

FCC Test Report

Report No.: RF180524C28

FCC ID: 2AKCZ-0D1

Test Model: APL46-0D1

Received Date: May 04, 2018

Test Date: May 04 ~ Jun. 20, 2018

Issued Date: Jul. 17, 2018

Applicant: SonicWall Inc.

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**FCC Registration /
Designation Number:** 788550 / TW0003



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Table of Contents

Release Control Record	4
1 Certificate of Conformity	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	9
3.2.1 Test Mode Applicability and Tested Channel Detail	10
3.3 Duty Cycle of Test Signal	12
3.4 Description of Support Units	15
3.4.1 Configuration of System under Test	15
3.5 General Description of Applied Standards	15
4 Test Types and Results	16
4.1 Radiated Emission and Bandedge Measurement	16
4.1.1 Limits of Radiated Emission and Bandedge Measurement	16
4.1.2 Test Instruments	17
4.1.3 Test Procedures	18
4.1.4 Deviation from Test Standard	18
4.1.5 Test Setup	19
4.1.6 EUT Operating Conditions	20
4.1.7 Test Results	21
4.2 Conducted Emission Measurement	57
4.2.1 Limits of Conducted Emission Measurement	57
4.2.2 Test Instruments	57
4.2.3 Test Procedures	58
4.2.4 Deviation from Test Standard	58
4.2.5 Test Setup	58
4.2.6 EUT Operating Conditions	58
4.2.7 Test Results	59
4.3 6dB Bandwidth Measurement	65
4.3.1 Limits of 6dB Bandwidth Measurement	65
4.3.2 Test Setup	65
4.3.3 Test Instruments	65
4.3.4 Test Procedure	65
4.3.5 Deviation from Test Standard	65
4.3.6 EUT Operating Conditions	65
4.3.7 Test Result	66
4.4 Conducted Output Power Measurement	72
4.4.1 Limits of Conducted Output Power Measurement	72
4.4.2 Test Setup	72
4.4.3 Test Instruments	72
4.4.4 Test Procedures	72
4.4.5 Deviation from Test Standard	72
4.4.6 EUT Operating Conditions	72
4.4.7 Test Results	73
4.5 Power Spectral Density Measurement	78
4.5.1 Limits of Power Spectral Density Measurement	78
4.5.2 Test Setup	78
4.5.3 Test Instruments	78
4.5.4 Test Procedure	78
4.5.5 Deviation from Test Standard	79
4.5.6 EUT Operating Condition	79

4.5.7 Test Results	80
4.6 Conducted Out of Band Emission Measurement.....	88
4.6.1 Limits of Conducted Out of Band Emission Measurement	88
4.6.2 Test Setup.....	88
4.6.3 Test Instruments	88
4.6.4 Test Procedure	88
4.6.5 Deviation from Test Standard	88
4.6.6 EUT Operating Condition	88
4.6.7 Test Results	88
5 Pictures of Test Arrangements.....	108
Appendix – Information on the Testing Laboratories	109

Release Control Record

Issue No.	Description	Date Issued
RF180524C28	Original release	Jul. 17, 2018

1 Certificate of Conformity

Product: Wireless Access Point

Brand: SONICWALL

Test Model: APL46-0D1

Sample Status: Engineering sample

Applicant: SonicWall Inc.

Test Date: May 04 ~ Jun. 20, 2018

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Jul. 17, 2018
Celine Chou / Specialist

Approved by : Bruce Chen , **Date:** Jul. 17, 2018
Bruce Chen / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -5.08dB at 0.52130MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.1dB at 2351.00MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connectors are N-Type, N-jack and IPEX not a standard connector.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless Access Point
Brand	SONICWALL
Test Model	APL46-0D1
Sample Status	Engineering sample
Power Supply Rating	54Vdc from PoE
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps
Operating Frequency	2412 ~ 2462MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7
Output Power	Radio 1, Dipole Ant.: CDD Mode: 180.098mW Beamforming Mode: 83.629mW Radio 1, Sector Ant.: CDD Mode: 148.599mW Beamforming Mode: 70.352mW Radio 3, PIFA Ant.: 49.204mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	NA
Cable Supplied	1.78m non-shielded ground cable without core

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	Beamforming Mode	TX Function	Remark
802.11b	Not Support	2TX	Radio 1
802.11g	Not Support	2TX	
802.11n (HT20)	Support	2TX	
802.11n (HT40)	Support	2TX	
802.11b	Not Support	1TX	Radio 3
802.11g	Not Support	1TX	
802.11n (HT20)	Not Support	1TX	

* For 802.11n, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

2. The EUT consumes power from the following PoE. (for support unit only)

PoE	
Brand	EnGenius
Model	EPA5006GAT
Input	100-240Vac, 50-60Hz, 0.8A
Output	54Vdc, 0.6A PIN 4,5: 54V PIN 7,8: RETURN

3. The following antennas were provided to the EUT.

No.	Antenna Model	Freq. Range	Type	Con nector	Gain (dBi)										Remark
					2400	2450	2500	5150	5250	5350	5500	5600	5725	5850	
1	DA2105	2.4G	Dipole	N-Type	4.1	4.2	4.5	-	-	-	-	-	-	-	Radio 1 (WLAN 2.4G: 2TX)
2	DA5107	5G	Dipole	N-Type	-	-	-	6.3	6.3	5.4	5.0	5.1	5.2	5.1	Radio 2 (WLAN 5G: 2TX)
					Ant.1 (2400-2500MHz)					Ant.2 (2400-2500MHz)					
3	SA2412-A	2.4G	Sector	N-jack	12.60					12.00					Radio 1 (WLAN 2.4G: 2TX)
					Ant.1 (5150-5850MHz)					Ant.2 (5150-5850MHz)					
4	SA5415-A	5G	Sector	N-jack	14.10					14.60					Radio 2 (WLAN 5G: 2TX)
					2400-2500MHz										
5	BLE Antenna	2.4G	PIFA	IPEX	3.69										Radio 4 (BTLE)
6	Scan Antenna	2.4G	PIFA	IPEX	3.67										Radio 3 (WLAN 2.4G: 1TX)

3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

Channel	Frequency	Channel	Frequency
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

7 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE \geq 1G	RE<1G	PLC	APCM	
A	√	√	√	√	EUT (Radio 1) with dipole ant.
B	√	√	√	√	EUT (Radio 1) with sector ant.
C	√	√	√	√	EUT (Radio 3) with PIFA ant.

Where RE \geq 1G: Radiated Emission above 1GHz & Bandedge Measurement

PLC: Power Line Conducted Emission

RE<1G: Radiated Emission below 1GHz

APCM: Antenna Port Conducted Measurement

Note: The EUT positioned on **Z-plane**.

Radiated Emission Test (Above 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Radio 1 (2TX)
C		1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Radio 3 (1TX)
A, B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Radio 1 (2TX)
C		1 to 11	1, 6, 11	OFDM	BPSK	6.0	Radio 3 (1TX)
A, B	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Radio 1 (2TX)
C		1 to 11	1, 6, 11	OFDM	BPSK	6.5	Radio 3 (1TX)
A, B	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5	Radio 1 (2TX)

Radiated Emission Test (Below 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B	802.11b	1 to 11	6	DSSS	DBPSK	1.0	Radio 1 (2TX)
C		1 to 11	6	DSSS	DBPSK	1.0	Radio 3 (1TX)

Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B	802.11b	1 to 11	6	DSSS	DBPSK	1.0	Radio 1 (2TX)
C		1 to 11	6	DSSS	DBPSK	1.0	Radio 3 (1TX)

6dB Bandwidth, Power Spectral Density and Conducted Out of Band Emission Measurement:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Radio 1 (2TX)
C		1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Radio 3 (1TX)
A, B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Radio 1 (2TX)
C		1 to 11	1, 6, 11	OFDM	BPSK	6.0	Radio 3 (1TX)
A, B	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Radio 1 (2TX)
C		1 to 11	1, 6, 11	OFDM	BPSK	6.5	Radio 3 (1TX)
A, B	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5	Radio 1 (2TX)

Conducted Output Power Measurement:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
CDD Mode							
A, B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Radio 1 (2TX)
C		1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Radio 3 (1TX)
A, B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Radio 1 (2TX)
C		1 to 11	1, 6, 11	OFDM	BPSK	6.0	Radio 3 (1TX)
A, B	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Radio 1 (2TX)
C		1 to 11	1, 6, 11	OFDM	BPSK	6.5	Radio 3 (1TX)
A, B	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5	Radio 1 (2TX)
Beamforming Mode							
A, B	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Radio 1 (2TX)
A, B	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5	Radio 1 (2TX)

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE \geq 1G	22 deg. C, 66% RH	120Vac, 60Hz	Adair Peng
RE<1G	22 deg. C, 68% RH 22 deg. C, 66% RH	120Vac, 60Hz	Adair Peng
PLC	25 deg. C, 66% RH	120Vac, 60Hz	Willy Cheng
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Ted Chang Frank Liu

3.3 Duty Cycle of Test Signal

Test Mode A (Radio 1, Dipole Ant.)

802.11b, 802.11n (HT20): Duty cycle of test signal is > 98%, duty factor is not required.

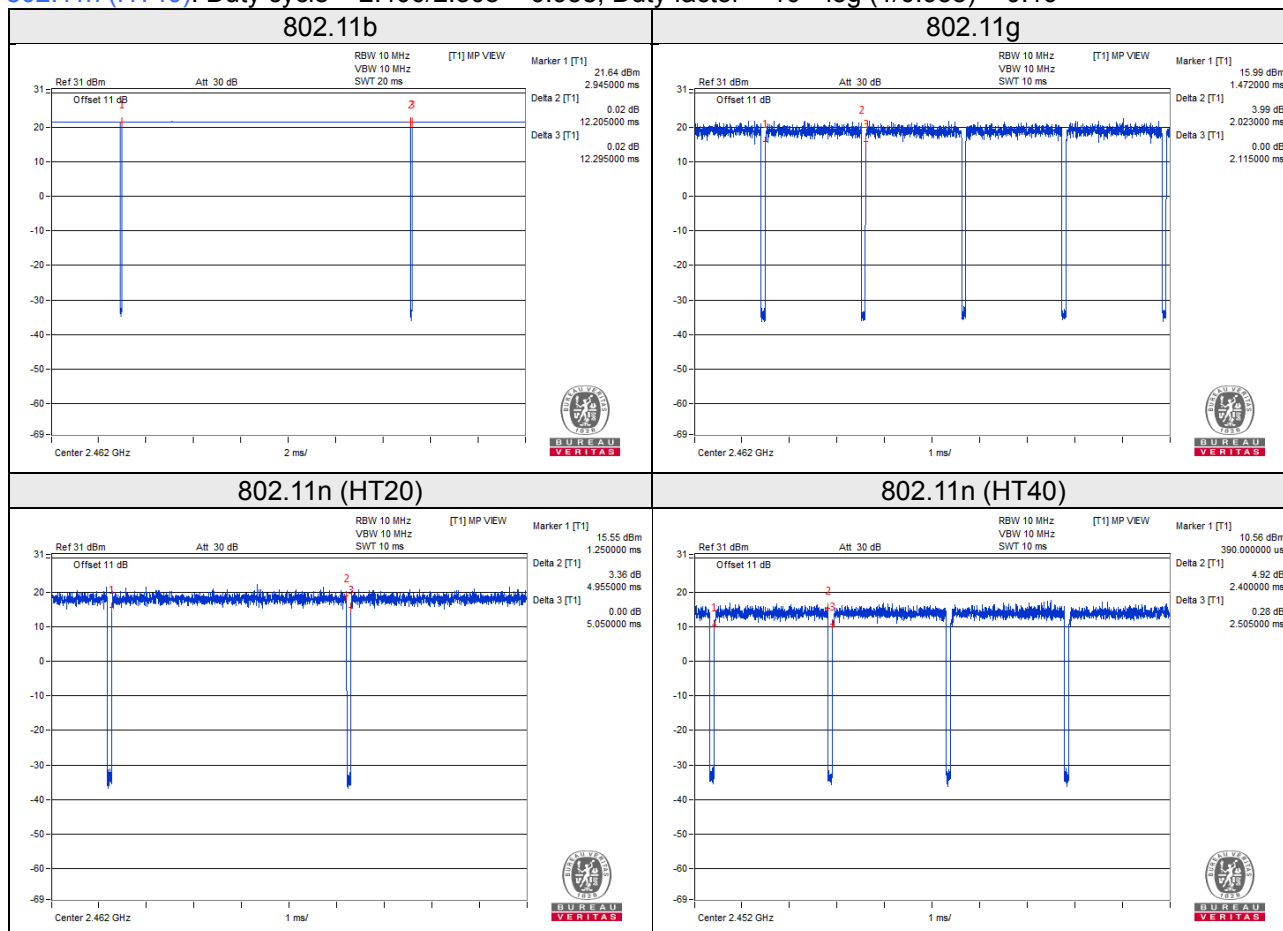
802.11g, 802.11n (HT40): Duty cycle of test signal is < 98%, duty factor is required.

802.11b: Duty cycle = $12.205/12.295 = 0.993$

802.11g: Duty cycle = $2.023/2.115 = 0.957$, Duty factor = $10 * \log (1/0.957) = 0.19$

802.11n (HT20): Duty cycle = $4.955/5.050 = 0.981$

802.11n (HT40): Duty cycle = $2.400/2.505 = 0.958$, Duty factor = $10 * \log (1/0.958) = 0.19$



Test Mode B (Radio 1, Sector Ant.)

802.11b, 802.11n (HT20): Duty cycle of test signal is > 98%, duty factor is not required.

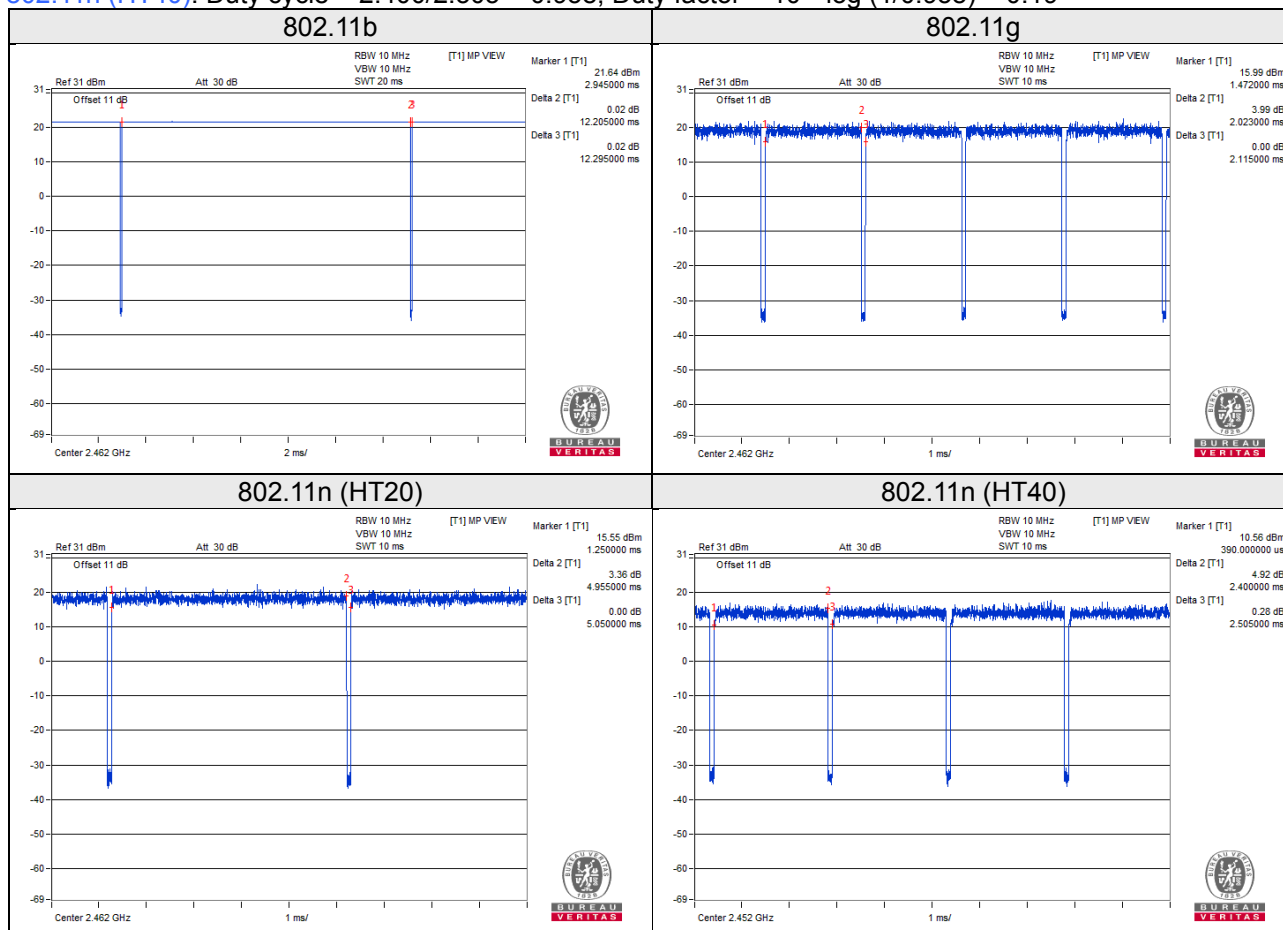
802.11g, 802.11n (HT40): Duty cycle of test signal is < 98%, duty factor is required.

802.11b: Duty cycle = $12.205/12.295 = 0.993$

802.11g: Duty cycle = $2.023/2.115 = 0.957$, Duty factor = $10 * \log(1/0.957) = 0.19$

802.11n (HT20): Duty cycle = $4.955/5.050 = 0.981$

802.11n (HT40): Duty cycle = $2.400/2.505 = 0.958$, Duty factor = $10 * \log(1/0.958) = 0.19$



Test Mode C (Radio 3, PIFA Ant.)

802.11b: Duty cycle of test signal is > 98%, duty factor is not required.

802.11g, 802.11n (HT20): Duty cycle of test signal is < 98%, duty factor is required.

802.11b: Duty cycle = $12.188/12.287 = 0.992$

802.11g: Duty cycle = $2.015/2.135 = 0.944$, Duty factor = $10 * \log(1/0.944) = 0.25$

802.11n (HT20): Duty cycle = $1.885/1.975 = 0.954$, Duty factor = $10 * \log(1/0.954) = 0.20$



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

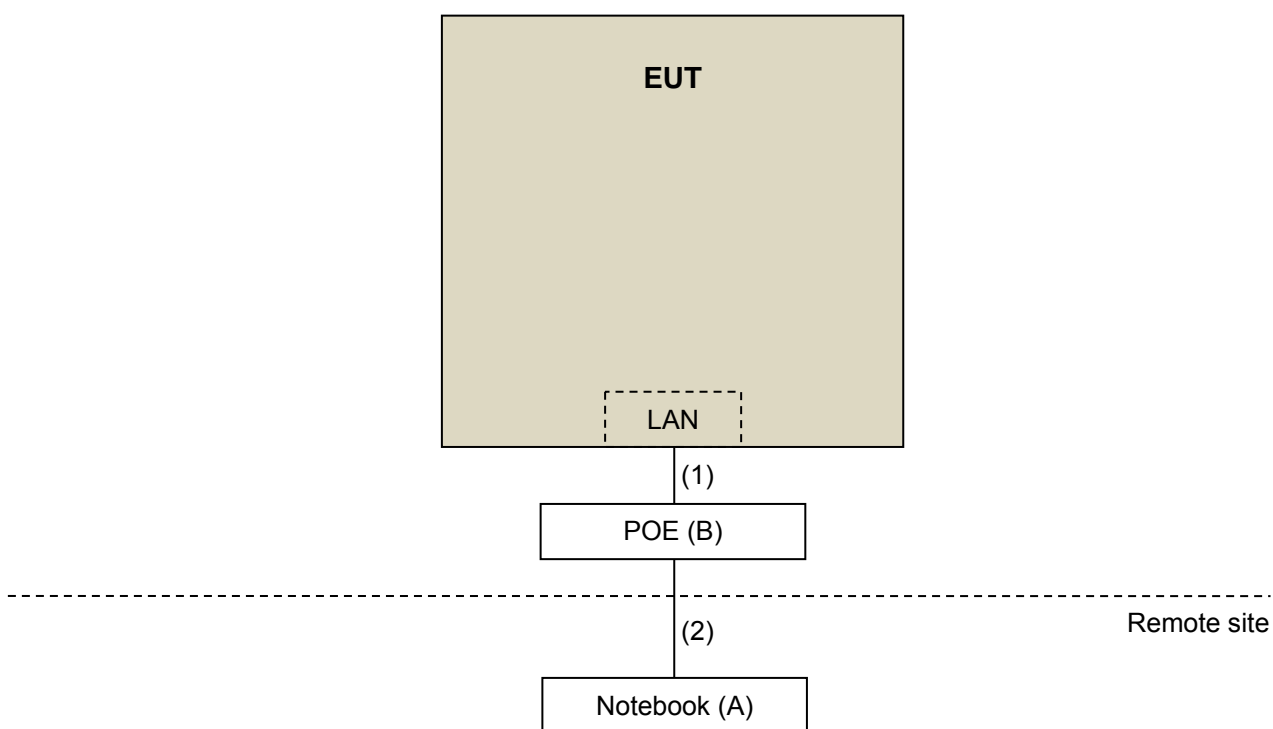
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	POE	EnGenius	EPA5006GAT	NA	NA	Provided by manufacturer

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45, Cat5e	1	1	N	0	-
2.	RJ45, Cat5e	1	6	N	0	-

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (15.247)

KDB 558074 D01 DTS Meas Guidance v04

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 17, 2017	Oct. 16, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 12, 2017	Dec. 11, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 11, 2017	Dec. 10, 2018
HORN Antenna SCHWARZBECK	9120D	209	Dec. 13, 2017	Dec. 12, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 01, 2017	Nov. 30, 2018
Loop Antenna EMCI	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 21, 2017	Aug. 20, 2018
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Apr. 03, 2018	Apr. 02, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2017	Aug. 20, 2018
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM-8 000	Cable-CH3-03 (309224+170907)	Sep.11, 2017	Sep. 10, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
High Speed Peak Power Meter	ML2495A	0824012	Aug. 18, 2017	Aug. 17, 2018
Power Sensor	MA2411B	0738171	Aug. 18, 2017	Aug. 17, 2018

- Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 3.
 3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
 5. The IC Site Registration No. is IC 7450F-3.

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

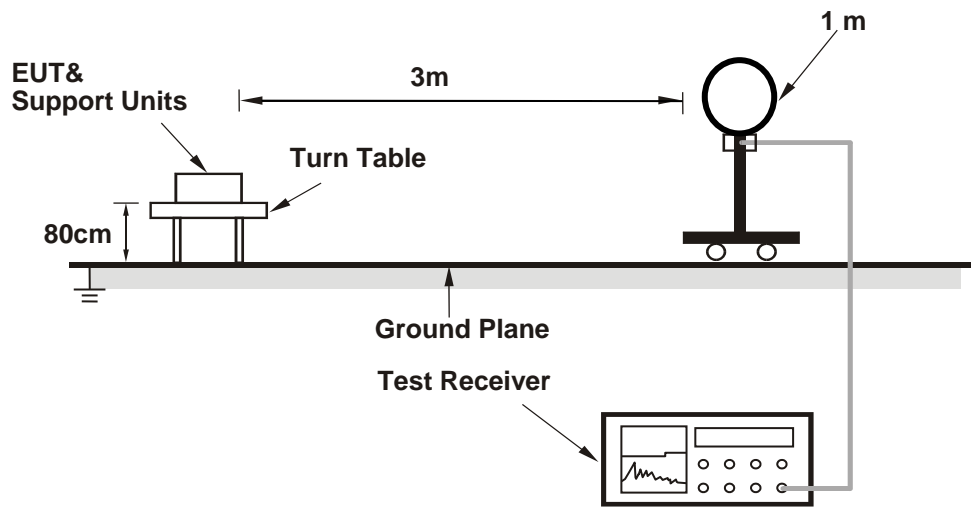
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

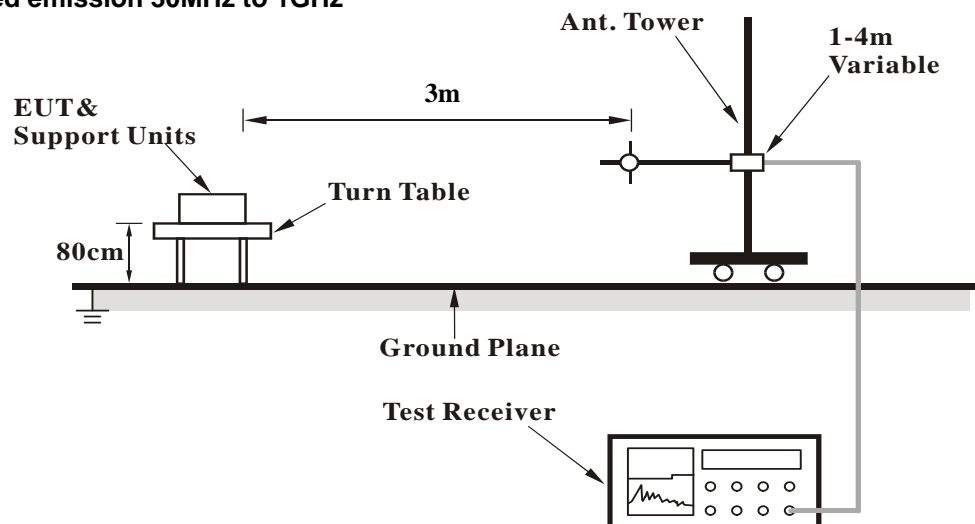
No deviation.

4.1.5 Test Setup

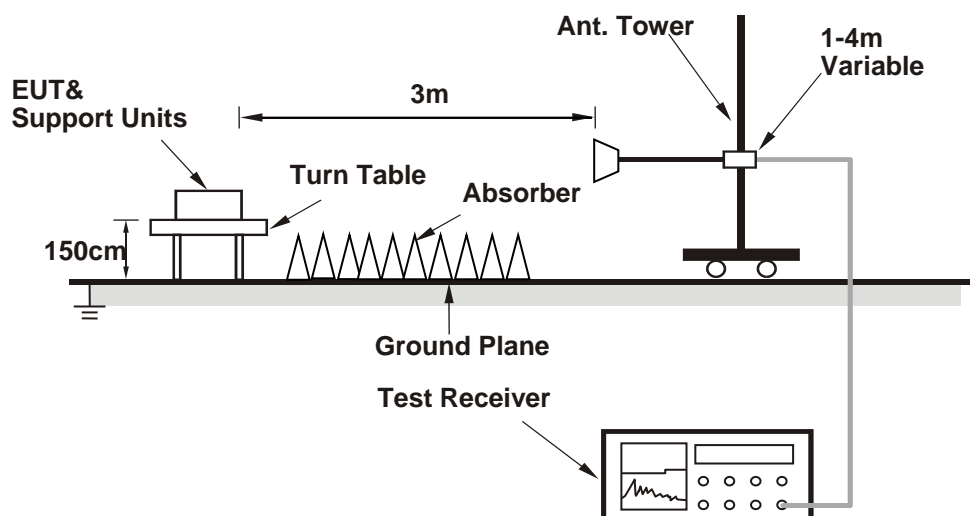
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

- Placed the EUT on the testing table.
- Prepared a notebook to act as a communication partner and placed it outside of testing area.
- The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- The communication partner sent data to EUT by command "PING".

4.1.7 Test Results

Above 1GHz Data:

Test Mode A (Radio 1, Dipole Ant.)

802.11b

CHANNEL	TX Channel 1	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.3 PK	74.0	-16.7	1.73 H	266	23.8	33.5
2	2390.00	46.0 AV	54.0	-8.0	1.73 H	266	12.5	33.5
3	*2412.00	100.0 PK			1.59 H	243	66.6	33.4
4	*2412.00	96.5 AV			1.59 H	243	63.1	33.4
5	4824.00	46.5 PK	74.0	-27.5	1.59 H	61	42.5	4.0
6	4824.00	35.4 AV	54.0	-18.6	1.59 H	61	31.4	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.1 PK	74.0	-14.9	1.72 V	9	25.6	33.5
2	2390.00	47.7 AV	54.0	-6.3	1.72 V	9	14.2	33.5
3	*2412.00	115.6 PK			1.51 V	2	82.2	33.4
4	*2412.00	111.8 AV			1.51 V	2	78.4	33.4
5	4824.00	46.3 PK	74.0	-27.7	1.58 V	321	42.3	4.0
6	4824.00	34.9 AV	54.0	-19.1	1.58 V	321	30.9	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	101.9 PK			1.58 H	21	68.5	33.4
2	*2437.00	98.2 AV			1.58 H	21	64.8	33.4
3	4874.00	45.7 PK	74.0	-28.3	1.66 H	10	42.0	3.7
4	4874.00	34.2 AV	54.0	-19.8	1.66 H	10	30.5	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	114.6 PK			1.66 V	285	81.2	33.4
2	*2437.00	111.1 AV			1.66 V	285	77.7	33.4
3	4874.00	48.2 PK	74.0	-25.8	1.73 V	332	44.5	3.7
4	4874.00	40.0 AV	54.0	-14.0	1.73 V	332	36.3	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	101.7 PK			1.67 H	29	68.4	33.3
2	*2462.00	97.8 AV			1.67 H	29	64.5	33.3
3	2483.50	56.3 PK	74.0	-17.7	1.87 H	41	23.1	33.2
4	2483.50	47.2 AV	54.0	-6.8	1.87 H	41	14.0	33.2
5	4924.00	45.3 PK	74.0	-28.7	1.81 H	25	41.8	3.5
6	4924.00	32.7 AV	54.0	-21.3	1.81 H	25	29.2	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.7 PK			1.57 V	4	83.4	33.3
2	*2462.00	112.9 AV			1.57 V	4	79.6	33.3
3	2483.50	57.8 PK	74.0	-16.2	1.99 V	351	24.6	33.2
4	2483.50	48.7 AV	54.0	-5.3	1.99 V	351	15.5	33.2
5	4924.00	47.6 PK	74.0	-26.4	1.91 V	333	44.1	3.5
6	4924.00	40.1 AV	54.0	-13.9	1.91 V	333	36.6	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.0 PK	74.0	-16.0	1.71 H	33	24.5	33.5
2	2390.00	45.7 AV	54.0	-8.3	1.71 H	33	12.2	33.5
3	*2412.00	97.3 PK			1.62 H	23	63.9	33.4
4	*2412.00	86.9 AV			1.62 H	23	53.5	33.4
5	4824.00	45.0 PK	74.0	-29.0	1.81 H	54	41.0	4.0
6	4824.00	32.0 AV	54.0	-22.0	1.81 H	54	28.0	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.8 PK	74.0	-4.2	2.28 V	4	36.3	33.5
2	2390.00	52.5 AV	54.0	-1.5	2.28 V	4	19.0	33.5
3	*2412.00	114.3 PK			1.87 V	11	80.9	33.4
4	*2412.00	104.0 AV			1.87 V	11	70.6	33.4
5	4824.00	46.4 PK	74.0	-27.6	2.25 V	343	42.4	4.0
6	4824.00	33.3 AV	54.0	-20.7	2.25 V	343	29.3	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	101.9 PK			1.58 H	21	68.5	33.4
2	*2437.00	98.2 AV			1.58 H	21	64.8	33.4
3	4874.00	45.7 PK	74.0	-28.3	1.66 H	10	42.0	3.7
4	4874.00	34.2 AV	54.0	-19.8	1.66 H	10	30.5	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	117.9 PK			1.65 V	12	84.5	33.4
2	*2437.00	107.4 AV			1.65 V	12	74.0	33.4
3	4874.00	46.7 PK	74.0	-27.3	2.28 V	346	43.0	3.7
4	4874.00	33.4 AV	54.0	-20.6	2.28 V	346	29.7	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	101.7 PK			1.50 H	10	68.4	33.3
2	*2462.00	91.1 AV			1.50 H	10	57.8	33.3
3	2483.50	57.5 PK	74.0	-16.5	1.69 H	22	24.3	33.2
4	2483.50	45.5 AV	54.0	-8.5	1.69 H	22	12.3	33.2
5	4924.00	45.7 PK	74.0	-28.3	1.98 H	50	42.2	3.5
6	4924.00	32.8 AV	54.0	-21.2	1.98 H	50	29.3	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.1 PK			1.87 V	10	80.8	33.3
2	*2462.00	104.3 AV			1.87 V	10	71.0	33.3
3	2483.50	67.4 PK	74.0	-6.6	1.55 V	1	34.2	33.2
4	2483.50	52.4 AV	54.0	-1.6	1.55 V	1	19.2	33.2
5	4924.00	46.4 PK	74.0	-27.6	2.30 V	256	42.9	3.5
6	4924.00	33.4 AV	54.0	-20.6	2.30 V	256	29.9	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.5 PK	74.0	-16.5	1.83 H	41	24.0	33.5
2	2390.00	45.9 AV	54.0	-8.1	1.83 H	41	12.4	33.5
3	*2412.00	96.6 PK			1.79 H	29	63.2	33.4
4	*2412.00	85.7 AV			1.79 H	29	52.3	33.4
5	4824.00	46.1 PK	74.0	-27.9	1.92 H	87	42.1	4.0
6	4824.00	32.9 AV	54.0	-21.1	1.92 H	87	28.9	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.7 PK	74.0	-7.3	1.89 V	0	33.2	33.5
2	2390.00	52.3 AV	54.0	-1.7	1.89 V	0	18.8	33.5
3	*2412.00	112.9 PK			1.94 V	3	79.5	33.4
4	*2412.00	102.2 AV			1.94 V	3	68.8	33.4
5	4824.00	45.2 PK	74.0	-28.8	2.31 V	317	41.2	4.0
6	4824.00	32.0 AV	54.0	-22.0	2.31 V	317	28.0	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	103.0 PK			1.90 H	21	69.6	33.4
2	*2437.00	91.8 AV			1.90 H	21	58.4	33.4
3	4874.00	46.7 PK	74.0	-27.3	2.08 H	103	43.0	3.7
4	4874.00	32.4 AV	54.0	-21.6	2.08 H	103	28.7	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	117.7 PK			1.90 V	358	84.3	33.4
2	*2437.00	107.3 AV			1.90 V	358	73.9	33.4
3	4874.00	44.9 PK	74.0	-29.1	2.03 V	308	41.2	3.7
4	4874.00	31.9 AV	54.0	-22.1	2.03 V	308	28.2	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	100.2 PK			1.68 H	15	66.9	33.3
2	*2462.00	88.9 AV			1.68 H	15	55.6	33.3
3	2483.50	57.1 PK	74.0	-16.9	1.87 H	22	23.9	33.2
4	2483.50	45.5 AV	54.0	-8.5	1.87 H	22	12.3	33.2
5	4924.00	46.0 PK	74.0	-28.0	1.99 H	98	42.5	3.5
6	4924.00	32.4 AV	54.0	-21.6	1.99 H	98	28.9	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.5 PK			1.92 V	171	80.2	33.3
2	*2462.00	102.9 AV			1.92 V	171	69.6	33.3
3	2483.50	68.2 PK	74.0	-5.8	1.55 V	2	35.0	33.2
4	2483.50	52.2 AV	54.0	-1.8	1.55 V	2	19.0	33.2
5	4924.00	45.2 PK	74.0	-28.8	2.67 V	299	41.7	3.5
6	4924.00	31.7 AV	54.0	-22.3	2.67 V	299	28.2	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

802.11n (HT40)

CHANNEL	TX Channel 3	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.7 PK	74.0	-16.3	1.73 H	20	24.2	33.5
2	2390.00	46.0 AV	54.0	-8.0	1.73 H	20	12.5	33.5
3	*2422.00	92.9 PK			1.58 H	12	59.5	33.4
4	*2422.00	83.4 AV			1.58 H	12	50.0	33.4
5	4844.00	45.5 PK	74.0	-28.5	1.87 H	111	41.7	3.8
6	4844.00	32.3 AV	54.0	-21.7	1.87 H	111	28.5	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.1 PK	74.0	-8.9	2.41 V	2	31.6	33.5
2	2390.00	52.3 AV	54.0	-1.7	2.41 V	2	18.8	33.5
3	*2422.00	107.1 PK			1.79 V	7	73.7	33.4
4	*2422.00	97.2 AV			1.79 V	7	63.8	33.4
5	4844.00	46.4 PK	74.0	-27.6	2.27 V	333	42.6	3.8
6	4844.00	33.3 AV	54.0	-20.7	2.27 V	333	29.5	3.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.8 PK	74.0	-14.2	1.44 H	23	26.3	33.5
2	2390.00	48.0 AV	54.0	-6.0	1.44 H	23	14.5	33.5
3	*2437.00	97.6 PK			1.37 H	15	64.2	33.4
4	*2437.00	87.0 AV			1.37 H	15	53.6	33.4
5	4874.00	45.9 PK	74.0	-28.1	1.91 H	65	42.2	3.7
6	4874.00	32.5 AV	54.0	-21.5	1.91 H	65	28.8	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.5 PK	74.0	-7.5	2.08 V	1	33.0	33.5
2	2390.00	52.3 AV	54.0	-1.7	2.08 V	1	18.8	33.5
3	*2437.00	112.1 PK			1.64 V	357	78.7	33.4
4	*2437.00	101.9 AV			1.64 V	357	68.5	33.4
5	4874.00	47.6 PK	74.0	-26.4	1.91 V	293	43.9	3.7
6	4874.00	33.4 AV	54.0	-20.6	1.91 V	293	29.7	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

CHANNEL	TX Channel 9	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	94.6 PK			1.90 H	27	61.2	33.4
2	*2452.00	84.1 AV			1.90 H	27	50.7	33.4
3	2483.50	57.4 PK	74.0	-16.6	1.88 H	17	24.2	33.2
4	2483.50	45.4 AV	54.0	-8.6	1.88 H	17	12.2	33.2
5	4904.00	45.5 PK	74.0	-28.5	2.03 H	77	42.0	3.5
6	4904.00	32.5 AV	54.0	-21.5	2.03 H	77	29.0	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	109.7 PK			1.94 V	8	76.3	33.4
2	*2452.00	99.9 AV			1.94 V	8	66.5	33.4
3	2483.50	65.1 PK	74.0	-8.9	2.11 V	357	31.9	33.2
4	2483.50	52.4 AV	54.0	-1.6	2.11 V	357	19.2	33.2
5	4904.00	46.4 PK	74.0	-27.6	2.29 V	263	42.9	3.5
6	4904.00	33.2 AV	54.0	-20.8	2.29 V	263	29.7	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

Test Mode B (Radio 1, Sector Ant.)

802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	64.0 PK	74.0	-10.0	2.13 H	351	30.4	33.6
2	2351.00	52.5 AV	54.0	-1.5	2.13 H	351	18.9	33.6
3	2390.00	60.2 PK	74.0	-13.8	2.06 H	349	26.7	33.5
4	2390.00	49.5 AV	54.0	-4.5	2.06 H	349	16.0	33.5
5	*2412.00	117.6 PK			2.05 H	355	84.2	33.4
6	*2412.00	113.8 AV			2.05 H	355	80.4	33.4
7	4824.00	47.3 PK	74.0	-26.7	2.00 H	254	43.3	4.0
8	4824.00	34.6 AV	54.0	-19.4	2.00 H	254	30.6	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	64.8 PK	74.0	-9.2	2.22 V	347	31.2	33.6
2	2351.00	52.7 AV	54.0	-1.3	2.22 V	347	19.1	33.6
3	2390.00	59.9 PK	74.0	-14.1	2.17 V	350	26.4	33.5
4	2390.00	50.8 AV	54.0	-3.2	2.17 V	350	17.3	33.5
5	*2412.00	117.5 PK			2.00 V	346	84.1	33.4
6	*2412.00	113.5 AV			2.00 V	346	80.1	33.4
7	4824.00	47.2 PK	74.0	-26.8	1.69 V	308	43.2	4.0
8	4824.00	34.3 AV	54.0	-19.7	1.69 V	308	30.3	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	64.5 PK	74.0	-9.5	2.14 H	349	30.9	33.6
2	2351.00	52.6 AV	54.0	-1.4	2.14 H	349	19.0	33.6
3	*2437.00	119.9 PK			2.21 H	348	86.5	33.4
4	*2437.00	116.0 AV			2.21 H	348	82.6	33.4
5	4874.00	47.0 PK	74.0	-27.0	2.41 H	255	43.3	3.7
6	4874.00	34.2 AV	54.0	-19.8	2.41 H	255	30.5	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	66.0 PK	74.0	-8.0	2.13 V	355	32.4	33.6
2	2351.00	52.5 AV	54.0	-1.5	2.13 V	355	18.9	33.6
3	*2437.00	117.4 PK			2.09 V	349	84.0	33.4
4	*2437.00	113.6 AV			2.09 V	349	80.2	33.4
5	4874.00	47.2 PK	74.0	-26.8	2.30 V	271	43.5	3.7
6	4874.00	35.2 AV	54.0	-18.8	2.30 V	271	31.5	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	67.0 PK	74.0	-7.0	2.19 H	347	33.4	33.6
2	2351.00	52.6 AV	54.0	-1.4	2.19 H	347	19.0	33.6
3	*2462.00	119.8 PK			2.17 H	350	86.5	33.3
4	*2462.00	115.9 AV			2.17 H	350	82.6	33.3
5	2483.50	61.5 PK	74.0	-12.5	2.23 H	340	28.3	33.2
6	2483.50	50.6 AV	54.0	-3.4	2.23 H	340	17.4	33.2
7	4924.00	47.5 PK	74.0	-26.5	2.14 H	245	44.0	3.5
8	4924.00	33.8 AV	54.0	-20.2	2.14 H	245	30.3	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	66.4 PK	74.0	-7.6	2.29 V	344	32.8	33.6
2	2351.00	52.3 AV	54.0	-1.7	2.29 V	344	18.7	33.6
3	*2462.00	116.8 PK			2.63 V	359	83.5	33.3
4	*2462.00	112.9 AV			2.63 V	359	79.6	33.3
5	2483.50	59.0 PK	74.0	-15.0	2.18 V	350	25.8	33.2
6	2483.50	47.4 AV	54.0	-6.6	2.18 V	350	14.2	33.2
7	4924.00	47.0 PK	74.0	-27.0	1.85 V	295	43.5	3.5
8	4924.00	34.3 AV	54.0	-19.7	1.85 V	295	30.8	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	68.1 PK	74.0	-5.9	1.85 H	351	34.5	33.6
2	2351.00	52.4 AV	54.0	-1.6	1.85 H	351	18.8	33.6
3	2390.00	63.9 PK	74.0	-10.1	1.99 H	348	30.4	33.5
4	2390.00	50.0 AV	54.0	-4.0	1.99 H	348	16.5	33.5
5	*2412.00	115.8 PK			2.21 H	346	82.4	33.4
6	*2412.00	104.4 AV			2.21 H	346	71.0	33.4
7	4824.00	47.1 PK	74.0	-26.9	1.89 H	236	43.1	4.0
8	4824.00	33.7 AV	54.0	-20.3	1.89 H	236	29.7	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	68.8 PK	74.0	-5.2	2.27 V	341	35.2	33.6
2	2351.00	51.5 AV	54.0	-2.5	2.27 V	341	17.9	33.6
3	2390.00	64.2 PK	74.0	-9.8	2.25 V	350	30.7	33.5
4	2390.00	49.5 AV	54.0	-4.5	2.25 V	350	16.0	33.5
5	*2412.00	114.1 PK			2.22 V	352	80.7	33.4
6	*2412.00	103.5 AV			2.22 V	352	70.1	33.4
7	4824.00	47.0 PK	74.0	-27.0	1.88 V	299	43.0	4.0
8	4824.00	33.7 AV	54.0	-20.3	1.88 V	299	29.7	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	68.2 PK	74.0	-5.8	2.34 H	350	34.6	33.6
2	2351.00	52.5 AV	54.0	-1.5	2.34 H	350	18.9	33.6
3	*2437.00	122.3 PK			2.21 H	349	88.9	33.4
4	*2437.00	110.6 AV			2.21 H	349	77.2	33.4
5	4874.00	47.2 PK	74.0	-26.8	2.10 H	266	43.5	3.7
6	4874.00	33.8 AV	54.0	-20.2	2.10 H	266	30.1	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	65.8 PK	74.0	-8.2	2.11 V	350	32.2	33.6
2	2351.00	49.9 AV	54.0	-4.1	2.11 V	350	16.3	33.6
3	*2437.00	119.1 PK			2.06 V	349	85.7	33.4
4	*2437.00	109.0 AV			2.06 V	349	75.6	33.4
5	4874.00	46.8 PK	74.0	-27.2	1.87 V	287	43.1	3.7
6	4874.00	33.2 AV	54.0	-20.8	1.87 V	287	29.5	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	66.0 PK	74.0	-8.0	2.21 H	354	32.4	33.6
2	2351.00	51.7 AV	54.0	-2.3	2.21 H	354	18.1	33.6
3	*2462.00	117.9 PK			2.15 H	346	84.6	33.3
4	*2462.00	106.1 AV			2.15 H	346	72.8	33.3
5	2483.50	66.2 PK	74.0	-7.8	2.19 H	343	33.0	33.2
6	2483.50	52.3 AV	54.0	-1.7	2.19 H	343	19.1	33.2
7	4924.00	47.1 PK	74.0	-26.9	1.97 H	274	43.6	3.5
8	4924.00	33.6 AV	54.0	-20.4	1.97 H	274	30.1	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	63.7 PK	74.0	-10.3	2.25 V	344	30.1	33.6
2	2351.00	49.6 AV	54.0	-4.4	2.25 V	344	16.0	33.6
3	*2462.00	114.6 PK			2.19 V	352	81.3	33.3
4	*2462.00	103.6 AV			2.19 V	352	70.3	33.3
5	2483.50	61.2 PK	74.0	-12.8	2.05 V	344	28.0	33.2
6	2483.50	48.9 AV	54.0	-5.1	2.05 V	344	15.7	33.2
7	4924.00	46.3 PK	74.0	-27.7	1.89 V	311	42.8	3.5
8	4924.00	33.0 AV	54.0	-21.0	1.89 V	311	29.5	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	66.2 PK	74.0	-7.8	2.15 H	351	32.6	33.6
2	2351.00	52.8 AV	54.0	-1.2	2.15 H	351	19.2	33.6
3	2390.00	63.4 PK	74.0	-10.6	2.11 H	349	29.9	33.5
4	2390.00	49.5 AV	54.0	-4.5	2.11 H	349	16.0	33.5
5	*2412.00	114.5 PK			2.11 H	344	81.1	33.4
6	*2412.00	103.0 AV			2.11 H	344	69.6	33.4
7	4824.00	47.0 PK	74.0	-27.0	1.98 H	261	43.0	4.0
8	4824.00	33.8 AV	54.0	-20.2	1.98 H	261	29.8	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	65.8 PK	74.0	-8.2	2.03 V	344	32.2	33.6
2	2351.00	51.3 AV	54.0	-2.7	2.03 V	344	17.7	33.6
3	2390.00	62.2 PK	74.0	-11.8	2.15 V	350	28.7	33.5
4	2390.00	48.8 AV	54.0	-5.2	2.15 V	350	15.3	33.5
5	*2412.00	113.2 PK			2.16 V	353	79.8	33.4
6	*2412.00	102.6 AV			2.16 V	353	69.2	33.4
7	4824.00	46.7 PK	74.0	-27.3	1.87 V	295	42.7	4.0
8	4824.00	33.5 AV	54.0	-20.5	1.87 V	295	29.5	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	63.5 PK	74.0	-10.5	2.15 H	350	29.9	33.6
2	2351.00	52.7 AV	54.0	-1.3	2.15 H	350	19.1	33.6
3	*2437.00	121.1 PK			2.21 H	344	87.7	33.4
4	*2437.00	110.1 AV			2.21 H	344	76.7	33.4
5	4874.00	47.4 PK	74.0	-26.6	2.05 H	266	43.7	3.7
6	4874.00	33.6 AV	54.0	-20.4	2.05 H	266	29.9	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	60.3 PK	74.0	-13.7	2.19 V	349	26.7	33.6
2	2351.00	50.7 AV	54.0	-3.3	2.19 V	349	17.1	33.6
3	*2437.00	119.1 PK			2.23 V	350	85.7	33.4
4	*2437.00	107.9 AV			2.23 V	350	74.5	33.4
5	4874.00	46.8 PK	74.0	-27.2	1.81 V	308	43.1	3.7
6	4874.00	33.1 AV	54.0	-20.9	1.81 V	308	29.4	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	60.6 PK	74.0	-13.4	2.20 H	350	27.0	33.6
2	2351.00	52.2 AV	54.0	-1.8	2.20 H	350	18.6	33.6
3	*2462.00	116.1 PK			2.19 H	347	82.8	33.3
4	*2462.00	105.0 AV			2.19 H	347	71.7	33.3
5	2483.50	68.0 PK	74.0	-6.0	2.13 H	340	34.8	33.2
6	2483.50	52.7 AV	54.0	-1.3	2.13 H	340	19.5	33.2
7	4924.00	47.2 PK	74.0	-26.8	1.97 H	254	43.7	3.5
8	4924.00	33.4 AV	54.0	-20.6	1.97 H	254	29.9	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	59.5 PK	74.0	-14.5	2.20 V	350	25.9	33.6
2	2351.00	50.3 AV	54.0	-3.7	2.20 V	350	16.7	33.6
3	*2462.00	113.7 PK			2.33 V	346	80.4	33.3
4	*2462.00	103.1 AV			2.33 V	346	69.8	33.3
5	2483.50	62.2 PK	74.0	-11.8	2.11 V	351	29.0	33.2
6	2483.50	48.3 AV	54.0	-5.7	2.11 V	351	15.1	33.2
7	4924.00	46.7 PK	74.0	-27.3	1.77 V	309	43.2	3.5
8	4924.00	32.9 AV	54.0	-21.1	1.77 V	309	29.4	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11n (HT40)

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	65.6 PK	74.0	-8.4	2.02 H	346	32.0	33.6
2	2351.00	52.4 AV	54.0	-1.6	2.02 H	346	18.8	33.6
3	2390.00	61.0 PK	74.0	-13.0	2.19 H	344	27.5	33.5
4	2390.00	50.2 AV	54.0	-3.8	2.19 H	344	16.7	33.5
5	*2422.00	108.7 PK			2.20 H	345	75.3	33.4
6	*2422.00	98.8 AV			2.20 H	345	65.4	33.4
7	4844.00	47.3 PK	74.0	-26.7	2.01 H	254	43.5	3.8
8	4844.00	33.5 AV	54.0	-20.5	2.01 H	254	29.7	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	64.5 PK	74.0	-9.5	2.19 V	349	30.9	33.6
2	2351.00	51.7 AV	54.0	-2.3	2.19 V	349	18.1	33.6
3	2390.00	60.7 PK	74.0	-13.3	2.25 V	347	27.2	33.5
4	2390.00	49.6 AV	54.0	-4.4	2.25 V	347	16.1	33.5
5	*2422.00	106.4 PK			2.23 V	350	73.0	33.4
6	*2422.00	96.5 AV			2.23 V	350	63.1	33.4
7	4844.00	46.9 PK	74.0	-27.1	1.81 V	308	43.1	3.8
8	4844.00	33.2 AV	54.0	-20.8	1.81 V	308	29.4	3.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	65.6 PK	74.0	-8.4	2.19 H	347	32.0	33.6
2	2351.00	52.9 AV	54.0	-1.1	2.19 H	347	19.3	33.6
3	*2437.00	114.2 PK			2.22 H	354	80.8	33.4
4	*2437.00	103.7 AV			2.22 H	354	70.3	33.4
5	4874.00	47.7 PK	74.0	-26.3	2.03 H	244	44.0	3.7
6	4874.00	34.0 AV	54.0	-20.0	2.03 H	244	30.3	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	65.1 PK	74.0	-8.9	2.03 V	351	31.5	33.6
2	2351.00	52.8 AV	54.0	-1.2	2.03 V	351	19.2	33.6
3	*2437.00	111.1 PK			2.28 V	348	77.7	33.4
4	*2437.00	101.1 AV			2.28 V	348	67.7	33.4
5	4874.00	47.2 PK	74.0	-26.8	1.77 V	304	43.5	3.7
6	4874.00	33.4 AV	54.0	-20.6	1.77 V	304	29.7	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

CHANNEL	TX Channel 9	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	60.6 PK	74.0	-13.4	2.30 H	343	27.0	33.6
2	2351.00	52.7 AV	54.0	-1.3	2.30 H	343	19.1	33.6
3	*2452.00	111.9 PK			2.20 H	350	78.5	33.4
4	*2452.00	101.1 AV			2.20 H	350	67.7	33.4
5	2483.50	65.2 PK	74.0	-8.8	2.22 H	341	32.0	33.2
6	2483.50	52.2 AV	54.0	-1.8	2.22 H	341	19.0	33.2
7	4904.00	46.8 PK	74.0	-27.2	1.86 H	233	43.3	3.5
8	4904.00	33.8 AV	54.0	-20.2	1.86 H	233	30.3	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2351.00	60.5 PK	74.0	-13.5	2.31 V	355	26.9	33.6
2	2351.00	50.9 AV	54.0	-3.1	2.31 V	355	17.3	33.6
3	*2452.00	108.6 PK			2.46 V	356	75.2	33.4
4	*2452.00	98.6 AV			2.46 V	356	65.2	33.4
5	2483.50	61.1 PK	74.0	-12.9	2.22 V	345	27.9	33.2
6	2483.50	48.3 AV	54.0	-5.7	2.22 V	345	15.1	33.2
7	4904.00	46.3 PK	74.0	-27.7	1.79 V	318	42.8	3.5
8	4904.00	33.2 AV	54.0	-20.8	1.79 V	318	29.7	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

Test Mode C (Radio 3, PIFA Ant.)

802.11b

CHANNEL	TX Channel 1	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.1 PK	74.0	-13.9	1.00 H	33	26.6	33.5
2	2390.00	50.4 AV	54.0	-3.6	1.00 H	33	16.9	33.5
3	*2412.00	108.1 PK			1.18 H	28	74.7	33.4
4	*2412.00	104.0 AV			1.18 H	28	70.6	33.4
5	4824.00	48.7 PK	74.0	-25.3	1.86 H	333	44.7	4.0
6	4824.00	38.3 AV	54.0	-15.7	1.86 H	333	34.3	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.5 PK	74.0	-13.5	1.00 V	17	27.0	33.5
2	2390.00	49.9 AV	54.0	-4.1	1.00 V	17	16.4	33.5
3	*2412.00	106.4 PK			1.24 V	6	73.0	33.4
4	*2412.00	102.4 AV			1.24 V	6	69.0	33.4
5	4824.00	48.4 PK	74.0	-25.6	3.86 V	336	44.4	4.0
6	4824.00	36.4 AV	54.0	-17.6	3.86 V	336	32.4	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.4 PK			1.10 H	42	74.0	33.4
2	*2437.00	103.3 AV			1.10 H	42	69.9	33.4
3	4874.00	48.7 PK	74.0	-25.3	1.88 H	337	45.0	3.7
4	4874.00	36.8 AV	54.0	-17.2	1.88 H	337	33.1	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.7 PK			1.07 V	16	72.3	33.4
2	*2437.00	101.8 AV			1.07 V	16	68.4	33.4
3	4874.00	48.4 PK	74.0	-25.6	3.57 V	358	44.7	3.7
4	4874.00	36.3 AV	54.0	-17.7	3.57 V	358	32.6	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.7 PK			1.09 H	28	73.4	33.3
2	*2462.00	102.5 AV			1.09 H	28	69.2	33.3
3	2483.50	59.3 PK	74.0	-14.7	1.11 H	22	26.1	33.2
4	2483.50	47.4 AV	54.0	-6.6	1.11 H	22	14.2	33.2
5	4924.00	48.4 PK	74.0	-25.6	1.36 H	339	44.9	3.5
6	4924.00	36.8 AV	54.0	-17.2	1.36 H	339	33.3	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	105.0 PK			1.06 V	11	71.7	33.3
2	*2462.00	100.6 AV			1.06 V	11	67.3	33.3
3	2483.50	59.6 PK	74.0	-14.4	1.12 V	15	26.4	33.2
4	2483.50	47.2 AV	54.0	-6.8	1.12 V	15	14.0	33.2
5	4924.00	48.4 PK	74.0	-25.6	3.52 V	20	44.9	3.5
6	4924.00	35.0 AV	54.0	-19.0	3.52 V	20	31.5	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.2 PK	74.0	-4.8	1.24 H	30	35.7	33.5
2	2390.00	52.4 AV	54.0	-1.6	1.24 H	30	18.9	33.5
3	*2412.00	109.8 PK			1.17 H	28	76.4	33.4
4	*2412.00	98.7 AV			1.17 H	28	65.3	33.4
5	4824.00	47.7 PK	74.0	-26.3	1.70 H	329	43.7	4.0
6	4824.00	34.1 AV	54.0	-19.9	1.70 H	329	30.1	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.9 PK	74.0	-6.1	1.68 V	20	34.4	33.5
2	2390.00	51.2 AV	54.0	-2.8	1.68 V	20	17.7	33.5
3	*2412.00	108.5 PK			1.68 V	12	75.1	33.4
4	*2412.00	97.5 AV			1.68 V	12	64.1	33.4
5	4824.00	47.4 PK	74.0	-26.6	3.74 V	344	43.4	4.0
6	4824.00	33.3 AV	54.0	-20.7	3.74 V	344	29.3	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	108.8 PK			1.11 H	28	75.4	33.4
2	*2437.00	97.6 AV			1.11 H	28	64.2	33.4
3	4874.00	47.5 PK	74.0	-26.5	1.65 H	335	43.8	3.7
4	4874.00	33.9 AV	54.0	-20.1	1.65 H	335	30.2	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.7 PK			1.05 V	9	74.3	33.4
2	*2437.00	96.5 AV			1.05 V	9	63.1	33.4
3	4874.00	47.0 PK	74.0	-27.0	3.68 V	349	43.3	3.7
4	4874.00	33.4 AV	54.0	-20.6	3.68 V	349	29.7	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.9 PK			1.13 H	27	74.6	33.3
2	*2462.00	96.9 AV			1.13 H	27	63.6	33.3
3	2483.50	63.4 PK	74.0	-10.6	1.11 H	27	30.2	33.2
4	2483.50	49.7 AV	54.0	-4.3	1.11 H	27	16.5	33.2
5	4924.00	47.7 PK	74.0	-26.3	1.69 H	325	44.2	3.5
6	4924.00	33.8 AV	54.0	-20.2	1.69 H	325	30.3	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.7 PK			1.05 V	9	73.4	33.3
2	*2462.00	95.7 AV			1.05 V	9	62.4	33.3
3	2483.50	62.7 PK	74.0	-11.3	1.04 V	11	29.5	33.2
4	2483.50	49.3 AV	54.0	-4.7	1.04 V	11	16.1	33.2
5	4924.00	47.2 PK	74.0	-26.8	3.67 V	352	43.7	3.5
6	4924.00	33.1 AV	54.0	-20.9	3.67 V	352	29.6	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.9 PK	74.0	-7.1	1.10 H	58	33.4	33.5
2	2390.00	52.6 AV	54.0	-1.4	1.10 H	58	19.1	33.5
3	*2412.00	107.1 PK			1.12 H	60	73.7	33.4
4	*2412.00	96.3 AV			1.12 H	60	62.9	33.4
5	4824.00	47.7 PK	74.0	-26.3	1.91 H	339	43.7	4.0
6	4824.00	34.3 AV	54.0	-19.7	1.91 H	339	30.3	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.2 PK	74.0	-7.8	1.32 V	15	32.7	33.5
2	2390.00	52.6 AV	54.0	-1.4	1.32 V	15	19.1	33.5
3	*2412.00	106.2 PK			1.25 V	7	72.8	33.4
4	*2412.00	95.2 AV			1.25 V	7	61.8	33.4
5	4824.00	47.5 PK	74.0	-26.5	3.49 V	353	43.5	4.0
6	4824.00	34.1 AV	54.0	-19.9	3.49 V	353	30.1	4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	109.0 PK			1.10 H	25	75.6	33.4
2	*2437.00	97.7 AV			1.10 H	25	64.3	33.4
3	4874.00	47.9 PK	74.0	-26.1	1.85 H	342	44.2	3.7
4	4874.00	34.2 AV	54.0	-19.8	1.85 H	342	30.5	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.0 PK			1.06 V	14	73.6	33.4
2	*2437.00	95.9 AV			1.06 V	14	62.5	33.4
3	4874.00	47.7 PK	74.0	-26.3	3.65 V	329	44.0	3.7
4	4874.00	34.2 AV	54.0	-19.8	3.65 V	329	30.5	3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.0 PK			1.00 H	41	74.7	33.3
2	*2462.00	96.9 AV			1.00 H	41	63.6	33.3
3	2483.50	66.2 PK	74.0	-7.8	1.02 H	28	33.0	33.2
4	2483.50	51.1 AV	54.0	-2.9	1.02 H	28	17.9	33.2
5	4924.00	48.2 PK	74.0	-25.8	1.89 H	328	44.7	3.5
6	4924.00	34.3 AV	54.0	-19.7	1.89 H	328	30.8	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.6 PK			1.04 V	12	73.3	33.3
2	*2462.00	95.7 AV			1.04 V	12	62.4	33.3
3	2483.50	64.5 PK	74.0	-9.5	1.09 V	14	31.3	33.2
4	2483.50	50.4 AV	54.0	-3.6	1.09 V	14	17.2	33.2
5	4924.00	48.0 PK	74.0	-26.0	3.74 V	341	44.5	3.5
6	4924.00	34.2 AV	54.0	-19.8	3.74 V	341	30.7	3.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

Below 1GHz worst-case data:

Test Mode A (Radio 1, Dipole Ant.)

802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.12	27.5 QP	40.0	-12.5	1.99 H	299	41.9	-14.4
2	99.89	27.9 QP	43.5	-15.6	1.99 H	94	46.4	-18.5
3	249.60	29.9 QP	46.0	-16.1	1.00 H	83	44.5	-14.6
4	348.76	24.2 QP	46.0	-21.8	1.00 H	99	36.3	-12.1
5	449.87	24.5 QP	46.0	-21.5	1.99 H	4	34.6	-10.1
6	545.14	31.8 QP	46.0	-14.2	1.99 H	83	40.5	-8.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	101.84	27.1 QP	43.5	-16.4	1.00 V	111	45.4	-18.3
2	187.39	30.9 QP	43.5	-12.6	1.00 V	208	47.0	-16.1
3	249.60	29.4 QP	46.0	-16.6	1.99 V	152	44.0	-14.6
4	374.04	30.0 QP	46.0	-16.0	1.00 V	143	41.6	-11.6
5	449.87	30.5 QP	46.0	-15.5	1.49 V	74	40.6	-10.1
6	552.91	38.0 QP	46.0	-8.0	1.00 V	224	46.6	-8.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Test Mode B (Radio 1, Sector Ant.)

802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	45.45	30.2 QP	40.0	-9.8	1.00 H	283	39.7	-9.5
2	90.17	30.1 QP	43.5	-13.4	1.99 H	259	44.8	-14.7
3	218.50	28.1 QP	46.0	-17.9	1.00 H	49	39.1	-11.0
4	405.15	26.8 QP	46.0	-19.2	1.99 H	187	31.9	-5.1
5	549.03	39.0 QP	46.0	-7.0	1.50 H	77	40.9	-1.9
6	716.23	32.7 QP	46.0	-13.3	1.00 H	207	31.2	1.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	45.45	36.1 QP	40.0	-3.9	1.49 V	16	45.6	-9.5
2	80.45	29.9 QP	40.0	-10.1	1.99 V	179	43.3	-13.4
3	164.06	28.0 QP	43.5	-15.5	1.00 V	140	36.9	-8.9
4	284.60	28.6 QP	46.0	-17.4	1.00 V	292	36.1	-7.5
5	550.97	36.9 QP	46.0	-9.1	1.99 V	148	38.8	-1.9
6	795.95	33.1 QP	46.0	-12.9	1.99 V	321	29.9	3.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Test Mode C (Radio 3, PIFA Ant.)

802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.12	27.3 QP	40.0	-12.7	2.00 H	64	36.8	-9.5
2	105.73	29.0 QP	43.5	-14.5	2.00 H	80	41.9	-12.9
3	249.60	31.3 QP	46.0	-14.7	1.01 H	90	40.4	-9.1
4	374.04	32.2 QP	46.0	-13.8	2.00 H	244	37.8	-5.6
5	539.30	33.7 QP	46.0	-12.3	1.50 H	296	36.1	-2.4
6	624.85	36.3 QP	46.0	-9.7	1.01 H	94	36.2	0.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	55.18	35.3 QP	40.0	-4.7	1.00 V	263	44.7	-9.4
2	191.28	30.7 QP	43.5	-12.8	1.49 V	6	41.9	-11.2
3	374.04	36.2 QP	46.0	-9.8	1.00 V	73	41.8	-5.6
4	506.25	34.8 QP	46.0	-11.2	1.00 V	334	37.5	-2.7
5	545.14	41.8 QP	46.0	-4.2	1.00 V	288	43.9	-2.1
6	624.85	37.7 QP	46.0	-8.3	1.99 V	12	37.6	0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 23, 2017	Nov. 22, 2018
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2017	Sep. 04, 2018
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 06, 2018	Mar. 05, 2019
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 15, 2017	Aug. 14, 2018
Software ADT	BV ADT_Conc_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 1.
 3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

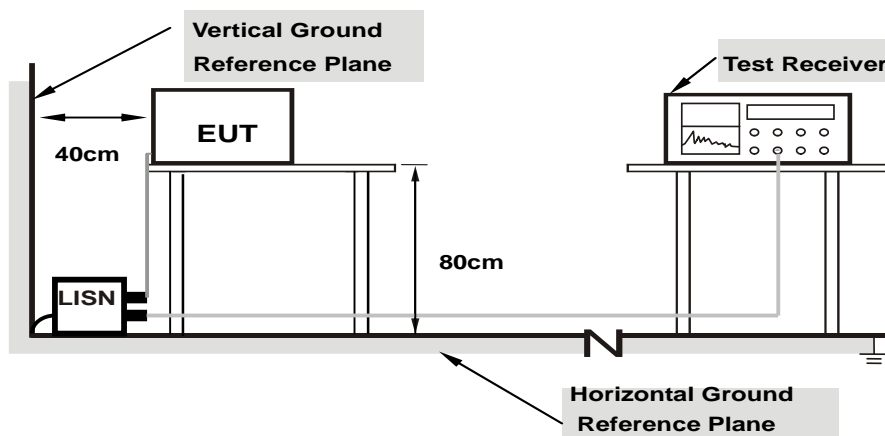
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

Worst-case data:

Test Mode A (Radio 1, Dipole Ant.)

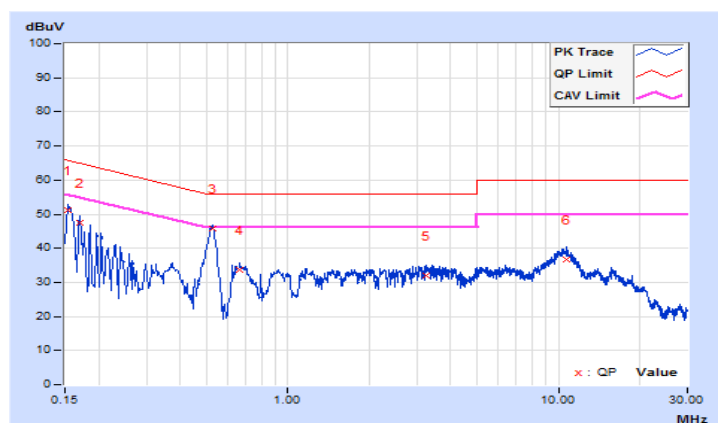
802.11b

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.10	41.04	25.90	51.14	36.00	65.79	55.79	-14.65	-19.79
2	0.16955	10.10	37.42	22.78	47.52	32.88	64.98	54.98	-17.46	-22.10
3	0.52544	10.12	35.73	30.61	45.85	40.73	56.00	46.00	-10.15	-5.27
4	0.66221	10.13	23.44	19.07	33.57	29.20	56.00	46.00	-22.43	-16.80
5	3.22717	10.25	21.89	16.49	32.14	26.74	56.00	46.00	-23.86	-19.26
6	10.77738	10.67	25.99	20.72	36.66	31.39	60.00	50.00	-23.34	-18.61

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

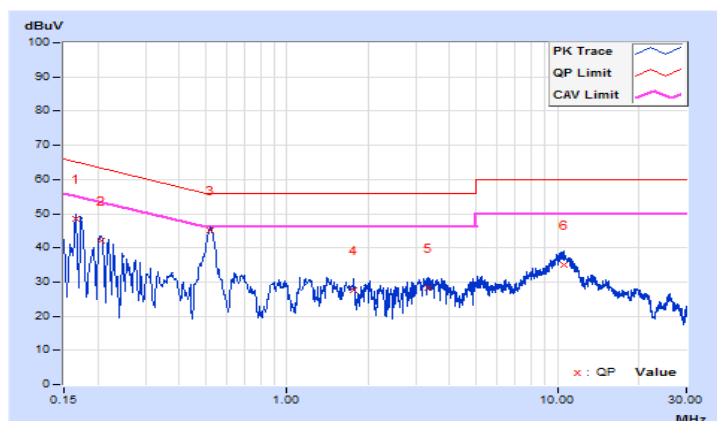


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16564	10.10	38.33	21.76	48.43	31.86	65.18	55.18	-16.75	-23.32
2	0.20511	10.10	31.98	17.42	42.08	27.52	63.40	53.40	-21.32	-25.88
3	0.52130	10.12	34.85	30.80	44.97	40.92	56.00	46.00	-11.03	-5.08
4	1.76483	10.16	17.32	12.82	27.48	22.98	56.00	46.00	-28.52	-23.02
5	3.32883	10.24	17.99	12.60	28.23	22.84	56.00	46.00	-27.77	-23.16
6	10.54278	10.54	24.53	19.25	35.07	29.79	60.00	50.00	-24.93	-20.21

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



Test Mode B (Radio 1, Sector Ant.)

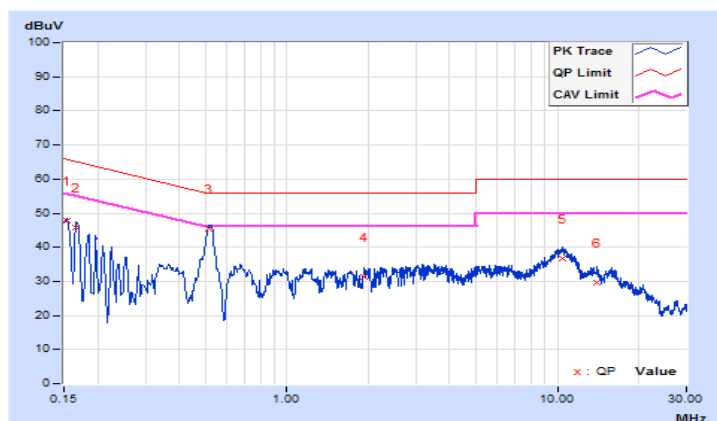
802.11b

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.10	37.87	23.41	47.97	33.51	65.79	55.79	-17.82	-22.28
2	0.16569	10.10	35.60	20.37	45.70	30.47	65.17	55.17	-19.47	-24.70
3	0.51719	10.12	35.46	30.75	45.58	40.87	56.00	46.00	-10.42	-5.13
4	1.93296	10.18	21.05	15.92	31.23	26.10	56.00	46.00	-24.77	-19.90
5	10.42939	10.64	26.15	21.00	36.79	31.64	60.00	50.00	-23.21	-18.36
6	14.06960	10.86	18.92	13.98	29.78	24.84	60.00	50.00	-30.22	-25.16

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

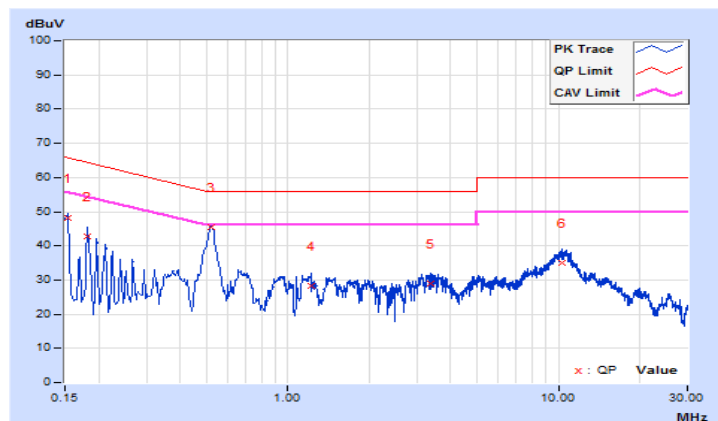


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.10	37.99	22.45	48.09	32.55	65.79	55.79	-17.70	-23.24
2	0.18128	10.10	32.75	17.57	42.85	27.67	64.43	54.43	-21.58	-26.76
3	0.51856	10.12	35.18	30.65	45.30	40.77	56.00	46.00	-10.70	-5.23
4	1.21352	10.14	18.05	13.80	28.19	23.94	56.00	46.00	-27.81	-22.06
5	3.35229	10.24	18.74	13.19	28.98	23.43	56.00	46.00	-27.02	-22.57
6	10.30036	10.53	24.48	19.20	35.01	29.73	60.00	50.00	-24.99	-20.27

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



Test Mode C (Radio 3, PIFA Ant.)

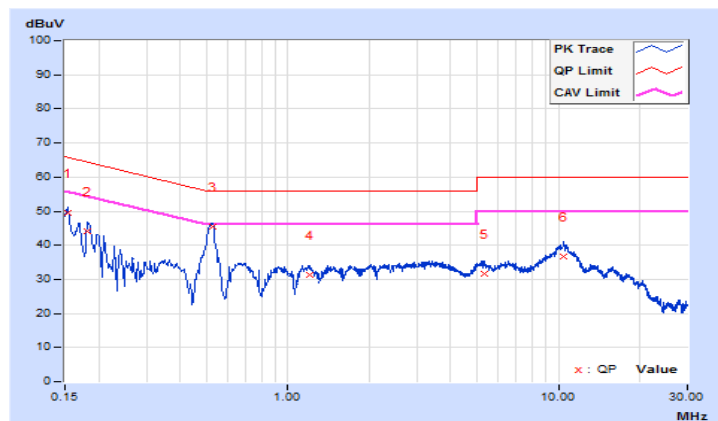
802.11b

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.10	39.24	24.50	49.34	34.60	65.79	55.79	-16.45	-21.19
2	0.18122	10.10	34.00	19.86	44.10	29.96	64.43	54.43	-20.33	-24.47
3	0.52682	10.12	35.21	30.18	45.33	40.30	56.00	46.00	-10.67	-5.70
4	1.20181	10.15	21.22	17.85	31.37	28.00	56.00	46.00	-24.63	-18.00
5	5.29556	10.36	21.30	15.79	31.66	26.15	60.00	50.00	-28.34	-23.85
6	10.45676	10.65	26.00	20.78	36.65	31.43	60.00	50.00	-23.35	-18.57

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

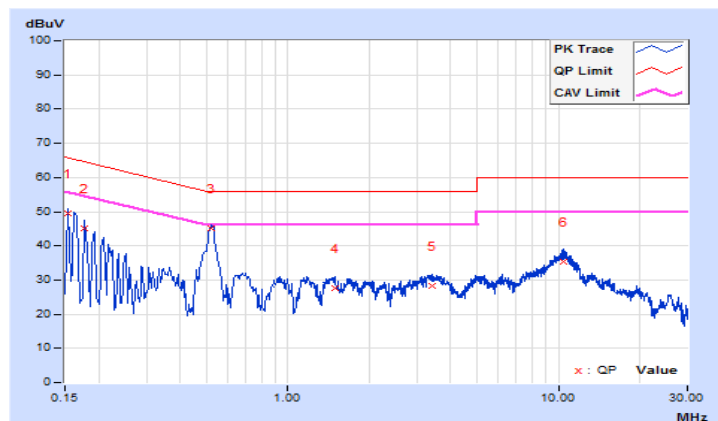


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.10	39.41	23.65	49.51	33.75	65.79	55.79	-16.28	-22.04
2	0.17737	10.10	35.18	19.24	45.28	29.34	64.61	54.61	-19.33	-25.27
3	0.52145	10.12	35.01	30.67	45.13	40.79	56.00	46.00	-10.87	-5.21
4	1.48722	10.15	17.51	13.69	27.66	23.84	56.00	46.00	-28.34	-22.16
5	3.41485	10.24	18.07	12.25	28.31	22.49	56.00	46.00	-27.69	-23.51
6	10.39029	10.54	24.70	19.30	35.24	29.84	60.00	50.00	-24.76	-20.16

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

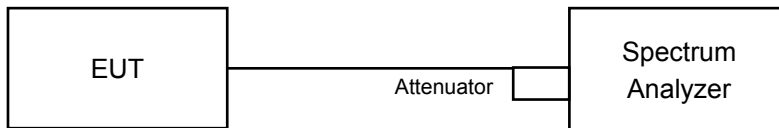


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

- Set resolution bandwidth (RBW) = 100kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Result

Test Mode A (Radio 1, Dipole Ant.)

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.10	8.09	0.5	Pass
6	2437	8.10	8.09	0.5	Pass
11	2462	8.58	8.58	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.40	16.40	0.5	Pass
6	2437	16.39	16.39	0.5	Pass
11	2462	16.40	16.40	0.5	Pass

802.11n (HT20)

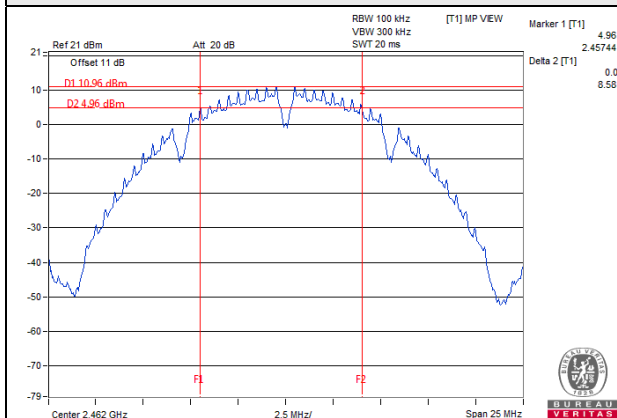
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.65	17.63	0.5	Pass
6	2437	17.65	17.60	0.5	Pass
11	2462	17.63	17.63	0.5	Pass

802.11n (HT40)

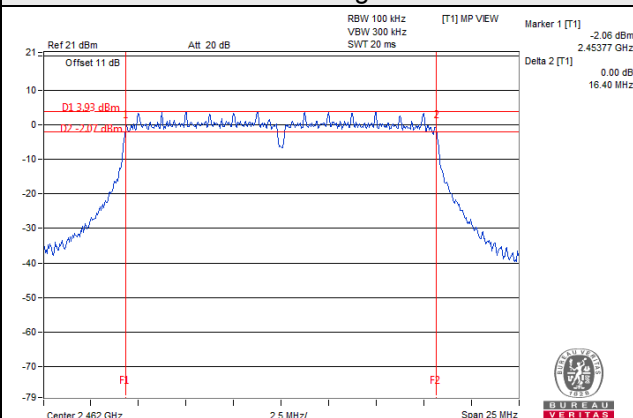
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.29	35.30	0.5	Pass
6	2437	35.22	35.27	0.5	Pass
9	2452	35.24	35.32	0.5	Pass

Spectrum Plot of Worst Value

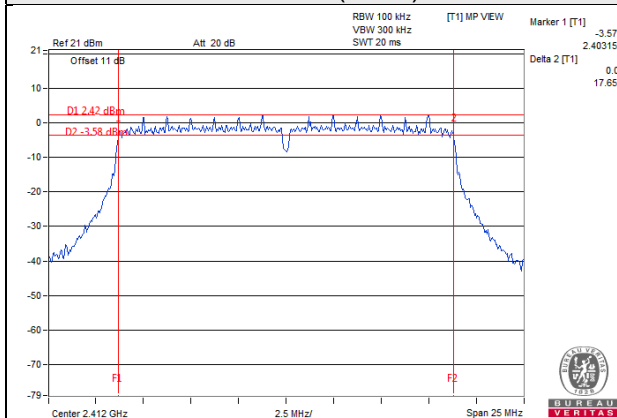
802.11b



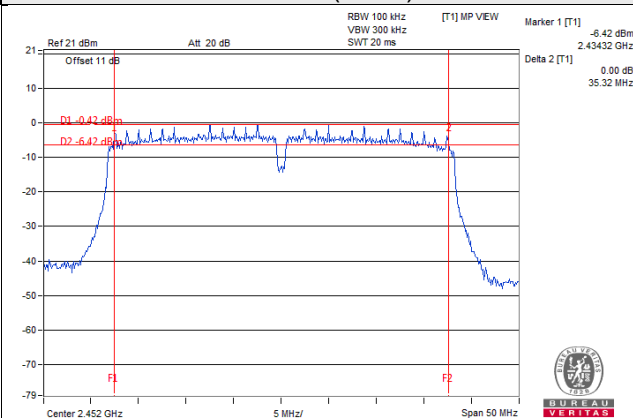
802.11g



802.11n (HT20)



802.11n (HT40)



Test Mode B (Radio 1, Sector Ant.)

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.07	9.02	0.5	Pass
6	2437	8.58	8.09	0.5	Pass
11	2462	8.10	8.09	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.40	16.40	0.5	Pass
6	2437	16.40	16.40	0.5	Pass
11	2462	16.39	16.40	0.5	Pass

802.11n (HT20)

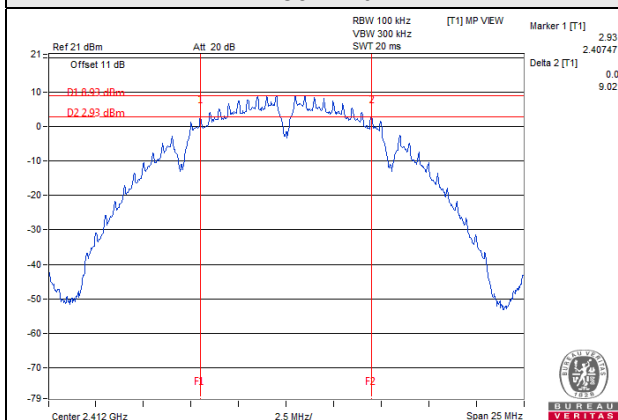
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.63	17.62	0.5	Pass
6	2437	17.62	17.64	0.5	Pass
11	2462	17.63	17.63	0.5	Pass

802.11n (HT40)

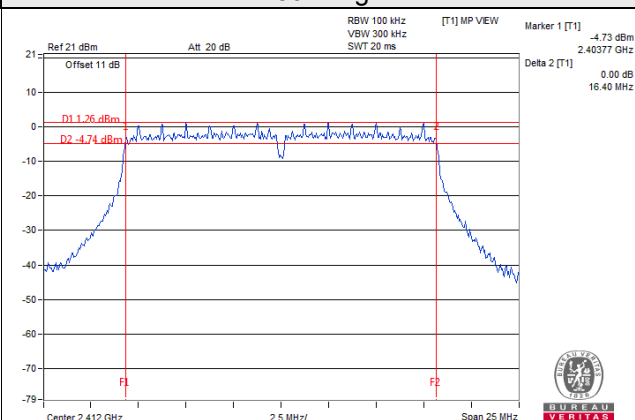
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.24	35.32	0.5	Pass
6	2437	35.23	35.34	0.5	Pass
9	2452	35.22	35.33	0.5	Pass

Spectrum Plot of Worst Value

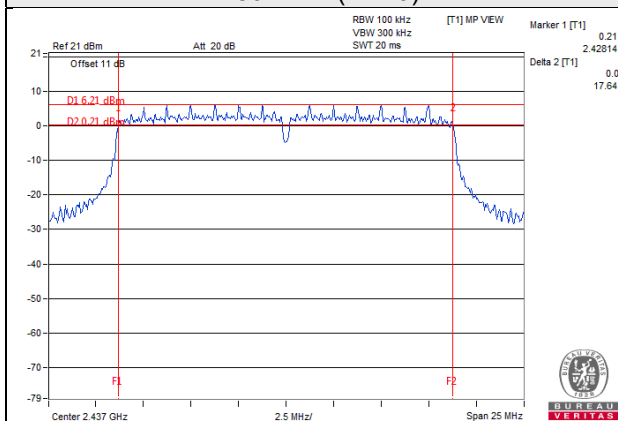
802.11b



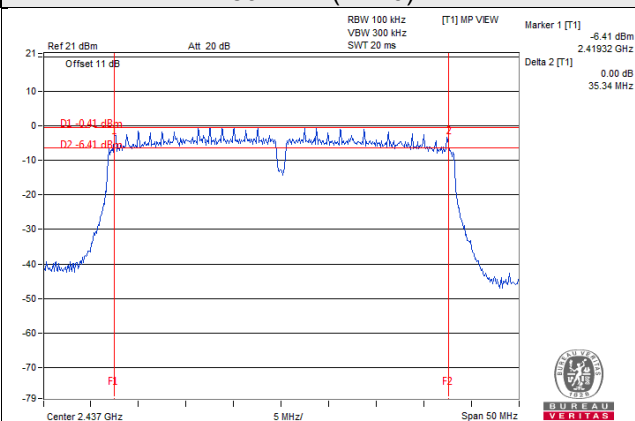
802.11g



802.11n (HT20)



802.11n (HT40)



Test Mode C (Radio 3, PIFA Ant.)

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	7.07	0.5	Pass
6	2437	7.12	0.5	Pass
11	2462	7.10	0.5	Pass

802.11g

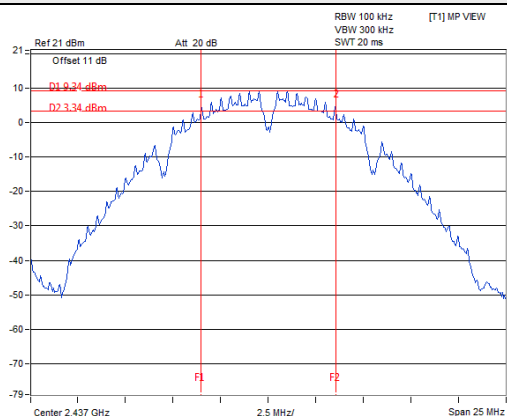
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.38	0.5	Pass
6	2437	16.34	0.5	Pass
11	2462	16.38	0.5	Pass

802.11n (HT20)

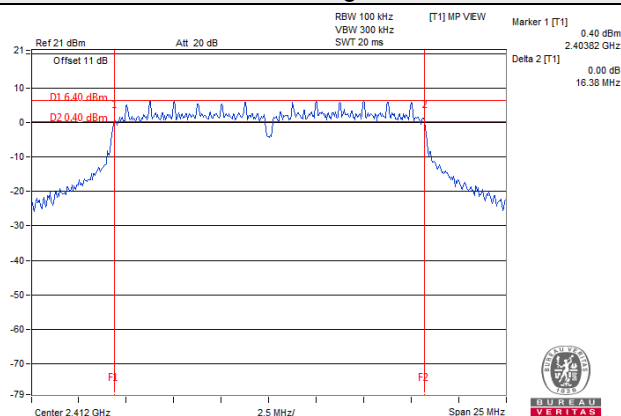
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.96	0.5	Pass
6	2437	17.33	0.5	Pass
11	2462	16.93	0.5	Pass

Spectrum Plot of Worst Value

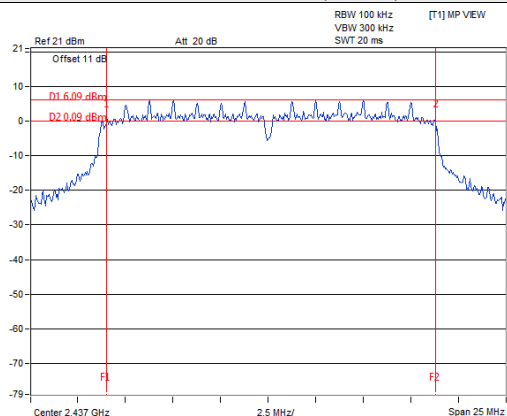
802.11b



802.11g



802.11n (HT20)



4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

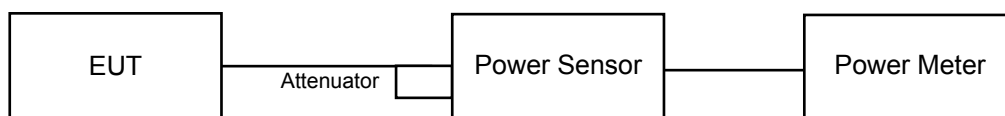
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as item 4.3.6.

4.4.7 Test Results

Test Mode A (Radio 1, Dipole Ant., CDD Mode)

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.98	19.71	172.609	22.37	30.00	Pass
6	2437	18.96	19.95	177.560	22.49	30.00	Pass
11	2462	19.11	19.94	180.098	22.56	30.00	Pass

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	14.51	15.31	62.212	17.94	30.00	Pass
6	2437	18.94	19.63	170.176	22.31	30.00	Pass
11	2462	15.28	15.91	72.723	18.62	30.00	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	13.35	14.25	48.234	16.83	30.00	Pass
6	2437	18.75	19.65	167.246	22.23	30.00	Pass
11	2462	14.73	15.44	64.712	18.11	30.00	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	11.02	12.06	28.716	14.58	30.00	Pass
6	2437	14.83	15.65	67.137	18.27	30.00	Pass
9	2452	13.43	14.18	48.211	16.83	30.00	Pass

Test Mode A (Radio 1, Dipole Ant., Beamforming Mode)

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	10.34	11.24	24.119	13.82	28.49	Pass
6	2437	15.74	16.64	83.629	19.22	28.49	Pass
11	2462	11.72	12.43	32.357	15.10	28.49	Pass

Note: Directional gain = $4.50\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $30 - (7.51 - 6) = 28.49\text{dBm}$.

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	8.01	9.05	14.359	11.57	28.49	Pass
6	2437	11.82	12.64	33.570	15.26	28.49	Pass
9	2452	10.42	11.17	24.107	13.82	28.49	Pass

Note: Directional gain = $4.50\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $30 - (7.51 - 6) = 28.49\text{dBm}$.

Test Mode B (Radio 1, Sector Ant., CDD Mode)

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.46	18.61	142.757	21.55	23.40	Pass
6	2437	18.41	18.93	147.506	21.69	23.40	Pass
11	2462	18.50	18.91	148.599	21.72	23.40	Pass

Note: Gain = 12.60dBi > 6dBi, so the power limit shall be reduced to $30-(12.60-6) = 23.40$ dBm.

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	13.42	13.82	46.078	16.63	23.40	Pass
6	2437	18.22	18.63	139.320	21.44	23.40	Pass
11	2462	13.43	13.83	46.184	16.64	23.40	Pass

Note: Gain = 12.60dBi > 6dBi, so the power limit shall be reduced to $30-(12.60-6) = 23.40$ dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	12.41	12.85	36.693	15.65	23.40	Pass
6	2437	18.21	18.72	140.695	21.48	23.40	Pass
11	2462	12.86	13.31	40.749	16.10	23.40	Pass

Note: Gain = 12.60dBi > 6dBi, so the power limit shall be reduced to $30-(12.60-6) = 23.40$ dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	9.03	10.32	18.763	12.73	23.40	Pass
6	2437	12.91	14.47	47.533	16.77	23.40	Pass
9	2452	10.77	11.93	27.536	14.40	23.40	Pass

Note: Gain = 12.60dBi > 6dBi, so the power limit shall be reduced to $30-(12.60-6) = 23.40$ dBm.

Test Mode B (Radio 1, Sector Ant., Beamforming Mode)

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	9.40	9.84	18.348	12.64	20.39	Pass
6	2437	15.20	15.71	70.352	18.47	20.39	Pass
11	2462	9.85	10.30	20.376	13.09	20.39	Pass

Note: Directional gain = 12.60dBi + 10log(2) = 15.61dBi > 6dBi, so the power limit shall be reduced to 30-(15.61-6) = 20.39dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	6.02	7.31	9.382	9.72	20.39	Pass
6	2437	9.90	11.46	23.768	13.76	20.39	Pass
9	2452	7.76	8.92	13.768	11.39	20.39	Pass

Note: Directional gain = 12.60dBi + 10log(2) = 15.61dBi > 6dBi, so the power limit shall be reduced to 30-(15.61-6) = 20.39dBm.

Test Mode C (Radio 3, PIFA Ant.)

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	49.204	16.92	30.00	Pass
6	2437	45.920	16.62	30.00	Pass
11	2462	46.452	16.67	30.00	Pass

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	33.420	15.24	30.00	Pass
6	2437	41.591	16.19	30.00	Pass
11	2462	42.756	16.31	30.00	Pass

802.11n (HT20)

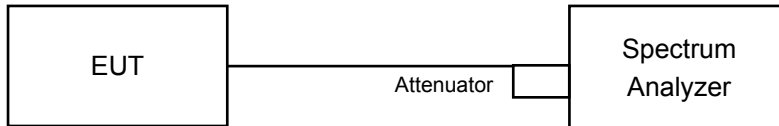
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	26.363	14.21	30.00	Pass
6	2437	44.875	16.52	30.00	Pass
11	2462	40.926	16.12	30.00	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

For Average Power (Duty cycle $\geq 98\%$)

- Set instrument center frequency to DTS channel center frequency.
- Set span to at least 1.5 times the OBW.
- Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set VBW $\geq 3 \times \text{RBW}$.
- Detector = power averaging (RMS) or sample detector (when RMS not available).
- Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span}/\text{RBW}$.
- Sweep time = auto couple.
- Employ trace averaging (RMS) mode over a minimum of 100 traces.
- Use the peak marker function to determine the maximum amplitude level.

For Average Power (Duty cycle $< 98\%$)

- Measure the duty cycle (x).
- Set instrument center frequency to DTS channel center frequency.
- Set span to at least 1.5 times the OBW.
- Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set VBW $\geq 3 \times \text{RBW}$.
- Detector = power averaging (RMS) or sample detector (when RMS not available).
- Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span}/\text{RBW}$.
- Sweep time = auto couple.
- Do not use sweep triggering. Allow sweep to "free run".
- Employ trace averaging (RMS) mode over a minimum of 100 traces.
- Use the peak marker function to determine the maximum amplitude level.
- Add $10 \log (1/x)$, where x is the duty cycle measured in step (a), to the measured PSD to compute the average PSD during the actual transmission time.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as item 4.3.6

4.5.7 Test Results

Test Mode A (Radio 1, Dipole Ant.)

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-8.59	3.01	-5.58	6.49	Pass
	6	2437	-8.66	3.01	-5.65	6.49	Pass
	11	2462	-8.59	3.01	-5.58	6.49	Pass
1	1	2412	-8.35	3.01	-5.34	6.49	Pass
	6	2437	-8.39	3.01	-5.38	6.49	Pass
	11	2462	-8.03	3.01	-5.02	6.49	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $4.50\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8-(7.51-6) = 6.49\text{dBm}$.

802.11g

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-16.00	3.01	0.19	-12.80	6.49	Pass
	6	2437	-11.53	3.01	0.19	-8.33	6.49	Pass
	11	2462	-15.22	3.01	0.19	-12.02	6.49	Pass
1	1	2412	-16.15	3.01	0.19	-12.95	6.49	Pass
	6	2437	-11.54	3.01	0.19	-8.34	6.49	Pass
	11	2462	-15.53	3.01	0.19	-12.33	6.49	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $4.50\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8-(7.51-6) = 6.49\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-17.51	3.01	-14.50	6.49	Pass
	6	2437	-12.09	3.01	-9.08	6.49	Pass
	11	2462	-16.55	3.01	-13.54	6.49	Pass
1	1	2412	-17.92	3.01	-14.91	6.49	Pass
	6	2437	-12.30	3.01	-9.29	6.49	Pass
	11	2462	-16.29	3.01	-13.28	6.49	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $4.50\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8-(7.51-6) = 6.49\text{dBm}$.

802.11n (HT40)

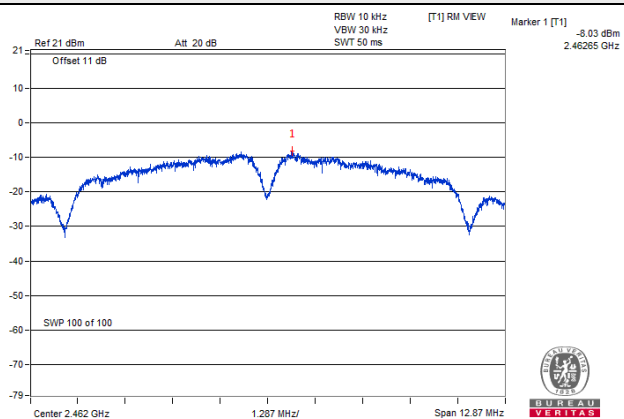
TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-22.76	3.01	0.19	-19.56	6.49	Pass
	6	2437	-19.07	3.01	0.19	-15.87	6.49	Pass
	9	2452	-20.18	3.01	0.19	-16.98	6.49	Pass
1	3	2422	-22.39	3.01	0.19	-19.19	6.49	Pass
	6	2437	-18.68	3.01	0.19	-15.48	6.49	Pass
	9	2452	-19.97	3.01	0.19	-16.77	6.49	Pass

Note:

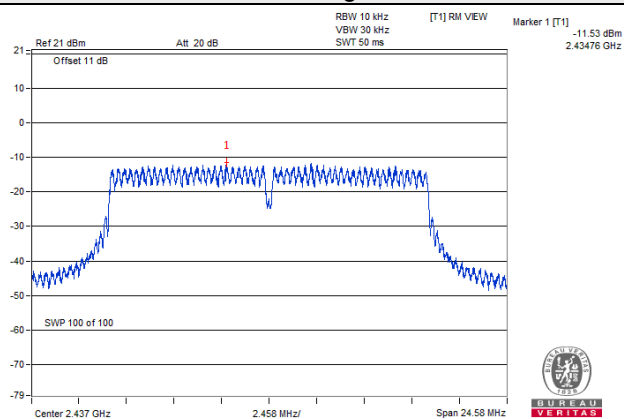
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $4.50\text{dBi} + 10\log(2) = 7.51\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8-(7.51-6) = 6.49\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

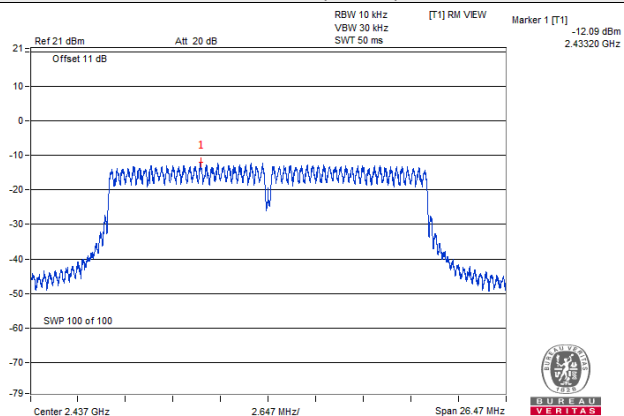
802.11b



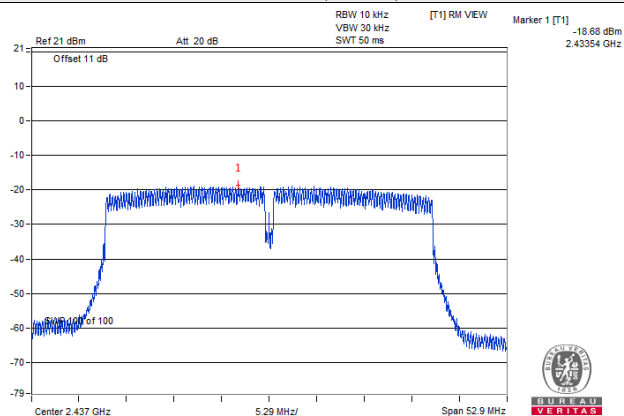
802.11g



802.11n (HT20)



802.11n (HT40)



Test Mode B (Radio 1, Sector Ant.)

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-10.64	3.01	-7.63	-1.61	Pass
	6	2437	-10.66	3.01	-7.65	-1.61	Pass
	11	2462	-9.34	3.01	-6.33	-1.61	Pass
1	1	2412	-10.26	3.01	-7.25	-1.61	Pass
	6	2437	-9.65	3.01	-6.64	-1.61	Pass
	11	2462	-9.58	3.01	-6.57	-1.61	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = 12.60dBi + 10log(2) = 15.61dBi > 6dBi, so the power density limit shall be reduced to 8-(15.61-6) = -1.61dBm.

802.11g

TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-18.25	3.01	0.19	-15.05	-1.61	Pass
	6	2437	-12.68	3.01	0.19	-9.48	-1.61	Pass
	11	2462	-17.50	3.01	0.19	-14.30	-1.61	Pass
1	1	2412	-17.73	3.01	0.19	-14.53	-1.61	Pass
	6	2437	-12.94	3.01	0.19	-9.74	-1.61	Pass
	11	2462	-17.75	3.01	0.19	-14.55	-1.61	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = 12.60dBi + 10log(2) = 15.61dBi > 6dBi, so the power density limit shall be reduced to 8-(15.61-6) = -1.61dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-19.65	3.01	-16.64	-1.61	Pass
	6	2437	-13.50	3.01	-10.49	-1.61	Pass
	11	2462	-18.63	3.01	-15.62	-1.61	Pass
1	1	2412	-19.26	3.01	-16.25	-1.61	Pass
	6	2437	-13.33	3.01	-10.32	-1.61	Pass
	11	2462	-18.81	3.01	-15.80	-1.61	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 12.60dBi + 10log(2) = 15.61dBi > 6dBi, so the power density limit shall be reduced to 8-(15.61-6) = -1.61dBm.

802.11n (HT40)

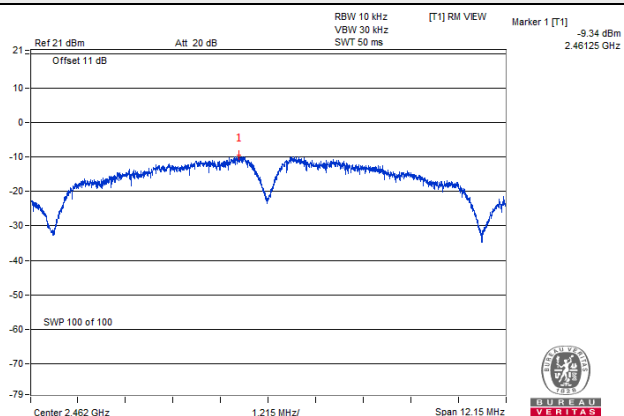
TX chain	Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-24.75	3.01	0.19	-21.55	-1.61	Pass
	6	2437	-20.09	3.01	0.19	-16.89	-1.61	Pass
	9	2452	-22.51	3.01	0.19	-19.31	-1.61	Pass
1	3	2422	-24.06	3.01	0.19	-20.86	-1.61	Pass
	6	2437	-20.05	3.01	0.19	-16.85	-1.61	Pass
	9	2452	-22.72	3.01	0.19	-19.52	-1.61	Pass

Note:

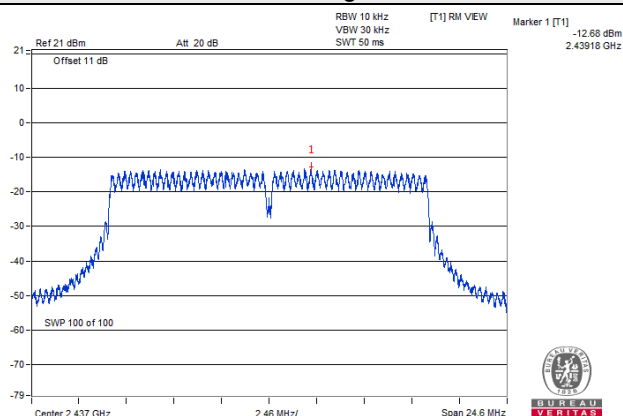
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 12.60dBi + 10log(2) = 15.61dBi > 6dBi, so the power density limit shall be reduced to 8-(15.61-6) = -1.61dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

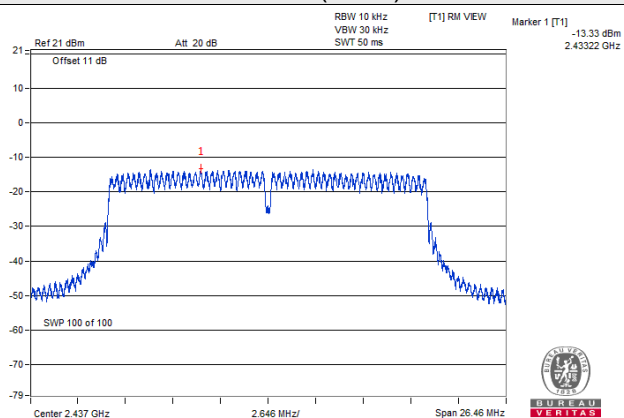
802.11b



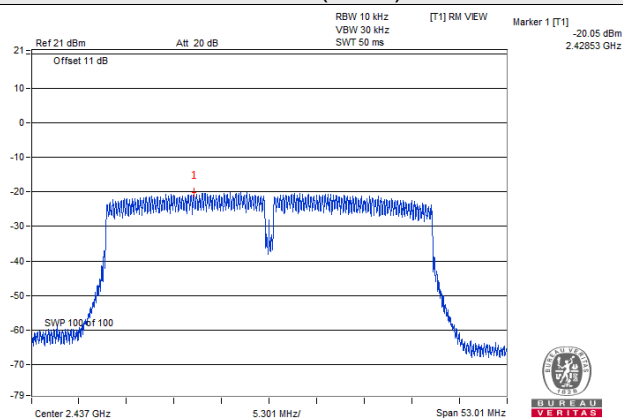
802.11g



802.11n (HT20)



802.11n (HT40)



Test Mode C (Radio 3, PIFA Ant.)

802.11b

Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
1	2412	-10.46	8.00	Pass
6	2437	-10.80	8.00	Pass
11	2462	-12.29	8.00	Pass

802.11g

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
1	2412	-14.16	0.25	-13.91	8.00	Pass
6	2437	-14.14	0.25	-13.89	8.00	Pass
11	2462	-15.76	0.25	-15.51	8.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

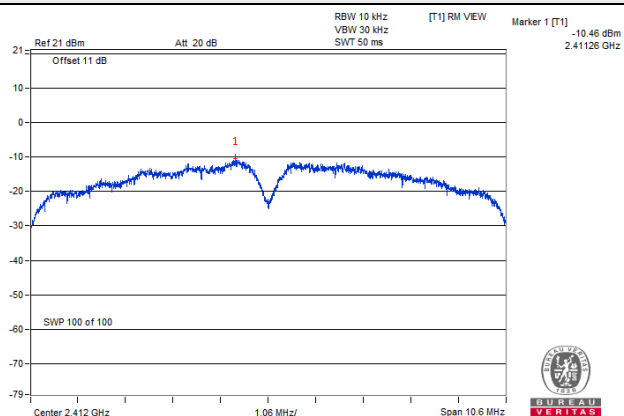
802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/10kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
1	2412	-14.37	0.20	-14.17	8.00	Pass
6	2437	-14.82	0.20	-14.62	8.00	Pass
11	2462	-14.68	0.20	-14.48	8.00	Pass

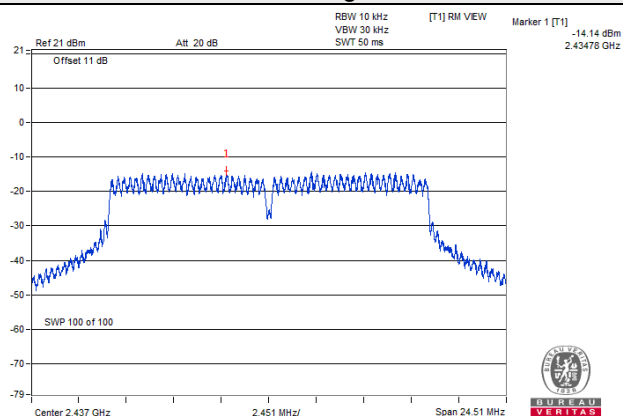
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

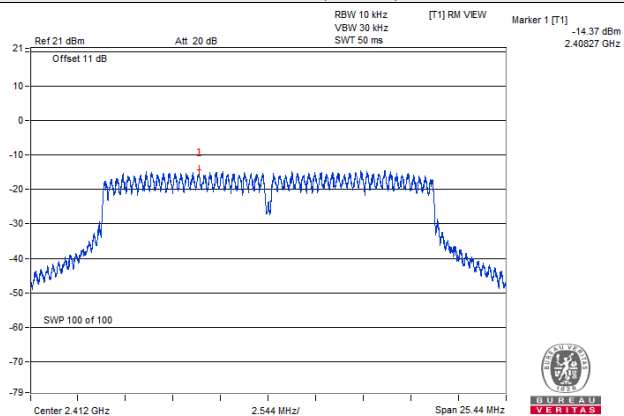
802.11b



802.11g



802.11n (HT20)

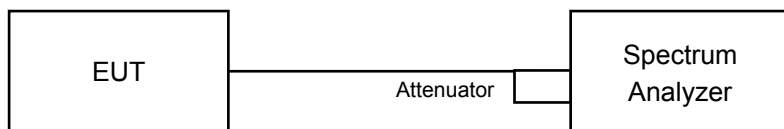


4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below -30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

- Set the RBW = 100 kHz.
- Set the VBW \geq 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

- Set RBW = 100 kHz.
- Set VBW \geq 300 kHz.
- Detector = peak.
- Sweep = auto couple.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Same as item 4.3.6

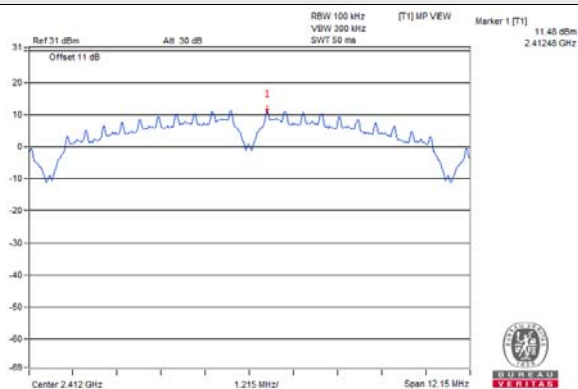
4.6.7 Test Results

The conducted emission test is performed on each TX port of operating mode without summing or adding 10log (N) since the limit is relative emission limit.

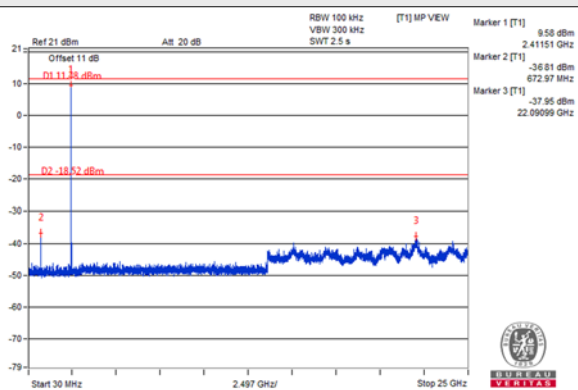
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

Test Mode A (Radio 1, Dipole Ant.)
802.11b_Chain 0

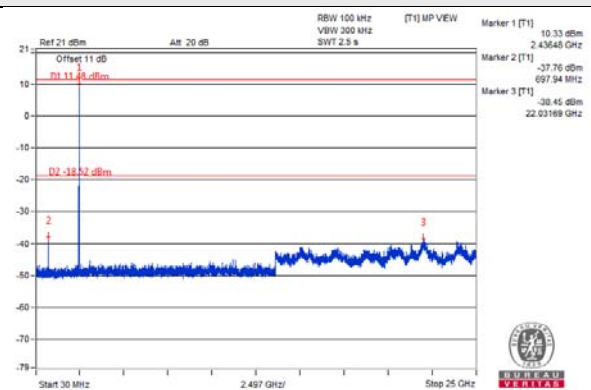
Maximum Reference Level



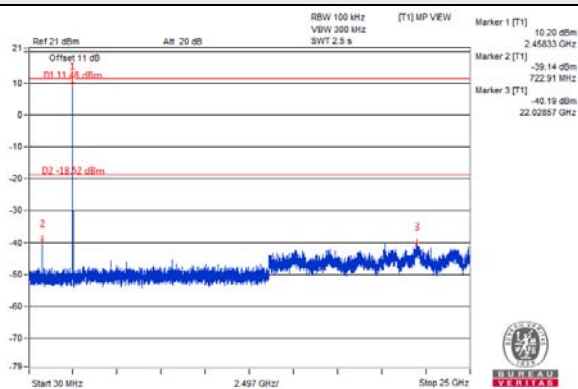
CH 1



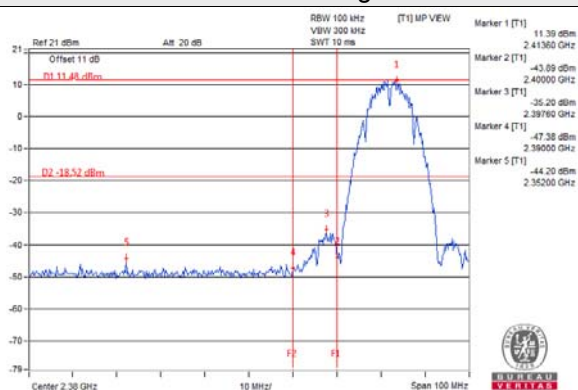
CH 6



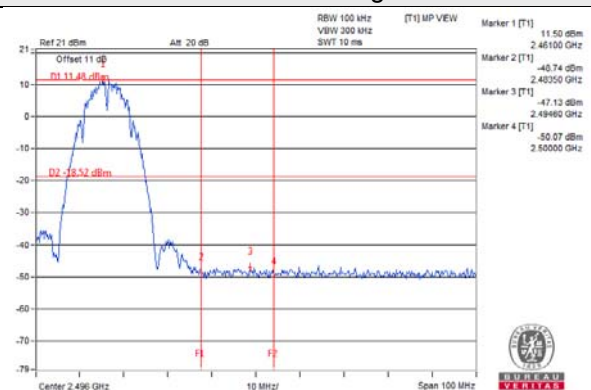
CH 11



CH 1 Band edge

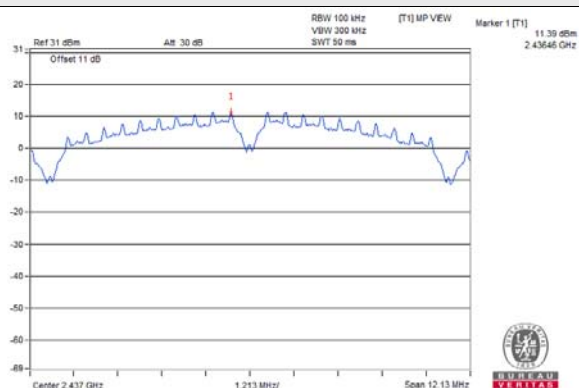


CH 11 Band edge

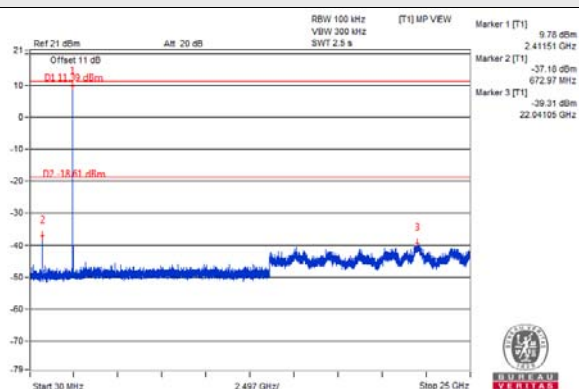


802.11b_Chain 1

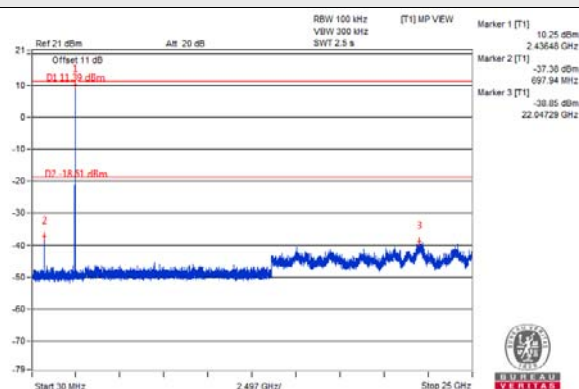
Maximum Reference Level



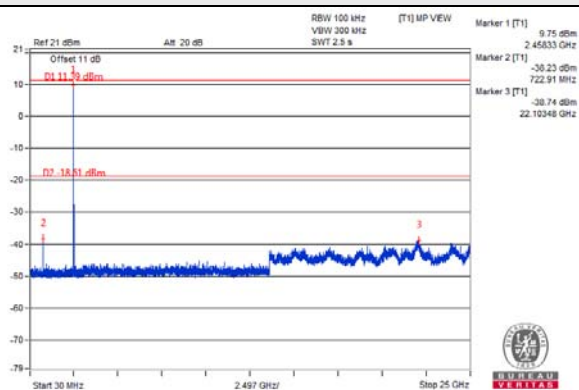
CH 1



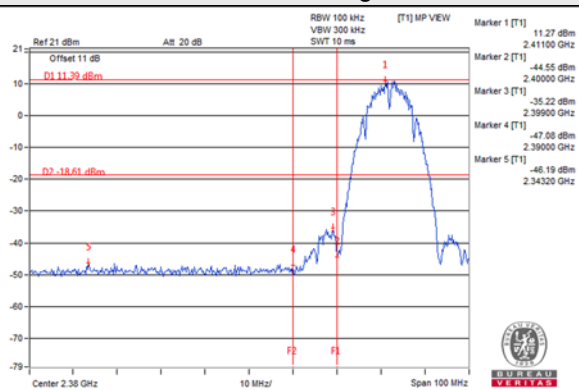
CH 6



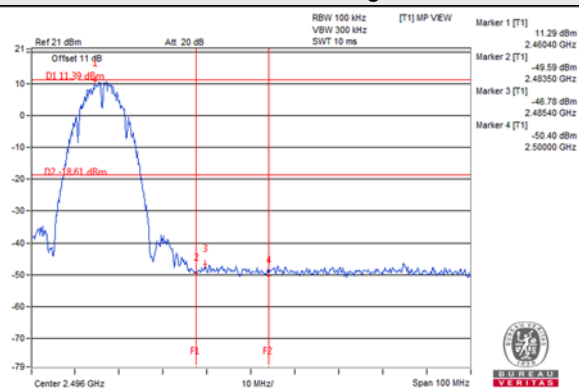
CH 11



CH 1 Band edge

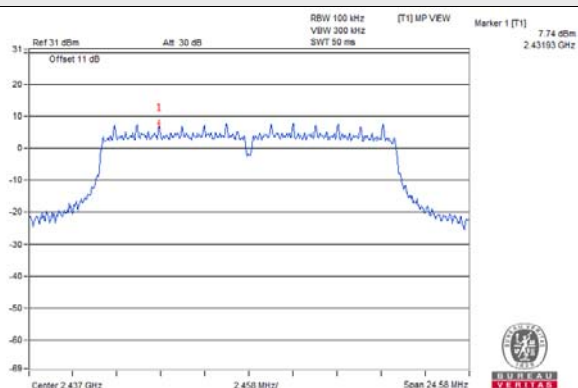


CH 11 Band edge

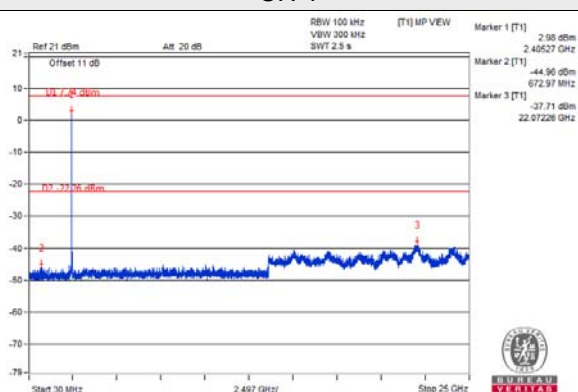


802.11g_Chain 0

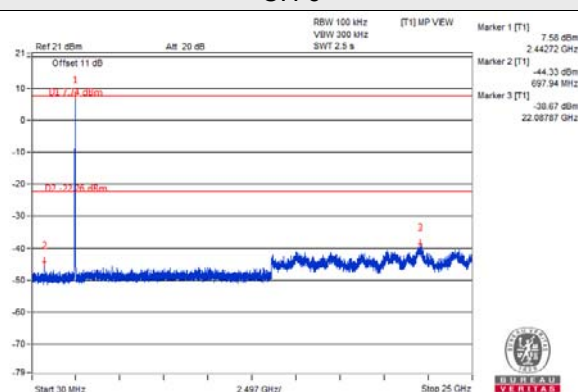
Maximum Reference Level



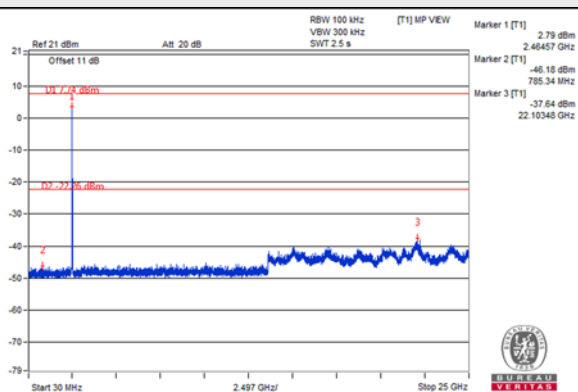
CH 1



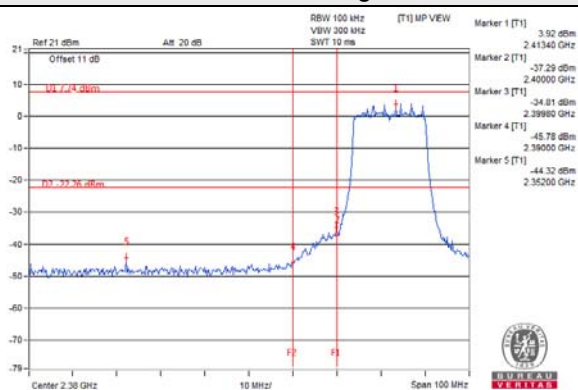
CH 6



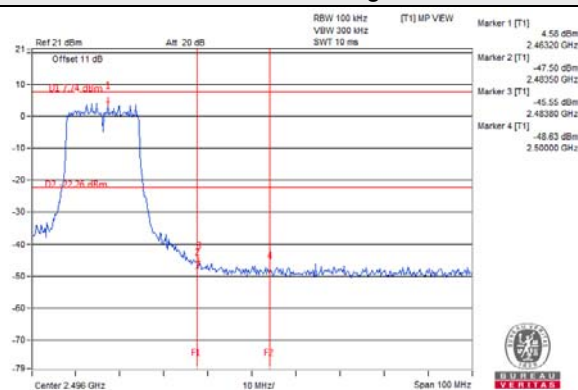
CH 11



CH 1 Band edge

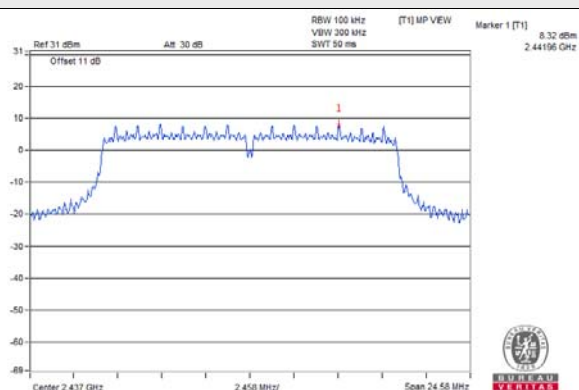


CH 11 Band edge

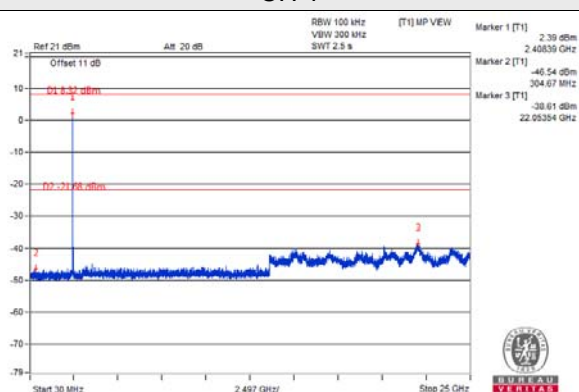


802.11g_Chain 1

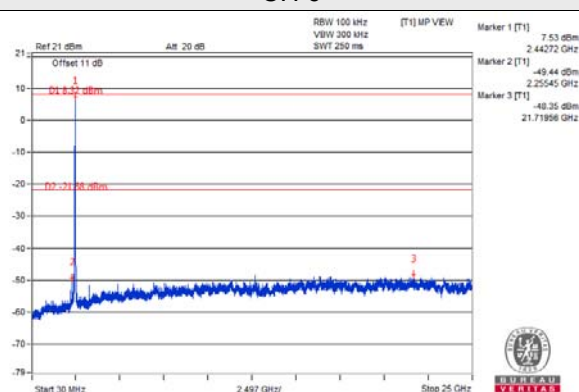
Maximum Reference Level



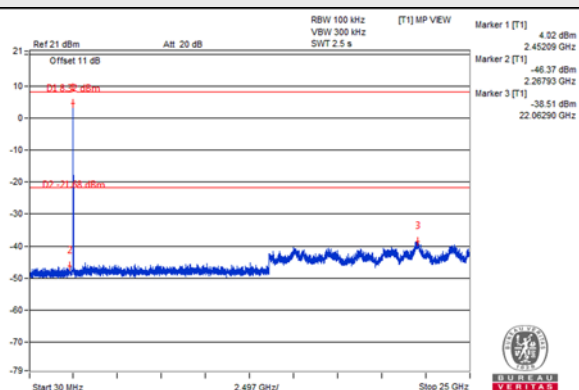
CH 1



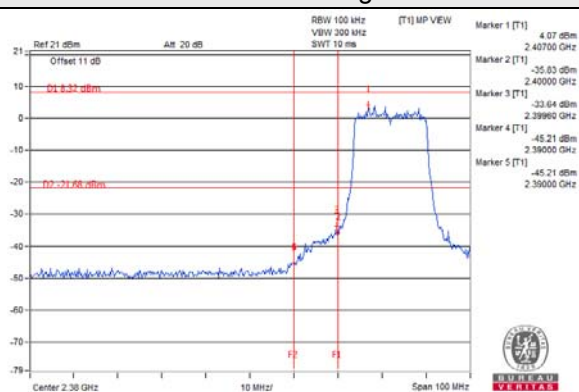
CH 6



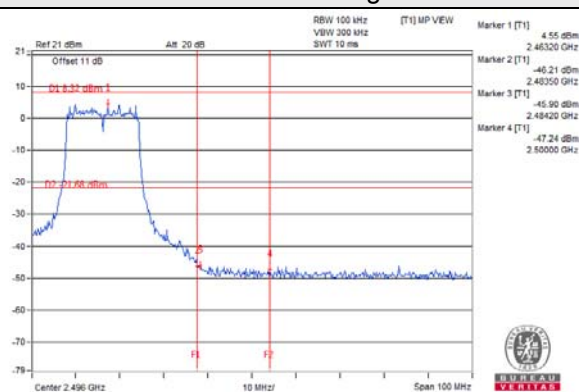
CH 11



CH 1 Band edge

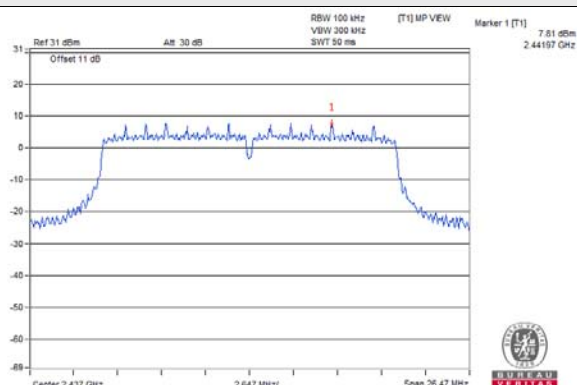


CH 11 Band edge

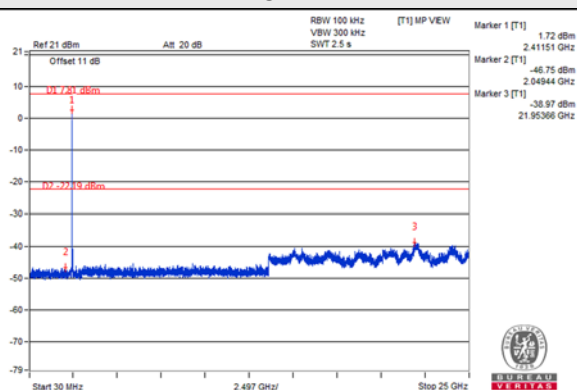


802.11n (HT20) Chain 0

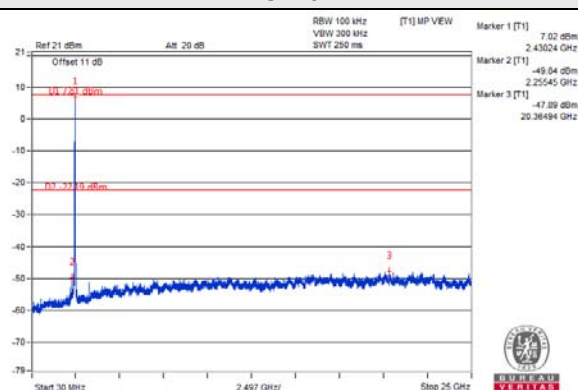
Maximum Reference Level



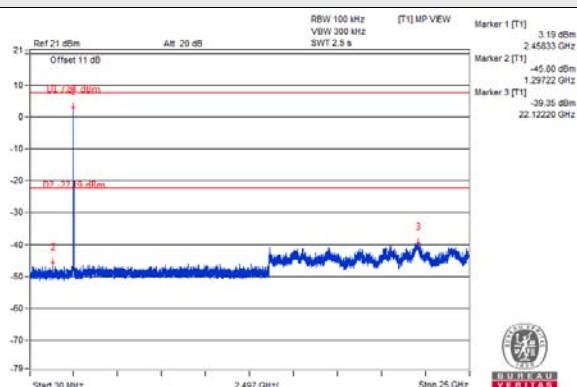
CH 1



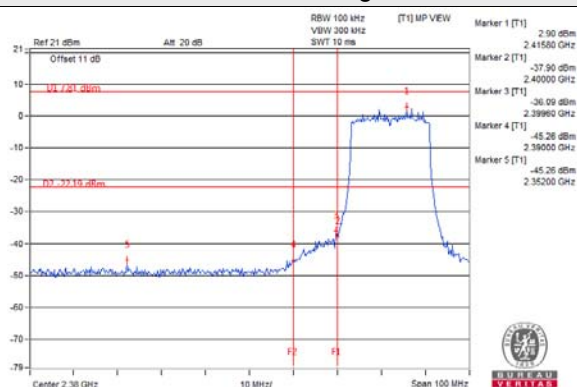
CH 6



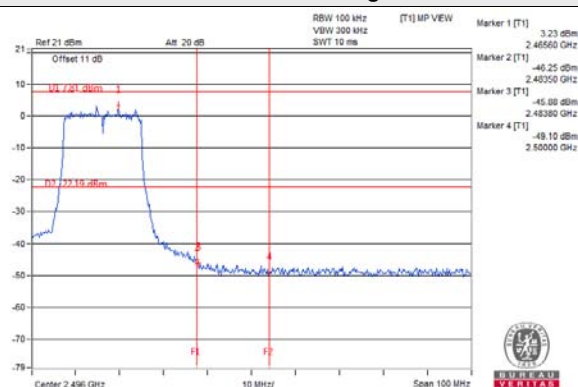
CH 11



CH 1 Band edge

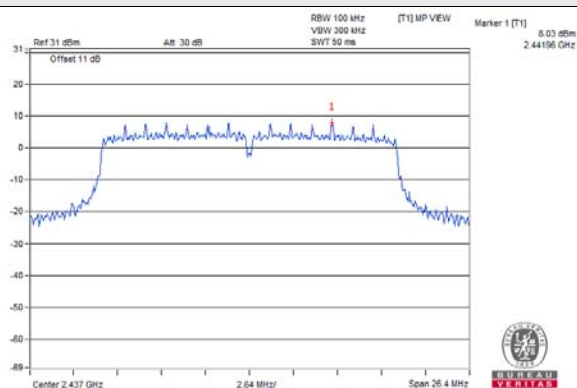


CH 11 Band edge

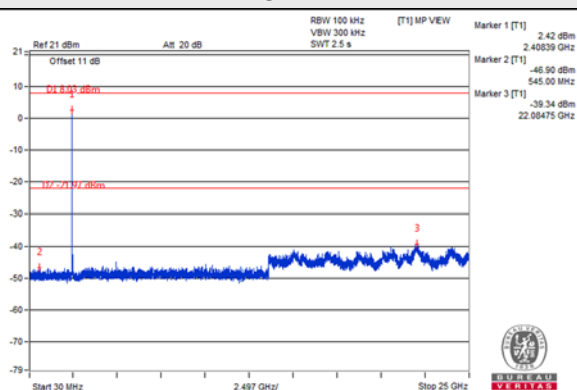


802.11n (HT20) Chain 1

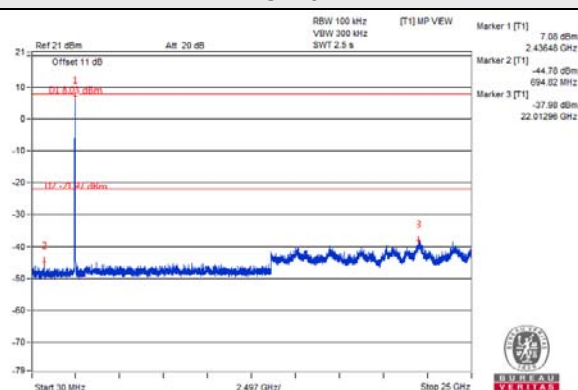
Maximum Reference Level



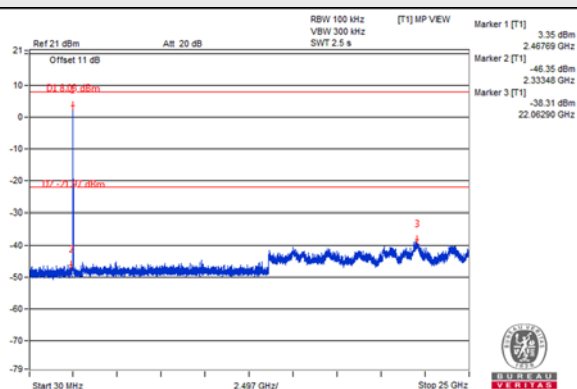
CH 1



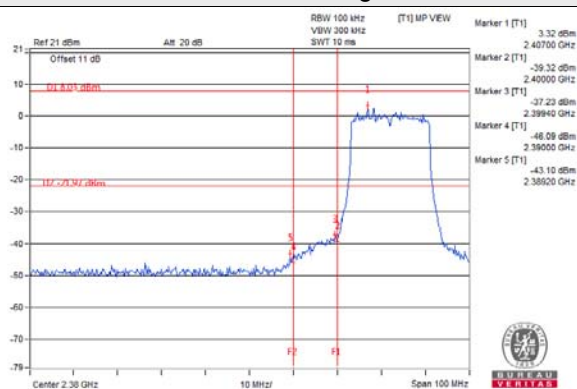
CH 6



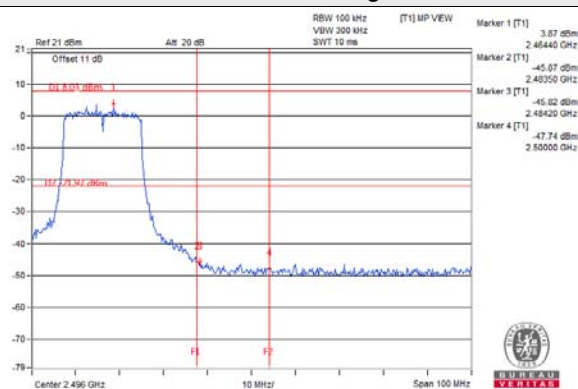
CH 11



CH 1 Band edge

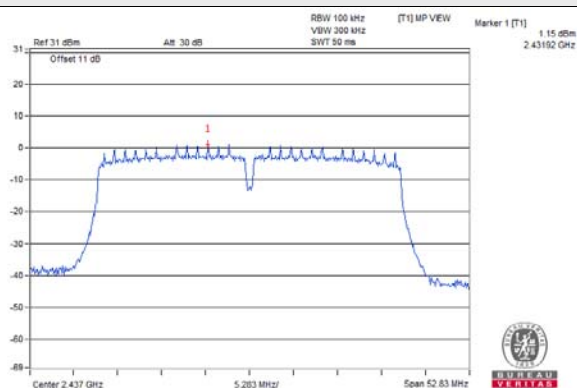


CH 11 Band edge

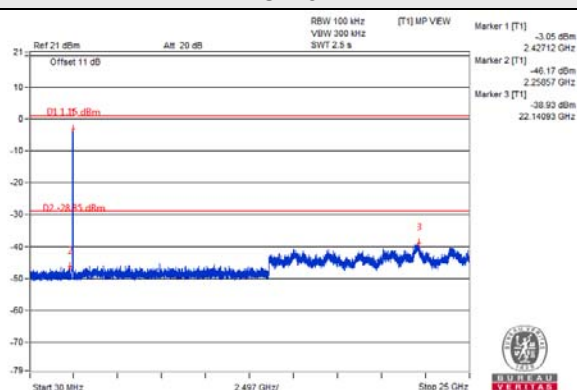


802.11n (HT40) Chain 0

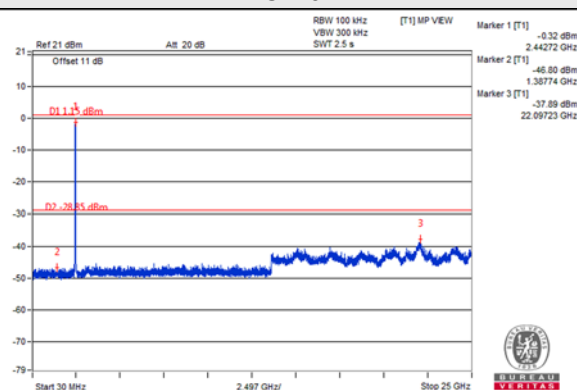
Maximum Reference Level



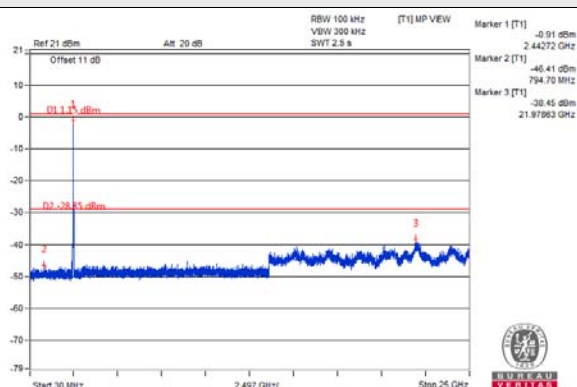
CH 3



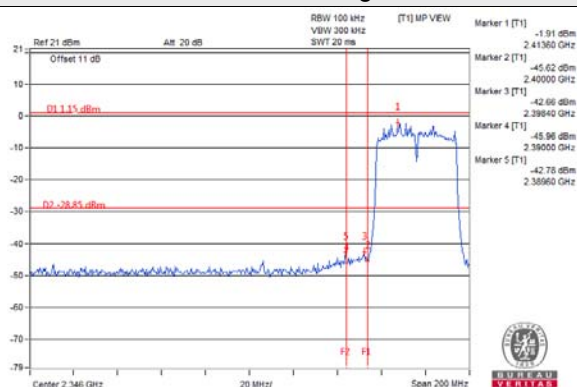
CH 6



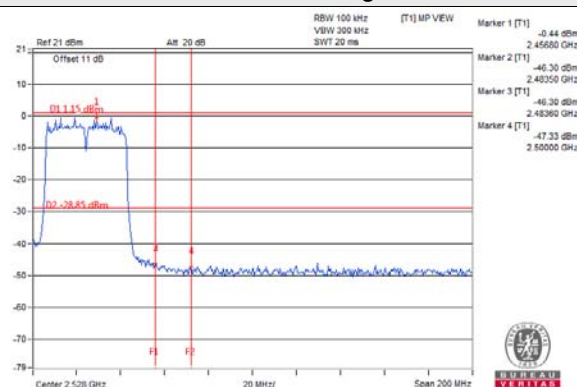
CH 9



CH 3 Band edge

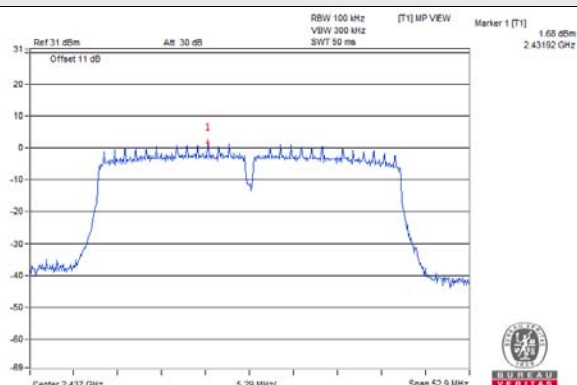


CH 9 Band edge

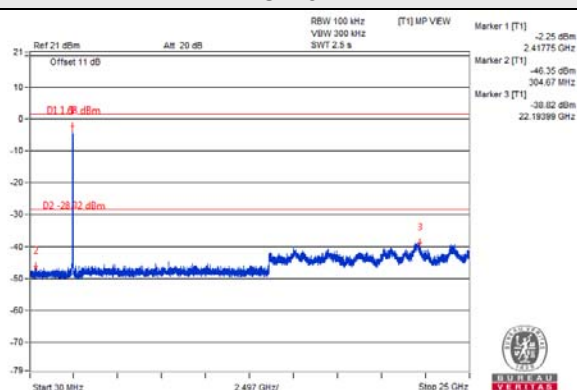


802.11n (HT40) Chain 1

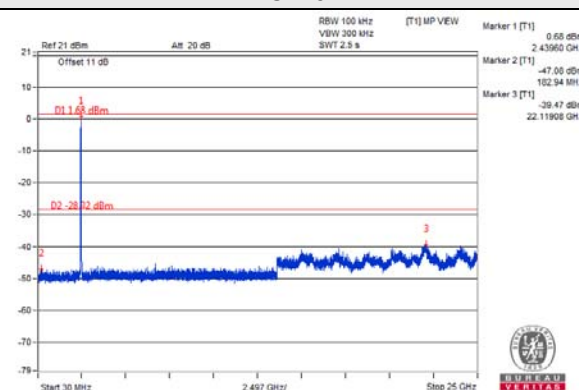
Maximum Reference Level



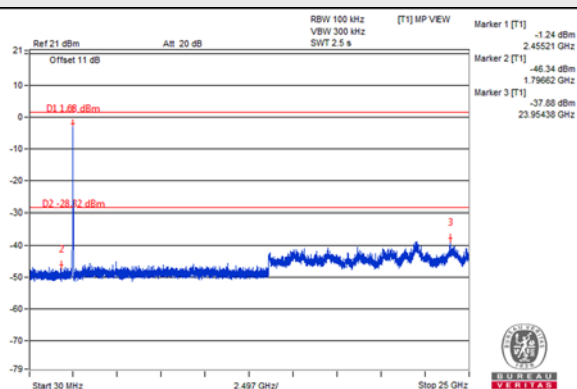
CH 3



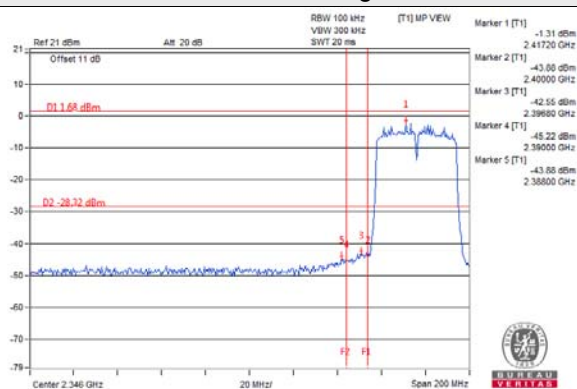
CH 6



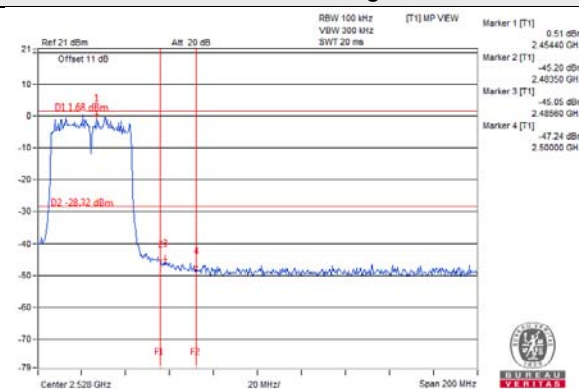
CH 9



CH 3 Band edge

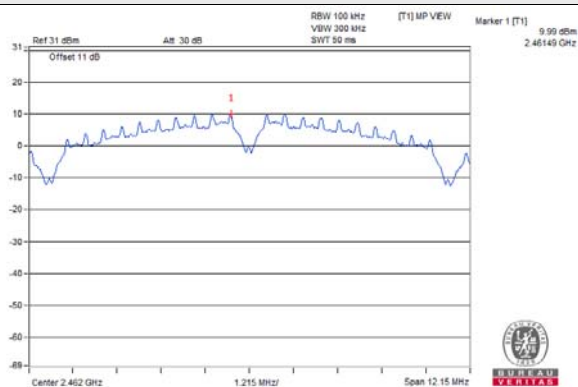


CH 9 Band edge

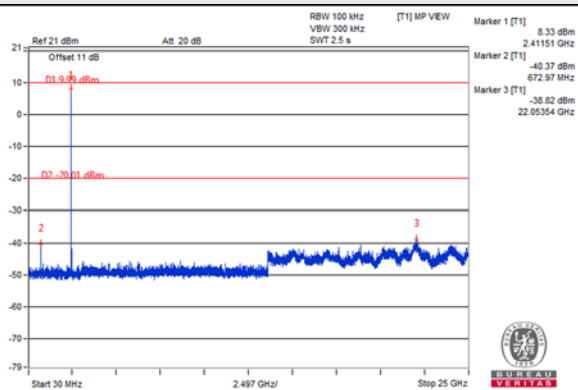


Test Mode B (Radio 1, Sector Ant.)
802.11b_Chain 0

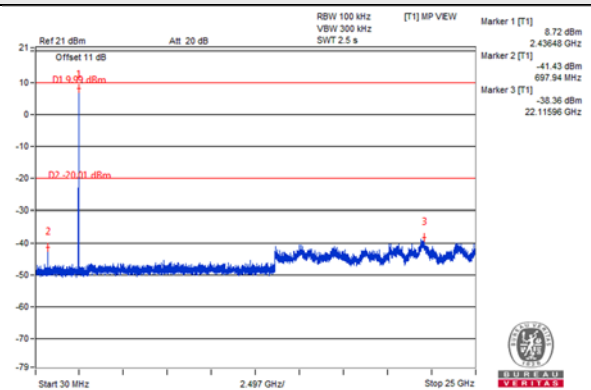
Maximum Reference Level



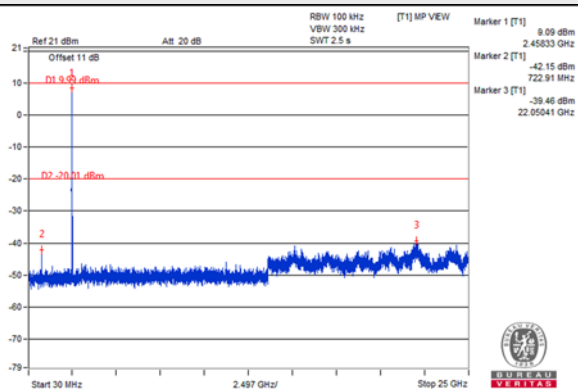
CH 1



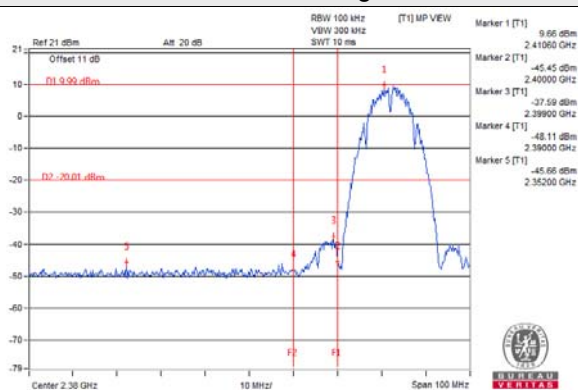
CH 6



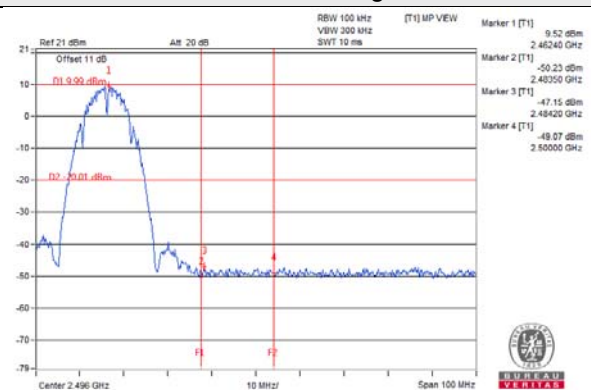
CH 11



CH 1 Band edge

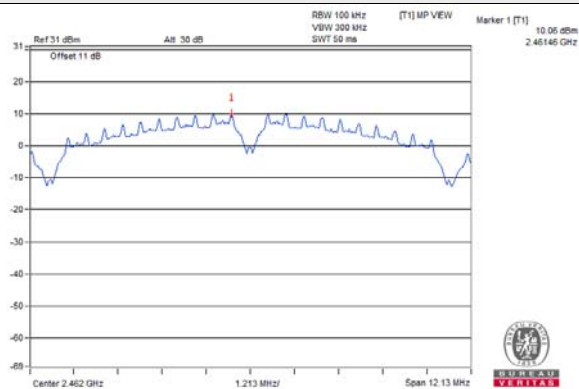


CH 11 Band edge

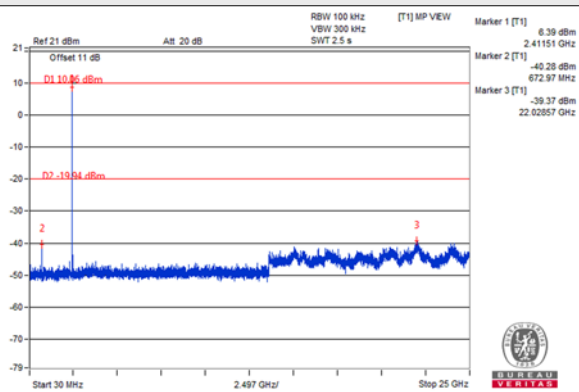


802.11b_Chain 1

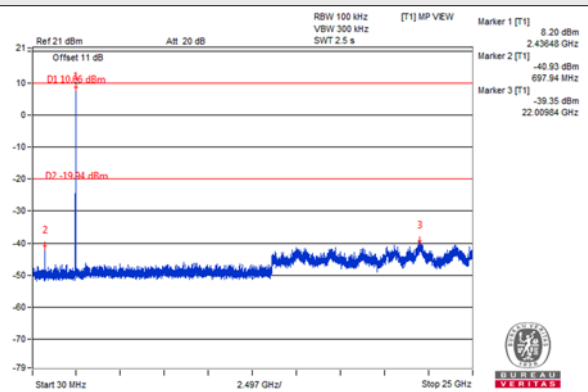
Maximum Reference Level



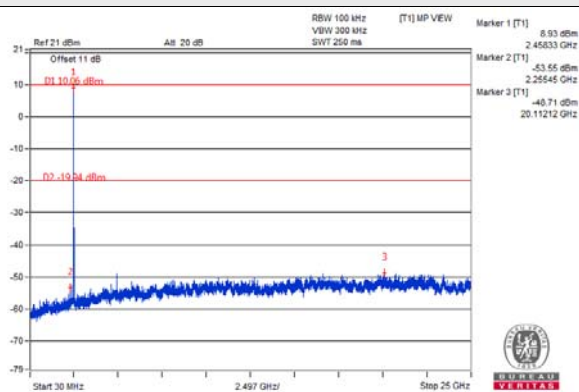
CH 1



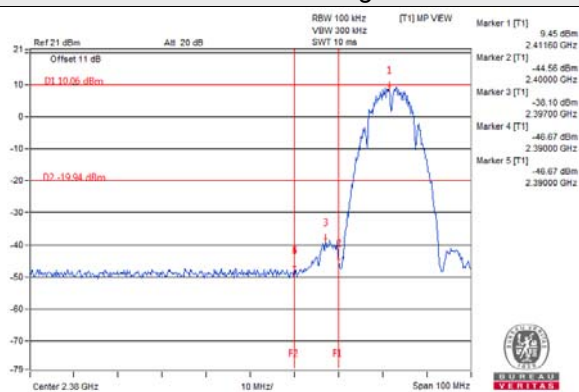
CH 6



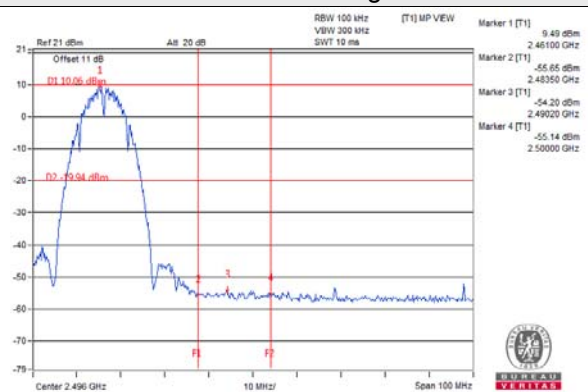
CH 11



CH 1 Band edge

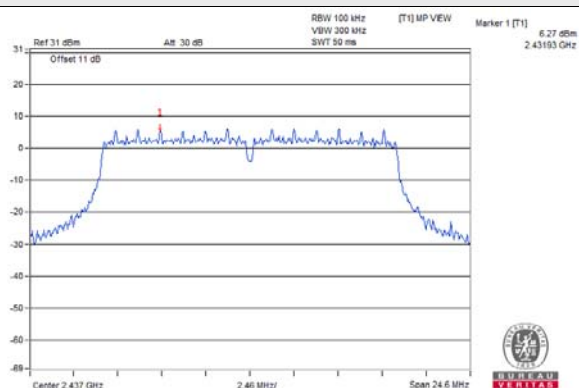


CH 11 Band edge

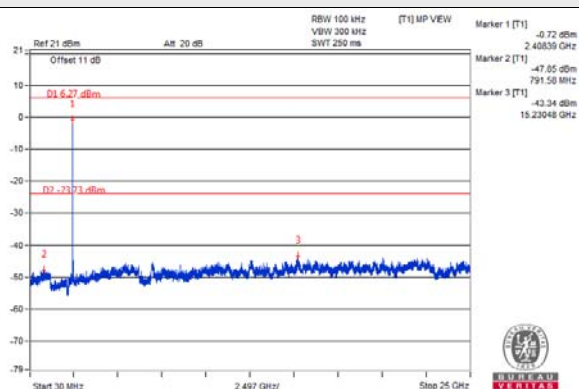


802.11g_Chain 0

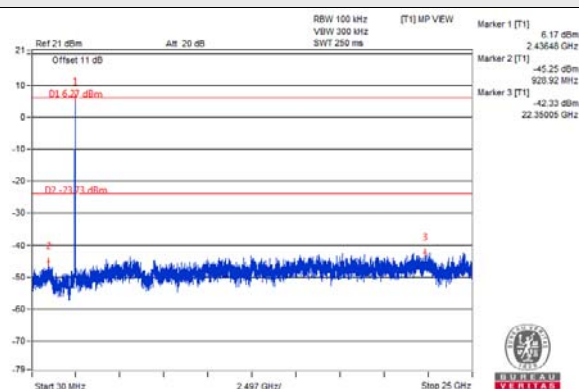
Maximum Reference Level



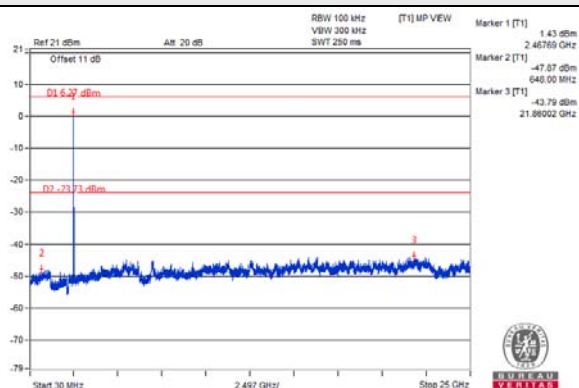
CH 1



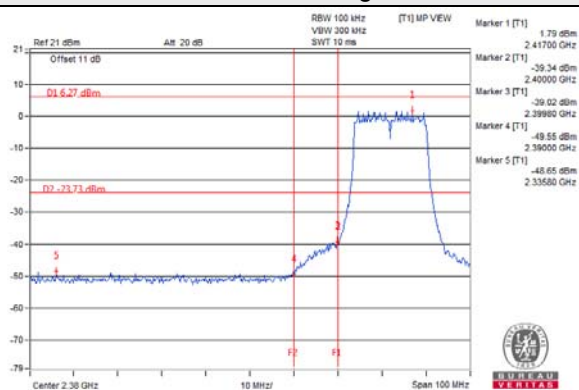
CH 6



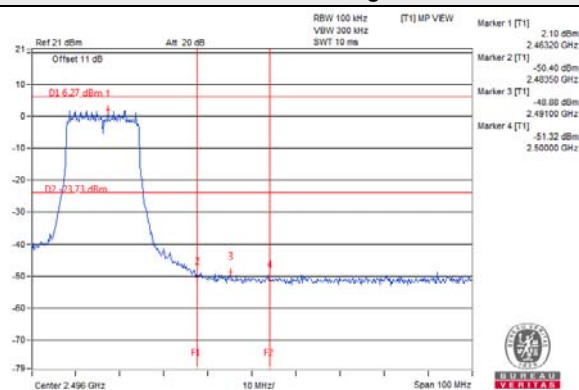
CH 11



CH 1 Band edge

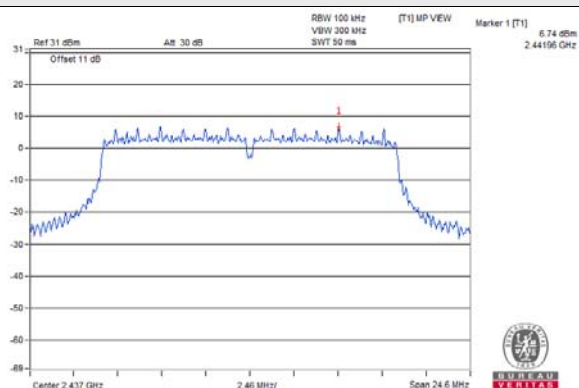


CH 11 Band edge

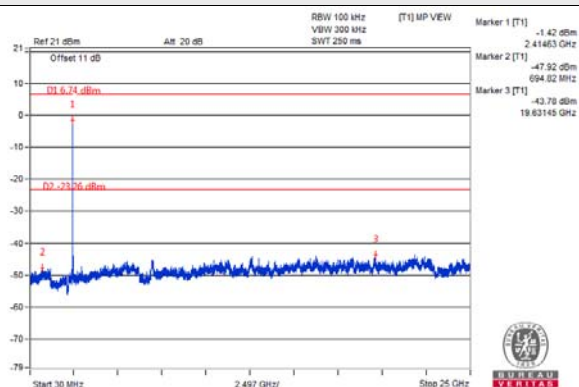


802.11g_Chain 1

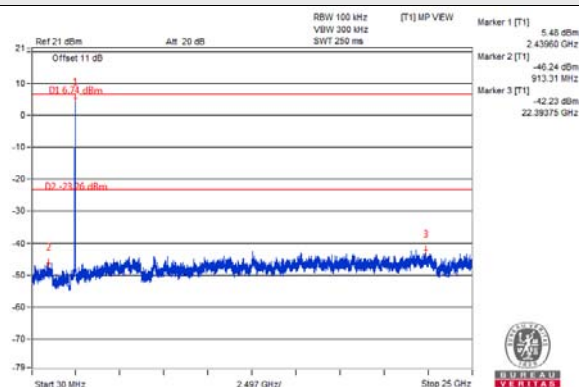
Maximum Reference Level



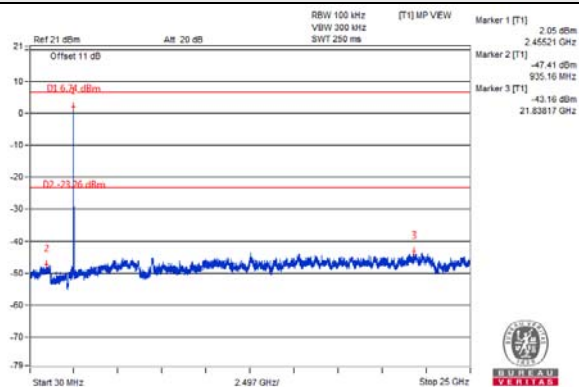
CH 1



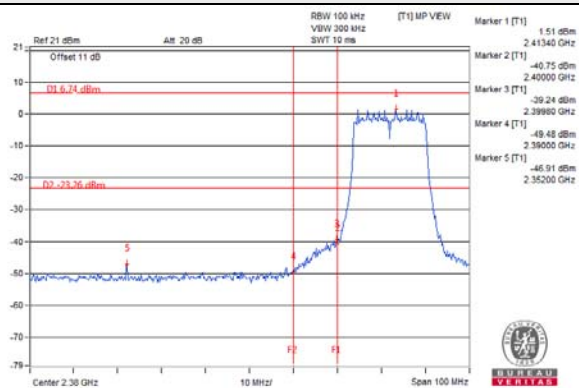
CH 6



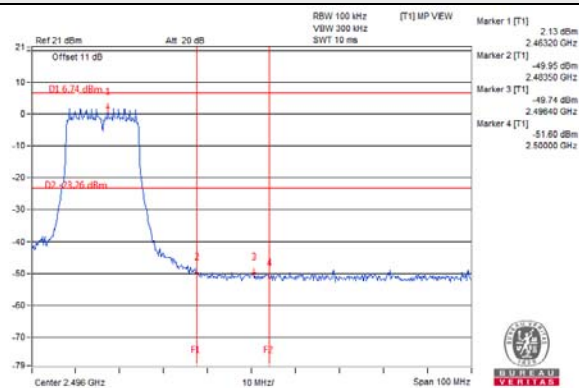
CH 11



CH 1 Band edge

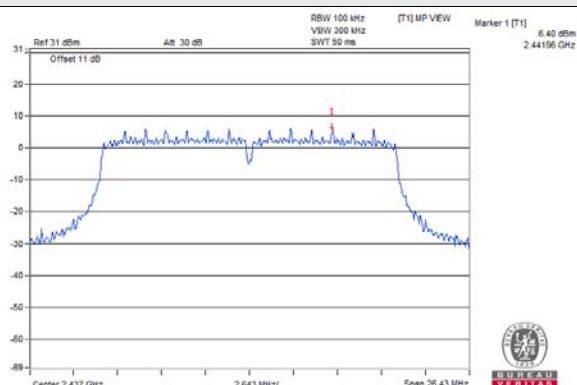


CH 11 Band edge

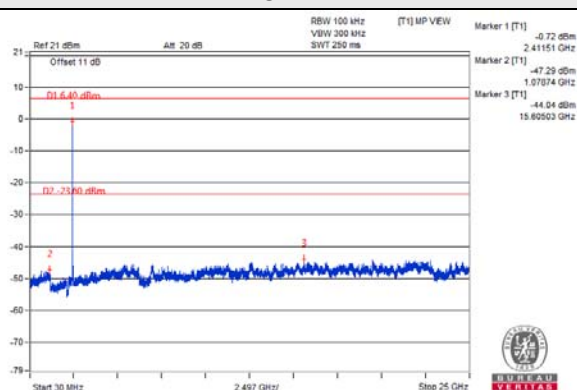


802.11n (HT20) Chain 0

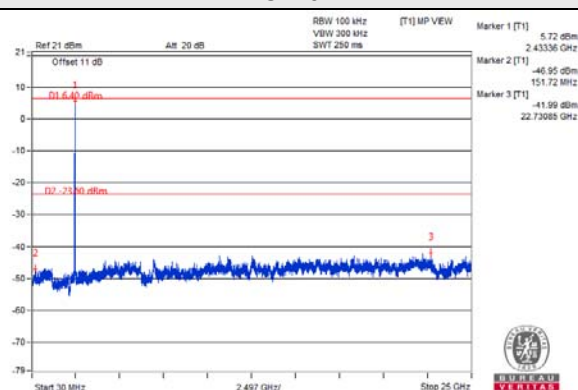
Maximum Reference Level



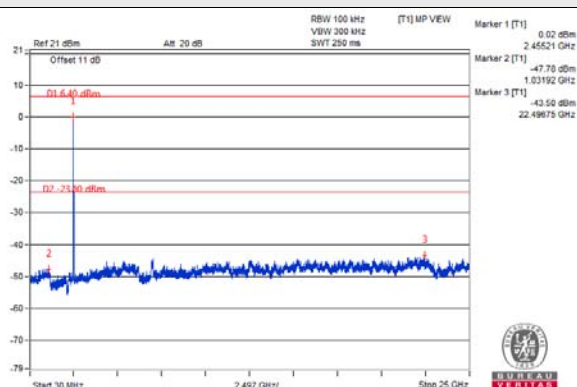
CH 1



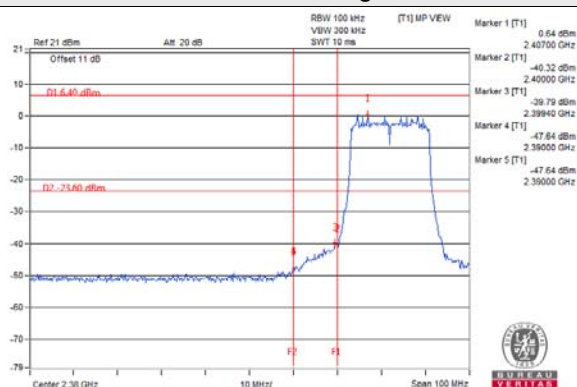
CH 6



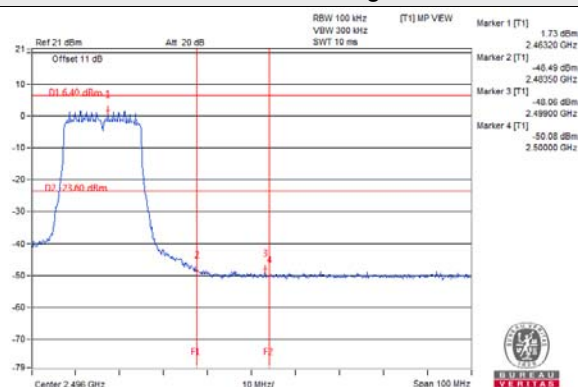
CH 11



CH 1 Band edge

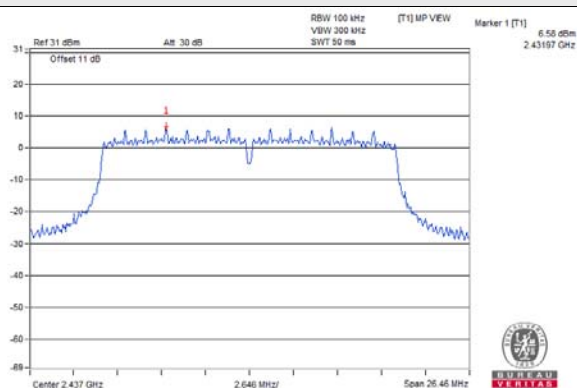


CH 11 Band edge

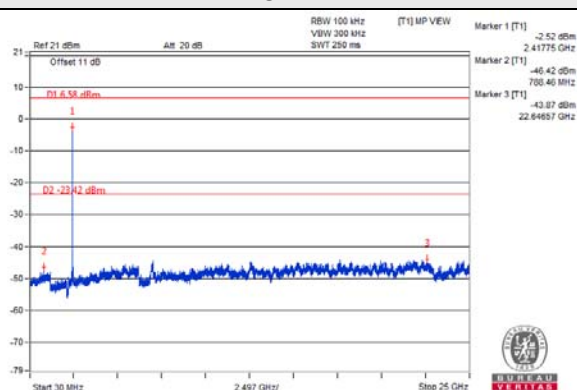


802.11n (HT20) Chain 1

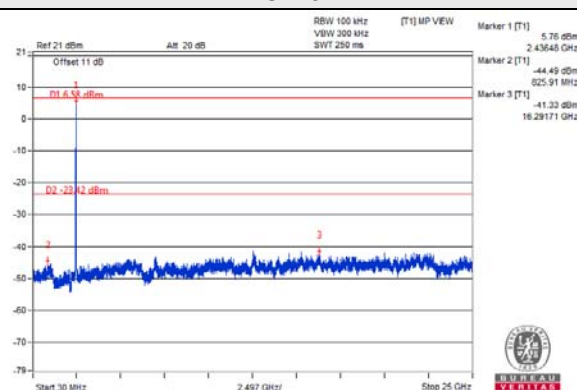
Maximum Reference Level



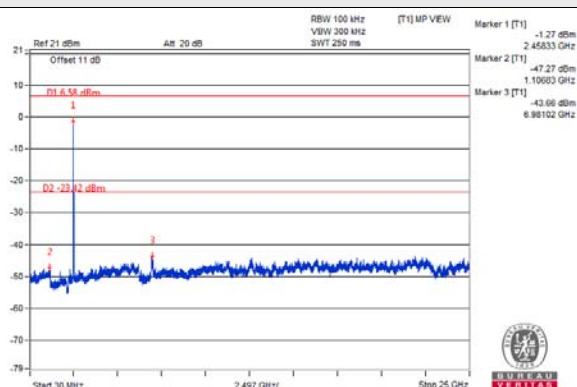
CH 1



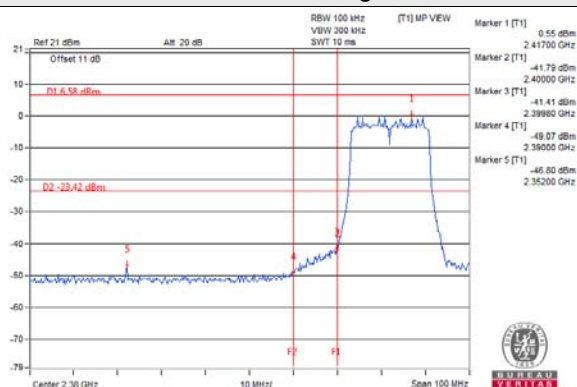
CH 6



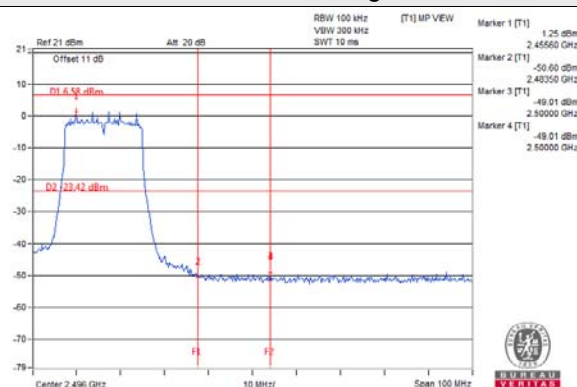
CH 11



CH 1 Band edge

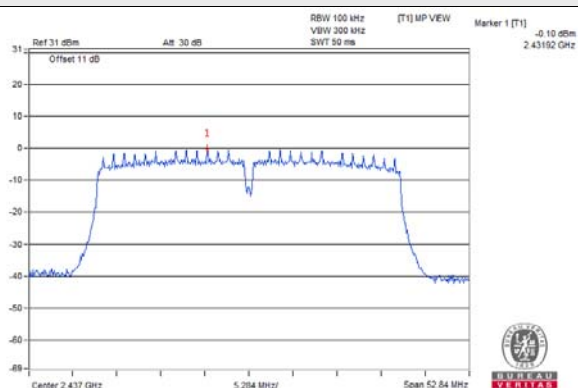


CH 11 Band edge

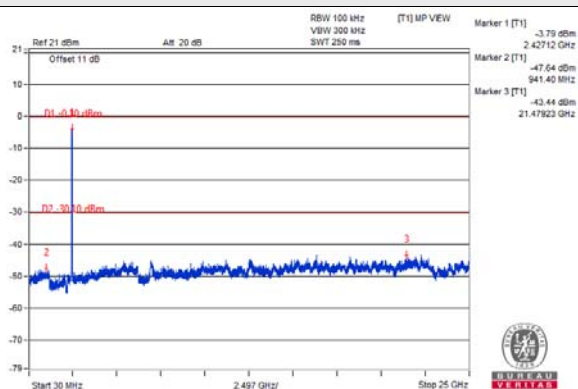


802.11n (HT40) Chain 0

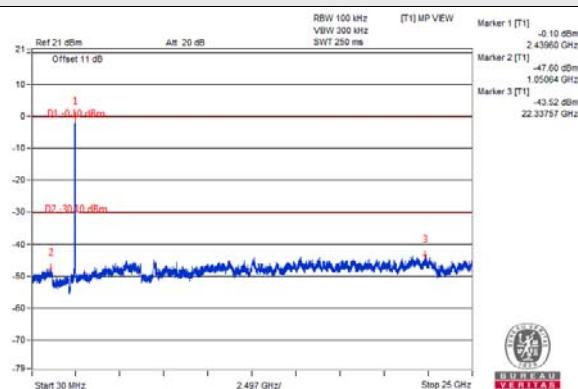
Maximum Reference Level



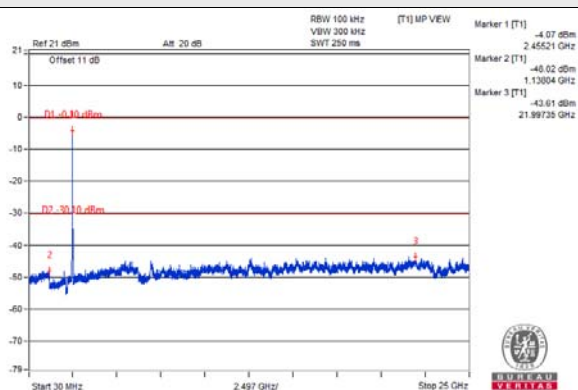
CH 3



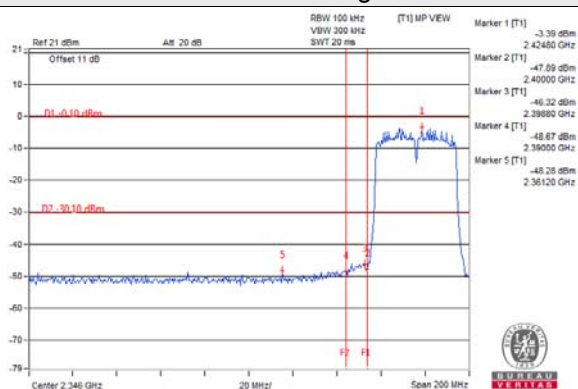
CH 6



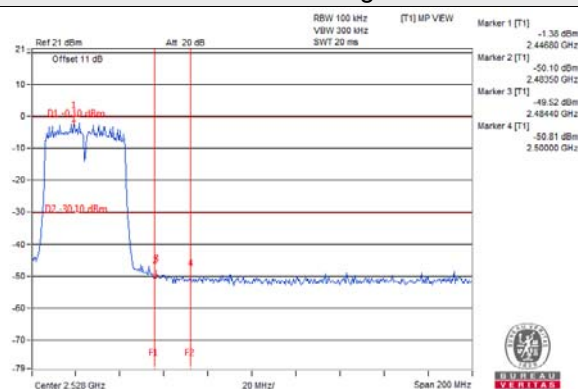
CH 9



CH 3 Band edge

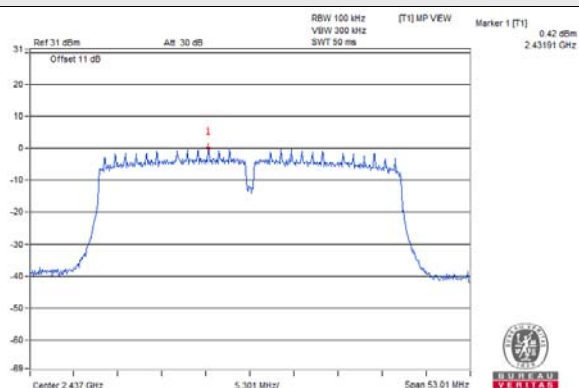


CH 9 Band edge

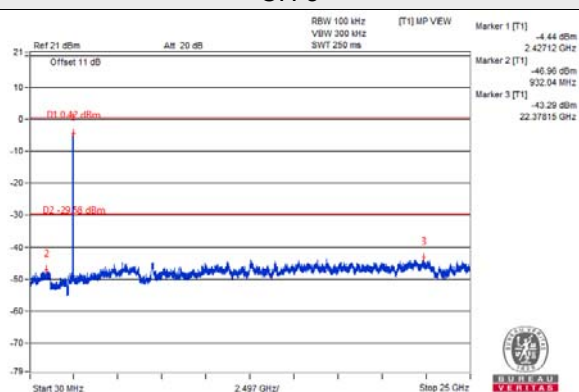


802.11n (HT40) Chain 1

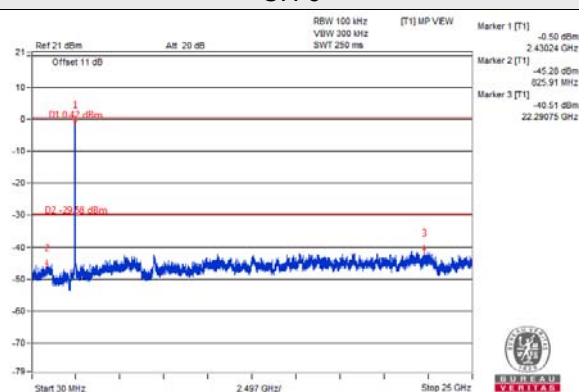
Maximum Reference Level



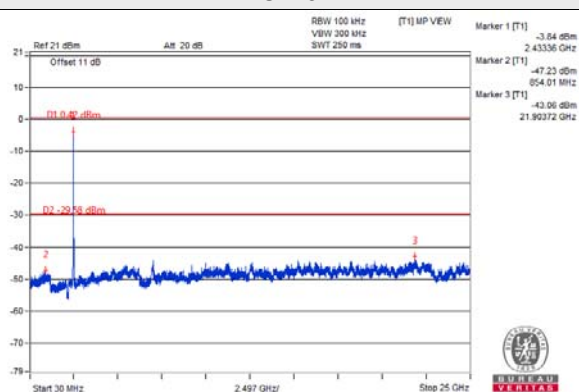
CH 3



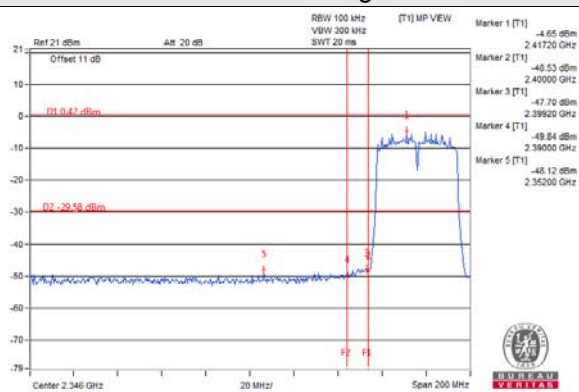
CH 6



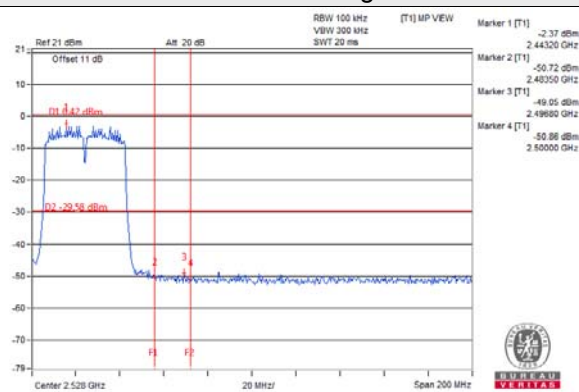
CH 9



CH 3 Band edge

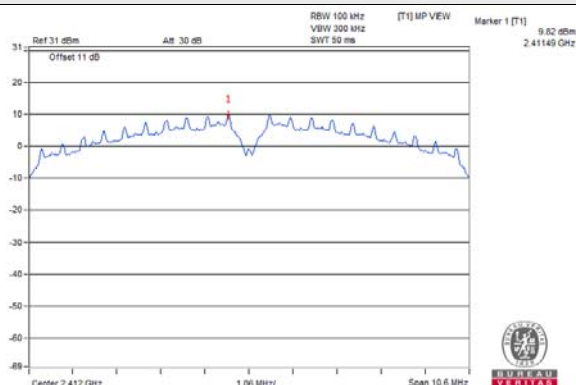


CH 9 Band edge

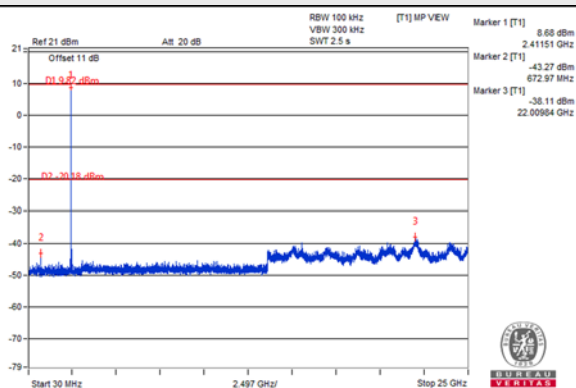


Test Mode C (Radio 3, PIFA Ant.)
802.11b

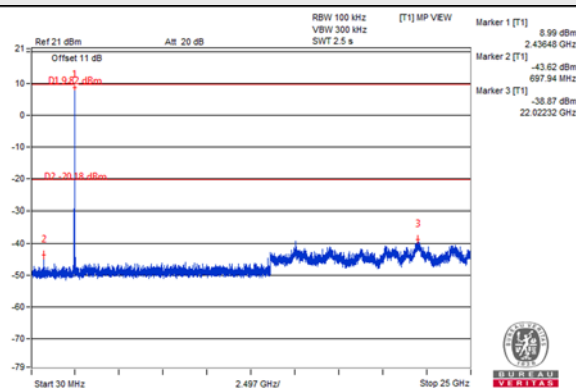
Maximum Reference Level



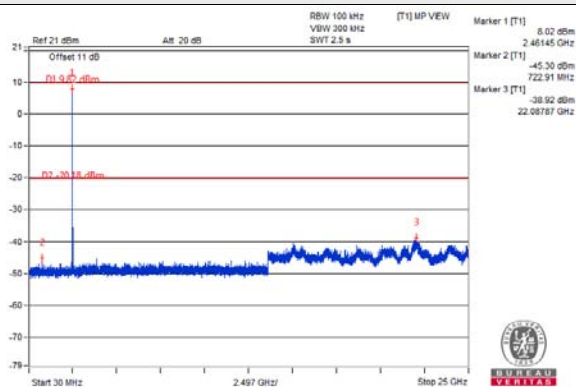
CH 1



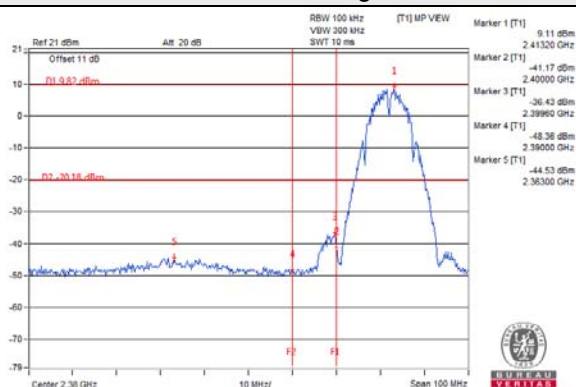
CH 6



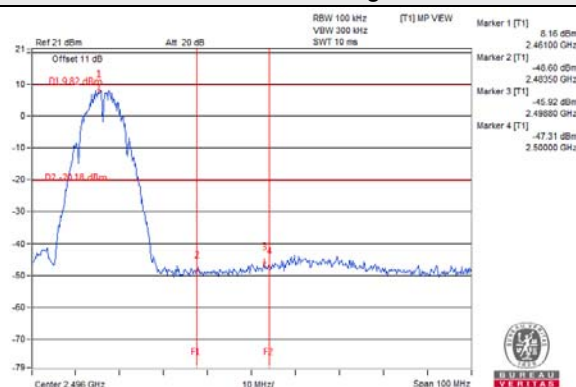
CH 11



CH 1 Band edge

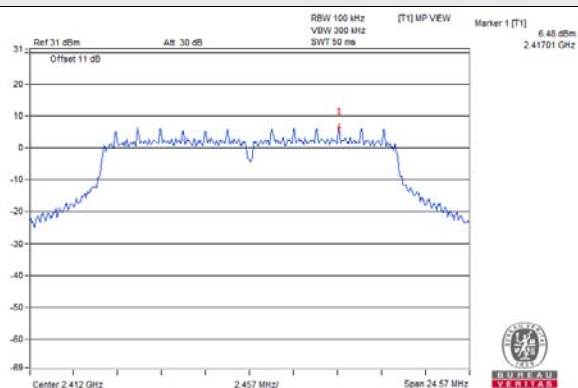


CH 11 Band edge

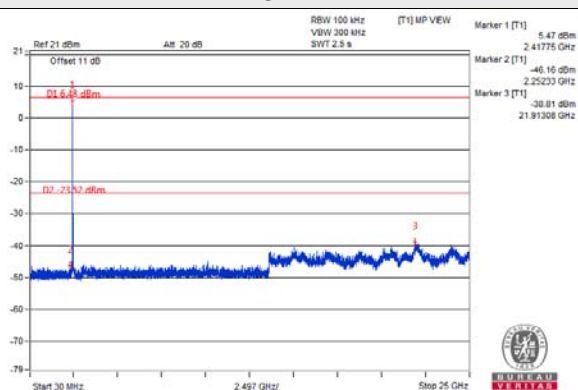


802.11g

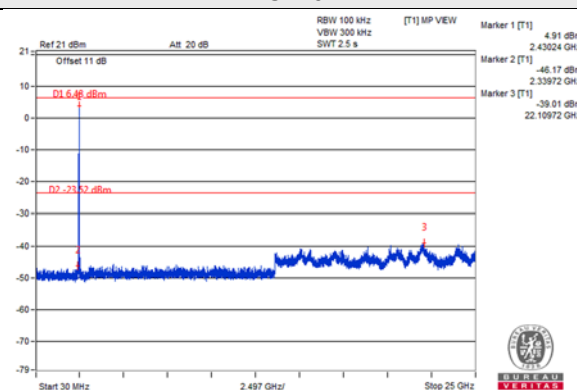
Maximum Reference Level



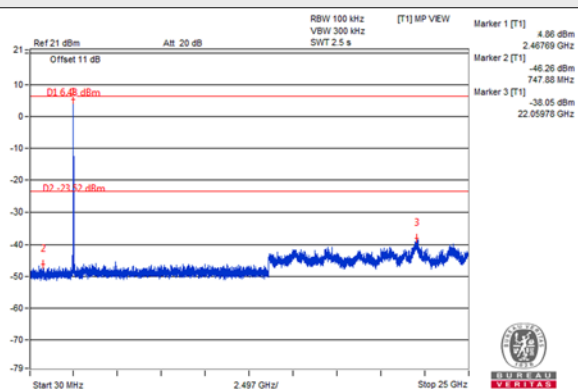
CH 1



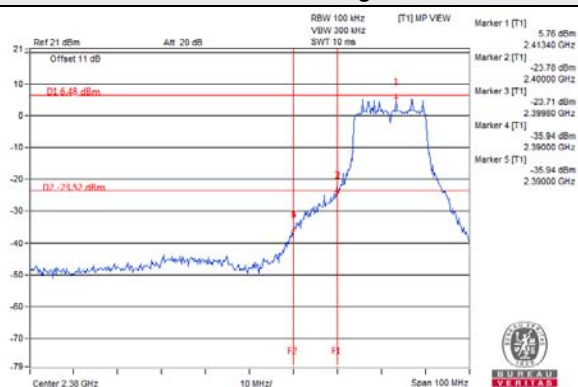
CH 6



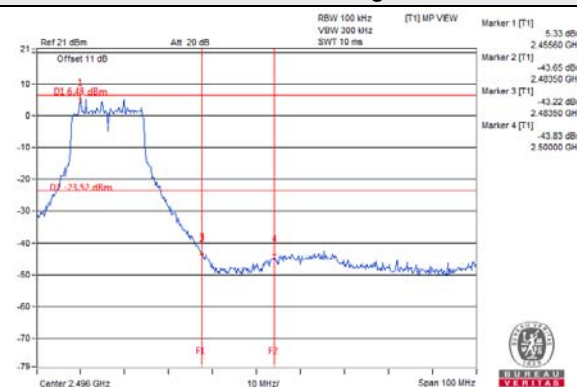
CH 11



CH 1 Band edge

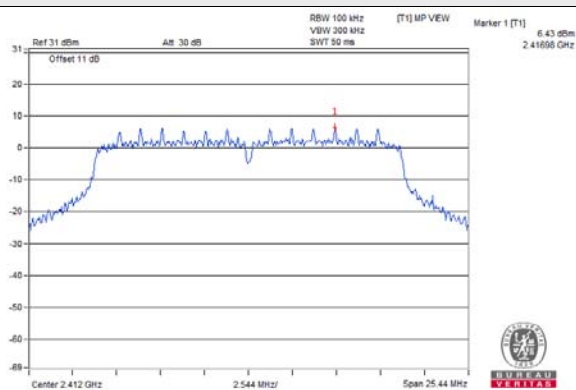


CH 11 Band edge

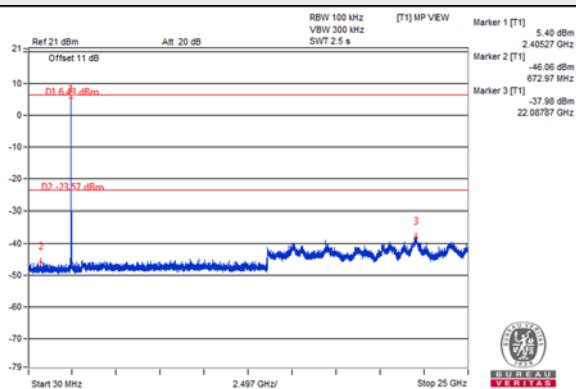


802.11n (HT20)

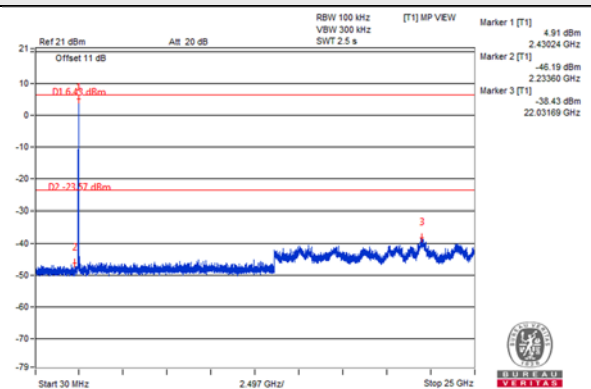
Maximum Reference Level



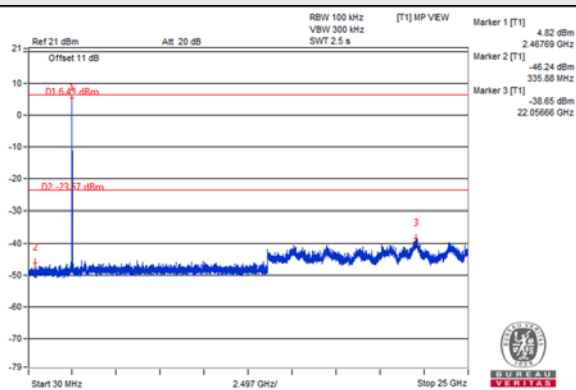
CH 1



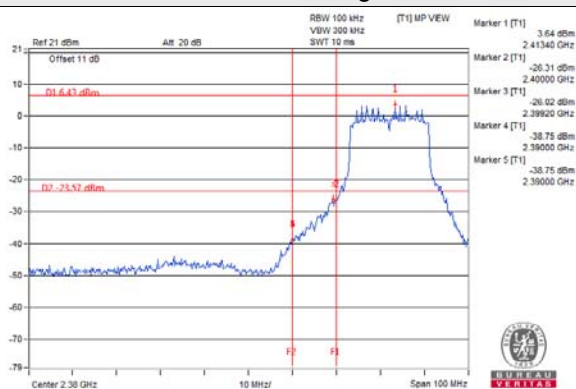
CH 6



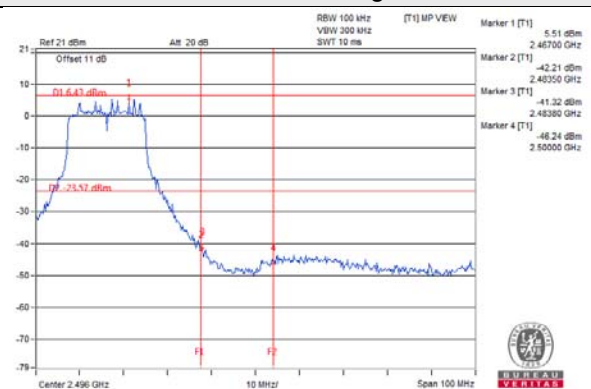
CH 11



CH 1 Band edge



CH 11 Band edge



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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