



FCC Test Report

Equipment : R6100 WiFi Router, R6000 WiFi Router
Brand Name : NETGEAR
Model No. : R6100, R6000
FCC ID : PY312400225
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
FCC Classification : DTS
Applicant : NETGEAR, Inc.
Manufacturer : 350 East Plumeria Drive, San Jose, California 95134, USA

The product sample received on Mar. 06, 2013 and completely tested on Apr. 19, 2013. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

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

Reviewed by:

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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]: 0.1786590MHz 41.47 (Margin 13.08dB) - AV 48.53 (Margin 16.02dB) - QP	FCC 15.207	Complied
3.2	15.247(a)	6dB Bandwidth	6dB Bandwidth Unit [MHz] 20M:17.62/ 40M:36.41	≥500kHz	Complied
3.3	15.247(b)	RF Output Power (Maximum Conducted (Average) Output Power)	Power [dBm]:25.93	Power [dBm]:30	Complied
3.4	15.247(d)	Power Spectral Density	PSD [dBm/3kHz]:-0.56	PSD [dBm/3kHz]:8	Complied
3.5	15.247(c)	Transmitter Radiated Bandedge Emissions	Non-Restricted Bands: 2399.89MHz:30.04dB Restricted Bands [dBuV/m at 3m]: 2486.48MHz 73.90 (Margin 0.1dB) - PK 53.66 (Margin 0.34dB) - AV	Non-Restricted Bands: > 30 dBc Restricted Bands: FCC 15.209	Complied
3.6	15.247(c)	Transmitter Radiated Unwanted Emissions	Restricted Bands [dBuV/m at 3m]: 4874.00MHz 56.48 (Margin 17.52dB) - PK 53.61 (Margin 0.39dB) - AV	Non-Restricted Bands: > 30 dBc Restricted Bands: FCC 15.209	Complied



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 _{TX})	RF Output Power (dBm)	Co-location
2400-2483.5	b	2412-2462	1-11 [11]	2	25.93	Yes
2400-2483.5	g	2412-2462	1-11 [11]	2	23.56	Yes
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	2	23.65	Yes
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	2	18.12	Yes

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

1.1.2 Antenna Information

Antenna Category	
<input checked="" type="checkbox"/>	Integral antenna (antenna permanently attached)
<input type="checkbox"/>	Temporary RF connector provided
<input checked="" type="checkbox"/>	No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.
<input type="checkbox"/>	External antenna (dedicated antennas)
<input type="checkbox"/>	Single power level with corresponding antenna(s).
<input type="checkbox"/>	Multiple power level and corresponding antenna(s).
<input type="checkbox"/>	RF connector provided
<input type="checkbox"/>	Unique antenna connector. (e.g., MMCX, U.FL, IPX, and RP-SMA, RP-N type...)
<input type="checkbox"/>	Standard antenna connector. (e.g., SMA, N, BNC, and TNC type...)

Antenna General Information				
No.	Ant. Cat.	Ant. Type	Connector	Gain (dBi)
1	Integral	Printed	N/A	1.8



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 radiopart 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"/> 97.54% - IEEE 802.11g	0.11
<input checked="" type="checkbox"/> 96.97% - IEEE 802.11n (HT20)	0.13
<input checked="" type="checkbox"/> 96.54% - IEEE 802.11n (HT40)	0.15

1.1.5 EUT Operational Condition

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

1.1.6 Table for Product Listing

No.	Brand Name	Model Name	Product Name	Descriptions
1	NETGEAR	R6100	R6100 WiFi Router	2.4G, 2T2R 5.0G, 2T2R
2	NETGEAR	R6000	R6000 WiFi Router	2.4G, 2T2R 5.0G, 1T1R

Note: Both models are with the same hardware. Difference of 5GHz chain function is using software setting not by hardware modified. Both models are tested separately and recorded in the report.

1.2 Accessories and Support Equipment

Accessories					
No.	Equipment	Brand Name	Model Name	P/N	Spec.
1	Adapter 1	NETGEAR	AD817F20	332-10307-02	I/P:100-240Vac, 50~60Hz, 0.56A O/P:12Vdc, 1.5A Power cord: 1.85m non-shielded cable w/o core
2	Adapter 2	NETGEAR	SAL018F1 NA	332-10375-01	I/P:100-120Vac, 47~63Hz, 0.6A O/P:12Vdc, 1.5A Power cord: 1.85m non-shielded cable w/o core
3	Adapter 3	NETGEAR	MU18-D1201 50-A1	332-10268-01	I/P:100-240Vac, 50~60Hz, 0.6A O/P:12Vdc, 1.5A Power cord: 1.85m non-shielded cable w/o core
4	Adapter 4	NETGEAR	AD817F10	332-10301-02	I/P:100-120Vac, 50~60Hz, 0.56A O/P:12Vdc, 1.5A Power cord: 1.85m non-shielded cable w/o core
5	RJ45 Cable	---	---	---	1.5m shielded cable w/o core

Support Equipment				
No.	Equipment	Brand Name	Model Name	Serial No.
1	Notebook	DELL	E5420	DoC
2	Notebook	DELL	E5420	DoC
3	USB Flash	Transcend	JetFlash V85	---

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 C63.10-2009
- ◆ FCC KDB 558074
- ◆ FCC KDB 662911
- ◆ FCC KDB 412172



1.4 Testing Location Information

Testing Location				
<input checked="" type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.		
		TEL : 886-3-327-3456 FAX : 886-3-327-0973		
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-HY	Ian Du	22.7°C / 61.5%	Apr. 15, 2013
AC Conduction	CO04-HY	Bill Hsiao	21°C / 52%	Apr. 19, 2013
Radiated Emission	03CH05-HY	Sam Chang	25°C / 65%	Mar. 20 ~ Apr. 18, 2013
Test site registered number [643075] with FCC				
Test site registered number [4086B-1] with IC				

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	Limit
AC power-line conducted emissions		±2.26 dB	N/A
Emission bandwidth, 6dB bandwidth		±1.42 %	N/A
RF output power, conducted		±0.63 dB	N/A
Power density, conducted		±0.81 dB	N/A
Unwanted emissions, conducted	30 – 1000 MHz	±0.51 dB	N/A
	1 – 18 GHz	±0.67 dB	N/A
	18 – 40 GHz	±0.83 dB	N/A
	40 – 200 GHz	N/A	N/A
All emissions, radiated	30 – 1000 MHz	±2.56 dB	N/A
	1 – 18 GHz	±3.59 dB	N/A
	18 – 40 GHz	±3.82 dB	N/A
	40 – 200 GHz	N/A	N/A
Temperature		±0.8 °C	N/A
Humidity		±3 %	N/A
DC and low frequency voltages		±3 %	N/A
Time		±1.42 %	N/A
Duty Cycle		±1.42 %	N/A

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,1-11Mbps	2	1-11 Mbps	1 Mbps
11g,6-54Mbps	2	6-54 Mbps	6 Mbps
HT20,M0-15	2	MCS 0-15	MCS 0
HT40,M0-15	2	MCS 0-15	MCS 0

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT support HT20 and HT40..

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

2.2 The Worst Case Power Setting Parameter

The Worst Case Power Setting Parameter (2400-2483.5MHz band)							
Test Software Version	Art2-GUI V2.3						
Modulation Mode	N _{TX}	Test Frequency (MHz)					
		NCB: 20MHz			NCB: 40MHz		
		2412	2437	2462	2422	2437	2452
11b,1-11Mbps	2	19.0	23.5	19.5	-	-	-
11g,6-54Mbps	2	14.5	21.0	14.5	-	-	-
HT20,M0-15	2	14.0	21.0	15.0	-	-	-
HT40,M0-15	2	-	-	-	11.5	15.0	12.0

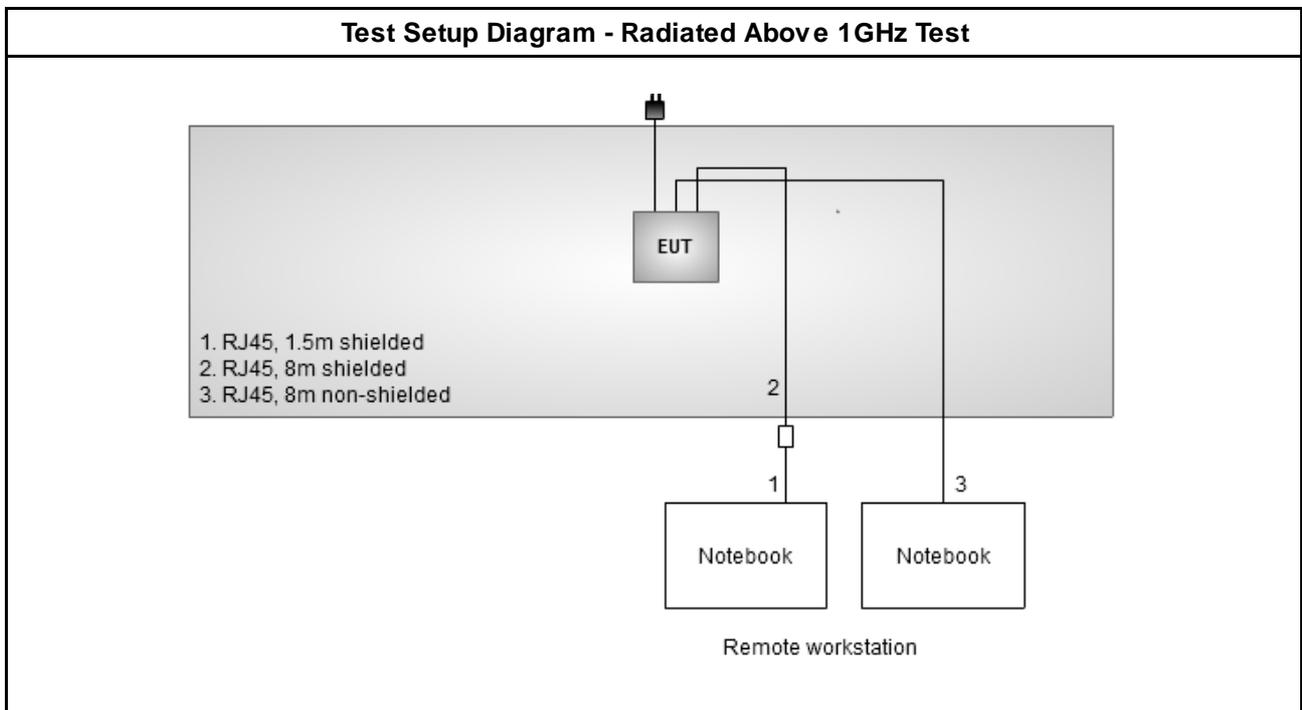
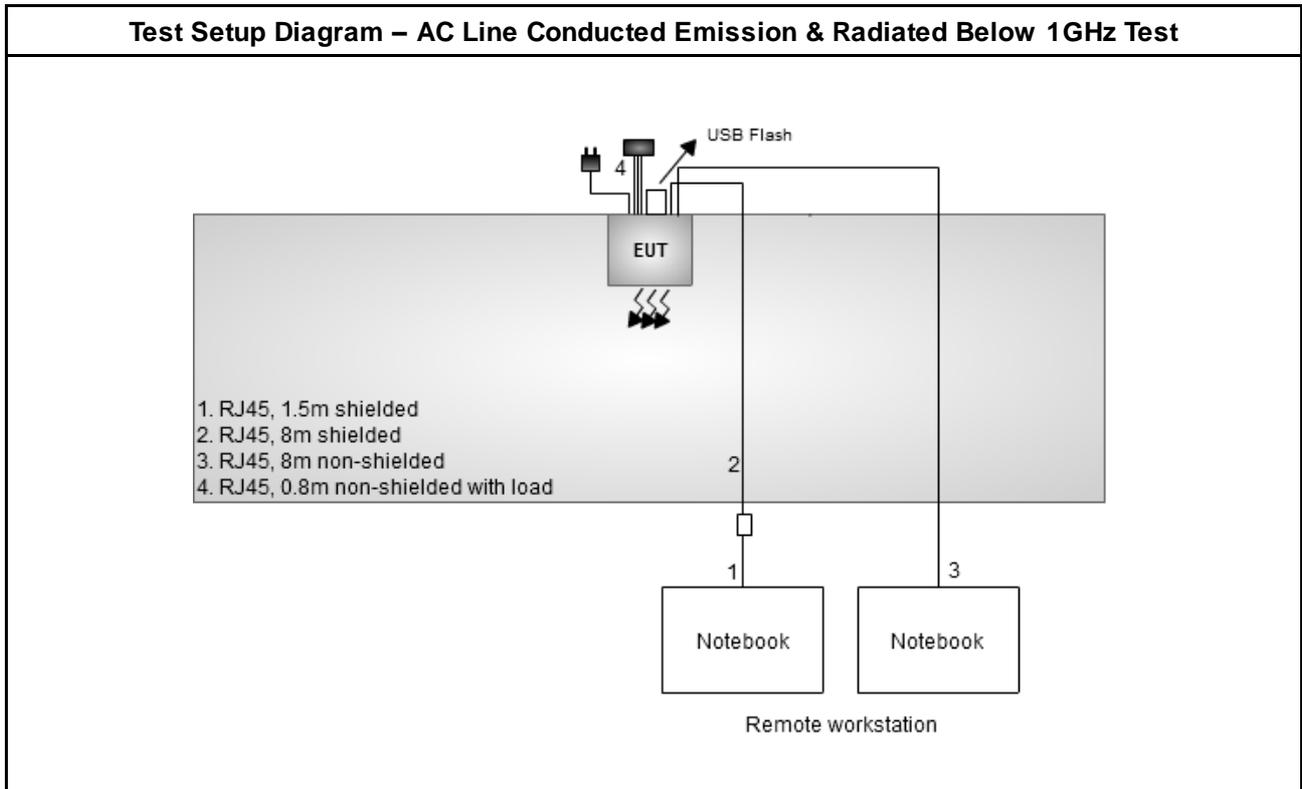
2.3 The Worst Case Measurement Configuration

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	AC Power & Radio link(WLAN), Adapter 2
Note: Adapter 1, adapter 2, adapter 3 and adapter 4 had been pretested and found that the adapter 2 was the worst case and was selected for final test.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	RF Output Power, Power Spectral Density, 6 dB Bandwidth
Test Condition	Conducted measurement at transmit chains
Modulation Mode	11b, 11g, HT20, HT40
Operating Mode	Operating Mode Description
1	AC Power & Radio link(WLAN), Adapter 2

The Worst Case Mode for Following Conformance Tests			
Tests Item	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
User Position	<input checked="" type="checkbox"/> EUT will be placed in fixed position.		
	<input type="checkbox"/> EUT will be placed in mobile position and operating multiple positions. EUT shall be performed two orthogonal planes. The worst planes is X.		
	<input type="checkbox"/> EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed two or three orthogonal planes. The worst planes is X.		
Operating Mode < 1GHz	<input checked="" type="checkbox"/> 1. AC Power & Radio link(WLAN), Adapter 2		
Modulation Mode	11b, 11g, HT20, HT40		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Note: Adapter 1, adapter 2, adapter 3 and adapter 4 had been pretested and found that the adapter 2 was the worst case and was selected for final test.			

2.4 Test Setup Diagram



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

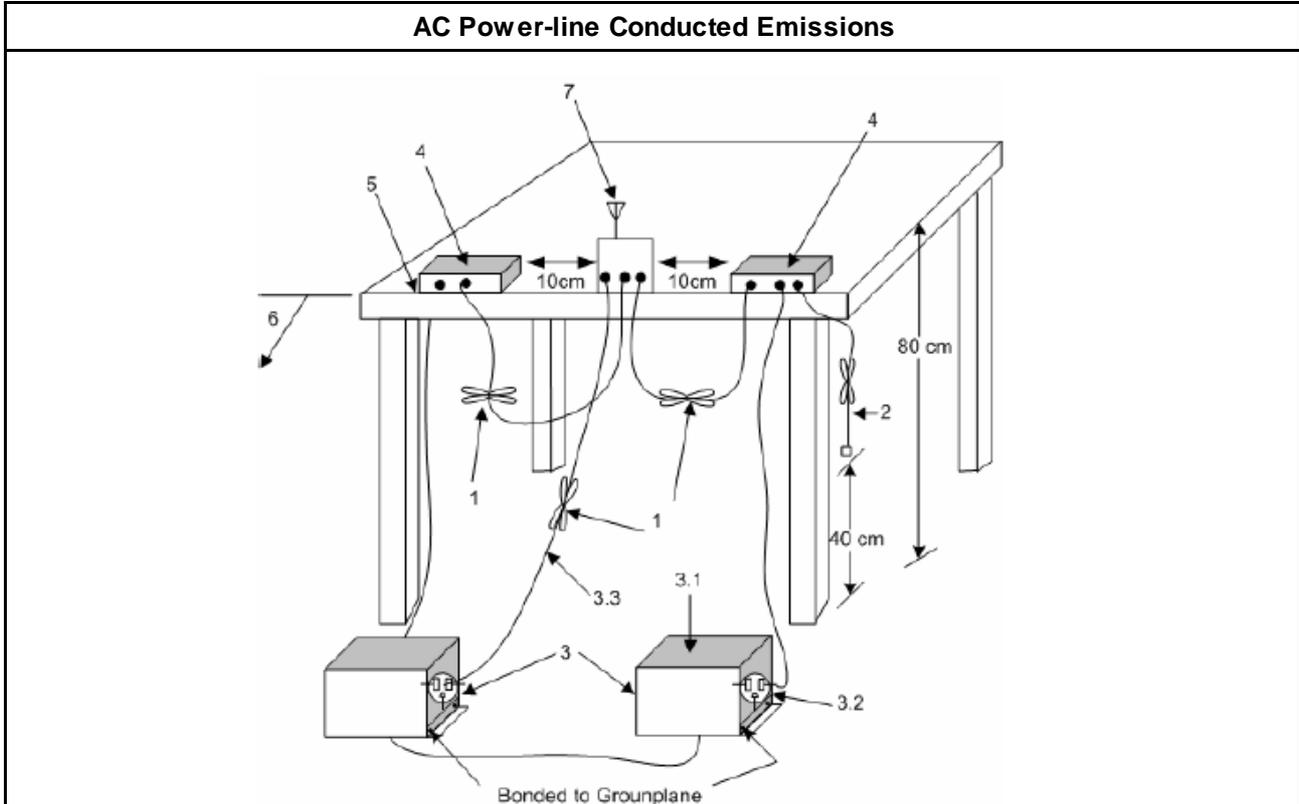
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup





3.1.5 Test Result of AC Power-line Conducted Emissions

AC Power-line Conducted Emissions Result			
Operating Mode	1	Power Phase	Neutral
Operating Function	AC Power & Radio link(WLAN), Adapter 2		

Date: 2013-04-19

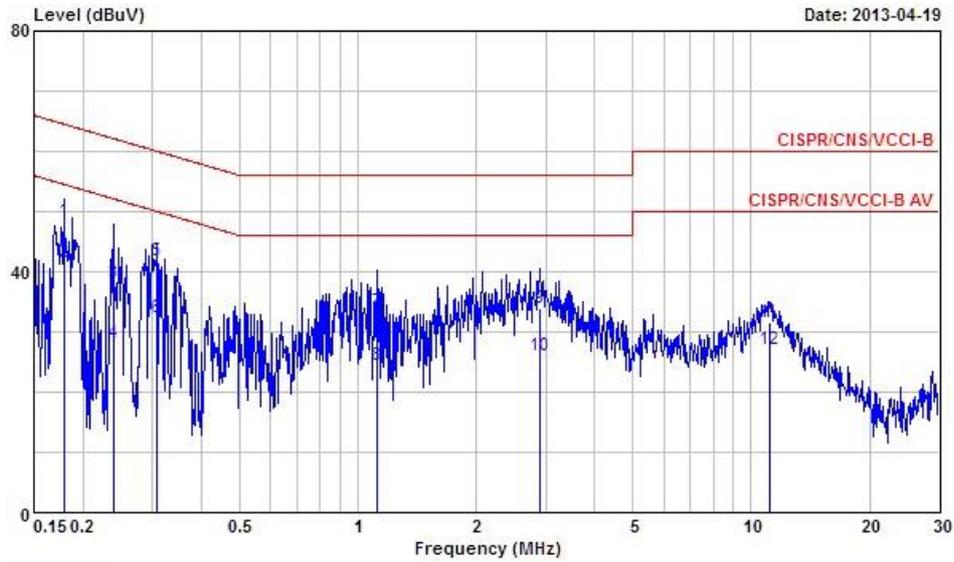
Freq	Level	Over	Limit	Read	LISN	Cable	Remark
MHz	dBuV	Limit	Line	Level	Factor	Loss	
		dB	dBuV	dBuV	dB	dB	
1	0.1796080	48.66	-15.84	64.50	48.19	0.11	0.36 QP
2	0.1796080	36.58	-17.92	54.50	36.11	0.11	0.36 Average
3	0.2986930	43.02	-17.26	60.28	42.56	0.10	0.36 QP
4	0.2986930	34.64	-15.64	50.28	34.18	0.10	0.36 Average
5	0.4686110	34.58	-21.96	56.54	34.10	0.10	0.38 QP
6	0.4686110	21.08	-25.46	46.54	20.60	0.10	0.38 Average
7	1.090	30.60	-25.40	56.00	30.18	0.11	0.31 QP
8	1.090	20.31	-25.69	46.00	19.89	0.11	0.31 Average
9	2.660	24.82	-21.18	46.00	24.32	0.14	0.36 Average
10	2.660	33.62	-22.38	56.00	33.12	0.14	0.36 QP
11	10.560	24.56	-25.44	50.00	24.01	0.24	0.31 Average
12	10.560	29.12	-30.88	60.00	28.57	0.24	0.31 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.)



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	AC Power & Radio link(WLAN), Adapter 2		



	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.1786590	48.53	-16.02	64.55	47.93	0.23	0.37	QP
2	0.1786590	41.47	-13.08	54.55	40.87	0.23	0.37	Average
3	0.2391010	38.22	-23.91	62.13	37.66	0.23	0.33	QP
4	0.2391010	28.10	-24.03	52.13	27.54	0.23	0.33	Average
5	0.3083410	41.88	-18.14	60.02	41.30	0.22	0.36	QP
6	0.3083410	32.29	-17.73	50.02	31.71	0.22	0.36	Average
7	1.120	33.43	-22.57	56.00	32.88	0.23	0.32	QP
8	1.120	24.52	-21.48	46.00	23.97	0.23	0.32	Average
9	2.900	33.83	-22.17	56.00	33.21	0.27	0.35	QP
10	2.900	26.01	-19.99	46.00	25.39	0.27	0.35	Average
11	11.140	31.56	-28.44	60.00	30.79	0.44	0.33	QP
12	11.140	27.20	-22.80	50.00	26.43	0.44	0.33	Average

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

3.2 6dB Bandwidth

3.2.1 6dB Bandwidth Limit

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

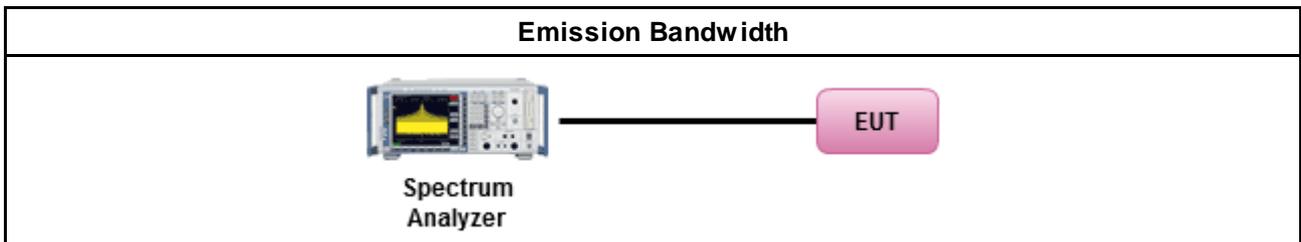
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/> For the emission bandwidth shall be measured using one of the options below:	
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input checked="" type="checkbox"/> For conducted measurement.	
<input type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input checked="" type="checkbox"/>	The EUT supports multiple transmit chains using options given below:
<input type="checkbox"/>	Option 1: Multiple transmit chains measurements need to be performed on one of the active transmit chains (antenna outputs). All measurement had be performed on transmit chains 1.
<input checked="" type="checkbox"/>	Option 2: Multiple transmit chains measurements need to be performed on each transmit chains individually (antenna outputs). All measurement had be performed on all transmit chains.

3.2.4 Test Setup

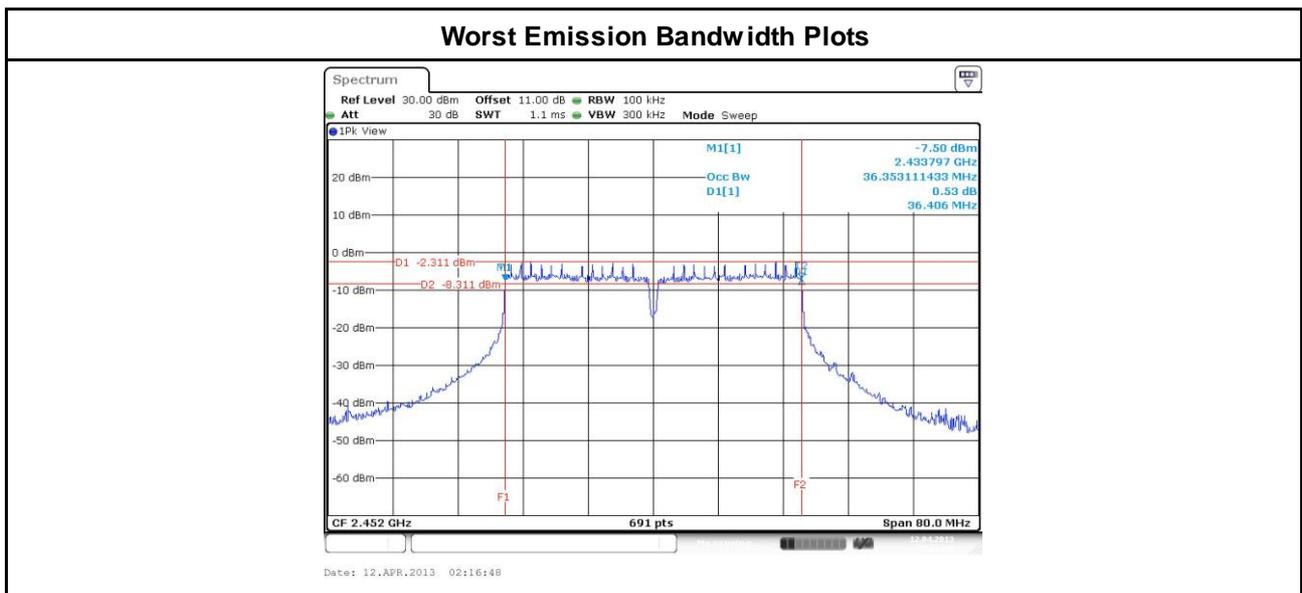




3.2.5 Test Result of Emission Bandwidth

Emission Bandwidth Result										
Condition			Emission Bandwidth (MHz)							
Modulation Mode	N _{TX}	Freq. (MHz)	99% Bandwidth				6dB Bandwidth			
			Chain-Port 1	Chain-Port 2	Chain-Port 3	Chain-Port 4	Chain-Port 1	Chain-Port 2	Chain-Port 3	Chain-Port 4
11b	2	2412	13.89	13.89	-	-	10.09	10.09	-	-
11b	2	2437	13.89	14.01	-	-	10.09	10.09	-	-
11b	2	2462	13.84	13.89	-	-	10.09	10.09	-	-
11g	2	2412	17.13	16.85	-	-	16.35	16.35	-	-
11g	2	2437	17.37	17.77	-	-	16.35	16.35	-	-
11g	2	2462	17.13	16.85	-	-	16.35	16.35	-	-
HT20	2	2412	18.18	18.06	-	-	17.62	17.62	-	-
HT20	2	2437	18.35	18.87	-	-	17.57	17.33	-	-
HT20	2	2462	18.12	18.06	-	-	17.62	17.62	-	-
HT40	2	2422	39.36	38.32	-	-	36.41	36.41	-	-
HT40	2	2437	39.36	38.67	-	-	36.41	36.41	-	-
HT40	2	2452	38.44	39.48	-	-	36.41	36.41	-	-
Limit			N/A				≥500 kHz			
Result			Complied							

Note 1: N_{TX} = Number of Transmit Chains





3.3 RF Output Power

3.3.1 RF Output Power Limit

RF Output Power Limit	
Maximum Peak Conducted Output Power or Maximum Conducted Output Power Limit	
<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 $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dBm
e.i.r.p. Power Limit:	
<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.	

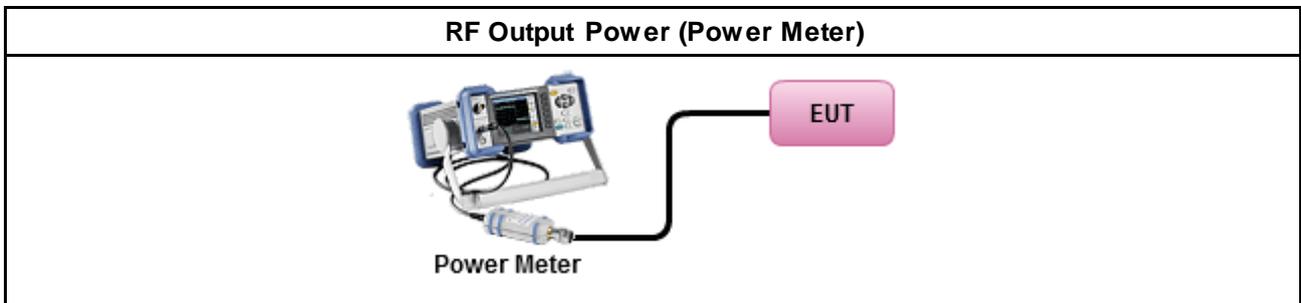
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<input type="checkbox"/>	Maximum Peak Conducted Output Power
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (integrated band power method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.3 Option 2 (peak power meter for VBW ≥ DTS BW)
<input checked="" type="checkbox"/>	Maximum Conducted (Average) Output Power
	[duty cycle ≥ 98% or external video / power trigger]
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.1.2 Method AVGSA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.1.3 Method AVGSA-1 Alt. (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.1.4 Method AVGSA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.1.5 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, clause 9.2.2 Method AVGPM (using an RF average power meter).
<input checked="" type="checkbox"/>	For conducted measurement.
<input type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input checked="" type="checkbox"/>	The EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
<input checked="" type="checkbox"/>	If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup



3.3.5 Directional Gain for Power Measurement

Directional Gain (DG) Result					
Transmit Chains No.		1	2	-	-
Maximum G _{ANT} (dBi)		1.8	1.8	-	-
Modulation Mode	DG (dBi)	N _{TX}	N _{SS}	STBC	Array Gain (dB)
11b,1-11Mbps	1.8	2	1	-	-
11g,6-54Mbps	1.8	2	1	-	-
HT20,M0-M7	1.8	2	1	-	-
HT20,M8-15	1.8	2	2	-	-
HT40,M0-M7	1.8	2	1	-	-
HT40,M8-M15	1.8	2	2	-	-

Note 1: For all transmitter outputs with equal antenna gains, directional gain is to be computed as follows:
Any transmit signals are correlated, Directional Gain = $G_{ANT} + 10 \log(N_{TX})$
All transmit signals are completely uncorrelated, Directional Gain = G_{ANT}

Note 2: For all transmitter outputs with unequal antenna gains, directional gain is to be computed as follows:
Any transmit signals are correlated, Directional Gain = $10 \log[(10^{G_1/20} + \dots + 10^{G_{N_{TX}}/20})^2 / N_{TX}]$
All transmit signals are completely uncorrelated, Directional Gain = $10 \log[(10^{G_1/10} + \dots + 10^{G_{N_{TX}}/10}) / N_{TX}]$

Note 3: For Spatial Multiplexing, Directional Gain (DG) = $G_{ANT} + 10 \log(N_{TX}/N_{SS})$,
where N_{SS} = the number of independent spatial streams data.

Note 4: For CDD transmissions, directional gain is calculated as power measurements:
Directional Gain (DG) = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows:
Array Gain = 0 dB (i.e., no array gain) for $N_{TX} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{TX} ;



3.3.6 Test Result of Maximum Conducted Output Power

Maximum Conducted (Average) Output Power									
Condition			RF Output Power (dBm)						
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)	EIRP Power	EIRP Limit
11b	2	2412	18.33	18.93	21.65	30	1.8	23.45	36
11b	2	2437	23.02	22.81	25.93	30	1.8	27.73	36
11b	2	2462	19.24	19.37	22.32	30	1.8	24.12	36
11g	2	2412	14.13	14.62	17.39	30	1.8	19.19	36
11g	2	2437	20.46	20.64	23.56	30	1.8	25.36	36
11g	2	2462	14.68	14.82	17.76	30	1.8	19.56	36
HT20	2	2412	14.11	14.36	17.25	30	1.8	19.05	36
HT20	2	2437	20.54	20.73	23.65	30	1.8	25.45	36
HT20	2	2462	15.01	15.33	18.18	30	1.8	19.98	36
HT40	2	2422	11.79	11.62	14.72	30	1.8	16.52	36
HT40	2	2437	14.82	15.39	18.12	30	1.8	19.92	36
HT40	2	2452	12.32	12.33	15.34	30	1.8	17.14	36
Result			Complied						

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<input checked="" type="checkbox"/> Power Spectral Density (PSD) ≤ 8 dBm/3kHz

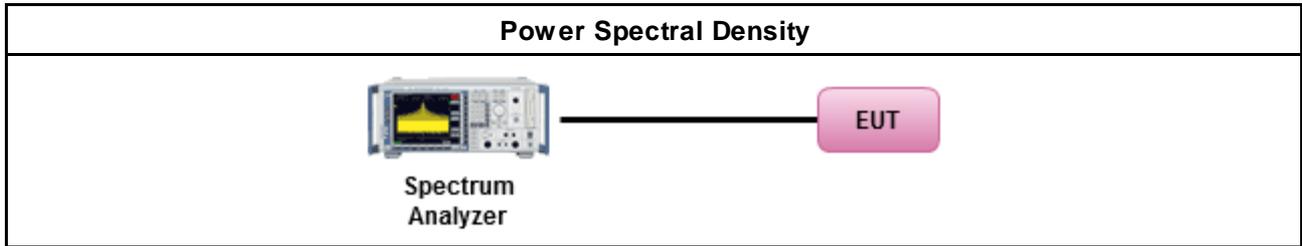
3.4.2 Measuring Instruments

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 type="checkbox"/> Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; detector=peak).. [duty cycle ≥ 98% or external video / power trigger]
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging). (For 11 b mode)
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-1 Alt. (slow sweep speed) duty cycle < 98% and average over on/off periods with duty factor
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-2 (spectral trace averaging). (For 11g , 11 HT20 / HT 40)
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)
<input checked="" type="checkbox"/> For conducted measurement.
<input type="checkbox"/> The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/> The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input checked="" type="checkbox"/> The EUT supports multiple transmit chains using options given below:
<input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power 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.

Test Setup

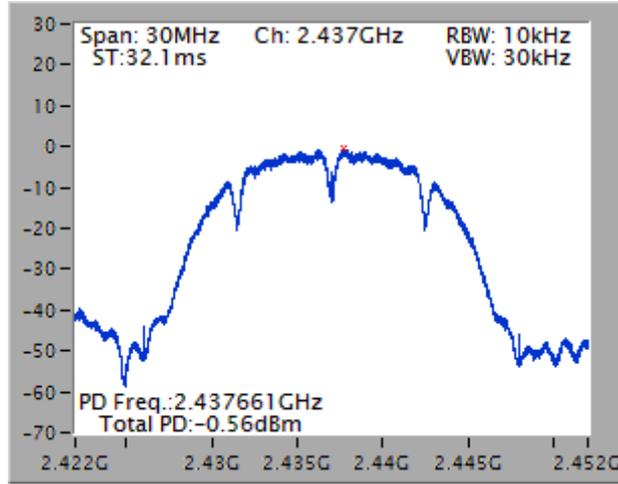


3.4.4 Test Result of Power Spectral Density

Power Spectral Density Result				
Condition			Power Spectral Density (dBm/10kHz)	
Modulation Mode	N _{TX}	Freq. (MHz)	Sum Chain	Power Limit
11b	2	2412	-4.97	8
11b	2	2437	-0.56	8
11b	2	2462	-4.47	8
11g	2	2412	-11.42	8
11g	2	2437	-4.90	8
11g	2	2462	-11.22	8
HT20	2	2412	-11.30	8
HT20	2	2437	-5.06	8
HT20	2	2462	-10.41	8
HT40	2	2422	-14.68	8
HT40	2	2437	-13.14	8
HT40	2	2452	-15.67	8
Result			Complied	
Note 1: PSD = sum each transmit chains by bin-to-bin PSD				

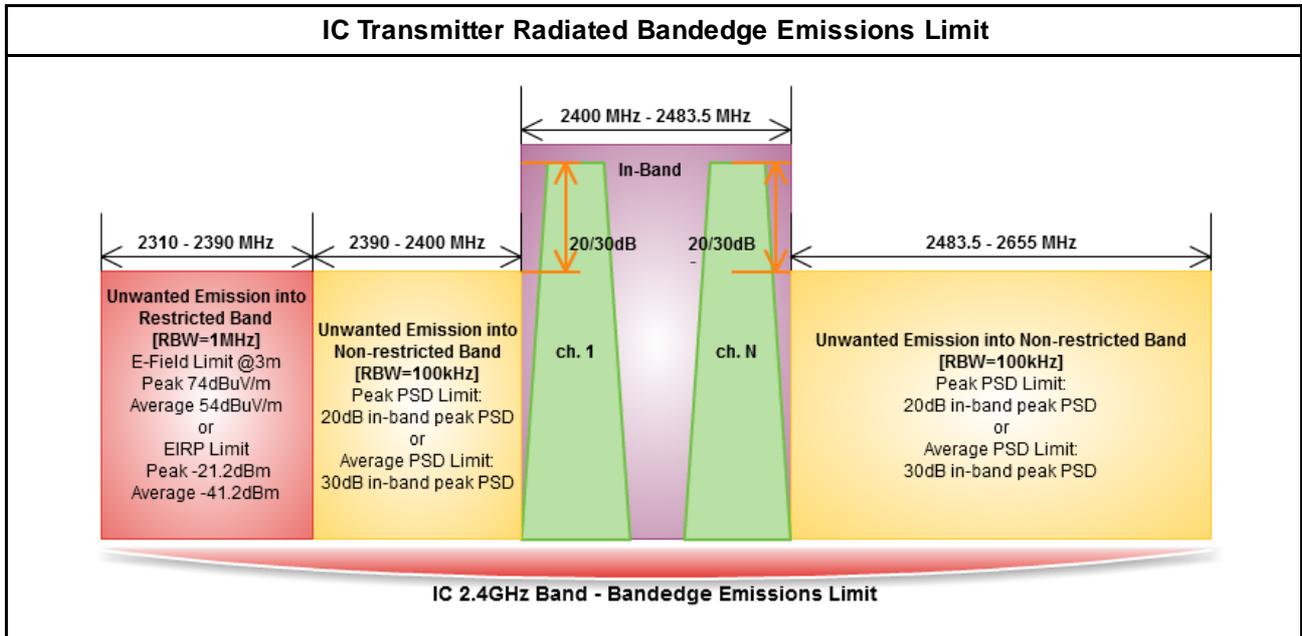
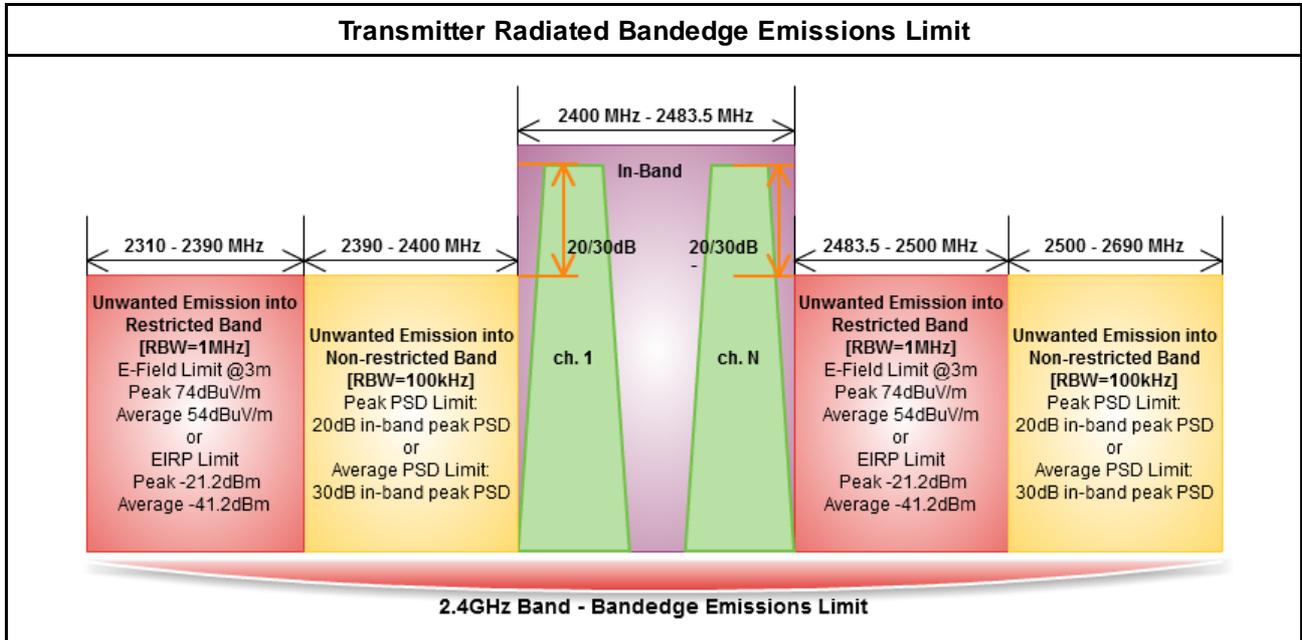


Worst Power Spectral Density Plots



3.5 Transmitter Radiated Bandedge Emissions

3.5.1 Transmitter Radiated Bandedge Emissions Limit





3.5.2 Measuring Instruments

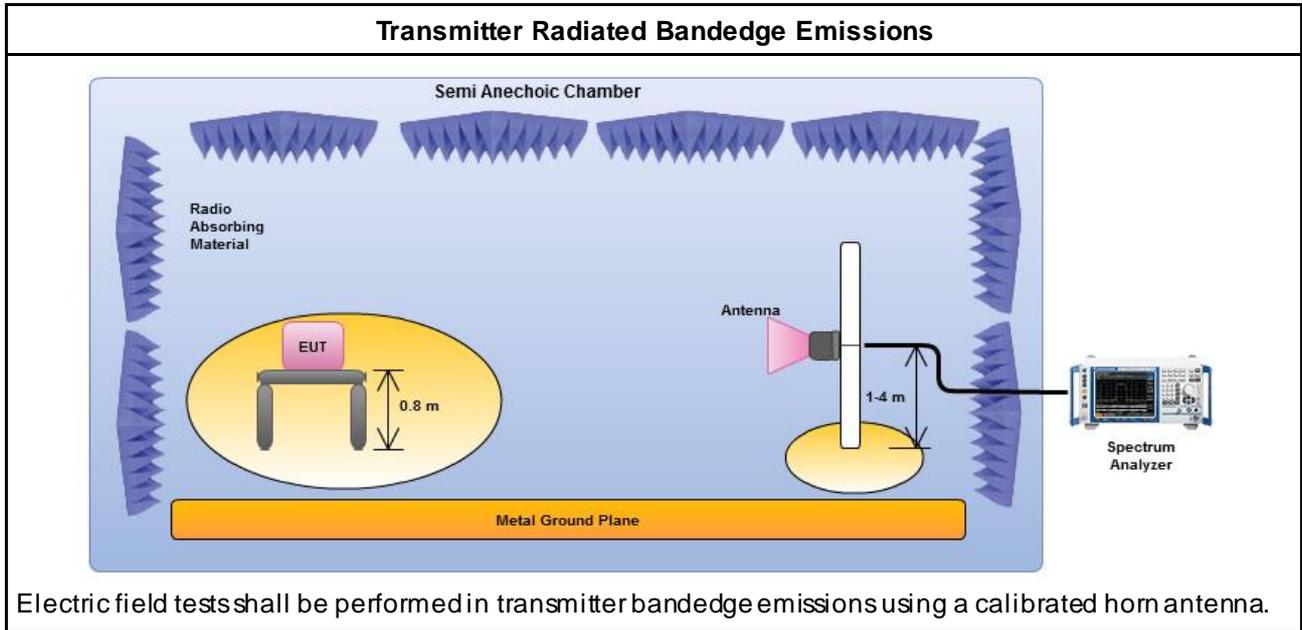
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.2.2 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
<input checked="" type="checkbox"/>	For the transmitter unwanted emissions shall be measured using following options below:
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$)
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$).
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.
<input checked="" type="checkbox"/>	For the transmitter bandedge emissions shall be measured using following options below:
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.2 for band-edge testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for marker-delta method for band-edge measurements.
<input checked="" type="checkbox"/>	For radiated measurement, refer as FCC KDB 558074, clause 12.2.7.

Test Method	
<input type="checkbox"/>	For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.
<input type="checkbox"/>	For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.
<input type="checkbox"/>	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB

3.5.4 Test Setup





3.5.5 Test Result of Transmitter Radiated Bandedge Emissions

Transmitter Radiated Bandedge Emissions Result								
Modulation	11b			N _{TX}	2			
Non-restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	NBE Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Level Type	Pol. note 1
2390-2400	2412	111.31	2397.02	70.40	40.91	30	PK	V
2500-2690	2462	112.35	2543.30	50.64	61.71	30	PK	V
Low Bandedge				Up Bandedge				
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical)								

Transmitter Radiated Bandedge Emissions Result								
Modulation	11b			N _{TX}	2			
Restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/1MHz)	RBE Freq. (MHz)	Measure Distance (m)	Out-Band Level (dBuV/m)	Limit (dBuV/m)	Level Type	Pol. note 1
2310-2390	2412	113.55	2331.62	3	63.19	74	PK	V
2310-2390	2412	110.89	2386.16	3	53.90	54	AV	V
2483.5-2500	2462	114.20	2487.50	3	62.08	74	PK	V
2483.5-2500	2462	111.55	2487.10	3	53.89	54	AV	V
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical).								



Transmitter Radiated Bandedge Emissions Result								
Modulation	11g			N _{TX}	2			
Non-restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	NBE Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Level Type	Pol. note 1
2390-2400	2412	103.82	2399.94	72.30	31.52	30	PK	V
2500-2690	2462	104.86	2539.70	48.01	56.85	30	PK	V
Low Bandedge				Up Bandedge				
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical)								

Transmitter Radiated Bandedge Emissions Result								
Modulation	11g			N _{TX}	2			
Restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/1MHz)	RBE Freq. (MHz)	Measure Distance (m)	Out-Band Level (dBuV/m)	Limit (dBuV/m)	Level Type	Pol. note 1
2310-2390	2412	110.75	2389.97	3	72.16	74	PK	V
2310-2390	2412	101.31	2389.97	3	53.55	54	AV	V
2483.5-2500	2462	112.71	2484.90	3	73.88	74	PK	V
2483.5-2500	2462	102.18	2483.70	3	49.35	54	AV	V
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical).								



Transmitter Radiated Bandedge Emissions Result								
Modulation	HT20			N _{TX}	2			
Non-restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	NBE Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Level Type	Pol. note 1
2390-2400	2412	104.15	2399.94	69.88	34.27	30	PK	V
2500-2690	2462	105.12	2504.80	48.47	56.65	30	PK	V
Low Bandedge				Up Bandedge				
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical)								

Transmitter Radiated Bandedge Emissions Result								
Modulation	HT20			N _{TX}	2			
Restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/1MHz)	RBE Freq. (MHz)	Measure Distance (m)	Out-Band Level (dBuV/m)	Limit (dBuV/m)	Level Type	Pol. note 1
2310-2390	2412	110.89	2389.41	3	71.02	74	PK	V
2310-2390	2412	101.01	2389.86	3	53.57	54	AV	V
2483.5-2500	2462	111.85	2483.50	3	73.67	74	PK	V
2483.5-2500	2462	101.99	2483.70	3	51.16	54	AV	V
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical).								



Transmitter Radiated Bandedge Emissions Result								
Modulation	HT40			N _{TX}	2			
Non-restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	NBE Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Level Type	Pol. note 1
2390-2400	2422	99.10	2399.89	69.06	30.04	30	PK	V
2500-2690	2452	99.95	2501.00	53.59	46.36	30	PK	V
Low Bandedge				Up Bandedge				
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical)								

Transmitter Radiated Bandedge Emissions Result								
Modulation	HT40			N _{TX}	2			
Restricted Band (MHz)	Test Ch. Freq. (MHz)	In-band PSD [i] (dBuV/1MHz)	RBE Freq. (MHz)	Measure Distance (m)	Out-Band Level (dBuV/m)	Limit (dBuV/m)	Level Type	Pol. note 1
2310-2390	2422	105.79	2389.33	3	71.64	74	PK	V
2310-2390	2422	96.29	2387.88	3	53.55	54	AV	V
2483.5-2500	2452	107.15	2486.48	3	73.90	74	PK	V
2483.5-2500	2452	97.29	2483.60	3	53.66	54	AV	V
Note 1: Measurement worst emissions of receive antenna polarization: H (Horizontal) or V (Vertical).								



3.6 Transmitter Radiated Unwanted Emissions

3.6.1 Transmitter Radiated Unwanted Emissions Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

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

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

3.6.2 Measuring Instruments

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

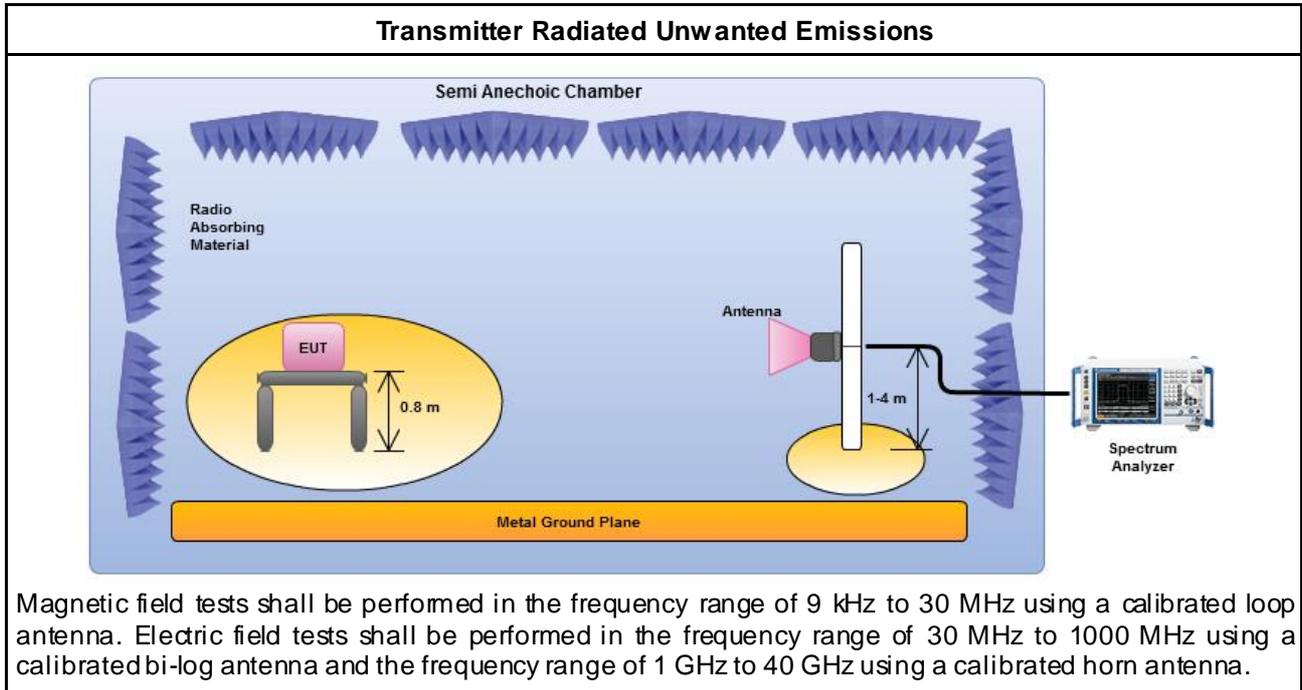


3.6.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
<input type="checkbox"/>	Measurements in the frequency range 10 GHz - 18GHz are typically made at a closer distance 1m, because the instrumentation noise floor is typically close to the radiated emission limit.
<input type="checkbox"/>	Measurements in the frequency range above 18 GHz - 25GHz are typically made at a closer distance 0.5m, because the instrumentation noise floor is typically close to the radiated emission limit.
<input checked="" type="checkbox"/>	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
<input checked="" type="checkbox"/>	For the transmitter unwanted emissions shall be measured using following options below:
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥ 98%)
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW ≥ 1/T).
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 12.2.3 measurement procedure Quasi-Peak limit.
<input checked="" type="checkbox"/>	For radiated measurement, refer as FCC KDB 558074, clause 12.2.7.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1000 MHz.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.6 for radiated emissions from above 1 GHz.

Test Method	
<input type="checkbox"/>	For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.
<input type="checkbox"/>	For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.
<input type="checkbox"/>	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB

3.6.4 Test Setup



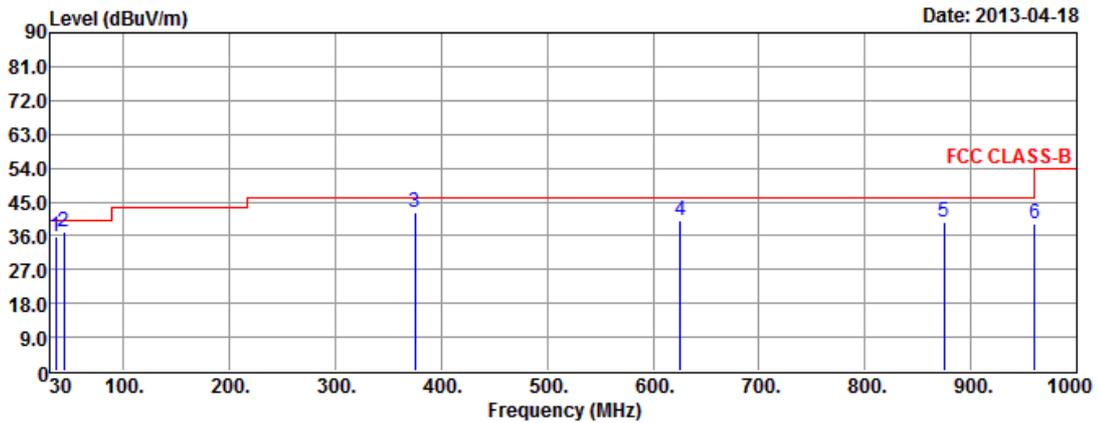
3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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



3.6.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Transmitter Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	1	Polarization	V
Operating Function	AC Power & Radio link(WLAN), Adapter 2		

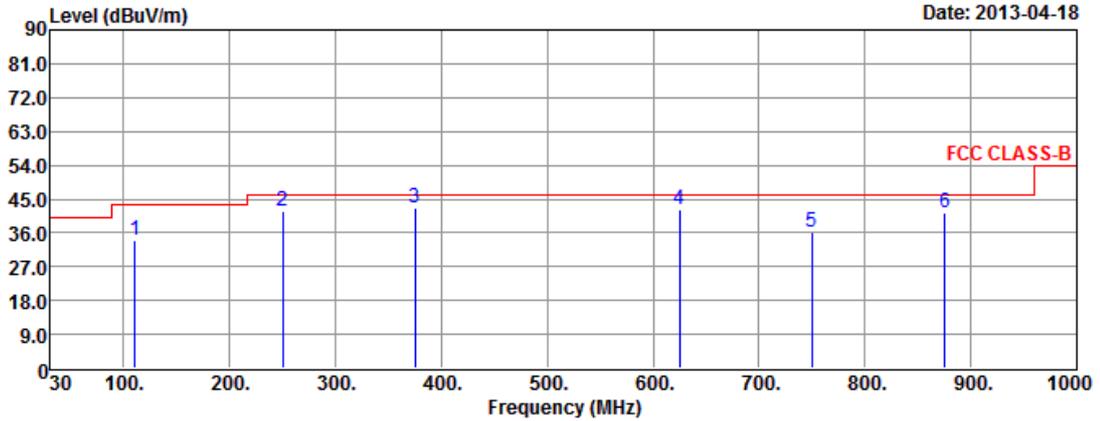


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	35.82	35.86	-4.14	40.00	50.92	15.89	0.67	31.62	---	---	QP
2	43.58	36.88	-3.12	40.00	56.50	11.22	0.70	31.54	---	---	QP
3	375.32	42.03	-3.97	46.00	55.82	15.06	2.16	31.01	---	---	Peak
4	625.58	39.98	-6.02	46.00	47.22	20.56	2.45	30.25	---	---	Peak
5	874.87	39.71	-6.29	46.00	43.50	23.10	2.96	29.85	---	---	Peak
6	960.23	39.37	-14.63	54.00	41.69	24.90	2.83	30.05	---	---	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 (Below 1GHz)			
Operating Mode	1	Polarization	H
Operating Function	AC Power & Radio link(WLAN), Adapter 2		



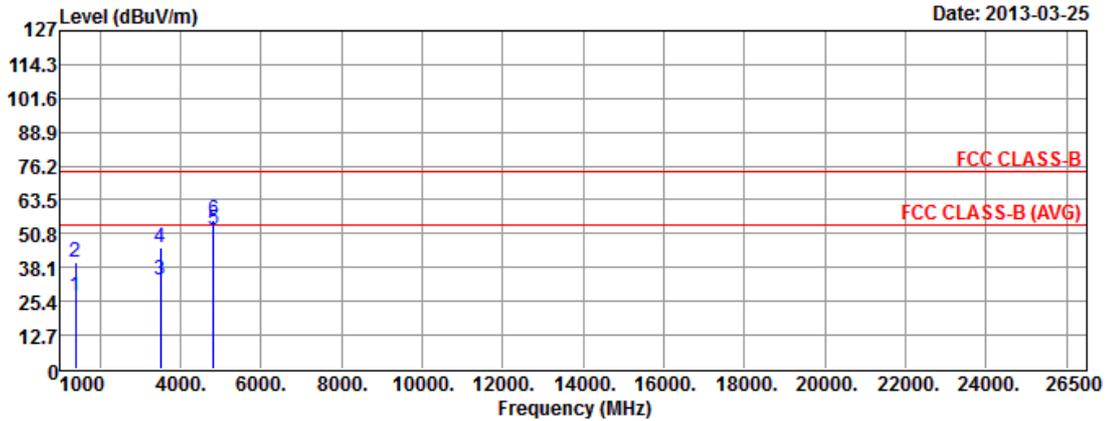
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	110.51	34.09	-9.41	43.50	53.22	11.26	1.15	31.54	---	---	Peak
2	250.19	41.87	-4.13	46.00	58.54	12.62	1.61	30.90	---	---	Peak
3	375.32	42.45	-3.55	46.00	56.24	15.06	2.16	31.01	---	---	QP
4	624.61	42.29	-3.71	46.00	49.54	20.55	2.45	30.25	---	---	Peak
5	749.74	36.15	-9.85	46.00	41.22	22.40	2.72	30.19	---	---	Peak
6	875.84	41.15	-4.85	46.00	44.93	23.10	2.97	29.85	---	---	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) for 11b

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	Test Freq. (MHz)	2412
N _{TX}	2	Polarization	V

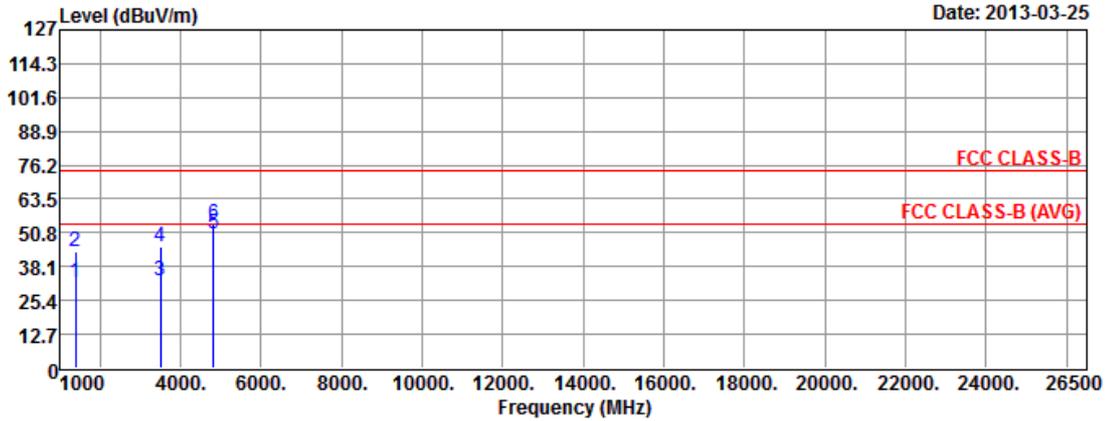


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.28	-26.72	54.00	32.96	27.98	3.42	37.08	---	---	Average
2	1400.00	40.06	-33.94	74.00	45.74	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.34	-20.66	54.00	30.55	32.70	5.69	35.60	---	---	Average
4	3500.00	45.69	-28.31	74.00	42.90	32.70	5.69	35.60	---	---	Peak
5	4824.00	52.55	-1.45	54.00	46.74	34.26	6.51	34.96	---	---	Average
6	4824.00	56.03	-17.97	74.00	50.22	34.26	6.51	34.96	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
 Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	Test Freq. (MHz)	2412
N _{TX}	2	Polarization	H

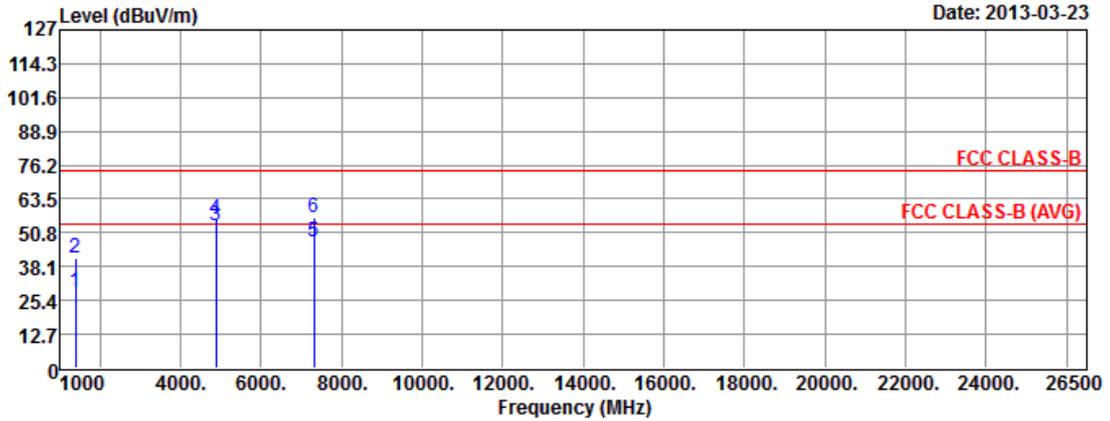


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.34	-21.66	54.00	38.02	27.98	3.42	37.08	---	---	Average
2	1400.00	43.66	-30.34	74.00	49.34	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.05	-20.95	54.00	30.26	32.70	5.69	35.60	---	---	Average
4	3500.00	45.86	-28.14	74.00	43.07	32.70	5.69	35.60	---	---	Peak
5	4824.00	50.66	-3.34	54.00	44.85	34.26	6.51	34.96	---	---	Average
6	4824.00	54.10	-19.90	74.00	48.29	34.26	6.51	34.96	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
 Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	V

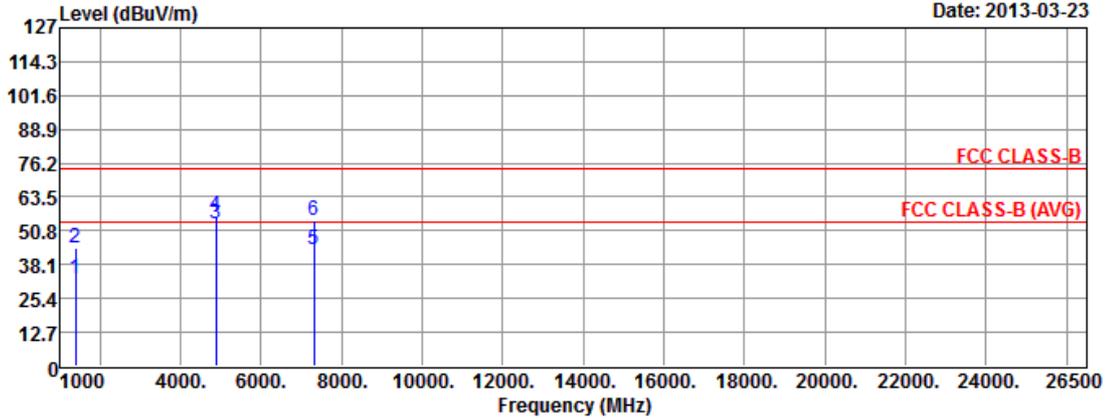


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	28.56	-25.44	54.00	34.24	27.98	3.42	37.08	---	---	Average
2	1400.00	41.32	-32.68	74.00	47.00	27.98	3.42	37.08	---	---	Peak
3	4874.00	53.59	-0.41	54.00	47.76	34.27	6.53	34.97	---	---	Average
4	4874.00	56.01	-17.99	74.00	50.18	34.27	6.53	34.97	---	---	Peak
5	7311.00	47.57	-6.43	54.00	38.15	36.04	8.40	35.02	---	---	Average
6	7311.00	56.56	-17.44	74.00	47.14	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	H

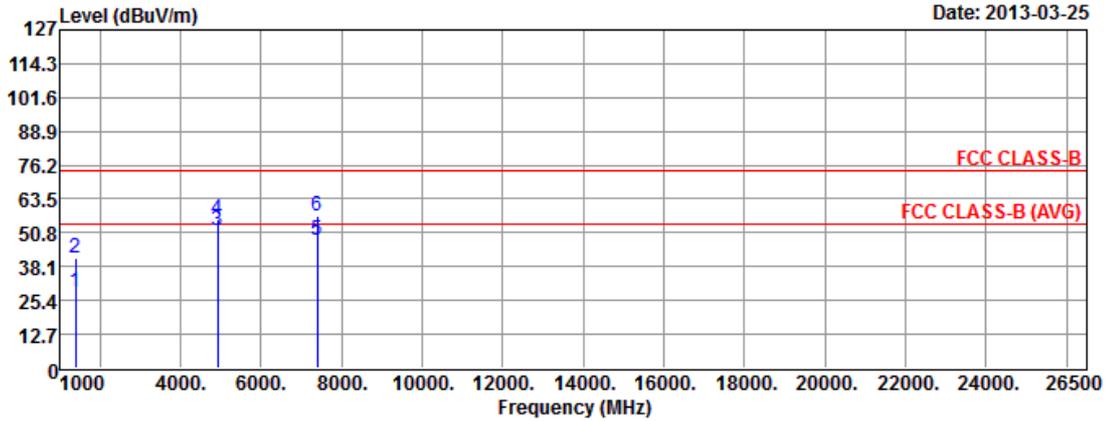


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.68	-21.32	54.00	38.36	27.98	3.42	37.08	---	---	Average
2	1400.00	44.25	-29.75	74.00	49.93	27.98	3.42	37.08	---	---	Peak
3	4874.00	53.61	-0.39	54.00	47.78	34.27	6.53	34.97	---	---	Average
4	4874.00	56.48	-17.52	74.00	50.65	34.27	6.53	34.97	---	---	Peak
5	7311.00	43.87	-10.13	54.00	34.45	36.04	8.40	35.02	---	---	Average
6	7311.00	54.81	-19.19	74.00	45.39	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	Test Freq. (MHz)	2462
N _{TX}	2	Polarization	V

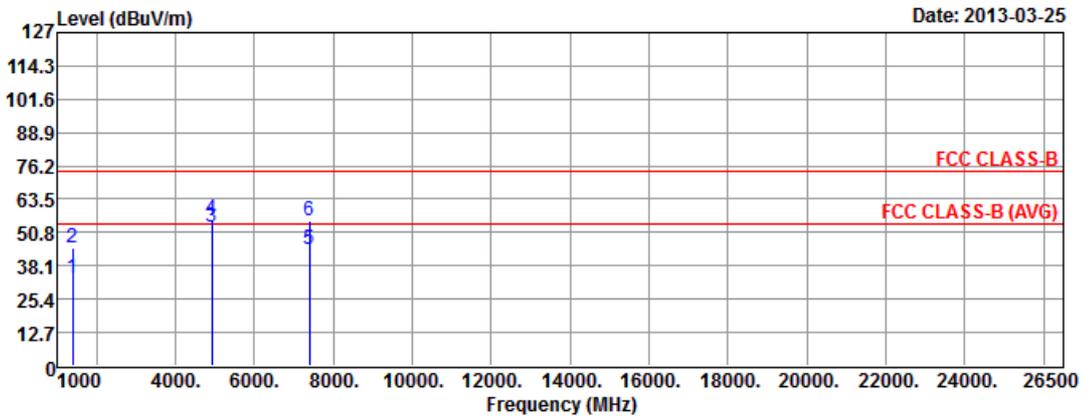


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	28.64	-25.36	54.00	34.32	27.98	3.42	37.08	---	---	Average
2	1400.00	41.36	-32.64	74.00	47.04	27.98	3.42	37.08	---	---	Peak
3	4924.00	51.85	-2.15	54.00	46.00	34.28	6.55	34.98	---	---	Average
4	4924.00	55.74	-18.26	74.00	49.89	34.28	6.55	34.98	---	---	Peak
5	7386.00	47.95	-6.05	54.00	38.42	36.02	8.56	35.05	---	---	Average
6	7386.00	56.83	-17.17	74.00	47.30	36.02	8.56	35.05	---	---	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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11b	Test Freq. (MHz)	2462
N _{TX}	2	Polarization	H



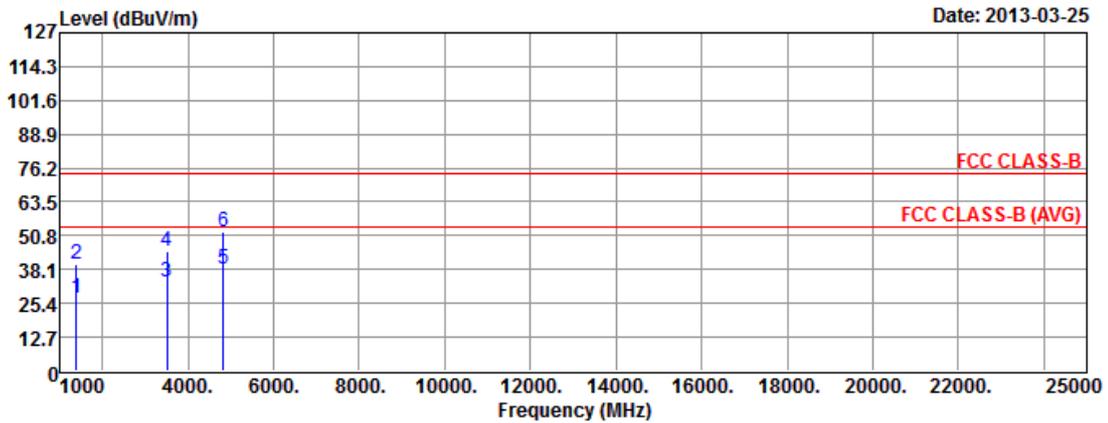
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	33.56	-20.44	54.00	39.24	27.98	3.42	37.08	---	---	Average
2	1400.00	44.95	-29.05	74.00	50.63	27.98	3.42	37.08	---	---	Peak
3	4924.00	52.90	-1.10	54.00	47.05	34.28	6.55	34.98	---	---	Average
4	4924.00	55.82	-18.18	74.00	49.97	34.28	6.55	34.98	---	---	Peak
5	7386.00	44.14	-9.86	54.00	34.61	36.02	8.56	35.05	---	---	Average
6	7386.00	55.06	-18.94	74.00	45.53	36.02	8.56	35.05	---	---	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 30 dB relative to the maximum measured in-band level.



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

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	Test Freq. (MHz)	2412
N _{TX}	2	Polarization	V

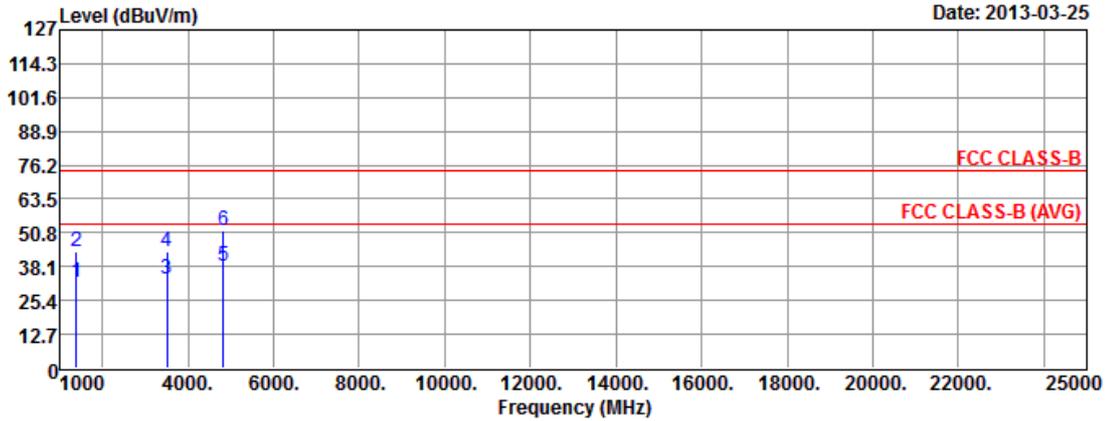


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.63	-26.37	54.00	33.31	27.98	3.42	37.08	---	---	Average
2	1400.00	40.36	-33.64	74.00	46.04	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.41	-20.59	54.00	30.62	32.70	5.69	35.60	---	---	Average
4	3500.00	45.27	-28.73	74.00	42.48	32.70	5.69	35.60	---	---	Peak
5	4824.00	38.52	-15.48	54.00	32.71	34.26	6.51	34.96	---	---	Average
6	4824.00	52.47	-21.53	74.00	46.66	34.26	6.51	34.96	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
 Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	Test Freq. (MHz)	2412
N _{TX}	2	Polarization	H

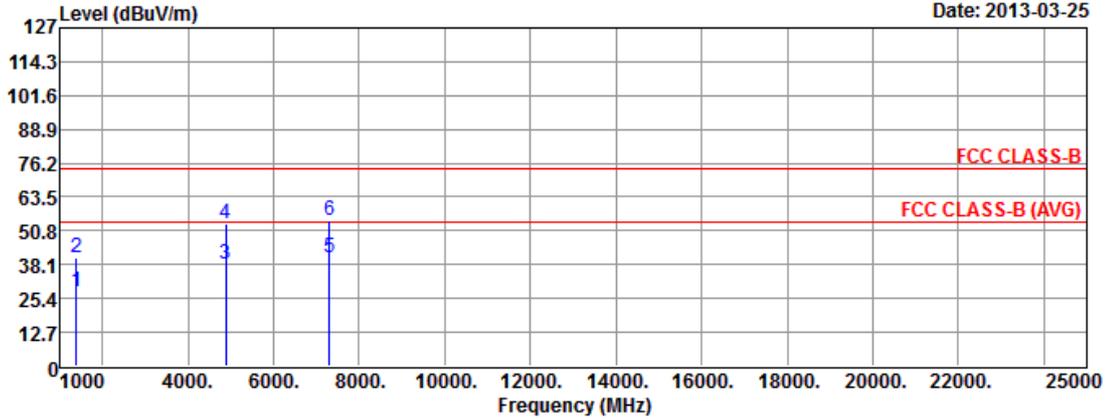


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.42	-21.58	54.00	38.10	27.98	3.42	37.08	---	---	Average
2	1400.00	43.51	-30.49	74.00	49.19	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.48	-20.52	54.00	30.69	32.70	5.69	35.60	---	---	Average
4	3500.00	43.63	-30.37	74.00	40.84	32.70	5.69	35.60	---	---	Peak
5	4824.00	38.41	-15.59	54.00	32.60	34.26	6.51	34.96	---	---	Average
6	4824.00	51.36	-22.64	74.00	45.55	34.26	6.51	34.96	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
 Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	V

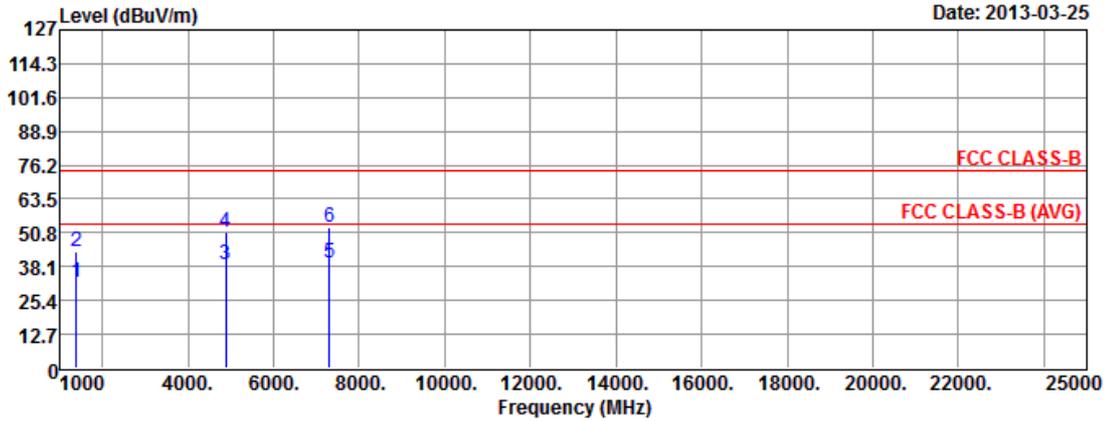


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.66	-26.34	54.00	33.34	27.98	3.42	37.08	---	---	Average
2	1400.00	40.58	-33.42	74.00	46.26	27.98	3.42	37.08	---	---	Peak
3	4874.00	38.57	-15.43	54.00	32.74	34.27	6.53	34.97	---	---	Average
4	4874.00	53.34	-20.66	74.00	47.51	34.27	6.53	34.97	---	---	Peak
5	7311.00	41.00	-13.00	54.00	31.58	36.04	8.40	35.02	---	---	Average
6	7311.00	54.64	-19.36	74.00	45.22	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	H

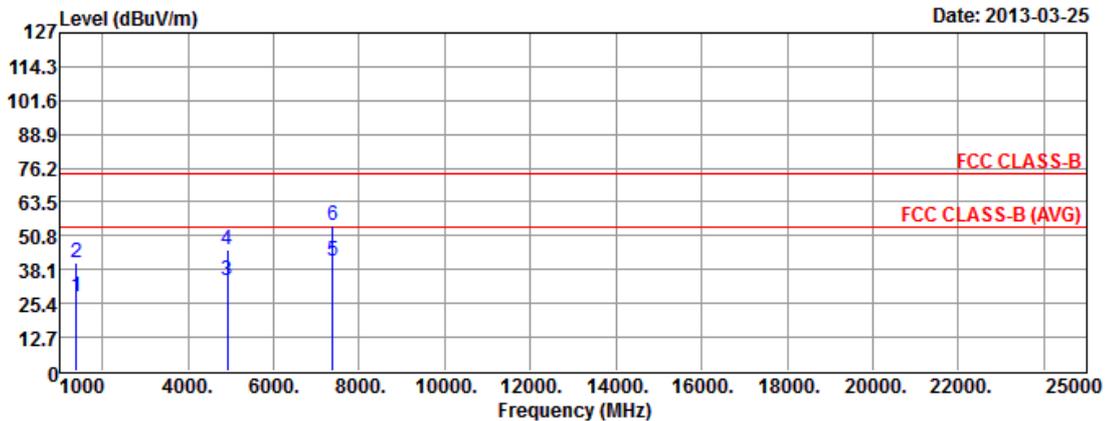


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.33	-21.67	54.00	38.01	27.98	3.42	37.08	---	---	Average
2	1400.00	43.56	-30.44	74.00	49.24	27.98	3.42	37.08	---	---	Peak
3	4874.00	38.96	-15.04	54.00	33.13	34.27	6.53	34.97	---	---	Average
4	4874.00	51.33	-22.67	74.00	45.50	34.27	6.53	34.97	---	---	Peak
5	7311.00	39.57	-14.43	54.00	30.15	36.04	8.40	35.02	---	---	Average
6	7311.00	53.06	-20.94	74.00	43.64	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	Test Freq. (MHz)	2462
N _{TX}	2	Polarization	V

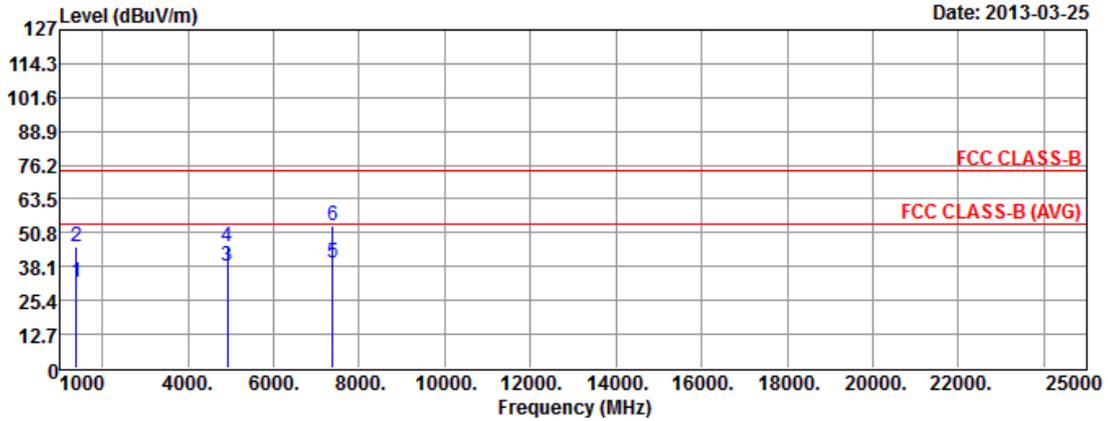


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.66	-26.34	54.00	33.34	27.98	3.42	37.08	---	---	Average
2	1400.00	40.55	-33.45	74.00	46.23	27.98	3.42	37.08	---	---	Peak
3	4924.00	33.85	-20.15	54.00	28.00	34.28	6.55	34.98	---	---	Average
4	4924.00	45.67	-28.33	74.00	39.82	34.28	6.55	34.98	---	---	Peak
5	7386.00	41.57	-12.43	54.00	32.04	36.02	8.56	35.05	---	---	Average
6	7386.00	54.68	-19.32	74.00	45.15	36.02	8.56	35.05	---	---	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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11g	Test Freq. (MHz)	2462
N _{TX}	2	Polarization	H



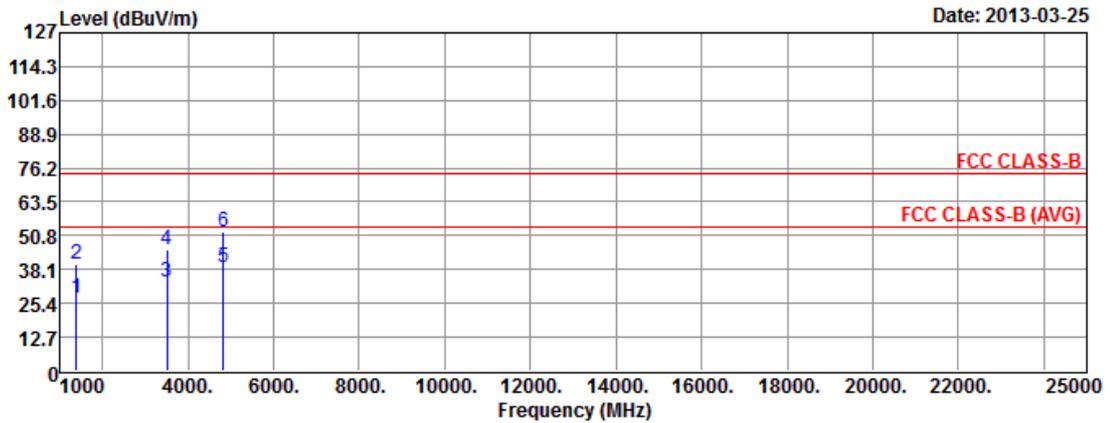
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.36	-21.64	54.00	38.04	27.98	3.42	37.08	---	---	Average
2	1400.00	45.67	-28.33	74.00	51.35	27.98	3.42	37.08	---	---	Peak
3	4924.00	38.33	-15.67	54.00	32.48	34.28	6.55	34.98	---	---	Average
4	4924.00	45.38	-28.62	74.00	39.53	34.28	6.55	34.98	---	---	Peak
5	7386.00	39.57	-14.43	54.00	30.04	36.02	8.56	35.05	---	---	Average
6	7386.00	53.72	-20.28	74.00	44.19	36.02	8.56	35.05	---	---	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 30 dB relative to the maximum measured in-band level.



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

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	Test Freq. (MHz)	2412
N _{TX}	2	Polarization	V

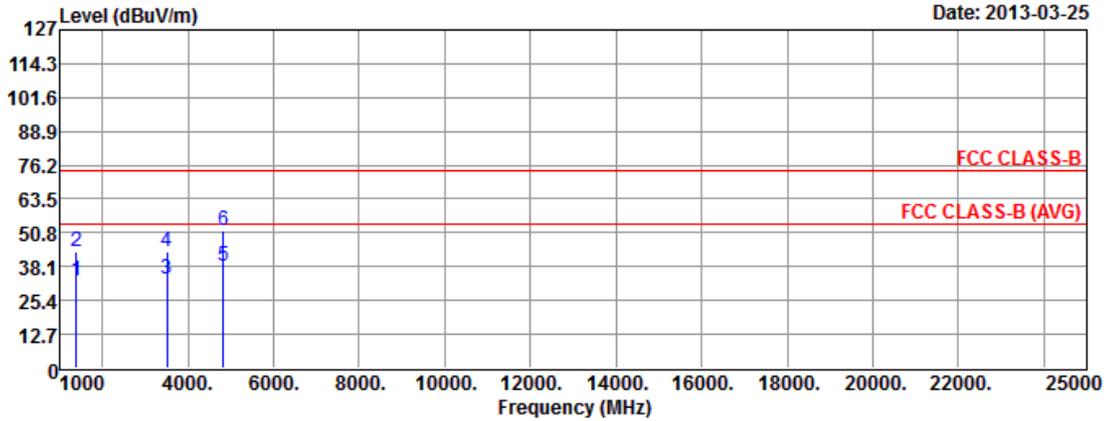


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.56	-26.44	54.00	33.24	27.98	3.42	37.08	---	---	Average
2	1400.00	40.27	-33.73	74.00	45.95	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.49	-20.51	54.00	30.70	32.70	5.69	35.60	---	---	Average
4	3500.00	45.41	-28.59	74.00	42.62	32.70	5.69	35.60	---	---	Peak
5	4824.00	38.69	-15.31	54.00	32.88	34.26	6.51	34.96	---	---	Average
6	4824.00	52.53	-21.47	74.00	46.72	34.26	6.51	34.96	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
 Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	Test Freq. (MHz)	2412
N _{TX}	2	Polarization	H

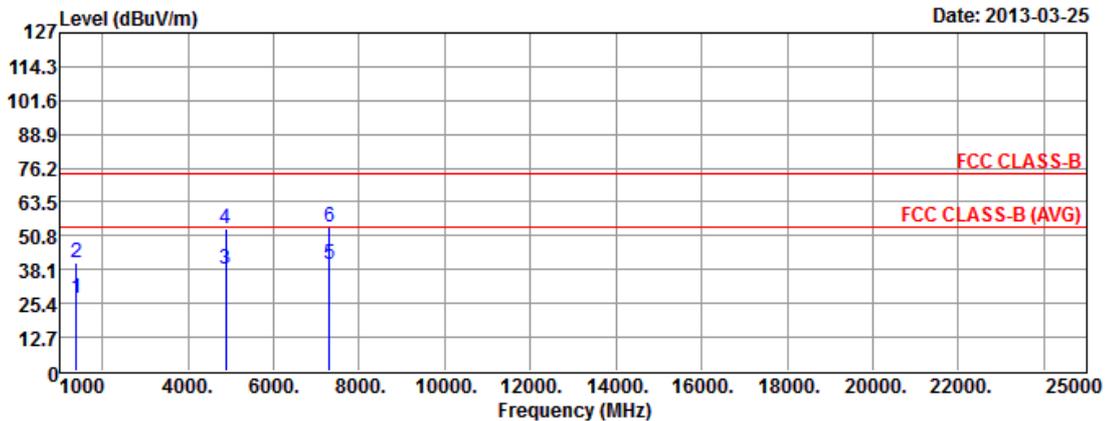


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.57	-21.43	54.00	38.25	27.98	3.42	37.08	---	---	Average
2	1400.00	43.66	-30.34	74.00	49.34	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.25	-20.75	54.00	30.46	32.70	5.69	35.60	---	---	Average
4	3500.00	43.52	-30.48	74.00	40.73	32.70	5.69	35.60	---	---	Peak
5	4824.00	38.43	-15.57	54.00	32.62	34.26	6.51	34.96	---	---	Average
6	4824.00	51.41	-22.59	74.00	45.60	34.26	6.51	34.96	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
 Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	V

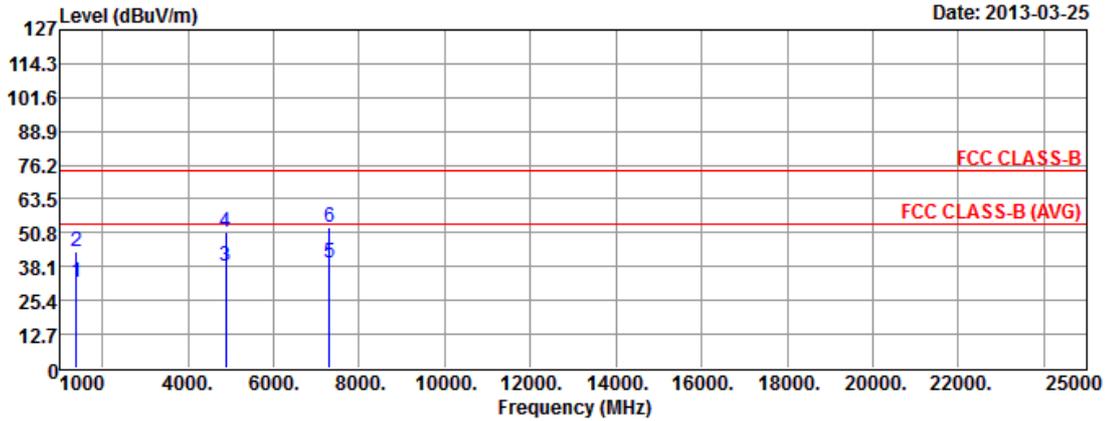


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.58	-26.42	54.00	33.26	27.98	3.42	37.08	---	---	Average
2	1400.00	40.61	-33.39	74.00	46.29	27.98	3.42	37.08	---	---	Peak
3	4874.00	38.21	-15.79	54.00	32.38	34.27	6.53	34.97	---	---	Average
4	4874.00	53.21	-20.79	74.00	47.38	34.27	6.53	34.97	---	---	Peak
5	7311.00	40.11	-13.89	54.00	30.69	36.04	8.40	35.02	---	---	Average
6	7311.00	54.26	-19.74	74.00	44.84	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	H

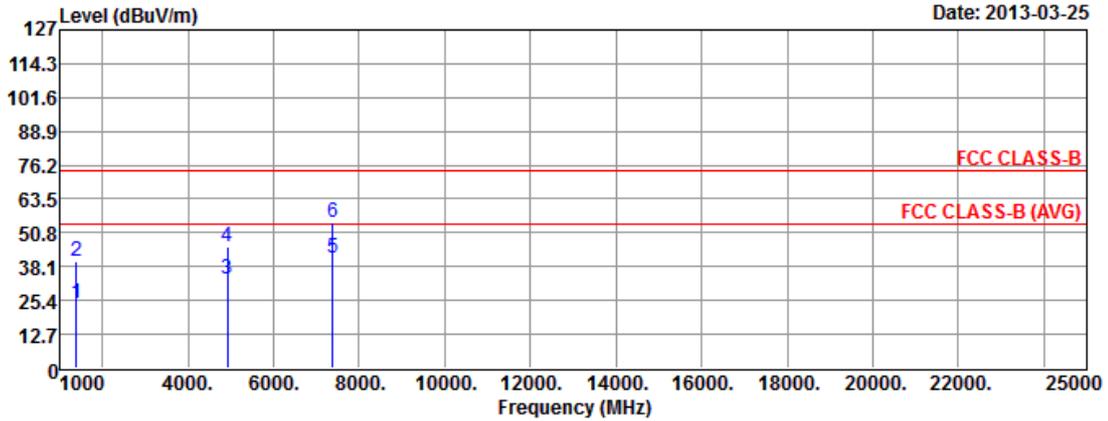


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.41	-21.59	54.00	38.09	27.98	3.42	37.08	---	---	Average
2	1400.00	43.61	-30.39	74.00	49.29	27.98	3.42	37.08	---	---	Peak
3	4874.00	38.57	-15.43	54.00	32.74	34.27	6.53	34.97	---	---	Average
4	4874.00	51.22	-22.78	74.00	45.39	34.27	6.53	34.97	---	---	Peak
5	7311.00	39.41	-14.59	54.00	29.99	36.04	8.40	35.02	---	---	Average
6	7311.00	52.96	-21.04	74.00	43.54	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	Test Freq. (MHz)	2462
N _{TX}	2	Polarization	V

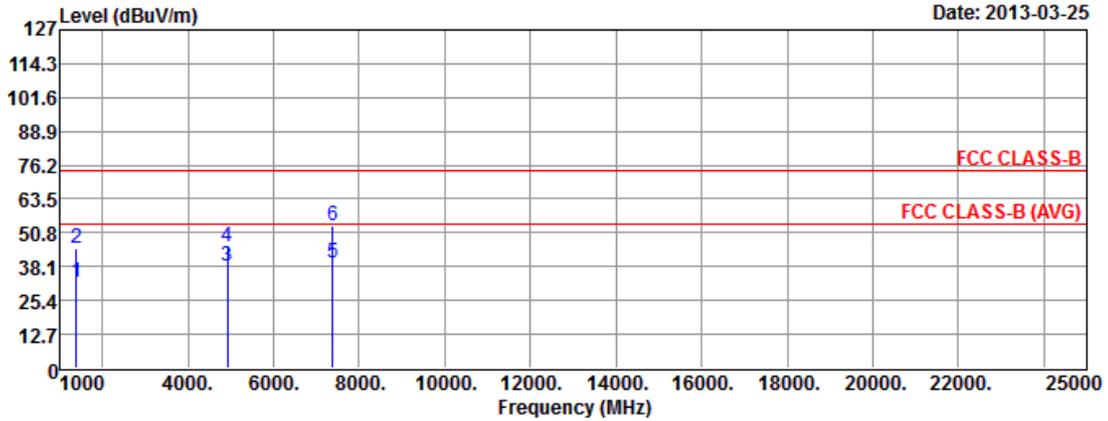


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	24.59	-29.41	54.00	30.27	27.98	3.42	37.08	---	---	Average
2	1400.00	40.27	-33.73	74.00	45.95	27.98	3.42	37.08	---	---	Peak
3	4924.00	33.59	-20.41	54.00	27.74	34.28	6.55	34.98	---	---	Average
4	4924.00	45.85	-28.15	74.00	40.00	34.28	6.55	34.98	---	---	Peak
5	7386.00	41.39	-12.61	54.00	31.86	36.02	8.56	35.05	---	---	Average
6	7386.00	54.42	-19.58	74.00	44.89	36.02	8.56	35.05	---	---	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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT20	Test Freq. (MHz)	2462
N _{TX}	2	Polarization	H



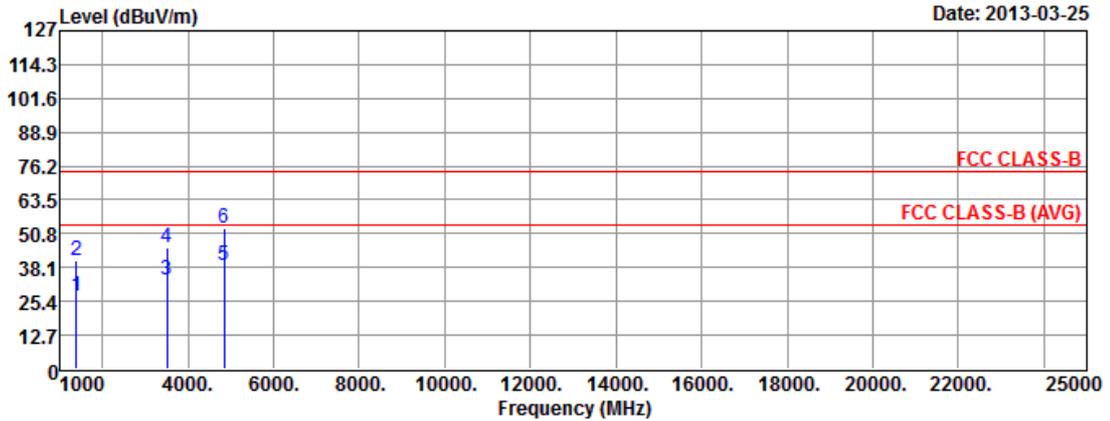
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.41	-21.59	54.00	38.09	27.98	3.42	37.08	---	---	Average
2	1400.00	45.26	-28.74	74.00	50.94	27.98	3.42	37.08	---	---	Peak
3	4924.00	38.52	-15.48	54.00	32.67	34.28	6.55	34.98	---	---	Average
4	4924.00	45.49	-28.51	74.00	39.64	34.28	6.55	34.98	---	---	Peak
5	7386.00	39.62	-14.38	54.00	30.09	36.02	8.56	35.05	---	---	Average
6	7386.00	53.42	-20.58	74.00	43.89	36.02	8.56	35.05	---	---	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 30 dB relative to the maximum measured in-band level.



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

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	Test Freq. (MHz)	2422
N _{TX}	2	Polarization	V

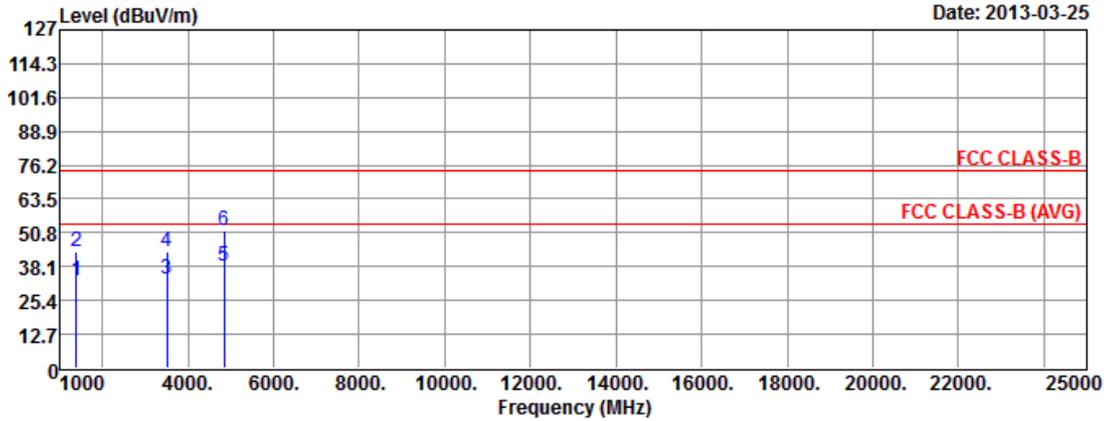


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.61	-26.39	54.00	33.29	27.98	3.42	37.08	---	---	Average
2	1400.00	40.59	-33.41	74.00	46.27	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.52	-20.48	54.00	30.73	32.70	5.69	35.60	---	---	Average
4	3500.00	45.49	-28.51	74.00	42.70	32.70	5.69	35.60	---	---	Peak
5	4844.00	38.75	-15.25	54.00	32.93	34.27	6.52	34.97	---	---	Average
6	4844.00	52.61	-21.39	74.00	46.79	34.27	6.52	34.97	---	---	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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	Test Freq. (MHz)	2422
N _{TX}	2	Polarization	H

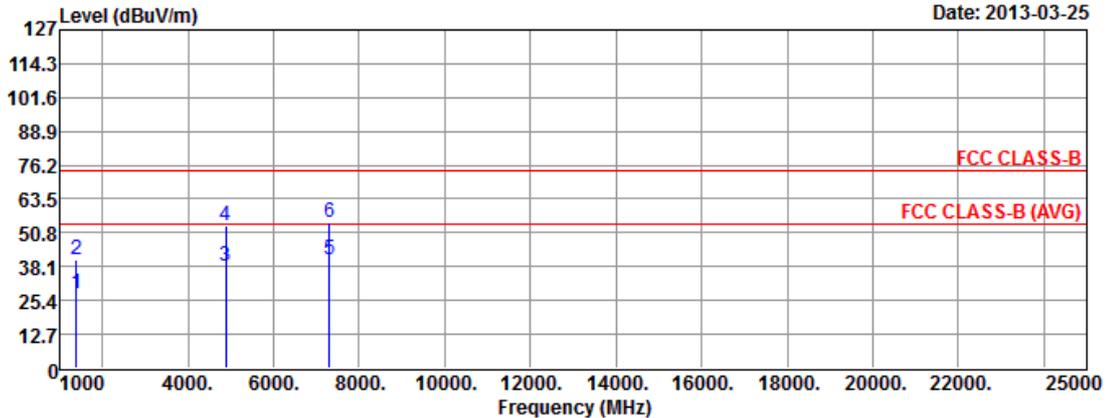


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.61	-21.39	54.00	38.29	27.98	3.42	37.08	---	---	Average
2	1400.00	43.52	-30.48	74.00	49.20	27.98	3.42	37.08	---	---	Peak
3	3500.00	33.29	-20.71	54.00	30.50	32.70	5.69	35.60	---	---	Average
4	3500.00	43.65	-30.35	74.00	40.86	32.70	5.69	35.60	---	---	Peak
5	4844.00	38.52	-15.48	54.00	32.70	34.27	6.52	34.97	---	---	Average
6	4844.00	51.52	-22.48	74.00	45.70	34.27	6.52	34.97	---	---	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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	V

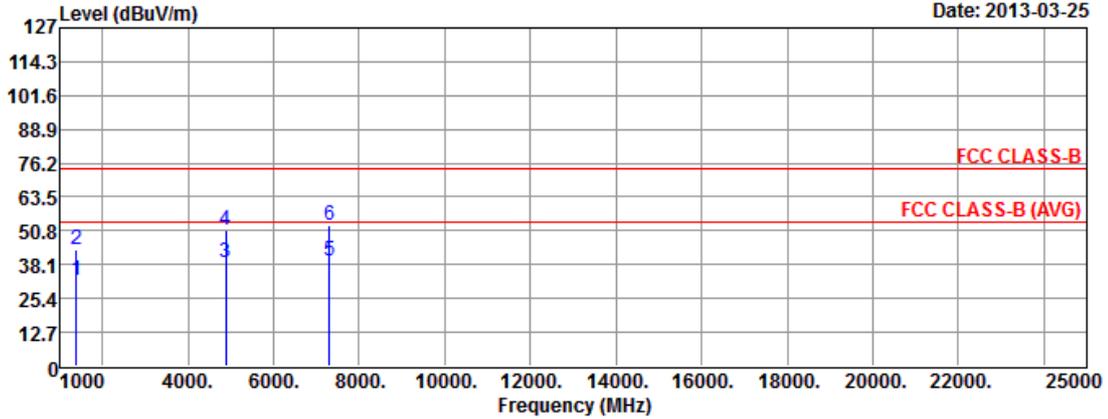


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	27.66	-26.34	54.00	33.34	27.98	3.42	37.08	---	---	Average
2	1400.00	40.69	-33.31	74.00	46.37	27.98	3.42	37.08	---	---	Peak
3	4874.00	38.49	-15.51	54.00	32.66	34.27	6.53	34.97	---	---	Average
4	4874.00	53.29	-20.71	74.00	47.46	34.27	6.53	34.97	---	---	Peak
5	7311.00	40.51	-13.49	54.00	31.09	36.04	8.40	35.02	---	---	Average
6	7311.00	54.57	-19.43	74.00	45.15	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	Test Freq. (MHz)	2437
N _{TX}	2	Polarization	H

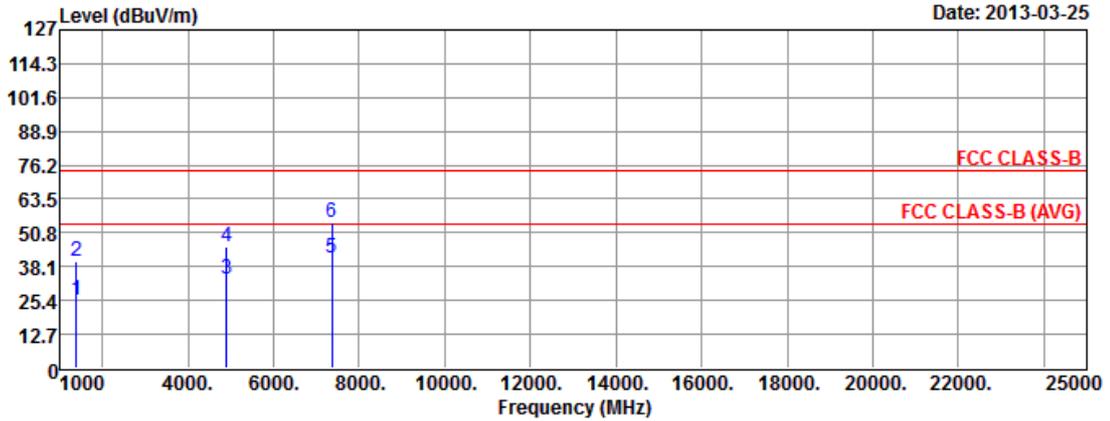


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.49	-21.51	54.00	38.17	27.98	3.42	37.08	---	---	Average
2	1400.00	43.63	-30.37	74.00	49.31	27.98	3.42	37.08	---	---	Peak
3	4874.00	38.61	-15.39	54.00	32.78	34.27	6.53	34.97	---	---	Average
4	4874.00	51.27	-22.73	74.00	45.44	34.27	6.53	34.97	---	---	Peak
5	7311.00	39.52	-14.48	54.00	30.10	36.04	8.40	35.02	---	---	Average
6	7311.00	52.69	-21.31	74.00	43.27	36.04	8.40	35.02	---	---	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)
 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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	Test Freq. (MHz)	2452
N _{TX}	2	Polarization	V

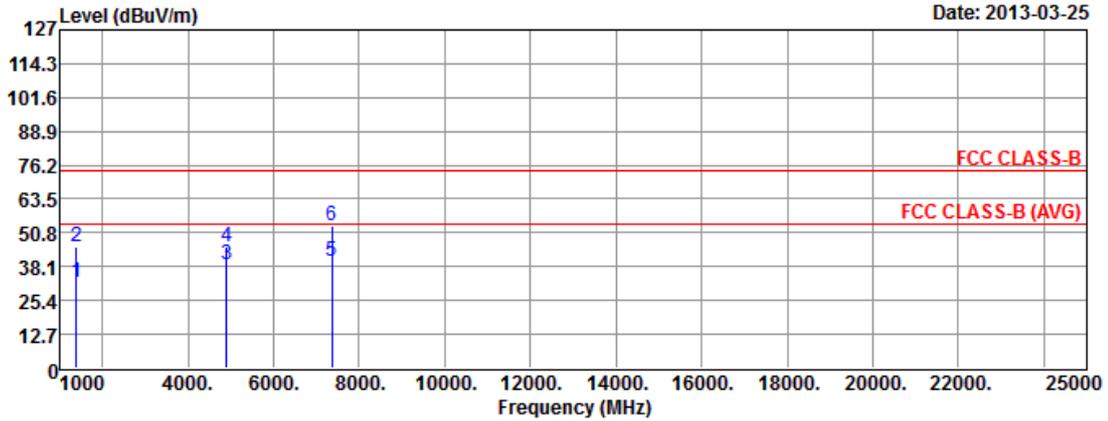


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	25.27	-28.73	54.00	30.95	27.98	3.42	37.08	---	---	Average
2	1400.00	40.11	-33.89	74.00	45.79	27.98	3.42	37.08	---	---	Peak
3	4904.00	33.47	-20.53	54.00	27.63	34.28	6.54	34.98	---	---	Average
4	4904.00	45.75	-28.25	74.00	39.91	34.28	6.54	34.98	---	---	Peak
5	7356.00	41.58	-12.42	54.00	32.09	36.03	8.50	35.04	---	---	Average
6	7356.00	54.66	-19.34	74.00	45.17	36.03	8.50	35.04	---	---	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 30 dB relative to the maximum measured in-band level.



Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	HT40	Test Freq. (MHz)	2452
N _{TX}	2	Polarization	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1400.00	32.49	-21.51	54.00	38.17	27.98	3.42	37.08	---	---	Average
2	1400.00	45.41	-28.59	74.00	51.09	27.98	3.42	37.08	---	---	Peak
3	4904.00	38.59	-15.41	54.00	32.75	34.28	6.54	34.98	---	---	Average
4	4904.00	45.56	-28.44	74.00	39.72	34.28	6.54	34.98	---	---	Peak
5	7356.00	39.82	-14.18	54.00	30.33	36.03	8.50	35.04	---	---	Average
6	7356.00	53.52	-20.48	74.00	44.03	36.03	8.50	35.04	---	---	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 30 dB relative to the maximum measured in-band level.



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9 kHz ~ 2.75 GHz	Mar. 26, 2013	Conduction (CO04-HY)
LISN	SCHWARZBECK MESS-ELEKTRO NIK	NSLK 8127	8127-477	9kHz – 30MHz	Jan. 21, 2013	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9 kHz ~ 30 MHz	Apr. 16, 2013	Conduction (CO04-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	CB049	9 kHz ~ 30 MHz	Apr. 25, 2012	Conduction (CO04-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP	100055	9Kz – 40GHz	Jun. 06, 2012	Radiation (03CH05-HY)
Receiver	R&S	ESIB26	100337	20Hz – 26.5GHz	Jun.21, 2012	Radiation (03CH05-HY)
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH05-HY	30 MHz - 1 GHz 3m	N/A	Radiation (03CH05-HY)
Amplifier	COM-POWER	PA-103	161241	1 MHz ~ 1 GHz	Feb. 26, 2013	Radiation (03CH05-HY)
Amplifier	Agilent	8449B	3008A02665	1GHz – 26.5 GHz	Aug. 28, 2012	Radiation (03CH05-HY)
Horn Antenna	ETS-LINDGREN	3117	66584	1GHz~18GHz	Aug. 09, 2012	Radiation (03CH05-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15GHz ~ 40GHz	Jan. 08, 2013	Radiation (03CH05-HY)
RF Cable-R03m	Jye Bao	RG142	03CH05-HY	30 MHz - 1 GHz	Oct. 14, 2012	Radiation (03CH05-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX104	03CH05-HY	1GHz~40GHz	Oct. 14, 2012	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30 MHz - 1 GHz	Oct. 06, 2012	Radiation (03CH05-HY)
Turn Table	HD	HD100	420/611	0 - 360 degree	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	HD100	240/666	1 m - 4 m	N/A	Radiation (03CH05-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Amplifier	MITEQ	AMF-6F-260400	9121372	26.5GHz ~ 40GHz	Apr. 19, 2011	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/0001	9 kHz - 30 MHz	Jul. 03, 2012	Radiation (03CH05-HY)

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



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSV 40	101486	9KHz~40GHz	Nov. 14, 2012	Conducted (TH01-HY)
Spectrum Analyzer	R&S	FSP 40	100593	9KHz ~ 40GHz	Aug. 14, 2012	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Jun. 19, 2012	Conducted (TH01-HY)
AC Power Source	G.W.	APS-9102	EL920581	AC 0V ~ 300V	Jul. 02, 2012	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-007	-20 ~ 100°C	Nov. 21, 2012	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jun. 26, 2012	Conducted (TH01-HY)
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	Sep. 08, 2012	Conducted (TH01-HY)
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	Sep. 08, 2012	Conducted (TH01-HY)
RF Cable-2m	HUBER+SUHNER	SUCOFLEX_104	SN 345675/4	1GHz ~ 26.5GHz	NA	Conducted (TH01-HY)
RF Cable-3m	HUBER+SUHNER	SUCOFLEX_104	SN 345669/4	1GHz ~ 26.5GHz	NA	Conducted (TH01-HY)

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