

# FCC Test Report

**Equipment** : Wireless Mini PCI  
**Brand Name** : **ADTRAN**  
**Model No.** : XW866G  
**Part No.** : 33500006x-E ( x = 0~9, a~z, A~Z, blank, “-” or “+” )  
**FCC ID** : HDC424RG50X  
**Standard** : 47 CFR FCC Part 15.407  
**RF Specification** : Wi-Fi  
**Operating Band** : 5150 MHz – 5250 MHz  
5725 MHz – 5850 MHz  
**FCC Classification** : NII  
**Applicant** : **Adtran**  
901 Explorer Blvd., Huntsville, AL 35806, US  
**Manufacturer** : **XAVi Technologies Corporation**  
22F., No.69, Sec. 2, Guangfu Rd., Sanchong Dist., New  
Taipei City 241, Taiwan (R.O.C.)

The product sample received on Sep. 05, 2016 and completely tested on Dec. 30, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Reviewed by:



Kevin Liang / Assistant Manager





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

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

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**Appendix D. Transmitter Bandedge Emissions**

**Appendix E. Transmitter Unwanted Emissions**

**Appendix F. Frequency Stability**

**Appendix G. Test Photos**

**Photographs of EUT v02**



### Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.3	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	Maximum Conducted Output Power	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Unwanted Emissions	Complied
3.7	15.407(g)	Frequency Stability	Complied





# 1 General Description

## 1.1 Information

### 1.1.1 Product Details

The difference between the report no. : N/A	
The Difference	N/A

Evaluated Test Items	N/A
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### 1.1.2 RF General Information

Band	Mode	BWch (MHz)	Channel Number	Nss-Min	Nant
5.2G	11a	20	36-48 [4]	1	4
5.2G	HT20	20	36-48 [4]	1,(M0-31)	4
5.2G	HT40	40	38-46 [2]	1,(M0-31)	4
5.2G	VHT20	20	36-48 [4]	1,(M0-8)	4
5.2G	VHT40	40	38-46 [2]	1,(M0-9)	4
5.2G	VHT80	80	42 [1]	1,(M0-9)	4
5.2G	VHT20 (Beamforming)	20	36-48 [4]	1,(M0-8)	4
5.2G	VHT40 (Beamforming)	40	38-46 [2]	1,(M0-9)	4
5.2G	VHT80 (Beamforming)	80	42 [1]	1,(M0-9)	4
5.8G	11a	20	149-165 [5]	1	4
5.8G	HT20	20	149-165 [5]	1,(M0-31)	4
5.8G	HT40	40	151-159 [2]	1,(M0-31)	4
5.8G	VHT20	20	149-165 [5]	1,(M0-8)	4
5.8G	VHT40	40	151-159 [2]	1,(M0-9)	4
5.8G	VHT80	80	155 [1]	1,(M0-9)	4
5.8G	VHT20 (Beamforming)	20	149-165 [5]	1,(M0-8)	4
5.8G	VHT40 (Beamforming)	40	151-159 [2]	1,(M0-9)	4
5.8G	VHT80 (Beamforming)	80	155 [1]	1,(M0-9)	4

Note:

- ♦ 5.2G is the 5.2GHz Band (5.15-5.25GHz).
- ♦ 5.8G is the 5.8GHz Band (5.725-5.850GHz).
- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ 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.



1.1.3 Antenna Information

Antenna Category	
<input checked="" type="checkbox"/>	Integral antenna (antenna permanently attached)
<input checked="" type="checkbox"/>	Temporary RF connector provided
<input type="checkbox"/>	No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.
<input type="checkbox"/>	External antenna (dedicated antennas)
<input type="checkbox"/>	Single power level with corresponding antenna(s).
<input type="checkbox"/>	Multiple power level and corresponding antenna(s).

Antenna General Information				
No.	Ant. Cat.	Ant. Type	Model No.	Gain (dBi)
A	Integral	PCB PIFA	NF5W20B	3.7
B	Integral	PCB PIFA	NF5W20B	3.7
C	Integral	PCB PIFA	NF5W20B	3.7
D	Integral	PCB PIFA	NF5W20B	3.7

1.1.4 Type of EUT

Identify EUT	
EUT Serial Number	N/A
Presentation of Equipment	<input type="checkbox"/> Production ; <input checked="" type="checkbox"/> Pre-Production ; <input type="checkbox"/> Prototype
Type of EUT	
<input type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ...
<input checked="" type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: <b>ADIRAN</b> / 424RG
<input type="checkbox"/>	Other:



1.1.5 Mode Test Duty Cycle

Operated Mode for Worst Duty Cycle	
<input checked="" type="checkbox"/> Operated test mode for worst duty cycle	
Test Signal Duty Cycle (x)	Power Duty Factor [dB] – (10 log 1/x)
<input checked="" type="checkbox"/> 99.1% - IEEE 802.11a	0.04
<input checked="" type="checkbox"/> 99.1% - IEEE 802.11n (HT20)	0.04
<input checked="" type="checkbox"/> 97.6% - IEEE 802.11n (HT40)	0.11
<input checked="" type="checkbox"/> 98.9% - IEEE 802.11ac (VHT20)	0.05
<input checked="" type="checkbox"/> 97.8% - IEEE 802.11ac (VHT40)	0.10
<input checked="" type="checkbox"/> 95.3% - IEEE 802.11ac (VHT80)	0.21
<input checked="" type="checkbox"/> 94.3% - IEEE 802.11ac (VHT20) (Beamforming)	0.25
<input checked="" type="checkbox"/> 92.5% - IEEE 802.11ac (VHT40) (Beamforming)	0.34
<input checked="" type="checkbox"/> 87.6% - IEEE 802.11ac (VHT80) (Beamforming)	0.57

1.1.6 EUT Operational Condition

Supply Voltage	<input checked="" type="checkbox"/> AC mains	<input type="checkbox"/> DC	
Type of DC Source	<input checked="" type="checkbox"/> External AC adapter	<input type="checkbox"/> From Host System	<input type="checkbox"/> Battery
Test Voltage	<input checked="" type="checkbox"/> Vnom (120 V)	<input checked="" type="checkbox"/> Vmax (138V)	<input checked="" type="checkbox"/> Vmin (102 V)
Test Climatic	<input checked="" type="checkbox"/> Tnom (20°C)	<input checked="" type="checkbox"/> Tmax (50°C)	<input checked="" type="checkbox"/> Tmin (-5°C)

1.1.7 EUT Operate Information

Items	Description		
Beamforming Function	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	
Operate Condition	<input checked="" type="checkbox"/> Indoor	<input type="checkbox"/> Outdoor	
	<input type="checkbox"/> Fixed P2P	<input type="checkbox"/> Client	
Operate Mode	<input checked="" type="checkbox"/> Master		



### 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
- ♦ KDB 789033 D02 v01r03
- ♦ KDB 662911 D01 v02r01
- ♦ KDB 644545 D03 v01

### 1.3 Testing Location Information

Testing Location				
<input checked="" type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.		
		TEL : 886-3-327-3456	FAX : 886-3-327-0973	
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Ryan	23°C / 63%	23/09/2016
RF Conducted	TH01-HY	Ryan	22.5°C / 65%	24/09/2016
RF Conducted (Beamforming)	TH01-HY	Lisa	24.5°C / 65%	29/12/2016
Radiated	03CH09-HY	Thor	24.6°C / 58%	14/09/2016
Radiated (Beamforming)	03CH09-HY	Terry	24°C / 60%	30/12/2016

Test site registered number [ 553509 ] with FCC.



### 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))

Measurement Uncertainty		
Test Item		Uncertainty
AC power-line conducted emissions		±2.26 dB
Emission bandwidth, 26dB bandwidth		±1.42 %
RF output power, conducted		±0.63 dB
Power density, conducted		±0.81 dB
Unwanted emissions, conducted	9 – 150 kHz	±0.38 dB
	0.15 – 30 MHz	±0.42 dB
	30 – 1000 MHz	±0.51 dB
	1 – 18 GHz	±0.67 dB
	18 – 40 GHz	±0.83 dB
	40 – 200 GHz	N/A
All emissions, radiated	9 – 150 kHz	±2.49 dB
	0.15 – 30 MHz	±2.28 dB
	30 – 1000 MHz	±2.56 dB
	1 – 18 GHz	±3.59 dB
	18 – 40 GHz	±3.82 dB
	40 – 200 GHz	N/A
Temperature		±0.8 °C
Humidity		±3 %
DC and low frequency voltages		±3 %
Time		±1.42 %
Duty Cycle		±1.42 %



## 2 Test Configuration of EUT

### 2.1 The Worst Case Modulation Configuration

Worst Modulation Used for Conformance Testing			
Modulation Mode	Transmit Chains ( $N_{TX}$ )	Data Rate / MCS	Worst Data Rate / MCS
11a	4	6-54Mbps	6 Mbps
HT20	4	MCS 0-31	MCS 0
HT40	4	MCS 0-31	MCS 0
VHT20	4	MCS 0-8	MCS 0
VHT40	4	MCS 0-9	MCS 0
VHT80	4	MCS 0-9	MCS 0
VHT20 (Beamforming)	4	MCS 0-8	MCS 0
VHT40 (Beamforming)	4	MCS 0-9	MCS 0
VHT80 (Beamforming)	4	MCS 0-9	MCS 0



## 2.2 Test Channel Mode

Test Software Version	PUTTY/ 0.62.0.0
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Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.2G	11a	20	1	4	5180	L	15
5.2G	11a	20	1	4	5200	M	19
5.2G	11a	20	1	4	5240	H	19
5.2G	HT20	20	1,(M0)	4	5180	L	14.5
5.2G	HT20	20	1,(M0)	4	5200	M	19
5.2G	HT20	20	1,(M0)	4	5240	H	19
5.2G	HT40	40	1,(M0)	4	5190	L	12.5
5.2G	HT40	40	1,(M0)	4	5230	H	19
5.2G	VHT20	20	1,(M0)	4	5180	L	14.5
5.2G	VHT20	20	1,(M0)	4	5200	M	19
5.2G	VHT20	20	1,(M0)	4	5240	H	19
5.2G	VHT40	40	1,(M0)	4	5190	L	12.5
5.2G	VHT40	40	1,(M0)	4	5230	H	19
5.2G	VHT80	80	1,(M0)	4	5210	S	12
5.2G	VHT20 (Beamforming)	20	1,(M0)	4	5180	L	15
5.2G	VHT20 (Beamforming)	20	1,(M0)	4	5200	M	15
5.2G	VHT20 (Beamforming)	20	1,(M0)	4	5240	H	15
5.2G	VHT40 (Beamforming)	40	1,(M0)	4	5190	L	13
5.2G	VHT40 (Beamforming)	40	1,(M0)	4	5230	H	15
5.2G	VHT80 (Beamforming)	80	1,(M0)	4	5210	S	12



Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.8G	11a	20	1	4	5745	L	19
5.8G	11a	20	1	4	5785	M	19
5.8G	11a	20	1	4	5825	H	19
5.8G	HT20	20	1,(M0)	4	5745	L	19
5.8G	HT20	20	1,(M0)	4	5785	M	19
5.8G	HT20	20	1,(M0)	4	5825	H	19
5.8G	HT40	40	1,(M0)	4	5755	L	19
5.8G	HT40	40	1,(M0)	4	5795	H	19
5.8G	VHT20	20	1,(M0)	4	5745	L	19
5.8G	VHT20	20	1,(M0)	4	5785	M	19
5.8G	VHT20	20	1,(M0)	4	5825	H	19
5.8G	VHT40	40	1,(M0)	4	5755	L	19
5.8G	VHT40	40	1,(M0)	4	5795	H	19
5.8G	VHT80	80	1,(M0)	4	5775	S	18
5.8G	VHT20 (Beamforming)	20	1,(M0)	4	5745	L	15
5.8G	VHT20 (Beamforming)	20	1,(M0)	4	5785	M	15
5.8G	VHT20 (Beamforming)	20	1,(M0)	4	5825	H	15
5.8G	VHT40 (Beamforming)	40	1,(M0)	4	5755	L	15
5.8G	VHT40 (Beamforming)	40	1,(M0)	4	5795	H	15
5.8G	VHT80 (Beamforming)	80	1,(M0)	4	5775	S	15

**Abbreviation Explanation**

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Test Cond.	Abbreviation
5.2G	VHT40	40	1,(M0-9)	4	5190	L	TN,VN	5.2G;VHT40;40;1,(M0-9);4;5190;L;TN,VN
5.2G	VHT80	80	1,(M0-9)	4	5210	S	TN,VN	5.2G;VHT80;80;1,(M0-9);4;5210;S;TN,VN

**Note:**



- ◆ Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.) and S (Single Ch. or Intra- band Ch.)

### 2.3 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 Test Voltage: 120Vac / 60Hz
<b>Operating Mode</b>	Operating Mode Description
1	Adapter Mode
2	UPS Mode
<b>Mode 2 configuration was pretested and found to be the worst case and measured during the test</b>	

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Emission Bandwidth, Maximum Conducted Output Power, Peak Power Spectral Density, Frequency Stability
<b>Test Condition</b>	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Transmitter Bandedge Emissions , Transmitter 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>User Position</b>	<input type="checkbox"/> EUT will be placed in fixed position.
	<input checked="" type="checkbox"/> EUT will be placed in mobile position and operating multiple positions.
	<input type="checkbox"/> EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions.
<b>Operating Mode &lt; 1GHz</b>	<input checked="" type="checkbox"/> 1. Adapter Mode
	<input checked="" type="checkbox"/> 2. UPS Mode

Mode 2 configuration was pretested and found to be the worst case and measured during the test			
	X Plane	Y Plane	Z Plane
<b>Orthogonal Planes of EUT</b>			
<b>Worst Planes of EUT</b>		V	



## 2.4 Support Equipment

Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5500	DoC
2	AC Adapter for NB	DELL	HA65NM130	DoC
3	Notebook	DELL	E6400	DoC
4	AC Adapter for NB	DELL	HA65NM130	DoC
5	Client	-	-	-
6	AC Adapter for Client	MOSO	MSA-C2500IS12.0-30F-US	-
7	AC Adapter for EUT	MOSO	MSA-C2500IS12.0-30F-US	-
8	UPS for EUT	Cyber	CSN27U12V3	-

Note: Support equipment No.5, 6, 7 and 8 was provided by customer.

Support Equipment – AC Conduction				
No.	Equipment	Brand Name	Model Name	FCC ID
1	AC Adapter for EUT	MOSO	MSA-C2500IS12.0-30F-US	-
2	UPS for EUT	Cyber	CSN27U12V3	-

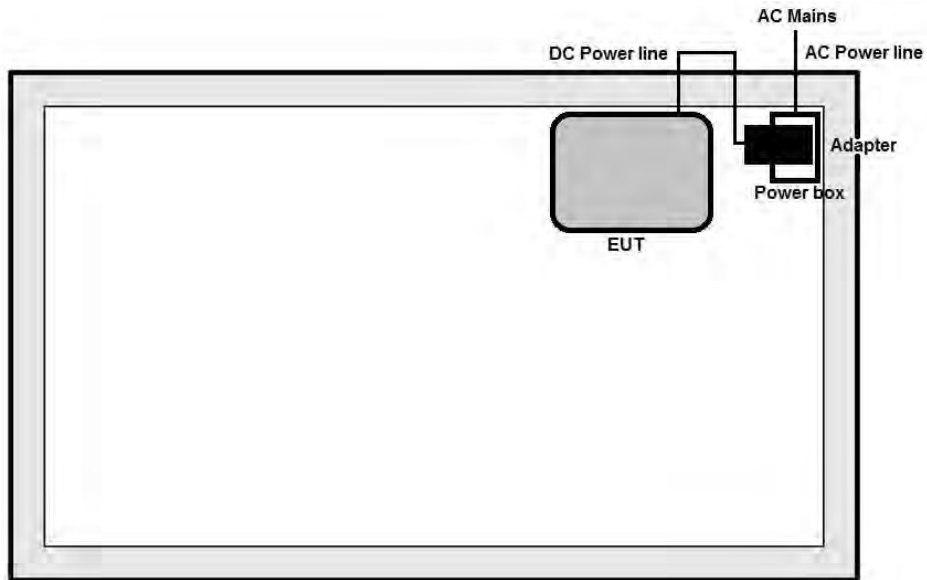
Note: Support equipment No.1 and 2 was provided by customer.

Support Equipment – Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5530	DoC
2	AC Adapter for NB	DELL	LA65NS2-01	DoC
3	Notebook	DELL	E5530	DoC
4	AC Adapter for NB	DELL	LA65NS2-01	DoC
5	Client	-	-	-
6	AC Adapter for Client	MOSO	MSA-C2500IS12.0-30F-US	-
7	AC Adapter for EUT	MOSO	MSA-C2500IS12.0-30F-US	-
8	UPS for EUT	Cyber	CSN27U12V3	-

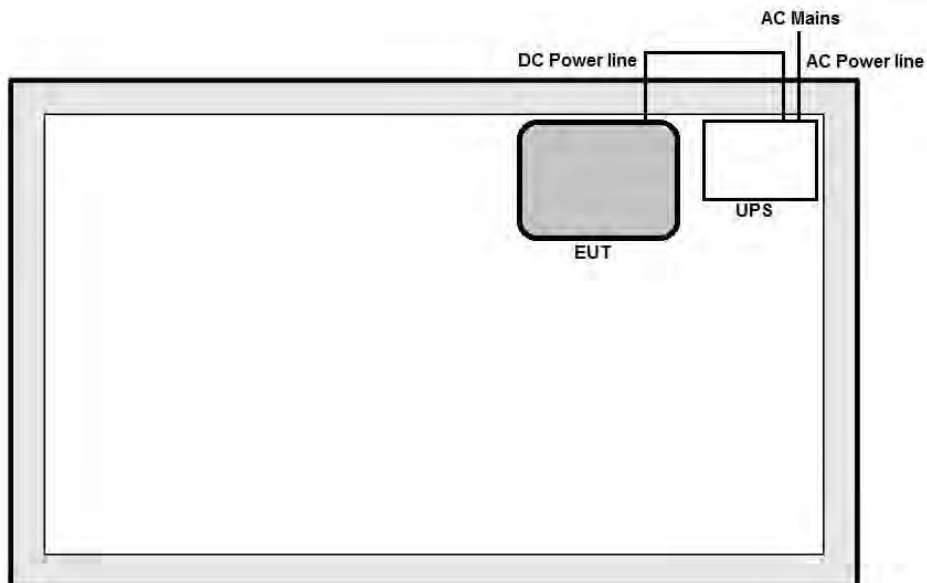
Note: Support equipment No.5, 6, 7 and 8 was provided by customer.

## 2.5 Test Setup Diagram

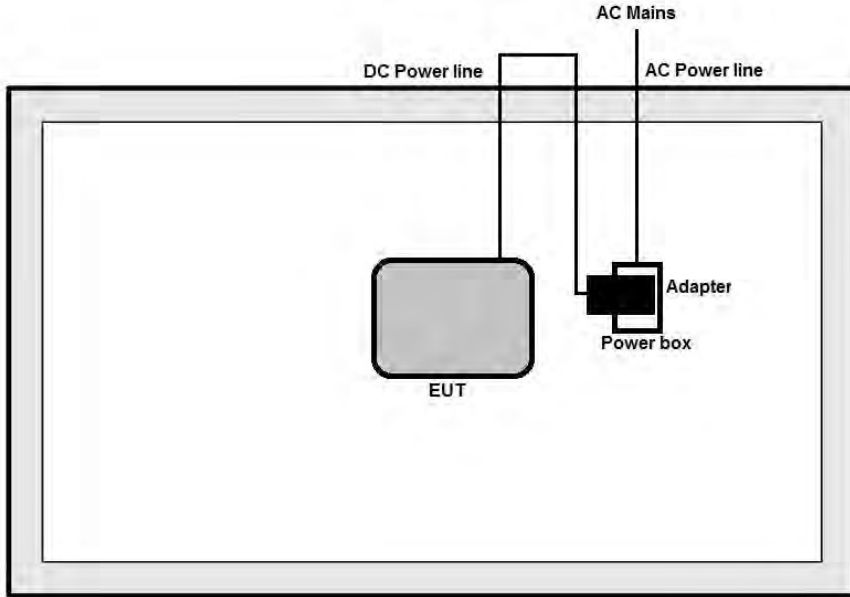
Test Setup Diagram – AC Line Conducted Emission Test (Mode 1)



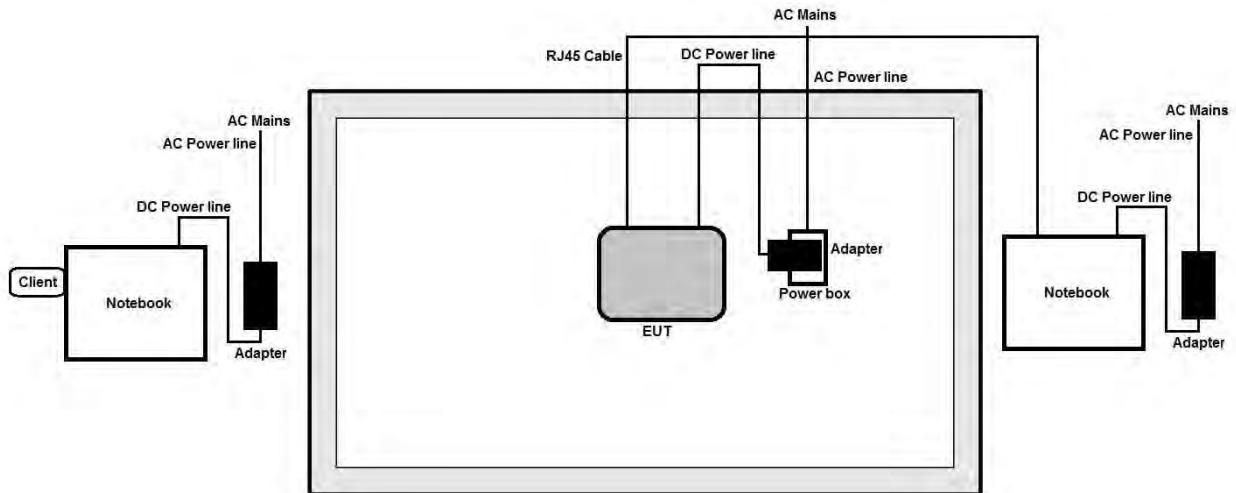
Test Setup Diagram – AC Line Conducted Emission Test (Mode 2)



Test Setup Diagram – Radiated Emission Test (Mode 1) (Non-Beamforming)

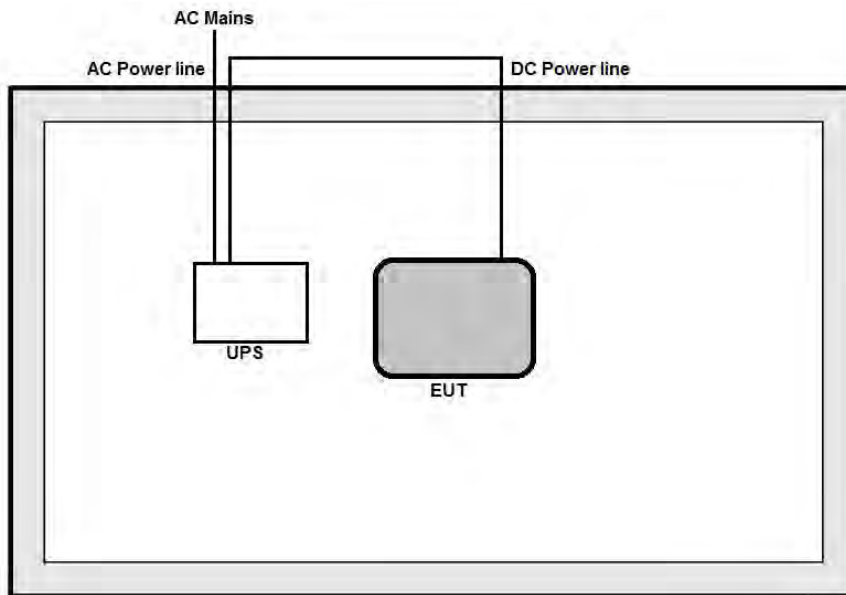


Test Setup Diagram – Radiated Emission Test (Mode 1) (Beamforming)

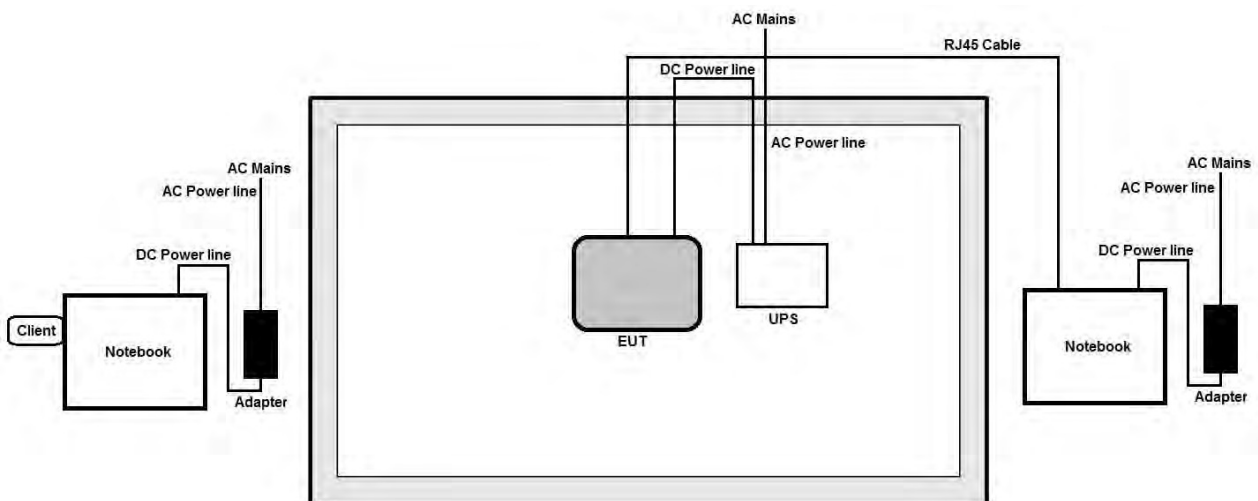




Test Setup Diagram – Radiated Emission Test (Mode 2) (Non-Beamforming)



Test Setup Diagram – Radiated Emission Test (Mode 2) (Beamforming)



### 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.

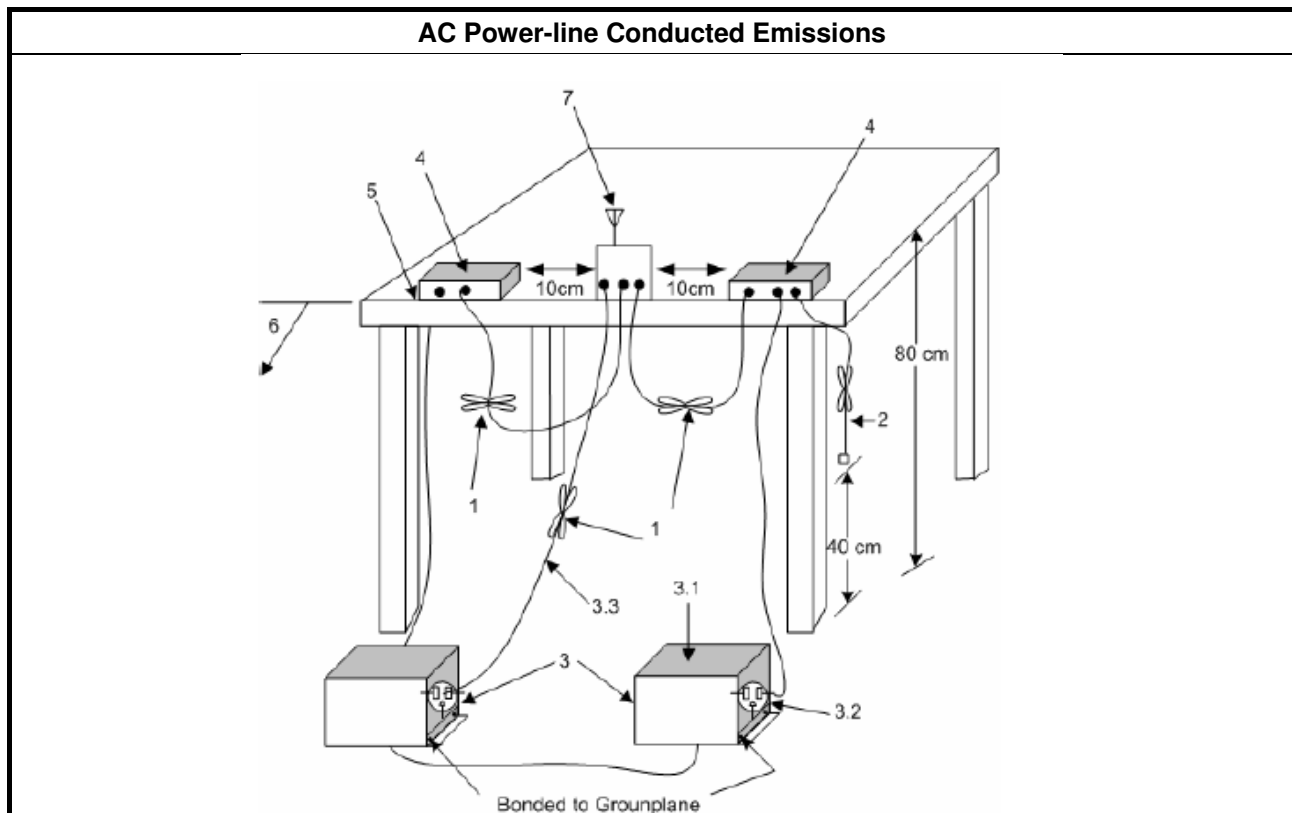
##### 3.1.2 Measuring Instruments

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 I

### 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 ≥ 500kHz.

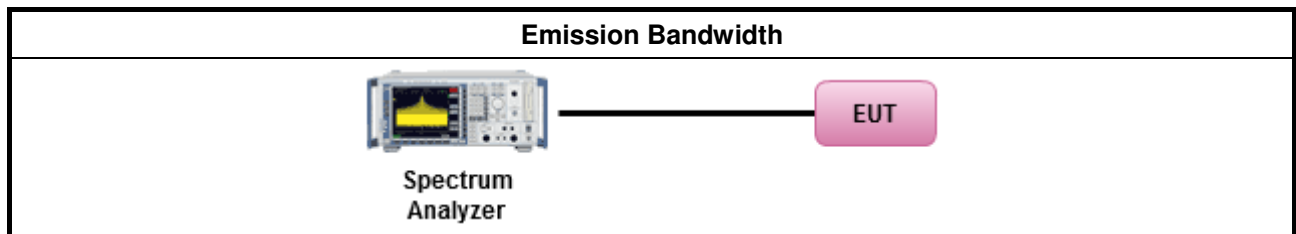
#### 3.2.2 Measuring Instruments

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:</li> </ul>	
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as RSS-Gen, clause 6.6 for bandwidth testing.

#### 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix A

### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit			
<b>UNII Devices</b>			
<ul style="list-style-type: none"> <li>▪ For the 5.15-5.25 GHz band:               <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td> <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> </td> </tr> </table> </li> </ul>			<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>
	<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>		
<ul style="list-style-type: none"> <li>▪ For the 5.25-5.35 GHz band, the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 250 mW or <math>11 \text{ dBm} + 10 \log B</math>, where B is the 26 dB emission bandwidth in MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 24 - (G_{TX} - 6)</math>.</li> </ul>			
<ul style="list-style-type: none"> <li>▪ For the 5.47-5.725 GHz band, the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 250 mW or <math>11 \text{ dBm} + 10 \log B</math>, where B is the 26 dB emission bandwidth in MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 24 - (G_{TX} - 6)</math>.</li> </ul>			
<ul style="list-style-type: none"> <li>▪ For the 5.725-5.85 GHz band:               <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td> <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> </td> </tr> </table> </li> </ul>			<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>
	<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><math>P_{Out}</math> = maximum conducted output power in dBm,  <math>G_{TX}</math> = the maximum transmitting antenna directional gain in dBi.</p>			

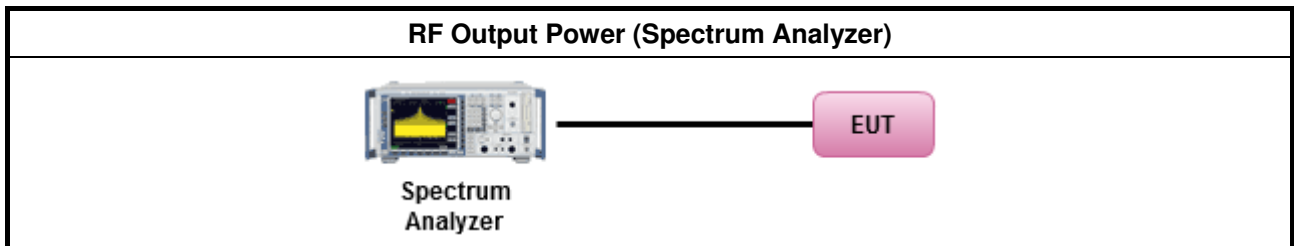
### 3.3.2 Measuring Instruments

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>	
	Duty cycle $\geq 98\%$
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle $< 98\%$
<input checked="" type="checkbox"/>	Refer as 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 type="checkbox"/>	Refer as KDB 789033, clause E Method PM (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 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 B

### 3.4 Peak Power Spectral Density

#### 3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit									
<b>UNII Devices</b>									
<ul style="list-style-type: none"> <li>▪ For the 5.15-5.25 GHz band:               <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;">▪</td> <td>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>.</td> </tr> <tr> <td>▪</td> <td>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>.</td> </tr> <tr> <td>▪</td> <td>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>.</td> </tr> <tr> <td>▪</td> <td>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>.</td> </tr> </table> </li> </ul>		▪	Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .	▪	Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .	▪	Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$ .	▪	Mobile or Portable Client: the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$ .
▪	Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .								
▪	Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .								
▪	Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$ .								
▪	Mobile or Portable Client: the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$ .								
<ul style="list-style-type: none"> <li>▪ For the 5.25-5.35 GHz band, 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>									
<ul style="list-style-type: none"> <li>▪ For the 5.47-5.725 GHz band, 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>									
<ul style="list-style-type: none"> <li>▪ For the 5.725-5.85 GHz band:               <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;">▪</td> <td>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>.</td> </tr> <tr> <td>▪</td> <td>Point-to-point systems (P2P): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz.</td> </tr> </table> </li> </ul>		▪	Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) $\leq 30$ dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$ .	▪	Point-to-point systems (P2P): the peak power spectral density (PPSD) $\leq 30$ dBm/500kHz.				
▪	Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) $\leq 30$ dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$ .								
▪	Point-to-point systems (P2P): the peak power spectral density (PPSD) $\leq 30$ dBm/500kHz.								
<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><math>G_{TX}</math></b> = the maximum transmitting antenna directional gain in dBi.</p>									

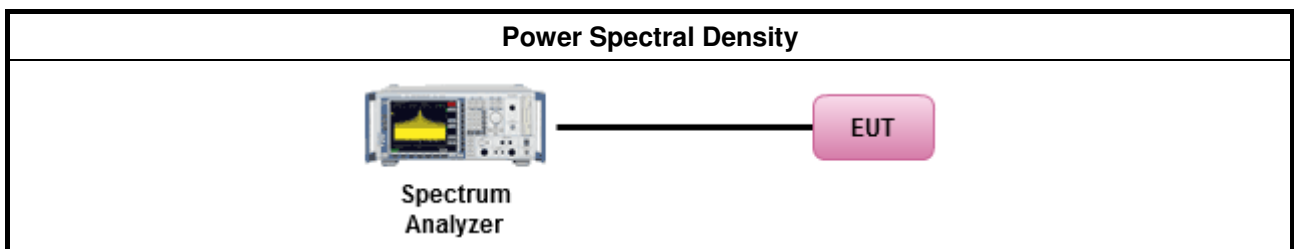
#### 3.4.2 Measuring Instruments

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 KDB 789033, F5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
Duty cycle ≥ 98%	
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
Duty cycle < 98%	
<input checked="" type="checkbox"/>	Refer as 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 N <sub>TX</sub> 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

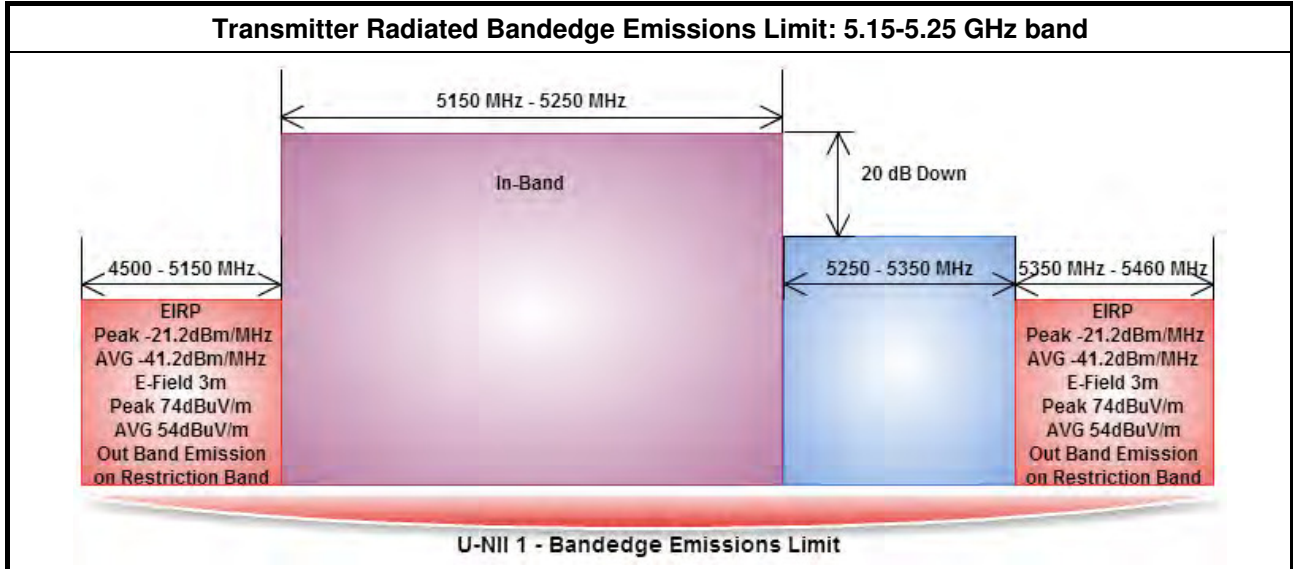


### 3.4.5 Test Result of Peak Power Spectral Density

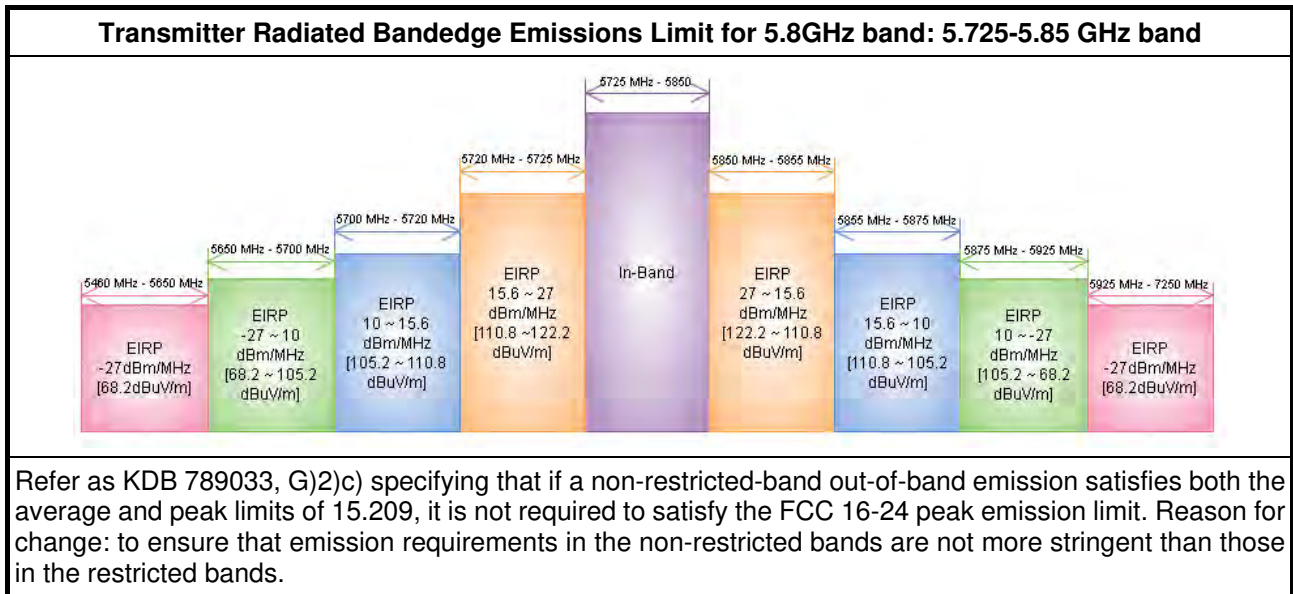
Refer as Appendix C

### 3.5 Transmitter Bandedge Emissions

#### 3.5.1 Transmitter Radiated Bandedge Emissions Limit



Refer as KDB 789033, G)2)c) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.



Refer as KDB 789033, G)2)c) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the FCC 16-24 peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.

#### 3.5.2 Measuring Instruments

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

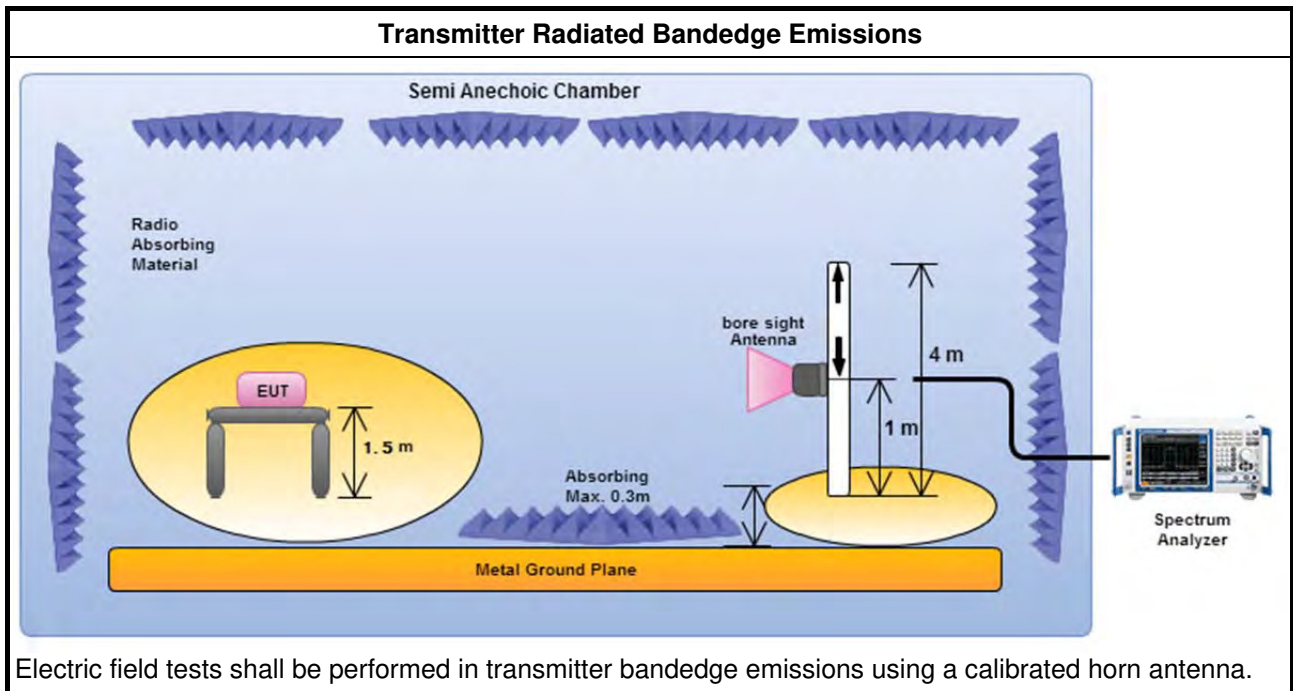




3.5.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.10.3 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
<input type="checkbox"/>	If EUT operate in adjacent contiguous bands, bandedge testing performed at the lowest frequency channel at lower-band and highest frequency channel at higher-band. Transmitter in-band emissions will consist of adjacent contiguous bands (e.g., IEEE 802.11ac VHT160 The lowest frequency channel at lower-band and highest frequency channel at higher-band in-band emissions will consist of two adjacent contiguous bands.)
<input type="checkbox"/>	Operating in 5.15-5.25 GHz band (lower-band) and 5.25-5.35 GHz band (higher-band).
<input type="checkbox"/>	Operating in 5.47-5.725 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band).
<input type="checkbox"/>	If EUT operate in individual non-contiguous bands, bandedge testing performed at the lowest frequency channel and highest frequency channel within lower-band and higher-band. (e.g., (e.g., IEEE 802.11ac VHT160)
<input type="checkbox"/>	Operating in 5.25-5.35 GHz band (lower-band) and 5.47-5.725 GHz band (higher-band).
<input type="checkbox"/>	Operating in 5.15-5.25 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band).
<input checked="" type="checkbox"/>	For the transmitter unwanted emissions shall be measured using following options below:
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
<input type="checkbox"/>	Refer as KDB 789033, G)6) Method AD (Trace Averaging).
<input type="checkbox"/>	Refer as KDB 789033, G)6) Method VB (Reduced VBW).
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)5) measurement procedure peak limit.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
<input checked="" type="checkbox"/>	For the transmitter bandedge emissions shall be measured using following options below:
<input type="checkbox"/>	Refer as KDB 789033, clause G)3)d) for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.10 for band-edge testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.10.6.2 for marker-delta method for band-edge measurements.
<input checked="" type="checkbox"/>	For radiated measurement, refer as ANSI C63.10, clause 6.6. Test distance is 3m.
<input checked="" type="checkbox"/>	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). Measurements in the bandedge are typically made at a closer distance 3m, because the instrumentation noise floor is typically close to the radiated emission limit.

### 3.5.4 Test Setup



### 3.5.5 Transmitter Radiated Bandedge Emissions

Refer as Appendix D

### 3.6 Transmitter Unwanted Emissions

#### 3.6.1 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.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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).

#### 3.6.2 Measuring Instruments

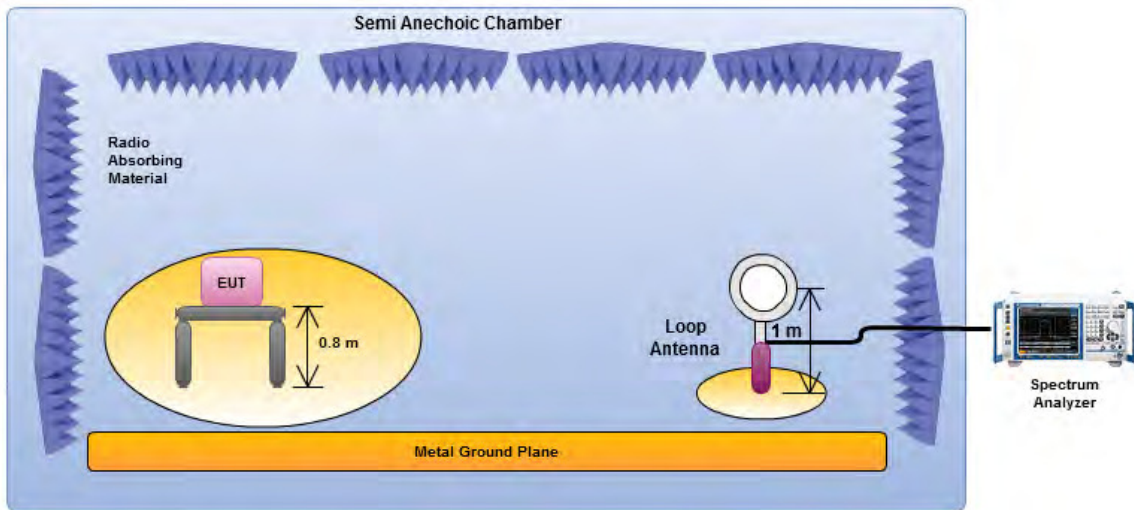
Refer a test equipment and calibration data table in this test report.

### 3.6.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	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).
<input checked="" type="checkbox"/>	The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
<input checked="" type="checkbox"/>	For the transmitter unwanted emissions shall be measured using following options below:
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
<input type="checkbox"/>	Refer as KDB 789033, G)6) Method AD (Trace Averaging).
<input type="checkbox"/>	Refer as KDB 789033, G)6) Method VB (Reduced VBW).
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). $VBW \geq 1/T$ , where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)5) measurement procedure peak limit.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
<input checked="" type="checkbox"/>	For radiated measurement.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. For 1 GHz to 5 GHz, test distance is 3m; For 5 GHz to 40 GHz, test distance is 3m.
<input checked="" type="checkbox"/>	The any unwanted emissions level shall not exceed the fundamental emission level.
<input checked="" type="checkbox"/>	All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

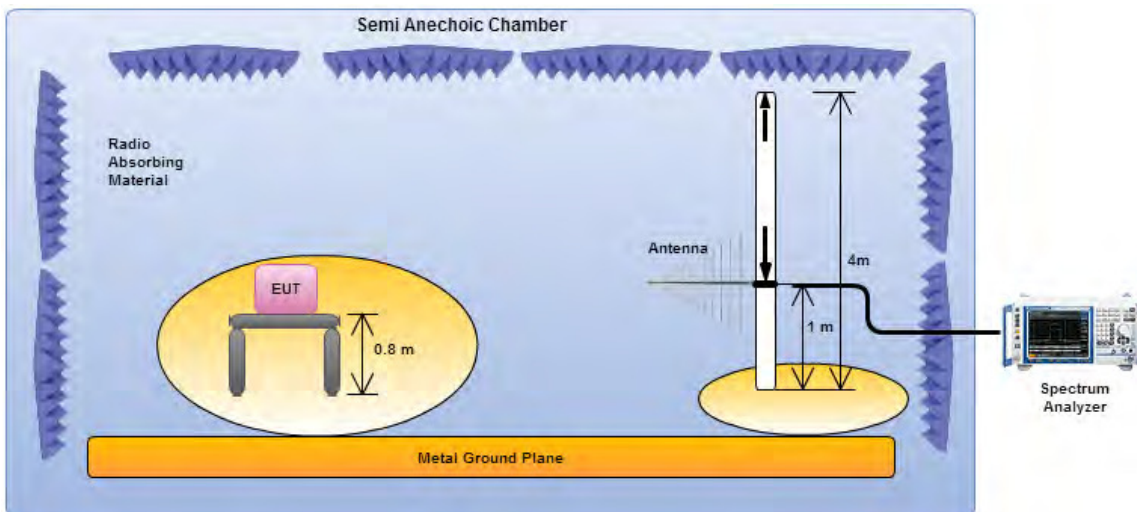
### 3.6.4 Test Setup

#### Transmitter Spurious and Out of Band Emissions (9 kHz - 30 MHz)



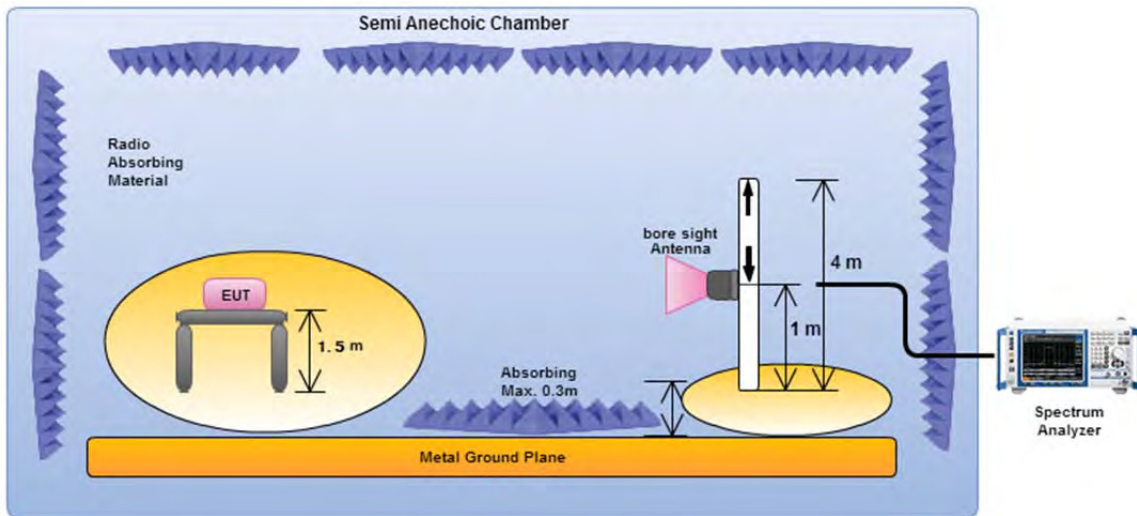
Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna.

#### Transmitter Radiated Unwanted Emissions (below 1GHz)



Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna.

**Transmitter Radiated Unwanted Emissions (above 1GHz)**



Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

**3.6.5 Transmitter Radiated Unwanted Emissions-with Antenna (Below 30MHz)**

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported. Any spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported.

**3.6.6 Test Result of Transmitter Radiated Unwanted Emissions**

Refer as Appendix E

### 3.7 Frequency Stability

#### 3.7.1 Frequency Stability Limit

Frequency Stability Limit	
<b>UNII Devices</b>	
<ul style="list-style-type: none"> <li>In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.</li> </ul>	
<b>IEEE Std. 802.11</b>	
<ul style="list-style-type: none"> <li>The transmitter center frequency tolerance shall be <math>\pm 20</math> ppm maximum for the 5 GHz.</li> </ul>	

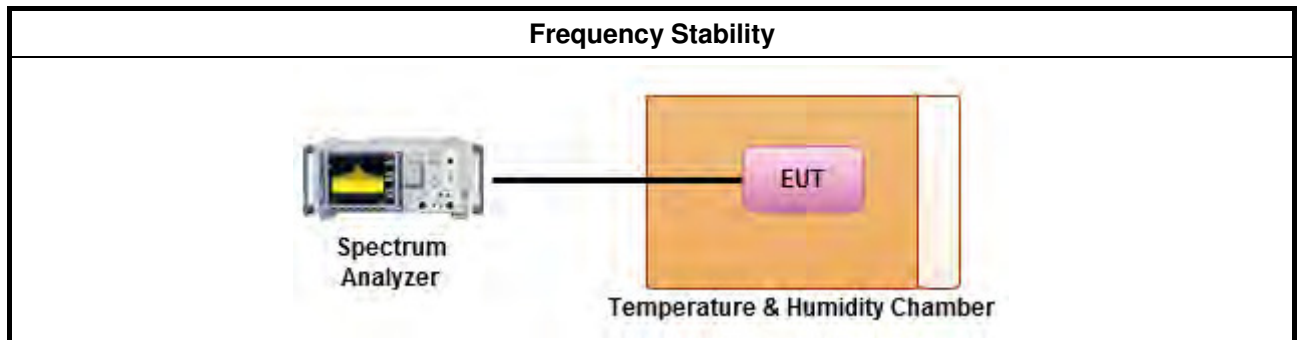
#### 3.7.2 Measuring Instruments

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

#### 3.7.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10, clause 6.8 for frequency stability tests</li> </ul>	
	<ul style="list-style-type: none"> <li>Frequency stability with respect to ambient temperature</li> </ul>
	<ul style="list-style-type: none"> <li>Frequency stability when varying supply voltage</li> </ul>

#### 3.7.4 Test Setup



#### 3.7.5 Test Result of Frequency Stability

Refer as Appendix F

## 4 Test Equipment and Calibration Data

### < AC Conduction >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR-3	102051	9 kHz ~ 3.6 GHz	19/04/2016	18/04/2017
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9 kHz ~ 30 MHz	26/01/2016	25/01/2017
LISN (Support Unit)	R&S	ENV216	101295	9 kHz ~ 30 MHz	04/11/2015	03/11/2016
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9 kHz ~ 30 MHz	30/10/2015	29/10/2016
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	NCR	NCR

NCR: Non Calibration Require.

### < Conducted Test >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9 kHz ~ 40 GHz	16/02/2016	15/02/ 2017
Power Sensor	Anritsu	MA2411B	1027452	300 MHz ~ 40 GHz	22/02/2016	21/02/2017
Power Meter	Anritsu	ML2495A	1124009	300 MHz ~ 40 GHz	22/02/2016	21/02/2017
Signal Generator	R&S	SMR40	100116	10 MHz ~ 40 GHz	21/07/2016	20/07/2017
AC Power Source	G.W	APS-9102	EL920581	AC 0V ~ 300V	04/06/2016	03/06/2017
Temp. and Humidity Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-007	-20 ~ 100°C	25/04/2016	24/04/2017

### < Conducted Test for Beamforming >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9 kHz ~ 40 GHz	16/02/2016	15/02/2017
Power Sensor	Anritsu	MA2411B	0917017	300 MHz ~ 40 GHz	04/02/2016	03/02/2017
Power Meter	Anritsu	ML2495A	0949003	300 MHz ~ 40 GHz	04/02/2016	03/02/2017
Signal Generator	R&S	SMR40	100116	10 MHz ~ 40 GHz	21/07/2016	20/07/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10710/4	30 MHz ~ 26.5 GHz	02/10/2016	01/10/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30 MHz ~ 26.5 GHz	02/10/2016	01/10/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10713/4	30 MHz ~ 26.5 GHz	02/10/2016	01/10/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10714/4	30 MHz ~ 26.5 GHz	02/10/2016	01/10/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10715/4	30 MHz ~ 26.5 GHz	02/10/2016	01/10/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10716/4	30 MHz ~ 26.5 GHz	02/10/2016	01/10/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10717/4	30 MHz ~ 26.5 GHz	02/10/2016	01/10/2017



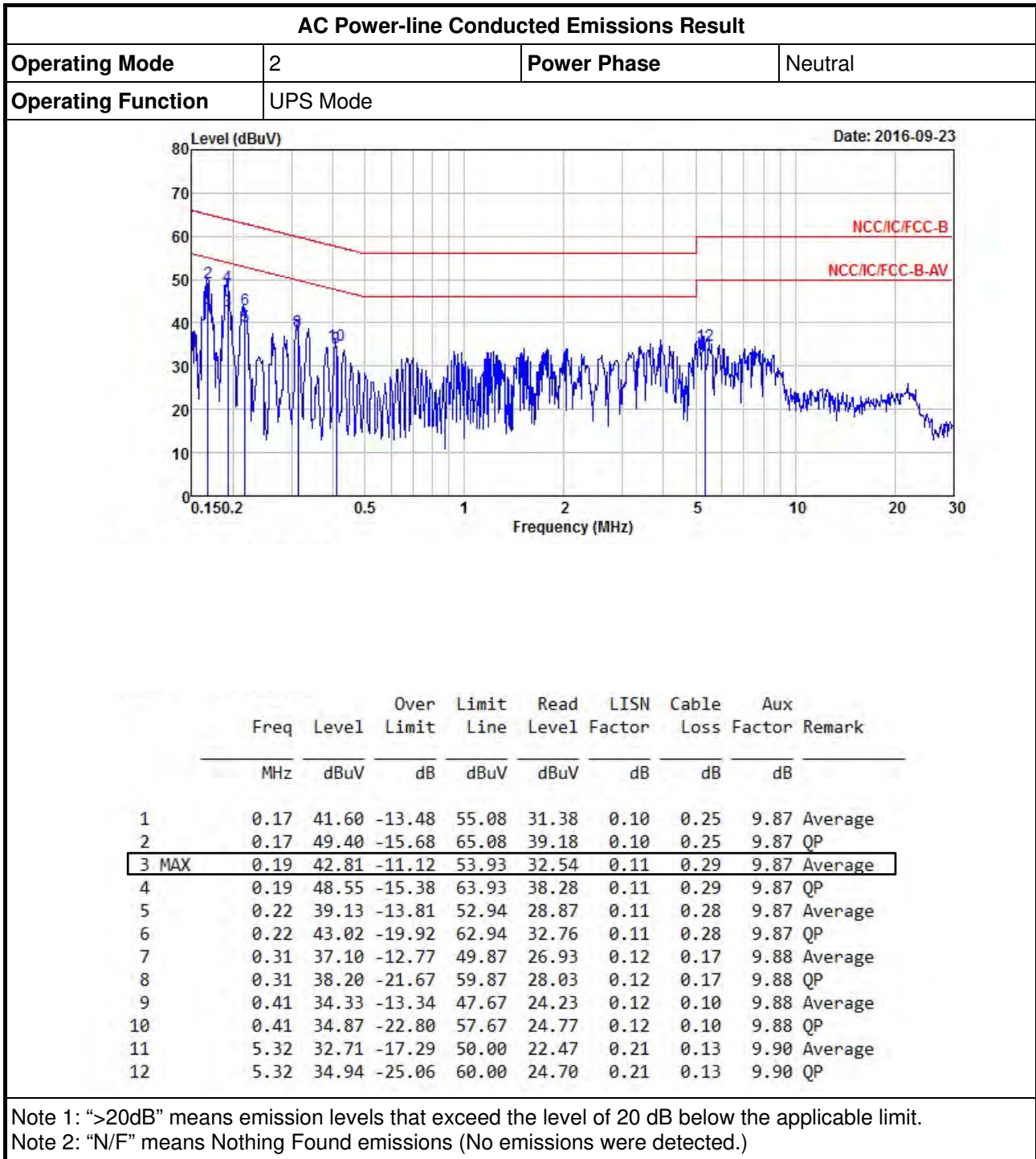


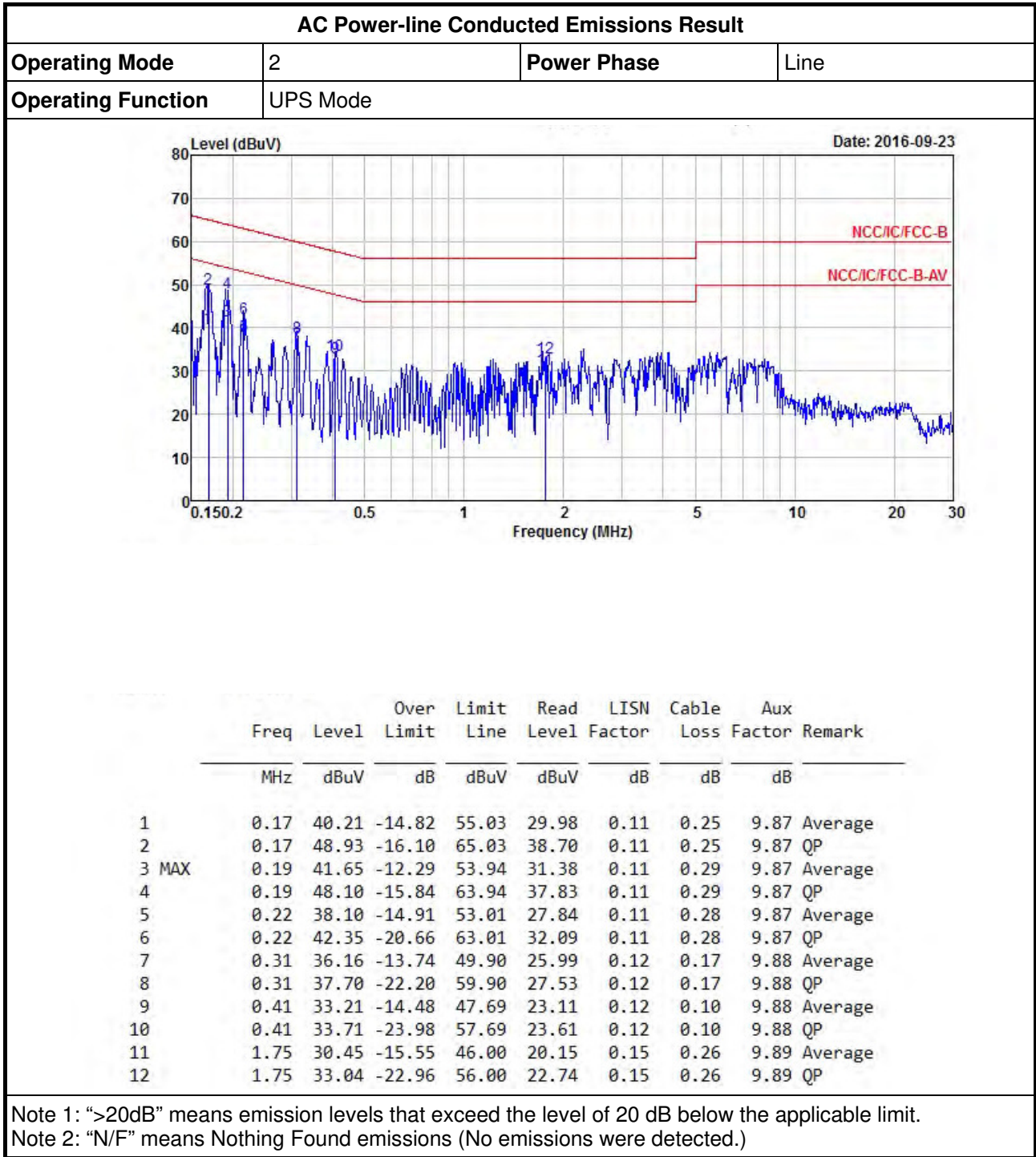
< Radiated Test >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30 MHz ~ 1 GHz 3m	25/04/2016	24/04/2017
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1 GHz ~ 18 GHz 3m	30/06/2016	29/06/2017
Amplifier	EMC	EMC9135	980232	9 kHz ~ 1 GHz	29/01/2016	28/01/2017
Amplifier	Agilent	8449B	3008A02096	1 GHz ~ 26.5 GHz	11/04/2016	10/04/2017
Amplifier	MITEQ	JS44-18004000-3 3-8P	1840917	18 GHz ~ 40 GHz	02/06/2015	01/06/2017
Spectrum	KEYSIGHT	N9010A	MY54200885	10 Hz ~ 44 GHz	04/07/2016	03/07/2017
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL 6111D & MTJ6102	35418	30 MHz ~ 1 GHz	31/03/2016	30/03/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA 9120D 1534	1 GHz ~ 18 GHz	22/04/2016	21/04/2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18 GHz ~ 40 GHz	04/01/2016	03/01/2017
Loop Antenna	ROHDE&SCHWARZ	HFH2-Z2	100330	9 kHz ~ 30 MHz	10/11/2014	09/11/2016

< Radiated Test for Beamforming >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30 MHz ~ 1 GHz 3m	25/04/2016	24/04/2017
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1 GHz ~ 18 GHz 3m	21/06/2016	20/06/2017
Amplifier	EMC	EMC9135	980232	9 kHz ~ 1 GHz	29/01/2016	28/01/2017
Amplifier	Agilent	8449B	3008A02096	1 GHz ~ 26.5 GHz	11/04/2016	10/04/2017
Spectrum	KEYSIGHT	N9010A	MY54200885	10 Hz ~ 44 GHz	04/07/2016	03/07/2017
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL 6111D & MTJ6102	35418	30 MHz ~ 1 GHz	1/10/2016	30/09/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA 9120D 1534	1 GHz ~ 18 GHz	22/04/2016	21/04/2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18 GHz ~ 40 GHz	04/01/2016	03/01/2017
RF Cable-R03m	Jye Bao	RG142	CB021	9 kHz ~ 1 GHz	23/07/2016	22/07/2017
RF Cable-high	Jye Bao	RG142	03CH09-HY	1 GHz ~ 40 GHz	23/07/2016	22/07/2017







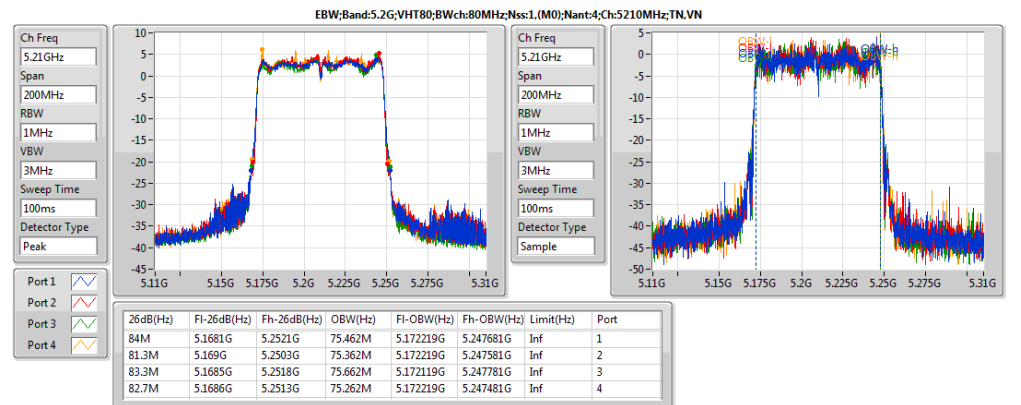
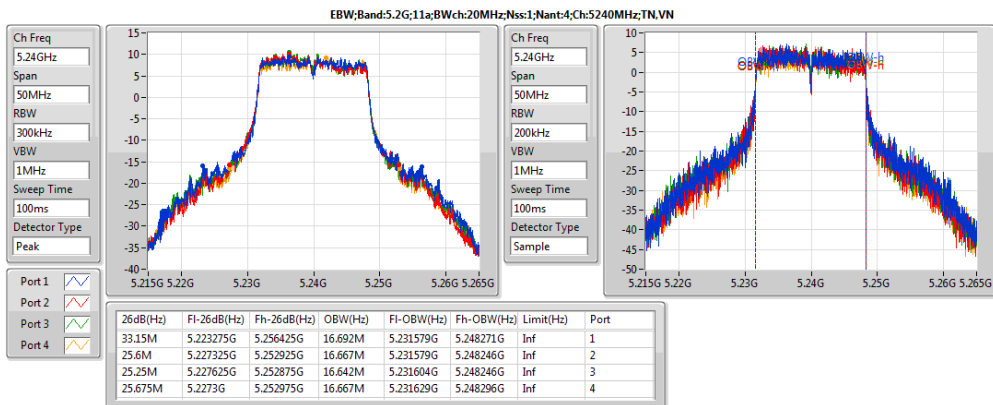
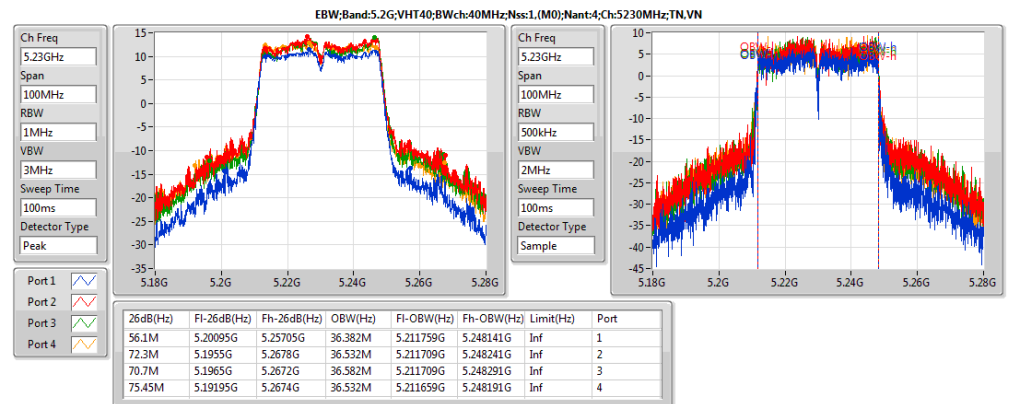
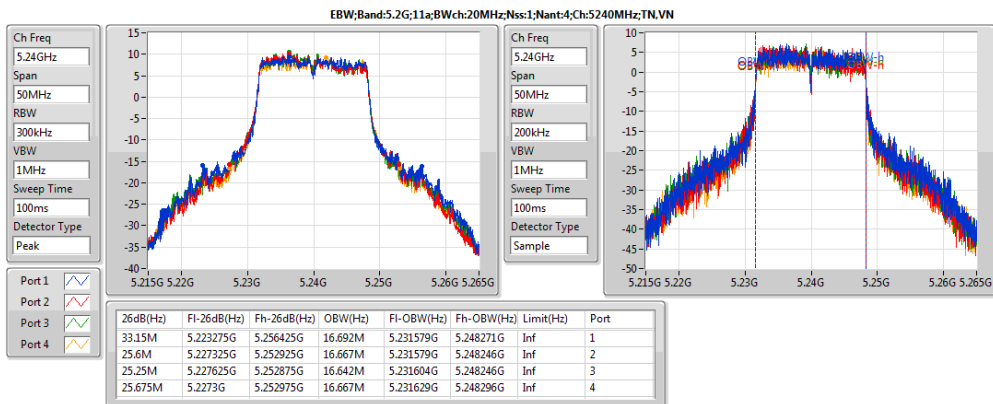
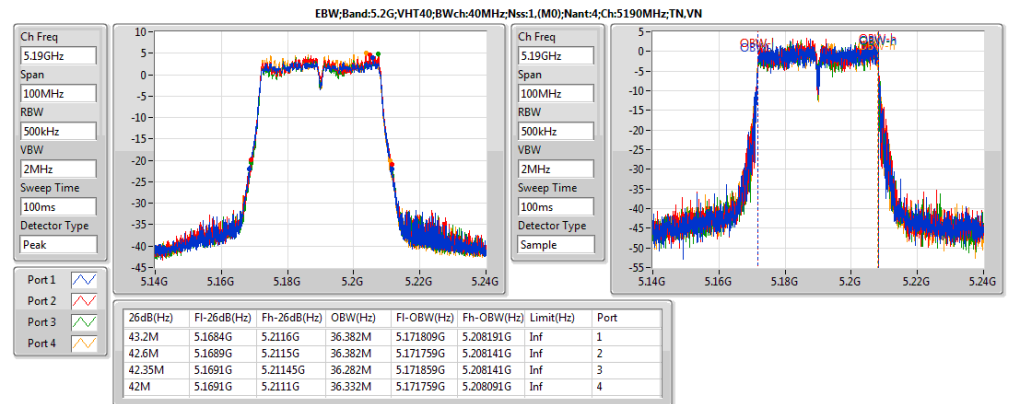
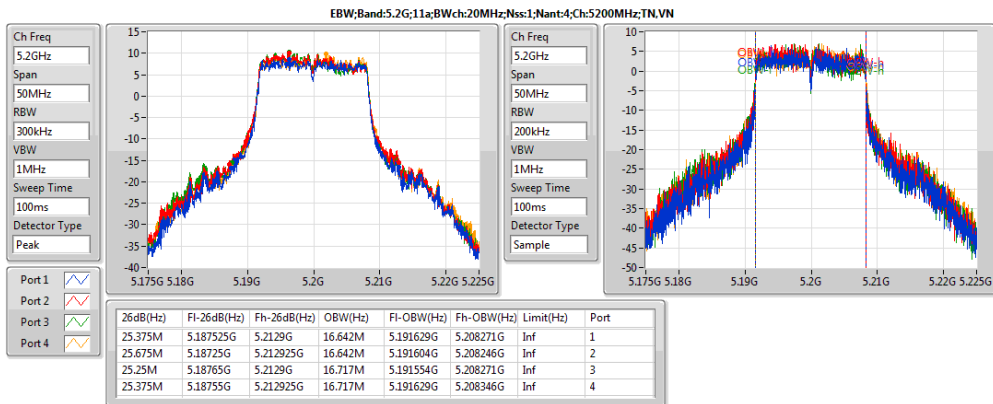
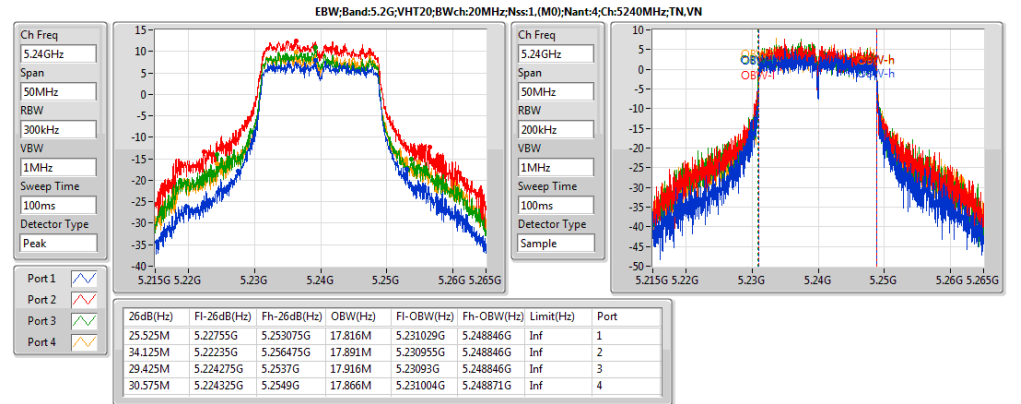
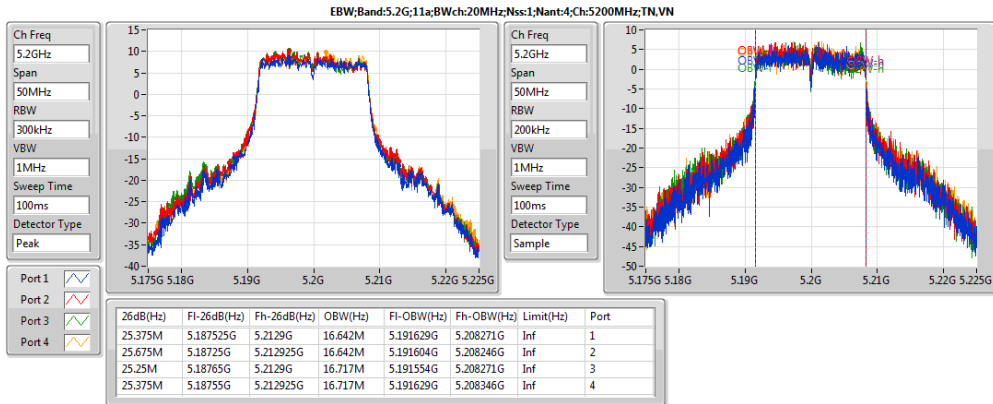
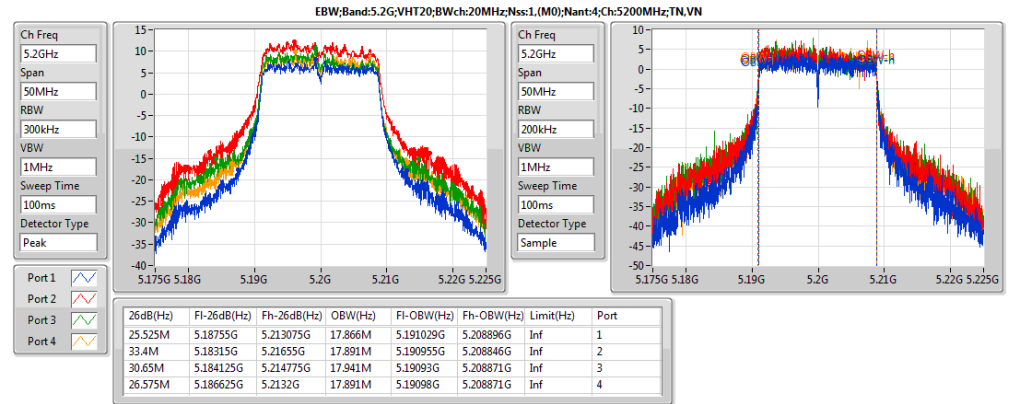
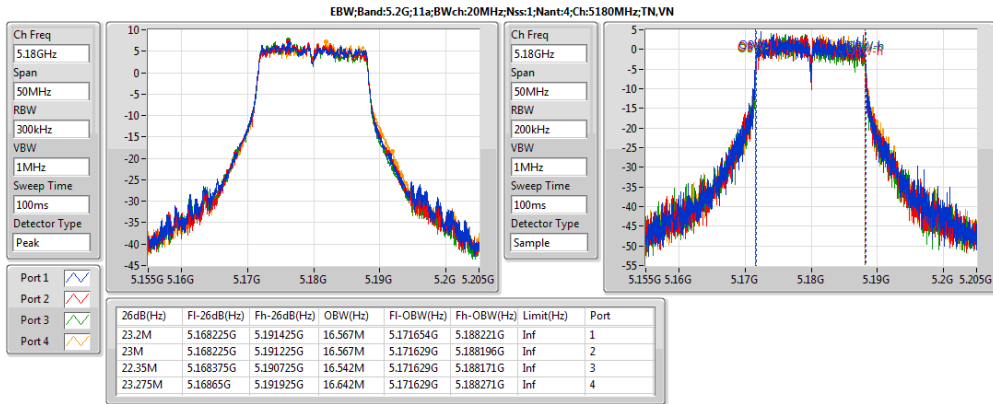
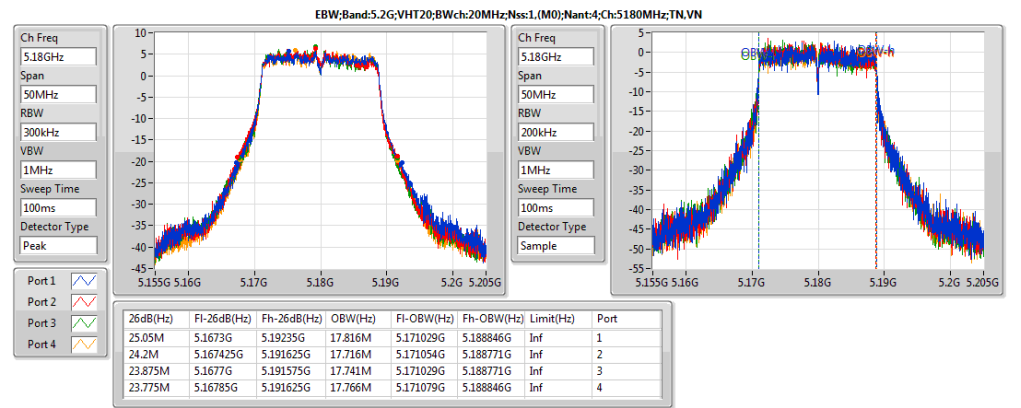
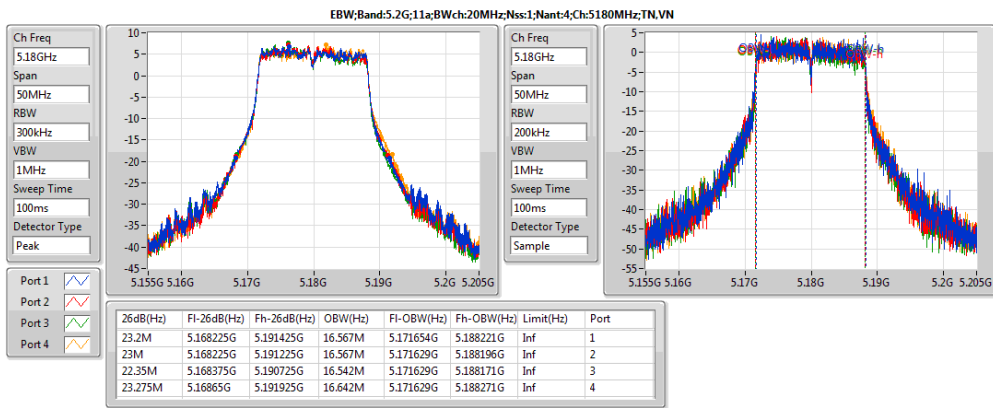
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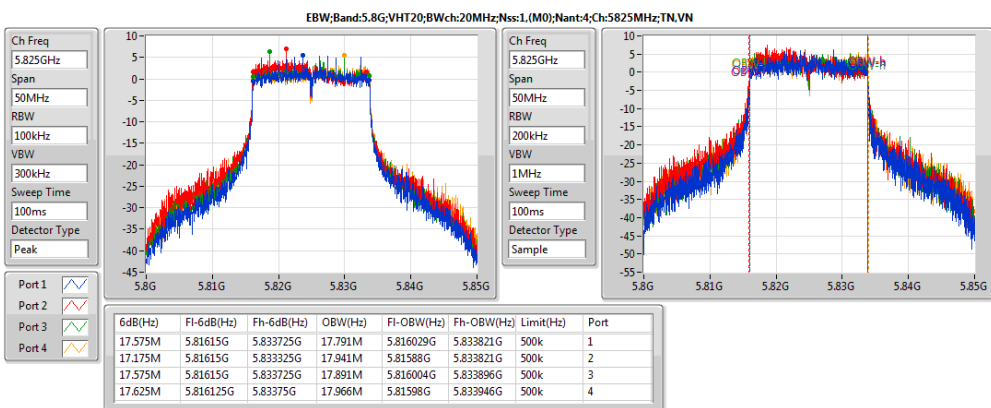
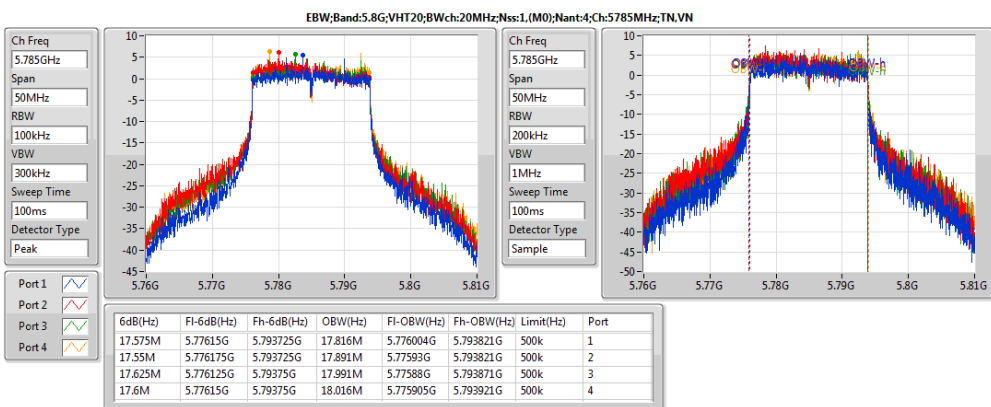
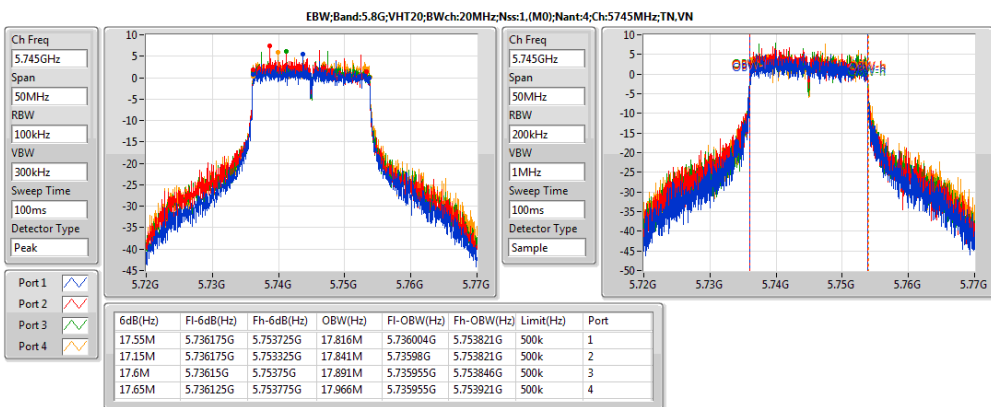
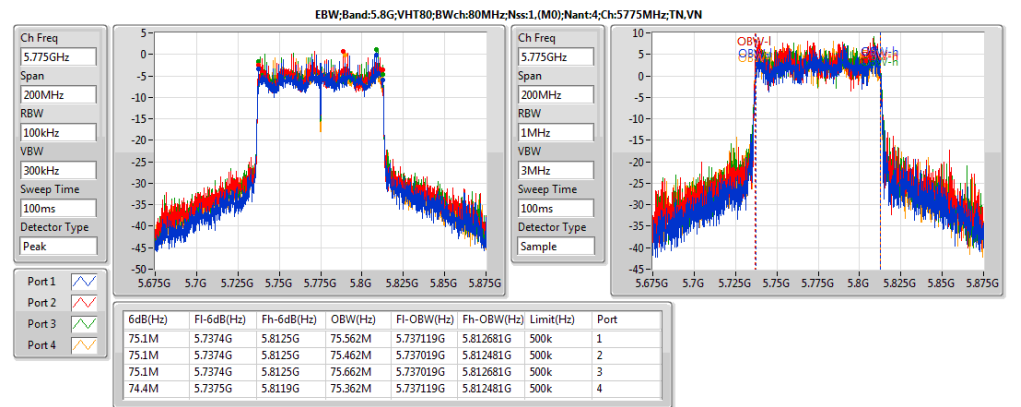
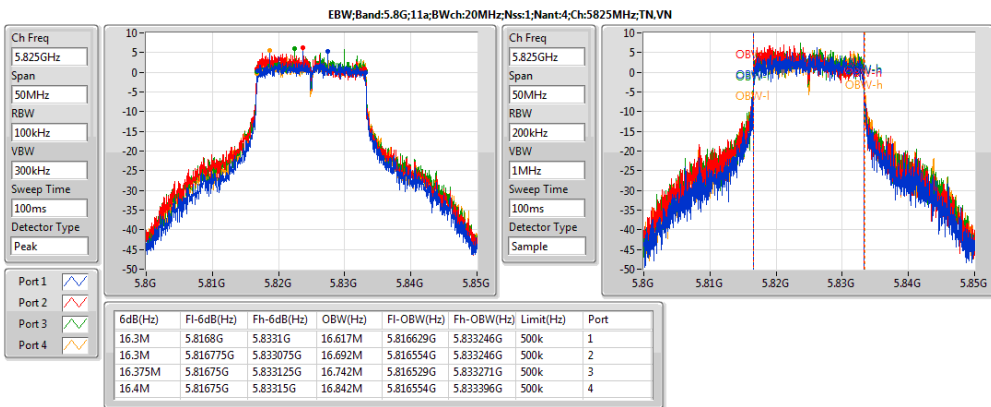
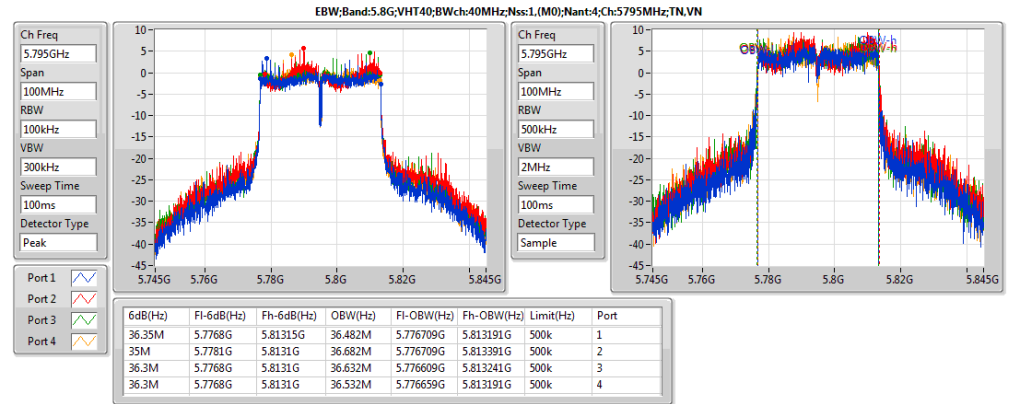
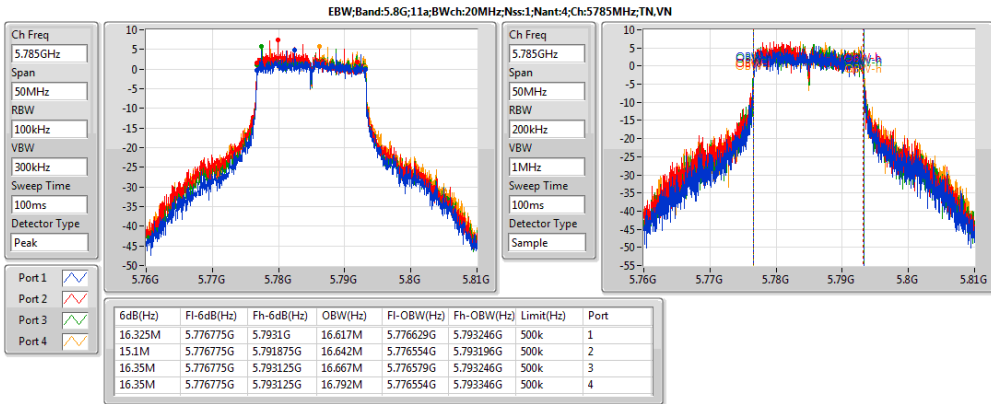
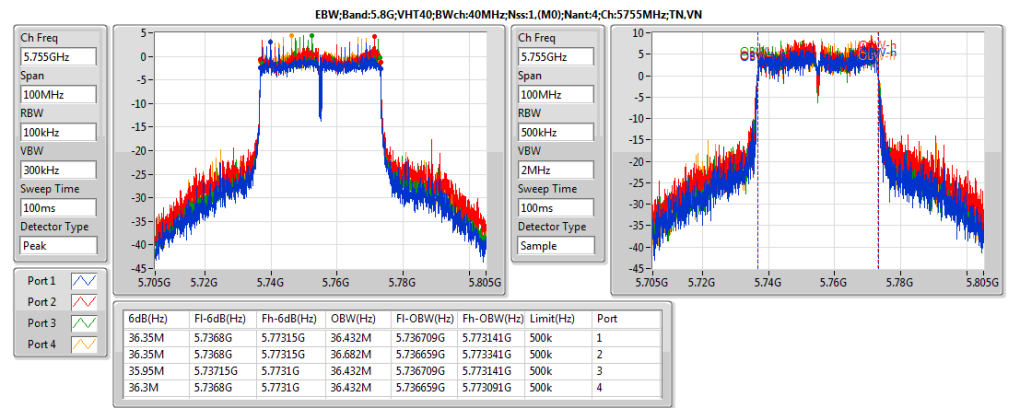
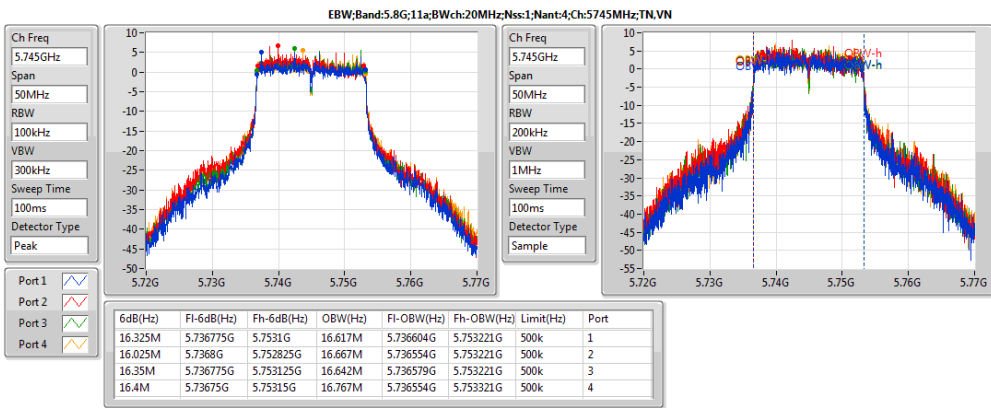
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.2G;11a;20;1;4	33.15M	16.717M	16M7D1D	22.35M	16.542M
5.2G;VHT20;20;1,(M0);4	34.125M	17.941M	17M9D1D	23.775M	17.716M
5.2G;VHT40;40;1,(M0);4	75.45M	36.582M	36M6D1D	42M	36.282M
5.2G;VHT80;80;1,(M0);4	84M	75.662M	75M7D1D	81.3M	75.262M
5.8G;11a;20;1;4	16.4M	16.842M	16M8D1D	15.1M	16.617M
5.8G;VHT20;20;1,(M0);4	17.65M	18.016M	18M0D1D	17.15M	17.791M
5.8G;VHT40;40;1,(M0);4	36.35M	36.682M	36M7D1D	35M	36.432M
5.8G;VHT80;80;1,(M0);4	75.1M	75.662M	75M7D1D	74.4M	75.362M



Result

Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)	P3-N dB (Hz)	P3-OBW (Hz)	P4-N dB (Hz)	P4-OBW (Hz)
5.2G;11a;20;1;4;5180;L;TN,VN	Pass	Inf	23.2M	16.567M	23M	16.567M	22.35M	16.542M	23.275M	16.642M
5.2G;11a;20;1;4;5180;L;TN,VN	Pass	Inf	23.2M	16.567M	23M	16.567M	22.35M	16.542M	23.275M	16.642M
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	Inf	25.375M	16.642M	25.675M	16.642M	25.25M	16.717M	25.375M	16.717M
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	Inf	25.375M	16.642M	25.675M	16.642M	25.25M	16.717M	25.375M	16.717M
5.2G;11a;20;1;4;5240;H;TN,VN	Pass	Inf	33.15M	16.692M	25.6M	16.667M	25.25M	16.642M	25.675M	16.667M
5.2G;11a;20;1;4;5240;H;TN,VN	Pass	Inf	33.15M	16.692M	25.6M	16.667M	25.25M	16.642M	25.675M	16.667M
5.2G;VHT20;20;1;(M0);4;5180;L;TN,VN	Pass	Inf	25.05M	17.816M	24.2M	17.716M	23.875M	17.741M	23.775M	17.766M
5.2G;VHT20;20;1;(M0);4;5200;M;TN,VN	Pass	Inf	25.525M	17.866M	33.4M	17.891M	30.65M	17.941M	26.575M	17.891M
5.2G;VHT20;20;1;(M0);4;5240;H;TN,VN	Pass	Inf	25.525M	17.816M	34.125M	17.891M	29.425M	17.916M	30.575M	17.866M
5.2G;VHT40;40;1;(M0);4;5190;L;TN,VN	Pass	Inf	43.2M	36.382M	42.6M	36.382M	42.35M	36.282M	42M	36.332M
5.2G;VHT40;40;1;(M0);4;5230;H;TN,VN	Pass	Inf	56.1M	36.382M	72.3M	36.532M	70.7M	36.582M	75.45M	36.532M
5.2G;VHT80;80;1;(M0);4;5210;S;TN,VN	Pass	Inf	84M	75.462M	81.3M	75.362M	83.3M	75.662M	82.7M	75.262M
5.8G;11a;20;1;4;5745;L;TN,VN	Pass	500k	16.325M	16.617M	16.025M	16.667M	16.35M	16.642M	16.4M	16.767M
5.8G;11a;20;1;4;5785;M;TN,VN	Pass	500k	16.325M	16.617M	15.1M	16.642M	16.35M	16.667M	16.35M	16.792M
5.8G;11a;20;1;4;5825;H;TN,VN	Pass	500k	16.3M	16.617M	16.3M	16.692M	16.375M	16.742M	16.4M	16.842M
5.8G;VHT20;20;1;(M0);4;5745;L;TN,VN	Pass	500k	17.55M	17.816M	17.15M	17.841M	17.6M	17.891M	17.65M	17.966M
5.8G;VHT20;20;1;(M0);4;5785;M;TN,VN	Pass	500k	17.575M	17.816M	17.55M	17.891M	17.625M	17.991M	17.6M	18.016M
5.8G;VHT20;20;1;(M0);4;5825;H;TN,VN	Pass	500k	17.575M	17.791M	17.175M	17.941M	17.575M	17.891M	17.625M	17.966M
5.8G;VHT40;40;1;(M0);4;5755;L;TN,VN	Pass	500k	36.35M	36.432M	36.35M	36.682M	35.95M	36.432M	36.3M	36.432M
5.8G;VHT40;40;1;(M0);4;5795;H;TN,VN	Pass	500k	36.35M	36.482M	35M	36.682M	36.3M	36.632M	36.3M	36.532M
5.8G;VHT80;80;1;(M0);4;5775;S;TN,VN	Pass	500k	75.1M	75.562M	75.1M	75.462M	75.1M	75.662M	74.4M	75.362M







Summary

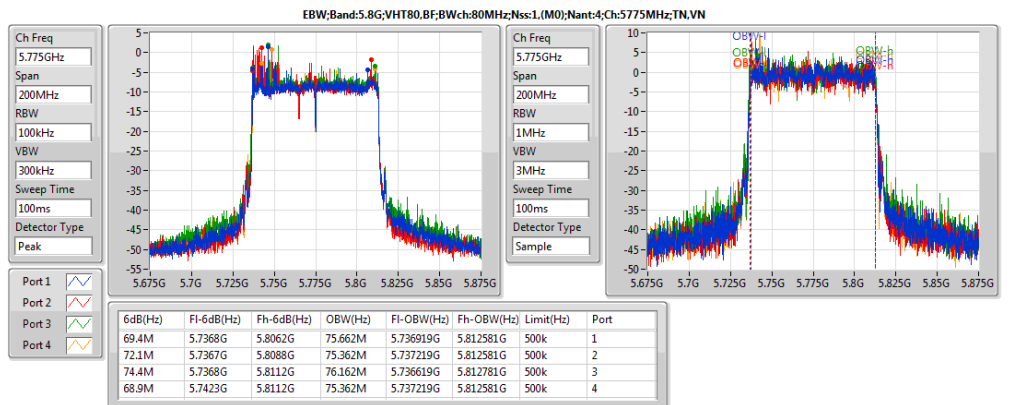
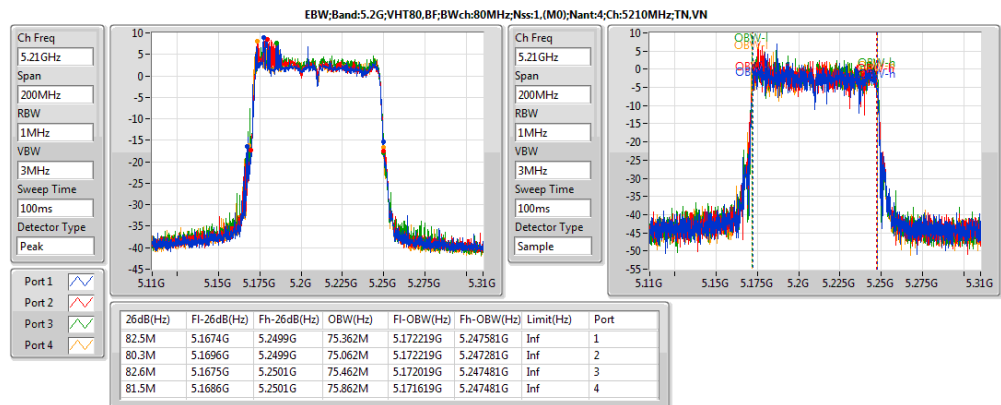
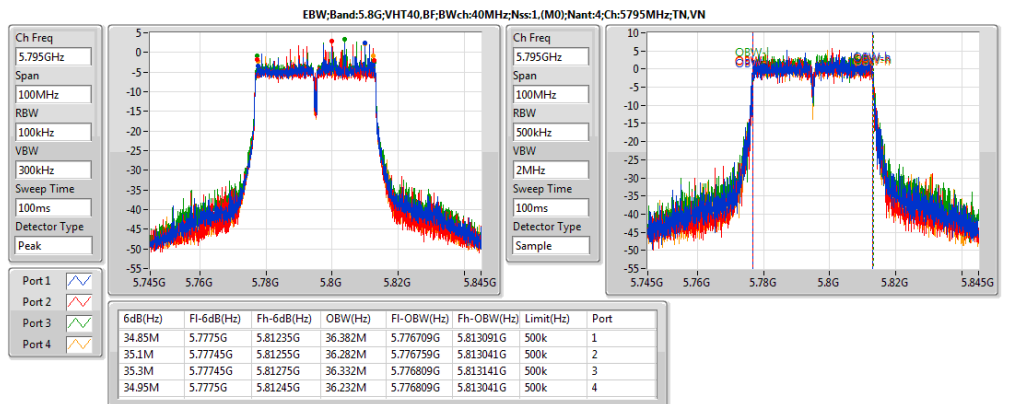
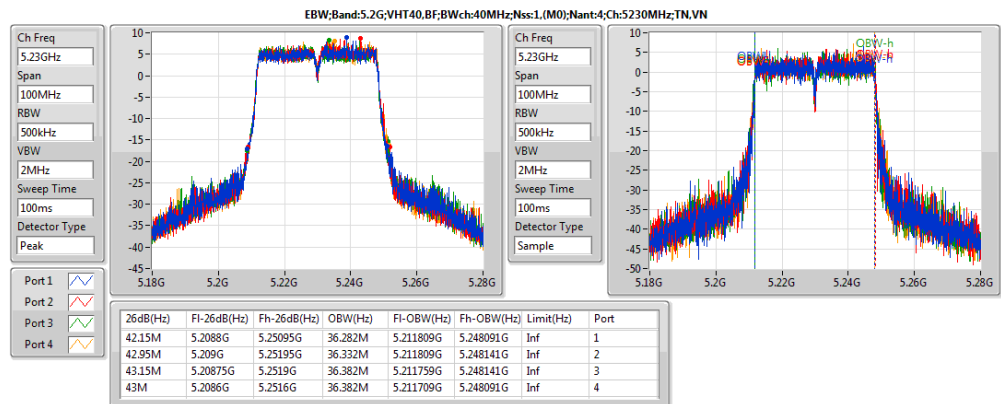
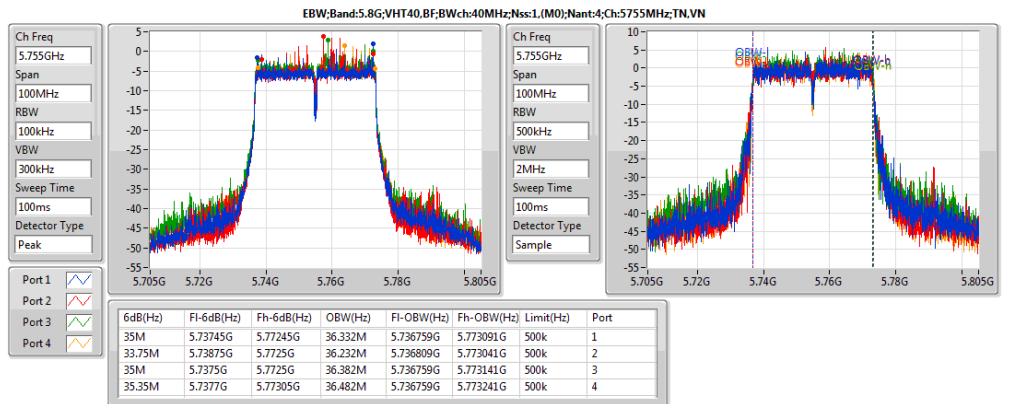
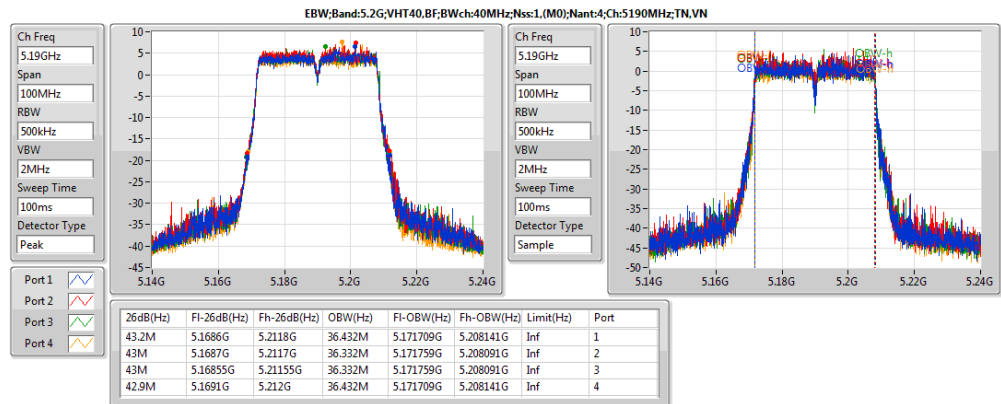
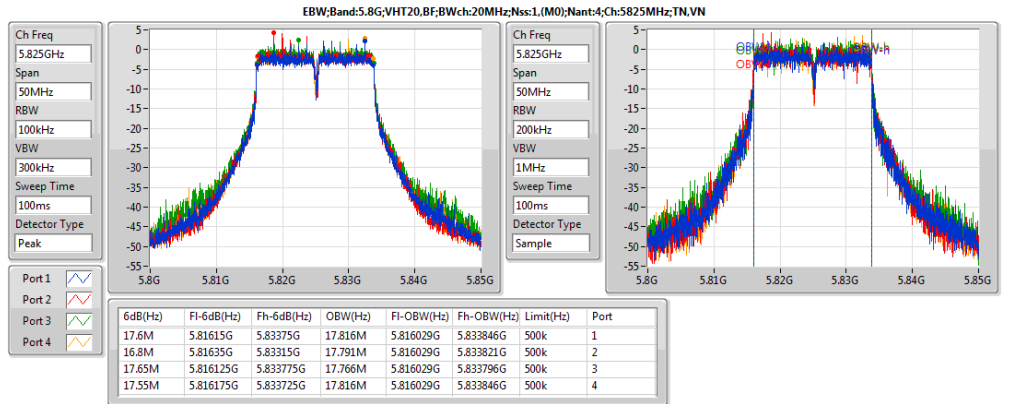
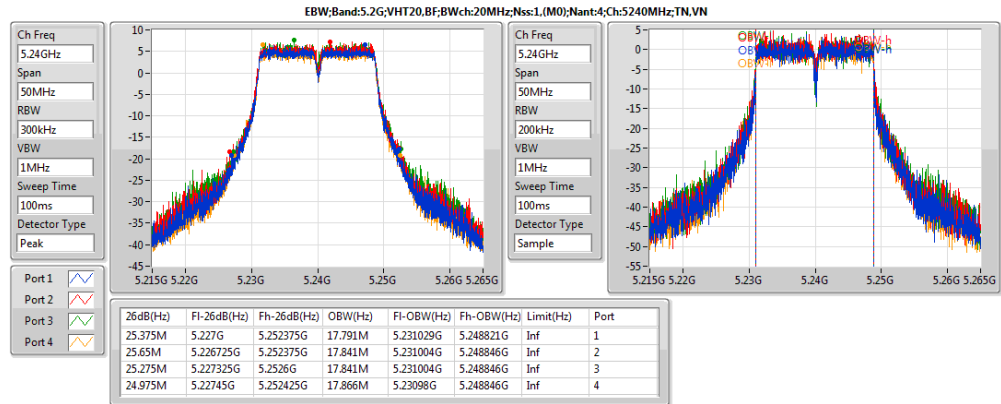
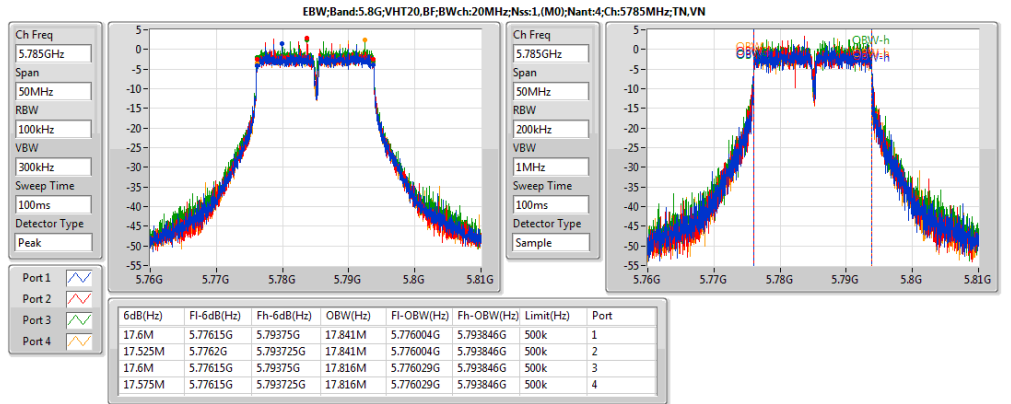
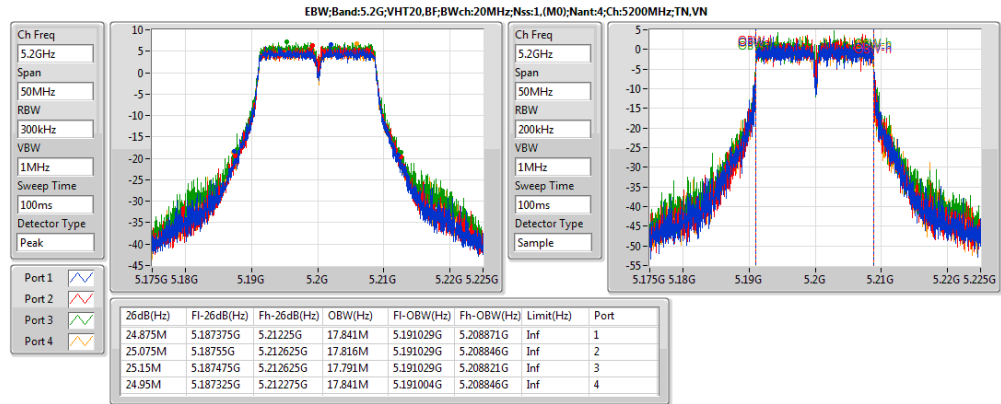
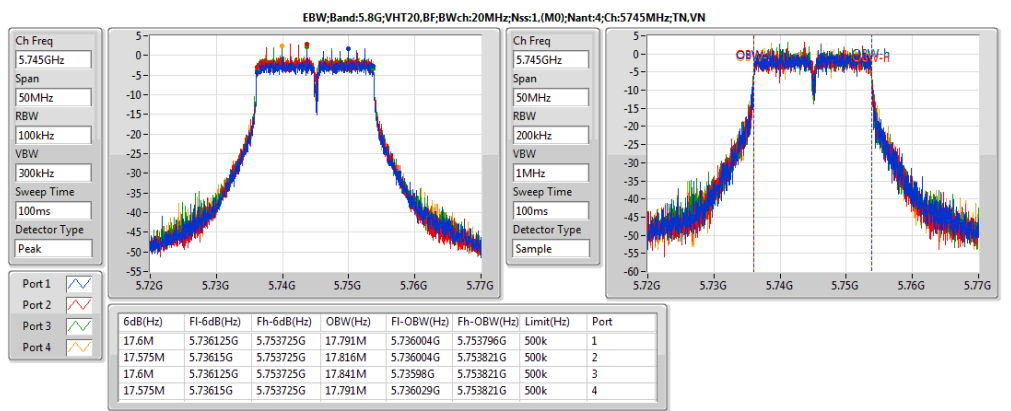
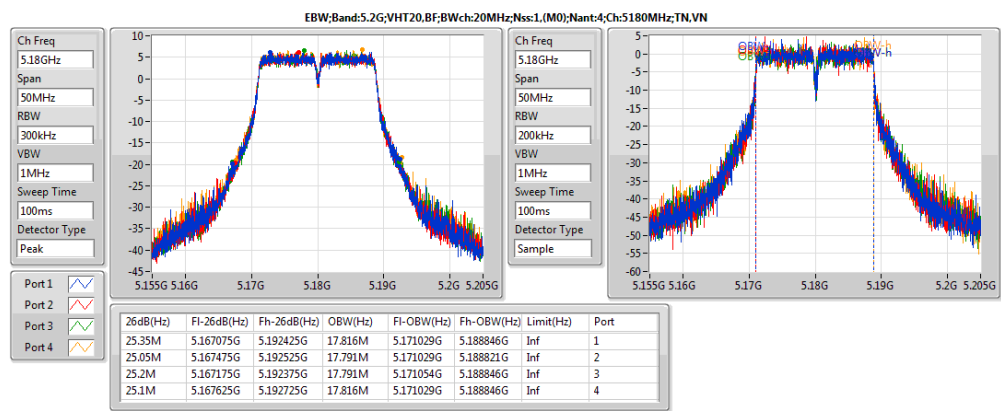
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.2G;VHT20,BF;20;1,(M0);4	25.65M	17.866M	17M9D1D	24.875M	17.791M
5.2G;VHT40,BF;40;1,(M0);4	43.2M	36.432M	36M4D1D	42.15M	36.282M
5.2G;VHT80,BF;80;1,(M0);4	82.6M	75.862M	75M9D1D	80.3M	75.062M
5.8G;VHT20,BF;20;1,(M0);4	17.65M	17.841M	17M8D1D	16.8M	17.766M
5.8G;VHT40,BF;40;1,(M0);4	35.35M	36.482M	36M5D1D	33.75M	36.232M
5.8G;VHT80,BF;80;1,(M0);4	74.4M	76.162M	76M2D1D	68.9M	75.362M





Result

Mode	Result	Limit (Hz)	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)	P3-N dB (Hz)	P3-OBW (Hz)	P4-N dB (Hz)	P4-OBW (Hz)
5.2G;VHT20,BF;20;1,(M0);4;5180;L;TN,VN	Pass	Inf	25.35M	17.816M	25.05M	17.791M	25.2M	17.791M	25.1M	17.816M
5.2G;VHT20,BF;20;1,(M0);4;5200;M;TN,VN	Pass	Inf	24.875M	17.841M	25.075M	17.816M	25.15M	17.791M	24.95M	17.841M
5.2G;VHT20,BF;20;1,(M0);4;5240;H;TN,VN	Pass	Inf	25.375M	17.791M	25.65M	17.841M	25.275M	17.841M	24.975M	17.866M
5.2G;VHT40,BF;40;1,(M0);4;5190;L;TN,VN	Pass	Inf	43.2M	36.432M	43M	36.332M	43M	36.332M	42.9M	36.432M
5.2G;VHT40,BF;40;1,(M0);4;5230;H;TN,VN	Pass	Inf	42.15M	36.282M	42.95M	36.332M	43.15M	36.382M	43M	36.382M
5.2G;VHT80,BF;80;1,(M0);4;5210;S;TN,VN	Pass	Inf	82.5M	75.362M	80.3M	75.062M	82.6M	75.462M	81.5M	75.862M
5.8G;VHT20,BF;20;1,(M0);4;5745;L;TN,VN	Pass	500k	17.6M	17.791M	17.575M	17.816M	17.6M	17.841M	17.575M	17.791M
5.8G;VHT20,BF;20;1,(M0);4;5785;M;TN,VN	Pass	500k	17.6M	17.841M	17.525M	17.841M	17.6M	17.816M	17.575M	17.816M
5.8G;VHT20,BF;20;1,(M0);4;5825;H;TN,VN	Pass	500k	17.6M	17.816M	16.8M	17.791M	17.65M	17.766M	17.55M	17.816M
5.8G;VHT40,BF;40;1,(M0);4;5755;L;TN,VN	Pass	500k	35M	36.332M	33.75M	36.232M	35M	36.382M	35.35M	36.482M
5.8G;VHT40,BF;40;1,(M0);4;5795;H;TN,VN	Pass	500k	34.85M	36.382M	35.1M	36.282M	35.3M	36.332M	34.95M	36.232M
5.8G;VHT80,BF;80;1,(M0);4;5775;S;TN,VN	Pass	500k	69.4M	75.662M	72.1M	75.362M	74.4M	76.162M	68.9M	75.362M





Summary

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.2G;11a;20;1;4	24.68	0.29376	28.38	0.68865
5.2G;HT20;20;1,(M0);4	24.26	0.26669	27.96	0.62517
5.2G;HT40;40;1,(M0);4	24.58	0.28708	28.28	0.67298
5.2G;VHT20;20;1,(M0);4	24.33	0.27102	28.03	0.63533
5.2G;VHT40;40;1,(M0);4	24.79	0.3013	28.49	0.70632
5.2G;VHT80;80;1,(M0);4	18.99	0.07925	22.69	0.18578
5.8G;11a;20;1;4	23.87	0.24378	27.57	0.57148
5.8G;HT20;20;1,(M0);4	24.05	0.2541	27.75	0.59566
5.8G;HT40;40;1,(M0);4	24.44	0.27797	28.14	0.65163
5.8G;VHT20;20;1,(M0);4	24.09	0.25645	27.79	0.60117
5.8G;VHT40;40;1,(M0);4	24.48	0.28054	28.18	0.65766
5.8G;VHT80;80;1,(M0);4	22.98	0.19861	26.68	0.46559



Result

Mode	Result	DG (dBi)	EIRP (dBm)	EIRP Lim. (dBm)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)	P2 (dBm)	P3 (dBm)	P4 (dBm)
5.2G;11a;20;1;4;5180;L;TN,VN	Pass	3.70	25.14	36.00	21.44	30.00	15.47	15.42	15.30	15.49
5.2G;11a;20;1;4;5180;L;TN,VN	Pass	3.70	25.14	36.00	21.44	30.00	15.47	15.42	15.30	15.49
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	3.70	28.04	36.00	24.34	30.00	17.81	18.57	18.45	18.38
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	3.70	28.04	36.00	24.34	30.00	17.81	18.57	18.45	18.38
5.2G;11a;20;1;4;5240;H;TN,VN	Pass	3.70	28.38	36.00	24.68	30.00	18.88	18.79	18.58	18.38
5.2G;11a;20;1;4;5240;H;TN,VN	Pass	3.70	28.38	36.00	24.68	30.00	18.88	18.79	18.58	18.38
5.2G;HT20;20;1;(M0);4;5180;L;TN,VN	Pass	3.70	24.61	36.00	20.91	30.00	14.70	15.25	14.67	14.91
5.2G;HT20;20;1;(M0);4;5200;M;TN,VN	Pass	3.70	27.87	36.00	24.17	30.00	16.92	18.66	18.48	18.33
5.2G;HT20;20;1;(M0);4;5240;H;TN,VN	Pass	3.70	27.96	36.00	24.26	30.00	17.00	18.71	18.71	18.34
5.2G;HT40;40;1;(M0);4;5190;L;TN,VN	Pass	3.70	22.95	36.00	19.25	30.00	13.01	13.46	13.03	13.41
5.2G;HT40;40;1;(M0);4;5230;H;TN,VN	Pass	3.70	28.28	36.00	24.58	30.00	16.53	19.20	19.09	18.92
5.2G;VHT20;20;1;(M0);4;5180;L;TN,VN	Pass	3.70	24.63	36.00	20.93	30.00	14.63	15.17	14.76	15.05
5.2G;VHT20;20;1;(M0);4;5200;M;TN,VN	Pass	3.70	27.90	36.00	24.20	30.00	17.05	18.65	18.56	18.29
5.2G;VHT20;20;1;(M0);4;5240;H;TN,VN	Pass	3.70	28.03	36.00	24.33	30.00	17.02	18.89	18.67	18.44
5.2G;VHT40;40;1;(M0);4;5190;L;TN,VN	Pass	3.70	23.06	36.00	19.36	30.00	13.27	13.66	13.03	13.38
5.2G;VHT40;40;1;(M0);4;5230;H;TN,VN	Pass	3.70	28.49	36.00	24.79	30.00	17.40	19.39	18.99	19.03
5.2G;VHT80;80;1;(M0);4;5210;S;TN,VN	Pass	3.70	22.69	36.00	18.99	30.00	13.00	13.27	12.58	13.00
5.8G;11a;20;1;4;5745;L;TN,VN	Pass	3.70	27.57	36.00	23.87	30.00	17.24	18.26	17.95	17.91
5.8G;11a;20;1;4;5785;M;TN,VN	Pass	3.70	27.55	36.00	23.85	30.00	17.48	18.10	17.77	17.95
5.8G;11a;20;1;4;5825;H;TN,VN	Pass	3.70	27.47	36.00	23.77	30.00	17.09	18.08	18.12	17.62
5.8G;HT20;20;1;(M0);4;5745;L;TN,VN	Pass	3.70	27.75	36.00	24.05	30.00	17.26	18.45	18.12	18.22
5.8G;HT20;20;1;(M0);4;5785;M;TN,VN	Pass	3.70	27.54	36.00	23.84	30.00	17.14	18.18	18.01	17.88
5.8G;HT20;20;1;(M0);4;5825;H;TN,VN	Pass	3.70	27.38	36.00	23.68	30.00	16.91	17.98	18.00	17.64
5.8G;HT40;40;1;(M0);4;5755;L;TN,VN	Pass	3.70	28.14	36.00	24.44	30.00	17.58	18.90	18.51	18.59
5.8G;HT40;40;1;(M0);4;5795;H;TN,VN	Pass	3.70	28.01	36.00	24.31	30.00	17.67	18.65	18.28	18.49
5.8G;VHT20;20;1;(M0);4;5745;L;TN,VN	Pass	3.70	27.78	36.00	24.08	30.00	17.27	18.32	18.22	18.34
5.8G;VHT20;20;1;(M0);4;5785;M;TN,VN	Pass	3.70	27.79	36.00	24.09	30.00	17.27	18.54	18.24	18.14
5.8G;VHT20;20;1;(M0);4;5825;H;TN,VN	Pass	3.70	27.48	36.00	23.78	30.00	17.16	18.20	17.92	17.69
5.8G;VHT40;40;1;(M0);4;5755;L;TN,VN	Pass	3.70	28.18	36.00	24.48	30.00	17.88	18.84	18.52	18.54
5.8G;VHT40;40;1;(M0);4;5795;H;TN,VN	Pass	3.70	28.04	36.00	24.34	30.00	17.74	18.66	18.47	18.37
5.8G;VHT80;80;1;(M0);4;5775;S;TN,VN	Pass	3.70	26.68	36.00	22.98	30.00	16.37	17.23	17.25	16.91



Summary

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.2G;VHT20,BF;20;1,(M0);4	20.50	0.1122	30.22	1.05196
5.2G;VHT40,BF;40;1,(M0);4	20.46	0.11117	30.18	1.04232
5.2G;VHT80,BF;80;1,(M0);4	17.10	0.05129	26.82	0.48084
5.8G;VHT20,BF;20;1,(M0);4	19.40	0.0871	29.12	0.81658
5.8G;VHT40,BF;40;1,(M0);4	20.08	0.10186	29.80	0.95499
5.8G;VHT80,BF;80;1,(M0);4	19.08	0.08091	28.80	0.75858



Result

Mode	Result	DG (dBi)	Sum (dBm)	Sum Lim. (dBm)	EIRP (dBm)	EIRP Lim. (dBm)	P1 (dBm)	P2 (dBm)	P3 (dBm)	P4 (dBm)
5.2G;VHT20,BF;20;1,(M0);4;5180;L;TN,VN	Pass	9.72	19.86	26.28	29.58	36.00	13.70	13.99	13.79	13.86
5.2G;VHT20,BF;20;1,(M0);4;5200;M;TN,VN	Pass	9.72	20.50	26.28	30.22	36.00	14.32	14.11	14.88	14.57
5.2G;VHT20,BF;20;1,(M0);4;5240;H;TN,VN	Pass	9.72	20.38	26.28	30.10	36.00	14.36	14.56	14.06	14.45
5.2G;VHT40,BF;40;1,(M0);4;5190;L;TN,VN	Pass	9.72	18.68	26.28	28.40	36.00	12.71	12.65	12.89	12.39
5.2G;VHT40,BF;40;1,(M0);4;5230;H;TN,VN	Pass	9.72	20.46	26.28	30.18	36.00	14.88	14.60	14.06	14.15
5.2G;VHT80,BF;80;1,(M0);4;5210;S;TN,VN	Pass	9.72	17.10	26.28	26.82	36.00	10.75	11.53	10.95	11.04
5.8G;VHT20,BF;20;1,(M0);4;5745;L;TN,VN	Pass	9.72	19.37	26.28	29.09	36.00	13.25	13.42	13.35	13.35
5.8G;VHT20,BF;20;1,(M0);4;5785;M;TN,VN	Pass	9.72	19.40	26.28	29.12	36.00	12.69	13.69	13.77	13.30
5.8G;VHT20,BF;20;1,(M0);4;5825;H;TN,VN	Pass	9.72	19.23	26.28	28.95	36.00	12.94	13.23	13.49	13.18
5.8G;VHT40,BF;40;1,(M0);4;5755;L;TN,VN	Pass	9.72	19.40	26.28	29.12	36.00	13.21	13.18	13.19	13.89
5.8G;VHT40,BF;40;1,(M0);4;5795;H;TN,VN	Pass	9.72	20.08	26.28	29.80	36.00	13.26	13.97	14.85	14.00
5.8G;VHT80,BF;80;1,(M0);4;5775;S;TN,VN	Pass	9.72	19.08	26.28	28.80	36.00	12.39	13.32	13.58	12.86



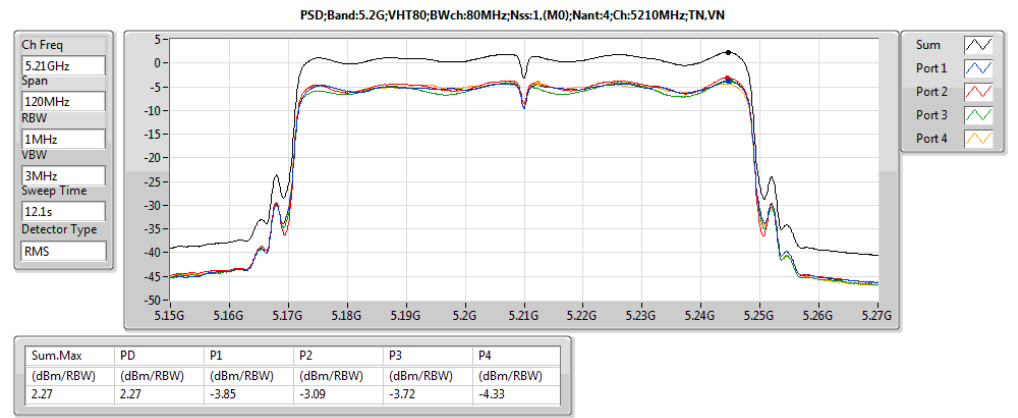
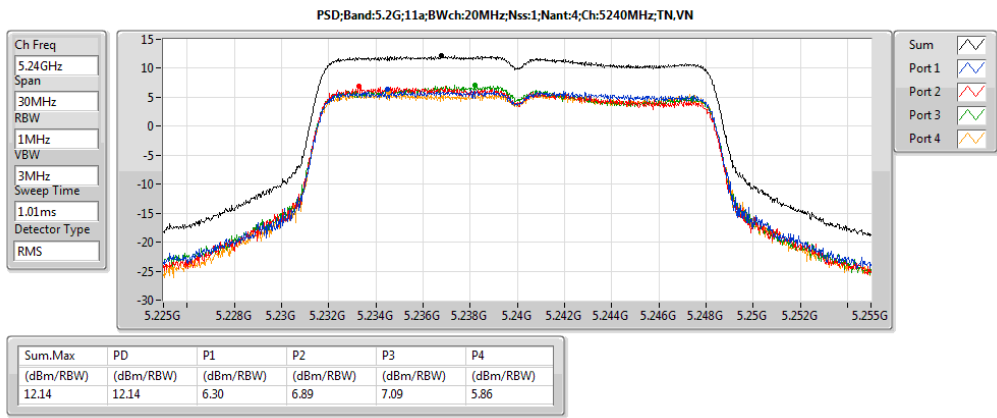
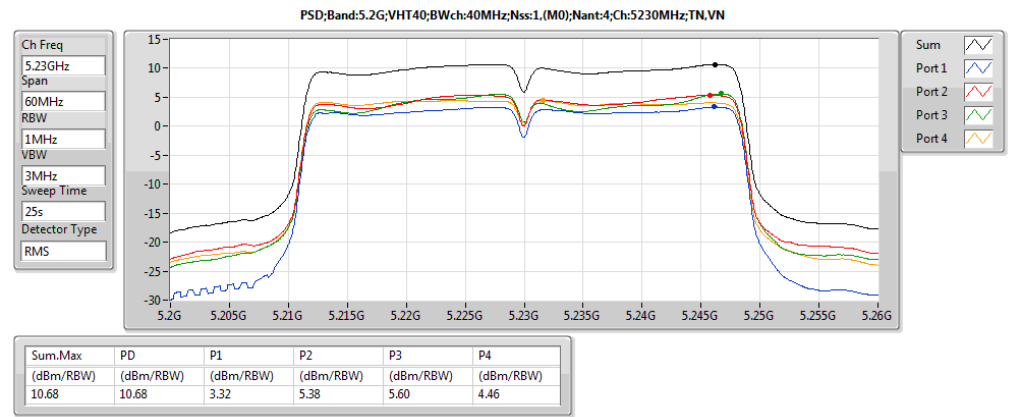
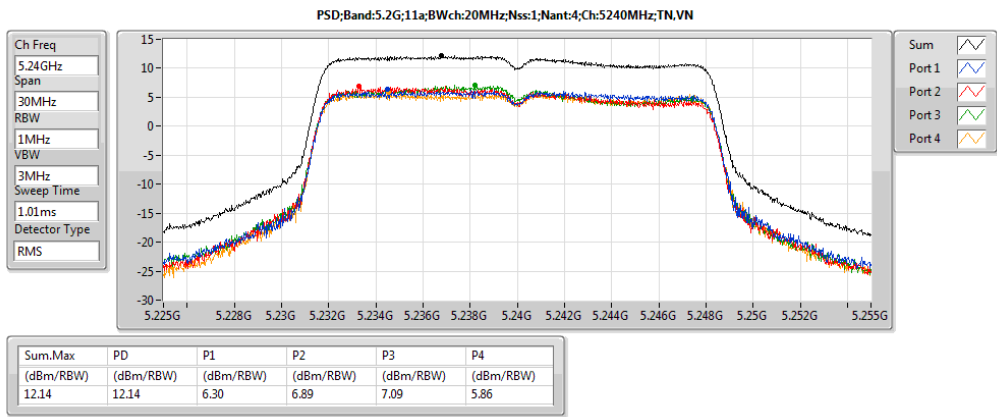
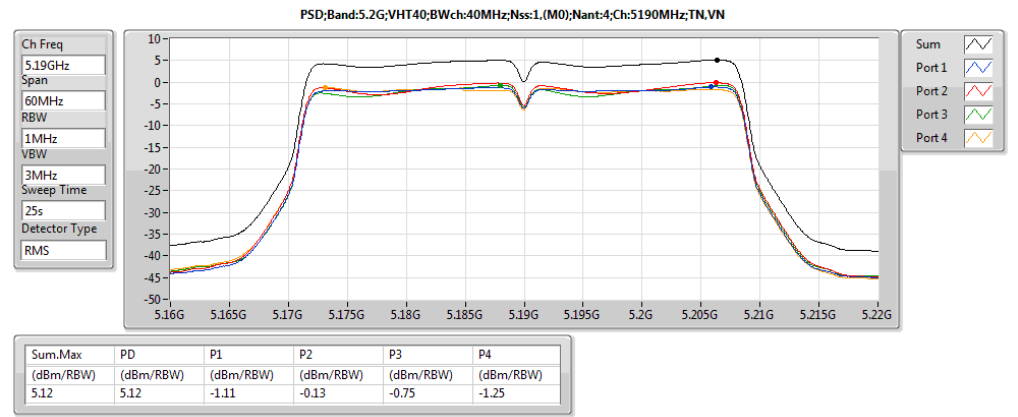
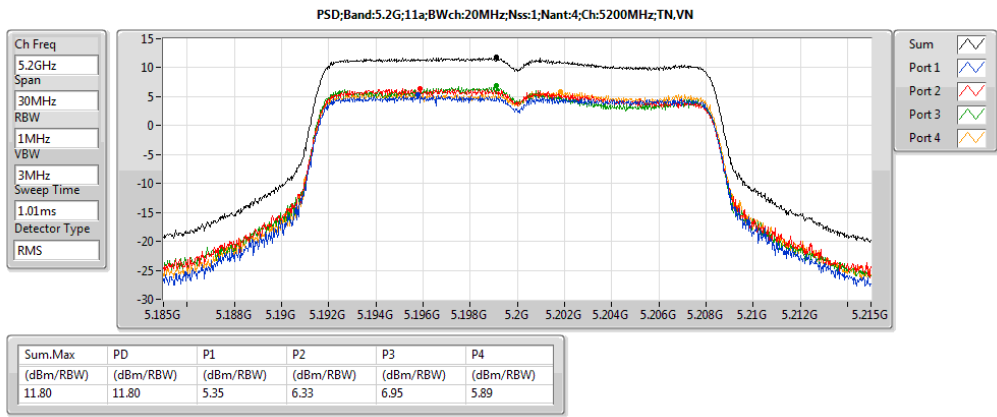
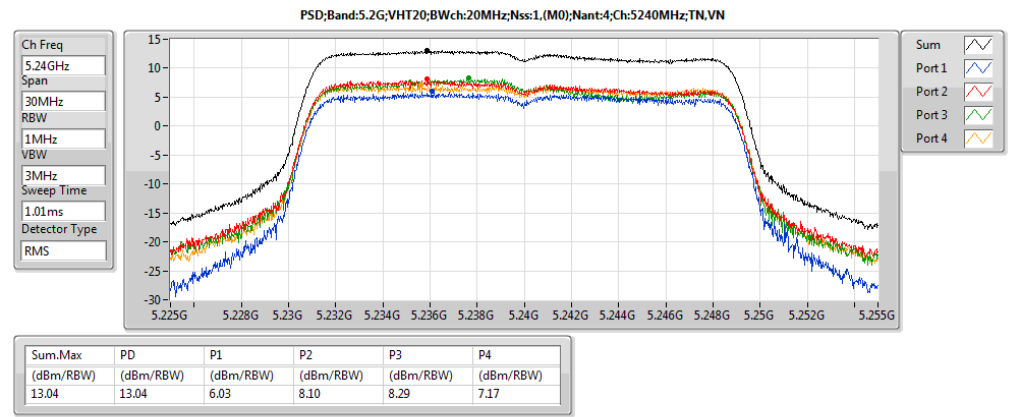
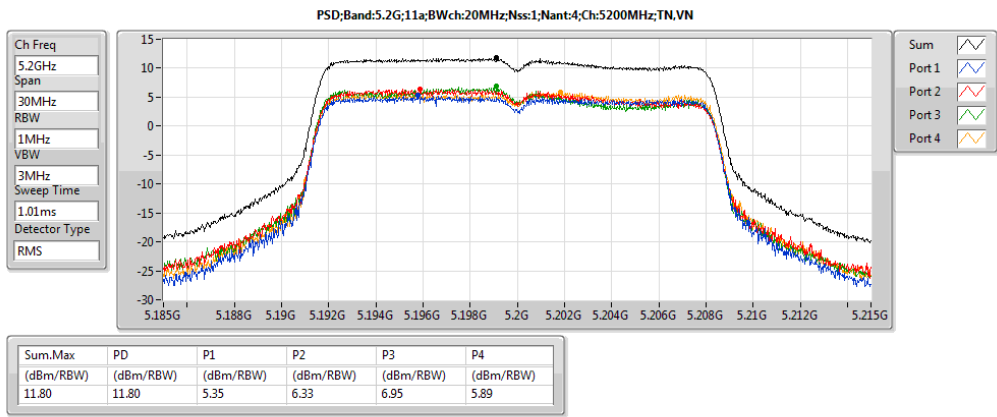
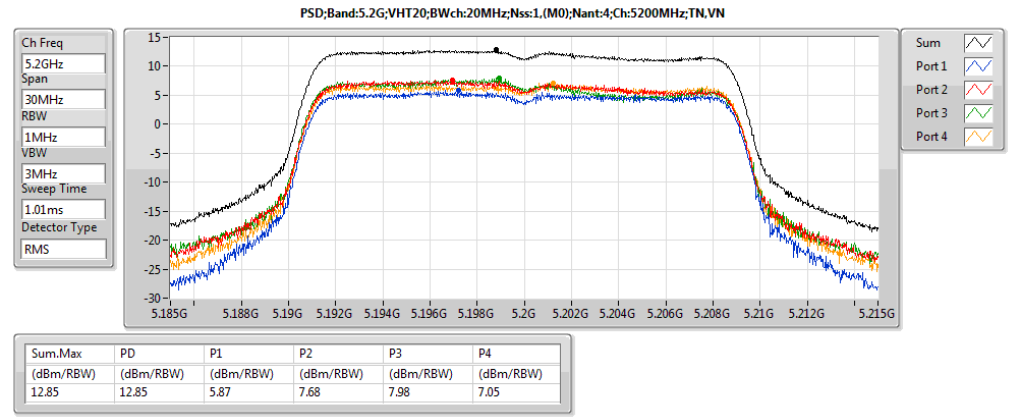
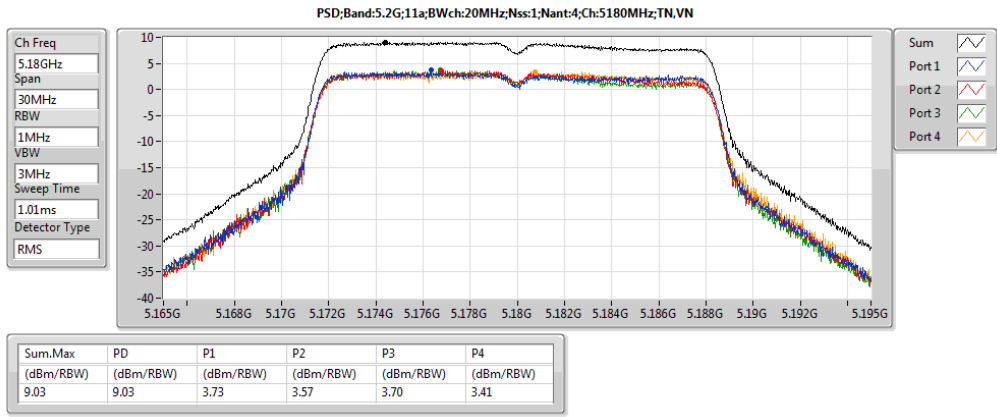
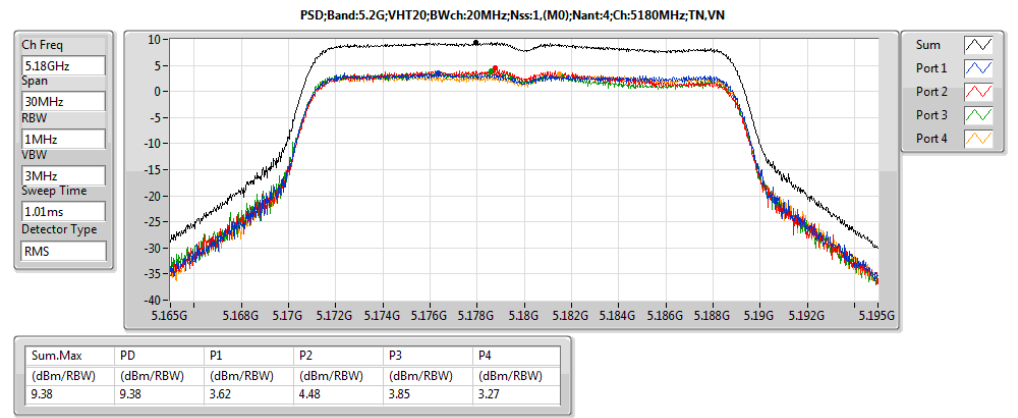
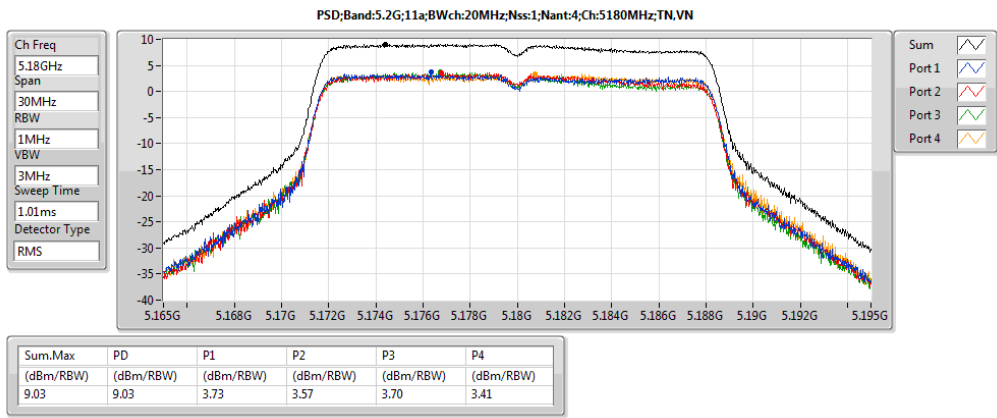
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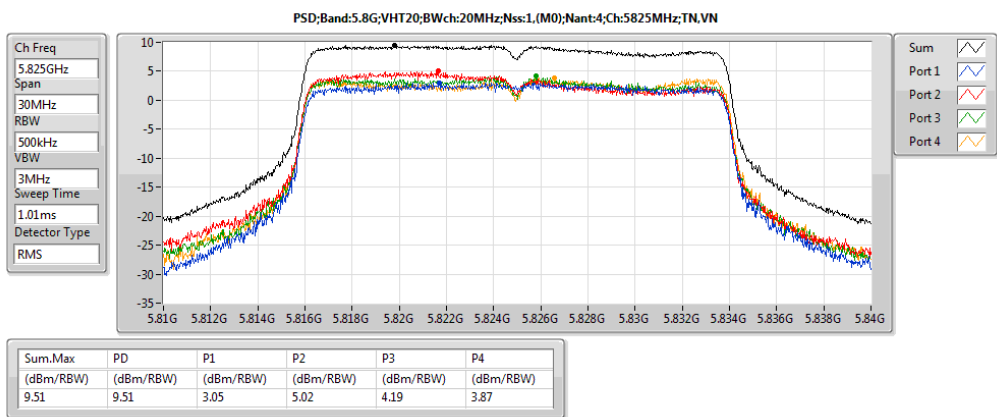
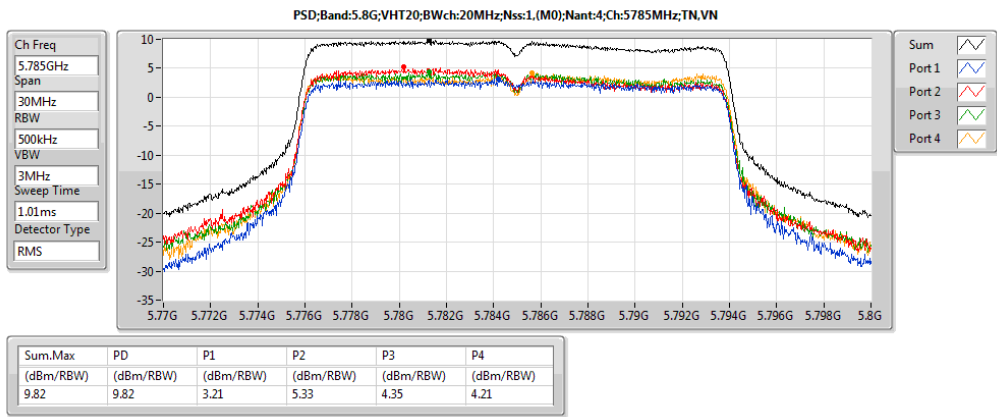
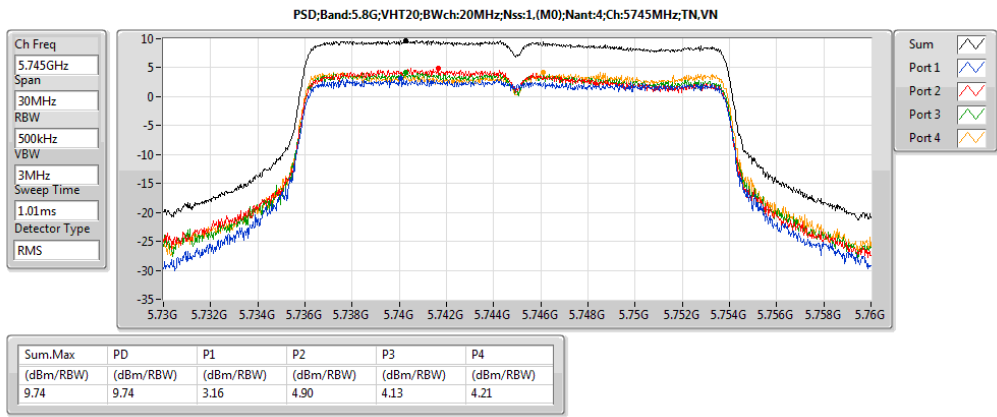
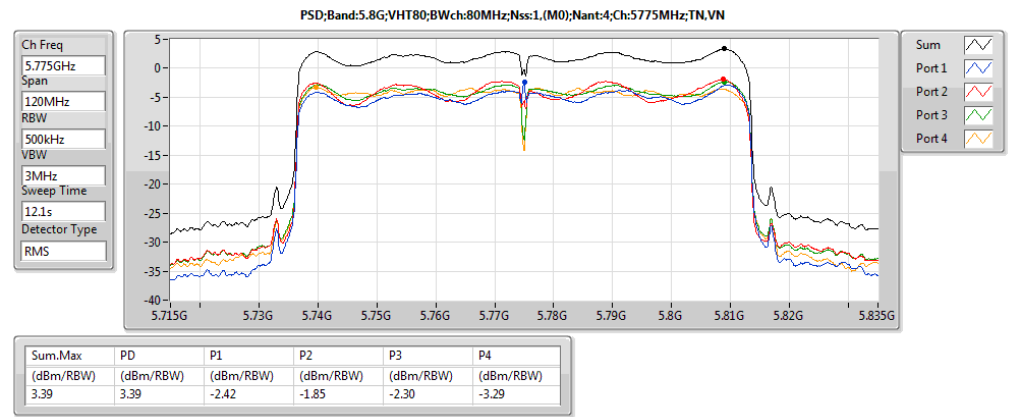
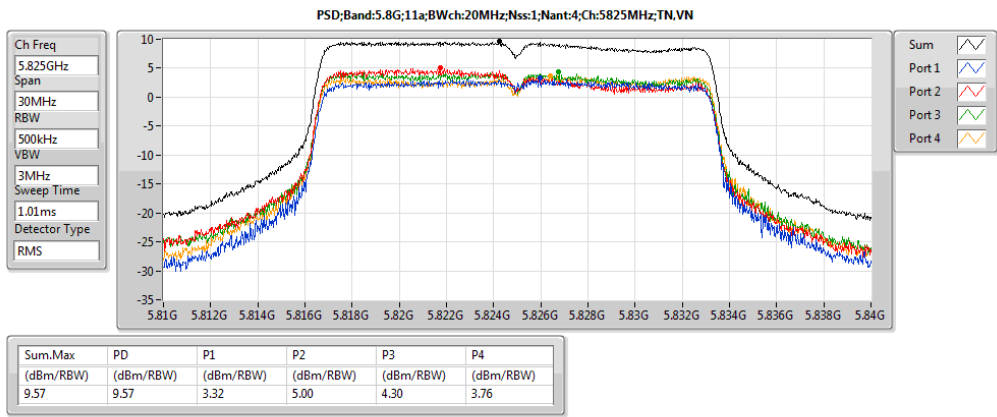
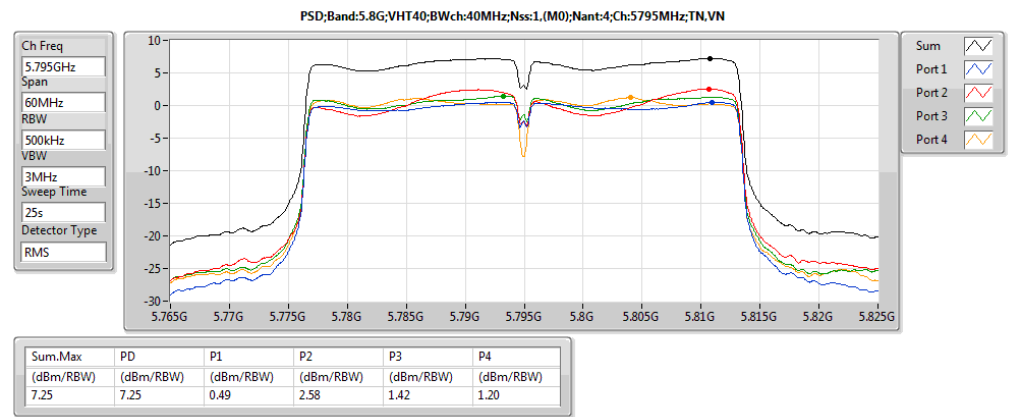
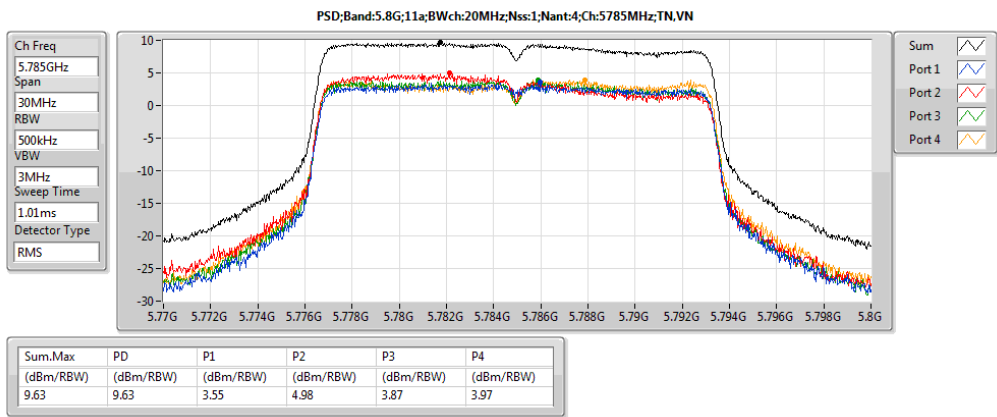
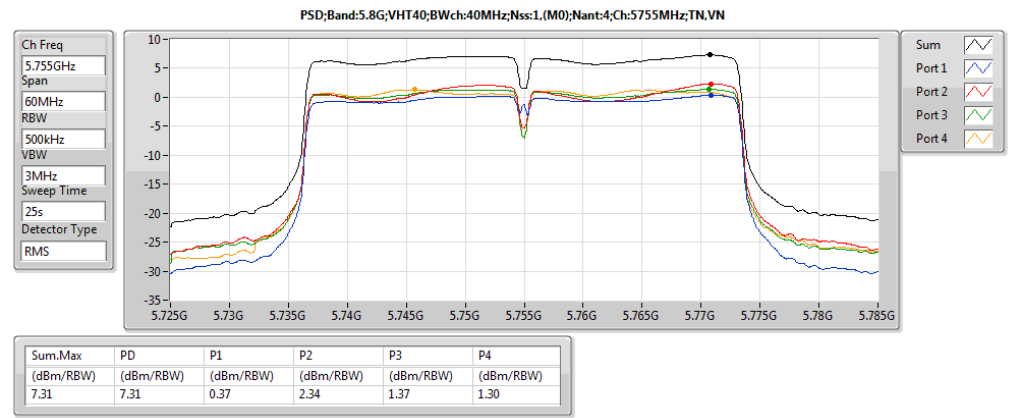
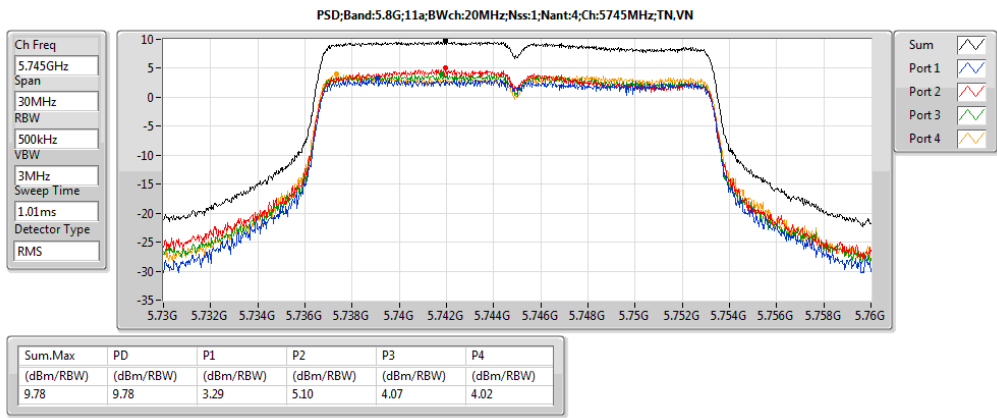
Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.2G;11a;20;1;4	12.14	21.86
5.2G;VHT20;20;1;(M0);4	13.04	22.76
5.2G;VHT40;40;1;(M0);4	10.68	20.40
5.2G;VHT80;80;1;(M0);4	2.27	11.99
5.8G;11a;20;1;4	9.78	19.50
5.8G;VHT20;20;1;(M0);4	9.82	19.54
5.8G;VHT40;40;1;(M0);4	7.31	17.03
5.8G;VHT80;80;1;(M0);4	3.39	13.11

Result

Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	Sum.Max (dBm/RBW)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Li m (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)	P3 (dBm/RBW)	P4 (dBm/RBW)
5.2G;11a;20;1;4;5180;L;TN,VN	Pass	1M	1M	0.00	9.72	9.03	9.03	13.28	18.75	Inf	3.73	3.57	3.70	3.41
5.2G;11a;20;1;4;5180;L;TN,VN	Pass	1M	1M	0.00	9.72	9.03	9.03	13.28	18.75	Inf	3.73	3.57	3.70	3.41
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	1M	1M	0.00	9.72	11.80	11.80	13.28	21.52	Inf	5.35	6.33	6.95	5.89
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	1M	1M	0.00	9.72	11.80	11.80	13.28	21.52	Inf	5.35	6.33	6.95	5.89
5.2G;11a;20;1;4;5240;H;TN,VN	Pass	1M	1M	0.00	9.72	12.14	12.14	13.28	21.86	Inf	6.30	6.89	7.09	5.86
5.2G;11a;20;1;4;5240;H;TN,VN	Pass	1M	1M	0.00	9.72	12.14	12.14	13.28	21.86	Inf	6.30	6.89	7.09	5.86
5.2G;VHT20;20;1;(M0);4;5180;L;TN,VN	Pass	1M	1M	0.00	9.72	9.38	9.38	13.28	19.10	Inf	3.62	4.48	3.85	3.27
5.2G;VHT20;20;1;(M0);4;5200;M;TN,VN	Pass	1M	1M	0.00	9.72	12.85	12.85	13.28	22.57	Inf	5.87	7.68	7.98	7.05
5.2G;VHT20;20;1;(M0);4;5240;H;TN,VN	Pass	1M	1M	0.00	9.72	13.04	13.04	13.28	22.76	Inf	6.03	8.10	8.29	7.17
5.2G;VHT40;40;1;(M0);4;5190;L;TN,VN	Pass	1M	1M	0.00	9.72	5.12	5.12	13.28	14.84	Inf	-1.11	-0.13	-0.75	-1.25
5.2G;VHT40;40;1;(M0);4;5230;H;TN,VN	Pass	1M	1M	0.00	9.72	10.68	10.68	13.28	20.40	Inf	3.32	5.38	5.60	4.46
5.2G;VHT80;80;1;(M0);4;5210;S;TN,VN	Pass	1M	1M	0.00	9.72	2.27	2.27	13.28	11.99	Inf	-3.85	-3.09	-3.72	-4.33
5.8G;11a;20;1;4;5745;L;TN,VN	Pass	500k	500k	0.00	9.72	9.78	9.78	26.28	19.50	32.28	3.29	5.10	4.07	4.02
5.8G;11a;20;1;4;5785;M;TN,VN	Pass	500k	500k	0.00	9.72	9.63	9.63	26.28	19.35	32.28	3.55	4.98	3.87	3.97
5.8G;11a;20;1;4;5825;H;TN,VN	Pass	500k	500k	0.00	9.72	9.57	9.57	26.28	19.29	32.28	3.32	5.00	4.30	3.76
5.8G;VHT20;20;1;(M0);4;5745;L;TN,VN	Pass	500k	500k	0.00	9.72	9.74	9.74	26.28	19.46	32.28	3.16	4.90	4.13	4.21
5.8G;VHT20;20;1;(M0);4;5785;M;TN,VN	Pass	500k	500k	0.00	9.72	9.82	9.82	26.28	19.54	32.28	3.21	5.33	4.35	4.21
5.8G;VHT20;20;1;(M0);4;5825;H;TN,VN	Pass	500k	500k	0.00	9.72	9.51	9.51	26.28	19.23	32.28	3.05	5.02	4.19	3.87
5.8G;VHT40;40;1;(M0);4;5755;L;TN,VN	Pass	500k	500k	0.00	9.72	7.31	7.31	26.28	17.03	32.28	0.37	2.34	1.37	1.30
5.8G;VHT40;40;1;(M0);4;5795;H;TN,VN	Pass	500k	500k	0.00	9.72	7.25	7.25	26.28	16.97	32.28	0.49	2.58	1.42	1.20
5.8G;VHT80;80;1;(M0);4;5775;S;TN,VN	Pass	500k	500k	0.00	9.72	3.39	3.39	26.28	13.11	32.28	-2.42	-1.85	-2.30	-3.29







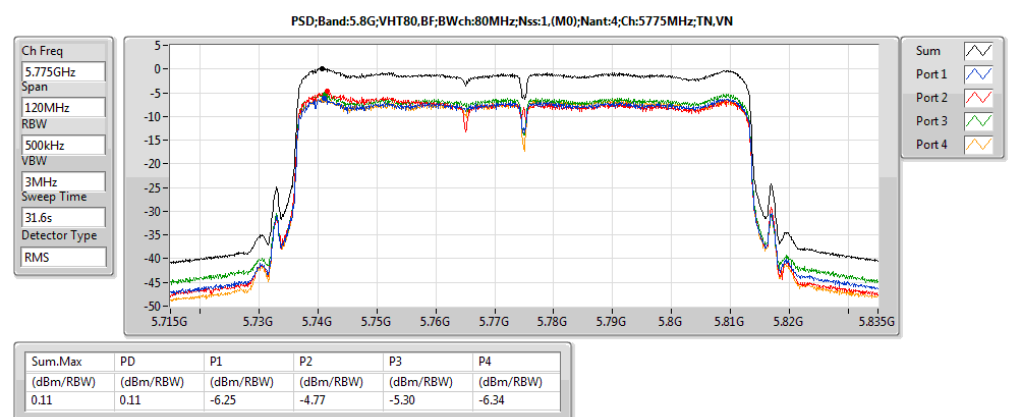
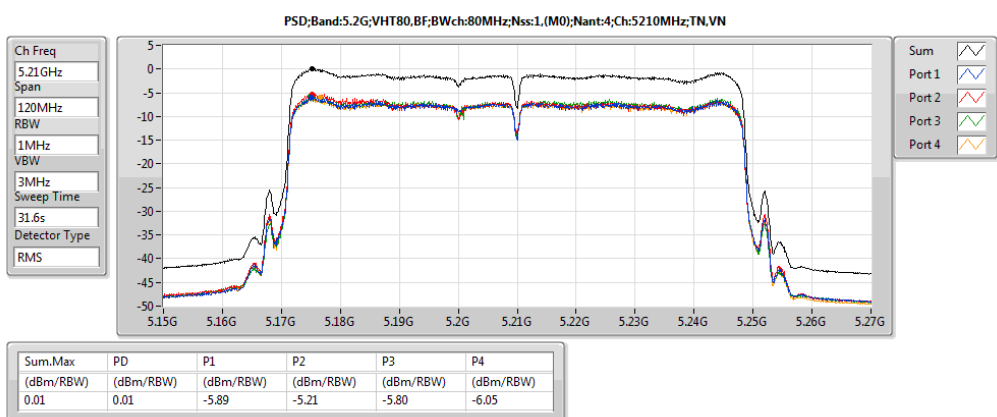
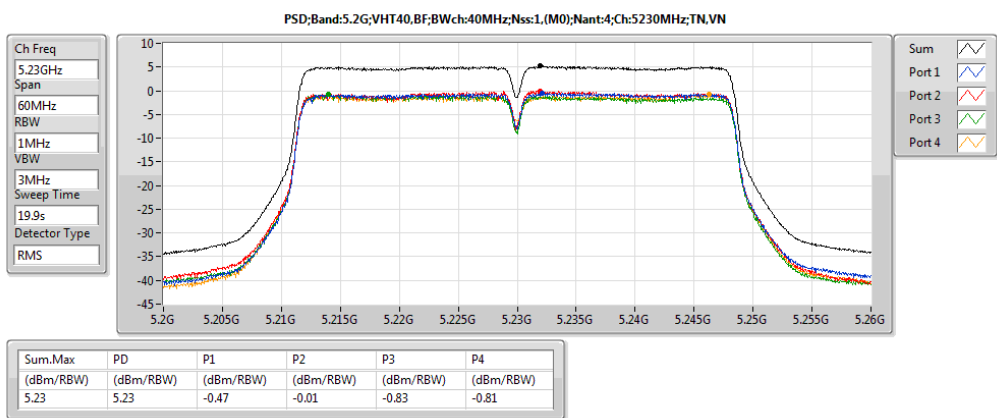
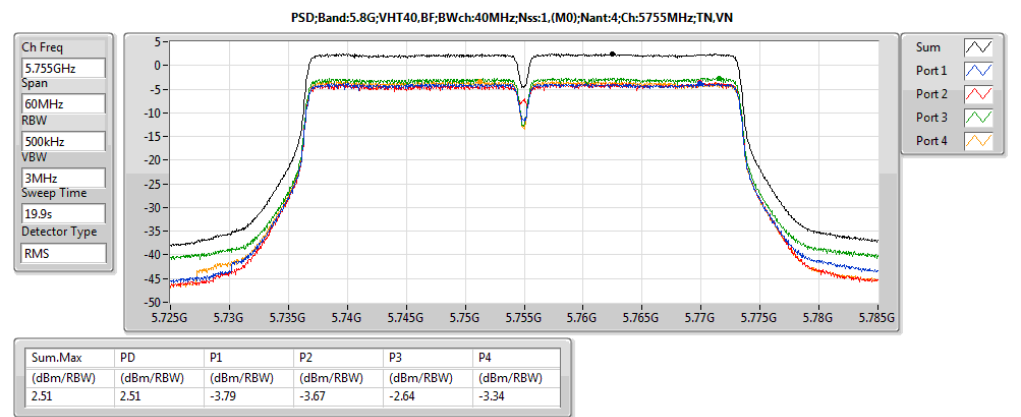
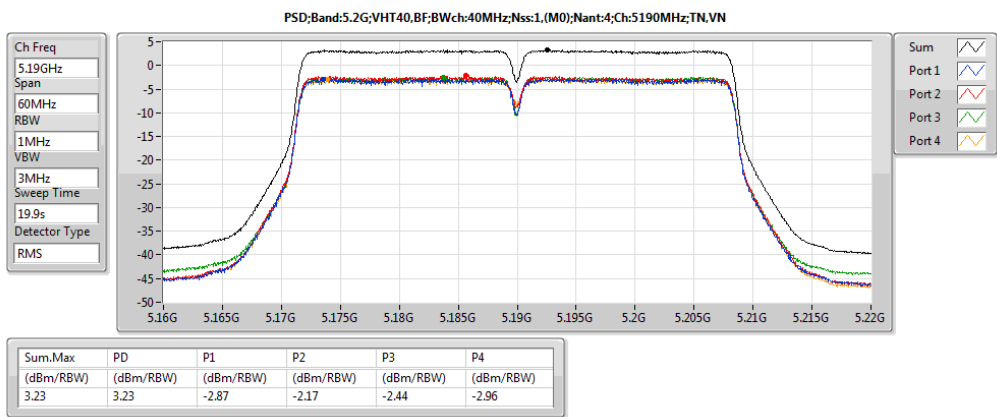
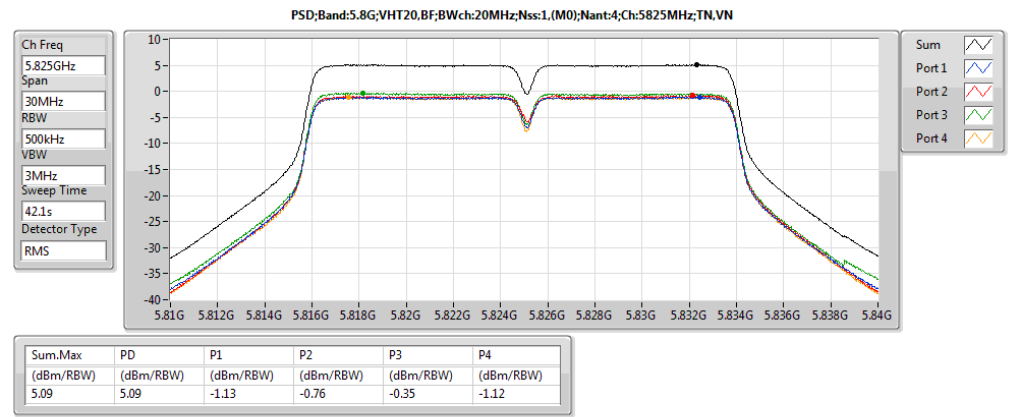
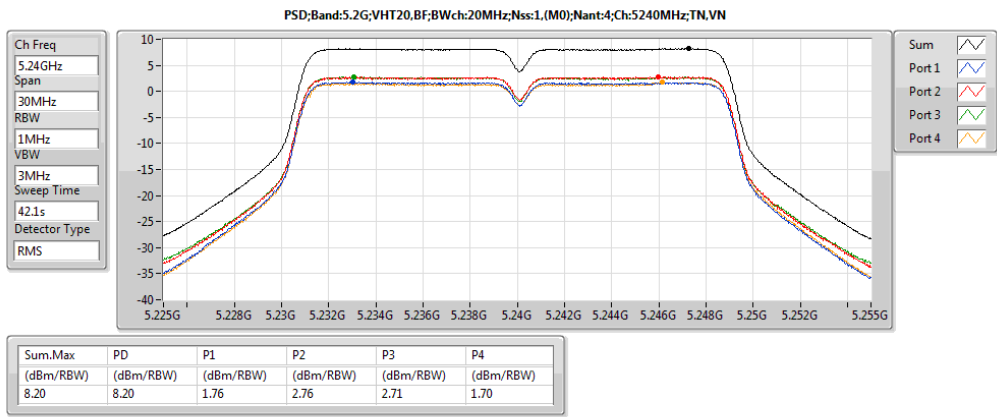
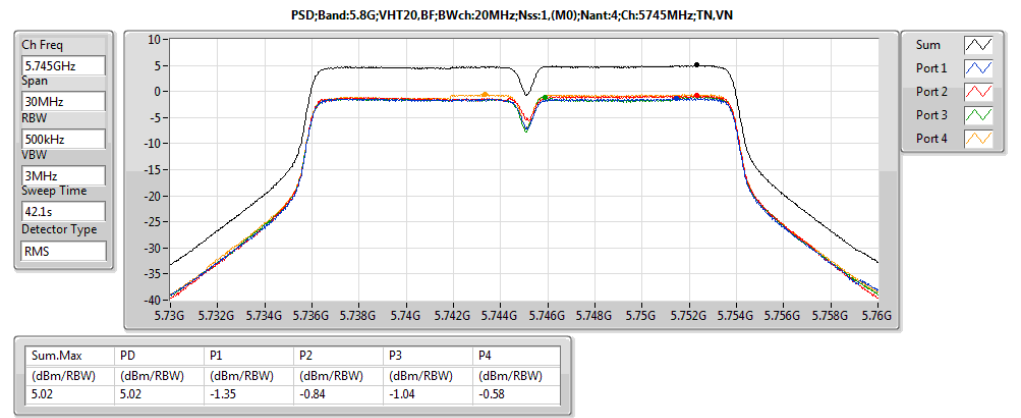
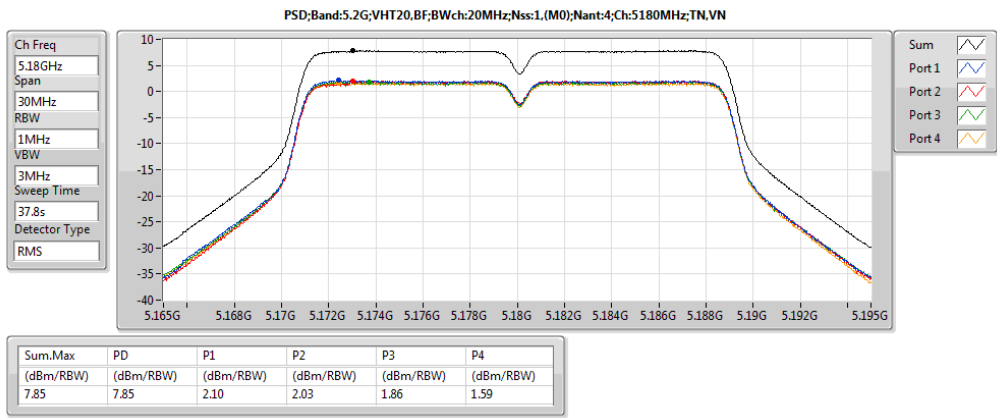


Summary

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.2G;VHT20,BF;20;1,(M0);4	8.20	17.92
5.2G;VHT40,BF;40;1,(M0);4	5.23	14.95
5.2G;VHT80,BF;80;1,(M0);4	0.01	9.73
5.8G;VHT20,BF;20;1,(M0);4	5.09	14.81
5.8G;VHT40,BF;40;1,(M0);4	2.57	12.29
5.8G;VHT80,BF;80;1,(M0);4	0.11	9.83

Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Li m (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)	P3 (dBm/RBW)	P4 (dBm/RBW)
5.2G;VHT20,BF;20;1,(M0);4;5180;L;TN,VN	Pass	9.72	7.85	13.28	17.57	Inf	2.10	2.03	1.86	1.59
5.2G;VHT20,BF;20;1,(M0);4;5200;M;TN,VN	Pass	9.72	8.09	13.28	17.81	Inf	1.99	2.42	2.65	1.48
5.2G;VHT20,BF;20;1,(M0);4;5240;H;TN,VN	Pass	9.72	8.20	13.28	17.92	Inf	1.76	2.76	2.71	1.70
5.2G;VHT40,BF;40;1,(M0);4;5190;L;TN,VN	Pass	9.72	3.23	13.28	12.95	Inf	-2.87	-2.17	-2.44	-2.96
5.2G;VHT40,BF;40;1,(M0);4;5230;H;TN,VN	Pass	9.72	5.23	13.28	14.95	Inf	-0.47	-0.01	-0.83	-0.81
5.2G;VHT80,BF;80;1,(M0);4;5210;S;TN,VN	Pass	9.72	0.01	13.28	9.73	Inf	-5.89	-5.21	-5.80	-6.05
5.8G;VHT20,BF;20;1,(M0);4;5745;L;TN,VN	Pass	9.72	5.02	26.28	14.74	Inf	-1.35	-0.84	-1.04	-0.58
5.8G;VHT20,BF;20;1,(M0);4;5785;M;TN,VN	Pass	9.72	5.05	26.28	14.77	Inf	-1.51	-1.06	-0.13	-1.11
5.8G;VHT20,BF;20;1,(M0);4;5825;H;TN,VN	Pass	9.72	5.09	26.28	14.81	Inf	-1.13	-0.76	-0.35	-1.12
5.8G;VHT40,BF;40;1,(M0);4;5755;L;TN,VN	Pass	9.72	2.51	26.28	12.23	Inf	-3.79	-3.67	-2.64	-3.34
5.8G;VHT40,BF;40;1,(M0);4;5795;H;TN,VN	Pass	9.72	2.57	26.28	12.29	Inf	-3.68	-3.44	-2.44	-3.65
5.8G;VHT80,BF;80;1,(M0);4;5775;S;TN,VN	Pass	9.72	0.11	26.28	9.83	Inf	-6.25	-4.77	-5.30	-6.34





**Transmitter Radiated Bandedge Emissions (with Antenna)**

U-NII 5150-5250MHz Transmitter Radiated Bandedge (with Antenna)										
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	4	5180	3	5149.900	65.85	74	5149.800	53.00	54	H
11a	4	5240	3	5140.800	60.20	74	5400.000	49.95	54	H
VHT20	4	5180	3	5149.000	65.75	74	5150.000	51.62	54	H
VHT20	4	5240	3	5399.393	60.37	74	5399.993	49.60	54	H
VHT40	4	5190	3	5143.560	64.21	74	5146.640	52.96	54	H
VHT40	4	5230	3	5148.000	63.16	74	5149.800	52.11	54	H
VHT80	4	5210	3	5147.400	72.07	74	5147.400	52.68	54	H

Note 1: Measurement worst emissions of receive antenna polarization.

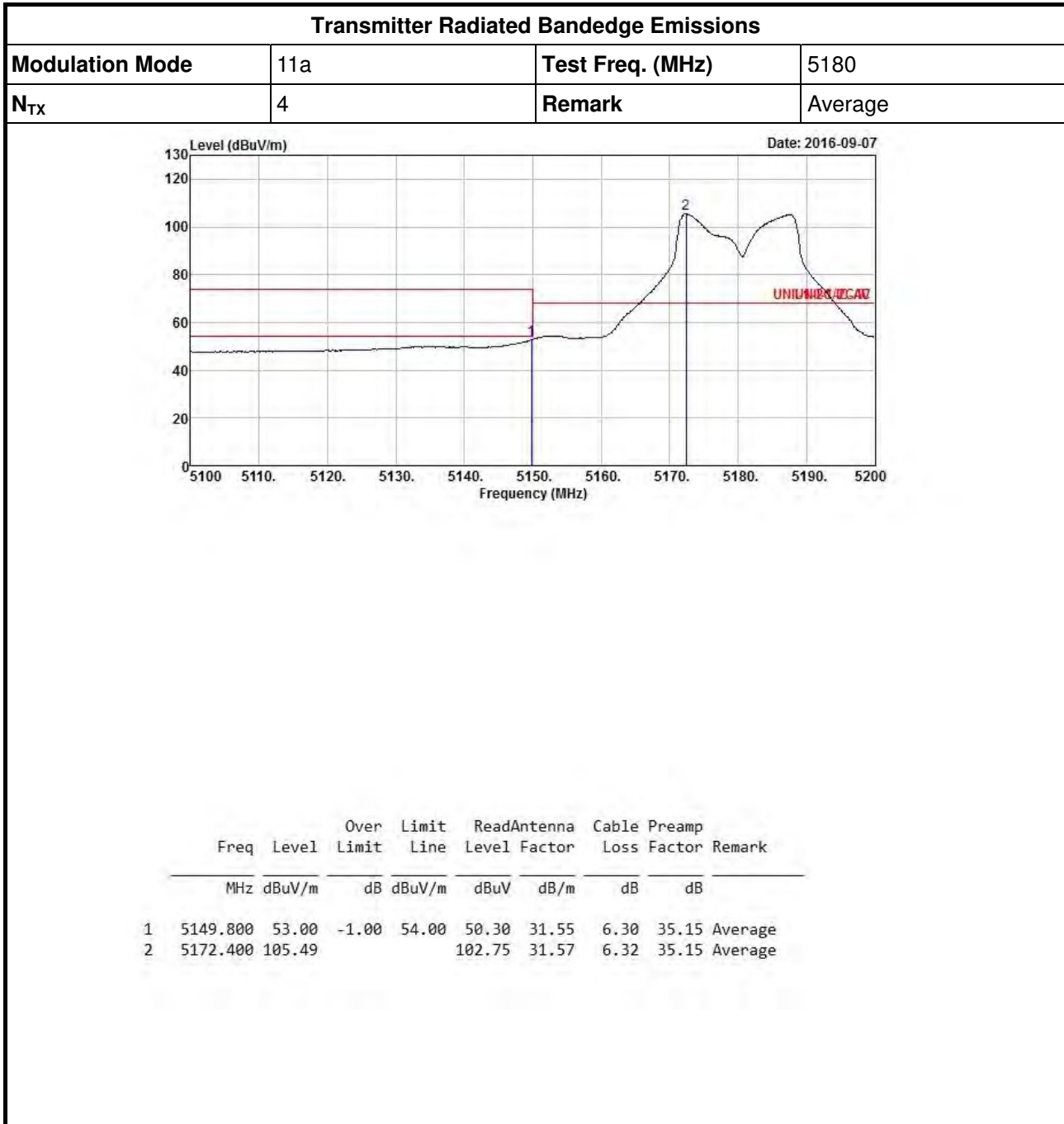
U-NII 5725-5850MHz Transmitter Radiated Bandedge (with Antenna)							
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Pol.
11a	4	5745	3	5626.820	61.15	68.2	H
11a	4	5825	3	5942.170	60.93	68.2	H
VHT20	4	5745	3	5644.500	60.02	68.2	H
VHT20	4	5825	3	5937.040	60.26	68.2	H
VHT40	4	5755	3	5635.540	60.95	68.2	H
VHT40	4	5795	3	5938.120	61.10	68.2	H
VHT80	4	5775	3	5649.050	64.61	68.2	H

Note 1: Measurement worst emissions of receive antenna polarization.



# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

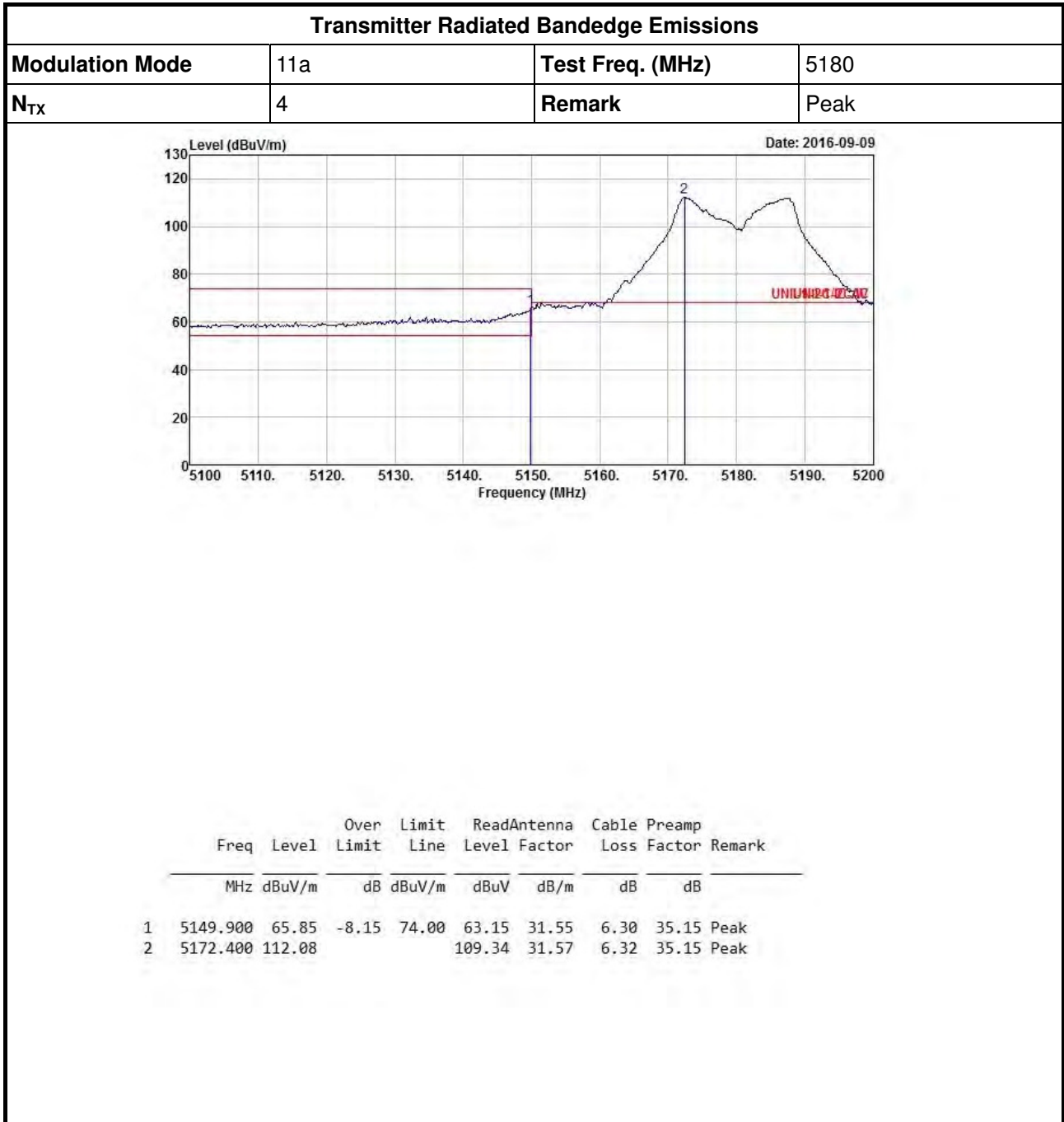
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

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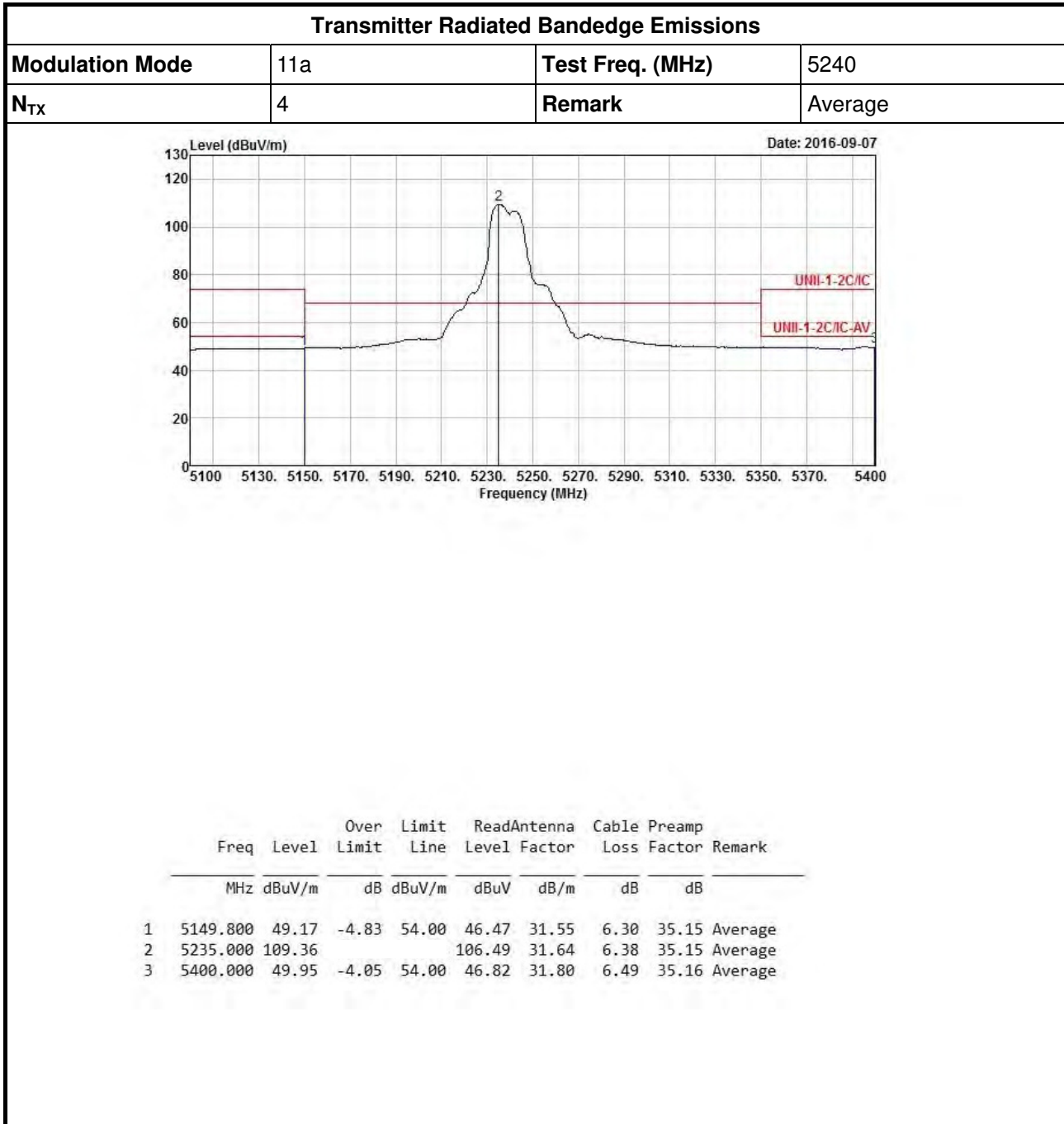






# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

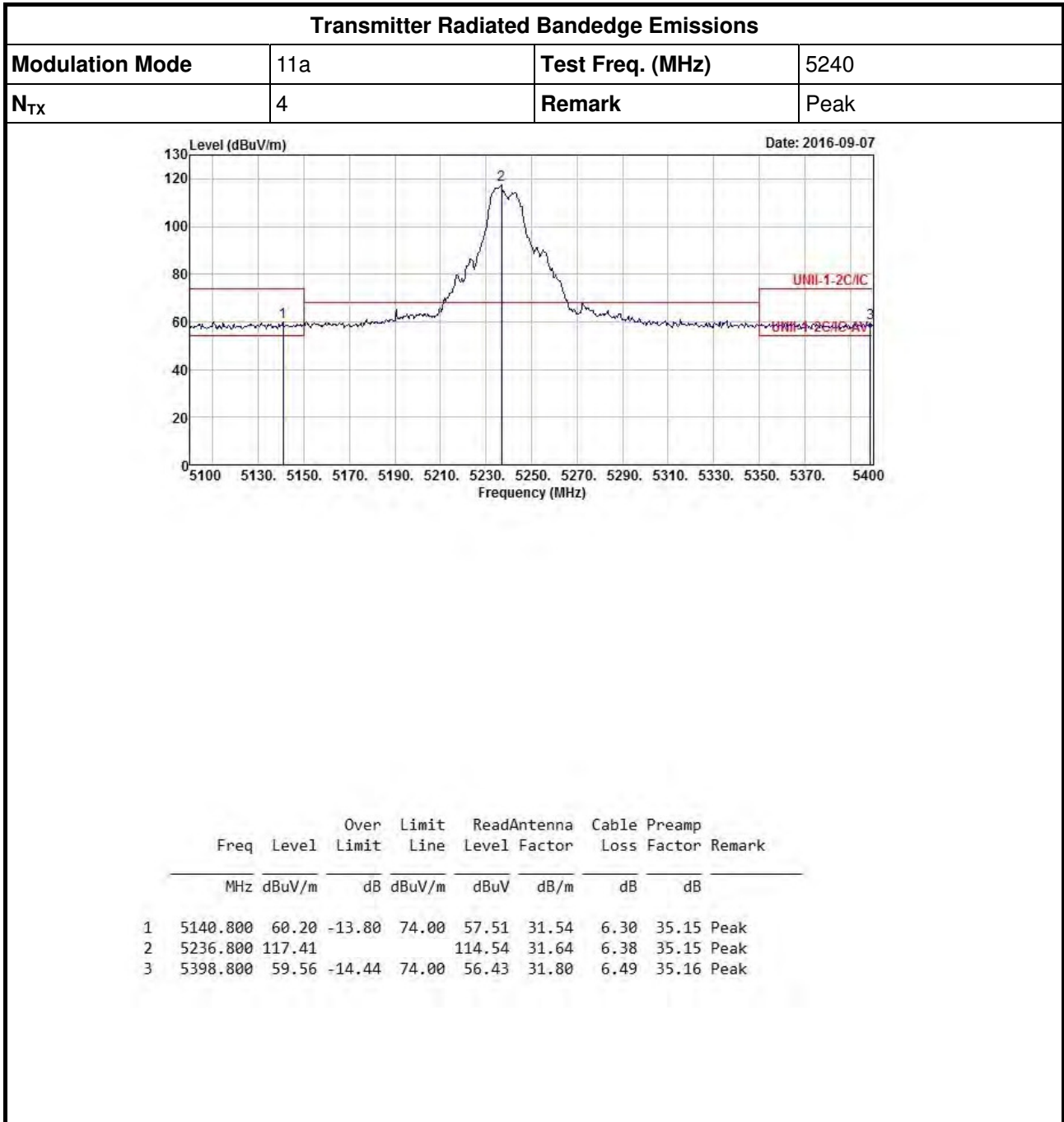
Appendix D





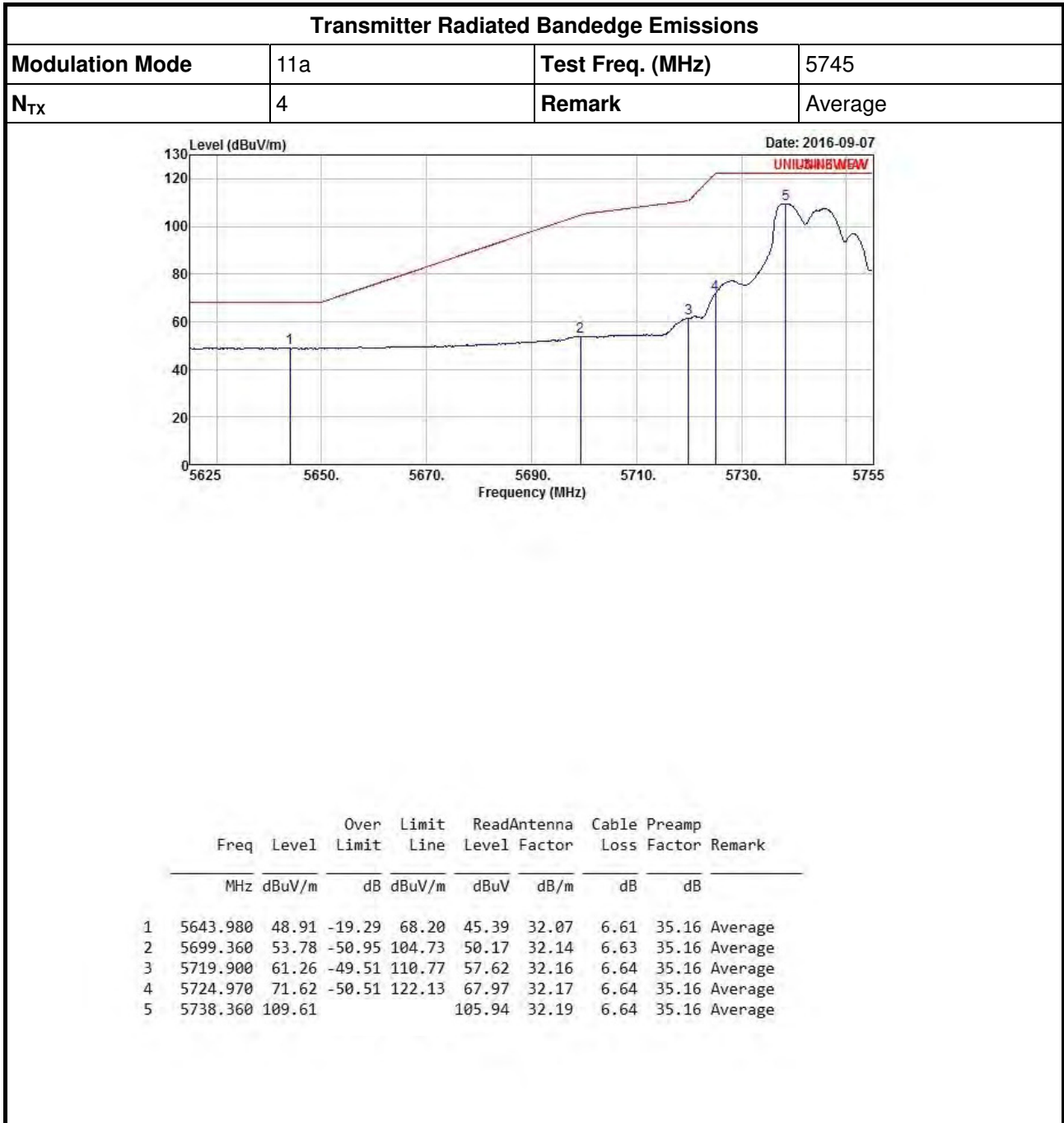
# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

Appendix D



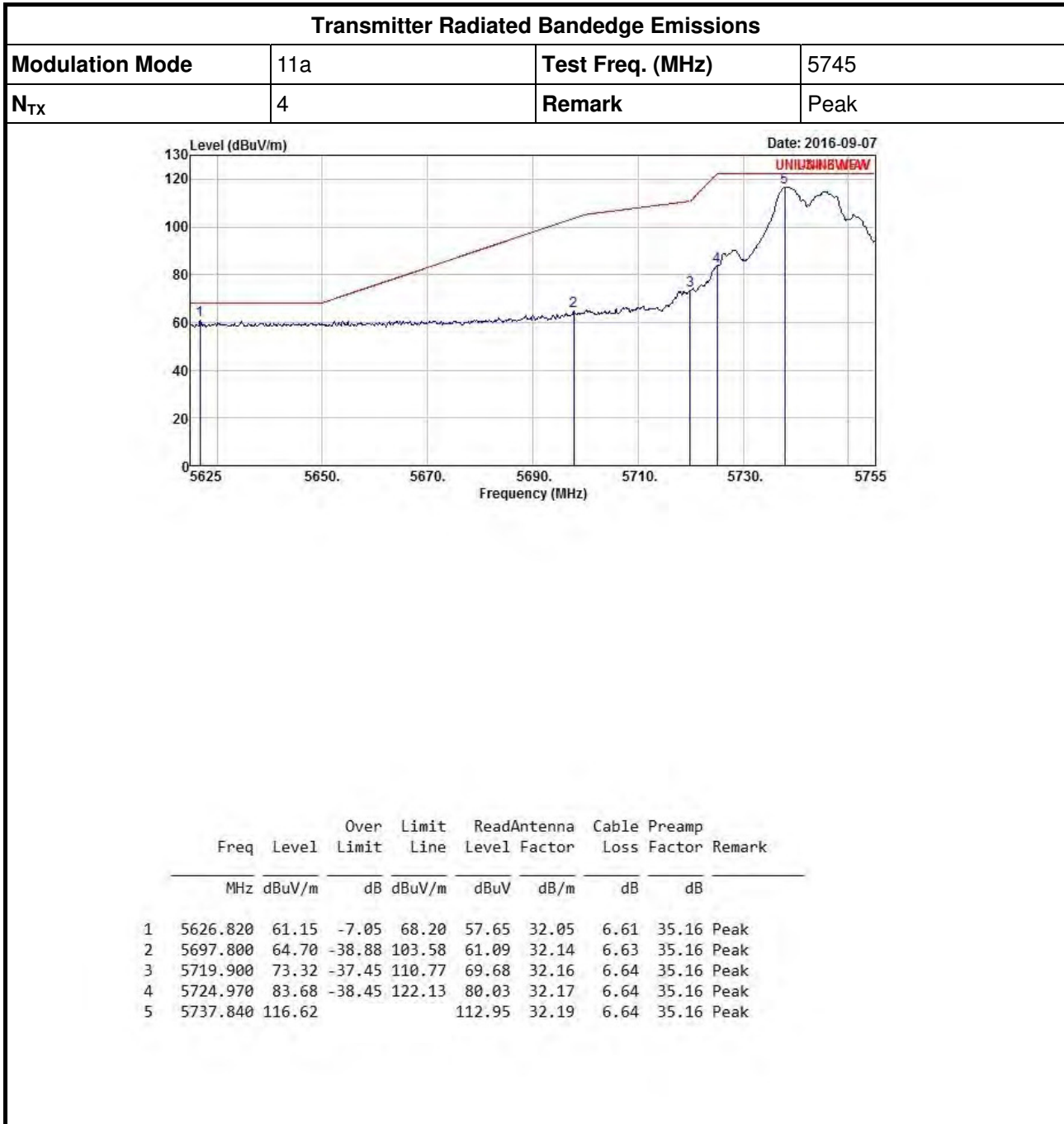


# Transmitter Radiated Bandedge Emissions (Non-Beamforming)





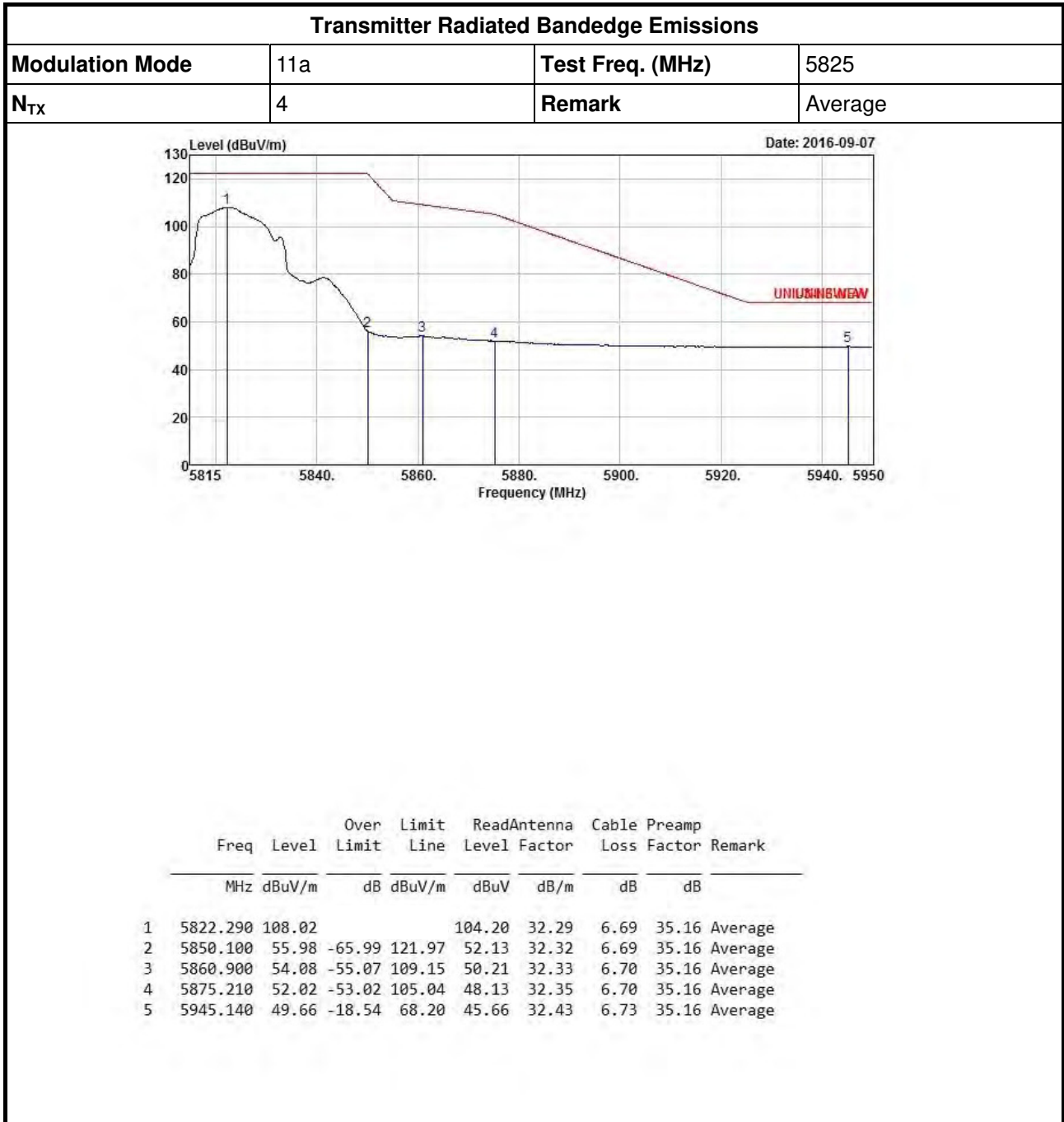
# Transmitter Radiated Bandedge Emissions (Non-Beamforming)





# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

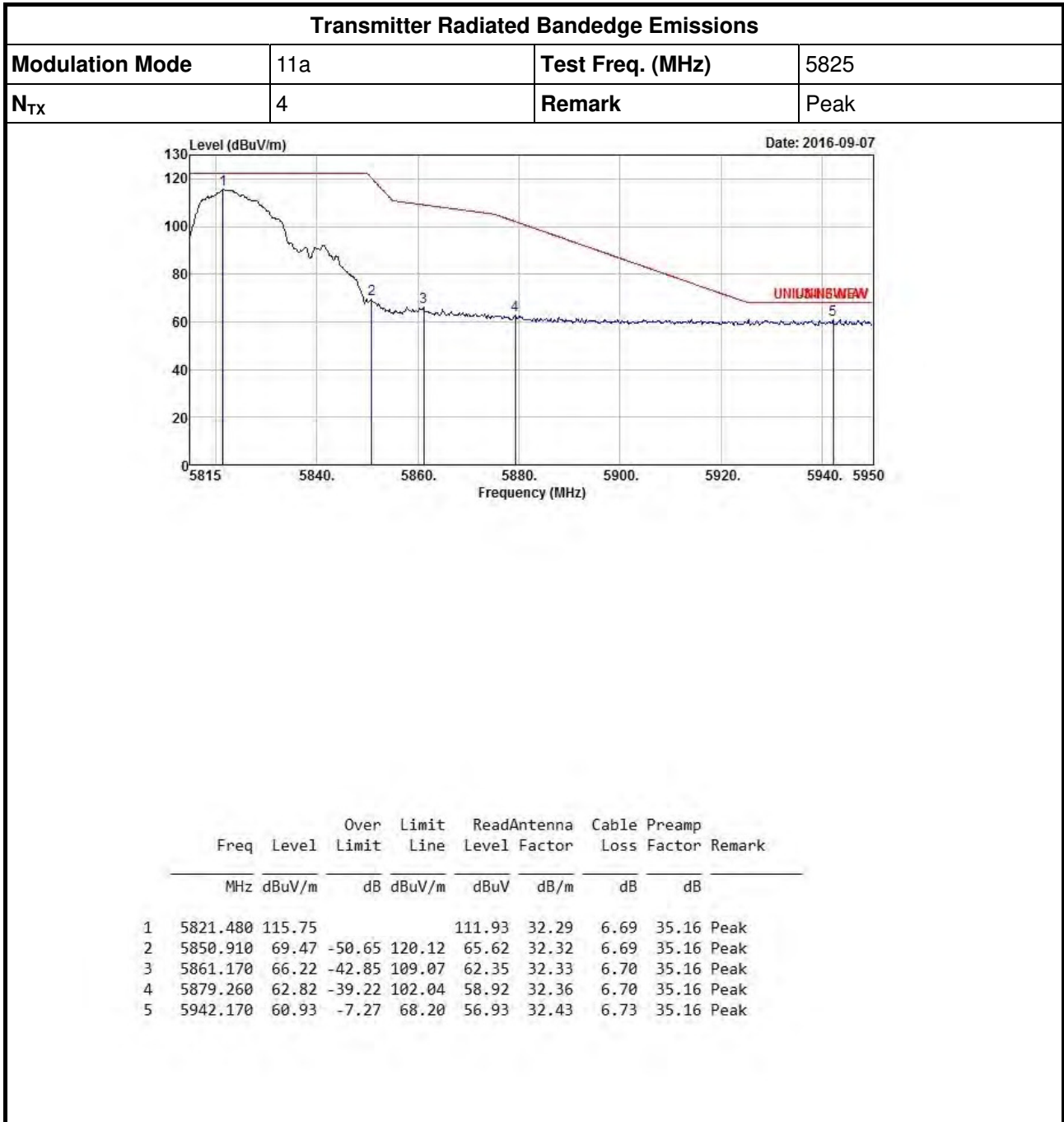
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

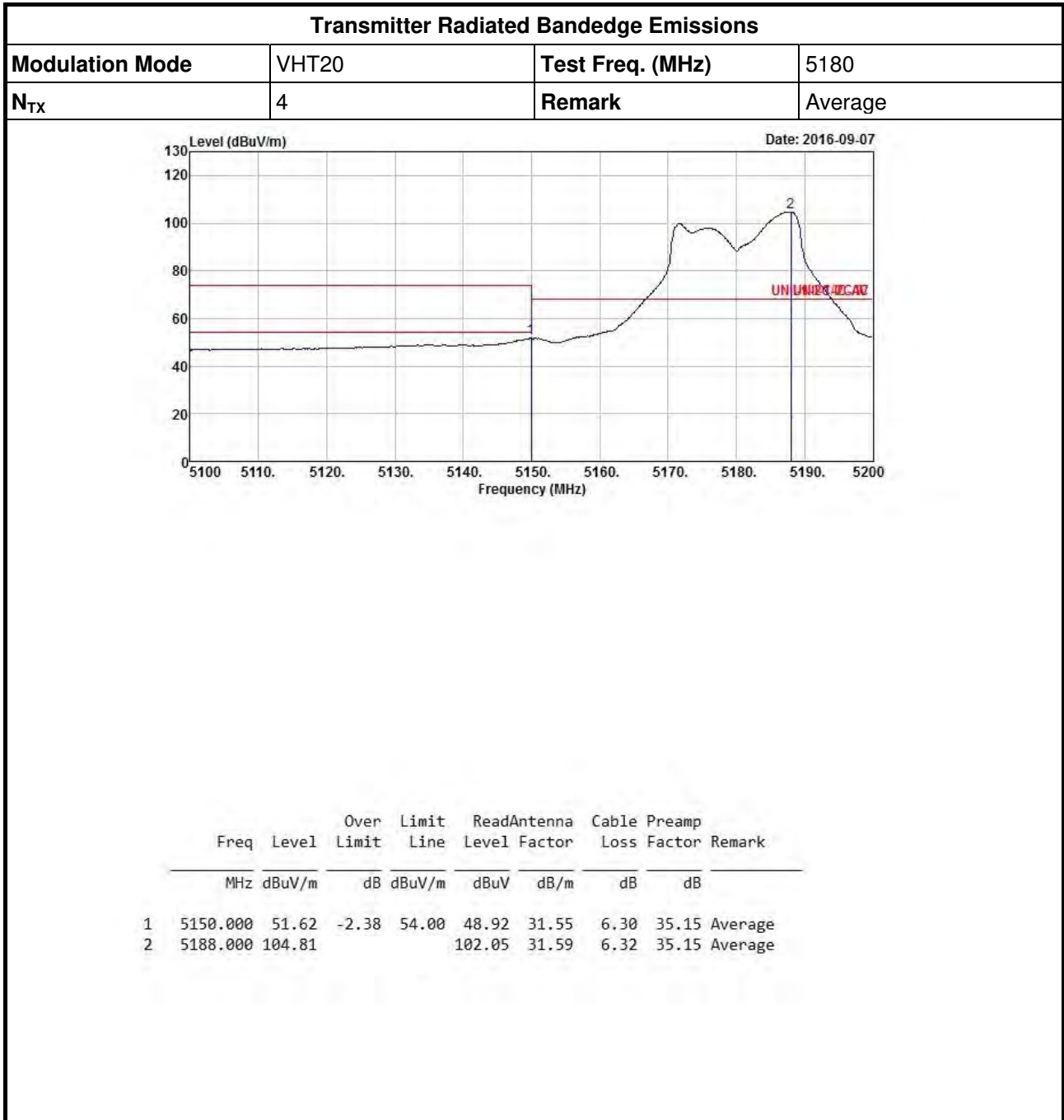
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

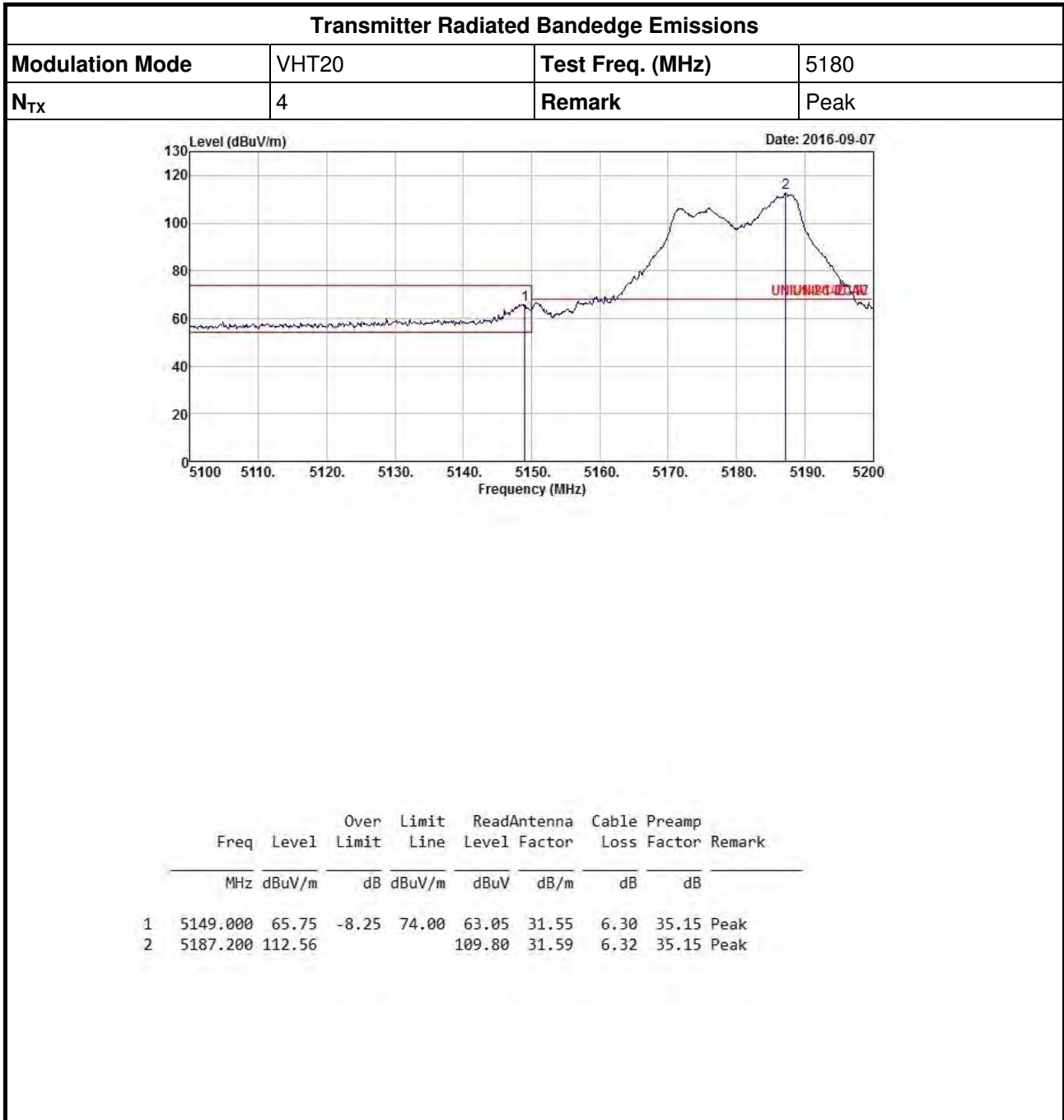
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

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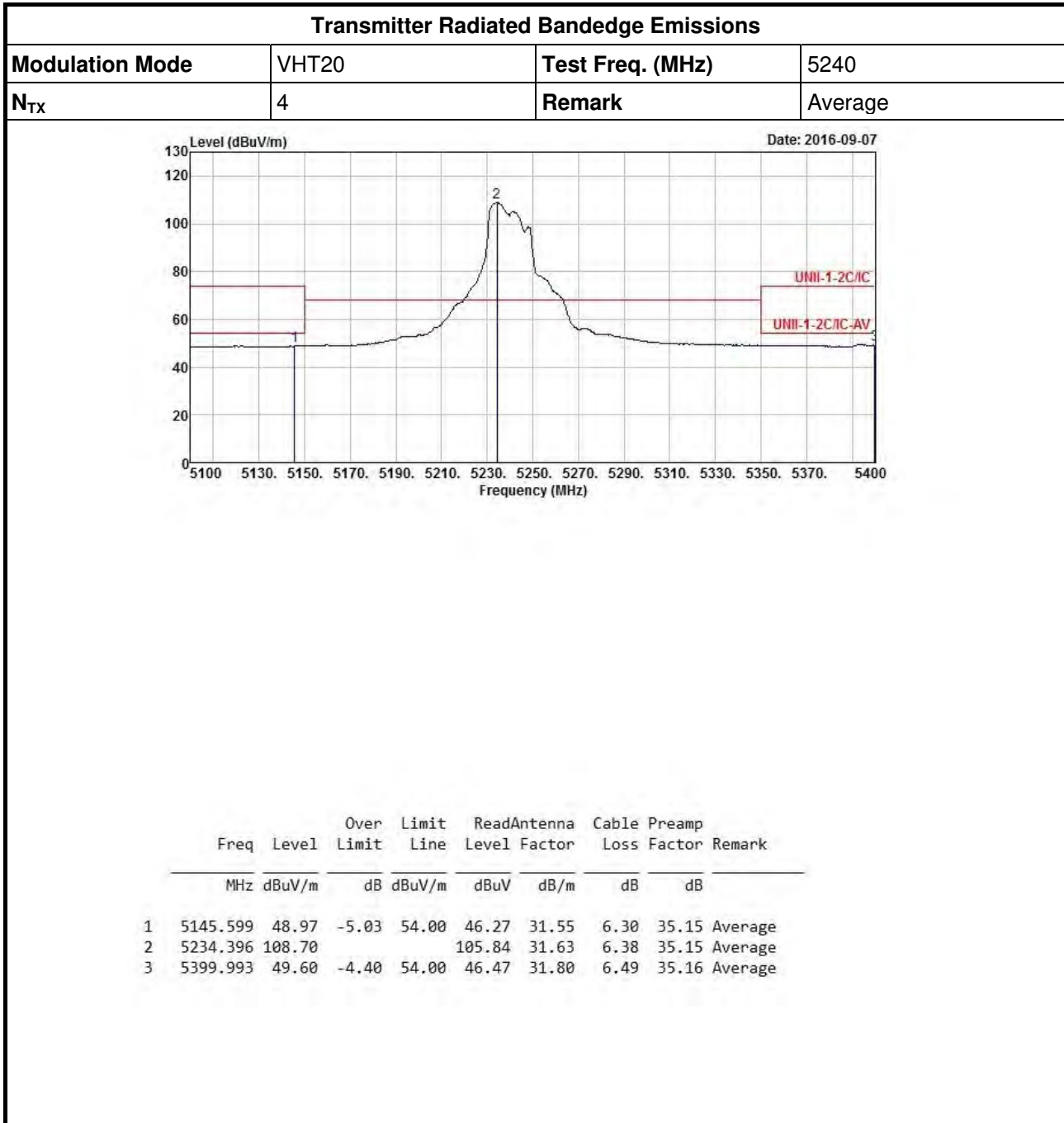






# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

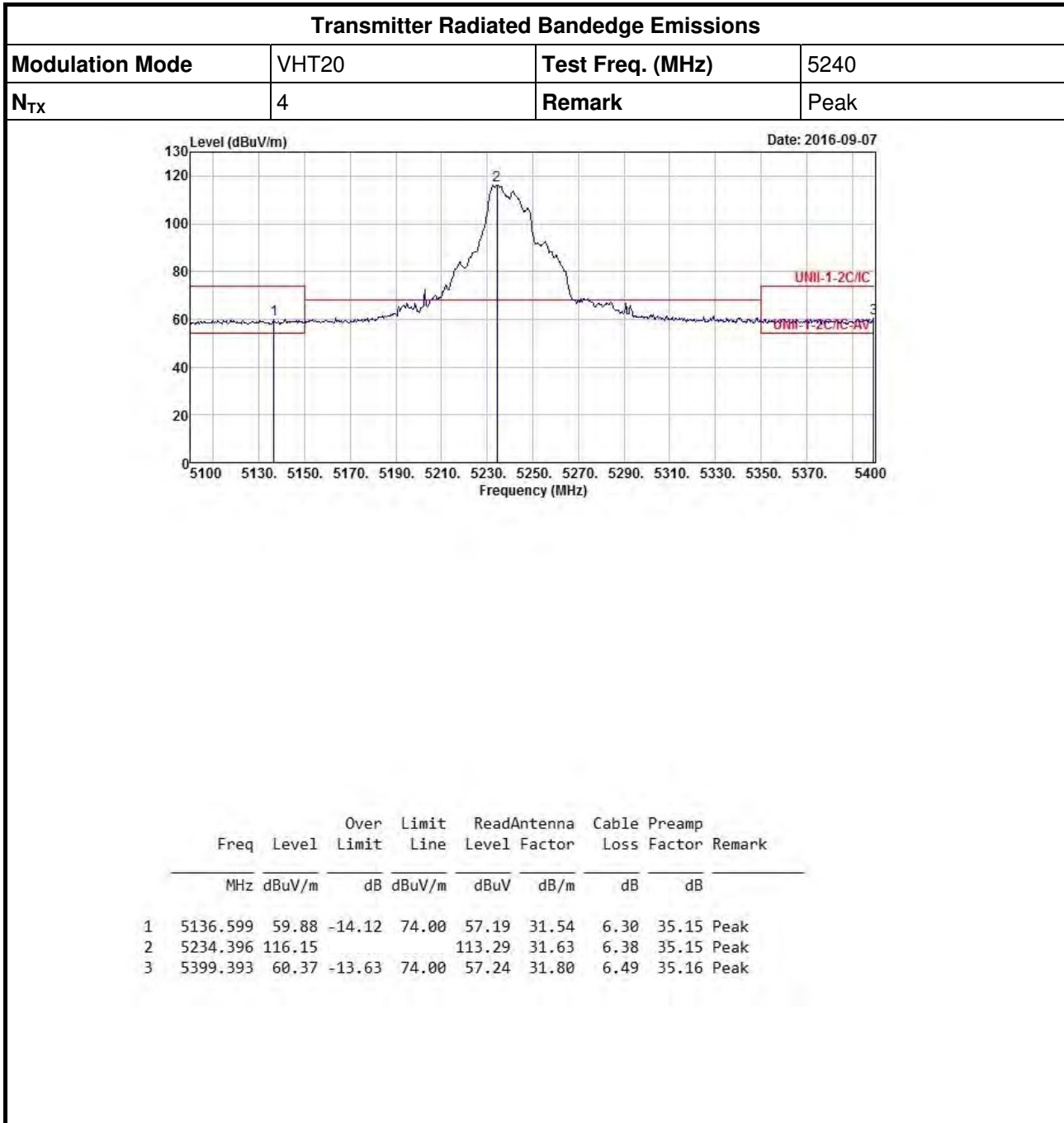
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

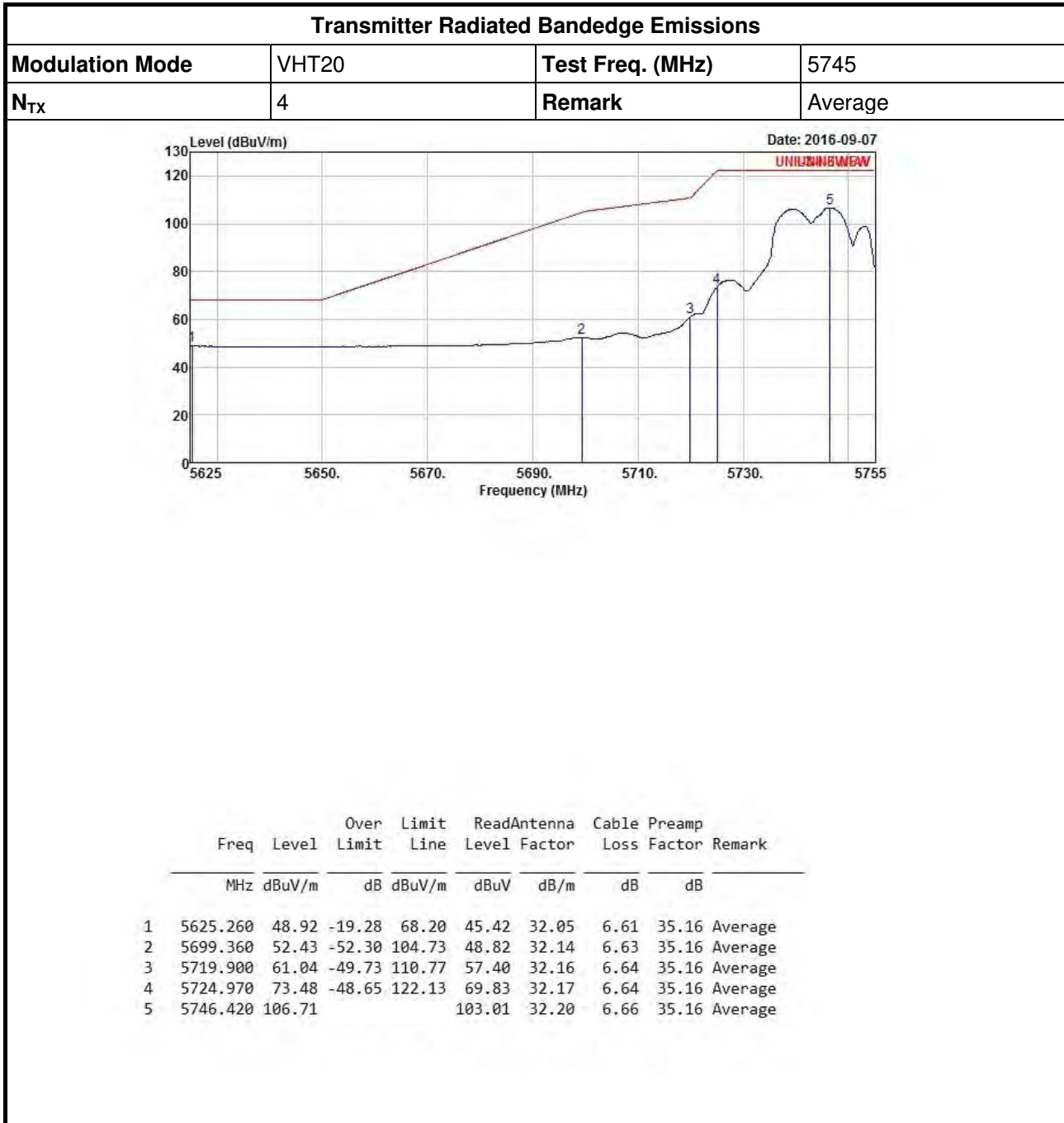
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

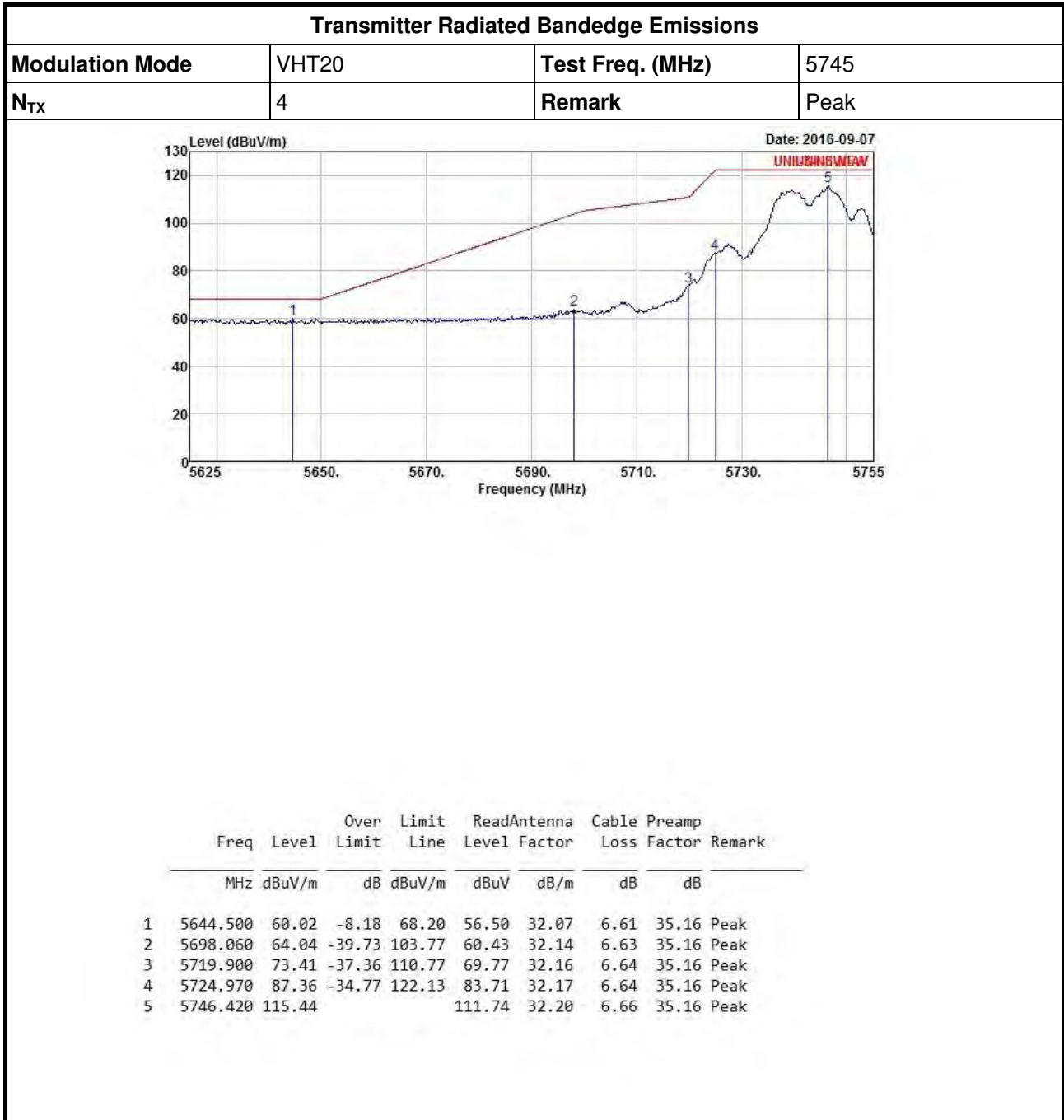
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

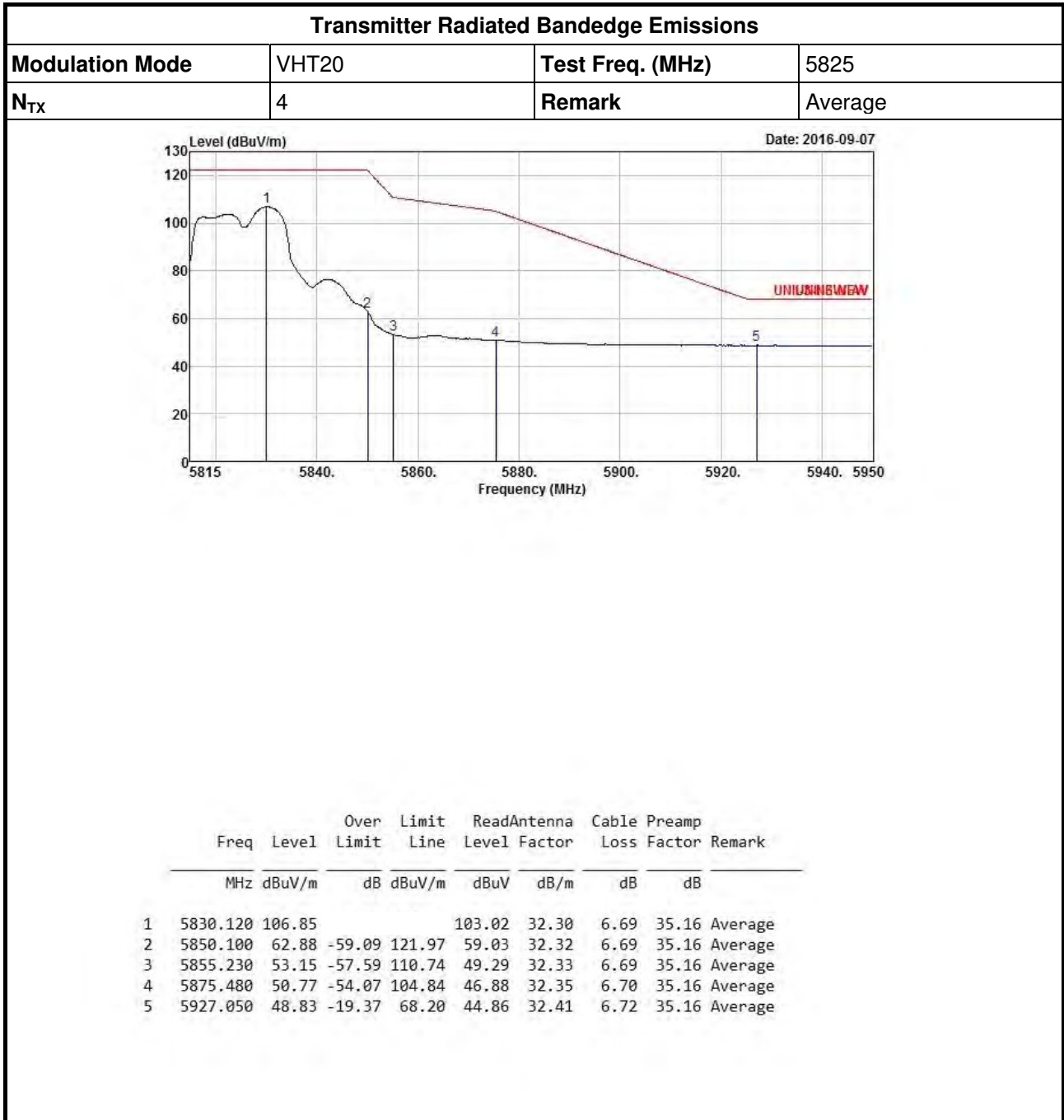
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

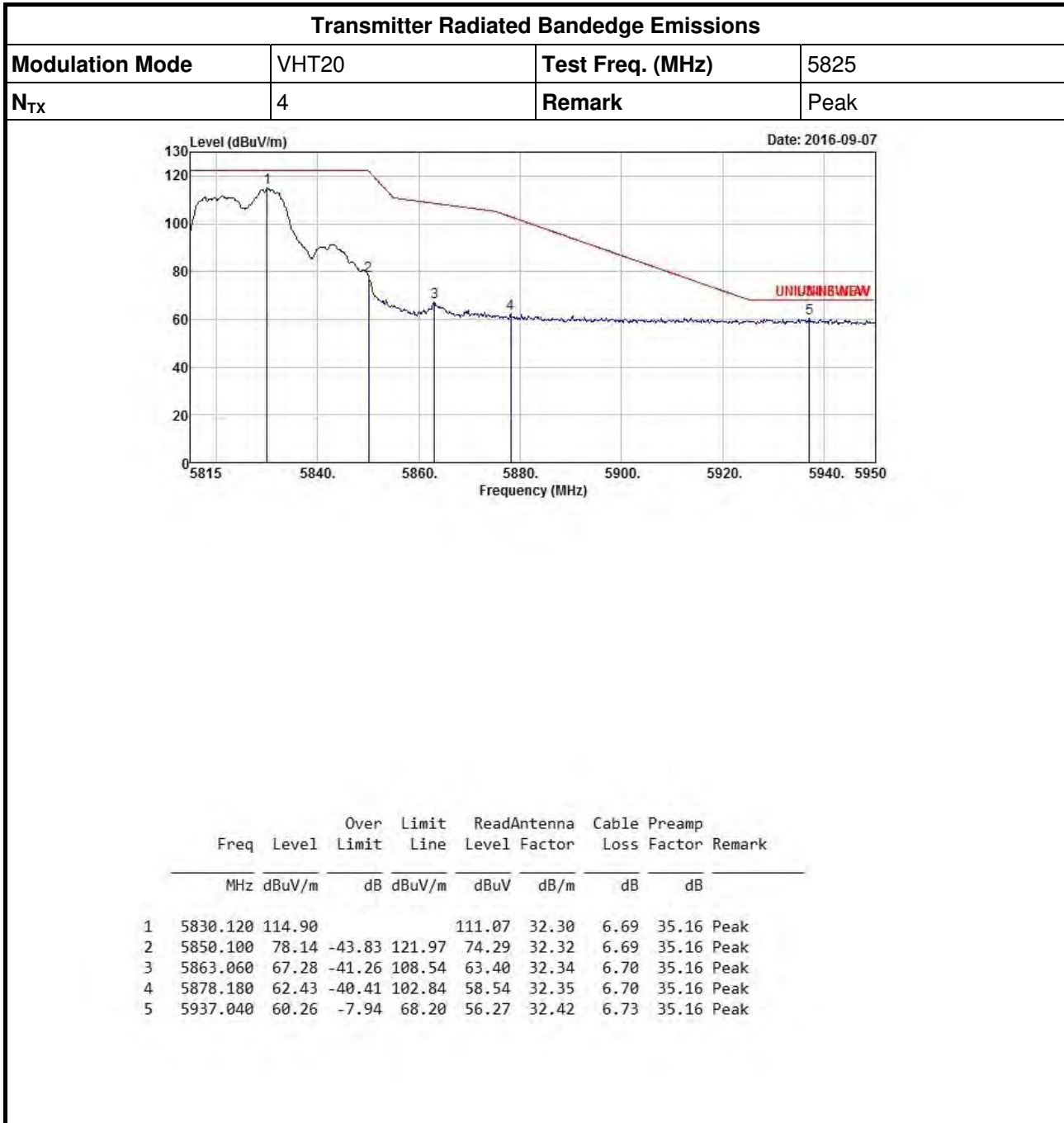
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

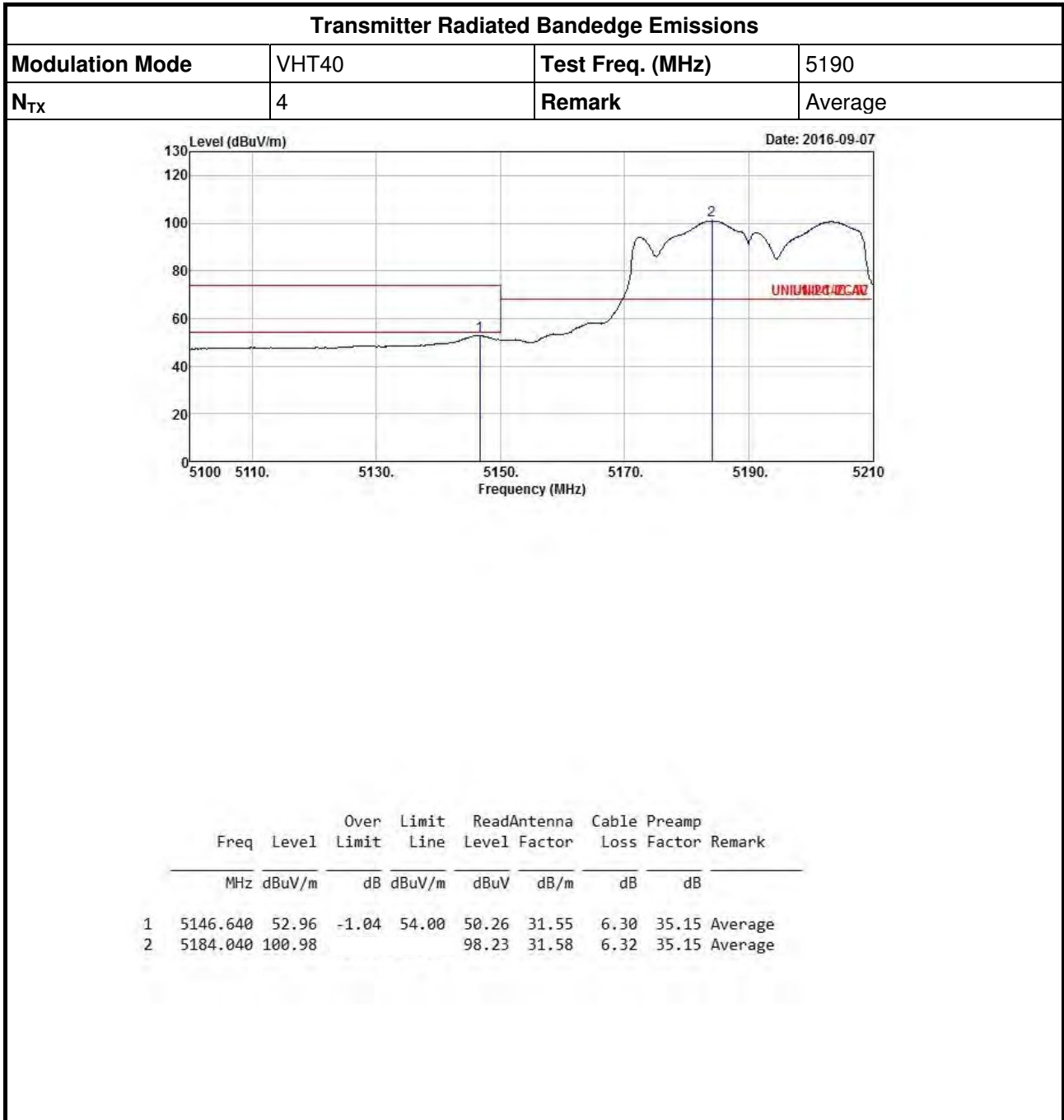
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

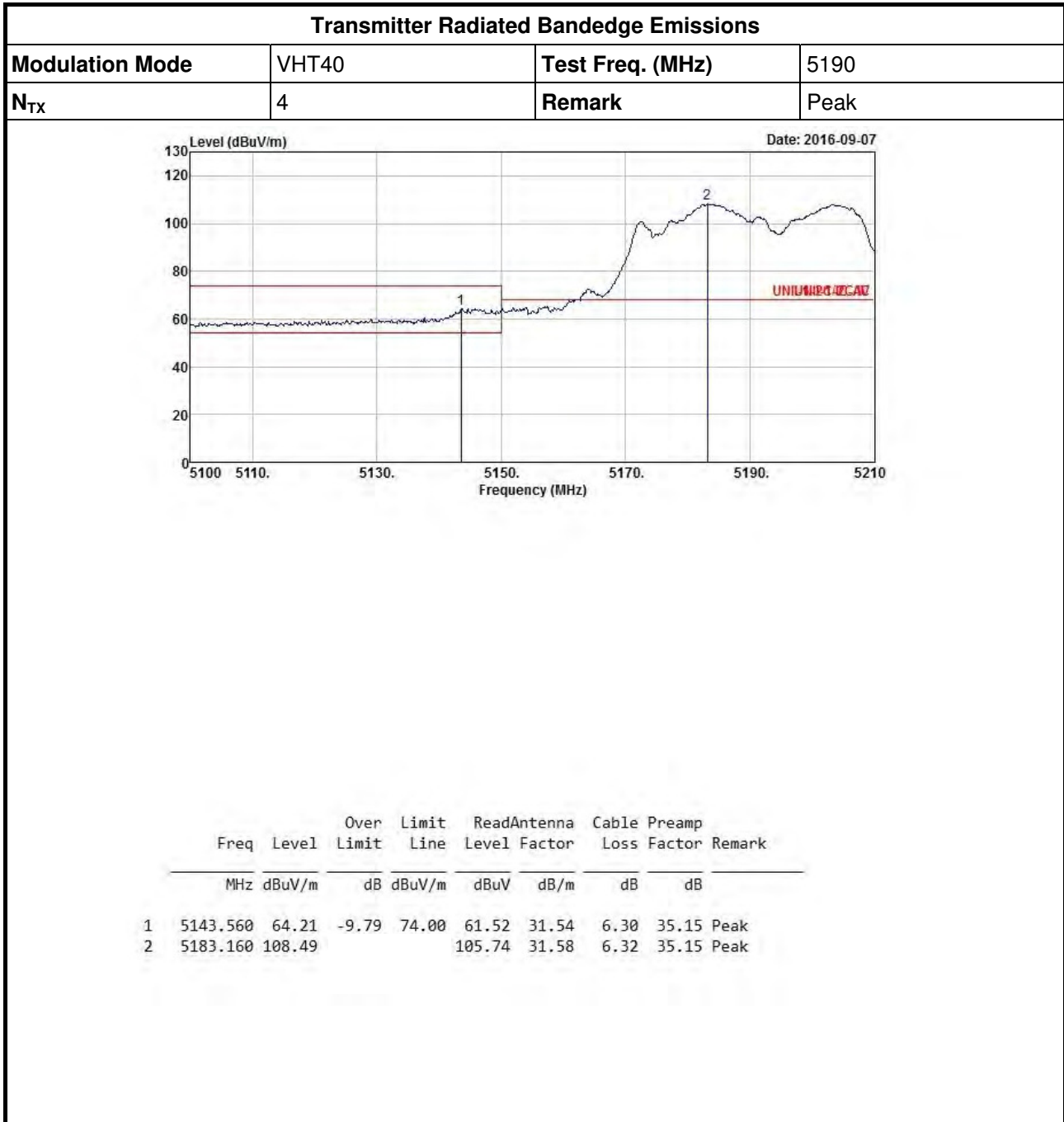
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

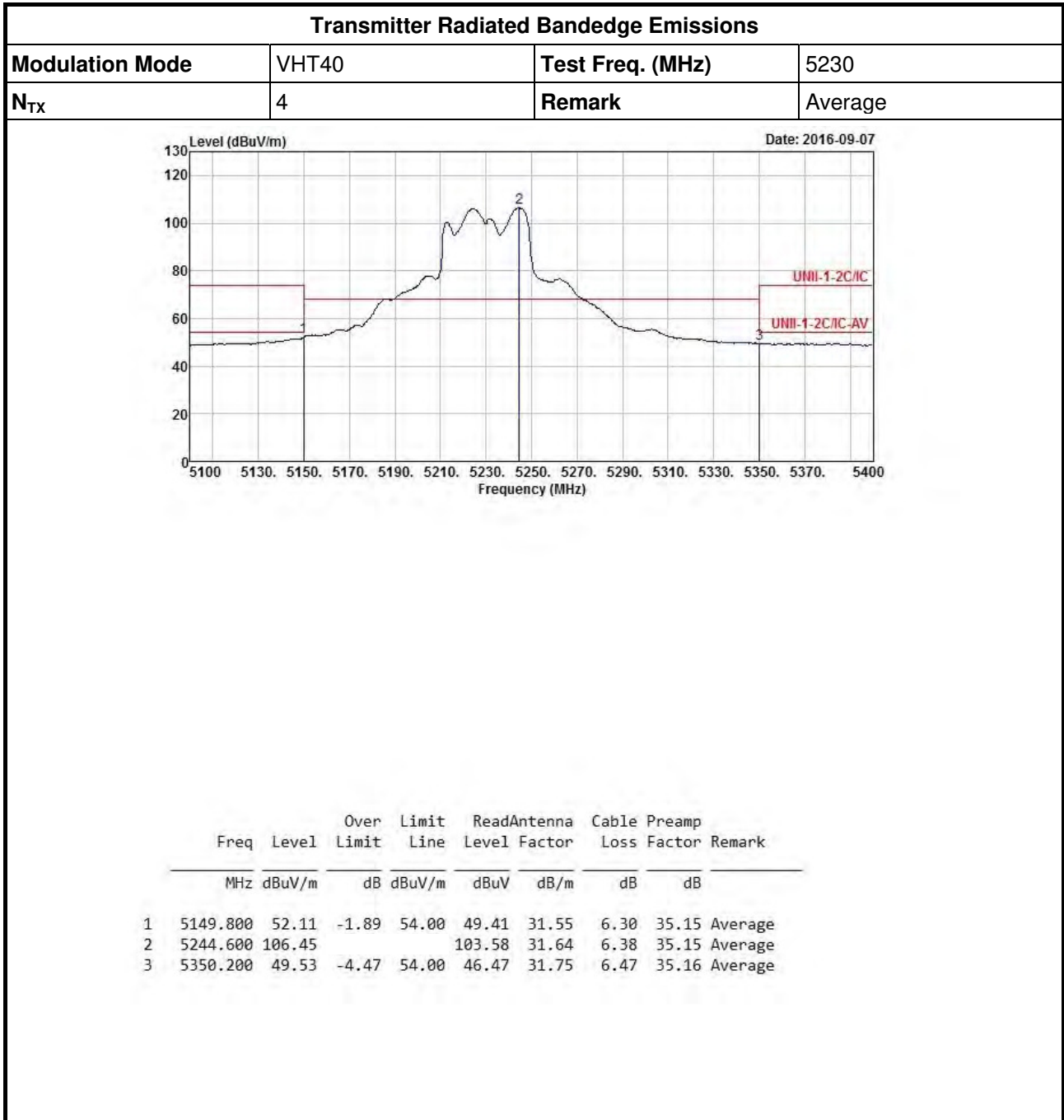
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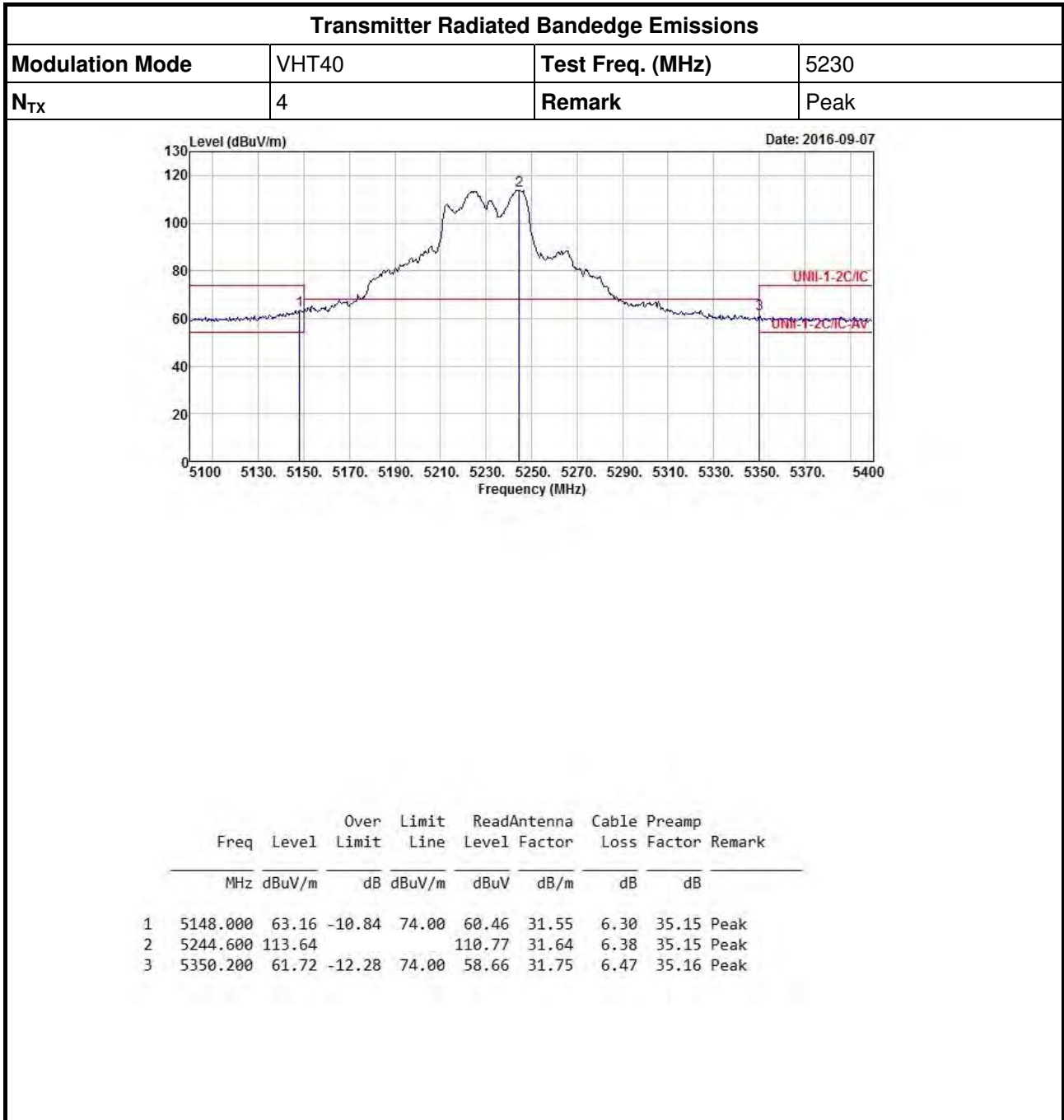
# Transmitter Radiated Bandedge Emissions (Non-Beamforming)





# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

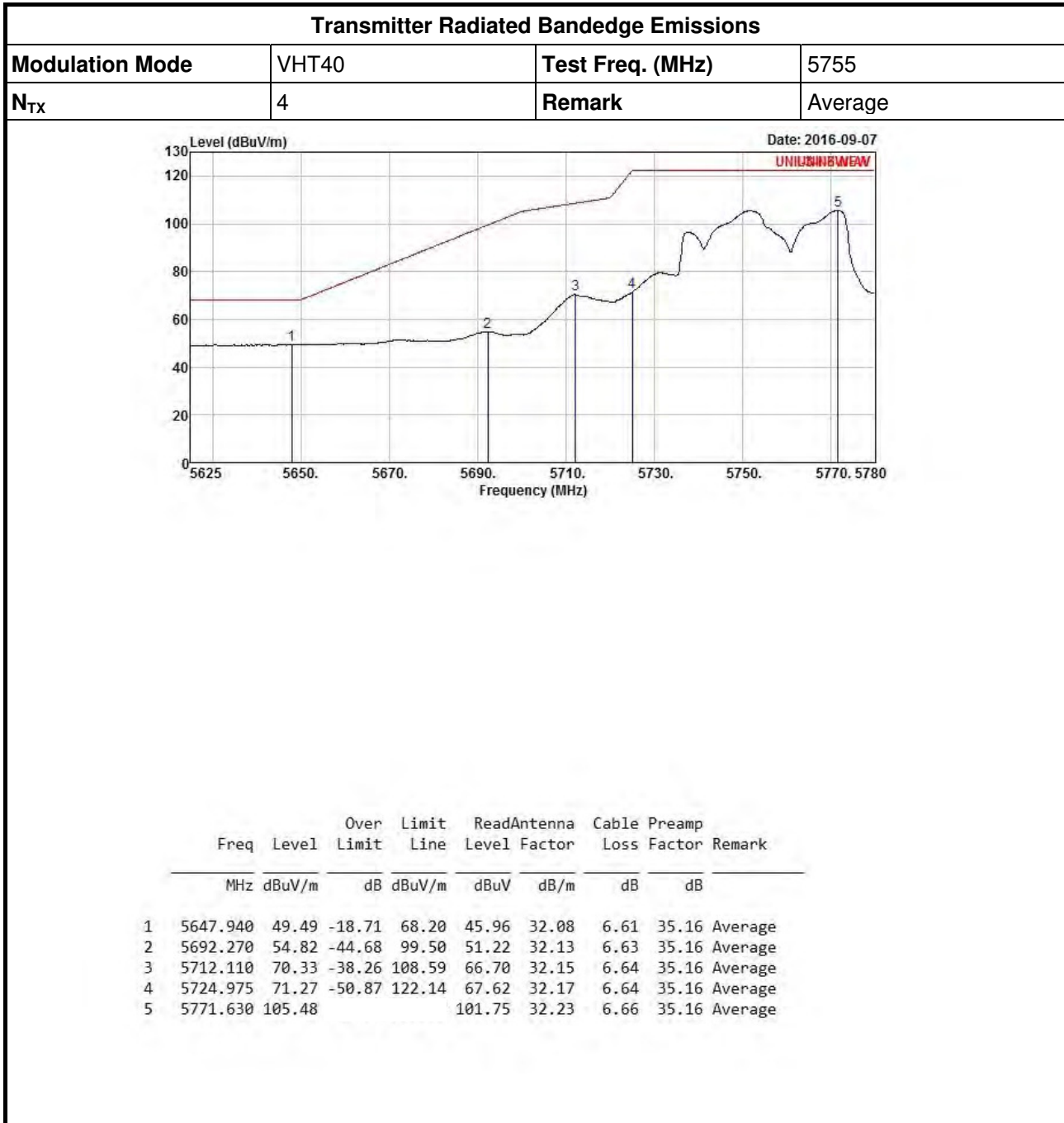
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

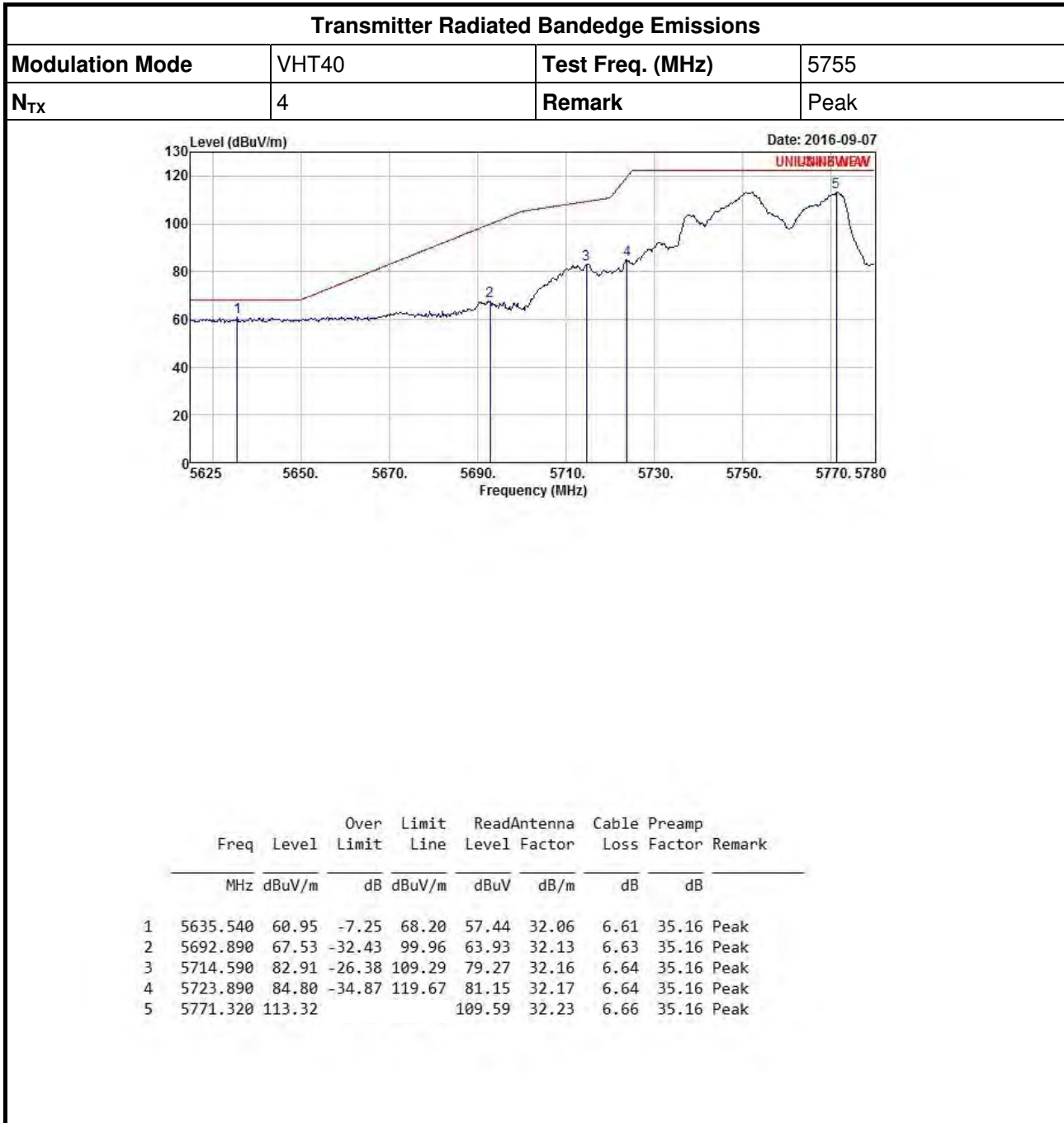
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

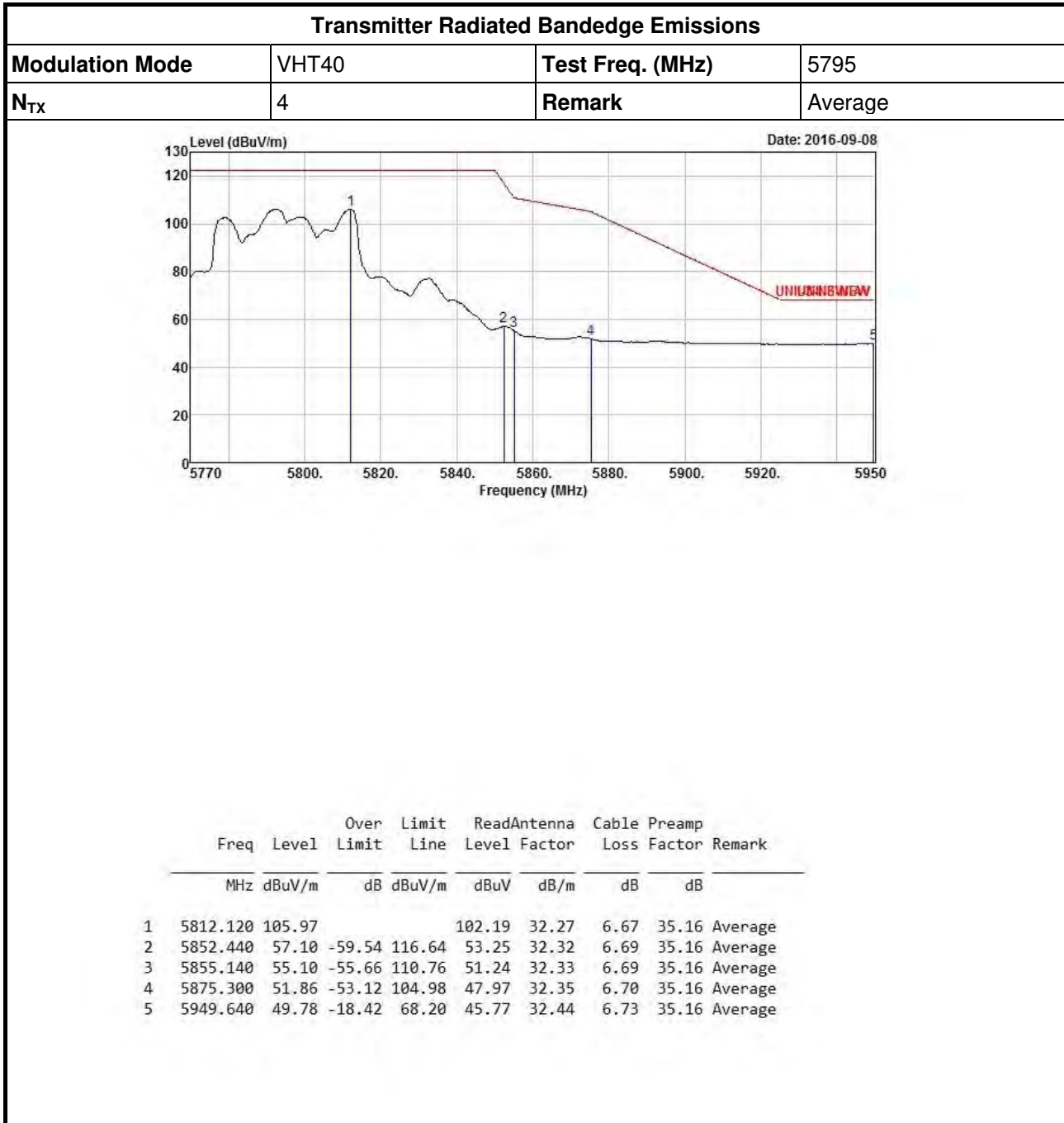
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

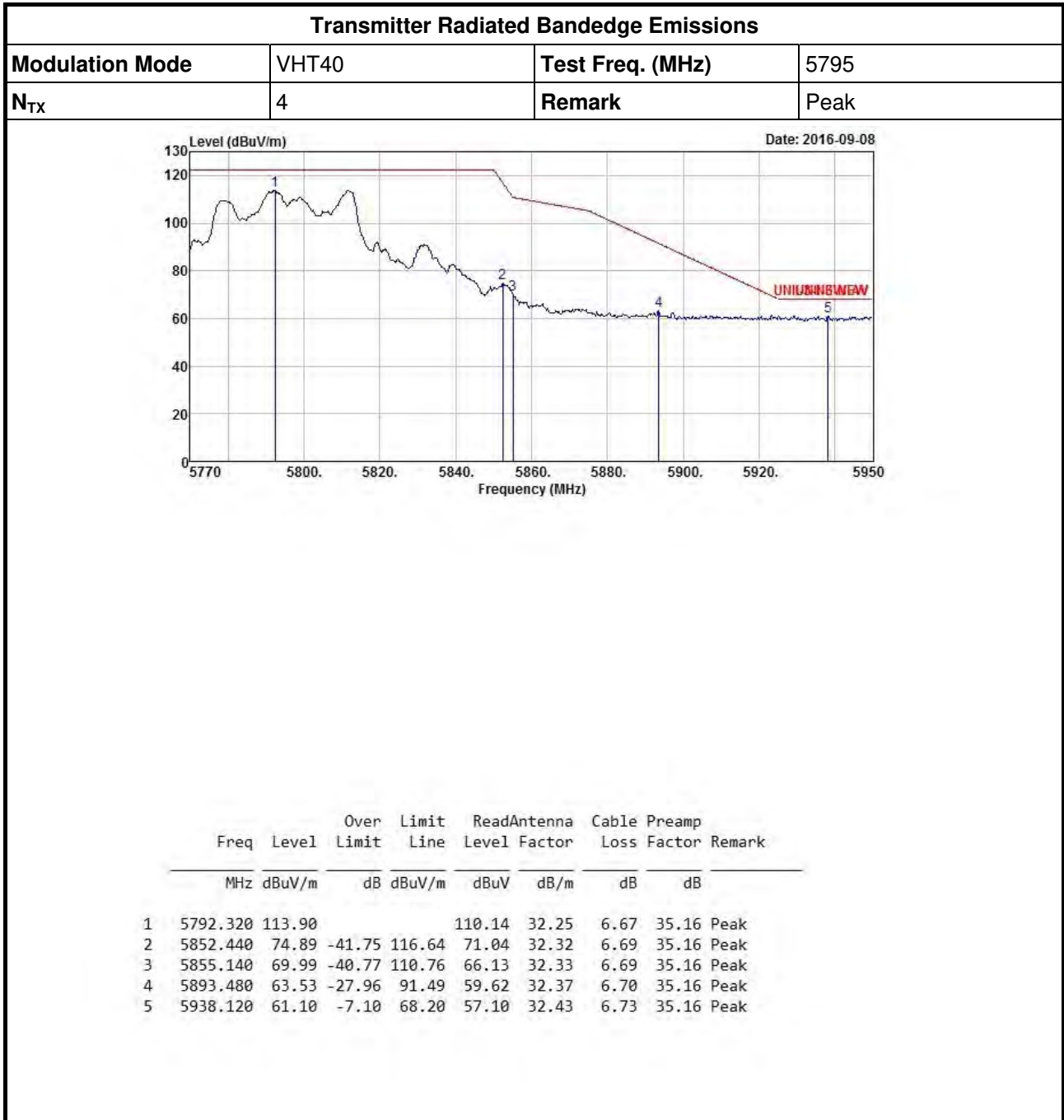
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

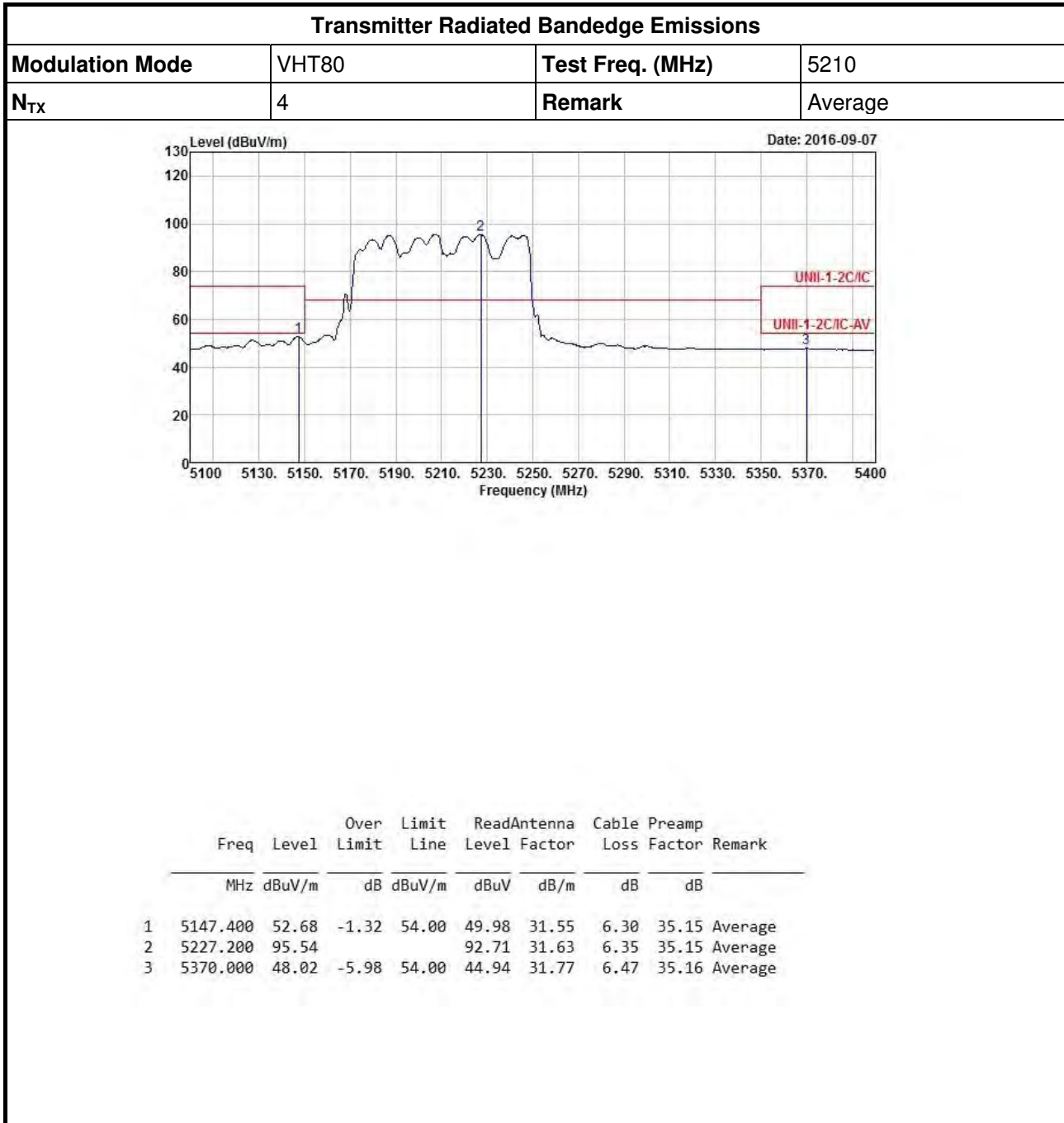
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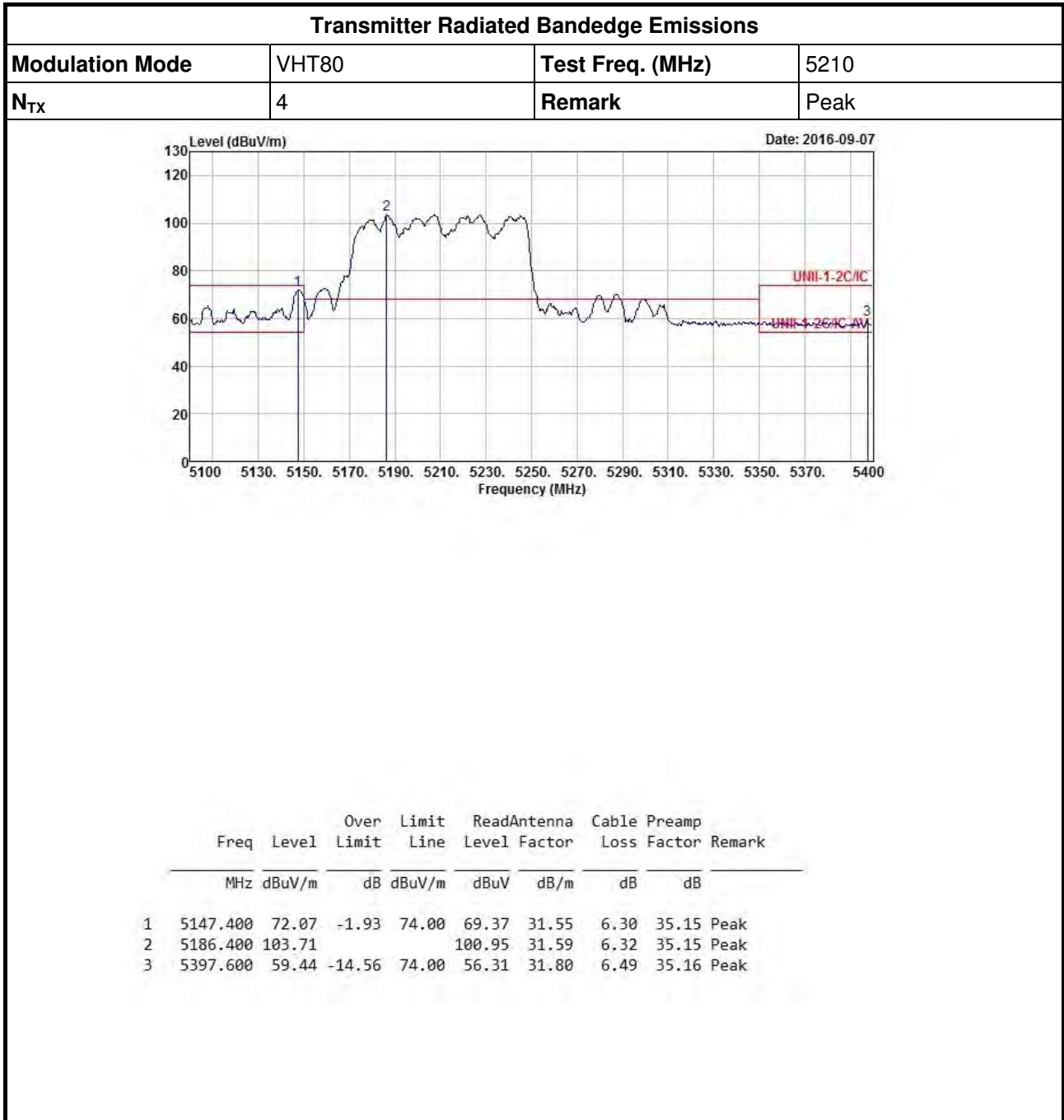
# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

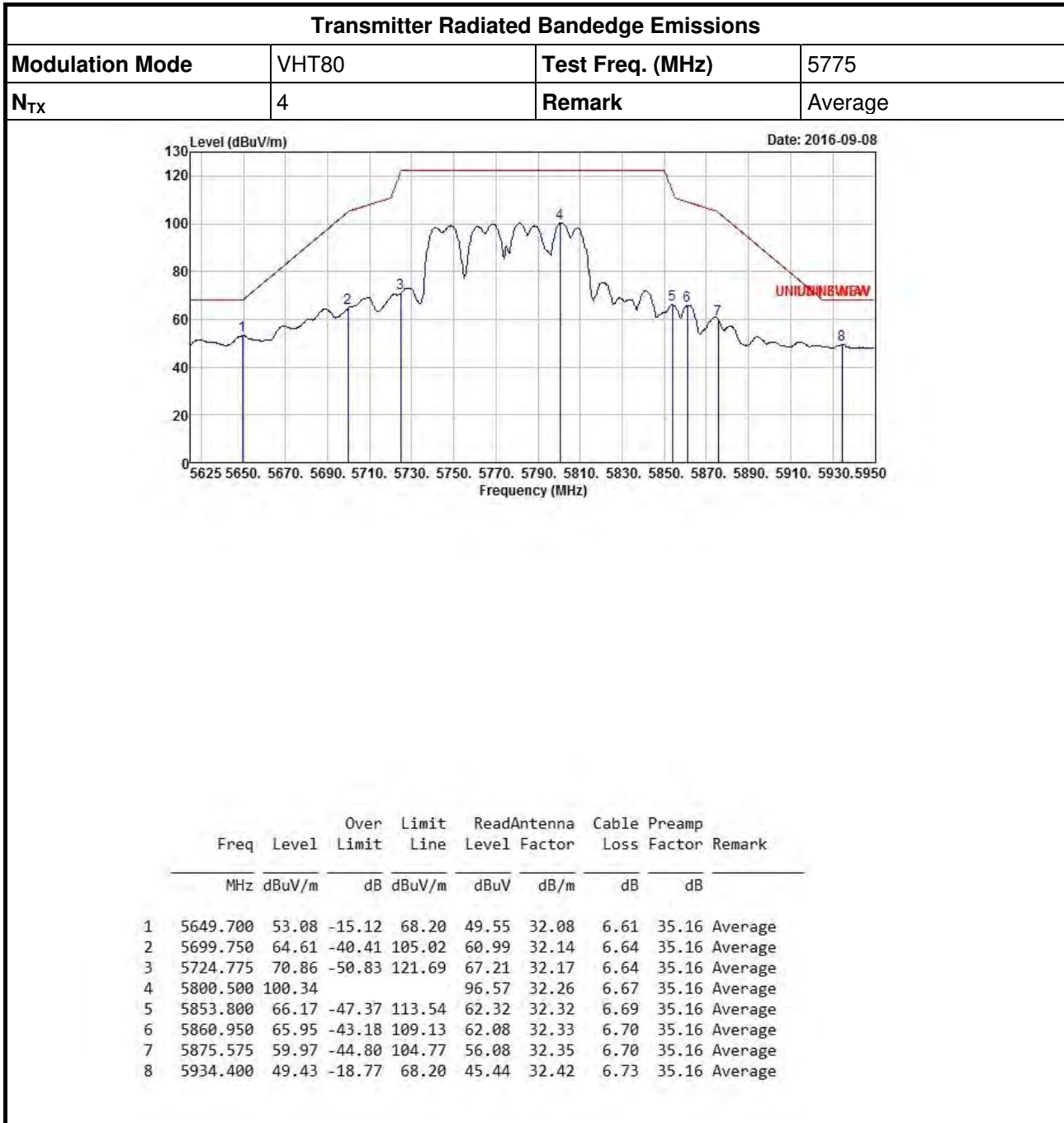






# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

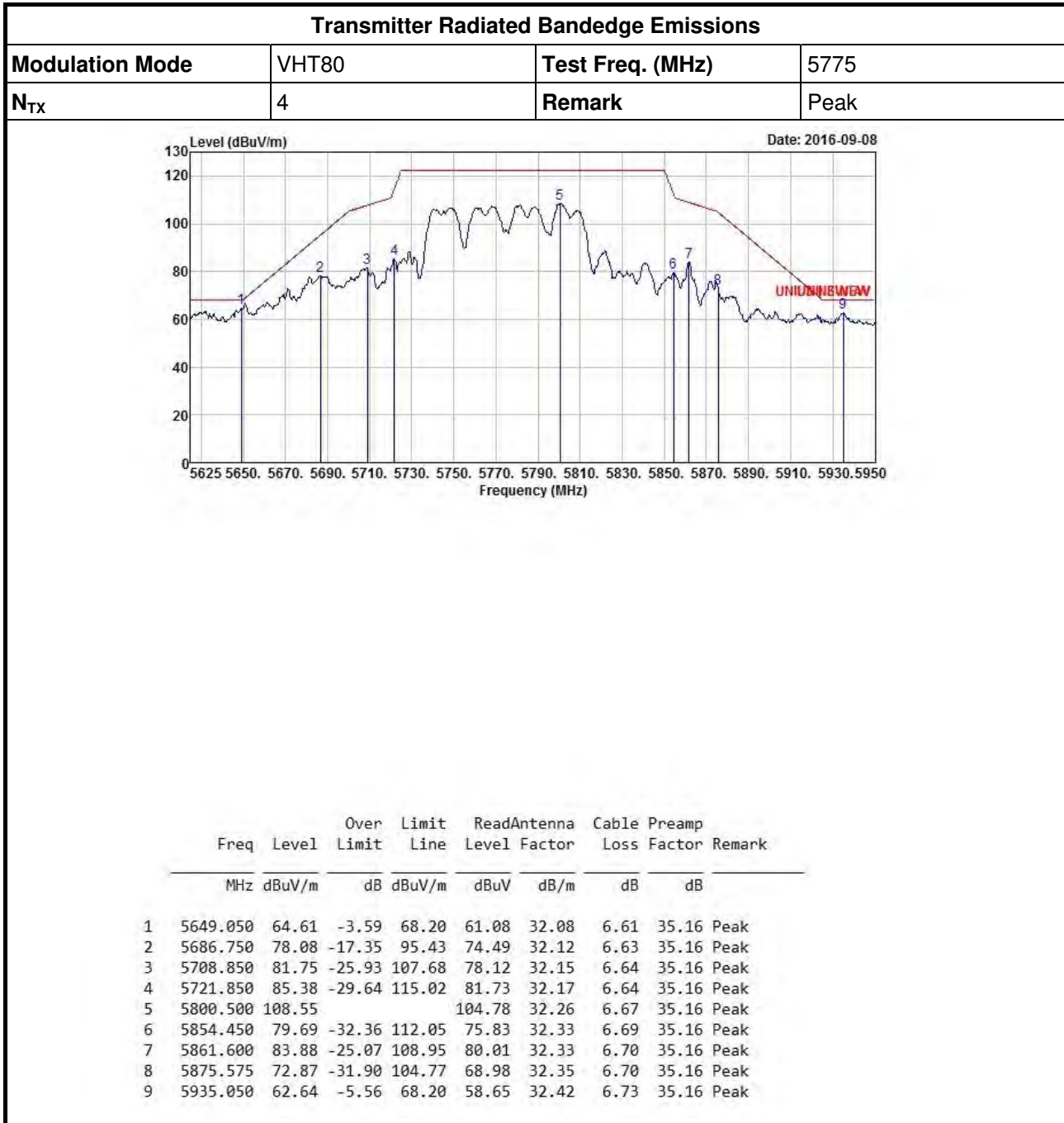
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# Transmitter Radiated Bandedge Emissions (Non-Beamforming)

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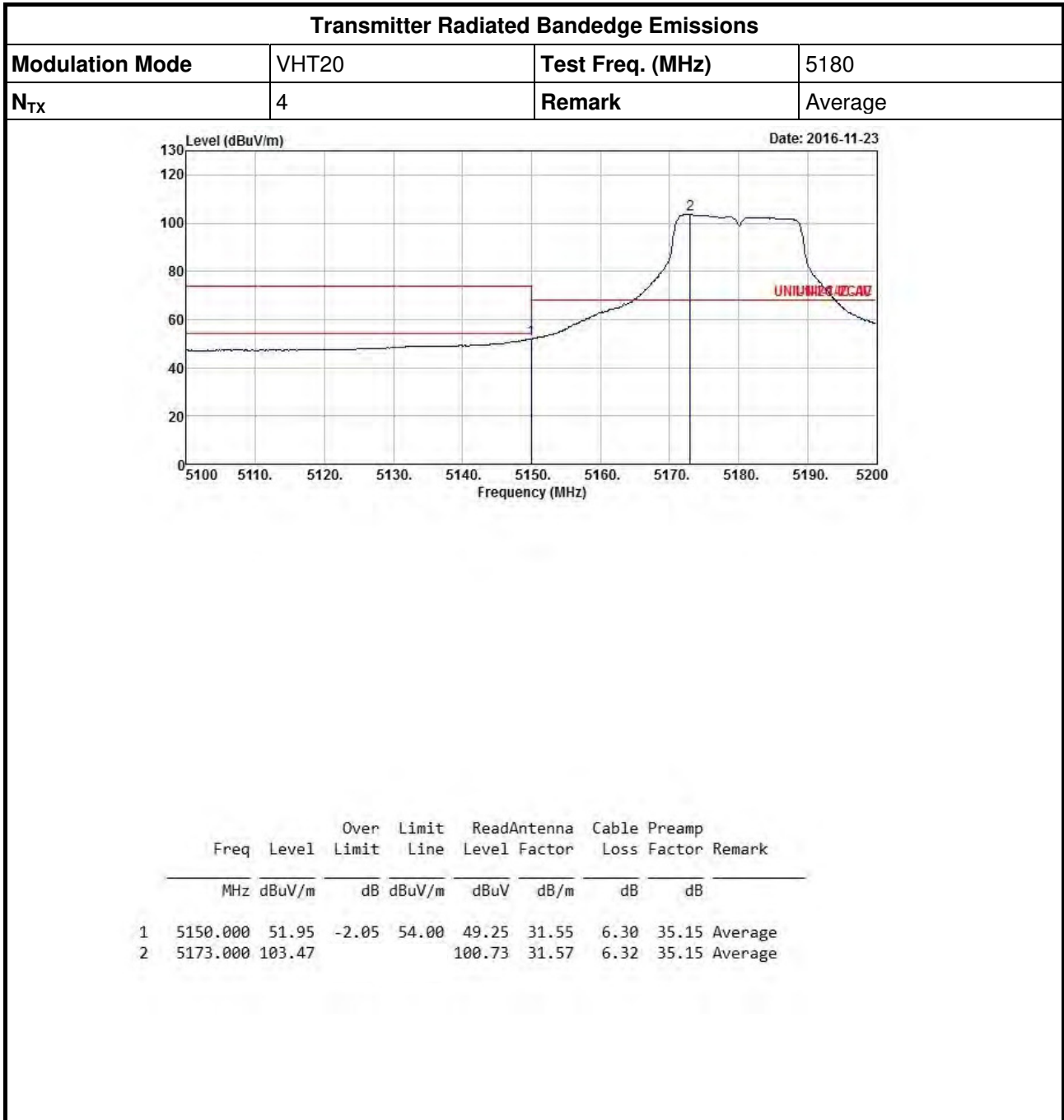
**Transmitter Radiated Bandedge Emissions (with Antenna)**

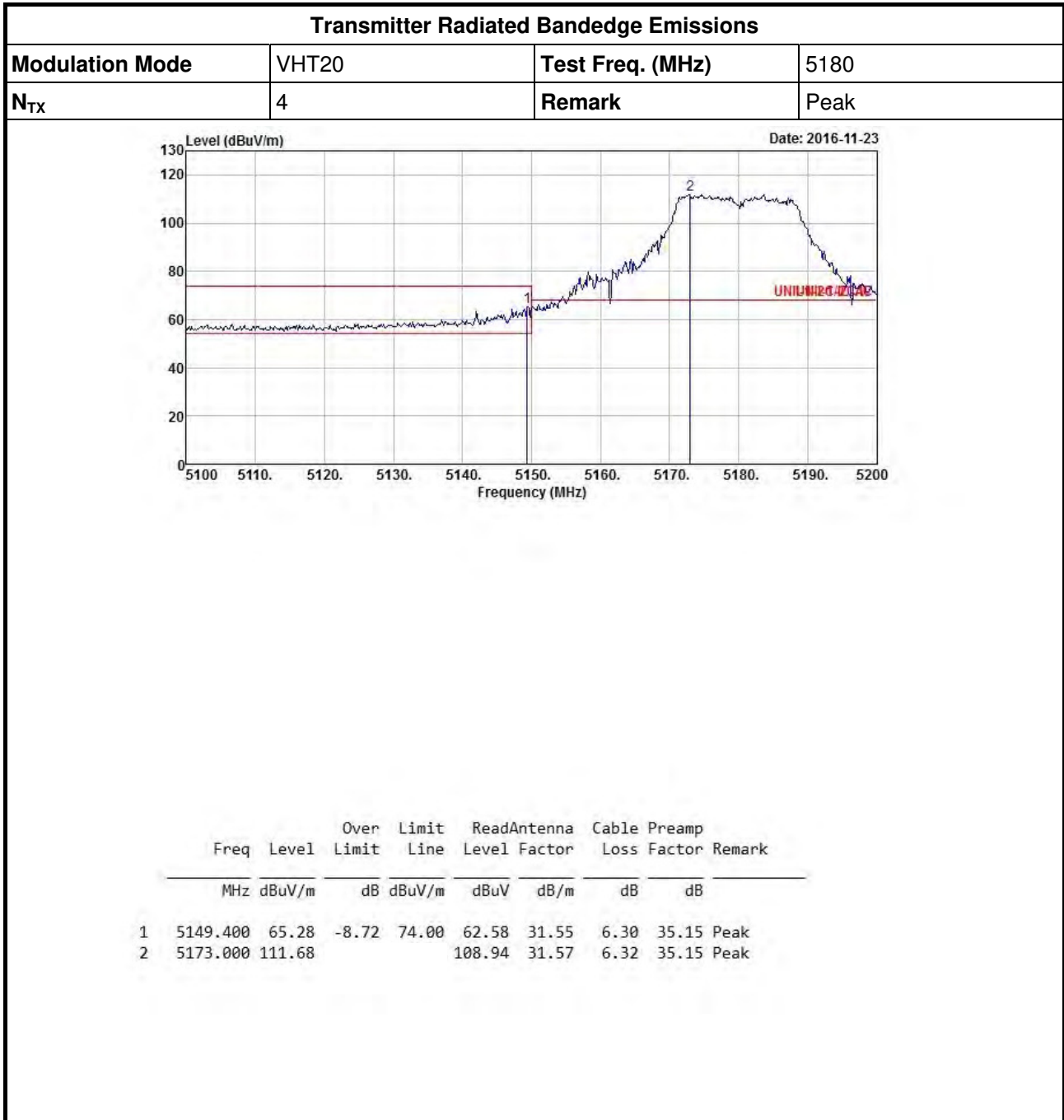
U-NII 5150-5250MHz Transmitter Radiated Bandedge (with Antenna)										
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
VHT20 (Beamforming)	4	5180	3	5149.400	65.28	74	5150.000	51.95	54	H
VHT20 (Beamforming)	4	5240	3	5128.800	57.22	74	5400.000	47.14	54	H
VHT40 (Beamforming)	4	5190	3	5147.080	71.09	74	5149.940	52.92	54	H
VHT40 (Beamforming)	4	5230	3	5146.200	58.89	74	5149.800	47.54	54	H
VHT80 (Beamforming)	4	5210	3	5144.400	68.47	74	5149.200	52.43	54	H

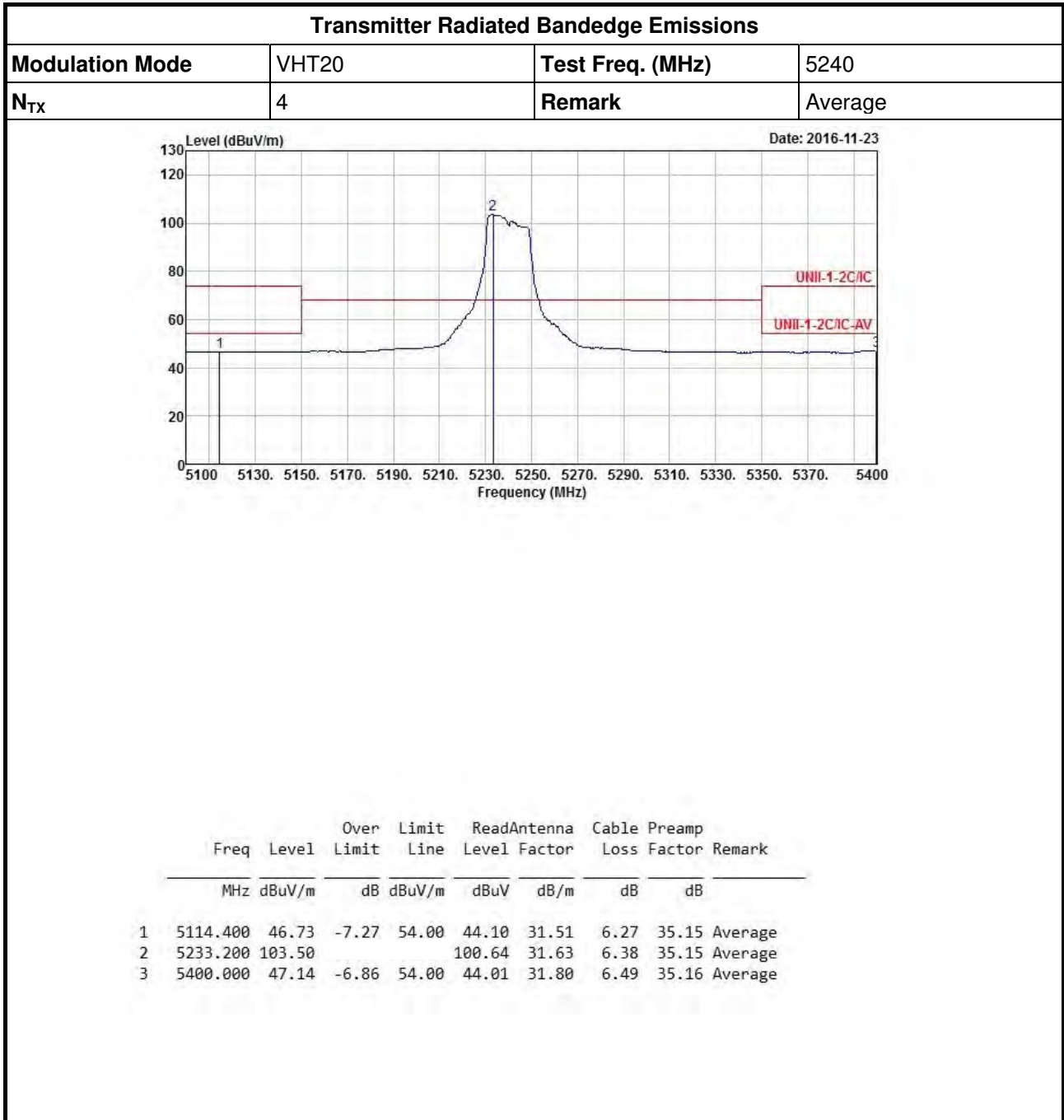
Note 1: Measurement worst emissions of receive antenna polarization.

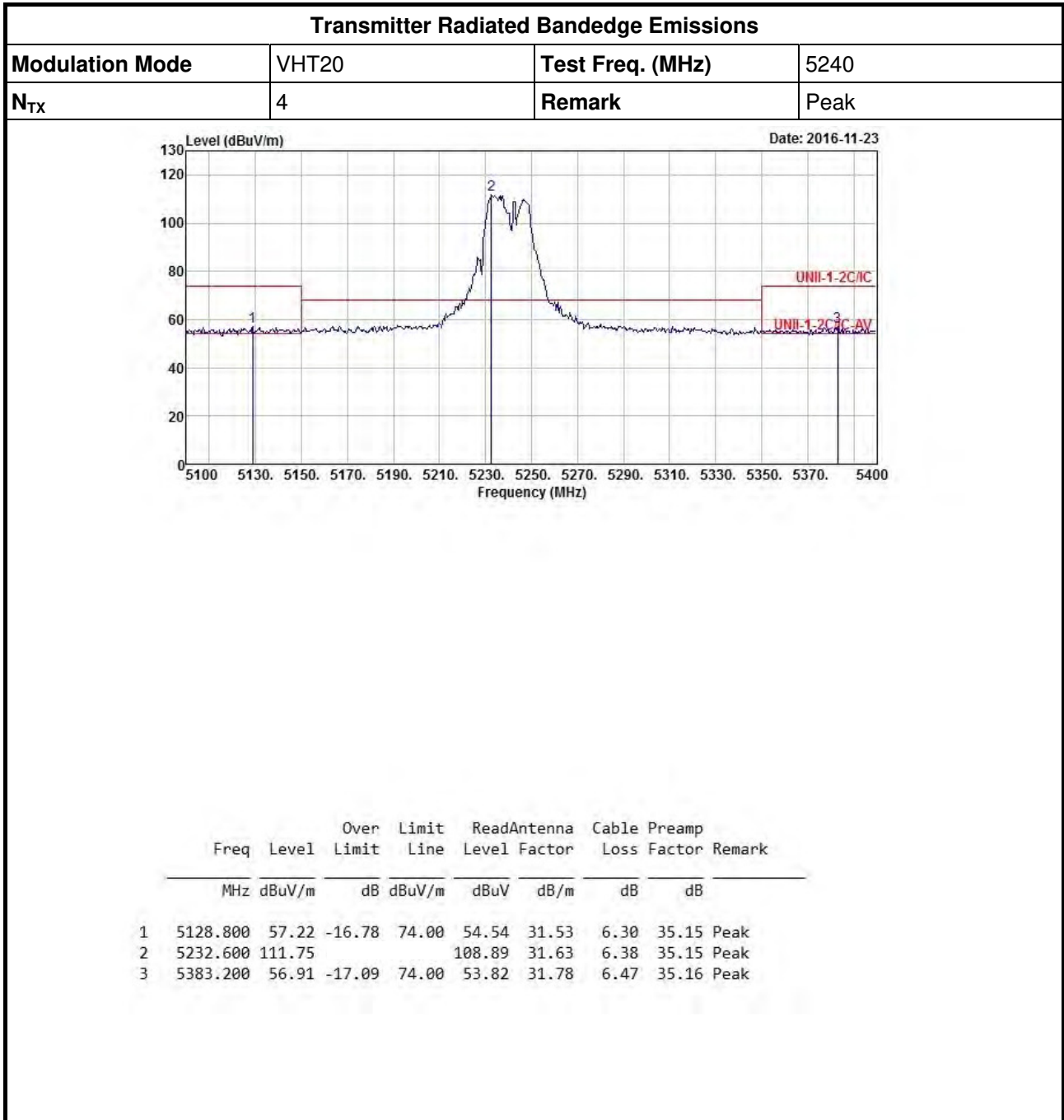
U-NII 5725-5850MHz Transmitter Radiated Bandedge (with Antenna)							
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Pol.
VHT20 (Beamforming)	4	5745	3	5737.840	11.99	122.2	H
VHT20 (Beamforming)	4	5825	3	5830.390	115.48	122.2	H
VHT40 (Beamforming)	4	5755	3	5627.480	58.89	68.2	H
VHT40 (Beamforming)	4	5795	3	5802.400	113.31	122.2	H
VHT80 (Beamforming)	4	5775	3	5942.200	58.52	68.2	H

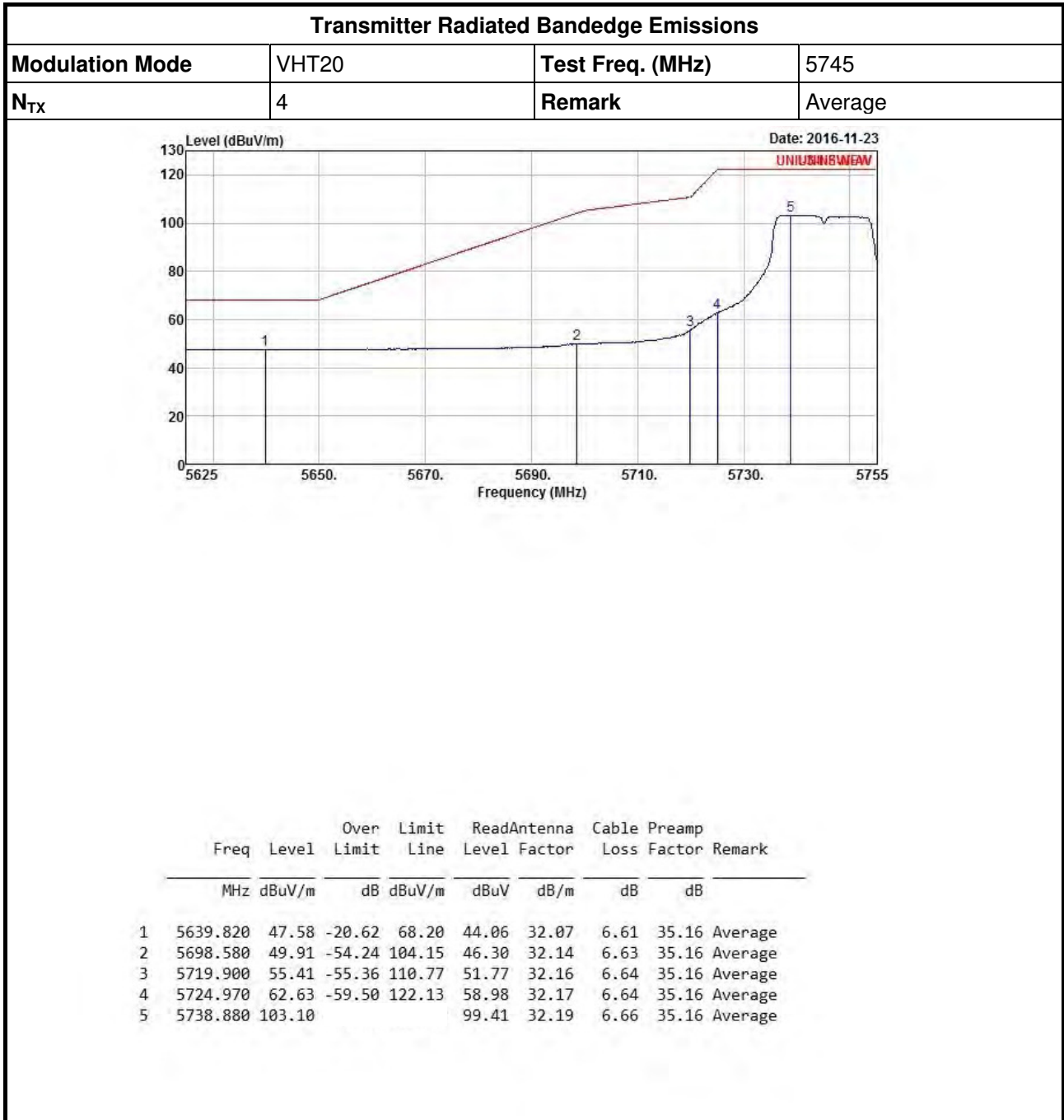
Note 1: Measurement worst emissions of receive antenna polarization.



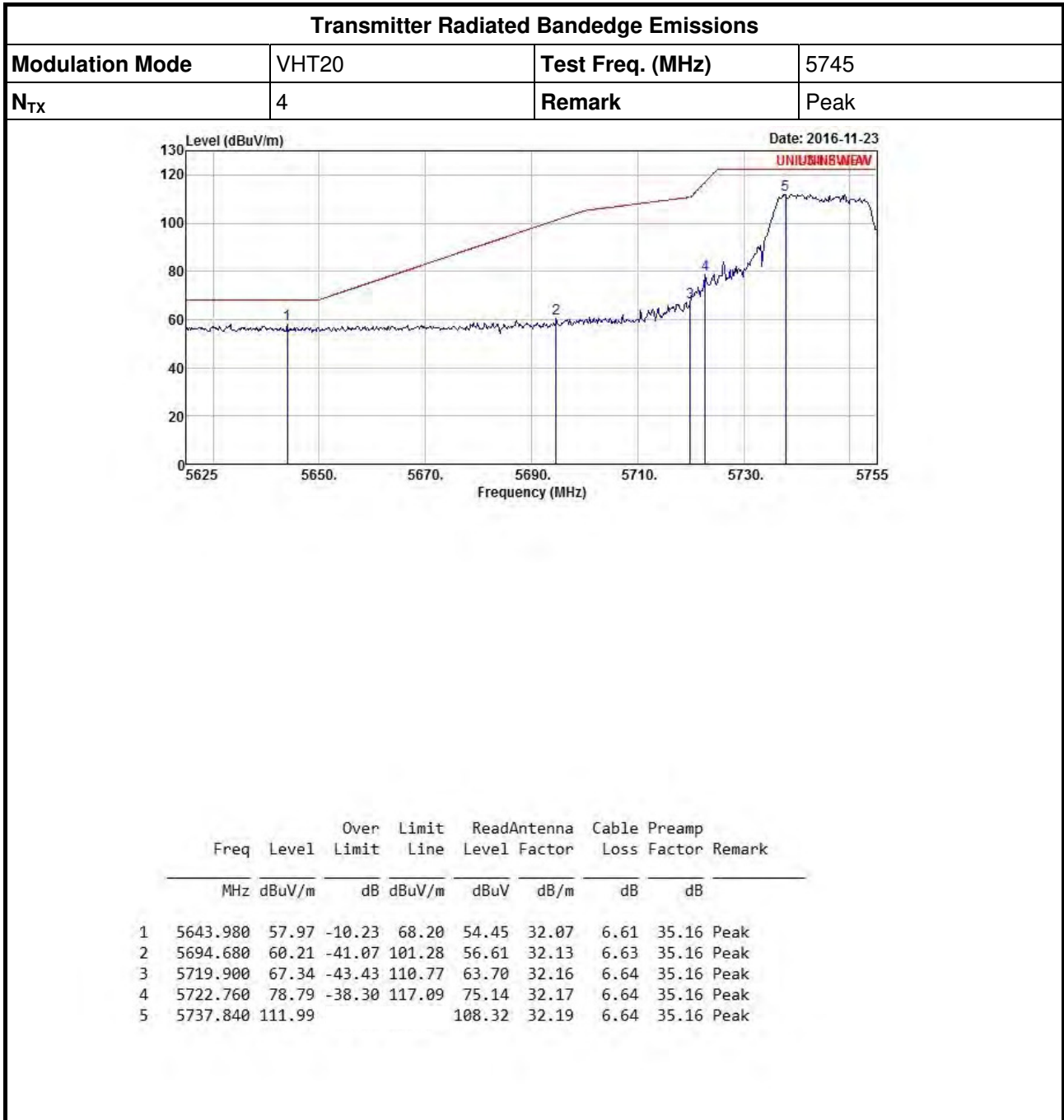


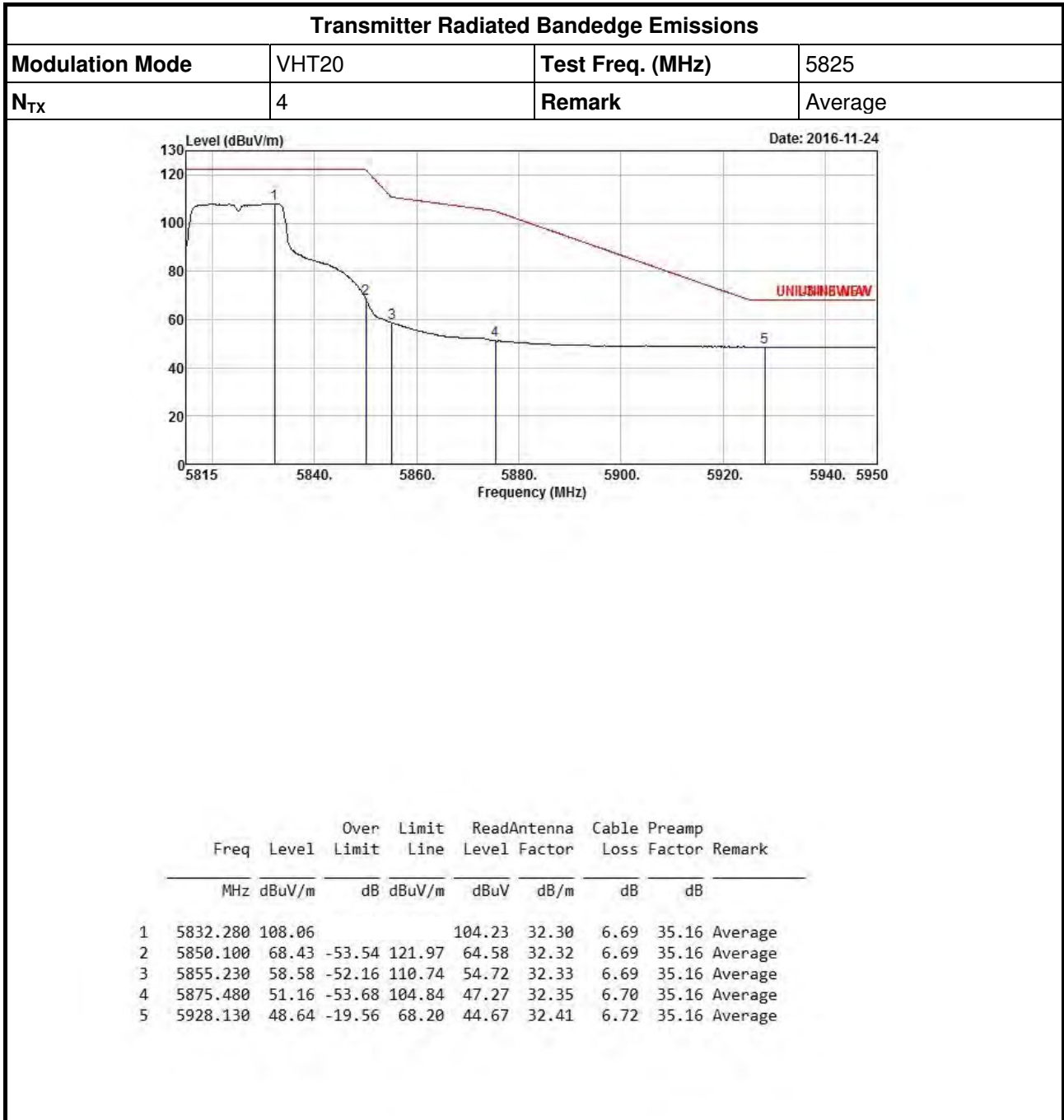


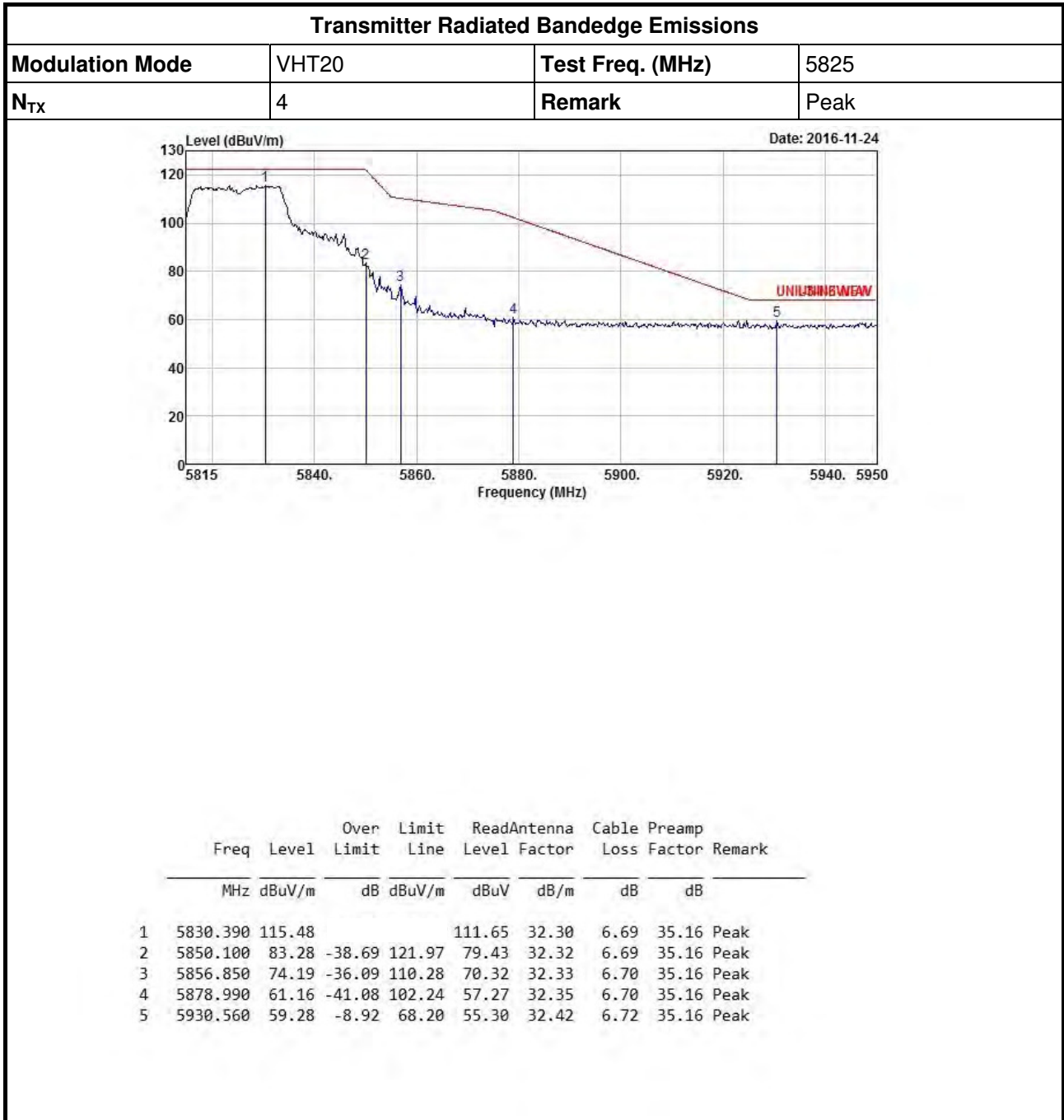


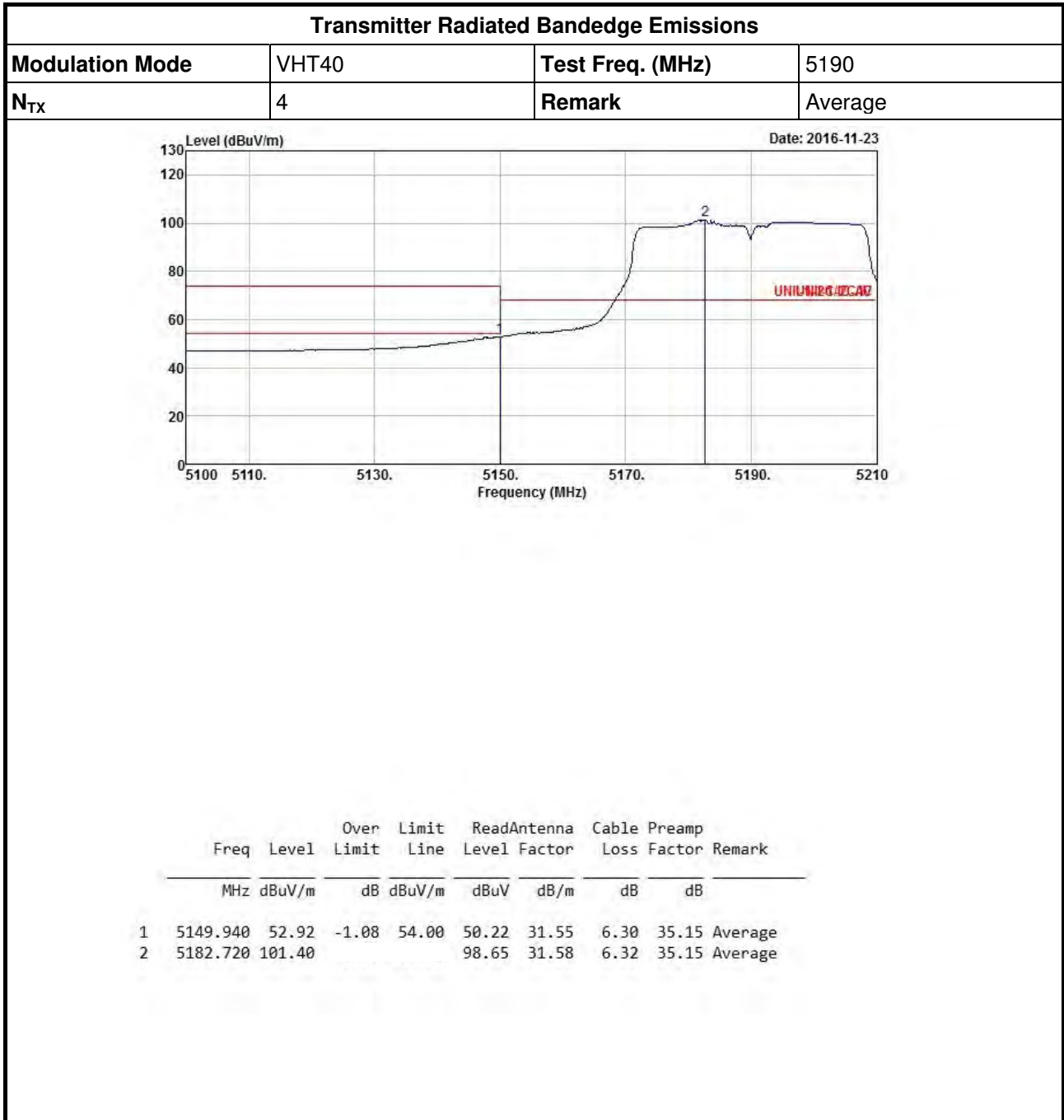


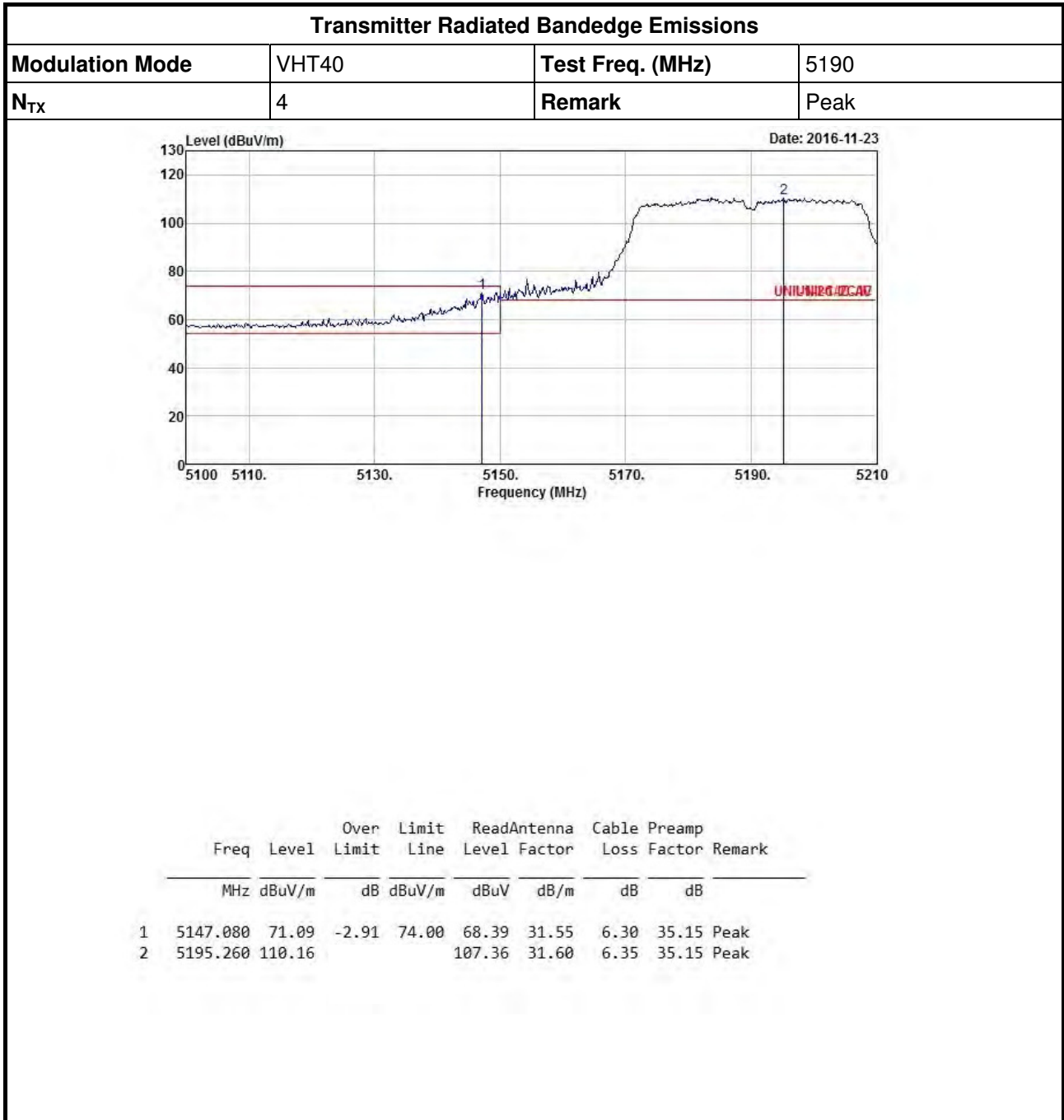


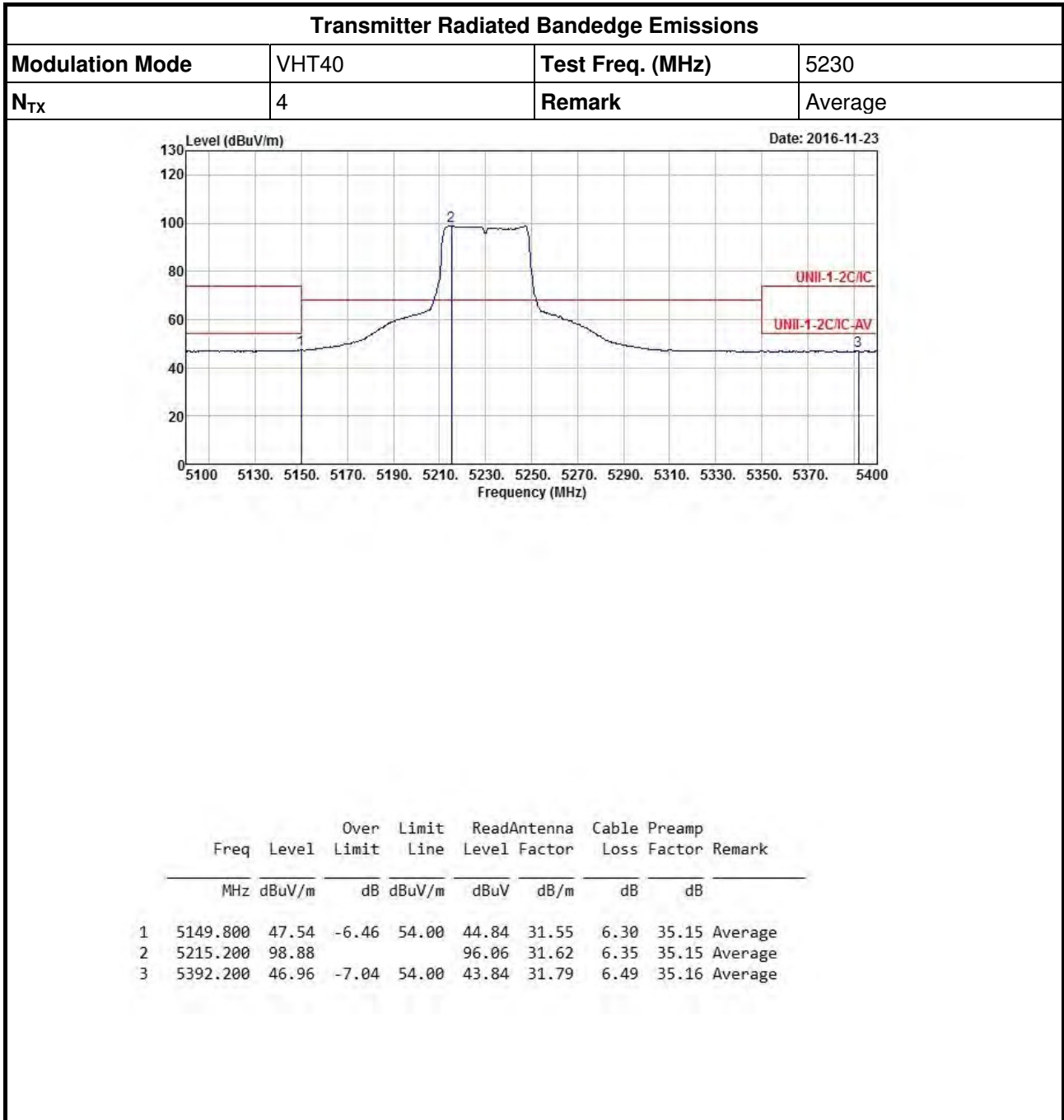


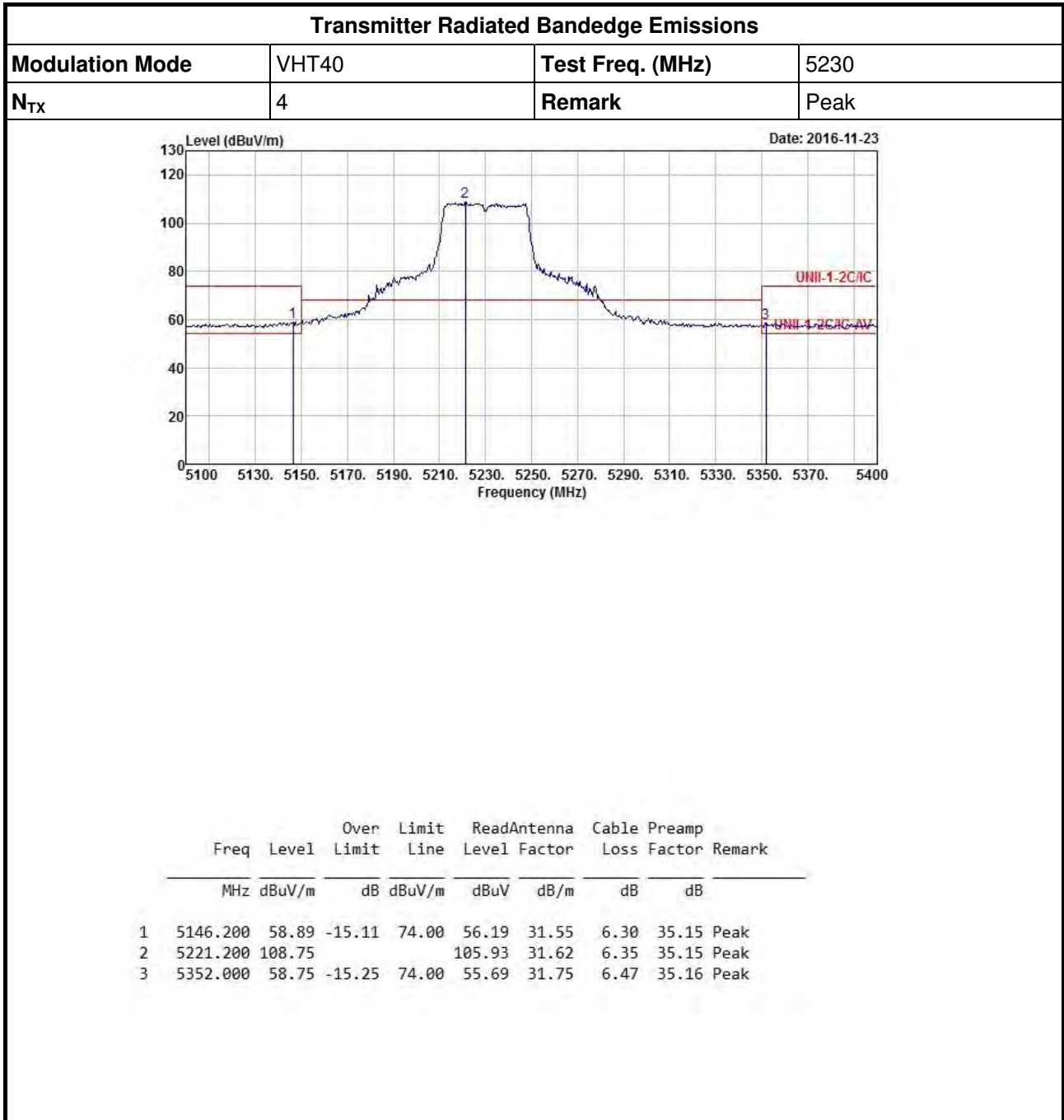


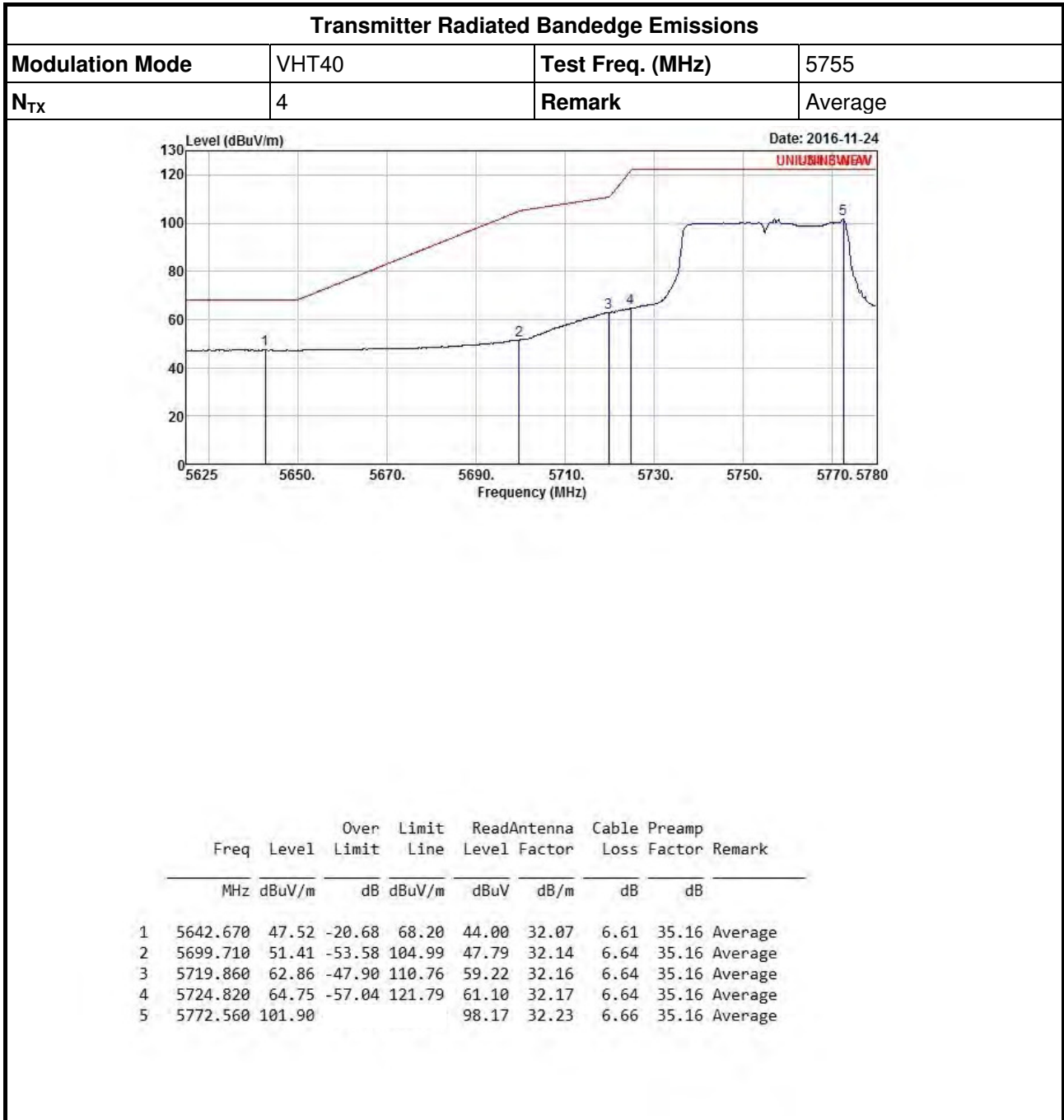




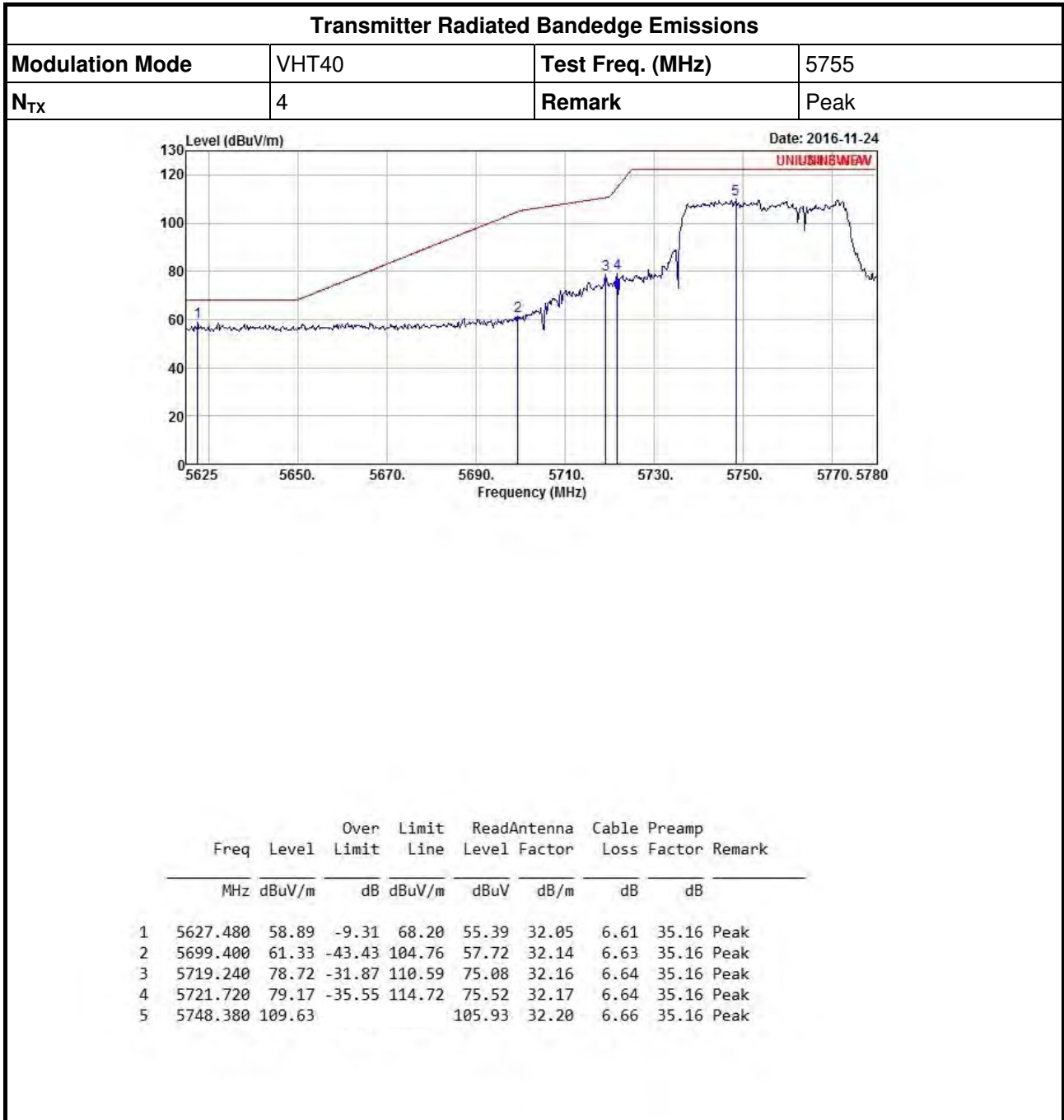


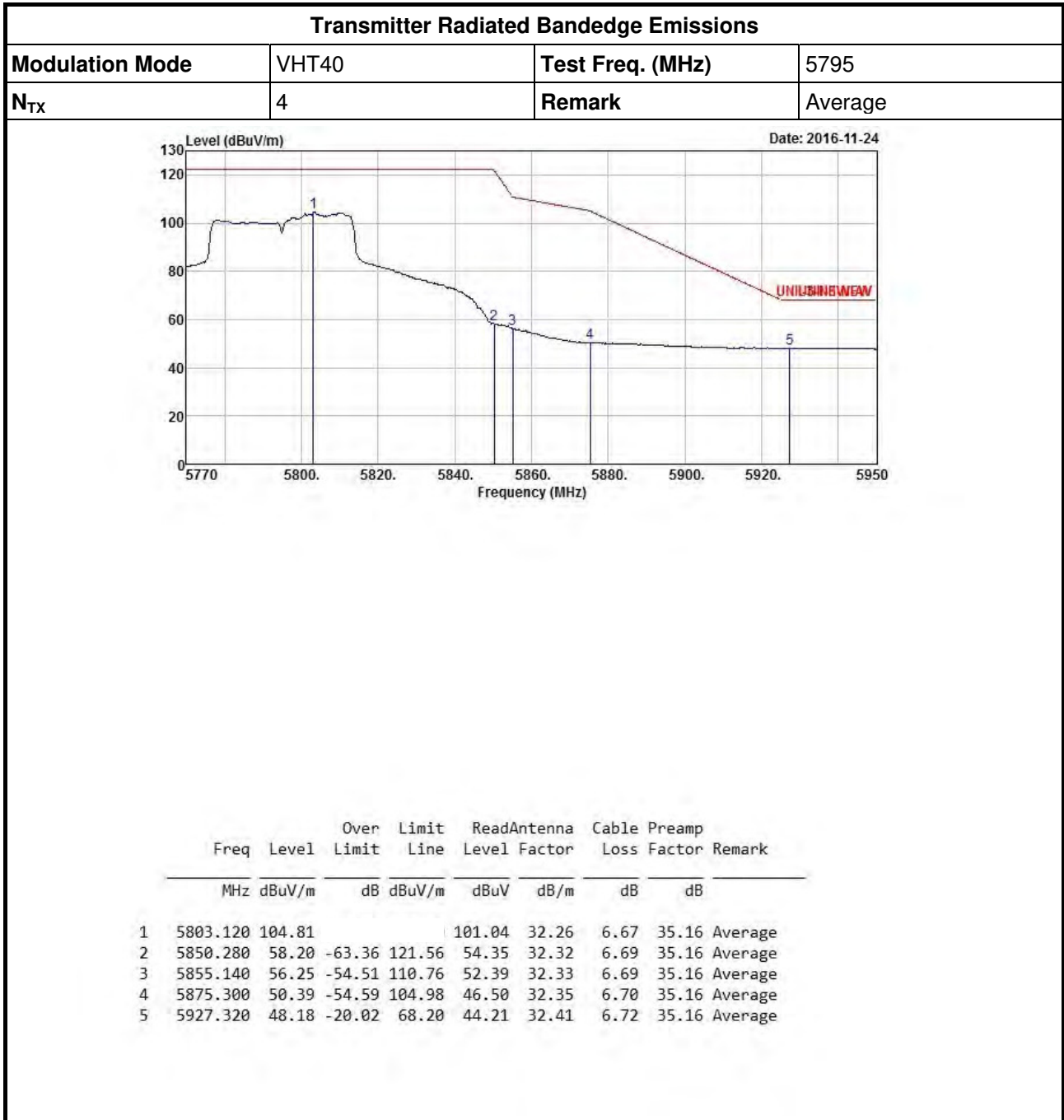


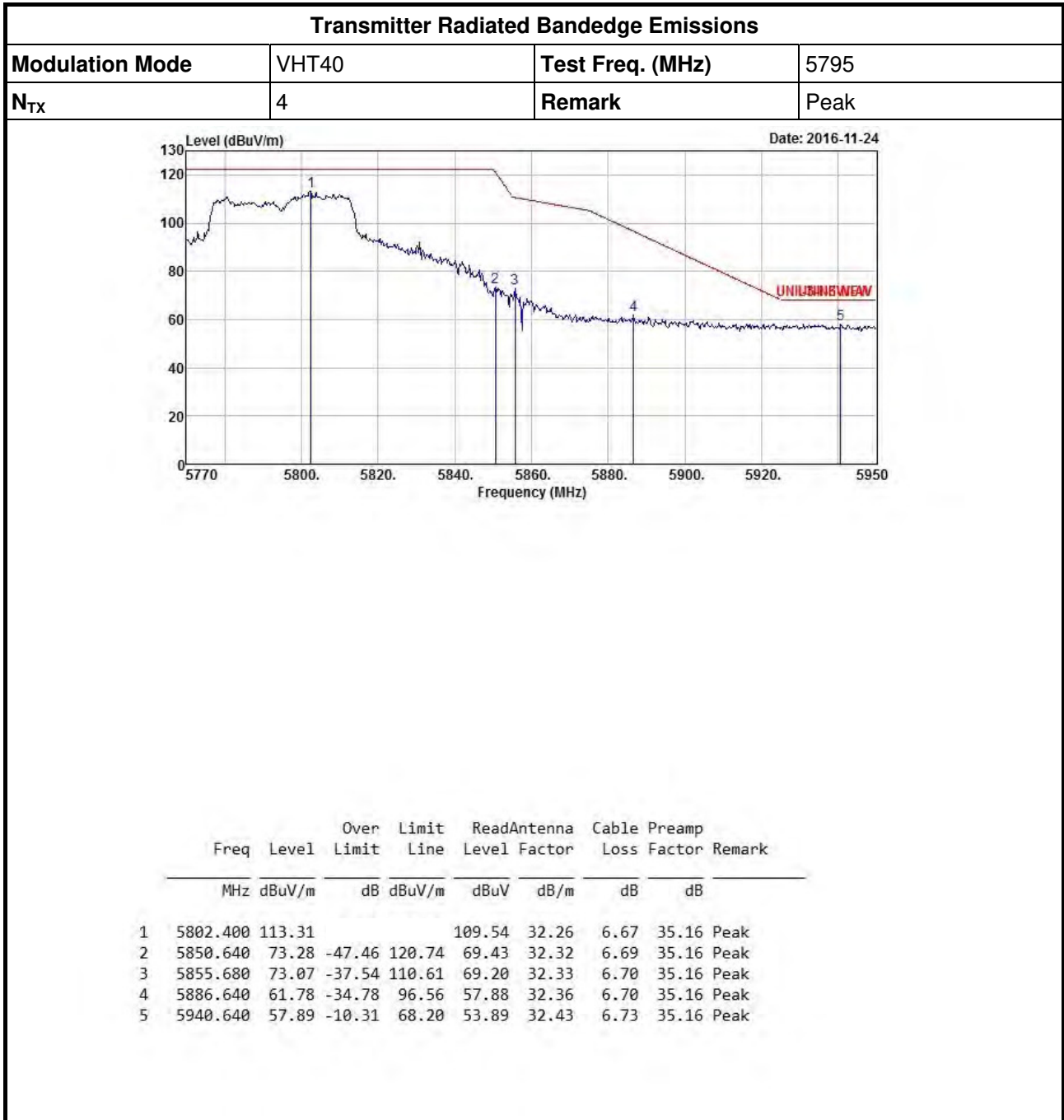


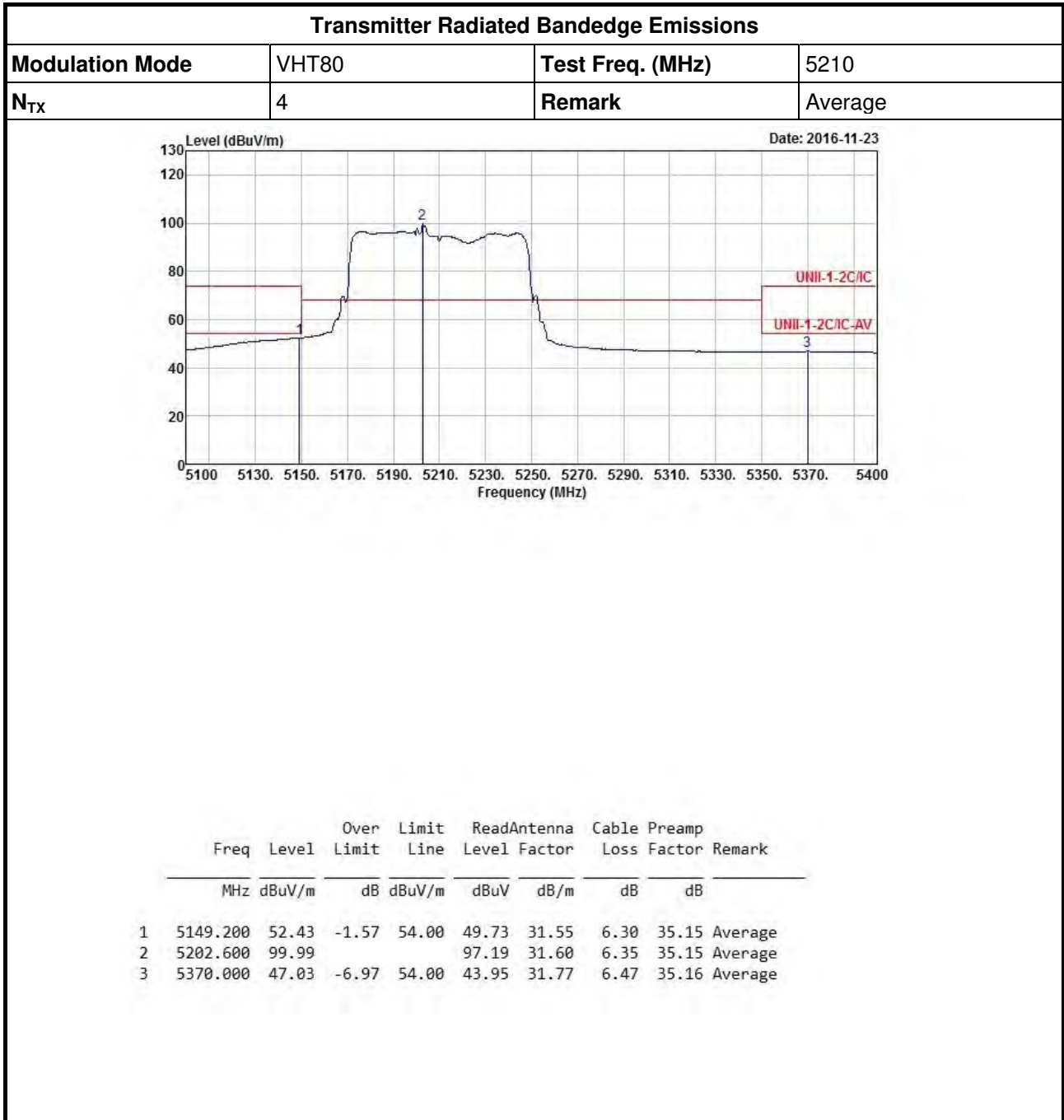


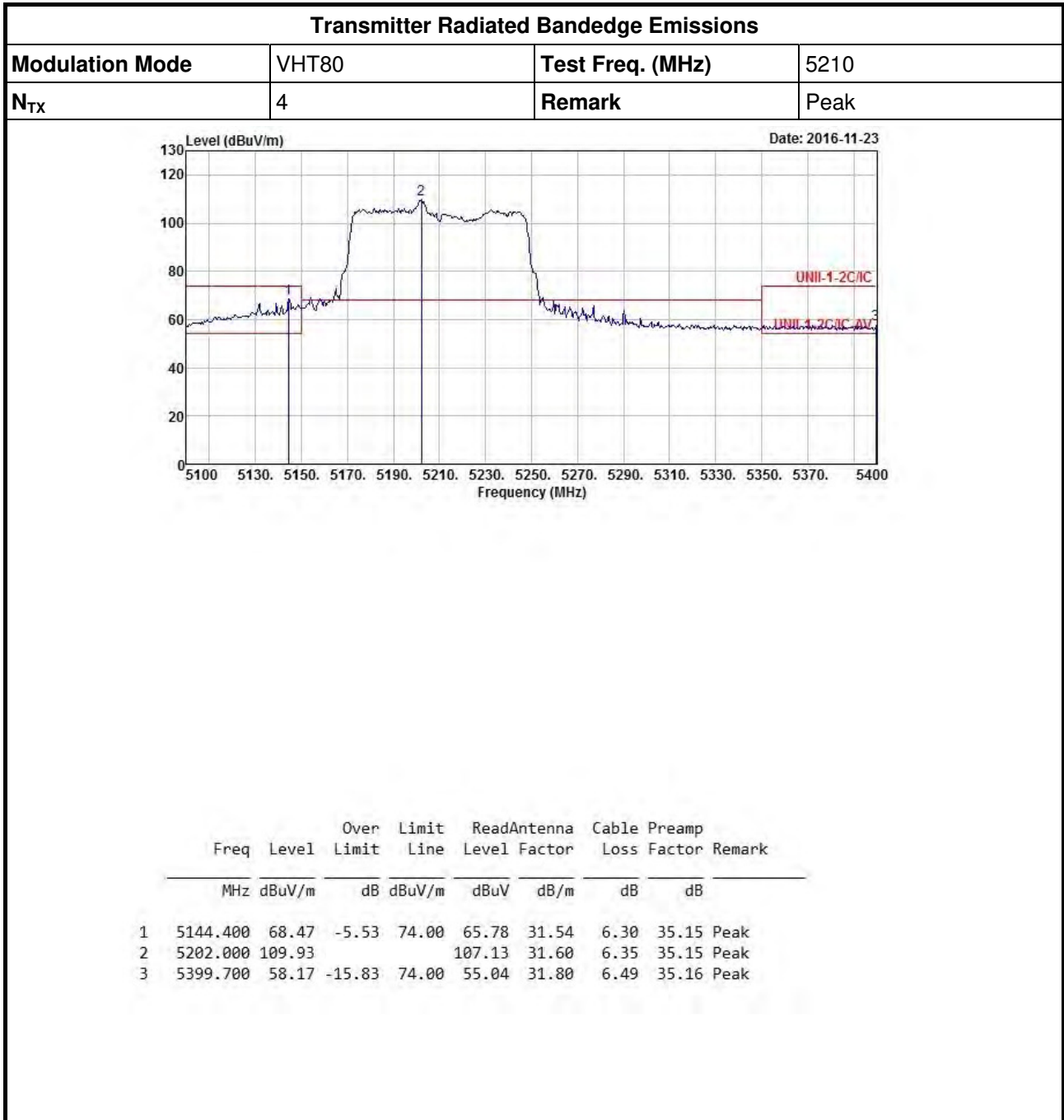








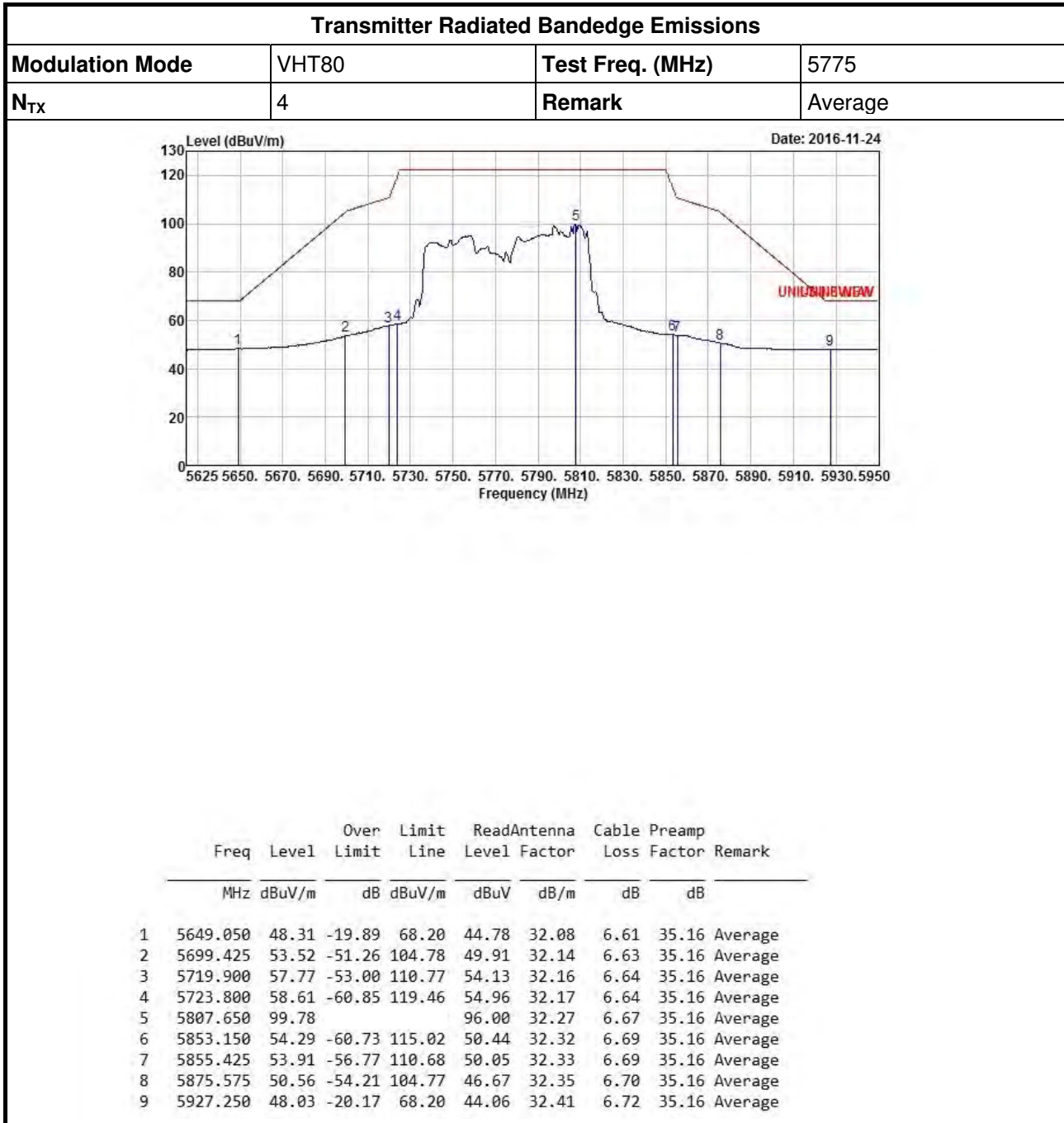


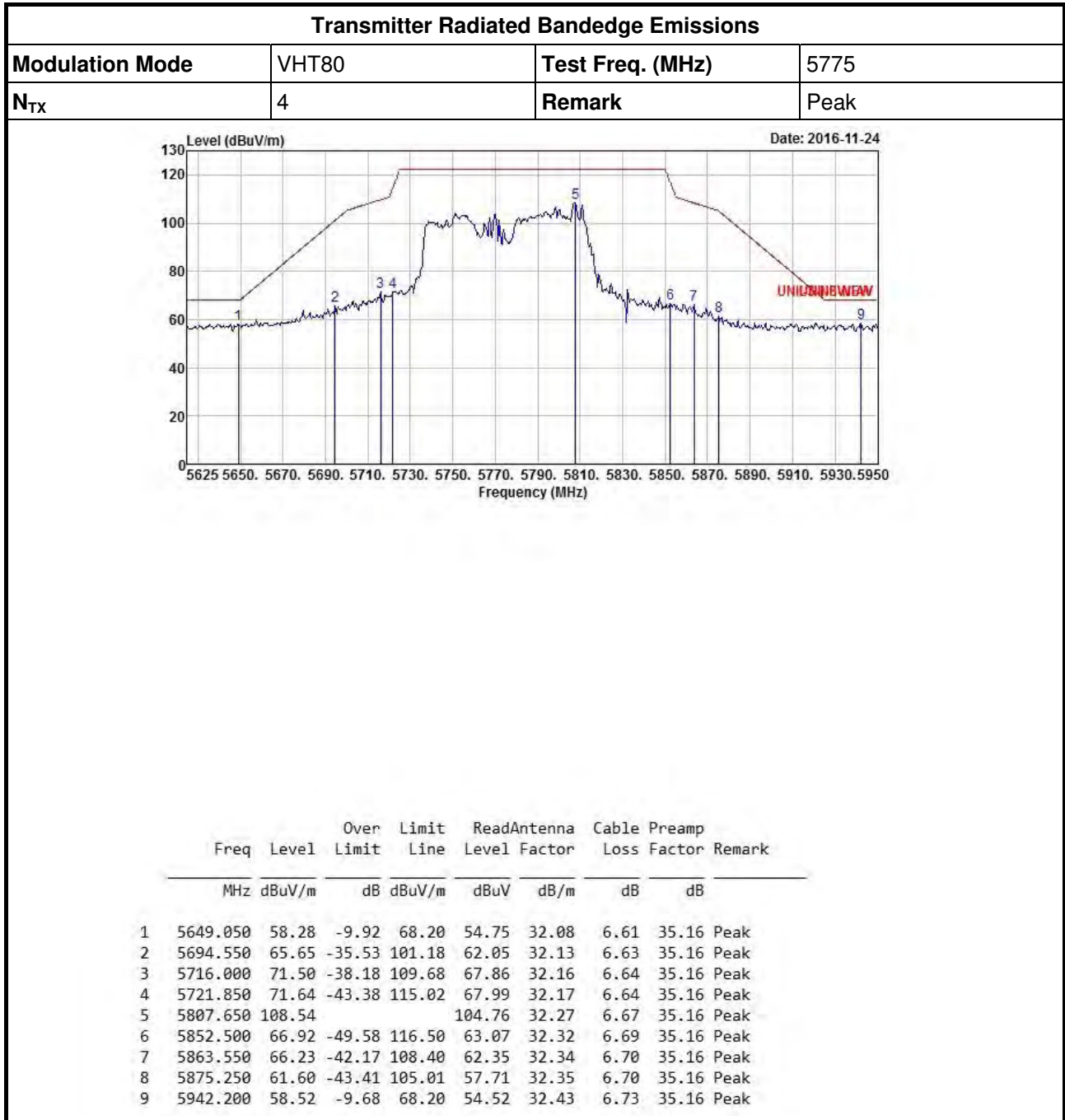




# Transmitter Radiated Bandedge Emissions (Beamforming)

Appendix D

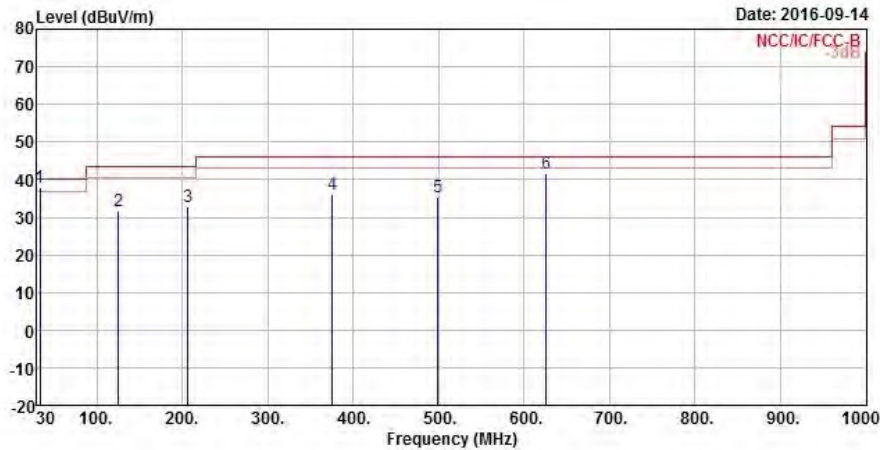






**Transmitter Radiated Unwanted Emissions (Below 1GHz)**

Transmitter Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	2	Polarization	V
Operating Function	UPS Mode		



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Gain	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	33.880	37.98	-2.02	40.00	52.21	22.80	0.34	37.37	QP
2	125.060	31.66	-11.84	43.50	50.73	17.00	0.64	36.71	Peak
3	206.540	32.65	-10.85	43.50	52.94	15.30	0.80	36.39	Peak
4	375.320	36.04	-9.96	46.00	50.65	20.91	1.08	36.60	Peak
5	499.480	35.52	-10.48	46.00	47.92	23.29	1.29	36.98	Peak
6	625.580	41.80	-4.20	46.00	52.68	25.01	1.44	37.33	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).  
 Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

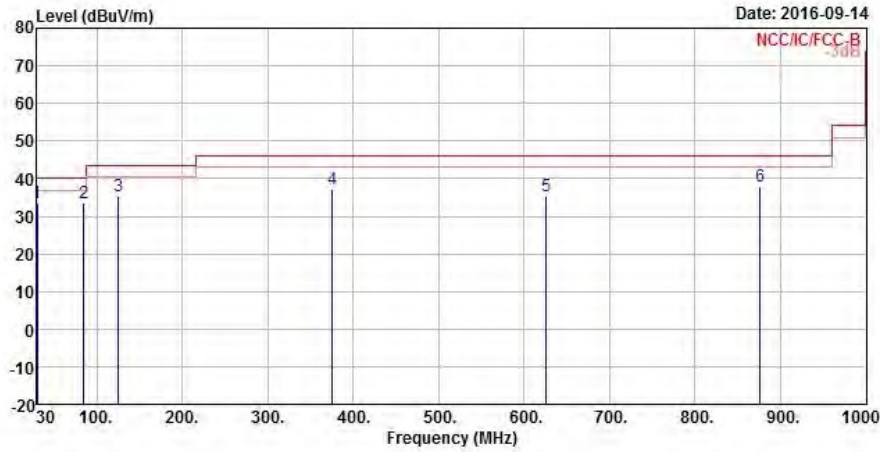




# Transmitter Radiated Unwanted Emissions (Non-Beamforming)

## Transmitter Radiated Unwanted Emissions (Below 1GHz)

Operating Mode	2	Polarization	H
Operating Function	UPS Mode		



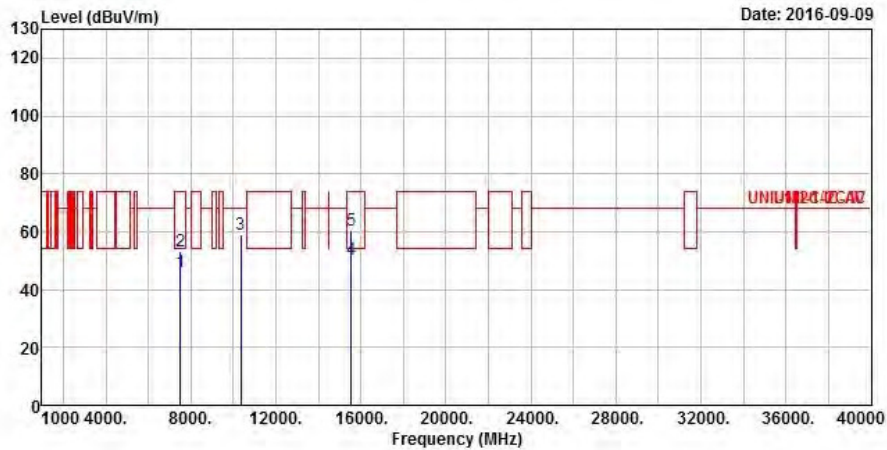
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Factor	
			dB	dBuV/m	dBuV	dB	dB	dB	
1	30.000	33.47	-6.53	40.00	45.67	24.90	0.32	37.42	Peak
2	84.320	33.61	-6.39	40.00	56.60	13.42	0.53	36.94	Peak
3	125.060	35.47	-8.03	43.50	54.54	17.00	0.64	36.71	Peak
4	375.320	37.27	-8.73	46.00	51.88	20.91	1.08	36.60	Peak
5	625.580	35.30	-10.70	46.00	46.18	25.01	1.44	37.33	Peak
6	875.840	37.90	-8.10	46.00	45.49	28.30	1.76	37.65	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).  
 Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.



**Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5150-5250MHz**

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	Test Freq. (MHz)	5180
N <sub>TX</sub>	4	Polarization	V

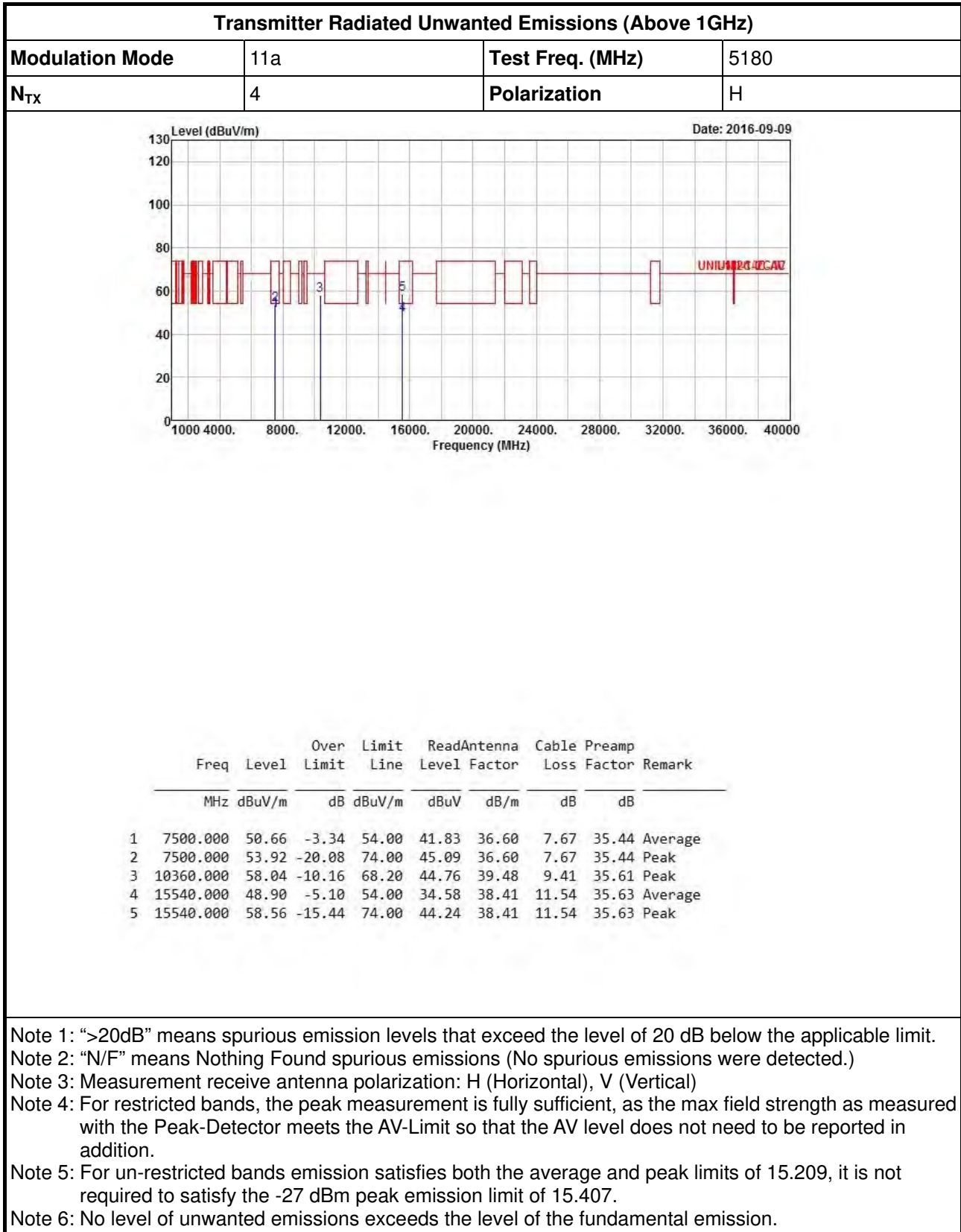


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7500.000	45.99	-8.01	54.00	37.16	36.60	7.67	35.44	Average
2	7500.000	53.20	-20.80	74.00	44.37	36.60	7.67	35.44	Peak
3	10360.000	58.99	-9.21	68.20	45.71	39.48	9.41	35.61	Peak
4	15540.000	50.25	-3.75	54.00	35.93	38.41	11.54	35.63	Average
5	15540.000	60.68	-13.32	74.00	46.36	38.41	11.54	35.63	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

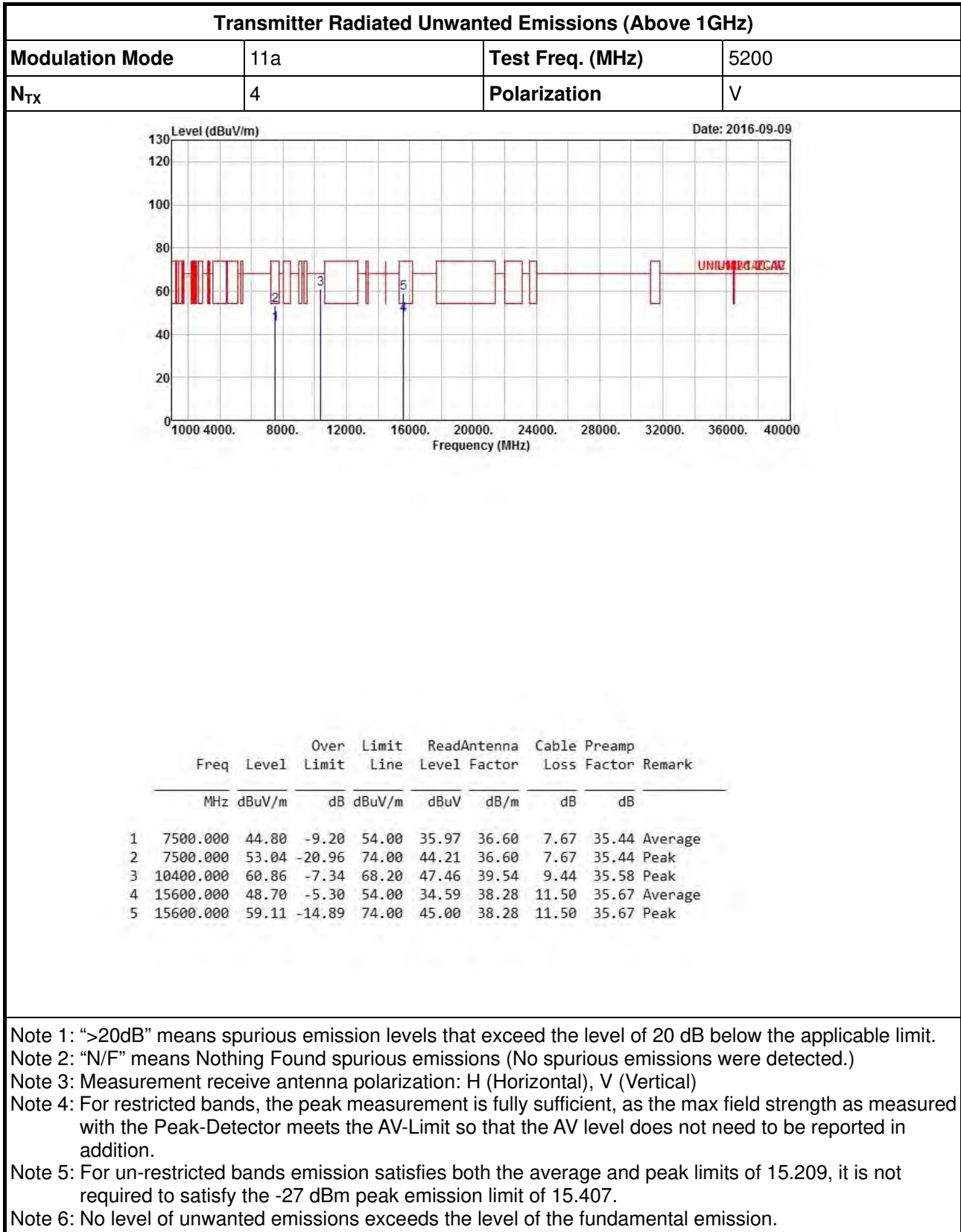


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



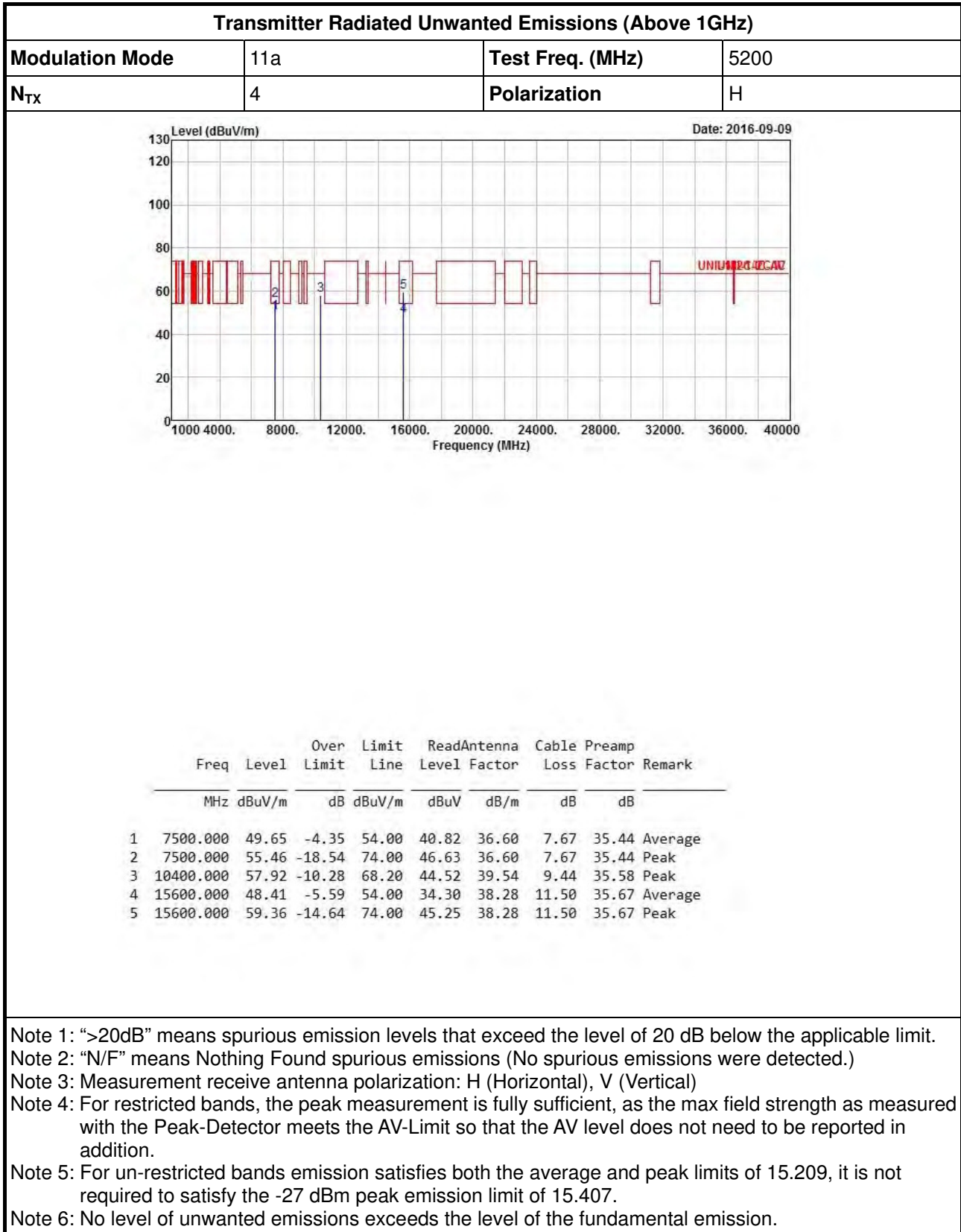


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



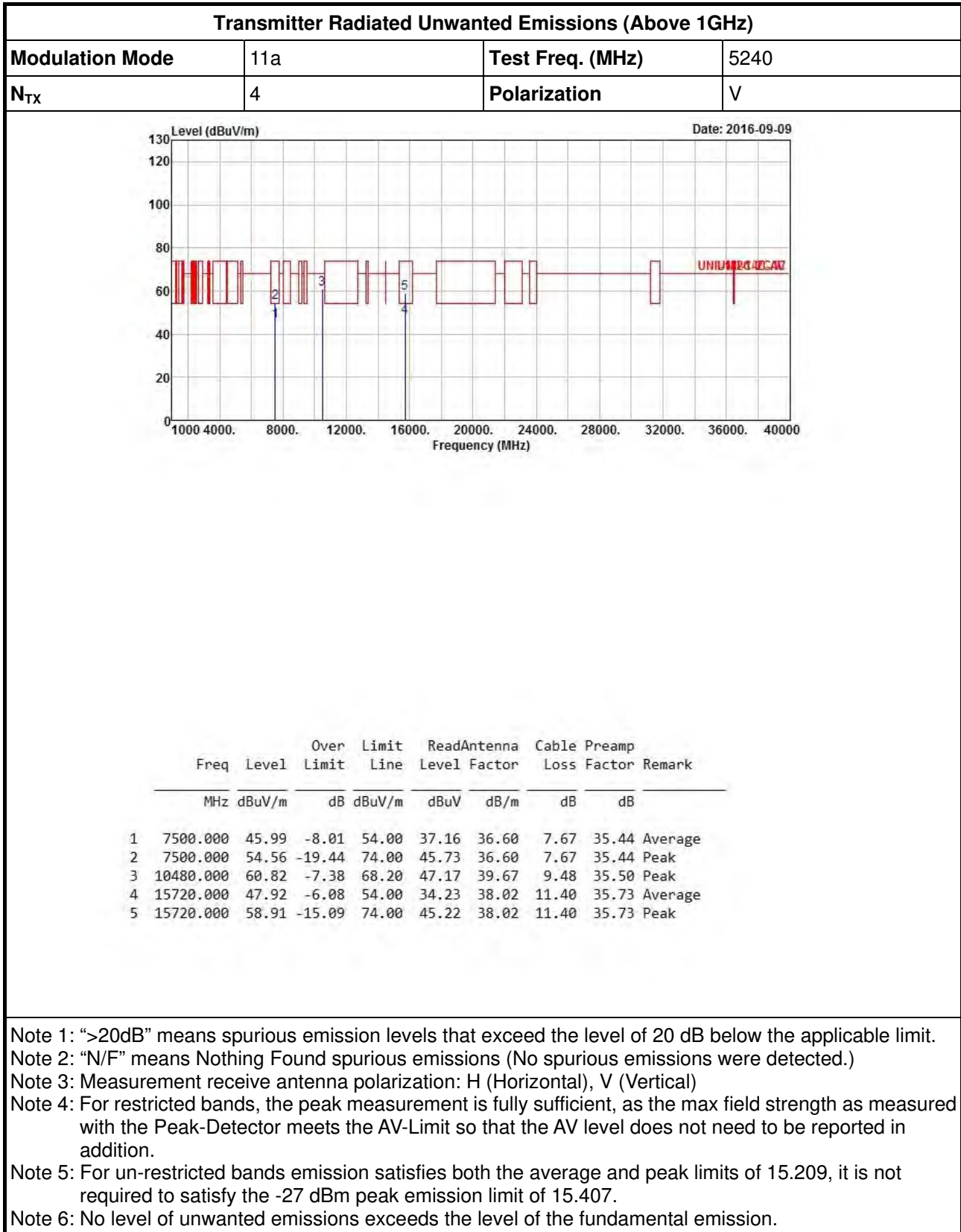


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



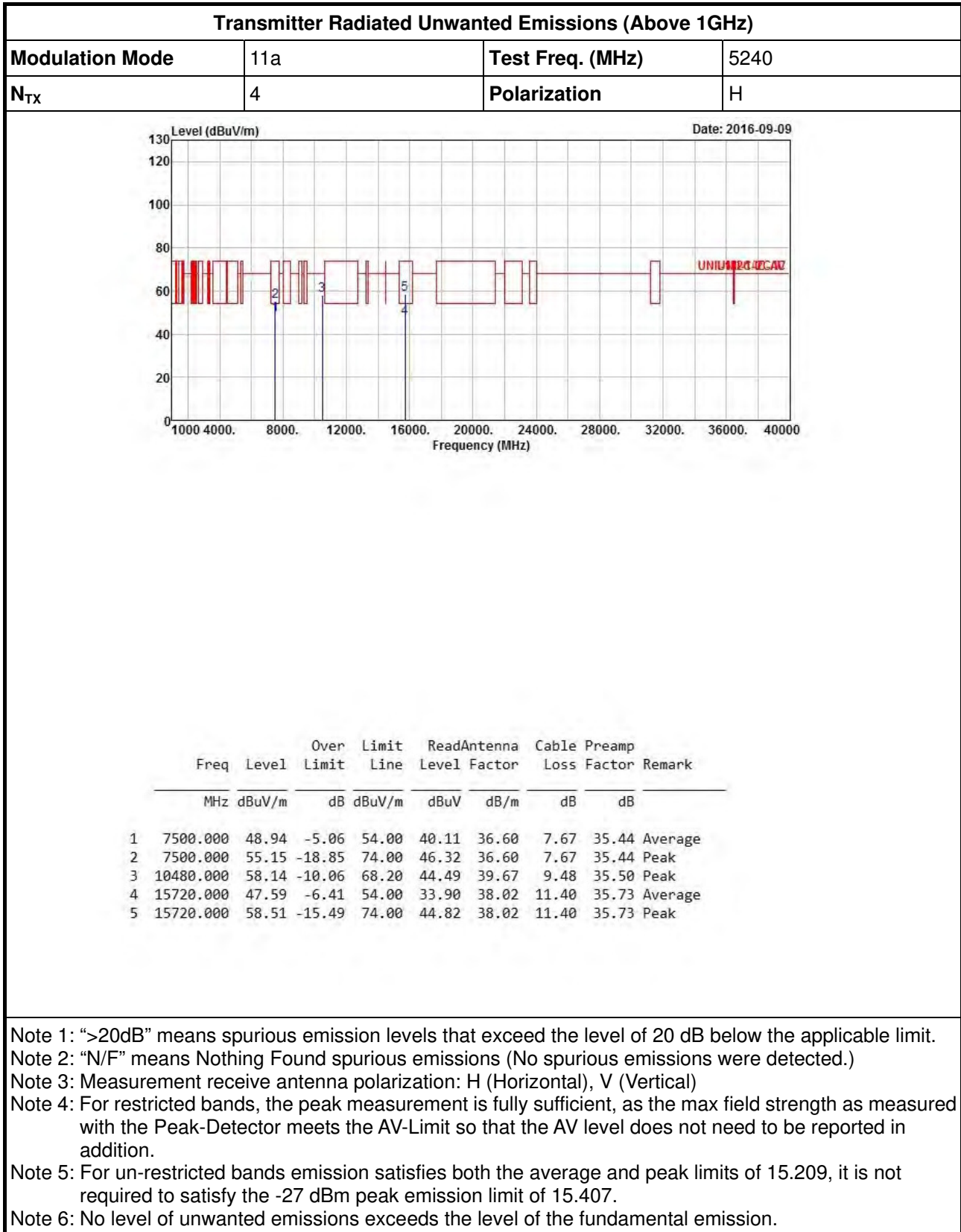


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



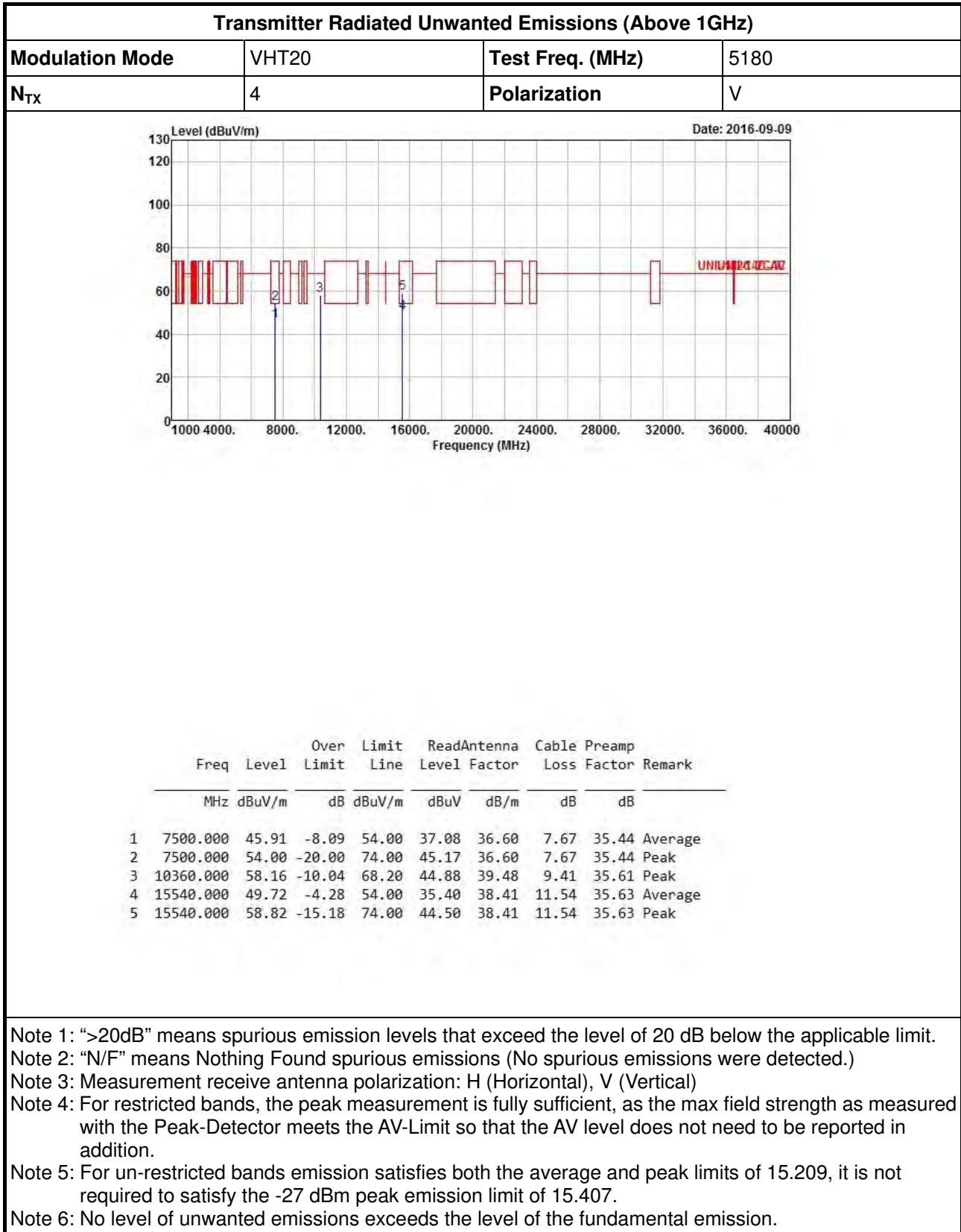


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





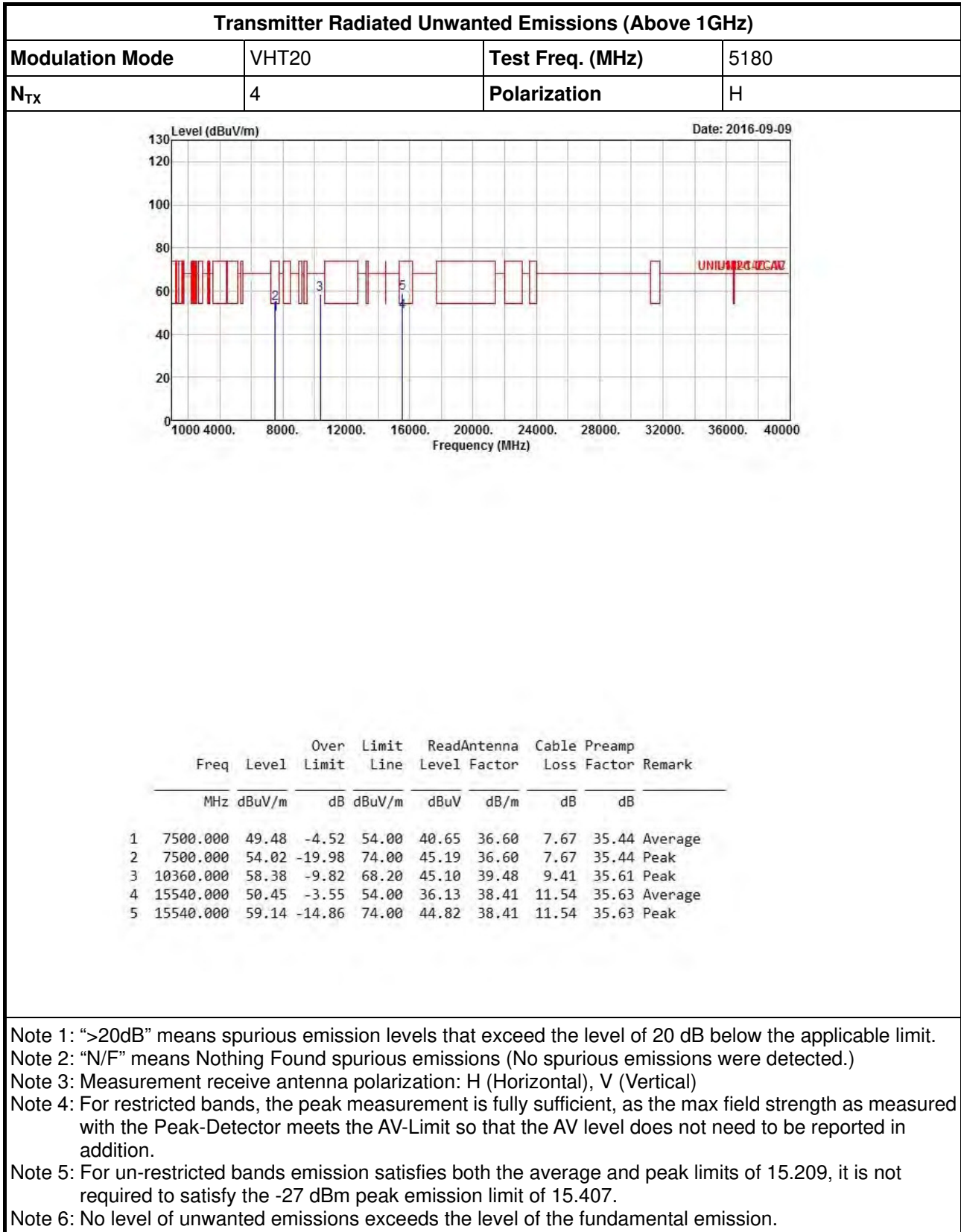
# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





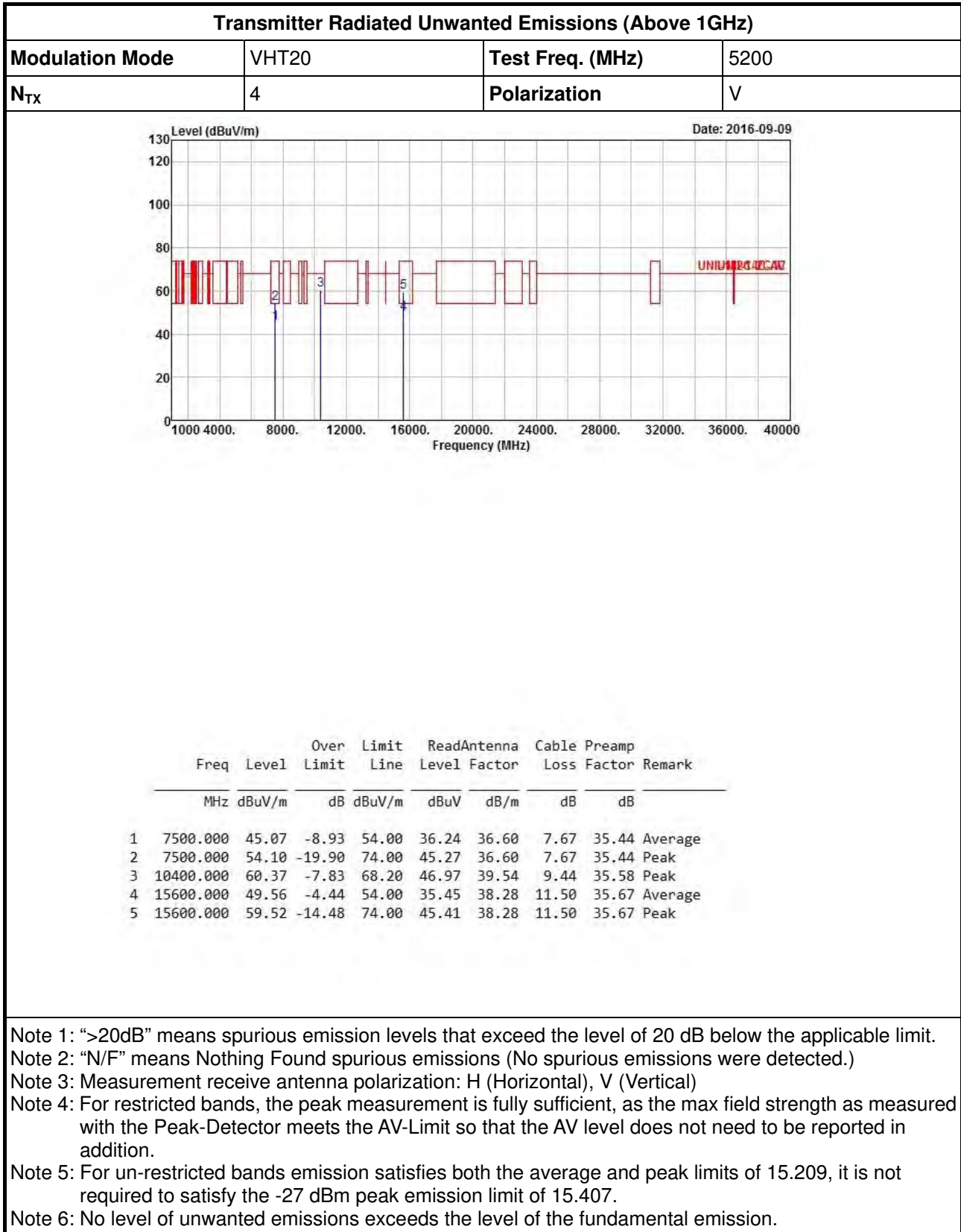


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



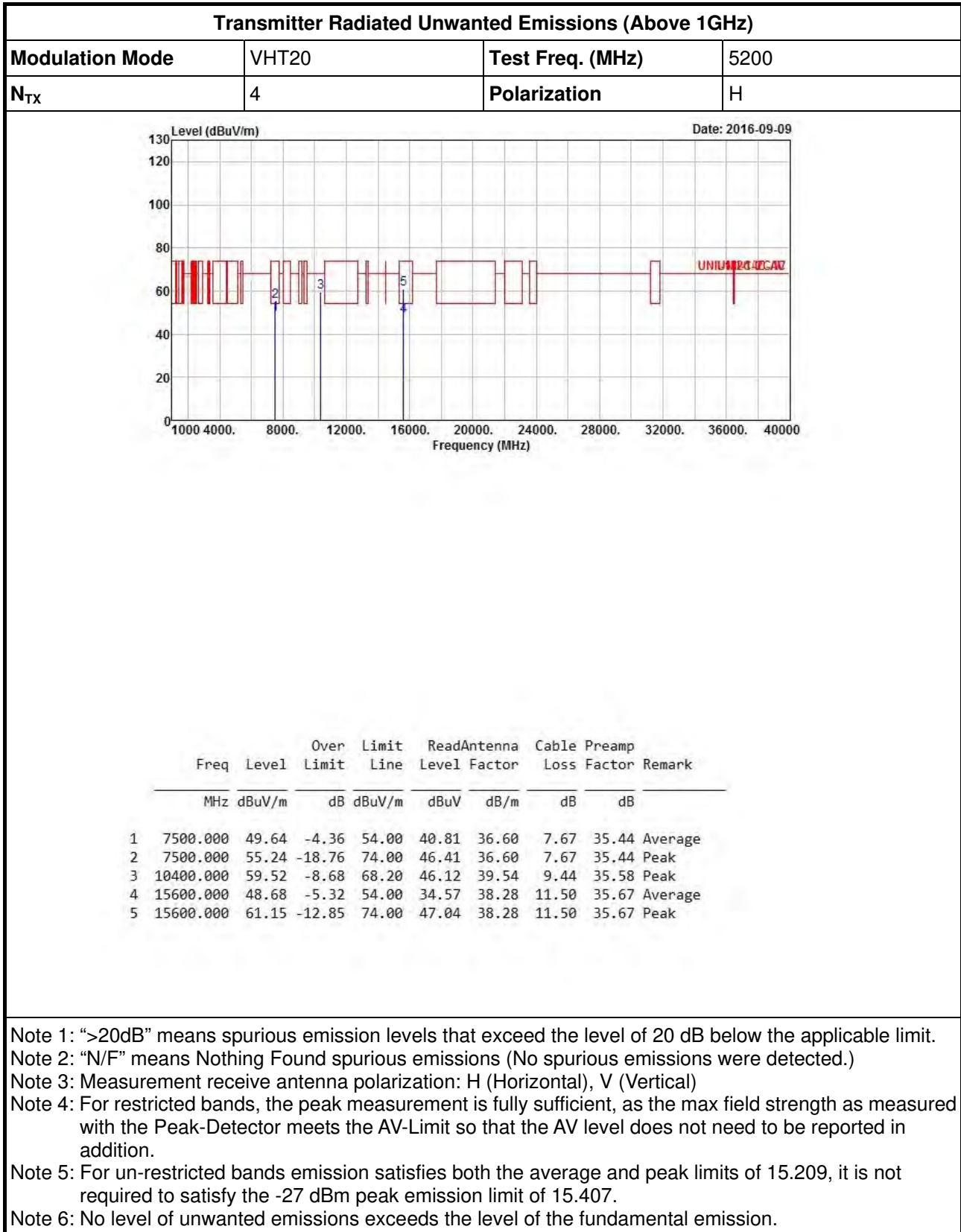


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



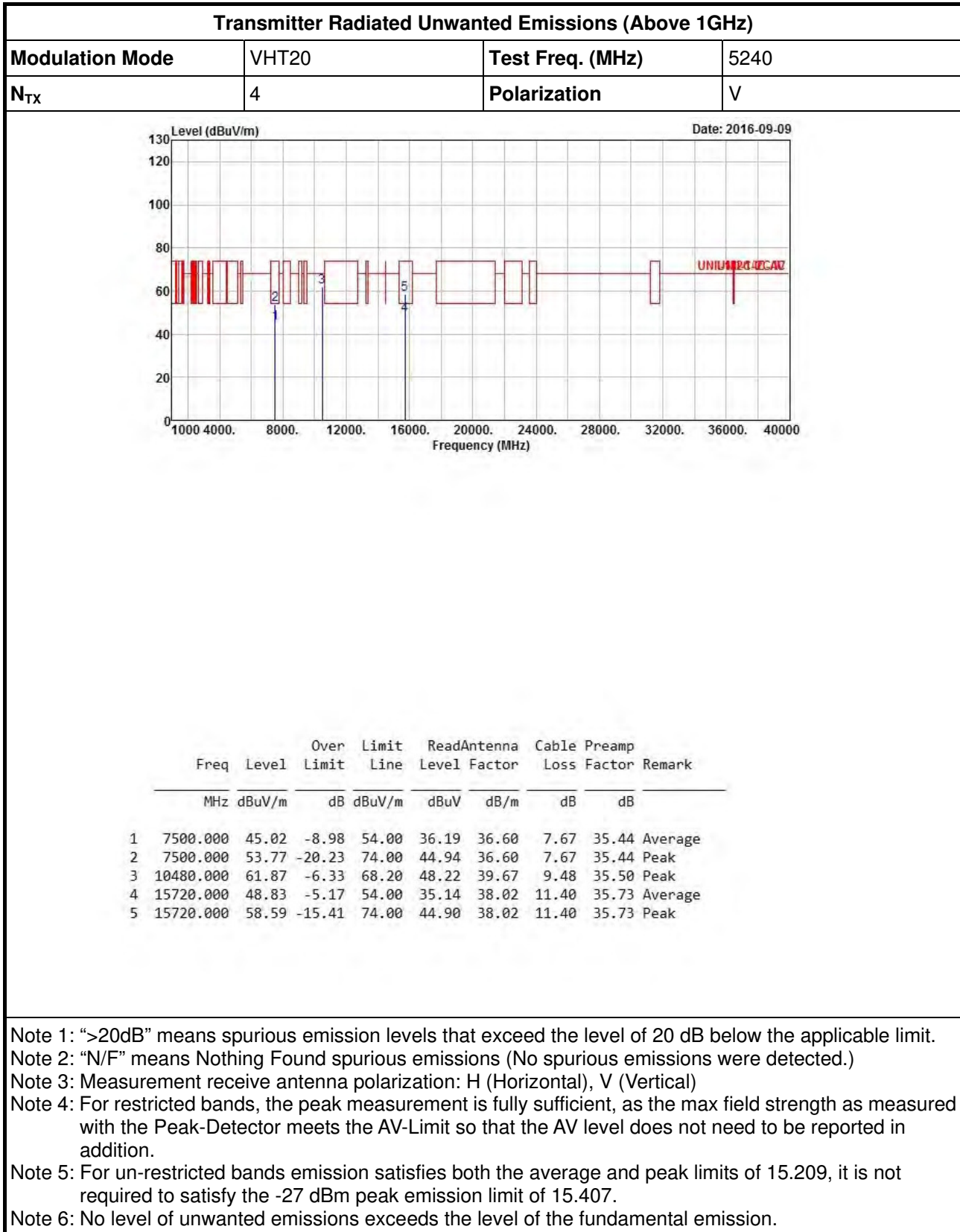


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



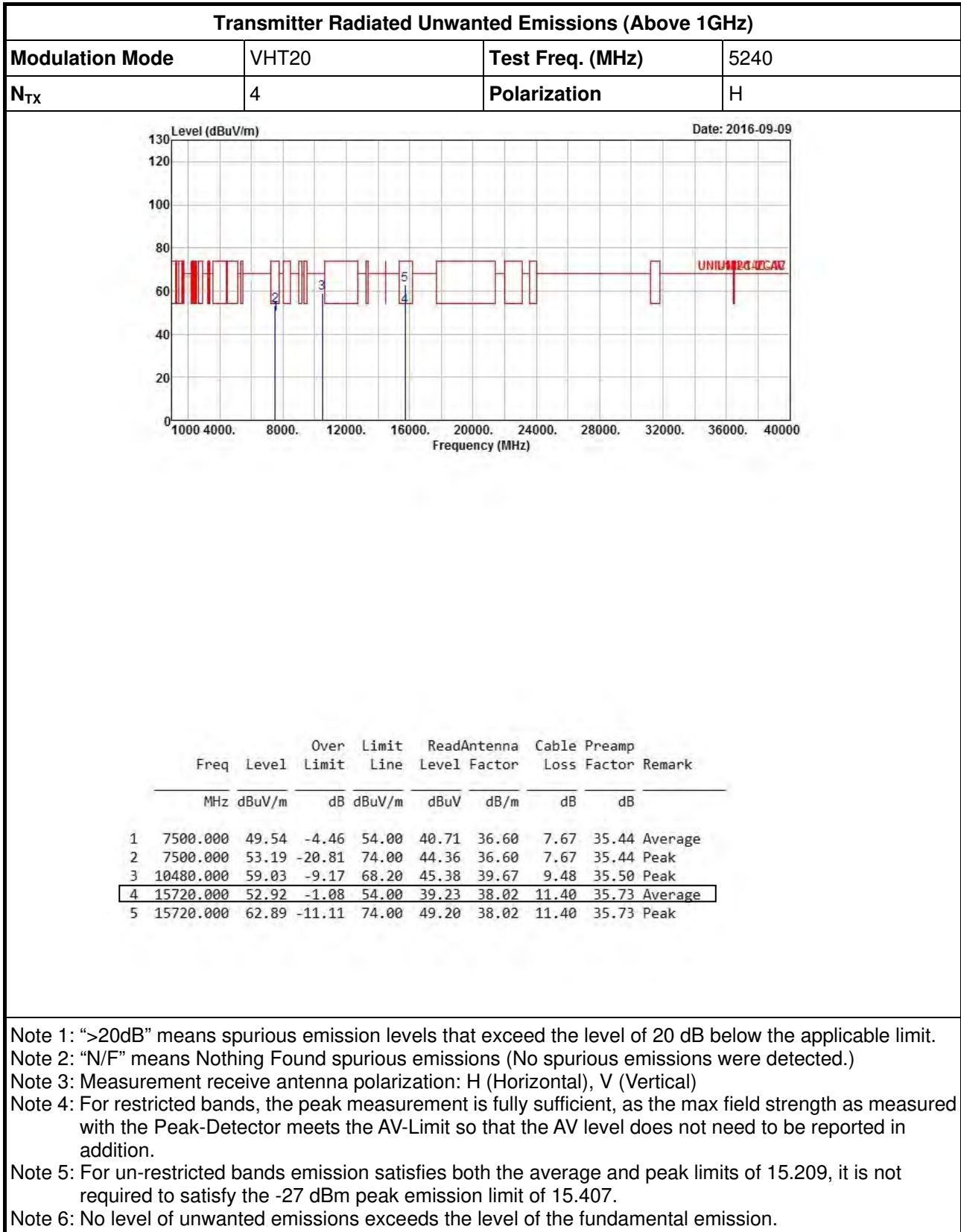


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



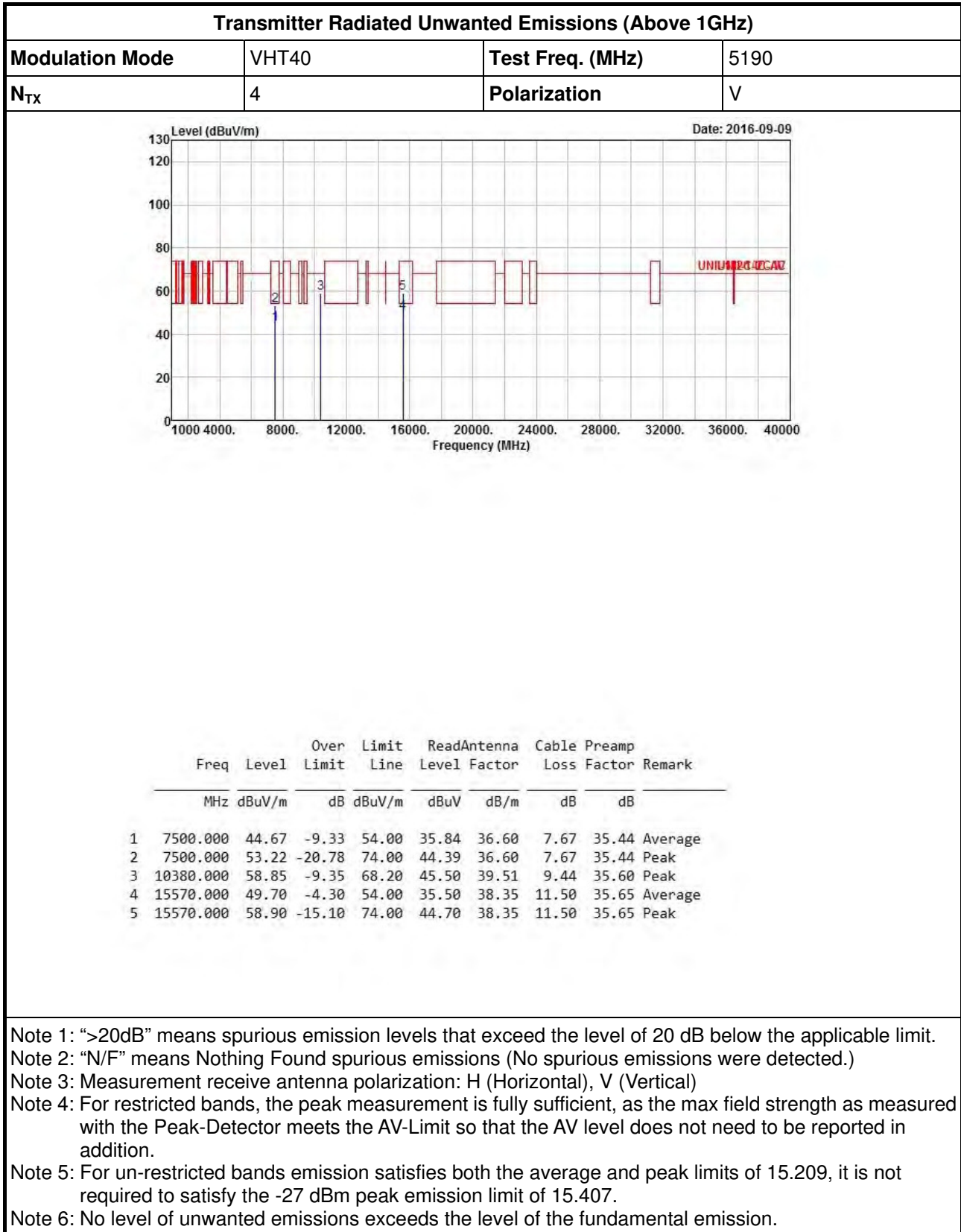


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



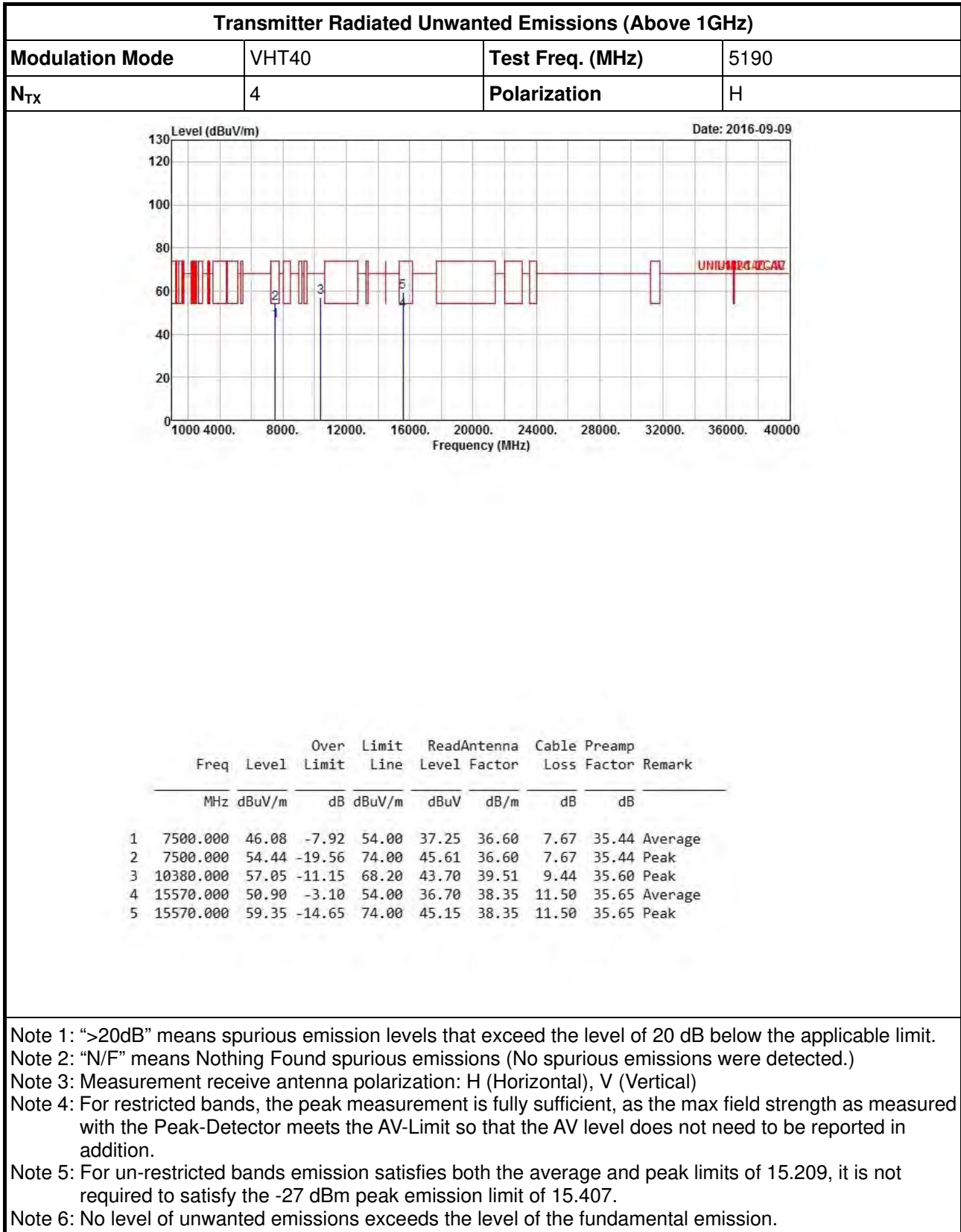


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



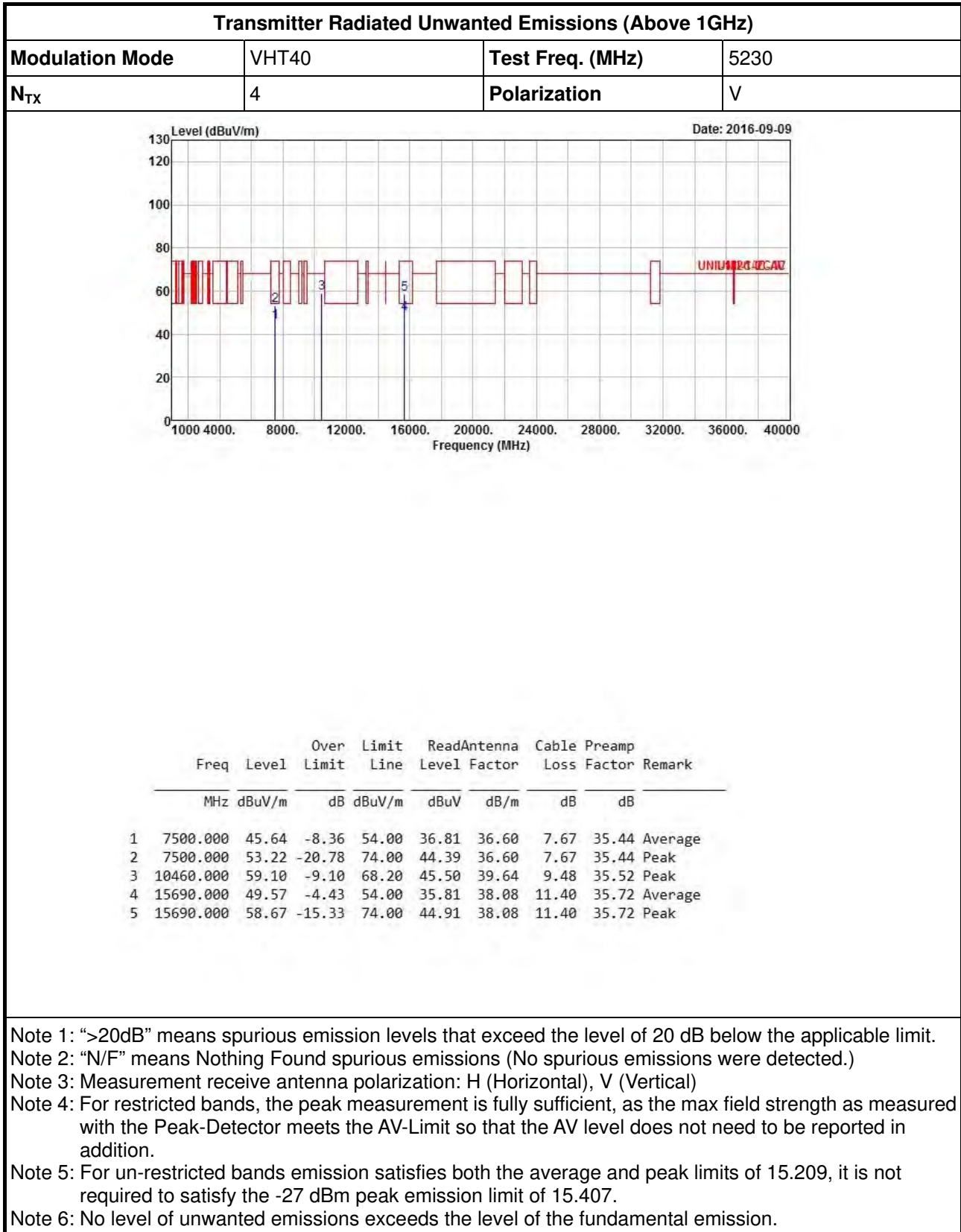


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





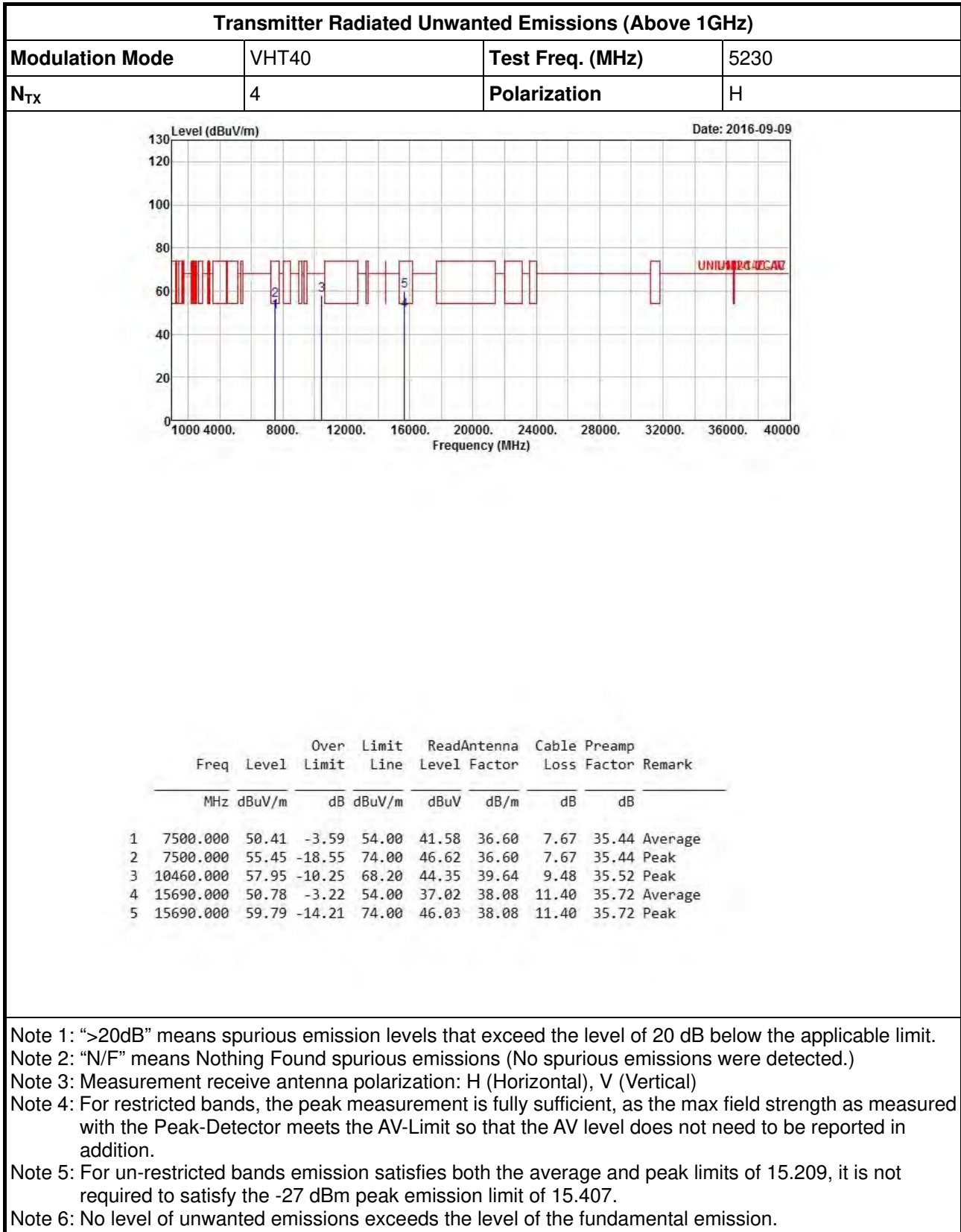
# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





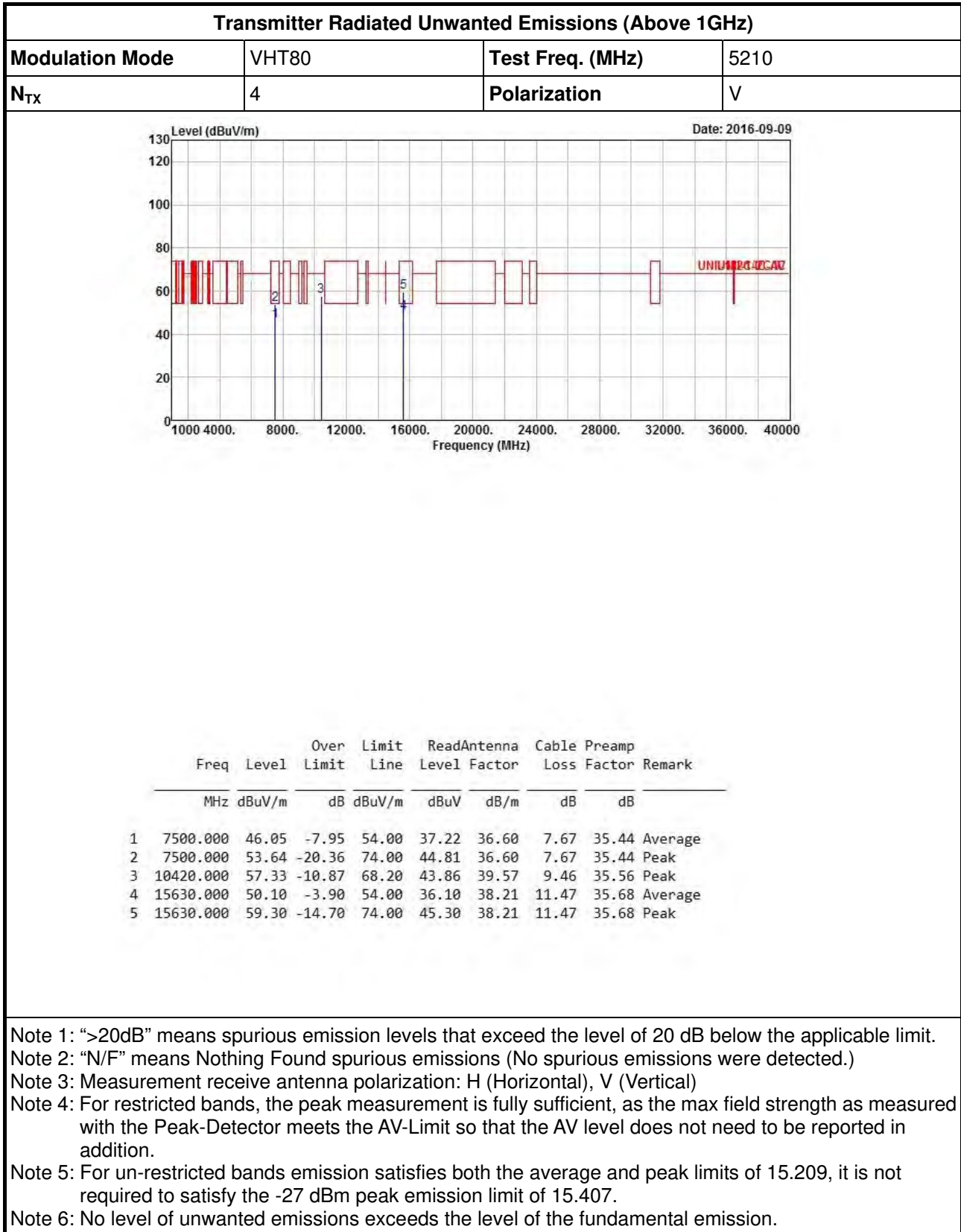


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



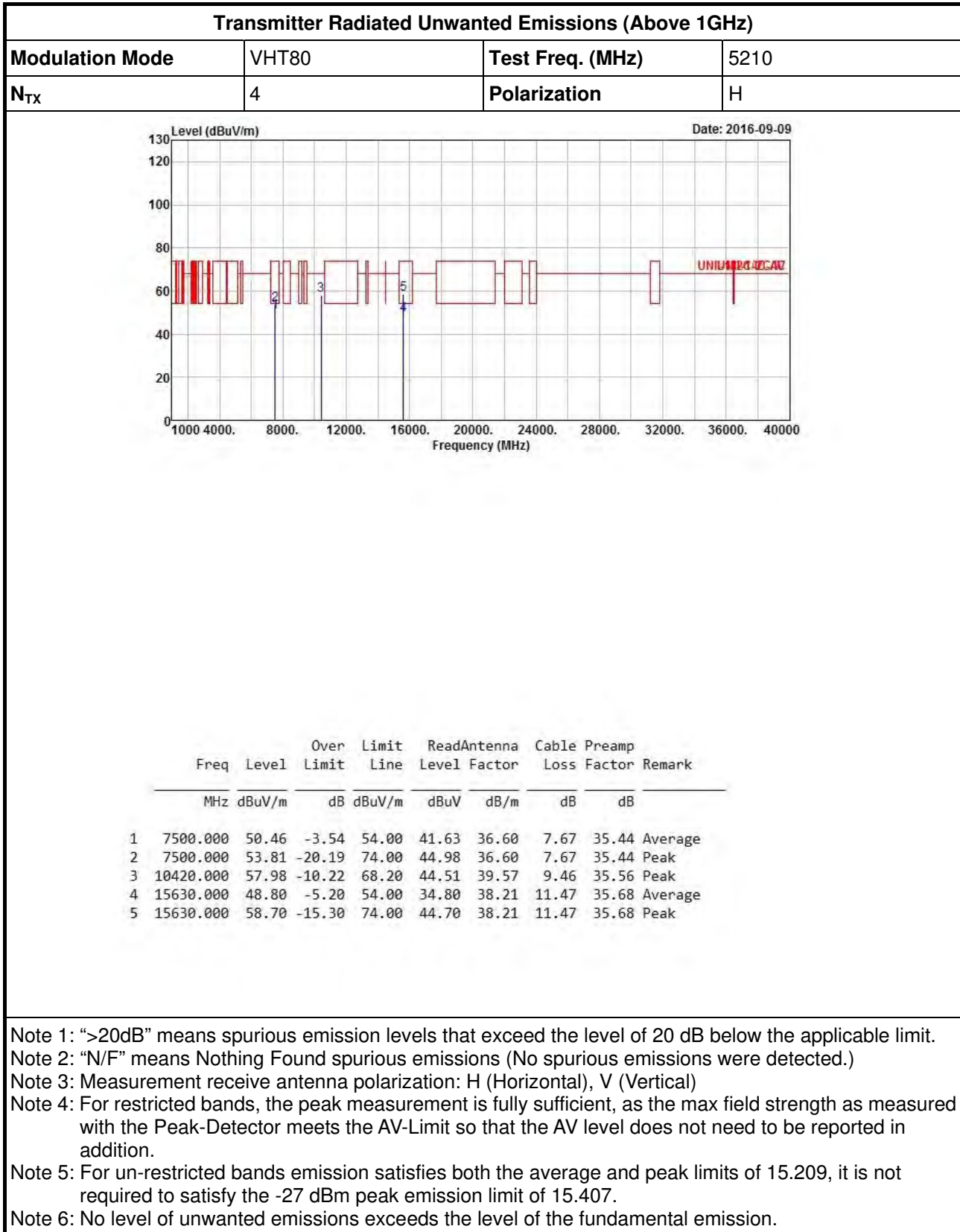


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





**Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5725-5850MHz**

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
<b>Modulation Mode</b>	11a	<b>Test Freq. (MHz)</b>	5745
<b>N<sub>TX</sub></b>	4	<b>Polarization</b>	V

Date: 2016-09-09

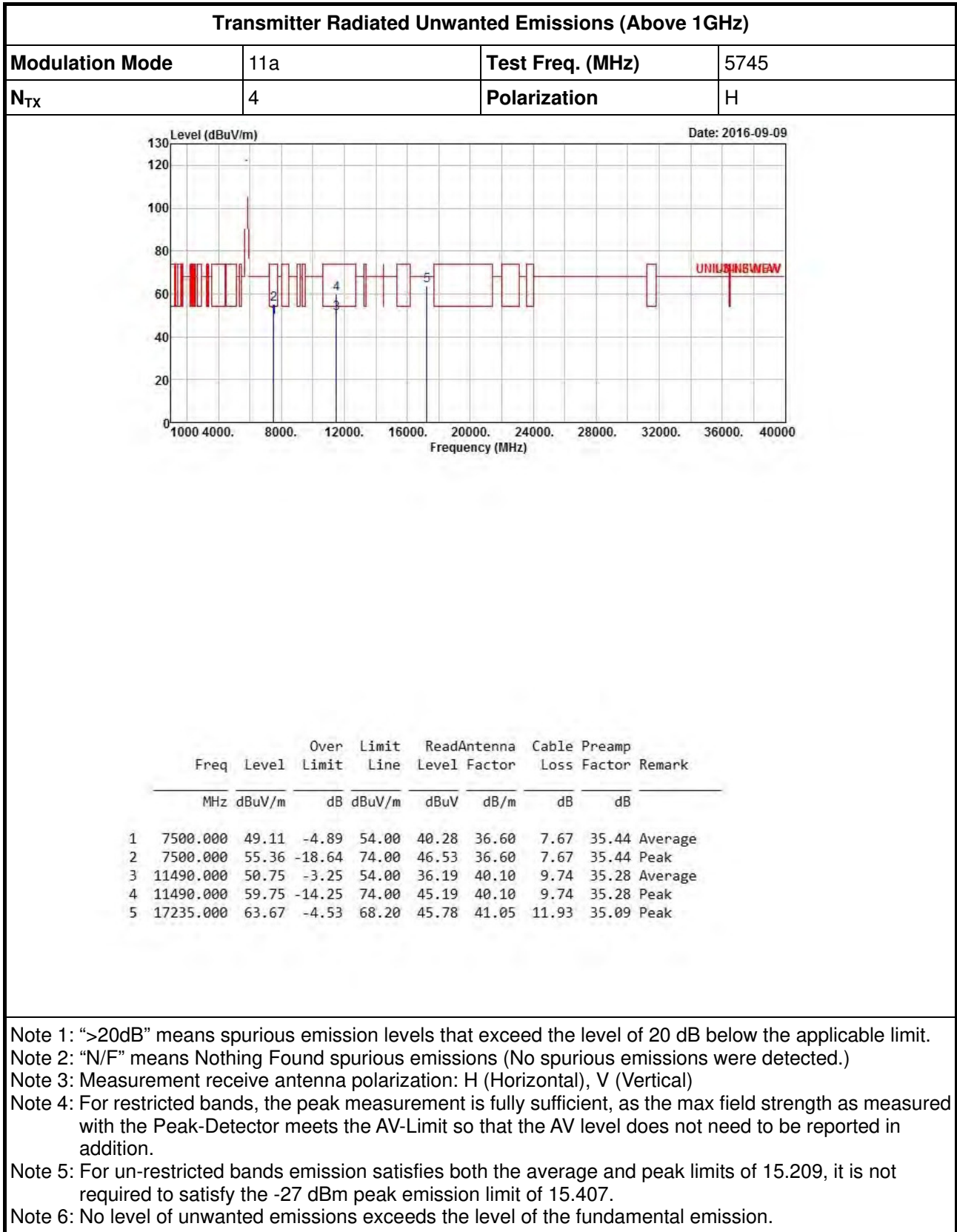
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	7500.000	46.25	-7.75	54.00	37.42	36.60	7.67	35.44 Average
2	7500.000	53.96	-20.04	74.00	45.13	36.60	7.67	35.44 Peak
3	11490.000	50.42	-3.58	54.00	35.86	40.10	9.74	35.28 Average
4	11490.000	59.27	-14.73	74.00	44.71	40.10	9.74	35.28 Peak
5	17235.000	63.06	-5.14	68.20	45.17	41.05	11.93	35.09 Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)  
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.  
 Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

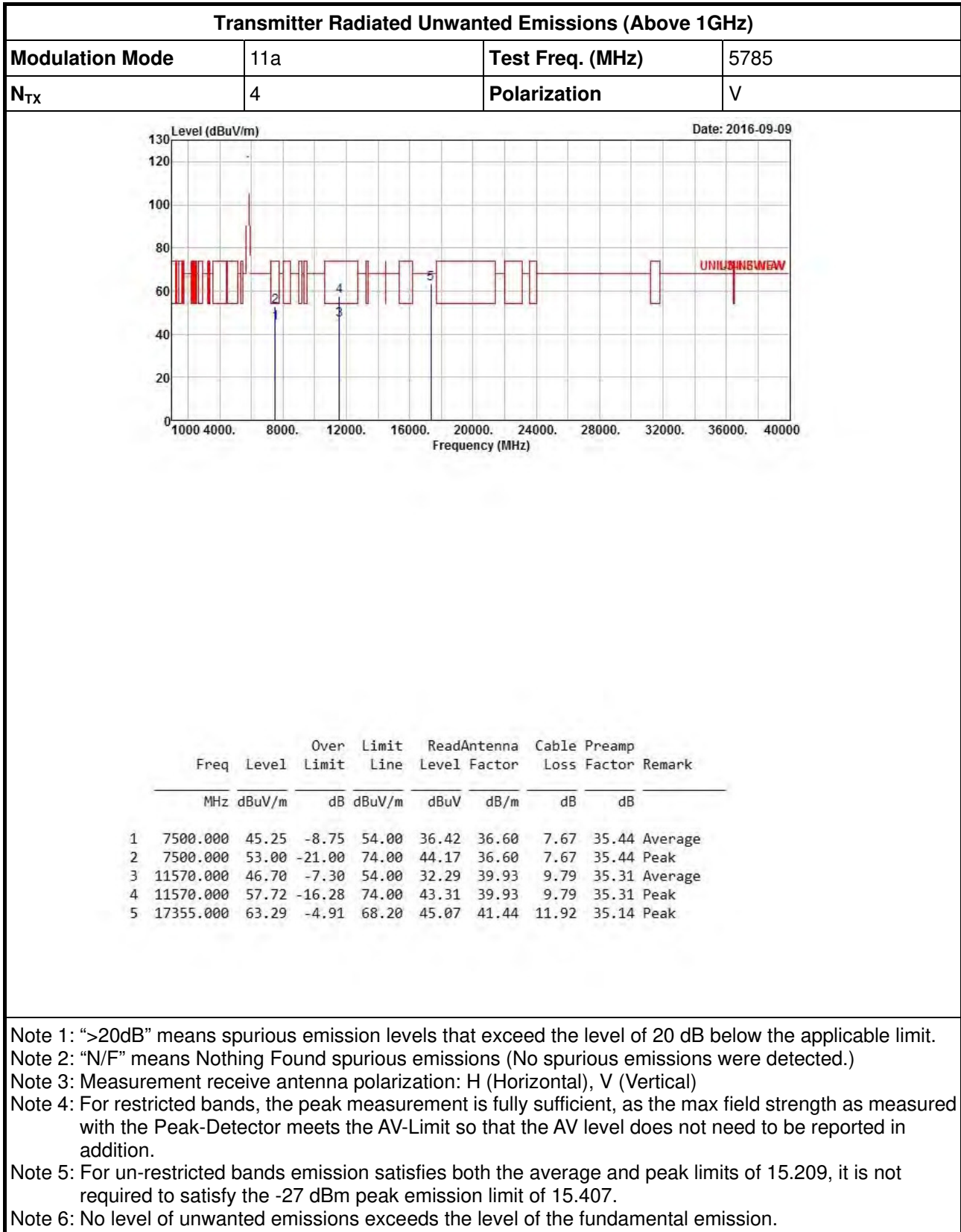


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



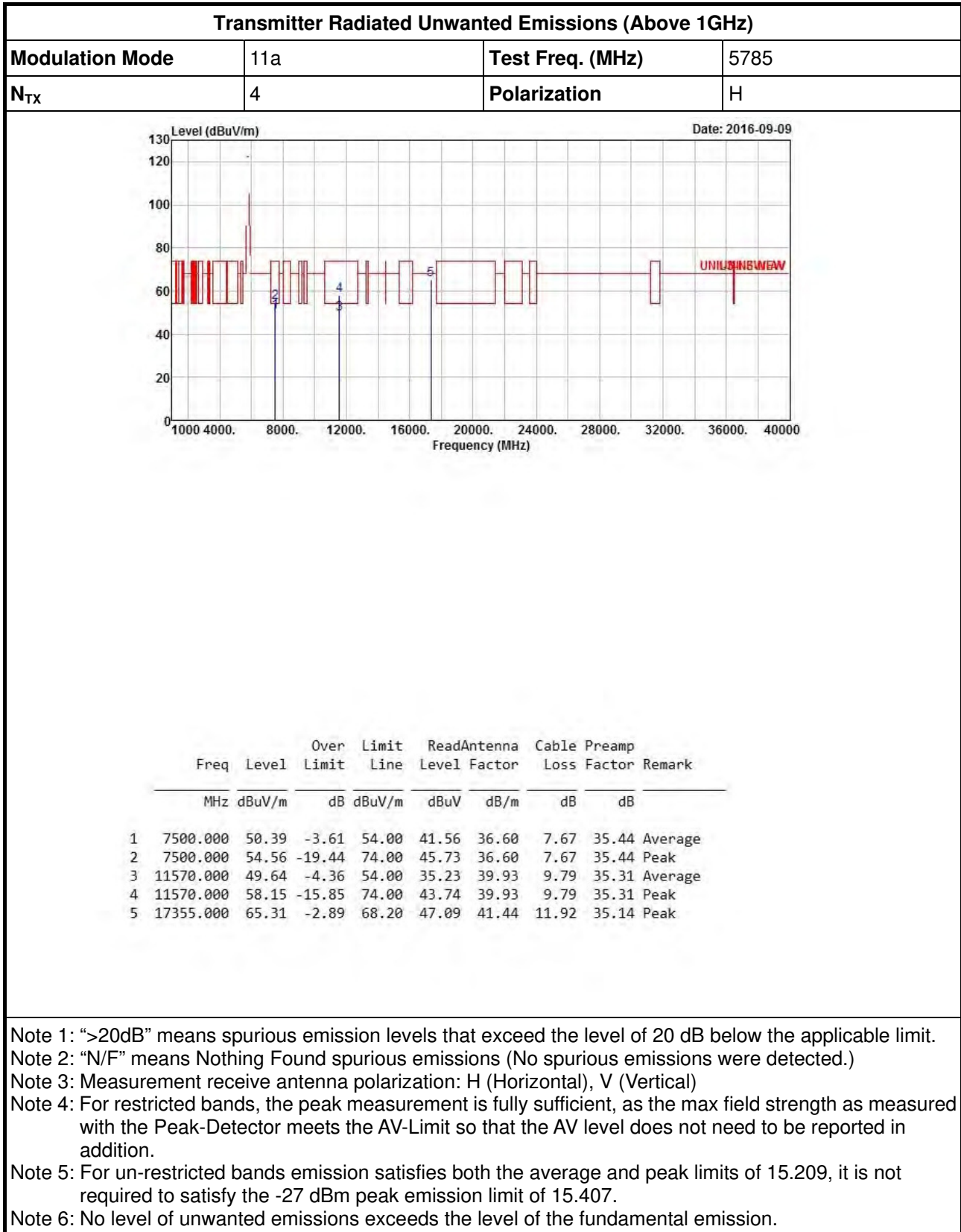


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



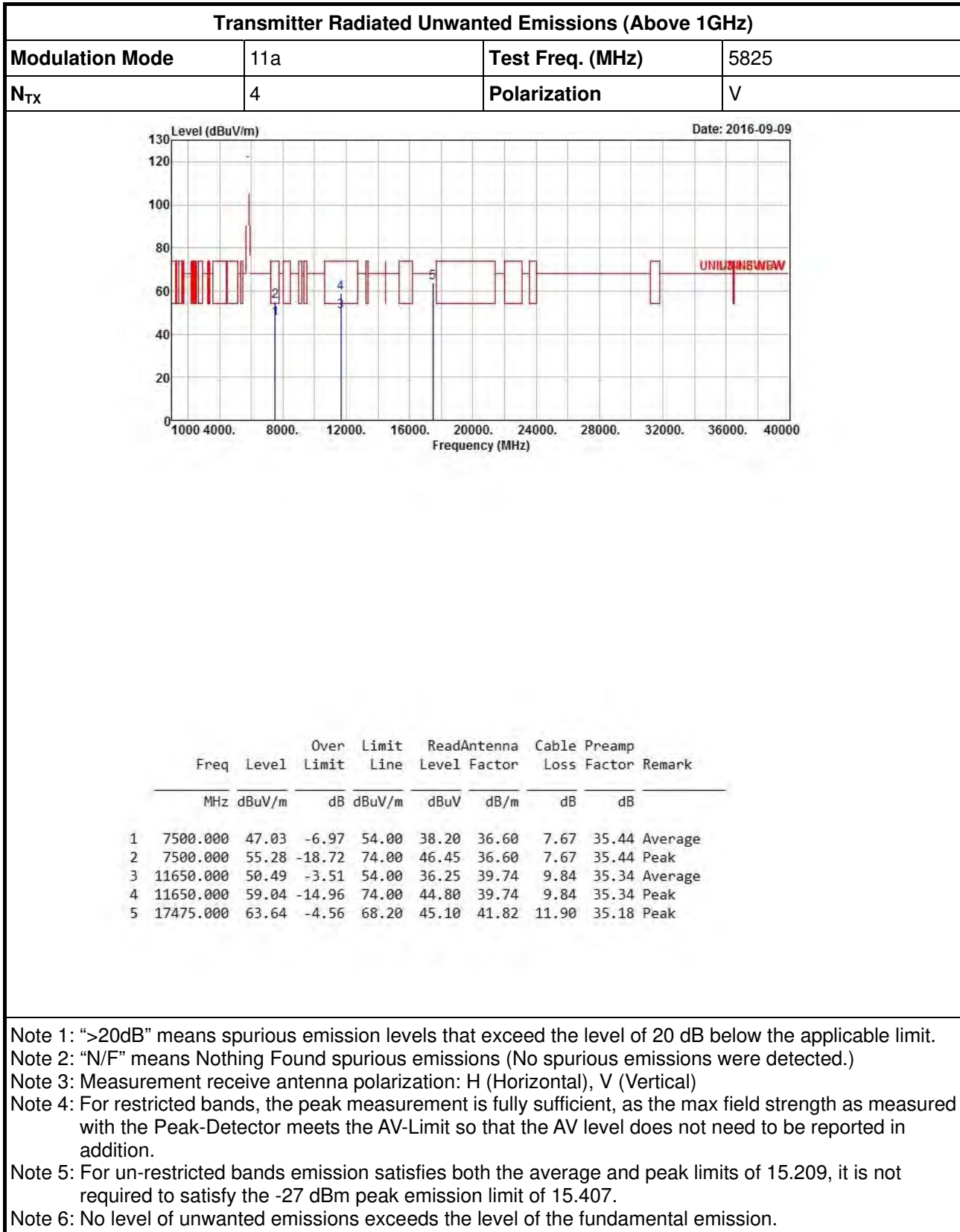


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





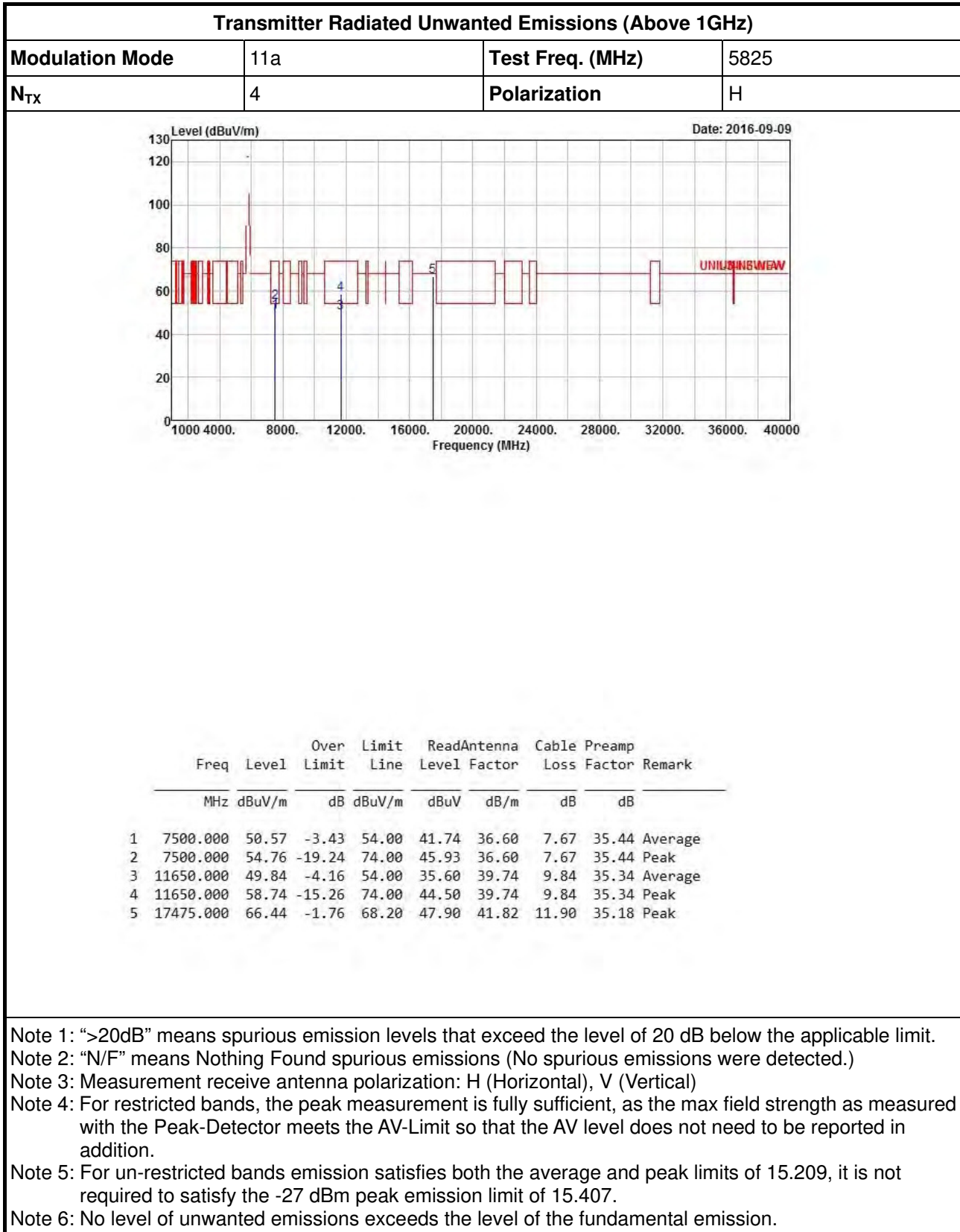
# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





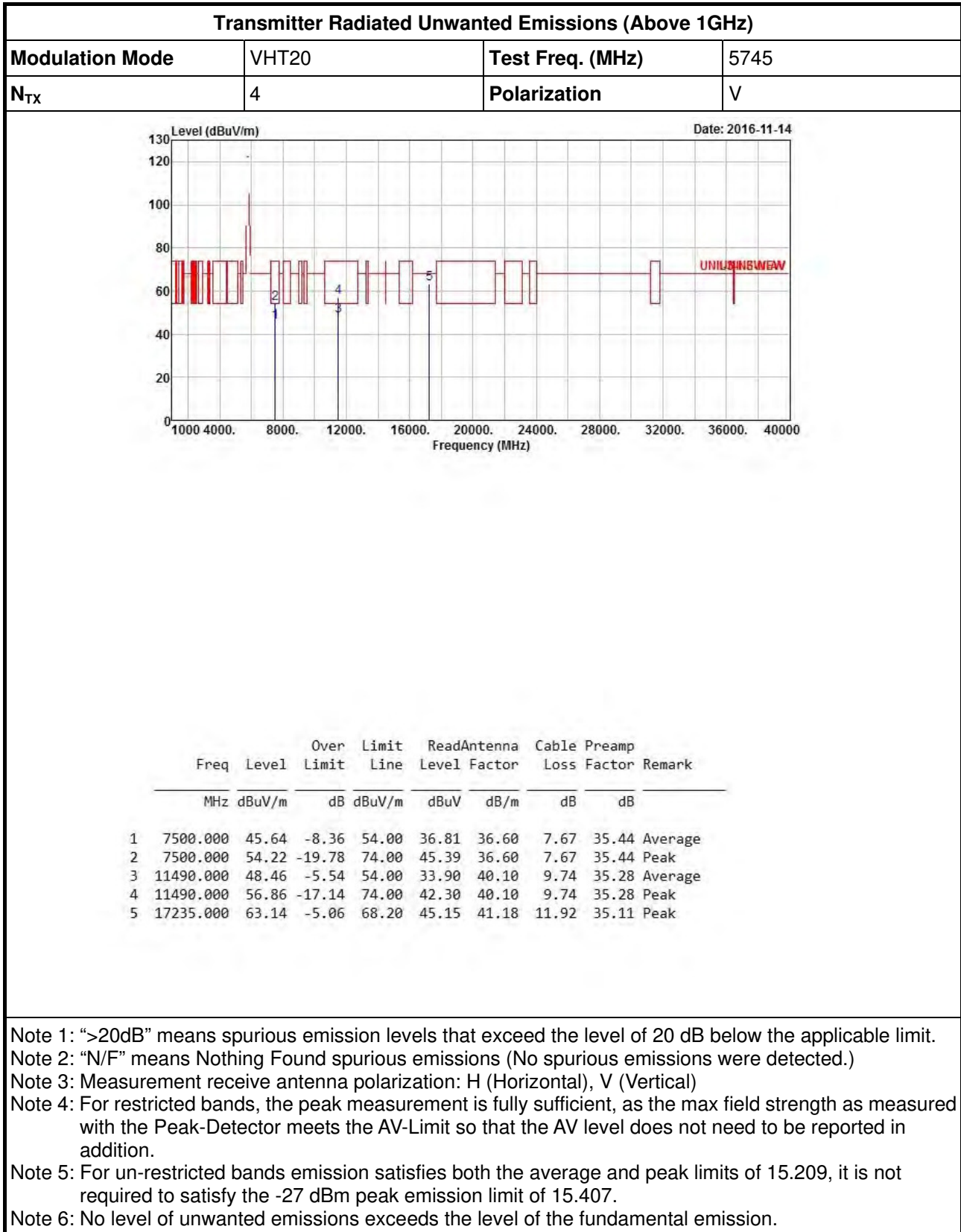


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



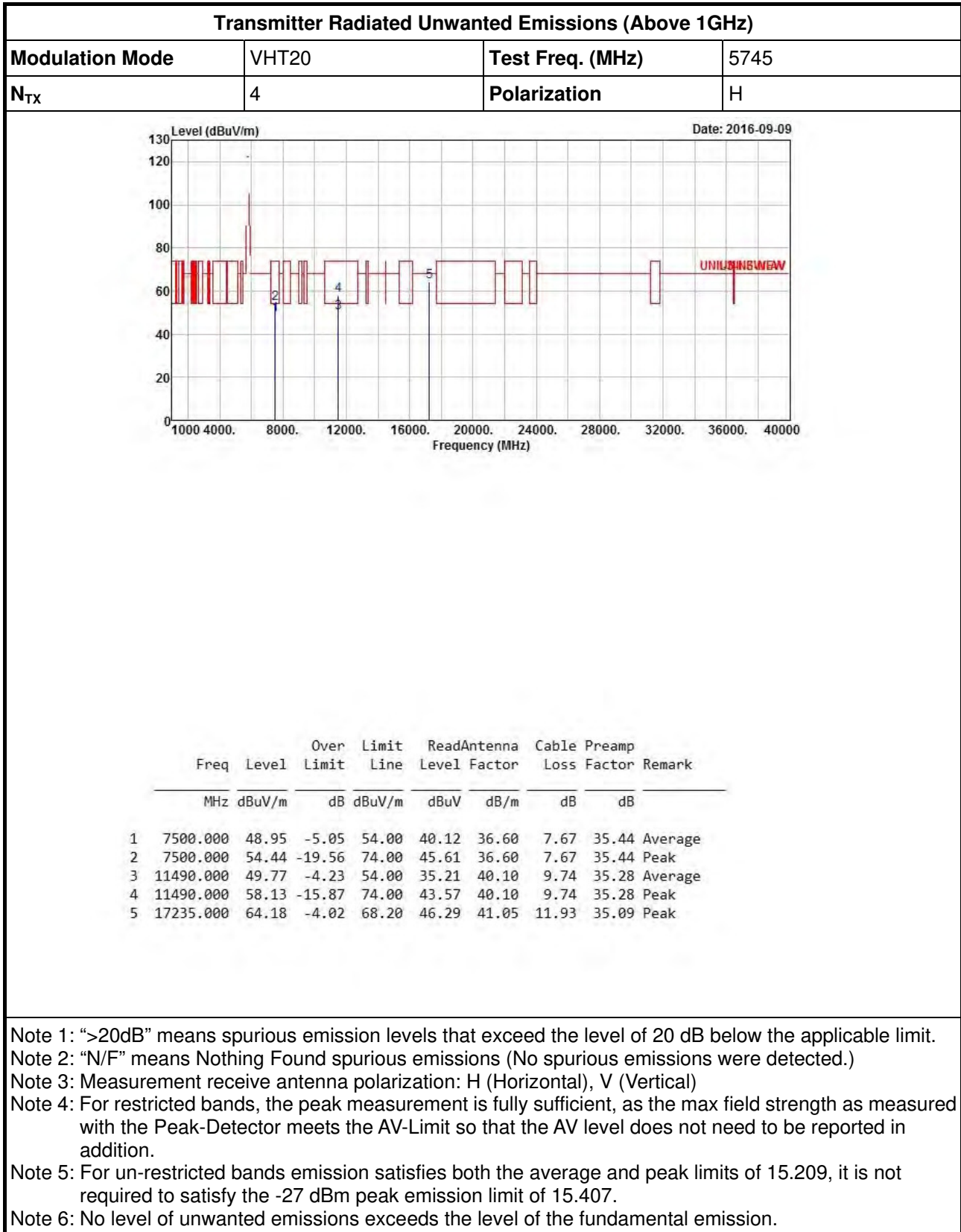


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



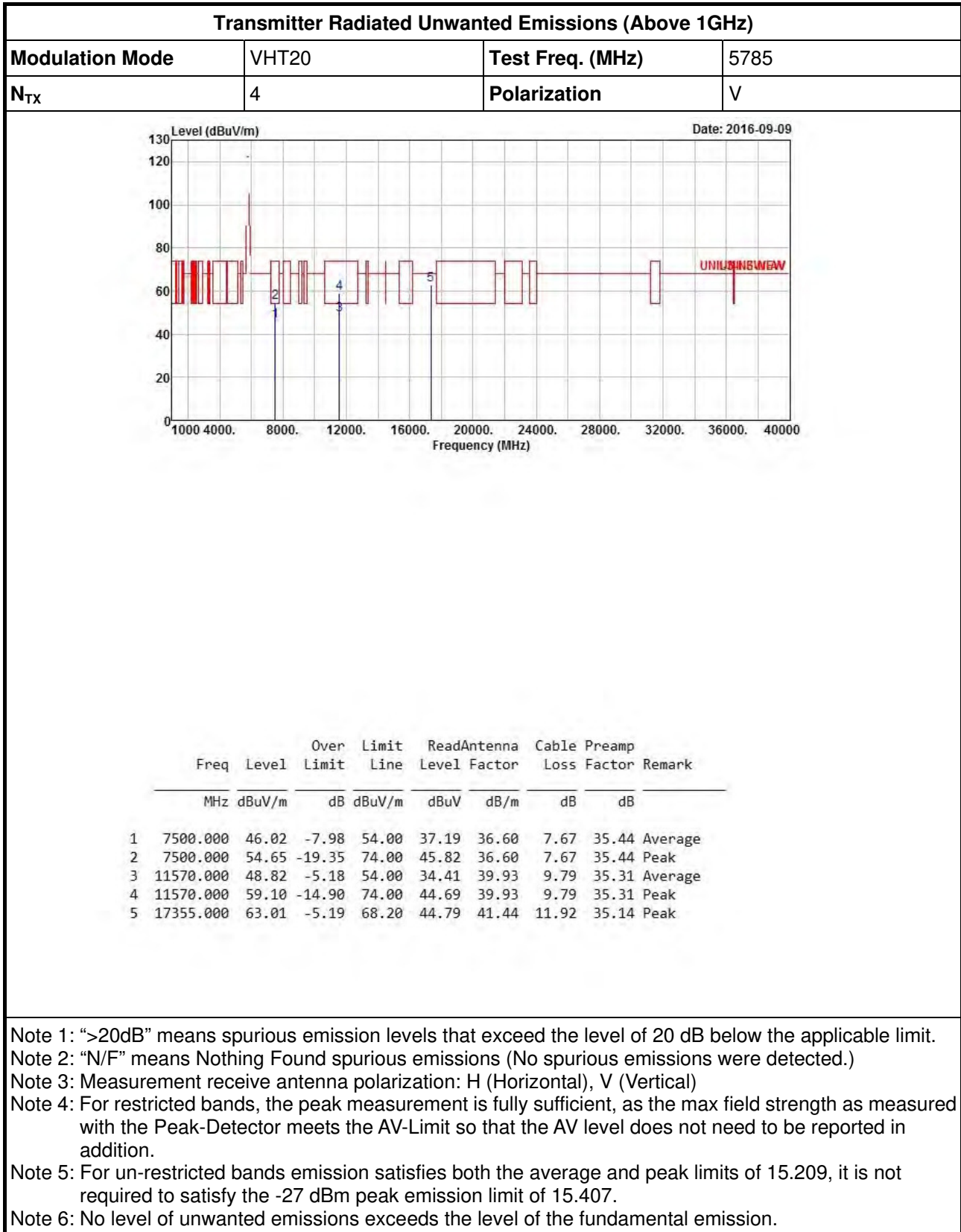


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





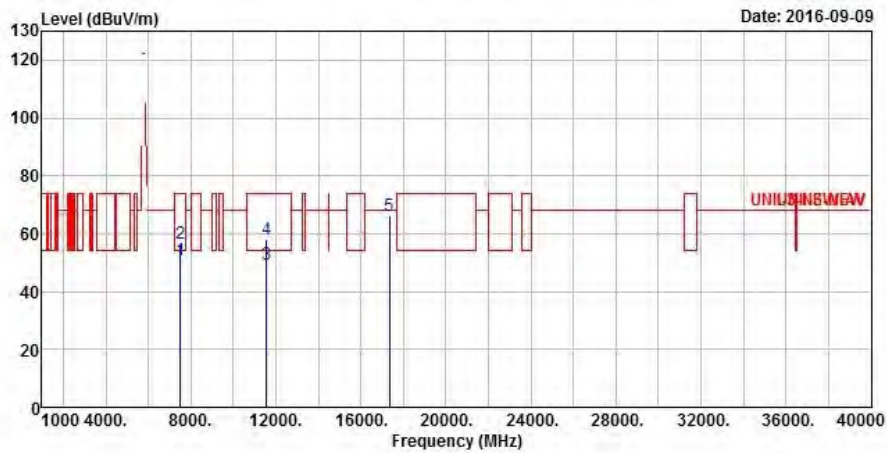
# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





**Transmitter Radiated Unwanted Emissions (Above 1GHz)**

<b>Modulation Mode</b>	VHT20	<b>Test Freq. (MHz)</b>	5785
<b>N<sub>TX</sub></b>	4	<b>Polarization</b>	H

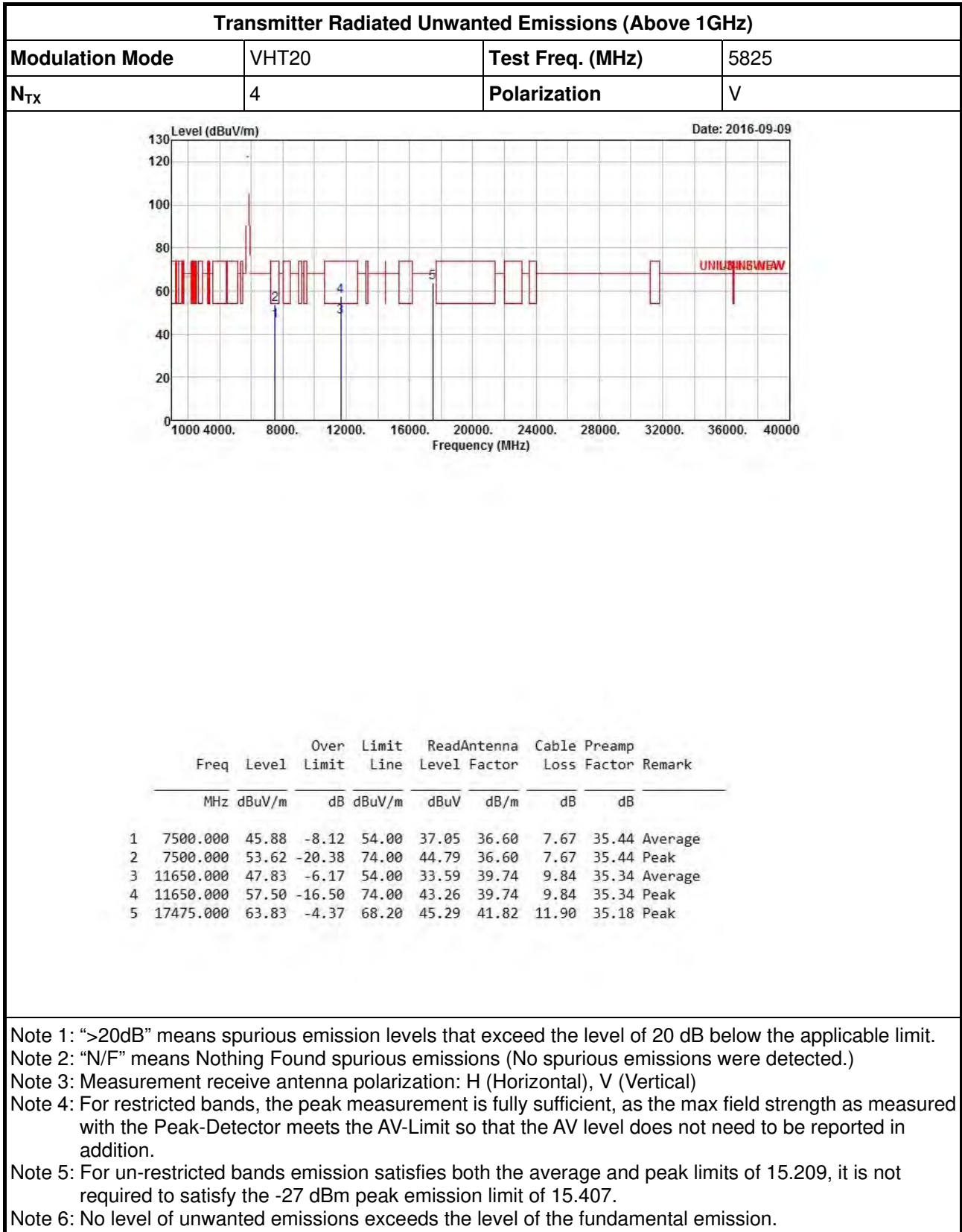


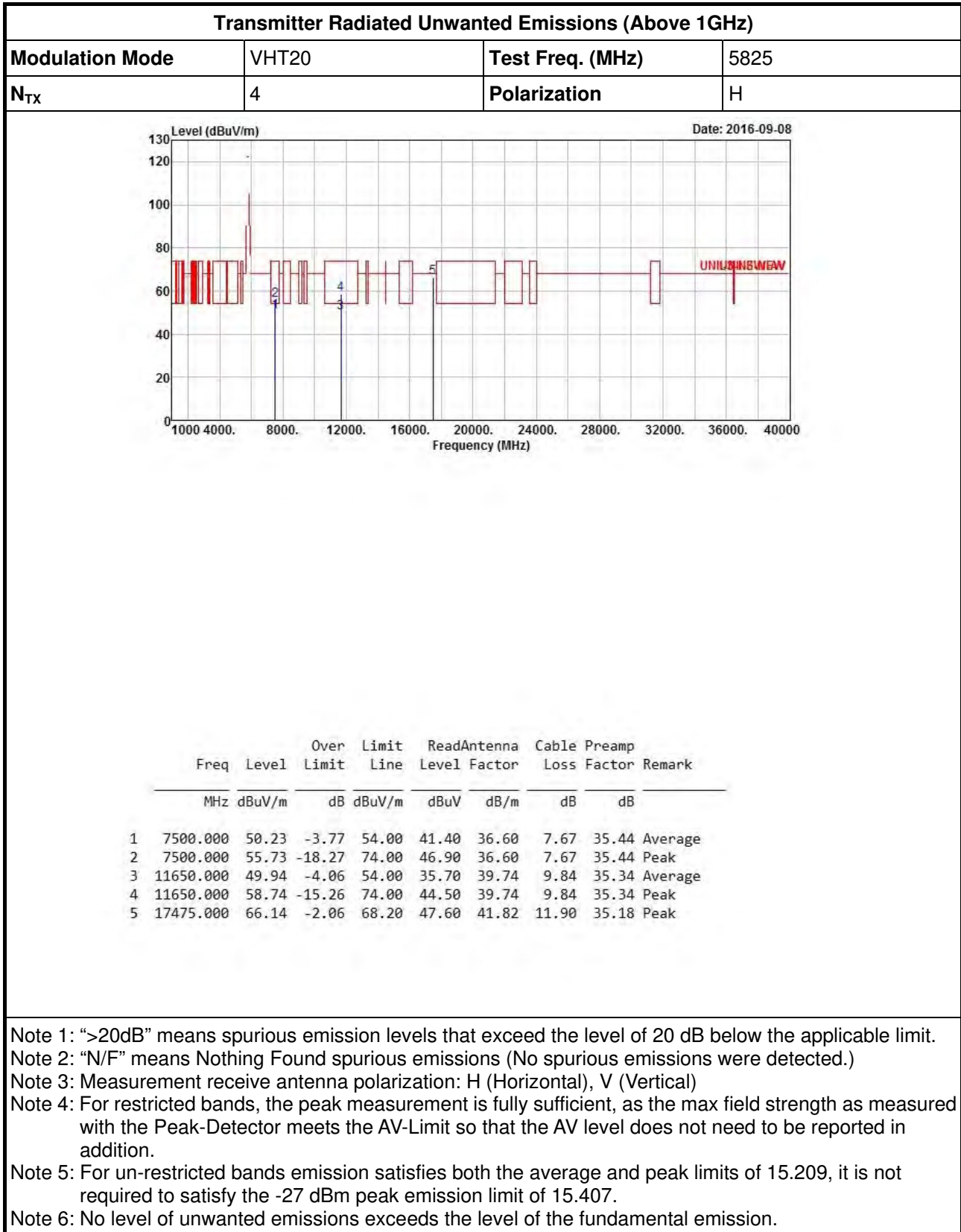
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	7500.000	50.62	-3.38	54.00	41.79	36.60	7.67	35.44 Average
2	7500.000	56.52	-17.48	74.00	47.69	36.60	7.67	35.44 Peak
3	11570.000	49.56	-4.44	54.00	35.15	39.93	9.79	35.31 Average
4	11570.000	58.08	-15.92	74.00	43.67	39.93	9.79	35.31 Peak
5	17355.000	66.01	-2.19	68.20	47.79	41.44	11.92	35.14 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



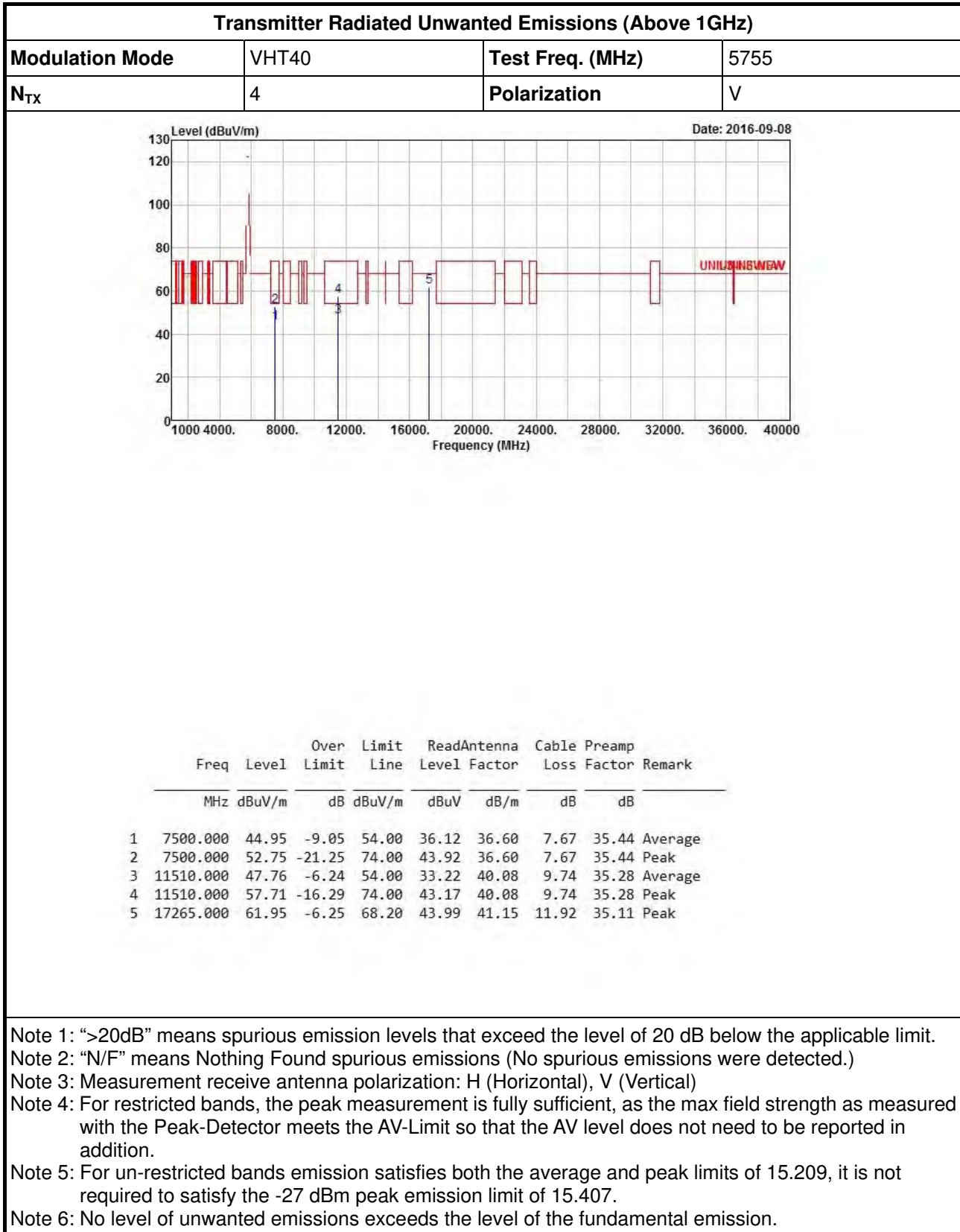
# Transmitter Radiated Unwanted Emissions (Non-Beamforming)







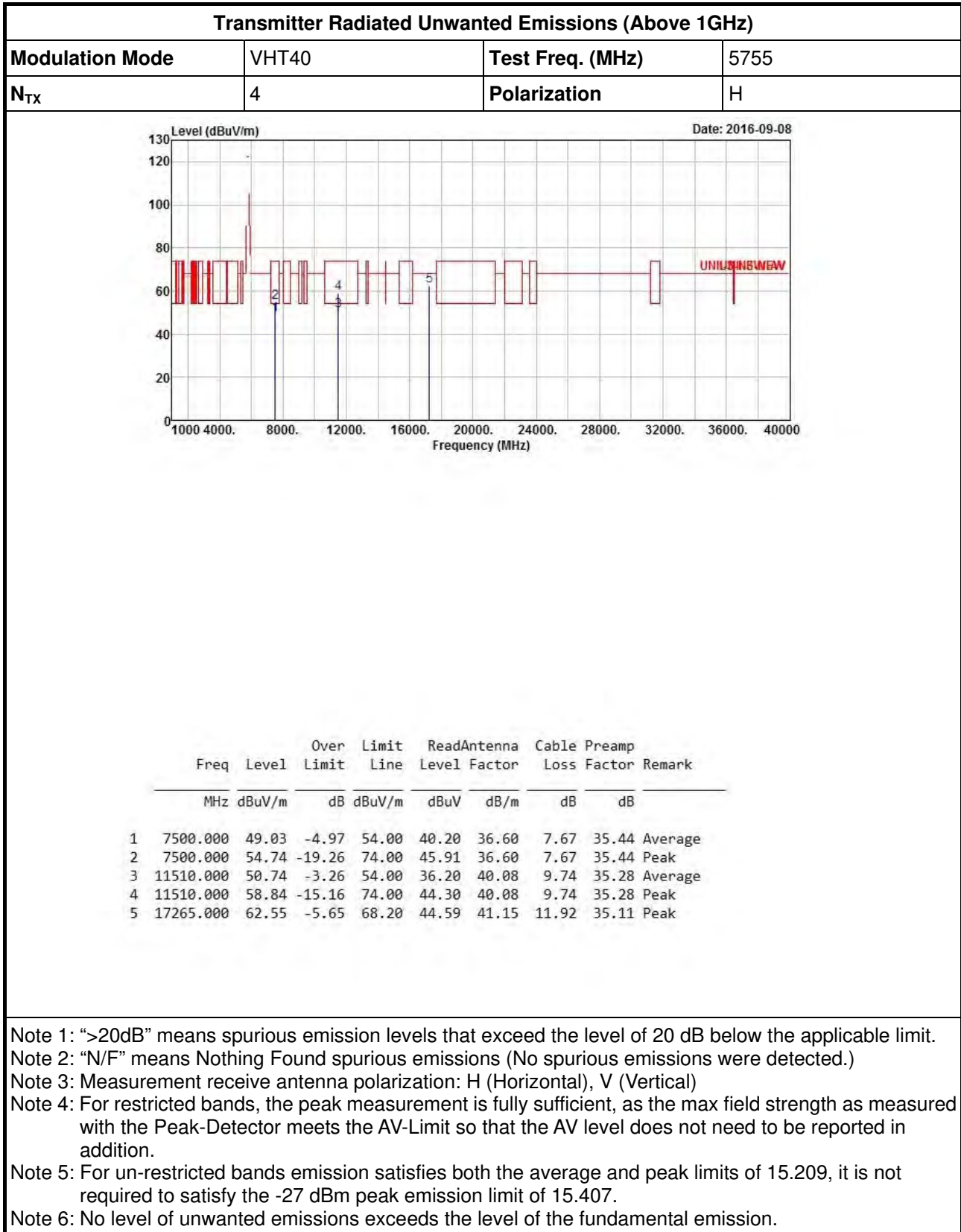
# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





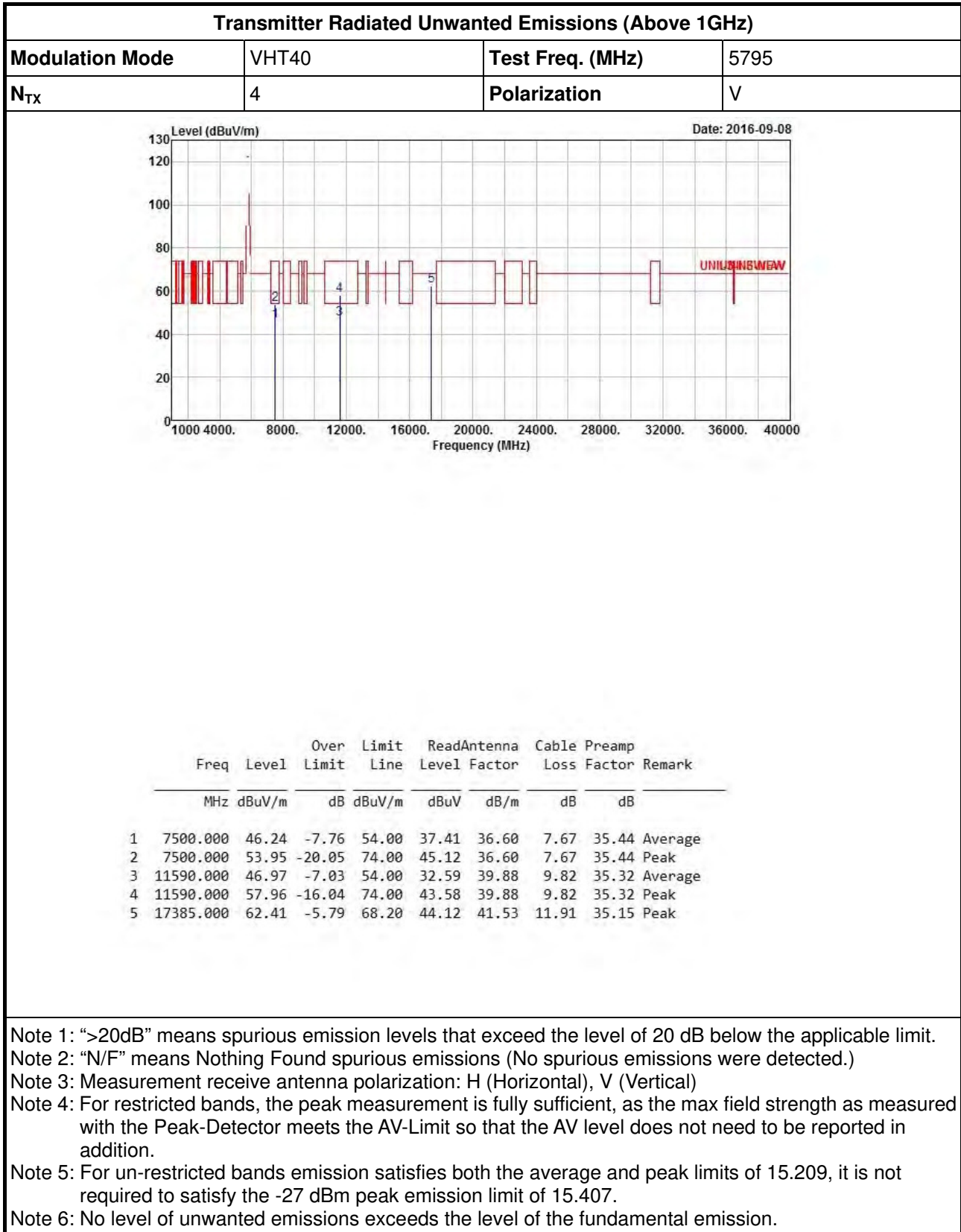


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



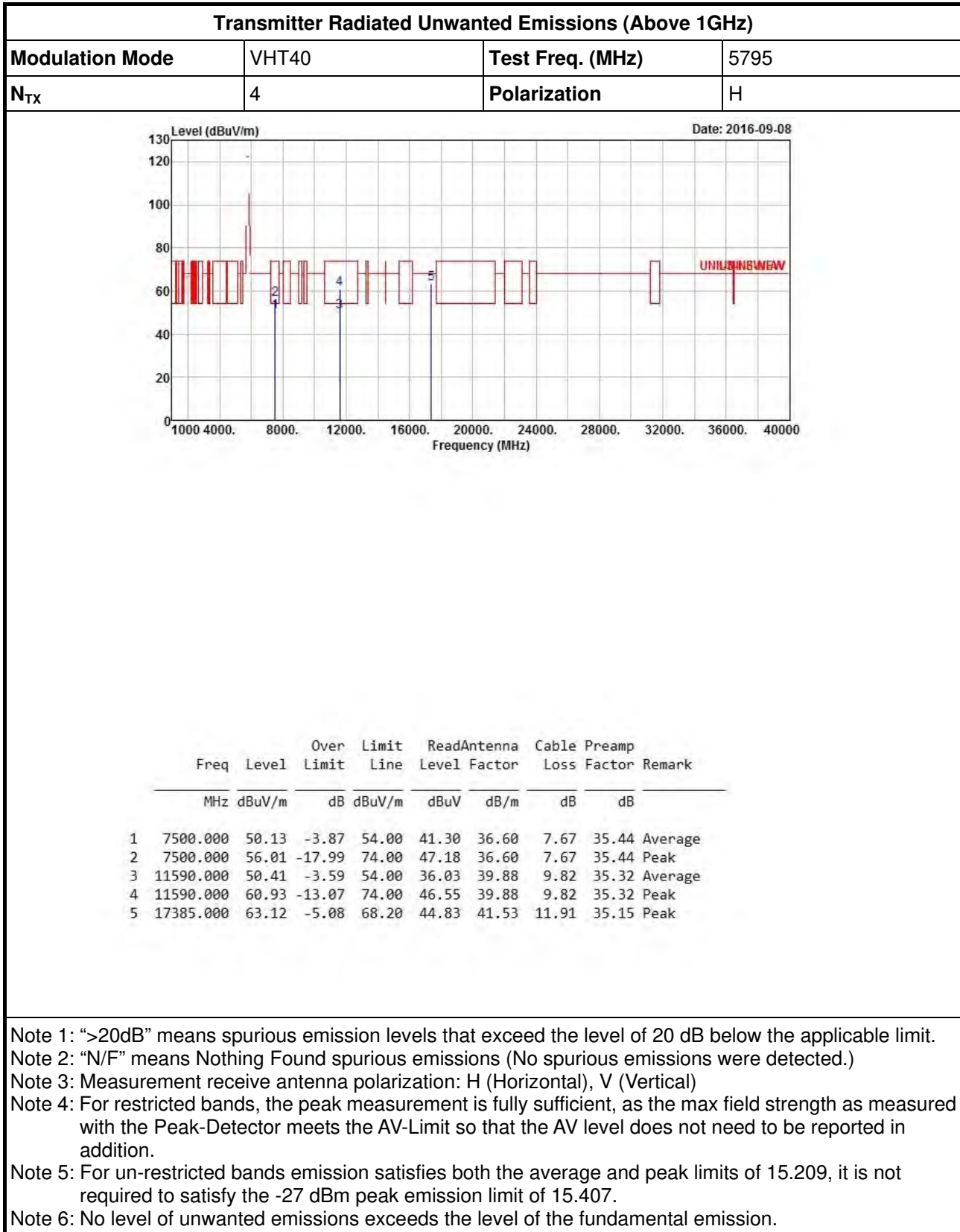


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



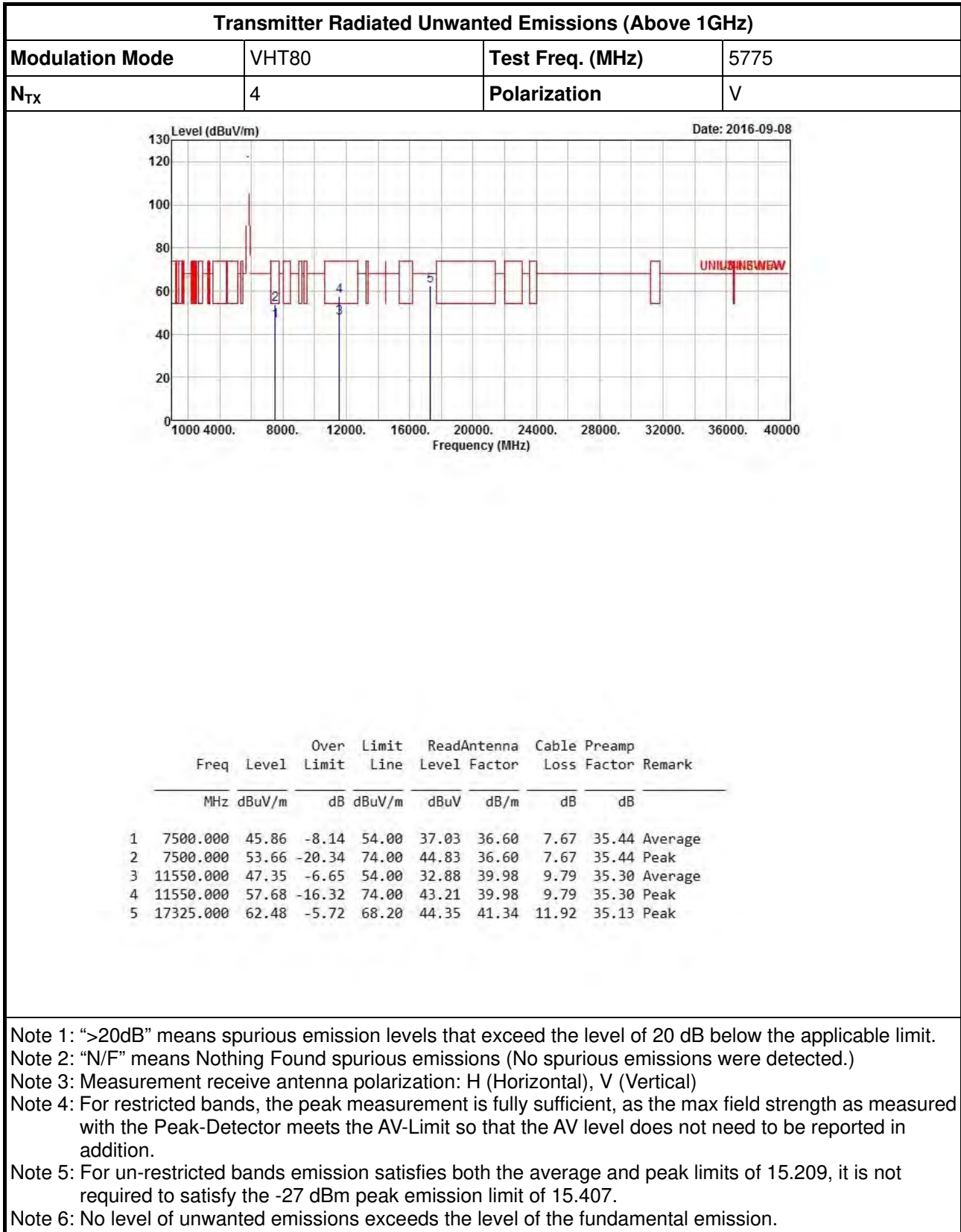


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)



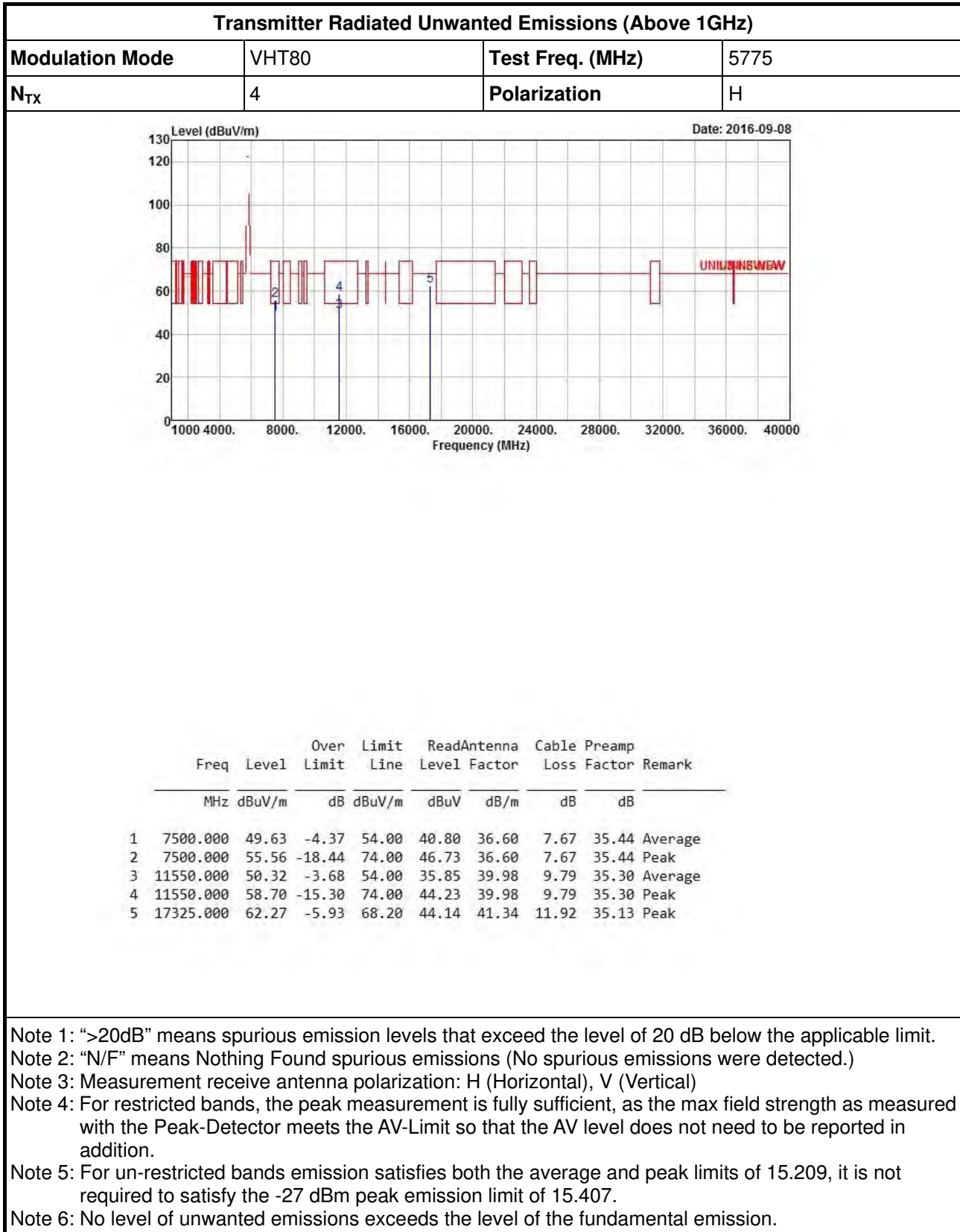


# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





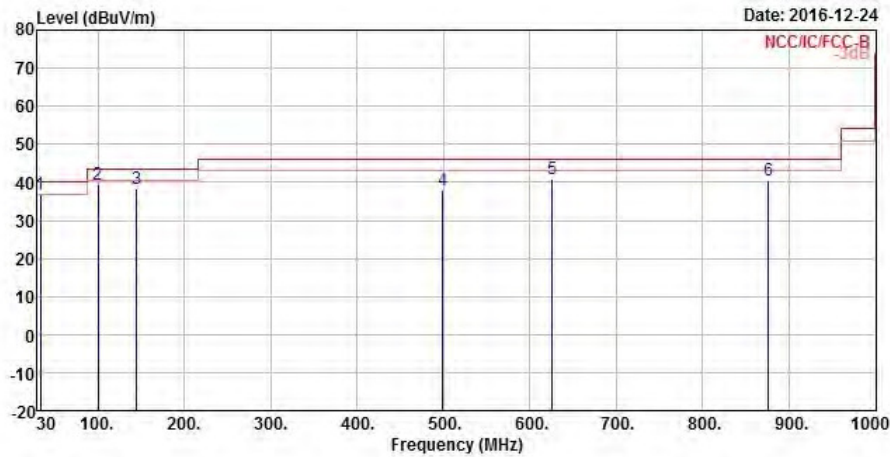
# Transmitter Radiated Unwanted Emissions (Non-Beamforming)





Transmitter Radiated Unwanted Emissions (Below 1GHz)

Transmitter Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	2	Polarization	V
Operating Function	UPS Mode		

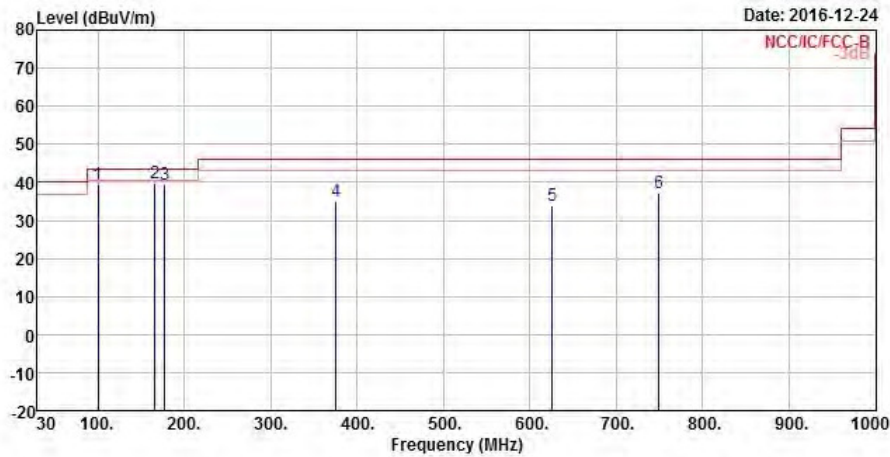


	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	
	MHz	dBuV/m	Limit	Line	Level	Loss	Loss	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB
1	33.880	36.97	-3.03	40.00	53.09	20.91	0.34	37.37 QP
2	99.840	39.45	-4.05	43.50	60.88	14.83	0.56	36.82 Peak
3	144.460	38.36	-5.14	43.50	58.04	16.28	0.67	36.63 Peak
4	499.480	38.03	-7.97	46.00	50.90	22.82	1.29	36.98 Peak
5	625.580	40.87	-5.13	46.00	51.60	25.16	1.44	37.33 Peak
6	875.840	40.62	-5.38	46.00	48.81	27.70	1.76	37.65 Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).  
 Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.



Transmitter Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	2	Polarization	H
Operating Function	UPS Mode		



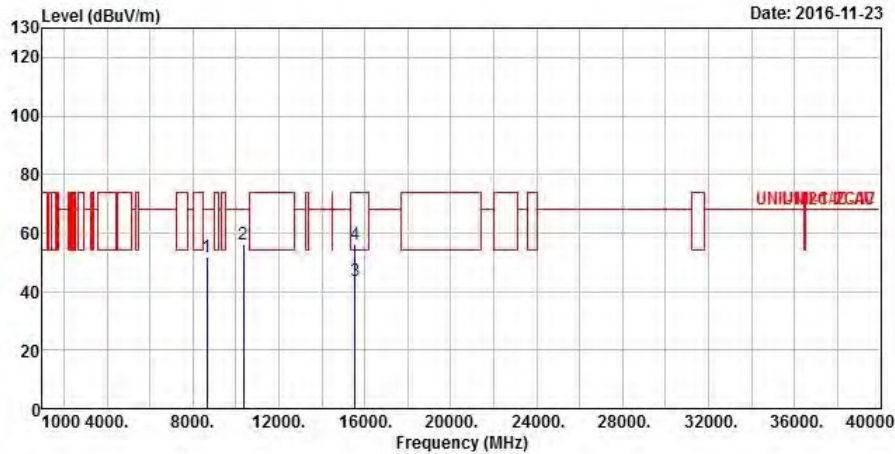
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV/m	dBuV	dB	dB	
1	99.840	39.27	-4.23	43.50	60.70	14.83	0.56	36.82 Peak
2	165.800	39.65	-3.85	43.50	60.52	14.95	0.72	36.54 Peak
3	177.440	39.58	-3.92	43.50	61.25	14.08	0.74	36.49 Peak
4	375.320	34.80	-11.20	46.00	50.36	19.96	1.08	36.60 Peak
5	625.580	34.01	-11.99	46.00	44.74	25.16	1.44	37.33 Peak
6	749.740	37.37	-8.63	46.00	46.53	26.76	1.60	37.52 Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).  
 Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.



Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5150-5250MHz

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT20	Test Freq. (MHz)	5180
N <sub>TX</sub>	4	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8644.000	51.94	-16.26	68.20	42.39	36.97	8.28	35.70	Peak
2	10360.000	56.25	-11.95	68.20	42.97	39.48	9.41	35.61	Peak
3	15540.000	43.72	-10.28	54.00	29.40	38.41	11.54	35.63	Average
4	15540.000	56.36	-17.64	74.00	42.04	38.41	11.54	35.63	Peak

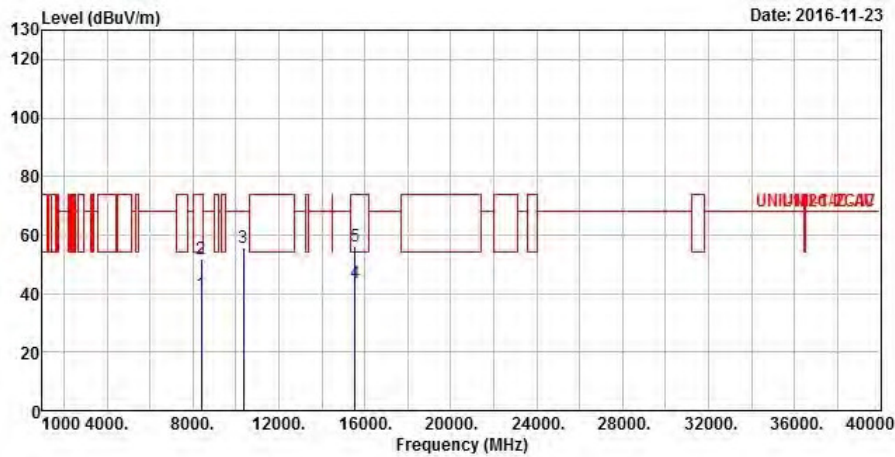
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.





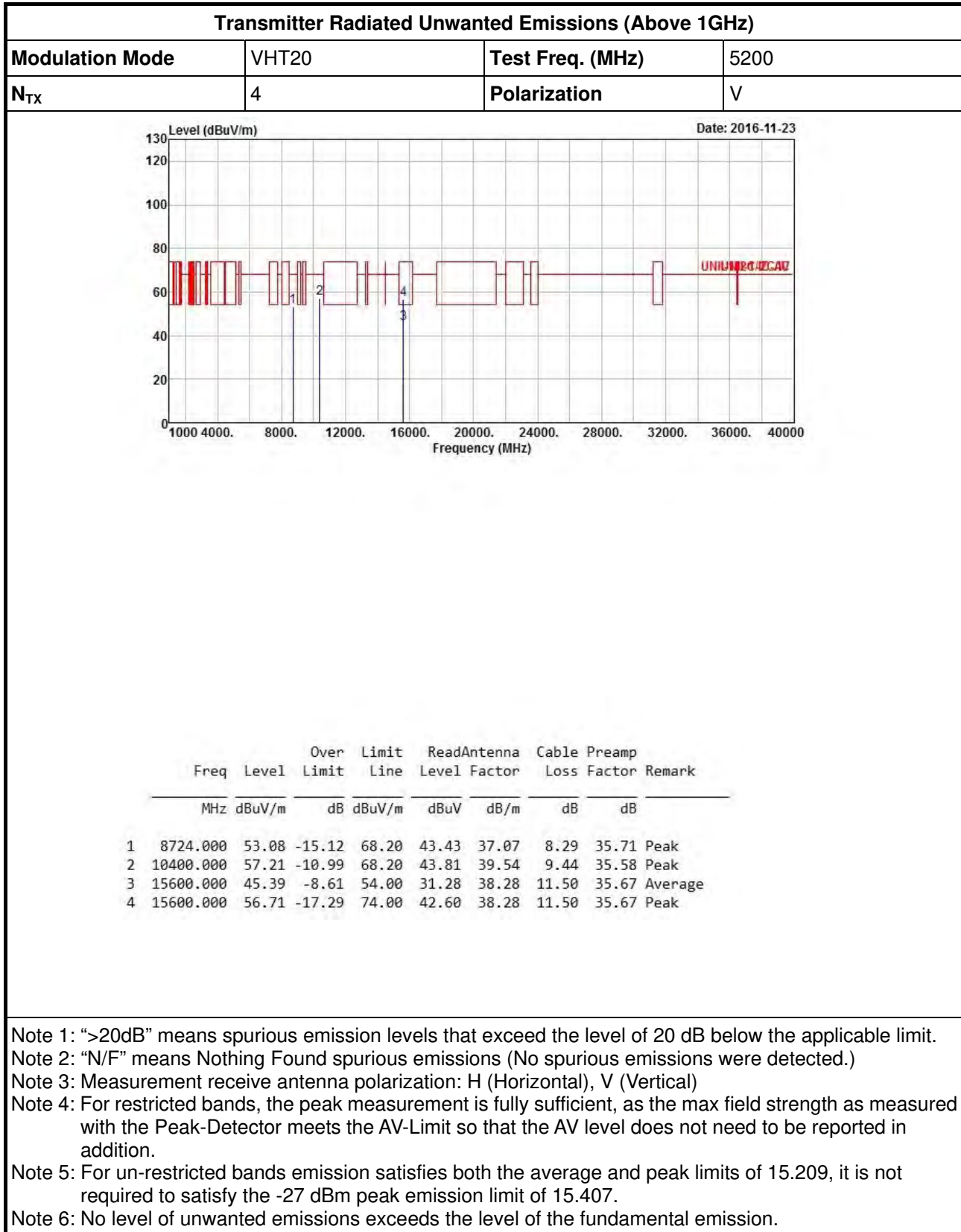
**Transmitter Radiated Unwanted Emissions (Above 1GHz)**

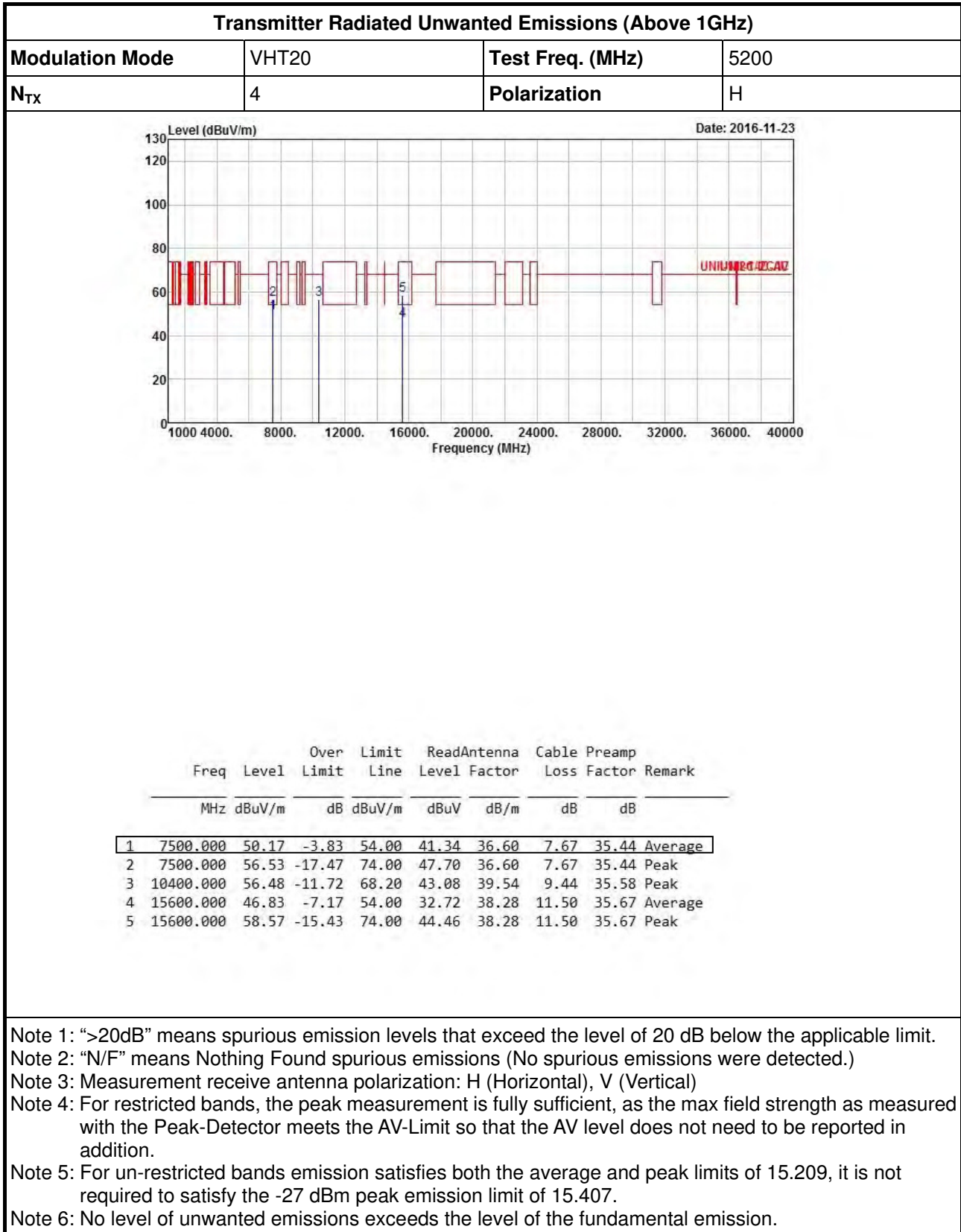
<b>Modulation Mode</b>	VHT20	<b>Test Freq. (MHz)</b>	5180
<b>N<sub>TX</sub></b>	4	<b>Polarization</b>	H

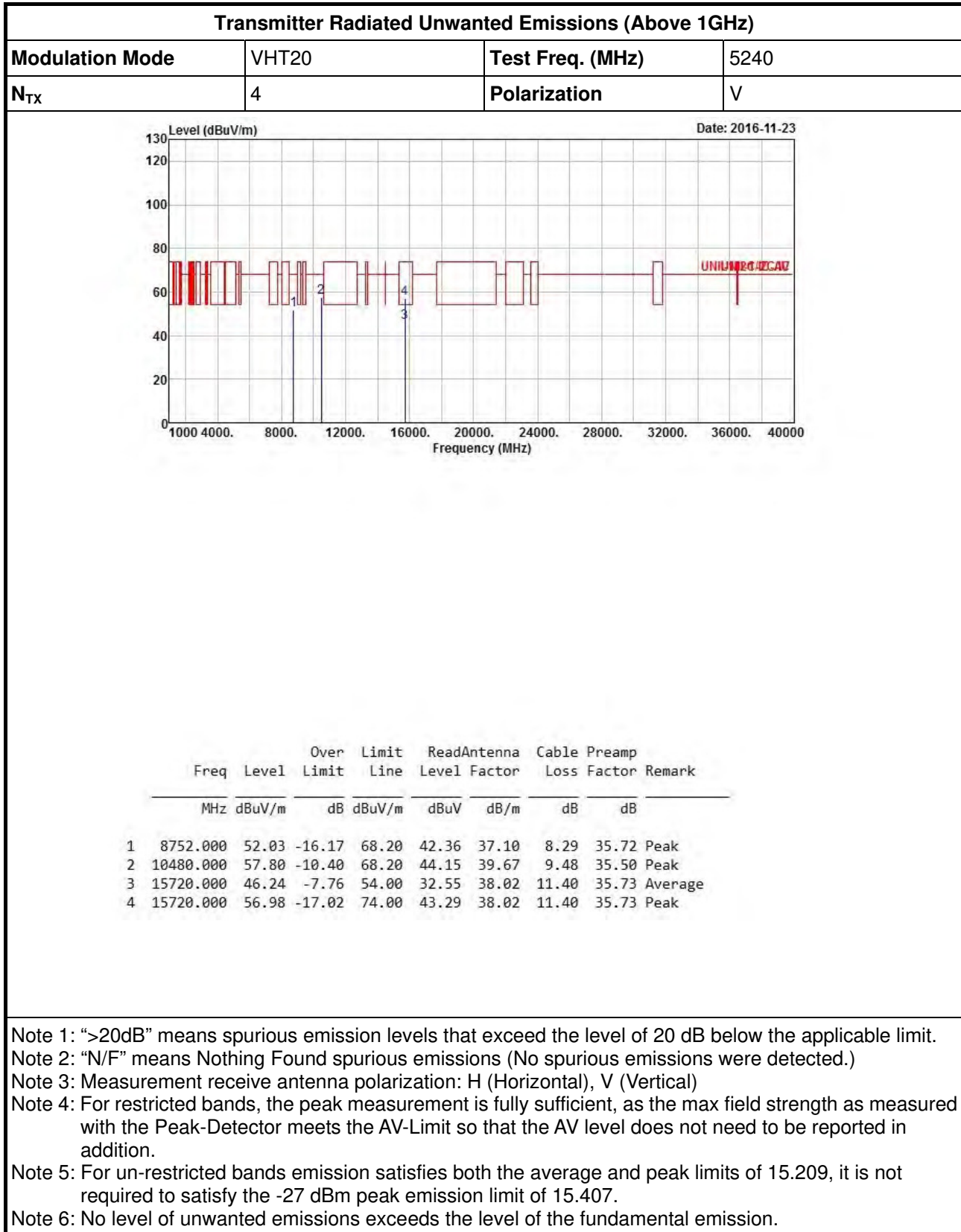


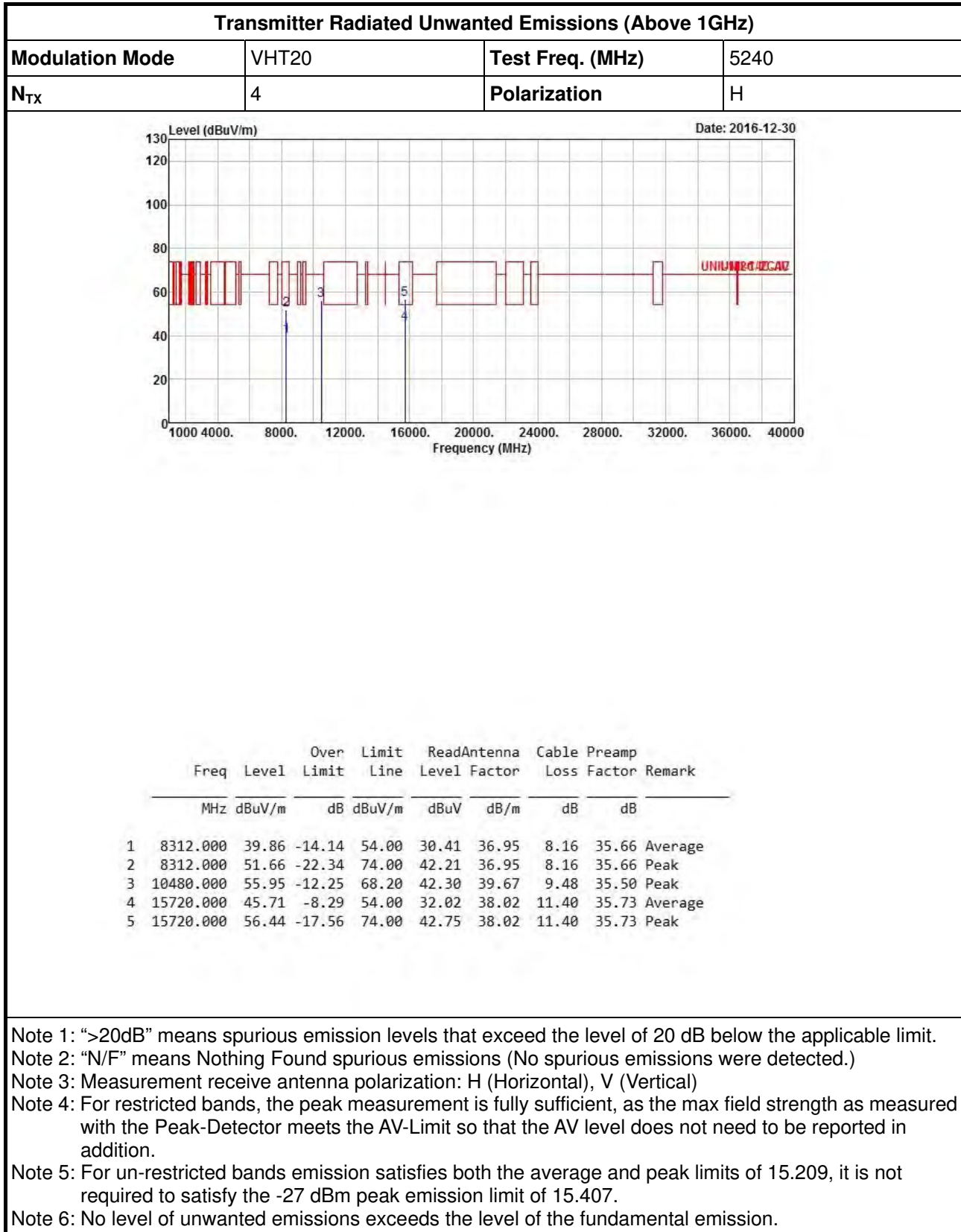
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	8384.000	39.72	-14.28	54.00	30.30	36.89	8.20	35.67 Average
2	8384.000	51.72	-22.28	74.00	42.30	36.89	8.20	35.67 Peak
3	10360.000	55.71	-12.49	68.20	42.43	39.48	9.41	35.61 Peak
4	15540.000	43.74	-10.26	54.00	29.42	38.41	11.54	35.63 Average
5	15540.000	55.96	-18.04	74.00	41.64	38.41	11.54	35.63 Peak

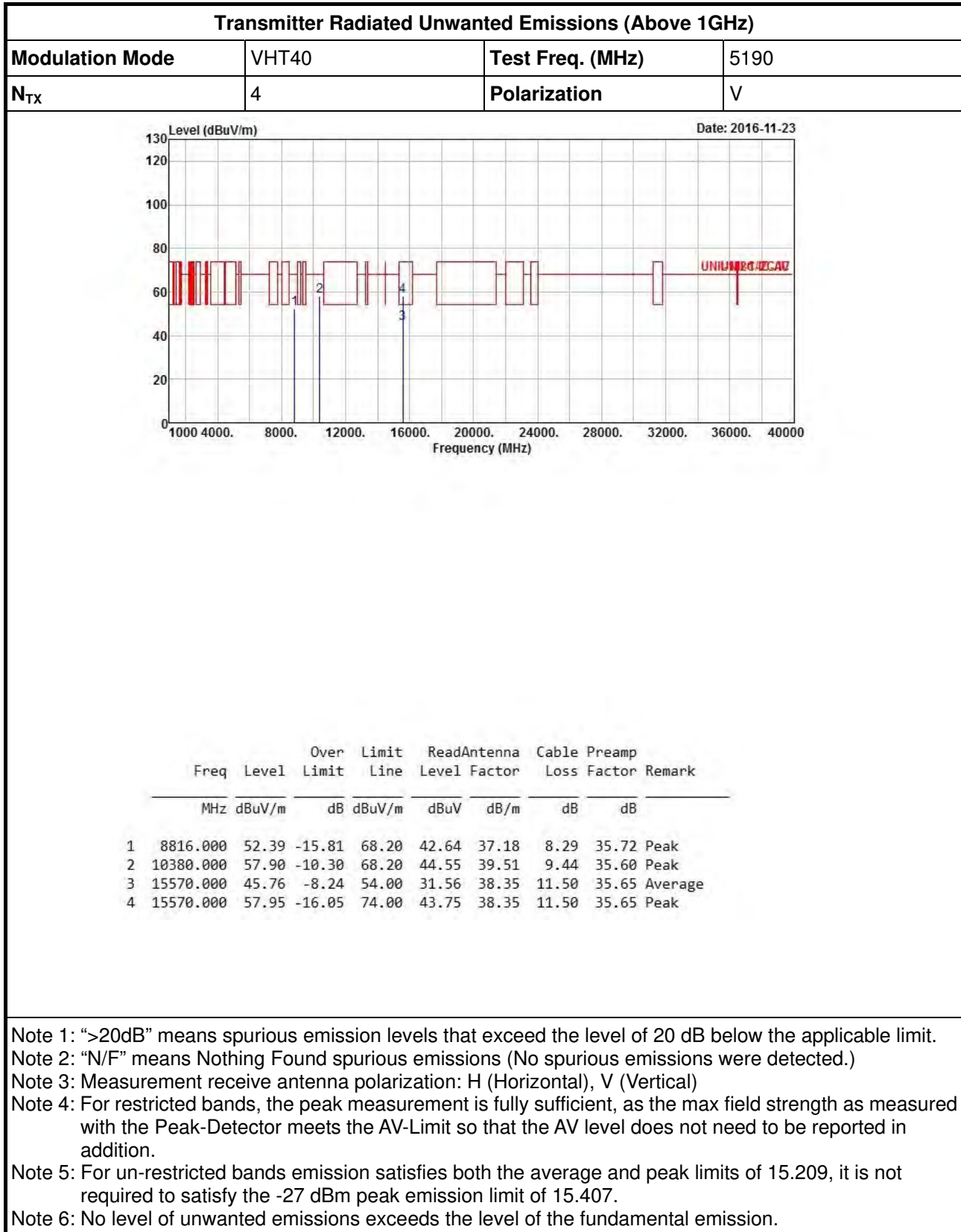
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

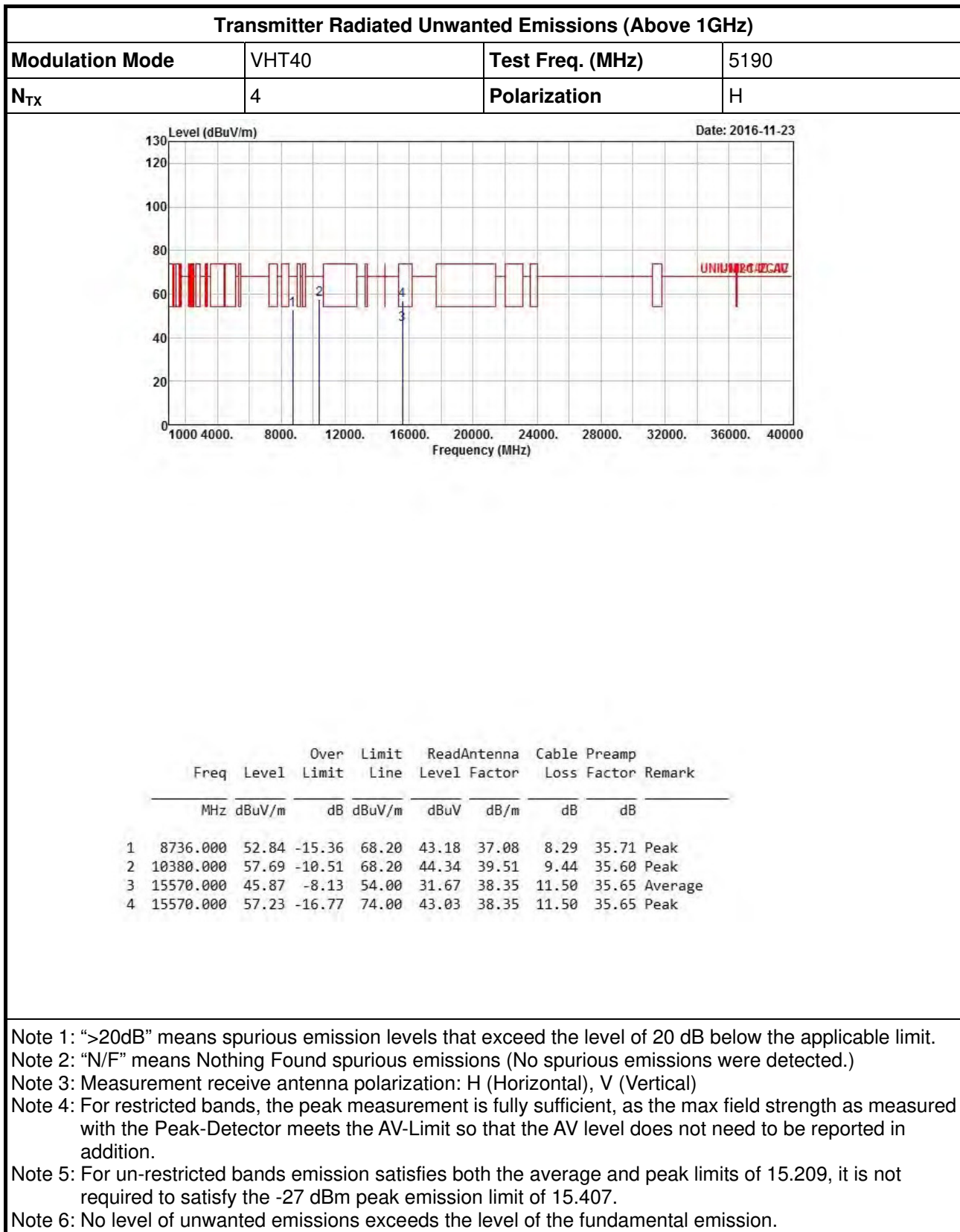


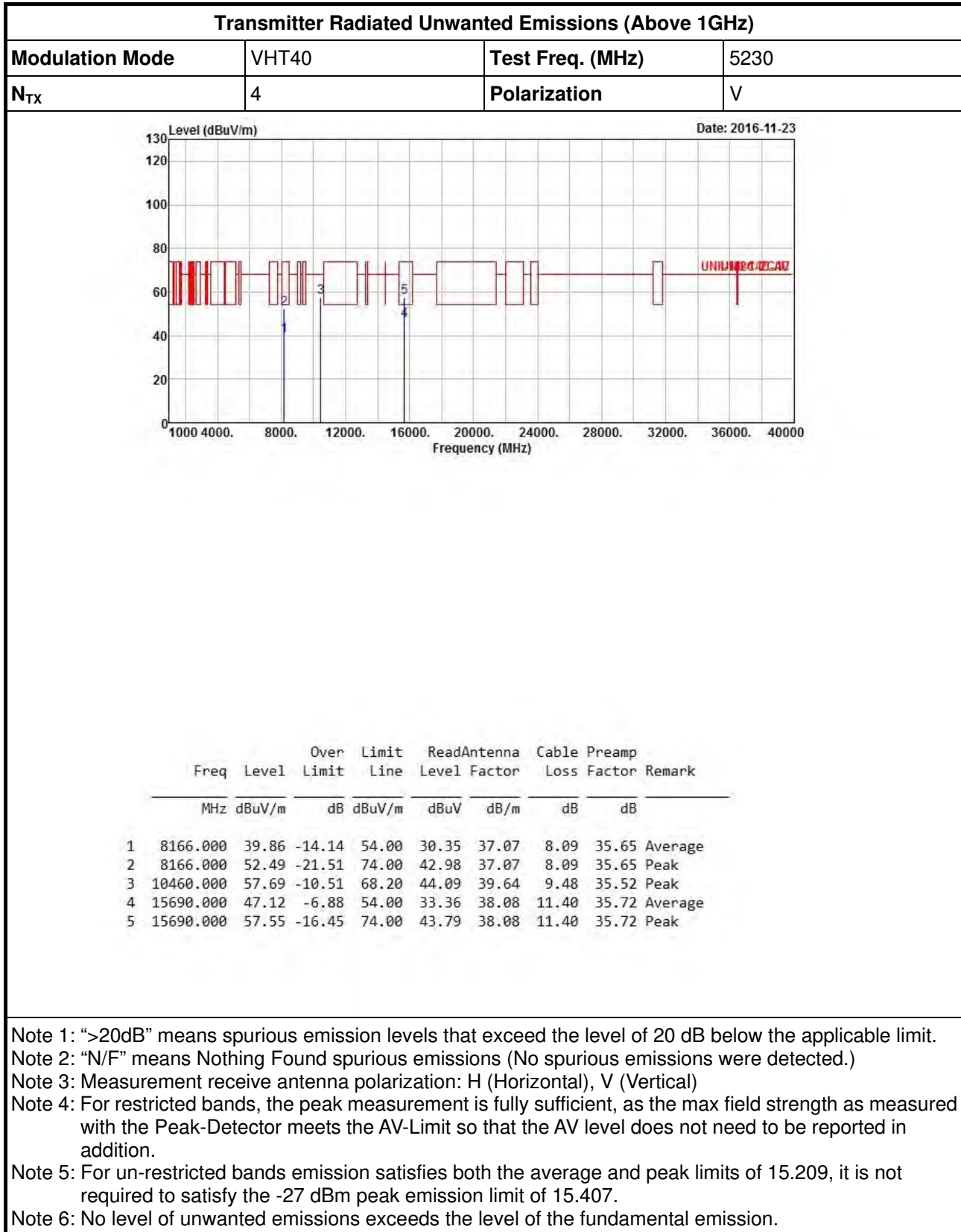








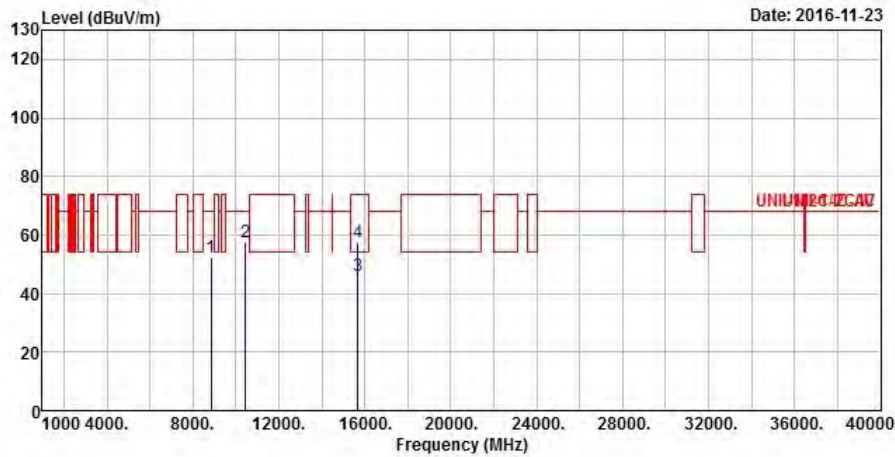






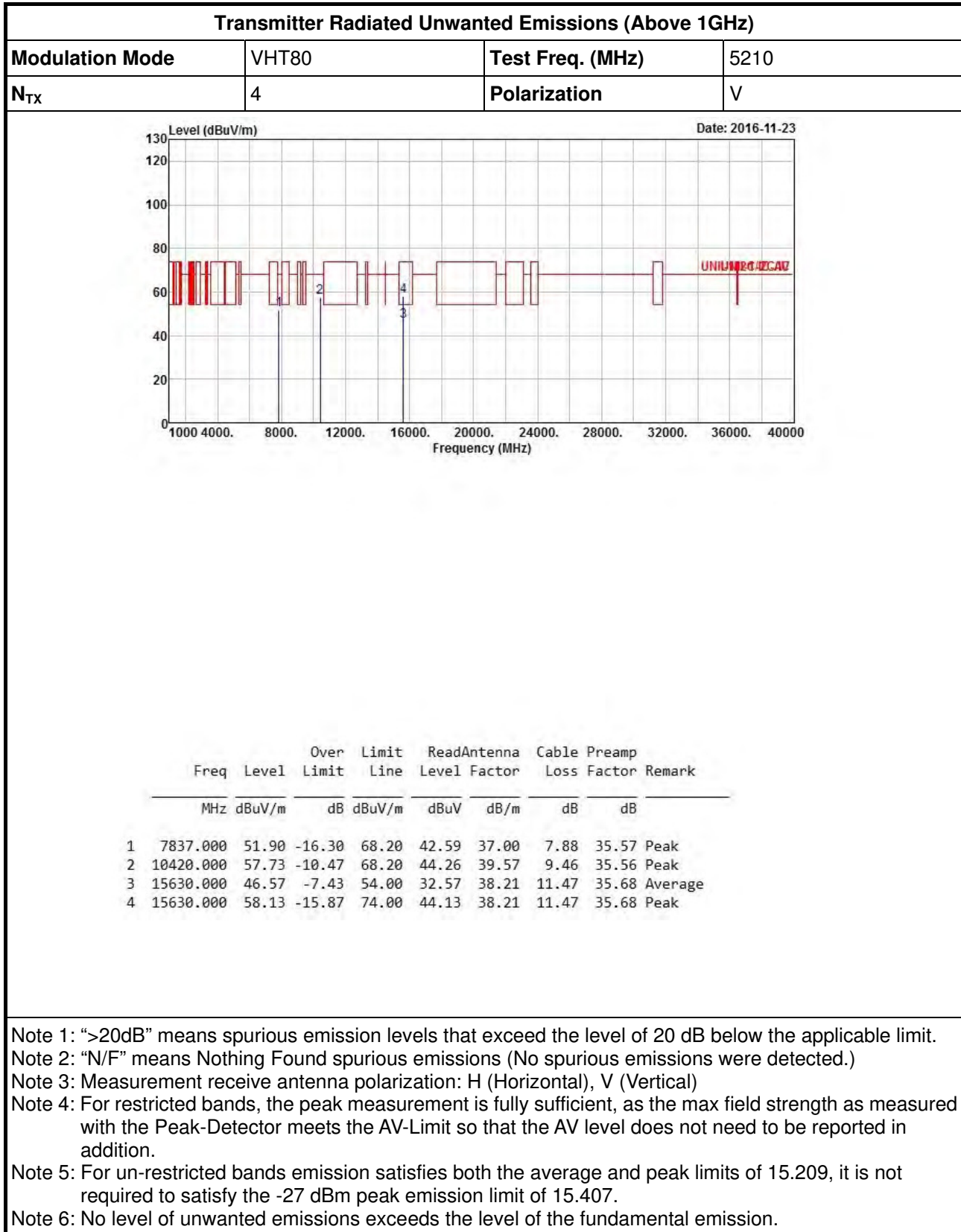


Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT40	Test Freq. (MHz)	5230
N <sub>TX</sub>	4	Polarization	H



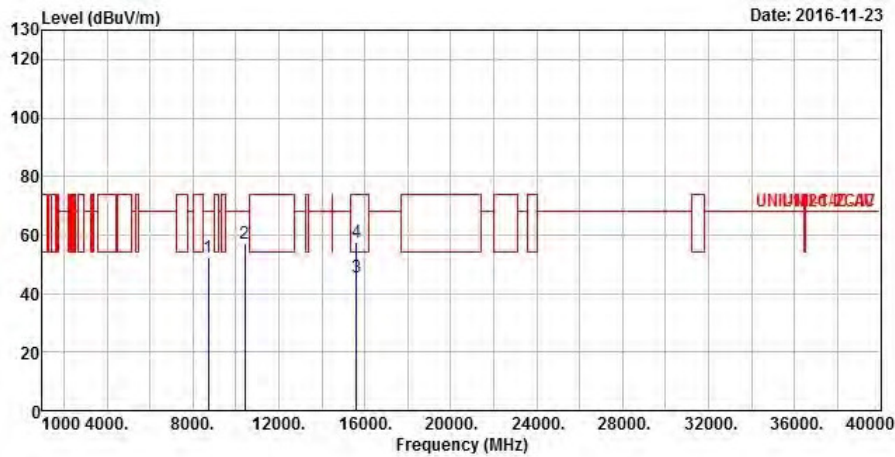
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV/m	dBuV	dB	dB	
1	8845.000	52.45	-15.75	68.20	42.67	37.21	8.30	35.73 Peak
2	10460.000	57.46	-10.74	68.20	43.86	39.64	9.48	35.52 Peak
3	15690.000	46.19	-7.81	54.00	32.43	38.08	11.40	35.72 Average
4	15690.000	57.68	-16.32	74.00	43.92	38.08	11.40	35.72 Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)  
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.  
 Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.





Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT80	Test Freq. (MHz)	5210
N <sub>TX</sub>	4	Polarization	H



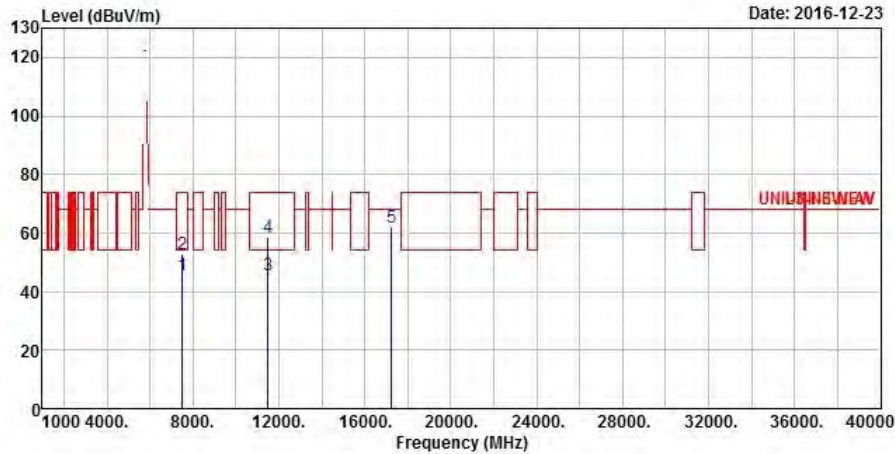
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	8718.000	52.08	-16.12	68.20	42.44	37.06	8.29	35.71 Peak
2	10420.000	57.14	-11.06	68.20	43.67	39.57	9.46	35.56 Peak
3	15630.000	45.80	-8.20	54.00	31.80	38.21	11.47	35.68 Average
4	15630.000	57.51	-16.49	74.00	43.51	38.21	11.47	35.68 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5725-5850MHz

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT20	Test Freq. (MHz)	5745
N <sub>TX</sub>	4	Polarization	V



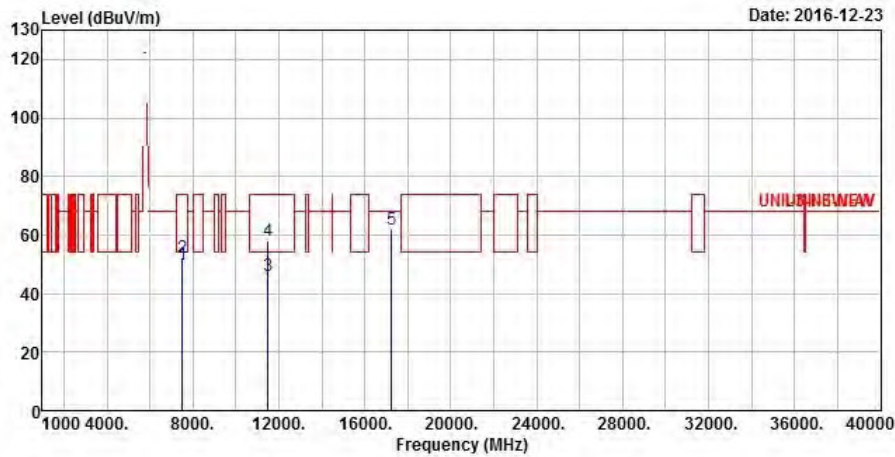
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7500.000	45.35	-8.65	54.00	36.52	36.60	7.67	35.44	Average
2	7500.000	52.81	-21.19	74.00	43.98	36.60	7.67	35.44	Peak
3	11490.000	45.80	-8.20	54.00	31.24	40.10	9.74	35.28	Average
4	11490.000	58.29	-15.71	74.00	43.73	40.10	9.74	35.28	Peak
5	17235.000	61.68	-6.52	68.20	43.79	41.05	11.93	35.09	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



**Transmitter Radiated Unwanted Emissions (Above 1GHz)**

<b>Modulation Mode</b>	VHT20	<b>Test Freq. (MHz)</b>	5745
<b>N<sub>TX</sub></b>	4	<b>Polarization</b>	H



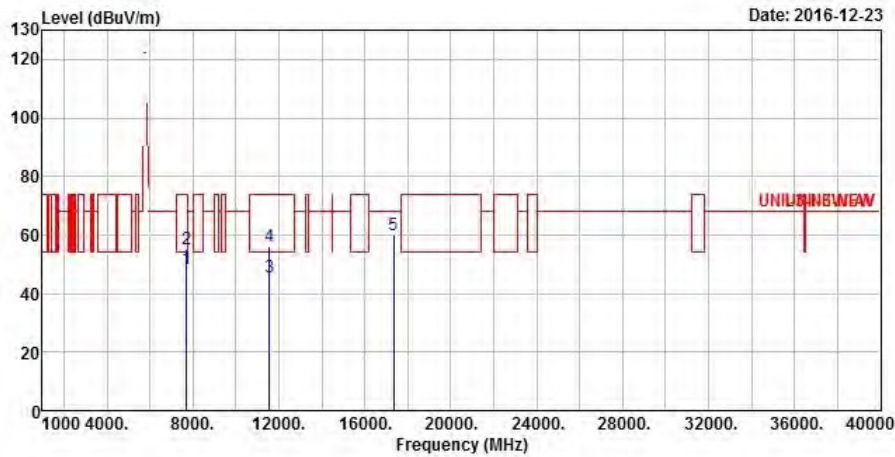
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	7500.000	50.07	-3.93	54.00	41.24	36.60	7.67	35.44 Average
2	7500.000	52.49	-21.51	74.00	43.66	36.60	7.67	35.44 Peak
3	11490.000	46.18	-7.82	54.00	31.62	40.10	9.74	35.28 Average
4	11490.000	57.81	-16.19	74.00	43.25	40.10	9.74	35.28 Peak
5	17235.000	61.64	-6.56	68.20	43.75	41.05	11.93	35.09 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



**Transmitter Radiated Unwanted Emissions (Above 1GHz)**

<b>Modulation Mode</b>	VHT20	<b>Test Freq. (MHz)</b>	5785
<b>N<sub>TX</sub></b>	4	<b>Polarization</b>	V

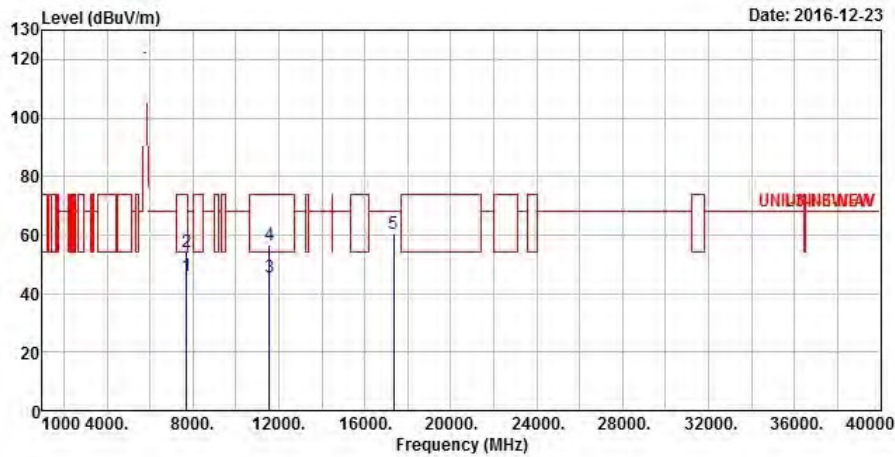


	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	7713.000	48.33	-5.67	54.00	39.19	36.86	7.80	35.52 Average
2	7713.000	55.00	-19.00	74.00	45.86	36.86	7.80	35.52 Peak
3	11570.000	45.54	-8.46	54.00	31.13	39.93	9.79	35.31 Average
4	11570.000	55.95	-18.05	74.00	41.54	39.93	9.79	35.31 Peak
5	17355.000	59.94	-8.26	68.20	41.72	41.44	11.92	35.14 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

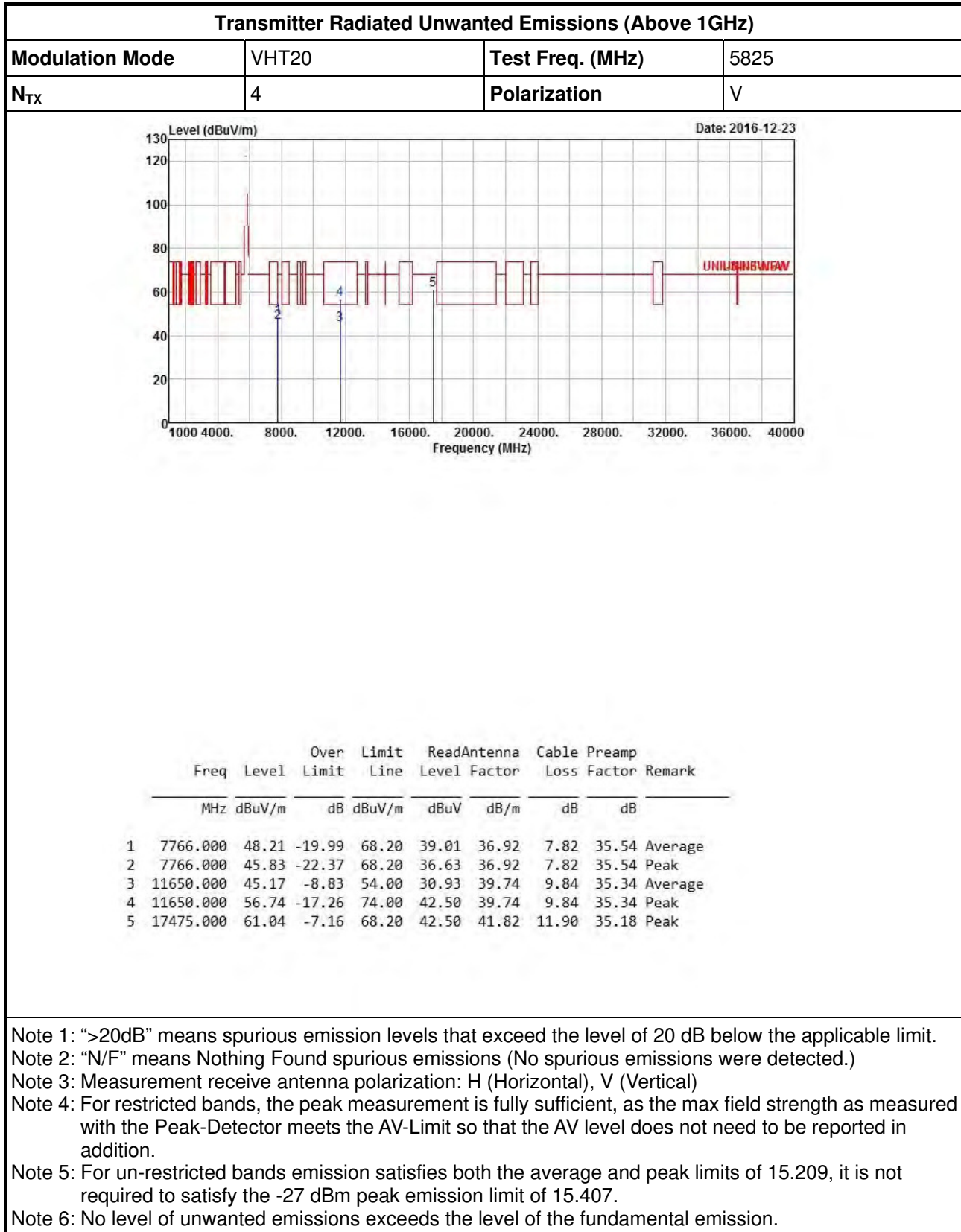


Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT20	Test Freq. (MHz)	5785
N <sub>TX</sub>	4	Polarization	H

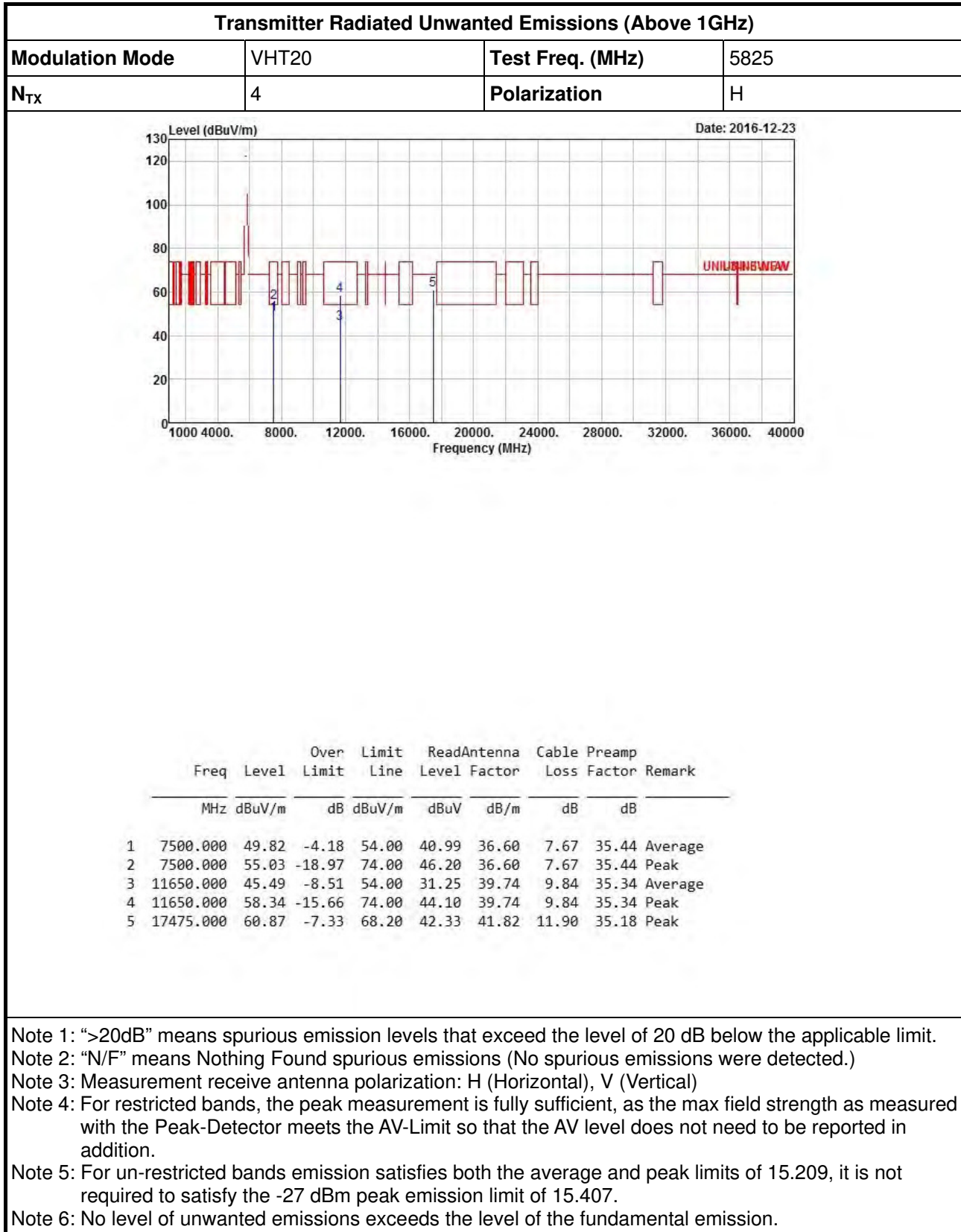


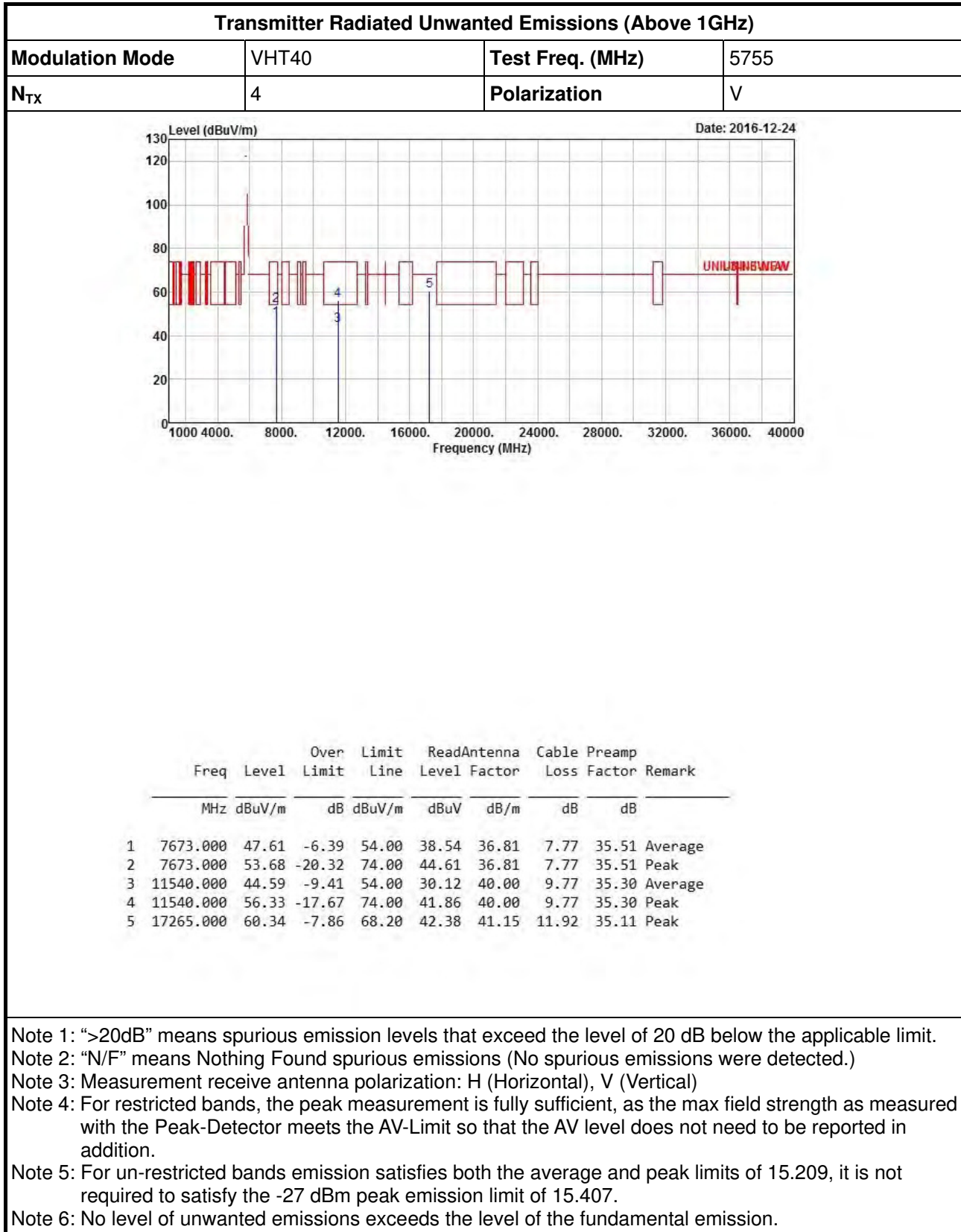
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV/m	dBuV	dB	dB	
1	7713.000	46.04	-7.96	54.00	36.90	36.86	7.80	35.52 Average
2	7713.000	54.40	-19.60	74.00	45.26	36.86	7.80	35.52 Peak
3	11570.000	45.39	-8.61	54.00	30.98	39.93	9.79	35.31 Average
4	11570.000	56.44	-17.56	74.00	42.03	39.93	9.79	35.31 Peak
5	17355.000	60.45	-7.75	68.20	42.23	41.44	11.92	35.14 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.





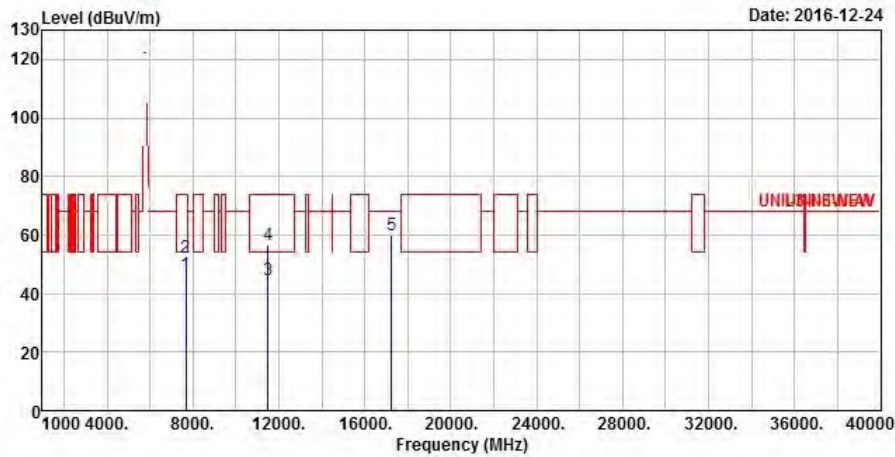






**Transmitter Radiated Unwanted Emissions (Above 1GHz)**

<b>Modulation Mode</b>	VHT40	<b>Test Freq. (MHz)</b>	5755
<b>N<sub>TX</sub></b>	4	<b>Polarization</b>	H

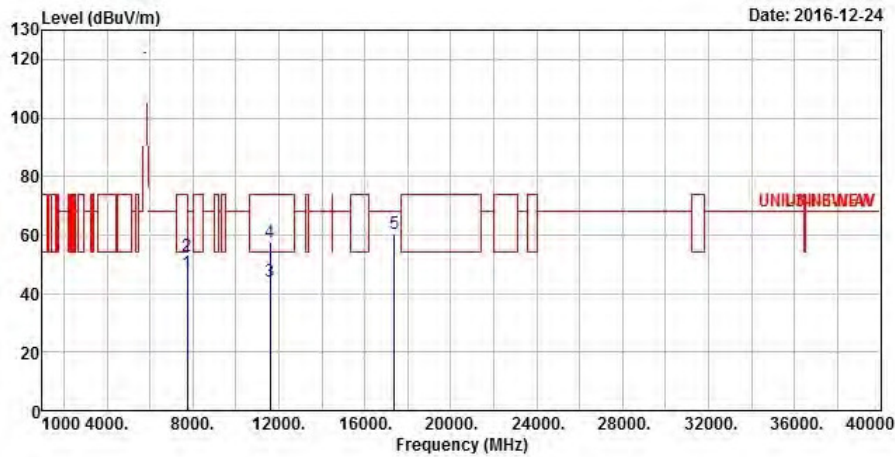


	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	7673.000	46.43	-7.57	54.00	37.36	36.81	7.77	35.51 Average
2	7673.000	52.18	-21.82	74.00	43.11	36.81	7.77	35.51 Peak
3	11510.000	44.53	-9.47	54.00	29.99	40.08	9.74	35.28 Average
4	11510.000	56.53	-17.47	74.00	41.99	40.08	9.74	35.28 Peak
5	17265.000	59.97	-8.23	68.20	42.01	41.15	11.92	35.11 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT40	Test Freq. (MHz)	5795
N <sub>TX</sub>	4	Polarization	V

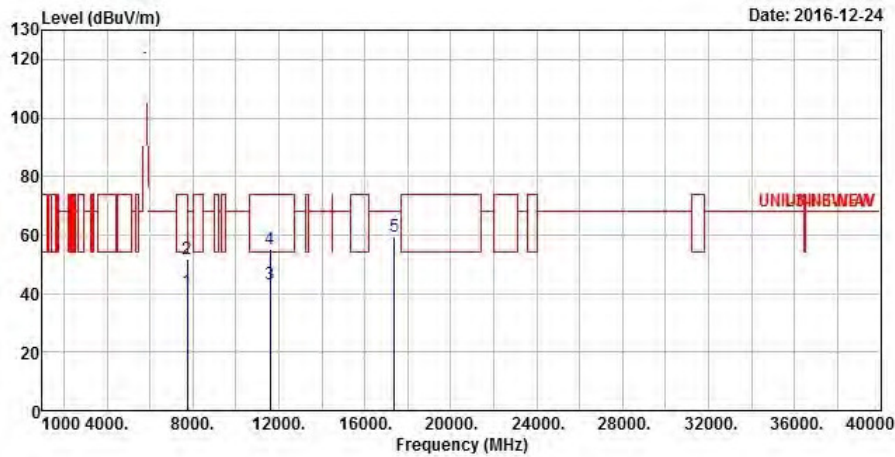


	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	7726.000	47.02	-6.98	54.00	37.88	36.87	7.80	35.53 Average
2	7726.000	52.94	-21.06	74.00	43.80	36.87	7.80	35.53 Peak
3	11590.000	44.18	-9.82	54.00	29.80	39.88	9.82	35.32 Average
4	11590.000	57.38	-16.62	74.00	43.00	39.88	9.82	35.32 Peak
5	17385.000	60.29	-7.91	68.20	42.00	41.53	11.91	35.15 Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)  
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.  
 Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

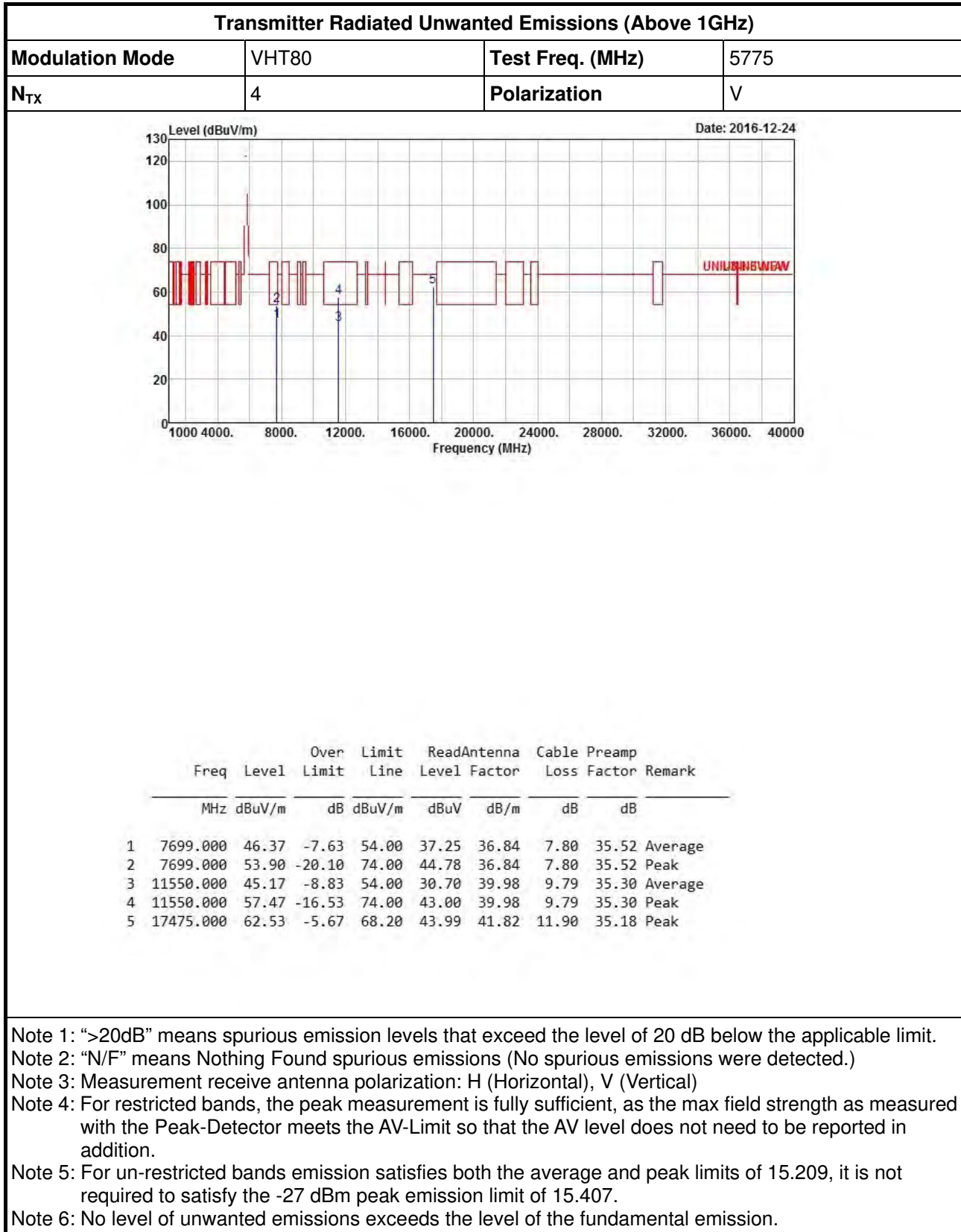


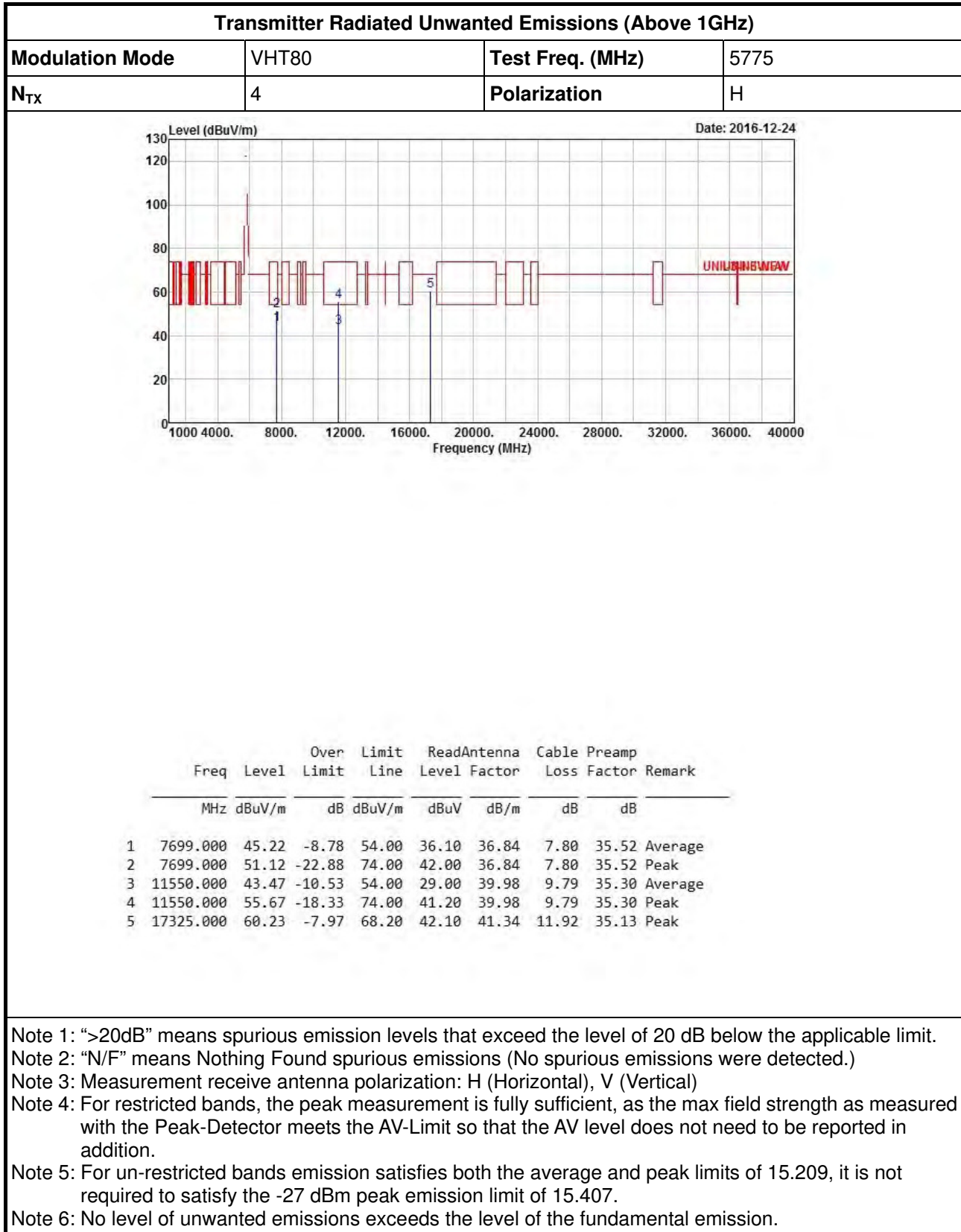
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	VHT40	Test Freq. (MHz)	5795
N <sub>TX</sub>	4	Polarization	H



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	
			dB	dBuV/m	dBuV	dB	dB	
1	7726.000	40.94	-13.06	54.00	31.80	36.87	7.80	35.53 Average
2	7726.000	51.84	-22.16	74.00	42.70	36.87	7.80	35.53 Peak
3	11590.000	43.38	-10.62	54.00	29.00	39.88	9.82	35.32 Average
4	11590.000	55.38	-18.62	74.00	41.00	39.88	9.82	35.32 Peak
5	17385.000	59.29	-8.91	68.20	41.00	41.53	11.91	35.15 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.







Summary

Mode	Result	Ch (Hz)	Center (Hz)	F1 (Hz)	Fh (Hz)	ppm	Limit (ppm)	Port	Remark
5.2G;11a;20;1;4;5200;M;T40,VN	Pass	5.2G	5.19995093G	NaN	NaN	9.437	20	1	5 min





Result

Mode	Result	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	ppm	Limit (ppm)	Port	Remark
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	5.2G	5.199964G	NaN	NaN	6.923	20	1	0 min
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	5.2G	5.19996405G	NaN	NaN	6.913	20	1	2 min
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	5.2G	5.19996393G	NaN	NaN	6.937	20	1	5 min
5.2G;11a;20;1;4;5200;M;TN,VN	Pass	5.2G	5.19996395G	NaN	NaN	6.932	20	1	10 min
5.2G;11a;20;1;4;5200;M;TN,VL	Pass	5.2G	5.199964G	NaN	NaN	6.922	20	1	0 min
5.2G;11a;20;1;4;5200;M;TN,VL	Pass	5.2G	5.19996394G	NaN	NaN	6.934	20	1	2 min
5.2G;11a;20;1;4;5200;M;TN,VL	Pass	5.2G	5.19996408G	NaN	NaN	6.909	20	1	5 min
5.2G;11a;20;1;4;5200;M;TN,VL	Pass	5.2G	5.19996404G	NaN	NaN	6.915	20	1	10 min
5.2G;11a;20;1;4;5200;M;TN,VH	Pass	5.2G	5.19996388G	NaN	NaN	6.945	20	1	0 min
5.2G;11a;20;1;4;5200;M;TN,VH	Pass	5.2G	5.19996386G	NaN	NaN	6.949	20	1	2 min
5.2G;11a;20;1;4;5200;M;TN,VH	Pass	5.2G	5.19996383G	NaN	NaN	6.956	20	1	5 min
5.2G;11a;20;1;4;5200;M;TN,VH	Pass	5.2G	5.19996374G	NaN	NaN	6.973	20	1	10 min
5.2G;11a;20;1;4;5200;M;T50,VN	Pass	5.2G	5.19996122G	NaN	NaN	7.458	20	1	0 min
5.2G;11a;20;1;4;5200;M;T50,VN	Pass	5.2G	5.19996114G	NaN	NaN	7.473	20	1	2 min
5.2G;11a;20;1;4;5200;M;T50,VN	Pass	5.2G	5.19996107G	NaN	NaN	7.486	20	1	5 min
5.2G;11a;20;1;4;5200;M;T50,VN	Pass	5.2G	5.19996114G	NaN	NaN	7.474	20	1	10 min
5.2G;11a;20;1;4;5200;M;T40,VN	Pass	5.2G	5.19995093G	NaN	NaN	9.436	20	1	0 min
5.2G;11a;20;1;4;5200;M;T40,VN	Pass	5.2G	5.19995096G	NaN	NaN	9.431	20	1	2 min
5.2G;11a;20;1;4;5200;M;T40,VN	Pass	5.2G	5.19995093G	NaN	NaN	9.437	20	1	5 min
5.2G;11a;20;1;4;5200;M;T40,VN	Pass	5.2G	5.199951G	NaN	NaN	9.422	20	1	10 min
5.2G;11a;20;1;4;5200;M;T30,VN	Pass	5.2G	5.19995418G	NaN	NaN	8.812	20	1	0 min
5.2G;11a;20;1;4;5200;M;T30,VN	Pass	5.2G	5.19995417G	NaN	NaN	8.814	20	1	2 min
5.2G;11a;20;1;4;5200;M;T30,VN	Pass	5.2G	5.1999542G	NaN	NaN	8.807	20	1	5 min
5.2G;11a;20;1;4;5200;M;T30,VN	Pass	5.2G	5.19995412G	NaN	NaN	8.824	20	1	10 min
5.2G;11a;20;1;4;5200;M;T20,VN	Pass	5.2G	5.19996379G	NaN	NaN	6.964	20	1	0 min
5.2G;11a;20;1;4;5200;M;T20,VN	Pass	5.2G	5.19996376G	NaN	NaN	6.969	20	1	2 min
5.2G;11a;20;1;4;5200;M;T20,VN	Pass	5.2G	5.19996372G	NaN	NaN	6.976	20	1	5 min
5.2G;11a;20;1;4;5200;M;T20,VN	Pass	5.2G	5.19996385G	NaN	NaN	6.951	20	1	10 min
5.2G;11a;20;1;4;5200;M;T10,VN	Pass	5.2G	5.19997706G	NaN	NaN	4.412	20	1	0 min
5.2G;11a;20;1;4;5200;M;T10,VN	Pass	5.2G	5.19997704G	NaN	NaN	4.415	20	1	2 min
5.2G;11a;20;1;4;5200;M;T10,VN	Pass	5.2G	5.1999771G	NaN	NaN	4.403	20	1	5 min
5.2G;11a;20;1;4;5200;M;T10,VN	Pass	5.2G	5.19997692G	NaN	NaN	4.439	20	1	10 min
5.2G;11a;20;1;4;5200;M;T0,VN	Pass	5.2G	5.19999751G	NaN	NaN	0.478	20	1	0 min
5.2G;11a;20;1;4;5200;M;T0,VN	Pass	5.2G	5.19999737G	NaN	NaN	0.505	20	1	2 min
5.2G;11a;20;1;4;5200;M;T0,VN	Pass	5.2G	5.19999752G	NaN	NaN	0.477	20	1	5 min
5.2G;11a;20;1;4;5200;M;T0,VN	Pass	5.2G	5.1999973G	NaN	NaN	0.518	20	1	10 min
5.2G;11a;20;1;4;5200;M;T-5,VN	Pass	5.2G	5.20000699G	NaN	NaN	1.344	20	1	0 min
5.2G;11a;20;1;4;5200;M;T-5,VN	Pass	5.2G	5.20000687G	NaN	NaN	1.322	20	1	2 min
5.2G;11a;20;1;4;5200;M;T-5,VN	Pass	5.2G	5.20000684G	NaN	NaN	1.315	20	1	5 min
5.2G;11a;20;1;4;5200;M;T-5,VN	Pass	5.2G	5.20000681G	NaN	NaN	1.31	20	1	10 min