FCC Test Report (WLAN-15.247)

Report No.:	RF150623E09
FCC ID:	U8G-P1934
Test Model:	MAX BR1 PRO LTE
Series Model:	MAX BR1 PRO, MAX BR2, MAX BR4, Pismo 934, Surf SOHO, Surf SOHO LTE, MAX BR2 LTE, MAX BR4 LTE
Received Date:	June 23, 2015
Test Date:	June 30 to July 15, 2015
Issued Date:	July 24, 2015
Applicant:	Pismo Labs Technology Limited
Address:	FLAT/RM A5, 5/F, HK SPINNERS IND BLDG PHASE 6, 481 CASTLE PEAK ROAD, CHEUNG SHA WAN, HONG KONG.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (1):	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
RF150623E09	Original release.	July 24, 2015

1 Certificate of Conformity

Product:	Industrial-Grade M2M Cellular Router
Brand:	Pepwave / Peplink / Pismo
Test Model:	MAX BR1 PRO LTE
Series Model:	MAX BR1 PRO, MAX BR2, MAX BR4, Pismo 934, Surf SOHO, Surf SOHO LTE, MAX BR2 LTE, MAX BR4 LTE
Sample Status:	MASS-PRODUCTION
Applicant:	Pismo Labs Technology Limited
Test Date:	June 30 to July 15, 2015
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) ANSI C63.10: 2009

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 EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** July 24, 2015

Claire Kuan / Specialist

Approved by : _____ , **Date:** July 24, 2015

May Chen / Manager

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 -9.01dB at 4.39009MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2390.00MHz &2483.50MHz.
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 PR-SMA not a standard connector.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.86 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	5.37 dB
	200MHz ~1000MHz	3.65 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	3.88 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Industrial-Grade M2M Cellular Router
Brand	Pepwave / Peplink / Pismo
Test Model	MAX BR1 PRO LTE
Series Model	MAX BR1 PRO, MAX BR2, MAX BR4, Pismo 934, Surf SOHO, Surf SOHO LTE, MAX BR2 LTE, MAX BR4 LTE
Status of EUT	MASS-PRODUCTION
Power Supply Rating	DC 12V from power adapter or DC 10-24V from Terminal Block
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 150Mbps
Operating Frequency	**For 15.407** 5.18 ~ 5.24GHz, 5.745 ~ 5.825GHz
	For 15.247 2.412 ~ 2.462GHz
Number of Channel	**For 15.407** 9 for 802.11a, 802.11n (HT20) 4 for 802.11n (HT40)
	For 15.247 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	**For 15.407** 802.11a: 146.218mW 802.11n (HT20): 139.959mW 802.11n (HT40): 75.683mW
	For 15.247 802.11b: 502.343mW 802.11g: 814.704mW 802.11n (HT20): 833.681mW 802.11n (HT40): 783.43mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1
Data Cable Supplied	NA

Note:

1. There are WLAN, WWAN(2G/3G), LTE(4G) and GPS technology used for the EUT.
2. 2.4GHz & 5GHz technology cannot transmit at same time.
3. WLAN/WWAN(2/3G)/LTE(4G) coexistence mode:

Condition	Technology	
1	WLAN(2.4GHz)	WWAN(2G)
2	WLAN(5GHz)	WWAN(2G)
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.		

4. The EUT contains WWAN certified module which FCC ID: N7NMC7355 (Model: MC7354).

5. All models are listed as below.

Brand	Model	Difference
Pepwave / Peplink / Pismo	MAX BR1 PRO LTE	All models are electrically identical, different model names are for marketing purpose.
	MAX BR1 PRO	
	MAX BR2	
	MAX BR4	
	Pismo 934	
	Surf SOHO	
	Surf SOHO LTE	
	MAX BR2 LTE	
	MAX BR4 LTE	
From the above models, model: **MAX BR1 PRO LTE** was selected as representative model for the test and its data was recorded in this report.		

6. The EUT uses following adapter.

Brand	Ten Pao
Model	S040EM1200300
Input Power	AC 100-240V, 1.2A, 50/60Hz
Output Power	DC 12V, 3000mA
Power Line	DC output cable: Unshielded, 1.5m with one core

7. The antennas provided to the EUT, please refer to the following table:

WLAN Antenna Spec.

No.	Transmitter Circuit	Brand	Model No.	Antenna Type	Antenna Connecter	Gain(dBi) including cable loss	Frequency (GHz to GHz)
1	Chain (0)	SmartAnt	SAA06-220690	Dipole	RP-SMA	3	2.4~2.4835
		SmartAnt	SAA06-220690	Dipole	RP-SMA	4-5.5	5.15~5.25
		SmartAnt	SAA06-220690	Dipole	RP-SMA	5.5-6	5.725~5.85
2	Chain (1)	SmartAnt	SAA06-220690	Dipole	RP-SMA	3	2.4~2.4835
		SmartAnt	SAA06-220690	Dipole	RP-SMA	4-5.5	5.15~5.25
		SmartAnt	SAA06-220690	Dipole	RP-SMA	5.5-6	5.725~5.85

LTE Antenna Spec.

Set	Transmitter Circuit	Brand	Model No.	Antenna Type	Antenna Connecter	Gain(dBi) including cable loss	Frequency (GHz to GHz)
1	Cellular Main	Pulse	SPDA24700/2700	Dipole	SMA Male	2	698-960/ 1710-2170/ 2500-2700
	Cellular Diversity/ Aux	Pulse	SPDA24700/2700	Dipole	SMA Male	2	

GPS Antenna Spec.

No.	Brand	Model No.	Antenna Type	Antenna Connecter	Gain(dBi) including cable loss	Frequency (GHz to GHz)
1	Chang Hong	GPS-01	Magnetic	R-SMA Male	-1	1.57542 (+/- 1.023)

8. The EUT incorporates a SISO function.

2.4GHz			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11b	1 ~ 11Mbps	1TX (Diversity)	1RX (Diversity)
802.11g	6 ~ 54Mbps	1TX (Diversity)	1RX (Diversity)
802.11n (HT20)	MCS 0~7	1TX (Diversity)	1RX (Diversity)
802.11n (HT40)	MCS 0~7	1TX (Diversity)	1RX (Diversity)
5GHz			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11a	6 ~ 54Mbps	1TX (Diversity)	1RX (Diversity)
802.11n (HT20)	MCS 0~7	1TX (Diversity)	1RX (Diversity)
802.11n (HT40)	MCS 0~7	1TX (Diversity)	1RX (Diversity)

9. The EUT was pre-tested under following test modes:

Mode	Test Condition
1	**Adapter**
2	DC Terminal Block in
The worst radiated emission was found in **Mode 1**. Therefore only the test data of the modes were recorded in this report.	

10. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

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	
1	√	√	√	√	With adapter
2	-	-	√	-	With DC Terminal Block in

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: The EUT had been pre-tested on the positioned of each 2 axis. The worst case was found when positioned on **X-plane**.

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

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.

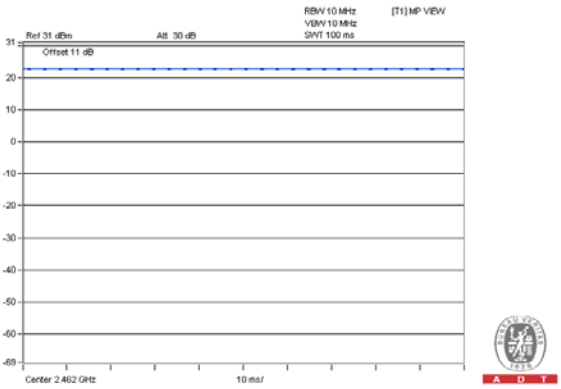
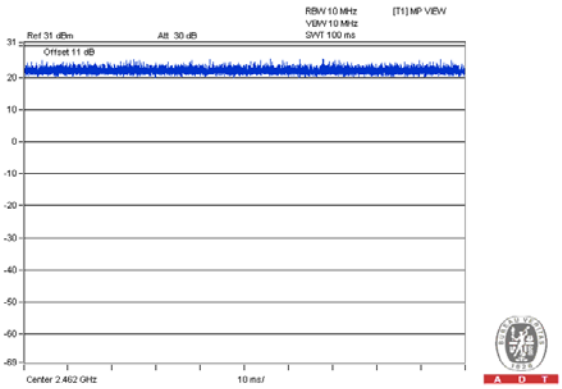
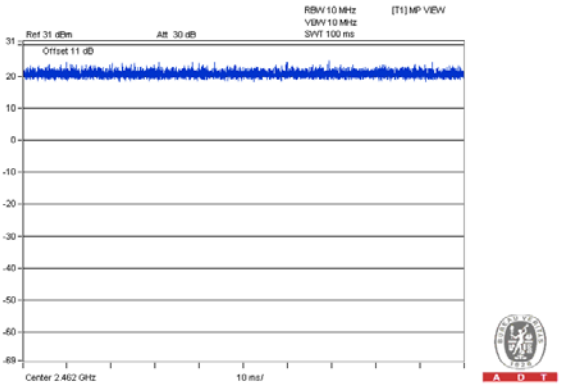
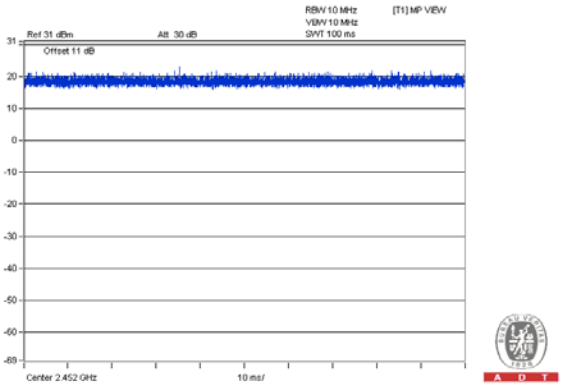
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	22deg. C, 66%RH	120Vac, 60Hz	Robert Cheng
RE<1G	19deg. C, 63%RH	120Vac, 60Hz	Weiwei Lo
PLC	25deg. C, 64%RH	120Vac, 60Hz	JyunChun Lin
	25deg. C, 65%RH	120Vac, 60Hz (System)	JyunChun Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is 100 %, duty factor is not required.

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 COMPUTER	DELL	E6400	D814C A00 APCC	NA	Provided by Lab
B.	HUB	Linksys	SD208	NA	NA	Provided by Lab
C.	DC POWER SUPPLY	GOOD WILL INSTRUMENT CO., LTD.	GPC-3030D	7700087	NA	Provided by Lab
D.	NOTEBOOK COMPUTER	DELL	E6420	482T3R1	FCC DoC	Provided by Lab

Note:

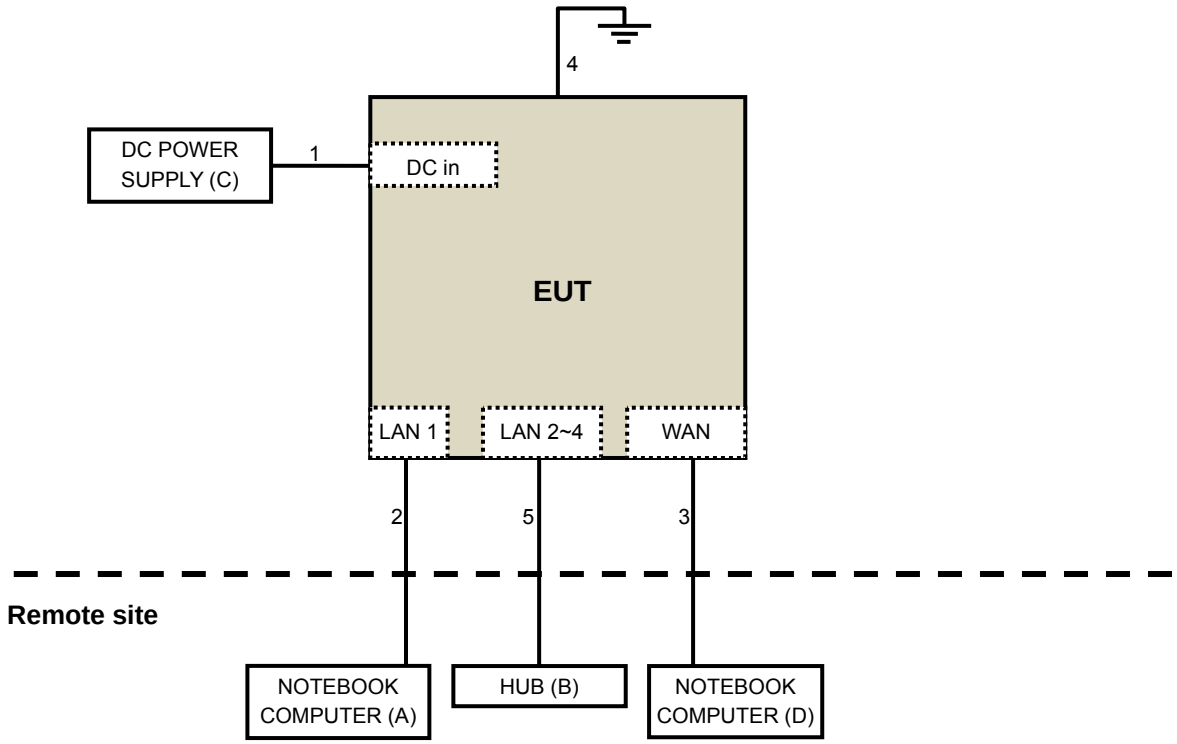
1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC	1	2	No	0	Provided by Lab
2.	RJ45	1	10	No	0	Provided by Lab
3.	RJ45	1	10	No	0	Provided by Lab
4.	EARTH	1	3	No	0	Provided by Lab
5.	RJ45	3	10	No	0	Provided by Lab
6.	DC	1	1.5	No	1	Supplied by client

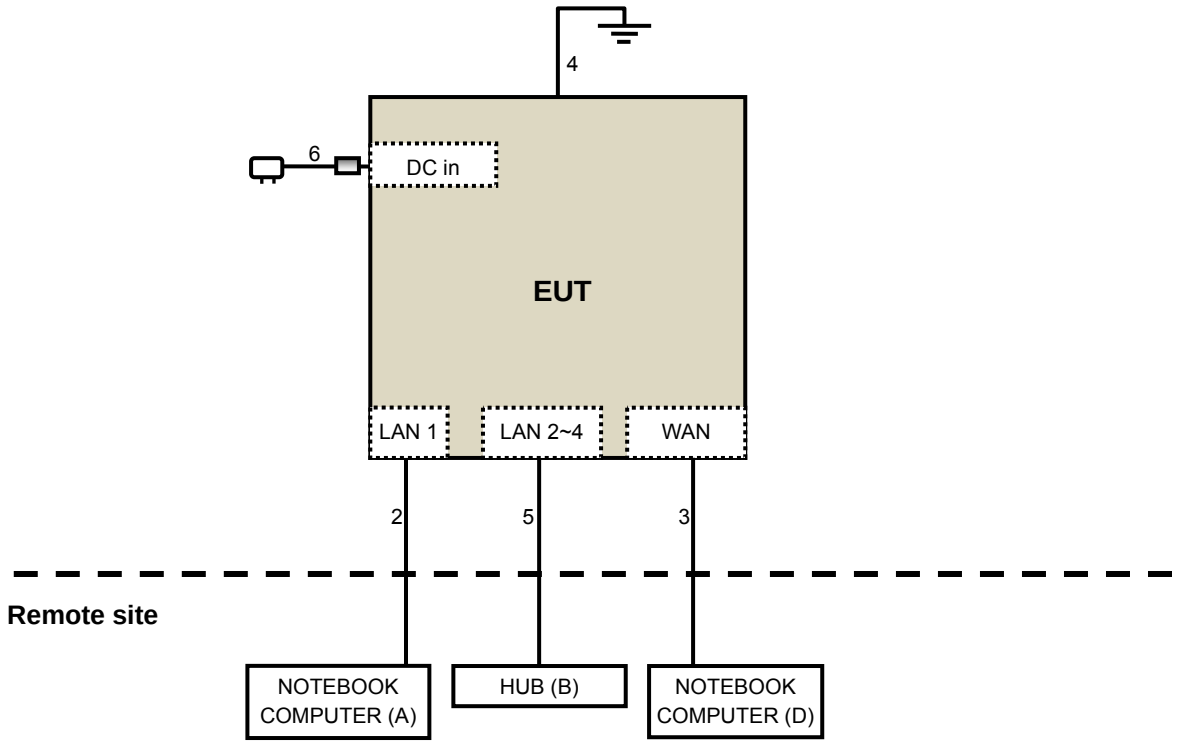
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

For conducted test mode 2:



For other test mode items:



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart C (15.247)
558074 D01 DTS Meas Guidance v03r02
ANSI C63.10: 2009

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

NOTE: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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 20dB below the highest level of the desired power:

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

NOTE:

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210105	July 21, 2014	July 20, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-03	Nov. 12, 2014	Nov. 11, 2015
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Feb. 06, 2015	Feb. 05, 2016
RF Cable	8D-FB	CHGCAB-001-1 CHGCAB-001-2	Oct. 04, 2014	Oct. 03, 2015
	RF-141	CHGCAB-004	Oct. 04, 2014	Oct. 03, 2015
Horn_Antenna AISI	AIH.8018	0000320091110	Feb. 09, 2015	Feb. 08, 2016
Pre-Amplifier Agilent	8449B	3008A02578	June 23, 2015	June 22, 2016
RF Cable	NA	131205 131216 131217 SNMY23684/4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Feb. 05, 2015	Feb. 04, 2016
RF Cable	NA	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated_V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	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 966 Chamber No. G.
3. The FCC Site Registration No. is 966073.
4. The VCCI Site Registration No. is G-137.
5. The CANADA Site Registration No. is IC 7450H-2.
6. Tested Date: July 10, 2015

4.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

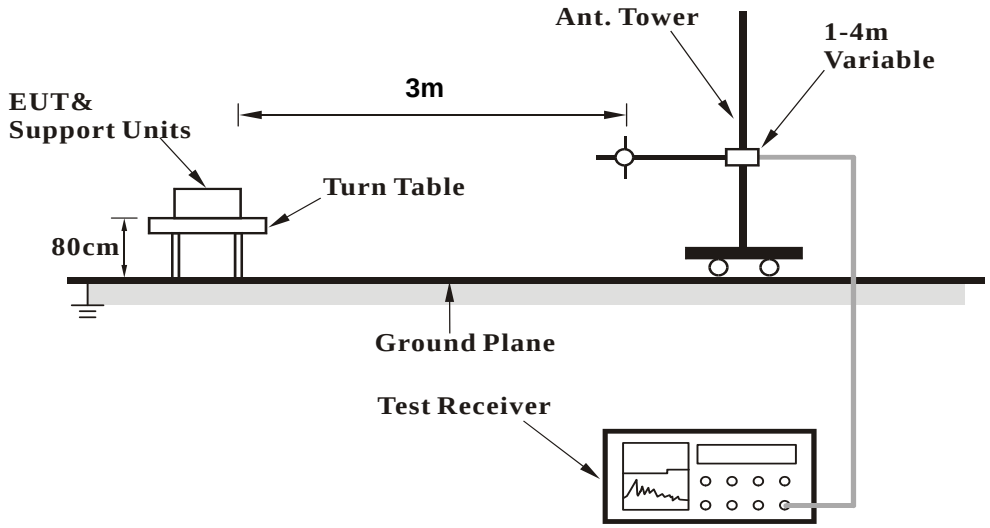
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

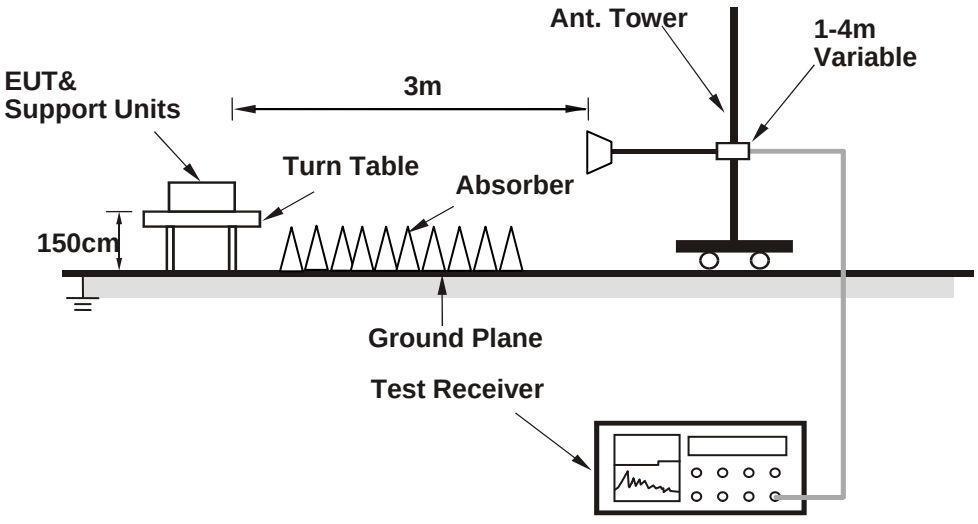
No deviation.

4.1.5 Test Set Up

<Frequency Range below 1GHz>



<Frequency Range 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 notebooks to act as 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 (artgui.exe) to enable EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data：

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	63.5 PK	74.0	-10.5	1.78 H	333	63.66	-0.16
2	2390.00	44.2 AV	54.0	-9.8	1.78 H	333	44.36	-0.16
3	*2412.00	100.2 PK			1.68 H	295	100.30	-0.10
4	*2412.00	97.6 AV			1.68 H	295	97.70	-0.10
5	4824.00	51.0 PK	74.0	-23.0	1.19 H	274	42.24	8.76
6	4824.00	46.1 AV	54.0	-7.9	1.19 H	274	37.34	8.76
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	68.3 PK	74.0	-5.7	1.45 V	322	68.46	-0.16
2	2390.00	53.8 AV	54.0	-0.2	1.45 V	322	53.96	-0.16
3	*2412.00	110.4 PK			1.45 V	322	110.50	-0.10
4	*2412.00	107.9 AV			1.45 V	322	108.00	-0.10
5	4824.00	51.3 PK	74.0	-22.7	1.38 V	315	42.54	8.76
6	4824.00	49.5 AV	54.0	-4.5	1.38 V	315	40.74	8.76

REMARKS:

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

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) 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	103.2 PK			1.61 H	276	103.23	-0.03
2	*2437.00	100.1 AV			1.61 H	276	100.13	-0.03
3	2483.50	60.2 PK	74.0	-13.8	1.75 H	317	60.09	0.11
4	2483.50	42.4 AV	54.0	-11.6	1.75 H	317	42.29	0.11
5	4874.00	50.7 PK	74.0	-23.3	1.14 H	294	41.79	8.91
6	4874.00	46.0 AV	54.0	-8.0	1.14 H	294	37.09	8.91
7	7311.00	52.2 PK	74.0	-21.8	1.25 H	266	35.75	16.45
8	7311.00	39.7 AV	54.0	-14.3	1.25 H	266	23.25	16.45
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	67.8 PK	74.0	-6.2	1.32 V	321	67.96	-0.16
2	2390.00	43.4 AV	54.0	-10.6	1.32 V	321	43.56	-0.16
3	*2437.00	113.1 PK			1.32 V	321	113.13	-0.03
4	*2437.00	110.7 AV			1.32 V	321	110.73	-0.03
5	2483.50	60.3 PK	74.0	-13.7	1.32 V	321	60.19	0.11
6	2483.50	45.1 AV	54.0	-8.9	1.32 V	321	44.99	0.11
7	4874.00	55.1 PK	74.0	-18.9	1.34 V	316	46.19	8.91
8	4874.00	53.8 AV	54.0	-0.2	1.34 V	316	44.89	8.91
9	7311.00	53.2 PK	74.0	-20.8	1.23 V	37	36.75	16.45
10	7311.00	41.7 AV	54.0	-12.3	1.23 V	37	25.25	16.45

REMARKS:

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

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) 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	101.2 PK			1.69 H	286	101.15	0.05
2	*2462.00	98.8 AV			1.69 H	286	98.75	0.05
3	2487.70	63.0 PK	74.0	-11.0	1.77 H	323	62.87	0.13
4	2487.70	44.1 AV	54.0	-9.9	1.77 H	323	43.97	0.13
5	4924.00	51.1 PK	74.0	-22.9	1.18 H	289	42.01	9.09
6	4924.00	46.4 AV	54.0	-7.6	1.18 H	289	37.31	9.09
7	7386.00	51.9 PK	74.0	-22.1	1.22 H	261	35.30	16.60
8	7386.00	39.5 AV	54.0	-14.5	1.22 H	261	22.90	16.60
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	112.3 PK			1.38 V	324	112.25	0.05
2	*2462.00	109.6 AV			1.38 V	324	109.55	0.05
3	2487.70	69.1 PK	74.0	-4.9	1.63 V	313	68.97	0.13
4	2487.70	52.1 AV	54.0	-1.9	1.63 V	313	51.97	0.13
5	4924.00	54.9 PK	74.0	-19.1	1.47 V	315	45.81	9.09
6	4924.00	53.5 AV	54.0	-0.5	1.47 V	315	44.41	9.09
7	7386.00	53.3 PK	74.0	-20.7	1.22 V	26	36.70	16.60
8	7386.00	41.5 AV	54.0	-12.5	1.22 V	26	24.90	16.60

REMARKS:

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

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) 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	62.6 PK	74.0	-11.4	1.77 H	338	62.76	-0.16
2	2390.00	43.5 AV	54.0	-10.5	1.77 H	338	43.66	-0.16
3	*2412.00	102.1 PK			1.72 H	285	102.20	-0.10
4	*2412.00	90.6 AV			1.72 H	285	90.70	-0.10
5	4824.00	47.4 PK	74.0	-26.6	1.03 H	194	38.64	8.76
6	4824.00	34.1 AV	54.0	-19.9	1.03 H	194	25.34	8.76
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	71.9 PK	74.0	-2.1	1.42 V	324	72.06	-0.16
2	2390.00	53.2 AV	54.0	-0.8	1.42 V	324	53.36	-0.16
3	*2412.00	113.9 PK			1.42 V	324	114.00	-0.10
4	*2412.00	101.0 AV			1.42 V	324	101.10	-0.10
5	4824.00	54.7 PK	74.0	-19.3	1.72 V	306	45.94	8.76
6	4824.00	42.5 AV	54.0	-11.5	1.72 V	306	33.74	8.76

REMARKS:

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

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) 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	1.78 H	336	62.66	-0.16
2	2390.00	43.4 AV	54.0	-10.6	1.78 H	336	43.56	-0.16
3	*2437.00	111.2 PK			1.66 H	294	111.23	-0.03
4	*2437.00	98.2 AV			1.66 H	294	98.23	-0.03
5	4874.00	46.6 PK	74.0	-27.4	1.03 H	189	37.69	8.91
6	4874.00	33.7 AV	54.0	-20.3	1.03 H	189	24.79	8.91
7	7311.00	51.8 PK	74.0	-22.2	1.18 H	80	35.35	16.45
8	7311.00	38.1 AV	54.0	-15.9	1.18 H	80	21.65	16.45
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	70.8 PK	74.0	-3.2	1.59 V	326	70.96	-0.16
2	2390.00	51.5 AV	54.0	-2.5	1.59 V	326	51.66	-0.16
3	*2437.00	121.1 PK			1.59 V	326	121.13	-0.03
4	*2437.00	109.2 AV			1.59 V	326	109.23	-0.03
5	2483.50	69.3 PK	74.0	-4.7	1.59 V	326	69.19	0.11
6	2483.50	44.6 AV	54.0	-9.4	1.59 V	326	44.49	0.11
7	4874.00	54.5 PK	74.0	-19.5	1.73 V	320	45.59	8.91
8	4874.00	42.3 AV	54.0	-11.7	1.73 V	320	33.39	8.91
9	7311.00	51.0 PK	74.0	-23.0	1.64 V	296	34.55	16.45
10	7311.00	37.1 AV	54.0	-16.9	1.64 V	296	20.65	16.45

REMARKS:

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

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) 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	104.2 PK			1.76 H	295	104.15	0.05
2	*2462.00	93.8 AV			1.76 H	295	93.75	0.05
3	2483.50	63.2 PK	74.0	-10.8	1.70 H	340	63.09	0.11
4	2483.50	43.9 AV	54.0	-10.1	1.70 H	340	43.79	0.11
5	4924.00	46.7 PK	74.0	-27.3	1.06 H	197	37.61	9.09
6	4924.00	33.9 AV	54.0	-20.1	1.06 H	197	24.81	9.09
7	7386.00	50.9 PK	74.0	-23.1	1.19 H	108	34.30	16.60
8	7386.00	37.3 AV	54.0	-16.7	1.19 H	108	20.70	16.60
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	115.7 PK			1.36 V	322	115.65	0.05
2	*2462.00	104.4 AV			1.36 V	322	104.35	0.05
3	2483.50	71.9 PK	74.0	-2.1	1.36 V	322	71.79	0.11
4	2483.50	53.1 AV	54.0	-0.9	1.36 V	322	52.99	0.11
5	4924.00	54.9 PK	74.0	-19.1	1.74 V	304	45.81	9.09
6	4924.00	42.7 AV	54.0	-11.3	1.74 V	304	33.61	9.09
7	7386.00	50.7 PK	74.0	-23.3	1.67 V	277	34.10	16.60
8	7386.00	36.9 AV	54.0	-17.1	1.67 V	277	20.30	16.60

REMARKS:

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

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) 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	62.6 PK	74.0	-11.4	1.70 H	324	62.76	-0.16
2	2390.00	43.5 AV	54.0	-10.5	1.70 H	324	43.66	-0.16
3	*2412.00	111.2 PK			1.76 H	306	111.30	-0.10
4	*2412.00	90.1 AV			1.76 H	306	90.20	-0.10
5	4824.00	46.6 PK	74.0	-27.4	1.09 H	194	37.84	8.76
6	4824.00	33.6 AV	54.0	-20.4	1.09 H	194	24.84	8.76
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	73.4 PK	74.0	-0.6	1.57 V	323	73.56	-0.16
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.57 V**	**323**	**54.06**	**-0.16**
3	*2412.00	112.7 PK			1.57 V	323	112.80	-0.10
4	*2412.00	100.7 AV			1.57 V	323	100.80	-0.10
5	4824.00	54.2 PK	74.0	-19.8	1.77 V	313	45.44	8.76
6	4824.00	42.2 AV	54.0	-11.8	1.77 V	313	33.44	8.76

REMARKS:

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

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) 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	63.7 PK	74.0	-10.3	1.70 H	344	63.86	-0.16
2	2390.00	44.3 AV	54.0	-9.7	1.70 H	344	44.46	-0.16
3	*2437.00	110.2 PK			1.73 H	286	110.23	-0.03
4	*2437.00	99.1 AV			1.73 H	286	99.13	-0.03
5	4874.00	46.8 PK	74.0	-27.2	1.08 H	193	37.89	8.91
6	4874.00	33.9 AV	54.0	-20.1	1.08 H	193	24.99	8.91
7	7311.00	50.3 PK	74.0	-23.7	1.18 H	101	33.85	16.45
8	7311.00	36.5 AV	54.0	-17.5	1.18 H	101	20.05	16.45
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	70.9 PK	74.0	-3.1	1.64 V	320	71.06	-0.16
2	2390.00	51.5 AV	54.0	-2.5	1.64 V	320	51.66	-0.16
3	*2437.00	121.3 PK			1.59 V	339	121.33	-0.03
4	*2437.00	109.2 AV			1.59 V	339	109.23	-0.03
5	2483.50	68.9 PK	74.0	-5.1	1.57 V	324	68.79	0.11
6	2483.50	44.2 AV	54.0	-9.8	1.57 V	324	44.09	0.11
7	4874.00	55.4 PK	74.0	-18.6	1.69 V	314	46.49	8.91
8	4874.00	42.9 AV	54.0	-11.1	1.69 V	314	33.99	8.91
9	7311.00	50.7 PK	74.0	-23.3	1.62 V	270	34.25	16.45
10	7311.00	37.0 AV	54.0	-17.0	1.62 V	270	20.55	16.45

REMARKS:

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

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) 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	103.8 PK			1.71 H	293	103.75	0.05
2	*2462.00	92.5 AV			1.71 H	293	92.45	0.05
3	2483.50	62.8 PK	74.0	-11.2	1.72 H	343	62.69	0.11
4	2483.50	43.8 AV	54.0	-10.2	1.72 H	343	43.69	0.11
5	4924.00	46.5 PK	74.0	-27.5	1.07 H	215	37.41	9.09
6	4924.00	33.4 AV	54.0	-20.6	1.07 H	215	24.31	9.09
7	7386.00	50.5 PK	74.0	-23.5	1.18 H	109	33.90	16.60
8	7386.00	37.0 AV	54.0	-17.0	1.18 H	109	20.40	16.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.1 PK			1.56 V	314	114.05	0.05
2	*2462.00	102.7 AV			1.56 V	314	102.65	0.05
3	**2483.50**	**73.9 PK**	**74.0**	**-0.1**	**1.56 V**	**314**	**73.79**	**0.11**
4	2483.50	51.0 AV	54.0	-3.0	1.56 V	314	50.89	0.11
5	4924.00	55.0 PK	74.0	-19.0	1.68 V	311	45.91	9.09
6	4924.00	42.8 AV	54.0	-11.2	1.68 V	311	33.71	9.09
7	7386.00	49.9 PK	74.0	-24.1	1.67 V	267	33.30	16.60
8	7386.00	36.2 AV	54.0	-17.8	1.67 V	267	19.60	16.60

REMARKS:

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

802.11n (HT40)

CHANNEL	TX Channel 3	DETECTOR FUNCTION	Peak (PK) 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	63.0 PK	74.0	-11.0	1.73 H	335	63.16	-0.16
2	2390.00	43.9 AV	54.0	-10.1	1.73 H	335	44.06	-0.16
3	*2422.00	95.8 PK			1.65 H	305	95.88	-0.08
4	*2422.00	85.1 AV			1.65 H	305	85.18	-0.08
5	4844.00	46.9 PK	74.0	-27.1	1.11 H	211	38.08	8.82
6	4844.00	33.5 AV	54.0	-20.5	1.11 H	211	24.68	8.82
7	7266.00	50.8 PK	74.0	-23.2	1.20 H	85	34.19	16.61
8	7266.00	36.9 AV	54.0	-17.1	1.20 H	85	20.29	16.61
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	71.6 PK	74.0	-2.4	1.52 V	326	71.76	-0.16
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.52 V**	**326**	**54.06**	**-0.16**
3	*2422.00	106.6 PK			1.52 V	326	106.68	-0.08
4	*2422.00	94.8 AV			1.52 V	326	94.88	-0.08
5	4844.00	54.9 PK	74.0	-19.1	1.68 V	295	46.08	8.82
6	4844.00	42.6 AV	54.0	-11.4	1.68 V	295	33.78	8.82
7	7266.00	50.4 PK	74.0	-23.6	1.62 V	292	33.79	16.61
8	7266.00	37.0 AV	54.0	-17.0	1.62 V	292	20.39	16.61

REMARKS:

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

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK) 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	63.5 PK	74.0	-10.5	1.70 H	327	63.66	-0.16
2	2390.00	44.3 AV	54.0	-9.7	1.70 H	327	44.46	-0.16
3	*2437.00	99.3 PK			1.72 H	315	99.33	-0.03
4	*2437.00	88.5 AV			1.72 H	315	88.53	-0.03
5	4874.00	46.4 PK	74.0	-27.6	1.08 H	219	37.49	8.91
6	4874.00	33.3 AV	54.0	-20.7	1.08 H	219	24.39	8.91
7	7311.00	50.4 PK	74.0	-23.6	1.22 H	107	33.95	16.45
8	7311.00	36.4 AV	54.0	-17.6	1.22 H	107	19.95	16.45
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	73.1 PK	74.0	-0.9	1.61 V	326	73.26	-0.16
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.61 V**	**326**	**54.06**	**-0.16**
3	*2437.00	110.5 PK			1.61 V	326	110.53	-0.03
4	*2437.00	99.1 AV			1.61 V	326	99.13	-0.03
5	2483.50	66.8 PK	74.0	-7.2	1.61 V	326	66.69	0.11
6	2483.50	47.4 AV	54.0	-6.6	1.61 V	326	47.29	0.11
7	4874.00	55.2 PK	74.0	-18.8	1.67 V	296	46.29	8.91
8	4874.00	43.0 AV	54.0	-11.0	1.67 V	296	34.09	8.91
9	7311.00	49.5 PK	74.0	-24.5	1.61 V	284	33.05	16.45
10	7311.00	36.2 AV	54.0	-17.8	1.61 V	284	19.75	16.45

REMARKS:

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

CHANNEL	TX Channel 9	DETECTOR 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	99.1 PK			1.69 H	312	99.08	0.02
2	*2452.00	88.1 AV			1.69 H	312	88.08	0.02
3	2483.50	60.6 PK	74.0	-13.4	1.69 H	312	60.49	0.11
4	2483.50	39.1 AV	54.0	-14.9	1.69 H	312	38.99	0.11
5	4904.00	47.2 PK	74.0	-26.8	1.08 H	206	38.19	9.01
6	4904.00	34.0 AV	54.0	-20.0	1.08 H	206	24.99	9.01
7	7356.00	51.4 PK	74.0	-22.6	1.11 H	80	34.85	16.55
8	7356.00	37.4 AV	54.0	-16.6	1.11 H	80	20.85	16.55
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	111.3 PK			1.59 V	314	111.28	0.02
2	*2452.00	98.7 AV			1.59 V	314	98.68	0.02
3	**2483.50**	**73.9 PK**	**74.0**	**-0.1**	**1.59 V**	**314**	**73.79**	**0.11**
4	2483.50	50.6 AV	54.0	-3.4	1.59 V	314	50.49	0.11
5	4904.00	54.7 PK	74.0	-19.3	1.72 V	297	45.69	9.01
6	4904.00	42.4 AV	54.0	-11.6	1.72 V	297	33.39	9.01
7	7356.00	50.0 PK	74.0	-24.0	1.66 V	273	33.45	16.55
8	7356.00	36.4 AV	54.0	-17.6	1.66 V	273	19.85	16.55

REMARKS:

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

BELOW 1GHz WORST-CASE DATA

802.11n (HT20)

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	138.11	36.3 QP	43.5	-7.2	2.00 H	101	49.73	-13.45
2	450.01	28.7 QP	46.0	-17.4	2.00 H	28	36.41	-7.76
3	500.01	28.8 QP	46.0	-17.2	1.50 H	36	35.64	-6.83
4	625.00	39.5 QP	46.0	-6.5	1.50 H	360	43.26	-3.74
5	667.19	38.2 QP	46.0	-7.9	1.50 H	0	41.46	-3.31
6	899.99	36.7 QP	46.0	-9.3	1.00 H	360	35.94	0.74
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	49.84	33.2 QP	40.0	-6.8	1.00 V	335	46.31	-13.09
2	137.91	27.6 QP	43.5	-15.9	2.00 V	194	41.07	-13.46
3	500.01	27.5 QP	46.0	-18.5	1.50 V	360	34.34	-6.83
4	625.00	38.3 QP	46.0	-7.7	1.50 V	2	42.07	-3.74
5	667.29	36.7 QP	46.0	-9.3	1.50 V	360	40.02	-3.31
6	899.99	36.2 QP	46.0	-9.8	1.00 V	0	35.42	0.74

REMARKS:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	100375	May 06, 2015	May 05, 2016
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK-8127	8127-522	Sep. 15, 2014	Sep. 14, 2015
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 11, 2015	June 10, 2016
RF Cable	5D-FB	COCCAB-001	Mar. 09, 2015	Mar. 08, 2016
50 ohms Terminator	N/A	EMC-03	Sep. 22, 2014	Sep. 21, 2015
50 ohms Terminator	N/A	EMC-02	Sep. 30, 2014	Sep. 29, 2015
Software BVADT	BVADT_Cond_ V7.3.7.3	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
3. The VCCI Con C Registration No. is C-3611.
4. Tested Date: June 30 to July 15, 2015

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.

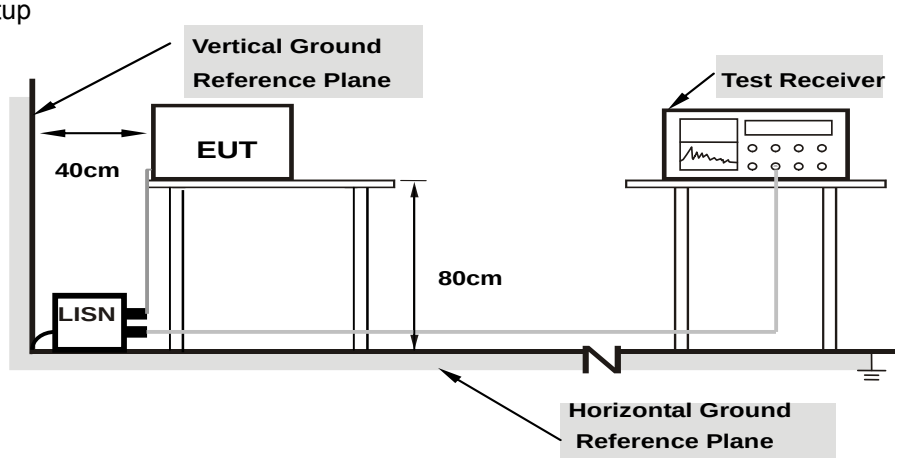
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

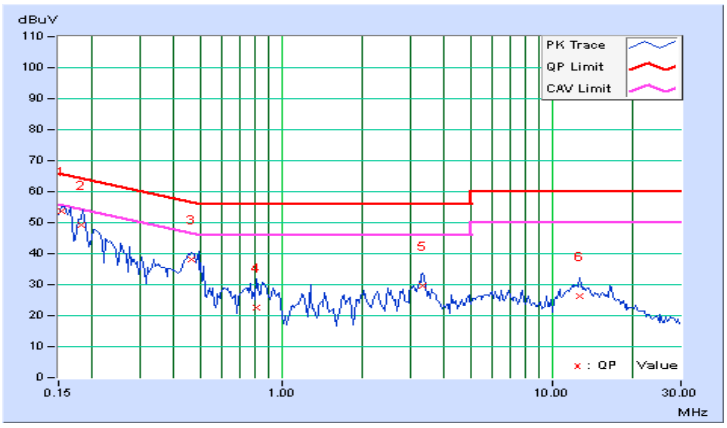
4.2.7 Test Results (Mode 1)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.14	53.54	41.23	53.68	41.37	65.79	55.79	-12.11	-14.42
2	0.18303	0.15	49.03	37.44	49.18	37.59	64.35	54.35	-15.17	-16.76
3	0.46641	0.17	37.95	31.89	38.12	32.06	56.58	46.58	-18.45	-14.51
4	0.81016	0.19	22.51	15.50	22.70	15.69	56.00	46.00	-33.30	-30.31
5	3.34375	0.34	29.16	22.35	29.50	22.69	56.00	46.00	-26.50	-23.31
6	12.66016	0.84	25.61	19.77	26.45	20.61	60.00	50.00	-33.55	-29.39

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.

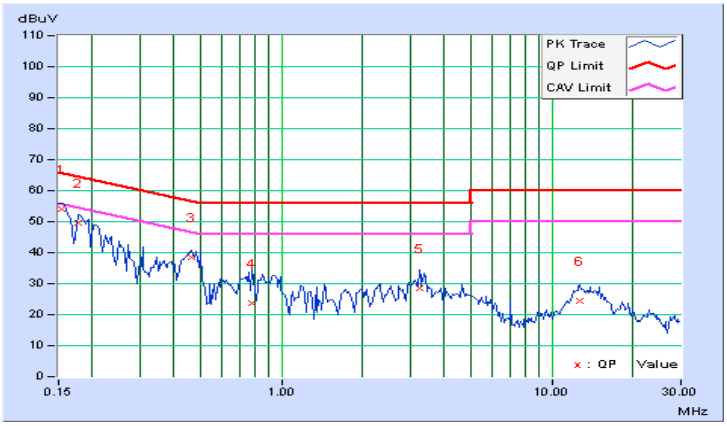


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.15413	0.14	53.91	42.02	54.05	42.16	65.77	55.77	-11.72	-13.61
2	0.17734	0.15	49.61	37.07	49.76	37.22	64.61	54.61	-14.85	-17.39
3	0.46250	0.20	38.20	31.83	38.40	32.03	56.65	46.65	-18.25	-14.62
4	0.77891	0.22	23.42	14.29	23.64	14.51	56.00	46.00	-32.36	-31.49
5	3.23438	0.37	28.30	22.79	28.67	23.16	56.00	46.00	-27.33	-22.84
6	12.71875	0.91	23.48	17.78	24.39	18.69	60.00	50.00	-35.61	-31.31

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.



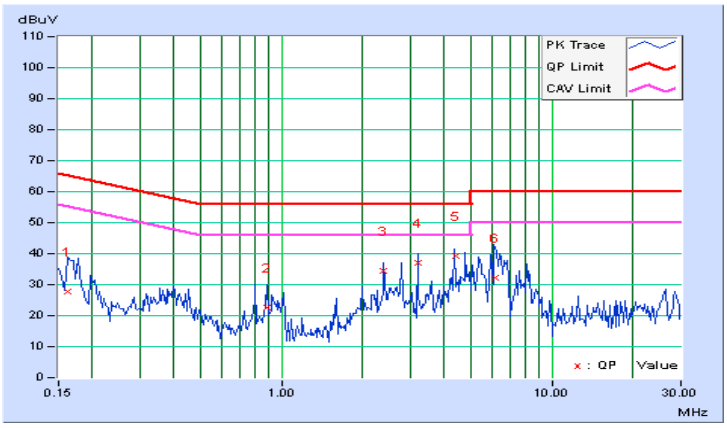
4.2.8 Test Results (Mode 2)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	0.08	27.56	7.97	27.64	8.05	65.38	55.38	-37.73	-47.32
2	0.88438	0.12	22.56	5.88	22.68	6.00	56.00	46.00	-33.32	-40.00
3	2.39453	0.18	34.32	31.99	34.50	32.17	56.00	46.00	-21.50	-13.83
4	3.19141	0.20	36.92	26.56	37.12	26.76	56.00	46.00	-18.88	-19.24
5	**4.39009**	**0.23**	**38.96**	**36.76**	**39.19**	**36.99**	**56.00**	**46.00**	**-16.81**	**-9.01**
6	6.13625	0.30	31.87	24.56	32.17	24.86	60.00	50.00	-27.83	-25.14

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.

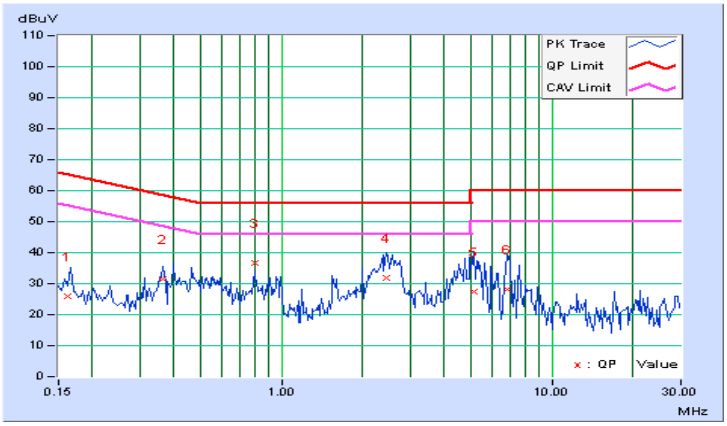


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.16250	0.08	26.01	13.78	26.09	13.86	65.34	55.34	-39.25	-41.48
2	0.36484	0.10	31.46	28.52	31.56	28.62	58.62	48.62	-27.06	-20.00
3	0.79691	0.12	36.64	34.28	36.76	34.40	56.00	46.00	-19.24	-11.60
4	2.44531	0.18	31.80	23.20	31.98	23.38	56.00	46.00	-24.02	-22.62
5	5.12109	0.27	27.09	17.76	27.36	18.03	60.00	50.00	-32.64	-31.97
6	6.84375	0.34	27.71	5.60	28.05	5.94	60.00	50.00	-31.95	-44.06

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.

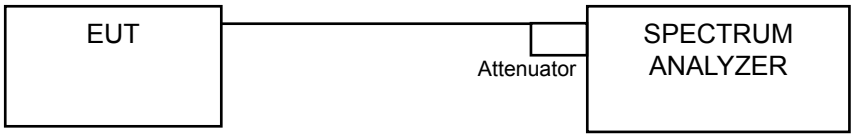


4.3 6dB Bandwidth Measurement

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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

NOTE: 1. The test was performed in Oven room B.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: July 13, 2015

4.3.4 Test Procedure

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
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

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	10.13	0.5	PASS
6	2437	10.13	0.5	PASS
11	2462	11.07	0.5	PASS

802.11g

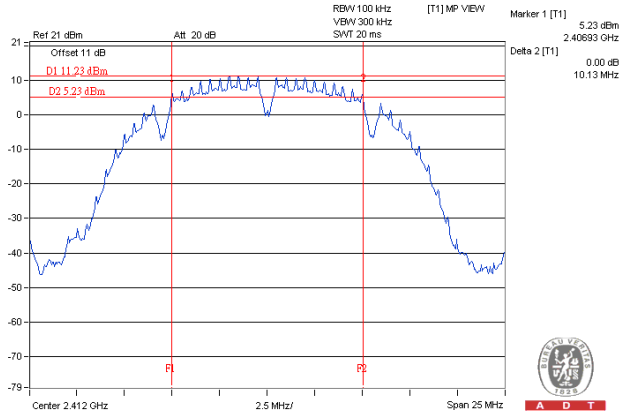
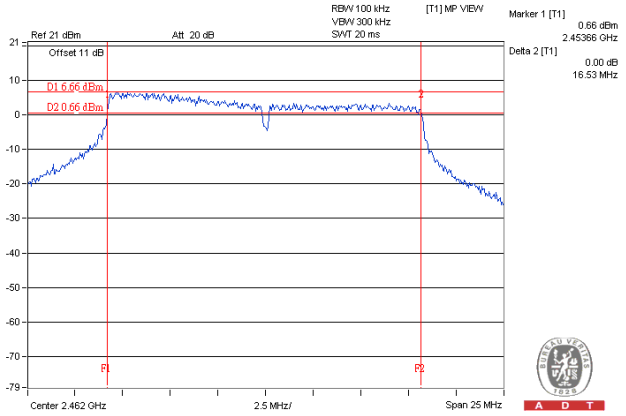
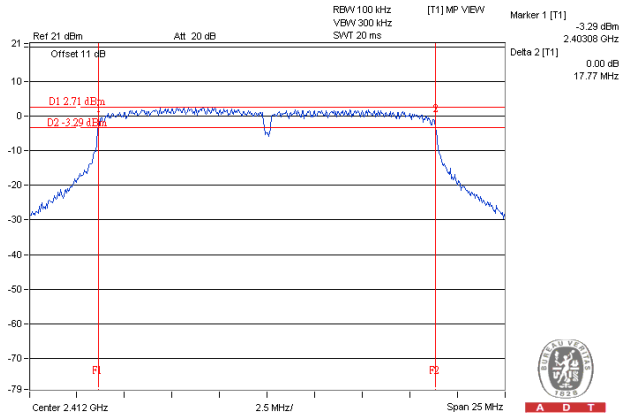
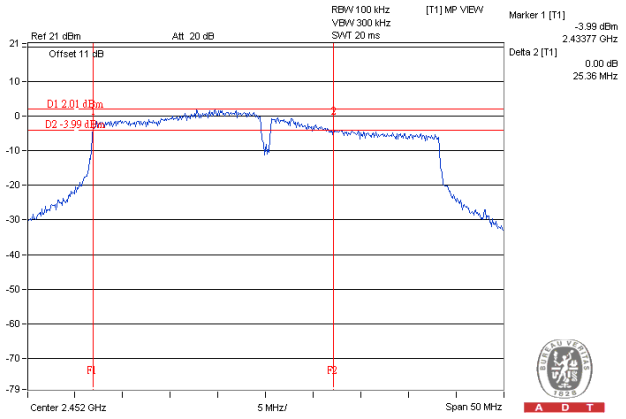
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.56	0.5	PASS
6	2437	16.54	0.5	PASS
11	2462	16.53	0.5	PASS

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.77	0.5	Pass
6	2437	17.77	0.5	Pass
11	2462	17.77	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	36.62	0.5	Pass
6	2437	36.56	0.5	Pass
9	2452	25.36	0.5	Pass

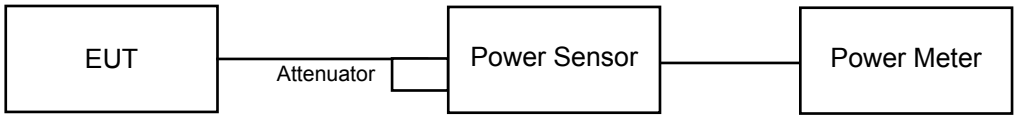
Spectrum Plot of Worst Value	
802.11b / CH1	**802.11g / CH11**
	
802.11n (HT20) / CH 1	**802.11n (HT40) / CH9**
	

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)

4.4.2 Test Setup



4.4.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power Meter Anritsu	ML2495A	1014008	Apr. 28, 2015	Apr. 27, 2016
Power Sensor Anritsu	MA2411B	0917122	Apr. 28, 2015	Apr. 27, 2016

NOTE:
1. The test was performed in Oven room B.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: July 24, 2015

4.4.4 Test Procedures

A peak / average power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak / 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

FOR PEAK POWER

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	229.087	23.60	30	Pass
6	2437	502.343	27.01	30	Pass
11	2462	496.592	26.96	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	769.13	28.86	30	Pass
6	2437	814.704	29.11	30	Pass
11	2462	787.046	28.96	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	762.079	28.82	30	Pass
6	2437	833.681	29.21	30	Pass
11	2462	785.236	28.95	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
3	2422	322.107	25.08	30	Pass
6	2437	783.43	28.94	30	Pass
9	2452	774.462	28.89	30	Pass

FOR AVERAGE POWER

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	153.815	21.87
6	2437	343.558	25.36
11	2462	334.965	25.25

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	124.165	20.94
6	2437	578.096	27.62
11	2462	240.436	23.81

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	104.954	20.21
6	2437	616.595	27.90
11	2462	179.473	22.54

802.11n (HT40)

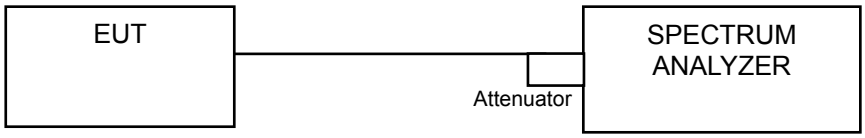
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
3	2422	41.210	16.15
6	2437	125.026	20.97
9	2452	99.541	19.98

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 Test Setup



4.5.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

NOTE:
1. The test was performed in Oven room B.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: July 24, 2015

4.5.4 Test Procedure

a. Set analyzer center frequency to DTS channel center frequency.
b. Set the span to 1.5 times the DTS bandwidth.
c. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d. Set the VBW ≥ 3 × RBW.
e. Detector = peak.
f. Sweep time = auto couple.
g. Trace mode = max hold.
h. Allow trace to fully stabilize.
i. Use the peak marker function to determine the maximum amplitude level within the RBW.

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

802.11b

Channel	Freq. (MHz)	PSD (dBm)	Limit (dBm)	Pass /Fail
1	2412	-3.95	8	Pass
6	2437	-0.94	8	Pass
11	2462	-2.33	8	Pass

802.11g

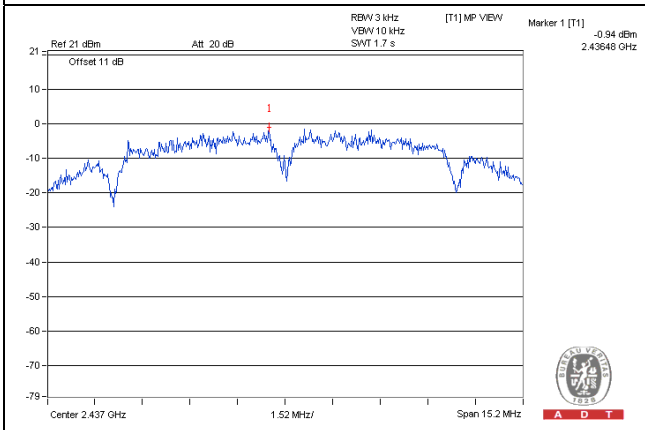
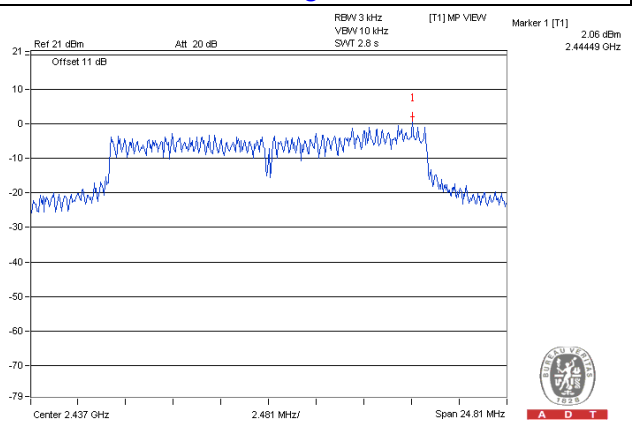
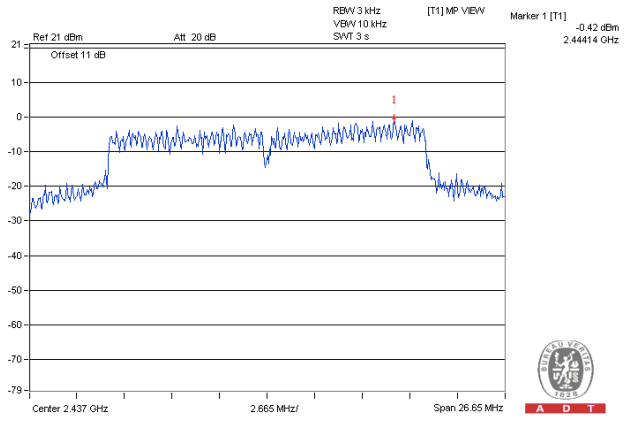
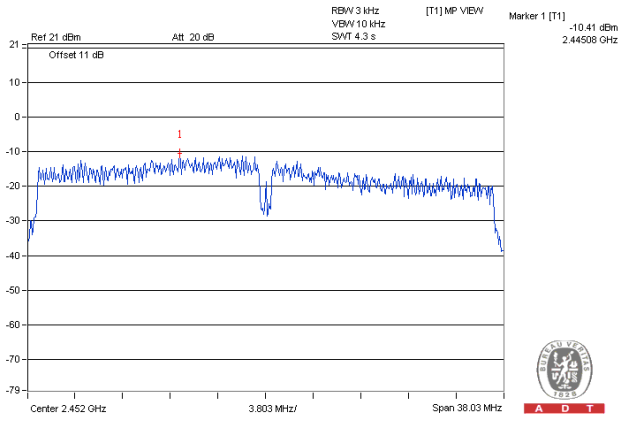
Channel	Freq. (MHz)	PSD (dBm)	Limit (dBm)	Pass /Fail
1	2412	-8.77	8	Pass
6	2437	2.06	8	Pass
11	2462	-3.14	8	Pass

802.11n (HT20)

Channel	Freq. (MHz)	PSD (dBm)	Limit (dBm)	Pass /Fail
1	2412	-9.39	8	Pass
6	2437	-0.42	8	Pass
11	2462	-5.41	8	Pass

802.11n (HT40)

Channel	Freq. (MHz)	PSD (dBm)	Limit (dBm)	PASS /FAIL
3	2422	-15.29	8	PASS
6	2437	-11.50	8	PASS
9	2452	-10.41	8	PASS

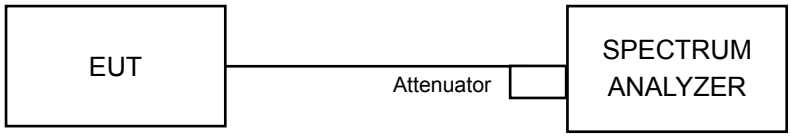
Spectrum Plot of Worst Value	
802.11b / CH6	**802.11g / CH6**
	
802.11n (HT20) / CH6	**802.11n (HT40) / CH9**
	

4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below 20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 Test Setup



4.6.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

NOTE: 1. The test was performed in Oven room B.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: July 24, 2015

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

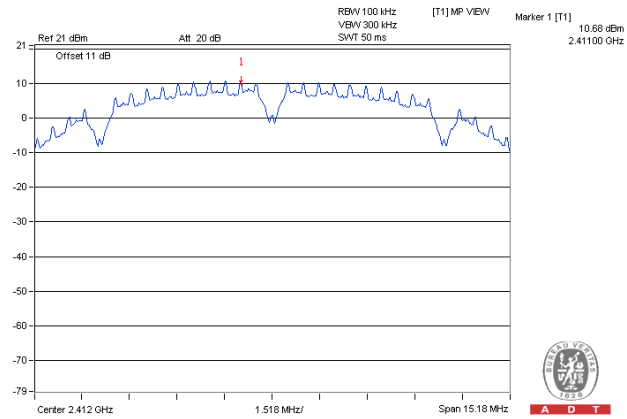
Same as Item 4.3.6

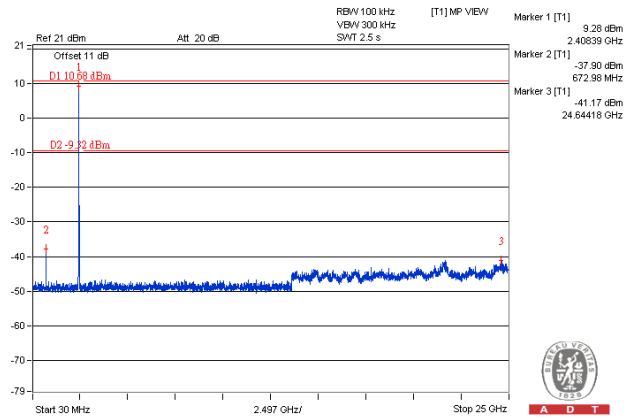
4.6.7 Test Results

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

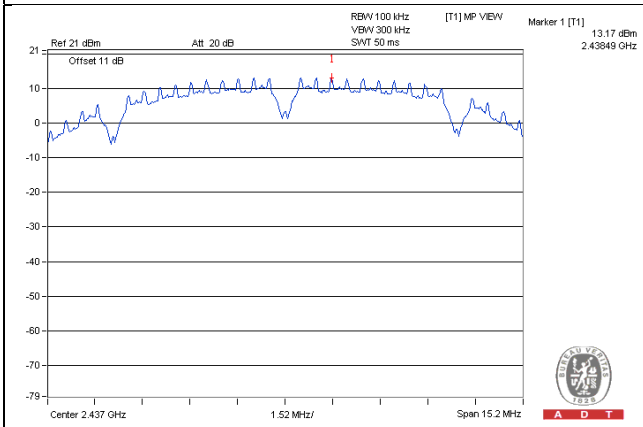
802.11b

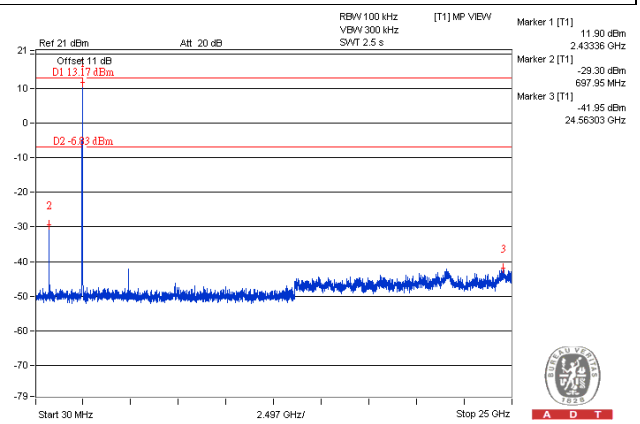
CH 1



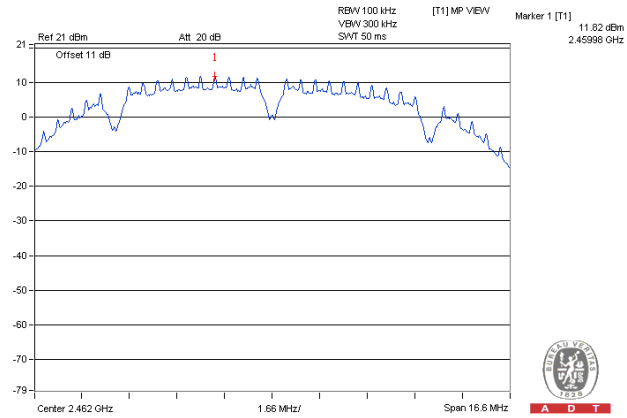


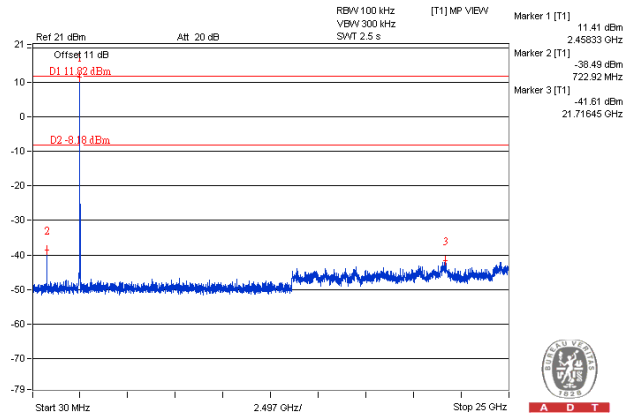
CH 6



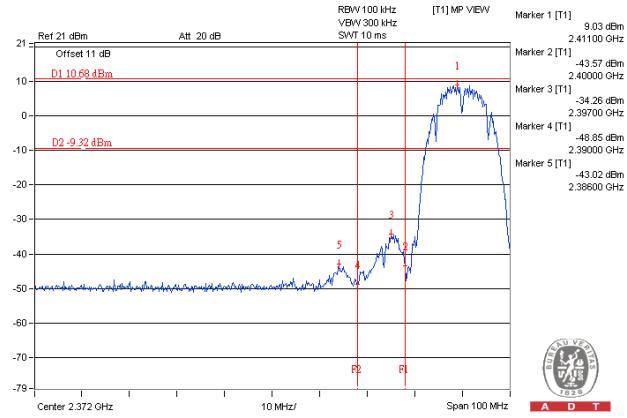


CH 11

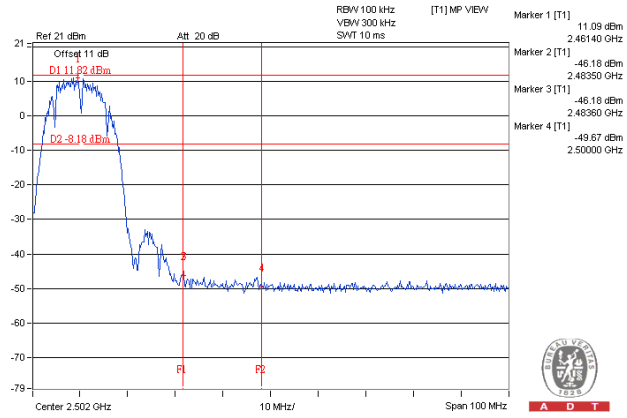




CH 1 Band edge

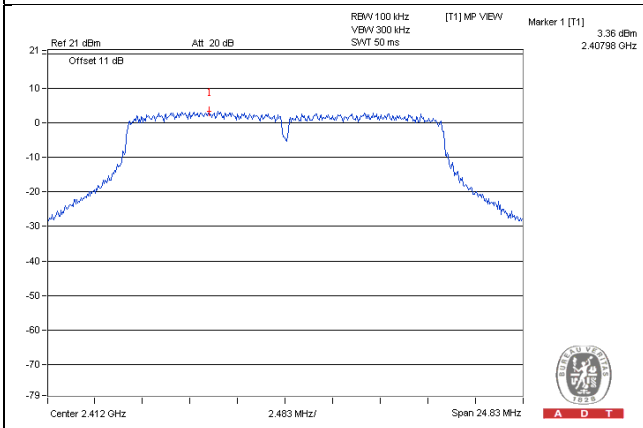


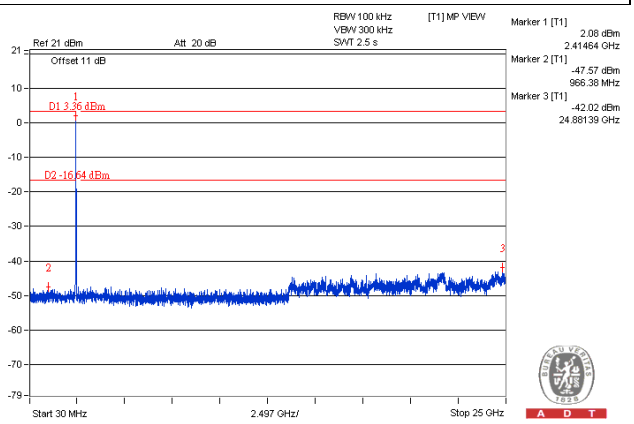
CH 11 Band edge



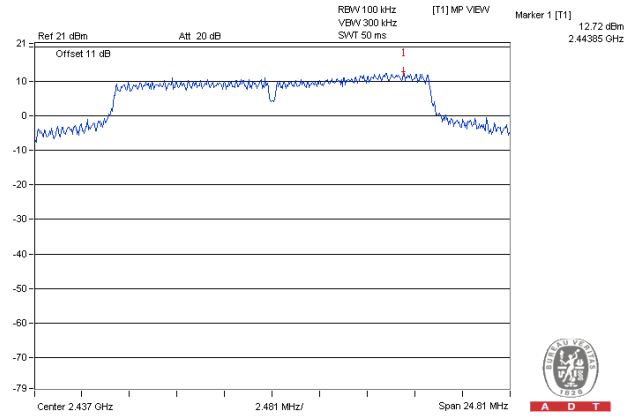
802.11g

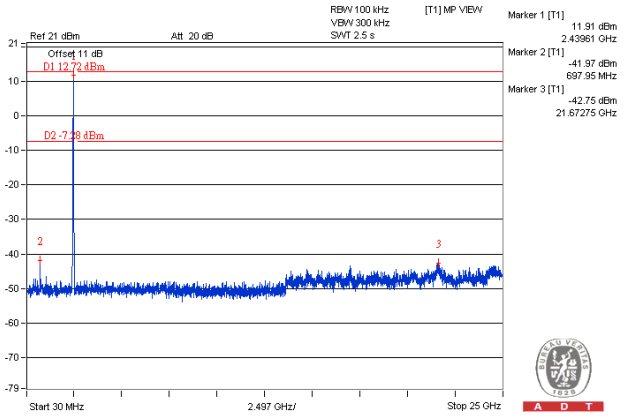
CH 1



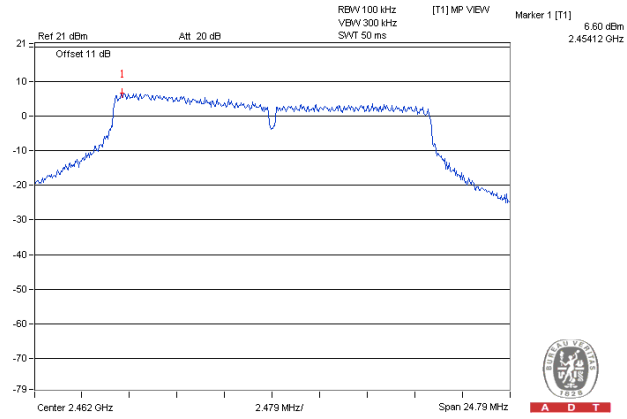


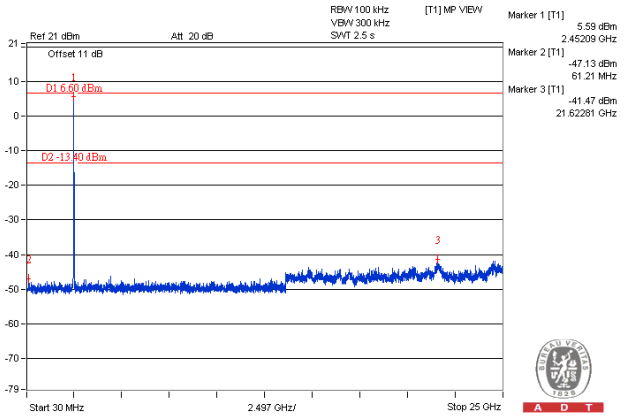
CH 6



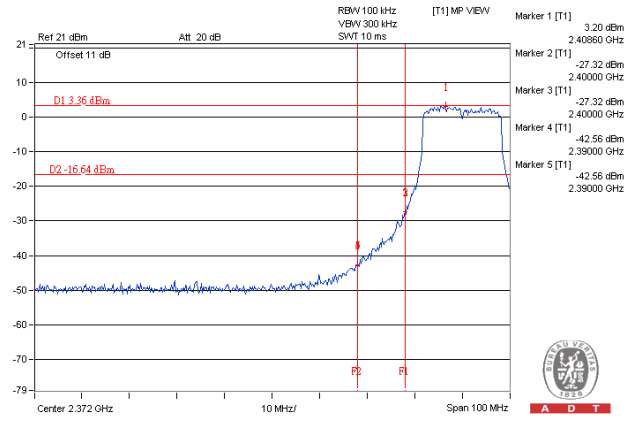


CH 11

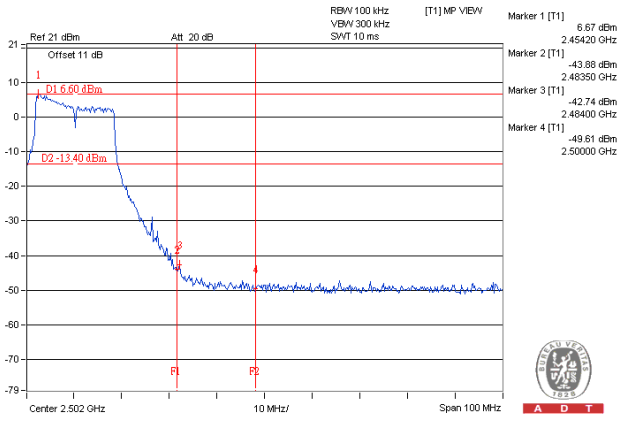




CH 1 Band edge

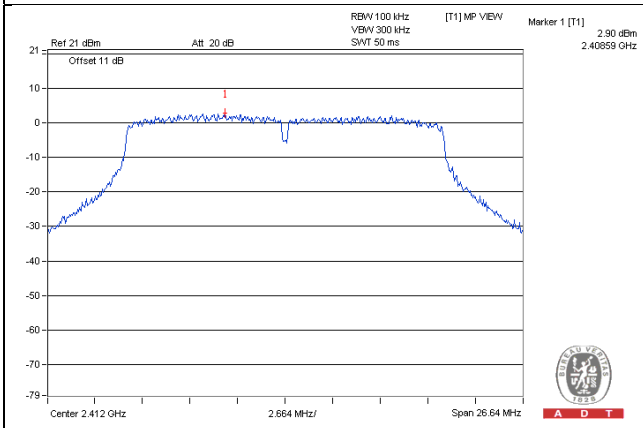


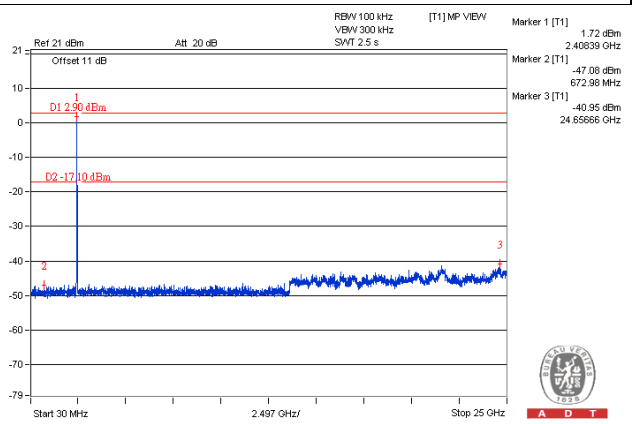
CH 11 Band edge



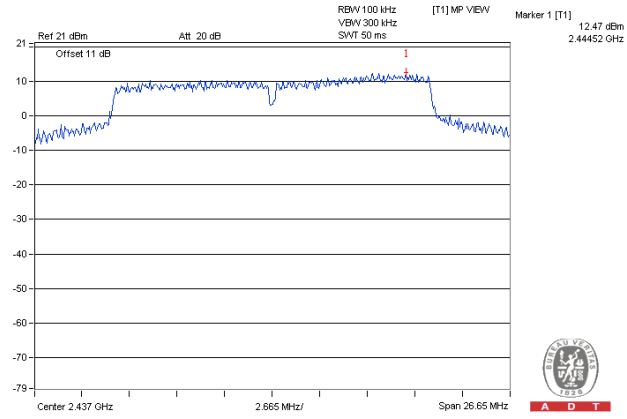
802.11n (HT20)

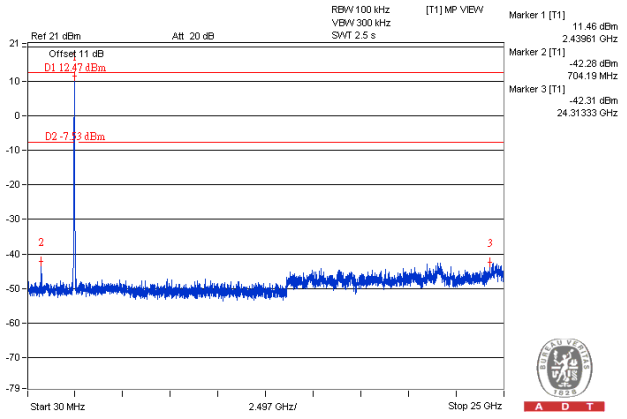
CH 1



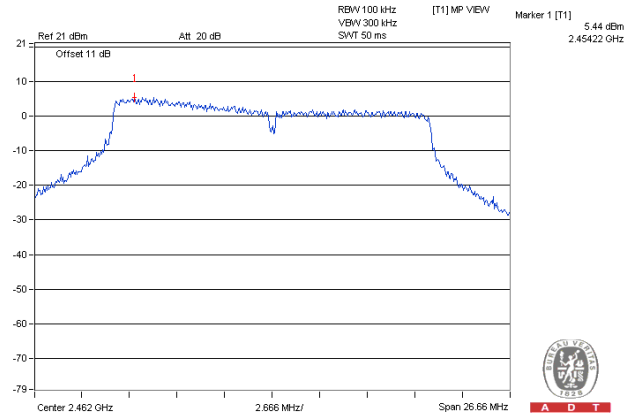


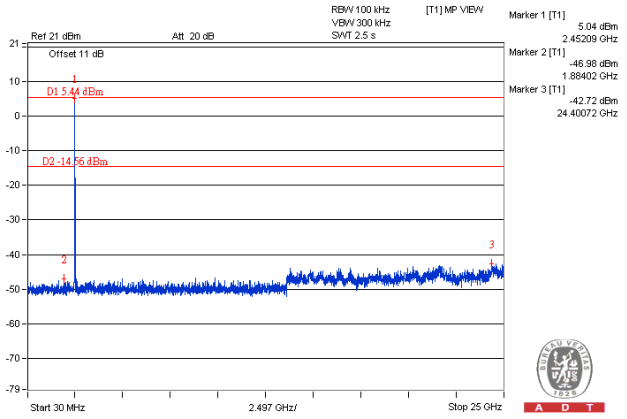
CH 6



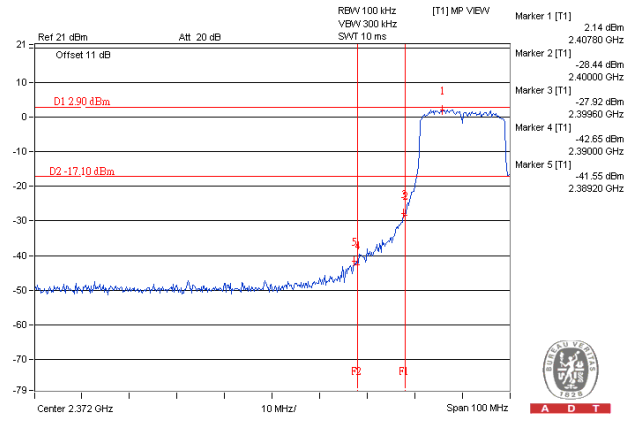


CH 11

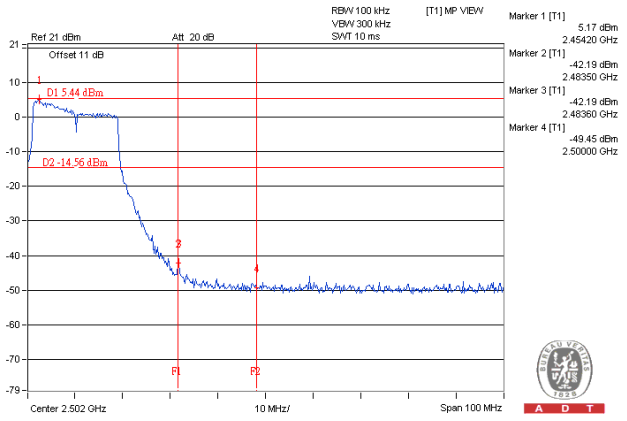




CH 1 Band edge

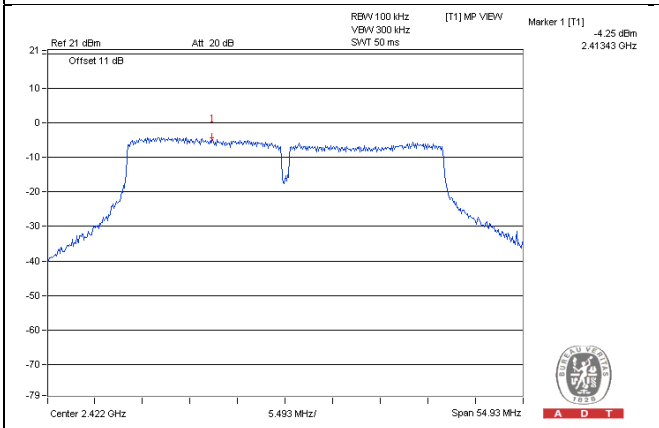


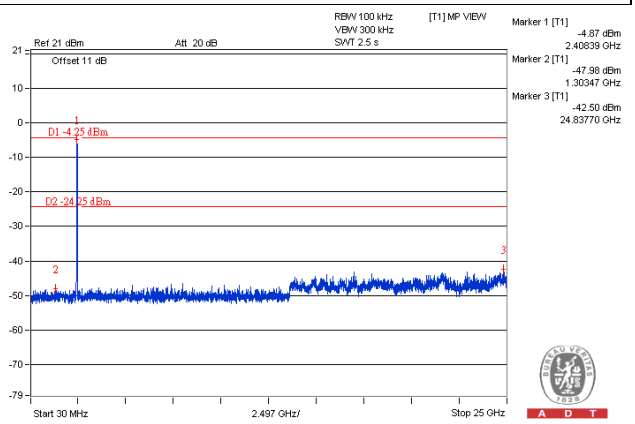
CH 11 Band edge



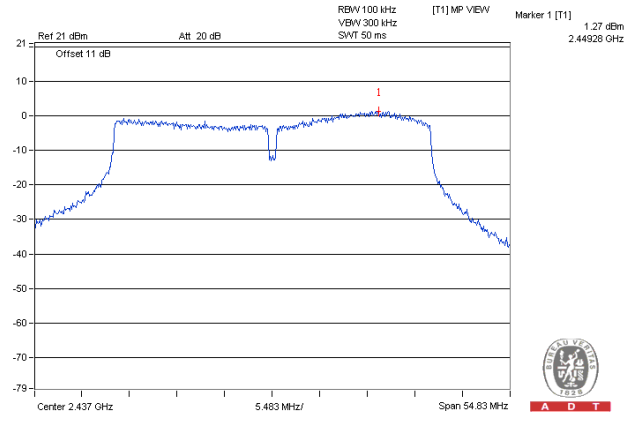
802.11n (HT40)

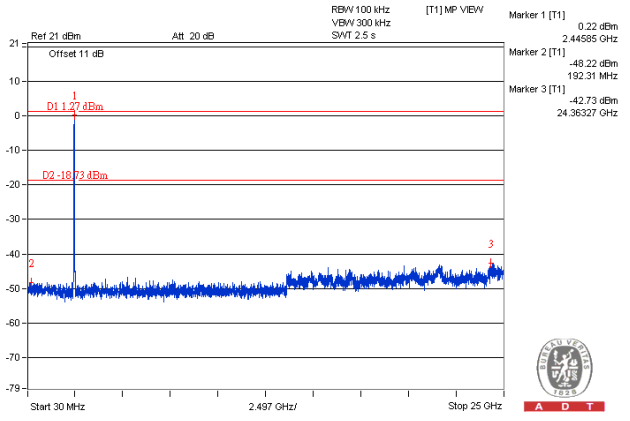
CH 3



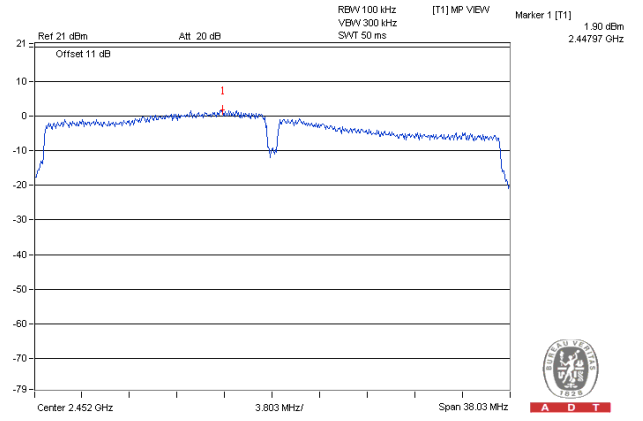


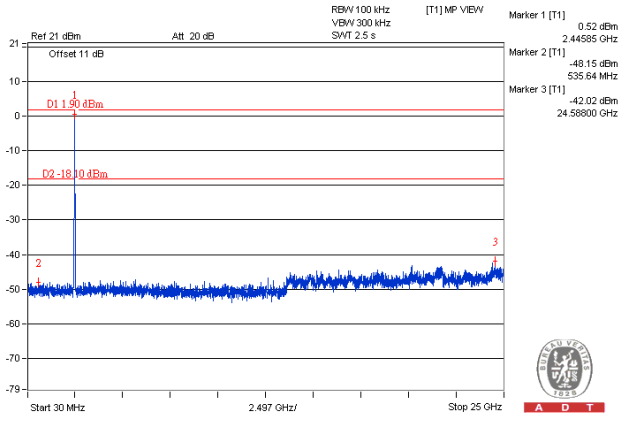
CH 6



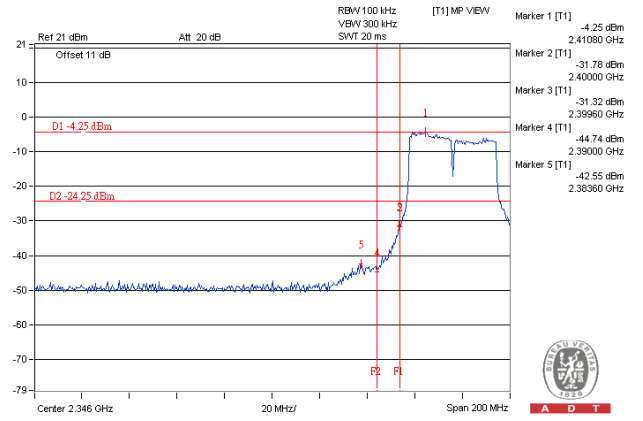


CH 9

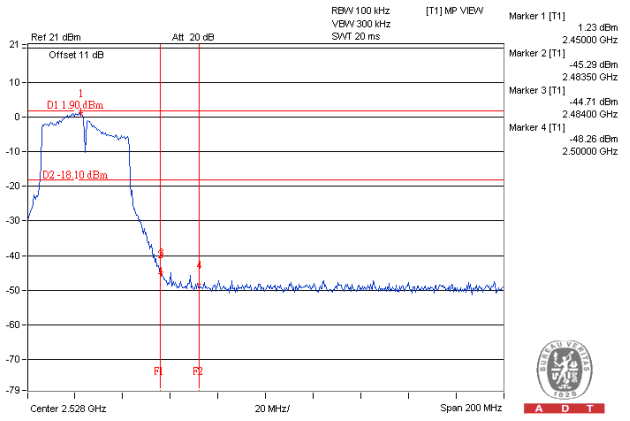




CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

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.

--- END ---