

FCC Test Report

Report No.: RF141016E01B

FCC ID: PY315200315

Test Model: D6400

Received Date: June 02, 2015

Test Date: June 08 to Nov. 09, 2015

Issued Date: Nov. 17, 2015

Applicant: NETGEAR, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

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Release Control Record

Issue No.	Description	Date Issued
RF141016E01B	Original release.	Nov. 17, 2015

1 Certificate of Conformity

Product: AC1600 WiFi VDSL/ADSL Modem Router

Brand: NETGEAR

Test Model: D6400

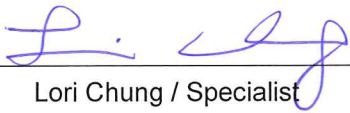
Sample Status: ENGINEERING SAMPLE

Applicant: NETGEAR, Inc.

Test Date: June 08 to Nov. 09, 2015

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 EMC characteristics under the conditions specified in this report. This report contains Radiated Emissions & Band Edge Measurement (above 1GHz) test data that were produced under subcontract by Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories.

Prepared by :  , **Date:** Nov. 17, 2015
Lori Chung / Specialist

Approved by :  , **Date:** Nov. 17, 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 -6.01dB at 0.29844MHz.
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 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 I-Pex not a standard connector.

NOTE: The EUT was operating in 2400 ~ 2483.5MHz, 5150~5250MHz and 5725~5850MHz frequencies band. This report was recorded the RF parameters including 2400 ~ 2483.5MHz. For the 5150~5250MHz and 5725~5850MHz RF parameters was recorded in another test report.

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) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.86 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.19 dB
Radiated Emissions above 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
	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	AC1600 WiFi VDSL/ADSL Modem Router
Brand	NETGEAR
Test Model	D6400
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a: up to 54Mbps 802.11n: up to 450Mbps 802.11ac: up to 1300Mbps
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), 802.11ac (VHT20) 4 for 802.11n (HT40), 802.11ac (VHT40) 2 for 802.11ac (VHT80) For 15.247 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	For 15.407 5.18~5.24 GHz CDD Mode: 802.11a: 148.551mW Beamforming Mode: 802.11ac (VHT20): 163.829mW 802.11ac (VHT40): 327.522mW 802.11ac (VHT80): 78.925mW 5.745~5.825 GHz CDD Mode: 802.11a: 152.554mW Beamforming Mode: 802.11ac (VHT20): 139.193mW 802.11ac (VHT40): 168.809mW 802.11ac (VHT80): 98.605mW For 15.247 CDD Mode: 802.11b: 104.713mW 802.11g: 183.097mW 802.11n (HT20): 180.027mW 802.11n (HT40): 66.443mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Splitter 1 (Model No.: DSL499, P/N: 350-10064-01) x 1 Adapter x 1
Data Cable Supplied	RJ11 cable (unshielded, 1.5m) x 1 RJ45 cable (shielded, 1.5m) x 1

Note:

1. 2.4GHz and 5GHz technology can transmit at same time.
2. The EUT must be supplied with a power adapter and following two different model names could be chosen:

Adapter	Brand	Model No.	P/N	Spec.
Adapter 1	NETGEAR	2ABL030F	332-10756-01	AC Input: 100-240V 1.0A, 50/60Hz DC Output: 12V, 2.5A DC cable (Unshielded, 1.8m)
Adapter 2	NETGEAR	ADS-40FPA-12 12030GPCU/GPC	332-10757-01	AC Input: 100-240V 1.0A, 50/60Hz DC Output: 12V, 2.5A DC cable (Unshielded, 1.8m)

Note: From the above adapters, the worst radiated emission test item was found in Adapter 2. Therefore only the test data of the mode was recorded in this report.

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

For 2.4GHz Band

PCB Chain No.	Brand	Model	Antenna Gain(dBi) < including cable loss>	Frequency range (GHz ~ GHz)	Antenna Type	Connector Type	Cable Length (mm)
Chain 0	NETGEAR	98P91MIPF044	2	2.4~2.4835	PCB	I-Pex	85
Chain 1	NETGEAR	98P91MIPF045	2	2.4~2.4835	PCB	I-Pex	150

For 5GHz Band

PCB Chain No.	Brand	Model	Antenna Gain(dBi) < including cable loss>	Frequency range (GHz ~ GHz)	Antenna Type	Connector Type	Cable Length (mm)
Chain 0	NETGEAR	98P92UIPF061	3	5.15~5.85	PCB	I-Pex	60
Chain 1	NETGEAR	98P92UIPF062	3	5.15~5.85	PCB	I-Pex	70
Chain 2	NETGEAR	98P92UIPF063	3	5.15~5.85	PCB	I-Pex	80

4. The EUT incorporates a MIMO function.

For 2.4GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	1TX (Diversity)	1RX (Diversity)
802.11g	6 ~ 54Mbps	2TX	2RX
802.11n (HT20) & 802.11n (HT40)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
For 5GHz Band			
802.11a	6 ~ 54Mbps	3TX	3RX
802.11n (HT20) & 802.11n (HT40)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS 16~23	3TX	3RX
802.11ac (VHT20)	MCS0~8 Nss= 1	3TX	3RX
	MCS0~8 Nss= 2	3TX	3RX
	MCS0~9 Nss= 3	3TX	3RX
802.11ac (VHT40) & 802.11ac (VHT80)	MCS0~9 Nss= 1	3TX	3RX
	MCS0~9 Nss= 2	3TX	3RX
	MCS0~9 Nss= 3	3TX	3RX

The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

5. The emission of the simultaneous operation (2.4GHz & 5GHz) has been evaluated and no non-compliance was found.
6. 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, 802.11n (HT20):

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

7 channels are provided for 802.11n (HT40):

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
1	√	√	√	√	With adapter 2
2	-	-	√	-	With adapter 1

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE:

1. “-” means no effect.

Radiated Emission Test (Above 1GHz):

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
CDD Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
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.

CDD Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	6	OFDM	BPSK	6

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.

CDD Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	6	OFDM	BPSK	6

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
CDD Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
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 $\geq$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Andy Ho
RE<1G	25deg. C, 64%RH	120Vac, 60Hz	Jyunchun Lin
PLC	25deg. C, 54%RH	120Vac, 60Hz	Jyunchun Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Nelson Teng

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

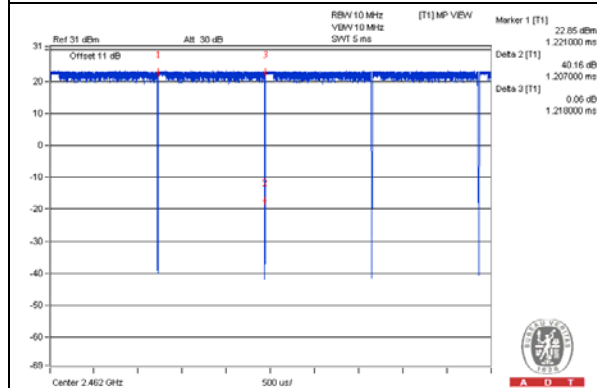
802.11b: Duty cycle = $1.207 \text{ ms} / 1.218 \text{ ms} = 0.991$

802.11g: Duty cycle = $2.063 \text{ ms} / 2.085 \text{ ms} = 0.989$

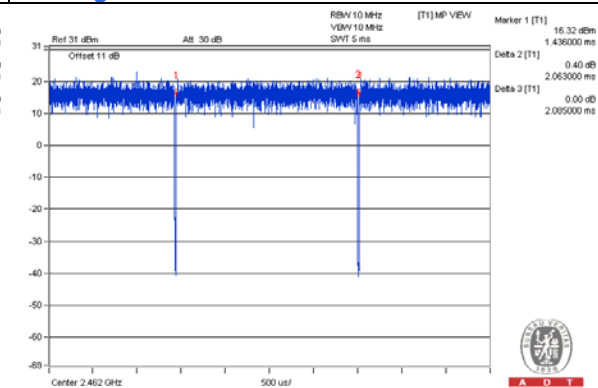
802.11n (HT20): Duty cycle = $1.92 \text{ ms} / 1.941 \text{ ms} = 0.989$

802.11n (HT40): Duty cycle = $0.955 \text{ ms} / 0.971 \text{ ms} = 0.984$

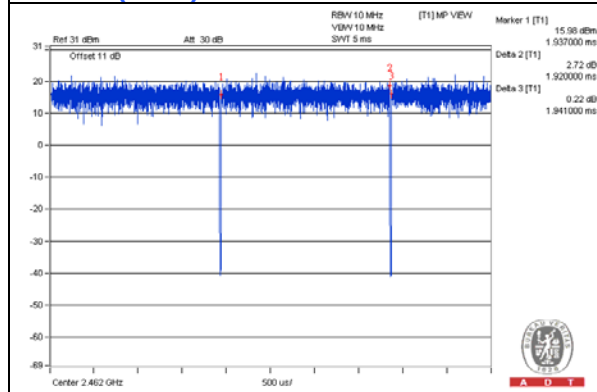
802.11b



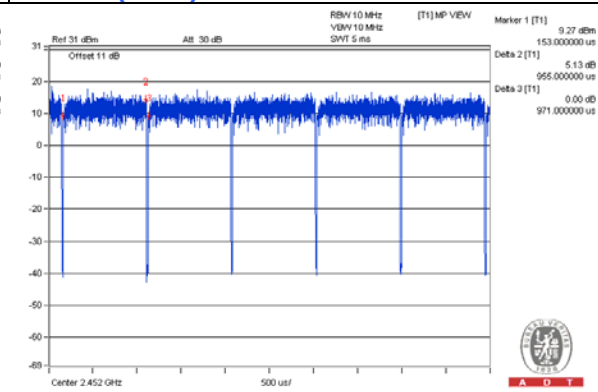
802.11g



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.

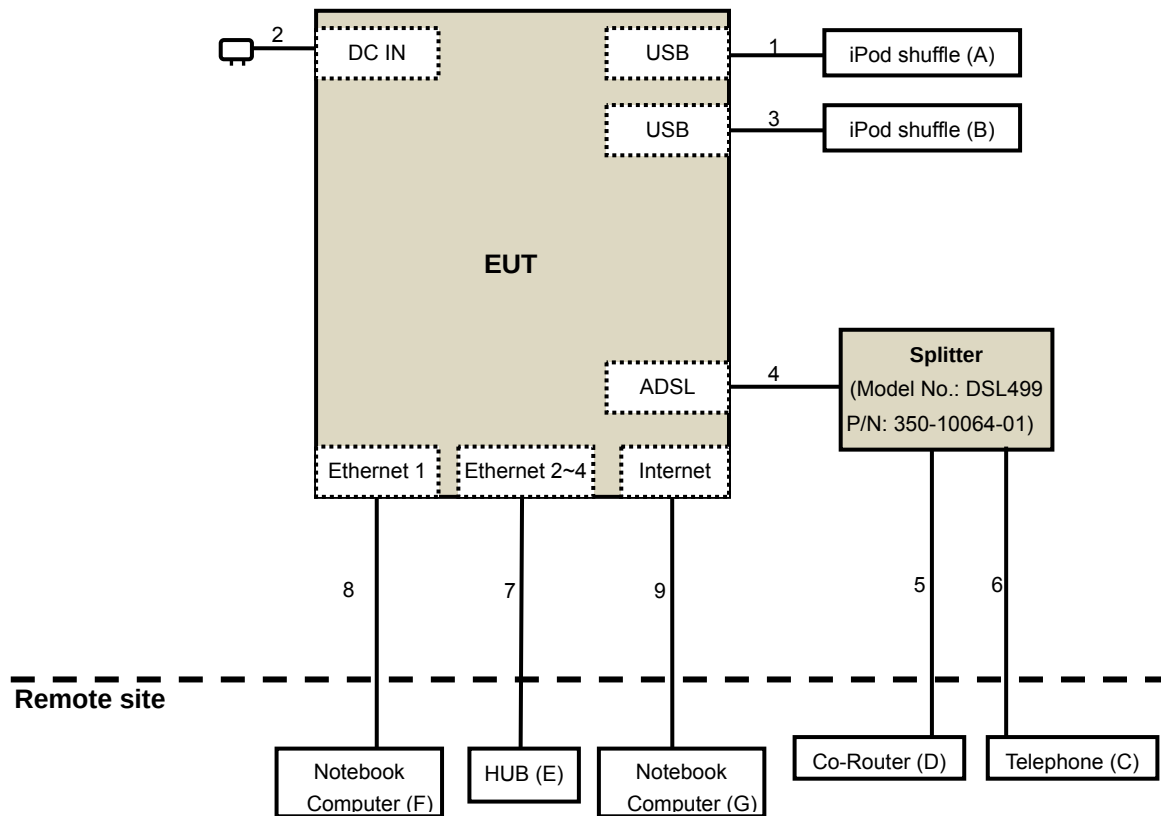
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	iPod shuffle	Apple	MD778TA/A	CC4JMFL0F4T1	NA	Provided by Lab
B.	iPod shuffle	Apple	MD778TA/A	CC4JG3SSF4T1	NA	Provided by Lab
C.	Telephone	WONDER	WD-303	7C17KA04011	NA	Provided by Lab
D.	Co-Router	ZyXEL	IES-1000	S08024701597	FCC DoC	Provided by Lab
E.	HUB	ZyXEL	ES-116P	S060H02000215	FCC DoC	Provided by Lab
F.	Notebook Computer	DELL	E6420	H62T3R1	FCC DoC	Provided by Lab
G.	Notebook Computer	DELL	E6420	B92T3R1	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.	USB	1	0.1	No	0	Provided by Lab
2.	DC	1	1.8	No	0	Supplied by Client
3.	USB	1	0.1	No	0	Provided by Lab
4.	RJ11	1	1.5	No	0	Supplied by Client
5.	RJ11	1	10	No	0	Provided by Lab
6.	RJ11	1	10	No	0	Provided by Lab
7.	RJ45	3	10	No	0	Provided by Lab
8.	RJ45	1	10	No	0	Provided by Lab
9.	RJ45	1	10	No	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart C (15.247)

558074 D01 DTS Meas Guidance v03r03

662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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 30dB below the highest level of the desired power:

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

NOTE:

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

4.1.2 Test Instruments

For below 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY54450088	July 24, 2015	July 23, 2016
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-06	Nov. 12, 2014	Nov. 11, 2015
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Feb. 03, 2015	Feb. 02, 2016
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 03, 2015	Apr. 02, 2016
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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. 4.
4. The FCC Site Registration No. is 292998
5. The CANADA Site Registration No. is 20331-2
6. Tested Date: Nov. 09, 2015



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For Other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 12, 2015	Oct. 11, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	July 08, 2015	July 07, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Feb. 06, 2015	Feb. 05, 2016
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Feb. 05, 2015	Feb. 04, 2016
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Feb. 09, 2015	Feb. 08, 2016
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2015	Aug. 08, 2016
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-02(295012+309220)	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	Aug. 09, 2015	Aug. 08, 2016
Software BV ADT	ADT_Radiated_V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100.	SC93021703	NA	NA
Power Meter Anritsu	ML2495A	1014008	Apr. 28, 2015	Apr. 27, 2016
Power Sensor Anritsu	MA2411B	0917122	Apr. 28, 2015	Apr. 27, 2016
Spectrum Analyzer R&S	FSP40	100060	May 08, 2015	May 07, 2016

- 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 4.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 460141.
5. The IC Site Registration No. is IC7450F-4.
6. Tested Date: Nov. 05 to 06, 2015

4.1.3 Test Procedures

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

Note:

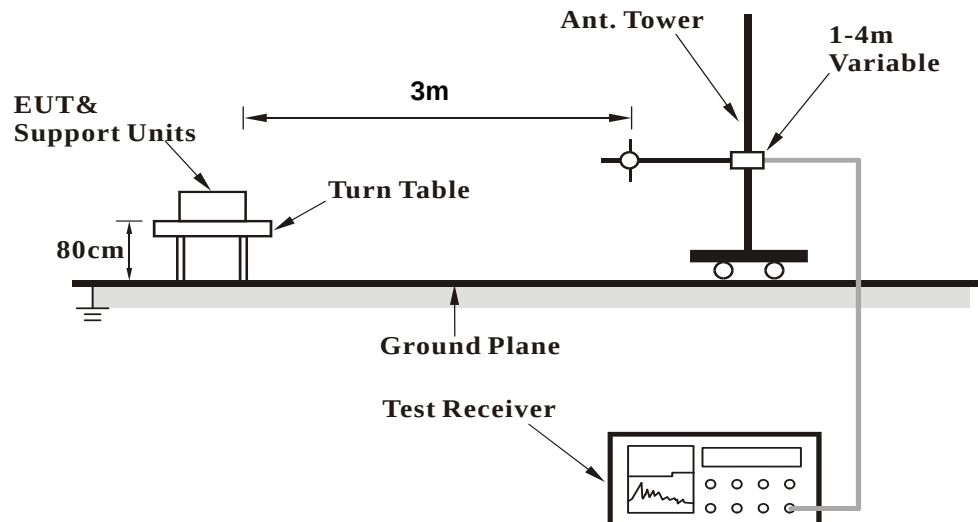
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 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 ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) 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

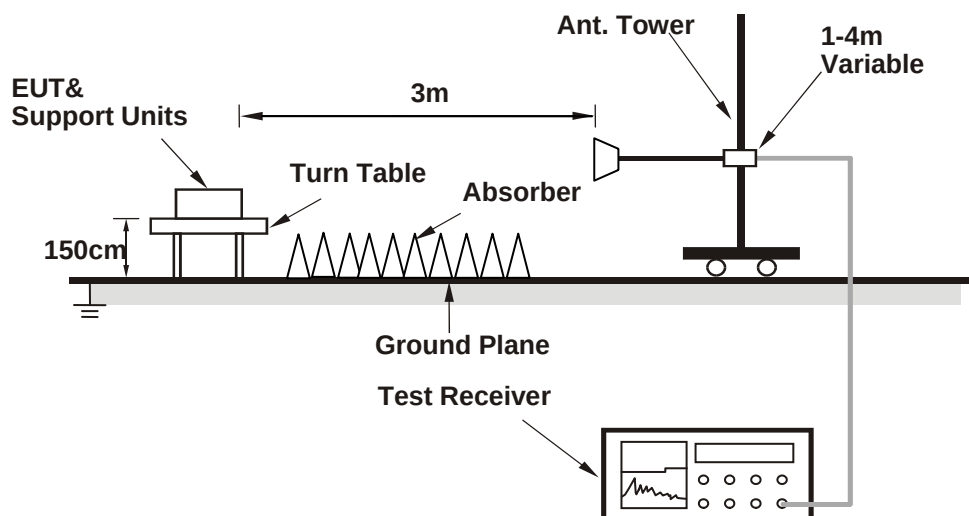
No deviation.

4.1.5 Test Setup

<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

1. Connect the EUT with the support units F & G (Notebook Computer) which is placed on remote site.
2. Controlling software (Mtool_2.0.1.0.msi) has been activated to set the EUT on specific status.

4.1.7 Test Results

Above 1GHz Data (Subcontract Item):

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.8 PK	74.0	-17.2	1.54 H	65	59.47	-2.67
2	2390.00	43.4 AV	54.0	-10.6	1.54 H	65	46.07	-2.67
3	*2412.00	106.6 PK			1.54 H	65	109.17	-2.57
4	*2412.00	103.9 AV			1.54 H	65	106.47	-2.57
5	4824.00	54.3 PK	74.0	-19.7	1.86 H	208	50.15	4.15
6	4824.00	52.5 AV	54.0	-1.5	1.86 H	208	48.35	4.15
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.2 PK	74.0	-15.8	2.11 V	190	60.87	-2.67
2	2390.00	48.0 AV	54.0	-6.0	2.11 V	190	50.67	-2.67
3	*2412.00	106.6 PK			2.11 V	190	109.17	-2.57
4	*2412.00	103.9 AV			2.11 V	190	106.47	-2.57
5	4824.00	54.3 PK	74.0	-19.7	1.81 V	198	50.15	4.15
6	4824.00	52.2 AV	54.0	-1.8	1.81 V	198	48.05	4.15

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	52.1 PK	74.0	-21.9	1.83 H	62	54.77	-2.67
2	2390.00	39.0 AV	54.0	-15.0	1.83 H	62	41.67	-2.67
3	*2437.00	107.4 PK			1.83 H	62	109.88	-2.48
4	*2437.00	104.7 AV			1.83 H	62	107.18	-2.48
5	2483.50	57.4 PK	74.0	-16.6	1.83 H	62	59.70	-2.30
6	2483.50	43.3 AV	54.0	-10.7	1.83 H	62	45.60	-2.30
7	4874.00	55.9 PK	74.0	-18.1	2.00 H	207	51.62	4.28
8	4874.00	53.6 AV	54.0	-0.4	2.00 H	207	49.32	4.28
9	7311.00	53.1 PK	74.0	-20.9	1.83 H	65	42.48	10.62
10	7311.00	46.7 AV	54.0	-7.3	1.83 H	65	36.08	10.62

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	54.0 PK	74.0	-20.0	2.18 V	189	56.67	-2.67
2	2390.00	40.2 AV	54.0	-13.8	2.18 V	189	42.87	-2.67
3	*2437.00	107.1 PK			2.18 V	189	109.58	-2.48
4	*2437.00	104.4 AV			2.18 V	189	106.88	-2.48
5	2483.50	56.4 PK	74.0	-17.6	2.18 V	189	58.70	-2.30
6	2483.50	42.5 AV	54.0	-11.5	2.18 V	189	44.80	-2.30
7	4874.00	53.1 PK	74.0	-20.9	1.63 V	199	48.82	4.28
8	4874.00	50.6 AV	54.0	-3.4	1.63 V	199	46.32	4.28
9	7311.00	49.5 PK	74.0	-24.5	1.89 V	205	38.88	10.62
10	7311.00	38.2 AV	54.0	-15.8	1.89 V	205	27.58	10.62

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.4 PK			1.75 H	60	109.78	-2.38
2	*2462.00	104.6 AV			1.75 H	60	106.98	-2.38
3	2483.50	61.3 PK	74.0	-12.7	1.75 H	60	63.60	-2.30
4	2483.50	52.6 AV	54.0	-1.4	1.75 H	60	54.90	-2.30
5	4924.00	55.5 PK	74.0	-18.5	1.95 H	209	51.03	4.47
6	4924.00	53.7 AV	54.0	-0.3	1.95 H	209	49.23	4.47
7	7386.00	51.1 PK	74.0	-22.9	1.63 H	70	40.25	10.85
8	7386.00	43.5 AV	54.0	-10.5	1.63 H	70	32.65	10.85
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.4 PK			1.70 V	194	109.78	-2.38
2	*2462.00	104.6 AV			1.70 V	194	106.98	-2.38
3	2483.50	61.2 PK	74.0	-12.8	1.70 V	194	63.50	-2.30
4	2483.50	52.0 AV	54.0	-2.0	1.70 V	194	54.30	-2.30
5	4924.00	53.3 PK	74.0	-20.7	1.69 V	206	48.83	4.47
6	4924.00	50.9 AV	54.0	-3.1	1.69 V	206	46.43	4.47
7	7386.00	49.1 PK	74.0	-24.9	1.93 V	194	38.25	10.85
8	7386.00	38.0 AV	54.0	-16.0	1.93 V	194	27.15	10.85

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.

CDD Mode

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.2 PK	74.0	-1.8	1.80 H	63	74.87	-2.67
2	2390.00	50.0 AV	54.0	-4.0	1.80 H	63	52.67	-2.67
3	*2412.00	110.7 PK			1.80 H	63	113.27	-2.57
4	*2412.00	98.5 AV			1.80 H	63	101.07	-2.57
5	4824.00	62.9 PK	74.0	-11.1	1.63 H	71	58.75	4.15
6	4824.00	45.9 AV	54.0	-8.1	1.63 H	71	41.75	4.15
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	73.2 PK	74.0	-0.8	2.31 V	114	75.87	-2.67
2	2390.00	50.1 AV	54.0	-3.9	2.31 V	114	52.77	-2.67
3	*2412.00	112.1 PK			2.31 V	114	114.67	-2.57
4	*2412.00	101.0 AV			2.31 V	114	103.57	-2.57
5	4824.00	55.4 PK	74.0	-18.6	1.47 V	205	51.25	4.15
6	4824.00	40.2 AV	54.0	-13.8	1.47 V	205	36.05	4.15

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.9 PK	74.0	-9.1	1.62 H	62	67.57	-2.67
2	2390.00	46.2 AV	54.0	-7.8	1.62 H	62	48.87	-2.67
3	*2437.00	113.5 PK			1.62 H	62	115.98	-2.48
4	*2437.00	101.2 AV			1.62 H	62	103.68	-2.48
5	2483.50	70.1 PK	74.0	-3.9	1.62 H	62	72.40	-2.30
6	2483.50	51.6 AV	54.0	-2.4	1.62 H	62	53.90	-2.30
7	4874.00	62.5 PK	74.0	-11.5	1.64 H	58	58.22	4.28
8	4874.00	45.7 AV	54.0	-8.3	1.64 H	58	41.42	4.28
9	7311.00	61.4 PK	74.0	-12.6	1.64 H	71	50.78	10.62
10	7311.00	45.2 AV	54.0	-8.8	1.64 H	71	34.58	10.62

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	66.4 PK	74.0	-7.6	1.56 V	131	69.07	-2.67
2	2390.00	45.6 AV	54.0	-8.4	1.56 V	131	48.27	-2.67
3	*2437.00	115.1 PK			1.56 V	131	117.58	-2.48
4	*2437.00	104.0 AV			1.56 V	131	106.48	-2.48
5	2483.50	73.6 PK	74.0	-0.4	1.56 V	131	75.90	-2.30
6	2483.50	52.5 AV	54.0	-1.5	1.56 V	131	54.80	-2.30
7	4874.00	55.5 PK	74.0	-18.5	1.51 V	196	51.22	4.28
8	4874.00	40.2 AV	54.0	-13.8	1.51 V	196	35.92	4.28
9	7311.00	53.3 PK	74.0	-20.7	1.90 V	360	42.68	10.62
10	7311.00	38.6 AV	54.0	-15.4	1.90 V	360	27.98	10.62

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.0 PK			1.79 H	64	111.38	-2.38
2	*2462.00	97.0 AV			1.79 H	64	99.38	-2.38
3	2483.50	73.5 PK	74.0	-0.5	1.79 H	64	75.80	-2.30
4	2483.50	51.0 AV	54.0	-3.0	1.79 H	64	53.30	-2.30
5	4924.00	62.6 PK	74.0	-11.4	1.66 H	63	58.13	4.47
6	4924.00	45.7 AV	54.0	-8.3	1.66 H	63	41.23	4.47
7	7386.00	61.3 PK	74.0	-12.7	1.66 H	69	50.45	10.85
8	7386.00	45.1 AV	54.0	-8.9	1.66 H	69	34.25	10.85
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	112.1 PK			1.85 V	184	114.48	-2.38
2	*2462.00	100.7 AV			1.85 V	184	103.08	-2.38
3	2483.50	73.9 PK	74.0	-0.1	1.85 V	184	76.20	-2.30
4	2483.50	51.2 AV	54.0	-2.8	1.85 V	184	53.50	-2.30
5	4924.00	55.3 PK	74.0	-18.7	1.45 V	185	50.83	4.47
6	4924.00	39.8 AV	54.0	-14.2	1.45 V	185	35.33	4.47
7	7386.00	53.5 PK	74.0	-20.5	1.90 V	360	42.65	10.85
8	7386.00	38.7 AV	54.0	-15.3	1.90 V	360	27.85	10.85

REMARKS:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.9 PK	74.0	-3.1	1.82 H	77	73.57	-2.67
2	2390.00	50.4 AV	54.0	-3.6	1.82 H	77	53.07	-2.67
3	*2412.00	107.9 PK			1.82 H	77	110.47	-2.57
4	*2412.00	96.9 AV			1.82 H	77	99.47	-2.57
5	4824.00	62.7 PK	74.0	-11.3	1.61 H	55	58.55	4.15
6	4824.00	46.0 AV	54.0	-8.0	1.61 H	55	41.85	4.15
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	1.92 V	187	76.07	-2.67
2	2390.00	53.2 AV	54.0	-0.8	1.92 V	187	55.87	-2.67
3	*2412.00	110.5 PK			1.92 V	187	113.07	-2.57
4	*2412.00	99.8 AV			1.92 V	187	102.37	-2.57
5	4824.00	55.3 PK	74.0	-18.7	1.50 V	176	51.15	4.15
6	4824.00	39.6 AV	54.0	-14.4	1.50 V	176	35.45	4.15

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.7 PK	74.0	-13.3	1.80 H	57	63.37	-2.67
2	2390.00	43.7 AV	54.0	-10.3	1.80 H	57	46.37	-2.67
3	*2437.00	112.8 PK			1.80 H	57	115.28	-2.48
4	*2437.00	101.0 AV			1.80 H	57	103.48	-2.48
5	2483.50	68.5 PK	74.0	-5.5	1.80 H	57	70.80	-2.30
6	2483.50	50.2 AV	54.0	-3.8	1.80 H	57	52.50	-2.30
7	4874.00	63.3 PK	74.0	-10.7	1.70 H	75	59.02	4.28
8	4874.00	46.2 AV	54.0	-7.8	1.70 H	75	41.92	4.28
9	7311.00	61.1 PK	74.0	-12.9	1.67 H	68	50.48	10.62
10	7311.00	44.8 AV	54.0	-9.2	1.67 H	68	34.18	10.62

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	63.4 PK	74.0	-10.6	1.58 V	126	66.07	-2.67
2	2390.00	46.5 AV	54.0	-7.5	1.58 V	126	49.17	-2.67
3	*2437.00	115.1 PK			1.58 V	126	117.58	-2.48
4	*2437.00	103.6 AV			1.58 V	126	106.08	-2.48
5	2483.50	71.7 PK	74.0	-2.3	1.58 V	126	74.00	-2.30
6	2483.50	53.6 AV	54.0	-0.4	1.58 V	126	55.90	-2.30
7	4874.00	55.5 PK	74.0	-18.5	1.43 V	189	51.22	4.28
8	4874.00	40.2 AV	54.0	-13.8	1.43 V	189	35.92	4.28
9	7311.00	53.7 PK	74.0	-20.3	1.88 V	360	43.08	10.62
10	7311.00	38.8 AV	54.0	-15.2	1.88 V	360	28.18	10.62

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.0 PK			1.83 H	73	110.38	-2.38
2	*2462.00	96.2 AV			1.83 H	73	98.58	-2.38
3	2483.50	71.2 PK	74.0	-2.8	1.83 H	73	73.50	-2.30
4	2483.50	47.6 AV	54.0	-6.4	1.83 H	73	49.90	-2.30
5	4924.00	62.7 PK	74.0	-11.3	1.72 H	69	58.23	4.47
6	4924.00	45.8 AV	54.0	-8.2	1.72 H	69	41.33	4.47
7	7386.00	61.3 PK	74.0	-12.7	1.68 H	54	50.45	10.85
8	7386.00	45.1 AV	54.0	-8.9	1.68 H	54	34.25	10.85
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	110.7 PK			1.87 V	193	113.08	-2.38
2	*2462.00	99.1 AV			1.87 V	193	101.48	-2.38
3	2483.50	73.9 PK	74.0	-0.1	1.87 V	193	76.20	-2.30
4	2483.50	50.2 AV	54.0	-3.8	1.87 V	193	52.50	-2.30
5	4924.00	55.5 PK	74.0	-18.5	1.45 V	174	51.03	4.47
6	4924.00	40.0 AV	54.0	-14.0	1.45 V	174	35.53	4.47
7	7386.00	53.9 PK	74.0	-20.1	1.93 V	360	43.05	10.85
8	7386.00	39.1 AV	54.0	-14.9	1.93 V	360	28.25	10.85

REMARKS:

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

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.8 PK	74.0	-6.2	1.79 H	56	70.47	-2.67
2	2390.00	50.1 AV	54.0	-3.9	1.79 H	56	52.77	-2.67
3	*2422.00	103.3 PK			1.79 H	56	105.84	-2.54
4	*2422.00	91.1 AV			1.79 H	56	93.64	-2.54
5	4844.00	62.8 PK	74.0	-11.2	1.66 H	53	58.60	4.20
6	4844.00	46.1 AV	54.0	-7.9	1.66 H	53	41.90	4.20
7	7266.00	61.6 PK	74.0	-12.4	1.62 H	55	51.13	10.47
8	7266.00	45.3 AV	54.0	-8.7	1.62 H	55	34.83	10.47
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	71.1 PK	74.0	-2.9	1.57 V	127	73.77	-2.67
2	2390.00	53.6 AV	54.0	-0.4	1.57 V	127	56.27	-2.67
3	*2422.00	105.7 PK			1.57 V	127	108.24	-2.54
4	*2422.00	93.7 AV			1.57 V	127	96.24	-2.54
5	4844.00	55.3 PK	74.0	-18.7	1.39 V	181	51.10	4.20
6	4844.00	39.8 AV	54.0	-14.2	1.39 V	181	35.60	4.20
7	7266.00	53.3 PK	74.0	-20.7	1.87 V	360	42.83	10.47
8	7266.00	38.6 AV	54.0	-15.4	1.87 V	360	28.13	10.47

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.8 PK	74.0	-10.2	1.82 H	61	66.47	-2.67
2	2390.00	45.8 AV	54.0	-8.2	1.82 H	61	48.47	-2.67
3	*2437.00	103.8 PK			1.82 H	61	106.28	-2.48
4	*2437.00	91.5 AV			1.82 H	61	93.98	-2.48
5	2483.50	70.9 PK	74.0	-3.1	1.82 H	61	73.20	-2.30
6	2483.50	51.0 AV	54.0	-3.0	1.82 H	61	53.30	-2.30
7	4874.00	62.4 PK	74.0	-11.6	1.60 H	75	58.12	4.28
8	4874.00	45.7 AV	54.0	-8.3	1.60 H	75	41.42	4.28
9	7311.00	61.6 PK	74.0	-12.4	1.71 H	80	50.98	10.62
10	7311.00	45.6 AV	54.0	-8.4	1.71 H	80	34.98	10.62

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	66.4 PK	74.0	-7.6	1.49 V	128	69.07	-2.67
2	2390.00	48.5 AV	54.0	-5.5	1.49 V	128	51.17	-2.67
3	*2437.00	107.0 PK			1.49 V	128	109.48	-2.48
4	*2437.00	94.9 AV			1.49 V	128	97.38	-2.48
5	2483.50	73.3 PK	74.0	-0.7	1.49 V	128	75.60	-2.30
6	2483.50	53.6 AV	54.0	-0.4	1.49 V	128	55.90	-2.30
7	4874.00	55.5 PK	74.0	-18.5	1.48 V	190	51.22	4.28
8	4874.00	40.1 AV	54.0	-13.9	1.48 V	190	35.82	4.28
9	7311.00	53.6 PK	74.0	-20.4	1.93 V	360	42.98	10.62
10	7311.00	38.7 AV	54.0	-15.3	1.93 V	360	28.08	10.62

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	102.7 PK			1.85 H	54	105.12	-2.42
2	*2452.00	90.4 AV			1.85 H	54	92.82	-2.42
3	2483.50	70.1 PK	74.0	-3.9	1.85 H	54	72.40	-2.30
4	2483.50	48.8 AV	54.0	-5.2	1.85 H	54	51.10	-2.30
5	4904.00	62.7 PK	74.0	-11.3	1.67 H	66	58.34	4.36
6	4904.00	45.6 AV	54.0	-8.4	1.67 H	66	41.24	4.36
7	7356.00	61.1 PK	74.0	-12.9	1.68 H	53	50.34	10.76
8	7356.00	44.8 AV	54.0	-9.2	1.68 H	53	34.04	10.76
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	*2452.00	105.5 PK			1.63 V	126	107.92	-2.42
2	*2452.00	93.0 AV			1.63 V	126	95.42	-2.42
3	2483.50	73.6 PK	74.0	-0.4	1.63 V	126	75.90	-2.30
4	2483.50	52.0 AV	54.0	-2.0	1.63 V	126	54.30	-2.30
5	4904.00	56.1 PK	74.0	-17.9	1.42 V	199	51.74	4.36
6	4904.00	40.6 AV	54.0	-13.4	1.42 V	199	36.24	4.36
7	7356.00	53.9 PK	74.0	-20.1	1.90 V	360	43.14	10.76
8	7356.00	38.9 AV	54.0	-15.1	1.90 V	360	28.14	10.76

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.

Below 1GHz Data:

CDD Mode

802.11g

CHANNEL	RX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 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	30.10	35.4 QP	40.0	-4.7	1.00 H	192	51.96	-16.61
2	125.01	36.6 QP	43.5	-6.9	1.50 H	114	53.55	-16.97
3	250.00	42.6 QP	46.0	-3.5	1.00 H	99	58.67	-16.12
4	625.00	41.5 QP	46.0	-4.5	1.50 H	40	47.70	-6.22
5	800.00	40.4 QP	46.0	-5.6	1.00 H	108	43.95	-3.56
6	875.00	39.9 QP	46.0	-6.1	1.50 H	174	42.40	-2.48
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	36.64	36.1 QP	40.0	-3.9	1.00 V	95	52.42	-16.28
2	109.03	37.6 QP	43.5	-5.9	1.50 V	111	55.65	-18.09
3	200.00	35.6 QP	43.5	-8.0	1.00 V	42	53.84	-18.29
4	250.00	39.0 QP	46.0	-7.0	1.00 V	118	55.12	-16.12
5	500.00	37.7 QP	46.0	-8.3	1.00 V	96	46.87	-9.18
6	800.00	40.5 QP	46.0	-5.6	1.50 V	196	44.01	-3.56

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	100071	Nov. 10, 2014	Nov. 09, 2015
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 08, 2015

4.2.3 Test Procedures

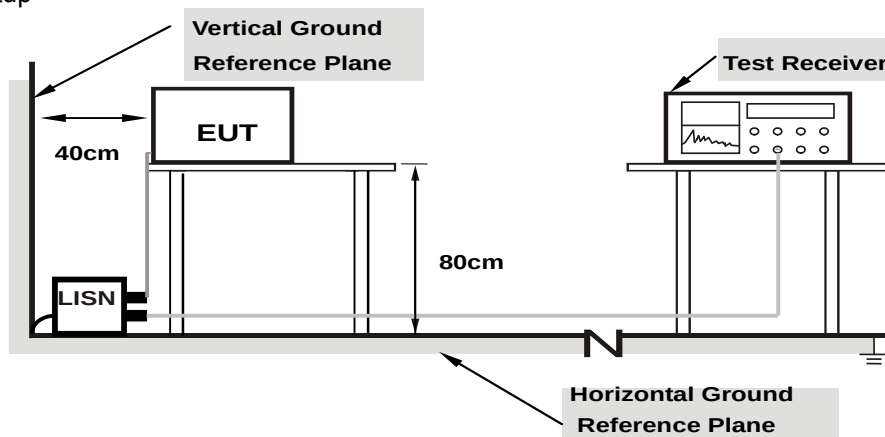
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results (Mode 1)

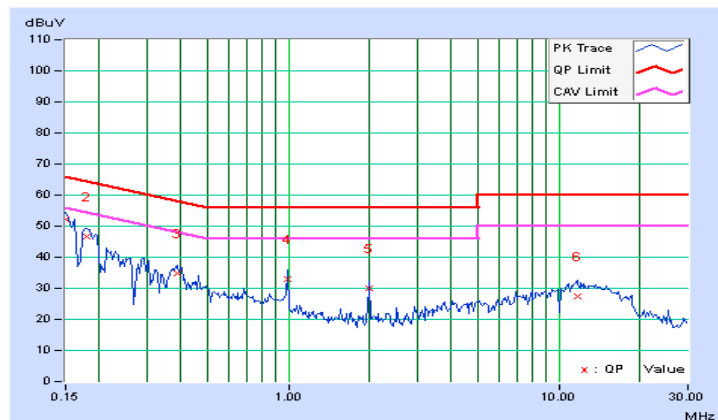
CDD Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.14	52.12	41.93	52.26	42.07	66.00	56.00	-13.74	-13.93
2	0.18028	0.15	46.61	37.25	46.76	37.40	64.47	54.47	-17.72	-17.08
3	0.38828	0.17	34.61	29.14	34.78	29.31	58.10	48.10	-23.32	-18.79
4	0.99378	0.20	32.58	31.48	32.78	31.68	56.00	46.00	-23.22	-14.32
5	1.98406	0.26	29.72	28.51	29.98	28.77	56.00	46.00	-26.02	-17.23
6	11.70313	0.80	26.71	21.53	27.51	22.33	60.00	50.00	-32.49	-27.67

Remarks:

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

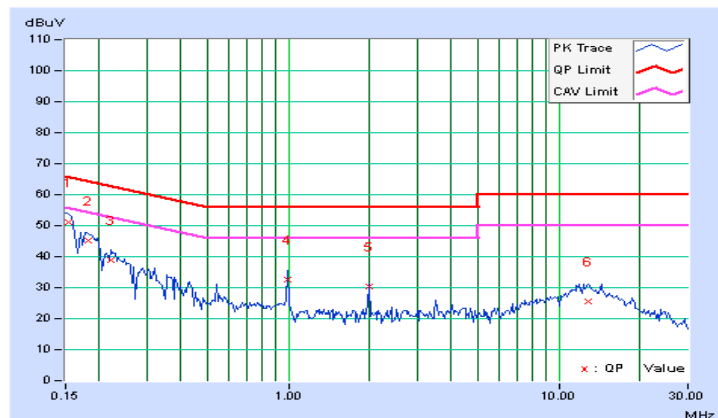


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.14	50.86	36.69	51.00	36.83	65.79	55.79	-14.79	-18.96
2	0.18125	0.15	44.98	34.49	45.13	34.64	64.43	54.43	-19.30	-19.79
3	0.22031	0.15	38.80	27.66	38.95	27.81	62.81	52.81	-23.85	-24.99
4	0.99316	0.24	32.38	31.60	32.62	31.84	56.00	46.00	-23.38	-14.16
5	1.98641	0.30	30.17	27.69	30.47	27.99	56.00	46.00	-25.53	-18.01
6	12.79688	0.91	24.83	19.93	25.74	20.84	60.00	50.00	-34.26	-29.16

Remarks:

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



4.2.8 Test Results (Mode 2)

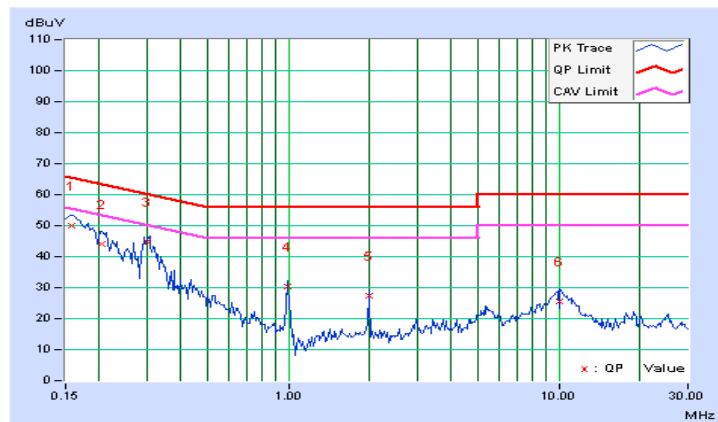
CDD Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	0.14	50.03	41.02	50.17	41.16	65.58	55.58	-15.41	-14.42
2	0.20469	0.15	44.05	36.05	44.20	36.20	63.42	53.42	-19.22	-17.22
3	0.30125	0.16	44.83	41.39	44.99	41.55	60.21	50.21	-15.22	-8.66
4	0.99087	0.20	30.05	30.04	30.25	30.24	56.00	46.00	-25.75	-15.76
5	1.97981	0.26	27.11	26.19	27.37	26.45	56.00	46.00	-28.63	-19.55
6	10.05469	0.74	24.67	20.81	25.41	21.55	60.00	50.00	-34.59	-28.45

Remarks:

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

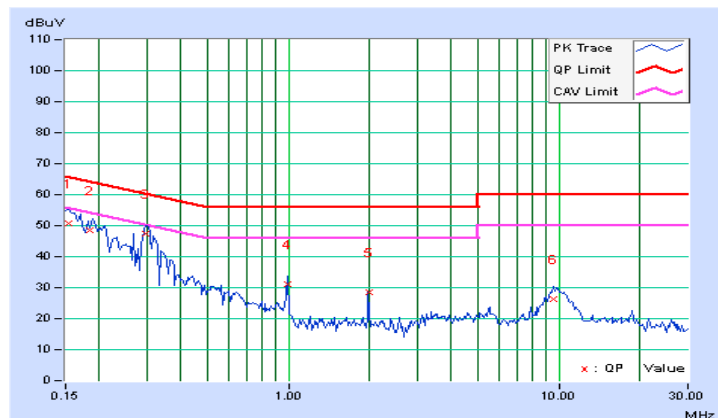


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.14	50.56	39.62	50.70	39.76	65.79	55.79	-15.09	-16.03
2	0.18419	0.15	48.25	38.80	48.40	38.95	64.29	54.29	-15.90	-15.35
3	0.29844	0.17	47.37	44.11	47.54	44.28	60.29	50.29	-12.75	-6.01
4	0.99025	0.24	30.90	30.06	31.14	30.30	56.00	46.00	-24.86	-15.70
5	1.97791	0.30	28.09	26.15	28.39	26.45	56.00	46.00	-27.61	-19.55
6	9.58984	0.76	25.59	21.33	26.35	22.09	60.00	50.00	-33.65	-27.91

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

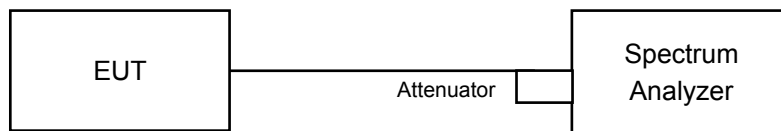


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

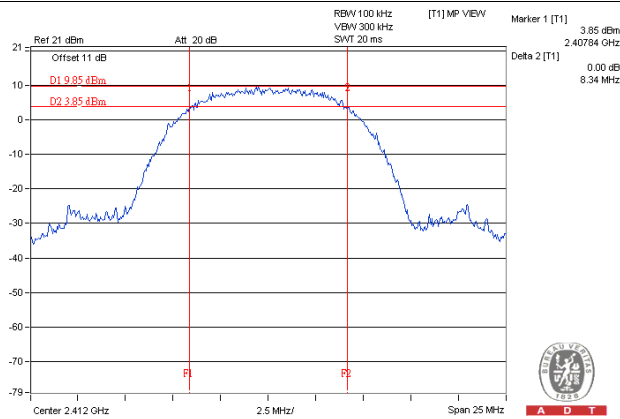
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
802.11b				
1	2412	8.34	0.5	Pass
6	2437	8.59	0.5	Pass
11	2462	8.38	0.5	Pass

CDD Mode

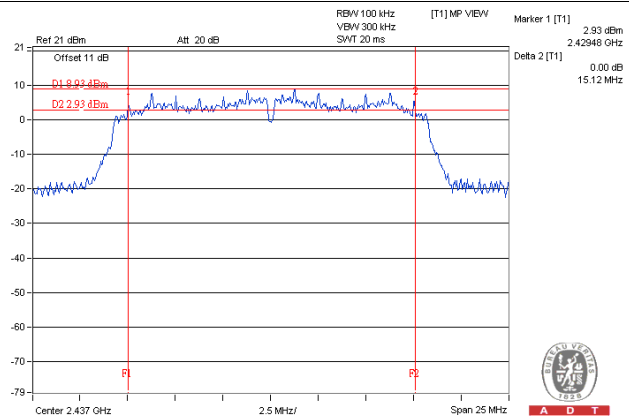
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
802.11g					
1	2412	15.15	15.13	0.5	Pass
6	2437	15.12	15.15	0.5	Pass
11	2462	15.16	15.14	0.5	Pass
802.11n (HT20)					
1	2412	15.13	15.74	0.5	Pass
6	2437	15.15	15.71	0.5	Pass
11	2462	15.17	15.72	0.5	Pass
802.11n (HT40)					
3	2422	36.14	36.42	0.5	Pass
6	2437	35.86	35.83	0.5	Pass
9	2452	35.88	36.36	0.5	Pass

Spectrum Plot of Worst Value

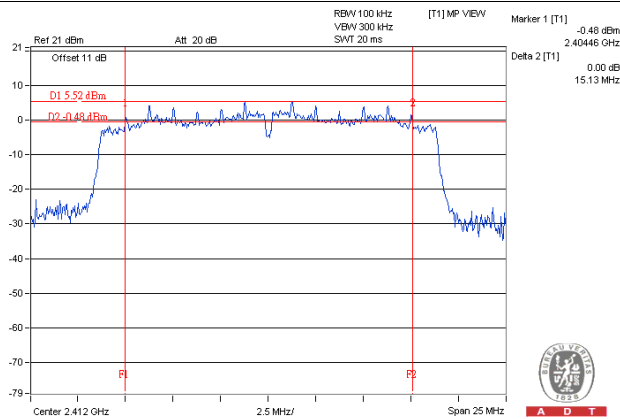
802.11b – CH 1



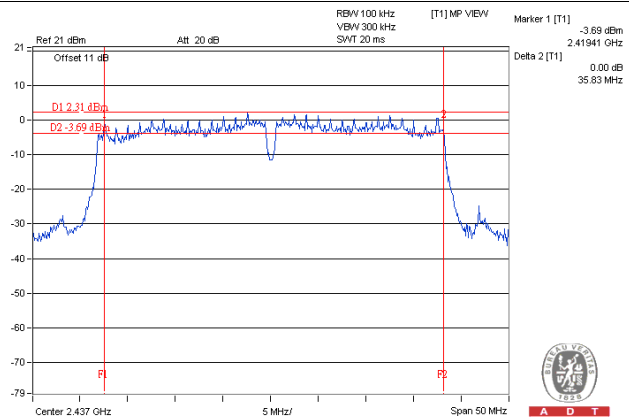
802.11g – Chain 0: CH 6



802.11n (HT20) – Chain 0: CH 1



802.11n (HT40) – Chain 1: CH 6



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,

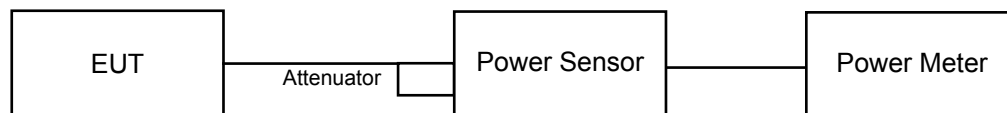
Array Gain = 0 dB (i.e., no array gain) for $NANT \leq 4$;

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

Array Gain = $5 \log(NANT/NSS)$ dB or 3 dB, whichever is less for 20-MHz channel widths with $NANT \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(NANT/NSS)$ 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

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass/Fail
802.11b					
1	2412	67.298	18.28	30	Pass
6	2437	95.28	19.79	30	Pass
11	2462	104.713	20.20	30	Pass

CDD Mode

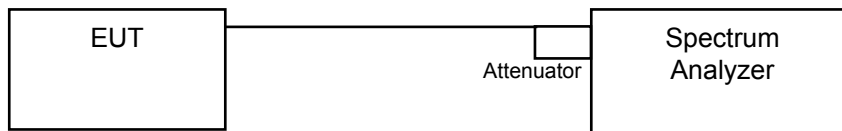
Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
802.11g							
1	2412	16.76	16.41	91.176	19.60	30	Pass
6	2437	19.50	19.73	183.097	22.63	30	Pass
11	2462	14.75	14.69	59.298	17.73	30	Pass
802.11n (HT20)							
1	2412	15.79	15.70	75.085	18.76	30	Pass
6	2437	19.27	19.80	180.027	22.55	30	Pass
11	2462	14.35	14.64	56.334	17.51	30	Pass
802.11n (HT40)							
3	2422	14.02	14.43	52.968	17.24	30	Pass
6	2437	15.02	15.40	66.443	18.22	30	Pass
9	2452	13.42	14.05	47.389	16.76	30	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm.

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

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

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	-10.08	8	Pass
6	2437	-9.28	8	Pass
11	2462	-7.83	8	Pass

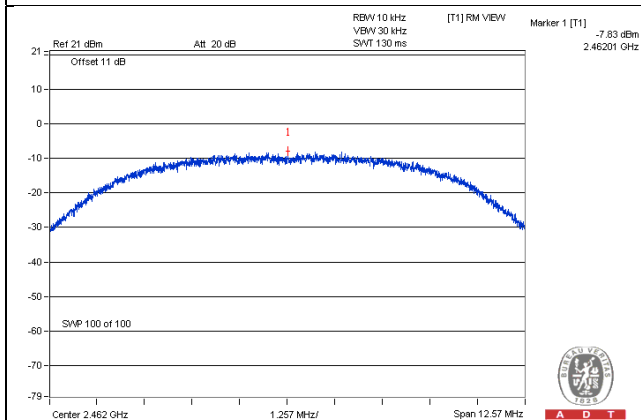
CDD Mode

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	Total PSD (dBm)	Limit (dBm)	Pass /Fail
802.11g							
0	1	2412	-13.09	3.01	-10.08	8	Pass
	6	2437	-9.56	3.01	-6.55	8	Pass
	11	2462	-14.46	3.01	-11.45	8	Pass
1	1	2412	-12.26	3.01	-9.25	8	Pass
	6	2437	-9.11	3.01	-6.10	8	Pass
	11	2462	-13.90	3.01	-10.89	8	Pass
802.11n (HT20)							
0	1	2412	-13.91	3.01	-10.90	8	Pass
	6	2437	-10.08	3.01	-7.07	8	Pass
	11	2462	-14.59	3.01	-11.58	8	Pass
1	1	2412	-13.40	3.01	-10.39	8	Pass
	6	2437	-9.38	3.01	-6.37	8	Pass
	11	2462	-14.59	3.01	-11.58	8	Pass
802.11n (HT40)							
0	3	2422	-17.46	3.01	-14.45	8	Pass
	6	2437	-16.81	3.01	-13.80	8	Pass
	9	2452	-18.76	3.01	-15.75	8	Pass
1	3	2422	-17.01	3.01	-14.00	8	Pass
	6	2437	-16.55	3.01	-13.54	8	Pass
	9	2452	-17.88	3.01	-14.87	8	Pass

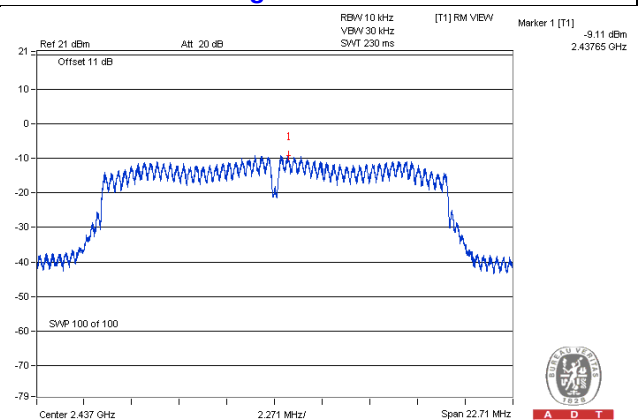
Note: 1. Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

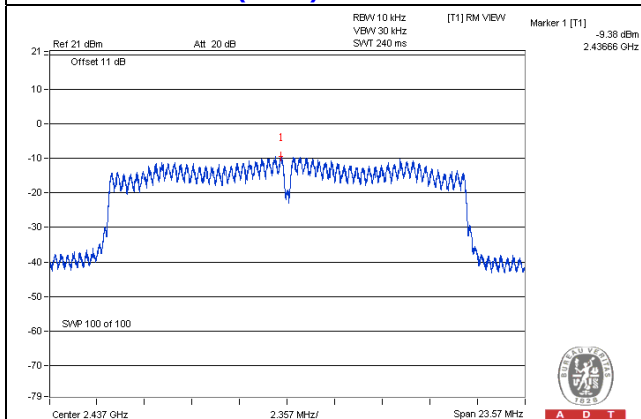
802.11b – CH 11



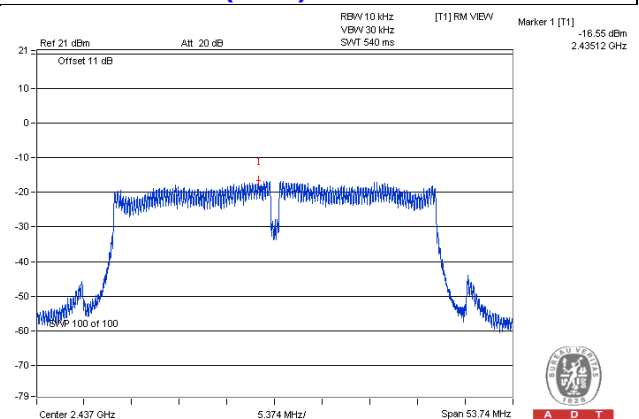
802.11g – Chain 1: CH 6



802.11n (HT20) – Chain 1: CH 6



802.11n (HT40) – Chain 1: CH 6

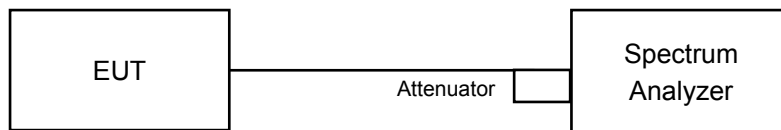


4.6 Conducted Out of Band Emission Measurement

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

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 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 OOB

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 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

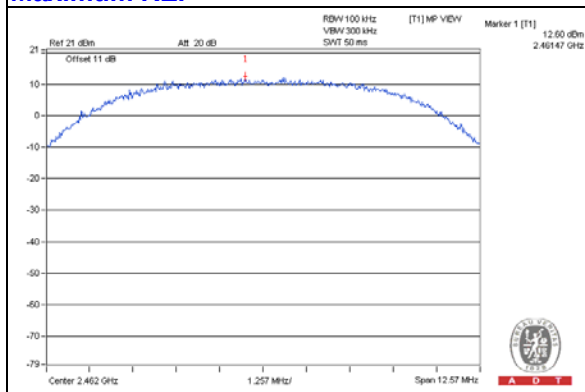
Same as Item 4.3.6

4.6.7 Test Results

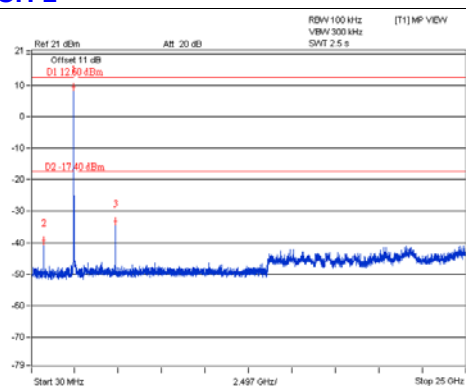
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

802.11b

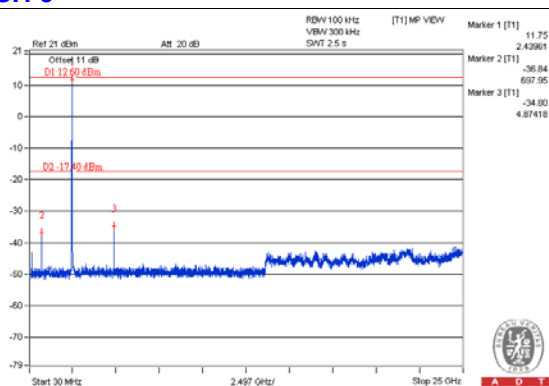
Maximum REF



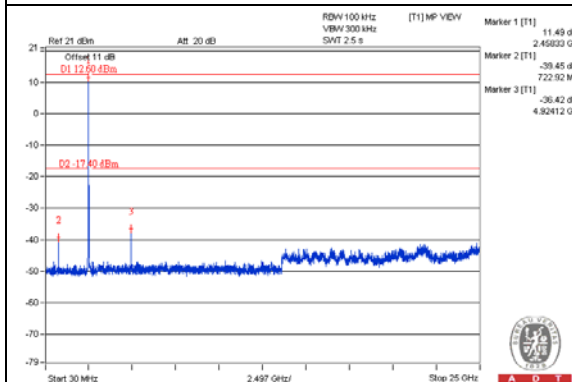
CH 1



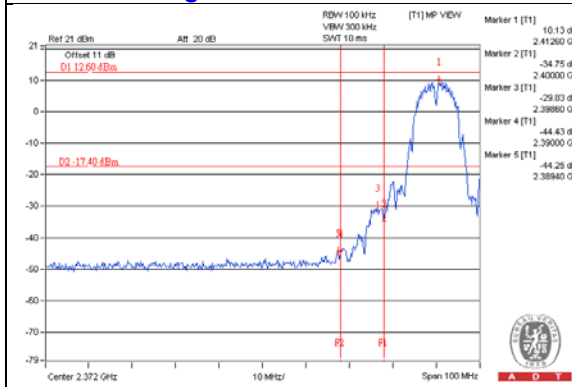
CH 6



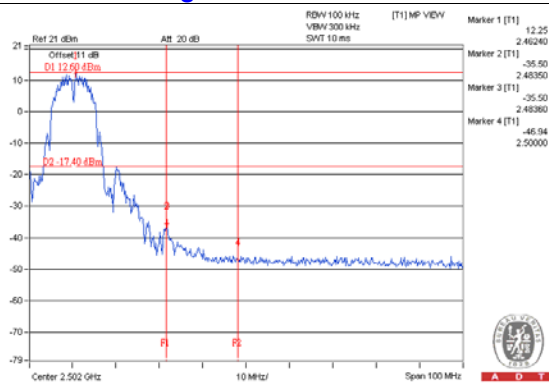
CH 11



CH 1 Band edge

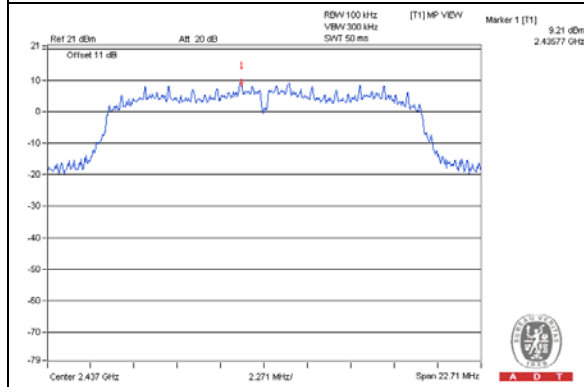


CH 11 Band edge



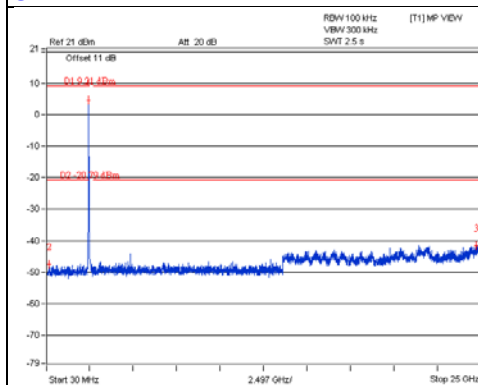
CDD Mode 802.11g

Maximum REF

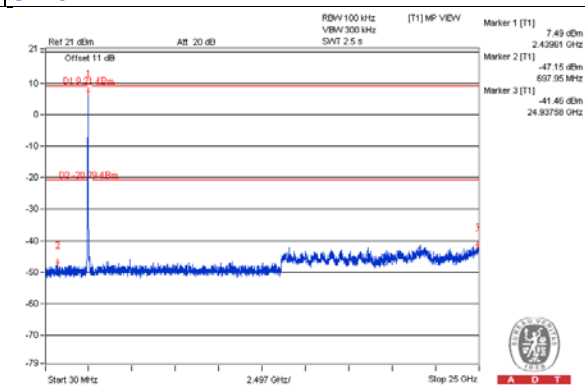


Chain 0

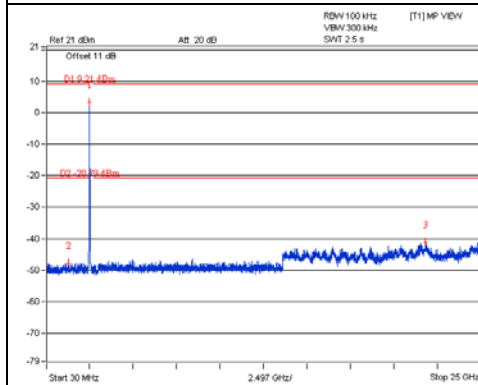
CH 1



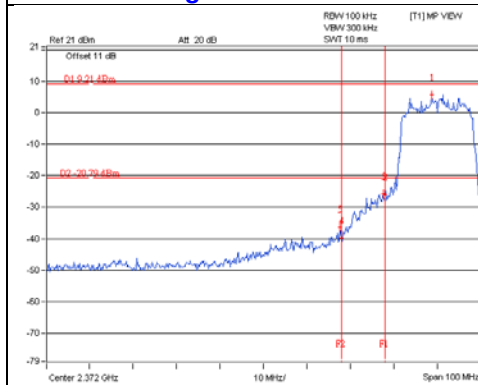
CH 6



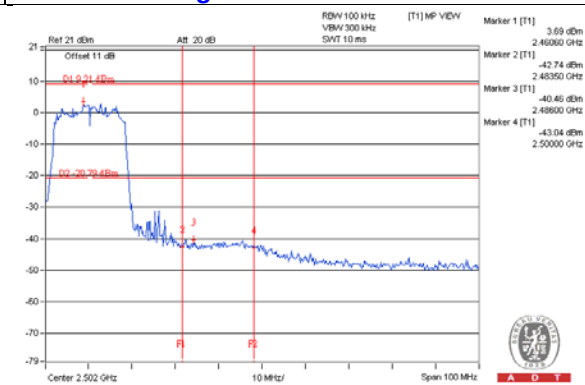
CH 11



CH 1 Band edge

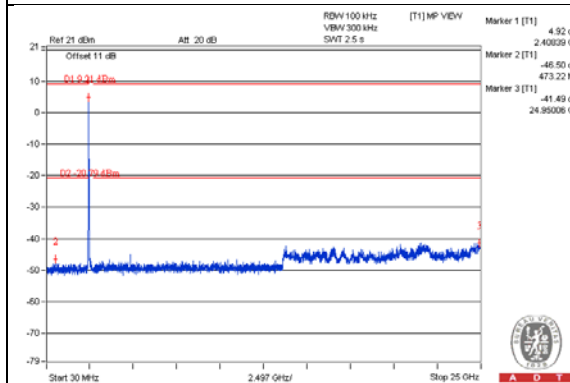


CH 11 Band edge

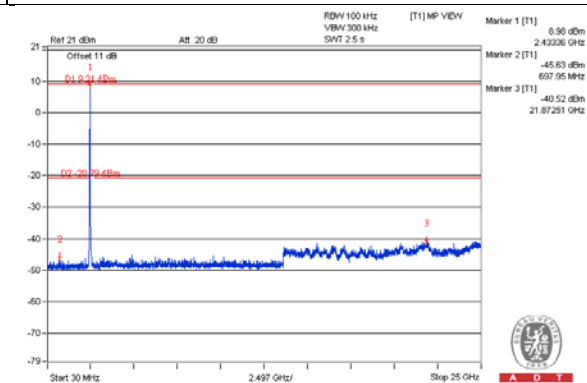


Chain 1

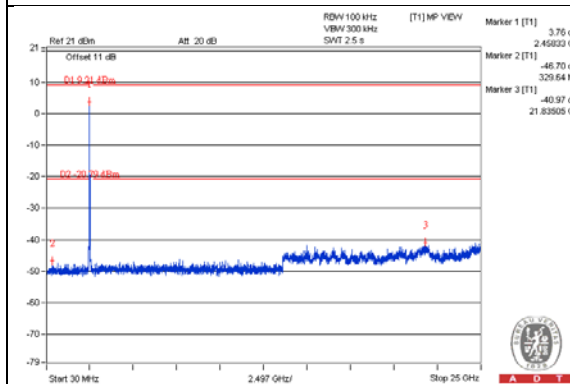
CH 1



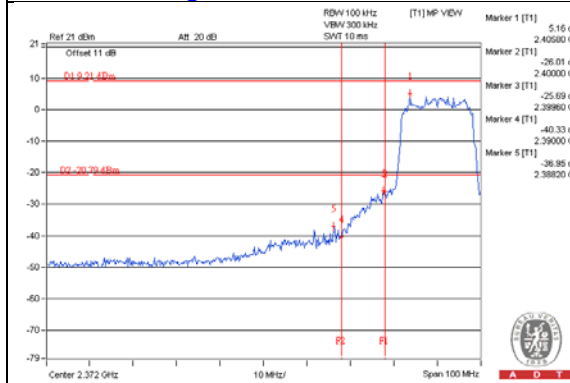
CH 6



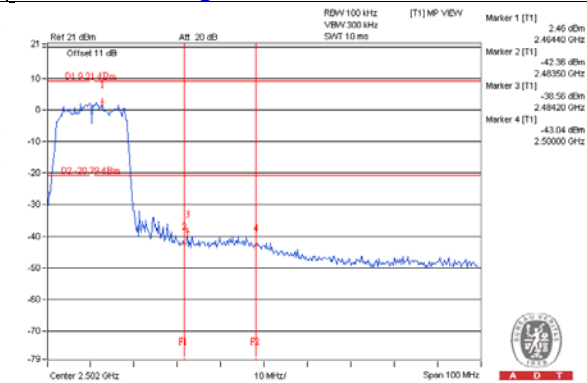
CH 11



CH 1 Band edge

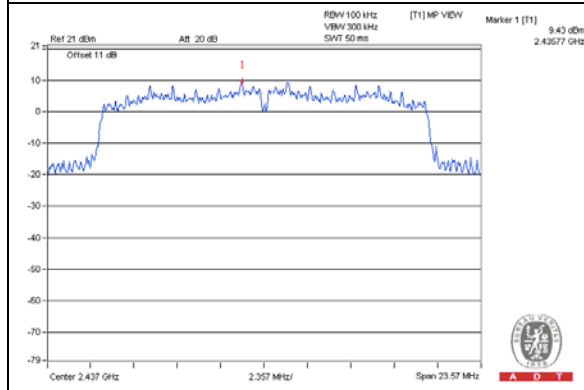


CH 11 Band edge



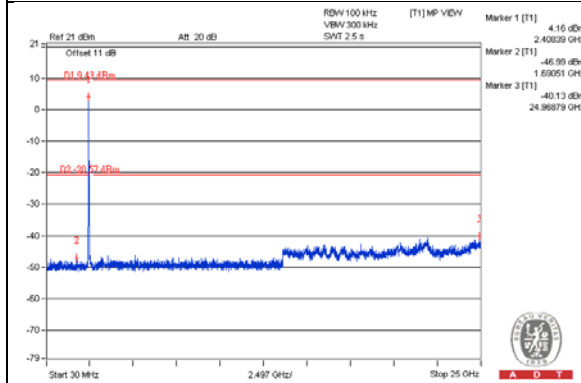
802.11n (HT20)

Maximum REF

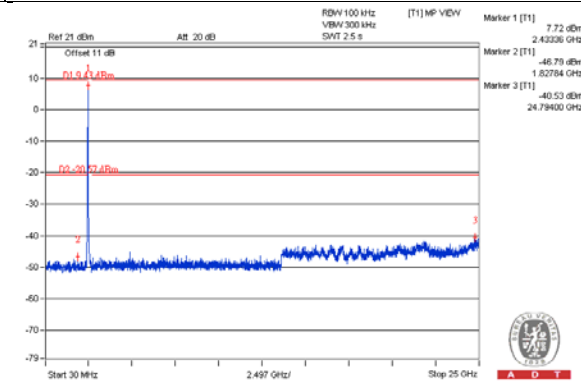


Chain 0

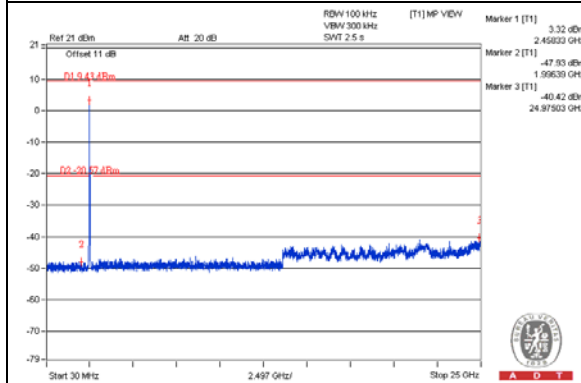
CH 1



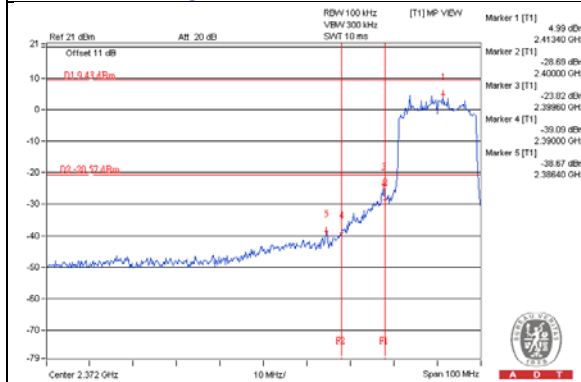
CH 6



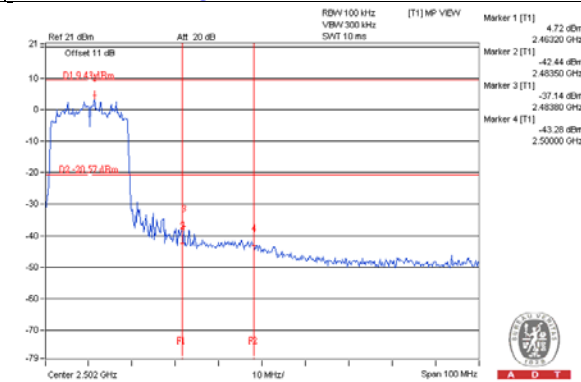
CH 11



CH 1 Band edge

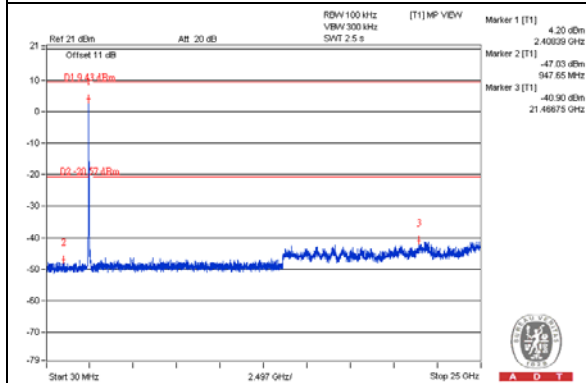


CH 11 Band edge

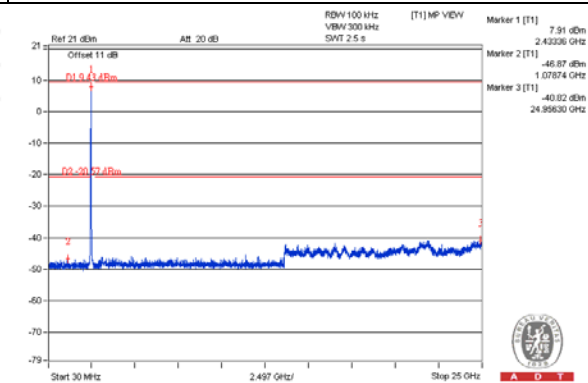


Chain 1

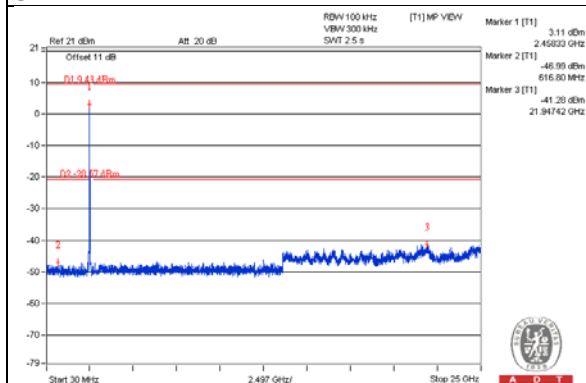
CH 1



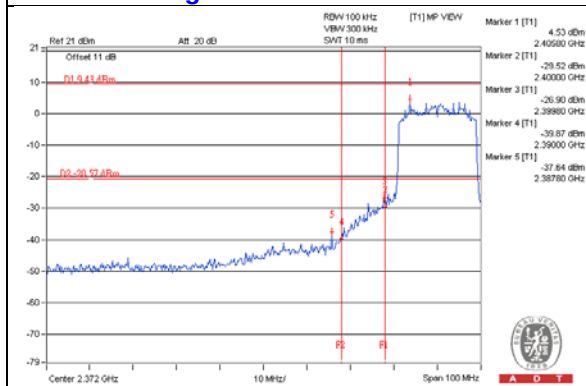
CH 6



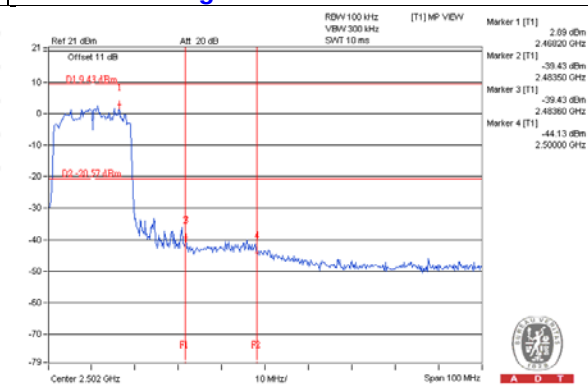
CH 11



CH 1 Band edge

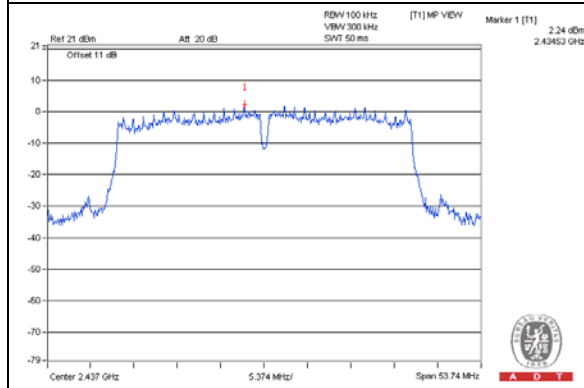


CH 11 Band edge



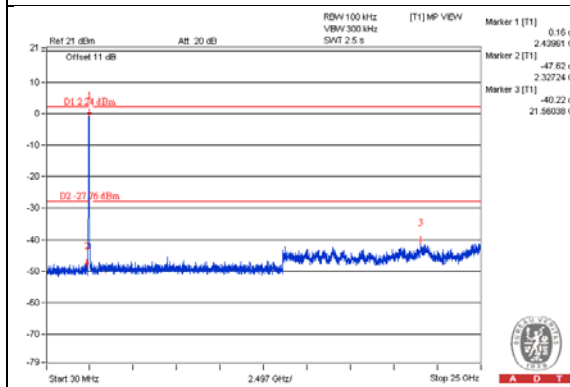
802.11n (HT40)

Maximum REF

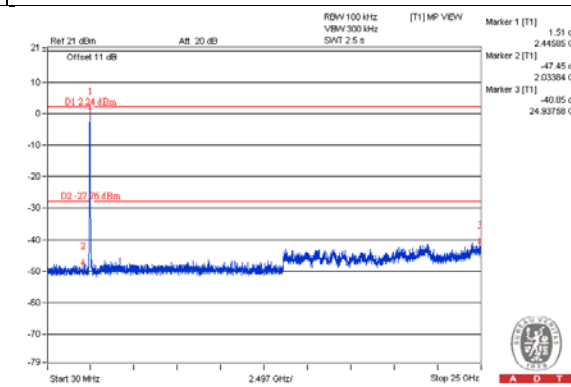


Chain 0

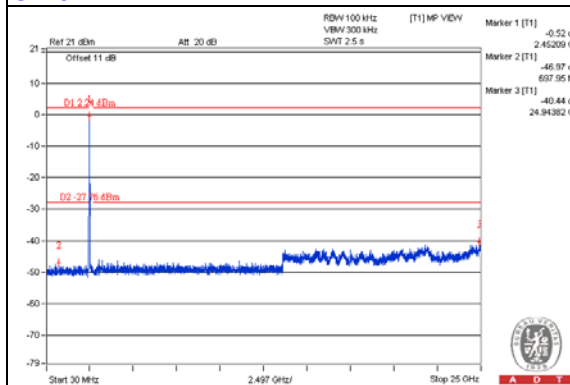
CH 3



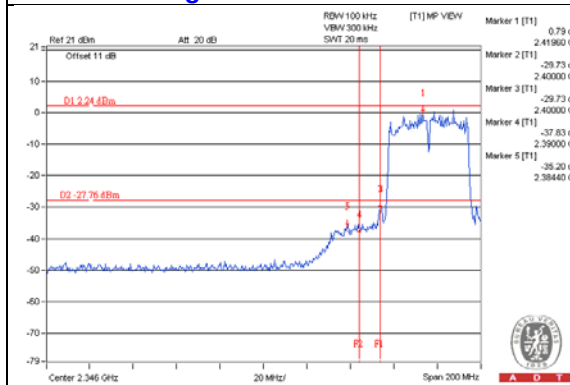
CH 6



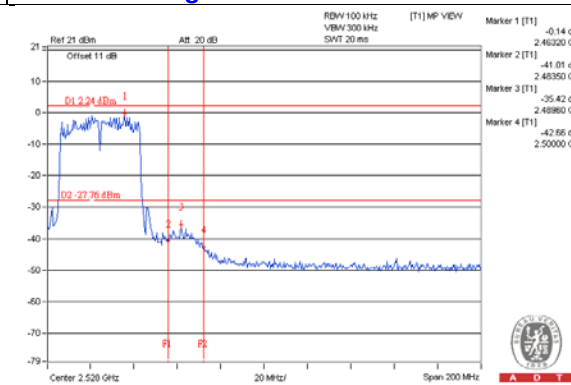
CH 9



CH 3 Band edge

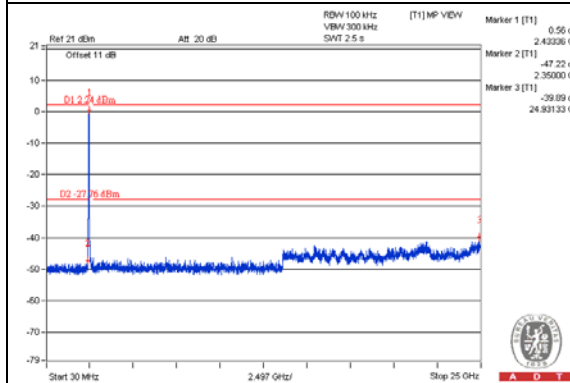


CH 9 Band edge

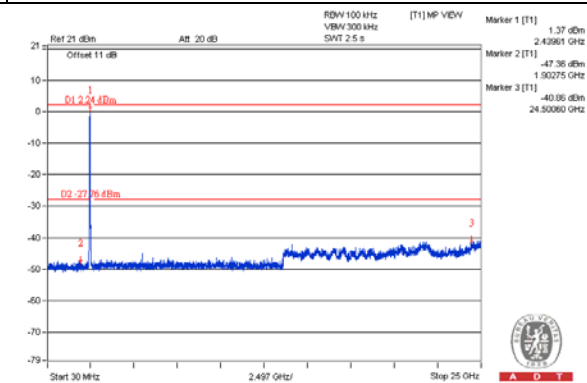


Chain 1

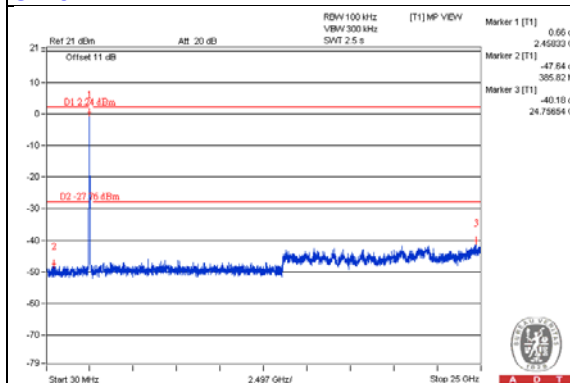
CH 3



CH 6

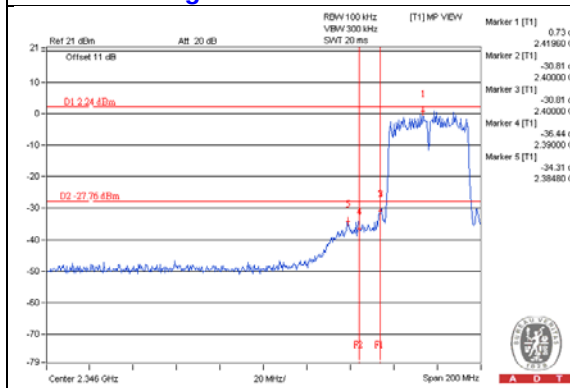


CH 9

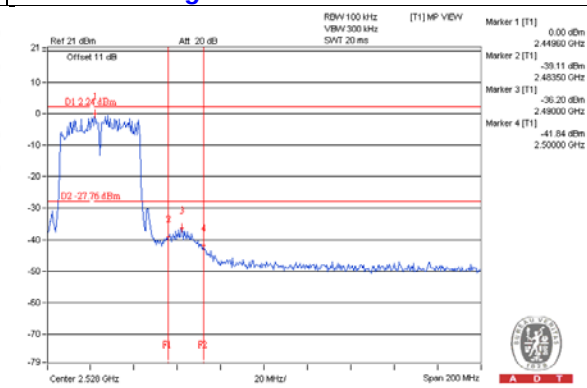


CH 9 Band edge

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:

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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 ---