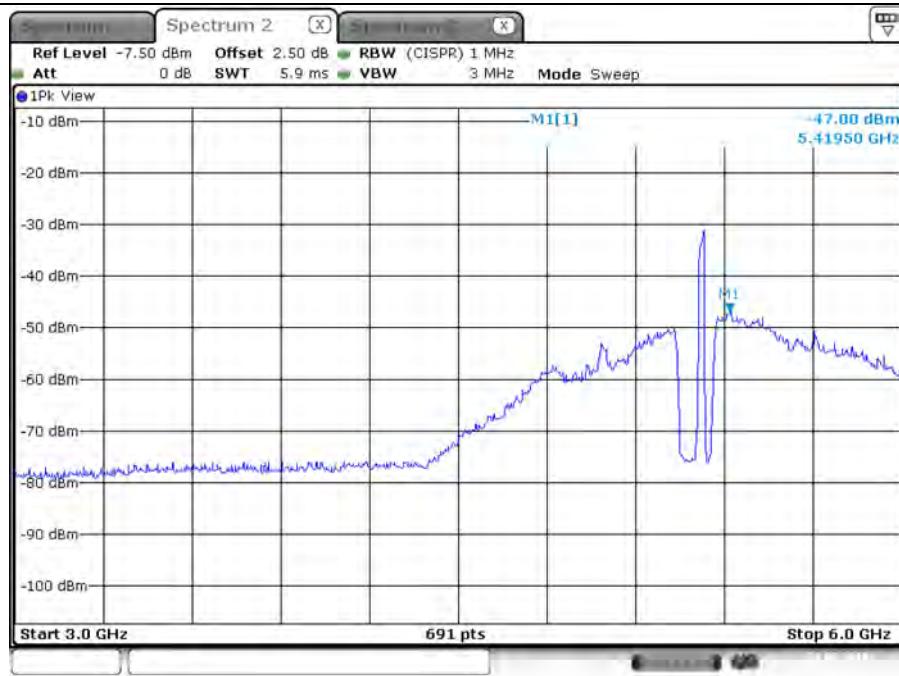
Date: 23 FEB.2018 11:54:48

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 2 / 3GHz~6GHz**


Date: 23.FEB.2018 12:02:20

**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 1 / 3GHz~6GHz**


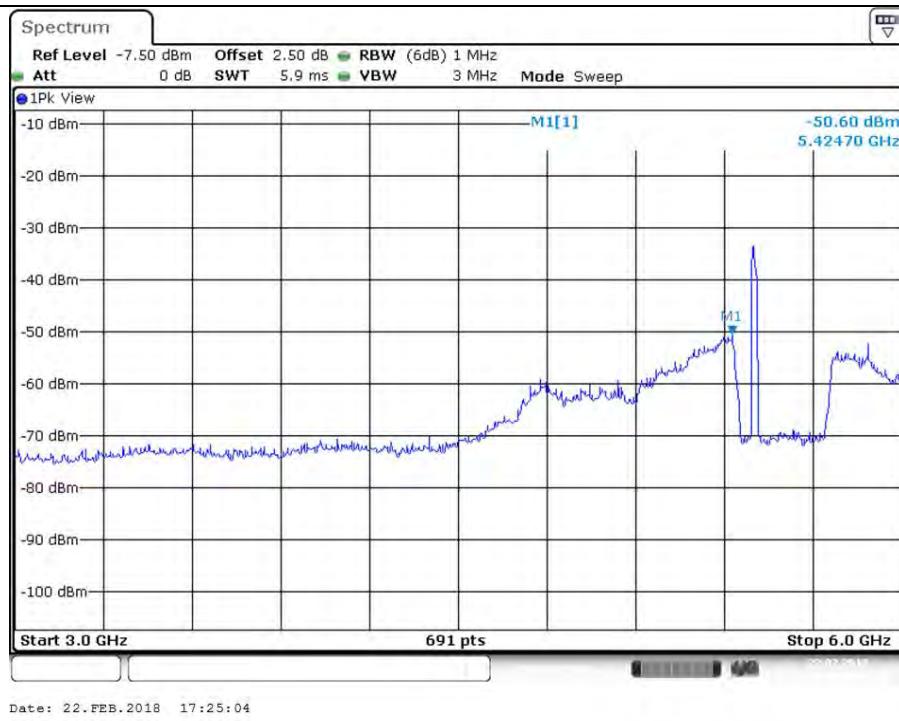
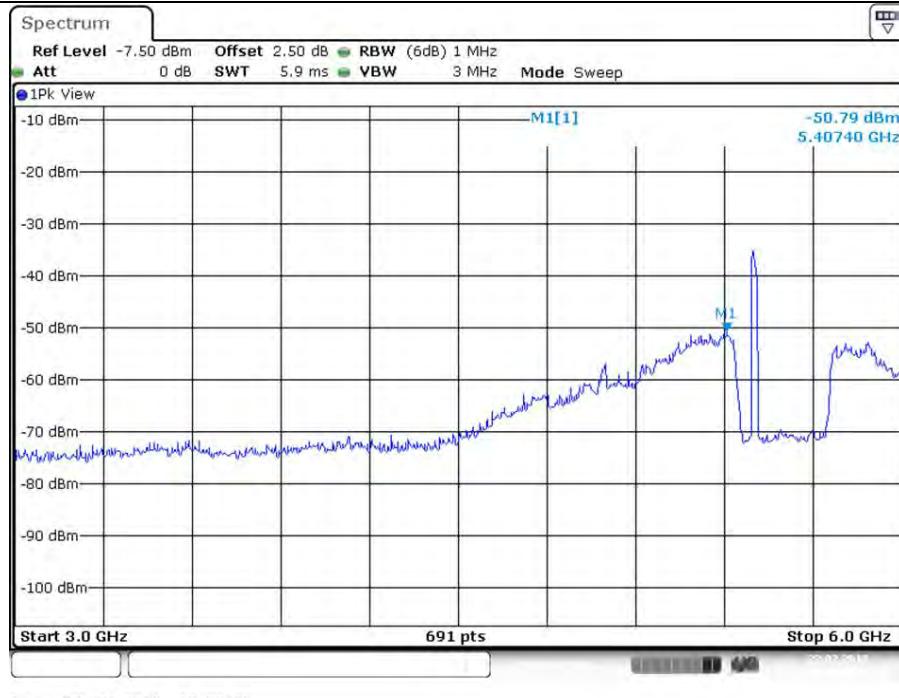
Date: 23 FEB.2018 11:55:45

**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 2 / 3GHz~6GHz**


Date: 23.FEB.2018 12:03:18

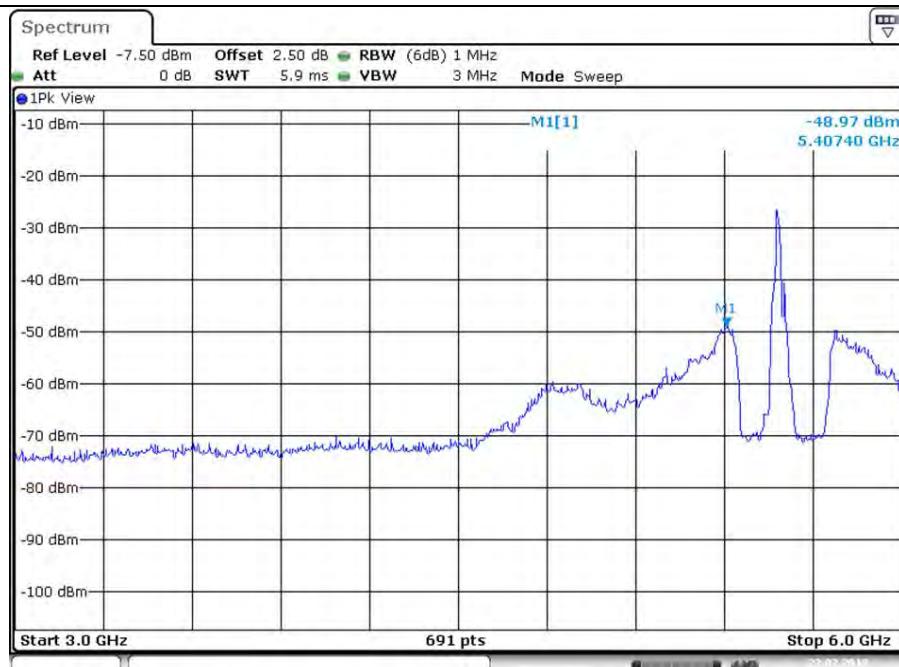
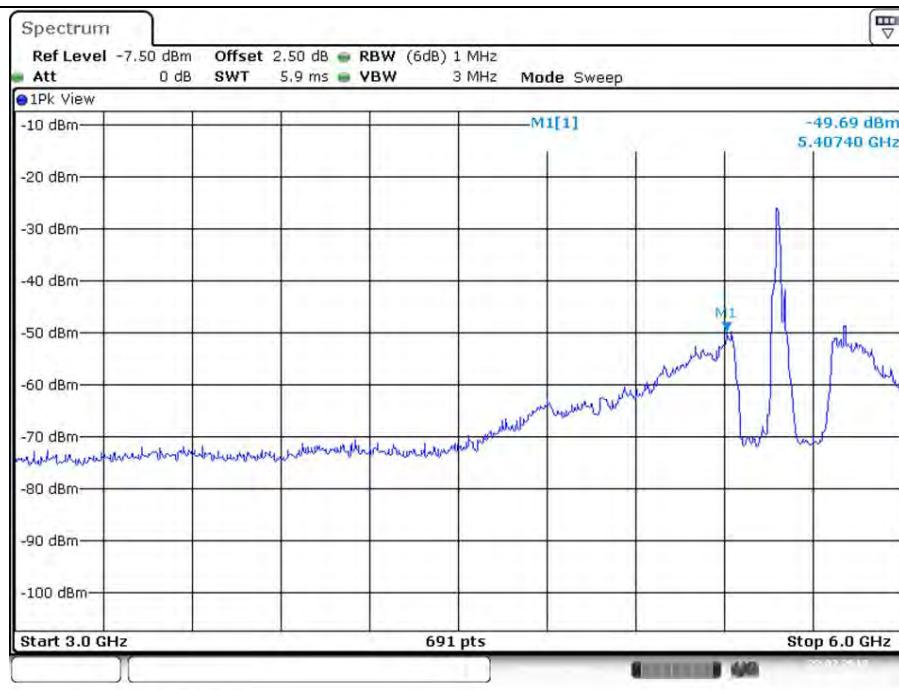
**Plot on Configuration VHT20 / 5500 MHz / Average / Port 1 / 3GHz~6GHz**

**Plot on Configuration VHT20 / 5500 MHz / Average / Port 2 / 3GHz~6GHz**

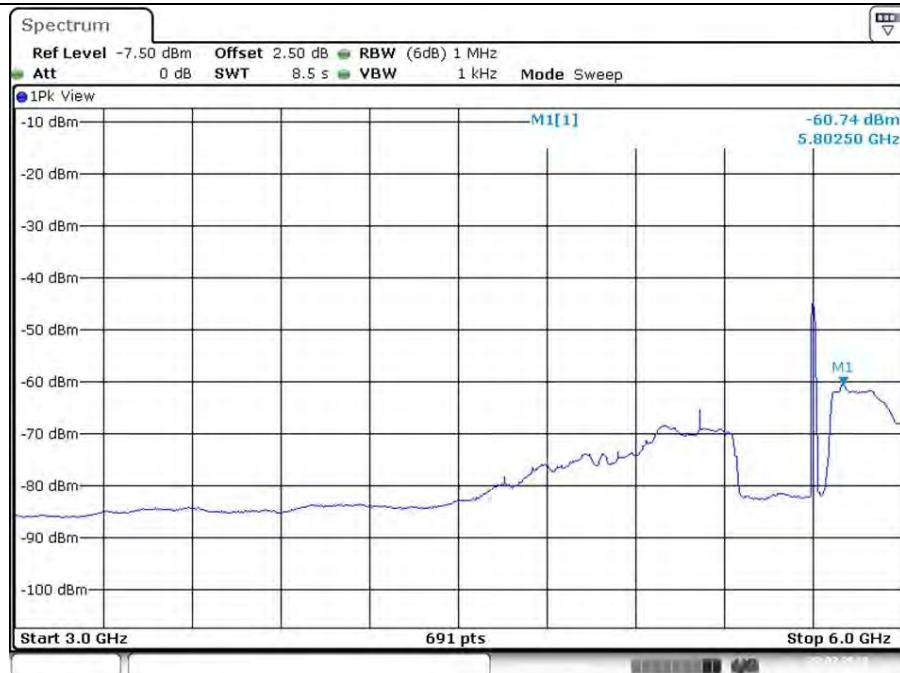

**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 1 / 3GHz~6GHz**

**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 2 / 3GHz~6GHz**


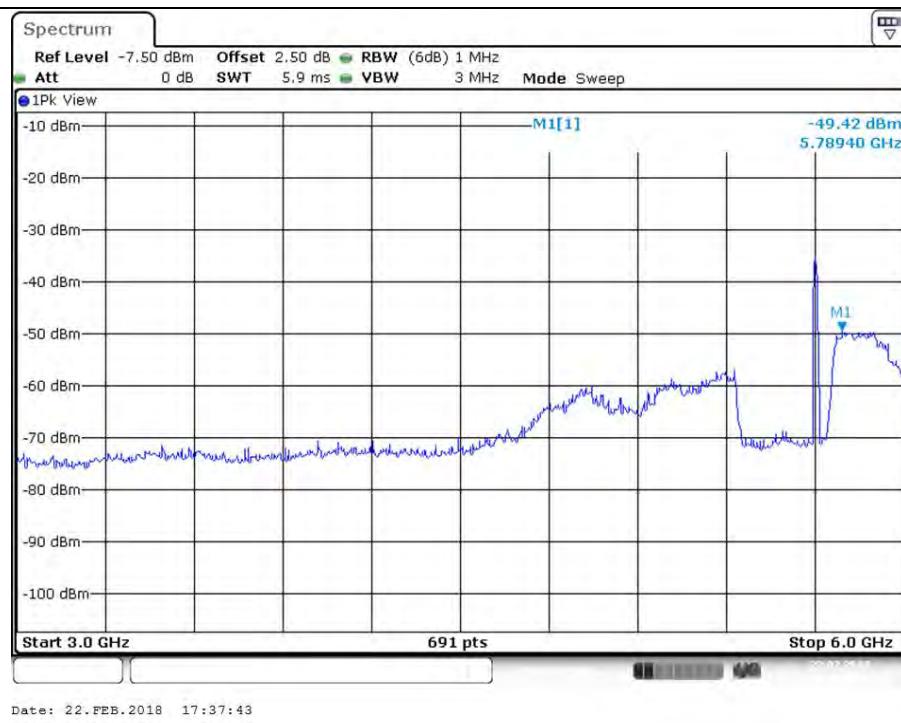
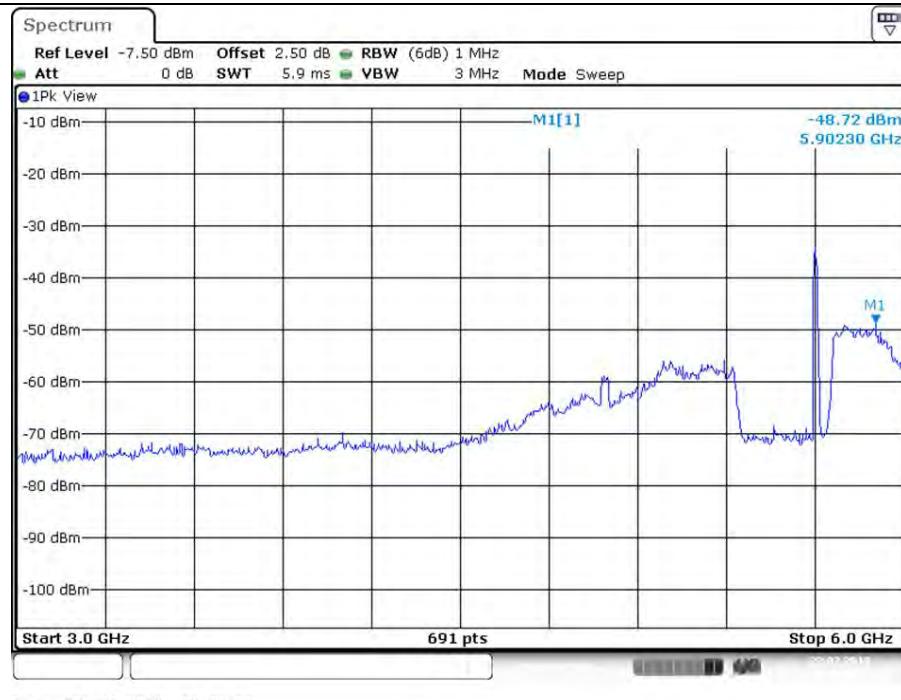
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 1 / 3GHz~6GHz**

**Plot on Configuration VHT20 / 5580 MHz / Average / Port 2 / 3GHz~6GHz**


**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 1 / 3GHz~6GHz**

**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 2 / 3GHz~6GHz**


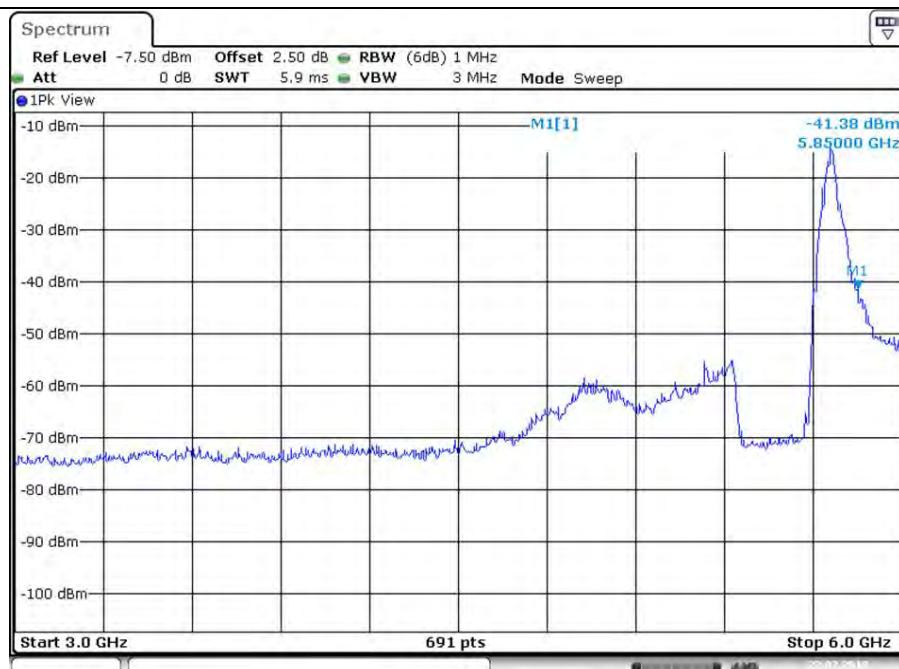
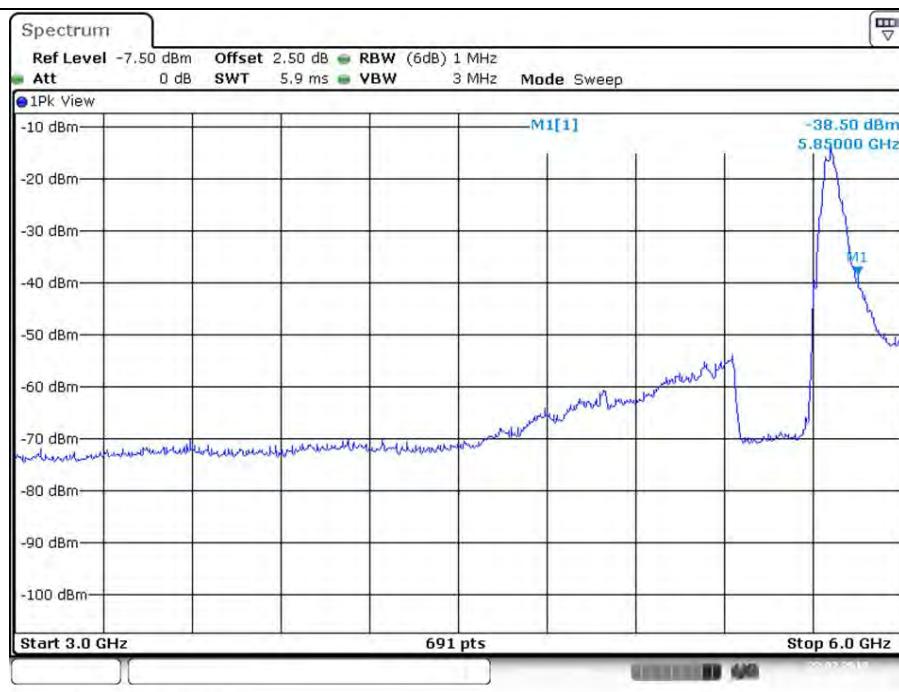
**Plot on Configuration VHT20 / 5700 MHz / Average / Port 1 / 3GHz~6GHz**

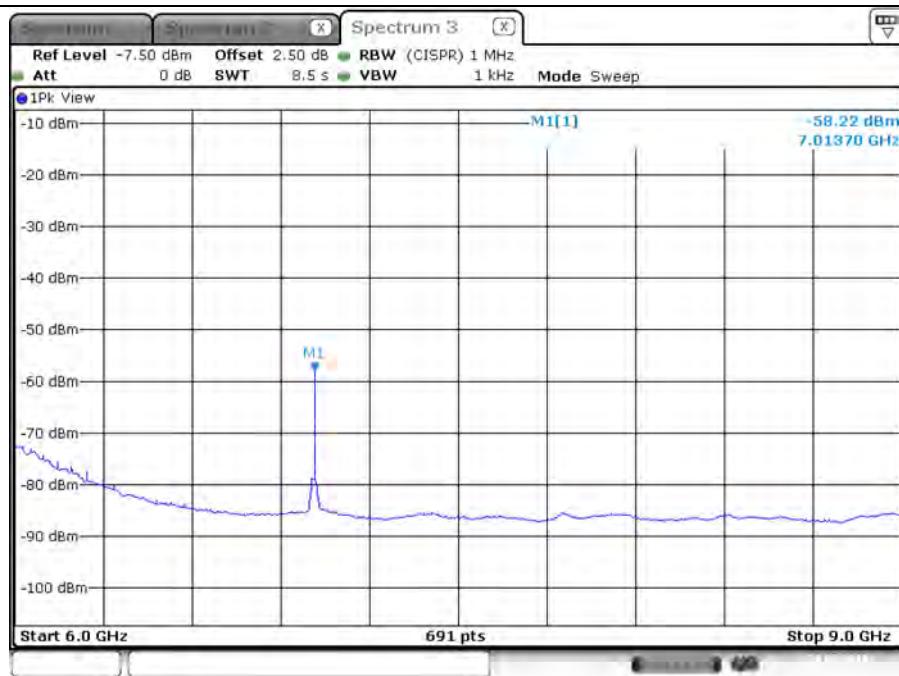
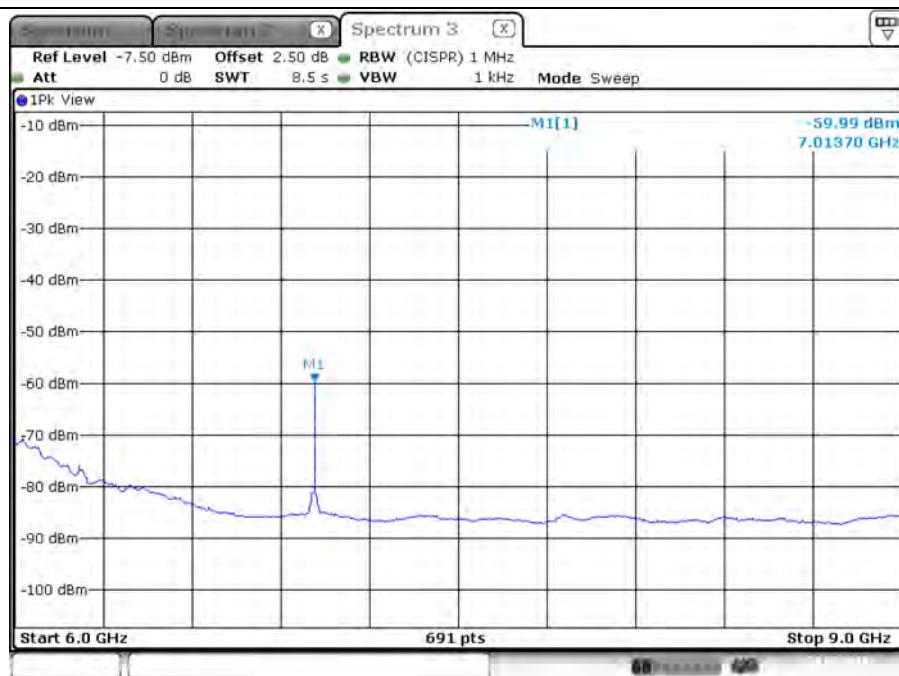
**Plot on Configuration VHT20 / 5700 MHz / Average / Port 2 / 3GHz~6GHz**


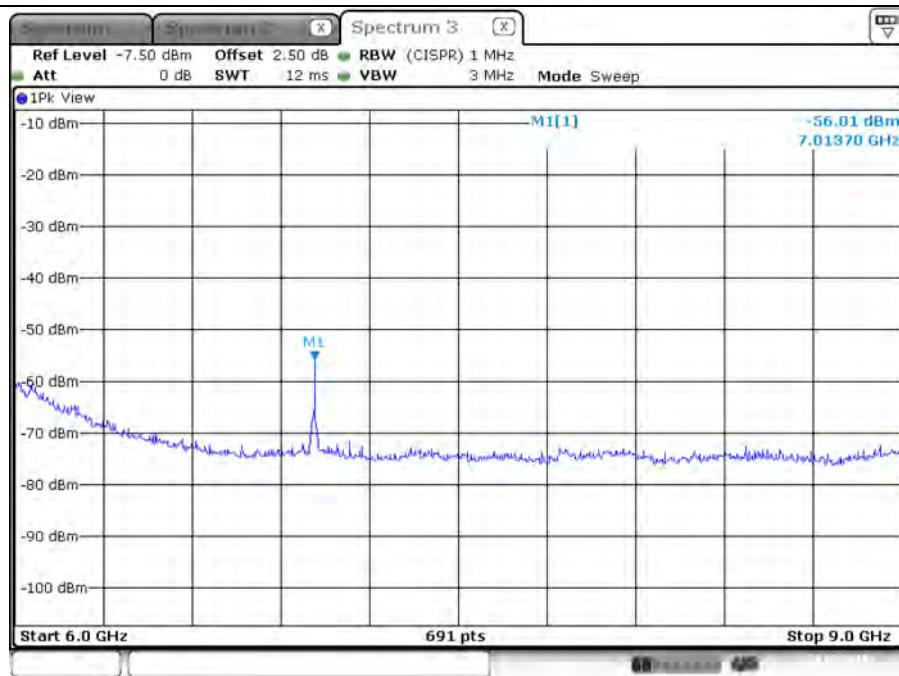
**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 1 / 3GHz~6GHz**

**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 2 / 3GHz~6GHz**


**Plot on Configuration VHT20 / 5720 MHz / Average / Port 1 / 3GHz~6GHz**

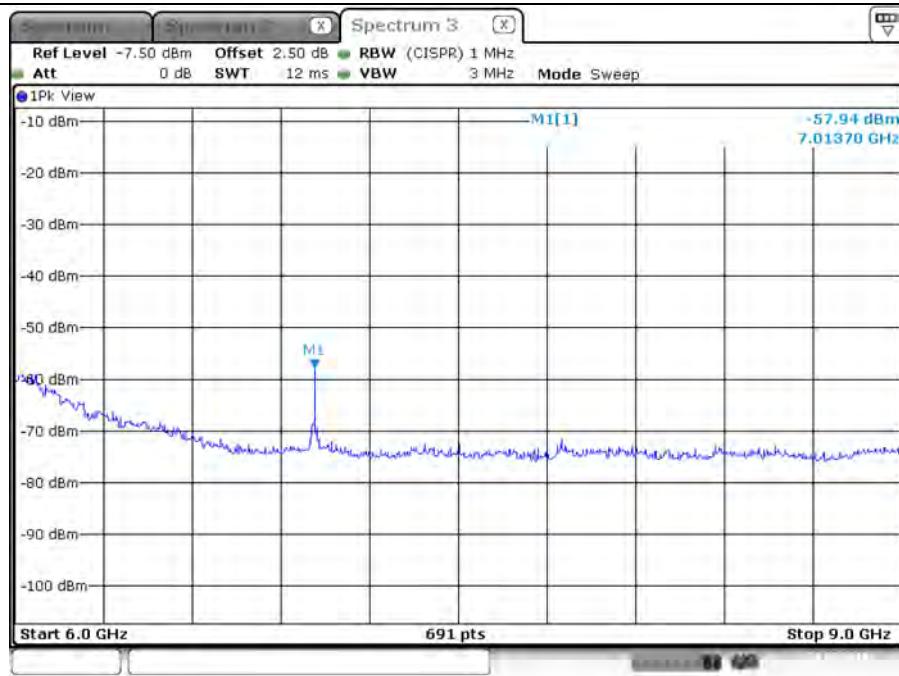
**Plot on Configuration VHT20 / 5720 MHz / Average / Port 2 / 3GHz~6GHz**


**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 1 / 3GHz~6GHz**

**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 2 / 3GHz~6GHz**


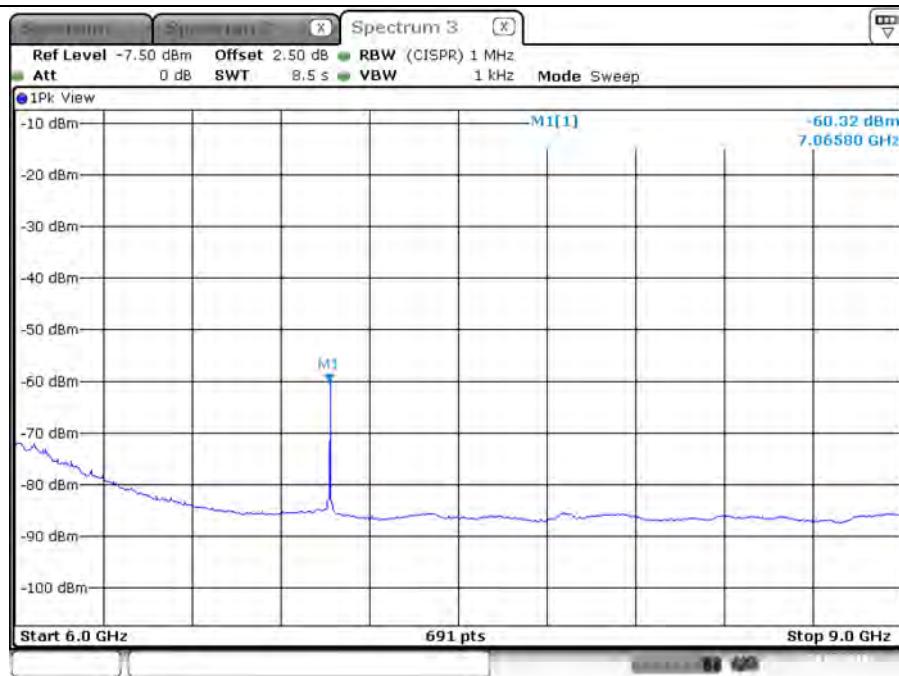
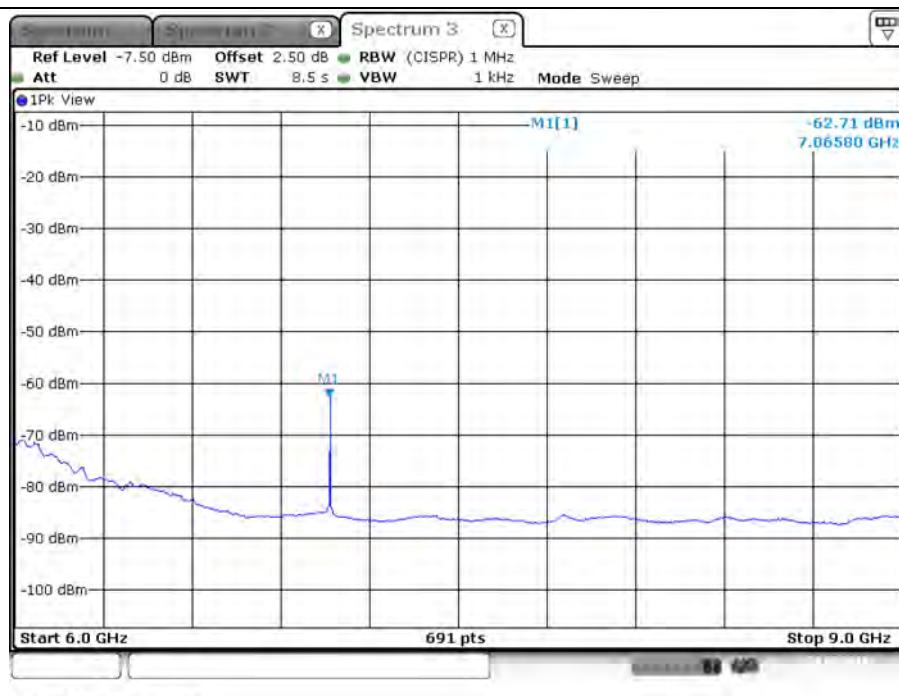
**Plot on Configuration VHT20 / 5260 MHz / Average / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5260 MHz / Average / Port 2 / 6GHz~9GHz**


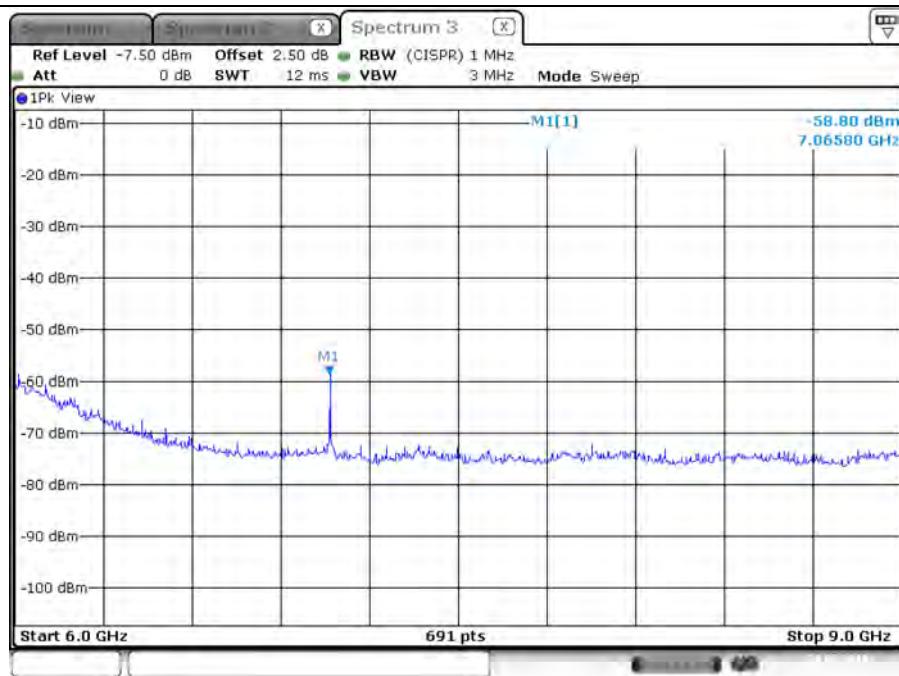
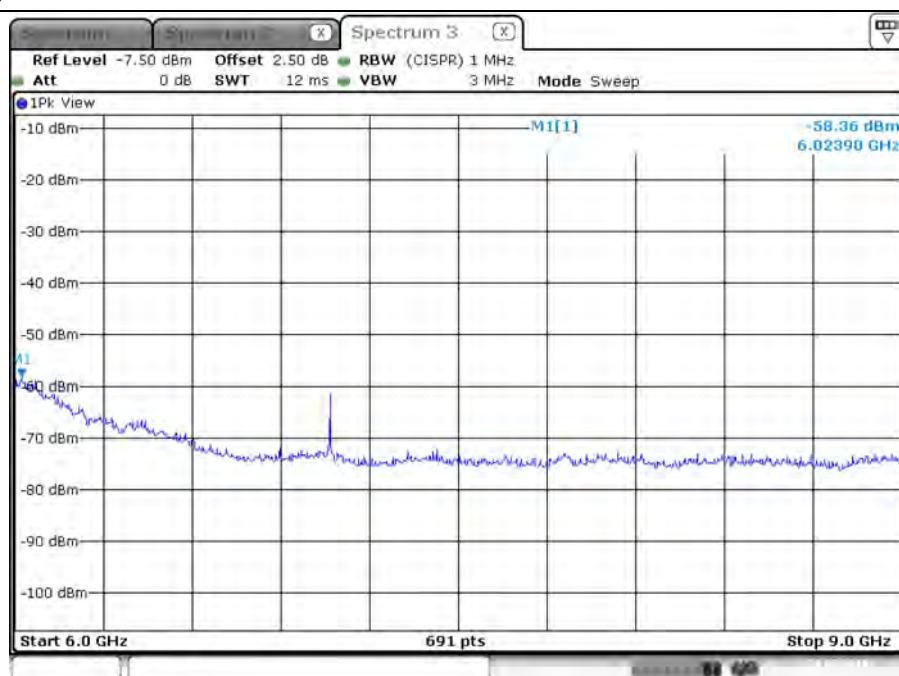
**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 1 / 6GHz~9GHz**


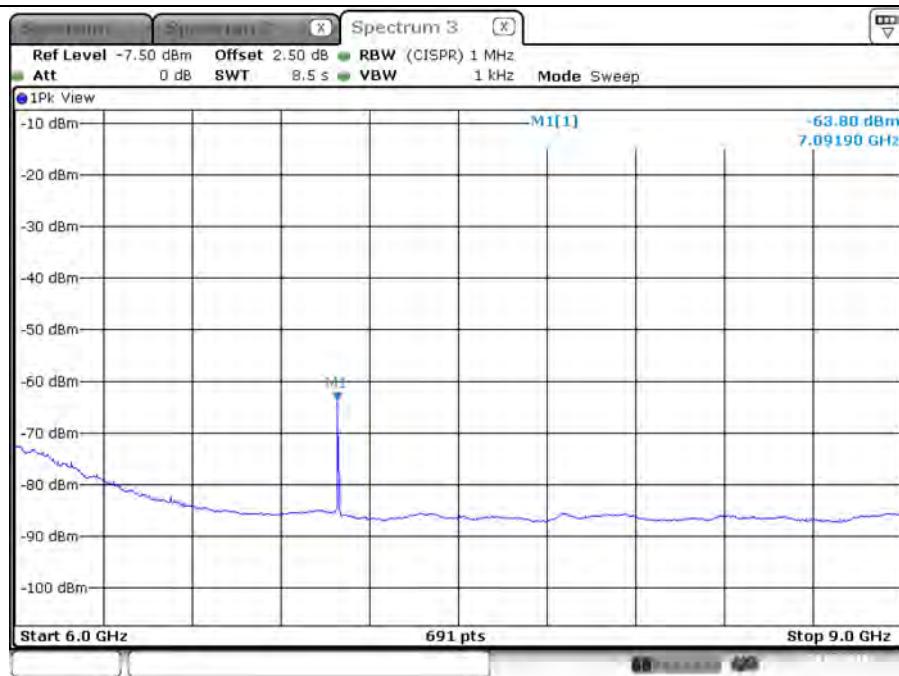
Date: 23 FEB.2018 11:06:56

**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 2 / 6GHz~9GHz**


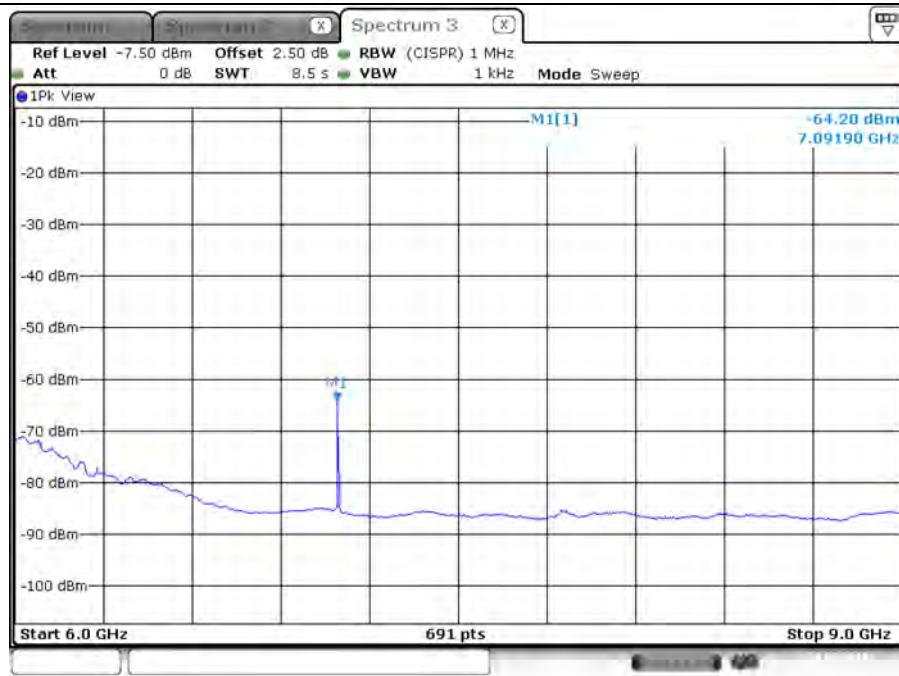
Date: 23.FEB.2018 11:12:34

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 2 / 6GHz~9GHz**


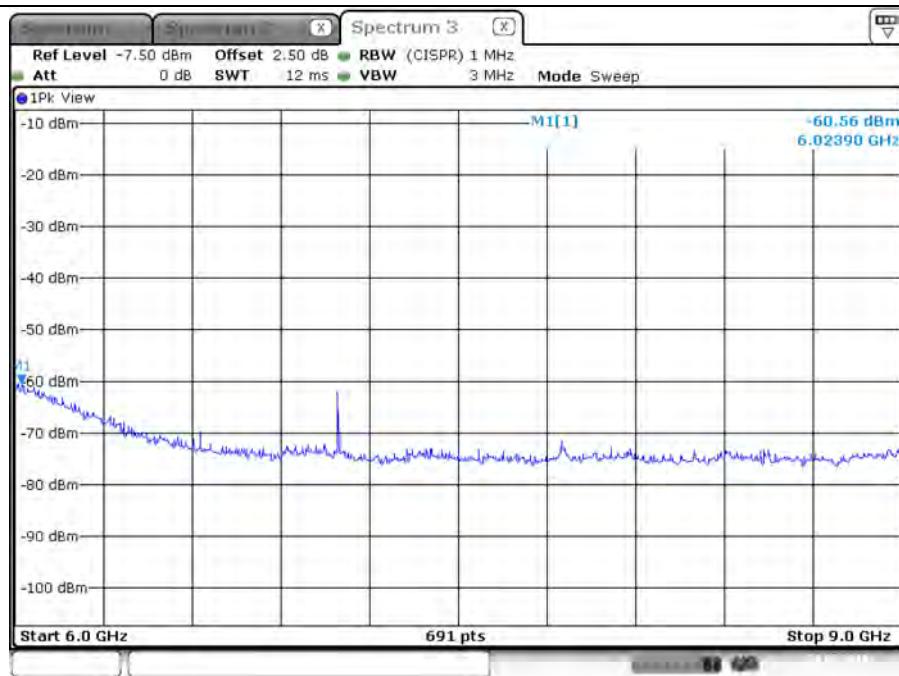
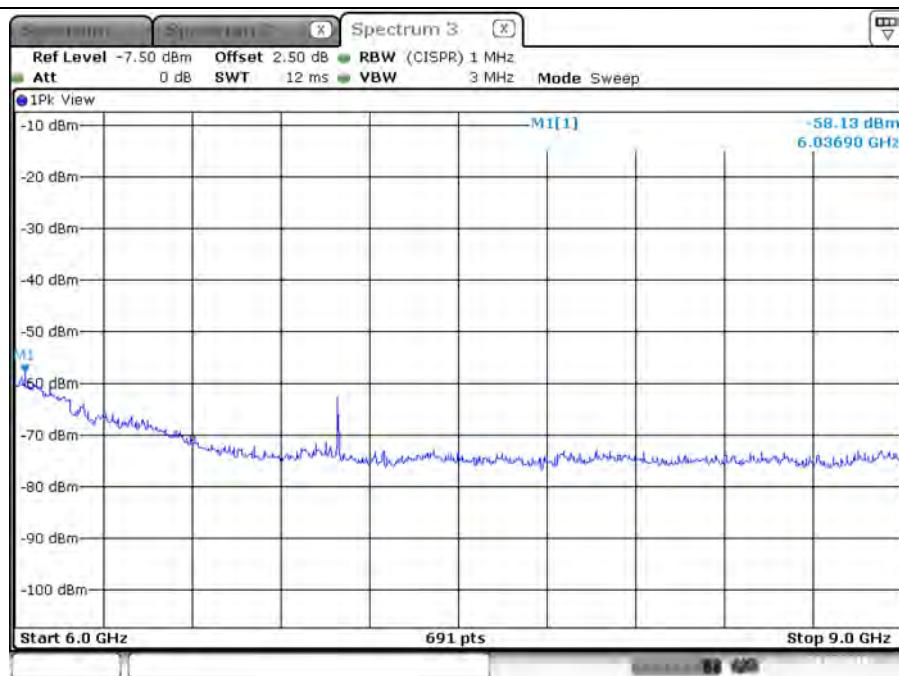
**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 2 / 6GHz~9GHz**


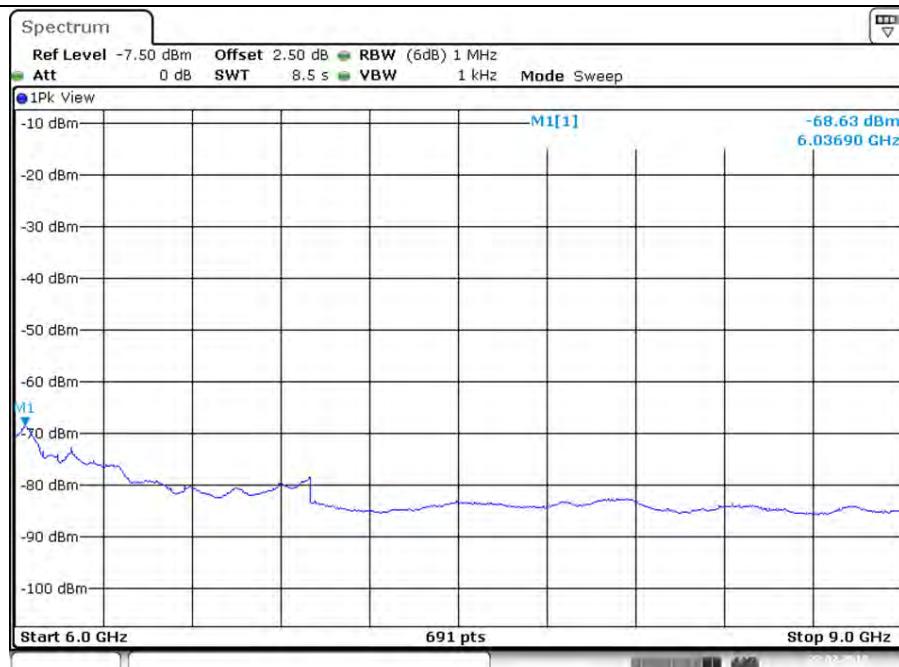
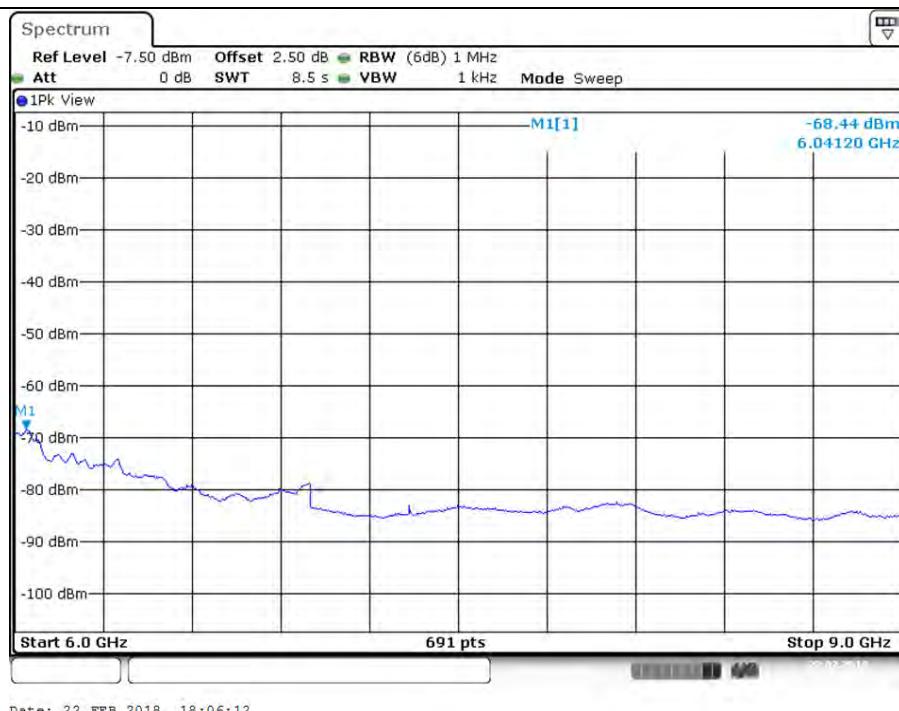
**Plot on Configuration VHT20 / 5320 MHz / Average / Port 1 / 6GHz~9GHz**


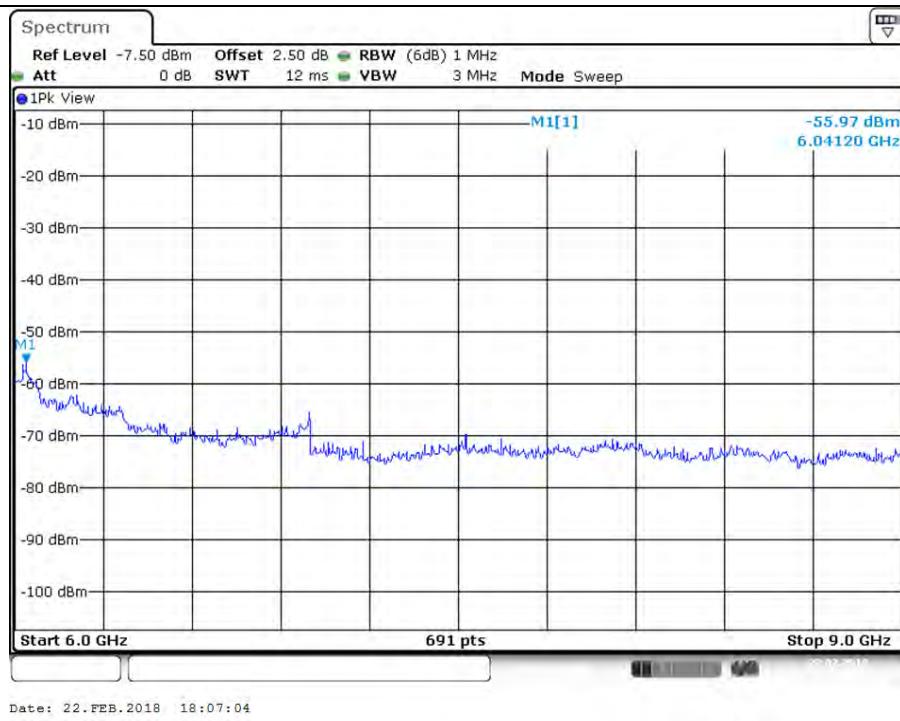
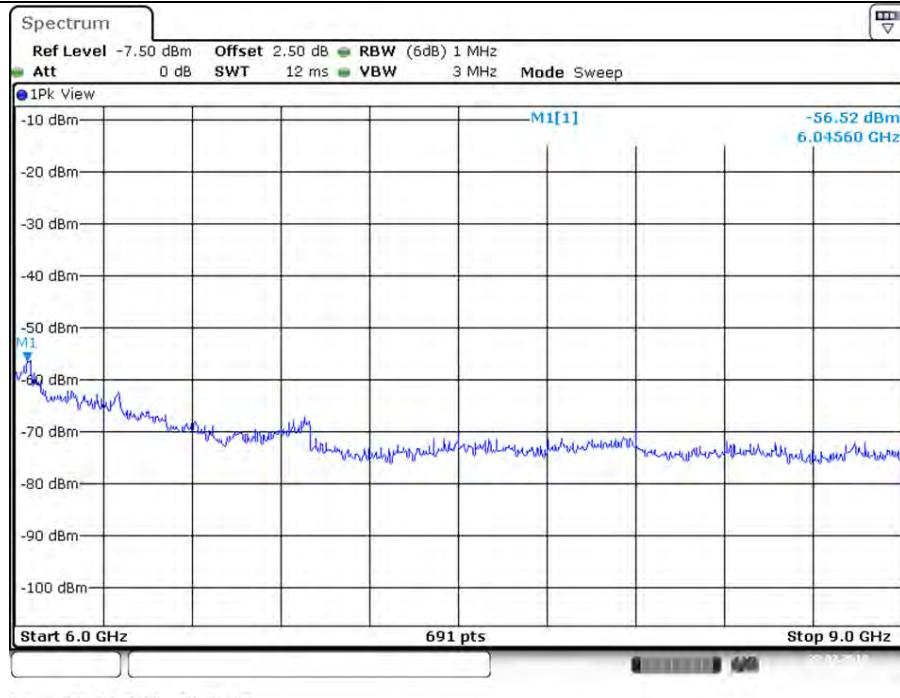
Date: 23 FEB 2018 11:56:43

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 2 / 6GHz~9GHz**


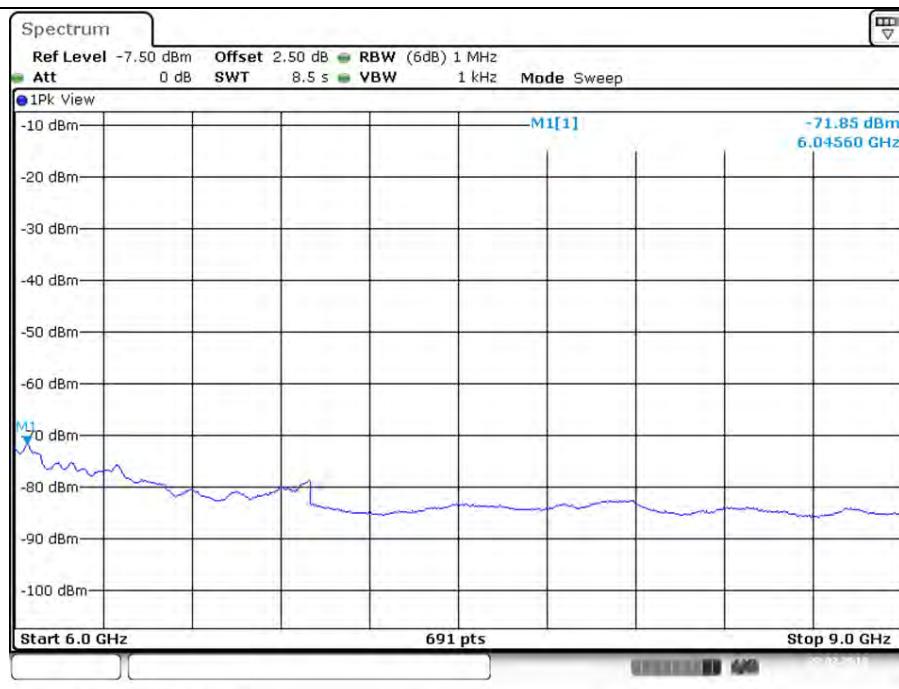
Date: 23.FEB.2018 12:00:15

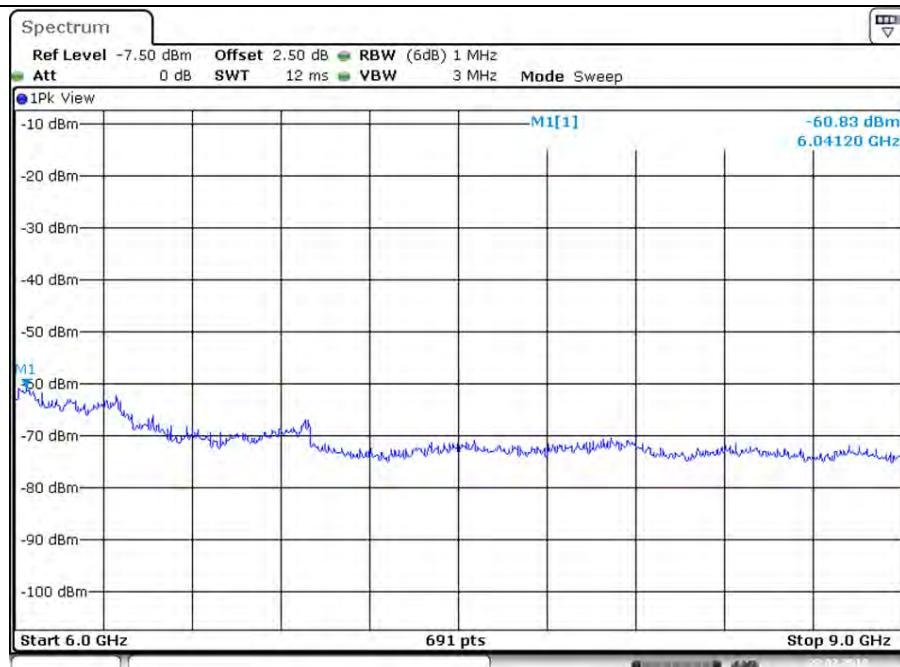
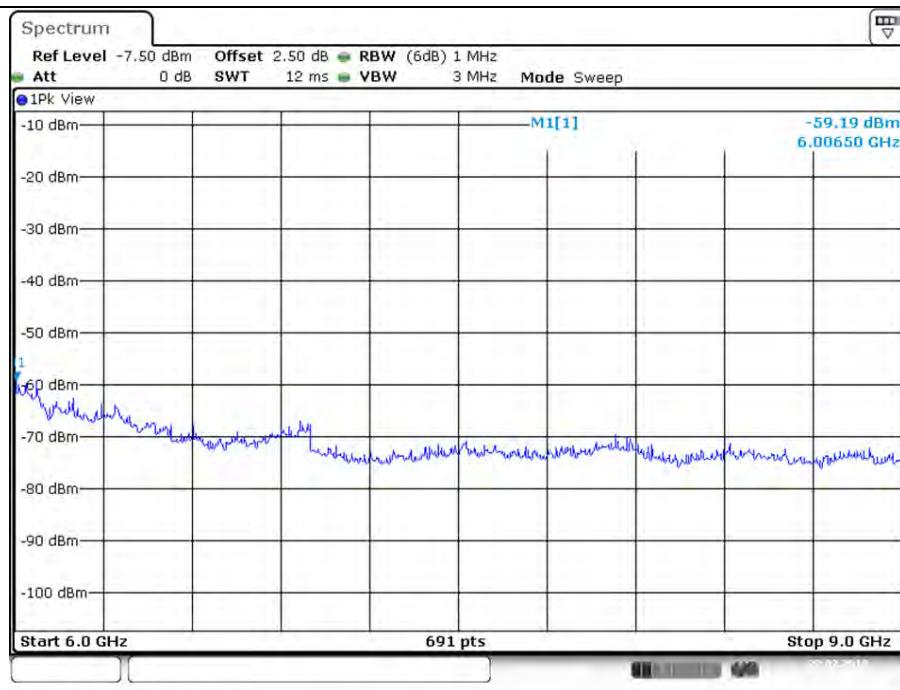
**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 2 / 6GHz~9GHz**


**Plot on Configuration VHT20 / 5500 MHz / Average / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5500 MHz / Average / Port 2 / 6GHz~9GHz**


**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 2 / 6GHz~9GHz**


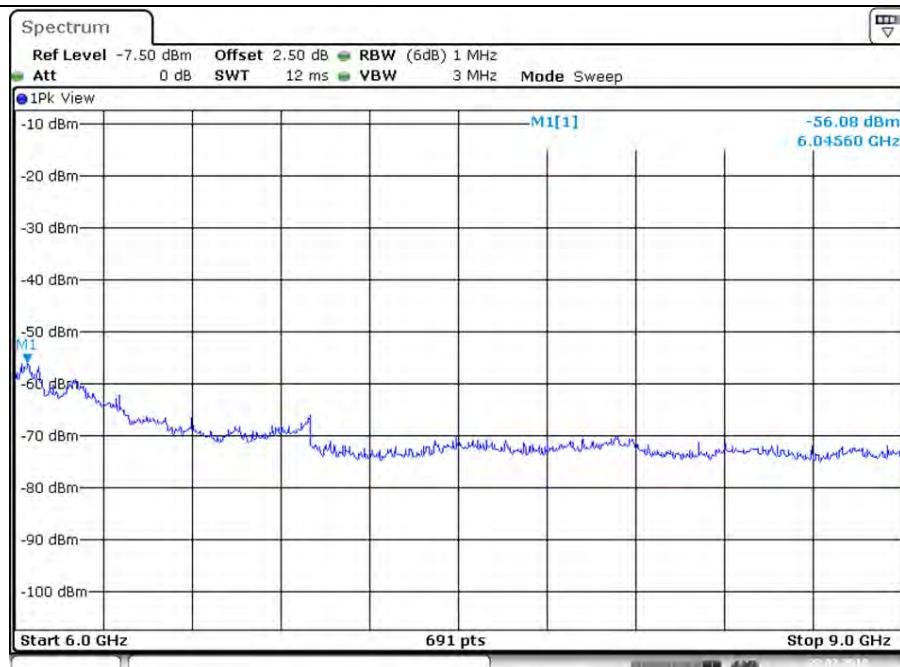
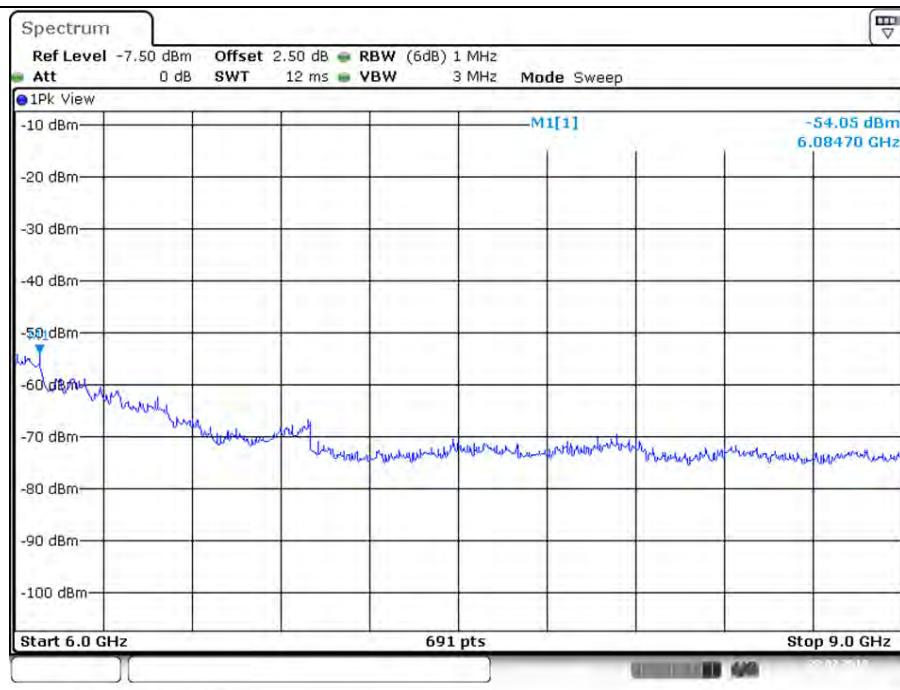
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 1 / 6GHz~9GHz**

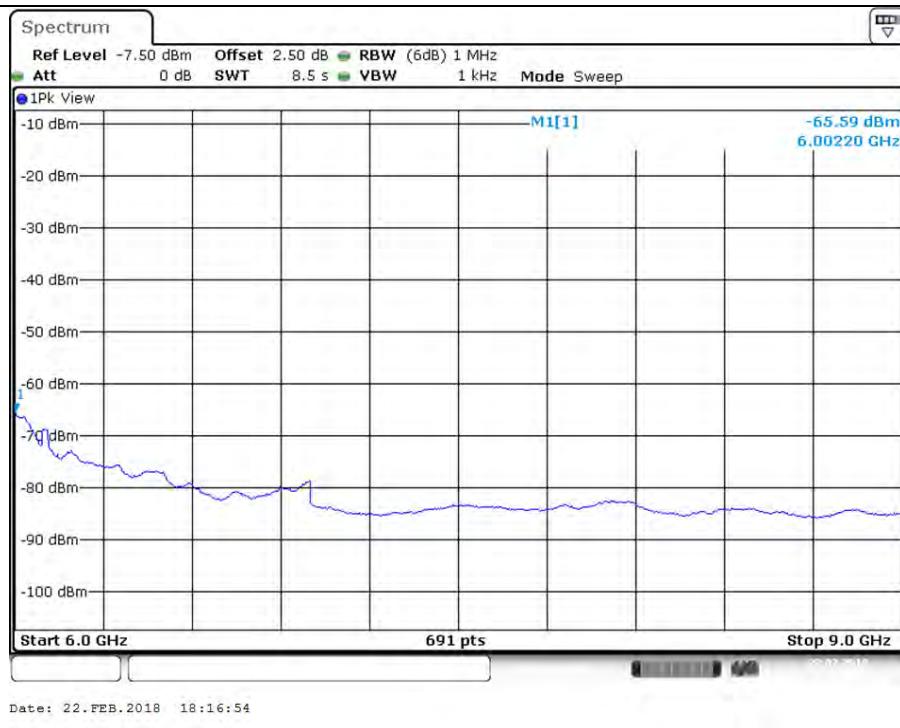
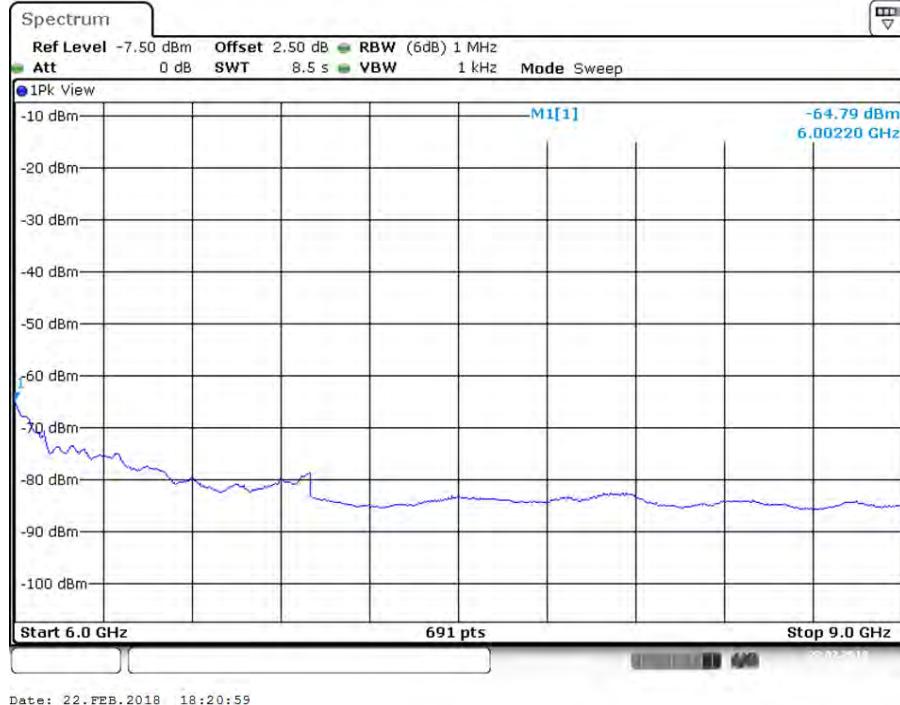
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 2 / 6GHz~9GHz**


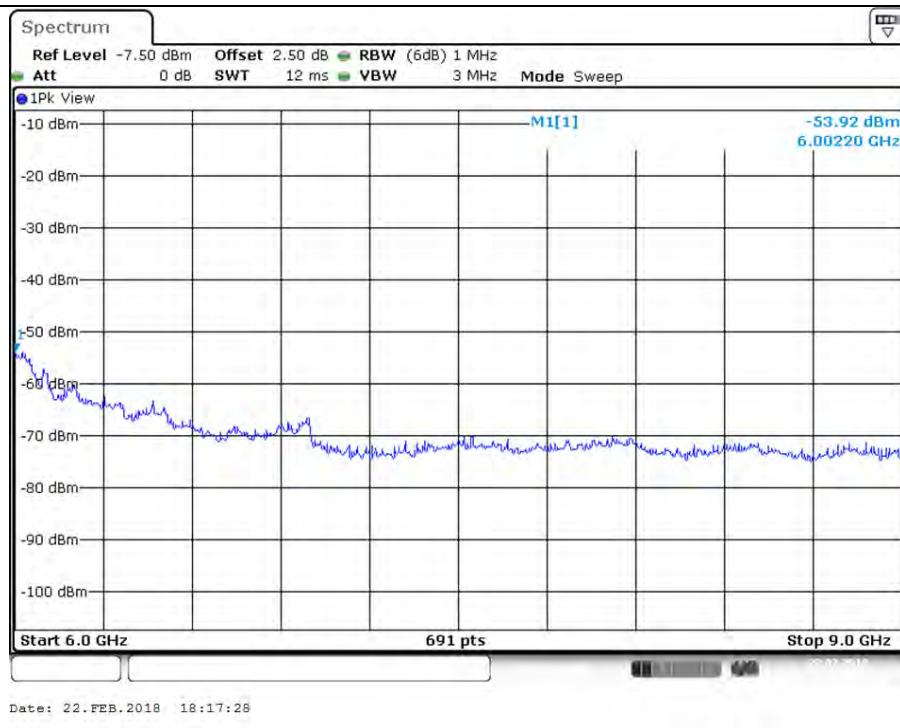
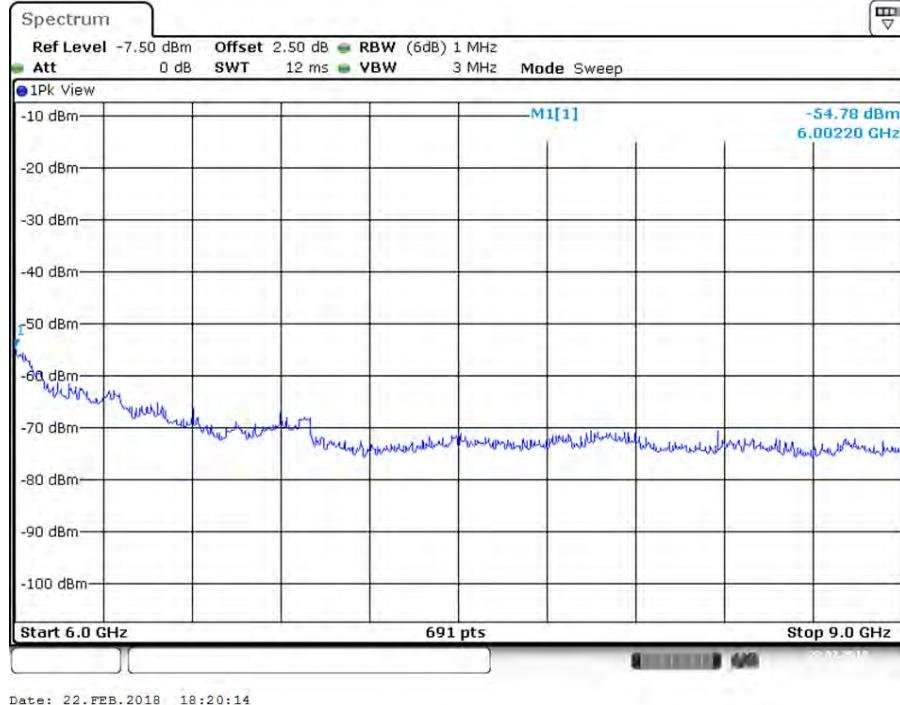
**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 2 / 6GHz~9GHz**


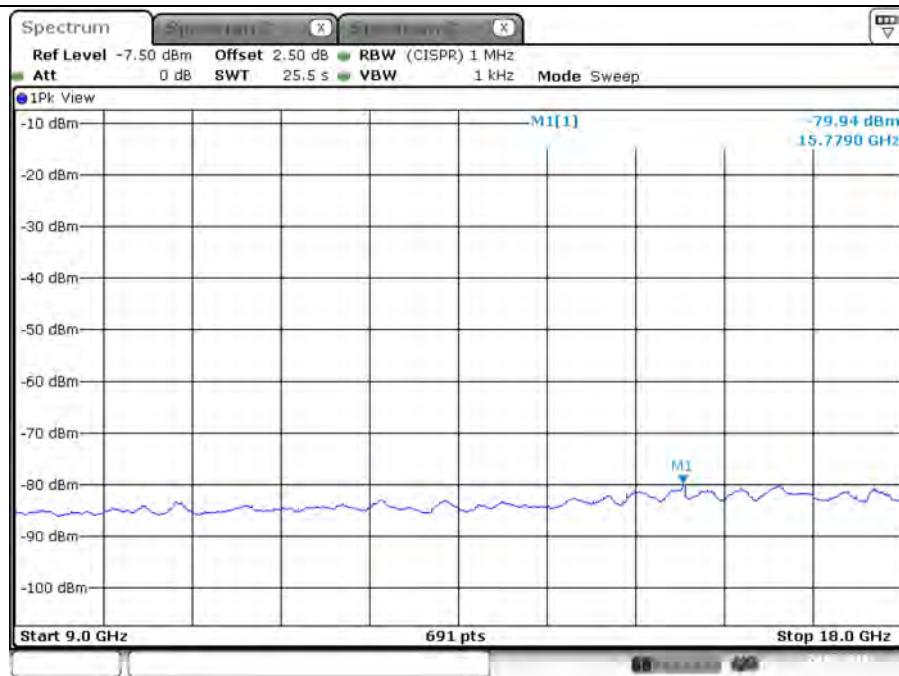
**Plot on Configuration VHT20 / 5700 MHz / Average / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5700 MHz / Average / Port 2 / 6GHz~9GHz**

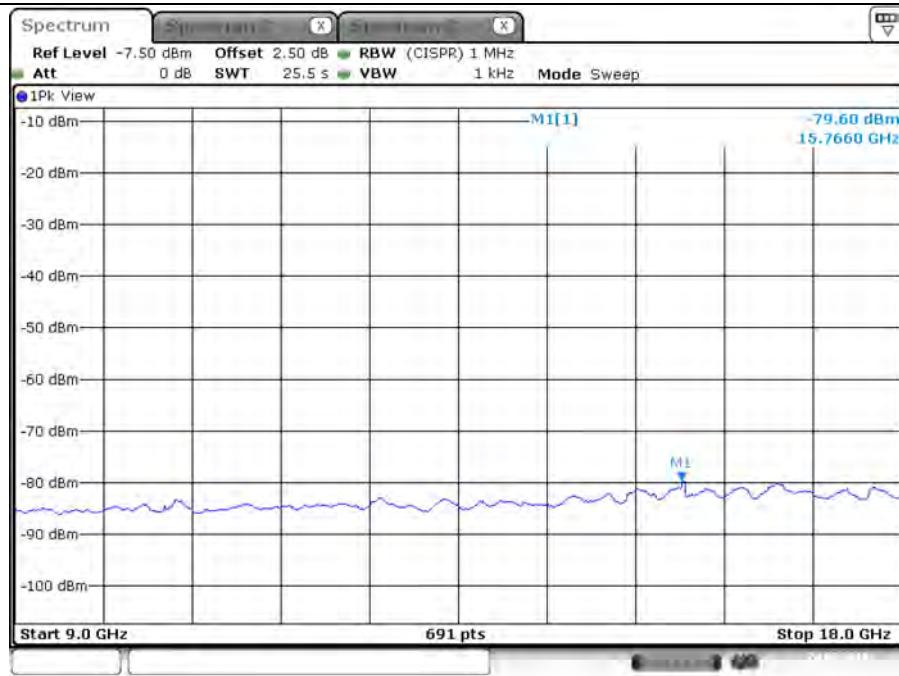

**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 2 / 6GHz~9GHz**


**Plot on Configuration VHT20 / 5720 MHz / Average / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 2 / 6GHz~9GHz**


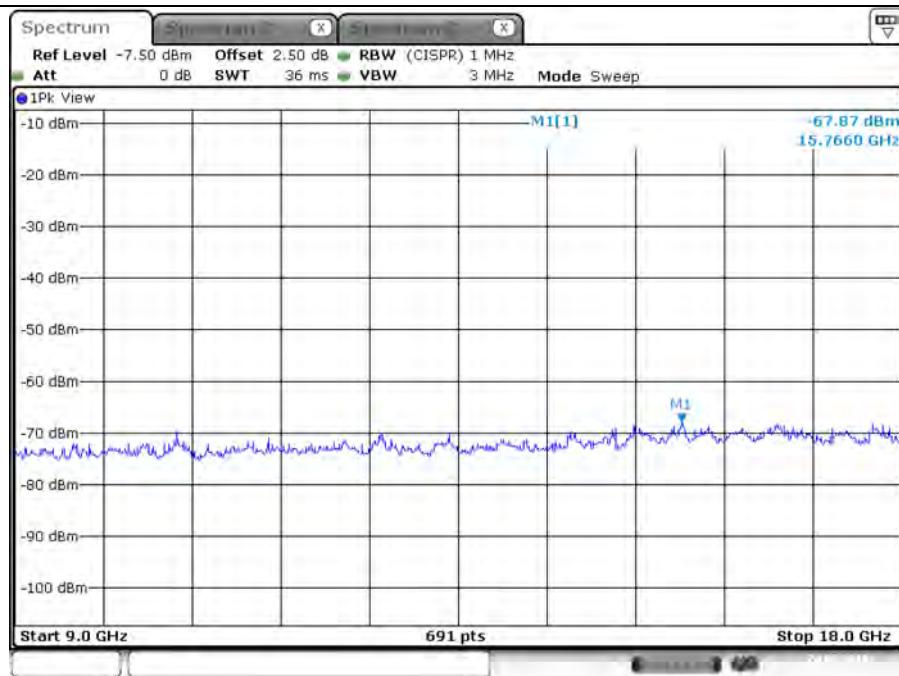
**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 1 / 6GHz~9GHz**

**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 2 / 6GHz~9GHz**


**Plot on Configuration VHT20 / 5260 MHz / Average / Port 1 / 9GHz~18GHz**


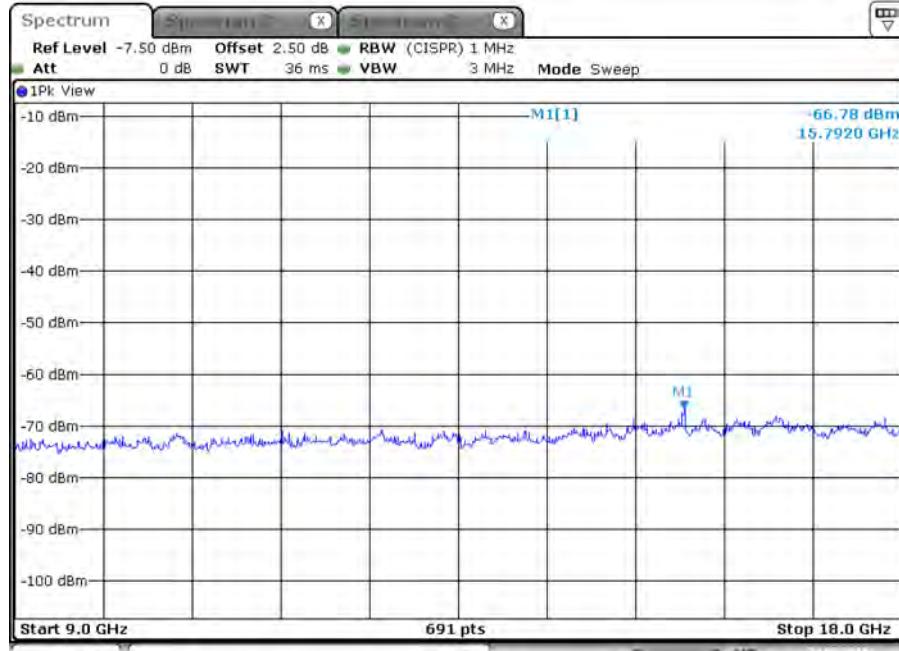
Date: 24.FEB.2018 13:10:06

**Plot on Configuration VHT20 / 5260 MHz / Average / Port 2 / 9GHz~18GHz**


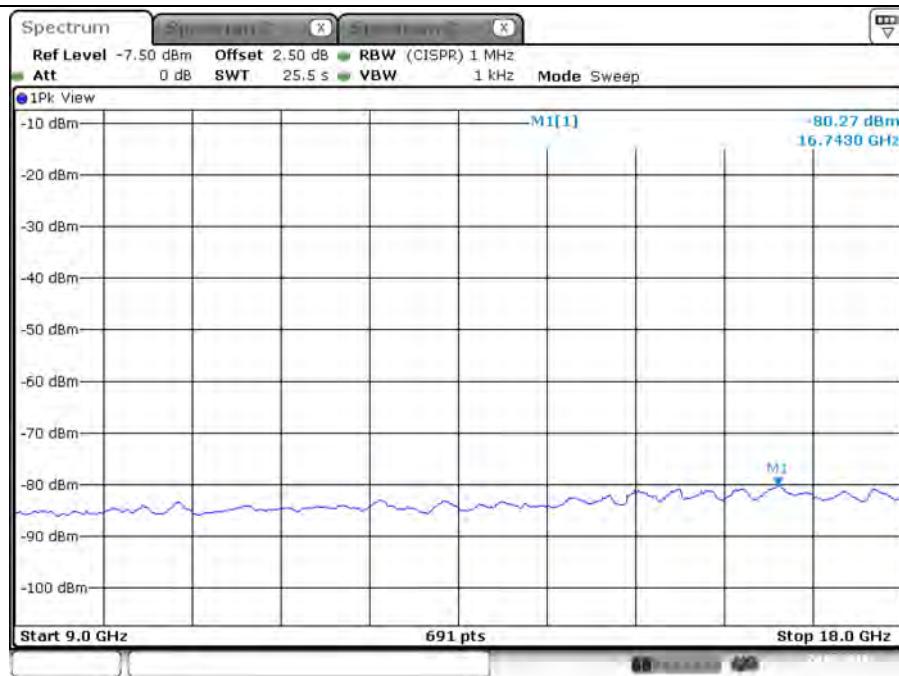
Date: 24.FEB.2018 13:20:29

**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 1 / 9GHz~18GHz**


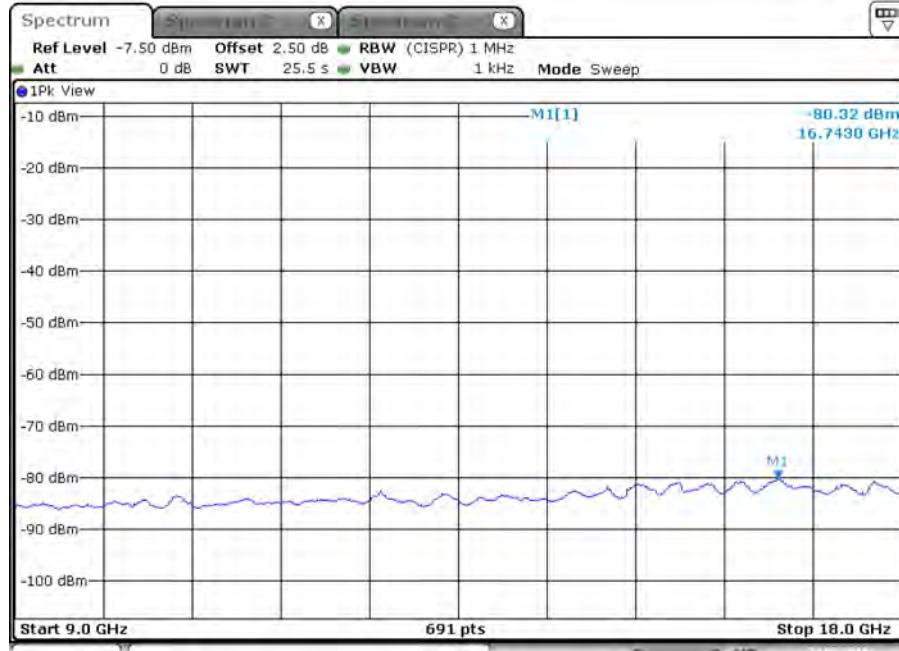
Date: 24 FEB.2018 13:11:27

**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 2 / 9GHz~18GHz**


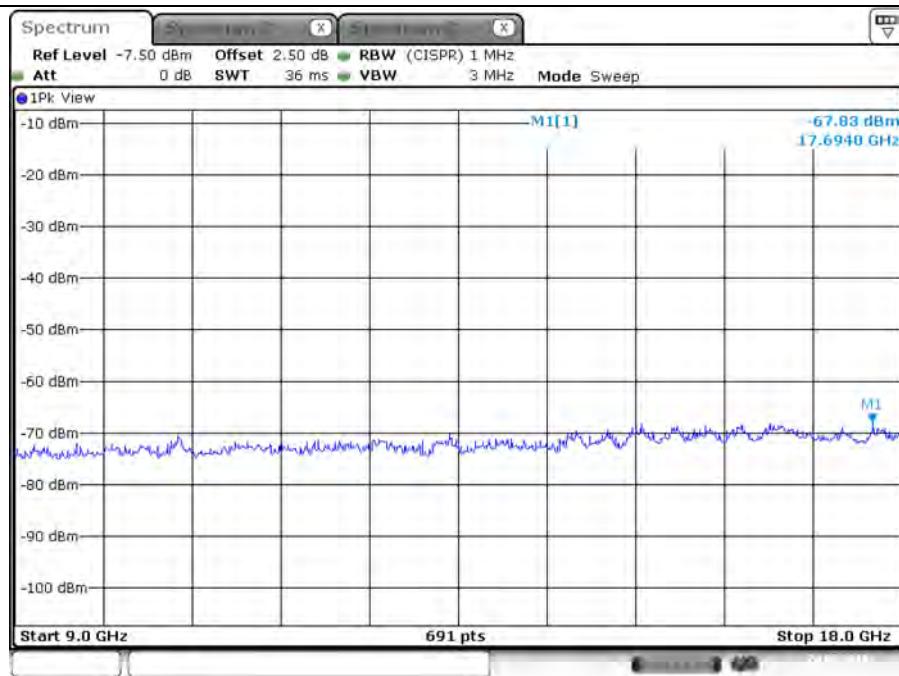
Date: 24.FEB.2018 13:21:09

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 1 / 9GHz~18GHz**


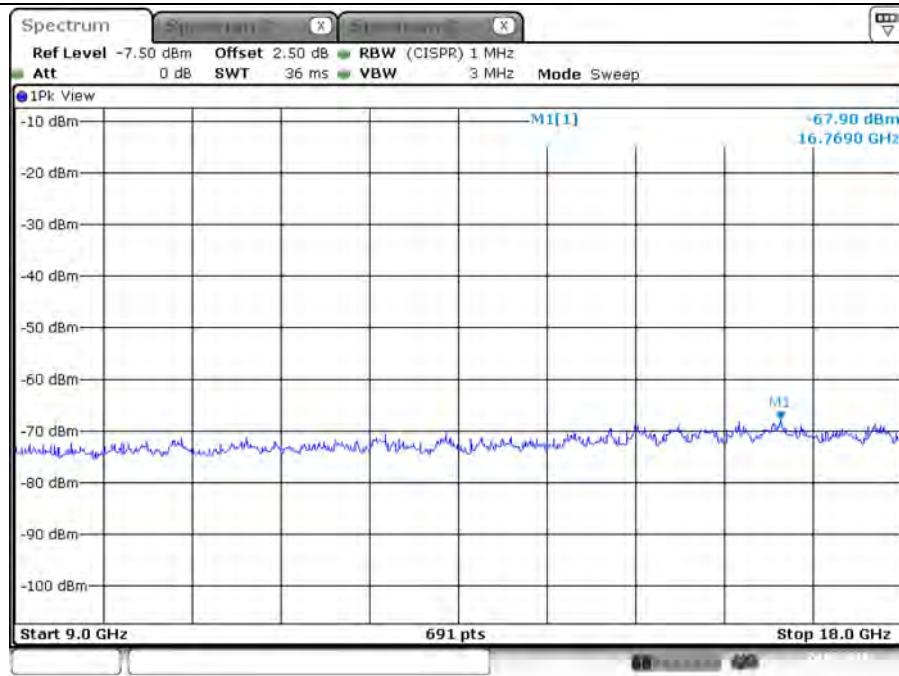
Date: 24.FEB.2018 13:25:53

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 2 / 9GHz~18GHz**


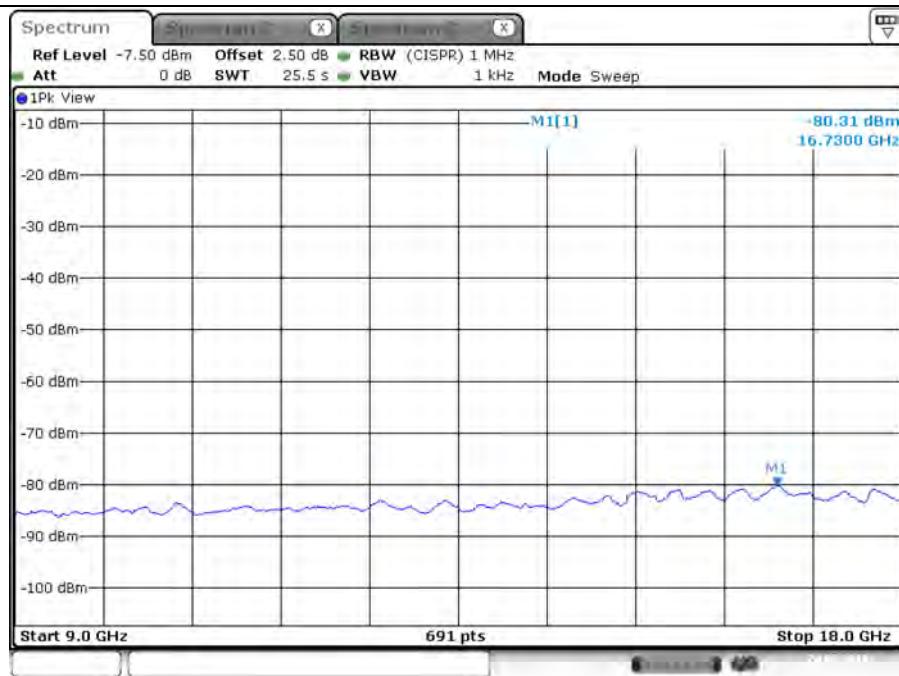
Date: 24.FEB.2018 13:36:00

**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 1 / 9GHz~18GHz**


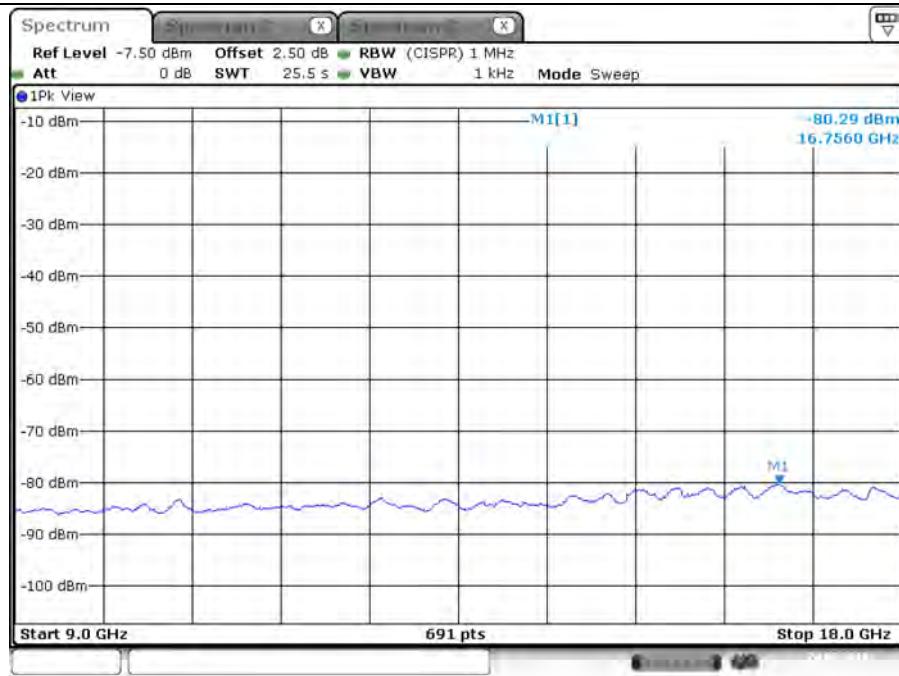
Date: 24.FEB.2018 13:26:48

**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 2 / 9GHz~18GHz**


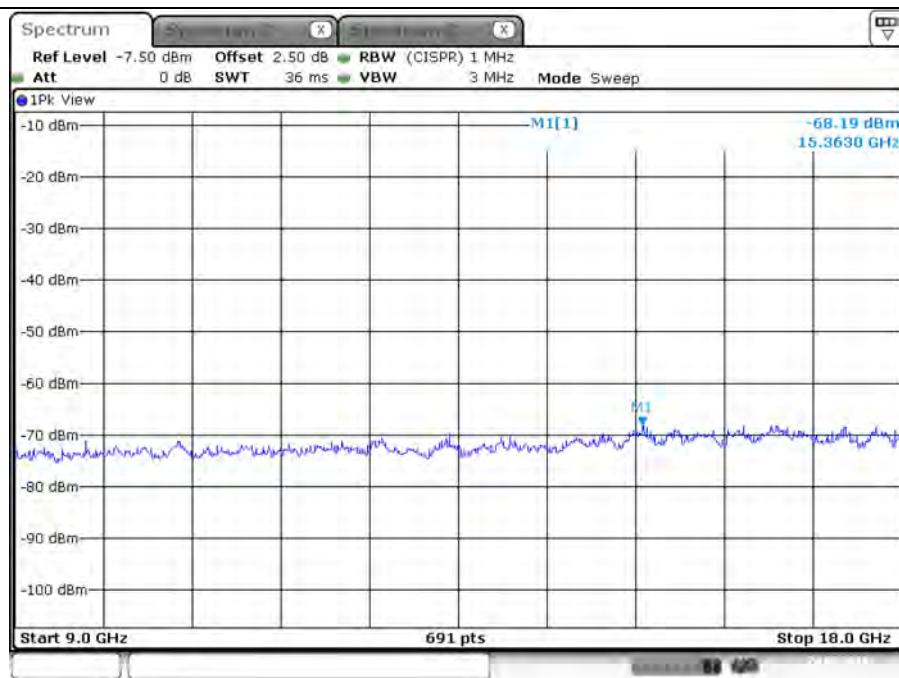
Date: 24.FEB.2018 13:36:45

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 1 / 9GHz~18GHz**


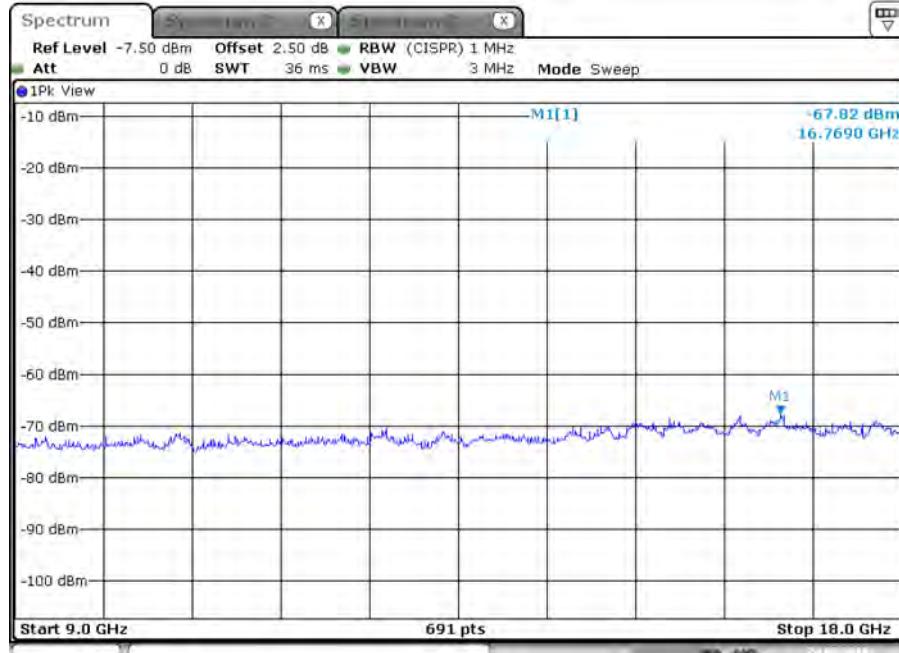
Date: 24 FEB 2018 13:38:58

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 2 / 9GHz~18GHz**


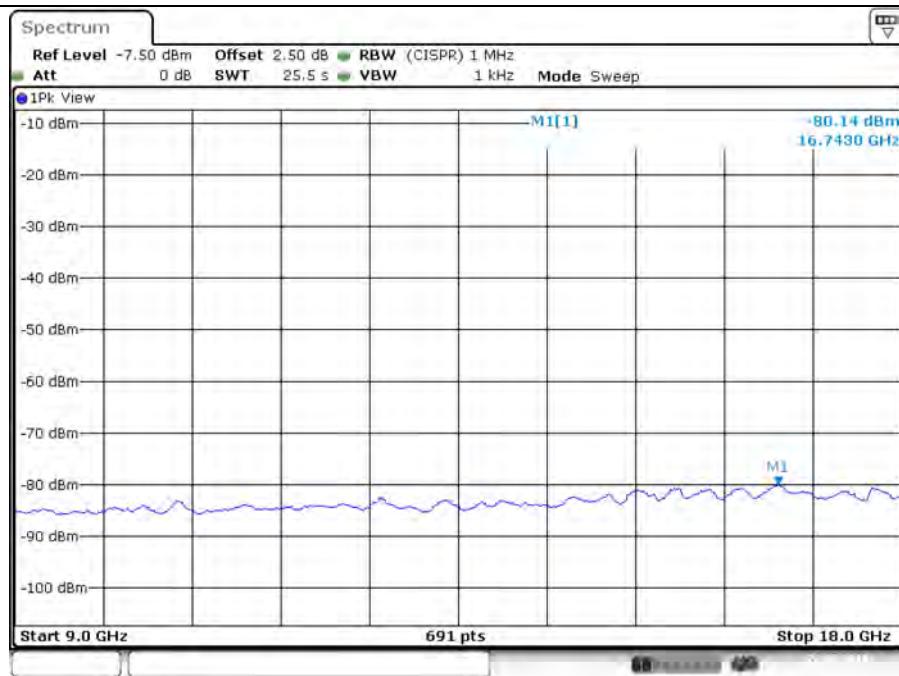
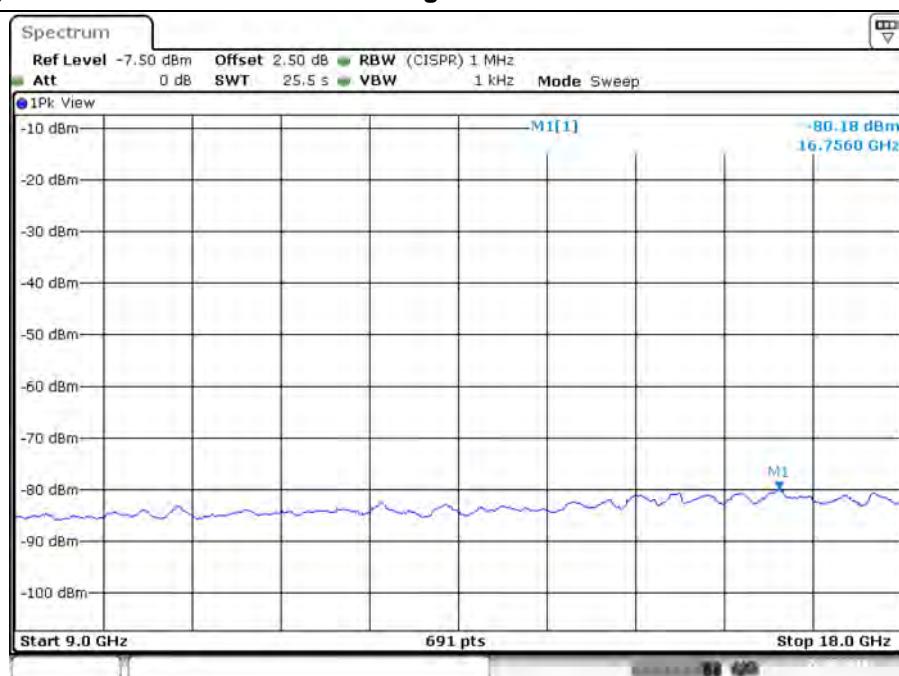
Date: 24.FEB.2018 13:50:34

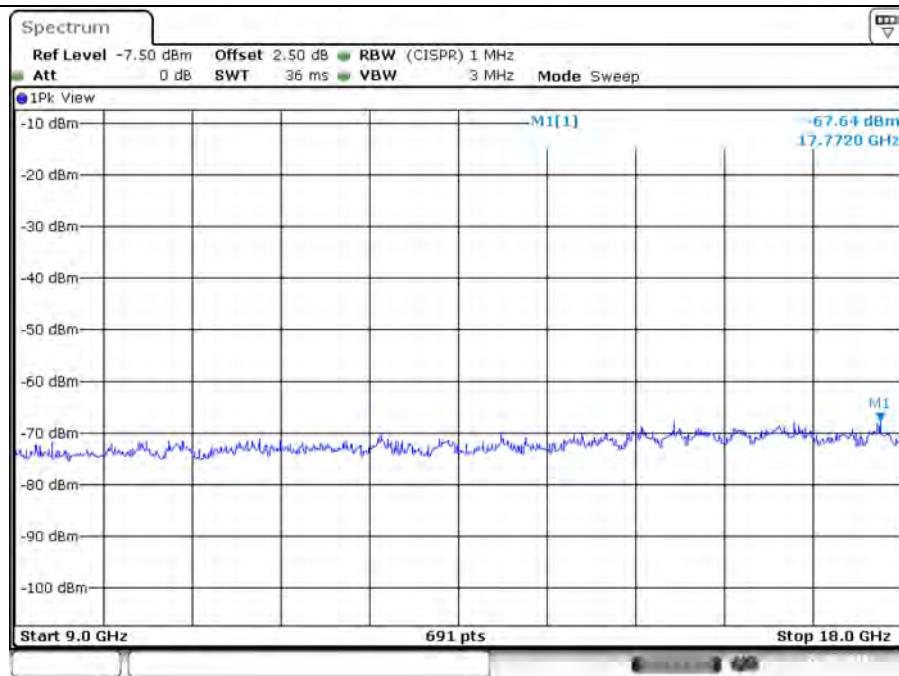
**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 1 / 9GHz~18GHz**


Date: 24.FEB.2018 13:40:04

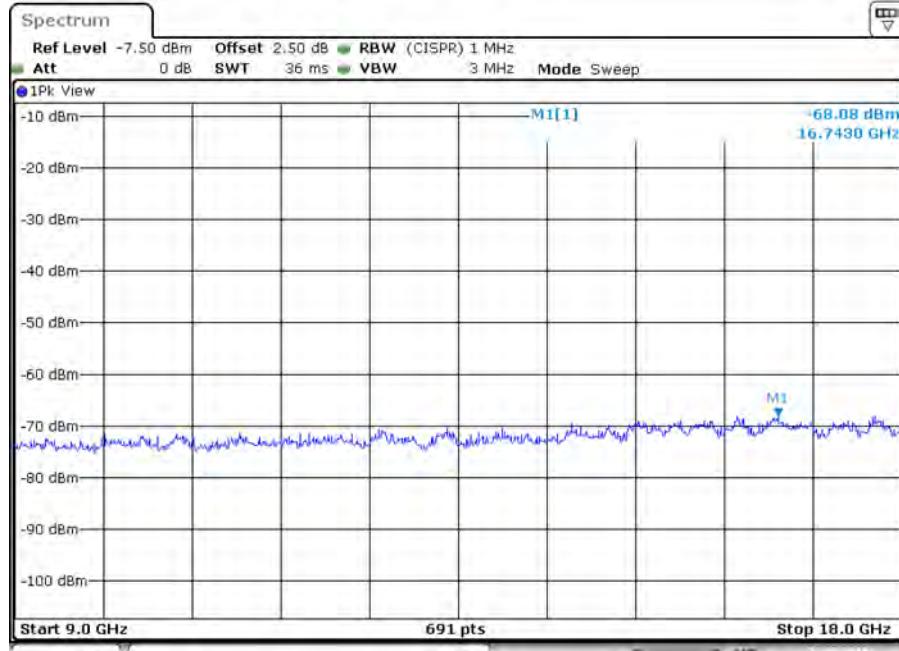
**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 2 / 9GHz~18GHz**


Date: 24.FEB.2018 13:51:29

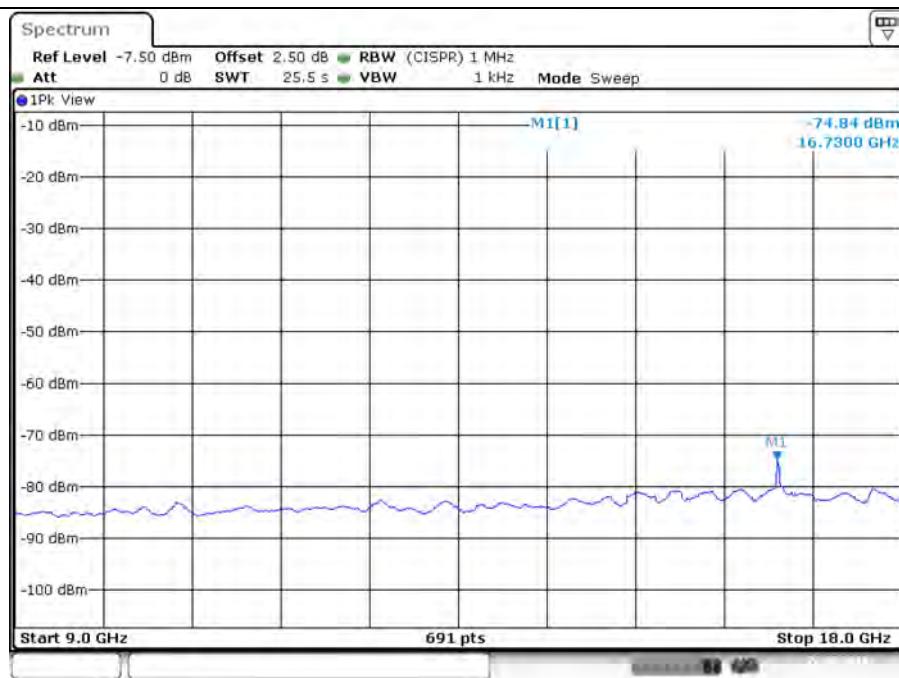
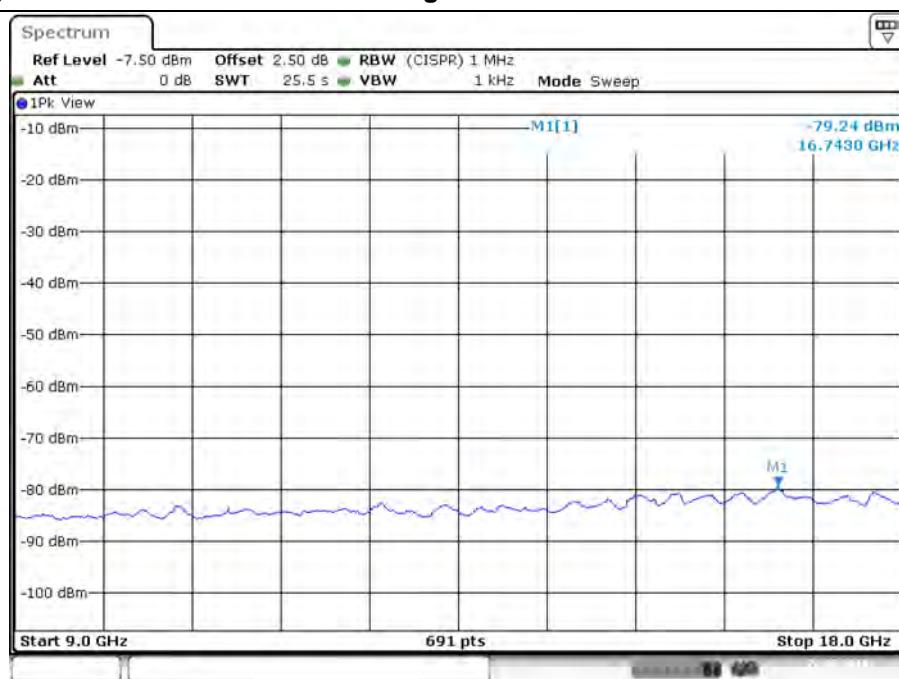
**Plot on Configuration VHT20 / 5500 MHz / Average / Port 1 / 9GHz~18GHz**

**Plot on Configuration VHT20 / 5500 MHz / Average / Port 2 / 9GHz~18GHz**


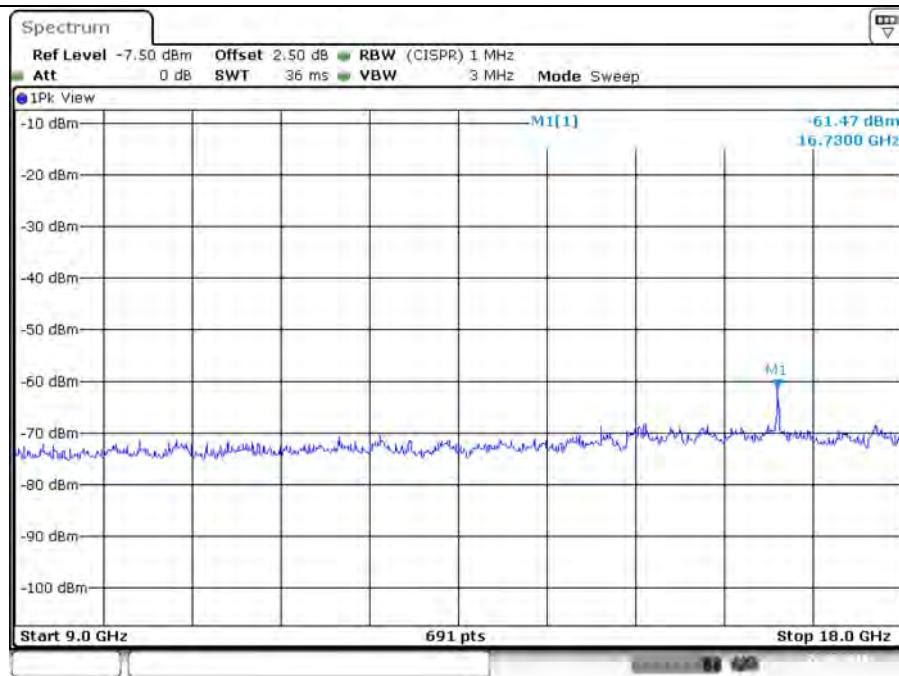
**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 1 / 9GHz~18GHz**


Date: 22 FEB. 2018 22:32:18

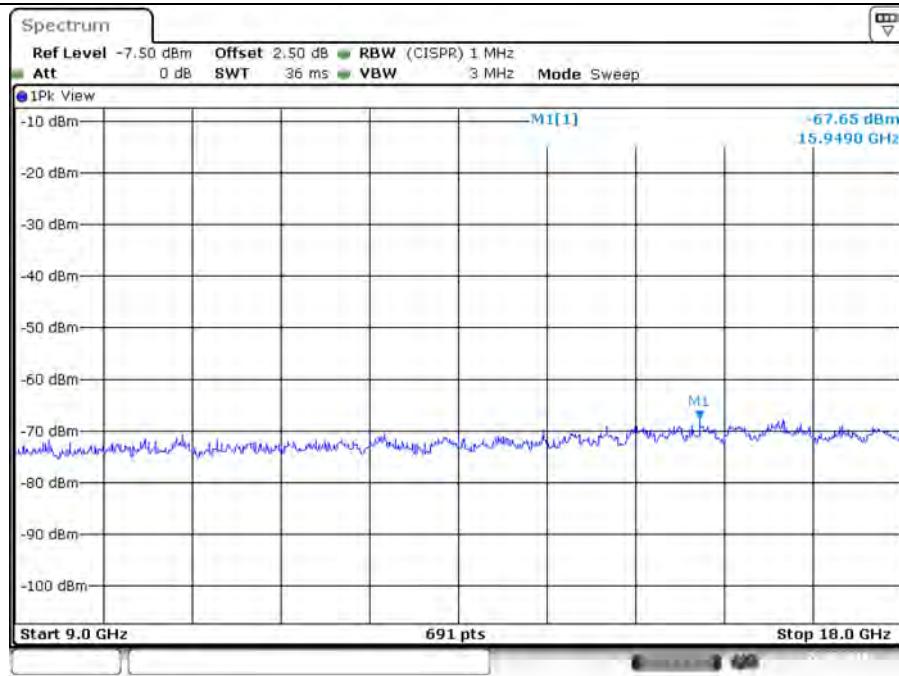
**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 2 / 9GHz~18GHz**


Date: 22 FEB. 2018 22:34:18

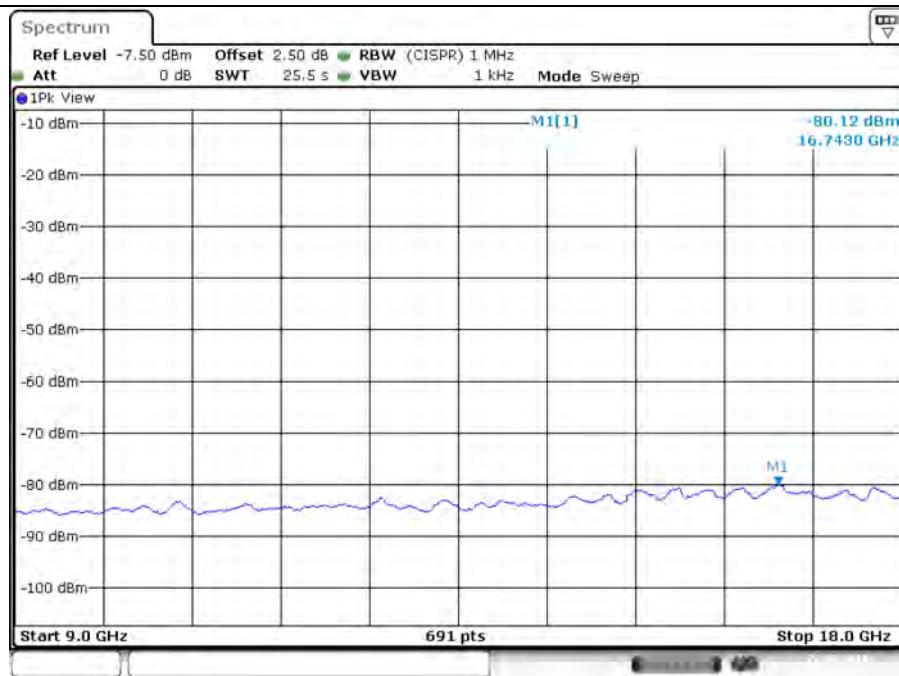
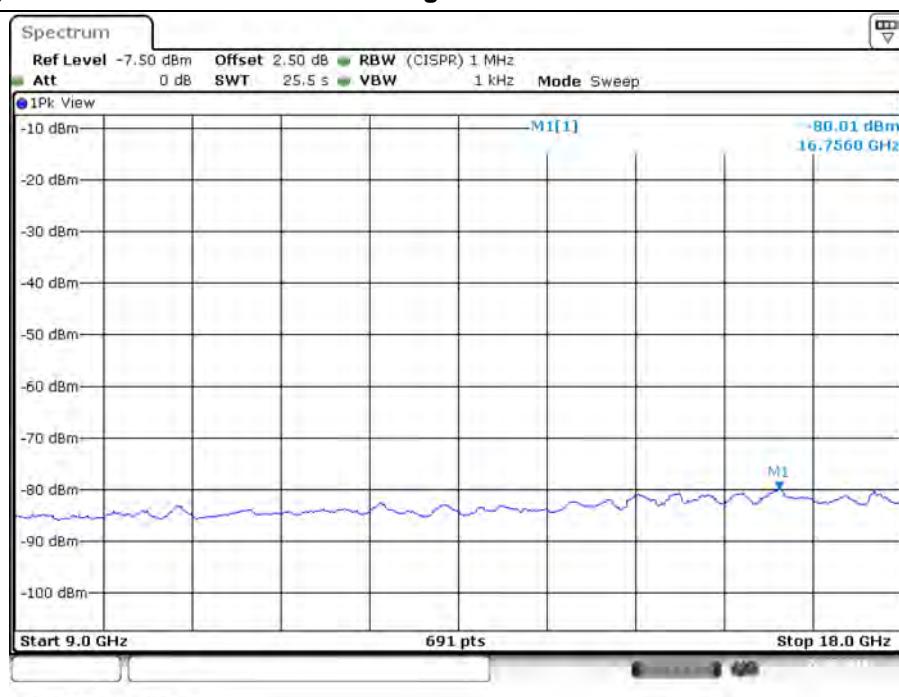
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 1 / 9GHz~18GHz**

**Plot on Configuration VHT20 / 5580 MHz / Average / Port 2 / 9GHz~18GHz**


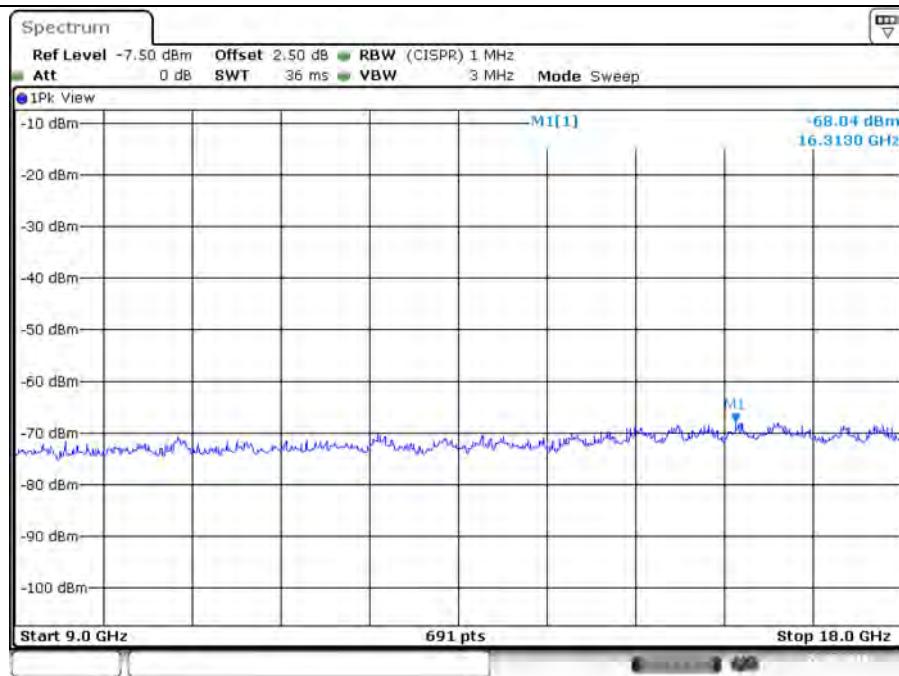
**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 1 / 9GHz~18GHz**


Date: 22.FEB.2018 22:41:11

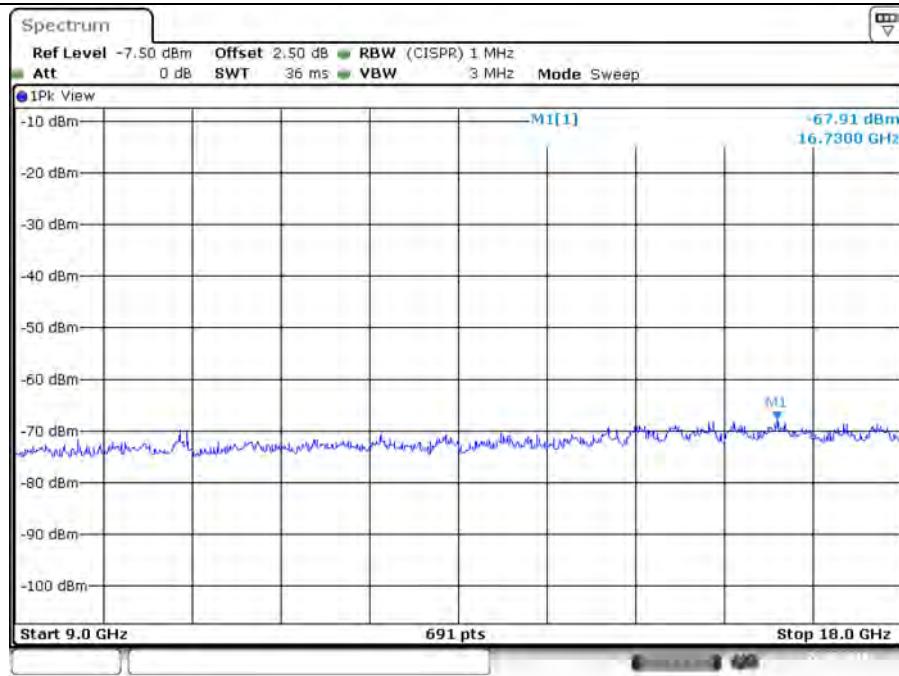
**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 2 / 9GHz~18GHz**


Date: 22.FEB.2018 22:41:50

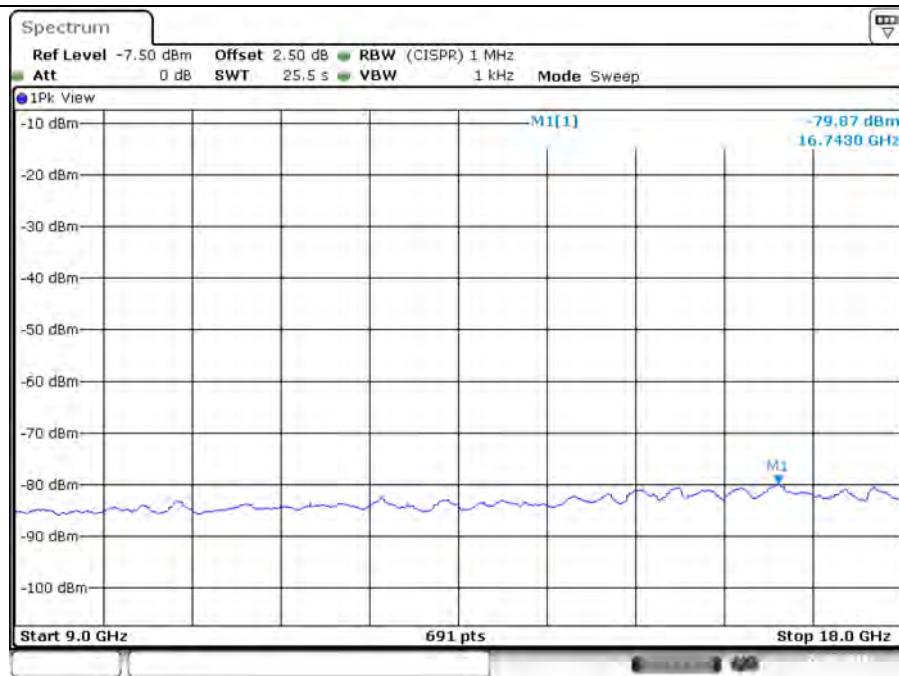
**Plot on Configuration VHT20 / 5700 MHz / Average / Port 1 / 9GHz~18GHz**

**Plot on Configuration VHT20 / 5700 MHz / Average / Port 2 / 9GHz~18GHz**


**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 1 / 9GHz~18GHz**


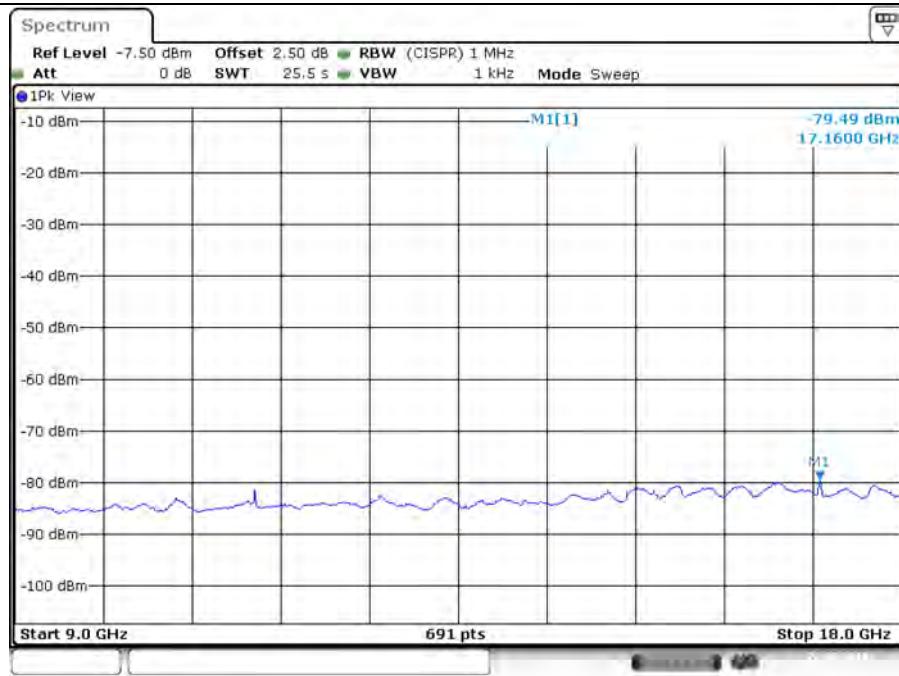
Date: 22 FEB. 2018 22:49:18

**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 2 / 9GHz~18GHz**


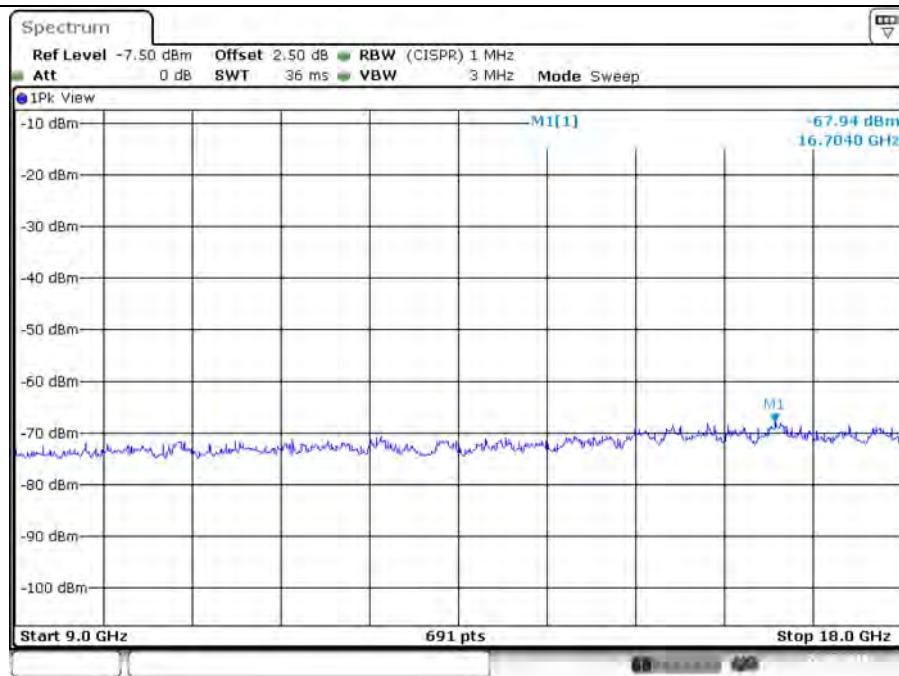
Date: 22.FEB.2018 22:48:32

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 1 / 9GHz~18GHz**


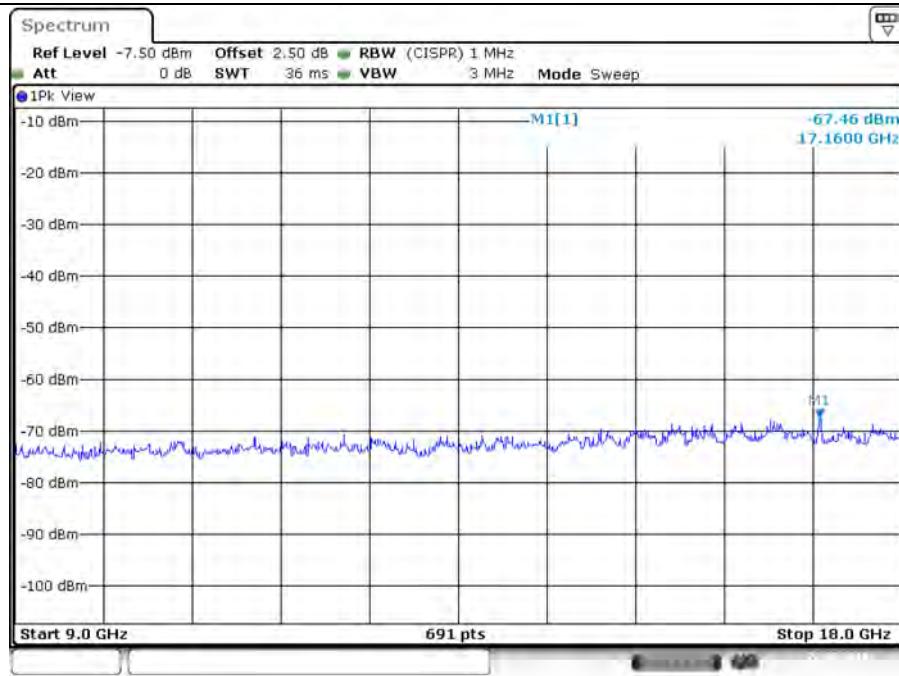
Date: 22 FEB.2018 23:24:26

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 2 / 9GHz~18GHz**


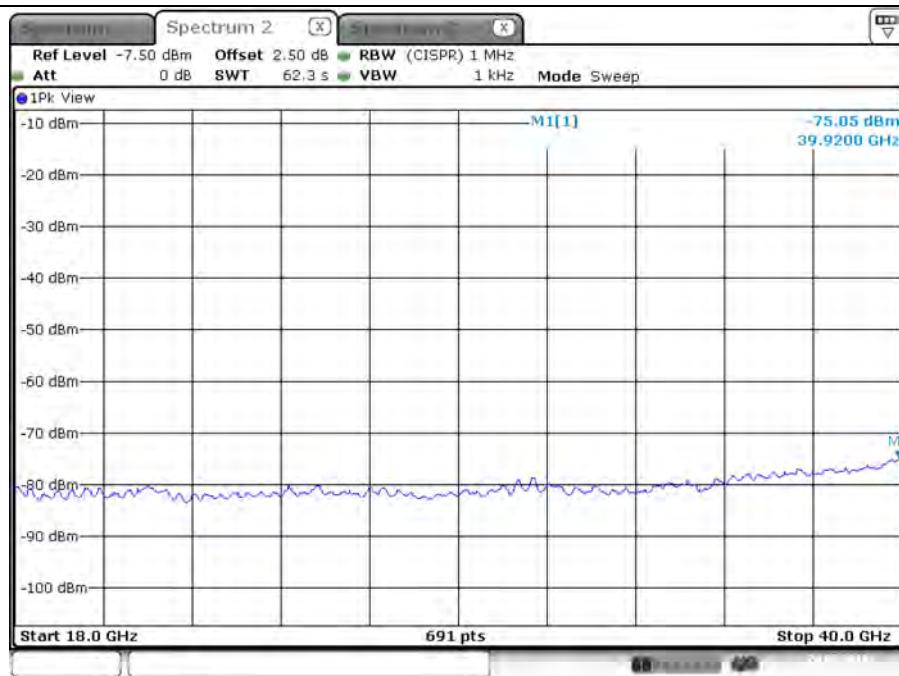
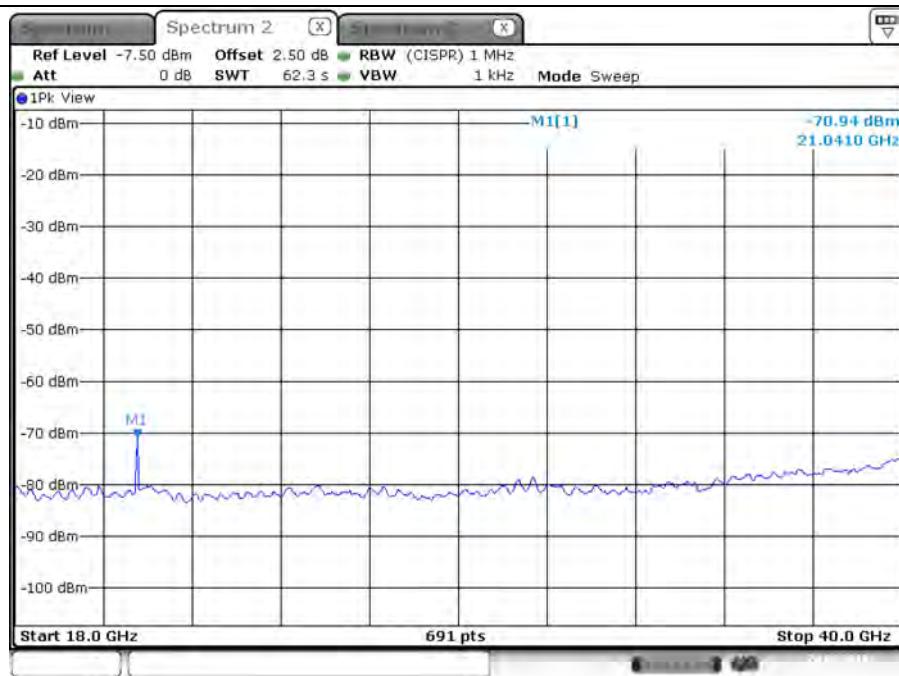
Date: 22.FEB.2018 23:18:04

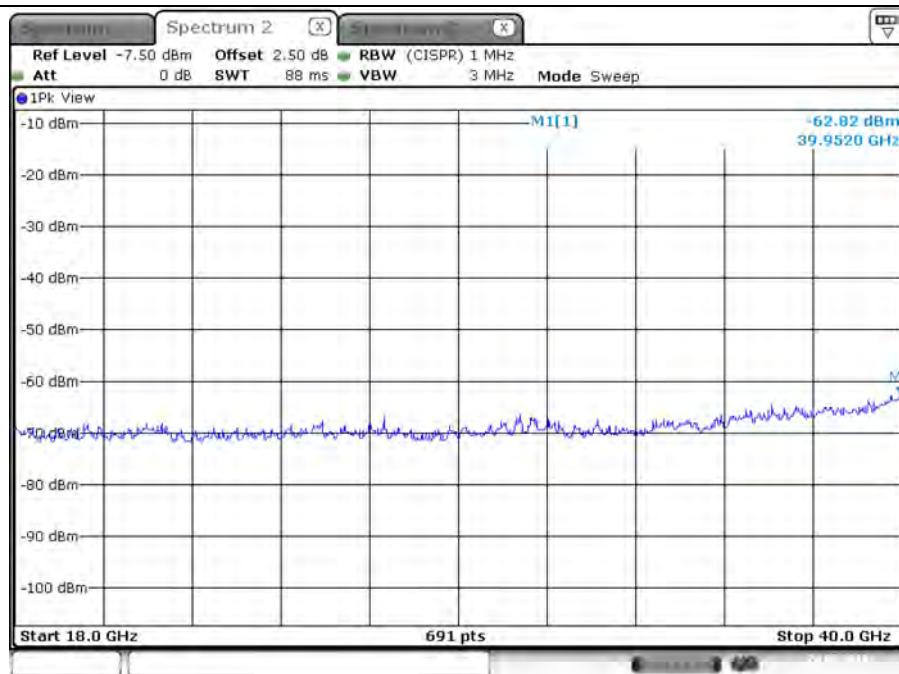
**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 1 / 9GHz~18GHz**


Date: 22 FEB. 2018 23:23:31

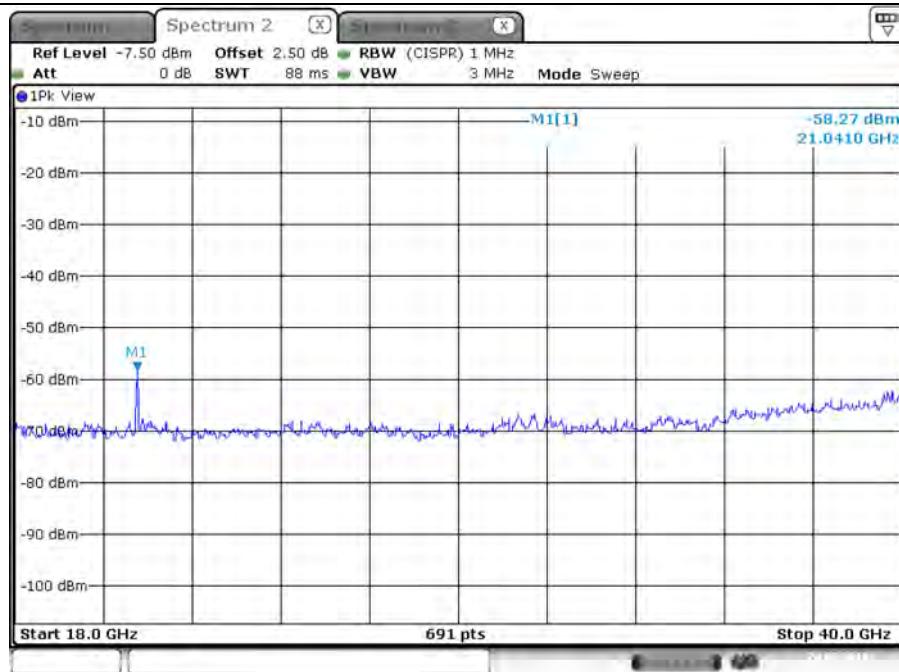
**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 2 / 9GHz~18GHz**


Date: 22 FEB. 2018 23:18:13

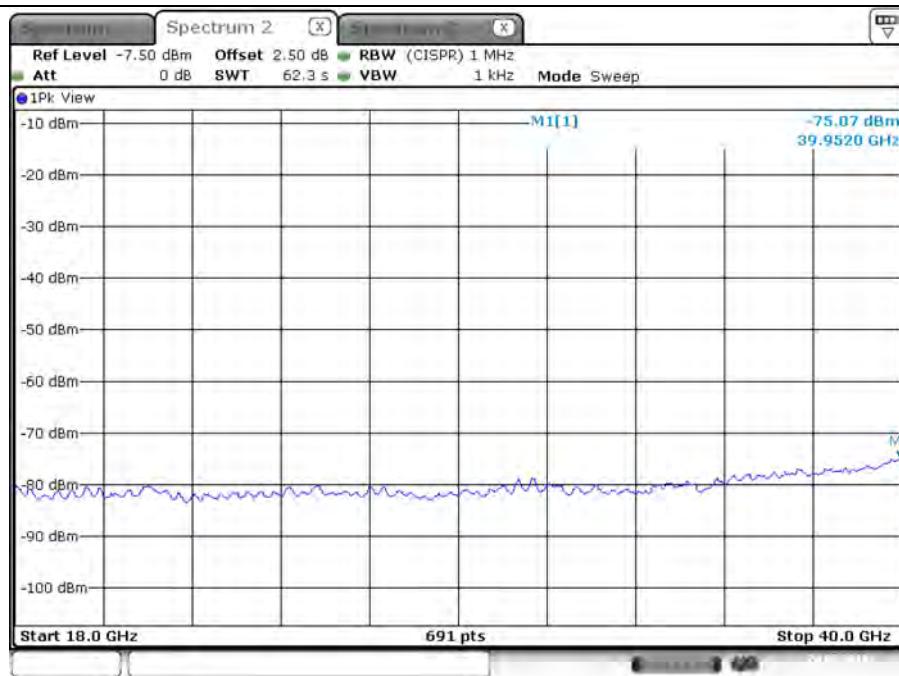
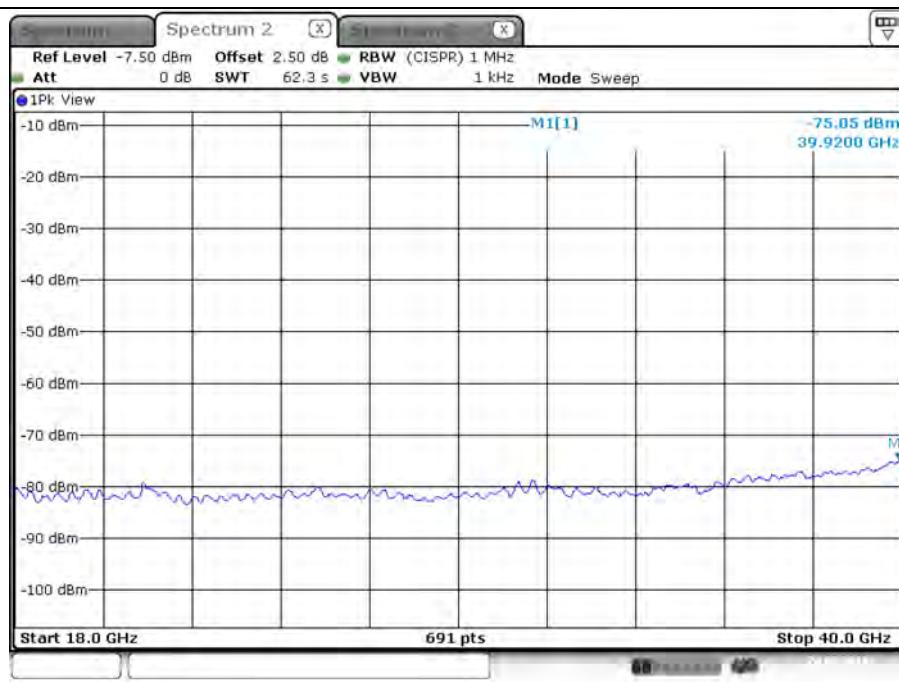
**Plot on Configuration VHT20 / 5260 MHz / Average / Port 1 / 18GHz~40GHz**

**Plot on Configuration VHT20 / 5260 MHz / Average / Port 2 / 18GHz~40GHz**


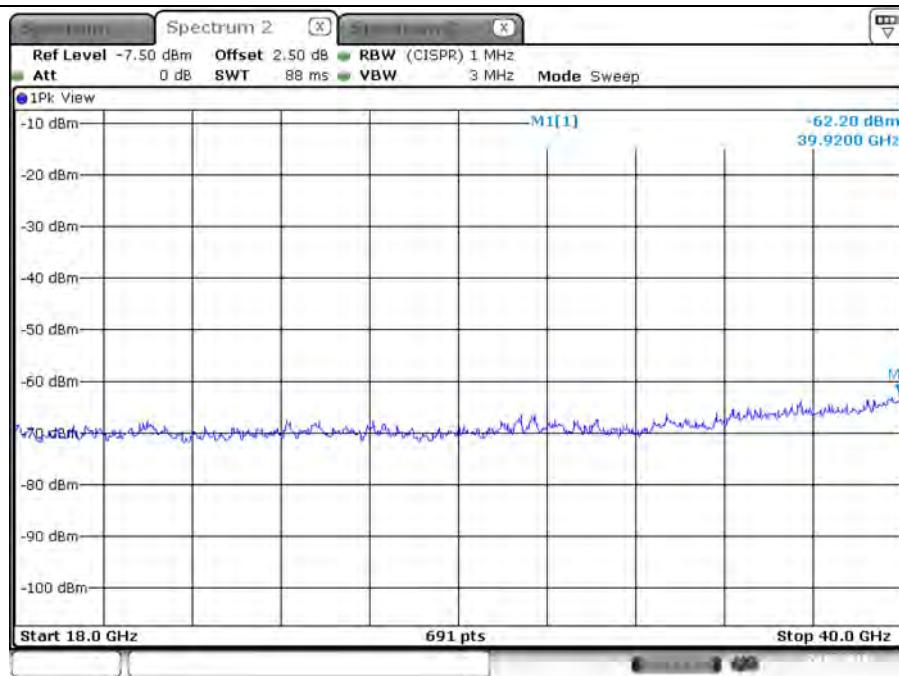
**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 1 / 18GHz~40GHz**


Date: 24.FEB.2018 13:14:27

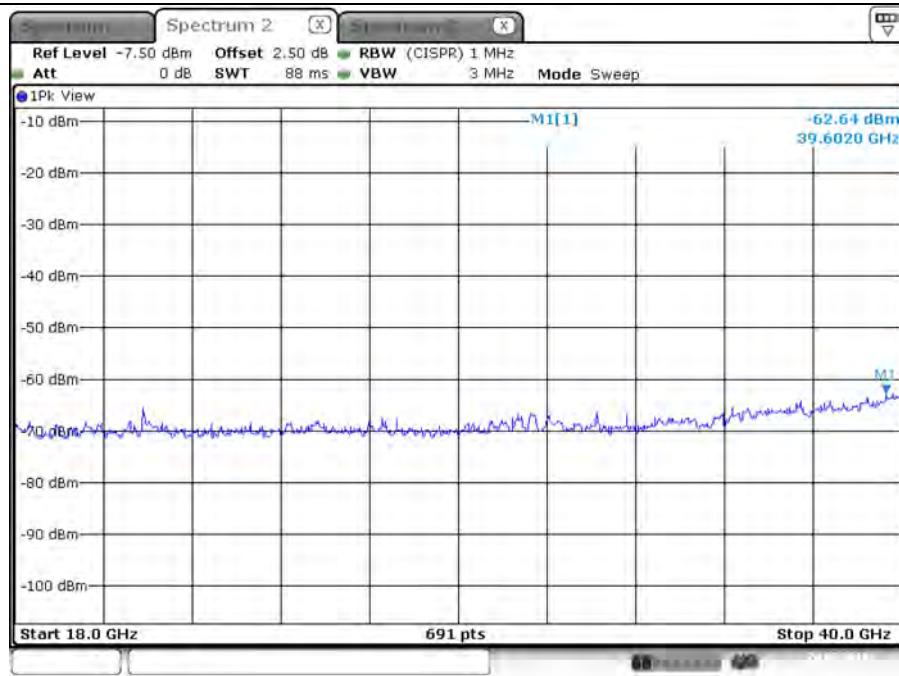
**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 2 / 18GHz~40GHz**


Date: 24.FEB.2018 13:18:32

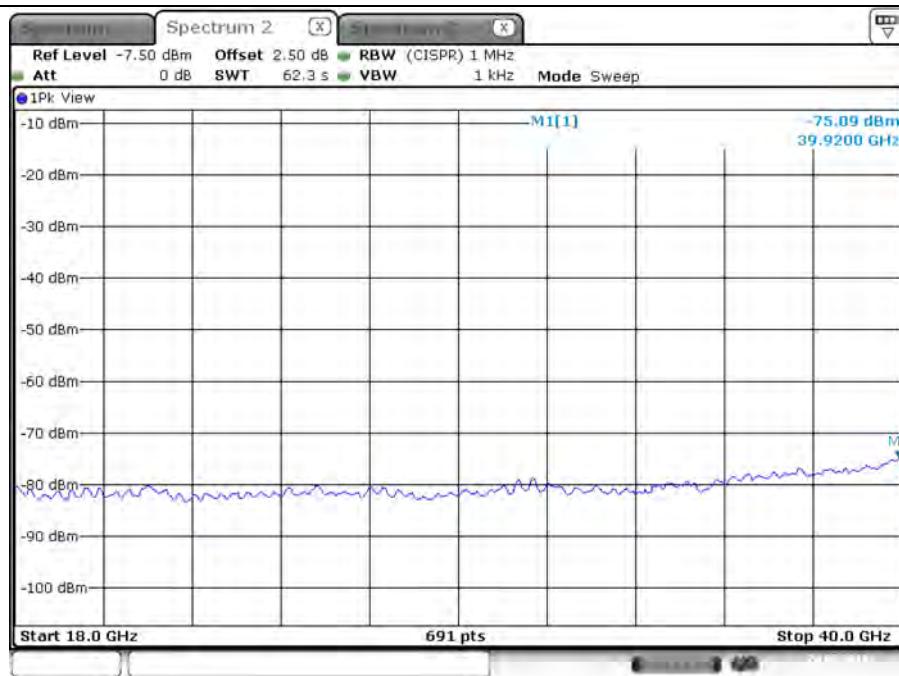
**Plot on Configuration VHT20 / 5300 MHz / Average / Port 1 / 18GHz~40GHz**

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 2 / 18GHz~40GHz**


**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 1 / 18GHz~40GHz**


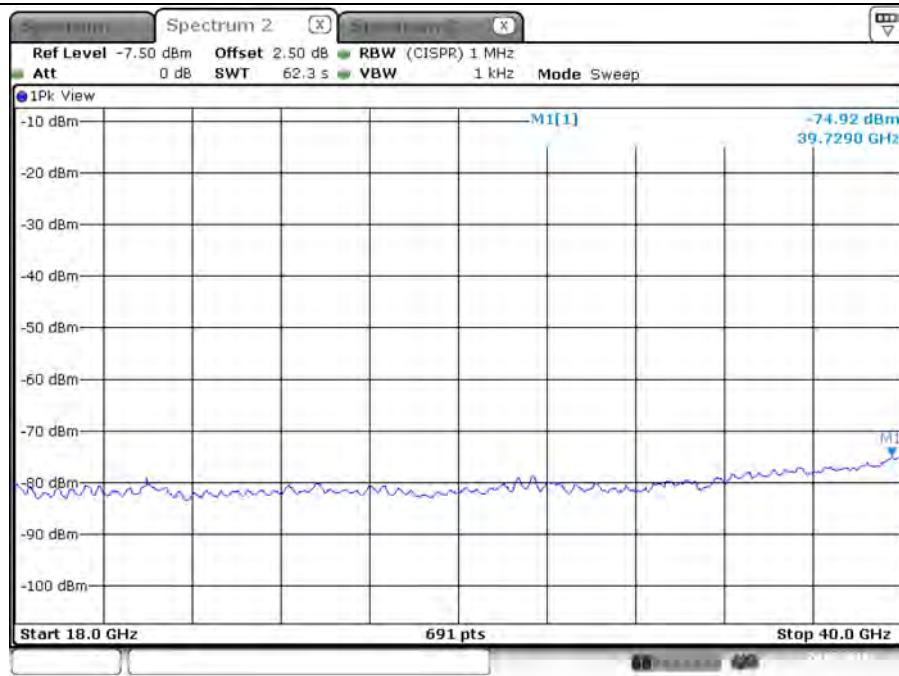
Date: 24.FEB.2018 13:30:45

**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 2 / 18GHz~40GHz**


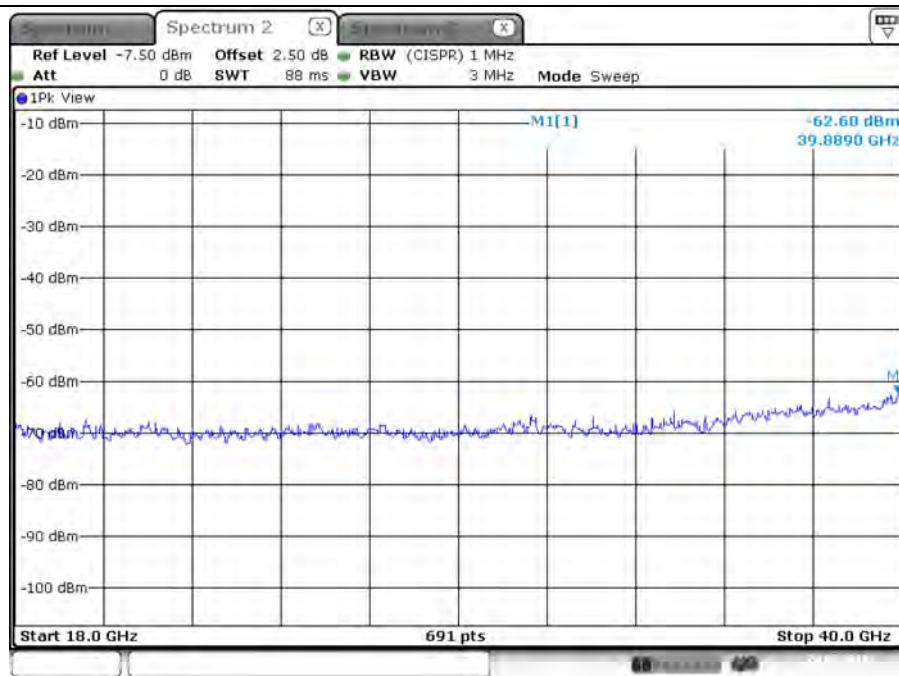
Date: 24.FEB.2018 13:34:37

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 1 / 18GHz~40GHz**


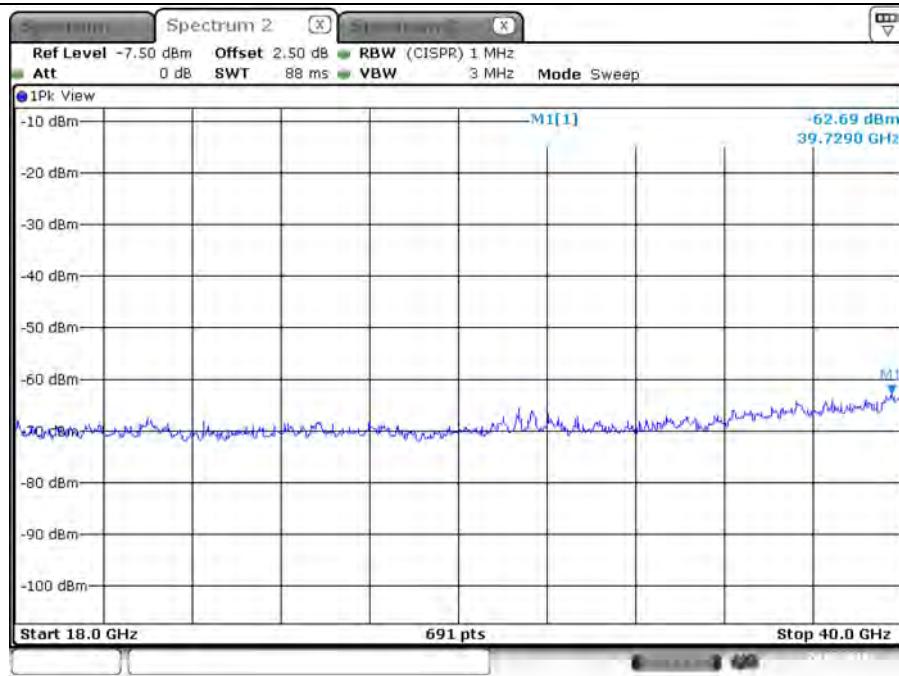
Date: 24.FEB.2018 13:41:53

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 2 / 18GHz~40GHz**


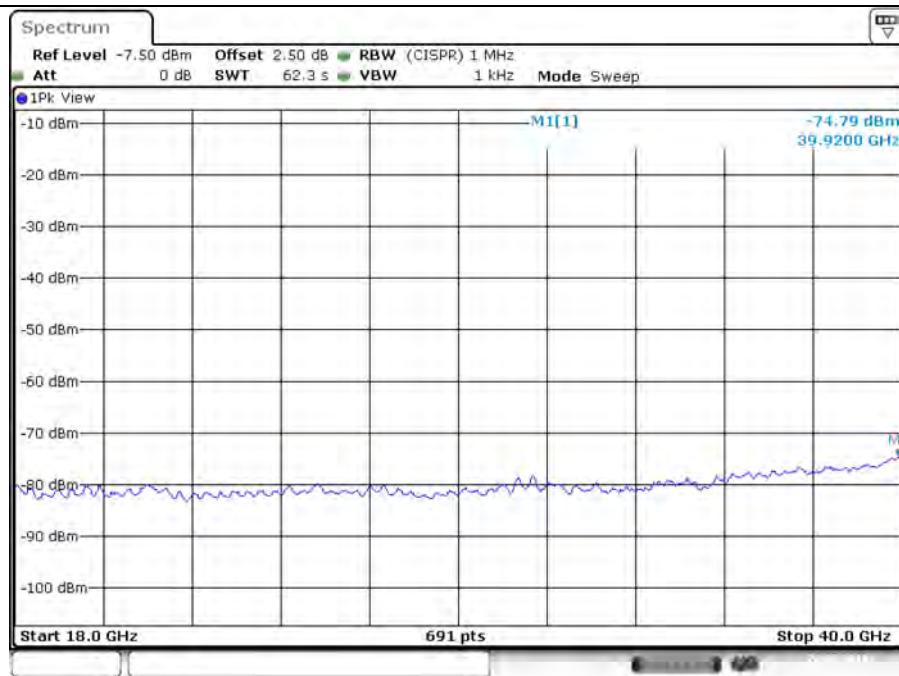
Date: 24.FEB.2018 13:46:29

**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 1 / 18GHz~40GHz**


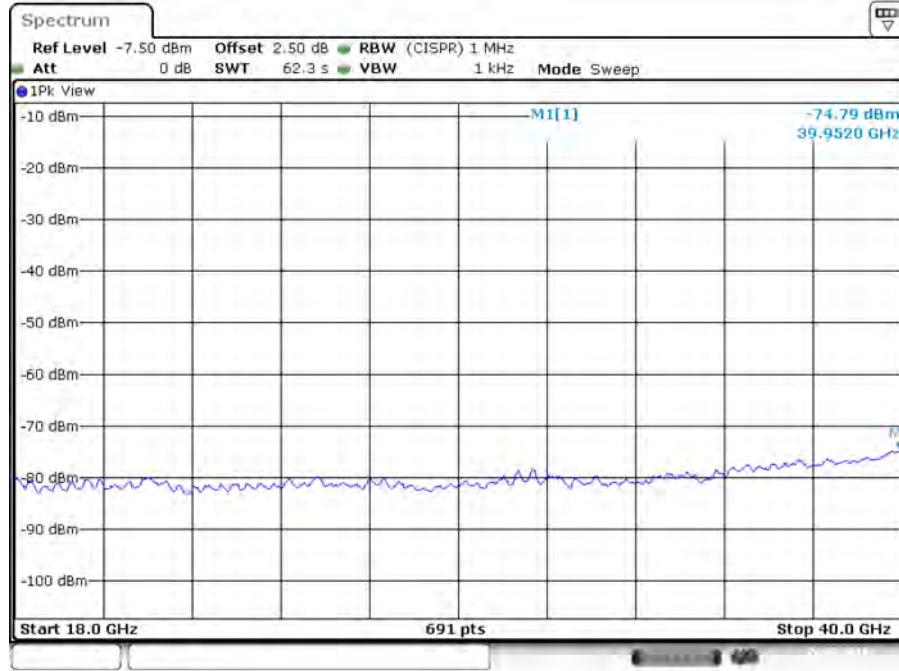
Date: 24.FEB.2018 13:43:26

**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 2 / 18GHz~40GHz**


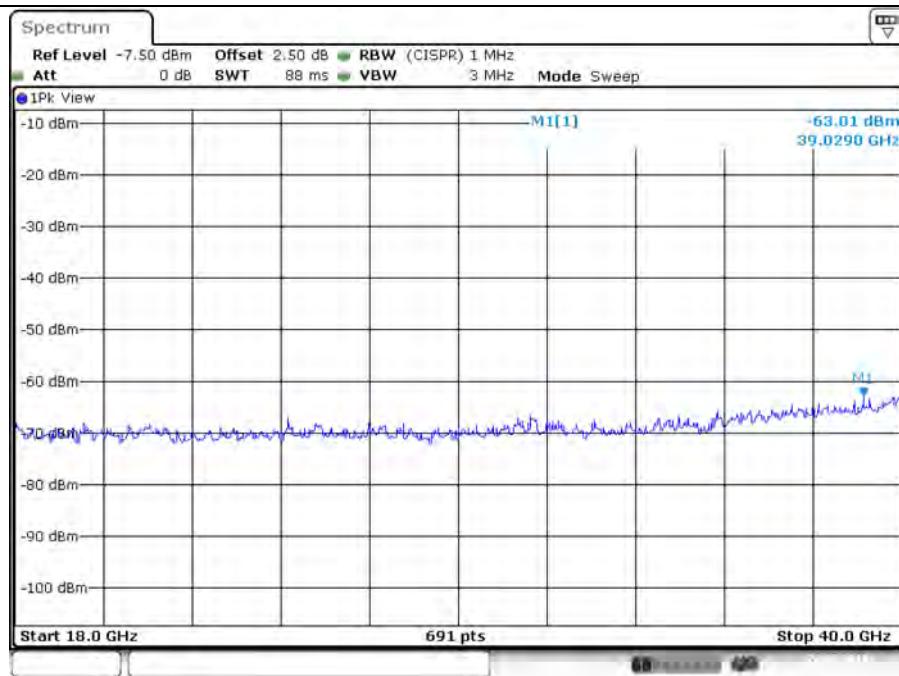
Date: 24.FEB.2018 13:48:07

**Plot on Configuration VHT20 / 5500 MHz / Average / Port 1 / 18GHz~40GHz**


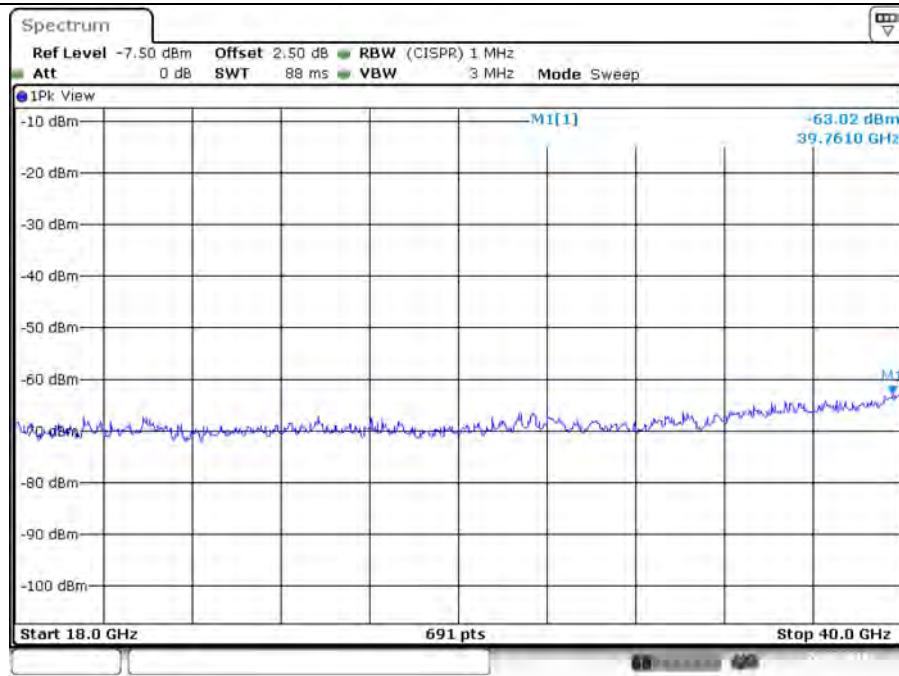
Date: 22 FEB.2018 22:37:45

**Plot on Configuration VHT20 / 5500 MHz / Average / Port 2 / 18GHz~40GHz**


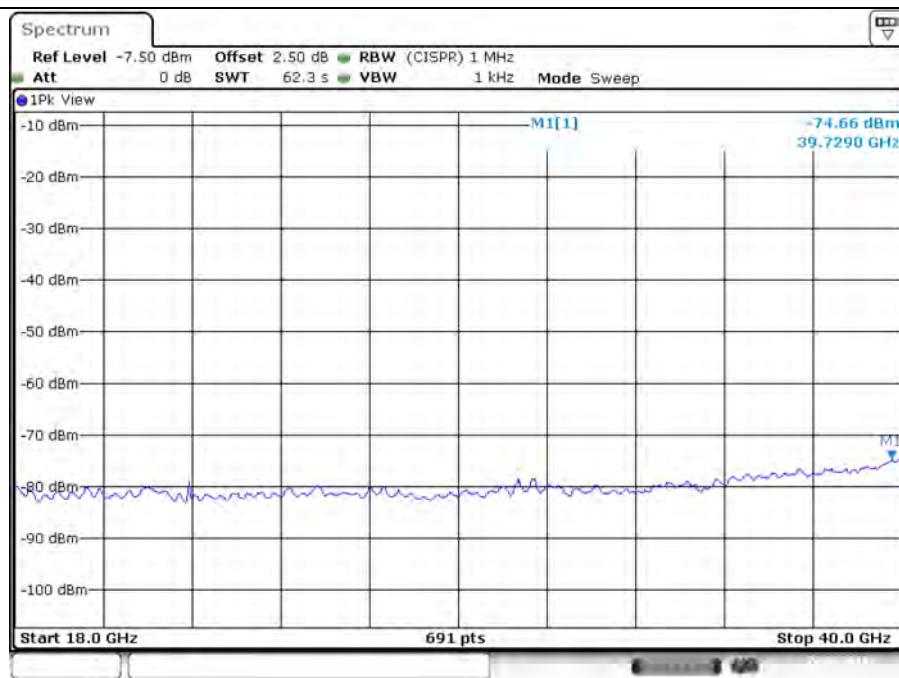
Date: 22.FEB.2018 22:36:10

**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 1 / 18GHz~40GHz**


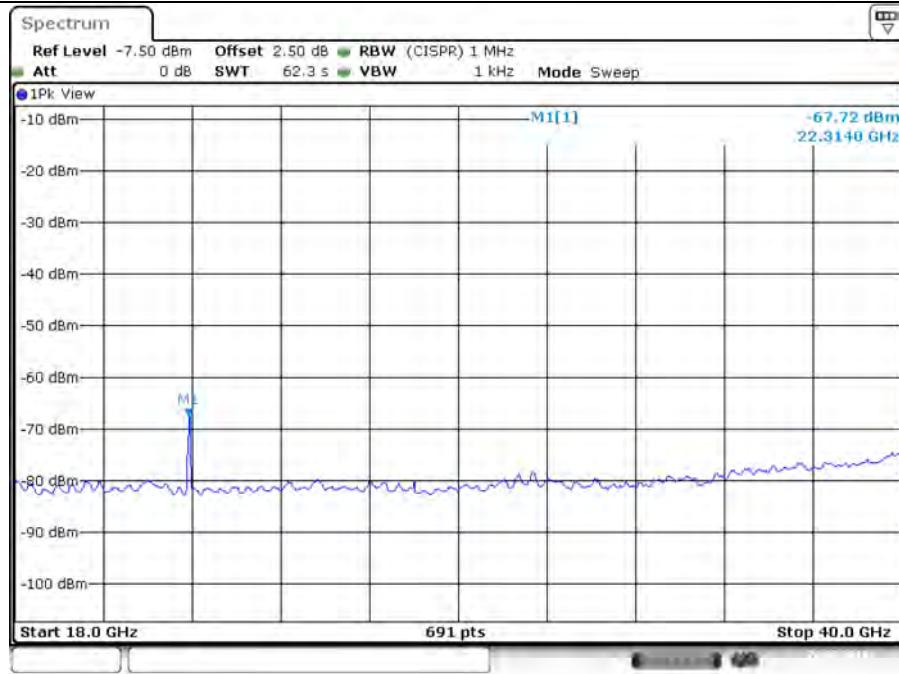
Date: 22 FEB 2018 22:37:56

**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 2 / 18GHz~40GHz**


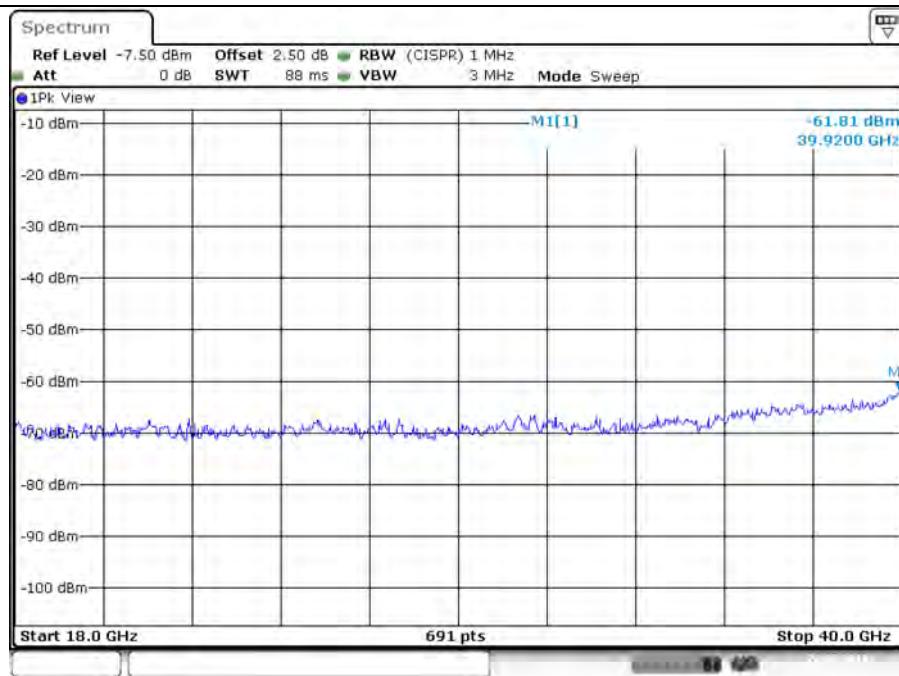
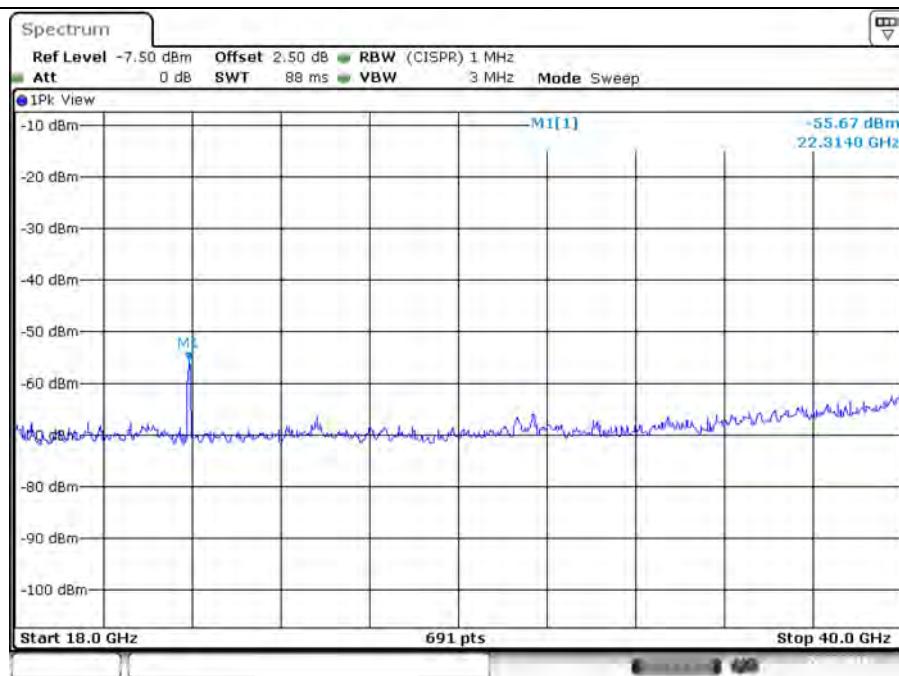
Date: 22 FEB 2018 22:34:55

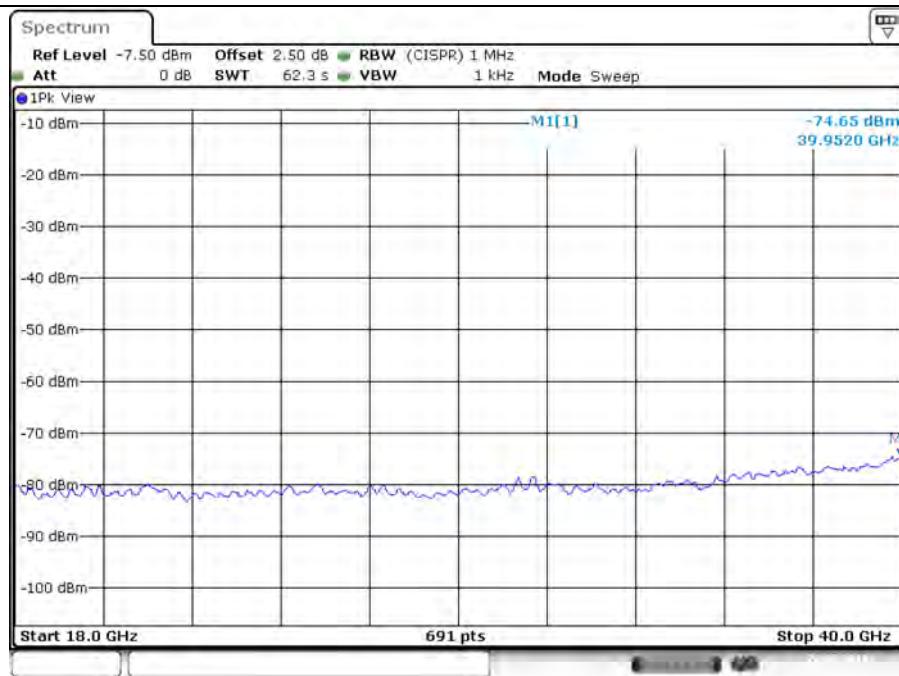
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 1 / 18GHz~40GHz**


Date: 22 FEB.2018 22:39:53

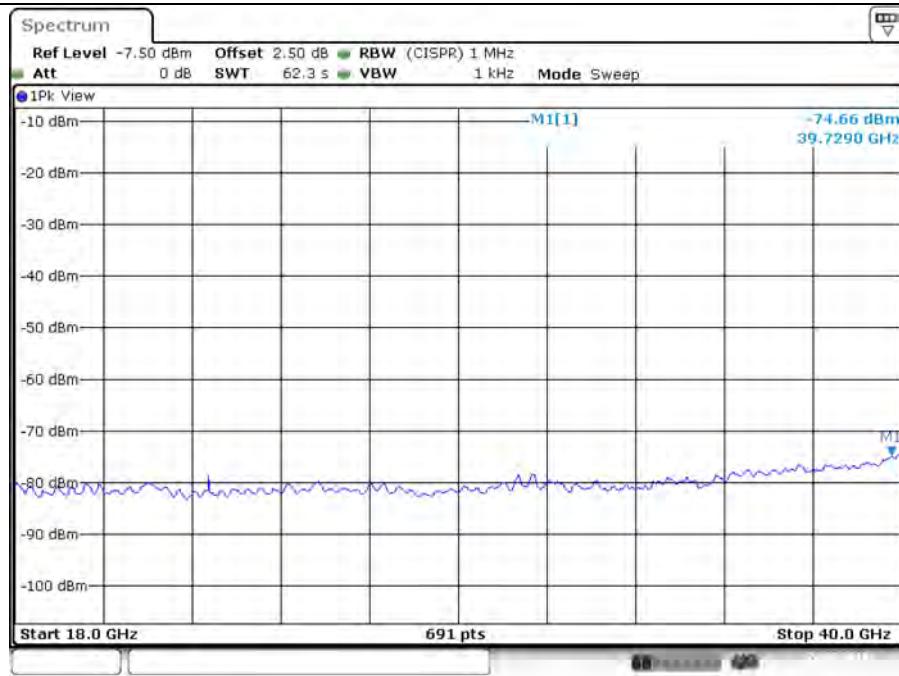
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 2 / 18GHz~40GHz**


Date: 22.FEB.2018 22:44:41

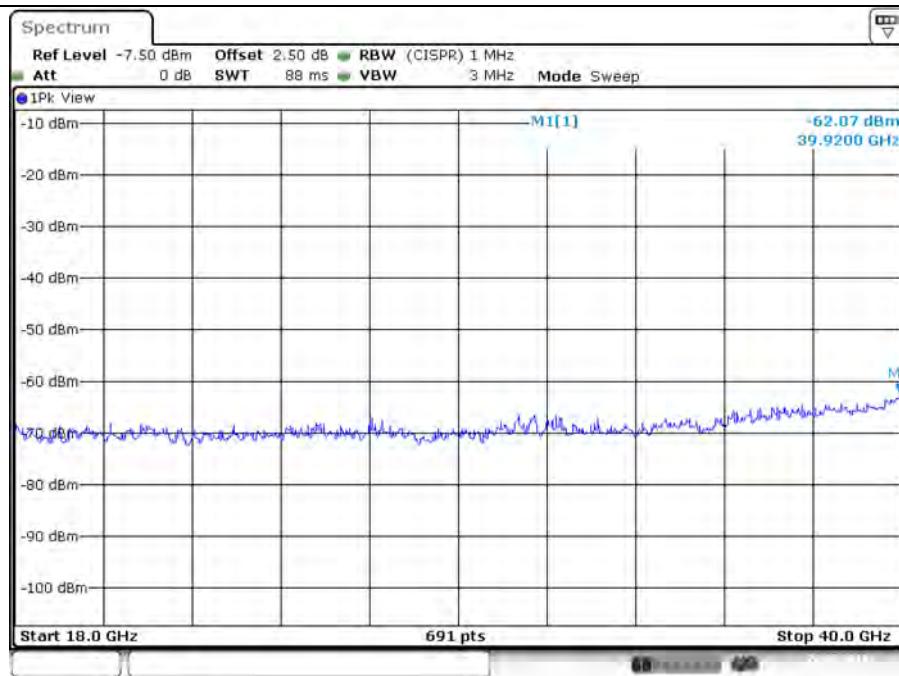
**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 1 / 18GHz~40GHz**

**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 2 / 18GHz~40GHz**


**Plot on Configuration VHT20 / 5700 MHz / Average / Port 1 / 18GHz~40GHz**


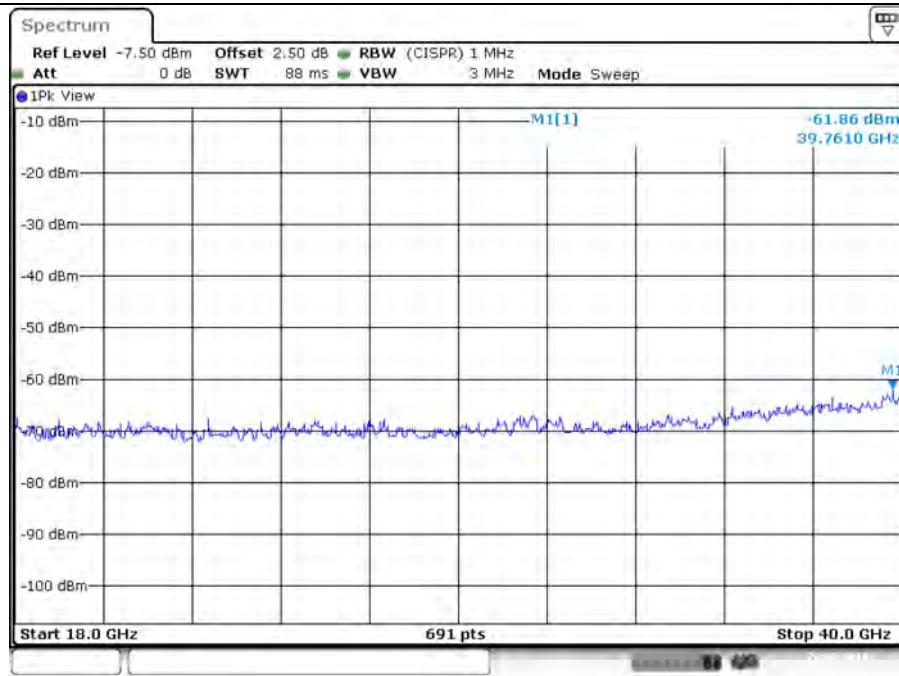
Date: 22 FEB.2018 22:51:15

**Plot on Configuration VHT20 / 5700 MHz / Average / Port 2 / 18GHz~40GHz**


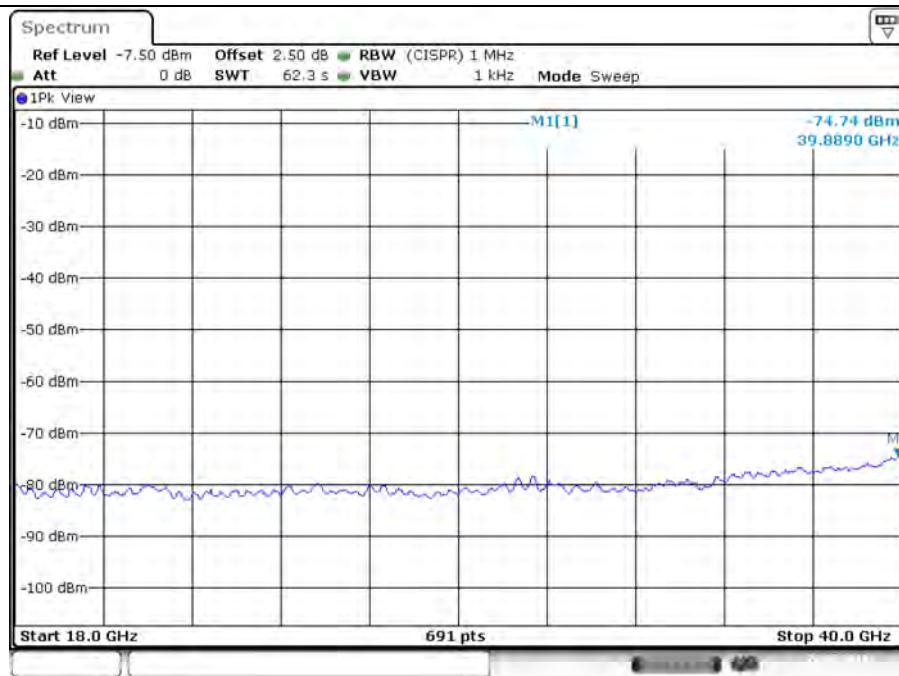
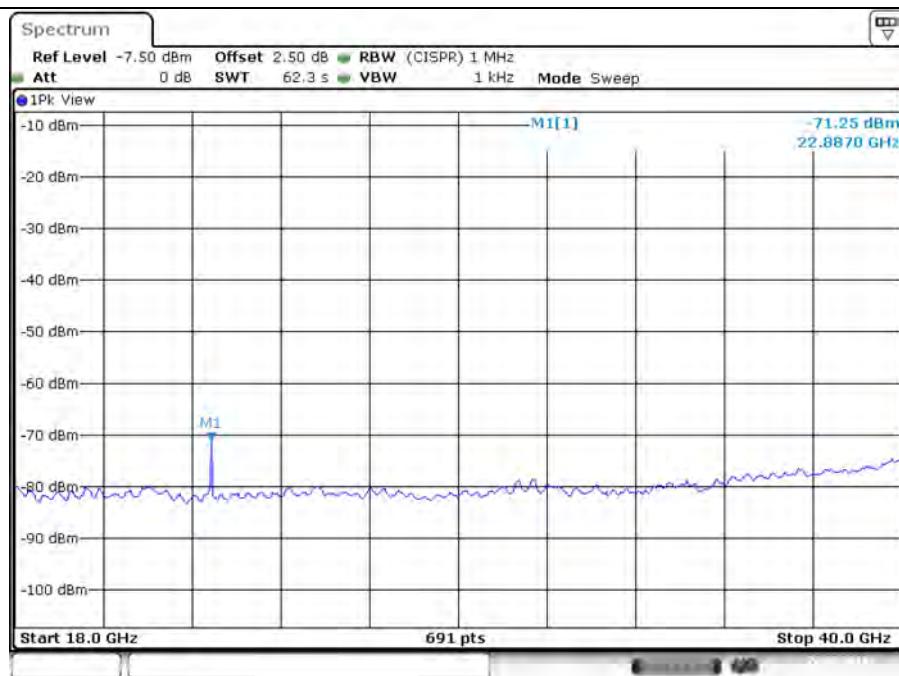
Date: 22 FEB.2018 22:47:35

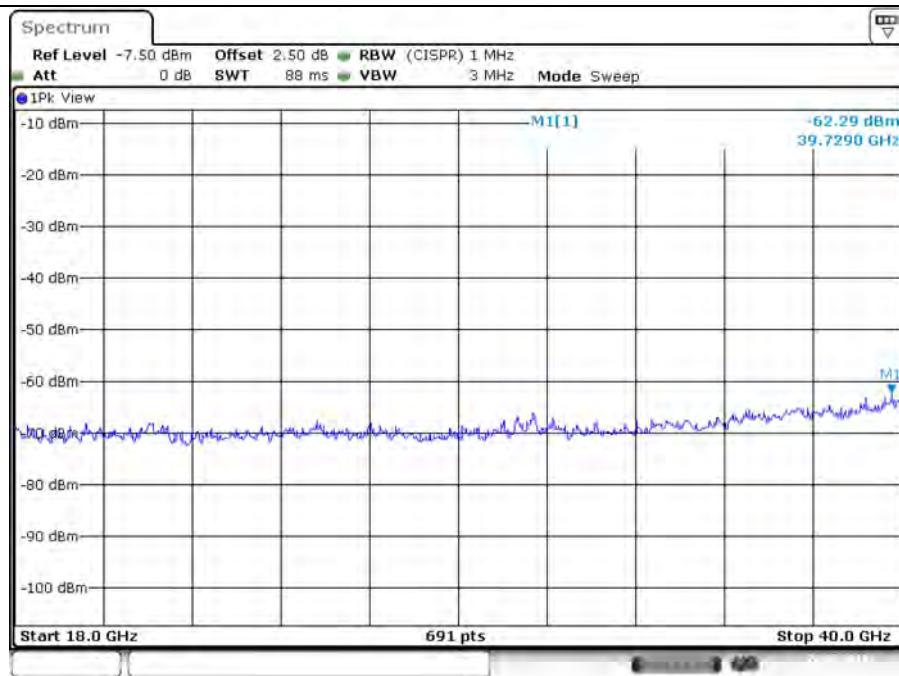
**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 1 / 18GHz~40GHz**


Date: 22.FEB.2018 22:51:26

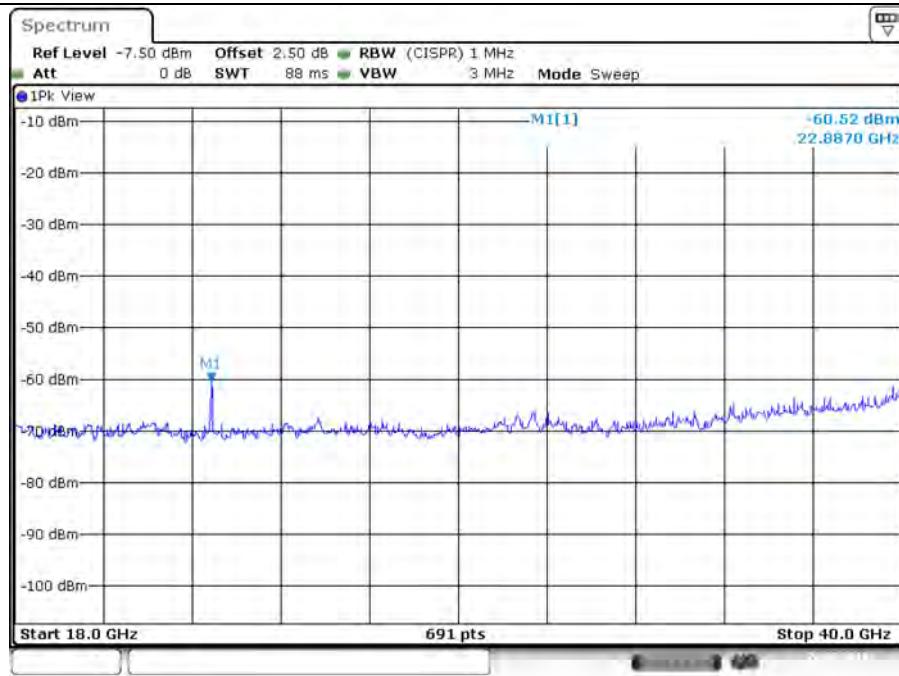
**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 2 / 18GHz~40GHz**


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

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 1 / 18GHz~40GHz**

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 2 / 18GHz~40GHz**


**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 1 / 18GHz~40GHz**


Date: 22 FEB. 2018 23:23:15

**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 2 / 18GHz~40GHz**


Date: 22 FEB. 2018 23:18:31



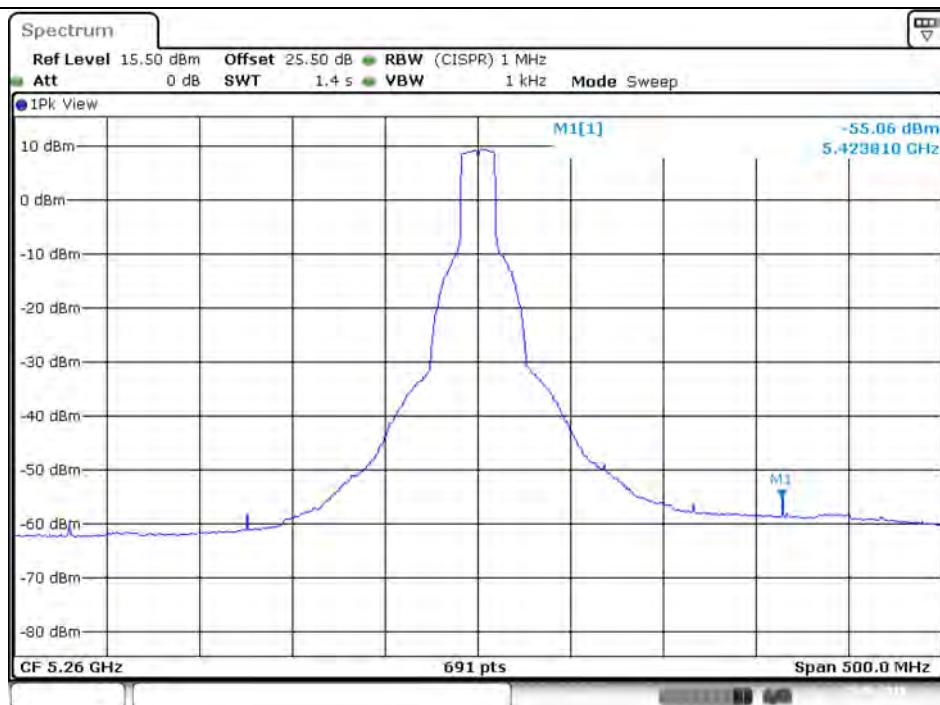
For Conducted Bandedge:  
For 20MHz

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	Configurations	VHT20 / Average / Port 1 + Port 2

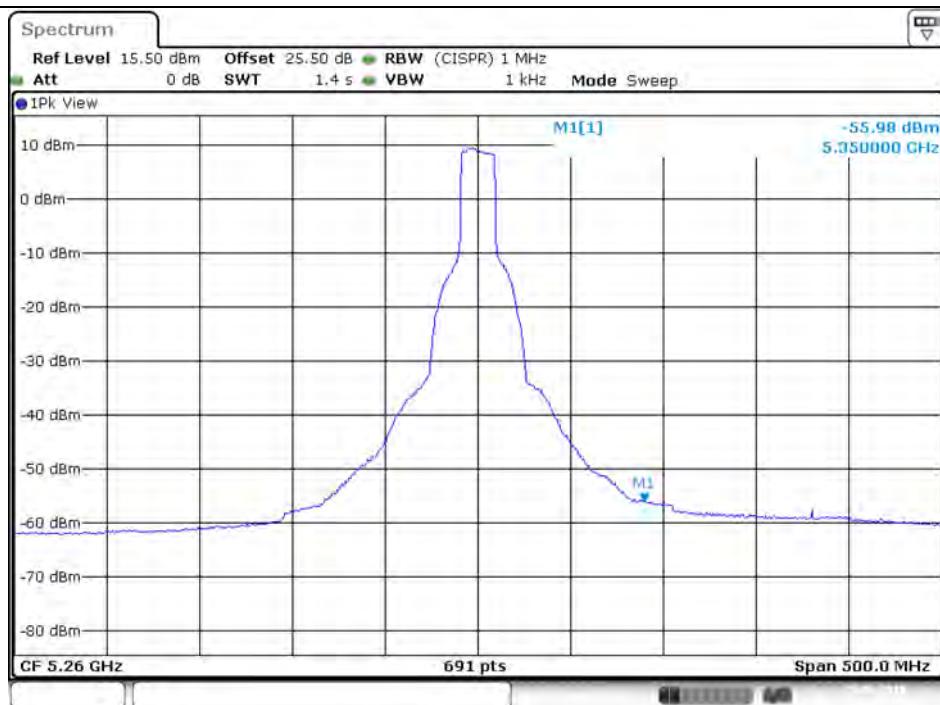
Frequency(MHz)	Port 1 (TX1) Bandedge Level (dBm)	Port 2 (TX2) Bandedge Level (dBm)	Total Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
5260	-55.06	-55.98	-44.49	-41.25	3.24
5300	-51.75	-52.88	-41.27	-41.25	0.02
5320	-52.26	-52.78	-41.50	-41.25	0.25
5500	-51.90	-53.13	-41.46	-41.25	0.21
5580	-53.11	-54.10	-42.57	-41.25	1.32
5700	-53.11	-52.56	-41.82	-41.25	0.57
5720 (Straddle Channel)	-52.53	-54.14	-42.25	-41.25	1.00

Temperature	22 °C	Humidity	54%
Test Engineer	Joy Tseng / Ekko Hsieh	Configurations	VHT20 / Peak / Port 1 + Port 2

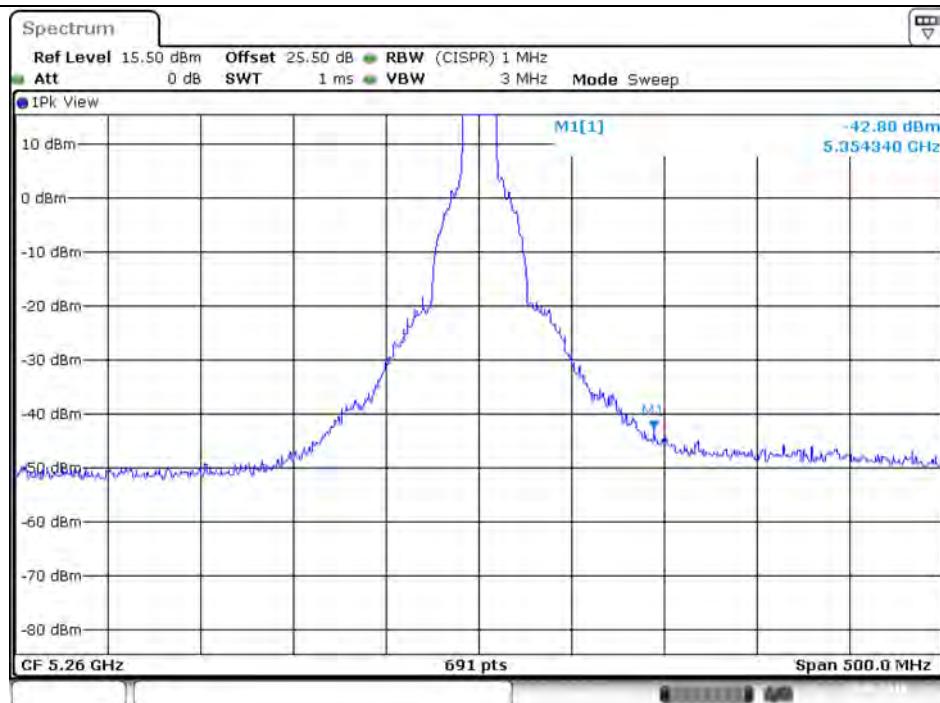
Frequency(MHz)	Port 1 (TX1) Bandedge Level (dBm)	Port 2 (TX2) Bandedge Level (dBm)	Total Bandedge Level (dBm)	Limit (dBm)	Margin (dB)
5260	-42.80	-43.66	-32.20	-21.25	10.95
5300	-39.09	-39.67	-28.36	-21.25	7.11
5320	-39.93	-39.32	-28.60	-21.25	7.35
5500	-40.21	-40.79	-29.48	-21.25	8.23
5580	-40.81	-42.62	-30.61	-21.25	9.36
5700	-41.75	-40.63	-30.14	-21.25	8.89
5720 (Straddle Channel)	-37.00	-39.96	-27.22	-21.25	5.97

**Plot on Configuration VHT20 / 5260 MHz / Average / Port 1 (TX1)**


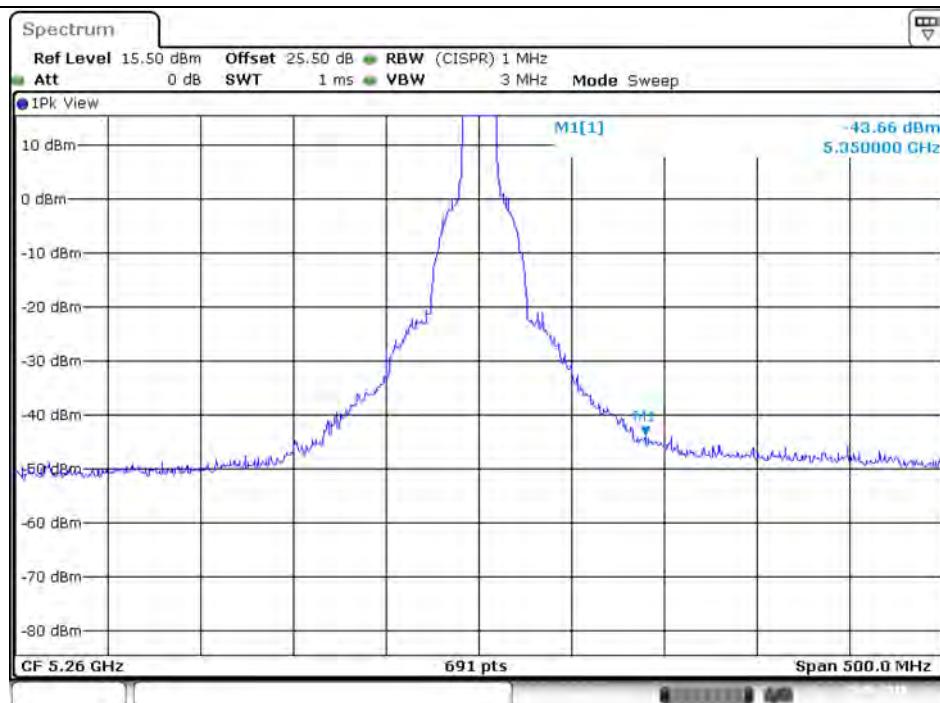
Date: 23.FEB.2018 10:04:13

**Plot on Configuration VHT20 / 5260 MHz / Average / Port 2 (TX2)**


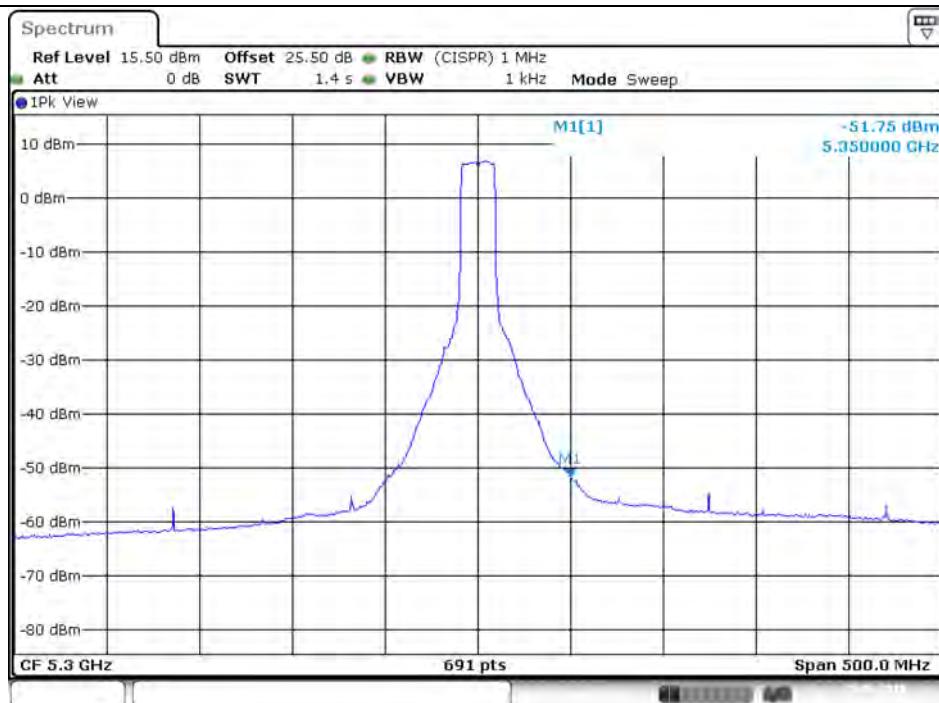
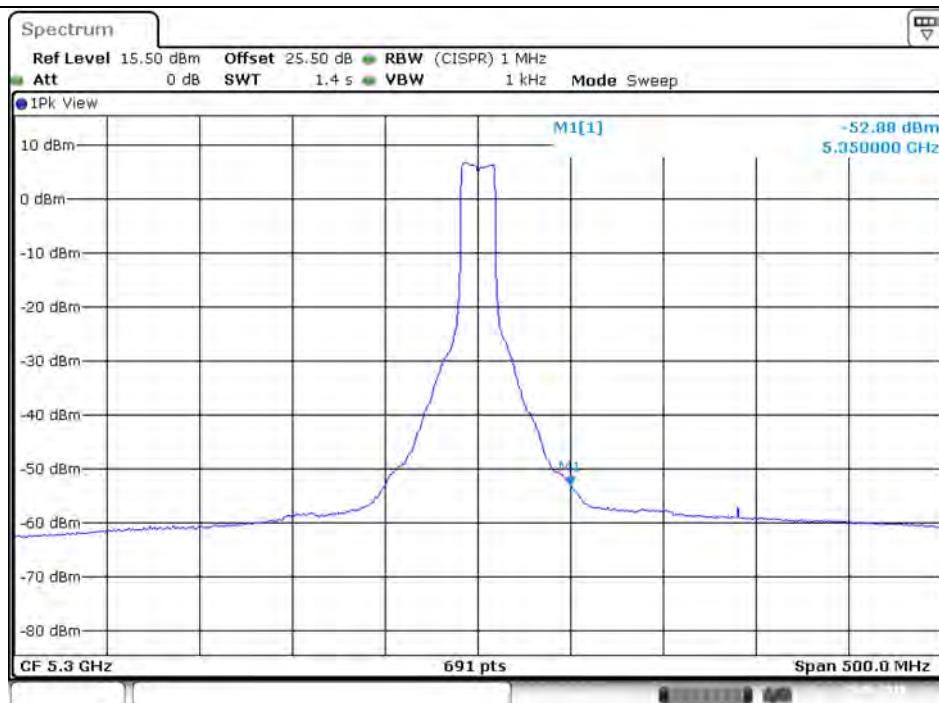
Date: 23.FEB.2018 10:07:32

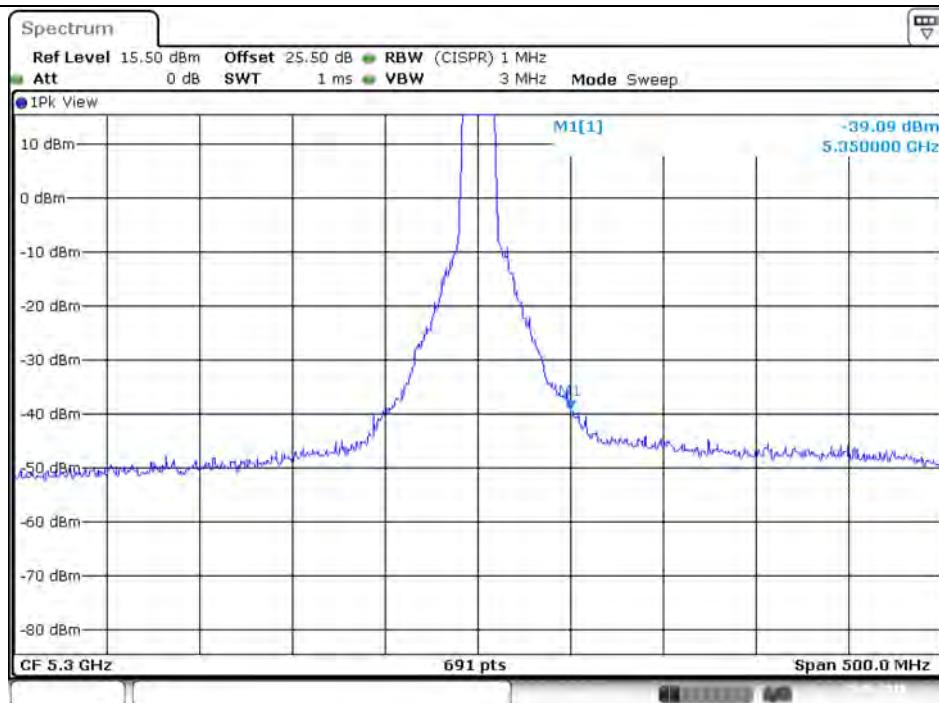
**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 1 (TX1)**


Date: 23.FEB.2018 10:05:30

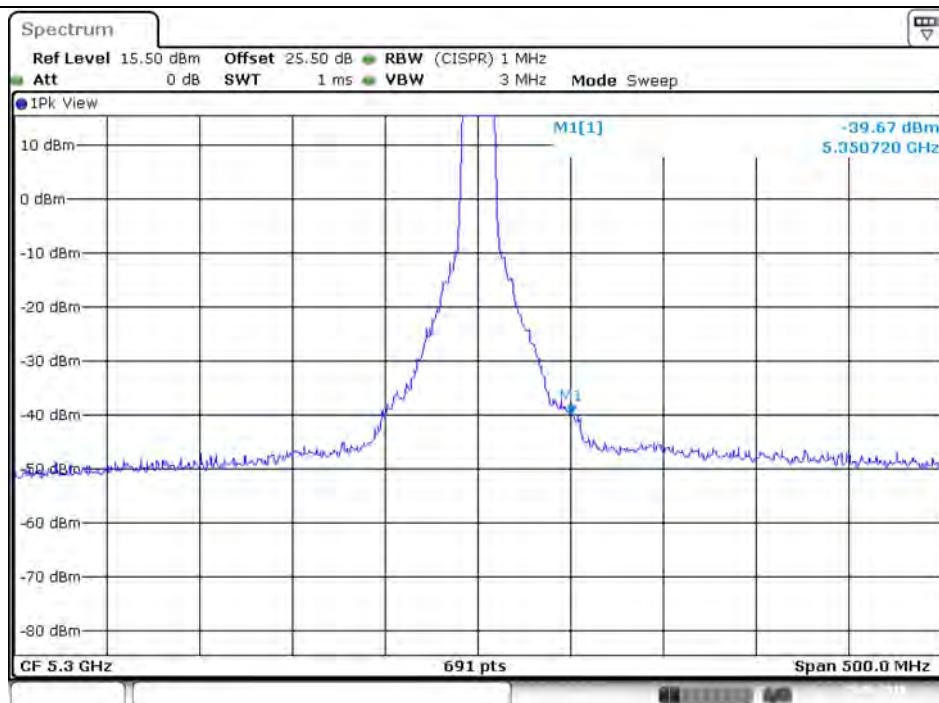
**Plot on Configuration VHT20 / 5260 MHz / Peak / Port 2 (TX2)**


Date: 23.FEB.2018 10:08:59

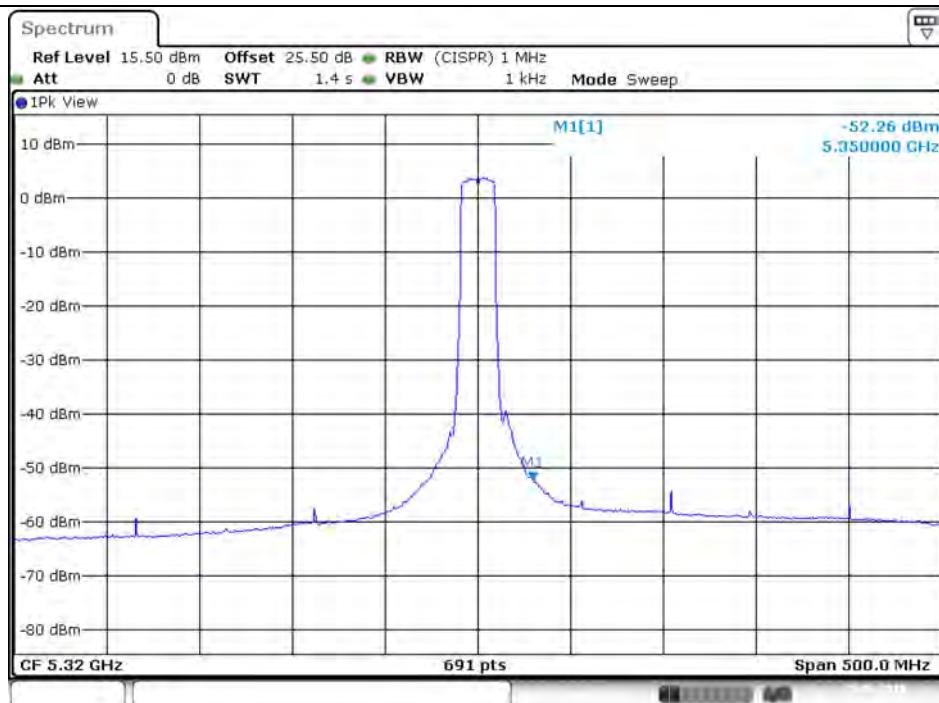
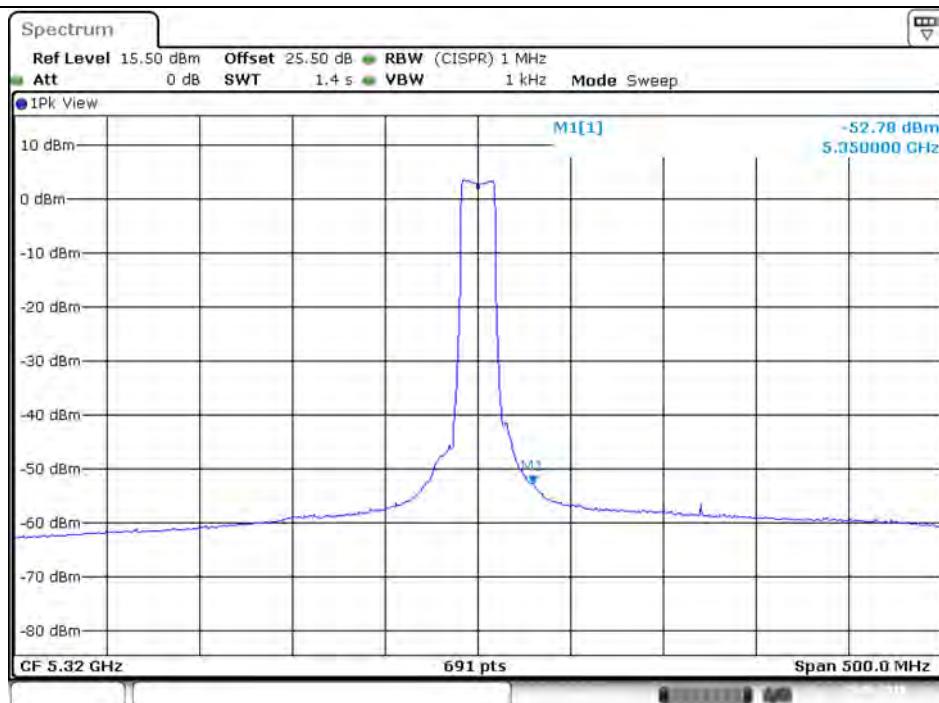
**Plot on Configuration VHT20 / 5300 MHz / Average / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5300 MHz / Average / Port 2 (TX2)**


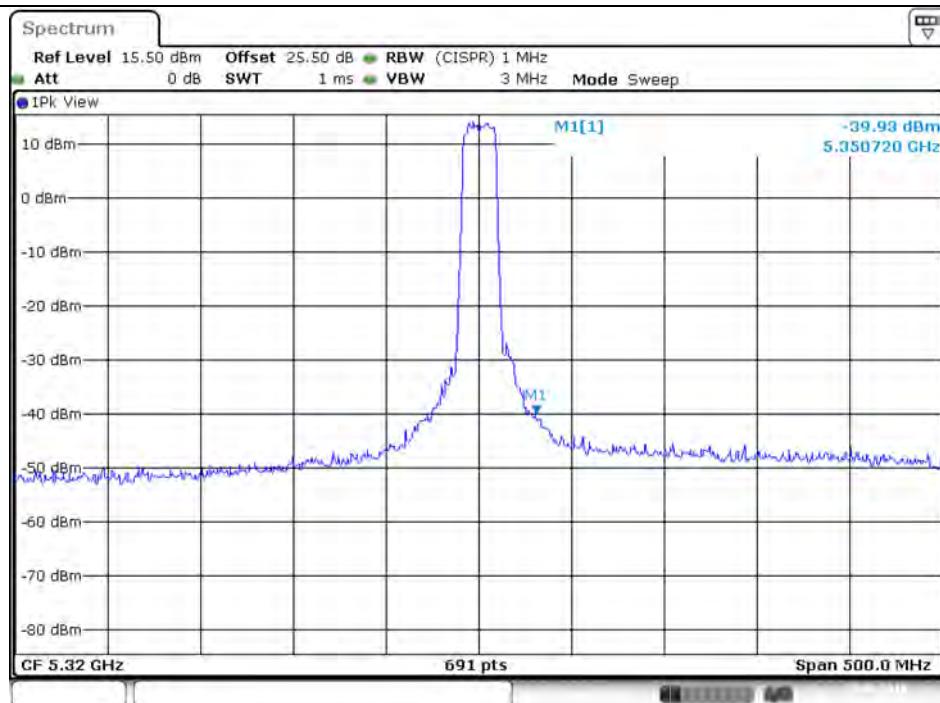
**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 1 (TX1)**


Date: 23.FEB.2018 10:19:25

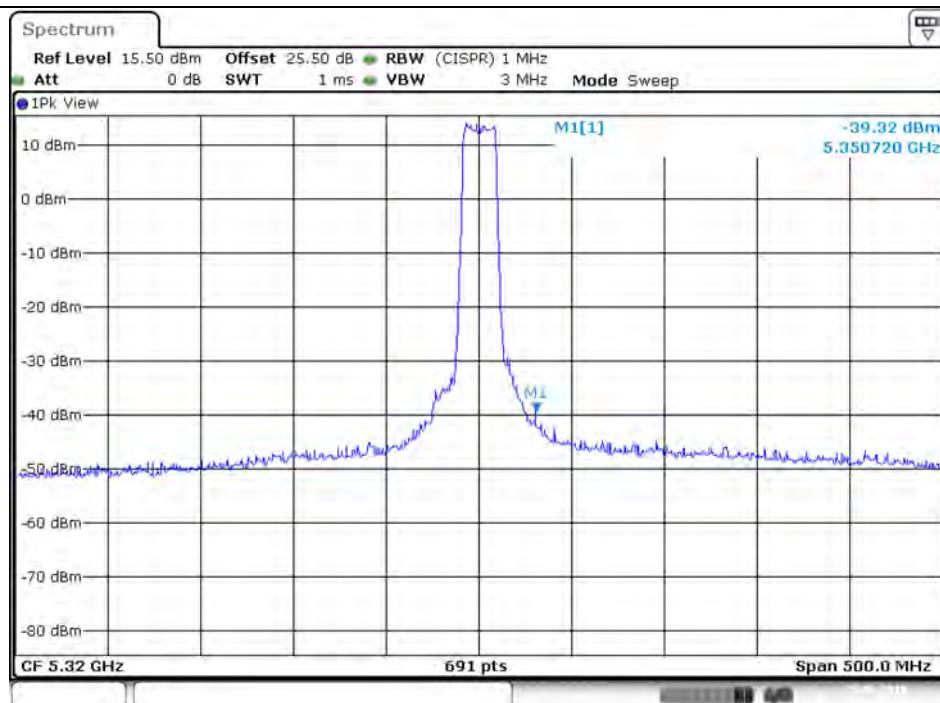
**Plot on Configuration VHT20 / 5300 MHz / Peak / Port 2 (TX2)**


Date: 23.FEB.2018 10:15:33

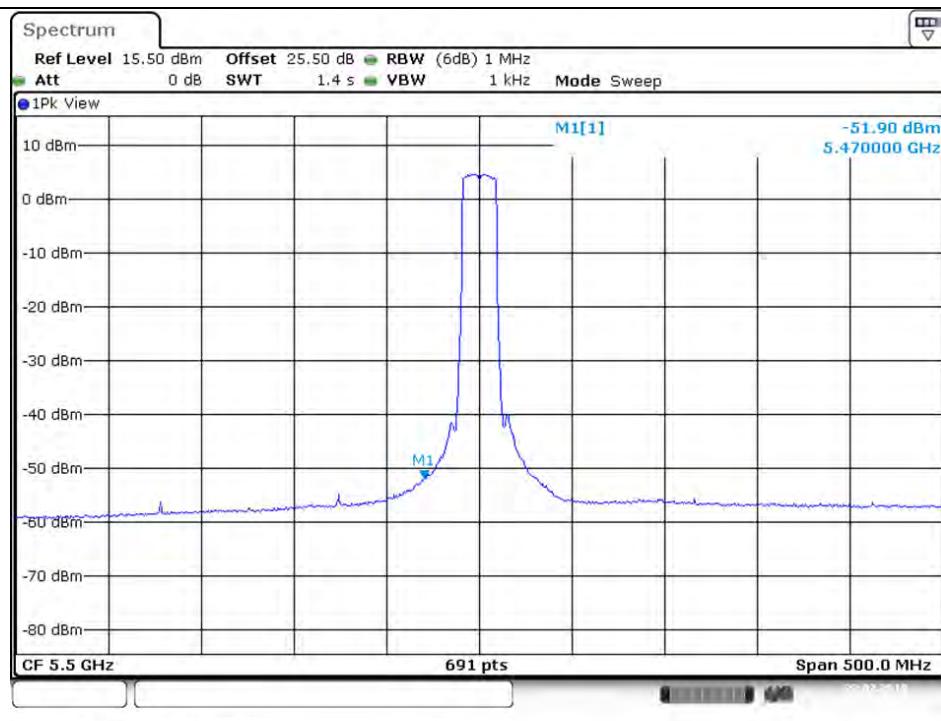
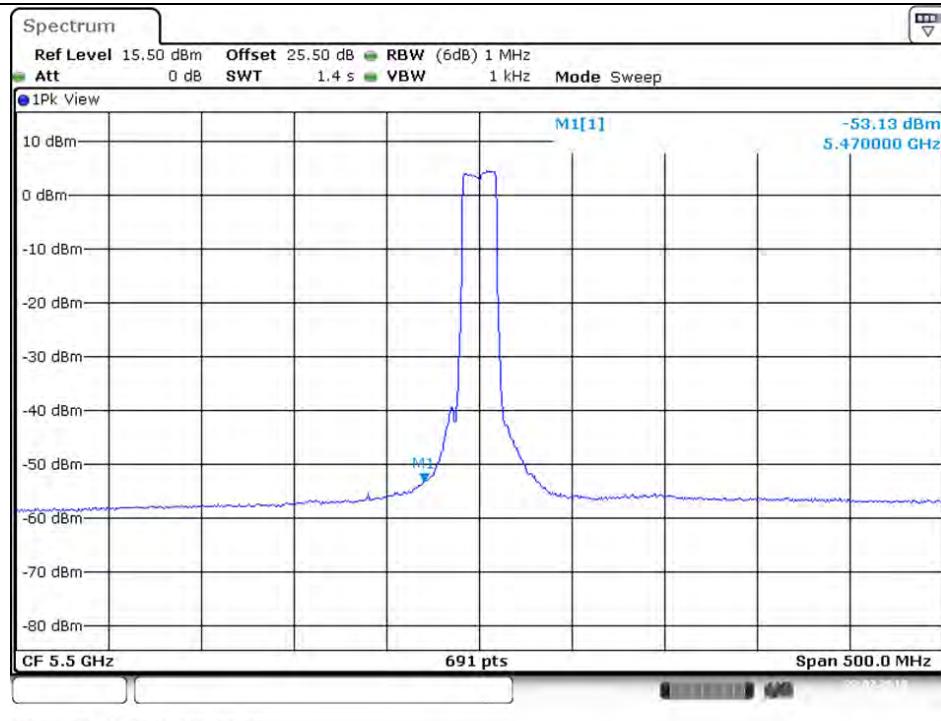
**Plot on Configuration VHT20 / 5320 MHz / Average / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5320 MHz / Average / Port 2 (TX2)**


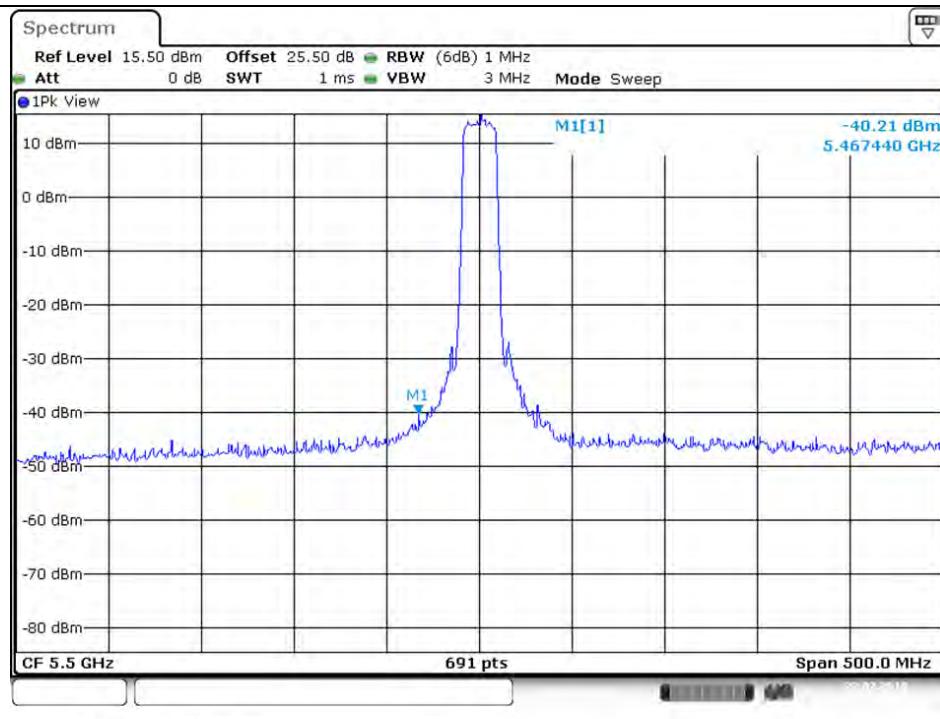
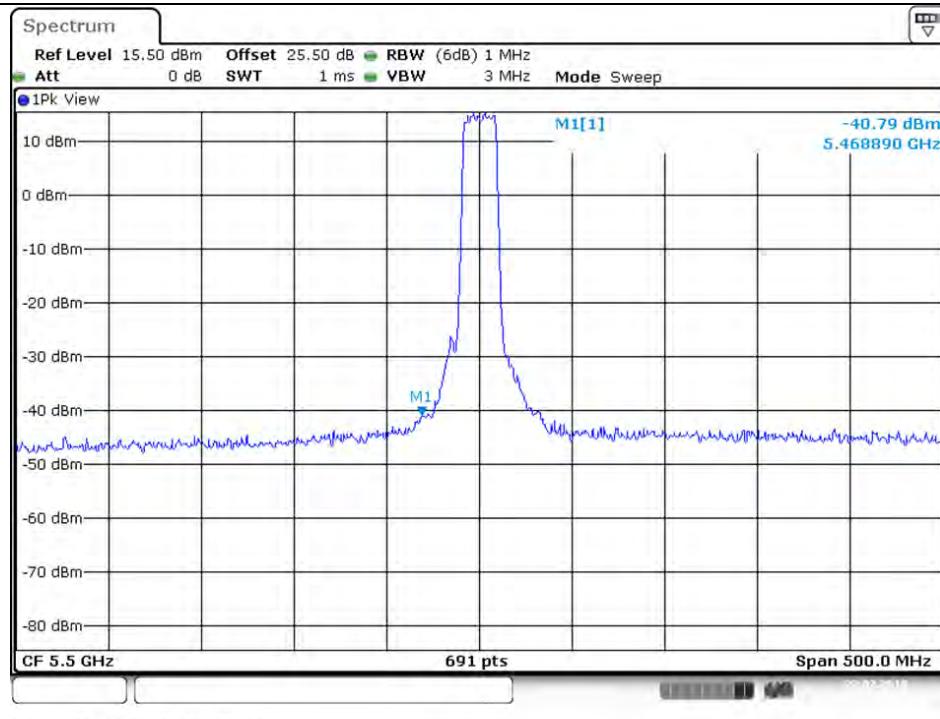
**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 1 (TX1)**


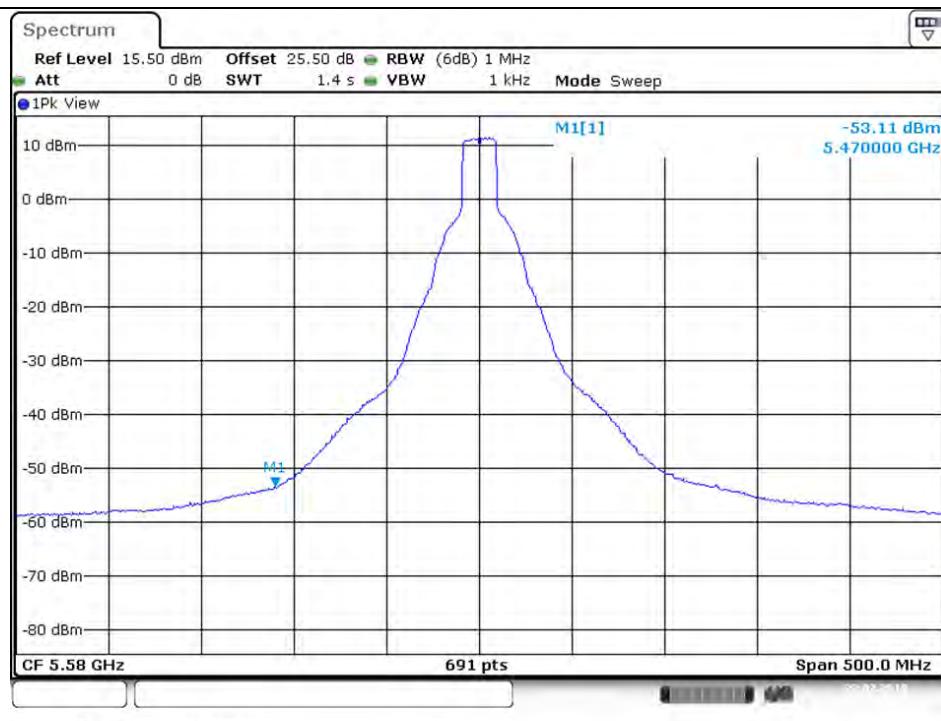
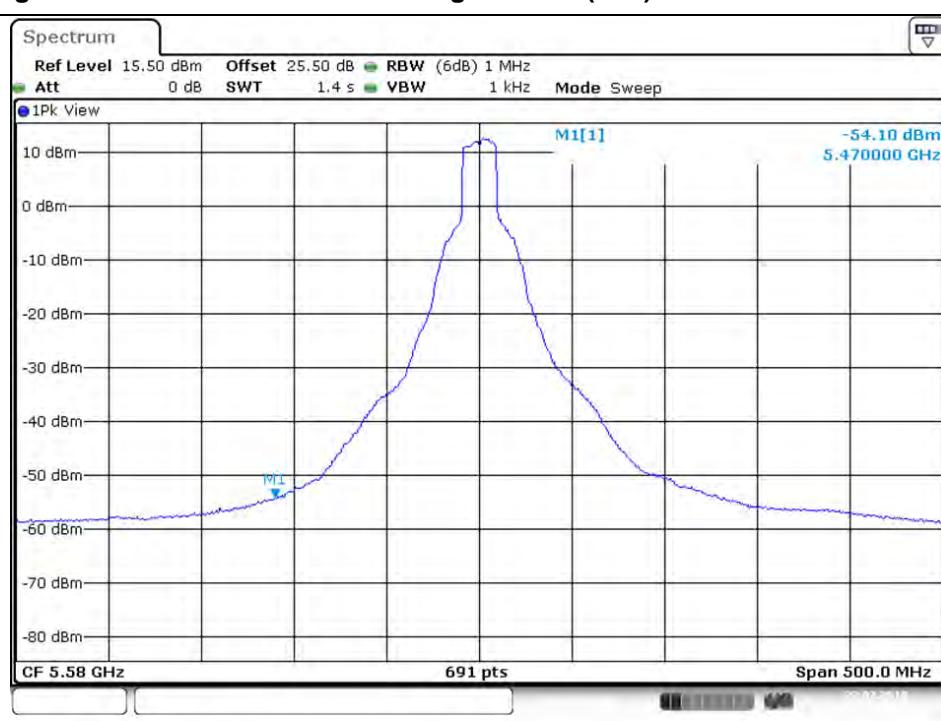
Date: 23.FEB.2018 10:24:22

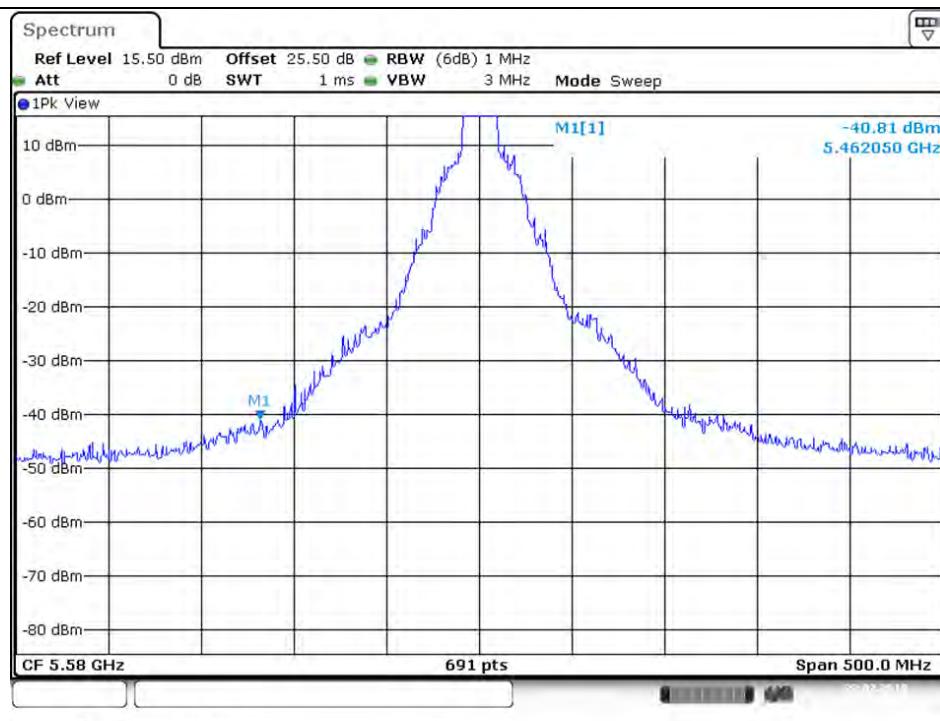
**Plot on Configuration VHT20 / 5320 MHz / Peak / Port 2 (TX2)**


Date: 23.FEB.2018 10:28:23

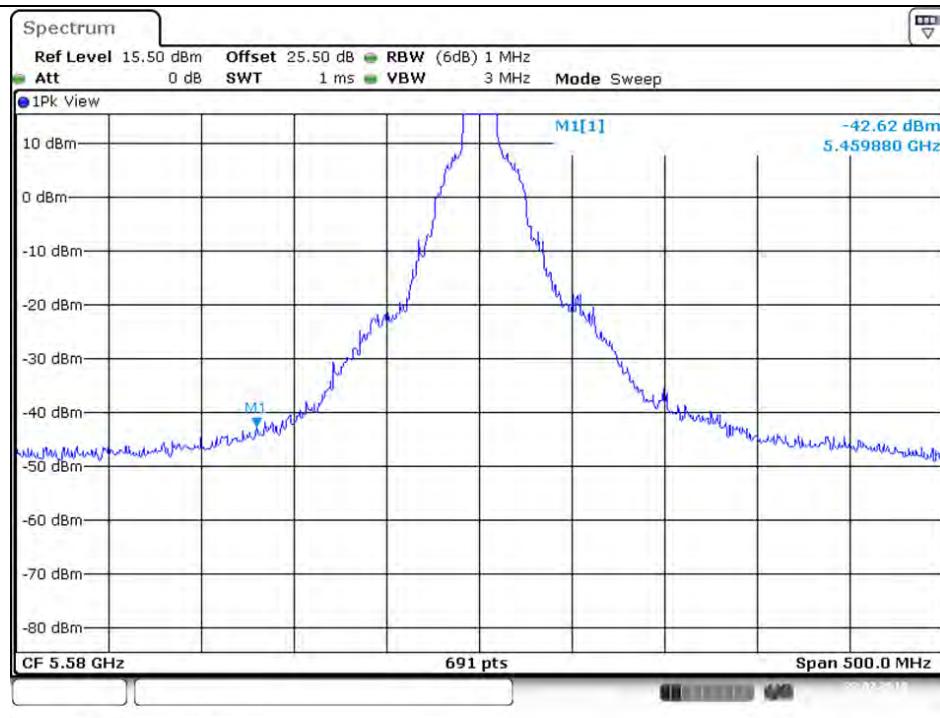
**Plot on Configuration VHT20 / 5500 MHz / Average / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5500 MHz / Average / Port 2 (TX2)**


**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5500 MHz / Peak / Port 2 (TX2)**


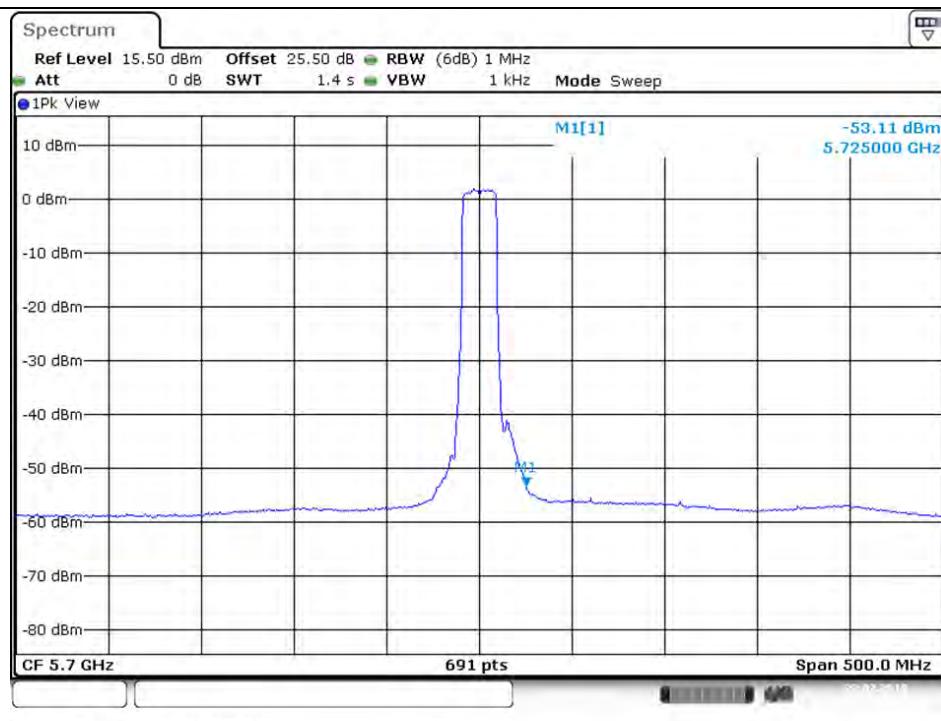
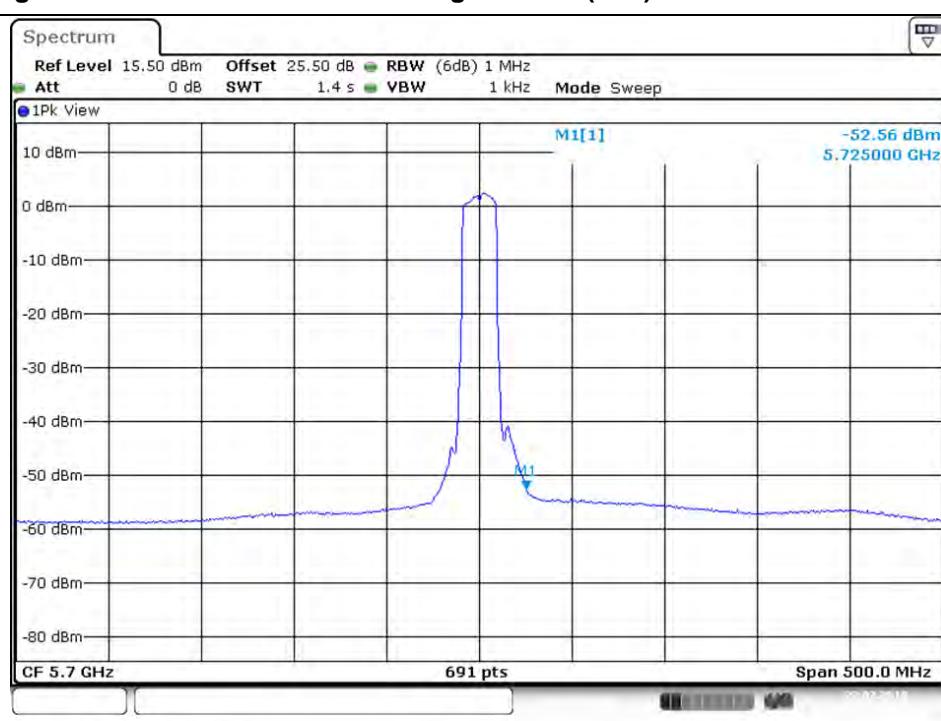
**Plot on Configuration VHT20 / 5580 MHz / Average / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5580 MHz / Average / Port 2 (TX2)**


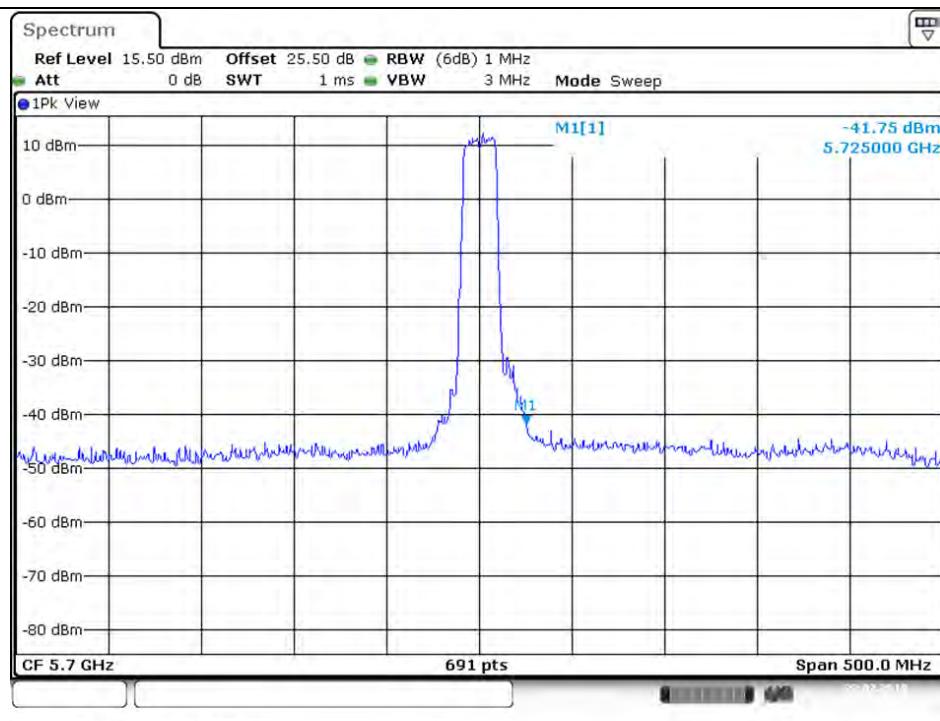
**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 1 (TX1)**


Date: 22.FEB.2018 15:44:03

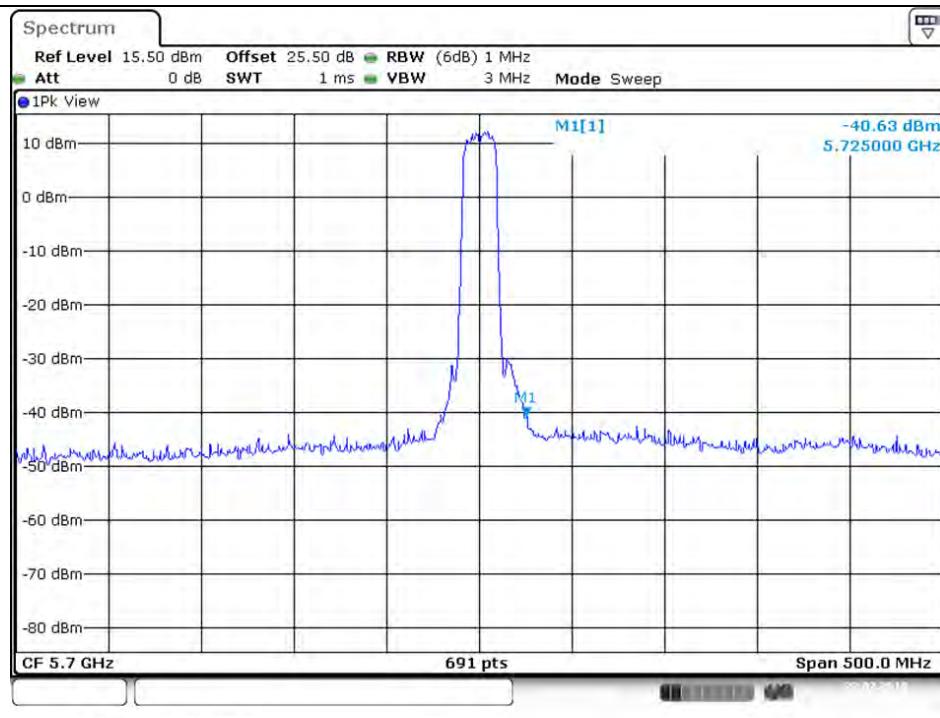
**Plot on Configuration VHT20 / 5580 MHz / Peak / Port 2 (TX2)**


Date: 22.FEB.2018 15:44:36

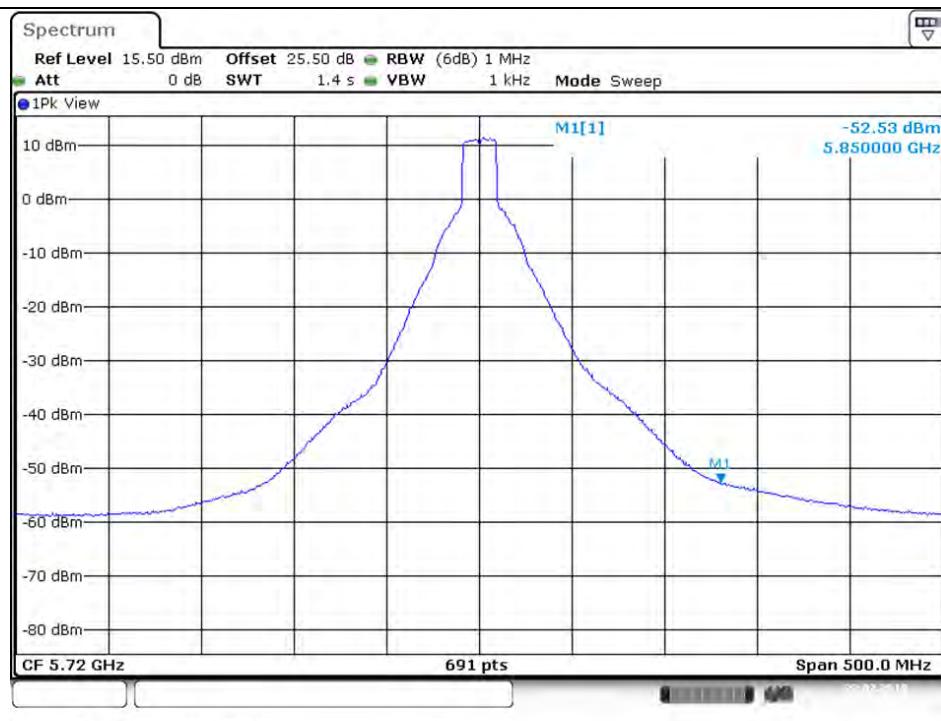
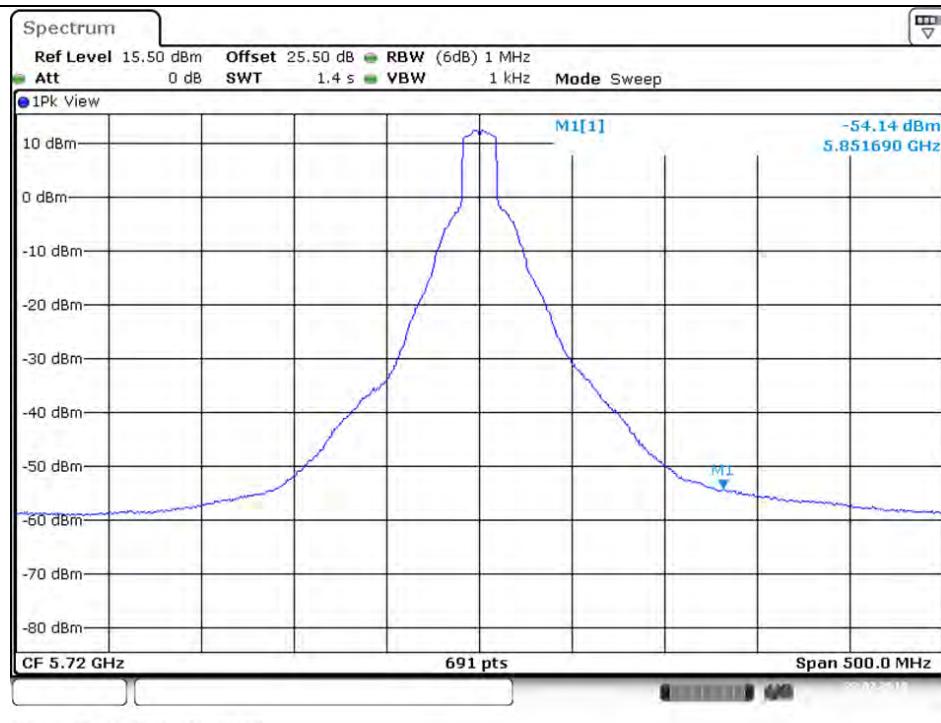
**Plot on Configuration VHT20 / 5700 MHz / Average / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5700 MHz / Average / Port 2 (TX2)**


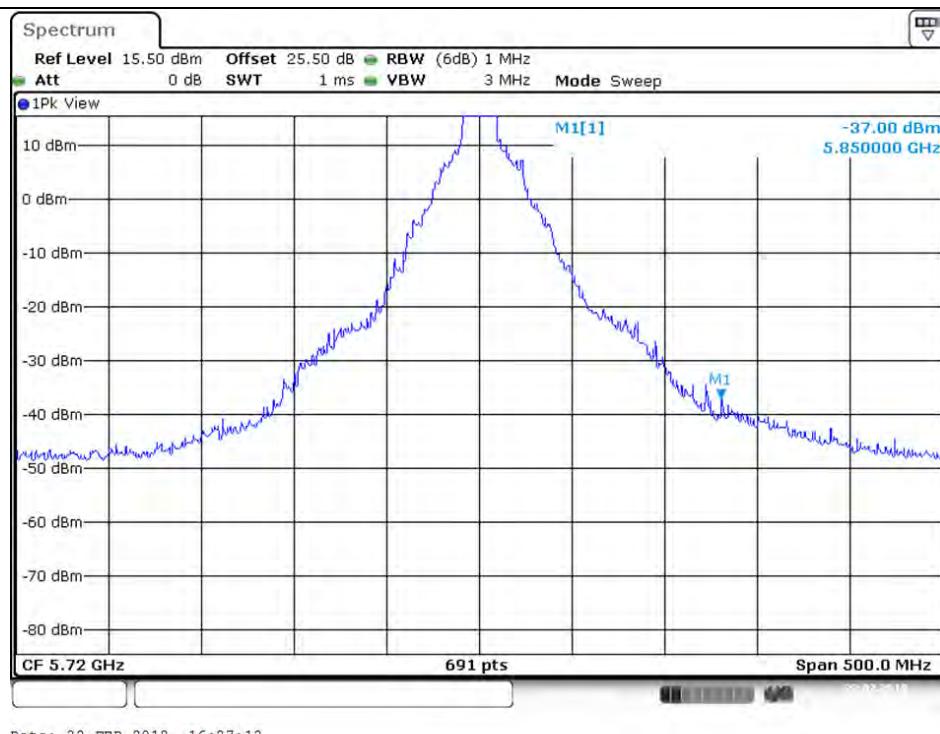
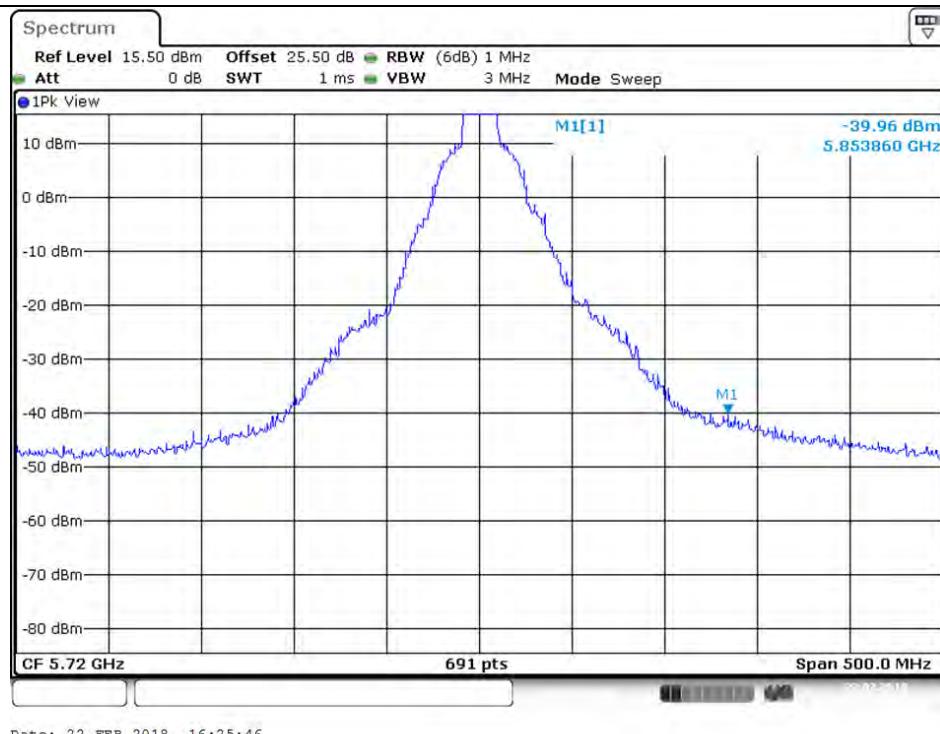
**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 1 (TX1)**


Date: 22.FEB.2018 15:52:29

**Plot on Configuration VHT20 / 5700 MHz / Peak / Port 2 (TX2)**


Date: 22.FEB.2018 15:52:00

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5720 MHz / Average / Port 2 (TX2)**


**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 1 (TX1)**

**Plot on Configuration VHT20 / 5720 MHz / Peak / Port 2 (TX2)**




## Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	P2 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
5.25-5.35GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40_Nss1,(MCS0)_2TX	Pass	5.35G	5.46G	AV	5.35022G	8.00	-52.27	-53.16	-49.68	-41.68	-41.20	-0.48
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40_Nss1,(MCS0)_2TX	Pass	5.35G	5.46G	AV	5.45956G	8.00	-52.35	-52.37	-49.35	-41.35	-41.20	-0.15

DG = Directional Gain;

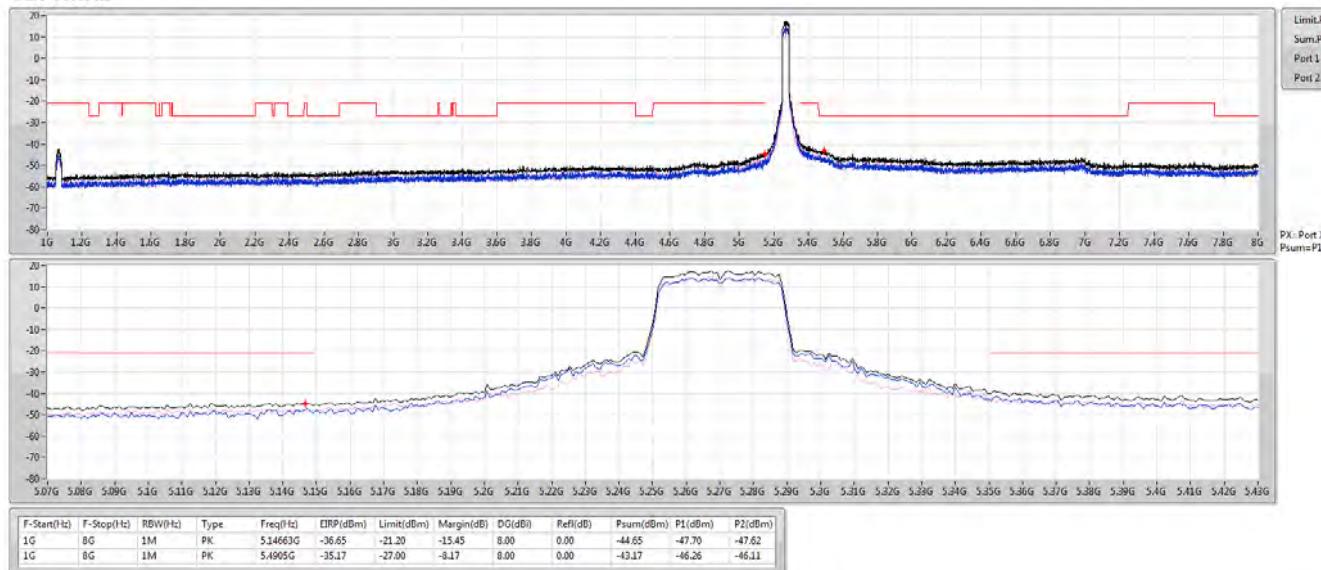
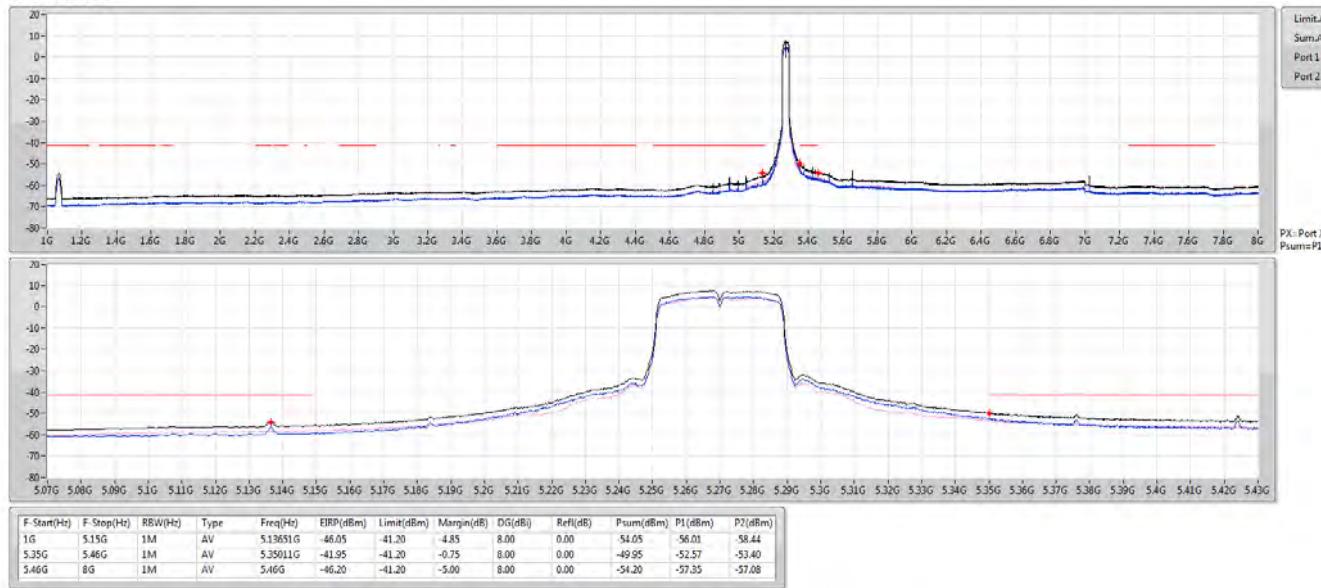
PX=Port X; Psum=P1+P2+...PX



## Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	P2 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	1G	5.15G	AV	5.13651G	8.00	-56.01	-58.44	-54.05	-46.05	-41.20	-4.85
5270MHz	Pass	5.35G	5.46G	AV	5.35011G	8.00	-52.57	-53.40	-49.95	-41.95	-41.20	-0.75
5270MHz	Pass	5.46G	8G	AV	5.46G	8.00	-57.35	-57.08	-54.20	-46.20	-41.20	-5.00
5270MHz	Pass	1G	8G	PK	5.14663G	8.00	-47.70	-47.62	-44.65	-36.65	-21.20	-15.45
5270MHz	Pass	1G	8G	PK	5.4905G	8.00	-46.26	-46.11	-43.17	-35.17	-27.00	-8.17
5310MHz	Pass	1G	5.15G	AV	5.13651G	8.00	-61.65	-61.84	-58.73	-50.73	-41.20	-9.53
5310MHz	Pass	5.35G	5.46G	AV	5.35022G	8.00	-52.27	-53.16	-49.68	-41.68	-41.20	-0.48
5310MHz	Pass	5.46G	8G	AV	5.46G	8.00	-59.24	-58.77	-55.99	-47.99	-41.20	-6.79
5310MHz	Pass	1G	8G	PK	5.12563G	8.00	-52.03	-49.56	-47.61	-39.61	-21.20	-18.41
5310MHz	Pass	1G	8G	PK	5.35225G	8.00	-41.62	-42.01	-38.80	-30.80	-21.20	-9.60
5510MHz	Pass	1G	5.15G	AV	1.30399G	8.00	-59.04	-58.02	-55.49	-47.49	-41.20	-6.29
5510MHz	Pass	5.15G	5.35G	AV	5.35G	8.00	-60.21	-59.58	-56.87	-48.87	-41.20	-7.67
5510MHz	Pass	5.35G	5.46G	AV	5.45956G	8.00	-52.35	-52.37	-49.35	-41.35	-41.20	-0.15
5510MHz	Pass	5.46G	8G	AV	5.46G	8.00	-52.18	-53.03	-49.57	-41.57	-41.20	-0.37
5510MHz	Pass	5.35G	5.46G	AV	5.46G	8.00	-52.18	-53.03	-49.57	-41.57	-41.20	-0.37
5510MHz	Pass	1G	8G	PK	5.45813G	8.00	-40.45	-41.52	-37.94	-29.94	-21.20	-8.74
5510MHz	Pass	1G	8G	PK	5.46163G	8.00	-39.59	-39.61	-36.59	-28.59	-27.00	-1.59
5510MHz	Pass	1G	8G	PK	5.732G	8.00	-44.83	-44.30	-41.55	-33.55	-27.00	-6.55
5550MHz	Pass	1G	5.15G	AV	1.34134G	8.00	-56.16	-55.74	-52.93	-44.93	-41.20	-3.73
5550MHz	Pass	5.15G	5.35G	AV	5.35G	8.00	-57.52	-58.34	-54.90	-46.90	-41.20	-5.70
5550MHz	Pass	5.35G	5.46G	AV	5.45901G	8.00	-52.21	-54.40	-50.16	-42.16	-41.20	-0.96
5550MHz	Pass	5.46G	8G	AV	5.46G	8.00	-52.06	-54.21	-49.99	-41.99	-41.20	-0.79
5550MHz	Pass	5.35G	5.46G	AV	5.46G	8.00	-52.06	-54.21	-49.99	-41.99	-41.20	-0.79
5550MHz	Pass	1G	8G	PK	5.34175G	8.00	-46.16	-46.18	-43.16	-35.16	-27.00	-8.16
5550MHz	Pass	1G	8G	PK	5.466G	8.00	-39.31	-42.19	-37.51	-29.51	-27.00	-2.51
5550MHz	Pass	1G	8G	PK	5.73463G	8.00	-42.53	-44.55	-40.41	-32.41	-27.00	-5.41
5670MHz	Pass	1G	5.15G	AV	1.46791G	8.00	-62.12	-62.01	-59.05	-51.05	-41.20	.9.85
5670MHz	Pass	5.15G	5.35G	AV	5.35G	8.00	-61.70	-61.50	-58.59	-50.59	-41.20	.9.39
5670MHz	Pass	5.35G	5.46G	AV	5.42392G	8.00	-57.27	-61.15	-55.78	-47.78	-41.20	-6.58
5670MHz	Pass	5.46G	8G	AV	5.46G	8.00	-59.88	-60.67	-57.25	-49.25	-41.20	.8.05
5670MHz	Pass	5.35G	5.46G	AV	5.46G	8.00	-59.88	-60.67	-57.25	-49.25	-41.20	.8.05
5670MHz	Pass	1G	8G	PK	5.33388G	8.00	-50.61	-49.81	-47.18	-39.18	-27.00	-12.18
5670MHz	Pass	1G	8G	PK	5.4625G	8.00	-47.90	-50.35	-45.94	-37.94	-27.00	-10.94
5670MHz	Pass	1G	8G	PK	5.72763G	8.00	-39.87	-36.98	-35.18	-27.18	-27.00	-0.18
5710MHz Straddle 5.47-5.725GHz	Pass	1G	5.15G	AV	1.50423G	8.00	-54.93	-54.91	-51.91	-43.91	-41.20	-2.71
5710MHz Straddle 5.47-5.725GHz	Pass	5.15G	5.35G	AV	5.35G	8.00	-62.21	-61.08	-58.60	-50.60	-41.20	-9.40
5710MHz Straddle 5.47-5.725GHz	Pass	5.35G	5.46G	AV	5.42403G	8.00	-57.70	-60.37	-55.82	-47.82	-41.20	-6.62
5710MHz Straddle 5.47-5.725GHz	Pass	5.46G	8G	AV	5.46G	8.00	-60.31	-60.69	-57.49	-49.49	-41.20	-8.29
5710MHz Straddle 5.47-5.725GHz	Pass	5.35G	5.46G	AV	5.46G	8.00	-59.99	-60.61	-57.28	-49.28	-41.20	-8.08
5710MHz Straddle 5.47-5.725GHz	Pass	1G	8G	PK	5.424G	8.00	-47.39	-48.97	-45.10	-37.10	-21.20	-15.90
5710MHz Straddle 5.47-5.725GHz	Pass	1G	8G	PK	5.466G	8.00	-50.07	-47.91	-45.85	-37.85	-27.00	-10.85
5710MHz Straddle 5.47-5.725GHz	Pass	1G	8G	PK	5.851G	8.00	-36.01	-42.63	-35.15	-27.15	-27.00	-0.15

DG = Directional Gain;  
 PX=Port X; Psum=P1+P2+...PX

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-PK**
**5270MHz**

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-AV**
**5270MHz**


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**5310MHz**
**CSE-PK**

26/04/2019

 Limit.PK

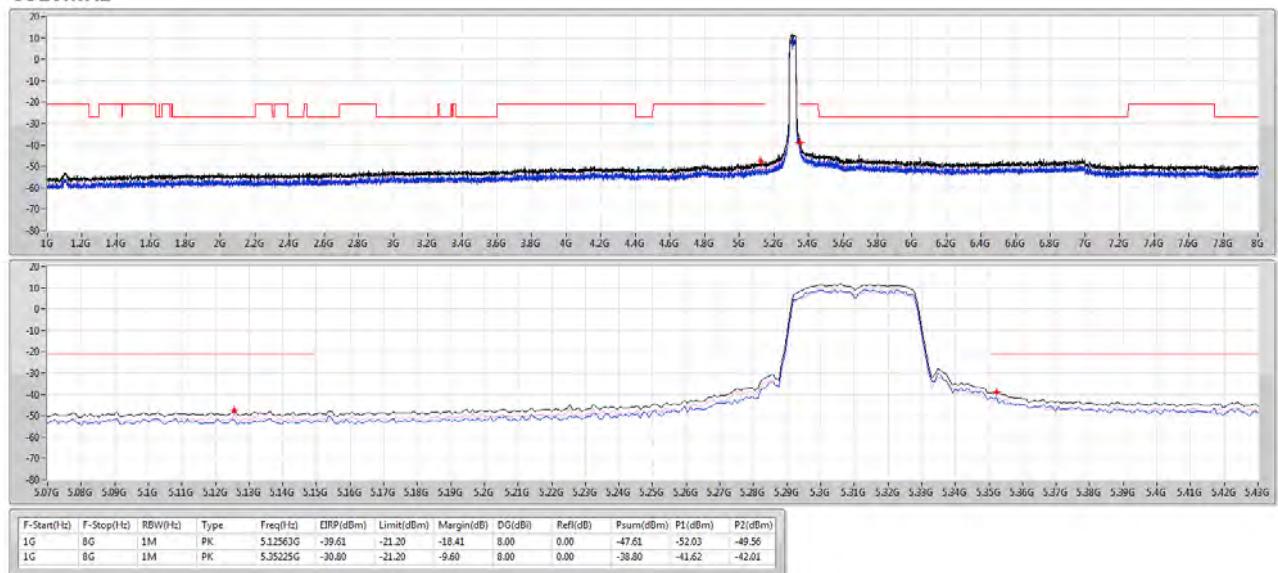
 Sum.PK

 Port1

 Port2

PX-Port X

Psum=Px+P1+P2


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**5310MHz**
**CSE-AV**

26/04/2019

 Limit.AV

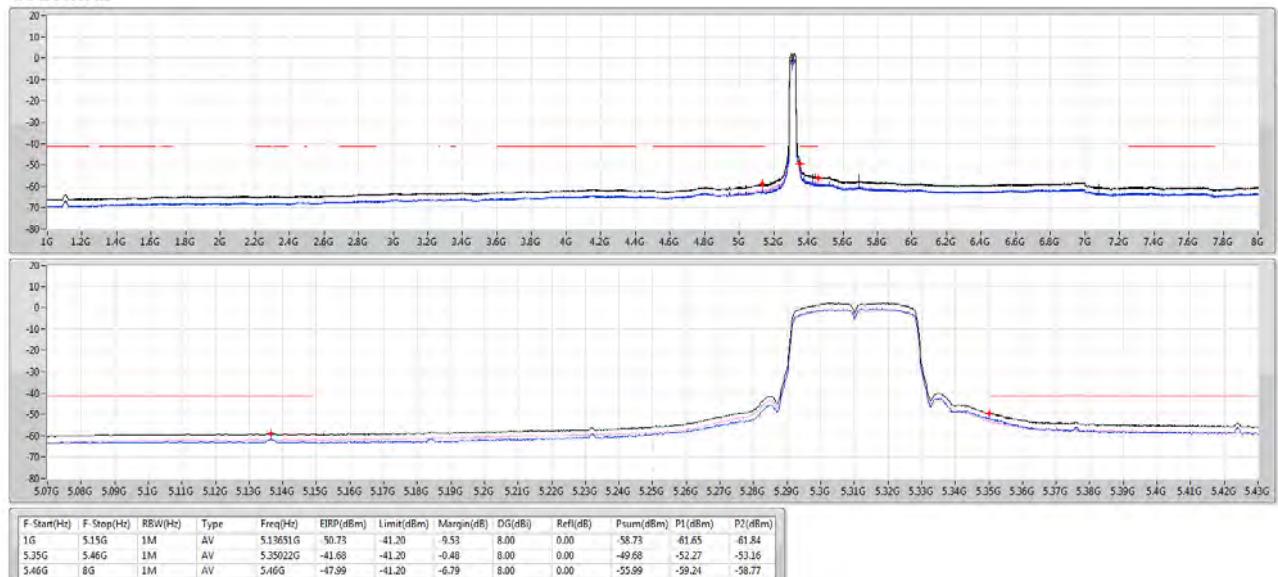
 Sum.AV

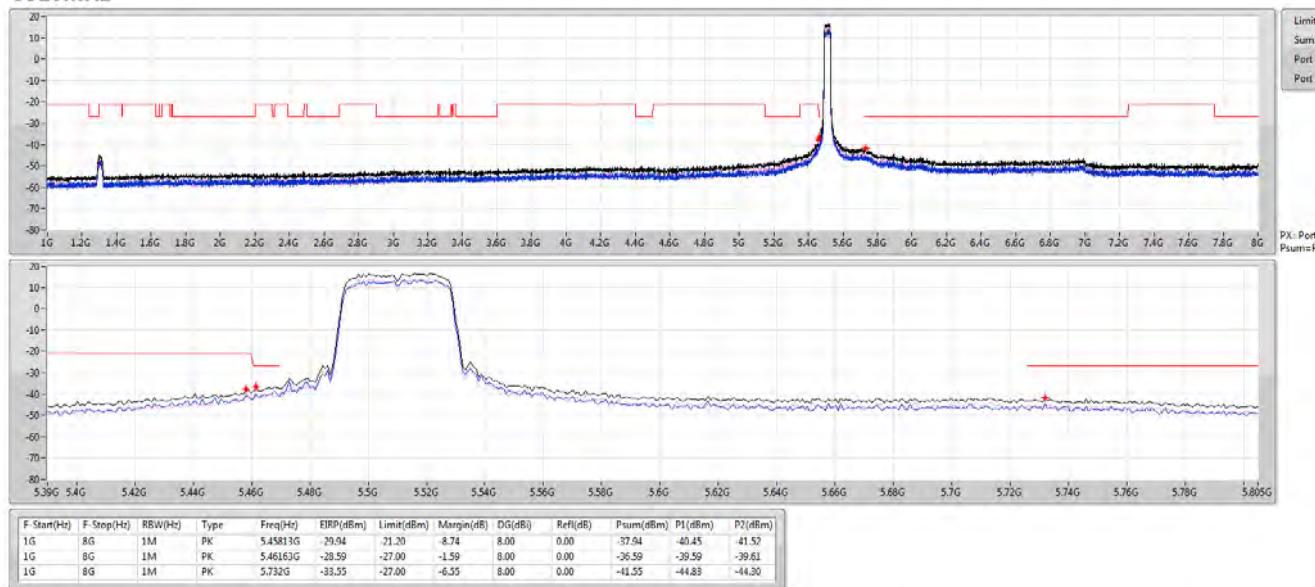
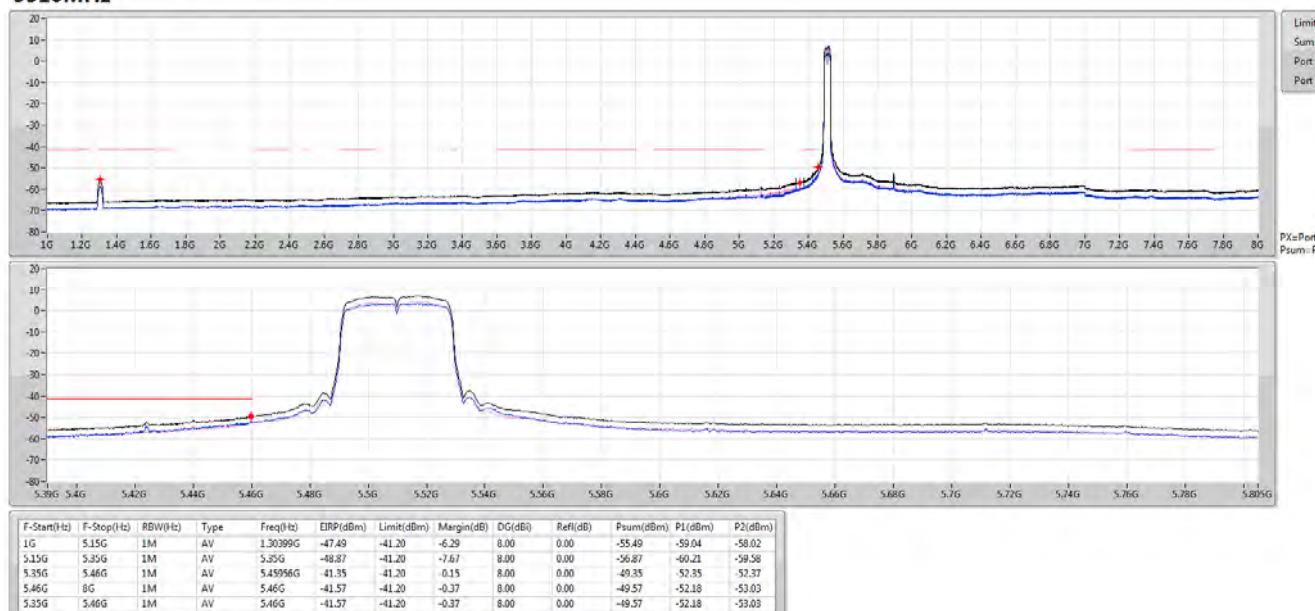
 Port1

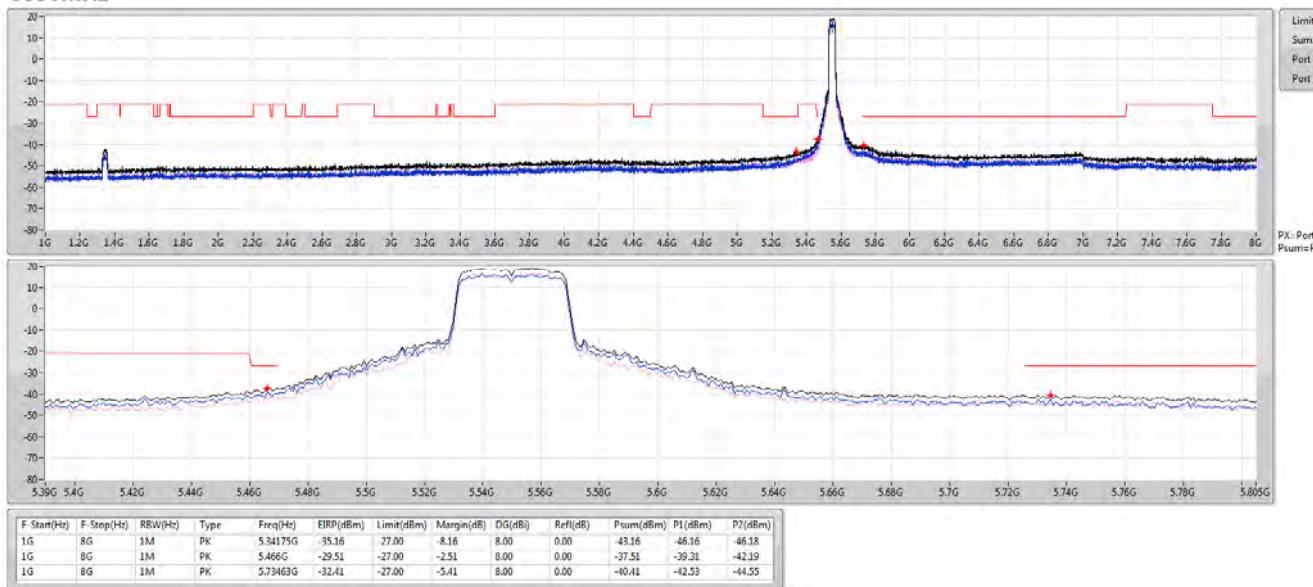
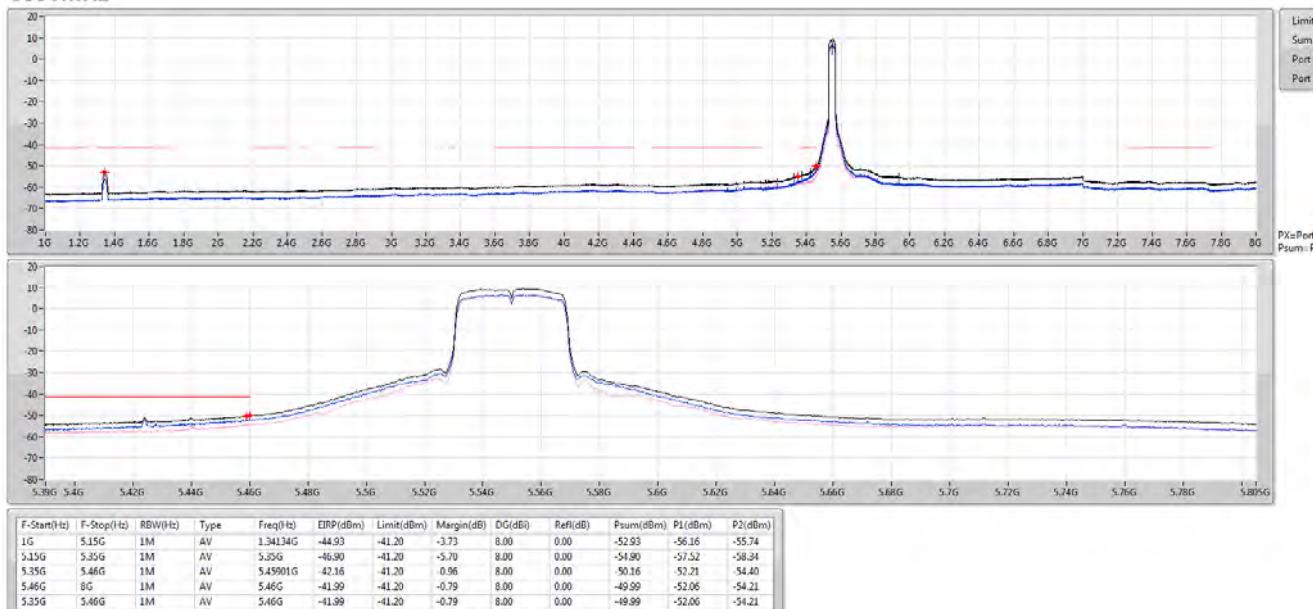
 Port2

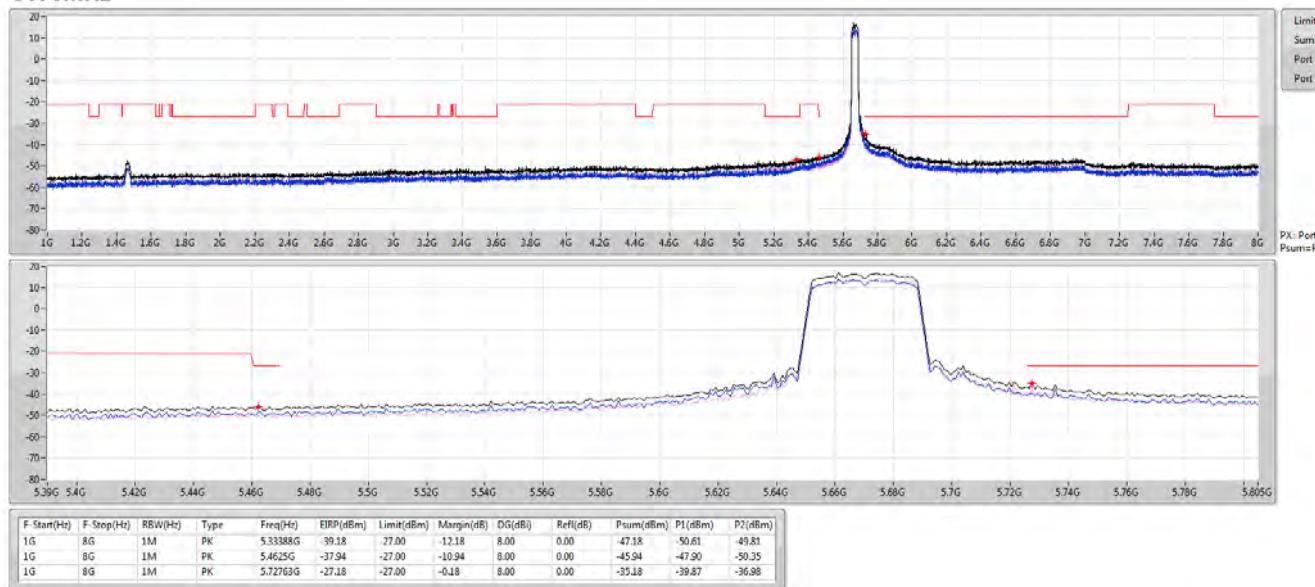
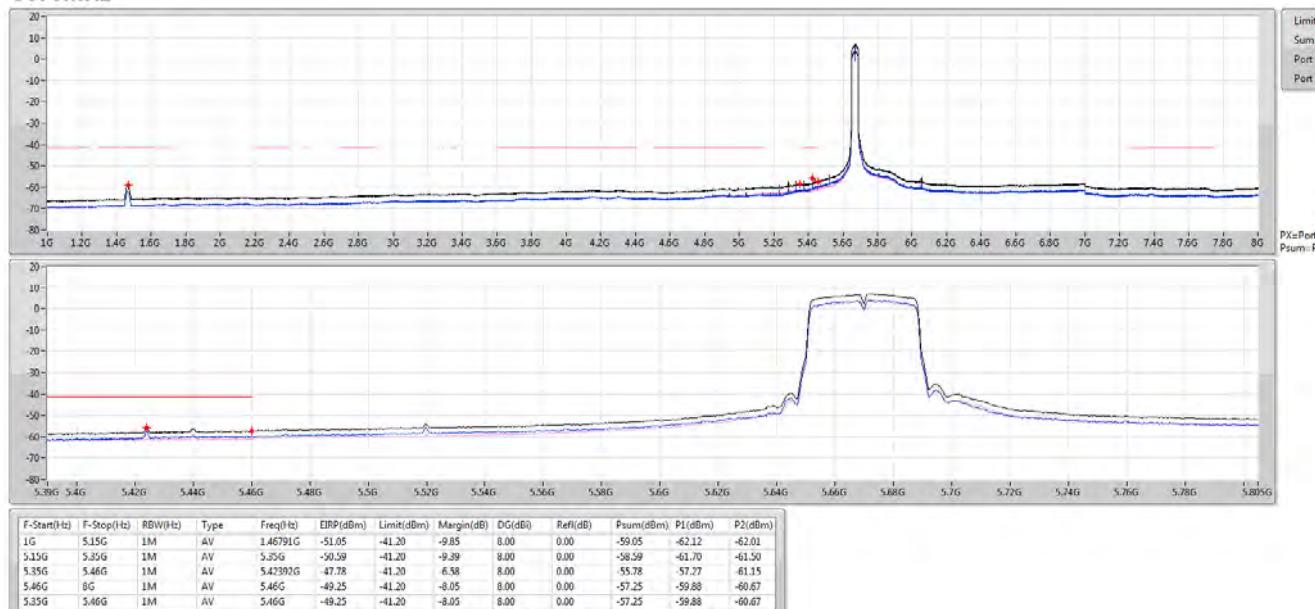
PX-Port X

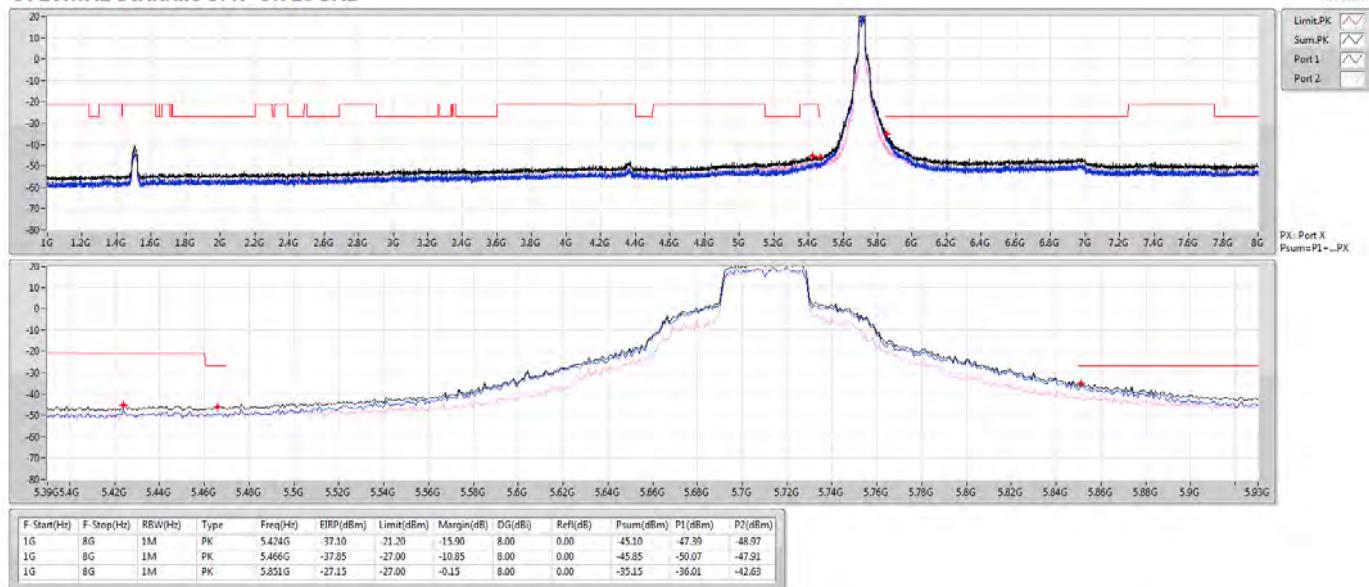
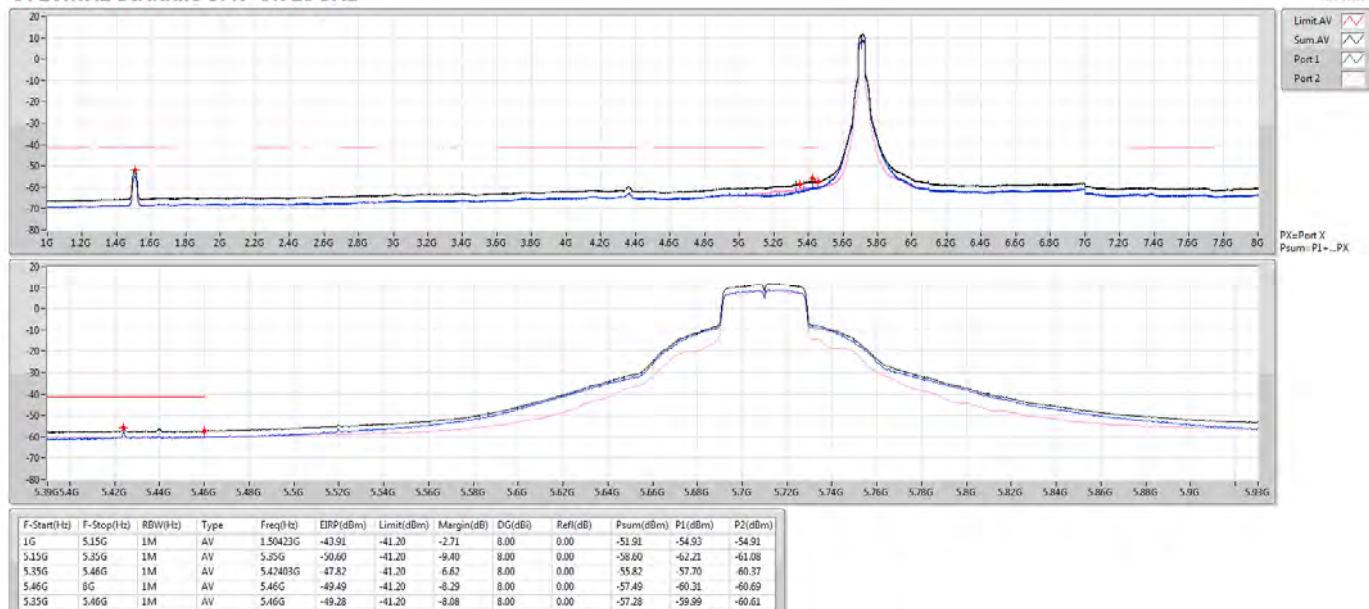
Psum=P1+Px



**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-PK**
**5510MHz**

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-AV**
**5510MHz**


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-PK**
**5550MHz**

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-AV**
**5550MHz**


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-PK**
**5670MHz**

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-AV**
**5670MHz**


**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-PK**
**5710MHz Straddle 5.47-5.725GHz**

**802.11ac VHT40\_Nss1,(MCS0)\_2TX**
**CSE-AV**
**5710MHz Straddle 5.47-5.725GHz**




## Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dB)	P1 (dBm)	P2 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
5.25-5.35GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40_Nss1,(MCS0)_2TX	Pass	8G	40G	AV	38.946G	8.00	-70.97	-70.59	-67.77	-59.77	-41.20	-18.57
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40_Nss1,(MCS0)_2TX	Pass	8G	40G	AV	38.938G	8.00	-70.48	-71.04	-67.74	-59.74	-41.20	-18.54

DG = Directional Gain;

PX=Port X; Psum=P1+P2+...PX



## Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dB)	P1 (dBm)	P2 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	8G	40G	AV	38.946G	8.00	-70.97	-70.59	-67.77	-59.77	-41.20	-18.57
5270MHz	Pass	8G	40G	PK	10.536G	8.00	-73.29	-71.04	-69.01	-61.01	-27.00	-34.01
5270MHz	Pass	8G	40G	PK	37.176G	8.00	-64.12	-62.79	-60.39	-52.39	-27.00	-25.39
5310MHz	Pass	8G	40G	AV	10.636G	8.00	-80.63	-81.23	-77.91	-69.91	-41.20	-28.71
5310MHz	Pass	8G	40G	AV	38.941G	8.00	-70.96	-70.81	-67.87	-59.87	-41.20	-18.67
5310MHz	Pass	8G	40G	PK	10.616G	8.00	-69.40	-73.14	-67.87	-59.87	-21.20	-38.67
5310MHz	Pass	8G	40G	PK	38.584G	8.00	-63.68	-63.19	-60.42	-52.42	-27.00	-25.42
5510MHz	Pass	8G	40G	AV	11.02G	8.00	-82.65	-83.15	-79.88	-71.88	-41.20	-30.68
5510MHz	Pass	8G	40G	AV	38.953G	8.00	-71.09	-70.84	-67.95	-59.95	-41.20	-18.75
5510MHz	Pass	8G	40G	PK	11.036G	8.00	-73.25	-72.36	-69.77	-61.77	-21.20	-40.57
5510MHz	Pass	8G	40G	PK	38.584G	8.00	-62.43	-62.87	-59.63	-51.63	-27.00	-24.63
5550MHz	Pass	8G	40G	AV	11.085G	8.00	-82.81	-82.84	-79.81	-71.81	-41.20	-30.61
5550MHz	Pass	8G	40G	AV	38.943G	8.00	-71.08	-71.00	-68.03	-60.03	-41.20	-18.83
5550MHz	Pass	8G	40G	PK	11.1G	8.00	-72.00	-72.67	-69.31	-61.31	-21.20	-40.11
5550MHz	Pass	8G	40G	PK	38.592G	8.00	-62.40	-63.59	-59.94	-51.94	-27.00	-24.94
5670MHz	Pass	8G	40G	AV	11.341G	8.00	-82.14	-82.08	-79.10	-71.10	-41.20	-29.90
5670MHz	Pass	8G	40G	AV	38.942G	8.00	-71.43	-70.56	-67.96	-59.96	-41.20	-18.76
5670MHz	Pass	8G	40G	PK	11.344G	8.00	-73.48	-70.56	-68.77	-60.77	-21.20	-39.57
5670MHz	Pass	8G	40G	PK	38.596G	8.00	-61.89	-64.00	-59.81	-51.81	-27.00	-24.81
5710MHz	Pass	8G	40G	AV	11.411G	8.00	-81.97	-82.08	-79.01	-71.01	-41.20	-29.81
5710MHz	Pass	8G	40G	AV	38.938G	8.00	-70.48	-71.04	-67.74	-59.74	-41.20	-18.54
5710MHz	Pass	8G	40G	PK	11.404G	8.00	-73.05	-70.43	-68.54	-60.54	-21.20	-39.34
5710MHz	Pass	8G	40G	PK	38.588G	8.00	-63.12	-62.33	-59.70	-51.70	-27.00	-24.70

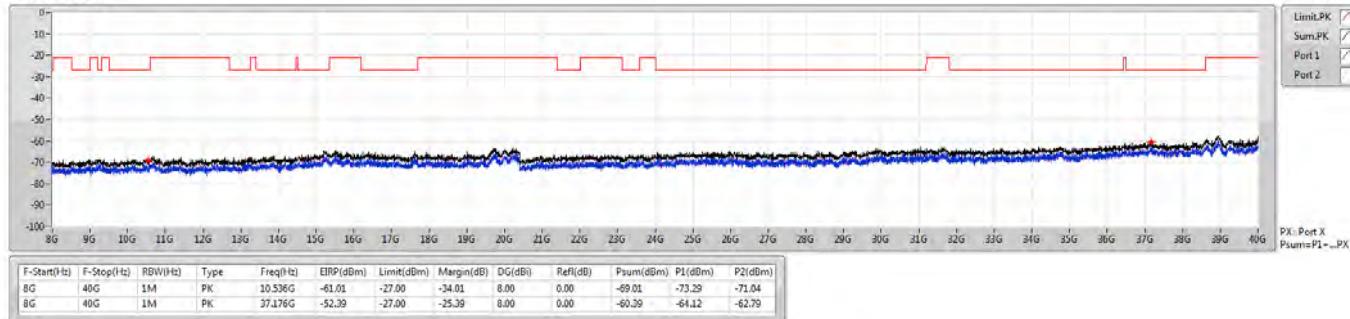
**DG** = Directional Gain;  
**PX**=Port X; **Psum**=P1+P2+...PX



## 802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-PK

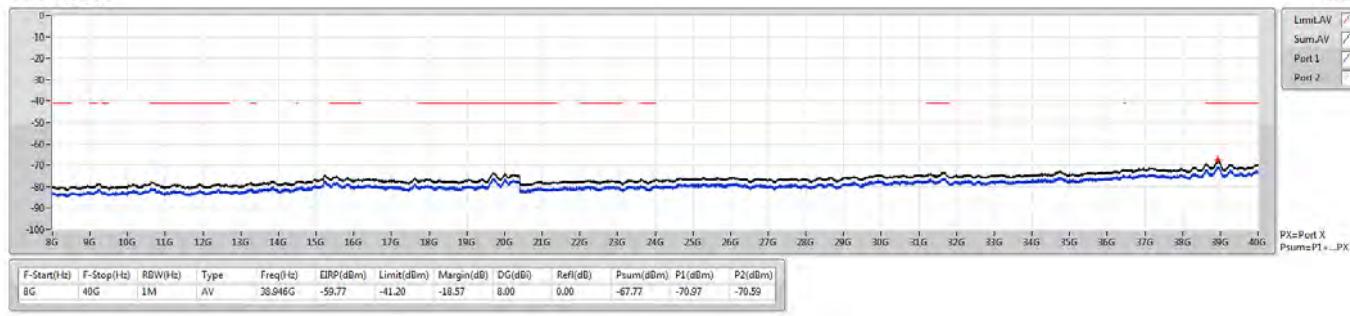
5270MHz



## 802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-AV

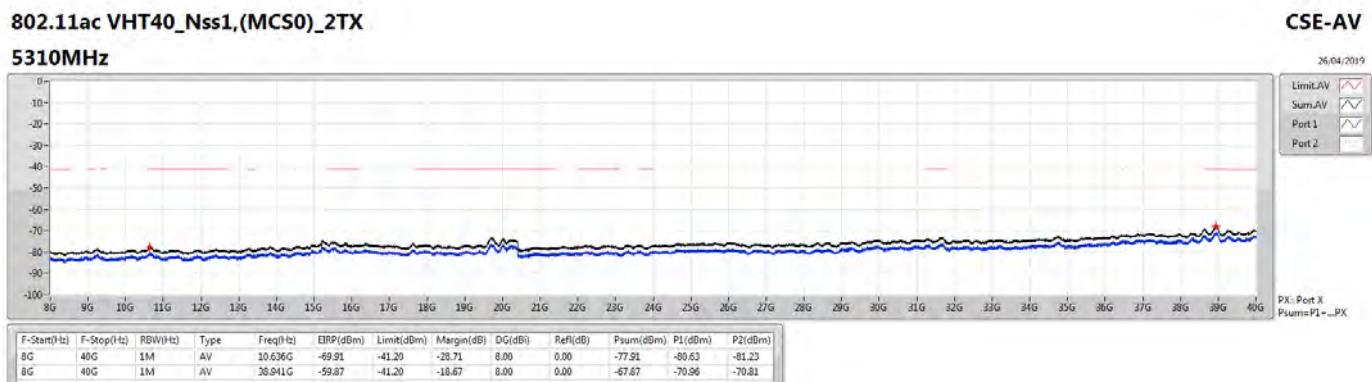
5270MHz





## TX Above 1GHz Result\_40MHz

## Appendix D.5





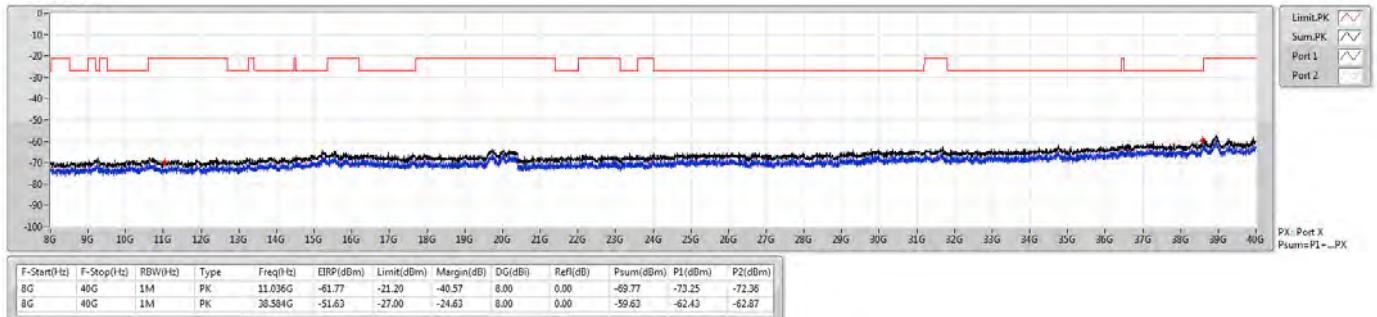
## TX Above 1GHz Result\_40MHz

## Appendix D.5

802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-PK

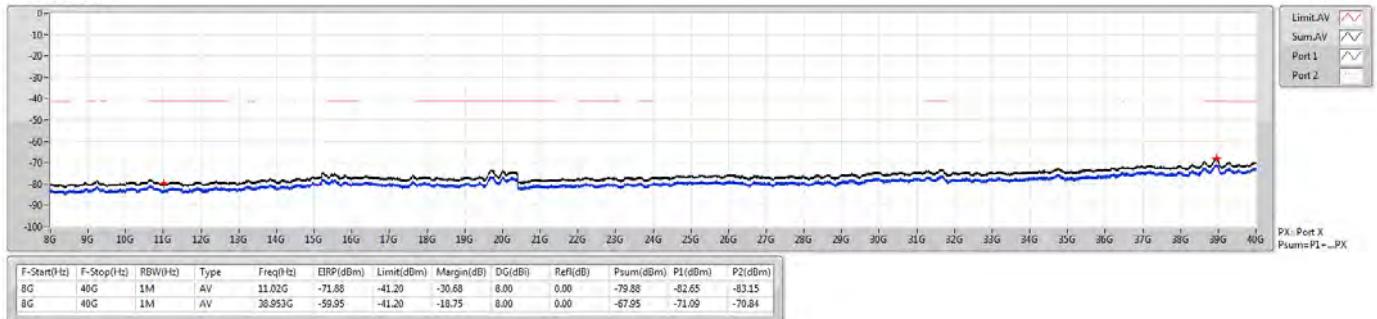
5510MHz



802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-AV

5510MHz





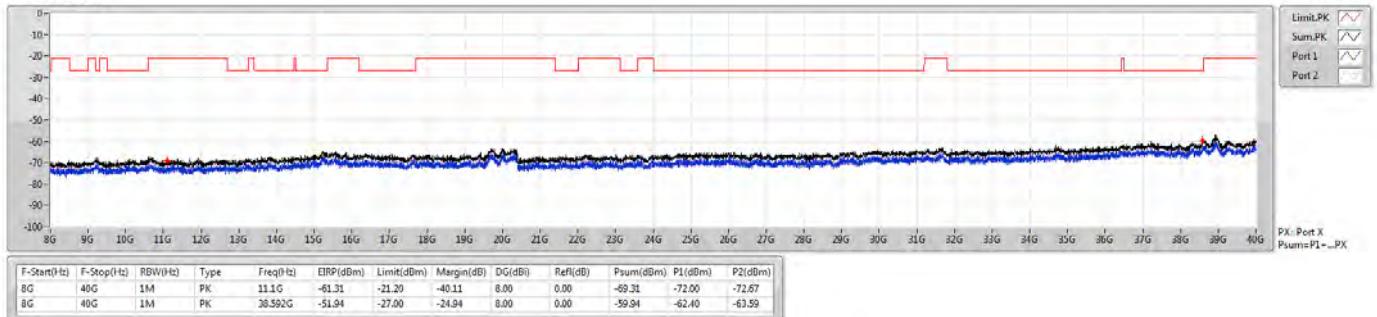
## TX Above 1GHz Result\_40MHz

## Appendix D.5

### 802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-PK

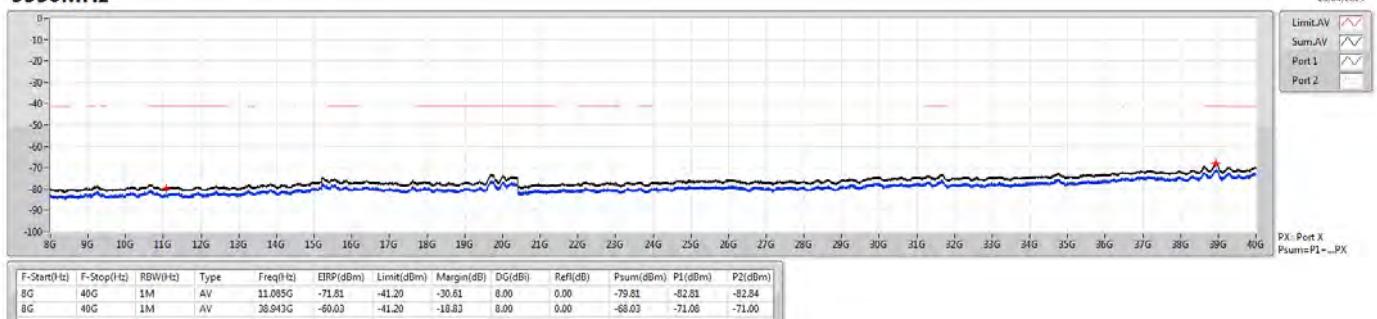
5550MHz



### 802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-AV

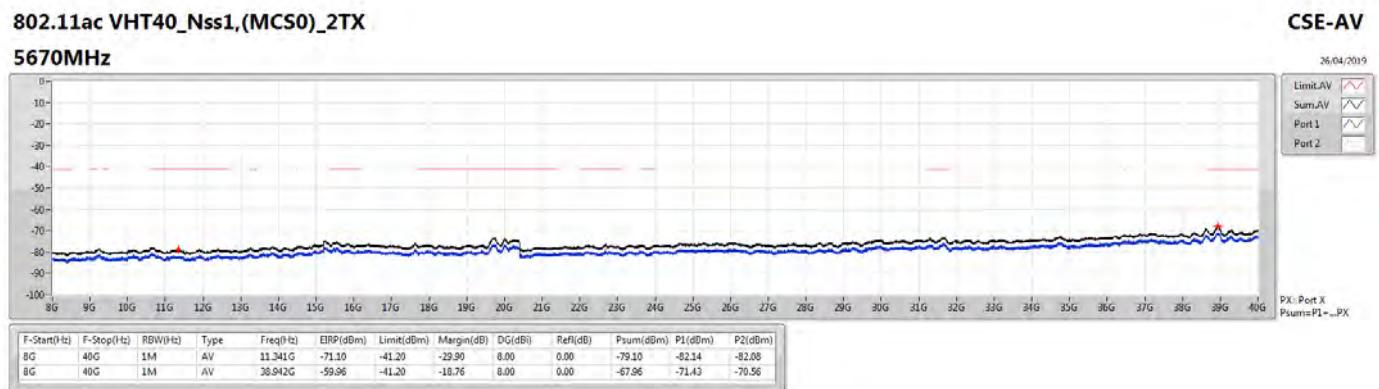
5550MHz





## TX Above 1GHz Result\_40MHz

## Appendix D.5





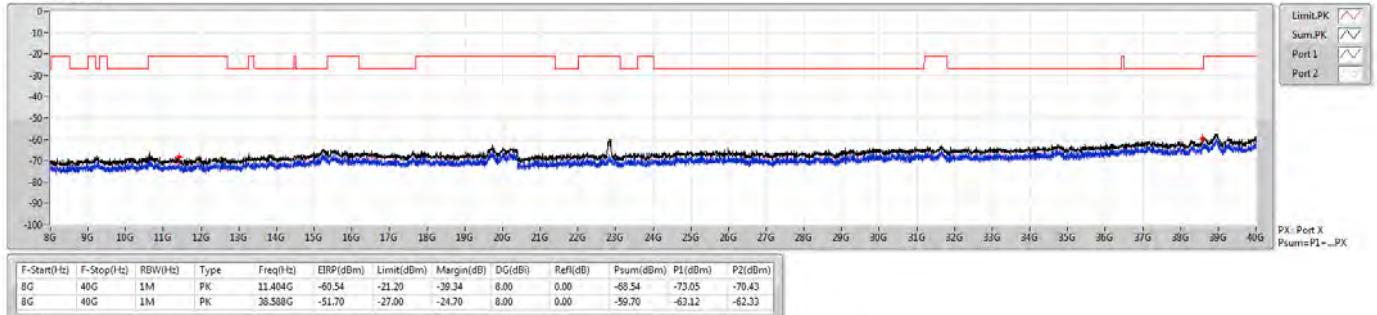
## TX Above 1GHz Result\_40MHz

## Appendix D.5

802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-PK

5710MHz



802.11ac VHT40\_Nss1,(MCS0)\_2TX

CSE-AV

5710MHz

