FCC Test Report

Report No.:	RF191104C18-1
FCC ID:	2ACTO-APX320X
Model:	APX 320X
Received Date:	Nov. 04, 2019
Test Date:	Nov. 08, 2019 ~ Jan. 01, 2020
Issued Date:	Mar. 31, 2020
Applicant:	Sophos Ltd
Address:	The Pentagon, Abingdon Science Park, Abingdon OX14 3YP, United Kingdom Of Great Britain And Northern Ireland
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
RF191104C18-1	Original release	Mar. 31, 2020

1 Certificate of Conformity

Product:	Sophos Access Point
Brand:	Sophos
Model:	APX 320X
Sample Status:	Engineering sample
Applicant:	Sophos Ltd
Test Date:	Nov. 08, 2019 ~ Jan. 01, 2020
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:** Mar. 31, 2020

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Mar. 31, 2020

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 -12.69dB at 0.41563MHz
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.6dB at 2390.00MHz.
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 N-Type connector 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	3.59 dB
	200MHz ~1000MHz	3.60 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	Sophos Access Point			
Brand	Sophos			
Model	APX 320X			
Sample Status	Engineering sample			
Power Supply Rating	55Vdc (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		Dipole antenna	Directional antenna	Sector antenna
	CDD Mode	576.047mW	249.141mW	249.141mW
	Beamforming Mode	447.495mW	124.867mW	124.867mW
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
802.11b	2TX	Not Support
802.11g	2TX	Not Support
802.11n (HT20)	2TX	Support
802.11n (HT40)	2TX	Support

2. The EUT uses the following PoE. (Support unit only)

Brand	Microsemi
Model	PD-9001GR/AC
Input Power	100-240Vac~50/60Hz, 0.67A
Output Power	55Vdc / 0.6A

3. The EUT uses the following antennas.

NO.	Type	Gain(dBi)								Connector
		2400 MHz	2450 MHz	2500 MHz	5150 MHz	5325 MHz	5500 MHz	5675 MHz	5850 MHz	
1	Dipole	3.1	3.2	3.1	5.1	5.0	5.6	5.7	6.0	N type
2	Directional	11.6	12.0	11.9	10.55	11.2	11.5	11.2	11.5	N type
3	Sector	10.6	11.4	11.2	12.57	12.7	13.0	12.4	13.1	N type

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	
A	√	√	√	√	EUT with Dipole antenna
B	√	√	√	√	EUT with Directional antenna
C	√	√	√	√	EUT with Sector antenna

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 **Z-plane**.
2. For radiated emission (below 1GHz) and power line conducted emission test items, the worst maximum power was selected.

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, B, C	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, B, C	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, B, C	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, B, 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	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	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, B, C	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A, B, C	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A, B, C	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A, B, 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	22deg. C, 67%RH	120Vac, 60Hz	Greg Lin
RE<1G	22deg. C, 67%RH	120Vac, 60Hz	Greg Lin
PLC	20deg. C, 64%RH	120Vac, 60Hz	Jim Lee
APCM	25deg. C, 60%RH 25deg. C, 75%RH	120Vac, 60Hz	Jisyong Wang Jones Chang

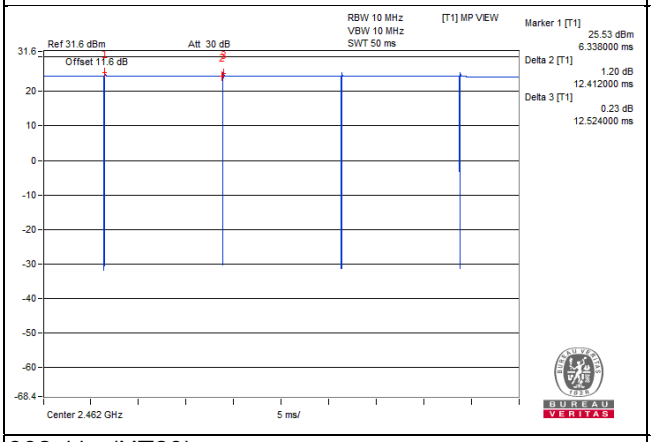
3.3 Duty Cycle of Test Signal

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

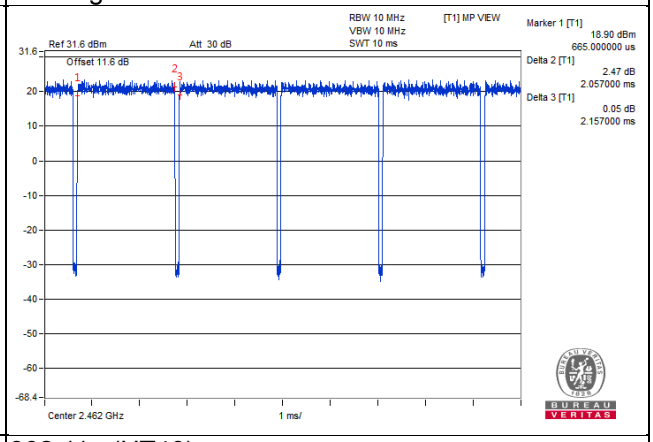
Test Mode A

802.11b: Duty cycle = 12.412/12.524 = 0.991
802.11g: Duty cycle = 2.057/2.157 = 0.954, Duty factor = 10 * log(1/0.954) = 0.21
802.11n (HT20): Duty cycle = 4.98/5.095 = 0.977, Duty factor = 10 * log(1/0.977) = 0.10
802.11n (HT40): Duty cycle = 2.425/2.53 = 0.958, Duty factor = 10 * log(1/0.958) = 0.18

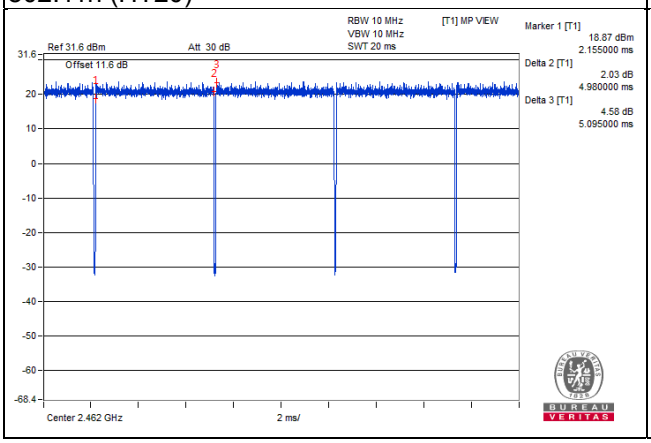
802.11b



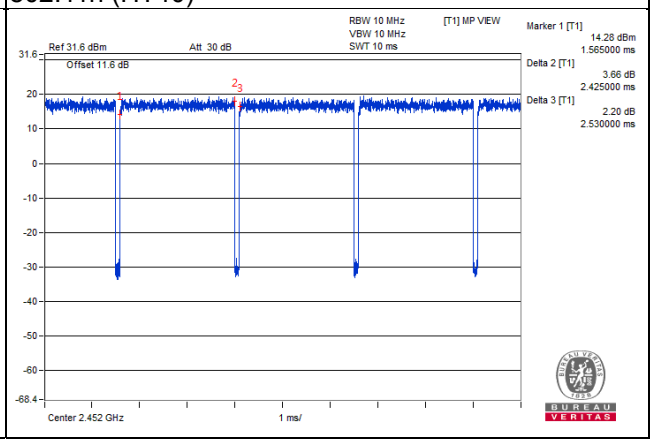
802.11g



802.11n (HT20)



802.11n (HT40)



Test Mode B, C

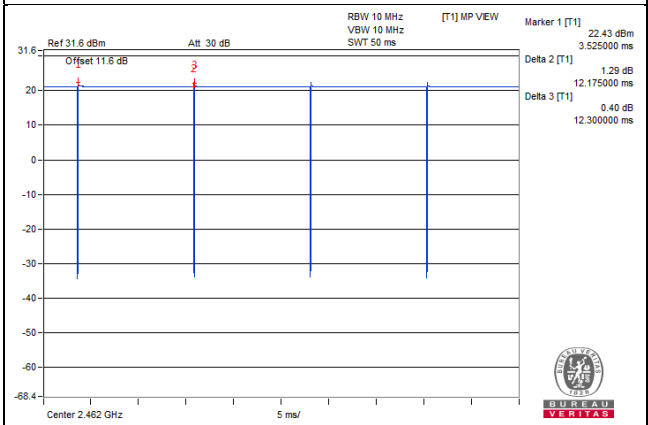
802.11b: Duty cycle = 12.175/12.3 = 0.99

802.11g: Duty cycle = 2.062/2.147 = 0.96, Duty factor = 10 * log(1/0.96) = 0.18

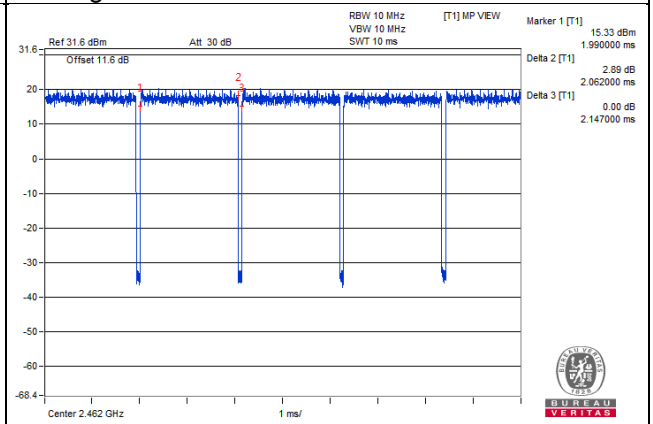
802.11n (HT20): Duty cycle = 5/5.092 = 0.982

802.11n (HT40): Duty cycle = 2.42/2.525 = 0.958, Duty factor = 10 * log(1/0.958) = 0.18

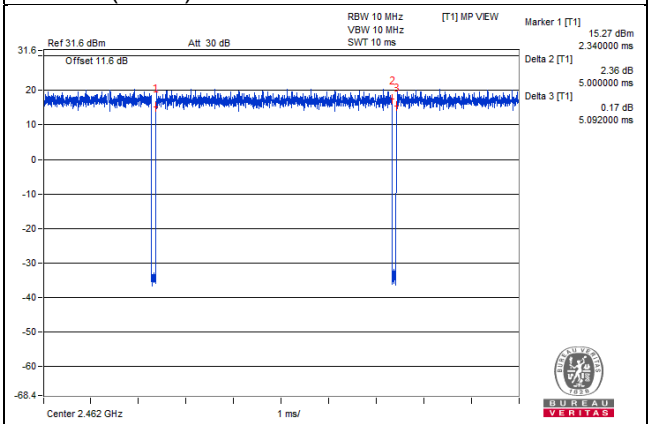
802.11b



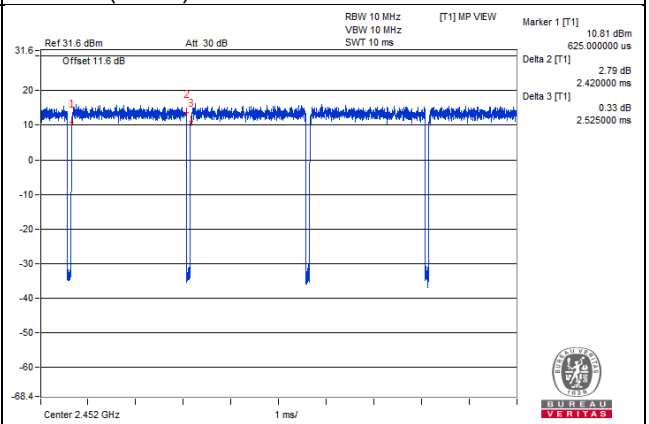
802.11g



802.11n (HT20)



802.11n (HT40)



3.4 Description of Support Units

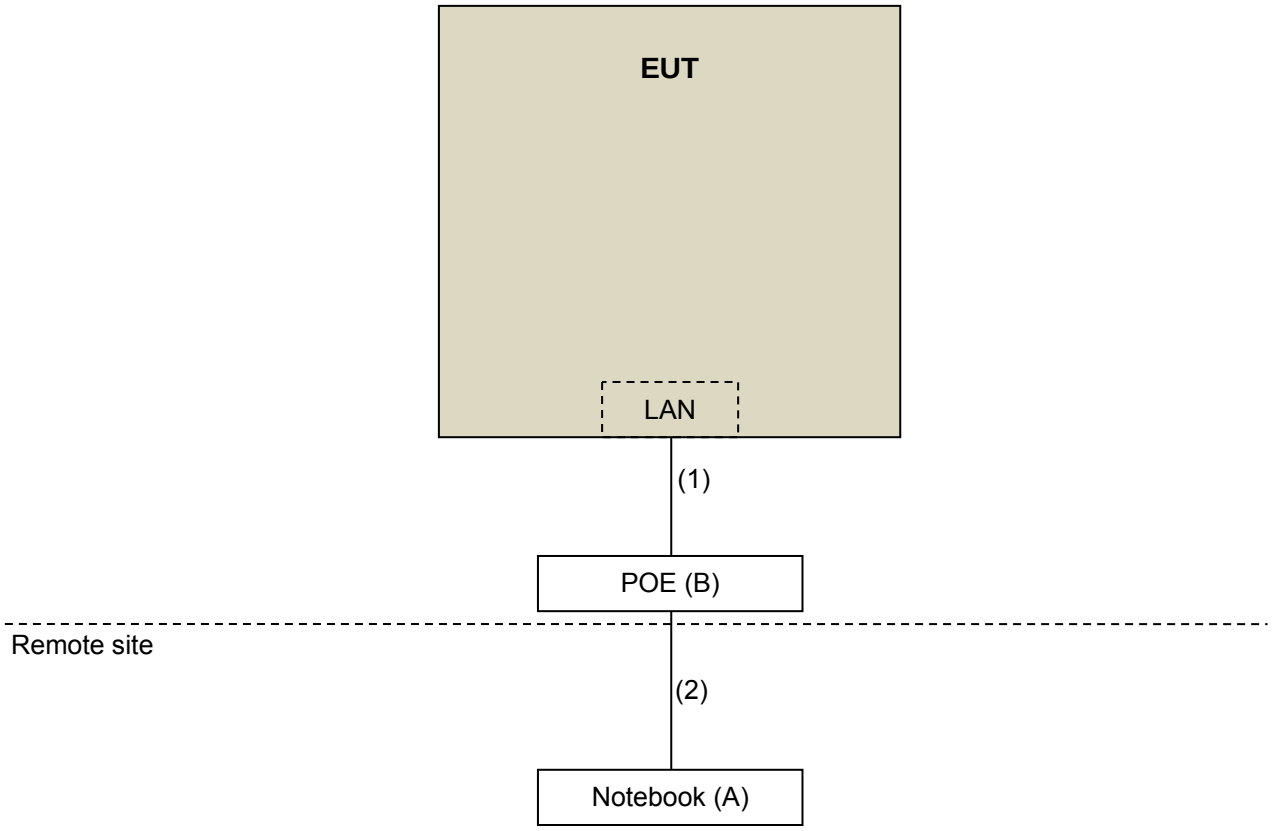
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	Lenovo	80Q7	PF0KUGU6	NA	-
B.	PoE	Microsemi	PD-9001GR/AC	NA	NA	-

Note: All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	2	N	0	-
2.	RJ45 cable	1	10	N	0	-

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

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

Test Standard:

FCC Part 15, Subpart C (15.247)

ANSI C63.10-2013

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

References Test Guidance:

KDB 558074 D01 DTS Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

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.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 15, 2019	Apr. 14, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 12, 2019	Jun. 11, 2020
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 07, 2019	Nov. 06, 2020
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 25, 2018	Nov. 24, 2019
			Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 25, 2018	Nov. 24, 2019
			Nov. 24, 2019	Nov. 23, 2020
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jul. 11, 2019	Jul. 10, 2020
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 19, 2019	Feb. 18, 2020
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 19, 2019	Jan. 18, 2020
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Jul. 11, 2019	Jul. 10, 2020
RF signal cable Woken	8D-FB	Cable-CH9-01	Jul. 30, 2019	Jul. 29, 2020
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	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 9.

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:

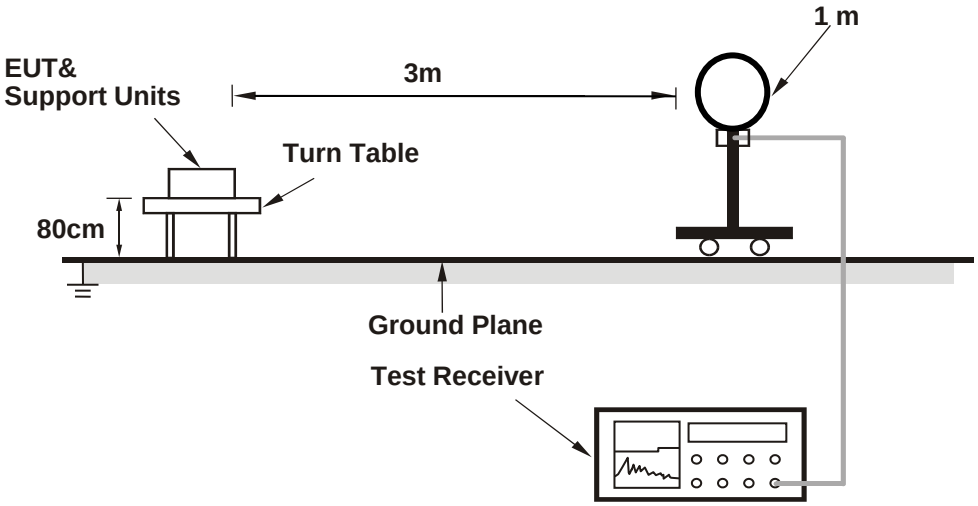
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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

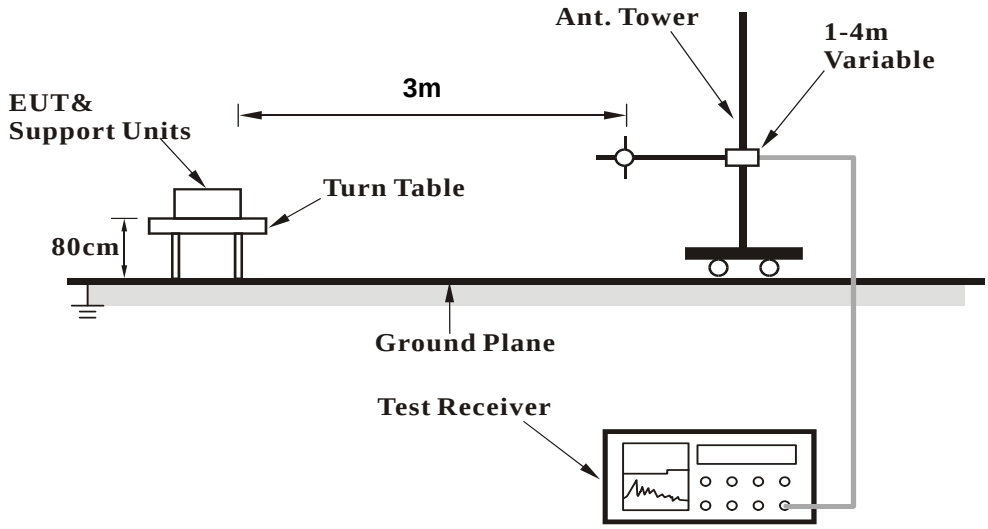
No deviation.

4.1.5 Test Set Up

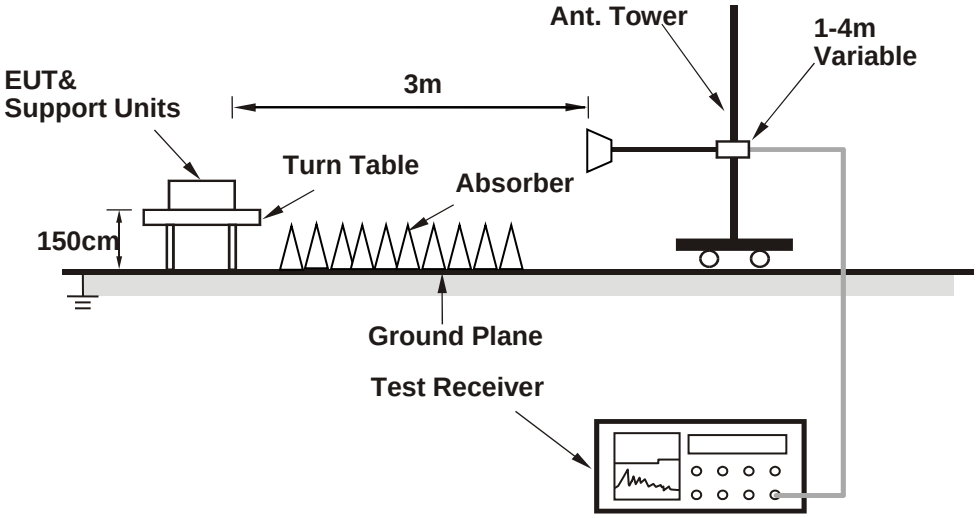
For Radiated emission below 30MHz



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 (QRCT3) 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	57.4 PK	74.0	-16.6	1.43 H	302	25.3	32.1
2	2390.00	48.4 AV	54.0	-5.6	1.43 H	302	16.3	32.1
3	*2412.00	102.6 PK			1.52 H	311	70.4	32.2
4	*2412.00	98.6 AV			1.52 H	311	66.4	32.2
5	4824.00	47.9 PK	74.0	-26.1	2.46 H	82	43.8	4.1
6	4824.00	41.4 AV	54.0	-12.6	2.46 H	82	37.3	4.1
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	61.2 PK	74.0	-12.8	2.41 V	27	29.1	32.1
2	2390.00	53.3 AV	54.0	-0.7	2.41 V	27	21.2	32.1
3	*2412.00	118.7 PK			2.43 V	16	86.5	32.2
4	*2412.00	114.7 AV			2.43 V	16	82.5	32.2
5	4824.00	49.0 PK	74.0	-25.0	3.77 V	36	44.9	4.1
6	4824.00	44.0 AV	54.0	-10.0	3.77 V	36	39.9	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. " * ": 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	104.7 PK			1.44 H	306	72.6	32.1
2	*2437.00	100.7 AV			1.44 H	306	68.6	32.1
3	4874.00	54.8 PK	74.0	-19.2	2.40 H	71	50.8	4.0
4	4874.00	50.2 AV	54.0	-3.8	2.40 H	71	46.2	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	120.5 PK			2.47 V	21	88.4	32.1
2	*2437.00	116.5 AV			2.47 V	21	84.4	32.1
3	4874.00	57.3 PK	74.0	-16.7	3.47 V	26	53.3	4.0
4	4874.00	52.8 AV	54.0	-1.2	3.47 V	26	48.8	4.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	102.0 PK			1.42 H	303	69.9	32.1
2	*2462.00	98.0 AV			1.42 H	303	65.9	32.1
3	2483.50	57.9 PK	74.0	-16.1	1.53 H	297	25.8	32.1
4	2483.50	48.6 AV	54.0	-5.4	1.53 H	297	16.5	32.1
5	4924.00	47.3 PK	74.0	-26.7	2.53 H	76	43.3	4.0
6	4924.00	41.4 AV	54.0	-12.6	2.53 H	76	37.4	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	117.9 PK			2.53 V	26	85.8	32.1
2	*2462.00	113.9 AV			2.53 V	26	81.8	32.1
3	2483.50	62.1 PK	74.0	-11.9	2.63 V	24	30.0	32.1
4	2483.50	53.2 AV	54.0	-0.8	2.63 V	24	21.1	32.1
5	4924.00	49.5 PK	74.0	-24.5	3.76 V	30	45.5	4.0
6	4924.00	44.0 AV	54.0	-10.0	3.76 V	30	40.0	4.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	62.5 PK	74.0	-11.5	1.52 H	293	30.4	32.1
2	2390.00	51.7 AV	54.0	-2.3	1.52 H	293	19.6	32.1
3	*2412.00	101.7 PK			1.48 H	287	69.5	32.2
4	*2412.00	91.6 AV			1.48 H	287	59.4	32.2
5	4824.00	44.3 PK	74.0	-29.7	2.56 H	88	40.2	4.1
6	4824.00	32.0 AV	54.0	-22.0	2.56 H	88	27.9	4.1
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	67.3 PK	74.0	-6.7	2.58 V	24	35.2	32.1
2	2390.00	52.8 AV	54.0	-1.2	2.58 V	24	20.7	32.1
3	*2412.00	115.2 PK			2.08 V	19	83.0	32.2
4	*2412.00	104.7 AV			2.08 V	19	72.5	32.2
5	4824.00	45.2 PK	74.0	-28.8	3.63 V	34	41.1	4.1
6	4824.00	34.3 AV	54.0	-19.7	3.63 V	34	30.2	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. " * ": 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	107.7 PK			1.42 H	277	75.6	32.1
2	*2437.00	97.6 AV			1.42 H	277	65.5	32.1
3	4874.00	52.2 PK	74.0	-21.8	2.49 H	62	48.2	4.0
4	4874.00	38.3 AV	54.0	-15.7	2.49 H	62	34.3	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	121.0 PK			2.52 V	24	88.9	32.1
2	*2437.00	110.8 AV			2.52 V	24	78.7	32.1
3	4874.00	54.7 PK	74.0	-19.3	3.49 V	17	50.7	4.0
4	4874.00	40.6 AV	54.0	-13.4	3.49 V	17	36.6	4.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	100.8 PK			1.37 H	283	68.7	32.1
2	*2462.00	90.7 AV			1.37 H	283	58.6	32.1
3	2483.50	62.4 PK	74.0	-11.6	1.43 H	276	30.3	32.1
4	2483.50	47.6 AV	54.0	-6.4	1.43 H	276	15.5	32.1
5	4924.00	44.4 PK	74.0	-29.6	2.38 H	85	40.4	4.0
6	4924.00	33.3 AV	54.0	-20.7	2.38 H	85	29.3	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.0 PK			2.33 V	25	81.9	32.1
2	*2462.00	103.9 AV			2.33 V	25	71.8	32.1
3	2483.50	67.0 PK	74.0	-7.0	2.22 V	21	34.9	32.1
4	2483.50	52.7 AV	54.0	-1.3	2.22 V	21	20.6	32.1
5	4924.00	46.3 PK	74.0	-27.7	3.78 V	33	42.3	4.0
6	4924.00	35.2 AV	54.0	-18.8	3.78 V	33	31.2	4.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	63.3 PK	74.0	-10.7	1.46 H	288	31.2	32.1
2	2390.00	47.8 AV	54.0	-6.2	1.46 H	288	15.7	32.1
3	*2412.00	101.9 PK			1.56 H	297	69.7	32.2
4	*2412.00	91.5 AV			1.56 H	297	59.3	32.2
5	4824.00	44.4 PK	74.0	-29.6	2.43 H	76	40.3	4.1
6	4824.00	32.3 AV	54.0	-21.7	2.43 H	76	28.2	4.1
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	68.2 PK	74.0	-5.8	1.95 V	20	36.1	32.1
2	2390.00	52.7 AV	54.0	-1.3	1.95 V	20	20.6	32.1
3	*2412.00	115.1 PK			1.89 V	18	82.9	32.2
4	*2412.00	104.8 AV			1.89 V	18	72.6	32.2
5	4824.00	46.2 PK	74.0	-27.8	3.32 V	28	42.1	4.1
6	4824.00	34.7 AV	54.0	-19.3	3.32 V	28	30.6	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. " * ": 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	107.3 PK			1.52 H	284	75.2	32.1
2	*2437.00	96.9 AV			1.52 H	284	64.8	32.1
3	4874.00	47.7 PK	74.0	-26.3	2.46 H	73	44.2	3.5
4	4874.00	33.9 AV	54.0	-20.1	2.46 H	73	30.4	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	120.7 PK			2.47 V	18	88.6	32.1
2	*2437.00	110.1 AV			2.47 V	18	78.0	32.1
3	4874.00	50.8 PK	74.0	-23.2	3.39 V	24	46.8	4.0
4	4874.00	36.6 AV	54.0	-17.4	3.39 V	24	32.6	4.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	101.0 PK			1.48 H	293	68.9	32.1
2	*2462.00	90.7 AV			1.48 H	293	58.6	32.1
3	2483.50	63.3 PK	74.0	-10.7	1.37 H	283	31.2	32.1
4	2483.50	47.7 AV	54.0	-6.3	1.37 H	283	15.6	32.1
5	4924.00	44.0 PK	74.0	-30.0	2.53 H	68	40.5	3.5
6	4924.00	32.8 AV	54.0	-21.2	2.53 H	68	29.3	3.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.5 PK			1.90 V	21	82.4	32.1
2	*2462.00	104.1 AV			1.90 V	21	72.0	32.1
3	2483.50	68.6 PK	74.0	-5.4	2.04 V	23	36.5	32.1
4	2483.50	52.9 AV	54.0	-1.1	2.04 V	23	20.8	32.1
5	4924.00	46.1 PK	74.0	-27.9	3.57 V	29	42.6	3.5
6	4924.00	34.7 AV	54.0	-19.3	3.57 V	29	31.2	3.5

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	62.8 PK	74.0	-11.2	1.51 H	287	30.7	32.1
2	2390.00	47.9 AV	54.0	-6.1	1.51 H	287	15.8	32.1
3	*2422.00	97.1 PK			1.46 H	294	65.0	32.1
4	*2422.00	87.3 AV			1.46 H	294	55.2	32.1
5	4844.00	44.2 PK	74.0	-29.8	2.47 H	70	40.7	3.5
6	4844.00	32.1 AV	54.0	-21.9	2.47 H	70	28.6	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	67.7 PK	74.0	-6.3	2.45 V	25	35.6	32.1
2	2390.00	52.7 AV	54.0	-1.3	2.45 V	25	20.6	32.1
3	*2422.00	110.2 PK			2.53 V	25	78.1	32.1
4	*2422.00	100.5 AV			2.53 V	25	68.4	32.1
5	4844.00	45.1 PK	74.0	-28.9	3.48 V	36	41.6	3.5
6	4844.00	33.8 AV	54.0	-20.2	3.48 V	36	30.3	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 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	99.7 PK			1.49 H	284	67.6	32.1
2	*2437.00	90.0 AV			1.49 H	284	57.9	32.1
3	2483.50	62.6 PK	74.0	-11.4	1.42 H	275	30.5	32.1
4	2483.50	48.3 AV	54.0	-5.7	1.42 H	275	16.2	32.1
5	4874.00	46.9 PK	74.0	-27.1	2.49 H	84	43.4	3.5
6	4874.00	32.9 AV	54.0	-21.1	2.49 H	84	29.4	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	112.7 PK			2.41 V	20	80.6	32.1
2	*2437.00	103.0 AV			2.41 V	20	70.9	32.1
3	2483.50	67.3 PK	74.0	-6.7	2.25 V	17	35.2	32.1
4	2483.50	53.4 AV	54.0	-0.6	2.25 V	17	21.3	32.1
5	4874.00	49.1 PK	74.0	-24.9	3.46 V	36	45.6	3.5
6	4874.00	34.7 AV	54.0	-19.3	3.46 V	36	31.2	3.5

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	97.5 PK			1.49 H	225	65.4	32.1
2	*2452.00	87.6 AV			1.49 H	225	55.5	32.1
3	2483.50	62.8 PK	74.0	-11.2	1.53 H	241	30.7	32.1
4	2483.50	47.4 AV	54.0	-6.6	1.53 H	241	15.3	32.1
5	4904.00	43.7 PK	74.0	-30.3	2.51 H	83	40.3	3.4
6	4904.00	32.0 AV	54.0	-22.0	2.51 H	83	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	110.5 PK			2.28 V	22	78.4	32.1
2	*2452.00	100.8 AV			2.28 V	22	68.7	32.1
3	2483.50	67.3 PK	74.0	-6.7	2.46 V	19	35.2	32.1
4	2483.50	52.7 AV	54.0	-1.3	2.46 V	19	20.6	32.1
5	4904.00	45.6 PK	74.0	-28.4	3.58 V	37	42.2	3.4
6	4904.00	34.5 AV	54.0	-19.5	3.58 V	37	31.1	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 B

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	65.3 PK	74.0	-8.7	1.60 H	11	33.4	31.9
2	2390.00	53.1 AV	54.0	-0.9	1.60 H	11	21.2	31.9
3	*2412.00	120.5 PK			1.55 H	6	88.6	31.9
4	*2412.00	116.5 AV			1.55 H	6	84.6	31.9
5	4824.00	47.5 PK	74.0	-26.5	3.49 H	128	43.7	3.8
6	4824.00	38.9 AV	54.0	-15.1	3.49 H	128	35.1	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.0 PK	74.0	-10.0	1.66 V	8	32.1	31.9
2	2390.00	51.7 AV	54.0	-2.3	1.66 V	8	19.8	31.9
3	*2412.00	119.8 PK			1.71 V	5	87.9	31.9
4	*2412.00	115.8 AV			1.71 V	5	83.9	31.9
5	4824.00	50.3 PK	74.0	-23.7	3.16 V	99	46.5	3.8
6	4824.00	45.0 AV	54.0	-9.0	3.16 V	99	41.2	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	123.1 PK			1.70 H	7	91.2	31.9
2	*2437.00	119.0 AV			1.70 H	7	87.1	31.9
3	4874.00	52.1 PK	74.0	-21.9	3.57 H	138	48.3	3.8
4	4874.00	46.3 AV	54.0	-7.7	3.57 H	138	42.5	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	122.3 PK			1.84 V	11	90.4	31.9
2	*2437.00	118.2 AV			1.84 V	11	86.3	31.9
3	4874.00	58.0 PK	74.0	-16.0	3.24 V	105	54.2	3.8
4	4874.00	52.7 AV	54.0	-1.3	3.24 V	105	48.9	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	120.3 PK			1.59 H	7	88.4	31.9
2	*2462.00	116.0 AV			1.59 H	7	84.1	31.9
3	2483.50	63.9 PK	74.0	-10.1	1.54 H	6	31.9	32.0
4	2483.50	53.3 AV	54.0	-0.7	1.54 H	6	21.3	32.0
5	4924.00	49.2 PK	74.0	-24.8	3.56 H	137	45.4	3.8
6	4924.00	42.3 AV	54.0	-11.7	3.56 H	137	38.5	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	118.3 PK			1.64 V	13	86.4	31.9
2	*2462.00	114.3 AV			1.64 V	13	82.4	31.9
3	2483.50	61.8 PK	74.0	-12.2	1.73 V	16	29.8	32.0
4	2483.50	52.5 AV	54.0	-1.5	1.73 V	16	20.5	32.0
5	4924.00	54.1 PK	74.0	-19.9	3.26 V	97	50.3	3.8
6	4924.00	47.0 AV	54.0	-7.0	3.26 V	97	43.2	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	70.1 PK	74.0	-3.9	1.73 H	7	38.2	31.9
2	**2390.00**	**53.4 AV**	**54.0**	**-0.6**	**1.73 H**	**7**	**21.5**	**31.9**
3	*2412.00	116.5 PK			1.71 H	4	84.6	31.9
4	*2412.00	106.5 AV			1.71 H	4	74.6	31.9
5	4824.00	51.6 PK	74.0	-22.4	3.57 H	128	47.8	3.8
6	4824.00	38.3 AV	54.0	-15.7	3.57 H	128	34.5	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.3 PK	74.0	-8.7	1.69 V	11	33.4	31.9
2	2390.00	52.3 AV	54.0	-1.7	1.69 V	11	20.4	31.9
3	*2412.00	114.7 PK			1.74 V	15	82.8	31.9
4	*2412.00	104.7 AV			1.74 V	15	72.8	31.9
5	4824.00	54.2 PK	74.0	-19.8	3.22 V	107	50.4	3.8
6	4824.00	40.1 AV	54.0	-13.9	3.22 V	107	36.3	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	124.4 PK			1.63 H	8	92.5	31.9
2	*2437.00	114.1 AV			1.63 H	8	82.2	31.9
3	4874.00	57.0 PK	74.0	-17.0	3.46 H	129	53.2	3.8
4	4874.00	42.9 AV	54.0	-11.1	3.46 H	129	39.1	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	122.7 PK			1.79 V	11	90.8	31.9
2	*2437.00	112.4 AV			1.79 V	11	80.5	31.9
3	4874.00	59.0 PK	74.0	-15.0	3.23 V	114	55.2	3.8
4	4874.00	45.1 AV	54.0	-8.9	3.23 V	114	41.3	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	116.0 PK			1.54 H	5	84.1	31.9
2	*2462.00	106.0 AV			1.54 H	5	74.1	31.9
3	2483.50	66.9 PK	74.0	-7.1	1.70 H	6	34.9	32.0
4	2483.50	53.2 AV	54.0	-0.8	1.70 H	6	21.2	32.0
5	4924.00	52.6 PK	74.0	-21.4	3.52 H	136	48.8	3.8
6	4924.00	38.5 AV	54.0	-15.5	3.52 H	136	34.7	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.2 PK			1.67 V	9	82.3	31.9
2	*2462.00	104.2 AV			1.67 V	9	72.3	31.9
3	2483.50	65.7 PK	74.0	-8.3	1.73 V	17	33.7	32.0
4	2483.50	52.1 AV	54.0	-1.9	1.73 V	17	20.1	32.0
5	4924.00	54.3 PK	74.0	-19.7	3.07 V	116	50.5	3.8
6	4924.00	39.7 AV	54.0	-14.3	3.07 V	116	35.9	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	67.1 PK	74.0	-6.9	1.71 H	1	35.2	31.9
2	2390.00	52.8 AV	54.0	-1.2	1.71 H	1	20.9	31.9
3	*2412.00	117.0 PK			1.68 H	8	85.1	31.9
4	*2412.00	106.5 AV			1.68 H	8	74.6	31.9
5	4824.00	46.4 PK	74.0	-27.6	3.42 H	121	42.6	3.8
6	4824.00	35.0 AV	54.0	-19.0	3.42 H	121	31.2	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.5 PK	74.0	-7.5	1.76 V	14	34.6	31.9
2	2390.00	52.1 AV	54.0	-1.9	1.76 V	14	20.2	31.9
3	*2412.00	115.0 PK			1.69 V	10	83.1	31.9
4	*2412.00	104.6 AV			1.69 V	10	72.7	31.9
5	4824.00	47.6 PK	74.0	-26.4	3.19 V	102	43.8	3.8
6	4824.00	36.3 AV	54.0	-17.7	3.19 V	102	32.5	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	68.8 PK	74.0	-5.2	1.71 H	1	36.9	31.9
2	2390.00	52.7 AV	54.0	-1.3	1.71 H	1	20.8	31.9
3	*2437.00	123.8 PK			1.75 H	6	91.9	31.9
4	*2437.00	113.5 AV			1.75 H	6	81.6	31.9
5	4874.00	52.6 PK	74.0	-21.4	3.47 H	125	48.8	3.8
6	4874.00	39.9 AV	54.0	-14.1	3.47 H	125	36.1	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.3 PK	74.0	-6.7	1.74 V	15	35.4	31.9
2	2390.00	52.3 AV	54.0	-1.7	1.74 V	15	20.4	31.9
3	*2437.00	122.1 PK			1.70 V	13	90.2	31.9
4	*2437.00	111.7 AV			1.70 V	13	79.8	31.9
5	4874.00	54.5 PK	74.0	-19.5	3.05 V	102	50.7	3.8
6	4874.00	41.5 AV	54.0	-12.5	3.05 V	102	37.7	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	116.6 PK			1.76 H	6	84.7	31.9
2	*2462.00	106.2 AV			1.76 H	6	74.3	31.9
3	2483.50	68.5 PK	74.0	-5.5	1.70 H	4	36.5	32.0
4	2483.50	53.2 AV	54.0	-0.8	1.70 H	4	21.2	32.0
5	4924.00	47.3 PK	74.0	-26.7	3.57 H	135	43.5	3.8
6	4924.00	36.1 AV	54.0	-17.9	3.57 H	135	32.3	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.8 PK			1.82 V	16	82.9	31.9
2	*2462.00	104.5 AV			1.82 V	16	72.6	31.9
3	2483.50	67.5 PK	74.0	-6.5	1.76 V	18	35.5	32.0
4	2483.50	52.5 AV	54.0	-1.5	1.76 V	18	20.5	32.0
5	4924.00	49.1 PK	74.0	-24.9	3.26 V	117	45.3	3.8
6	4924.00	37.7 AV	54.0	-16.3	3.26 V	117	33.9	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	69.1 PK	74.0	-4.9	1.86 H	8	37.2	31.9
2	2390.00	52.9 AV	54.0	-1.1	1.86 H	8	21.0	31.9
3	*2422.00	113.3 PK			1.65 H	6	81.4	31.9
4	*2422.00	103.5 AV			1.65 H	6	71.6	31.9
5	4844.00	45.6 PK	74.0	-28.4	3.52 H	136	41.9	3.7
6	4844.00	34.4 AV	54.0	-19.6	3.52 H	136	30.7	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.4 PK	74.0	-5.6	1.69 V	8	36.5	31.9
2	2390.00	52.2 AV	54.0	-1.8	1.69 V	8	20.3	31.9
3	*2422.00	111.5 PK			1.71 V	14	79.6	31.9
4	*2422.00	101.8 AV			1.71 V	14	69.9	31.9
5	4844.00	47.3 PK	74.0	-26.7	3.19 V	92	43.6	3.7
6	4844.00	36.1 AV	54.0	-17.9	3.19 V	92	32.4	3.7

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	114.2 PK			1.73 H	4	82.3	31.9
2	*2437.00	104.6 AV			1.73 H	4	72.7	31.9
3	2483.50	68.7 PK	74.0	-5.3	1.72 H	6	36.7	32.0
4	2483.50	53.1 AV	54.0	-0.9	1.72 H	6	21.1	32.0
5	4874.00	49.7 PK	74.0	-24.3	3.42 H	133	45.9	3.8
6	4874.00	35.5 AV	54.0	-18.5	3.42 H	133	31.7	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	112.7 PK			1.75 V	14	80.8	31.9
2	*2437.00	103.1 AV			1.75 V	14	71.2	31.9
3	2483.50	67.8 PK	74.0	-6.2	1.70 V	11	35.8	32.0
4	2483.50	52.2 AV	54.0	-1.8	1.70 V	11	20.2	32.0
5	4874.00	51.4 PK	74.0	-22.6	3.12 V	95	47.6	3.8
6	4874.00	36.9 AV	54.0	-17.1	3.12 V	95	33.1	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	112.7 PK			1.66 H	5	80.8	31.9
2	*2452.00	102.4 AV			1.66 H	5	70.5	31.9
3	2483.50	69.0 PK	74.0	-5.0	1.76 H	4	37.0	32.0
4	2483.50	53.1 AV	54.0	-0.9	1.76 H	4	21.1	32.0
5	4904.00	46.1 PK	74.0	-27.9	3.07 H	112	42.4	3.7
6	4904.00	35.2 AV	54.0	-18.8	3.07 H	112	31.5	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	*2452.00	110.5 PK			1.77 V	13	78.6	31.9
2	*2452.00	100.7 AV			1.77 V	13	68.8	31.9
3	2483.50	68.3 PK	74.0	-5.7	1.70 V	7	36.3	32.0
4	2483.50	52.2 AV	54.0	-1.8	1.70 V	7	20.2	32.0
5	4904.00	47.6 PK	74.0	-26.4	3.22 V	109	43.9	3.7
6	4904.00	36.4 AV	54.0	-17.6	3.22 V	109	32.7	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.

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	61.9 PK	74.0	-12.1	1.49 H	14	30.0	31.9
2	2390.00	53.2 AV	54.0	-0.8	1.49 H	14	21.3	31.9
3	*2412.00	120.4 PK			1.53 H	8	88.5	31.9
4	*2412.00	116.4 AV			1.53 H	8	84.5	31.9
5	4824.00	51.0 PK	74.0	-23.0	3.44 H	184	47.2	3.8
6	4824.00	44.6 AV	54.0	-9.4	3.44 H	184	40.8	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.6 PK	74.0	-12.4	1.57 V	16	29.7	31.9
2	2390.00	52.5 AV	54.0	-1.5	1.57 V	16	20.6	31.9
3	*2412.00	118.6 PK			1.64 V	10	86.7	31.9
4	*2412.00	114.6 AV			1.64 V	10	82.7	31.9
5	4824.00	51.7 PK	74.0	-22.3	3.89 V	188	47.9	3.8
6	4824.00	46.1 AV	54.0	-7.9	3.89 V	188	42.3	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	123.7 PK			1.52 H	2	91.8	31.9
2	*2437.00	119.7 AV			1.52 H	2	87.8	31.9
3	4874.00	56.2 PK	74.0	-17.8	3.62 H	148	52.4	3.8
4	4874.00	51.0 AV	54.0	-3.0	3.62 H	148	47.2	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	121.8 PK			1.58 V	11	89.9	31.9
2	*2437.00	117.8 AV			1.58 V	11	85.9	31.9
3	4874.00	57.6 PK	74.0	-16.4	3.79 V	183	53.8	3.8
4	4874.00	52.5 AV	54.0	-1.5	3.79 V	183	48.7	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	119.5 PK			1.68 H	12	87.6	31.9
2	*2462.00	115.4 AV			1.68 H	12	83.5	31.9
3	2483.50	65.2 PK	74.0	-8.8	1.69 H	2	33.2	32.0
4	2483.50	53.2 AV	54.0	-0.8	1.69 H	2	21.2	32.0
5	4924.00	52.1 PK	74.0	-21.9	3.52 H	188	48.3	3.8
6	4924.00	45.2 AV	54.0	-8.8	3.52 H	188	41.4	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	117.7 PK			1.62 V	9	85.8	31.9
2	*2462.00	113.6 AV			1.62 V	9	81.7	31.9
3	2483.50	63.9 PK	74.0	-10.1	1.57 V	13	31.9	32.0
4	2483.50	52.4 AV	54.0	-1.6	1.57 V	13	20.4	32.0
5	4924.00	53.5 PK	74.0	-20.5	3.81 V	178	49.7	3.8
6	4924.00	46.6 AV	54.0	-7.4	3.81 V	178	42.8	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	65.2 PK	74.0	-8.8	1.70 H	3	33.3	31.9
2	2390.00	53.1 AV	54.0	-0.9	1.70 H	3	21.2	31.9
3	*2412.00	116.4 PK			1.56 H	3	84.5	31.9
4	*2412.00	106.4 AV			1.56 H	3	74.5	31.9
5	4824.00	52.5 PK	74.0	-21.5	2.26 H	167	48.7	3.8
6	4824.00	38.4 AV	54.0	-15.6	2.26 H	167	34.6	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.6 PK	74.0	-10.4	1.62 V	16	31.7	31.9
2	2390.00	52.2 AV	54.0	-1.8	1.62 V	16	20.3	31.9
3	*2412.00	114.6 PK			1.68 V	13	82.7	31.9
4	*2412.00	104.5 AV			1.68 V	13	72.6	31.9
5	4824.00	54.0 PK	74.0	-20.0	3.16 V	179	50.2	3.8
6	4824.00	39.8 AV	54.0	-14.2	3.16 V	179	36.0	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	124.3 PK			1.55 H	3	92.4	31.9
2	*2437.00	113.9 AV			1.55 H	3	82.0	31.9
3	4874.00	57.2 PK	74.0	-16.8	1.83 H	172	53.4	3.8
4	4874.00	43.1 AV	54.0	-10.9	1.83 H	172	39.3	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	122.4 PK			1.63 V	11	90.5	31.9
2	*2437.00	112.1 AV			1.63 V	11	80.2	31.9
3	4874.00	58.6 PK	74.0	-15.4	3.37 V	186	54.8	3.8
4	4874.00	44.7 AV	54.0	-9.3	3.37 V	186	40.9	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	115.6 PK			1.74 H	358	83.7	31.9
2	*2462.00	105.7 AV			1.74 H	358	73.8	31.9
3	2483.50	68.1 PK	74.0	-5.9	1.68 H	2	36.1	32.0
4	2483.50	52.8 AV	54.0	-1.2	1.68 H	2	20.8	32.0
5	4924.00	52.3 PK	74.0	-21.7	2.37 H	163	48.5	3.8
6	4924.00	38.2 AV	54.0	-15.8	2.37 H	163	34.4	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.9 PK			1.69 V	14	82.0	31.9
2	*2462.00	103.8 AV			1.69 V	14	71.9	31.9
3	2483.50	66.8 PK	74.0	-7.2	1.60 V	7	34.8	32.0
4	2483.50	51.9 AV	54.0	-2.1	1.60 V	7	19.9	32.0
5	4924.00	54.1 PK	74.0	-19.9	3.63 V	192	50.3	3.8
6	4924.00	39.6 AV	54.0	-14.4	3.63 V	192	35.8	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	67.5 PK	74.0	-6.5	1.84 H	1	35.6	31.9
2	2390.00	53.1 AV	54.0	-0.9	1.84 H	1	21.2	31.9
3	*2412.00	116.7 PK			1.59 H	4	84.8	31.9
4	*2412.00	106.2 AV			1.59 H	4	74.3	31.9
5	4824.00	46.1 PK	74.0	-27.9	2.37 H	172	42.3	3.8
6	4824.00	34.6 AV	54.0	-19.4	2.37 H	172	30.8	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.6 PK	74.0	-7.4	1.63 V	10	34.7	31.9
2	2390.00	52.3 AV	54.0	-1.7	1.63 V	10	20.4	31.9
3	*2412.00	114.7 PK			1.67 V	12	82.8	31.9
4	*2412.00	104.3 AV			1.67 V	12	72.4	31.9
5	4824.00	47.4 PK	74.0	-26.6	3.76 V	177	43.6	3.8
6	4824.00	36.1 AV	54.0	-17.9	3.76 V	177	32.3	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	123.3 PK			1.73 H	4	91.4	31.9
2	*2437.00	112.9 AV			1.73 H	4	81.0	31.9
3	2483.50	69.2 PK	74.0	-4.8	1.69 H	6	37.2	32.0
4	2483.50	53.1 AV	54.0	-0.9	1.69 H	6	21.1	32.0
5	4874.00	52.1 PK	74.0	-21.9	2.56 H	164	48.3	3.8
6	4874.00	39.2 AV	54.0	-14.8	2.56 H	164	35.4	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	121.4 PK			1.73 V	16	89.5	31.9
2	*2437.00	111.1 AV			1.73 V	16	79.2	31.9
3	2483.50	67.8 PK	74.0	-6.2	1.66 V	11	35.8	32.0
4	2483.50	52.5 AV	54.0	-1.5	1.66 V	11	20.5	32.0
5	4874.00	54.1 PK	74.0	-19.9	3.64 V	171	50.3	3.8
6	4874.00	41.1 AV	54.0	-12.9	3.64 V	171	37.3	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	115.2 PK			1.78 H	10	83.3	31.9
2	*2462.00	104.9 AV			1.78 H	10	73.0	31.9
3	2483.50	67.6 PK	74.0	-6.4	1.68 H	4	35.6	32.0
4	2483.50	52.9 AV	54.0	-1.1	1.68 H	4	20.9	32.0
5	4924.00	46.6 PK	74.0	-27.4	2.29 H	184	42.8	3.8
6	4924.00	35.1 AV	54.0	-18.9	2.29 H	184	31.3	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.6 PK			1.73 V	15	81.7	31.9
2	*2462.00	103.2 AV			1.73 V	15	71.3	31.9
3	2483.50	66.6 PK	74.0	-7.4	1.62 V	17	34.6	32.0
4	2483.50	52.2 AV	54.0	-1.8	1.62 V	17	20.2	32.0
5	4924.00	47.9 PK	74.0	-26.1	3.82 V	164	44.1	3.8
6	4924.00	36.5 AV	54.0	-17.5	3.82 V	164	32.7	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	69.7 PK	74.0	-4.3	1.82 H	8	37.8	31.9
2	2390.00	53.2 AV	54.0	-0.8	1.82 H	8	21.3	31.9
3	*2422.00	112.7 PK			1.61 H	9	80.8	31.9
4	*2422.00	103.0 AV			1.61 H	9	71.1	31.9
5	4844.00	45.4 PK	74.0	-28.6	2.63 H	169	41.7	3.7
6	4844.00	34.1 AV	54.0	-19.9	2.63 H	169	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	2390.00	68.6 PK	74.0	-5.4	1.67 V	8	36.7	31.9
2	2390.00	52.3 AV	54.0	-1.7	1.67 V	8	20.4	31.9
3	*2422.00	110.9 PK			1.73 V	13	79.0	31.9
4	*2422.00	101.2 AV			1.73 V	13	69.3	31.9
5	4844.00	46.9 PK	74.0	-27.1	3.59 V	176	43.2	3.7
6	4844.00	35.5 AV	54.0	-18.5	3.59 V	176	31.8	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	113.7 PK			1.54 H	1	81.8	31.9
2	*2437.00	104.1 AV			1.54 H	1	72.2	31.9
3	2483.50	68.5 PK	74.0	-5.5	1.71 H	8	36.5	32.0
4	2483.50	53.2 AV	54.0	-0.8	1.71 H	8	21.2	32.0
5	4874.00	49.5 PK	74.0	-24.5	2.33 H	182	45.7	3.8
6	4874.00	35.2 AV	54.0	-18.8	2.33 H	182	31.4	3.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	112.0 PK			1.62 V	11	80.1	31.9
2	*2437.00	102.4 AV			1.62 V	11	70.5	31.9
3	2483.50	67.7 PK	74.0	-6.3	1.57 V	9	35.7	32.0
4	2483.50	52.2 AV	54.0	-1.8	1.57 V	9	20.2	32.0
5	4874.00	51.1 PK	74.0	-22.9	3.69 V	180	47.3	3.8
6	4874.00	36.5 AV	54.0	-17.5	3.69 V	180	32.7	3.8

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	112.2 PK			1.72 H	5	80.3	31.9
2	*2452.00	102.2 AV			1.72 H	5	70.3	31.9
3	2483.50	69.2 PK	74.0	-4.8	1.74 H	359	37.2	32.0
4	2483.50	53.3 AV	54.0	-0.7	1.74 H	359	21.3	32.0
5	4904.00	46.0 PK	74.0	-28.0	2.26 H	178	42.3	3.7
6	4904.00	35.0 AV	54.0	-19.0	2.26 H	178	31.3	3.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	110.1 PK			1.67 V	13	78.2	31.9
2	*2452.00	100.3 AV			1.67 V	13	68.4	31.9
3	2483.50	68.4 PK	74.0	-5.6	1.60 V	9	36.4	32.0
4	2483.50	52.4 AV	54.0	-1.6	1.60 V	9	20.4	32.0
5	4904.00	47.4 PK	74.0	-26.6	3.56 V	177	43.7	3.7
6	4904.00	46.3 AV	54.0	-7.7	3.56 V	177	42.6	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.

Below 1GHz worst-case data:

Test Mode A

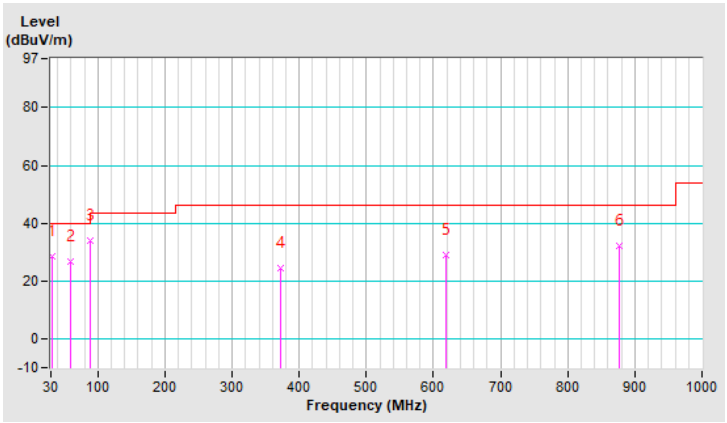
802.11b

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	31.94	28.7 QP	40.0	-11.3	1.00 H	91	40.1	-11.4
2	60.07	26.7 QP	40.0	-13.3	1.25 H	304	37.1	-10.4
3	88.20	34.0 QP	43.5	-9.5	1.00 H	3	48.9	-14.9
4	372.41	24.4 QP	46.0	-21.6	1.50 H	87	30.6	-6.2
5	617.82	28.8 QP	46.0	-17.2	1.25 H	152	30.5	-1.7
6	875.84	32.3 QP	46.0	-13.7	1.00 H	101	29.6	2.7

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. 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.

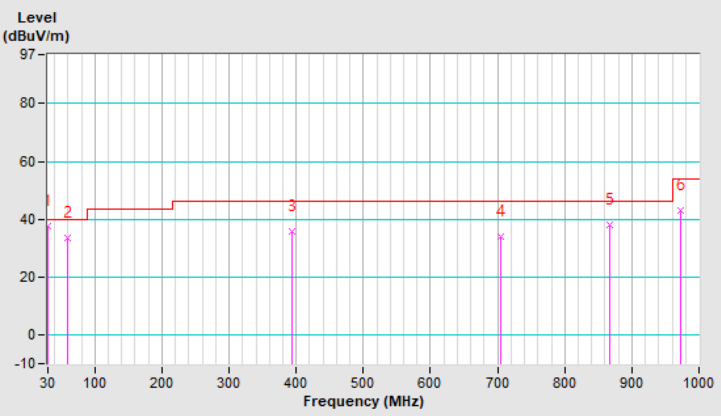


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	30.00	37.4 QP	40.0	-2.6	1.25 V	281	48.7	-11.3
2	60.07	33.7 QP	40.0	-6.3	1.00 V	51	44.1	-10.4
3	394.72	35.7 QP	46.0	-10.3	1.50 V	11	41.6	-5.9
4	705.12	33.8 QP	46.0	-12.2	1.25 V	356	34.2	-0.4
5	867.11	38.0 QP	46.0	-8.0	1.00 V	354	35.5	2.5
6	971.87	42.9 QP	54.0	-11.1	1.25 V	343	38.0	4.9

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

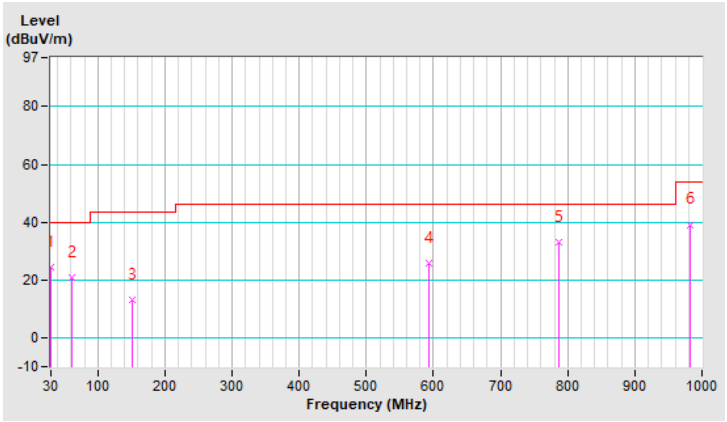
802.11b

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	30.00	24.4 QP	40.0	-15.6	1.25 H	165	35.7	-11.3
2	62.01	20.8 QP	40.0	-19.2	1.00 H	30	31.3	-10.5
3	152.22	13.0 QP	43.5	-30.5	1.50 H	26	22.2	-9.2
4	593.57	26.0 QP	46.0	-20.0	1.25 H	15	28.0	-2.0
5	787.57	32.9 QP	46.0	-13.1	1.00 H	103	31.4	1.5
6	982.54	39.2 QP	54.0	-14.8	1.00 H	26	34.2	5.0

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.

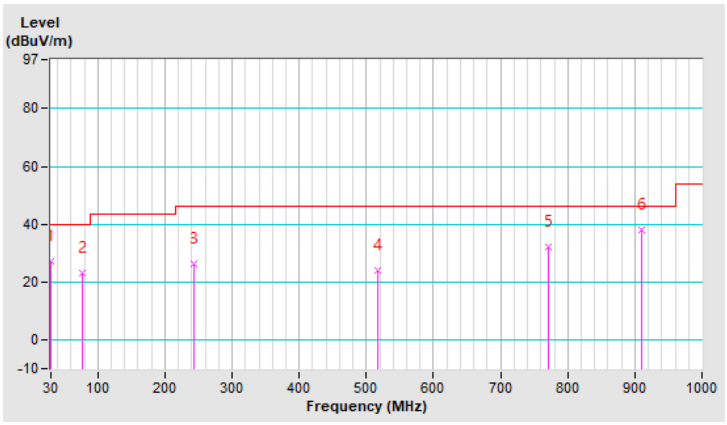


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	30.97	27.3 QP	40.0	-12.7	1.25 V	18	39.1	-11.8
2	76.56	23.0 QP	40.0	-17.0	1.00 V	98	36.2	-13.2
3	242.43	26.4 QP	46.0	-19.6	1.50 V	130	36.7	-10.3
4	517.91	24.1 QP	46.0	-21.9	1.00 V	163	27.4	-3.3
5	771.08	32.2 QP	46.0	-13.8	1.50 V	318	30.9	1.3
6	909.79	38.2 QP	46.0	-7.8	1.25 V	286	34.4	3.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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

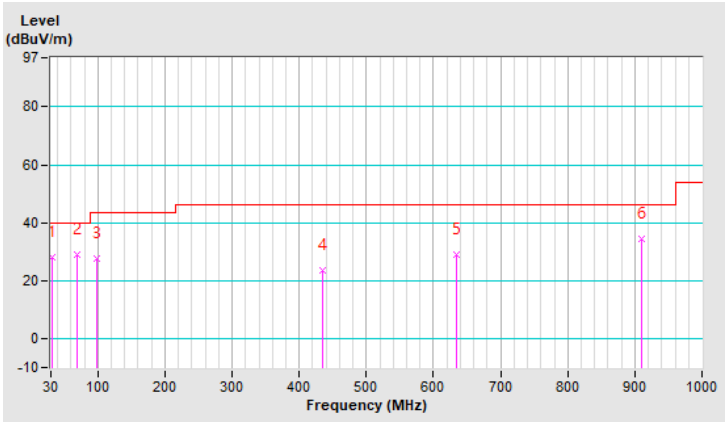
802.11b

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	31.94	28.0 QP	40.0	-12.0	1.00 H	76	39.4	-11.4
2	69.77	28.9 QP	40.0	-11.1	1.00 H	177	40.4	-11.5
3	97.90	27.8 QP	43.5	-15.7	1.25 H	235	42.0	-14.2
4	434.49	23.7 QP	46.0	-22.3	1.25 H	331	28.5	-4.8
5	633.34	28.9 QP	46.0	-17.1	1.50 H	251	30.3	-1.4
6	909.79	34.6 QP	46.0	-11.4	1.00 H	168	30.8	3.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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.

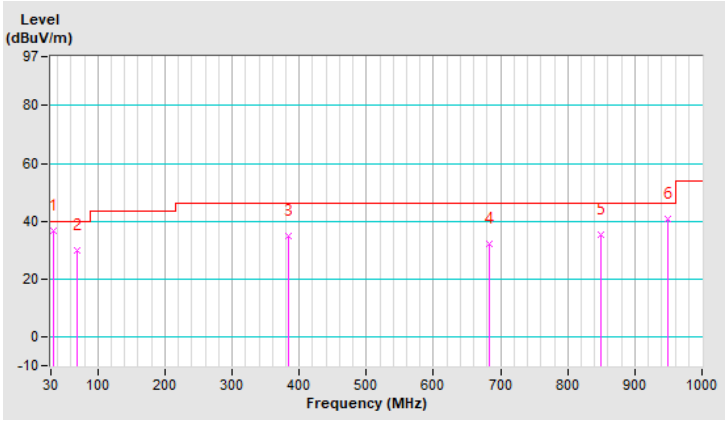


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	33.88	36.6 QP	40.0	-3.4	1.00 V	120	47.9	-11.3
2	69.77	29.7 QP	40.0	-10.3	1.50 V	290	41.2	-11.5
3	383.08	35.0 QP	46.0	-11.0	1.25 V	8	41.0	-6.0
4	683.78	32.2 QP	46.0	-13.8	1.00 V	7	33.0	-0.8
5	849.65	35.4 QP	46.0	-10.6	1.00 V	343	33.2	2.2
6	949.56	41.0 QP	46.0	-5.0	1.25 V	351	36.5	4.5

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. 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

Test Date: Dec. 12, 2019 ~ Feb. 03, 2020

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 11, 2019	Dec. 10, 2020
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.

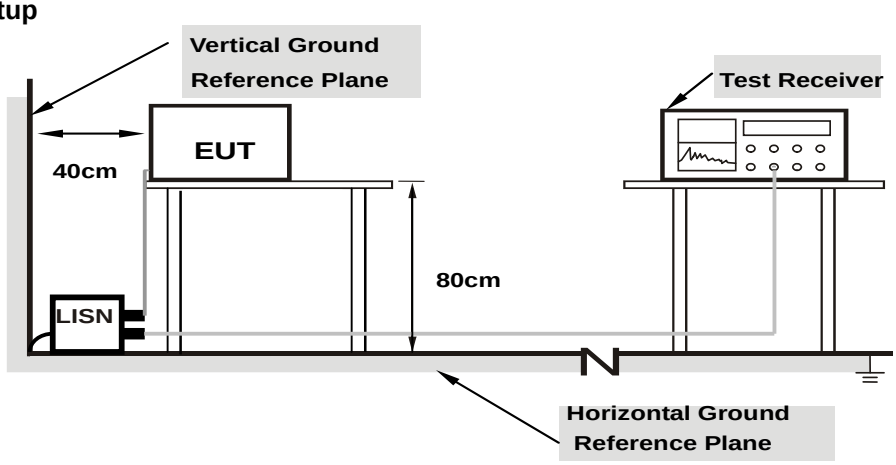
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

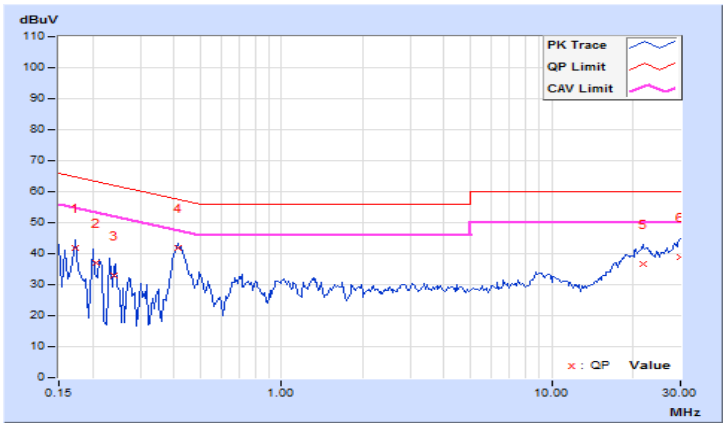
Test Mode A

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

No	Freq.	Corr. Factor	Reading Value		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	0.17344	9.67	32.09	24.14	41.76	33.81	64.79	54.79	-23.03	-20.98
2	0.20589	9.66	27.29	19.81	36.95	29.47	63.37	53.37	-26.42	-23.90
3	0.24113	9.67	23.32	16.26	32.99	25.93	62.06	52.06	-29.07	-26.13
4	**0.41563**	**9.69**	**32.08**	**25.16**	**41.77**	**34.85**	**57.54**	**47.54**	**-15.77**	**-12.69**
5	21.79297	9.99	26.83	21.48	36.82	31.47	60.00	50.00	-23.18	-18.53
6	29.95703	10.01	28.96	23.59	38.97	33.60	60.00	50.00	-21.03	-16.40

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.

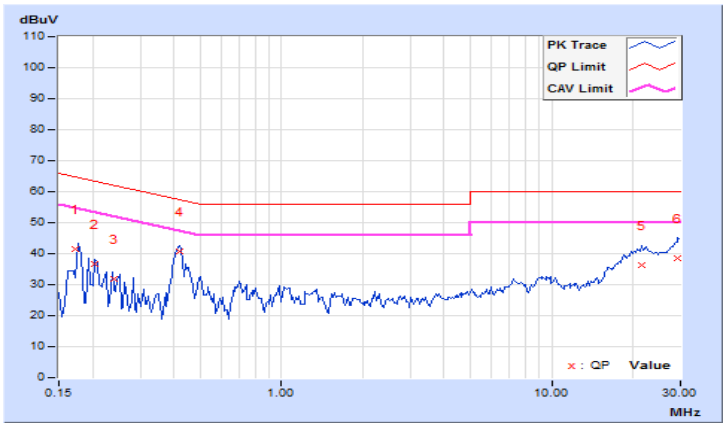


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.17223	9.64	31.89	22.99	41.53	32.63	64.85	54.85	-23.32	-22.22
2	0.20469	9.64	26.85	17.76	36.49	27.40	63.42	53.42	-26.93	-26.02
3	0.24103	9.64	22.34	13.59	31.98	23.23	62.06	52.06	-30.08	-28.83
4	0.41953	9.66	31.06	24.31	40.72	33.97	57.46	47.46	-16.74	-13.49
5	21.44922	10.06	26.39	21.17	36.45	31.23	60.00	50.00	-23.55	-18.77
6	29.34766	10.10	28.36	22.99	38.46	33.09	60.00	50.00	-21.54	-16.91

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.



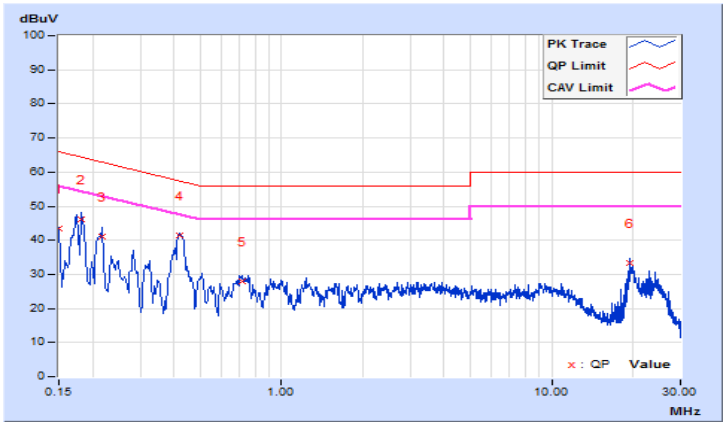
Test Mode B

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	0.15000	9.67	33.92	20.63	43.59	30.30	66.00	56.00	-22.41	-25.70
2	0.18200	9.66	36.32	24.40	45.98	34.06	64.39	54.39	-18.41	-20.33
3	0.21800	9.66	31.57	20.69	41.23	30.35	62.89	52.89	-21.66	-22.54
4	0.41799	9.69	31.61	23.83	41.30	33.52	57.49	47.49	-16.19	-13.97
5	0.71169	9.71	18.37	11.25	28.08	20.96	56.00	46.00	-27.92	-25.04
6	19.52600	9.98	23.22	20.25	33.20	30.23	60.00	50.00	-26.80	-19.77

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.

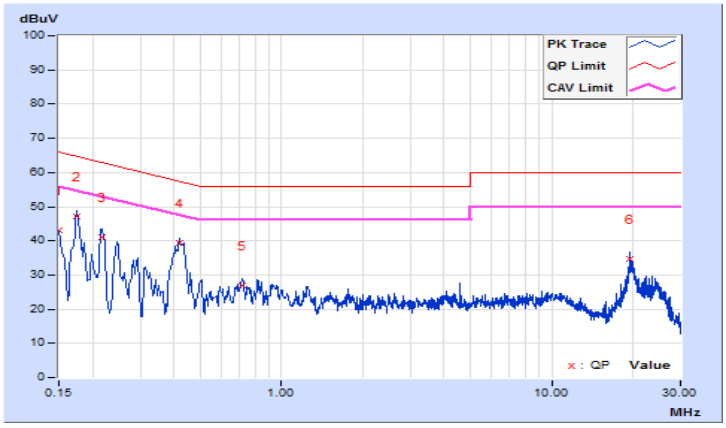


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	33.42	19.57	43.06	29.21	66.00	56.00	-22.94	-26.79
2	0.17400	9.64	37.58	25.85	47.22	35.49	64.77	54.77	-17.55	-19.28
3	0.21800	9.64	31.27	19.97	40.91	29.61	62.89	52.89	-21.98	-23.28
4	0.41799	9.66	29.90	22.07	39.56	31.73	57.49	47.49	-17.93	-15.76
5	0.71800	9.68	17.13	10.71	26.81	20.39	56.00	46.00	-29.19	-25.61
6	19.52600	10.04	24.57	21.46	34.61	31.50	60.00	50.00	-25.39	-18.50

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.



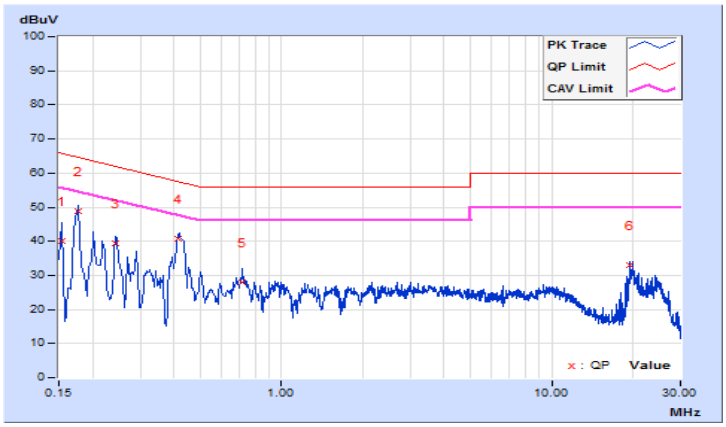
Test Mode C

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	0.15400	9.67	30.30	12.26	39.97	21.93	65.78	55.78	-25.81	-33.85
2	0.17708	9.66	39.02	29.07	48.68	38.73	64.62	54.62	-15.94	-15.89
3	0.24200	9.67	29.62	18.14	39.29	27.81	62.03	52.03	-22.74	-24.22
4	0.41689	9.69	31.19	23.01	40.88	32.70	57.51	47.51	-16.63	-14.81
5	0.71800	9.71	18.24	11.50	27.95	21.21	56.00	46.00	-28.05	-24.79
6	19.52236	9.98	22.99	20.48	32.97	30.46	60.00	50.00	-27.03	-19.54

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.

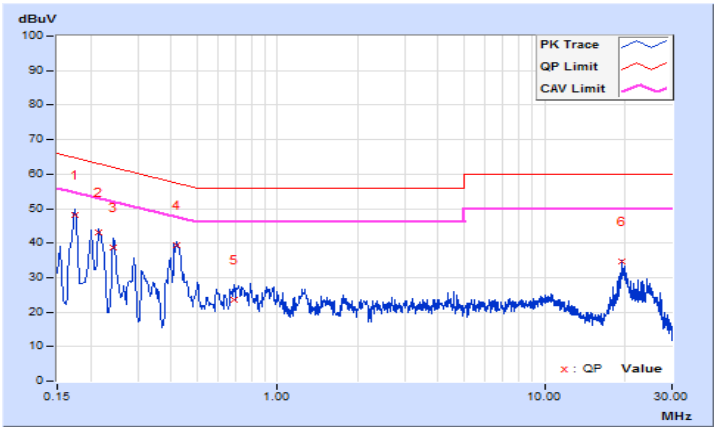


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.17400	9.64	38.53	26.56	48.17	36.20	64.77	54.77	-16.60	-18.57
2	0.21400	9.64	33.39	24.18	43.03	33.82	63.05	53.05	-20.02	-19.23
3	0.24200	9.64	28.94	16.97	38.58	26.61	62.03	52.03	-23.45	-25.42
4	0.42131	9.66	29.75	23.10	39.41	32.76	57.42	47.42	-18.01	-14.66
5	0.69000	9.68	14.01	7.68	23.69	17.36	56.00	46.00	-32.31	-28.64
6	19.52600	10.04	24.78	22.18	34.82	32.22	60.00	50.00	-25.18	-17.78

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.

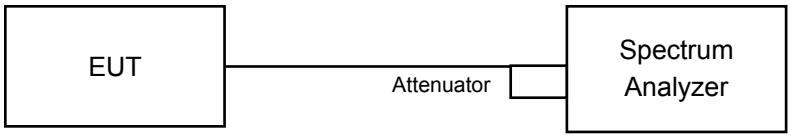


4.3 6dB Bandwidth Measurement

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	8.12	8.10	0.5	Pass
6	2437	8.13	8.13	0.5	Pass
11	2462	8.12	8.12	0.5	Pass

802.11g

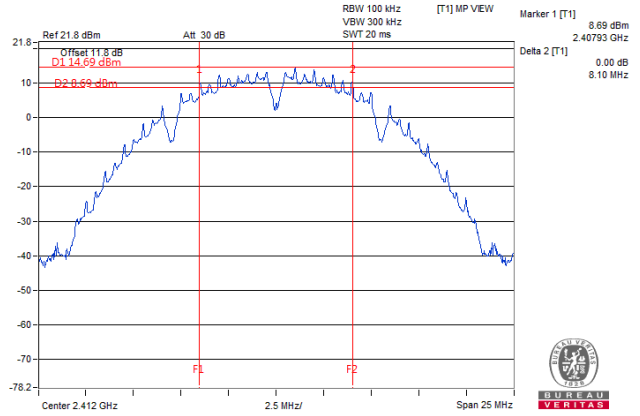
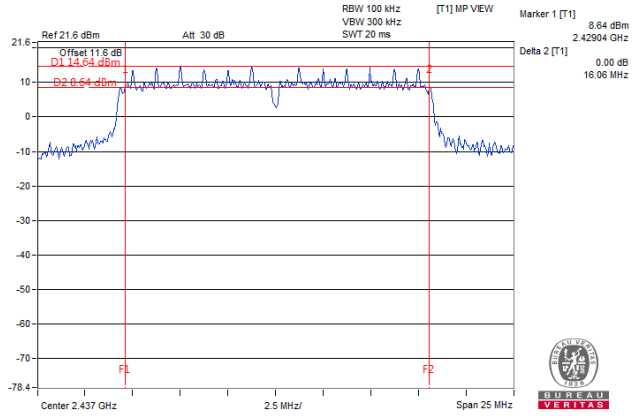
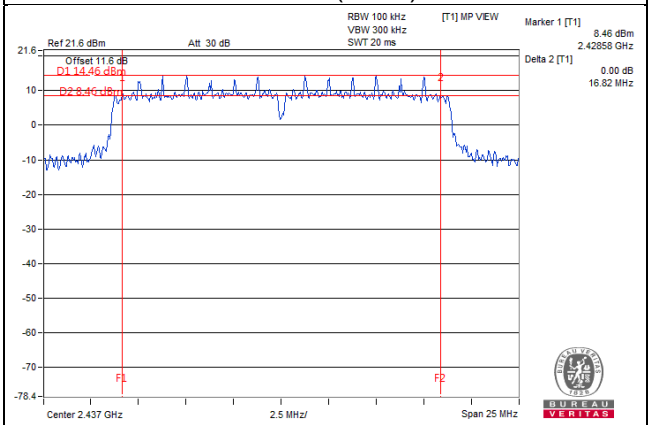
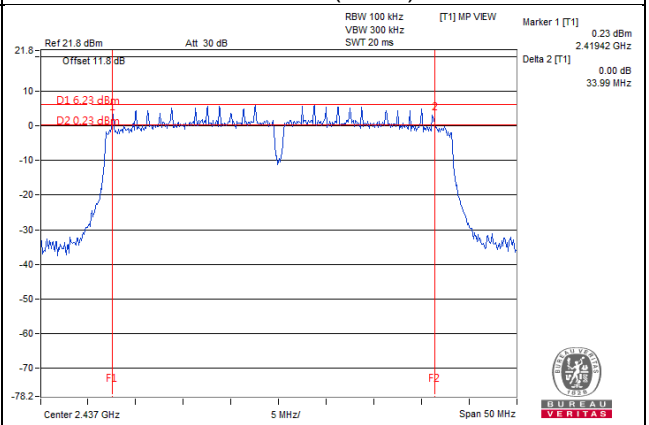
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.34	16.36	0.5	Pass
6	2437	16.06	16.34	0.5	Pass
11	2462	16.37	16.36	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.88	17.61	0.5	Pass
6	2437	16.82	16.84	0.5	Pass
11	2462	16.84	17.36	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.32	35.30	0.5	Pass
6	2437	35.19	33.99	0.5	Pass
9	2452	35.31	35.32	0.5	Pass

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

Test Mode B

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.11	8.09	0.5	Pass
6	2437	8.55	8.09	0.5	Pass
11	2462	8.10	8.09	0.5	Pass

802.11g

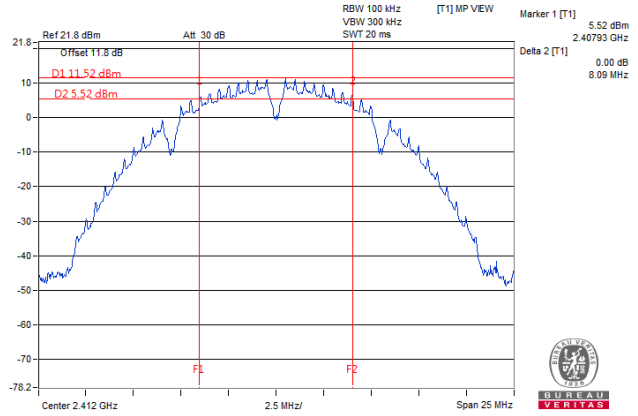
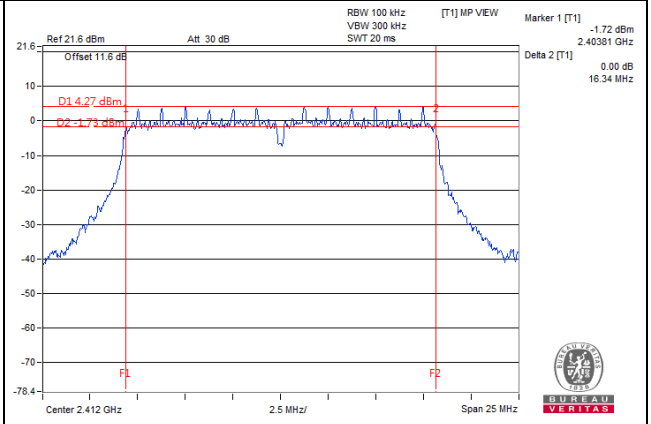
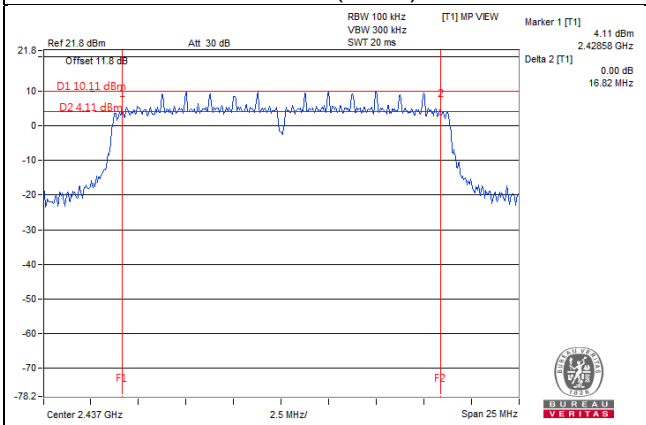
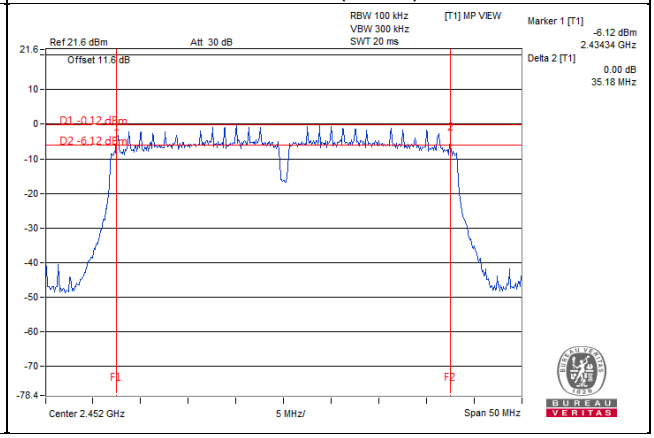
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.34	16.37	0.5	Pass
6	2437	16.34	16.36	0.5	Pass
11	2462	16.36	16.36	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.32	17.54	0.5	Pass
6	2437	17.33	16.82	0.5	Pass
11	2462	17.24	16.93	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.27	35.21	0.5	Pass
6	2437	35.26	35.18	0.5	Pass
9	2452	35.18	35.29	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	8.11	8.09	0.5	Pass
6	2437	8.55	8.09	0.5	Pass
11	2462	8.10	8.09	0.5	Pass

802.11g

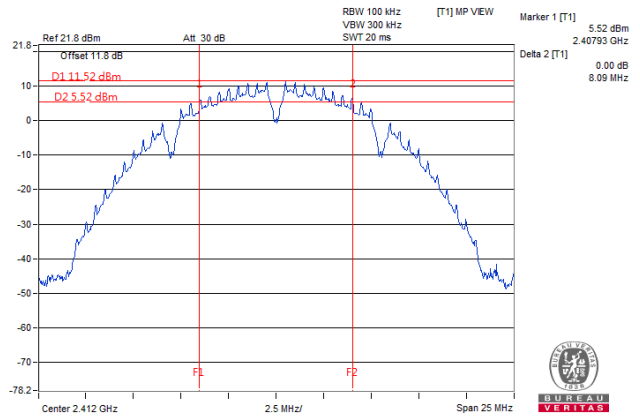
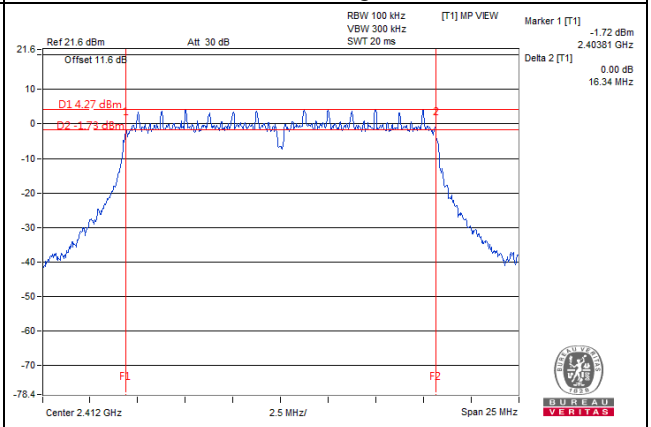
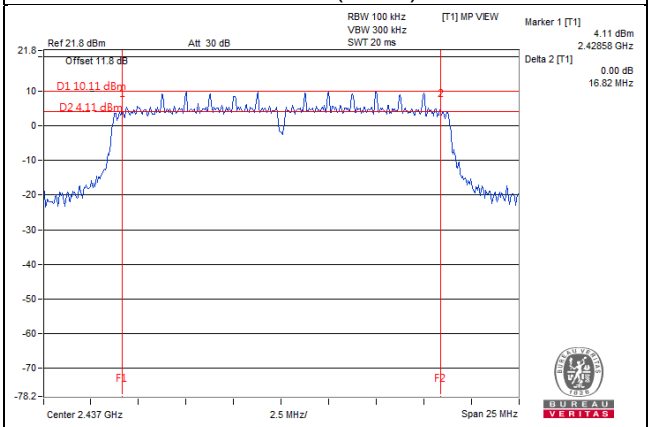
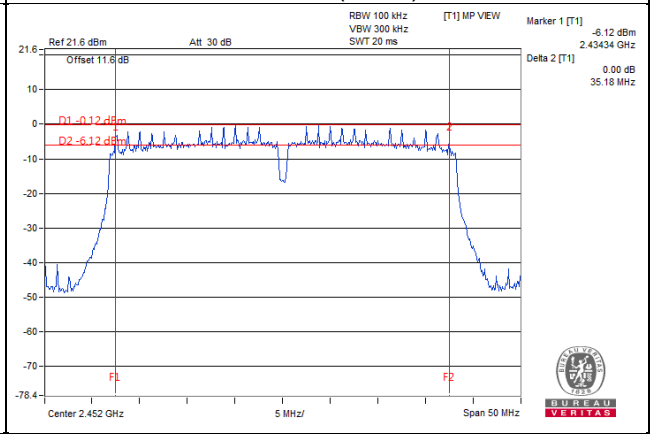
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.34	16.37	0.5	Pass
6	2437	16.34	16.36	0.5	Pass
11	2462	16.36	16.36	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.32	17.54	0.5	Pass
6	2437	17.33	16.82	0.5	Pass
11	2462	17.24	16.93	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.27	35.21	0.5	Pass
6	2437	35.26	35.18	0.5	Pass
9	2452	35.18	35.29	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

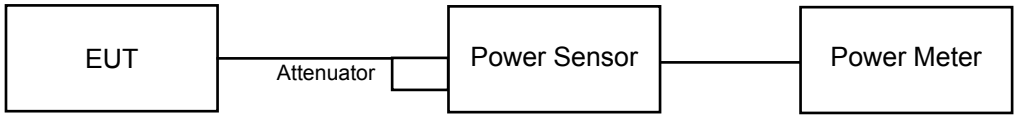
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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	21.53	22.62	325.043	25.12	30	Pass
6	2437	23.97	25.14	**576.047**	27.60	30	Pass
11	2462	21.43	22.58	320.129	25.05	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	16.23	17.07	92.909	19.68	30	Pass
6	2437	23.15	24.03	459.468	26.62	30	Pass
11	2462	15.24	16.11	74.252	18.71	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	15.04	16.03	72.002	18.57	30	Pass
6	2437	22.98	23.96	447.495	26.51	30	Pass
11	2462	14.93	16.11	71.949	18.57	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	14.57	15.42	63.476	18.03	30	Pass
6	2437	16.51	17.37	99.347	19.97	30	Pass
9	2452	14.63	15.46	64.196	18.08	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	15.04	16.03	72.002	18.57	29.79	Pass
6	2437	22.98	23.96	**447.495**	26.51	29.79	Pass
11	2462	14.93	16.11	71.949	18.57	29.79	Pass

Note: Directional gain = 3.20dBi +10log(2) = 6.21dBi>6dBi, so the limit shall be reduced to 30-(6.21-6) = 29.79dBm.

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	14.57	15.42	63.476	18.03	29.79	Pass
6	2437	16.51	17.37	99.347	19.97	29.79	Pass
9	2452	14.63	15.46	64.196	18.08	29.79	Pass

Note: Directional gain = 3.20dBi +10log(2) = 6.21dBi>6dBi, so the limit shall be reduced to 30-(6.21-6) = 29.79dBm.

Test Mode B

802.11b

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	20.21	21.06	232.598	23.67	24.00	Pass
6	2437	20.24	21.04	232.739	23.67	24.00	Pass
11	2462	20.23	21.54	248.000	23.94	24.00	Pass

Note: Gain: 12.0dBi >6dBi, so the limit shall be reduced to 30-(12.0-6) = 24.0dBm.

802.11g

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	16.15	16.53	86.188	19.35	24.00	Pass
6	2437	20.67	21.08	244.914	23.89	24.00	Pass
11	2462	14.75	15.63	66.413	18.22	24.00	Pass

Note: Gain: 12.0dBi >6dBi, so the limit shall be reduced to 30-(12.0-6) = 24.0dBm.

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	15.86	16.54	83.630	19.22	24.00	Pass
6	2437	20.76	21.14	**249.141**	23.96	24.00	Pass
11	2462	14.76	15.67	66.821	18.25	24.00	Pass

Note: Gain: 12.0dBi >6dBi, so the limit shall be reduced to 30-(12.0-6) = 24.0dBm.

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	15.01	15.77	69.453	18.42	24.00	Pass
6	2437	16.04	16.65	86.417	19.37	24.00	Pass
9	2452	14.08	14.53	53.965	17.32	24.00	Pass

Note: Gain: 12.0dBi >6dBi, so the limit shall be reduced to 30-(12.0-6) = 24.0dBm.

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	15.86	16.54	83.630	19.22	20.99	Pass
6	2437	17.76	18.14	**124.867**	20.96	20.99	Pass
11	2462	14.76	15.67	66.821	18.25	20.99	Pass

Note: Directional gain = 12.0dBi +10log(2) = 15.01dBi>6dBi, so the limit shall be reduced to 30-(15.01-6) = 20.99dBm.

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	15.01	15.77	69.453	18.42	20.99	Pass
6	2437	16.04	16.65	86.417	19.37	20.99	Pass
9	2452	14.08	14.53	53.965	17.32	20.99	Pass

Note: Directional gain = 12.0dBi +10log(2) = 15.01dBi>6dBi, so the limit shall be reduced to 30-(15.01-6) = 20.99dBm.

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	20.21	21.06	232.598	23.67	24.60	Pass
6	2437	20.24	21.04	232.739	23.67	24.60	Pass
11	2462	20.23	21.54	248.000	23.94	24.60	Pass

Note: Gain: 11.4dBi >6dBi, so the limit shall be reduced to 30-(11.4-6) = 24.6dBm.

802.11g

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	16.15	16.53	86.188	19.35	24.60	Pass
6	2437	20.67	21.08	244.914	23.89	24.60	Pass
11	2462	14.75	15.63	66.413	18.22	24.60	Pass

Note: Gain: 11.4dBi >6dBi, so the limit shall be reduced to 30-(11.4-6) = 24.6dBm.

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	15.86	16.54	83.630	19.22	24.60	Pass
6	2437	20.76	21.14	**249.141**	23.96	24.60	Pass
11	2462	14.76	15.67	66.821	18.25	24.60	Pass

Note: Gain: 11.4dBi >6dBi, so the limit shall be reduced to 30-(11.4-6) = 24.6dBm.

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	15.01	15.77	69.453	18.42	24.60	Pass
6	2437	16.04	16.65	86.417	19.37	24.60	Pass
9	2452	14.08	14.53	53.965	17.32	24.60	Pass

Note: Gain: 11.4dBi >6dBi, so the limit shall be reduced to 30-(11.4-6) = 24.6dBm.

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	15.86	16.54	83.630	19.22	21.59	Pass
6	2437	17.76	18.14	**124.867**	20.96	21.59	Pass
11	2462	14.76	15.67	66.821	18.25	21.59	Pass

Note: Directional gain = 11.4dBi +10log(2) = 14.41dBi>6dBi, so the limit shall be reduced to 30-(14.41-6) = 21.59dBm.

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	15.01	15.77	69.453	18.42	21.59	Pass
6	2437	16.04	16.65	86.417	19.37	21.59	Pass
9	2452	14.08	14.53	53.965	17.32	21.59	Pass

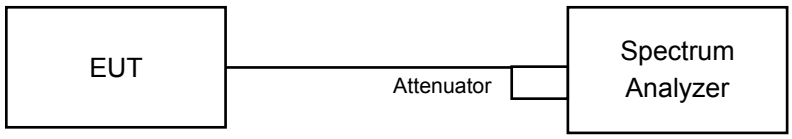
Note: Directional gain = 11.4dBi +10log(2) = 14.41dBi>6dBi, so the limit shall be reduced to 30-(14.41-6) = 21.59dBm.

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)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-5.16	-10.39	3.01	-7.38	7.79	Pass
	6	2437	-2.23	-7.46	3.01	-4.45	7.79	Pass
	11	2462	-5.26	-10.49	3.01	-7.48	7.79	Pass
1	1	2412	-4.02	-9.25	3.01	-6.24	7.79	Pass
	6	2437	-1.75	-6.98	3.01	-3.97	7.79	Pass
	11	2462	-3.97	-9.20	3.01	-6.19	7.79	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 3.2dBi +10log(2) = 6.21dBi>6dBi, so the power density limit shall be reduced to 8-(6.21-6) = 7.79dBm.

802.11g

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-12.28	-17.51	3.01	0.21	-14.29	7.79	Pass
	6	2437	-6.12	-11.35	3.01	0.21	-8.13	7.79	Pass
	11	2462	-13.44	-18.67	3.01	0.21	-15.45	7.79	Pass
1	1	2412	-11.39	-16.62	3.01	0.21	-13.40	7.79	Pass
	6	2437	-5.40	-10.63	3.01	0.21	-7.41	7.79	Pass
	11	2462	-12.18	-17.41	3.01	0.21	-14.19	7.79	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 3.2dBi +10log(2) = 6.21dBi>6dBi, so the power density limit shall be reduced to 8-(6.21-6) = 7.79dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

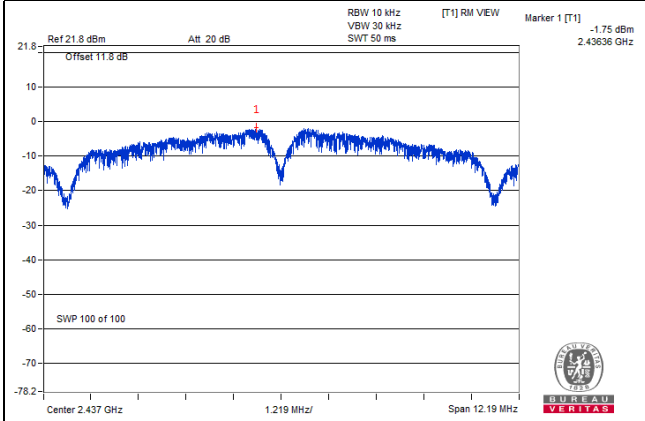
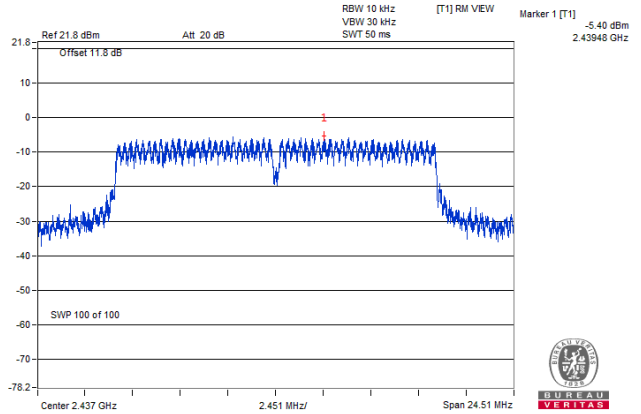
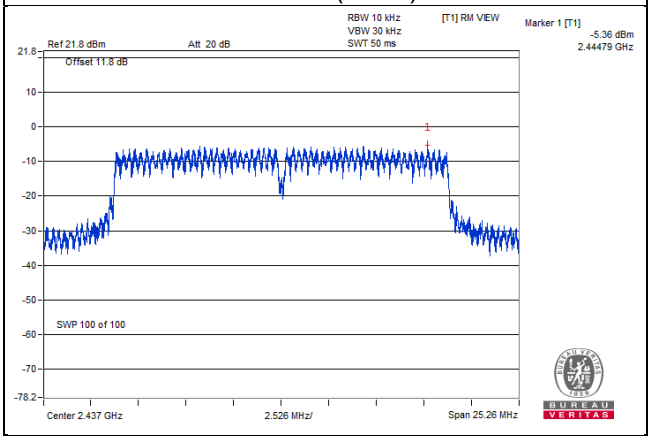
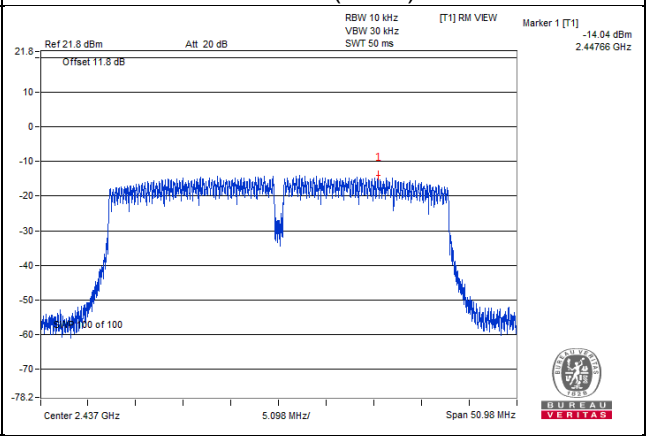
TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-13.11	-18.34	3.01	0.10	-15.23	7.79	Pass
	6	2437	-5.70	-10.93	3.01	0.10	-7.82	7.79	Pass
	11	2462	-12.85	-18.08	3.01	0.10	-14.97	7.79	Pass
1	1	2412	-11.94	-17.17	3.01	0.10	-14.06	7.79	Pass
	6	2437	-5.36	-10.59	3.01	0.10	-7.48	7.79	Pass
	11	2462	-11.80	-17.03	3.01	0.10	-13.92	7.79	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 3.2dBi +10log(2) = 6.21dBi>6dBi, so the power density limit shall be reduced to 8-(6.21-6) = 7.79dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-16.49	-21.72	3.01	0.18	-18.53	7.79	Pass
	6	2437	-14.49	-19.72	3.01	0.18	-16.53	7.79	Pass
	9	2452	-17.08	-22.31	3.01	0.18	-19.12	7.79	Pass
1	3	2422	-15.69	-20.92	3.01	0.18	-17.73	7.79	Pass
	6	2437	-14.04	-19.27	3.01	0.18	-16.08	7.79	Pass
	9	2452	-16.14	-21.37	3.01	0.18	-18.18	7.79	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 3.2dBi +10log(2) = 6.21dBi>6dBi, so the power density limit shall be reduced to 8-(6.21-6) = 7.79dBm.
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 B

802.11b

TX chain	Chan.	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-8.80	-14.03	3.01	-11.02	-1.01	Pass
	6	2437	-9.07	-14.30	3.01	-11.29	-1.01	Pass
	11	2462	-9.28	-14.51	3.01	-11.50	-1.01	Pass
1	1	2412	-8.44	-13.67	3.01	-10.66	-1.01	Pass
	6	2437	-8.81	-14.04	3.01	-11.03	-1.01	Pass
	11	2462	-8.52	-13.75	3.01	-10.74	-1.01	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 12.0dBi +10log(2) = 15.01dBi>6dBi, so the power density limit shall be reduced to 8-(15.01-6) = -1.01dBm.

802.11g

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-15.75	-20.98	3.01	0.18	-17.79	-1.01	Pass
	6	2437	-10.88	-16.11	3.01	0.18	-12.92	-1.01	Pass
	11	2462	-16.76	-21.99	3.01	0.18	-18.80	-1.01	Pass
1	1	2412	-14.85	-20.08	3.01	0.18	-16.89	-1.01	Pass
	6	2437	-10.73	-15.96	3.01	0.18	-12.77	-1.01	Pass
	11	2462	-15.41	-20.64	3.01	0.18	-17.45	-1.01	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 12.0dBi +10log(2) = 15.01dBi>6dBi, so the power density limit shall be reduced to 8-(15.01-6) = -1.01dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

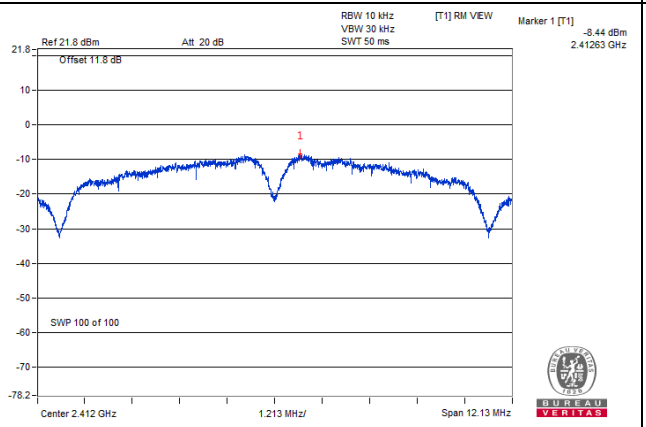
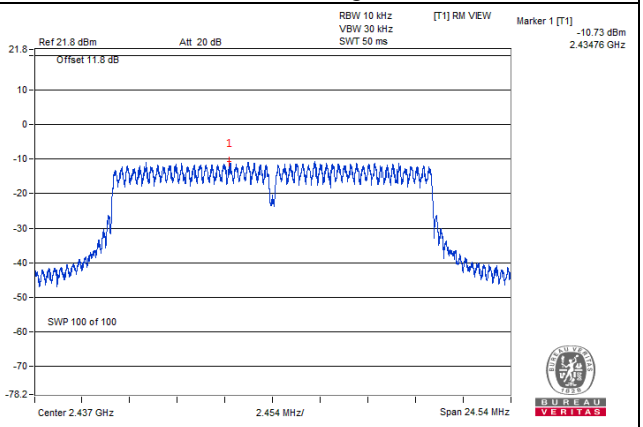
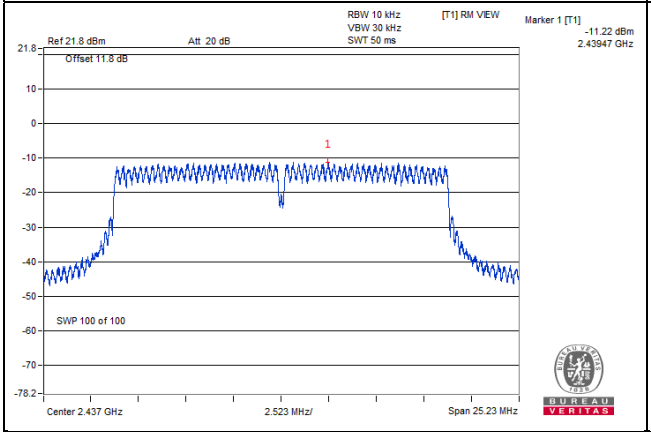
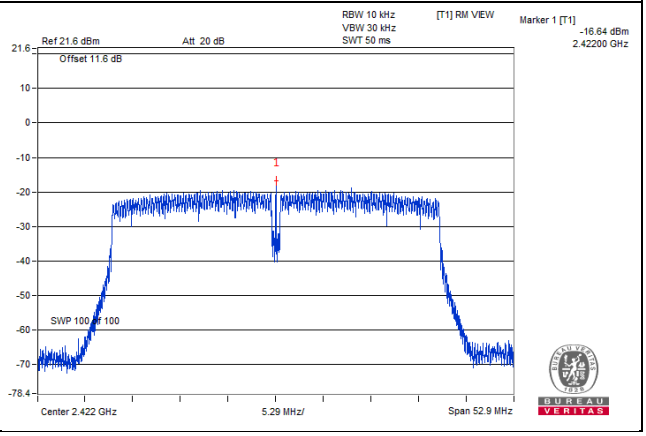
TX chain	Chan.	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-15.06	-20.29	3.01	-17.28	-1.01	Pass
	6	2437	-11.65	-16.88	3.01	-13.87	-1.01	Pass
	11	2462	-16.57	-21.80	3.01	-18.79	-1.01	Pass
1	1	2412	-14.42	-19.65	3.01	-16.64	-1.01	Pass
	6	2437	-11.22	-16.45	3.01	-13.44	-1.01	Pass
	11	2462	-15.02	-20.25	3.01	-17.24	-1.01	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 12.0dBi +10log(2) = 15.01dBi>6dBi, so the power density limit shall be reduced to 8-(15.01-6) = -1.01dBm.

802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-16.64	-21.87	3.01	0.18	-18.68	-1.01	Pass
	6	2437	-18.05	-23.28	3.01	0.18	-20.09	-1.01	Pass
	9	2452	-20.25	-25.48	3.01	0.18	-22.29	-1.01	Pass
1	3	2422	-18.43	-23.66	3.01	0.18	-20.47	-1.01	Pass
	6	2437	-17.46	-22.69	3.01	0.18	-19.50	-1.01	Pass
	9	2452	-19.53	-24.76	3.01	0.18	-21.57	-1.01	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 12.0dBi +10log(2) = 15.01dBi>6dBi, so the power density limit shall be reduced to 8-(15.01-6) = -1.01dBm.
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)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-8.80	-14.03	3.01	-11.02	-0.41	Pass
	6	2437	-9.07	-14.30	3.01	-11.29	-0.41	Pass
	11	2462	-9.28	-14.51	3.01	-11.50	-0.41	Pass
1	1	2412	-8.44	-13.67	3.01	-10.66	-0.41	Pass
	6	2437	-8.81	-14.04	3.01	-11.03	-0.41	Pass
	11	2462	-8.52	-13.75	3.01	-10.74	-0.41	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 11.4dBi +10log(2) = 14.41dBi>6dBi, so the power density limit shall be reduced to 8-(14.41-6) = -0.41dBm.

802.11g

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-15.75	-20.98	3.01	0.18	-17.79	-0.41	Pass
	6	2437	-10.88	-16.11	3.01	0.18	-12.92	-0.41	Pass
	11	2462	-16.76	-21.99	3.01	0.18	-18.80	-0.41	Pass
1	1	2412	-14.85	-20.08	3.01	0.18	-16.89	-0.41	Pass
	6	2437	-10.73	-15.96	3.01	0.18	-12.77	-0.41	Pass
	11	2462	-15.41	-20.64	3.01	0.18	-17.45	-0.41	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 11.4dBi +10log(2) = 14.41dBi>6dBi, so the power density limit shall be reduced to 8-(14.41-6) = -0.41dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

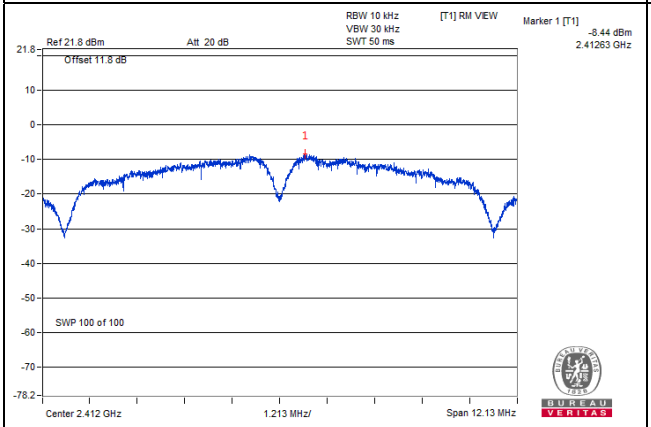
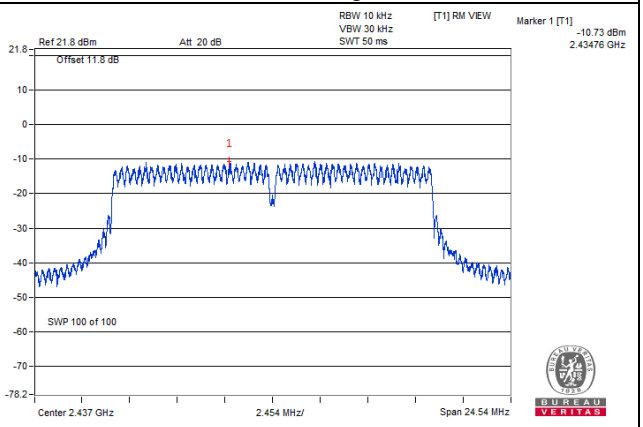
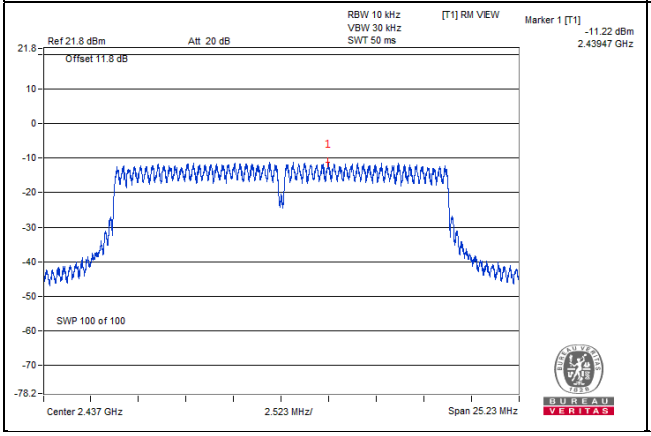
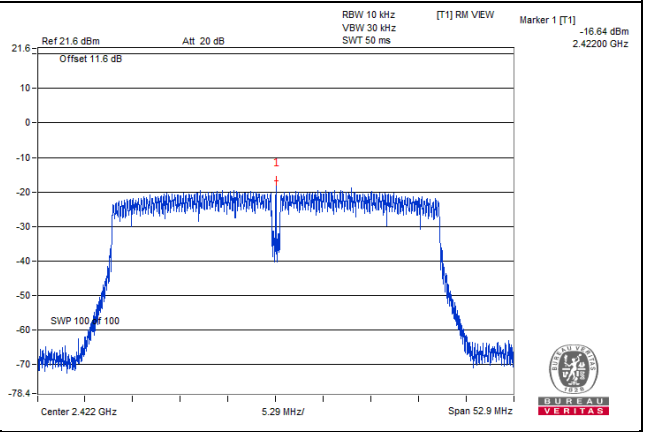
TX chain	Chan.	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	1	2412	-15.06	-20.29	3.01	-17.28	-0.41	Pass
	6	2437	-11.65	-16.88	3.01	-13.87	-0.41	Pass
	11	2462	-16.57	-21.80	3.01	-18.79	-0.41	Pass
1	1	2412	-14.42	-19.65	3.01	-16.64	-0.41	Pass
	6	2437	-11.22	-16.45	3.01	-13.44	-0.41	Pass
	11	2462	-15.02	-20.25	3.01	-17.24	-0.41	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 11.4dBi +10log(2) = 14.41dBi>6dBi, so the power density limit shall be reduced to 8-(14.41-6) = -0.41dBm.

802.11n (HT40)

TX chain	Channel	Frequency (MHz)	PSD (dBm/10kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	3	2422	-16.64	-21.87	3.01	0.18	-18.68	-0.41	Pass
	6	2437	-18.05	-23.28	3.01	0.18	-20.09	-0.41	Pass
	9	2452	-20.25	-25.48	3.01	0.18	-22.29	-0.41	Pass
1	3	2422	-18.43	-23.66	3.01	0.18	-20.47	-0.41	Pass
	6	2437	-17.46	-22.69	3.01	0.18	-19.50	-0.41	Pass
	9	2452	-19.53	-24.76	3.01	0.18	-21.57	-0.41	Pass

Note:
1. Method E) 2) C) of power density measurement of KDB 662911 is using for calculating total power density, total power density is measure value add 10 log (N_{ANT}) dB.
2. Directional gain = 11.4dBi +10log(2) = 14.41dBi>6dBi, so the power density limit shall be reduced to 8-(14.41-6) = -0.41dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

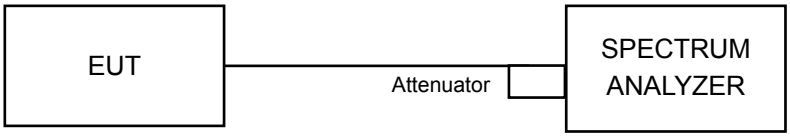
Spectrum Plot of Worst Value	
802.11b	802.11g
	
802.11n (HT20)	802.11n (HT40)
	

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

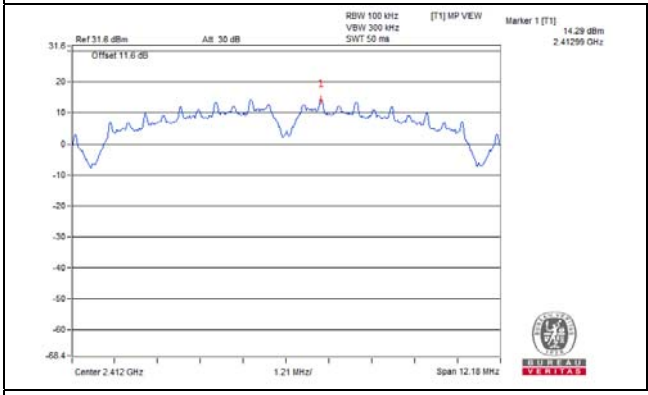
4.6.7 Test Results

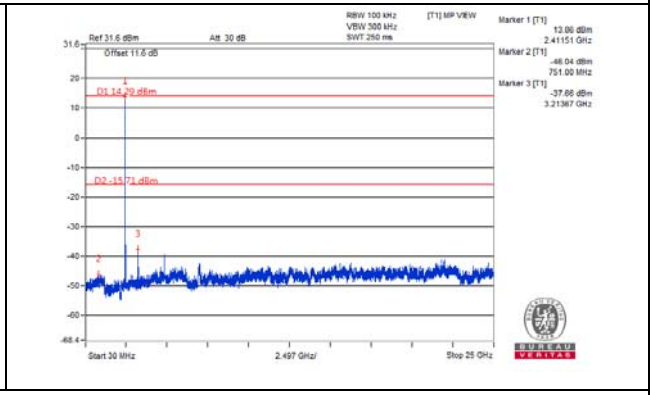
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

Test Mode A

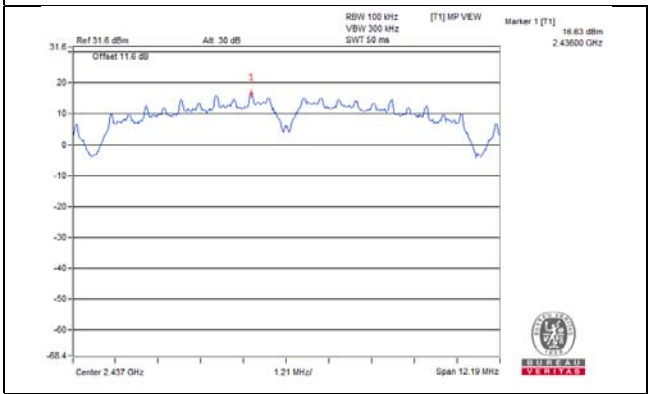
802.11b_Chain 0

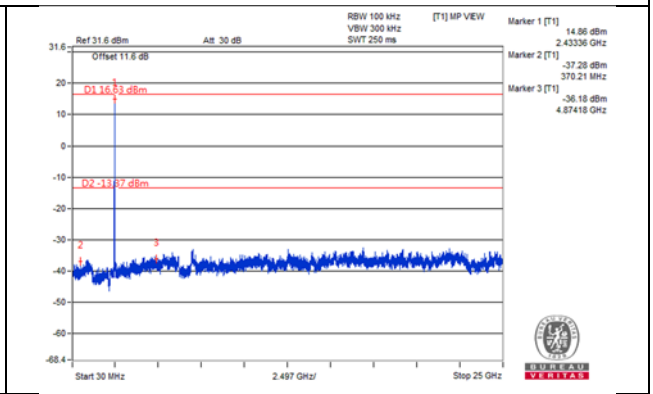
CH 1



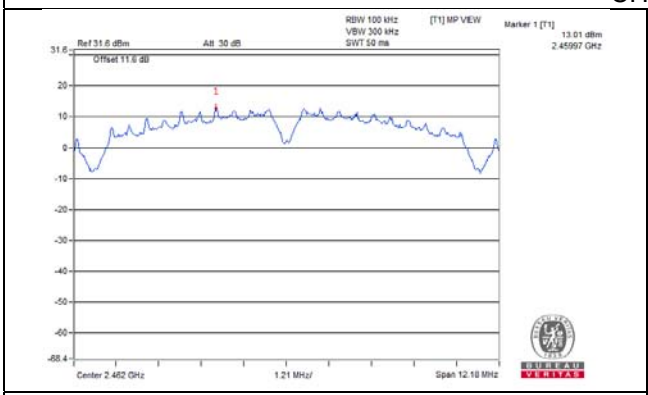


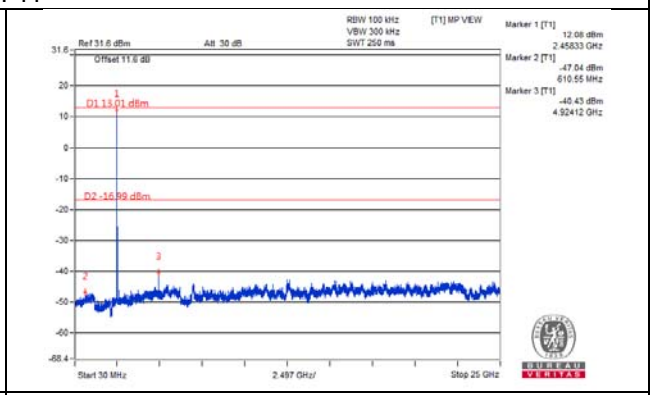
CH 6



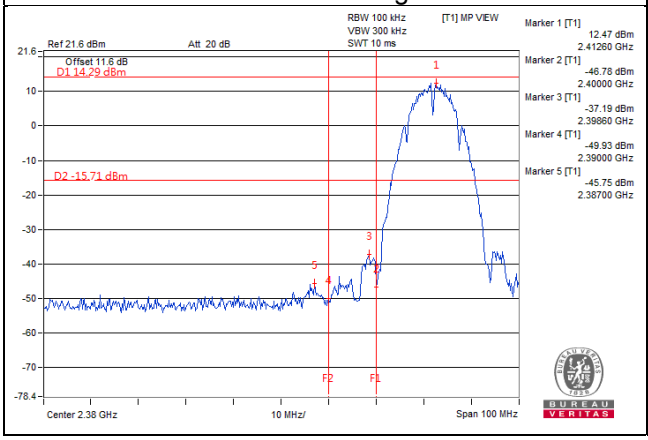


CH 11

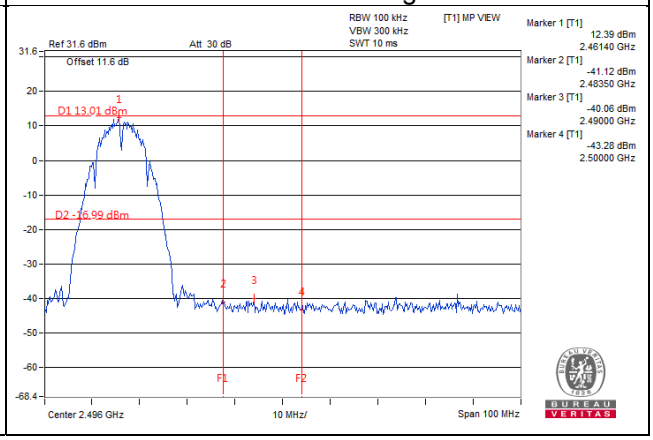




CH 1 Band edge

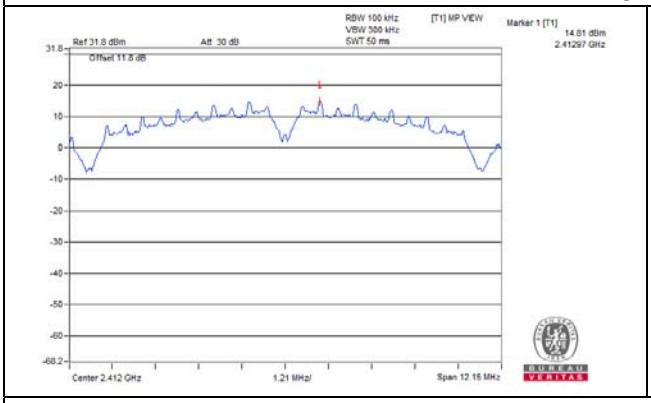


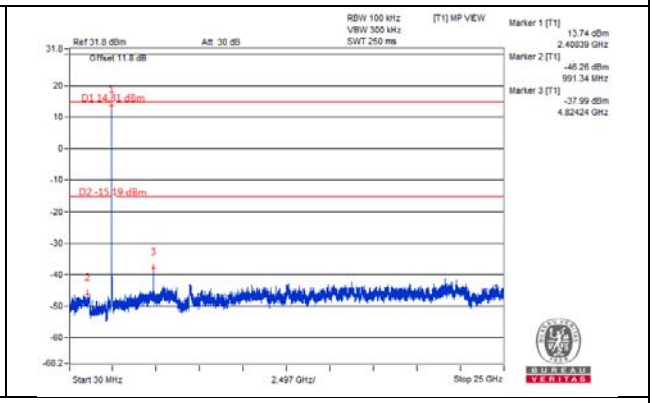
CH 11 Band edge



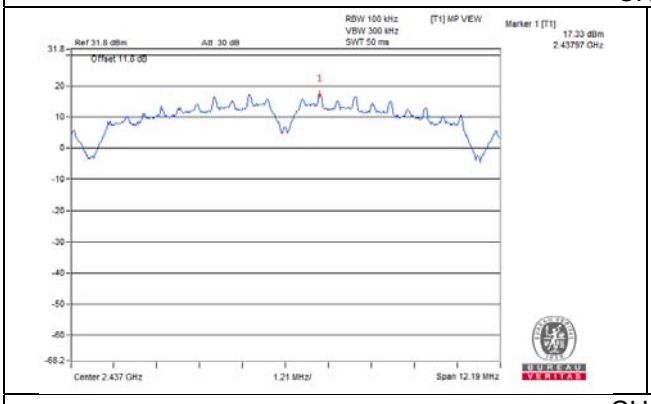
802.11b_Chain 1

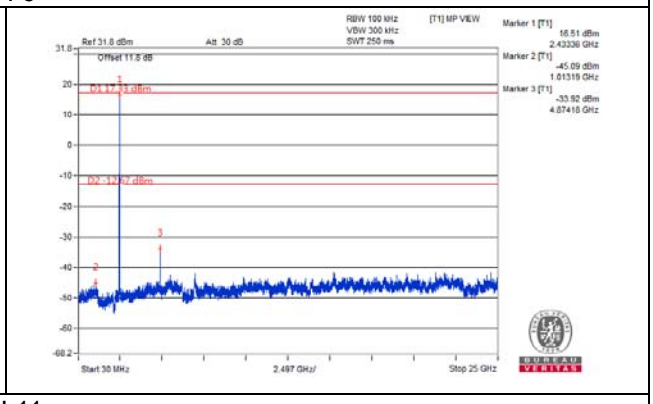
CH 1



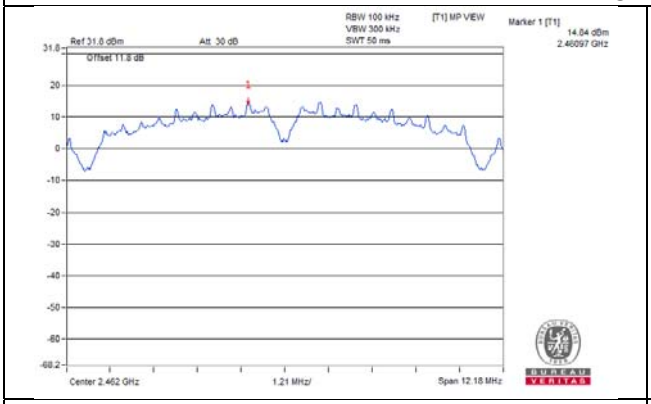


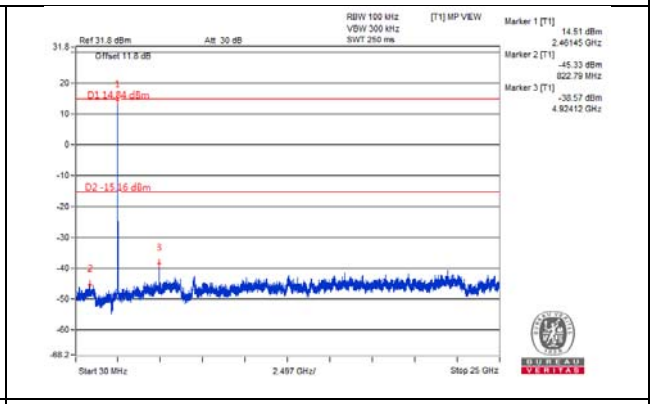
CH 6



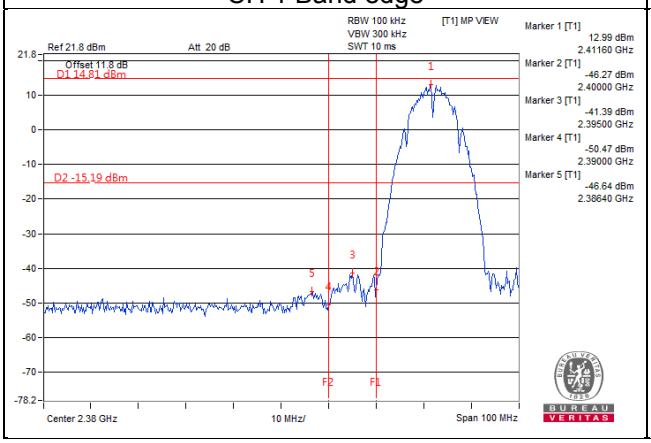


CH 11

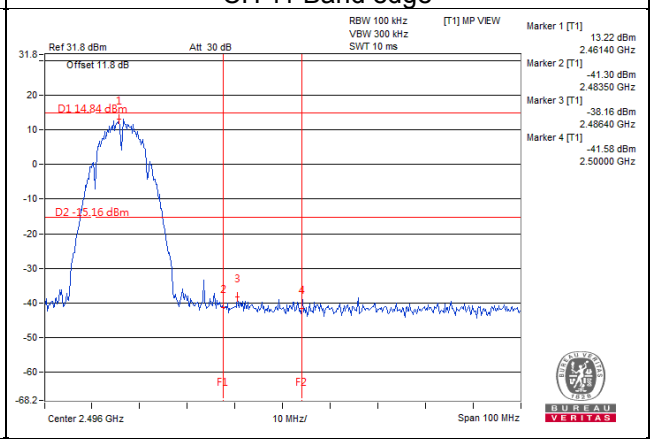




CH 1 Band edge

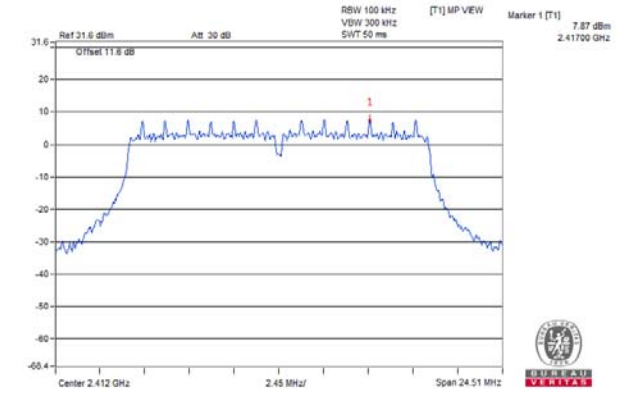


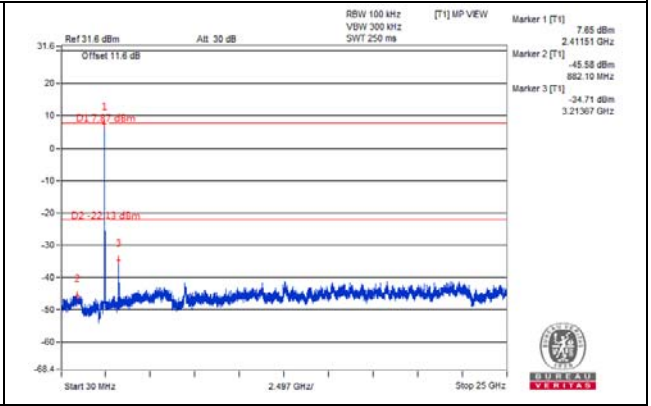
CH 11 Band edge



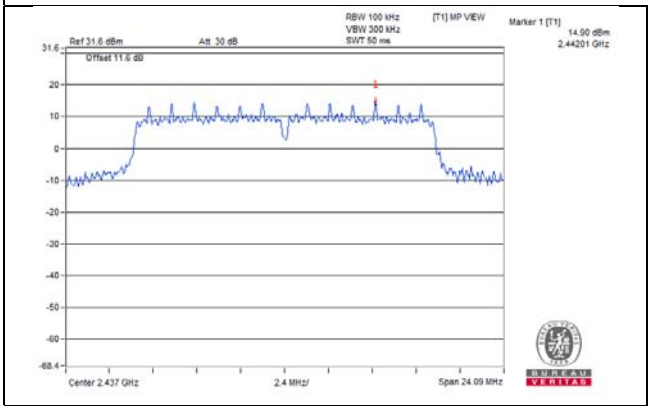
802.11g_Chain 0

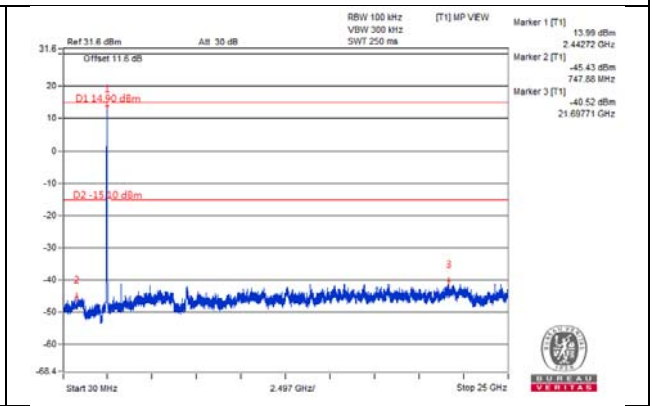
CH 1



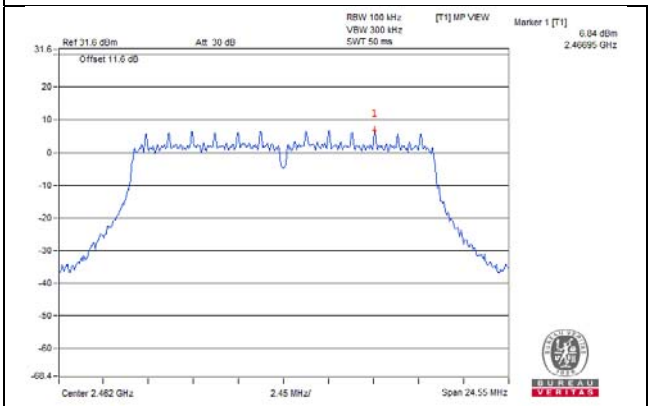


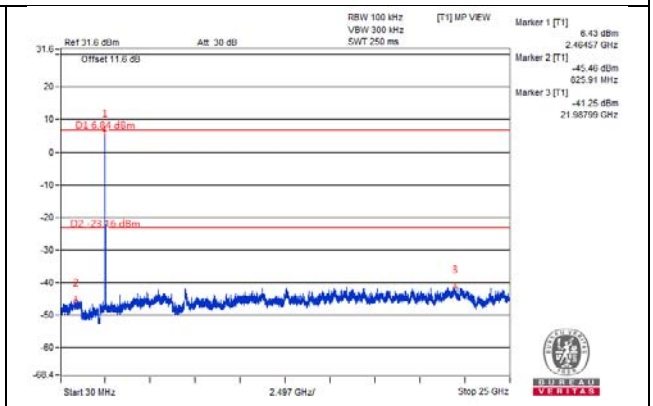
CH 6



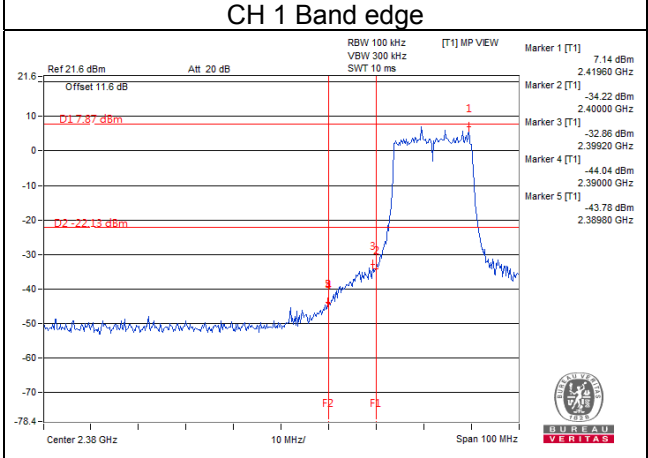


CH 11

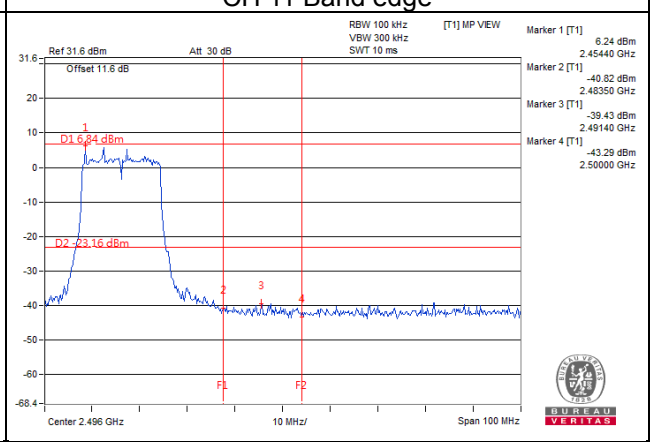




CH 1 Band edge

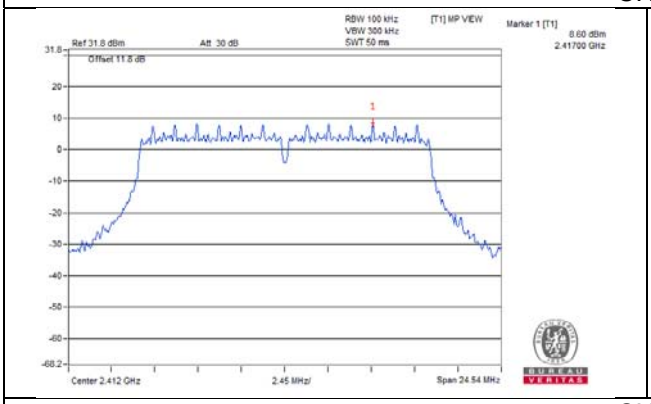


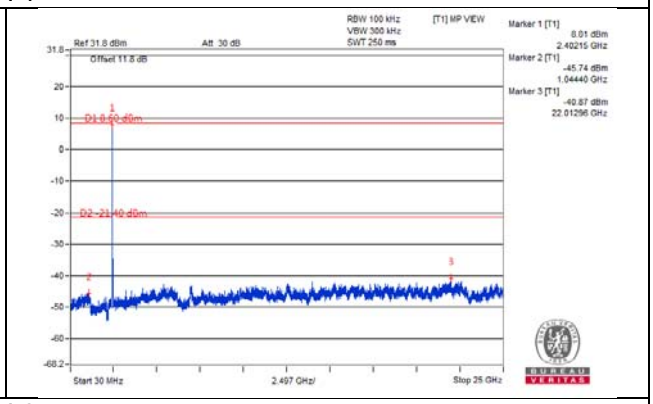
CH 11 Band edge



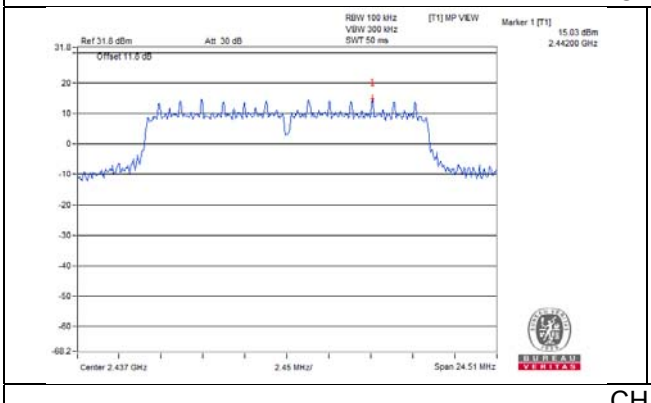
802.11g_Chain 1

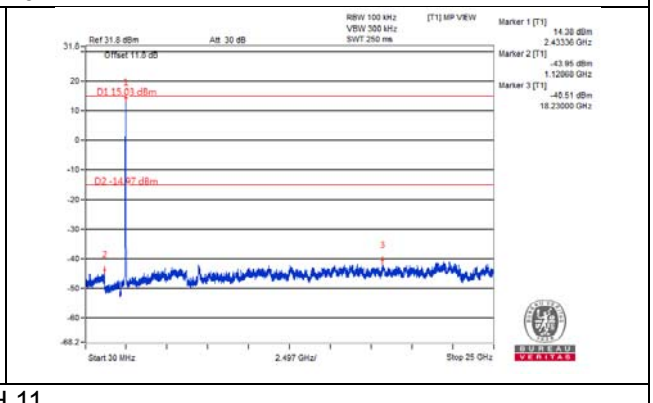
CH 1



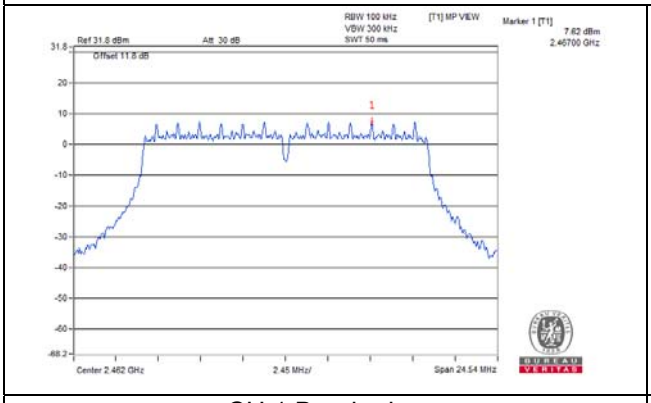


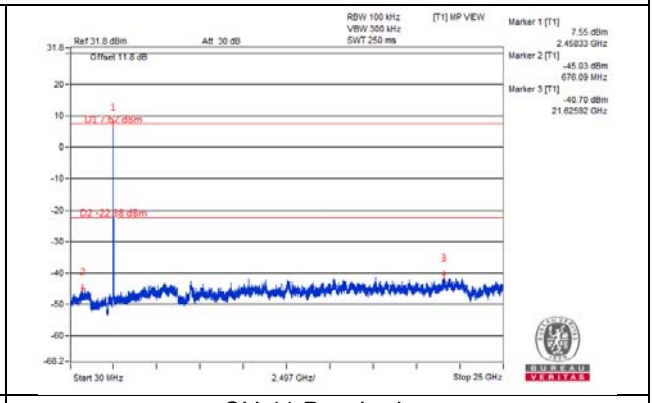
CH 6



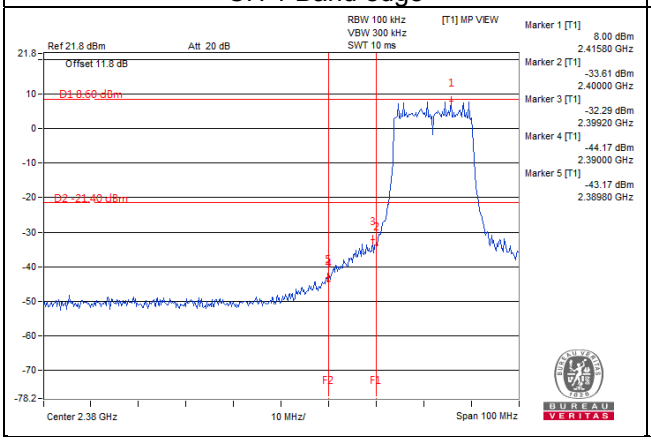


CH 11

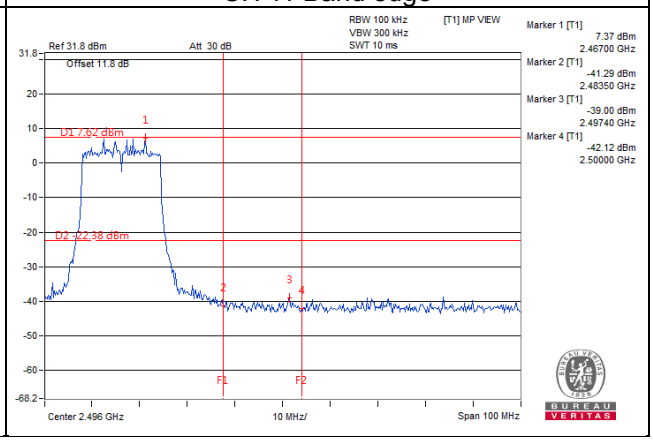




CH 1 Band edge

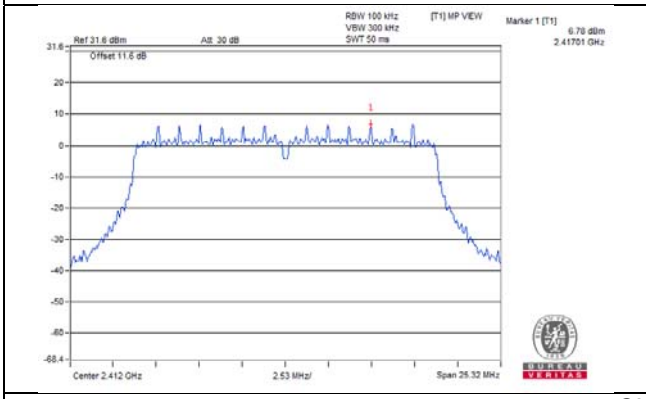


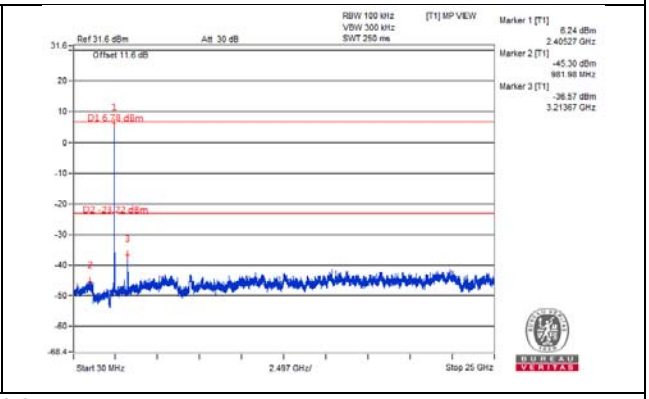
CH 11 Band edge



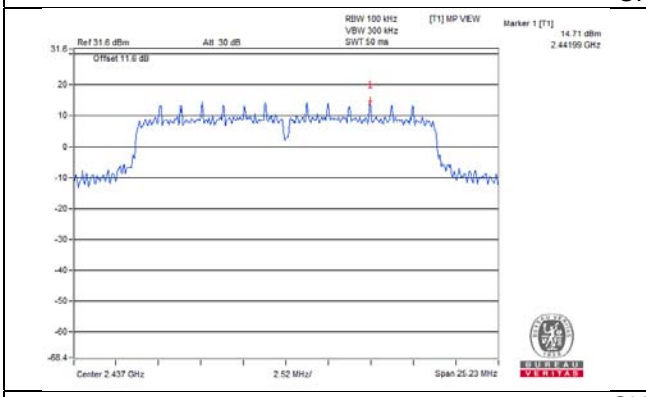
802.11n (HT20)_Chain 0

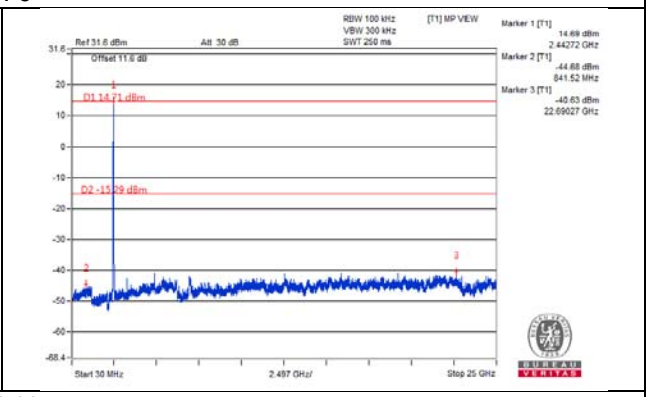
CH 1



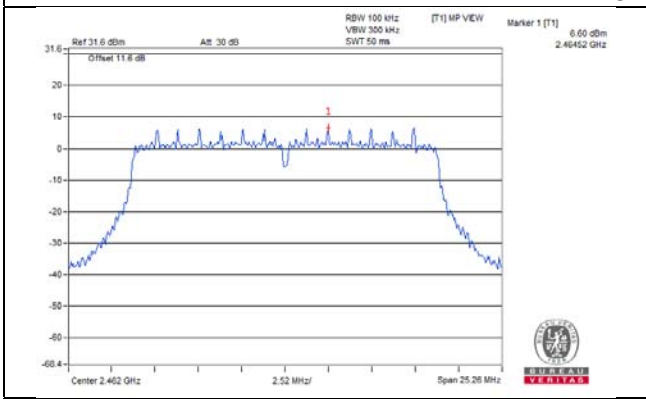


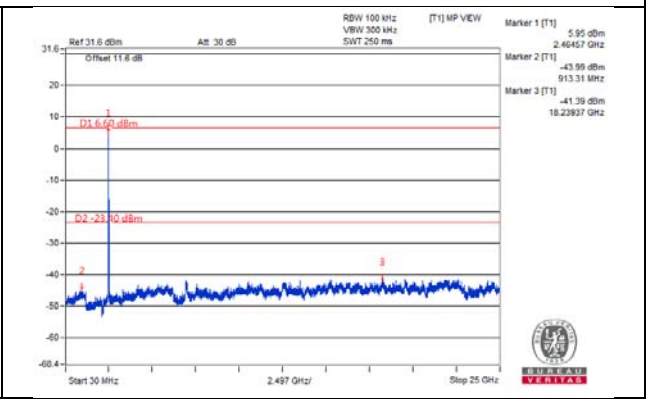
CH 6



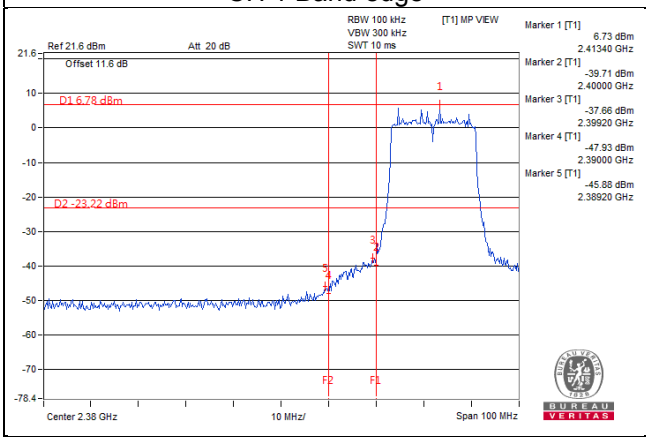


CH 11

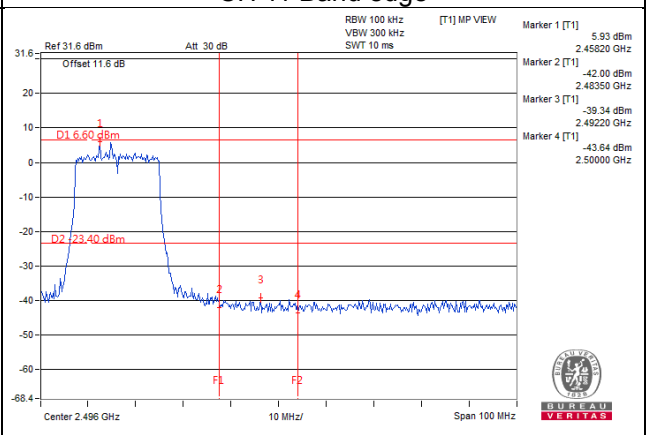




CH 1 Band edge

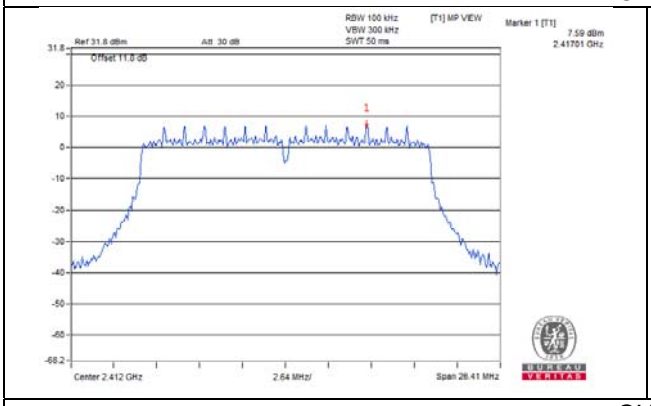


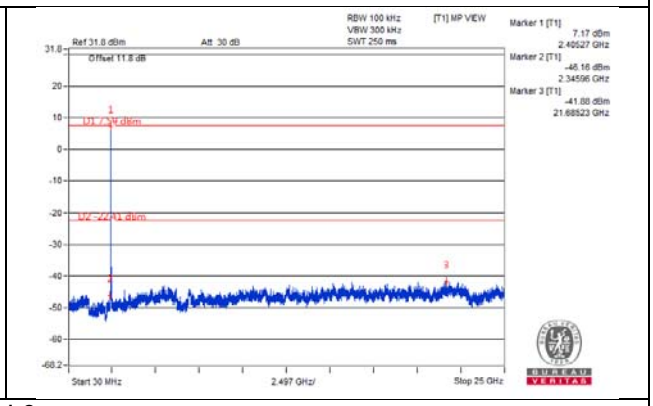
CH 11 Band edge



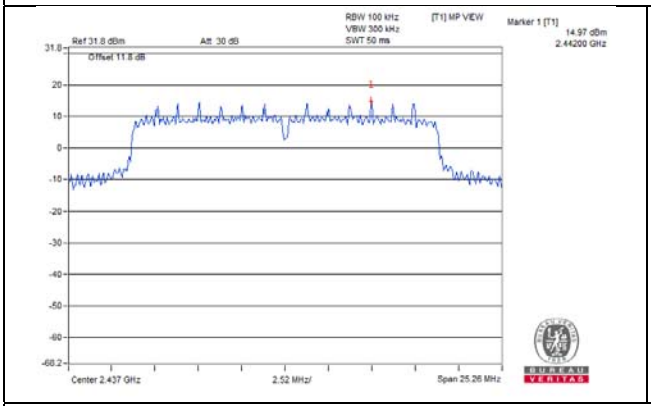
802.11n (HT20)_Chain 1

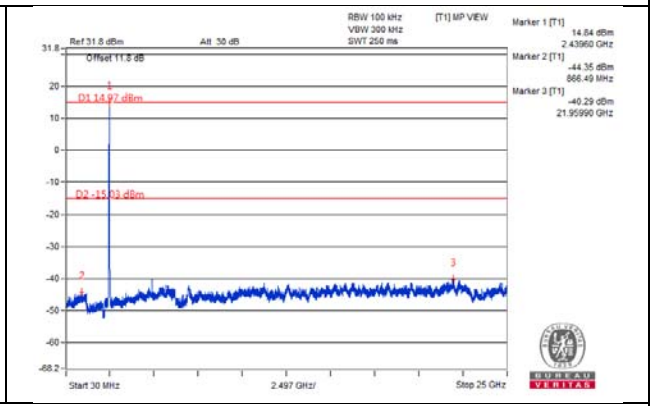
CH 1



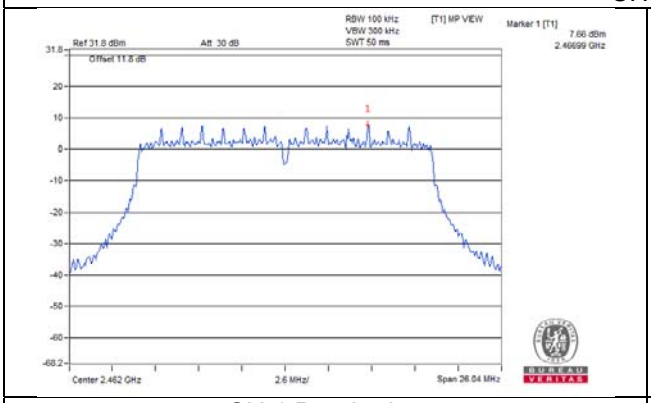


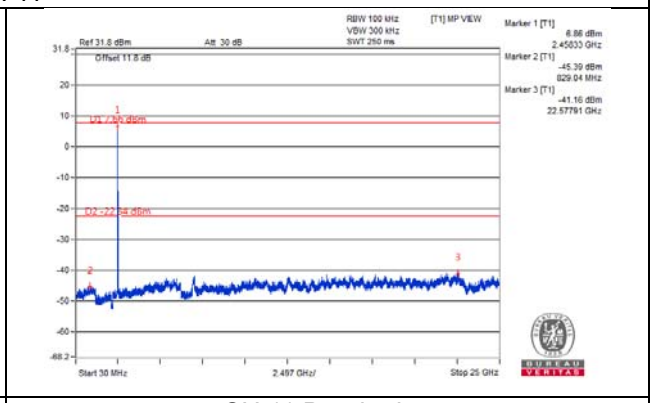
CH 6



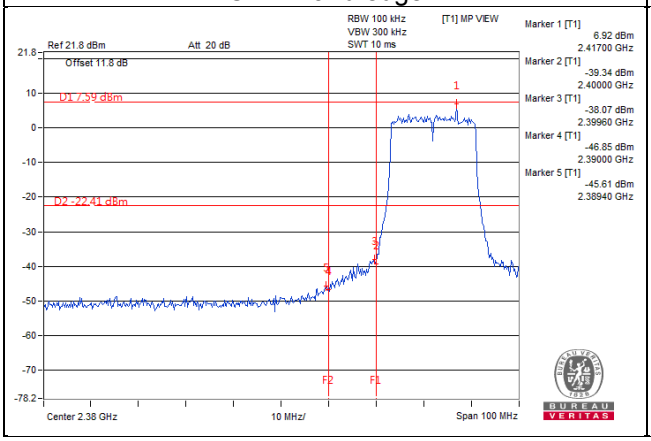


CH 11

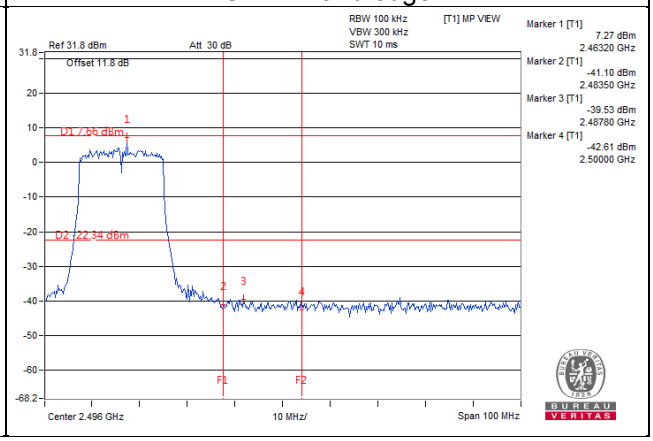




CH 1 Band edge

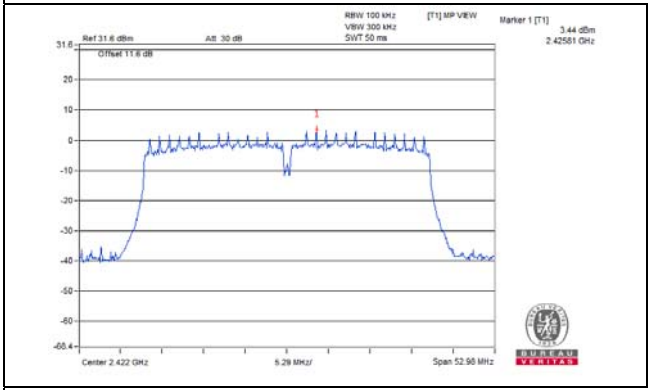


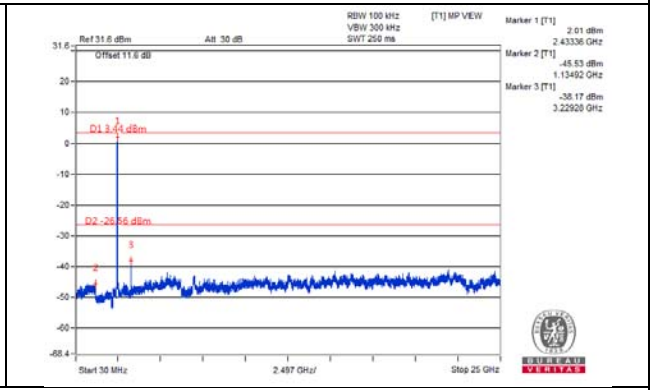
CH 11 Band edge



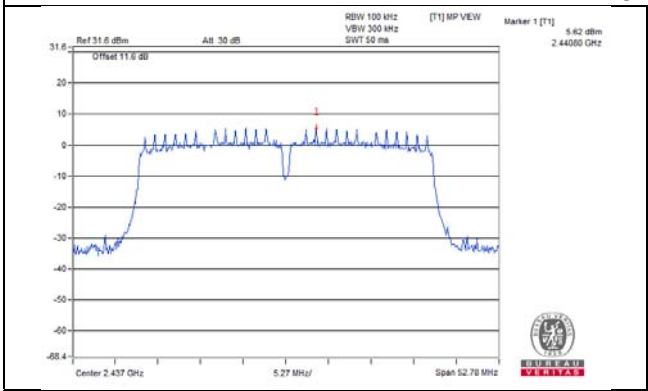
802.11n (HT40)_Chain 0

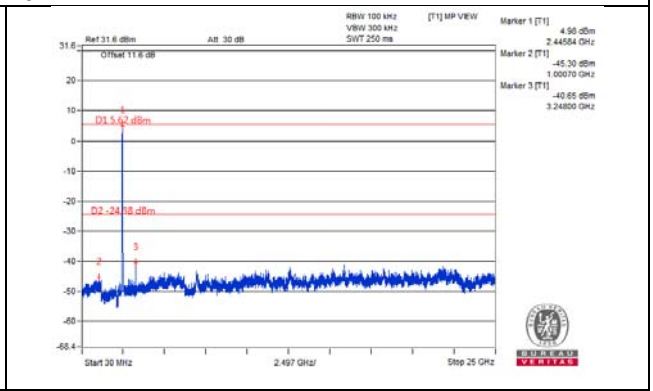
CH 3



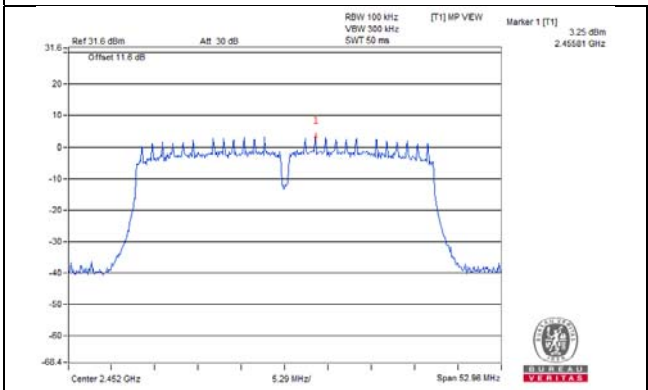


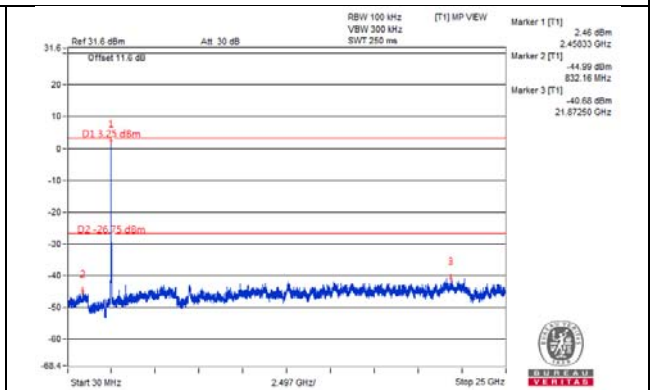
CH 6



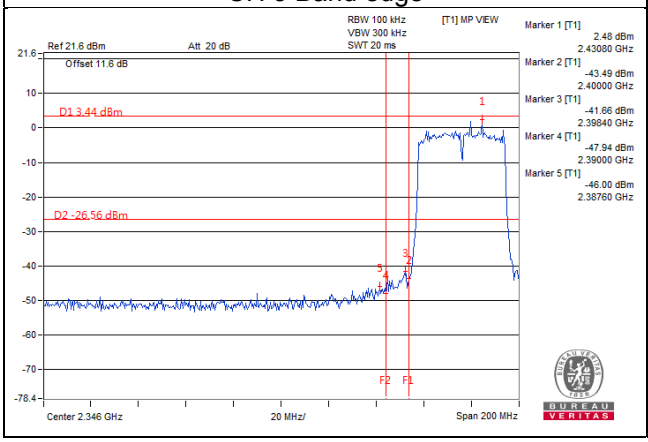


CH 9

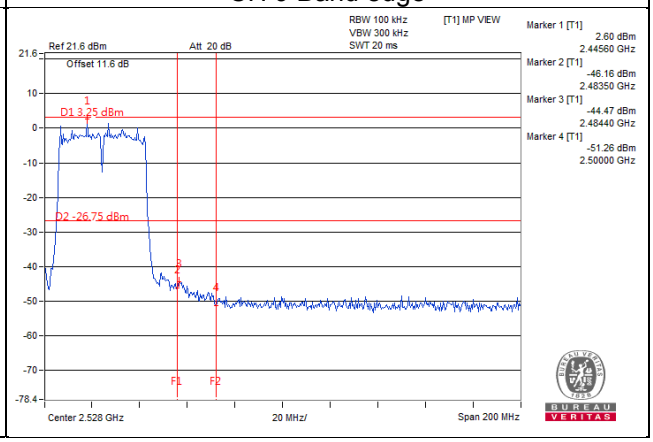




CH 3 Band edge

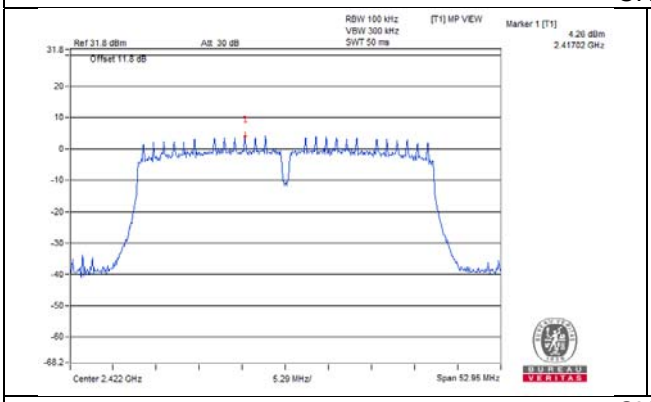


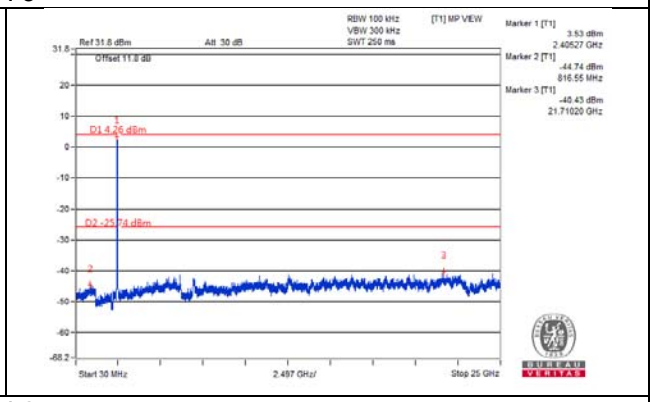
CH 9 Band edge



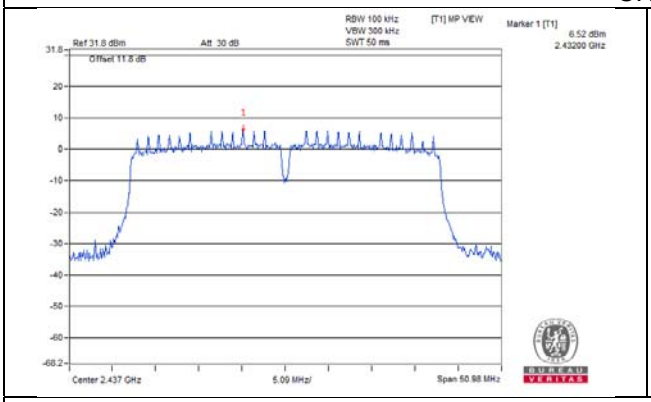
802.11n (HT40)_Chain 1

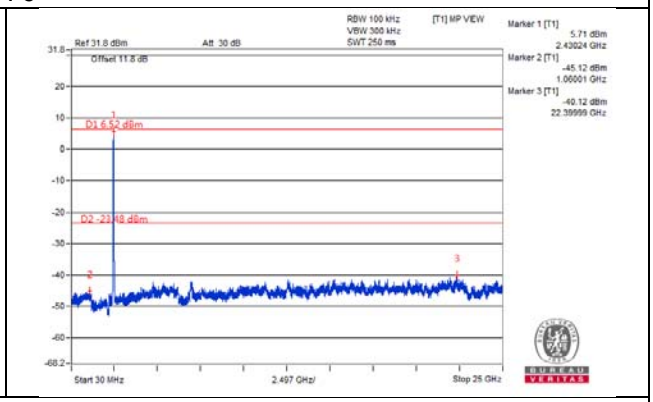
CH 3



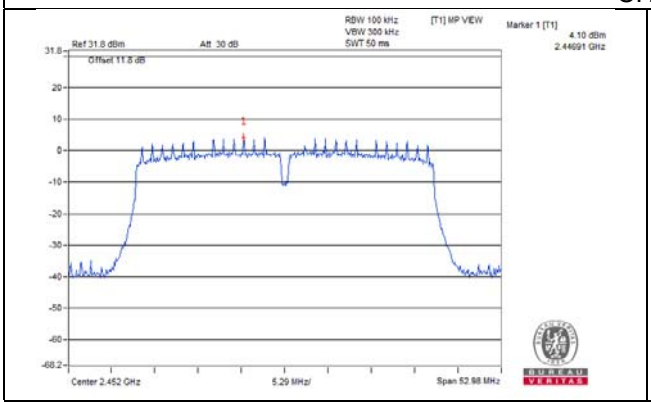


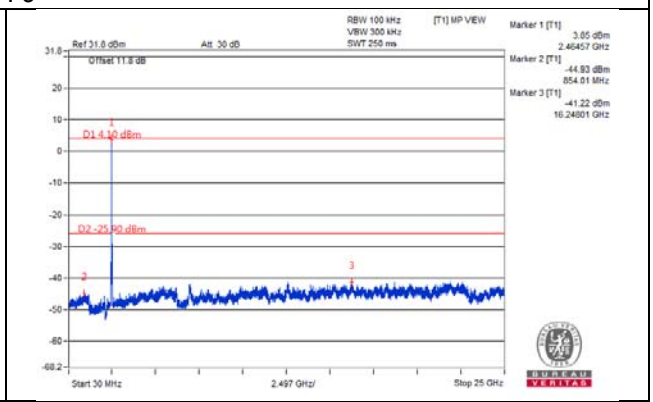
CH 6



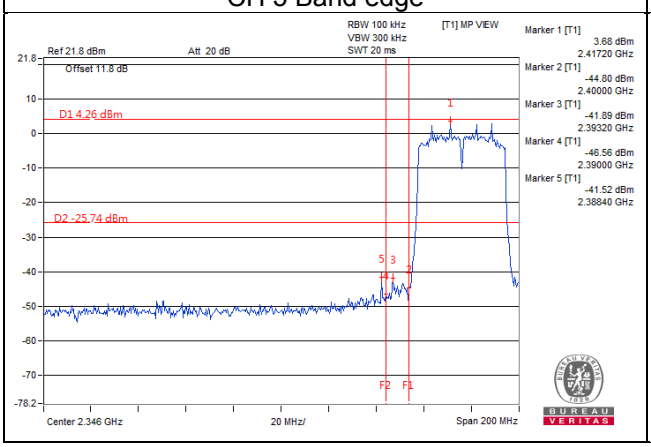


CH 9

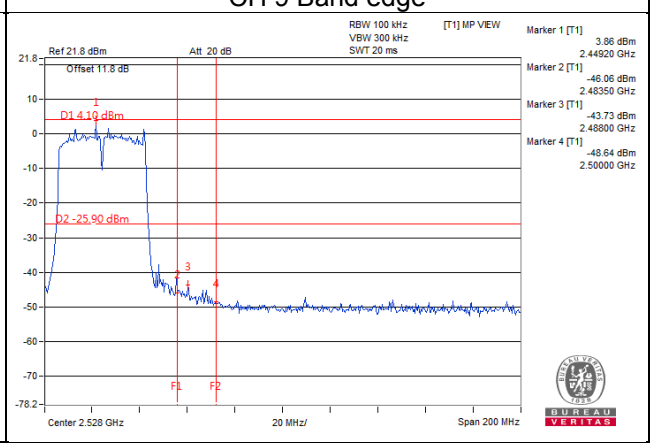




CH 3 Band edge



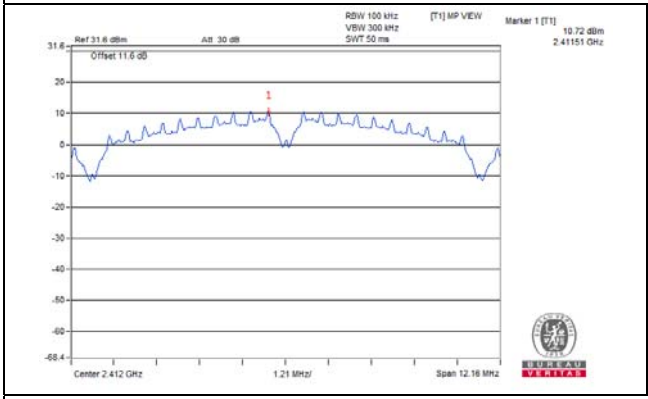
CH 9 Band edge

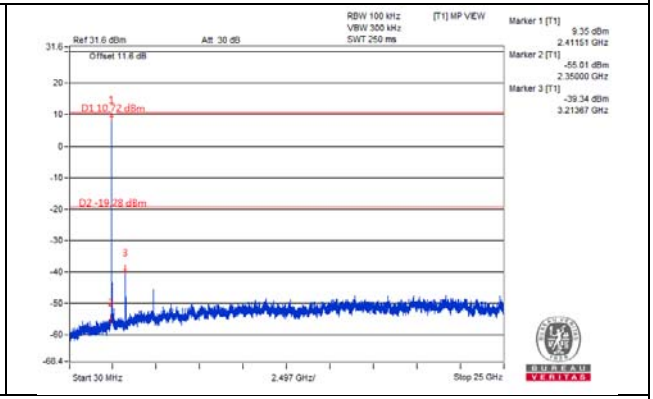


Test Mode B

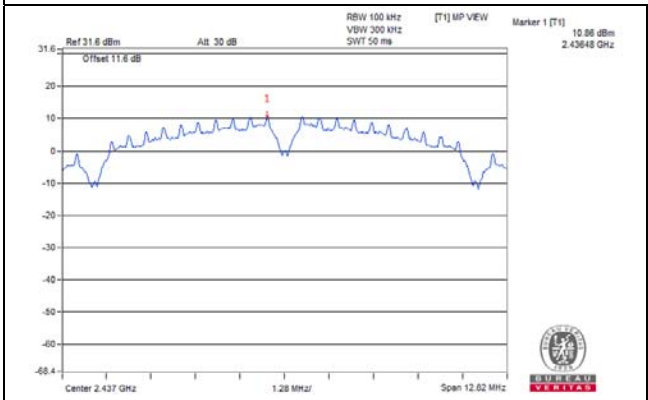
802.11b_Chain 0

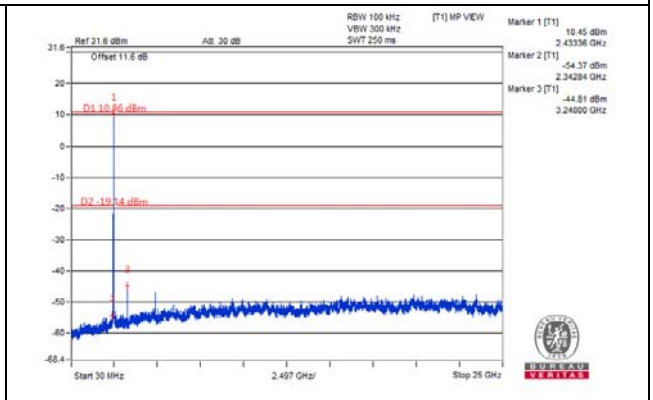
CH 1



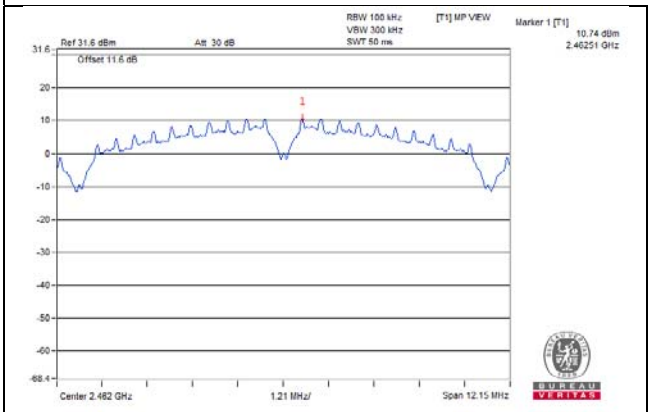


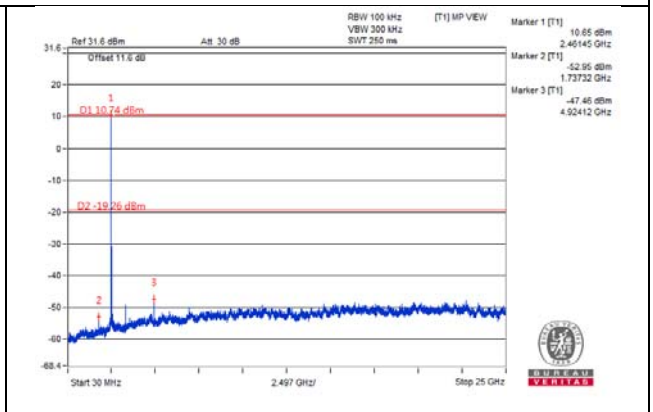
CH 6



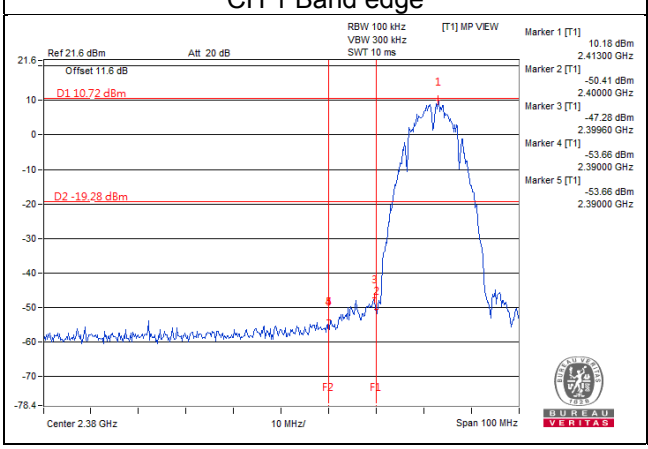


CH 11

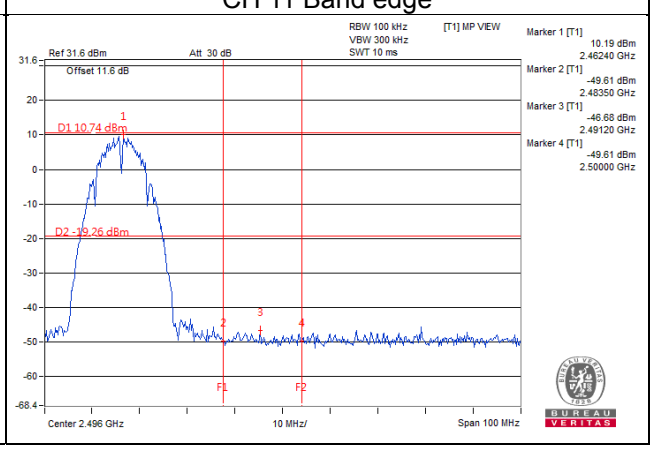




CH 1 Band edge

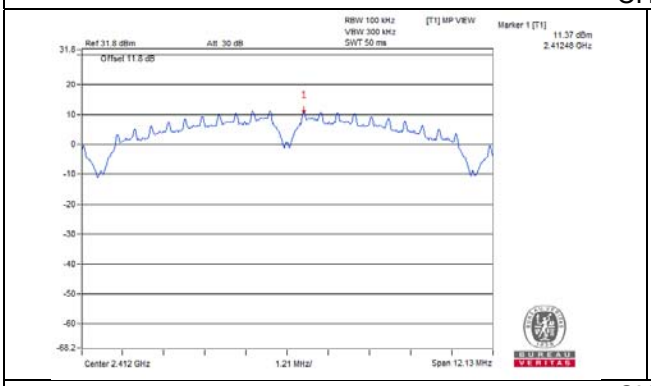


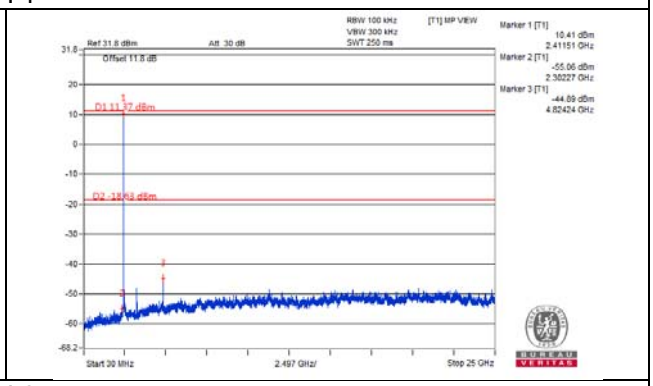
CH 11 Band edge



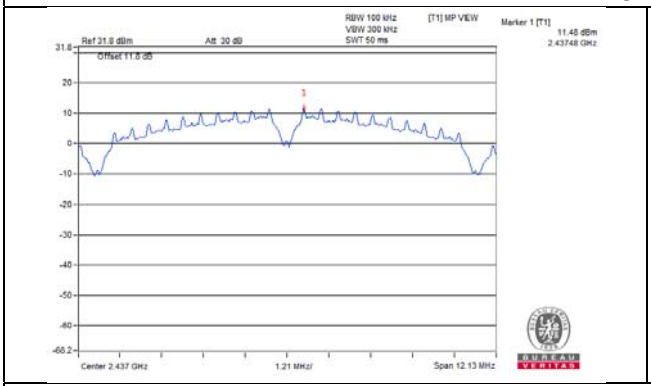
802.11b_Chain 1

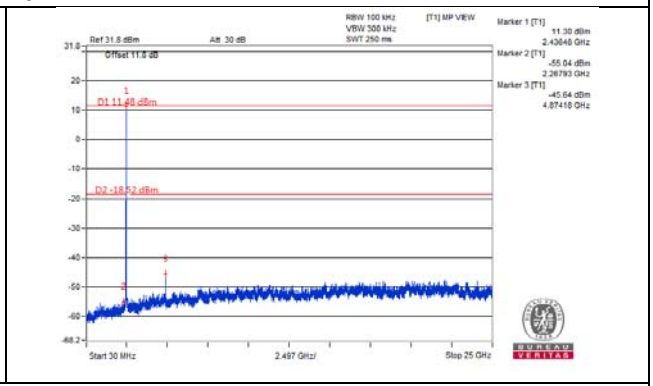
CH 1



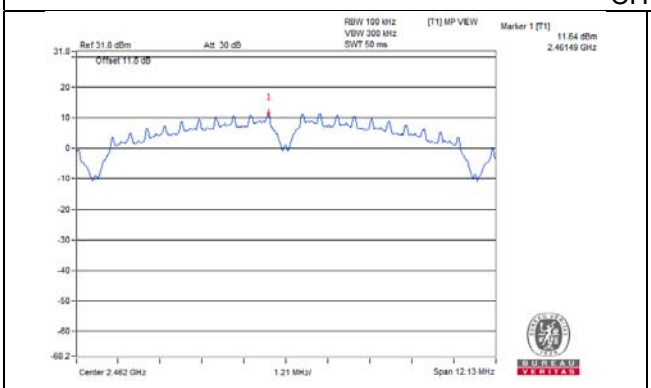


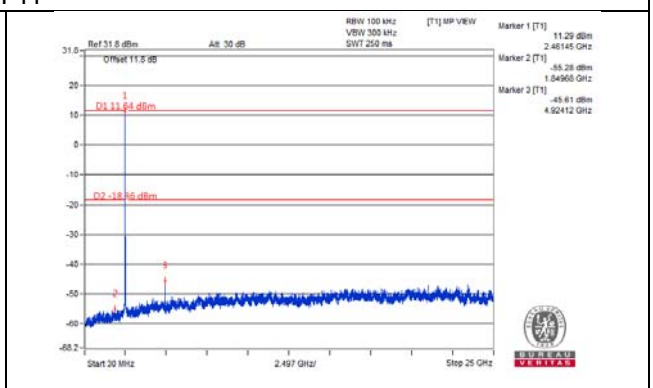
CH 6



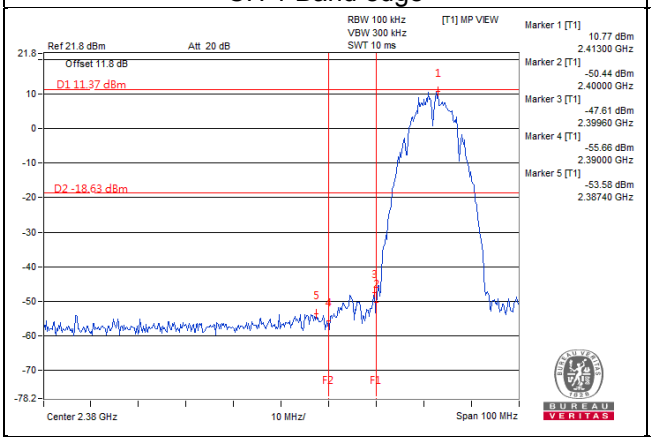


CH 11

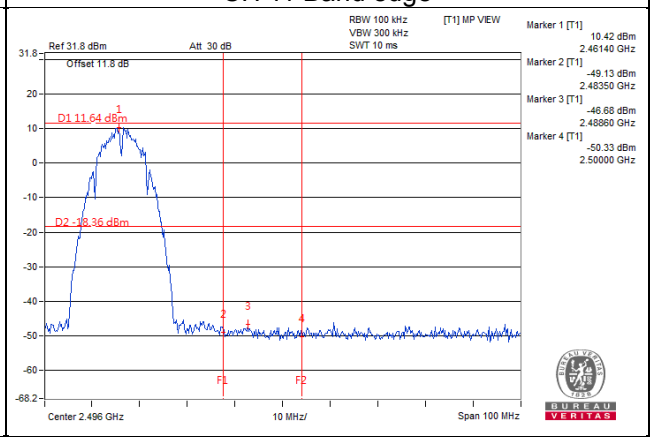




CH 1 Band edge

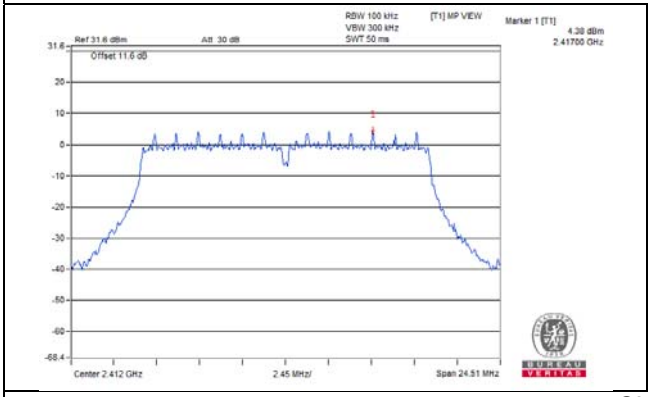


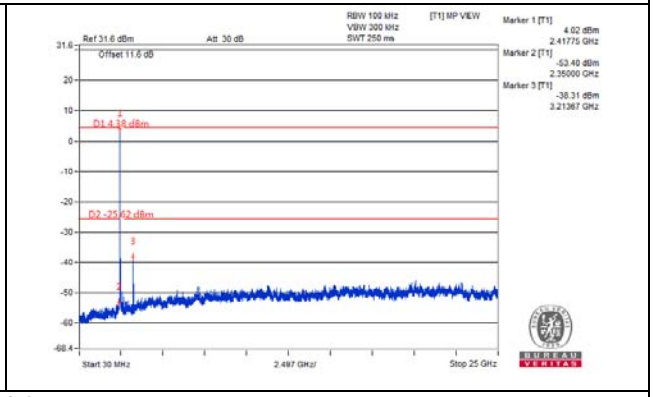
CH 11 Band edge



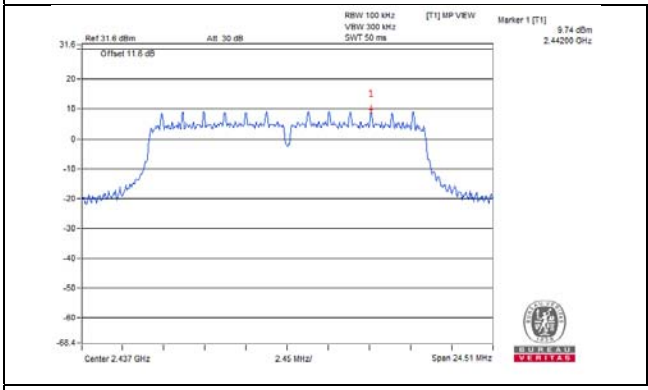
802.11g_Chain 0

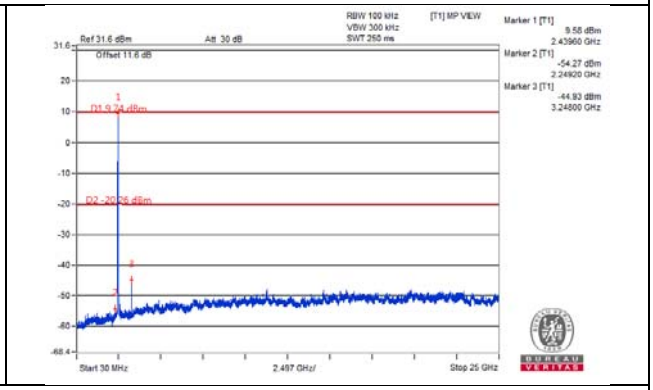
CH 1



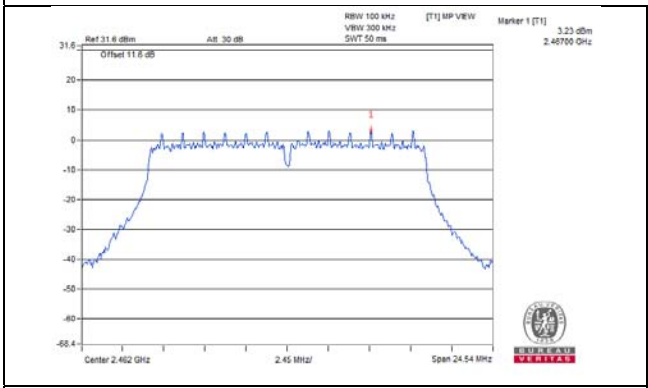


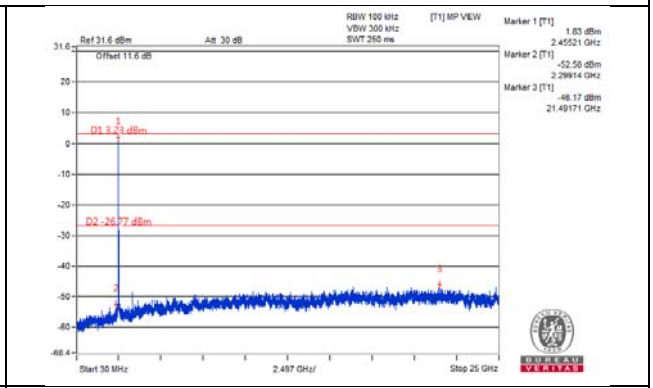
CH 6



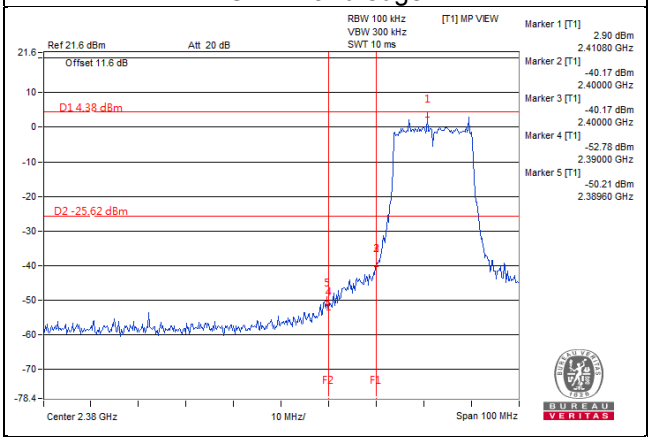


CH 11

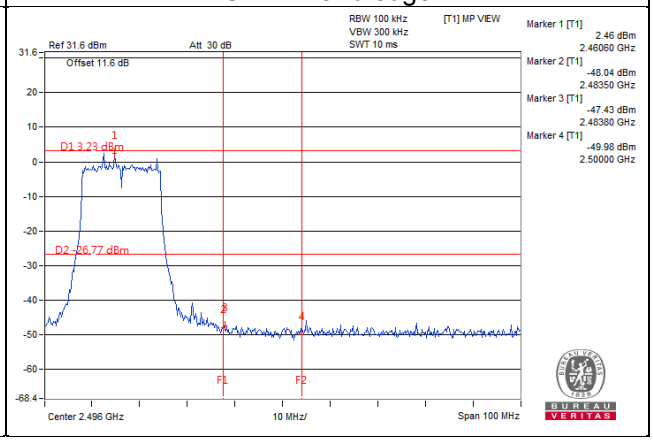




CH 1 Band edge

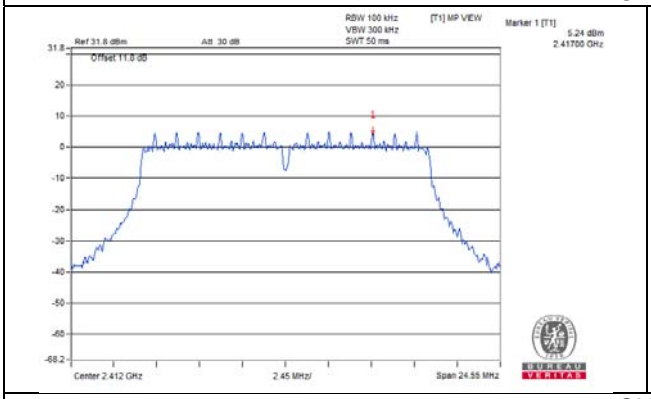


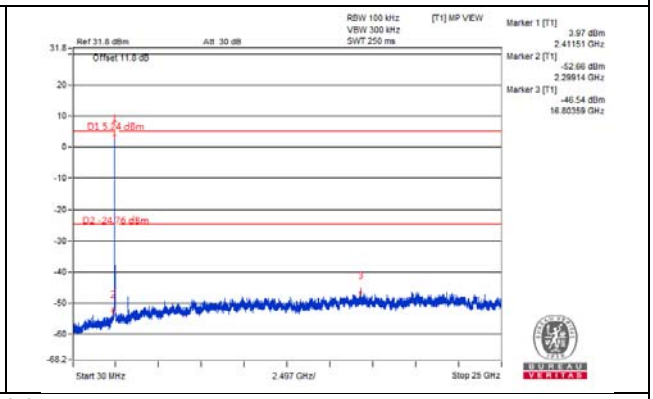
CH 11 Band edge



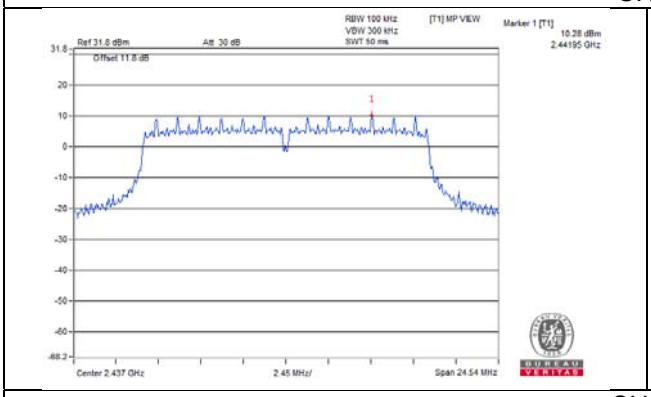
802.11g_Chain 1

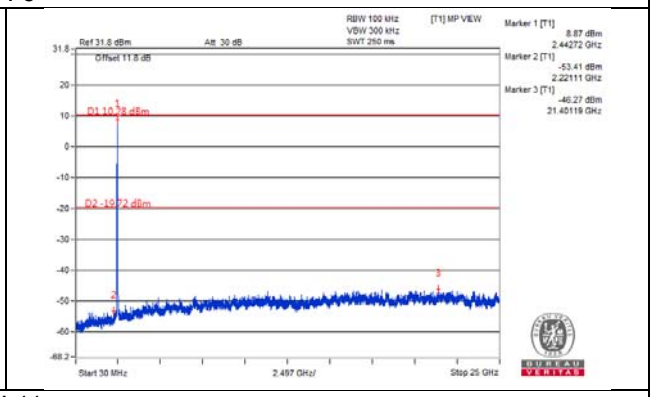
CH 1



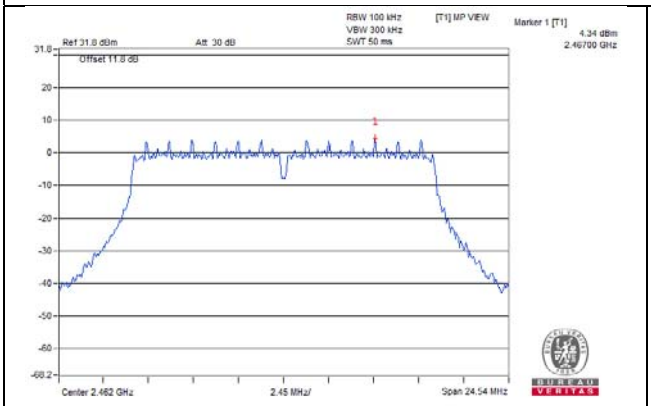


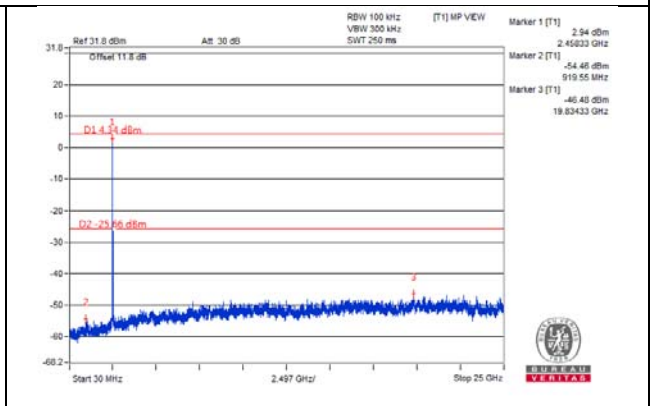
CH 6



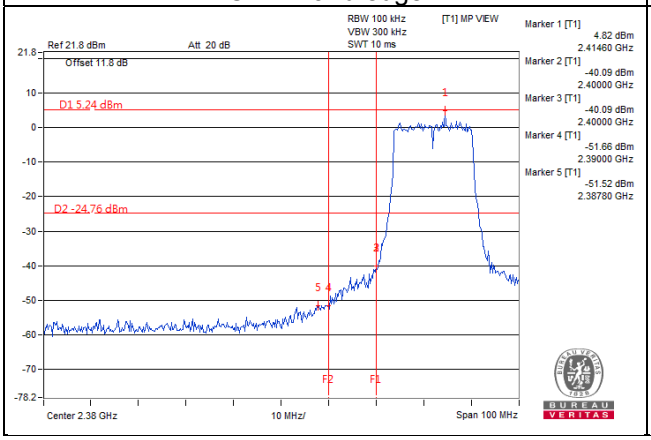


CH 11

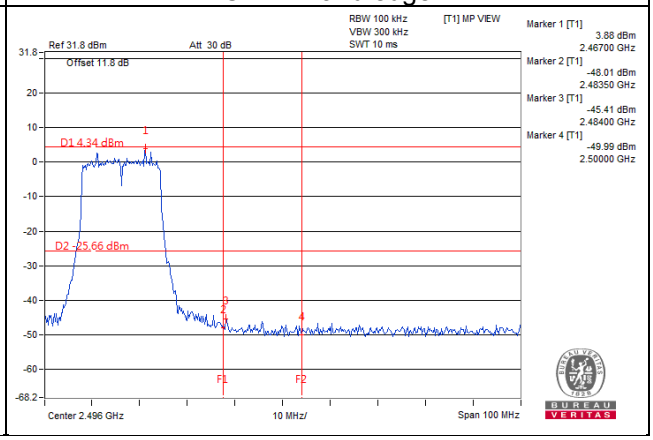




CH 1 Band edge

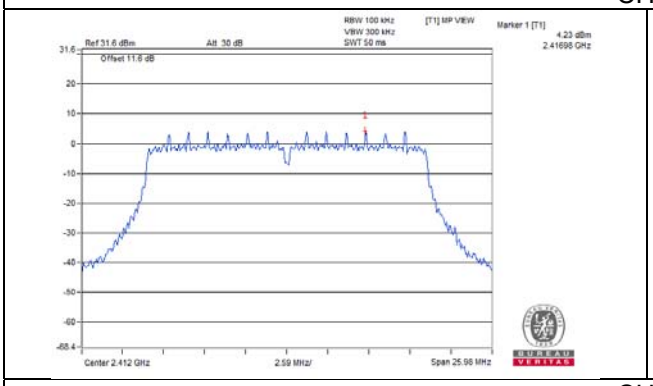


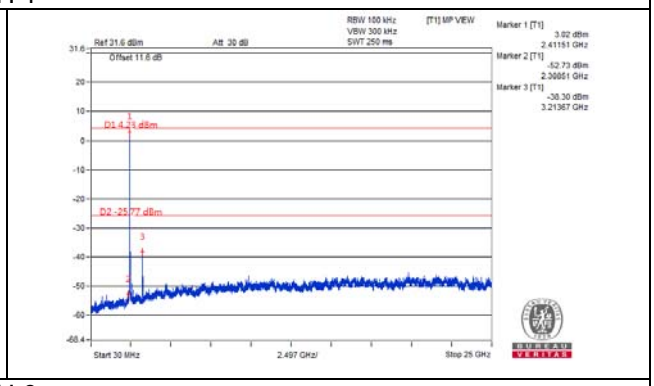
CH 11 Band edge



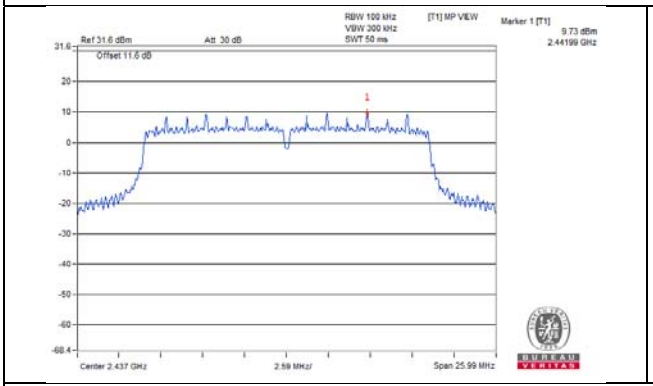
802.11n (HT20)_Chain 0

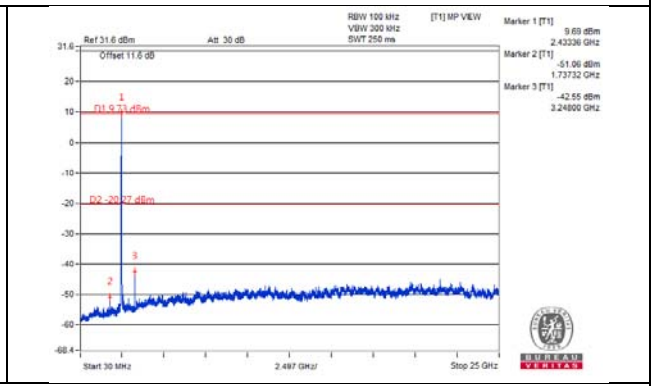
CH 1



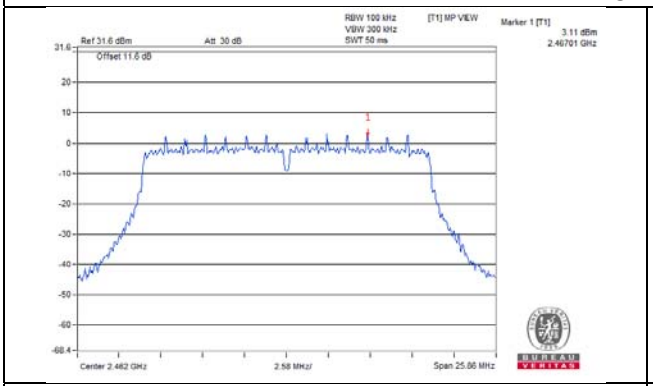


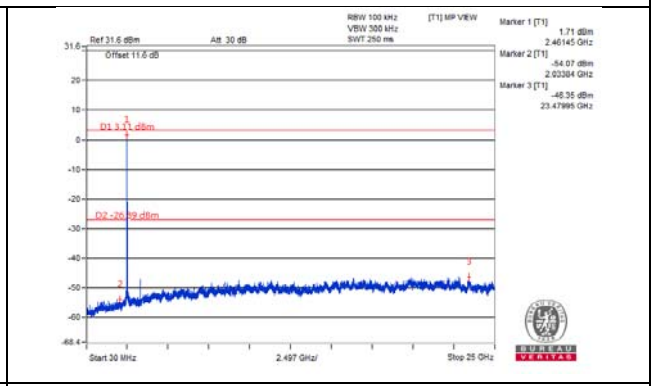
CH 6



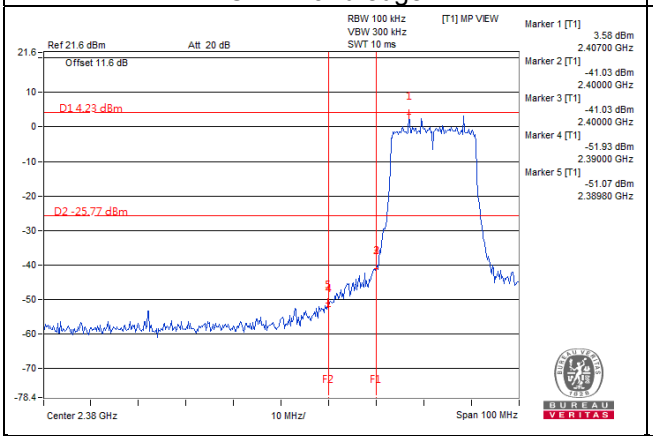


CH 11

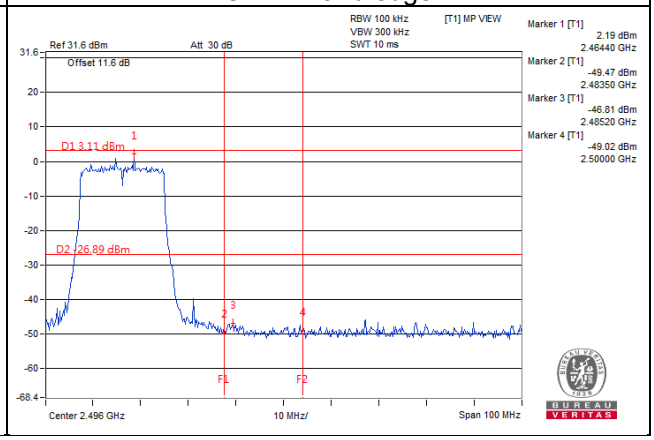




CH 1 Band edge

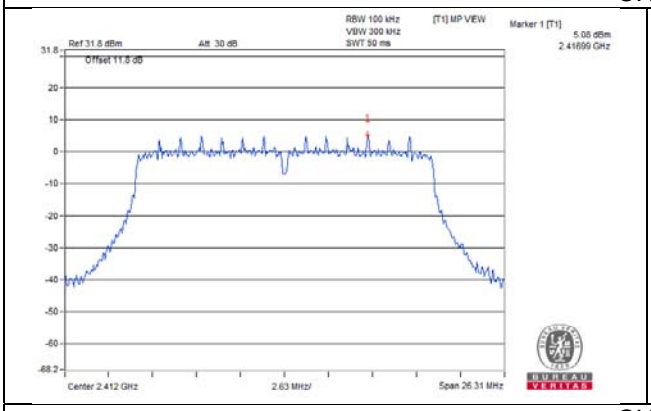


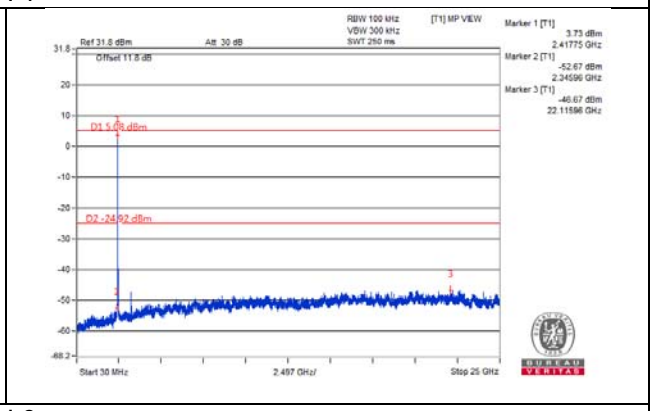
CH 11 Band edge



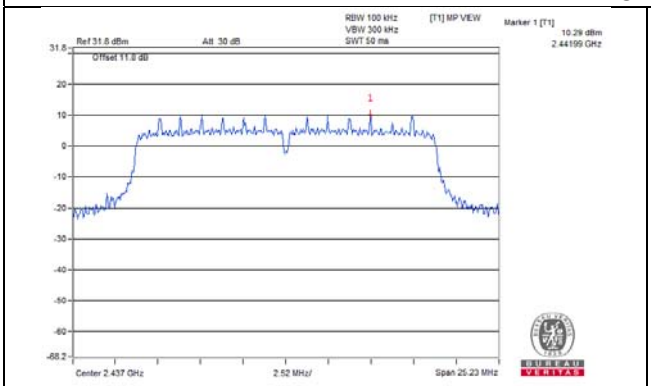
802.11n (HT20)_Chain 1

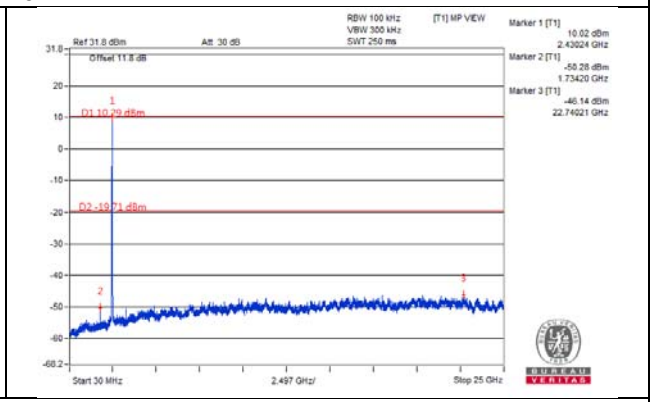
CH 1



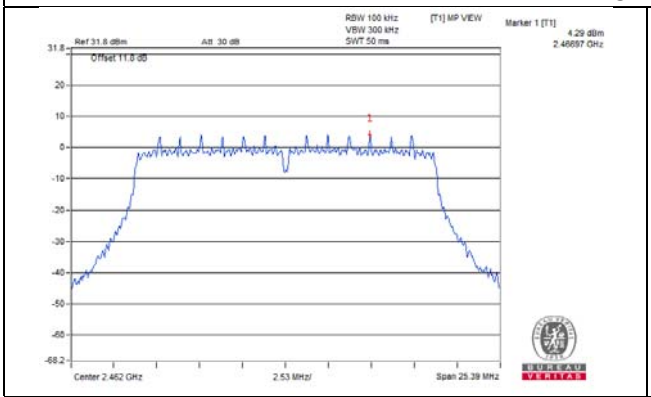


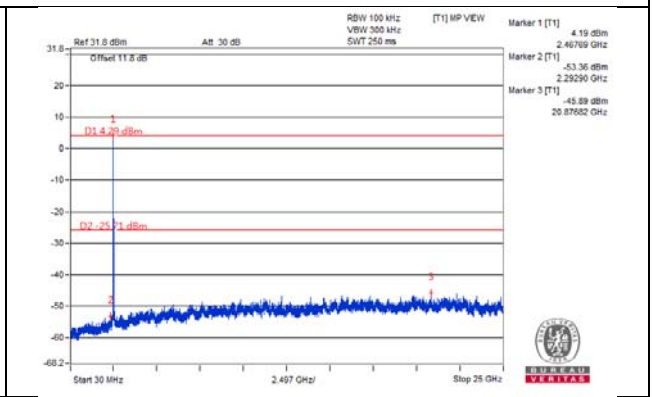
CH 6



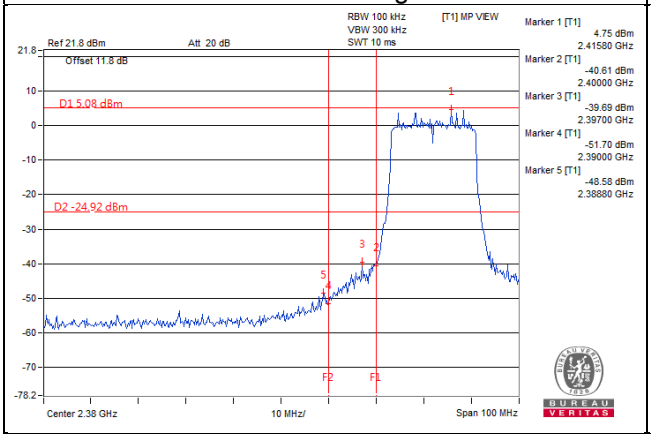


CH 11

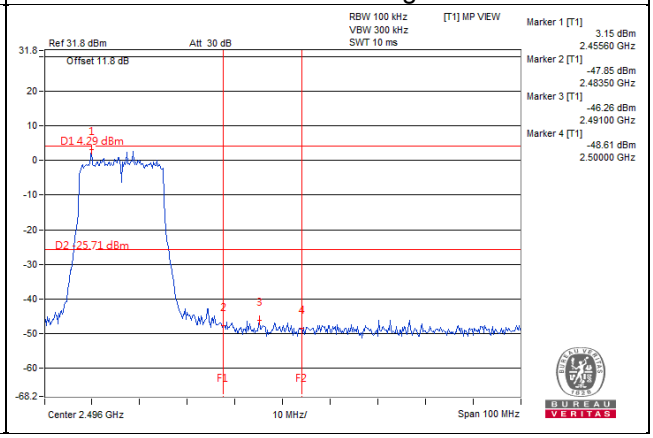




CH 1 Band edge

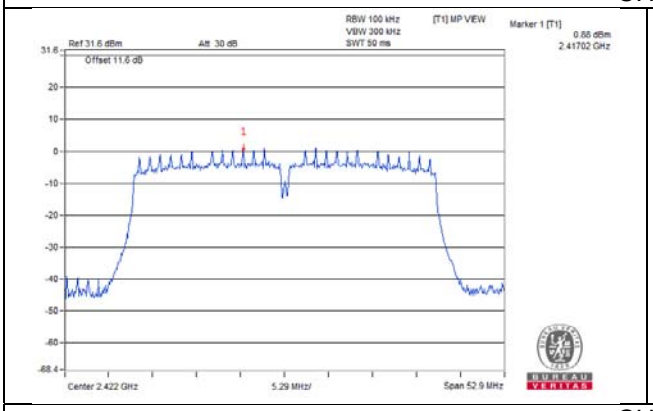


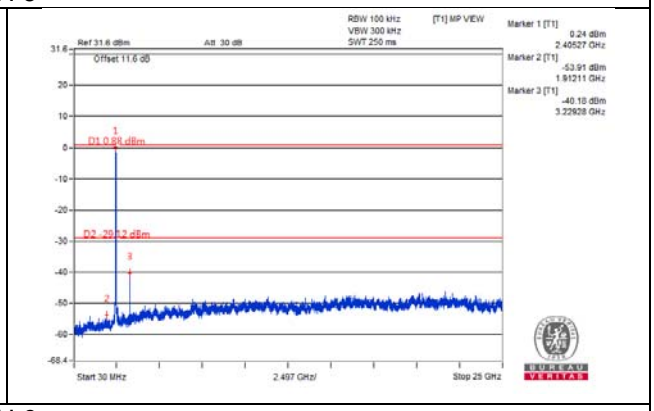
CH 11 Band edge



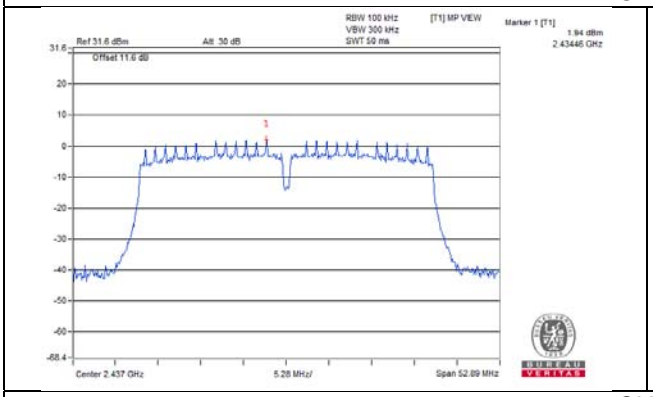
802.11n (HT40)_Chain 0

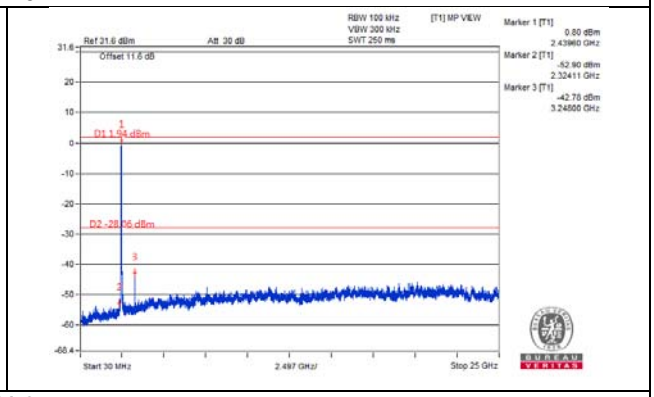
CH 3



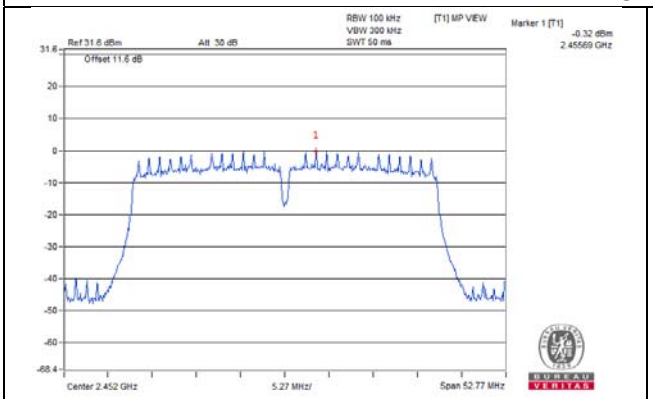


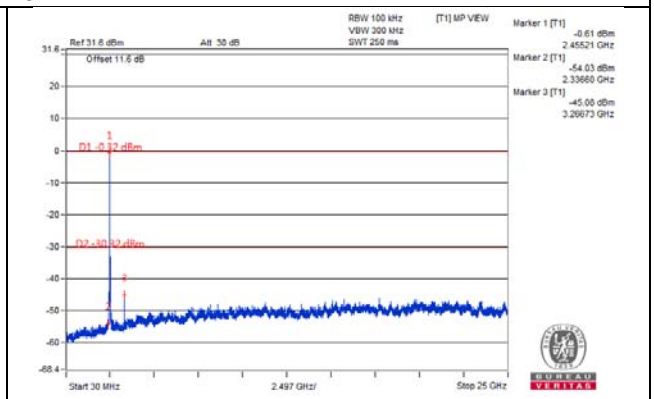
CH 6



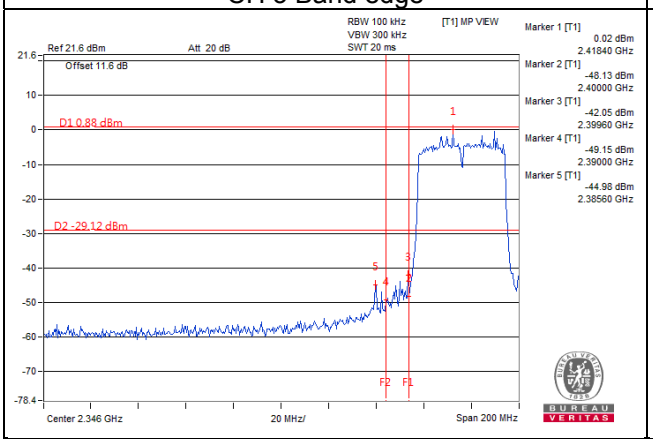


CH 9

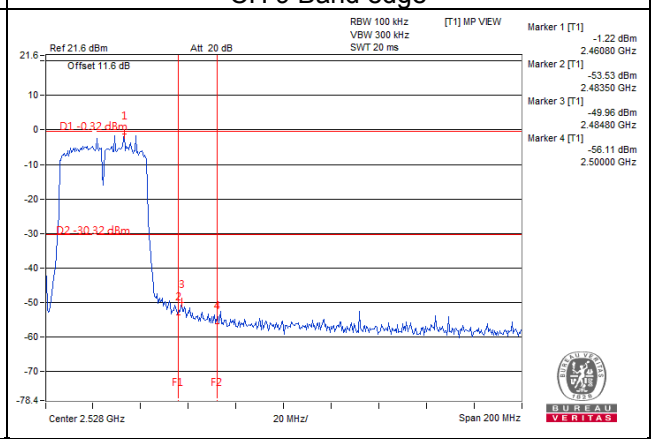




CH 3 Band edge

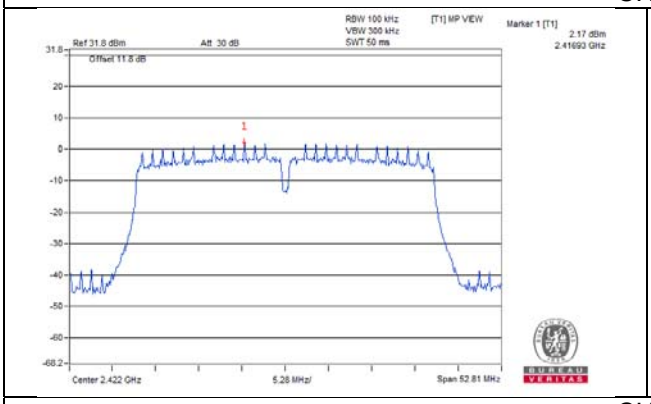


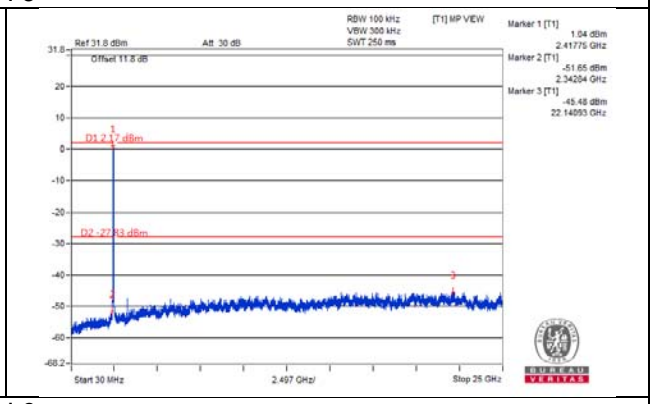
CH 9 Band edge



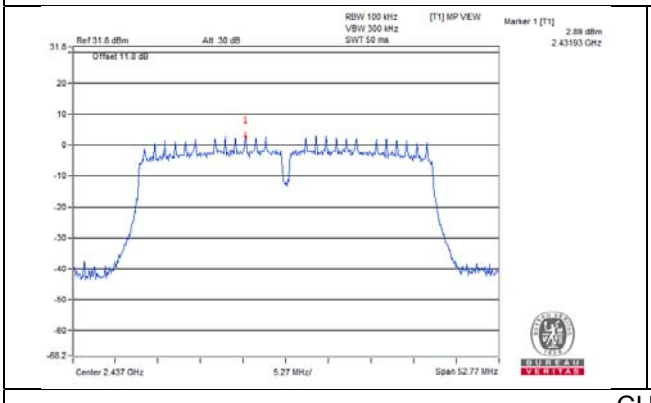
802.11n (HT40)_Chain 1

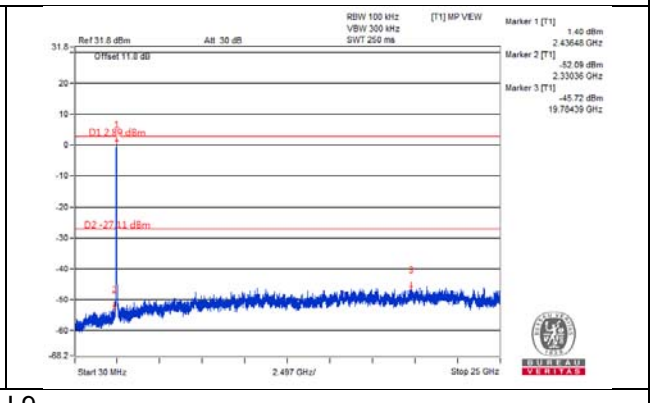
CH 3



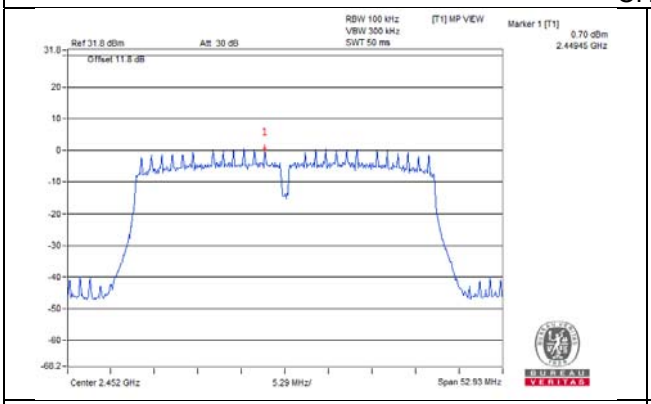


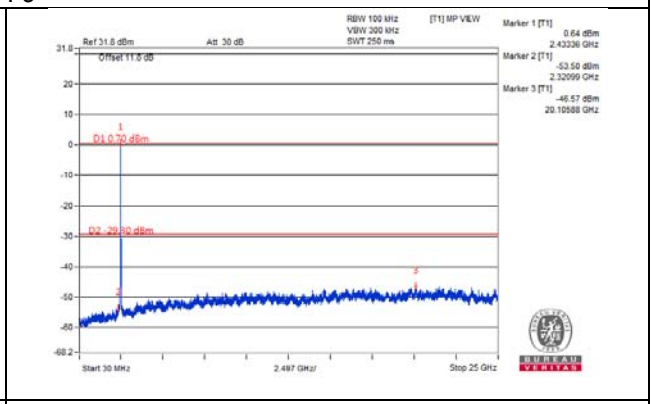
CH 6



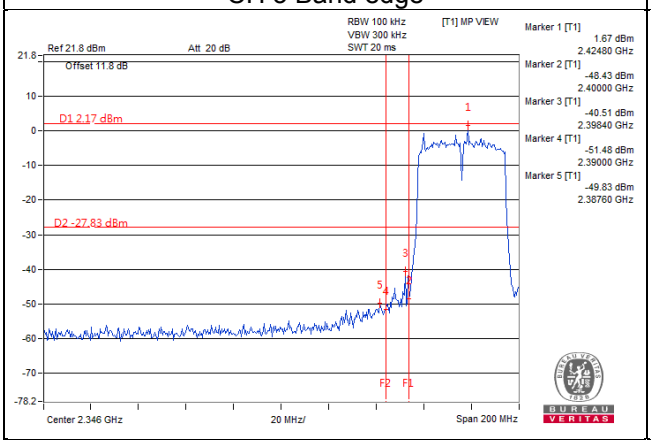


CH 9

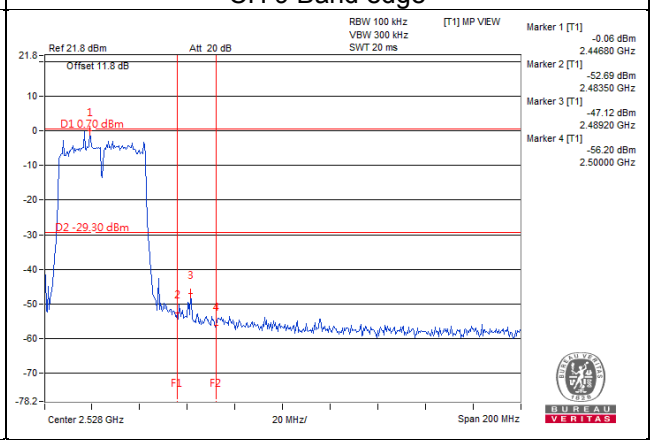




CH 3 Band edge



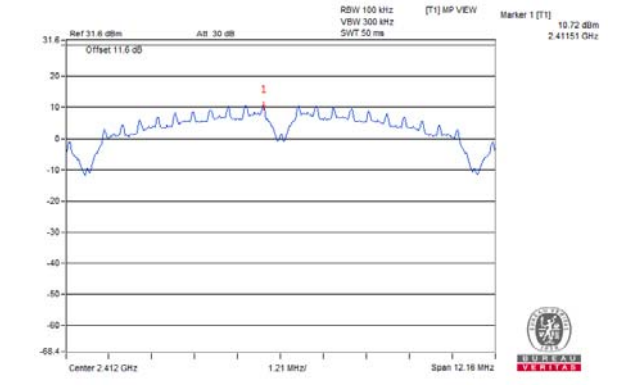
CH 9 Band edge

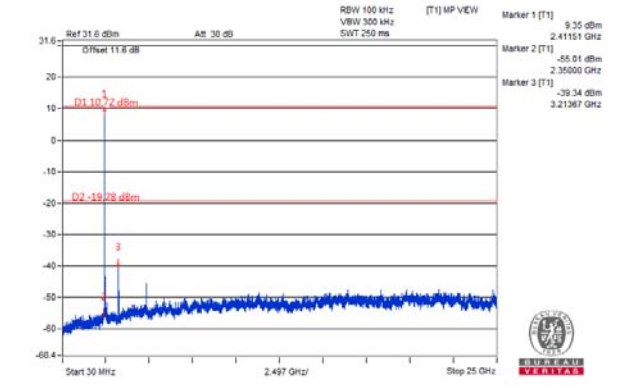


Test Mode C

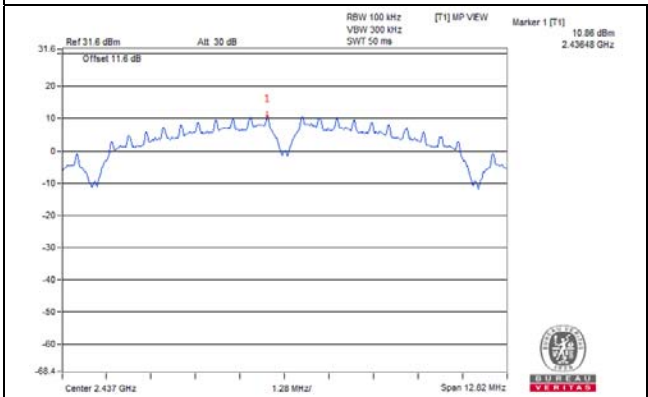
802.11b_Chain 0

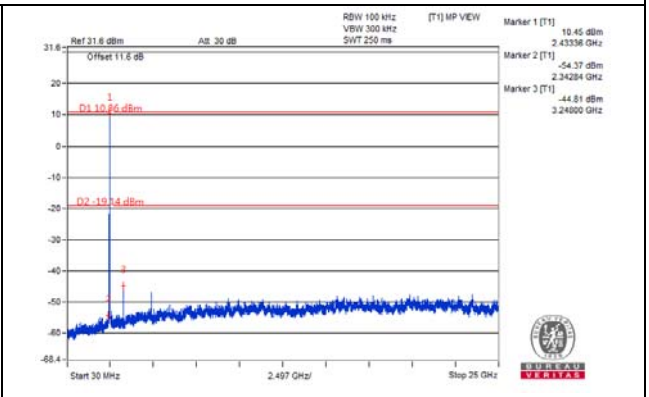
CH 1



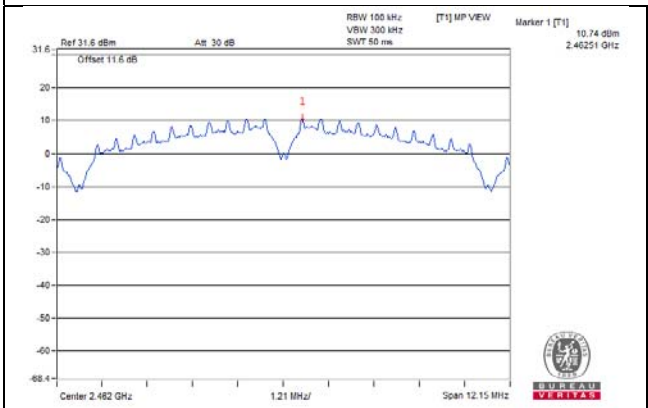


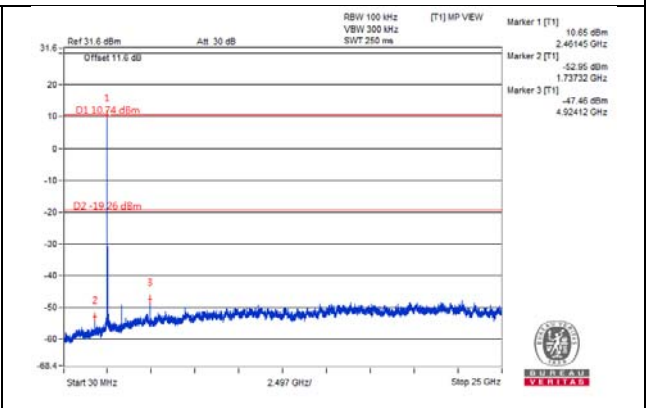
CH 6



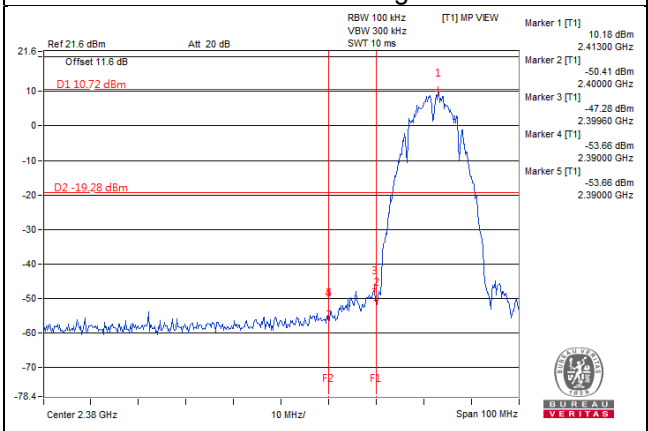


CH 11

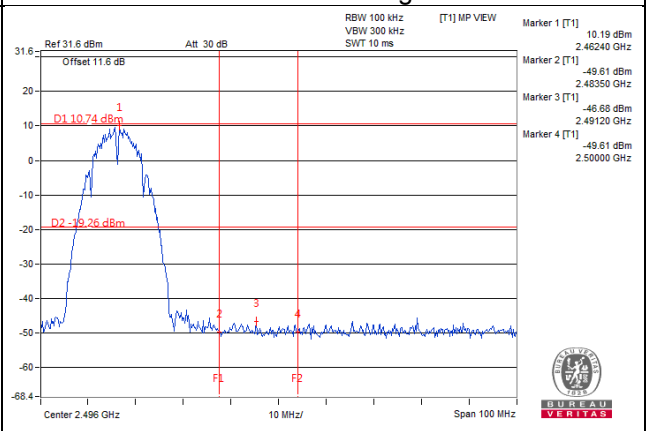




CH 1 Band edge

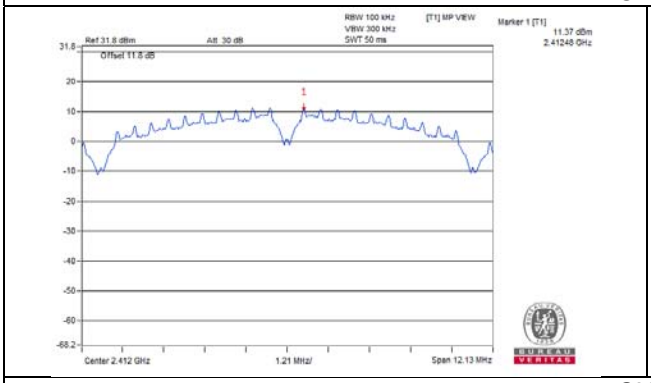


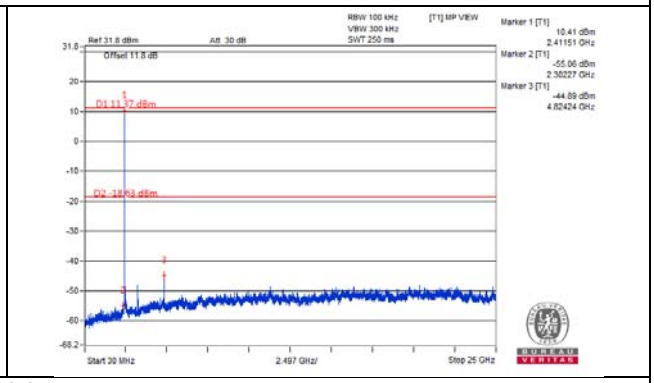
CH 11 Band edge



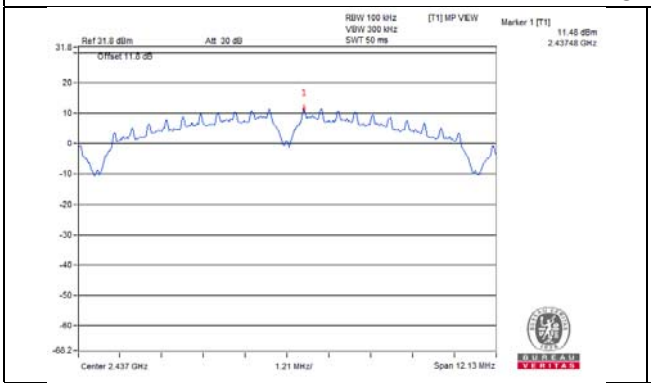
802.11b_Chain 1

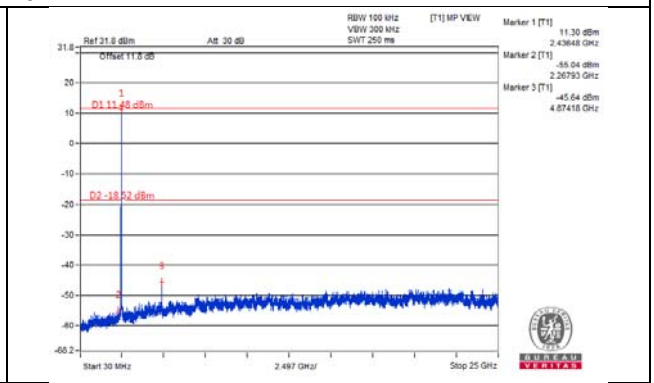
CH 1



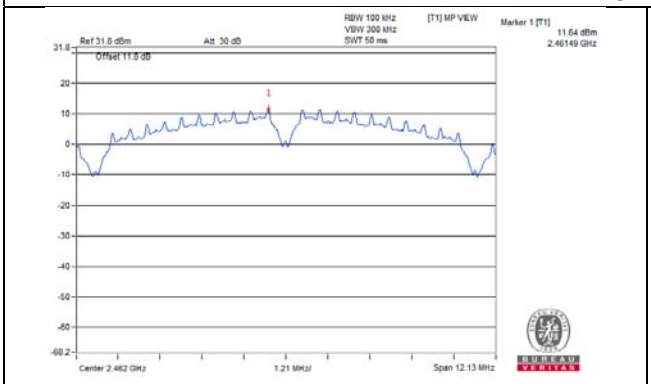


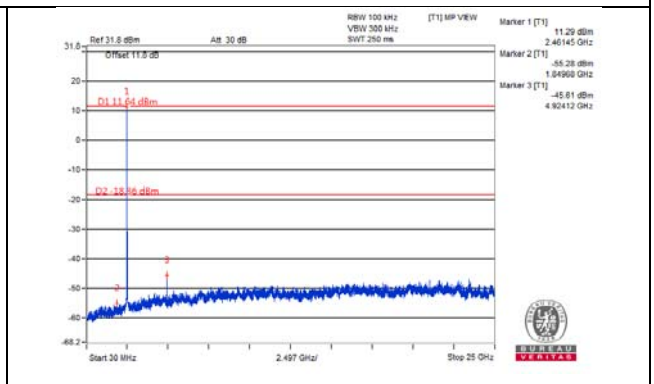
CH 6



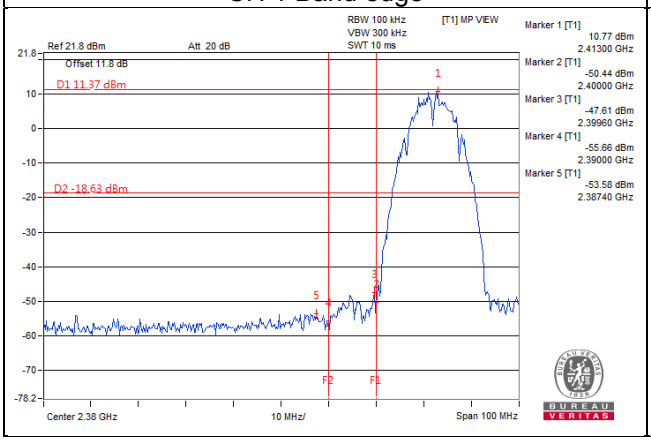


CH 11

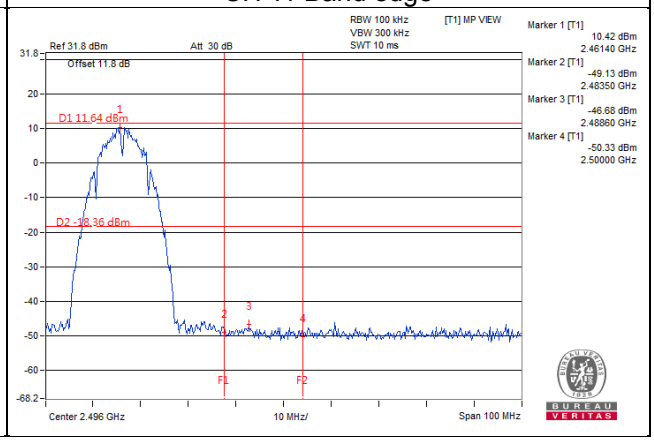




CH 1 Band edge

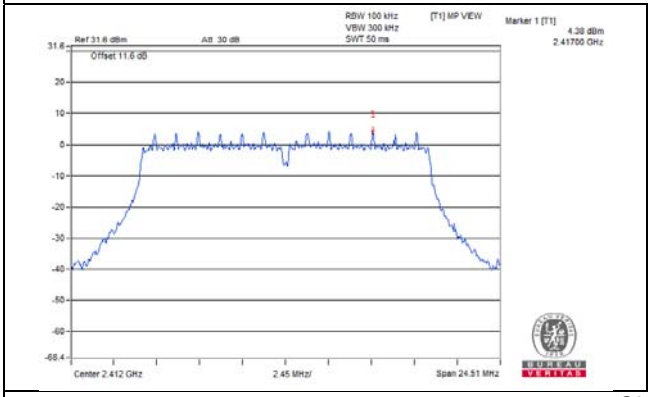


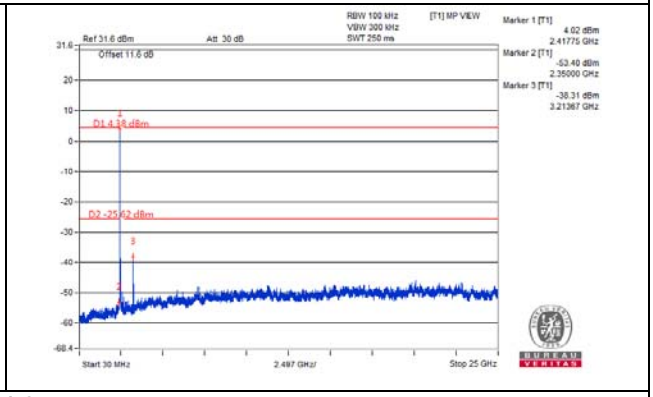
CH 11 Band edge



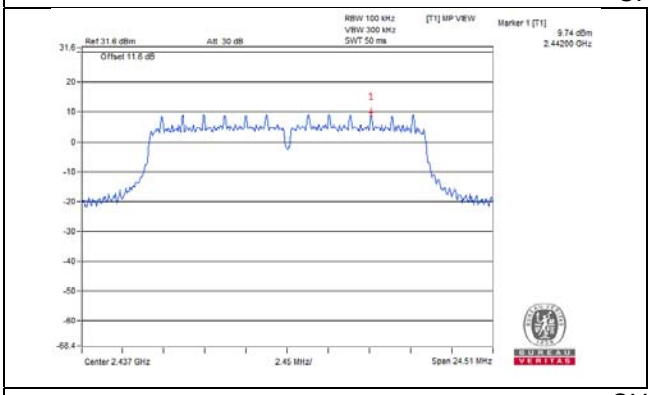
802.11g_Chain 0

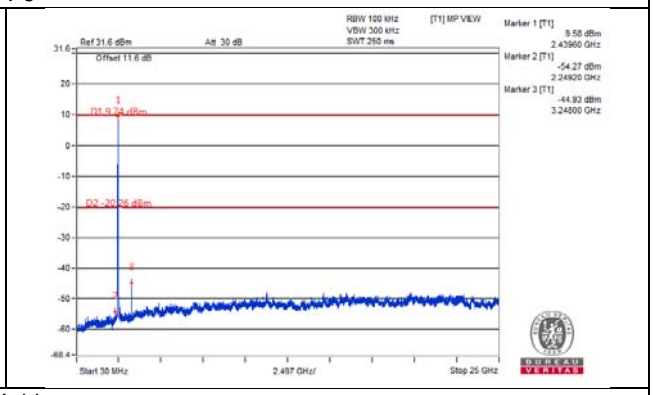
CH 1



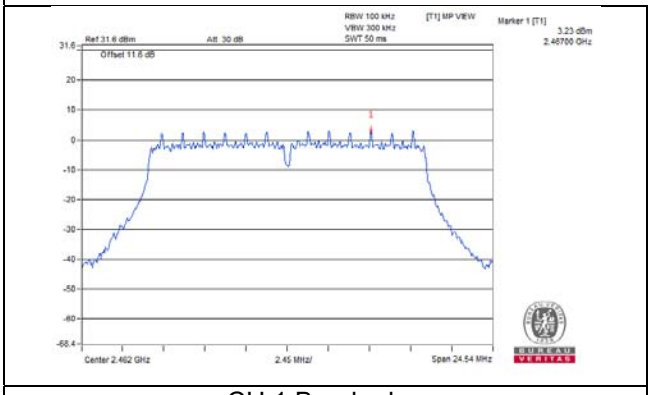


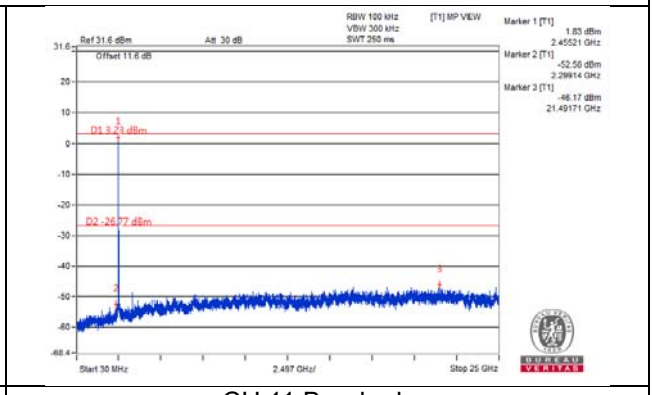
CH 6



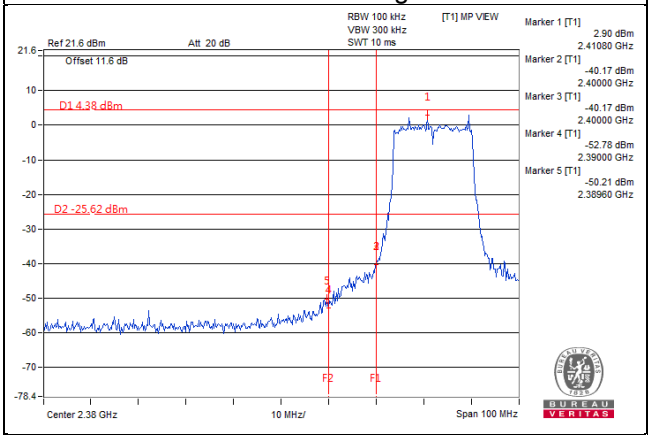


CH 11

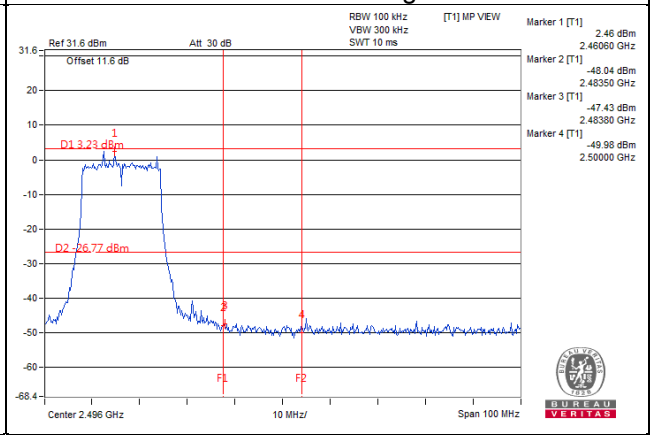




CH 1 Band edge

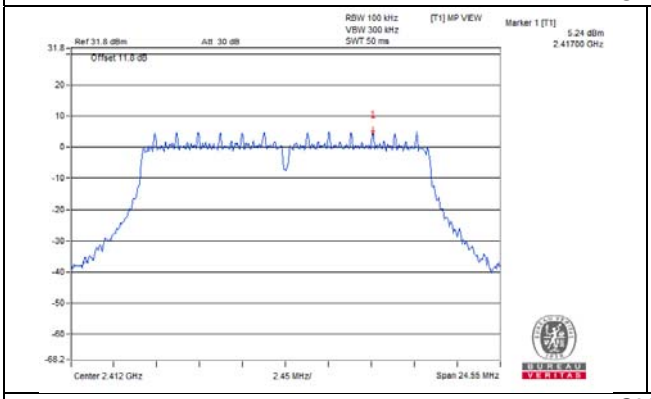


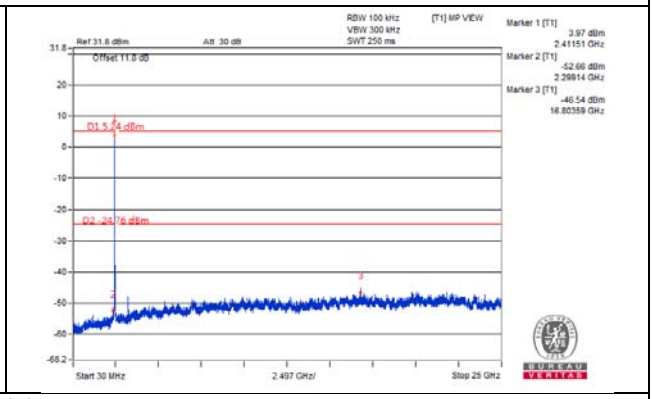
CH 11 Band edge



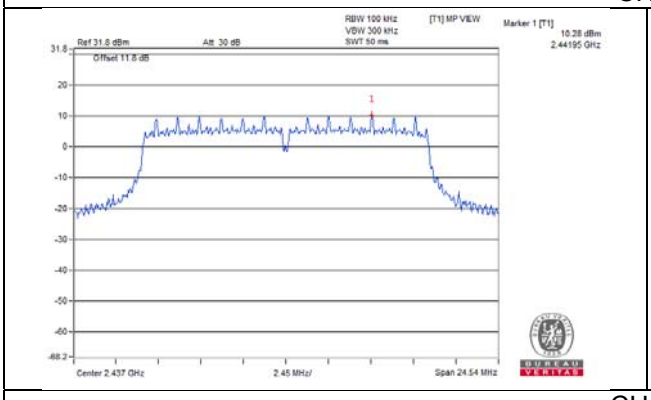
802.11g_Chain 1

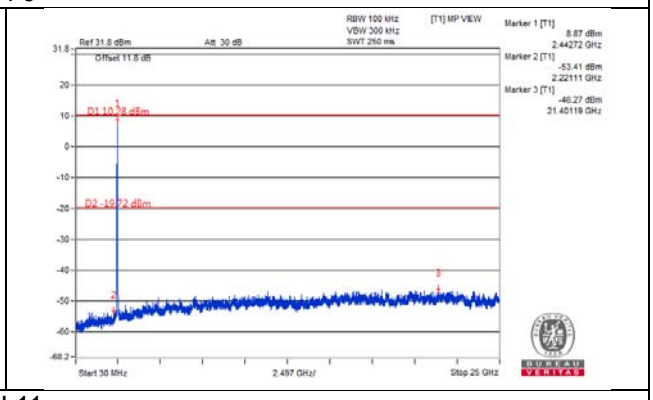
CH 1



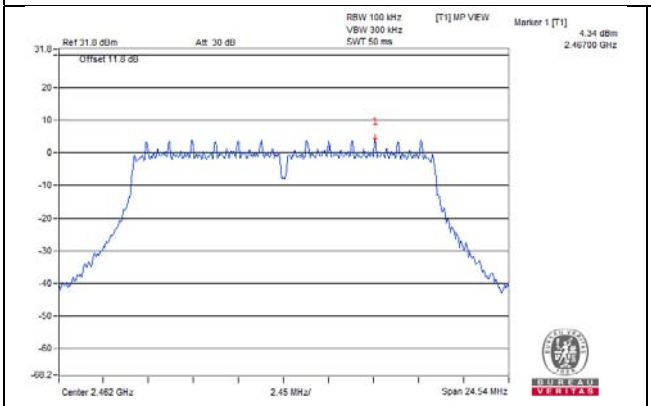


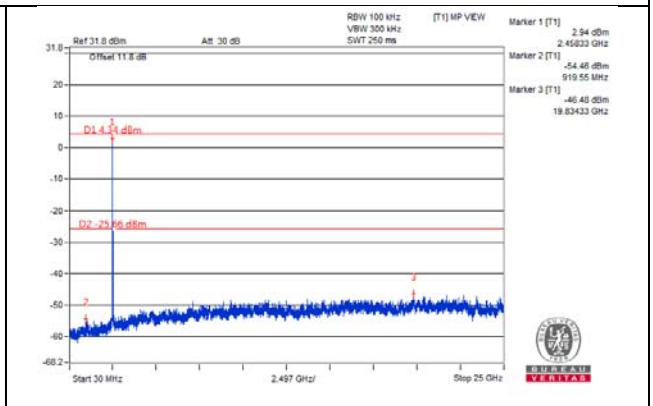
CH 6



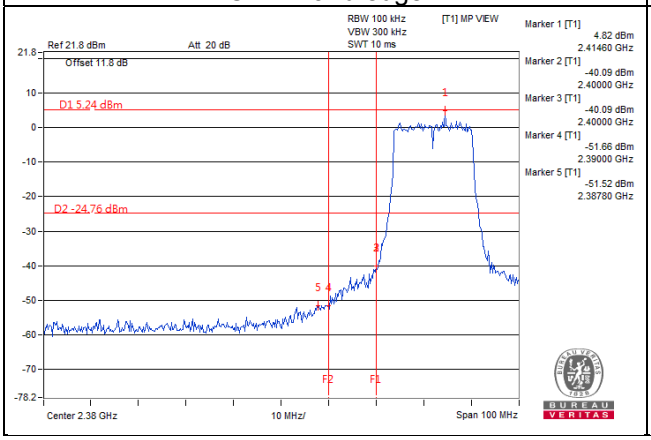


CH 11

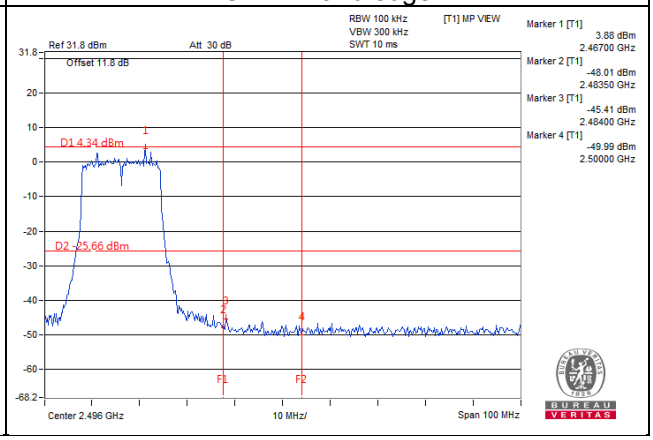




CH 1 Band edge

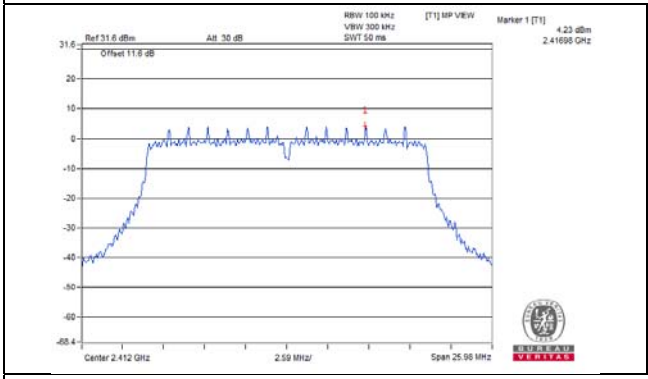


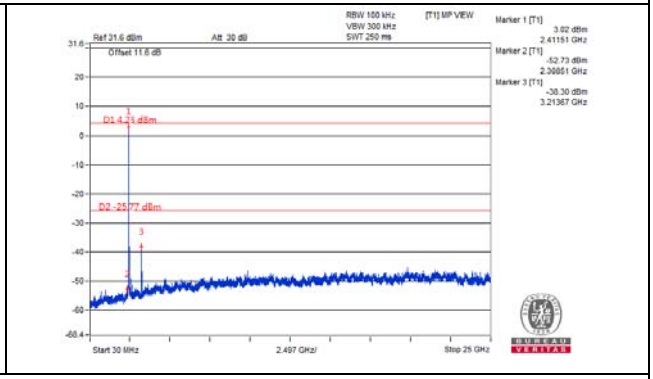
CH 11 Band edge



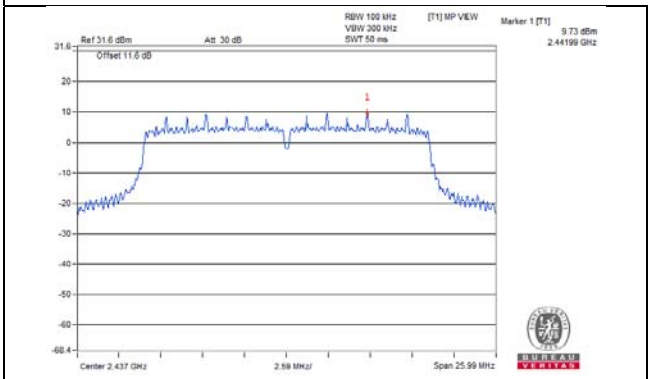
802.11n (HT20)_Chain 0

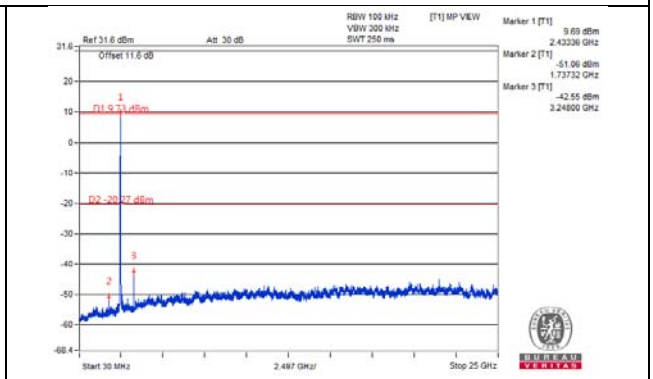
CH 1



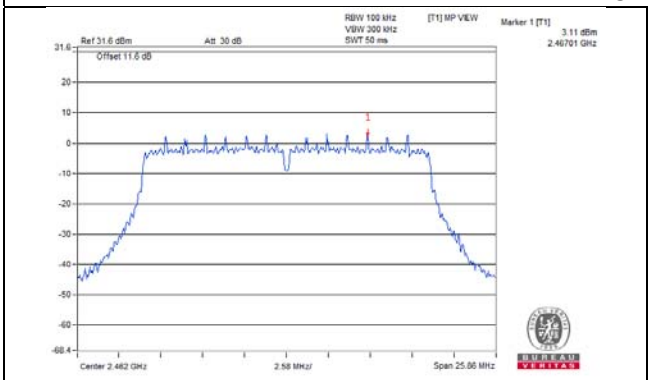


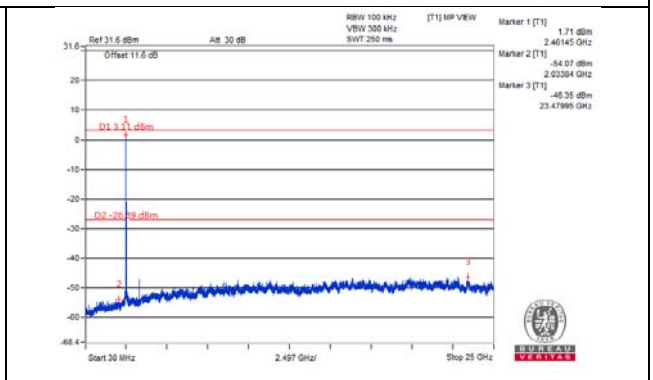
CH 6



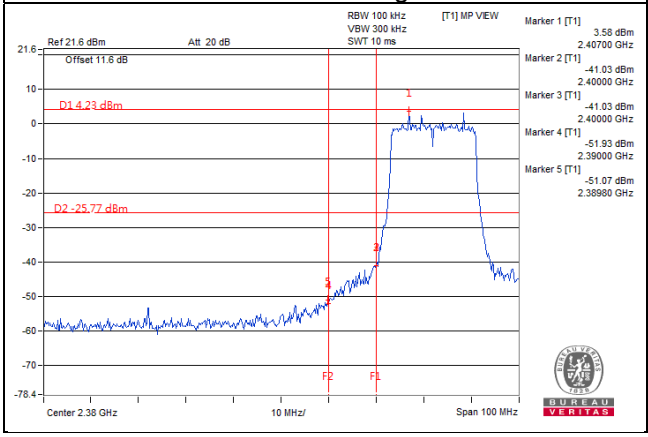


CH 11

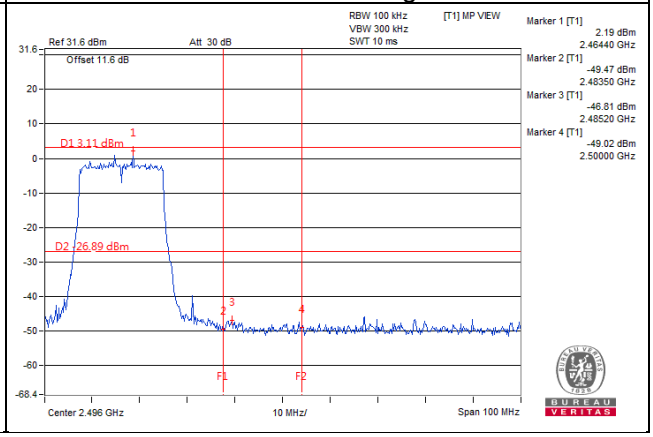




CH 1 Band edge

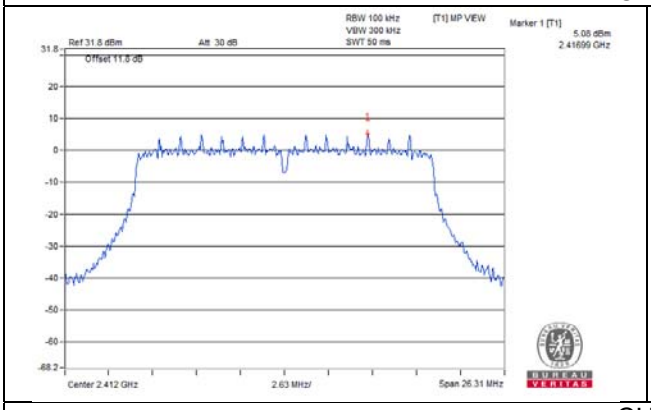


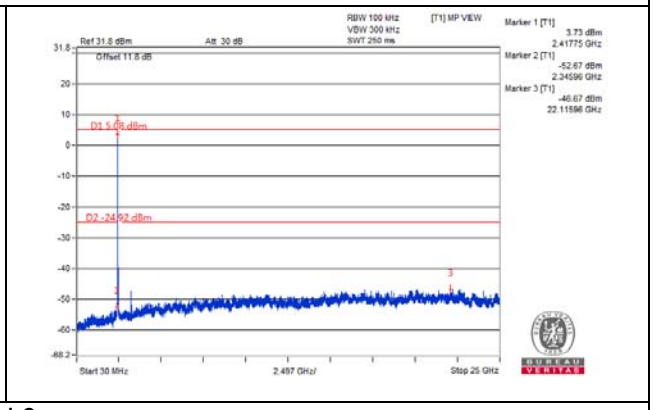
CH 11 Band edge



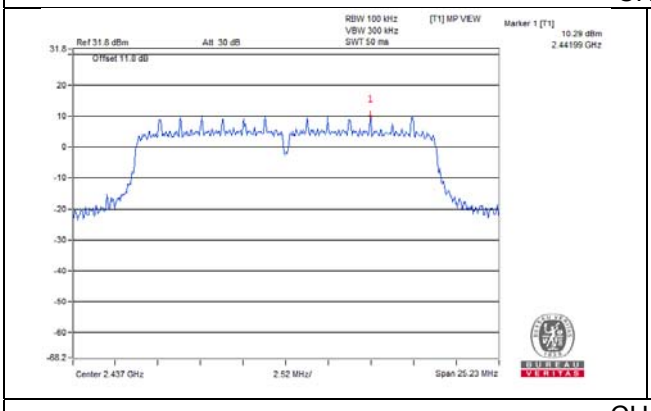
802.11n (HT20)_Chain 1

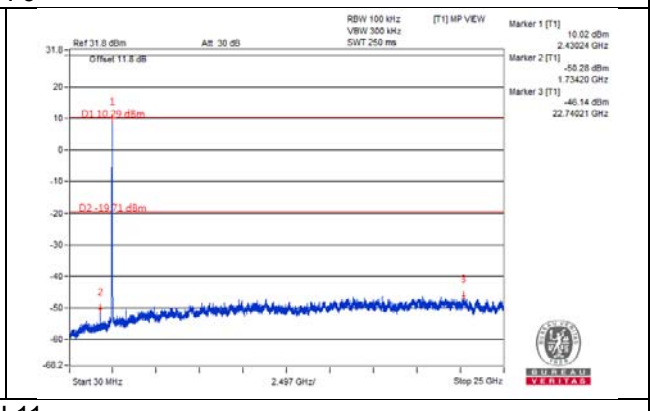
CH 1



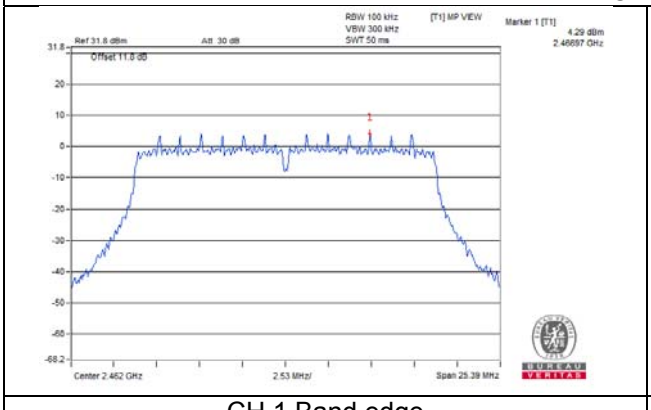


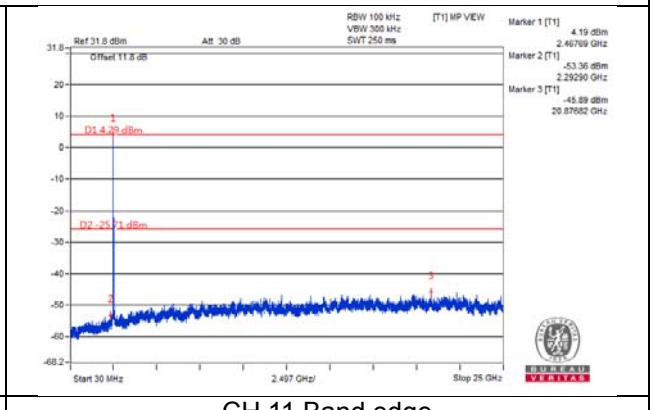
CH 6



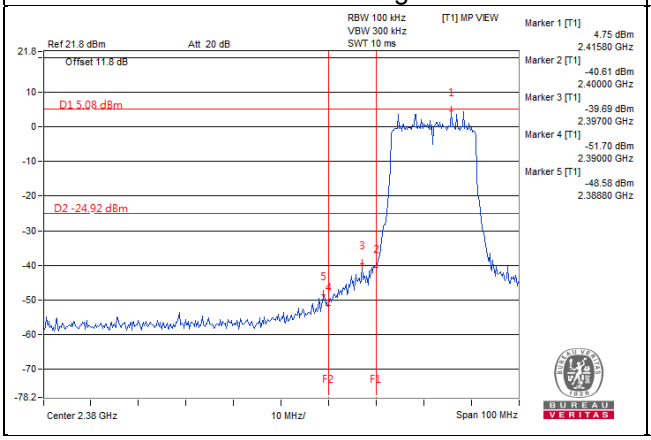


CH 11

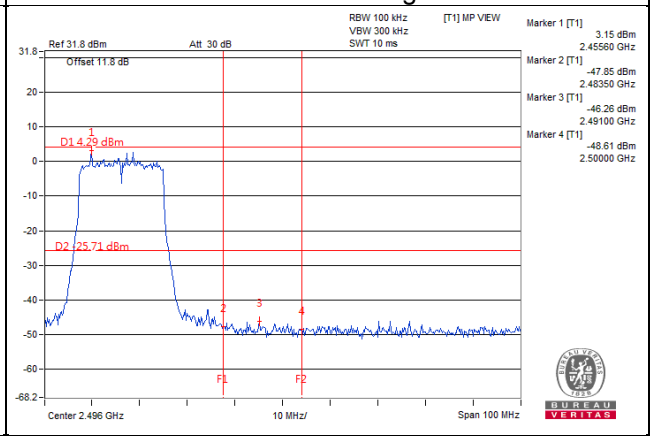




CH 1 Band edge

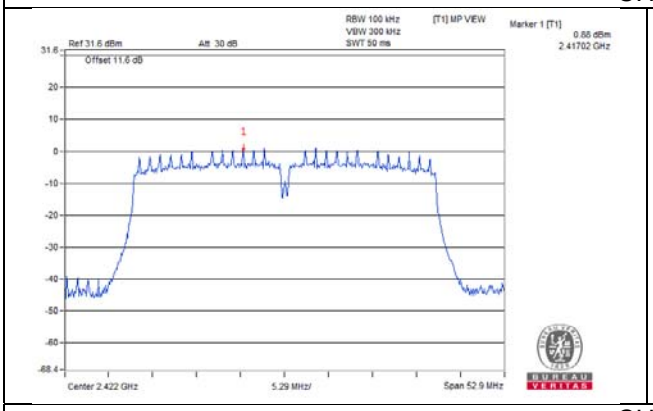


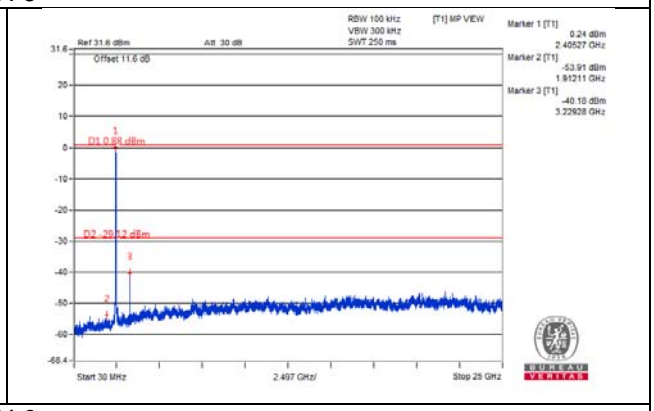
CH 11 Band edge



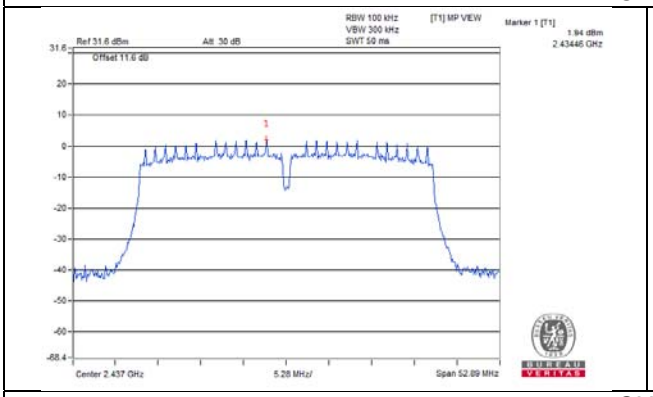
802.11n (HT40)_Chain 0

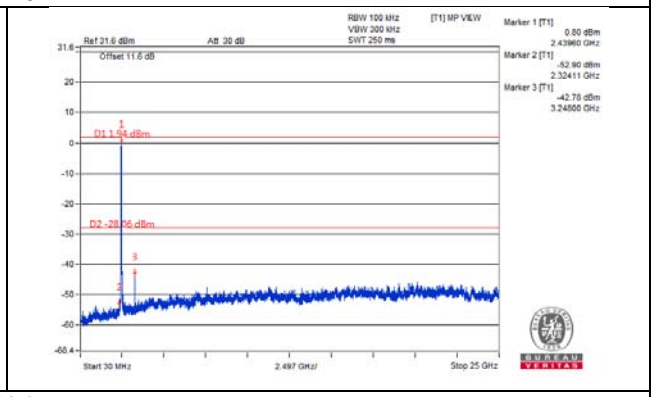
CH 3



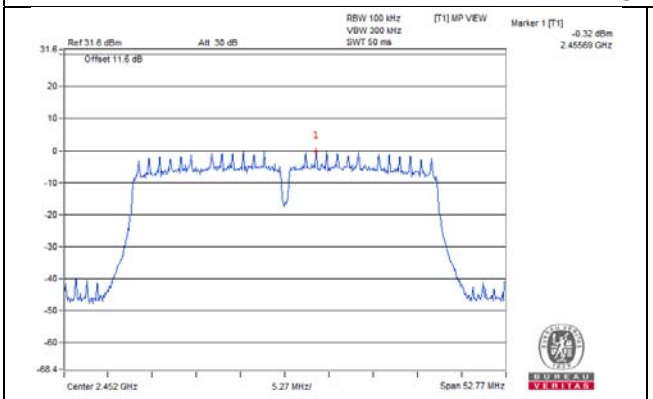


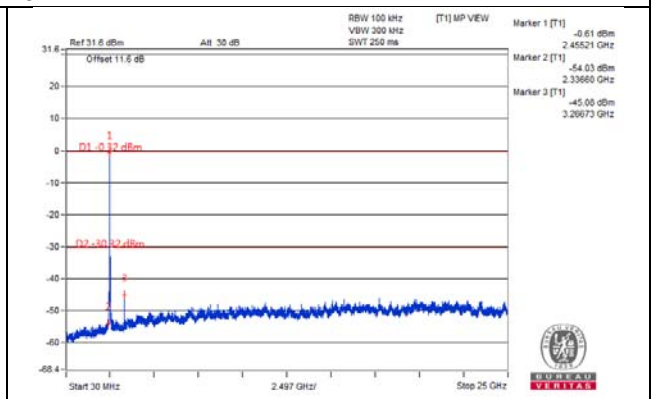
CH 6



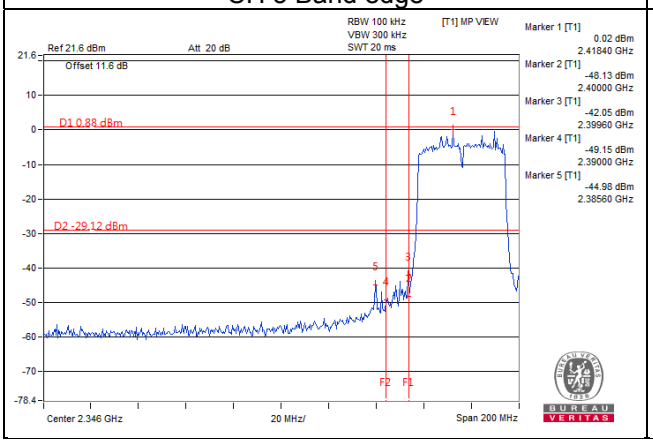


CH 9





CH 3 Band edge



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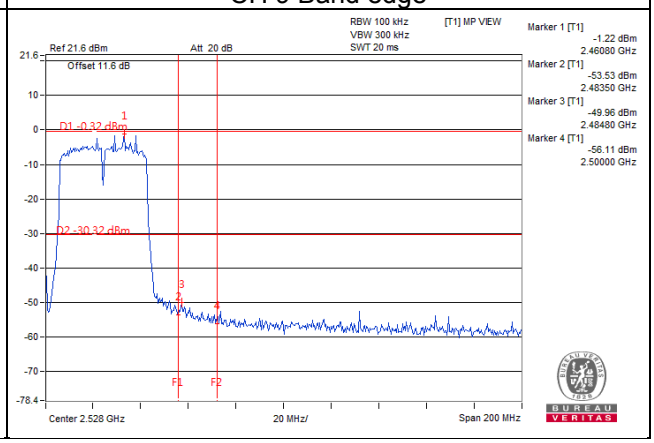
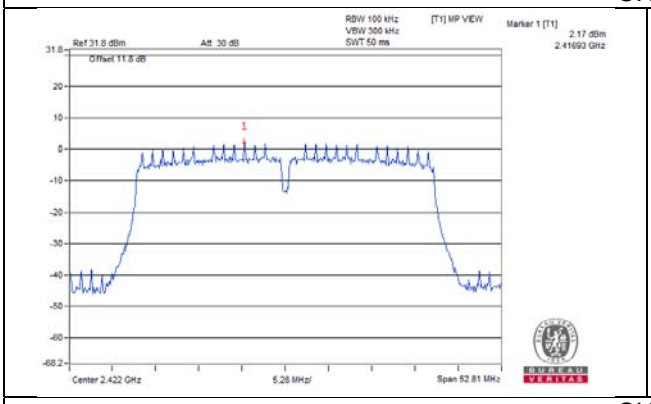
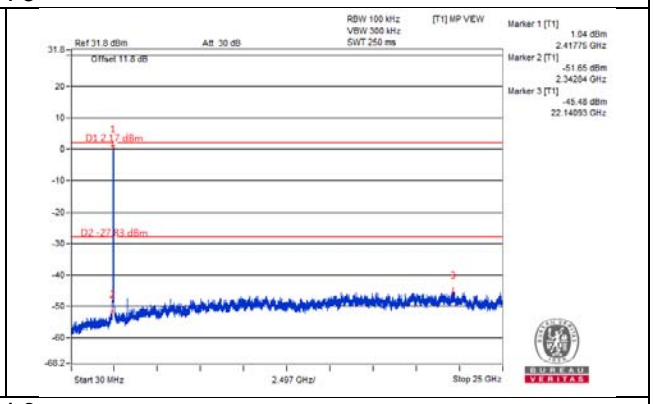


802.11n (HT40)_Chain 1

CH 3





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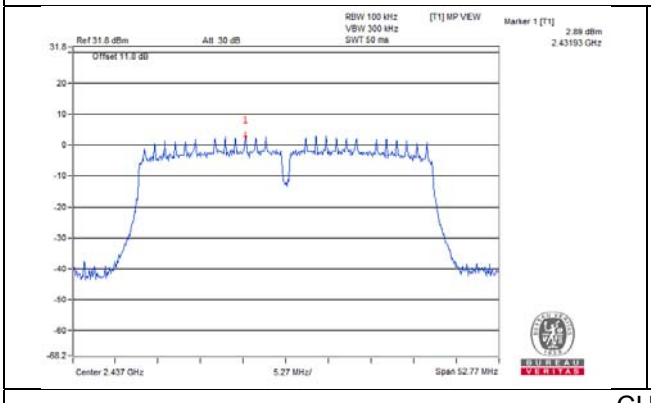
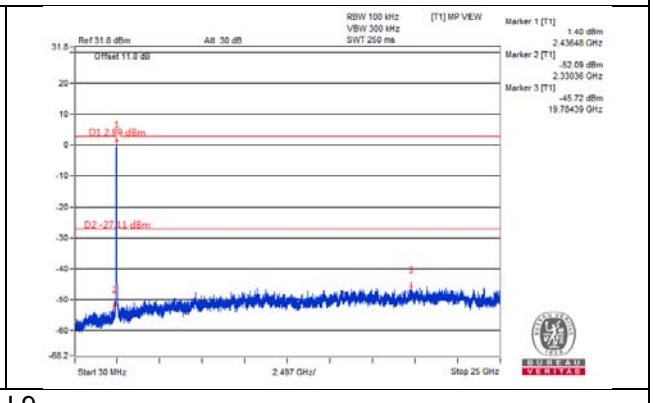
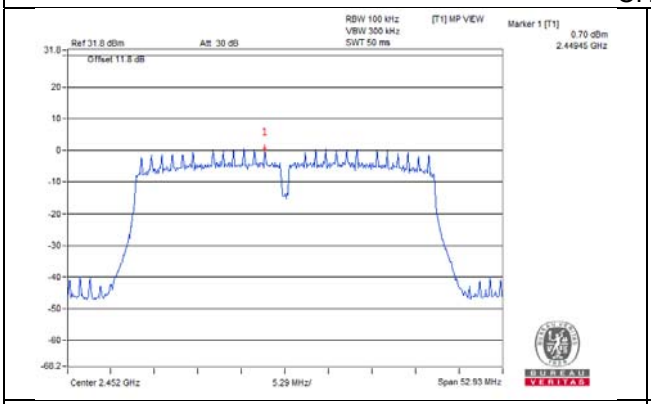
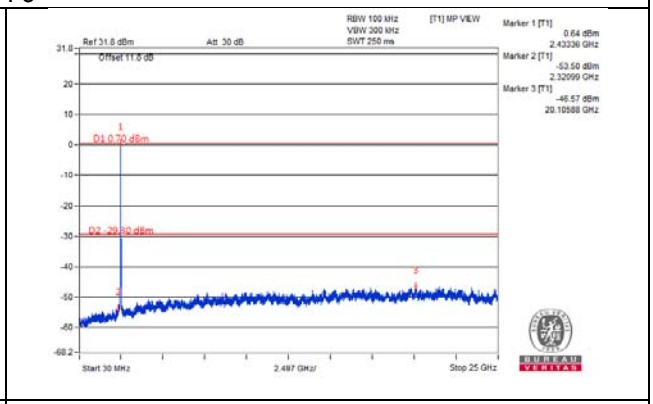


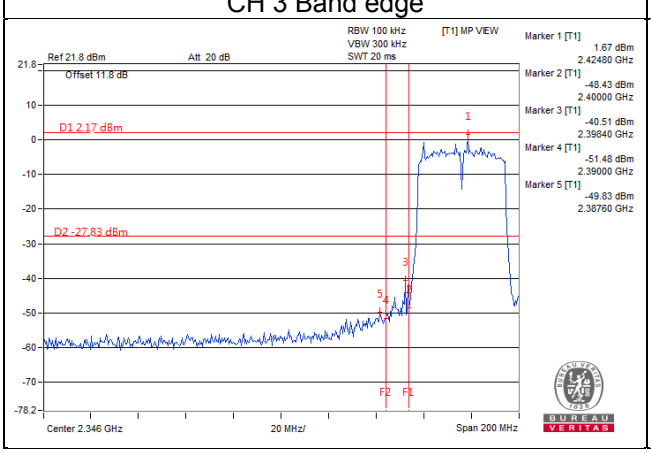


CH 9

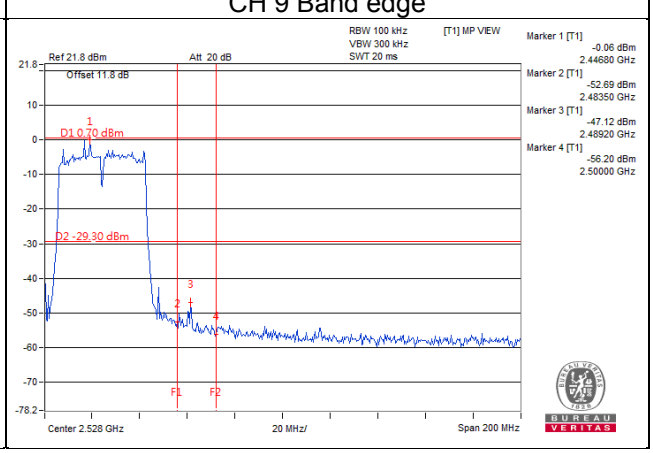




CH 3 Band edge



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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