



# FCC Test Report

**Equipment** : AC1350 Wireless Dual Band Router  
**Brand Name** : TP-LINK  
**Model No.** : Archer C60  
**FCC ID** : TE7C60  
**Standard** : 47 CFR FCC Part 15.407  
**RF Specification** : Wi-Fi  
**Frequency** : 5150 MHz – 5250 MHz  
5725 MHz – 5850 MHz  
**FCC Classification** : NII  
**Applicant / Manufacturer** : TP-LINK TECHNOLOGIES CO., LTD.  
Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central  
Science and Technology Park, Shennan Rd, Nanshan,  
Shenzhen,China

The product sample received on Jun. 23, 2016 and completely tested on Oct. 05, 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 I. Test Result of AC Power-line Conducted Emissions

### Appendix A. Test Result of Emission Bandwidth

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

### Appendix C. Test Result of Power Spectral Density

### Appendix D. Transmitter Bandedge Emissions

### Appendix E. Transmitter Unwanted Emissions

### Appendix F. Frequency Stability

### Appendix G. Test Photos

### Appendix EP. Photographs of EUT v01



## 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



## Revision History



# 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

### 1.1.2 RF General Information

Band	Mode	BWch (MHz)	Nss-Min	Nant
5.2G	11a	20	1	2
5.2G	HT20	20	1,(M0-15)	2
5.2G	HT40	40	1,(M0-15)	2
5.2G	VHT20	20	1,(M0-8)	2
5.2G	VHT40	40	1,(M0-9)	2
5.2G	VHT80	80	1,(M0-9)	2
5.8G	11a	20	1	2
5.8G	HT20	20	1,(M0-15)	2
5.8G	HT40	40	1,(M0-15)	2
5.8G	VHT20	20	1,(M0-8)	2
5.8G	VHT40	40	1,(M0-9)	2
5.8G	VHT80	80	1,(M0-9)	2

#### 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. 2 means have 2 outputs for port 1 and port 2.



## 1.1.3 Antenna Information

Antenna Category	
<input type="checkbox"/>	Equipment placed on the market without antennas
<input type="checkbox"/>	Integral antenna (antenna permanently attached)
<input 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 checked="" type="checkbox"/>	External antenna (dedicated antennas)
<input checked="" 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	Gain (dBi)	
			U-NII-1	U-NII-3
1	External	Dipole	2.47	3.23
2	External	Dipole	2.58	3.36

## 1.1.4 Type of EUT

Identify EUT	
EUT Serial Number	N/A
Presentation of Equipment	<input checked="" type="checkbox"/> Production ; <input type="checkbox"/> Pre-Production ; <input type="checkbox"/> Prototype
Type of EUT	
<input checked="" 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 type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: ...
<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"/> 97.2% - IEEE 802.11a	0.12
<input checked="" type="checkbox"/> 98.7% - IEEE 802.11n (HT20)	0.06
<input checked="" type="checkbox"/> 97.6% - IEEE 802.11n (HT40)	0.11
<input checked="" type="checkbox"/> 99.0% - IEEE 802.11n (VHT20)	0.04
<input checked="" type="checkbox"/> 97.5% - IEEE 802.11n (VHT40)	0.11
<input checked="" type="checkbox"/> 94.9% - IEEE 802.11n (VHT80)	0.23

### 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

### 1.1.7 EUT Operate Information

Items	Description		
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" 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
- 16-24-UNII
- 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
AC Conduction		CO04-HY	Ryan	25°C / 53%
RF Conducted		TH01-HY	Lisa	23.5°C / 63%
Radiated Emission		03CH09-HY	Thor	23.8°C / 62.4%
Test Date				
				01/07/2016
				05/10/2016
				27/09/2016

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



## 2 Test Configuration of EUT

### 2.1 Test Condition

Condition Item	Abbreviation/Remark	Remark
RF Conducted	Abbreviation	Remark
TN,VN	TN	20°C
-	VN	110V
Freq. Stability	Abbreviation	Remark
TN,VN	TN	110V
TN,VL	TL	93.5V
TN,VH	TH	126.5V
T40,VN	T40	40°C
T30,VN	T30	30°C
T20,VN	T20	20°C
T10,VN	T10	10°C
T0,VN	T0	0°C

### 2.2 The Worst Case Modulation Configuration

Worst Modulation Used for Conformance Testing			
Modulation Mode	Transmit Chains (N <sub>TX</sub> )	Data Rate / MCS	Worst Data Rate / MCS
11a	2	6-54Mbps	6 Mbps
HT20	2	MCS 0-15	MCS 0
HT40	2	MCS 0-15	MCS 0
VHT20	2	MCS 0-8	MCS 0
VHT40	2	MCS 0-9	MCS 0
VHT80	2	MCS 0-9	MCS 0



## 2.3 Test Channel Mode

Test Software		QRCT /V 3.0.144.0					
Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.2G	11a	20	1	2	5180	L	16
5.2G	11a	20	1	2	5200	M	21
5.2G	11a	20	1	2	5240	H	22.5
5.2G	HT20	20	1	2	5180	L	15.5
5.2G	HT20	20	1	2	5200	M	21.5
5.2G	HT20	20	1	2	5240	H	22.5
5.2G	VHT20	20	1	2	5180	L	15.5
5.2G	VHT20	20	1	2	5200	M	21.5
5.2G	VHT20	20	1	2	5240	H	22.5
5.2G	HT40	40	1	2	5190	L	11.5
5.2G	HT40	40	1	2	5230	H	20
5.2G	VHT40	40	1	2	5190	L	11.5
5.2G	VHT40	40	1	2	5230	H	20
5.2G	VHT80	80	1	2	5210	S	10.5



Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.8G	11a	20	1	2	5745	L	25
5.8G	11a	20	1	2	5785	M	25
5.8G	11a	20	1	2	5825	H	25
5.8G	HT20	20	1	2	5745	L	25
5.8G	HT20	20	1	2	5785	M	25
5.8G	HT20	20	1	2	5825	H	25
5.8G	VHT20	20	1	2	5745	L	25
5.8G	VHT20	20	1	2	5785	M	25
5.8G	VHT20	20	1	2	5825	H	25
5.8G	HT40	40	1	2	5755	L	25
5.8G	HT40	40	1	2	5795	H	25
5.8G	VHT40	40	1	2	5755	L	25
5.8G	VHT40	40	1	2	5795	H	25
5.8G	VHT80	80	1	2	5775	S	16

**Abbreviation Explanation**

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Test Cond.	Abbreviation
5.2G	VHT40	40	1,(M0-9)	2	5190	L	TN,VN	5.2G;VHT40;40;1,(M0-9);2;5190;L;TN,VN
5.2G	VHT80	80	1,(M0-9)	2	5210	S	TN,VN	5.2G;VHT80;80;1,(M0-9);2;5210;S;TN,VN

## Note:

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



## 2.4 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

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 checked="" type="checkbox"/> EUT will be placed in fixed position. <input 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
<b>Orthogonal Planes of EUT</b>	<b>X Plane</b> 
<b>Worst Planes of EUT</b>	<b>V</b>
<b>Orthogonal Planes of EUT</b>	<b>X Plane</b>  <b>Z Plane</b> 
<b>Worst Planes of Ant.</b>	<b>V</b>



## 2.5 Accessories and Support Equipment

Accessories				
AC Adapter	Brand Name	TP-LINK	Model Name	T120100-2B1
	Power Rating	I/P: 100 - 240Vac, 300mA, O/P: 12Vdc, 1000mA		
	Power Cord	1.5 meter, non-shielded cable, w/o ferrite core		

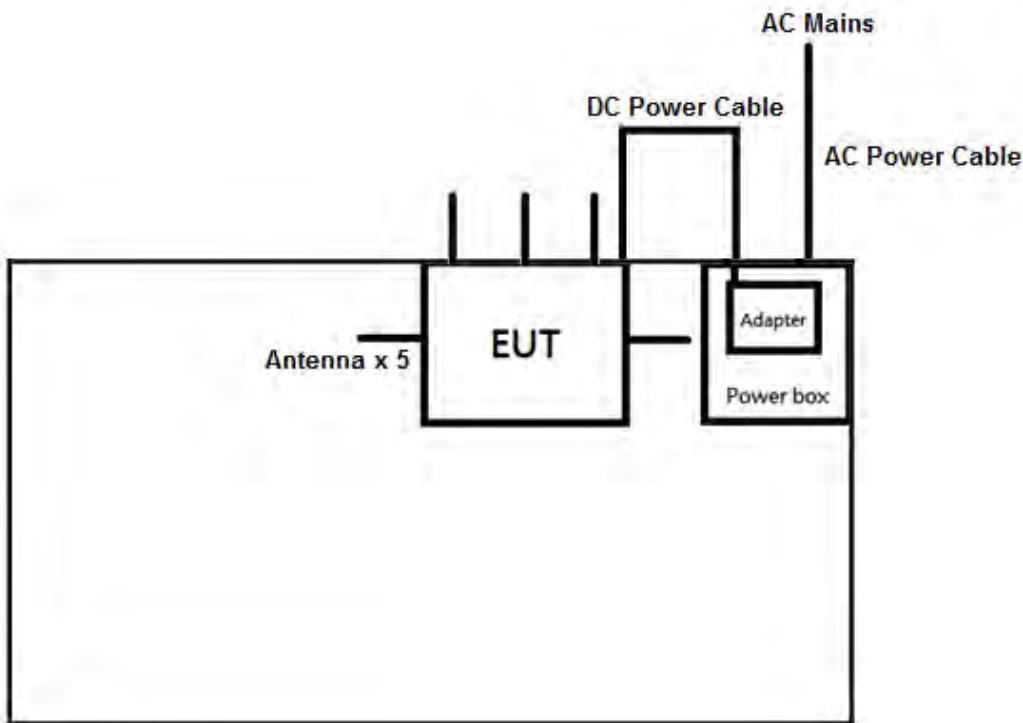
Reminder: Regarding to more detail and other information, please refer to user manual.

Support Equipment – AC Conduction and Radiated Emission				
No.	Equipment	Brand Name	Model Name	
1	-	-	-	-

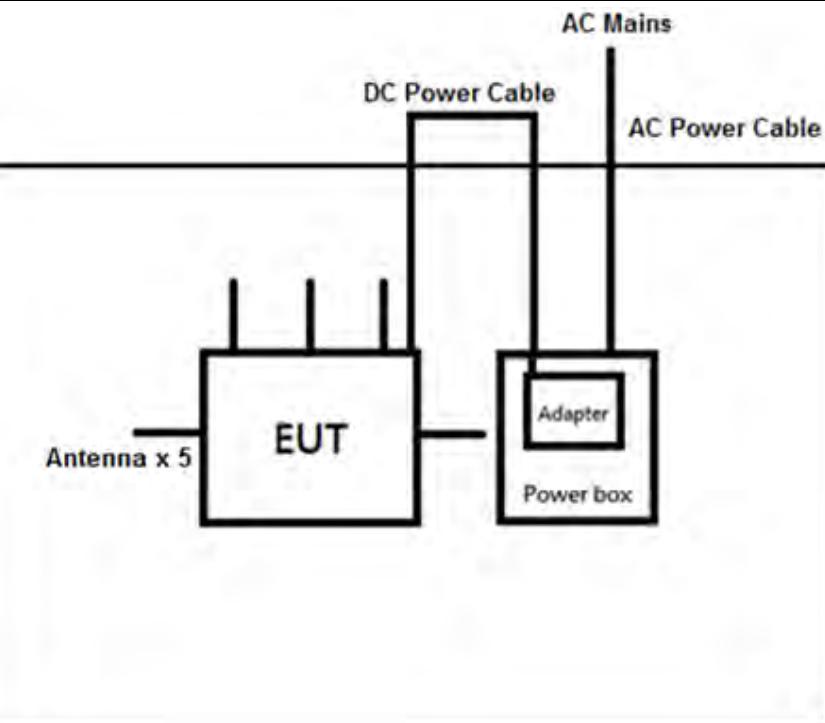
Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5540	DoC
2	AC Adapter for Notebook	DELL	HA65NM130	DoC

## 2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Test Setup Diagram –Radiated Emission Test



### 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.

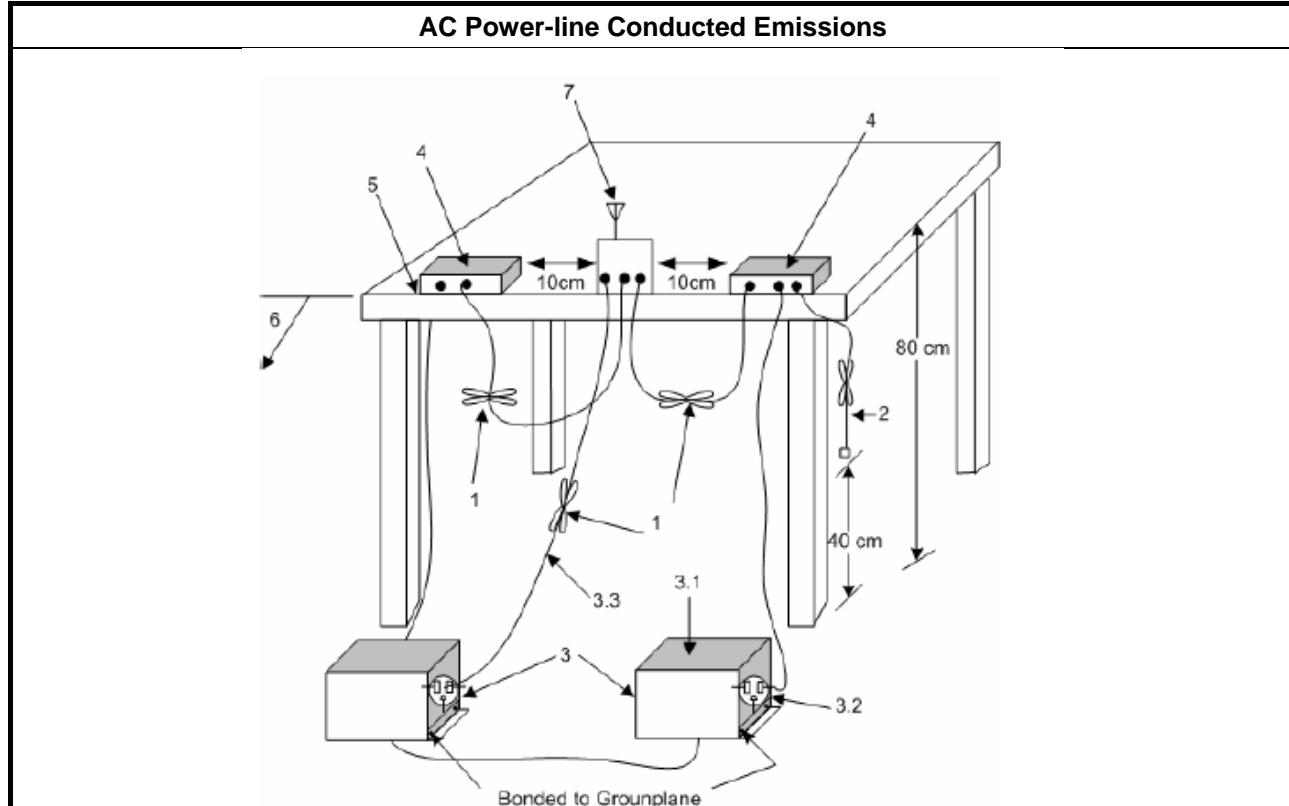
##### 3.1.2 Measuring Instruments

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 $\geq$ 500kHz.

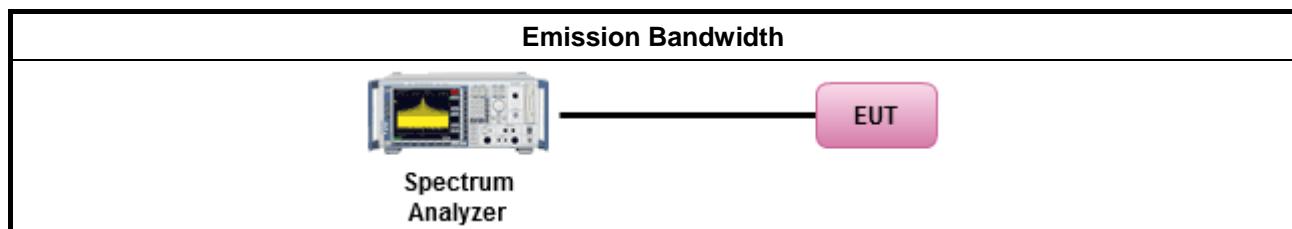
### 3.2.2 Measuring Instruments

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

### 3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
<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 IC 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>	
▪ For the 5.15-5.25 GHz band:	
▪ Outdoor AP: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ . e.i.r.p. at any elevation angle above 30 degrees $\leq 125$ mW [21dBm]	
▪ Indoor AP: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$	
▪ Point-to-point AP: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$ .	
▪ Mobile or Portable Client: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .	
▪ For the 5.25-5.35 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or $11$ dBm + $10 \log B$ , where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .	
▪ For the 5.47-5.725 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or $11$ dBm + $10 \log B$ , where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .	
▪ For the 5.725-5.85 GHz band:	
▪ Point-to-multipoint systems (P2M): the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ .	
▪ Point-to-point systems (P2P): the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W.	
$P_{Out}$ = maximum conducted output power in dBm, $G_{TX}$ = the maximum transmitting antenna directional gain in dBi.	

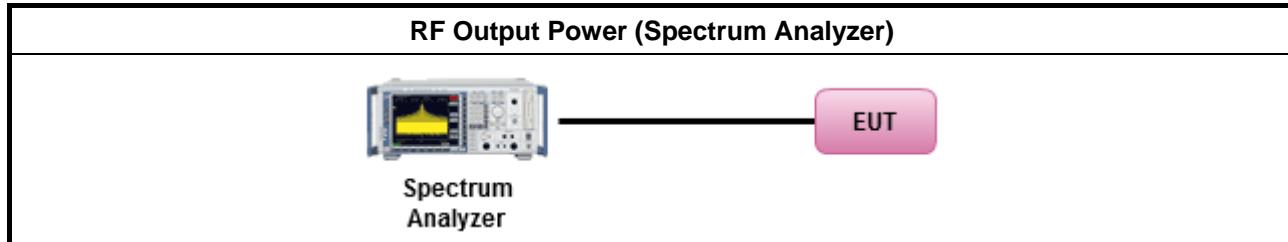
#### 3.3.2 Measuring Instruments

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

### 3.3.3 Test Procedures

<b>Test Method</b>	
▪ Maximum Conducted Output Power	
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).
▪ For conducted measurement.	
▪ 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.	
▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{\text{total}} = P_{\text{total}} + DG$	

### 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>	
▪ For the 5.15-5.25 GHz band:	
	▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .
	▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .
	▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$ .
	▪ Mobile or Portable Client: the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then PPSD= $11 - (G_{TX} - 6)$ .
▪ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then PPSD= $11 - (G_{TX} - 6)$ .	
▪ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then PPSD= $11 - (G_{TX} - 6)$ .	
▪ For the 5.725-5.85 GHz band:	
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) $\leq 30$ 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.
<b>PPSD</b> = peak power spectral density that the same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz <b>G<sub>TX</sub></b> = the maximum transmitting antenna directional gain in dBi.	

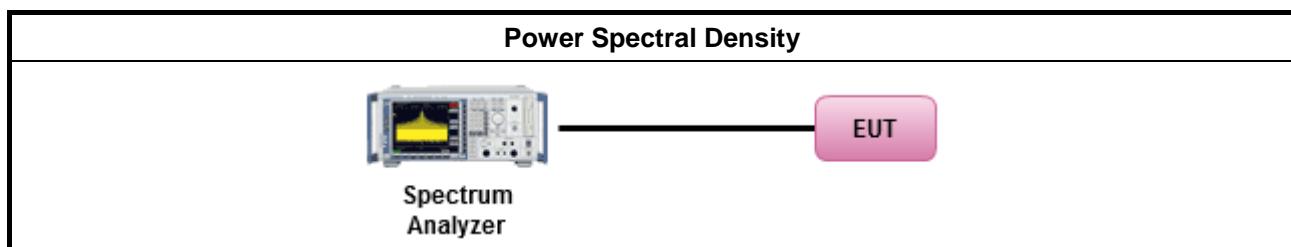
### 3.4.2 Measuring Instruments

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 $\geq$ 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)	
<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 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 $N_{TX}$ 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,
<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>	<input type="checkbox"/> Option 3: Measure and add $10 \log(N)$ dB, where N is the number of transmit chains. Refer as 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.

### 3.4.4 Test Setup

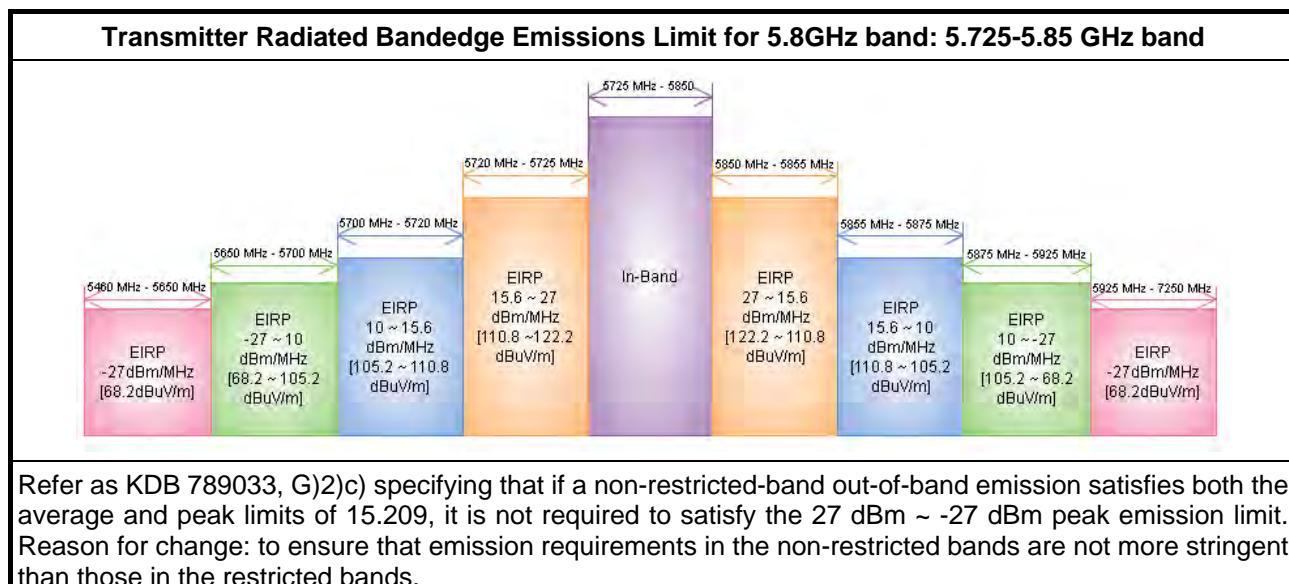
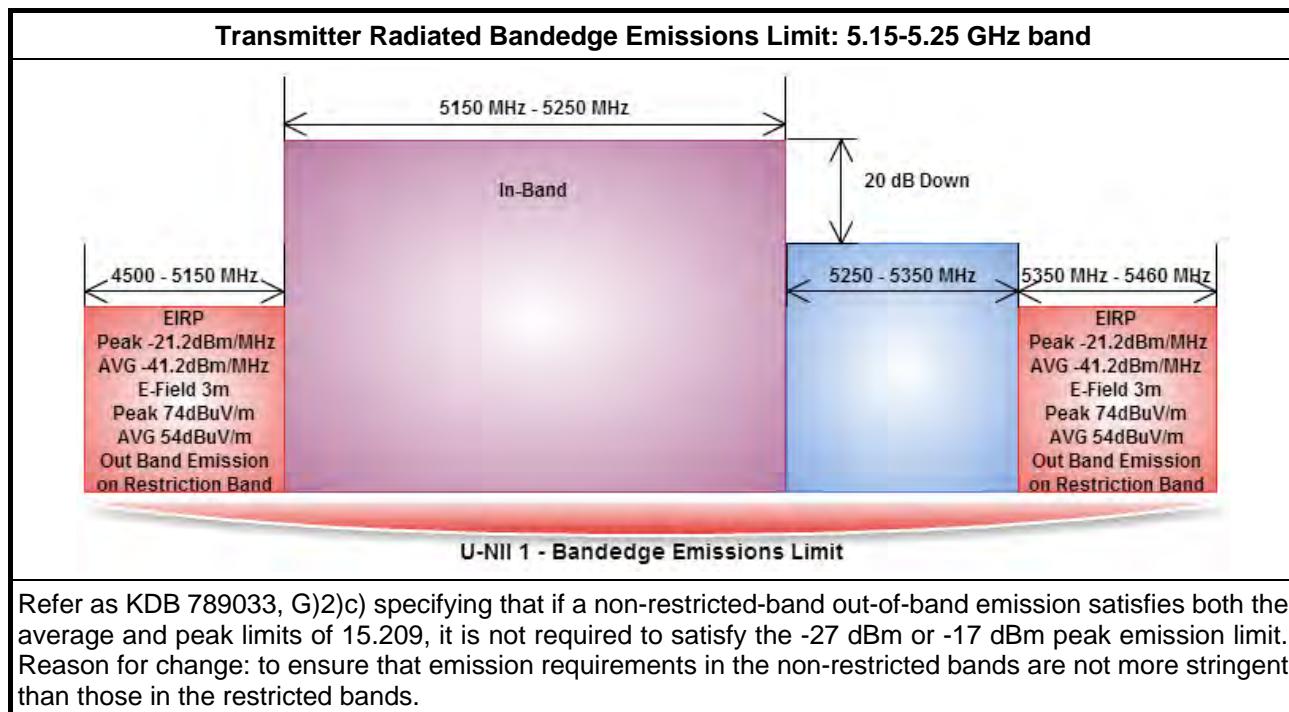


### 3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix C

## 3.5 Transmitter Bandedge Emissions

### 3.5.1 Transmitter Radiated Bandedge Emissions Limit



### 3.5.2 Measuring Instruments

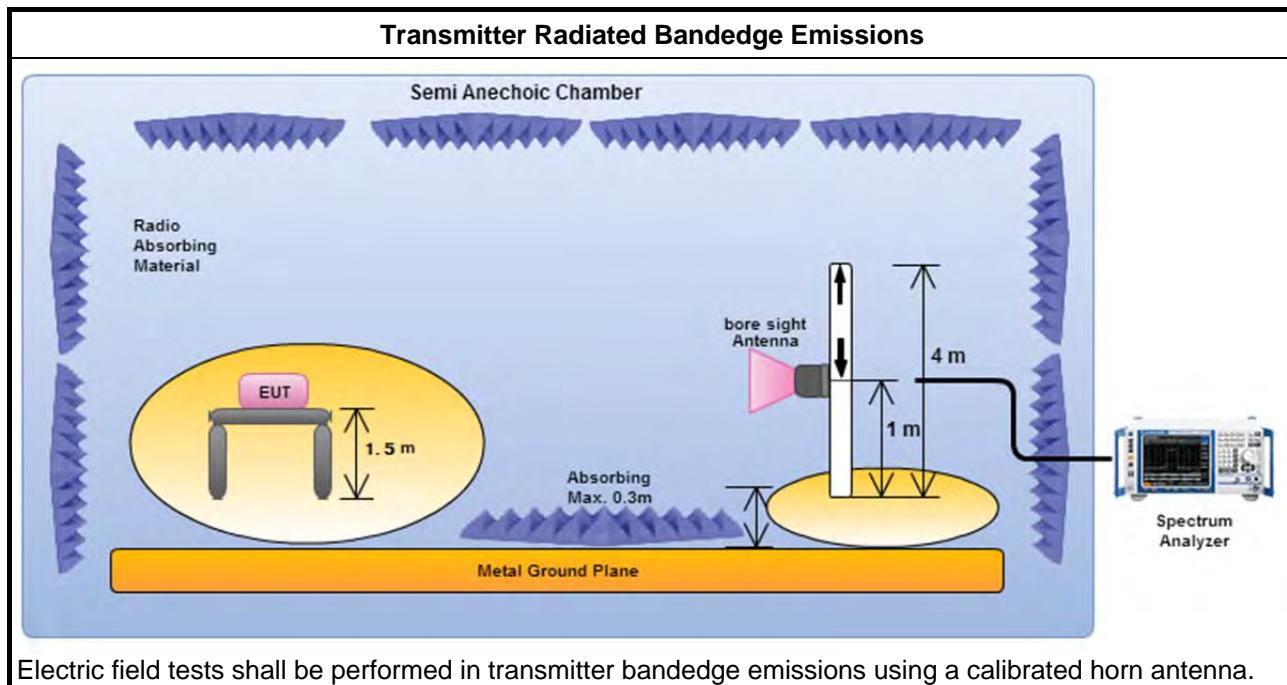
Refer a test equipment and calibration data table in this test report.



### 3.5.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
<input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 6.10 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). $VBW \geq 1/T$ , 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 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 ~ 68.2 dBuV/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.

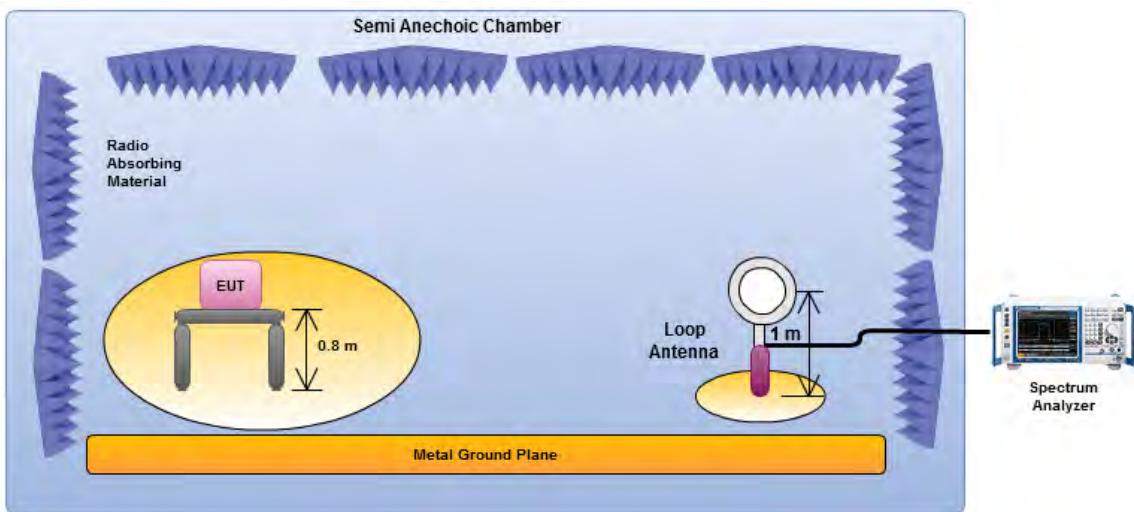


### 3.6.3 Test Procedures

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"/>	<input checked="" type="checkbox"/> Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	<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.

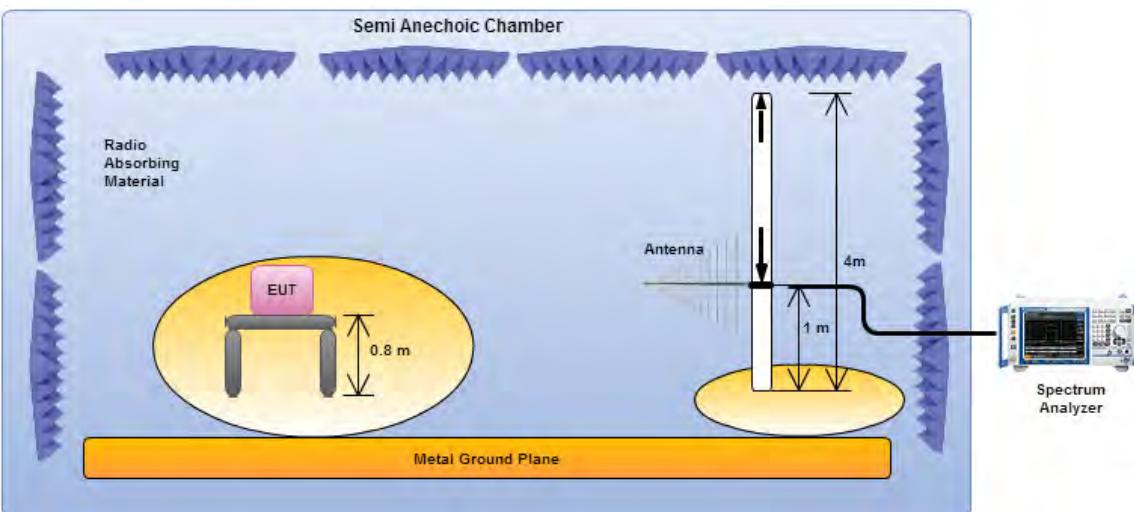
### 3.6.4 Test Setup

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

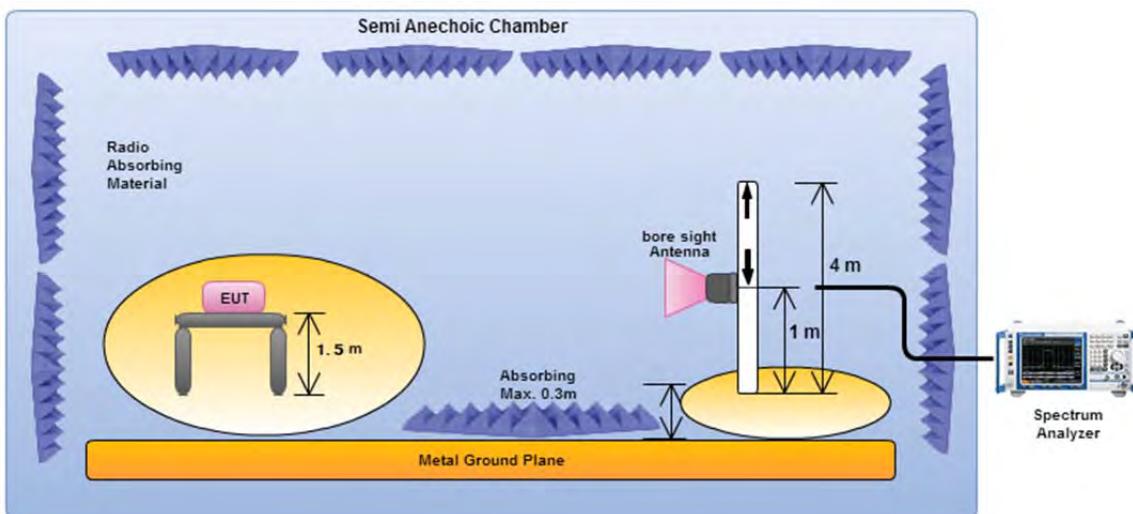


Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna.

#### 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>	

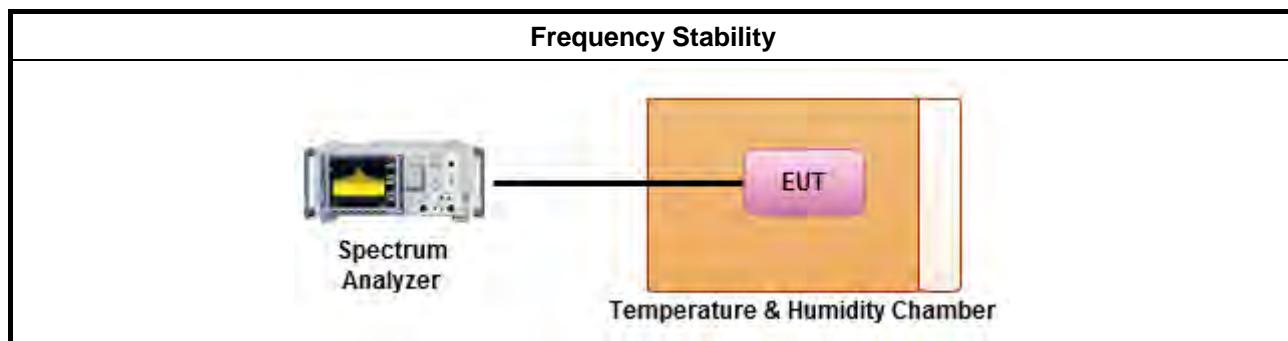
### 3.7.2 Measuring Instruments

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

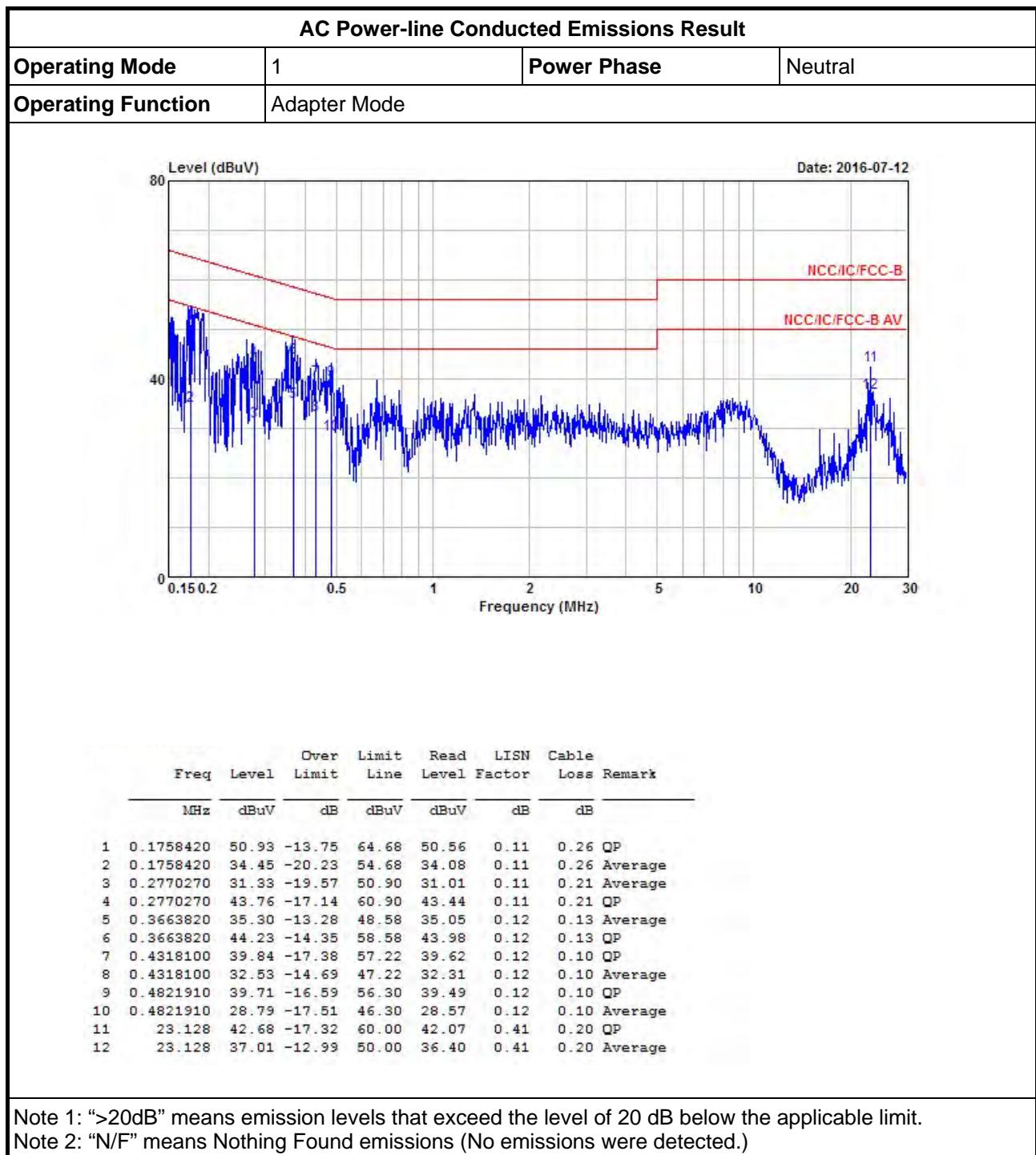
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR-3	102051	9kHz~3.6GHz	19/04/2016	18/04/2017
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz~30MHz	26/01/2016	25/01/2017
LISN (Support Unit)	R&S	ENV216	101295	9kHz~30MHz	04/11/2015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

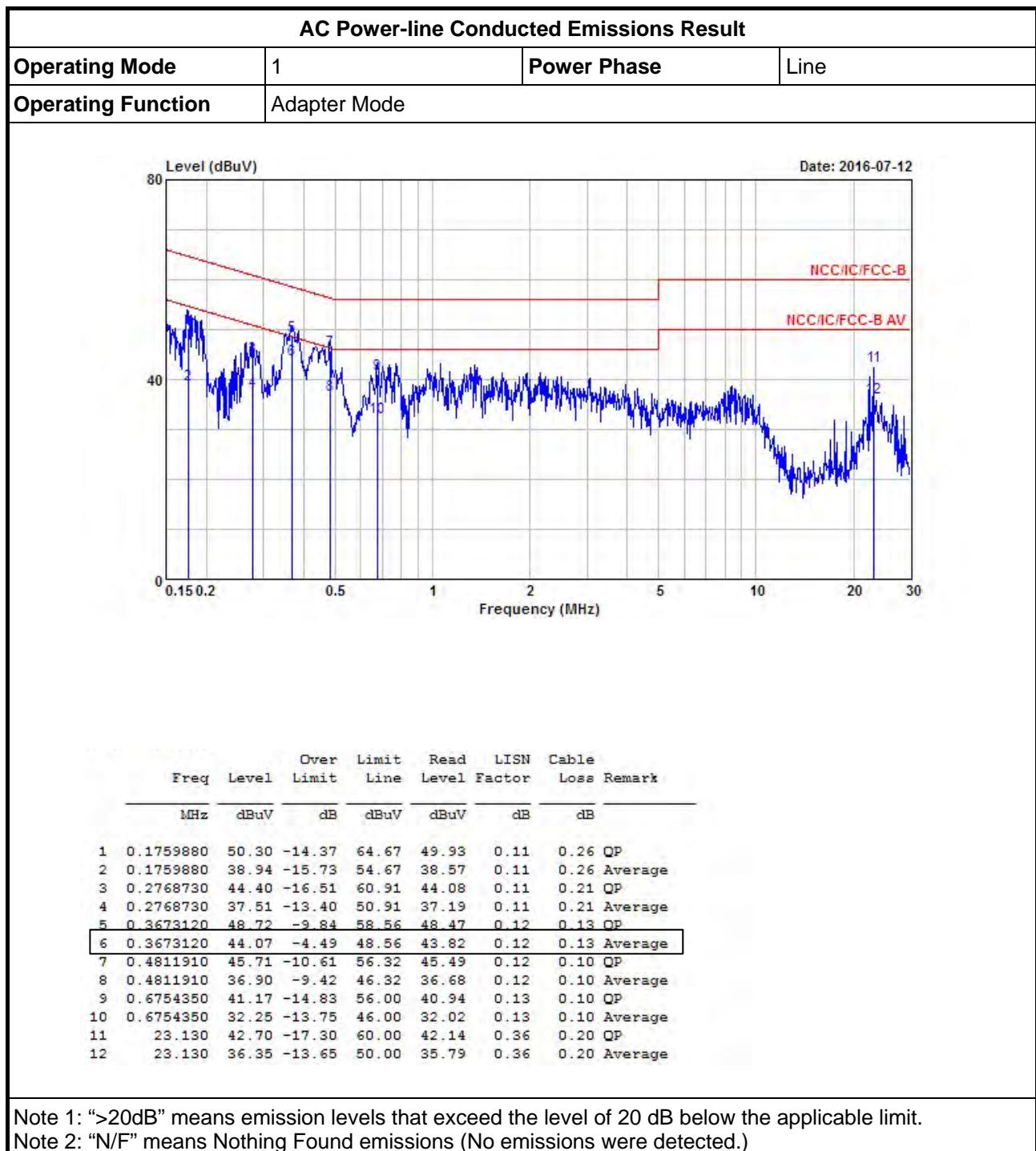
### Conducted

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

### Radiated

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz~1GHz 3m	25/04/2016	24/04/2017
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	30/06/2016	29/06/2017
Amplifier	EMC	EMC9135	980232	9kHz~1.0GHz	29/01/2016	28/01/2017
Amplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	11/04/2016	10/04/2017
Spectrum	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	04/07/2016	03/07/2017
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL 6111D & MTJ6102	35418	30MHz~1GHz	31/03/2016	30/03/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA 9120D 1534	1GHz~18GHz	22/04/2016	21/04/2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18GHz~40GHz	04/01/2016	03/01/2017
Amplifier	MITEQ	JS44-18004000-33-8P	1840917	18GHz~40GHz	02/06/2015	01/06/2017
Loop Antenna	ROHDE&SCHWARZ	HFH2-Z2	100330	9kHz~30MHz	10/11/2014	09/11/2016





**Summary**

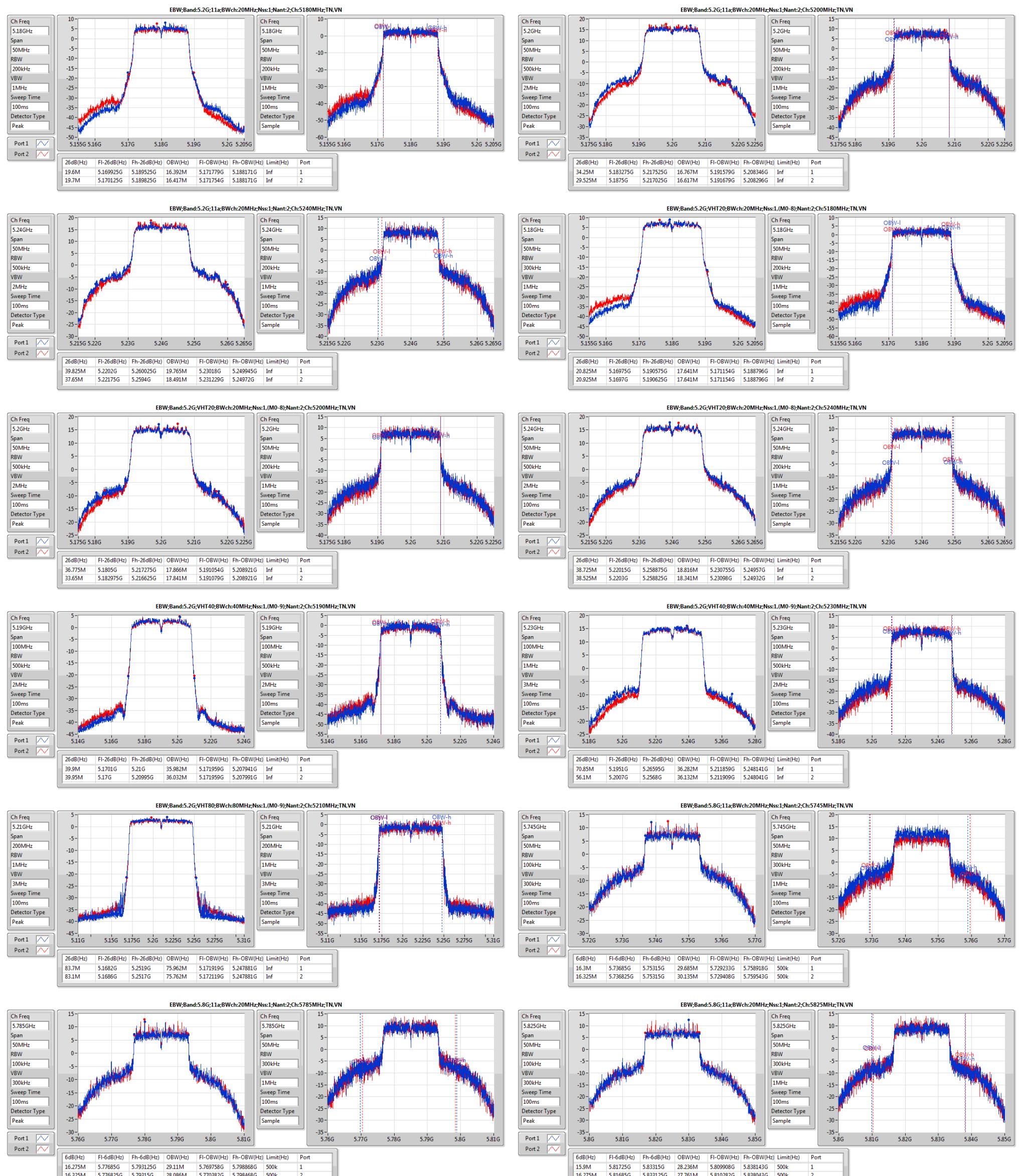
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.2G;11a;20;1;2	39.825M	19.765M	19M8D1D	19.6M	16.392M
5.2G;VHT20;20;1,(M0-8);2	38.725M	18.816M	18M8D1D	20.825M	17.641M
5.2G;VHT40;40;1,(M0-9);2	63.65M	36.382M	36M4D1D	39.9M	35.982M
5.2G;VHT80;80;1,(M0-9);2	83.7M	75.962M	76M0D1D	83.1M	75.762M
5.8G;11a;20;1;2	16.325M	30.135M	30M1D1D	15.9M	27.761M
5.8G;VHT20;20;1,(M0-8);2	17.575M	28.786M	28M8D1D	17.15M	27.236M
5.8G;VHT40;40;1,(M0-9);2	35.9M	53.723M	53M7D1D	31.3M	50.725M
5.8G;VHT80;80;1,(M0-9);2	76.1M	75.862M	75M9D1D	75.8M	75.862M

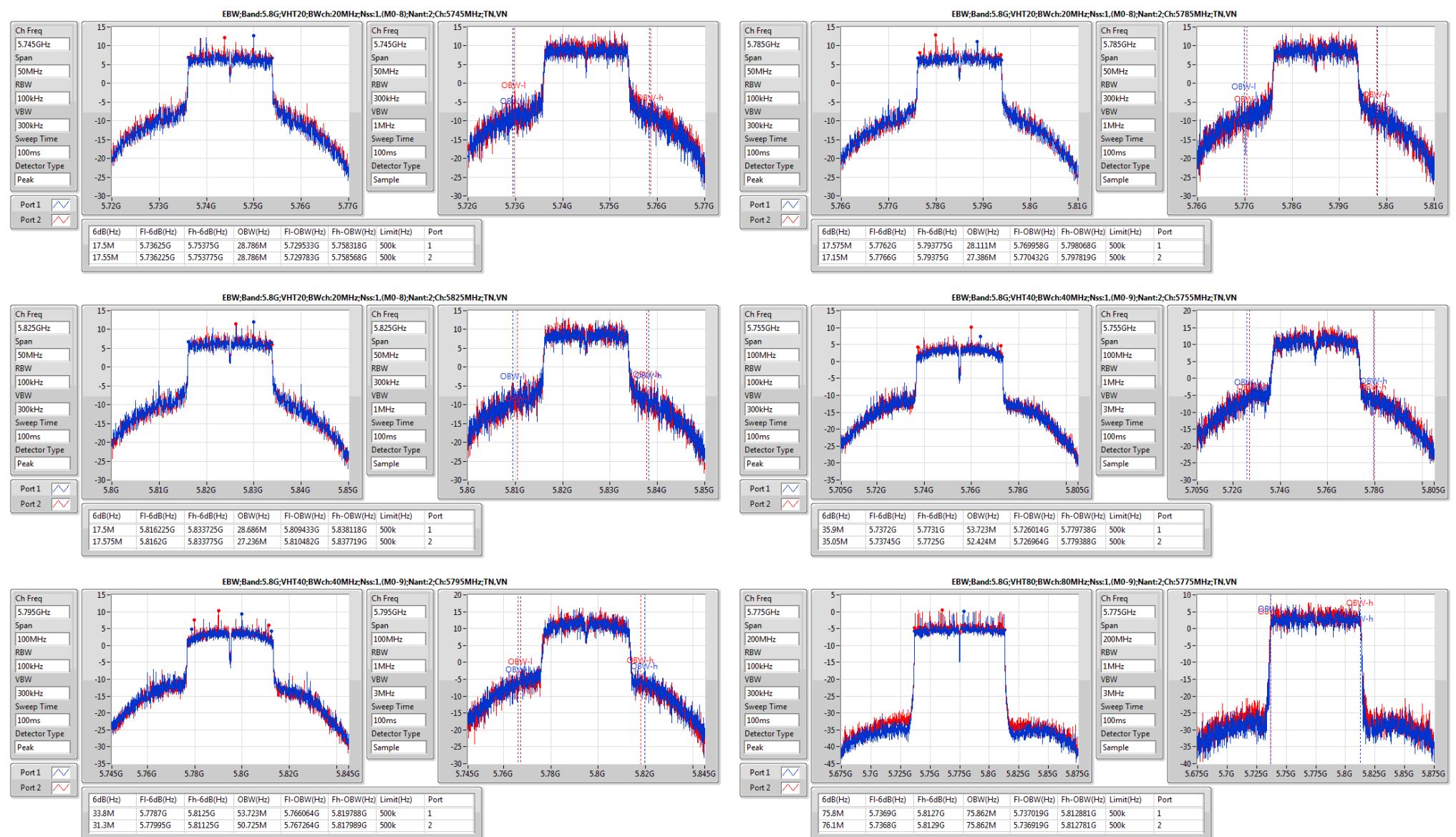
**Result**

Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)
5.2G;11a;20;1;2;5180;L;TN,VN	Pass	Inf	19.6M	16.392M	19.7M	16.417M
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	Inf	34.25M	16.767M	29.525M	16.617M
5.2G;11a;20;1;2;5240;H;TN,VN	Pass	Inf	39.825M	19.765M	37.65M	18.491M
5.2G;VHT20;20;1,(M0-8);2;5180;L;TN,VN	Pass	Inf	20.825M	17.641M	20.925M	17.641M
5.2G;VHT20;20;1,(M0-8);2;5200;M;TN,VN	Pass	Inf	36.775M	17.866M	33.65M	17.841M
5.2G;VHT20;20;1,(M0-8);2;5240;H;TN,VN	Pass	Inf	38.725M	18.816M	38.525M	18.341M
5.2G;VHT40;40;1,(M0-9);2;5190;L;TN,VN	Pass	Inf	39.9M	35.982M	39.95M	36.032M
5.2G;VHT40;40;1,(M0-9);2;5230;H;TN,VN	Pass	Inf	63.65M	36.382M	61.9M	36.282M
5.2G;VHT80;80;1,(M0-9);2;5210;S;TN,VN	Pass	Inf	83.7M	75.962M	83.1M	75.762M
5.8G;11a;20;1;2;5745;L;TN,VN	Pass	500k	16.3M	29.685M	16.325M	30.135M
5.8G;11a;20;1;2;5785;M;TN,VN	Pass	500k	16.275M	29.11M	16.325M	28.086M
5.8G;11a;20;1;2;5825;H;TN,VN	Pass	500k	15.9M	28.236M	16.275M	27.761M
5.8G;VHT20;20;1,(M0-8);2;5745;L;TN,VN	Pass	500k	17.5M	28.786M	17.55M	28.786M
5.8G;VHT20;20;1,(M0-8);2;5785;M;TN,VN	Pass	500k	17.575M	28.111M	17.15M	27.386M
5.8G;VHT20;20;1,(M0-8);2;5825;H;TN,VN	Pass	500k	17.5M	28.686M	17.575M	27.236M
5.8G;VHT40;40;1,(M0-9);2;5755;L;TN,VN	Pass	500k	35.9M	53.723M	35.05M	52.424M
5.8G;VHT40;40;1,(M0-9);2;5795;H;TN,VN	Pass	500k	33.8M	53.723M	31.3M	50.725M
5.8G;VHT80;80;1,(M0-9);2;5775;S;TN,VN	Pass	500k	75.8M	75.862M	76.1M	75.862M



## *EBW Result*





**Summary**

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.2G;11a;20;1;2	26.19	0.41591	28.77	0.75336
5.2G;HT20;20;1,(M0-15);2	25.96	0.39446	28.54	0.7145
5.2G;HT40;40;1,(M0-15);2	25.08	0.32211	27.66	0.58345
5.2G;VHT20;20;1,(M0-8);2	26.07	0.40458	28.65	0.73282
5.2G;VHT40;40;1,(M0-9);2	25.11	0.32434	27.69	0.58749
5.2G;VHT80;80;1,(M0-9);2	15.39	0.03459	17.97	0.06266
5.8G;11a;20;1;2	25.78	0.37844	29.14	0.82035
5.8G;HT20;20;1,(M0-15);2	25.31	0.33963	28.67	0.73621
5.8G;HT40;40;1,(M0-15);2	24.97	0.31405	28.33	0.68077
5.8G;VHT20;20;1,(M0-8);2	25.41	0.34754	28.77	0.75336
5.8G;VHT40;40;1,(M0-9);2	25.14	0.32659	28.50	0.70795
5.8G;VHT80;80;1,(M0-9);2	20.10	0.10233	23.46	0.22182



## Result

Mode	Result	DG (dBi)	EIRP (dBm)	EIRP Lim. (dBm)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)	P2 (dBm)
5.2G;11a;20;1;2:5180;L;TN,VN	Pass	2.58	23.03	36.00	20.45	30.00	17.39	17.49
5.2G;11a;20;1;2:5200;M;TN,VN	Pass	2.58	27.88	36.00	25.30	30.00	22.36	22.22
5.2G;11a;20;1;2:5240;H;TN,VN	Pass	2.58	28.77	36.00	26.19	30.00	23.25	23.10
5.2G;HT20;20;1,(M0-15);2:5180;L;TN,VN	Pass	2.58	22.71	36.00	20.13	30.00	17.24	16.99
5.2G;HT20;20;1,(M0-15);2:5200;M;TN,VN	Pass	2.58	28.11	36.00	25.53	30.00	22.29	22.73
5.2G;HT20;20;1,(M0-15);2:5240;H;TN,VN	Pass	2.58	28.54	36.00	25.96	30.00	22.82	23.07
5.2G;HT40;40;1,(M0-15);2:5190;L;TN,VN	Pass	2.58	18.74	36.00	16.16	30.00	12.90	13.39
5.2G;HT40;40;1,(M0-15);2:5230;H;TN,VN	Pass	2.58	27.66	36.00	25.08	30.00	22.03	22.11
5.2G;VHT20;20;1,(M0-8);2:5180;L;TN,VN	Pass	2.58	22.84	36.00	20.26	30.00	17.26	17.24
5.2G;VHT20;20;1,(M0-8);2:5200;M;TN,VN	Pass	2.58	28.16	36.00	25.58	30.00	22.58	22.56
5.2G;VHT20;20;1,(M0-8);2:5240;H;TN,VN	Pass	2.58	28.65	36.00	26.07	30.00	23.12	22.99
5.2G;VHT40;40;1,(M0-9);2:5190;L;TN,VN	Pass	2.58	18.89	36.00	16.31	30.00	13.44	13.15
5.2G;VHT40;40;1,(M0-9);2:5230;H;TN,VN	Pass	2.58	27.69	36.00	25.11	30.00	22.24	21.96
5.2G;VHT80;80;1,(M0-9);2:5210;S;TN,VN	Pass	2.58	17.97	36.00	15.39	30.00	12.58	12.18
5.8G;11a;20;1;2:5745;L;TN,VN	Pass	3.36	29.14	36.00	25.78	30.00	22.48	23.04
5.8G;11a;20;1;2:5785;M;TN,VN	Pass	3.36	28.85	36.00	25.49	30.00	22.20	22.74
5.8G;11a;20;1;2:5825;H;TN,VN	Pass	3.36	28.48	36.00	25.12	30.00	21.77	22.43
5.8G;HT20;20;1,(M0-15);2:5745;L;TN,VN	Pass	3.36	28.67	36.00	25.31	30.00	21.91	22.65
5.8G;HT20;20;1,(M0-15);2:5785;M;TN,VN	Pass	3.36	28.58	36.00	25.22	30.00	21.80	22.59
5.8G;HT20;20;1,(M0-15);2:5825;H;TN,VN	Pass	3.36	28.37	36.00	25.01	30.00	21.60	22.37
5.8G;HT40;40;1,(M0-15);2:5755;L;TN,VN	Pass	3.36	28.26	36.00	24.90	30.00	21.54	22.22
5.8G;HT40;40;1,(M0-15);2:5795;H;TN,VN	Pass	3.36	28.33	36.00	24.97	30.00	21.62	22.28
5.8G;VHT20;20;1,(M0-8);2:5745;L;TN,VN	Pass	3.36	28.69	36.00	25.33	30.00	21.91	22.70
5.8G;VHT20;20;1,(M0-8);2:5785;M;TN,VN	Pass	3.36	28.77	36.00	25.41	30.00	22.12	22.66
5.8G;VHT20;20;1,(M0-8);2:5825;H;TN,VN	Pass	3.36	28.55	36.00	25.19	30.00	21.80	22.52
5.8G;VHT40;40;1,(M0-9);2:5755;L;TN,VN	Pass	3.36	28.45	36.00	25.09	30.00	21.86	22.29
5.8G;VHT40;40;1,(M0-9);2:5795;H;TN,VN	Pass	3.36	28.50	36.00	25.14	30.00	21.89	22.35
5.8G;VHT80;80;1,(M0-9);2:5775;S;TN,VN	Pass	3.36	23.46	36.00	20.10	30.00	16.64	17.49

**Summary**

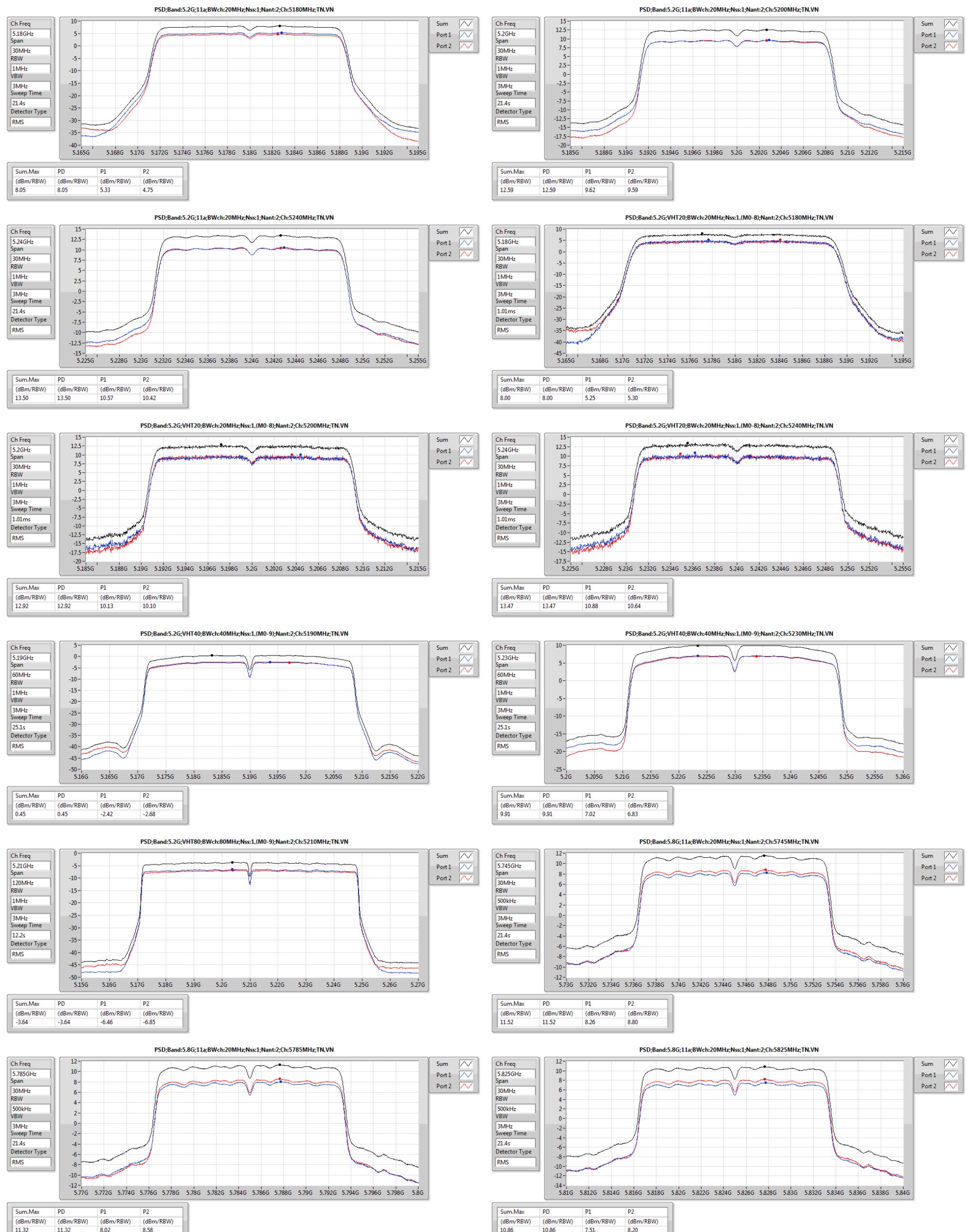
Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.2G;11a;20;1;2	13.50	19.04
5.2G;VHT20;20;1,(M0-8);2	13.47	19.01
5.2G;VHT40;40;1,(M0-9);2	9.39	14.93
5.2G;VHT80;80;1,(M0-9);2	-3.64	1.90
5.8G;11a;20;1;2	11.52	17.83
5.8G;VHT20;20;1,(M0-8);2	11.27	17.58
5.8G;VHT40;40;1,(M0-9);2	7.83	14.14
5.8G;VHT80;80;1,(M0-9);2	-0.31	6.00

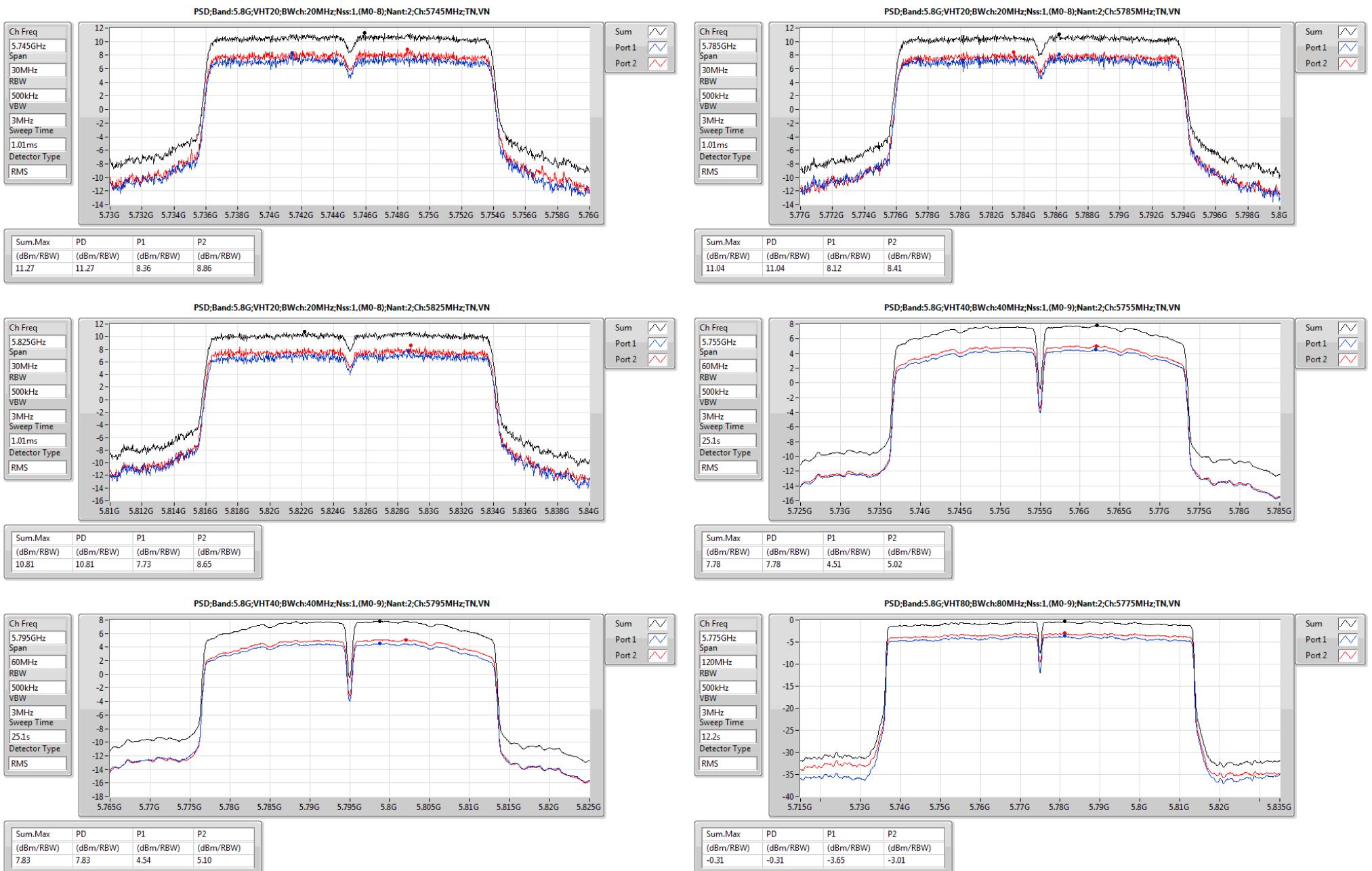
**Result**

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)
5.2G;11a;20;1;2;5180;L;TN,VN	Pass	1M	1M	0.00	5.54	8.05	8.05	17.00	13.59	Inf	5.33	4.75
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	1M	1M	0.00	5.54	12.59	12.59	17.00	18.13	Inf	9.62	9.59
5.2G;11a;20;1;2;5240;H;TN,VN	Pass	1M	1M	0.00	5.54	13.50	13.50	17.00	19.04	Inf	10.57	10.42
5.2G;VHT20;20;1,(M0-8);2;5180;L;TN,VN	Pass	1M	1M	0.00	5.54	8.00	8.00	17.00	13.54	Inf	5.25	5.30
5.2G;VHT20;20;1,(M0-8);2;5200;M;TN,VN	Pass	1M	1M	0.00	5.54	12.92	12.92	17.00	18.46	Inf	10.13	10.10
5.2G;VHT20;20;1,(M0-8);2;5240;H;TN,VN	Pass	1M	1M	0.00	5.54	13.47	13.47	17.00	19.01	Inf	10.88	10.64
5.2G;VHT40;40;1,(M0-9);2;5190;L;TN,VN	Pass	1M	1M	0.00	5.54	0.45	0.45	17.00	5.99	Inf	-2.42	-2.68
5.2G;VHT40;40;1,(M0-9);2;5230;H;TN,VN	Pass	1M	1M	0.00	5.54	9.39	9.39	17.00	14.93	Inf	6.52	6.24
5.2G;VHT80;80;1,(M0-9);2;5210;S;TN,VN	Pass	1M	1M	0.00	5.54	-3.64	-3.64	17.00	1.90	Inf	-6.46	-6.85
5.8G;11a;20;1;2;5745;L;TN,VN	Pass	500k	500k	0.00	6.31	11.52	11.52	29.69	17.83	35.69	8.26	8.80
5.8G;11a;20;1;2;5785;M;TN,VN	Pass	500k	500k	0.00	6.31	11.32	11.32	29.69	17.63	35.69	8.02	8.58
5.8G;11a;20;1;2;5825;H;TN,VN	Pass	500k	500k	0.00	6.31	10.86	10.86	29.69	17.17	35.69	7.51	8.20
5.8G;VHT20;20;1,(M0-8);2;5745;L;TN,VN	Pass	500k	500k	0.00	6.31	11.27	11.27	29.69	17.58	35.69	8.36	8.86
5.8G;VHT20;20;1,(M0-8);2;5785;M;TN,VN	Pass	500k	500k	0.00	6.31	11.04	11.04	29.69	17.35	35.69	8.12	8.41
5.8G;VHT20;20;1,(M0-8);2;5825;H;TN,VN	Pass	500k	500k	0.00	6.31	10.81	10.81	29.69	17.12	35.69	7.73	8.65
5.8G;VHT40;40;1,(M0-9);2;5755;L;TN,VN	Pass	500k	500k	0.00	6.31	7.78	7.78	29.69	14.09	35.69	4.51	5.02
5.8G;VHT40;40;1,(M0-9);2;5795;H;TN,VN	Pass	500k	500k	0.00	6.31	7.83	7.83	29.69	14.14	35.69	4.54	5.10
5.8G;VHT80;80;1,(M0-9);2;5775;S;TN,VN	Pass	500k	500k	0.00	6.31	-0.31	-0.31	29.69	6.00	35.69	-3.65	-3.01



## *PSD Result*





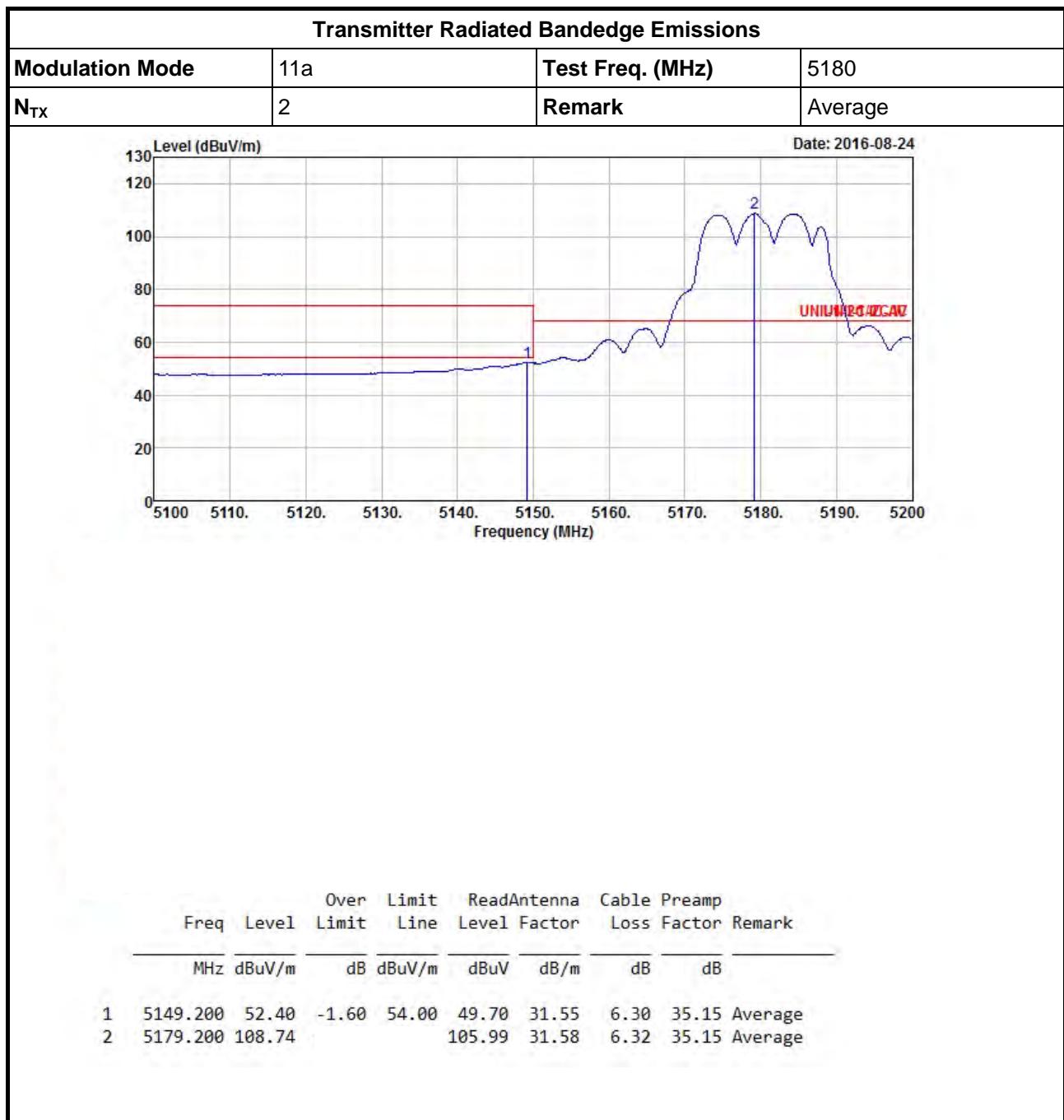
**Transmitter Radiated Bandedge Emissions (with Antenna)**

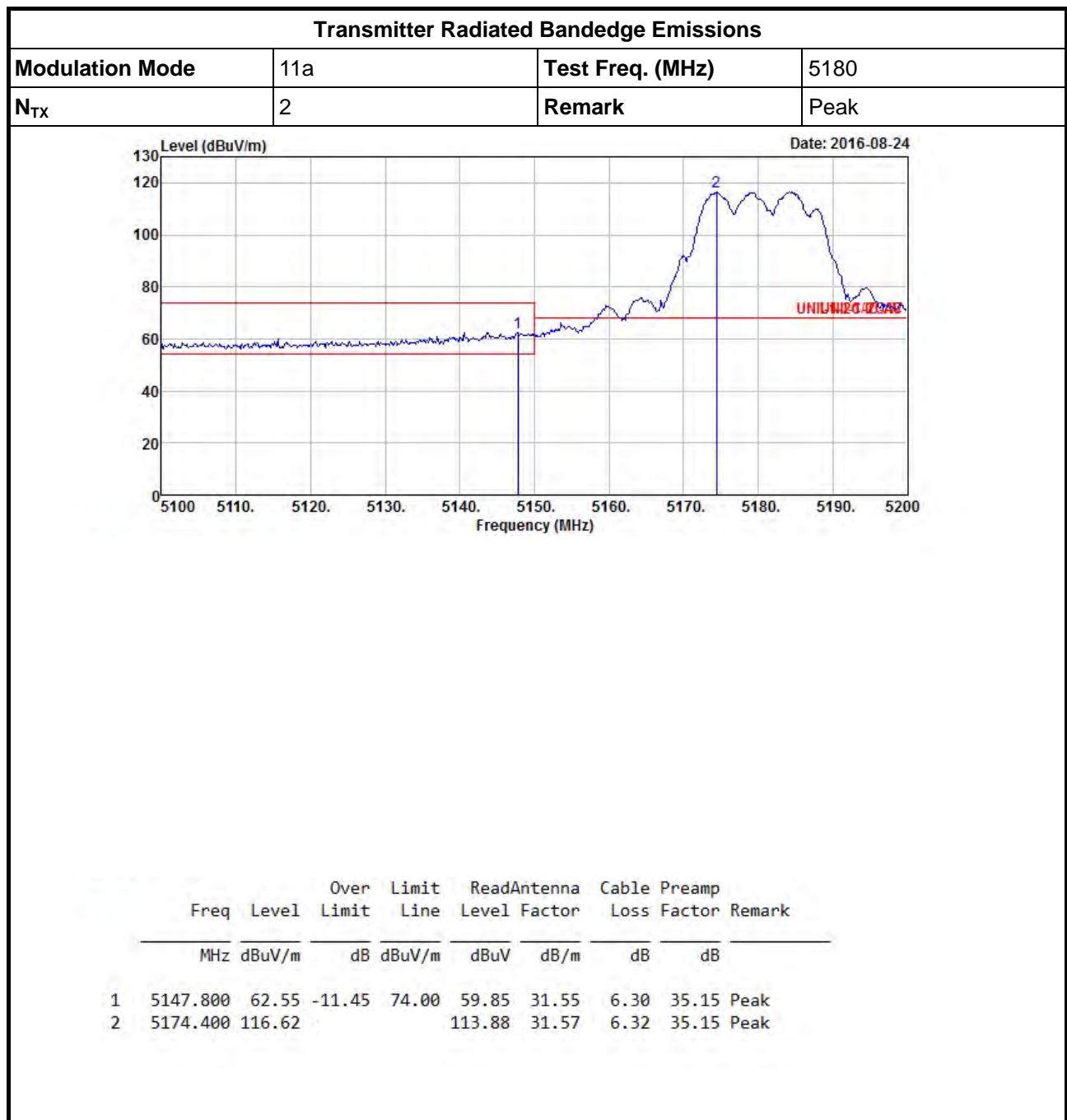
U-NII 5150-5250MHz Transmitter Radiated Bandedge (with Antenna)										
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	2	5180	3	5147.800	62.55	74	5149.200	52.40	54	V
11a	2	5240	3	5134.560	58.92	74	5149.680	48.78	54	V
VHT20	2	5180	3	5147.800	64.11	74	5150.000	53.08	54	V
VHT20	2	5240	3	5146.200	59.09	74	5146.800	48.37	54	V
VHT40	2	5190	3	5149.720	64.47	74	5149.940	52.87	54	V
VHT40	2	5230	3	5149.800	63.79	74	5149.800	53.37	54	V
VHT80	2	5210	3	5149.800	64.98	74	5144.400	53.56	54	V

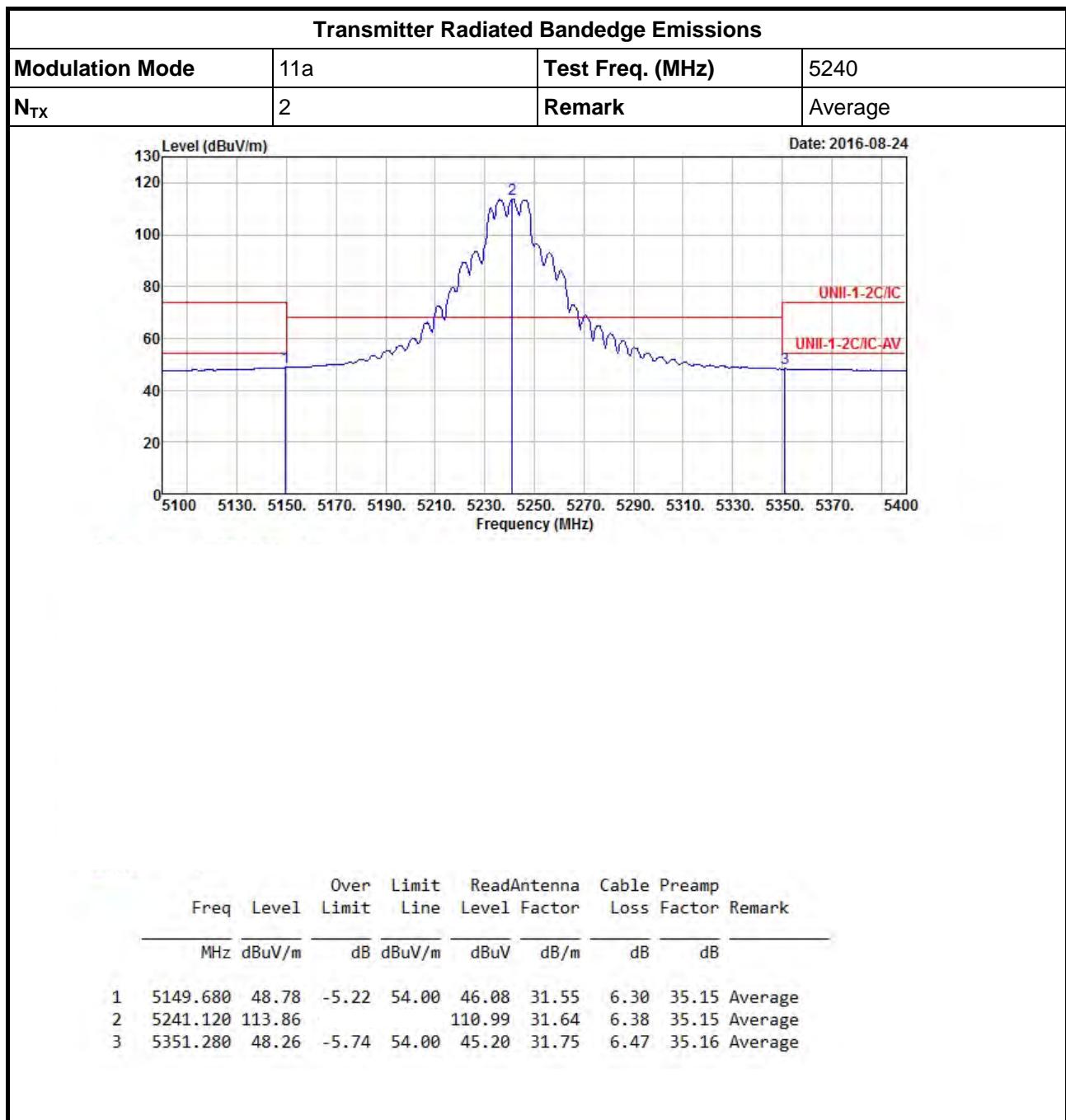
Note 1: Measurement worst emissions of receive antenna polarization.

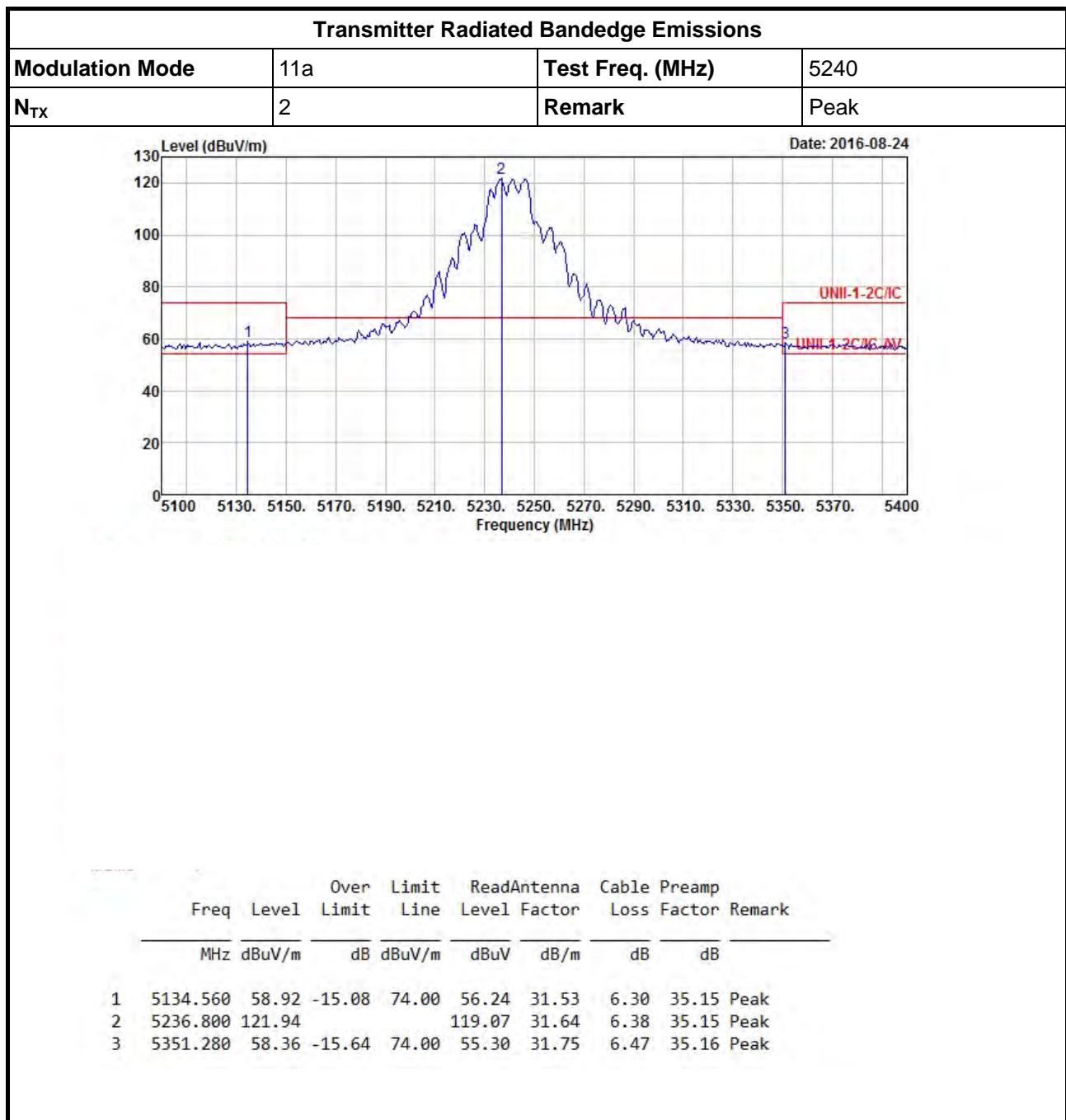
U-NII 5725-5850MHz Transmitter Radiated Bandedge (with Antenna)							
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Pol.
11a	2	5745	3	5633.56	58.69	68.3	V
11a	2	5825	3	5509.14	58.85	68.3	V
VHT20	2	5745	3	5626.04	59.05	68.3	V
VHT20	2	5825	3	5927.05	59.08	68.3	V
VHT40	2	5755	3	5638.02	59.9	68.3	V
VHT40	2	5795	3	5932	58.77	68.3	V
VHT80	2	5775	3	5643.2	67.59	68.3	V

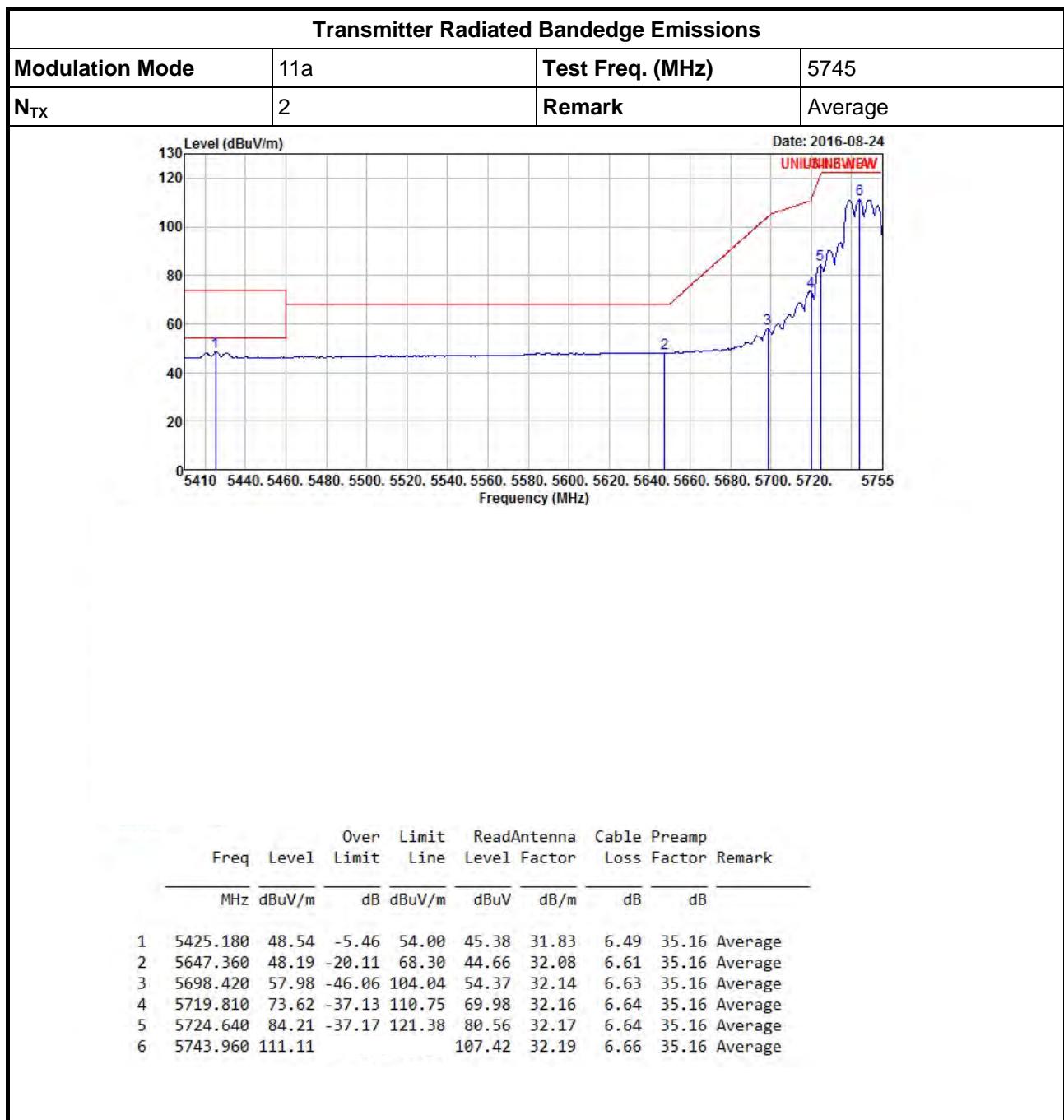
Note 1: Measurement worst emissions of receive antenna polarization.













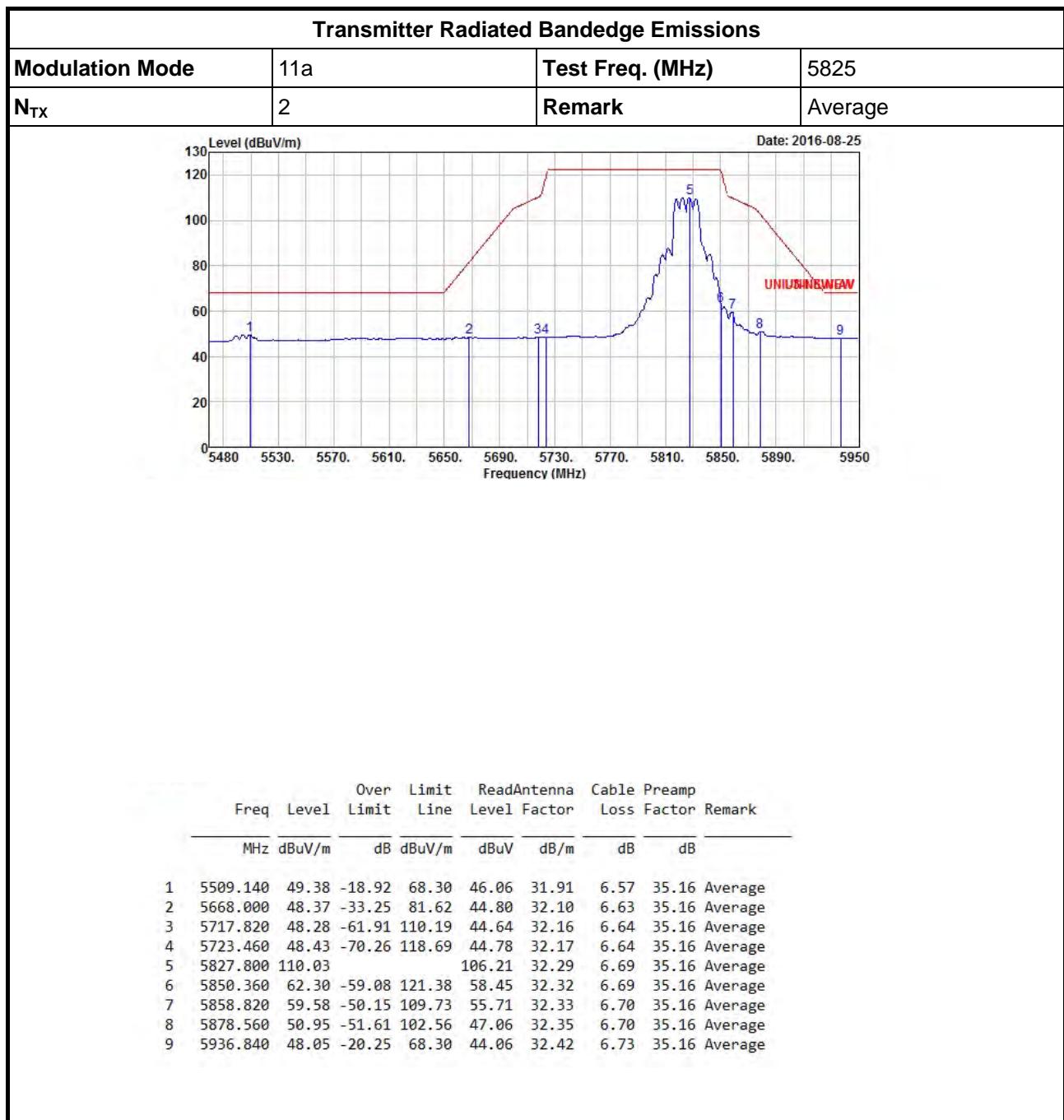
**Transmitter Radiated Bandedge Emissions**

Modulation Mode	11a	Test Freq. (MHz)	5745
N <sub>TX</sub>	2	Remark	Peak

Date: 2016-08-24

Frequency (MHz)

Freq	Level	Over Limit		ReadAntenna		Cable Preamp		Remark
		Line	Limit	Level	Factor	Loss	Factor	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5425.180	58.77	-15.23	74.00	55.61	31.83	6.49	35.16 Peak
2	5633.560	58.69	-9.61	68.30	55.18	32.06	6.61	35.16 Peak
3	5699.110	69.15	-35.40	104.55	65.54	32.14	6.63	35.16 Peak
4	5719.810	83.50	-27.25	110.75	79.86	32.16	6.64	35.16 Peak
5	5724.640	94.30	-27.08	121.38	90.65	32.17	6.64	35.16 Peak
6	5743.960	119.47			115.78	32.19	6.66	35.16 Peak





**Transmitter Radiated Bandedge Emissions**

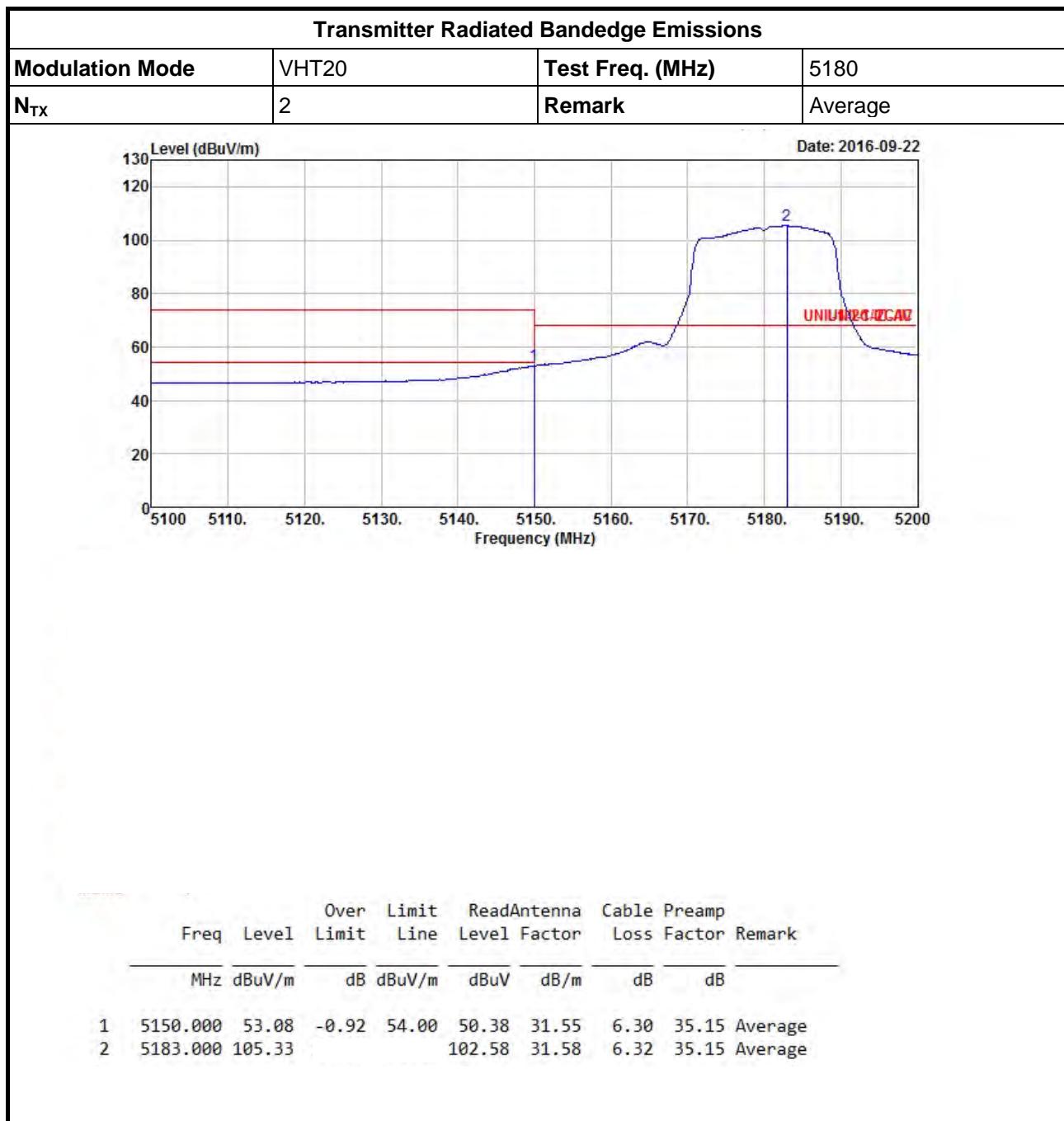
Modulation Mode	11a	Test Freq. (MHz)	5825
N <sub>TX</sub>	2	Remark	Peak

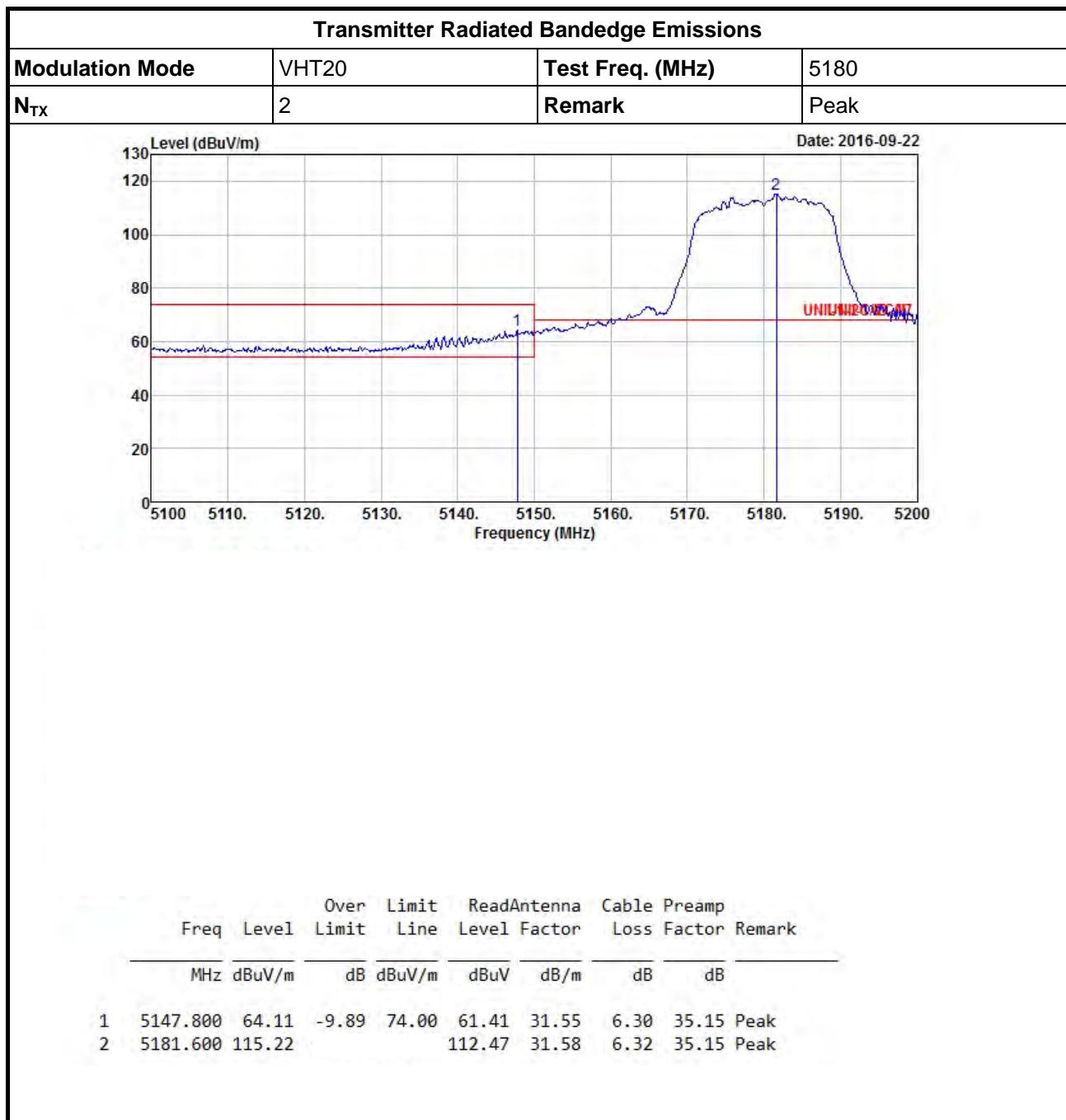
Date: 2016-08-25

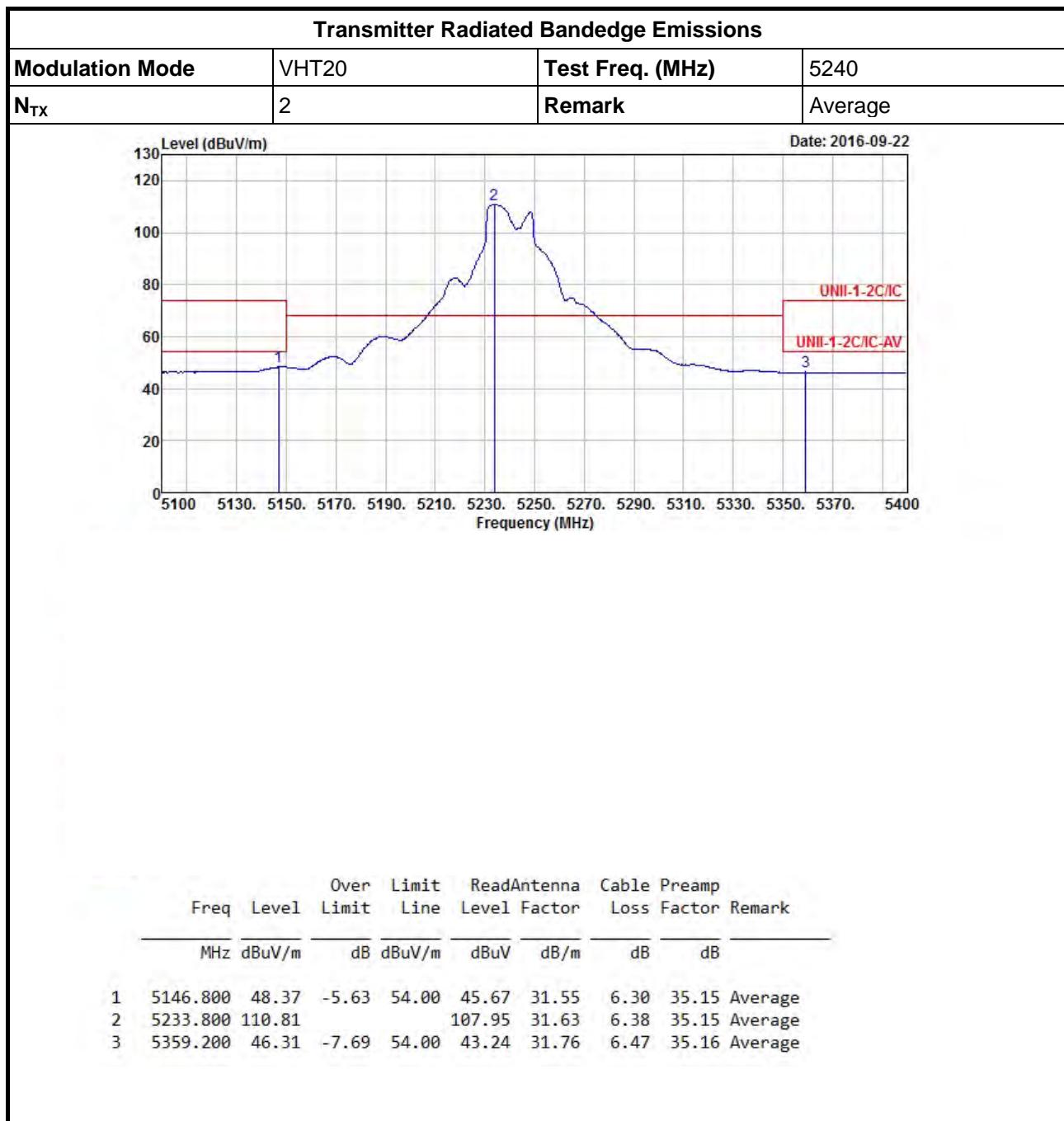
Level (dBuV/m)

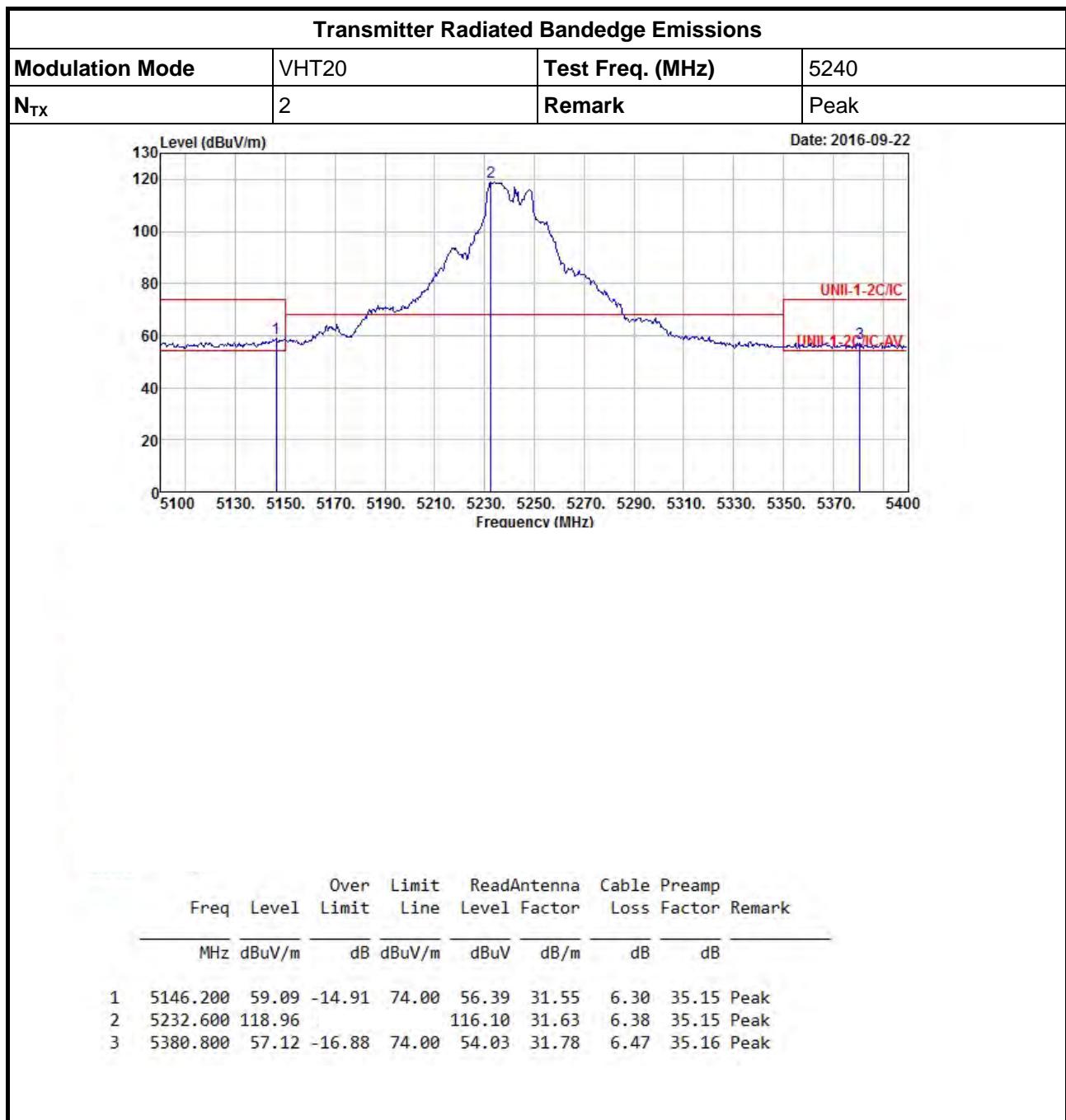
Frequency (MHz)

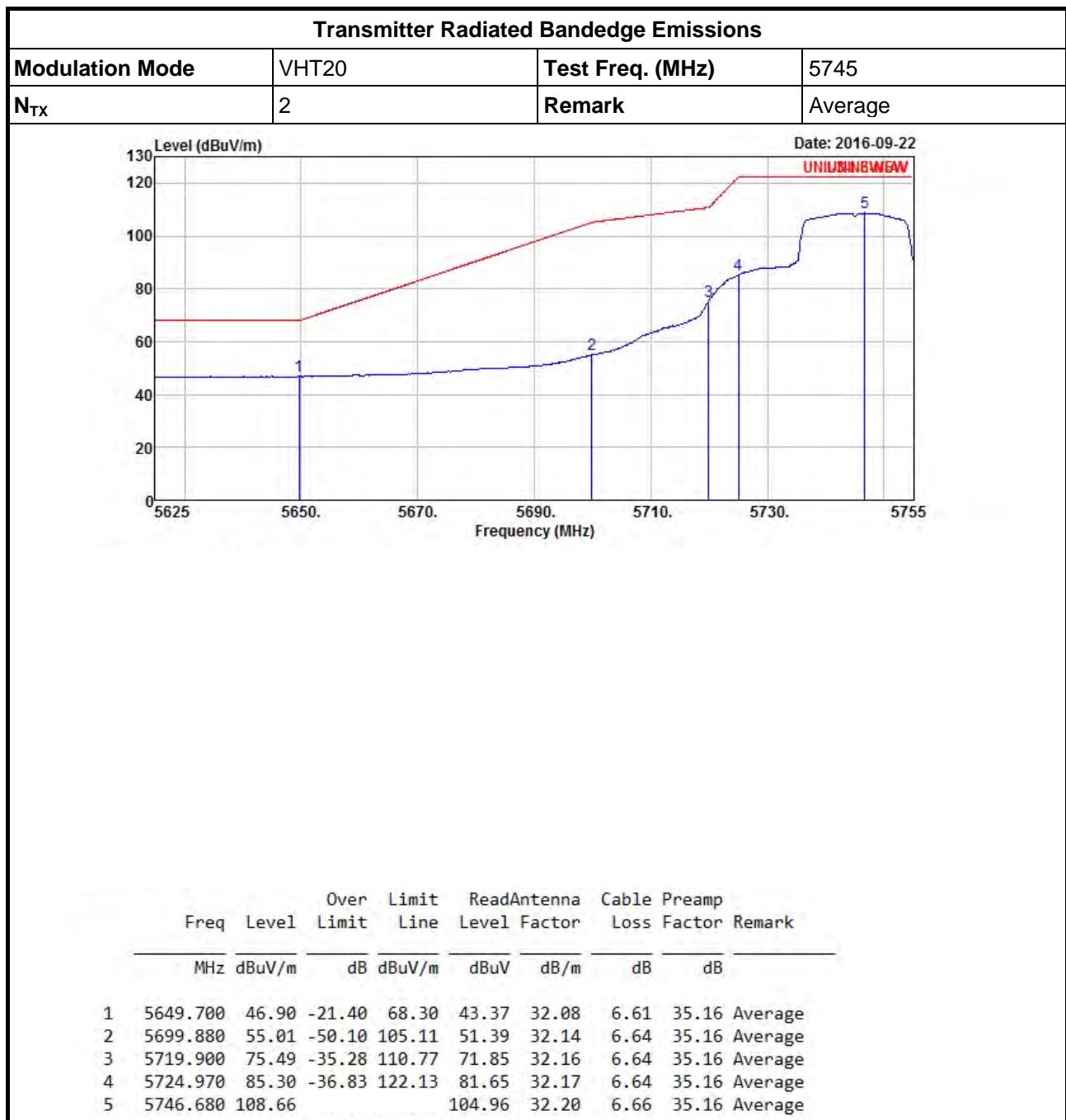
	Over Limit	Limit	Read	Antenna	Cable	Preamp		
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5509.140	58.85	-9.45	68.30	55.53	31.91	6.57	35.16 Peak
2	5683.980	58.12	-35.29	93.41	54.53	32.12	6.63	35.16 Peak
3	5711.240	58.42	-49.93	108.35	54.79	32.15	6.64	35.16 Peak
4	5722.520	58.17	-58.38	116.55	54.52	32.17	6.64	35.16 Peak
5	5822.160	117.33			113.51	32.29	6.69	35.16 Peak
6	5851.300	70.85	-48.39	119.24	67.00	32.32	6.69	35.16 Peak
7	5857.880	67.39	-42.60	109.99	63.52	32.33	6.70	35.16 Peak
8	5878.560	60.57	-41.99	102.56	56.68	32.35	6.70	35.16 Peak
9	5927.440	57.73	-10.57	68.30	53.76	32.41	6.72	35.16 Peak

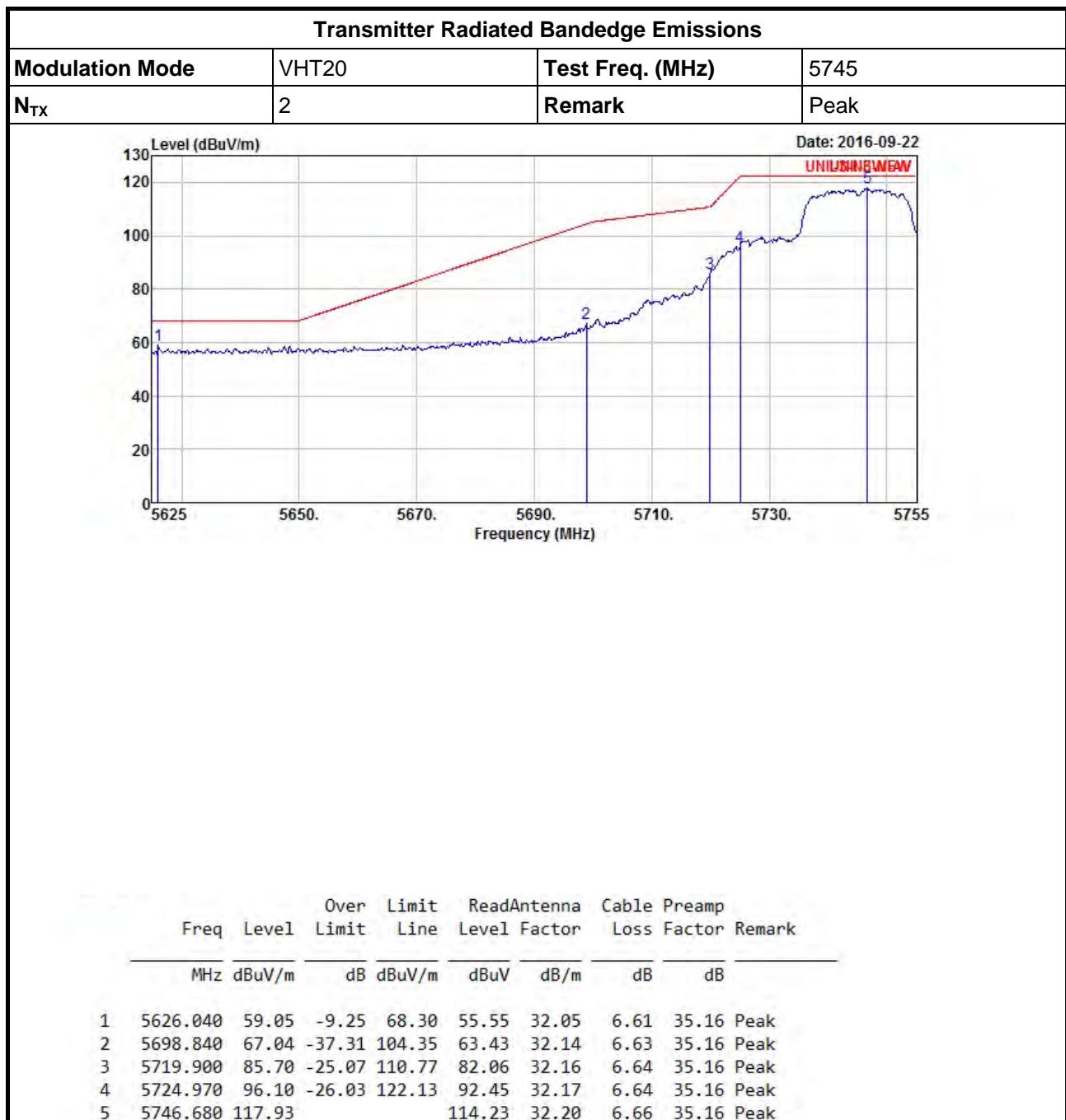


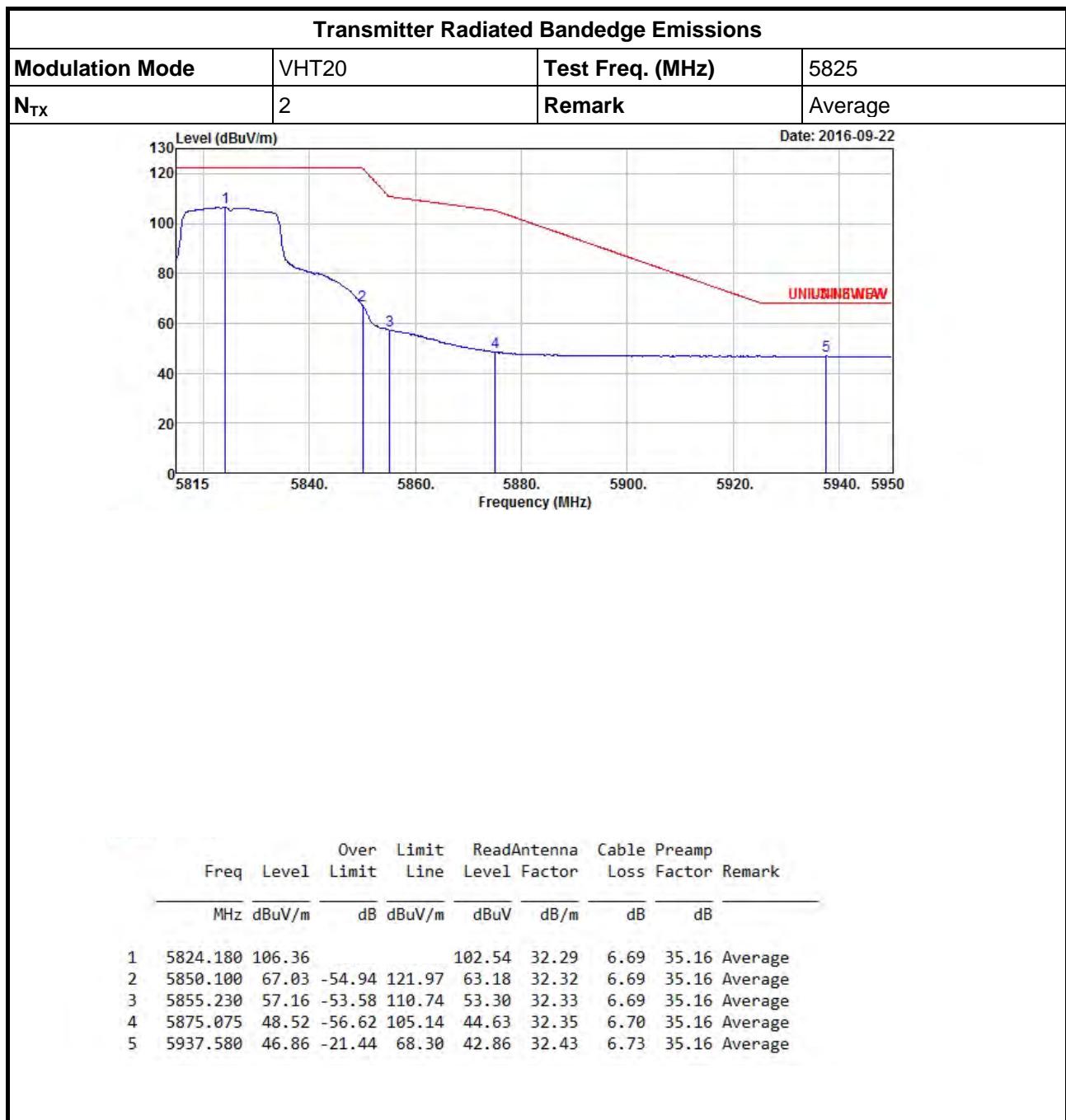


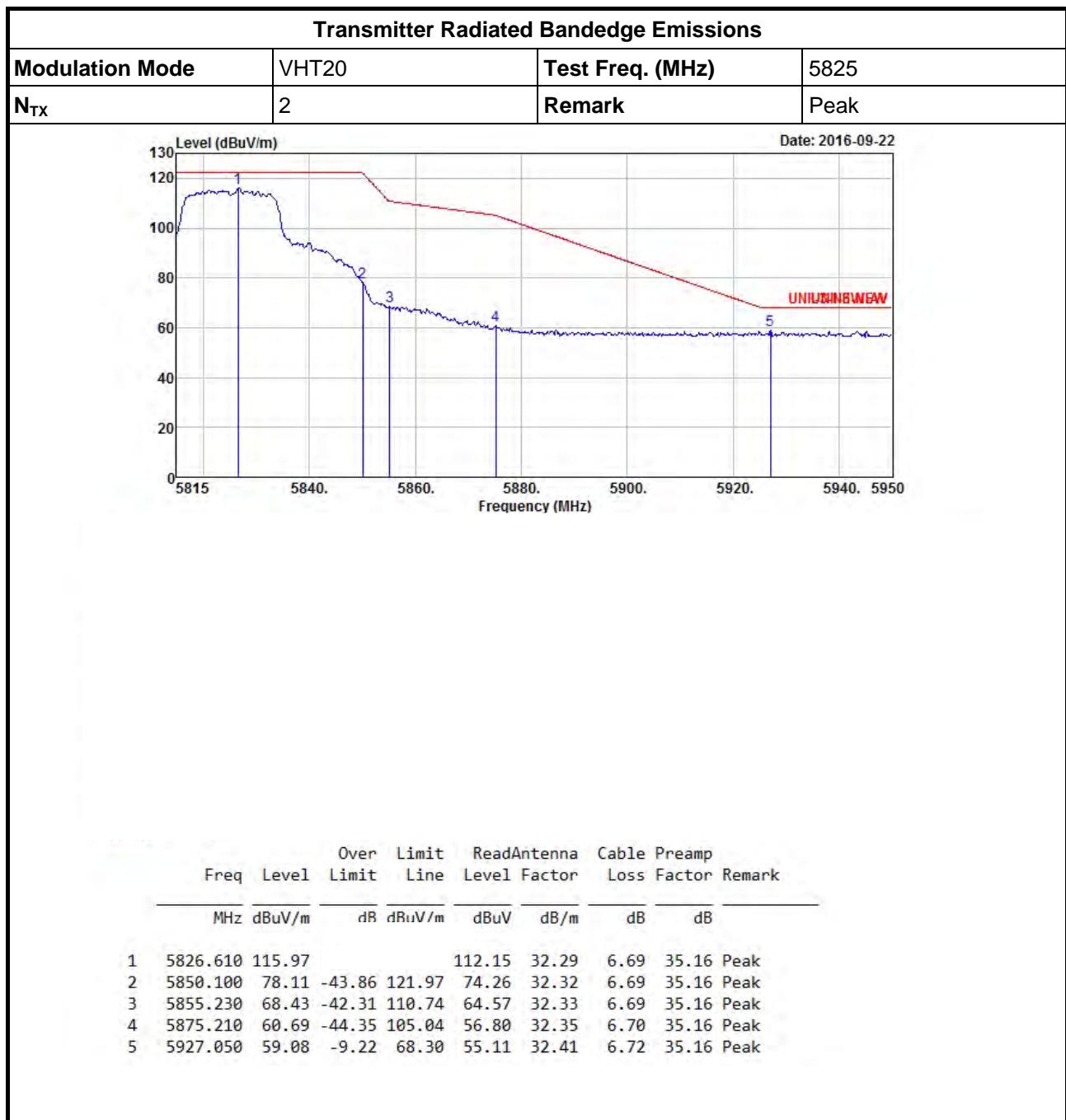


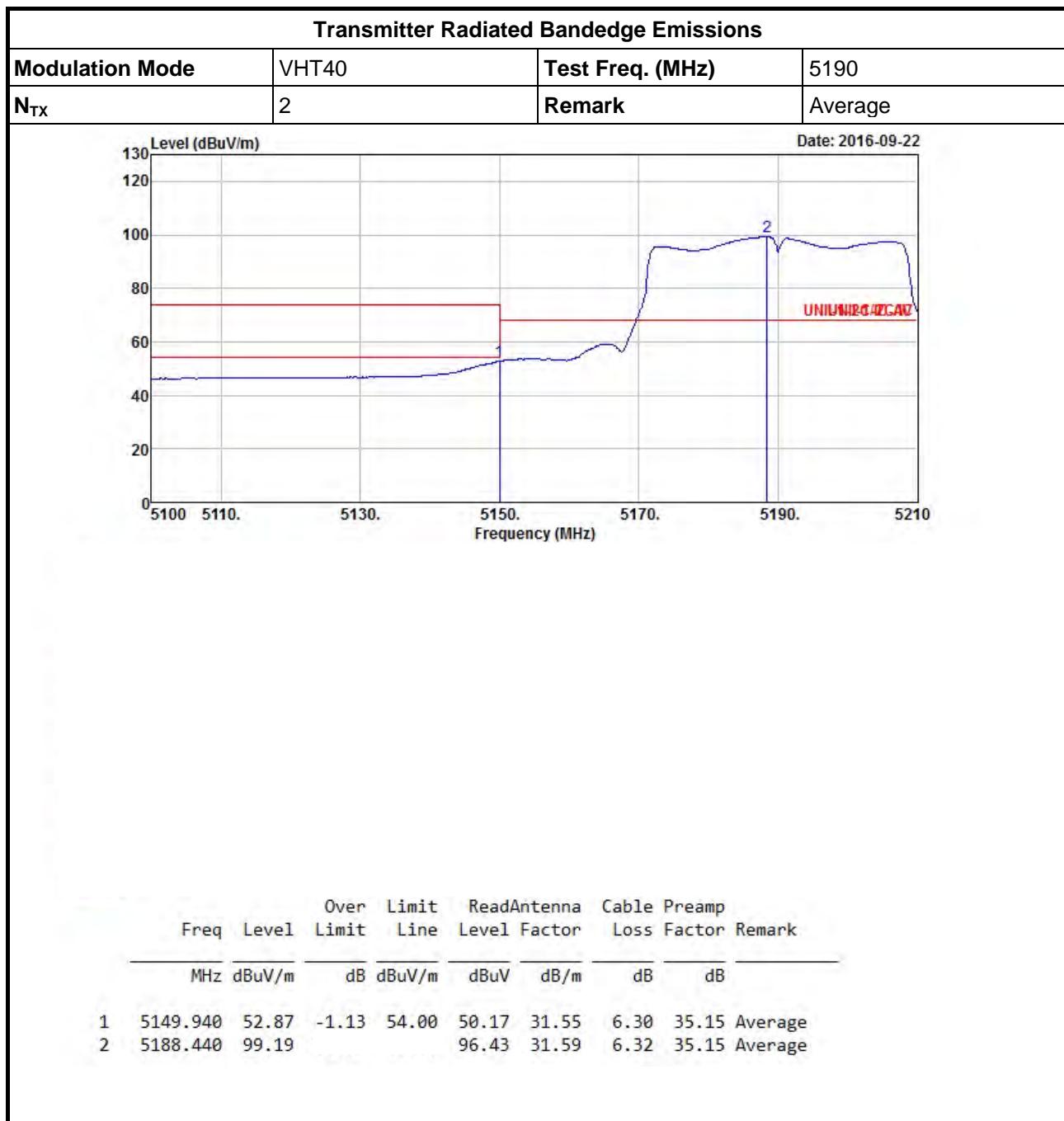


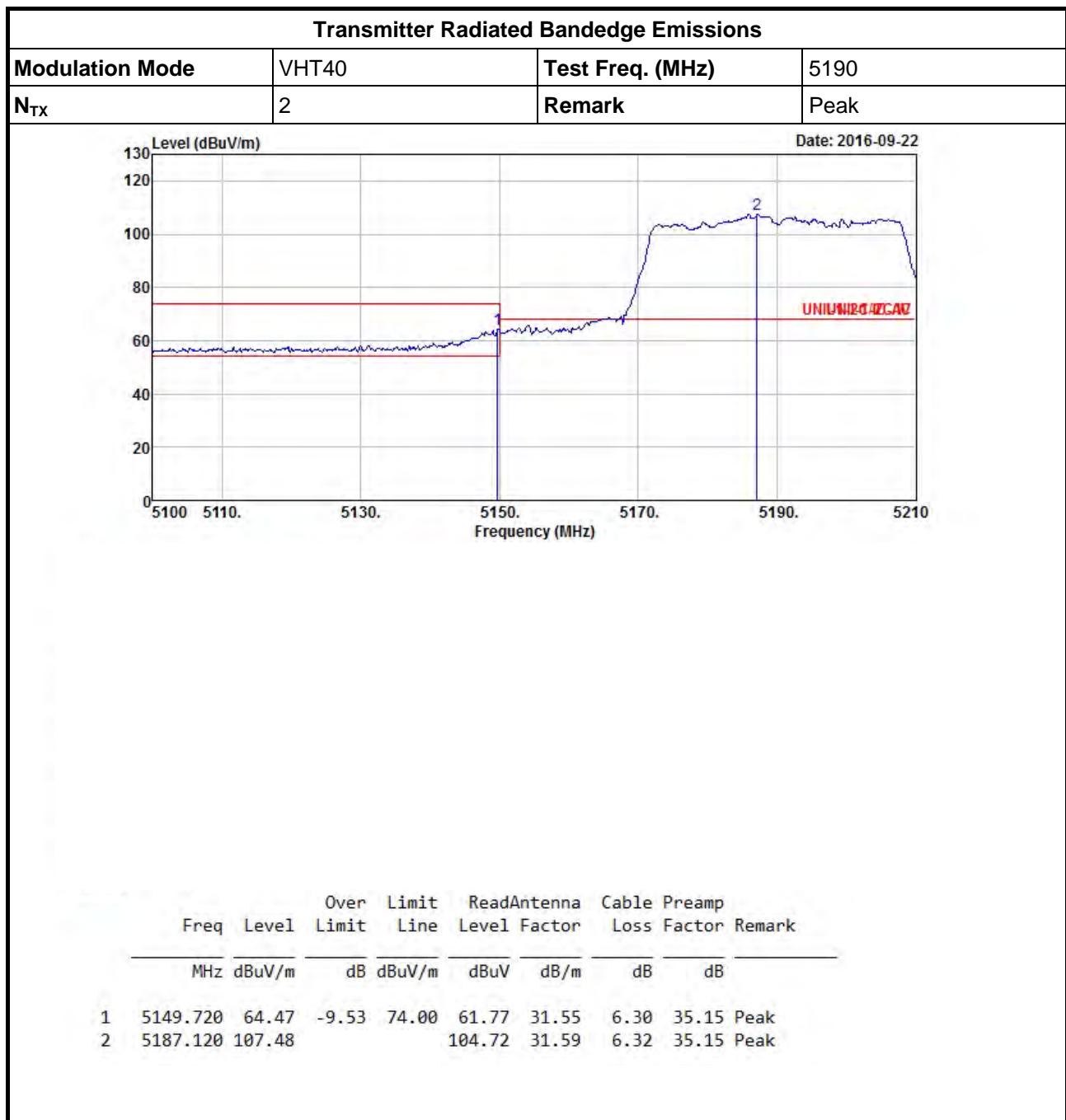


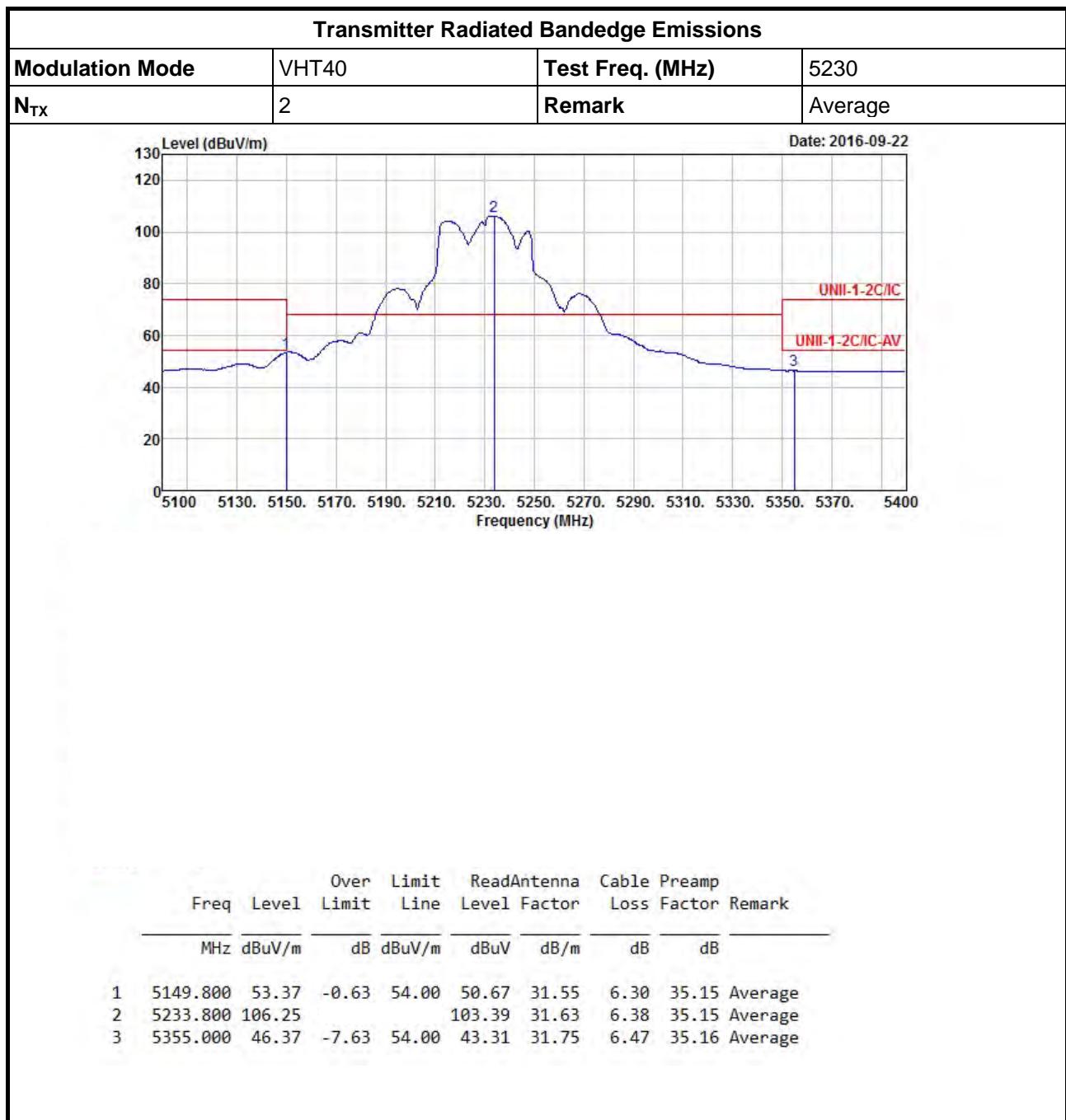


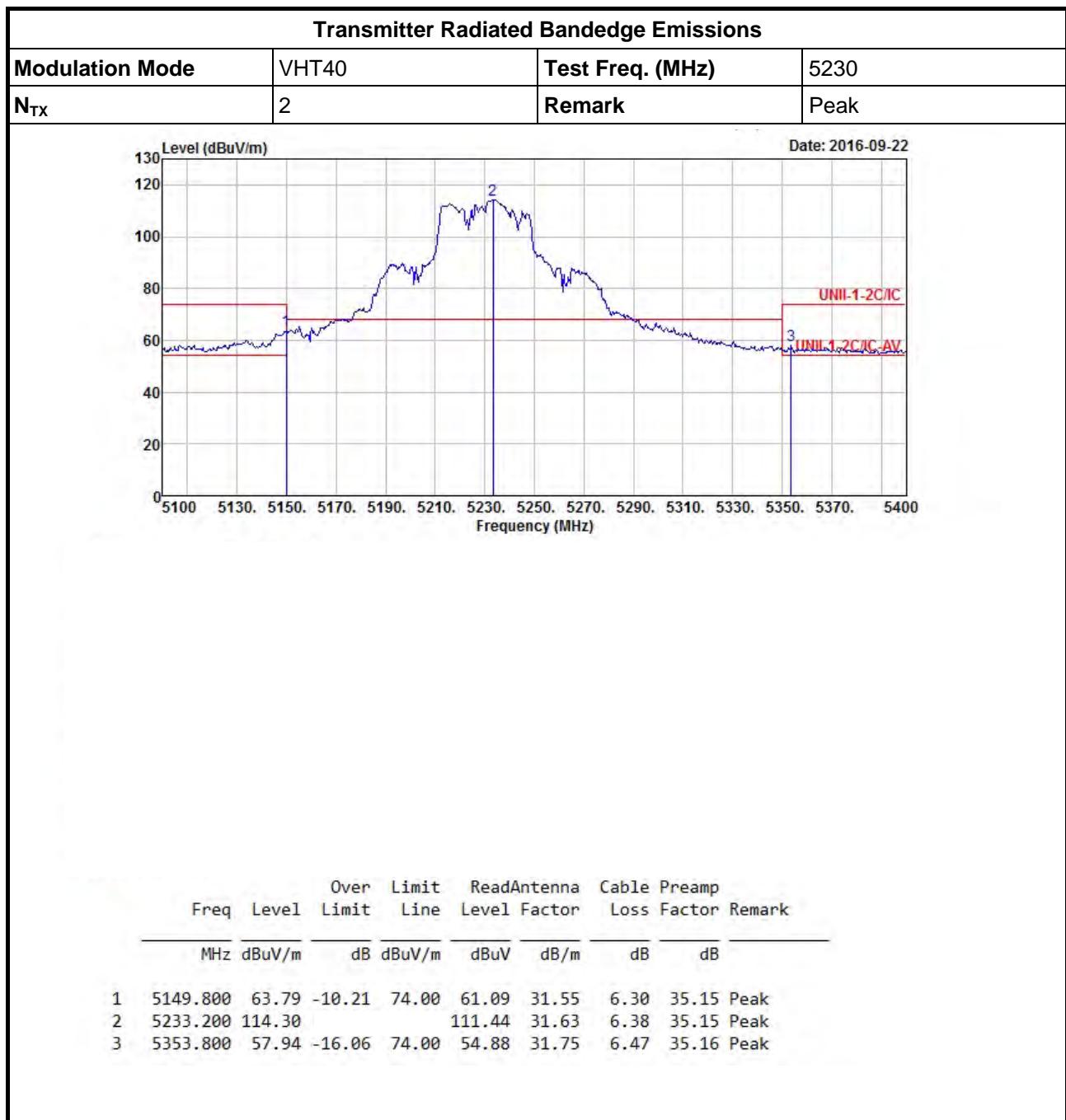


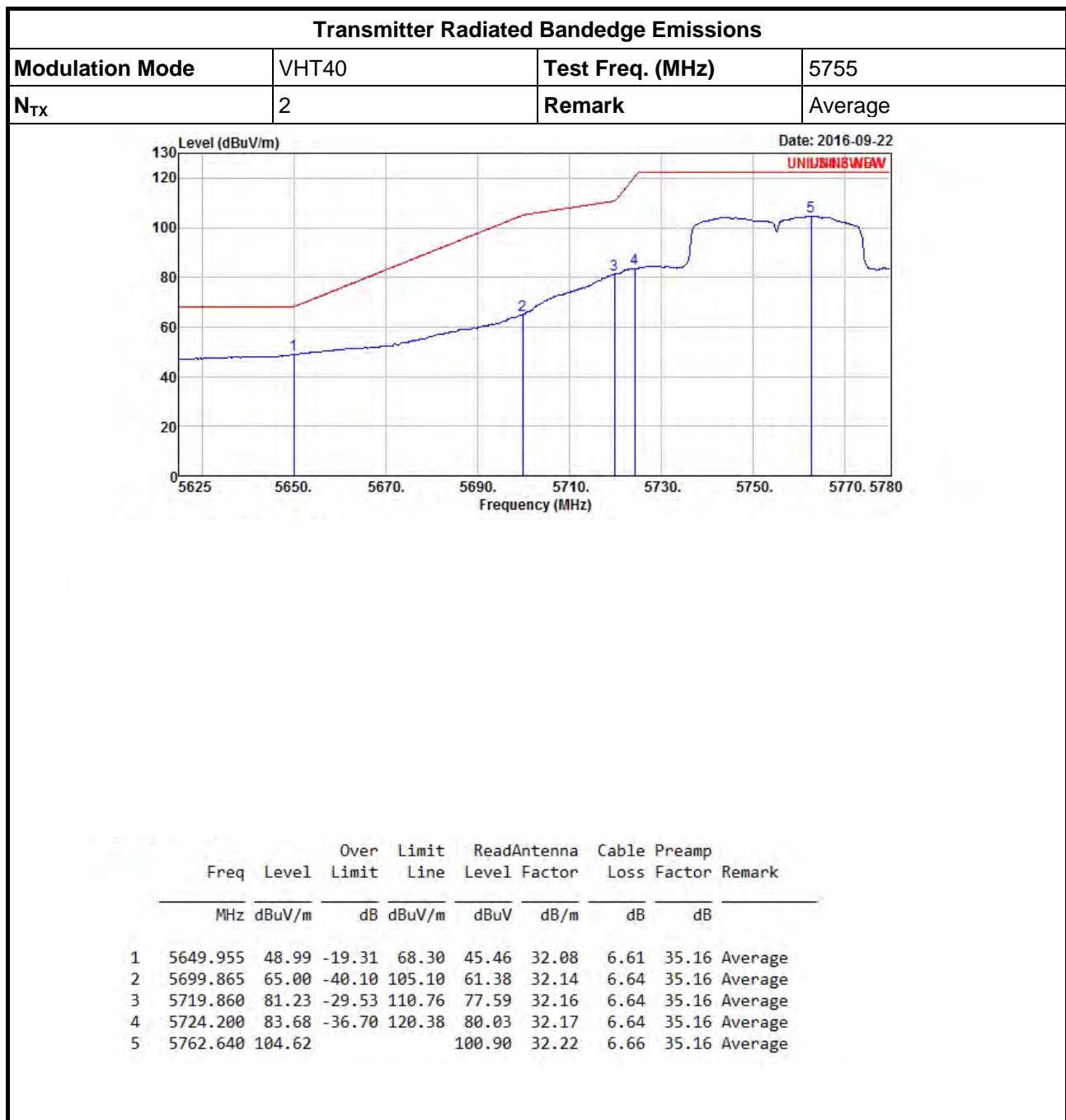


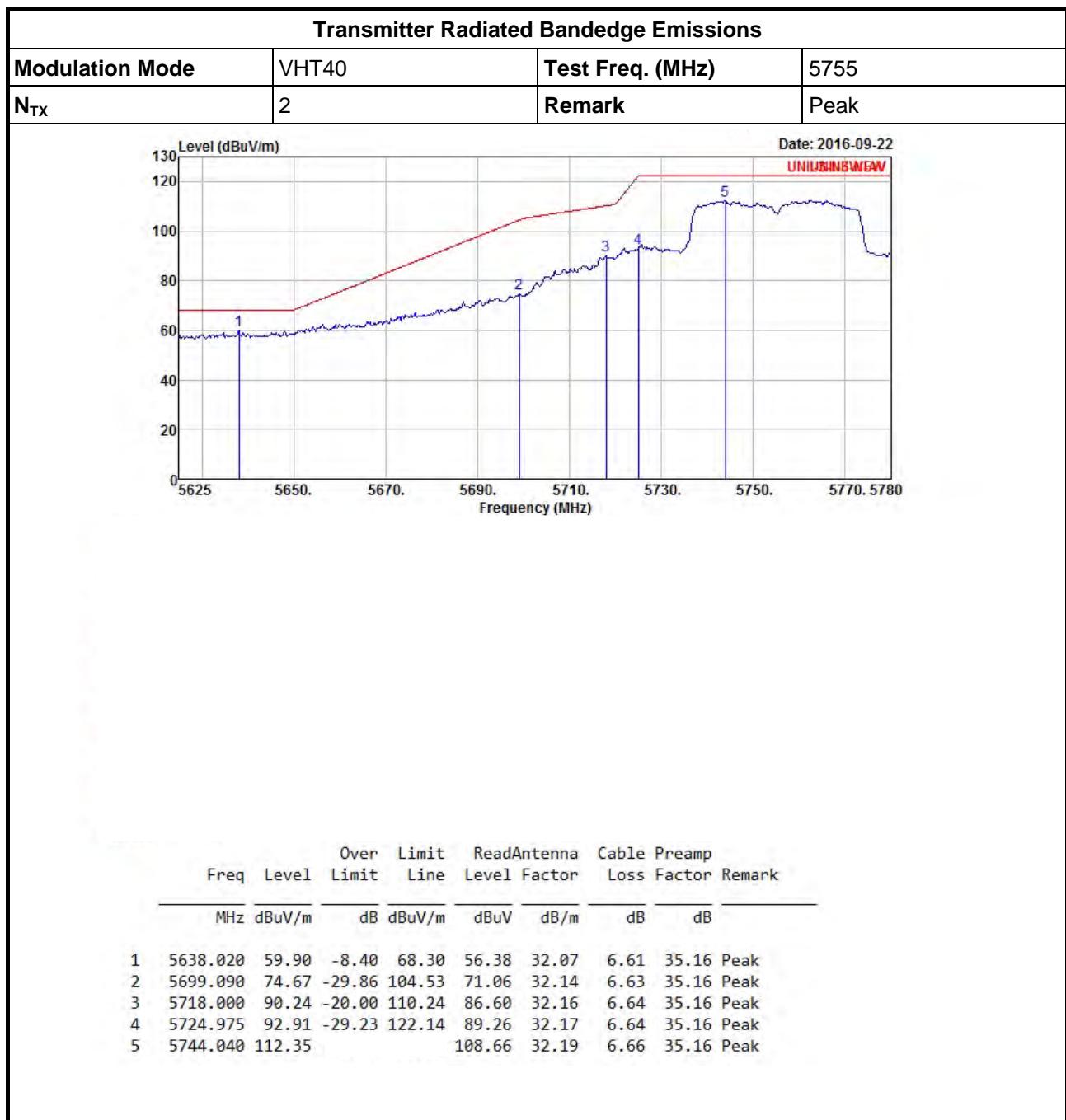


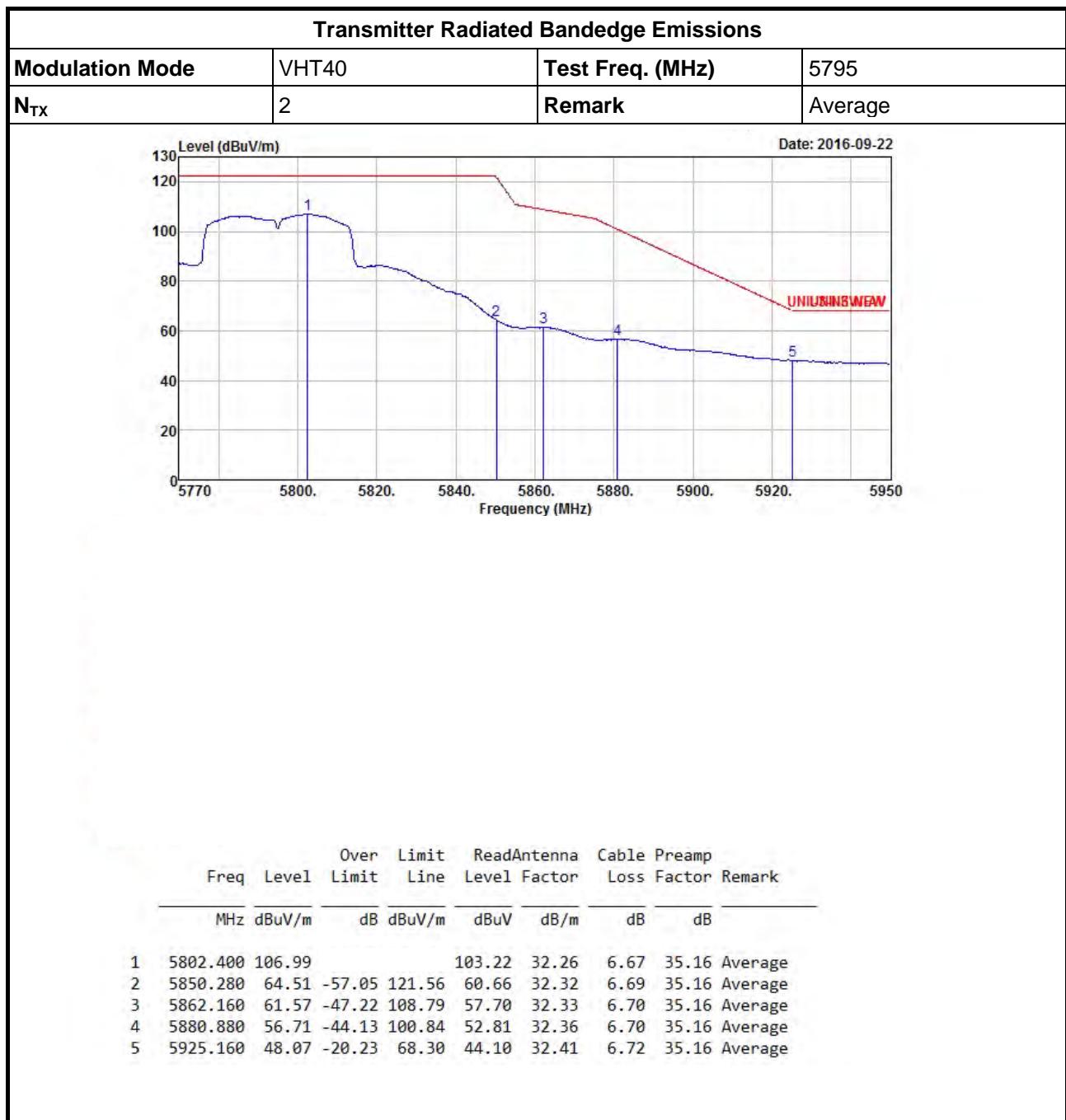


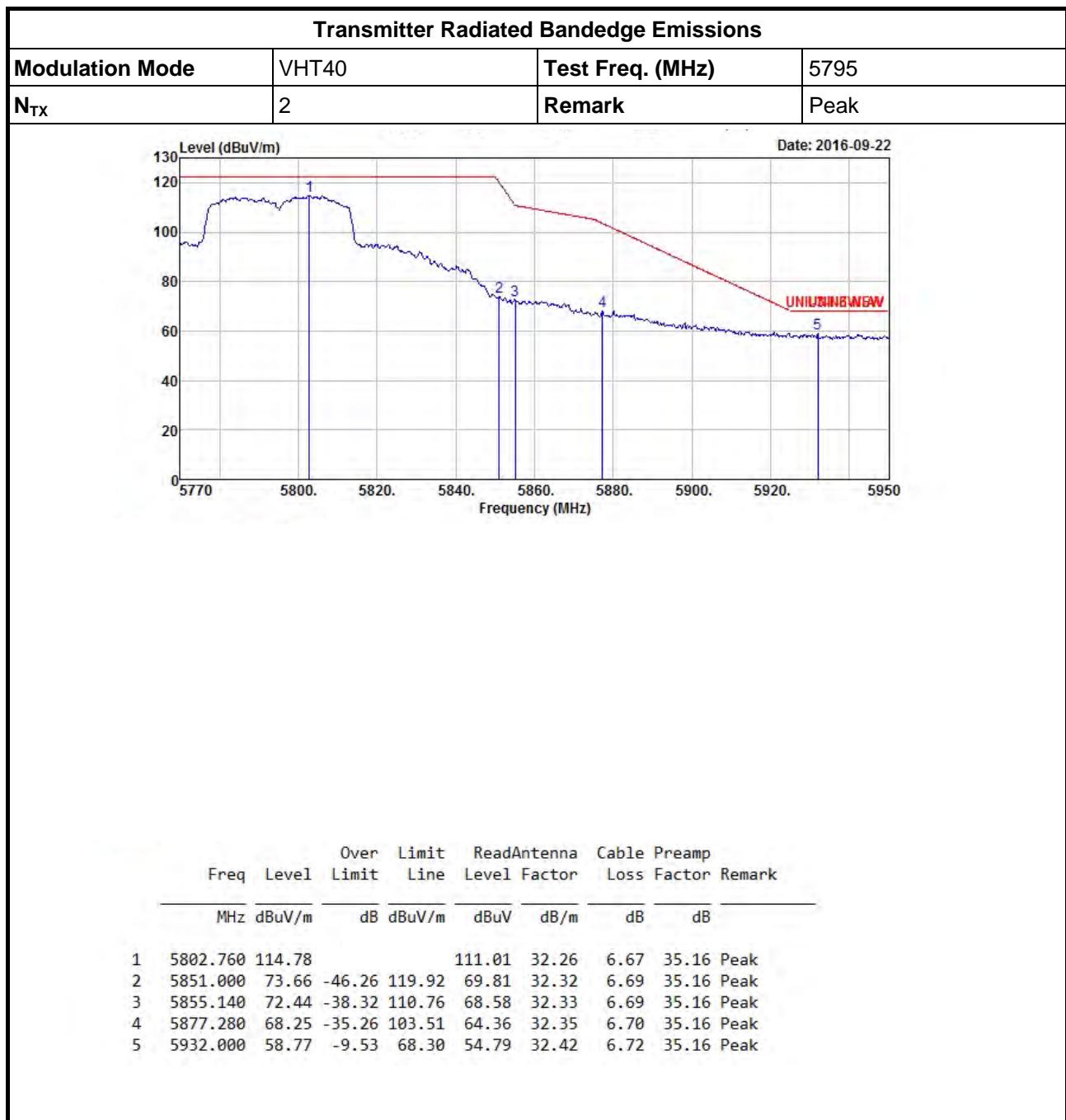


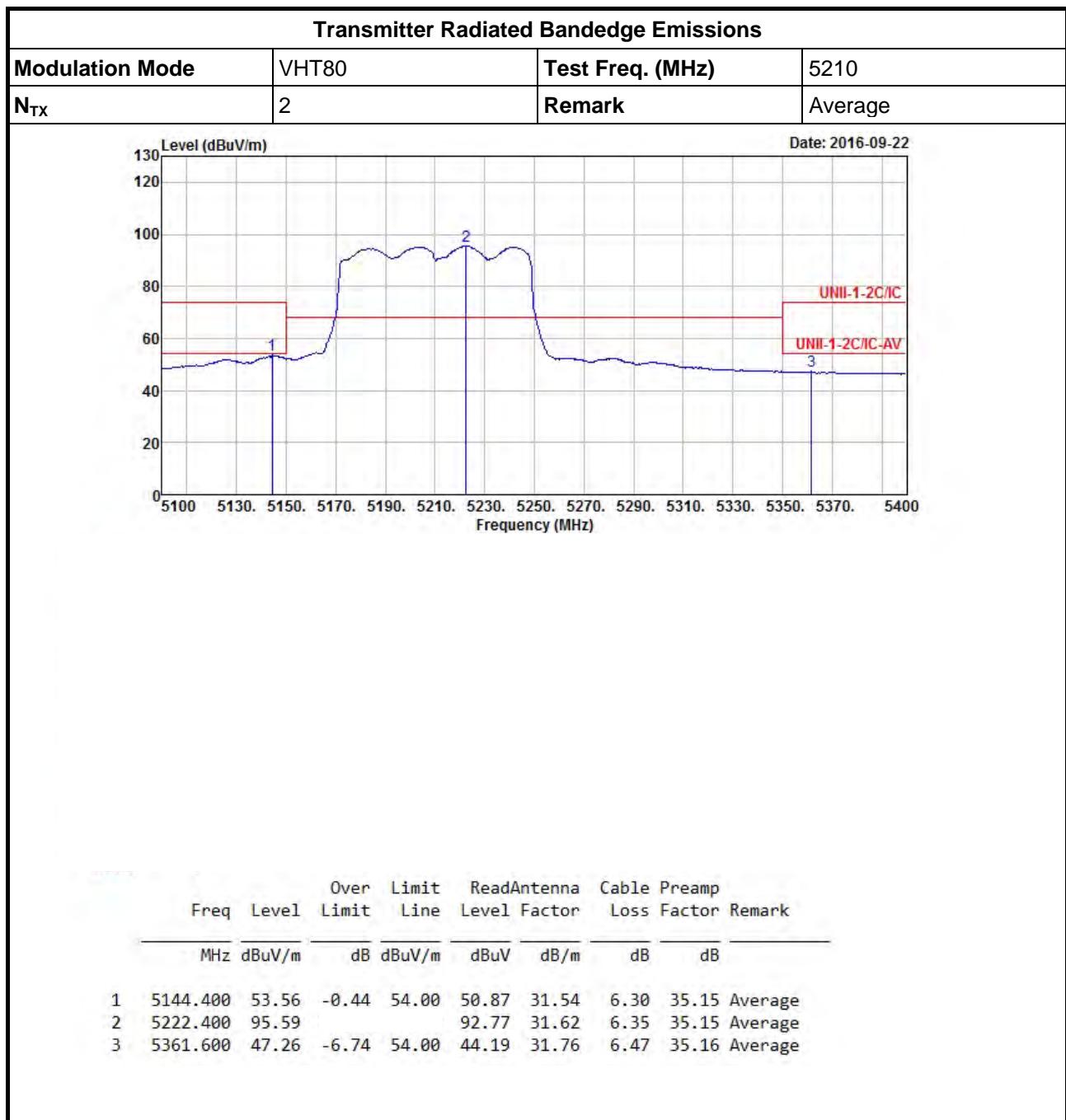


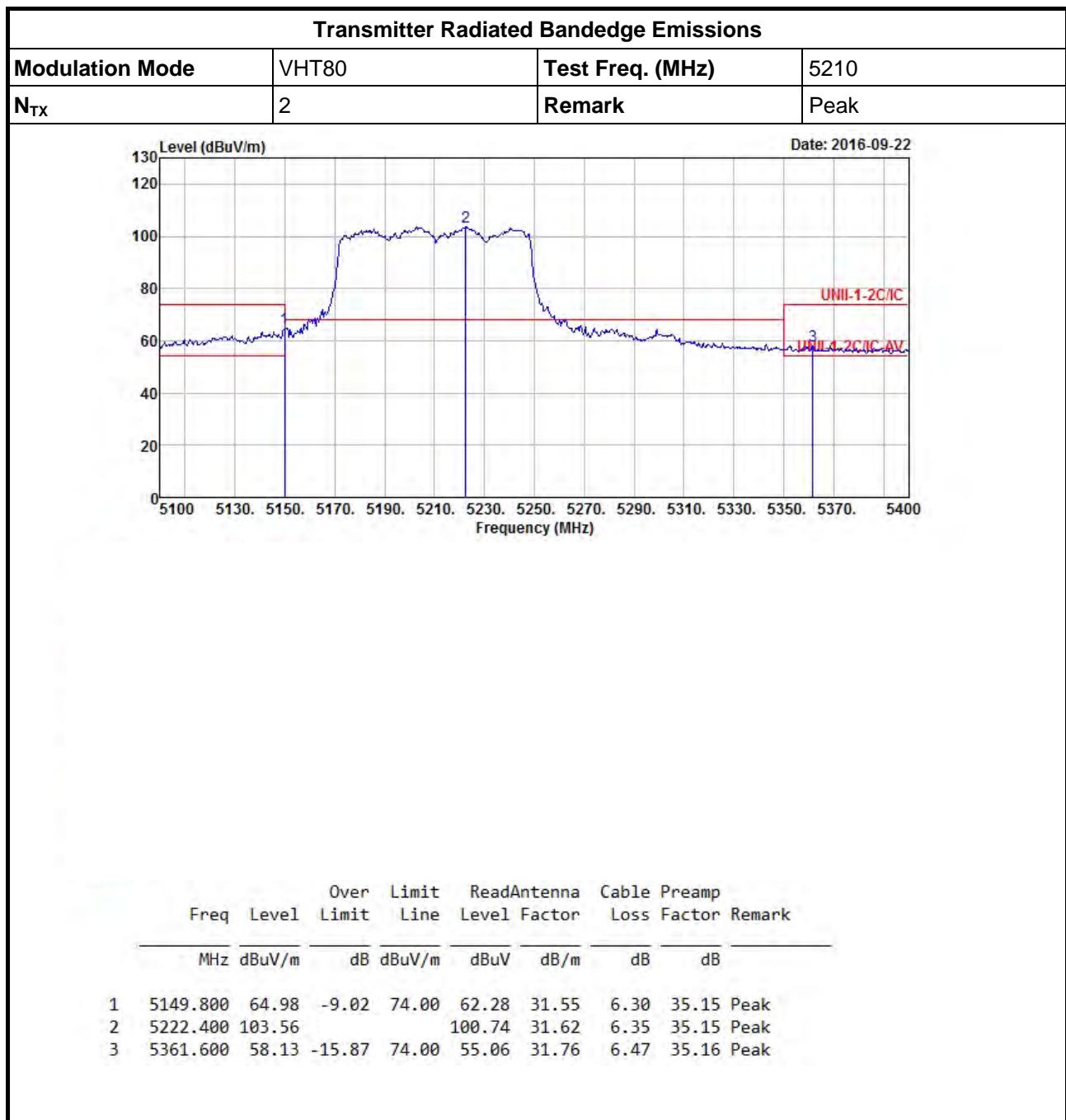














**Transmitter Radiated Bandedge Emissions**

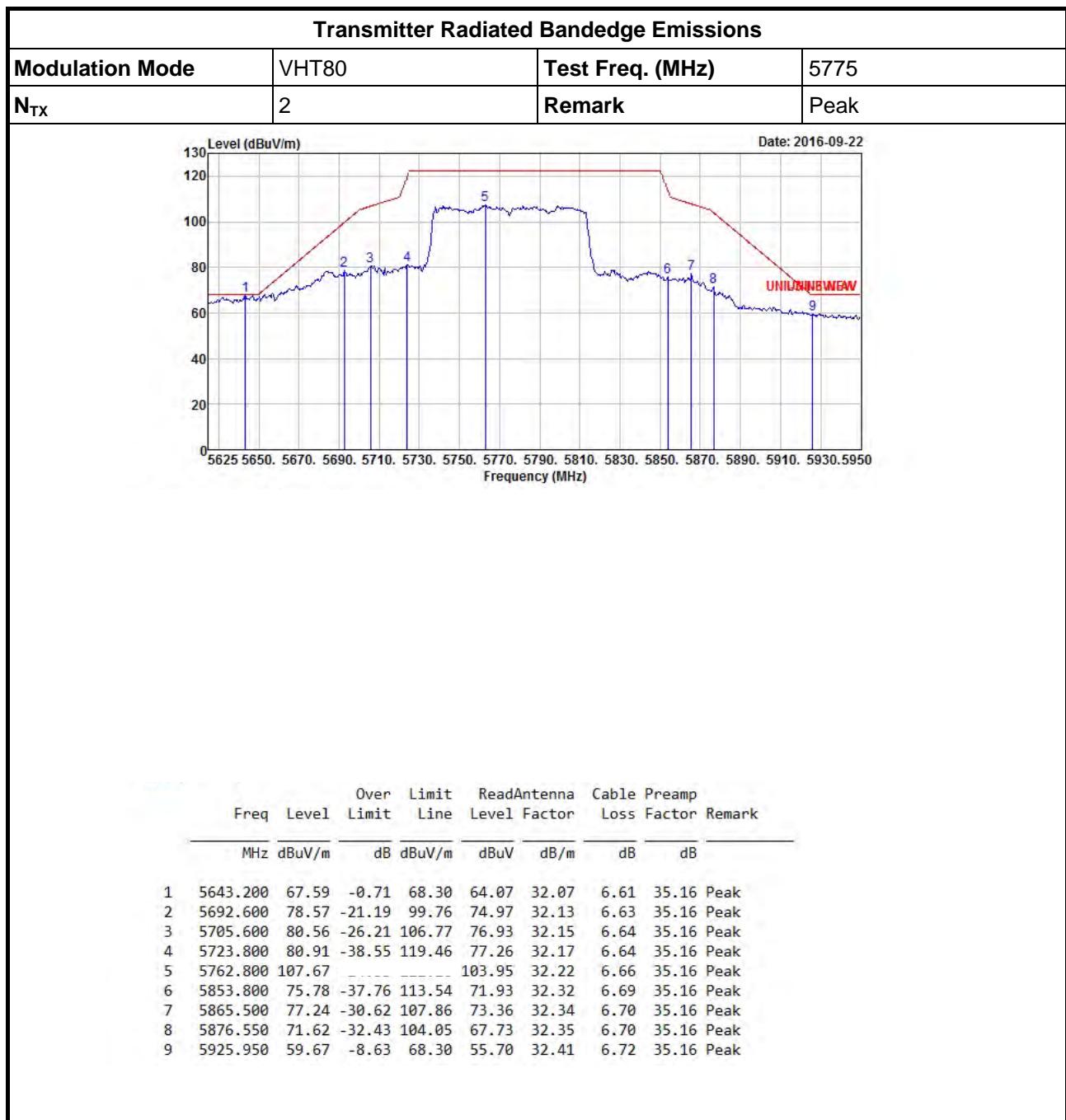
<b>Modulation Mode</b>	VHT80	<b>Test Freq. (MHz)</b>	5775
<b>N<sub>TX</sub></b>	2	<b>Remark</b>	Average

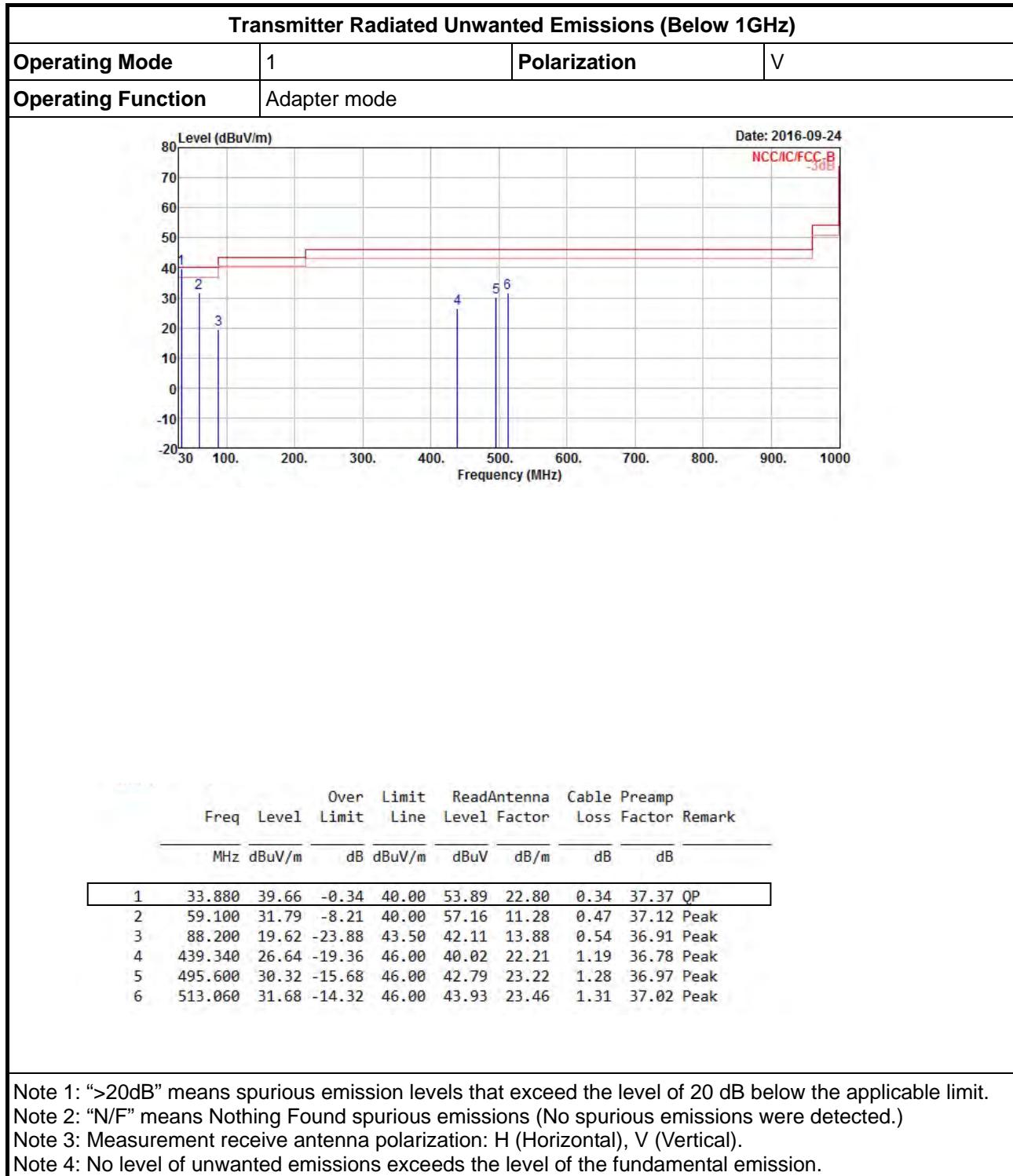
Date: 2016-09-22

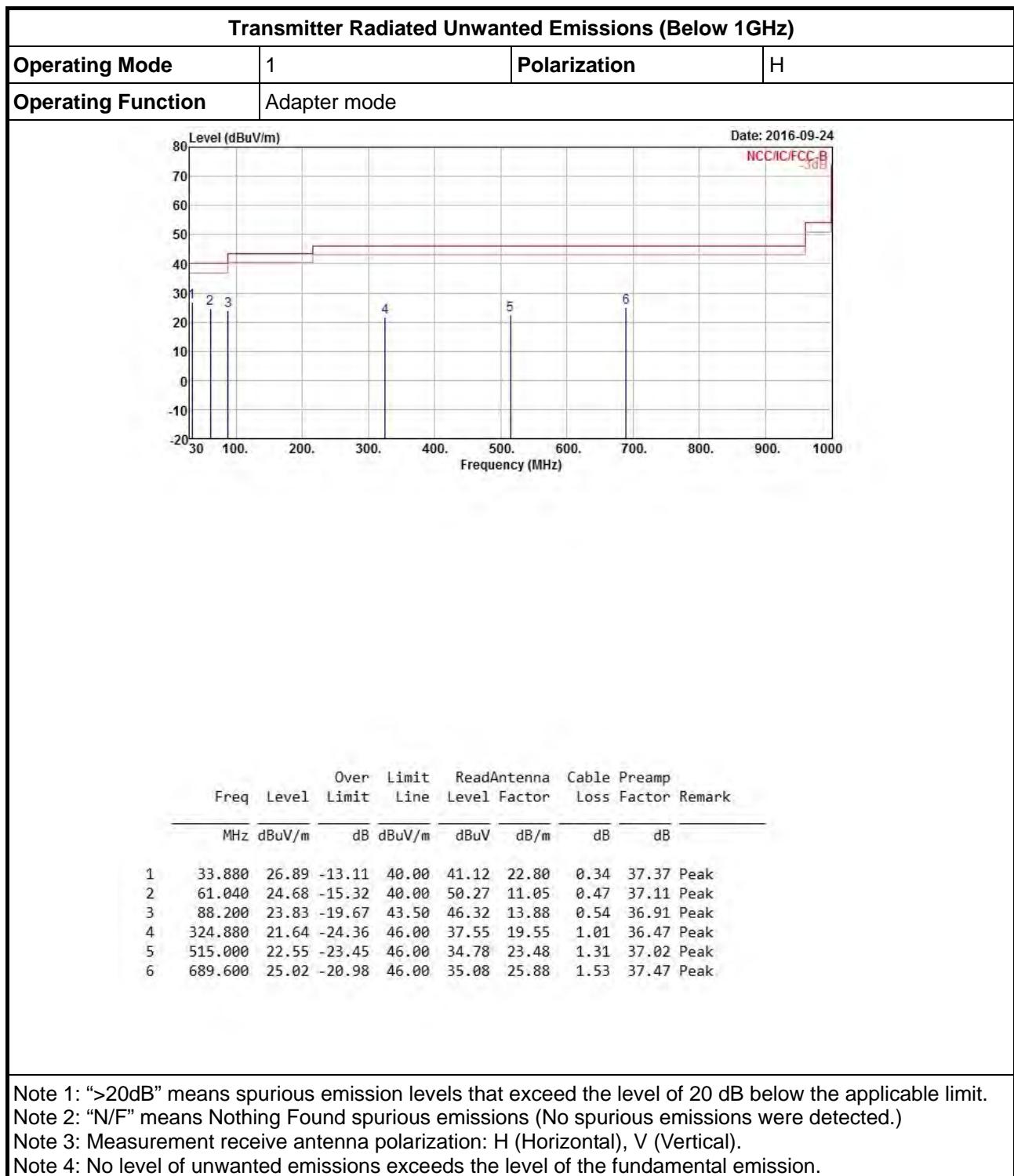
Level (dBuV/m)

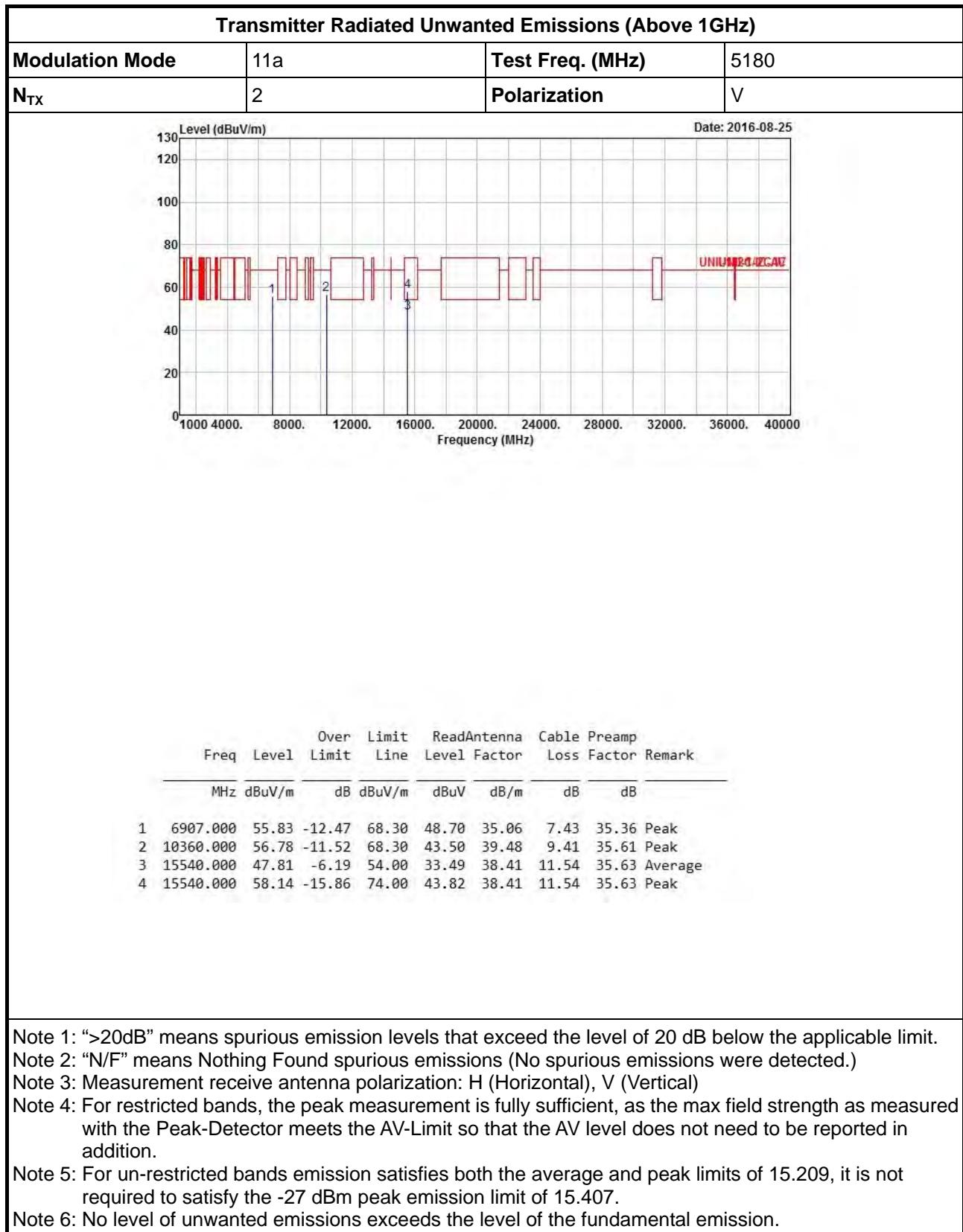
Frequency (MHz)

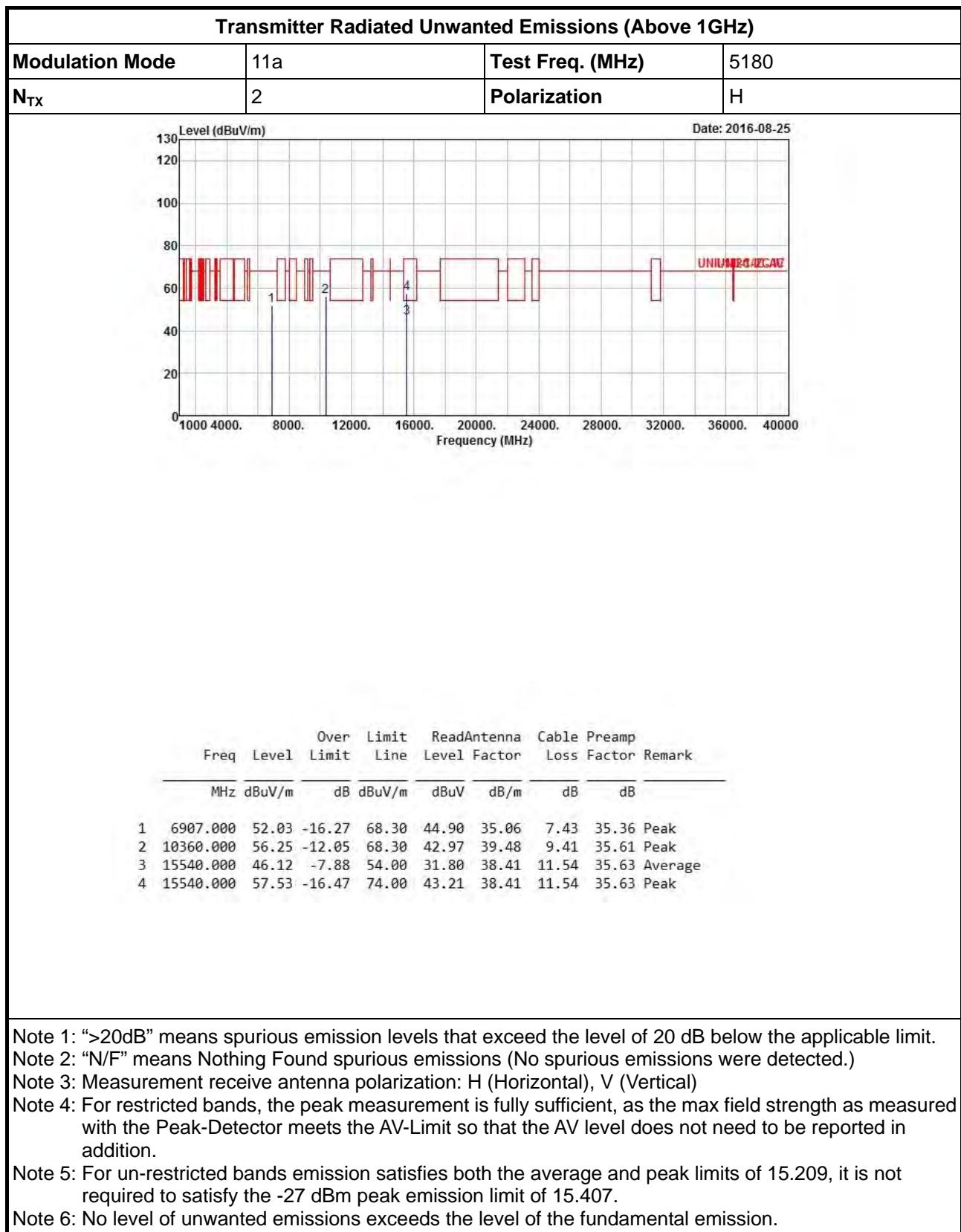
Freq	Level	Over Limit		ReadAntenna		Cable Preamp		Remark	
		MHz	dBuV/m	Limit	Line	dB	dBuV		dB/m
1	5646.450	54.39	-13.91	68.30	50.86	32.08	6.61	35.16	Average
2	5699.750	65.87	-39.15	105.02	62.25	32.14	6.64	35.16	Average
3	5710.150	68.26	-39.78	108.04	64.63	32.15	6.64	35.16	Average
4	5723.800	69.97	-49.49	119.46	66.32	32.17	6.64	35.16	Average
5	5763.450	98.34	-----	-----	94.62	32.22	6.66	35.16	Average
6	5850.550	63.89	-57.06	120.95	60.04	32.32	6.69	35.16	Average
7	5861.600	63.85	-45.10	108.95	59.98	32.33	6.70	35.16	Average
8	5877.200	57.29	-46.28	103.57	53.40	32.35	6.70	35.16	Average
9	5925.300	48.13	-20.17	68.30	44.16	32.41	6.72	35.16	Average

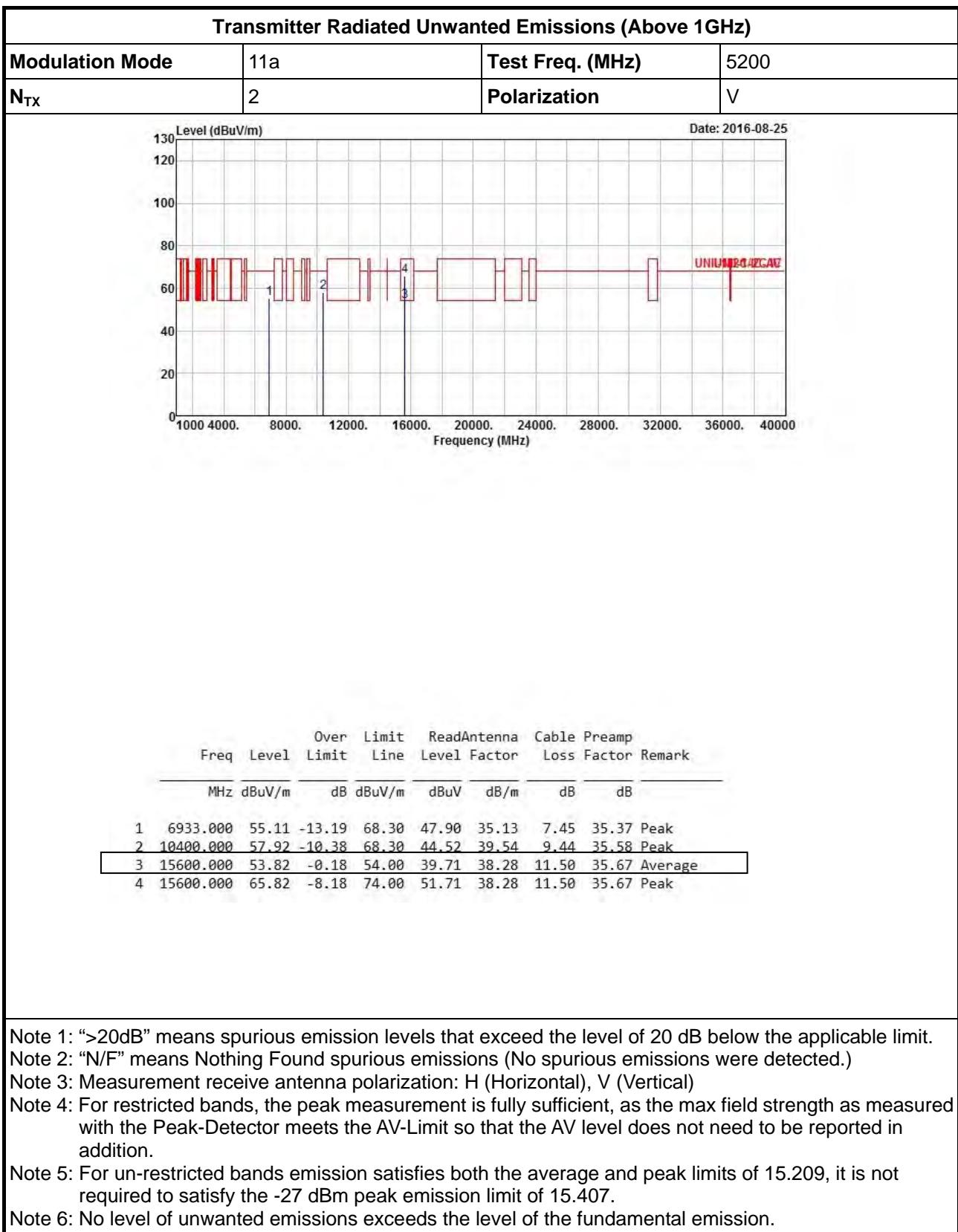


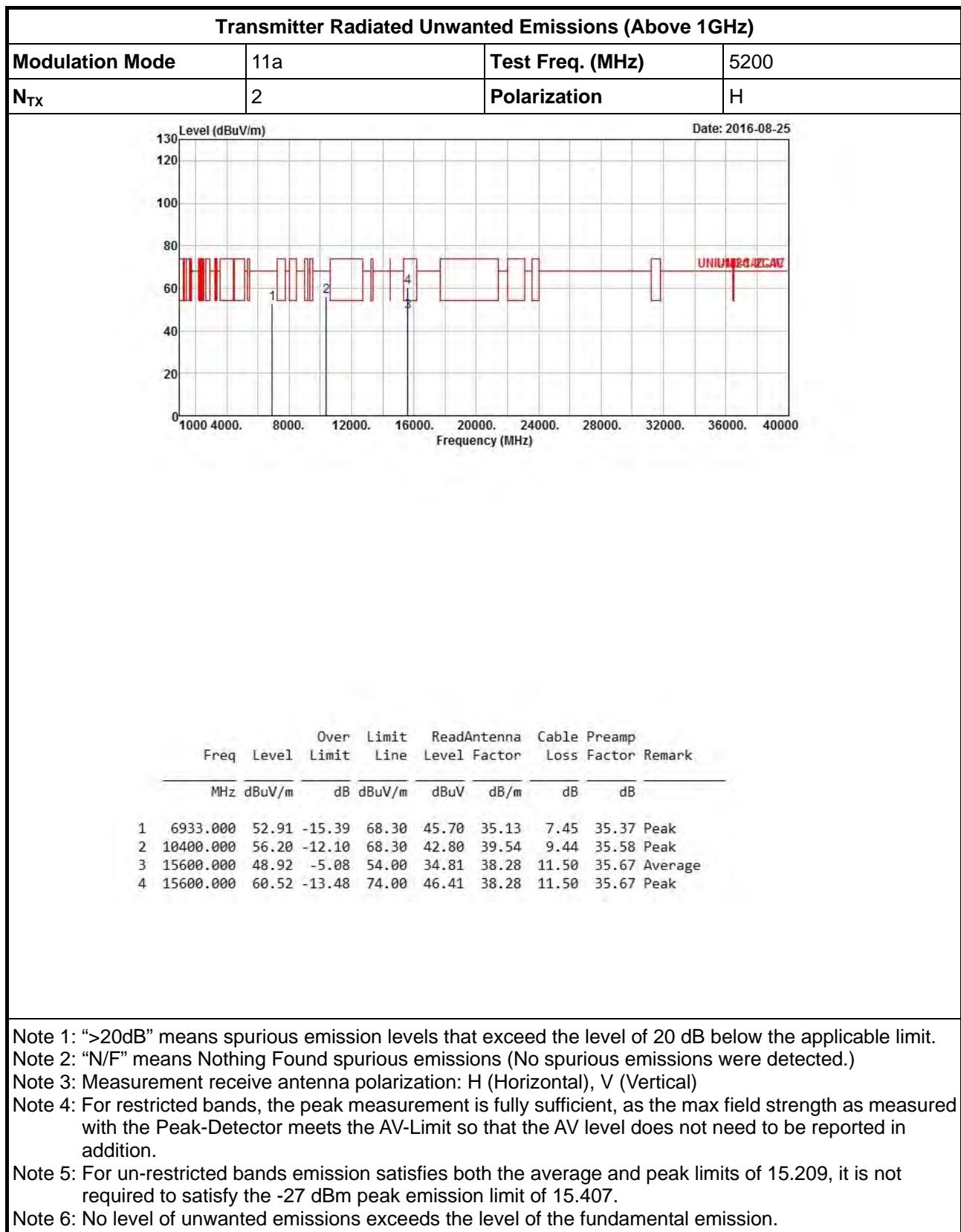
**Transmitter Radiated Unwanted Emissions (Below 1GHz)**

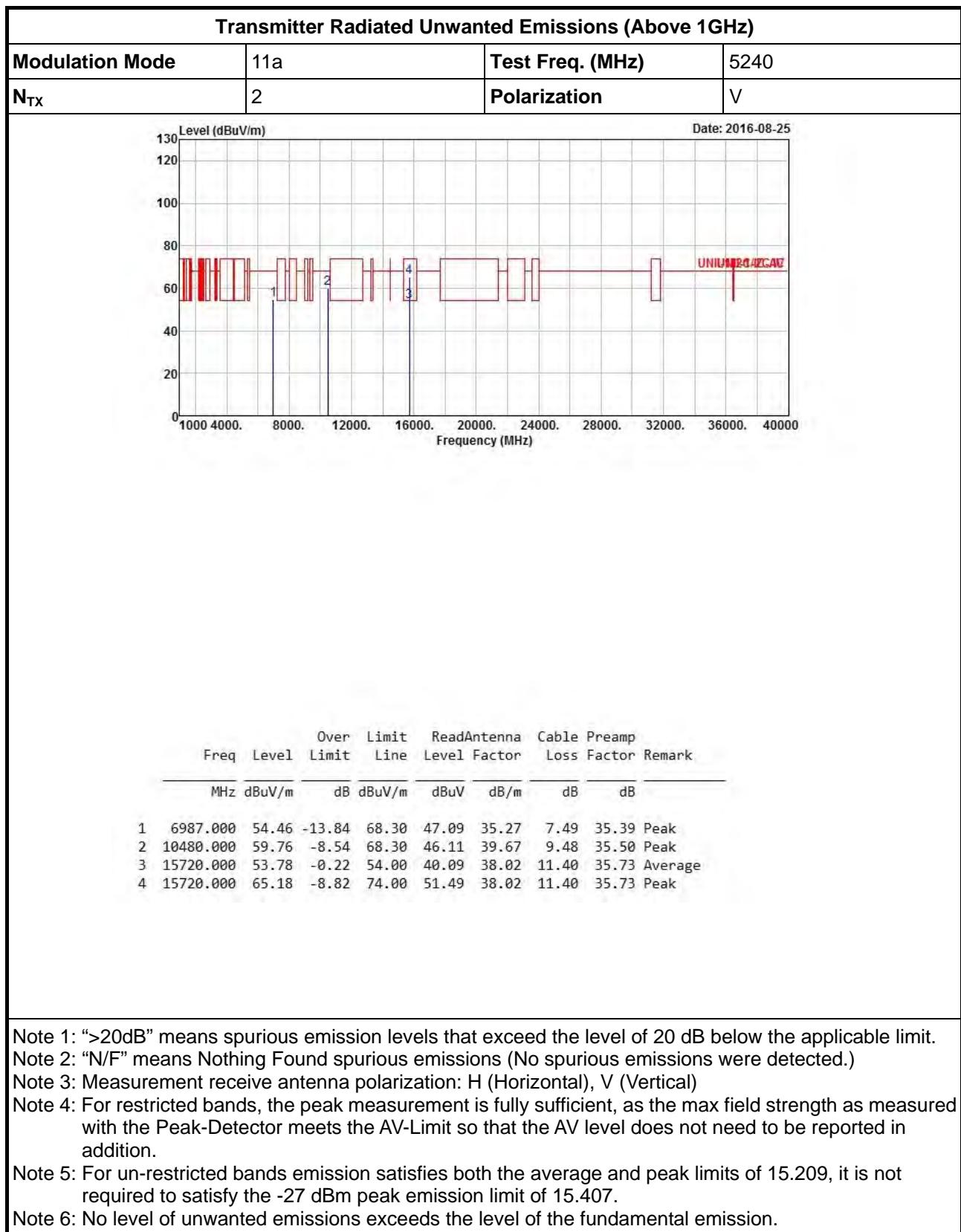


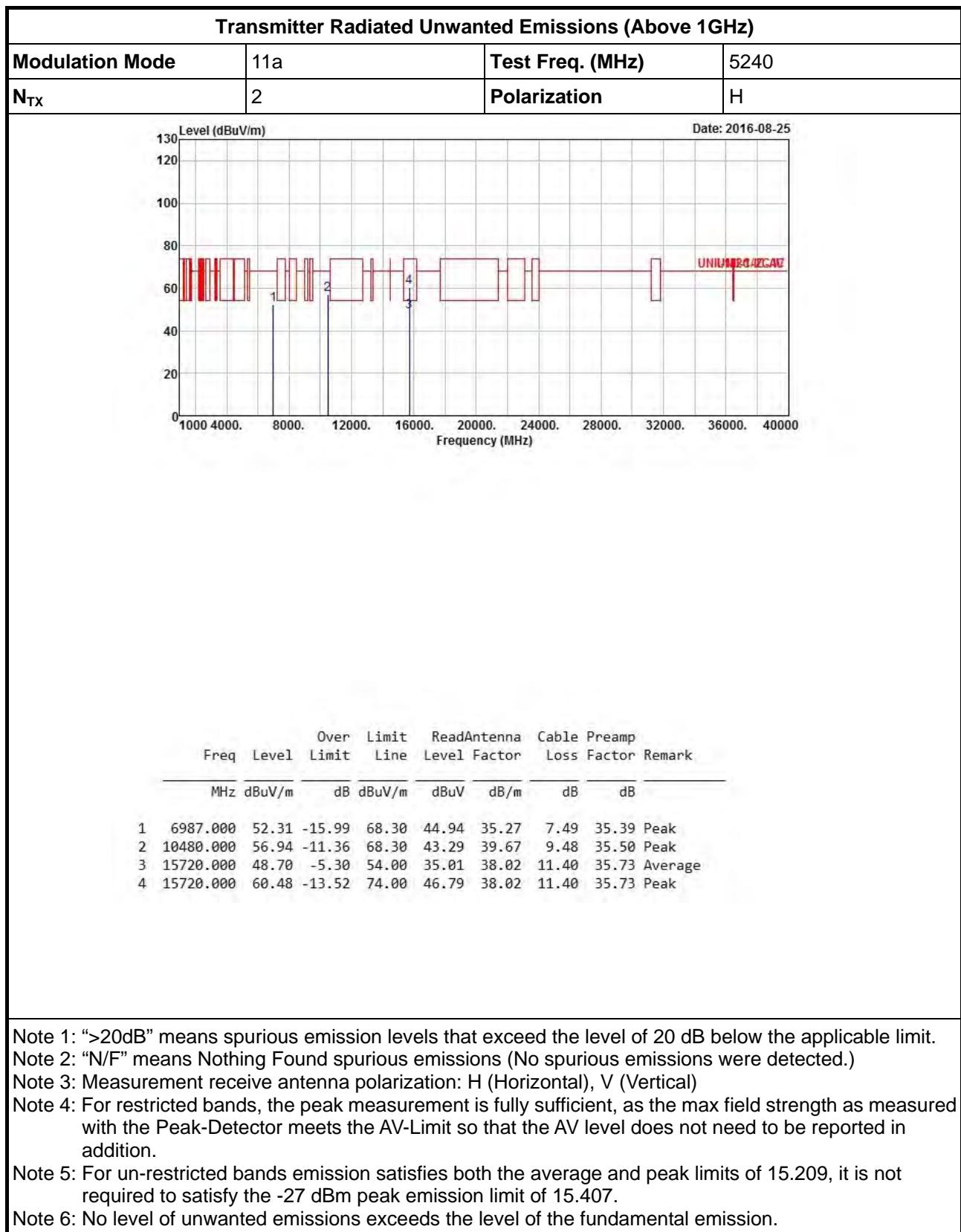
**Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5150-5250MHz**


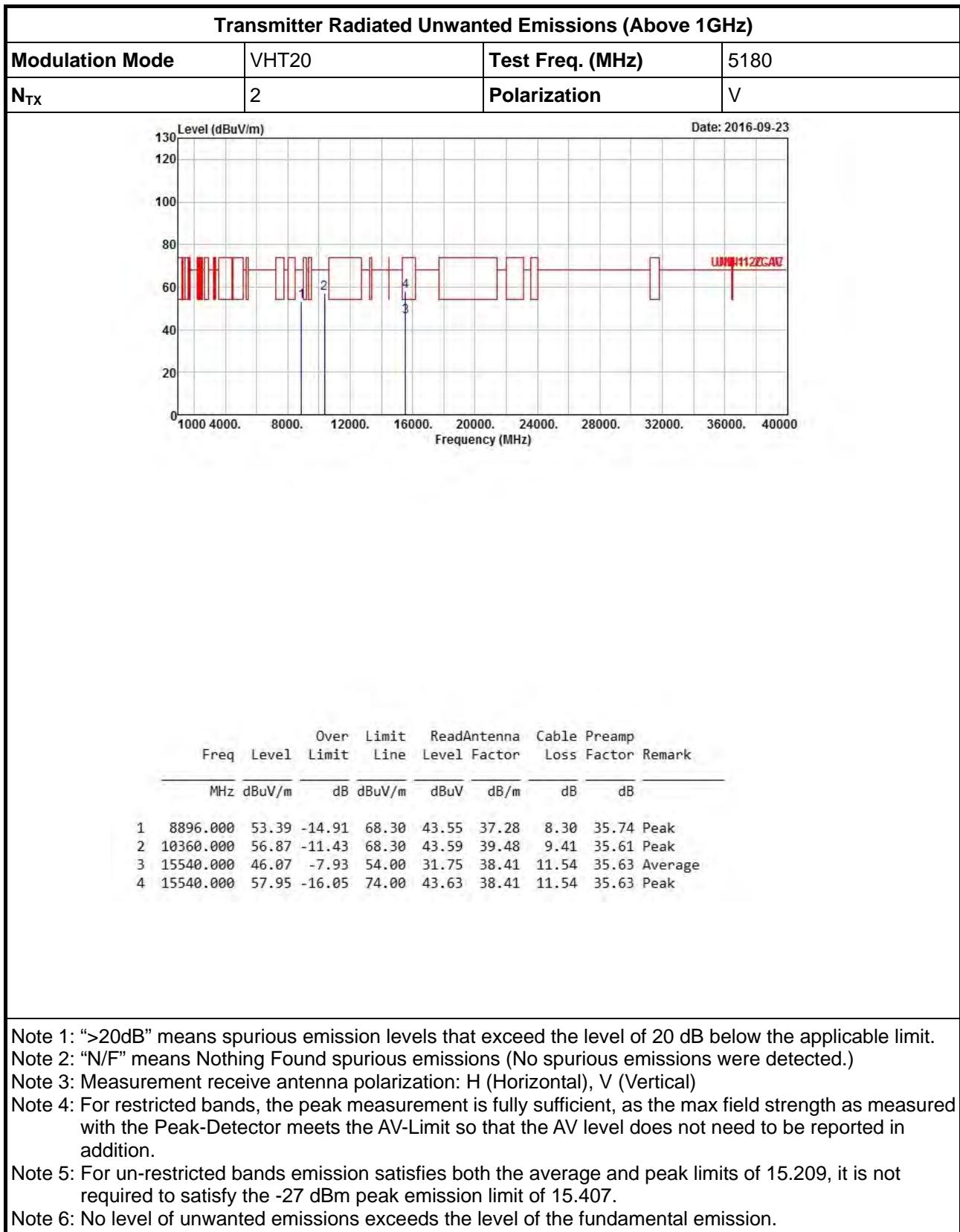


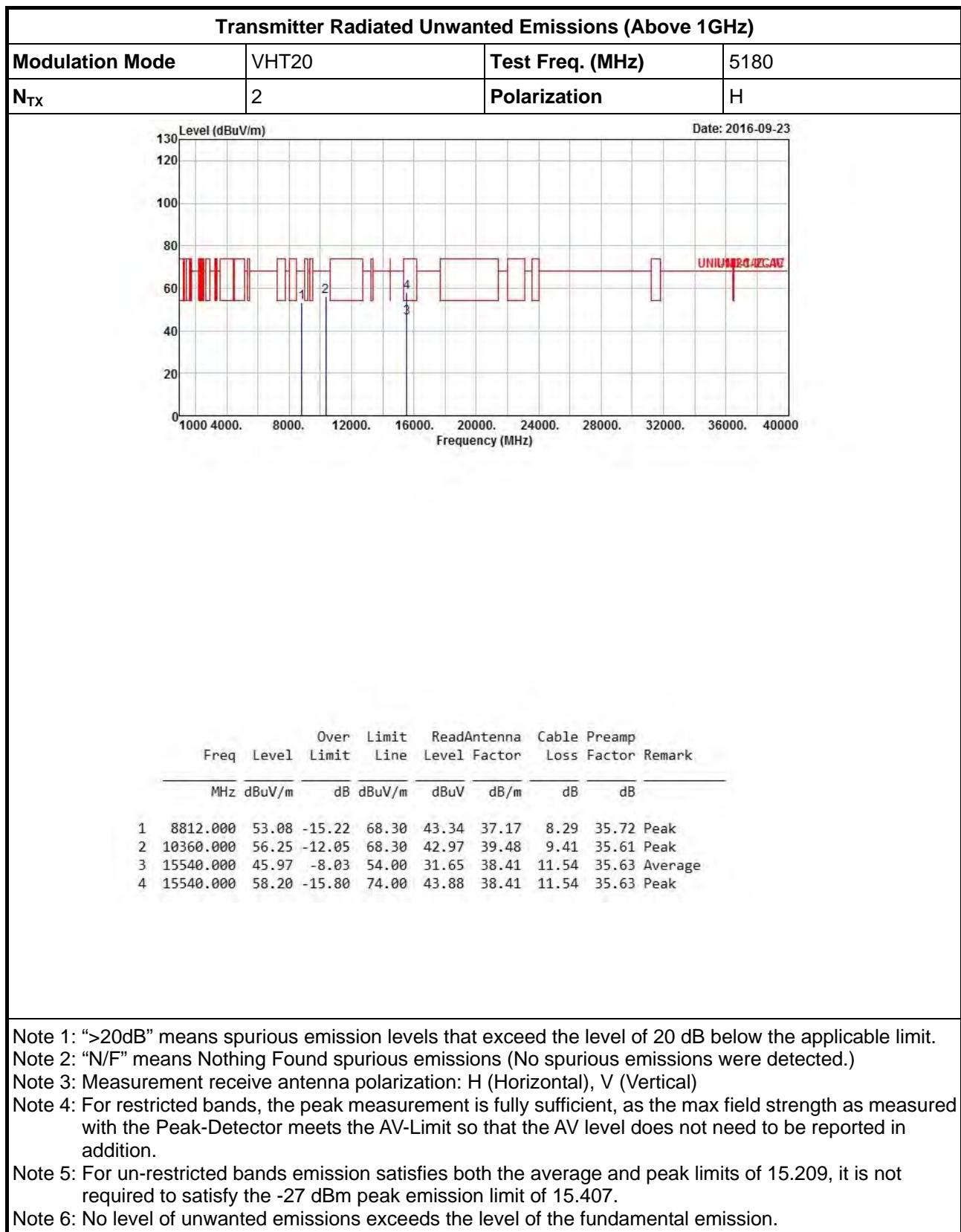


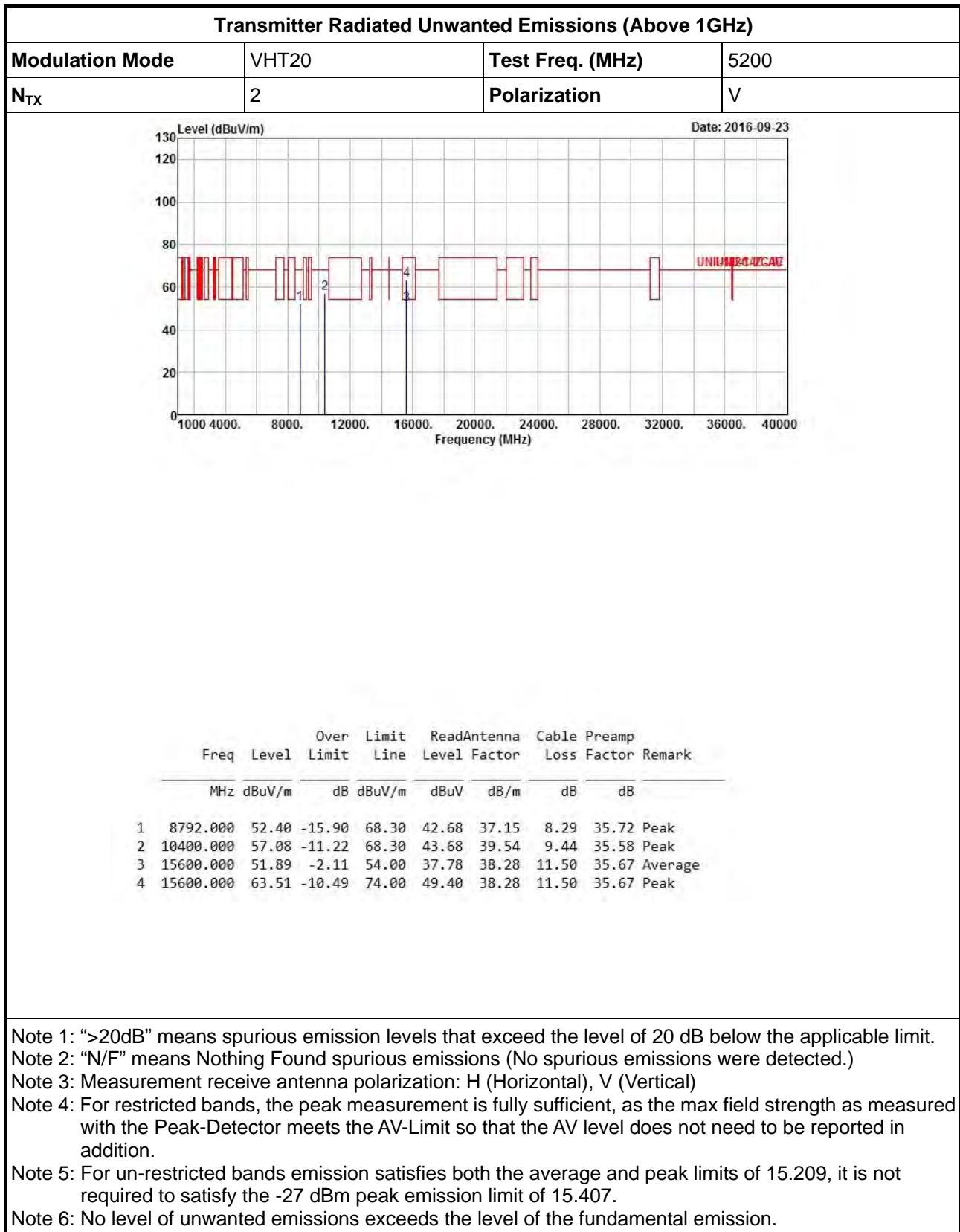












Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

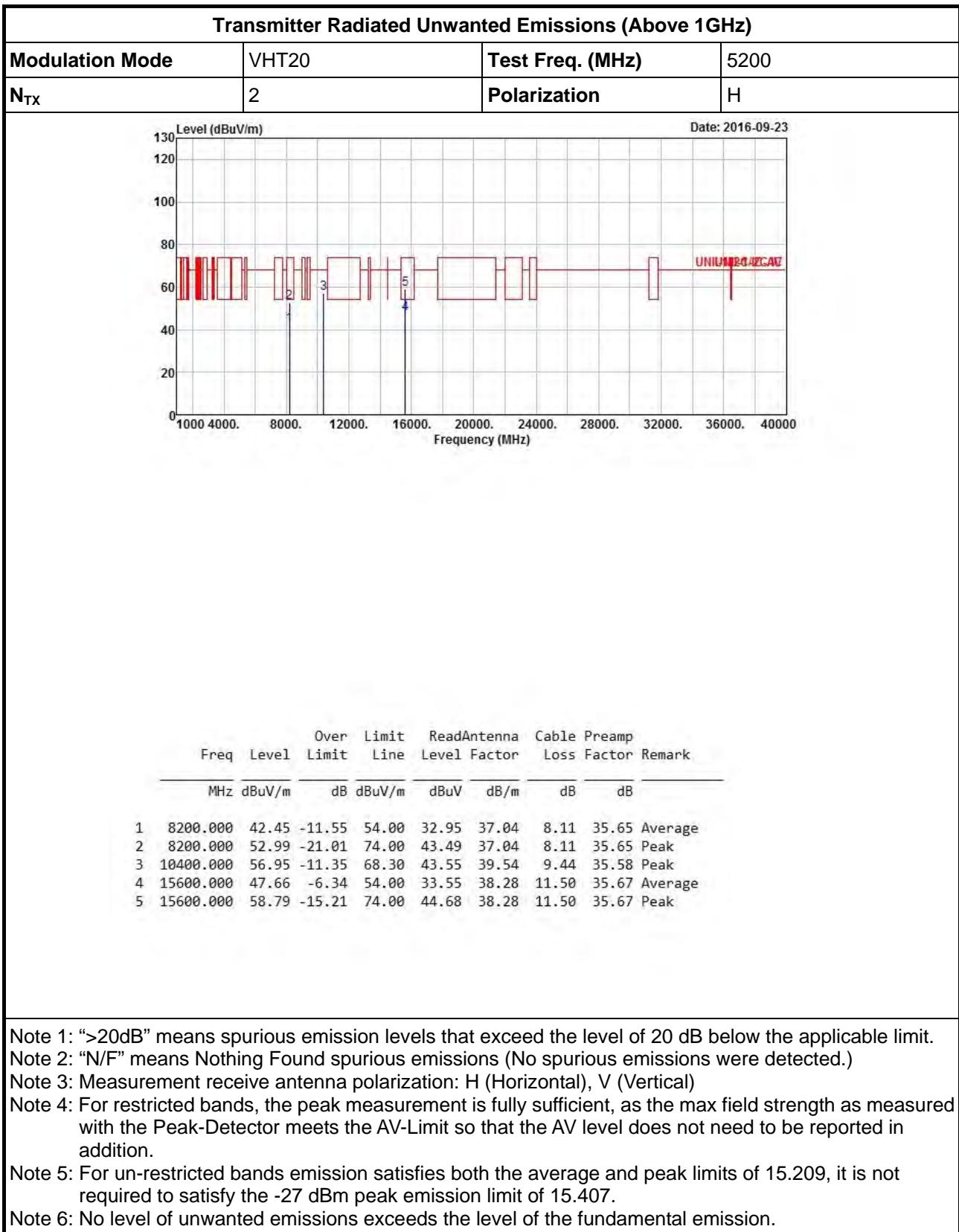
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

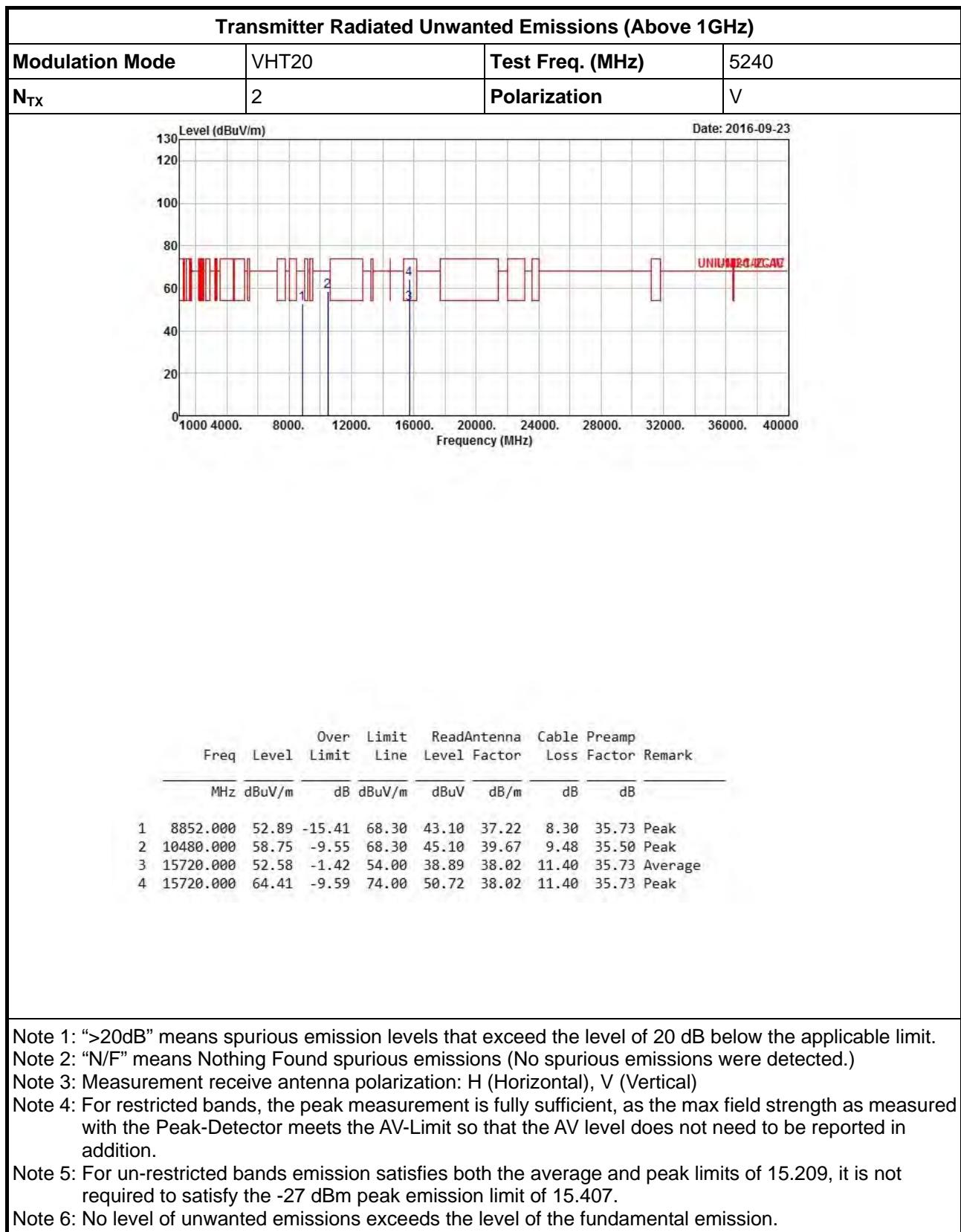
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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.





Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

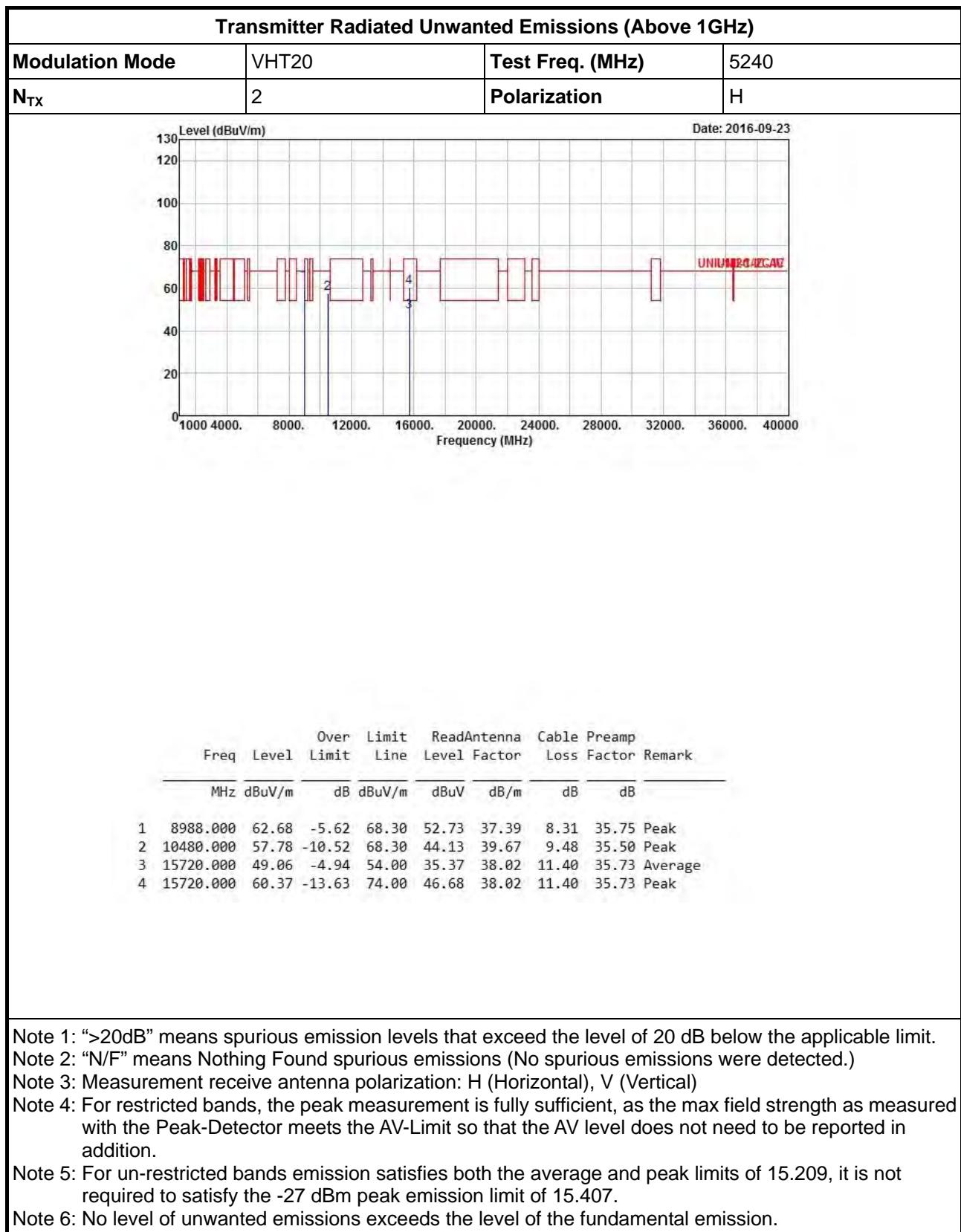
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

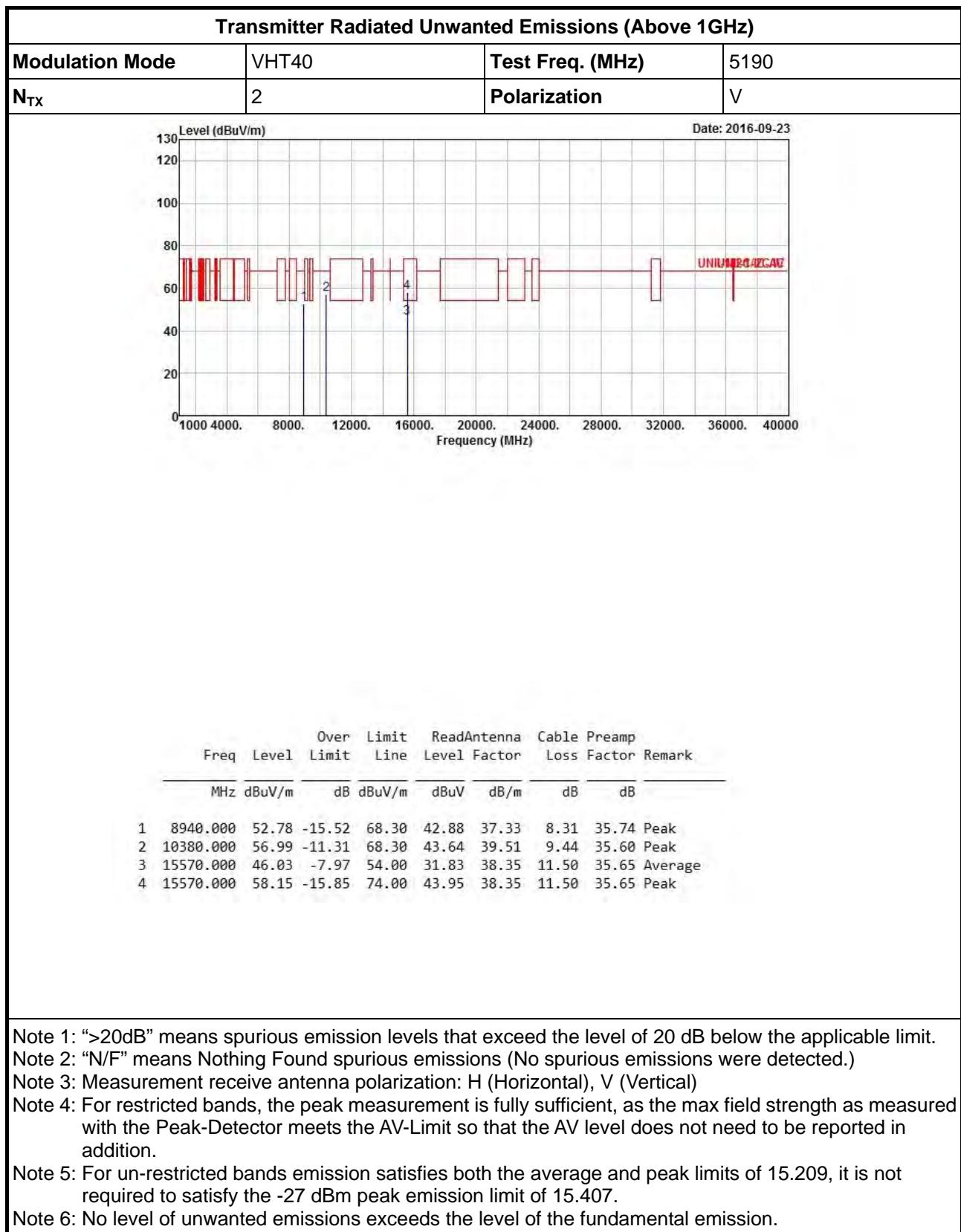
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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.





Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

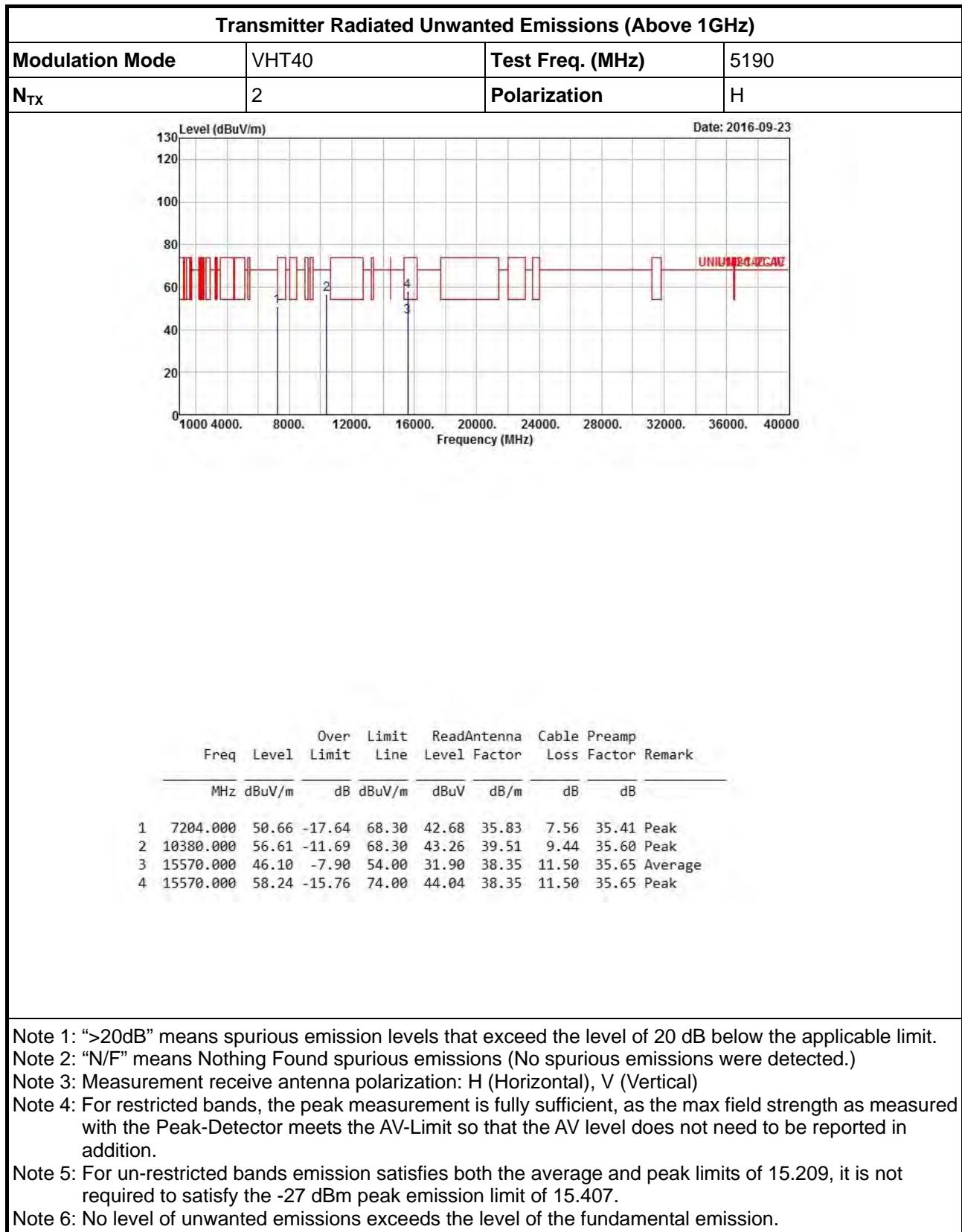
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

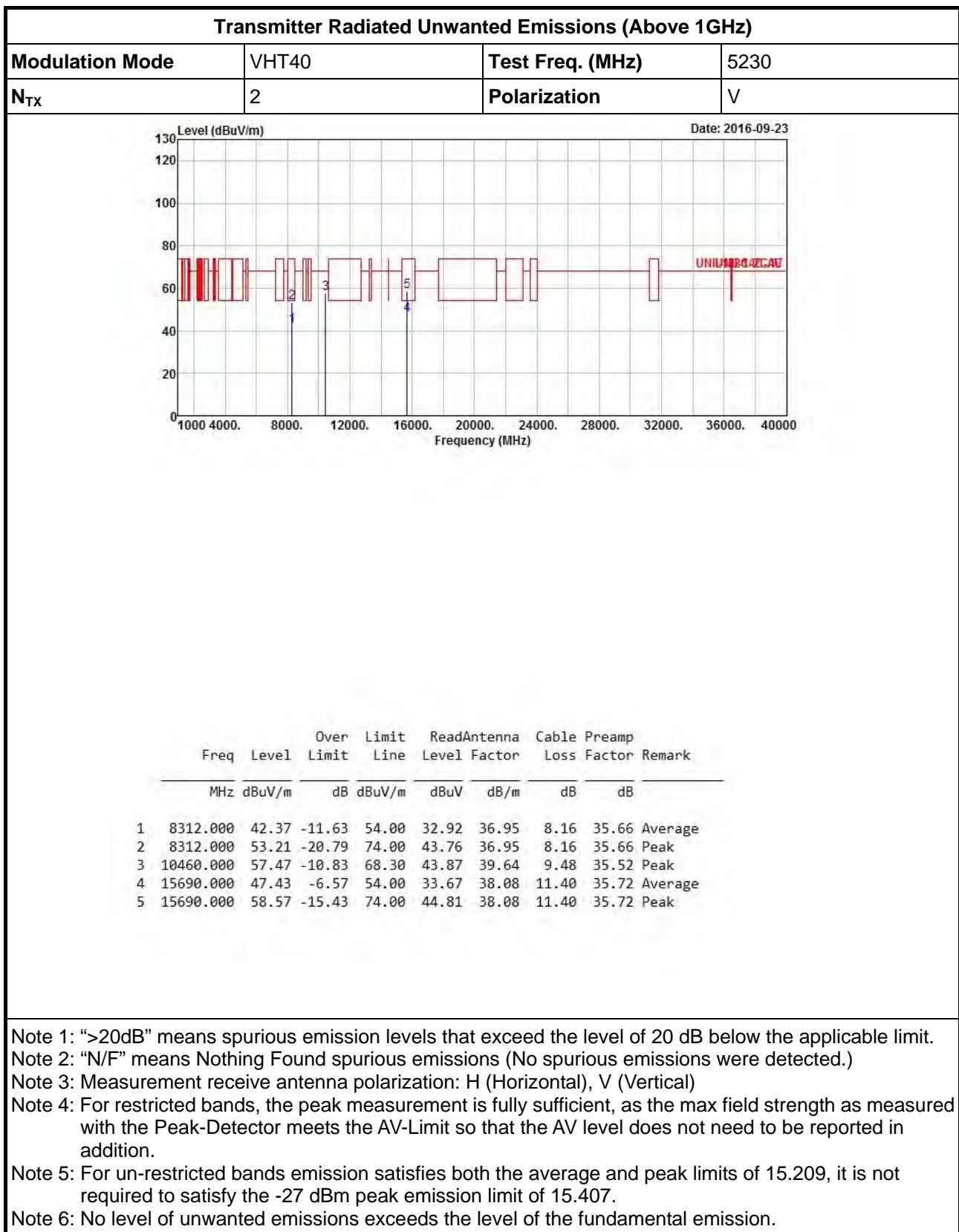
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

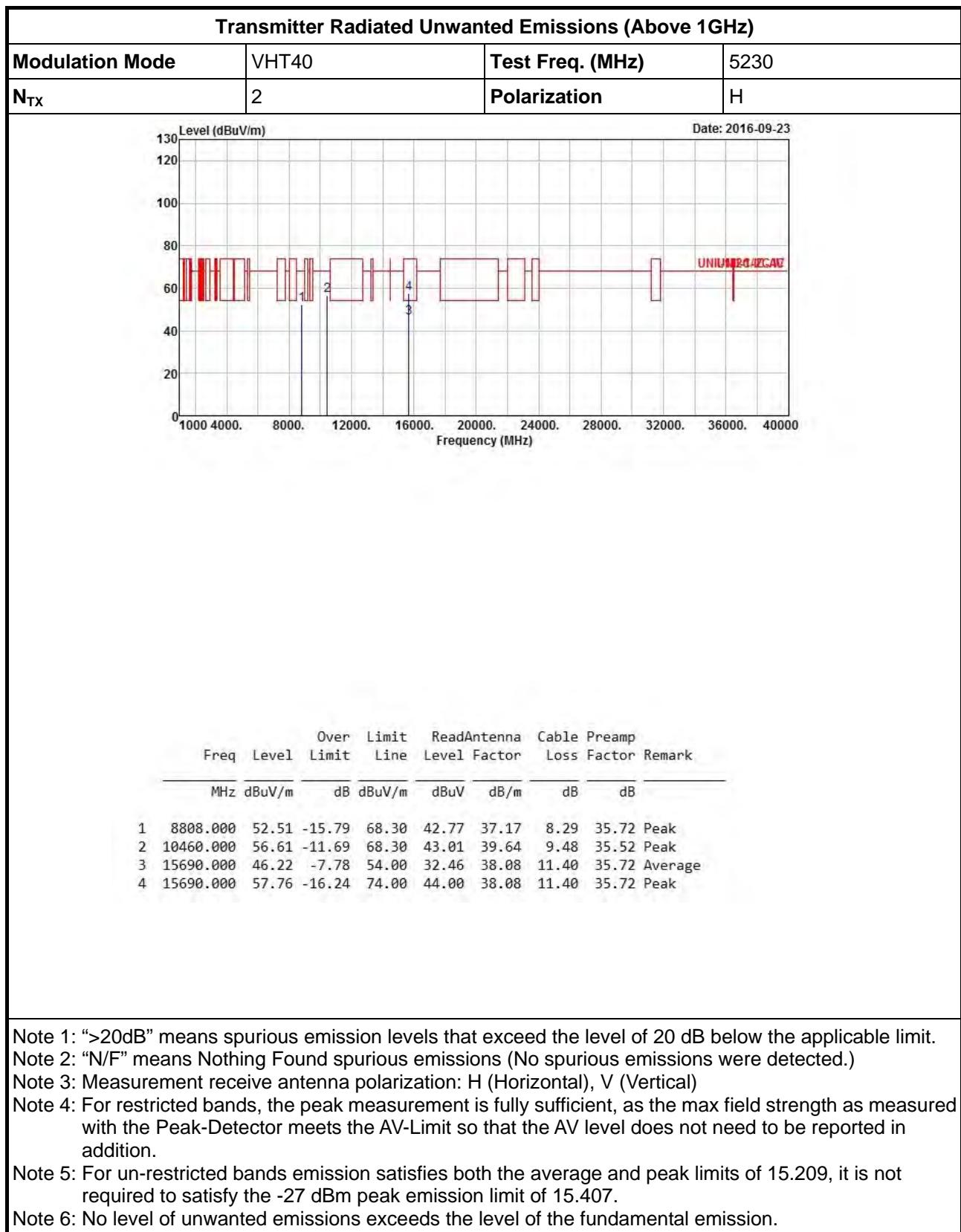
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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.







Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

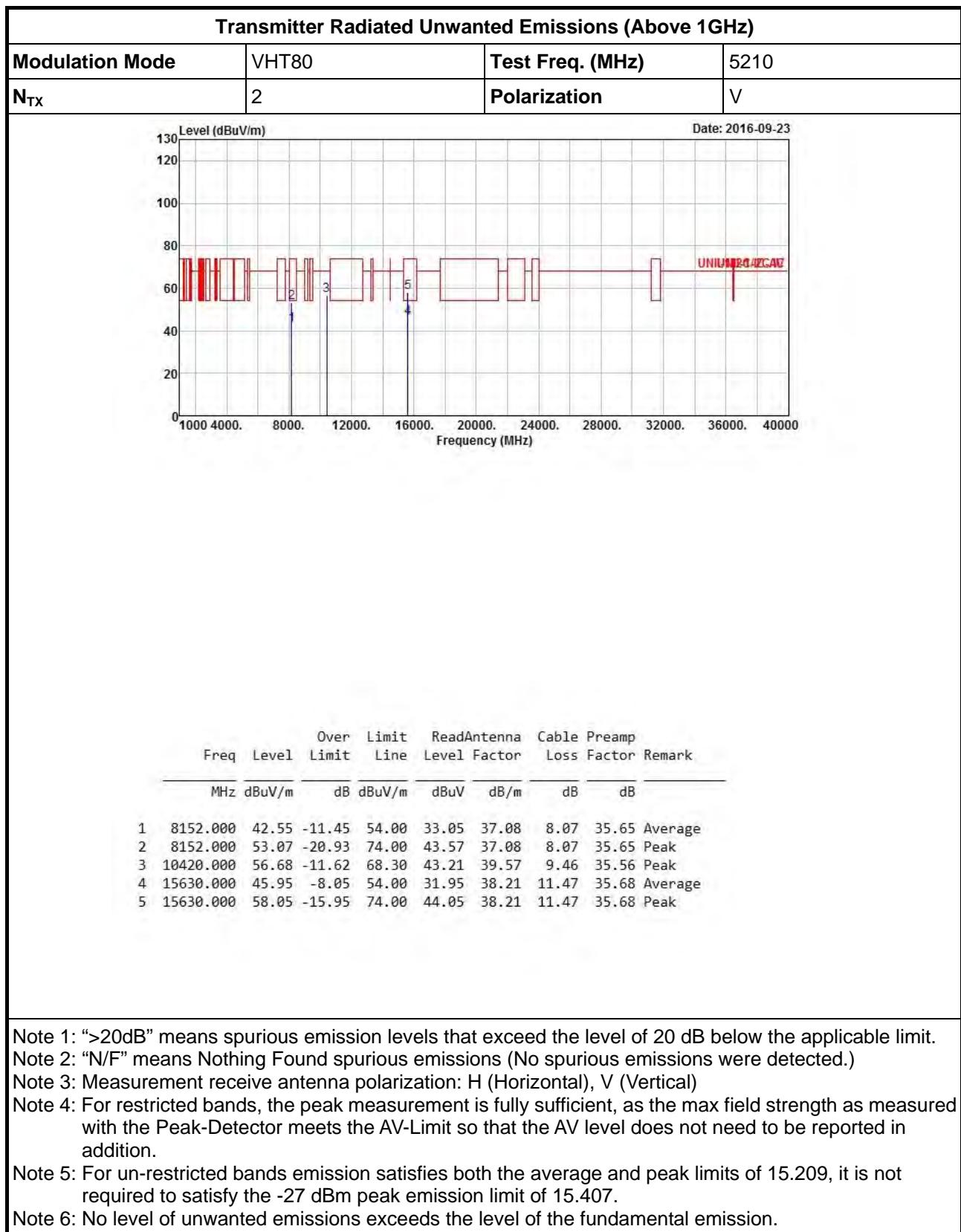
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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.



Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

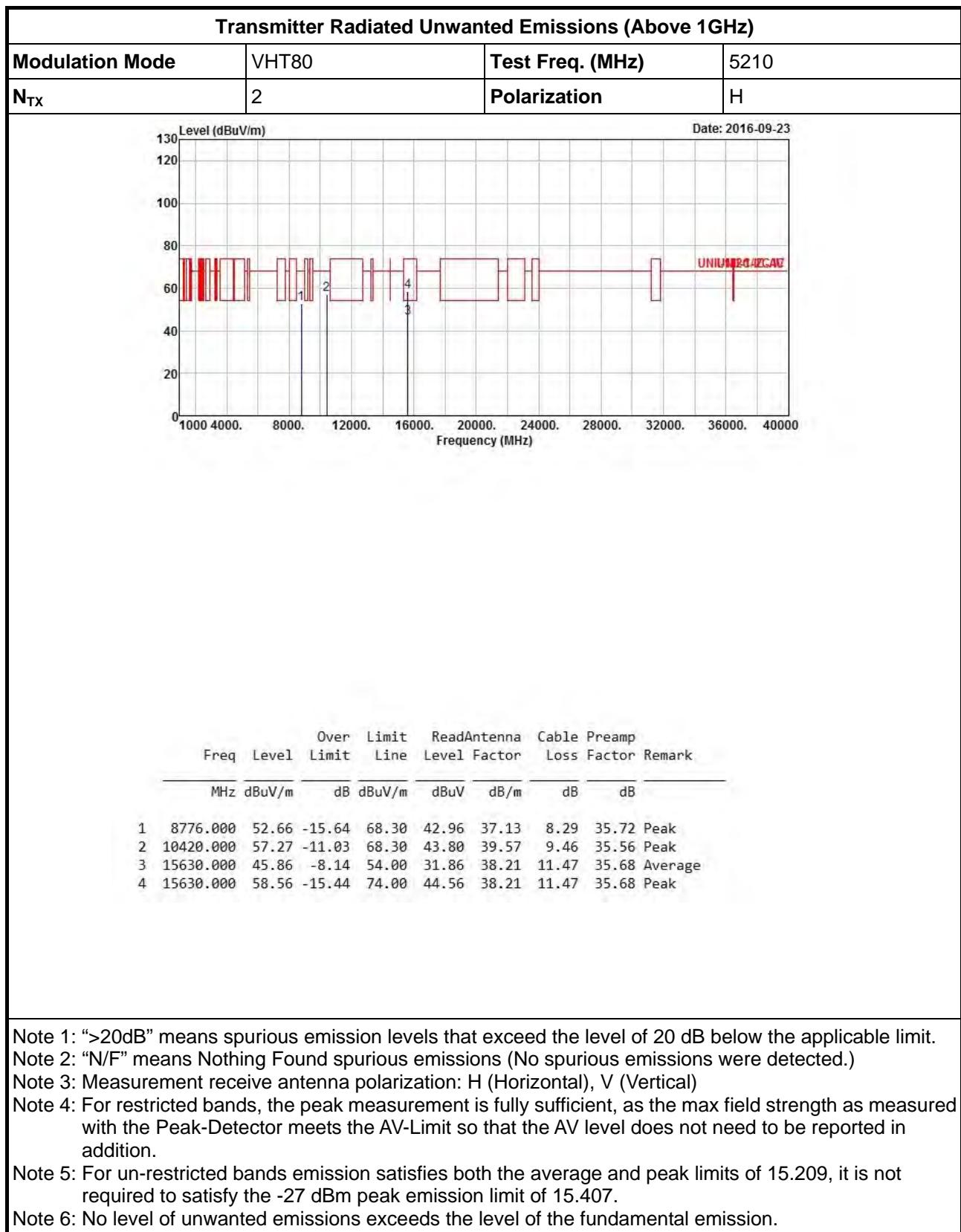
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

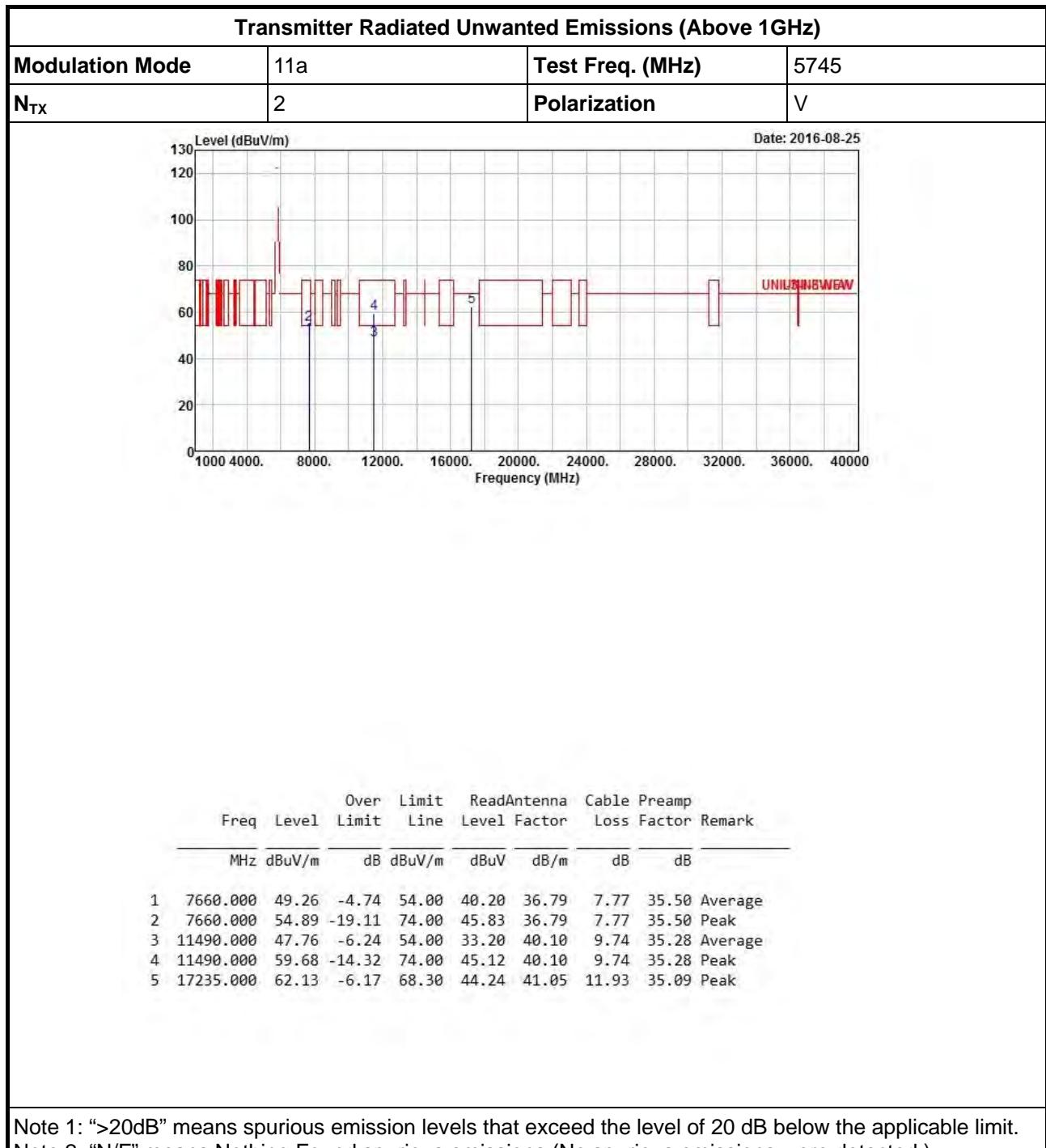
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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**


Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

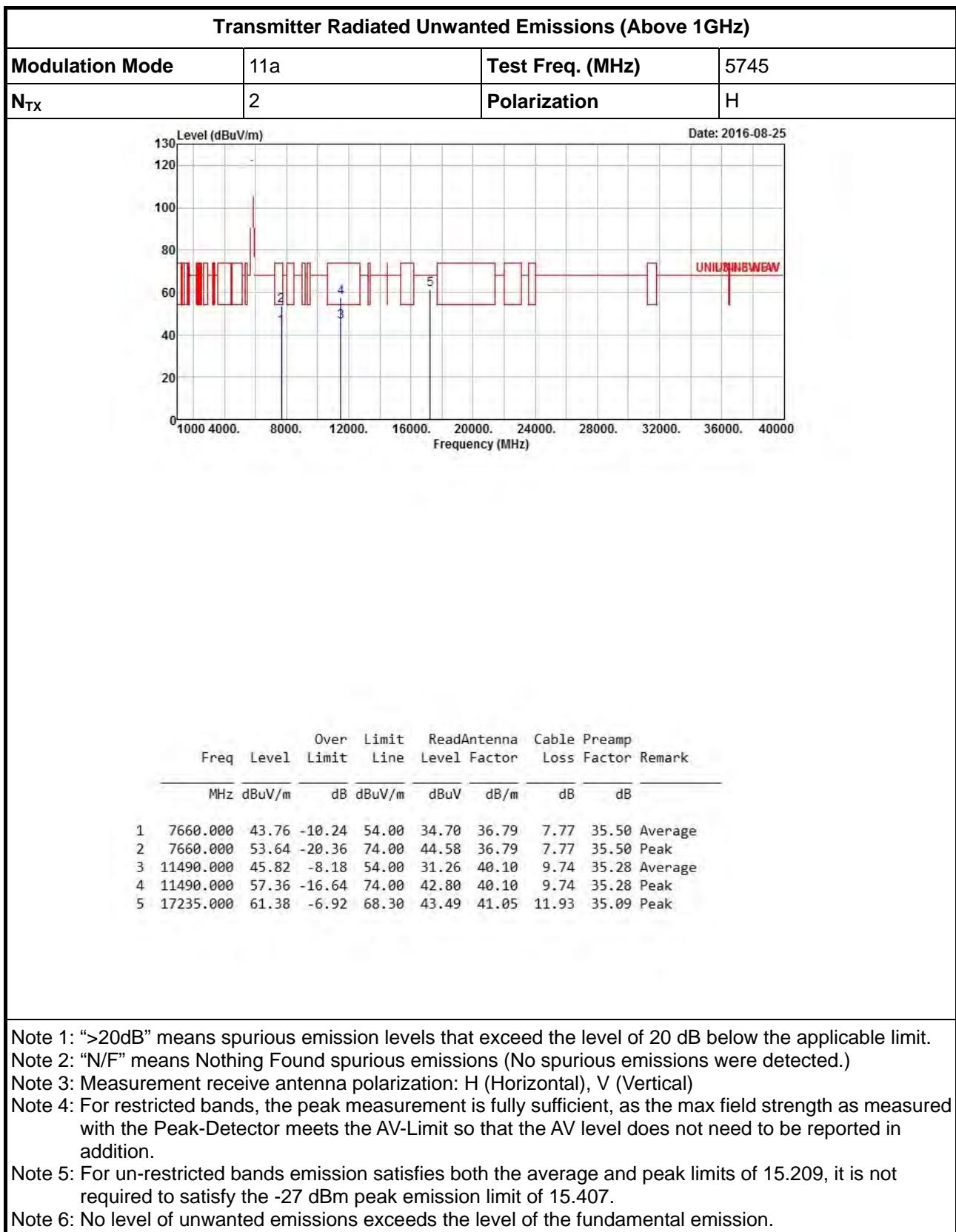
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

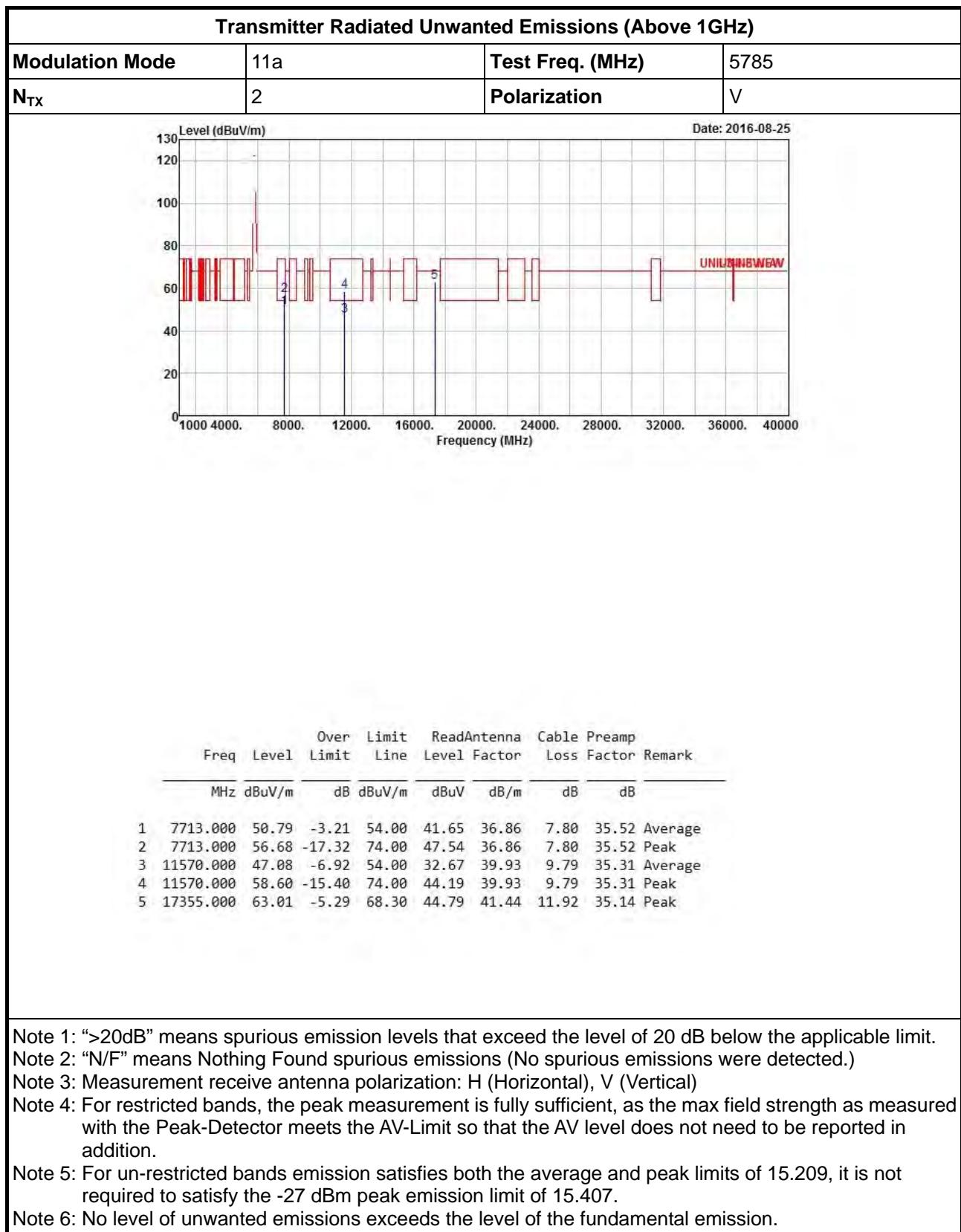
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

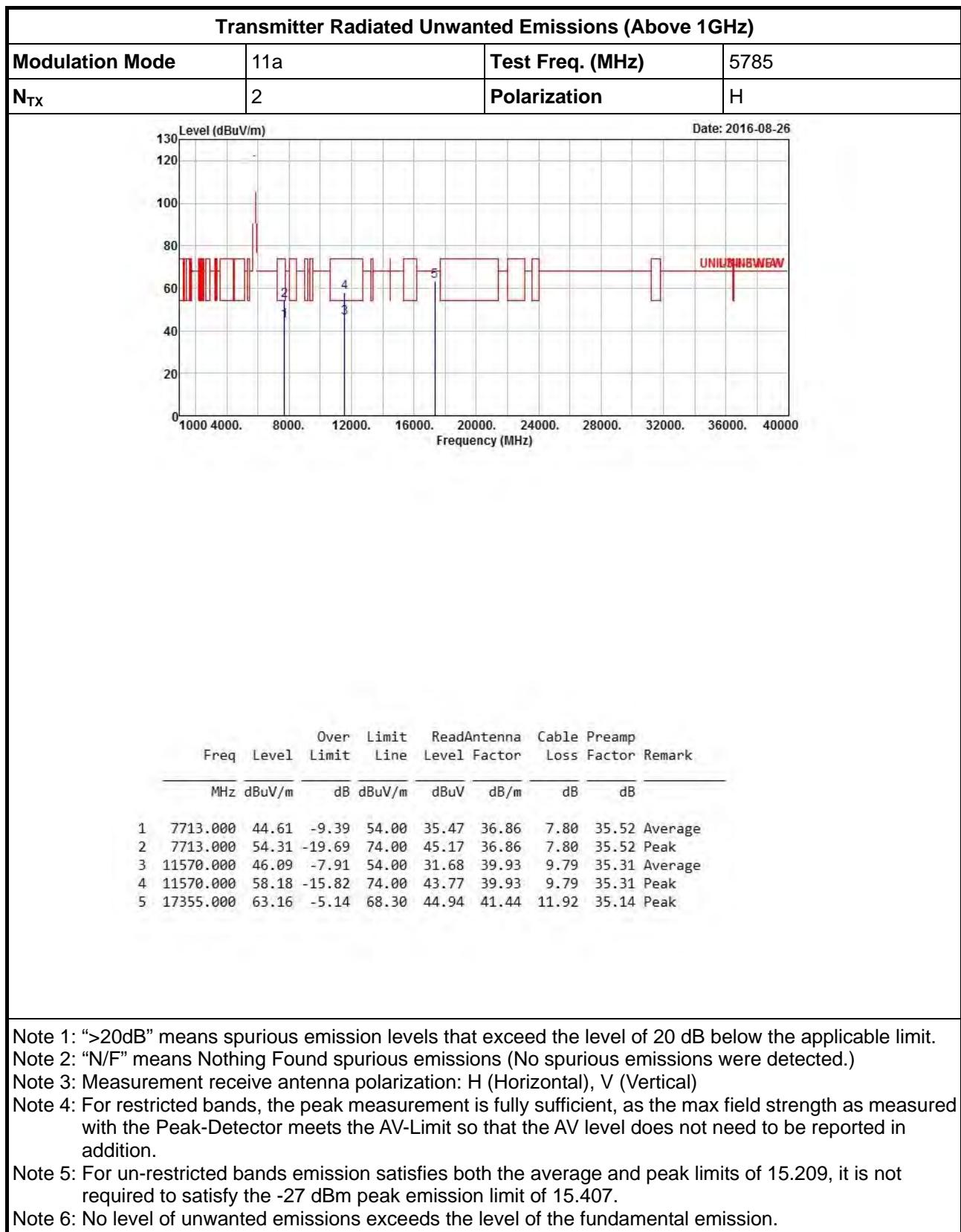
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

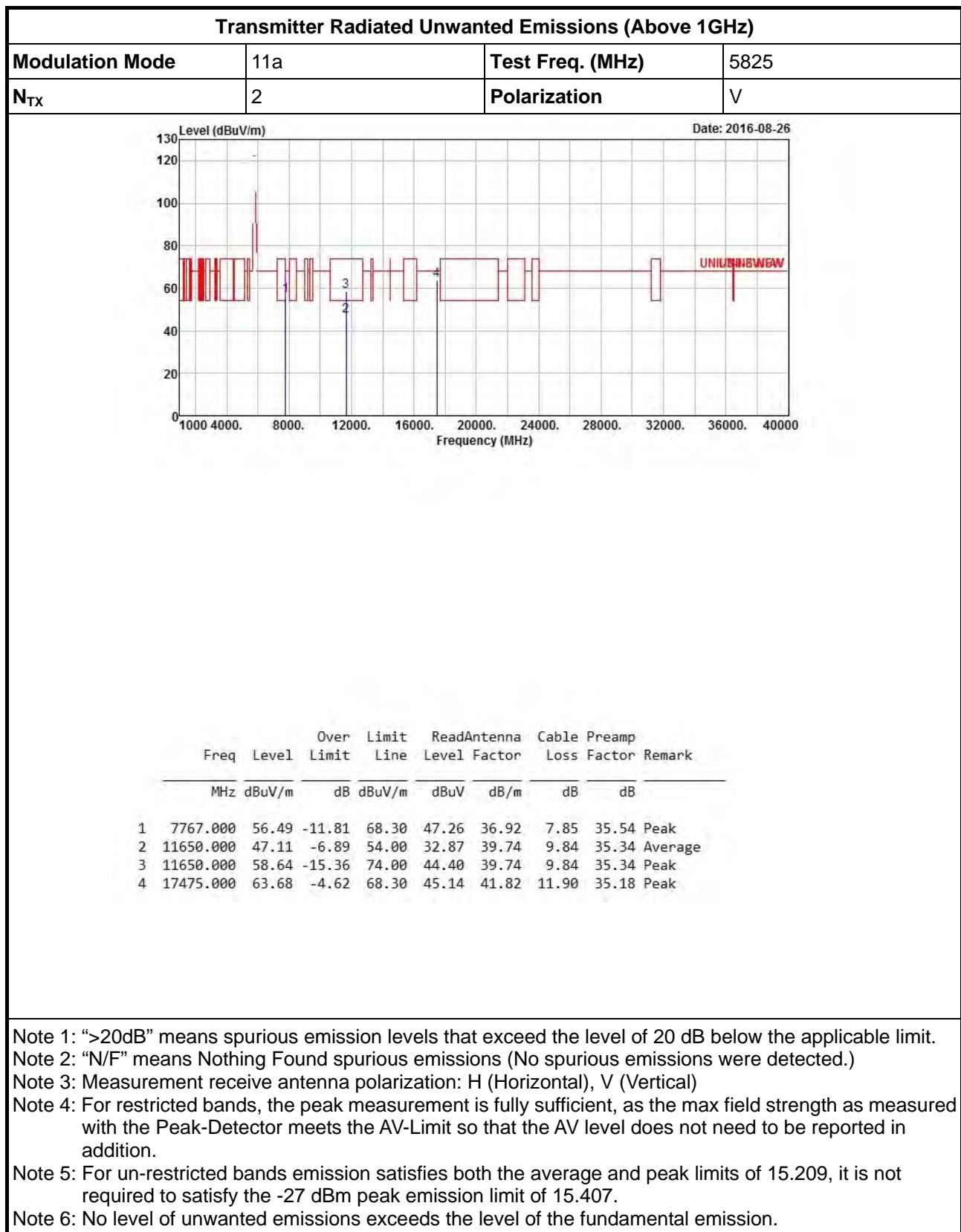
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

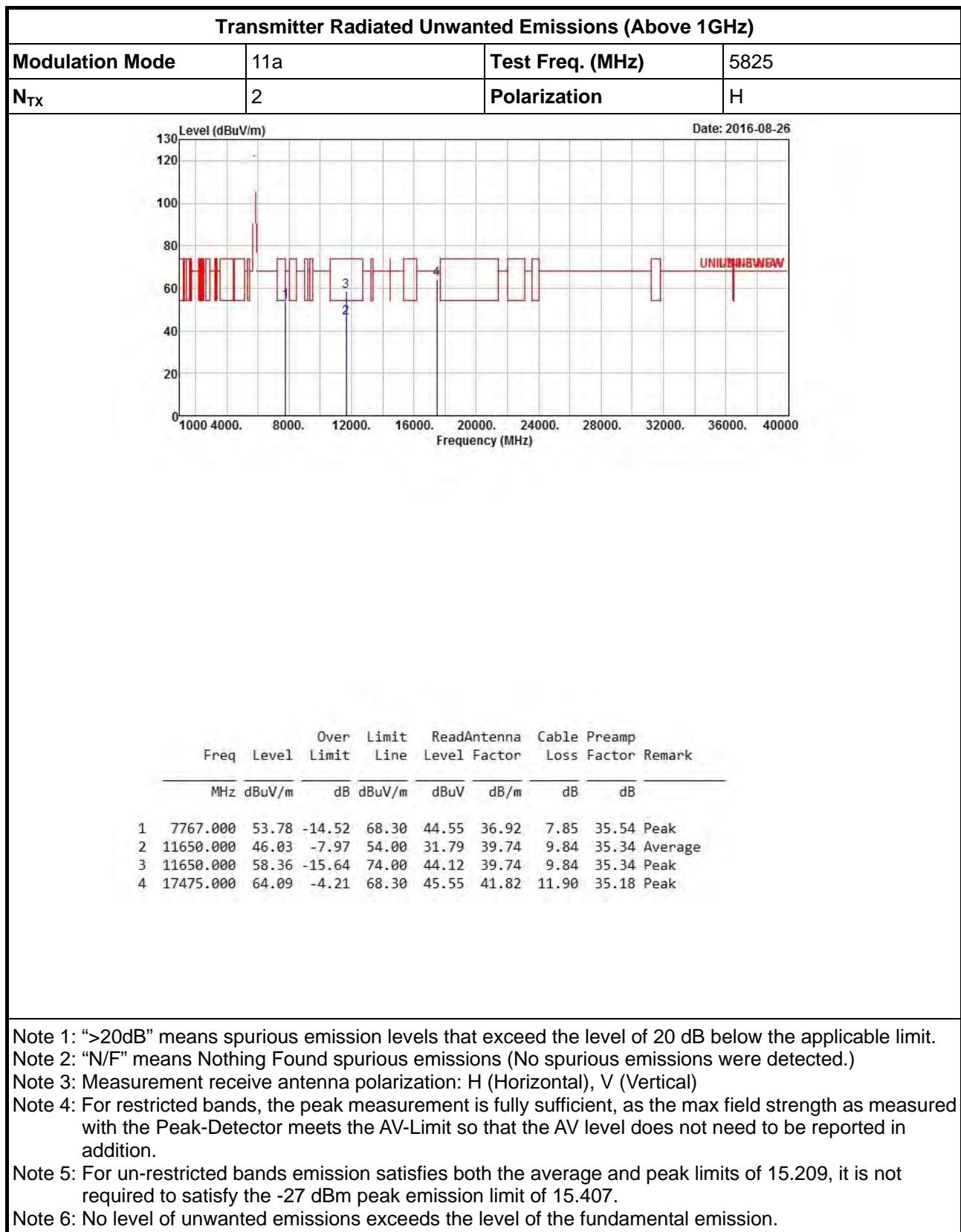
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

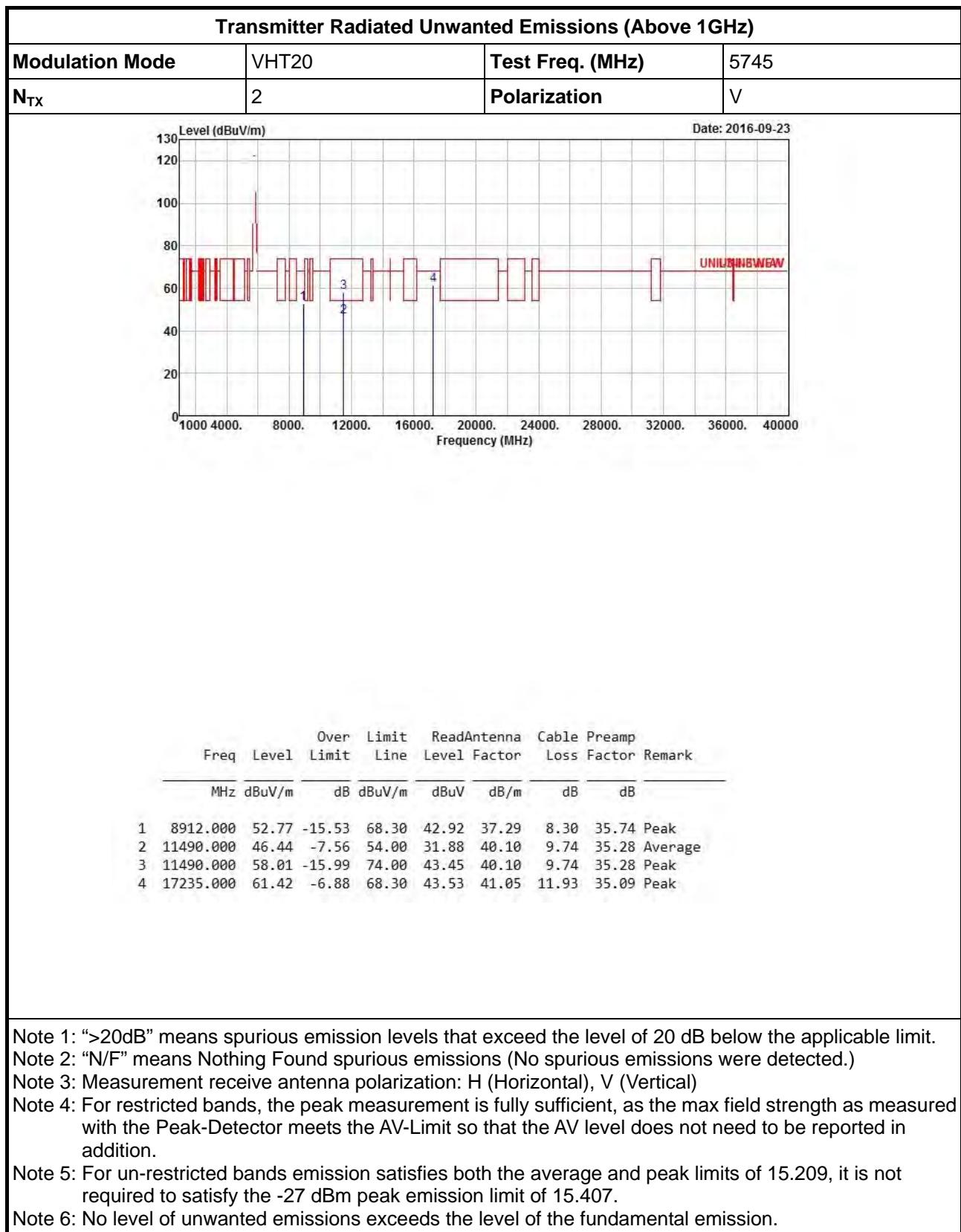












Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

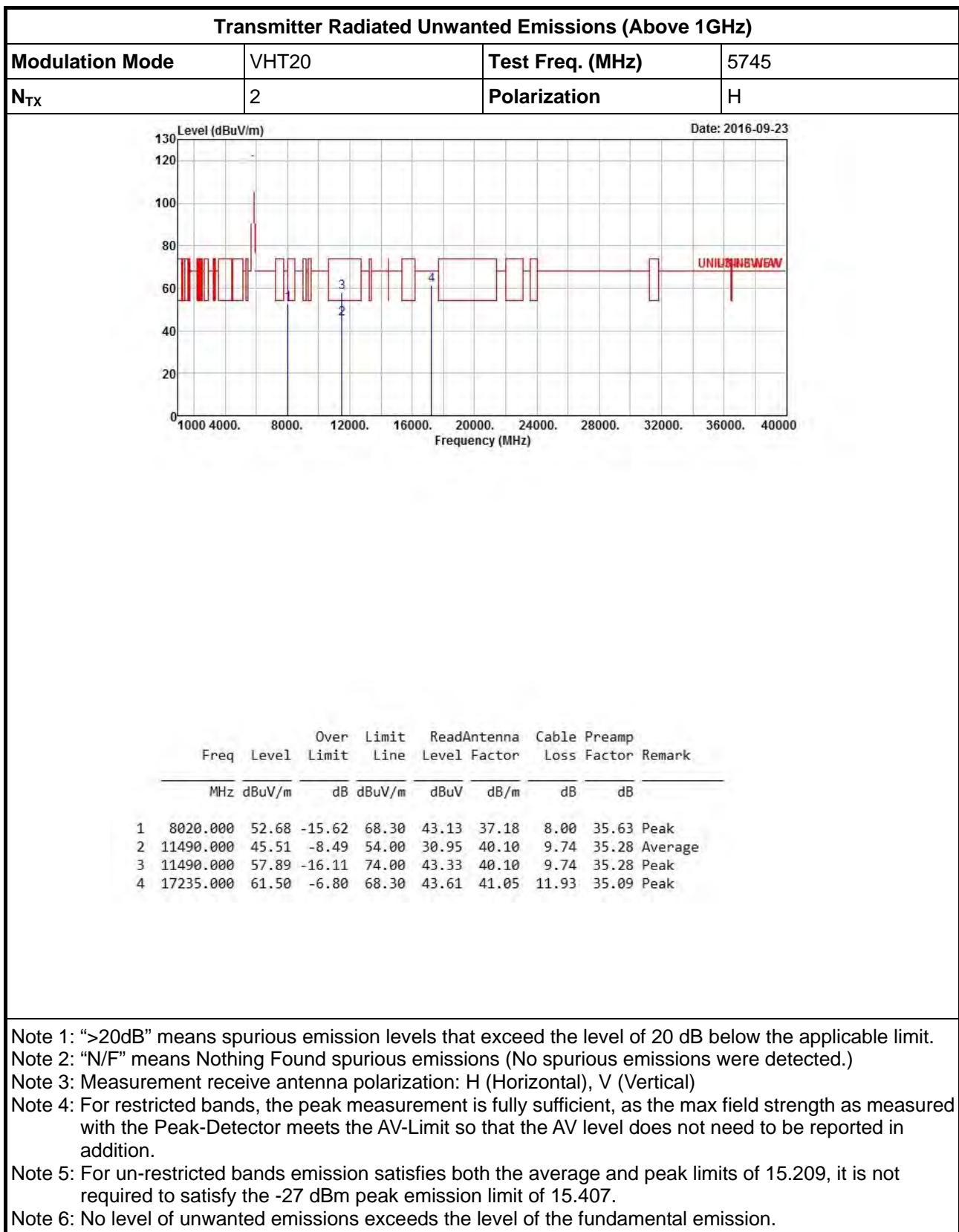
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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.



Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

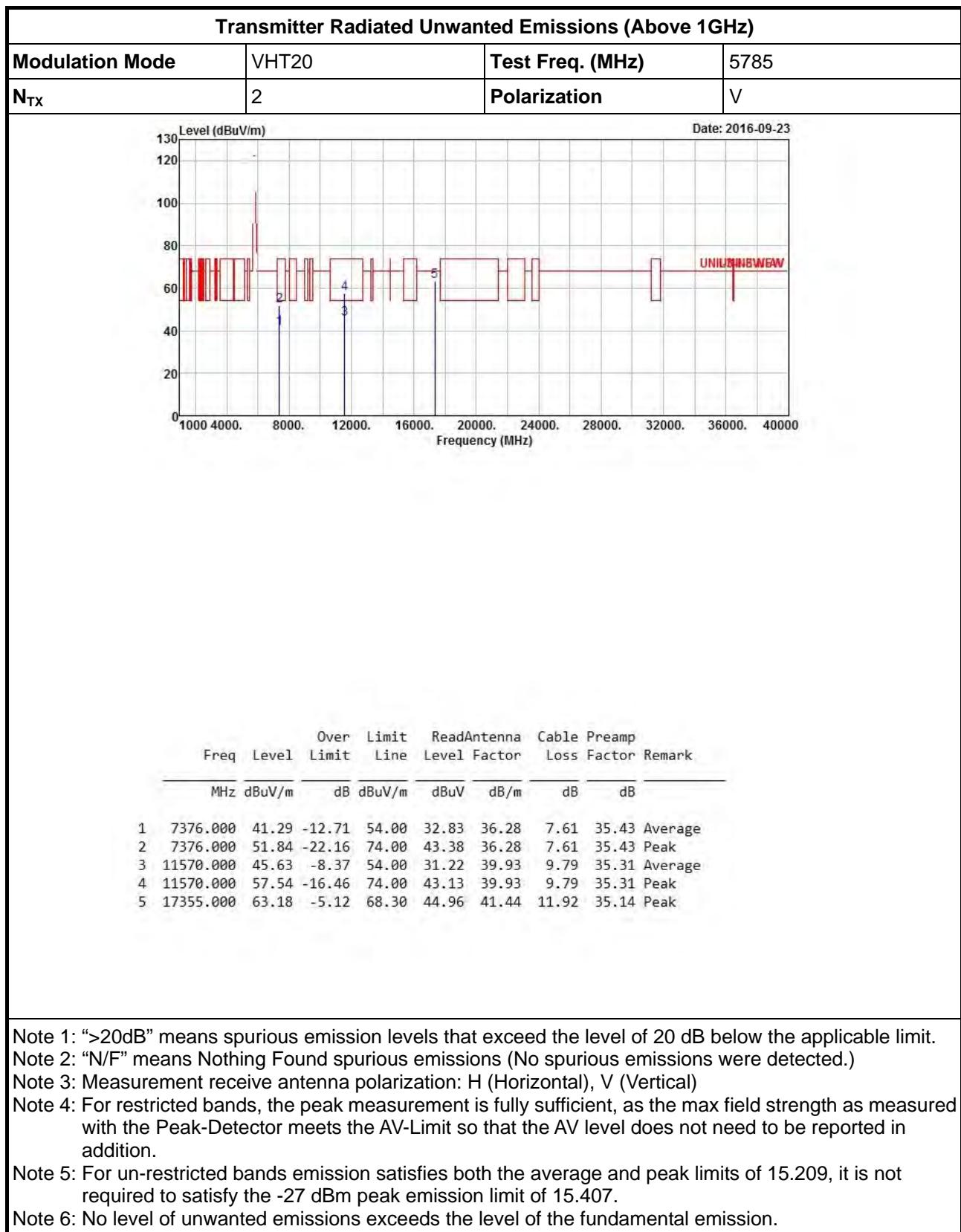
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

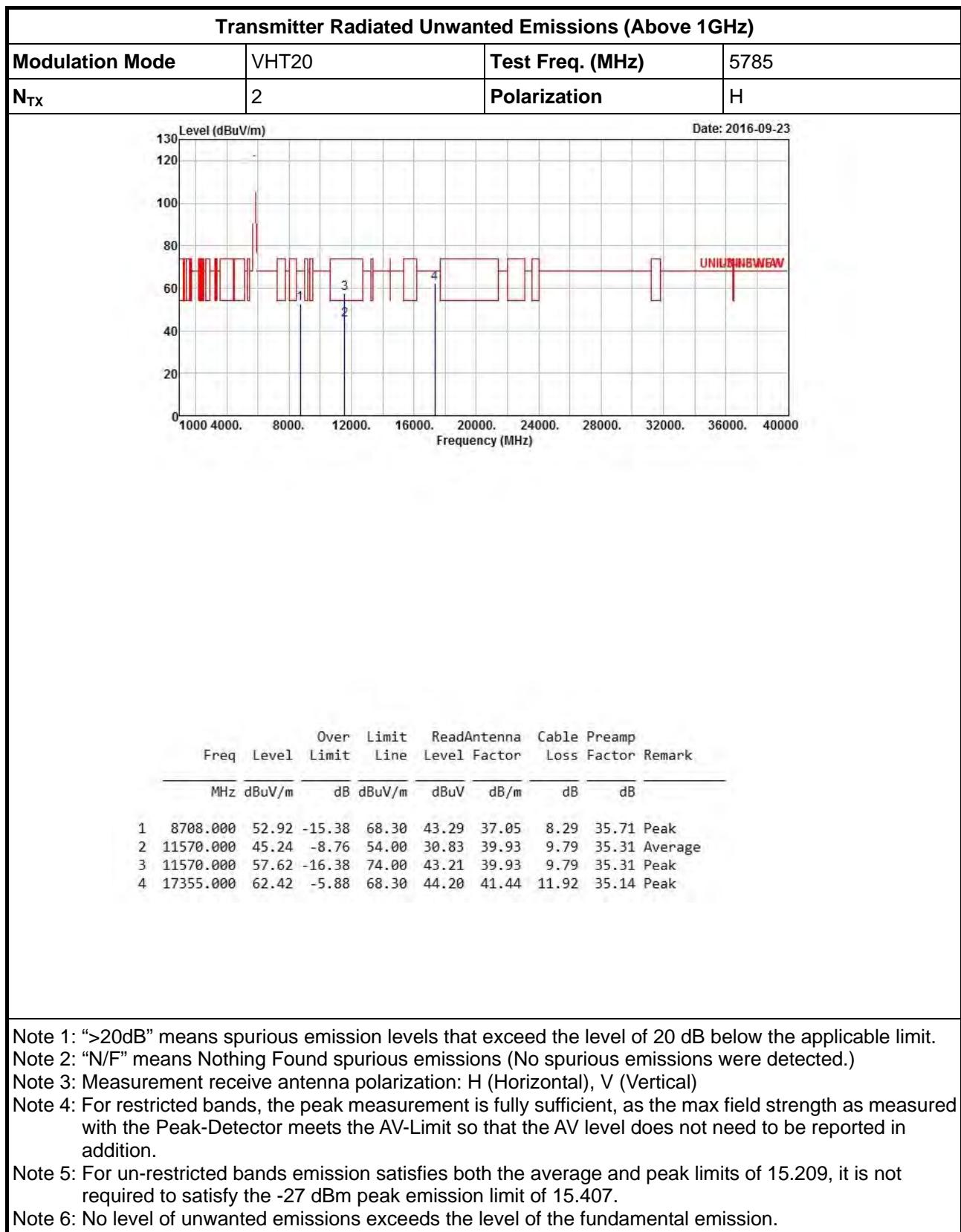
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

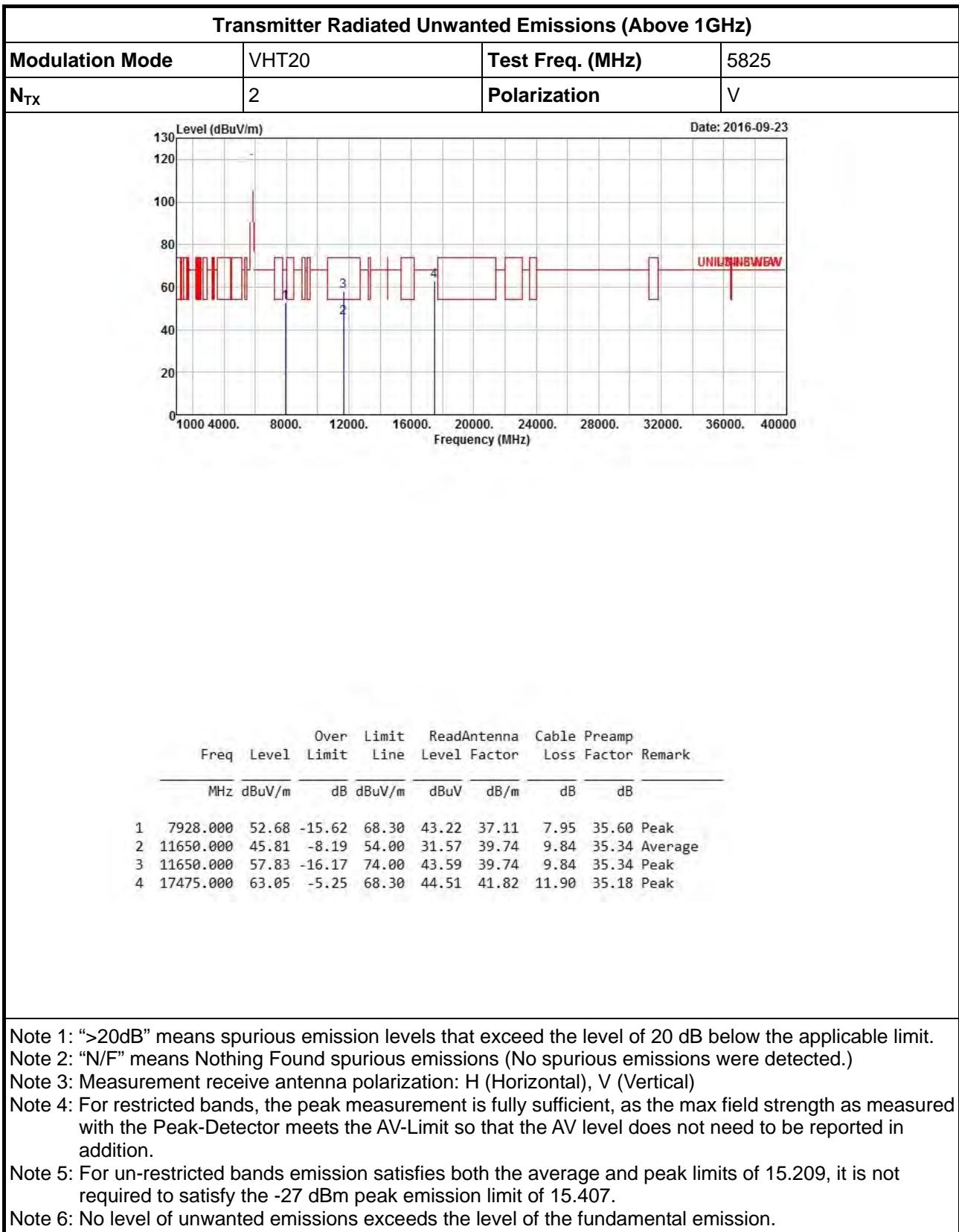
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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.







Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

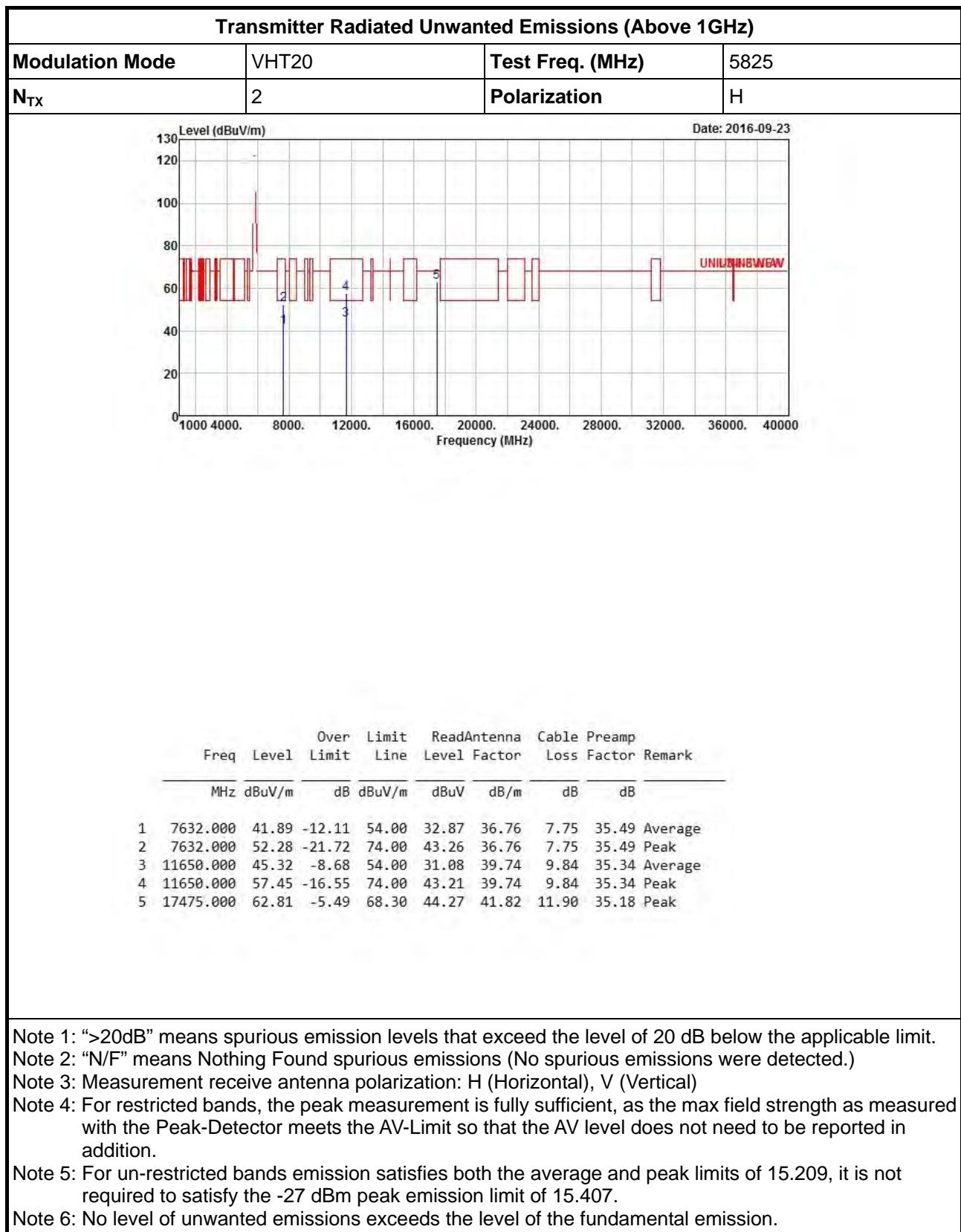
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

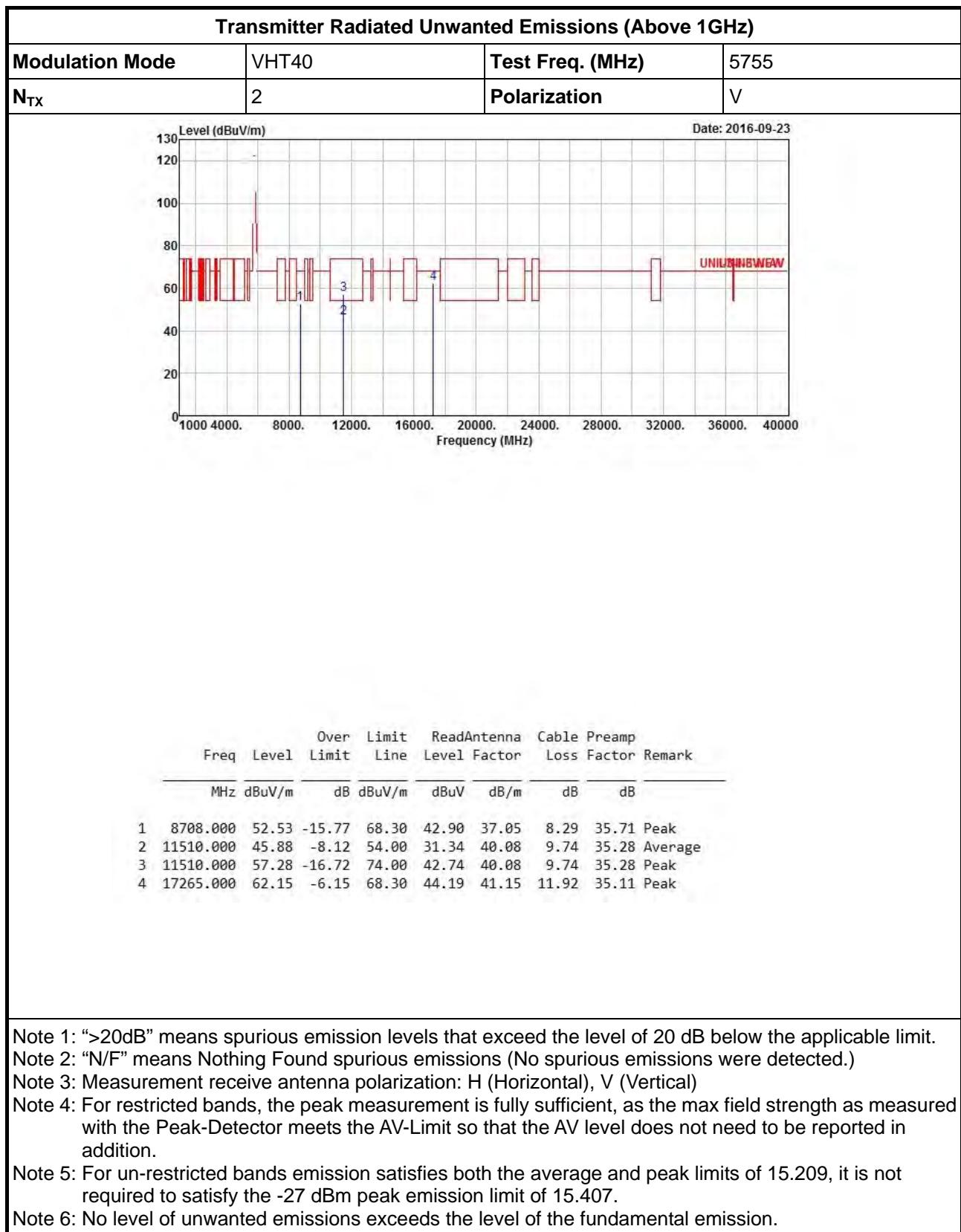
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

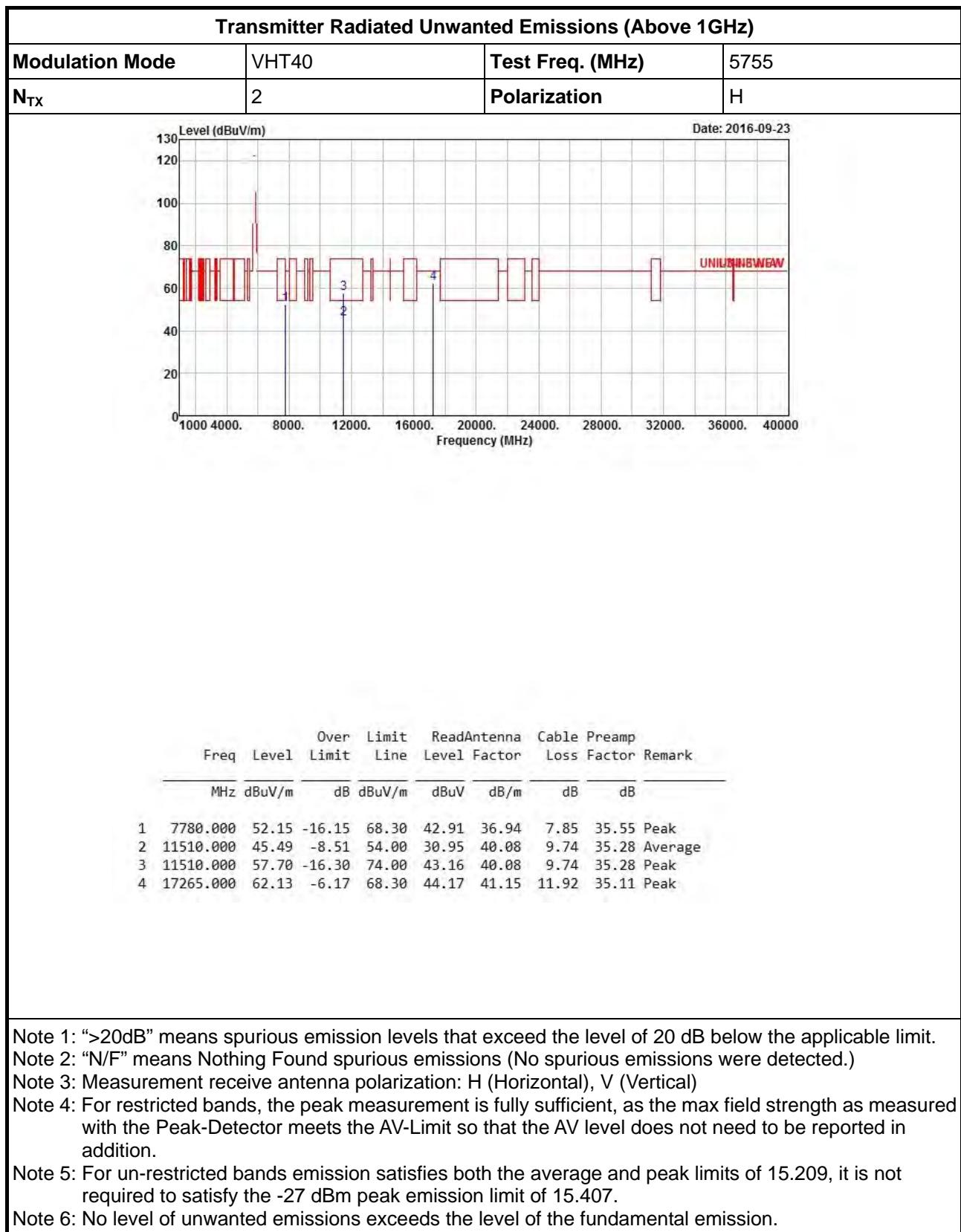
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

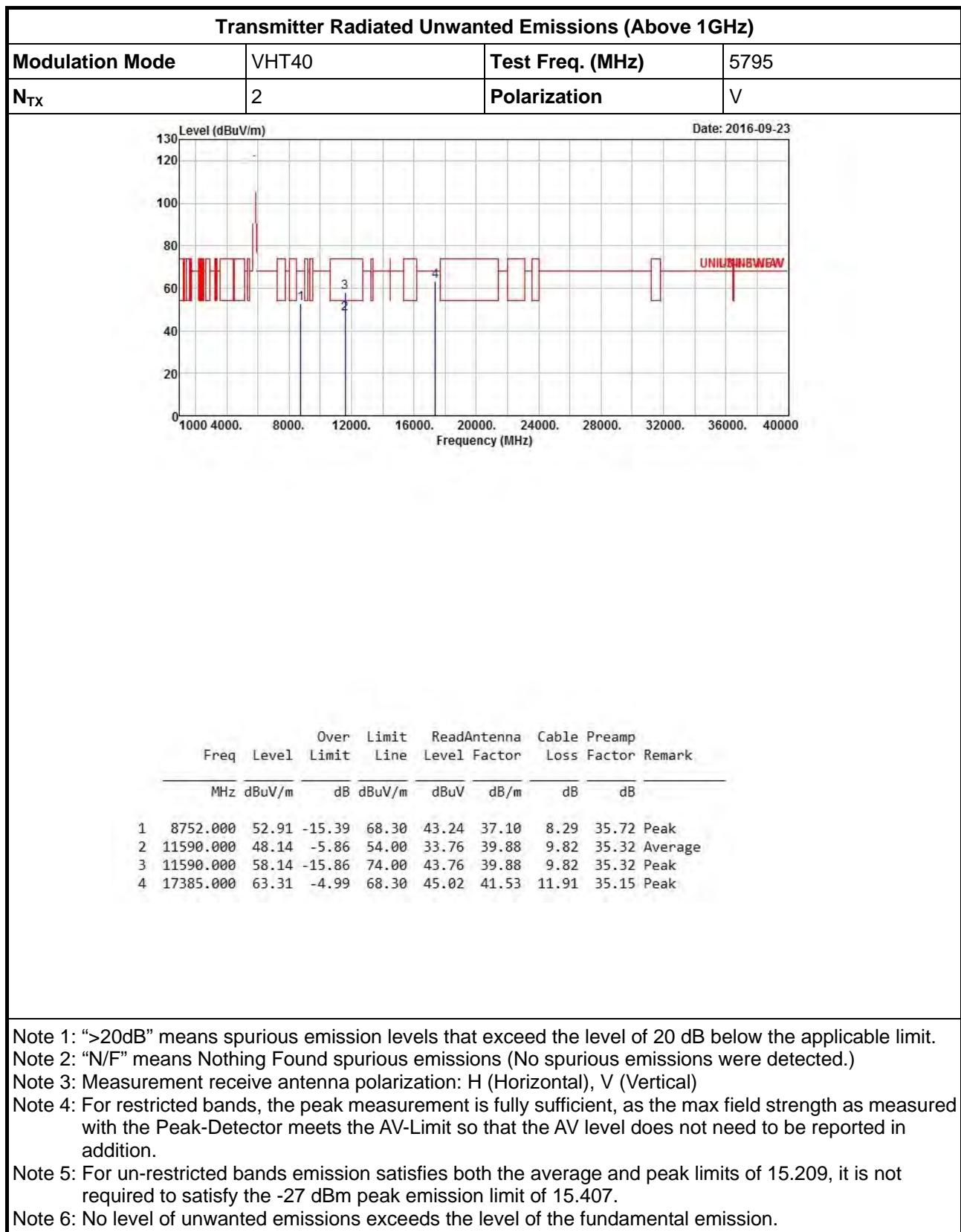
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

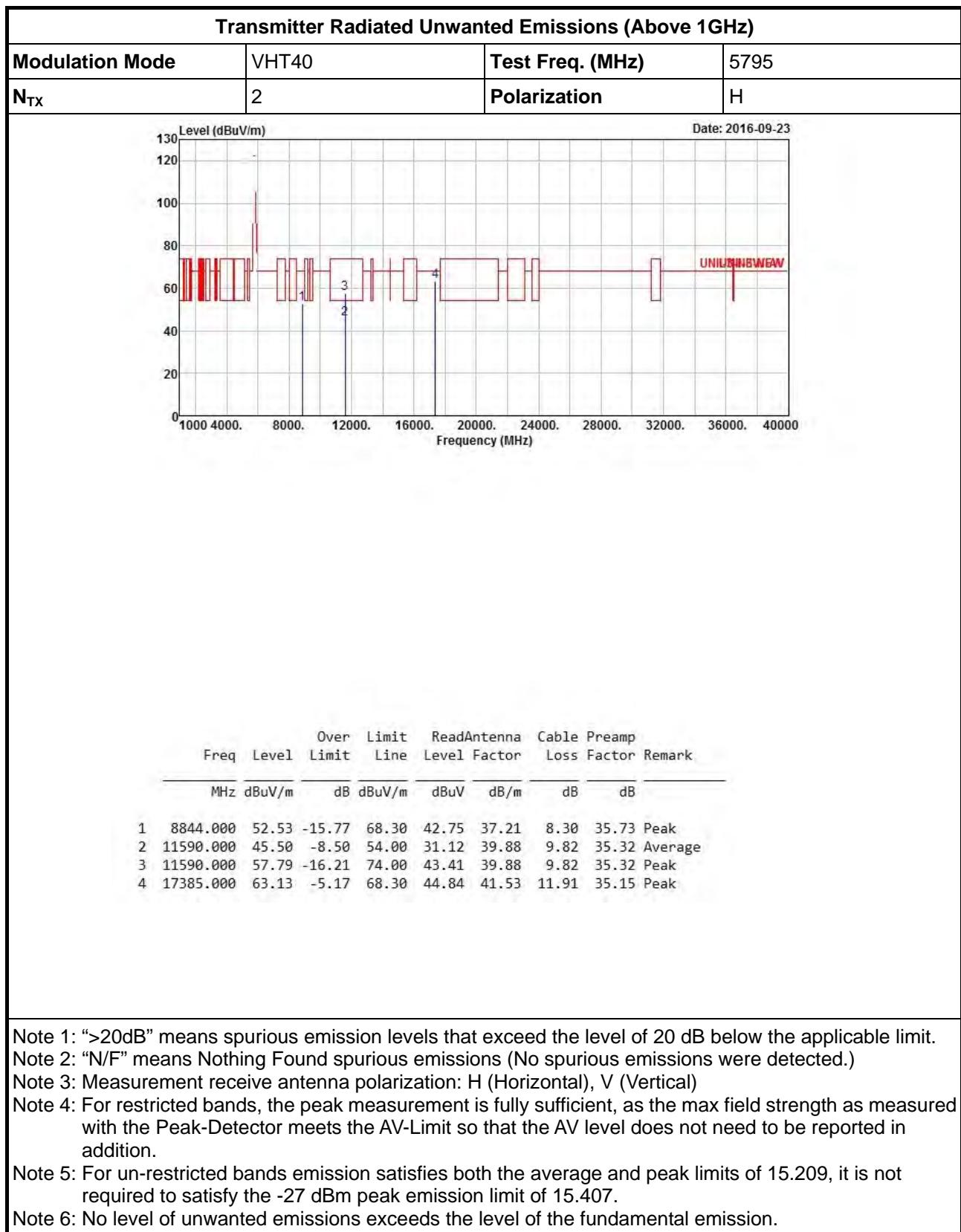
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

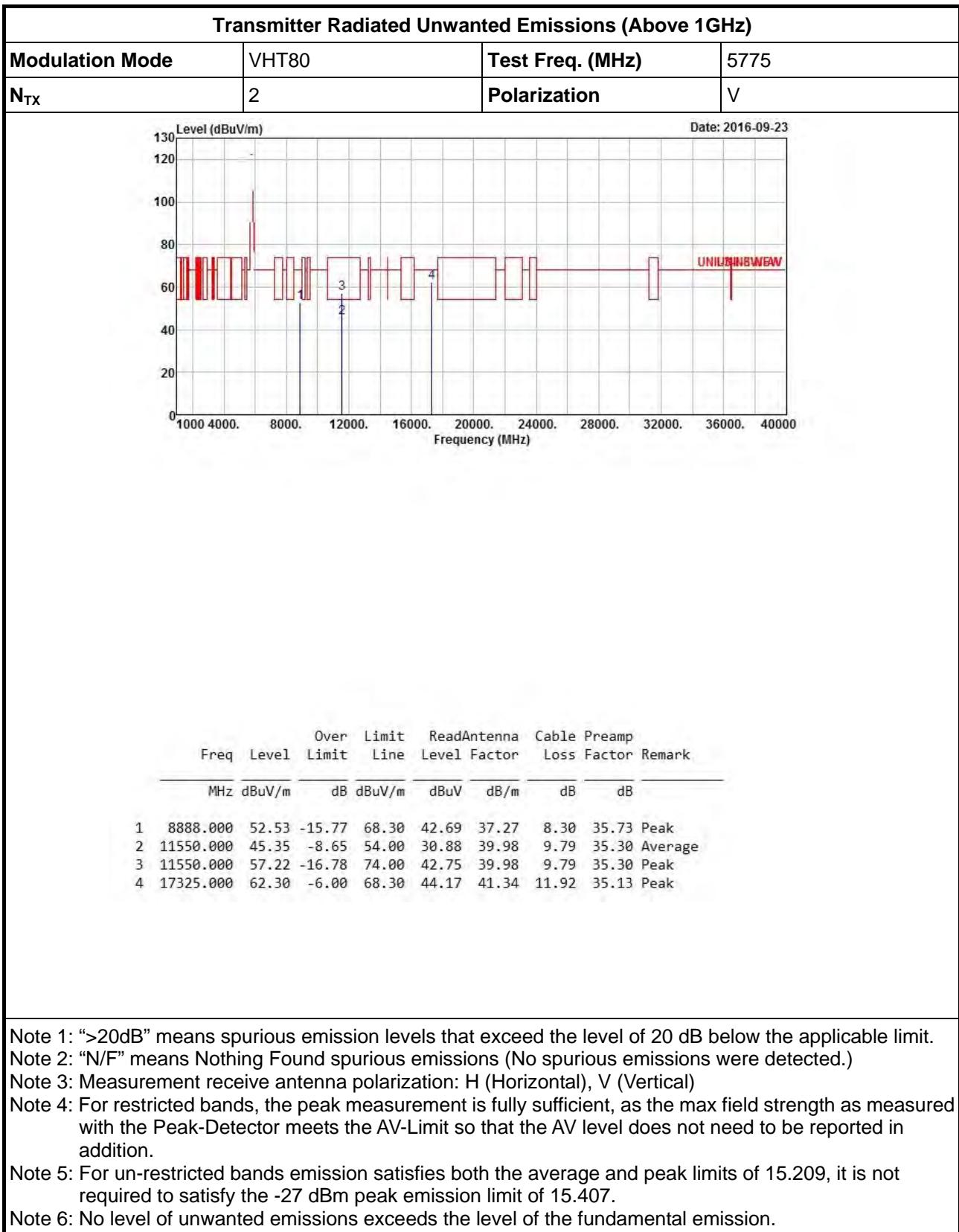


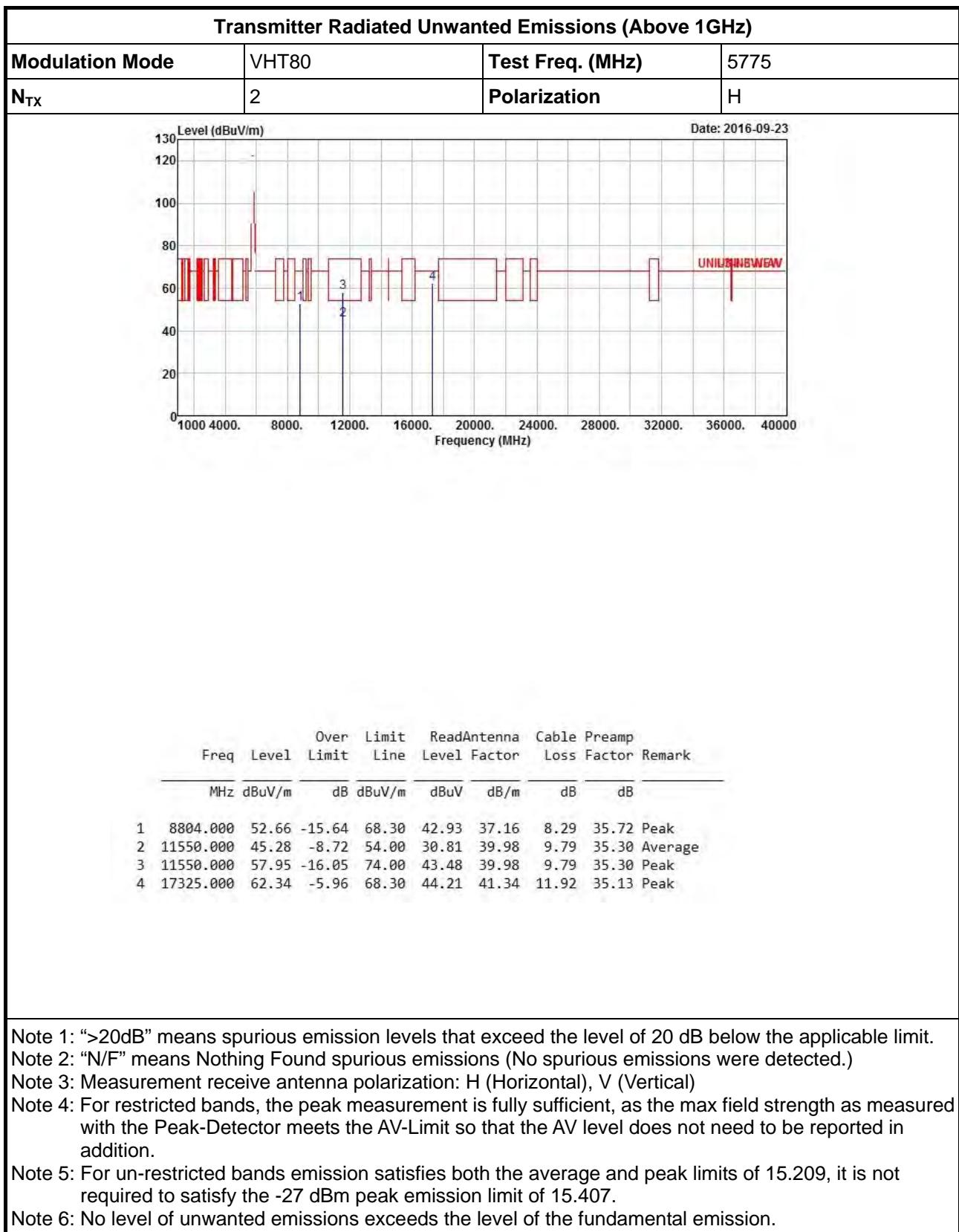












**Summary**

Mode	Result	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	ppm	Limit (ppm)	Port	Remark
5.2G;11a;20;1;2;5200;M;T40;VN	Pass	5.2G	5.19997759G	NaN	NaN	4.31	20	1	0 min

**Result**

Mode	Result	Ch (Hz)	Center (Hz)	Fl (Hz)	Fh (Hz)	ppm	Limit (ppm)	Port	Remark
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19998928G	NaN	NaN	2.061	20	1	0 min
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19998927G	NaN	NaN	2.064	20	1	2 min
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19998926G	NaN	NaN	2.065	20	1	5 min
5.2G;11a;20;1;2;5200;M;TN,VN	Pass	5.2G	5.19998924G	NaN	NaN	2.068	20	1	10 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19998921G	NaN	NaN	2.075	20	1	0 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19998921G	NaN	NaN	2.075	20	1	2 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19998923G	NaN	NaN	2.071	20	1	5 min
5.2G;11a;20;1;2;5200;M;TN,VL	Pass	5.2G	5.19998924G	NaN	NaN	2.069	20	1	10 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.19998922G	NaN	NaN	2.073	20	1	0 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.19998922G	NaN	NaN	2.072	20	1	2 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.19998922G	NaN	NaN	2.073	20	1	5 min
5.2G;11a;20;1;2;5200;M;TN,VH	Pass	5.2G	5.19998925G	NaN	NaN	2.067	20	1	10 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.19997759G	NaN	NaN	4.31	20	1	0 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.19997761G	NaN	NaN	4.306	20	1	2 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.19997765G	NaN	NaN	4.298	20	1	5 min
5.2G;11a;20;1;2;5200;M;T40,VN	Pass	5.2G	5.19997762G	NaN	NaN	4.305	20	1	10 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19997912G	NaN	NaN	4.016	20	1	0 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19997912G	NaN	NaN	4.015	20	1	2 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19997911G	NaN	NaN	4.018	20	1	5 min
5.2G;11a;20;1;2;5200;M;T30,VN	Pass	5.2G	5.19997911G	NaN	NaN	4.018	20	1	10 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19998936G	NaN	NaN	2.046	20	1	0 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19998934G	NaN	NaN	2.05	20	1	2 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19998932G	NaN	NaN	2.054	20	1	5 min
5.2G;11a;20;1;2;5200;M;T20,VN	Pass	5.2G	5.19998933G	NaN	NaN	2.052	20	1	10 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.20000273G	NaN	NaN	0.524	20	1	0 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.20000271G	NaN	NaN	0.522	20	1	2 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.2000027G	NaN	NaN	0.52	20	1	5 min
5.2G;11a;20;1;2;5200;M;T10,VN	Pass	5.2G	5.2000027G	NaN	NaN	0.519	20	1	10 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.20001658G	NaN	NaN	3.188	20	1	0 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.20001657G	NaN	NaN	3.187	20	1	2 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.20001656G	NaN	NaN	3.185	20	1	5 min
5.2G;11a;20;1;2;5200;M;T0,VN	Pass	5.2G	5.20001656G	NaN	NaN	3.185	20	1	10 min