FCC Test Report

Report No.:	RF180108C15D-2
FCC ID:	Q6G-AP225W
Model:	W-118
Received Date:	Jan. 08, 2018
Test Date:	Oct. 25 ~ Nov. 04, 2019
Issued Date:	Nov. 11, 2019
Applicant:	WatchGuard Technologies, Inc.
Address:	505 Fifth Avenue South, Suite 500 Seattle WA United States 98104
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF180108C15D-2	Original release	Nov. 11, 2019

1 Certificate of Conformity

Product:	AP225W
Brand:	WatchGuard
Model:	W-118
Sample Status:	Engineering sample
Applicant:	WatchGuard Technologies, Inc.
Test Date:	Oct. 25 ~ Nov. 04, 2019
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 : Pettie Chen , **Date:** Nov. 11, 2019

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Nov. 11, 2019

Bruce Chen / Senior 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 -5.89dB at 0.37817MHz
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2390.00, 4874.00, 4924.00MHz.
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 connector is IPEX not a standard connector.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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	9kHz ~ 30MHz	3.04 dB
	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	AP225W
Brand	WatchGuard
Model	W-118
Sample Status	Engineering sample
Power Supply Rating	12Vdc from Adapter 54Vdc from POE
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300Mbps
Operating Frequency	2412 ~ 2462MHz
Number of Channel	11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	Radio 1: CDD Mode: 383.857mW Beamforming Mode: 139.841mW Radio 3: 72.402mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	NA
Data Cable Supplied	NA

Note:

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

2.4GHz Band			
Modulation Mode	TX Function	Beamforming	Remark
802.11b	2TX	Not Support	Radio 1
802.11g	2TX	Not Support	
802.11n (HT20)	2TX	Support	
802.11n (HT40)	2TX	Support	
802.11b	2TX	Not Support	Radio 3
802.11g	2TX	Not Support	
802.11n (HT20)	2TX	Not Support	
802.11n (HT40)	2TX	Not Support	

2. The EUT consumes power from following Adapter and POE. (Support unit only)

Adapter	
Brand	Powertron Electronics Corp.
Model	PA1024-120IB200
Input Power	100-240Vac, 50-60Hz, 0.6A
Output Power	12Vdc / 2.0A 24W Max
Power Cord	1.5m non-shielded cable with one core 0.5m non-shielded cable without core

POE	
Brand	EnGenius
Model	EPA5006GAT
Input Power	100-240Vac, 50-60Hz, 0.8A
Output Power	54Vdc, 0.6A

3. The EUT uses following antennas.

Type	PIFA						PIFA
Connecter	IPEX						-
Radio	1		2		3		BT/Zigbee
Frequency (MHz)	2400-2500		5150-5850		2400-2500 & 5150-5850		2400-2500
Antenna	1	2	3	4	5	6	BT/Zigbee
Gain (dBi)	3.67	4.31	5.72	5.99	2.51 / 4.83	2.78 / 4.80	2.76

4. Spurious emission of the simultaneous operation mode as below and the test data please refer to report no.: RF180108C15D-4.

No	Mode
1	Radio 1 + Radio 2 + Radio 3(2.4GHz) + BT LE
2	Radio 1 + Radio 3(5GHz) + BT LE
3	Radio 1 + Radio 2 + Radio 3(2.4GHz)+ Zigbee
4	Radio 1 + Radio 3(5GHz) + Zigbee

*The Radio 2 and Radio 3(5GHz) cannot transmit simultaneously.

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≥1G	RE<1G	PLC	APCM	Radio	Power
A	√	√	√	√	Radio 1	Power from adapter
B	-	√	√	-		Power from PoE
C	√	√	√	√	Radio 3	Power from adapter
D	-	√	√	-		Power from PoE

Where **RE≥1G:** Radiated Emission above 1GHz & Bandedge Measurement **RE<1G:** Radiated Emission below 1GHz

PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

Note:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane (For Test Mode A, B), Z-plane (For Test Mode C, D).**
2. "-": Means no effect.

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)
A, C	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, C	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, C	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, C	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

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)
A, B, C, D	802.11b	1 to 11	6	DSSS	DBPSK	1.0

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)
A, B, C, D	802.11b	1 to 11	6	DSSS	DBPSK	1.0

Antenna Port Conducted 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)
A, C	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, C	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, C	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, C	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	22 deg. C, 68% RH	120Vac, 60Hz	Adair Peng
RE<1G	23 deg. C, 67% RH	120Vac, 60Hz	Adair Peng
PLC	25 deg. C, 75% RH	120Vac, 60Hz	Jones Chang
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Jisyong Wang

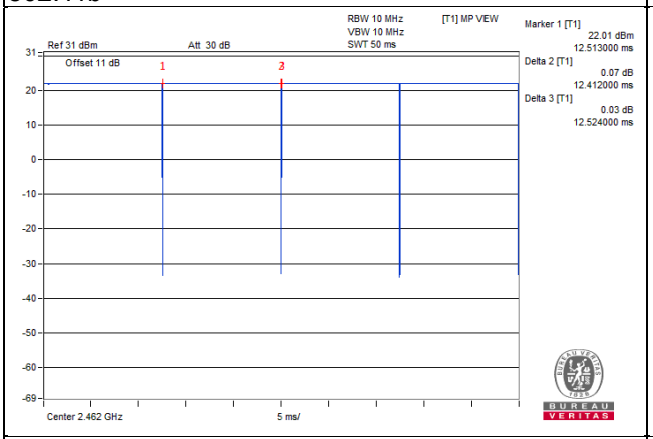
3.3 Duty Cycle of Test Signal

Duty cycle of test signal is > 98%, duty factor is not required.
Duty cycle of test signal is < 98%, duty factor shall be considered.

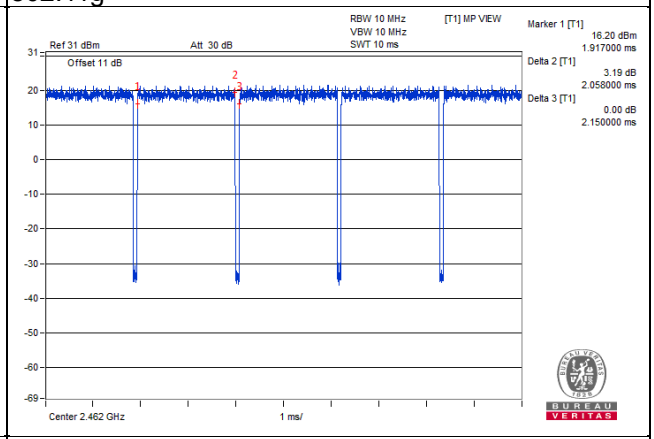
Test Mode A

802.11b: Duty cycle = 12.412/12.524 = 0.991
802.11g: Duty cycle = 2.058/2.15 = 0.957, Duty factor = 10 * log(1/0.957) = 0.19
802.11n (HT20): Duty cycle = 4.986/5.091 = 0.979, Duty factor = 10 * log(1/0.979) = 0.09
802.11n (HT40): Duty cycle = 2.423/2.515 = 0.963, Duty factor = 10 * log(1/0.963) = 0.16

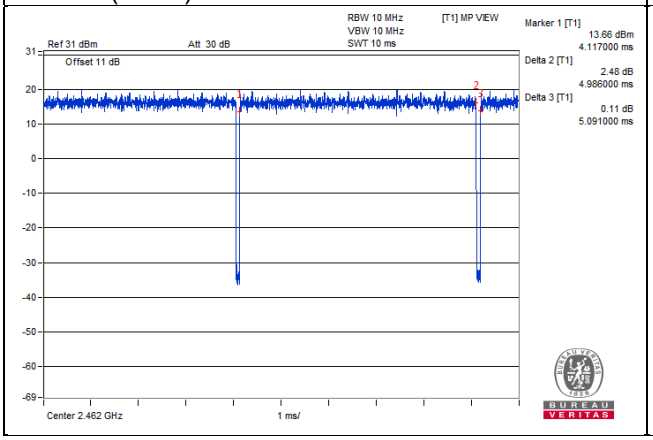
802.11b



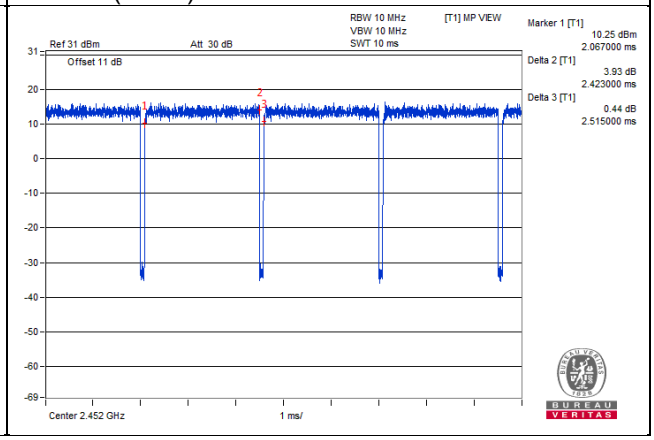
802.11g



802.11n (HT20)



802.11n (HT40)



Test Mode C

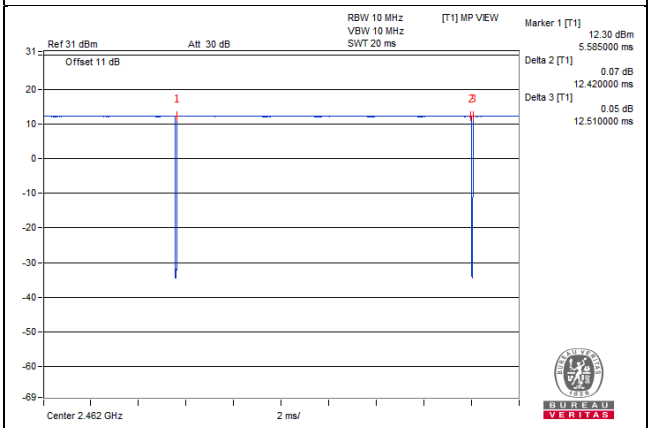
802.11b: Duty cycle = 12.42/12.51 = 0.993

802.11g: Duty cycle = 2.06/2.145 = 0.96, Duty factor = 10 * log(1/0.96) = 0.18

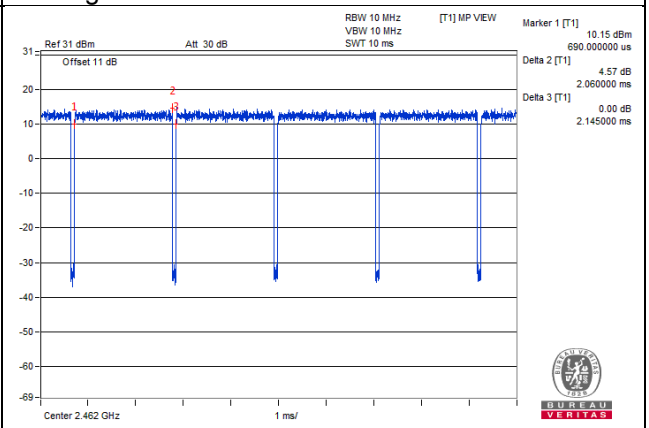
802.11n (HT20): Duty cycle = 1.918/2.008 = 0.955, Duty factor = 10 * log(1/0.955) = 0.20

802.11n (HT40): Duty cycle = 0.944/1.034 = 0.913, Duty factor = 10 * log(1/0.913) = 0.40

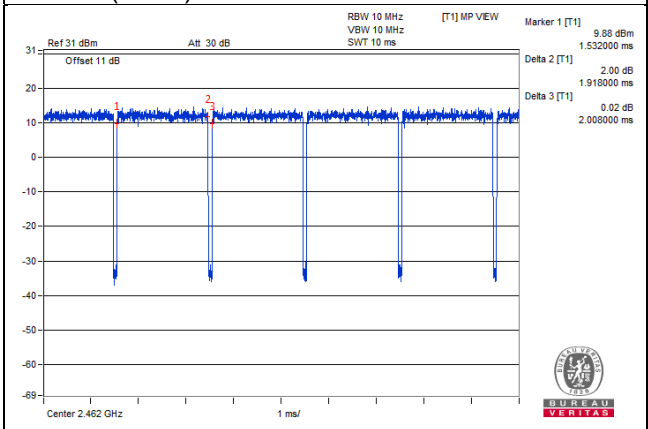
802.11b



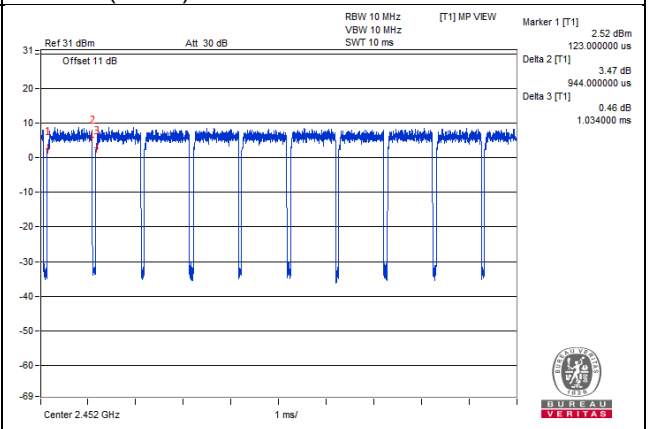
802.11g



802.11n (HT20)



802.11n (HT40)



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	Lenovo	80Q7	PF0KUGU6	FCC DoC Approved	-
B.	Adapter	Powertron	PA1024-120IB200	NA	NA	Provided by manufacturer
C.	Load	NA	NA	NA	NA	-
D.	POE	EnGenius	EPA5006GAT	NA	NA	Provided by manufacturer

Note:

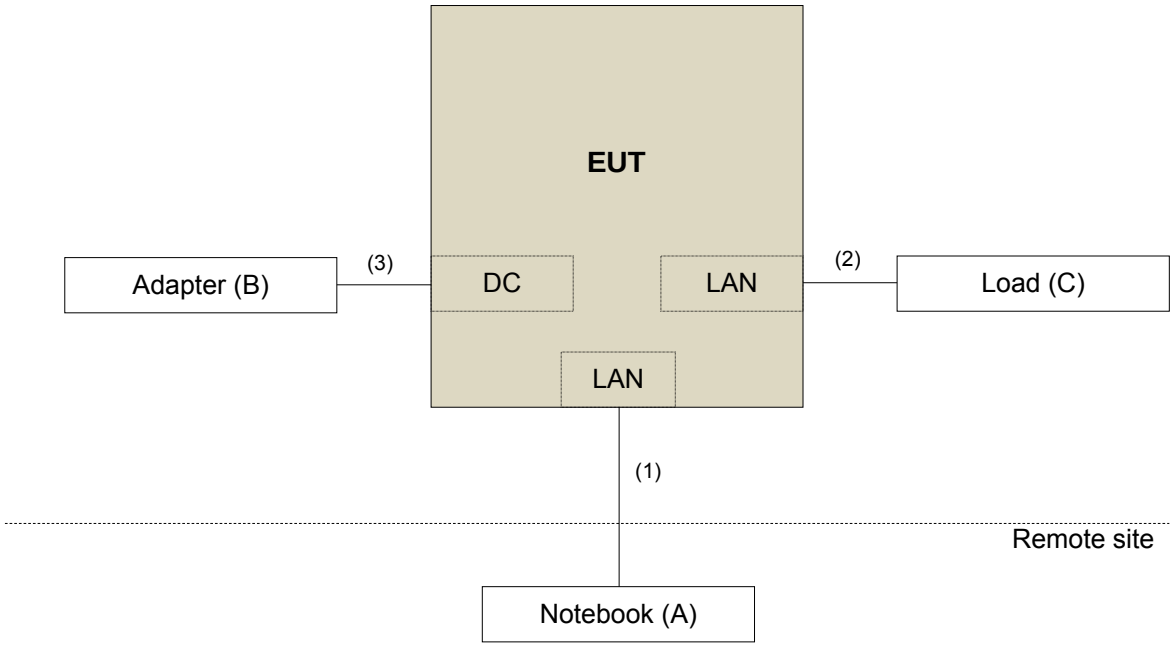
1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45, Cat5e	1	10	N	0	-
2.	RJ45, Cat5e	4	3	N	0	-
3.	Power Cord	1	1.0	N	0	-
4.	RJ45, Cat5e	1	3	N	0	-

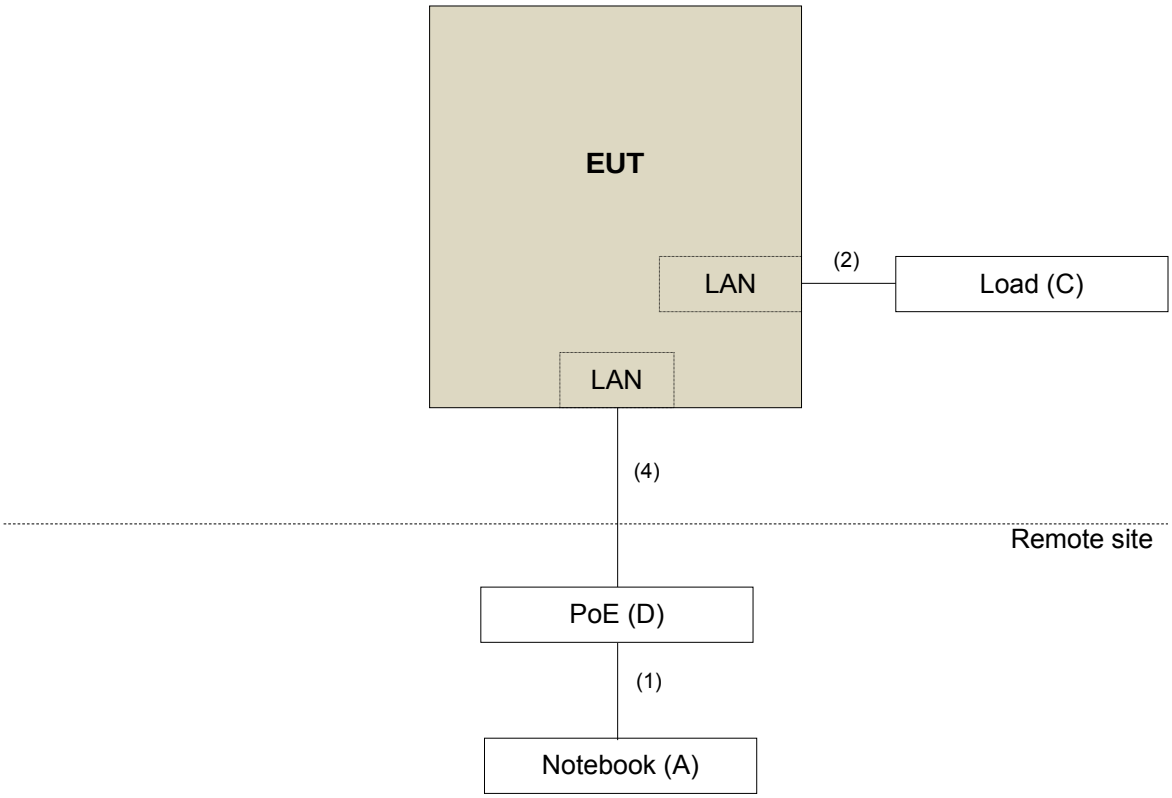
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

Test Mode A, C



Test Mode B, D



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 v05r02

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 30dB under any condition of modulation.

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 30, 2019	May 29, 2020
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 22, 2018	Nov. 21, 2019
HORN Antenna SCHWARZBECK	9120D	209	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 25, 2018	Nov. 24, 2019
Loop Antenna TESEQ	HLA 6121	45745	Jul. 01, 2019	Jun. 30, 2020
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 20, 2019	Aug. 19, 2020
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 27, 2019	Mar. 26, 2020
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 20, 2019	Aug. 19, 2020
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 20, 2019	Aug. 19, 2020
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM-8000	Cable-CH3-03 (309224+170907)	Aug. 20, 2019	Aug. 19, 2020
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
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	Jul. 15, 2019	Jul. 14, 2020

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.

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 detects 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:

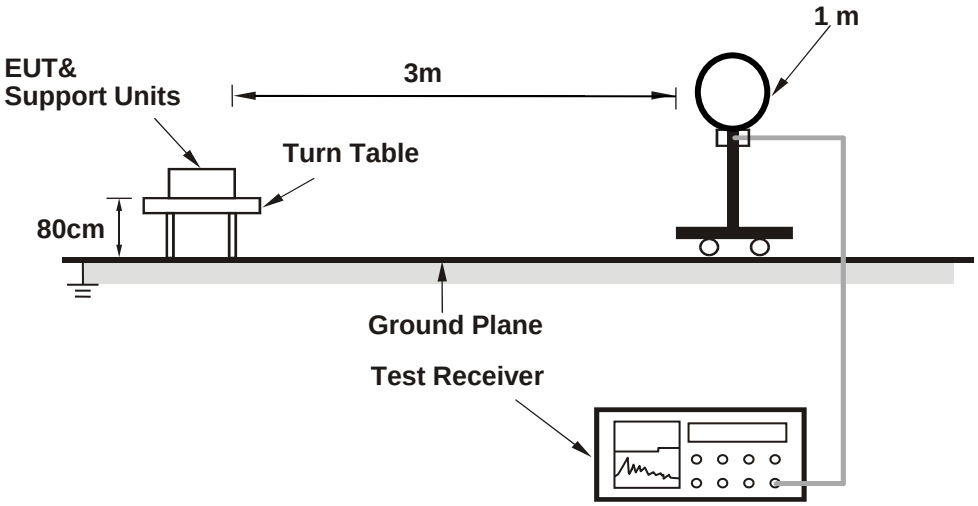
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 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

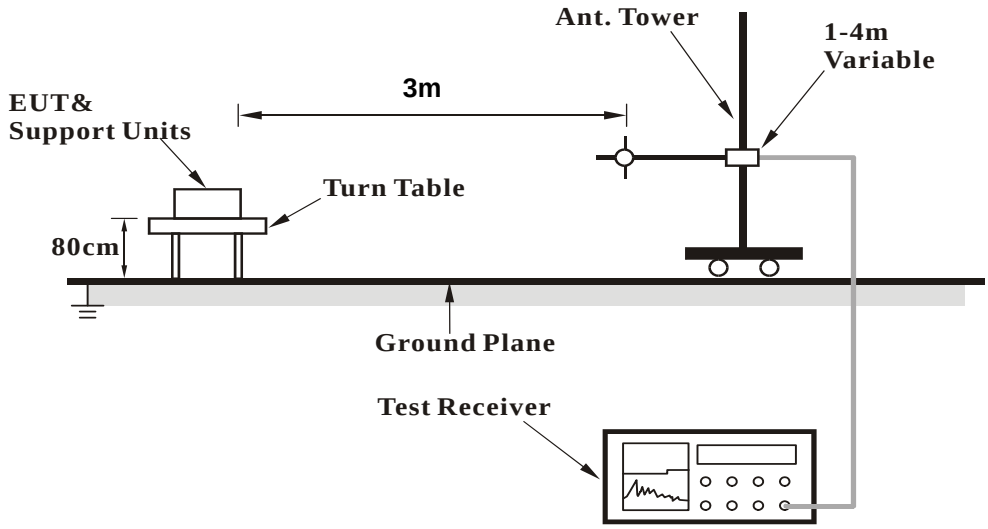
No deviation.

4.1.5 Test Set Up

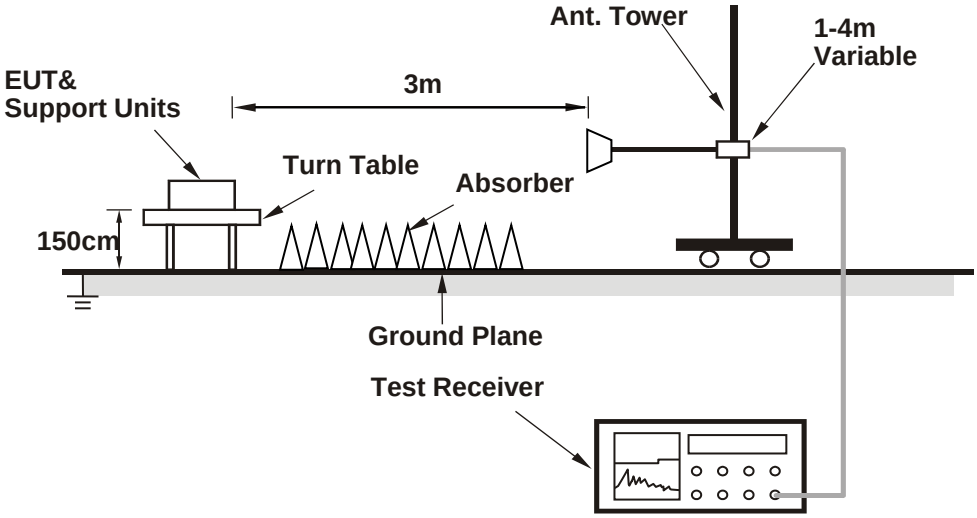
For Radiated emission below 30MHz



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

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

4.1.7 Test Results

Above 1GHz worst-Case data:

Test Mode A

802.11b

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

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	1.66 H	330	26.6	33.5
2	2390.00	52.5 AV	54.0	-1.5	1.66 H	330	19.0	33.5
3	*2412.00	117.3 PK			1.19 H	300	83.9	33.4
4	*2412.00	114.0 AV			1.19 H	300	80.6	33.4
5	4824.00	47.3 PK	74.0	-26.7	1.99 H	23	43.6	3.7
6	4824.00	38.2 AV	54.0	-15.8	1.99 H	23	34.5	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	2390.00	58.1 PK	74.0	-15.9	2.38 V	59	24.6	33.5
2	2390.00	47.2 AV	54.0	-6.8	2.38 V	59	13.7	33.5
3	*2412.00	112.0 PK			2.58 V	74	78.6	33.4
4	*2412.00	108.4 AV			2.58 V	74	75.0	33.4
5	4824.00	46.0 PK	74.0	-28.0	1.36 V	305	42.3	3.7
6	4824.00	35.0 AV	54.0	-19.0	1.36 V	305	31.3	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	118.2 PK			2.31 H	302	84.8	33.4
2	*2437.00	114.3 AV			2.31 H	302	80.9	33.4
3	4874.00	48.0 PK	74.0	-26.0	2.10 H	340	44.5	3.5
4	4874.00	40.2 AV	54.0	-13.8	2.10 H	340	36.7	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	*2437.00	112.6 PK			1.49 V	101	79.2	33.4
2	*2437.00	109.0 AV			1.49 V	100	75.6	33.4
3	4874.00	47.1 PK	74.0	-26.9	1.14 V	350	43.6	3.5
4	4874.00	39.9 AV	54.0	-14.1	1.14 V	350	36.4	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	117.7 PK			1.31 H	310	84.4	33.3
2	*2462.00	114.0 AV			1.31 H	310	80.7	33.3
3	2483.50	61.0 PK	74.0	-13.0	1.52 H	327	27.8	33.2
4	2483.50	51.4 AV	54.0	-2.6	1.52 H	327	18.2	33.2
5	4924.00	45.3 PK	74.0	-28.7	1.83 H	299	42.0	3.3
6	4924.00	31.4 AV	54.0	-22.6	1.83 H	299	28.1	3.3
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	109.3 PK			1.29 V	94	76.0	33.3
2	*2462.00	105.3 AV			1.29 V	94	72.0	33.3
3	2483.50	58.0 PK	74.0	-16.0	1.69 V	107	24.8	33.2
4	2483.50	47.4 AV	54.0	-6.6	1.69 V	107	14.2	33.2
5	4924.00	44.0 PK	74.0	-30.0	1.90 V	320	40.7	3.3
6	4924.00	32.1 AV	54.0	-21.9	1.90 V	320	28.8	3.3

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	68.3 PK	74.0	-5.7	1.65 H	318	34.8	33.5
2	2390.00	52.0 AV	54.0	-2.0	1.65 H	318	18.5	33.5
3	*2412.00	113.4 PK			1.83 H	320	80.0	33.4
4	*2412.00	103.1 AV			1.83 H	320	69.7	33.4
5	4824.00	45.1 PK	74.0	-28.9	2.18 H	348	41.4	3.7
6	4824.00	31.2 AV	54.0	-22.8	2.18 H	348	27.5	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	2390.00	61.0 PK	74.0	-13.0	1.97 V	118	27.5	33.5
2	2390.00	49.2 AV	54.0	-4.8	1.97 V	118	15.7	33.5
3	*2412.00	107.6 PK			1.97 V	99	74.2	33.4
4	*2412.00	95.7 AV			1.97 V	99	62.3	33.4
5	4824.00	45.3 PK	74.0	-28.7	2.20 V	290	41.6	3.7
6	4824.00	32.3 AV	54.0	-21.7	2.20 V	290	28.6	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	119.8 PK			1.68 H	11	86.4	33.4
2	*2437.00	109.3 AV			1.68 H	11	75.9	33.4
3	2483.50	68.0 PK	74.0	-6.0	1.77 H	25	34.8	33.2
4	2483.50	52.2 AV	54.0	-1.8	1.77 H	25	19.0	33.2
5	4874.00	45.1 PK	74.0	-28.9	2.18 H	183	41.6	3.5
6	4874.00	31.6 AV	54.0	-22.4	2.18 H	183	28.1	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	*2437.00	113.4 PK			2.20 V	63	80.0	33.4
2	*2437.00	102.4 AV			2.20 V	63	69.0	33.4
3	2483.50	60.0 PK	74.0	-14.0	2.23 V	76	26.8	33.2
4	2483.50	47.4 AV	54.0	-6.6	2.23 V	76	14.2	33.2
5	4874.00	45.2 PK	74.0	-28.8	1.99 V	310	41.7	3.5
6	4874.00	32.2 AV	54.0	-21.8	1.99 V	310	28.7	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	114.3 PK			1.52 H	304	81.0	33.3
2	*2462.00	104.0 AV			1.52 H	304	70.7	33.3
3	2483.50	66.4 PK	74.0	-7.6	1.20 H	338	33.2	33.2
4	2483.50	52.0 AV	54.0	-2.0	1.20 H	338	18.8	33.2
5	4924.00	45.1 PK	74.0	-28.9	1.89 H	266	41.8	3.3
6	4924.00	32.1 AV	54.0	-21.9	1.89 H	266	28.8	3.3
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	108.3 PK			2.09 V	73	75.0	33.3
2	*2462.00	97.1 AV			2.09 V	73	63.8	33.3
3	2483.50	59.5 PK	74.0	-14.5	2.00 V	66	26.3	33.2
4	2483.50	47.3 AV	54.0	-6.7	2.00 V	66	14.1	33.2
5	4924.00	45.3 PK	74.0	-28.7	2.39 V	300	42.0	3.3
6	4924.00	32.3 AV	54.0	-21.7	2.39 V	300	29.0	3.3

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	66.0 PK	74.0	-8.0	1.62 H	310	32.5	33.5
2	2390.00	52.2 AV	54.0	-1.8	1.62 H	310	18.7	33.5
3	*2412.00	113.4 PK			1.40 H	311	80.0	33.4
4	*2412.00	103.3 AV			1.40 H	311	69.9	33.4
5	4824.00	46.3 PK	74.0	-27.7	2.13 H	349	42.6	3.7
6	4824.00	32.3 AV	54.0	-21.7	2.13 H	349	28.6	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	62.1 PK	74.0	-11.9	1.99 V	66	28.6	33.5
2	2390.00	49.3 AV	54.0	-4.7	1.99 V	66	15.8	33.5
3	*2412.00	107.7 PK			2.00 V	55	74.3	33.4
4	*2412.00	96.4 AV			2.00 V	55	63.0	33.4
5	4824.00	45.4 PK	74.0	-28.6	1.92 V	289	41.7	3.7
6	4824.00	32.4 AV	54.0	-21.6	1.92 V	289	28.7	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	119.4 PK			2.17 H	317	87.0	32.4
2	*2437.00	108.9 AV			2.17 H	317	76.5	32.4
3	2483.50	67.7 PK	74.0	-6.3	2.23 H	323	35.1	32.6
4	2483.50	51.8 AV	54.0	-2.2	2.23 H	323	19.2	32.6
5	4874.00	49.6 PK	74.0	-24.4	1.92 H	163	45.9	3.7
6	4874.00	34.1 AV	54.0	-19.9	1.92 H	163	30.4	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	111.8 PK			2.33 V	66	79.4	32.4
2	*2437.00	101.1 AV			2.33 V	66	68.7	32.4
3	2483.50	62.9 PK	74.0	-11.1	2.13 V	75	30.3	32.6
4	2483.50	47.8 AV	54.0	-6.2	2.13 V	75	15.2	32.6
5	4874.00	48.8 PK	74.0	-25.2	1.93 V	309	45.1	3.7
6	4874.00	34.0 AV	54.0	-20.0	1.93 V	309	30.3	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	114.3 PK			2.56 H	286	81.0	33.3
2	*2462.00	104.0 AV			2.56 H	286	70.7	33.3
3	2483.50	66.0 PK	74.0	-8.0	2.41 H	320	32.8	33.2
4	2483.50	52.5 AV	54.0	-1.5	2.41 H	320	19.3	33.2
5	4924.00	44.5 PK	74.0	-29.5	1.75 H	260	41.2	3.3
6	4924.00	31.8 AV	54.0	-22.2	1.75 H	260	28.5	3.3
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	108.0 PK			1.81 V	103	74.7	33.3
2	*2462.00	97.3 AV			1.81 V	103	64.0	33.3
3	2483.50	59.0 PK	74.0	-15.0	1.85 V	86	25.8	33.2
4	2483.50	47.5 AV	54.0	-6.5	1.85 V	86	14.3	33.2
5	4924.00	45.2 PK	74.0	-28.8	2.04 V	319	41.9	3.3
6	4924.00	32.0 AV	54.0	-22.0	2.04 V	319	28.7	3.3

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	65.1 PK	74.0	-8.9	2.40 H	60	31.6	33.5
2	2390.00	52.4 AV	54.0	-1.6	2.40 H	60	18.9	33.5
3	*2422.00	110.3 PK			2.25 H	70	76.9	33.4
4	*2422.00	100.1 AV			2.25 H	70	66.7	33.4
5	4844.00	45.2 PK	74.0	-28.8	2.22 H	330	41.6	3.6
6	4844.00	31.0 AV	54.0	-23.0	2.22 H	330	27.4	3.6
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	61.0 PK	74.0	-13.0	1.87 V	89	27.5	33.5
2	2390.00	48.4 AV	54.0	-5.6	1.87 V	89	14.9	33.5
3	*2422.00	103.2 PK			1.70 V	97	69.8	33.4
4	*2422.00	93.2 AV			1.70 V	97	59.8	33.4
5	4844.00	45.6 PK	74.0	-28.4	1.88 V	336	42.0	3.6
6	4844.00	32.0 AV	54.0	-22.0	1.86 V	336	28.4	3.6

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	66.3 PK	74.0	-7.7	1.36 H	306	32.8	33.5
2	2390.00	52.3 AV	54.0	-1.7	1.36 H	306	18.8	33.5
3	*2437.00	112.0 PK			2.24 H	325	78.6	33.4
4	*2437.00	102.3 AV			2.24 H	325	68.9	33.4
5	2483.50	68.4 PK	74.0	-5.6	1.19 H	318	35.2	33.2
6	2483.50	52.7 AV	54.0	-1.3	1.19 H	318	19.5	33.2
7	4874.00	45.3 PK	74.0	-28.7	1.90 H	262	41.8	3.5
8	4874.00	31.3 AV	54.0	-22.7	1.90 H	262	27.8	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	2390.00	60.3 PK	74.0	-13.7	1.64 V	109	26.8	33.5
2	2390.00	48.1 AV	54.0	-5.9	1.64 V	109	14.6	33.5
3	*2437.00	105.3 PK			1.48 V	100	71.9	33.4
4	*2437.00	95.4 AV			1.48 V	100	62.0	33.4
5	2483.50	62.0 PK	74.0	-12.0	1.60 V	99	28.8	33.2
6	2483.50	48.2 AV	54.0	-5.8	1.60 V	99	15.0	33.2
7	4874.00	45.1 PK	74.0	-28.9	1.79 V	289	41.6	3.5
8	4874.00	32.3 AV	54.0	-21.7	1.79 V	289	28.8	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)
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 FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	110.2 PK			1.29 H	301	76.8	33.4
2	*2452.00	99.3 AV			1.29 H	301	65.9	33.4
3	2483.50	64.5 PK	74.0	-9.5	1.10 H	309	31.3	33.2
4	2483.50	52.2 AV	54.0	-1.8	1.10 H	309	19.0	33.2
5	4904.00	45.4 PK	74.0	-28.6	1.68 H	261	42.0	3.4
6	4904.00	32.0 AV	54.0	-22.0	1.68 H	261	28.6	3.4
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	102.2 PK			2.10 V	58	68.8	33.4
2	*2452.00	92.2 AV			2.10 V	58	58.8	33.4
3	2483.50	60.5 PK	74.0	-13.5	1.82 V	82	27.3	33.2
4	2483.50	47.5 AV	54.0	-6.5	1.82 V	82	14.3	33.2
5	4904.00	45.5 PK	74.0	-28.5	1.70 V	284	42.1	3.4
6	4904.00	32.3 AV	54.0	-21.7	1.70 V	284	28.9	3.4

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

Test Mode C

802.11b

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

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	57.6 PK	74.0	-16.4	1.49 H	196	24.1	33.5
2	2390.00	46.0 AV	54.0	-8.0	1.49 H	196	12.5	33.5
3	*2412.00	92.1 PK			1.49 H	183	58.7	33.4
4	*2412.00	88.7 AV			1.49 H	183	55.3	33.4
5	4824.00	56.0 PK	74.0	-18.0	1.63 H	359	52.3	3.7
6	4824.00	52.8 AV	54.0	-1.2	1.63 H	359	49.1	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	2390.00	56.7 PK	74.0	-17.3	1.89 V	350	23.2	33.5
2	2390.00	46.1 AV	54.0	-7.9	1.89 V	350	12.6	33.5
3	*2412.00	105.7 PK			1.90 V	358	72.3	33.4
4	*2412.00	101.8 AV			1.90 V	358	68.4	33.4
5	4824.00	51.6 PK	74.0	-22.4	2.69 V	22	47.9	3.7
6	4824.00	47.7 AV	54.0	-6.3	2.69 V	22	44.0	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	96.7 PK			1.66 H	197	63.3	33.4
2	*2437.00	93.1 AV			1.66 H	197	59.7	33.4
3	4874.00	57.9 PK	74.0	-16.1	1.59 H	356	54.4	3.5
4	**4874.00**	**53.0 AV**	**54.0**	**-1.0**	**1.59 H**	**356**	**49.5**	**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	*2437.00	109.0 PK			2.08 V	6	75.6	33.4
2	*2437.00	105.3 AV			2.08 V	6	71.9	33.4
3	4874.00	54.8 PK	74.0	-19.2	2.66 V	343	51.3	3.5
4	4874.00	52.3 AV	54.0	-1.7	2.66 V	343	48.8	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	93.4 PK			1.69 H	189	60.1	33.3
2	*2462.00	89.5 AV			1.69 H	189	56.2	33.3
3	2483.50	56.8 PK	74.0	-17.2	1.50 H	182	23.6	33.2
4	2483.50	46.0 AV	54.0	-8.0	1.50 H	182	12.8	33.2
5	4924.00	56.3 PK	74.0	-17.7	1.23 H	0	53.0	3.3
6	**4924.00**	**53.0 AV**	**54.0**	**-1.0**	**1.23 H**	**0**	**49.7**	**3.3**
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			2.21 V	13	73.3	33.3
2	*2462.00	103.1 AV			2.21 V	13	69.8	33.3
3	2483.50	57.2 PK	74.0	-16.8	2.20 V	349	24.0	33.2
4	2483.50	46.2 AV	54.0	-7.8	2.20 V	349	13.0	33.2
5	4924.00	53.6 PK	74.0	-20.4	2.60 V	44	50.3	3.3
6	4924.00	50.3 AV	54.0	-3.7	2.60 V	44	47.0	3.3

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	59.1 PK	74.0	-14.9	1.56 H	190	25.6	33.5
2	2390.00	47.6 AV	54.0	-6.4	1.56 H	190	14.1	33.5
3	*2412.00	96.4 PK			1.56 H	183	63.0	33.4
4	*2412.00	86.4 AV			1.56 H	183	53.0	33.4
5	4824.00	54.5 PK	74.0	-19.5	1.40 H	359	50.8	3.7
6	4824.00	43.7 AV	54.0	-10.3	1.40 H	359	40.0	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	67.6 PK	74.0	-6.4	2.06 V	346	34.1	33.5
2	**2390.00**	**53.0 AV**	**54.0**	**-1.0**	**2.06 V**	**346**	**19.5**	**33.5**
3	*2412.00	109.0 PK			1.96 V	353	75.6	33.4
4	*2412.00	99.1 AV			1.96 V	353	65.7	33.4
5	4824.00	49.3 PK	74.0	-24.7	2.44 V	37	45.6	3.7
6	4824.00	37.7 AV	54.0	-16.3	2.44 V	37	34.0	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	99.5 PK			1.60 H	333	66.1	33.4
2	*2437.00	90.4 AV			1.60 H	333	57.0	33.4
3	4874.00	55.8 PK	74.0	-18.2	2.05 H	10	52.3	3.5
4	4874.00	44.5 AV	54.0	-9.5	2.05 H	10	41.0	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	*2437.00	113.3 PK			1.80 V	350	79.9	33.4
2	*2437.00	103.9 AV			1.80 V	350	70.5	33.4
3	4874.00	53.0 PK	74.0	-21.0	2.60 V	34	49.5	3.5
4	4874.00	41.5 AV	54.0	-12.5	2.60 V	34	38.0	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	93.7 PK			1.62 H	188	60.4	33.3
2	*2462.00	84.7 AV			1.62 H	188	51.4	33.3
3	2483.50	56.4 PK	74.0	-17.6	1.59 H	188	23.2	33.2
4	2483.50	46.2 AV	54.0	-7.8	1.59 H	188	13.0	33.2
5	4924.00	51.8 PK	74.0	-22.2	1.76 H	3	48.5	3.3
6	4924.00	39.2 AV	54.0	-14.8	1.76 H	3	35.9	3.3
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	107.3 PK			1.90 V	359	74.0	33.3
2	*2462.00	98.0 AV			1.90 V	359	64.7	33.3
3	2483.50	67.2 PK	74.0	-6.8	1.50 V	0	34.0	33.2
4	2483.50	52.9 AV	54.0	-1.1	1.50 V	0	19.7	33.2
5	4924.00	49.6 PK	74.0	-24.4	2.25 V	355	46.3	3.3
6	4924.00	37.2 AV	54.0	-16.8	2.25 V	355	33.9	3.3

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	57.0 PK	74.0	-17.0	1.49 H	179	23.5	33.5
2	2390.00	47.0 AV	54.0	-7.0	1.49 H	179	13.5	33.5
3	*2412.00	94.9 PK			1.50 H	181	61.5	33.4
4	*2412.00	85.2 AV			1.50 H	181	51.8	33.4
5	4824.00	52.7 PK	74.0	-21.3	1.60 H	359	49.0	3.7
6	4824.00	40.8 AV	54.0	-13.2	1.60 H	359	37.1	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	2390.00	68.8 PK	74.0	-5.2	2.00 V	300	35.3	33.5
2	**2390.00**	**53.0 AV**	**54.0**	**-1.0**	**2.00 V**	**300**	**19.5**	**33.5**
3	*2412.00	108.0 PK			1.88 V	338	74.6	33.4
4	*2412.00	97.7 AV			1.88 V	338	64.3	33.4
5	4824.00	49.7 PK	74.0	-24.3	2.44 V	349	46.0	3.7
6	4824.00	37.0 AV	54.0	-17.0	2.44 V	349	33.3	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	99.8 PK			1.50 H	191	66.4	33.4
2	*2437.00	90.6 AV			1.50 H	191	57.2	33.4
3	4874.00	58.6 PK	74.0	-15.4	2.09 H	19	55.1	3.5
4	4874.00	44.5 AV	54.0	-9.5	2.09 H	19	41.0	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	*2437.00	113.0 PK			2.29 V	353	79.6	33.4
2	*2437.00	103.7 AV			2.29 V	353	70.3	33.4
3	4874.00	55.7 PK	74.0	-18.3	2.79 V	340	52.2	3.5
4	4874.00	41.5 AV	54.0	-12.5	2.79 V	340	38.0	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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	92.8 PK			1.65 H	187	59.5	33.3
2	*2462.00	82.9 AV			1.65 H	187	49.6	33.3
3	2483.50	57.0 PK	74.0	-17.0	1.64 H	183	23.8	33.2
4	2483.50	45.5 AV	54.0	-8.5	1.64 H	183	12.3	33.2
5	4924.00	52.3 PK	74.0	-21.7	2.11 H	359	49.0	3.3
6	4924.00	40.5 AV	54.0	-13.5	2.11 H	359	37.2	3.3
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	107.3 PK			1.79 V	340	74.0	33.3
2	*2462.00	97.8 AV			1.79 V	340	64.5	33.3
3	2483.50	66.2 PK	74.0	-7.8	1.74 V	319	33.0	33.2
4	2483.50	52.7 AV	54.0	-1.3	1.74 V	319	19.5	33.2
5	4924.00	48.9 PK	74.0	-25.1	2.55 V	351	45.6	3.3
6	4924.00	36.3 AV	54.0	-17.7	2.55 V	351	33.0	3.3

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	55.7 PK	74.0	-18.3	1.52 H	179	22.2	33.5
2	2390.00	45.5 AV	54.0	-8.5	1.52 H	179	12.0	33.5
3	*2422.00	87.4 PK			1.55 H	189	54.0	33.4
4	*2422.00	78.4 AV			1.55 H	189	45.0	33.4
5	4844.00	45.0 PK	74.0	-29.0	1.79 H	42	41.4	3.6
6	4844.00	31.7 AV	54.0	-22.3	1.79 H	42	28.1	3.6
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	65.5 PK	74.0	-8.5	1.78 V	310	32.0	33.5
2	**2390.00**	**53.0 AV**	**54.0**	**-1.0**	**1.78 V**	**310**	**19.5**	**33.5**
3	*2422.00	101.0 PK			1.87 V	350	67.6	33.4
4	*2422.00	91.7 AV			1.87 V	350	58.3	33.4
5	4844.00	45.8 PK	74.0	-28.2	2.79 V	21	42.2	3.6
6	4844.00	33.7 AV	54.0	-20.3	2.79 V	21	30.1	3.6

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	58.7 PK	74.0	-15.3	1.85 H	355	25.5	33.2
2	2390.00	46.4 AV	54.0	-7.6	1.85 H	355	13.2	33.2
3	*2437.00	92.3 PK			1.65 H	351	59.1	33.2
4	*2437.00	83.2 AV			1.65 H	351	50.0	33.2
5	2483.50	59.3 PK	74.0	-14.7	1.71 H	350	25.9	33.4
6	2483.50	46.4 AV	54.0	-7.6	1.71 H	350	13.0	33.4
7	4874.00	48.6 PK	74.0	-25.4	1.89 H	333	45.5	3.1
8	4874.00	36.5 AV	54.0	-17.5	1.89 H	333	33.4	3.1
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	2390.00	68.7 PK	74.0	-5.3	1.69 V	18	35.5	33.2
2	2390.00	52.2 AV	54.0	-1.8	1.69 V	18	19.0	33.2
3	*2437.00	105.3 PK			1.75 V	2	72.1	33.2
4	*2437.00	96.3 AV			1.75 V	2	63.1	33.2
5	2483.50	67.5 PK	74.0	-6.5	1.61 V	6	34.1	33.4
6	2483.50	52.4 AV	54.0	-1.6	1.61 V	6	19.0	33.4
7	4874.00	48.4 PK	74.0	-25.6	3.05 V	359	45.3	3.1
8	4874.00	36.1 AV	54.0	-17.9	3.05 V	359	33.0	3.1

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)
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 FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

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	88.4 PK			1.69 H	192	55.0	33.4
2	*2452.00	79.0 AV			1.69 H	192	45.6	33.4
3	2483.50	56.7 PK	74.0	-17.3	1.60 H	188	23.5	33.2
4	2483.50	45.8 AV	54.0	-8.2	1.60 H	188	12.6	33.2
5	4904.00	44.5 PK	74.0	-29.5	2.69 H	352	41.1	3.4
6	4904.00	33.9 AV	54.0	-20.1	2.69 H	352	30.5	3.4
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	101.0 PK			1.88 V	14	67.6	33.4
2	*2452.00	91.7 AV			1.88 V	14	58.3	33.4
3	2483.50	64.2 PK	74.0	-9.8	1.86 V	20	31.0	33.2
4	2483.50	52.8 AV	54.0	-1.2	1.86 V	20	19.6	33.2
5	4904.00	46.7 PK	74.0	-27.3	2.50 V	358	43.3	3.4
6	4904.00	36.2 AV	54.0	-17.8	2.50 V	358	32.8	3.4

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)
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

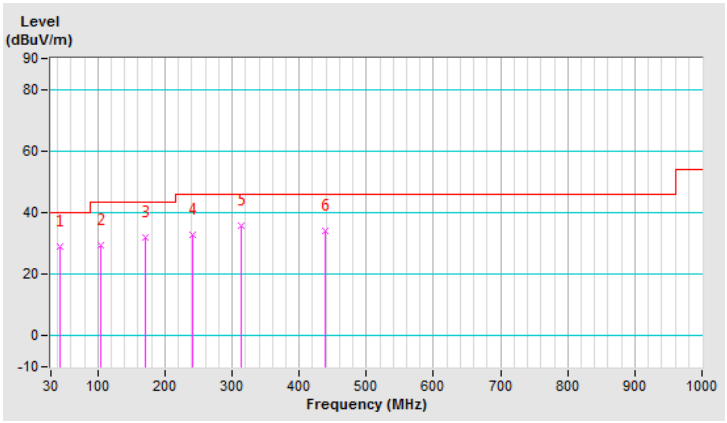
802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	44.06	29.1 QP	40.0	-10.9	1.51 H	235	38.3	-9.2
2	104.51	29.6 QP	43.5	-13.9	2.00 H	266	42.0	-12.4
3	170.58	32.1 QP	43.5	-11.4	1.51 H	234	41.1	-9.0
4	240.87	32.9 QP	46.0	-13.1	1.00 H	232	42.4	-9.5
5	313.97	35.9 QP	46.0	-10.1	1.00 H	209	42.9	-7.0
6	439.09	33.9 QP	46.0	-12.1	2.00 H	335	36.7	-2.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

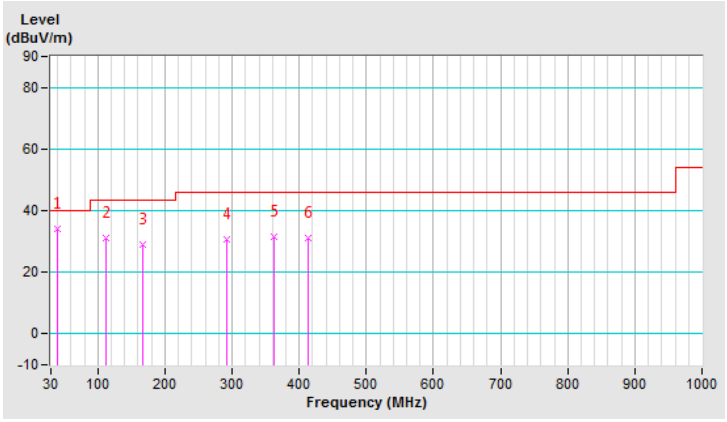


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	39.84	34.0 QP	40.0	-6.0	1.00 V	238	43.7	-9.7
2	111.54	31.3 QP	43.5	-12.2	1.00 V	104	43.1	-11.8
3	166.36	28.8 QP	43.5	-14.7	1.00 V	295	37.5	-8.7
4	292.88	30.5 QP	46.0	-15.5	1.49 V	180	38.1	-7.6
5	361.77	31.7 QP	46.0	-14.3	1.00 V	212	37.5	-5.8
6	413.78	31.2 QP	46.0	-14.8	1.00 V	4	35.3	-4.1

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.



Test Mode B

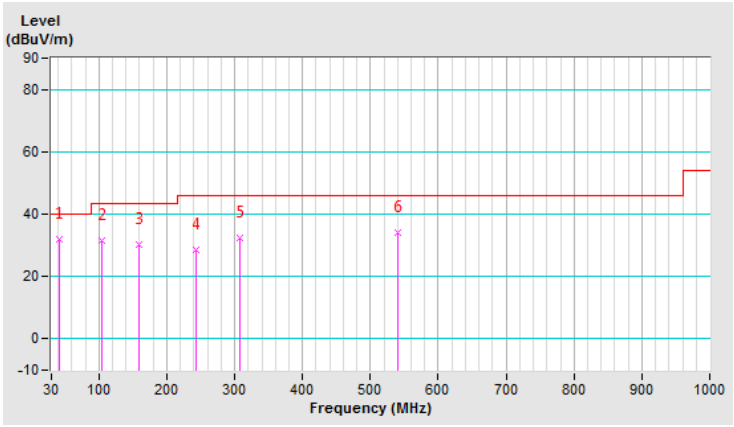
802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	41.25	32.1 QP	40.0	-7.9	2.00 H	71	41.5	-9.4
2	104.51	31.6 QP	43.5	-11.9	2.00 H	39	44.0	-12.4
3	159.33	30.3 QP	43.5	-13.2	1.00 H	220	38.9	-8.6
4	243.68	28.7 QP	46.0	-17.3	1.00 H	224	38.1	-9.4
5	306.94	32.5 QP	46.0	-13.5	1.00 H	117	39.6	-7.1
6	540.30	34.1 QP	46.0	-11.9	1.49 H	2	34.9	-0.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

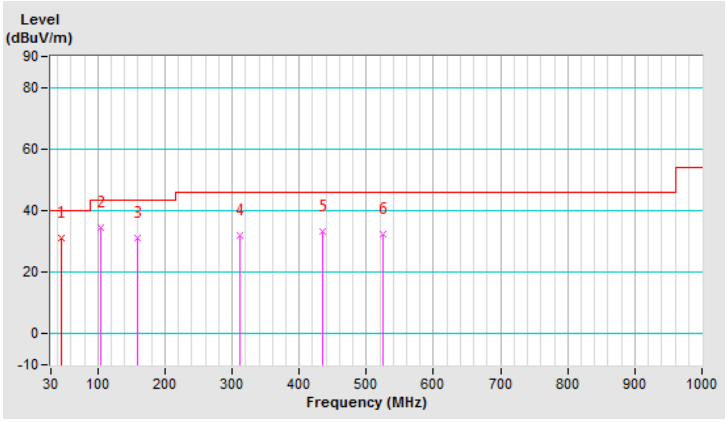


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	45.78	31.2 QP	40.0	-8.8	1.50 V	12	40.2	-9.0
2	104.51	34.6 QP	43.5	-8.9	1.01 V	49	47.0	-12.4
3	159.33	31.0 QP	43.5	-12.5	1.01 V	130	39.6	-8.6
4	311.16	32.1 QP	46.0	-13.9	1.51 V	297	39.1	-7.0
5	434.87	33.2 QP	46.0	-12.8	1.01 V	162	36.2	-3.0
6	524.84	32.3 QP	46.0	-13.7	1.01 V	240	33.3	-1.0

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.



Test Mode C

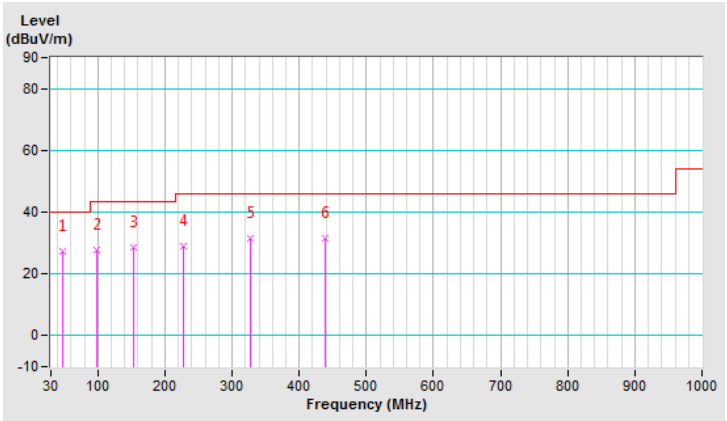
802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	46.87	27.1 QP	40.0	-12.9	1.00 H	244	36.2	-9.1
2	97.48	27.6 QP	43.5	-15.9	2.00 H	100	40.8	-13.2
3	153.71	28.7 QP	43.5	-14.8	1.49 H	254	37.4	-8.7
4	228.22	29.1 QP	46.0	-16.9	1.00 H	239	39.5	-10.4
5	326.62	31.4 QP	46.0	-14.6	1.00 H	267	38.1	-6.7
6	439.09	31.7 QP	46.0	-14.3	2.00 H	225	34.5	-2.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

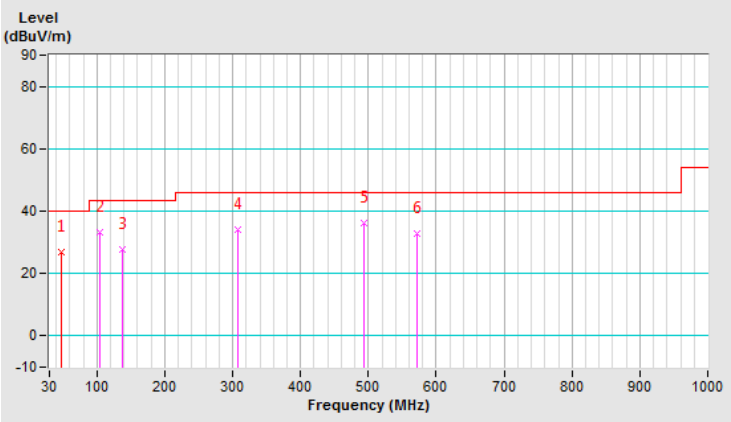


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	47.20	26.8 QP	40.0	-13.2	1.48 V	259	35.8	-9.0
2	104.51	33.2 QP	43.5	-10.3	1.00 V	88	45.6	-12.4
3	138.25	27.8 QP	43.5	-15.7	1.49 V	57	37.0	-9.2
4	308.35	34.0 QP	46.0	-12.0	1.49 V	199	41.1	-7.1
5	493.91	36.1 QP	46.0	-9.9	2.00 V	181	37.8	-1.7
6	572.64	33.0 QP	46.0	-13.0	1.00 V	25	32.8	0.2

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.



Test Mode D

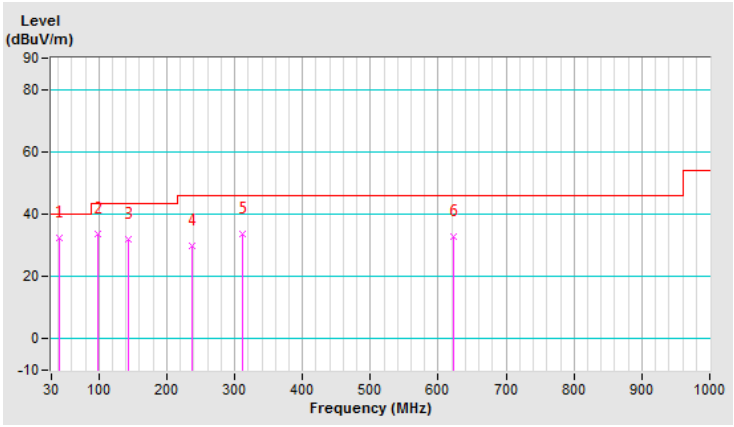
802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	42.65	32.5 QP	40.0	-7.5	2.00 H	105	41.8	-9.3
2	97.48	33.8 QP	43.5	-9.7	2.00 H	77	47.0	-13.2
3	143.87	32.0 QP	43.5	-11.5	1.00 H	227	40.9	-8.9
4	238.06	29.8 QP	46.0	-16.2	1.00 H	116	39.5	-9.7
5	311.16	33.8 QP	46.0	-12.2	1.00 H	132	40.8	-7.0
6	621.84	32.8 QP	46.0	-13.2	1.00 H	197	31.4	1.4

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

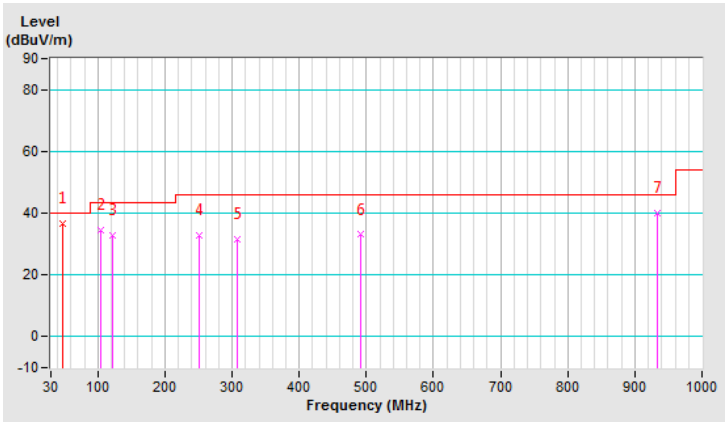


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	48.33	36.8 QP	40.0	-3.2	1.00 V	291	45.7	-8.9
2	104.51	34.5 QP	43.5	-9.0	1.00 V	111	46.9	-12.4
3	122.78	32.8 QP	43.5	-10.7	1.49 V	309	43.5	-10.7
4	250.71	32.8 QP	46.0	-13.2	1.49 V	310	42.0	-9.2
5	306.94	31.6 QP	46.0	-14.4	1.99 V	115	38.7	-7.1
6	491.10	33.0 QP	46.0	-13.0	1.49 V	307	34.7	-1.7
7	933.93	40.0 QP	46.0	-6.0	1.00 V	303	34.9	5.1

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.



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.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 10, 2018	Dec. 09, 2019
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 21, 2019	Feb. 20, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 22, 2019	Aug. 21, 2020
Software ADT	BV ADT_Cond_ 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-12040.

4.2.3 Test Procedures

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

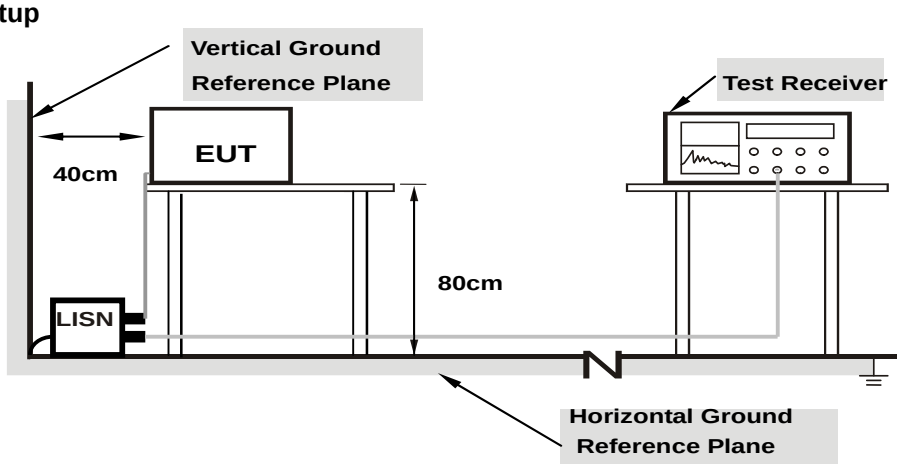
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

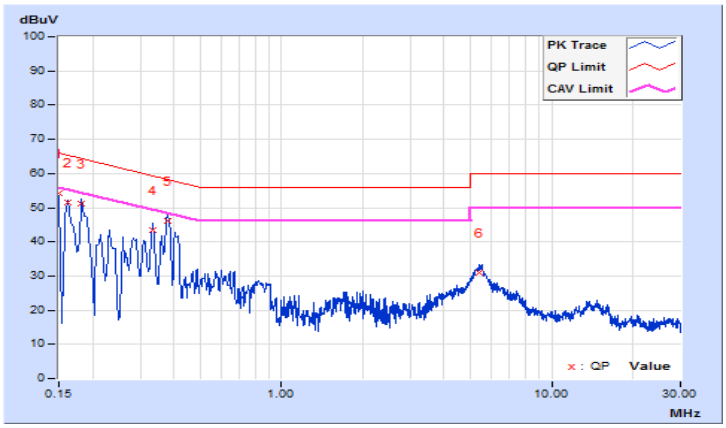
Test Mode A

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.67	44.48	29.97	54.15	39.64	66.00	56.00	-11.85	-16.36
2	0.16200	9.67	41.70	27.41	51.37	37.08	65.36	55.36	-13.99	-18.28
3	0.18200	9.66	41.56	28.17	51.22	37.83	64.39	54.39	-13.17	-16.56
4	0.33413	9.68	33.87	30.88	43.55	40.56	59.35	49.35	-15.80	-8.79
5	**0.37817**	**9.69**	**36.57**	**32.74**	**46.26**	**42.43**	**58.32**	**48.32**	**-12.06**	**-5.89**
6	5.41800	9.86	21.23	13.63	31.09	23.49	60.00	50.00	-28.91	-26.51

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.

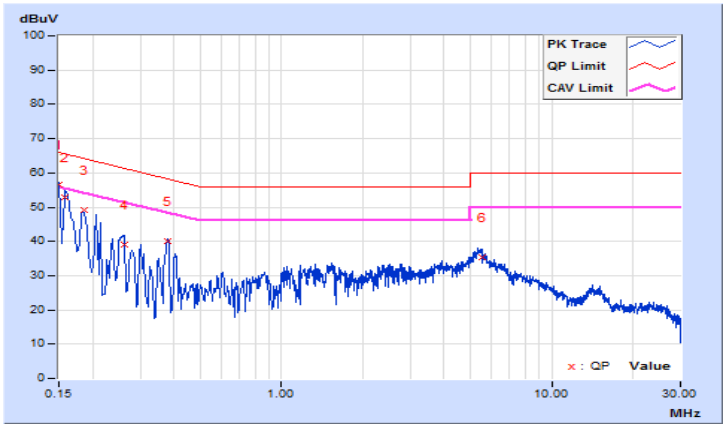


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.64	46.98	31.96	56.62	41.60	66.00	56.00	-9.38	-14.40
2	0.15811	9.64	43.22	29.05	52.86	38.69	65.56	55.56	-12.70	-16.87
3	0.18519	9.64	39.53	23.90	49.17	33.54	64.25	54.25	-15.08	-20.71
4	0.26083	9.65	29.39	15.87	39.04	25.52	61.40	51.40	-22.36	-25.88
5	0.37817	9.66	30.55	23.97	40.21	33.63	58.32	48.32	-18.11	-14.69
6	5.51000	9.84	25.52	17.04	35.36	26.88	60.00	50.00	-24.64	-23.12

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.



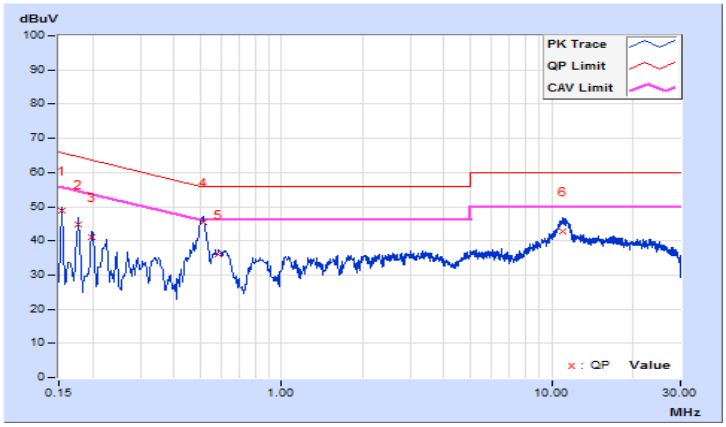
Test Mode B

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	9.67	39.08	22.28	48.75	31.95	65.78	55.78	-17.03	-23.83
2	0.17800	9.66	35.10	19.86	44.76	29.52	64.58	54.58	-19.82	-25.06
3	0.19832	9.66	31.28	17.06	40.94	26.72	63.68	53.68	-22.74	-26.96
4	0.51400	9.70	35.71	30.15	45.41	39.85	56.00	46.00	-10.59	-6.15
5	0.58563	9.70	26.36	21.05	36.06	30.75	56.00	46.00	-19.94	-15.25
6	10.93000	9.94	32.87	27.64	42.81	37.58	60.00	50.00	-17.19	-12.42

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.

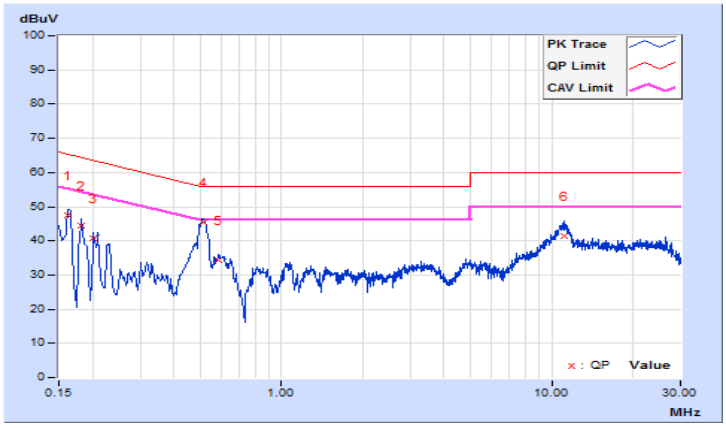


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16190	9.64	37.89	22.47	47.53	32.11	65.37	55.37	-17.84	-23.26
2	0.18200	9.64	34.77	19.10	44.41	28.74	64.39	54.39	-19.98	-25.65
3	0.20201	9.64	31.25	16.70	40.89	26.34	63.53	53.53	-22.64	-27.19
4	0.51200	9.67	35.94	30.38	45.61	40.05	56.00	46.00	-10.39	-5.95
5	0.58563	9.67	24.56	18.97	34.23	28.64	56.00	46.00	-21.77	-17.36
6	11.19800	9.93	31.37	26.09	41.30	36.02	60.00	50.00	-18.70	-13.98

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.



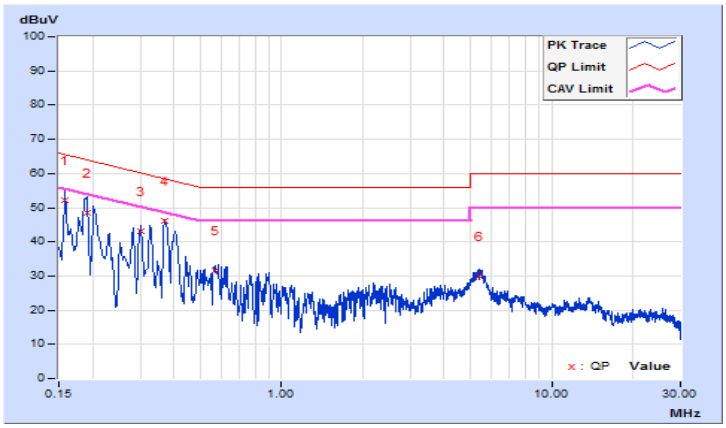
Test Mode C

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15800	9.67	42.50	28.78	52.17	38.45	65.57	55.57	-13.40	-17.12
2	0.19000	9.66	38.70	25.22	48.36	34.88	64.04	54.04	-15.68	-19.16
3	0.30200	9.68	33.35	29.19	43.03	38.87	60.19	50.19	-17.16	-11.32
4	0.37000	9.69	36.27	31.25	45.96	40.94	58.50	48.50	-12.54	-7.56
5	0.56591	9.70	21.89	14.50	31.59	24.20	56.00	46.00	-24.41	-21.80
6	5.37400	9.86	20.23	13.03	30.09	22.89	60.00	50.00	-29.91	-27.11

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.

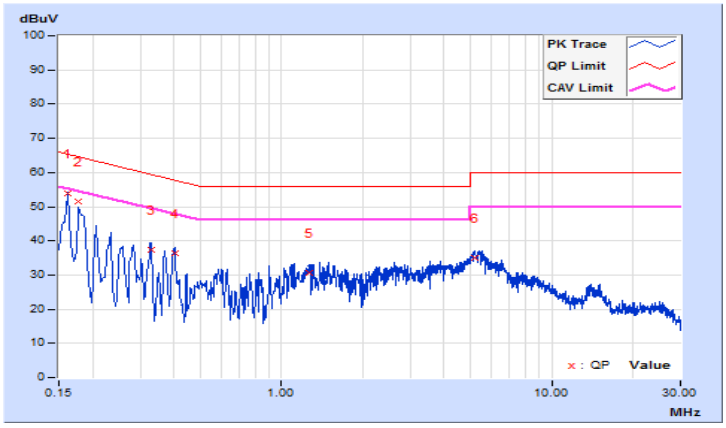


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16200	9.64	44.35	28.64	53.99	38.28	65.36	55.36	-11.37	-17.08
2	0.17801	9.64	41.80	27.42	51.44	37.06	64.58	54.58	-13.14	-17.52
3	0.32802	9.65	27.67	22.96	37.32	32.61	59.50	49.50	-22.18	-16.89
4	0.40179	9.66	26.58	20.64	36.24	30.30	57.82	47.82	-21.58	-17.52
5	1.26600	9.71	20.85	14.91	30.56	24.62	56.00	46.00	-25.44	-21.38
6	5.19000	9.83	25.10	16.79	34.93	26.62	60.00	50.00	-25.07	-23.38

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.



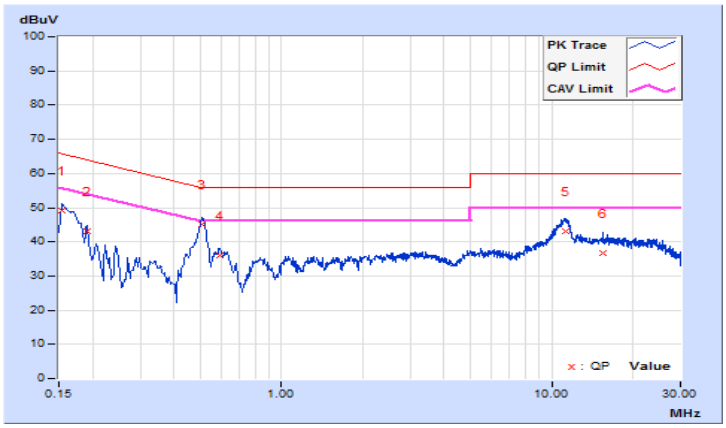
Test Mode D

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	9.67	39.45	22.60	49.12	32.27	65.78	55.78	-16.66	-23.51
2	0.19013	9.66	33.55	18.25	43.21	27.91	64.03	54.03	-20.82	-26.12
3	0.51065	9.70	35.43	30.16	45.13	39.86	56.00	46.00	-10.87	-6.14
4	0.58872	9.70	26.25	21.32	35.95	31.02	56.00	46.00	-20.05	-14.98
5	11.23400	9.94	33.05	27.87	42.99	37.81	60.00	50.00	-17.01	-12.19
6	15.55800	9.97	26.74	21.67	36.71	31.64	60.00	50.00	-23.29	-18.36

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.

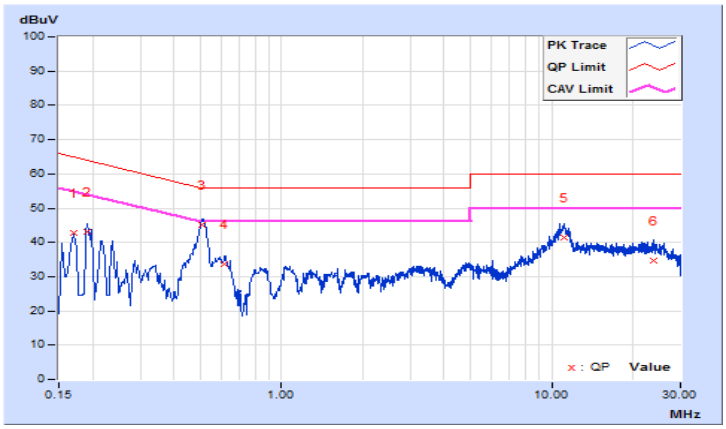


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	9.64	32.97	19.21	42.61	28.85	64.96	54.96	-22.35	-26.11
2	0.19000	9.64	33.45	17.28	43.09	26.92	64.04	54.04	-20.95	-27.12
3	0.50931	9.67	35.53	30.36	45.20	40.03	56.00	46.00	-10.80	-5.97
4	0.61731	9.67	24.16	18.90	33.83	28.57	56.00	46.00	-22.17	-17.43
5	11.14600	9.93	31.37	26.11	41.30	36.04	60.00	50.00	-18.70	-13.96
6	23.95000	10.08	24.60	19.22	34.68	29.30	60.00	50.00	-25.32	-20.70

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.

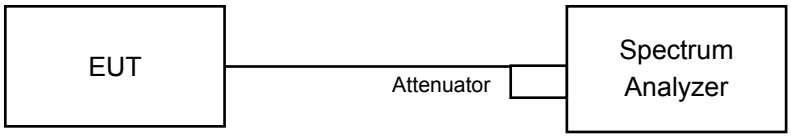


4.3 6dB Bandwidth Measurement

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

a. Set resolution bandwidth (RBW) = 100kHz

b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = average.

c. Trace mode = max hold.

d. Sweep = auto couple.

e. 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 fromTest 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

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	7.61	7.61	0.5	Pass
6	2437	8.62	8.15	0.5	Pass
11	2462	8.12	8.13	0.5	Pass

802.11g

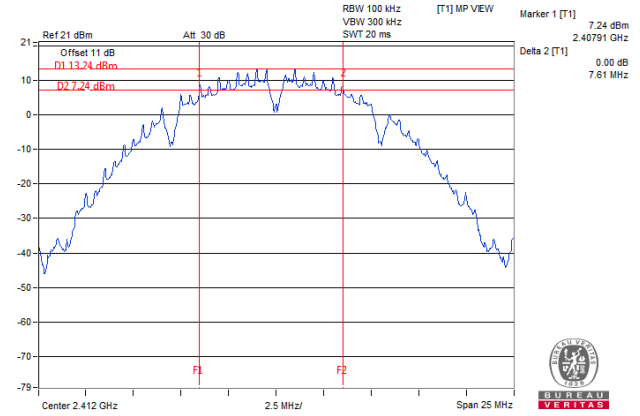
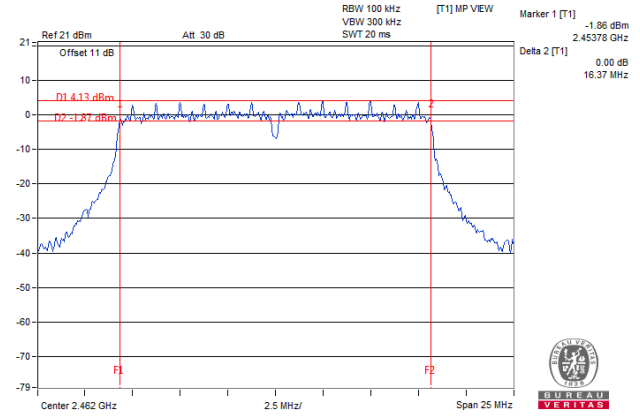
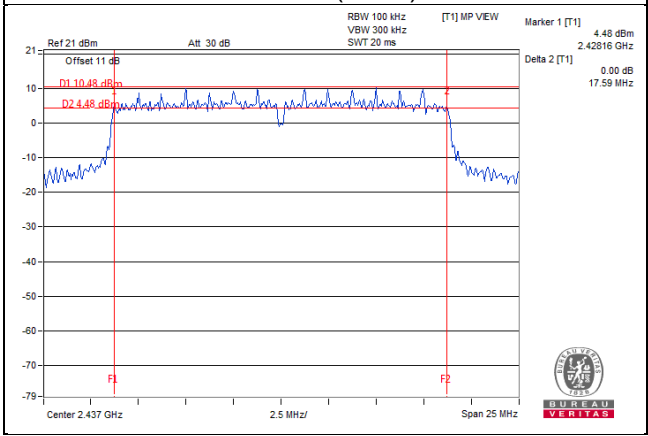
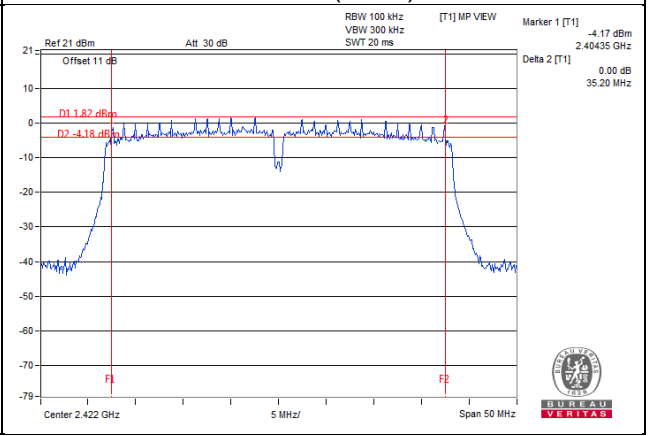
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.38	16.40	0.5	Pass
6	2437	16.37	16.37	0.5	Pass
11	2462	16.37	16.39	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.61	17.62	0.5	Pass
6	2437	17.62	17.59	0.5	Pass
11	2462	17.62	17.61	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.20	35.27	0.5	Pass
6	2437	35.26	35.33	0.5	Pass
9	2452	35.23	35.28	0.5	Pass

Spectrum Plot of Worst Value	
802.11b	802.11g
	
802.11n (HT20)	802.11n (HT40)
	

Test Mode C

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	10.12	10.12	0.5	Pass
6	2437	10.13	10.13	0.5	Pass
11	2462	10.13	10.13	0.5	Pass

802.11g

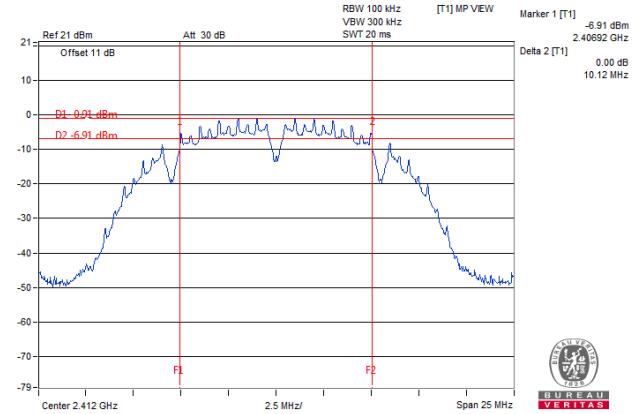
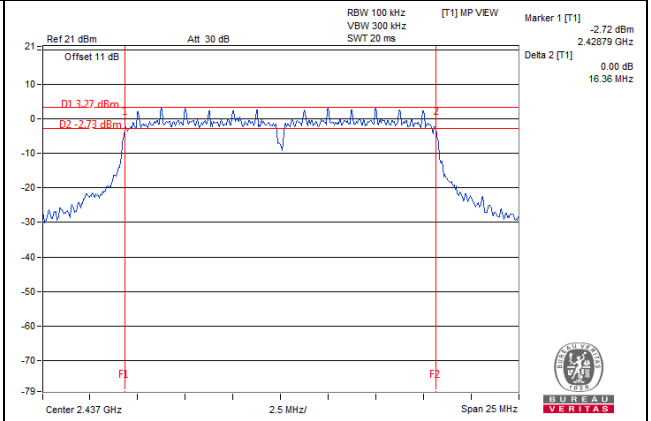
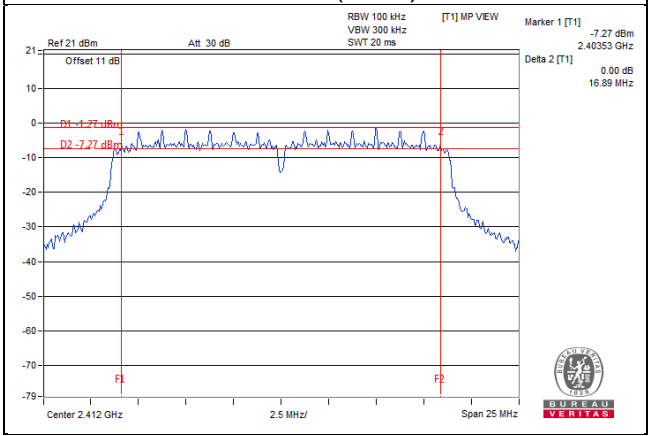
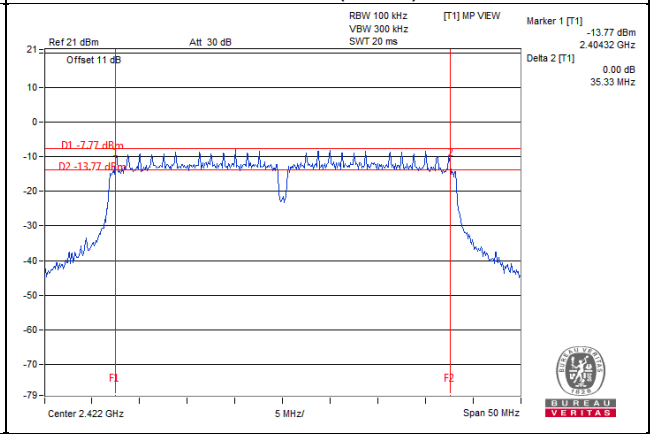
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.37	16.38	0.5	Pass
6	2437	16.36	16.36	0.5	Pass
11	2462	16.37	16.37	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.07	16.89	0.5	Pass
6	2437	16.99	16.89	0.5	Pass
11	2462	17.34	17.23	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.52	35.33	0.5	Pass
6	2437	35.57	35.34	0.5	Pass
9	2452	35.96	35.48	0.5	Pass

Spectrum Plot of Worst Value	
802.11b	802.11g
	
802.11n (HT20)	802.11n (HT40)
	

4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

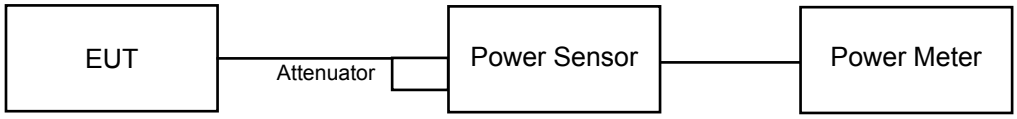
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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

An average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor. Record the power level.

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

CDD Mode

802.11b

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	21.59	21.52	286.118	24.57	30	Pass
6	2437	22.72	22.94	**383.857**	25.84	30	Pass
11	2462	20.01	19.91	198.180	22.97	30	Pass

802.11g

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	16.61	16.55	91.000	19.59	30	Pass
6	2437	21.33	21.35	272.289	24.35	30	Pass
11	2462	15.62	15.43	71.389	18.54	30	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	17.01	16.84	98.540	19.94	30	Pass
6	2437	21.55	21.36	279.662	24.47	30	Pass
11	2462	15.53	15.39	70.321	18.47	30	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	15.72	15.55	73.217	18.65	30	Pass
6	2437	16.71	16.42	90.734	19.58	30	Pass
9	2452	13.24	13.05	41.270	16.16	30	Pass

Beamforming Mode

802.11n (HT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	14.00	13.83	49.274	16.93	28.68	Pass
6	2437	18.54	18.35	**139.841**	21.46	28.68	Pass
11	2462	12.52	12.38	35.163	15.46	28.68	Pass

Note: Directional gain = 4.31dBi +10log(2) = 7.32dBi>6dBi, so the limit shall be reduced to 30-(7.32-6) = 28.68dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	12.71	12.54	36.611	15.64	28.68	Pass
6	2437	13.70	13.41	45.370	16.57	28.68	Pass
9	2452	10.23	10.04	20.637	13.15	28.68	Pass

Note: Directional gain = 4.31dBi +10log(2) = 7.32dBi>6dBi, so the limit shall be reduced to 30-(7.32-6) = 28.68dBm.

Test Mode C

802.11b

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	9.63	9.51	18.116	12.58	30	Pass
6	2437	12.44	12.82	36.682	15.64	30	Pass
11	2462	11.25	11.45	27.299	14.36	30	Pass

802.11g

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	10.88	10.90	24.549	13.90	30	Pass
6	2437	15.25	15.90	**72.402**	18.60	30	Pass
11	2462	10.33	10.39	21.729	13.37	30	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	9.73	9.83	19.013	12.79	30	Pass
6	2437	15.15	15.82	70.928	18.51	30	Pass
11	2462	9.42	9.53	17.724	12.49	30	Pass

802.11n (HT40)

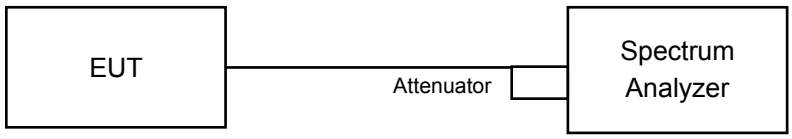
Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	6.14	6.25	8.328	9.21	30	Pass
6	2437	10.51	10.73	23.076	13.63	30	Pass
9	2452	6.55	6.77	9.272	9.67	30	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm in any 3 kHz.

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 duty cycle ≥ 98%

a. Set instrument center frequency to DTS channel center frequency.
b. Set span to at least 1.5 times the OBW.
c. Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d. Set VBW ≥3 x RBW.
e. Detector = power averaging (RMS) or sample detector (when RMS not available).
f. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
g. Sweep time = auto couple.
h. Employ trace averaging (RMS) mode over a minimum of 100 traces.
i. Use the peak marker function to determine the maximum amplitude level.

For duty cycle < 98%

a. Measure the duty cycle (x).
b. Set instrument center frequency to DTS channel center frequency.
c. Set span to at least 1.5 times the OBW.
d. Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
e. Set VBW ≥3 x RBW.
f. Detector = power averaging (RMS) or sample detector (when RMS not available).
g. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
h. Sweep time = auto couple.
i. Do not use sweep triggering. Allow sweep to “free run”.
j. Employ trace averaging (RMS) mode over a minimum of 100 traces.
k. Use the peak marker function to determine the maximum amplitude level.
l. 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

802.11b

TX chain	Chan.	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-5.60	3.01	-2.59	6.68	Pass
	6	2437	-4.62	3.01	-1.61	6.68	Pass
	11	2462	-7.92	3.01	-4.91	6.68	Pass
1	1	2412	-5.41	3.01	-2.40	6.68	Pass
	6	2437	-5.13	3.01	-2.12	6.68	Pass
	11	2462	-7.02	3.01	-4.01	6.68	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 = 4.31dBi +10log(2) = 7.32dBi>6dBi, so the power density limit shall be reduced to 8-(7.32-6) = 6.68dBm.

802.11g

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-14.19	3.01	0.19	-10.99	6.68	Pass
	6	2437	-9.33	3.01	0.19	-6.13	6.68	Pass
	11	2462	-15.11	3.01	0.19	-11.91	6.68	Pass
1	1	2412	-14.04	3.01	0.19	-10.84	6.68	Pass
	6	2437	-9.56	3.01	0.19	-6.36	6.68	Pass
	11	2462	-14.80	3.01	0.19	-11.60	6.68	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 = 4.31dBi +10log(2) = 7.32dBi>6dBi, so the power density limit shall be reduced to 8-(7.32-6) = 6.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

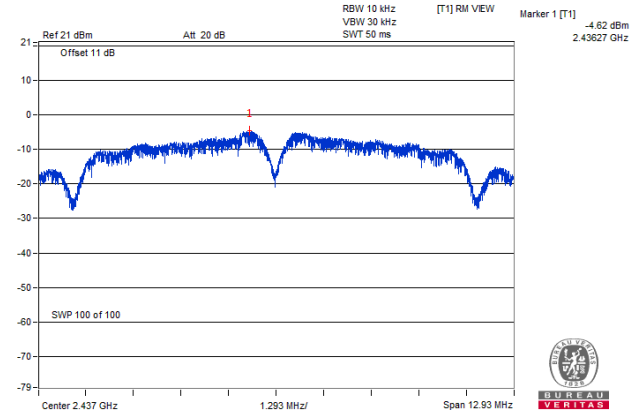
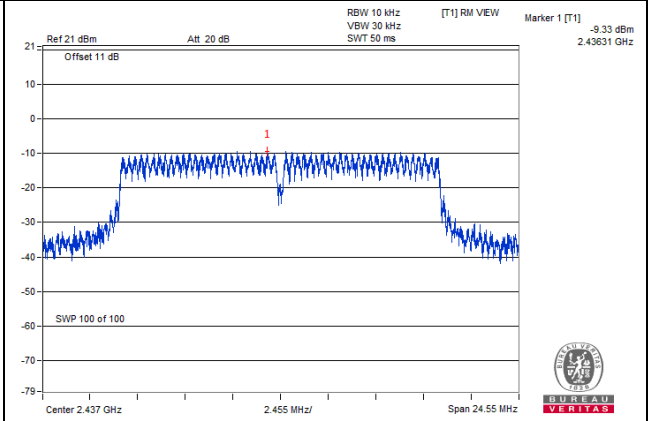
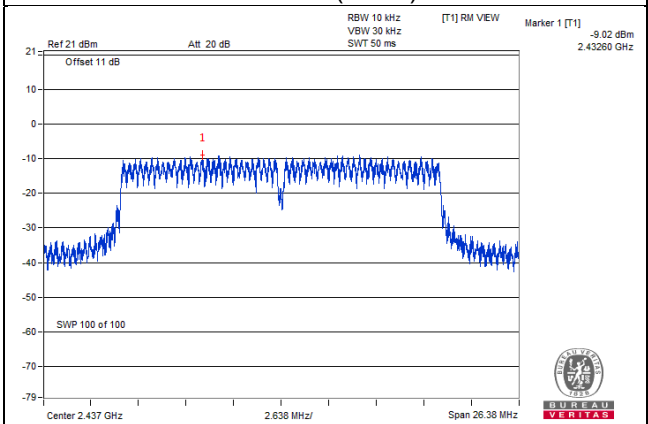
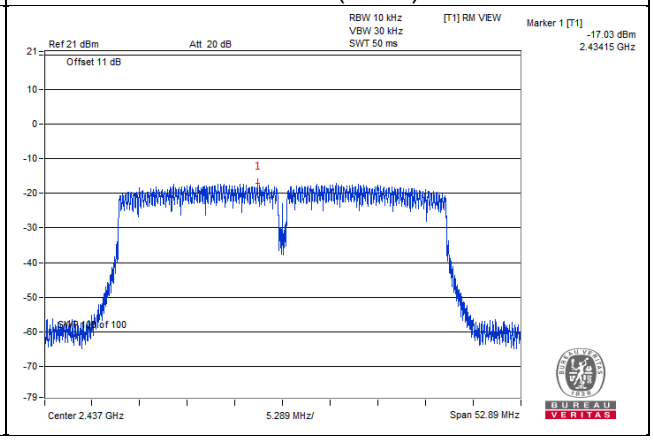
TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-13.06	3.01	0.09	-9.96	6.68	Pass
	6	2437	-9.08	3.01	0.09	-5.98	6.68	Pass
	11	2462	-14.83	3.01	0.09	-11.73	6.68	Pass
1	1	2412	-13.12	3.01	0.09	-10.02	6.68	Pass
	6	2437	-9.02	3.01	0.09	-5.92	6.68	Pass
	11	2462	-14.19	3.01	0.09	-11.09	6.68	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 = 4.31dBi +10log(2) = 7.32dBi>6dBi, so the power density limit shall be reduced to 8-(7.32-6) = 6.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-17.66	3.01	0.16	-14.49	6.68	Pass
	6	2437	-17.03	3.01	0.16	-13.86	6.68	Pass
	9	2452	-19.96	3.01	0.16	-16.79	6.68	Pass
1	3	2422	-17.70	3.01	0.16	-14.53	6.68	Pass
	6	2437	-17.18	3.01	0.16	-14.01	6.68	Pass
	9	2452	-20.53	3.01	0.16	-17.36	6.68	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 = 4.31dBi +10log(2) = 7.32dBi>6dBi, so the power density limit shall be reduced to 8-(7.32-6) = 6.68dBm.
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

802.11b

TX chain	Chan.	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-19.89	3.01	-16.88	8	Pass
	6	2437	-17.00	3.01	-13.99	8	Pass
	11	2462	-17.44	3.01	-14.43	8	Pass
1	1	2412	-19.07	3.01	-16.06	8	Pass
	6	2437	-15.85	3.01	-12.84	8	Pass
	11	2462	-17.04	3.01	-14.03	8	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 = 2.78dBi +10log(2) = 5.79dBi<6dBi, so the power density limit no need to reduced.

802.11g

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-21.21	3.01	0.18	-18.02	8	Pass
	6	2437	-16.29	3.01	0.18	-13.10	8	Pass
	11	2462	-20.78	3.01	0.18	-17.59	8	Pass
1	1	2412	-20.02	3.01	0.18	-16.83	8	Pass
	6	2437	-15.24	3.01	0.18	-12.05	8	Pass
	11	2462	-20.36	3.01	0.18	-17.17	8	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 = 2.78dBi +10log(2) = 5.79dBi<6dBi, so the power density limit no need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

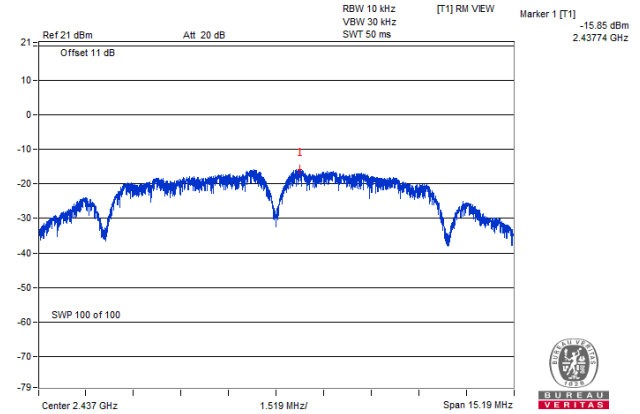
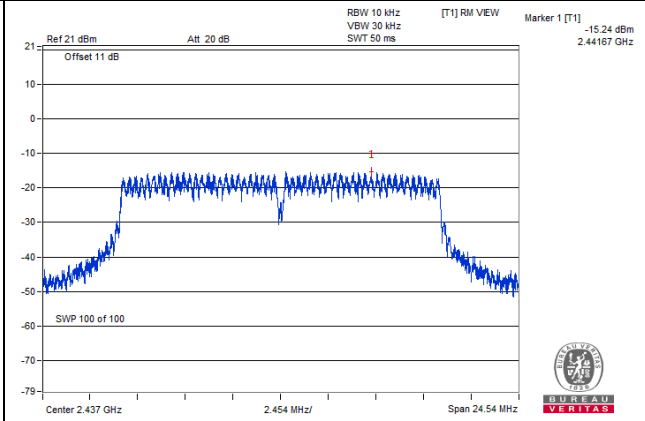
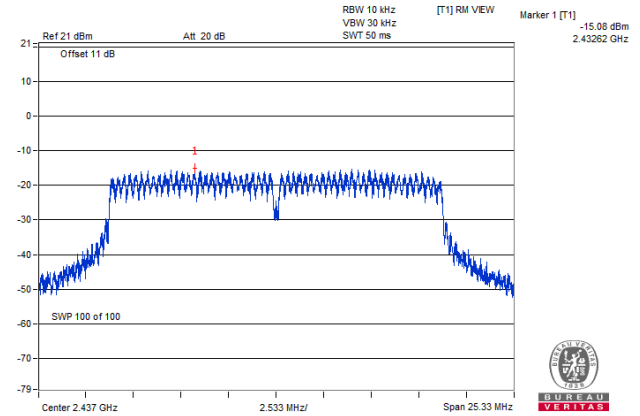
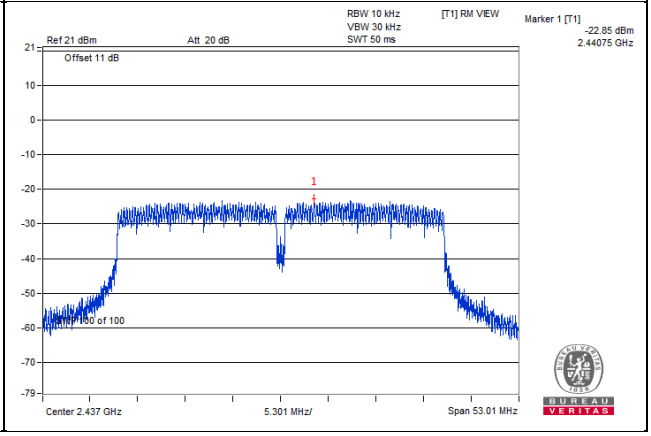
TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-21.68	3.01	0.20	-18.47	8	Pass
	6	2437	-15.82	3.01	0.20	-12.61	8	Pass
	11	2462	-21.22	3.01	0.20	-18.01	8	Pass
1	1	2412	-20.79	3.01	0.20	-17.58	8	Pass
	6	2437	-15.08	3.01	0.20	-11.87	8	Pass
	11	2462	-21.10	3.01	0.20	-17.89	8	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 = 2.78dBi +10log(2) = 5.79dBi<6dBi, so the power density limit no need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-28.14	3.01	0.40	-24.73	8	Pass
	6	2437	-23.92	3.01	0.40	-20.51	8	Pass
	9	2452	-27.31	3.01	0.40	-23.90	8	Pass
1	3	2422	-27.70	3.01	0.40	-24.29	8	Pass
	6	2437	-22.85	3.01	0.40	-19.44	8	Pass
	9	2452	-26.99	3.01	0.40	-23.58	8	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 = 2.78dBi +10log(2) = 5.79dBi<6dBi, so the power density limit no need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

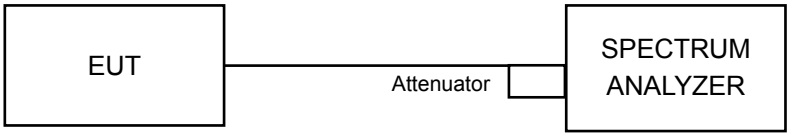
Spectrum Plot of Worst Value	
802.11b	802.11g
	
802.11n (HT20)	802.11n (HT40)
	

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

a. Set the RBW = 100 kHz.

b. Set the VBW ≥ 300 kHz.

c. Detector = peak.

d. Sweep time = auto couple.

e. Trace mode = max hold.

f. Allow trace to fully stabilize.

g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.

b. Set VBW ≥ 300 kHz.

c. Ensure that the number of measurement points ≥ span/RBW

d. According to measurement points to set differ measurement span.

e. Detector = peak.

f. Trace Mode = max hold.

g. Sweep = auto couple.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Same as Item 4.3.6

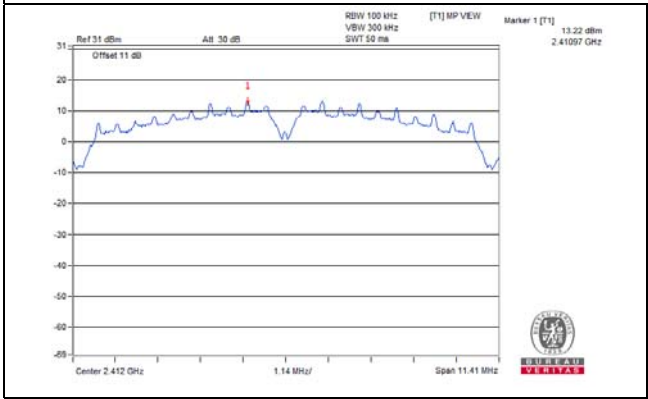
4.6.7 Test Results

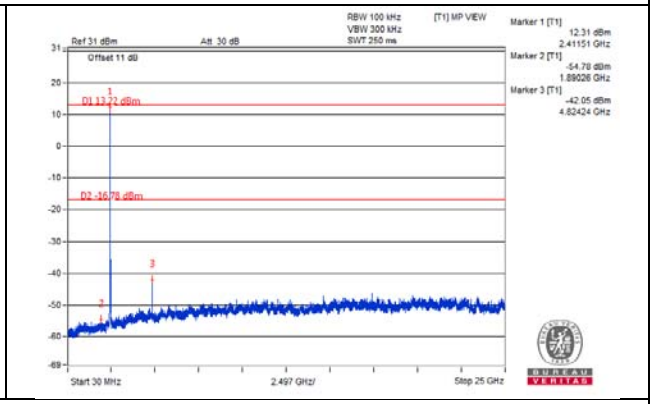
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

Test Mode A

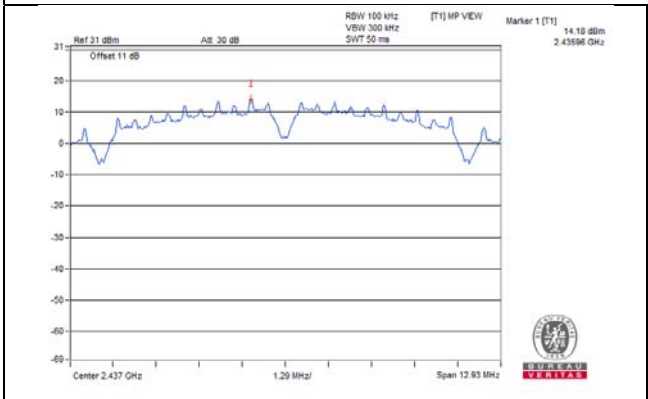
802.11b_Chain 0

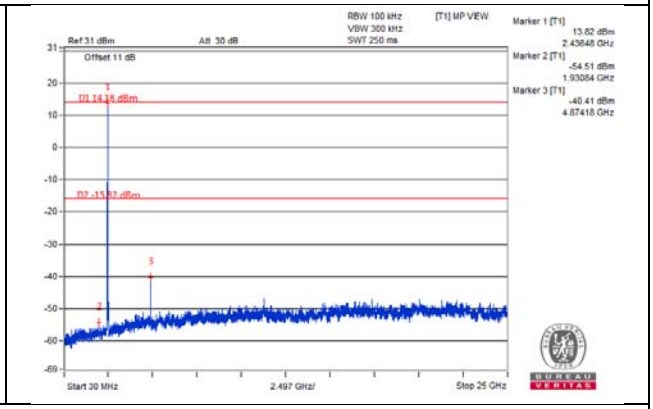
CH 1



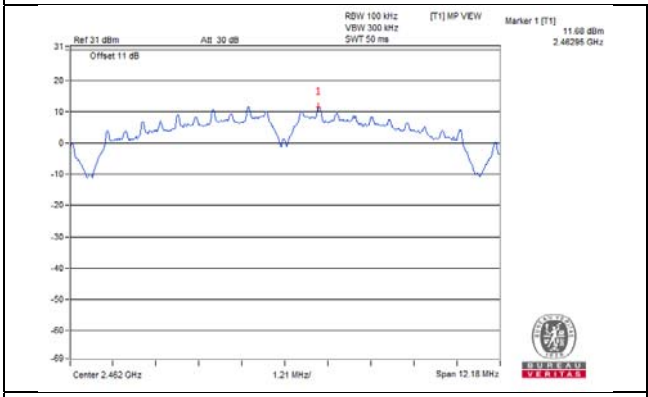


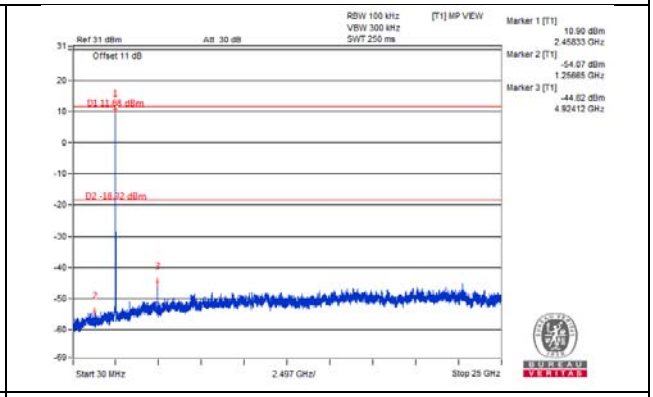
CH 6



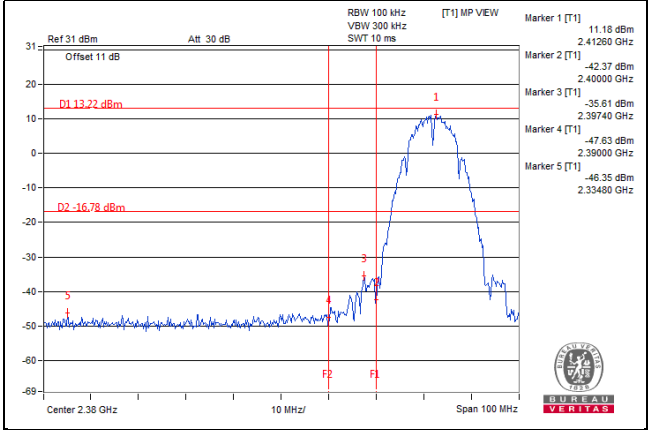


CH 11

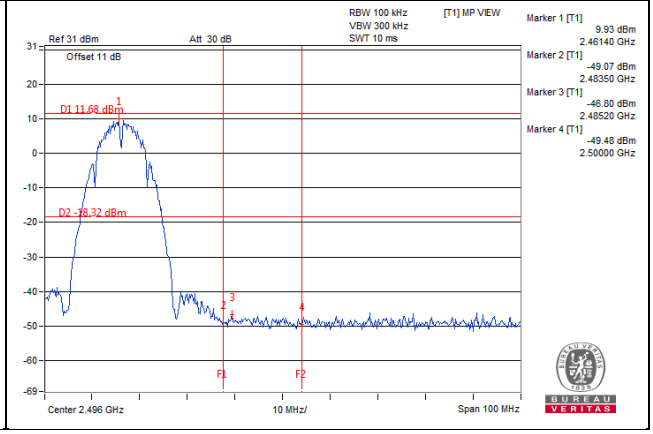




CH 1 Band edge

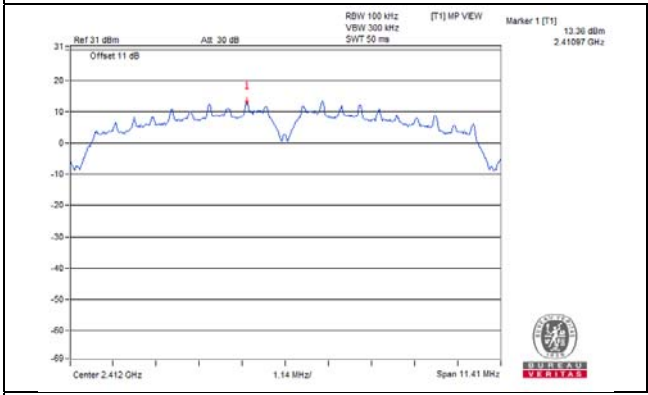


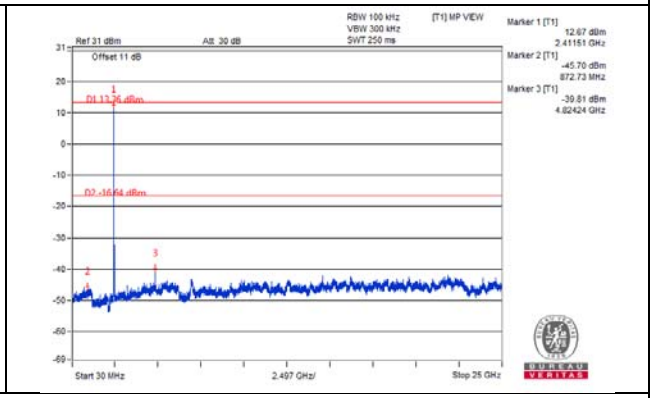
CH 11 Band edge



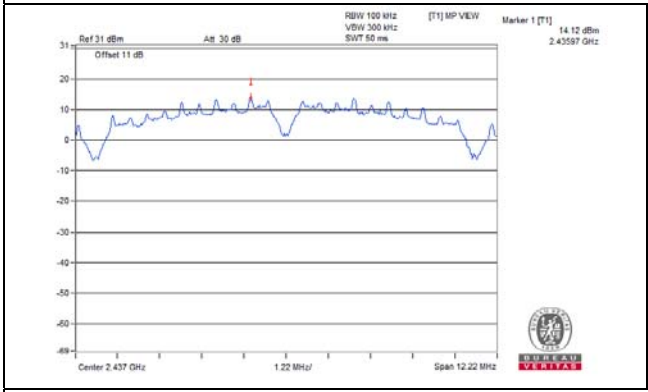
802.11b_Chain 1

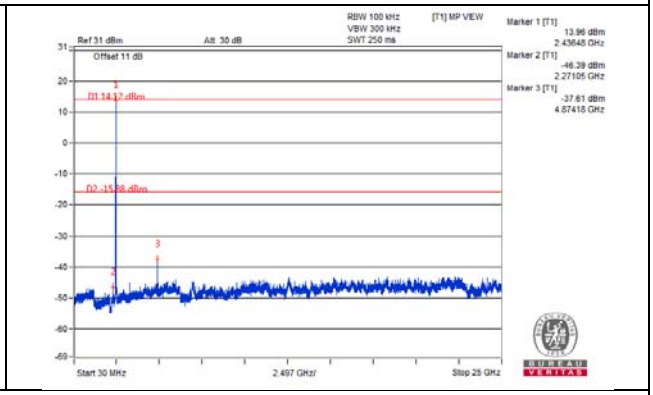
CH 1



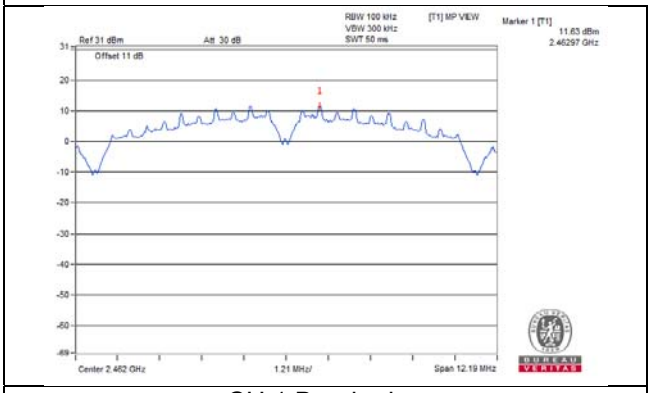


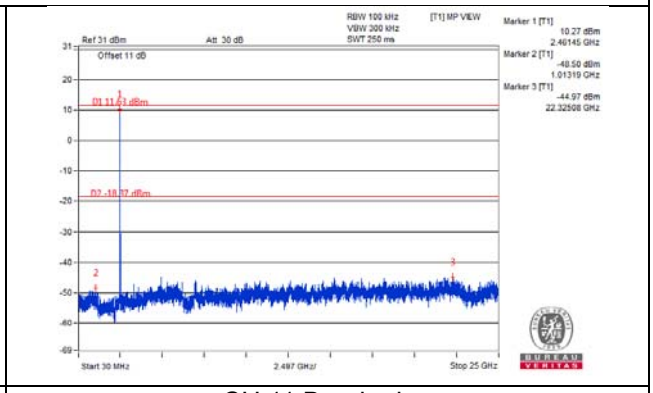
CH 6



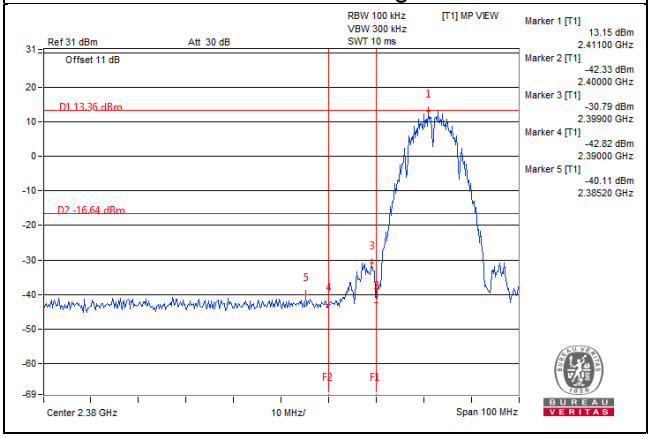


CH 11

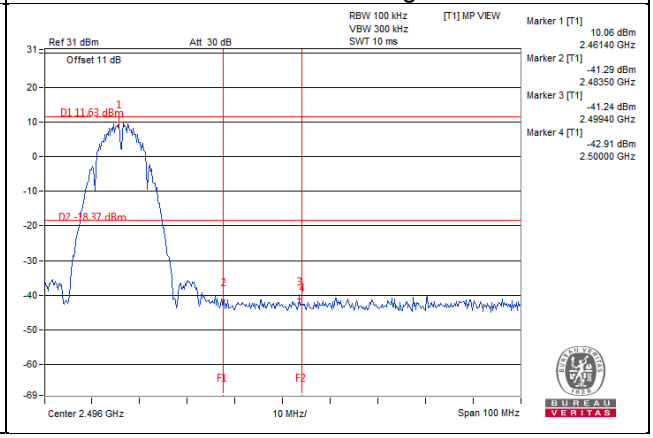




CH 1 Band edge

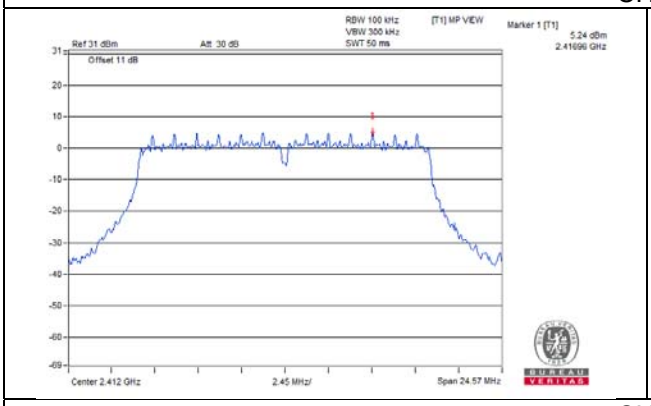


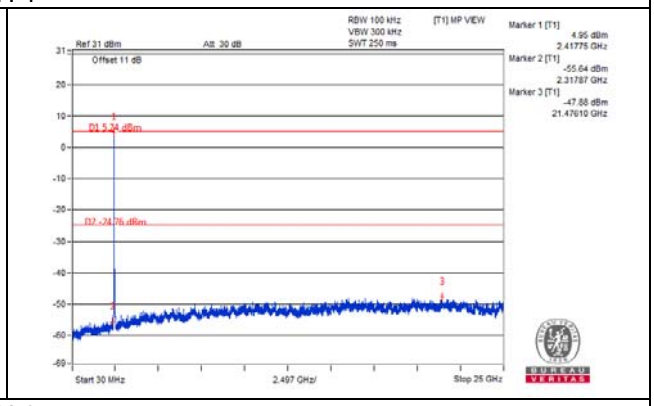
CH 11 Band edge



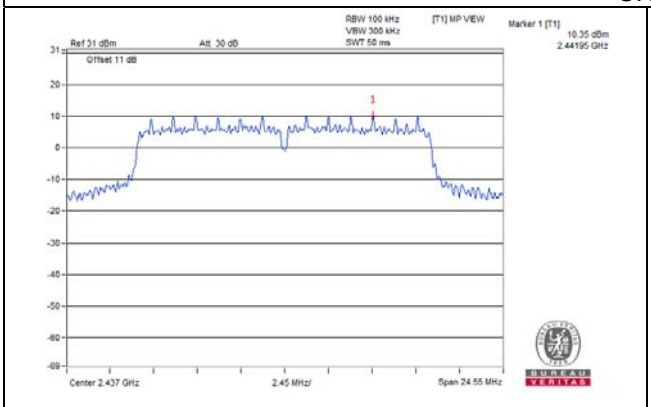
802.11g_Chain 0

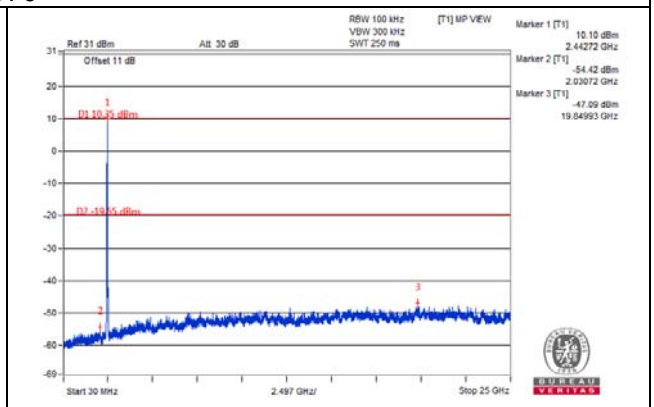
CH 1



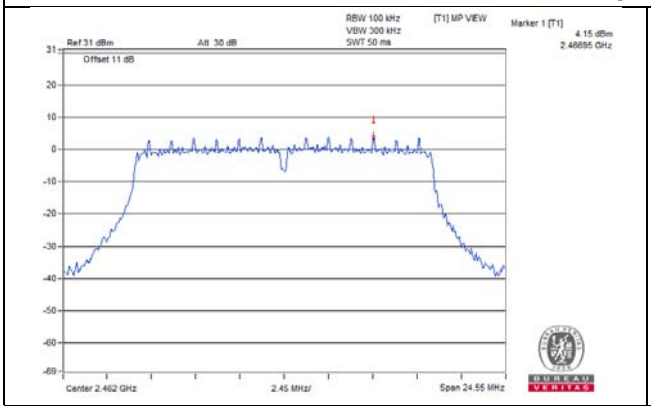


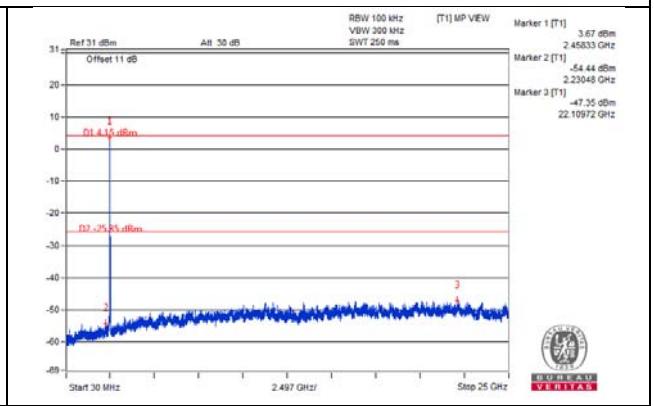
CH 6



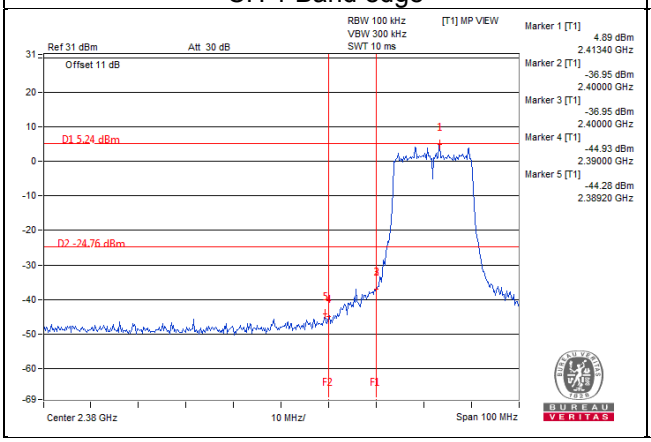


CH 11

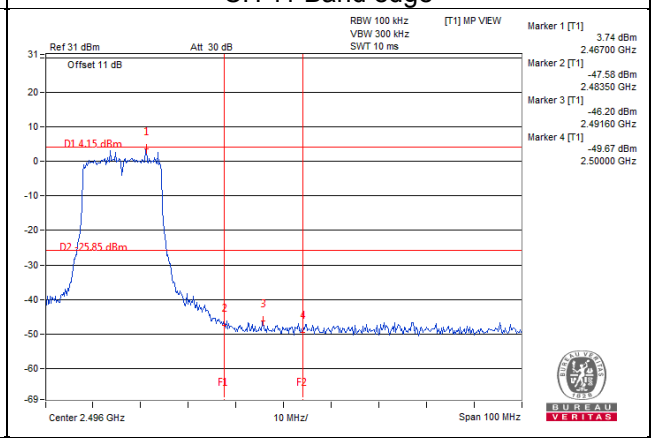




CH 1 Band edge

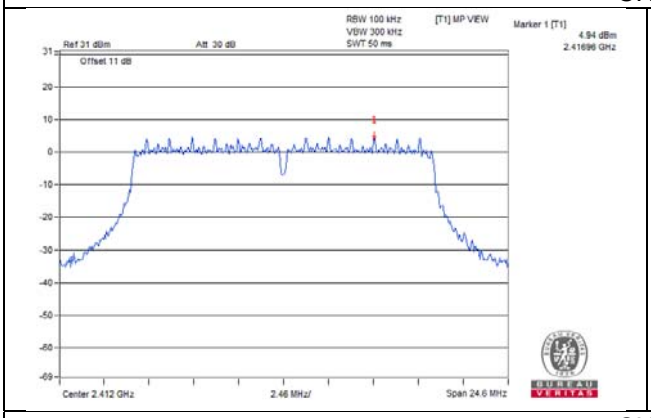


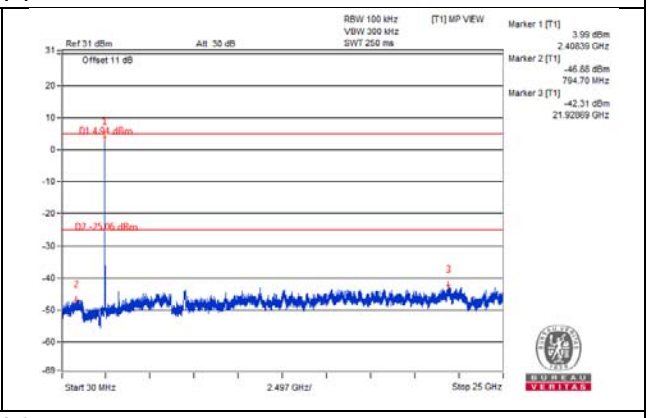
CH 11 Band edge



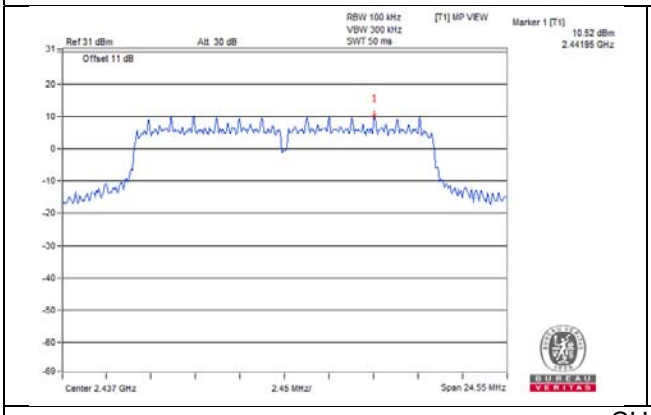
802.11g_Chain 1

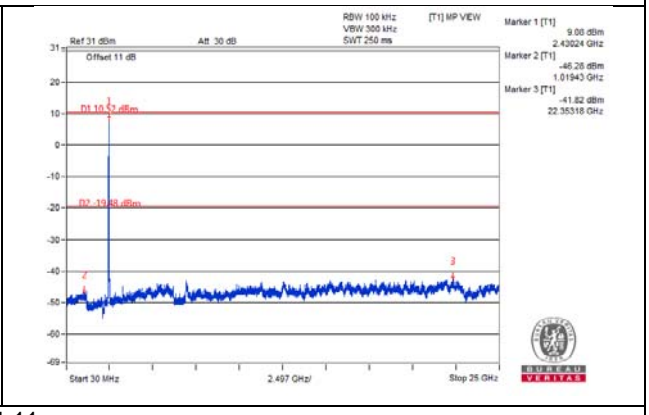
CH 1



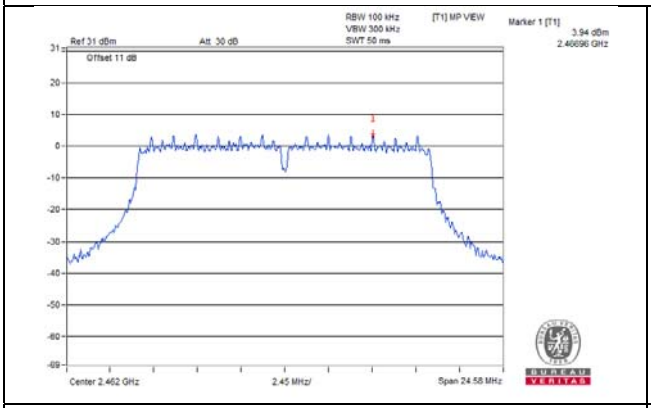


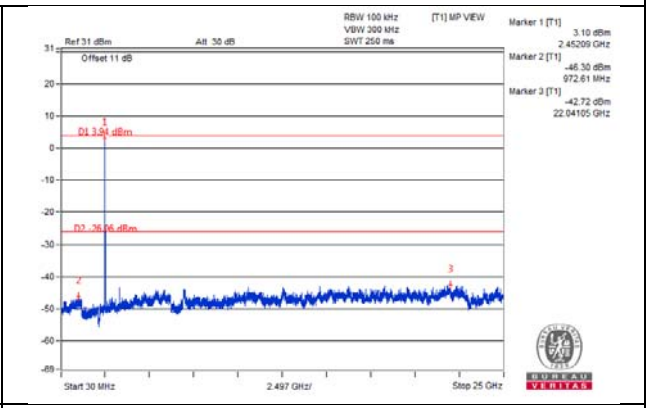
CH 6



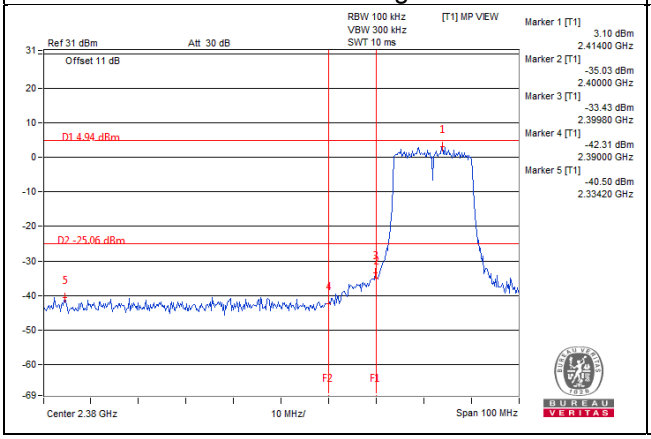


CH 11

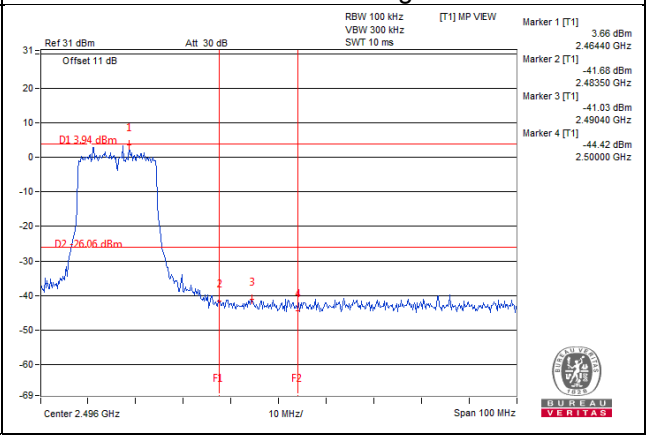




CH 1 Band edge

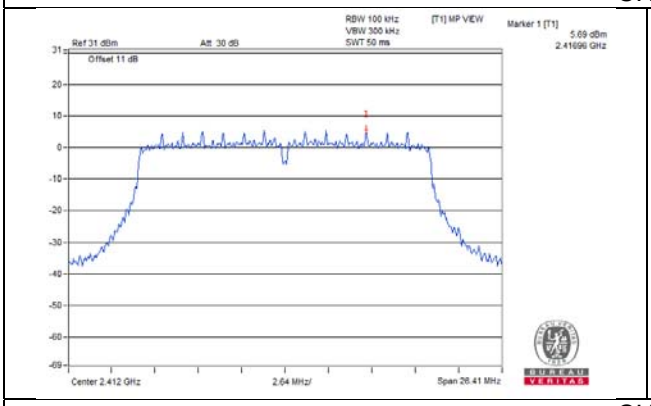


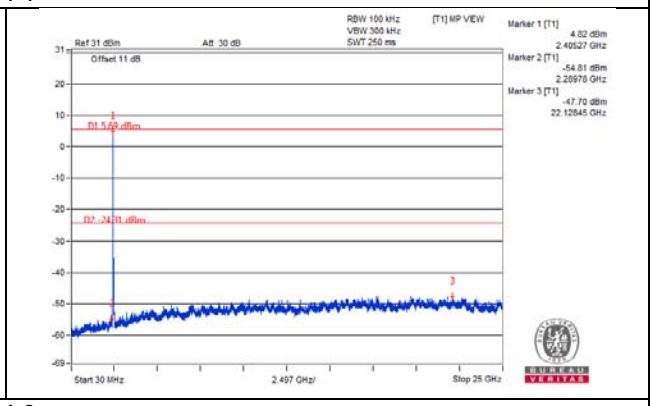
CH 11 Band edge



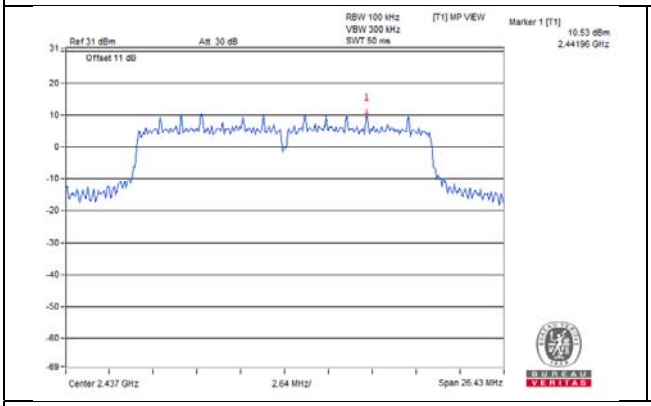
802.11n (HT20)_Chain 0

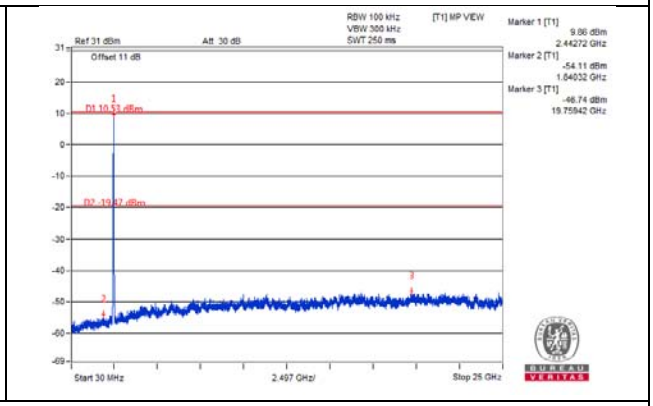
CH 1



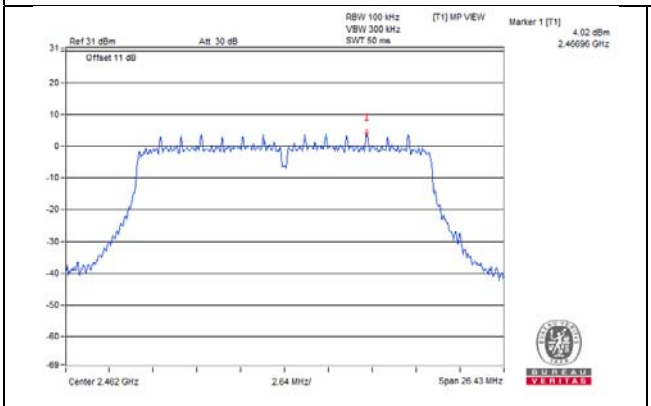


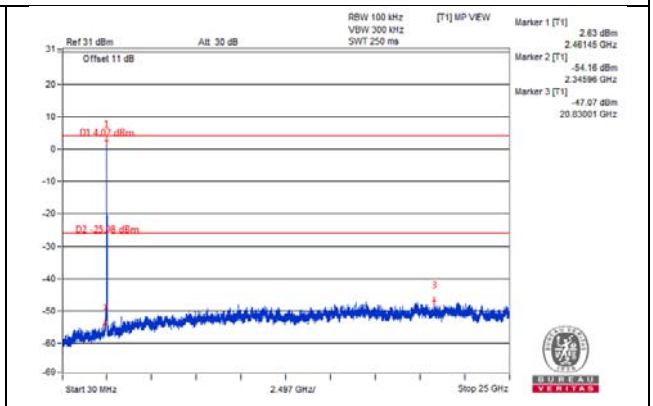
CH 6



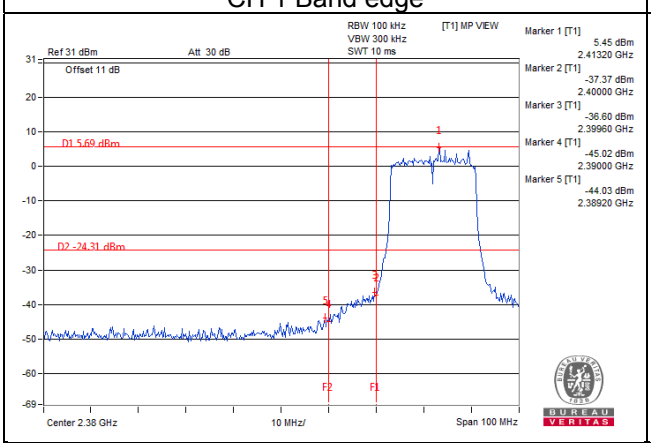


CH 11

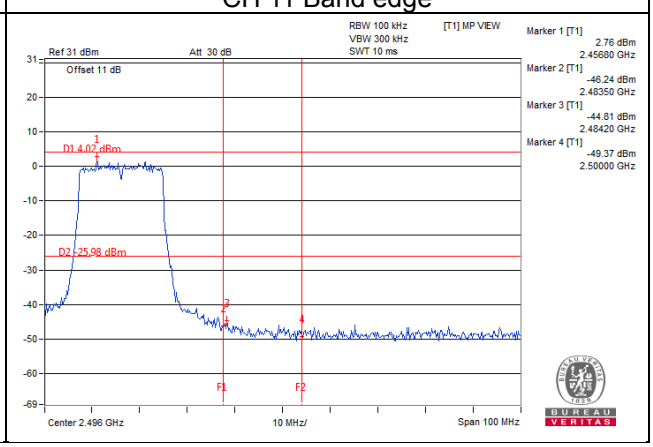




CH 1 Band edge

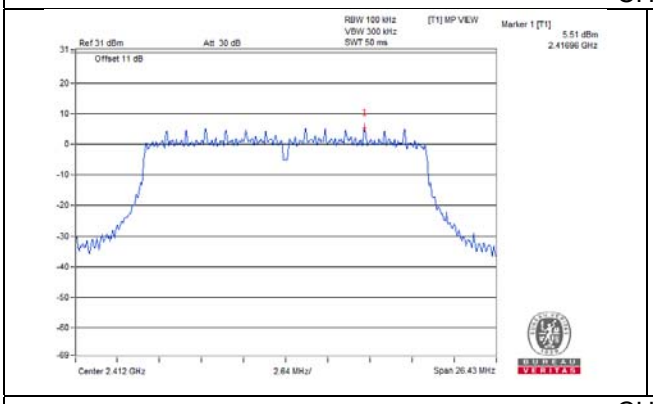


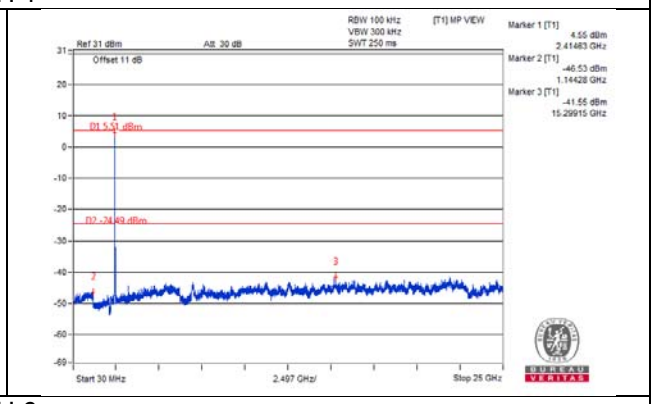
CH 11 Band edge



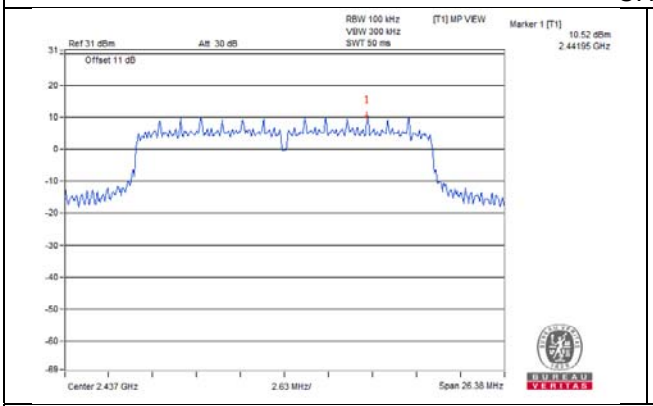
802.11n (HT20)_Chain 1

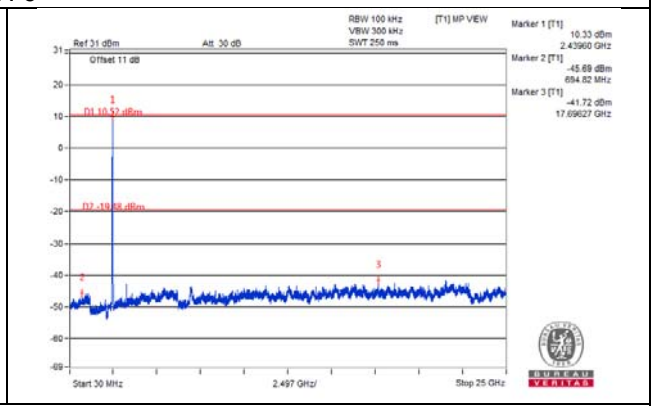
CH 1



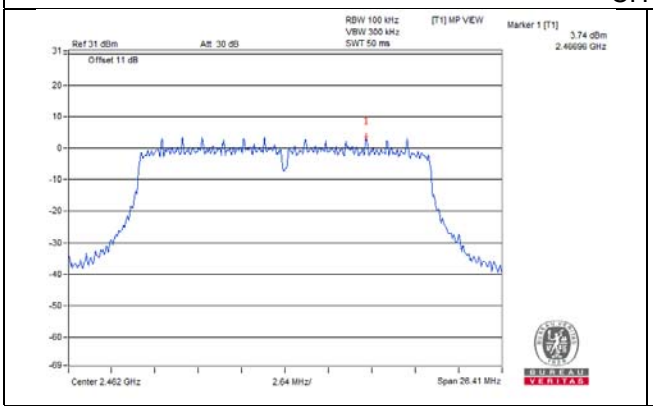


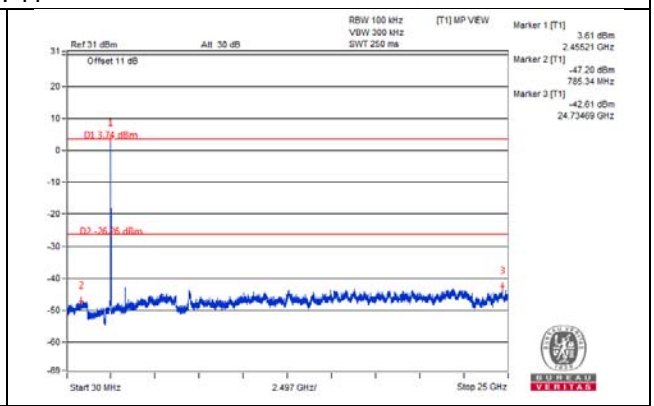
CH 6



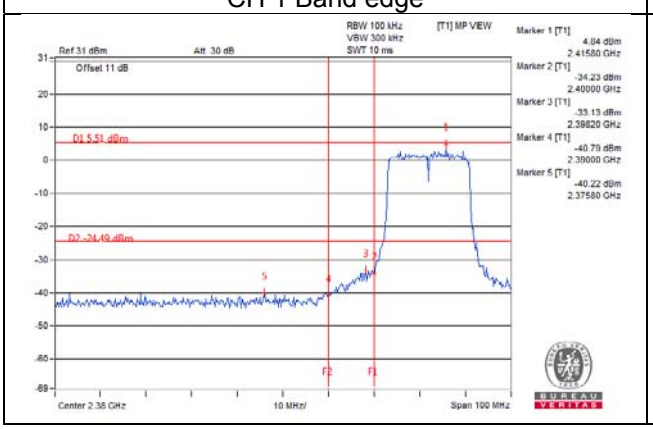


CH 11

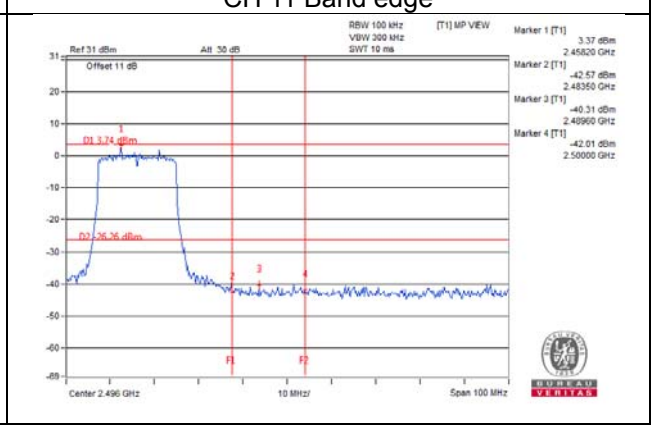




CH 1 Band edge

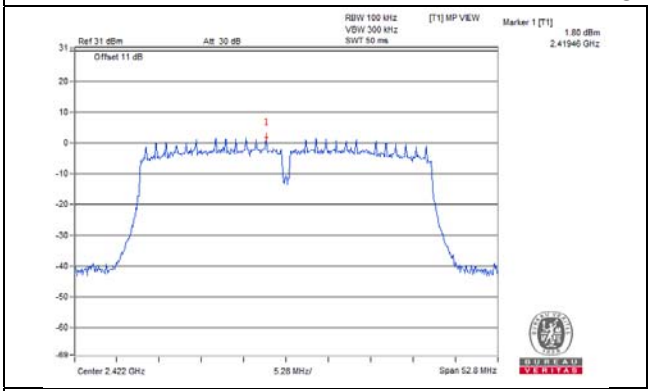


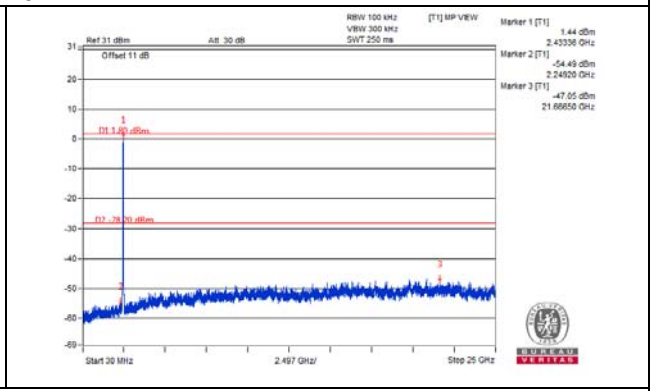
CH 11 Band edge



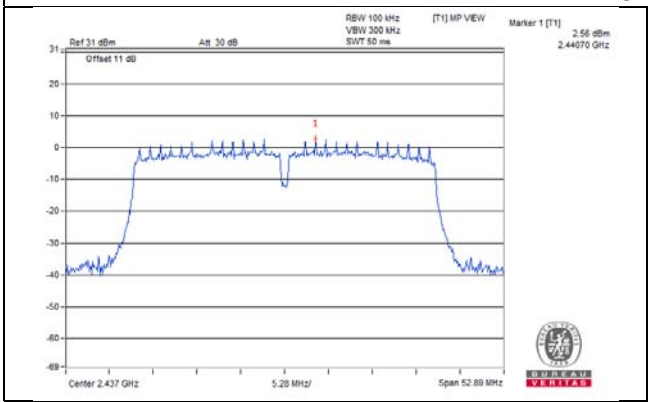
802.11n (HT40)_Chain 0

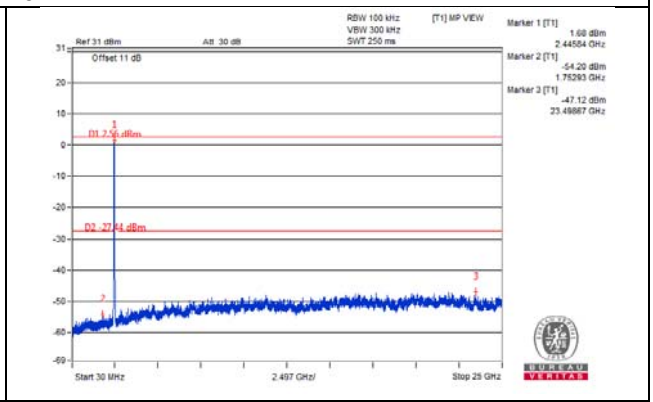
CH 3



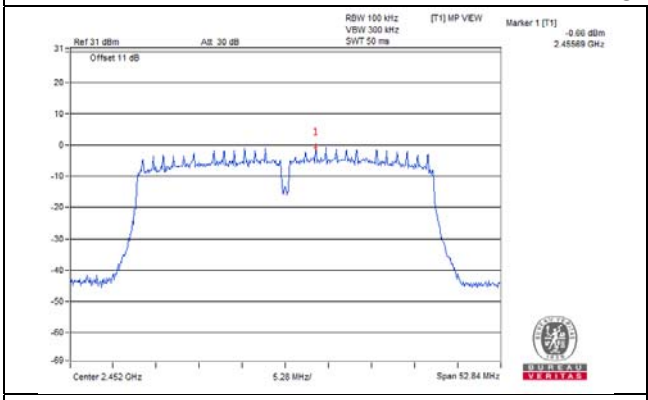


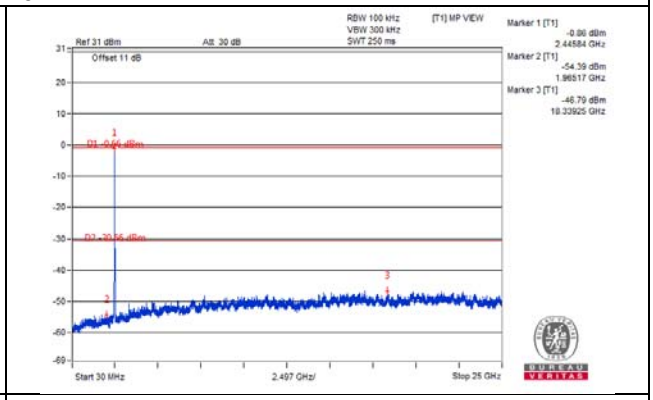
CH 6



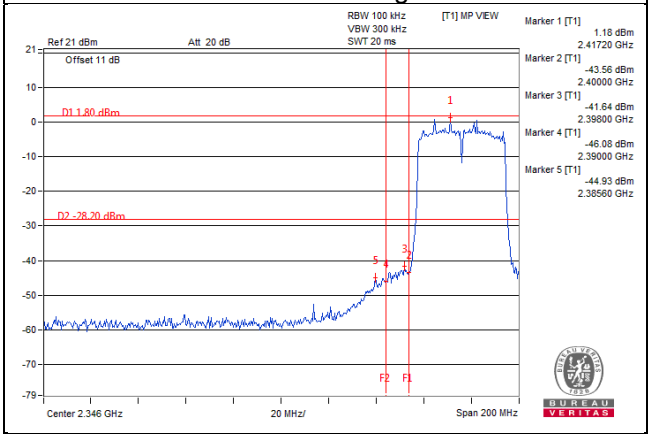


CH 9

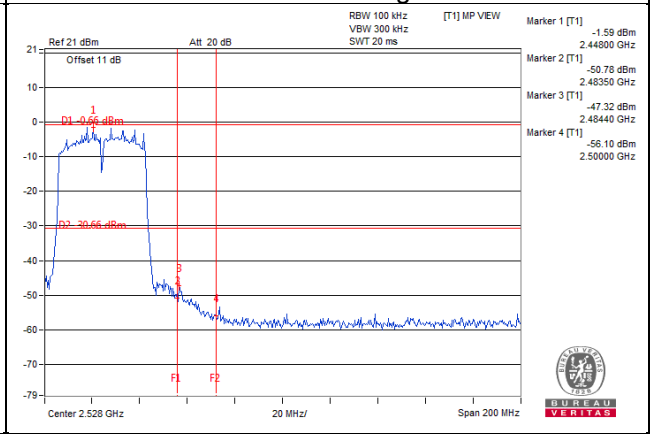




CH 3 Band edge

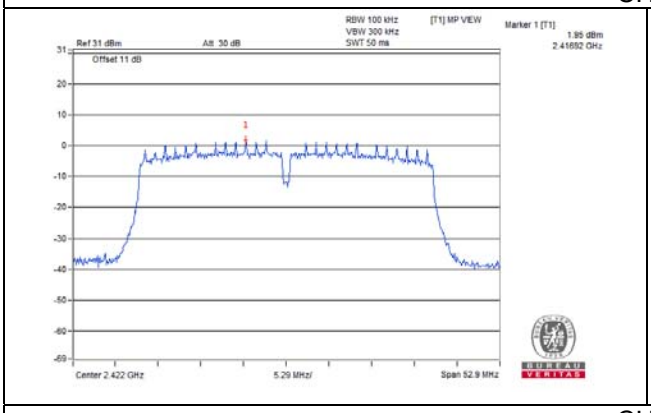


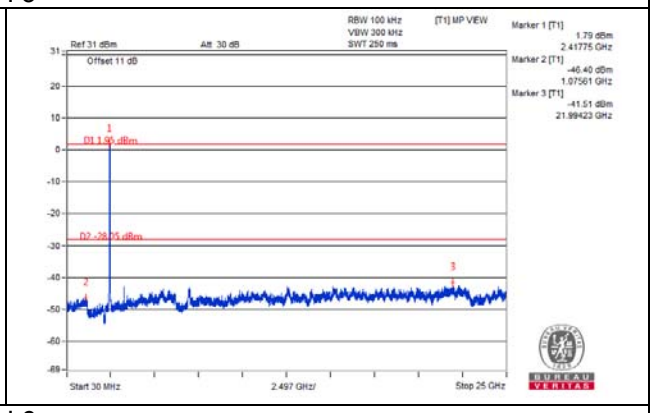
CH 9 Band edge



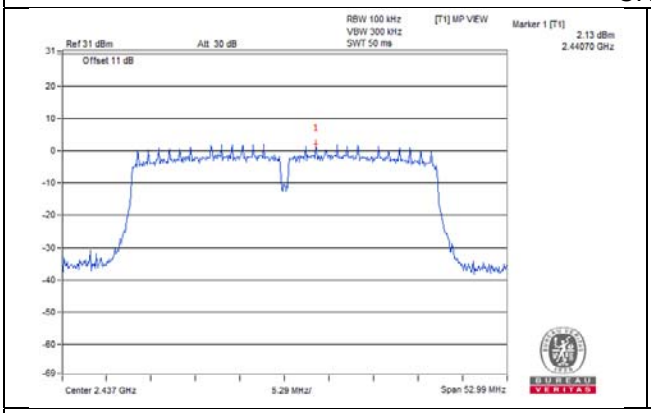
802.11n (HT40)_Chain 1

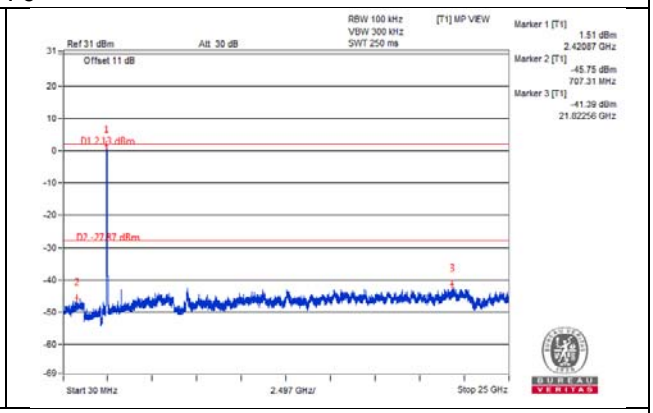
CH 3



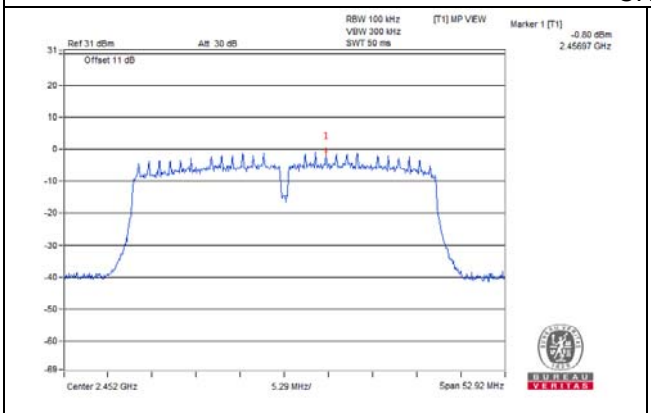


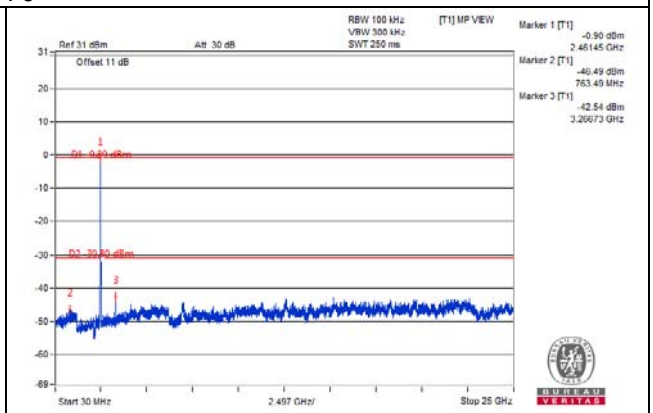
CH 6



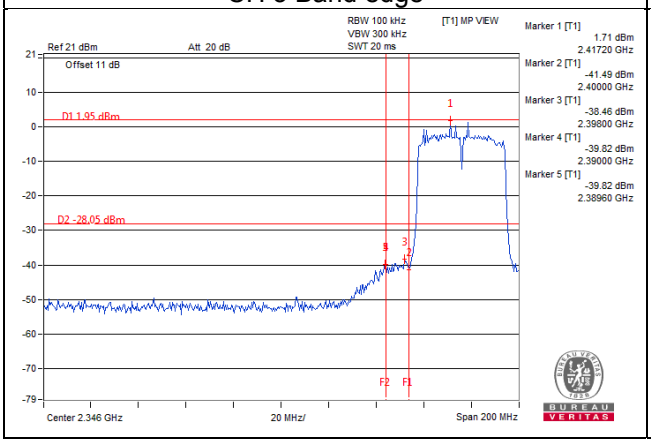


CH 9

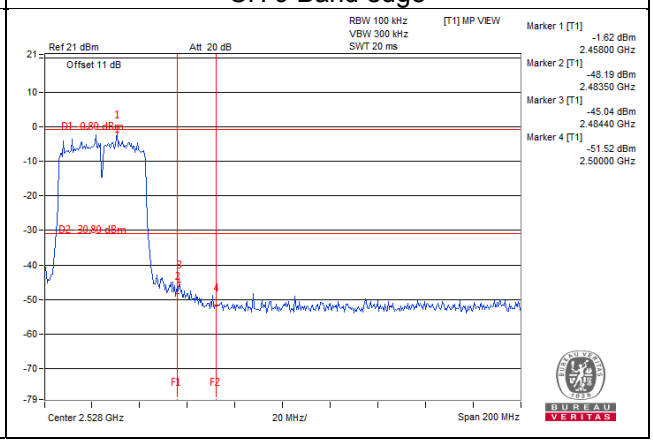




CH 3 Band edge



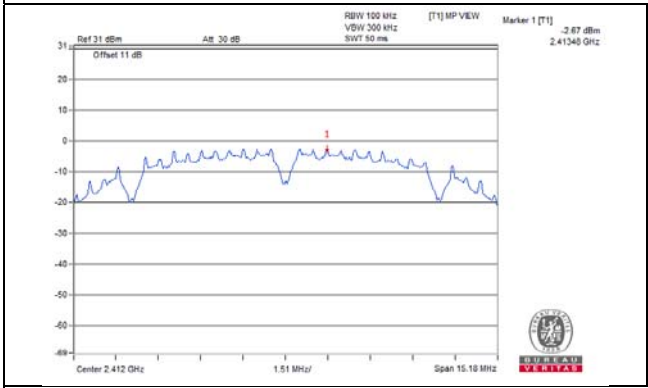
CH 9 Band edge

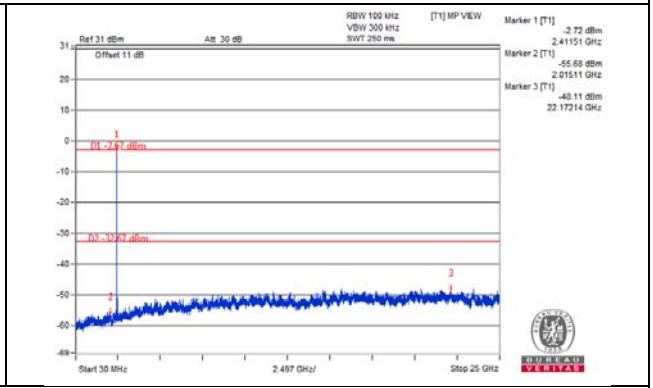


Test Mode C

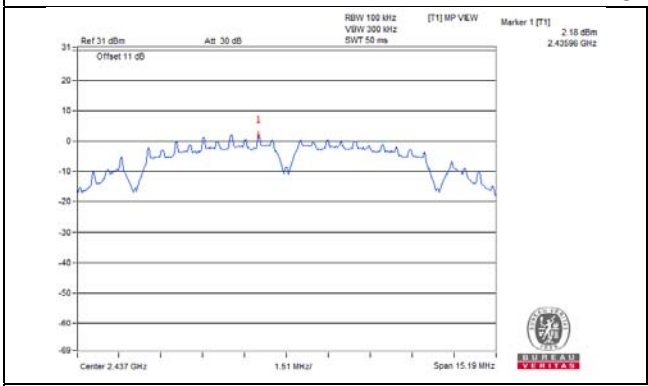
802.11b_Chain 0

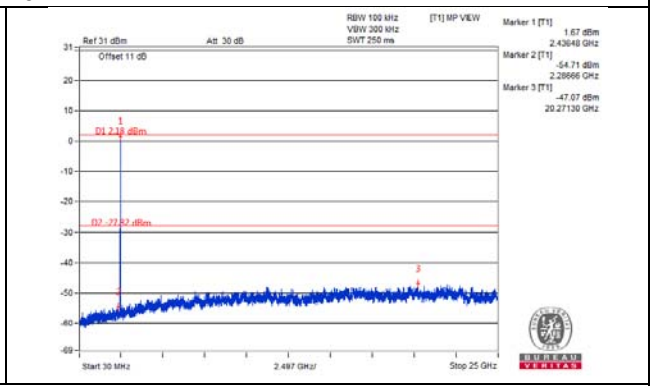
CH 1



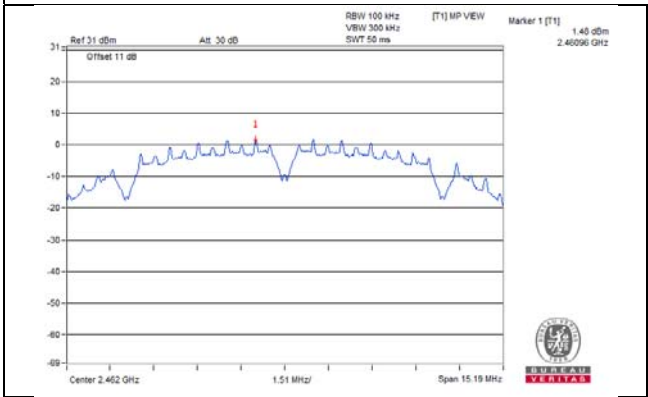


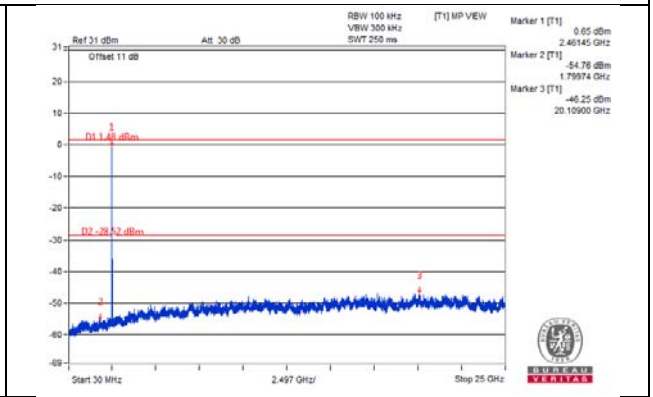
CH 6



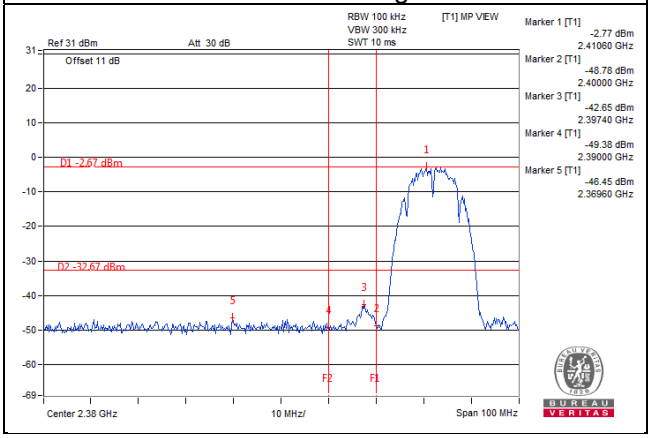


CH 11

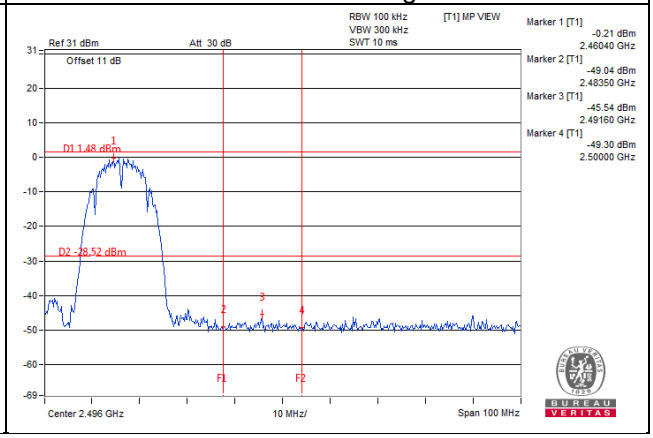




CH 1 Band edge

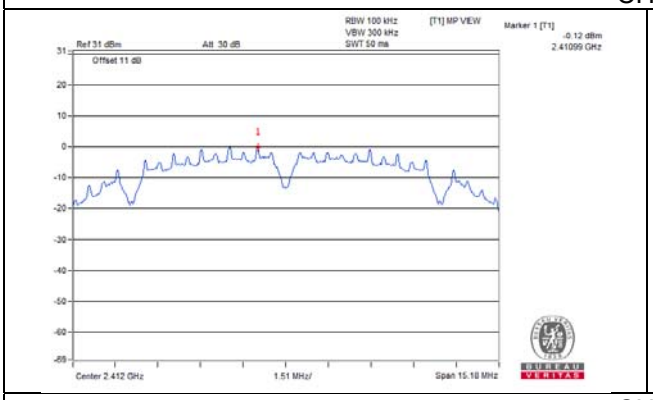


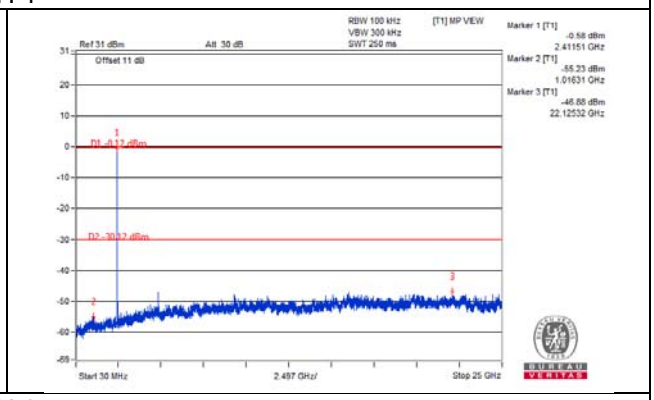
CH 11 Band edge



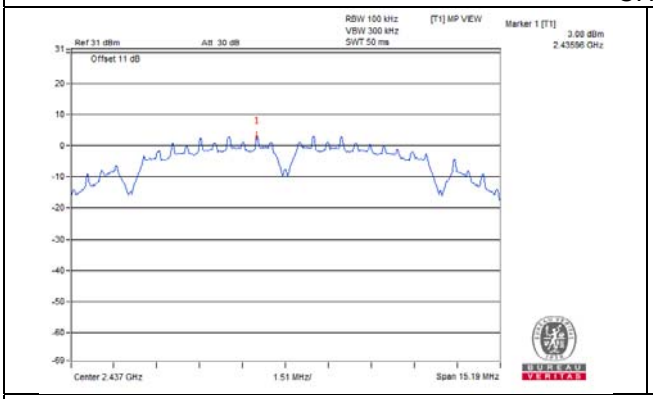
802.11b_Chain 1

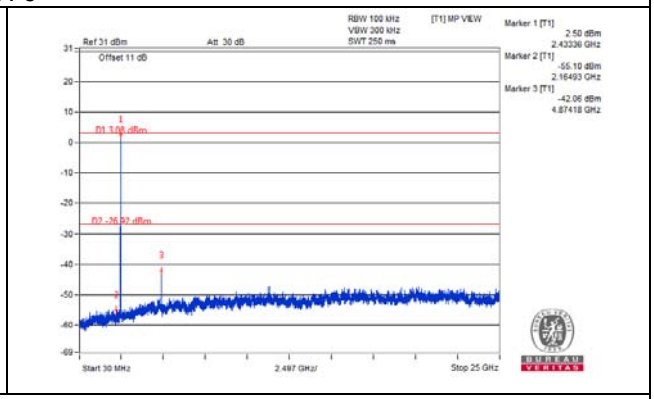
CH 1



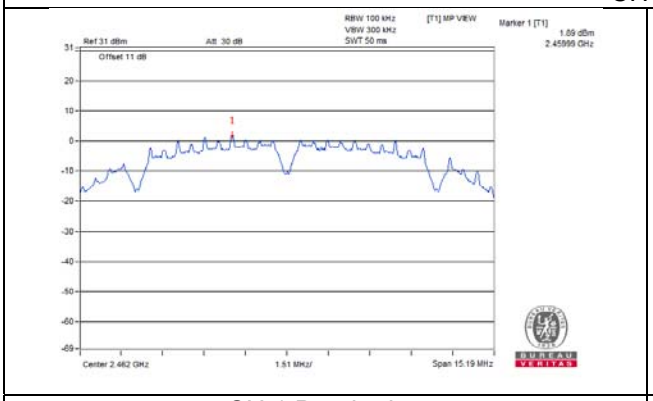


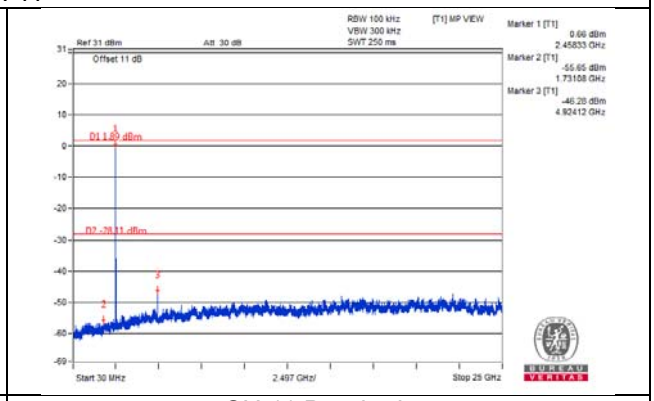
CH 6



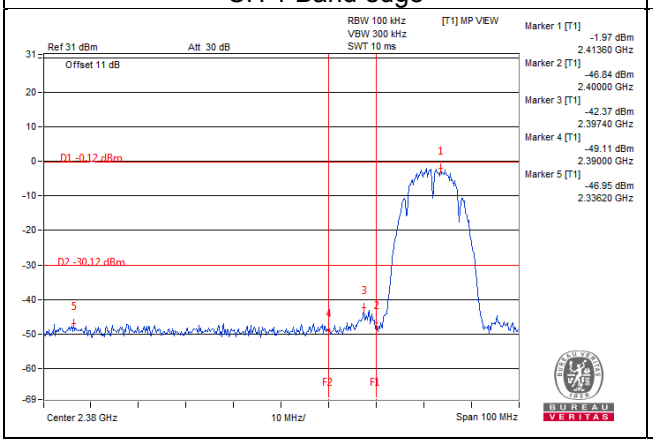


CH 11

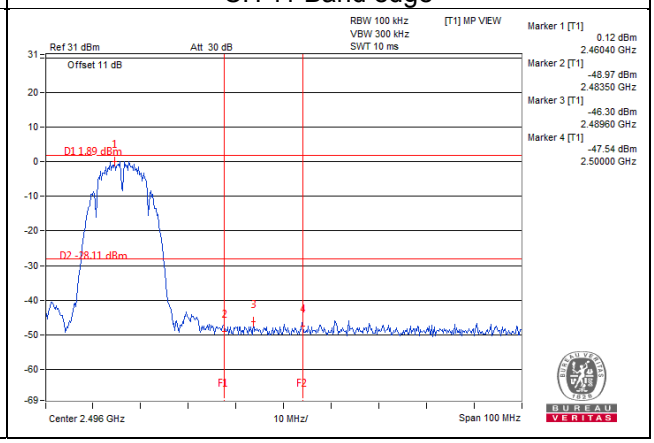




CH 1 Band edge

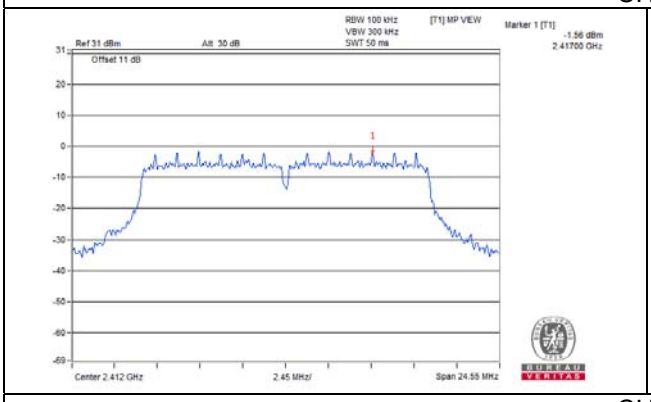


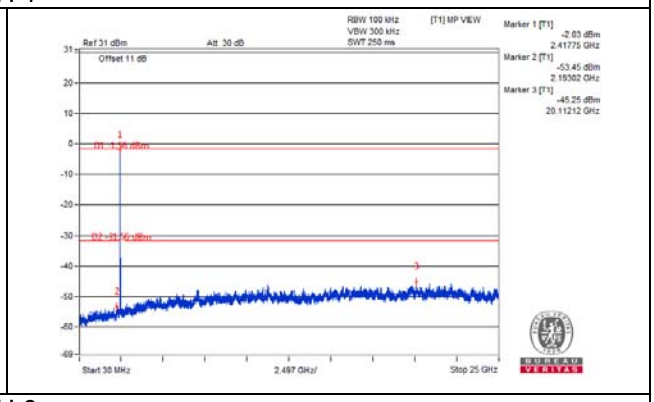
CH 11 Band edge



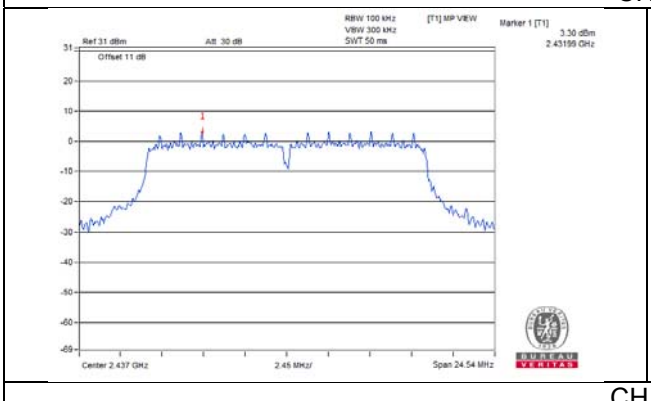
802.11g_Chain 0

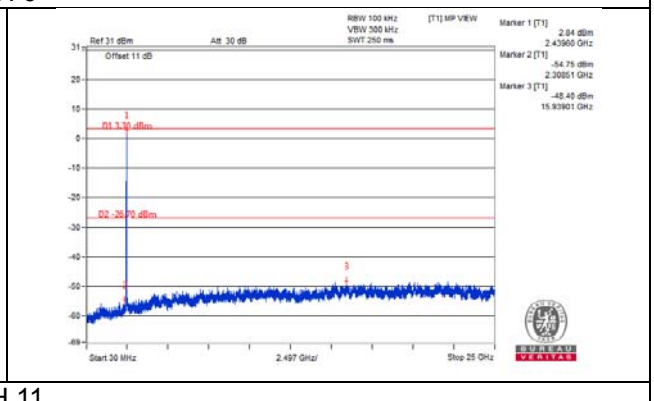
CH 1



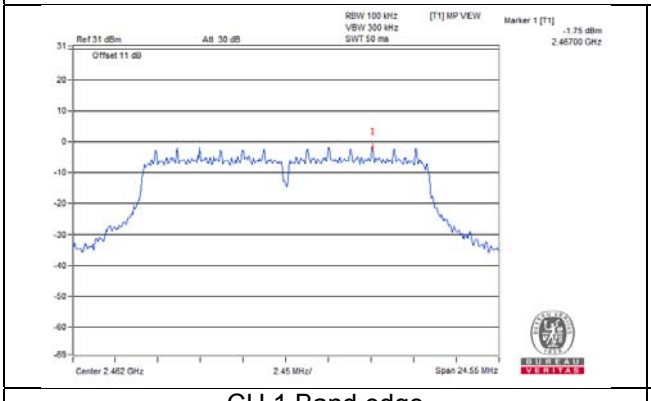


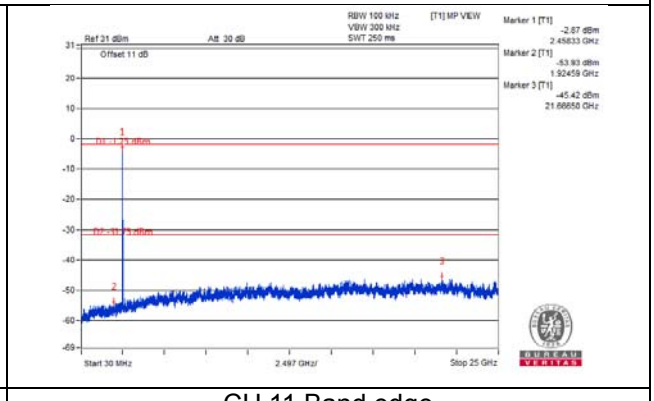
CH 6



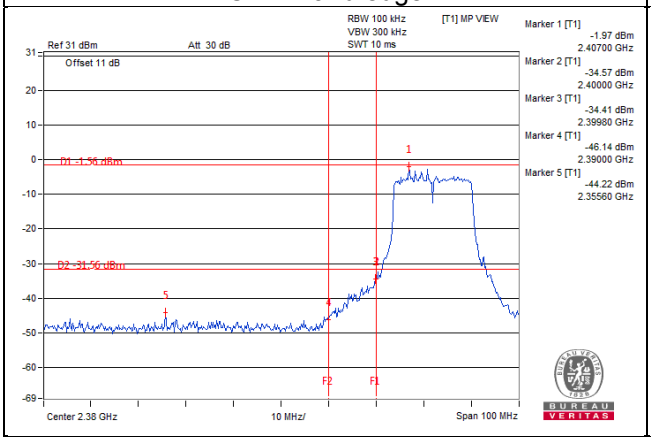


CH 11

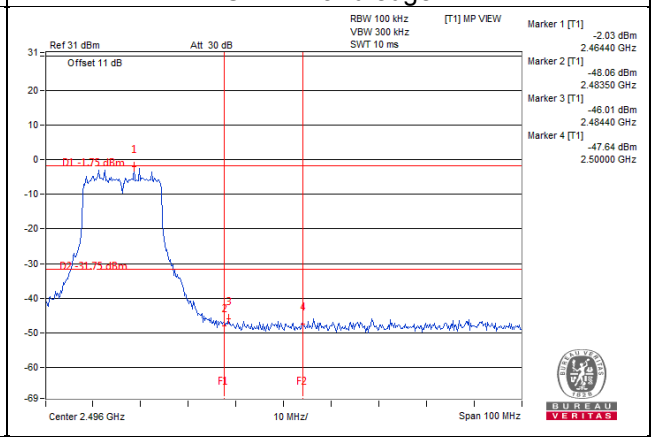




CH 1 Band edge

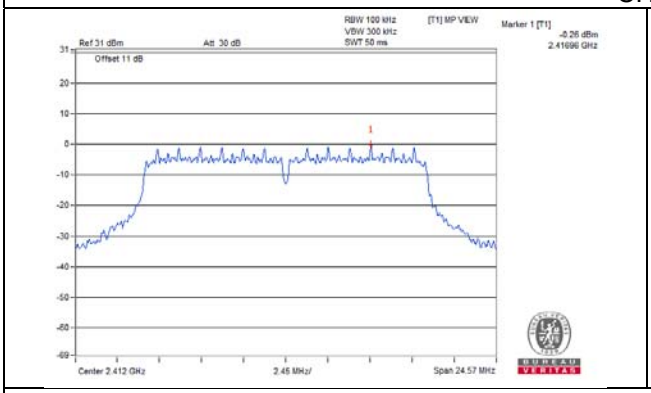


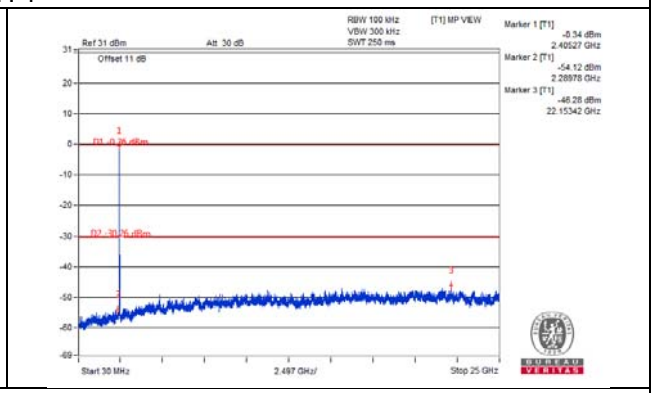
CH 11 Band edge



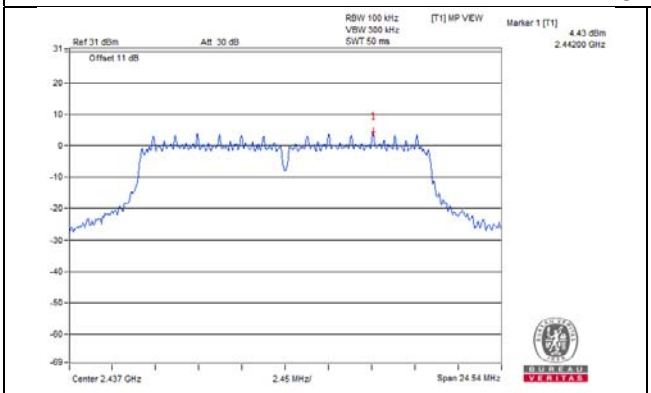
802.11g_Chain 1

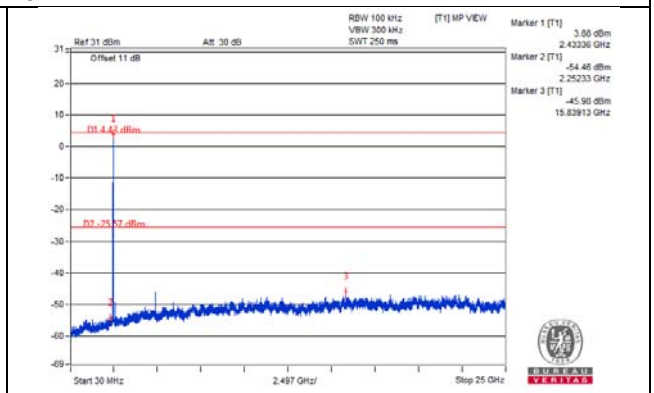
CH 1



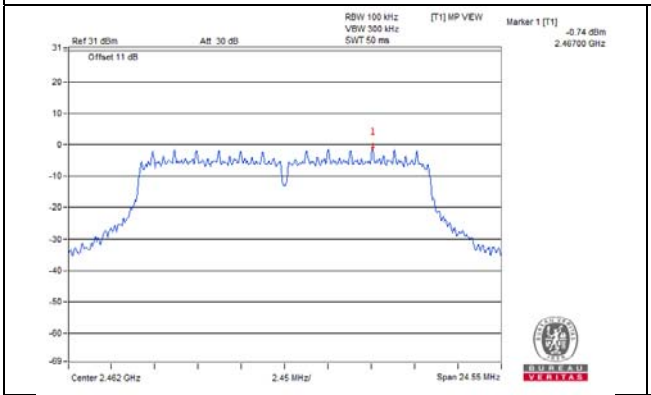


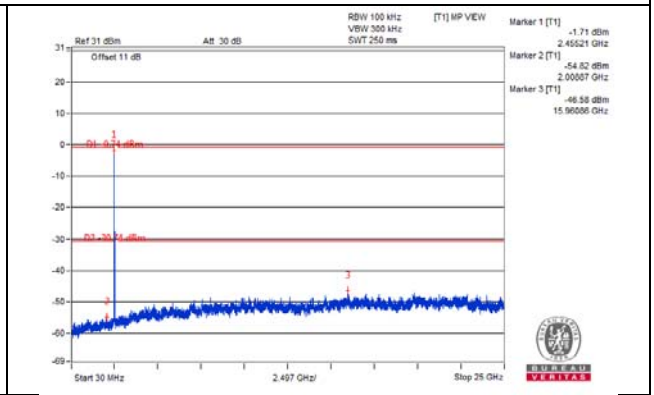
CH 6



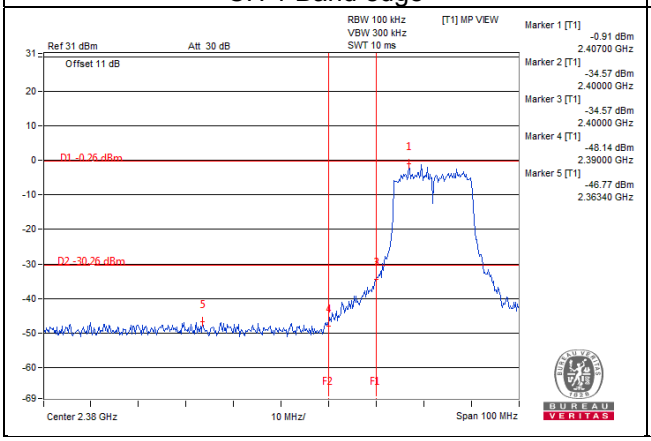


CH 11

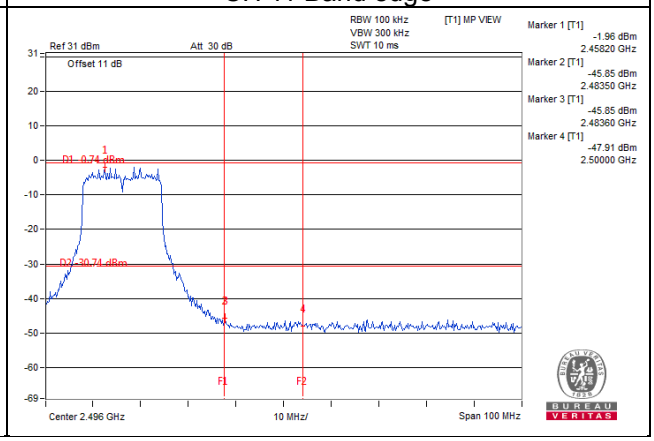




CH 1 Band edge

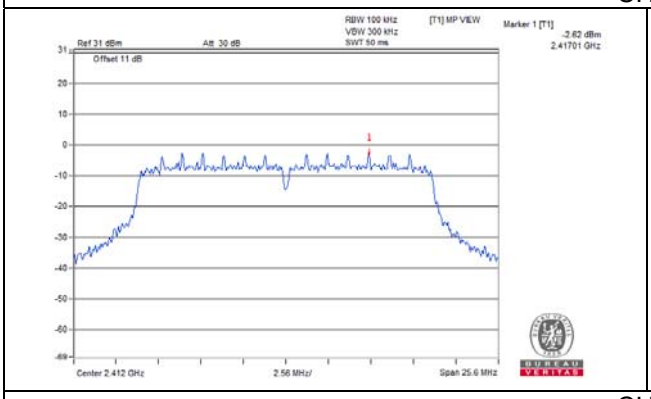


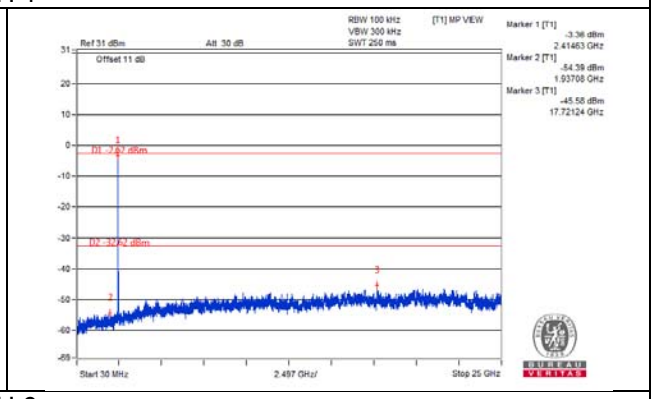
CH 11 Band edge



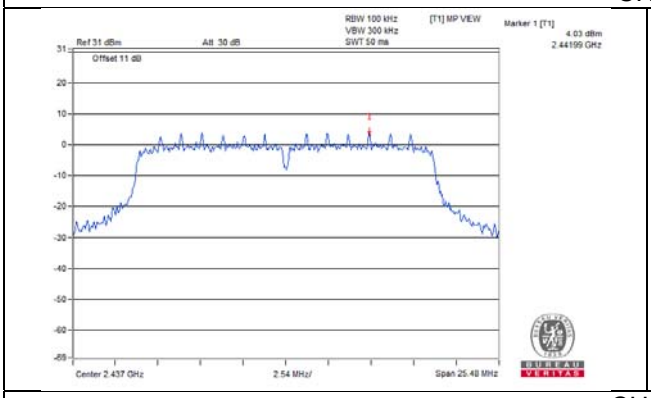
802.11n (HT20)_Chain 0

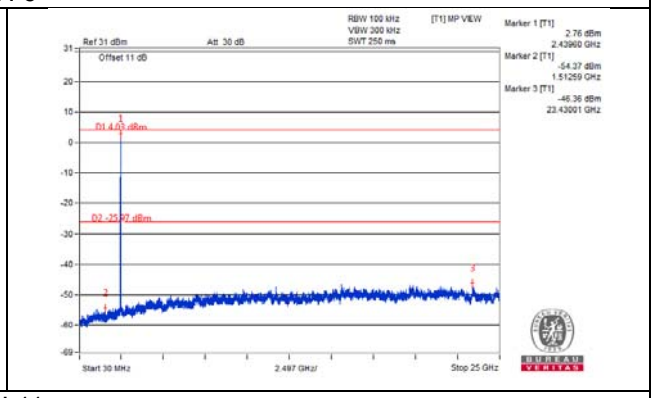
CH 1



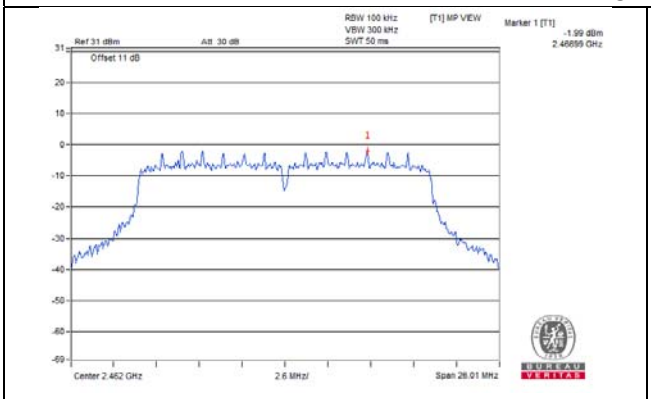


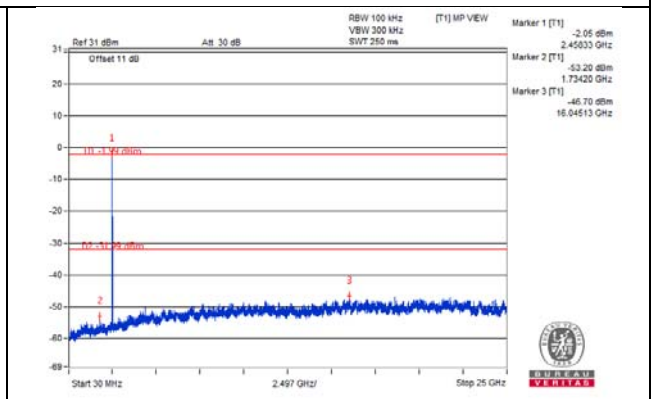
CH 6



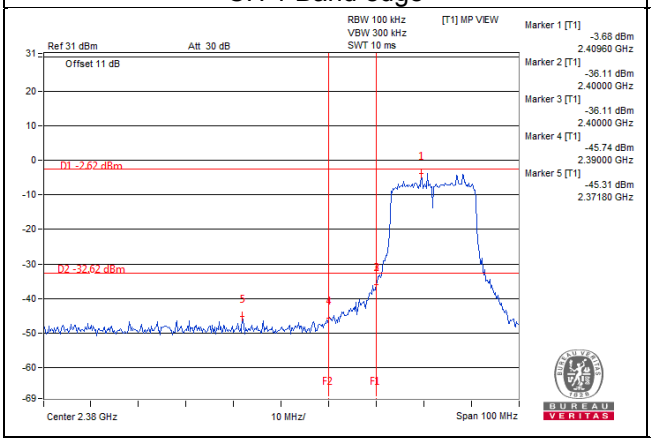


CH 11

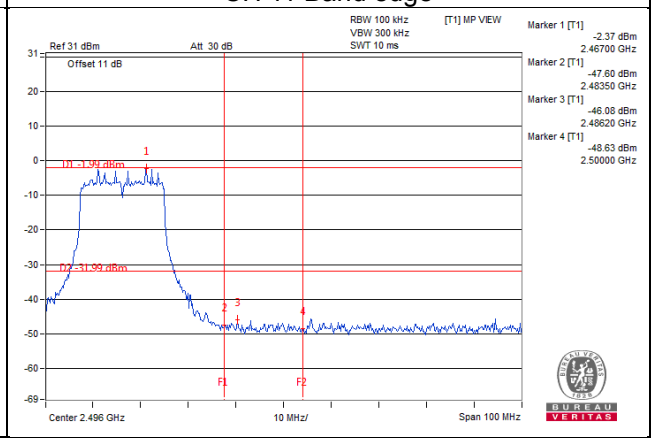




CH 1 Band edge

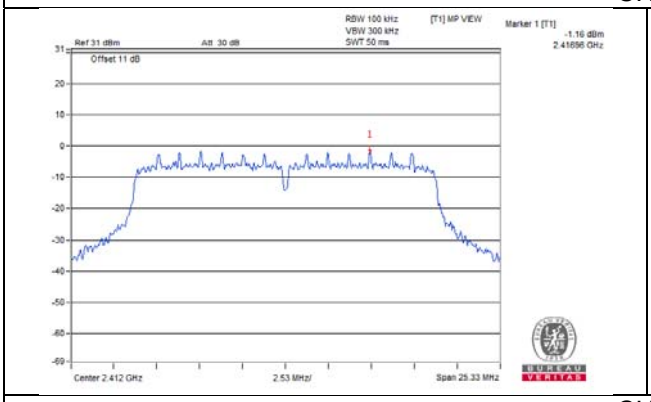


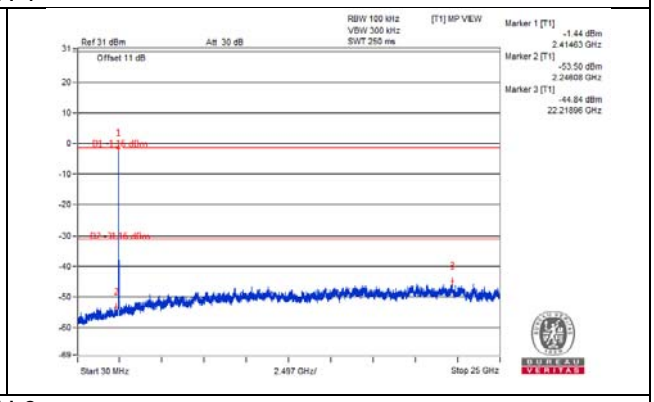
CH 11 Band edge



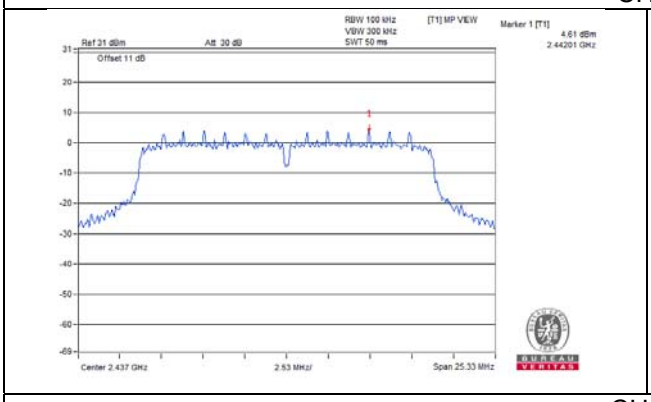
802.11n (HT20)_Chain 1

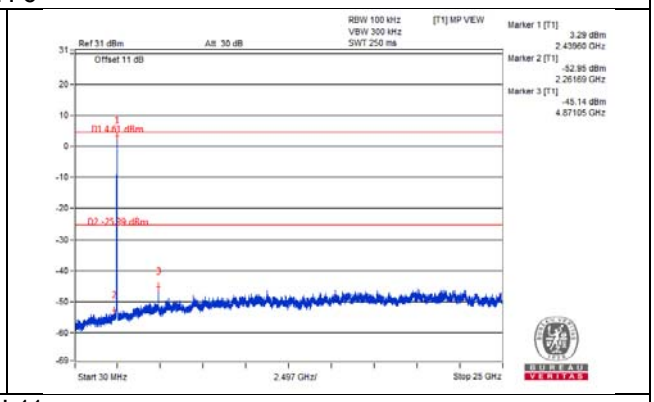
CH 1



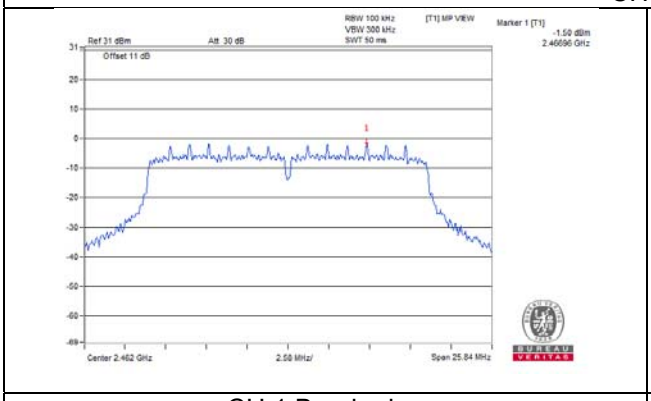


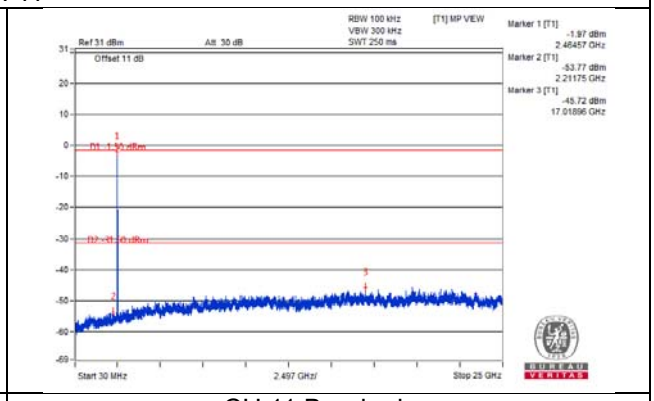
CH 6



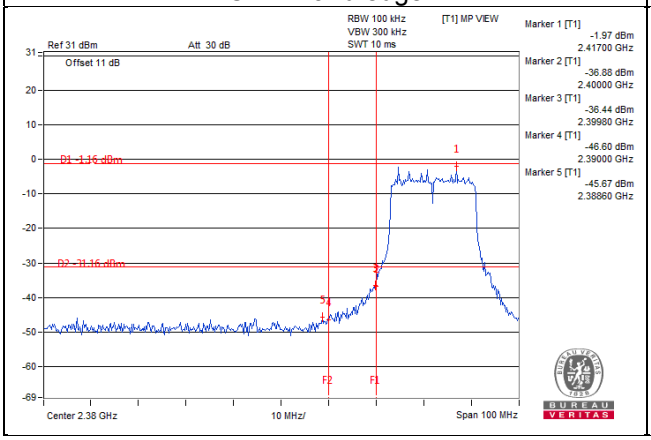


CH 11

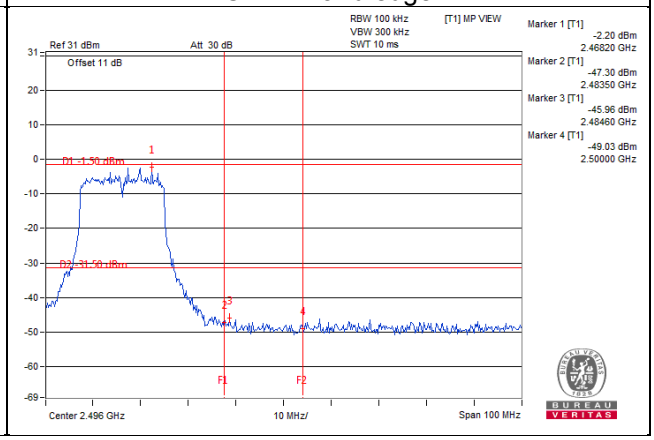




CH 1 Band edge

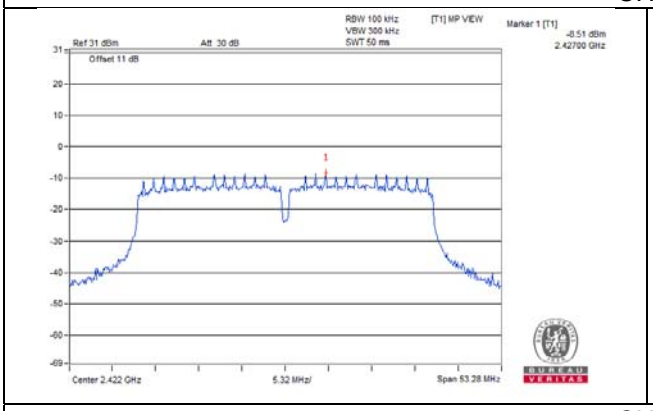


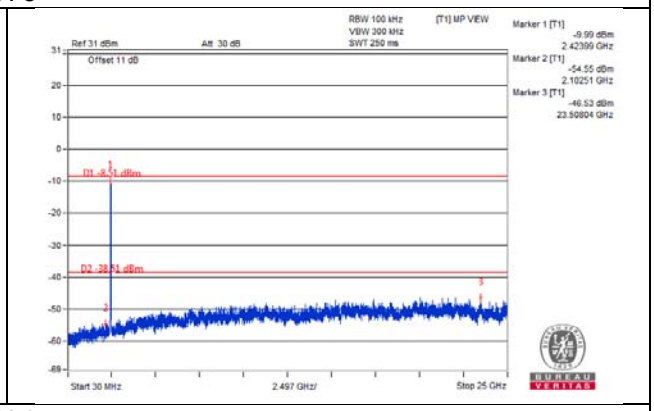
CH 11 Band edge



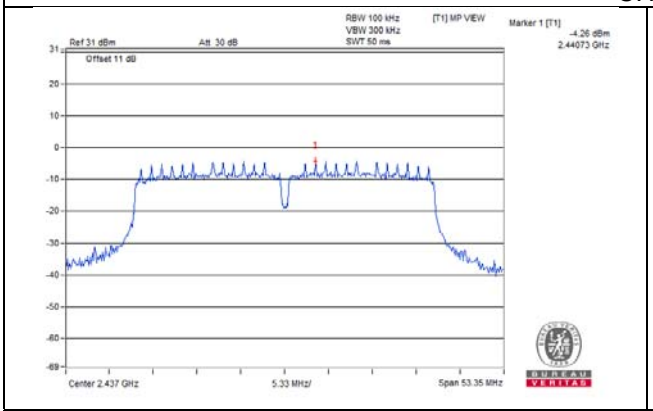
802.11n (HT40)_Chain 0

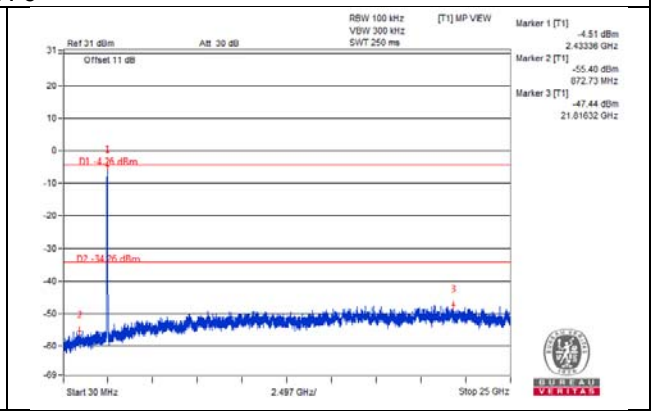
CH 3



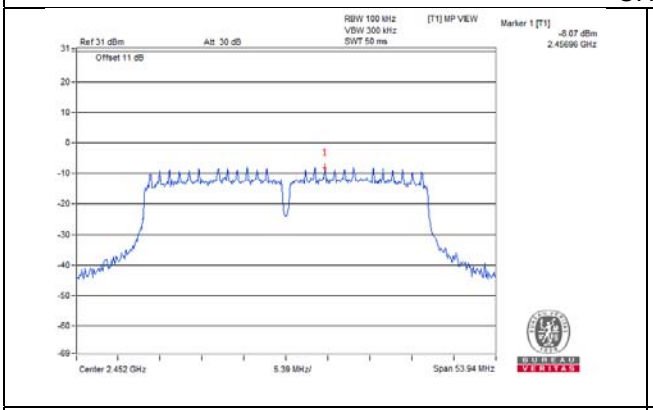


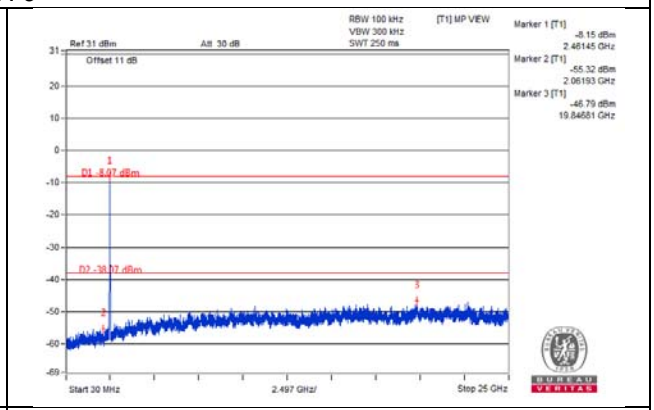
CH 6



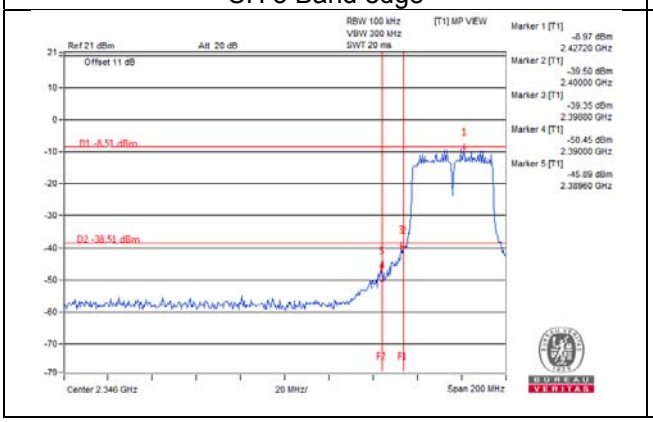


CH 9

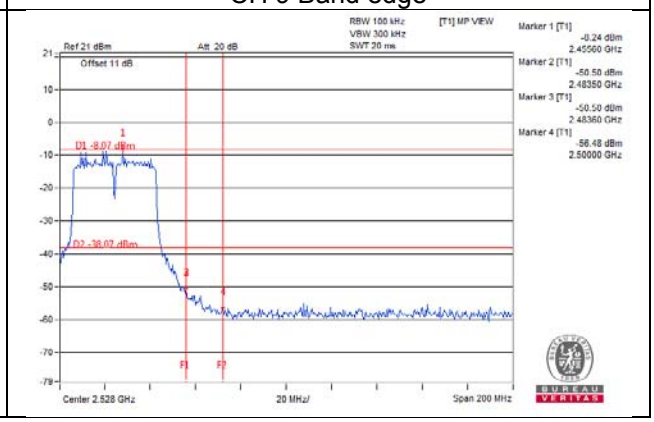




CH 3 Band edge

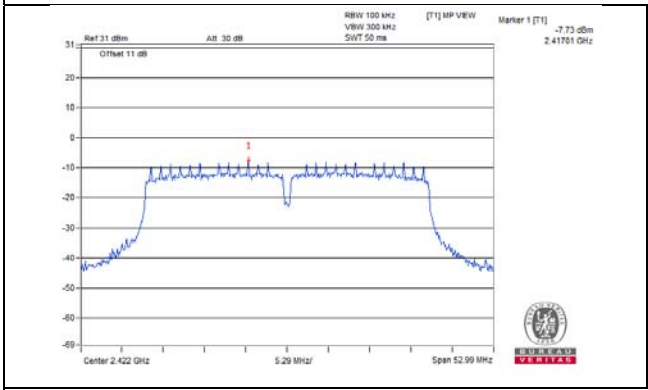


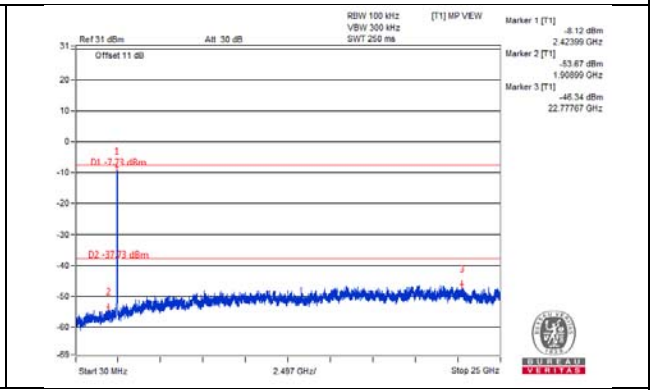
CH 9 Band edge



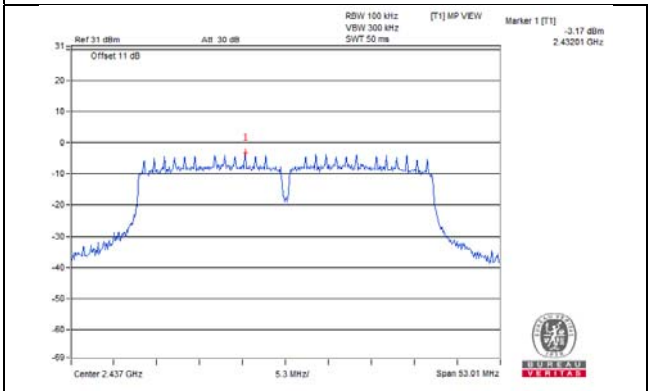
802.11n (HT40)_Chain 1

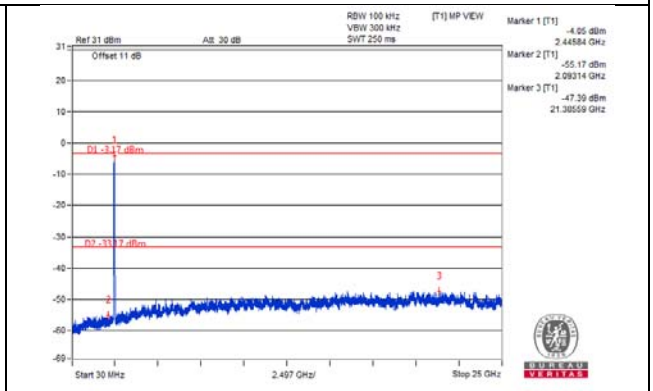
CH 3



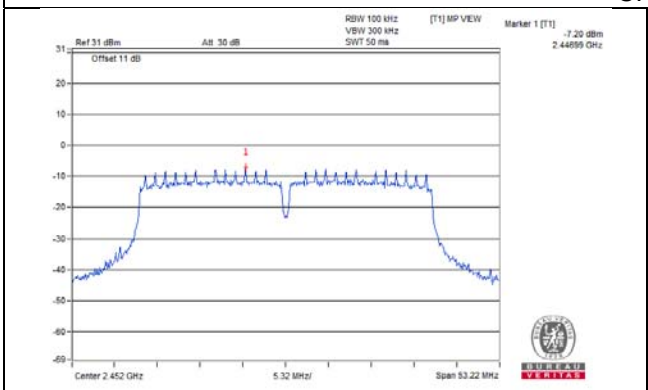


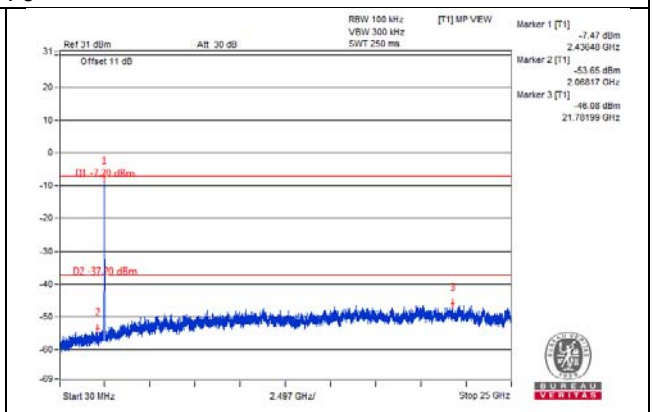
CH 6



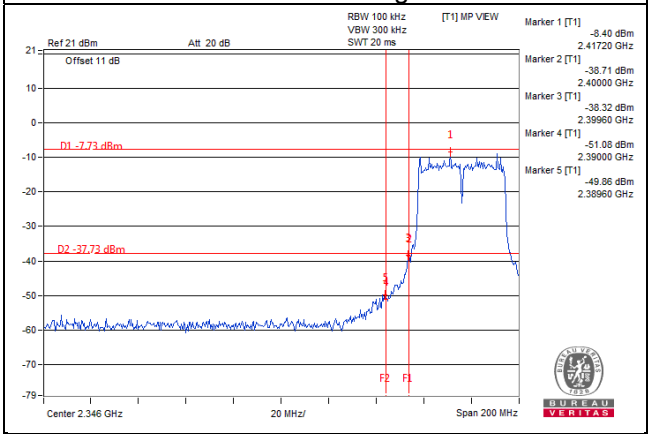


CH 9

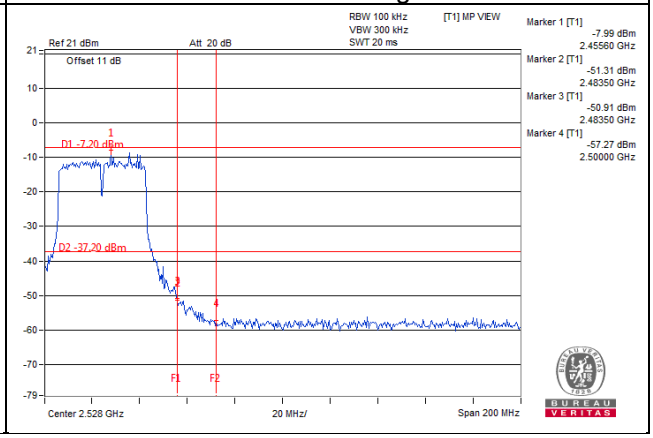




CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

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

Appendix – Information of 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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