



# FCC Test Report

**Equipment** : 11ac Wireless Dual-Band USB Adapter  
**Brand Name** : EDIMAX  
**Model No.** : EW-7811UTC / EW-7811UAC / EW-7811DAC /  
GWU-H811UTC / GWU-H811UAC  
**FCC ID** : NDD9578111305  
**Standard** : 47 CFR FCC Part 15.247  
**Operating Band** : 2400 MHz – 2483.5 MHz  
**FCC Classification** : DTS  
**Applicant** : EDIMAX TECHNOLOGY CO., LTD.  
**Manufacturer** : No.3,Wu-Chuan 3rd Road,Wu-Ku Industrial Park,  
New Taipei City, Taiwan  
**Multiple Listing** : Please refer to section 1.1.1

The product sample received on Aug. 15, 2013 and completely tested on Nov. 25, 2013. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 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:

  
Wayne Hsu / Assistant Manager





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### APPENDIX A. TEST PHOTOS

### APPENDIX B. PHOTOGRAPHS OF EUT



## Summary of Test Result

Conformance Test Specifications					
Report Clause	Ref. Std. Clause	Description	Measured	Limit	Result
1.1.3	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	[dBuV]: 0.1903870MHz 52.77 (Margin 11.25dB) – QP 41.06 (Margin 12.96dB) - AV	FCC 15.207	Complied
3.2	15.247(a)	6dB Bandwidth	6dB Bandwidth Unit [MHz] 20M: 9.28 / 40M: 36.36	≥500kHz	Complied
3.3	15.247(b)	RF Output Power (Maximum Peak Conducted Output Power)	Power [dBm]: 21.82	Power [dBm]:30	Complied
3.4	15.247(d)	Power Spectral Density	PSD [dBm/100kHz]:-9.35	PSD [dBm/3kHz]:8	Complied
3.5	15.247(c)	Transmitter Radiated Bandedge Emissions	Non-Restricted Bands: 2504.72MHz: 29.07dB Restricted Bands dBuV/m at 3m]: 2389.97MHz 66.53 (Margin 7.47dB) – PK 53.00 (Margin 1.00dB) - AV	Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209	Complied
3.6	15.247(c)	Transmitter Radiated Unwanted Emissions	Restricted Bands [dBuV/m at 3m]: 319.060MHz 44.02 (Margin 1.98dB) – QP	Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209	Complied



## Revision History



## 1 General Description

### 1.1 Information

#### 1.1.1 Table for Multiple Listing

Brand and models that are exactly the same EUT, products with different models only because of market segmentation.

NO.	Brand Name	Model Name
1	Edimax	EW-7811UTC, EW-7811UAC, EW-7811DAC, GWU-H811UTC, GWU-H811UAC
2	Rosewill	AC600UB (#33-166-105)

#### 1.1.2 RF General Information

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N <sub>Tx</sub> )	RF Output Power (dBm)
2400-2483.5	b	2412-2462	1-11 [11]	1	20.99
2400-2483.5	g	2412-2462	1-11 [11]	1	21.08
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	1	21.82
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	1	21.79

Note 1: RF output power specifies that Maximum Peak Conducted Output Power.  
Note 2: 802.11b uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.  
Note 3: 802.11g/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.  
Note 4: Co-location, Co-location is generally defined as simultaneously transmitting (co-transmitting) antennas within 20 cm of each other. (i.e., EUT has simultaneously co-transmitting that operating 2.4GHz and 5GHz.)



### 1.1.3 Antenna Information

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

Antenna General Information					
No.	Ant. Cat.	Ant. Type	Part No.	Gain (dBi)	Model Name
1	External	Dipole	RFA-25-C57F0-70B-10	4.00	EW-7811UAC, GWU-H811UAC
			EDA-1310-25GC1-A2	2.14	
2	Integral	PIFA	ALU120-222026	2.00	EW-7811UTC, GWU-H811UTC
3	External	Directional Antenna	RFA-25-7-ST73F0-10	4.20	EW-7811DAC

NOTE: The RF Conducted performed the worst configuration for higher gain was test in final test report.

### 1.1.4 Type of EUT

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



### 1.1.5 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle	
Test Signal Duty Cycle (x)	
	Power Duty Factor [dB] – (10 log 1/x)
<input type="checkbox"/> Operated normally mode for worst duty cycle	
<input checked="" type="checkbox"/> Operated test mode for worst duty cycle	
<input checked="" type="checkbox"/> 100% - IEEE 802.11b	0
<input checked="" type="checkbox"/> 100% - IEEE 802.11g	0
<input checked="" type="checkbox"/> 100% - IEEE 802.11n (HT20)	0
<input checked="" type="checkbox"/> 100% - IEEE 802.11n (HT40)	0

### 1.1.6 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"/> Battery



## 1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2009
- ♦ FCC KDB 558074
- ♦ FCC KDB 662911

## 1.3 Testing Location Information

Testing Location			
	HWA YA	ADD	TEL
Test Condition	Test Site No.	Test Engineer	Test Environment
AC Conduction	CO04-HY	Zeus	24°C / 51%
RF Conducted	TH01-HY	Ian	21.9°C / 64%
Radiated Emission	03CH03-HY	Spirit	24°C / 62%



## 1.4 Measurement Uncertainty

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

Measurement Uncertainty		
Test Item	Uncertainty	
AC power-line conducted emissions	$\pm 2.26$ dB	
Emission bandwidth, 6dB bandwidth	$\pm 1.42$ %	
RF output power, conducted	$\pm 0.63$ dB	
Power density, conducted	$\pm 0.81$ dB	
Unwanted emissions, conducted	9 – 150 kHz	$\pm 0.38$ dB
	0.15 – 30 MHz	$\pm 0.42$ dB
	30 – 1000 MHz	$\pm 0.51$ dB
	1 – 18 GHz	$\pm 0.67$ dB
	18 – 40 GHz	$\pm 0.83$ dB
	40 – 200 GHz	N/A
All emissions, radiated	9 – 150 kHz	$\pm 2.49$ dB
	0.15 – 30 MHz	$\pm 2.28$ dB
	30 – 1000 MHz	$\pm 2.56$ dB
	1 – 18 GHz	$\pm 3.59$ dB
	18 – 40 GHz	$\pm 3.82$ dB
	40 – 200 GHz	N/A
Temperature	$\pm 0.8$ °C	
Humidity	$\pm 3$ %	
DC and low frequency voltages	$\pm 3$ %	
Time	$\pm 1.42$ %	
Duty Cycle	$\pm 1.42$ %	



## 2 Test Configuration of EUT

### 2.1 The Worst Case Modulation Configuration

Worst Modulation Used for Conformance Testing			
Modulation Mode	Transmit Chains (N <sub>TX</sub> )	Data Rate / MCS	Worst Data Rate / MCS
11b,1-11Mbps	1	1-11 Mbps	1 Mbps
11g,6-54Mbps	1	6-54 Mbps	6 Mbps
HT20,M0-7	1	MCS 0-7	MCS 0
HT40,M0-7	1	MCS 0-7	MCS 0

### 2.2 The Worst Case Power Setting Parameter

The Worst Case Power Setting Parameter (2400-2483.5MHz band)							
Test Software Version	Realtek 11ac 8811A USB WLAN MP_ 0.0033.20130401						
Modulation Mode	N <sub>TX</sub>	Test Frequency (MHz)					
		NCB: 20MHz			NCB: 40MHz		
		2412	2437	2462	2422	2437	2452
11b	1	39	43	40	-	-	-
11g	1	47	52	49	-	-	-
HT-20	1	47	52	49	-	-	-
HT-40	1	-	-	-	43	54	44



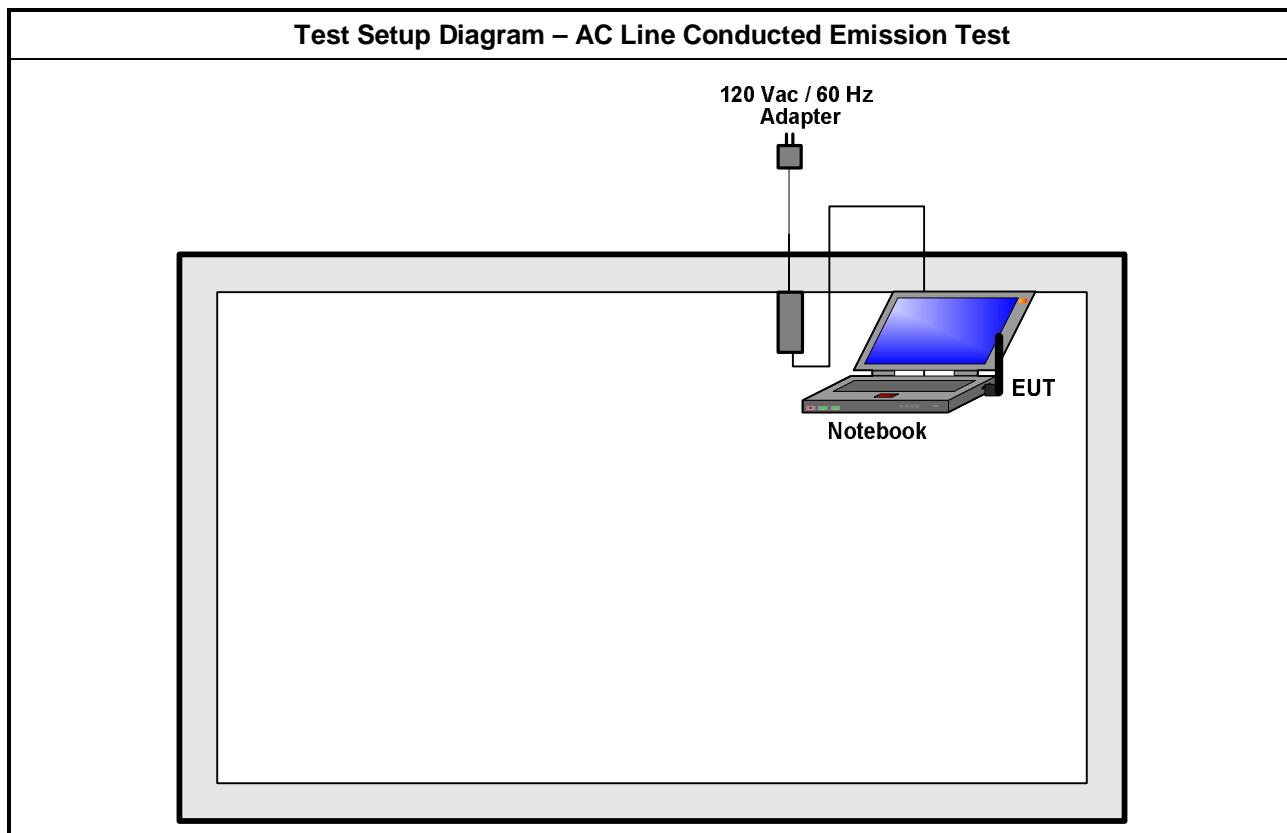
## 2.3 The Worst Case Measurement Configuration

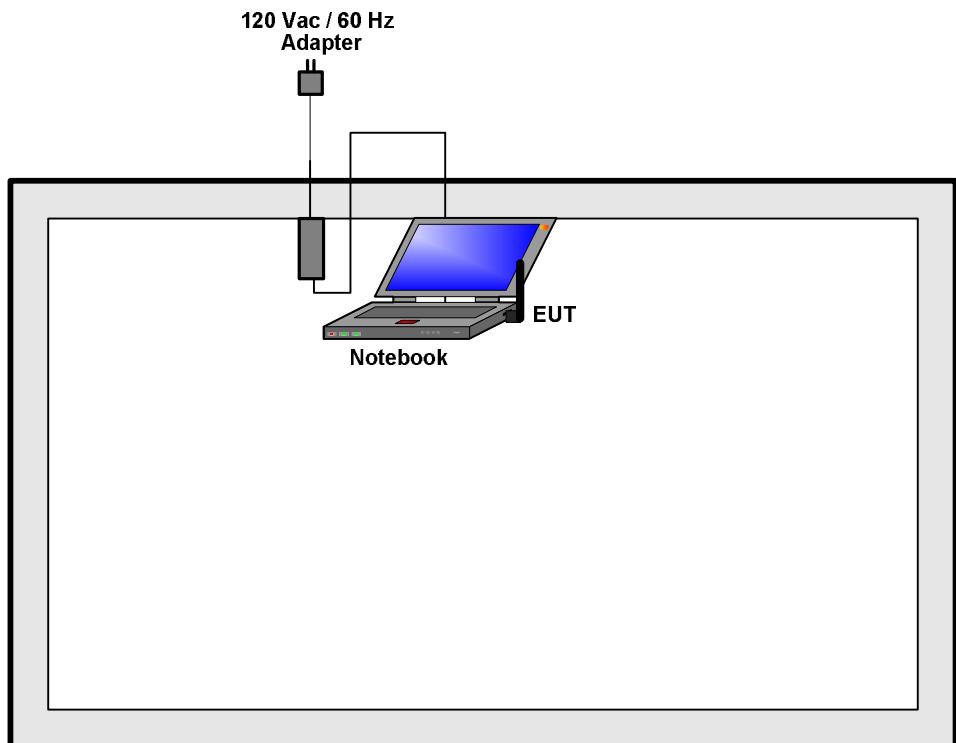
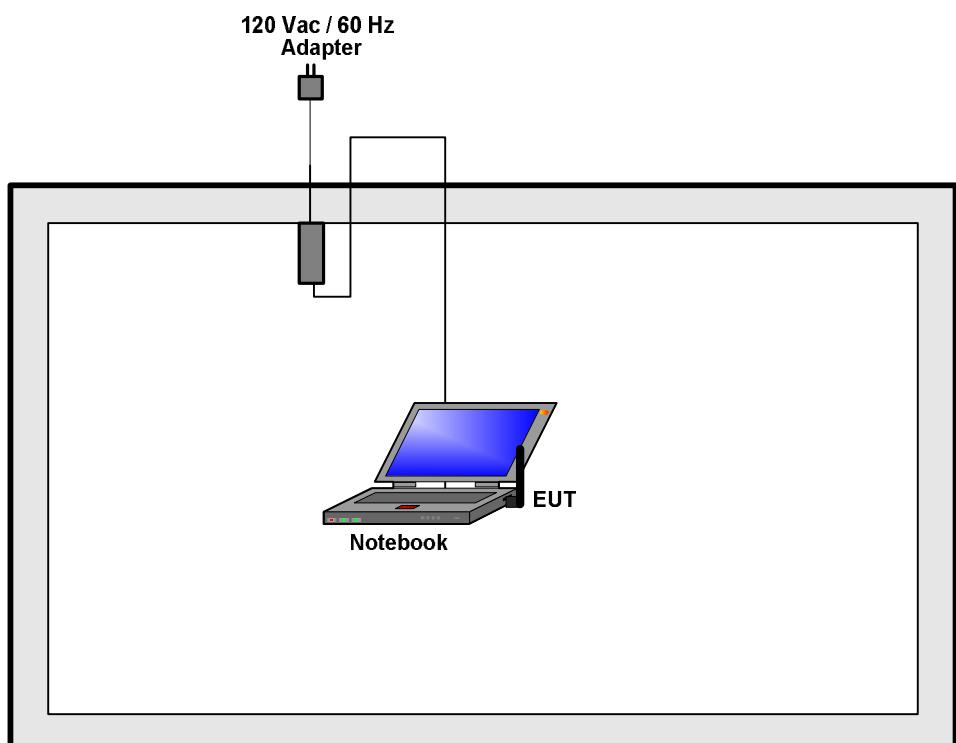
The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
<b>Operating Mode</b>	Operating Mode Description
1	Model Name EW-7811UAC, GWU-H811UAC (WiFi link)
2	Model Name EW-7811UTC, GWU-H811UTC (WiFi link)
3	Model Name EW-7811DAC (WiFi link)

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	RF Output Power, Power Spectral Density, 6 dB Bandwidth
<b>Test Condition</b>	Conducted measurement at transmit chains
<b>Modulation Mode</b>	11b, 11g, HT20, HT40

The Worst Case Mode for Following Conformance Tests					
<b>Tests Item</b>	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions				
<b>Test Condition</b>	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.				
<b>User Position</b>	<input type="checkbox"/> EUT will be placed in fixed position. <input checked="" type="checkbox"/> EUT will be placed in mobile position and operating multiple positions. EUT shall be performed two orthogonal planes. The worst planes is X. <input type="checkbox"/> EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed two or three orthogonal planes.				
<b>Operating Mode</b>	<input checked="" type="checkbox"/> 1. Model Name EW-7811UAC, GWU-H811UAC (WiFi link) <input checked="" type="checkbox"/> 2. Model Name EW-7811UTC, GWU-H811UTC (WiFi link) <input checked="" type="checkbox"/> 3. Model Name EW-7811DAC (WiFi link)				
<b>Modulation Mode</b>	11b, 11g, HT20, HT40				
<b>Orthogonal Planes of EUT</b>	<table border="1"><thead><tr><th>X Plane</th><th>Y Plane</th></tr></thead><tbody><tr><td></td><td></td></tr></tbody></table>	X Plane	Y Plane		
X Plane	Y Plane				
					

## 2.4 Test Setup Diagram



**Test Setup Diagram - Radiated Test (9kHz~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.

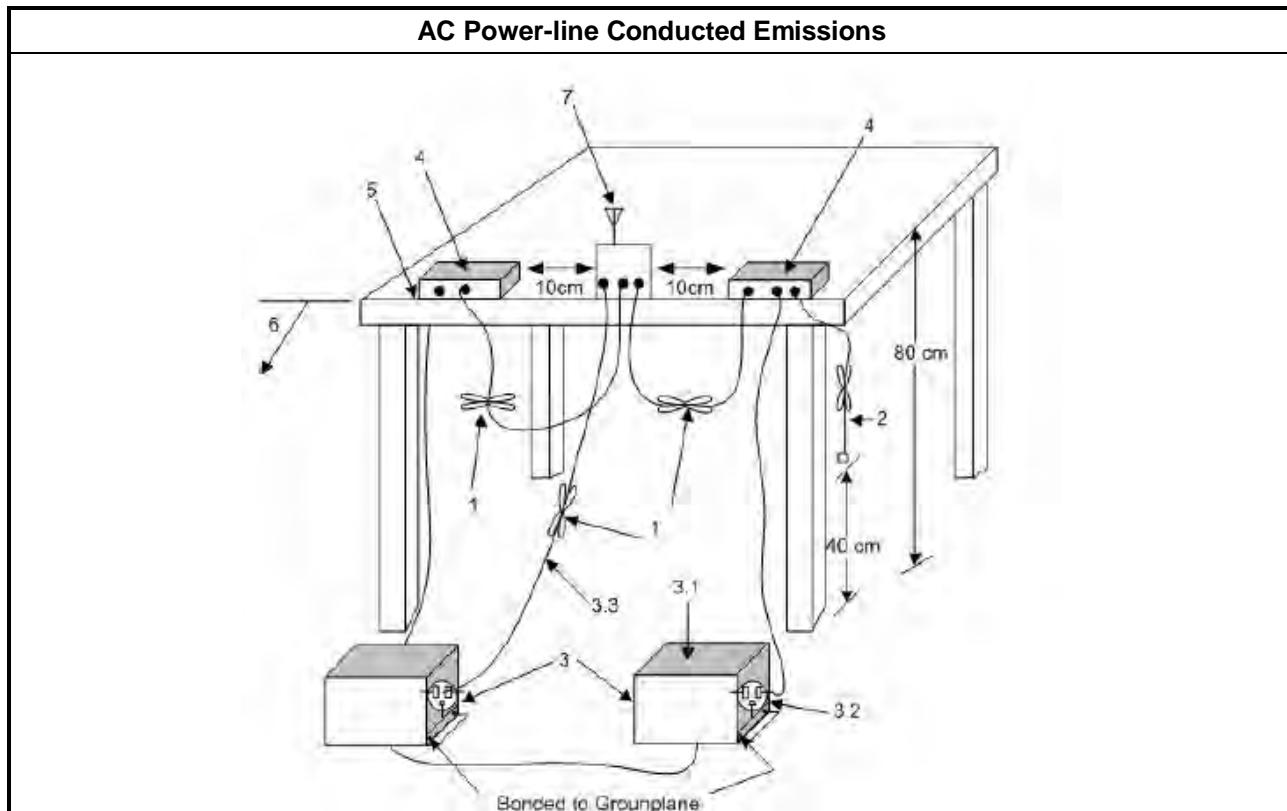
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

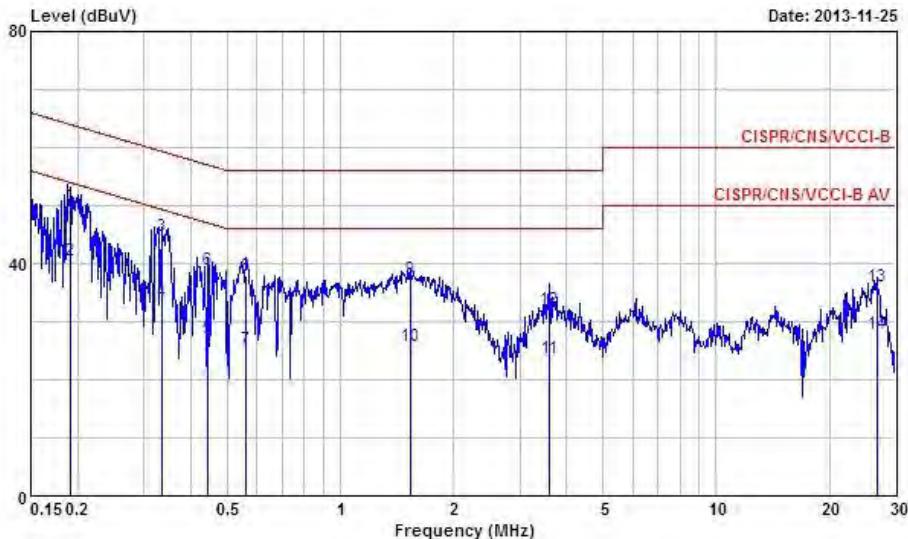
Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2009, clause 6.2 for AC power-line conducted emissions.

##### 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	Neutral					
Operating Function	Model Name EW-7811UAC, GWU-H811UAC (WiFi link)							
								
Freq	Level	Over Limit	Line	Read Level	LISN Factor	Cable Loss	Remark	
MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1 0.1913990	49.97	-14.01	63.98	49.62	0.23	0.12	QP	
2 0.1913990	40.52	-13.46	53.98	40.17	0.23	0.12	Average	
3 0.3338470	44.78	-14.57	59.35	44.46	0.22	0.10	QP	
4 0.3338470	33.47	-15.88	49.35	33.15	0.22	0.10	Average	
5 0.4444290	27.03	-19.95	46.98	26.70	0.22	0.11	Average	
6 0.4444290	39.04	-17.94	56.98	38.71	0.22	0.11	QP	
7 0.5581450	25.19	-20.81	46.00	24.83	0.22	0.14	Average	
8 0.5581450	37.82	-18.18	56.00	37.46	0.22	0.14	QP	
9 1.540	37.46	-18.54	56.00	36.96	0.24	0.26	QP	
10 1.540	25.66	-20.34	46.00	25.16	0.24	0.26	Average	
11 3.600	23.80	-22.20	46.00	23.30	0.28	0.22	Average	
12 3.600	32.16	-23.84	56.00	31.66	0.28	0.22	QP	
13 26.700	36.11	-23.89	60.00	35.39	0.68	0.04	QP	
14 26.700	27.99	-22.01	50.00	27.27	0.68	0.04	Average	

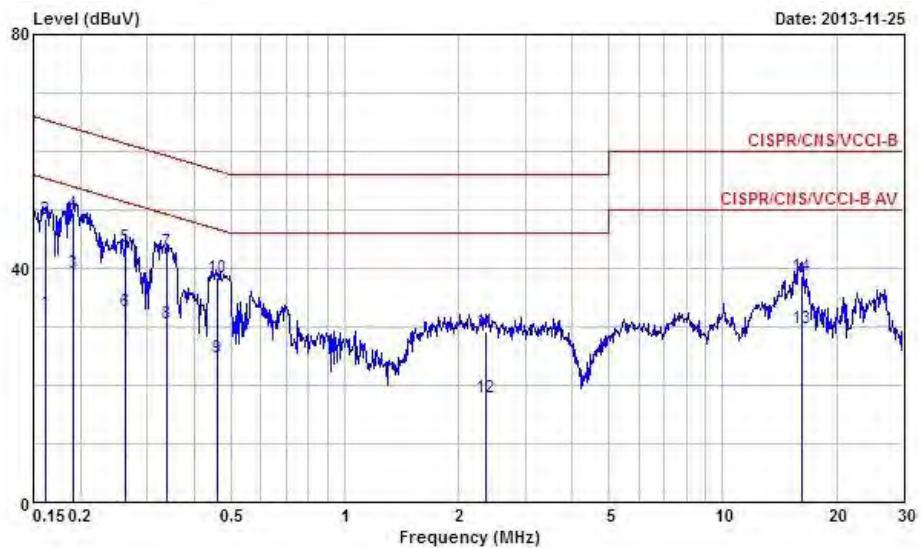
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

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



## AC Power-line Conducted Emissions Result

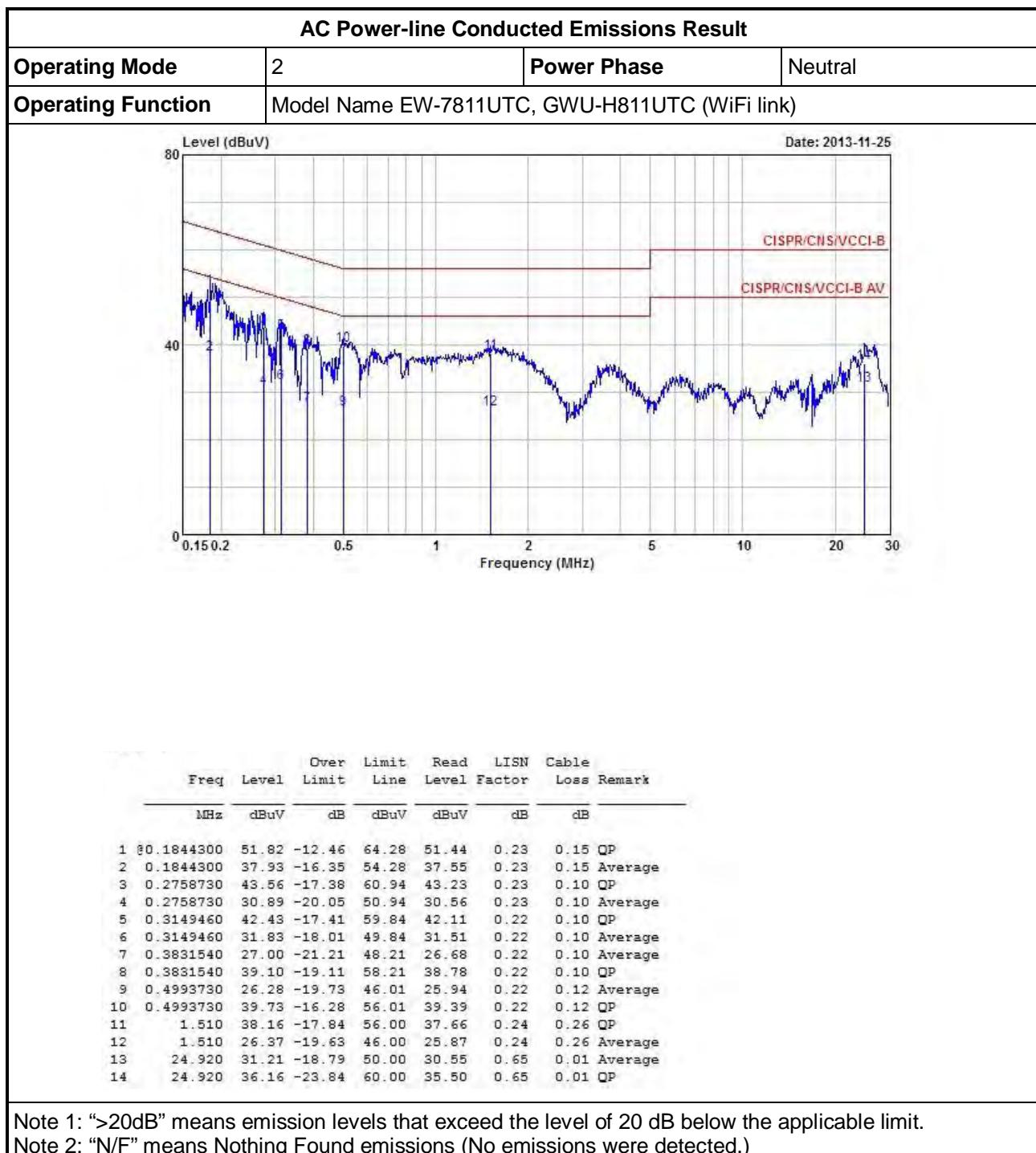
<b>Operating Mode</b>	1	<b>Power Phase</b>	Line
<b>Operating Function</b>	Model Name EW-7811UAC, GWU-H811UAC (WiFi link)		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1615500	32.33	-23.05	55.38	32.00	0.11	0.22	Average
2	0.1615500	48.36	-17.02	65.38	48.03	0.11	0.22	QP
3	0.1903870	39.11	-14.91	54.02	38.87	0.11	0.13	Average
4	0.1903870	49.41	-14.61	64.02	49.17	0.11	0.13	QP
5	0.2630270	43.81	-17.53	61.34	43.60	0.11	0.10	QP
6	0.2630270	32.69	-18.65	51.34	32.48	0.11	0.10	Average
7	0.3374030	42.99	-16.28	59.27	42.79	0.10	0.10	QP
8	0.3374030	30.59	-18.68	49.27	30.39	0.10	0.10	Average
9	0.4612220	24.80	-21.87	46.67	24.58	0.10	0.12	Average
10	0.4612220	38.30	-18.37	56.67	38.08	0.10	0.12	QP
11	2.360	29.20	-26.80	56.00	28.79	0.13	0.28	QP
12	2.360	18.00	-28.00	46.00	17.59	0.13	0.28	Average
13	16.140	29.85	-20.15	50.00	29.36	0.29	0.20	Average
14	16.140	38.56	-21.44	60.00	38.07	0.29	0.20	QP

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.)



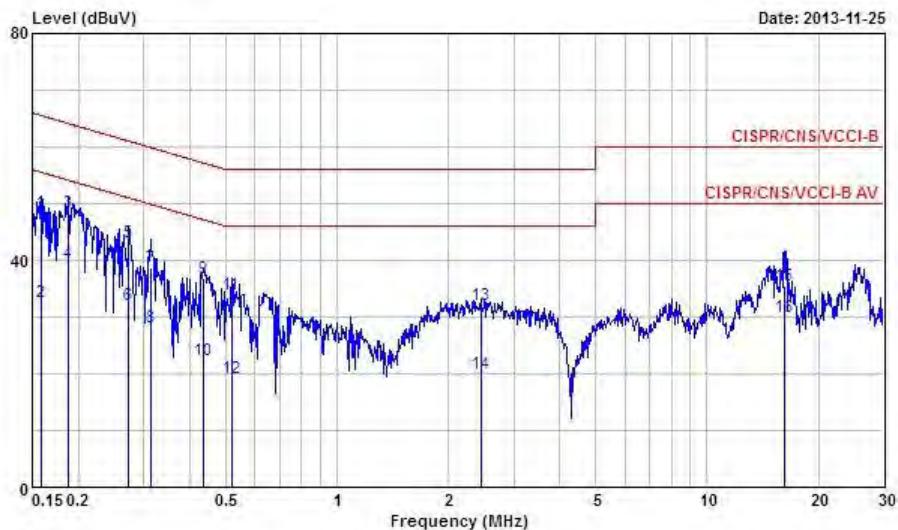
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

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



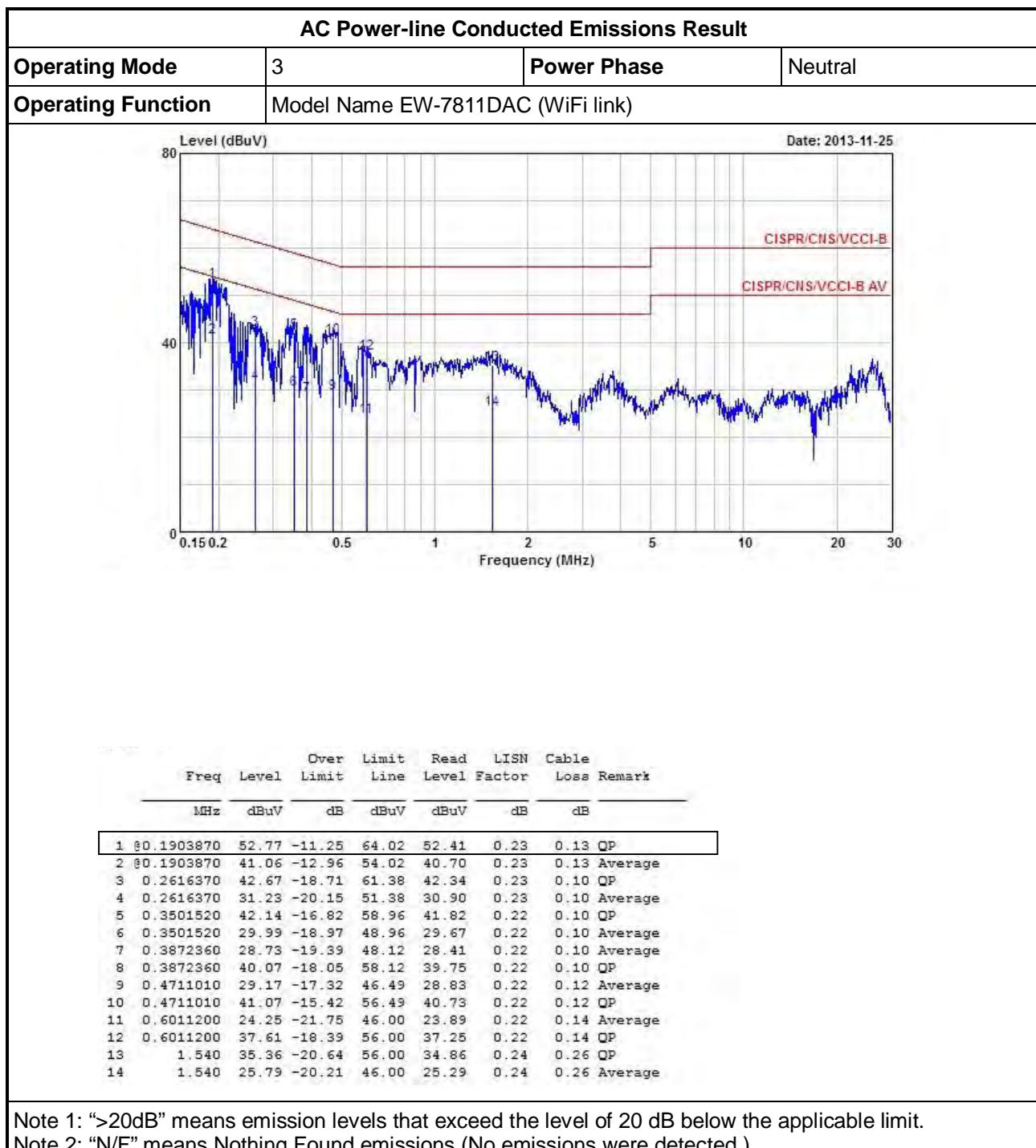
## AC Power-line Conducted Emissions Result

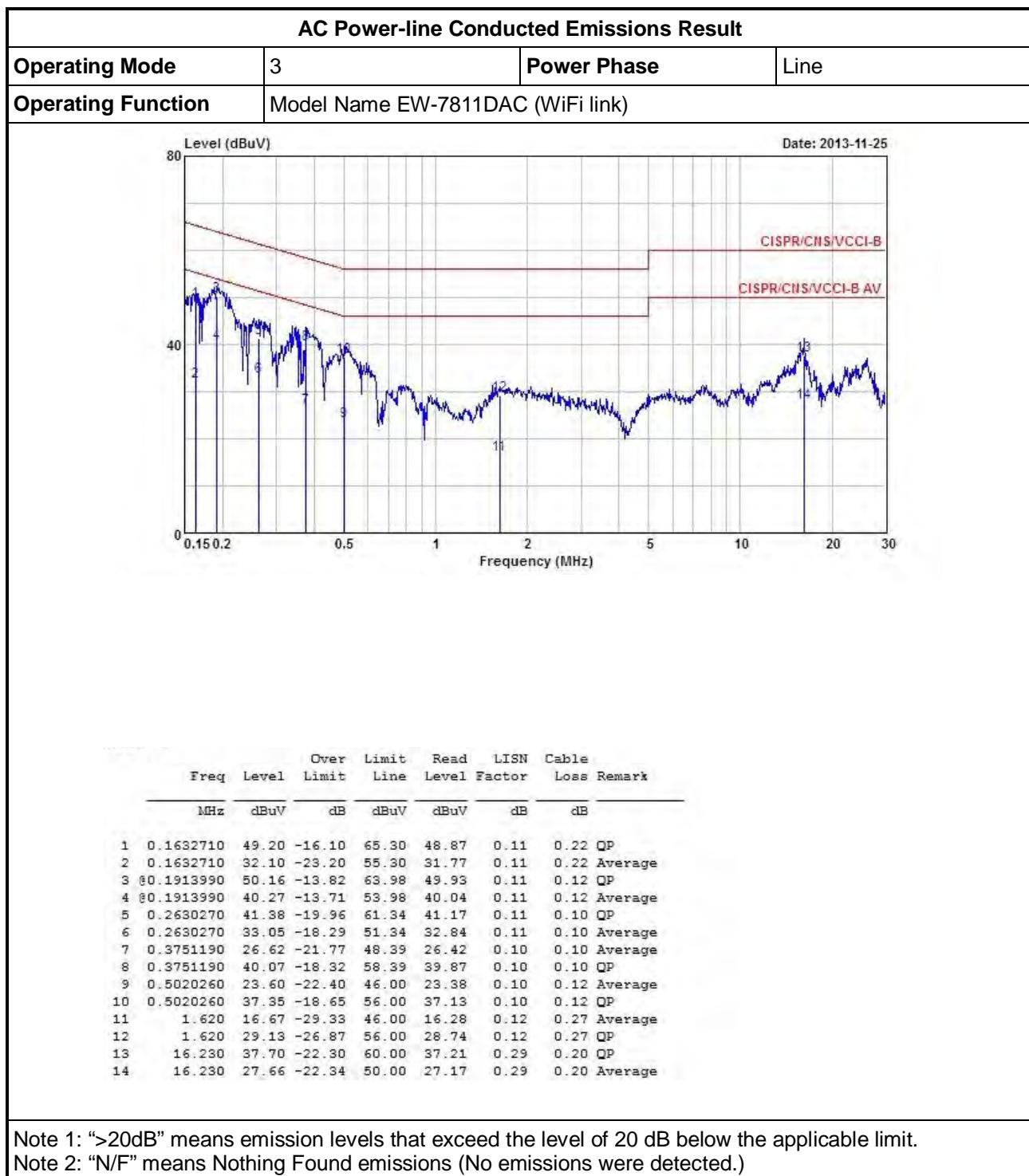
<b>Operating Mode</b>	2	<b>Power Phase</b>	Line
<b>Operating Function</b>	Model Name EW-7811UTC, GWU-H811UTC (WiFi link)		



Freq	Level	Over Limit		Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB
1	0.1581620	48.35	-17.21	65.56	48.00	0.11	0.24	QP
2	0.1581620	32.74	-22.82	55.56	32.39	0.11	0.24	Average
3	0.1883800	48.47	-15.64	64.11	48.23	0.11	0.13	QP
4	0.1883800	39.46	-14.65	54.11	39.22	0.11	0.13	Average
5	0.2729650	43.15	-17.88	61.03	42.94	0.11	0.10	QP
6	0.2729650	32.02	-19.01	51.03	31.81	0.11	0.10	Average
7	0.3132810	38.72	-21.16	59.88	38.52	0.10	0.10	QP
8	0.3132810	28.22	-21.66	49.88	28.02	0.10	0.10	Average
9	0.4351090	36.83	-20.32	57.15	36.62	0.10	0.11	QP
10	0.4351090	22.36	-24.79	47.15	22.15	0.10	0.11	Average
11	0.5182420	33.91	-22.09	56.00	33.68	0.10	0.13	QP
12	0.5182420	19.10	-26.90	46.00	18.87	0.10	0.13	Average
13	2.450	32.10	-23.90	56.00	31.69	0.14	0.27	QP
14	2.450	19.90	-26.10	46.00	19.49	0.14	0.27	Average
15	16.140	35.54	-24.46	60.00	35.05	0.29	0.20	QP
16	16.140	29.93	-20.07	50.00	29.44	0.29	0.20	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 6dB Bandwidth

### 3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
<b>Systems using digital modulation techniques:</b>
<input checked="" type="checkbox"/> 6 dB bandwidth $\geq$ 500 kHz.

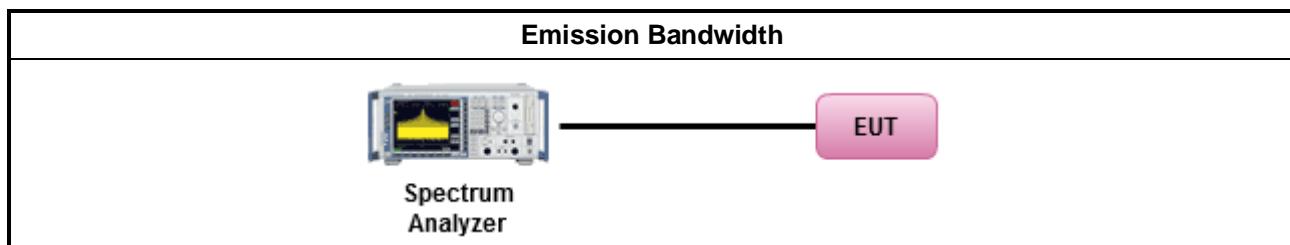
### 3.2.2 Measuring Instruments

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 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.1 for occupied 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 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 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.

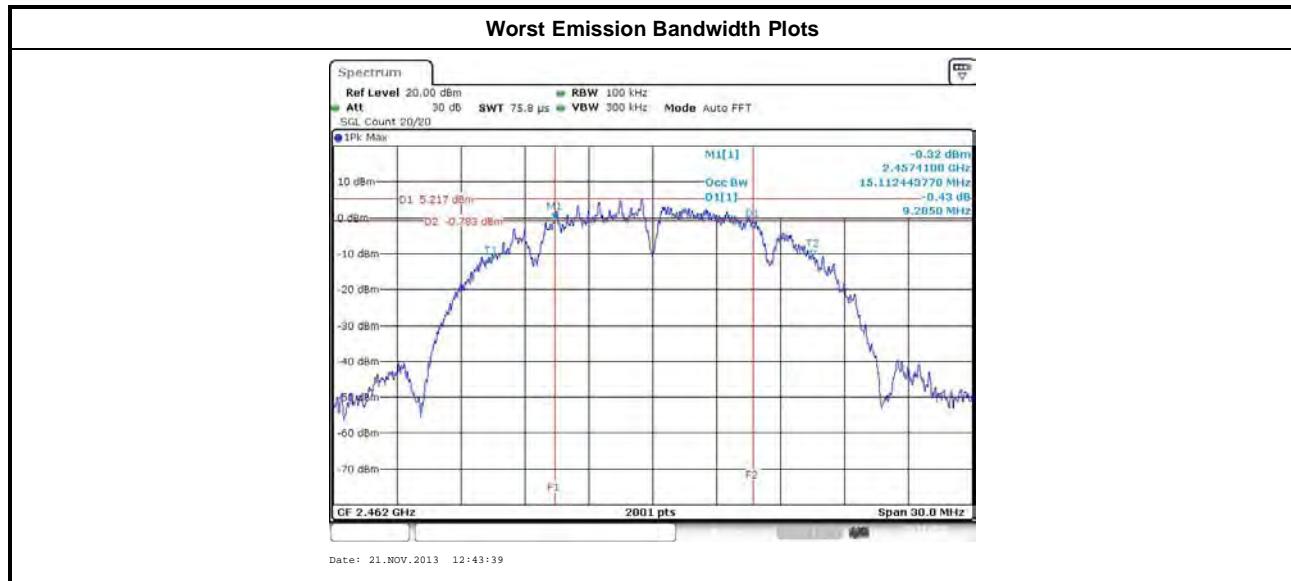
### 3.2.4 Test Setup





## 3.2.5 Test Result of Emission Bandwidth

Emission Bandwidth Result					
Condition			Emission Bandwidth (MHz)		
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	99% Bandwidth	6dB Bandwidth	
11b	1	2412	15.06	10.08	
11b	1	2437	15.08	9.82	
11b	1	2462	15.11	9.28	
11g	1	2412	16.41	16.54	
11g	1	2437	16.47	16.48	
11g	1	2462	16.44	16.50	
HT20	1	2412	17.58	17.62	
HT20	1	2437	17.60	17.67	
HT20	1	2462	17.63	17.74	
HT40	1	2422	36.22	36.40	
HT40	1	2437	36.18	36.40	
HT40	1	2452	36.18	36.36	
Limit			N/A	≥500 kHz	
Result			Complied		

Note 1: N<sub>TX</sub> = Number of Transmit Chains



### 3.3 RF Output Power

#### 3.3.1 RF Output Power Limit

RF Output Power Limit	
<b>Maximum Peak Conducted Output Power or Maximum Conducted Output Power Limit</b>	
<input checked="" type="checkbox"/> 2400-2483.5 MHz Band:	
<input checked="" type="checkbox"/> If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
<input checked="" type="checkbox"/> Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm	
<input type="checkbox"/> Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm	
<input type="checkbox"/> Smart antenna system (SAS):	
<input type="checkbox"/> Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm	
<input type="checkbox"/> Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm	
<input type="checkbox"/> Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm	
<b>e.i.r.p. Power Limit:</b>	
<input checked="" type="checkbox"/> 2400-2483.5 MHz Band	
<input checked="" type="checkbox"/> Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)	
<input type="checkbox"/> Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm	
<input type="checkbox"/> Smart antenna system (SAS)	
<input type="checkbox"/> Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm	
<input type="checkbox"/> Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm	
<input type="checkbox"/> Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ dBm	
$P_{Out}$ = maximum peak conducted output power or maximum conducted output power in dBm, $G_{TX}$ = the maximum transmitting antenna directional gain in dBi. $P_{eirp}$ = e.i.r.p. Power in dBm.	

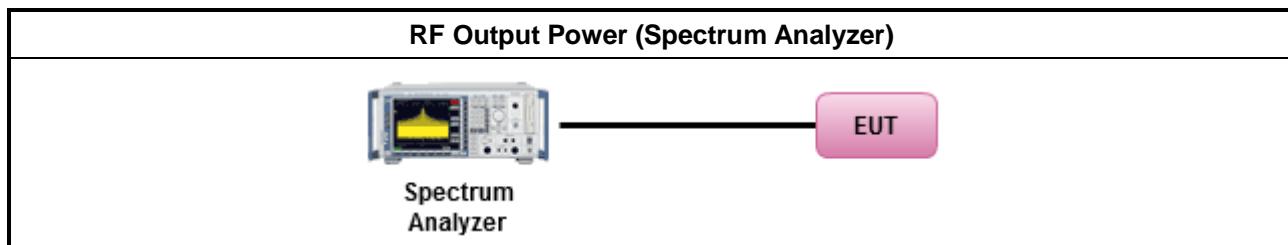
#### 3.3.2 Measuring Instruments

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

### 3.3.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/> Maximum Peak Conducted Output Power	<input type="checkbox"/> Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW $\geq$ EBW method). <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 9.1.2 Option 2 (integrated band power method). <input type="checkbox"/> Refer as FCC KDB 558074, clause 9.1.3 Option 2 (peak power meter for VBW $\geq$ DTS BW)
<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 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging). <input type="checkbox"/> Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed) duty cycle $<$ 98% and average over on/off periods with duty factor <input type="checkbox"/> Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging). <input type="checkbox"/> Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed) RF power meter and average over on/off periods with duty factor or gated trigger <input type="checkbox"/> Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM (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 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 type="checkbox"/> If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

### 3.3.4 Test Setup



4.20 4.20 4.20 4.20

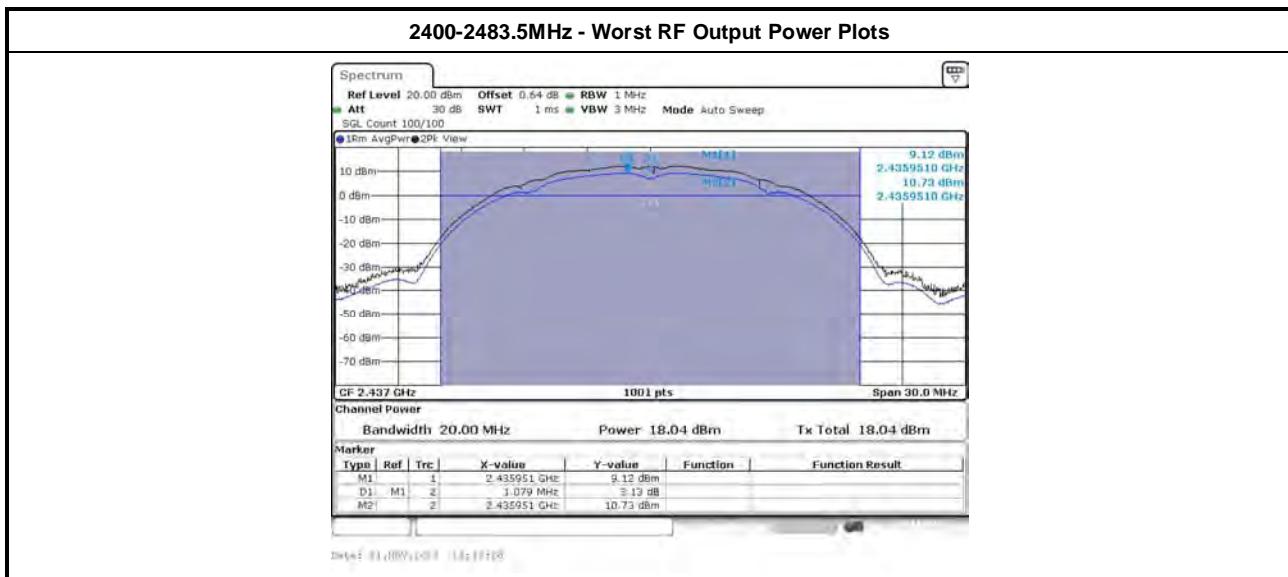


### 3.3.5 Test Result of Maximum Peak Conducted Output Power

Maximum Peak Conducted Output Power Result							
Condition			RF Output Power (dBm)				
Modulation Mode	N <sub>Tx</sub>	Freq. (MHz)	RF Output Power	Power Limit	Antenna Gain (dBi)	EIRP Power	EIRP Limit
11b	1	2412	19.24	30	4.20	23.44	36
11b	1	2437	20.99	30	4.20	25.19	36
11b	1	2462	19.39	30	4.20	23.59	36
11g	1	2412	18.66	30	4.20	22.86	36
11g	1	2437	21.08	30	4.20	25.28	36
11g	1	2462	19.47	30	4.20	23.67	36
HT20	1	2412	19.07	30	4.20	23.27	36
HT20	1	2437	21.82	30	4.20	26.02	36
HT20	1	2462	19.86	30	4.20	24.06	36
HT40	1	2422	17.07	30	4.20	21.27	36
HT40	1	2437	21.79	30	4.20	25.99	36
HT40	1	2452	16.98	30	4.20	21.18	36
Result			Complied				

### 3.3.6 Test Result of Maximum Conducted Output Power

Maximum Conducted Output Power							
Condition			RF Output Power (dBm)				
Modulation Mode	N <sub>Tx</sub>	Freq. (MHz)	RF Output Power	Power Limit	Antenna Gain (dBi)	EIRP Power	EIRP Limit
11b	1	2412	16.29	30	4.20	20.49	36
11b	1	2437	18.04	30	4.20	22.24	36
11b	1	2462	16.43	30	4.20	20.63	36
11g	1	2412	13.78	30	4.20	17.98	36
11g	1	2437	16.18	30	4.20	20.38	36
11g	1	2462	14.70	30	4.20	18.90	36
HT20	1	2412	13.87	30	4.20	18.07	36
HT20	1	2437	16.66	30	4.20	20.86	36
HT20	1	2462	14.66	30	4.20	18.86	36
HT40	1	2422	12.07	30	4.20	16.27	36
HT40	1	2437	16.88	30	4.20	21.08	36
HT40	1	2452	12.09	30	4.20	16.29	36
Result			Complied				





## 3.4 Power Spectral Density

### 3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<input checked="" type="checkbox"/> Power Spectral Density (PSD) $\leq 8 \text{ dBm/3kHz}$

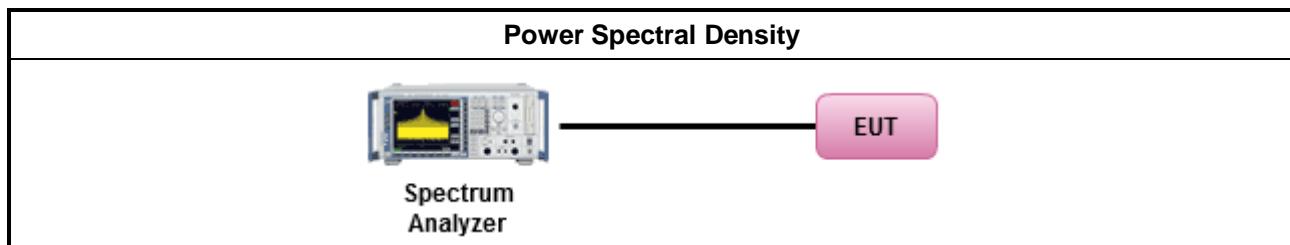
### 3.4.2 Measuring Instruments

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

### 3.4.3 Test Procedures

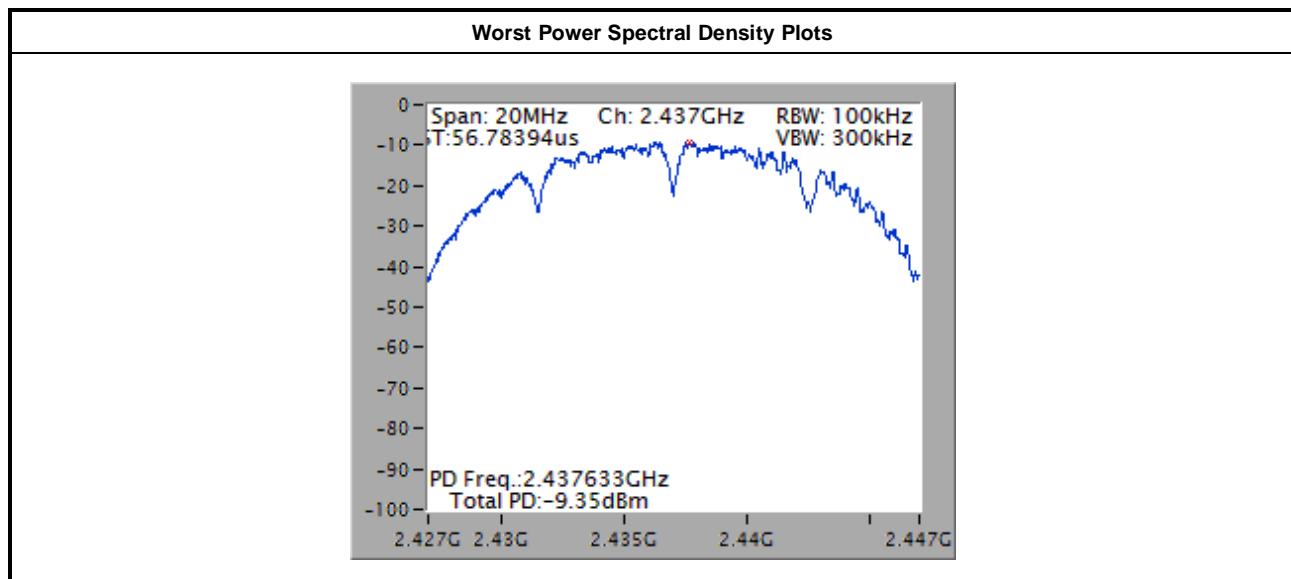
Test Method
<input checked="" type="checkbox"/> Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz;detector=peak).. [duty cycle $\geq 98\%$ or external video / power trigger]
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-1 Alt. (slow sweep speed)
duty cycle $< 98\%$ and average over on/off periods with duty factor
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-2 (spectral trace averaging).
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (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 type="checkbox"/> The EUT supports multiple transmit chains using options given below:
<input type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the $N_{TX}$ output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
<input type="checkbox"/> Option 2: Measure and 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.

### 3.4.4 Test Setup



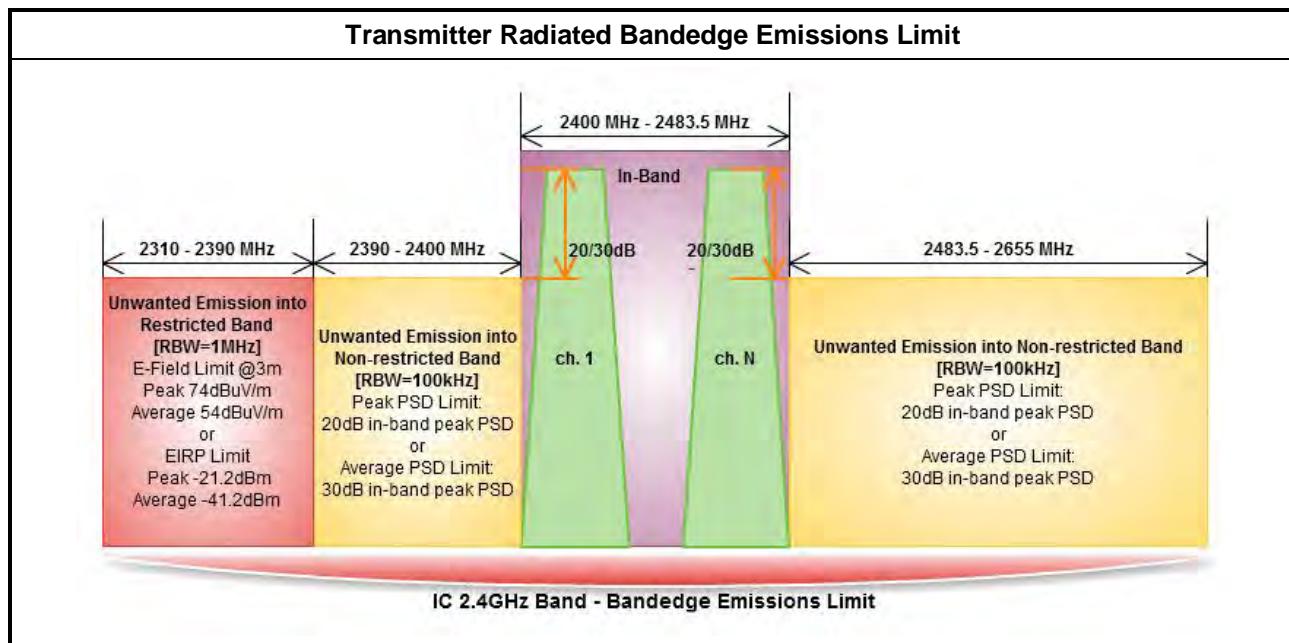
### 3.4.5 Test Result of Power Spectral Density

Condition			Power Spectral Density	
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Sum Chain (dBm/100kHz)	PSD Limit (dBm/3kHz)
11b	1	2412	-11.09	8
11b	1	2437	-9.35	8
11b	1	2462	-11.04	8
11g	1	2412	-16.73	8
11g	1	2437	-13.81	8
11g	1	2462	-14.94	8
HT20	1	2412	-15.95	8
HT20	1	2437	-13.56	8
HT20	1	2462	-15.19	8
HT40	1	2422	-21.90	8
HT40	1	2437	-16.83	8
HT40	1	2452	-21.68	8
Result		Complied		



## 3.5 Transmitter Radiated Bandedge Emissions

### 3.5.1 Transmitter Radiated Bandedge Emissions Limit



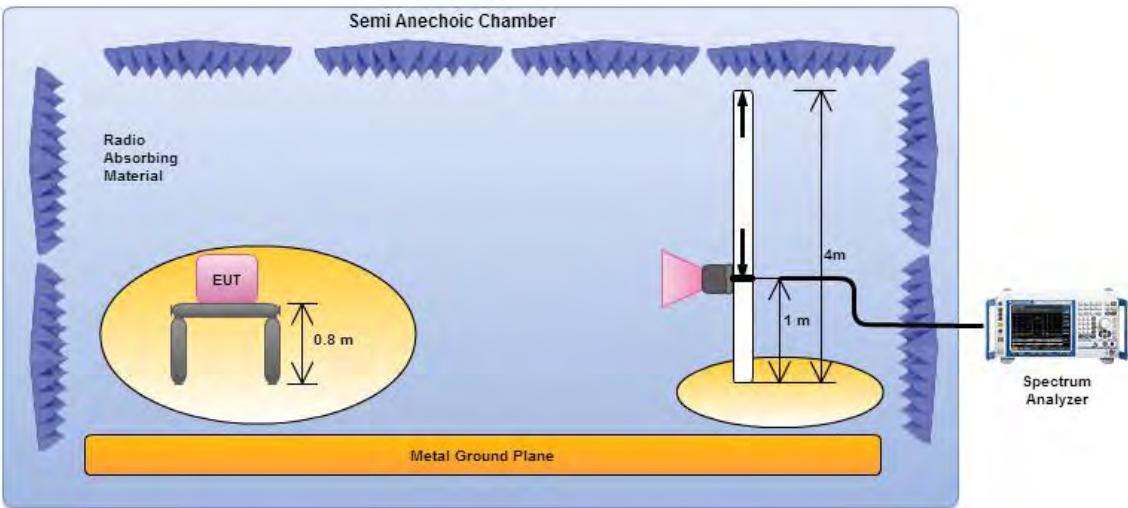
### 3.5.2 Measuring Instruments

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

### 3.5.3 Test Procedures

<b>Test Method</b>
<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 6.9.2.2 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating 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 558074, clause 11 for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands. <ul style="list-style-type: none"> <li><input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle <math>\geq 98\%</math>)</li> <li><input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).</li> <li><input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW <math>\geq 1/T</math>).</li> <li><input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW <math>\geq 1/T</math>, where T is pulse time.</li> <li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.</li> <li><input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.</li> </ul>
<input checked="" type="checkbox"/> For the transmitter bandedge emissions shall be measured using following options below:
<input type="checkbox"/> Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
<input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 6.9.2 for band-edge testing.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.3 for marker-delta method for band-edge measurements.
<input checked="" type="checkbox"/> For radiated measurement, refer as FCC KDB 558074, clause 12.2.7 and ANSI C63.10, clause 6.6. Test distance is 3m.

### 3.5.4 Test Setup

<b>Transmitter Radiated Bandedge Emissions</b>
 <p>Electric field tests shall be performed in transmitter bandedge emissions using a calibrated horn antenna.</p>



### 3.5.5 Transmitter Radiated Bandedge Emissions

#### Mode 1

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Non-restricted Band)								
Modulation	N <sub>TX</sub>	Test Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Pol.
11b	1	2412	106.32	2399.94	67.17	39.15	20	V
11b	1	2462	104.94	2523.34	64.09	40.85	20	V
11g	1	2412	101.27	2399.49	69.81	31.46	20	V
11g	1	2462	100.34	2537.50	63.93	36.41	20	V
HT20,M0-7	1	2412	101.61	2399.82	68.51	33.10	20	V
HT20,M0-7	1	2462	100.80	2541.10	63.60	37.20	20	V
HT40,M0-7	1	2422	97.77	2399.50	66.47	31.30	20	V
HT40,M0-7	1	2452	97.22	2503.76	64.03	33.19	20	V

Note 1: Measurement worst emissions of receive antenna polarization

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Restricted Band)										
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11b	1	2412	3	2387.28	62.34	74	2386.94	51.75	54	V
11b	1	2462	3	2488.15	62.49	74	2488.15	51.72	54	V
11g	1	2412	3	2389.18	68.81	74	2390.00	52.87	54	V
11g	1	2462	3	2483.80	66.13	74	2483.50	50.98	54	V
HT20,M0-7	1	2412	3	2389.86	67.99	74	2390.00	52.61	54	V
HT20,M0-7	1	2462	3	2485.40	69.58	74	2483.50	52.07	54	V
HT40,M0-7	1	2422	3	2388.41	65.08	74	2390.00	52.52	54	V
HT40,M0-7	1	2452	3	2487.92	68.49	74	2483.60	52.64	54	V

Note 1: Measurement worst emissions of receive antenna polarization.

**Mode 2**

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Non-restricted Band)								
Modulation	N <sub>TX</sub>	Test Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Pol.
11b	1	2412	106.51	2391.42	64.27	42.24	20	H
11b	1	2462	106.28	2510.70	64.51	41.77	20	H
11g	1	2412	100.11	2400.00	66.44	33.67	20	H
11g	1	2462	98.85	2551.40	64.00	34.85	20	H
HT20,M0-7	1	2412	97.98	2390.00	62.14	35.84	20	H
HT20,M0-7	1	2462	97.07	2533.80	63.99	33.08	20	H
HT40,M0-7	1	2422	94.47	2389.60	64.37	30.10	20	H
HT40,M0-7	1	2452	93.11	2504.72	64.04	29.07	20	H

Note 1: Measurement worst emissions of receive antenna polarization

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Restricted Band)										
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11b	1	2412	3	2385.94	63.28	74	2386.05	52.79	54	H
11b	1	2462	3	2487.80	63.44	74	2487.00	52.59	54	H
11g	1	2412	3	2388.74	66.73	74	2389.97	52.81	54	H
11g	1	2462	3	2483.50	65.92	74	2483.50	52.44	54	H
HT20,M0-7	1	2412	3	2390.00	68.54	74	2389.97	52.96	54	H
HT20,M0-7	1	2462	3	2484.70	66.27	74	2483.50	52.10	54	H
HT40,M0-7	1	2422	3	2387.48	65.50	74	2389.99	52.48	54	H
HT40,M0-7	1	2452	3	2487.08	62.33	74	2484.08	50.32	54	H

Note 1: Measurement worst emissions of receive antenna polarization.

**Mode 3**

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Non-restricted Band)								
Modulation	N <sub>TX</sub>	Test Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Pol.
11b	1	2412	108.14	2399.94	66.62	41.52	20	H
11b	1	2462	107.94	2501.40	62.74	45.20	20	H
11g	1	2412	102.26	2400.00	66.29	35.97	20	H
11g	1	2462	102.02	2541.90	62.73	39.29	20	H
HT20,M0-7	1	2412	102.56	2399.82	67.40	35.16	20	H
HT20,M0-7	1	2462	101.74	2547.90	62.10	39.64	20	H
HT40,M0-7	1	2422	95.70	2400.00	64.08	31.62	20	H
HT40,M0-7	1	2452	97.358	2510.00	62.17	35.18	20	H

Note 1: Measurement worst emissions of receive antenna polarization

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Restricted Band)										
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11b	1	2412	3	2386.50	63.99	74	2386.94	52.06	54	H
11b	1	2462	3	2488.20	63.62	74	2488.20	52.56	54	H
11g	1	2412	3	2388.62	68.33	74	2389.97	52.65	54	H
11g	1	2462	3	2485.00	67.47	74	2483.50	52.56	54	H
HT20,M0-7	1	2412	3	2389.97	66.53	74	2389.97	53.00	54	H
HT20,M0-7	1	2462	3	2485.40	69.88	74	2483.80	52.78	54	H
HT40,M0-7	1	2422	3	2386.30	65.86	74	2389.60	52.48	54	H
HT40,M0-7	1	2452	3	2487.44	65.77	74	2484.08	52.97	54	H

Note 1: Measurement worst emissions of receive antenna polarization.



## 3.6 Transmitter Radiated Unwanted Emissions

### 3.6.1 Transmitter Radiated Unwanted Emissions Limit

Restricted Band Emissions 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 Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

### 3.6.2 Measuring Instruments

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

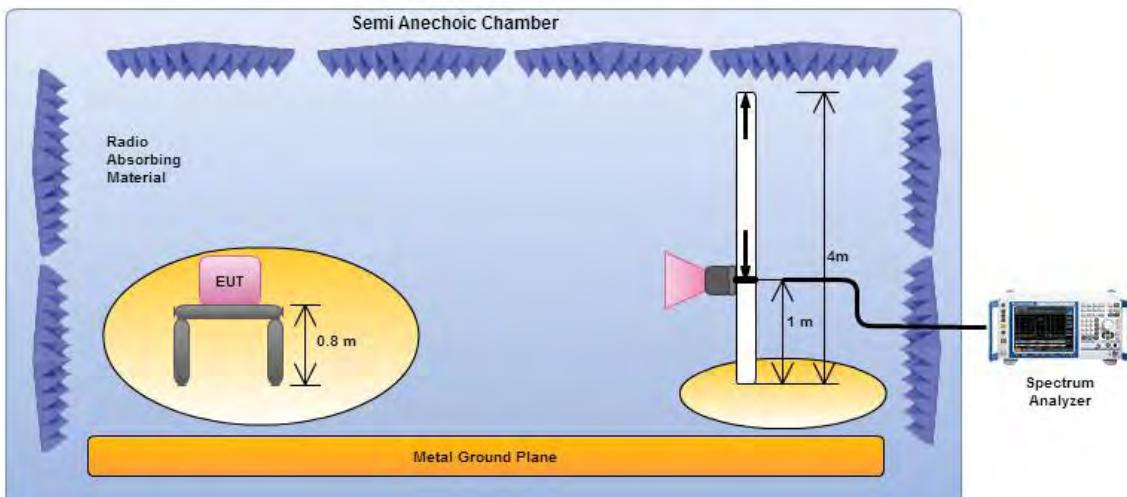


### 3.6.3 Test Procedures

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. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
<input checked="" type="checkbox"/> The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
<input checked="" type="checkbox"/> For the transmitter unwanted emissions shall be measured using following options below:
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$ )
<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced $VBW \geq 1/T$ ).
<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced $VBW$ ). $VBW \geq 1/T$ , where $T$ is pulse time.
<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.3 measurement procedure Quasi-Peak limit.
<input checked="" type="checkbox"/> For radiated measurement, refer as FCC KDB 558074, clause 12.2.7.
<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 1 GHz and 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



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 and the frequency range of 1 GHz to 40 GHz using a calibrated horn antenna.

### 3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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



## 3.6.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)

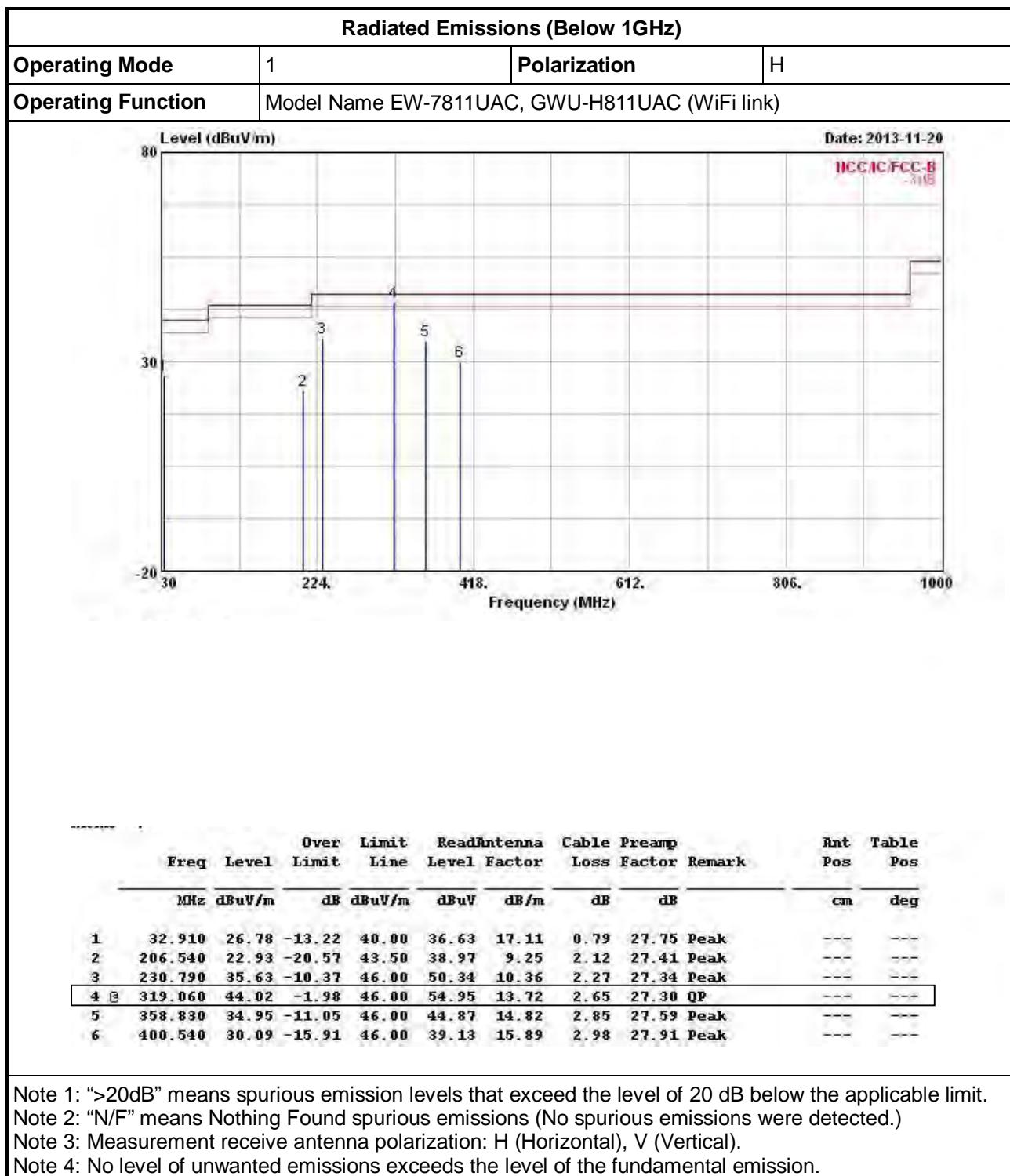
Radiated Emissions (Below 1GHz)																
Operating Mode		1		Polarization		V										
Operating Function		Model Name EW-7811UAC, GWU-H811UAC (WiFi link)														
Level (dBuV/m)												Date: 2013-11-20				
30	224.	418.	612.	806.	1000							IC:IC,FCC-B -MID				
31.940	27.34	-12.66	40.00	36.75	17.57	0.79	27.77	Peak	---	---						
141.550	26.32	-17.18	43.50	41.25	10.98	1.71	27.62	Peak	---	---						
230.790	32.66	-13.34	46.00	47.37	10.36	2.27	27.34	Peak	---	---						
319.060	33.46	-12.54	46.00	44.39	13.72	2.65	27.30	Peak	---	---						
365.620	30.82	-15.18	46.00	40.72	14.88	2.87	27.65	Peak	---	---						
797.270	34.80	-11.20	46.00	38.55	19.93	4.40	28.08	Peak	---	---						

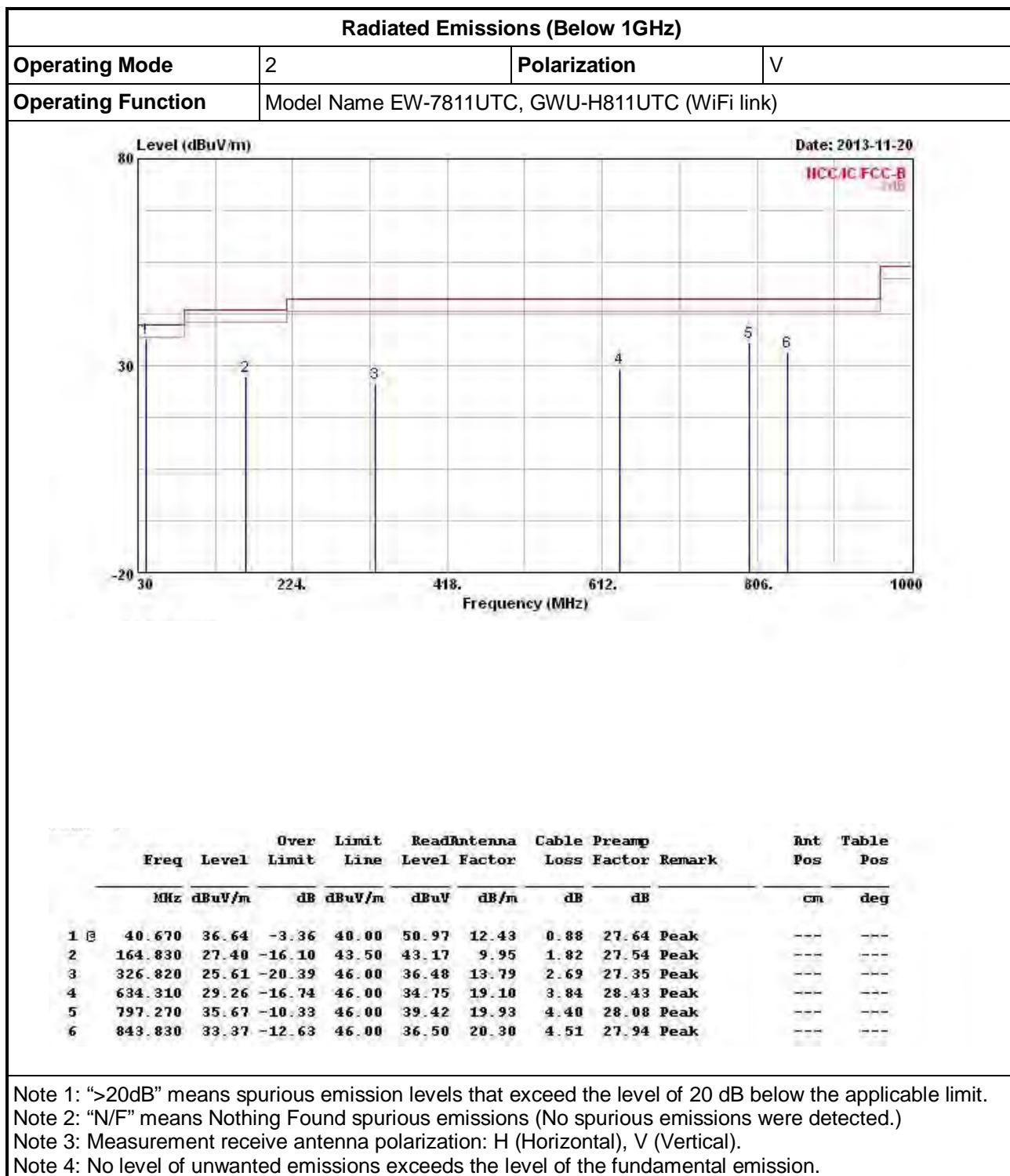
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

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

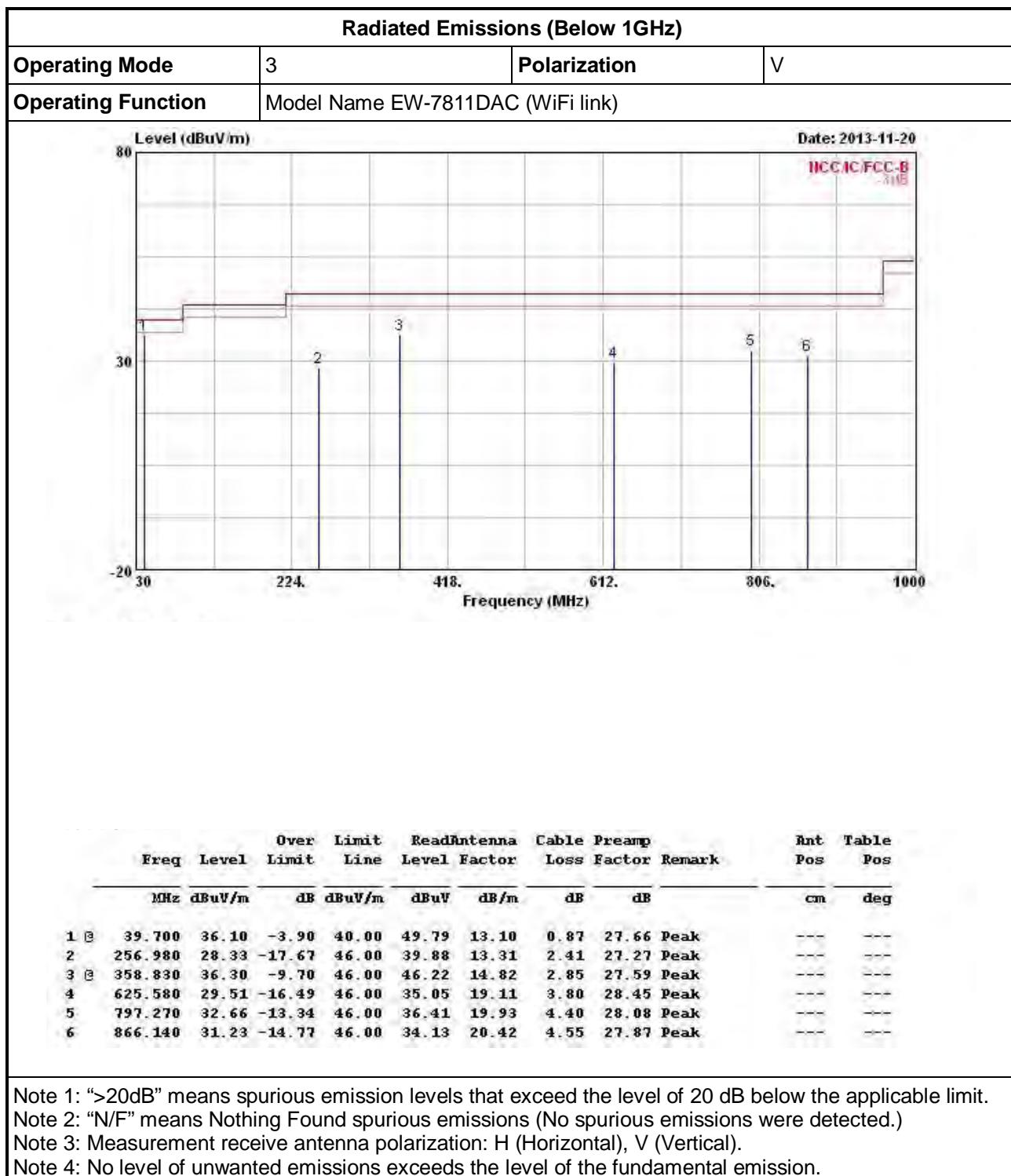
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

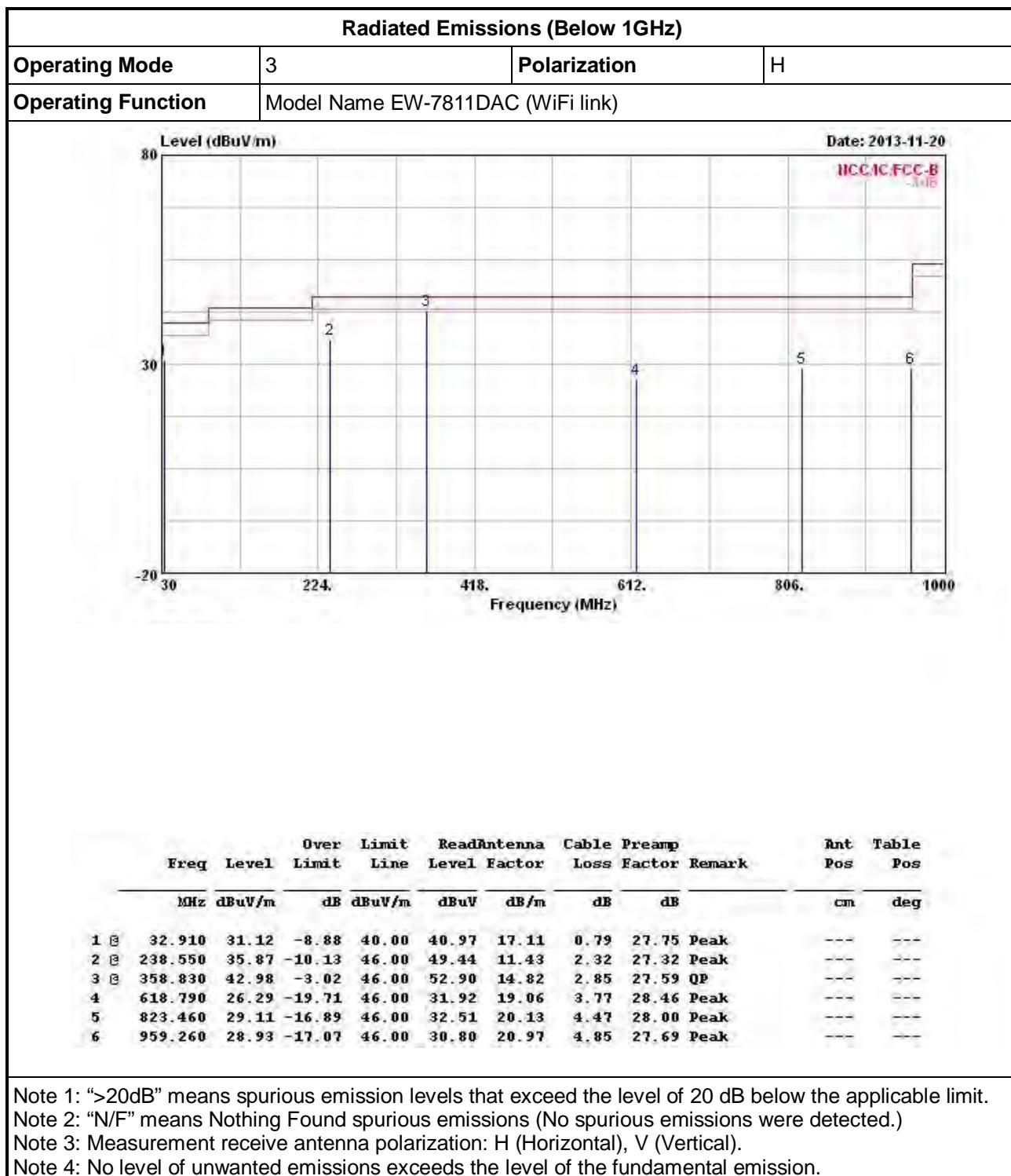
Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.





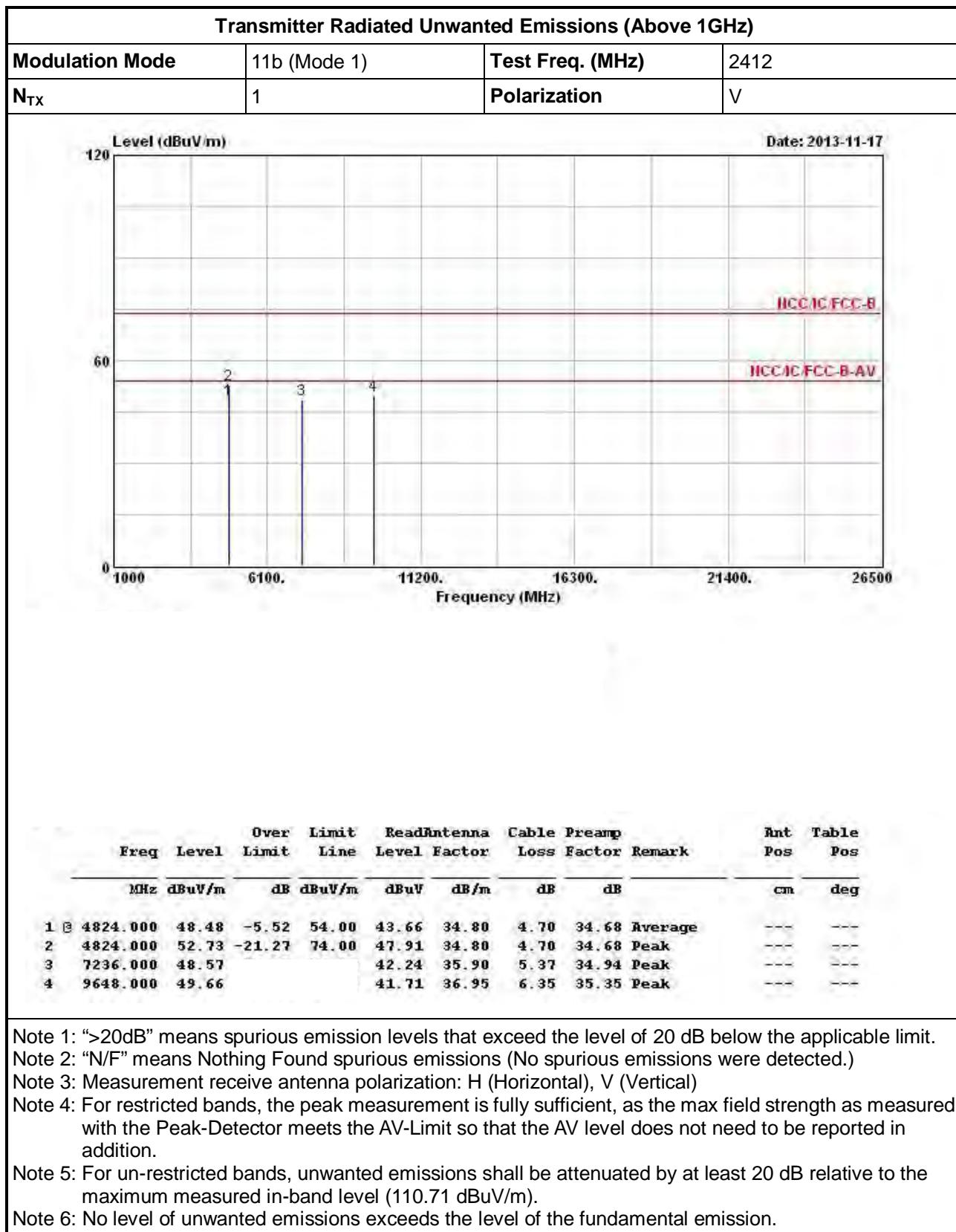








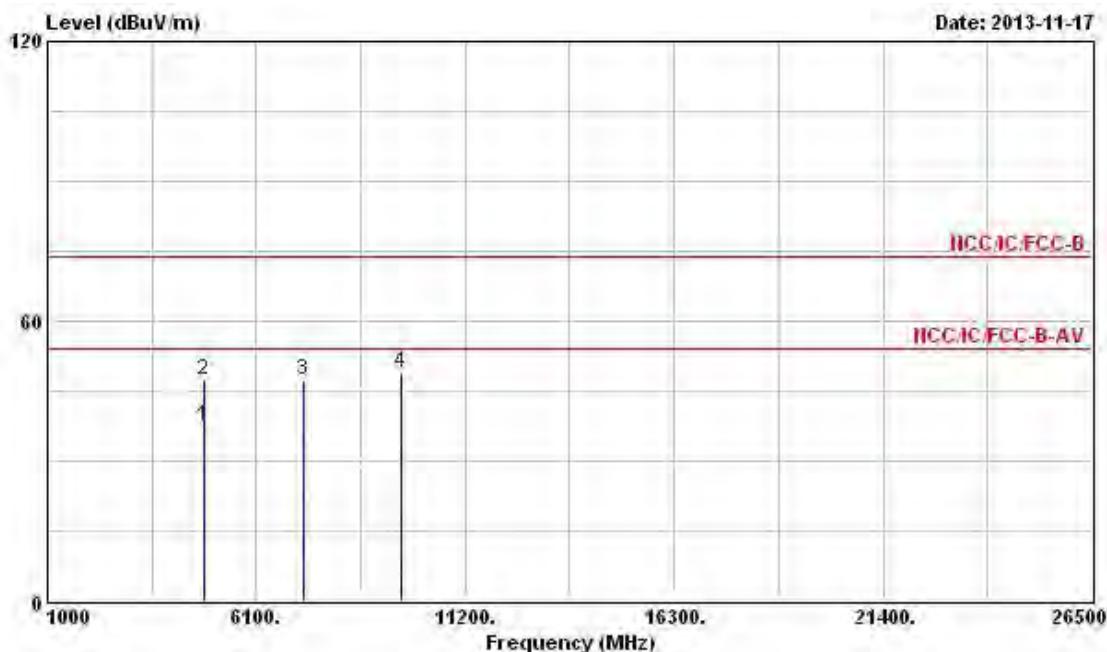
## 3.6.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11b





## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 1)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Line	Limit	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 4824.000	37.46	-16.54	54.00	32.64	34.80	4.70	34.68	Average	---	---
2 4824.000	47.41	-26.59	74.00	42.59	34.80	4.70	34.68	Peak	---	---
3 7236.000	47.32			40.99	35.90	5.37	34.94	Peak	---	---
4 9648.000	49.08			41.13	36.95	6.35	35.35	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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (110.71 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

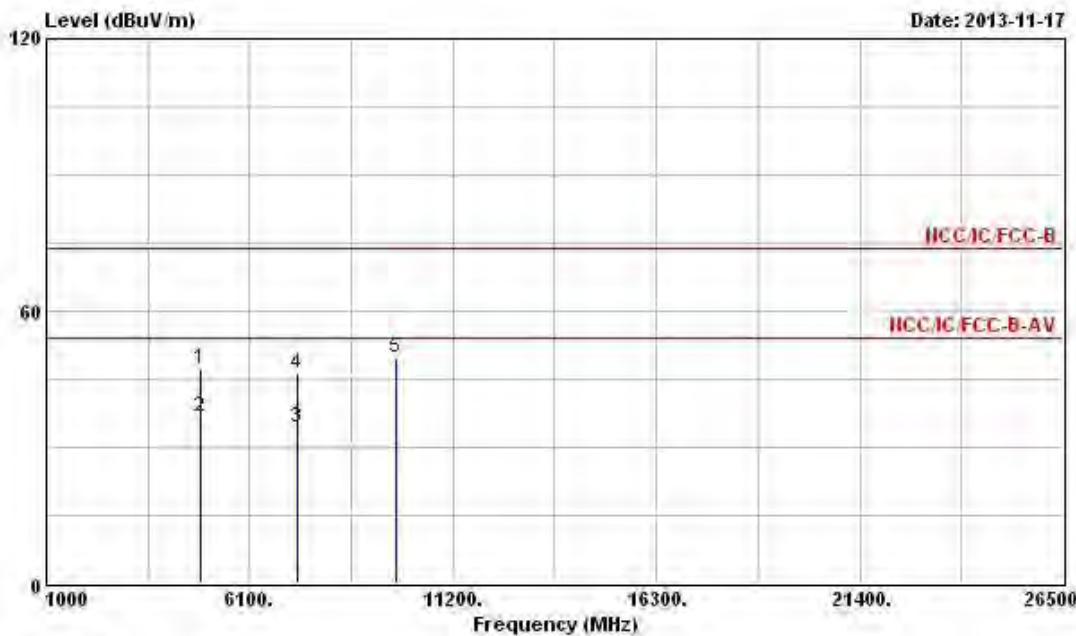
Modulation Mode	11b (Mode 1)	Test Freq. (MHz)	2437							
N <sub>TX</sub>	1	Polarization	V							
Level (dBuV/m)			Date: 2013-11-17							
Freq	Over Limit	Limit Line	Read	Antenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 ② 4874.000	47.04	-6.96	54.00	42.21	34.77	4.73	34.67	Average	---	---
2 4874.000	51.54	-22.46	74.00	46.71	34.77	4.73	34.67	Peak	---	---
3 7311.000	47.83	-26.17	74.00	41.41	35.90	5.47	34.95	Peak	---	---
4 7311.000	34.61	-19.39	54.00	28.19	35.90	5.47	34.95	Average	---	---
5 9748.000	48.87			40.71	37.11	6.41	35.36	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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.37 dBuV/m).  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	11b (Mode 1)	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Line	Level	Factor		Loss	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
4874.000	47.53	-26.47	74.00	42.70	34.77	4.73	34.67	Peak	---	---
4874.000	36.90	-17.10	54.00	32.07	34.77	4.73	34.67	Average	---	---
7311.000	34.16	-19.84	54.00	27.74	35.90	5.47	34.95	Average	---	---
7311.000	46.37	-27.63	74.00	39.95	35.90	5.47	34.95	Peak	---	---
9748.000	49.87			41.71	37.11	6.41	35.36	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 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.

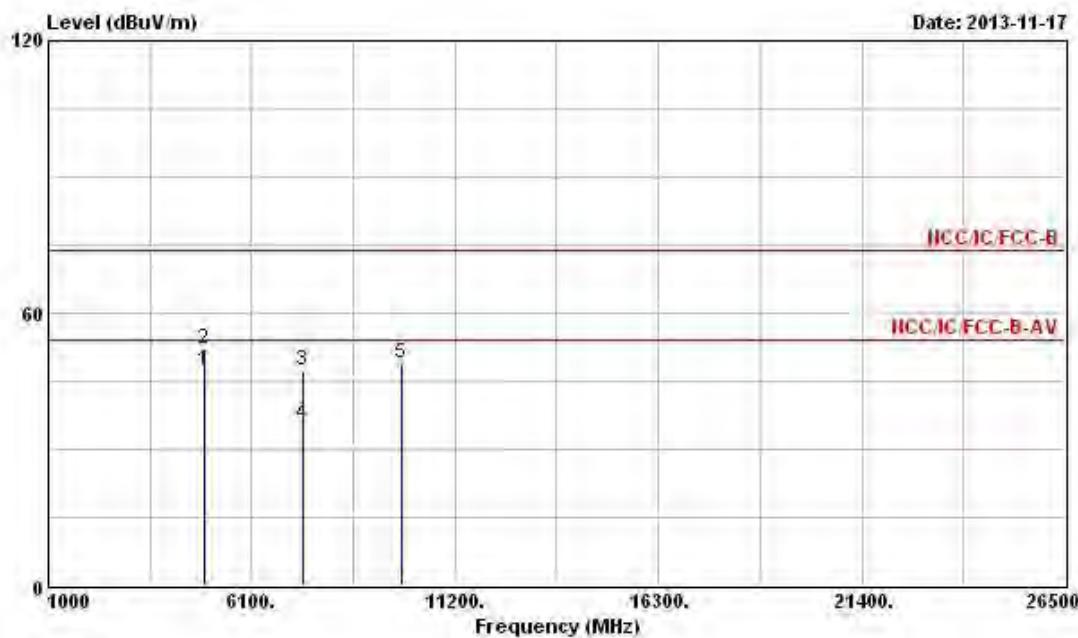
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.37 dB<sub>UV</sub>/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	11b (Mode 1)	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over	Limit	ReadAntenna		Cable		Preamp	Remark	Ant	Table
		Line	Level	Factor	Factor	Loss	Factor	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB				
4924.000	47.30	-6.70	54.00	42.43	34.74	4.79	34.66	Average	---	---	---
4924.000	51.92	-22.08	74.00	47.05	34.74	4.79	34.66	Peak	---	---	---
7386.000	47.53	-26.47	74.00	41.03	35.90	5.57	34.97	Peak	---	---	---
7386.000	35.65	-18.35	54.00	29.15	35.90	5.57	34.97	Average	---	---	---
9848.000	49.12			40.74	37.25	6.50	35.37	Peak	---	---	---

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

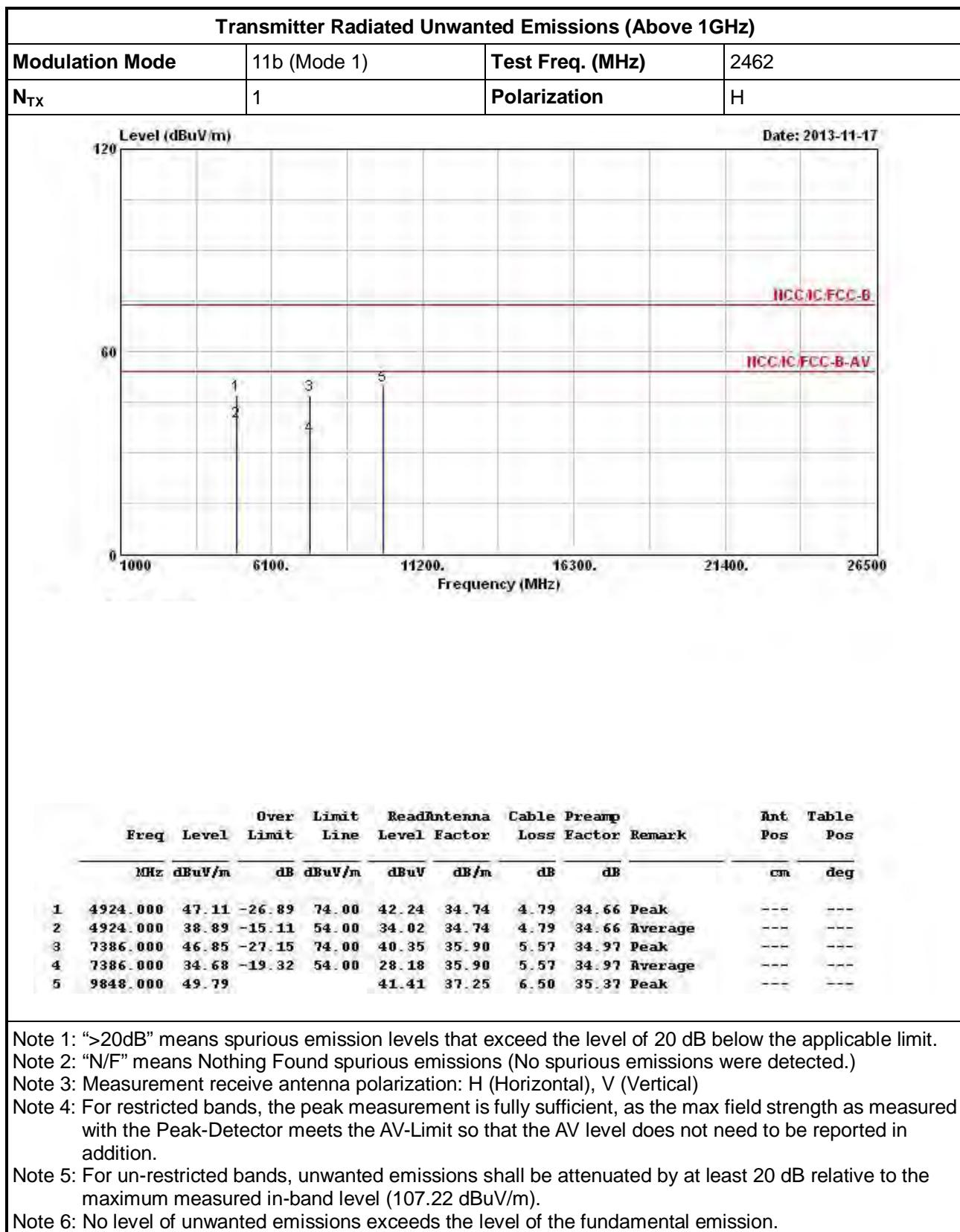
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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

Note 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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.22 dB<sub>UV</sub>/m).

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



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

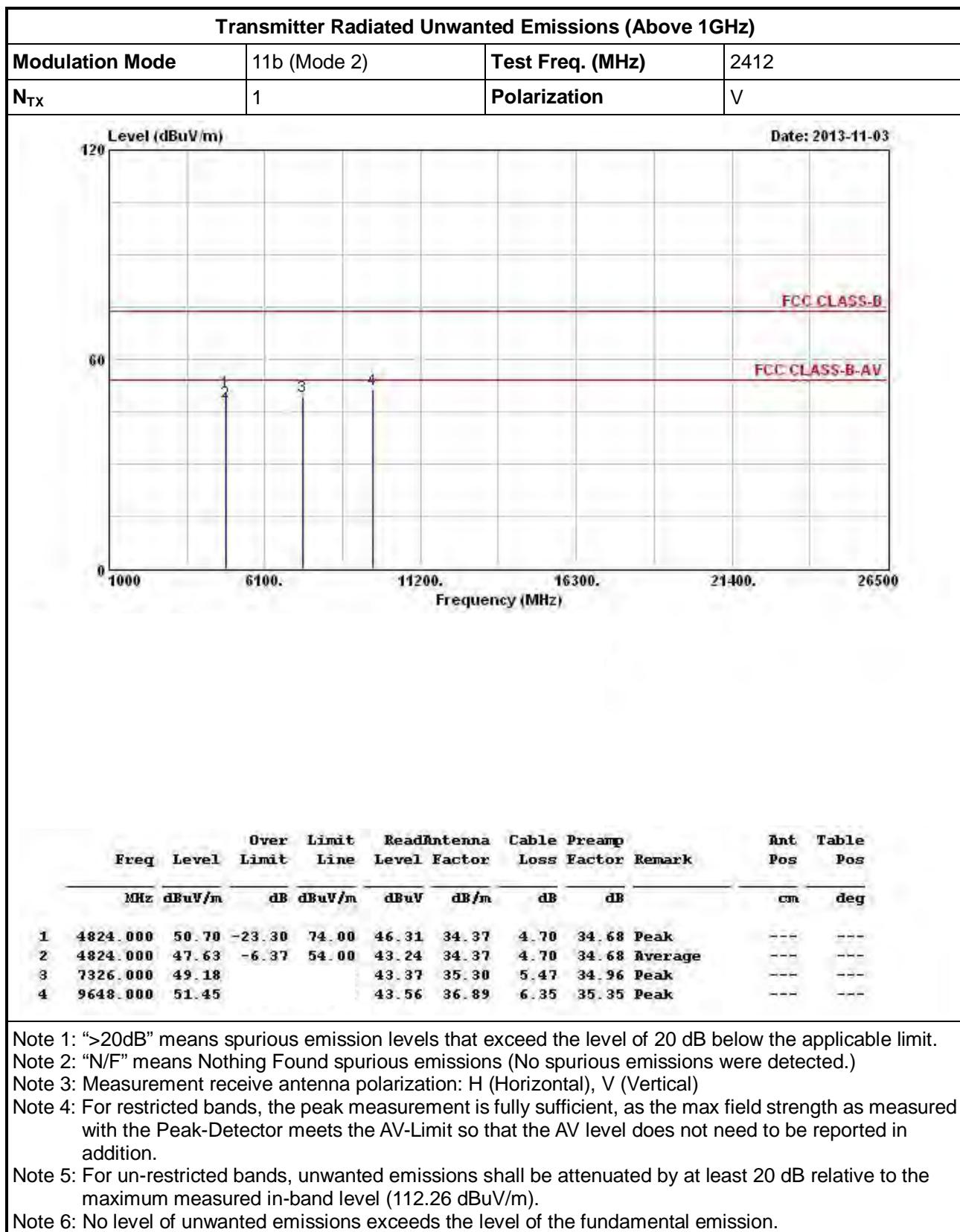
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

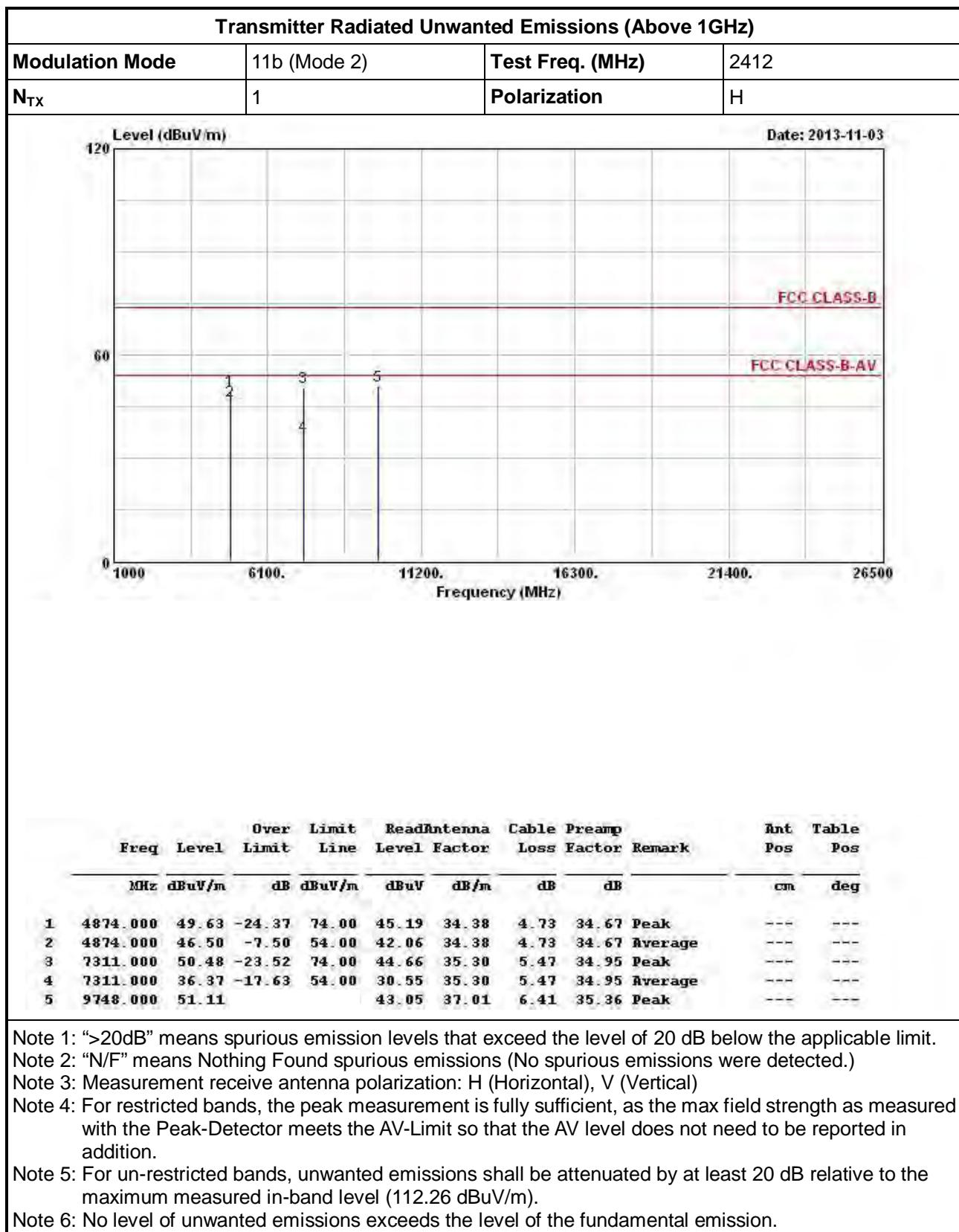
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.22 dBuV/m).

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

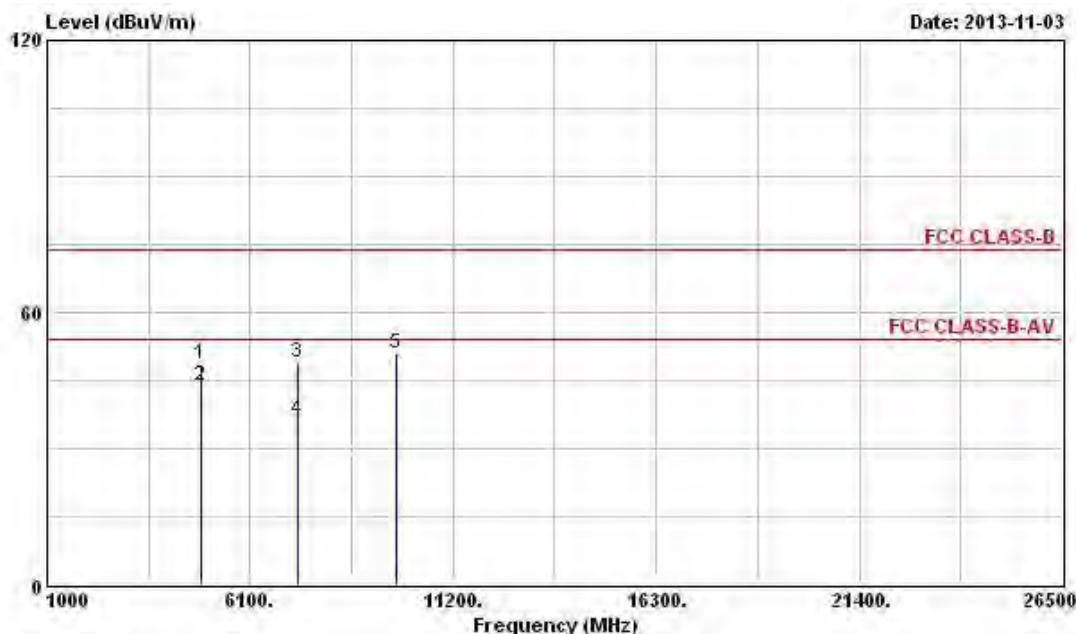






## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 2)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Int	Table
		Limit	Line	Level	Factor	Loss	Factor		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4874.000	48.44	-25.56	74.00	44.00	34.38	4.73	34.67	Peak	---
2 4874.000	43.64	-10.36	54.00	39.20	34.38	4.73	34.67	Average	---
3 7311.000	48.95	-25.05	74.00	43.13	35.30	5.47	34.95	Peak	---
4 7311.000	36.24	-17.76	54.00	30.42	35.30	5.47	34.95	Average	---
5 9748.000	51.04			42.98	37.01	6.41	35.36	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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (114.62 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 2)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	H
Level (dBuV/m)			Date: 2013-11-03
			FCC CLASS-B
			FCC CLASS-B-AV
Frequency (MHz)			
0 1000 6100. 11200. 16300. 21400. 26500			

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 4924.000	47.96	-26.04	74.00	43.44	34.39	4.79	34.66	Peak	---	---
2 4924.000	41.62	-12.38	54.00	37.10	34.39	4.79	34.66	Average	---	---
3 7386.000	49.36	-24.64	74.00	43.46	35.30	5.57	34.97	Peak	---	---
4 7386.000	36.80	-17.20	54.00	30.90	35.30	5.57	34.97	Average	---	---
5 9848.000	51.33			43.09	37.11	6.50	35.37	Peak	---	---

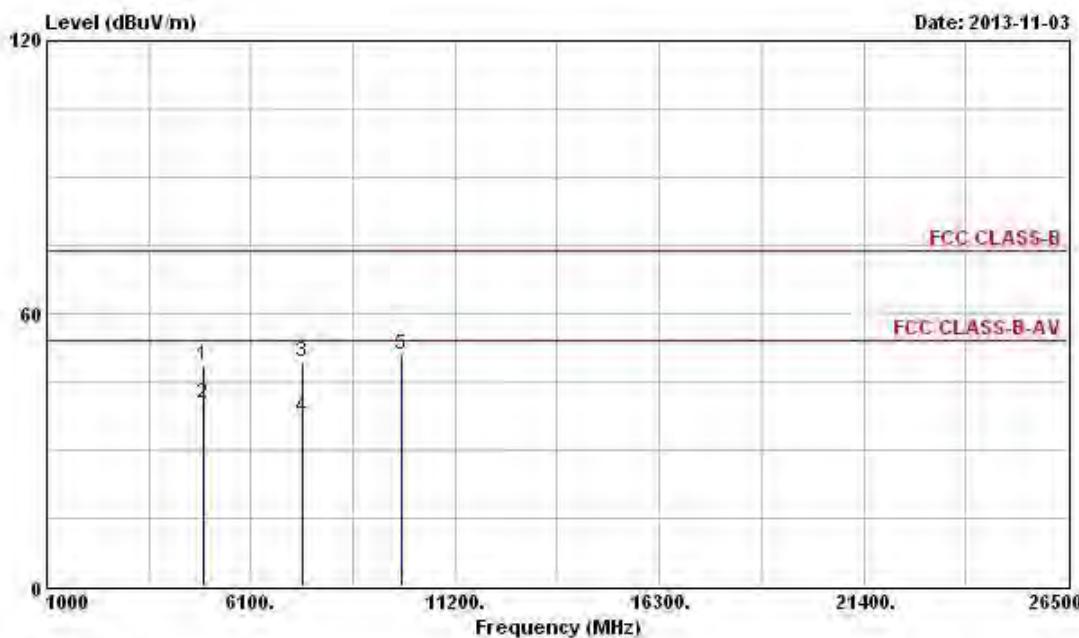
  

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)  
 Note 4: For restricted 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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (114.62 dBuV/m).  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	11b (Mode 2)	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Line	Level	Factor		Loss	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
4924.000	48.64	-25.36	74.00	44.12	34.39	4.79	34.66	Peak	---	---
4924.000	40.45	-13.55	54.00	35.93	34.39	4.79	34.66	Average	---	---
7386.000	49.28	-24.72	74.00	43.38	35.30	5.57	34.97	Peak	---	---
7386.000	36.92	-17.08	54.00	31.02	35.30	5.57	34.97	Average	---	---
9848.000	50.78			42.54	37.11	6.50	35.37	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 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.

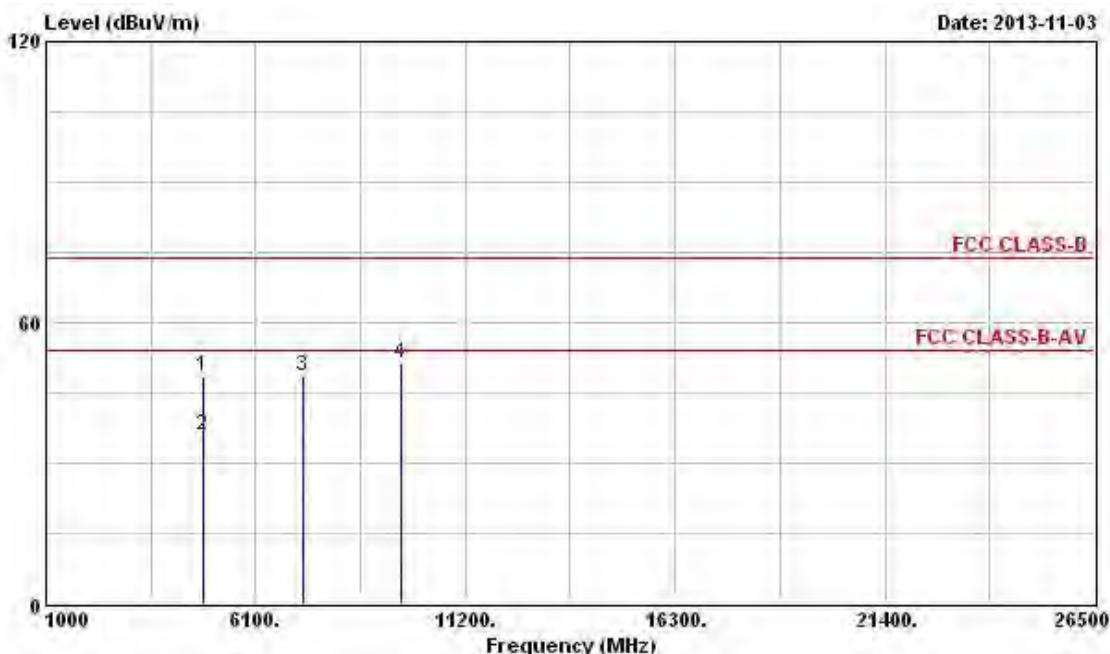
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.74 dB<sub>UV</sub>/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 2)	Test Freq. (MHz)	2462
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Int	Table
		Line	Limit	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4824.000	48.71	-25.29	74.00	44.32	34.37	4.70	34.68 Peak	---	---
2	4824.000	35.77	-18.23	54.00	31.38	34.37	4.70	34.68 Average	---	---
3	7236.000	48.64			42.91	35.30	5.37	34.94 Peak	---	---
4	9648.000	51.29			43.40	36.89	6.35	35.35 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.

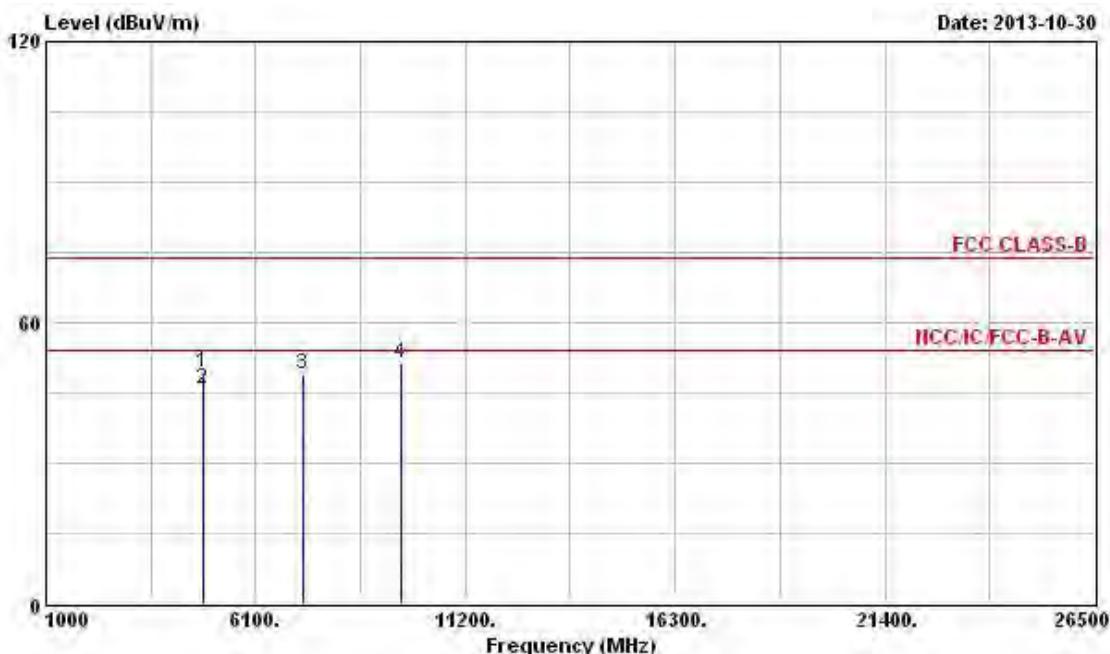
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.74 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 3)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Int	Table
		Line	Limit	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 4823.000	49.38	-24.62	74.00	44.56	34.80	4.70	34.68	Peak	---	---
2 6100.000	45.91	-8.09	54.00	41.09	34.80	4.70	34.68	Average	---	---
3 7236.000	49.03			42.70	35.90	5.37	34.94	Peak	---	---
4 9648.000	51.48			43.53	36.95	6.35	35.35	Peak	---	---

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

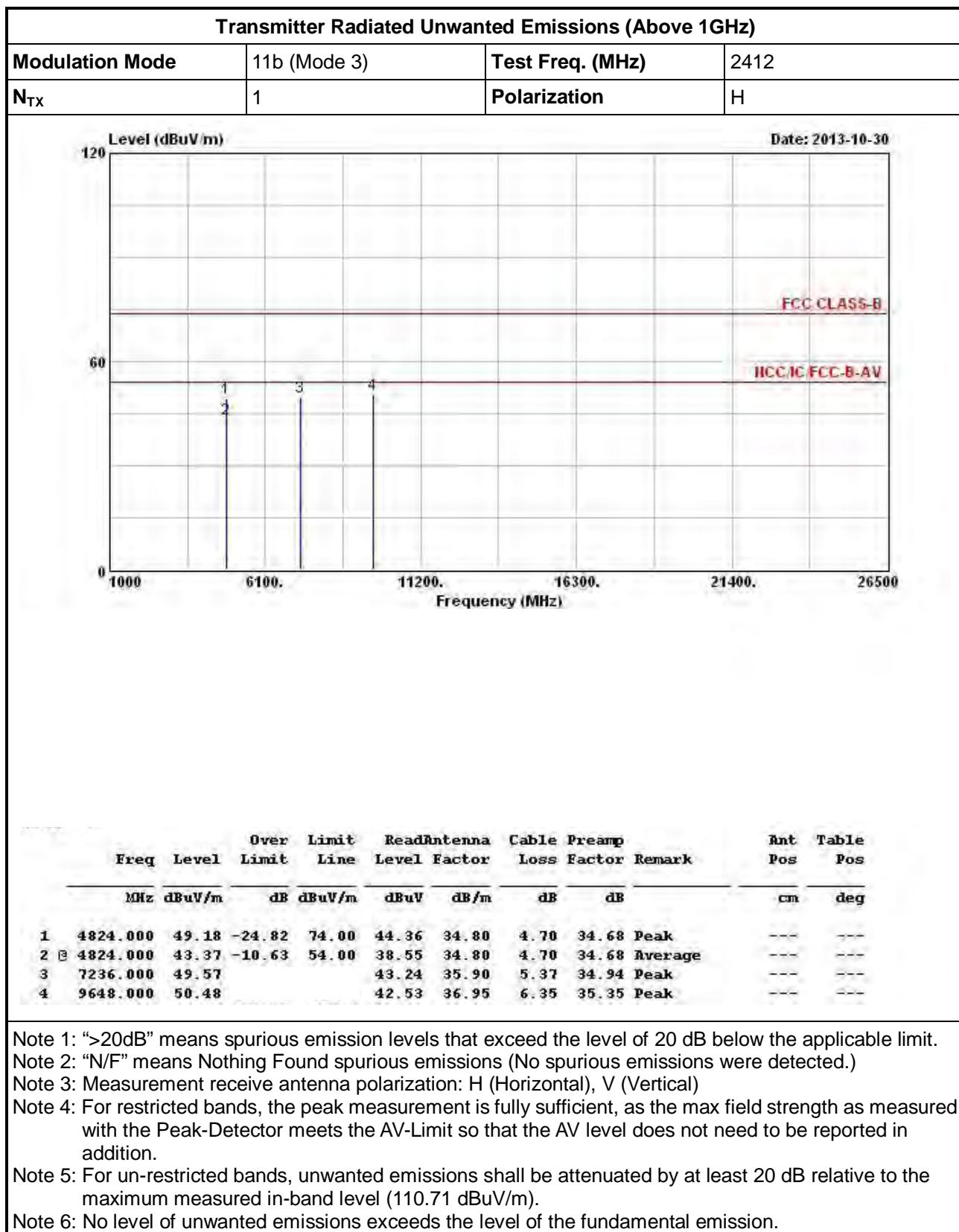
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (110.71 dBuV/m).

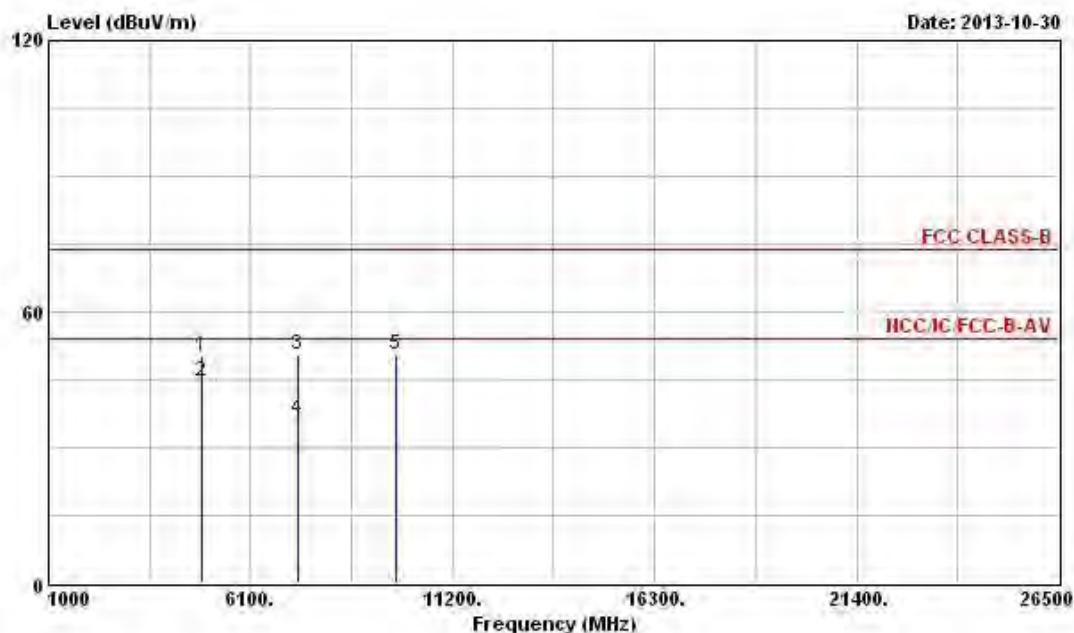
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.





## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 3)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over Limit	Line	Read		Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
				Antenna Level	Factor					
MHz	dBuV/m		dB	dBuV/m		dBuV	dB/m	dB	dB	cm deg
1 4874.000	49.97	-24.03	74.00	45.14	34.77	4.73	34.67	Peak	---	---
2 4874.000	44.42	-9.58	54.00	39.59	34.77	4.73	34.67	Average	---	---
3 7311.000	50.53	-23.47	74.00	44.11	35.90	5.47	34.95	Peak	---	---
4 7311.000	36.48	-17.52	54.00	30.06	35.90	5.47	34.95	Average	---	---
5 9748.000	50.33			42.17	37.11	6.41	35.36	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.

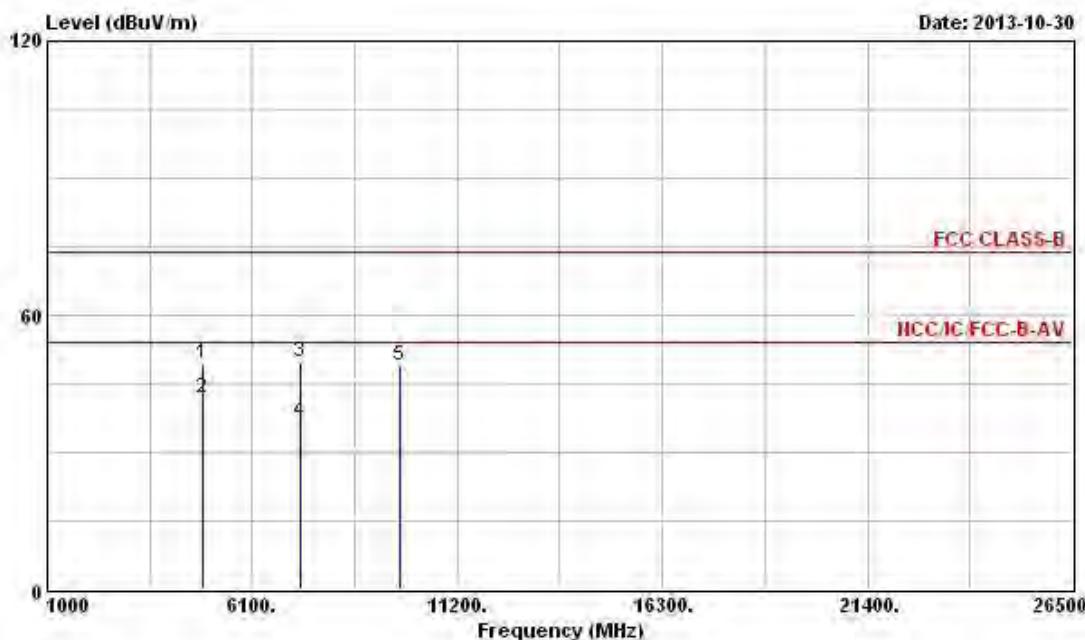
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.37 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 3)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table
		Limit	Line	Level	Factor	Loss	Factor		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4874.000	49.44	-24.56	74.00	44.61	34.77	4.73	34.67	Peak	---
2 4874.000	41.77	-12.23	54.00	36.94	34.77	4.73	34.67	Average	---
3 7311.000	49.80	-24.20	74.00	43.38	35.90	5.47	34.95	Peak	---
4 7311.000	36.80	-17.20	54.00	30.38	35.90	5.47	34.95	Average	---
5 9748.000	48.99			40.83	37.11	6.41	35.36	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.

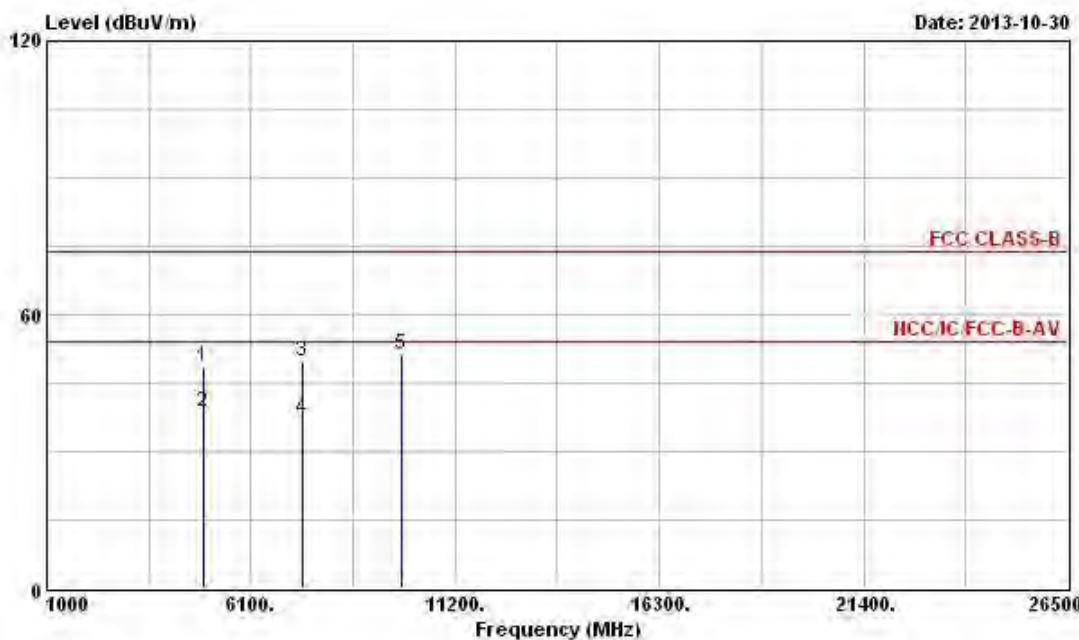
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.37 dBuV/m).

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



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

<b>Modulation Mode</b>	11b (Mode 3)	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Line	Level	Factor		Loss	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
4924.000	48.61	-25.39	74.00	43.74	34.74	4.79	34.66	Peak	---	---
4924.000	38.52	-15.48	54.00	33.65	34.74	4.79	34.66	Average	---	---
7386.000	49.67	-24.33	74.00	43.17	35.90	5.57	34.97	Peak	---	---
7386.000	37.26	-16.74	54.00	30.76	35.90	5.57	34.97	Average	---	---
9848.000	51.25			42.87	37.25	6.50	35.37	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 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.

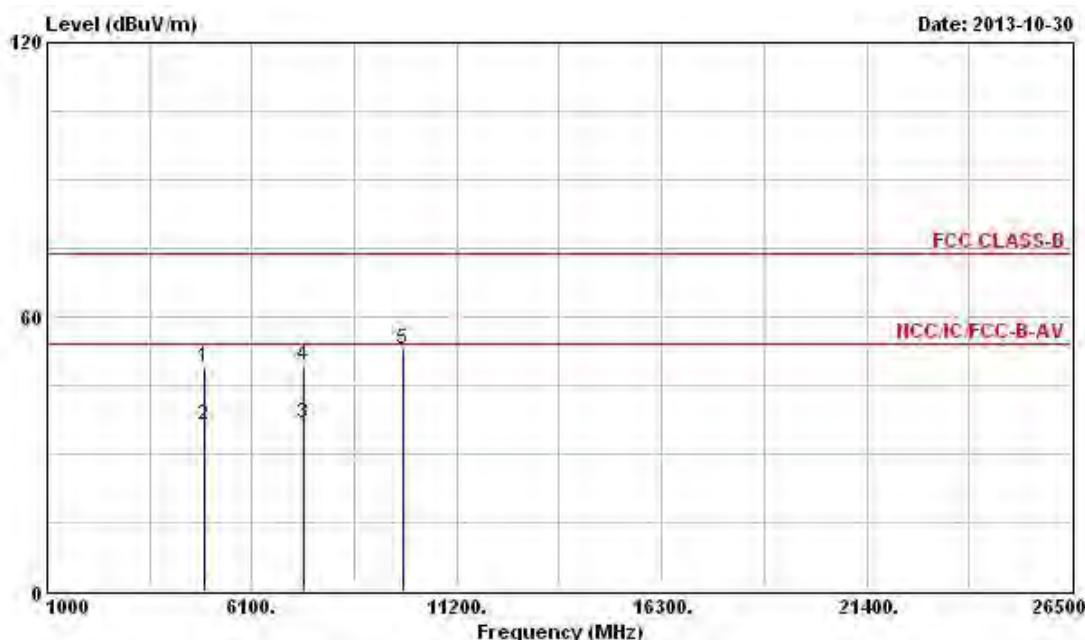
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.22 dB<sub>UV</sub>/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11b (Mode 3)	Test Freq. (MHz)	2462
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos
		Limit	Line	Antenna Level	Factor	Cable Loss	Preamp Factor		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4924.000	48.76	-25.24	74.00	43.89	34.74	4.79	34.66	Peak	---
2 4924.000	36.48	-17.52	54.00	31.61	34.74	4.79	34.66	Average	---
3 7386.000	36.69	-17.31	54.00	30.19	35.90	5.57	34.97	Average	---
4 7386.000	49.39	-24.61	74.00	42.89	35.90	5.57	34.97	Peak	---
5 9848.000	52.71			44.33	37.25	6.50	35.37	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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.22 dBuV/m).

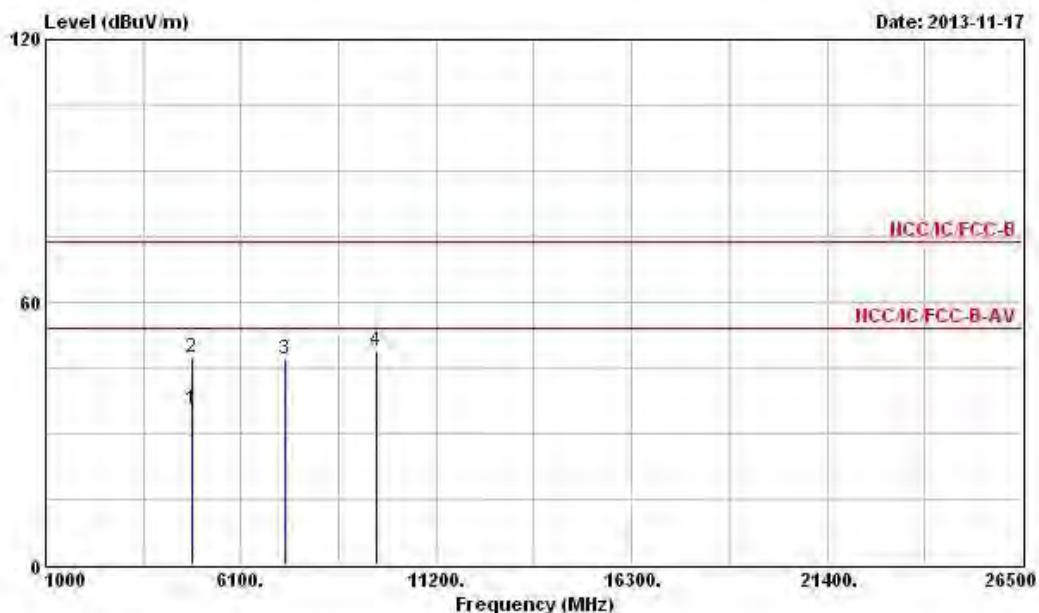
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



## 3.6.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11g

## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 1)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over Limit	Line	Read		Ant	Table		
				Antenna	Cable			Pos	Pos
MHz	dB <sub>uV/m</sub>	dB	dB <sub>uV/m</sub>	dB <sub>uV</sub>	dB/m	dB	dB	cm	deg
1 4824.000	35.47	-18.53	54.00	30.65	34.80	4.70	34.68	Average	---
2 4824.000	47.37	-26.63	74.00	42.55	34.80	4.70	34.68	Peak	---
3 7236.000	46.85			40.52	35.90	5.37	34.94	Peak	---
4 9648.000	48.90			40.95	36.95	6.35	35.35	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.

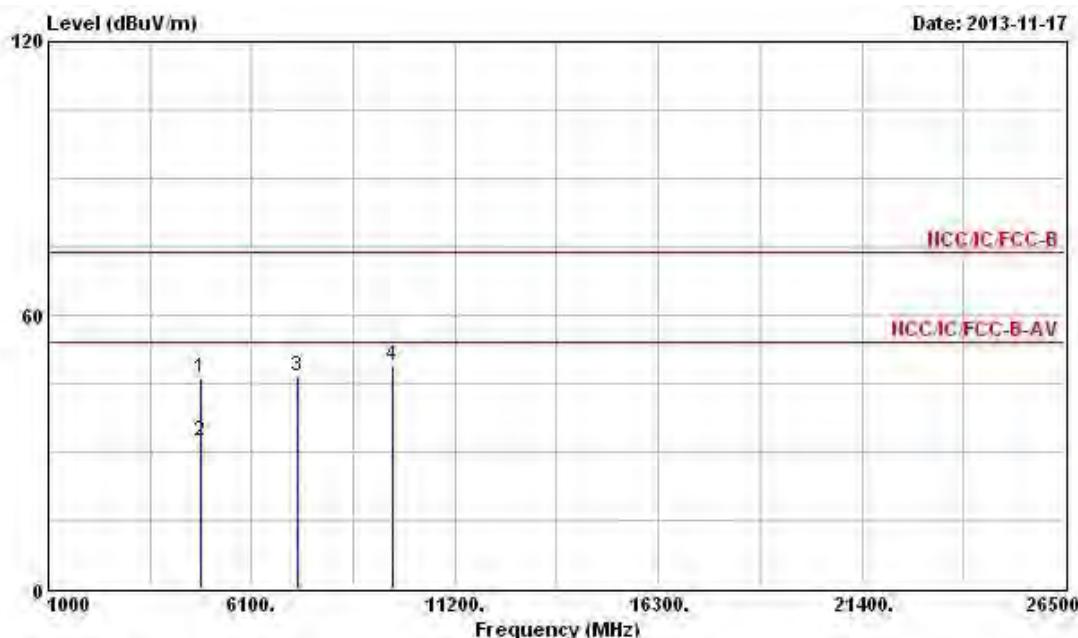
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (110.57 dB<sub>uV/m</sub>).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 1)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos
		Limit	Line	Level	Factor	Cable	Preamp		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4824.000	46.21	-27.79	74.00	41.39	34.80	4.70	34.68	Peak	---
2 4824.000	32.47	-21.53	54.00	27.65	34.80	4.70	34.68	Average	---
3 7236.000	46.62			40.29	35.90	5.37	34.94	Peak	---
4 9648.000	48.85			40.90	36.95	6.35	35.35	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.

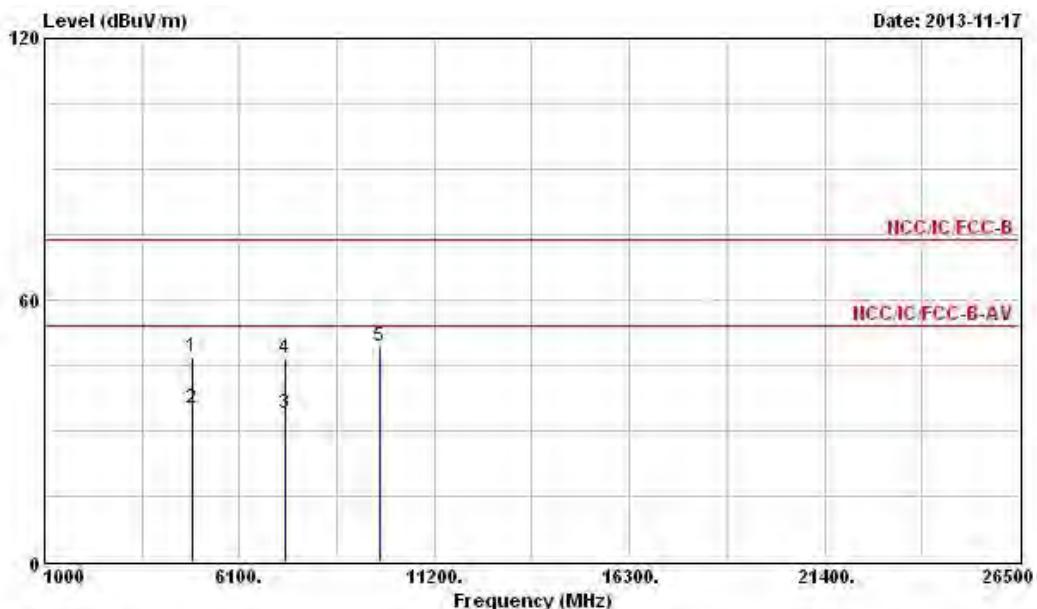
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (110.57 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	11g (Mode 1)	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over Limit		ReadAntenna		Cable Preamp		Remark	Ant Pos	Table Pos	
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	4874.000	46.97	-27.03	74.00	42.14	34.77	4.73	34.67	Peak	---	---
2	4874.000	35.02	-18.98	54.00	30.19	34.77	4.73	34.67	Average	---	---
3	7311.000	34.13	-19.87	54.00	27.71	35.90	5.47	34.95	Average	---	---
4	7311.000	46.73	-27.27	74.00	40.31	35.90	5.47	34.95	Peak	---	---
5	9748.000	49.26			41.10	37.11	6.41	35.36	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.

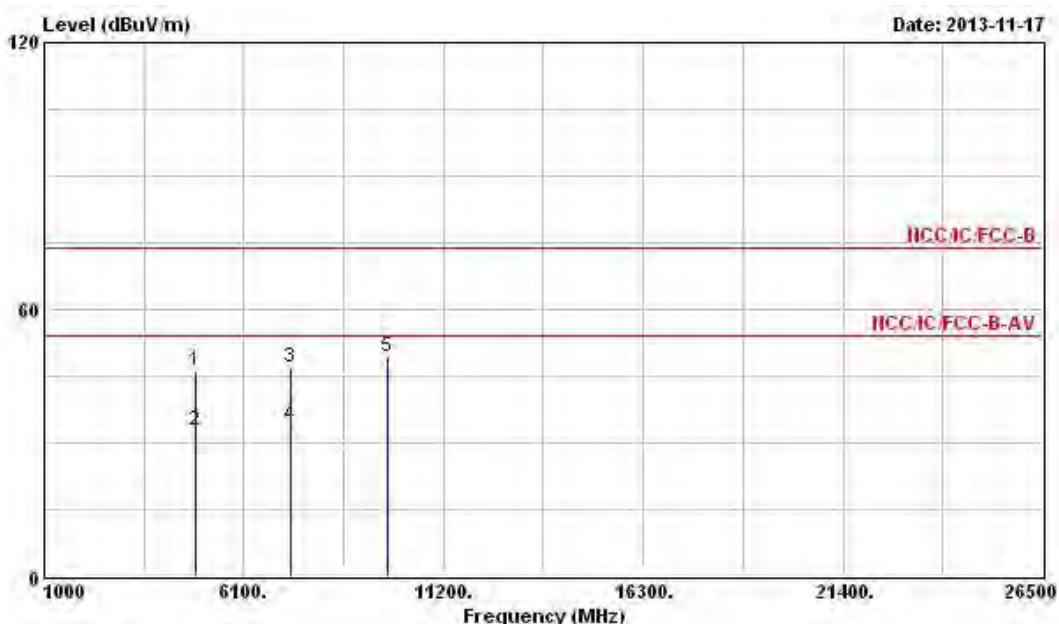
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.09 dB<sub>UV</sub>/m).

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission maximum measured in-band level (112.09 dBmV/m).



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 1)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Loss	Factor		Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	46.02	-27.98	74.00	41.19	34.77	4.73	34.67 Peak	---	---
2	4874.000	32.60	-21.40	54.00	27.77	34.77	4.73	34.67 Average	---	---
3	7311.000	46.87	-27.13	74.00	40.45	35.90	5.47	34.95 Peak	---	---
4	7311.000	33.95	-20.05	54.00	27.53	35.90	5.47	34.95 Average	---	---
5	9748.000	49.51			41.35	37.11	6.41	35.36 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.

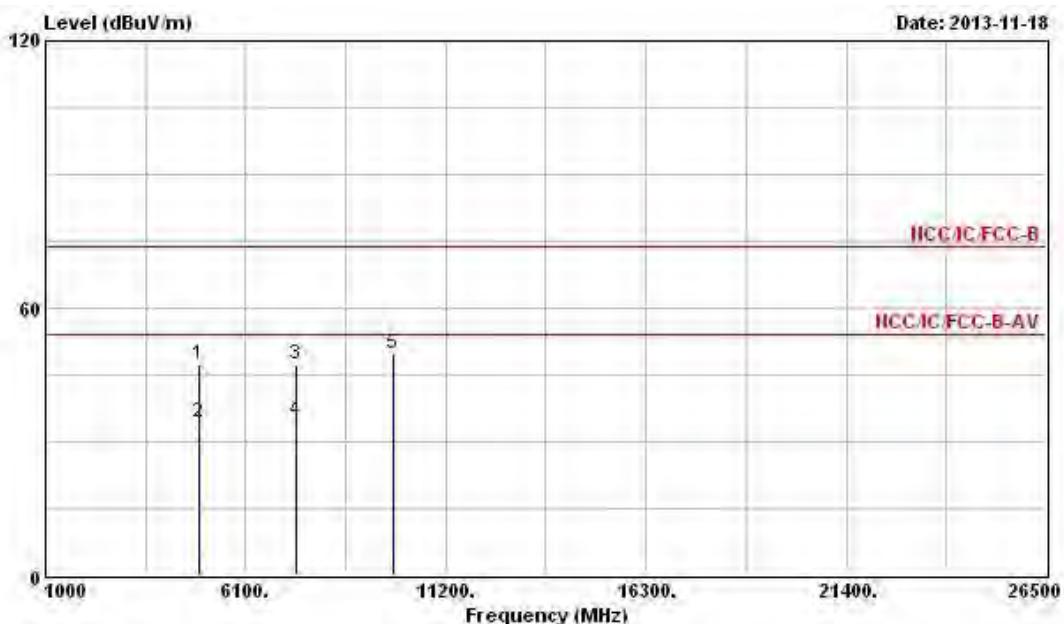
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.09 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	11g (Mode 1)	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
4924.000	47.25	-26.75	74.00	42.38	34.74	4.79	34.66	Peak	---	---
4924.000	34.32	-19.68	54.00	29.45	34.74	4.79	34.66	Average	---	---
7386.000	47.50	-26.50	74.00	41.00	35.90	5.57	34.97	Peak	---	---
7386.000	34.62	-19.38	54.00	28.12	35.90	5.57	34.97	Average	---	---
9848.000	49.57			41.19	37.25	6.50	35.37	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.

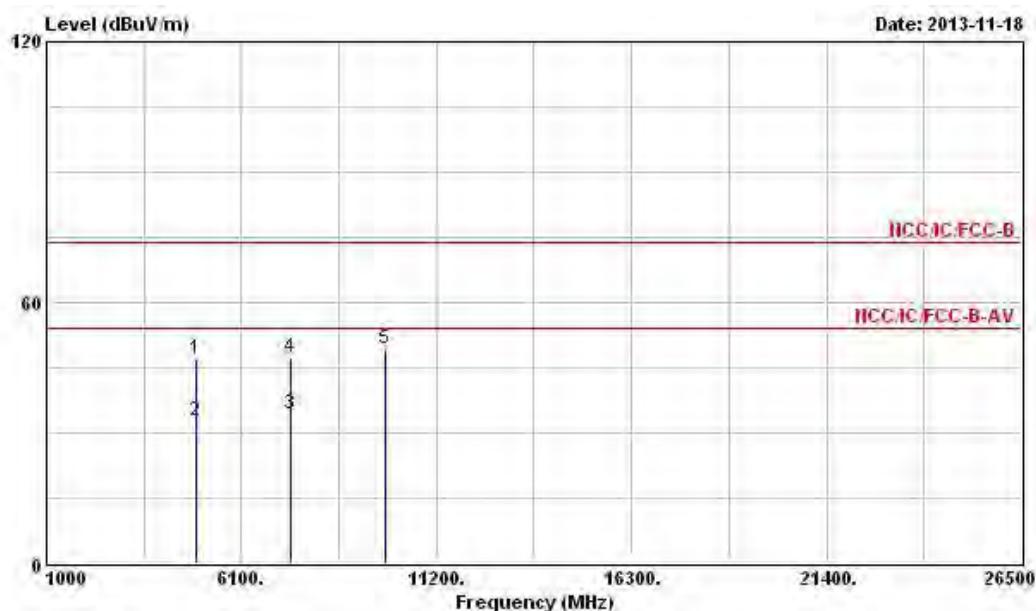
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.69 dB<sub>UV</sub>/m).

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission maximum measured in-band level (109.69 dBuV/m).



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 1)	Test Freq. (MHz)	2462
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over Limit	Line	Read		Antenna	Cable Loss	Preamp Factor	Remark	Int Pos	Table Pos
				dB	dBuV/m						
1 4924.000	46.80	-27.20	74.00	41.93	34.74	4.79	34.66	Peak		---	---
2 4924.000	32.80	-21.20	54.00	27.93	34.74	4.79	34.66	Average		---	---
3 7386.000	34.52	-19.48	54.00	28.02	35.90	5.57	34.97	Average		---	---
4 7386.000	47.38	-26.62	74.00	40.88	35.90	5.57	34.97	Peak		---	---
5 9848.000	49.26			40.88	37.25	6.50	35.37	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.

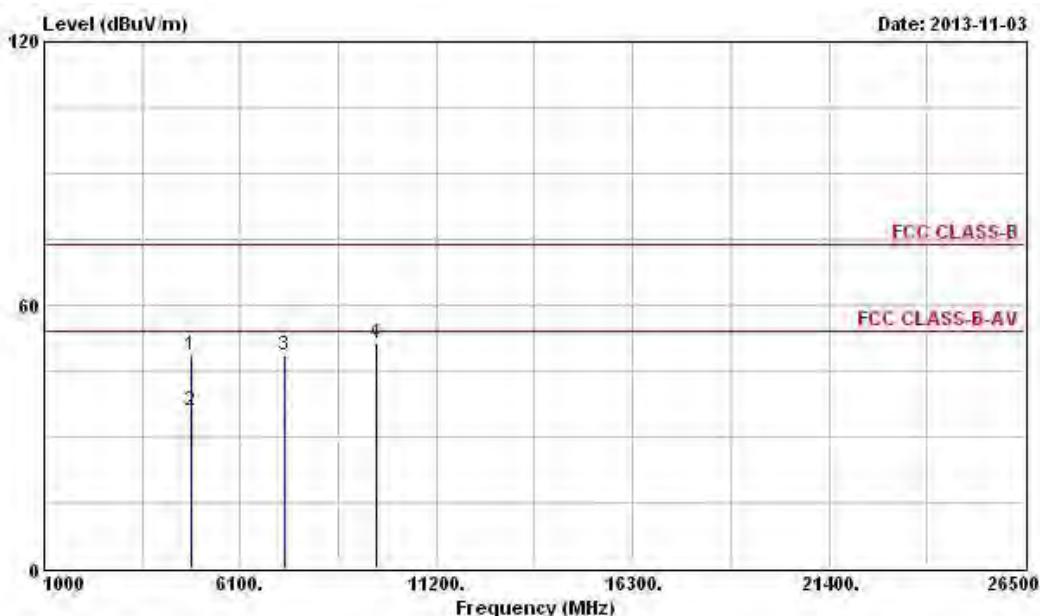
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.69 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 2)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over Limit	Line	Read	Antenna	Cable	Preamp	Remark	Ant	Table
									Pos	Pos
MHz	dBuV/m		dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4824.000	48.71	-25.29	74.00	44.32	34.37	4.70	34.68	Peak	---	---
2 4824.000	35.77	-18.23	54.00	31.38	34.37	4.70	34.68	Average	---	---
3 7236.000	48.64			42.91	35.30	5.37	34.94	Peak	---	---
4 9648.000	51.29			43.40	36.89	6.35	35.35	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.

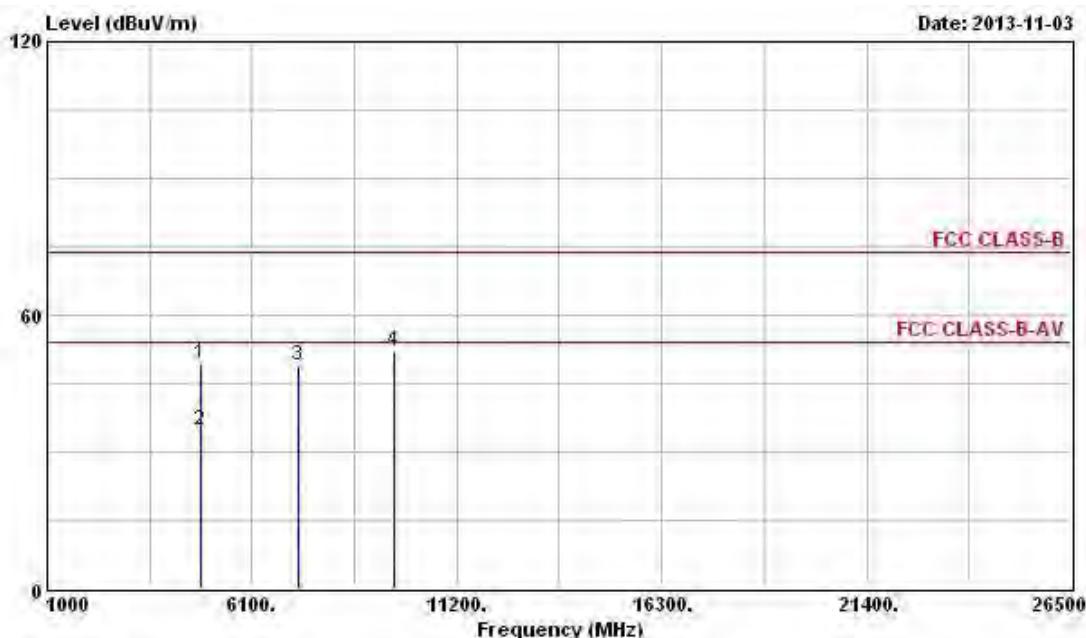
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.45 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 2)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos
		Limit	Line	Level	Factor	Cable	Preamp		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4824.000	49.16	-24.84	74.00	44.77	34.37	4.70	34.68 Peak	---	---
2 4824.000	34.69	-19.31	54.00	30.30	34.37	4.70	34.68 Average	---	---
3 7236.000	49.08			43.35	35.30	5.37	34.94 Peak	---	---
4 9648.000	51.99			44.10	36.89	6.35	35.35 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.

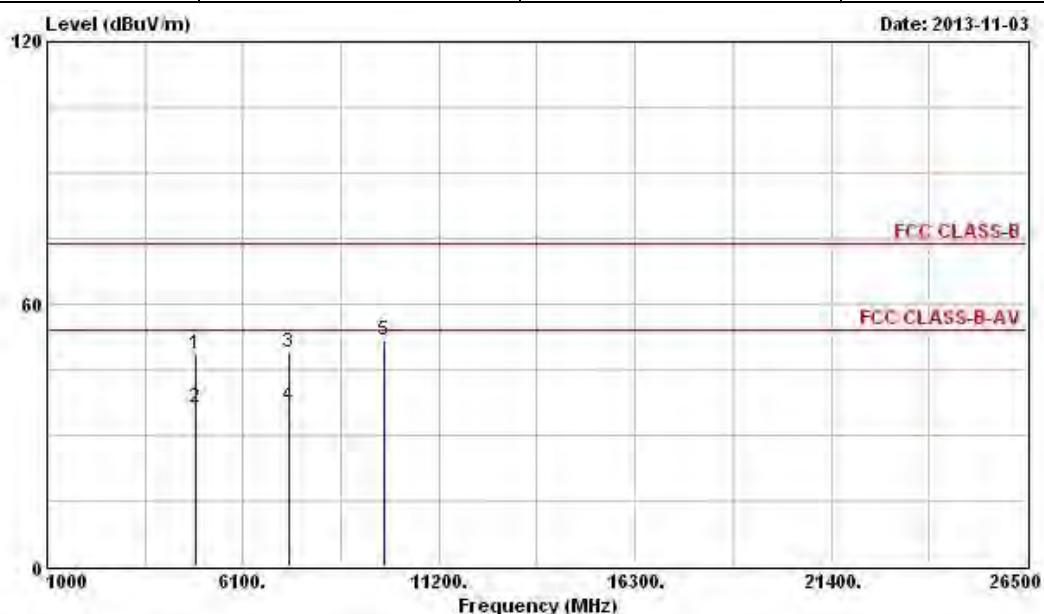
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.45 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 2)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos
		MHz	dBuV/m	dB	Line	Level	Factor		
1	4874.000	48.51	-25.49	74.00	44.07	34.38	4.73	34.67	Peak
2	4874.000	36.32	-17.68	54.00	31.88	34.38	4.73	34.67	Average
3	7311.000	48.90	-25.10	74.00	43.08	35.30	5.47	34.95	Peak
4	7311.000	36.54	-17.46	54.00	30.72	35.30	5.47	34.95	Average
5	9748.000	51.90			43.84	37.01	6.41	35.36	Peak

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

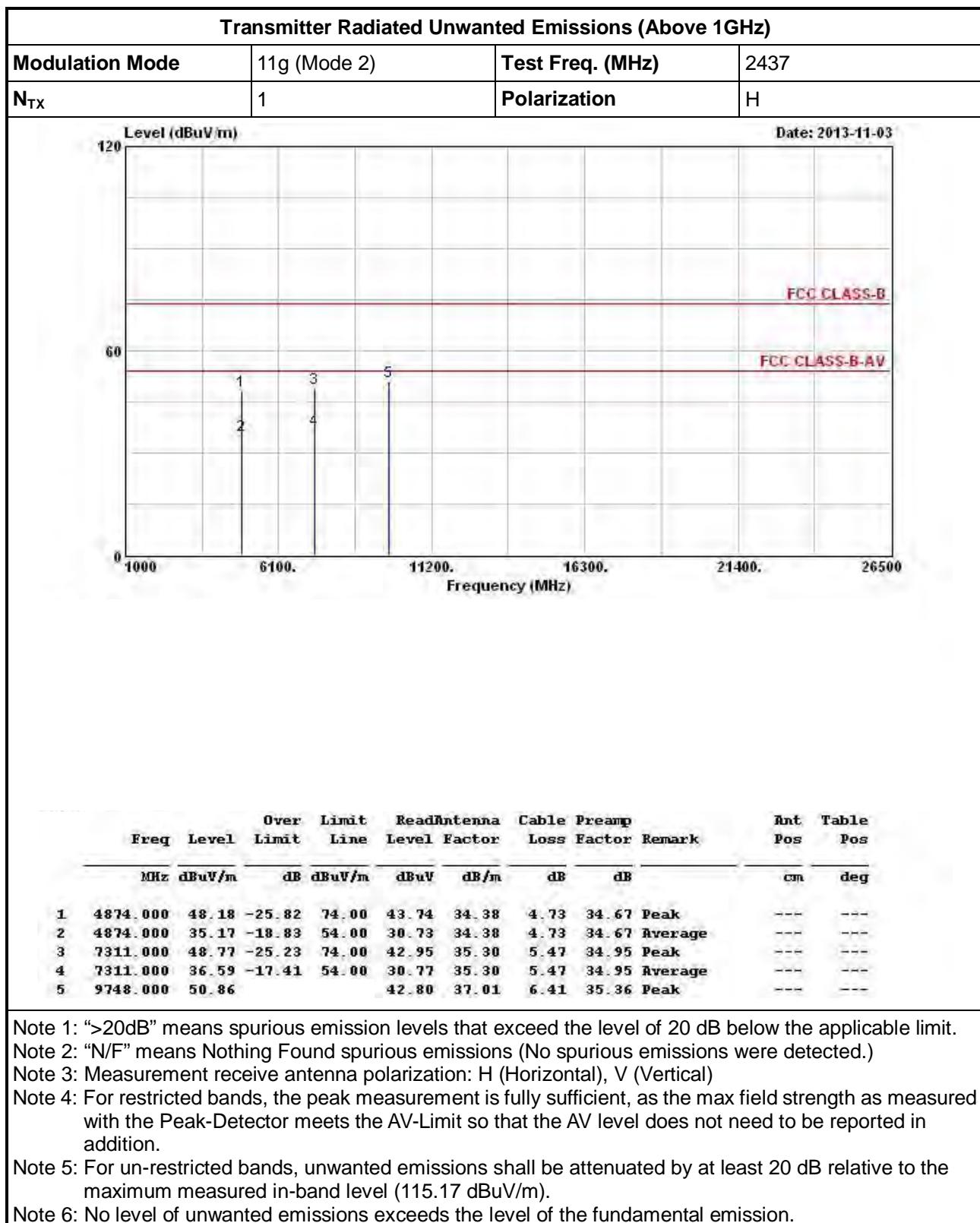
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (115.17 dBuV/m).

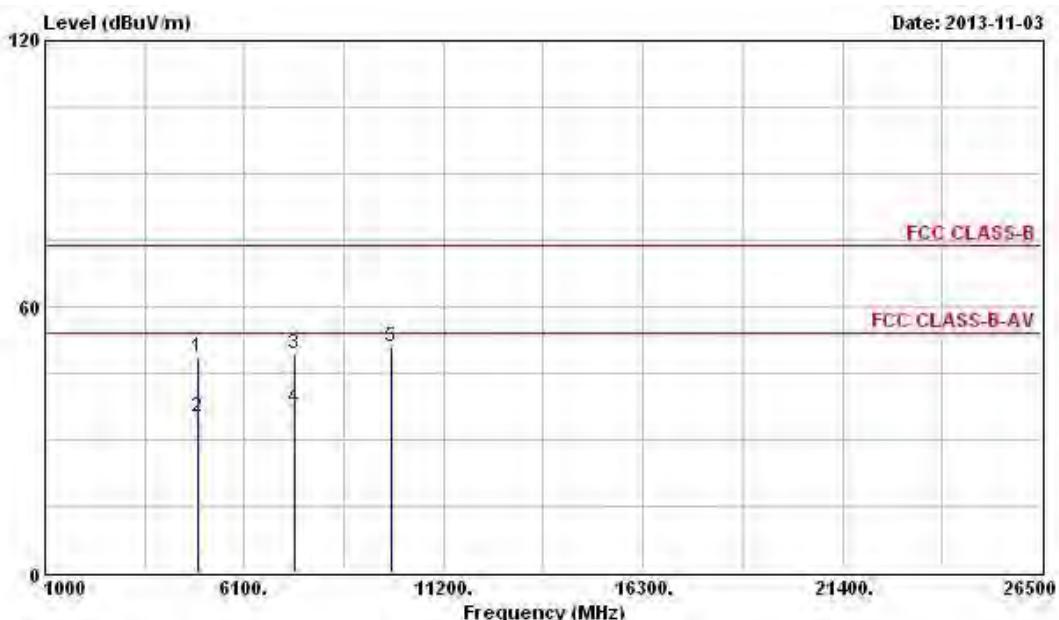
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.





## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	11g (Mode 2)	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over	Limit	ReadAntenna		Cable		Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Loss	Factor	Pos			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	4924.000	48.72	-25.28	74.00	44.20	34.39	4.79	34.66	Peak	---	---
2	4924.000	35.29	-18.71	54.00	30.77	34.39	4.79	34.66	Average	---	---
3	7386.000	49.32	-24.68	74.00	43.42	35.30	5.57	34.97	Peak	---	---
4	7386.000	37.01	-16.99	54.00	31.11	35.30	5.57	34.97	Average	---	---
5	9848.000	51.00			42.76	37.11	6.50	35.37	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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.94 dB<sub>UV</sub>/m).

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission maximum measured in-band level (109.94 dB<sub>UV</sub>/mJ).



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

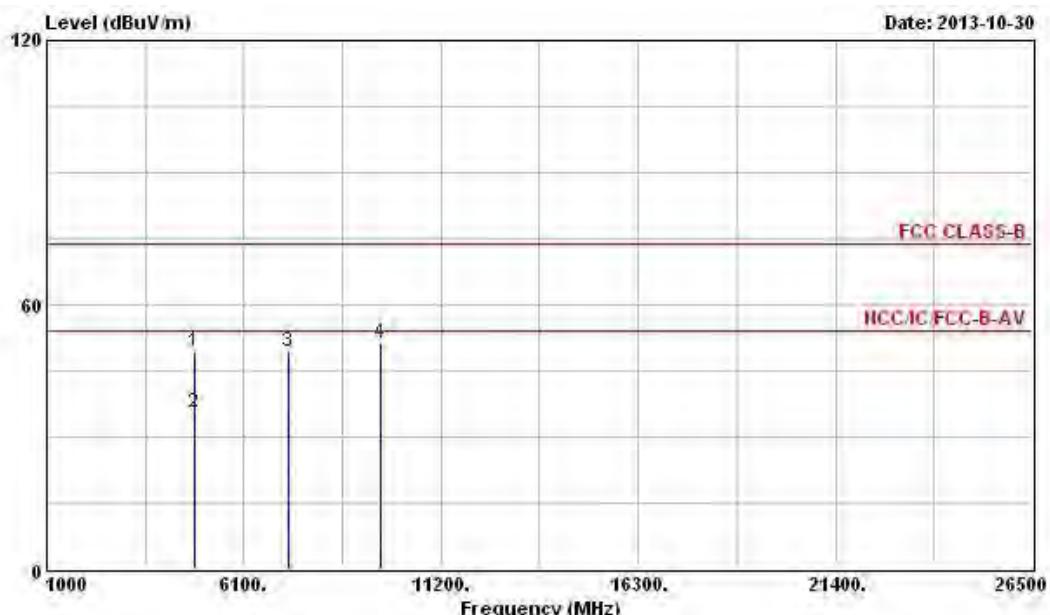
Modulation Mode	11g (Mode 2)	Test Freq. (MHz)	2462																																																																									
N <sub>TX</sub>	1	Polarization	H																																																																									
Level (dBuV/m)			Date: 2013-11-03																																																																									
			FCC CLASS-B																																																																									
			FCC CLASS-B-AV																																																																									
<table border="1"> <thead> <tr> <th rowspan="2">Freq MHz</th> <th rowspan="2">Level dBuV/m</th> <th>Over Limit</th> <th>Line</th> <th>Read</th> <th>Antenna</th> <th>Cable</th> <th>Preamp</th> <th rowspan="2">Remark</th> <th rowspan="2">Int Pos</th> <th rowspan="2">Table Pos</th> </tr> <tr> <th>Limit</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dB</th> </tr> </thead> <tbody> <tr> <td>1 4924.000</td> <td>48.49</td> <td>-25.51</td> <td>74.00</td> <td>43.97</td> <td>34.39</td> <td>4.79</td> <td>34.66</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>2 4924.000</td> <td>35.03</td> <td>-18.97</td> <td>54.00</td> <td>30.51</td> <td>34.39</td> <td>4.79</td> <td>34.66</td> <td>Average</td> <td>---</td> <td>---</td> </tr> <tr> <td>3 7386.000</td> <td>49.27</td> <td>-24.73</td> <td>74.00</td> <td>43.37</td> <td>35.30</td> <td>5.57</td> <td>34.97</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>4 7386.000</td> <td>37.02</td> <td>-16.98</td> <td>54.00</td> <td>31.12</td> <td>35.30</td> <td>5.57</td> <td>34.97</td> <td>Average</td> <td>---</td> <td>---</td> </tr> <tr> <td>5 9848.000</td> <td>51.17</td> <td></td> <td></td> <td>42.93</td> <td>37.11</td> <td>6.50</td> <td>35.37</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> </tbody> </table>			Freq MHz	Level dBuV/m	Over Limit	Line	Read	Antenna	Cable	Preamp	Remark	Int Pos	Table Pos	Limit	dB	dBuV/m	dBuV	dB/m	dB	dB	1 4924.000	48.49	-25.51	74.00	43.97	34.39	4.79	34.66	Peak	---	---	2 4924.000	35.03	-18.97	54.00	30.51	34.39	4.79	34.66	Average	---	---	3 7386.000	49.27	-24.73	74.00	43.37	35.30	5.57	34.97	Peak	---	---	4 7386.000	37.02	-16.98	54.00	31.12	35.30	5.57	34.97	Average	---	---	5 9848.000	51.17			42.93	37.11	6.50	35.37	Peak	---	---	
Freq MHz	Level dBuV/m	Over Limit			Line	Read	Antenna	Cable	Preamp	Remark				Int Pos	Table Pos																																																													
		Limit	dB	dBuV/m	dBuV	dB/m	dB	dB																																																																				
1 4924.000	48.49	-25.51	74.00	43.97	34.39	4.79	34.66	Peak	---	---																																																																		
2 4924.000	35.03	-18.97	54.00	30.51	34.39	4.79	34.66	Average	---	---																																																																		
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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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.94 dBuV/m).  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 3)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over Limit	Line	Read	Antenna	Cable	Preamp	Remark	Ant	Table
									Pos	Pos
MHz	dBuV/m		dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4824.000	49.15	-24.85	74.00	44.33	34.80	4.70	34.68	Peak	---	---
2 4824.000	35.56	-18.44	54.00	30.74	34.80	4.70	34.68	Average	---	---
3 7236.000	49.28			42.95	35.90	5.37	34.94	Peak	---	---
4 9648.000	51.48			43.53	36.95	6.35	35.35	Peak	---	---

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

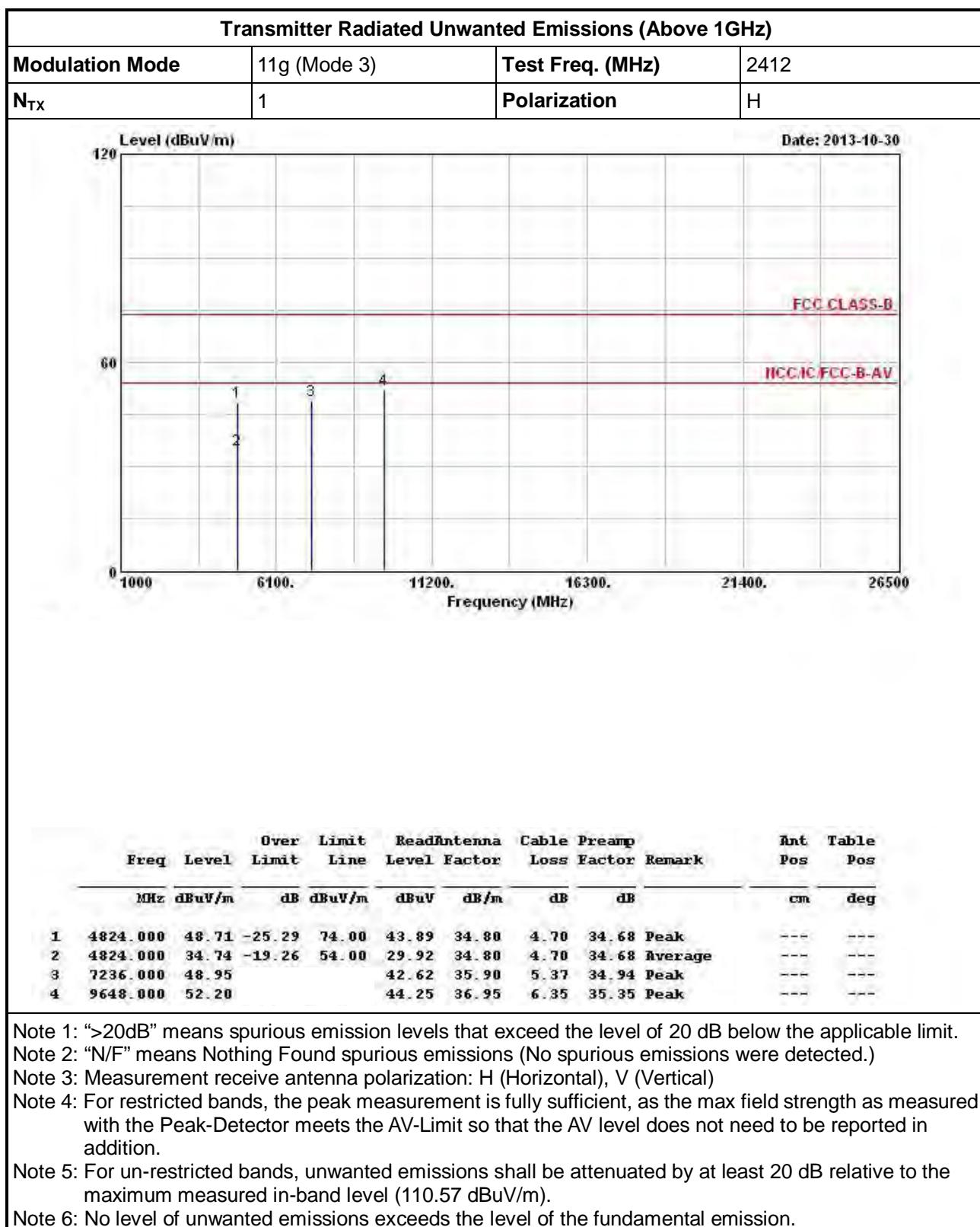
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (110.57 dBuV/m).

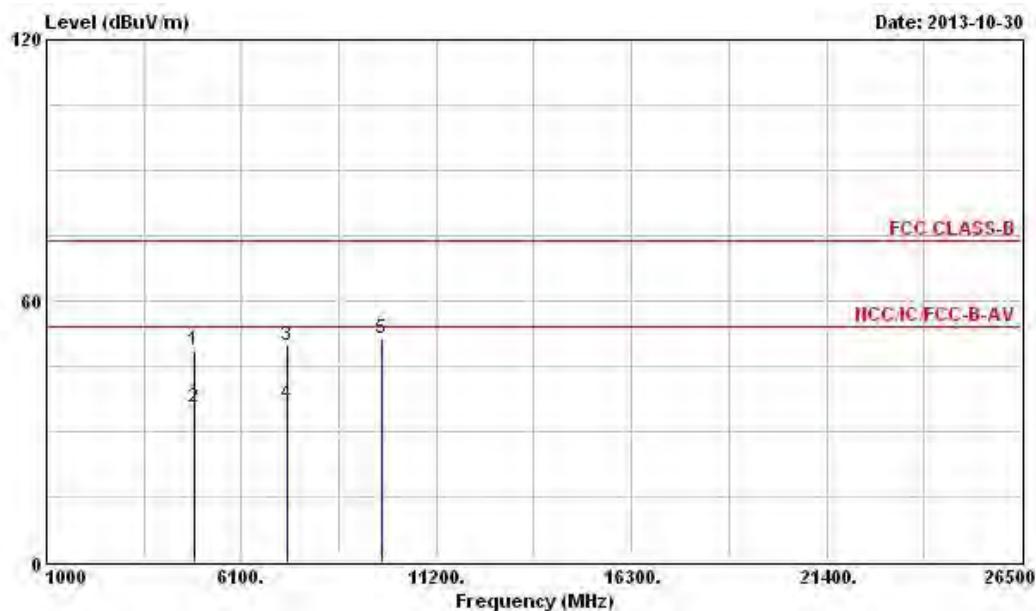
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.





## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	11g (Mode 3)	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over Limit		ReadAntenna		Cable Preamp		Remark	Ant Pos	Table Pos	
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	4874.000	48.73	-25.27	74.00	43.90	34.77	4.73	34.67	Peak	---	---
2	4874.000	35.37	-18.63	54.00	30.54	34.77	4.73	34.67	Average	---	---
3	7311.000	49.71	-24.29	74.00	43.29	35.90	5.47	34.95	Peak	---	---
4	7311.000	36.46	-17.54	54.00	30.04	35.90	5.47	34.95	Average	---	---
5	9748.000	51.33			43.17	37.11	6.41	35.36	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.

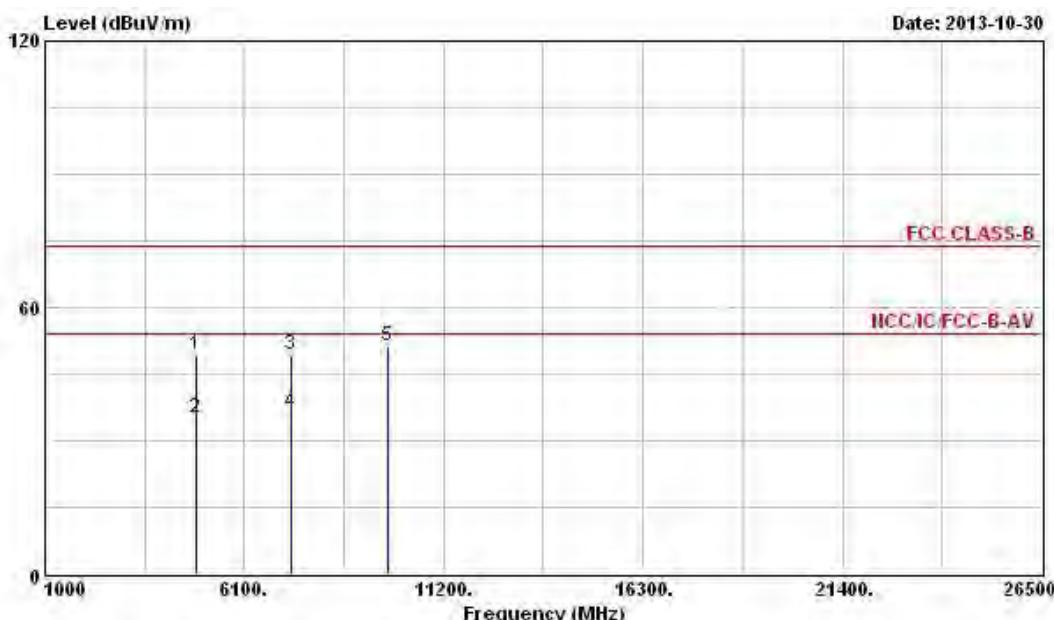
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.09 dB<sub>UV</sub>/m)

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission maximum measured in-band level (112.09 dB<sub>V</sub>/m).



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 3)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Int	Table
		Limit	Line							
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 4874.000	49.26	-24.74	74.00	44.43	34.77	4.73	34.67	Peak	---	---
2 4874.000	34.96	-19.04	54.00	30.13	34.77	4.73	34.67	Average	---	---
3 7311.000	49.37	-24.63	74.00	42.95	35.90	5.47	34.95	Peak	---	---
4 7311.000	36.40	-17.60	54.00	29.98	35.90	5.47	34.95	Average	---	---
5 9748.000	51.21			43.11	37.11	6.41	35.36	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.

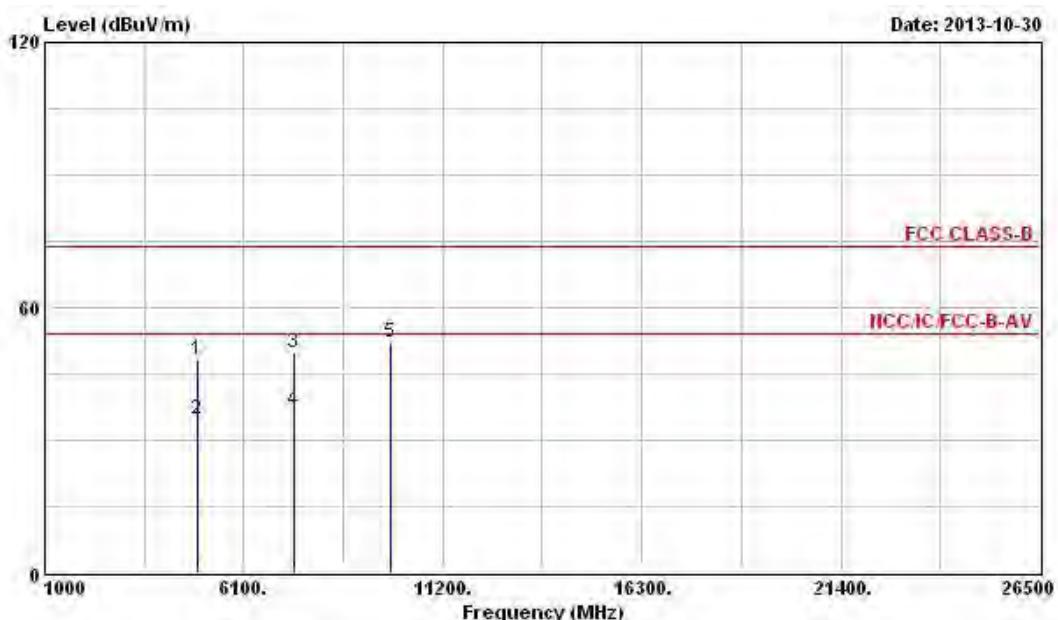
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (112.09 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 3)	Test Freq. (MHz)	2462
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over	Limit	Read	Intenna	Cable	Preamp	Remark	Int	Table
		Limit	Line	Level	Factor	Cable	Preamp		Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 4924.000	48.31	-25.69	74.00	43.44	34.74	4.79	34.66	Peak	---	---
2 4924.000	34.66	-19.34	54.00	29.79	34.74	4.79	34.66	Average	---	---
3 7386.000	49.67	-24.33	74.00	43.17	35.90	5.57	34.97	Peak	---	---
4 7386.000	36.52	-17.48	54.00	30.02	35.90	5.57	34.97	Average	---	---
5 9848.000	52.22			43.84	37.25	6.50	35.37	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.

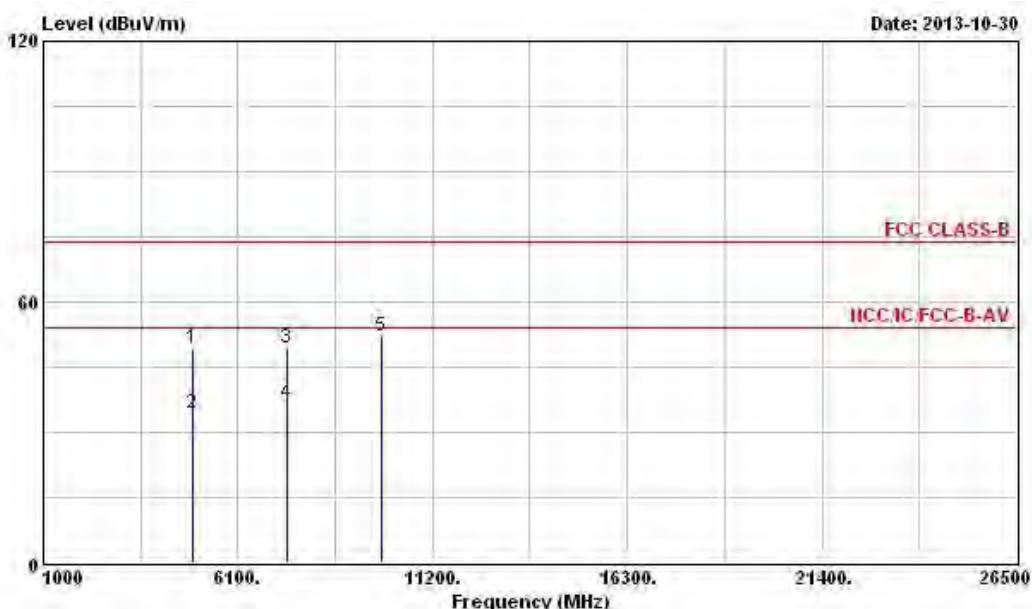
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.69 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	11g (Mode 3)	Test Freq. (MHz)	2462
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos
		Limit	Line	Level	Factor	Loss	Factor		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4924.000	49.40	-24.60	74.00	44.53	34.74	4.79	34.66	Peak	---
2 4924.000	34.46	-19.54	54.00	29.59	34.74	4.79	34.66	Average	---
3 7386.000	49.26	-24.74	74.00	42.76	35.90	5.57	34.97	Peak	---
4 7386.000	36.59	-17.41	54.00	30.09	35.90	5.57	34.97	Average	---
5 9848.000	52.14			43.76	37.25	6.50	35.37	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)

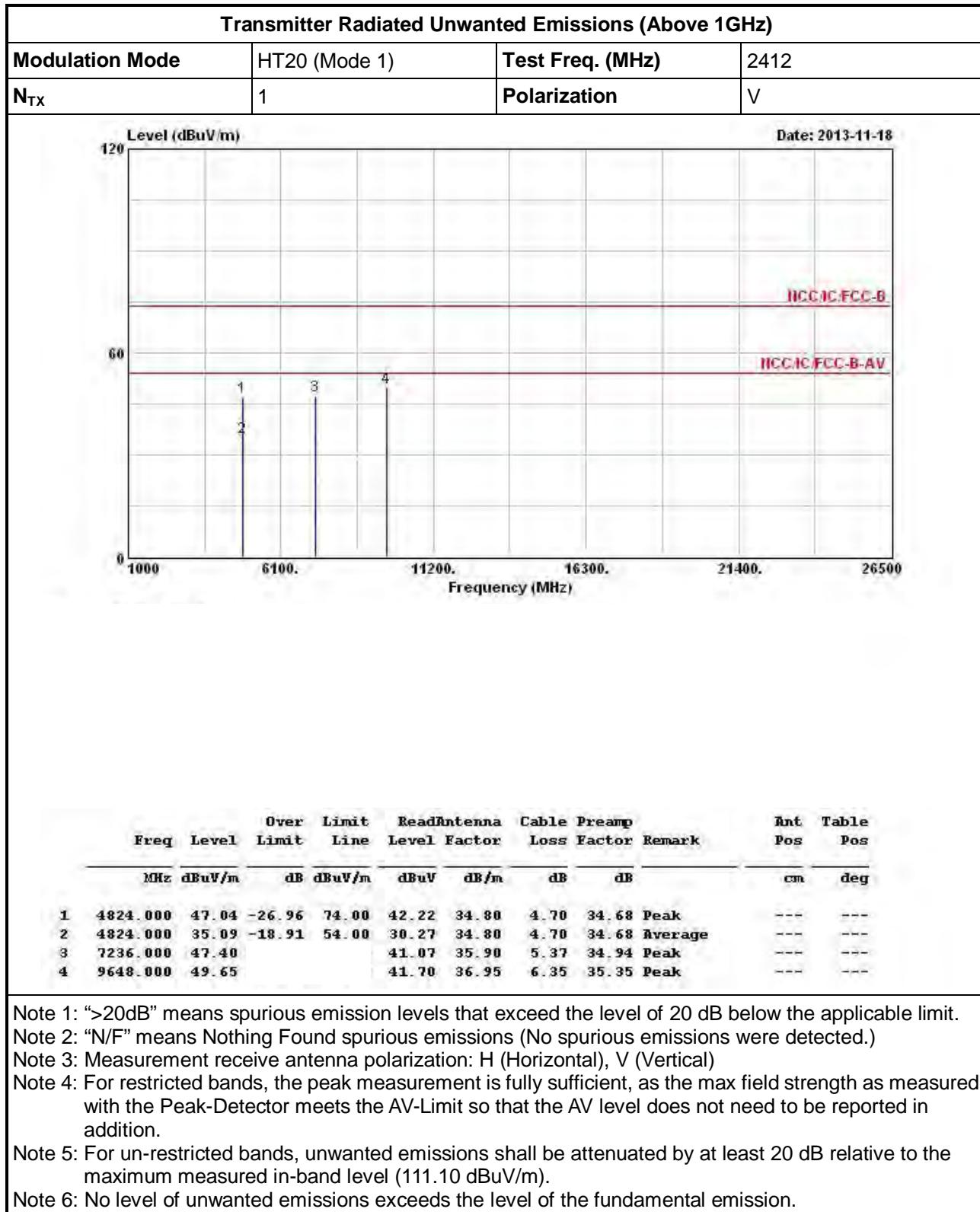
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.69 dBuV/m).

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



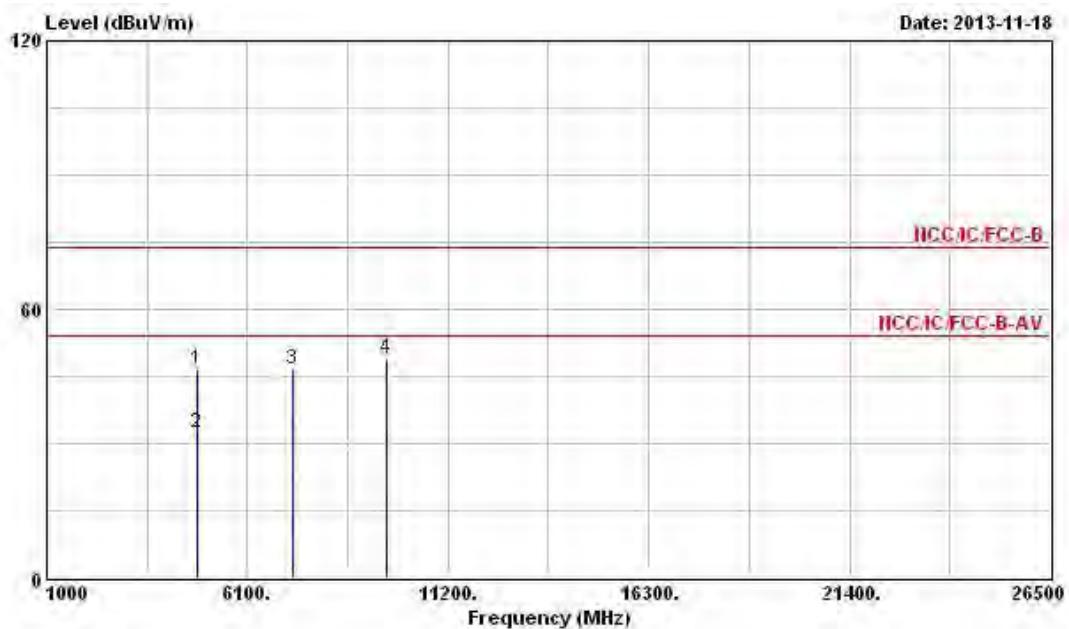
## 3.6.9 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20





## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	HT20 (Mode 1)	<b>Test Freq. (MHz)</b>	2412
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



Freq	Level	Over Limit		Read Antenna		Cable Preamp		Remark	Ant Pos	Table Pos
		Limit	Line	Level	Factor	Loss	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
4824.000	46.39	-27.61	74.00	41.57	34.80	4.70	34.68	Peak	---	---
4824.000	32.44	-21.56	54.00	27.62	34.80	4.70	34.68	Average	---	---
7236.000	46.58			40.25	35.90	5.37	34.94	Peak	---	---
9648.000	48.81			40.86	36.95	6.35	35.35	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.

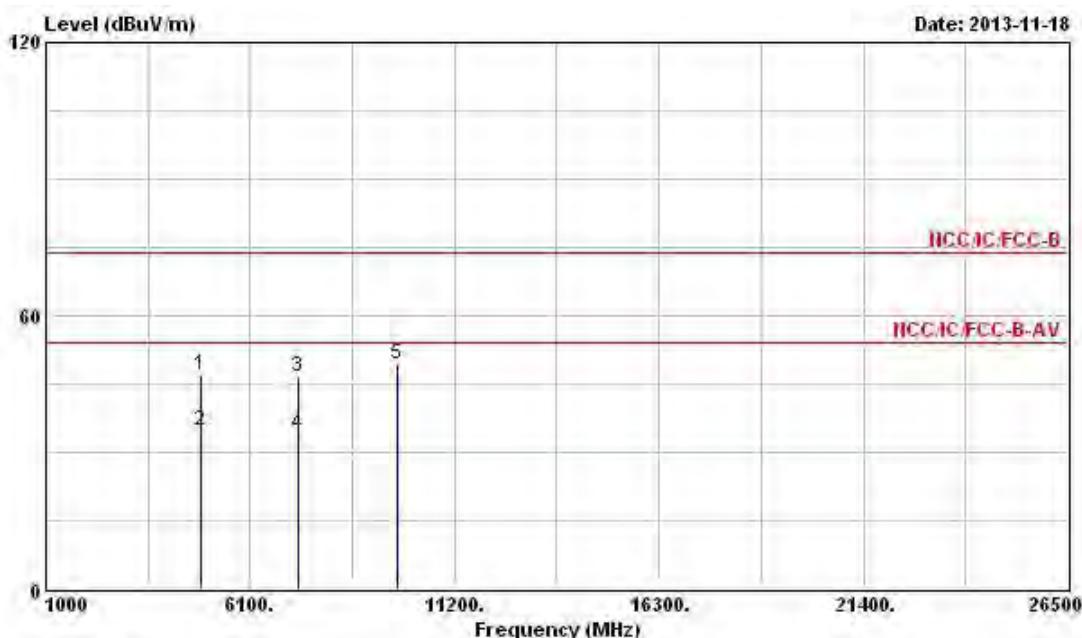
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.10 dB<sub>µ</sub>V/m).

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission maximum measured in-band level (111.10 dBV/m).



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT20 (Mode 1)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over Limit	Line	Read		Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos			
				Antenna Level	Factor								
				MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	4874.000	46.92	-27.08	74.00	42.09	34.77	4.73	34.67	Peak	---	---		
2	4874.000	34.75	-19.25	54.00	29.92	34.77	4.73	34.67	Average	---	---		
3	7311.000	46.66	-27.34	74.00	40.24	35.90	5.47	34.95	Peak	---	---		
4	7311.000	34.07	-19.93	54.00	27.65	35.90	5.47	34.95	Average	---	---		
5	9748.000	49.22			41.06	37.11	6.41	35.36	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.

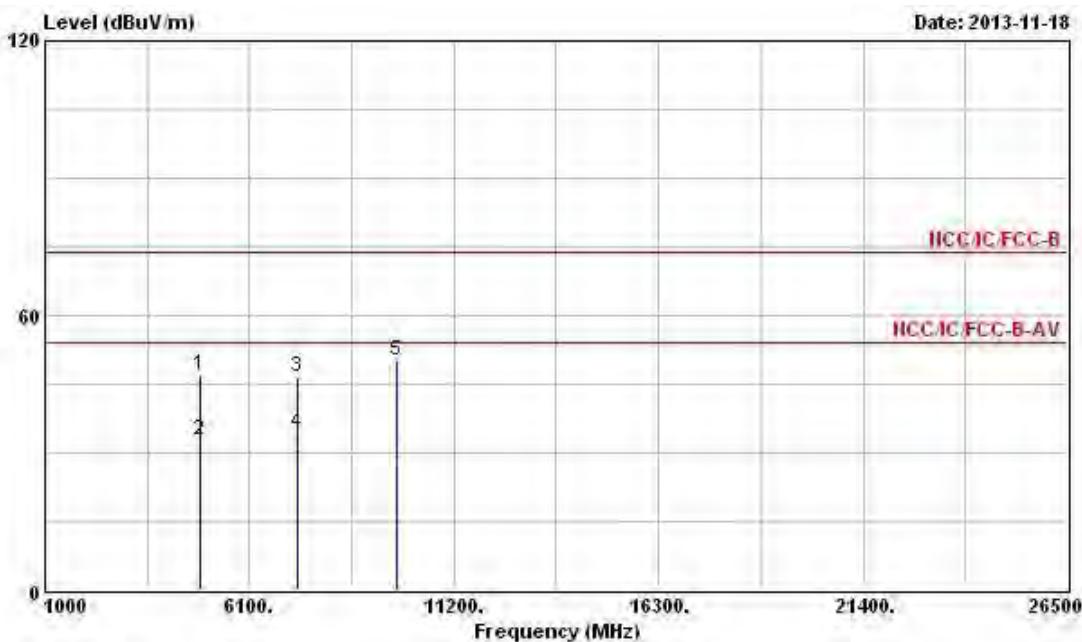
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (113.09 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	HT20 (Mode 1)	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



Freq	Level	Over Limit		ReadAntenna		Cable Preamp		Remark	Rnt Pos	Table Pos
		dB	dBuV/m	Line	Level	Factor	Loss			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1.000	46.97	-27.03	74.00	42.14	34.77	4.73	34.67	Peak	---	---
1.000	32.71	-21.29	54.00	27.88	34.77	4.73	34.67	Average	---	---
1.000	46.64	-27.36	74.00	40.22	35.90	5.47	34.95	Peak	---	---
1.000	34.35	-19.65	54.00	27.93	35.90	5.47	34.95	Average	---	---
3.000	50.26			42.10	37.11	6.41	35.36	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.

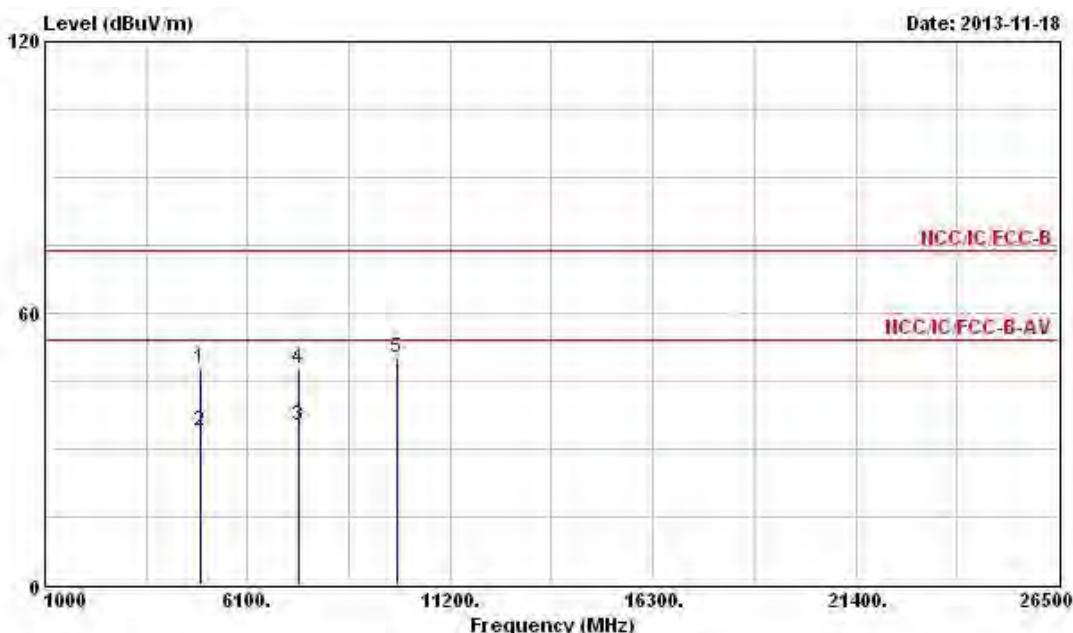
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (113.09 dB<sub>UV</sub>/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT20 (Mode 1)	Test Freq. (MHz)	2462
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table
		Limit	Line	Level	Factor	Loss	Factor		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4924.000	47.67	-26.33	74.00	42.80	34.74	4.79	34.66	Peak	---
2 4924.000	34.11	-19.89	54.00	29.24	34.74	4.79	34.66	Average	---
3 7386.000	35.03	-18.97	54.00	28.53	35.90	5.57	34.97	Average	---
4 7386.000	47.75	-26.25	74.00	41.25	35.90	5.57	34.97	Peak	---
5 9848.000	50.29			41.91	37.25	6.50	35.37	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.

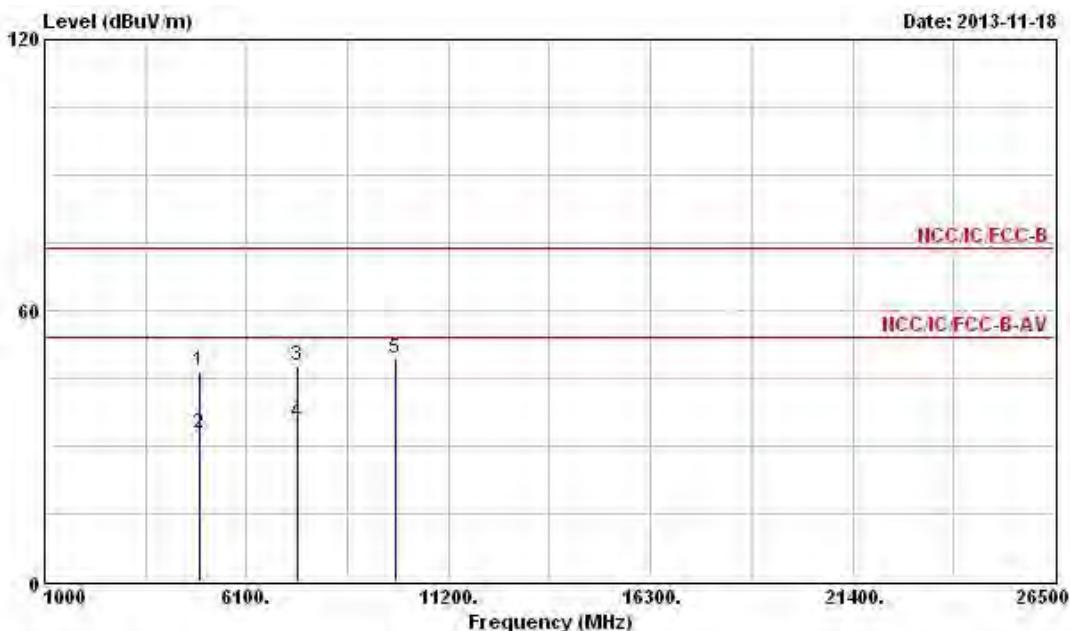
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.20 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	HT20 (Mode 1)	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



Freq	Over Limit		ReadAntenna		Cable		Preamp		Int Pos	Table Pos
	Level	Limit	Line	Level	Factor	Loss	Factor	Remark		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
4924.000	46.71	-27.29	74.00	41.84	34.74	4.79	34.66	Peak	---	---
4924.000	32.89	-21.11	54.00	28.02	34.74	4.79	34.66	Average	---	---
7386.000	47.74	-26.26	74.00	41.24	35.90	5.57	34.97	Peak	---	---
7386.000	35.03	-18.97	54.00	28.53	35.90	5.57	34.97	Average	---	---
9848.000	49.25			40.87	37.25	6.50	35.37	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 3: Measurement: active 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

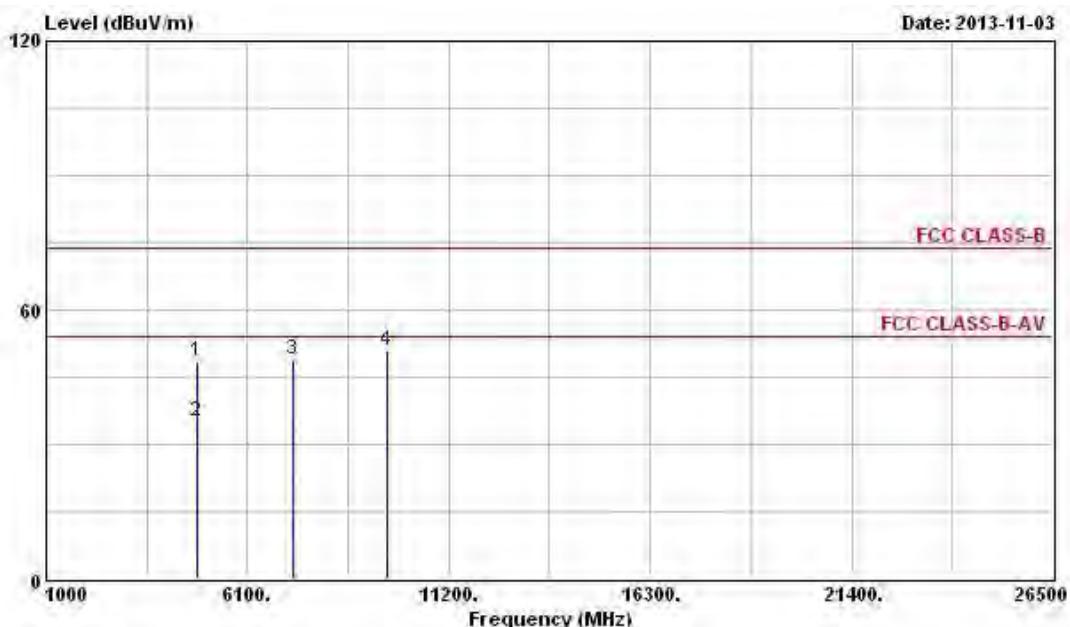
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.20 dBuV/m)

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT20 (Mode 2)	Test Freq. (MHz)	2412
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 4824.000	48.66	-25.34	74.00	44.27	34.37	4.70	34.68	Peak	---	---
2 4824.000	35.21	-18.79	54.00	30.82	34.37	4.70	34.68	Average	---	---
3 7236.000	48.85			43.12	35.30	5.37	34.94	Peak	---	---
4 9648.000	50.96			43.07	36.89	6.35	35.35	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.

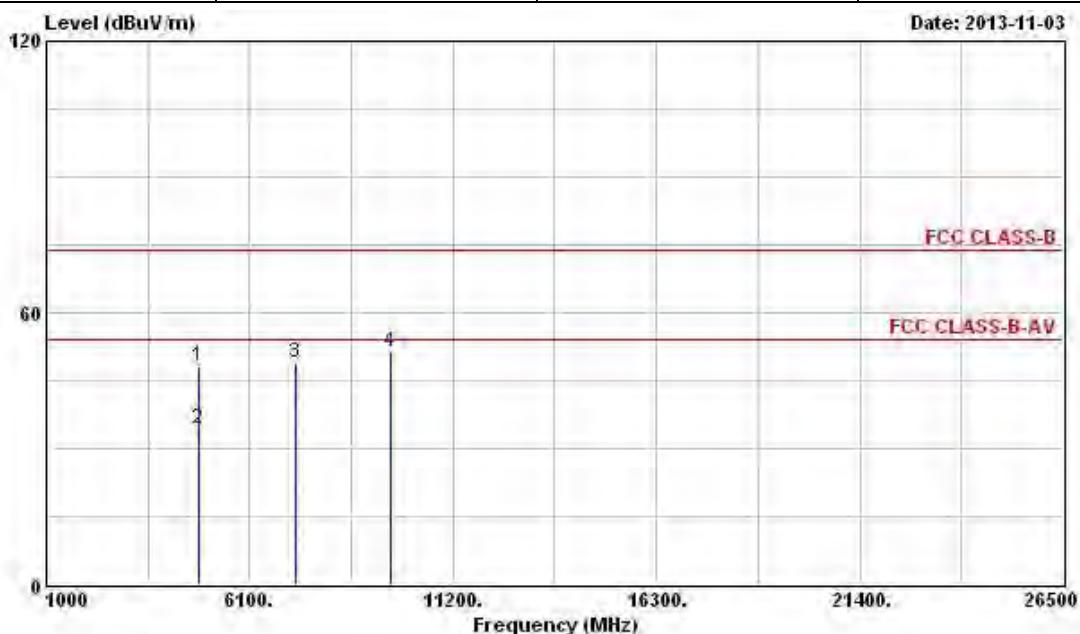
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.64 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	HT20 (Mode 2)	<b>Test Freq. (MHz)</b>	2412
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



Freq	Level	Over Limit		ReadAntenna		Cable		Preamp		Remark	Ant Pos	Table Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			
1	4824.000	48.07	-25.93	74.00	43.68	34.37	4.70	34.68	Peak	---	---	---
2	4824.000	34.33	-19.67	54.00	29.94	34.37	4.70	34.68	Average	---	---	---
3	7236.000	48.86			43.13	35.30	5.37	34.94	Peak	---	---	---
4	9648.000	51.25			43.36	36.89	6.35	35.35	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.

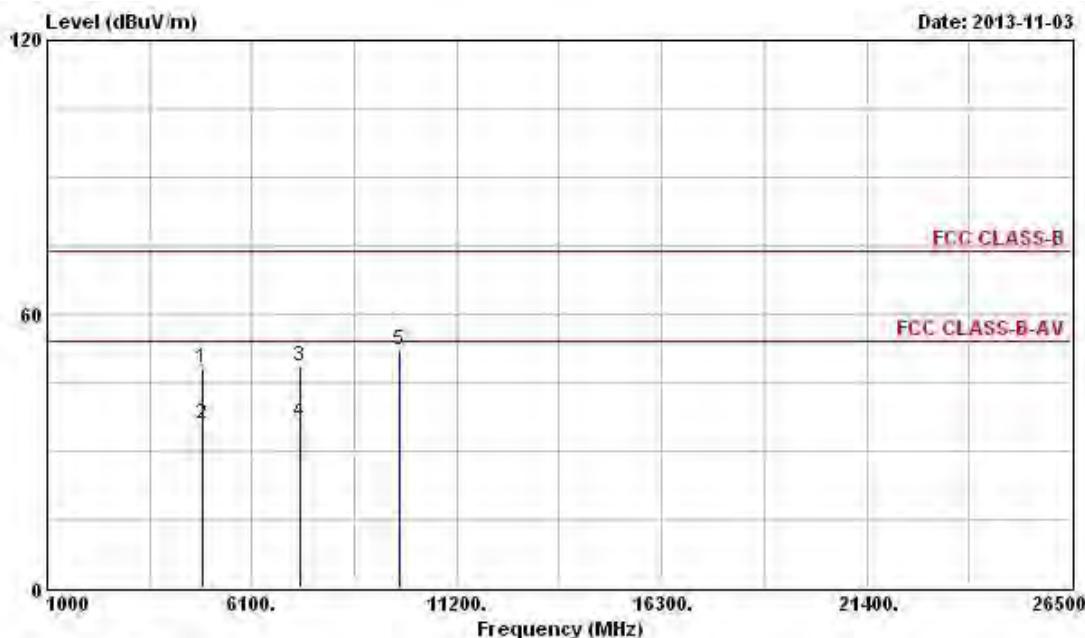
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.64 dB<sub>UV</sub>/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT20 (Mode 2)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over	Limit	Read	Intenna	Cable	Preamp	Ant Pos	Table Pos
		Limit	Line	Level	Factor	Cable	Preamp		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4874.000	48.35	-25.65	74.00	43.91	34.38	4.73	34.67	Peak	---
2 4874.000	36.04	-17.96	54.00	31.60	34.38	4.73	34.67	Average	---
3 7311.000	48.69	-25.31	74.00	42.87	35.30	5.47	34.95	Peak	---
4 7311.000	36.46	-17.54	54.00	30.64	35.30	5.47	34.95	Average	---
5 9748.000	52.28			44.22	37.01	6.41	35.36	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.

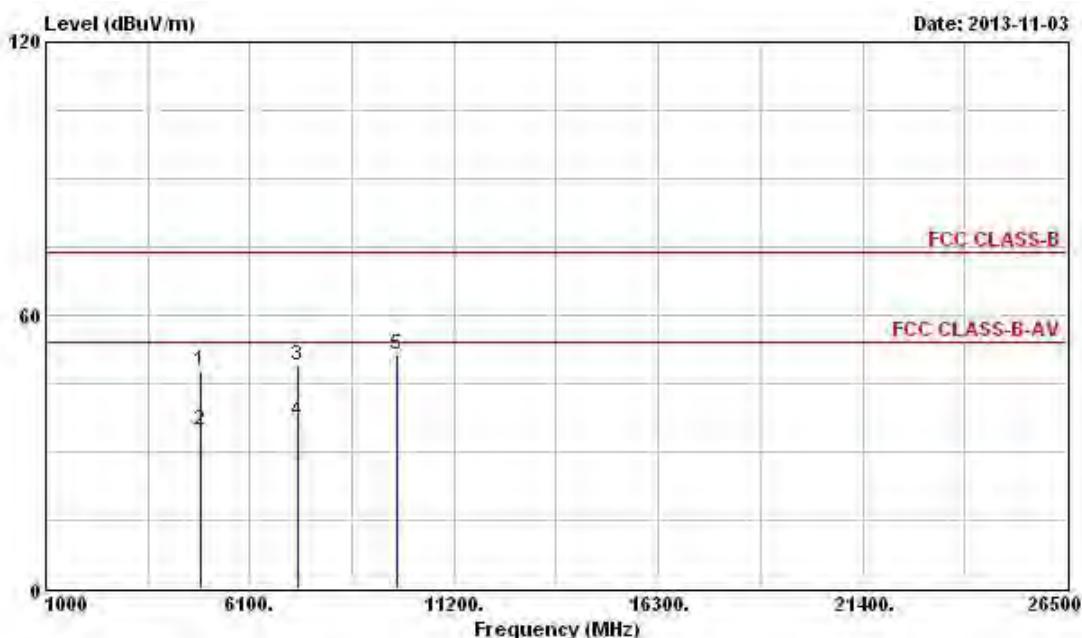
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (115.12 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT20 (Mode 2)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos
		Limit	Line	Antenna	Level	Factor	Loss		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1 4874.000	47.70	-26.30	74.00	43.26	34.38	4.73	34.67	Peak	---
2 4874.000	34.93	-19.07	54.00	30.49	34.38	4.73	34.67	Average	---
3 7311.000	49.12	-24.88	74.00	43.30	35.30	5.47	34.95	Peak	---
4 7311.000	36.59	-17.41	54.00	30.77	35.30	5.47	34.95	Average	---
5 9748.000	51.15			43.09	37.01	6.41	35.36	Peak	---

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

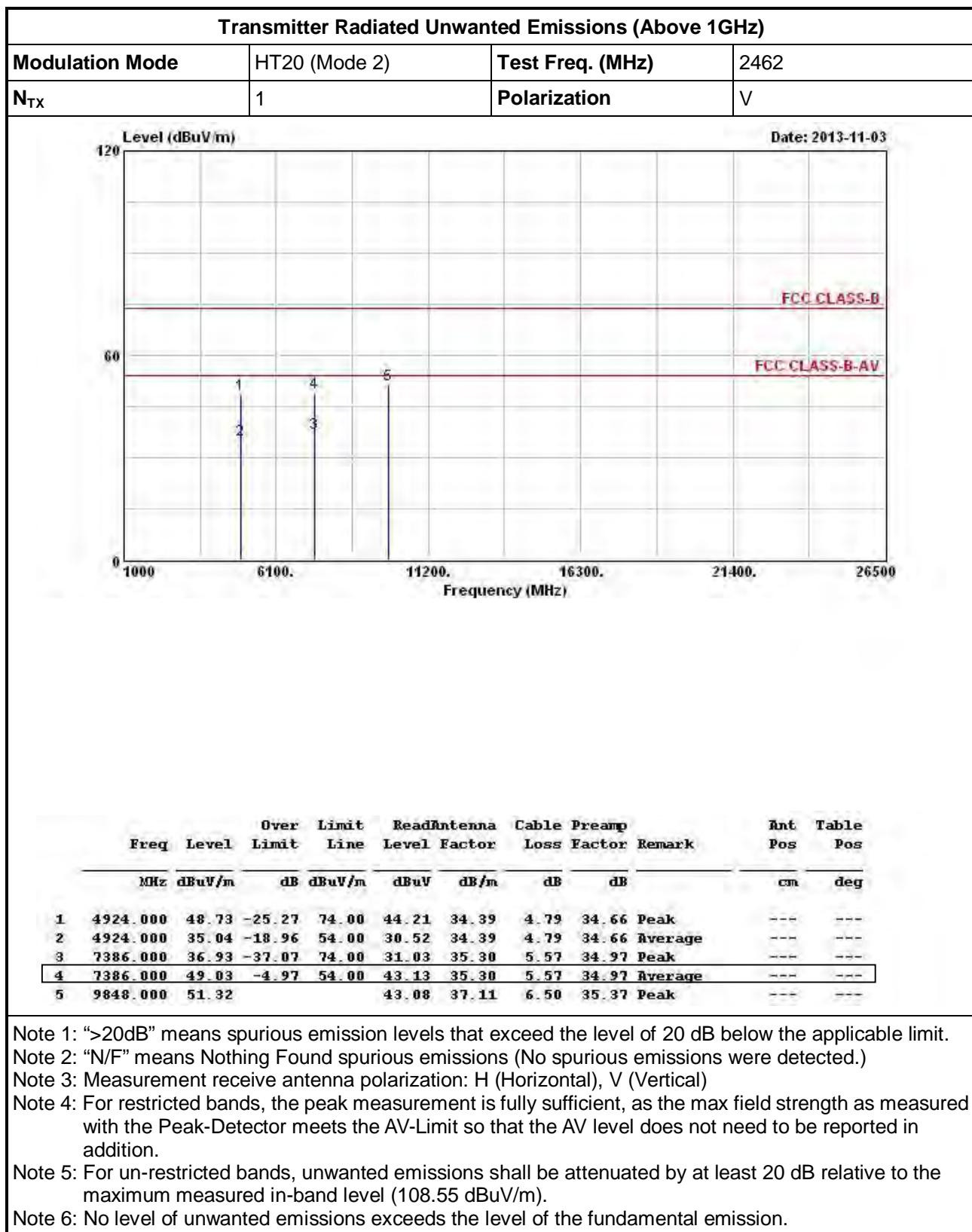
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

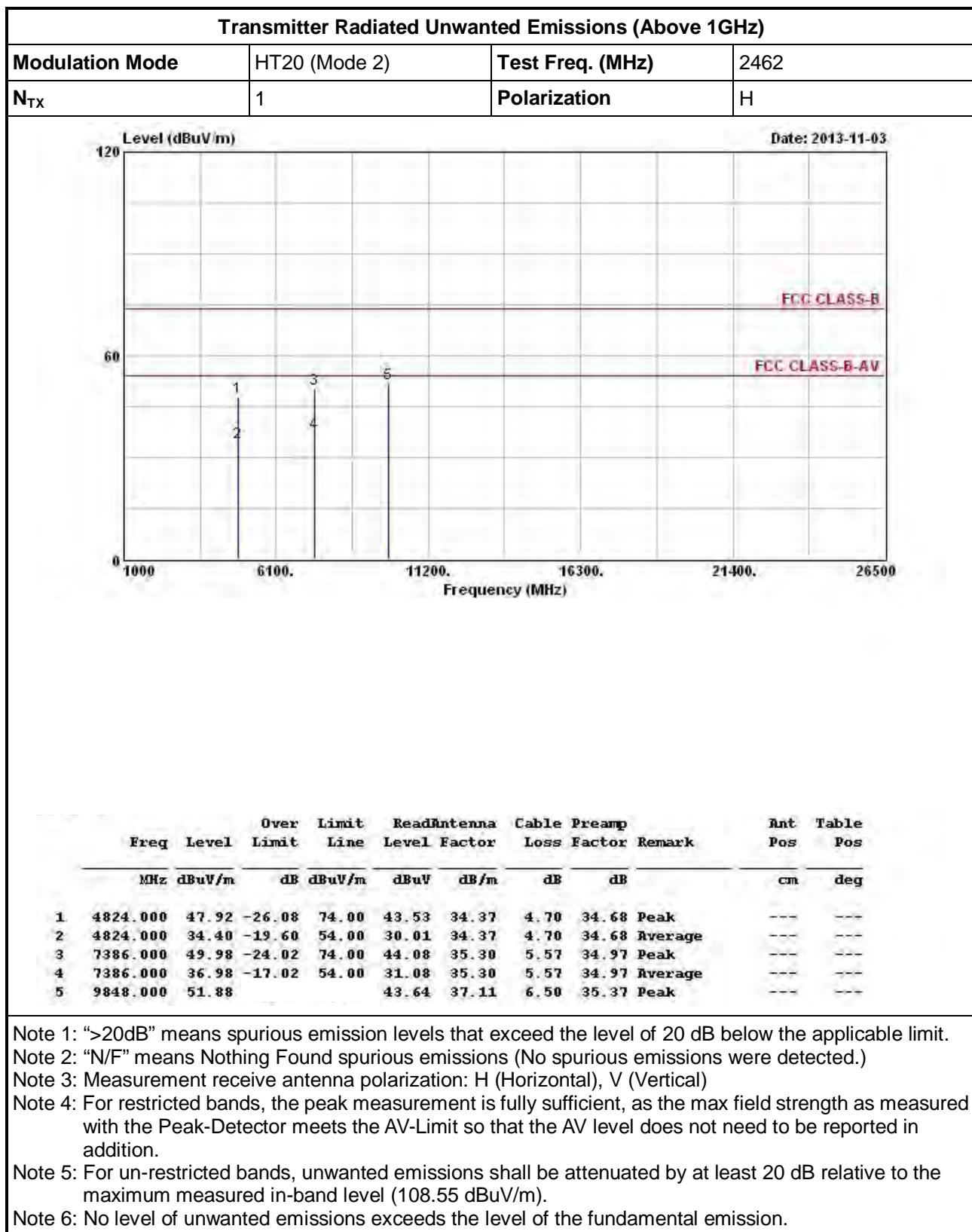
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

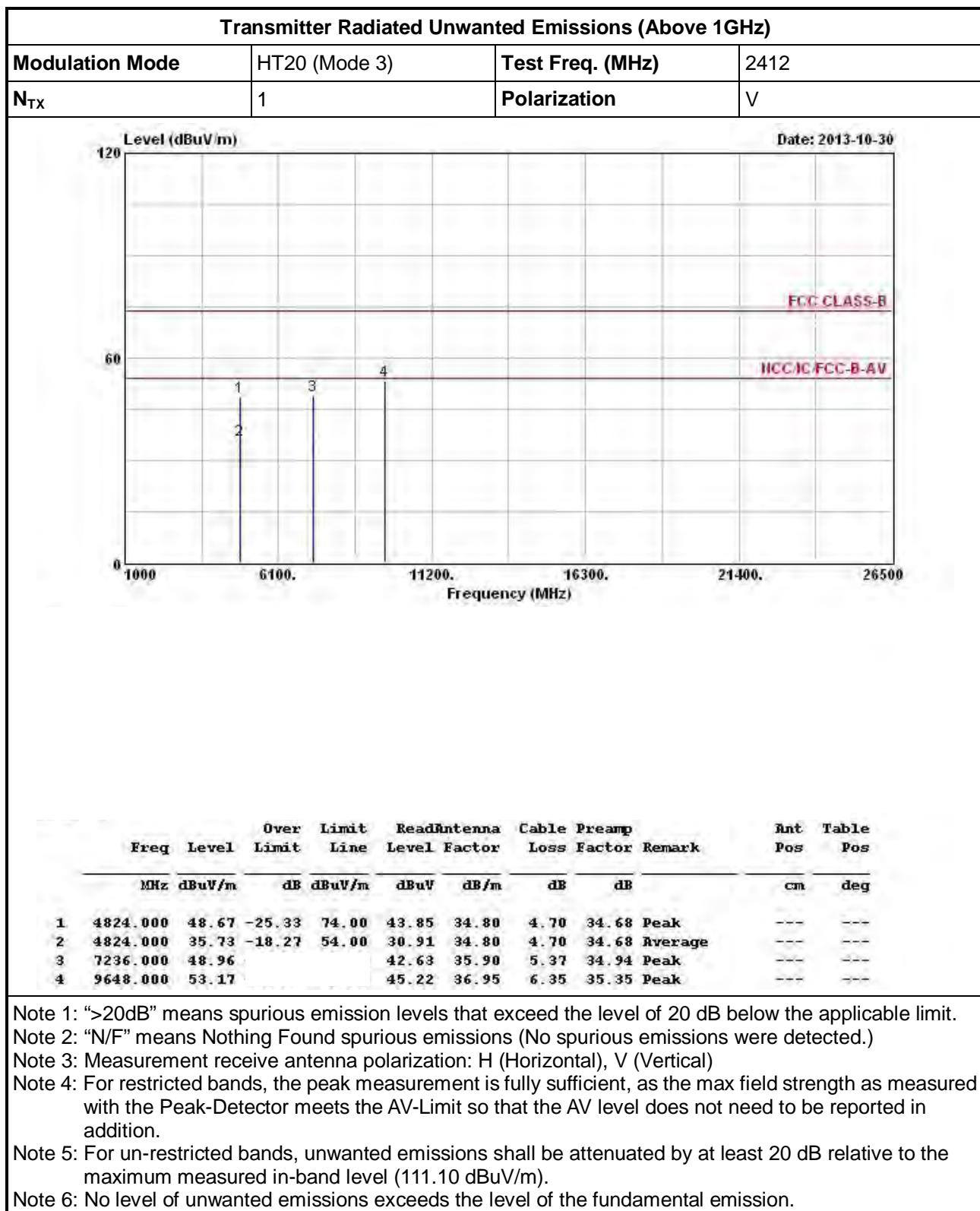
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (115.12 dBuV/m).

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









## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT20 (Mode 3)	Test Freq. (MHz)	2412																																																																										
N <sub>TX</sub>	1	Polarization	H																																																																										
Level (dBuV/m)			Date: 2013-10-30																																																																										
			FCC CLASS-B																																																																										
			IC/C/IC/FCC-B-AV																																																																										
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## Transmitter Radiated Unwanted Emissions (Above 1GHz)

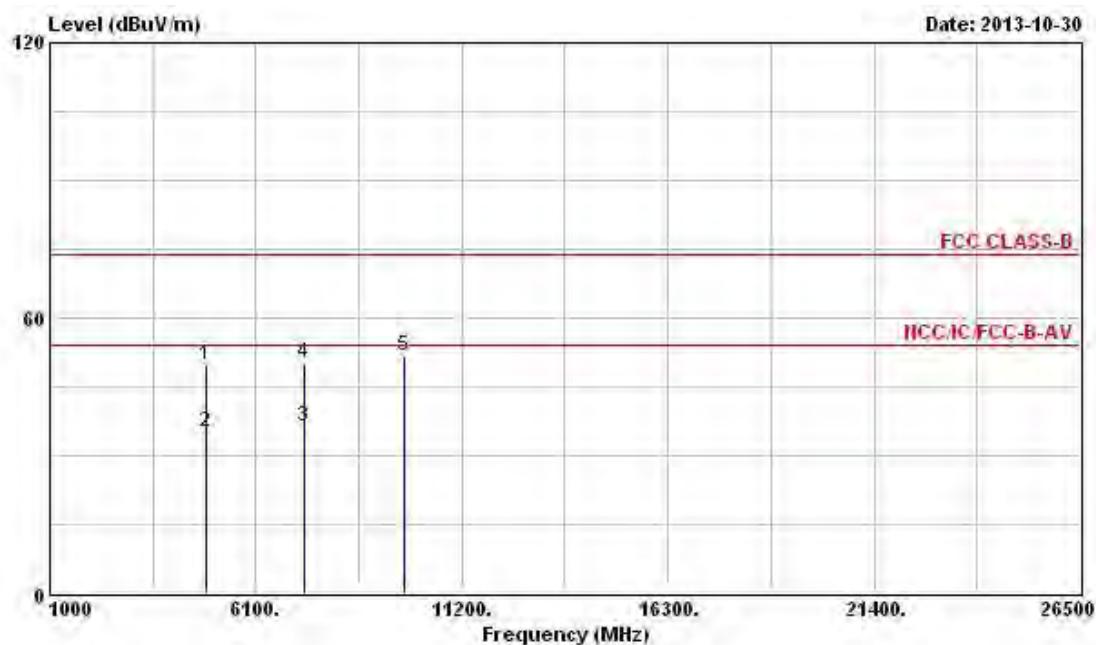
Modulation Mode	HT20 (Mode 3)	Test Freq. (MHz)	2437																																																																						
N <sub>TX</sub>	1	Polarization	V																																																																						
Level (dBuV/m)			Date: 2013-10-30																																																																						
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Freq	Level	Over Limit	Line	Read	Antenna	Cable	Preamp	Ant	Table																																																																
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1	4874.000	49.05	-24.95	74.00	44.22	34.77	4.73	34.67	Peak																																																																
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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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (113.09 dBuV/m).  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT20 (Mode 3)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos
		Limit	Line	Level	Factor	Loss	Factor		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	4874.000	49.62	-24.38	74.00	44.79	34.77	4.73	34.67	Peak
2	4874.000	35.09	-18.91	54.00	30.26	34.77	4.73	34.67	Average
3	7311.000	36.47	-17.53	54.00	30.05	35.90	5.47	34.95	Average
4	7311.000	50.18	-23.82	74.00	43.76	35.90	5.47	34.95	Peak
5	9748.000	51.61			43.45	37.11	6.41	35.36	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)

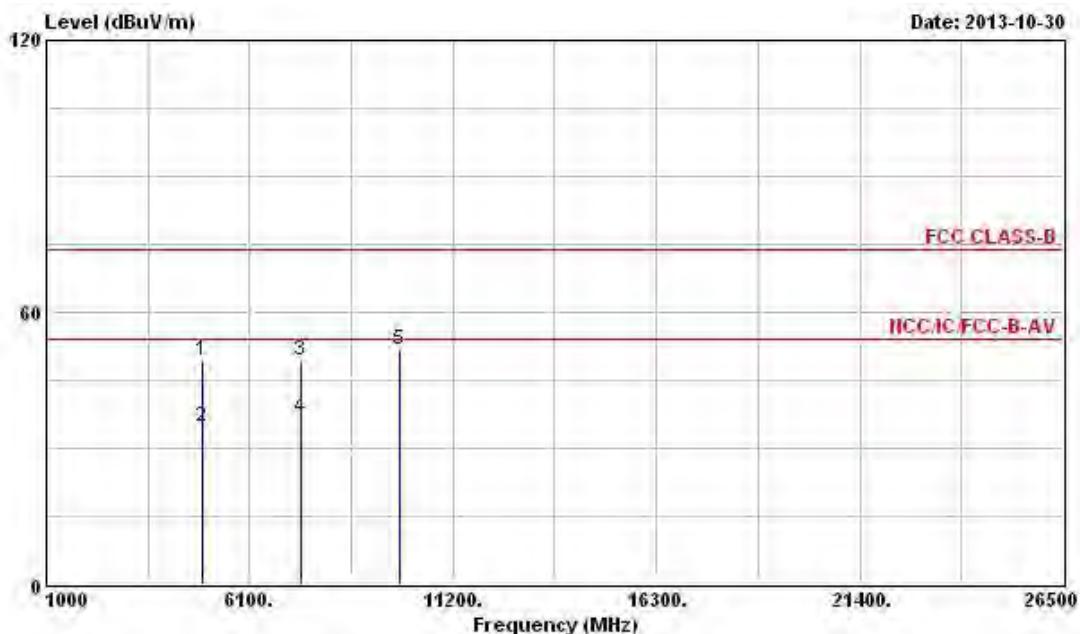
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (113.09 dBuV/m).

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



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20 (Mode 3)	Test Freq. (MHz)	2462
$N_{TX}$	1	Polarization	V



Freq	Level	Over Limit		ReadAntenna		Cable Preamp		Remark	Ant Pos	Table Pos	
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	4924.000	49.27	-24.73	74.00	44.40	34.74	4.79	34.66	Peak	---	---
2	4924.000	34.73	-19.27	54.00	29.86	34.74	4.79	34.66	Average	---	---
3	7386.000	49.32	-24.68	74.00	42.82	35.90	5.57	34.97	Peak	---	---
4	7386.000	36.66	-17.34	54.00	30.16	35.90	5.57	34.97	Average	---	---
5	9848.000	51.70			43.32	37.25	6.50	35.37	Peak	---	---

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

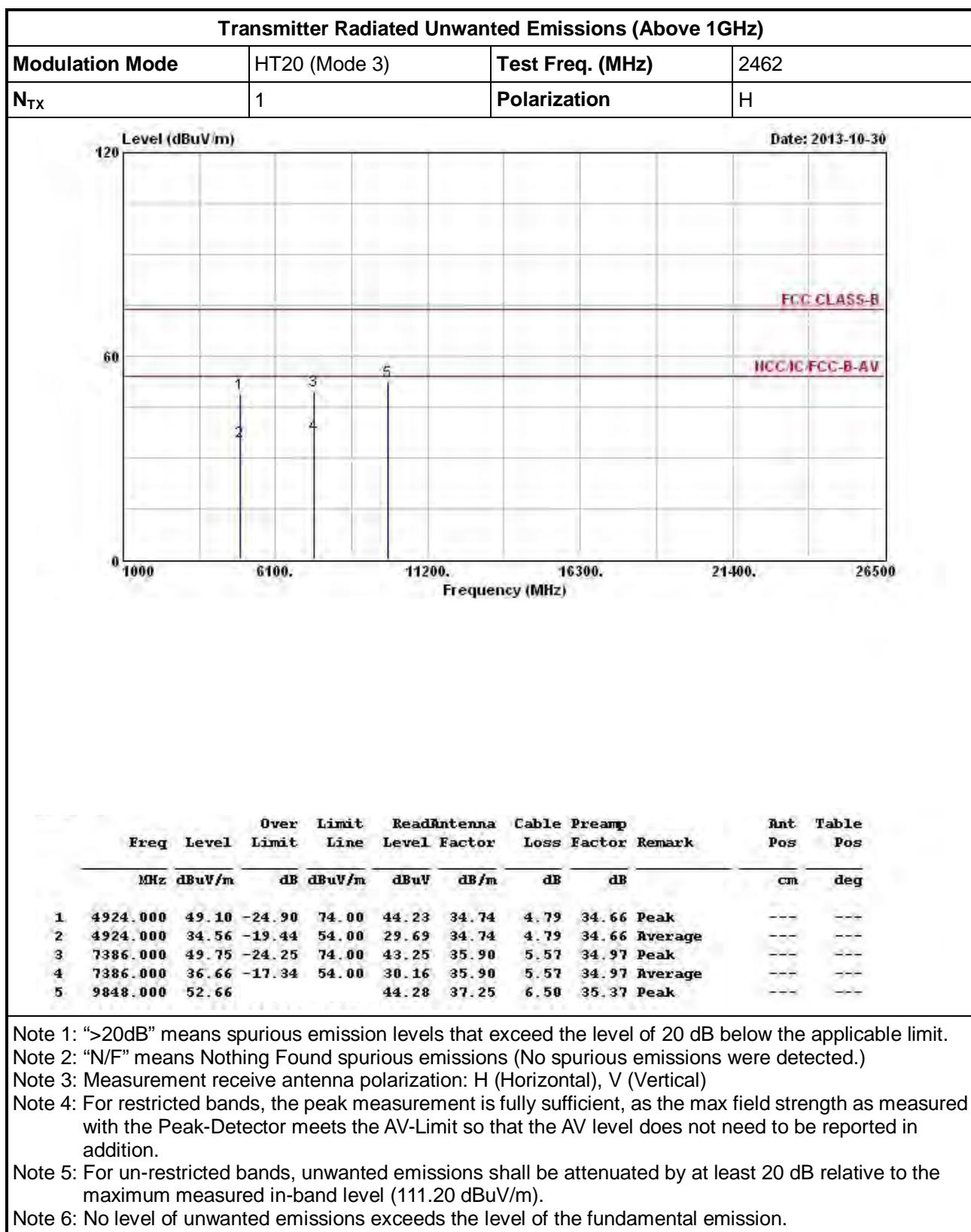
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (111.20 dBuV/m).

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



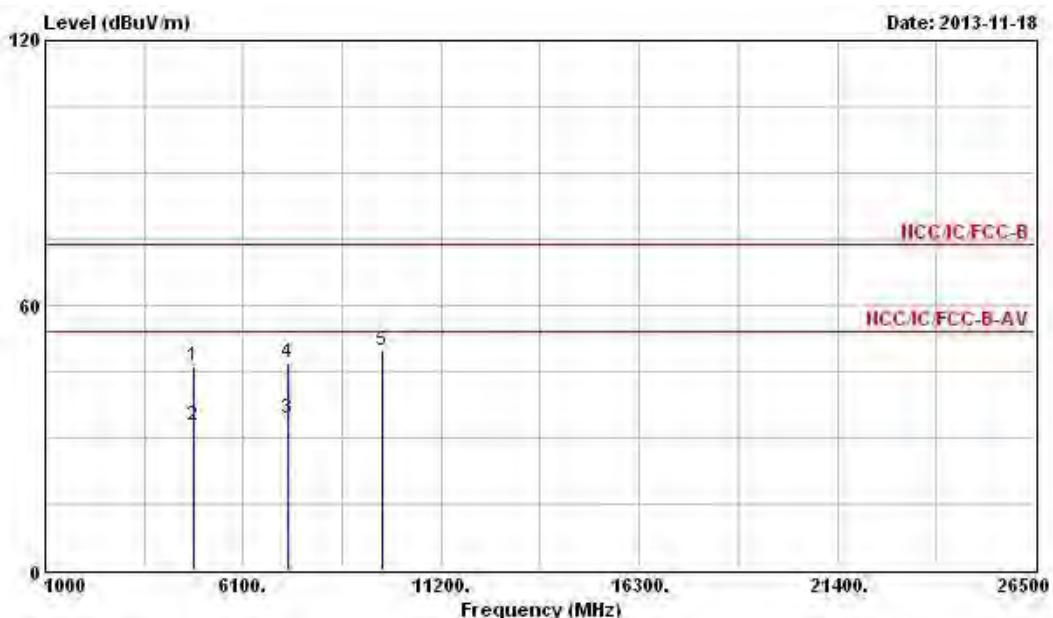


### 3.6.10 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT40



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT40 (Mode 1)	Test Freq. (MHz)	2422
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 4844.000	46.27	-27.73	74.00	41.43	34.79	4.73	34.68	Peak	---	---
2 4844.000	32.82	-21.18	54.00	27.98	34.79	4.73	34.68	Average	---	---
3 7266.000	34.20	-19.80	54.00	27.82	35.90	5.42	34.94	Average	---	---
4 7266.000	47.01	-26.99	74.00	40.63	35.90	5.42	34.94	Peak	---	---
5 9688.000	49.71			41.69	37.00	6.38	35.36	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.

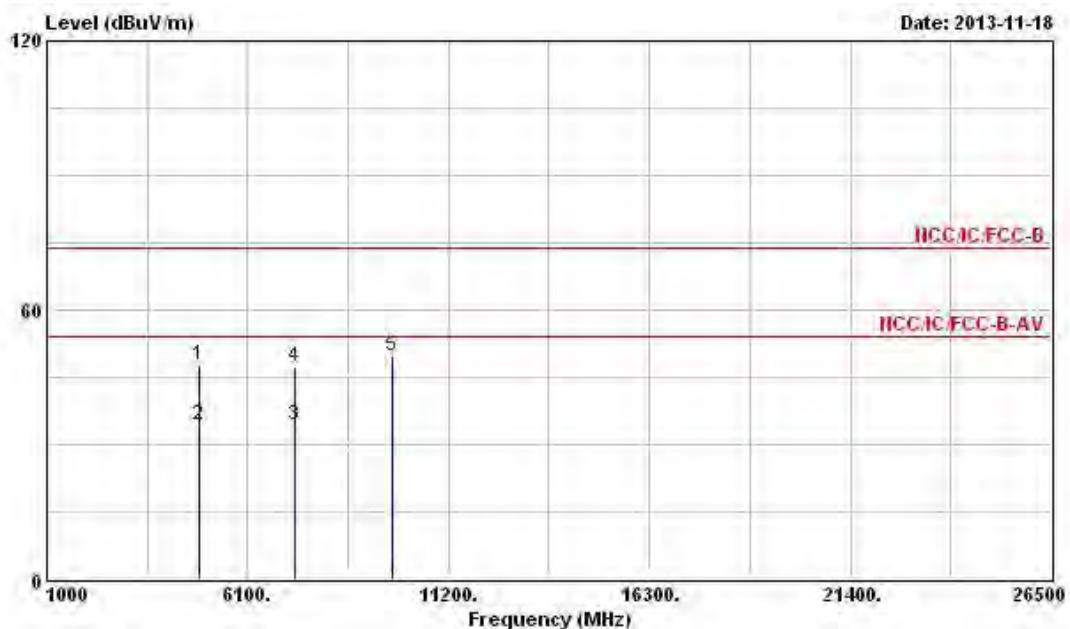
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.97 dBuV/m).

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



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

<b>Modulation Mode</b>	HT40 (Mode 1)	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Cable	Preamp			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
4874.000	47.78	-26.22	74.00	42.95	34.77	4.73	34.67	Peak	---	---
4874.000	34.18	-19.82	54.00	29.35	34.77	4.73	34.67	Average	---	---
7311.000	34.49	-19.51	54.00	28.07	35.90	5.47	34.95	Average	---	---
7311.000	47.44	-26.56	74.00	41.02	35.90	5.47	34.95	Peak	---	---
9748.000	49.77			41.61	37.11	6.41	35.36	Peak	---	---

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

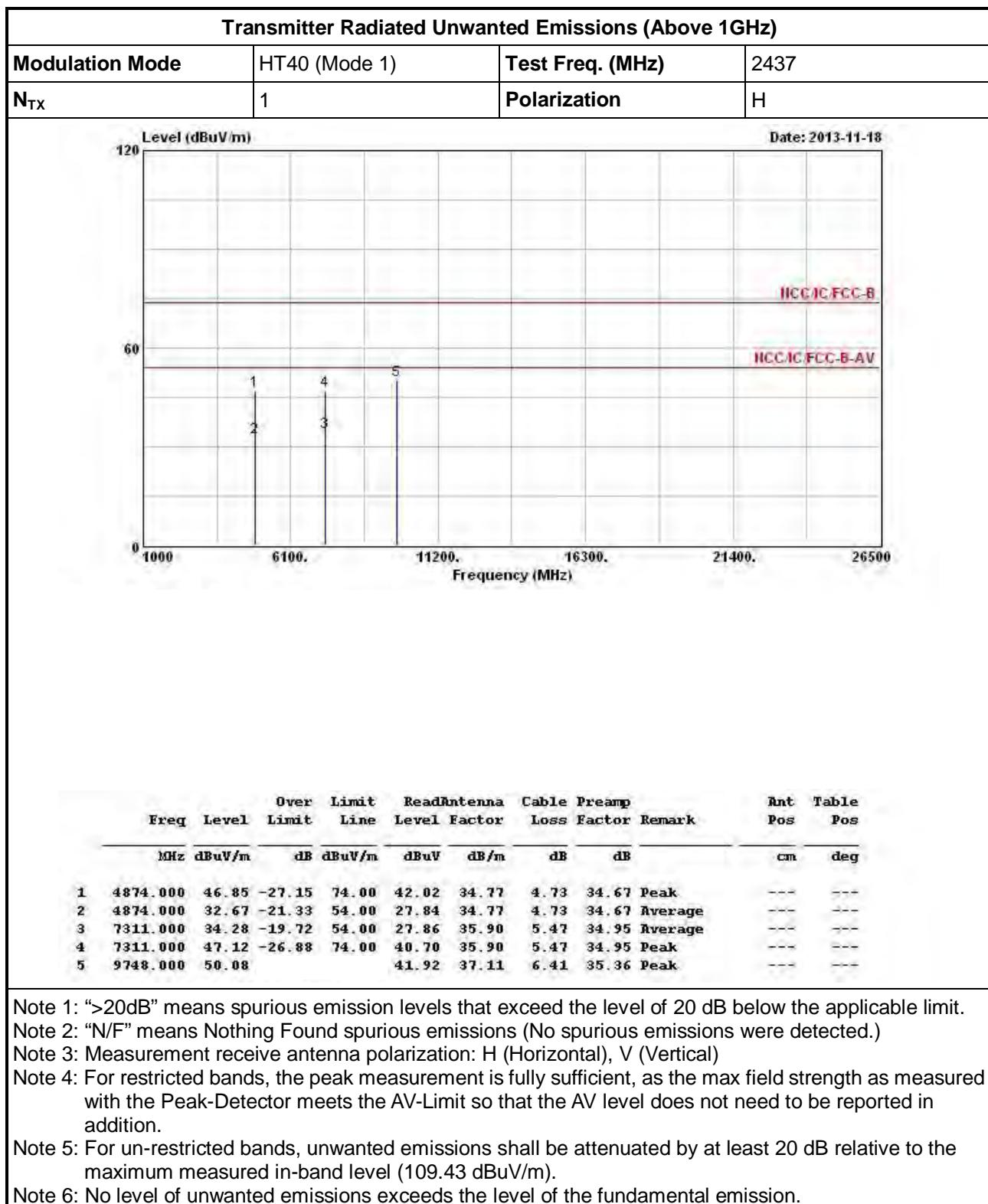
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.43 dB<sub>UV</sub>/m).

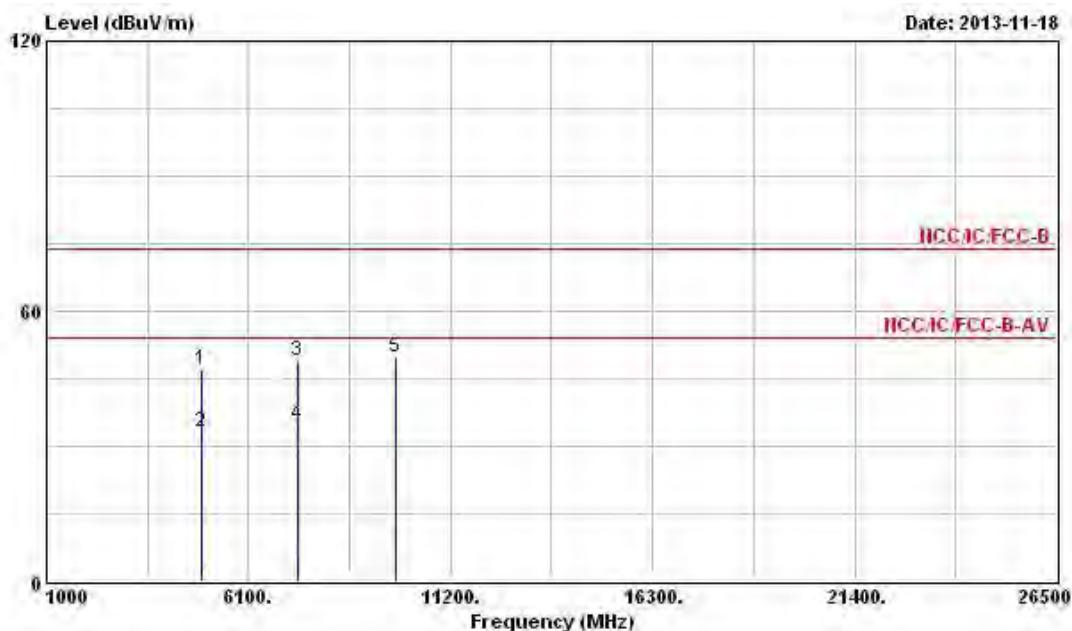
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.





## Transmitter Radiated Unwanted Emissions (Above 1GHz)

<b>Modulation Mode</b>	HT40 (Mode 1)	<b>Test Freq. (MHz)</b>	2452
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



Freq	Level	Over Limit		ReadAntenna		Cable Preamp		Remark	Ant Pos	Table Pos
		Limit	Line	Level	Factor	Loss	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
4904.000	47.04	-26.96	74.00	42.19	34.75	4.76	34.66	Peak	---	---
4904.000	33.01	-20.99	54.00	28.16	34.75	4.76	34.66	Average	---	---
7356.000	48.76	-25.24	74.00	42.30	35.90	5.52	34.96	Peak	---	---
7356.000	34.61	-19.39	54.00	28.15	35.90	5.52	34.96	Average	---	---
9808.000	49.63			41.32	37.20	6.47	35.36	Peak	---	---

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

Note 1: "25dB" means spurious emissions levels that exceed the cover of 25 dB below the upper limit.

Note 2: "NF" 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.

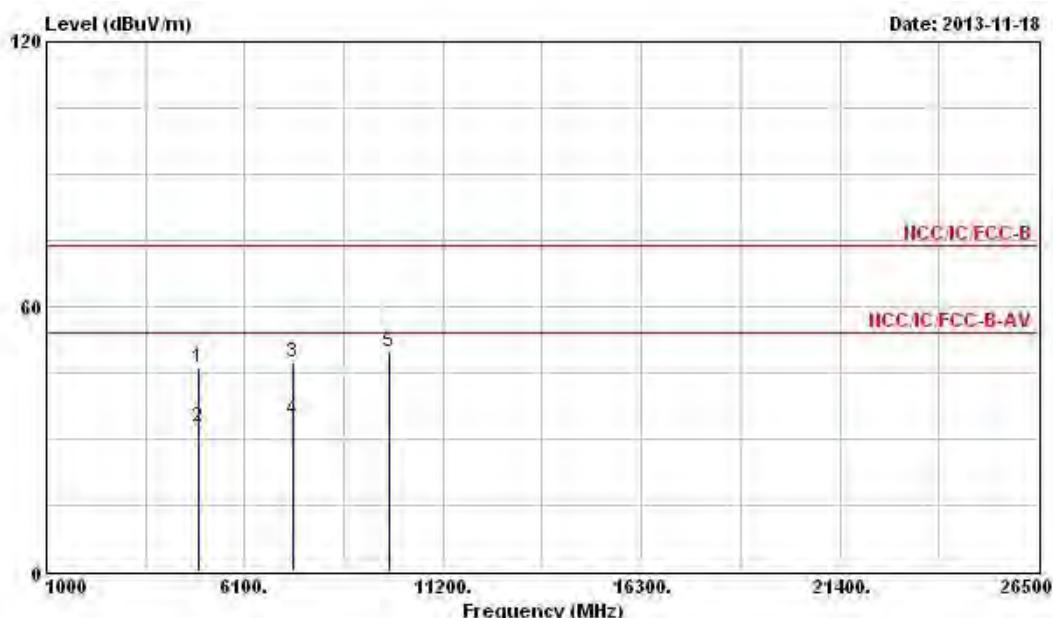
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.60 dB<sub>UV</sub>/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT40 (Mode 1)	Test Freq. (MHz)	2452
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		MHz	dBuV/m	dB	Line	Level	Factor		Pos	Pos
									cm	deg
1	4904.000	46.10	-27.90	74.00	41.25	34.75	4.76	34.66 Peak	---	---
2	4904.000	32.84	-21.16	54.00	27.99	34.75	4.76	34.66 Average	---	---
3	7356.000	47.38	-26.62	74.00	40.92	35.90	5.52	34.96 Peak	---	---
4	7356.000	34.54	-19.46	54.00	28.08	35.90	5.52	34.96 Average	---	---
5	9808.000	49.88			41.57	37.20	6.47	35.36 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.

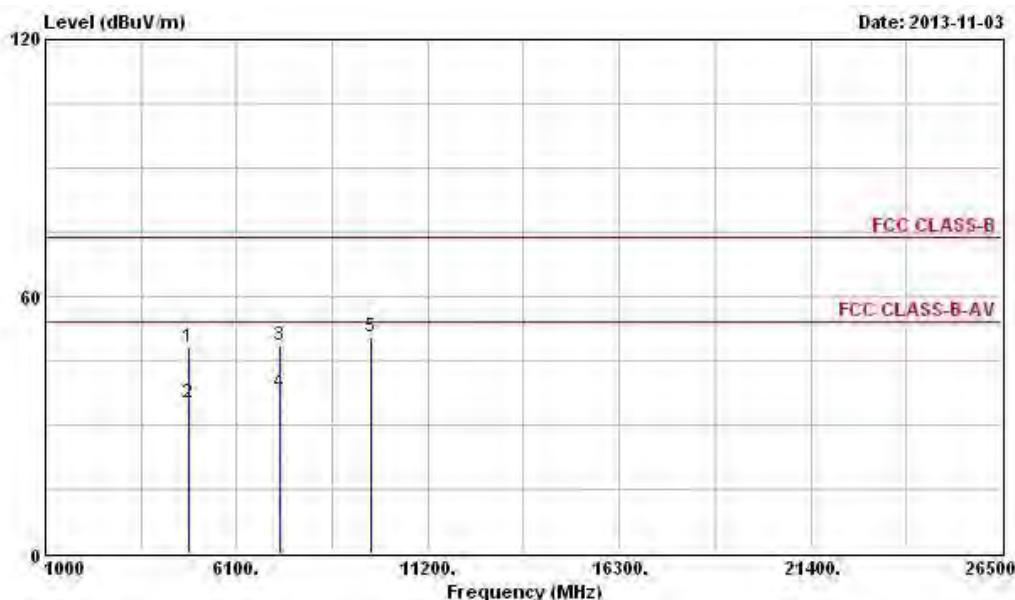
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.60 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT40 (Mode 2)	Test Freq. (MHz)	2422
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over Limit	Line	Read		Ant	Table		
				Antenna	Factor			Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 4844.000	48.05	-25.95	74.00	43.63	34.37	4.73	34.68	Peak	---
2 4844.000	35.26	-18.74	54.00	30.84	34.37	4.73	34.68	Average	---
3 7266.000	48.58	-25.42	74.00	42.80	35.30	5.42	34.94	Peak	---
4 7266.000	37.34	-16.66	54.00	31.56	35.30	5.42	34.94	Average	---
5 9688.000	50.56			42.61	36.93	6.38	35.36	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.

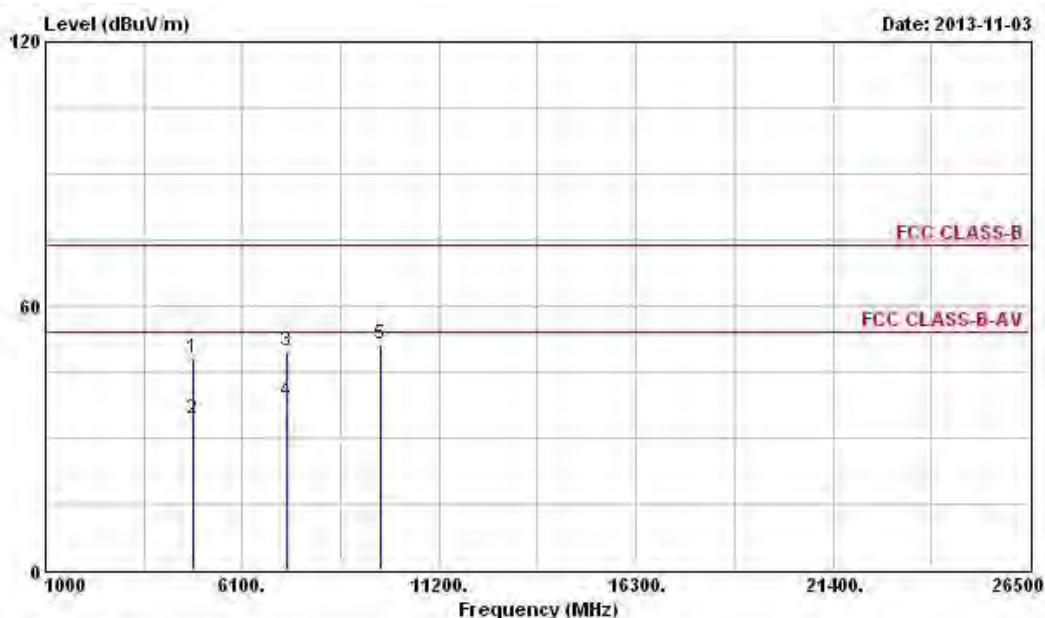
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (105.80 dBuV/m).

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



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT40 (Mode 2)	Test Freq. (MHz)	2422
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		MHz	dBuV/m	dB	Line	Antenna	Cable			
				Level	Factor	Loss	Factor		cm	deg
1	4844.000	48.32	-25.68	74.00	43.90	34.37	4.73	34.68 Peak	---	---
2	4844.000	34.43	-19.57	54.00	30.01	34.37	4.73	34.68 Average	---	---
3	7266.000	49.76	-24.24	74.00	43.98	35.30	5.42	34.94 Peak	---	---
4	7266.000	38.38	-15.62	54.00	32.60	35.30	5.42	34.94 Average	---	---
5	9688.000	51.41			43.46	36.93	6.38	35.36 Peak	---	---

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

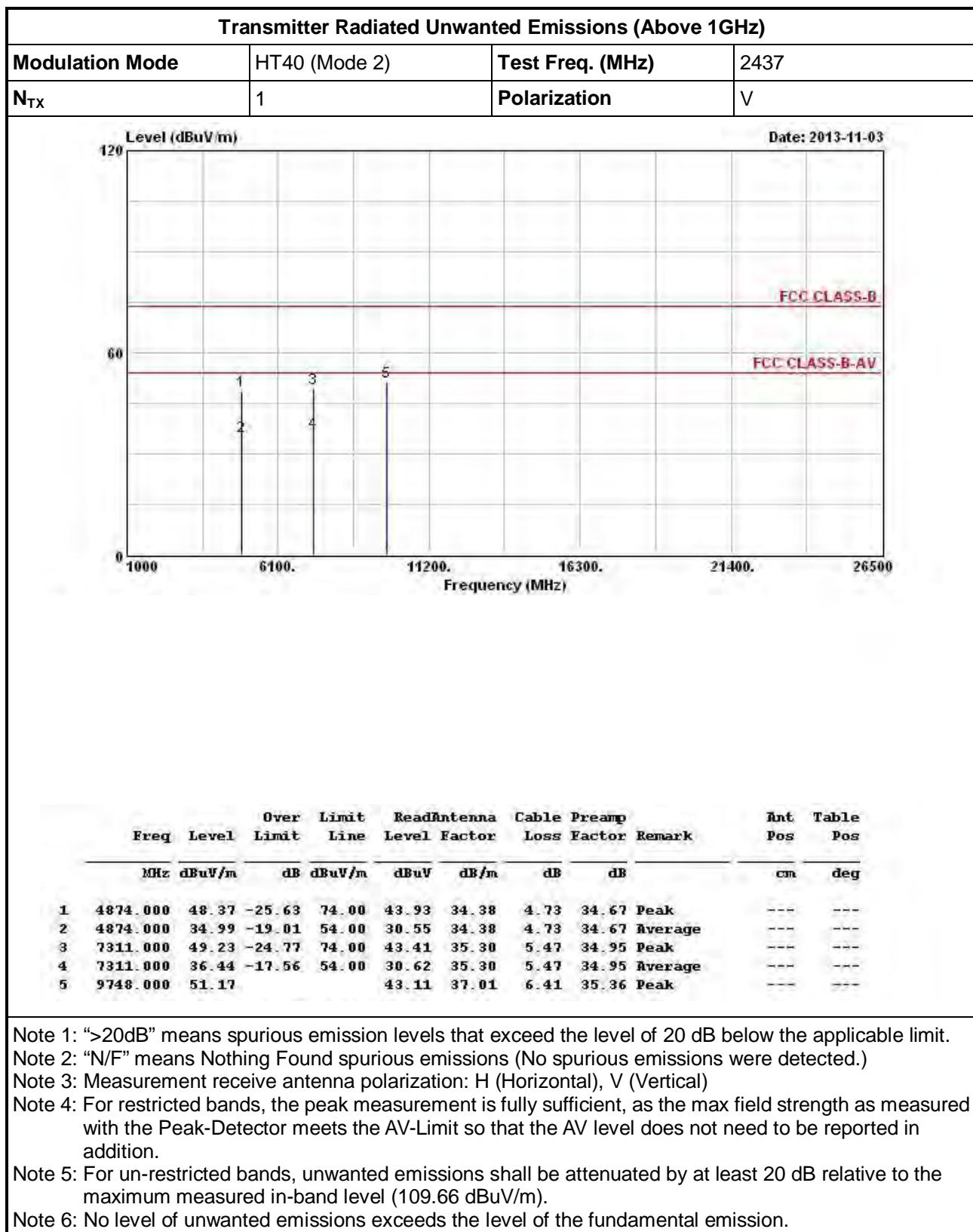
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

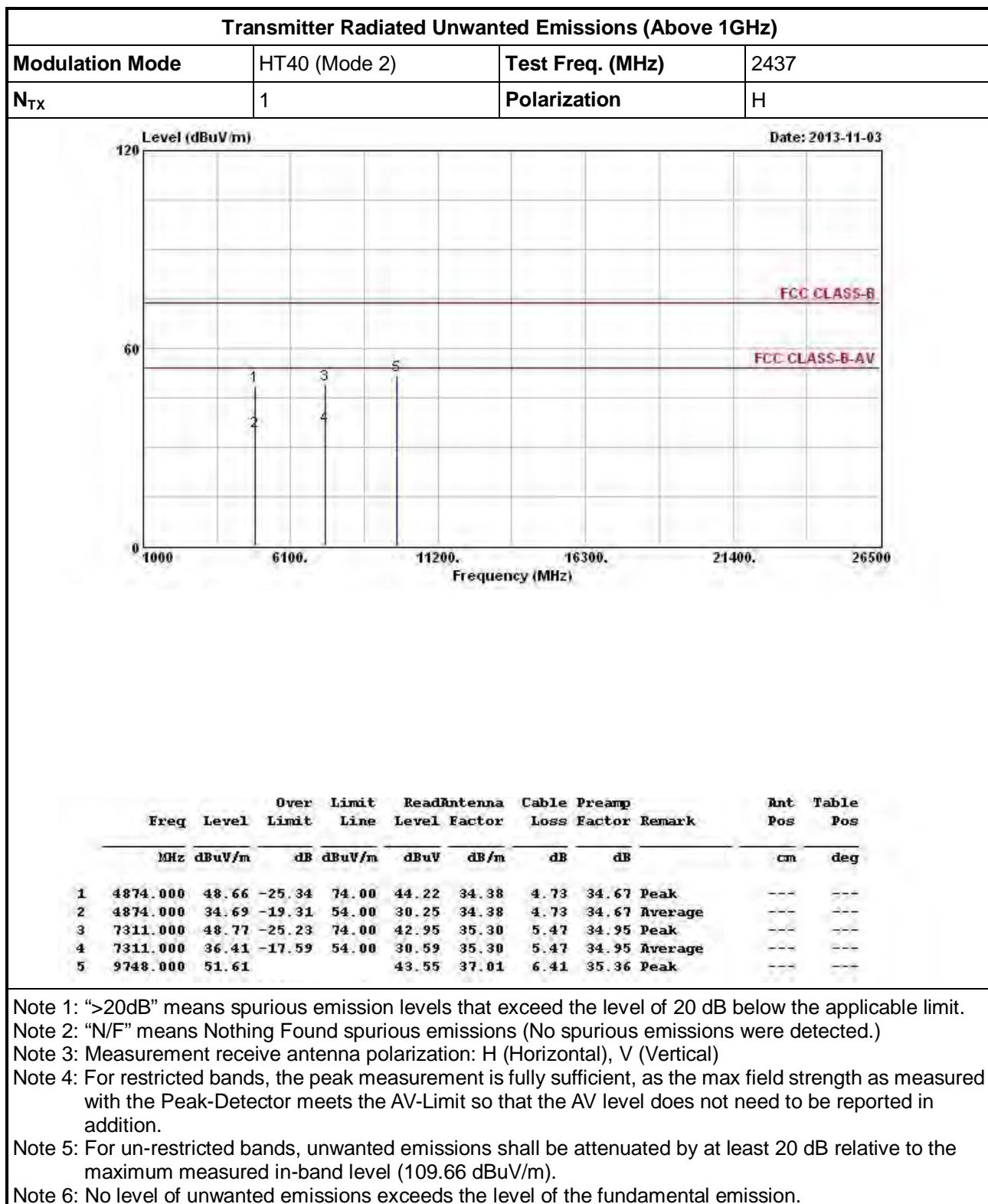
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

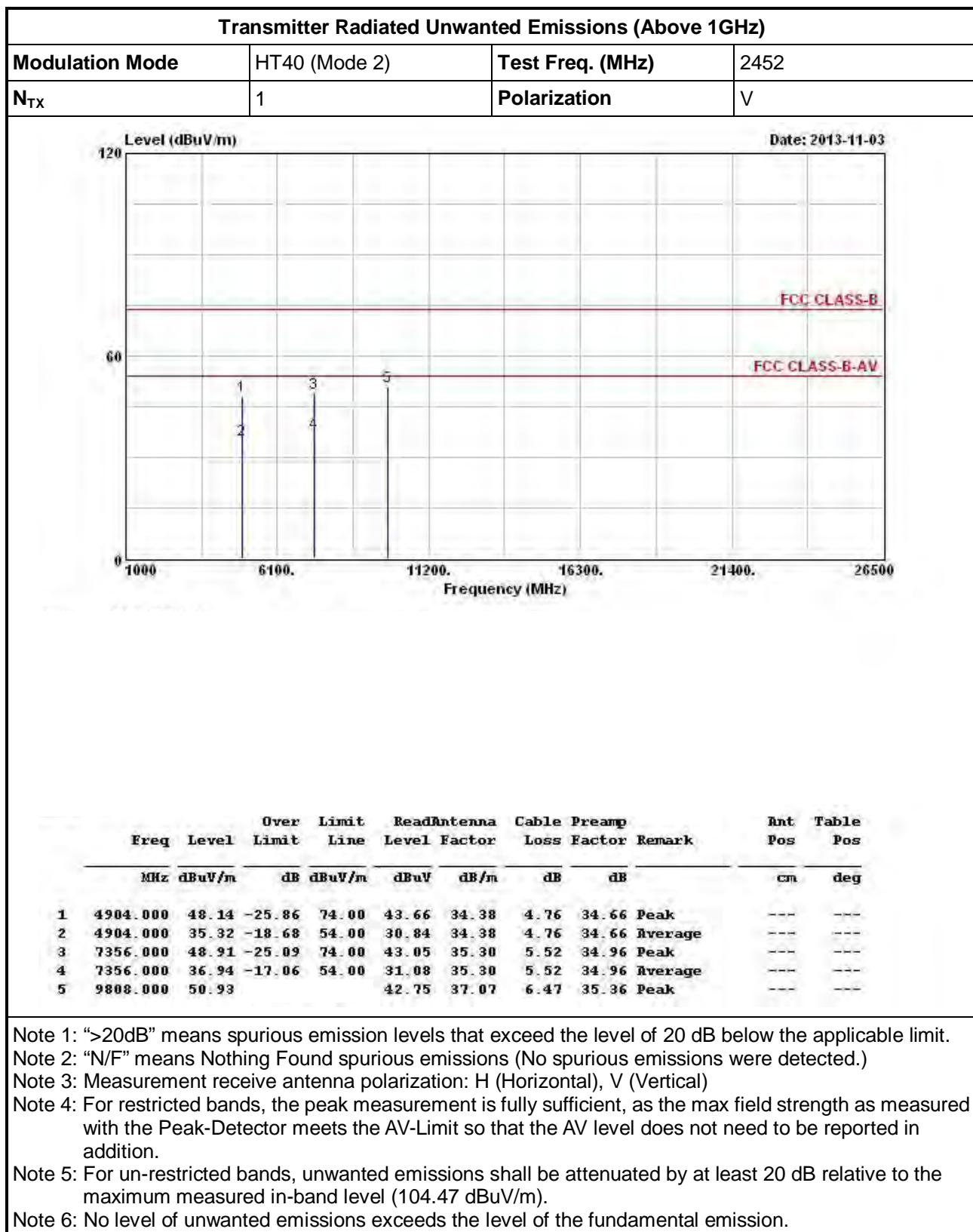
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (105.80 dBuV/m).

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



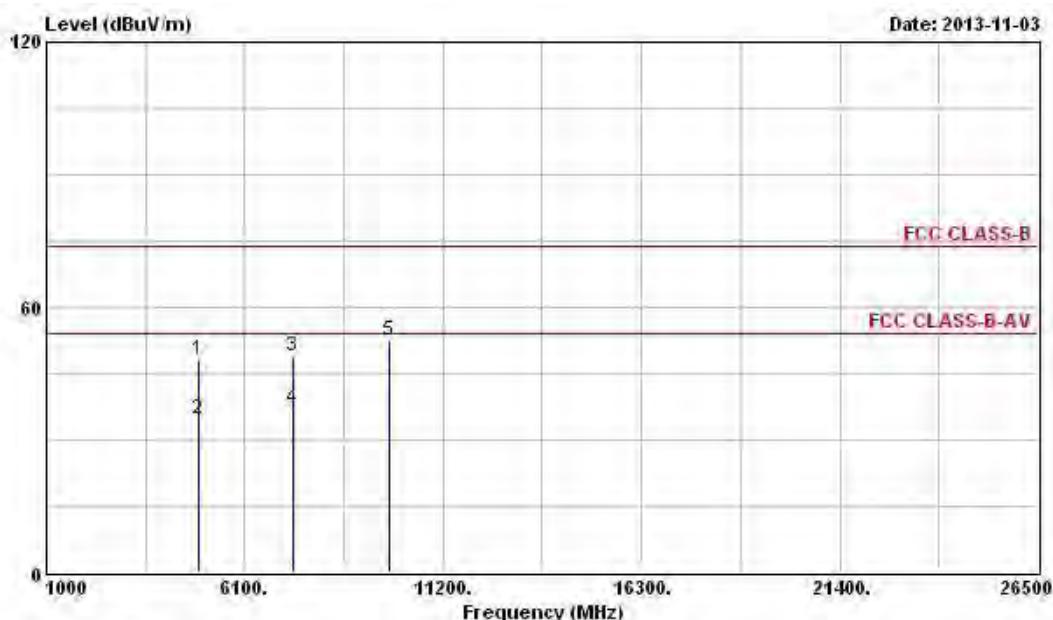






## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT40 (Mode 2)	Test Freq. (MHz)	2452
N <sub>TX</sub>	1	Polarization	H



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Cable	Preamp		Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1. 4904.000	48.01	-25.99	74.00	43.53	34.38	4.76	34.66	Peak	---	---
2. 4904.000	34.86	-19.14	54.00	30.38	34.38	4.76	34.66	Average	---	---
3. 7356.000	49.02	-24.98	74.00	43.16	35.30	5.52	34.96	Peak	---	---
4. 7356.000	36.96	-17.04	54.00	31.10	35.30	5.52	34.96	Average	---	---
5. 9888.000	52.64			44.46	37.07	6.47	35.36	Peak	---	---

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

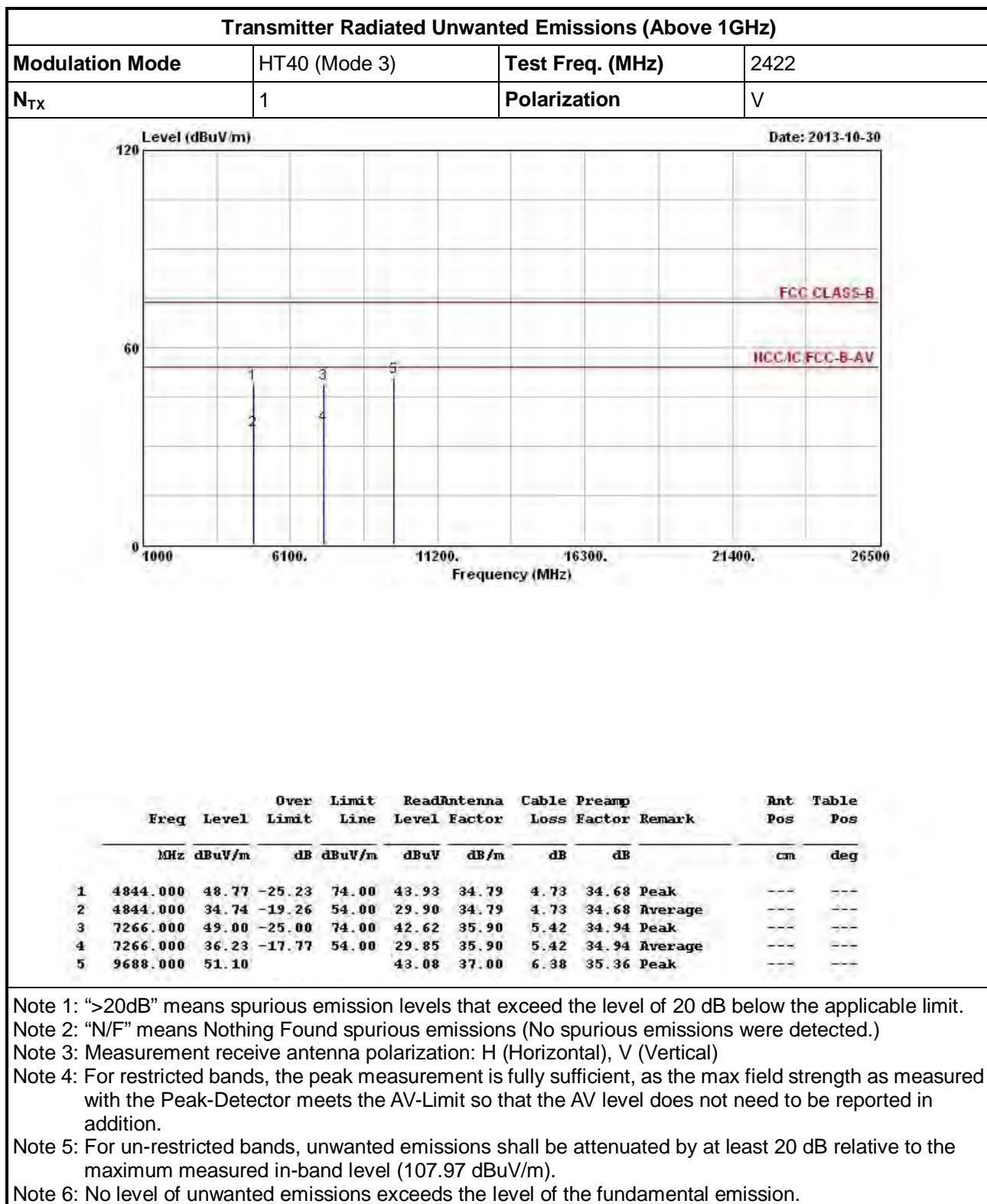
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (104.47 dBuV/m).

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





## Transmitter Radiated Unwanted Emissions (Above 1GHz)

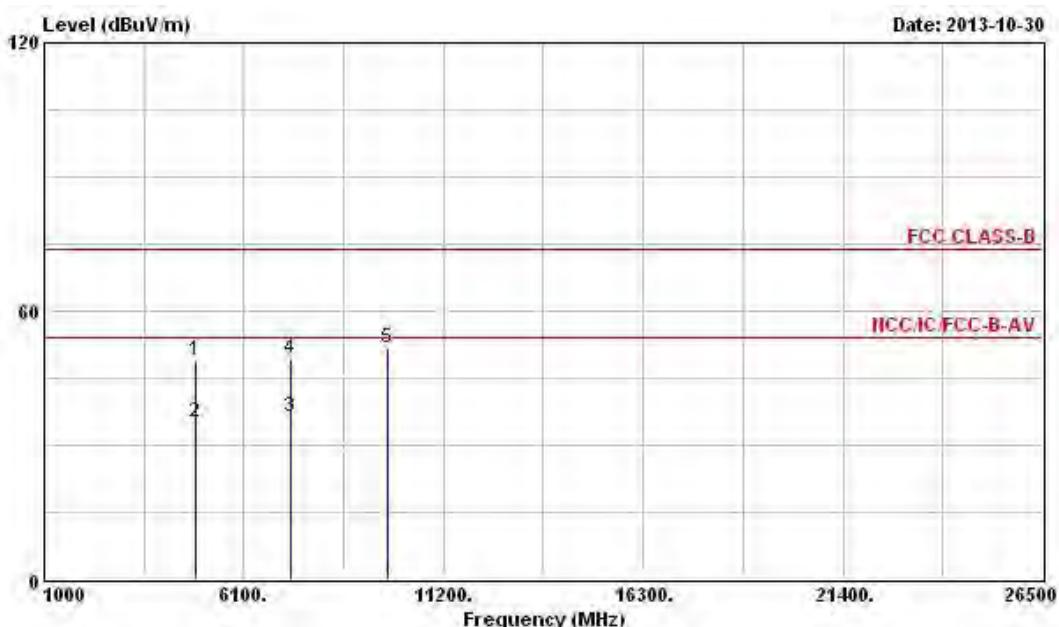
Modulation Mode	HT40 (Mode 3)	Test Freq. (MHz)	2422																																																																						
N <sub>TX</sub>	1	Polarization	H																																																																						
Level (dB <sub>UV</sub> /m)			Date: 2013-10-30																																																																						
<table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over Limit</th> <th>Line</th> <th>Read</th> <th>Antenna</th> <th>Cable</th> <th>Preamp</th> <th>Ant Pos</th> <th>Table Pos</th> </tr> <tr> <th>MHz</th> <th>dB<sub>UV</sub>/m</th> <th>dB</th> <th>dB<sub>UV</sub>/m</th> <th>dB<sub>UV</sub></th> <th>dB/m</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4844.000</td> <td>48.32</td> <td>-25.68</td> <td>74.00</td> <td>43.48</td> <td>34.79</td> <td>4.73</td> <td>34.68</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>4844.000</td> <td>34.53</td> <td>-19.47</td> <td>54.00</td> <td>29.69</td> <td>34.79</td> <td>4.73</td> <td>34.68</td> <td>Average</td> </tr> <tr> <td>3</td> <td>7266.000</td> <td>49.09</td> <td>-24.91</td> <td>74.00</td> <td>42.71</td> <td>35.90</td> <td>5.42</td> <td>34.94</td> <td>Peak</td> </tr> <tr> <td>4</td> <td>7266.000</td> <td>36.22</td> <td>-17.78</td> <td>54.00</td> <td>29.84</td> <td>35.90</td> <td>5.42</td> <td>34.94</td> <td>Average</td> </tr> <tr> <td>5</td> <td>9688.000</td> <td>51.81</td> <td></td> <td></td> <td>43.79</td> <td>37.00</td> <td>6.38</td> <td>35.36</td> <td>Peak</td> </tr> </tbody> </table>			Freq	Level	Over Limit	Line	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos	MHz	dB <sub>UV</sub> /m	dB	dB <sub>UV</sub> /m	dB <sub>UV</sub>	dB/m	dB	dB	cm	deg	1	4844.000	48.32	-25.68	74.00	43.48	34.79	4.73	34.68	Peak	2	4844.000	34.53	-19.47	54.00	29.69	34.79	4.73	34.68	Average	3	7266.000	49.09	-24.91	74.00	42.71	35.90	5.42	34.94	Peak	4	7266.000	36.22	-17.78	54.00	29.84	35.90	5.42	34.94	Average	5	9688.000	51.81			43.79	37.00	6.38	35.36	Peak	
Freq	Level	Over Limit	Line	Read	Antenna	Cable	Preamp	Ant Pos	Table Pos																																																																
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1	4844.000	48.32	-25.68	74.00	43.48	34.79	4.73	34.68	Peak																																																																
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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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.97 dB<sub>UV</sub>/m).  
 Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.



## Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode	HT40 (Mode 3)	Test Freq. (MHz)	2437
N <sub>TX</sub>	1	Polarization	V



Freq	Level	Over Limit	Limit Line	Read		Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
				Antenna	Factor					
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 4874.000	49.05	-24.95	74.00	44.22	34.77	4.73	34.67	Peak	---	---
2 4874.000	35.09	-18.91	54.00	30.26	34.77	4.73	34.67	Average	---	---
3 7311.000	36.42	-17.58	54.00	30.00	35.90	5.47	34.95	Average	---	---
4 7311.000	49.37	-24.63	74.00	42.95	35.90	5.47	34.95	Peak	---	---
5 9748.000	51.54			43.38	37.11	6.41	35.36	Peak	---	---

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

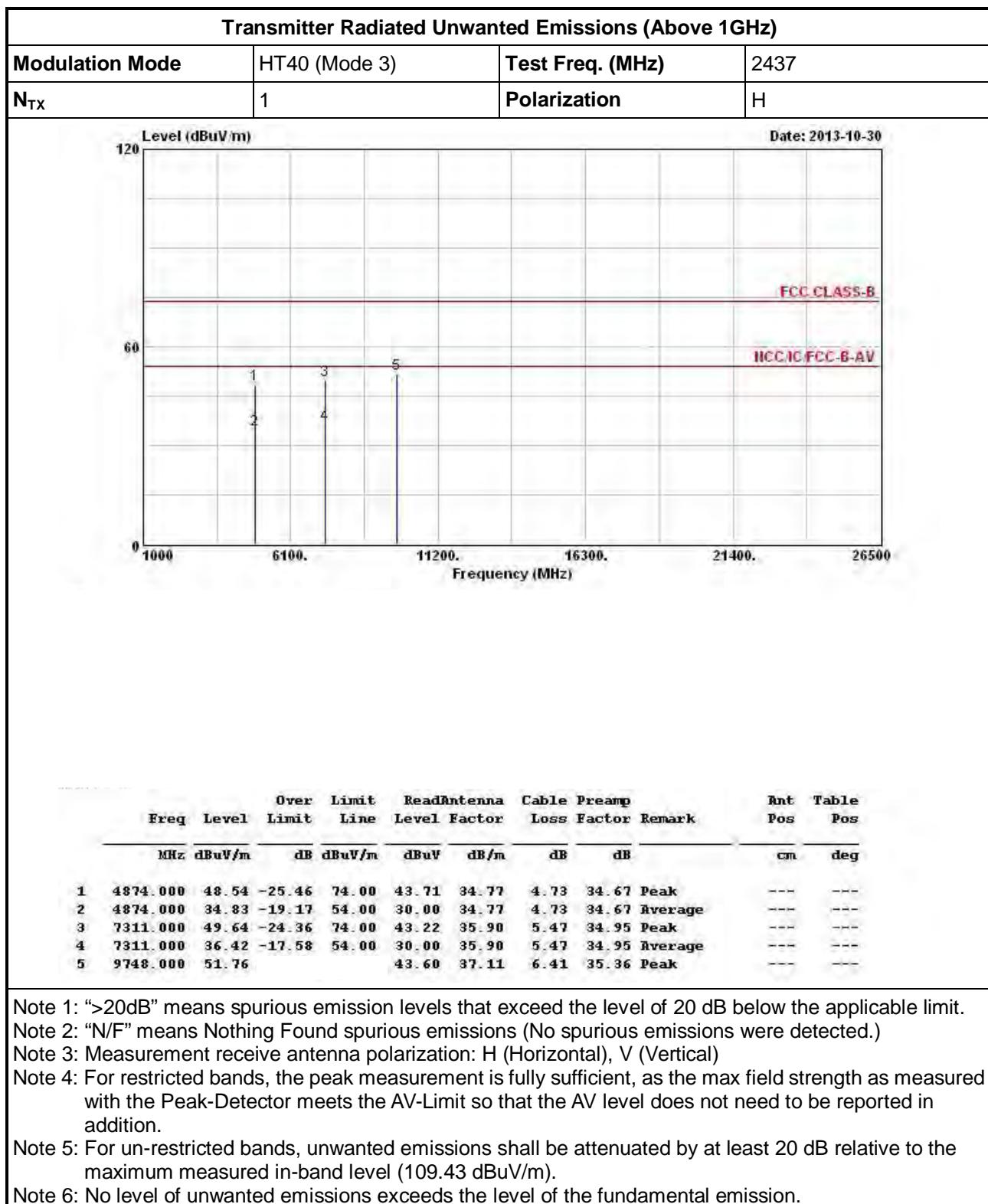
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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.

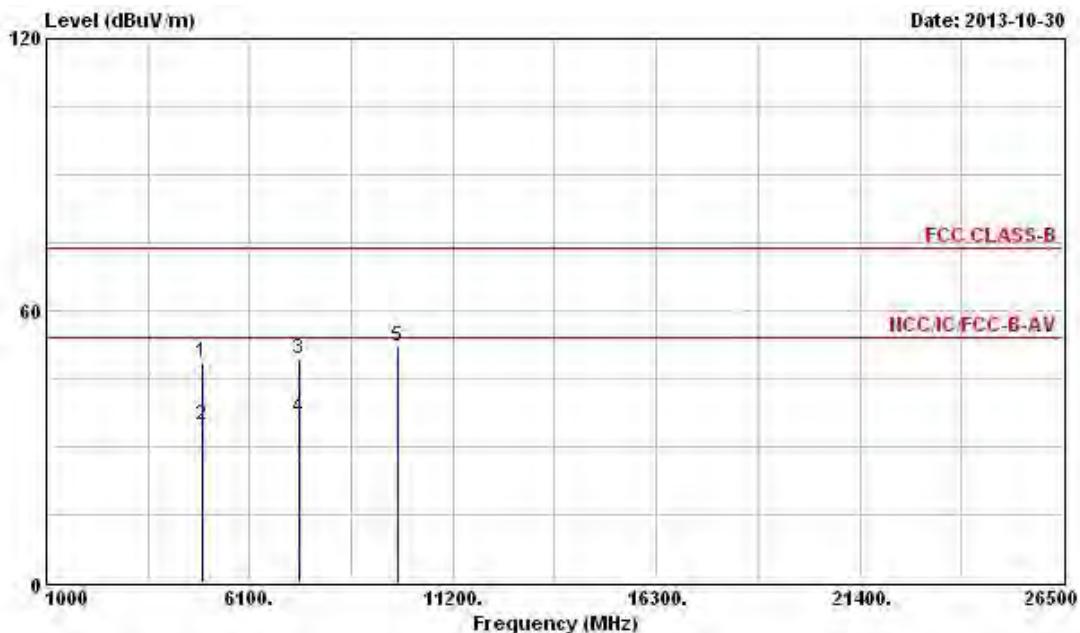
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.43 dBuV/m).

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





Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40 (Mode 3)	Test Freq. (MHz)	2452
$N_{TX}$	1	Polarization	V



Freq	Level	Over	Limit	Read		Antenna	Cable	Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor		Loss	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
4904.000	48.47	-25.53	74.00	43.62	34.75	4.76	34.66	Peak	---	---	---
4904.000	34.68	-19.32	54.00	29.83	34.75	4.76	34.66	Average	---	---	---
7356.000	49.27	-24.73	74.00	42.81	35.90	5.52	34.96	Peak	---	---	---
7356.000	36.49	-17.51	54.00	30.03	35.90	5.52	34.96	Average	---	---	---
9808.000	51.92			43.61	37.20	6.47	35.36	Peak	---	---	---

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

Note 2: "NF" 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.

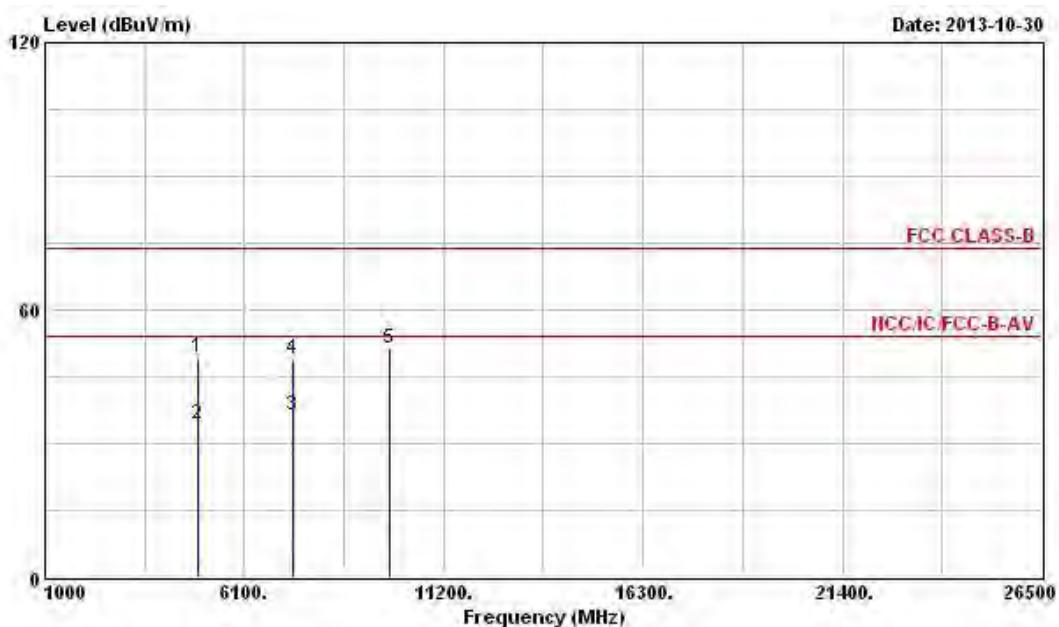
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.60 dB<sub>UV</sub>/m).

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



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

<b>Modulation Mode</b>	HT40 (Mode 3)	<b>Test Freq. (MHz)</b>	2452
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



Freq	Level	Over	Limit	ReadAntenna		Cable		Preamp	Remark	Ant	Table
		Limit	Line	Level	Factor	Loss	Factor	Pos			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
4904.000	49.27	-24.73	74.00	44.42	34.75	4.76	34.66	Peak	---	---	
4904.000	34.46	-19.54	54.00	29.61	34.75	4.76	34.66	Average	---	---	
7356.000	36.50	-17.50	54.00	30.04	35.90	5.52	34.96	Average	---	---	
7356.000	49.07	-24.93	74.00	42.61	35.90	5.52	34.96	Peak	---	---	
9808.000	51.51			43.20	37.20	6.47	35.36	Peak	---	---	

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

Note 1: >2dB means spurious emission levels that exceed the level of 2dB below the applicable limit.

Note 2: "NF" 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, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.60 dB<sub>UV</sub>/m).

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission maximum measured in-band level (107.60 dBuV/m).



## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Mar. 26, 2013	Conduction (CO04-HY)
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 21, 2013	Conduction (CO04-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	7.61183201e+012	9kHz ~ 30MHz	Oct. 30, 2013	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSV 40	101013	9KHz~40GHz	Jan. 29, 2013	Conducted (TH01-HY)
RF Cable-2m	HUBER+SUHNER	SUCOFLEX_104	SN 345675/4	30MHz ~ 26.5GHz	Dec. 04, 2012	Conducted (TH01-HY)
RF Cable-3m	HUBER+SUHNER	SUCOFLEX_104	SN 345669/4	30MHz ~ 26.5GHz	Dec. 04, 2012	Conducted (TH01-HY)

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



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz ~ 1GHz 3m	May 11, 2013	Radiation (03CH02-HY)
Amplifier	Agilent	8447D	2944A11146	100kHz ~ 1.3GHz	Jul. 17, 2013	Radiation (03CH02-HY)
Amplifier	Agilent	8449B	3008A02373	1GHz ~ 26.5GHz	Aug. 28, 2013	Radiation (03CH02-HY)
Spectrum Analyzer	R&S	FSP40	100593	9kHz ~ 40GHz	Oct. 03, 2013	Radiation (03CH02-HY)
Bilog Antenna	SCHAFFNER	CBL61128	2723	30MHz ~ 2GHz	Oct. 10, 2013	Radiation (03CH02-HY)
Horn Antenna	ETS-LINDGREN	3115	6744	1GHz ~ 18GHz	Mar. 18, 2013	Radiation (03CH02-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15GHz ~ 40GHz	Jan. 08, 2013	Radiation (03CH02-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	Nov. 09, 2013	Radiation (03CH02-HY)
RF Cable-high	SUHNER	SUCOFLEX106	03CH02-HY	1GHz ~ 40GHz	Mar. 05, 2013	Radiation (03CH02-HY)
Turn Table	Chaintek Instruments	3000	MF7802058	0~ 360 degree	N/A	Radiation (03CH02-HY)
Antenna Mast	MF	MF7802	MF780208205	1 ~ 4 m	N/A	Radiation (03CH02-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	TESEQ	HLA 6120	31244	9 kHz - 30 MHz	Dec. 02, 2012	Radiation (03CH02-HY)

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