

# FCC Test Report

**Equipment** : 802.11 b/g/n 2.4G Band 1T1R AP Module  
**Brand Name** : ASKEY  
**Model No.** : WLL6540(RoHS)  
**FCC ID** : H8N-WLL6540  
**Standard** : 47 CFR FCC Part 15.247  
**Operating Band** : 2400 MHz – 2483.5 MHz  
**Equipment Class** : DTS  
**Applicant** : Askey Computer Corp.  
10F, No. 119, Chienkang Rd., Chung-Ho, Taipei 235  
Taiwan  
**Manufacturer** : ASKEY TECHNOLOGY (JIANG SU) LTD.  
No. 1388, Jiao Tong Road,  
Wujiang Economic-Technological Development Area,  
Jiangsu Province, P.R. China

The product sample received on Sep. 30, 2015 and completely tested on Oct. 13, 2015. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Reviewed by:



Kevin Liang / Assistant Manager



## Table of Contents

<b>1</b>	<b>GENERAL DESCRIPTION .....</b>	<b>5</b>
1.1	Information.....	5
1.2	Support Equipment.....	7
1.3	Testing Applied Standards .....	7
1.4	Testing Location Information.....	7
1.5	Measurement Uncertainty .....	8
<b>2</b>	<b>TEST CONFIGURATION OF EUT .....</b>	<b>9</b>
2.1	The Worst Case Modulation Configuration .....	9
2.2	The Worst Case Power Setting Parameter.....	9
2.3	The Worst Case Measurement Configuration.....	10
2.4	Test Setup Diagram .....	11
<b>3</b>	<b>TRANSMITTER TEST RESULT .....</b>	<b>13</b>
3.1	AC Power-line Conducted Emissions .....	13
3.2	6dB Bandwidth .....	16
3.3	RF Output Power.....	18
3.4	Power Spectral Density .....	21
3.5	Transmitter Radiated Bandedge Emissions.....	23
3.6	Radiated Unwanted Emissions .....	27
<b>4</b>	<b>TEST EQUIPMENT AND CALIBRATION DATA .....</b>	<b>56</b>

### **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
1.1.2	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	[dBuV]: 0.1500000MHz 52.67 (Margin 13.33dB) - QP 29.67 (Margin 26.33dB) - AV	FCC 15.207	Complied
3.2	15.247(a)	6dB Bandwidth	6dB Bandwidth Unit [MHz] 20M: 8.61 / 40M: 35.44	≥500kHz	Complied
3.3	15.247(b)	RF Output Power (Maximum Peak Conducted Output Power)	Power [dBm]: 23.97	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/100kHz]: -5.05	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Transmitter Radiated Bandedge Emissions	Non-Restricted Bands: 2395.800 MHz: 28.12 dB Restricted Bands [dBuV/m at 3m]: 2386.296 MHz 70.04 (Margin 3.96 dB) - PK 52.98 (Margin 1.02 dB) - AV	Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209	Complied
3.6	15.247(d)	Radiated Unwanted Emissions	Restricted Bands [dBuV/m at 3m]: 39.700 MHz 36.93 (Margin 3.07 dB) – QP	Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209	Complied

## Revision History

[illegible]

# 1 General Description

## 1.1 Information

### 1.1.1 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	23.97
2400-2483.5	g	2412-2462	1-11 [11]	1	23.60
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	1	23.58
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	1	21.45

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.

### 1.1.2 Antenna Information

Antenna Category	
<input checked="" type="checkbox"/>	External antenna (dedicated antennas)
<input checked="" type="checkbox"/>	Single power level with corresponding antenna(s).
<input type="checkbox"/>	Multiple power level and corresponding antenna(s).

Antenna General Information		
Ant. Cat.	Ant. Type	Gain (dBi)
External	Stamped metal PIFA	2.4

**1.1.3 Type of EUT**

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

**1.1.4 Test Signal Duty Cycle**

Operated Mode for Worst Duty Cycle	
<input type="checkbox"/> Operated normally mode for worst duty cycle	
<input checked="" type="checkbox"/> Operated test mode for worst duty cycle	
Test Signal Duty Cycle (x)	Power Duty Factor [dB] – (10 log 1/x)
<input checked="" type="checkbox"/> 100.00% - IEEE 802.11b	0.00
<input checked="" type="checkbox"/> 100.00%- IEEE 802.11g	0.00
<input checked="" type="checkbox"/> 100.00%- IEEE 802.11n (HT20)	0.00
<input checked="" type="checkbox"/> 100.00%- IEEE 802.11n (HT40)	0.00

**1.1.5 EUT Operational Condition**

<b>Supply Voltage</b>	<input type="checkbox"/> AC mains	<input checked="" type="checkbox"/> DC	
<b>Type of DC Source</b>	<input type="checkbox"/> Internal DC supply	<input checked="" type="checkbox"/> From system	<input type="checkbox"/> External DC adapter

## 1.2 Support Equipment

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

Support Equipment - AC Conduction and Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5530	DoC
2	Adapter for NB	DELL	LA65NS2-01	DoC
3	Micro USB cable	-	-	-
4	AC Adapter	LENOVO	C-P06	DoC

\*\* The Micro USB cable and AC adapter provide by customer.

## 1.3 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 558074 D01 v03r03

## 1.4 Testing Location Information

Testing Location				
<input checked="" type="checkbox"/>	HWA YA	ADD :	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.	
		TEL :	886-3-327-3456	FAX : 886-3-327-0973
Test site registered number [636805] with FCC.				
Test Condition		Test Site No.	Test Engineer	Test Environment
AC Conduction		CO04-HY	Anthony	21°C / 58%
RF Conducted		TH01-HY	Candy	23.6°C / 62.5%
Radiated Emission		03CH02-HY	Daniel	22.1°C / 59%
Test site registered number [636805] with FCC.				

## 1.5 Measurement Uncertainty

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

Measurement Uncertainty		
Test Item		Uncertainty
AC power-line conducted emissions		±2.3 dB
Emission bandwidth, 6dB bandwidth		±0.6 %
RF output power, conducted		±0.1 dB
Power density, conducted		±0.6 dB
Unwanted emissions, conducted	9 – 150 kHz	±0.4 dB
	0.15 – 30 MHz	±0.4 dB
	30 – 1000 MHz	±0.6 dB
	1 – 18 GHz	±0.5 dB
	18 – 40 GHz	±0.5 dB
	40 – 200 GHz	N/A
All emissions, radiated	9 – 150 kHz	±2.5 dB
	0.15 – 30 MHz	±2.3 dB
	30 – 1000 MHz	±2.6 dB
	1 – 18 GHz	±3.6 dB
	18 – 40 GHz	±3.8 dB
	40 – 200 GHz	N/A
Temperature		±0.8 °C
Humidity		±5 %
DC and low frequency voltages		±0.9%
Time		±1.4 %
Duty Cycle		±0.6 %



## 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	1-11 Mbps	1 Mbps
11g	1	6-54 Mbps	6 Mbps
HT20	1	MCS 0-7	MCS 0
HT40	1	MCS 0-7	MCS 0

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). The EUT supports HT20 and HT40. Worst modulation mode of Guard Interval (GI) is 800ns.

Note 2: Modulation modes consist below configuration:  
11b: IEEE 802.11b, 11g: IEEE 802.11g, HT20/HT40: IEEE 802.11n

Note 3: RF output power specifies that Maximum Peak Conducted Output Power.


### 2.2 The Worst Case Power Setting Parameter

The Worst Case Power Setting Parameter (2400-2483.5MHz band)							
Test Software Version	MT7628 QA_0.0.0.81						
Modulation Mode	N <sub>TX</sub>	Test Frequency (MHz)					
		NCB: 20MHz			NCB: 40MHz		
		2412	2437	2462	2422	2437	2452
11b	1	1D	24	1E	-	-	-
11g	1	1B	25	1C	-	-	-
HT20	1	19	25	1A	-	-	-
HT40	1	-	-	-	0D	18	0D

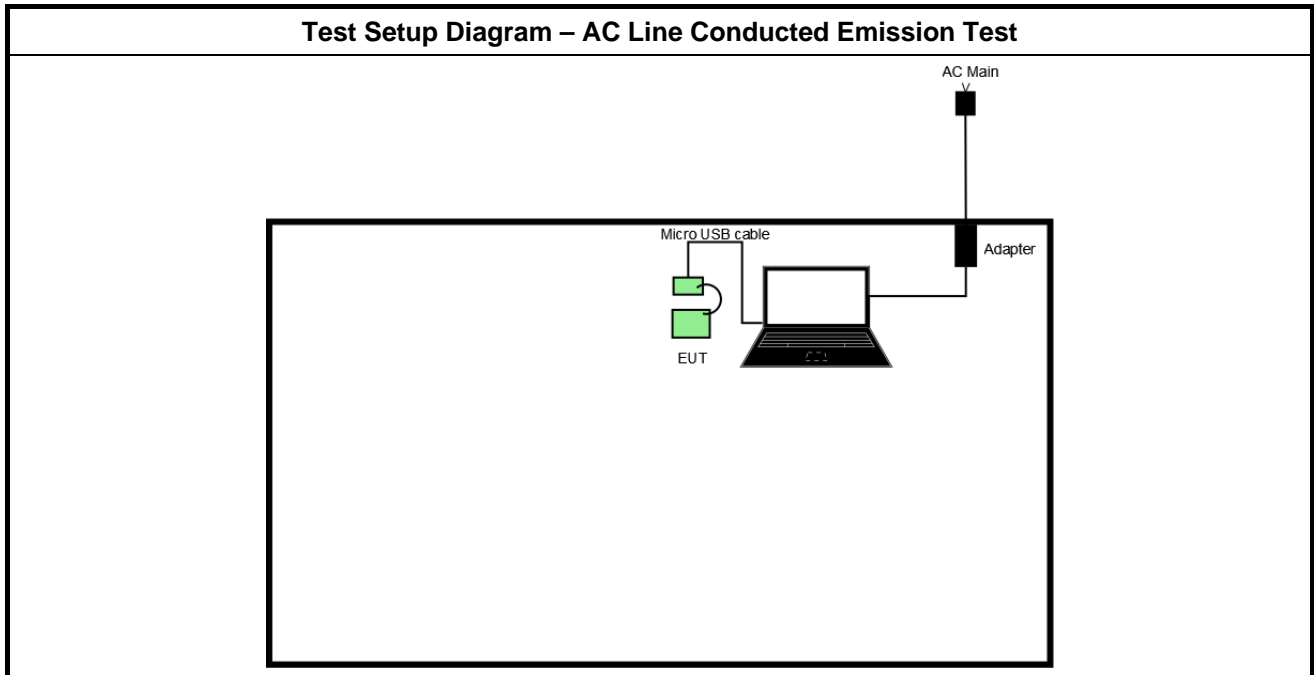
## 2.3 The Worst Case Measurement Configuration

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
<b>1</b>	Adapter mode and transmit
<b>2</b>	EUT with Notebook via USB cable
<b>The Mode 2 generated the worst test result, it was reported as final data.</b>	

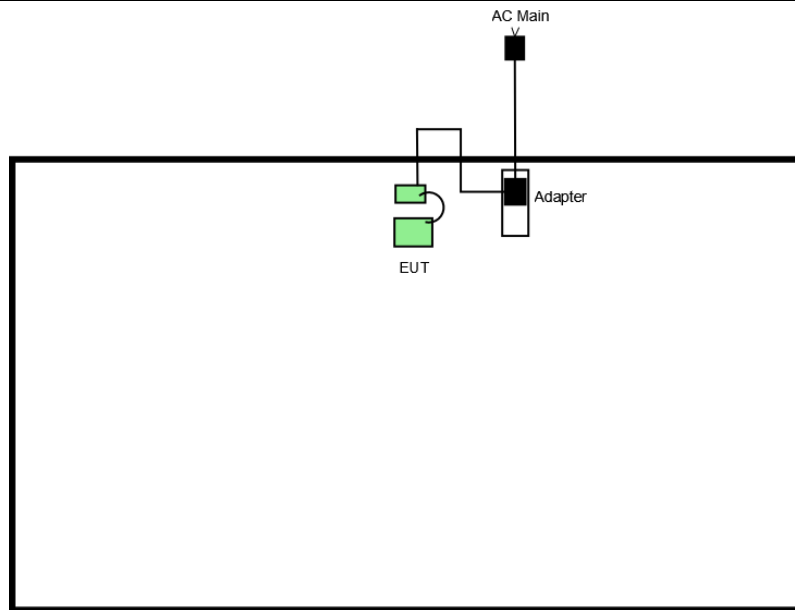
The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	RF Output Power, Power Spectral Density, 6 dB Bandwidth
<b>Test Condition</b>	Conducted measurement at transmit chains
<b>Modulation Mode</b>	11b, 11g, HT20, HT40

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
<b>User Position</b>	<input checked="" type="checkbox"/> EUT will be placed in fixed position.
	<input type="checkbox"/> EUT will be placed in mobile position and operating multiple positions.
	<input type="checkbox"/> EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed three orthogonal planes.
<b>Operating Mode</b>	Operating Mode Description
<b>Radiated Emissions Below 1GHz</b>	1. Adapter mode and transmit
	2. EUT with Notebook via USB cable
	<b>The Mode 1 generated the worst test result, it was reported as final data.</b>
<b>Radiated Emissions Above 1GHz</b>	1. Adapter mode and transmit
<b>Modulation Mode</b>	11b, 11g, HT20, HT40
<b>Orthogonal Planes of EUT</b>	<b>X Plane</b>
	

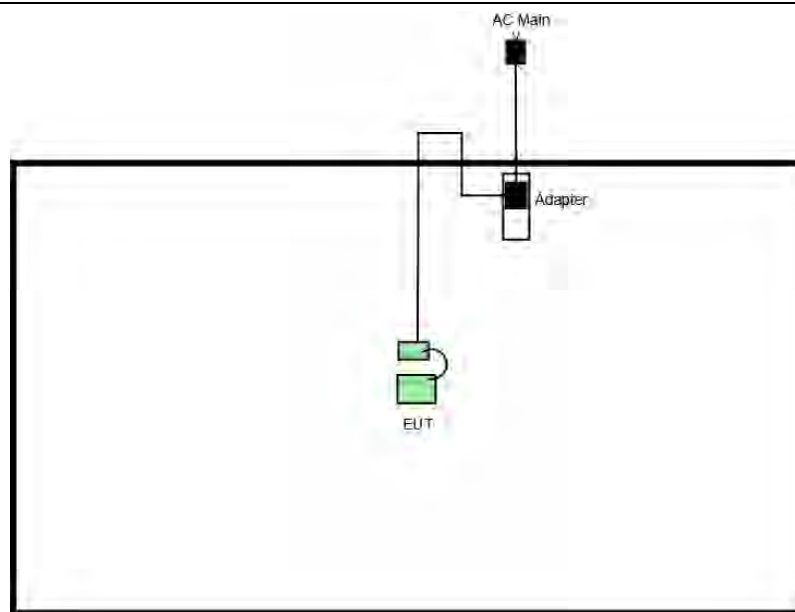
## 2.4 Test Setup Diagram



**Test Setup Diagram - Radiated Test Below 1GHz**



**Test Setup Diagram - Radiated Test Above 1GHz**



### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

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

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

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

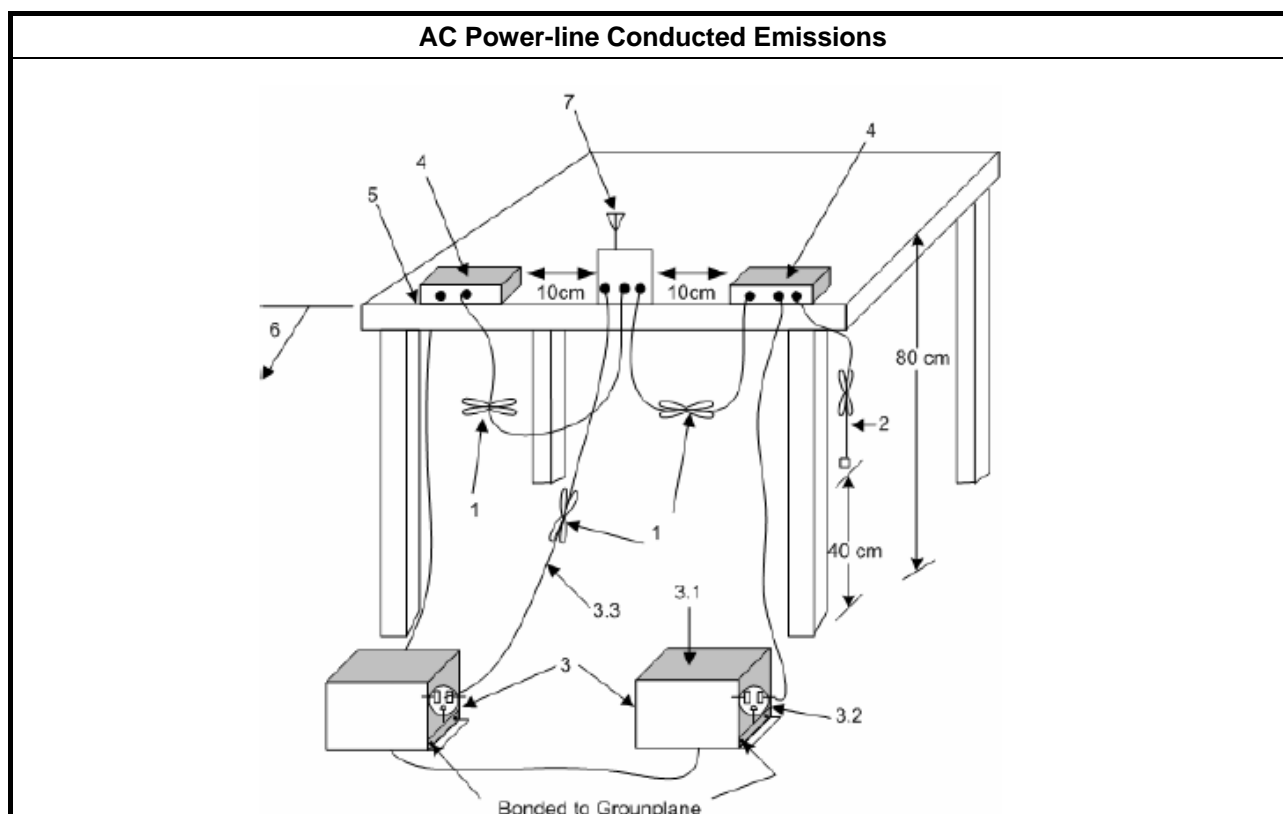
##### 3.1.2 Measuring Instruments

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

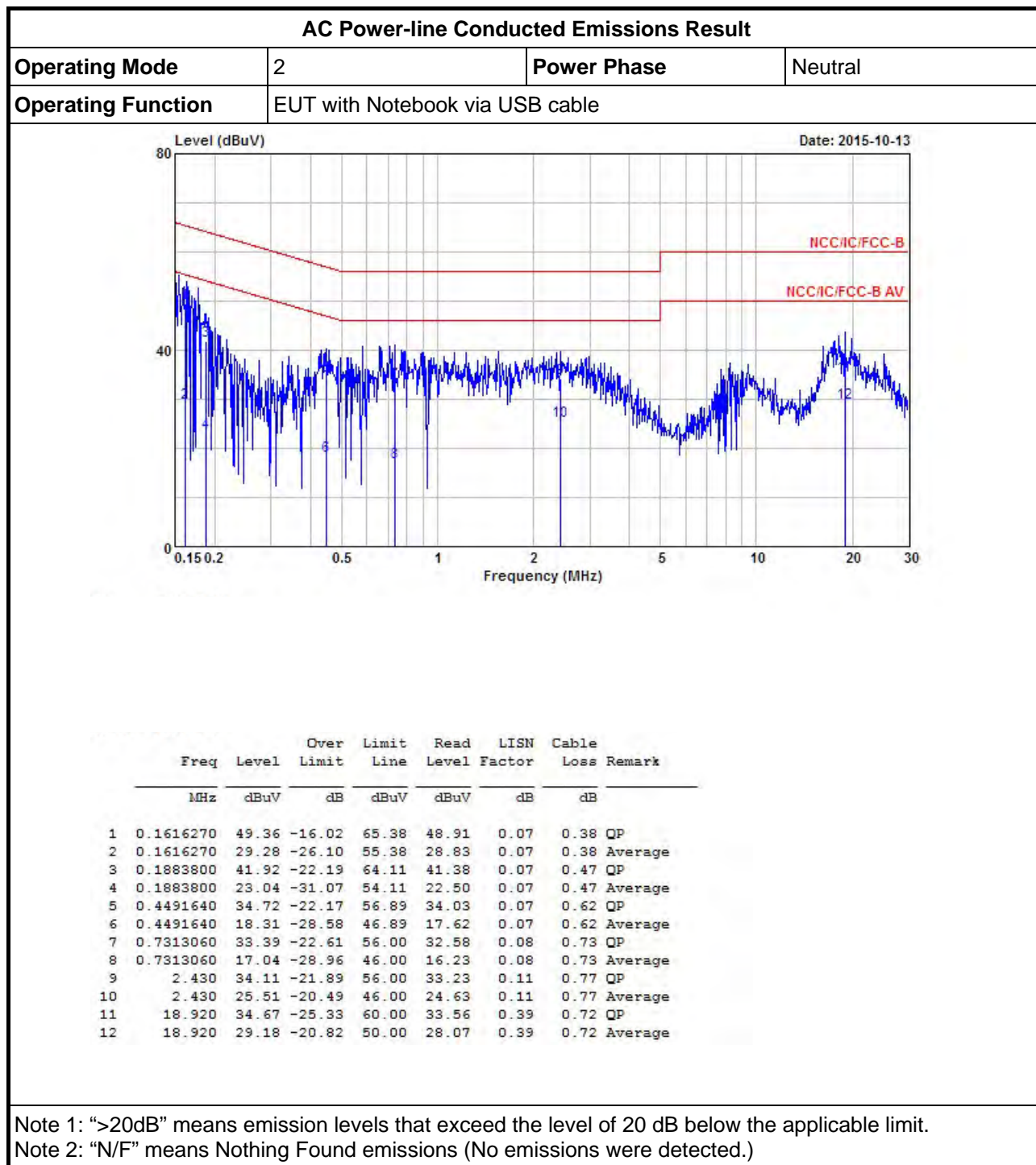
##### 3.1.3 Test Procedures

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

##### 3.1.4 Test Setup

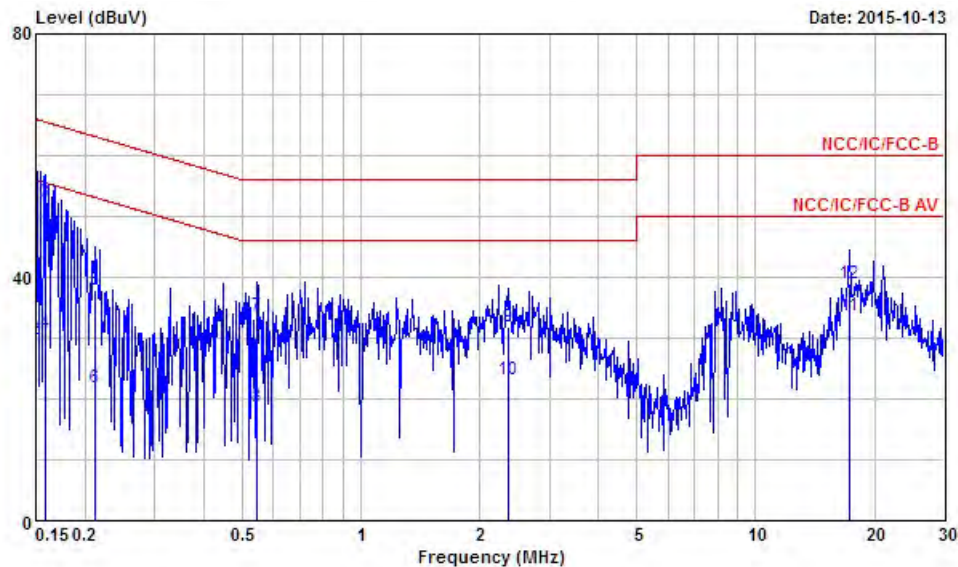


### 3.1.5 Test Result of AC Power-line Conducted Emissions



**AC Power-line Conducted Emissions Result**

<b>Operating Mode</b>	2	<b>Power Phase</b>	Line
<b>Operating Function</b>	EUT with Notebook via USB cable		



	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.1500000	52.67	-13.33	66.00	52.28	0.05	0.34	QP
2	0.1500000	29.67	-26.33	56.00	29.28	0.05	0.34	Average
3	0.1590020	52.38	-13.14	65.52	51.96	0.05	0.37	QP
4	0.1590020	30.70	-24.82	55.52	30.28	0.05	0.37	Average
5	0.2127940	37.86	-25.24	63.10	37.29	0.06	0.51	QP
6	0.2127940	21.79	-31.31	53.10	21.22	0.06	0.51	Average
7	0.5464400	33.64	-22.36	56.00	32.90	0.07	0.67	QP
8	0.5464400	18.72	-27.28	46.00	17.98	0.07	0.67	Average
9	2.370	31.89	-24.11	56.00	31.00	0.11	0.78	QP
10	2.370	23.08	-22.92	46.00	22.19	0.11	0.78	Average
11	17.290	33.58	-16.42	50.00	32.50	0.33	0.75	Average
12	17.290	39.07	-20.93	60.00	37.99	0.33	0.75	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.)

## 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.

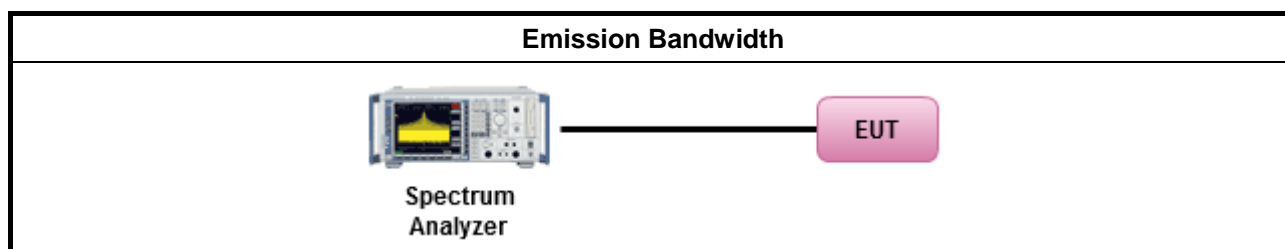
### 3.2.2 Measuring Instruments

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 D01 v03r03, clause 8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9 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 1.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 2 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

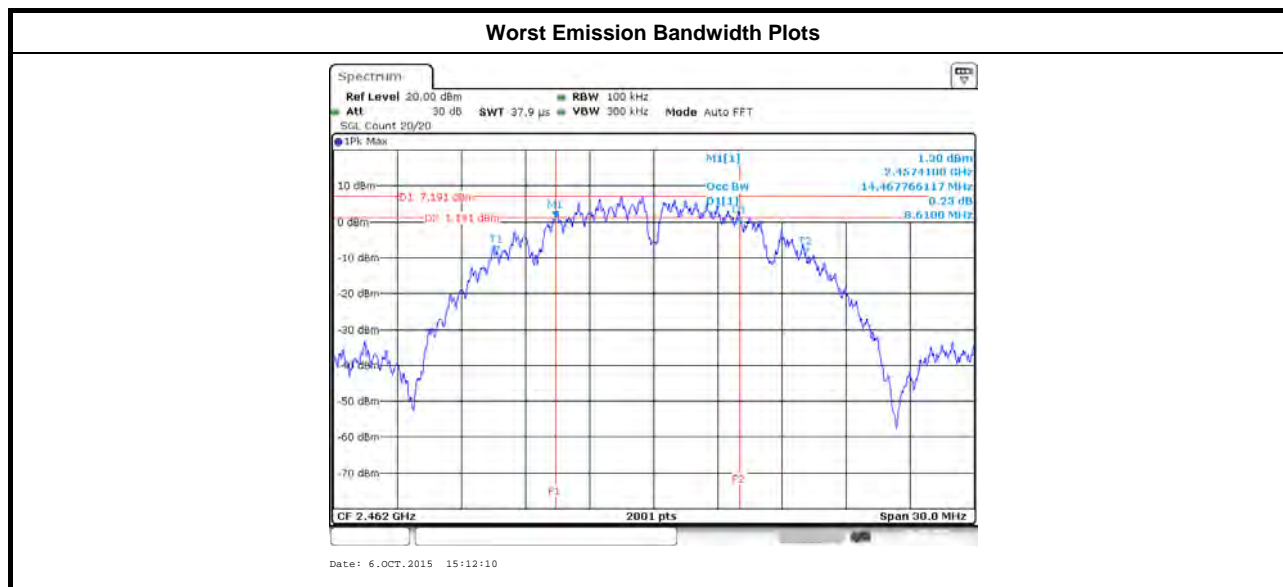




### 3.2.5 Test Result of Emission Bandwidth

Emission Bandwidth Result				
Condition			Emission Bandwidth (MHz)	
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	99% Bandwidth	6dB Bandwidth
11b	1	2412	14.36	9.64
11b	1	2437	15.14	9.57
11b	1	2462	14.46	8.61
11g	1	2412	16.31	15.66
11g	1	2437	16.58	16.29
11g	1	2462	16.34	16.32
HT20	1	2412	17.51	17.55
HT20	1	2437	17.63	17.56
HT20	1	2462	17.70	17.08
HT40	1	2422	35.86	35.96
HT40	1	2437	35.94	36.28
HT40	1	2452	35.90	35.44
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.	

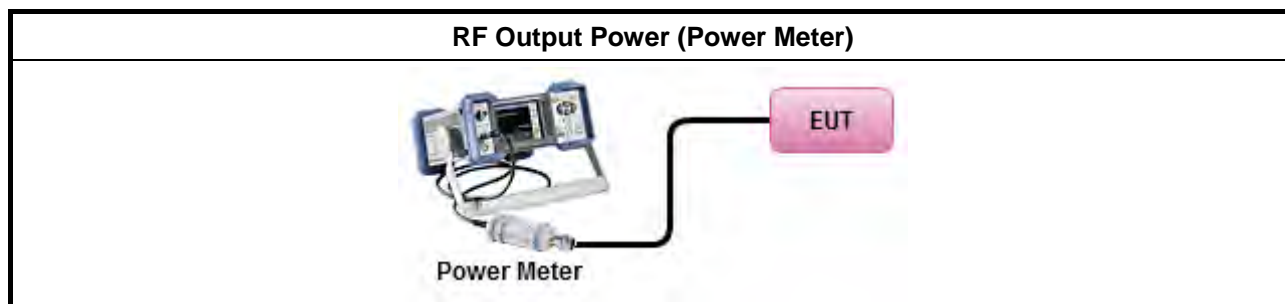
#### 3.3.2 Measuring Instruments

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 D01 v03r03, clause 9.1.1 (RBW ≥ EBW method).
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 9.1.2 (peak power meter for VBW ≥ DTS BW).
<input checked="" type="checkbox"/>	Maximum Conducted Output Power
	[duty cycle ≥ 98% or external video / power trigger]
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, 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 D01 v03r03, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, 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 checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, 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 1.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 2 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



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

Maximum Peak Conducted Output Power Result							
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	RF Output Power (dBm)	Power Limit	Ant. (dBi)	EIRP Power	EIRP Limit
11b	1	2412	20.77	30.00	2.4	23.17	36.00
11b	1	2437	23.97	30.00	2.4	26.37	36.00
11b	1	2462	21.48	30.00	2.4	23.88	36.00
11g	1	2412	20.88	30.00	2.4	23.28	36.00
11g	1	2437	23.60	30.00	2.4	26.00	36.00
11g	1	2462	21.55	30.00	2.4	23.95	36.00
HT20	1	2412	19.89	30.00	2.4	22.29	36.00
HT20	1	2437	23.58	30.00	2.4	25.98	36.00
HT20	1	2462	21.06	30.00	2.4	23.46	36.00
HT40	1	2422	15.46	30.00	2.4	17.86	36.00
HT40	1	2437	21.45	30.00	2.4	23.85	36.00
HT40	1	2452	15.47	30.00	2.4	17.87	36.00
Result			Complied				

### 3.3.6 Test Result of Maximum Conducted Output Power

Maximum Conducted Output Power Result							
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	RF Output Power (dBm)	Power Limit	Ant. (dBi)	EIRP Power	EIRP Limit
11b	1	2412	17.90	30.00	2.4	20.30	36.00
11b	1	2437	21.07	30.00	2.4	23.47	36.00
11b	1	2462	18.57	30.00	2.4	20.97	36.00
11g	1	2412	15.99	30.00	2.4	18.39	36.00
11g	1	2437	18.75	30.00	2.4	21.15	36.00
11g	1	2462	16.68	30.00	2.4	19.08	36.00
HT20	1	2412	14.92	30.00	2.4	17.32	36.00
HT20	1	2437	18.64	30.00	2.4	21.04	36.00
HT20	1	2462	16.18	30.00	2.4	18.58	36.00
HT40	1	2422	10.49	30.00	2.4	12.89	36.00
HT40	1	2437	16.39	30.00	2.4	18.79	36.00
HT40	1	2452	10.58	30.00	2.4	12.98	36.00
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) $\leq 8$ dBm/3kHz

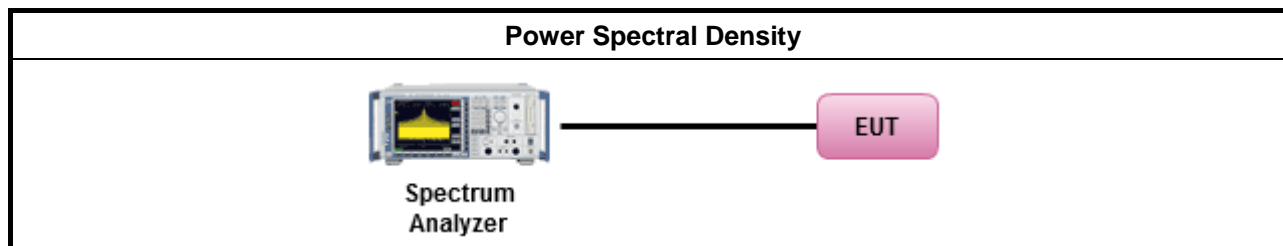
#### 3.4.2 Measuring Instruments

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

#### 3.4.3 Test Procedures

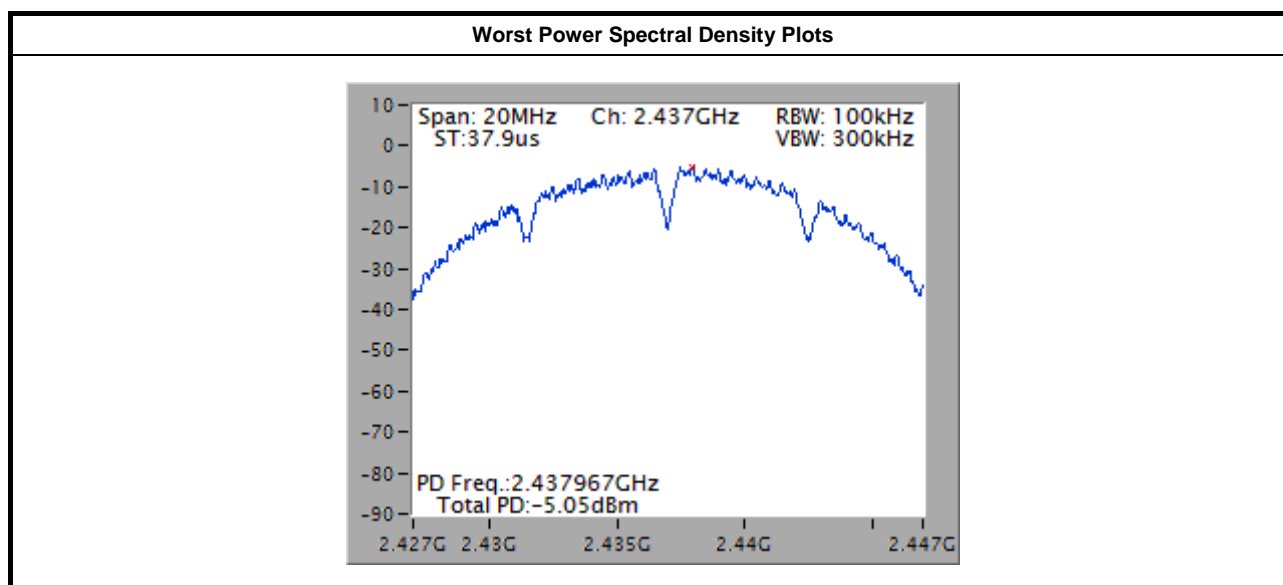
Test Method	
<input checked="" type="checkbox"/>	Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method 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 D01 v03r03, 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 D01 v03r03, clause 10.3 Method AVGPSD-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, 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 D01 v03r03, clause 10.5 Method AVGPSD-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, 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 1.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 2 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



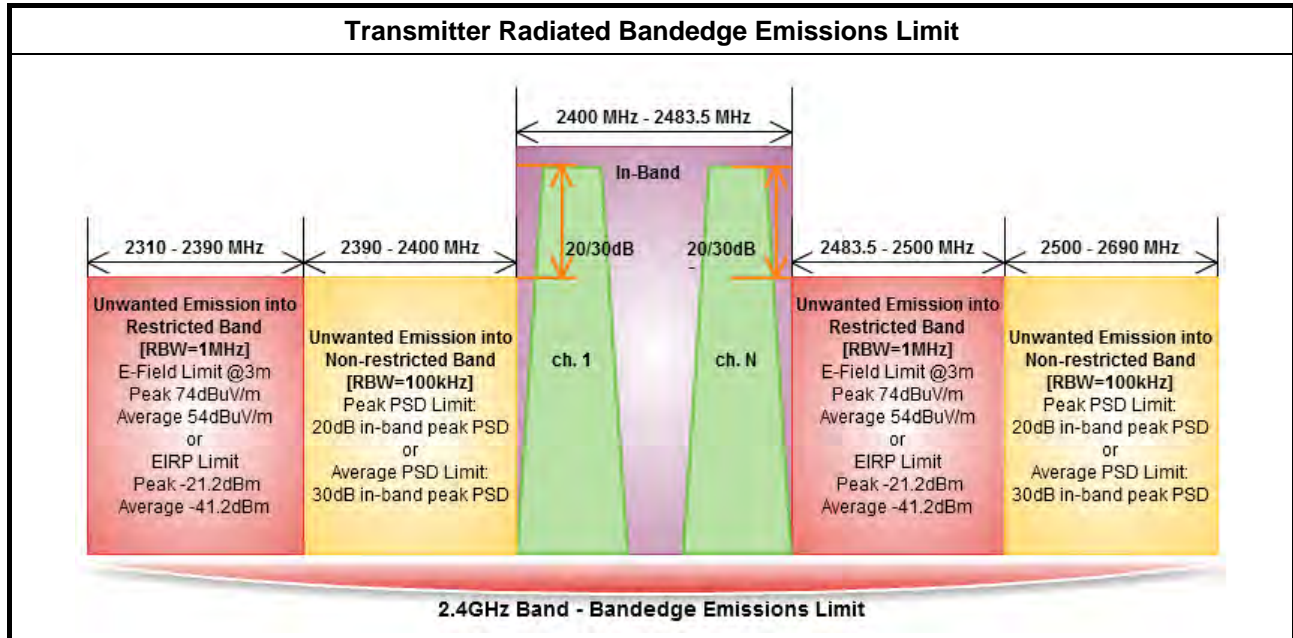
### 3.4.5 Test Result of Power Spectral Density

Power Spectral Density Result				
Condition			Power Spectral Density	
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Sum Chain (dBm/100kHz)	PSD Limit (dBm/3kHz)
11b	1	2412	-6.32	8.00
11b	1	2437	-5.05	8.00
11b	1	2462	-6.60	8.00
11g	1	2412	-12.63	8.00
11g	1	2437	-8.61	8.00
11g	1	2462	-11.72	8.00
HT20	1	2412	-13.96	8.00
HT20	1	2437	-10.74	8.00
HT20	1	2462	-12.67	8.00
HT40	1	2422	-21.28	8.00
HT40	1	2437	-15.26	8.00
HT40	1	2452	-21.33	8.00
Result			Complied	



### 3.5 Transmitter Radiated Bandedge Emissions

#### 3.5.1 Transmitter Radiated Bandedge Emissions Limit



#### 3.5.2 Measuring Instruments

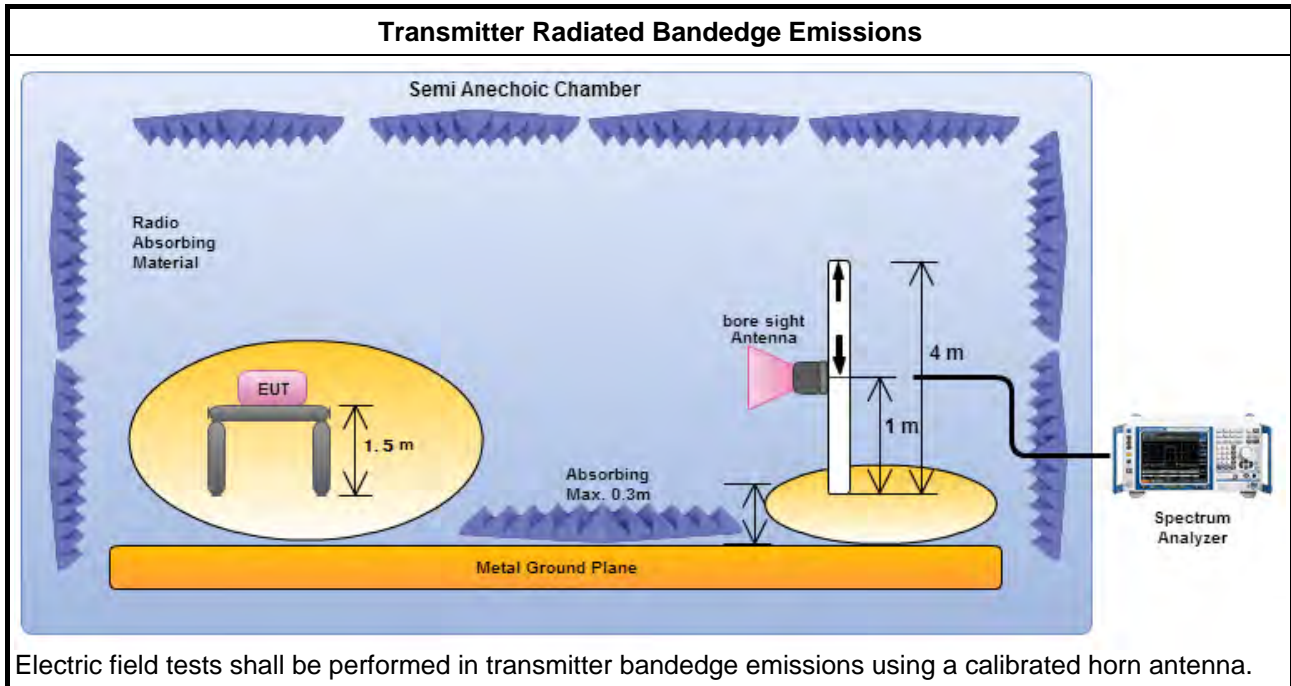
Refer a test equipment and calibration data table in this test report.

### 3.5.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
<input checked="" type="checkbox"/>	Refer as ANSI C63.10.3, clause 6.10.3 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 D01 v03r03, clause 11 for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12 for unwanted emissions into restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq$ 98%)
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12.2.5.3 Option 3 (Reduced VBW $\geq$ 1/T).
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 11.3 and 12.2.4 measurement procedure peak limit.
<input checked="" type="checkbox"/>	For the transmitter bandedge emissions shall be measured using following options below:
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, 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 6.10 for band-edge testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.10.6.2 for marker-delta method for band-edge measurements.
<input checked="" type="checkbox"/>	For radiated measurement, refer as FCC KDB 558074 D01 v03r03, clause 12.2.7 and ANSI C63.10, clause 6.6. Test distance is 3m.



### 3.5.4 Test Setup



### 3.5.5 Test Result of Transmitter Radiated Bandedge Emissions

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	105.80	2391.760	64.78	41.02	20	H
11b	1	2462	107.44	2544.200	63.22	44.22	20	H
11g	1	2412	100.45	2399.600	71.77	28.68	20	H
11g	1	2462	99.71	2511.000	64.53	35.18	20	H
HT20	1	2412	99.04	2399.824	70.01	29.03	20	H
HT20	1	2462	97.73	2545.800	63.89	33.84	20	H
HT40	1	2422	92.99	2395.800	64.87	28.12	20	H
HT40	1	2452	92.36	2547.920	63.56	28.80	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	2383.696	62.44	74	2385.712	52.48	54	H
11b	1	2462	3	2487.600	62.40	74	2487.800	52.55	54	H
11g	1	2412	3	2389.968	69.04	74	2389.968	52.36	54	H
11g	1	2462	3	2483.600	71.75	74	2483.500	52.87	54	H
HT20	1	2412	3	2389.744	69.38	74	2389.968	52.59	54	H
HT20	1	2462	3	2484.000	72.16	74	2483.500	52.91	54	H
HT40	1	2422	3	2389.728	70.04	74	2386.296	52.98	54	H
HT40	1	2452	3	2483.600	68.80	74	2483.600	52.85	54	H

Note 1: Measurement worst emissions of receive antenna polarization.

### 3.6 Radiated Unwanted Emissions

#### 3.6.1 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

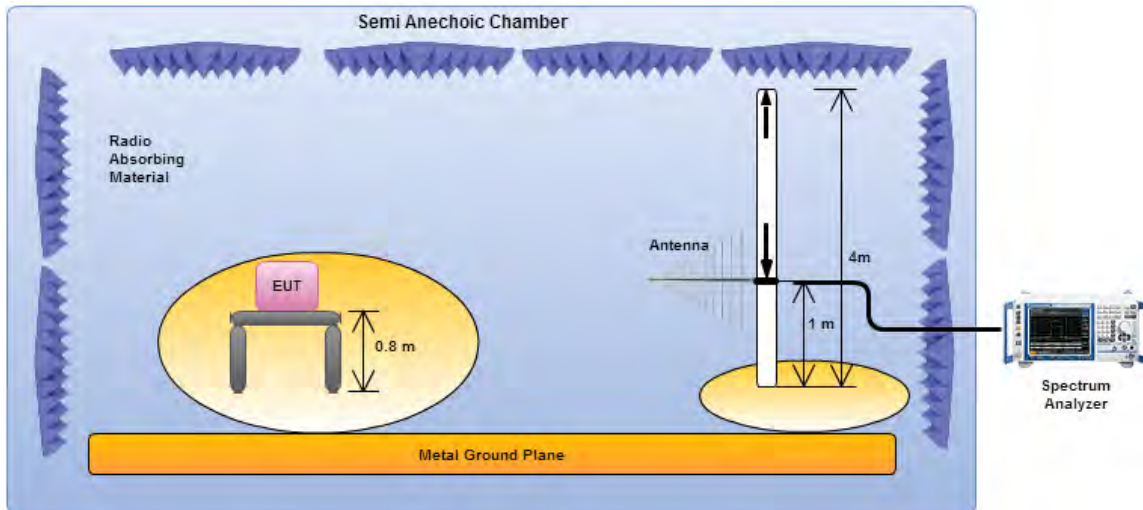
Refer a test equipment and calibration data table in this test report.

### 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 D01 v03r03, clause 11 for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12 for unwanted emissions into restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$ )
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
<input type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$ ).
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW $\geq 1/T$ , where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 11.3 and 12.2.4 measurement procedure peak limit.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 D01 v03r03, clause 12.2.3 measurement procedure Quasi-Peak limit.
<input checked="" type="checkbox"/>	For radiated measurement, refer as FCC KDB 558074 D01 v03r03, 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.

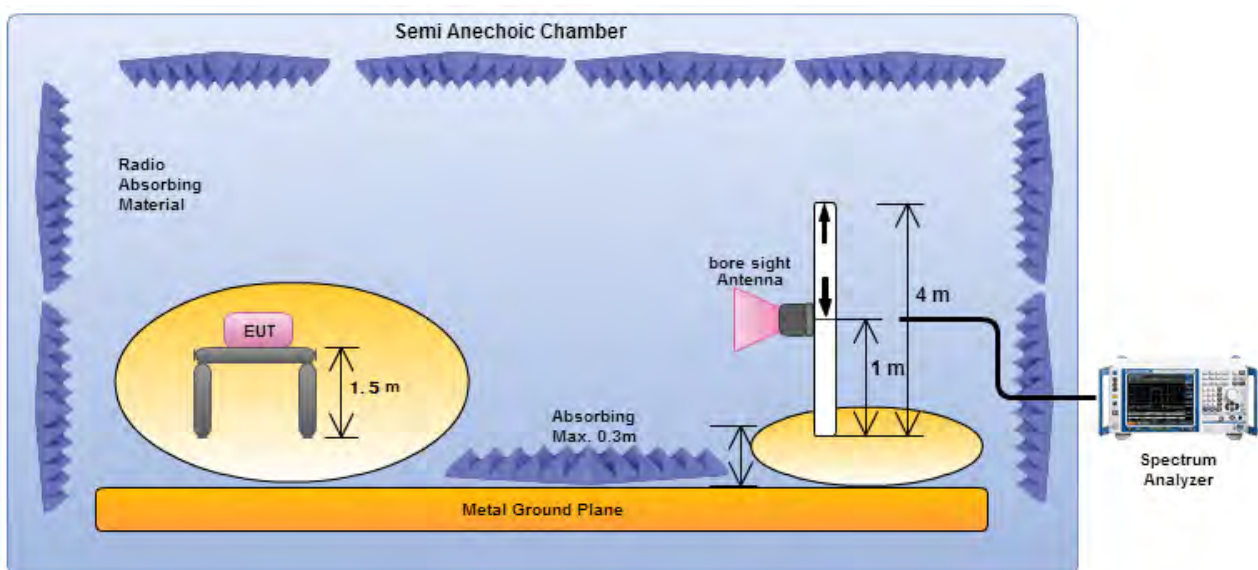
### 3.6.4 Test Setup

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



Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna.

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

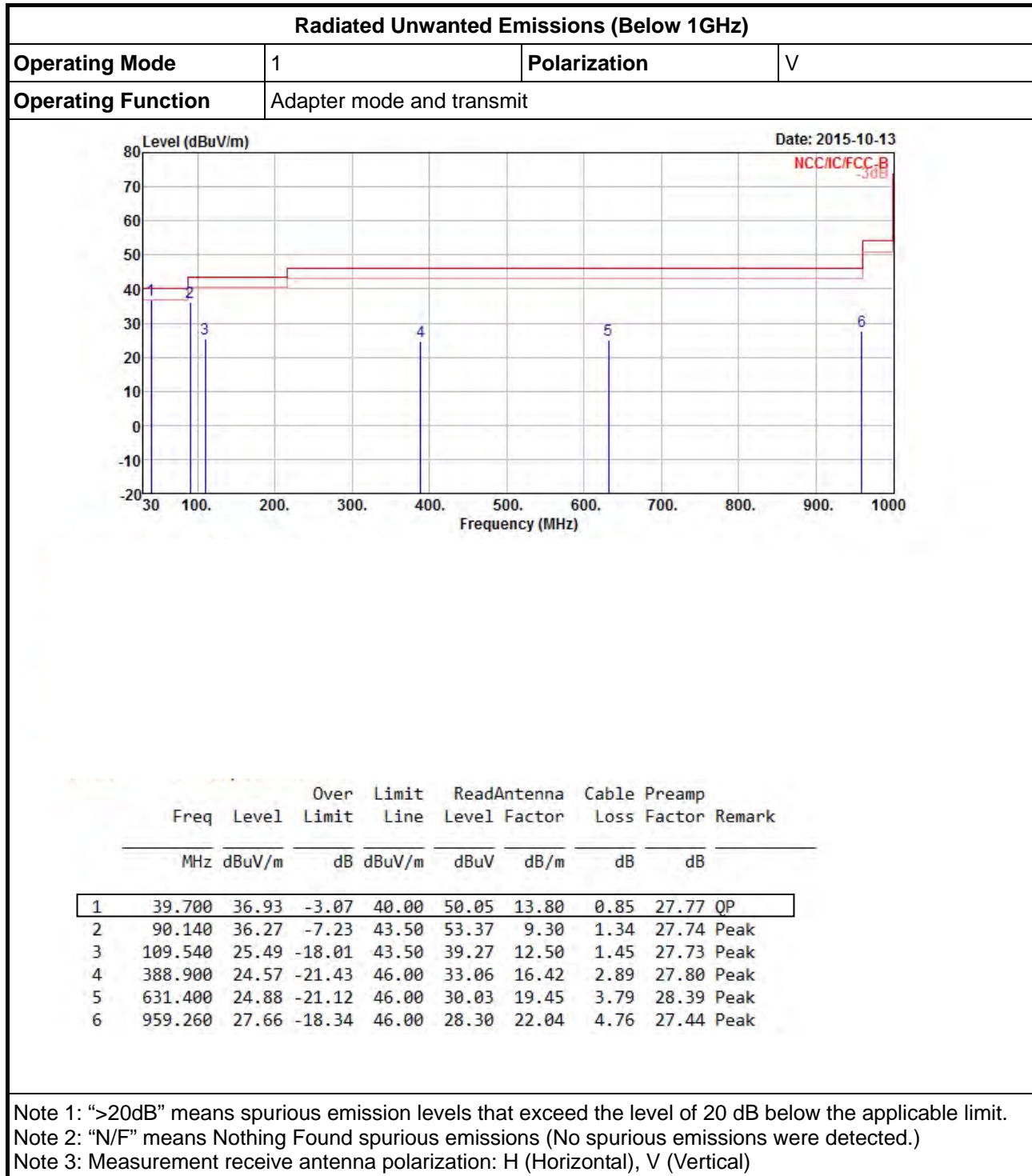


- Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

### 3.6.5 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.

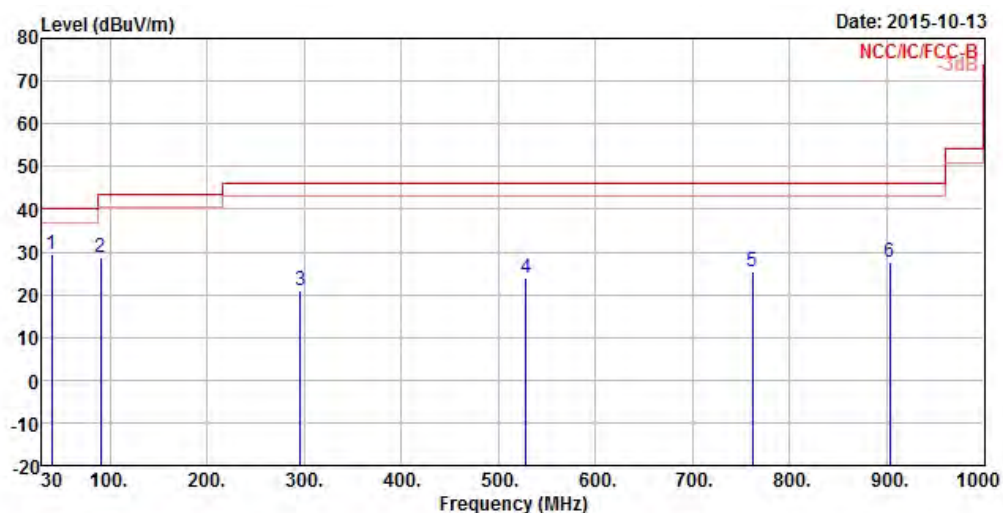
### 3.6.6 Radiated Unwanted Emissions (Below 1GHz)





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

<b>Operating Mode</b>	1	<b>Polarization</b>	H
<b>Operating Function</b>	Adapter mode and transmit		



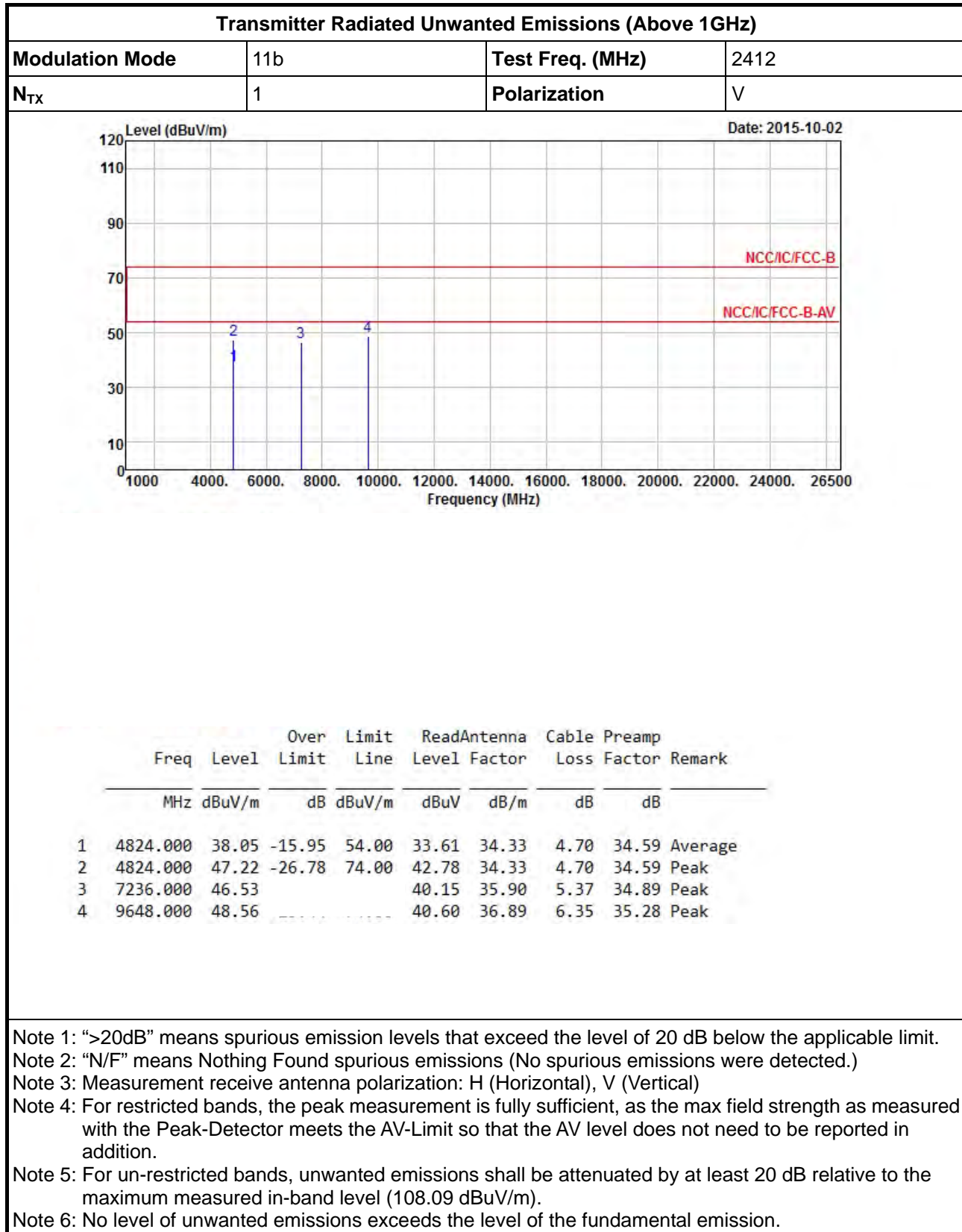
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamplifier Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	39.700	29.53	-10.47	40.00	42.65	13.80	0.85	27.77 Peak
2	90.140	28.88	-14.62	43.50	45.98	9.30	1.34	27.74 Peak
3	295.780	21.14	-24.86	46.00	31.81	13.88	2.50	27.05 Peak
4	528.580	24.02	-21.98	46.00	30.59	18.45	3.40	28.42 Peak
5	761.380	25.39	-20.61	46.00	28.82	20.49	4.20	28.12 Peak
6	903.000	27.50	-18.50	46.00	28.91	21.62	4.56	27.59 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)

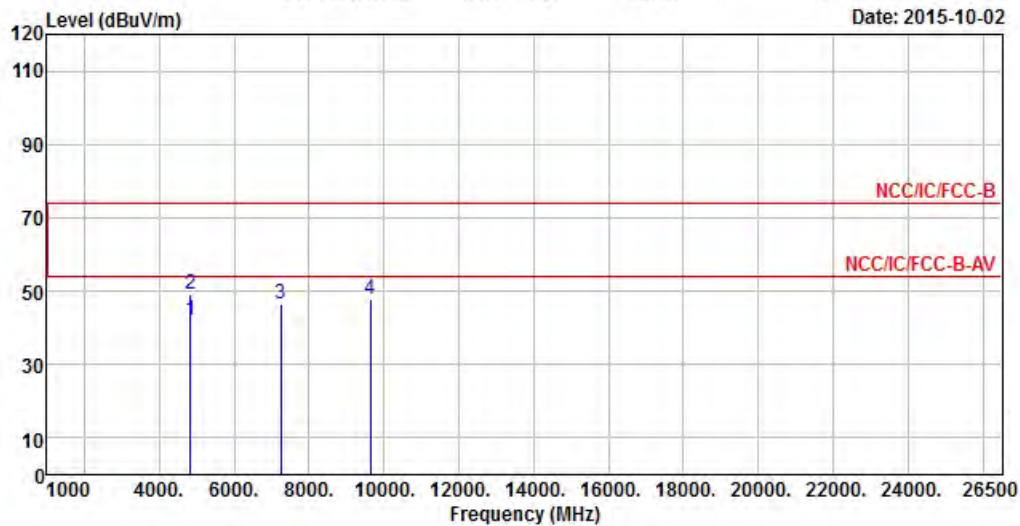
### 3.6.7 Transmitter Radiated Unwanted Emissions (Above 1GHz)





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

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4824.000	42.23	-11.77	54.00	37.79	34.33	4.70	34.59 Average
2	4824.000	49.15	-24.85	74.00	44.71	34.33	4.70	34.59 Peak
3	7236.000	46.40			40.02	35.90	5.37	34.89 Peak
4	9648.000	48.00			40.04	36.89	6.35	35.28 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)

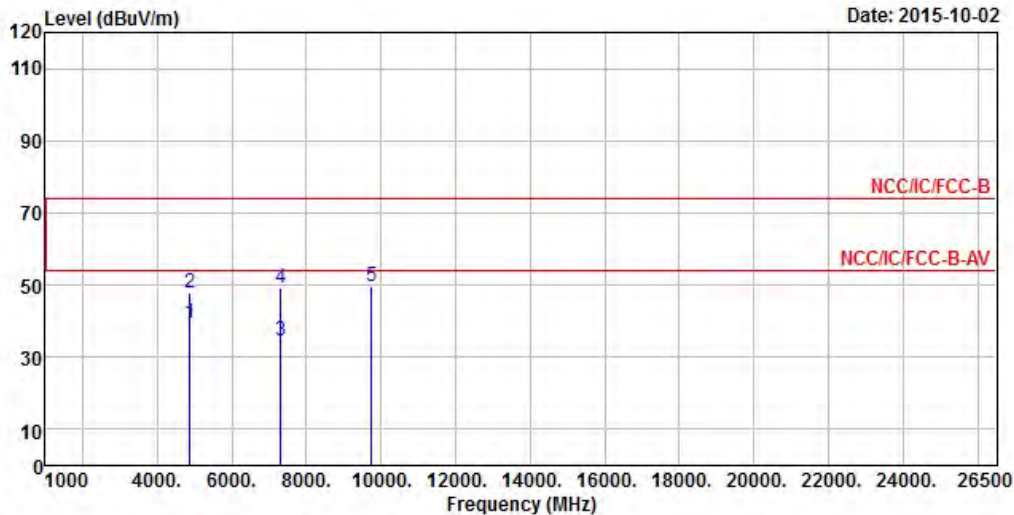
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (108.09 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>	11b	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	39.40	-14.60	54.00	34.93	34.32	4.73	34.58	Average
2	4874.000	47.96	-26.04	74.00	43.49	34.32	4.73	34.58	Peak
3	7311.000	34.68	-19.32	54.00	28.20	35.92	5.47	34.91	Average
4	7311.000	49.02	-24.98	74.00	42.54	35.92	5.47	34.91	Peak
5	9748.000	49.61			41.53	36.96	6.41	35.29	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)

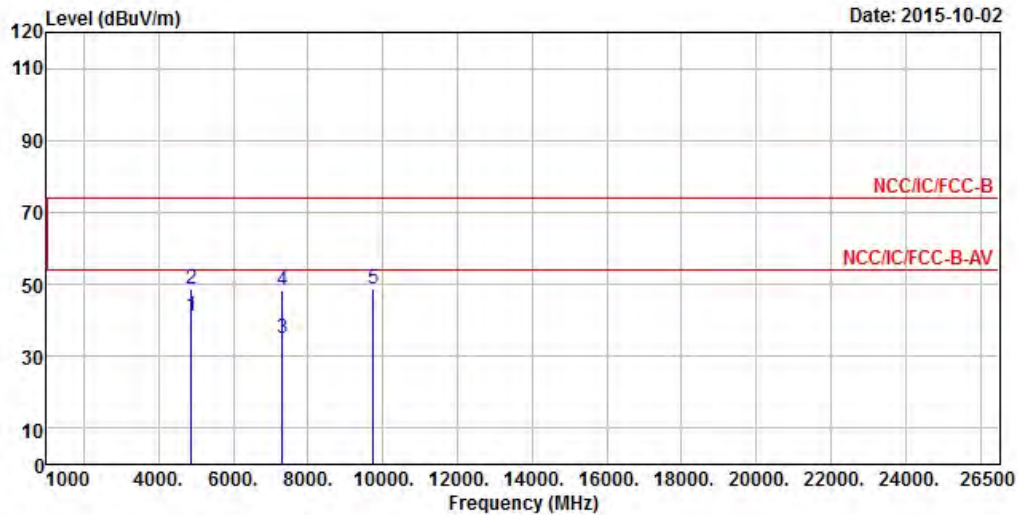
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (110.94 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	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	41.24	-12.76	54.00	36.77	34.32	4.73	34.58	Average
2	4874.000	48.84	-25.16	74.00	44.37	34.32	4.73	34.58	Peak
3	7311.000	34.93	-19.07	54.00	28.45	35.92	5.47	34.91	Average
4	7311.000	48.30	-25.70	74.00	41.82	35.92	5.47	34.91	Peak
5	9748.000	48.62			40.54	36.96	6.41	35.29	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)

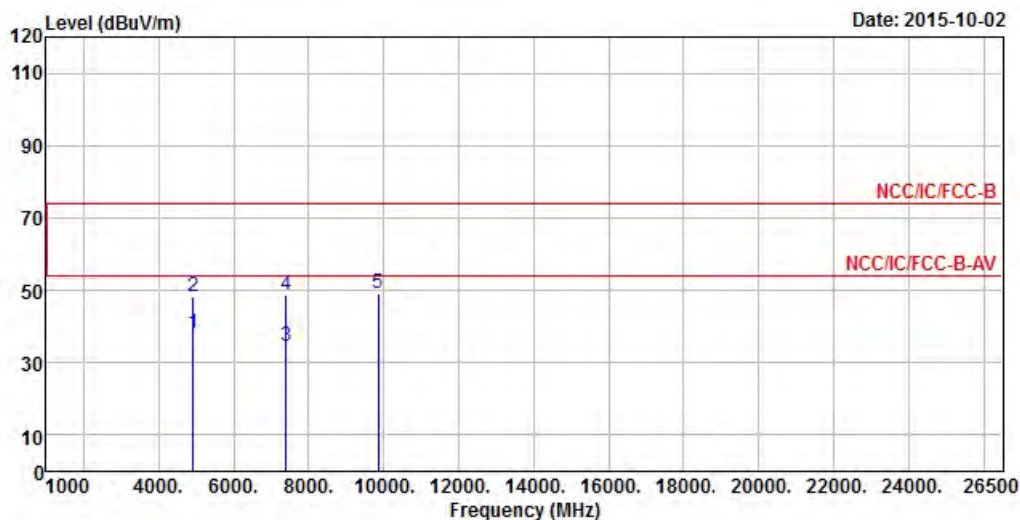
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (110.94 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	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	38.09	-15.91	54.00	33.56	34.31	4.79	34.57	Average
2	4924.000	48.43	-25.57	74.00	43.90	34.31	4.79	34.57	Peak
3	7386.000	34.67	-19.33	54.00	28.07	35.96	5.57	34.93	Average
4	7386.000	48.52	-25.48	74.00	41.92	35.96	5.57	34.93	Peak
5	9848.000	49.35			41.14	37.01	6.50	35.30	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)

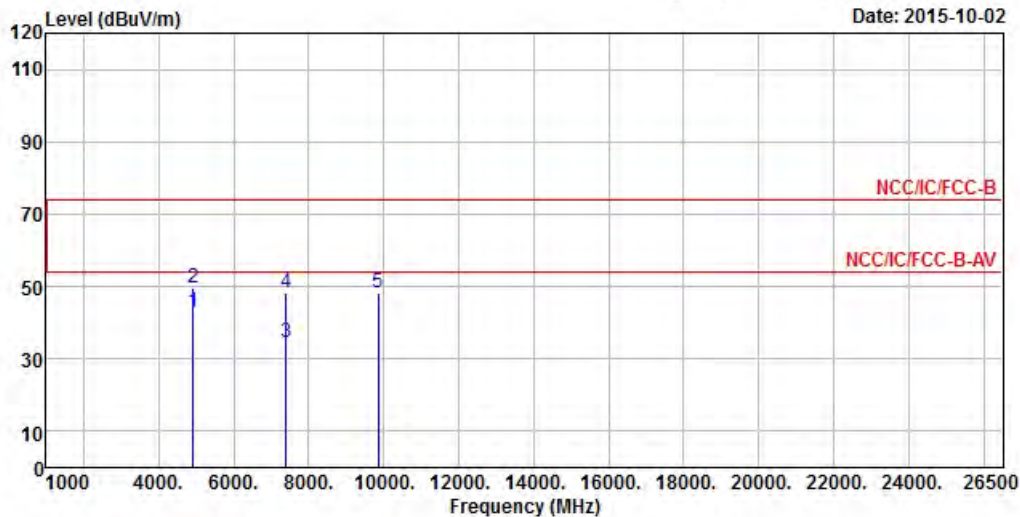
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.44 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	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4924.000	43.12	-10.88	54.00	38.59	34.31	4.79	34.57 Average
2	4924.000	49.65	-24.35	74.00	45.12	34.31	4.79	34.57 Peak
3	7386.000	34.50	-19.50	54.00	27.90	35.96	5.57	34.93 Average
4	7386.000	48.24	-25.76	74.00	41.64	35.96	5.57	34.93 Peak
5	9848.000	48.10			39.89	37.01	6.50	35.30 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.

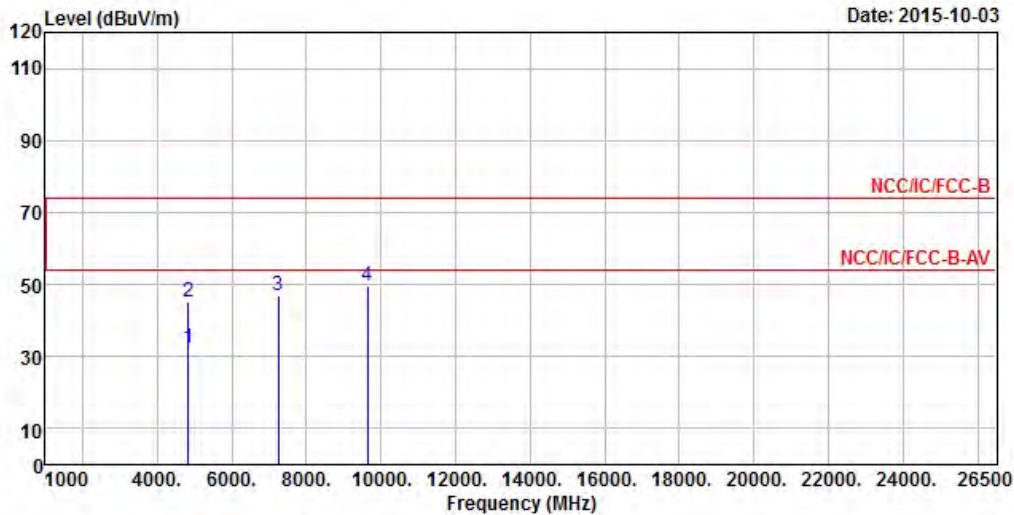
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (109.44 dBuV/m).

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4824.000	32.51	-21.49	54.00	28.07	34.33	4.70	34.59 Average
2	4824.000	45.33	-28.67	74.00	40.89	34.33	4.70	34.59 Peak
3	7236.000	47.05			40.67	35.90	5.37	34.89 Peak
4	9648.000	49.52			41.56	36.89	6.35	35.28 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)

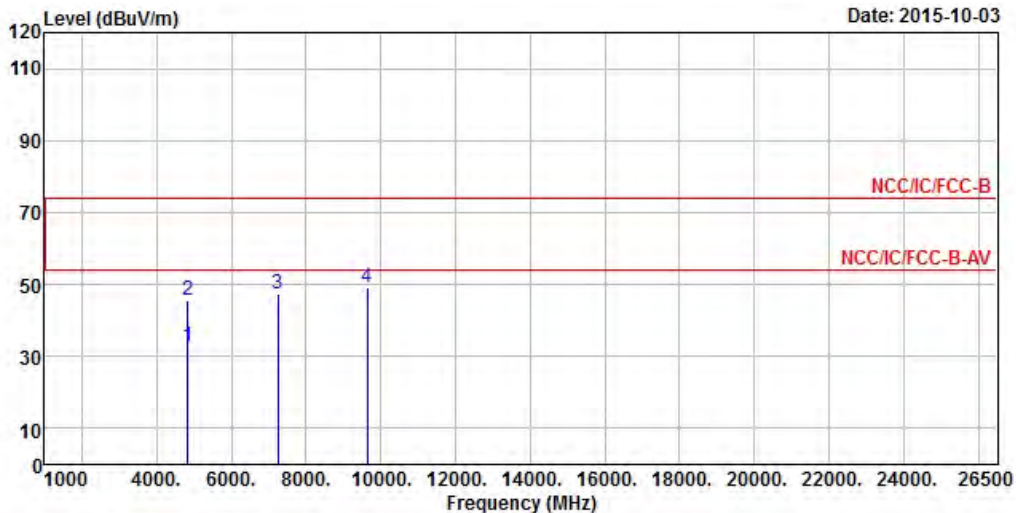
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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)**

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4824.000	32.70	-21.30	54.00	28.26	34.33	4.70	34.59 Average
2	4824.000	45.61	-28.39	74.00	41.17	34.33	4.70	34.59 Peak
3	7236.000	47.47			41.09	35.90	5.37	34.89 Peak
4	9648.000	49.07			41.11	36.89	6.35	35.28 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)

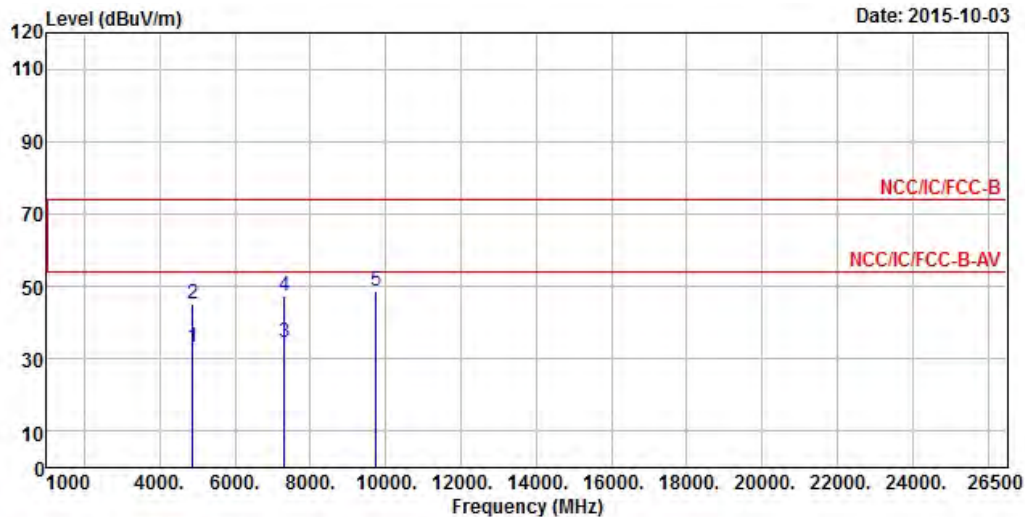
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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)**

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	33.13	-20.87	54.00	28.66	34.32	4.73	34.58	Average
2	4874.000	45.08	-28.92	74.00	40.61	34.32	4.73	34.58	Peak
3	7311.000	34.72	-19.28	54.00	28.24	35.92	5.47	34.91	Average
4	7311.000	47.44	-26.56	74.00	40.96	35.92	5.47	34.91	Peak
5	9748.000	48.70			40.62	36.96	6.41	35.29	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.

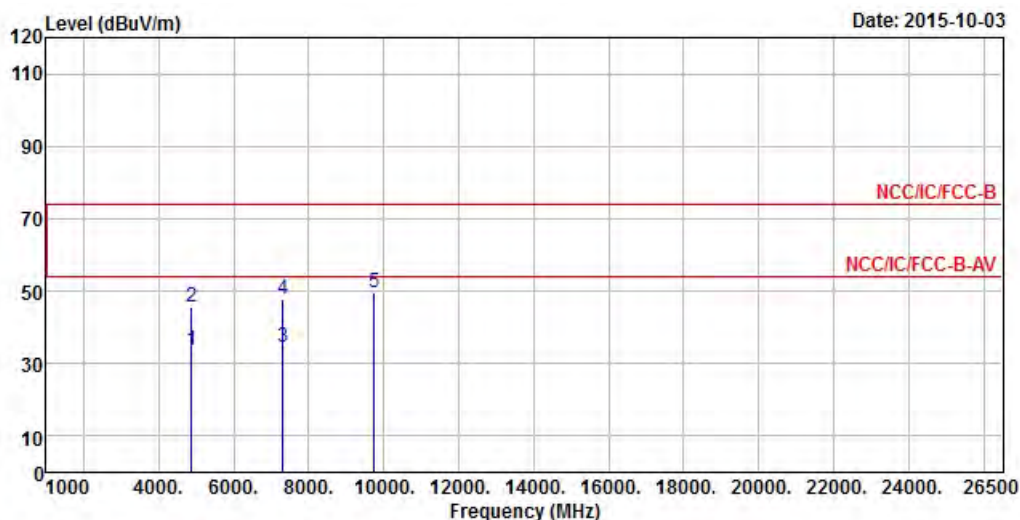
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (114.03 dBuV/m).

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	33.82	-20.18	54.00	29.35	34.32	4.73	34.58	Average
2	4874.000	45.76	-28.24	74.00	41.29	34.32	4.73	34.58	Peak
3	7311.000	34.58	-19.42	54.00	28.10	35.92	5.47	34.91	Average
4	7311.000	47.82	-26.18	74.00	41.34	35.92	5.47	34.91	Peak
5	9748.000	49.49			41.41	36.96	6.41	35.29	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)

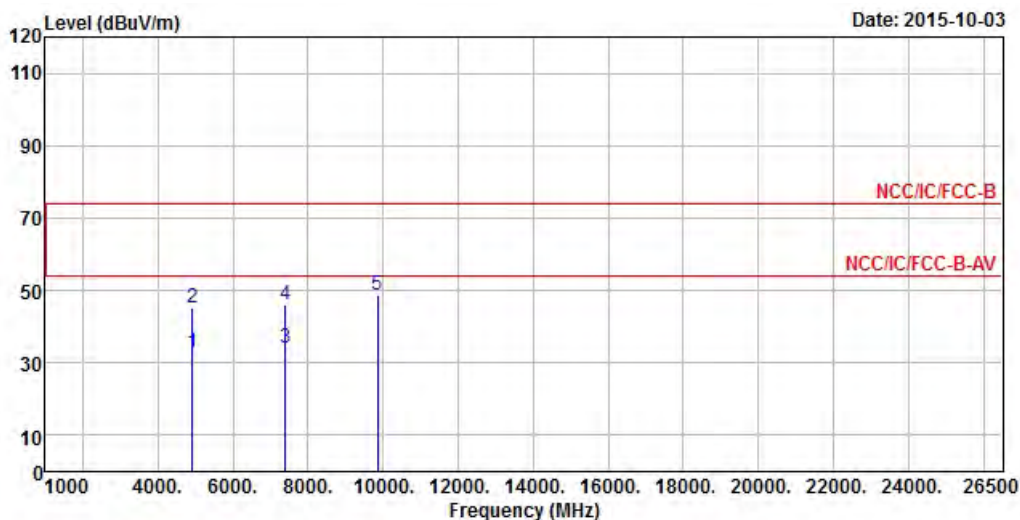
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (114.03 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	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	32.77	-21.23	54.00	28.24	34.31	4.79	34.57	Average
2	4924.000	45.34	-28.66	74.00	40.81	34.31	4.79	34.57	Peak
3	7386.000	34.30	-19.70	54.00	27.70	35.96	5.57	34.93	Average
4	7386.000	46.23	-27.77	74.00	39.63	35.96	5.57	34.93	Peak
5	9848.000	48.90			40.69	37.01	6.50	35.30	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)

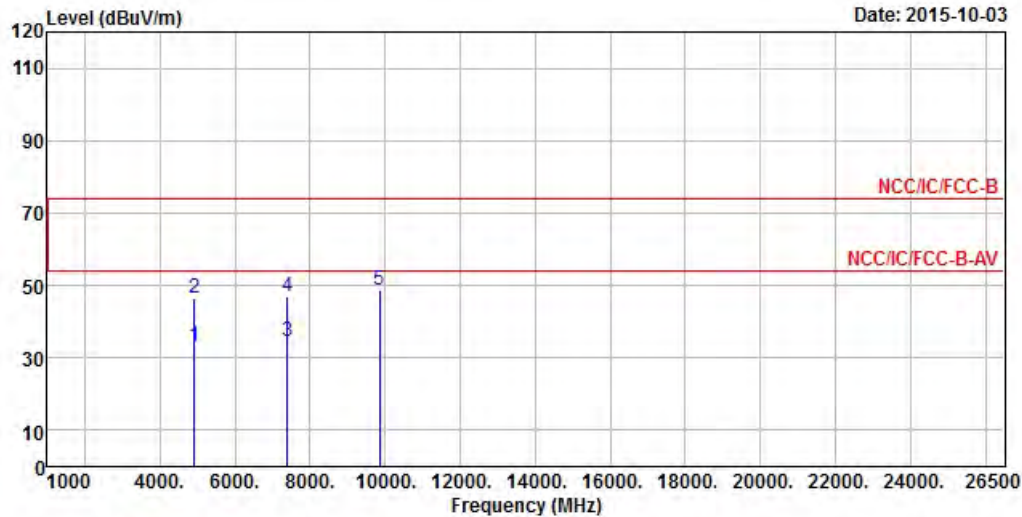
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (108.41 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	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	33.22	-20.78	54.00	28.69	34.31	4.79	34.57	Average
2	4924.000	46.47	-27.53	74.00	41.94	34.31	4.79	34.57	Peak
3	7386.000	34.41	-19.59	54.00	27.81	35.96	5.57	34.93	Average
4	7386.000	47.01	-26.99	74.00	40.41	35.96	5.57	34.93	Peak
5	9848.000	48.86			40.65	37.01	6.50	35.30	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)

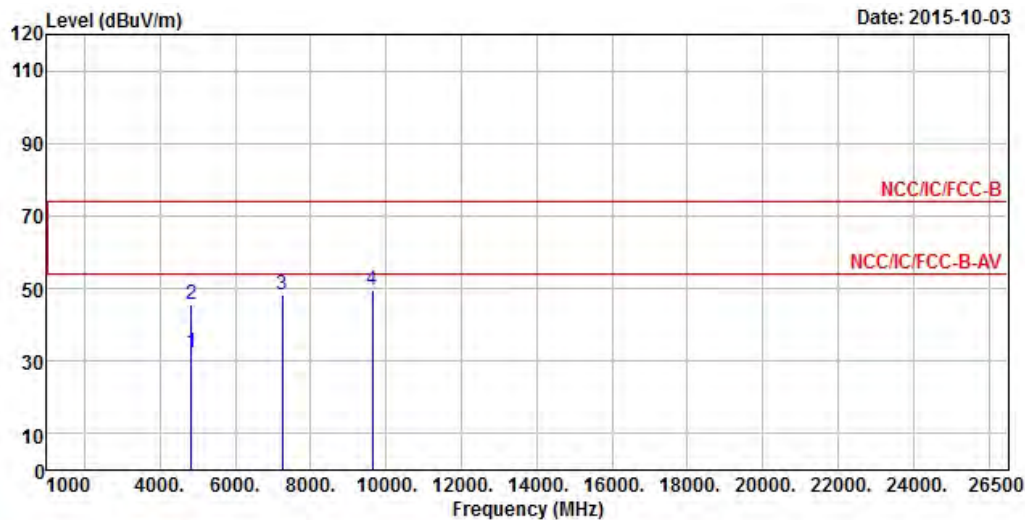
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (108.41 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	<b>Test Freq. (MHz)</b>	2412
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4824.000	32.16	-21.84	54.00	27.72	34.33	4.70	34.59 Average
2	4824.000	45.61	-28.39	74.00	41.17	34.33	4.70	34.59 Peak
3	7236.000	48.15			41.77	35.90	5.37	34.89 Peak
4	9648.000	49.72			41.76	36.89	6.35	35.28 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)

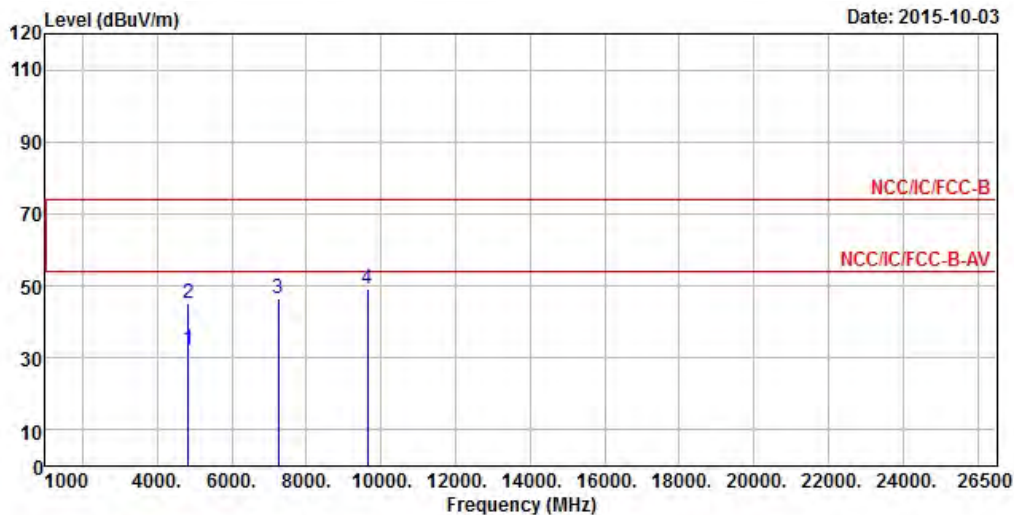
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (108.60 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	<b>Test Freq. (MHz)</b>	2412
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamplifier Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4824.000	32.30	-21.70	54.00	27.86	34.33	4.70	34.59 Average
2	4824.000	45.27	-28.73	74.00	40.83	34.33	4.70	34.59 Peak
3	7236.000	46.53			40.15	35.90	5.37	34.89 Peak
4	9648.000	48.95			40.99	36.89	6.35	35.28 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.

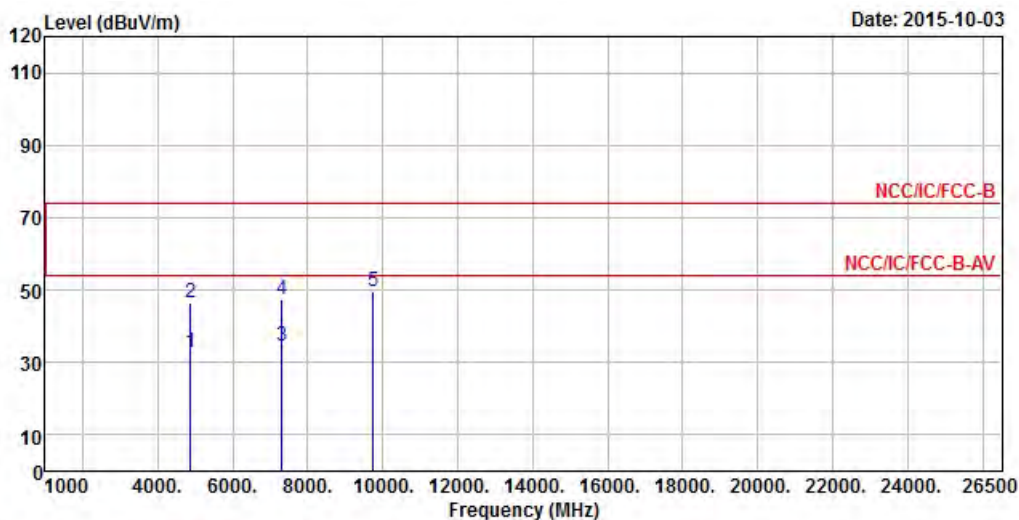
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (108.60 dBuV/m).

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	32.91	-21.09	54.00	28.44	34.32	4.73	34.58	Average
2	4874.000	46.28	-27.72	74.00	41.81	34.32	4.73	34.58	Peak
3	7311.000	34.44	-19.56	54.00	27.96	35.92	5.47	34.91	Average
4	7311.000	47.41	-26.59	74.00	40.93	35.92	5.47	34.91	Peak
5	9748.000	49.52			41.44	36.96	6.41	35.29	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)

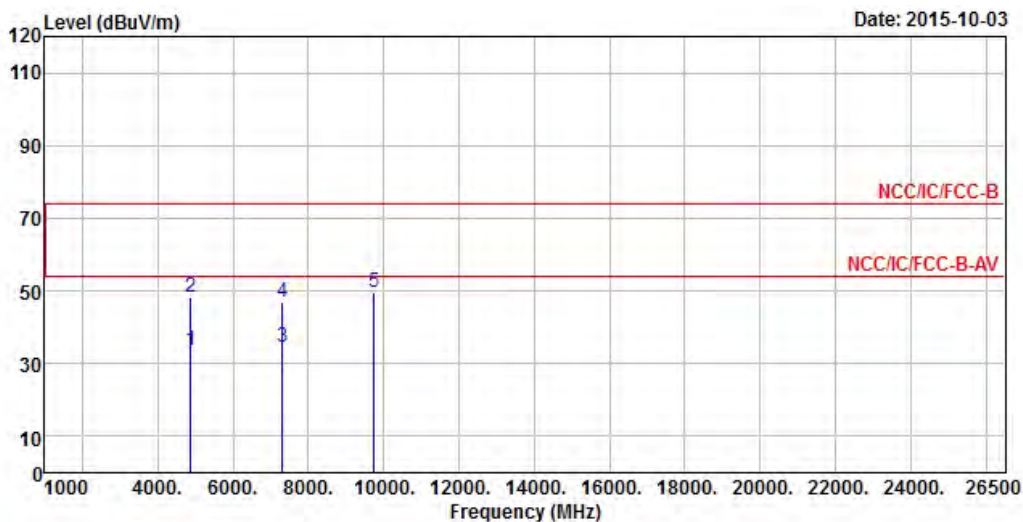
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (113.50 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	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4874.000	33.60	-20.40	54.00	29.13	34.32	4.73	34.58 Average
2	4874.000	48.26	-25.74	74.00	43.79	34.32	4.73	34.58 Peak
3	7311.000	34.47	-19.53	54.00	27.99	35.92	5.47	34.91 Average
4	7311.000	46.99	-27.01	74.00	40.51	35.92	5.47	34.91 Peak
5	9748.000	49.58			41.50	36.96	6.41	35.29 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)

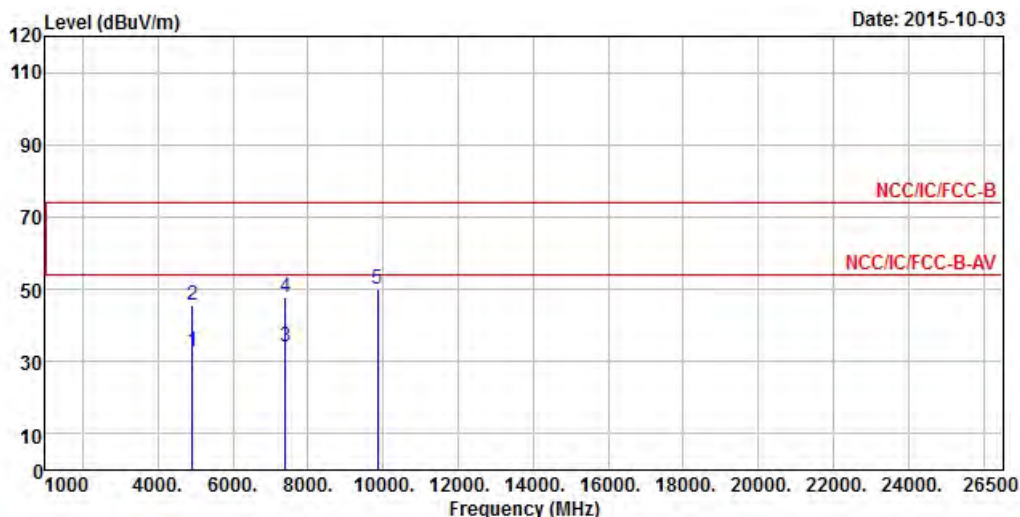
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (113.50 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	<b>Test Freq. (MHz)</b>	2462
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4924.000	32.61	-21.39	54.00	28.08	34.31	4.79	34.57 Average
2	4924.000	45.62	-28.38	74.00	41.09	34.31	4.79	34.57 Peak
3	7386.000	34.21	-19.79	54.00	27.61	35.96	5.57	34.93 Average
4	7386.000	47.88	-26.12	74.00	41.28	35.96	5.57	34.93 Peak
5	9848.000	49.92			41.71	37.01	6.50	35.30 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.

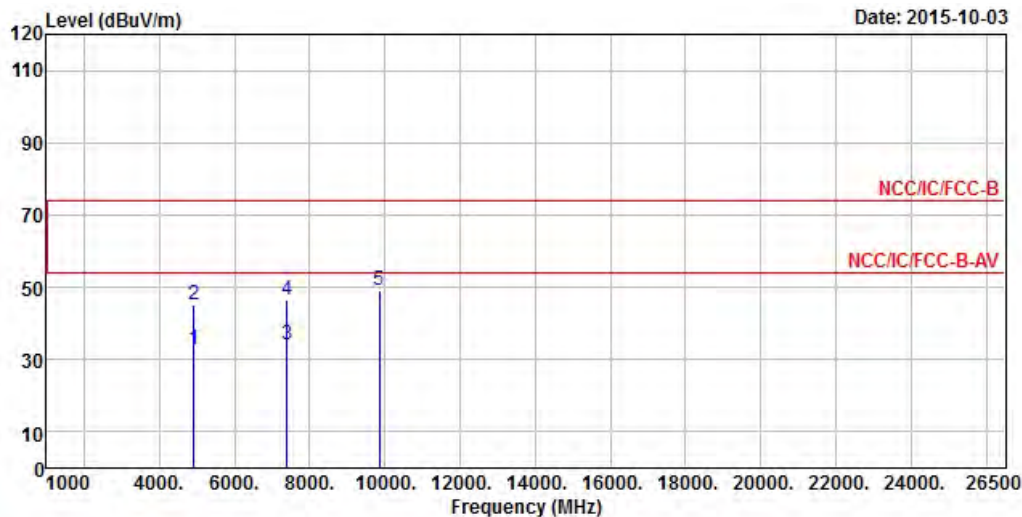
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.04 dBuV/m).

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	4924.000	32.75	-21.25	54.00	28.22	34.31	4.79	34.57 Average
2	4924.000	45.34	-28.66	74.00	40.81	34.31	4.79	34.57 Peak
3	7386.000	34.28	-19.72	54.00	27.68	35.96	5.57	34.93 Average
4	7386.000	46.53	-27.47	74.00	39.93	35.96	5.57	34.93 Peak
5	9848.000	49.25			41.04	37.01	6.50	35.30 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)

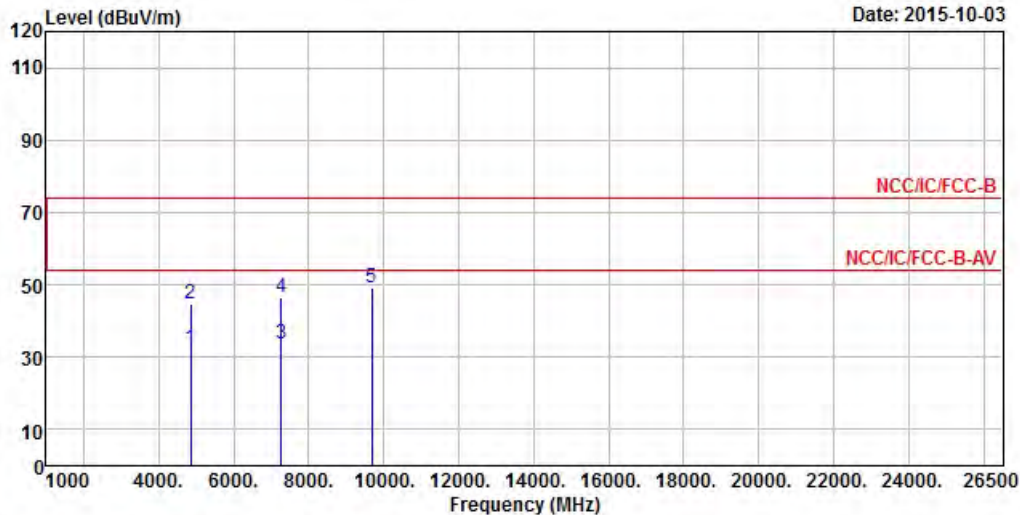
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (107.04 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	<b>Test Freq. (MHz)</b>	2422
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4844.000	32.37	-21.63	54.00	27.90	34.33	4.73	34.59	Average
2	4844.000	44.85	-29.15	74.00	40.38	34.33	4.73	34.59	Peak
3	7266.000	33.69	-20.31	54.00	27.25	35.91	5.42	34.89	Average
4	7266.000	46.33	-27.67	74.00	39.89	35.91	5.42	34.89	Peak
5	9688.000	49.26			41.26	36.91	6.38	35.29	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)

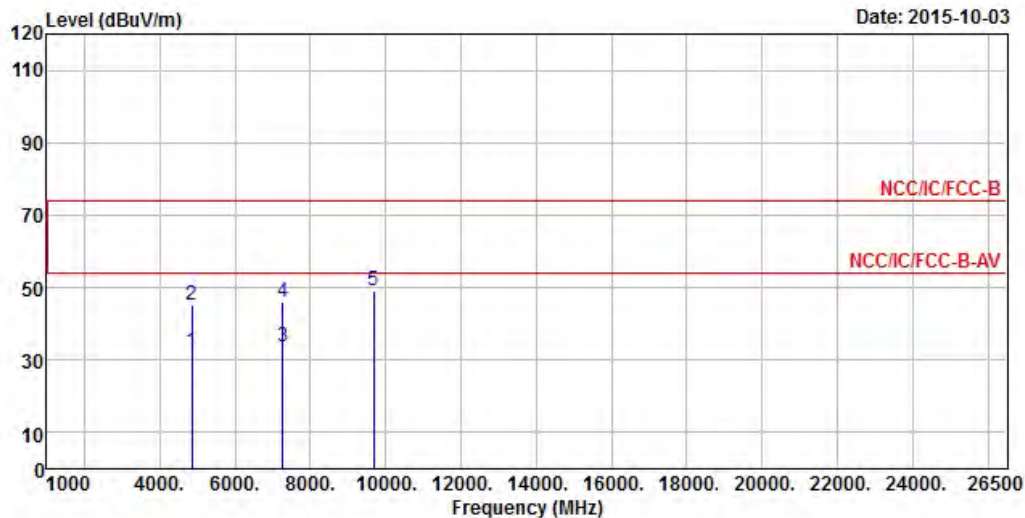
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (102.53 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	<b>Test Freq. (MHz)</b>	2422
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4844.000	32.31	-21.69	54.00	27.84	34.33	4.73	34.59	Average
2	4844.000	44.97	-29.03	74.00	40.50	34.33	4.73	34.59	Peak
3	7266.000	33.85	-20.15	54.00	27.41	35.91	5.42	34.89	Average
4	7266.000	46.24	-27.76	74.00	39.80	35.91	5.42	34.89	Peak
5	9688.000	49.36			41.36	36.91	6.38	35.29	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)

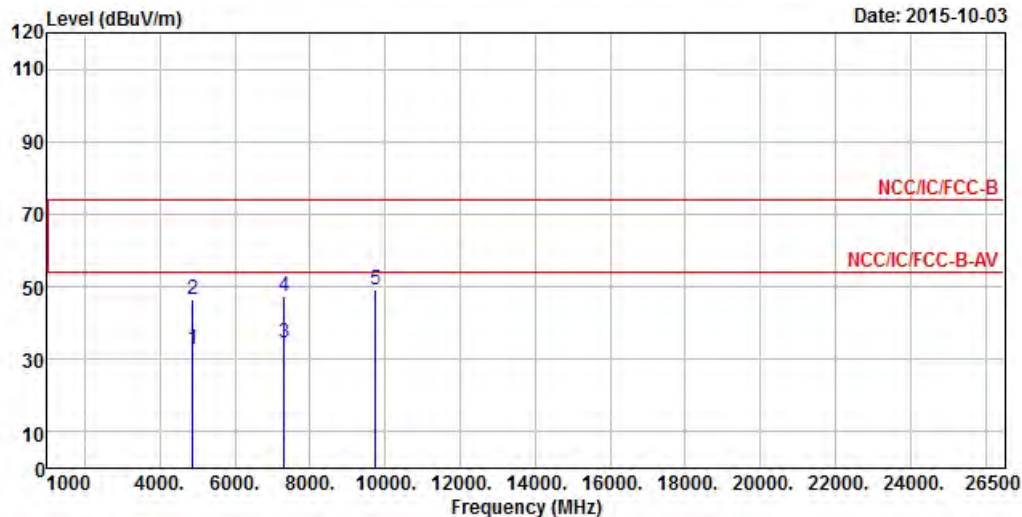
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (102.53 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	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	32.73	-21.27	54.00	28.26	34.32	4.73	34.58	Average
2	4874.000	46.68	-27.32	74.00	42.21	34.32	4.73	34.58	Peak
3	7311.000	34.33	-19.67	54.00	27.85	35.92	5.47	34.91	Average
4	7311.000	47.29	-26.71	74.00	40.81	35.92	5.47	34.91	Peak
5	9748.000	48.99			40.91	36.96	6.41	35.29	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)

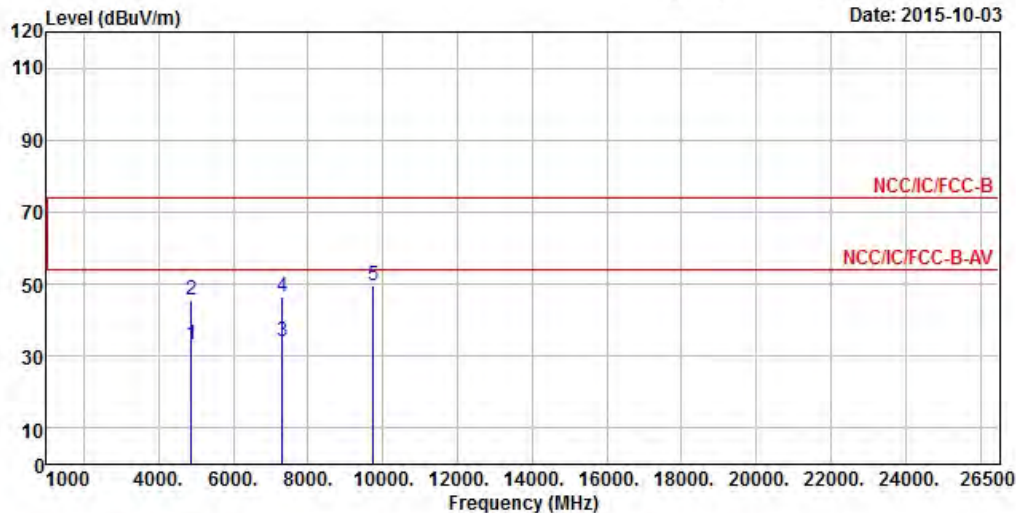
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (106.82 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	<b>Test Freq. (MHz)</b>	2437
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	33.05	-20.95	54.00	28.58	34.32	4.73	34.58	Average
2	4874.000	45.68	-28.32	74.00	41.21	34.32	4.73	34.58	Peak
3	7311.000	34.26	-19.74	54.00	27.78	35.92	5.47	34.91	Average
4	7311.000	46.57	-27.43	74.00	40.09	35.92	5.47	34.91	Peak
5	9748.000	49.50			41.42	36.96	6.41	35.29	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.

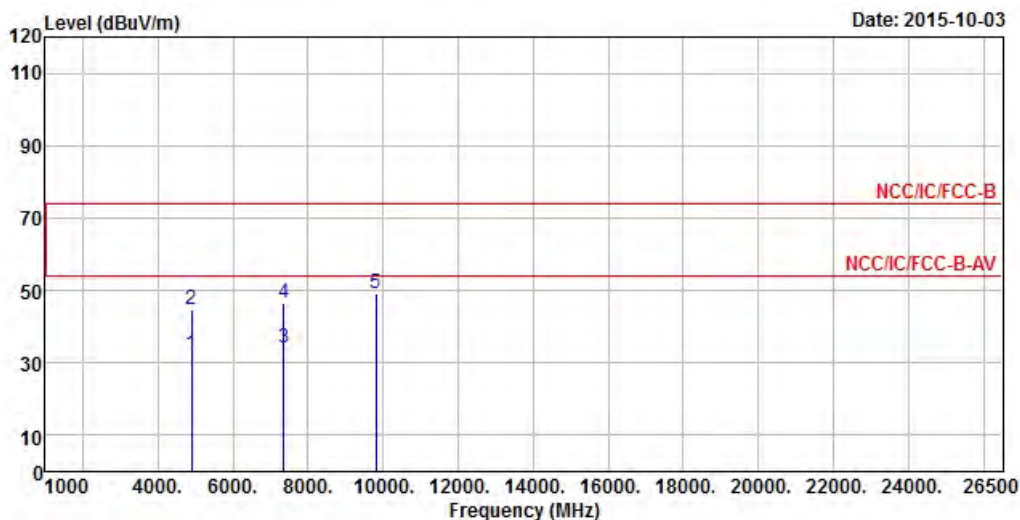
Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (106.82 dBuV/m).

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



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4904.000	32.35	-21.65	54.00	27.84	34.32	4.76	34.57	Average
2	4904.000	44.94	-29.06	74.00	40.43	34.32	4.76	34.57	Peak
3	7356.000	33.98	-20.02	54.00	27.44	35.94	5.52	34.92	Average
4	7356.000	46.63	-27.37	74.00	40.09	35.94	5.52	34.92	Peak
5	9808.000	49.33			41.17	36.99	6.47	35.30	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)

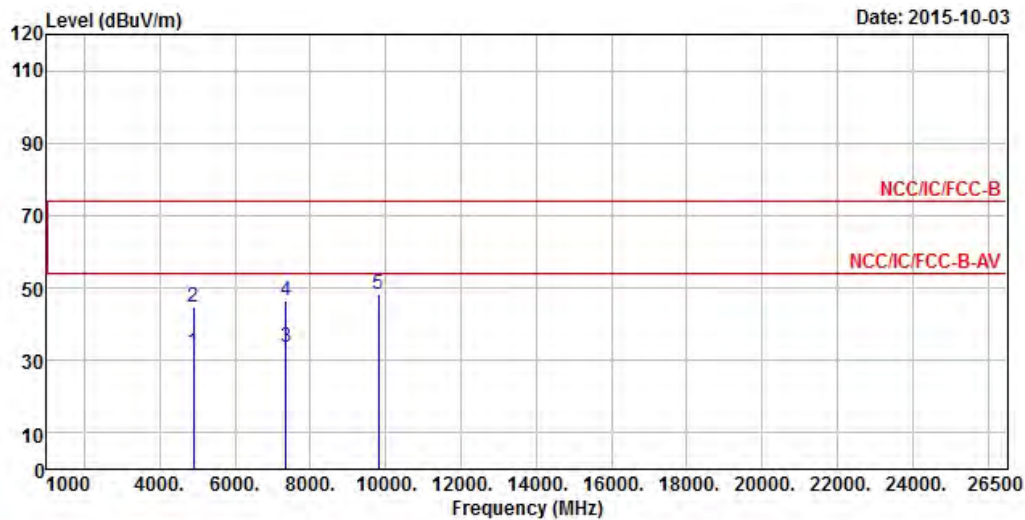
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level (102.54 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	<b>Test Freq. (MHz)</b>	2452
<b>N<sub>TX</sub></b>	1	<b>Polarization</b>	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4904.000	32.37	-21.63	54.00	27.86	34.32	4.76	34.57	Average
2	4904.000	44.69	-29.31	74.00	40.18	34.32	4.76	34.57	Peak
3	7356.000	33.84	-20.16	54.00	27.30	35.94	5.52	34.92	Average
4	7356.000	46.50	-27.50	74.00	39.96	35.94	5.52	34.92	Peak
5	9808.000	48.43			40.27	36.99	6.47	35.30	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 (102.54 dBuV/m).

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

## 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	Apr. 15. 2015	AC Conduction
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 22, 2015	AC Conduction
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	Oct. 31, 2014	AC Conduction
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	NCR	AC Conduction

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	101500	9kHz ~ 40GHz	May 06, 2015	RF Conducted
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jul. 28, 2015	RF Conducted
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	Jan. 29, 2015	RF Conducted
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	Jan. 29, 2015	RF Conducted

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP40	100593	9kHz ~ 40GHz	Oct. 20, 2014	Radiation
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz ~ 1GHz 3m	May 03, 2015	Radiation
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz ~ 6GHz 3m	Mar 17, 2015	Radiation
Amplifier	Agilent	8447D	2944A11149	100kHz ~ 1.3GHz	Jul. 24, 2015	Radiation
Amplifier	Agilent	8449B	3008A02373	1GHz ~ 26.5GHz	Sep.10.2015	Radiation
Amplifier	EMC INSTRUMENTS	EMC184045B	980192	18GHz ~ 40GHz	Aug. 25.2014	Radiation
Horn Antenna	ETS-LINDGREN	3117	00091920	1GHz ~ 18GHz	Nov. 28, 2014	Radiation
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	18GHz ~ 40GHz	Jan. 27, 2015	Radiation
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	Nov. 08, 2014	Radiation
RF Cable-high	SUHNER	SUCOFLEX106	MY17173/4	1GHz ~ 40GHz	Mar. 04, 2015	Radiation
Bilog Antenna	SCHAFFNER	CBL 6112B	2723	30MHz ~ 1GHz	Oct. 05, 2015	Radiation
Turn Table	Chaintek Instruments	3000	MF7802058	0~ 360 degree	N/A	Radiation
Antenna Mast	MF	MF7802	MF780208205	1 ~ 4 m	N/A	Radiation

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	R&S	HFH2-Z2	100330	9 kHz~30 MHz	Nov. 10, 2014	Radiation

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