

FCC Test Report

Equipment : 802.11n, Dual Band, Wireless LAN
PCI Express Half Mini Card

Brand Name : Sparklan

Model No. : WPEA-121N

FCC ID : RYK-WPEA-121N

Standard : 47 CFR FCC Part 15.407

Operating Band : 5150 MHz – 5250 MHz
5250 MHz – 5350 MHz
5470 MHz – 5725 MHz
5725 MHz – 5850 MHz

FCC Classification : UNII

Applicant : SparkLAN Communications, Inc.
Manufacturer : 8F., No. 257, Sec. 2, Tiding Blvd., Neihu District,
Taipei City 11493, Taiwan

Function : ☐ Outdoor AP ☐ Fixed P2P AP
☐ Indoor AP ☒ Portable Client

The product sample received on Apr. 31, 2015 and completely tested on Oct. 06, 2015. 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



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Support Equipment.....	9
1.3	Testing Applied Standards	9
1.4	Testing Location Information	9
1.5	Measurement Uncertainty	10
2	TEST CONFIGURATION OF EUT.....	11
2.1	The Worst Case Modulation Configuration	11
2.2	The Worst Case Power Setting Parameter	11
2.3	The Worst Case Measurement Configuration.....	13
2.4	Test Setup Diagram	14
3	TRANSMITTER TEST RESULT	16
3.1	AC Power-line Conducted Emissions	16
3.2	Emission Bandwidth	19
3.3	RF Output Power.....	26
3.4	Peak Power Spectral Density	37
3.5	Transmitter Bandedge Emissions	45
3.6	Transmitter Unwanted Emissions.....	51
3.7	Frequency Stability.....	188
4	TEST EQUIPMENT AND CALIBRATION DATA	190
APPENDIX A. TEST PHOTOS		
APPENDIX B. PHOTOGRAPHS OF EUT		

Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	RF Output Power (Maximum Conducted Output Power)	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Transmitter Bandedge Emissions	Complied
3.6	15.407(b)	Transmitter Unwanted Emissions	Complied
3.7	15.407(g)	Frequency Stability	Complied



SPORTON INTERNATIONAL INC.
TEL : 886-3-327-3456
FAX : 886-3-327-0973

1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information (5150-5250MHz band)					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	RF Output Power (dBm)
5150-5250	a	5180-5240	36-48 [4]	2	12.44
				1	10.40
5150-5250	n (HT20)	5180-5240	36-48 [4]	2	12.97
				1	10.93
5150-5250	n (HT40)	5190-5230	38-46 [2]	2	13.42
				1	11.41
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.					

RF General Information (5250-5350MHz band)					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	RF Output Power (dBm)
5250-5350	a	5260-5320	52-64 [4]	2	19.54
				1	17.39
5250-5350	n (HT20)	5260-5320	52-64 [4]	2	17.78
				1	15.61
5250-5350	n (HT40)	5270-5310	54-62 [2]	2	19.10
				1	16.76
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.					

RF General Information (5470-5725MHz band)					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	RF Output Power (dBm)
5470-5725	a	5500-5700	100-140 [8]	2	17.88
				1	14.72
5470-5725	n (HT20)	5500-5700	100-140 [8]	2	17.95
				1	14.73
5470-5725	n (HT40)	5510-5670	102-134 [3]	2	18.41
				1	16.66

Note 1: RF output power specifies that Maximum Conducted Output Power.
Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

RF General Information (5725-5850MHz band)					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	RF Output Power (dBm)
5725-5850	a	5745-5825	149-165 [5]	2	20.56
				1	17.47
5725-5850	n (HT20)	5745-5825	149-165 [5]	2	19.54
				1	17.47
5725-5850	n (HT40)	5755-5795	151-159 [2]	2	17.93
				1	15.45

Note 1: RF output power specifies that Maximum Conducted Output Power.
Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

1.1.2 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.	

Antenna General Information		
Ant. Cat.	Ant. Type	Gain (dBi)
Integral	PIFA	4.00

1.1.3 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:

1.1.4 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle			
<input type="checkbox"/> Operated normally mode for worst duty cycle			
<input checked="" type="checkbox"/> Operated test mode for worst duty cycle			
Test Signal Duty Cycle (x)		N _{TX}	Power Duty Factor [dB] – (10 log 1/x)
<input checked="" type="checkbox"/>	98.98% - IEEE 802.11a	2	0.04
	98.98% - IEEE 802.11a	1	0.04
<input checked="" type="checkbox"/>	98.91%- IEEE 802.11n (HT20)	2	0.05
	98.91%- IEEE 802.11n (HT20)	1	0.05
<input checked="" type="checkbox"/>	97.83%- IEEE 802.11n (HT40)	2	0.10
	97.83%- IEEE 802.11n (HT40)	1	0.10

1.1.5 EUT Operational Condition

Supply Voltage	<input type="checkbox"/> AC mains	<input checked="" type="checkbox"/> DC	
Type of DC Source	<input type="checkbox"/> Internal DC supply	<input checked="" type="checkbox"/> From system	<input type="checkbox"/> External DC adapter
Test Voltage	<input checked="" type="checkbox"/> Vnom (5 V)	<input checked="" type="checkbox"/> Vmax (5.75 V)	<input checked="" type="checkbox"/> Vmin (4.25 V)
Test Climatic	<input checked="" type="checkbox"/> Tnom (20°C)	<input checked="" type="checkbox"/> Tmax (50°C)	<input checked="" type="checkbox"/> Tmin (-20°C)

1.1.6 DFS and TPC Information

The DFS Related Operating Mode(s) of the Equipment			
<input type="checkbox"/> Master			
<input type="checkbox"/> Cilent with radar detection			
<input checked="" type="checkbox"/> Cilent without radar detection			
Software / Firmware Version		10.0.0.288	
Communication Mode		<input checked="" type="checkbox"/> IP Based (Load Based)	<input type="checkbox"/> Frame Based
IEEE Std. 802.11	Frequency Range (MHz)	TPC (Transmit Power Control)	Passive Scan
a / n (HT20)	<input checked="" type="checkbox"/> 5250-5350	Yes	Yes
n (HT40)	<input checked="" type="checkbox"/> 5470-5725	Yes	Yes
	<input type="checkbox"/> 5600-5650	-	-

1.2 Support Equipment

Support Equipment - RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5540	DoC
2	Adapter for NB	DELL	HA65NM130	DoC
3	Fixture	-	-	-

Support Equipment - AC Conduction and Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5540	DoC
	Adapter for NB	DELL	LA65NS-01	DoC
2	Fixture	-	-	-

Note: The fixture provide by customer.

1.3 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v01
- ♦ FCC KDB 644545 D03 v01
- ♦ FCC KDB 662911 v02r01
- ♦ FCC-14-30A1-UNII

1.4 Testing Location Information

Testing Location				
☒	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 site registered number [636805] with FCC.				
Test Condition		Test Site No.	Test Engineer	Test Environment
AC Conduction		CO04-HY	Zeus	21°C / 59%
RF Conducted		TH01-HY	Leo	20.4°C / 60.2%
Radiated Emission		03CH02-HY	Allen	23.4°C / 56%

1.5 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		±2.3 dB
Emission bandwidth, 26dB bandwidth		±0.5%
RF output power, conducted		±0.1 dB
Power density, conducted		±0.5 dB
Unwanted emissions, conducted	9 – 150 kHz	±0.4 dB
	0.15 – 30 MHz	±0.4 dB
	30 – 1000 MHz	±0.6 dB
	1 – 18 GHz	±0.5 dB
	18 – 40 GHz	±0.5 dB
	40 – 200 GHz	N/A
All emissions, radiated	9 – 150 kHz	±2.5 dB
	0.15 – 30 MHz	±2.3 dB
	30 – 1000 MHz	±2.6 dB
	1 – 18 GHz	±3.6 dB
	18 – 40 GHz	±3.8 dB
	40 – 200 GHz	N/A
Temperature		±0.8 °C
Humidity		±5 %
DC and low frequency voltages		±0.9%
Time		±1.4 %
Duty Cycle		±0.5 %

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	2	6-54Mbps	6 Mbps
	1	6-54Mbps	6 Mbps
HT20	2	MCS 0-15	MCS 0
	1	MCS 0-7	MCS 0
HT40	2	MCS 0-15	MCS 0
	1	MCS 0-7	MCS 0
<p>Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). The EUT supports HT20 and HT40. Worst modulation mode of Guard Interval (GI) is 800ns.</p> <p>Note 2: Modulation modes consist below configuration: 11a: IEEE 802.11a, HT20/HT40: IEEE 802.11n</p> <p>Note 3: RF output power specifies that Maximum Conducted Output Power.</p>			

2.2 The Worst Case Power Setting Parameter

The Worst Case Power Setting Parameter (5150-5250MHz band)						
Test Software Version	Atheros Radio Test2 (ART2-GUI)_ 2.3					
Modulation Mode	N _{TX}	Test Frequency (MHz)				
		NCB: 20MHz			NCB: 40MHz	
		5180	5200	5240	5190	5230
11a	2	10	10	11	-	-
	1	13.5	13.5	14	-	-
HT20	2	11	11	12	-	-
	1	14	14	14.5	-	-
HT40	2	-	-	-	10	12.5
	1	-	-	-	12.5	15

The Worst Case Power Setting Parameter (5250-5350MHz band)						
Test Software Version	Atheros Radio Test2 (ART2-GUI)_ 2.3					
Modulation Mode	N _{TX}	Test Frequency (MHz)				
		NCB: 20MHz			NCB: 40MHz	
		5260	5300	5320	5270	5310
11a	2	18.5	17.5	15.5	-	-
	1	23	23	18	-	-
HT20	2	16.5	16	15	-	-
	1	20	23	18.5	-	-
HT40	2	-	-	-	18	12.5
	1	-	-	-	21.5	14.5


The Worst Case Power Setting Parameter (5470-5725MHz band)							
Test Software Version	Atheros Radio Test2 (ART2-GUI)_ 2.3						
Modulation Mode	N _{TX}	Test Frequency (MHz)					
		NCB: 20MHz			NCB: 40MHz		
		5500	5580	5700	5510	5550	5670
11a	2	14	17	15	-	-	-
	1	17	19	16.5	-	-	-
HT20	2	13.5	17	14.5	-	-	-
	1	15.5	19	17.5	-	-	-
HT40	2	-	-	-	9.5	17.5	16
	1	-	-	-	11	19	17.5

The Worst Case Power Setting Parameter (5725-5850MHz band)						
Test Software Version	Atheros Radio Test2 (ART2-GUI)_ 2.3					
Modulation Mode	N _{TX}	Test Frequency (MHz)				
		NCB: 20MHz			NCB: 40MHz	
		5745	5785	5825	5755	5795
11a	2	13	21	15	-	-
	1	13.5	23	16	-	-
HT20	2	12.5	21	14	-	-
	1	13	23	14.5	-	-
HT40	2	-	-	-	9.5	17.5
	1	-	-	-	11	18

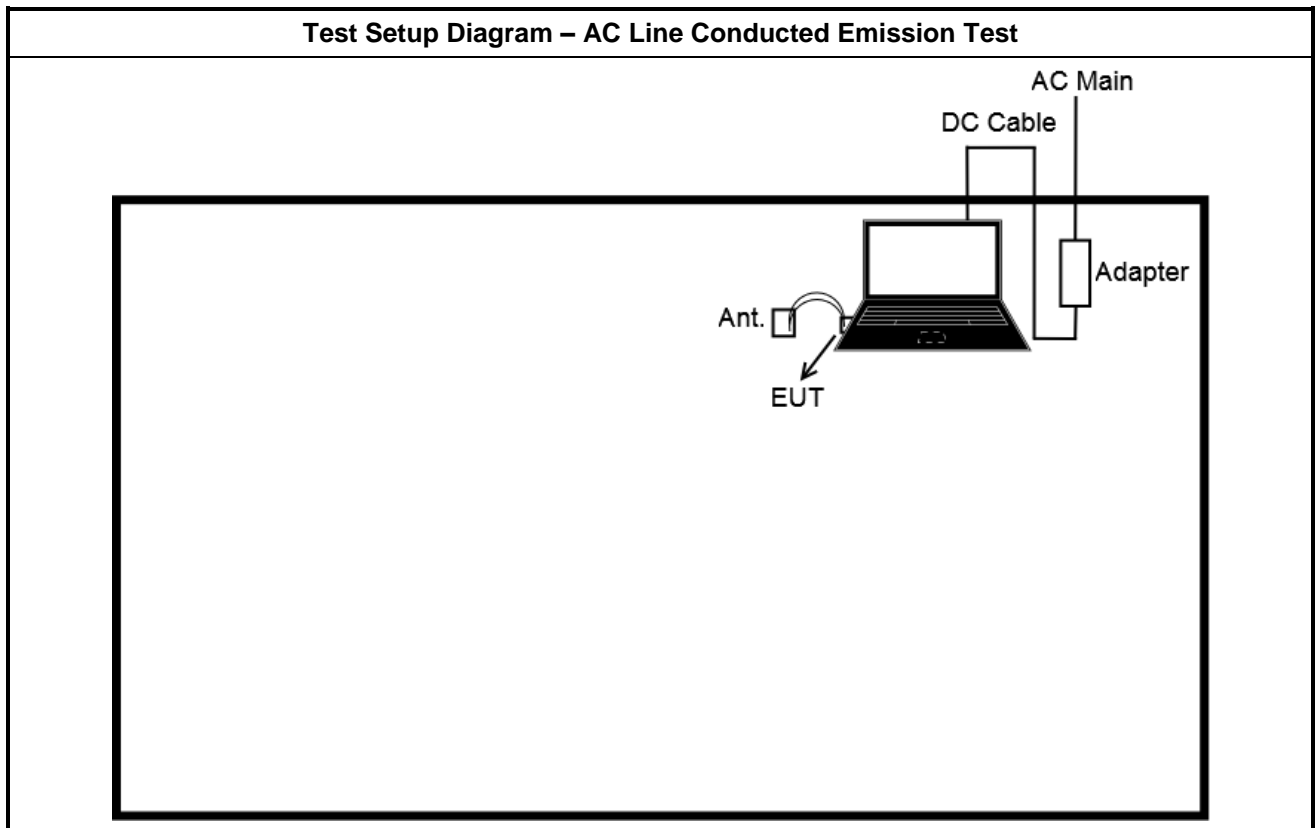
2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Operating Mode Description
1	Transmit Mod

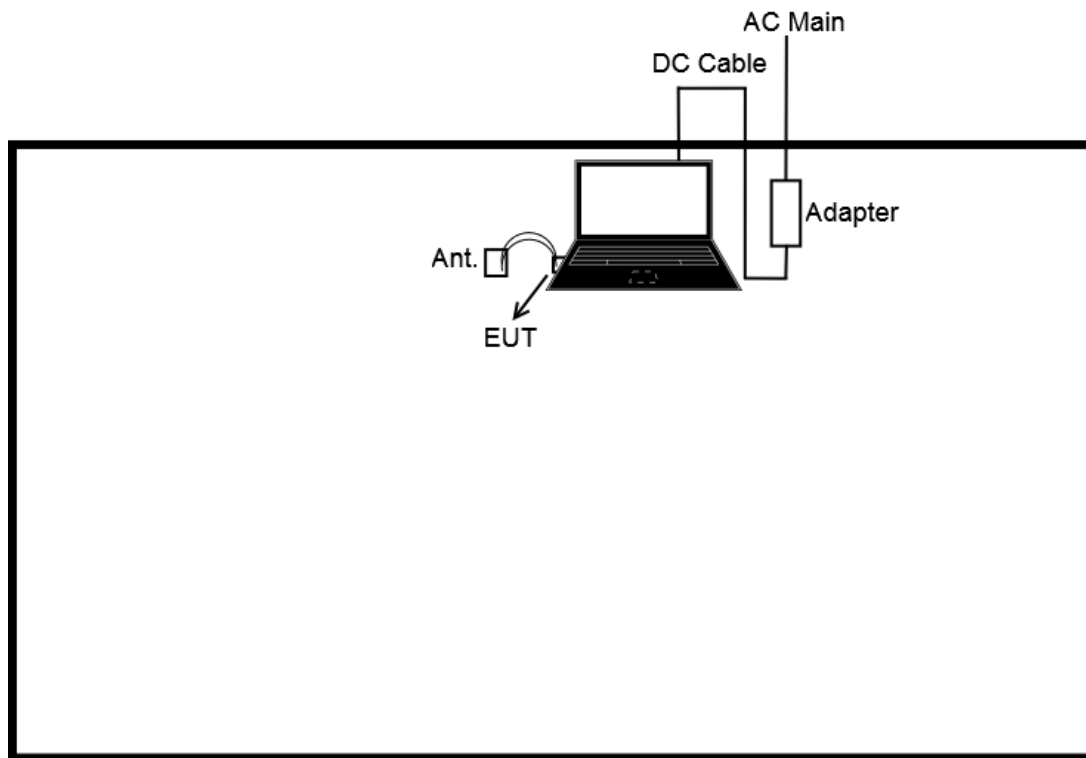
The Worst Case Mode for Following Conformance Tests	
Tests Item	RF Output Power, Peak Power Spectral Density, Emission Bandwidth,
Test Condition	Conducted measurement at transmit chains
Modulation Mode	11a, HT20, HT40

The Worst Case Mode for Following Conformance Tests	
Tests Item	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
User Position	<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.
Operating Mode	Operating Mode Description
1	Transmit Mod
Modulation Mode	11a, HT20, HT40
Orthogonal Planes of EUT	X Plane
	

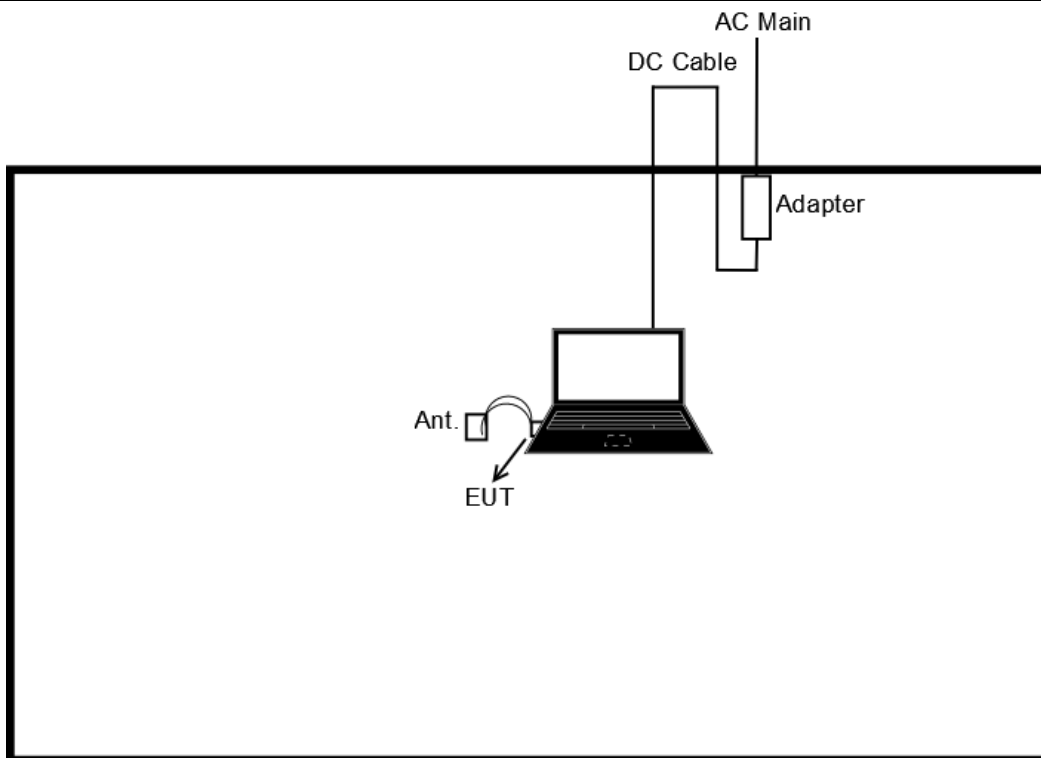
2.4 Test Setup Diagram



Test Setup Diagram - Radiated Test Below 1GHz



Test Setup Diagram - Radiated Test Above 1GHz



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.

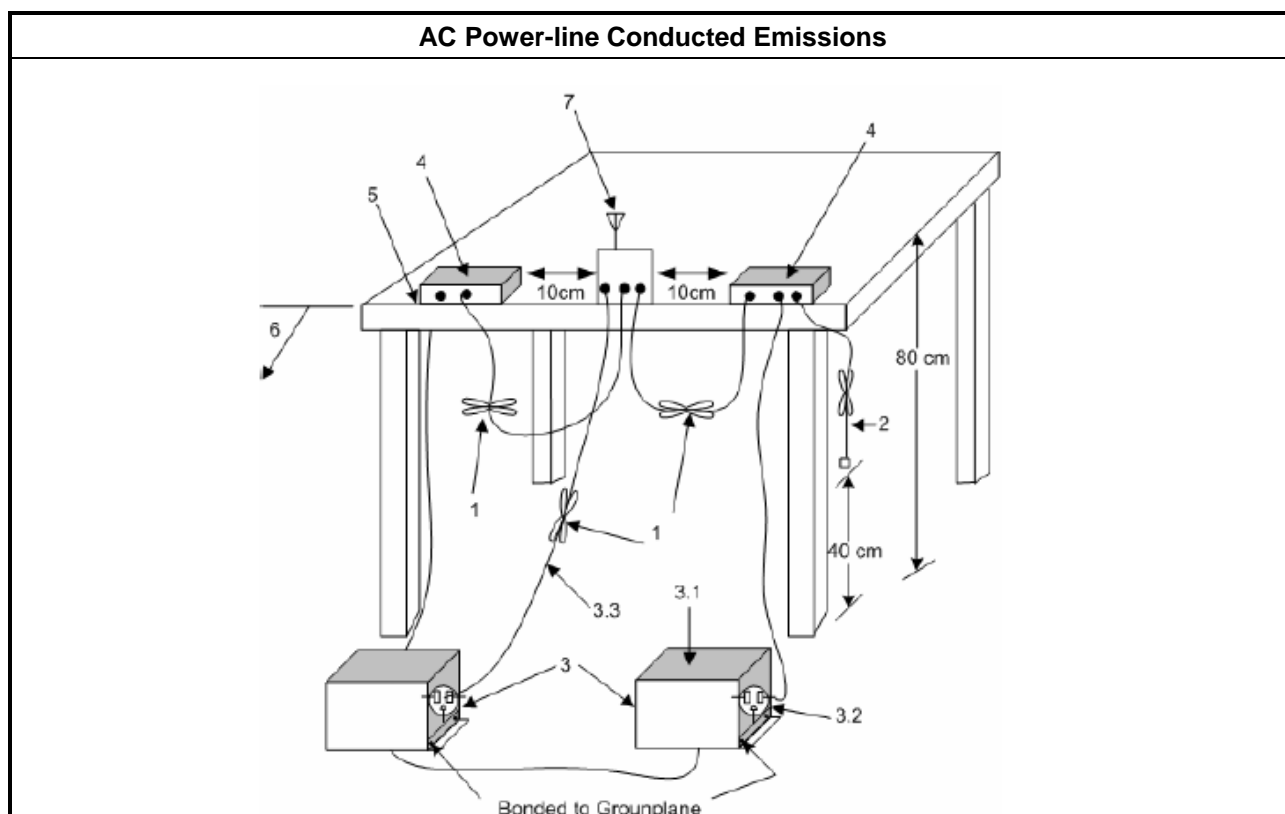
3.1.2 Measuring Instruments

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

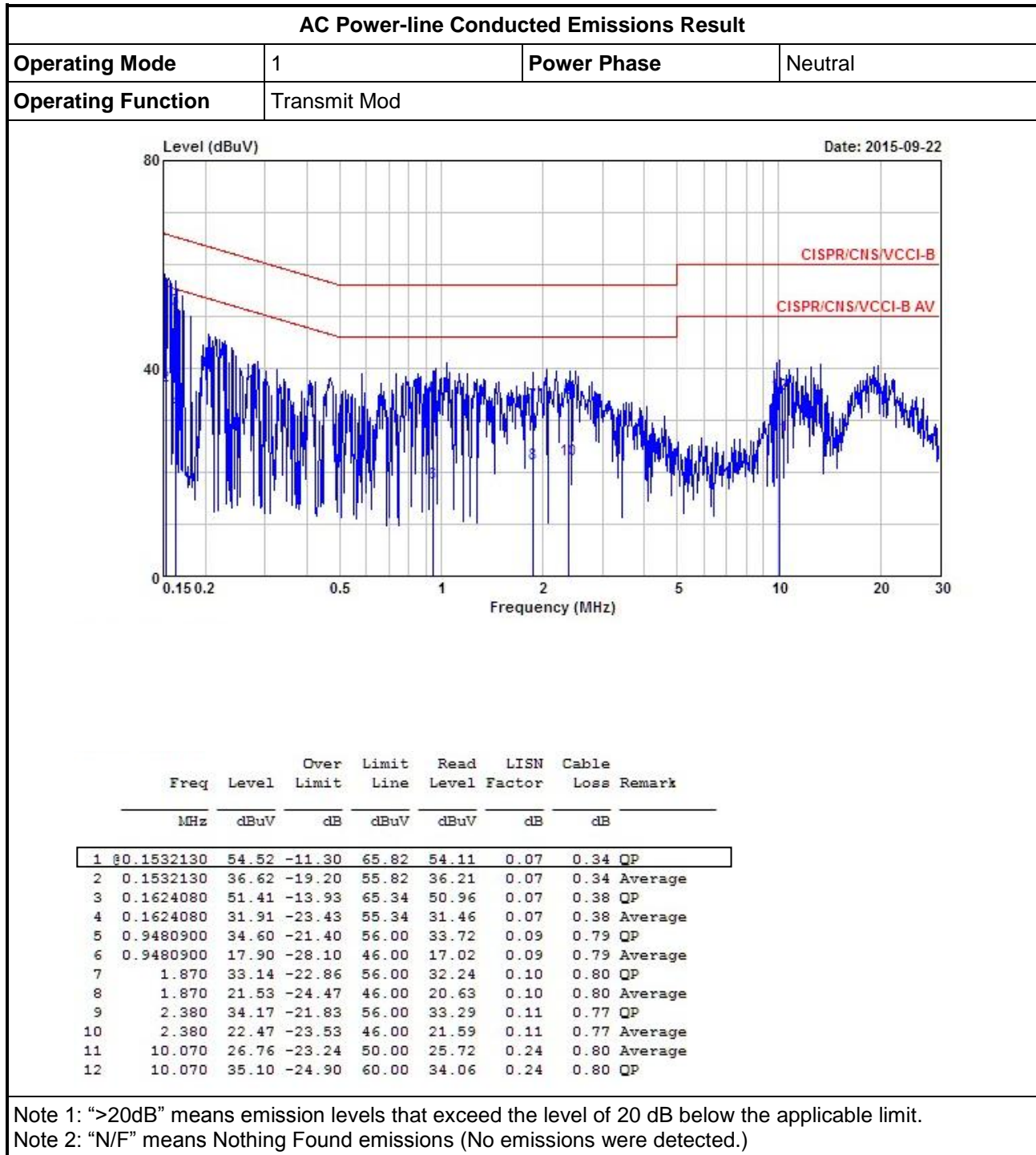
3.1.3 Test Procedures

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

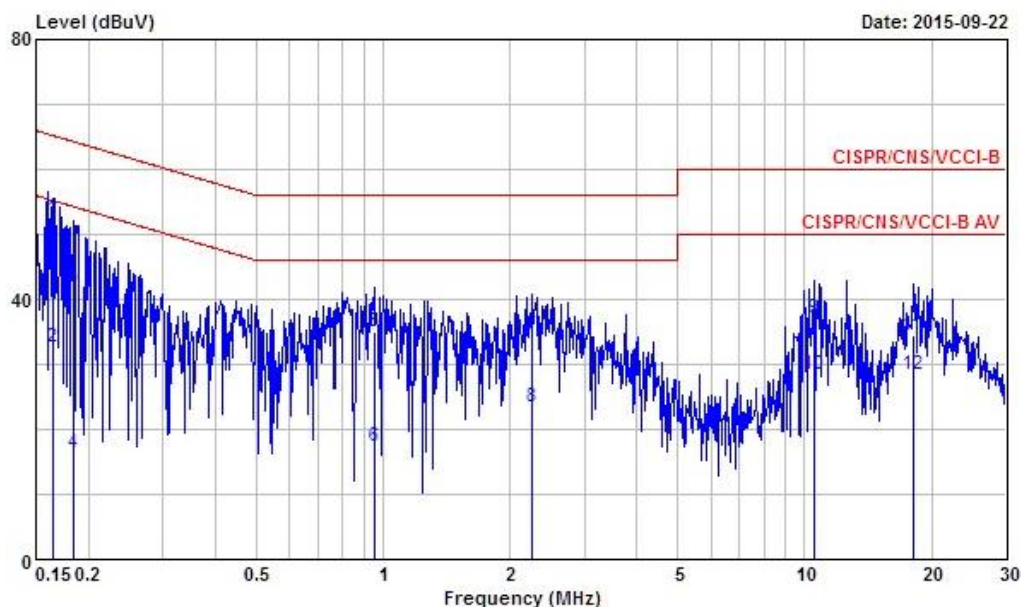


3.1.5 Test Result of AC Power-line Conducted Emissions



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Transmit Mod		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1641380	52.29	-12.96	65.25	51.85	0.05	0.39	QP
2	0.1641380	32.59	-22.66	55.25	32.15	0.05	0.39	Average
3	0.1844300	41.74	-22.54	64.28	41.23	0.06	0.45	QP
4	0.1844300	16.41	-37.87	54.28	15.90	0.06	0.45	Average
5	0.9531270	34.87	-21.13	56.00	34.00	0.08	0.79	QP
6	0.9531270	17.40	-28.60	46.00	16.53	0.08	0.79	Average
7	2.260	34.38	-21.62	56.00	33.49	0.11	0.78	QP
8	2.260	23.51	-22.49	46.00	22.62	0.11	0.78	Average
9	10.560	37.10	-22.90	60.00	36.06	0.24	0.80	QP
10	10.560	28.48	-21.52	50.00	27.44	0.24	0.80	Average
11	18.040	34.51	-25.49	60.00	33.43	0.34	0.74	QP
12	18.040	28.37	-21.63	50.00	27.29	0.34	0.74	Average

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

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

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, the bandwidth is for reference.
<input checked="" type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

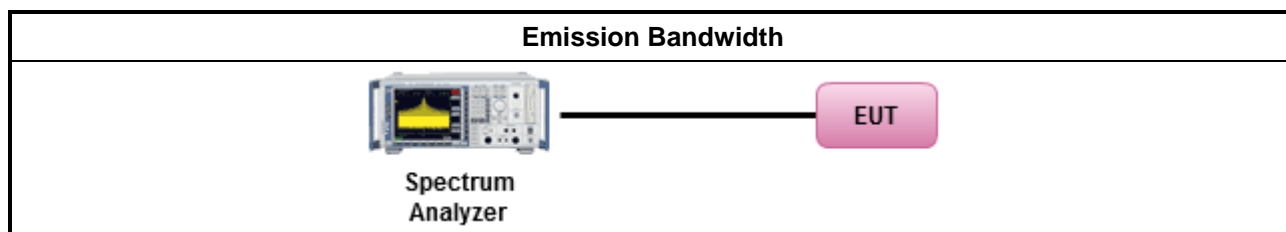
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 6.6 for bandwidth testing.
<input checked="" type="checkbox"/>	For conducted measurement.
<input checked="" type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input checked="" type="checkbox"/>	The EUT supports multiple transmit chains using options given below:
<input type="checkbox"/>	Option 1: Multiple transmit chains measurements need to be performed on one of the active transmit chains (antenna outputs). All measurement had be performed on transmit chains 1.
<input checked="" type="checkbox"/>	Option 2: Multiple transmit chains measurements need to be performed on each transmit chains individually (antenna outputs). All measurement had be performed on all transmit chains.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

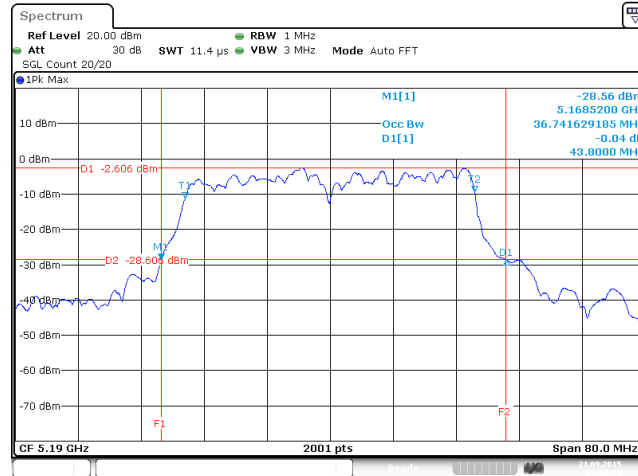
UNII Emission Bandwidth Result (5150-5250MHz band)						
Condition			Emission Bandwidth (MHz)			
Modulation Mode	N _{TX}	Freq. (MHz)	99% Bandwidth		26dB Bandwidth	
			Chain Port 1	Chain Port 2	Chain Port 1	Chain Port 2
11a	2	5180	16.69	16.54	21.52	20.10
11a	2	5200	16.69	16.71	21.85	20.37
11a	2	5240	17.16	16.84	21.25	21.05
11a	1	5180	16.66	-	21.22	-
11a	1	5200	17.16	-	21.55	-
11a	1	5240	16.49	-	21.32	-
HT20	2	5180	17.89	17.89	20.95	20.92
HT20	2	5200	17.91	17.64	21.30	21.62
HT20	2	5240	17.64	17.64	20.55	20.77
HT20	1	5180	17.81	-	21.60	-
HT20	1	5200	17.81	-	22.07	-
HT20	1	5240	17.76	-	21.32	-
HT40	2	5190	36.58	36.74	42.72	43.80
HT40	2	5230	36.26	36.74	38.80	41.72
HT40	1	5190	36.42	-	41.88	-
HT40	1	5230	36.58	-	42.44	-
Result			Complied			

UNII Emission Bandwidth Result (5250-5350MHz band)						
Condition			Emission Bandwidth (MHz)			
Modulation Mode	N _{TX}	Freq. (MHz)	99% Bandwidth		26dB Bandwidth	
			Chain Port 1	Chain Port 2	Chain Port 1	Chain Port 2
11a	2	5260	16.96	16.81	28.75	26.15
11a	2	5300	16.51	16.66	27.12	25.57
11a	2	5320	16.44	16.46	21.32	20.27
11a	1	5260	23.21	-	40.22	-
11a	1	5300	22.71	-	37.65	-
11a	1	5320	16.39	-	22.20	-
HT20	2	5260	17.64	17.81	21.17	21.90
HT20	2	5300	17.64	17.59	20.32	20.70
HT20	2	5320	17.64	17.61	20.70	20.52
HT20	1	5260	19.16	-	34.35	-
HT20	1	5300	21.56	-	35.57	-
HT20	1	5320	17.96	-	27.00	-
HT40	2	5270	36.90	37.06	50.96	47.08
HT40	2	5310	36.26	36.38	39.36	42.00
HT40	1	5270	39.66	-	76.80	-
HT40	1	5310	36.38	-	43.16	-
Result			Complied			

UNII Emission Bandwidth Result (5470-5725MHz band)						
Condition			Emission Bandwidth (MHz)			
Modulation Mode	N _{TX}	Freq. (MHz)	99% Bandwidth		26dB Bandwidth	
			Chain Port 1	Chain Port 2	Chain Port 1	Chain Port 2
11a	2	5500	17.04	16.59	26.32	20.00
11a	2	5580	17.09	16.89	29.02	23.05
11a	2	5700	17.01	16.61	24.70	20.57
11a	1	5500	17.11	-	31.22	-
11a	1	5580	18.69	-	32.27	-
11a	1	5700	17.24	-	27.82	-
HT20	2	5500	17.84	17.61	21.77	21.30
HT20	2	5580	17.96	17.96	33.17	27.35
HT20	2	5700	17.61	17.94	24.72	22.00
HT20	1	5500	18.16	-	28.85	-
HT20	1	5580	18.36	-	34.62	-
HT20	1	5700	18.59	-	31.25	-
HT40	2	5510	36.54	36.50	42.28	43.72
HT40	2	5550	37.02	38.18	69.84	62.04
HT40	2	5670	37.14	36.78	49.64	48.36
HT40	1	5510	36.34	-	41.08	-
HT40	1	5550	38.22	-	69.44	-
HT40	1	5670	36.58	-	64.76	-
Result			Complied			

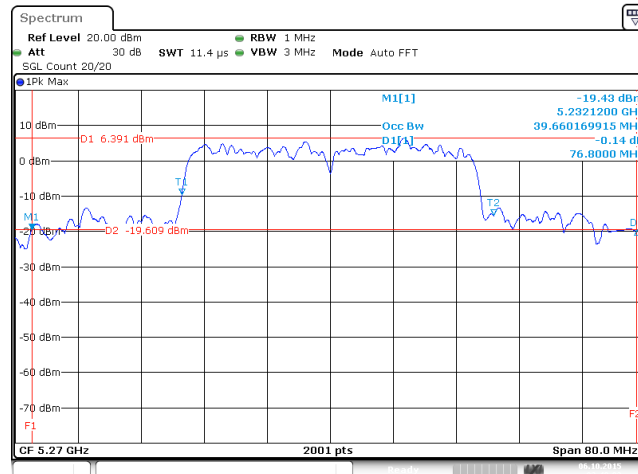
UNII Emission Bandwidth Result (5725-5850MHz band)						
Condition			Emission Bandwidth (MHz)			
Modulation Mode	N _{TX}	Freq. (MHz)	99% Bandwidth		26dB Bandwidth	
			Chain Port 1	Chain Port 2	Chain Port 1	Chain Port 2
11a	2	5745	16.44	16.41	16.45	16.48
11a	2	5785	17.93	16.77	15.03	16.38
11a	2	5825	16.53	16.46	16.41	16.54
11a	1	5745	16.41	-	16.35	-
11a	1	5785	19.52	-	16.39	-
11a	1	5825	16.59	-	16.36	-
HT20	2	5745	17.60	17.61	17.68	17.62
HT20	2	5785	18.65	17.84	17.59	17.62
HT20	2	5825	17.64	17.61	17.22	17.58
HT20	1	5745	17.60	-	17.59	-
HT20	1	5785	19.95	-	17.67	-
HT20	1	5825	17.75	-	17.65	-
HT40	2	5755	36.18	36.10	35.32	34.40
HT40	2	5795	36.74	36.26	35.72	35.68
HT40	1	5755	36.22	-	36.44	-
HT40	1	5795	37.94	-	36.48	-
Result			Complied			

5150-5250MHz - Worst Emission 26Bandwidth Plots



Date: 21.SEP.2015 21:12:36

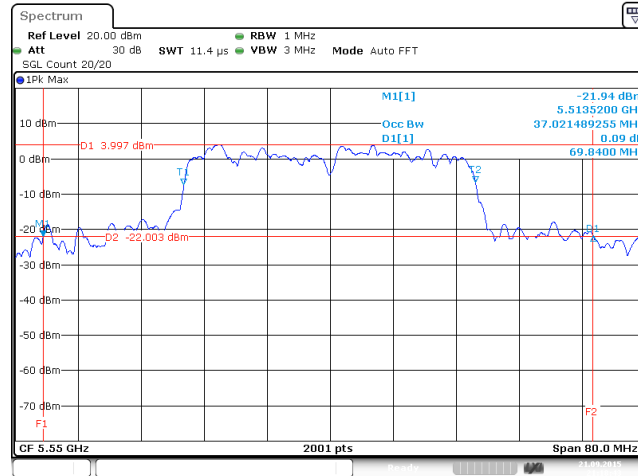
5250-5350MHz - Worst Emission 26Bandwidth Plots



Date: 6.OCT.2015 02:40:03

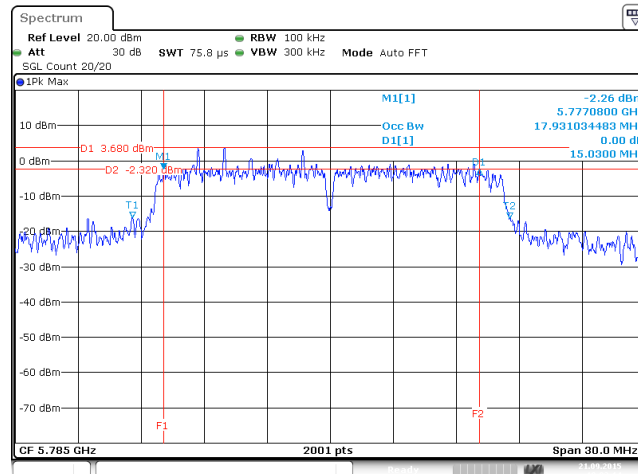


5470-5725MHz - Worst Emission 26Bandwidth Plots



Date: 21.SEP.2015 21:18:42

5725-5850MHz - Worst Emission 6Bandwidth Plots



Date: 21.SEP.2015 19:03:14

3.3 RF Output Power

3.3.1 RF Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	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 ≤ 125 mW [21dBm]
<input type="checkbox"/>	Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$
<input type="checkbox"/>	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 $P_{Out} = 30 - (G_{TX} - 23)$.
<input checked="" type="checkbox"/>	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 $P_{Out} = 24 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
<input checked="" type="checkbox"/>	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 $P_{Out} = 30 - (G_{TX} - 6)$.
<input type="checkbox"/>	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.	

Note: The value have added the factor of clause 1.1.4 table.

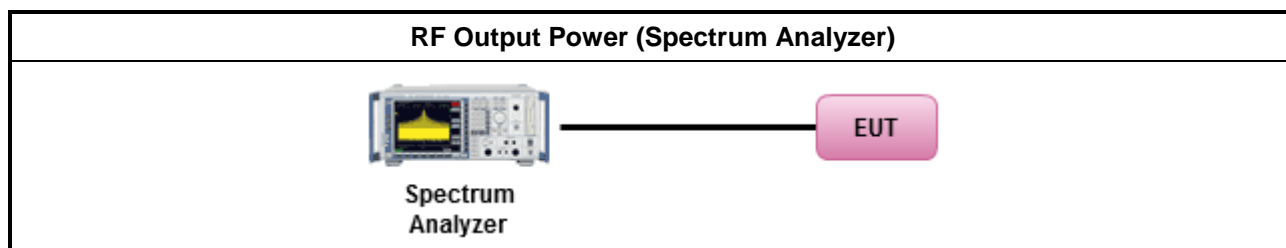
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	Maximum Conducted Output Power
	[duty cycle $\geq 98\%$ or external video / power trigger]
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty cycle $< 98\%$ and average over on/off periods with duty factor
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, 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 FCC KDB 789033 D02 v01, clause E Method PM (using an RF average power meter).
<input checked="" type="checkbox"/>	For conducted measurement.
<input checked="" type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input checked="" type="checkbox"/>	The EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
<input checked="" type="checkbox"/>	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]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$

3.3.4 Test Setup



3.3.5 Directional Gain for Power Measurement

Directional Gain (DG) Result					
Transmit Chains No.		1	2	-	-
Maximum G_{ANT} (dBi)		4.00	4.00	-	-
Modulation Mode	DG (dBi)	N_{TX}	N_{SS} (Min.)	STBC	Array Gain (dB)
11a	7.01	2	1	-	3.01 (Note3)
	4.00	1	1	-	0.00
HT20	7.01	2	1	-	3.01 (Note3)
	4.00	1	1	-	0.00
HT40	7.01	2	1	-	3.01 (Note3)
	4.00	1	1	-	0.00
<p>Note 1: For all transmitter outputs with equal antenna gains, directional gain is to be computed as follows: Any transmit signals are correlated, Directional Gain = $G_{ANT} + 10 \log(N_{TX}) = 4.00 + 10 \log(2) = 7.01$ All transmit signals are completely uncorrelated, Directional Gain = G_{ANT}</p> <p>Note 2: For all transmitter outputs with unequal antenna gains, directional gain is to be computed as follows: Any transmit signals are correlated, Directional Gain = $10 \log[(10^{G_{1/20}} + \dots + 10^{G_{N/20}})^2 / N_{TX}]$ All transmit signals are completely uncorrelated, Directional Gain = $10 \log[(10^{G_{1/10}} + \dots + 10^{G_{N/10}}) / N_{TX}]$</p> <p>Note 3: For Spatial Multiplexing, Directional Gain (DG) = $G_{ANT} + 10 \log(N_{TX}/N_{SS})$, where N_{SS} = the number of independent spatial streams data.</p> <p>Note 4: For CDD transmissions, directional gain is calculated as power measurements: Directional Gain (DG) = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows: Array Gain = 0 dB (i.e., no array gain) for $N_{TX} \leq 4$; Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{TX};</p>					

3.3.6 Test Result of Maximum Conducted Output Power

Maximum Conducted Output Power (5150-5250MHz band)							
Condition			RF Output Power (dBm)				
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)
11a	2	5180	8.29	9.12	11.74	22.99	7.01
11a	2	5200	8.79	9.04	11.93	22.99	7.01
11a	2	5240	9.53	9.31	12.44	22.99	7.01
11a	1	5180	9.54	-	9.54	24.00	4.00
11a	1	5200	9.67	-	9.67	24.00	4.00
11a	1	5240	10.40	-	10.40	24.00	4.00
HT20	2	5180	8.59	9.53	12.09	22.99	7.01
HT20	2	5200	9.22	9.78	12.52	22.99	7.01
HT20	2	5240	10.01	9.92	12.97	22.99	7.01
HT20	1	5180	10.48	-	10.48	24.00	4.00
HT20	1	5200	10.32	-	10.32	24.00	4.00
HT20	1	5240	10.93	-	10.93	24.00	4.00
HT40	2	5190	8.11	9.02	11.59	22.99	7.01
HT40	2	5230	10.63	10.19	13.42	22.99	7.01
HT40	1	5190	9.20	-	9.20	24.00	4.00
HT40	1	5230	11.41	-	11.41	24.00	4.00
Result			Complied				

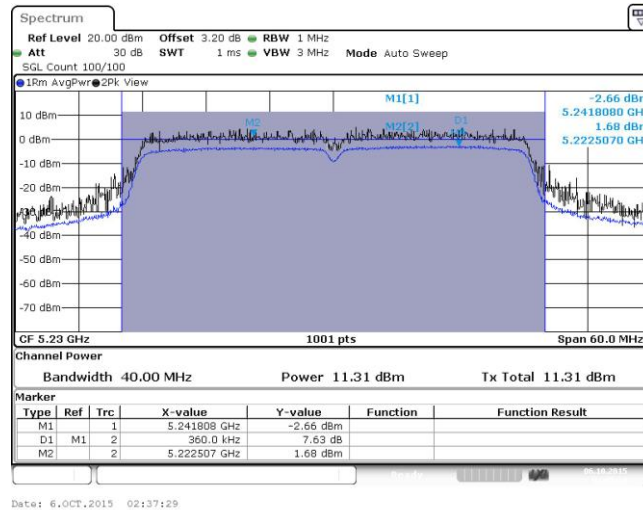
Maximum Conducted Output Power (5250-5350MHz band)							
Condition			RF Output Power (dBm)				
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)
11a	2	5260	16.03	16.97	19.54	22.99	7.01
11a	2	5300	14.65	16.35	18.60	22.99	7.01
11a	2	5320	12.60	13.81	16.26	22.99	7.01
11a	1	5260	17.39	-	17.39	24.00	4.00
11a	1	5300	16.43	-	16.43	24.00	4.00
11a	1	5320	13.11	-	13.11	24.00	4.00
HT20	2	5260	14.41	15.11	17.78	22.99	7.01
HT20	2	5300	13.20	14.93	17.16	22.99	7.01
HT20	2	5320	12.03	14.09	16.19	22.99	7.01
HT20	1	5260	15.61	-	15.61	24.00	4.00
HT20	1	5300	15.36	-	15.36	24.00	4.00
HT20	1	5320	13.57	-	13.57	24.00	4.00
HT40	2	5270	15.74	16.43	19.10	22.99	7.01
HT40	2	5310	9.82	10.41	13.13	22.99	7.01
HT40	1	5270	16.76	-	16.76	24.00	4.00
HT40	1	5310	10.86	-	10.86	24.00	4.00
Result			Complied				

Maximum Conducted Output Power (5470-5725MHz band)							
Condition			RF Output Power (dBm)				
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)
11a	2	5500	13.28	12.24	15.81	22.99	7.01
11a	2	5580	14.79	14.94	17.88	22.99	7.01
11a	2	5700	13.02	12.43	15.75	22.99	7.01
11a	1	5500	14.10	-	14.10	24.00	4.00
11a	1	5580	14.72	-	14.72	24.00	4.00
11a	1	5700	13.47	-	13.47	24.00	4.00
HT20	2	5500	12.56	11.46	15.05	22.99	7.01
HT20	2	5580	14.65	15.22	17.95	22.99	7.01
HT20	2	5700	12.18	11.38	14.81	22.99	7.01
HT20	1	5500	13.06	-	13.06	24.00	4.00
HT20	1	5580	14.73	-	14.73	24.00	4.00
HT20	1	5700	13.89	-	13.89	24.00	4.00
HT40	2	5510	8.75	7.30	11.09	22.99	7.01
HT40	2	5550	15.38	15.43	18.41	22.99	7.01
HT40	2	5670	13.84	13.47	16.66	22.99	7.01
HT40	1	5510	8.86	-	8.86	24.00	4.00
HT40	1	5550	14.83	-	14.83	24.00	4.00
HT40	1	5670	14.02	-	14.02	24.00	4.00
Result			Complied				

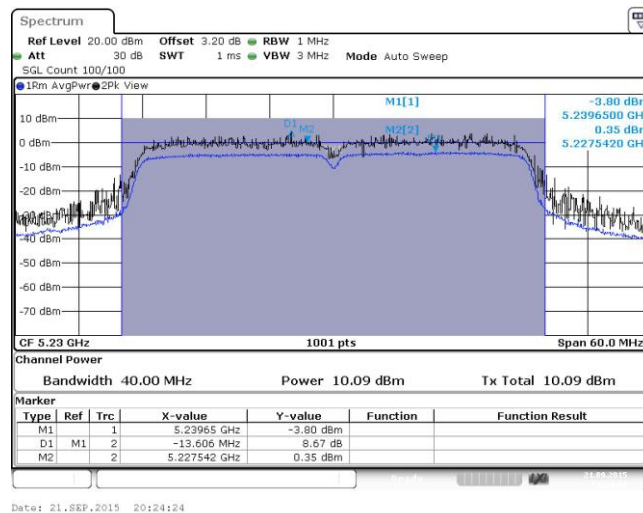
Maximum Conducted Output Power (5725-5850MHz band)							
Condition			RF Output Power (dBm)				
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)
11a	2	5745	11.77	11.18	14.50	28.99	7.01
11a	2	5785	17.53	17.56	20.56	28.99	7.01
11a	2	5825	14.34	12.94	16.71	28.99	7.01
11a	1	5745	12.22	-	12.22	30.00	4.00
11a	1	5785	17.47	-	17.47	30.00	4.00
11a	1	5825	14.55	-	14.55	30.00	4.00
HT20	2	5745	11.13	10.60	13.88	28.99	7.01
HT20	2	5785	16.43	16.64	19.54	28.99	7.01
HT20	2	5825	13.45	11.89	15.75	28.99	7.01
HT20	1	5745	11.25	-	11.25	30.00	4.00
HT20	1	5785	17.47	-	17.47	30.00	4.00
HT20	1	5825	13.74	-	13.74	30.00	4.00
HT40	2	5755	8.35	7.54	10.97	28.99	7.01
HT40	2	5795	15.34	14.46	17.93	28.99	7.01
HT40	1	5755	9.67	-	9.67	30.00	4.00
HT40	1	5795	15.45	-	15.45	30.00	4.00
Result			Complied				



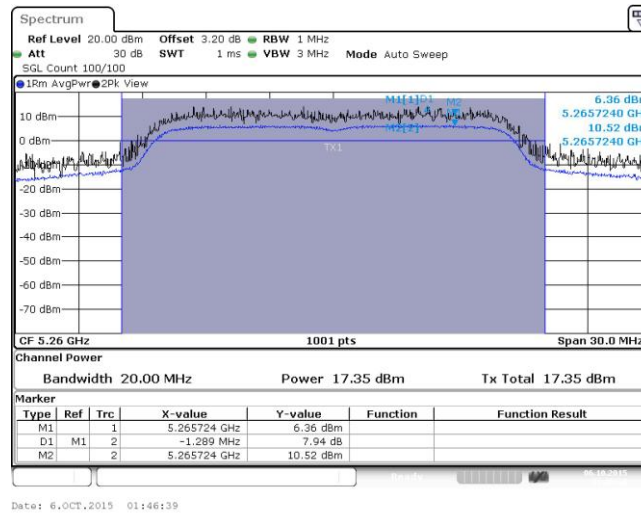
5150-5250MHz - Worst RF Output Power Plots (Port 1)



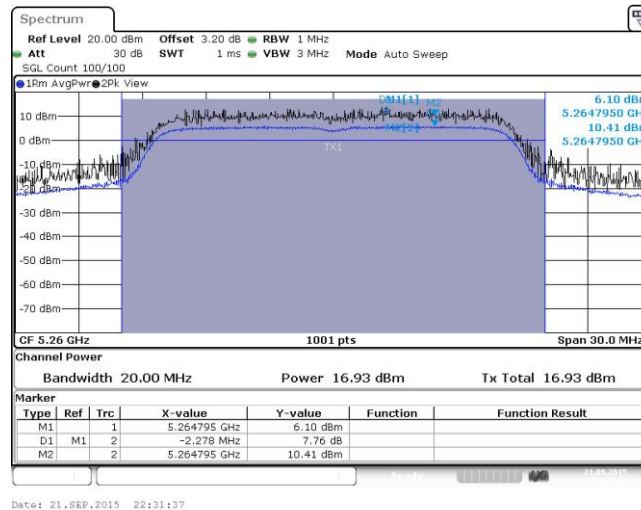
5150-5250MHz - Worst RF Output Power Plots (Port 2)



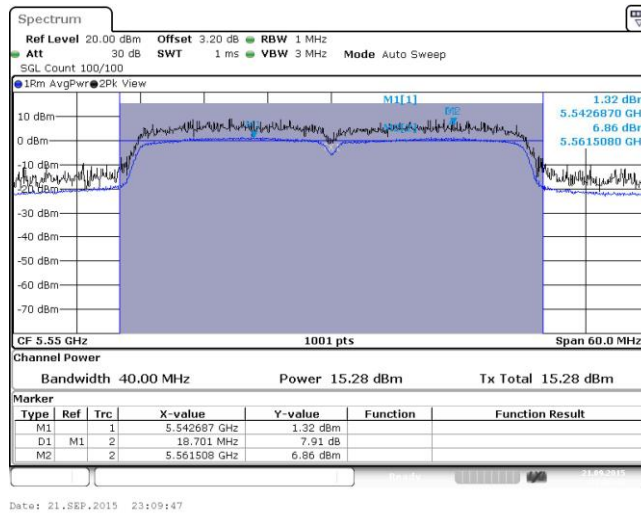
5250-5350MHz - Worst RF Output Power Plots (Port 1)



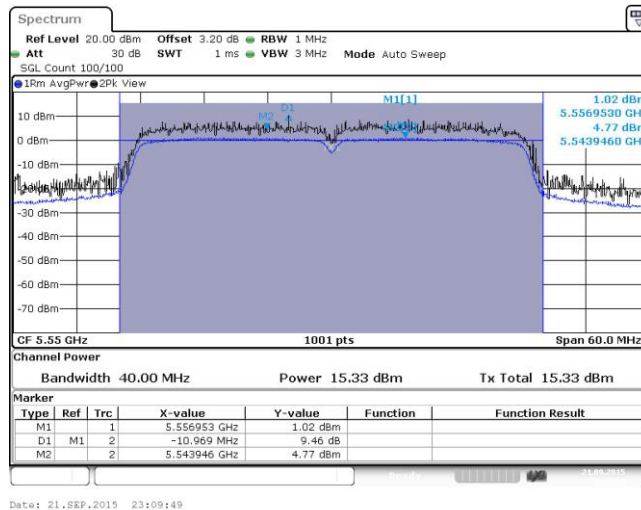
5250-5350MHz - Worst RF Output Power Plots (Port 2)



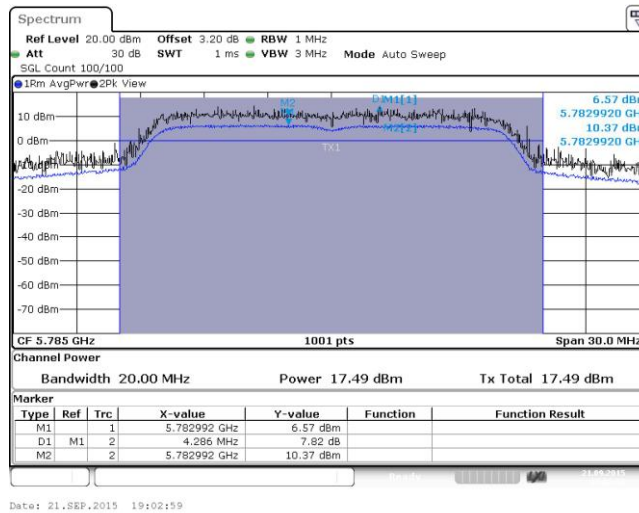
5470-5725MHz - Worst RF Output Power Plots (Port 1)



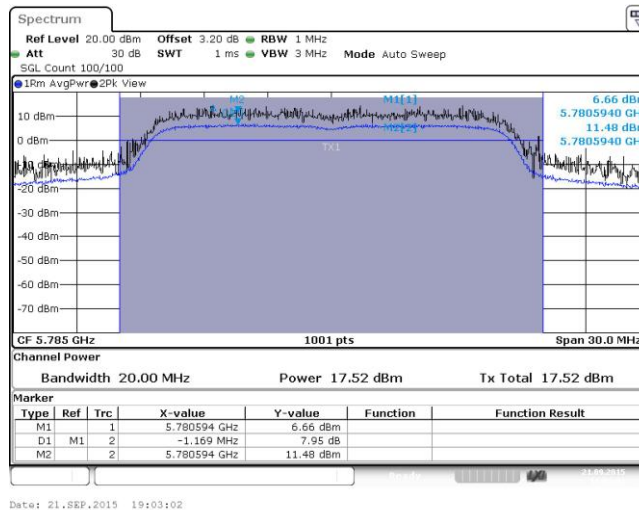
5470-5725MHz - Worst RF Output Power Plots (Port 2)



5725-5850MHz - Worst RF Output Power Plots (Port 1)



5725-5850MHz - Worst RF Output Power Plots (Port 2)



3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.
<input type="checkbox"/>	Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.
<input type="checkbox"/>	Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$.
<input checked="" type="checkbox"/>	Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
<input checked="" type="checkbox"/>	Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$.
<input type="checkbox"/>	Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

3.4.2 Measuring Instruments

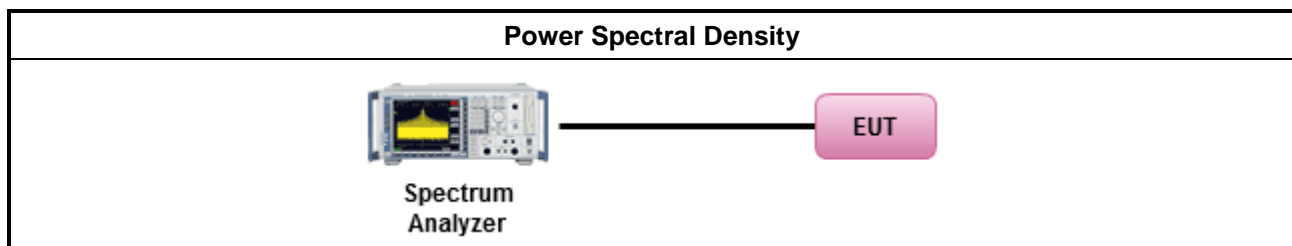
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	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:
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, 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% or external video / power trigger]
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<input checked="" type="checkbox"/>	For conducted measurement.
<input checked="" type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input checked="" type="checkbox"/>	The EUT supports multiple transmit chains using options given below:
<input checked="" type="checkbox"/>	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
<input type="checkbox"/>	Option 2: 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.
<input checked="" type="checkbox"/>	If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$
<input type="checkbox"/>	Each individually PPSD plots refer as test report clause 3.3.5 with each individually PPSD plots.

Note: The value have added the factor of clause 1.1.4 table.

3.4.4 Test Setup



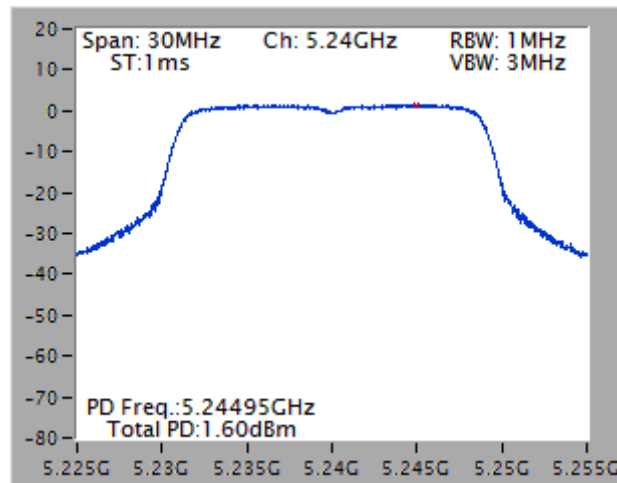
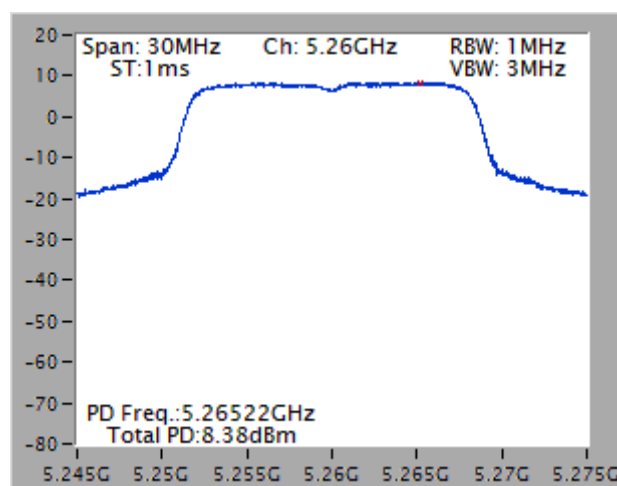
3.4.5 Test Result of Peak Power Spectral Density

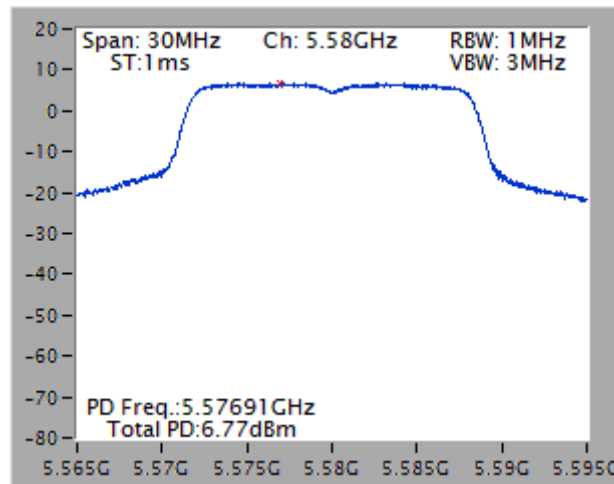
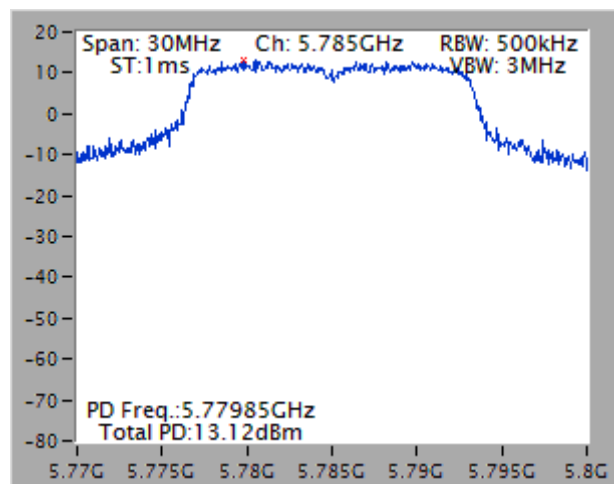
Peak Power Spectral Density Result (5150-5250MHz band)					
Modulation Mode	N _{TX}	Freq. (MHz)	Peak Power Spectral Density (dBm)	PSD Limit	DG (dBi)
11a	2	5180	0.85	9.99	7.01
11a	2	5200	0.82	9.99	7.01
11a	2	5240	1.36	9.99	7.01
11a	1	5180	-1.40	11.00	4.00
11a	1	5200	-1.15	11.00	4.00
11a	1	5240	-0.46	11.00	4.00
HT20	2	5180	1.07	9.99	7.01
HT20	2	5200	1.24	9.99	7.01
HT20	2	5240	1.65	9.99	7.01
HT20	1	5180	-0.56	11.00	4.00
HT20	1	5200	-0.38	11.00	4.00
HT20	1	5240	0.26	11.00	4.00
HT40	2	5190	-2.55	9.99	7.01
HT40	2	5230	-0.63	9.99	7.01
HT40	1	5190	-4.78	11.00	4.00
HT40	1	5230	-2.56	11.00	4.00
Result			Complied		

Peak Power Spectral Density Result (5250-5350MHz band)					
Modulation Mode	N _{TX}	Freq. (MHz)	Peak Power Spectral Density (dBm)	PSD Limit	DG (dBi)
11a	2	5260	8.42	9.99	7.01
11a	2	5300	7.57	9.99	7.01
11a	2	5320	5.33	9.99	7.01
11a	1	5260	6.40	11.00	4.00
11a	1	5300	5.42	11.00	4.00
11a	1	5320	2.18	11.00	4.00
HT20	2	5260	6.48	9.99	7.01
HT20	2	5300	5.94	9.99	7.01
HT20	2	5320	4.98	9.99	7.01
HT20	1	5260	4.62	11.00	4.00
HT20	1	5300	4.21	11.00	4.00
HT20	1	5320	2.31	11.00	4.00
HT40	2	5270	4.86	9.99	7.01
HT40	2	5310	-1.09	9.99	7.01
HT40	1	5270	2.68	11.00	4.00
HT40	1	5310	-3.43	11.00	4.00
Result			Complied		

Peak Power Spectral Density Result (5470-5725MHz band)					
Modulation Mode	N _{TX}	Freq. (MHz)	Peak Power Spectral Density (dBm)	PSD Limit	DG (dBi)
11a	2	5500	4.76	9.99	7.01
11a	2	5580	6.81	9.99	7.01
11a	2	5700	4.67	9.99	7.01
11a	1	5500	3.11	11.00	4.00
11a	1	5580	3.86	11.00	4.00
11a	1	5700	2.52	11.00	4.00
HT20	2	5500	3.78	9.99	7.01
HT20	2	5580	6.71	9.99	7.01
HT20	2	5700	3.48	9.99	7.01
HT20	1	5500	1.95	11.00	4.00
HT20	1	5580	3.63	11.00	4.00
HT20	1	5700	2.66	11.00	4.00
HT40	2	5510	-3.40	9.99	7.01
HT40	2	5550	4.23	9.99	7.01
HT40	2	5670	2.32	9.99	7.01
HT40	1	5510	-5.42	11.00	4.00
HT40	1	5550	0.51	11.00	4.00
HT40	1	5670	-0.22	11.00	4.00
Result			Complied		

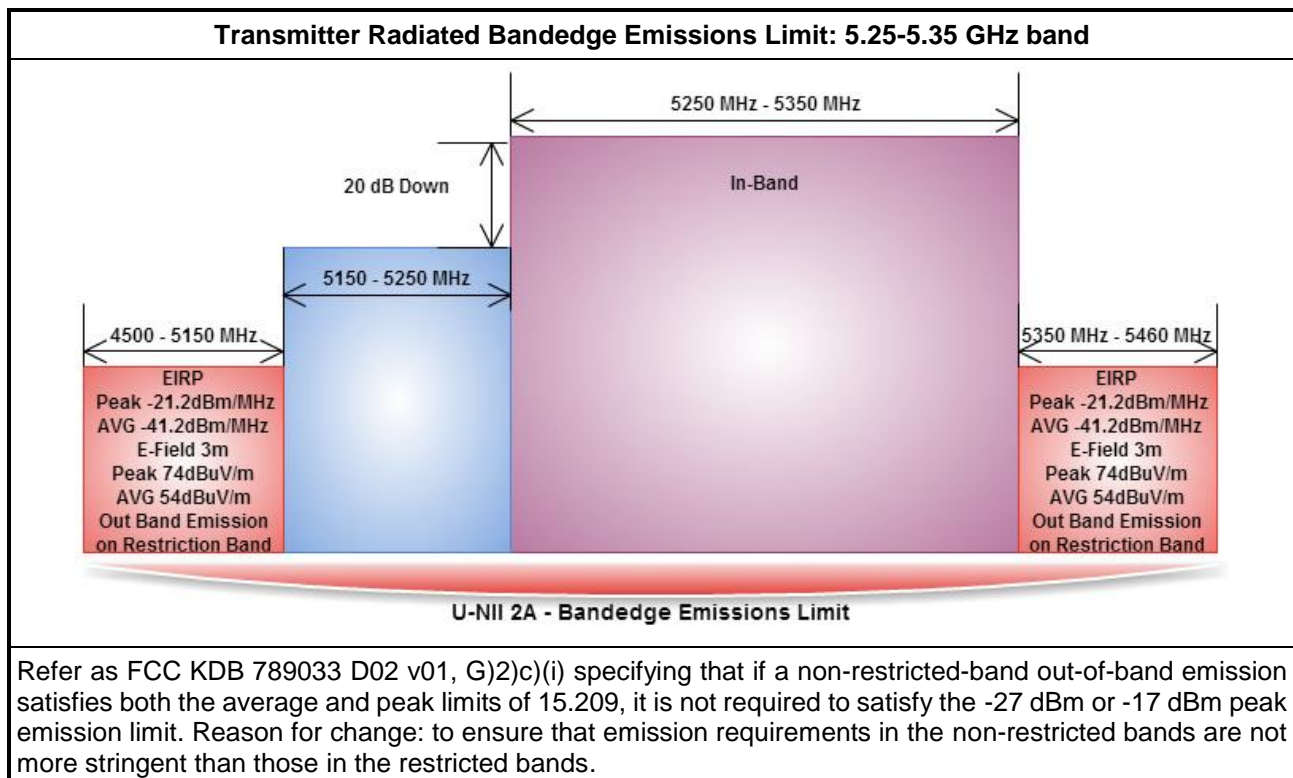
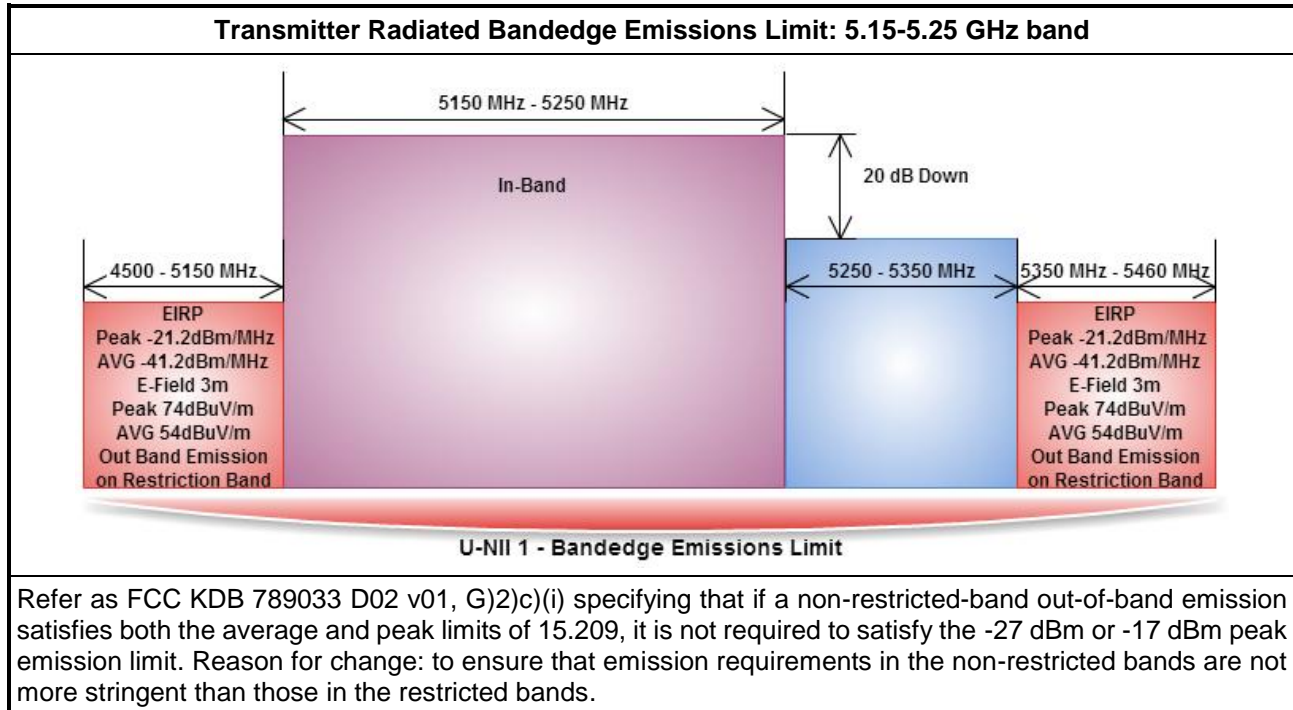
Peak Power Spectral Density Result (5725-5850MHz band)					
Modulation Mode	N _{TX}	Freq. (MHz)	Peak Power Spectral Density (dBm)	PSD Limit	DG (dBi)
11a	2	5745	8.16	28.99	7.01
11a	2	5785	13.16	28.99	7.01
11a	2	5825	9.40	28.99	7.01
11a	1	5745	4.14	30.00	4.00
11a	1	5785	8.63	30.00	4.00
11a	1	5825	7.21	30.00	4.00
HT20	2	5745	6.67	28.99	7.01
HT20	2	5785	11.75	28.99	7.01
HT20	2	5825	7.80	28.99	7.01
HT20	1	5745	3.89	30.00	4.00
HT20	1	5785	8.47	30.00	4.00
HT20	1	5825	5.80	30.00	4.00
HT40	2	5755	0.73	28.99	7.01
HT40	2	5795	7.32	28.99	7.01
HT40	1	5755	-1.28	30.00	4.00
HT40	1	5795	4.71	30.00	4.00
Result			Complied		

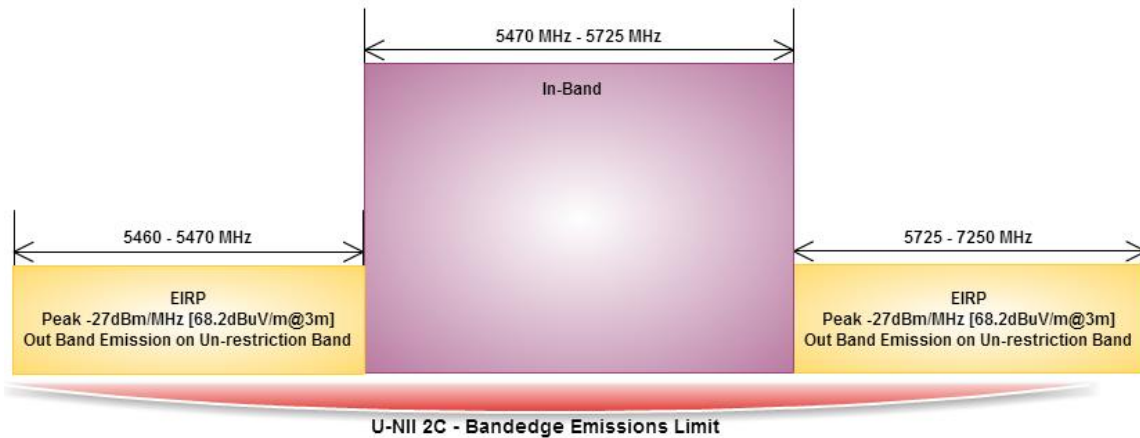
5150-5250MHz - Worst Power Spectral Density Plots

5250-5350MHz - Worst Power Spectral Density Plots


5470-5725MHz - Worst Power Spectral Density Plots

5725-5850MHz - Worst Power Spectral Density Plots


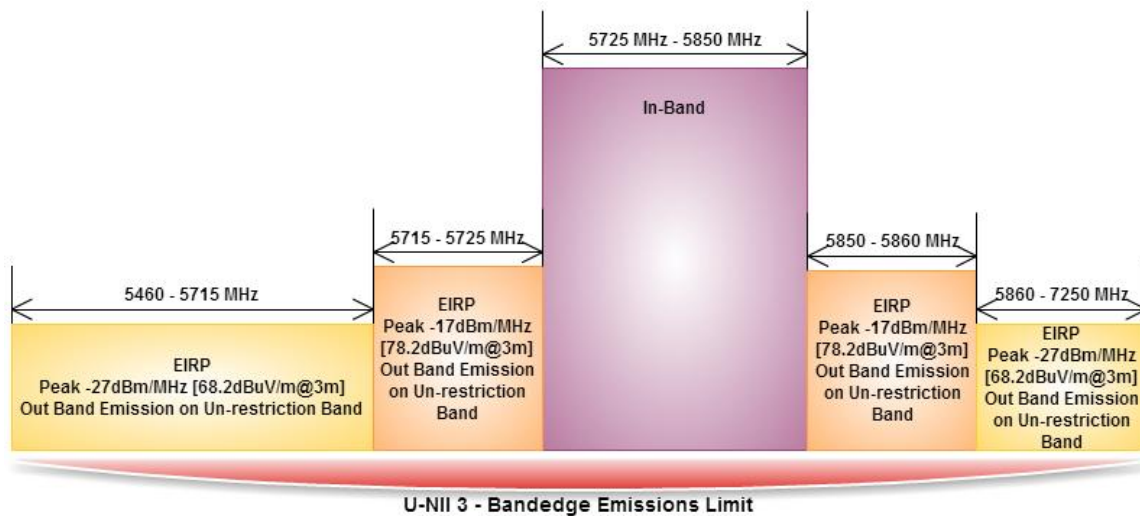
3.5 Transmitter Bandedge Emissions

3.5.1 Transmitter Radiated Bandedge Emissions Limit



Transmitter Radiated Bandedge Emissions Limit: 5.47-5.725 GHz band


Refer as FCC KDB 789033 D02 v01, G)2)c)(i) 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.

Transmitter Radiated Bandedge Emissions Limit for 5.8GHz band: 5.725-5.85 GHz band


Refer as FCC KDB 789033 D02 v01, G)2)c)(i) 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.

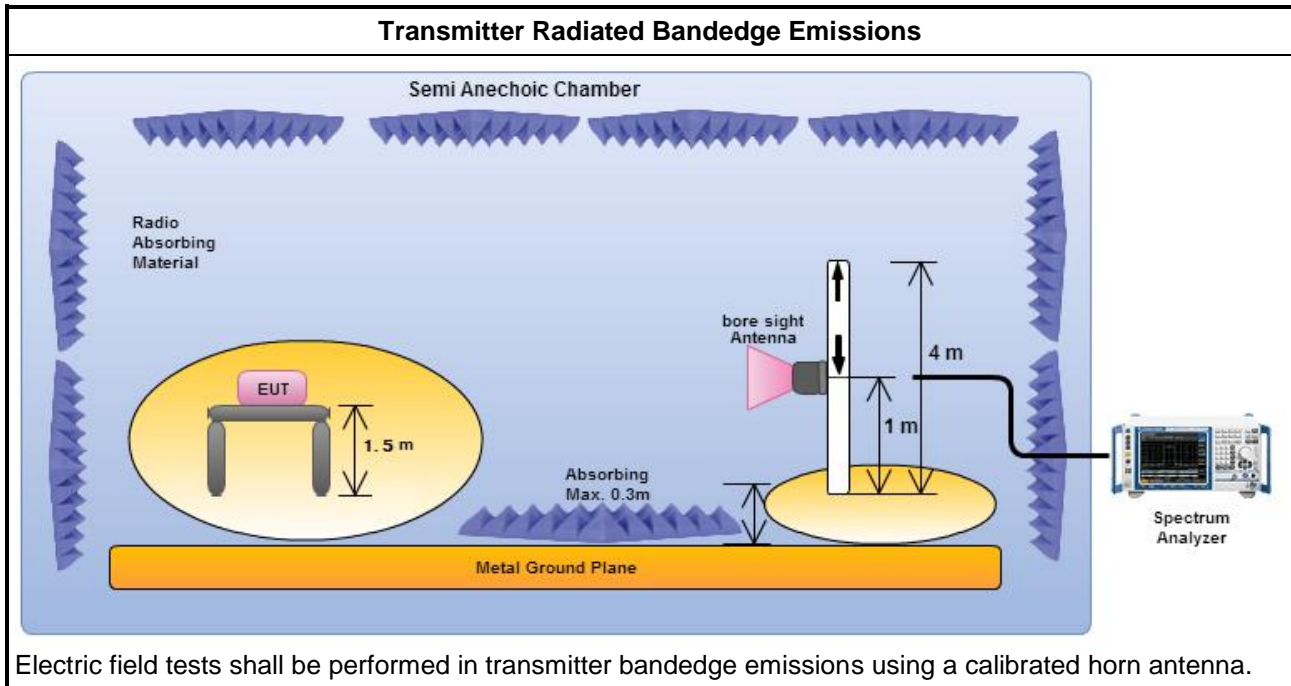
3.5.2 Measuring Instruments

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"/>	<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"/>	<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 FCC KDB 789033 D02 v01, clause H)2) for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause H)1) for unwanted emissions into restricted bands.
<input type="checkbox"/>	<input type="checkbox"/> Refer as FCC KDB 789033 D02 v01, H)6) Method AD (Trace Averaging).
<input type="checkbox"/>	<input type="checkbox"/> Refer as FCC KDB 789033 D02 v01, H)6) Method VB (Reduced VBW).
<input type="checkbox"/>	<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"/>	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
<input type="checkbox"/>	<input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02 v01, clause H)5) measurement procedure peak limit.
<input type="checkbox"/>	<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"/>	<input type="checkbox"/> Refer as FCC KDB 789033 D02 v01, clause H)3)d) for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
<input type="checkbox"/>	<input type="checkbox"/> Refer as ANSI C63.10, clause 6.10 for band-edge testing.
<input type="checkbox"/>	<input checked="" 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 (with Antenna)

U-NII 5150-5250MHz Transmitter Radiated Bandedge (with Antenna)										
Modulation Mode	N _{TX}	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	5136.200	59.54	74	5120.800	45.76	54	H
11a	2	5240	3	5136.000	59.81	74	5123.400	45.80	54	H
11a	1	5180	3	5118.400	59.27	74	5122.800	45.15	54	H
11a	1	5240	3	5102.400	58.43	74	5118.000	45.07	54	H
HT20	2	5180	3	5101.600	59.00	74	5122.600	45.52	54	H
HT20	2	5240	3	5105.400	58.98	74	5128.800	45.47	54	H
HT20	1	5180	3	5144.200	58.09	74	5122.600	45.04	54	H
HT20	1	5240	3	5115.600	58.41	74	5136.000	45.09	54	H
HT40	2	5190	3	5149.060	63.43	74	5149.500	47.18	54	H
HT40	2	5230	3	5145.600	58.67	74	5132.400	45.13	54	H
HT40	1	5190	3	5148.180	65.86	74	5149.940	48.57	54	H
HT40	1	5230	3	5119.800	58.70	74	5128.200	45.42	54	H

Note 1: Measurement worst emissions of receive antenna polarization.

U-NII 5250-5350MHz Transmitter Radiated Bandedge (with Antenna)										
Modulation Mode	N _{TX}	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	5260	3	5400.000	59.69	74	5365.200	45.88	54	H
11a	2	5320	3	5351.160	62.72	74	5351.160	45.85	54	H
11a	1	5260	3	5383.800	58.53	74	5355.000	45.17	54	H
11a	1	5320	3	5350.320	67.37	74	5350.040	46.57	54	H
HT20	2	5260	3	5358.600	58.79	74	5366.400	45.49	54	H
HT20	2	5320	3	5362.080	59.81	74	5360.260	45.77	54	H
HT20	1	5260	3	5351.000	58.15	74	5398.800	45.15	54	H
HT20	1	5320	3	5351.020	70.88	74	5350.320	47.85	54	H
HT40	2	5270	3	5351.400	62.01	74	5350.500	45.99	54	H
HT40	2	5310	3	5350.120	69.83	74	5350.030	52.64	54	H
HT40	1	5270	3	5350.200	66.22	74	5350.200	47.77	54	H
HT40	1	5310	3	5351.560	71.54	74	5350.030	52.86	54	H

Note 1: Measurement worst emissions of receive antenna polarization.

U-NII 5470-5725MHz Transmitter Radiated Bandedge (with Antenna)

Modulation Mode	N _{TX}	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Pol.
11a	2	5500	3	5469.840	66.85	68.2	H
11a	2	5700	3	5725.160	66.98	68.2	H
11a	1	5500	3	5469.200	66.52	68.2	H
11a	1	5700	3	5725.160	67.15	68.2	H
HT20	2	5500	3	5469.040	66.74	68.2	H
HT20	2	5700	3	5725.160	67.04	68.2	H
HT20	1	5500	3	5467.120	66.32	68.2	H
HT20	1	5700	3	5725.040	66.51	68.2	H
HT40	2	5510	3	5467.800	67.17	68.2	H
HT40	2	5670	3	5725.000	67.14	68.2	H
HT40	1	5510	3	5467.400	66.59	68.2	H
HT40	1	5670	3	5728.400	66.38	68.2	H

Note 1: Measurement worst emissions of receive antenna polarization.

U-NII 5725-5850MHz Transmitter Radiated Bandedge (with Antenna)

Modulation Mode	N _{TX}	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Pol.
11a	2	5745	3	5723.920	76.69	78.2	H
11a	2	5825	3	5860.570	65.89	68.2	H
11a	1	5745	3	5724.340	76.46	78.2	H
11a	1	5825	3	5860.360	67.04	68.2	H
HT20	2	5745	3	5724.550	76.92	78.2	H
HT20	2	5825	3	5861.410	66.30	68.2	H
HT20	1	5745	3	5724.340	76.75	78.2	H
HT20	1	5825	3	5860.780	67.02	68.2	H
HT40	2	5755	3	5714.740	67.13	68.2	H
HT40	2	5795	3	5864.500	66.43	68.2	H
HT40	1	5755	3	5713.440	67.06	68.2	H
HT40	1	5795	3	5861.800	66.51	68.2	H

Note 1: Measurement worst emissions of receive antenna polarization.

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	5.715 5.725 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] 5.85 5.86 GHz: e.i.r.p. -17 dBm [78.2 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

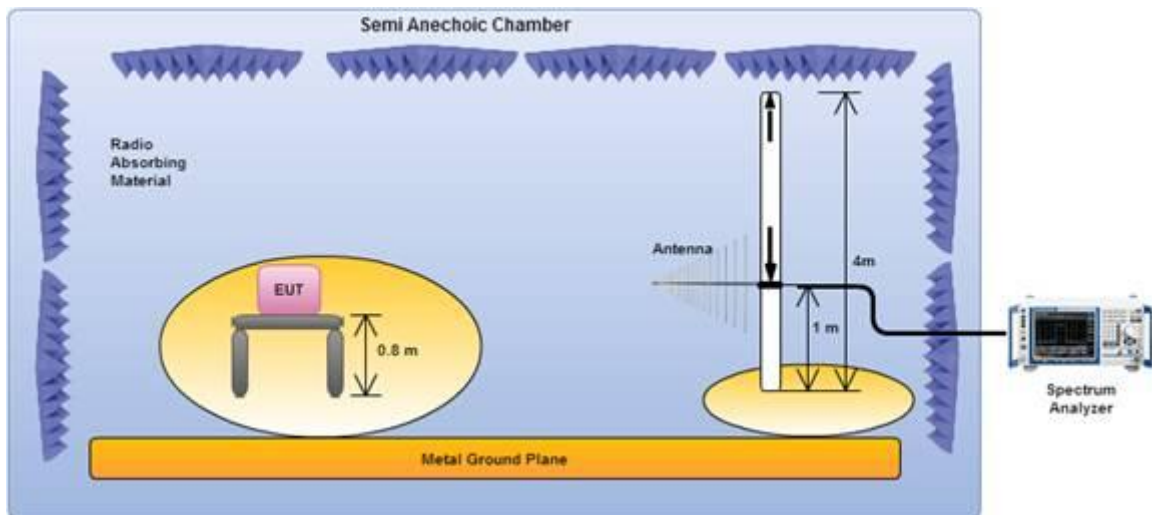
Refer a test equipment and calibration data table in this test report.

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 ≥ 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 FCC KDB 789033 D02 v01, clause G)2) for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, clause G)1) for unwanted emissions into restricted bands.
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, G)6) Method AD (Trace Averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033 D02 v01, 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 FCC KDB 789033 D02 v01, 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.

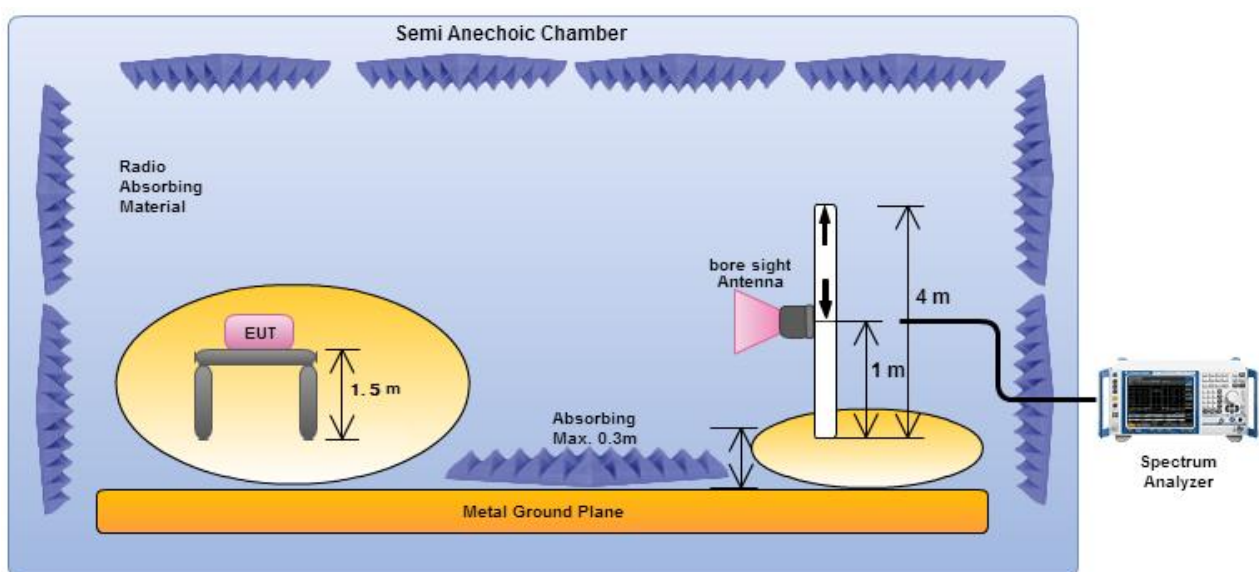
3.6.4 Test Setup

Transmitter Radiated Unwanted Emissions Below 1GHz



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

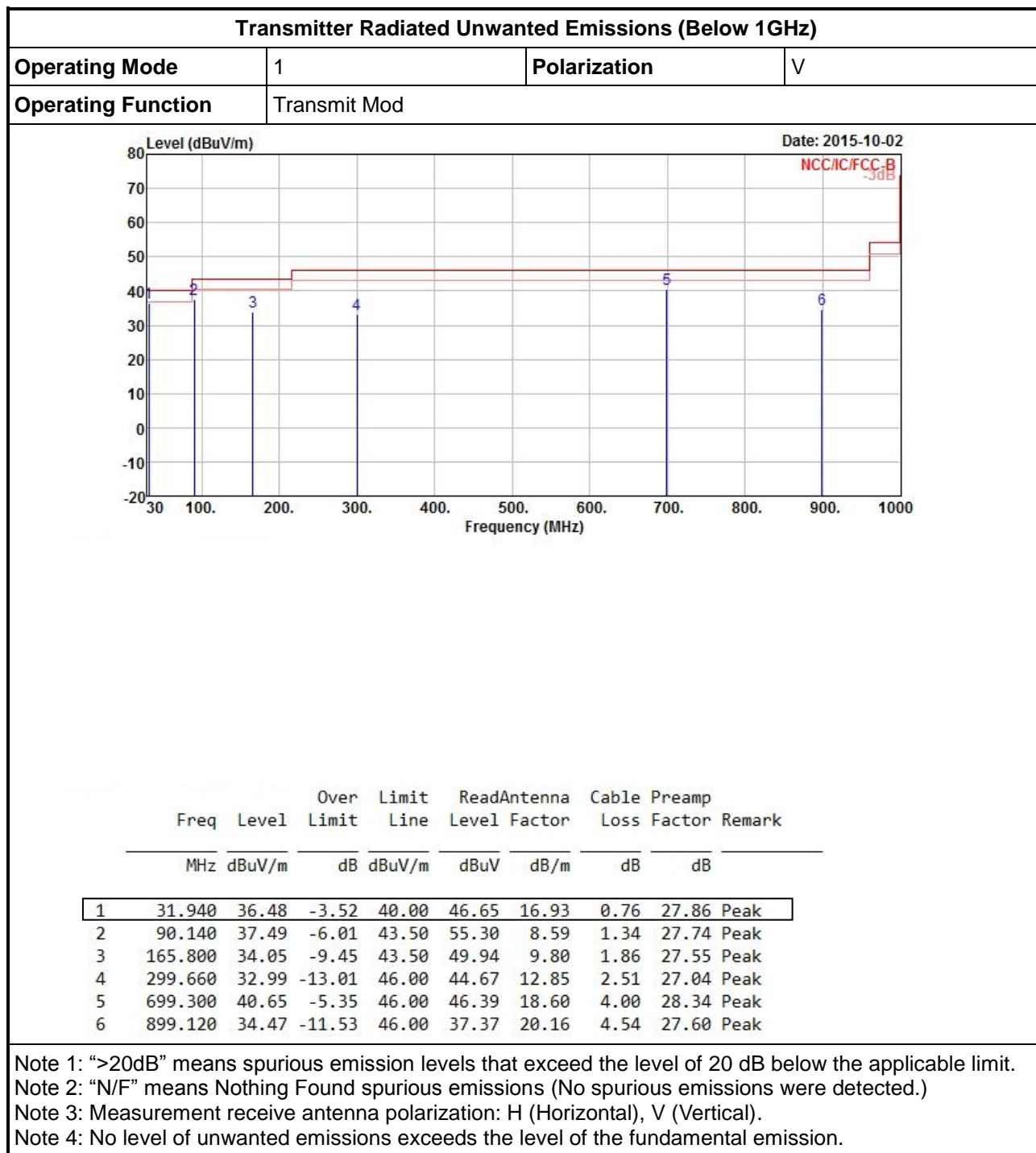


Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

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

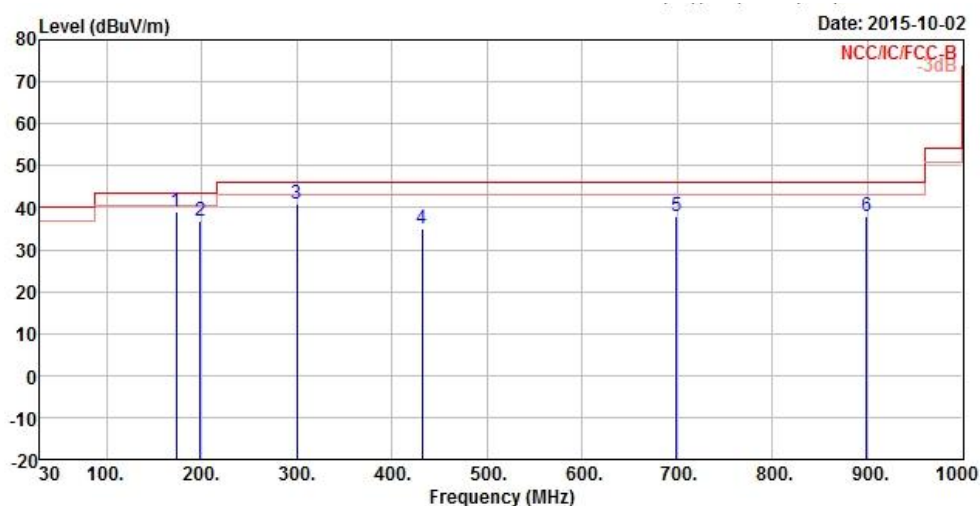
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.6.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)



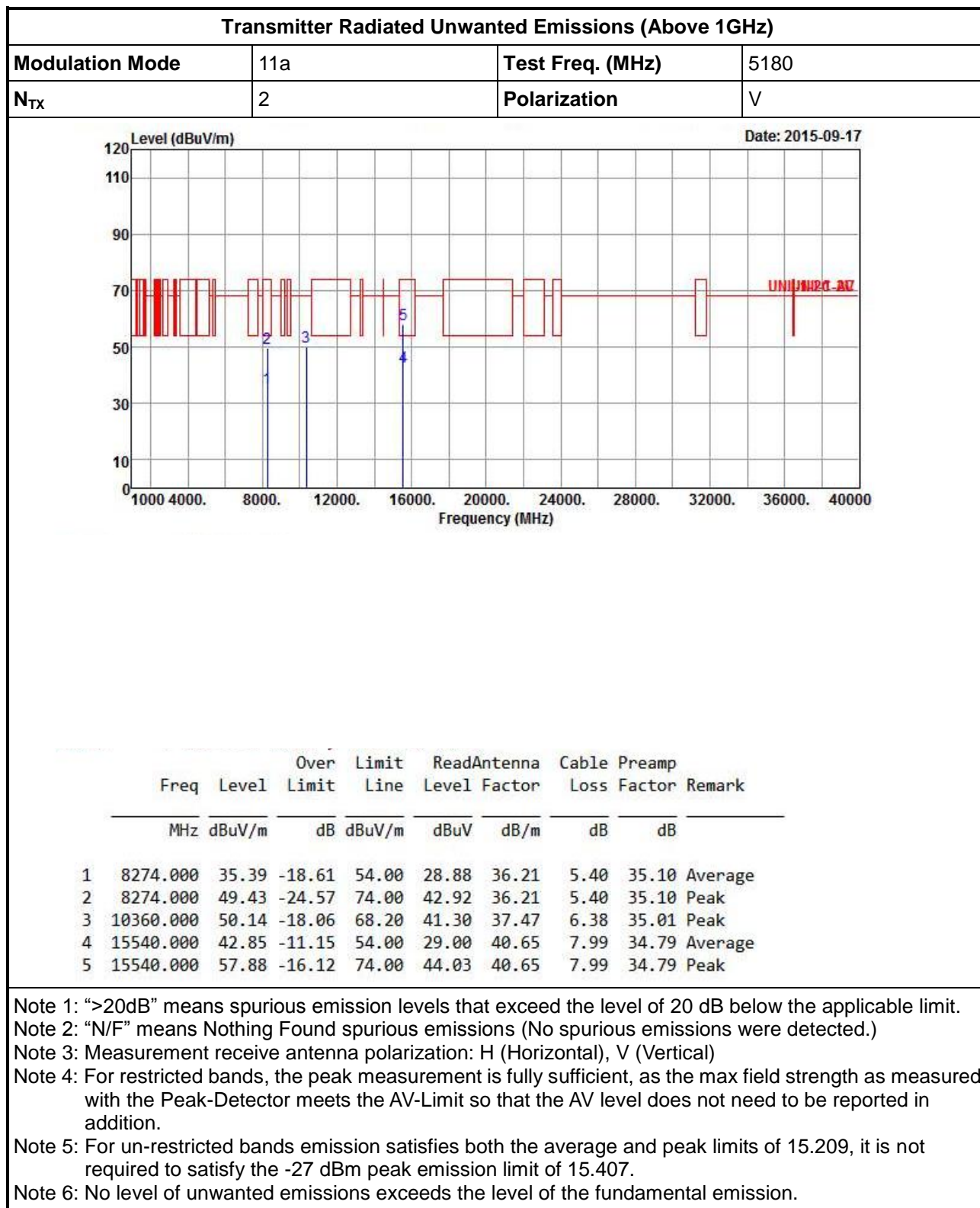
Transmitter Radiated Unwanted Emissions (Below 1GHz)

Operating Mode	1	Polarization	H
Operating Function	Transmit Mod		



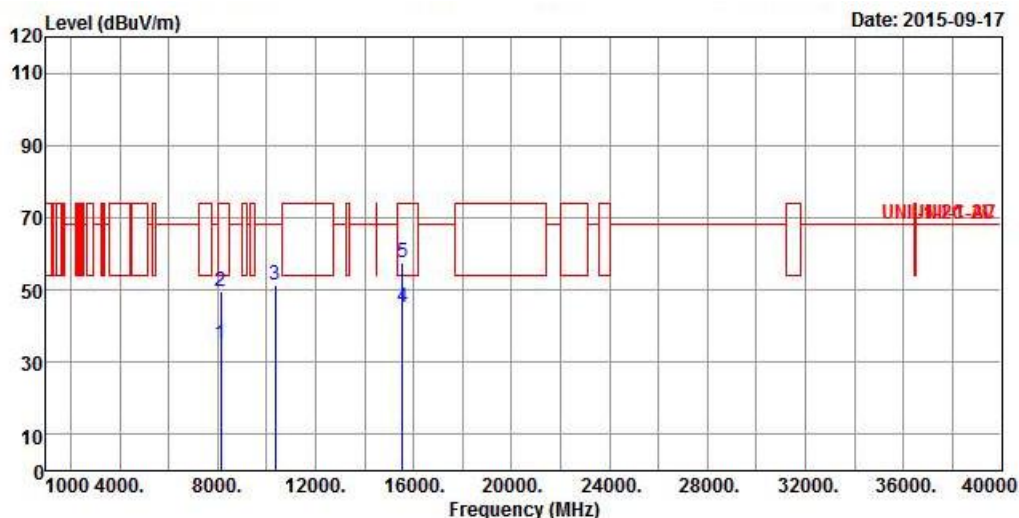
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	173.560	39.13	-4.37	43.50	55.37	9.39	1.90	27.53 Peak
2	198.780	36.97	-6.53	43.50	53.41	8.96	2.04	27.44 Peak
3	299.660	40.99	-5.01	46.00	52.67	12.85	2.51	27.04 Peak
4	431.580	35.03	-10.97	46.00	43.82	16.22	3.05	28.06 Peak
5	699.300	37.96	-8.04	46.00	43.70	18.60	4.00	28.34 Peak
6	899.120	37.99	-8.01	46.00	40.89	20.16	4.54	27.60 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.

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


Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11a	Test Freq. (MHz)	5180
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamplifier Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8130.000	35.09	-18.91	54.00	28.70	36.15	5.36	35.12 Average
2	8130.000	49.80	-24.20	74.00	43.41	36.15	5.36	35.12 Peak
3	10360.000	51.17	-17.03	68.20	42.33	37.47	6.38	35.01 Peak
4	15540.000	45.28	-8.72	54.00	31.43	40.65	7.99	34.79 Average
5	15540.000	57.68	-16.32	74.00	43.83	40.65	7.99	34.79 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)

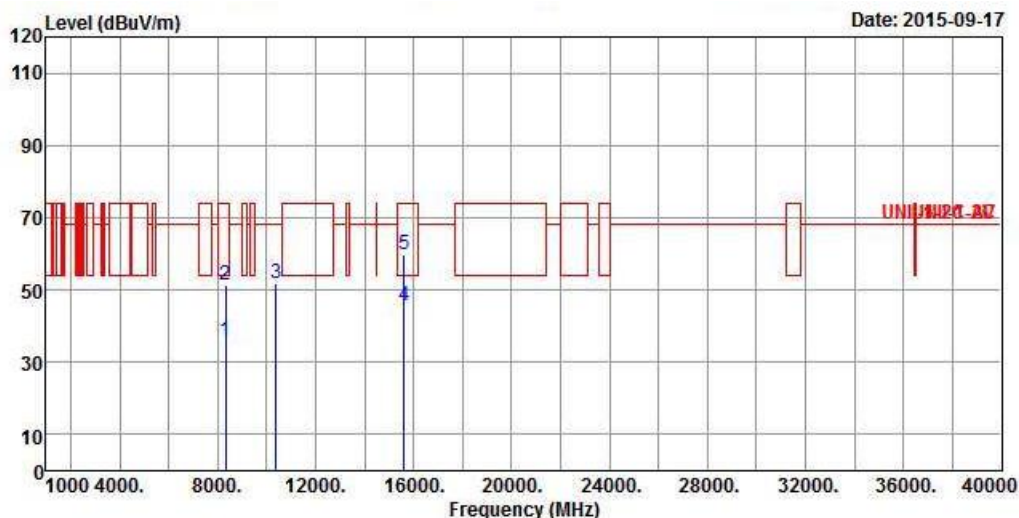
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5200
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8320.000	36.07	-17.93	54.00	29.51	36.23	5.42	35.09	Average
2	8320.000	51.34	-22.66	74.00	44.78	36.23	5.42	35.09	Peak
3	10400.000	51.83	-16.37	68.20	42.95	37.50	6.35	34.97	Peak
4	15600.000	45.40	-8.60	54.00	31.57	40.74	7.96	34.87	Average
5	15600.000	59.66	-14.34	74.00	45.83	40.74	7.96	34.87	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)

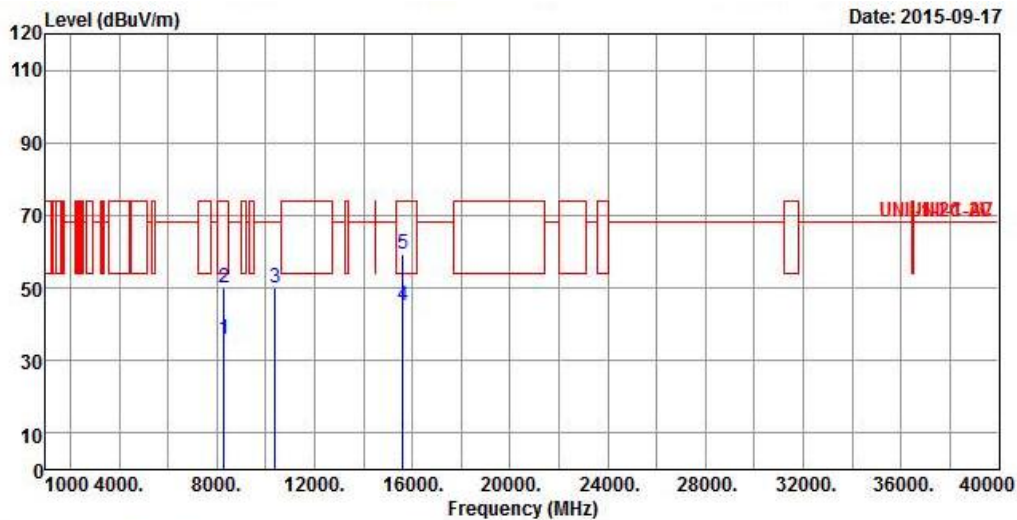
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5200
N_{TX}	2	Polarization	H



	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	8280.000	35.80	-18.20	54.00	29.29	36.21	5.40	35.10	Average
2	8280.000	49.85	-24.15	74.00	43.34	36.21	5.40	35.10	Peak
3	10400.000	50.07	-18.13	68.20	41.19	37.50	6.35	34.97	Peak
4	15600.000	45.10	-8.90	54.00	31.27	40.74	7.96	34.87	Average
5	15600.000	59.33	-14.67	74.00	45.50	40.74	7.96	34.87	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)

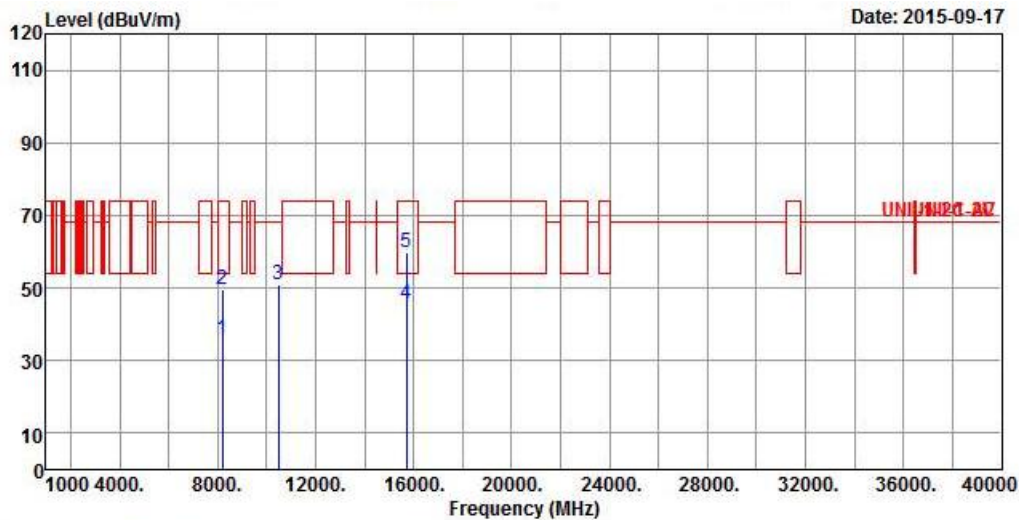
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5240
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamplifier Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8212.000	35.82	-18.18	54.00	29.37	36.18	5.38	35.11 Average
2	8212.000	49.77	-24.23	74.00	43.32	36.18	5.38	35.11 Peak
3	10480.000	51.12	-17.08	68.20	42.14	37.58	6.30	34.90 Peak
4	15720.000	45.78	-8.22	54.00	32.00	40.91	7.86	34.99 Average
5	15720.000	59.90	-14.10	74.00	46.12	40.91	7.86	34.99 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)

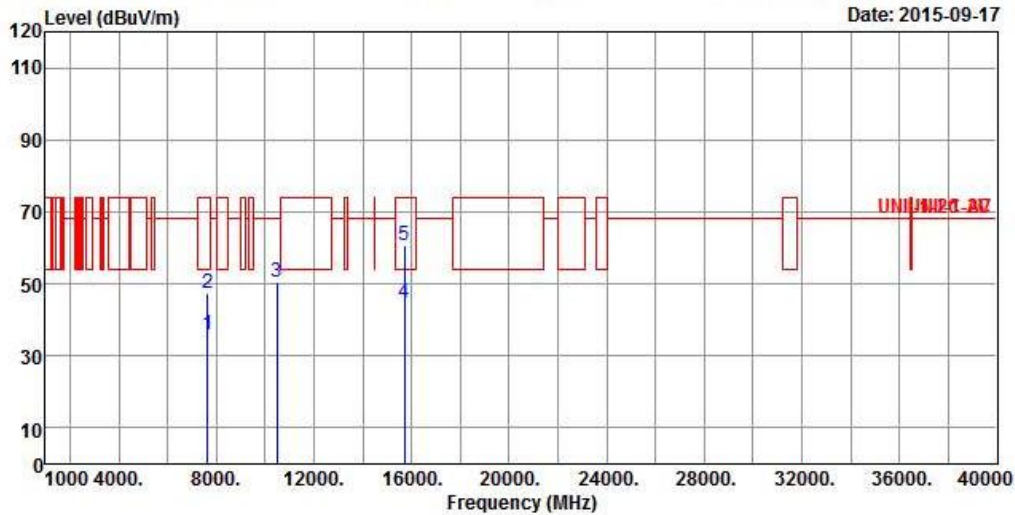
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5240
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7644.000	36.03	-17.97	54.00	29.42	36.03	5.61	35.03	Average
2	7644.000	47.59	-26.41	74.00	40.98	36.03	5.61	35.03	Peak
3	10480.000	50.29	-17.91	68.20	41.31	37.58	6.30	34.90	Peak
4	15720.000	44.93	-9.07	54.00	31.15	40.91	7.86	34.99	Average
5	15720.000	60.62	-13.38	74.00	46.84	40.91	7.86	34.99	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)

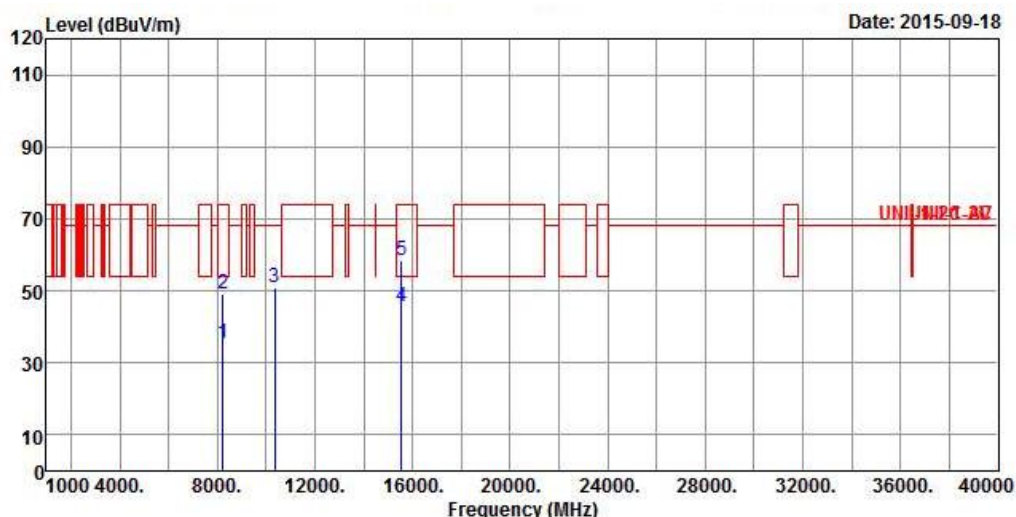
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5180
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8220.000	35.24	-18.76	54.00	28.78	36.19	5.38	35.11	Average
2	8220.000	49.08	-24.92	74.00	42.62	36.19	5.38	35.11	Peak
3	10360.000	50.73	-17.47	68.20	41.89	37.47	6.38	35.01	Peak
4	15540.000	45.50	-8.50	54.00	31.65	40.65	7.99	34.79	Average
5	15540.000	58.61	-15.39	74.00	44.76	40.65	7.99	34.79	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)

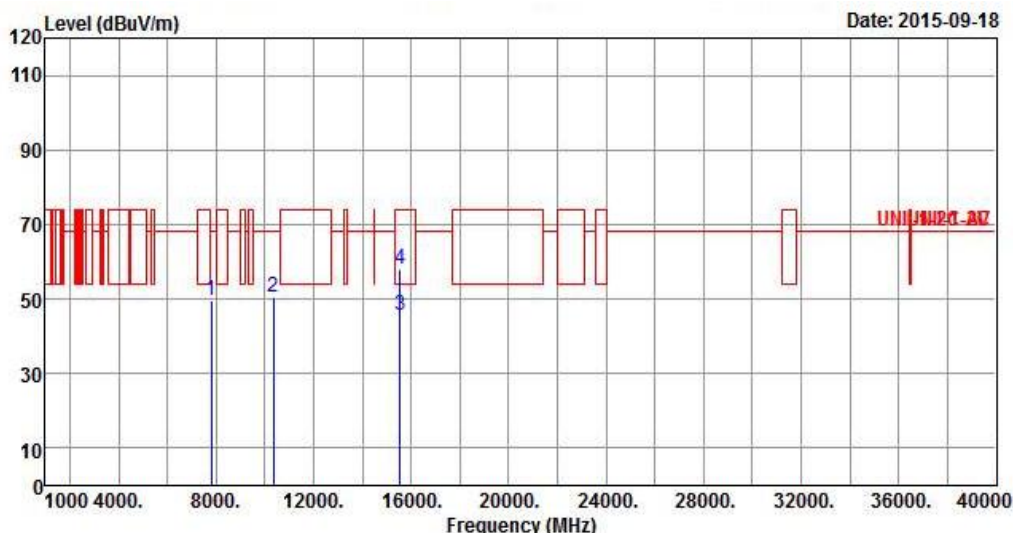
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5180
N_{TX}	2	Polarization	H



	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	7810.000	49.79	-18.41	68.20	43.37	36.06	5.44	35.08	Peak
2	10360.000	50.47	-17.73	68.20	41.63	37.47	6.38	35.01	Peak
3	15540.000	45.58	-8.42	54.00	31.73	40.65	7.99	34.79	Average
4	15540.000	58.14	-15.86	74.00	44.29	40.65	7.99	34.79	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)

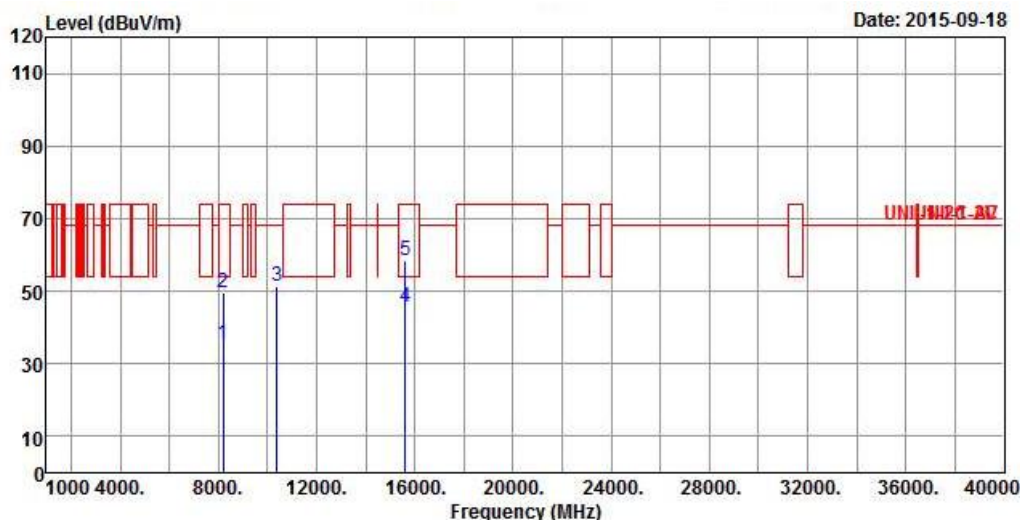
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5200
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamplifier Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8202.000	35.38	-18.62	54.00	28.93	36.18	5.38	35.11 Average
2	8202.000	49.64	-24.36	74.00	43.19	36.18	5.38	35.11 Peak
3	10400.000	51.33	-16.87	68.20	42.45	37.50	6.35	34.97 Peak
4	15600.000	45.47	-8.53	54.00	31.64	40.74	7.96	34.87 Average
5	15600.000	58.39	-15.61	74.00	44.56	40.74	7.96	34.87 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)

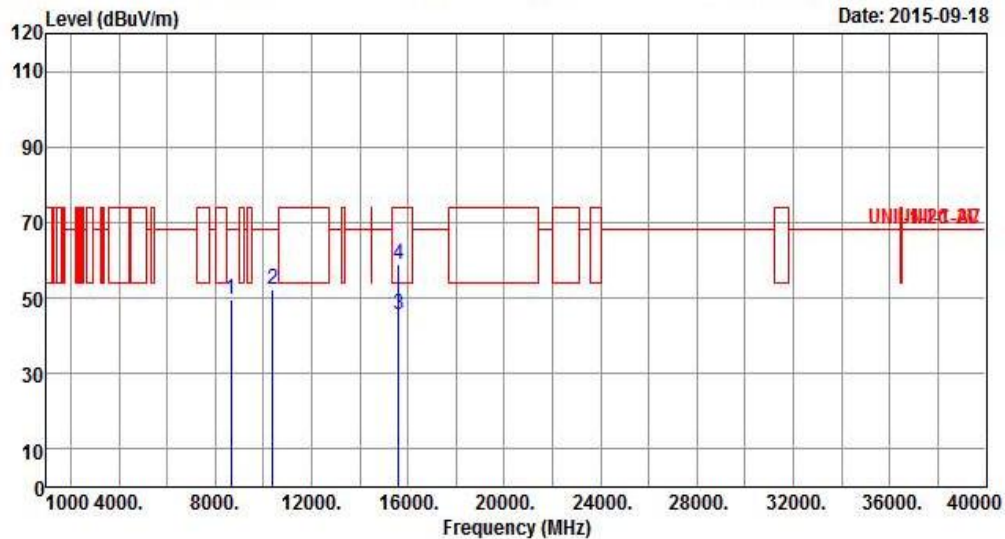
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5200
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8652.000	49.46	-18.74	68.20	42.60	36.33	5.62	35.09 Peak
2	10400.000	52.26	-15.94	68.20	43.38	37.50	6.35	34.97 Peak
3	15600.000	45.51	-8.49	54.00	31.68	40.74	7.96	34.87 Average
4	15600.000	58.87	-15.13	74.00	45.04	40.74	7.96	34.87 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)

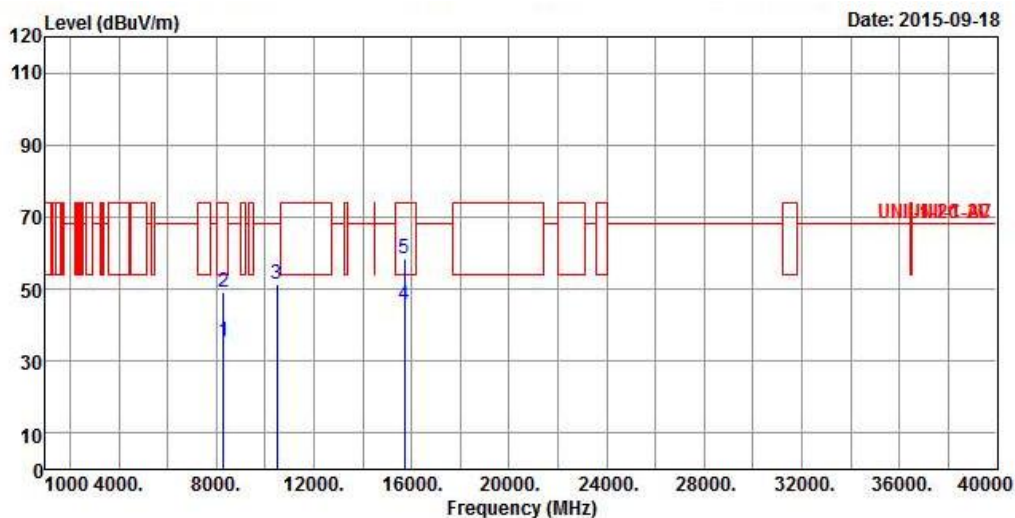
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5240
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8292.000	35.27	-18.73	54.00	28.74	36.22	5.40	35.09	Average
2	8292.000	49.32	-24.68	74.00	42.79	36.22	5.40	35.09	Peak
3	10480.000	51.31	-16.89	68.20	42.33	37.58	6.30	34.90	Peak
4	15720.000	45.79	-8.21	54.00	32.01	40.91	7.86	34.99	Average
5	15720.000	58.42	-15.58	74.00	44.64	40.91	7.86	34.99	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)

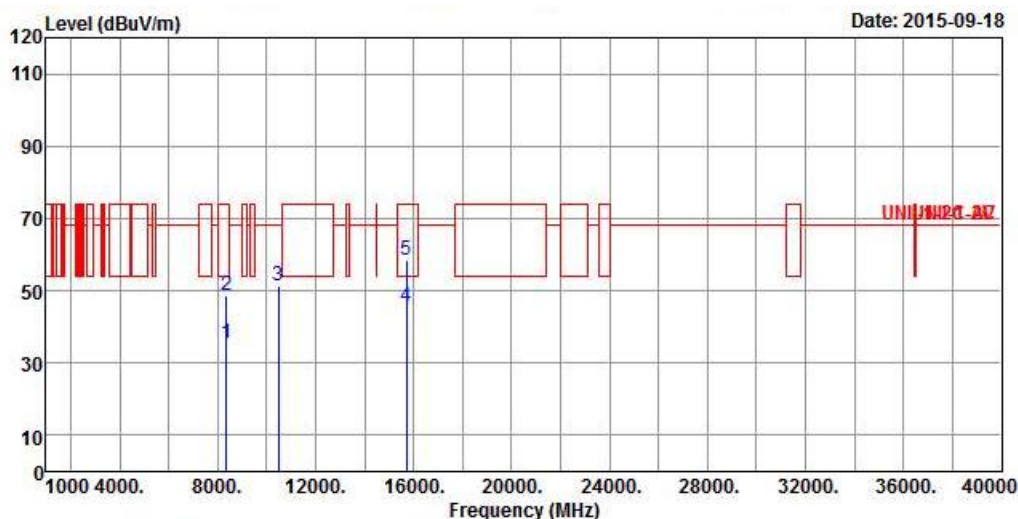
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5240
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8346.000	35.41	-18.59	54.00	28.84	36.24	5.42	35.09	Average
2	8346.000	48.91	-25.09	74.00	42.34	36.24	5.42	35.09	Peak
3	10480.000	51.53	-16.67	68.20	42.55	37.58	6.30	34.90	Peak
4	15720.000	45.73	-8.27	54.00	31.95	40.91	7.86	34.99	Average
5	15720.000	58.34	-15.66	74.00	44.56	40.91	7.86	34.99	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)

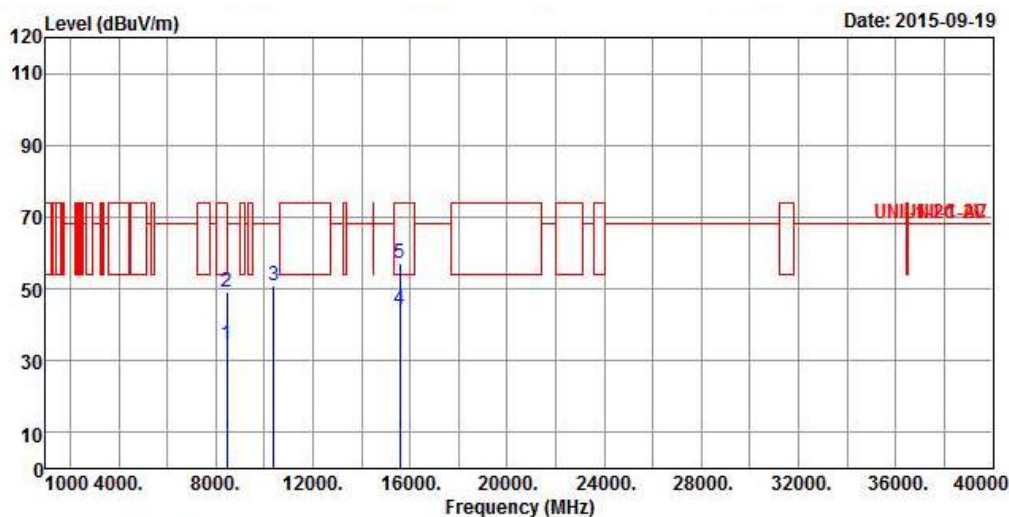
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5190
N_{TX}	2	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	8454.000	34.55	-19.45	54.00	27.89	36.28	5.45	35.07	Average
2	8454.000	49.14	-24.86	74.00	42.48	36.28	5.45	35.07	Peak
3	10380.000	50.81	-17.39	68.20	41.97	37.48	6.35	34.99	Peak
4	15570.000	44.45	-9.55	54.00	30.61	40.70	7.96	34.82	Average
5	15570.000	57.19	-16.81	74.00	43.35	40.70	7.96	34.82	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)

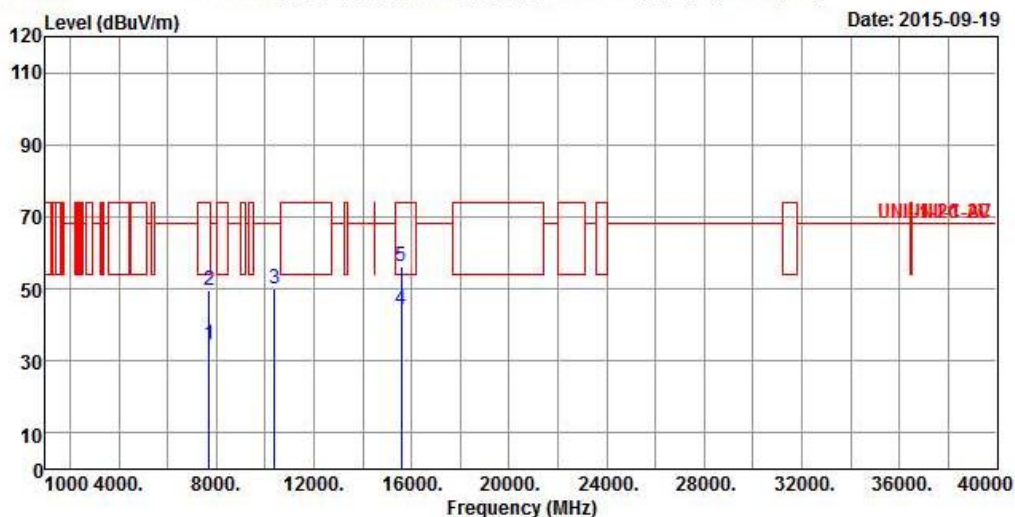
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5190
N_{TX}	2	Polarization	H



	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	7716.000	34.67	-19.33	54.00	28.13	36.04	5.54	35.04	Average
2	7716.000	49.43	-24.57	74.00	42.89	36.04	5.54	35.04	Peak
3	10380.000	50.13	-18.07	68.20	41.29	37.48	6.35	34.99	Peak
4	15570.000	44.45	-9.55	54.00	30.61	40.70	7.96	34.82	Average
5	15570.000	56.37	-17.63	74.00	42.53	40.70	7.96	34.82	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)

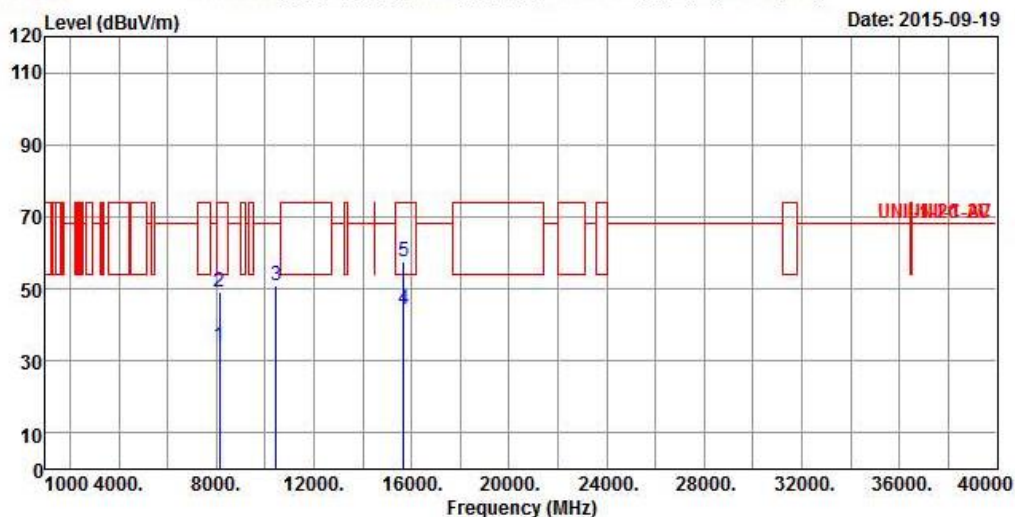
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5230
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8148.000	34.28	-19.72	54.00	27.88	36.16	5.36	35.12	Average
2	8148.000	49.05	-24.95	74.00	42.65	36.16	5.36	35.12	Peak
3	10460.000	50.82	-17.38	68.20	41.89	37.55	6.30	34.92	Peak
4	15690.000	44.46	-9.54	54.00	30.69	40.87	7.86	34.96	Average
5	15690.000	57.37	-16.63	74.00	43.60	40.87	7.86	34.96	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)

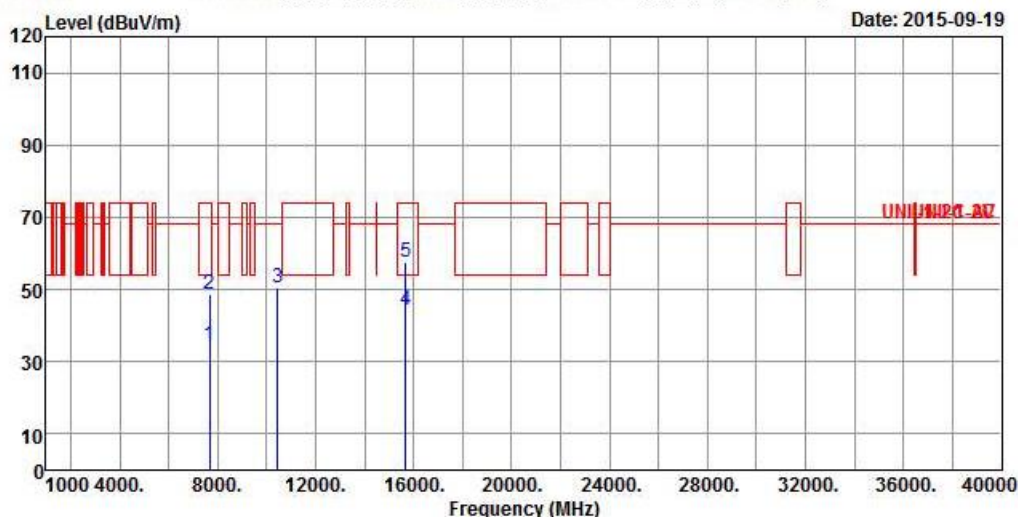
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5230
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	7680.000	34.64	-19.36	54.00	28.06	36.04	5.58	35.04 Average
2	7680.000	48.66	-25.34	74.00	42.08	36.04	5.58	35.04 Peak
3	10460.000	50.67	-17.53	68.20	41.74	37.55	6.30	34.92 Peak
4	15690.000	44.34	-9.66	54.00	30.57	40.87	7.86	34.96 Average
5	15690.000	57.40	-16.60	74.00	43.63	40.87	7.86	34.96 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)

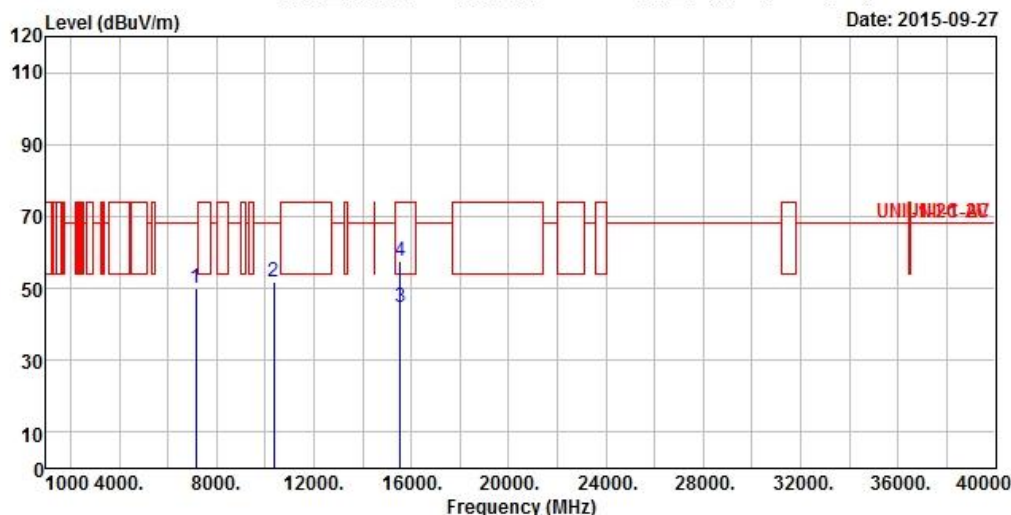
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5180
N_{TX}	1	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7152.000	50.07	-18.13	68.20	43.85	35.86	5.28	34.92	Peak
2	10360.000	51.82	-16.38	68.20	42.98	37.47	6.38	35.01	Peak
3	15540.000	44.68	-9.32	54.00	30.83	40.65	7.99	34.79	Average
4	15540.000	57.59	-16.41	74.00	43.74	40.65	7.99	34.79	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)

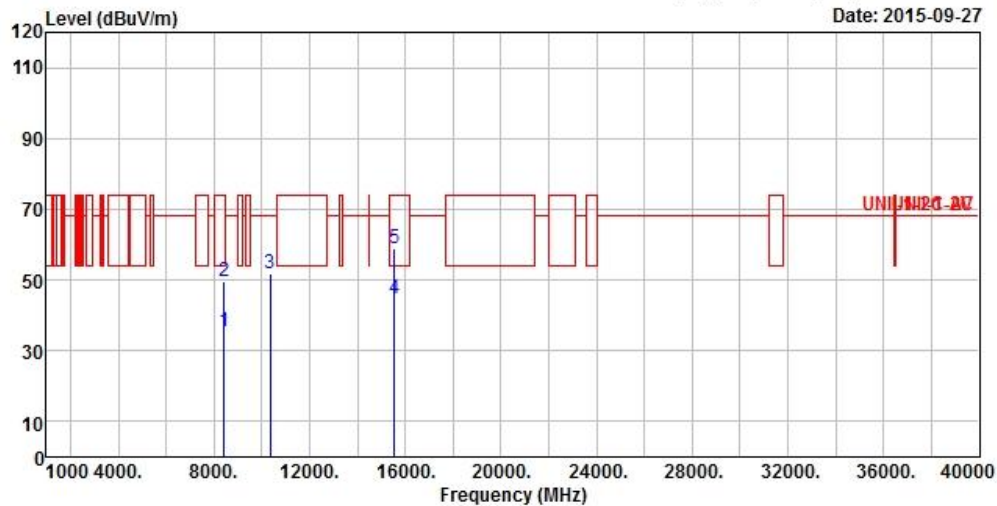
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5180
N_{TX}	1	Polarization	H

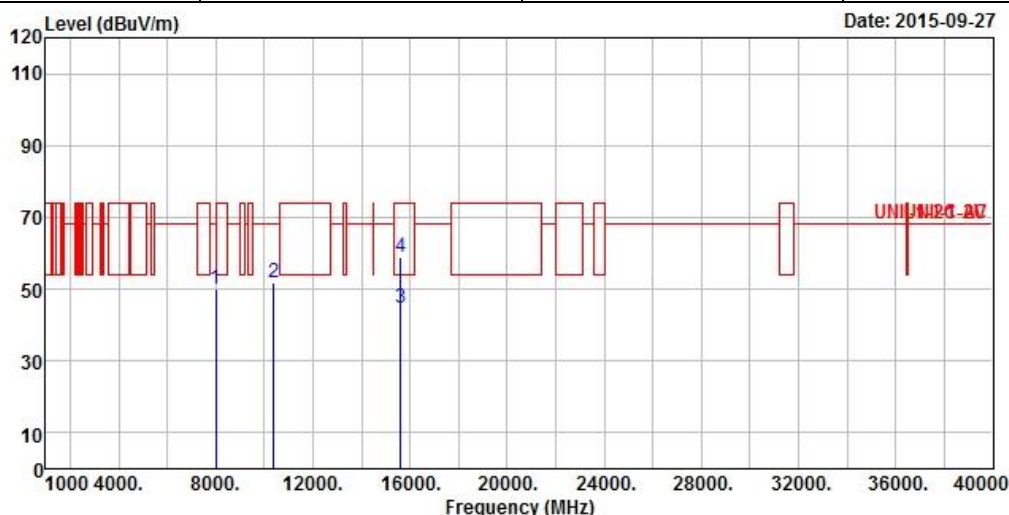


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamplifier Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8432.000	35.28	-18.72	54.00	28.63	36.27	5.45	35.07 Average
2	8432.000	49.39	-24.61	74.00	42.74	36.27	5.45	35.07 Peak
3	10360.000	51.82	-16.38	68.20	42.98	37.47	6.38	35.01 Peak
4	15540.000	44.84	-9.16	54.00	30.99	40.65	7.99	34.79 Average
5	15540.000	58.84	-15.16	74.00	44.99	40.65	7.99	34.79 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	11a	Test Freq. (MHz)	5200
N_{TX}	1	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8001.000	50.12	-18.08	68.20	43.84	36.10	5.32	35.14 Peak
2	10400.000	51.87	-16.33	68.20	42.99	37.50	6.35	34.97 Peak
3	15600.000	44.85	-9.15	54.00	31.02	40.74	7.96	34.87 Average
4	15600.000	58.92	-15.08	74.00	45.09	40.74	7.96	34.87 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)

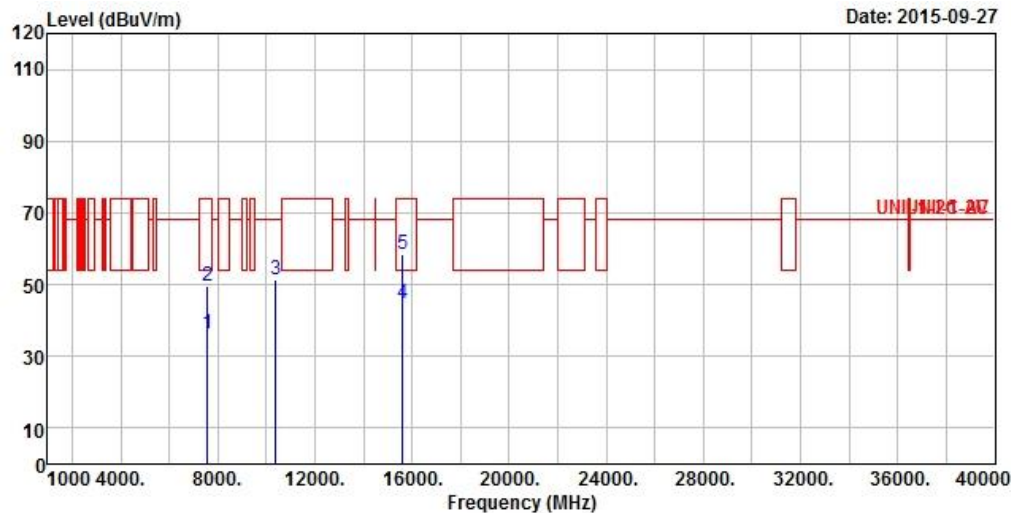
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5200
N_{TX}	1	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	7585.000	36.28	-17.72	54.00	29.62	36.02	5.64	35.00 Average
2	7585.000	49.40	-24.60	74.00	42.74	36.02	5.64	35.00 Peak
3	10400.000	51.50	-16.70	68.20	42.62	37.50	6.35	34.97 Peak
4	15600.000	44.82	-9.18	54.00	30.99	40.74	7.96	34.87 Average
5	15600.000	58.58	-15.42	74.00	44.75	40.74	7.96	34.87 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)

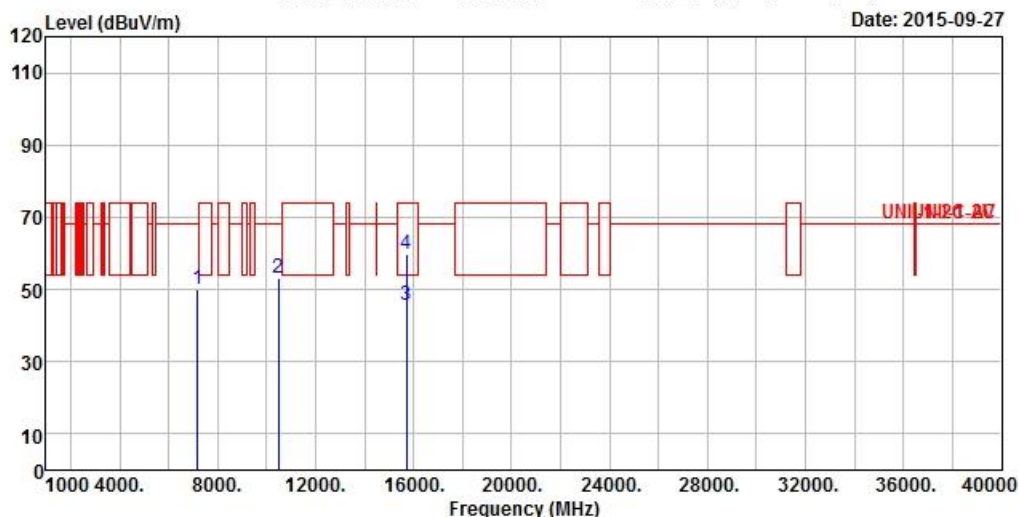
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5240
N_{TX}	1	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	7174.000	50.08	-18.12	68.20	43.85	35.87	5.28	34.92 Peak
2	10480.000	52.97	-15.23	68.20	43.99	37.58	6.30	34.90 Peak
3	15720.000	45.43	-8.57	54.00	31.65	40.91	7.86	34.99 Average
4	15720.000	59.63	-14.37	74.00	45.85	40.91	7.86	34.99 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)

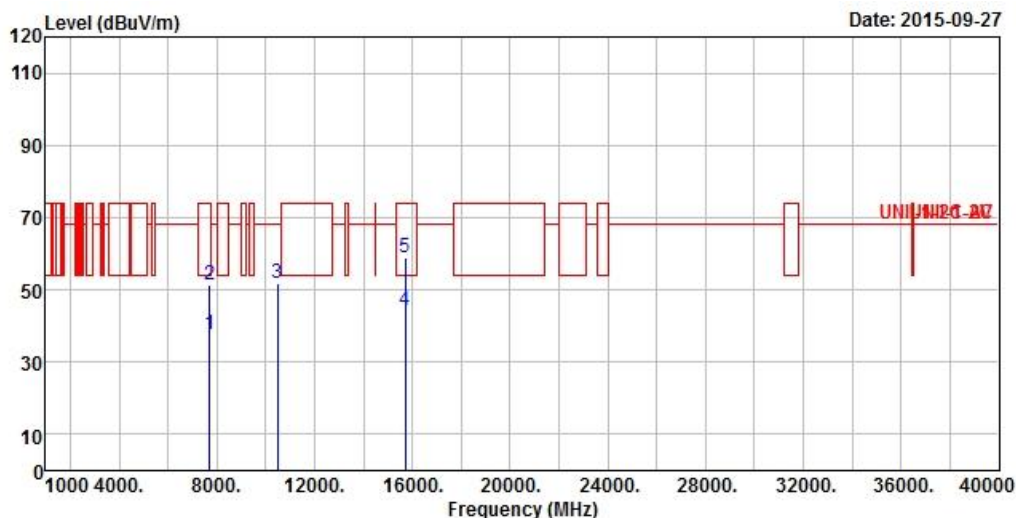
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5240
N_{TX}	1	Polarization	H



	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	7696.000	37.53	-16.47	54.00	30.99	36.04	5.54	35.04	Average
2	7696.000	51.28	-22.72	74.00	44.74	36.04	5.54	35.04	Peak
3	10480.000	51.97	-16.23	68.20	42.99	37.58	6.30	34.90	Peak
4	15720.000	44.23	-9.77	54.00	30.45	40.91	7.86	34.99	Average
5	15720.000	58.79	-15.21	74.00	45.01	40.91	7.86	34.99	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)

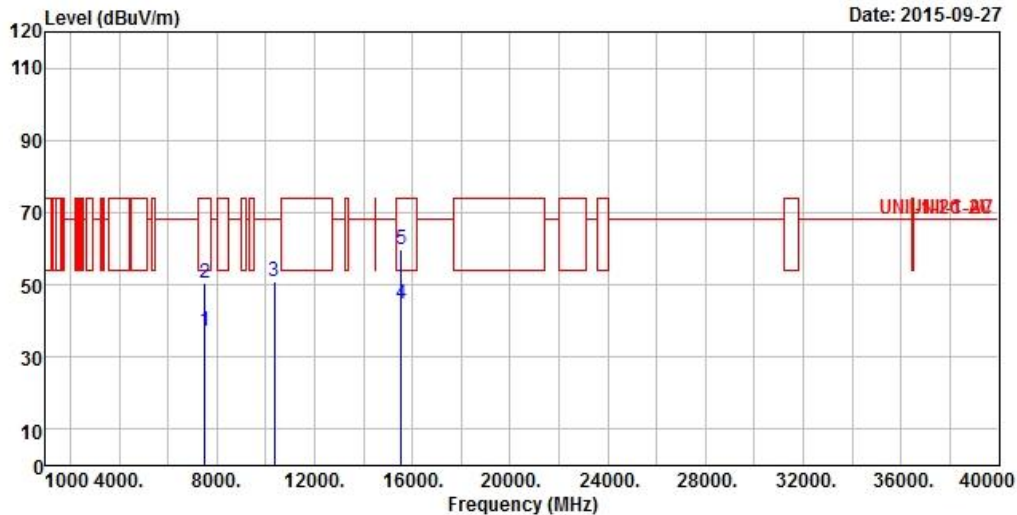
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5180
N_{TX}	1	Polarization	V

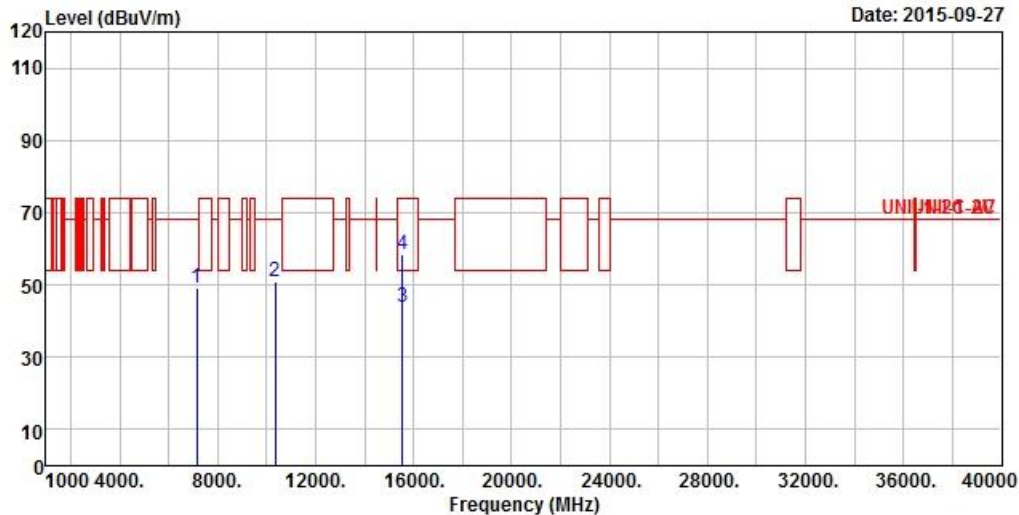


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7524.000	37.25	-16.75	54.00	30.52	36.01	5.71	34.99	Average
2	7524.000	50.38	-23.62	74.00	43.65	36.01	5.71	34.99	Peak
3	10360.000	51.06	-17.14	68.20	42.22	37.47	6.38	35.01	Peak
4	15540.000	44.84	-9.16	54.00	30.99	40.65	7.99	34.79	Average
5	15540.000	59.84	-14.16	74.00	45.99	40.65	7.99	34.79	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	HT20	Test Freq. (MHz)	5180
N_{TX}	1	Polarization	H



	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	7163.000	48.97	-19.23	68.20	42.74	35.87	5.28	34.92	Peak
2	10360.000	50.82	-17.38	68.20	41.98	37.47	6.38	35.01	Peak
3	15540.000	43.84	-10.16	54.00	29.99	40.65	7.99	34.79	Average
4	15540.000	58.27	-15.73	74.00	44.42	40.65	7.99	34.79	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)

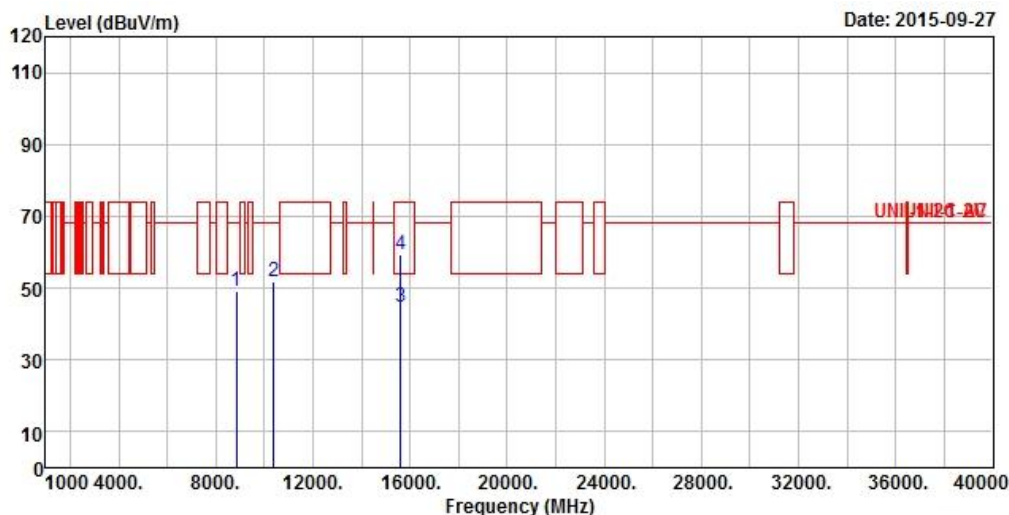
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5200
N_{TX}	1	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	8842.000	49.05	-19.15	68.20	41.98	36.37	5.82	35.12	Peak
2	10400.000	51.90	-16.30	68.20	43.02	37.50	6.35	34.97	Peak
3	15600.000	44.81	-9.19	54.00	30.98	40.74	7.96	34.87	Average
4	15600.000	59.15	-14.85	74.00	45.32	40.74	7.96	34.87	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)

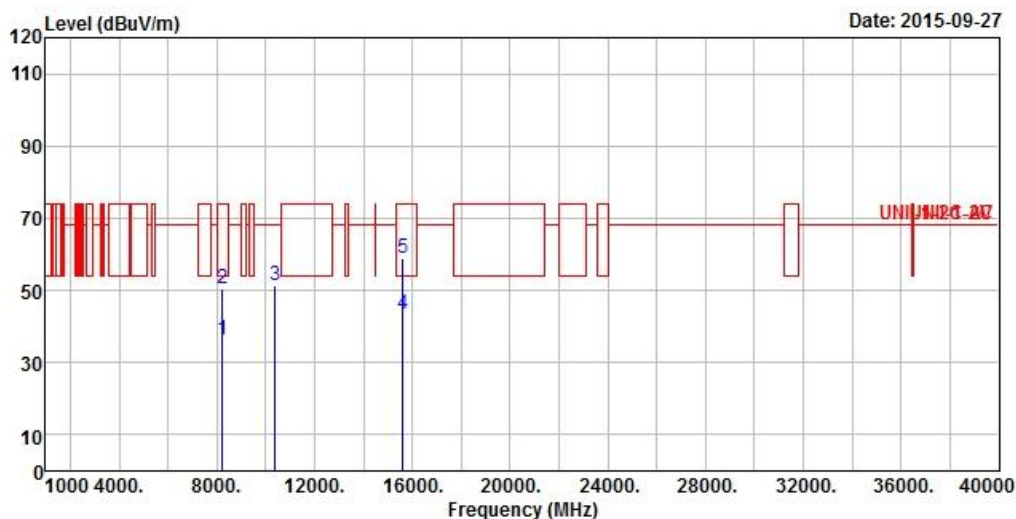
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5200
N_{TX}	1	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8241.000	36.12	-17.88	54.00	29.63	36.20	5.39	35.10	Average
2	8241.000	50.33	-23.67	74.00	43.84	36.20	5.39	35.10	Peak
3	10400.000	51.39	-16.81	68.20	42.51	37.50	6.35	34.97	Peak
4	15600.000	43.24	-10.76	54.00	29.41	40.74	7.96	34.87	Average
5	15600.000	58.78	-15.22	74.00	44.95	40.74	7.96	34.87	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)

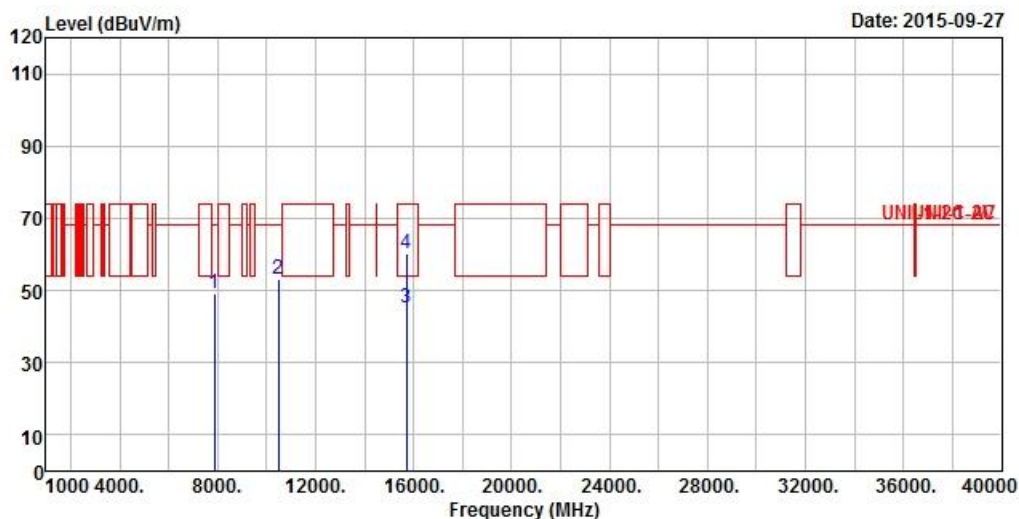
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5240
N_{TX}	1	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	7863.000	49.24	-18.96	68.20	42.85	36.07	5.41	35.09	Peak
2	10480.000	53.10	-15.10	68.20	44.12	37.58	6.30	34.90	Peak
3	15720.000	45.23	-8.77	54.00	31.45	40.91	7.86	34.99	Average
4	15720.000	60.10	-13.90	74.00	46.32	40.91	7.86	34.99	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)

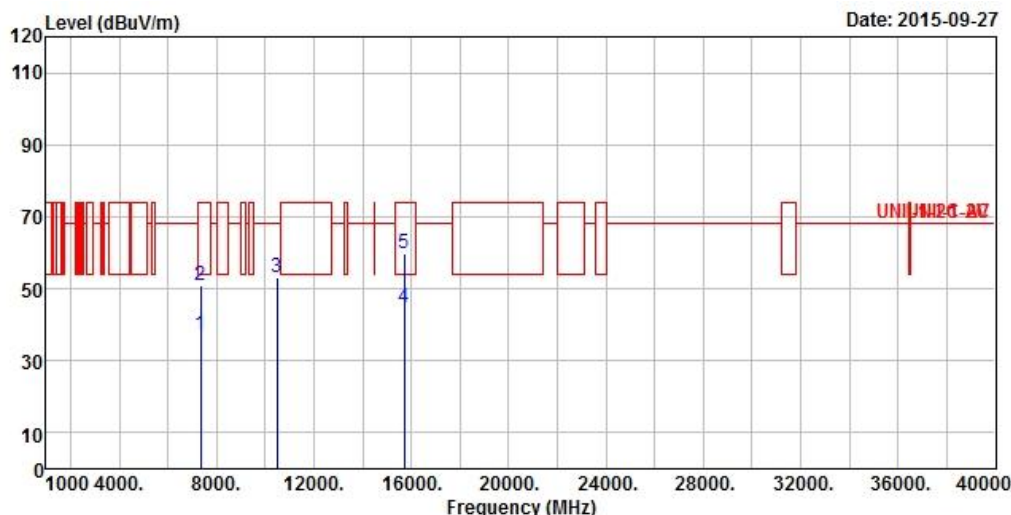
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5240
N_{TX}	1	Polarization	H



	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	7352.000	37.04	-16.96	54.00	30.53	35.94	5.52	34.95	Average
2	7352.000	51.14	-22.86	74.00	44.63	35.94	5.52	34.95	Peak
3	10480.000	52.97	-15.23	68.20	43.99	37.58	6.30	34.90	Peak
4	15720.000	44.67	-9.33	54.00	30.89	40.91	7.86	34.99	Average
5	15720.000	59.65	-14.35	74.00	45.87	40.91	7.86	34.99	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)

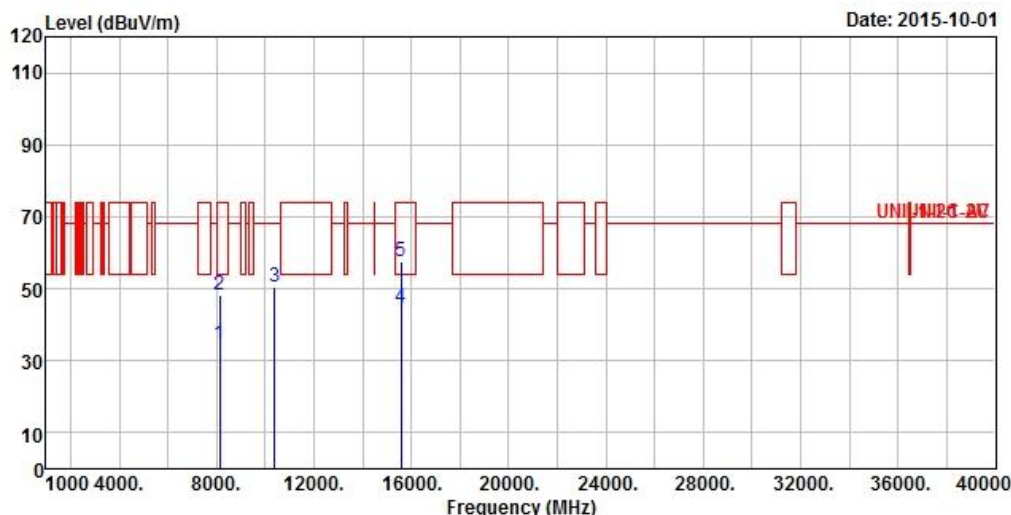
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5190
N_{TX}	1	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	8130.000	34.33	-19.67	54.00	27.94	36.15	5.36	35.12	Average
2	8130.000	48.45	-25.55	74.00	42.06	36.15	5.36	35.12	Peak
3	10380.000	50.63	-17.57	68.20	41.79	37.48	6.35	34.99	Peak
4	15570.000	44.92	-9.08	54.00	31.08	40.70	7.96	34.82	Average
5	15570.000	57.75	-16.25	74.00	43.91	40.70	7.96	34.82	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)

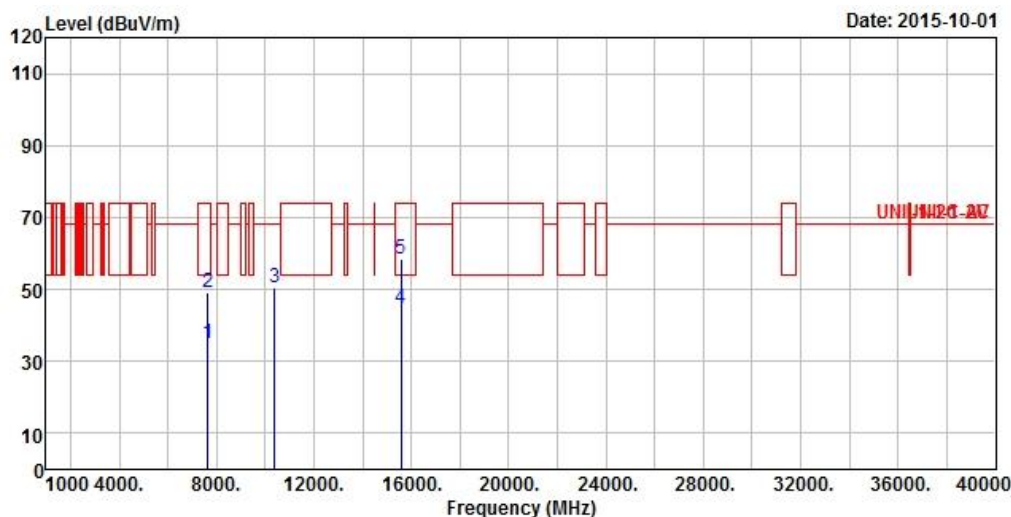
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5190
N_{TX}	1	Polarization	H



	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	7644.000	34.97	-19.03	54.00	28.36	36.03	5.61	35.03	Average
2	7644.000	49.09	-24.91	74.00	42.48	36.03	5.61	35.03	Peak
3	10380.000	50.69	-17.51	68.20	41.85	37.48	6.35	34.99	Peak
4	15570.000	44.91	-9.09	54.00	31.07	40.70	7.96	34.82	Average
5	15570.000	58.41	-15.59	74.00	44.57	40.70	7.96	34.82	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)

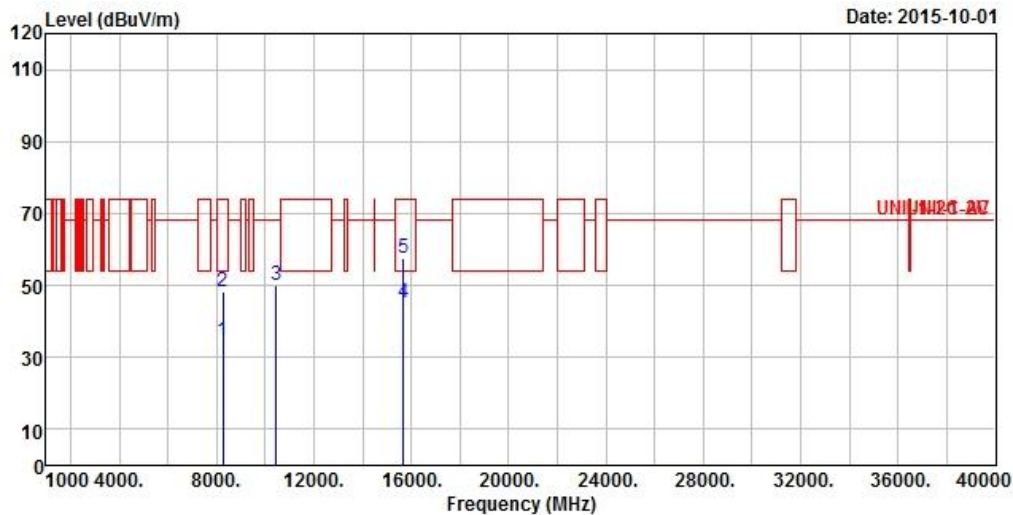
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5230
N_{TX}	1	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8274.000	34.69	-19.31	54.00	28.18	36.21	5.40	35.10 Average
2	8274.000	48.47	-25.53	74.00	41.96	36.21	5.40	35.10 Peak
3	10460.000	50.14	-18.06	68.20	41.21	37.55	6.30	34.92 Peak
4	15690.000	45.22	-8.78	54.00	31.45	40.87	7.86	34.96 Average
5	15690.000	57.67	-16.33	74.00	43.90	40.87	7.86	34.96 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)

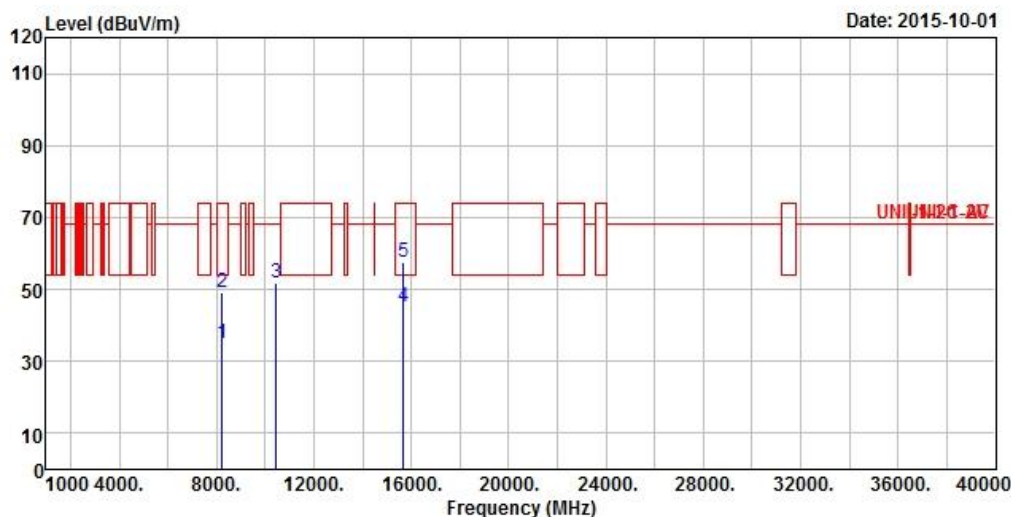
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5230
N_{TX}	1	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8238.000	34.83	-19.17	54.00	28.34	36.20	5.39	35.10 Average
2	8238.000	49.33	-24.67	74.00	42.84	36.20	5.39	35.10 Peak
3	10460.000	51.96	-16.24	68.20	43.03	37.55	6.30	34.92 Peak
4	15690.000	45.27	-8.73	54.00	31.50	40.87	7.86	34.96 Average
5	15690.000	57.56	-16.44	74.00	43.79	40.87	7.86	34.96 Peak

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

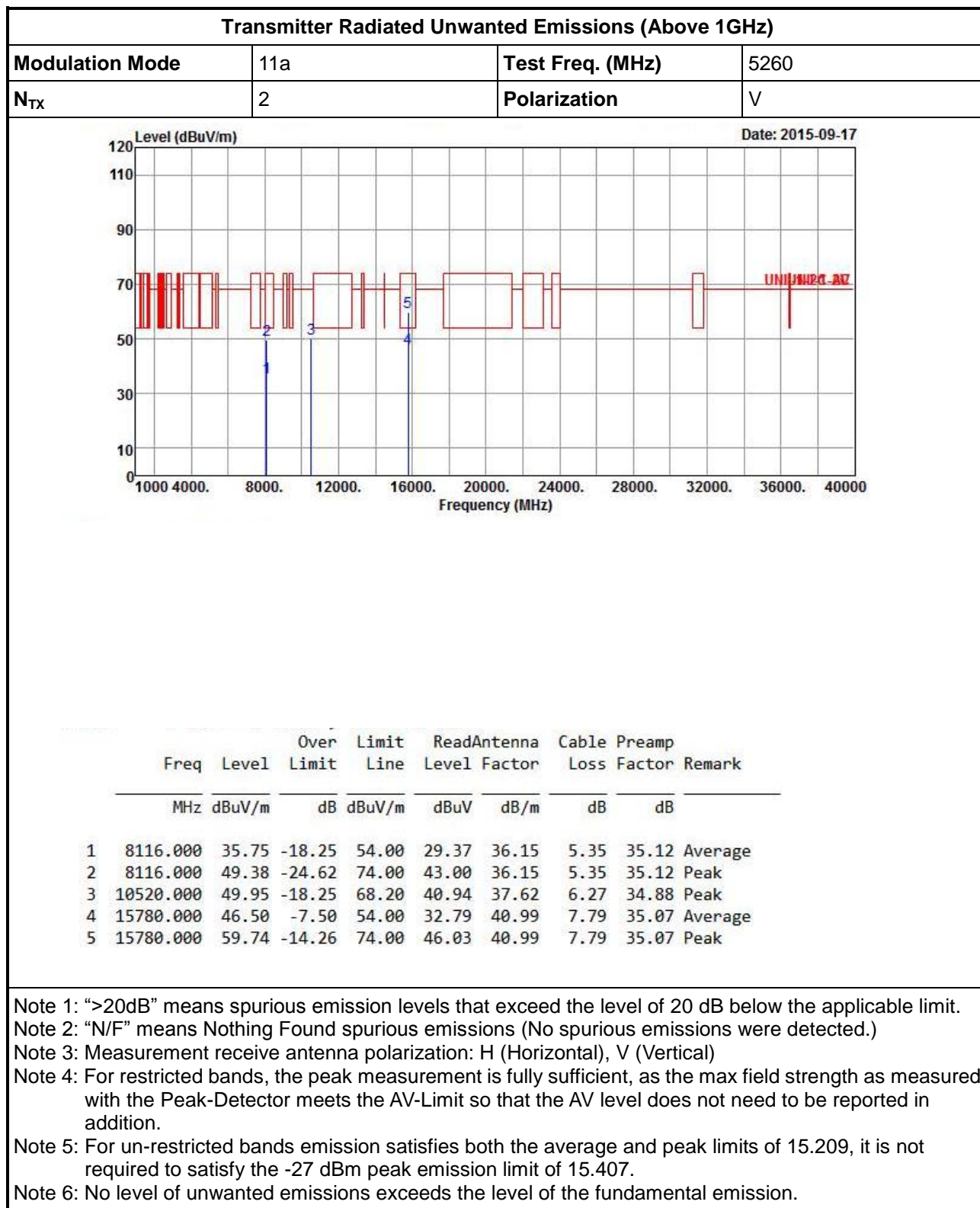
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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.

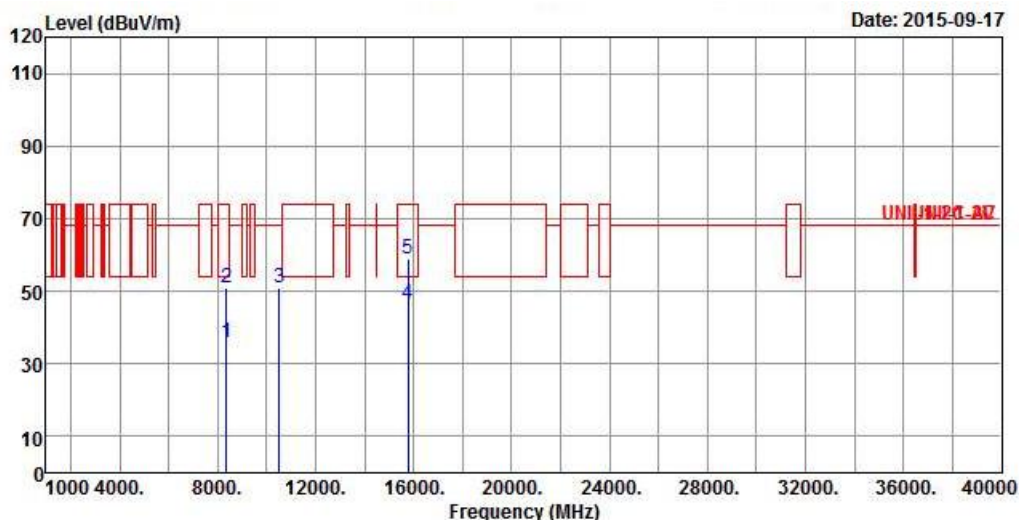
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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

3.6.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5250-5350MHz


Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11a	Test Freq. (MHz)	5260
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8352.000	35.81	-18.19	54.00	29.23	36.24	5.43	35.09 Average
2	8352.000	50.82	-23.18	74.00	44.24	36.24	5.43	35.09 Peak
3	10520.000	50.70	-17.50	68.20	41.69	37.62	6.27	34.88 Peak
4	15780.000	46.47	-7.53	54.00	32.76	40.99	7.79	35.07 Average
5	15780.000	59.04	-14.96	74.00	45.33	40.99	7.79	35.07 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)

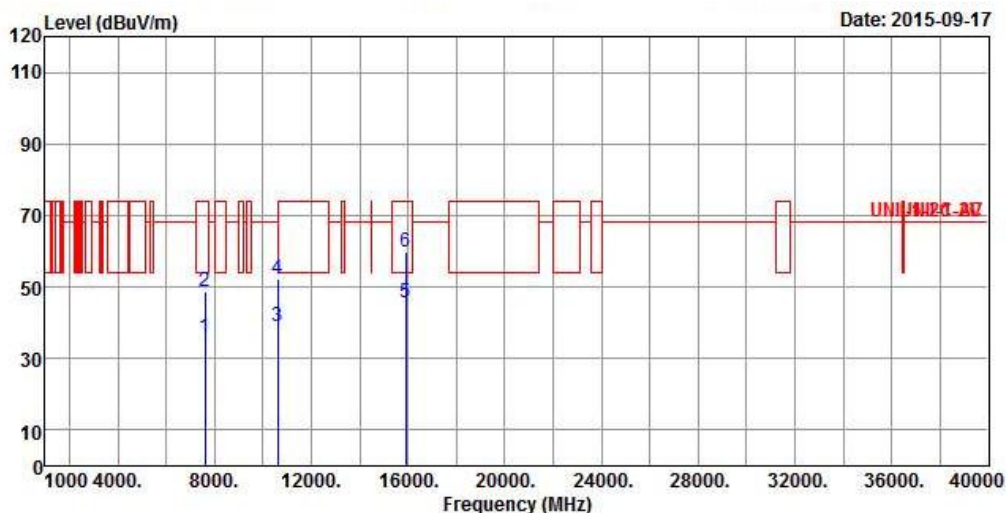
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5300
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7612.000	35.68	-18.32	54.00	29.06	36.02	5.61	35.01	Average
2	7612.000	48.70	-25.30	74.00	42.08	36.02	5.61	35.01	Peak
3	10600.000	38.83	-15.17	54.00	29.60	37.72	6.27	34.76	Average
4	10600.000	52.35	-15.85	68.20	43.12	37.72	6.27	34.76	Peak
5	15900.000	45.58	-8.42	54.00	31.92	41.16	7.69	35.19	Average
6	15900.000	59.67	-14.33	74.00	46.01	41.16	7.69	35.19	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)

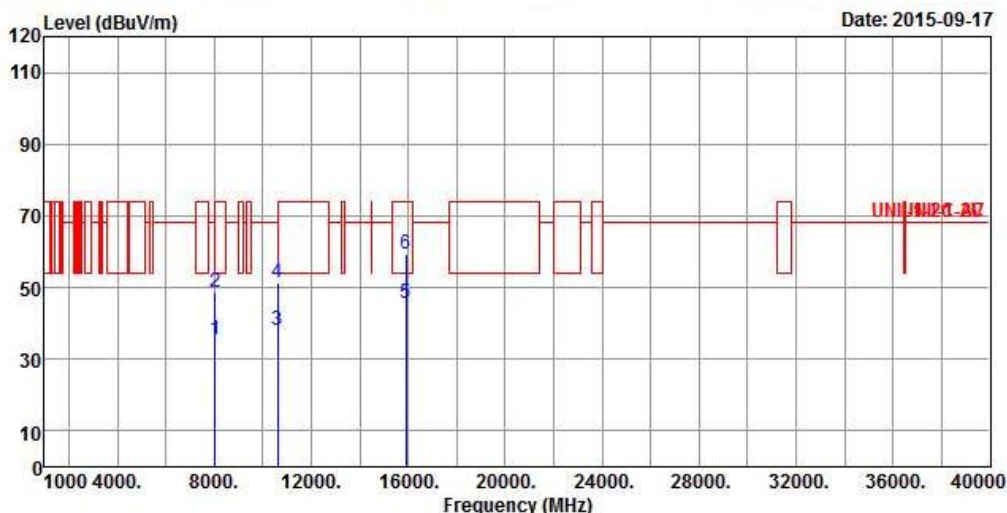
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5300
N_{TX}	2	Polarization	H



	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	8036.000	35.27	-18.73	54.00	28.98	36.11	5.32	35.14	Average
2	8036.000	48.61	-25.39	74.00	42.32	36.11	5.32	35.14	Peak
3	10600.000	38.27	-15.73	54.00	29.04	37.72	6.27	34.76	Average
4	10600.000	51.41	-16.79	68.20	42.18	37.72	6.27	34.76	Peak
5	15900.000	45.51	-8.49	54.00	31.85	41.16	7.69	35.19	Average
6	15900.000	59.21	-14.79	74.00	45.55	41.16	7.69	35.19	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)

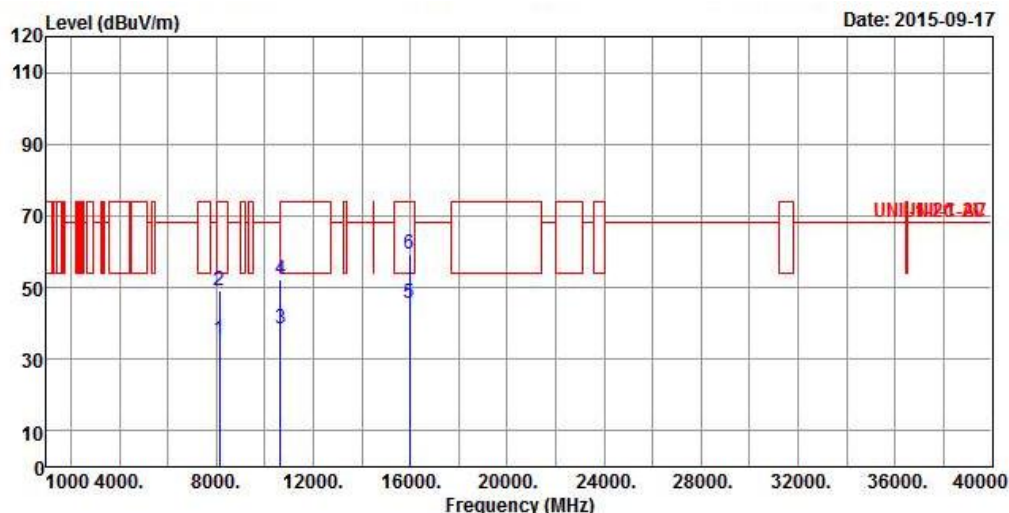
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5320
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8128.000	35.34	-18.66	54.00	28.95	36.15	5.36	35.12	Average
2	8128.000	49.29	-24.71	74.00	42.90	36.15	5.36	35.12	Peak
3	10640.000	38.37	-15.63	54.00	29.01	37.77	6.26	34.67	Average
4	10640.000	52.15	-21.85	74.00	42.79	37.77	6.26	34.67	Peak
5	15960.000	45.46	-8.54	54.00	31.86	41.25	7.62	35.27	Average
6	15960.000	59.23	-14.77	74.00	45.63	41.25	7.62	35.27	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)

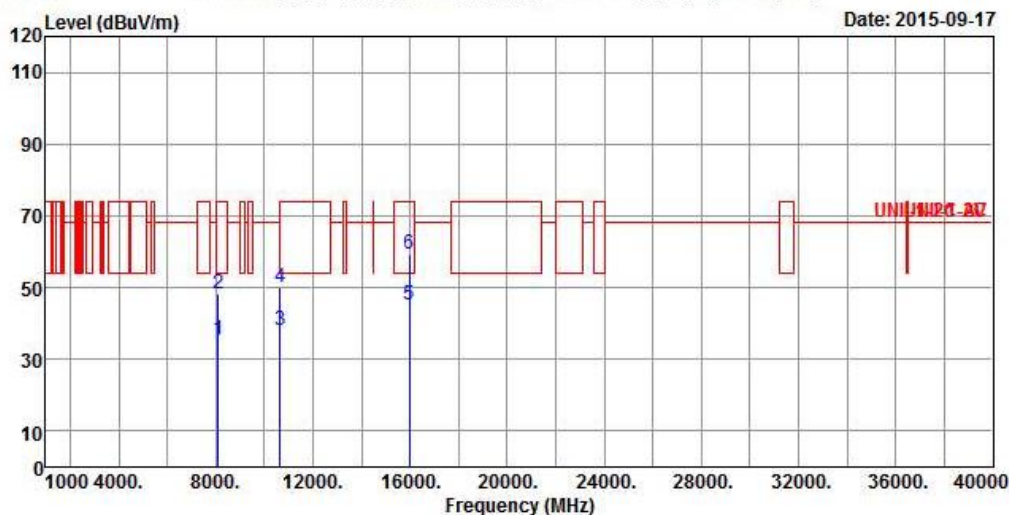
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	11a	Test Freq. (MHz)	5320
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8116.000	35.45	-18.55	54.00	29.07	36.15	5.35	35.12	Average
2	8116.000	48.43	-25.57	74.00	42.05	36.15	5.35	35.12	Peak
3	10640.000	38.04	-15.96	54.00	28.68	37.77	6.26	34.67	Average
4	10640.000	50.03	-23.97	74.00	40.67	37.77	6.26	34.67	Peak
5	15960.000	45.19	-8.81	54.00	31.59	41.25	7.62	35.27	Average
6	15960.000	59.36	-14.64	74.00	45.76	41.25	7.62	35.27	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)

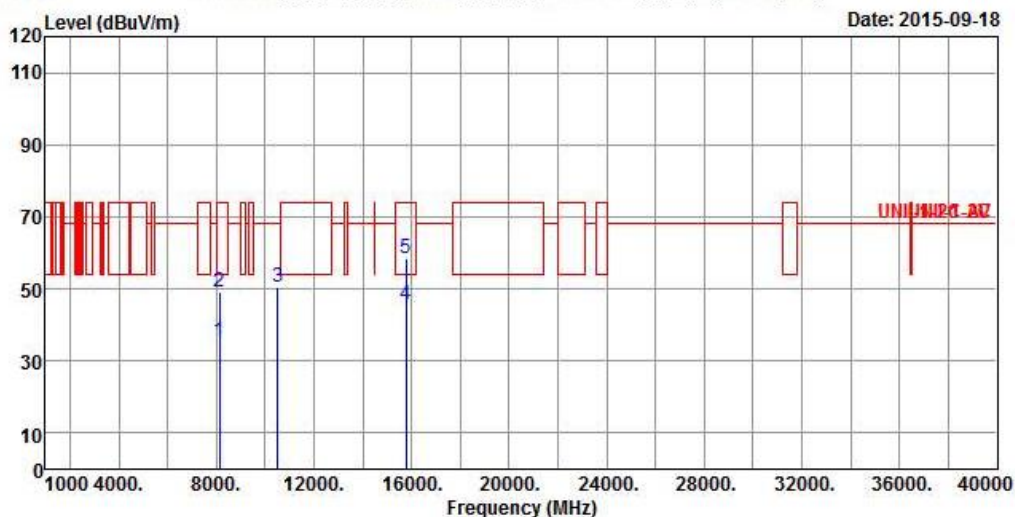
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5260
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8130.000	35.39	-18.61	54.00	29.00	36.15	5.36	35.12	Average
2	8130.000	49.28	-24.72	74.00	42.89	36.15	5.36	35.12	Peak
3	10520.000	50.45	-17.75	68.20	41.44	37.62	6.27	34.88	Peak
4	15780.000	45.78	-8.22	54.00	32.07	40.99	7.79	35.07	Average
5	15780.000	58.30	-15.70	74.00	44.59	40.99	7.79	35.07	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)

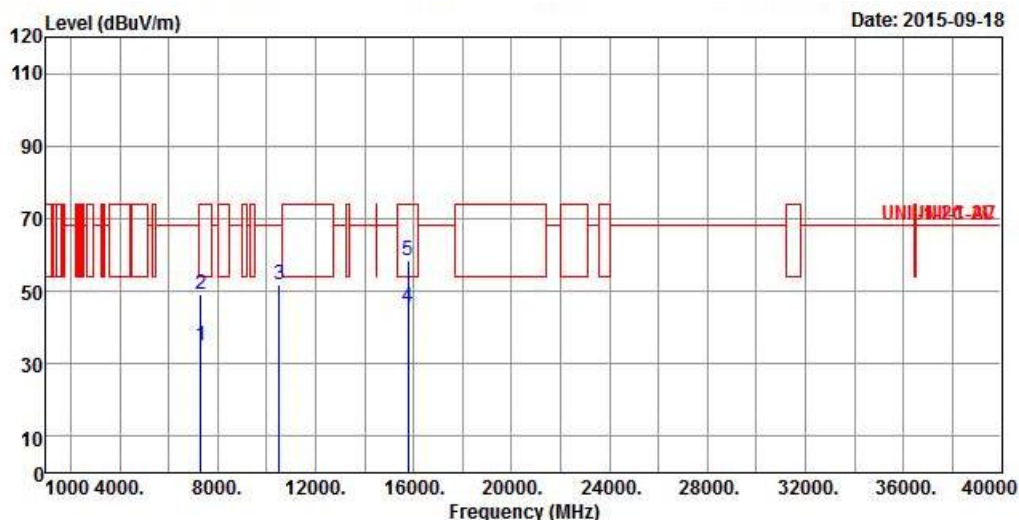
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5260
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamplifier Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	7320.000	34.79	-19.21	54.00	28.34	35.93	5.47	34.95 Average
2	7320.000	49.12	-24.88	74.00	42.67	35.93	5.47	34.95 Peak
3	10520.000	51.66	-16.54	68.20	42.65	37.62	6.27	34.88 Peak
4	15780.000	45.69	-8.31	54.00	31.98	40.99	7.79	35.07 Average
5	15780.000	58.26	-15.74	74.00	44.55	40.99	7.79	35.07 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)

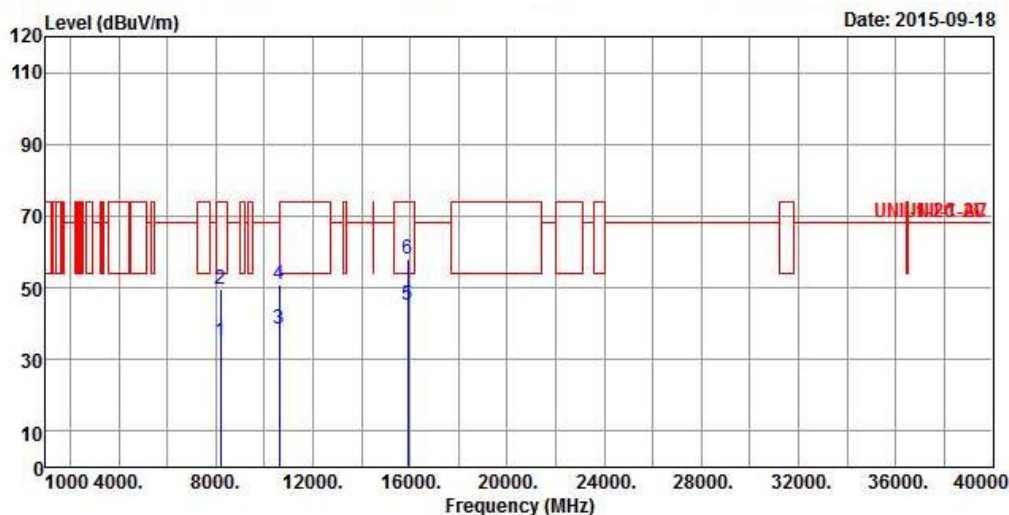
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5300
N_{TX}	2	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	8188.000	35.13	-18.87	54.00	28.69	36.18	5.37	35.11	Average
2	8188.000	49.43	-24.57	74.00	42.99	36.18	5.37	35.11	Peak
3	10600.000	38.60	-15.40	54.00	29.37	37.72	6.27	34.76	Average
4	10600.000	51.04	-22.96	74.00	41.81	37.72	6.27	34.76	Peak
5	15900.000	45.33	-8.67	54.00	31.67	41.16	7.69	35.19	Average
6	15900.000	57.88	-16.12	74.00	44.22	41.16	7.69	35.19	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)

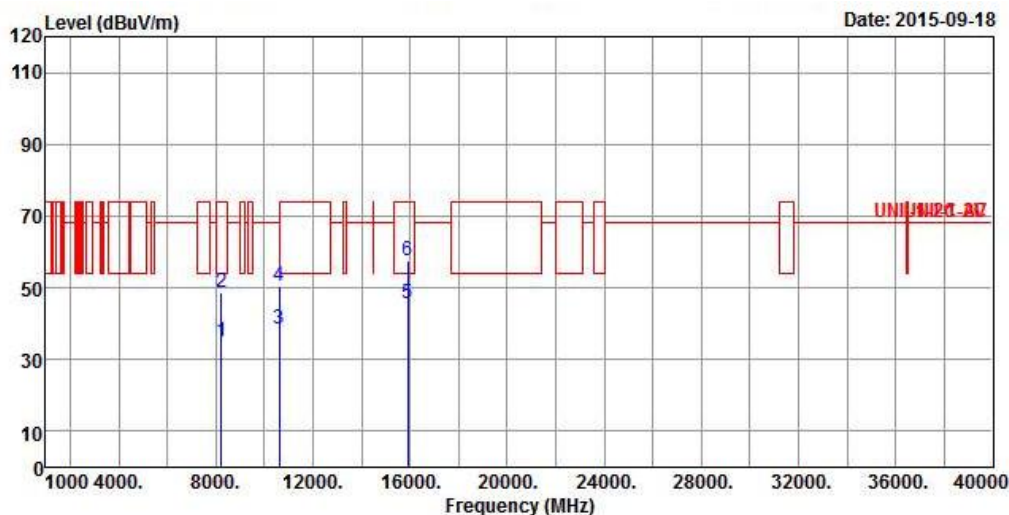
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5300
N_{TX}	2	Polarization	H



	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	8238.000	35.07	-18.93	54.00	28.58	36.20	5.39	35.10	Average
2	8238.000	48.69	-25.31	74.00	42.20	36.20	5.39	35.10	Peak
3	10600.000	38.36	-15.64	54.00	29.13	37.72	6.27	34.76	Average
4	10600.000	50.60	-23.40	74.00	41.37	37.72	6.27	34.76	Peak
5	15900.000	45.56	-8.44	54.00	31.90	41.16	7.69	35.19	Average
6	15900.000	57.54	-16.46	74.00	43.88	41.16	7.69	35.19	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)

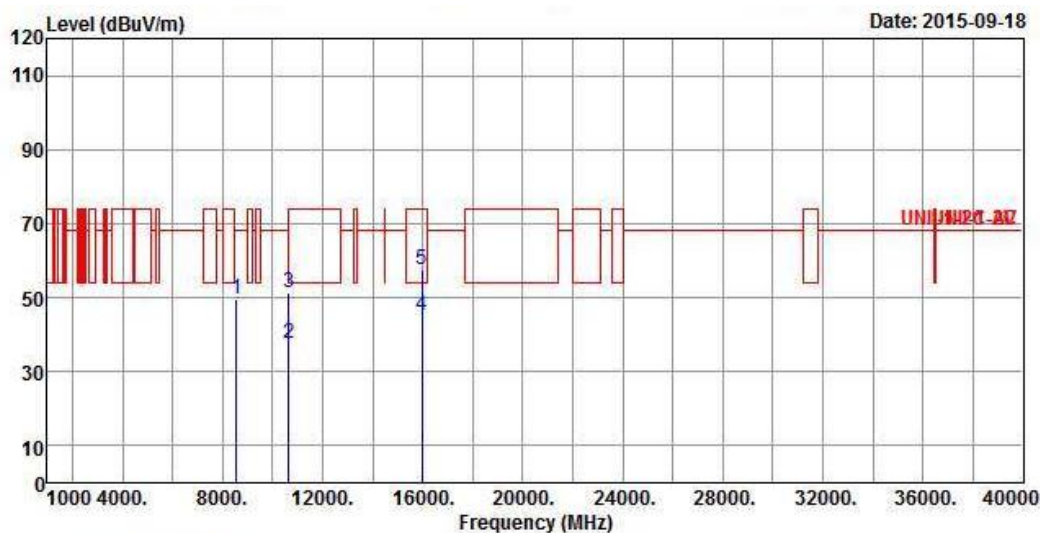
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5320
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Preamp Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8544.000	49.66	-18.54	68.20	42.92	36.31	5.50	35.07 Peak
2	10640.000	37.56	-16.44	54.00	28.20	37.77	6.26	34.67 Average
3	10640.000	51.28	-22.72	74.00	41.92	37.77	6.26	34.67 Peak
4	15960.000	45.21	-8.79	54.00	31.61	41.25	7.62	35.27 Average
5	15960.000	57.56	-16.44	74.00	43.96	41.25	7.62	35.27 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)

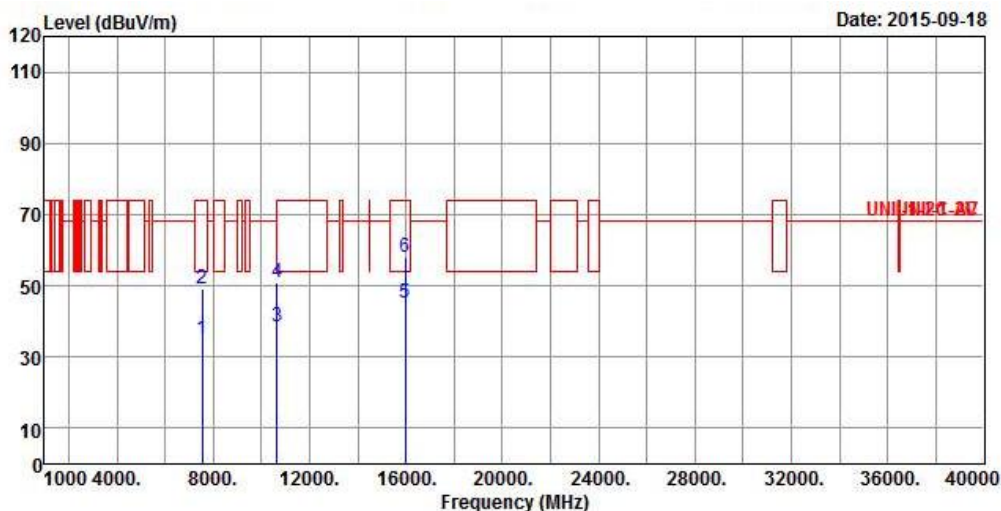
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT20	Test Freq. (MHz)	5320
N_{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7554.000	34.94	-19.06	54.00	28.25	36.01	5.68	35.00	Average
2	7554.000	49.35	-24.65	74.00	42.66	36.01	5.68	35.00	Peak
3	10640.000	38.32	-15.68	54.00	28.96	37.77	6.26	34.67	Average
4	10640.000	50.83	-23.17	74.00	41.47	37.77	6.26	34.67	Peak
5	15960.000	45.14	-8.86	54.00	31.54	41.25	7.62	35.27	Average
6	15960.000	58.02	-15.98	74.00	44.42	41.25	7.62	35.27	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)

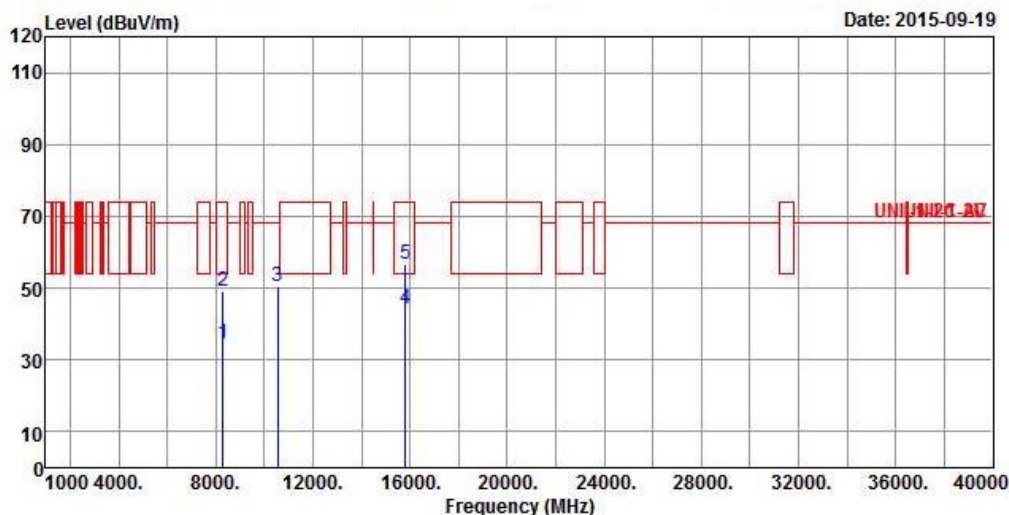
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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	HT40	Test Freq. (MHz)	5270
N_{TX}	2	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8292.000	34.61	-19.39	54.00	28.08	36.22	5.40	35.09	Average
2	8292.000	49.18	-24.82	74.00	42.65	36.22	5.40	35.09	Peak
3	10540.000	50.55	-17.65	68.20	41.48	37.64	6.27	34.84	Peak
4	15810.000	44.20	-9.80	54.00	30.51	41.03	7.76	35.10	Average
5	15810.000	56.66	-17.34	74.00	42.97	41.03	7.76	35.10	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.