



# FCC RADIO TEST REPORT

**FCC ID** : Z8H89FT0024  
**Equipment** : ePMP3000  
**Brand Name** : Cambium Networks  
**Model Name** : ePMP3000  
**Applicant** : Cambium Networks Inc.  
 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA  
**Manufacturer** : Cambium Networks Inc.  
 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA  
**Standard** : 47 CFR FCC Part 15.407

The product was received on Mar. 21, 2018, and testing was started from Mar. 21, 2018 and completed on Dec. 27, 2018. 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 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: Cliff Chang

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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### History of this test report

Report No.	Version	Description	Issued Date
FR7N2420-04	01	Initial issue of report	Nov. 16, 2018
FR7N2420-04	02	Changing the approval to full modular approval from end product approval.	Nov. 29, 2018
FR7N2420-04	03	Adding the set 2 antenna (Dipole antenna, 2dBi). The Performance Checking as below: 1. Emission Bandwidth. 2. Maximum Conducted Output Power. 3. Peak Power Spectral Density. 4. Unwanted Emissions.	Dec. 28, 2018



### 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	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	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: **Cliff Chang**

Report Producer: **Cindy Peng**



# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	ac (VHT20)	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	ac (VHT40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT20	20	4TX
5.15-5.25GHz	802.11ac VHT40	40	4TX
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX

Note:

- VHT20, VHT40 and VHT80 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

Set	Ant.	Port	Brand	Model Name	Type	Connector	Gain (dBi)
1	1	1	Cambium	ePMP3000	Array	Reversed-SMA	18
		2	Cambium	ePMP3000	Array	Reversed-SMA	18
		3	Cambium	ePMP3000	Array	Reversed-SMA	18
		4	Cambium	ePMP3000	Array	Reversed-SMA	18
Set	Ant.	Port	Brand	Model Name	Type	Connector	Gain (dBi)
2		2	ABRACON	APAMS-121	Dipole	Reversed-SMA	2
		3	ABRACON	APAMS-121	Dipole	Reversed-SMA	2
		4	ABRACON	APAMS-121	Dipole	Reversed-SMA	2
		5	ABRACON	APAMS-121	Dipole	Reversed-SMA	2

Note 1: The above information was declared by manufacturer.

Note 2: The EUT has two sets of antenna.

Note 3: Set 1 antenna has one antenna, and it has four connectors.

Note 4: Set 1 antenna array gain is 0dBi.

Note 5: Set 2 antenna contains four antennas.

**For IEEE 802.11ac mode (4TX/4RX)**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20	0.988	0.052	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40	0.978	0.097	10.014m	100
802.11ac VHT80	0.951	0.218	5.007m	300

Note:

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

1.1.4 EUT Operational Condition

<b>EUT Power Type</b>	From PoE			
<b>Beamforming Function</b>	<input type="checkbox"/> With beamforming	<input checked="" type="checkbox"/> Without beamforming		
<b>Function</b>	<input checked="" type="checkbox"/> Outdoor P2M	<input type="checkbox"/> Indoor P2M		
	<input type="checkbox"/> Fixed P2P	<input type="checkbox"/> Client		
<b>Test Software Version</b>	QCARCT Version: 3.0.264.0			

Note: The above information was declared by manufacturer.



### 1.2 Testing Applied Standards

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

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

### 1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
<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

#### For Set 1 antenna:

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li/Brian Sun	22°C / 54%	Mar. 21, 2018–Oct. 08, 2018
Radiated	03CH01-CB	KJ Chang	22°C / 54%	Sep. 04, 2018–Nov. 28, 2018
AC Conduction	CO02-CB	Ryo Fan	21°C / 69%	Sep. 07, 2018

#### For Set 2 antenna:

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Eddie Weng	22°C / 54%	Dec. 07, 2018–Dec. 27, 2018
Radiated	03CH01-CB	Brain Sun	22°C / 54%	Dec. 10, 2018–Dec. 20, 2018

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

### 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74 x10 <sup>-8</sup>	Confidence levels of 95%



## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

For EUT + Set 1 antenna:

Mode	Power Setting
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5180MHz	9
5200MHz	9
5240MHz	9
5745MHz	12
5785MHz	12
5825MHz	12
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5190MHz	8.5
5230MHz	8.5
5755MHz	10
5795MHz	10
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5210MHz	6.5
5775MHz	6.5





For EUT + Set 2 antenna:

Mode	PowerSetting
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5180MHz	13.5
5200MHz	13.5
5240MHz	14
5745MHz	23.5
5785MHz	23.5
5825MHz	23.5
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5190MHz	13.5
5230MHz	13.5
5755MHz	23.5
5795MHz	23.5
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5210MHz	13.5
5775MHz	21.5



## 2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral
<b>Operating Mode</b>	CTX
	The EUT has two sets of antenna. Only the higher gain antenna "Set 1 antenna" was tested and recorded in the report.
1	EUT + Set 1 antenna

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
<b>Operating Mode</b>	
1	EUT + Set 1 antenna
2	EUT + Set 2 antenna

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 &lt; 1GHz</b>	CTX
The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Y axis. So the measurement will follow this same test configuration.	
1	EUT at Y-axis + Set 1 antenna
2	EUT at Y-axis + Set 2 antenna
<b>Operating Mode &gt; 1GHz</b>	CTX
The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Y axis. So the measurement will follow this same test configuration.	
1	EUT at Y-axis + Set 1 antenna
2	EUT at Y-axis + Set 2 antenna

Note: The EUT was powered by PoE, and the PoE was for measurement only, would not be marked.

Equipment	Brand Name	Model Name	FCC ID
PoE	Cambium Networks	NET-P30-56IN	N/A



### 2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

### 2.4 Accessories

N/A

### 2.5 Support Equipment

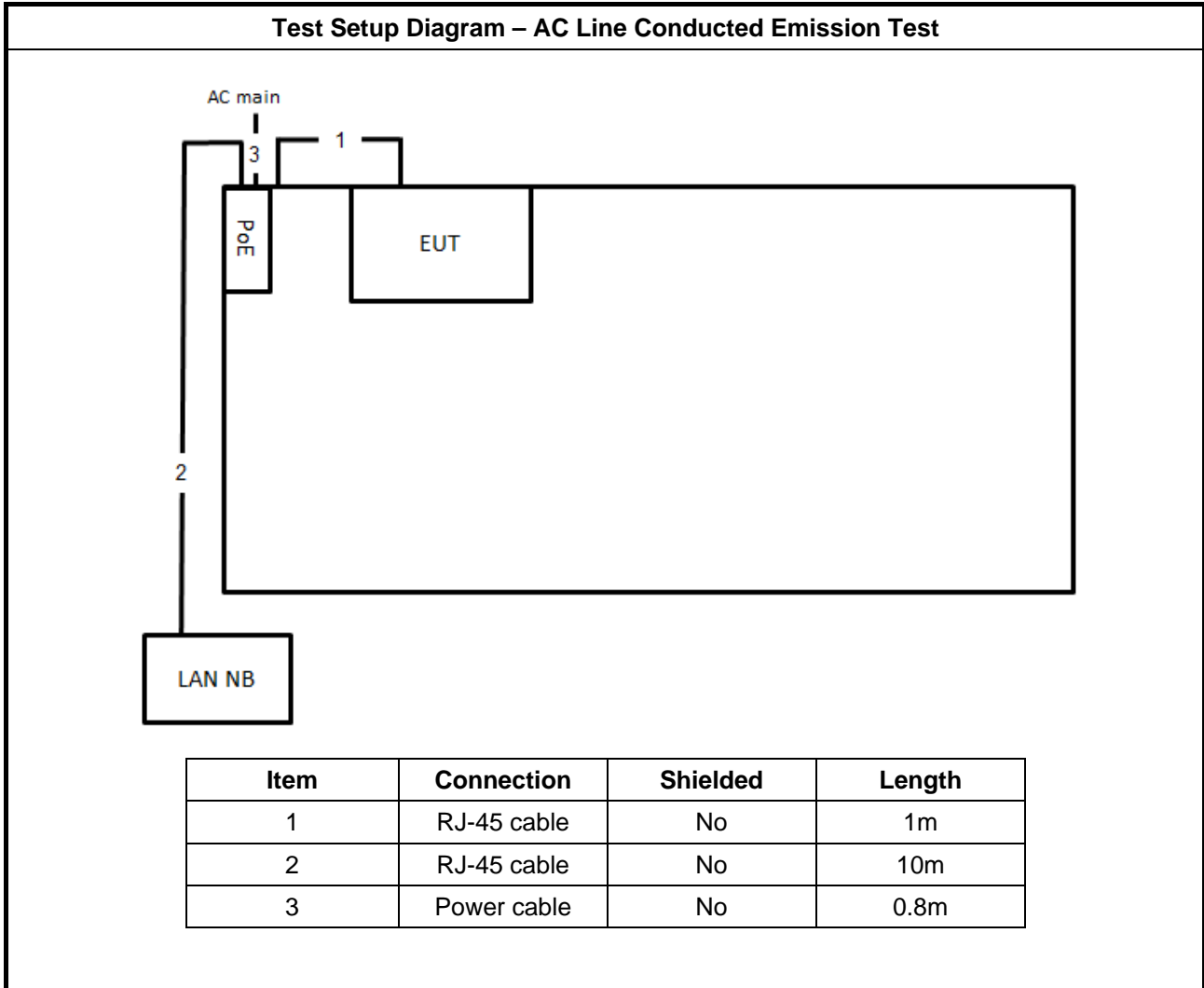
For Test Site No: CO02-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	N/A
2	PoE	Cambium Networks	NET-P30-56IN	N/A

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

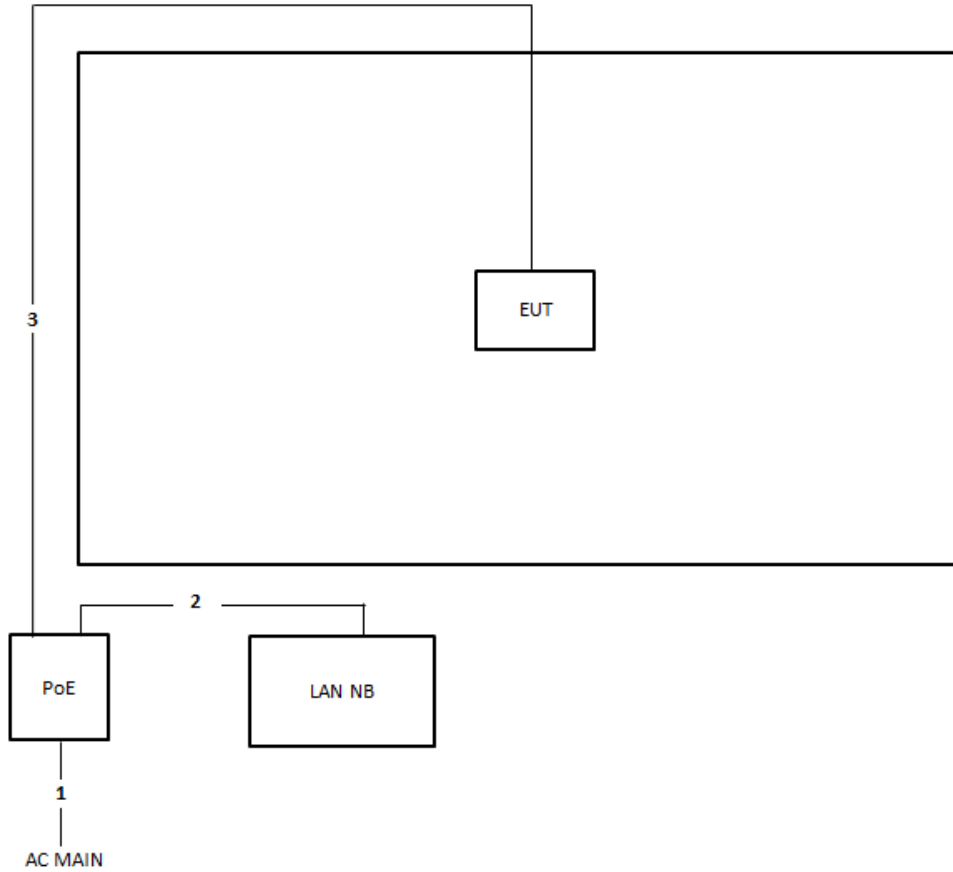
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	N/A
2	PoE	Cambium Networks	NET-P30-56IN	N/A

## 2.6 Test Setup Diagram





Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	0.8m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m



### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: \* Decreases with the logarithm of the frequency.

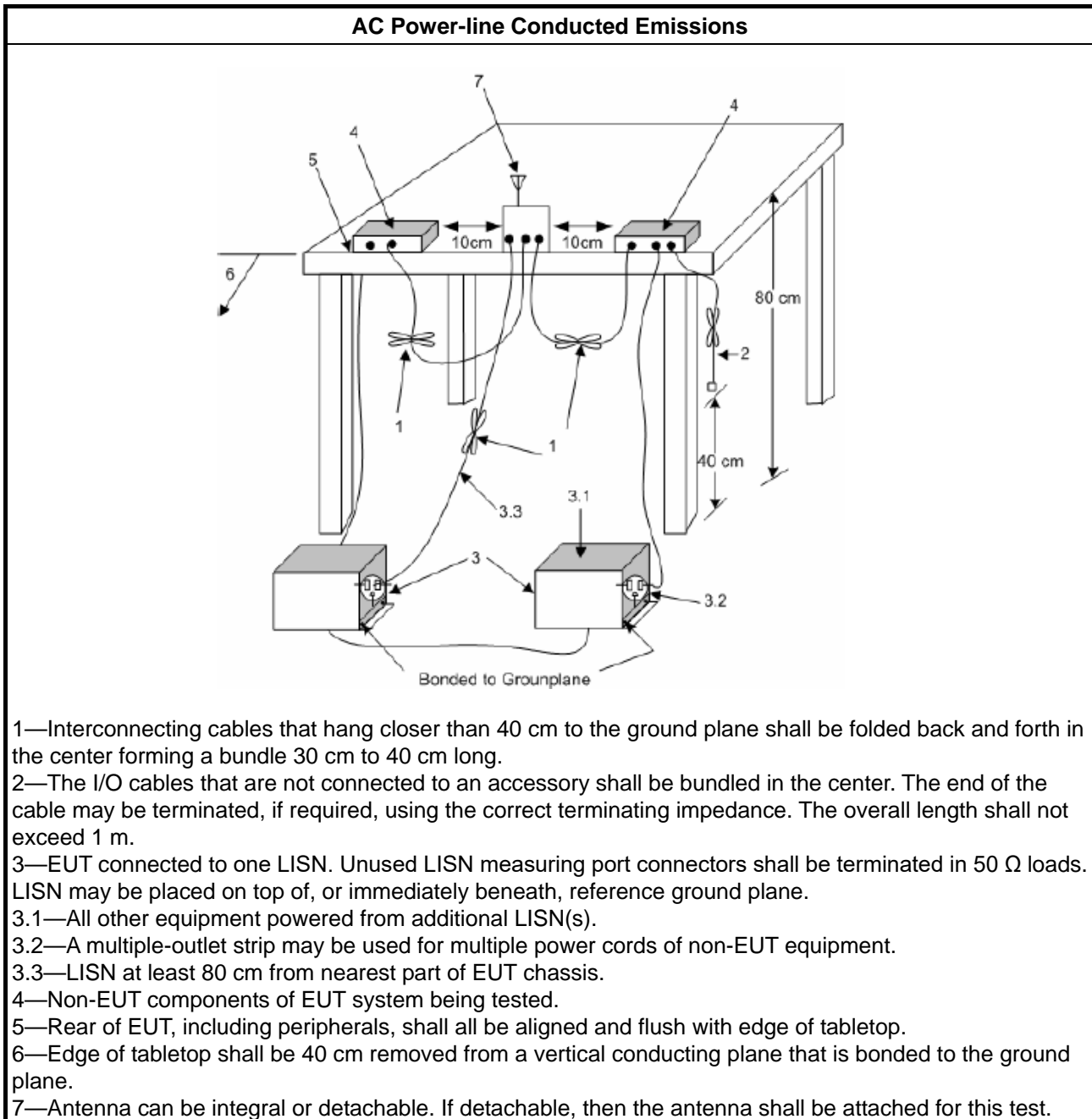
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

### 3.1.4 Test Setup



### 3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

### 3.2 Emission Bandwidth

#### 3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
<b>UNII Devices</b>	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input 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 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.

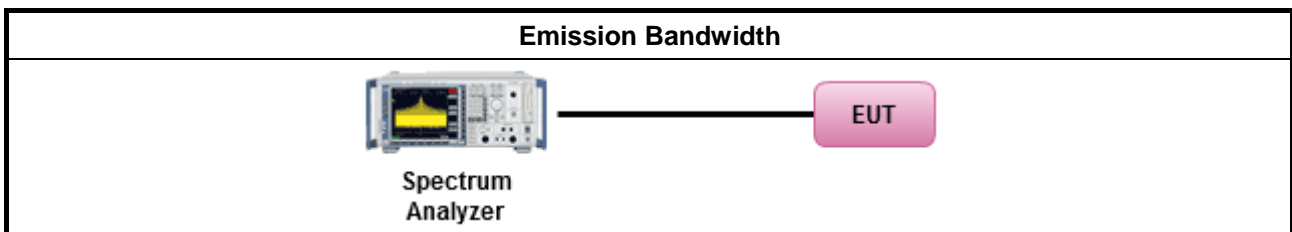
#### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

Test Method							
<ul style="list-style-type: none"> <li>▪ For the emission bandwidth shall be measured using one of the options below:           <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"><input checked="" type="checkbox"/></td> <td>Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.</td> </tr> </table> </li> </ul>		<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.
<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.						

#### 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B





### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
<b>UNII Devices</b>	
<input checked="" 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 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 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.	

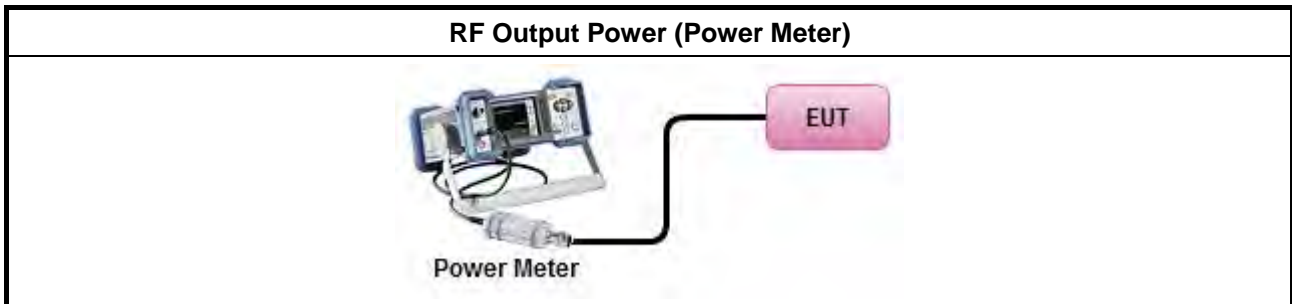
### 3.3.2 Measuring Instruments

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>▪ Maximum Conducted Output Power</li> </ul>	
Average over on/off periods with duty factor	
<input 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).
<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: 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> </ul>	
<ul style="list-style-type: none"> <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>	

### 3.3.4 Test Setup



### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



### 3.4 Peak Power Spectral Density

#### 3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
<b>UNII Devices</b>	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	<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 <math>PPSD = 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 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:	
<input type="checkbox"/>	<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 <math>PPSD = 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 peak power spectral density (PPSD) $\leq 4$ dBm/MHz and 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 and the e.i.r.p. peak power spectral density (PPSD) $\leq 17$ dBm/MHz.
<input type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where <math>\theta</math> is the angle above the local horizontal plane (of the Earth) as shown below:            -13 dBW/MHz for <math>0^\circ \leq \theta &lt; 8^\circ</math> ; -13 - 0.716 (<math>\theta-8</math>) dBW/MHz for <math>8^\circ \leq \theta &lt; 40^\circ</math>            -35.9 - 1.22 (<math>\theta-40</math>) dBW/MHz for <math>40^\circ \leq \theta \leq 45^\circ</math> ; -42 dBW/MHz for <math>\theta &gt; 45^\circ</math></li> </ul>
<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 and the e.i.r.p. peak power spectral density (PPSD) $\leq 17$ dBm/MHz.
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<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 <math>PPSD = 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>
<p><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.</p>	



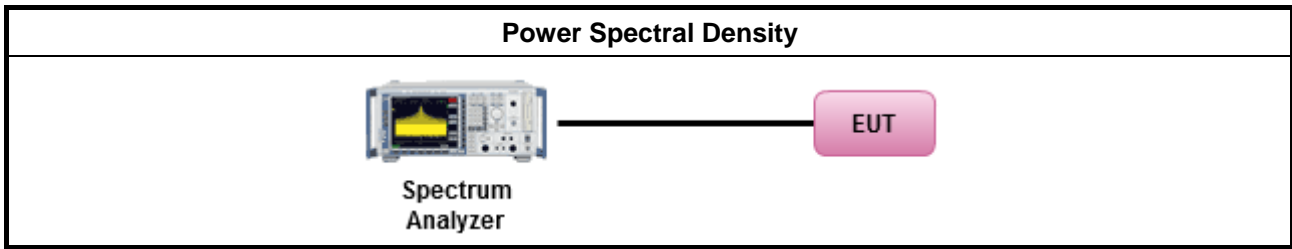
### 3.4.2 Measuring Instruments

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>▪ 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>	
	<input type="checkbox"/> Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth [duty cycle ≥ 98% or external video / power trigger]
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
	<input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed) duty cycle < 98% and average over on/off periods with duty factor
	<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)
<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>
	<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.
	<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,
	<input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
	<ul style="list-style-type: none"> <li>▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods:  <math>PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n</math>            (calculated in linear unit [mW] and transfer to log unit [dBm])  <math>EIRP_{total} = PPSD_{total} + DG</math> </li> </ul>

### 3.4.4 Test Setup



### 3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D



### 3.5 Unwanted Emissions

#### 3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
<input checked="" type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input 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).

**3.5.2 Measuring Instruments**

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

**3.5.3 Test Procedures**

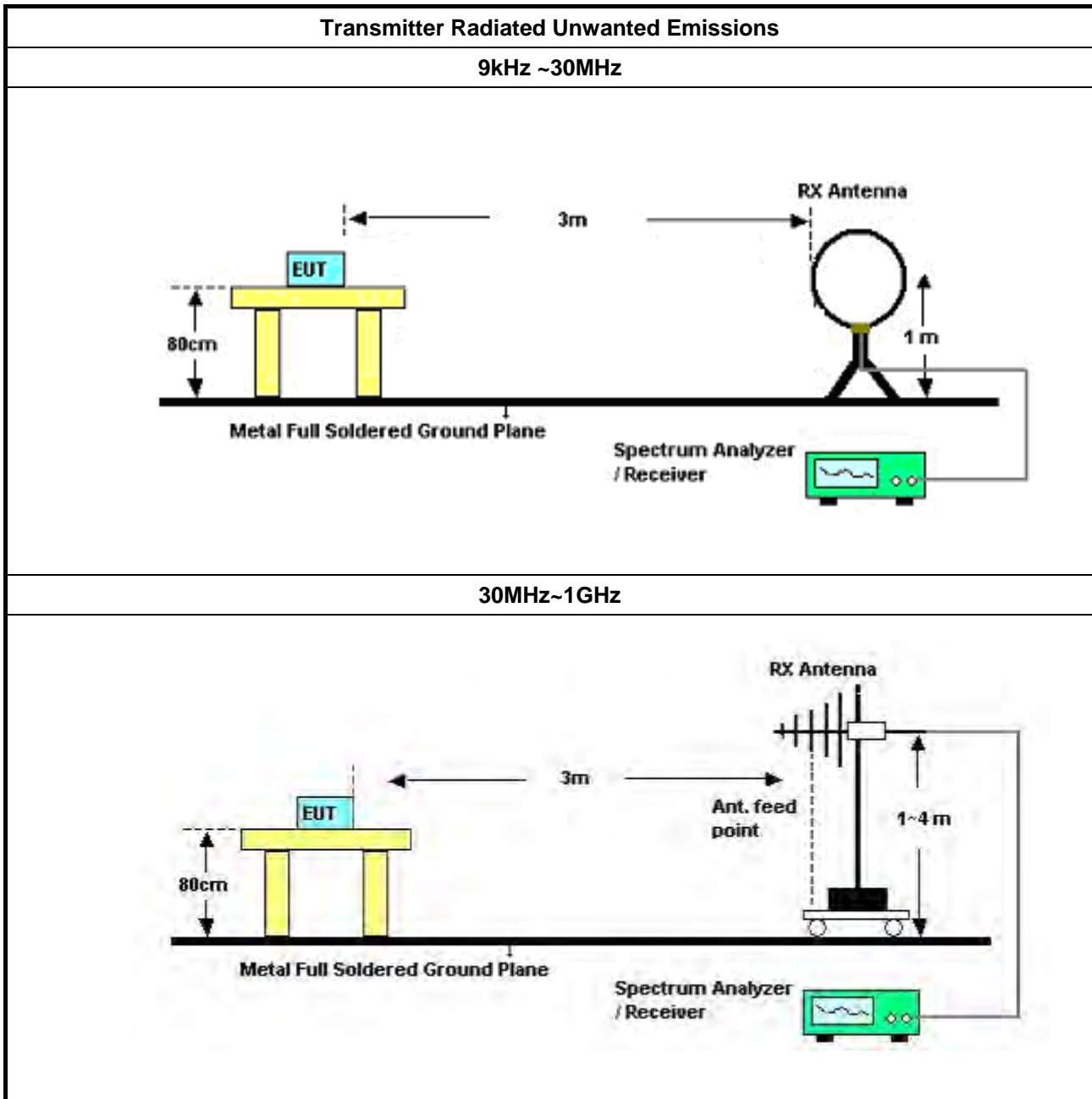
Test Method	
	<ul style="list-style-type: none"> <li>▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance 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 ≥ 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:               <ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.</li> <li>▪ Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.                   <ul style="list-style-type: none"> <li><input type="checkbox"/> Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).</li> <li><input checked="" type="checkbox"/> Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).</li> <li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.</li> <li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.</li> <li><input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.</li> <li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.</li> </ul> </li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>▪ For radiated measurement.               <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> </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>

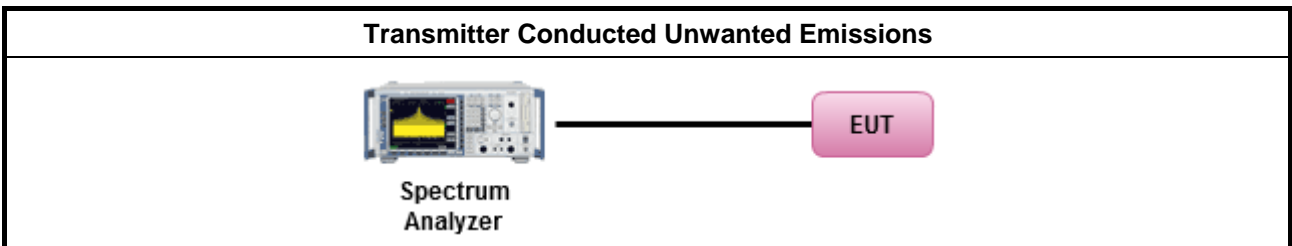
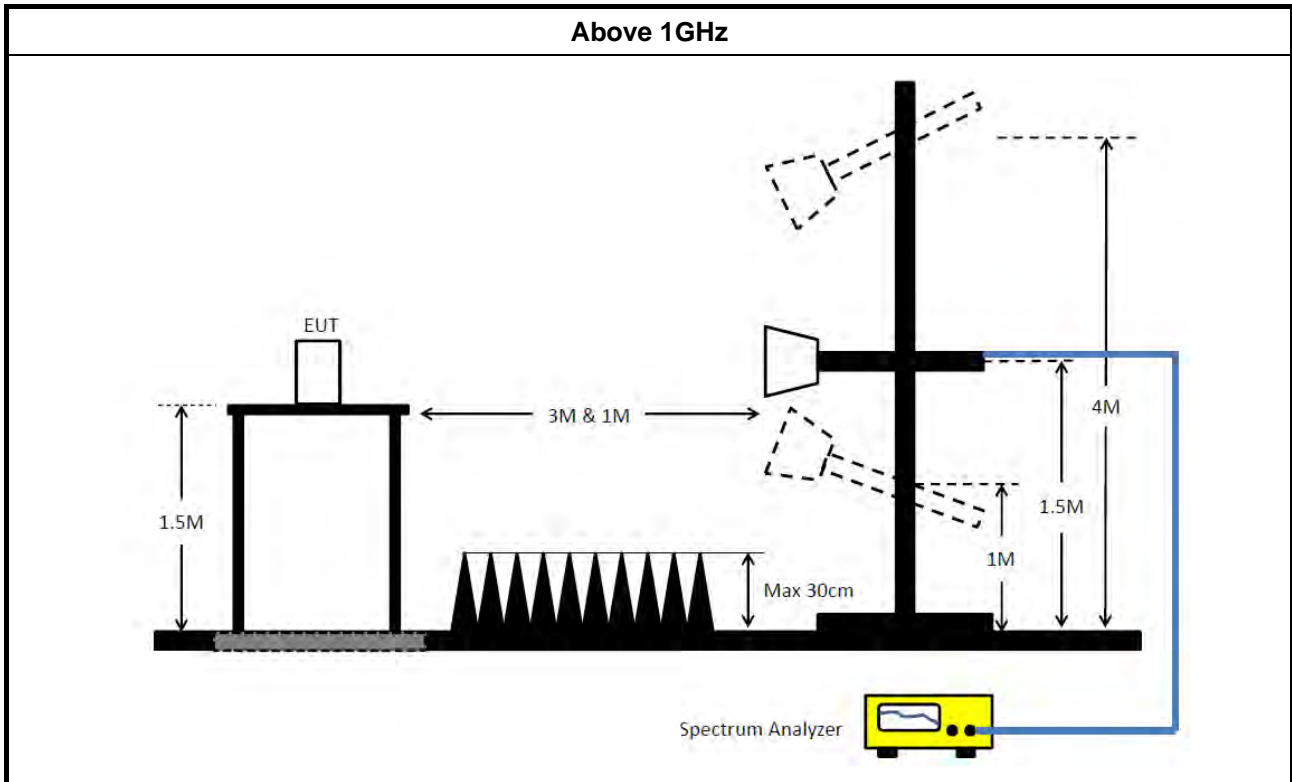


Test Method	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 789033, clause H)3).	
	▪ For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions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



### 3.5.4 Test Setup





**3.5.5 Transmitter Unwanted Emissions (Below 30MHz)**

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

**3.5.6 Test Result of Transmitter Unwanted Emissions**

Refer as Appendix E



## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 24, 2017	Nov. 23, 2018	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 13, 2017	Nov. 12, 2018	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 17, 2018	Jan. 16, 2019	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Nov. 10, 2017	Nov. 09, 2018	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB))
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA917025 2	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	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-H G	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 2018	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jul. 03, 2018	Jul. 02, 2019	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	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	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	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)



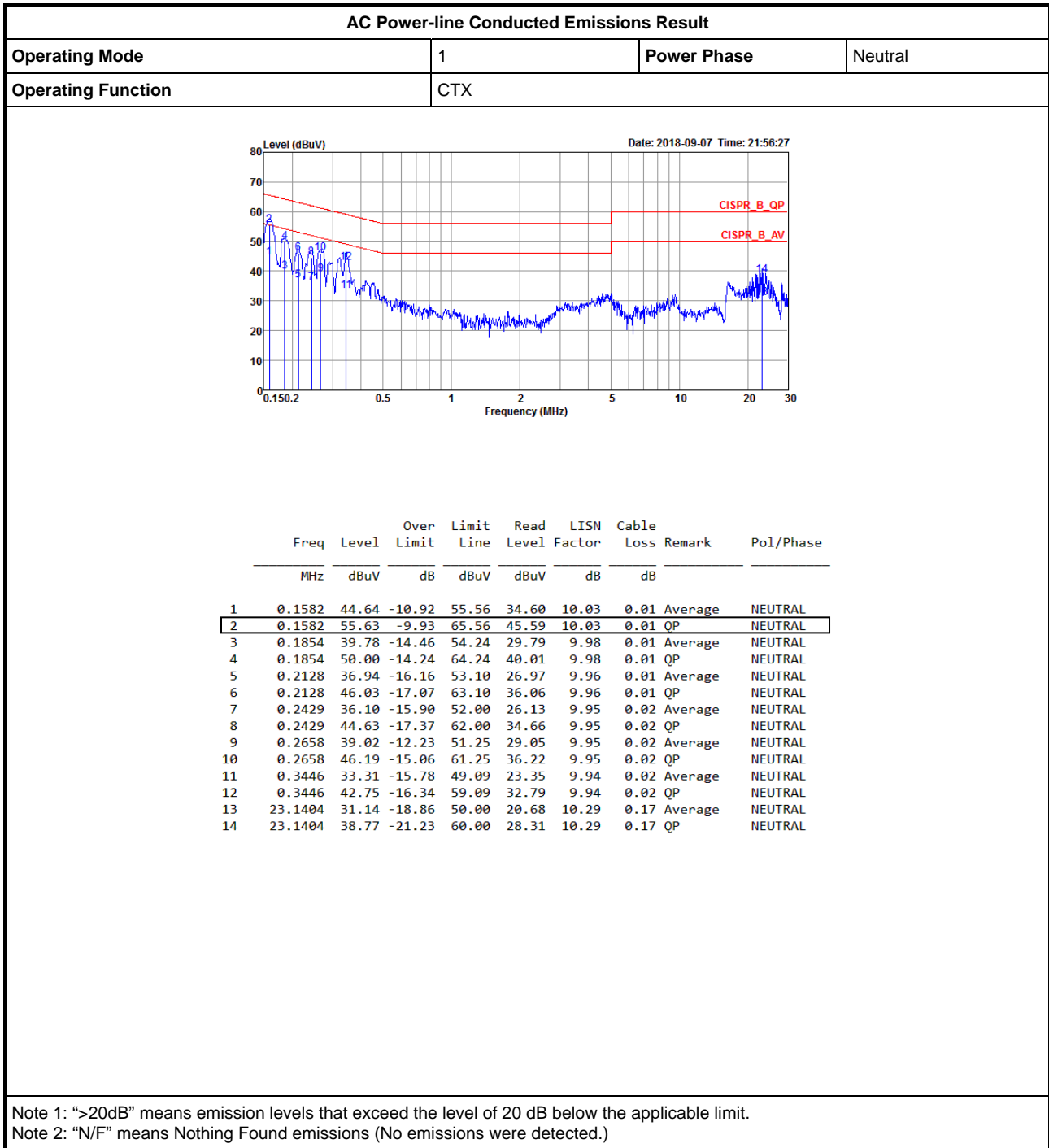
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	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)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	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	101027	9kHz~40GHz	Jun. 22, 2018	Jun. 21, 2019	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)
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.  
N.C.R. means Non-Calibration required



# AC Power-line Conducted Emissions Result

Appendix A





# AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result									
Operating Mode	1			Power Phase	Line				
Operating Function	CTX								
<div style="text-align: right;">Date: 2018-09-07 Time: 21:59:07</div>									
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1590	44.57	-10.95	55.52	34.58	9.98	0.01	Average	LINE
2	0.1590	54.70	-10.82	65.52	44.71	9.98	0.01	QP	LINE
3	0.1844	38.83	-15.45	54.28	28.89	9.93	0.01	Average	LINE
4	0.1844	48.79	-15.49	64.28	38.85	9.93	0.01	QP	LINE
5	0.2151	36.28	-16.73	53.01	26.36	9.91	0.01	Average	LINE
6	0.2151	44.81	-18.20	63.01	34.89	9.91	0.01	QP	LINE
7	0.2535	33.81	-17.83	51.64	23.89	9.90	0.02	Average	LINE
8	0.2535	40.70	-20.94	61.64	30.78	9.90	0.02	QP	LINE
9	0.3234	35.81	-13.81	49.62	25.91	9.88	0.02	Average	LINE
10	0.3234	43.15	-16.47	59.62	33.25	9.88	0.02	QP	LINE
11	0.3465	34.06	-14.99	49.05	24.16	9.88	0.02	Average	LINE
12	0.3465	44.31	-14.74	59.05	34.41	9.88	0.02	QP	LINE
13	22.6551	32.26	-17.74	50.00	21.84	10.26	0.16	Average	LINE
14	22.6551	38.91	-21.09	60.00	28.49	10.26	0.16	QP	LINE

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



**For EUT + Set 1 antenna:  
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	20.725M	17.641M	17M6D1D	19.575M	17.516M
802.11ac VHT40_Nss1,(MCS0)_4TX	40M	36.082M	36M1D1D	39.2M	35.882M
802.11ac VHT80_Nss1,(MCS0)_4TX	83.8M	75.862M	75M9D1D	82.8M	75.762M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	17.6M	17.666M	17M7D1D	15.625M	17.566M
802.11ac VHT40_Nss1,(MCS0)_4TX	35.7M	36.082M	36M1D1D	31.2M	35.832M
802.11ac VHT80_Nss1,(MCS0)_4TX	76.3M	75.962M	76M0D1D	74.4M	75.662M

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

**Max-OBW** = Maximum 99% occupied bandwidth;

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

**Min-OBW** = Minimum 99% occupied bandwidth;



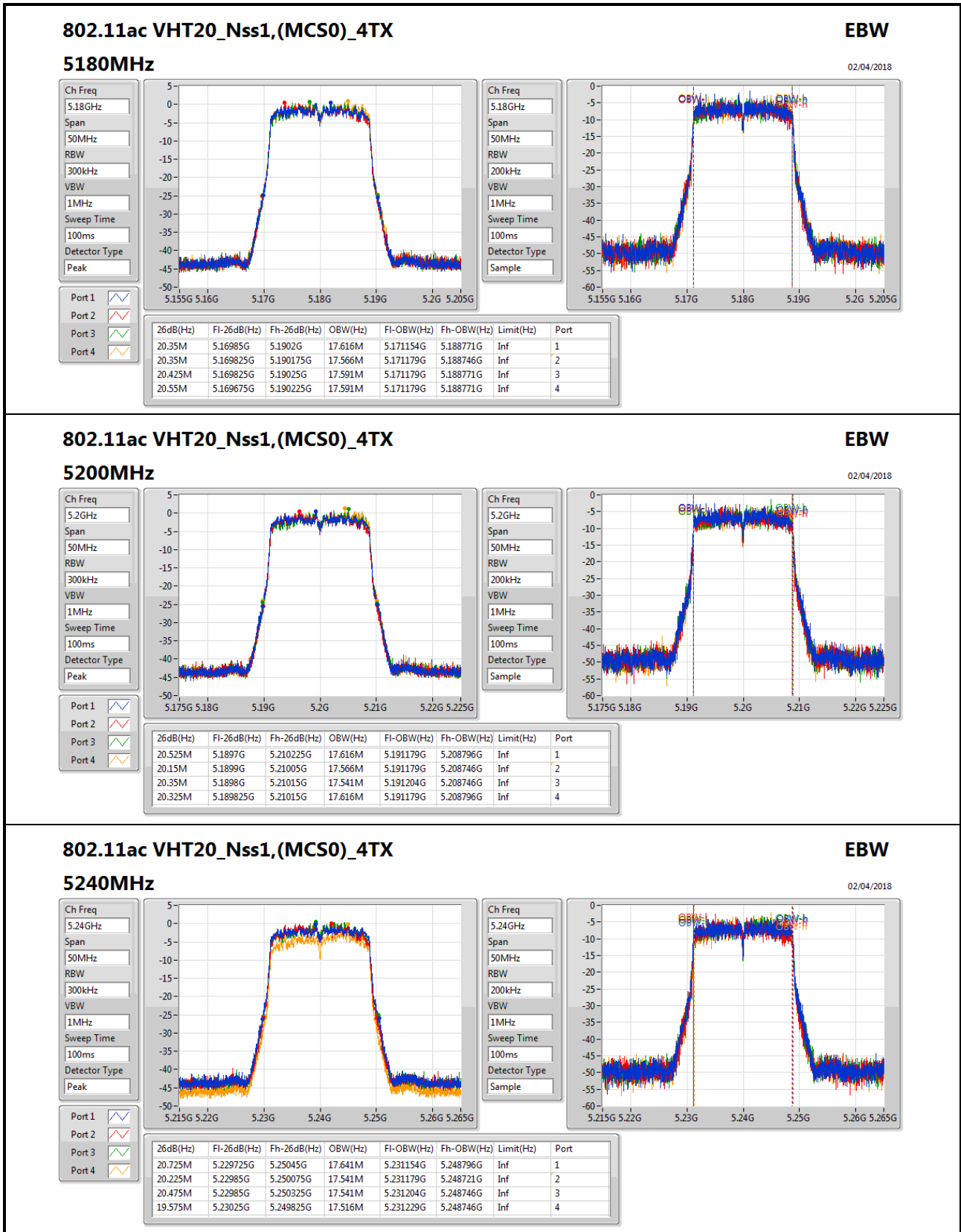
**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.35M	17.616M	20.35M	17.566M	20.425M	17.591M	20.55M	17.591M
5200MHz	Pass	Inf	20.525M	17.616M	20.15M	17.566M	20.35M	17.541M	20.325M	17.616M
5240MHz	Pass	Inf	20.725M	17.641M	20.225M	17.541M	20.475M	17.541M	19.575M	17.516M
5745MHz	Pass	500k	17.575M	17.616M	17.5M	17.616M	17.55M	17.666M	17.55M	17.616M
5785MHz	Pass	500k	17.525M	17.616M	17.6M	17.616M	17.55M	17.591M	17.525M	17.666M
5825MHz	Pass	500k	17.55M	17.641M	17.575M	17.641M	15.625M	17.566M	16.55M	17.616M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.95M	35.932M	40M	35.982M	39.6M	36.032M	39.2M	35.882M
5230MHz	Pass	Inf	39.7M	35.982M	40M	36.082M	39.75M	36.082M	39.25M	35.982M
5755MHz	Pass	500k	32.4M	35.982M	35M	35.882M	31.25M	35.832M	35.3M	35.982M
5795MHz	Pass	500k	35M	35.982M	35M	35.932M	31.2M	36.082M	35.7M	36.032M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	83.8M	75.762M	83.5M	75.862M	83.3M	75.762M	82.8M	75.862M
5775MHz	Pass	500k	76.3M	75.662M	74.4M	75.862M	76.3M	75.762M	75.1M	75.962M

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

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




**802.11ac VHT20\_Nss1,(MCS0)\_4TX**
**EBW**

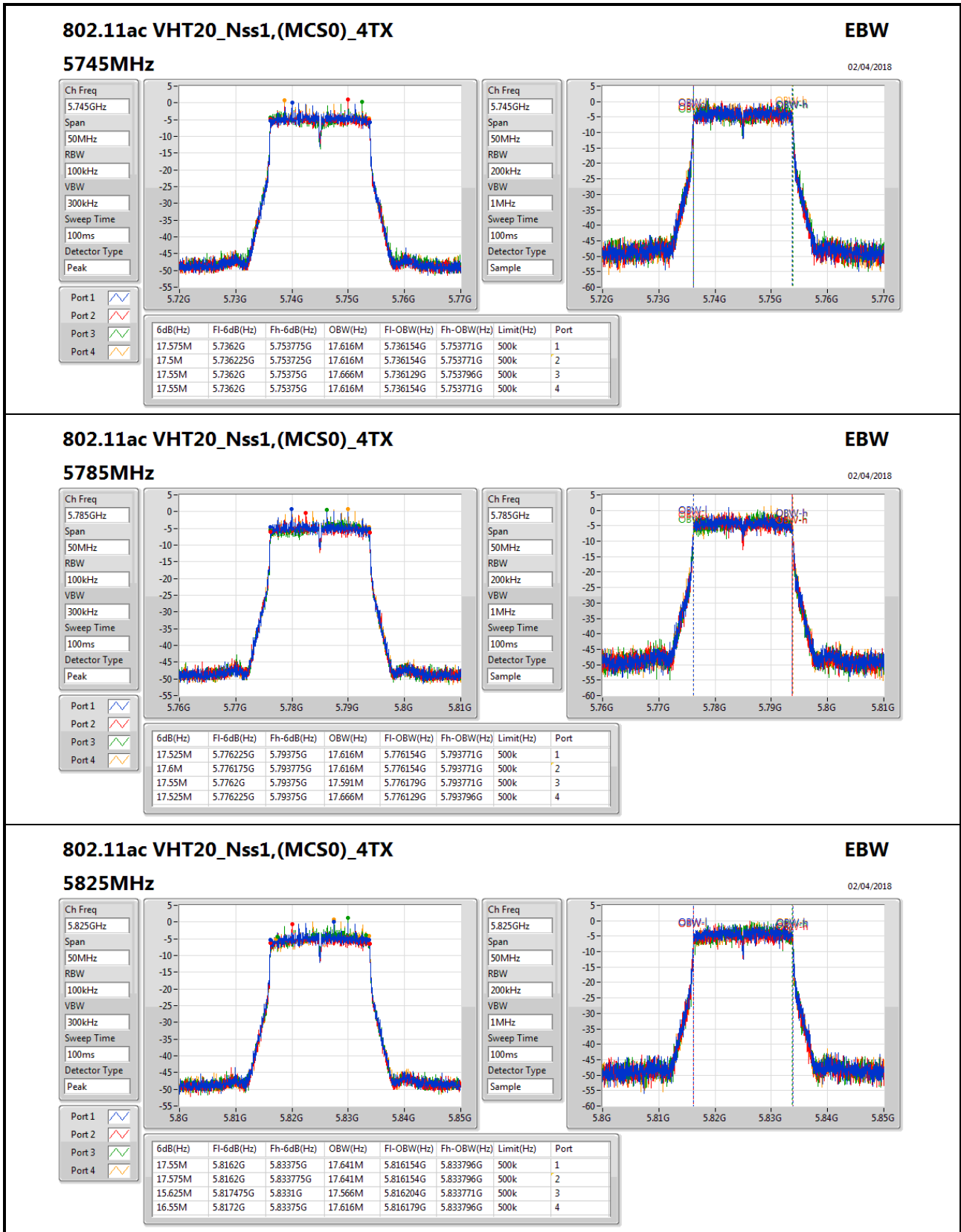
02/04/2018

**5240MHz**

Ch Freq: 5.24GHz  
Span: 50MHz  
RBW: 300kHz  
VBW: 1MHz  
Sweep Time: 100ms  
Detector Type: Peak

Ch Freq: 5.24GHz  
Span: 50MHz  
RBW: 200kHz  
VBW: 1MHz  
Sweep Time: 100ms  
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.725M	5.229725G	5.25045G	17.641M	5.231154G	5.248796G	Inf	1
20.225M	5.22985G	5.250075G	17.541M	5.231179G	5.248721G	Inf	2
20.475M	5.22985G	5.250325G	17.541M	5.231204G	5.248746G	Inf	3
19.575M	5.23025G	5.249825G	17.516M	5.231229G	5.248746G	Inf	4









For EUT + Set 2 antenna:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	20.675M	17.7M	17M7D1D	20.325M	17.625M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.9M	36.25M	36M2D1D	40.1M	36.1M
802.11ac VHT80_Nss1,(MCS0)_4TX	83.9M	76M	76M0D1D	82.8M	75.7M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	17.6M	17.691M	17M7D1D	16.55M	17.591M
802.11ac VHT40_Nss1,(MCS0)_4TX	35.65M	36.232M	36M2D1D	32.15M	35.882M
802.11ac VHT80_Nss1,(MCS0)_4TX	76.3M	75.962M	76M0D1D	74.4M	75.862M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

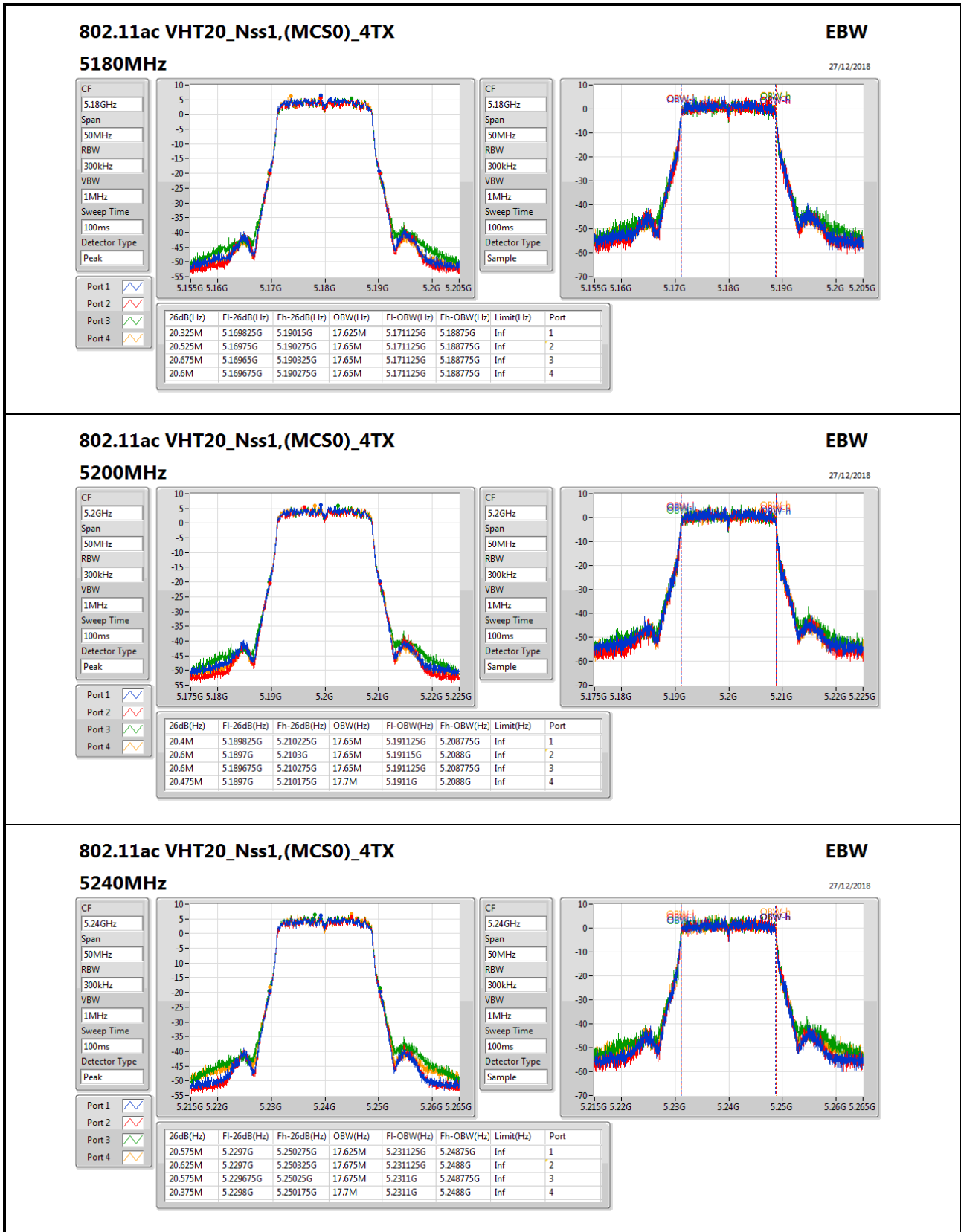


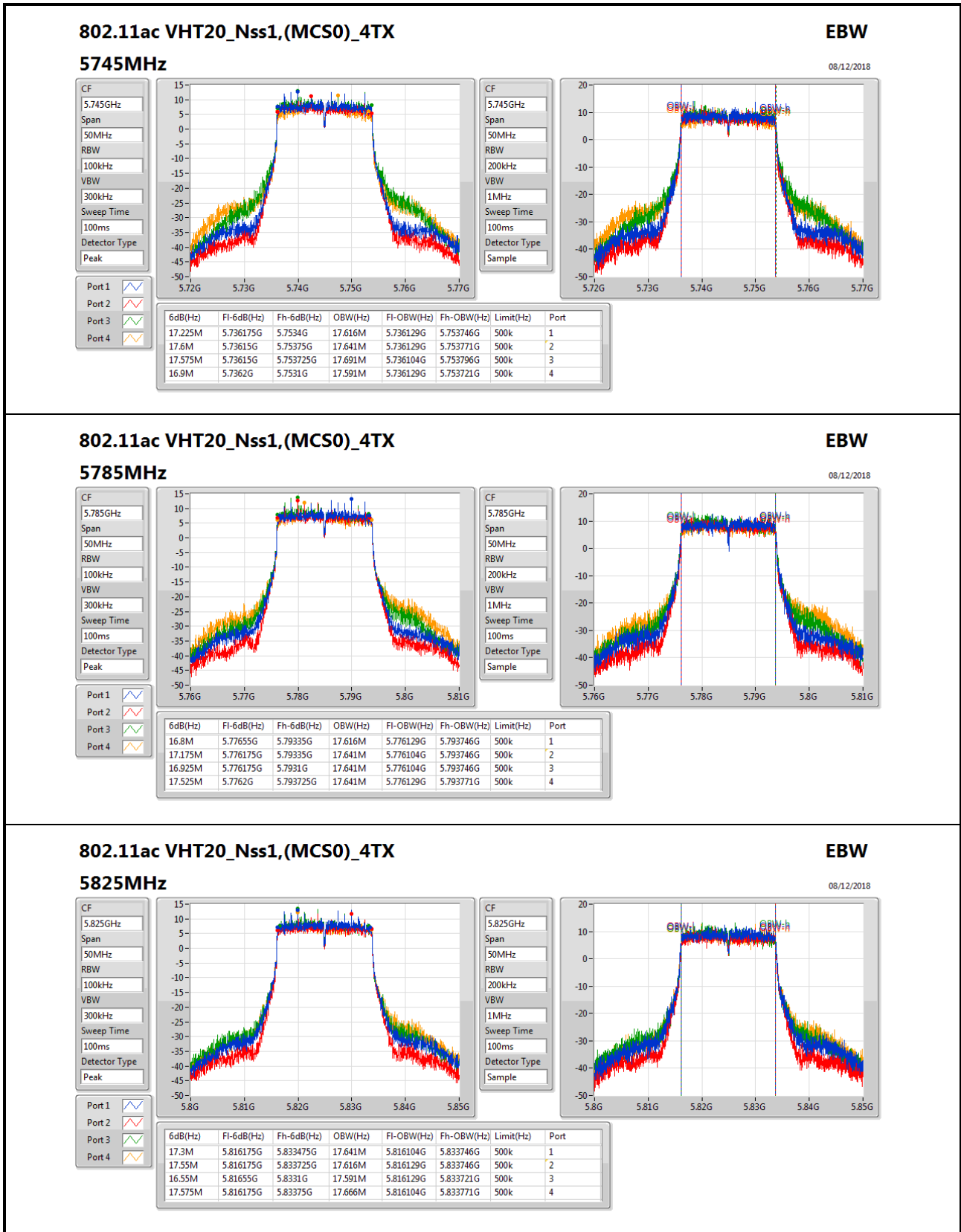
**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.325M	17.625M	20.525M	17.65M	20.675M	17.65M	20.6M	17.65M
5200MHz	Pass	Inf	20.4M	17.65M	20.6M	17.65M	20.6M	17.65M	20.475M	17.7M
5240MHz	Pass	Inf	20.575M	17.625M	20.625M	17.675M	20.575M	17.675M	20.375M	17.7M
5745MHz	Pass	500k	17.225M	17.616M	17.6M	17.641M	17.575M	17.691M	16.9M	17.591M
5785MHz	Pass	500k	16.8M	17.616M	17.175M	17.641M	16.925M	17.641M	17.525M	17.641M
5825MHz	Pass	500k	17.3M	17.641M	17.55M	17.616M	16.55M	17.591M	17.575M	17.666M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.65M	36.25M	40.9M	36.25M	40.45M	36.15M	40.35M	36.1M
5230MHz	Pass	Inf	40.55M	36.2M	40.7M	36.15M	40.35M	36.25M	40.1M	36.1M
5755MHz	Pass	500k	34.45M	36.032M	33.75M	35.932M	32.15M	35.882M	35M	36.232M
5795MHz	Pass	500k	35M	36.032M	35.05M	35.932M	35.65M	36.032M	34.35M	36.082M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	83.9M	75.9M	83.4M	75.9M	83.5M	76M	82.8M	75.7M
5775MHz	Pass	500k	76.3M	75.862M	76.3M	75.862M	74.4M	75.862M	74.5M	75.962M

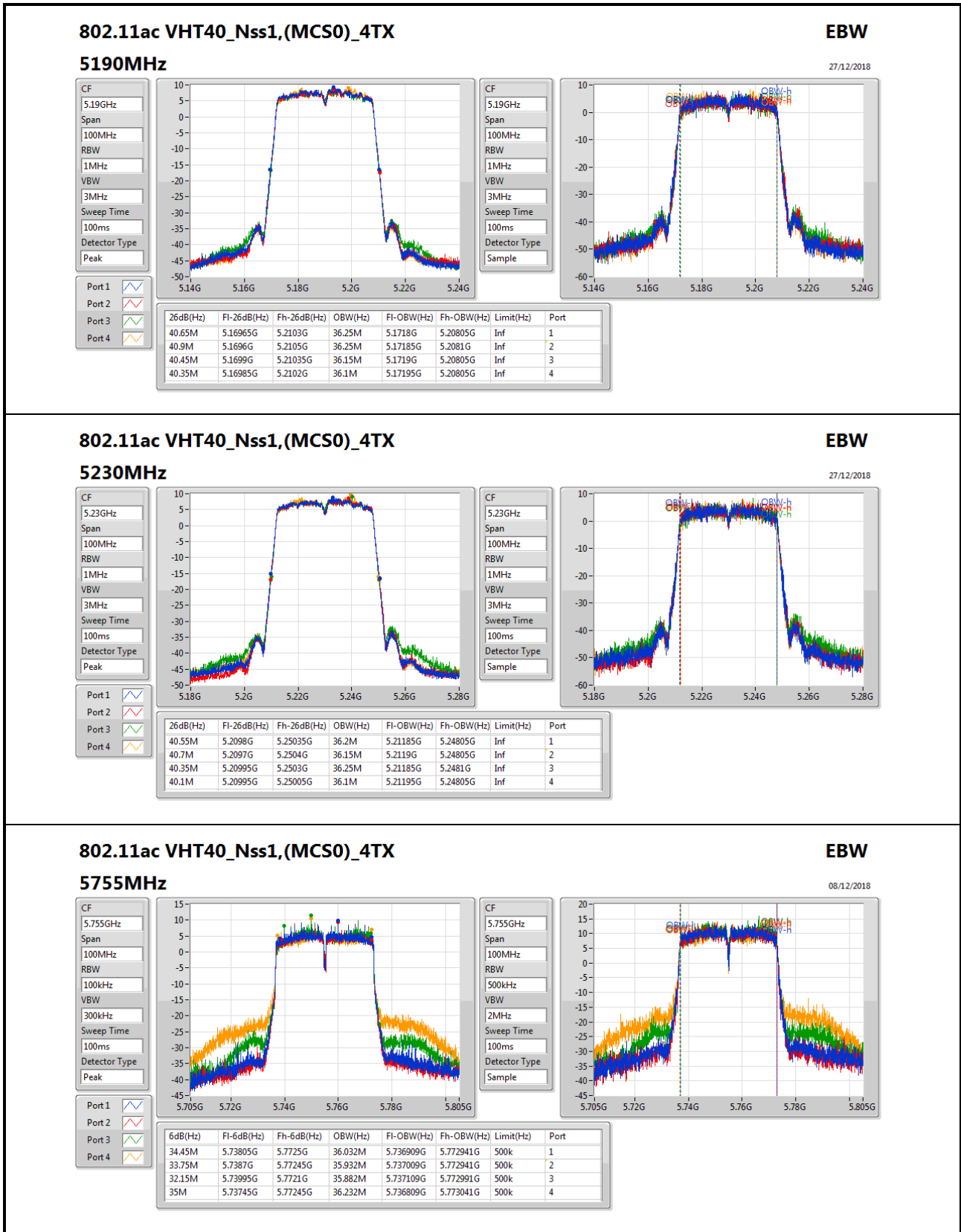
**Port X-N dB** = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

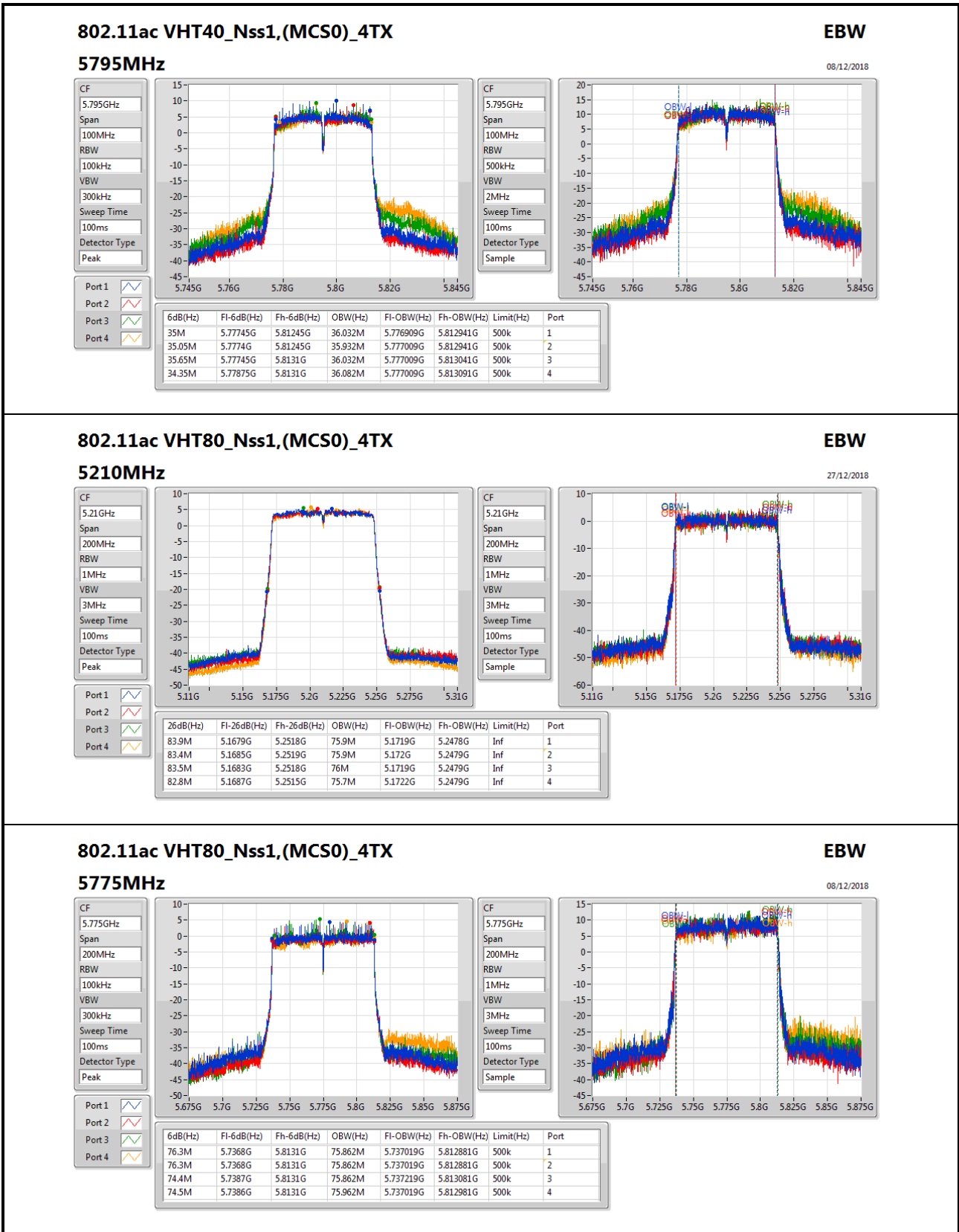
**Port X-OBW** = Port X 99% occupied bandwidth;













**Power Result**

**For EUT + Set 1 antenna:  
Summary**

Mode	Total Power (dBm)	Total Power (W)	EIRP / EIRP- Elevation 30° (dBm)	EIRP / EIRP- Elevation 30° (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	14.85	0.03055	32.85/11.18	1.92752
802.11ac VHT40_Nss1,(MCS0)_4TX	14.31	0.02698	32.31/10.64	1.70216
802.11ac VHT80_Nss1,(MCS0)_4TX	12.44	0.01754	30.44/8.77	1.10662
5.725-5.85GHz	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	17.89	0.06152	-	-
802.11ac VHT40_Nss1,(MCS0)_4TX	15.89	0.03882	-	-
802.11ac VHT80_Nss1,(MCS0)_4TX	12.43	0.01750	-	-



**Power Result**

**Appendix C.1**

**Result**

Mode	Result	Directional Gain (Output Power) / Gain-Elevation 30° (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP / EIRP-Elevation 30° (dBm)	EIRP Limit / EIRP Limit-Elevation 30° (dBm)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	18.00/-3.67	8.83	8.68	8.52	8.91	14.76	18.00	32.76/11.09	36.00/21.00
5200MHz	Pass	18.00/-3.67	8.81	8.69	8.84	8.97	14.85	18.00	32.85/11.18	36.00/21.00
5240MHz	Pass	18.00/-3.67	8.76	8.72	8.92	8.85	14.83	18.00	32.83/11.16	36.00/21.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	18.00/-3.67	8.29	8.46	8.01	8.33	14.30	18.00	32.30/10.63	36.00/21.00
5230MHz	Pass	18.00/-3.67	8.21	8.34	8.05	8.53	14.31	18.00	32.31/10.64	36.00/21.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	18.00/-3.67	6.43	6.39	6.35	6.52	12.44	18.00	30.44/8.77	36.00/21.00

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	18.00	11.95	11.77	11.65	12.08	17.89	18.00
5785MHz	Pass	18.00	11.87	11.64	11.76	11.83	17.80	18.00
5825MHz	Pass	18.00	11.88	11.61	11.98	11.85	17.85	18.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5755MHz	Pass	18.00	9.90	9.75	9.82	10.02	15.89	18.00
5795MHz	Pass	18.00	9.84	9.63	9.74	9.78	15.77	18.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	18.00	6.65	6.16	6.27	6.54	12.43	18.00

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



## Power Result

Appendix C.1

### For EUT + Set 2 antenna: Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP / EIRP- Elevation 30° (dBm)	EIRP / EIRP- Elevation 30° (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	19.63	0.09183	21.63/20.94	0.14555
802.11ac VHT40_Nss1,(MCS0)_4TX	19.35	0.08610	21.35/20.66	0.13646
802.11ac VHT80_Nss1,(MCS0)_4TX	19.41	0.08730	21.41/20.72	0.13836
5.725-5.85GHz	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_4TX	29.63	0.91833	31.63	1.45546
802.11ac VHT40_Nss1,(MCS0)_4TX	29.74	0.94189	31.74	1.49279
802.11ac VHT80_Nss1,(MCS0)_4TX	27.67	0.58479	29.67	0.92683



## Power Result

## Appendix C.1

### Result

Mode	Result	Directional Gain (Output Power) / Gain-Elevation 30° (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP / EIRP-Elevation 30° (dBm)	EIRP Limit / EIRP Limit-Elevation 30° (dBm)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	2.00/1.31	13.60	13.11	13.24	13.31	19.34	30.00	21.34/20.65	36.00/21.00
5200MHz	Pass	2.00/1.31	13.39	12.99	13.18	13.15	19.20	30.00	21.20/20.51	36.00/21.00
5240MHz	Pass	2.00/1.31	13.59	13.33	13.91	13.58	19.63	30.00	21.63/20.94	36.00/21.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	2.00/1.31	13.49	13.18	13.11	13.51	19.35	30.00	21.35/20.66	36.00/21.00
5230MHz	Pass	2.00/1.31	13.19	13.20	13.18	13.29	19.24	30.00	21.24/20.55	36.00/21.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	2.00/1.31	13.60	13.27	13.36	13.32	19.41	30.00	21.41/20.72	36.00/21.00

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	2.00	23.89	23.37	24.04	23.06	29.63	30.00
5785MHz	Pass	2.00	23.84	23.34	24.02	23.14	29.62	30.00
5825MHz	Pass	2.00	23.86	23.25	24.03	23.24	29.63	30.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5755MHz	Pass	2.00	23.78	23.47	24.24	23.32	29.74	30.00
5795MHz	Pass	2.00	23.84	23.43	24.05	23.29	29.68	30.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	2.00	21.75	21.47	22.05	21.31	27.67	30.00

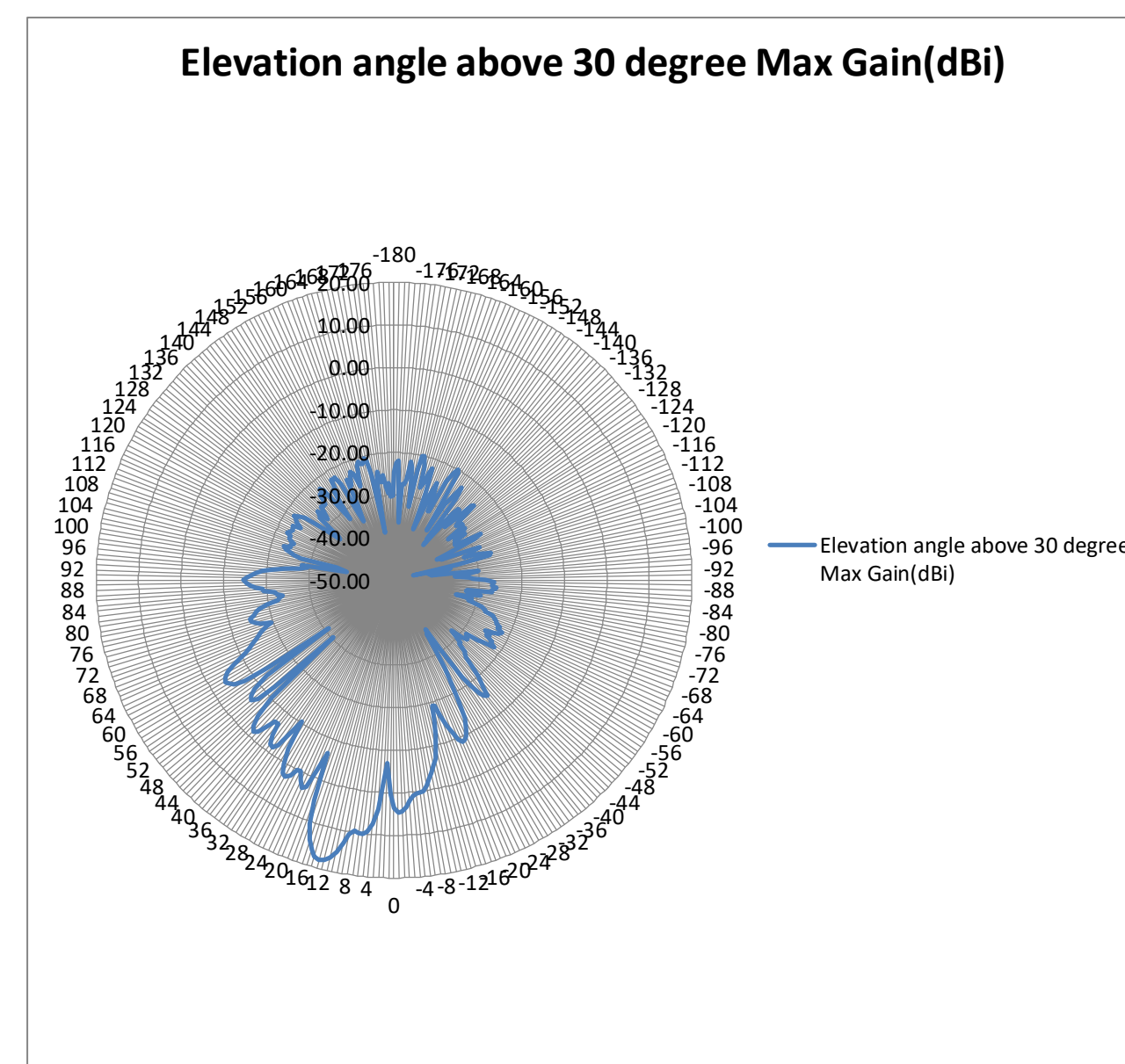
DG = Directional Gain; Port X = Port X output power



Elevation angle above 30 degree Max Gain

For EUT + Set 1 antenna:

Elevation angle above 30 degree Max Gain(dBi)		-3.67
Freq. (MHz)	5150	
H-Plan angle(Degree)	Gain(dBm)	Elevation Angle Define
-180	-24.57	
-179	-22.41	
-178	-22.01	
-177	-27.85	
-176	-36.52	
-175	-27.32	
-174	-27.45	
-173	-26.24	
-172	-21.80	
-171	-23.15	
-170	-27.05	
-169	-32.30	
-168	-23.52	
-167	-20.05	
-166	-20.01	
-165	-22.63	
-164	-27.43	
-163	-25.98	
-162	-23.58	
-161	-22.30	
-160	-28.26	
-159	-37.28	
-158	-31.91	
-157	-28.22	
-156	-25.10	
-155	-28.04	
-154	-32.13	
-153	-31.90	
-152	-23.92	
-151	-21.30	
-150	-19.87	
-149	-20.58	
-148	-29.99	
-147	-36.06	
-146	-28.70	
-145	-26.38	
-144	-23.22	
-143	-25.99	
-142	-37.69	
-141	-33.98	
-140	-39.25	
-139	-29.21	
-138	-27.42	
-137	-27.47	
-136	-32.74	
-135	-30.06	
-134	-24.76	
-133	-24.24	
-132	-29.87	
-131	-30.58	
-130	-29.35	
-129	-29.12	
-128	-30.32	
-127	-34.24	
-126	-29.30	
-125	-30.78	
-124	-32.93	
-123	-30.07	
-122	-33.11	
-121	-33.45	
-120	-33.59	
-119	-30.08	
-118	-26.92	
-117	-28.87	
-116	-38.80	
-115	-35.45	
-114	-37.85	
-113	-36.32	
-112	-31.26	
-111	-28.36	
-110	-30.47	
-109	-30.80	
-108	-32.65	
-107	-29.36	
-106	-26.37	
-105	-26.84	
-104	-34.29	
-103	-45.45	
-102	-36.55	
-101	-39.31	
-100	-41.80	
-99	-40.41	
-98	-38.70	
-97	-41.14	
-96	-30.01	
-95	-32.90	
-94	-34.00	
-93	-35.58	
-92	-32.35	
-91	-31.56	
-90	-28.50	
-89	-26.50	
-88	-26.63	
-87	-26.94	
-86	-25.80	
-85	-26.14	
-84	-26.99	
-83	-26.70	
-82	-32.70	
-81	-32.84	
-80	-29.31	
-79	-34.35	
-78	-31.32	
-77	-35.01	
-76	-31.23	
-75	-32.02	
-74	-29.62	
-73	-28.52	
-72	-27.50	
-71	-27.22	
-70	-25.14	
-69	-24.90	
-68	-23.97	
-67	-23.81	
-66	-22.75	
-65	-23.20	
-64	-21.68	
-63	-22.36	
-62	-23.71	
-61	-25.63	
-60	-24.13	
-59	-24.84	
-58	-22.76	
-57	-22.82	
-56	-21.71	
-55	-24.94	
-54	-25.63	
-53	-28.85	
-52	-28.14	
-51	-27.96	
-50	-29.30	
-49	-32.01	
-48	-30.79	
-47	-28.49	
-46	-28.55	
-45	-26.27	
-44	-25.86	
-43	-25.25	
-42	-22.39	
-41	-19.87	
-40	-17.40	
-39	-15.13	
-38	-15.63	
-37	-16.73	
-36	-19.49	
-35	-22.40	
-34	-30.16	
-33	-36.22	
-32	-33.43	
-31	-35.17	
-30	-26.38	
-29	-22.81	
-28	-17.33	
-27	-13.59	
-26	-11.09	
-25	-9.67	
-24	-8.94	
-23	-8.70	
-22	-9.61	
-21	-11.16	
-20	-13.52	
-19	-16.29	
-18	-18.81	
-17	-19.13	
-16	-15.08	
-15	-12.02	
-14	-9.47	
-13	-6.84	
-12	-5.51	
-11	-3.88	
-10	-2.49	
-9	-0.97	
-8	-0.01	
-7	0.33	
-6	0.34	
-5	0.86	
-4	1.89	
-3	3.42	
-2	4.51	
-1	4.73	







Elevation angle above 30 degree Max Gain

0	3.62	
1	0.52	
2	-6.99	
3	-2.86	
4	4.06	
5	7.62	
6	9.47	
7	10.14	
8	9.93	
9	9.63	
10	10.63	
11	12.94	
12	15.23	
13	16.88	
14	17.85	
15	18.07	0° reference angle
16	17.59	
17	16.32	
18	14.15	
19	10.68	
20	5.01	
21	-6.61	
22	-1.60	
23	2.78	
24	3.36	
25	1.92	
26	-0.19	
27	0.04	
28	1.90	
29	2.71	
30	2.28	
31	0.52	
32	-3.32	
33	-10.33	
34	-6.95	
35	-2.75	
36	-1.26	
37	-1.83	
38	-3.84	
39	-6.67	
40	-6.59	
41	-4.25	
42	-2.25	
43	-1.47	
44	-2.33	
45	-4.70	
46	-9.97	
47	-30.42	
48	-12.40	
49	-7.53	
50	-6.11	
51	-6.77	
52	-8.34	
53	-12.62	
54	-31.00	
55	-13.99	
56	-7.70	
57	-5.22	
58	-4.09	
59	-3.67	
60	-4.29	
61	-5.26	
62	-7.19	
63	-9.47	
64	-11.09	
65	-12.73	
66	-13.44	
67	-14.86	
68	-15.87	
69	-16.62	
70	-18.33	
71	-19.45	
72	-17.01	
73	-15.61	
74	-14.97	
75	-14.91	
76	-16.21	
77	-16.67	
78	-17.50	
79	-19.52	
80	-22.29	
81	-22.76	
82	-23.47	
83	-22.30	
84	-21.88	
85	-19.18	
86	-19.10	
87	-17.44	
88	-16.14	
89	-15.50	
90	-14.65	
91	-15.51	
92	-16.33	
93	-17.46	
94	-18.93	
95	-21.20	
96	-24.17	
97	-27.52	
98	-29.43	
99	-27.98	
100	-38.86	
101	-36.19	
102	-36.19	
103	-27.51	
104	-25.89	
105	-24.55	
106	-23.48	
107	-23.06	
108	-24.58	
109	-24.23	
110	-24.87	
111	-23.84	
112	-23.57	
113	-23.47	
114	-22.67	
115	-23.19	
116	-23.50	
117	-23.20	
118	-23.10	
119	-24.84	
120	-24.09	
121	-23.17	
122	-22.76	
123	-21.99	
124	-23.53	
125	-24.51	
126	-29.73	
127	-33.97	
128	-33.46	
129	-29.89	
130	-27.10	
131	-26.85	
132	-25.93	
133	-28.80	
134	-27.15	
135	-25.56	
136	-26.00	
137	-25.43	
138	-26.10	
139	-23.30	
140	-24.43	
141	-22.28	
142	-23.34	
143	-27.66	
144	-32.39	
145	-27.77	
146	-24.32	
147	-24.74	
148	-22.32	
149	-22.44	
150	-22.10	
151	-24.19	
152	-32.50	
153	-34.56	
154	-30.53	
155	-23.85	
156	-25.49	
157	-23.49	
158	-22.62	
159	-23.38	
160	-26.69	
161	-25.06	
162	-21.45	
163	-20.89	
164	-21.63	
165	-21.81	
166	-20.39	
167	-20.90	
168	-24.78	
169	-38.64	
170	-26.81	
171	-24.34	
172	-26.76	
173	-26.64	
174	-25.25	
175	-28.17	
176	-29.44	
177	-27.08	
178	-30.45	
179	-30.17	

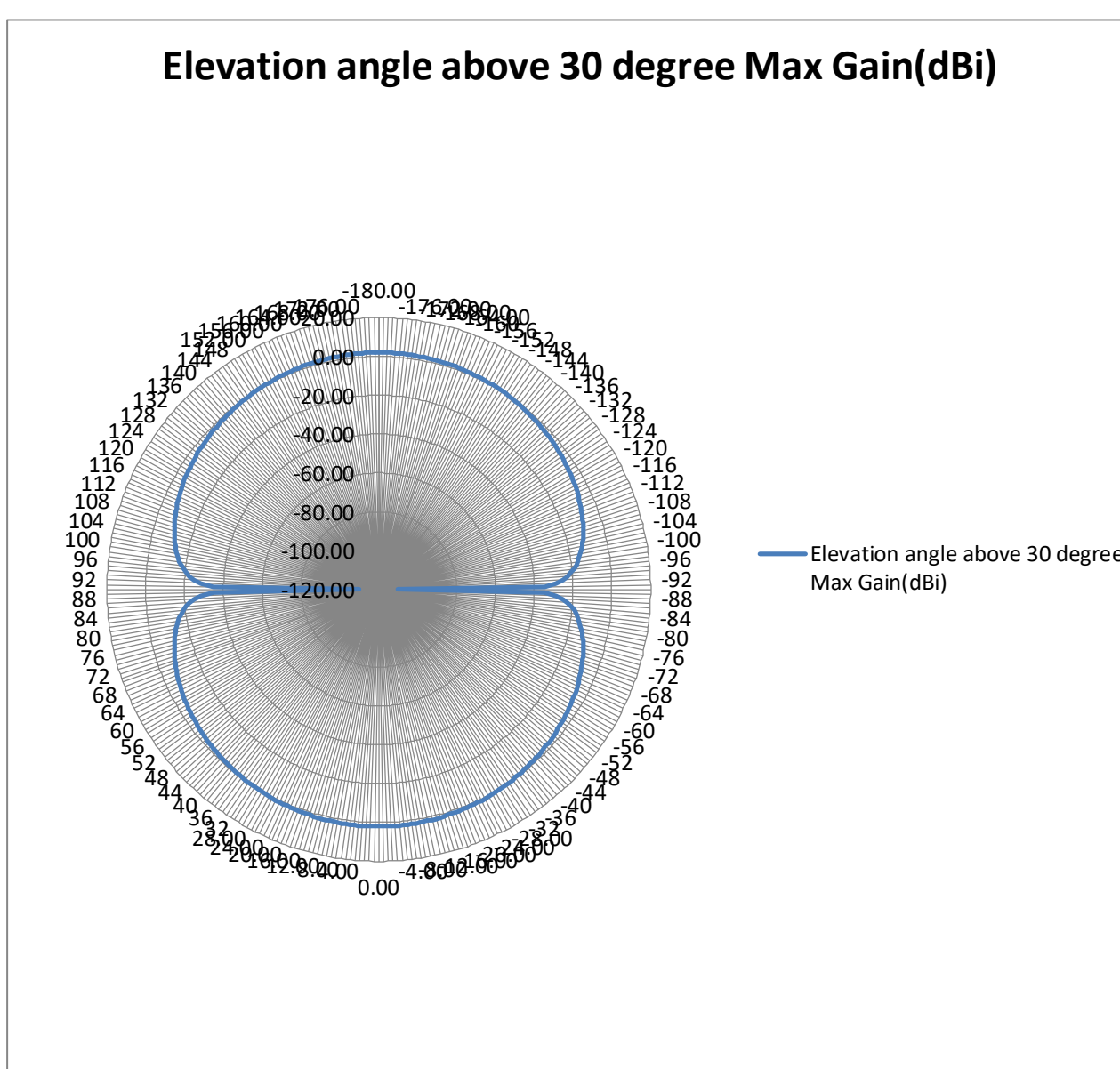




Elevation angle above 30 degree Max Gain

For EUT + Set 2 antenna:

Elevation angle above 30 degree Max Gain(dBi)		1.31
Freq. (MHz)	5150	
H-Plan angle(Degree)	Gain(dBm)	Elevation Angle Define
-180.00	2.02	0° - 30°
-179.00	2.02	
-178.00	2.02	
-177.00	2.01	
-176.00	2.00	
-175.00	1.98	
-174.00	1.96	
-173.00	1.94	
-172.00	1.91	
-171.00	1.88	
-170.00	1.85	
-169.00	1.81	
-168.00	1.77	
-167.00	1.73	
-166.00	1.68	
-165.00	1.63	
-164.00	1.57	
-163.00	1.51	
-162.00	1.45	
-161.00	1.38	
-160	1.31	Above 30 degree
-159	1.24	
-158	1.16	
-157	1.08	
-156	1.00	
-155	0.91	
-154	0.82	
-153	0.72	
-152	0.62	
-151	0.52	
-150	0.41	
-149	0.30	
-148	0.19	
-147	0.07	
-146	-0.06	
-145	-0.18	
-144	-0.32	
-143	-0.45	
-142	-0.59	
-141	-0.74	
-140	-0.89	
-139	-1.04	
-138	-1.20	
-137	-1.36	
-136	-1.53	
-135	-1.71	
-134	-1.89	
-133	-2.07	
-132	-2.26	
-131	-2.46	
-130	-2.66	
-129	-2.87	
-128	-3.08	
-127	-3.30	
-126	-3.53	
-125	-3.76	
-124	-4.01	
-123	-4.26	
-122	-4.52	
-121	-4.79	
-120	-5.06	
-119	-5.35	
-118	-5.65	
-117	-5.96	
-116	-6.28	
-115	-6.62	
-114	-6.97	
-113	-7.34	
-112	-7.72	
-111	-8.12	
-110	-8.54	
-109	-8.98	
-108	-9.45	
-107	-9.94	
-106	-10.47	
-105	-11.03	
-104	-11.62	
-103	-12.27	
-102	-12.96	
-101	-13.71	
-100	-14.54	
-99	-15.46	
-98	-16.48	
-97	-17.64	
-96	-18.97	
-95	-20.56	
-94	-22.50	
-93	-24.99	
-92	-28.52	
-91	-34.54	
-90	-110.10	
-89	-34.54	
-88	-28.52	
-87	-24.99	
-86	-22.50	
-85	-20.56	
-84	-18.97	
-83	-17.64	
-82	-16.48	
-81	-15.46	
-80	-14.54	
-79	-13.71	
-78	-12.96	
-77	-12.27	
-76	-11.62	
-75	-11.03	
-74	-10.47	
-73	-9.94	
-72	-9.45	
-71	-8.98	
-70	-8.54	
-69	-8.12	
-68	-7.72	
-67	-7.34	
-66	-6.97	
-65	-6.62	
-64	-6.28	
-63	-5.96	
-62	-5.65	
-61	-5.35	
-60	-5.06	
-59	-4.79	
-58	-4.52	
-57	-4.26	
-56	-4.01	
-55	-3.76	
-54	-3.53	
-53	-3.30	
-52	-3.08	
-51	-2.87	
-50	-2.66	
-49	-2.46	
-48	-2.26	
-47	-2.07	
-46	-1.89	
-45	-1.71	
-44	-1.53	
-43	-1.36	
-42	-1.20	
-41	-1.04	
-40	-0.89	
-39	-0.74	
-38	-0.59	
-37	-0.45	
-36	-0.32	
-35	-0.18	
-34	-0.06	
-33	0.07	
-32	0.19	
-31	0.30	
-30.00	0.41	0° - 30°
-29.00	0.52	
-28.00	0.62	
-27.00	0.72	
-26.00	0.82	
-25.00	0.91	
-24.00	1.00	
-23.00	1.08	
-22.00	1.16	
-21.00	1.24	
-20.00	1.31	
-19.00	1.38	
-18.00	1.45	
-17.00	1.51	
-16.00	1.57	
-15.00	1.63	
-14.00	1.68	
-13.00	1.73	
-12.00	1.77	
-11.00	1.81	
-10.00	1.85	
-9.00	1.88	
-8.00	1.91	
-7.00	1.94	
-6.00	1.96	
-5.00	1.98	
-4.00	2.00	
-3.00	2.01	
-2.00	2.02	
-1.00	2.02	





Elevation angle above 30 degree Max Gain

0.00	2.02	0° reference angle
1.00	2.02	0° - 30°
2.00	2.02	
3.00	2.01	
4.00	2.00	
5.00	1.98	
6.00	1.96	
7.00	1.94	
8.00	1.91	
9.00	1.88	
10.00	1.85	
11.00	1.81	
12.00	1.77	
13.00	1.73	
14.00	1.68	
15.00	1.63	
16.00	1.57	
17.00	1.51	
18.00	1.45	
19.00	1.38	
20.00	1.31	
21.00	1.24	
22.00	1.16	
23.00	1.08	
24.00	1.00	
25.00	0.91	
26.00	0.82	
27.00	0.72	
28.00	0.62	
29.00	0.52	
30.00	0.41	
31	0.30	Above 30 degree
32	0.19	
33	0.07	
34	-0.06	
35	-0.18	
36	-0.32	
37	-0.45	
38	-0.59	
39	-0.74	
40	-0.88	
41	-1.04	
42	-1.20	
43	-1.36	
44	-1.53	
45	-1.71	
46	-1.89	
47	-2.07	
48	-2.26	
49	-2.46	
50	-2.66	
51	-2.87	
52	-3.08	
53	-3.30	
54	-3.53	
55	-3.76	
56	-4.01	
57	-4.26	
58	-4.52	
59	-4.79	
60	-5.06	
61	-5.35	
62	-5.65	
63	-5.96	
64	-6.28	
65	-6.62	
66	-6.97	
67	-7.34	
68	-7.72	
69	-8.12	
70	-8.54	
71	-8.98	
72	-9.45	
73	-9.94	
74	-10.47	
75	-11.03	
76	-11.62	
77	-12.27	
78	-12.96	
79	-13.71	
80	-14.54	
81	-15.46	
82	-16.48	
83	-17.64	
84	-18.97	
85	-20.58	
86	-22.50	
87	-24.99	
88	-28.52	
89	-34.54	
90	-110.10	
91	-34.54	
92	-28.52	
93	-24.99	
94	-22.50	
95	-20.58	
96	-18.97	
97	-17.64	
98	-16.48	
99	-15.46	
100	-14.54	
101	-13.71	
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110	-8.54	
111	-8.12	
112	-7.72	
113	-7.34	
114	-6.97	
115	-6.62	
116	-6.28	
117	-5.96	
118	-5.65	
119	-5.35	
120	-5.06	
121	-4.79	
122	-4.52	
123	-4.26	
124	-4.01	
125	-3.76	
126	-3.53	
127	-3.30	
128	-3.08	
129	-2.87	
130	-2.66	
131	-2.46	
132	-2.26	
133	-2.07	
134	-1.89	
135	-1.71	
136	-1.53	
137	-1.36	
138	-1.20	
139	-1.04	
140	-0.89	
141	-0.74	
142	-0.59	
143	-0.45	
144	-0.32	
145	-0.18	
146	-0.06	
147	0.07	
148	0.19	
149	0.30	
150.00	0.41	0° - 30°
151.00	0.52	
152.00	0.62	
153.00	0.72	
154.00	0.82	
155.00	0.91	
156.00	1.00	
157.00	1.08	
158.00	1.16	
159.00	1.24	
160.00	1.31	
161.00	1.38	
162.00	1.45	
163.00	1.51	
164.00	1.57	
165.00	1.63	
166.00	1.68	
167.00	1.73	
168.00	1.77	
169.00	1.81	
170.00	1.85	
171.00	1.88	
172.00	1.91	
173.00	1.94	
174.00	1.96	
175.00	1.98	
176.00	2.00	
177.00	2.01	
178.00	2.02	
179.00	2.02	



For EUT + Set 1 antenna:  
Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT20_Nss1,(MCS0)_4TX	1.70
802.11ac VHT40_Nss1,(MCS0)_4TX	-1.66
802.11ac VHT80_Nss1,(MCS0)_4TX	-6.74
5.725-5.85GHz	-
802.11ac VHT20_Nss1,(MCS0)_4TX	2.95
802.11ac VHT40_Nss1,(MCS0)_4TX	-1.78
802.11ac VHT80_Nss1,(MCS0)_4TX	-8.50

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

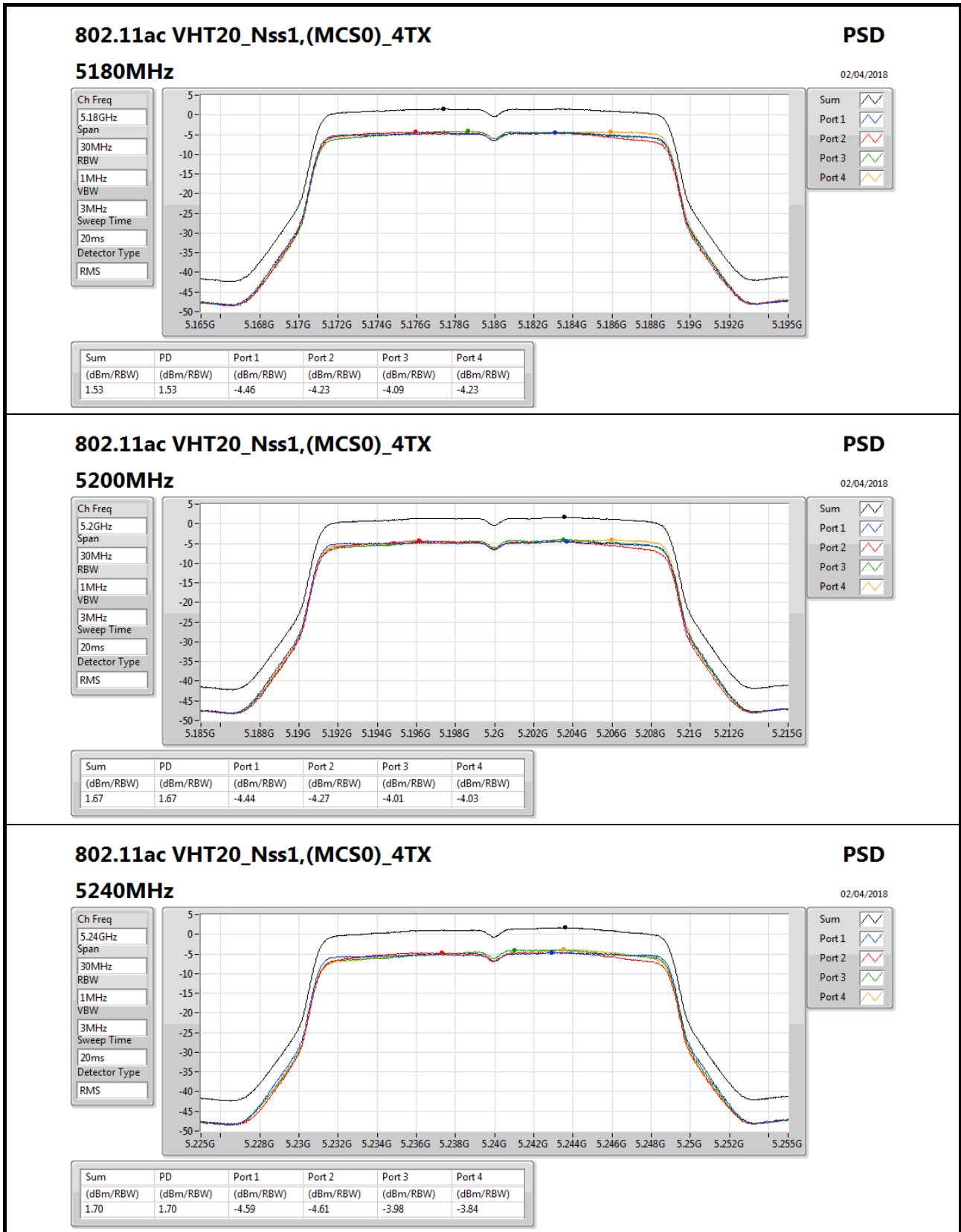


Result

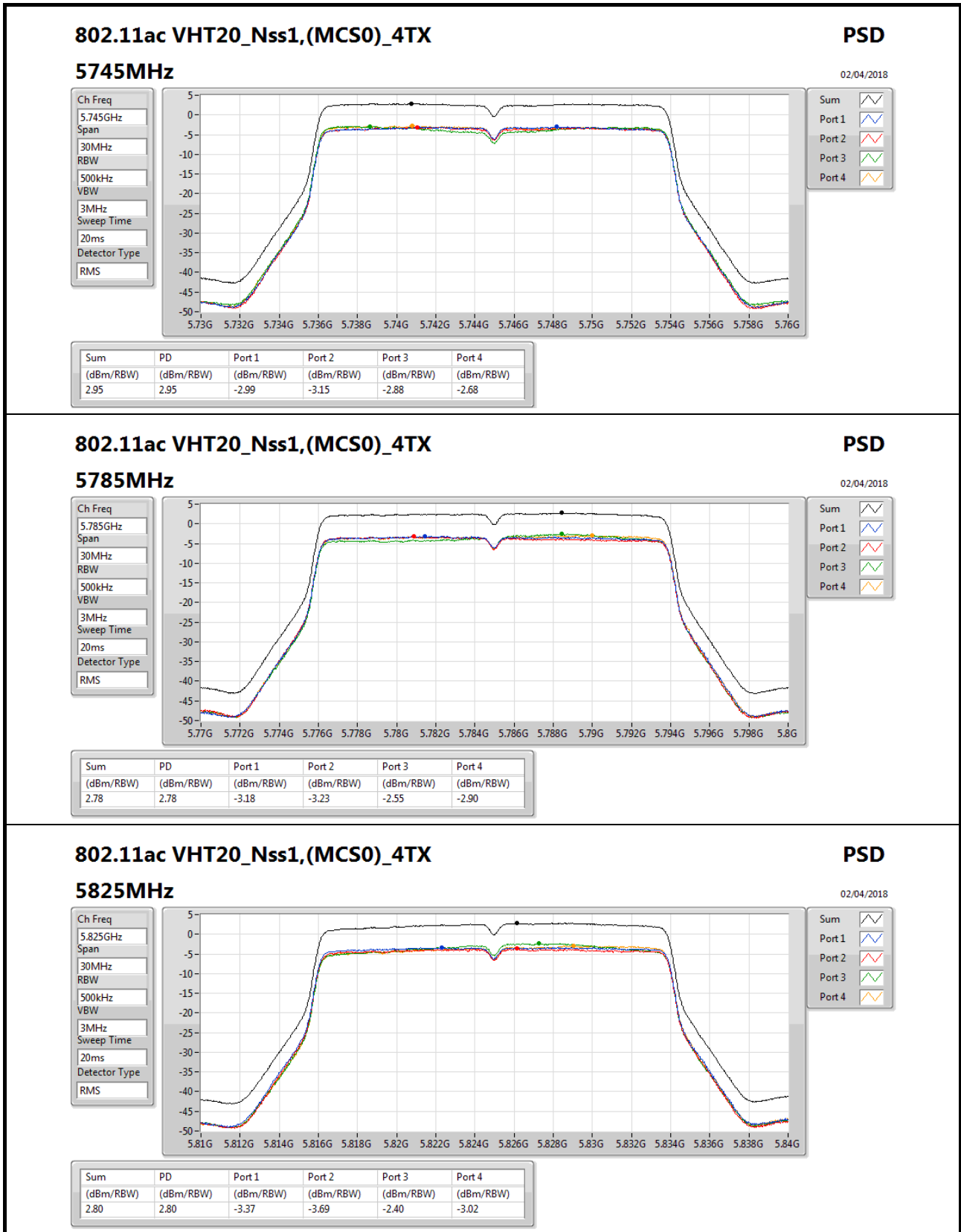
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	18.00	-4.46	-4.23	-4.09	-4.23	1.53	5.00
5200MHz	Pass	18.00	-4.44	-4.27	-4.01	-4.03	1.67	5.00
5240MHz	Pass	18.00	-4.59	-4.61	-3.98	-3.84	1.70	5.00
5745MHz	Pass	18.00	-2.99	-3.15	-2.88	-2.68	2.95	18.00
5785MHz	Pass	18.00	-3.18	-3.23	-2.55	-2.90	2.78	18.00
5825MHz	Pass	18.00	-3.37	-3.69	-2.40	-3.02	2.80	18.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	18.00	-7.87	-7.42	-7.78	-7.24	-1.83	5.00
5230MHz	Pass	18.00	-8.18	-7.78	-7.22	-6.94	-1.66	5.00
5755MHz	Pass	18.00	-7.74	-7.88	-7.47	-7.49	-1.78	18.00
5795MHz	Pass	18.00	-8.05	-8.17	-7.44	-7.93	-2.29	18.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	18.00	-12.93	-12.49	-12.43	-11.91	-6.74	5.00
5775MHz	Pass	18.00	-14.45	-14.30	-14.25	-14.58	-8.50	18.00

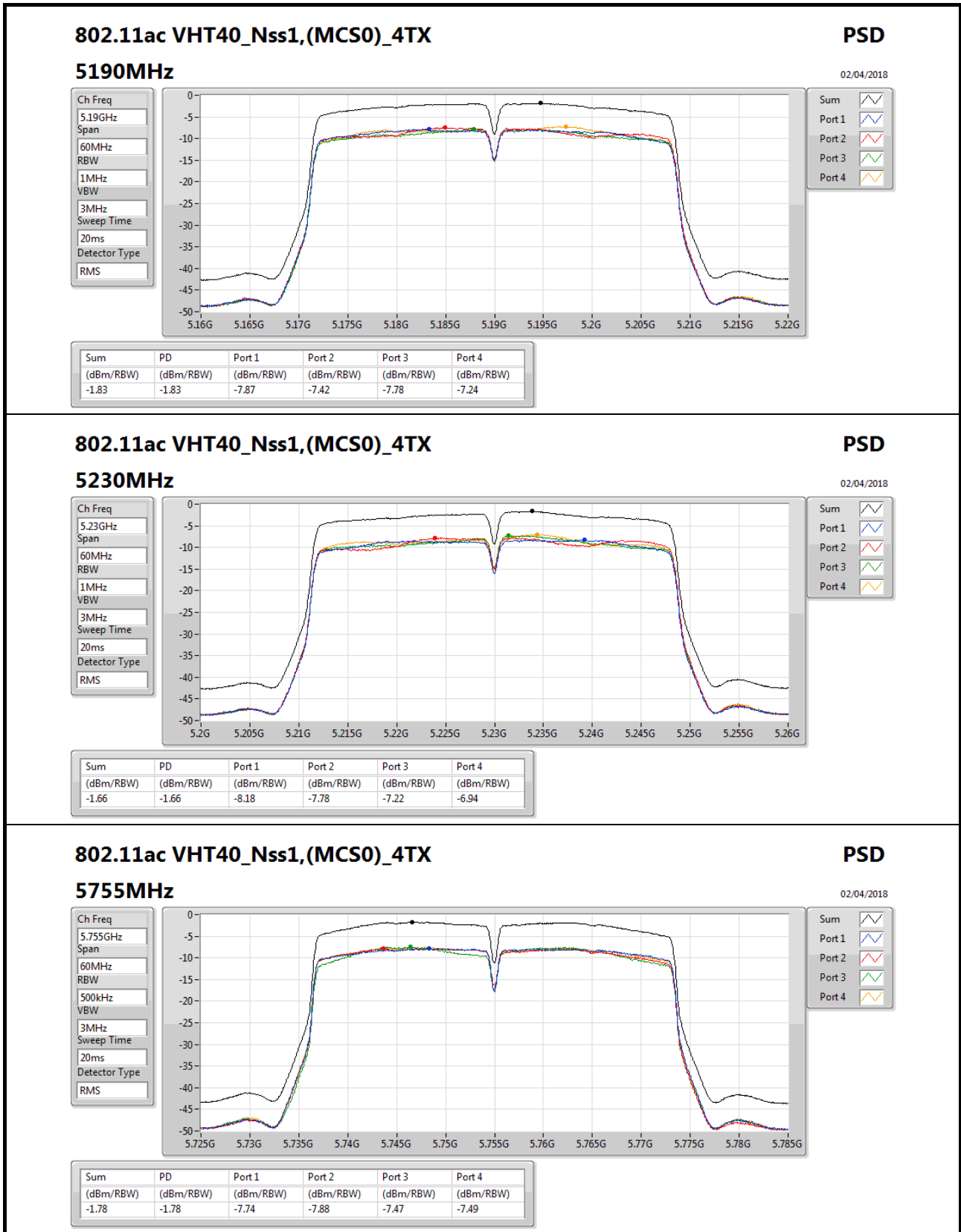
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

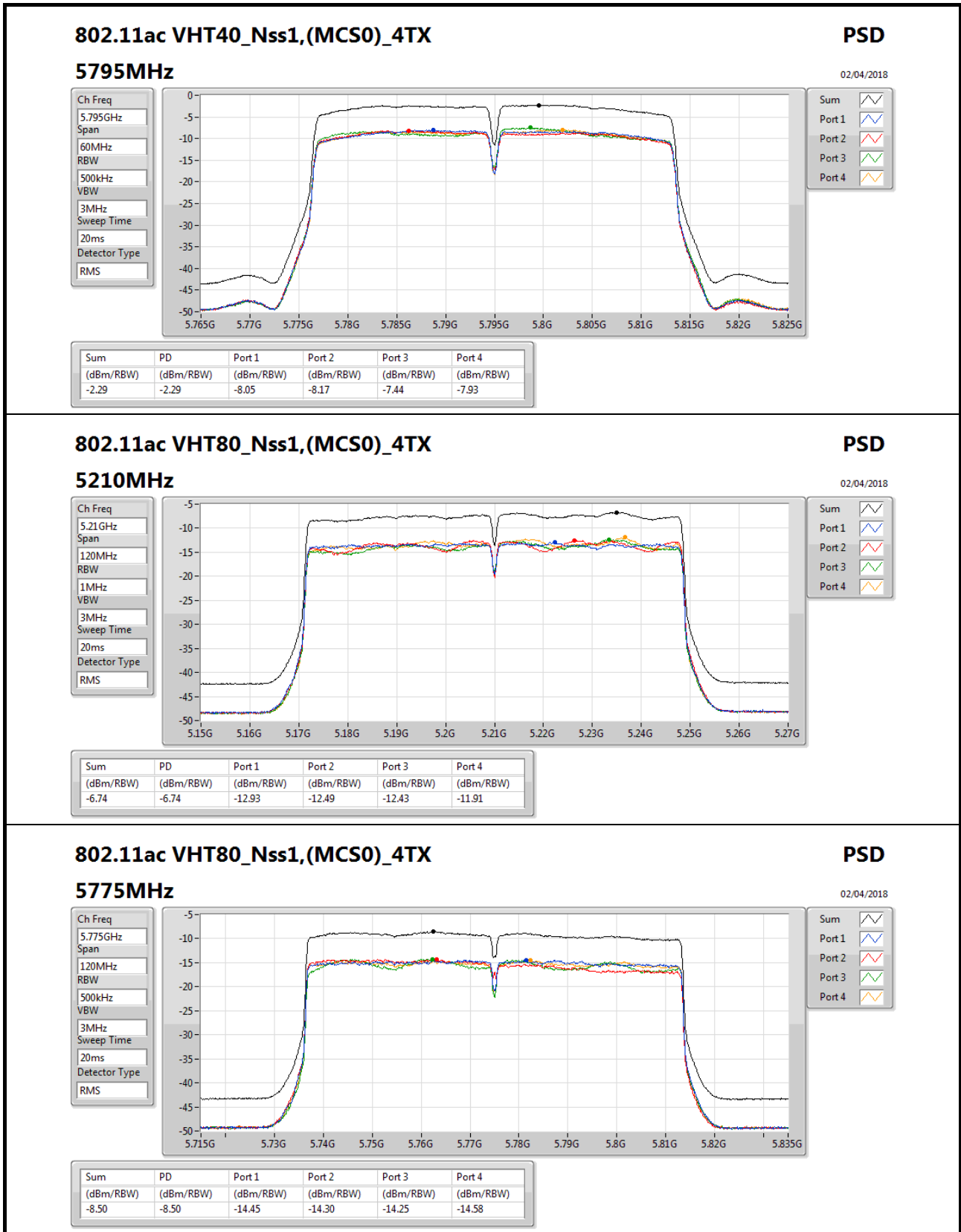
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port Xpower density;















**For EUT + Set 2 antenna:  
Summary**

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT20_Nss1,(MCS0)_4TX	6.43
802.11ac VHT40_Nss1,(MCS0)_4TX	3.43
802.11ac VHT80_Nss1,(MCS0)_4TX	0.60
5.725-5.85GHz	-
802.11ac VHT20_Nss1,(MCS0)_4TX	15.01
802.11ac VHT40_Nss1,(MCS0)_4TX	12.25
802.11ac VHT80_Nss1,(MCS0)_4TX	7.24

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

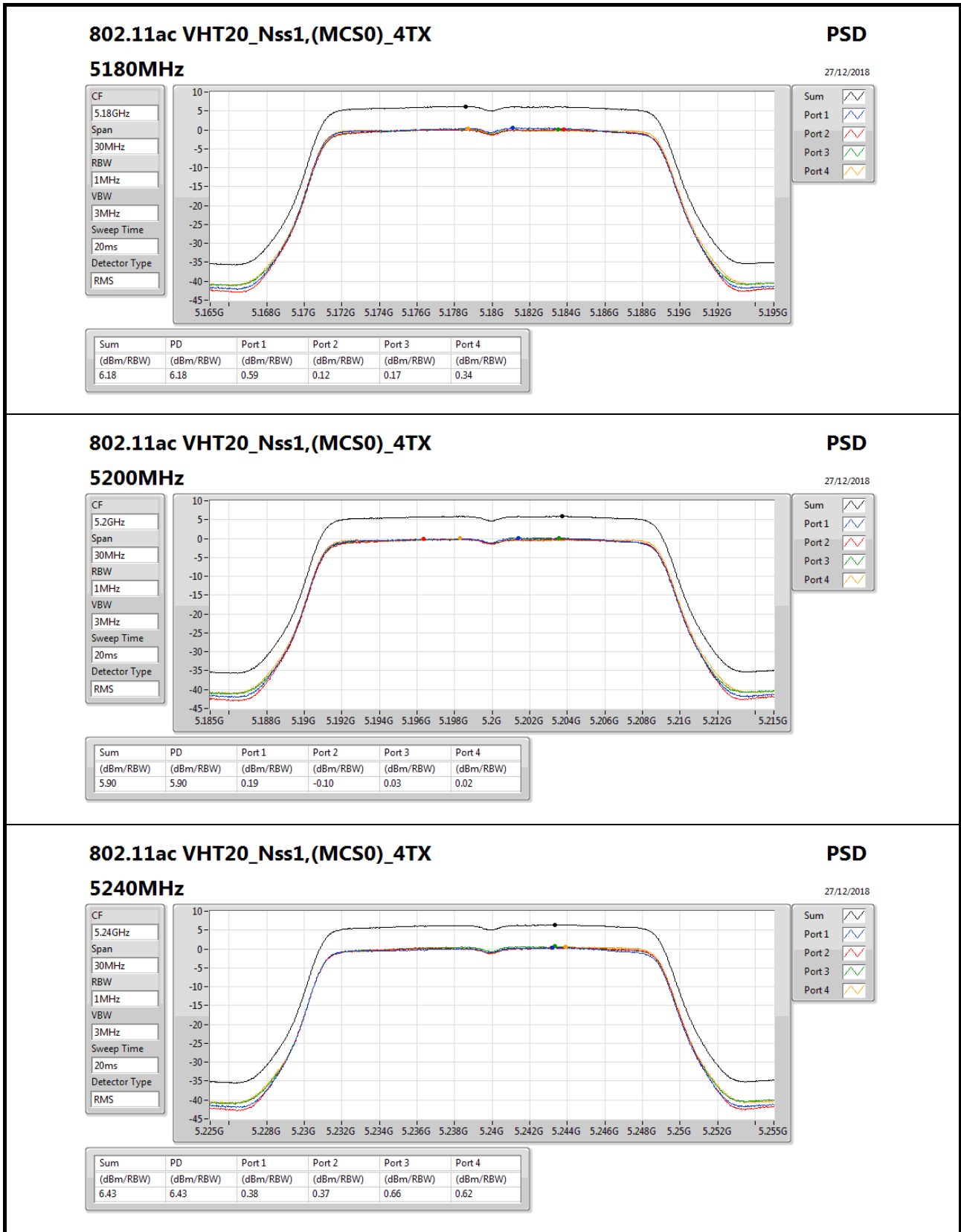


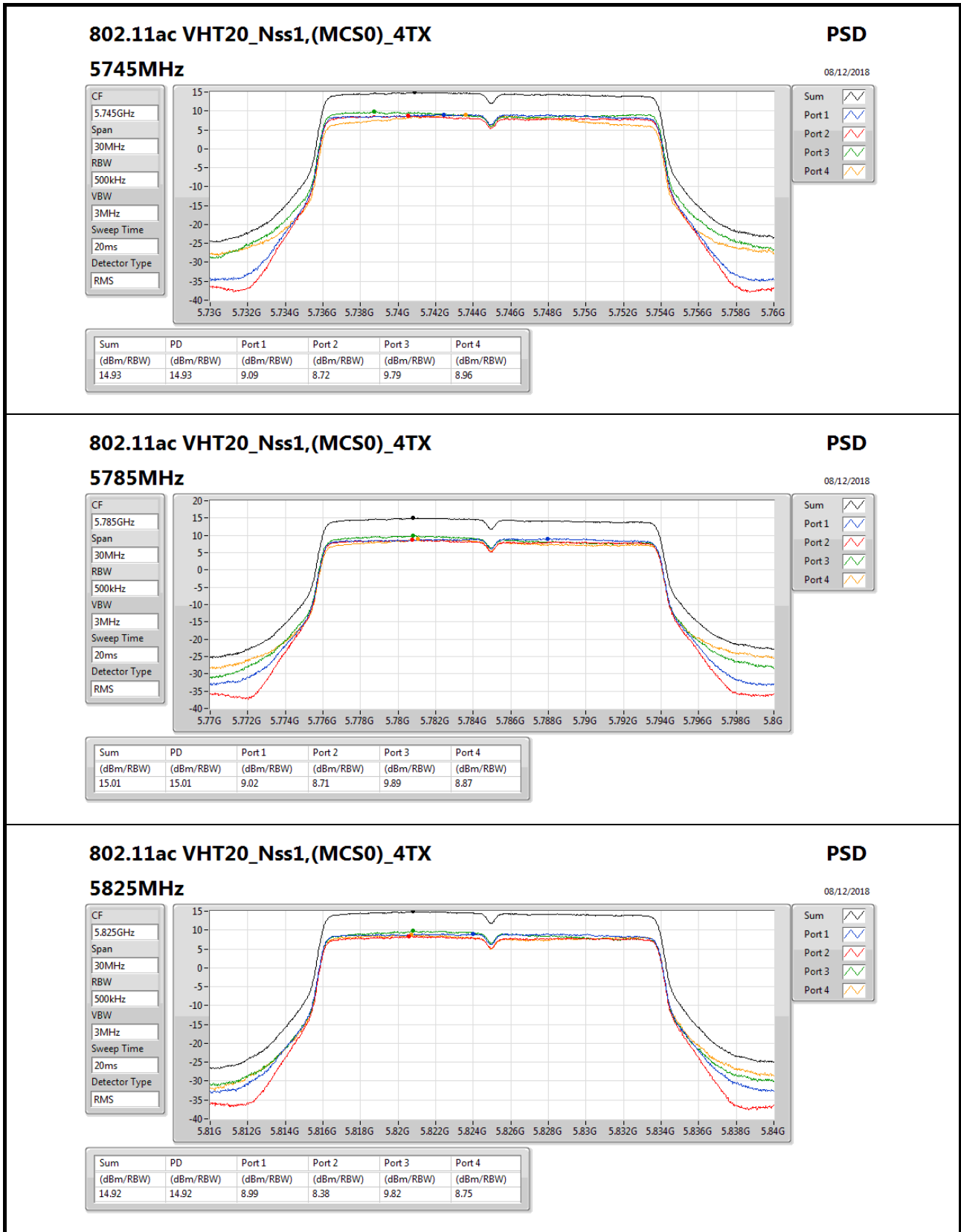
Result

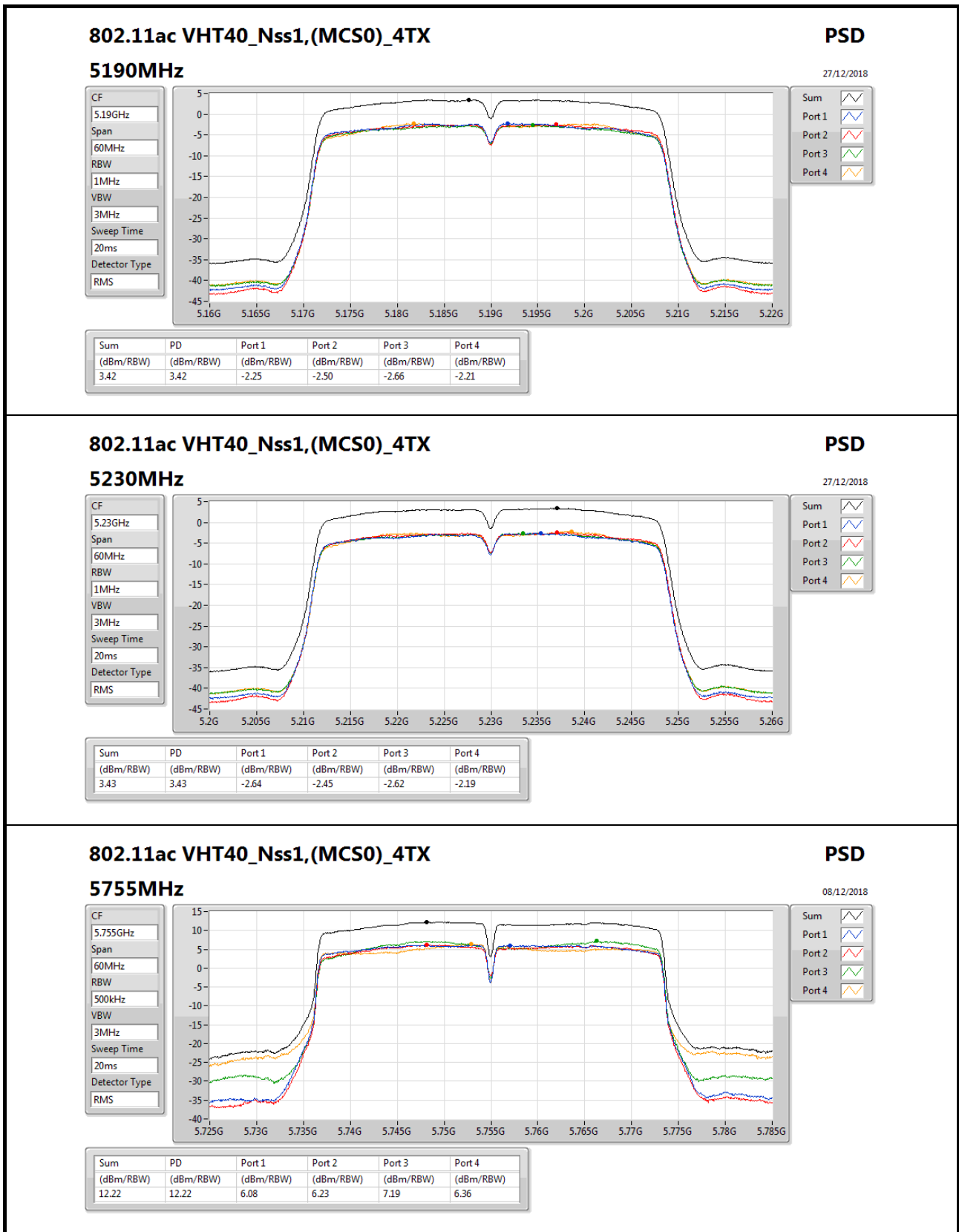
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	8.02	0.59	0.12	0.17	0.34	6.18	14.98
5200MHz	Pass	8.02	0.19	-0.10	0.03	0.02	5.90	14.98
5240MHz	Pass	8.02	0.38	0.37	0.66	0.62	6.43	14.98
5745MHz	Pass	8.02	9.09	8.72	9.79	8.96	14.93	27.98
5785MHz	Pass	8.02	9.02	8.71	9.89	8.87	15.01	27.98
5825MHz	Pass	8.02	8.99	8.38	9.82	8.75	14.92	27.98
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	8.02	-2.25	-2.50	-2.66	-2.21	3.42	14.98
5230MHz	Pass	8.02	-2.64	-2.45	-2.62	-2.19	3.43	14.98
5755MHz	Pass	8.02	6.08	6.23	7.19	6.36	12.22	27.98
5795MHz	Pass	8.02	6.27	6.06	7.15	6.20	12.25	27.98
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.02	-5.17	-5.29	-5.35	-4.70	0.60	14.98
5775MHz	Pass	8.02	1.27	0.91	2.38	1.23	7.24	27.98

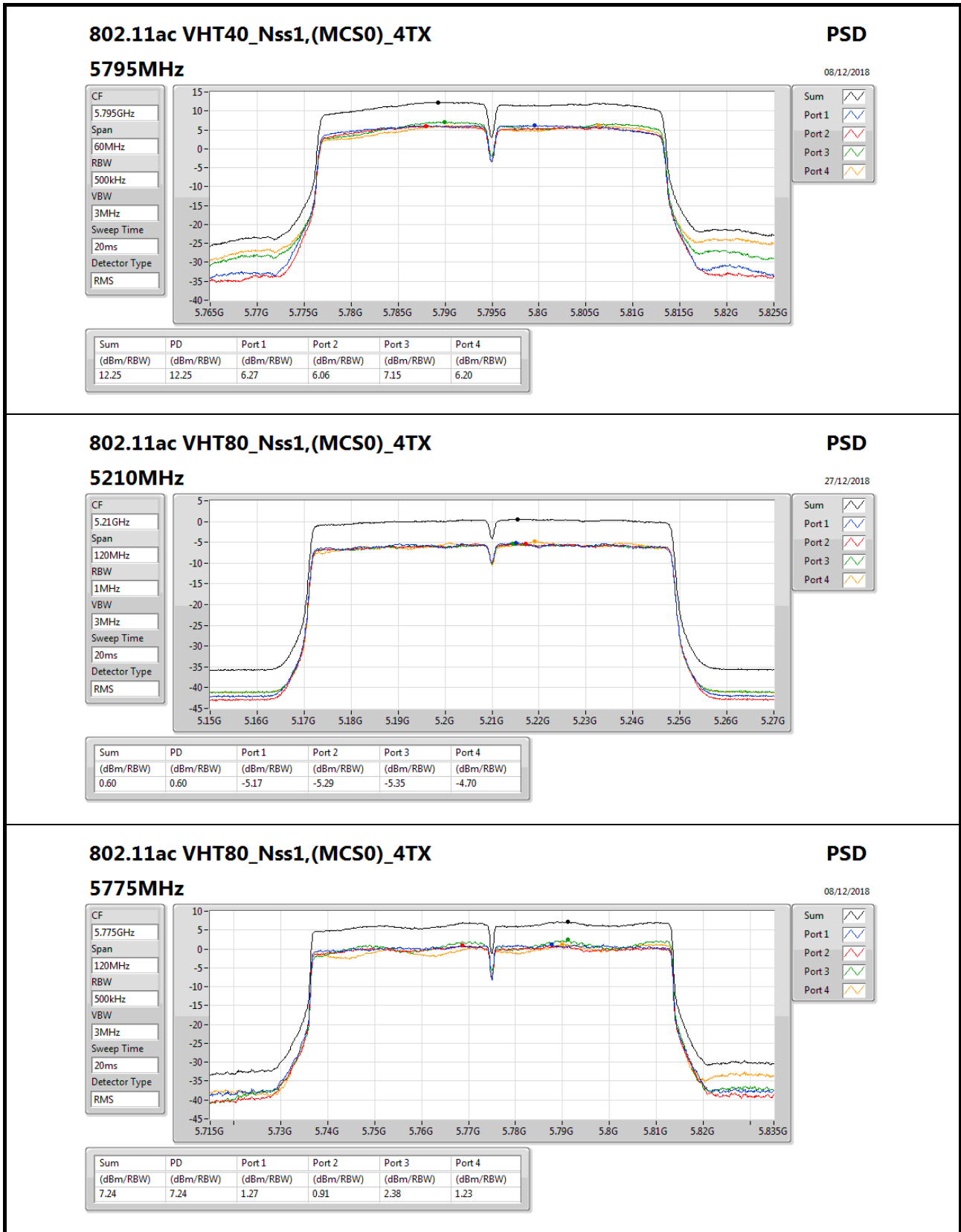
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port Xpower density;











# RSE below 1GHz Result

RSE below 1GHz Result																																																																																																			
Operating Mode	1	Polarization	Horizontal																																																																																																
Operating Function	CTX																																																																																																		
<div style="display: flex; justify-content: space-between;"> <div> <p>Level (dBuV/m)</p> <p style="text-align: right;">Date: 2018-09-04 Time: 19:38:35</p> </div> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Limit Line</th> <th>Over Limit</th> <th>Read Level</th> <th>CableAntenna Loss</th> <th>Preamp Factor</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> <th>Pol/Phase</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV</th> <th>dB</th> <th>dB/m</th> <th>dB</th> <th>cm</th> <th>deg</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>37.76</td> <td>32.55</td> <td>40.00</td> <td>-7.45</td> <td>42.78</td> <td>1.10</td> <td>20.18</td> <td>31.51</td> <td>300</td> <td>0 Peak</td> <td>HORIZONTAL</td> </tr> <tr> <td>2</td> <td>105.66</td> <td>31.95</td> <td>43.50</td> <td>-11.55</td> <td>45.46</td> <td>0.93</td> <td>17.27</td> <td>31.71</td> <td>300</td> <td>0 Peak</td> <td>HORIZONTAL</td> </tr> <tr> <td>3</td> <td>375.32</td> <td>33.76</td> <td>46.00</td> <td>-12.24</td> <td>42.98</td> <td>2.22</td> <td>20.47</td> <td>31.91</td> <td>300</td> <td>0 Peak</td> <td>HORIZONTAL</td> </tr> <tr> <td>4</td> <td>500.45</td> <td>33.32</td> <td>46.00</td> <td>-12.68</td> <td>39.36</td> <td>2.94</td> <td>23.10</td> <td>32.08</td> <td>300</td> <td>0 Peak</td> <td>HORIZONTAL</td> </tr> <tr> <td>5</td> <td>625.58</td> <td>32.53</td> <td>46.00</td> <td>-13.47</td> <td>37.44</td> <td>2.76</td> <td>24.55</td> <td>32.22</td> <td>300</td> <td>0 Peak</td> <td>HORIZONTAL</td> </tr> <tr> <td>6</td> <td>875.84</td> <td>35.59</td> <td>46.00</td> <td>-10.41</td> <td>38.09</td> <td>3.60</td> <td>26.06</td> <td>32.16</td> <td>300</td> <td>0 Peak</td> <td>HORIZONTAL</td> </tr> </tbody> </table>					Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	37.76	32.55	40.00	-7.45	42.78	1.10	20.18	31.51	300	0 Peak	HORIZONTAL	2	105.66	31.95	43.50	-11.55	45.46	0.93	17.27	31.71	300	0 Peak	HORIZONTAL	3	375.32	33.76	46.00	-12.24	42.98	2.22	20.47	31.91	300	0 Peak	HORIZONTAL	4	500.45	33.32	46.00	-12.68	39.36	2.94	23.10	32.08	300	0 Peak	HORIZONTAL	5	625.58	32.53	46.00	-13.47	37.44	2.76	24.55	32.22	300	0 Peak	HORIZONTAL	6	875.84	35.59	46.00	-10.41	38.09	3.60	26.06	32.16	300	0 Peak	HORIZONTAL
	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase																																																																																								
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																									
1	37.76	32.55	40.00	-7.45	42.78	1.10	20.18	31.51	300	0 Peak	HORIZONTAL																																																																																								
2	105.66	31.95	43.50	-11.55	45.46	0.93	17.27	31.71	300	0 Peak	HORIZONTAL																																																																																								
3	375.32	33.76	46.00	-12.24	42.98	2.22	20.47	31.91	300	0 Peak	HORIZONTAL																																																																																								
4	500.45	33.32	46.00	-12.68	39.36	2.94	23.10	32.08	300	0 Peak	HORIZONTAL																																																																																								
5	625.58	32.53	46.00	-13.47	37.44	2.76	24.55	32.22	300	0 Peak	HORIZONTAL																																																																																								
6	875.84	35.59	46.00	-10.41	38.09	3.60	26.06	32.16	300	0 Peak	HORIZONTAL																																																																																								
<p>Note 1: "&gt;20dB" means emission levels that exceed the level of 20 dB below the applicable limit.            Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)</p>																																																																																																			



# RSE below 1GHz Result

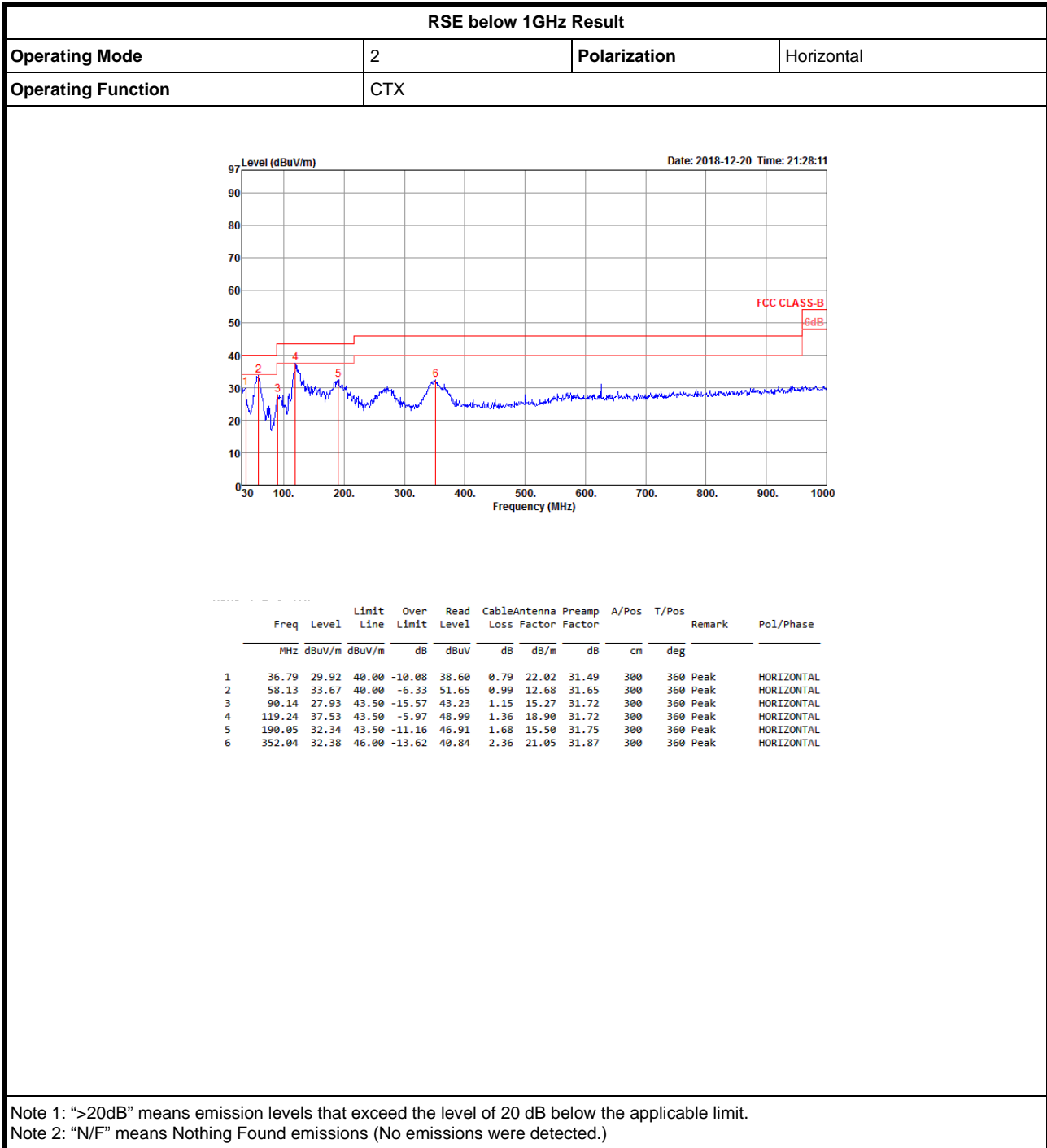
Appendix E.1

RSE below 1GHz Result																																																																																																			
Operating Mode	1	Polarization	Vertical																																																																																																
Operating Function	CTX																																																																																																		
<div style="display: flex; justify-content: space-between;"> <div> <p>Level (dBuV/m)</p> <p style="text-align: right;">Date: 2018-09-04 Time: 19:34:55</p> </div> </div>																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Limit</th> <th>Over</th> <th>Read</th> <th>CableAntenna</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> <th>Pol/Phase</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV</th> <th>dB</th> <th>dB/m</th> <th>dB</th> <th>cm</th> <th>deg</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>34.85</td> <td>33.38</td> <td>40.00</td> <td>-6.62</td> <td>41.76</td> <td>1.01</td> <td>22.06</td> <td>31.45</td> <td>300</td> <td>360 Peak</td> <td>VERTICAL</td> </tr> <tr> <td>2</td> <td>73.65</td> <td>32.90</td> <td>40.00</td> <td>-7.10</td> <td>51.35</td> <td>0.86</td> <td>12.37</td> <td>31.68</td> <td>300</td> <td>360 Peak</td> <td>VERTICAL</td> </tr> <tr> <td>3</td> <td>158.04</td> <td>32.66</td> <td>43.50</td> <td>-10.84</td> <td>47.34</td> <td>1.01</td> <td>16.07</td> <td>31.76</td> <td>300</td> <td>360 Peak</td> <td>VERTICAL</td> </tr> <tr> <td>4</td> <td>184.23</td> <td>37.18</td> <td>43.50</td> <td>-6.32</td> <td>52.36</td> <td>1.60</td> <td>14.98</td> <td>31.76</td> <td>300</td> <td>360 Peak</td> <td>VERTICAL</td> </tr> <tr> <td>5</td> <td>375.32</td> <td>33.85</td> <td>46.00</td> <td>-12.15</td> <td>43.07</td> <td>2.22</td> <td>20.47</td> <td>31.91</td> <td>300</td> <td>360 Peak</td> <td>VERTICAL</td> </tr> <tr> <td>6</td> <td>875.84</td> <td>32.11</td> <td>46.00</td> <td>-13.89</td> <td>34.61</td> <td>3.60</td> <td>26.06</td> <td>32.16</td> <td>300</td> <td>360 Peak</td> <td>VERTICAL</td> </tr> </tbody> </table>					Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	34.85	33.38	40.00	-6.62	41.76	1.01	22.06	31.45	300	360 Peak	VERTICAL	2	73.65	32.90	40.00	-7.10	51.35	0.86	12.37	31.68	300	360 Peak	VERTICAL	3	158.04	32.66	43.50	-10.84	47.34	1.01	16.07	31.76	300	360 Peak	VERTICAL	4	184.23	37.18	43.50	-6.32	52.36	1.60	14.98	31.76	300	360 Peak	VERTICAL	5	375.32	33.85	46.00	-12.15	43.07	2.22	20.47	31.91	300	360 Peak	VERTICAL	6	875.84	32.11	46.00	-13.89	34.61	3.60	26.06	32.16	300	360 Peak	VERTICAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																								
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																									
1	34.85	33.38	40.00	-6.62	41.76	1.01	22.06	31.45	300	360 Peak	VERTICAL																																																																																								
2	73.65	32.90	40.00	-7.10	51.35	0.86	12.37	31.68	300	360 Peak	VERTICAL																																																																																								
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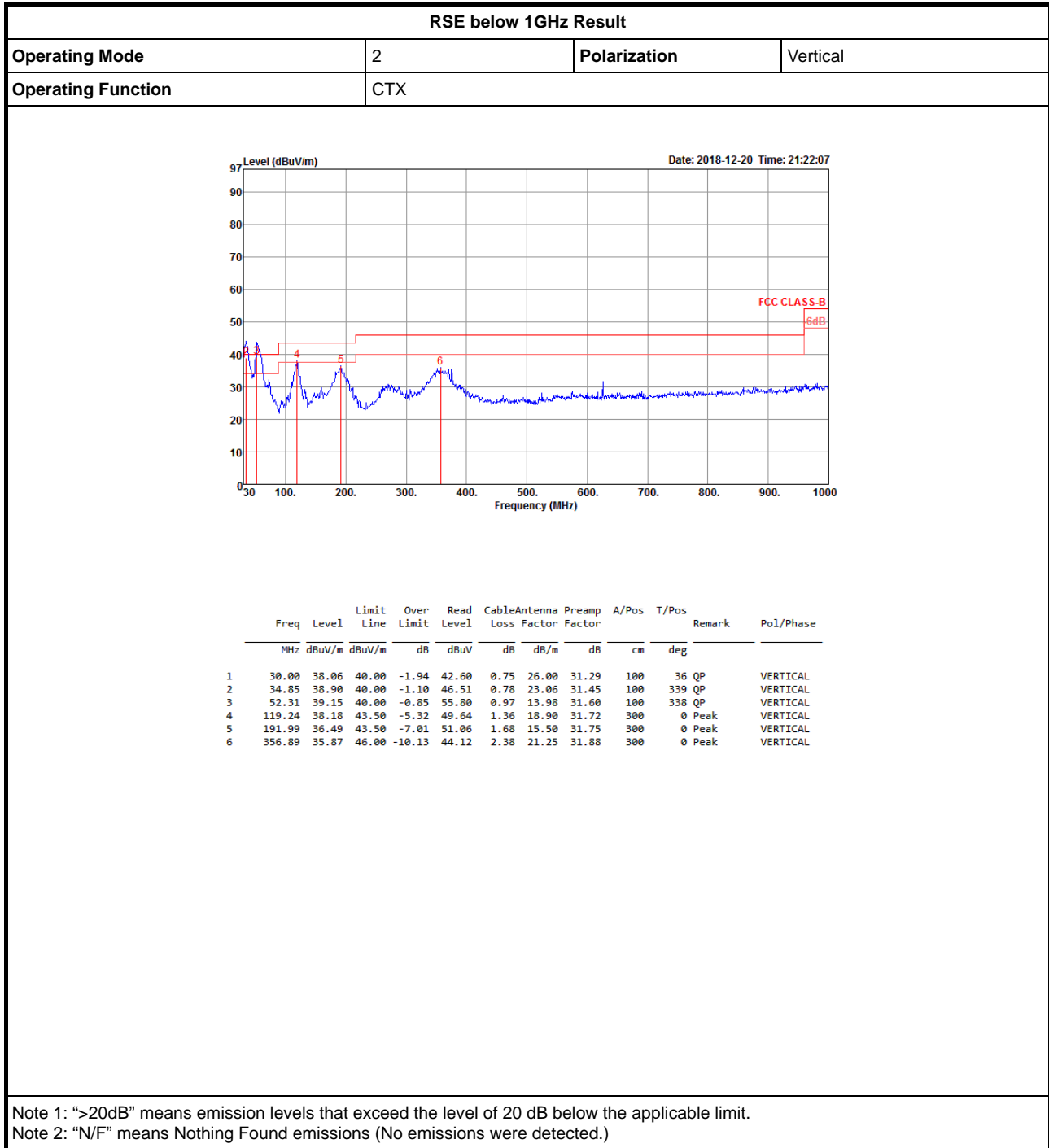
# RSE below 1GHz Result





## RSE below 1GHz Result

Appendix E.1





For Set 1 antenna:  
For Conducted Spurious Emission

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-89.27	-89.40	-89.37	-89.41	-65.34	-41.20	24.14
5200	-89.38	-89.36	-89.38	-89.36	-65.35	-41.20	24.15
5240	-89.21	-89.43	-89.35	-89.45	-65.34	-41.20	24.14
5745	-89.86	-89.87	-89.82	-89.94	-65.85	-41.20	24.65
5785	-89.88	-89.78	-89.87	-86.89	-64.88	-41.20	23.68
5825	-89.92	-87.40	-85.07	-89.02	-63.42	-41.20	22.22

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-76.29	-76.59	-76.03	-75.73	-52.13	-21.20	30.93
5200	-76.01	-75.47	-76.51	-76.10	-51.99	-21.20	30.79
5240	-76.16	-76.46	-76.53	-76.23	-52.32	-21.20	31.12
5745	-76.83	-77.02	-77.28	-77.12	-53.04	-21.20	31.84
5785	-77.29	-76.32	-76.51	-76.16	-52.53	-21.20	31.33
5825	-76.36	-76.96	-77.03	-77.00	-52.81	-21.20	31.61



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-89.80	-89.84	-89.87	-89.65	-65.77	-41.20	24.57
5230	-89.82	-89.86	-89.92	-89.79	-65.83	-41.20	24.63
5755	-89.57	-90.06	-89.87	-84.96	-64.00	-41.20	22.80
5795	-89.73	-89.83	-89.62	-89.33	-65.60	-41.20	24.40

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-76.36	-76.73	-76.66	-76.48	-52.53	-21.20	31.33
5230	-77.16	-77.07	-76.32	-76.71	-52.78	-21.20	31.58
5755	-75.99	-76.16	-69.81	-76.67	-49.56	-21.20	28.36
5795	-76.69	-76.77	-76.72	-72.47	-51.19	-21.20	29.99



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-89.80	-89.84	-89.78	-89.92	-65.81	-41.20	24.61
5775	-83.40	-89.89	-89.90	-88.66	-62.98	-41.20	21.78

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 1GHz~3GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-77.12	-76.15	-76.87	-76.13	-52.53	-21.20	31.33
5775	-74.37	-76.26	-76.60	-71.65	-50.22	-21.20	29.02



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-63.17	-63.14	-68.84	-71.01	-41.29	-41.20	0.09
5200	-68.69	-63.06	-68.71	-71.38	-42.77	-41.20	1.57
5240	-65.17	-64.04	-68.64	-71.63	-42.44	-41.20	1.24
5745	-63.94	-65.88	-67.72	-67.72	-42.00	-41.20	0.80
5785	-64.01	-65.67	-68.23	-69.21	-42.28	-41.20	1.08
5825	-64.52	-65.95	-68.88	-68.21	-42.52	-41.20	1.32

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-54.43	-58.07	-56.59	-58.50	-32.57	-21.20	11.37
5200	-59.56	-56.21	-57.56	-58.70	-33.80	-21.20	12.60
5240	-55.83	-59.06	-60.75	-58.96	-34.24	-21.20	13.04
5745	-58.69	-55.50	-56.60	-55.15	-32.26	-21.20	11.06
5785	-57.32	-56.40	-56.94	-56.48	-32.75	-21.20	11.55
5825	-54.72	-55.37	-55.57	-54.86	-31.10	-21.20	9.90



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-67.59	-65.42	-70.07	-70.83	-43.92	-41.20	2.72
5230	-69.99	-65.63	-69.93	-71.47	-44.62	-41.20	3.42
5755	-64.38	-65.58	-68.35	-69.16	-42.41	-41.20	1.21
5795	-65.27	-65.94	-68.34	-68.00	-42.67	-41.20	1.47

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-58.75	-57.44	-60.26	-58.34	-34.56	-21.20	13.36
5230	-58.41	-57.89	-60.50	-59.47	-34.93	-21.20	13.73
5755	-57.63	-56.09	-57.29	-56.70	-32.87	-21.20	11.67
5795	-58.70	-55.96	-55.21	-55.55	-32.14	-21.20	10.94



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-68.62	-65.44	-68.03	-69.40	-43.58	-41.20	2.38
5775	-64.96	-66.56	-69.00	-68.26	-42.89	-41.20	1.69

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 3GHz~6GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-56.74	-55.45	-55.19	-56.19	-31.83	-21.20	10.63
5775	-57.46	-56.66	-57.41	-56.44	-32.95	-21.20	11.75





**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-80.90	-80.89	-80.68	-81.12	-56.87	-41.20	15.67
5200	-81.08	-81.16	-80.87	-81.01	-57.01	-41.20	15.81
5240	-80.94	-81.09	-80.93	-81.22	-57.02	-41.20	15.82
5745	-70.29	-67.62	-71.50	-72.00	-45.97	-41.20	4.77
5785	-72.09	-69.08	-70.29	-71.13	-46.49	-41.20	5.29
5825	-70.65	-67.26	-69.26	-69.81	-45.04	-41.20	3.84

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-68.49	-68.45	-68.34	-69.02	-44.55	-21.20	23.35
5200	-68.13	-68.25	-68.32	-68.73	-44.33	-21.20	23.13
5240	-68.11	-68.70	-68.57	-68.97	-44.56	-21.20	23.36
5745	-61.48	-58.41	-59.68	-59.41	-35.59	-21.20	14.39
5785	-61.71	-58.07	-58.41	-59.20	-35.12	-21.20	13.92
5825	-59.18	-54.94	-57.45	-57.78	-33.03	-21.20	11.83



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-81.15	-81.31	-81.18	-81.50	-57.26	-41.20	16.06
5230	-81.37	-81.54	-81.28	-81.54	-57.41	-41.20	16.21
5755	-70.11	-67.55	-70.79	-71.27	-45.65	-41.20	4.45
5795	-72.83	-69.23	-70.01	-70.99	-46.55	-41.20	5.35

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-68.46	-68.70	-68.07	-69.14	-44.55	-21.20	23.35
5230	-68.65	-68.99	-69.17	-69.73	-45.10	-21.20	23.90
5755	-59.72	-56.24	-58.84	-59.34	-34.28	-21.20	13.08
5795	-62.11	-57.49	-57.79	-59.23	-34.79	-21.20	13.59



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-81.44	-81.46	-81.37	-81.57	-57.44	-41.20	16.24
5775	-72.83	-71.20	-70.81	-69.95	-47.06	-41.20	5.86

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 6GHz~9GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-68.81	-69.30	-68.51	-68.66	-44.79	-21.20	23.59
5775	-61.55	-59.11	-58.98	-58.91	-35.49	-21.20	14.29



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-81.30	-81.35	-81.18	-81.03	-57.19	-41.20	15.99
5200	-81.23	-81.19	-81.26	-81.24	-57.21	-41.20	16.01
5240	-81.28	-81.04	-81.13	-81.19	-57.14	-41.20	15.94
5745	-76.28	-75.76	-75.88	-75.11	-51.72	-41.20	10.52
5785	-76.37	-77.21	-76.64	-75.24	-52.28	-41.20	11.08
5825	-78.13	-77.25	-76.94	-75.94	-52.97	-41.20	11.77

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-68.52	-68.93	-69.26	-69.22	-44.95	-21.20	23.75
5200	-68.77	-68.62	-68.80	-68.70	-44.70	-21.20	23.50
5240	-68.86	-69.14	-68.63	-69.19	-44.93	-21.20	23.73
5745	-63.40	-63.30	-62.69	-60.29	-38.20	-21.20	17.00
5785	-63.59	-63.91	-62.49	-63.57	-39.33	-21.20	18.13
5825	-65.05	-65.39	-61.80	-62.42	-39.36	-21.20	18.16



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-81.21	-81.16	-81.23	-80.99	-57.13	-41.20	15.93
5230	-81.22	-81.38	-81.02	-81.27	-57.20	-41.20	16.00
5755	-80.06	-79.96	-80.33	-79.44	-55.91	-41.20	14.71
5795	-80.65	-80.69	-80.83	-80.67	-56.69	-41.20	15.49

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-69.03	-68.74	-68.91	-68.70	-44.82	-21.20	23.62
5230	-68.99	-68.90	-69.13	-69.42	-45.08	-21.20	23.88
5755	-68.50	-68.40	-68.23	-66.84	-43.92	-21.20	22.72
5795	-67.79	-68.57	-68.48	-68.70	-44.35	-21.20	23.15



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-81.09	-81.19	-81.12	-81.38	-57.17	-41.20	15.97
5775	-80.76	-80.86	-80.86	-80.76	-56.79	-41.20	15.59

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 9GHz~18GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-69.30	-68.40	-68.81	-68.67	-44.76	-21.20	23.56
5775	-68.69	-68.81	-68.34	-68.57	-44.58	-21.20	23.38



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-75.81	-75.84	-75.89	-75.70	-51.79	-41.20	10.59
5200	-75.76	-75.91	-75.80	-75.72	-51.78	-41.20	10.58
5240	-75.88	-75.67	-75.85	-75.77	-51.77	-41.20	10.57
5745	-75.48	-75.36	-75.46	-75.29	-51.38	-41.20	10.18
5785	-75.40	-75.29	-75.51	-75.25	-51.34	-41.20	10.14
5825	-75.27	-75.39	-75.36	-75.40	-51.33	-41.20	10.13

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT20 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5180	-63.21	-63.46	-63.79	-63.80	-39.54	-21.20	18.34
5200	-63.44	-63.57	-63.94	-63.07	-39.47	-21.20	18.27
5240	-63.71	-63.42	-63.45	-63.82	-39.58	-21.20	18.38
5745	-63.14	-63.17	-63.50	-63.62	-39.33	-21.20	18.13
5785	-64.01	-63.09	-62.44	-63.76	-39.26	-21.20	18.06
5825	-63.68	-63.23	-63.34	-62.88	-39.25	-21.20	18.05



**TX Above 1GHz Result**

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-75.72	-75.90	-75.86	-75.80	-51.80	-41.20	10.60
5230	-75.85	-75.88	-75.95	-75.91	-51.88	-41.20	10.68
5755	-75.46	-75.45	-75.36	-75.40	-51.40	-41.20	10.20
5795	-75.36	-75.17	-75.44	-75.31	-51.30	-41.20	10.10

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT40 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5190	-63.01	-62.97	-62.88	-63.69	-39.11	-21.20	17.91
5230	-62.72	-63.74	-62.97	-63.81	-39.26	-21.20	18.06
5755	-63.01	-63.00	-63.11	-63.51	-39.13	-21.20	17.93
5795	-62.31	-63.41	-63.59	-62.72	-38.96	-21.20	17.76





**TX Above 1GHz Result**

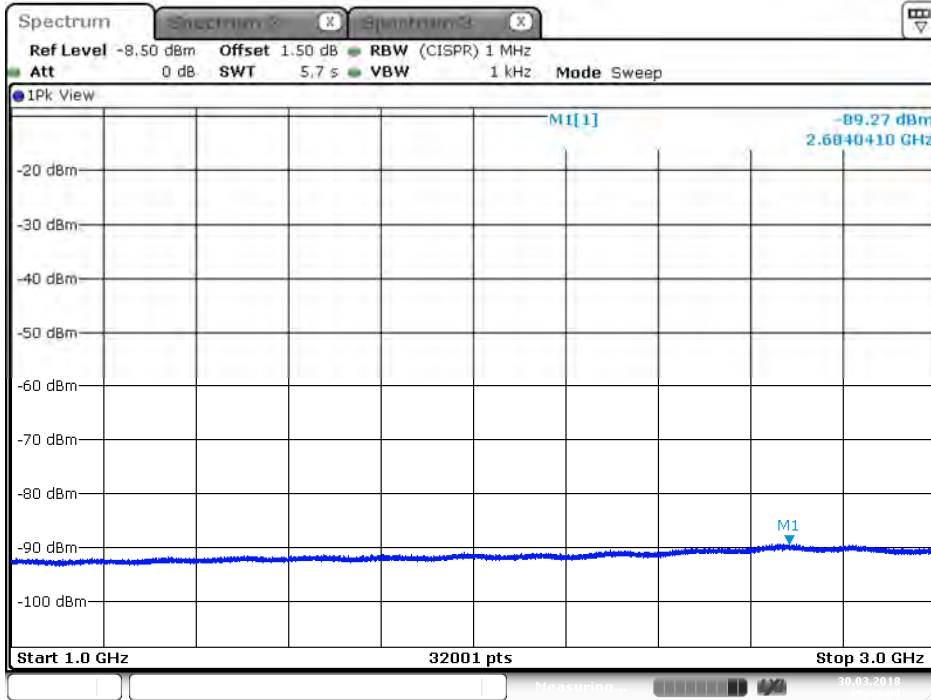
<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Average / Port 1 + Port 2 + Port 3 + Port 4 / 18GHz~40GHz

Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-75.88	-75.58	-75.81	-75.83	-51.75	-41.20	10.55
5775	-75.27	-75.42	-75.36	-75.37	-51.33	-41.20	10.13

<b>Temperature</b>	22°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Serway Li	<b>Configurations</b>	VHT80 / Peak / Port 1 + Port 2 + Port 3 + Port 4 / 18GHz~40GHz

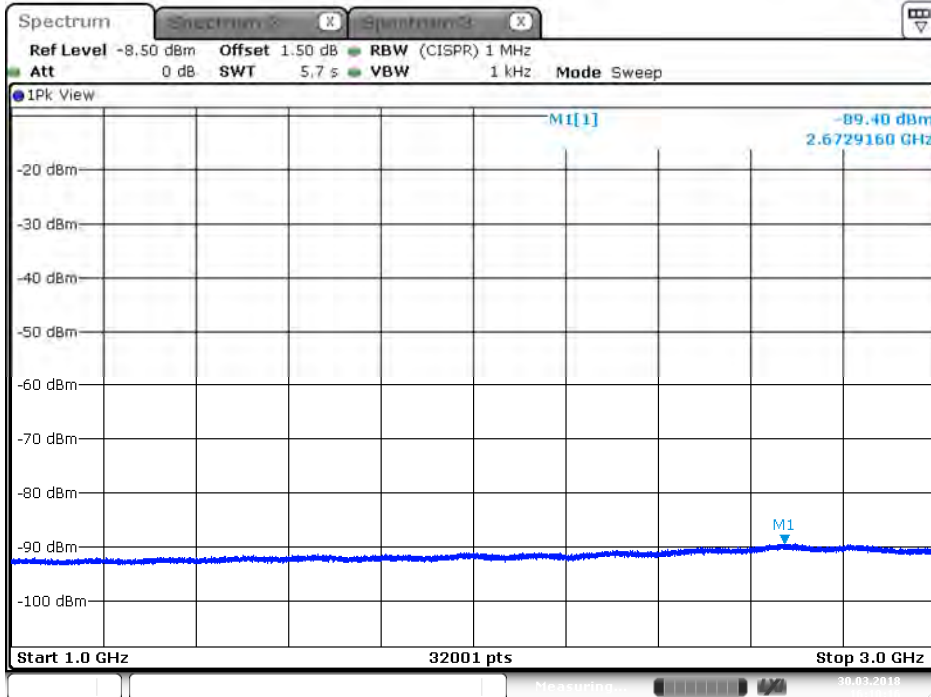
Frequency (MHz)	Port(TX1) Spurious Level (dBm)	Port(TX2) Spurious Level (dBm)	Port(TX3) Spurious Level (dBm)	Port(TX4) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dBm)
5210	-63.76	-63.33	-63.86	-63.54	-39.60	-21.20	18.40
5775	-63.74	-62.90	-62.82	-61.87	-38.76	-21.20	17.56

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



Date: 30.MAR.2018 15:40:09

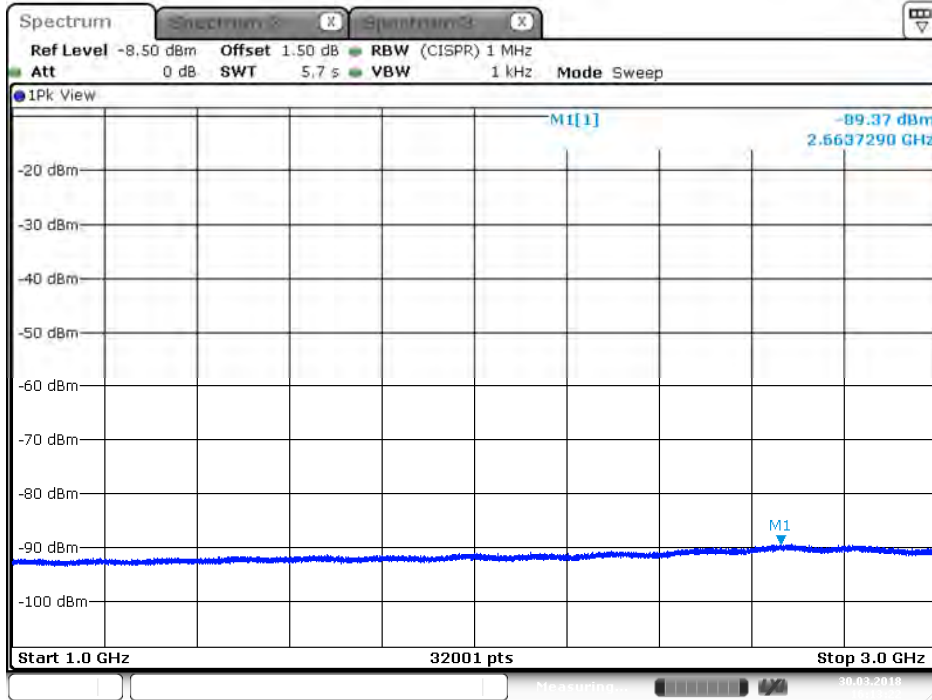
**Plot on Configuration VHT20 / 5180 MHz / Average / Port 2 / 1GHz~3GHz**



Date: 30.MAR.2018 16:10:16

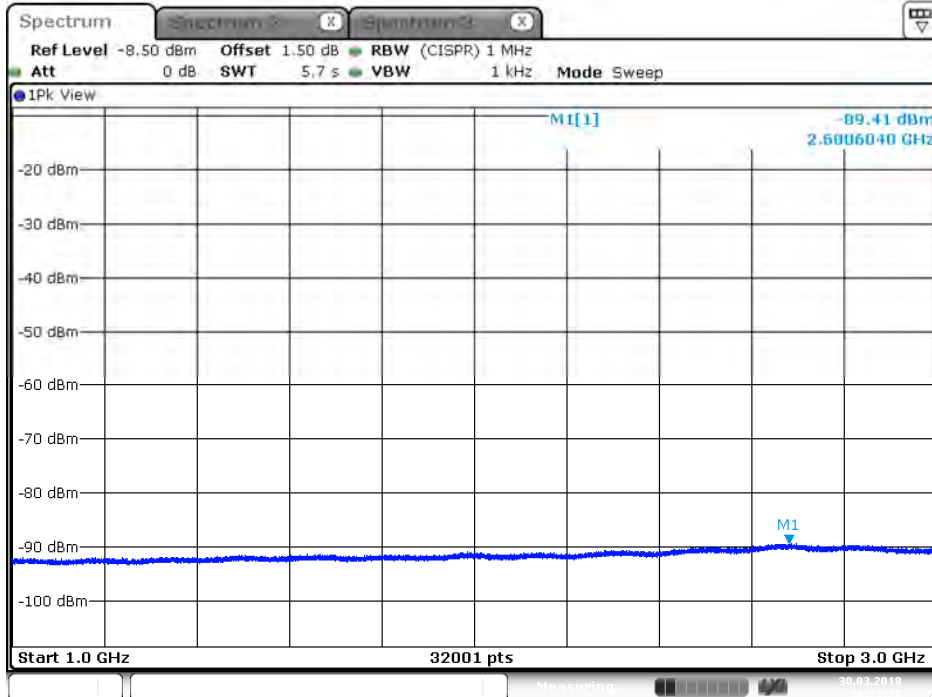


Plot on Configuration VHT20 / 5180 MHz / Average / Port 3 / 1GHz~3GHz



Date: 30.MAR.2018 16:13:23

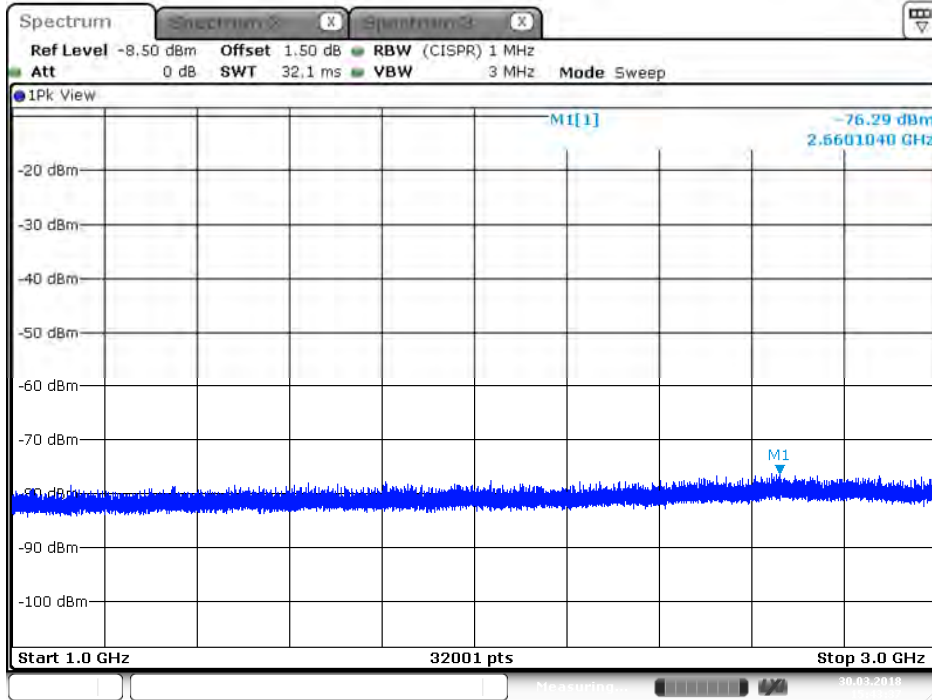
Plot on Configuration VHT20 / 5180 MHz / Average / Port 4 / 1GHz~3GHz



Date: 30.MAR.2018 16:21:28

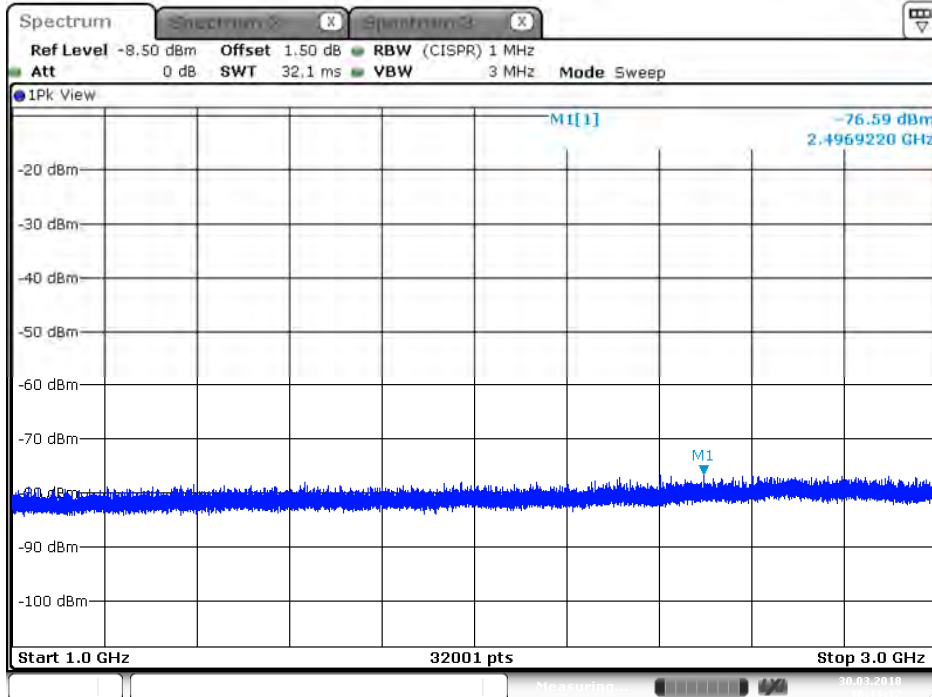


Plot on Configuration VHT20 / 5180 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 30.MAR.2018 15:43:37

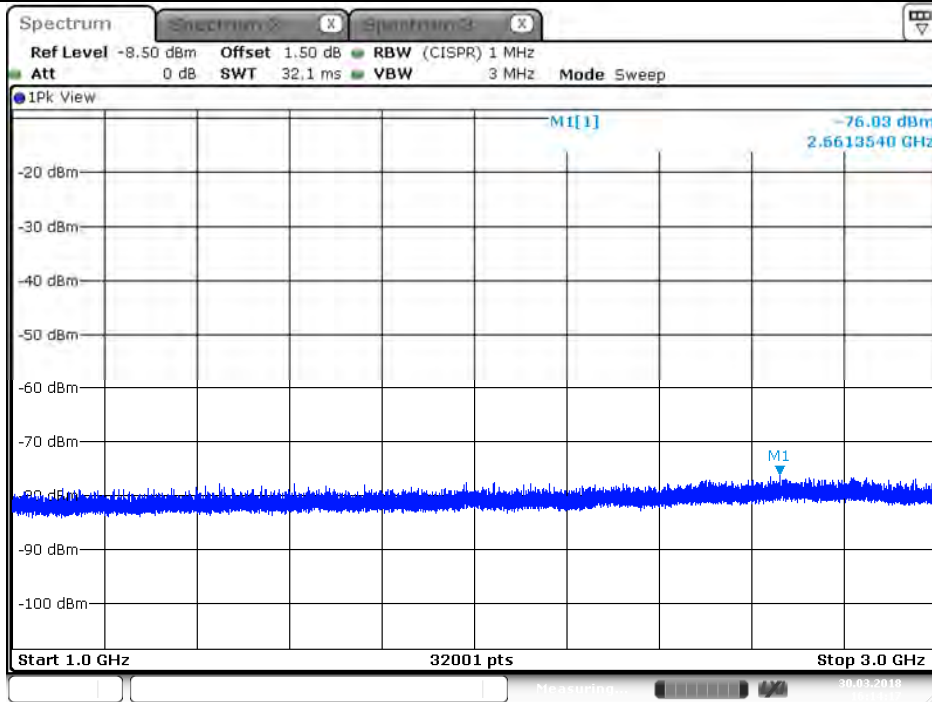
Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 / 1GHz~3GHz



Date: 30.MAR.2018 16:11:12

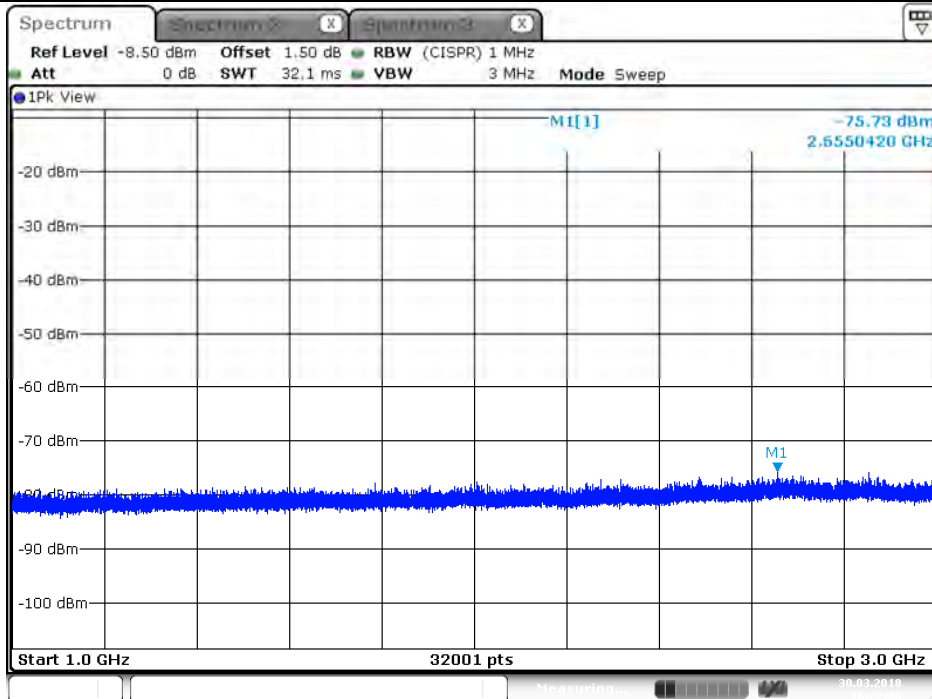


Plot on Configuration VHT20 / 5180 MHz / Peak / Port 3 / 1GHz~3GHz



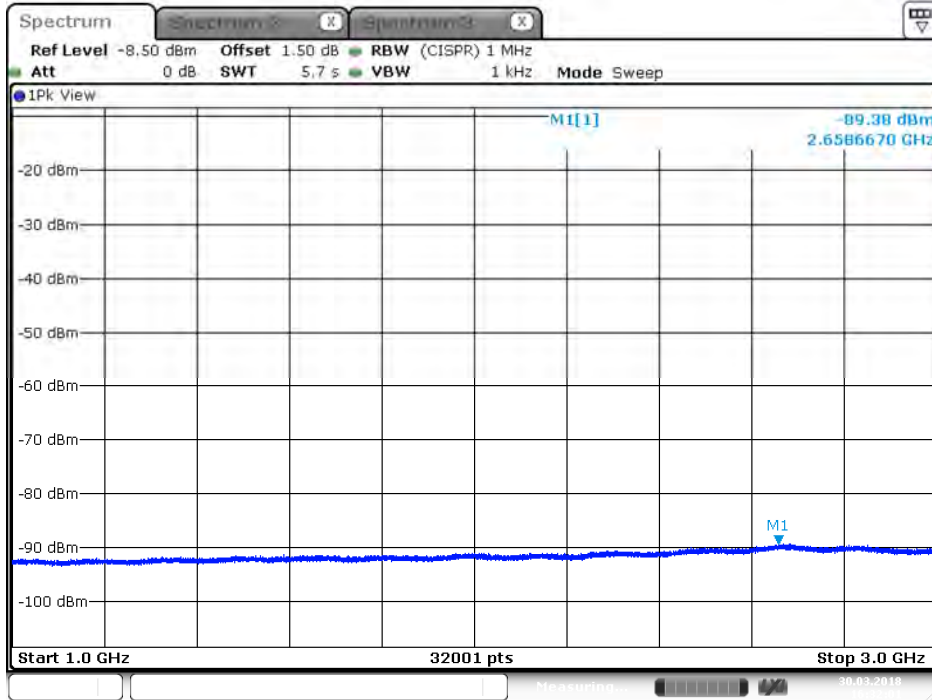
Date: 30.MAR.2018 16:14:18

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 4 / 1GHz~3GHz



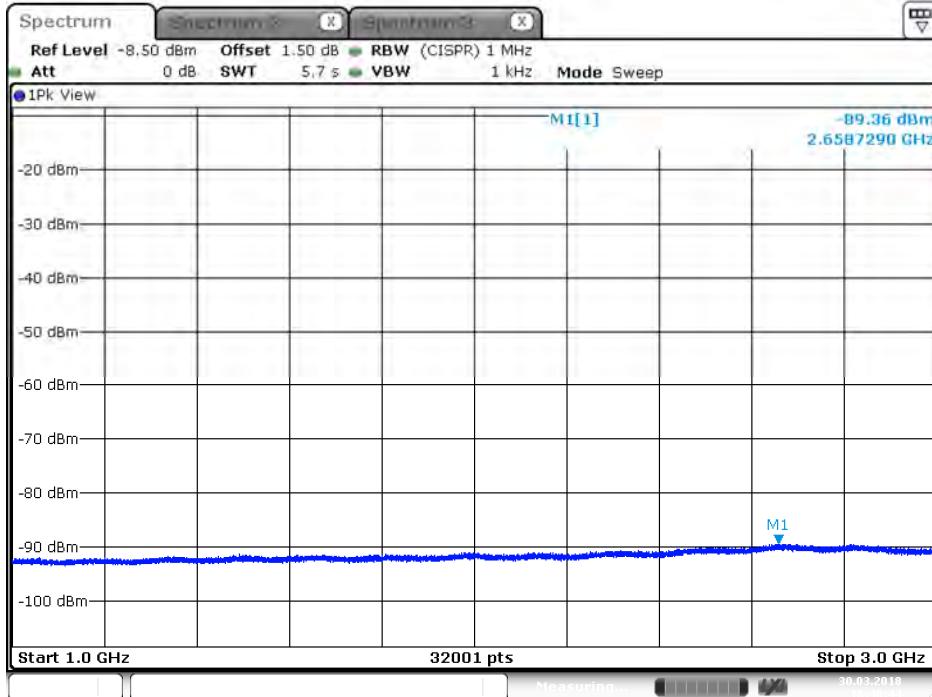
Date: 30.MAR.2018 16:22:40

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



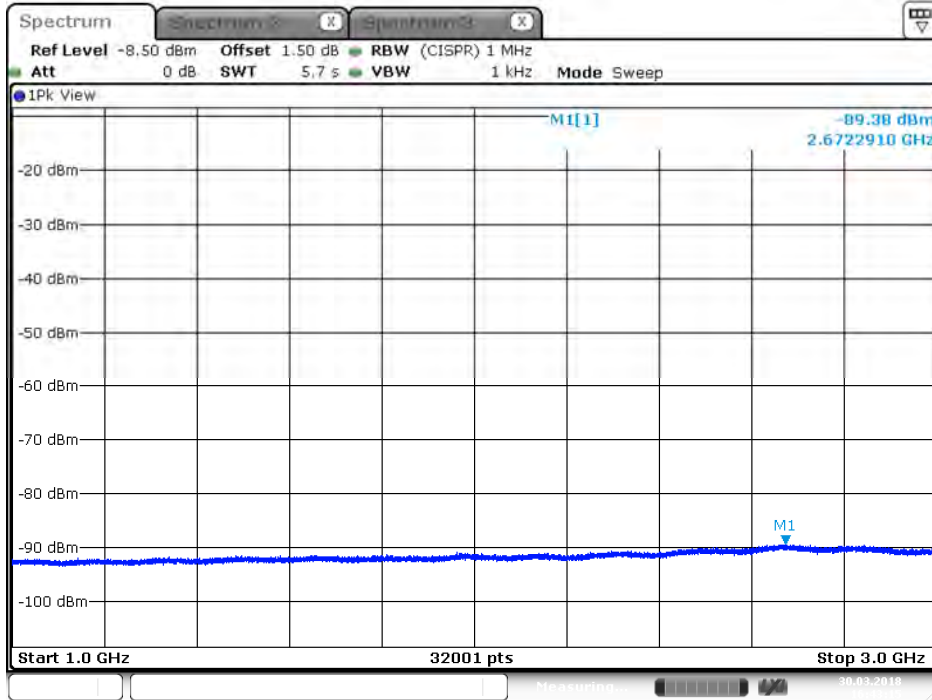
Date: 30.MAR.2018 16:32:01

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



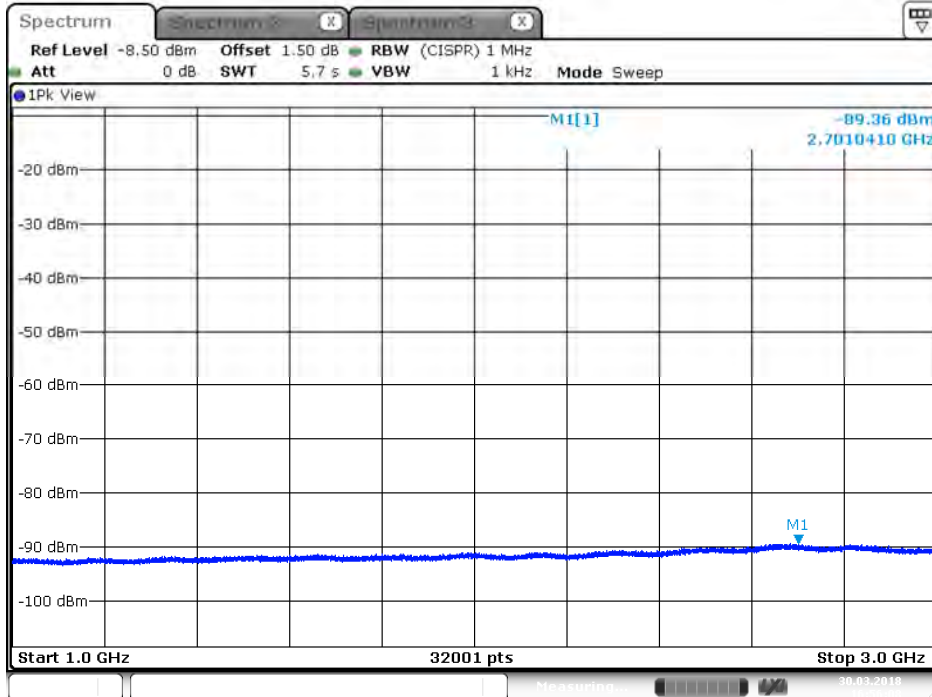
Date: 30.MAR.2018 16:40:44

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



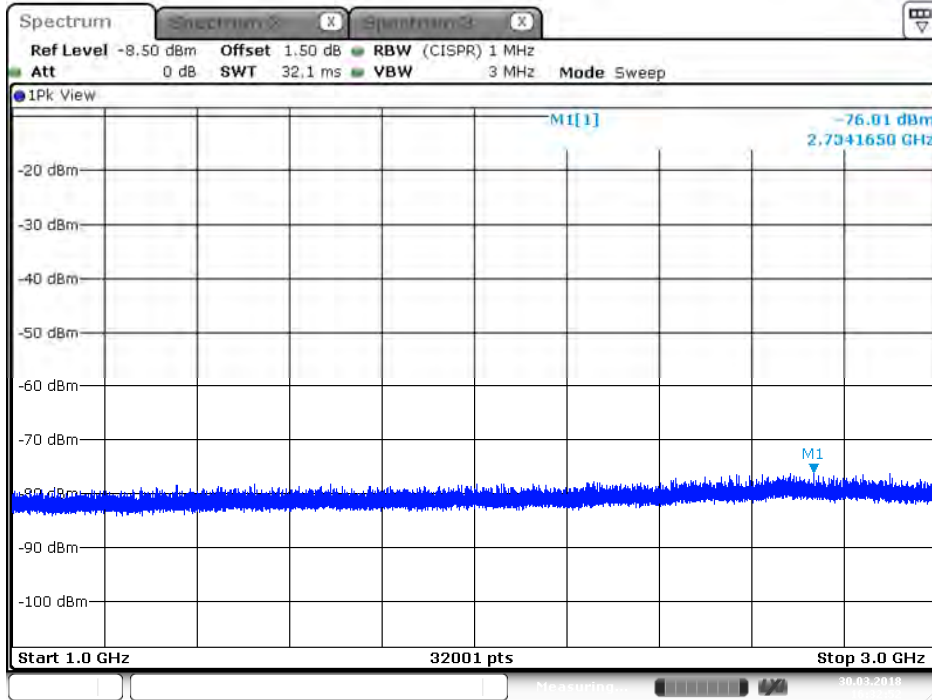
Date: 30.MAR.2018 16:43:15

**Plot on Configuration VHT20 / 5200 MHz / Average / Port 4 / 1GHz~3GHz**



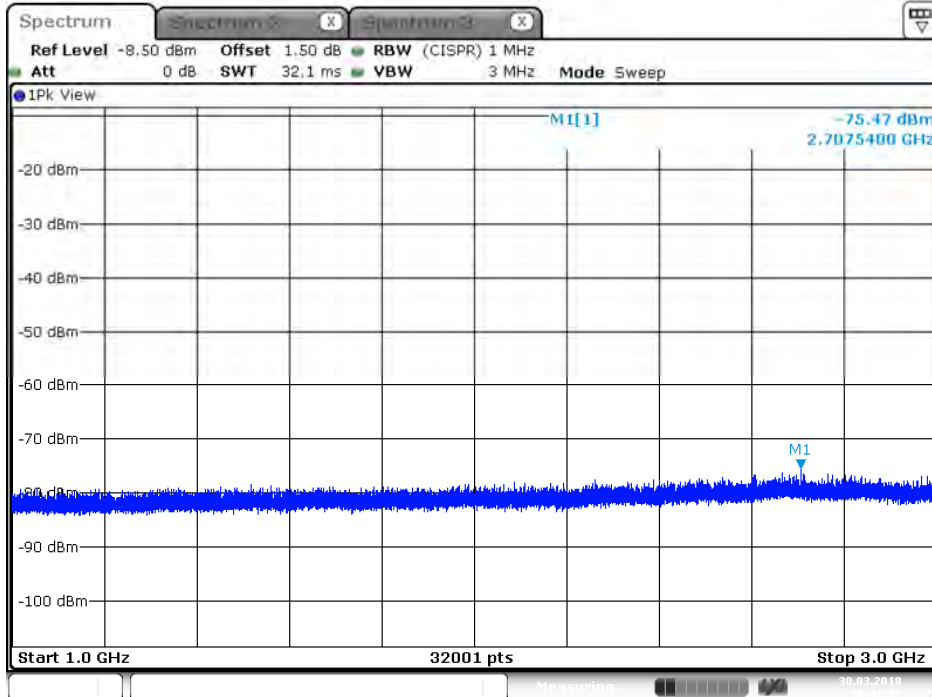
Date: 30.MAR.2018 16:56:08

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



Date: 30.MAR.2018 16:32:53

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

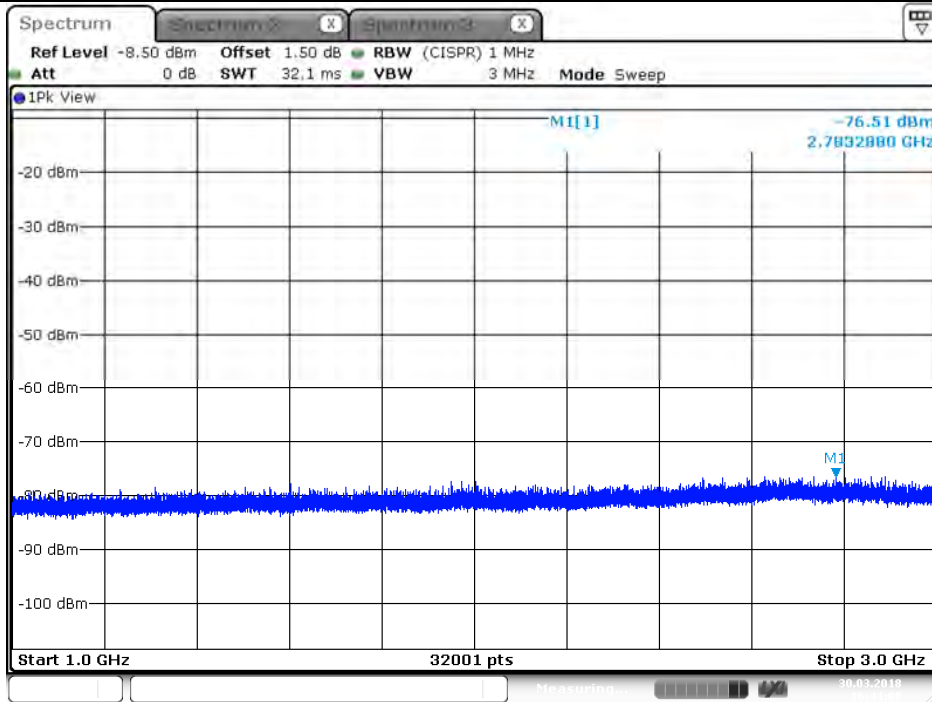


Date: 30.MAR.2018 16:41:31



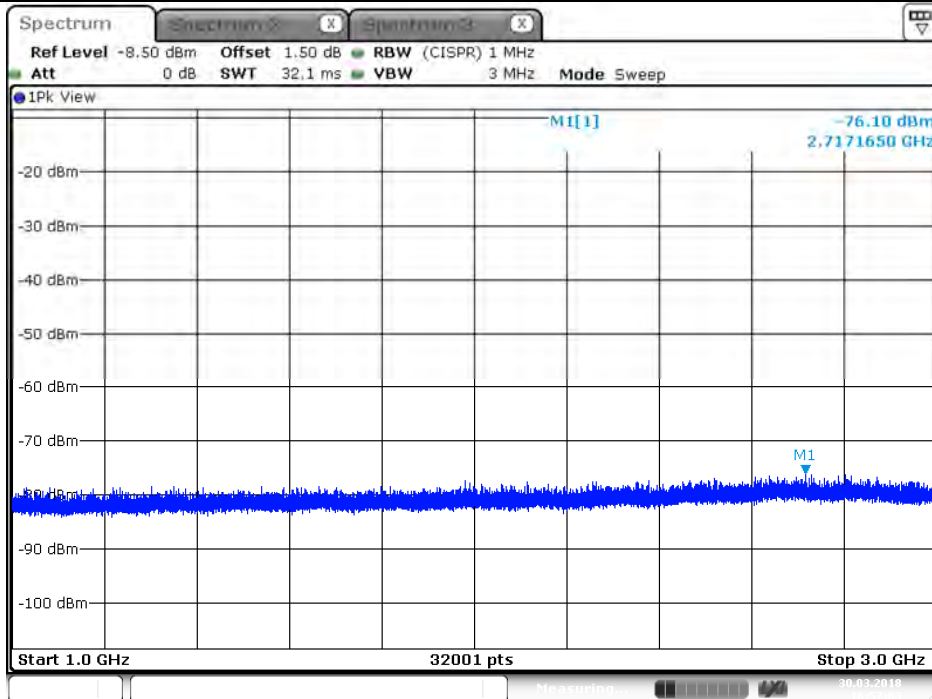


Plot on Configuration VHT20 / 5200 MHz / Peak / Port 3 / 1GHz~3GHz



Date: 30.MAR.2018 16:44:08

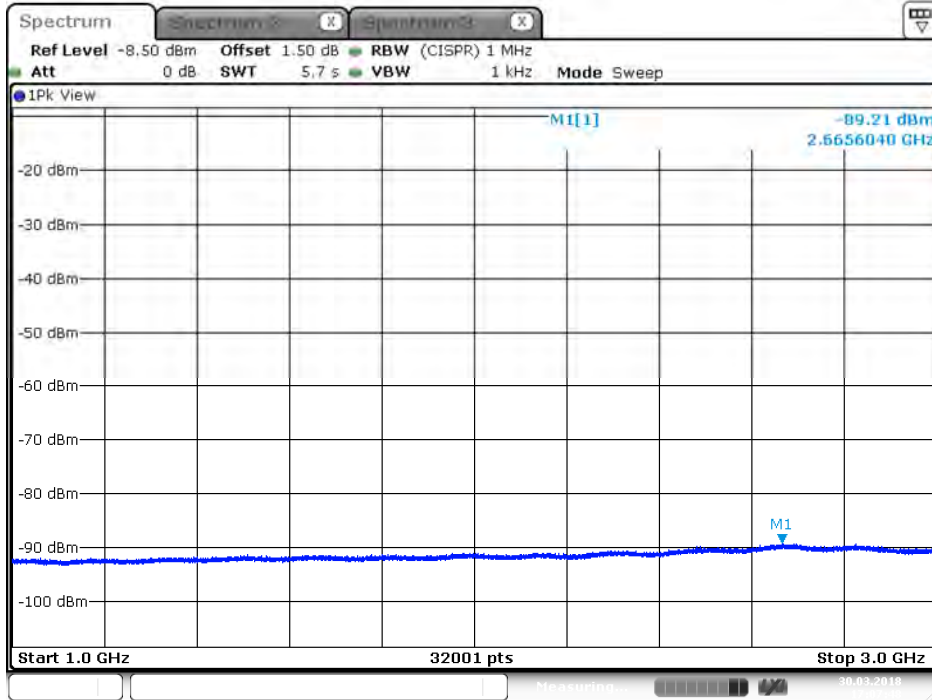
Plot on Configuration VHT20 / 5200 MHz / Peak / Port 4 / 1GHz~3GHz



Date: 30.MAR.2018 16:57:03

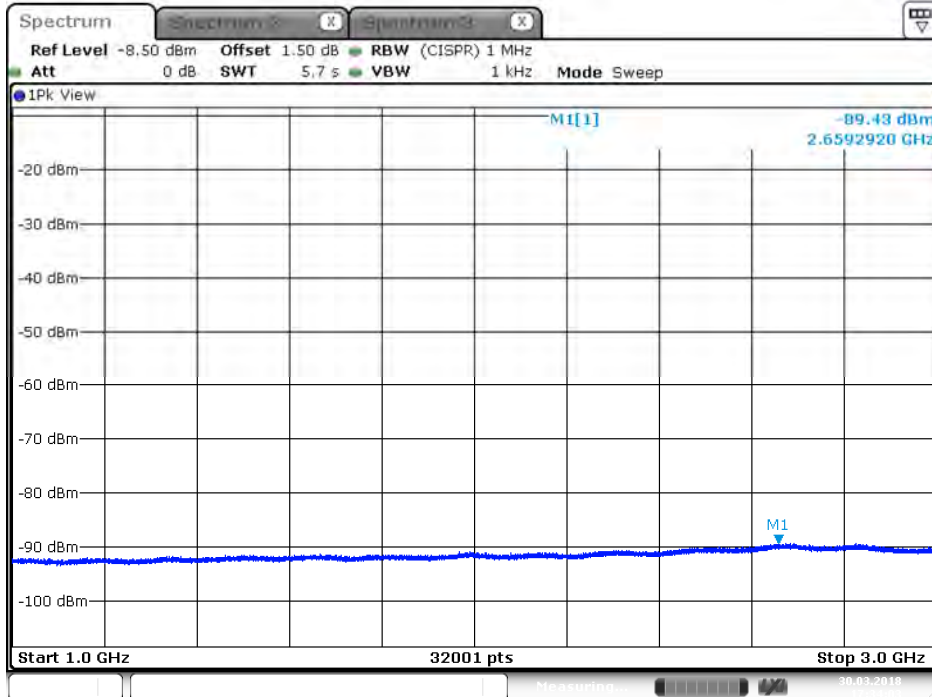


Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 / 1GHz~3GHz



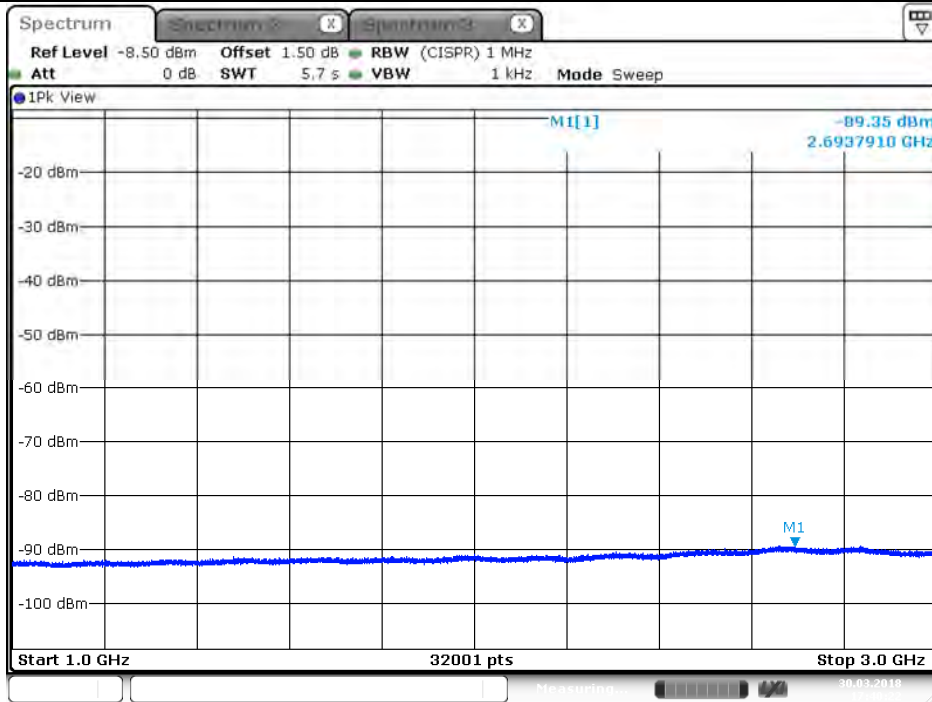
Date: 30.MAR.2018 17:07:49

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



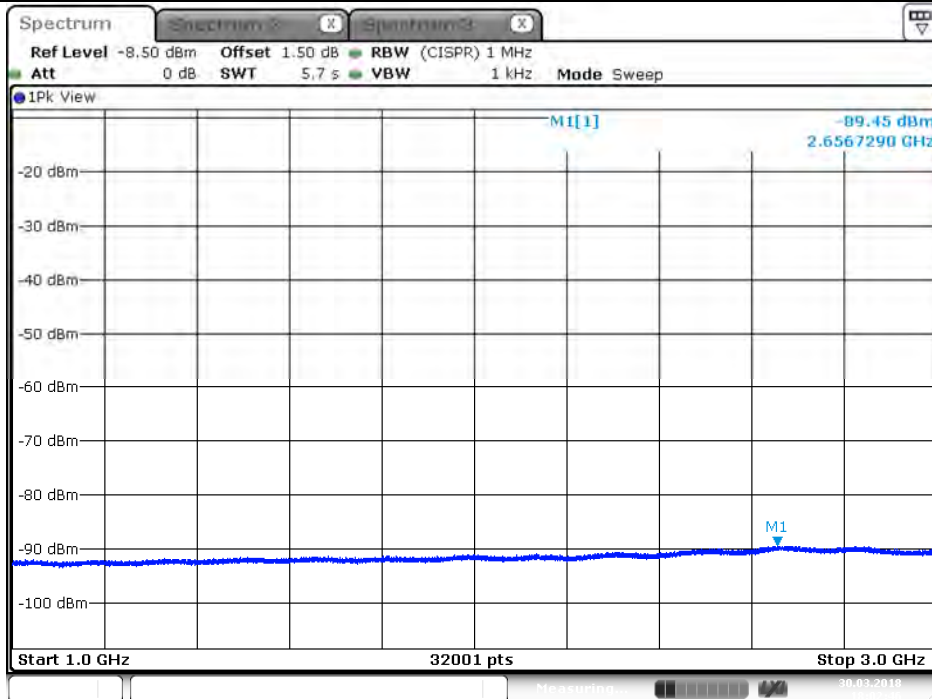
Date: 30.MAR.2018 17:34:03

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



Date: 30.MAR.2018 17:40:22

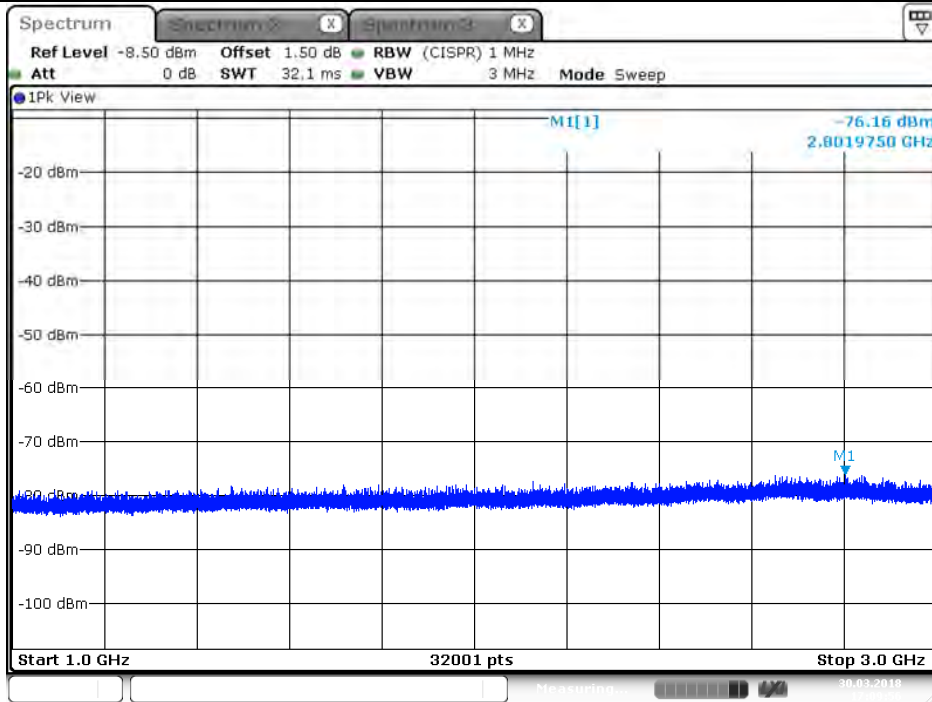
**Plot on Configuration VHT20 / 5240 MHz / Average / Port 4 / 1GHz~3GHz**



Date: 30.MAR.2018 18:02:46

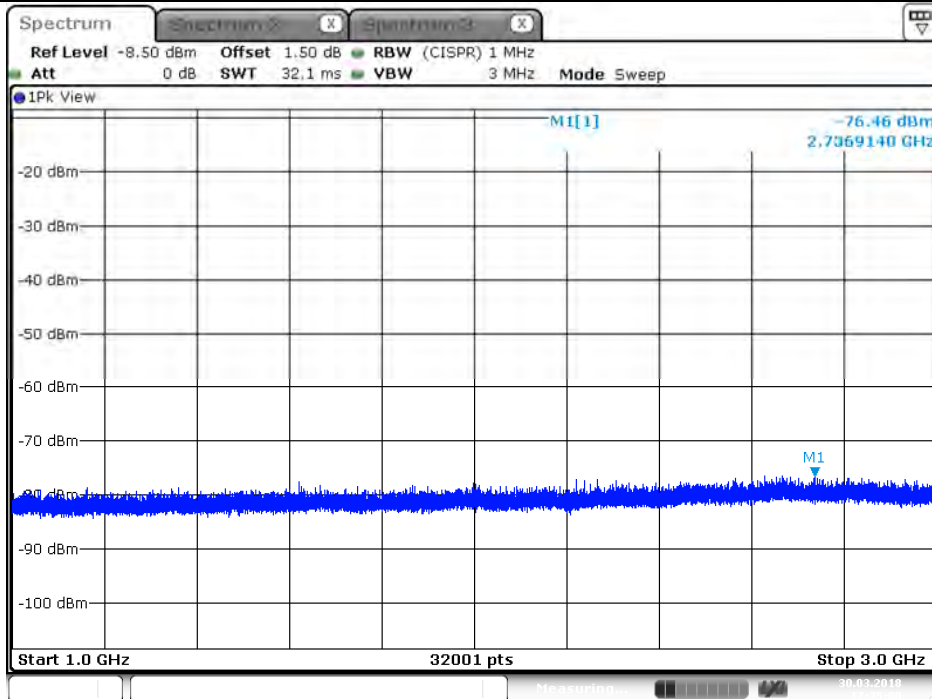


Plot on Configuration VHT20 / 5240 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 30.MAR.2018 17:09:56

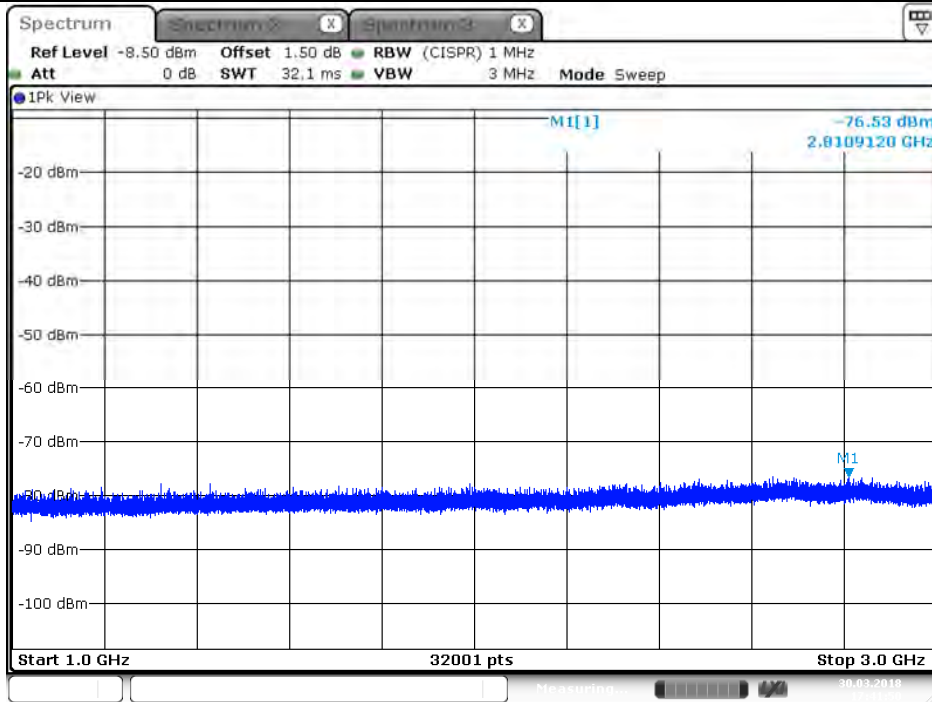
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 / 1GHz~3GHz



Date: 30.MAR.2018 17:35:00

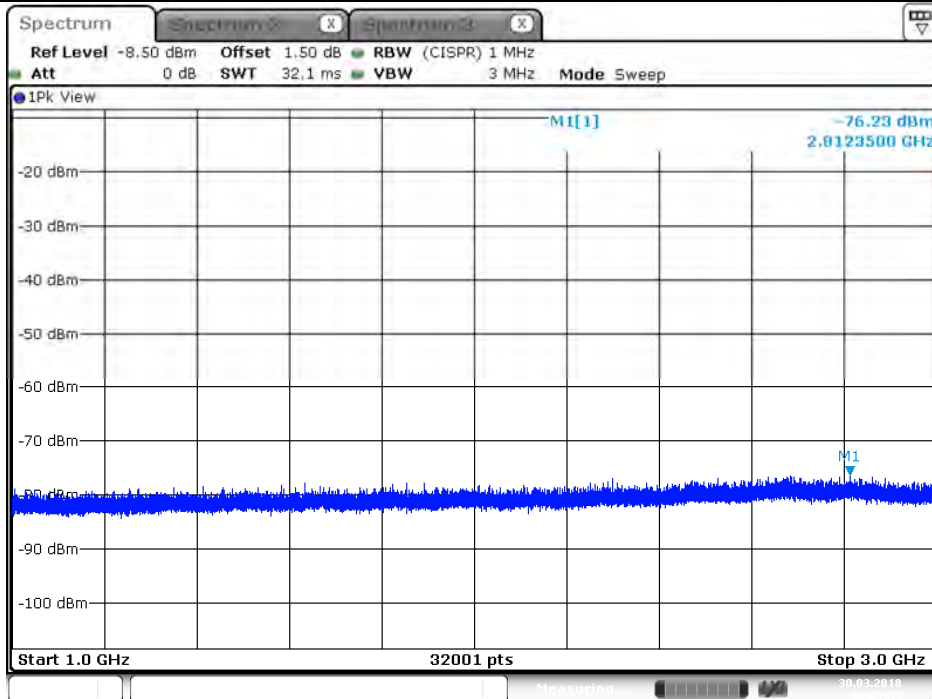


Plot on Configuration VHT20 / 5240 MHz / Peak / Port 3 / 1GHz~3GHz



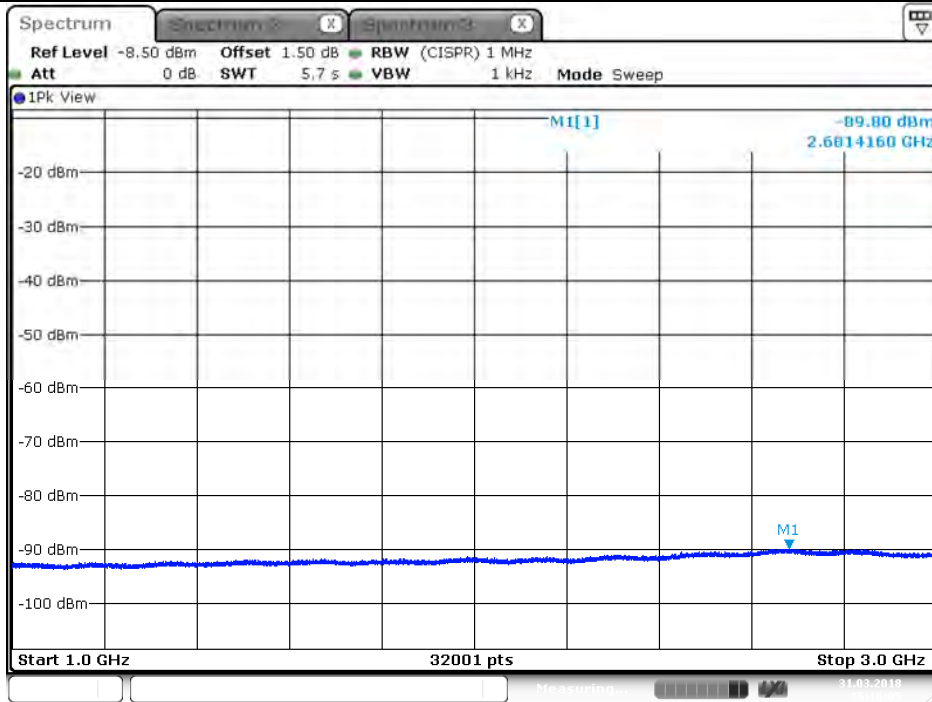
Date: 30.MAR.2018 17:41:50

Plot on Configuration VHT20 / 5240 MHz / Peak / Port 4 / 1GHz~3GHz



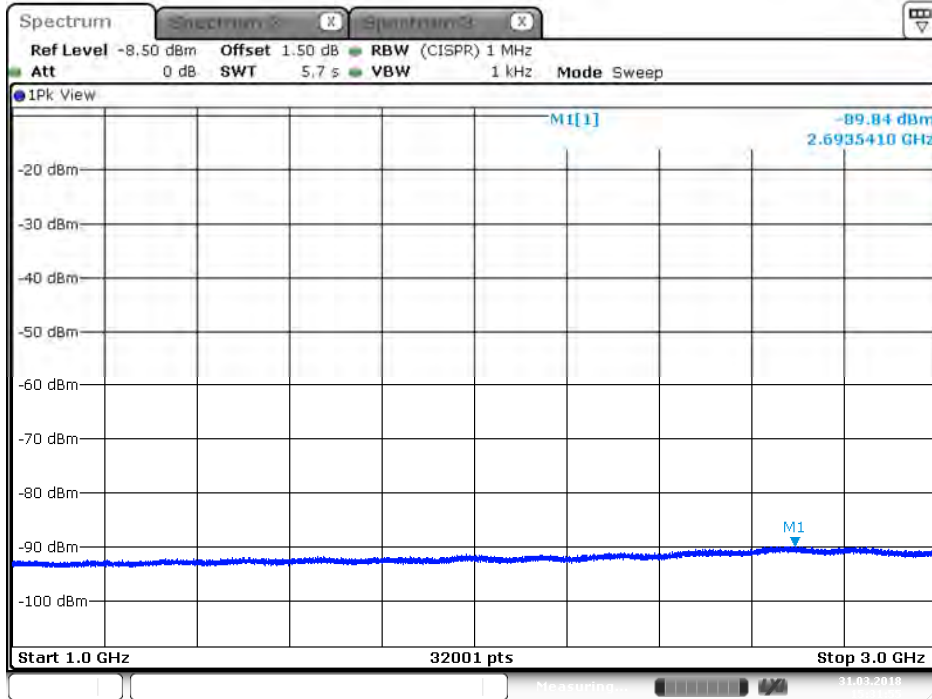
Date: 30.MAR.2018 18:03:53

**Plot on Configuration VHT40 / 5190 MHz / Average / Port 1 / 1GHz~3GHz**



Date: 31.MAR.2018 15:16:06

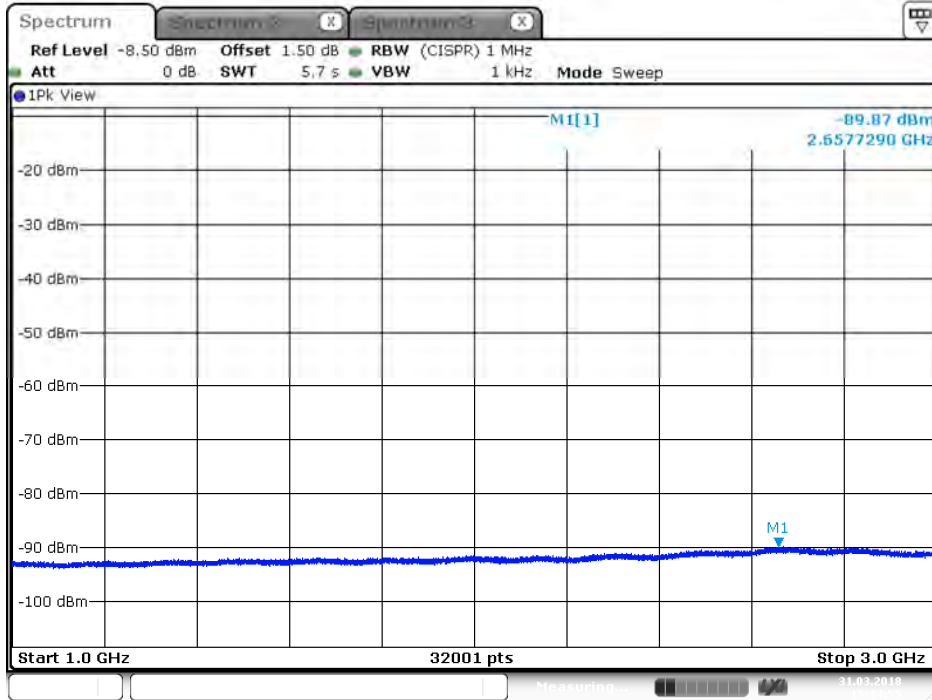
**Plot on Configuration VHT40 / 5190 MHz / Average / Port 2 / 1GHz~3GHz**



Date: 31.MAR.2018 15:31:56

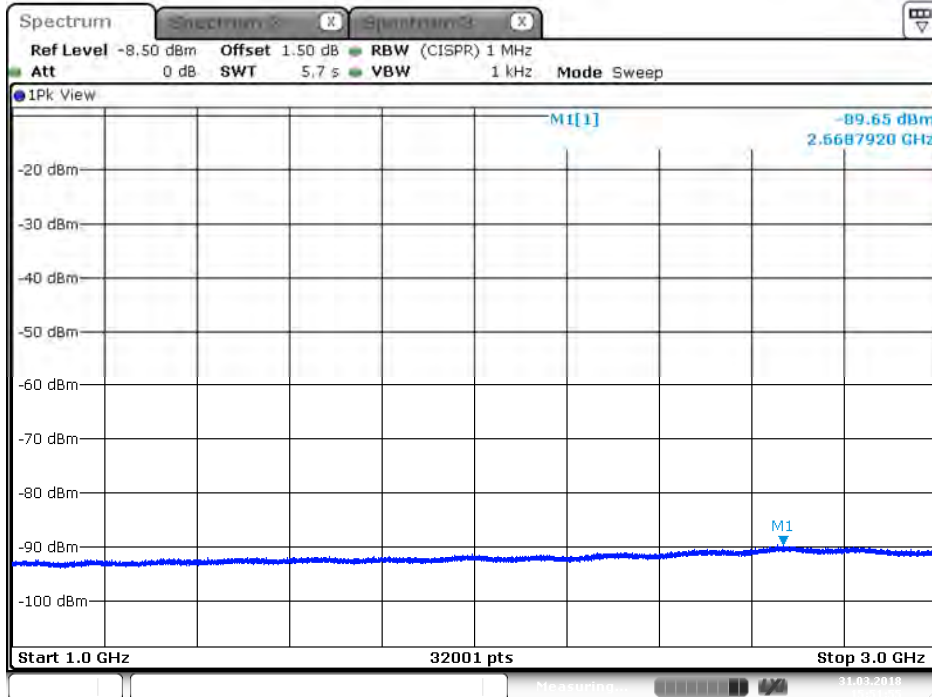


Plot on Configuration VHT40 / 5190 MHz / Average / Port 3 / 1GHz~3GHz



Date: 31.MAR.2018 15:34:56

Plot on Configuration VHT40 / 5190 MHz / Average / Port 4 / 1GHz~3GHz

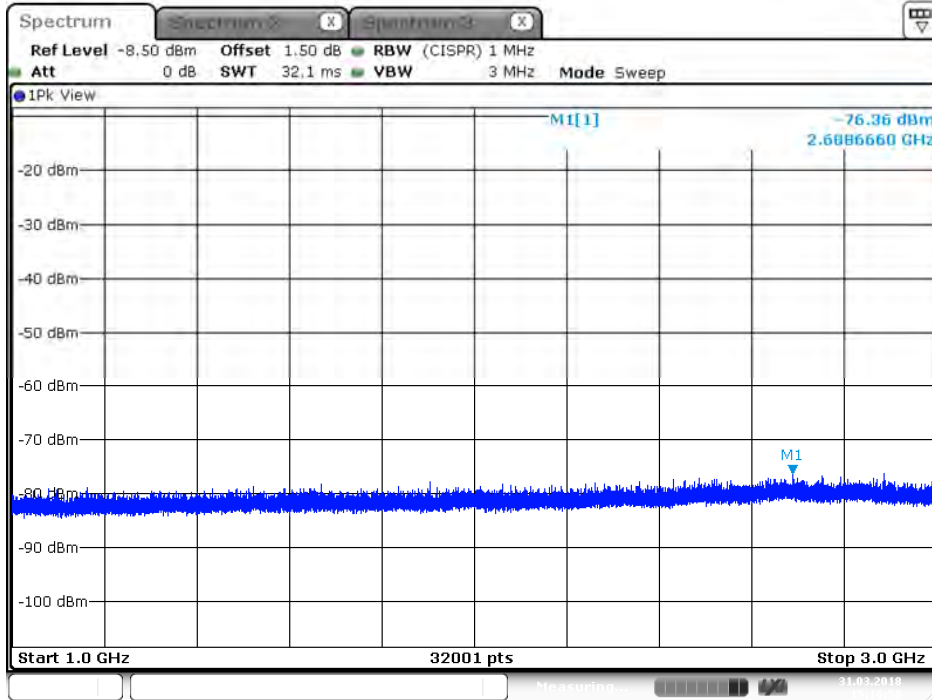


Date: 31.MAR.2018 15:51:55



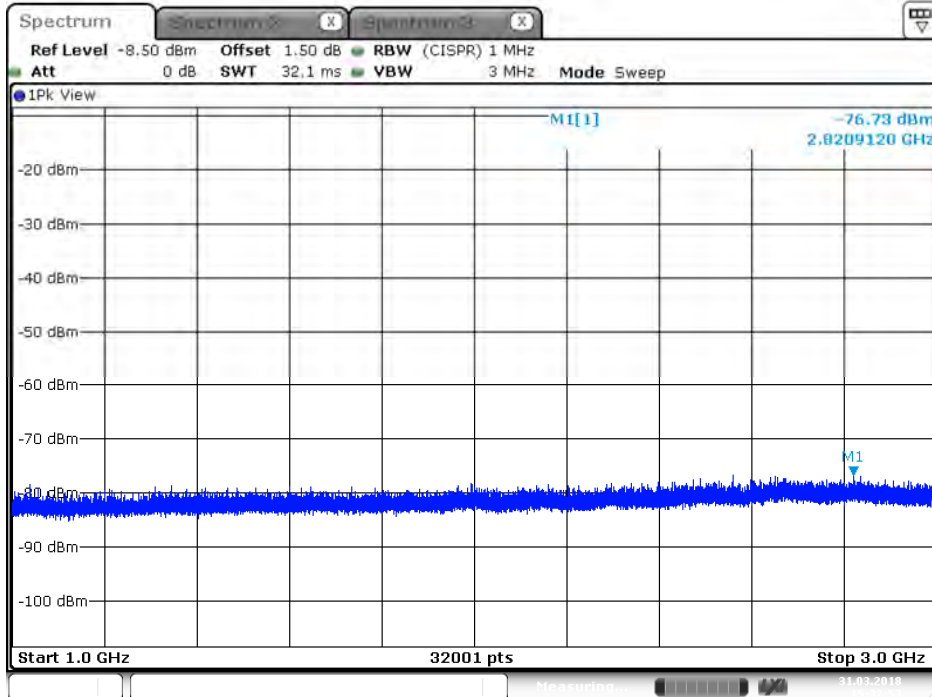


Plot on Configuration VHT40 / 5190 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 31.MAR.2018 15:16:59

Plot on Configuration VHT40 / 5190 MHz / Peak / Port 2 / 1GHz~3GHz

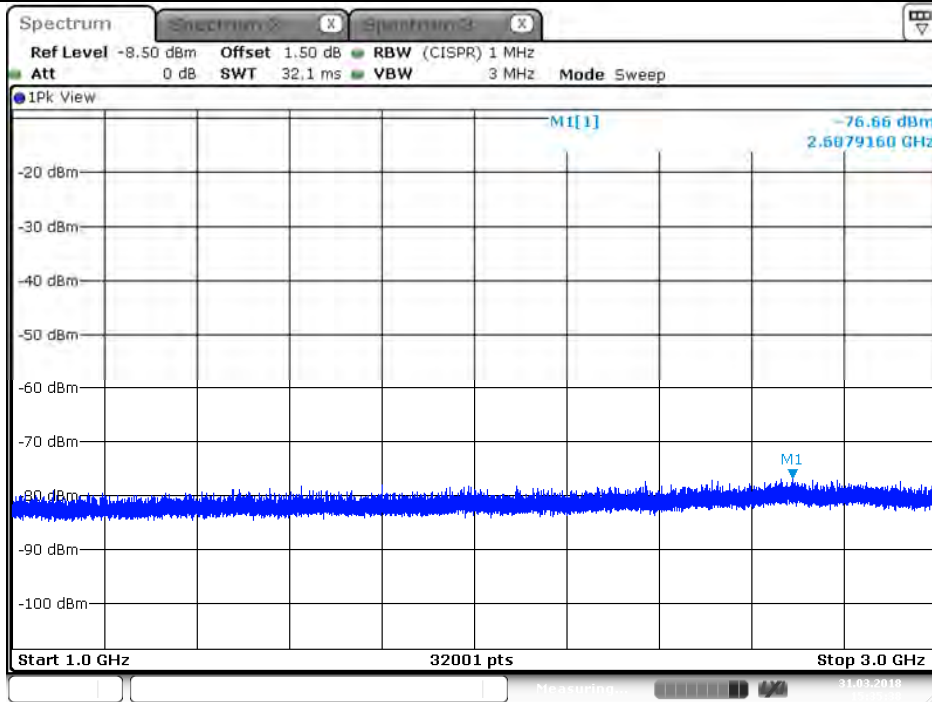


Date: 31.MAR.2018 15:32:53



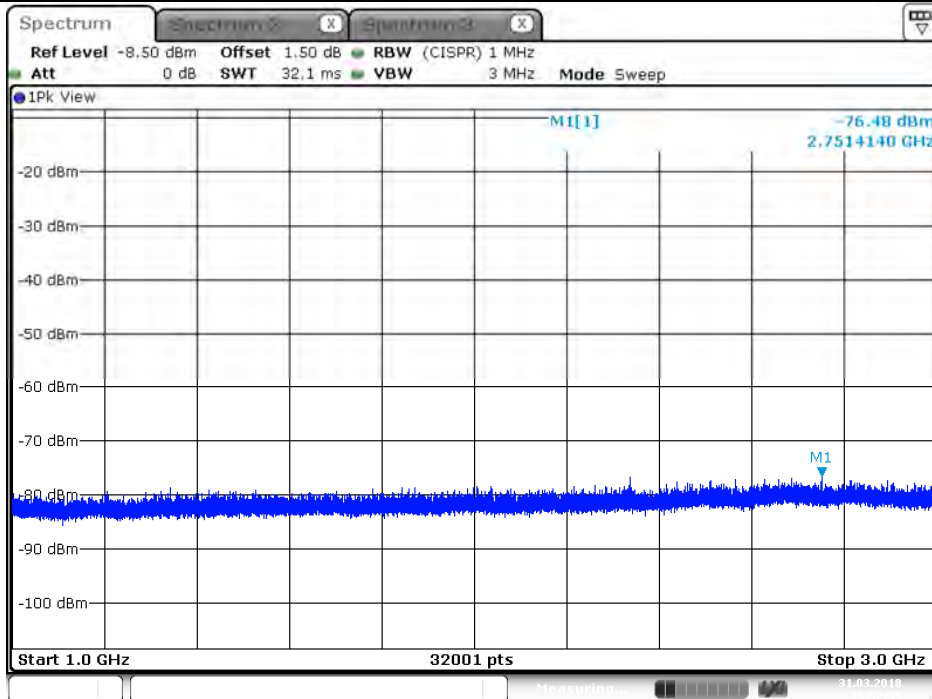


Plot on Configuration VHT40 / 5190 MHz / Peak / Port 3 / 1GHz~3GHz



Date: 31.MAR.2018 15:35:37

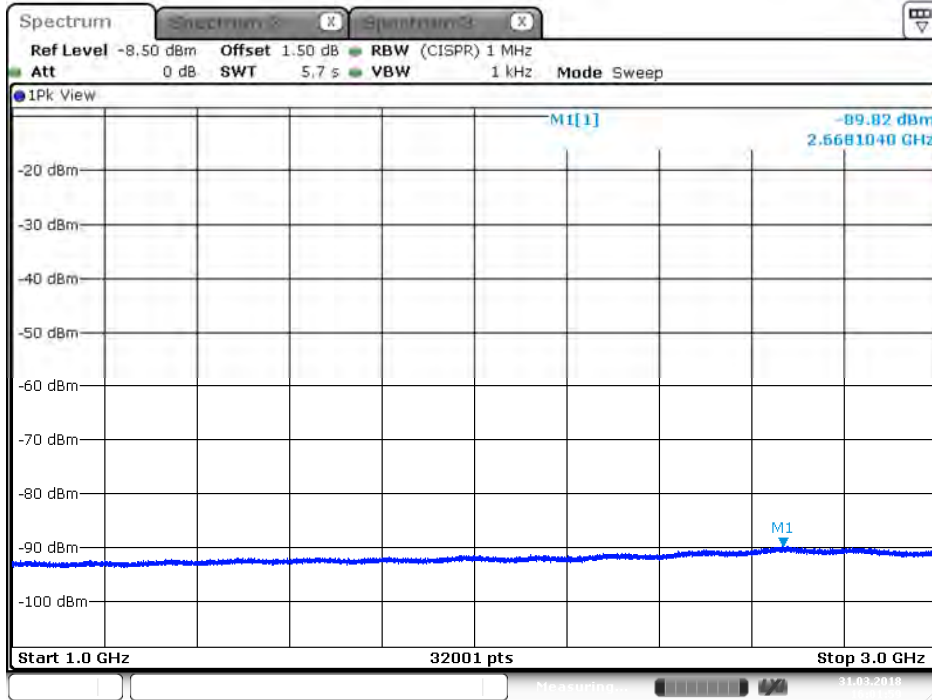
Plot on Configuration VHT40 / 5190 MHz / Peak / Port 4 / 1GHz~3GHz



Date: 31.MAR.2018 15:52:59

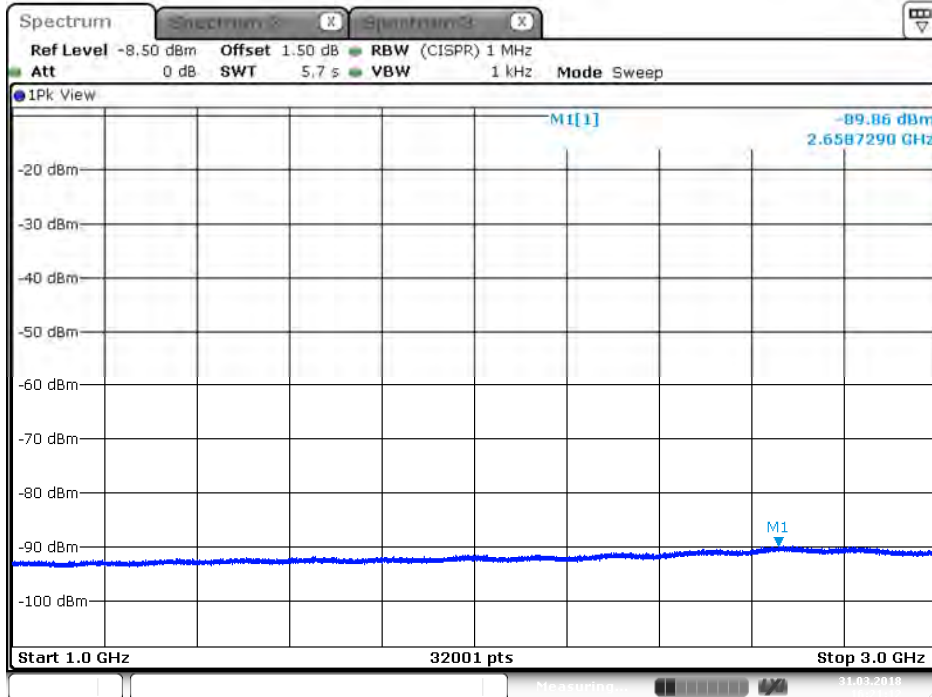


Plot on Configuration VHT40 / 5230 MHz / Average / Port 1 / 1GHz~3GHz



Date: 31.MAR.2018 16:02:00

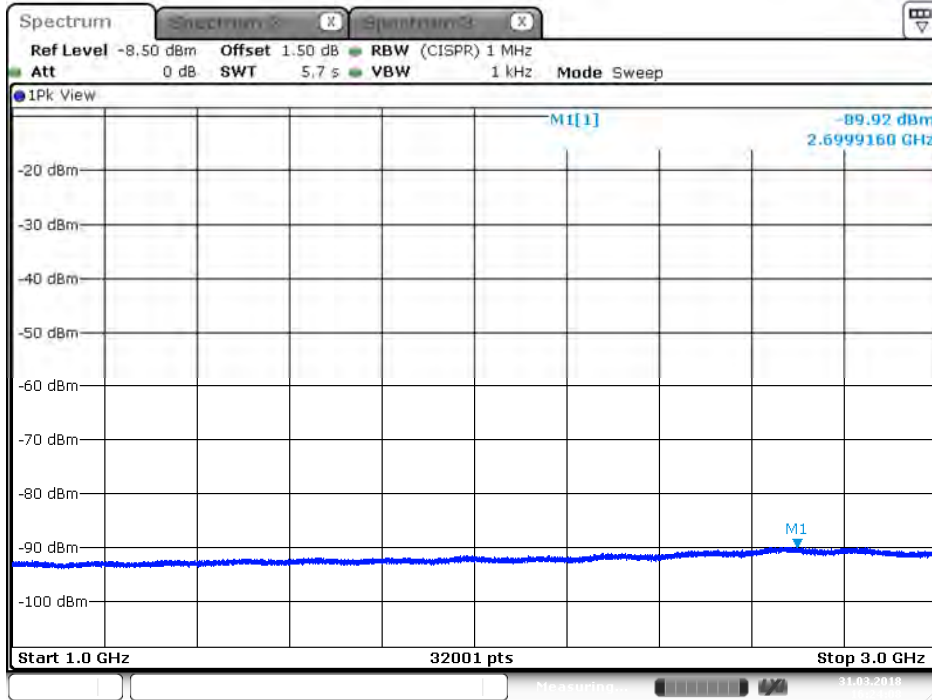
Plot on Configuration VHT40 / 5230 MHz / Average / Port 2 / 1GHz~3GHz



Date: 31.MAR.2018 16:21:12

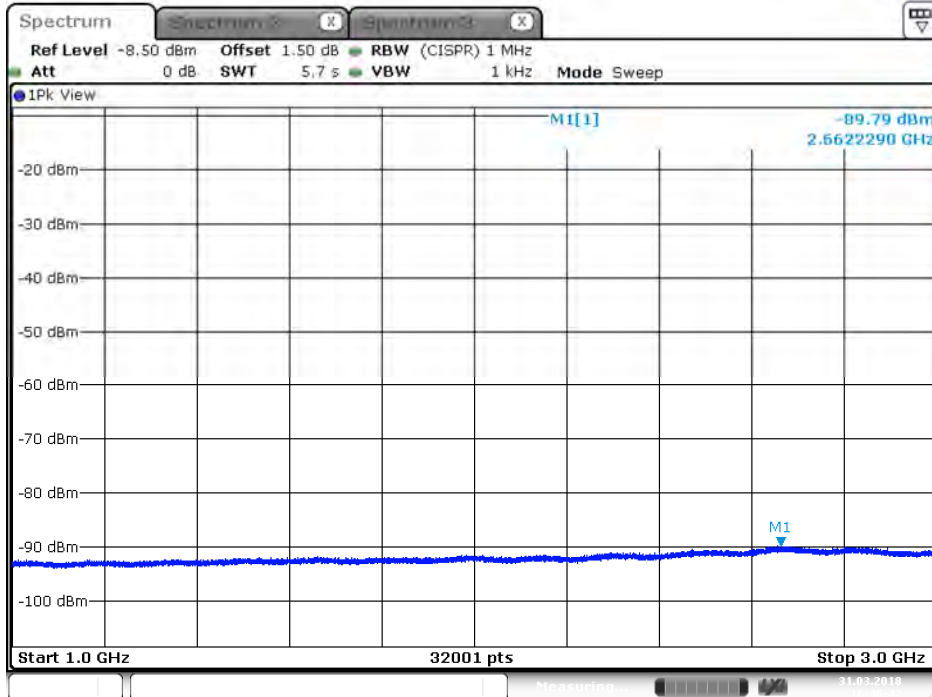


Plot on Configuration VHT40 / 5230 MHz / Average / Port 3 / 1GHz~3GHz



Date: 31.MAR.2018 16:24:08

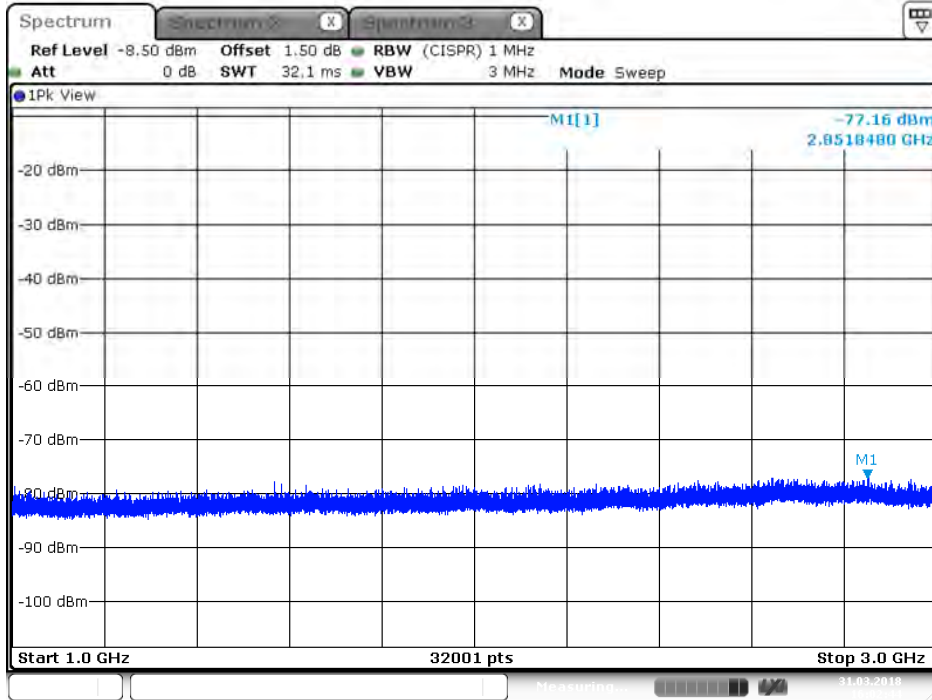
Plot on Configuration VHT40 / 5230 MHz / Average / Port 4 / 1GHz~3GHz



Date: 31.MAR.2018 16:46:42

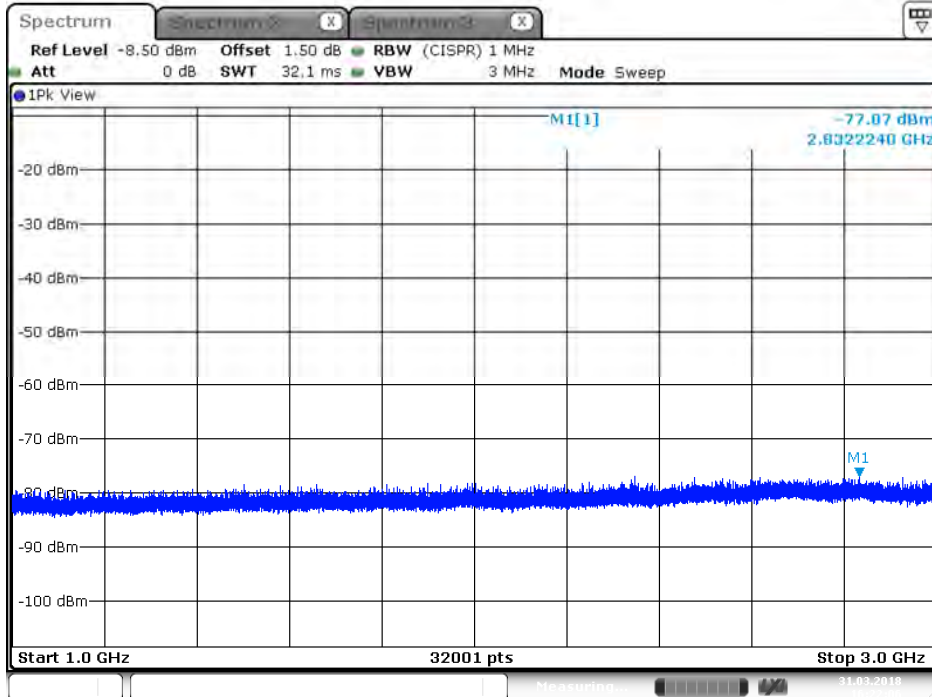


Plot on Configuration VHT40 / 5230 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 31.MAR.2018 16:02:44

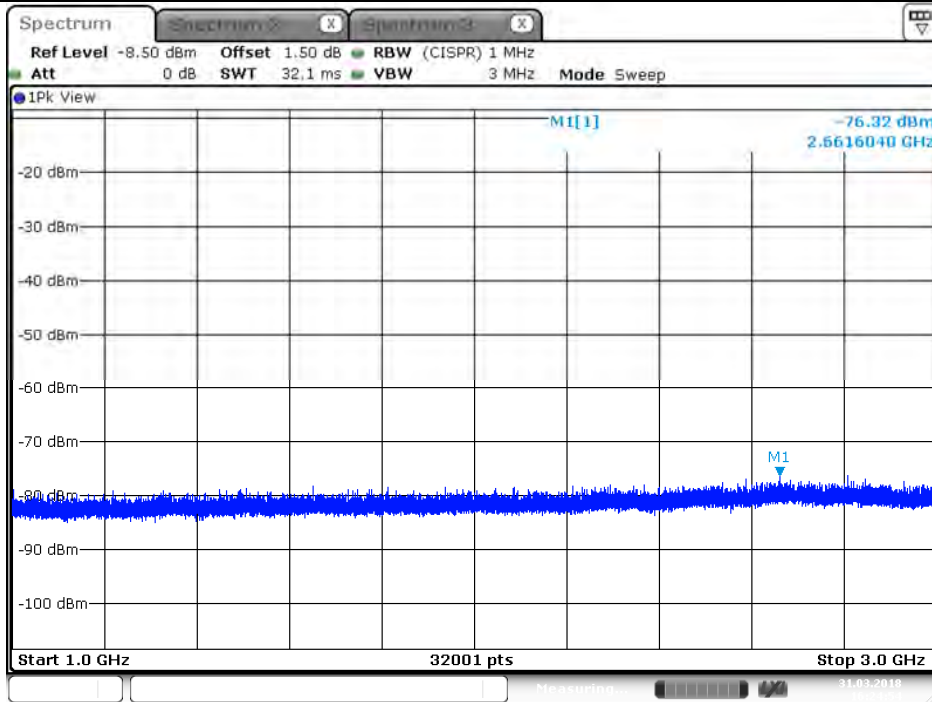
Plot on Configuration VHT40 / 5230 MHz / Peak / Port 2 / 1GHz~3GHz



Date: 31.MAR.2018 16:22:07

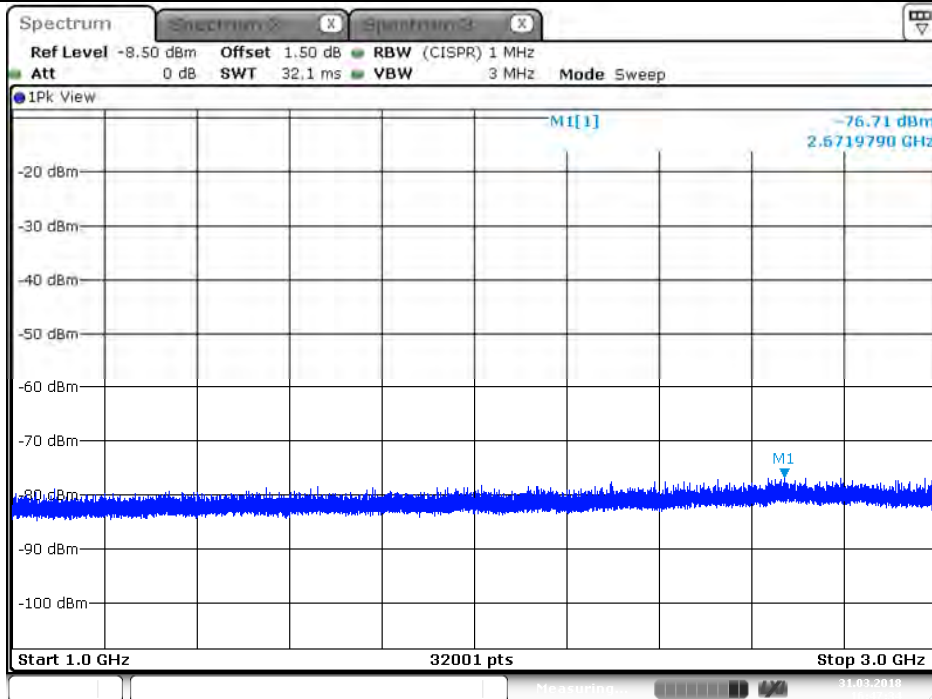


Plot on Configuration VHT40 / 5230 MHz / Peak / Port 3 / 1GHz~3GHz



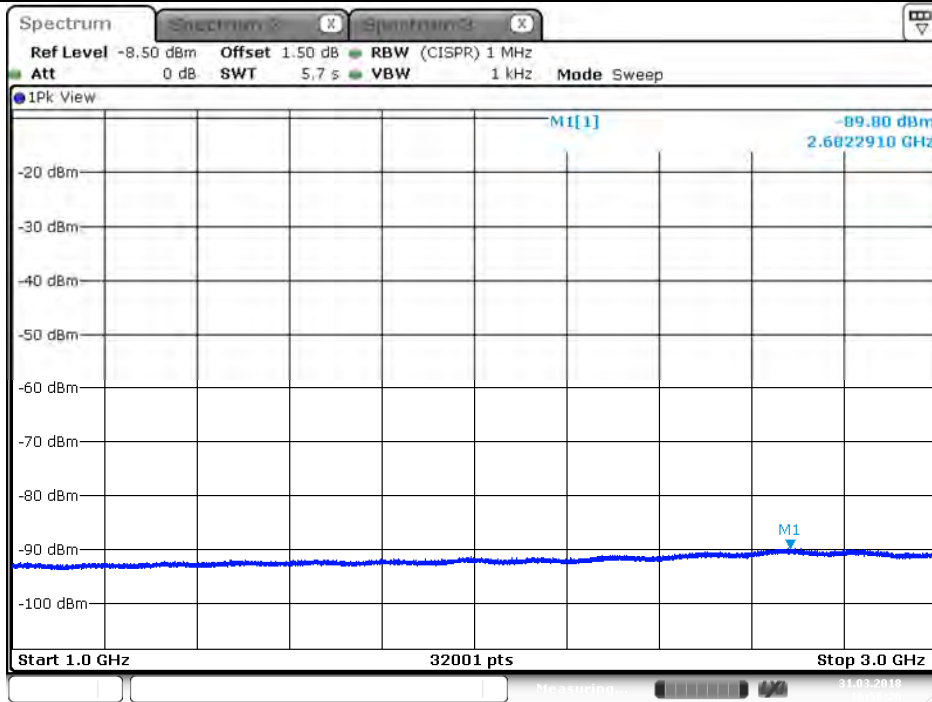
Date: 31.MAR.2018 16:24:54

Plot on Configuration VHT40 / 5230 MHz / Peak / Port 4 / 1GHz~3GHz



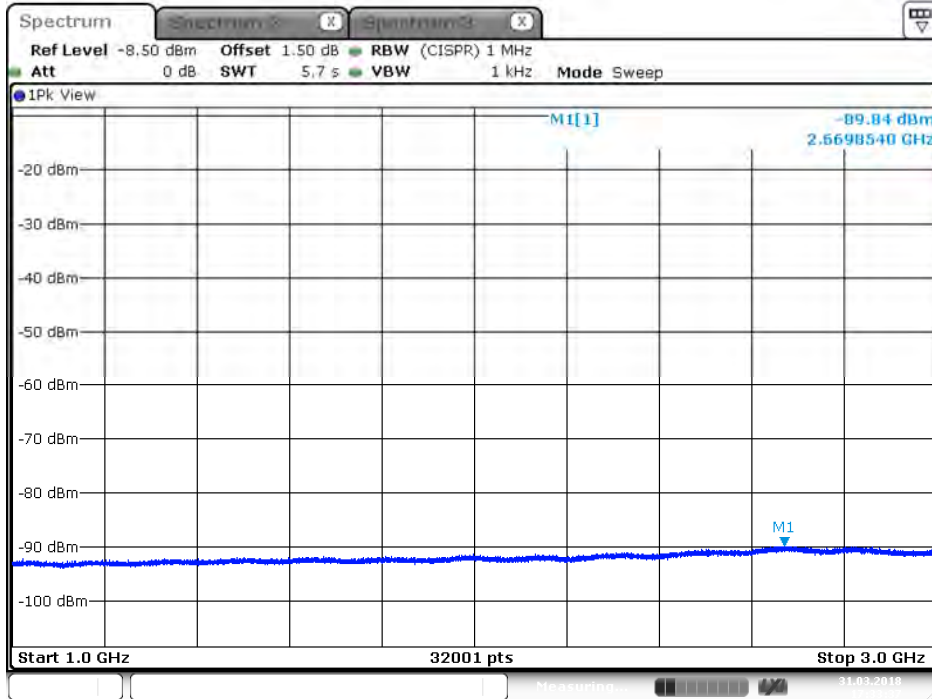
Date: 31.MAR.2018 16:47:35

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



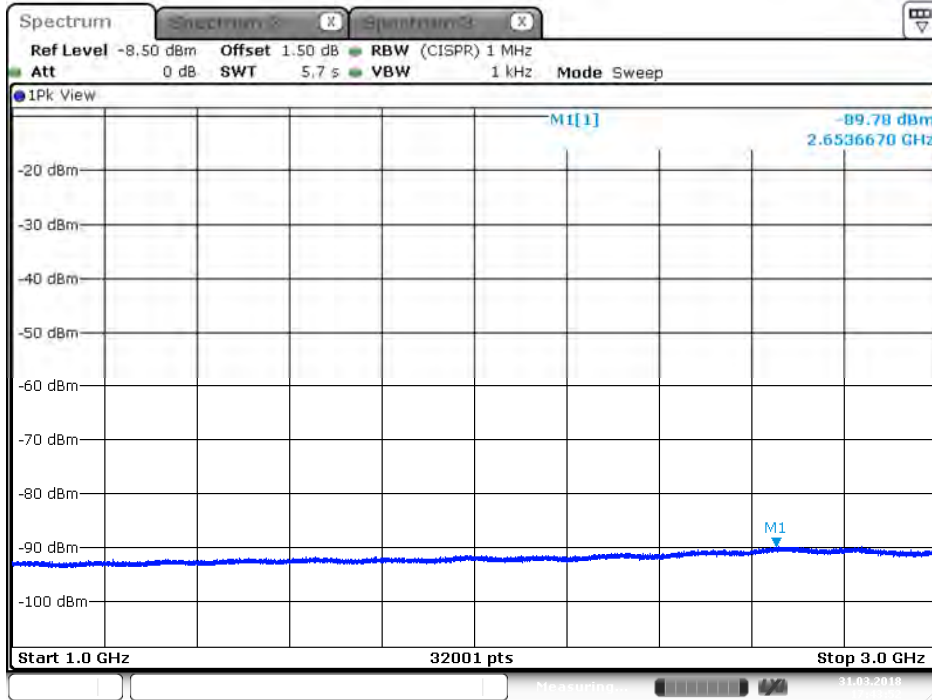
Date: 31.MAR.2018 16:56:26

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



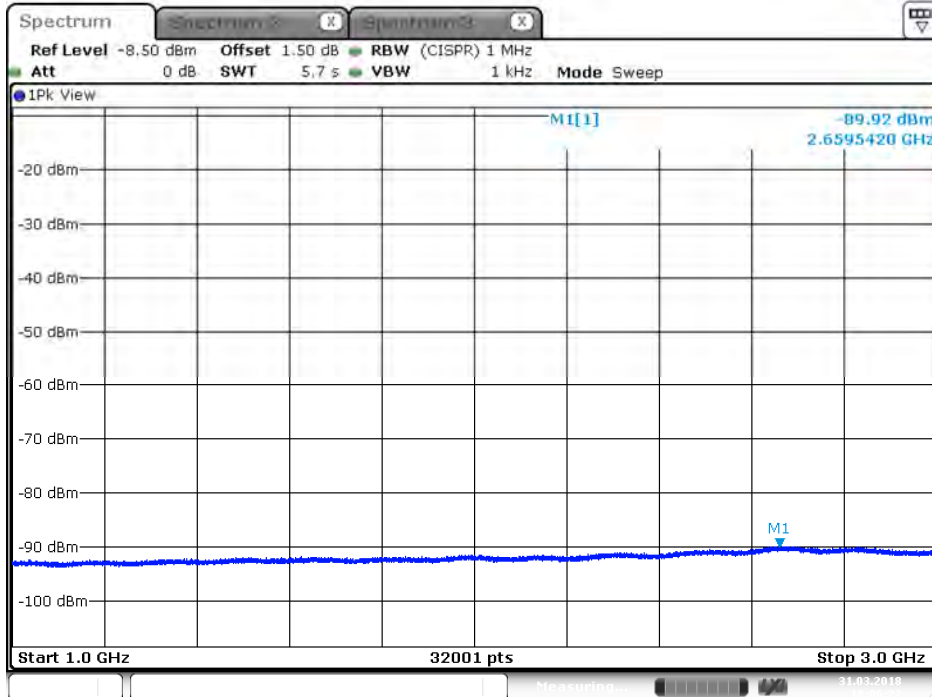
Date: 31.MAR.2018 17:33:38

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



Date: 31.MAR.2018 17:43:52

**Plot on Configuration VHT80 / 5210 MHz / Average / Port 4 / 1GHz~3GHz**

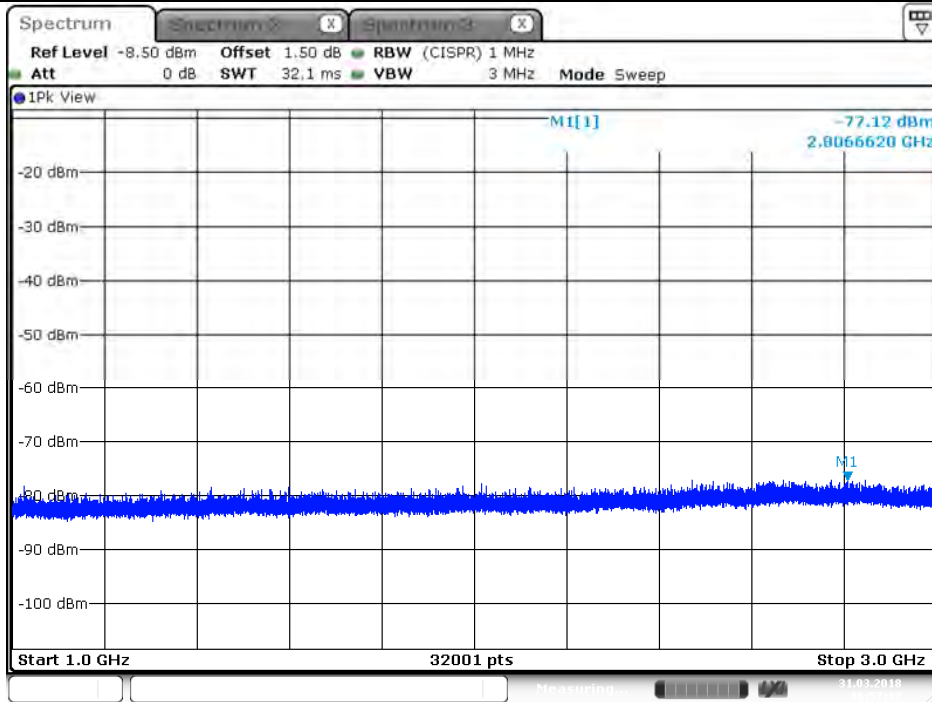


Date: 31.MAR.2018 18:06:23



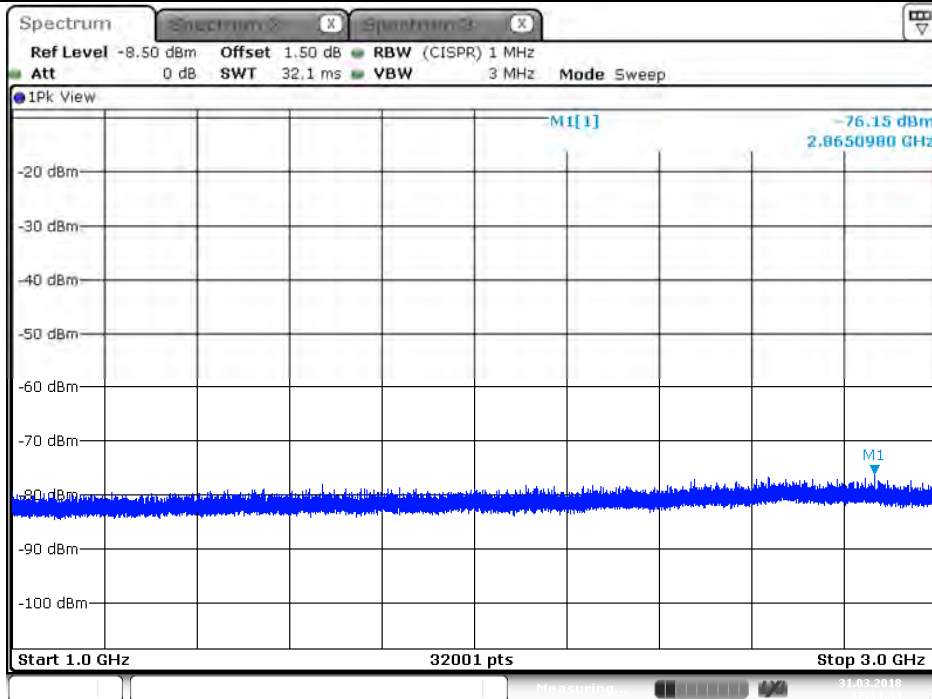


Plot on Configuration VHT80 / 5210 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 31.MAR.2018 16:57:18

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

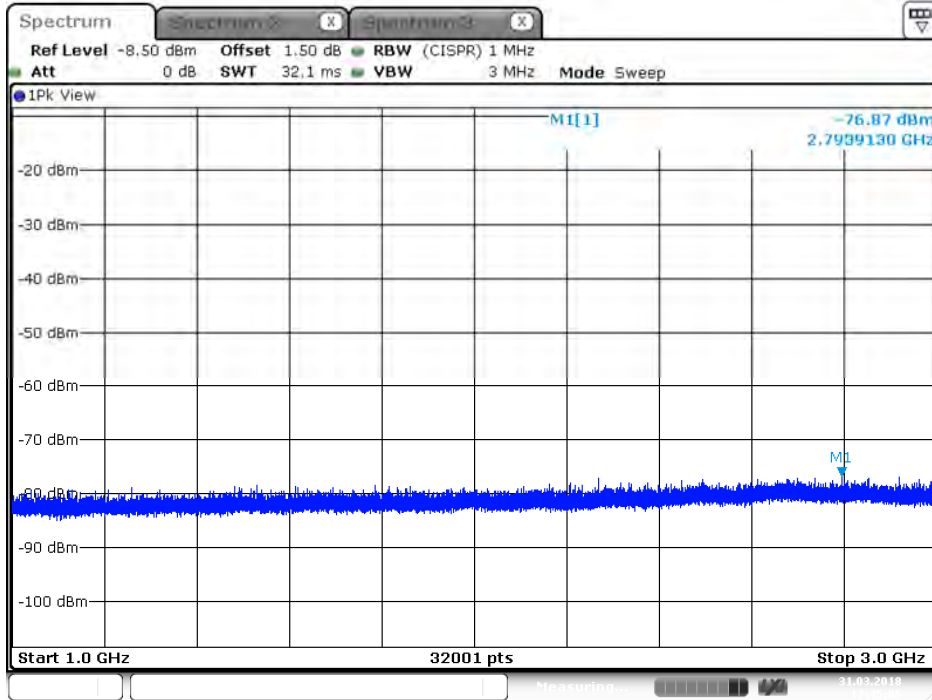


Date: 31.MAR.2018 17:34:34



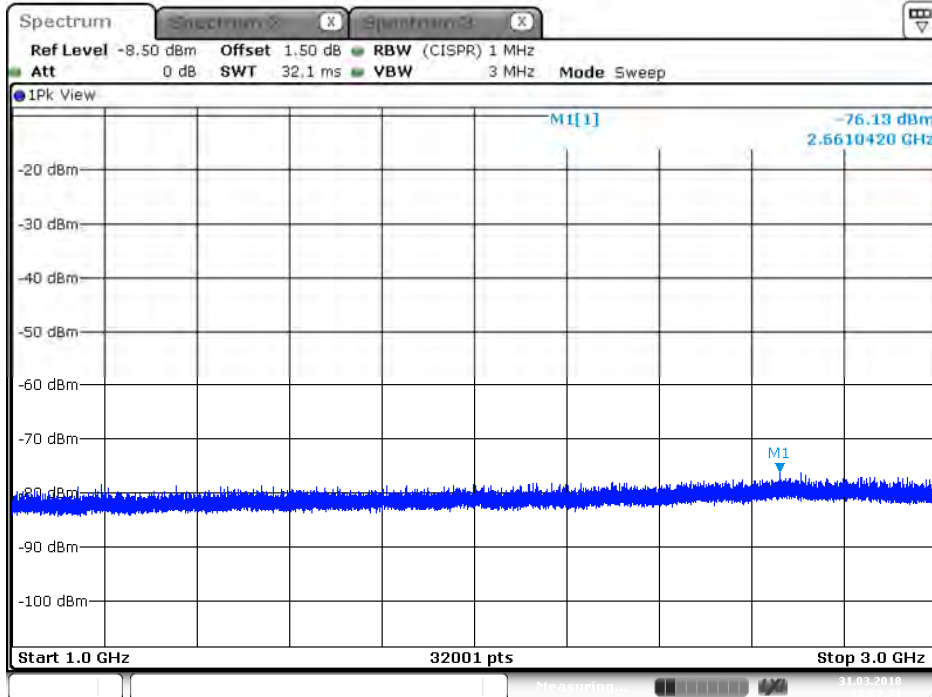


Plot on Configuration VHT80 / 5210 MHz / Peak / Port 3 / 1GHz~3GHz



Date: 31.MAR.2018 17:45:06

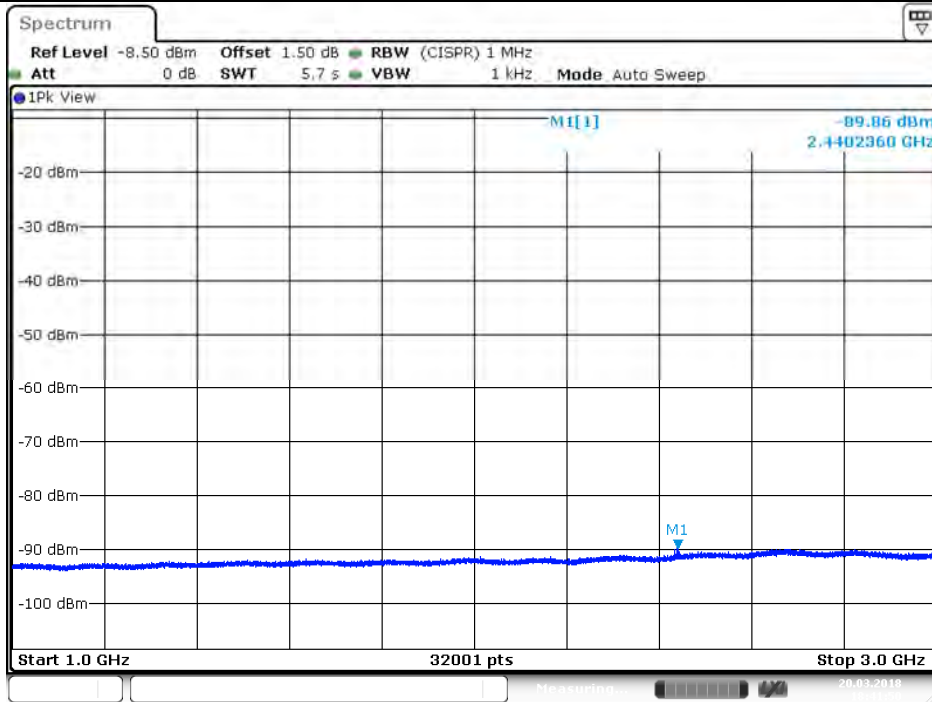
Plot on Configuration VHT80 / 5210 MHz / Peak / Port 4 / 1GHz~3GHz



Date: 31.MAR.2018 18:07:22

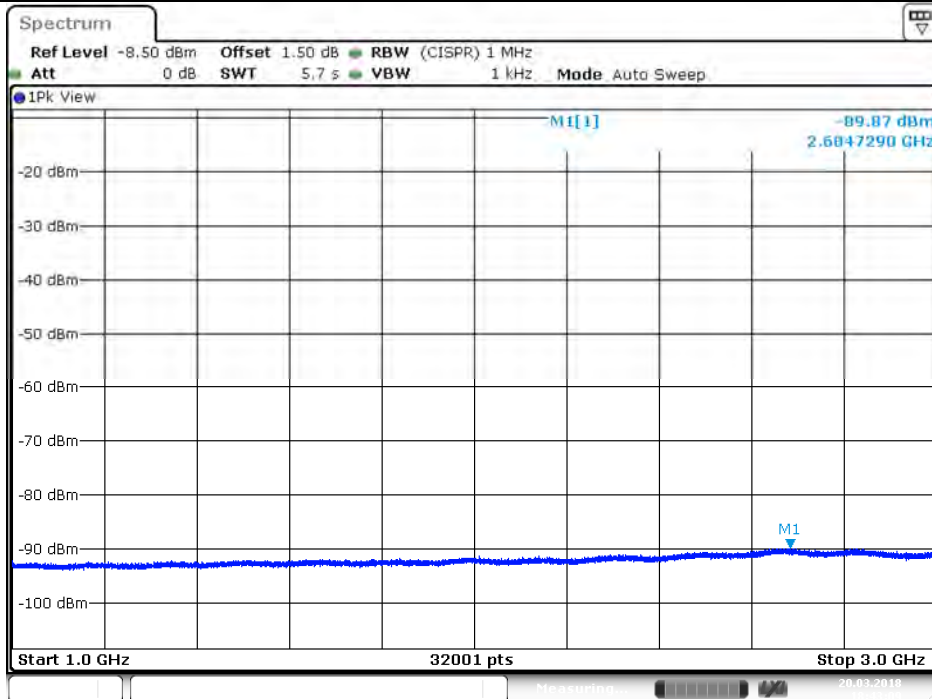


Plot on Configuration VHT20 / 5745 MHz / Average / Port 1 / 1GHz~3GHz



Date: 20.MAR.2018 18:41:50

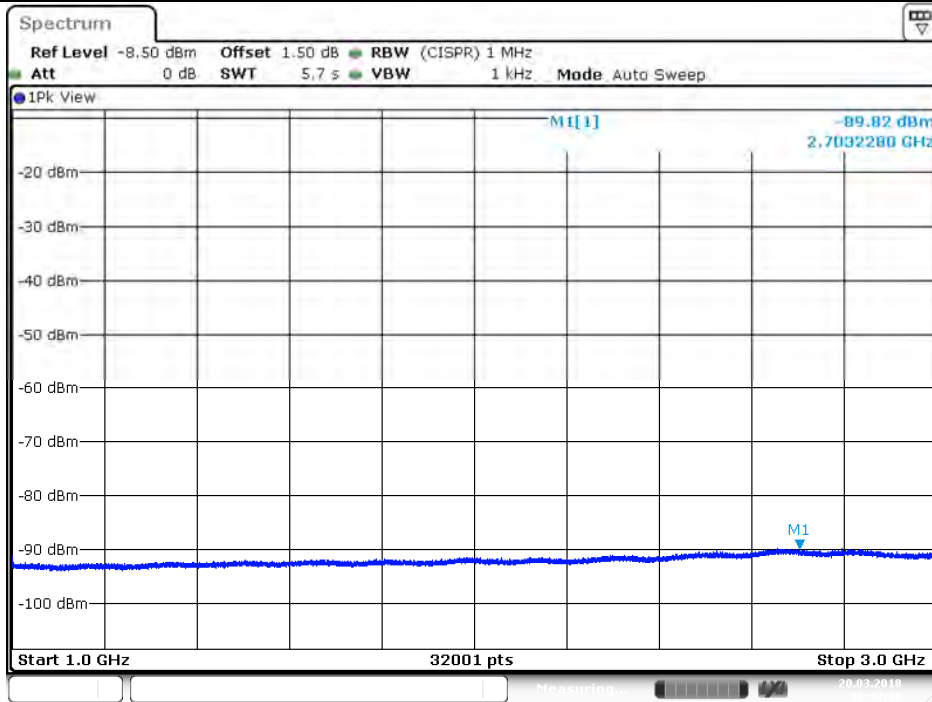
Plot on Configuration VHT20 / 5745 MHz / Average / Port 2 / 1GHz~3GHz



Date: 20.MAR.2018 18:43:09

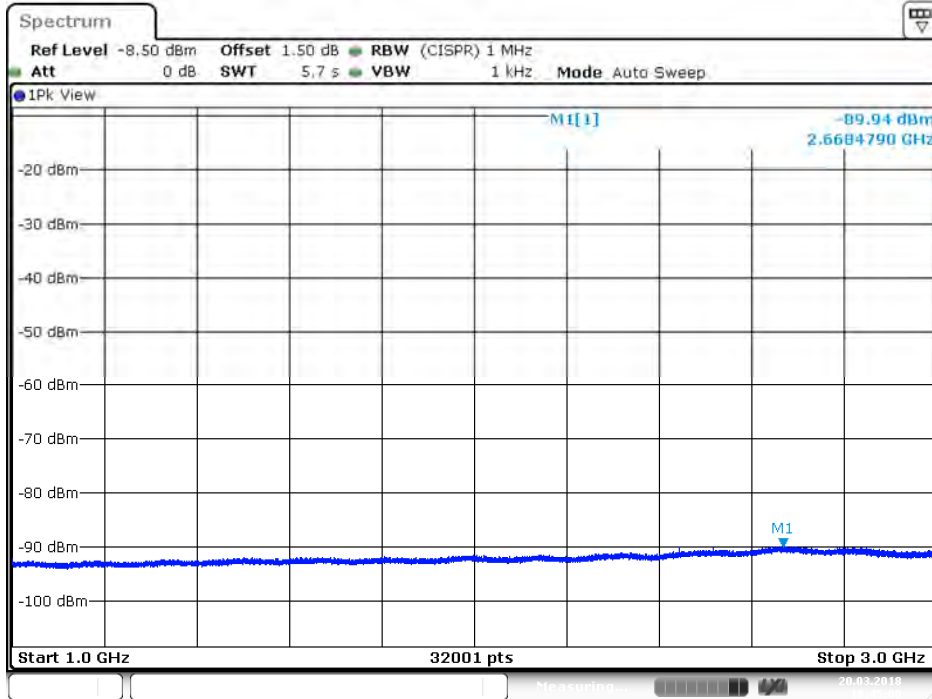


Plot on Configuration VHT20 / 5745 MHz / Average / Port 3 / 1GHz~3GHz



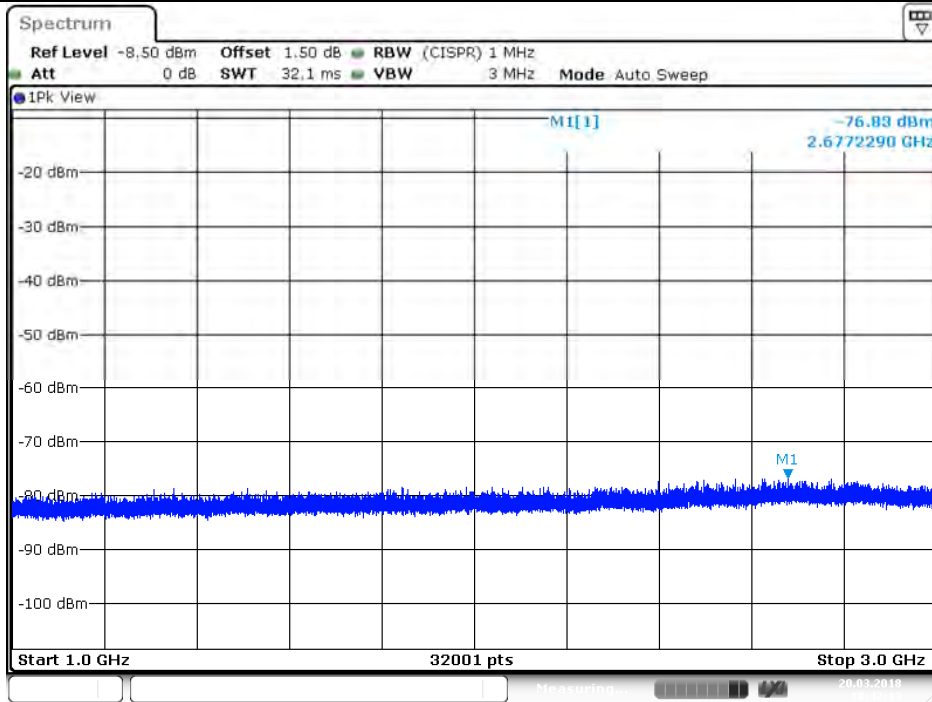
Date: 20.MAR.2018 18:43:49

Plot on Configuration VHT20 / 5745 MHz / Average / Port 4 / 1GHz~3GHz

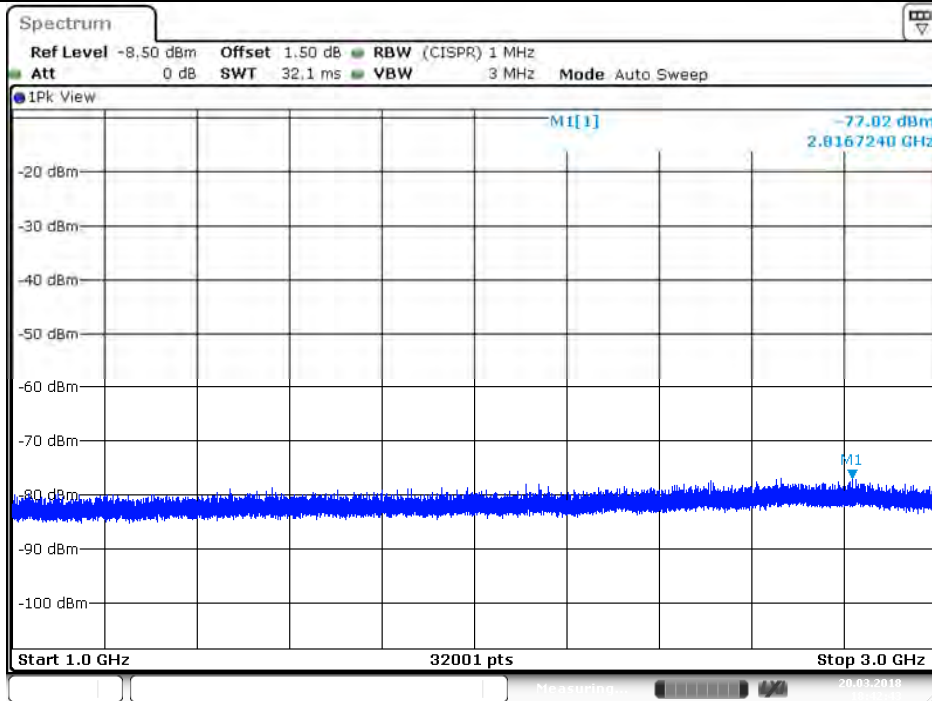


Date: 20.MAR.2018 18:45:01

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

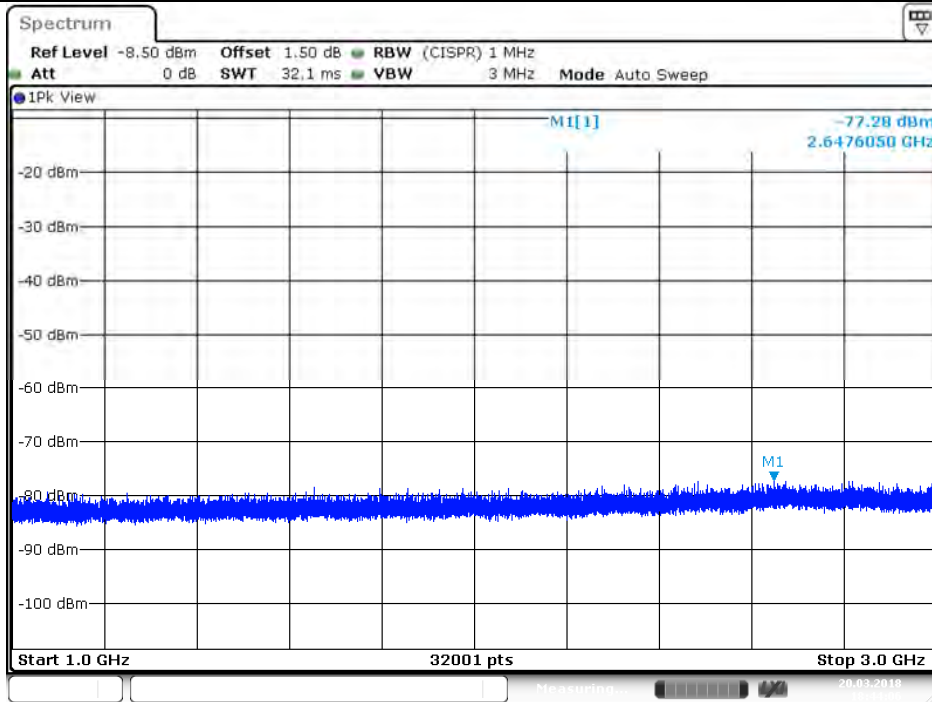


**Plot on Configuration VHT20 / 5745 MHz / Peak / Port 2 / 1GHz~3GHz**



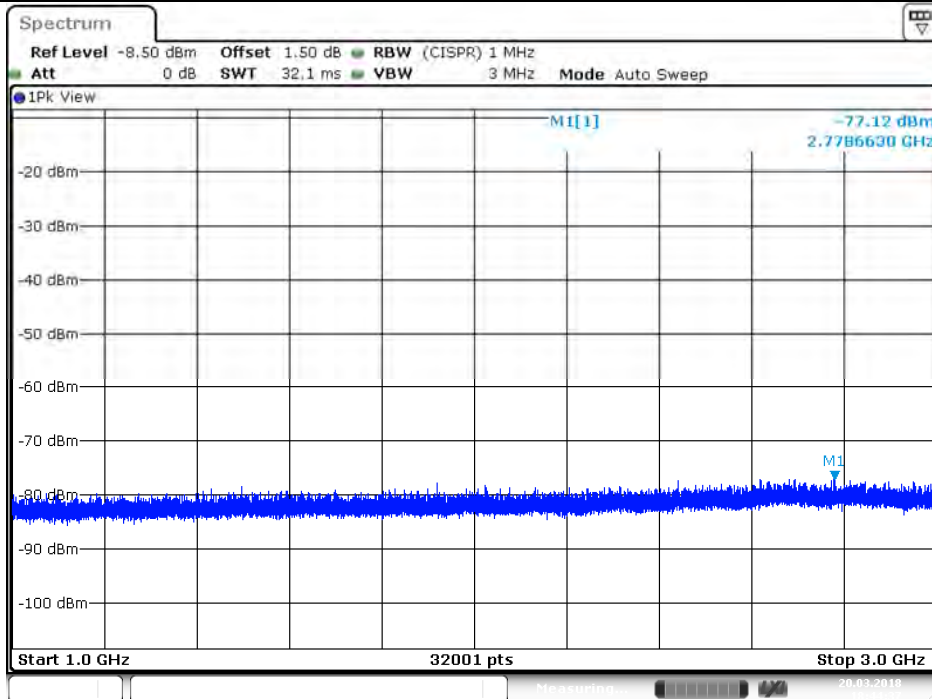


Plot on Configuration VHT20 / 5745 MHz / Peak / Port 3 / 1GHz~3GHz



Date: 20.MAR.2018 18:44:06

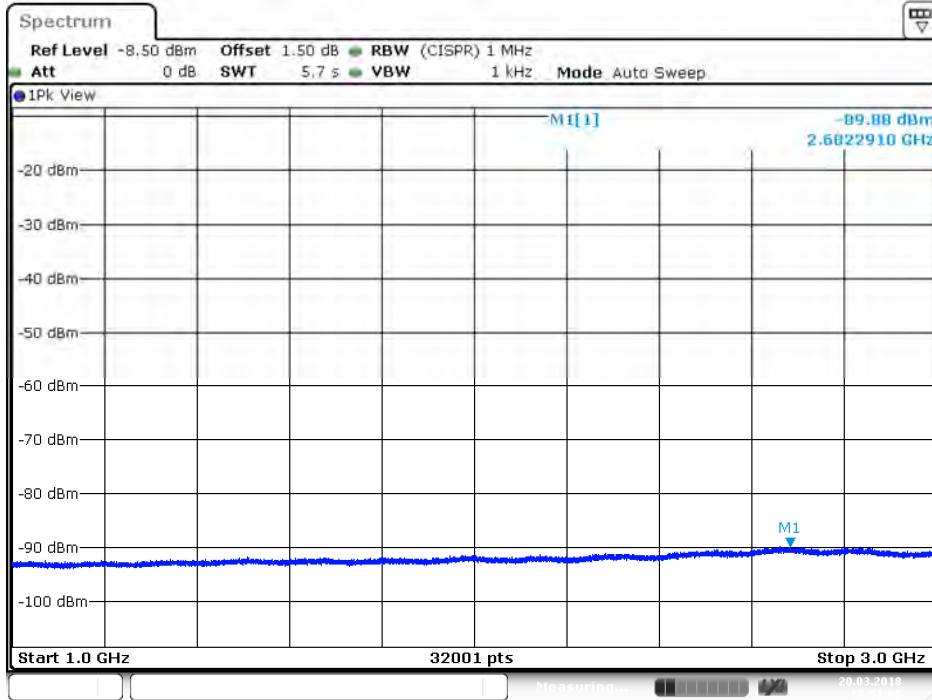
Plot on Configuration VHT20 / 5745 MHz / Peak / Port 4 / 1GHz~3GHz



Date: 20.MAR.2018 18:44:38

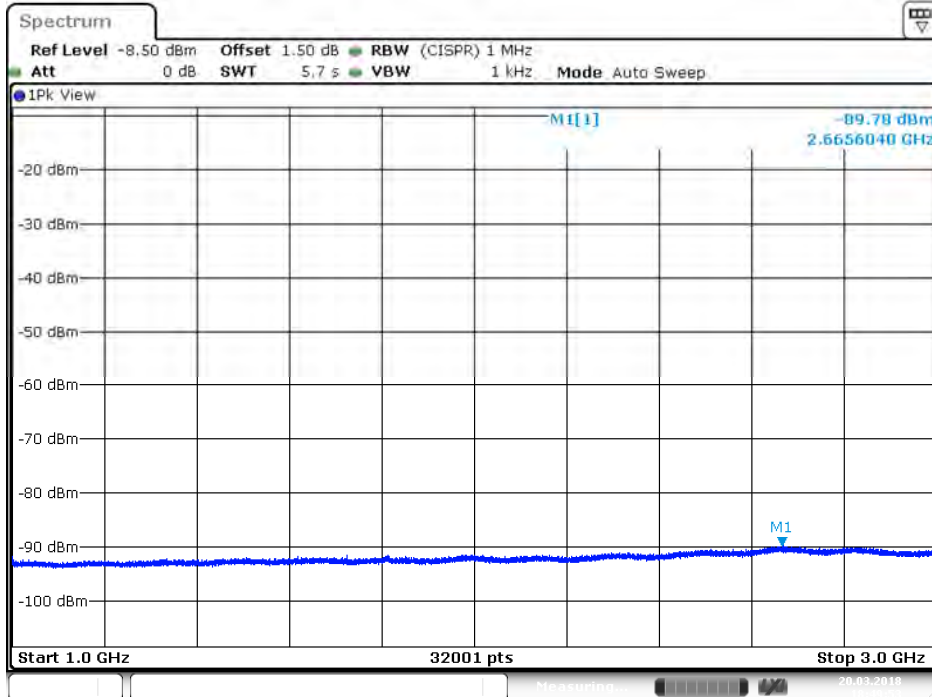


Plot on Configuration VHT20 / 5785 MHz / Average / Port 1 / 1GHz~3GHz



Date: 20.MAR.2018 18:51:07

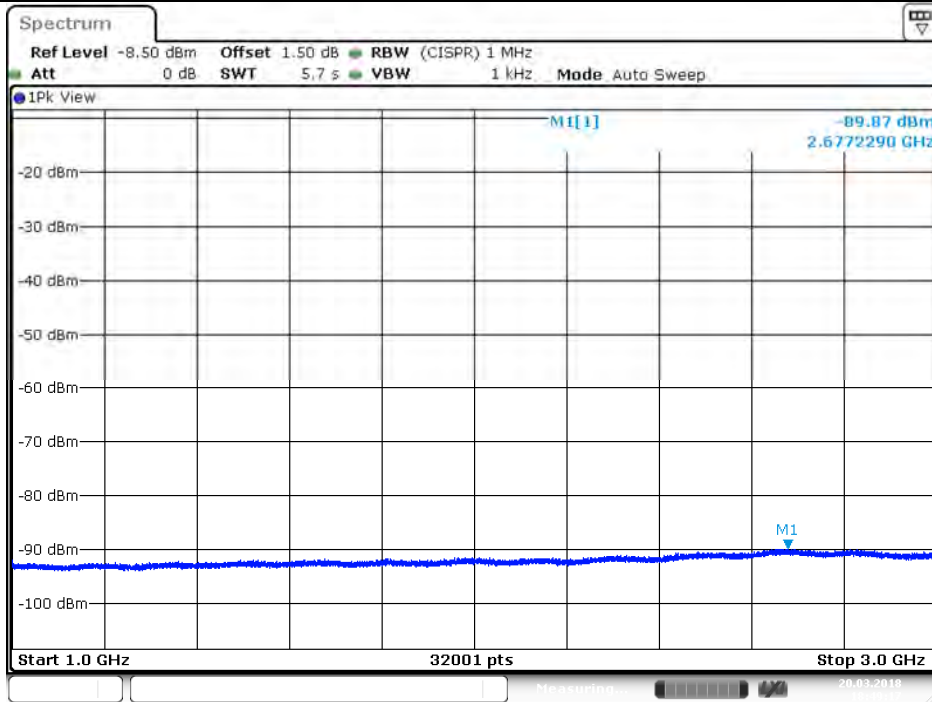
Plot on Configuration VHT20 / 5785 MHz / Average / Port 2 / 1GHz~3GHz



Date: 20.MAR.2018 18:49:54

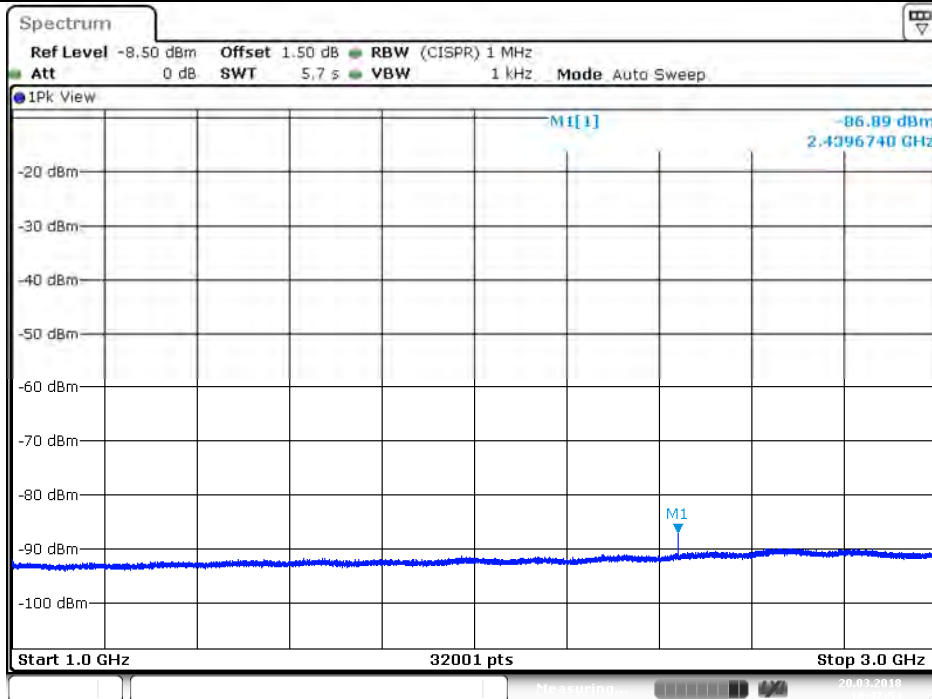


Plot on Configuration VHT20 / 5785 MHz / Average / Port 3 / 1GHz~3GHz



Date: 20.MAR.2018 18:49:17

Plot on Configuration VHT20 / 5785 MHz / Average / Port 4 / 1GHz~3GHz

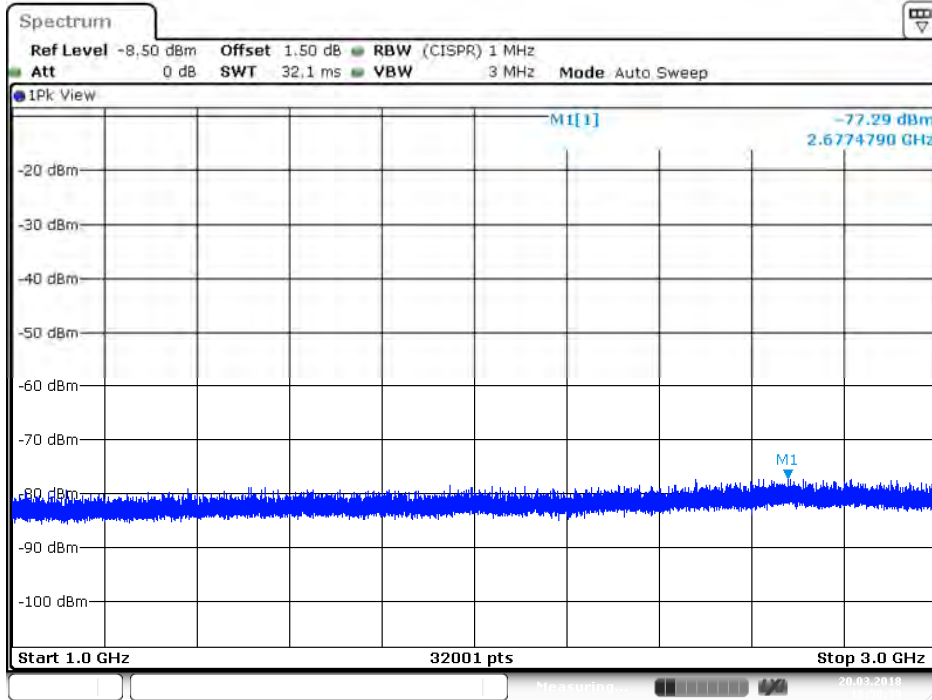


Date: 20.MAR.2018 18:47:54



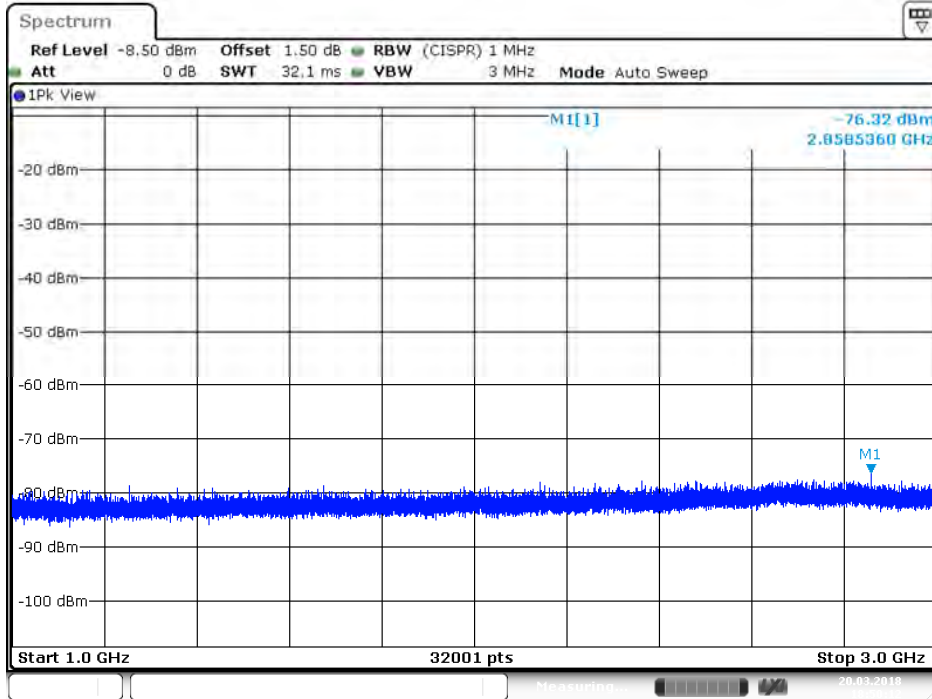


Plot on Configuration VHT20 / 5785 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 20.MAR.2018 18:50:40

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

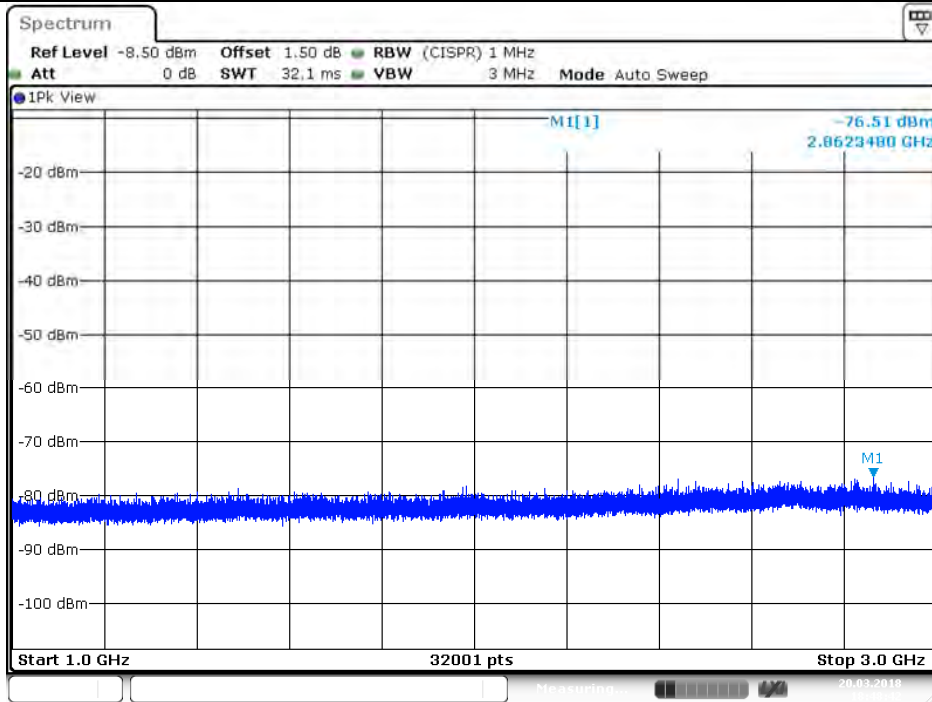


Date: 20.MAR.2018 18:50:12



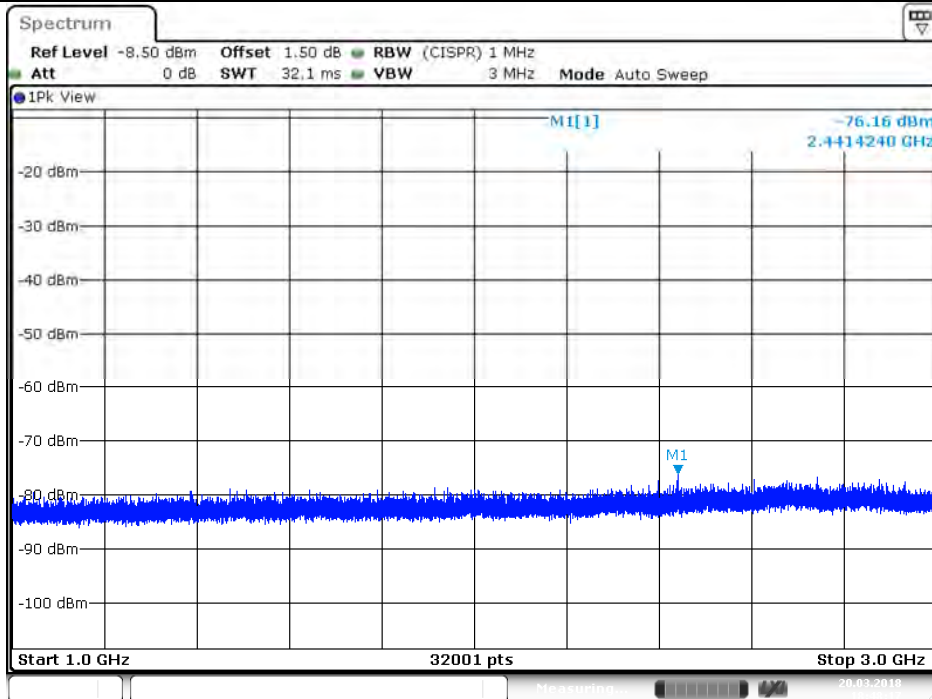


Plot on Configuration VHT20 / 5785 MHz / Peak / Port 3 / 1GHz~3GHz



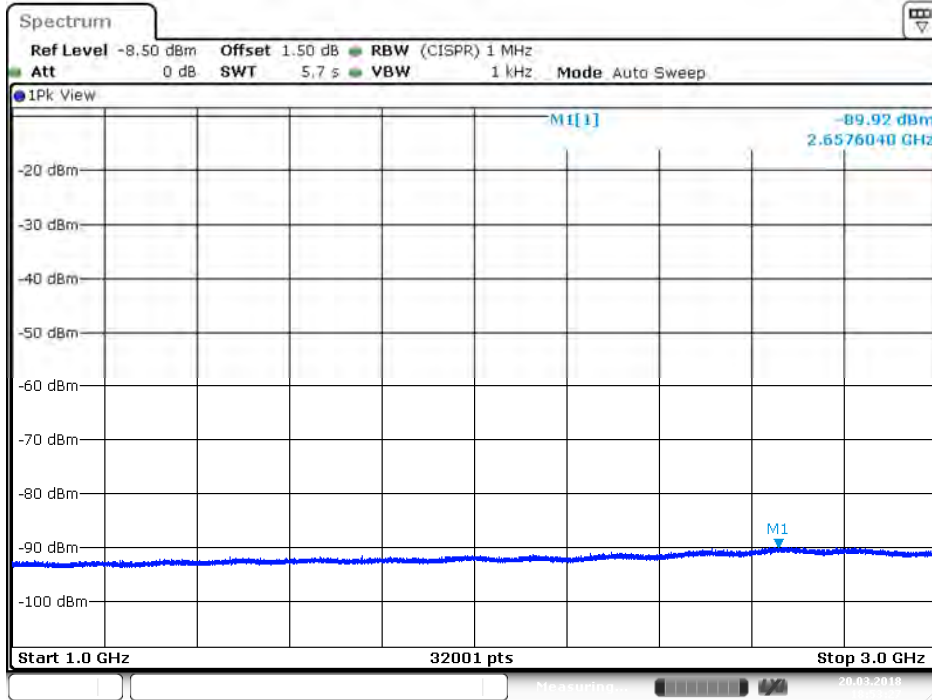
Date: 20.MAR.2018 18:48:43

Plot on Configuration VHT20 / 5785 MHz / Peak / Port 4 / 1GHz~3GHz



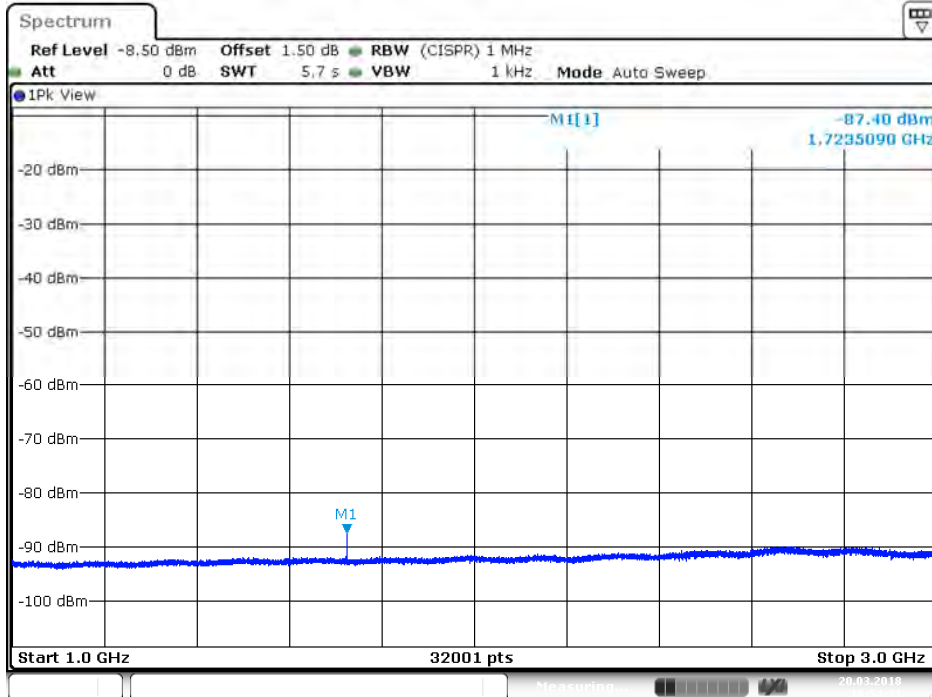
Date: 20.MAR.2018 18:48:17

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



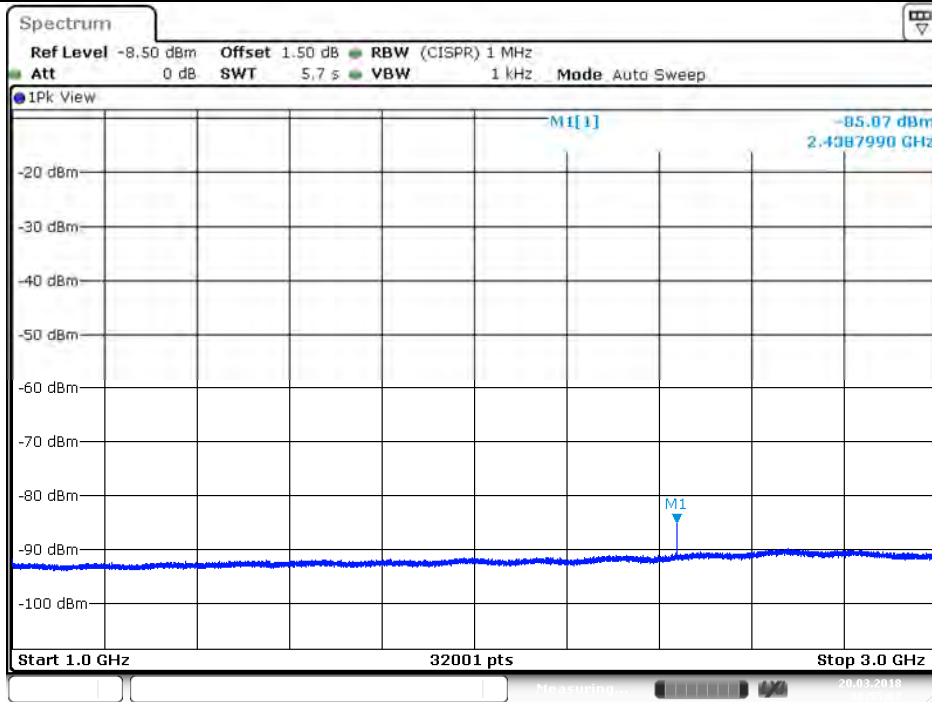
Date: 20.MAR.2018 18:53:28

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

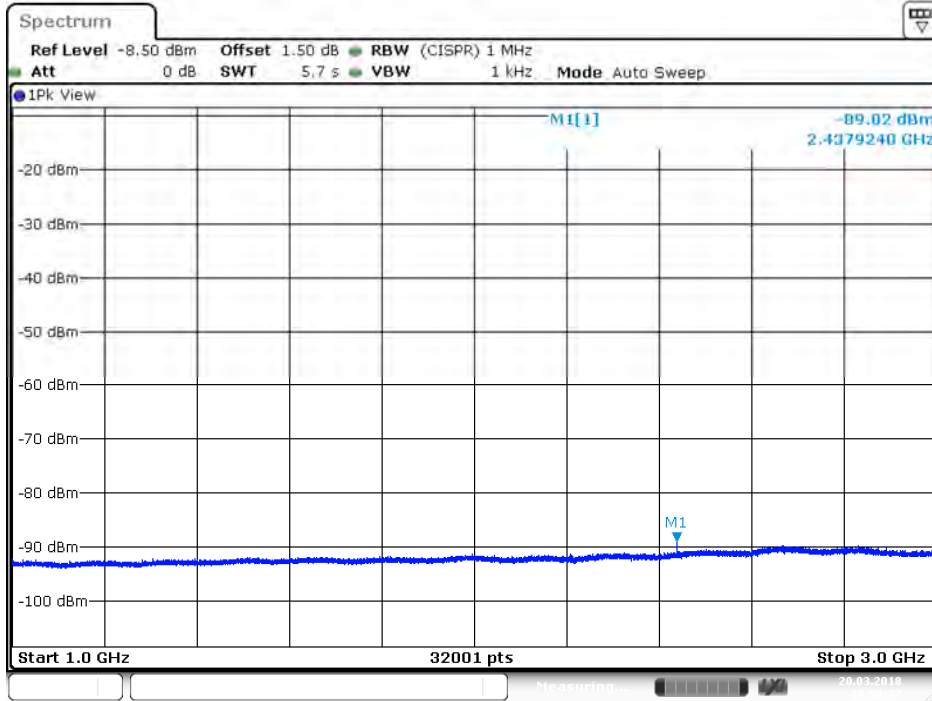


Date: 20.MAR.2018 18:54:32

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

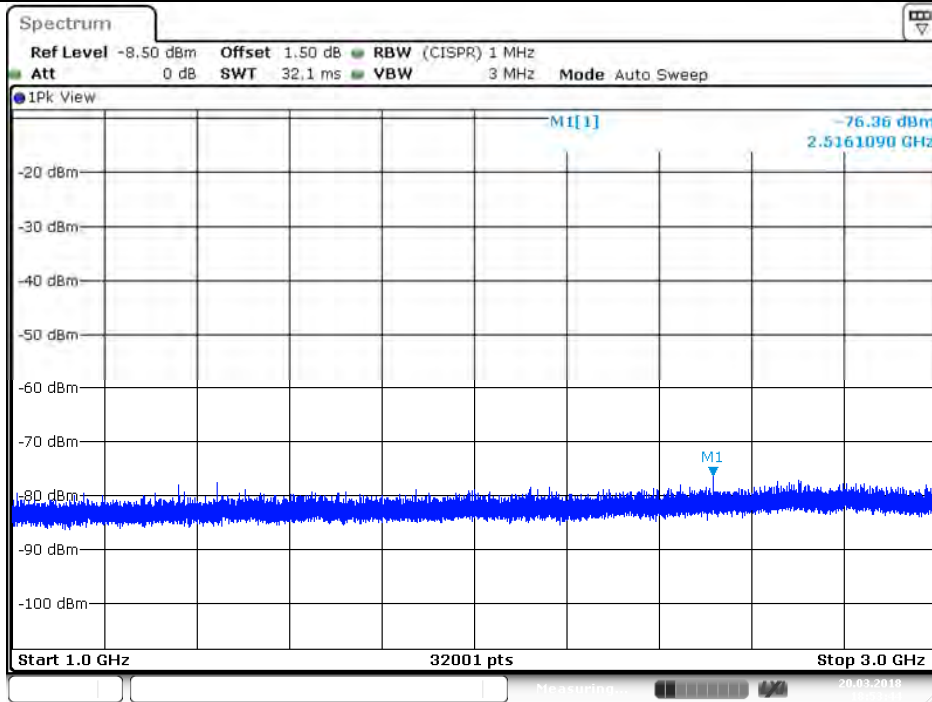


**Plot on Configuration VHT20 / 5825 MHz / Average / Port 4 / 1GHz~3GHz**



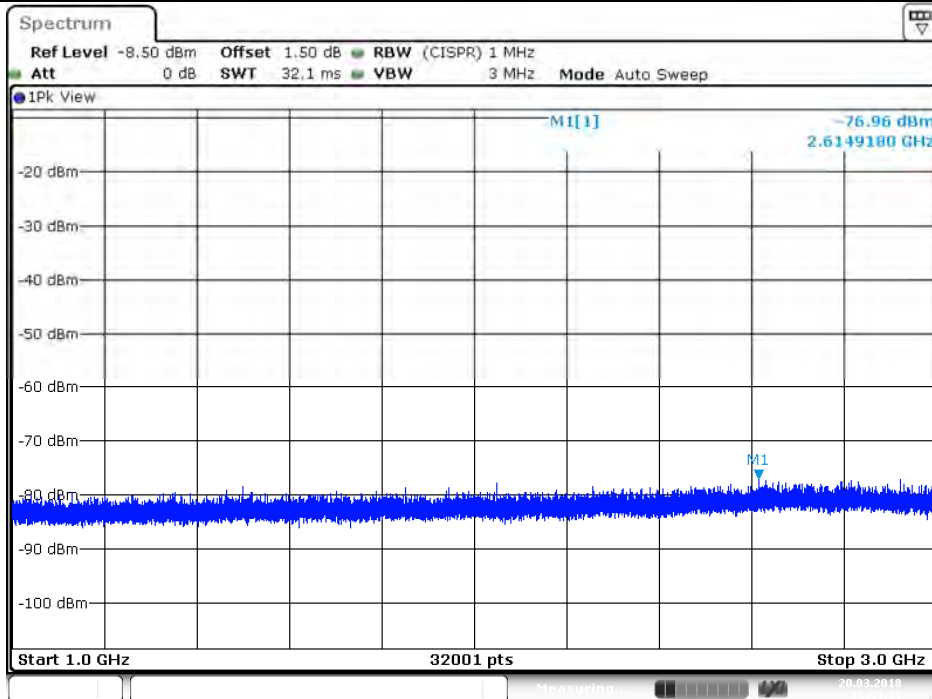


Plot on Configuration VHT20 / 5825 MHz / Peak / Port 1 / 1GHz~3GHz



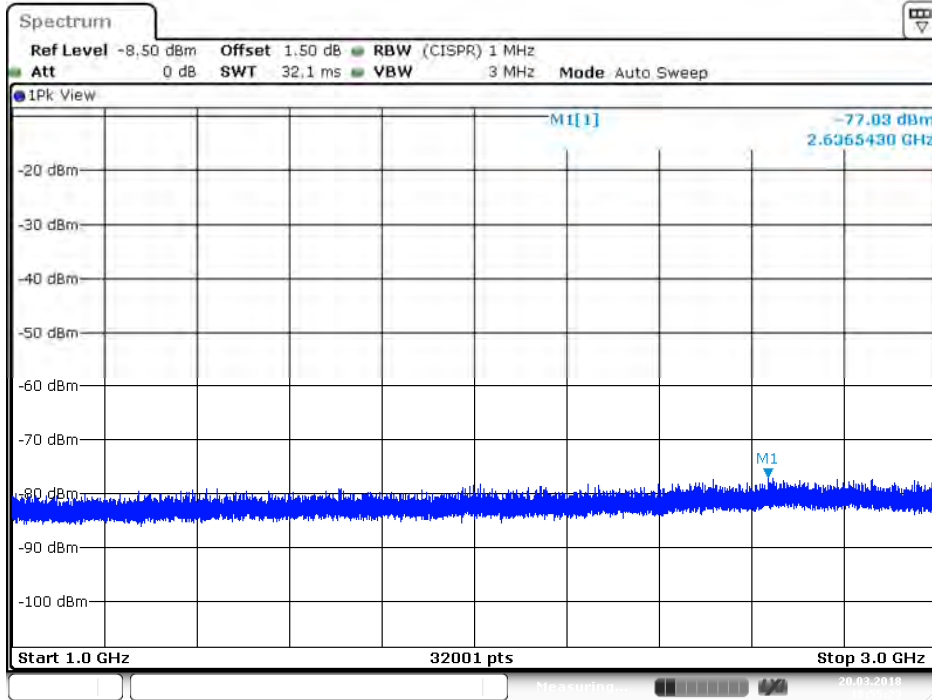
Date: 20.MAR.2018 18:53:44

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

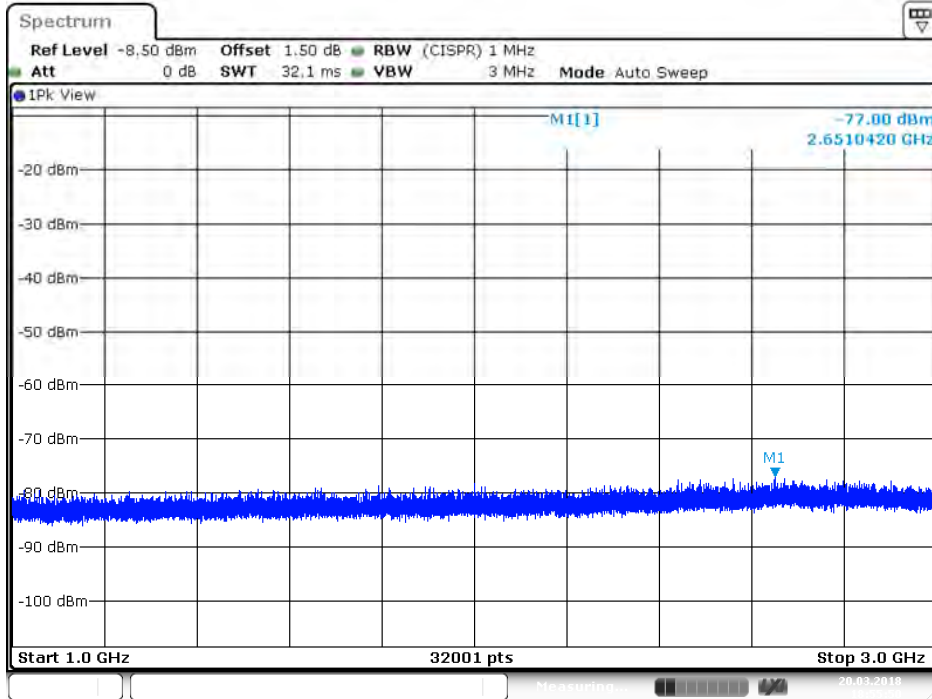


Date: 20.MAR.2018 18:54:11

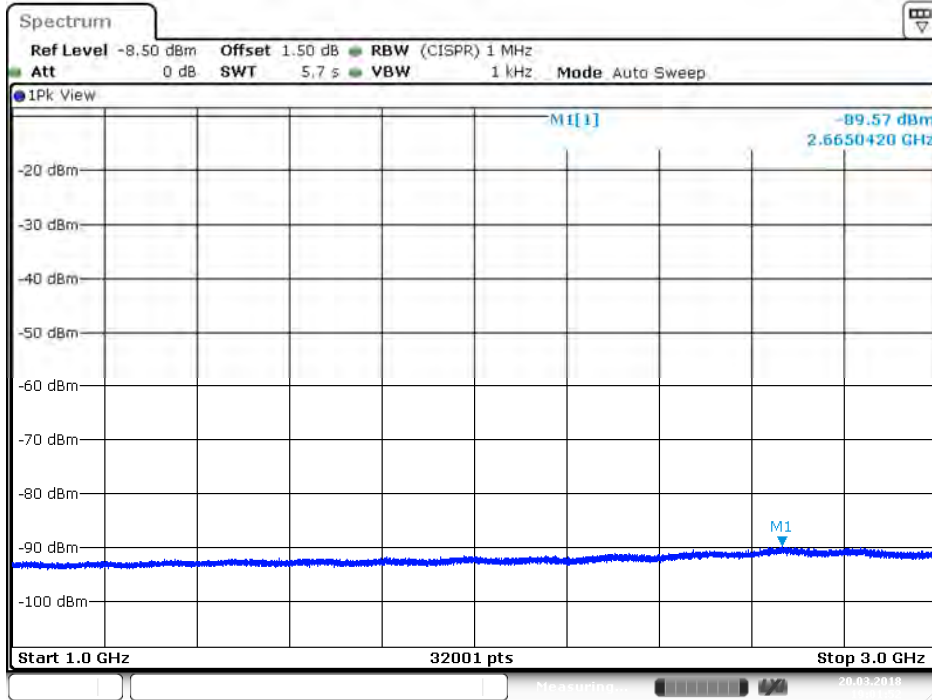
**Plot on Configuration VHT20 / 5825 MHz / Peak / Port 3 / 1GHz~3GHz**



**Plot on Configuration VHT20 / 5825 MHz / Peak / Port 4 / 1GHz~3GHz**

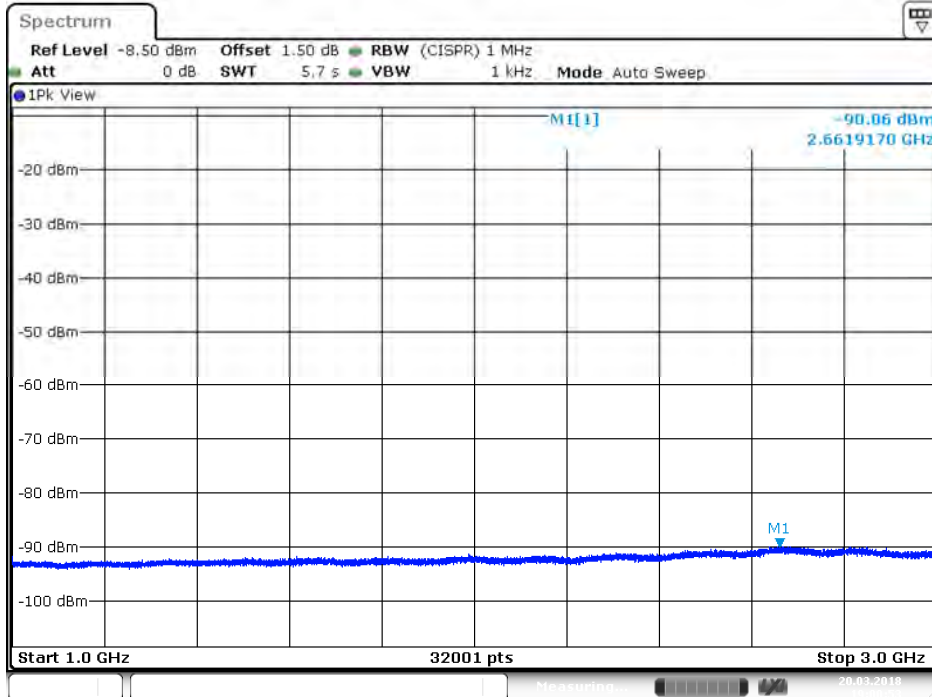


**Plot on Configuration VHT40 / 5755 MHz / Average / Port 1 / 1GHz~3GHz**



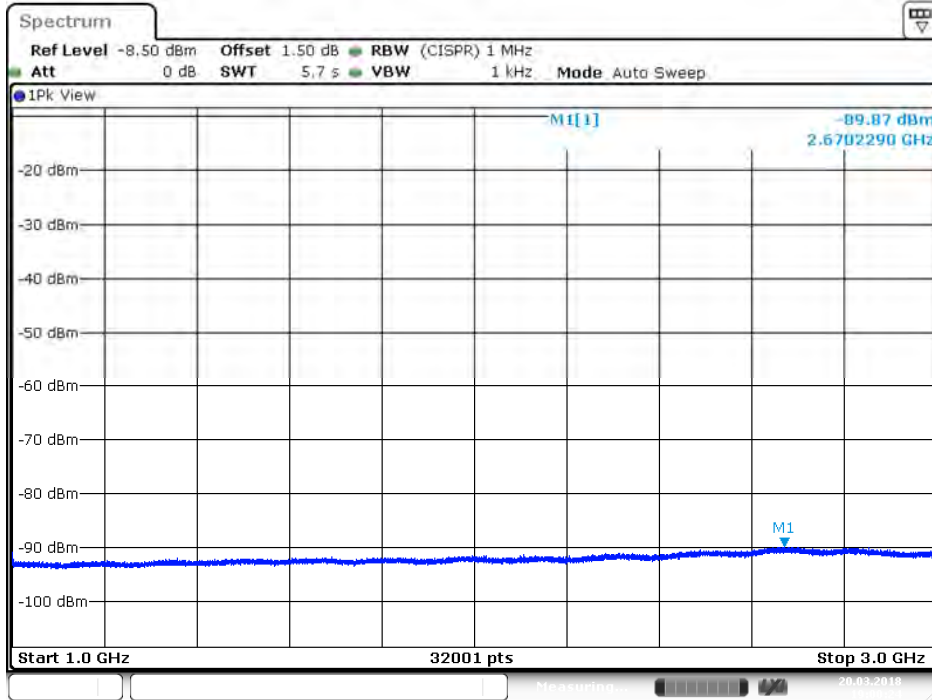
Date: 20.MAR.2018 19:01:53

**Plot on Configuration VHT40 / 5755 MHz / Average / Port 2 / 1GHz~3GHz**

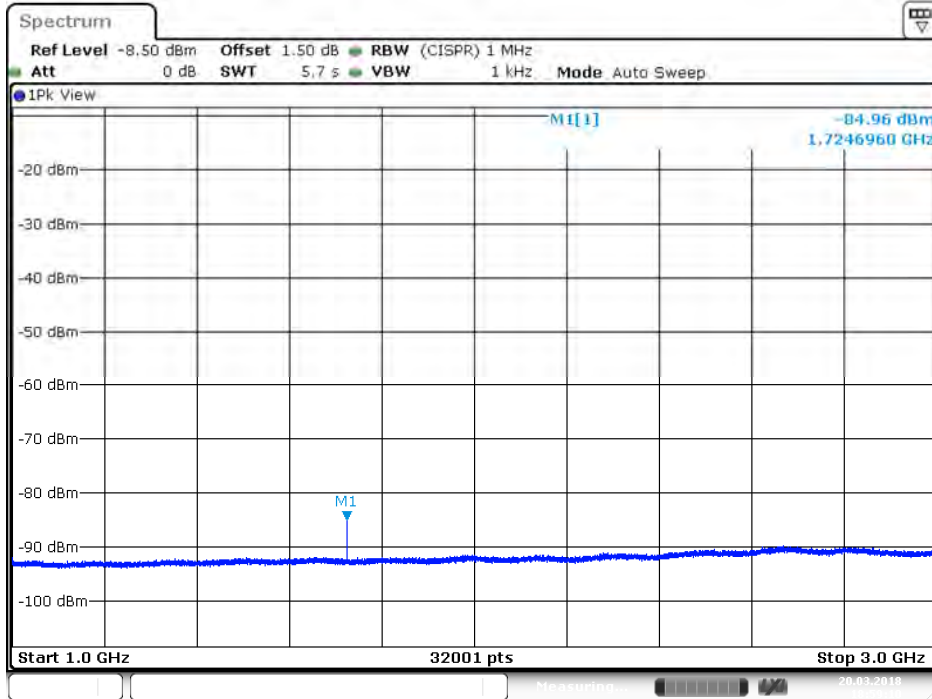


Date: 20.MAR.2018 19:00:53

**Plot on Configuration VHT40 / 5755 MHz / Average / Port 3 / 1GHz~3GHz**



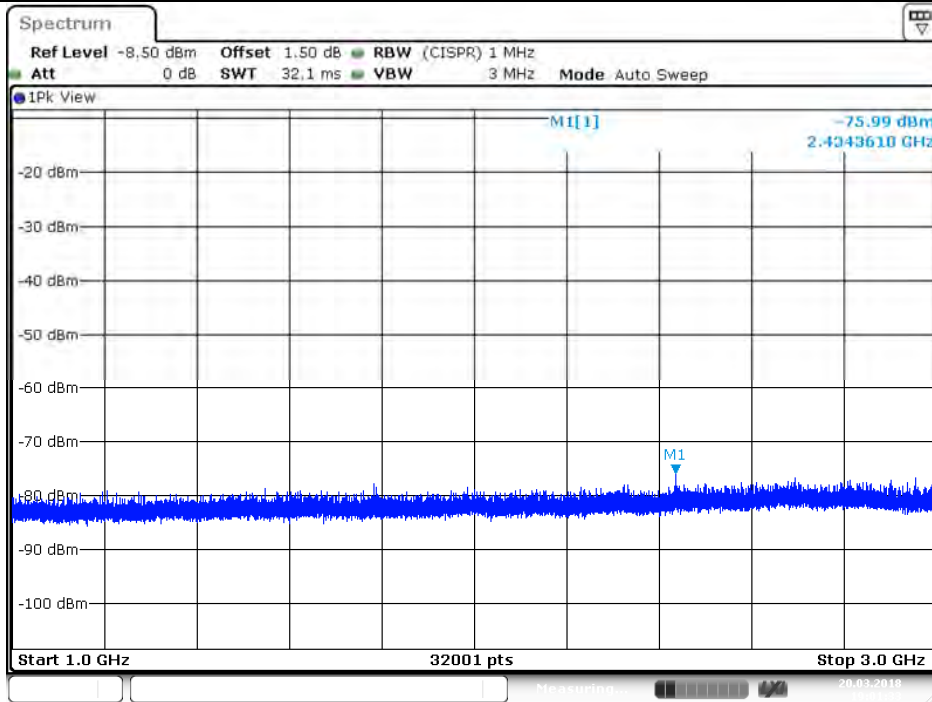
**Plot on Configuration VHT40 / 5755 MHz / Average / Port 4 / 1GHz~3GHz**





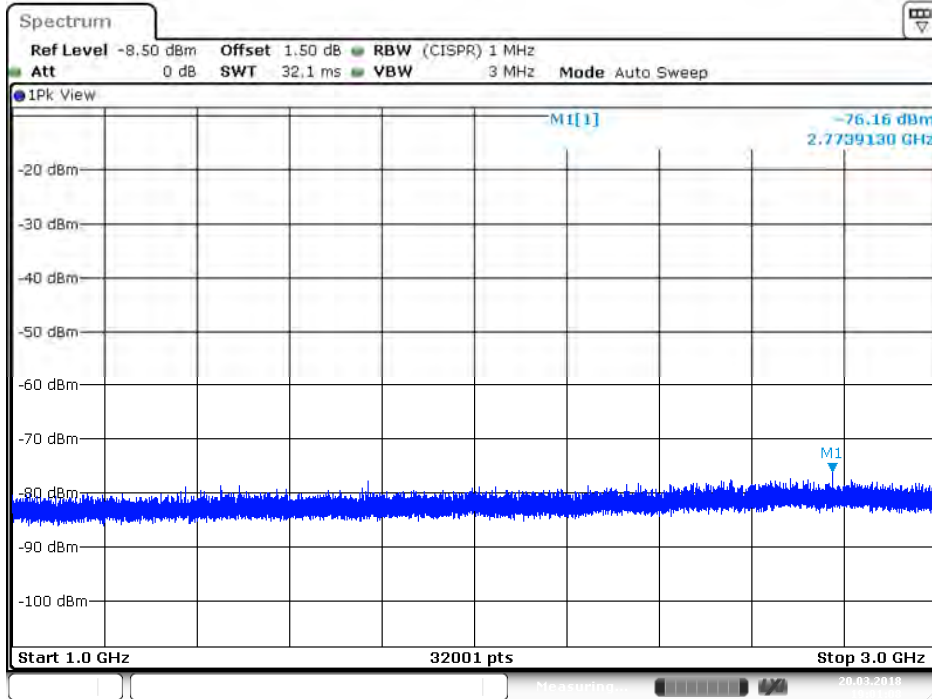


Plot on Configuration VHT40 / 5755 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 20.MAR.2018 19:01:33

Plot on Configuration VHT40 / 5755 MHz / Peak / Port 2 / 1GHz~3GHz

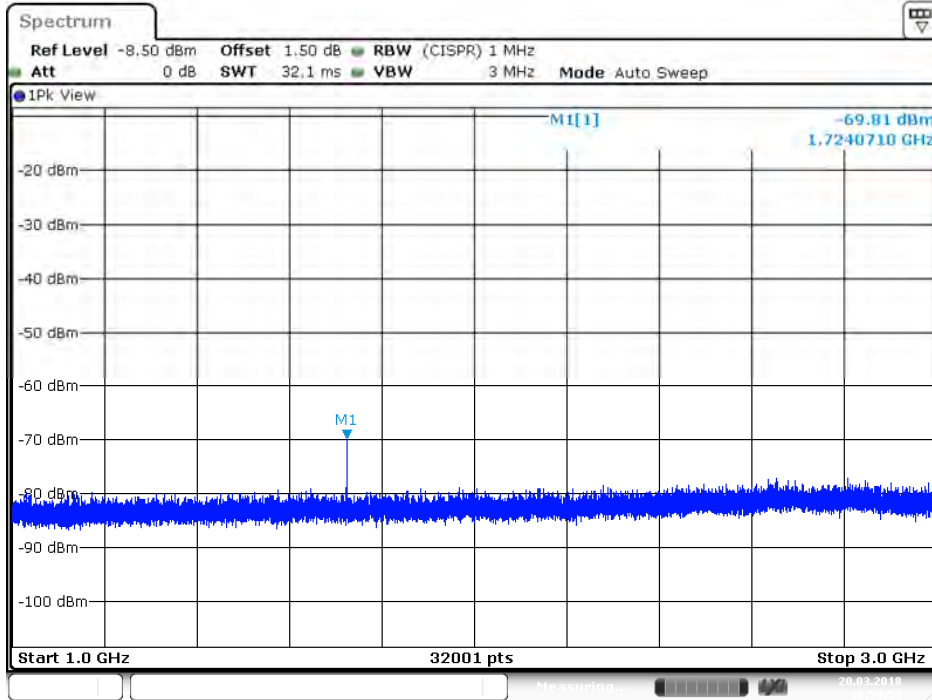


Date: 20.MAR.2018 19:01:08



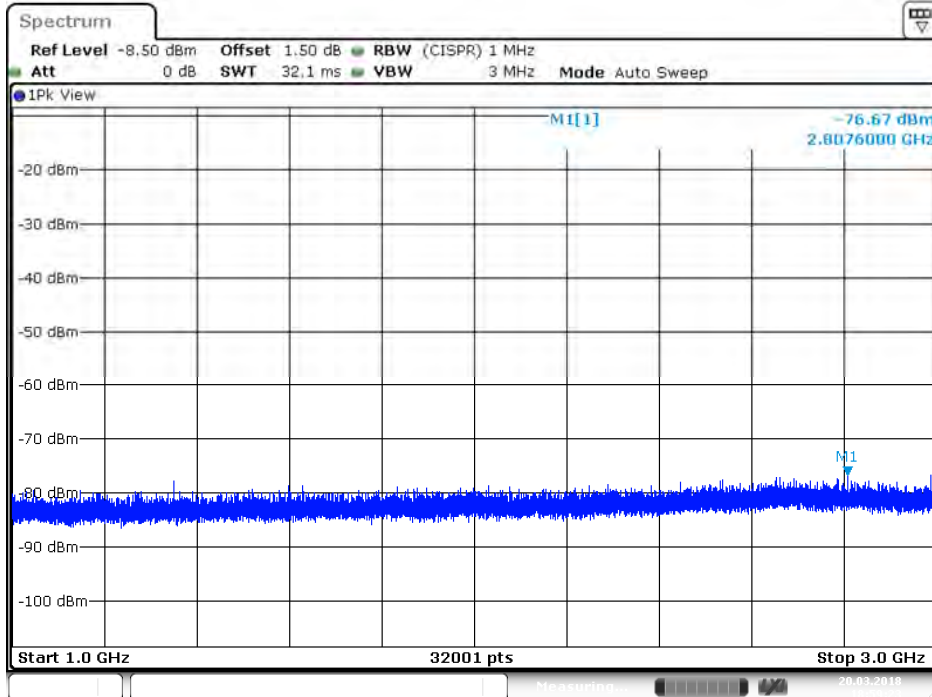


Plot on Configuration VHT40 / 5755 MHz / Peak / Port 3 / 1GHz~3GHz



Date: 20.MAR.2018 18:59:53

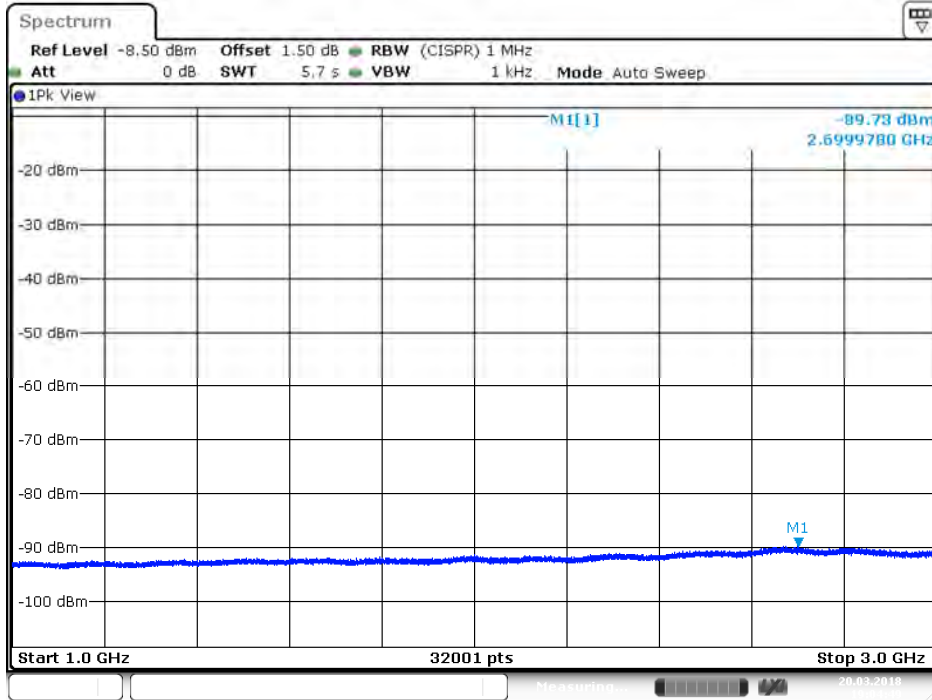
Plot on Configuration VHT40 / 5755 MHz / Peak / Port 4 / 1GHz~3GHz



Date: 20.MAR.2018 18:59:24

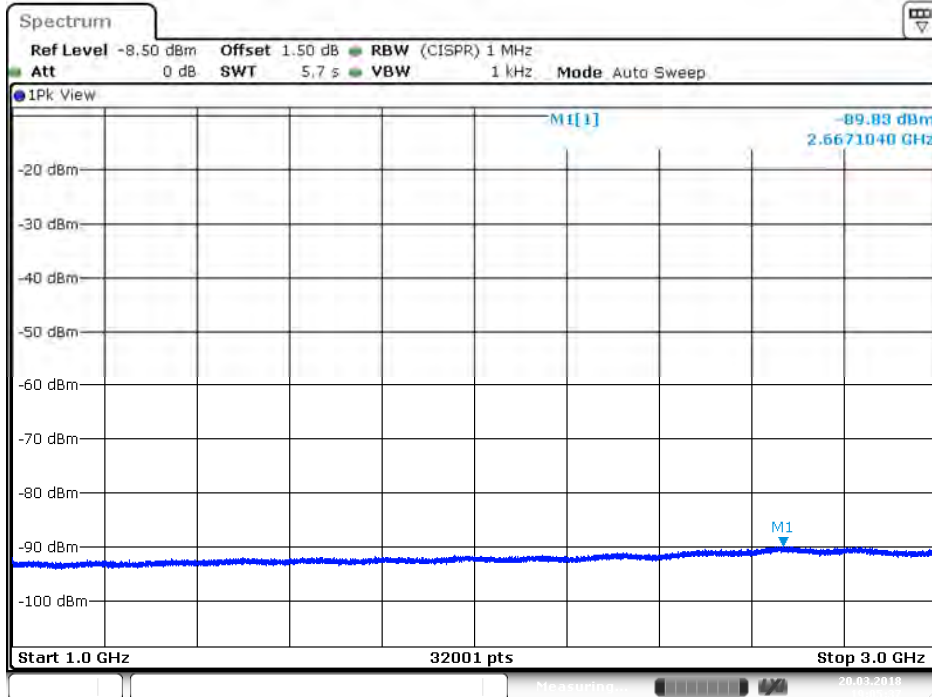


Plot on Configuration VHT40 / 5795 MHz / Average / Port 1 / 1GHz~3GHz



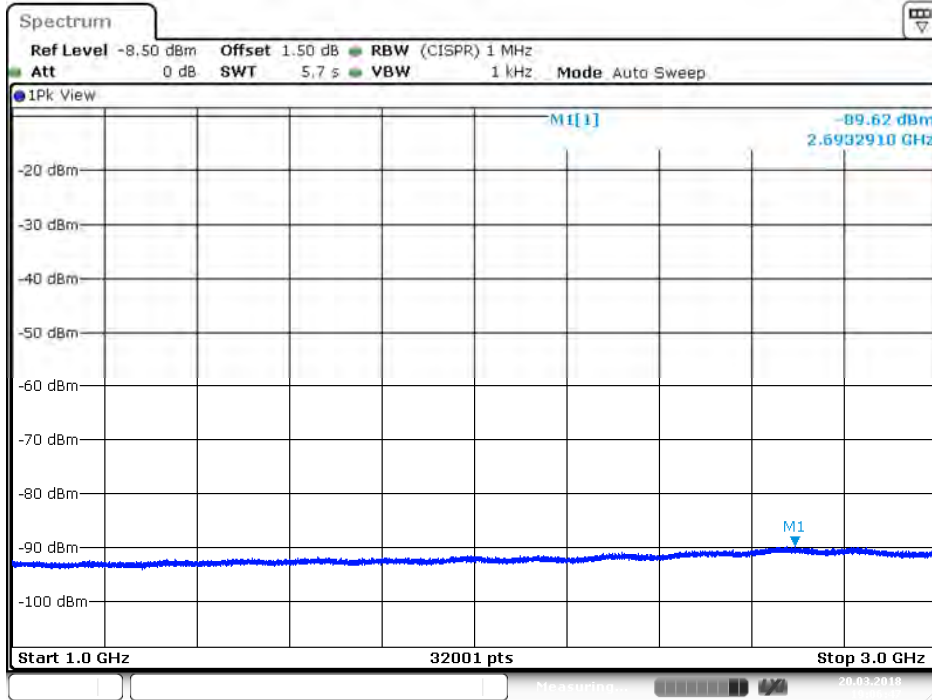
Date: 20.MAR.2018 19:04:49

Plot on Configuration VHT40 / 5795 MHz / Average / Port 2 / 1GHz~3GHz

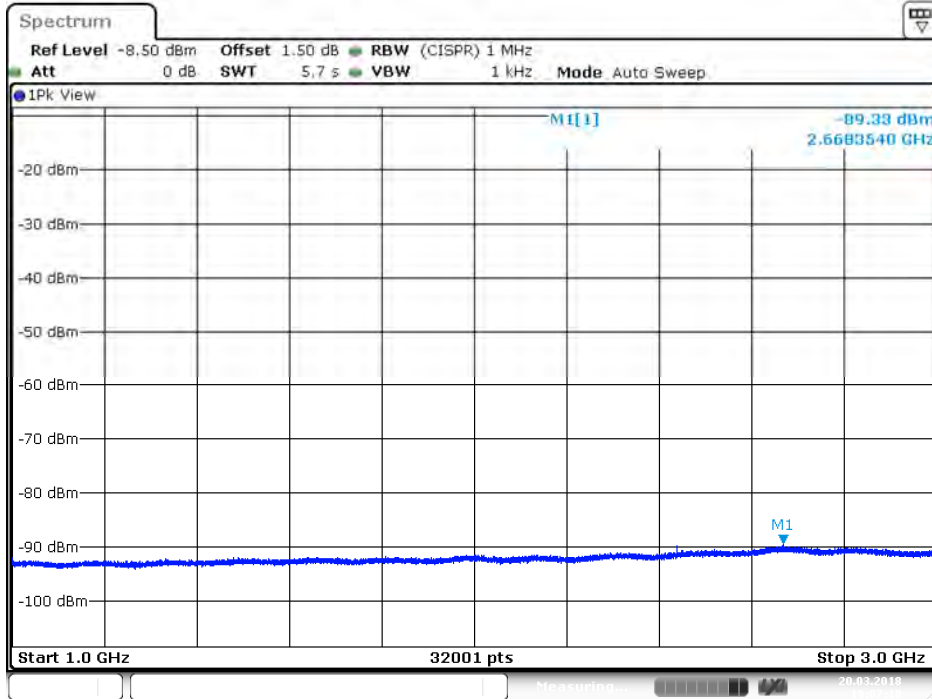


Date: 20.MAR.2018 19:05:38

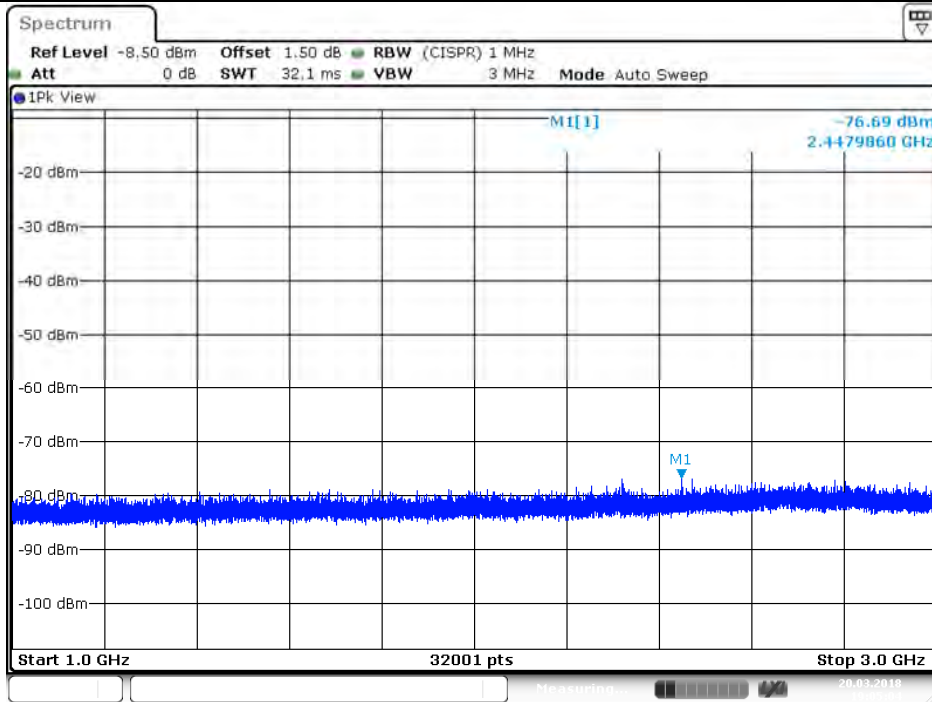
**Plot on Configuration VHT40 / 5795 MHz / Average / Port 3 / 1GHz~3GHz**



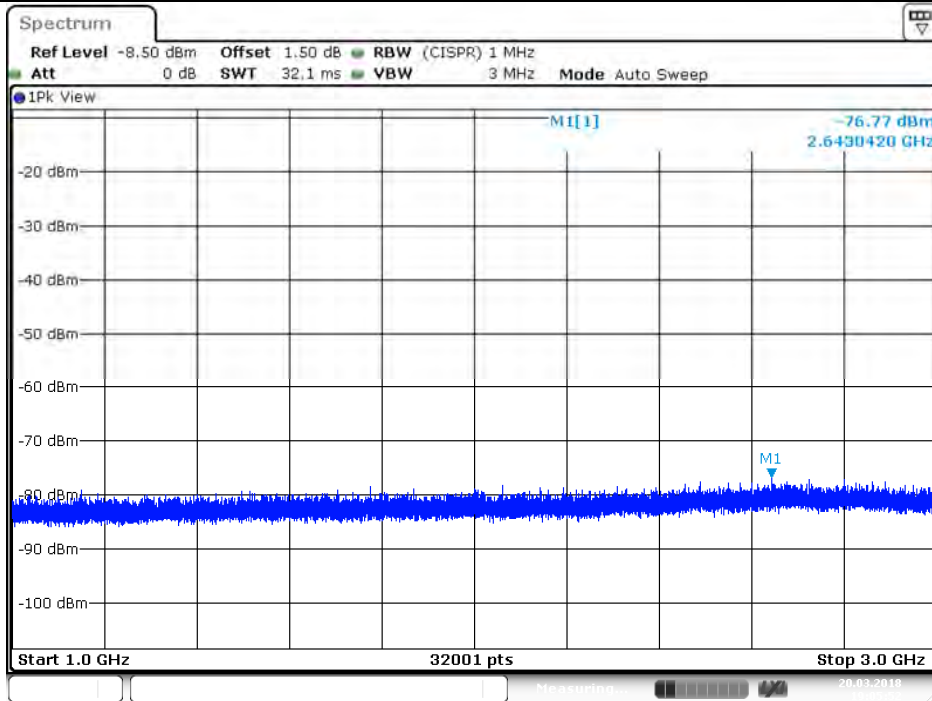
**Plot on Configuration VHT40 / 5795 MHz / Average / Port 4 / 1GHz~3GHz**



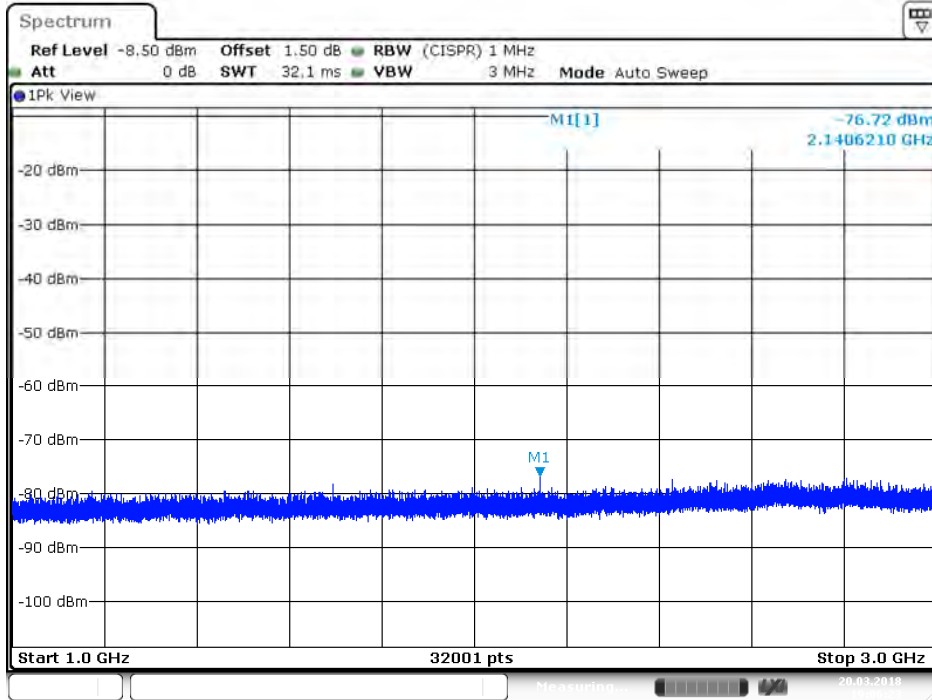
**Plot on Configuration VHT40 / 5795 MHz / Peak / Port 1 / 1GHz~3GHz**



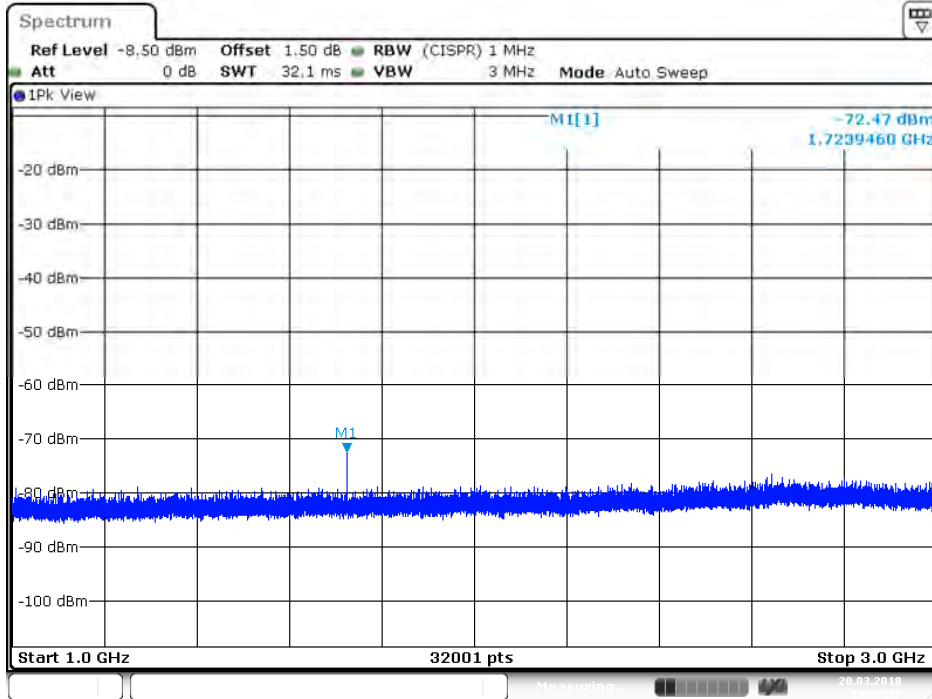
**Plot on Configuration VHT40 / 5795 MHz / Peak / Port 2 / 1GHz~3GHz**



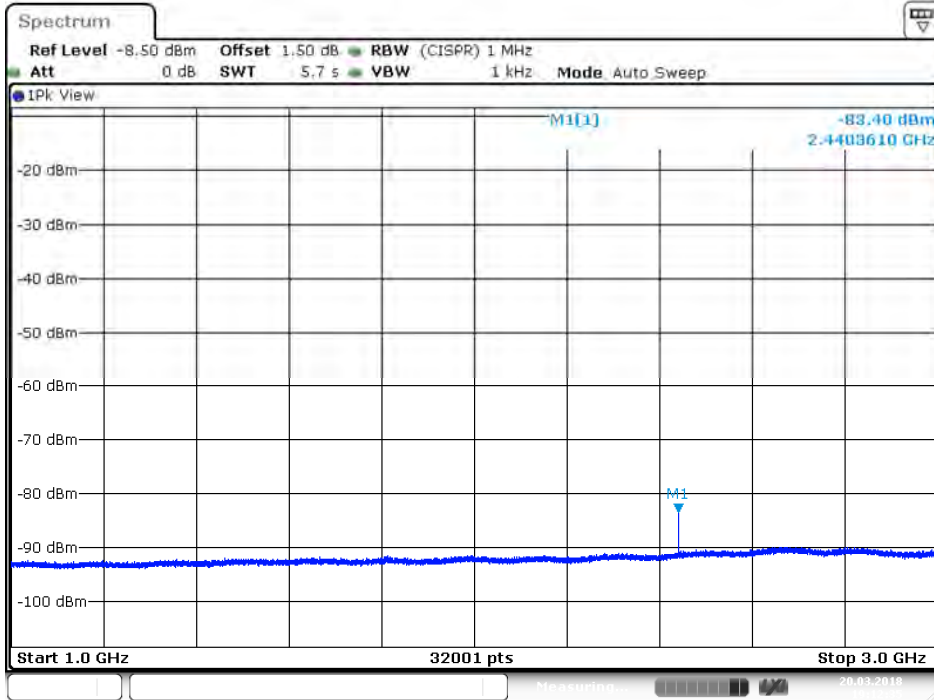
**Plot on Configuration VHT40 / 5795 MHz / Peak / Port 3 / 1GHz~3GHz**



**Plot on Configuration VHT40 / 5795 MHz / Peak / Port 4 / 1GHz~3GHz**

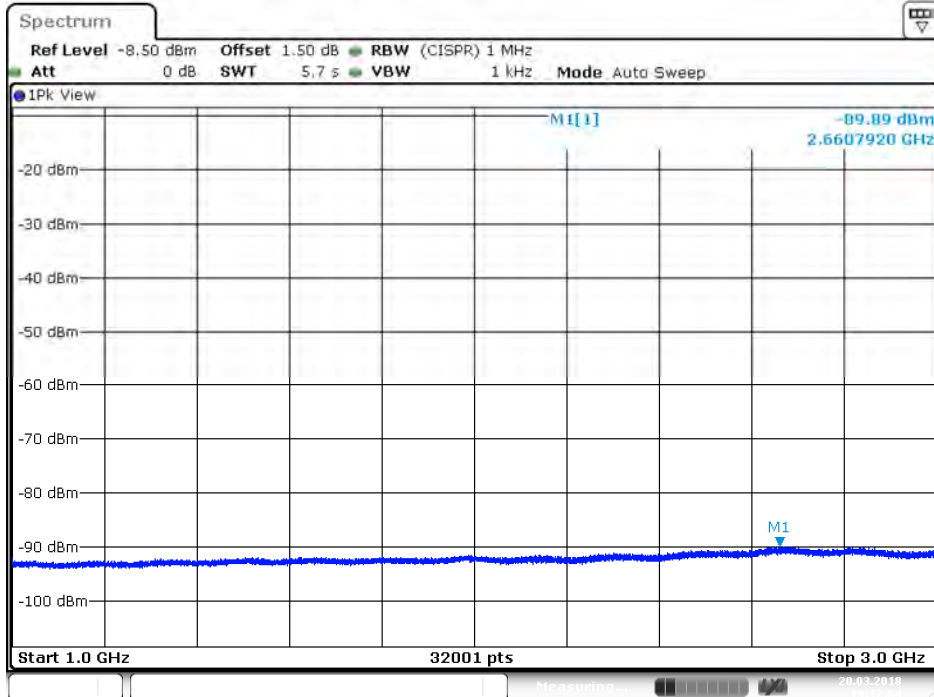


**Plot on Configuration VHT80 / 5775 MHz / Average / Port 1 / 1GHz~3GHz**



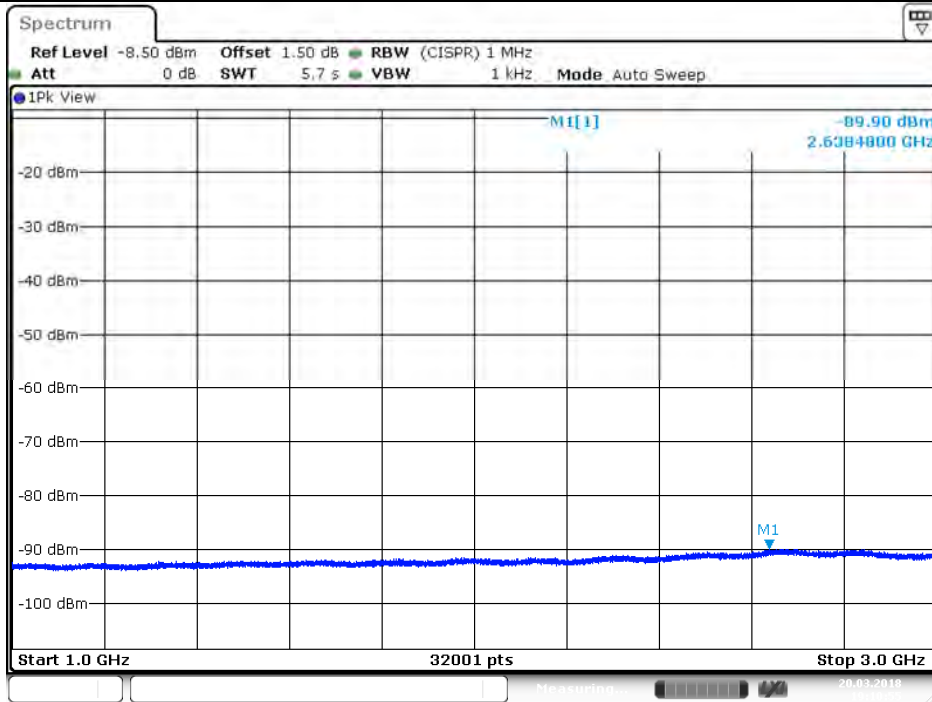
Date: 20.MAR.2018 19:12:36

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

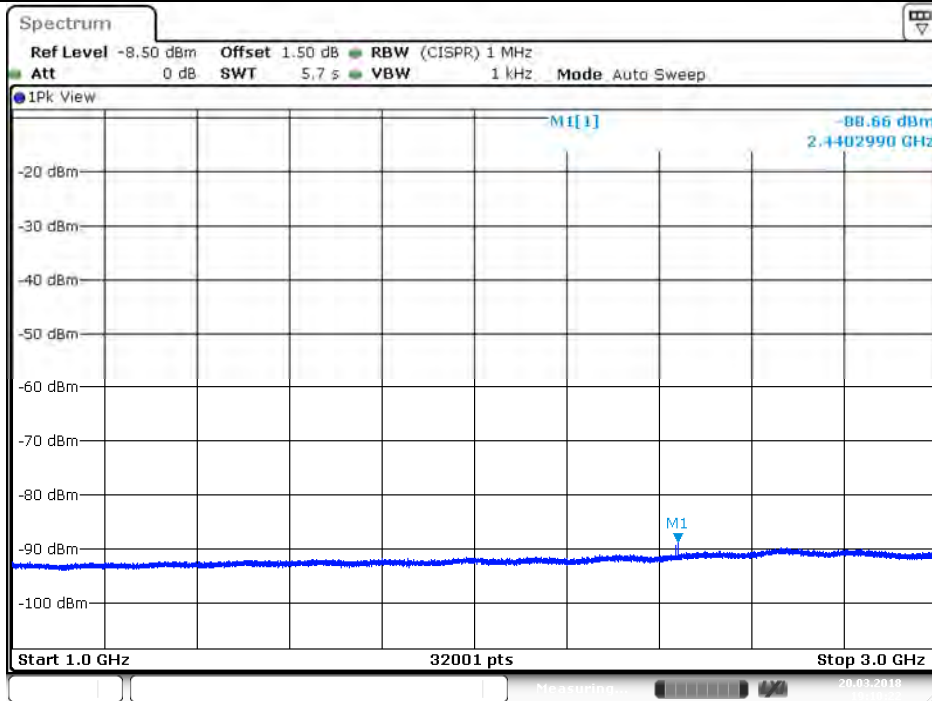


Date: 20.MAR.2018 19:12:04

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



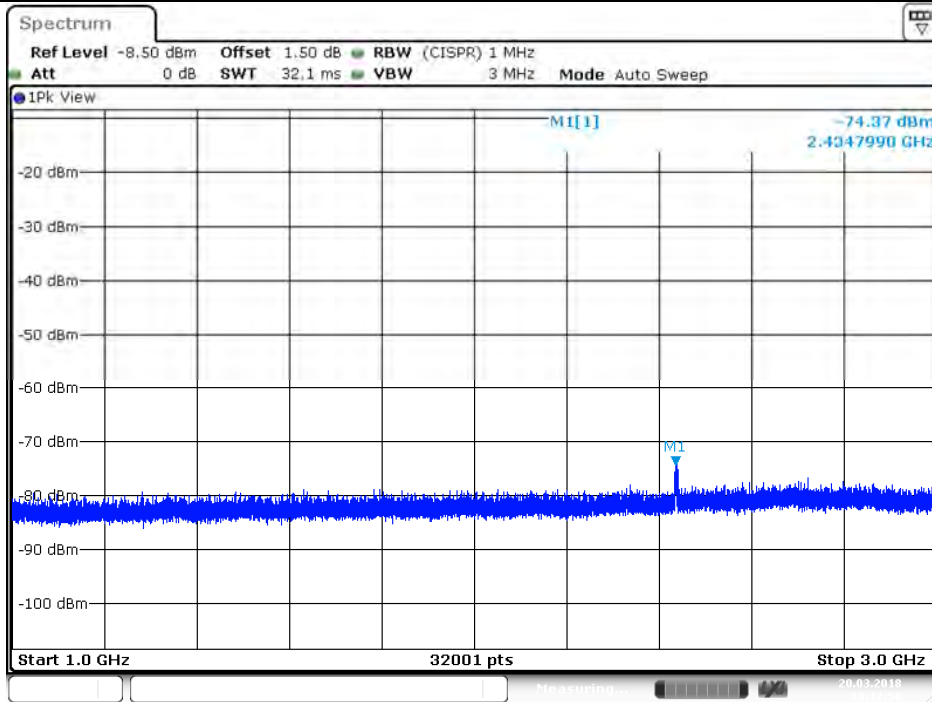
**Plot on Configuration VHT80 / 5775 MHz / Average / Port 4/ 1GHz~3GHz**





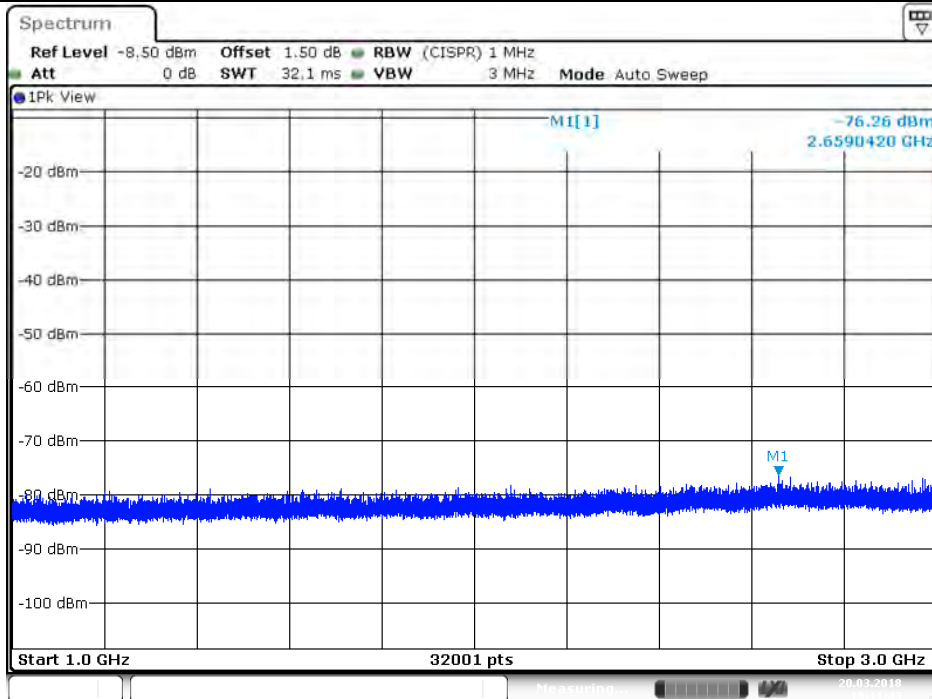


Plot on Configuration VHT80 / 5775 MHz / Peak / Port 1 / 1GHz~3GHz



Date: 20.MAR.2018 19:12:56

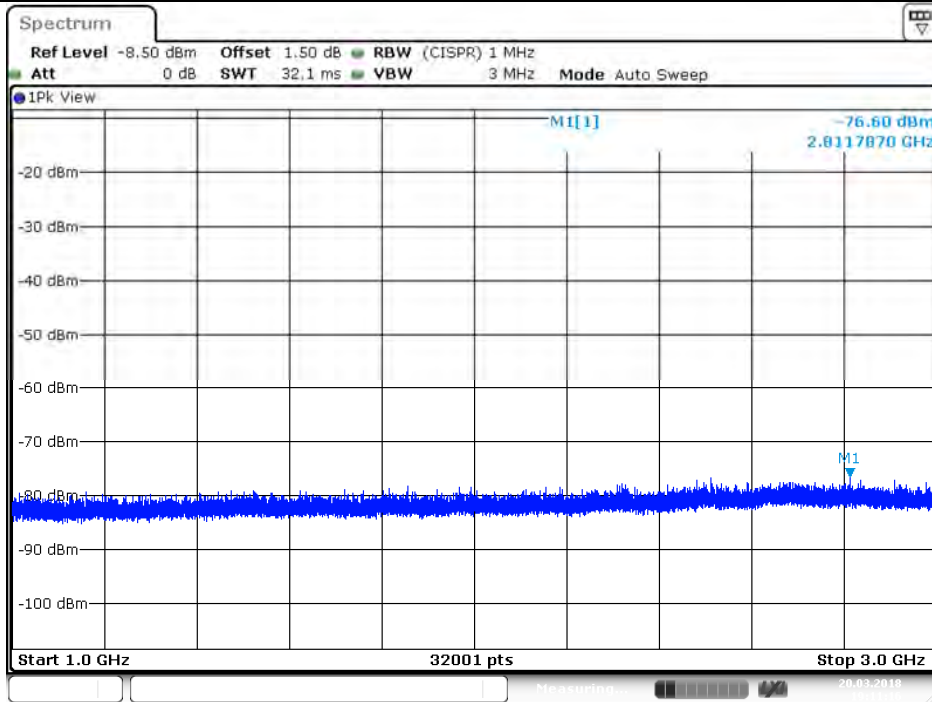
Plot on Configuration VHT80 / 5775 MHz / Peak / Port 2 / 1GHz~3GHz



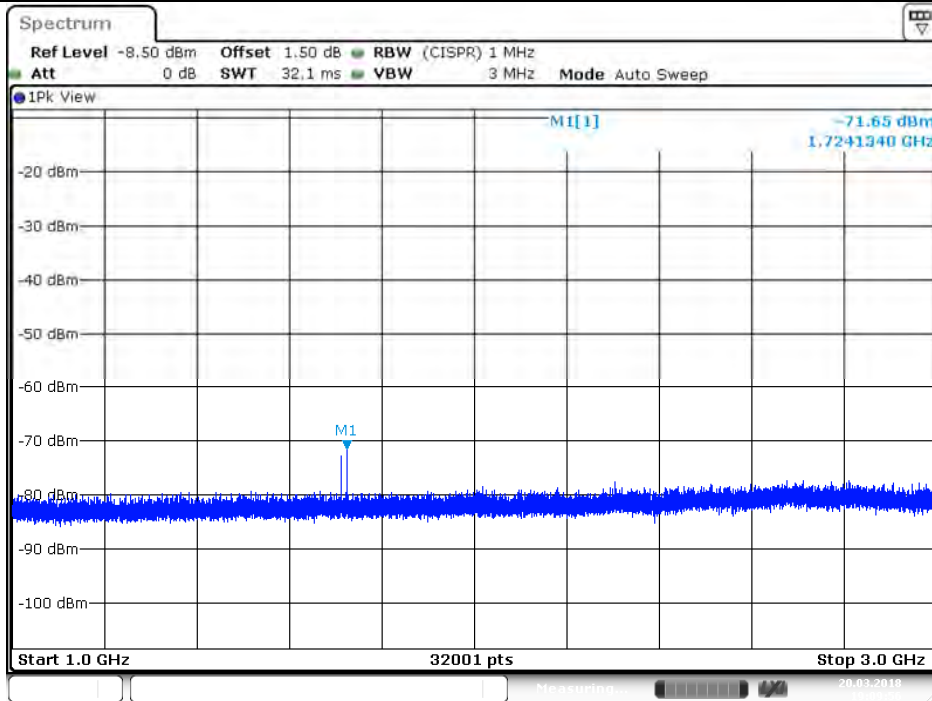
Date: 20.MAR.2018 19:11:43



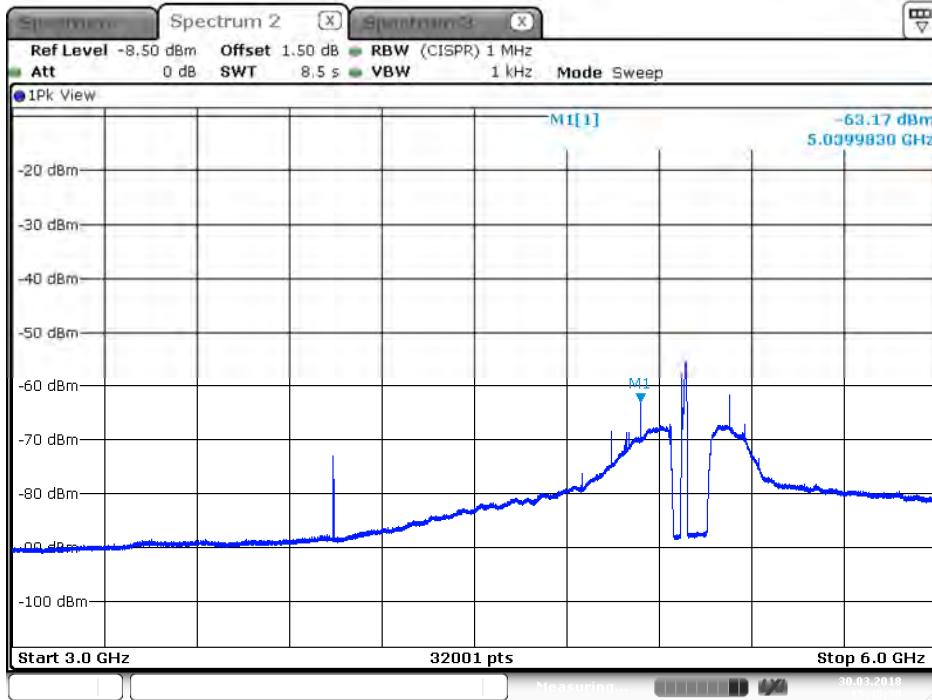
**Plot on Configuration VHT80 / 5775 MHz / Peak / Port 3 / 1GHz~3GHz**



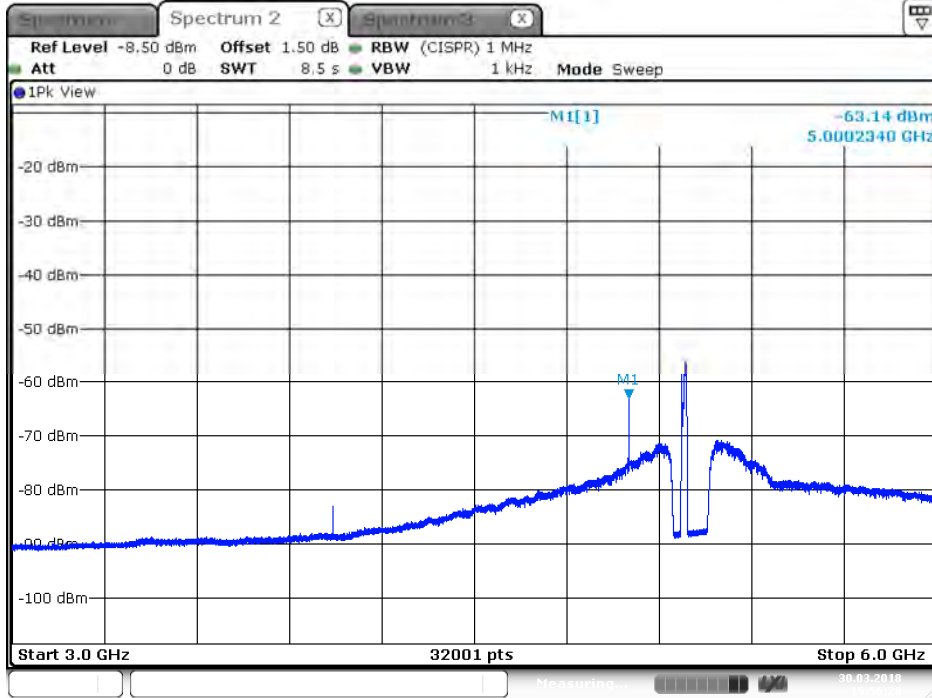
**Plot on Configuration VHT80 / 5775 MHz / Peak / Port 4 / 1GHz~3GHz**



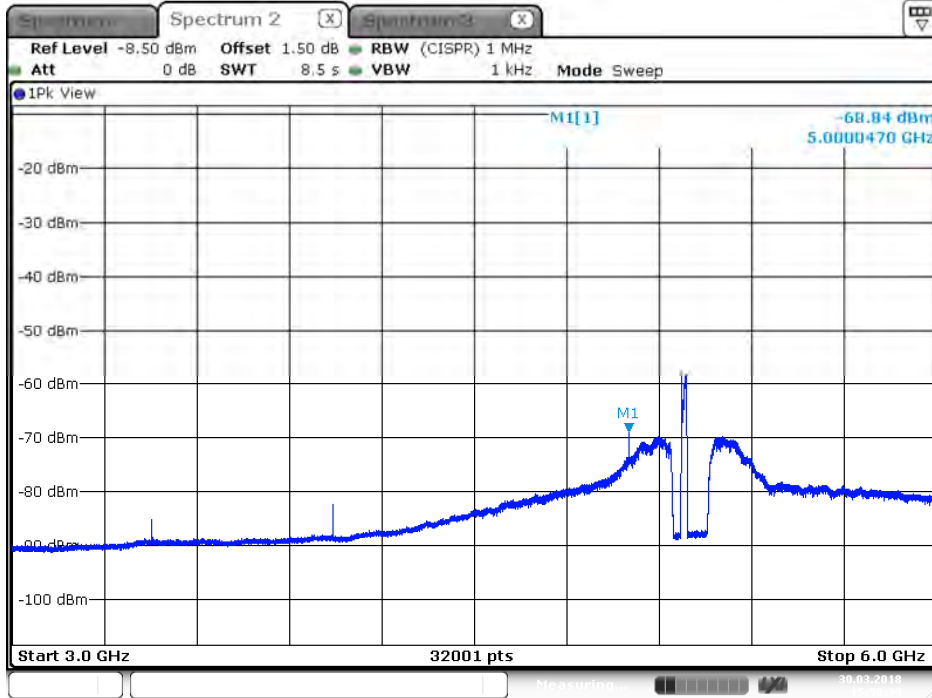
**Plot on Configuration VHT20 / 5180 MHz / Average / Port 1 / 3GHz~6GHz**



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

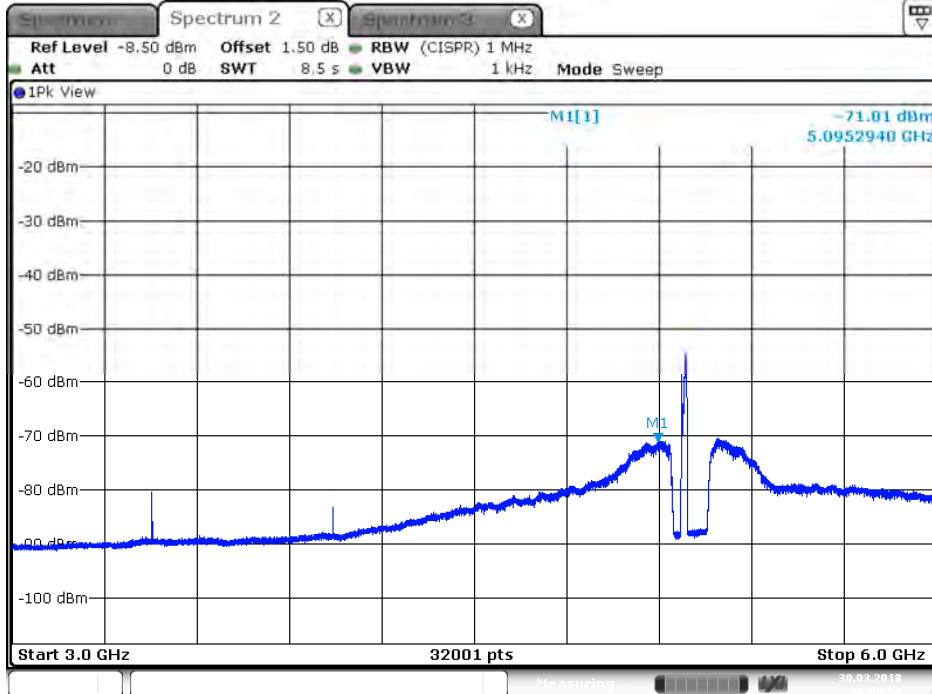


**Plot on Configuration VHT20 / 5180 MHz / Average / Port 3 / 3GHz~6GHz**



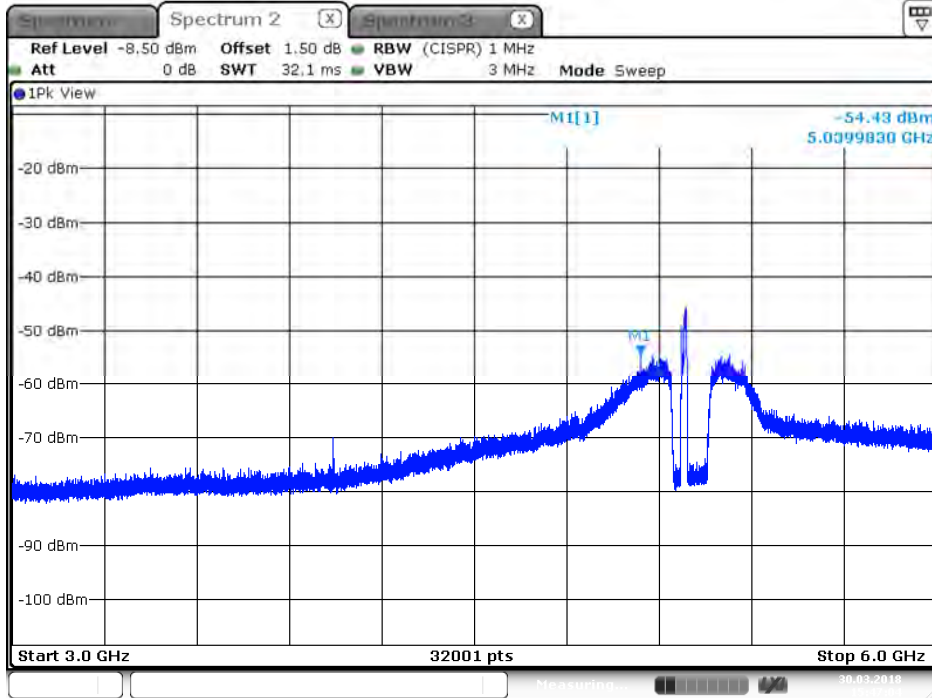
Date: 30.MAR.2018 15:58:39

**Plot on Configuration VHT20 / 5180 MHz / Average / Port 4 / 3GHz~6GHz**

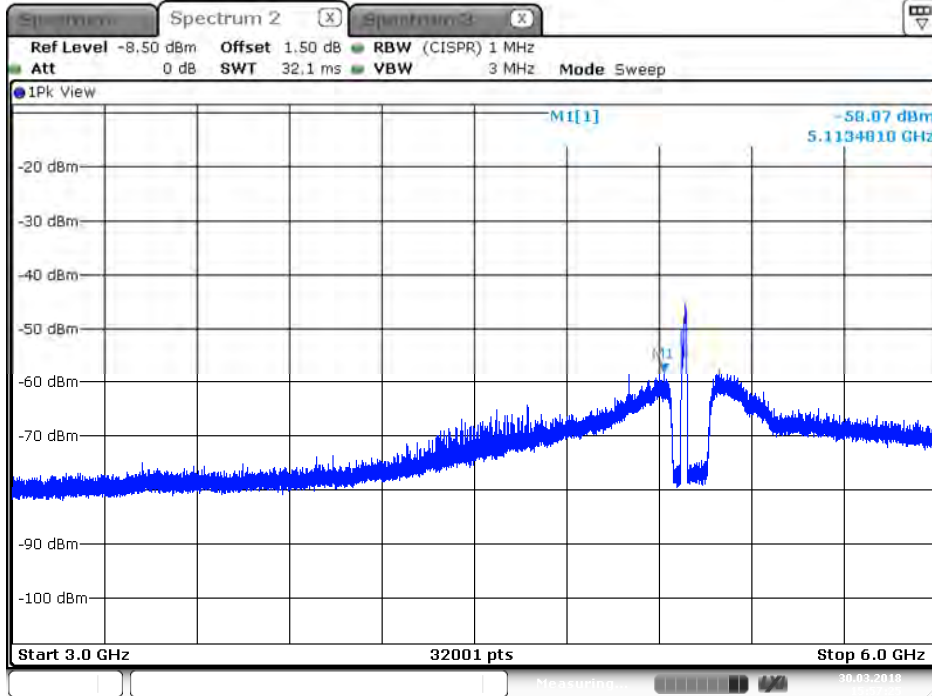


Date: 30.MAR.2018 16:00:59

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

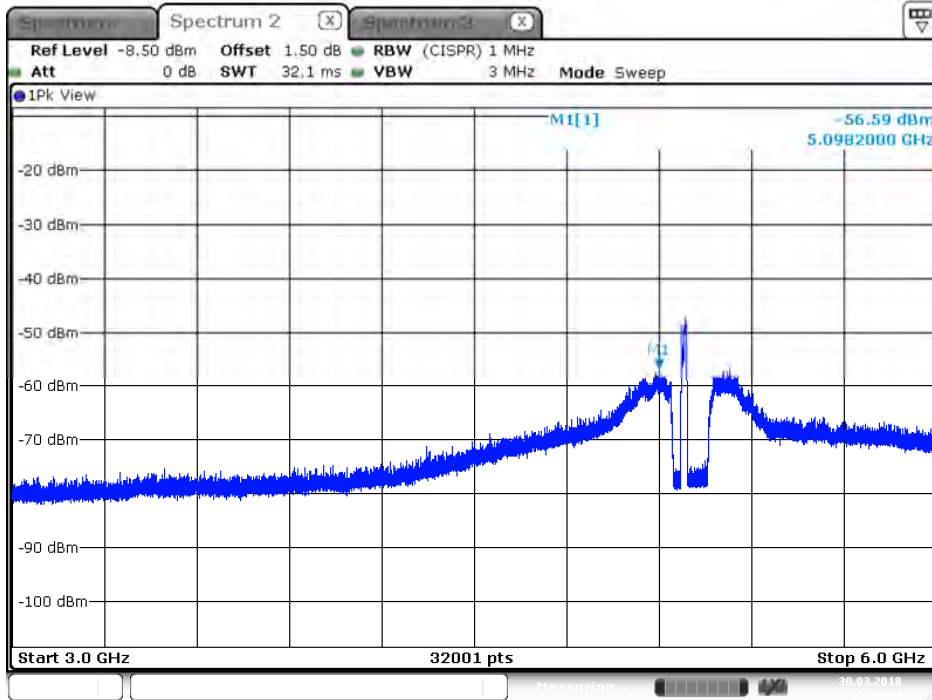


**Plot on Configuration VHT20 / 5180 MHz / Peak / Port 2 / 3GHz~6GHz**



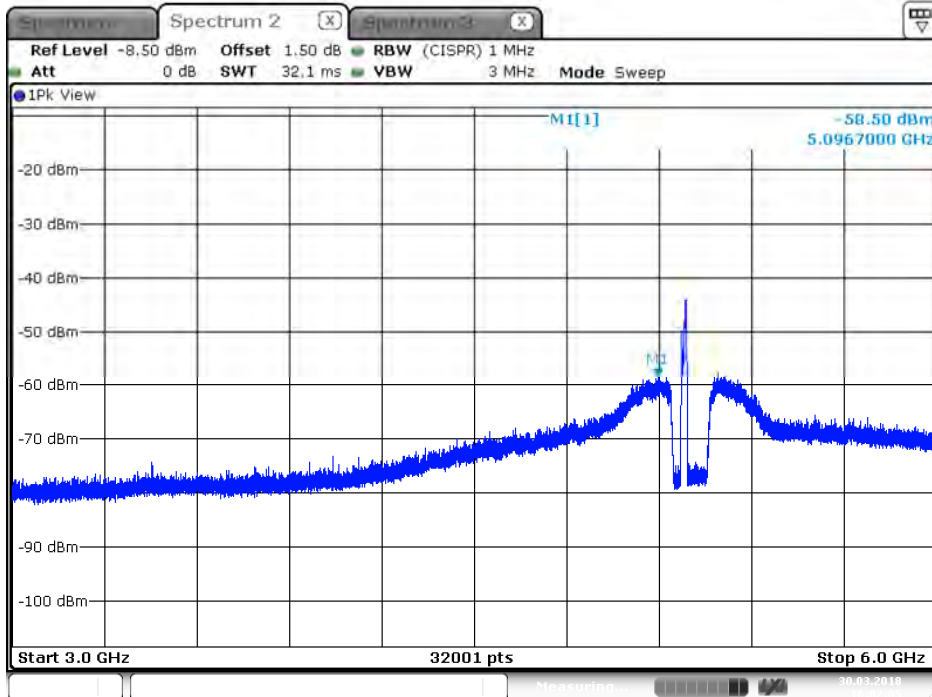


Plot on Configuration VHT20 / 5180 MHz / Peak / Port 3 / 3GHz~6GHz



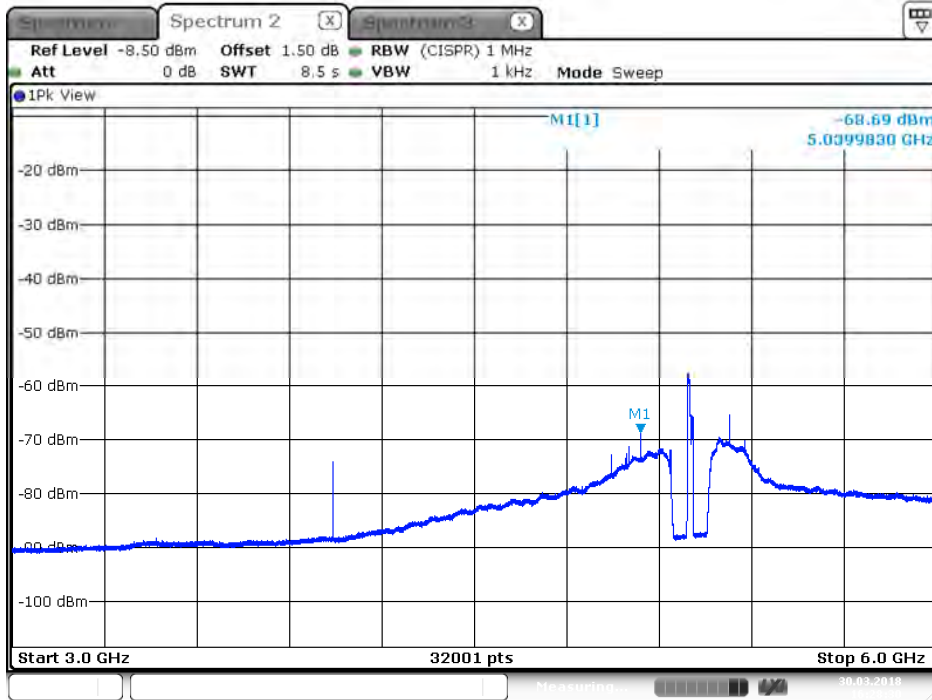
Date: 30.MAR.2018 15:59:34

Plot on Configuration VHT20 / 5180 MHz / Peak / Port 4 / 3GHz~6GHz

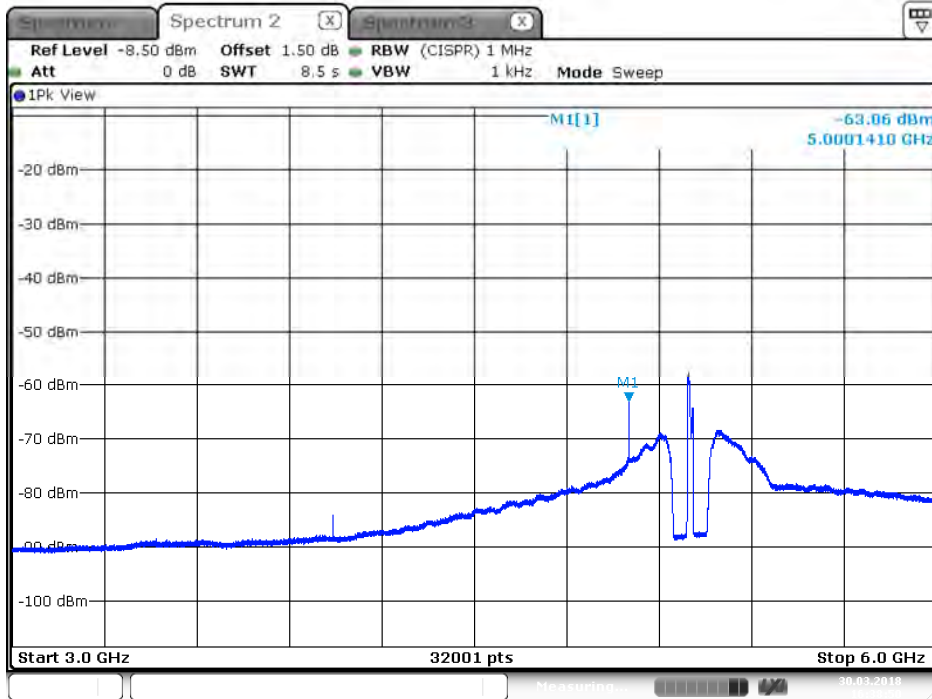


Date: 30.MAR.2018 16:02:05

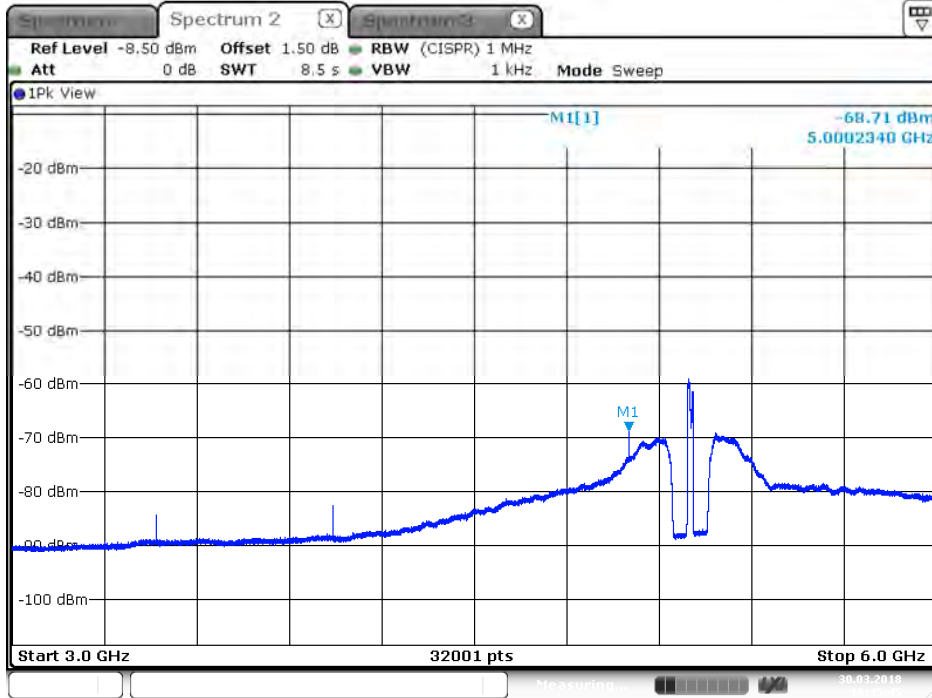
**Plot on Configuration VHT20 / 5200 MHz / Average / Port 1 / 3GHz~6GHz**



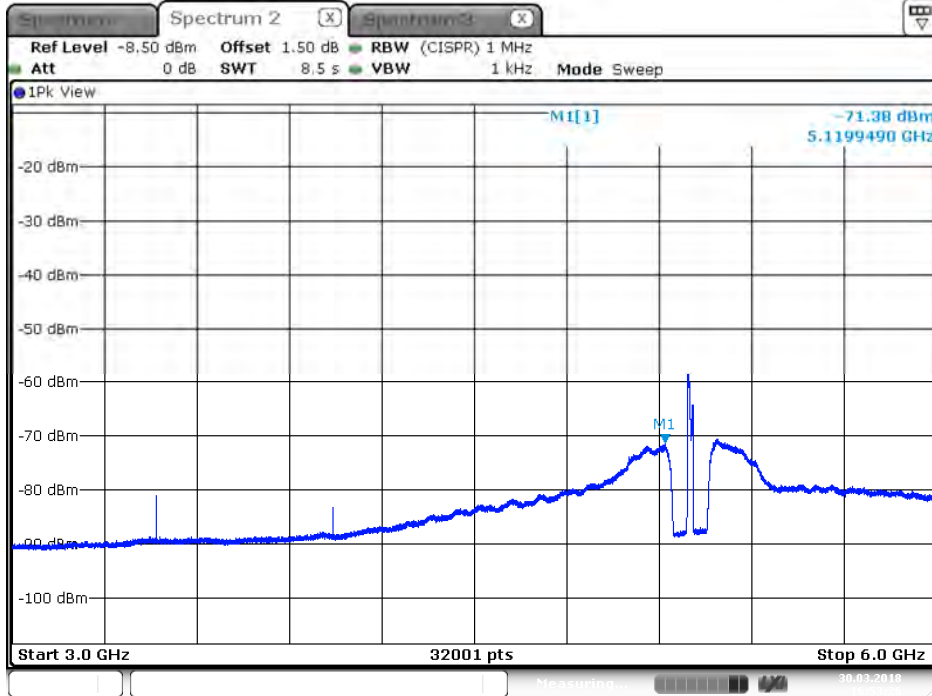
**Plot on Configuration VHT20 / 5200 MHz / Average / Port 2 / 3GHz~6GHz**



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

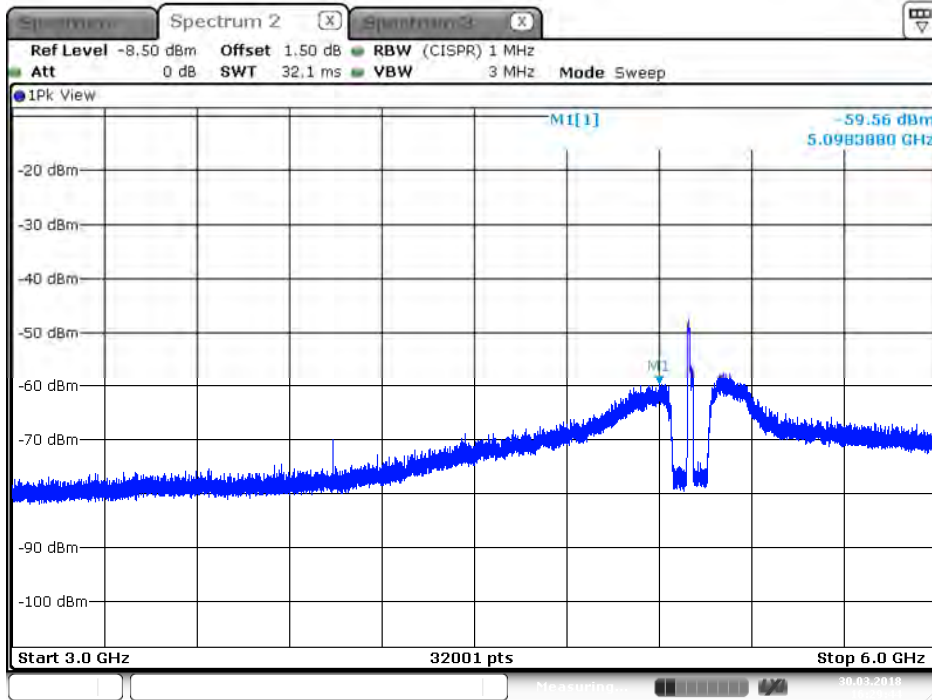


**Plot on Configuration VHT20 / 5200 MHz / Average / Port 4 / 3GHz~6GHz**



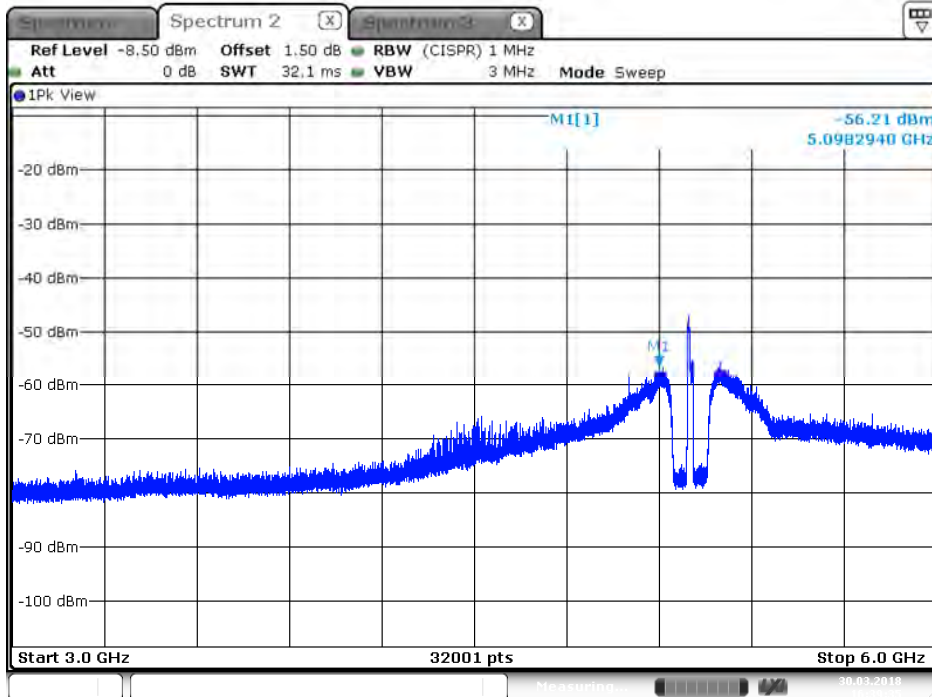


**Plot on Configuration VHT20 / 5200 MHz / Peak / Port 1 / 3GHz~6GHz**



Date: 30.MAR.2018 16:29:44

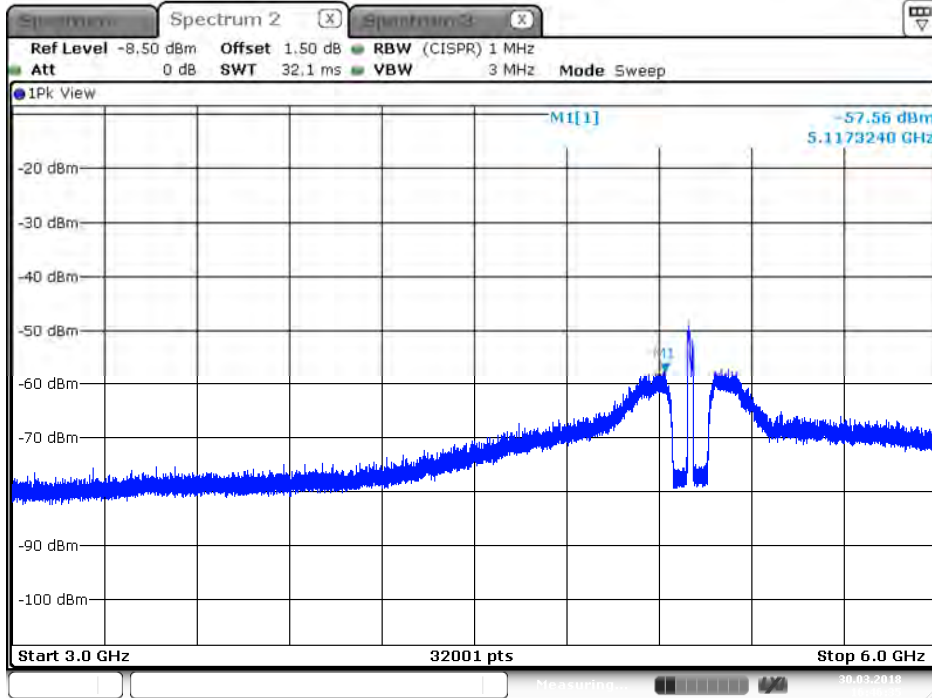
**Plot on Configuration VHT20 / 5200 MHz / Peak / Port 2 / 3GHz~6GHz**



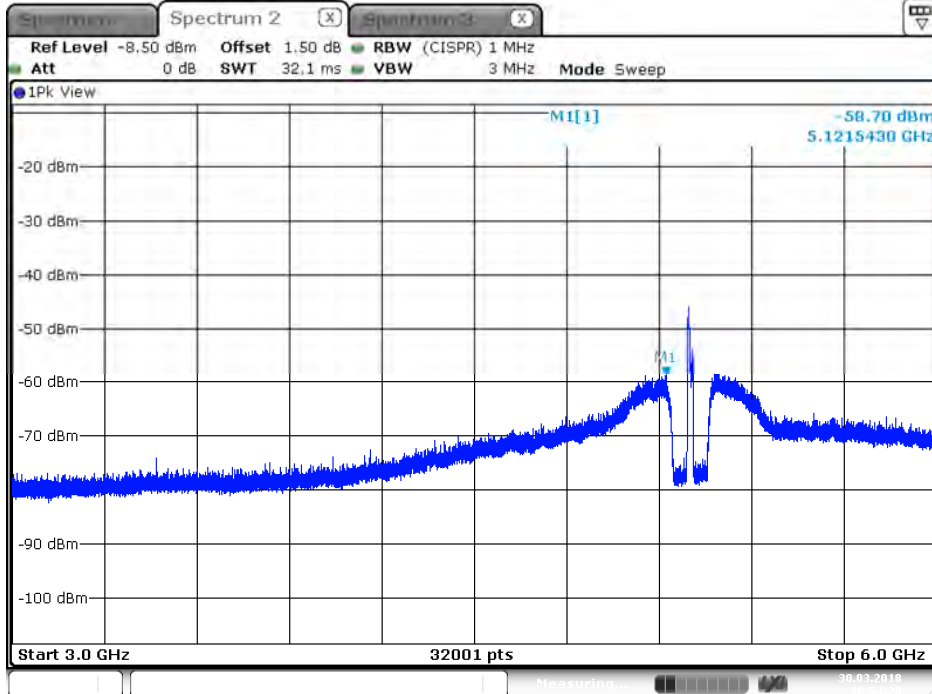
Date: 30.MAR.2018 16:39:36



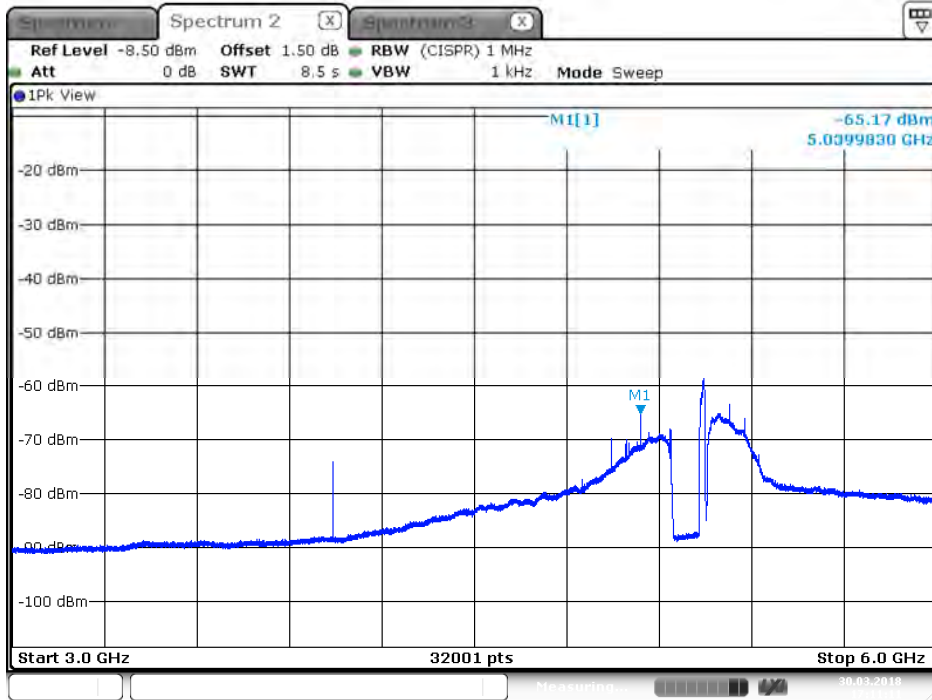
**Plot on Configuration VHT20 / 5200 MHz / Peak / Port 3 / 3GHz~6GHz**



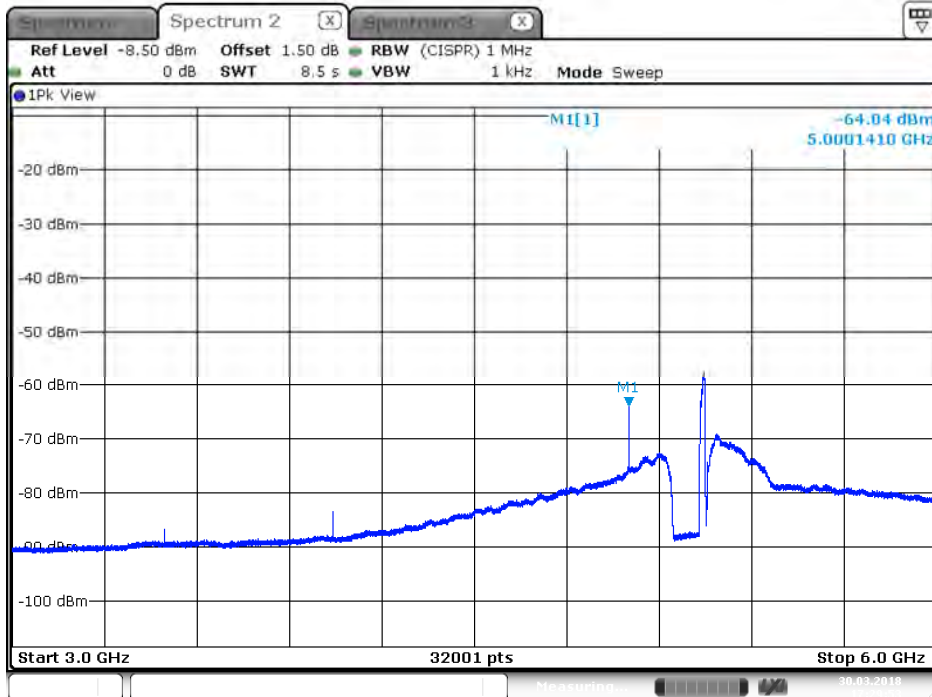
**Plot on Configuration VHT20 / 5200 MHz / Peak / Port 4 / 3GHz~6GHz**



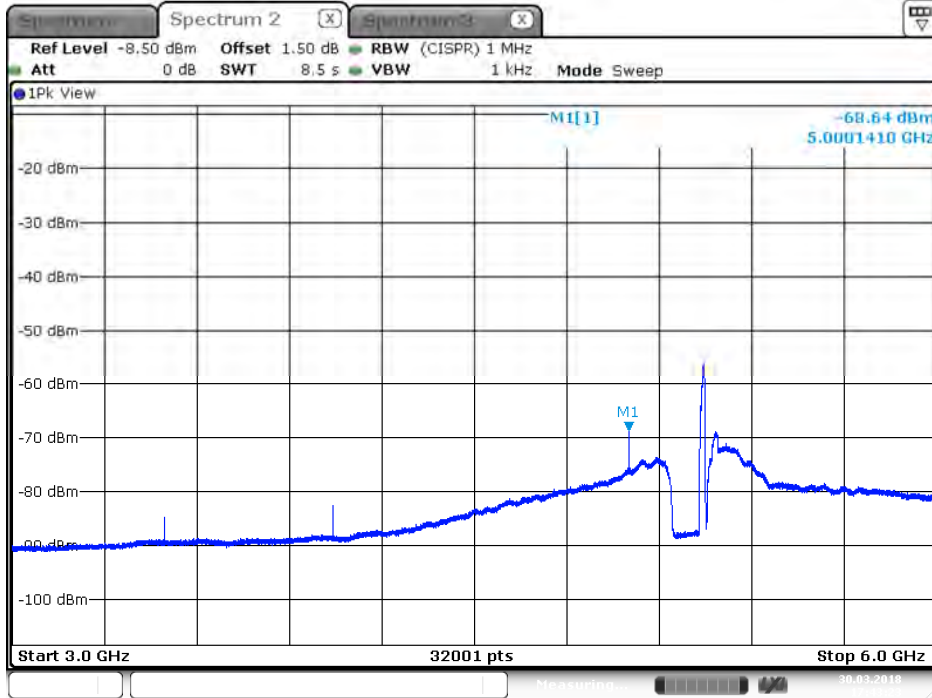
**Plot on Configuration VHT20 / 5240 MHz / Average / Port 1 / 3GHz~6GHz**



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

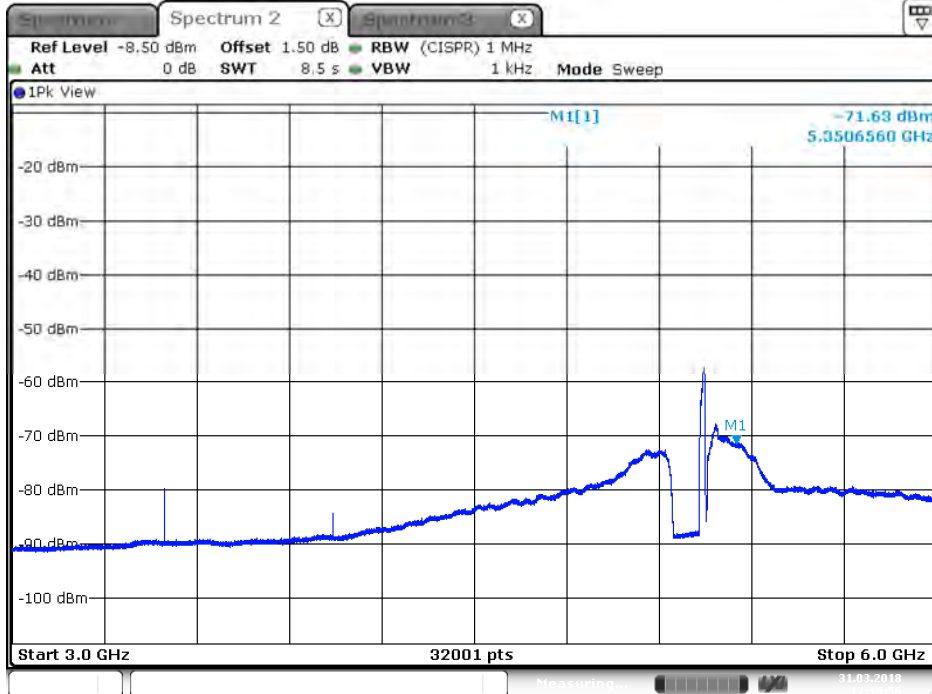


**Plot on Configuration VHT20 / 5240 MHz / Average / Port 3 / 3GHz~6GHz**



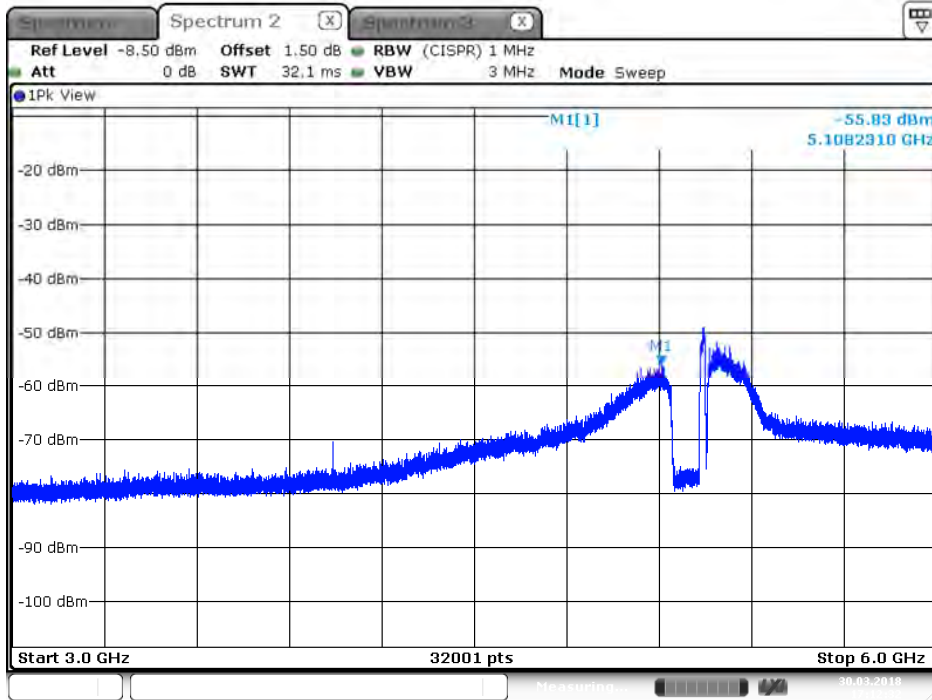
Date: 30.MAR.2018 17:43:23

**Plot on Configuration VHT20 / 5240 MHz / Average / Port 4 / 3GHz~6GHz**

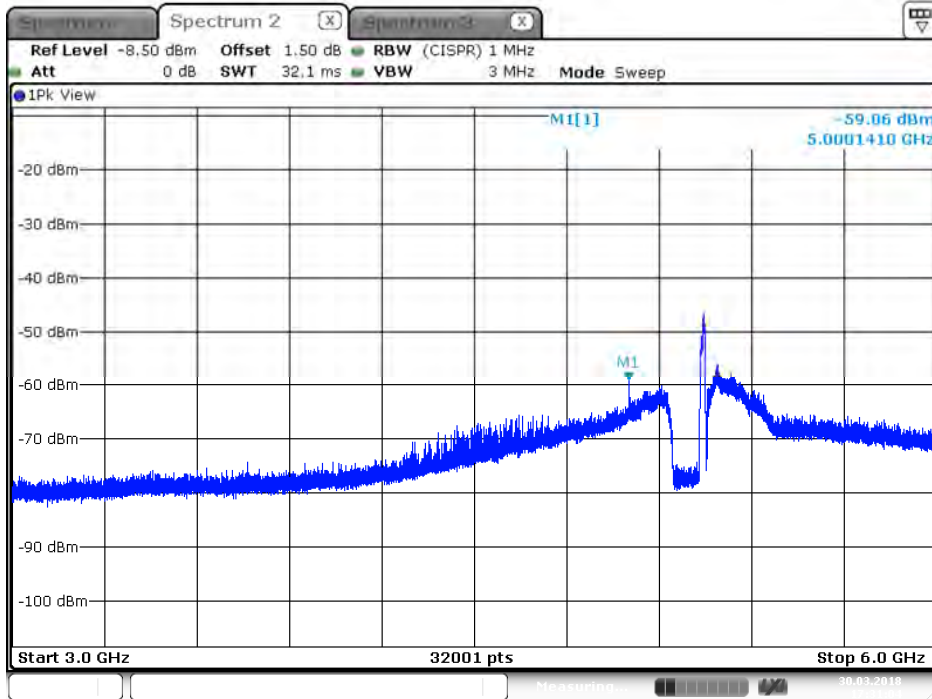


Date: 31.MAR.2018 17:15:56

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

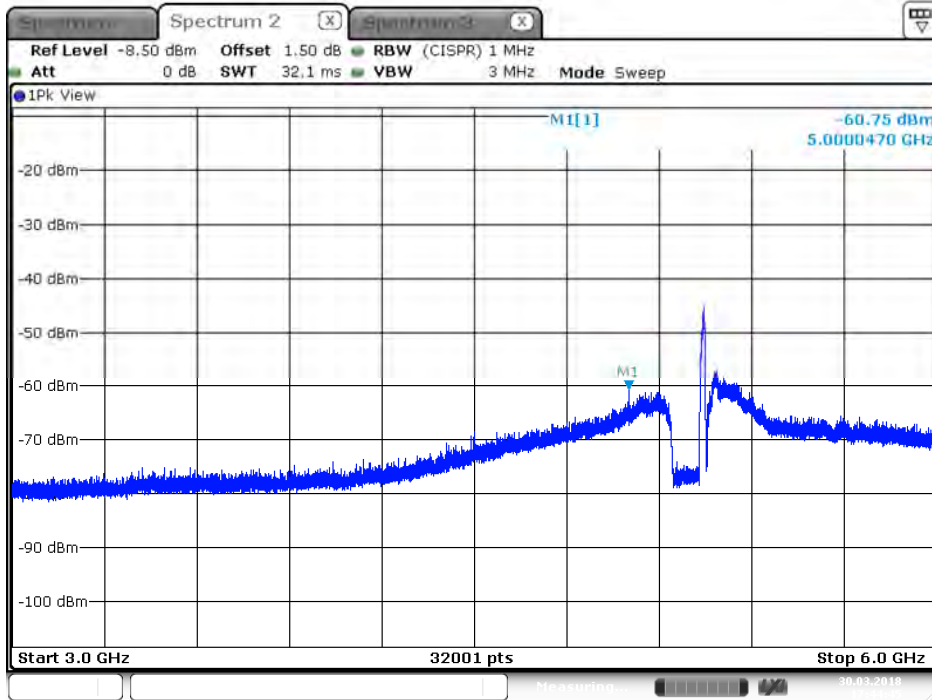


**Plot on Configuration VHT20 / 5240 MHz / Peak / Port 2 / 3GHz~6GHz**

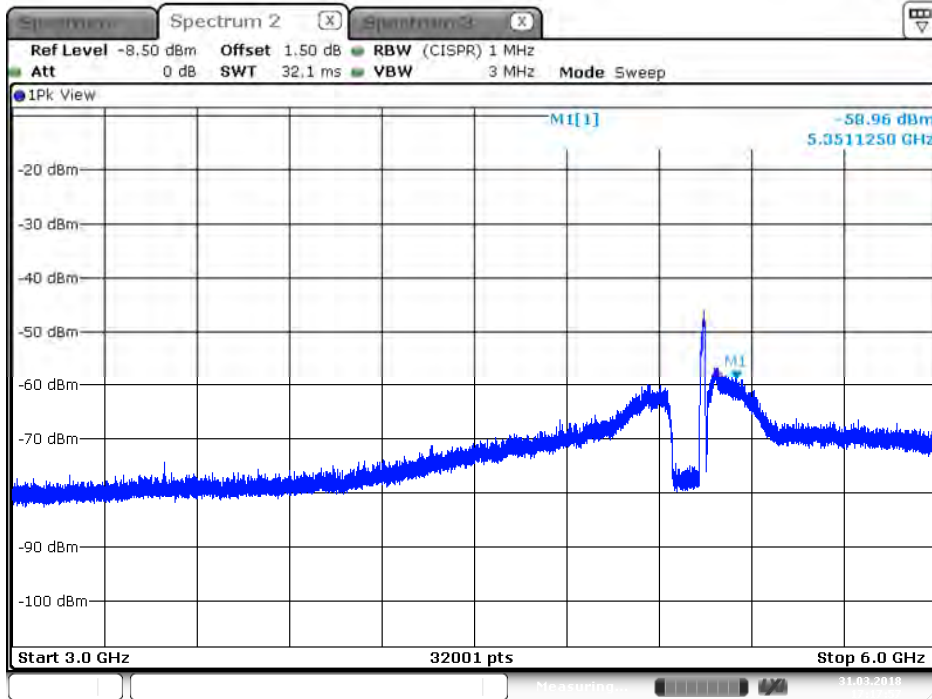




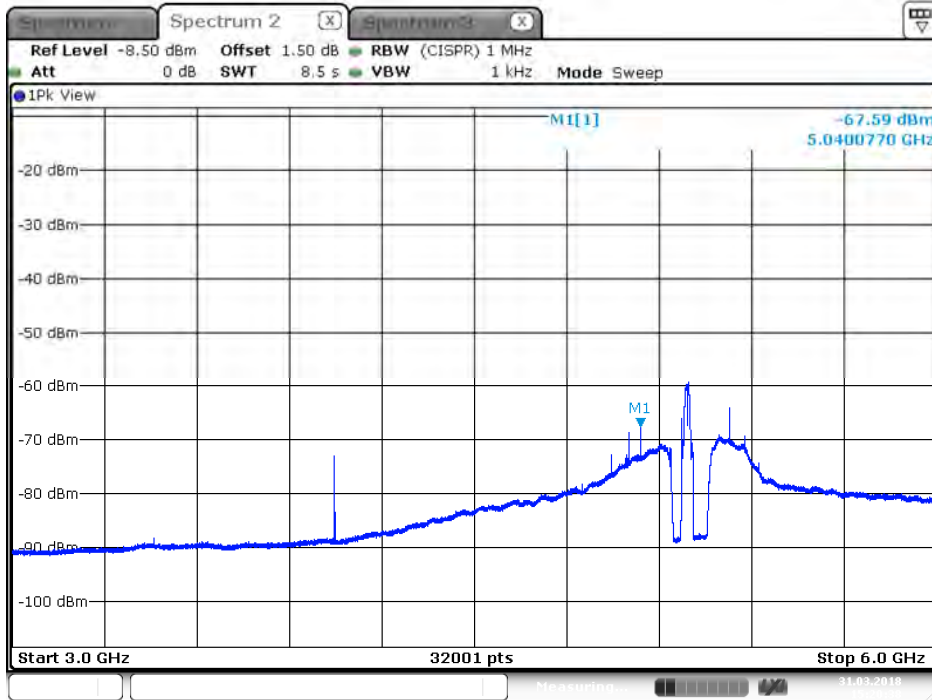
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 3 / 3GHz~6GHz



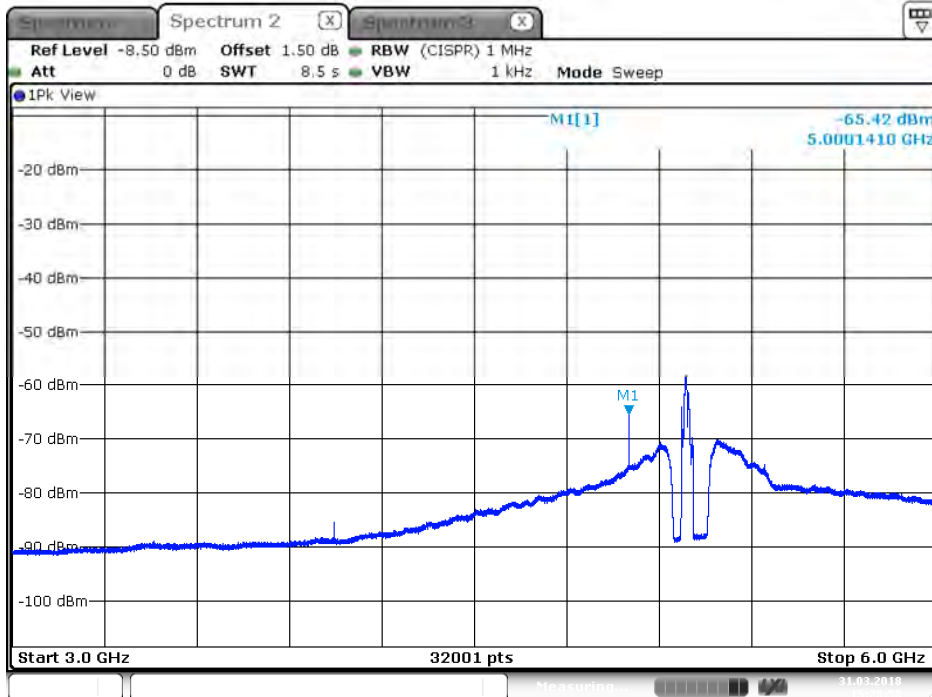
Plot on Configuration VHT20 / 5240 MHz / Peak / Port 4 / 3GHz~6GHz



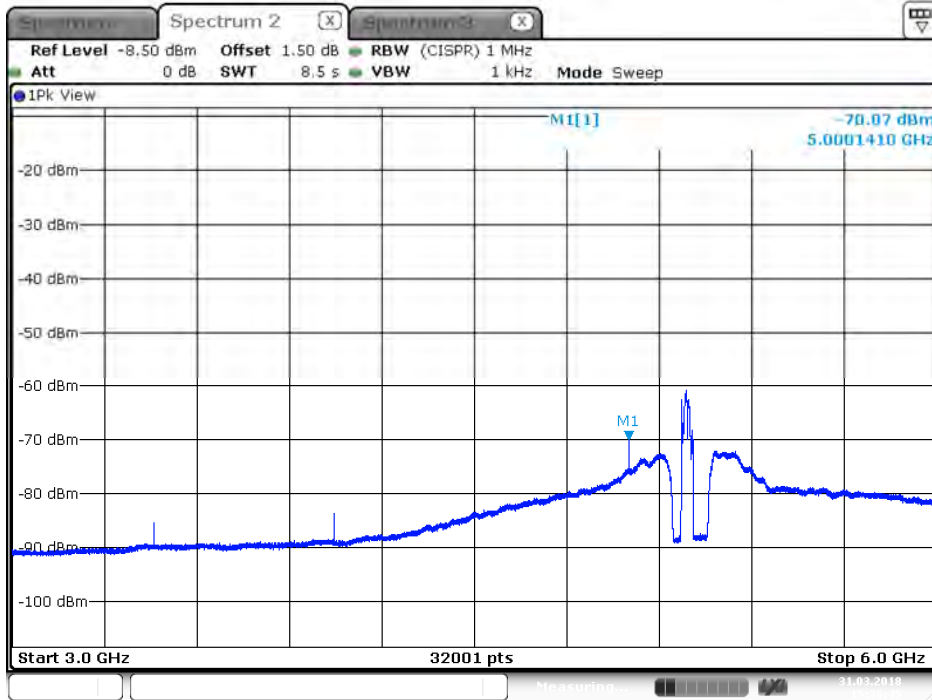
**Plot on Configuration VHT40 / 5190 MHz / Average / Port 1 / 3GHz~6GHz**



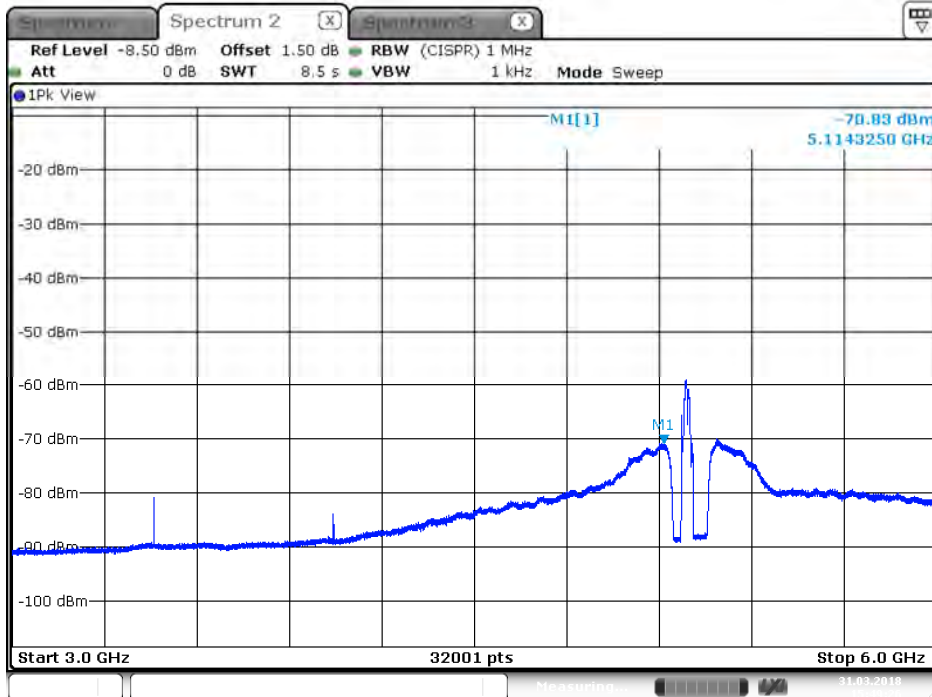
**Plot on Configuration VHT40 / 5190 MHz / Average / Port 2 / 3GHz~6GHz**



**Plot on Configuration VHT40 / 5190 MHz / Average / Port 3 / 3GHz~6GHz**

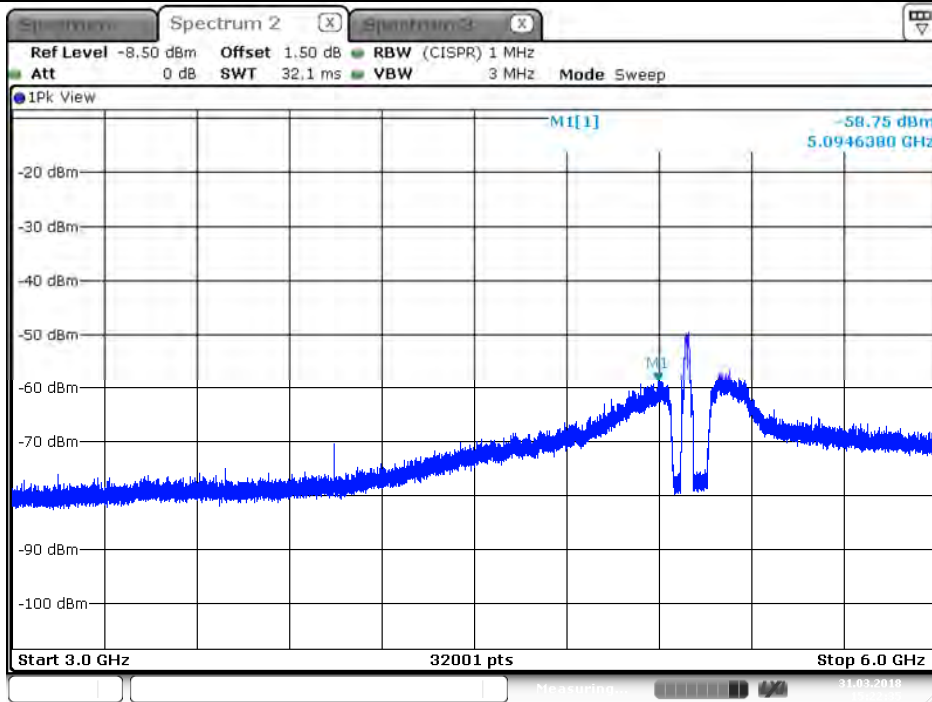


**Plot on Configuration VHT40 / 5190 MHz / Average / Port 4 / 3GHz~6GHz**

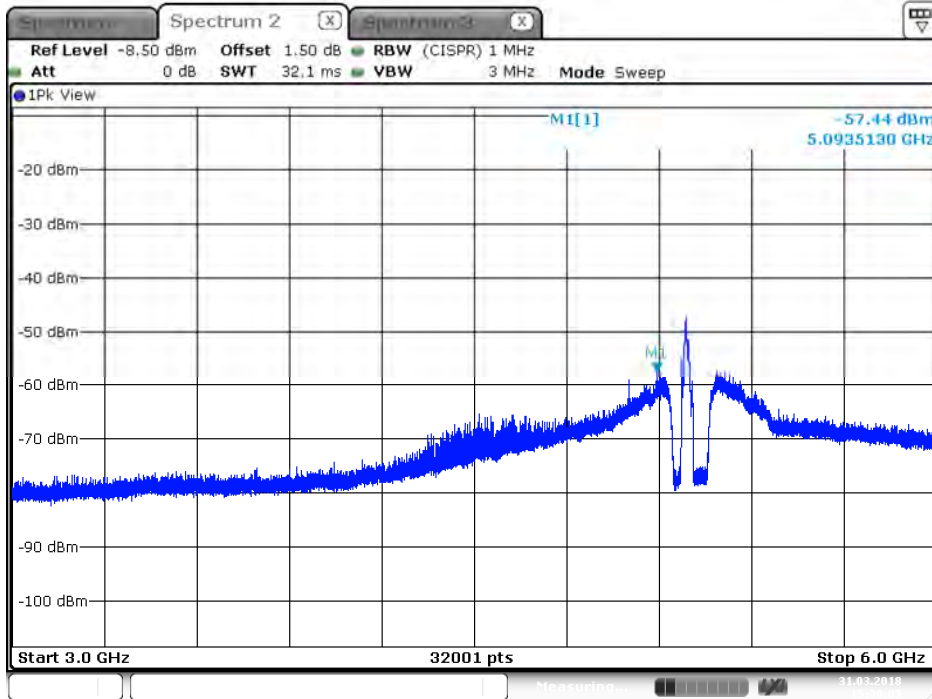




**Plot on Configuration VHT40 / 5190 MHz / Peak / Port 1 / 3GHz~6GHz**



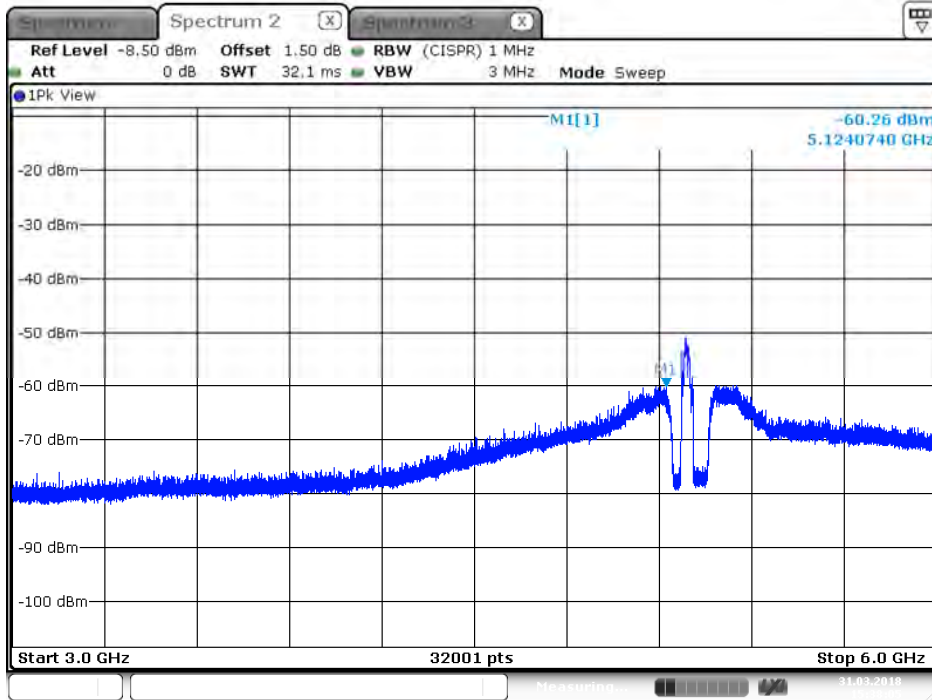
**Plot on Configuration VHT40 / 5190 MHz / Peak / Port 2 / 3GHz~6GHz**





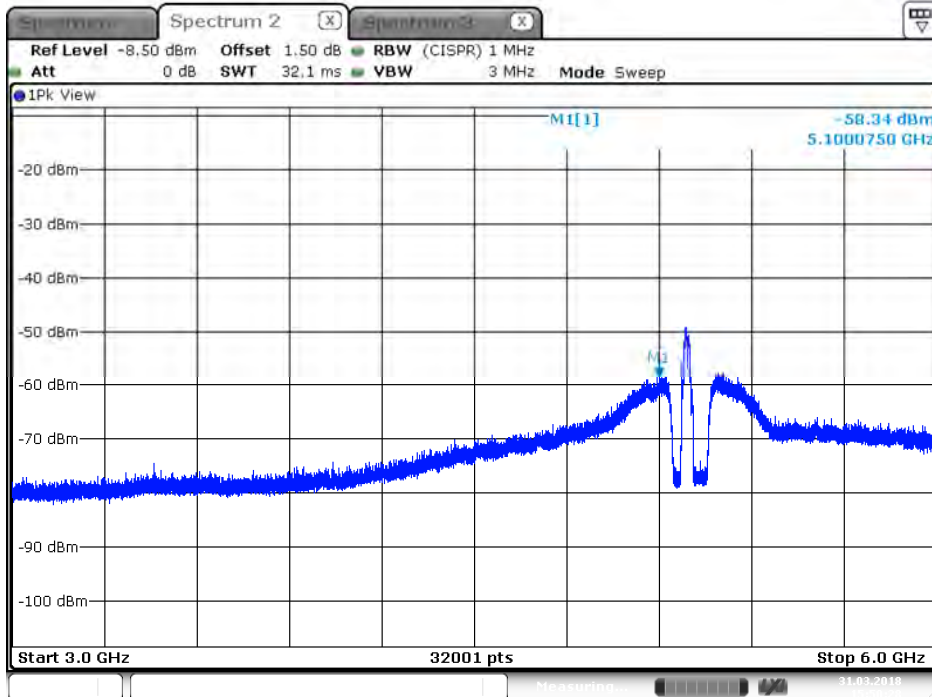


Plot on Configuration VHT40 / 5190 MHz / Peak / Port 3 / 3GHz~6GHz



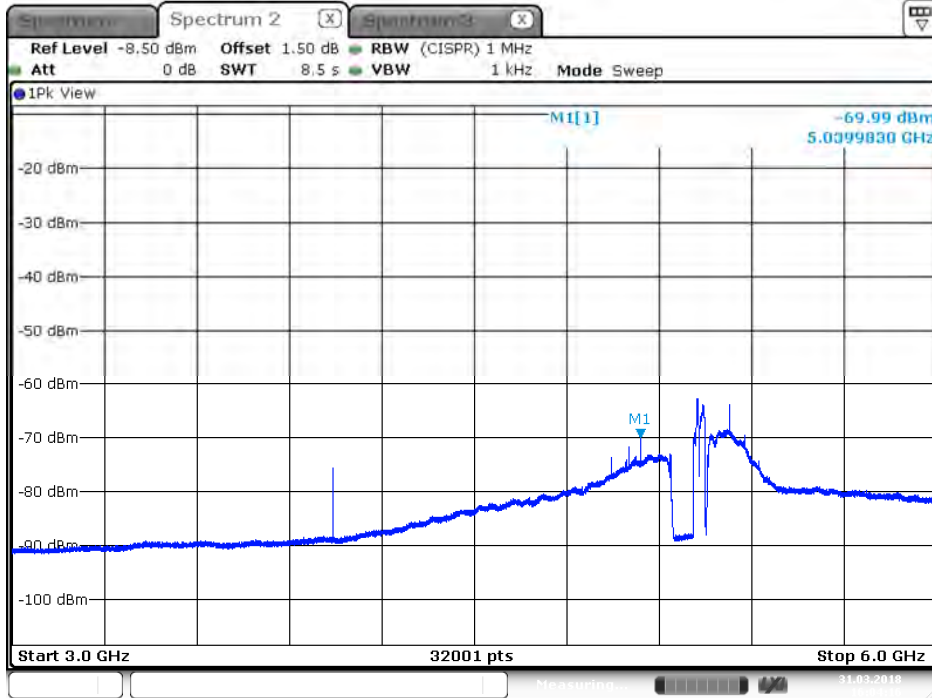
Date: 31.MAR.2018 15:38:04

Plot on Configuration VHT40 / 5190 MHz / Peak / Port 4 / 3GHz~6GHz

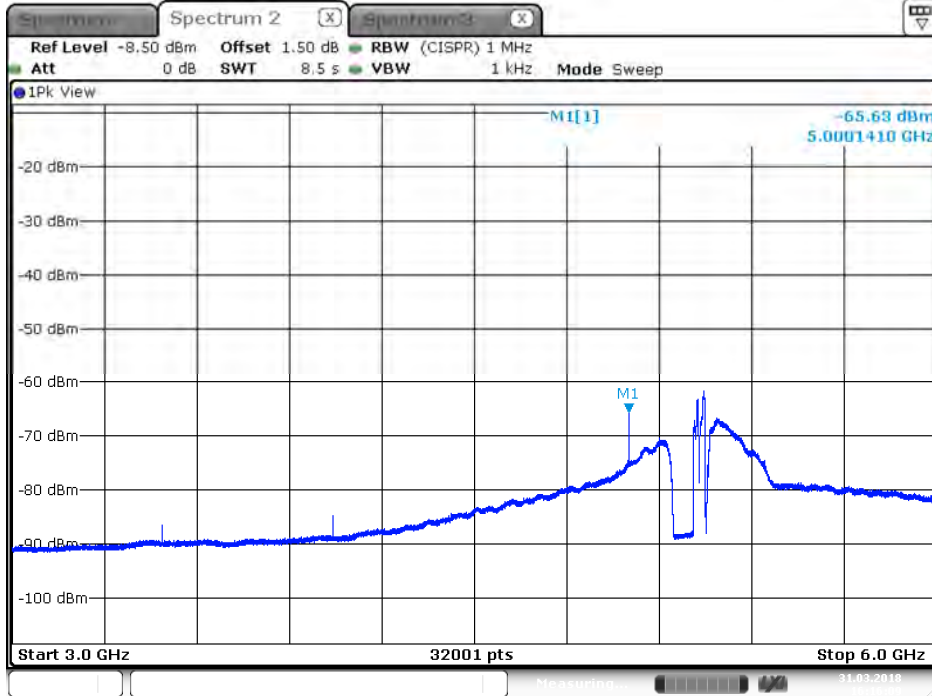


Date: 31.MAR.2018 15:50:28

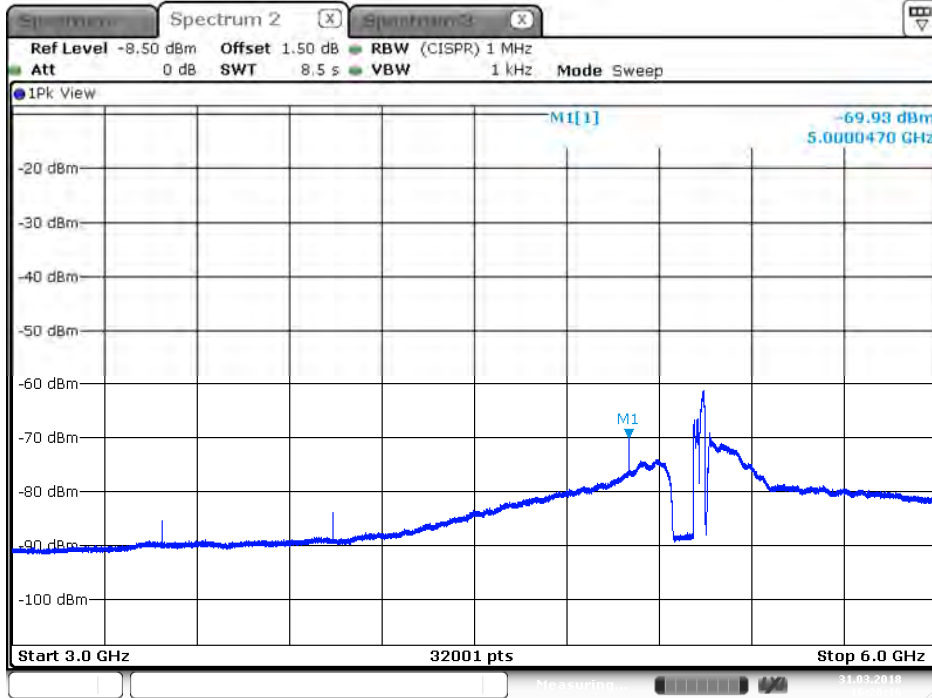
**Plot on Configuration VHT40 / 5230 MHz / Average / Port 1 / 3GHz~6GHz**



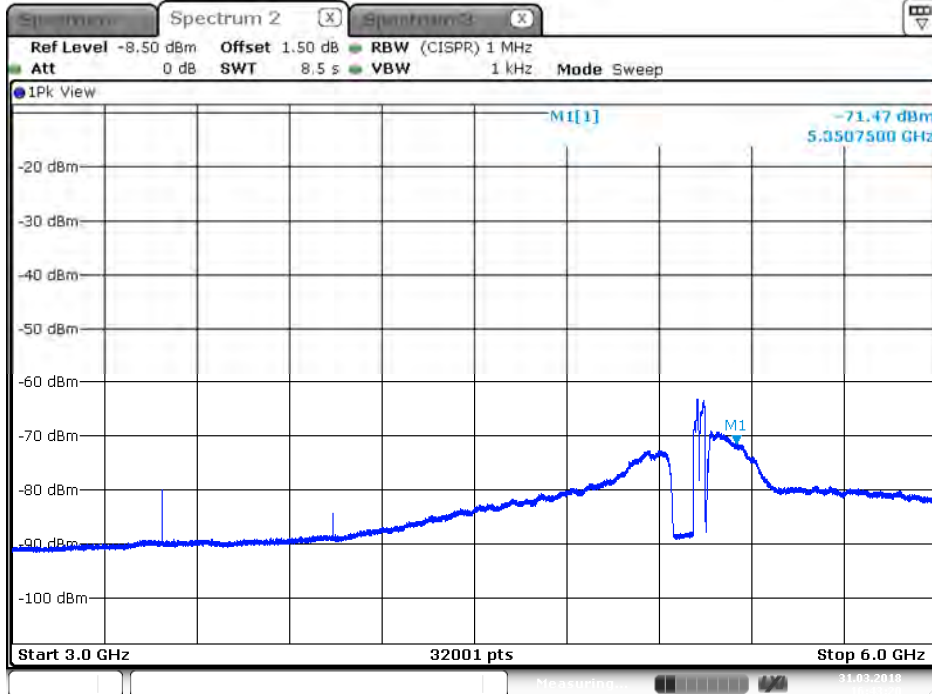
**Plot on Configuration VHT40 / 5230 MHz / Average / Port 2 / 3GHz~6GHz**



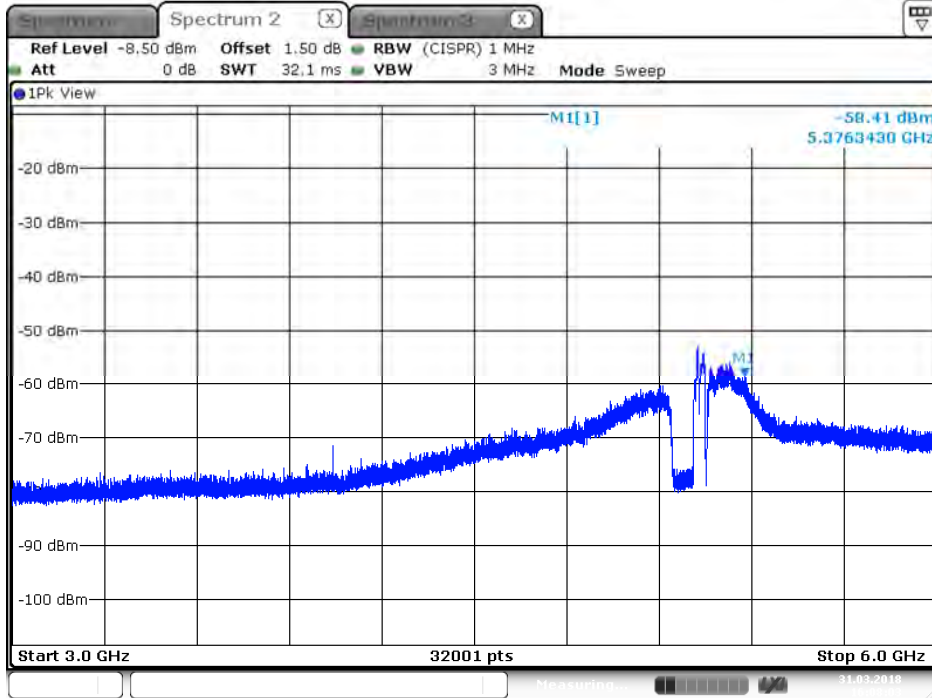
**Plot on Configuration VHT40 / 5230 MHz / Average / Port 3 / 3GHz~6GHz**



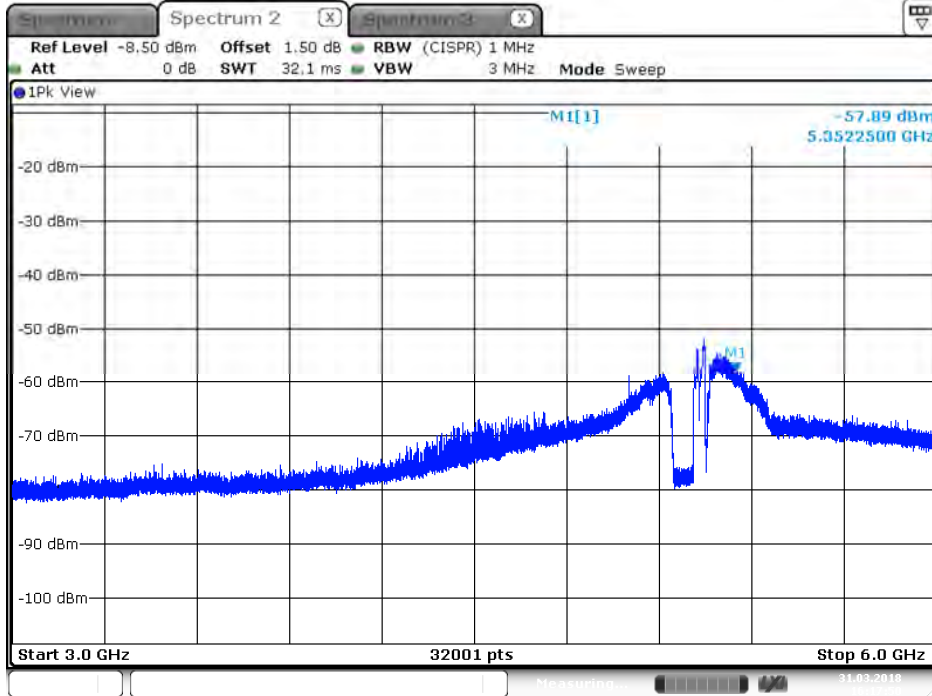
**Plot on Configuration VHT40 / 5230 MHz / Average / Port 4 / 3GHz~6GHz**



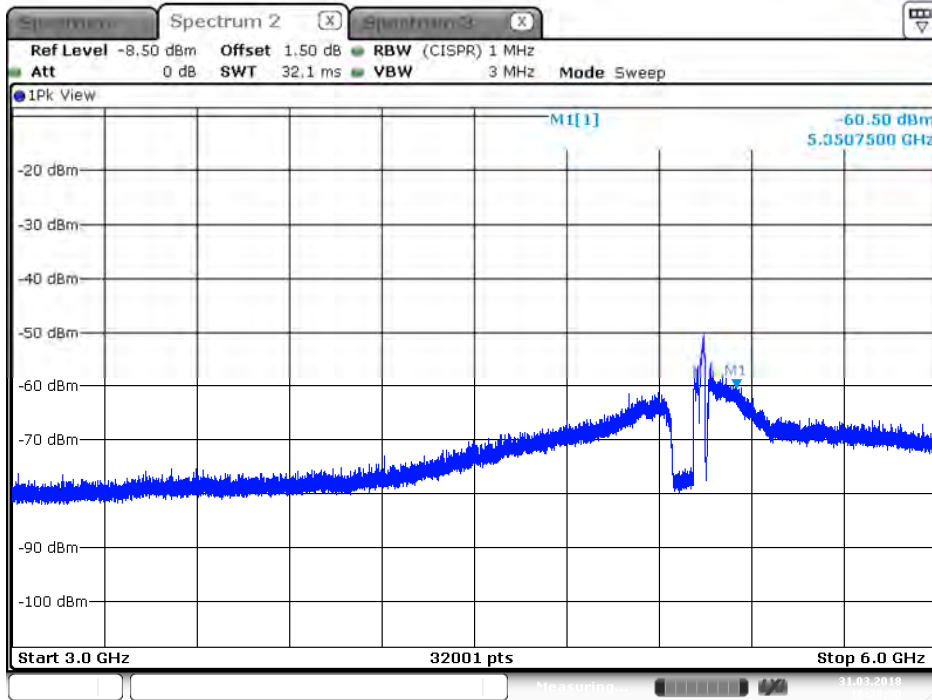
**Plot on Configuration VHT40 / 5230 MHz / Peak / Port 1 / 3GHz~6GHz**



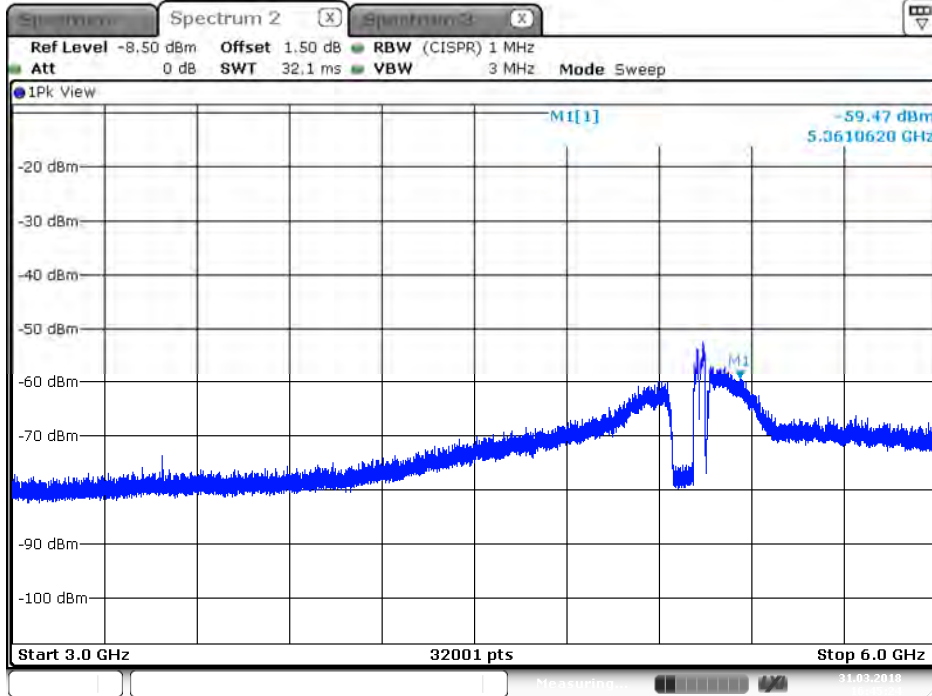
**Plot on Configuration VHT40 / 5230 MHz / Peak / Port 2 / 3GHz~6GHz**



**Plot on Configuration VHT40 / 5230 MHz / Peak / Port 3 / 3GHz~6GHz**

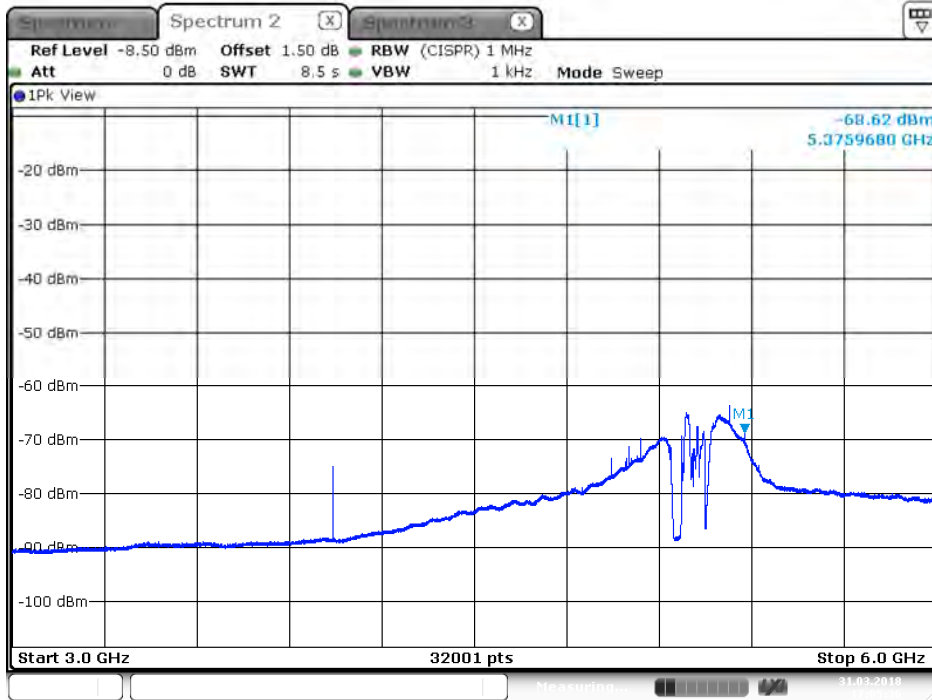


**Plot on Configuration VHT40 / 5230 MHz / Peak / Port 4 / 3GHz~6GHz**





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



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

