FCC Test Report

Equipment	:	**1T1R 11n Wireless LAN with Bluetooth USB Adapter**
Brand Name	:	**EDIMAX**
Model No.	:	**EW-7611ULB**
FCC ID	:	**NDD9576111602**
Standard	:	**47 CFR FCC Part 15.247**
Frequency	:	**2400 MHz – 2483.5 MHz**
FCC Classification	:	**DTS**
Function	:	☒ **Point-to-multipoint;** ☐ **Point-to-point**
Applicant **Manufacturer**	:	**EDIMAX TECHNOLOGY CO., LTD.** No.3,Wu-Chuan 3rd Road,Wu-Ku Industrial Park, New Taipei City, Taiwan

The product sample received on May 11, 2016 and completely tested on May 27, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Reviewed by:

Kevin Liang / Assistant Manager

Testing Laboratory
1190

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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]: 0.1891870MHz 48.33 (Margin 15.74dB) – QP 38.62 (Margin 15.45dB) – AV	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	Refer as Appendix A	≥500kHz	Complied
3.3	15.247(b)	Fundamental Emission Output Power	Refer as Appendix B	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	Refer as Appendix C	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Test Result of Transmitter Radiated Bandedge Emissions	Non-Restricted Bands: 2399.89 MHz: 31.72 dB Restricted Bands [dBuV/m at 3m]: 2483.6MHz 71.07 (Margin 2.93 dB) – PK 52.54 (Margin 1.46 dB) – AV	Non-Restricted Bands:> 20 dBc Bands: FCC 15.209	Complied
3.6	15.247(d)	Transmitter Radiated Unwanted Emissions	Restricted Bands [dBuV/m at 3m]: 4874.00MHz 52.96(Margin 1.04dB) – AV 55.92(Margin 18.08dB) – PK	Non-Restricted Bands:> 20 dBc Restricted Bands: FCC 15.209	Complied

Revision History

Report No.	Version	Description	Issued Date
FR630231AC	Rev. 01	Initial issue of report	Jun. 16, 2016

1 General Description

1.1 Information

1.1.1 RF General Information

Band	Mode	BWch (MHz)	Nss-Min	Nant
2.4G	11b	20	1	1
2.4G	11g	20	1	1
2.4G	HT20	20	1,(M0-7)	1
2.4G	HT40	40	1,(M0-7)	1

Note:
- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Antenna Category	
☒	Integral antenna (antenna permanently attached)
	☐ Temporary RF connector provided
	☒ 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.
☐	External antenna (dedicated antennas)
	☐ Single power level with corresponding antenna(s).
	☐ Multiple power level and corresponding antenna(s).
	☐ RF connector provided
	☐ Unique antenna connector. (e.g., MMCX, U.FL, IPX, and RP-SMA, RP-N type…)
	☐ Standard antenna connector. (e.g., SMA, N, BNC, and TNC type…)

Antenna General Information			
No.	Ant. Cat.	Ant. Type	Gain (dBi)
1	Integral	PIFA	1.6

1.1.3 Type of EUT

Identify EUT	
EUT Serial Number	N/A
Presentation of Equipment	☐ Production ; ☐ Pre-Production ; ☒ Prototype

Type of EUT	
☒	Stand-alone
☐	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: …
☐	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: …
☐	Other:

1.1.4 Mode Test Duty Cycle

Operated Mode for Worst Duty Cycle	
☒ Operated test mode for worst duty cycle	
Test Signal Duty Cycle (x)	**Power Duty Factor [dB] – (10 log 1/x)**
☒ 99.5% - IEEE 802.11b	0.02
☒ 95%- IEEE 802.11g	0.04
☒ 95%- IEEE 802.11HT20	0.04
☒ 95%- IEEE 802.11HT40	0.04

1.1.5 EUT Operational Condition

Supply Voltage	☐ AC mains	☒ DC	
Type of DC Source	☐ External AC adapter	☒ From Host System	☐ 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 C63.10-2013
- FCC KDB 558074 D01 v03r05

1.3 Testing Location Information

Testing Location					
☒	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan City, Taiwan, R.O.C.			
		TEL : 886-3-327-3456 FAX : 886-3-318-0055			
Test Condition		**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
AC Conduction		CO04-HY	Ryan Hong	24°C / 58%	2016/05/27
RF Conducted		TH01-HY	Lisa Chen	25°C / 65%	2016/05/26
Radiated		03CH03-HY	Jeff Lin	22.1°C / 59%	2016/05/26

Test site registered number [553509] with FCC.

1.4 Measurement Uncertainty

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

Measurement Uncertainty		
Test Item		**Uncertainty**
AC power-line conducted emissions		±2.3 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_{TX})**	**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 support 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 Test Channel Mode

Test Software Version		Putty					
Band	**Mode**	**BWch (MHz)**	**Nss-Min**	**Nant**	**Ch. (MHz)**	**Range**	**Power Setting**
2.4G	11b	20	1	1	2412	L	60
2.4G	11b	20	1	1	2437	M	59
2.4G	11b	20	1	1	2462	H	55
2.4G	11g	20	1	1	2412	L	63
2.4G	11g	20	1	1	2437	M	63
2.4G	11g	20	1	1	2462	H	63
2.4G	HT20	20	1,(M0-7)	1	2412	L	63
2.4G	HT20	20	1,(M0-7)	1	2437	M	63
2.4G	HT20	20	1,(M0-7)	1	2462	H	62
2.4G	HT40	40	1,(M0-7)	1	2422	L	63
2.4G	HT40	40	1,(M0-7)	1	2437	M	63
2.4G	HT40	40	1,(M0-7)	1	2452	H	61

Abbreviation Explanation

Band	**Mode**	**BWch (MHz)**	**Nss-Min**	**Nant**	**Ch. (MHz)**	**Range**	**Test Cond.**	**Abbreviation**
2.4G	HT20	20	1,(M0-15)	2	2412	L	TN,VN	2.4G;HT20;20;1,(M0-15);2;2412;L;TN,VN
2.4G	HT40	40	1,(M0-15)	2	2437	M	TN,VN	2.4G;HT40;40;1,(M0-15);2;2437;M;TN,VN

Note:
- Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch).

2.3 The Worst Case Measurement Configuration

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth, Fundamental Emission Output Power, Power Spectral Density, Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
User Position	☐ EUT will be placed in fixed position.		
	☒ EUT will be placed in mobile position and operating multiple positions. EUT shall be performed three orthogonal planes.		
	☐ EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed three orthogonal planes.		
Operating Mode < 1GHz	☒ 1. USB Mode		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
			
Worst Planes of EUT	V		

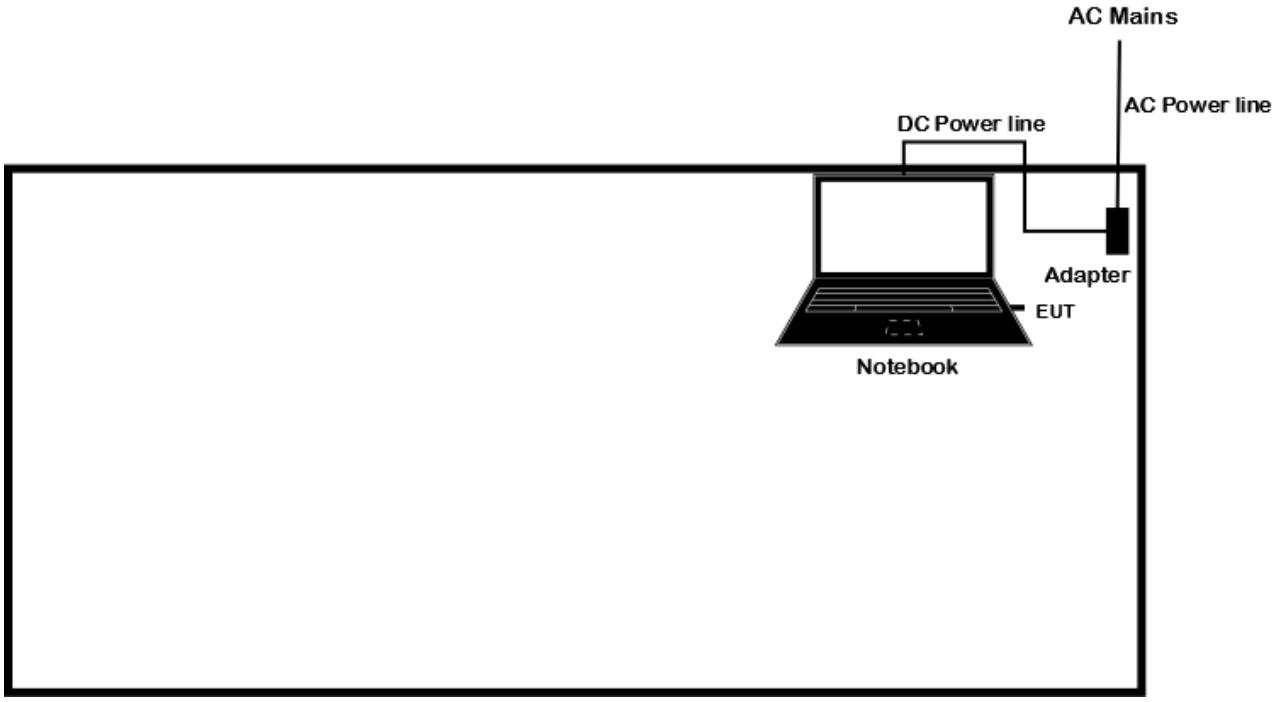
2.4 Accessories and Support Equipment

Support Equipment

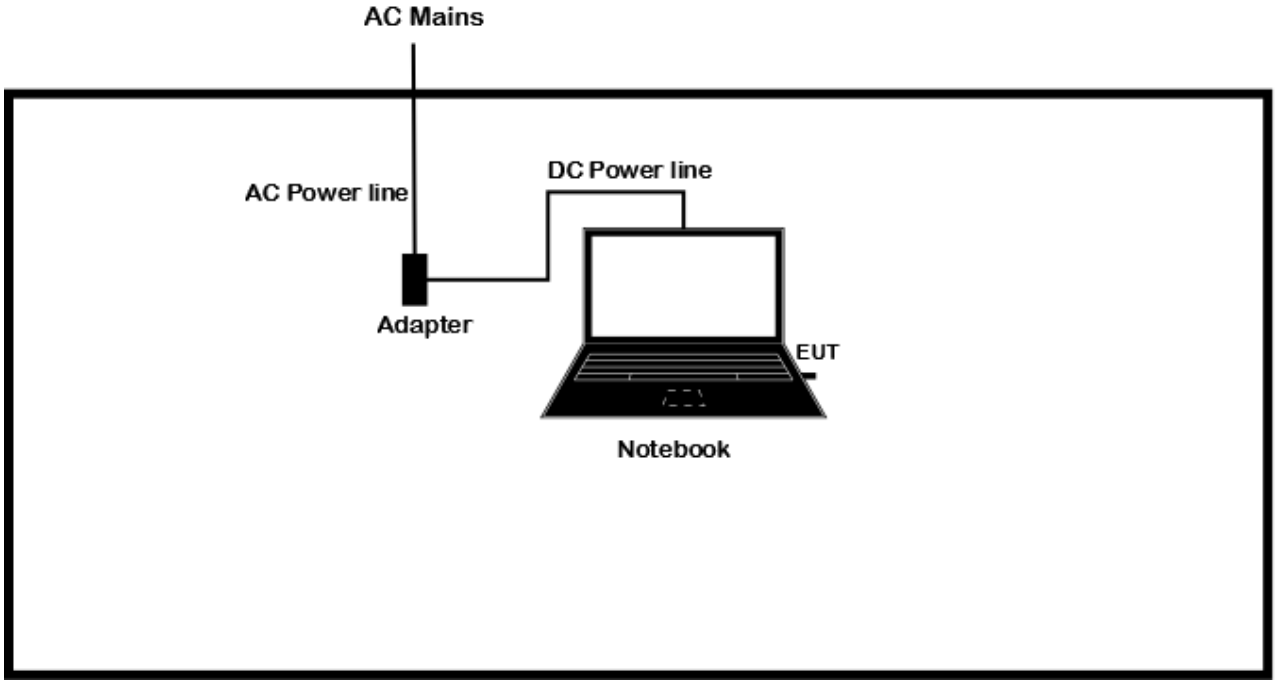
No.	Equipment	Brand	Model	FCC ID	Description
1	Notebook	DELL	E5540	R33002	-
2	AC adapter for NB	DELL	HA65NM130	R3537	-

2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Test Setup Diagram - Radiated Test



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

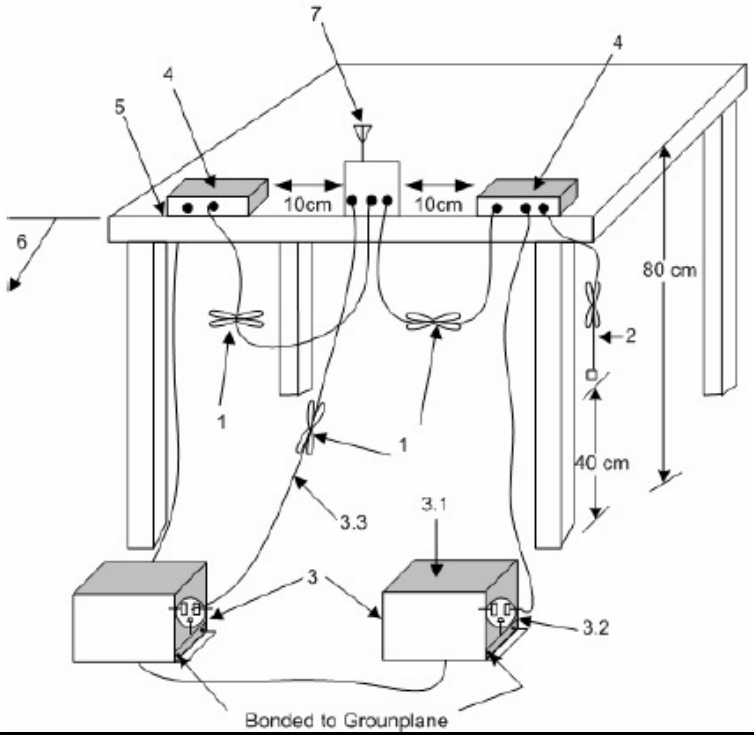
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix I

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

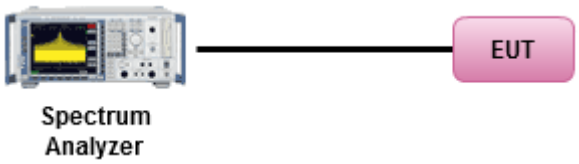
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	☒ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.3 Fundamental Emission Output Power

3.3.1 Fundamental Emission Output Power Limit

Maximum Peak Conducted Output Power or Maximum Conducted Output Power Limit
▪ 2400-2483.5 MHz Band:
▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm
▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
▪ Smart antenna system (SAS):
- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
e.i.r.p. Power Limit:
▪ 2400-2483.5 MHz Band
▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
▪ Point-to-point systems (P2P): $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX}])$ dBm
▪ Smart antenna system (SAS)
- Single beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
- Overlap beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
- Aggregate power on all beams: $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX} + 8])$ 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.

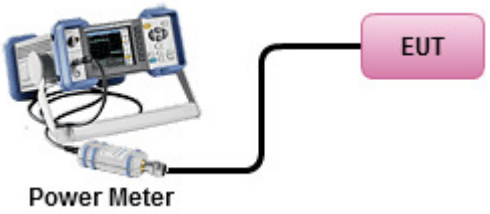
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	☒ Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
	☐ 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
	☐ Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	☐ 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
	☒ Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM (using an RF average power meter).
▪ For conducted measurement.	
	▪ If 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.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

RF Output Power (Power Meter)


3.3.5 Test Result of Maximum Peak Conducted Output Power

Refer as Appendix B

3.3.6 Test Result of Maximum Average Conducted Output Power

Refer as Appendix B

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

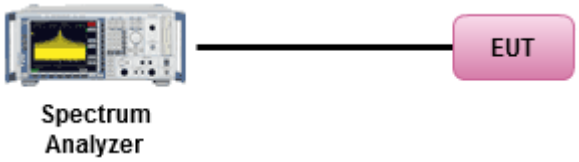
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method			
▪ 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).			
	☒ Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).		
	[duty cycle ≥ 98% or external video / power trigger]		
	☐ Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).		
	☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)		
	duty cycle < 98% and average over on/off periods with duty factor		
	☐ Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).		
	☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)		
▪ For conducted measurement.			
	▪ If The EUT supports multiple transmit chains using options given below:		
		☒ 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.	
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.	

3.4.4 Test Setup

Power Spectral Density
 Spectrum Analyzer

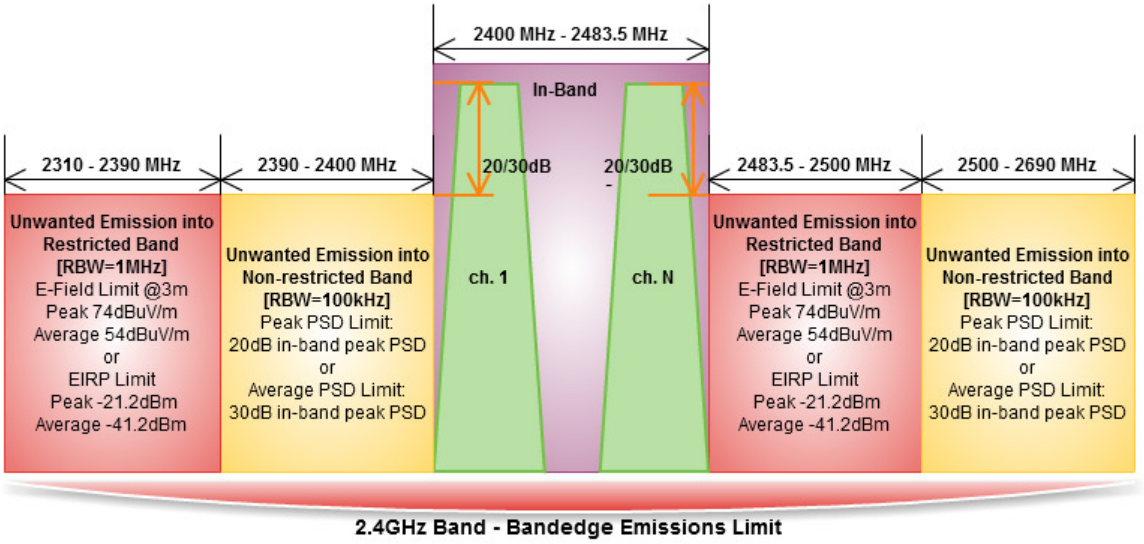
3.4.5 Test Result of Power Spectral Density

Refer as Appendix C

3.5 Transmitter Radiated Bandedge Emissions

3.5.1 Transmitter Radiated Bandedge Emissions Limit

Transmitter Radiated Bandedge Emissions Limit



3.5.2 Measuring Instruments

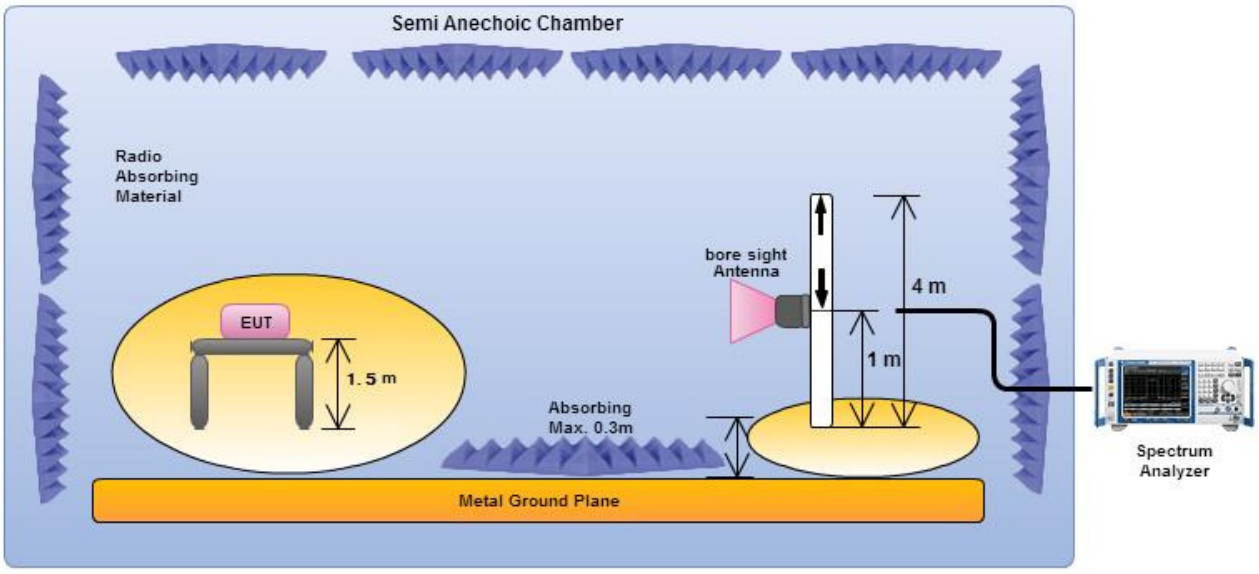
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method		
☒	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
☒	Refer as ANSI C63.10, clause 6.10 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
☒	For the transmitter unwanted emissions shall be measured using following options below:	
	☒	Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.
	☒	Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
		☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)
		☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
		☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).
		☐ Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
		☒ Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.
☒	For the transmitter bandedge emissions shall be measured using following options below:	
	☐	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).
	☐	Refer as ANSI C63.10, clause 6.10 for band-edge testing.
	☒	Refer as ANSI C63.10, clause 6.10.6.2 for marker-delta method for band-edge measurements.
☒	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

Transmitter Radiated Bandedge Emissions



Electric field tests shall be performed in transmitter bandedge emissions using a calibrated horn antenna.

3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix D

3.6 Transmitter Radiated Unwanted Emissions

3.6.1 Transmitter in 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

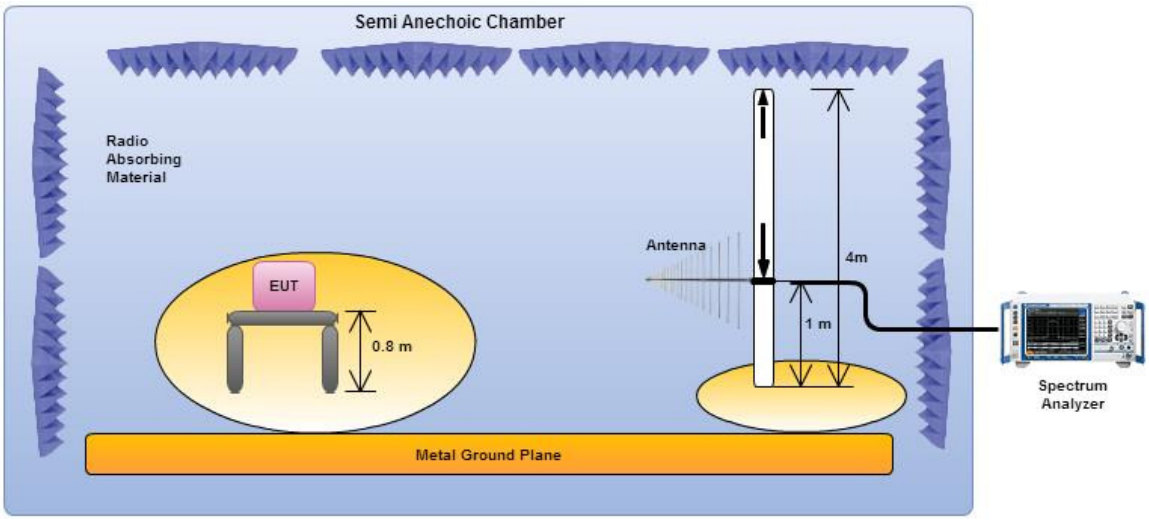
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method			
☒	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).		
☒	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
☒	For the transmitter unwanted emissions shall be measured using following options below:		
	☒	Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.	
	☒	Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.	
		☐	Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)
		☐	Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
		☒	Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).
		☐	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.
		☒	Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.
		☒	Refer as FCC KDB 558074, clause 12.2.3 measurement procedure Quasi-Peak limit.
☒	For radiated measurement, refer as FCC KDB 558074, clause 12.2.7.		
	☒	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.	
	☒	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.	
	☒	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1 GHz and test distance is 3m.	
☒	The any unwanted emissions level shall not exceed the fundamental emission level.		
☒	All amplitude of spurious emissions that are attenuated by more than 30 dB below the permissible value has no need to be reported.		

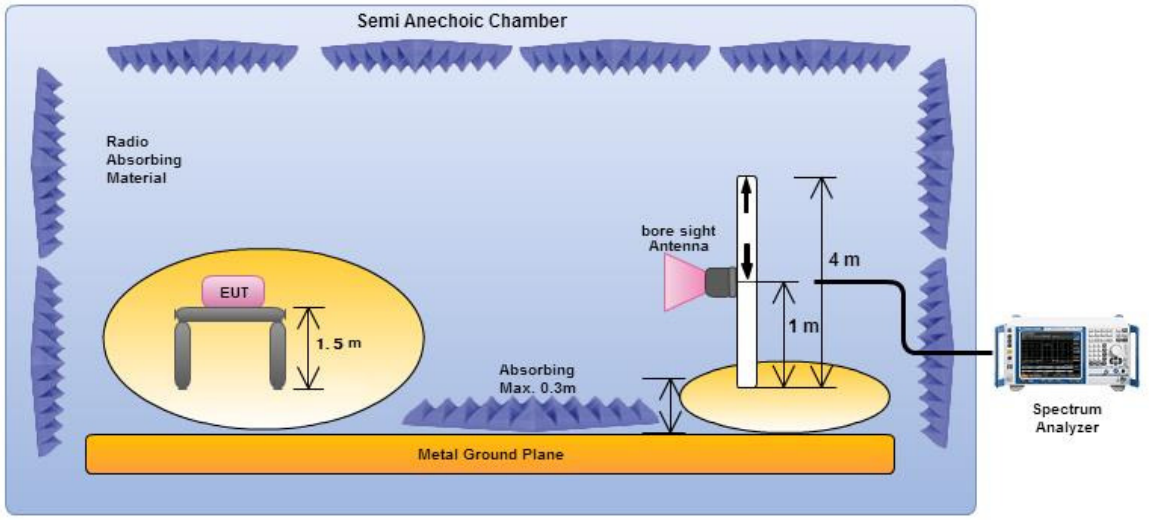
3.6.4 Test Setup

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 (below 1GHz)



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

3.6.5 Transmitter Radiated Unwanted Emissions (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

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
EMC Receiver	KETSIGHT	N9038A	MY54130031	20Hz ~ 8.4GHz	Apr. 14, 2016	Apr. 13, 2017
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 26, 2016	Jan. 25, 2017
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	Oct. 30, 2015	Oct. 29, 2016
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	NCR	NCR

Instrument for Conducted Test

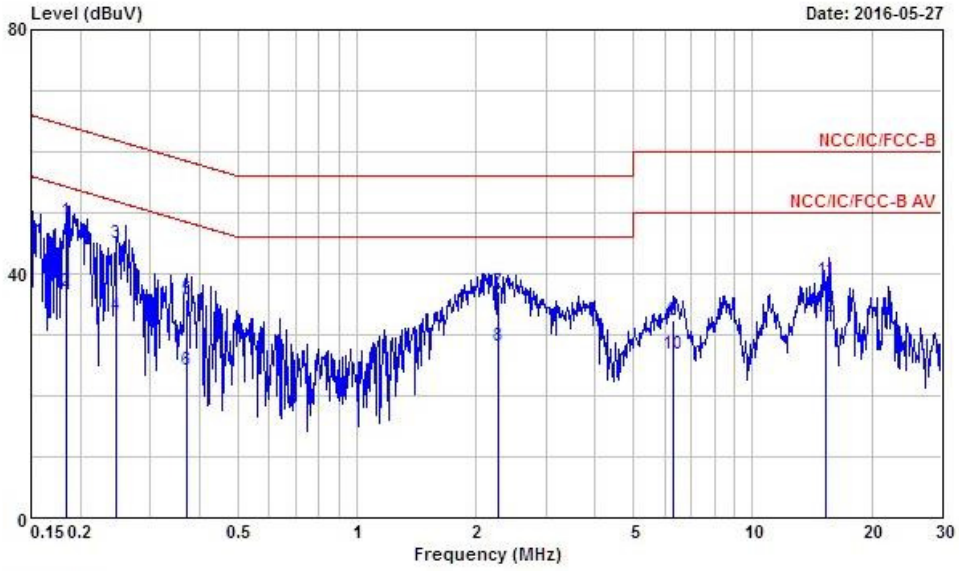
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101500	9KHz~40GHz	May 12, 2016	May 11, 2017
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jul. 28, 2015	Jul. 27, 2016
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	Feb. 04 ,2016	Feb. 03 ,2017
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	Feb. 04, 2016	Feb. 03, 2017

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Nov. 28, 2015	Nov. 27, 2016
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz ~ 18GHz 3m	Dec. 16, 2015	Dec. 15, 2016
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May 10, 2016	May 09, 2017
Amplifier	Agilent	8449B	3008A02120	1GHz ~ 26.5GHz	Sep. 02, 2015	Sep. 01, 2016
Spectrum	R&S	FSV40	101513	9kHz ~ 40GHz	Feb. 16, 2016	Feb. 15, 2017
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 18, 2015	Sep. 17, 2016
Horn Antenna	SCHWARZBECK	BBHA9120D	1531	1GHz ~ 18GHz	Apr. 22, 2016	Apr. 21, 2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	18GHz ~ 40GHz	Jan. 29, 2016	Jan. 28, 2017
Loop Antenna	TESEQ	HLA 6120	31244	9 kHz~30 MHz	Feb.02.2015	Feb. 01. 2017

Test Result of AC Power-line Conducted Emissions

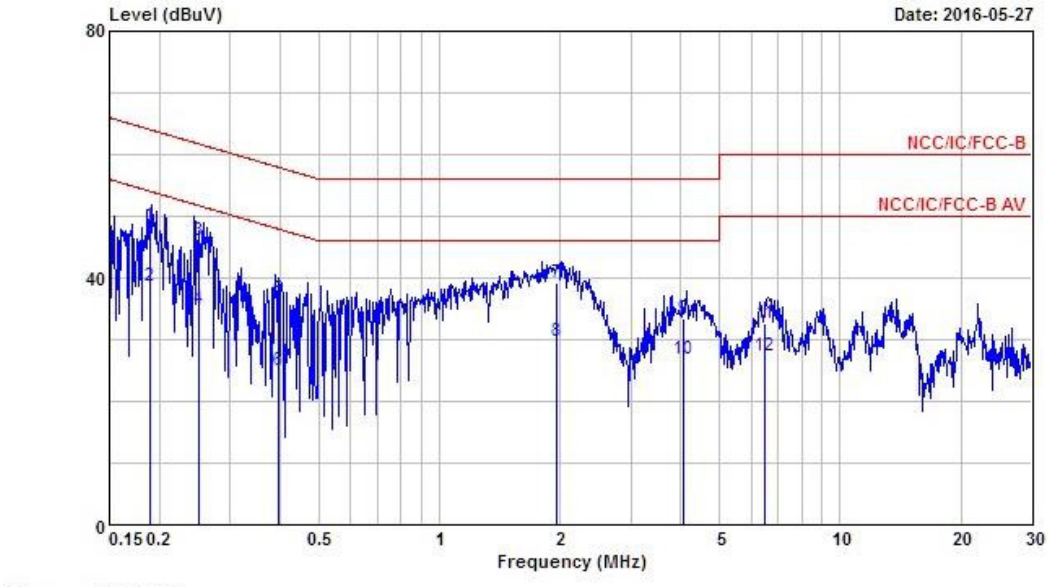
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	USB mode		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1842100	48.60	-15.69	64.29	48.21	0.11	0.28	QP
2	0.1842100	37.09	-17.20	54.29	36.70	0.11	0.28	Average
3	0.2454550	44.97	-16.94	61.91	44.62	0.11	0.24	QP
4	0.2454550	33.13	-18.78	51.91	32.78	0.11	0.24	Average
5	0.3699650	35.84	-22.66	58.50	35.60	0.12	0.12	QP
6	0.3699650	24.26	-24.24	48.50	24.02	0.12	0.12	Average
7	2.272	37.05	-18.95	56.00	36.64	0.15	0.26	QP
8	2.272	28.06	-17.94	46.00	27.65	0.15	0.26	Average
9	6.320	32.28	-27.72	60.00	31.92	0.21	0.15	QP
10	6.320	26.72	-23.28	50.00	26.36	0.21	0.15	Average
11	15.338	38.83	-21.17	60.00	38.31	0.32	0.20	QP
12	15.338	33.00	-17.00	50.00	32.48	0.32	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.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	USB mode		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1891870	48.33	-15.74	64.07	47.94	0.11	0.28	QP
2	0.1891870	38.62	-15.45	54.07	38.23	0.11	0.28	Average
3	0.2497320	46.03	-15.74	61.77	45.69	0.11	0.23	QP
4	0.2497320	35.02	-16.75	51.77	34.68	0.11	0.23	Average
5	0.3948930	36.66	-21.30	57.96	36.44	0.12	0.10	QP
6	0.3948930	24.98	-22.98	47.96	24.76	0.12	0.10	Average
7	1.960	39.30	-16.70	56.00	38.85	0.15	0.30	QP
8	1.960	29.81	-16.19	46.00	29.36	0.15	0.30	Average
9	4.055	33.51	-22.49	56.00	33.23	0.18	0.10	QP
10	4.055	26.82	-19.18	46.00	26.54	0.18	0.10	Average
11	6.495	32.75	-27.25	60.00	32.37	0.23	0.15	QP
12	6.495	27.35	-22.65	50.00	26.97	0.23	0.15	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.)

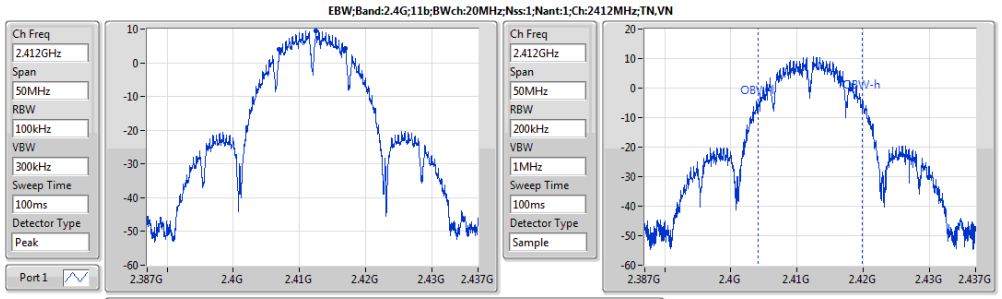
Summary

Mode	N dB (Hz)	OBW (Hz)	ITU-Code
2.4G;11b;20;1;1	10.075M	15.742M	15M7G1D
2.4G;11g;20;1;1	16.575M	16.642M	16M6D1D
2.4G;HT20;20;1,(M0-7);1	17.8M	17.841M	17M8D1D
2.4G;HT40;40;1,(M0-7);1	36.4M	36.132M	36M1D1D

Result

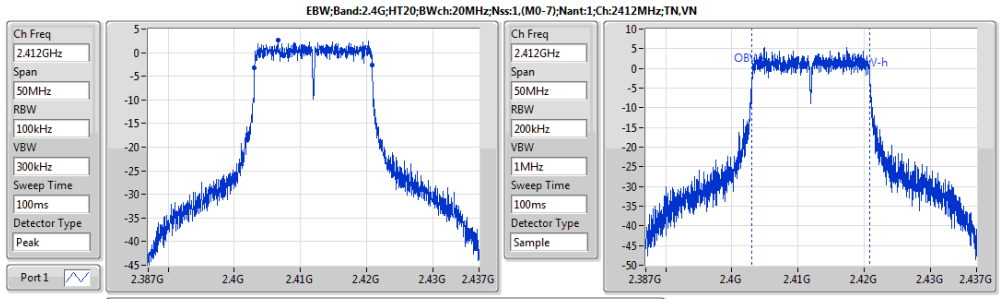
Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)
2.4G;11b;20;1;1;2412;L;TN,VN	Pass	500k	10.075M	15.742M
2.4G;11b;20;1;1;2437;M;TN,VN	Pass	500k	10.05M	15.592M
2.4G;11b;20;1;1;2462;H;TN,VN	Pass	500k	10.05M	15.417M
2.4G;11g;20;1;1;2412;L;TN,VN	Pass	500k	16.575M	16.642M
2.4G;11g;20;1;1;2437;M;TN,VN	Pass	500k	16.575M	16.642M
2.4G;11g;20;1;1;2462;H;TN,VN	Pass	500k	16.55M	16.642M
2.4G;HT20;20;1,(M0-7);1;2412;L;TN,VN	Pass	500k	17.8M	17.841M
2.4G;HT20;20;1,(M0-7);1;2437;M;TN,VN	Pass	500k	17.8M	17.791M
2.4G;HT20;20;1,(M0-7);1;2462;H;TN,VN	Pass	500k	17.8M	17.766M
2.4G;HT40;40;1,(M0-7);1;2422;L;TN,VN	Pass	500k	36.35M	36.132M
2.4G;HT40;40;1,(M0-7);1;2437;M;TN,VN	Pass	500k	36.4M	36.132M
2.4G;HT40;40;1,(M0-7);1;2452;H;TN,VN	Pass	500k	36.35M	36.032M

EBW;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:1;Ch:2412MHz;TN,VN



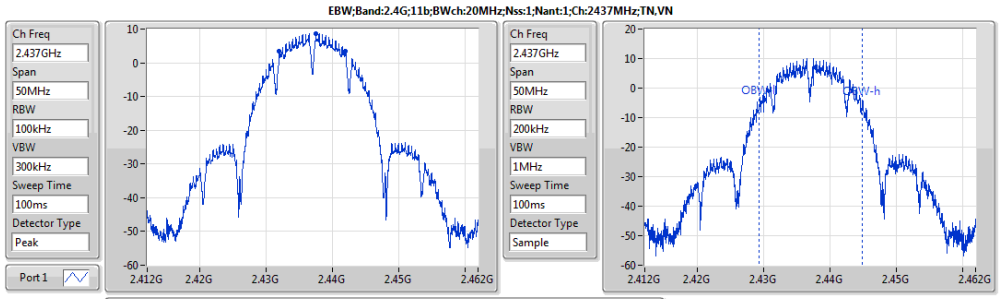
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.075M	2.406925G	2.417G	15.742M	2.404129G	2.419871G	500k	1

EBW;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0-7);Nant:1;Ch:2412MHz;TN,VN



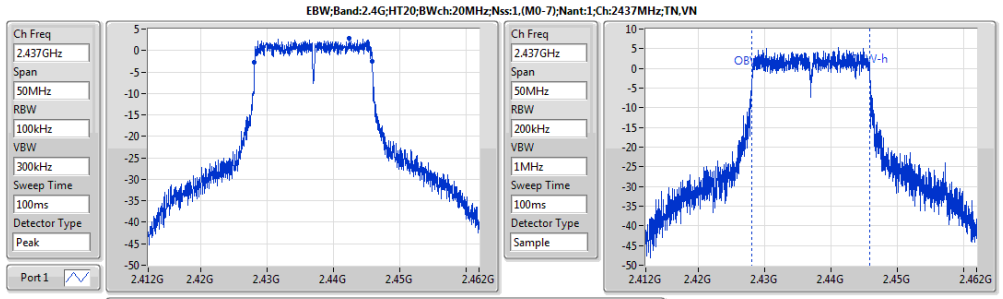
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.8M	2.403075G	2.420875G	17.841M	2.403054G	2.420896G	500k	1

EBW;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:1;Ch:2437MHz;TN,VN



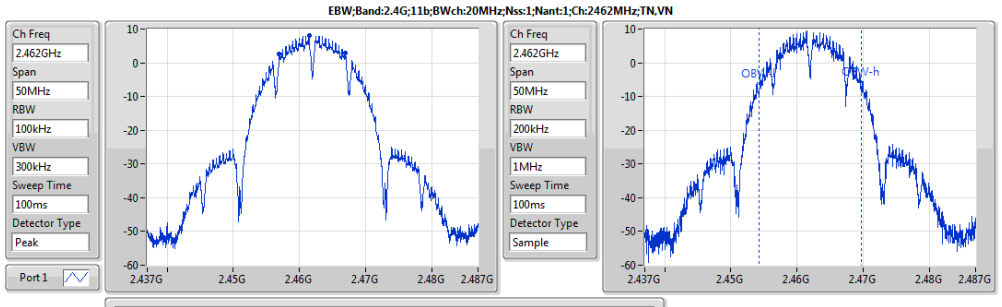
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.05M	2.43195G	2.442G	15.592M	2.429254G	2.444846G	500k	1

EBW;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0-7);Nant:1;Ch:2437MHz;TN,VN



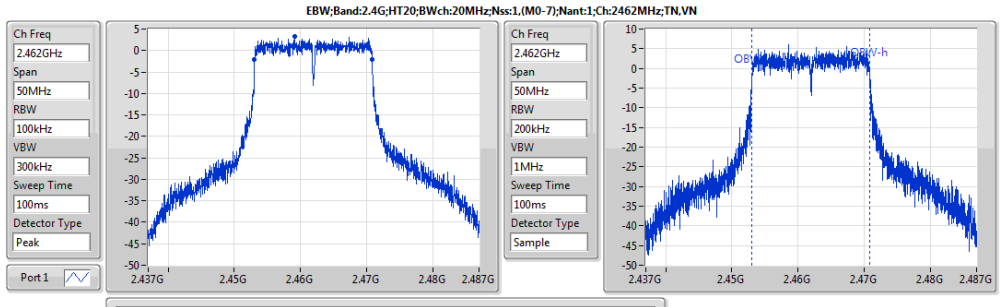
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.8M	2.428075G	2.445875G	17.791M	2.428079G	2.445871G	500k	1

EBW;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:1;Ch:2462MHz;TN,VN



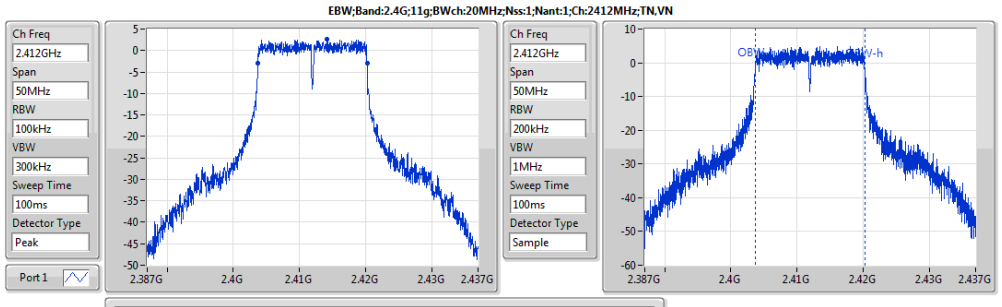
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.05M	2.45695G	2.467G	15.417M	2.454304G	2.469721G	500k	1

EBW;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0-7);Nant:1;Ch:2462MHz;TN,VN



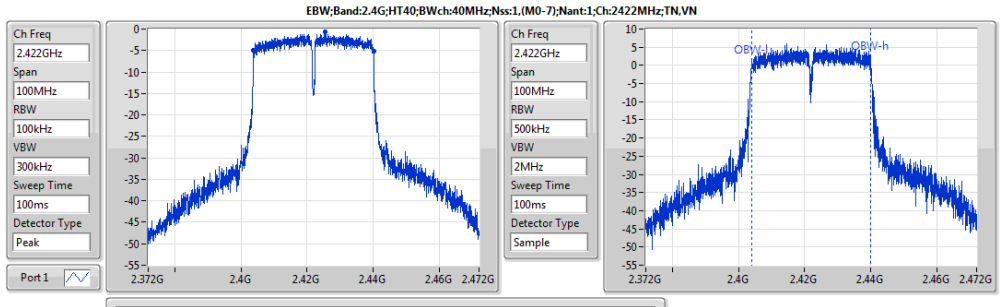
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.8M	2.453075G	2.470875G	17.766M	2.453079G	2.470846G	500k	1

EBW;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:1;Ch:2412MHz;TN,VN



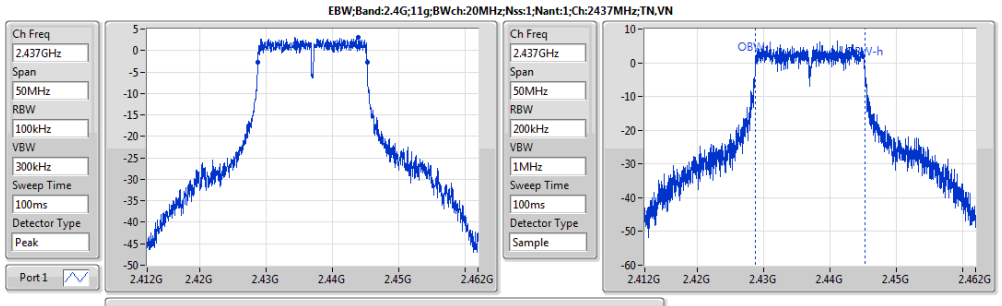
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.575M	2.403675G	2.42025G	16.642M	2.403654G	2.420296G	500k	1

EBW;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0-7);Nant:1;Ch:2422MHz;TN,VN



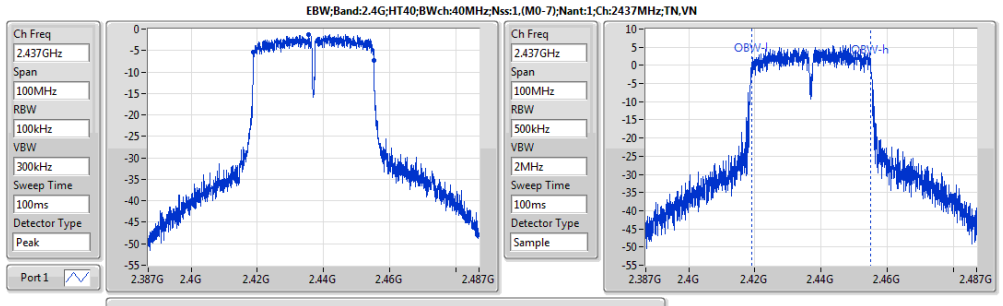
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.35M	2.4038G	2.44015G	36.132M	2.403909G	2.440041G	500k	1

EBW;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:1;Ch:2437MHz;TN,VN



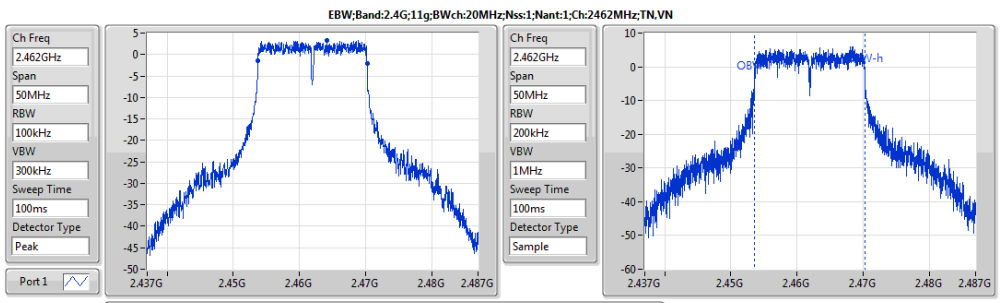
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.575M	2.428675G	2.44525G	16.642M	2.428654G	2.445296G	500k	1

EBW;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0-7);Nant:1;Ch:2437MHz;TN,VN



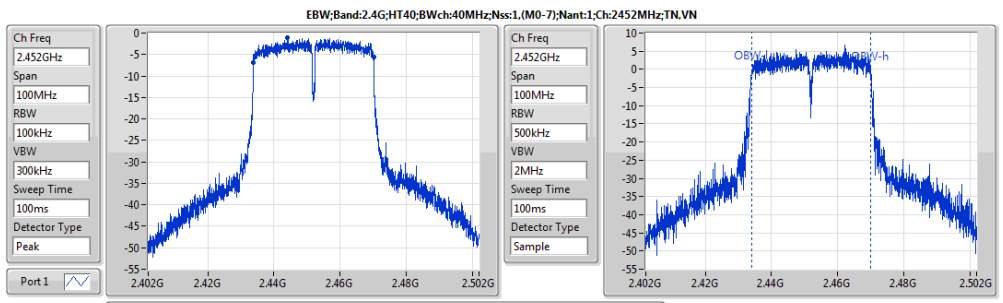
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.4M	2.4188G	2.4552G	36.132M	2.418909G	2.455041G	500k	1

EBW;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:1;Ch:2462MHz;TN,VN



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.55M	2.4537G	2.47025G	16.642M	2.453629G	2.470271G	500k	1

EBW;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0-7);Nant:1;Ch:2452MHz;TN,VN



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.35M	2.4338G	2.47015G	36.032M	2.433959G	2.469991G	500k	1

Summary

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
2.4G;11b;20;1;1	20.06	0.10139	21.66	0.14655
2.4G;11g;20;1;1	18.02	0.06339	19.62	0.09162
2.4G;HT20;20;1;(M0-7);1	17.69	0.05875	19.29	0.08492
2.4G;HT40;40;1;(M0-7);1	16.81	0.04797	18.41	0.06934

Result

Mode	Result	DG (dBi)	EIRP (dBm)	EIRP Lim. (dBm)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)
2.4G;11b;20;1;1;2412;L;TN,VN	Pass	1.60	21.66	36.00	20.06	30.00	20.06
2.4G;11b;20;1;1;2437;M;TN,VN	Pass	1.60	21.06	36.00	19.46	30.00	19.46
2.4G;11b;20;1;1;2462;H;TN,VN	Pass	1.60	20.20	36.00	18.60	30.00	18.60
2.4G;11g;20;1;1;2412;L;TN,VN	Pass	1.60	18.96	36.00	17.36	30.00	17.36
2.4G;11g;20;1;1;2437;M;TN,VN	Pass	1.60	19.32	36.00	17.72	30.00	17.72
2.4G;11g;20;1;1;2462;H;TN,VN	Pass	1.60	19.62	36.00	18.02	30.00	18.02
2.4G;HT20;20;1,(M0-7);1;2412;L;TN,VN	Pass	1.60	19.05	36.00	17.45	30.00	17.45
2.4G;HT20;20;1,(M0-7);1;2437;M;TN,VN	Pass	1.60	19.06	36.00	17.46	30.00	17.46
2.4G;HT20;20;1,(M0-7);1;2462;H;TN,VN	Pass	1.60	19.29	36.00	17.69	30.00	17.69
2.4G;HT40;40;1,(M0-7);1;2422;L;TN,VN	Pass	1.60	18.30	36.00	16.70	30.00	16.70
2.4G;HT40;40;1,(M0-7);1;2437;M;TN,VN	Pass	1.60	18.41	36.00	16.81	30.00	16.81
2.4G;HT40;40;1,(M0-7);1;2452;H;TN,VN	Pass	1.60	18.13	36.00	16.53	30.00	16.53

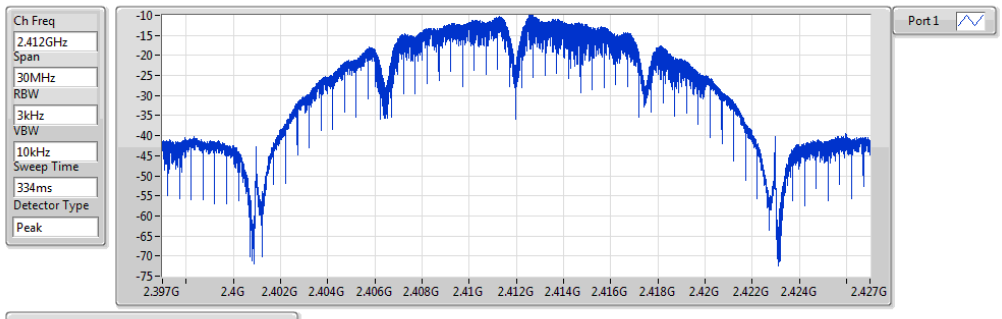
Summary

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
2.4G;11b;20;1;1	-10.22	-8.62
2.4G;11g;20;1;1	-10.63	-9.03
2.4G;HT20;20;1,(M0-7);1	-10.50	-8.90
2.4G;HT40;40;1,(M0-7);1	-12.75	-11.15

Result

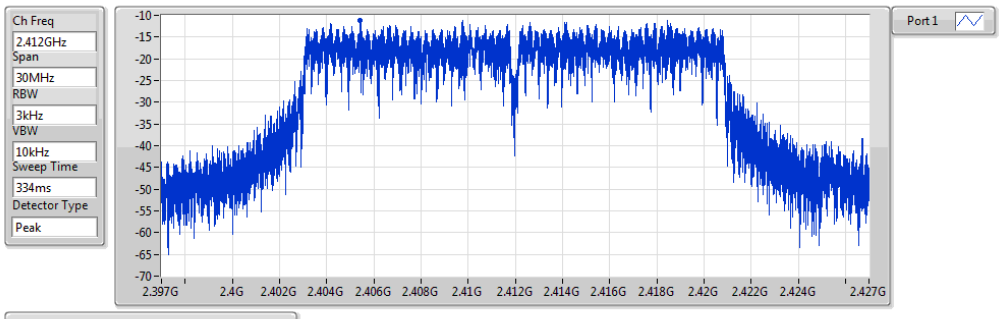
Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	Sum.Max (dBm/RBW)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Lim (dBm/RBW)	P1 (dBm/RBW)
2.4G;11b;20;1;1;2412;L;TN,VN	Pass	3k	3k	0.00	1.60	-10.22	-10.22	8.00	-8.62	Inf	-10.22
2.4G;11b;20;1;1;2437;M;TN,VN	Pass	3k	3k	0.00	1.60	-10.65	-10.65	8.00	-9.05	Inf	-10.65
2.4G;11b;20;1;1;2462;H;TN,VN	Pass	3k	3k	0.00	1.60	-11.49	-11.49	8.00	-9.89	Inf	-11.49
2.4G;11g;20;1;1;2412;L;TN,VN	Pass	3k	3k	0.00	1.60	-11.59	-11.59	8.00	-9.99	Inf	-11.59
2.4G;11g;20;1;1;2437;M;TN,VN	Pass	3k	3k	0.00	1.60	-10.92	-10.92	8.00	-9.32	Inf	-10.92
2.4G;11g;20;1;1;2462;H;TN,VN	Pass	3k	3k	0.00	1.60	-10.63	-10.63	8.00	-9.03	Inf	-10.63
2.4G;HT20;20;1,(M0-7);1;2412;L;TN,VN	Pass	3k	3k	0.00	1.60	-11.22	-11.22	8.00	-9.62	Inf	-11.22
2.4G;HT20;20;1,(M0-7);1;2437;M;TN,VN	Pass	3k	3k	0.00	1.60	-10.71	-10.71	8.00	-9.11	Inf	-10.71
2.4G;HT20;20;1,(M0-7);1;2462;H;TN,VN	Pass	3k	3k	0.00	1.60	-10.50	-10.50	8.00	-8.90	Inf	-10.50
2.4G;HT40;40;1,(M0-7);1;2422;L;TN,VN	Pass	3k	3k	0.00	1.60	-12.84	-12.84	8.00	-11.24	Inf	-12.84
2.4G;HT40;40;1,(M0-7);1;2437;M;TN,VN	Pass	3k	3k	0.00	1.60	-12.75	-12.75	8.00	-11.15	Inf	-12.75
2.4G;HT40;40;1,(M0-7);1;2452;H;TN,VN	Pass	3k	3k	0.00	1.60	-13.65	-13.65	8.00	-12.05	Inf	-13.65

PSD;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:1;Ch:2412MHz;TN,VN



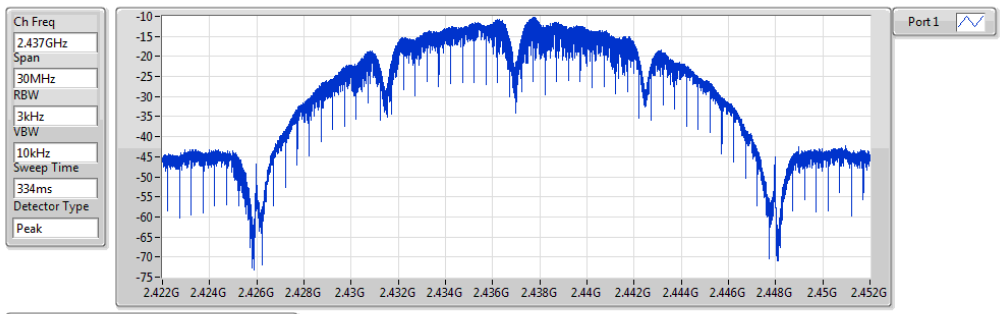
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.22	-10.22	-10.22

PSD;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0-7);Nant:1;Ch:2412MHz;TN,VN



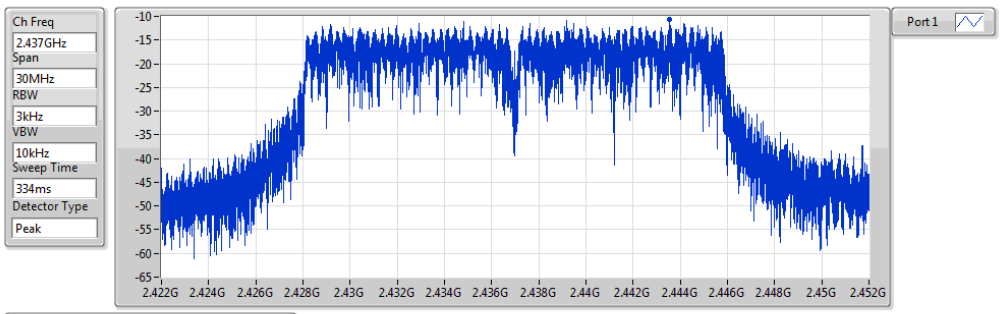
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.22	-11.22	-11.22

PSD;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:1;Ch:2437MHz;TN,VN



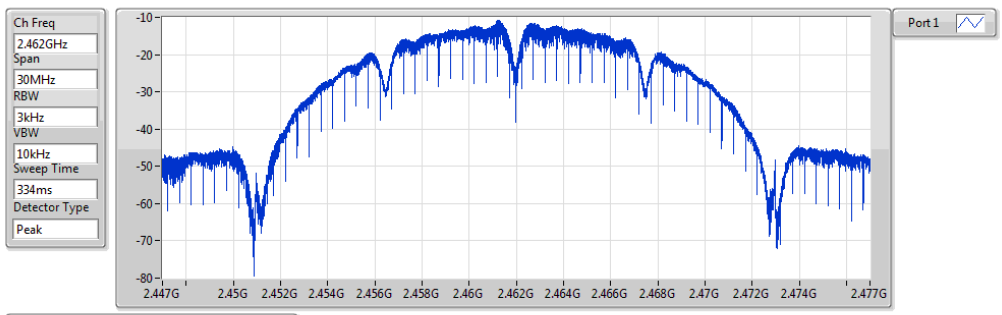
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.65	-10.65	-10.65

PSD;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0-7);Nant:1;Ch:2437MHz;TN,VN



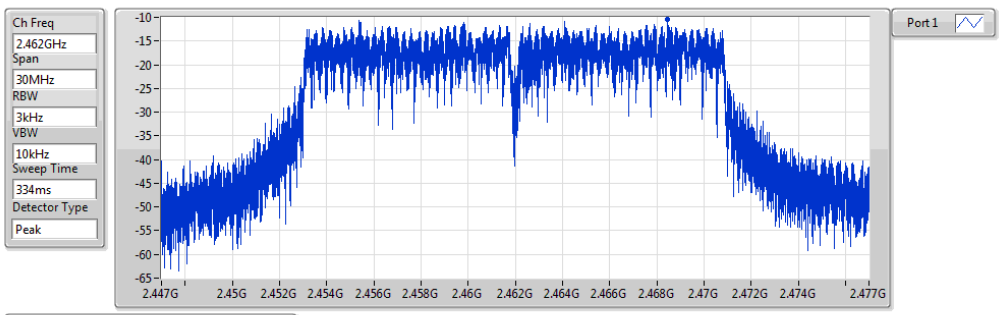
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.71	-10.71	-10.71

PSD;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:1;Ch:2462MHz;TN,VN



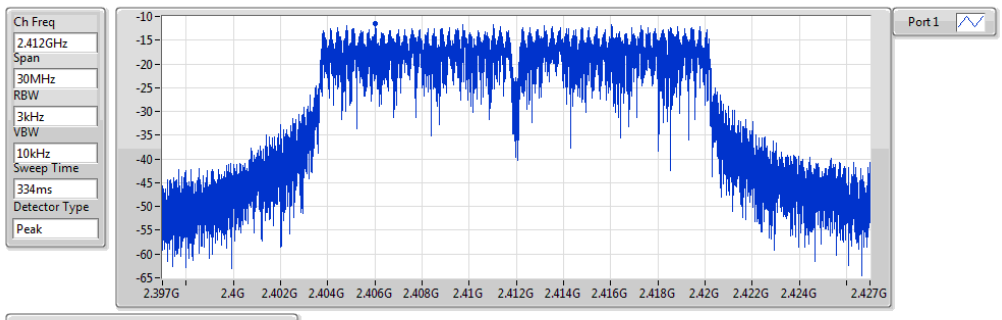
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.49	-11.49	-11.49

PSD;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0-7);Nant:1;Ch:2462MHz;TN,VN



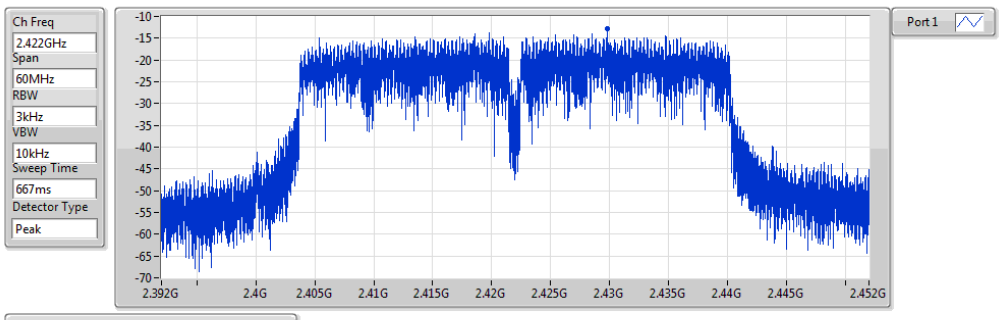
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.50	-10.50	-10.50

PSD;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:1;Ch:2412MHz;TN,VN



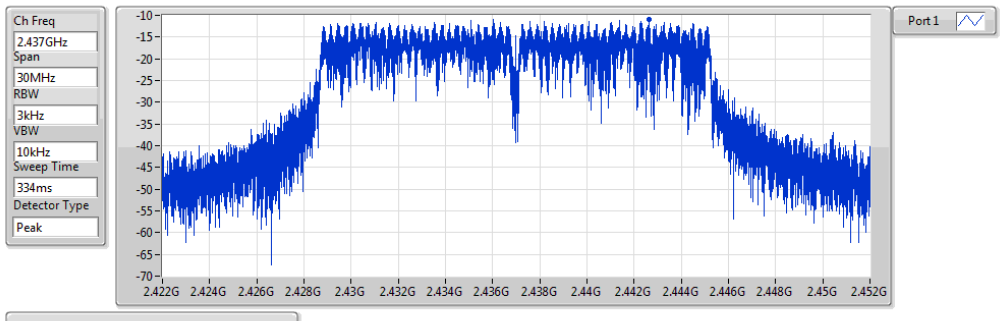
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.59	-11.59	-11.59

PSD;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0-7);Nant:1;Ch:2422MHz;TN,VN



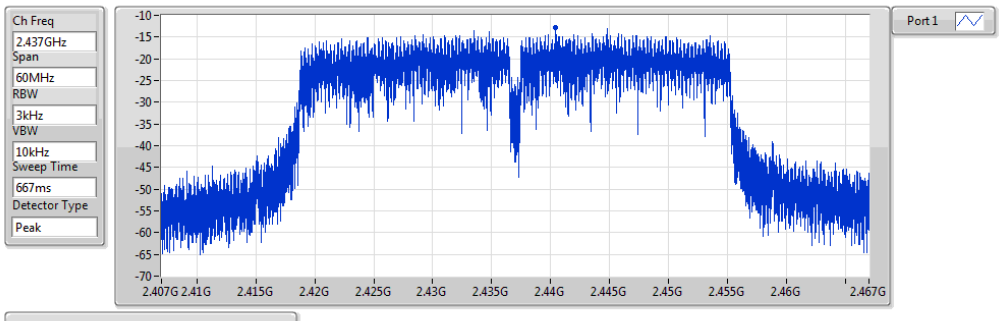
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.84	-12.84	-12.84

PSD;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:1;Ch:2437MHz;TN,VN



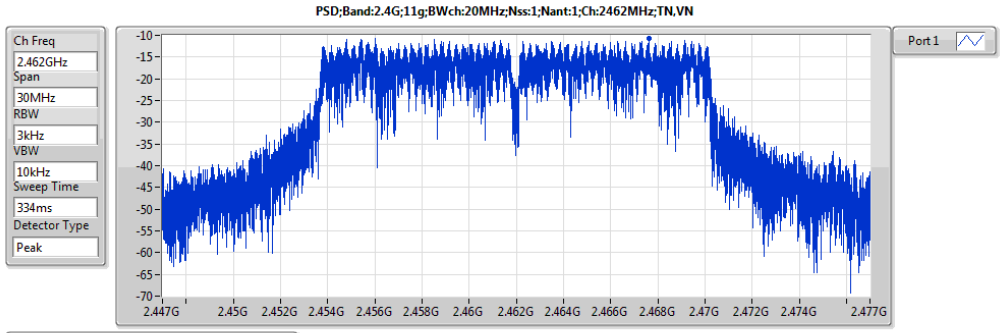
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.92	-10.92	-10.92

PSD;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0-7);Nant:1;Ch:2437MHz;TN,VN



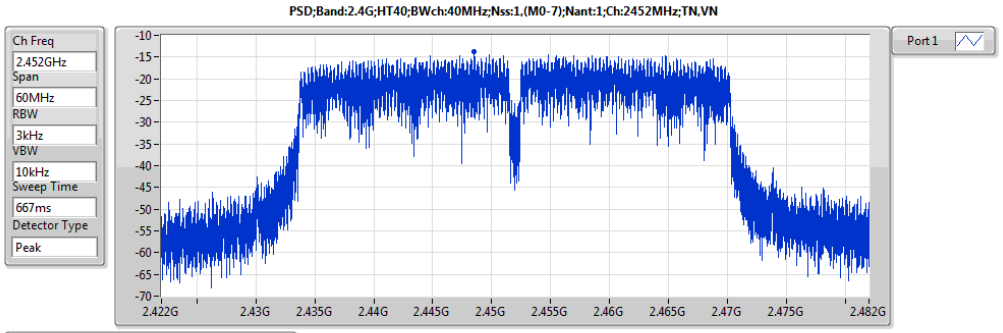
Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.75	-12.75	-12.75

PSD;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:1;Ch:2462MHz;TN,VN



Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.63	-10.63	-10.63

PSD;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0-7);Nant:1;Ch:2452MHz;TN,VN



Sum.Max	PD	P1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.65	-13.65	-13.65

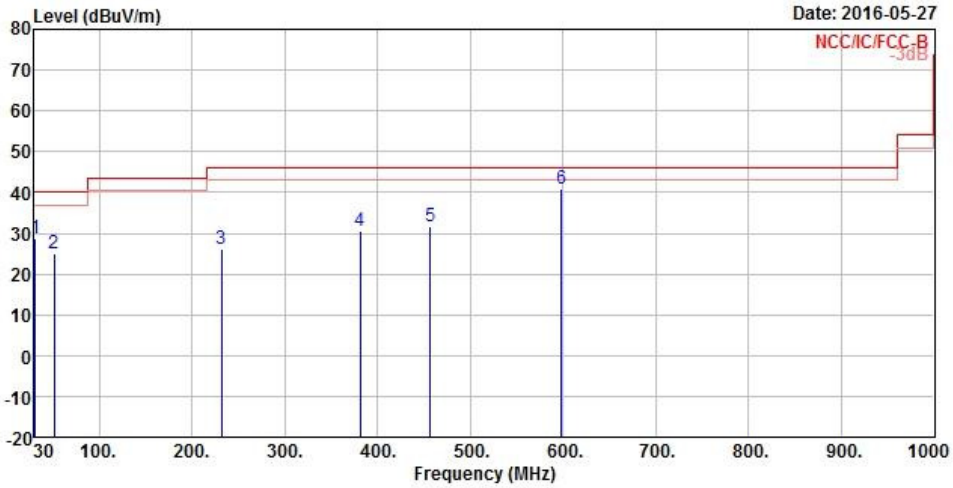
Test Result of Transmitter Radiated Bandedge Emissions

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Non-restricted Band)								
Modulation	**N_{TX}**	**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	101.05	2398.70	68.03	33.02	20	H
11b	1	2462	101.14	2502.60	50.61	50.53	20	H
11g	1	2412	95.78	2399.71	62.80	32.98	20	H
11g	1	2462	97.16	2505.20	51.04	46.12	20	H
HT20	1	2412	95.70	2399.60	63.38	32.32	20	H
HT20	1	2462	96.83	2500.60	51.65	45.18	20	H
HT40	1	2422	92.86	2399.89	61.14	31.72	20	H
HT40	1	2452	93.00	2500.40	51.70	41.30	20	H
Note 1: Measurement worst emissions of receive antenna polarization								

2400-2483.5MHz Transmitter Radiated Bandedge Emissions (Restricted Band)										
Modulation Mode	**N_{TX}**	**Freq. (MHz)**	**Measure Distance (m)**	**Freq. (MHz) PK**	**Level (dBuV/m) PK**	**Limit (dBuV/m) PK**	**Freq. (MHz) AV**	**Level (dBuV/m) AV**	**Limit (dBuV/m) AV**	**Pol.**
11b	1	2412	3	2353.46	60.11	74	2386.16	47.21	54	H
11b	1	2462	3	2486.40	60.89	74	2487.80	47.68	54	H
11g	1	2412	3	2389.97	65.76	74	2389.97	48.84	54	H
11g	1	2462	3	2483.80	69.55	74	2483.60	51.82	54	H
HT20	1	2412	3	2389.97	68.67	74	2389.97	49.68	54	H
HT20	1	2462	3	2483.60	71.07	74	2483.60	52.54	54	H
HT40	1	2422	3	2387.62	67.07	74	2389.99	51.11	54	H
HT40	1	2452	3	2485.52	69.09	74	2483.60	51.92	54	H
Note 1: Measurement worst emissions of receive antenna polarization.										

Transmitter Radiated Unwanted Emissions (Below 1GHz)

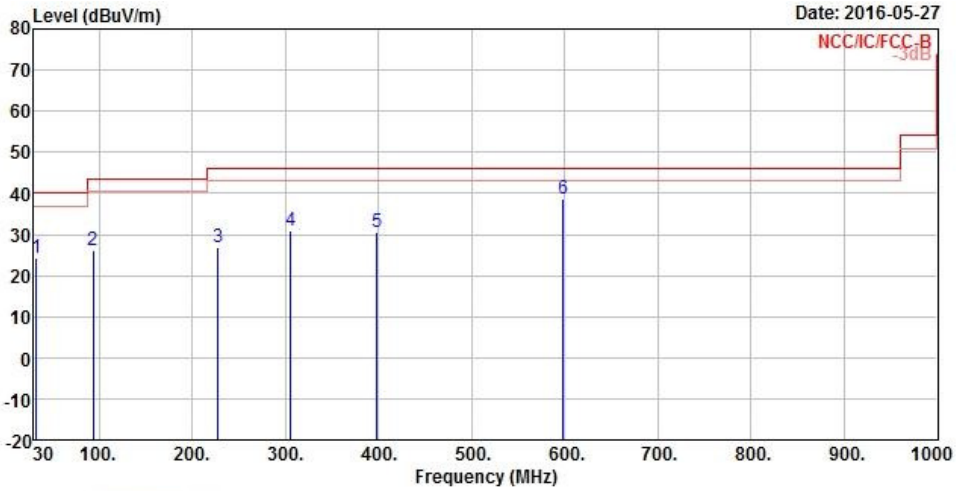
Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	1	**Polarization**	V
Operating Function	USB mode		



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	30.970	28.81	-11.19	40.00	29.75	25.82	0.79	27.55	Peak
2	51.340	25.16	-14.84	40.00	37.17	14.45	1.04	27.50	Peak
3	231.760	25.96	-20.04	46.00	33.20	17.22	2.39	26.85	Peak
4	381.140	30.39	-15.61	46.00	31.97	21.94	3.18	26.70	Peak
5	456.800	31.70	-14.30	46.00	32.57	23.04	3.41	27.32	Peak
6	598.420	40.83	-5.17	46.00	39.96	24.83	4.06	28.02	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)

Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	1	**Polarization**	H
Operating Function	USB mode		

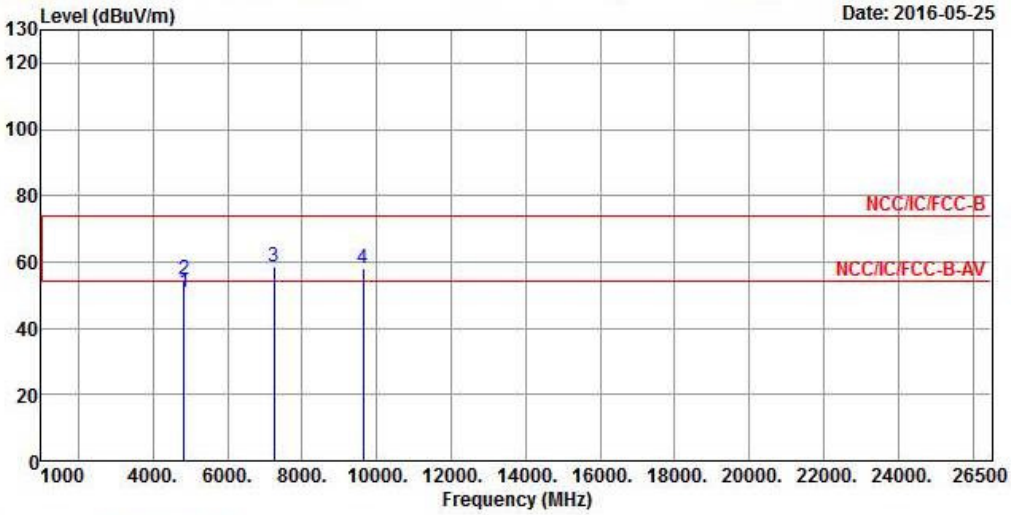


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	32.910	24.15	-15.85	40.00	26.65	24.22	0.82	27.54	Peak
2	94.020	26.25	-17.25	43.50	36.07	16.09	1.49	27.40	Peak
3	227.880	26.81	-19.19	46.00	34.40	16.89	2.38	26.86	Peak
4	305.480	30.95	-15.05	46.00	35.05	19.94	2.66	26.70	Peak
5	398.600	30.71	-15.29	46.00	31.84	22.33	3.24	26.70	Peak
6	598.420	38.50	-7.50	46.00	37.63	24.83	4.06	28.02	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)

Transmitter Radiated Unwanted Emissions (Above 1GHz)

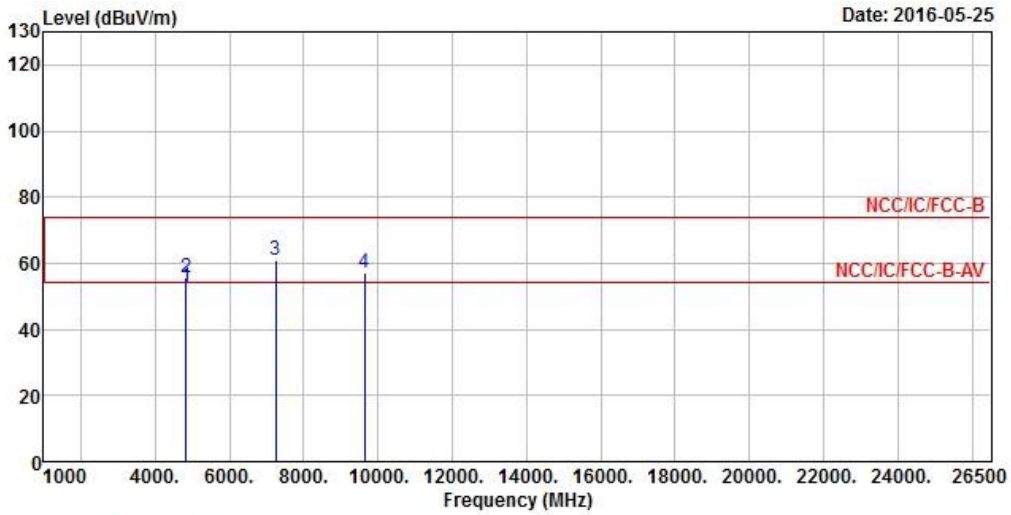
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	**Test Freq. (MHz)**	2412
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	51.04	-2.96	54.00	47.03	31.15	5.40	32.54	Average
2	4824.000	54.61	-19.39	74.00	50.60	31.15	5.40	32.54	Peak
3	7236.000	58.36			48.44	35.67	7.03	32.78	Peak
4	9648.000	58.20			44.42	38.73	8.27	33.22	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 (105.85 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

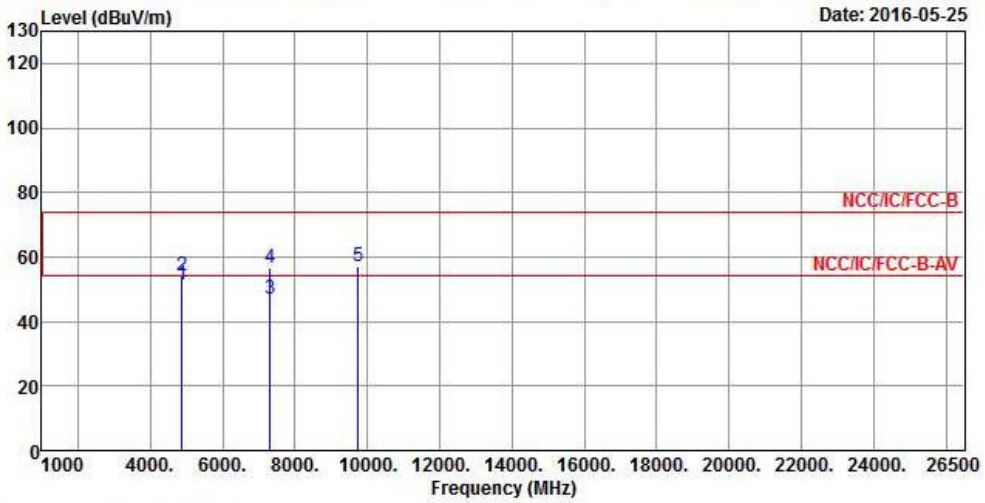
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	**Test Freq. (MHz)**	2412
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	52.71	-1.29	54.00	48.70	31.15	5.40	32.54	Average
2	4824.000	55.58	-18.42	74.00	51.57	31.15	5.40	32.54	Peak
3	7236.000	60.90			86.65	0.00	7.03	32.78	Peak
4	9648.000	57.00			81.95	0.00	8.27	33.22	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 (105.85dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

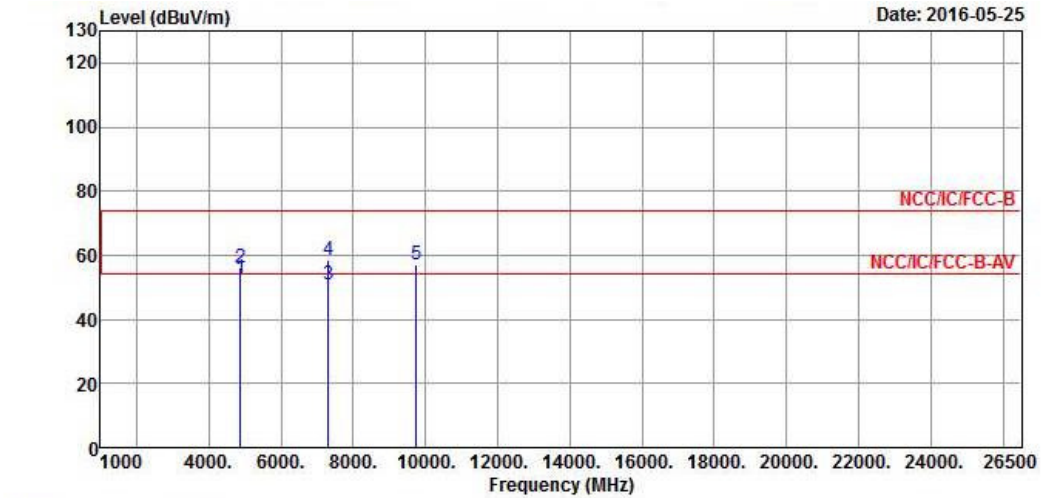
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	51.14	-2.86	54.00	46.96	31.22	5.49	32.53	Average
2	4874.000	54.42	-19.58	74.00	50.24	31.22	5.49	32.53	Peak
3	7311.000	46.79	-7.21	54.00	36.72	35.85	7.02	32.80	Average
4	7311.000	56.48	-17.52	74.00	46.41	35.85	7.02	32.80	Peak
5	9748.000	57.06			43.33	38.75	8.20	33.22	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 (105.52 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

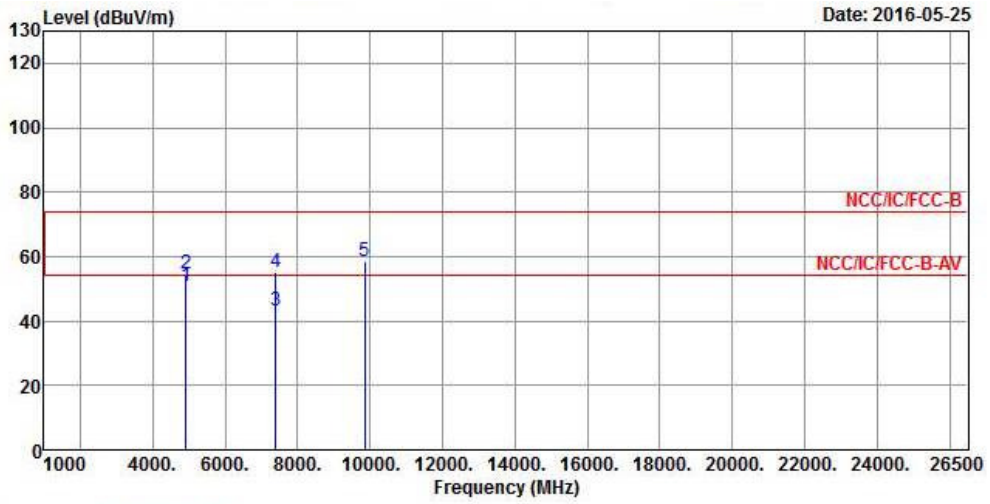
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	52.96	-1.04	54.00	48.78	31.22	5.49	32.53	Average
2	4874.000	55.92	-18.08	74.00	51.74	31.22	5.49	32.53	Peak
3	7311.000	50.81	-3.19	54.00	40.74	35.85	7.02	32.80	Average
4	7311.000	58.42	-15.58	74.00	48.35	35.85	7.02	32.80	Peak
5	9748.000	57.03			43.30	38.75	8.20	33.22	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 (105.52 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

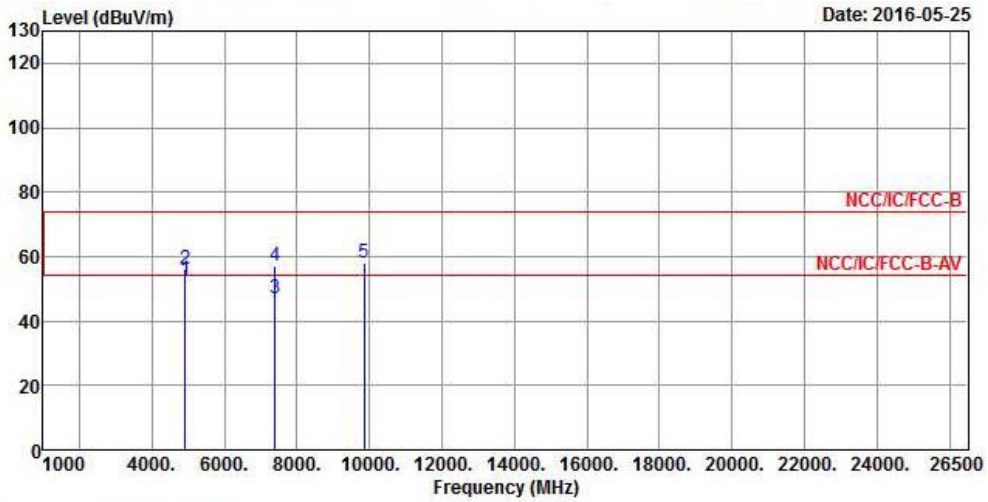
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	**Test Freq. (MHz)**	2462
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	51.08	-2.92	54.00	46.72	31.29	5.59	32.52	Average
2	4924.000	54.88	-19.12	74.00	50.52	31.29	5.59	32.52	Peak
3	7386.000	43.02	-10.98	54.00	32.80	36.03	7.01	32.82	Average
4	7386.000	55.10	-18.90	74.00	44.88	36.03	7.01	32.82	Peak
5	9848.000	58.49			44.75	38.77	8.18	33.21	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 (104.81 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

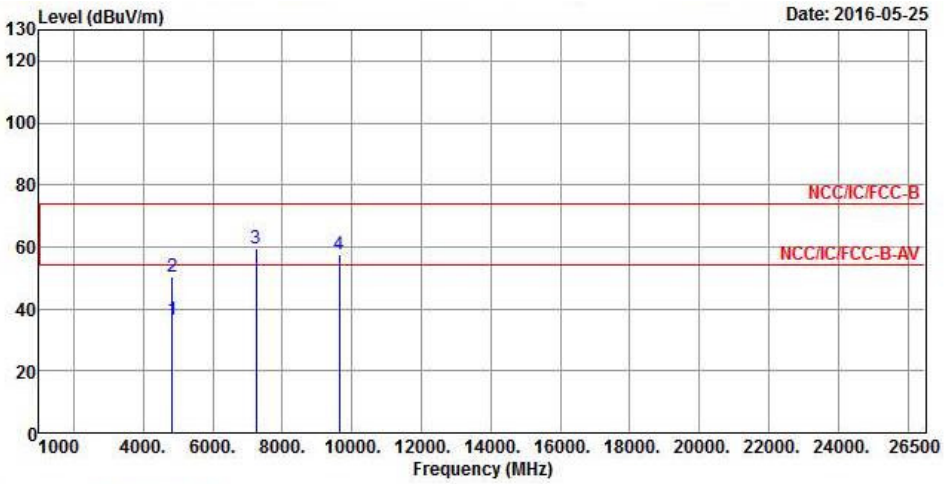
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	**Test Freq. (MHz)**	2462
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	52.88	-1.12	54.00	48.52	31.29	5.59	32.52	Average
2	4924.000	56.19	-17.81	74.00	51.83	31.29	5.59	32.52	Peak
3	7386.000	47.14	-6.86	54.00	36.92	36.03	7.01	32.82	Average
4	7386.000	57.04	-16.96	74.00	46.82	36.03	7.01	32.82	Peak
5	9848.000	58.17			44.43	38.77	8.18	33.21	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 (104.81dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

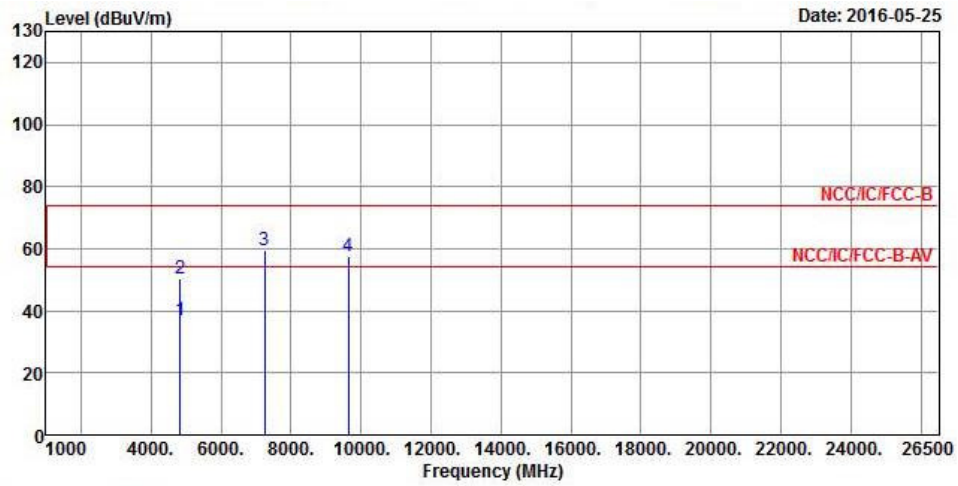
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	**Test Freq. (MHz)**	2412
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	36.67	-17.33	54.00	32.66	31.15	5.40	32.54	Average
2	4824.000	50.19	-23.81	74.00	46.18	31.15	5.40	32.54	Peak
3	7236.000	59.56			49.64	35.67	7.03	32.78	Peak
4	9648.000	57.41			43.63	38.73	8.27	33.22	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 (104.89dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

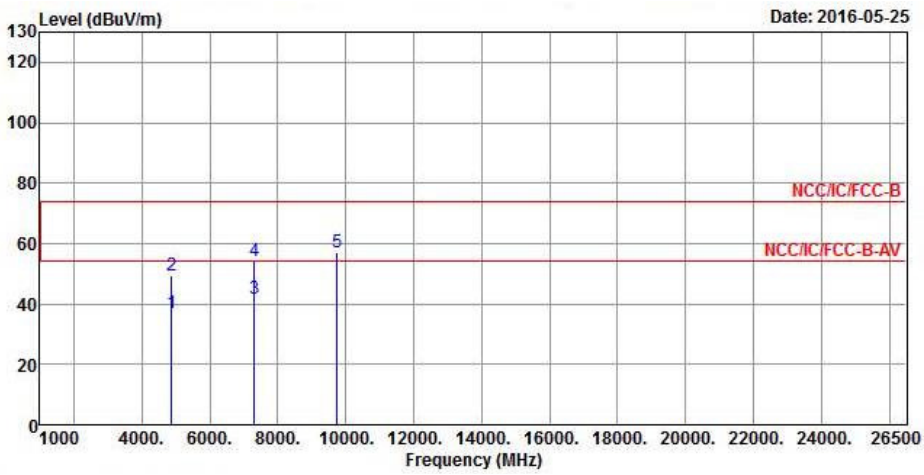
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	**Test Freq. (MHz)**	2412
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	37.17	-16.83	54.00	33.16	31.15	5.40	32.54	Average
2	4824.000	50.20	-23.80	74.00	46.19	31.15	5.40	32.54	Peak
3	7236.000	59.54			49.62	35.67	7.03	32.78	Peak
4	9648.000	57.35			43.57	38.73	8.27	33.22	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 (104.89 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

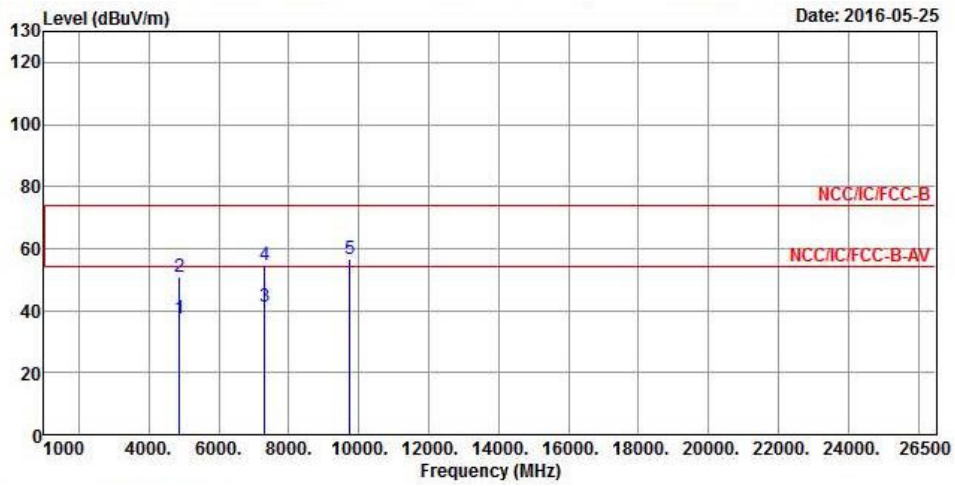
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	36.76	-17.24	54.00	32.58	31.22	5.49	32.53	Average
2	4874.000	49.64	-24.36	74.00	45.46	31.22	5.49	32.53	Peak
3	7311.000	41.91	-12.09	54.00	31.84	35.85	7.02	32.80	Average
4	7311.000	54.31	-19.69	74.00	44.24	35.85	7.02	32.80	Peak
5	9748.000	57.01			43.28	38.75	8.20	33.22	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 (105.11 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

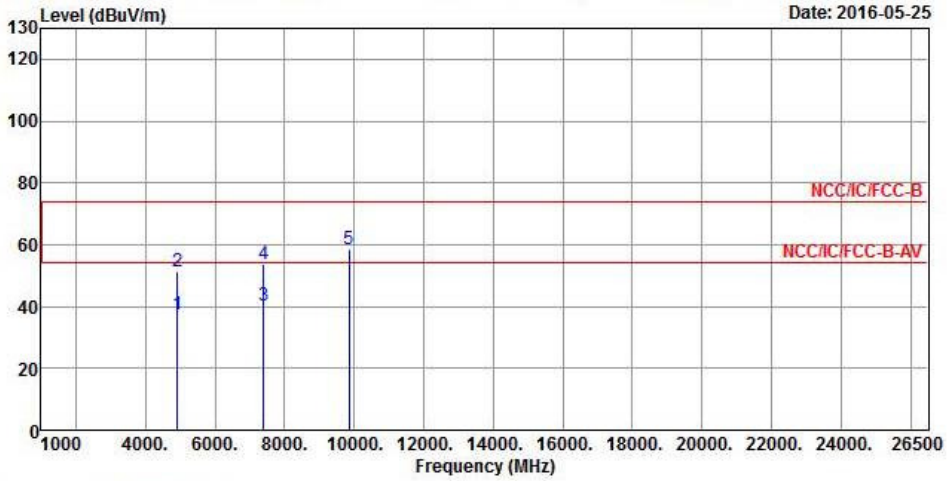
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	37.60	-16.40	54.00	33.42	31.22	5.49	32.53	Average
2	4874.000	50.84	-23.16	74.00	46.66	31.22	5.49	32.53	Peak
3	7311.000	41.35	-12.65	54.00	31.28	35.85	7.02	32.80	Average
4	7311.000	54.52	-19.48	74.00	44.45	35.85	7.02	32.80	Peak
5	9748.000	56.68			42.95	38.75	8.20	33.22	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 (105.11 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

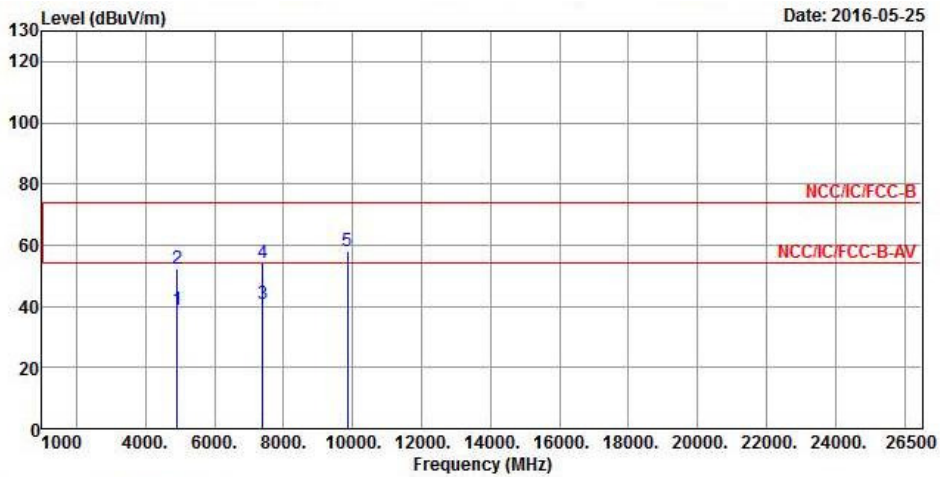
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	**Test Freq. (MHz)**	2462
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	37.52	-16.48	54.00	33.16	31.29	5.59	32.52	Average
2	4924.000	51.32	-22.68	74.00	46.96	31.29	5.59	32.52	Peak
3	7386.000	40.46	-13.54	54.00	30.24	36.03	7.01	32.82	Average
4	7386.000	53.87	-20.13	74.00	43.65	36.03	7.01	32.82	Peak
5	9848.000	58.40			44.66	38.77	8.18	33.21	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 (106.23 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

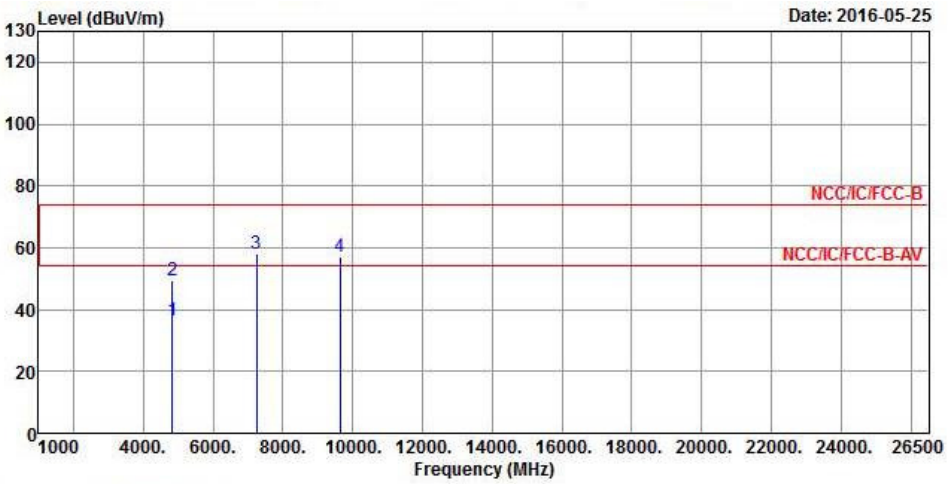
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	**Test Freq. (MHz)**	2462
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	38.95	-15.05	54.00	34.59	31.29	5.59	32.52	Average
2	4924.000	52.43	-21.57	74.00	48.07	31.29	5.59	32.52	Peak
3	7386.000	40.83	-13.17	54.00	30.61	36.03	7.01	32.82	Average
4	7386.000	54.27	-19.73	74.00	44.05	36.03	7.01	32.82	Peak
5	9848.000	58.22			44.48	38.77	8.18	33.21	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 (106.23 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

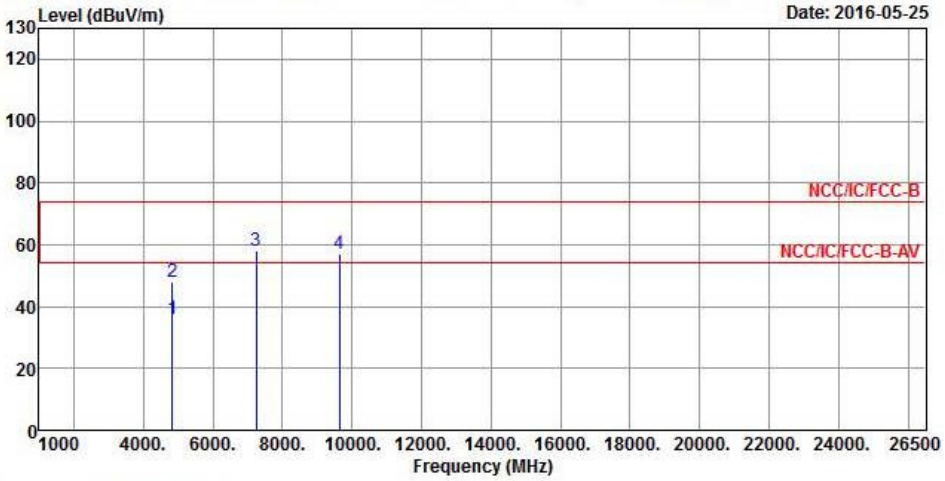
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	2412
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	36.38	-17.62	54.00	32.37	31.15	5.40	32.54	Average
2	4824.000	49.60	-24.40	74.00	45.59	31.15	5.40	32.54	Peak
3	7236.000	58.22			48.30	35.67	7.03	32.78	Peak
4	9648.000	57.09			43.31	38.73	8.27	33.22	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 (104.63 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

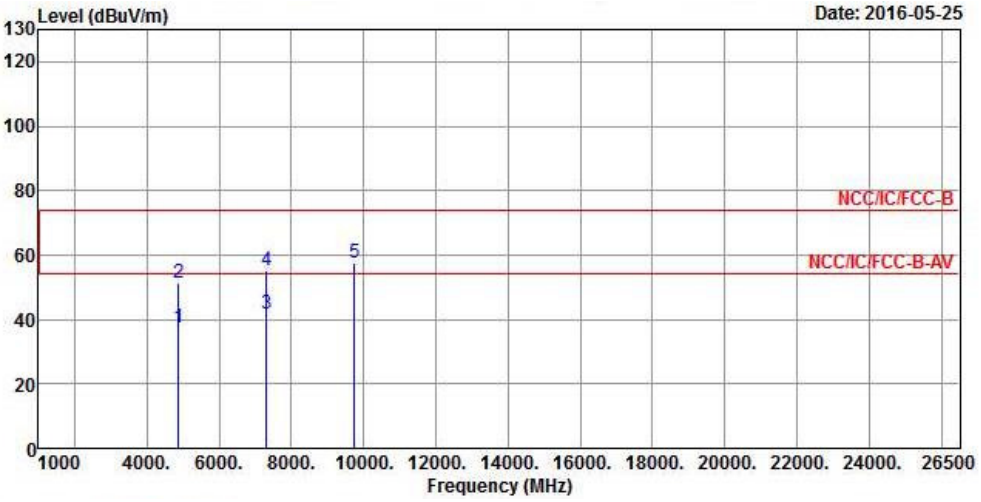
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	2412
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	35.83	-18.17	54.00	31.82	31.15	5.40	32.54	Average
2	4824.000	48.06	-25.94	74.00	44.05	31.15	5.40	32.54	Peak
3	7236.000	57.97			48.05	35.67	7.03	32.78	Peak
4	9648.000	57.11			43.33	38.73	8.27	33.22	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 (104.63 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

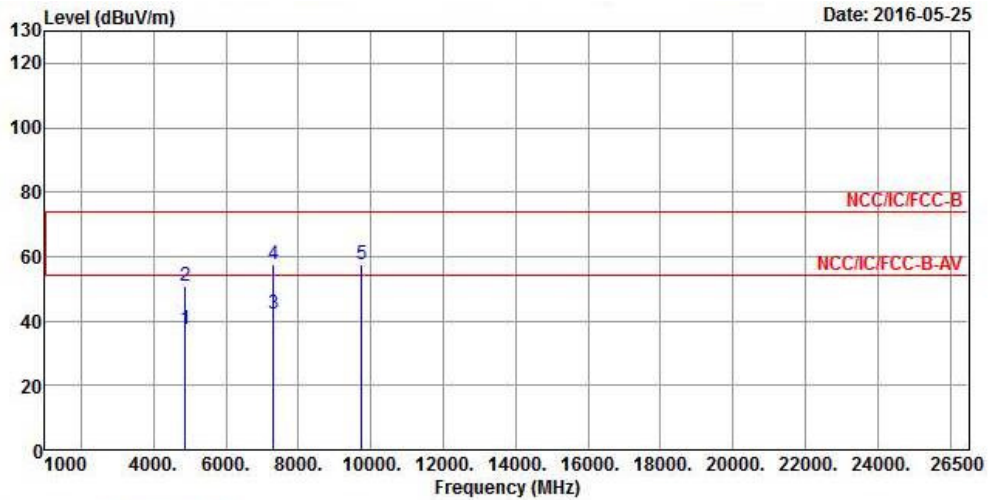
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	37.39	-16.61	54.00	33.21	31.22	5.49	32.53	Average
2	4874.000	51.12	-22.88	74.00	46.94	31.22	5.49	32.53	Peak
3	7311.000	41.68	-12.32	54.00	31.61	35.85	7.02	32.80	Average
4	7311.000	55.02	-18.98	74.00	44.95	35.85	7.02	32.80	Peak
5	9748.000	57.59			43.86	38.75	8.20	33.22	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 (106.01 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

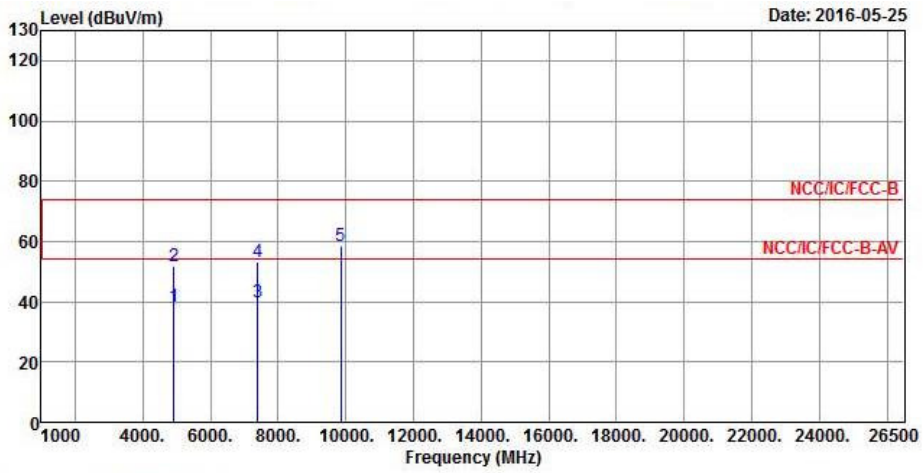
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	37.40	-16.60	54.00	33.22	31.22	5.49	32.53	Average
2	4874.000	50.83	-23.17	74.00	46.65	31.22	5.49	32.53	Peak
3	7311.000	42.12	-11.88	54.00	32.05	35.85	7.02	32.80	Average
4	7311.000	57.63	-16.37	74.00	47.56	35.85	7.02	32.80	Peak
5	9748.000	57.80			44.07	38.75	8.20	33.22	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 (106.01 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

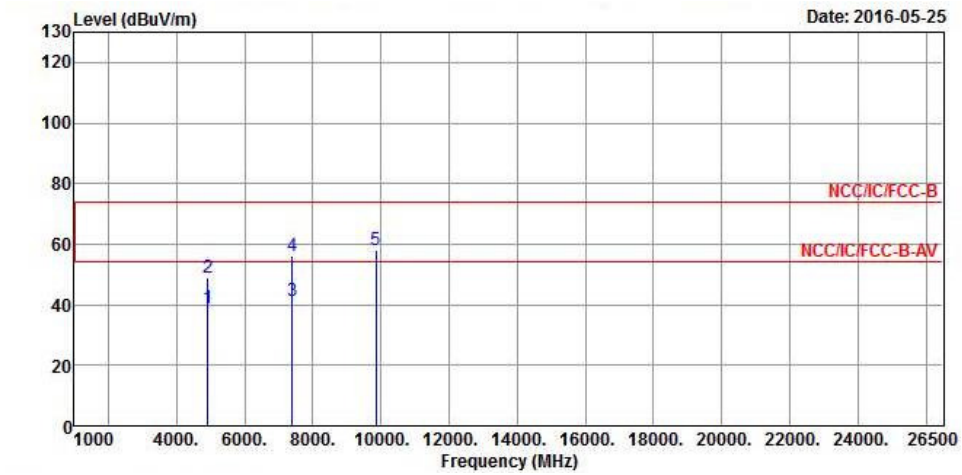
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	2462
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	38.22	-15.78	54.00	33.86	31.29	5.59	32.52	Average
2	4924.000	51.57	-22.43	74.00	47.21	31.29	5.59	32.52	Peak
3	7386.000	39.93	-14.07	54.00	29.71	36.03	7.01	32.82	Average
4	7386.000	53.33	-20.67	74.00	43.11	36.03	7.01	32.82	Peak
5	9848.000	58.53			44.79	38.77	8.18	33.21	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 (106.07 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

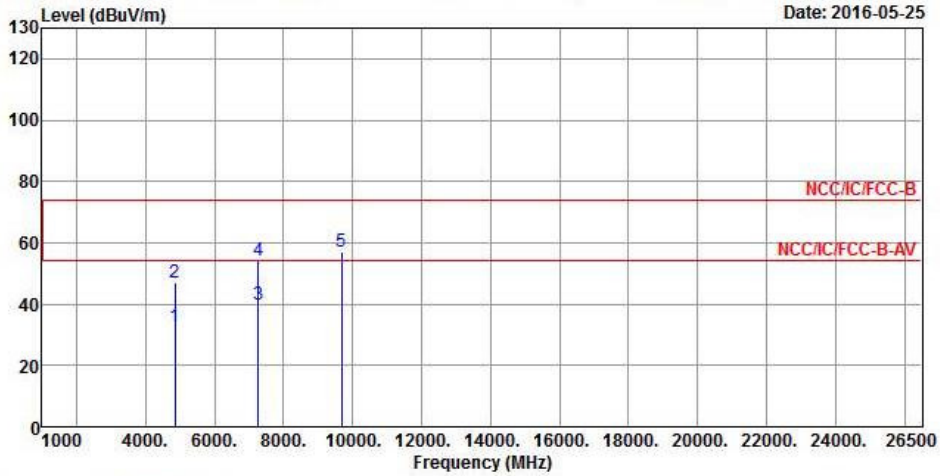
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	**Test Freq. (MHz)**	2462
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	38.62	-15.38	54.00	34.26	31.29	5.59	32.52	Average
2	4924.000	48.75	-25.25	74.00	44.39	31.29	5.59	32.52	Peak
3	7386.000	41.27	-12.73	54.00	31.05	36.03	7.01	32.82	Average
4	7386.000	56.32	-17.68	74.00	46.10	36.03	7.01	32.82	Peak
5	9848.000	58.12			44.38	38.77	8.18	33.21	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 (106.07 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

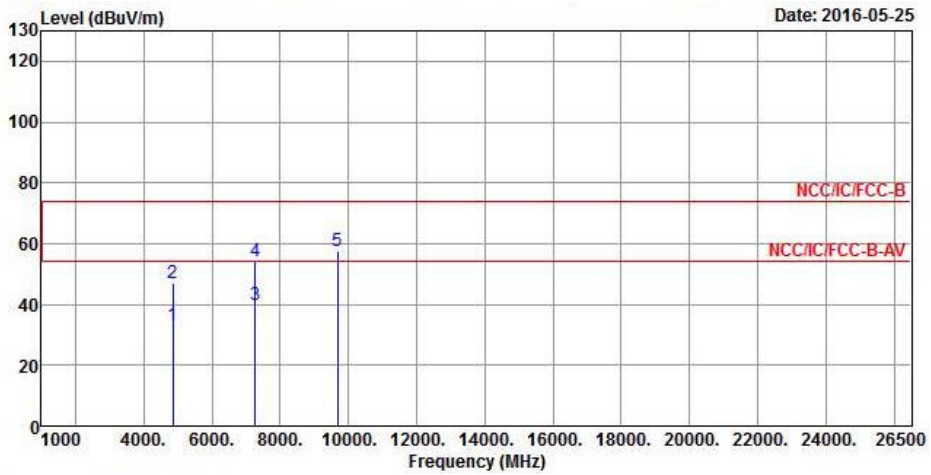
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	2422
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4844.000	32.85	-21.15	54.00	28.77	31.18	5.44	32.54	Average
2	4844.000	47.25	-26.75	74.00	43.17	31.18	5.44	32.54	Peak
3	7266.000	39.82	-14.18	54.00	29.84	35.74	7.03	32.79	Average
4	7266.000	54.29			44.31	35.74	7.03	32.79	Peak
5	9688.000	57.11			43.35	38.74	8.24	33.22	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 (102.08dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

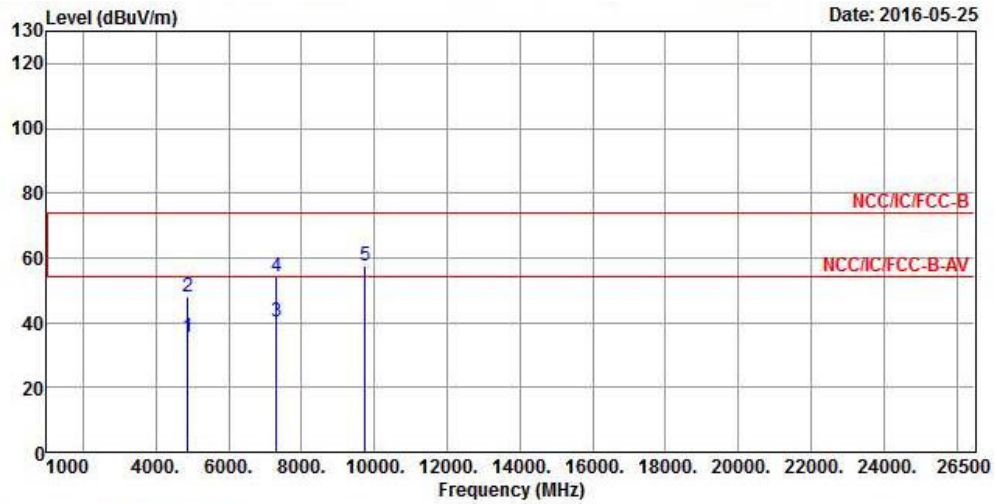
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	2422
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4844.000	32.88	-21.12	54.00	28.80	31.18	5.44	32.54	Average
2	4844.000	47.10	-26.90	74.00	43.02	31.18	5.44	32.54	Peak
3	7266.000	39.75	-14.25	54.00	29.77	35.74	7.03	32.79	Average
4	7266.000	54.27			44.29	35.74	7.03	32.79	Peak
5	9688.000	57.47			43.71	38.74	8.24	33.22	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 (102.08 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

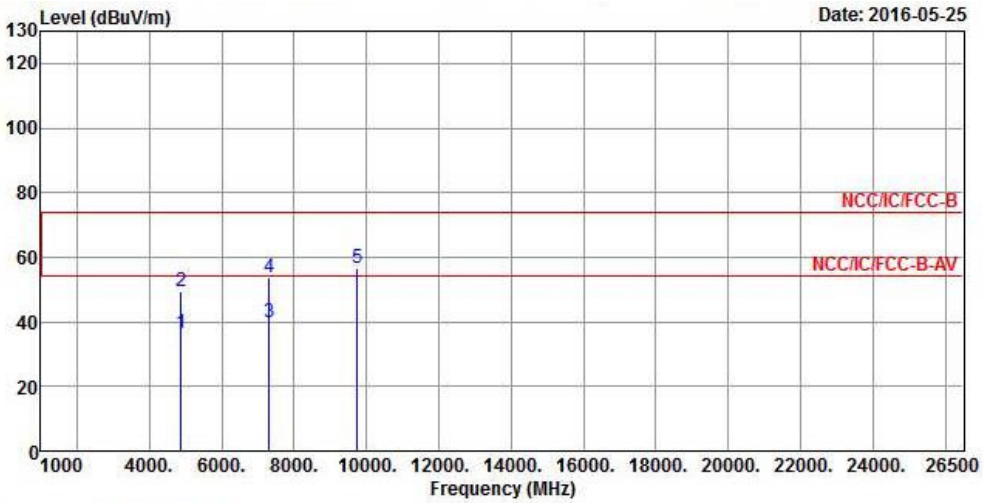
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	35.67	-18.33	54.00	31.49	31.22	5.49	32.53	Average
2	4874.000	47.85	-26.15	74.00	43.67	31.22	5.49	32.53	Peak
3	7311.000	40.14	-13.86	54.00	30.07	35.85	7.02	32.80	Average
4	7311.000	54.00	-20.00	74.00	43.93	35.85	7.02	32.80	Peak
5	9748.000	57.63			43.90	38.75	8.20	33.22	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 (102.89dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

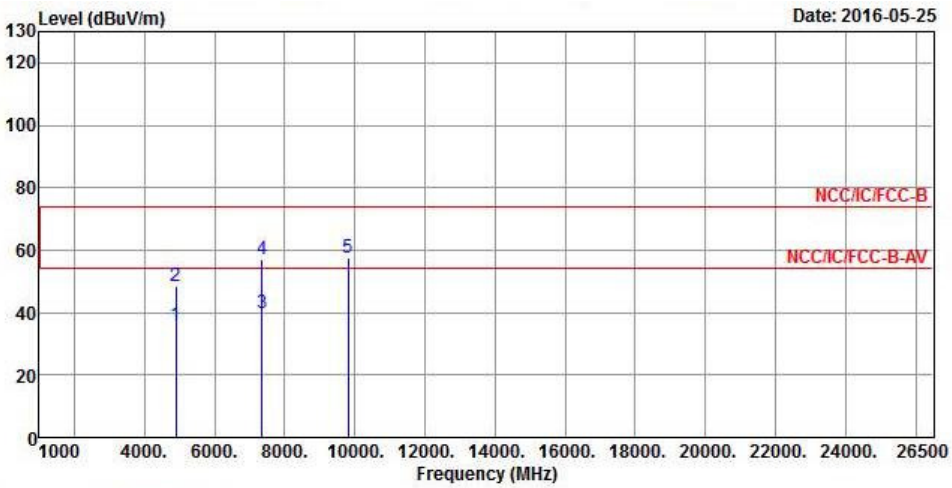
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	2437
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	36.25	-17.75	54.00	32.07	31.22	5.49	32.53	Average
2	4874.000	49.22	-24.78	74.00	45.04	31.22	5.49	32.53	Peak
3	7311.000	39.93	-14.07	54.00	29.86	35.85	7.02	32.80	Average
4	7311.000	53.55	-20.45	74.00	43.48	35.85	7.02	32.80	Peak
5	9748.000	56.63			42.90	38.75	8.20	33.22	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 (102.89 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

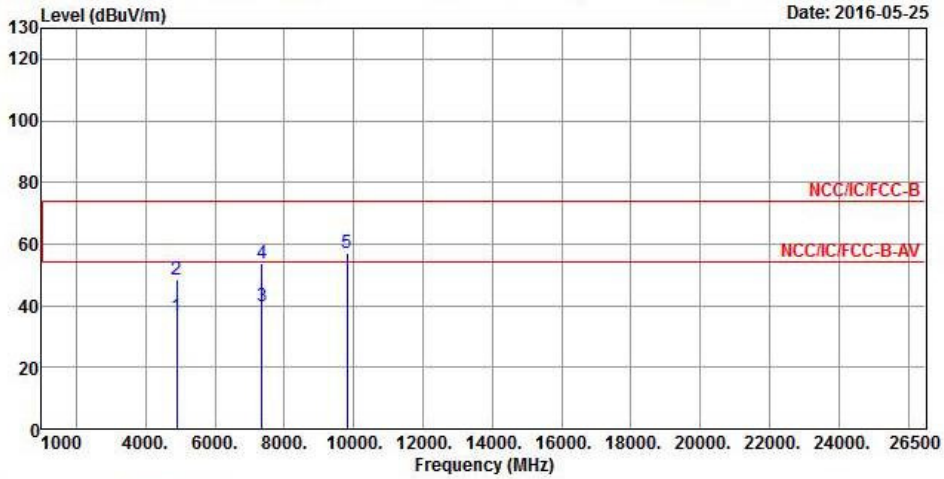
Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	**Test Freq. (MHz)**	2452
N_{TX}	1	**Polarization**	V



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4904.000	35.88	-18.12	54.00	31.59	31.27	5.55	32.53	Average
2	4904.000	48.62	-25.38	74.00	44.33	31.27	5.55	32.53	Peak
3	7356.000	39.66	-14.34	54.00	29.50	35.95	7.02	32.81	Average
4	7356.000	57.00	-17.00	74.00	46.84	35.95	7.02	32.81	Peak
5	9808.000	57.68			43.96	38.76	8.17	33.21	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 (102.30 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	**Test Freq. (MHz)**	2452
N_{TX}	1	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4904.000	36.46	-17.54	54.00	32.17	31.27	5.55	32.53	Average
2	4904.000	48.41	-25.59	74.00	44.12	31.27	5.55	32.53	Peak
3	7356.000	39.68	-14.32	54.00	29.52	35.95	7.02	32.81	Average
4	7356.000	53.69	-20.31	74.00	43.53	35.95	7.02	32.81	Peak
5	9808.000	57.03			43.31	38.76	8.17	33.21	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 (102.30 dBuV/m).
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.