FCC Test Report (WLAN)

Report No.:	RF160510E15
FCC ID:	JNZNR0011
Test Model:	N-R0011
Received Date:	May 10, 2016
Test Date:	May 26 to June 27, 2016
Issued Date:	July 12, 2016
Applicant:	LOGITECH FAR EAST LTD.
Address:	#2 Creation Rd. 4, Science-Based Ind. Park Hsinchu Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, 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
RF160510E15	Original release.	July 12, 2016

1 Certificate of Conformity

Product:	Bridge
Brand:	Logitech
Test Model:	N-R0011
Sample Status:	ENGINEERING SAMPLE
Applicant:	LOGITECH FAR EAST LTD.
Test Date:	May 26 to June 27, 2016
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.

Prepared by : _____ , **Date:** July 12, 2016

Wendy Wu / Specialist

Approved by : _____ , **Date:** July 12, 2016

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 -8.21dB at 0.59531MHz.
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 4874.00MHz.
15.247(d)	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	The antenna is PCB printed type, there is no antenna connector in EUT.

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	1.83 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.19 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.43 dB
	6GHz ~ 18GHz	3.49 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 (WLAN)

Product	Bridge
Brand	Logitech
Test Model	N-R0011
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	AC 100-240V, 50/60Hz, 50mA
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 72.2Mbps
Operating Frequency	2412MHz ~ 2462MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20): 11
Output Power	112.46mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The EUT may have a lot of colors for marketing requirement.
2. The antennas provided to the EUT, please refer to the following table:

Antenna No	PCB Chain No.	Gain (dBi)	Frequency (GHz to GHz)	Antenna Connector	Antenna Type
1	Chain 0 (WiFi)	4.3	2.4~2.4835	PCB printed Antenna	PCB
2	Chain 1 (BT-LE)	4.2	2.4~2.4835	PCB printed Antenna	PCB

3. The EUT must be supplied with internal power supply (direct plug-in type) as following table:

Brand	Model No.	Spec.
Logitech	NA	Input : 100-240V, 50-60Hz, 50mA Output : 5V, 1A

4. The EUT incorporates a SISO function.

MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	1TX	1RX
802.11g	6 ~ 54Mbps	1TX	1RX
802.11n (HT20)	MCS 0~7	1TX	1RX

5. The emission of the simultaneous operation (2.4GHz WiFi & BT-LE) 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 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		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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 3 axis. The worst case was found when positioned on **Z-plane (below 1GHz) and X-plane (above 1GHz)**.

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
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	36
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	54
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	58.5
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	65

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
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	36
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	54
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	58.5
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	65

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY	TEST LOCATION
RE≥1G	21deg. C, 69%RH	120Vac, 60Hz	Andy Ho	2
RE<1G	16deg. C, 68%RH	120Vac, 60Hz	Russell Yeh	2
PLC	23deg. C, 69%RH	120Vac, 60Hz	Arthur Yang	1
APCM	23deg. C, 64%RH	120Vac, 60Hz	Anderson Chen	2

Note: The test configuration was defined by the applicant requirement.

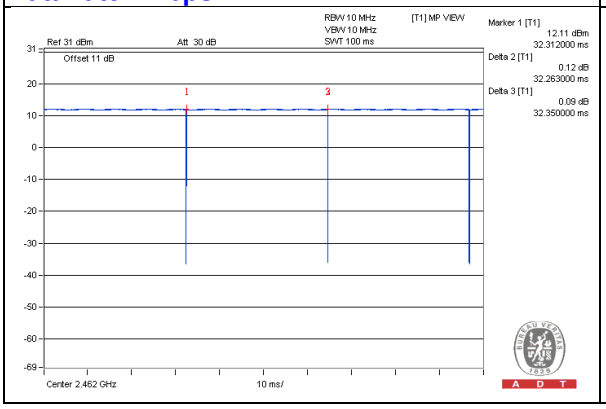
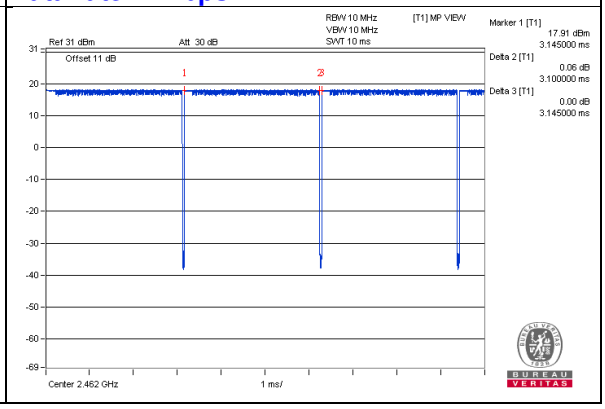
3.3 Duty Cycle of Test Signal

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

802.11b:

Data rate 1Mbps: Duty cycle = 32.263/32.35 = 0.997

Data rate 11Mbps: Duty cycle = 3.1/3.145 = 0.986

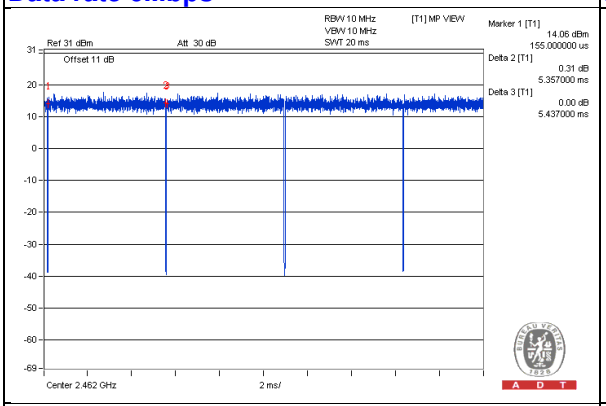
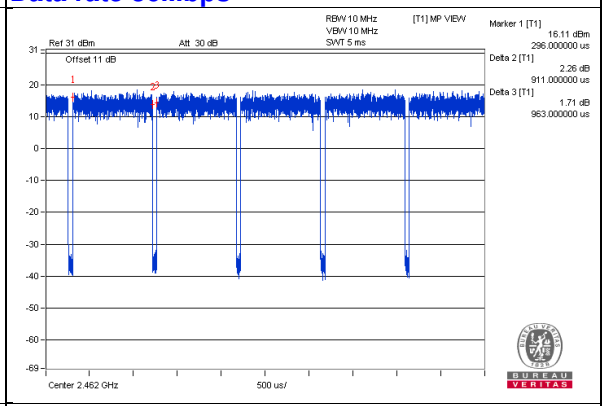
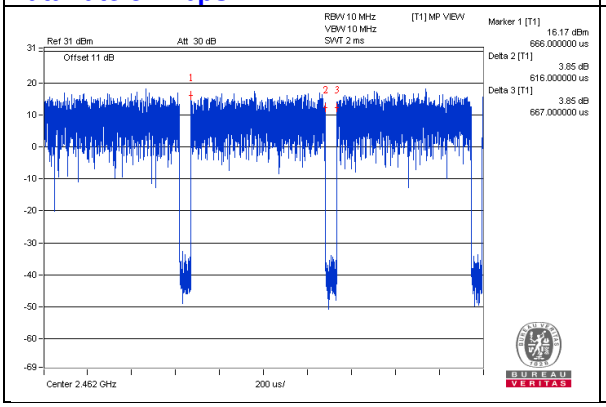
Data rate 1Mbps	Data rate 11Mbps
	

802.11g:

Data rate 6Mbps: Duty cycle = 5.357/5.437 = 0.985

Data rate 36Mbps: Duty cycle = 0.911/0.963 = 0.946, Duty factor = 10 * log(1/0.946) = 0.2

Data rate 54Mbps: Duty cycle = 0.616/0.667 = 0.924, Duty factor = 10 * log(1/0.924) = 0.3

Data rate 6Mbps	Data rate 36Mbps
	
Data rate 54Mbps	
	

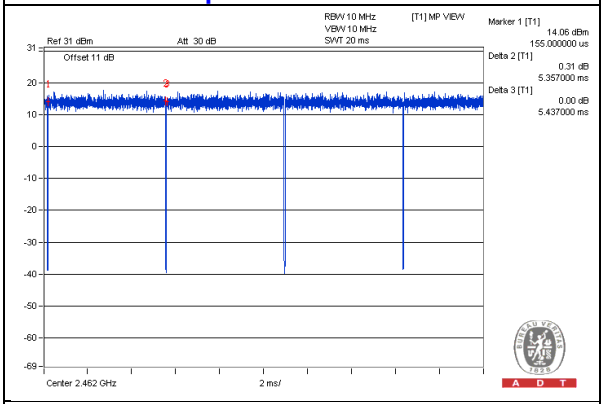
802.11n (HT20):

Data rate 6.5Mbps: Duty cycle = 4.427/4.477 = 0.989

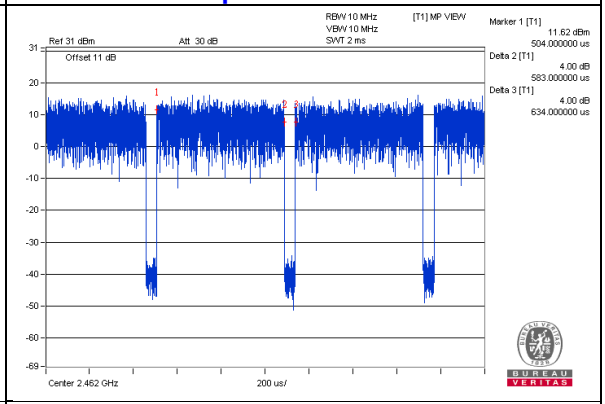
Data rate 58.5Mbps: Duty cycle = 0.583/0.634 = 0.92, Duty factor = 10 * log(1/0.92) = 0.4

Data rate 65Mbps: Duty cycle = 0.532/0.583 = 0.913, Duty factor = 10 * log(1/0.913) = 0.4

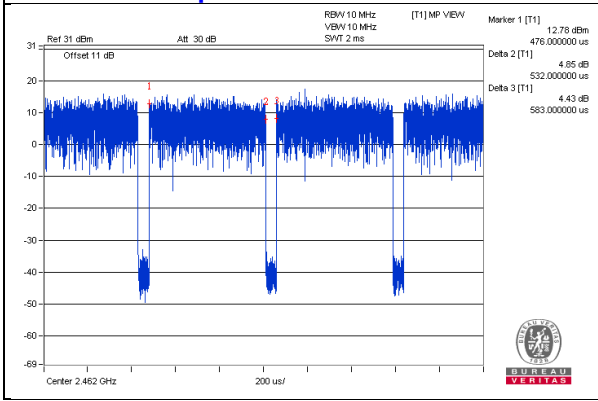
Data rate 6.5Mbps



Data rate 58.5Mbps



Data rate 65Mbps



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.

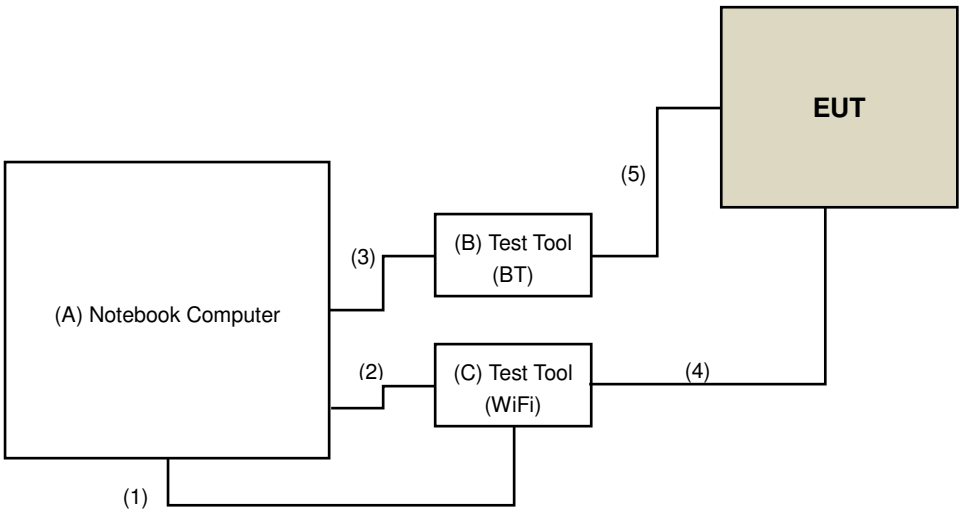
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook Computer	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
B.	Test Tool(BT)	NA	NA	NA	NA	Supplied by Client
C.	Test Tool(WiFi)	NA	NA	NA	NA	Supplied by Client

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.	RJ-45 Cable	1	1.5	No	0	Provided by Lab
2.	USB Cable	1	0.5	Yes	0	Supplied by client
3.	USB Cable	1	1	Yes	0	Supplied by client
4.	Console Cable	1	0.3	No	0	Supplied by client
5.	Console Cable	1	0.5	No	0	Supplied by client

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart C (15.247)
KDB 558074 D01 DTS Meas Guidance v03r05
ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 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	MY54450088	July 24, 2015	July 23, 2016
Pre-Amplifier(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2016	Jan. 17, 2017
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-01	Nov. 11, 2015	Nov. 10, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Jan. 04, 2016	Jan. 03, 2017
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 02, 2016	Apr. 01, 2017
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Jan. 19, 2016	Jan. 18, 2017
Pre-Amplifier Agilent	8449B	3008A01922	Sep. 19, 2015	Sep. 18, 2016
RF Cable	EMC104-SM-SM-2000 EMC104-SM-SM-5000 EMC104-SM-SM-5000	150318 150323 150324	Mar. 30, 2016	Mar. 29, 2017
Pre-Amplifier EMCI	EMC184045	980143	Jan. 15, 2016	Jan. 14, 2017
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Jan. 08, 2016	Jan. 07, 2017
RF Cable	SUCOFLEX 102	36432/2 36441/2	Jan. 16, 2016	Jan. 15, 2017
Software	ADT_Radiated_V8.7.07	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA
Spectrum Analyzer R&S	FSP40	100060	May 11, 2016	May 10, 2017
Power meter Anritsu	ML2495A	1014008	May 05, 2016	May 04, 2017
Power sensor Anritsu	MA2411B	0917122	May 05, 2016	May 04, 2017

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 calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 4.
4. Loop antenna was used for all emissions below 30 MHz.
5. The FCC Site Registration No. is 292998
6. The CANADA Site Registration No. is 20331-2
7. Tested Date: May 26 to June 27, 2016

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:

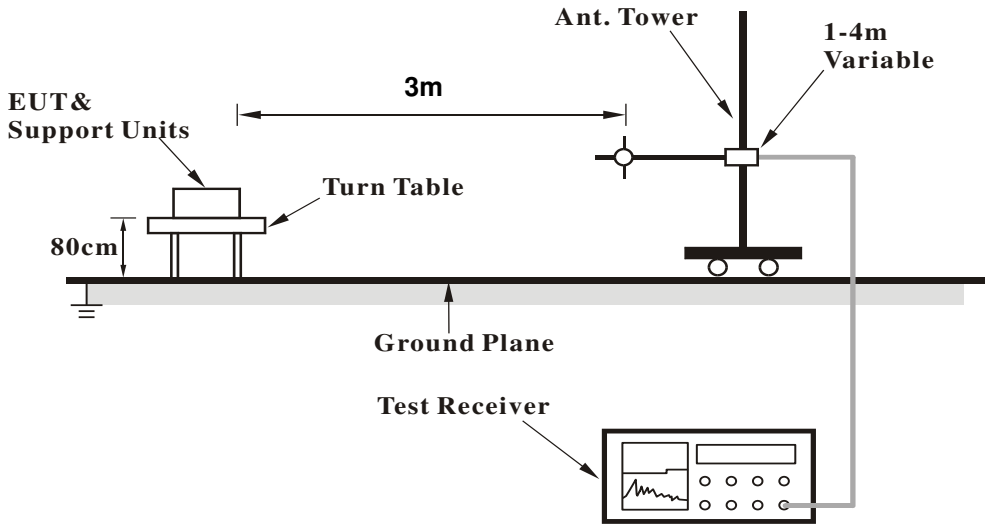
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

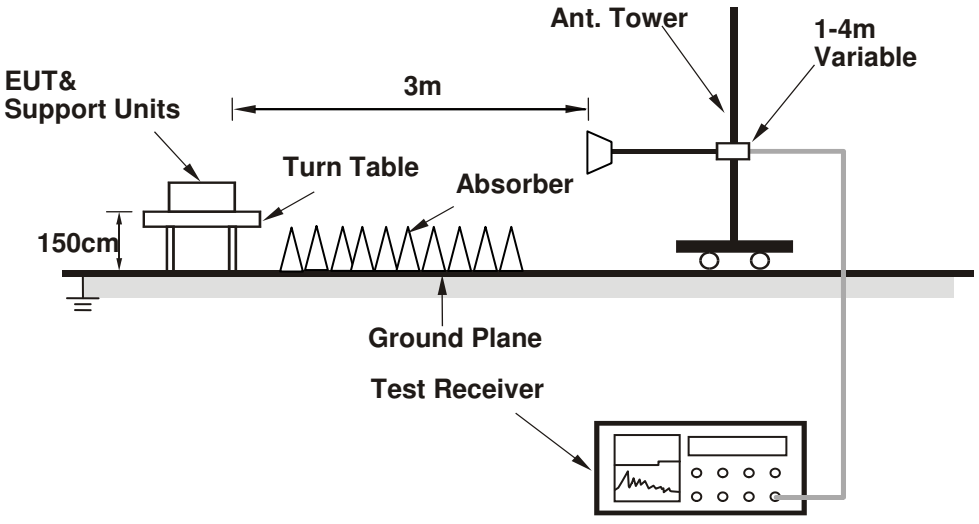
No deviation.

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. Connect the EUT with Notebook Computer which is placed on a testing table.
b. The communication partner run test program “art.exe (artgui.exe V2.2)“ to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data:

802.11b

Data rate 1Mbps

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	54.0 PK	74.0	-20.0	1.03 H	293	59.6	-5.6
2	2390.00	41.6 AV	54.0	-12.4	1.03 H	293	47.2	-5.6
3	*2412.00	98.5 PK			1.03 H	293	104.0	-5.5
4	*2412.00	96.1 AV			1.03 H	293	101.6	-5.5
5	4824.00	55.1 PK	74.0	-18.9	3.81 H	52	54.2	0.9
6	4824.00	53.8 AV	54.0	-0.2	3.81 H	52	52.9	0.9
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	50.3 PK	74.0	-23.7	3.33 V	220	55.9	-5.6
2	2390.00	37.8 AV	54.0	-16.2	3.33 V	220	43.4	-5.6
3	*2412.00	95.4 PK			3.48 V	210	100.9	-5.5
4	*2412.00	93.1 AV			3.48 V	210	98.6	-5.5
5	4824.00	51.2 PK	74.0	-22.8	1.00 V	74	50.3	0.9
6	4824.00	48.8 AV	54.0	-5.2	1.00 V	74	47.9	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	96.9 PK			1.48 H	298	102.3	-5.4
2	*2437.00	94.5 AV			1.48 H	298	99.9	-5.4
3	4874.00	55.0 PK	74.0	-19.0	3.97 H	36	54.0	1.0
4	4874.00	53.7 AV	54.0	-0.3	3.97 H	36	52.7	1.0
5	7311.00	48.9 PK	74.0	-25.1	1.55 H	230	41.3	7.6
6	7311.00	34.2 AV	54.0	-19.8	1.55 H	230	26.6	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	96.2 PK			3.35 V	206	101.6	-5.4
2	*2437.00	93.4 AV			3.35 V	206	98.8	-5.4
3	4874.00	50.5 PK	74.0	-23.5	1.03 V	78	49.5	1.0
4	4874.00	49.2 AV	54.0	-4.8	1.03 V	78	48.2	1.0
5	7311.00	46.8 PK	74.0	-27.2	1.63 V	220	39.2	7.6
6	7311.00	32.4 AV	54.0	-21.6	1.63 V	220	24.8	7.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
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	97.9 PK			1.00 H	15	103.2	-5.3
2	*2462.00	95.6 AV			1.00 H	15	100.9	-5.3
3	2483.50	53.7 PK	74.0	-20.3	1.00 H	15	59.0	-5.3
4	2483.50	40.5 AV	54.0	-13.5	1.00 H	15	45.8	-5.3
5	4924.00	54.8 PK	74.0	-19.2	3.93 H	38	53.5	1.3
6	4924.00	53.6 AV	54.0	-0.4	3.93 H	38	52.3	1.3
7	7386.00	49.3 PK	74.0	-24.7	1.65 H	231	41.6	7.7
8	7386.00	35.5 AV	54.0	-18.5	1.65 H	231	27.8	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	96.0 PK			3.57 V	217	101.3	-5.3
2	*2462.00	93.5 AV			3.57 V	217	98.8	-5.3
3	2483.50	50.8 PK	74.0	-23.2	3.57 V	217	56.1	-5.3
4	2483.50	38.2 AV	54.0	-15.8	3.57 V	217	43.5	-5.3
5	4924.00	51.7 PK	74.0	-22.3	1.01 V	90	50.4	1.3
6	4924.00	49.4 AV	54.0	-4.6	1.01 V	90	48.1	1.3
7	7386.00	48.3 PK	74.0	-25.7	1.42 V	159	40.6	7.7
8	7386.00	35.4 AV	54.0	-18.6	1.42 V	159	27.7	7.7

REMARKS:

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

Data rate 11Mbps

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.6 PK	74.0	-14.4	2.52 H	42	65.2	-5.6
2	2390.00	47.3 AV	54.0	-6.7	2.52 H	42	52.9	-5.6
3	*2412.00	108.6 PK			2.52 H	42	114.1	-5.5
4	*2412.00	99.3 AV			2.52 H	42	104.8	-5.5
5	4824.00	69.1 PK	74.0	-4.9	2.40 H	35	68.2	0.9
6	4824.00	53.7 AV	54.0	-0.3	2.40 H	35	52.8	0.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.8 PK	74.0	-17.2	3.35 V	239	62.4	-5.6
2	2390.00	44.3 AV	54.0	-9.7	3.35 V	239	49.9	-5.6
3	*2412.00	106.7 PK			3.35 V	239	112.2	-5.5
4	*2412.00	96.9 AV			3.35 V	239	102.4	-5.5
5	4824.00	61.9 PK	74.0	-12.1	1.48 V	360	61.0	0.9
6	4824.00	48.5 AV	54.0	-5.5	1.48 V	360	47.6	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	108.4 PK			2.50 H	43	113.8	-5.4
2	*2437.00	99.1 AV			2.50 H	43	104.5	-5.4
3	4874.00	67.9 PK	74.0	-6.1	2.40 H	27	66.9	1.0
4	4874.00	53.3 AV	54.0	-0.7	2.40 H	27	52.3	1.0
5	7311.00	45.0 PK	74.0	-29.0	1.30 H	113	37.4	7.6
6	7311.00	33.1 AV	54.0	-20.9	1.30 H	113	25.5	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.5 PK			3.28 V	230	111.9	-5.4
2	*2437.00	96.8 AV			3.28 V	230	102.2	-5.4
3	4874.00	61.9 PK	74.0	-12.1	1.40 V	360	60.9	1.0
4	4874.00	48.8 AV	54.0	-5.2	1.40 V	360	47.8	1.0
5	7311.00	45.6 PK	74.0	-28.4	1.72 V	306	38.0	7.6
6	7311.00	34.0 AV	54.0	-20.0	1.72 V	306	26.4	7.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
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	107.7 PK			2.92 H	259	113.0	-5.3
2	*2462.00	98.2 AV			2.92 H	259	103.5	-5.3
3	2483.50	59.4 PK	74.0	-14.6	2.92 H	259	64.7	-5.3
4	2483.50	47.1 AV	54.0	-6.9	2.92 H	259	52.4	-5.3
5	4924.00	67.8 PK	74.0	-6.2	2.40 H	25	66.5	1.3
6	4924.00	53.1 AV	54.0	-0.9	2.40 H	25	51.8	1.3
7	7386.00	45.3 PK	74.0	-28.7	1.34 H	110	37.6	7.7
8	7386.00	33.4 AV	54.0	-20.6	1.34 H	110	25.7	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.9 PK			3.28 V	235	112.2	-5.3
2	*2462.00	97.5 AV			3.28 V	235	102.8	-5.3
3	2483.50	56.7 PK	74.0	-17.3	3.28 V	235	62.0	-5.3
4	2483.50	44.0 AV	54.0	-10.0	3.28 V	235	49.3	-5.3
5	4924.00	62.1 PK	74.0	-11.9	1.46 V	360	60.8	1.3
6	4924.00	48.9 AV	54.0	-5.1	1.46 V	360	47.6	1.3
7	7386.00	45.6 PK	74.0	-28.4	1.67 V	317	37.9	7.7
8	7386.00	33.9 AV	54.0	-20.1	1.67 V	317	26.2	7.7

REMARKS:

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

802.11g

Data rate 6Mbps

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	73.8 PK	74.0	-0.2	1.04 H	293	79.4	-5.6
2	2390.00	53.3 AV	54.0	-0.7	1.04 H	293	58.9	-5.6
3	*2412.00	104.7 PK			1.04 H	293	110.2	-5.5
4	*2412.00	94.0 AV			1.04 H	293	99.5	-5.5
5	4824.00	66.2 PK	74.0	-7.8	3.38 H	210	65.3	0.9
6	4824.00	51.3 AV	54.0	-2.7	3.38 H	210	50.4	0.9
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	71.2 PK	74.0	-2.8	3.27 V	219	76.8	-5.6
2	2390.00	50.5 AV	54.0	-3.5	3.27 V	219	56.1	-5.6
3	*2412.00	102.7 PK			3.59 V	223	108.2	-5.5
4	*2412.00	92.8 AV			3.59 V	223	98.3	-5.5
5	4824.00	51.0 PK	74.0	-23.0	1.06 V	63	50.1	0.9
6	4824.00	48.3 AV	54.0	-5.7	1.06 V	63	47.4	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	105.1 PK			1.50 H	300	110.5	-5.4
2	*2437.00	94.6 AV			1.50 H	300	100.0	-5.4
3	4874.00	67.3 PK	74.0	-6.7	3.43 H	217	66.3	1.0
4	4874.00	53.7 AV	54.0	-0.3	3.43 H	217	52.7	1.0
5	7311.00	49.1 PK	74.0	-24.9	1.00 H	360	41.5	7.6
6	7311.00	35.9 AV	54.0	-18.1	1.00 H	360	28.3	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	103.4 PK			3.40 V	212	108.8	-5.4
2	*2437.00	93.2 AV			3.40 V	212	98.6	-5.4
3	4874.00	64.8 PK	74.0	-9.2	1.12 V	51	63.8	1.0
4	4874.00	50.1 AV	54.0	-3.9	1.12 V	51	49.1	1.0
5	7311.00	48.2 PK	74.0	-25.8	1.70 V	228	40.6	7.6
6	7311.00	34.7 AV	54.0	-19.3	1.70 V	228	27.1	7.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
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	104.4 PK			1.00 H	15	109.7	-5.3
2	*2462.00	93.2 AV			1.00 H	15	98.5	-5.3
3	2483.50	73.8 PK	74.0	-0.2	1.00 H	15	79.1	-5.3
4	2483.50	51.7 AV	54.0	-2.3	1.00 H	15	57.0	-5.3
5	4924.00	65.7 PK	74.0	-8.3	3.42 H	203	64.4	1.3
6	4924.00	50.8 AV	54.0	-3.2	3.42 H	203	49.5	1.3
7	7386.00	48.2 PK	74.0	-25.8	1.02 H	351	40.5	7.7
8	7386.00	34.3 AV	54.0	-19.7	1.02 H	351	26.6	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.3 PK			3.64 V	216	107.6	-5.3
2	*2462.00	92.2 AV			3.64 V	216	97.5	-5.3
3	2483.50	70.6 PK	74.0	-3.4	3.22 V	209	75.9	-5.3
4	2483.50	48.7 AV	54.0	-5.3	3.22 V	209	54.0	-5.3
5	4924.00	50.3 PK	74.0	-23.7	1.22 V	69	49.0	1.3
6	4924.00	47.7 AV	54.0	-6.3	1.22 V	69	46.4	1.3
7	7386.00	48.7 PK	74.0	-25.3	1.88 V	212	41.0	7.7
8	7386.00	34.2 AV	54.0	-19.8	1.88 V	212	26.5	7.7

REMARKS:

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

Data rate 36Mbps

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	73.1 PK	74.0	-0.9	2.59 H	43	78.7	-5.6
2	2390.00	53.2 AV	54.0	-0.8	2.59 H	43	58.8	-5.6
3	*2412.00	106.1 PK			2.59 H	43	111.6	-5.5
4	*2412.00	95.2 AV			2.59 H	43	100.7	-5.5
5	4824.00	62.1 PK	74.0	-11.9	2.37 H	241	61.2	0.9
6	4824.00	50.7 AV	54.0	-3.3	2.37 H	241	49.8	0.9
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	3.32 V	230	76.5	-5.6
2	2390.00	52.0 AV	54.0	-2.0	3.32 V	230	57.6	-5.6
3	*2412.00	104.0 PK			3.32 V	230	109.5	-5.5
4	*2412.00	93.5 AV			3.32 V	230	99.0	-5.5
5	4824.00	56.6 PK	74.0	-17.4	1.44 V	360	55.7	0.9
6	4824.00	44.8 AV	54.0	-9.2	1.44 V	360	43.9	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	110.1 PK			2.50 H	43	115.5	-5.4
2	*2437.00	98.9 AV			2.50 H	43	104.3	-5.4
3	4874.00	66.7 PK	74.0	-7.3	2.49 H	26	65.7	1.0
4	**4874.00**	**53.9 AV**	**54.0**	**-0.1**	**2.49 H**	**26**	**52.9**	**1.0**
5	7311.00	45.0 PK	74.0	-29.0	1.34 H	106	37.4	7.6
6	7311.00	33.0 AV	54.0	-21.0	1.34 H	106	25.4	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.2 PK			3.33 V	233	112.6	-5.4
2	*2437.00	97.6 AV			3.33 V	233	103.0	-5.4
3	4874.00	61.6 PK	74.0	-12.4	1.41 V	360	60.6	1.0
4	4874.00	48.7 AV	54.0	-5.3	1.41 V	360	47.7	1.0
5	7311.00	45.9 PK	74.0	-28.1	1.75 V	306	38.3	7.6
6	7311.00	34.2 AV	54.0	-19.8	1.75 V	306	26.6	7.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
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	106.1 PK			3.01 H	263	111.4	-5.3
2	*2462.00	95.1 AV			3.01 H	263	100.4	-5.3
3	2483.50	72.1 PK	74.0	-1.9	3.01 H	263	77.4	-5.3
4	2483.50	53.6 AV	54.0	-0.4	3.01 H	263	58.9	-5.3
5	4924.00	63.6 PK	74.0	-10.4	2.45 H	247	62.3	1.3
6	4924.00	51.8 AV	54.0	-2.2	2.45 H	247	50.5	1.3
7	7386.00	45.4 PK	74.0	-28.6	1.31 H	104	37.7	7.7
8	7386.00	33.8 AV	54.0	-20.2	1.31 H	104	26.1	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.4 PK			3.31 V	237	109.7	-5.3
2	*2462.00	93.7 AV			3.31 V	237	99.0	-5.3
3	2483.50	70.9 PK	74.0	-3.1	3.31 V	237	76.2	-5.3
4	2483.50	53.1 AV	54.0	-0.9	3.31 V	237	58.4	-5.3
5	4924.00	58.1 PK	74.0	-15.9	1.44 V	360	56.8	1.3
6	4924.00	46.2 AV	54.0	-7.8	1.44 V	360	44.9	1.3
7	7386.00	45.9 PK	74.0	-28.1	1.67 V	299	38.2	7.7
8	7386.00	34.0 AV	54.0	-20.0	1.67 V	299	26.3	7.7

REMARKS:

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

Data rate 54Mbps

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	72.8 PK	74.0	-1.2	2.59 H	43	78.4	-5.6
2	2390.00	53.1 AV	54.0	-0.9	2.59 H	43	58.7	-5.6
3	*2412.00	105.4 PK			2.59 H	43	110.9	-5.5
4	*2412.00	95.1 AV			2.59 H	43	100.6	-5.5
5	4824.00	62.0 PK	74.0	-12.0	2.38 H	253	61.1	0.9
6	4824.00	50.5 AV	54.0	-3.5	2.38 H	253	49.6	0.9
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	70.4 PK	74.0	-3.6	3.36 V	251	76.0	-5.6
2	2390.00	52.6 AV	54.0	-1.4	3.36 V	251	58.2	-5.6
3	*2412.00	104.3 PK			3.36 V	251	109.8	-5.5
4	*2412.00	93.6 AV			3.36 V	251	99.1	-5.5
5	4824.00	56.8 PK	74.0	-17.2	1.41 V	360	55.9	0.9
6	4824.00	45.2 AV	54.0	-8.8	1.41 V	360	44.3	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	109.8 PK			2.50 H	43	115.2	-5.4
2	*2437.00	99.7 AV			2.50 H	43	105.1	-5.4
3	4874.00	66.2 PK	74.0	-7.8	2.47 H	21	65.2	1.0
4	4874.00	53.7 AV	54.0	-0.3	2.47 H	21	52.7	1.0
5	7311.00	45.0 PK	74.0	-29.0	1.35 H	108	37.4	7.6
6	7311.00	33.3 AV	54.0	-20.7	1.35 H	108	25.7	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.4 PK			3.31 V	221	112.8	-5.4
2	*2437.00	97.6 AV			3.31 V	221	103.0	-5.4
3	4874.00	61.7 PK	74.0	-12.3	1.35 V	360	60.7	1.0
4	4874.00	48.8 AV	54.0	-5.2	1.35 V	360	47.8	1.0
5	7311.00	45.5 PK	74.0	-28.5	1.73 V	296	37.9	7.6
6	7311.00	33.9 AV	54.0	-20.1	1.73 V	296	26.3	7.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
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	105.5 PK			3.01 H	263	110.8	-5.3
2	*2462.00	95.3 AV			3.01 H	263	100.6	-5.3
3	2483.50	73.1 PK	74.0	-0.9	3.01 H	263	78.4	-5.3
4	2483.50	53.7 AV	54.0	-0.3	3.01 H	263	59.0	-5.3
5	4924.00	64.1 PK	74.0	-9.9	2.45 H	246	62.8	1.3
6	4924.00	52.1 AV	54.0	-1.9	2.45 H	246	50.8	1.3
7	7386.00	44.8 PK	74.0	-29.2	1.33 H	112	37.1	7.7
8	7386.00	33.4 AV	54.0	-20.6	1.33 H	112	25.7	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.7 PK			3.27 V	240	110.0	-5.3
2	*2462.00	94.0 AV			3.27 V	240	99.3	-5.3
3	2483.50	71.1 PK	74.0	-2.9	3.27 V	240	76.4	-5.3
4	2483.50	52.5 AV	54.0	-1.5	3.27 V	240	57.8	-5.3
5	4924.00	58.6 PK	74.0	-15.4	1.50 V	360	57.3	1.3
6	4924.00	46.6 AV	54.0	-7.4	1.50 V	360	45.3	1.3
7	7386.00	45.8 PK	74.0	-28.2	1.64 V	300	38.1	7.7
8	7386.00	33.7 AV	54.0	-20.3	1.64 V	300	26.0	7.7

REMARKS:

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

802.11n (HT20)

Data rate 6.5Mbps

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	73.0 PK	74.0	-1.0	1.02 H	299	78.6	-5.6
2	2390.00	53.6 AV	54.0	-0.4	1.02 H	299	59.2	-5.6
3	*2412.00	103.1 PK			1.02 H	299	108.6	-5.5
4	*2412.00	92.2 AV			1.02 H	299	97.7	-5.5
5	4824.00	65.8 PK	74.0	-8.2	3.37 H	206	64.9	0.9
6	4824.00	50.9 AV	54.0	-3.1	3.37 H	206	50.0	0.9
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	70.4 PK	74.0	-3.6	3.20 V	217	76.0	-5.6
2	2390.00	50.2 AV	54.0	-3.8	3.20 V	217	55.8	-5.6
3	*2412.00	101.2 PK			3.60 V	217	106.7	-5.5
4	*2412.00	90.8 AV			3.60 V	217	96.3	-5.5
5	4824.00	49.2 PK	74.0	-24.8	1.36 V	80	48.3	0.9
6	4824.00	46.3 AV	54.0	-7.7	1.36 V	80	45.4	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	105.9 PK			1.02 H	295	111.3	-5.4
2	*2437.00	94.7 AV			1.02 H	295	100.1	-5.4
3	4874.00	67.6 PK	74.0	-6.4	3.97 H	38	66.6	1.0
4	4874.00	53.7 AV	54.0	-0.3	3.97 H	38	52.7	1.0
5	7311.00	49.3 PK	74.0	-24.7	1.06 H	360	41.7	7.6
6	7311.00	35.9 AV	54.0	-18.1	1.06 H	360	28.3	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	103.6 PK			3.51 V	208	109.0	-5.4
2	*2437.00	92.6 AV			3.51 V	208	98.0	-5.4
3	4874.00	65.3 PK	74.0	-8.7	1.50 V	92	64.3	1.0
4	4874.00	50.7 AV	54.0	-3.3	1.50 V	92	49.7	1.0
5	7311.00	48.4 PK	74.0	-25.6	1.91 V	215	40.8	7.6
6	7311.00	34.5 AV	54.0	-19.5	1.91 V	215	26.9	7.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.7 PK			1.02 H	360	108.0	-5.3
2	*2462.00	91.6 AV			1.02 H	360	96.9	-5.3
3	2483.50	73.8 PK	74.0	-0.2	1.02 H	360	79.1	-5.3
4	2483.50	51.6 AV	54.0	-2.4	1.02 H	360	56.9	-5.3
5	4924.00	65.8 PK	74.0	-8.2	3.41 H	215	64.5	1.3
6	4924.00	50.7 AV	54.0	-3.3	3.41 H	215	49.4	1.3
7	7386.00	47.7 PK	74.0	-26.3	1.04 H	338	40.0	7.7
8	7386.00	34.0 AV	54.0	-20.0	1.04 H	338	26.3	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	100.6 PK			3.47 V	220	105.9	-5.3
2	*2462.00	90.1 AV			3.47 V	220	95.4	-5.3
3	2483.50	69.8 PK	74.0	-4.2	3.14 V	202	75.1	-5.3
4	2483.50	48.3 AV	54.0	-5.7	3.14 V	202	53.6	-5.3
5	4924.00	50.6 PK	74.0	-23.4	1.18 V	77	49.3	1.3
6	4924.00	48.2 AV	54.0	-5.8	1.18 V	77	46.9	1.3
7	7386.00	48.8 PK	74.0	-25.2	1.87 V	210	41.1	7.7
8	7386.00	34.4 AV	54.0	-19.6	1.87 V	210	26.7	7.7

REMARKS:

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

Data rate 58.5Mbps

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	72.6 PK	74.0	-1.4	2.58 H	43	78.2	-5.6
2	2390.00	53.6 AV	54.0	-0.4	2.58 H	43	59.2	-5.6
3	*2412.00	104.5 PK			2.58 H	43	110.0	-5.5
4	*2412.00	93.9 AV			2.58 H	43	99.4	-5.5
5	4824.00	62.4 PK	74.0	-11.6	2.37 H	252	61.5	0.9
6	4824.00	50.9 AV	54.0	-3.1	2.37 H	252	50.0	0.9
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	70.4 PK	74.0	-3.6	3.33 V	250	76.0	-5.6
2	2390.00	52.0 AV	54.0	-2.0	3.33 V	250	57.6	-5.6
3	*2412.00	102.6 PK			3.33 V	250	108.1	-5.5
4	*2412.00	92.2 AV			3.33 V	250	97.7	-5.5
5	4824.00	56.7 PK	74.0	-17.3	1.39 V	360	55.8	0.9
6	4824.00	45.2 AV	54.0	-8.8	1.39 V	360	44.3	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	109.4 PK			2.50 H	43	114.8	-5.4
2	*2437.00	99.4 AV			2.50 H	43	104.8	-5.4
3	4874.00	66.1 PK	74.0	-7.9	2.47 H	21	65.1	1.0
4	**4874.00**	**53.9 AV**	**54.0**	**-0.1**	**2.47 H**	**21**	**52.9**	**1.0**
5	7311.00	45.2 PK	74.0	-28.8	1.26 H	129	37.6	7.6
6	7311.00	33.5 AV	54.0	-20.5	1.26 H	129	25.9	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.6 PK			3.33 V	235	112.0	-5.4
2	*2437.00	96.8 AV			3.33 V	235	102.2	-5.4
3	4874.00	61.7 PK	74.0	-12.3	1.46 V	360	60.7	1.0
4	4874.00	48.6 AV	54.0	-5.4	1.46 V	360	47.6	1.0
5	7311.00	45.4 PK	74.0	-28.6	1.73 V	310	37.8	7.6
6	7311.00	34.1 AV	54.0	-19.9	1.73 V	310	26.5	7.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
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	103.9 PK			3.00 H	263	109.2	-5.3
2	*2462.00	93.2 AV			3.00 H	263	98.5	-5.3
3	2483.50	73.8 PK	74.0	-0.2	3.00 H	263	79.1	-5.3
4	2483.50	53.0 AV	54.0	-1.0	3.00 H	263	58.3	-5.3
5	4924.00	64.4 PK	74.0	-9.6	2.42 H	245	63.1	1.3
6	4924.00	52.6 AV	54.0	-1.4	2.42 H	245	51.3	1.3
7	7386.00	44.2 PK	74.0	-29.8	1.30 H	117	36.5	7.7
8	7386.00	33.1 AV	54.0	-20.9	1.30 H	117	25.4	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.3 PK			3.28 V	242	107.6	-5.3
2	*2462.00	91.9 AV			3.28 V	242	97.2	-5.3
3	2483.50	70.4 PK	74.0	-3.6	3.28 V	242	75.7	-5.3
4	2483.50	52.7 AV	54.0	-1.3	3.28 V	242	58.0	-5.3
5	4924.00	58.3 PK	74.0	-15.7	1.47 V	360	57.0	1.3
6	4924.00	46.5 AV	54.0	-7.5	1.47 V	360	45.2	1.3
7	7386.00	46.0 PK	74.0	-28.0	1.64 V	314	38.3	7.7
8	7386.00	34.3 AV	54.0	-19.7	1.64 V	314	26.6	7.7

REMARKS:

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

Data rate 65Mbps

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	72.4 PK	74.0	-1.6	2.59 H	44	78.0	-5.6
2	2390.00	53.6 AV	54.0	-0.4	2.59 H	44	59.2	-5.6
3	*2412.00	105.0 PK			2.59 H	44	110.5	-5.5
4	*2412.00	94.0 AV			2.59 H	44	99.5	-5.5
5	4824.00	61.5 PK	74.0	-12.5	2.39 H	256	60.6	0.9
6	4824.00	50.2 AV	54.0	-3.8	2.39 H	256	49.3	0.9
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	70.5 PK	74.0	-3.5	3.25 V	228	76.1	-5.6
2	2390.00	52.8 AV	54.0	-1.2	3.25 V	228	58.4	-5.6
3	*2412.00	102.9 PK			3.25 V	228	108.4	-5.5
4	*2412.00	92.3 AV			3.25 V	228	97.8	-5.5
5	4824.00	56.9 PK	74.0	-17.1	1.44 V	360	56.0	0.9
6	4824.00	45.1 AV	54.0	-8.9	1.44 V	360	44.2	0.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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	109.2 PK			2.50 H	43	114.6	-5.4
2	*2437.00	99.4 AV			2.50 H	43	104.8	-5.4
3	4874.00	67.8 PK	74.0	-6.2	2.47 H	21	66.8	1.0
4	**4874.00**	**53.9 AV**	**54.0**	**-0.1**	**2.47 H**	**21**	**52.9**	**1.0**
5	7311.00	44.7 PK	74.0	-29.3	1.31 H	117	37.1	7.6
6	7311.00	32.6 AV	54.0	-21.4	1.31 H	117	25.0	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.8 PK			3.30 V	242	112.2	-5.4
2	*2437.00	97.1 AV			3.30 V	242	102.5	-5.4
3	4874.00	61.6 PK	74.0	-12.4	1.44 V	360	60.6	1.0
4	4874.00	48.6 AV	54.0	-5.4	1.44 V	360	47.6	1.0
5	7311.00	45.8 PK	74.0	-28.2	1.73 V	299	38.2	7.6
6	7311.00	34.4 AV	54.0	-19.6	1.73 V	299	26.8	7.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
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			3.00 H	263	109.1	-5.3
2	*2462.00	93.6 AV			3.00 H	263	98.9	-5.3
3	2483.50	72.7 PK	74.0	-1.3	3.00 H	263	78.0	-5.3
4	2483.50	53.5 AV	54.0	-0.5	3.00 H	263	58.8	-5.3
5	4924.00	64.4 PK	74.0	-9.6	2.49 H	233	63.1	1.3
6	4924.00	52.5 AV	54.0	-1.5	2.49 H	233	51.2	1.3
7	7386.00	45.0 PK	74.0	-29.0	1.28 H	107	37.3	7.7
8	7386.00	33.4 AV	54.0	-20.6	1.28 H	107	25.7	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.7 PK			3.36 V	244	108.0	-5.3
2	*2462.00	92.1 AV			3.36 V	244	97.4	-5.3
3	2483.50	70.2 PK	74.0	-3.8	3.36 V	244	75.5	-5.3
4	2483.50	52.5 AV	54.0	-1.5	3.36 V	244	57.8	-5.3
5	4924.00	58.7 PK	74.0	-15.3	1.42 V	360	57.4	1.3
6	4924.00	46.5 AV	54.0	-7.5	1.42 V	360	45.2	1.3
7	7386.00	46.2 PK	74.0	-27.8	1.72 V	292	38.5	7.7
8	7386.00	34.4 AV	54.0	-19.6	1.72 V	292	26.7	7.7

REMARKS:

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

Below 1GHz Data:

802.11n (HT20)

CHANNEL	TX 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	107.96	20.6 QP	43.5	-22.9	1.50 H	353	32.2	-11.6
2	173.05	20.8 QP	43.5	-22.7	1.50 H	360	30.2	-9.4
3	242.72	26.8 QP	46.0	-19.2	1.50 H	213	36.9	-10.1
4	400.93	23.2 QP	46.0	-22.8	1.00 H	32	28.5	-5.3
5	609.26	24.7 QP	46.0	-21.3	2.00 H	360	25.0	-0.3
6	961.81	27.3 QP	54.0	-26.7	1.50 H	76	22.7	4.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	111.77	21.1 QP	43.5	-22.4	1.00 V	125	32.3	-11.2
2	242.72	23.9 QP	46.0	-22.1	2.00 V	75	34.0	-10.1
3	264.59	26.5 QP	46.0	-19.5	2.00 V	349	35.9	-9.4
4	334.46	19.8 QP	46.0	-26.2	1.00 V	17	26.9	-7.1
5	402.18	19.9 QP	46.0	-26.1	1.00 V	358	25.2	-5.3
6	960.01	35.9 QP	54.0	-18.1	1.50 V	131	31.3	4.6

REMARKS:

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

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 09, 2016	May 08, 2017
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK-8127	8127-522	Sep. 01, 2015	Aug. 31, 2016
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 11, 2015	June 10, 2016
RF Cable	5D-FB	COCCAB-001	Mar. 08, 2016	Mar. 07, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-002	Sep. 14, 2015	Sep. 13, 2016
50 ohms Terminator	N/A	EMC-03	Sep. 23, 2015	Sep. 22, 2016
50 ohms Terminator	N/A	EMC-02	Oct. 01, 2015	Sep. 30, 2016
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: May 26, 2016

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.

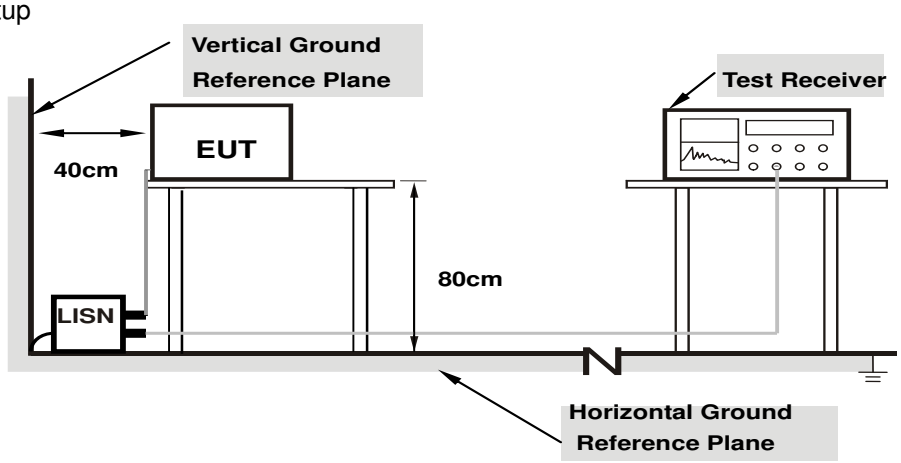
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

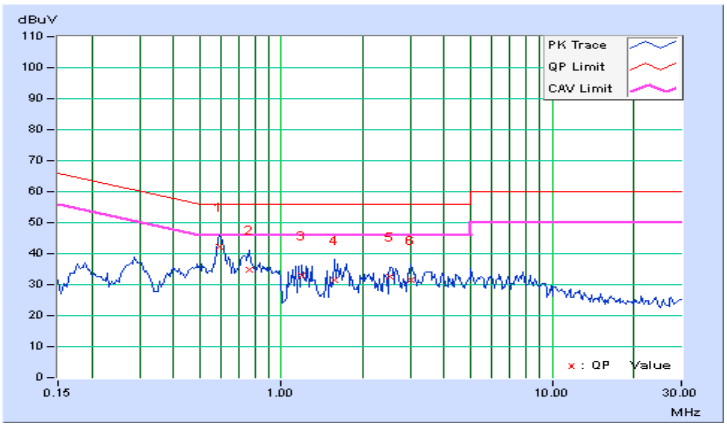
4.2.7 Test Results

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	**0.59531**	**10.41**	**31.98**	**27.38**	**42.39**	**37.79**	**56.00**	**46.00**	**-13.61**	**-8.21**
2	0.75938	10.40	24.37	18.34	34.77	28.74	56.00	46.00	-21.23	-17.26
3	1.19141	10.39	22.54	16.30	32.93	26.69	56.00	46.00	-23.07	-19.31
4	1.58203	10.41	21.14	14.11	31.55	24.52	56.00	46.00	-24.45	-21.48
5	2.53125	10.49	21.97	15.21	32.46	25.70	56.00	46.00	-23.54	-20.30
6	3.02344	10.54	20.98	14.45	31.52	24.99	56.00	46.00	-24.48	-21.01

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.

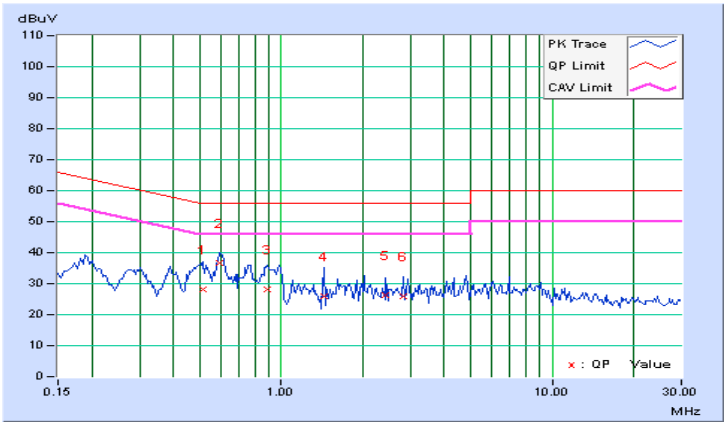


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.51719	10.47	17.73	10.36	28.20	20.83	56.00	46.00	-27.80	-25.17
2	0.59531	10.46	26.32	21.58	36.78	32.04	56.00	46.00	-19.22	-13.96
3	0.88828	10.44	17.65	7.80	28.09	18.24	56.00	46.00	-27.91	-27.76
4	1.43750	10.46	15.57	5.70	26.03	16.16	56.00	46.00	-29.97	-29.84
5	2.42188	10.55	15.73	6.91	26.28	17.46	56.00	46.00	-29.72	-28.54
6	2.81250	10.59	15.41	7.58	26.00	18.17	56.00	46.00	-30.00	-27.83

REMARKS:

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

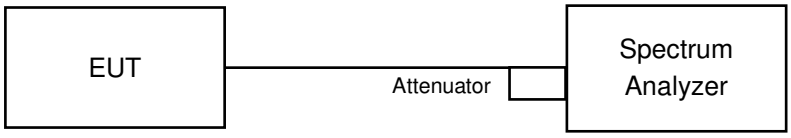


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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

Data rate 1Mbps

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	10.13	0.5	PASS
6	2437	10.12	0.5	PASS
11	2462	10.10	0.5	PASS

Data rate 11Mbps

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	10.12	0.5	PASS
6	2437	10.27	0.5	PASS
11	2462	10.17	0.5	PASS

802.11g

Data rate 6Mbps

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.41	0.5	PASS
6	2437	16.37	0.5	PASS
11	2462	16.37	0.5	PASS

Data rate 36Mbps

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.52	0.5	PASS
6	2437	16.48	0.5	PASS
11	2462	16.53	0.5	PASS

Data rate 54Mbps

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.52	0.5	PASS
6	2437	16.52	0.5	PASS
11	2462	16.54	0.5	PASS

802.11n (HT20)

Data rate 6.5Mbps

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.60	0.5	Pass
6	2437	17.61	0.5	Pass
11	2462	17.62	0.5	Pass

Data rate 58.5Mbps

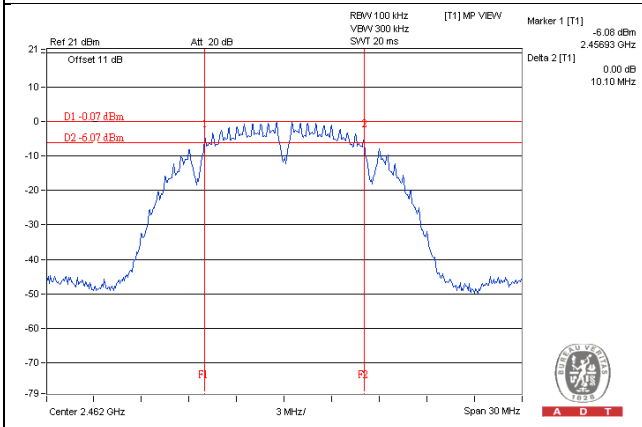
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.76	0.5	Pass
6	2437	17.70	0.5	Pass
11	2462	17.75	0.5	Pass

Data rate 65Mbps

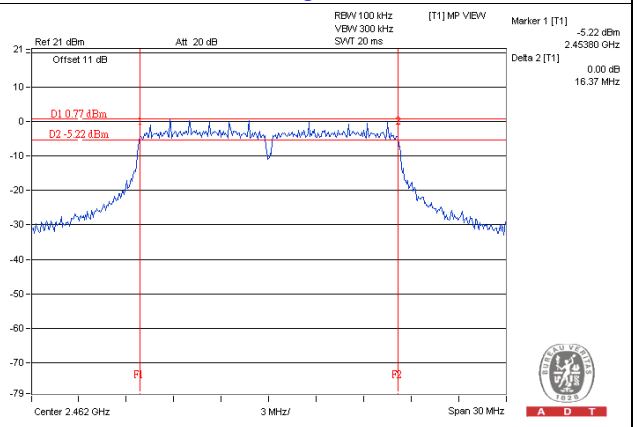
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.76	0.5	Pass
6	2437	17.72	0.5	Pass
11	2462	17.75	0.5	Pass

Spectrum Plot of Worst Value

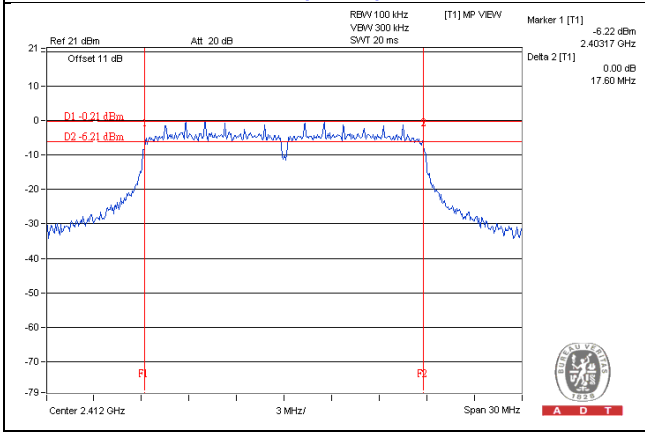
802.11b: CH11



802.11g: CH11



802.11n (HT20): CH1

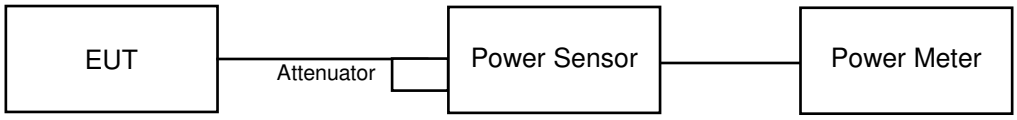


4.4 Conducted Output Power Measurement

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

Refer to section 4.1.2 to get information of above instrument.

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

Data rate 1Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	14.555	11.63	30	Pass
6	2437	13.213	11.21	30	Pass
11	2462	13.646	11.35	30	Pass

Data rate 11Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	59.979	17.78	30	Pass
6	2437	63.68	18.04	30	Pass
11	2462	67.453	18.29	30	Pass

802.11g

Data rate 6Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	80.168	19.04	30	Pass
6	2437	101.158	20.05	30	Pass
11	2462	76.033	18.81	30	Pass

Data rate 36Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	81.658	19.12	30	Pass
6	2437	109.901	20.41	30	Pass
11	2462	106.66	20.28	30	Pass

Data rate 54Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	85.507	19.32	30	Pass
6	2437	112.46	20.51	30	Pass
11	2462	108.393	20.35	30	Pass

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Data rate 6.5Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	74.989	18.75	30	Pass
6	2437	105.439	20.23	30	Pass
11	2462	72.277	18.59	30	Pass

Data rate 58.5Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	78.886	18.97	30	Pass
6	2437	111.944	20.49	30	Pass
11	2462	97.499	19.89	30	Pass

Data rate 65Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	75.683	18.79	30	Pass
6	2437	109.901	20.41	30	Pass
11	2462	97.724	19.90	30	Pass

FOR AVERAGE POWER

802.11b

Data rate 1Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	7.943	9.00
6	2437	7.87	8.96
11	2462	8.166	9.12

Data rate 11Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	36.898	15.67
6	2437	41.495	16.18
11	2462	44.978	16.53

802.11g

Data rate 6Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	15.382	11.87
6	2437	30.409	14.83
11	2462	14.028	11.47

Data rate 36Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	13.868	11.42
6	2437	24.099	13.82
11	2462	22.336	13.49

Data rate 54Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	14.689	11.67
6	2437	24.66	13.92
11	2462	21.777	13.38

802.11n (HT20)

Data rate 6.5Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	12.823	11.08
6	2437	28.445	14.54
11	2462	12.05	10.81

Data rate 58.5Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	12.19	10.86
6	2437	23.823	13.77
11	2462	16.866	12.27

Data rate 65Mbps

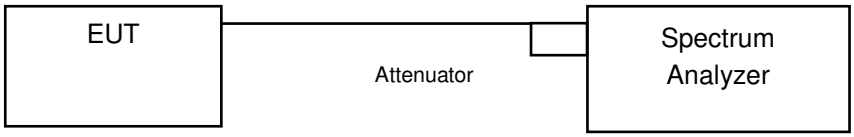
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	11.641	10.66
6	2437	23.227	13.66
11	2462	16.482	12.17

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

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

Data rate 1Mbps

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-15.90	8	Pass
6	2437	-15.50	8	Pass
11	2462	-14.41	8	Pass

Data rate 11Mbps

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-9.37	8	Pass
6	2437	-8.41	8	Pass
11	2462	-8.98	8	Pass

802.11g

Data rate 6Mbps

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-13.76	8	Pass
6	2437	-11.05	8	Pass
11	2462	-13.82	8	Pass

Data rate 36Mbps

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-14.37	8	Pass
6	2437	-10.22	8	Pass
11	2462	-11.76	8	Pass

Data rate 54Mbps

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-14.79	8	Pass
6	2437	-10.75	8	Pass
11	2462	-13.73	8	Pass

802.11n (HT20)

Data rate 6.5Mbps

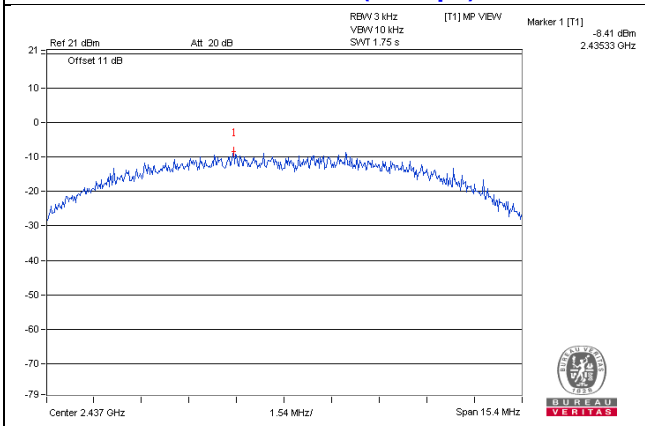
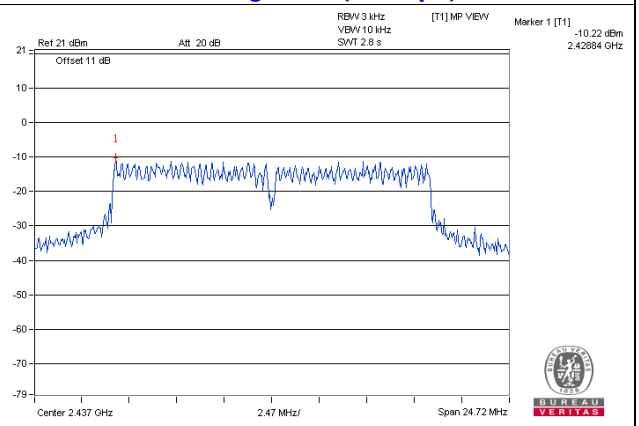
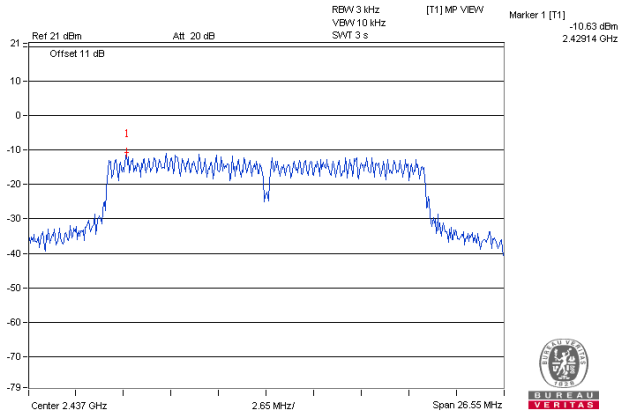
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-15.06	8	Pass
6	2437	-11.43	8	Pass
11	2462	-15.27	8	Pass

Data rate 58.5Mbps

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-16.05	8	Pass
6	2437	-10.63	8	Pass
11	2462	-15.36	8	Pass

Data rate 65Mbps

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-15.57	8	Pass
6	2437	-11.25	8	Pass
11	2462	-14.92	8	Pass

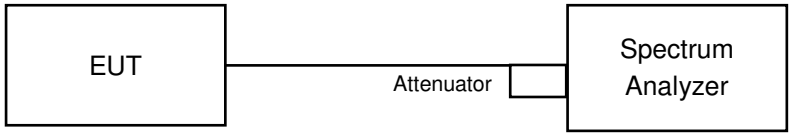
Spectrum Plot of Worst Value	
802.11b: CH11 (11Mbps)	**802.11g: CH6 (36Mbps)**
	
802.11n (HT20): CH6 (58.5Mbps)	
	

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

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 ≥ 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

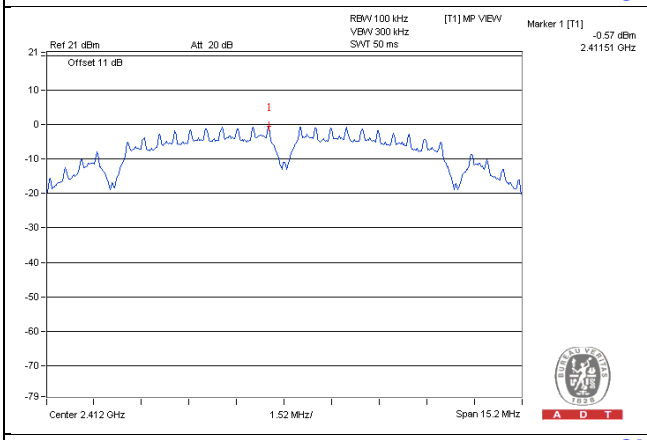
Same as Item 4.3.6

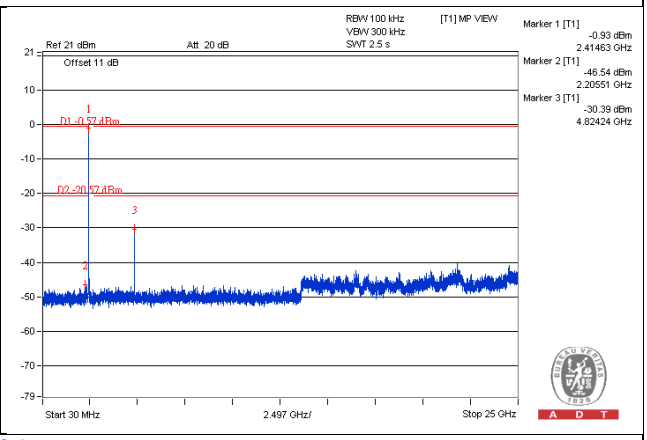
4.6.7 Test Results

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.

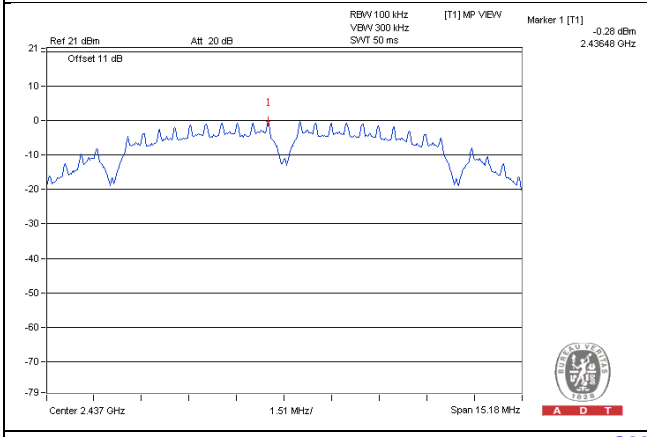
802.11b – Data rate 1Mbps

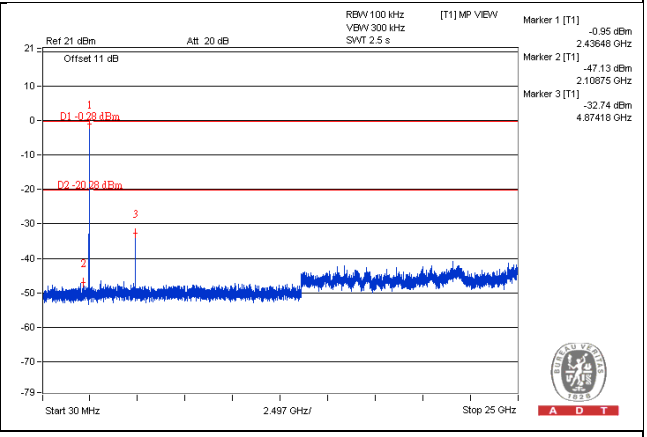
CH 1



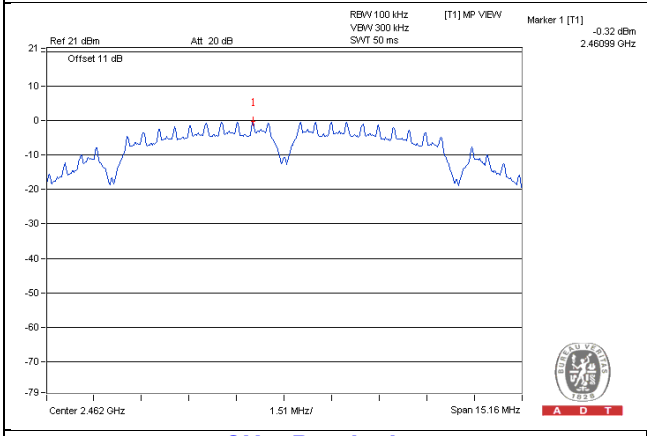


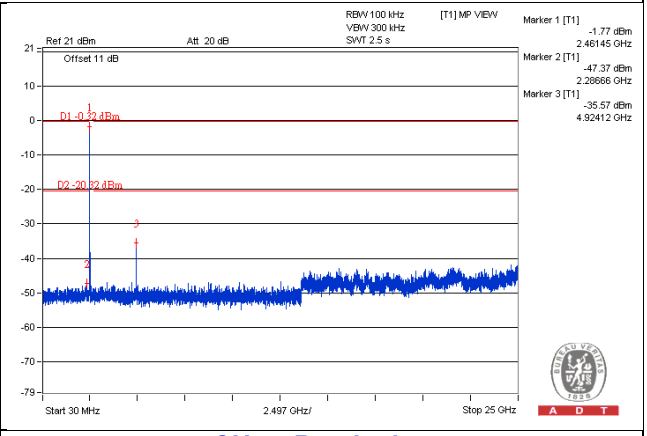
CH 6



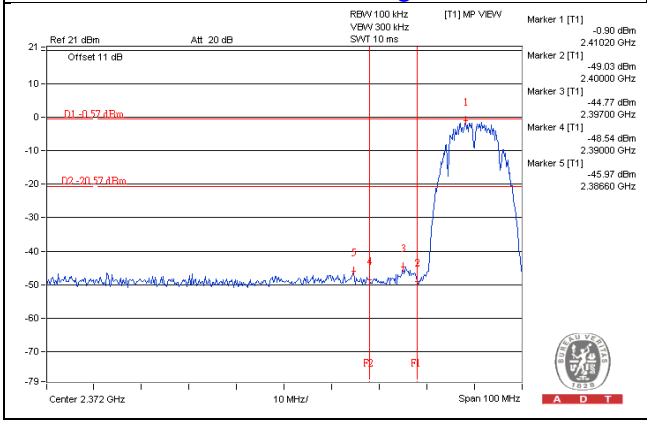


CH 11

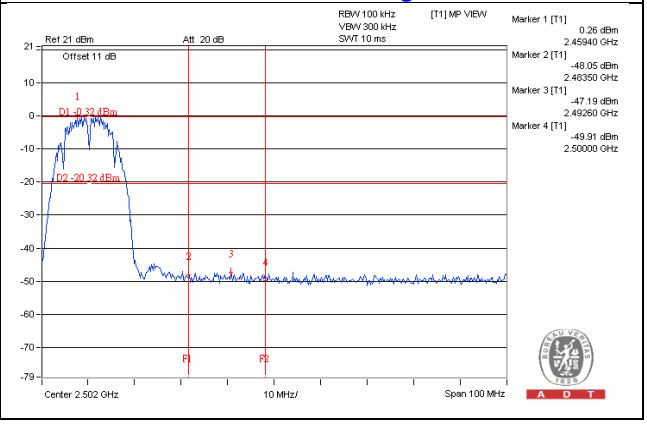




CH 1 Band edge

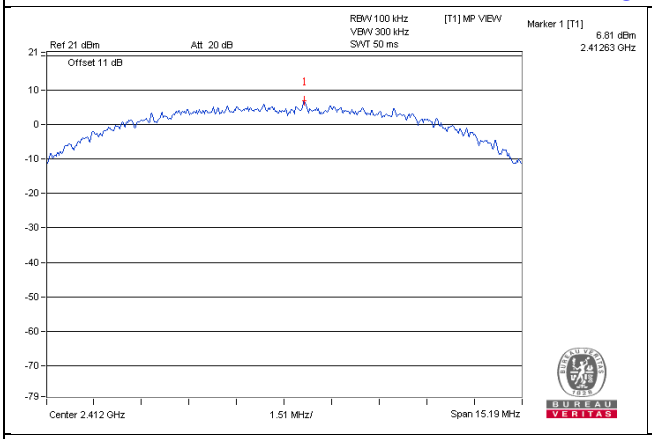


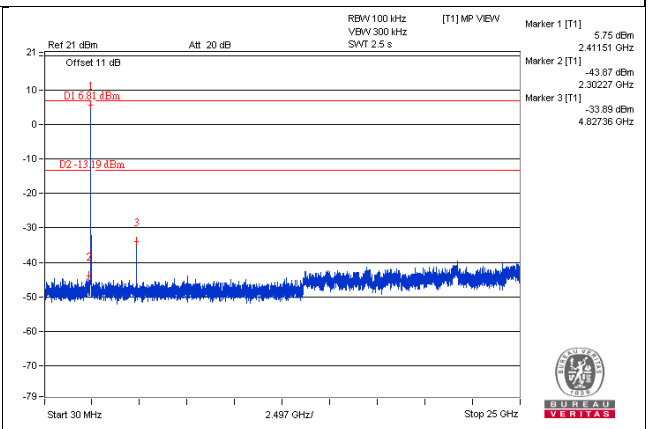
CH 11 Band edge



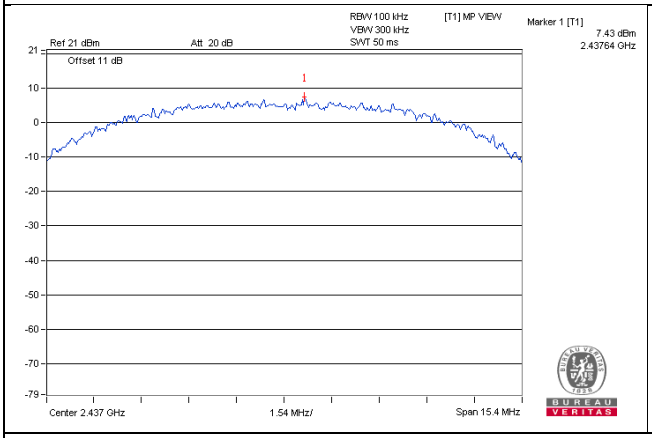
802.11b – Data rate 11Mbps

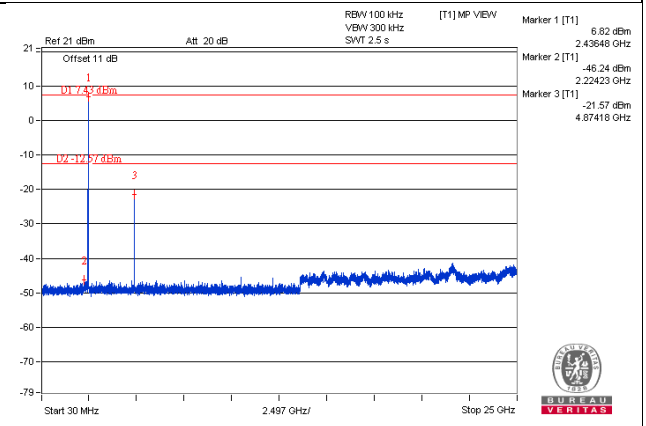
CH 1



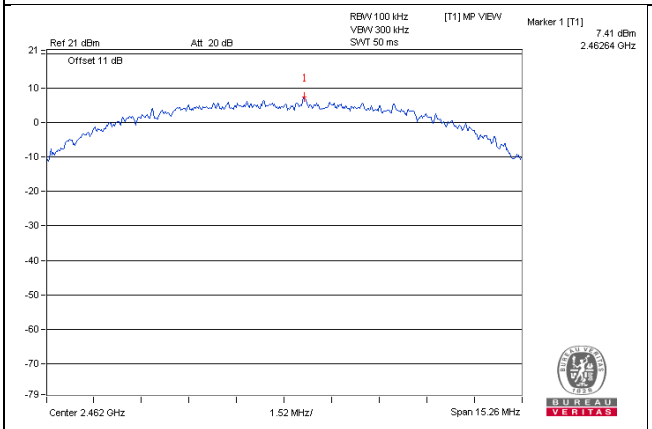


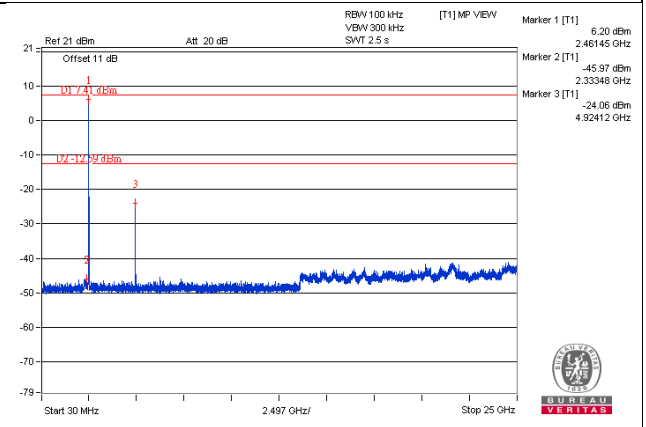
CH 6



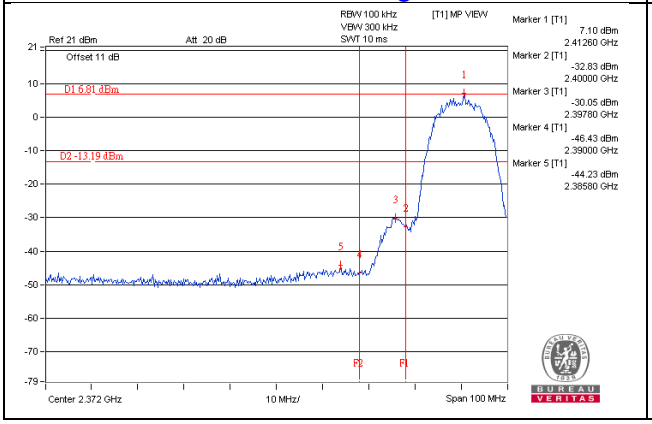


CH 11

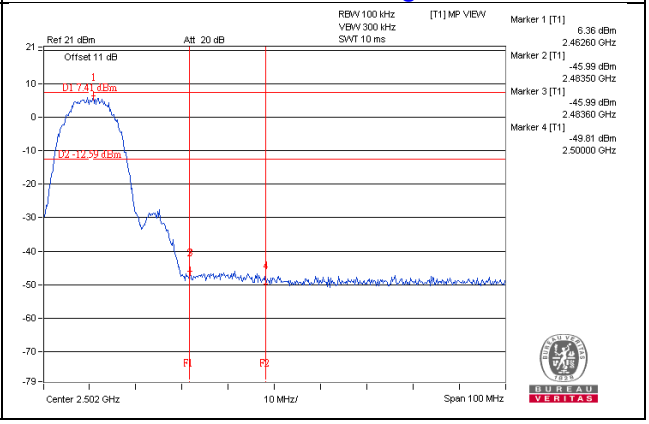




CH 1 Band edge

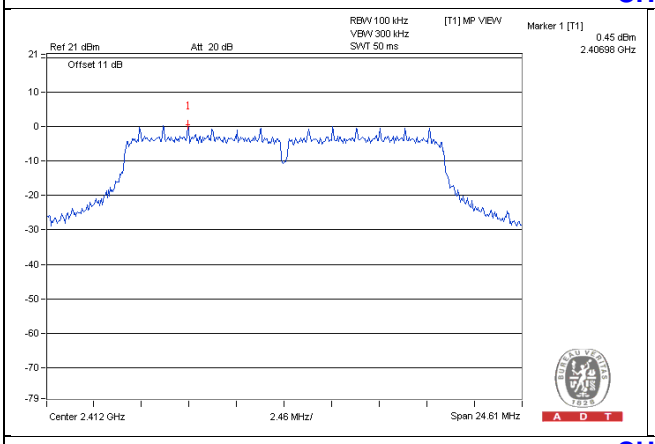


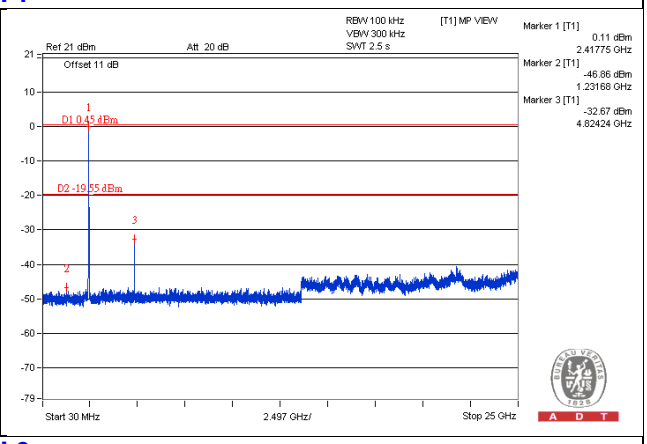
CH 11 Band edge



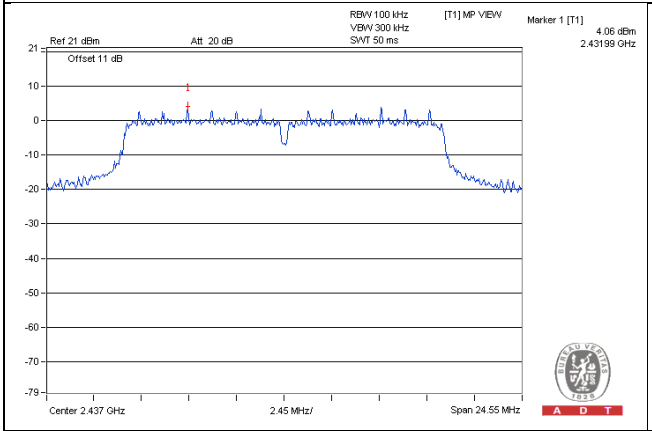
802.11g - Data rate 6Mbps

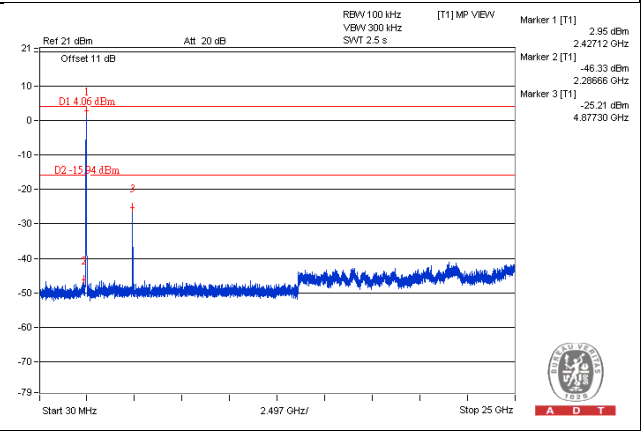
CH 1



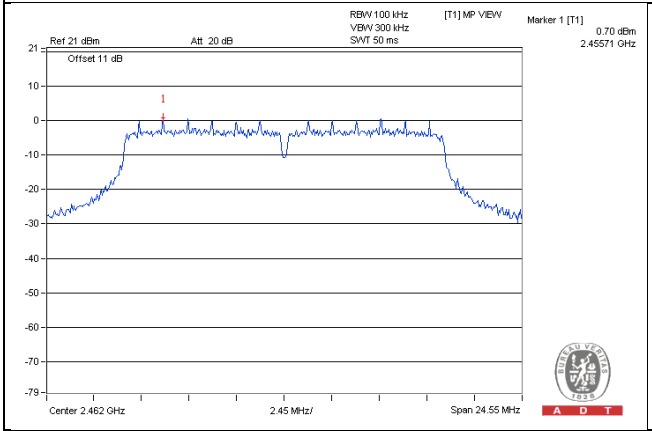


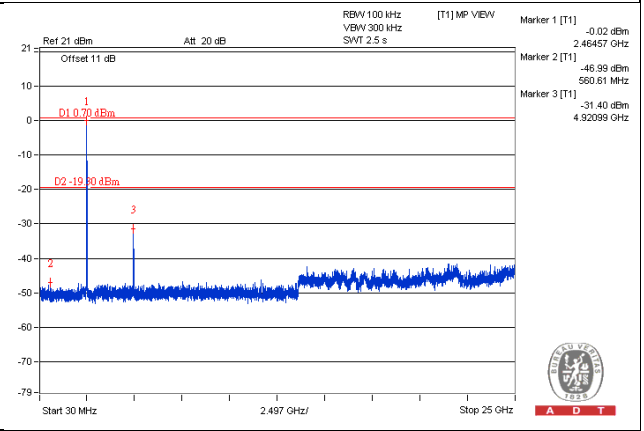
CH 6



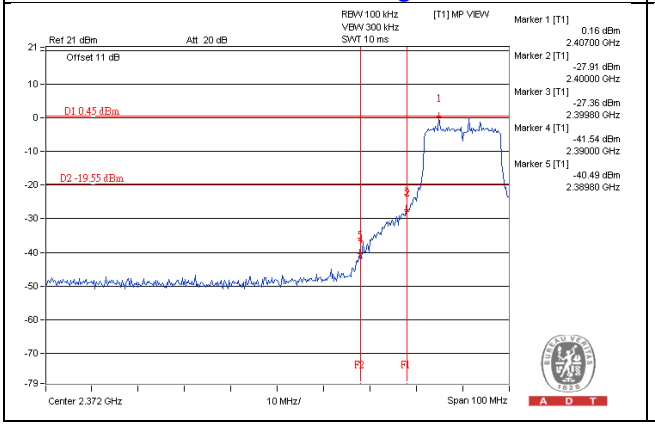


CH 11

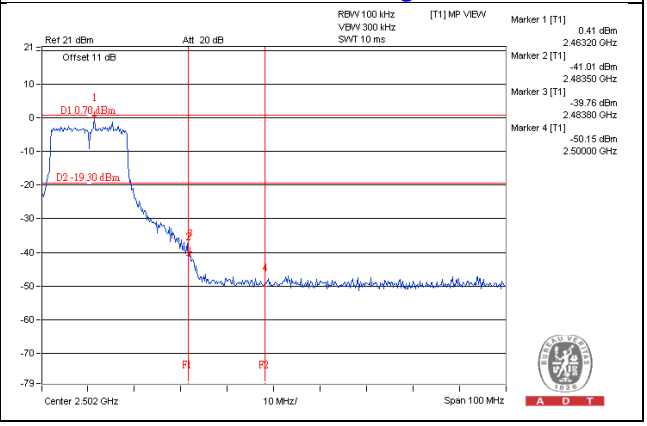




CH 1 Band edge

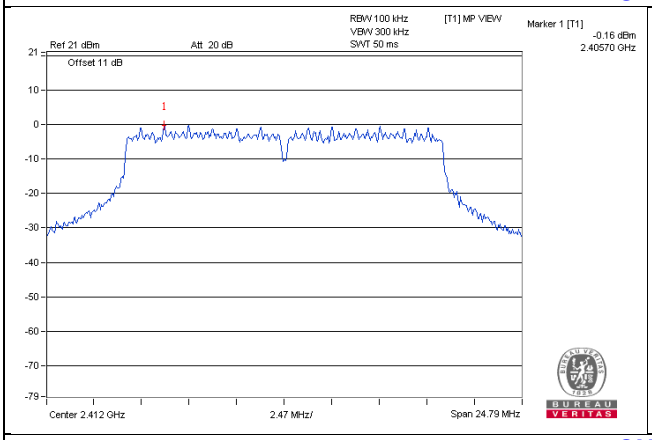


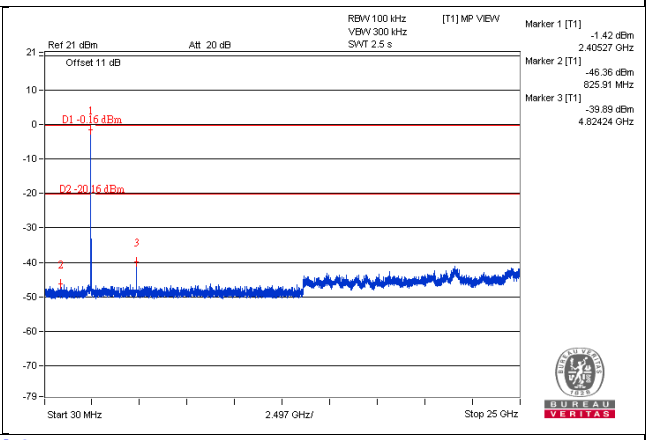
CH 11 Band edge



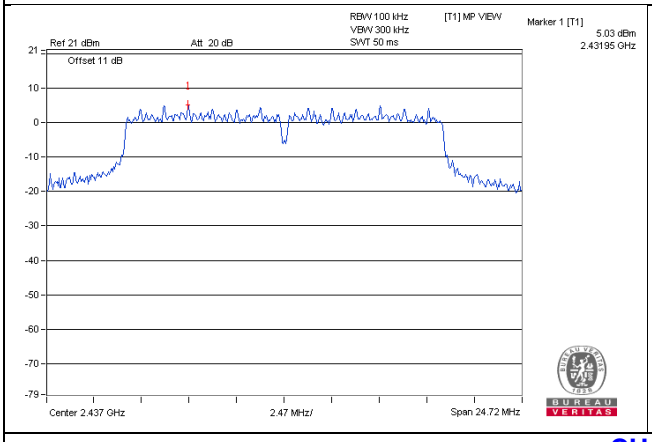
802.11g - Data rate 36Mbps

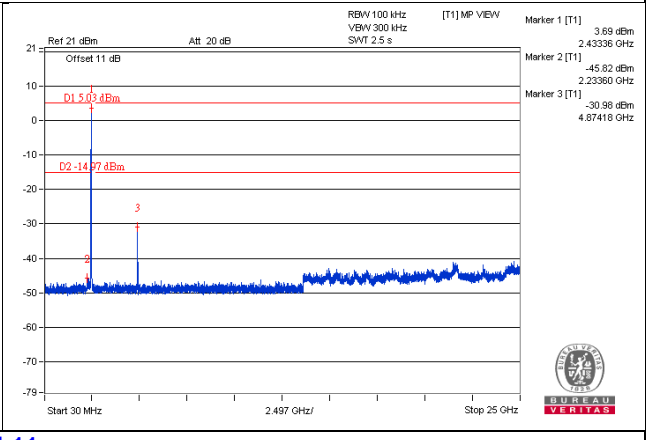
CH 1



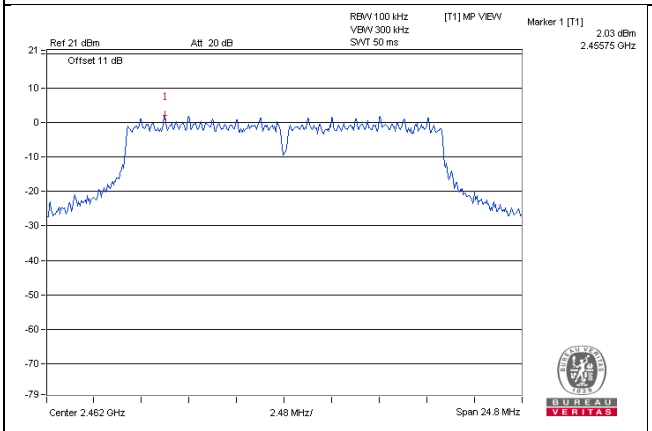


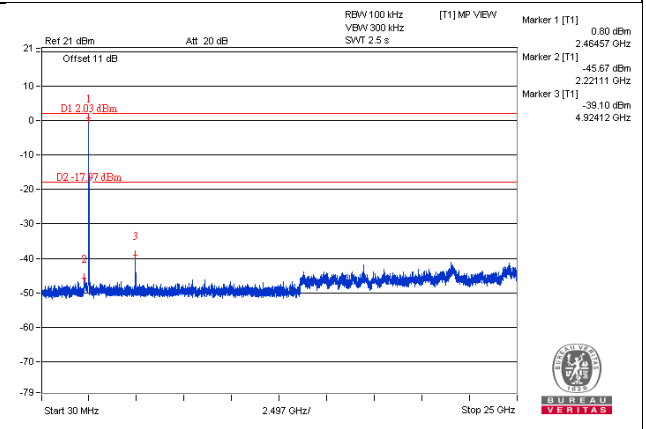
CH 6



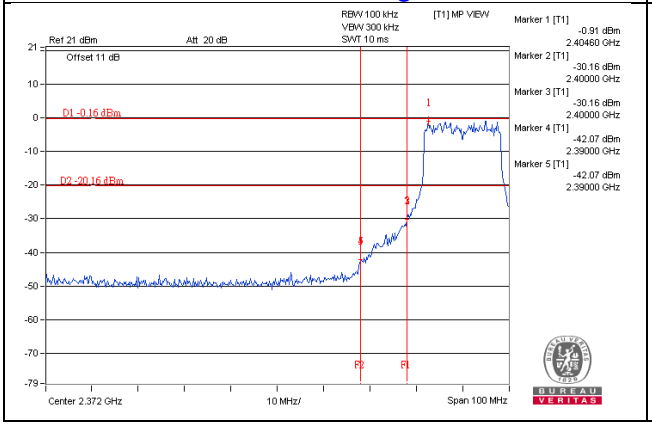


CH 11

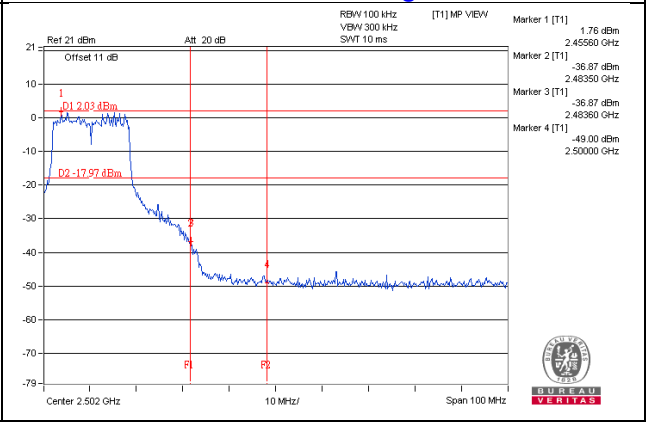




CH 1 Band edge

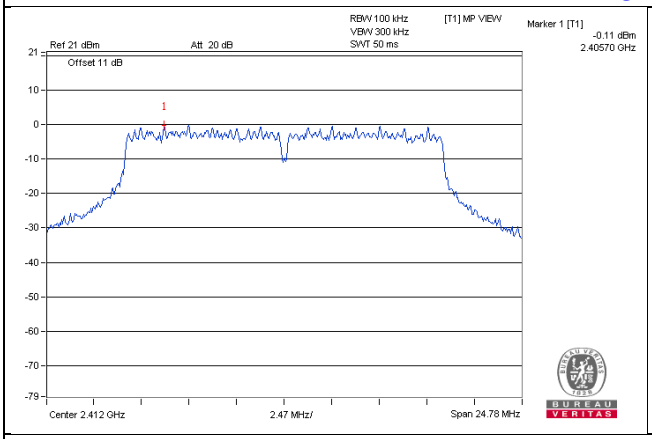


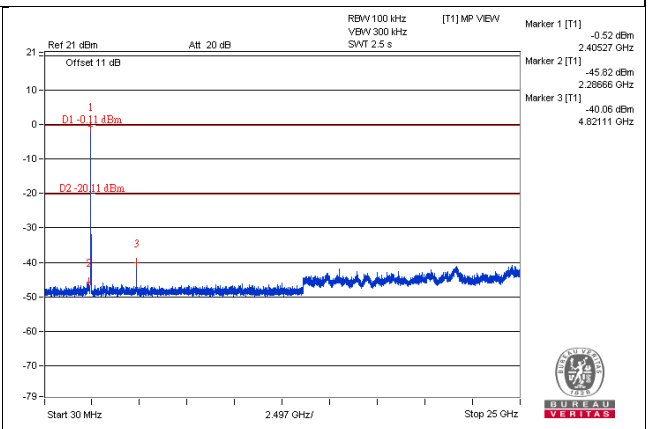
CH 11 Band edge



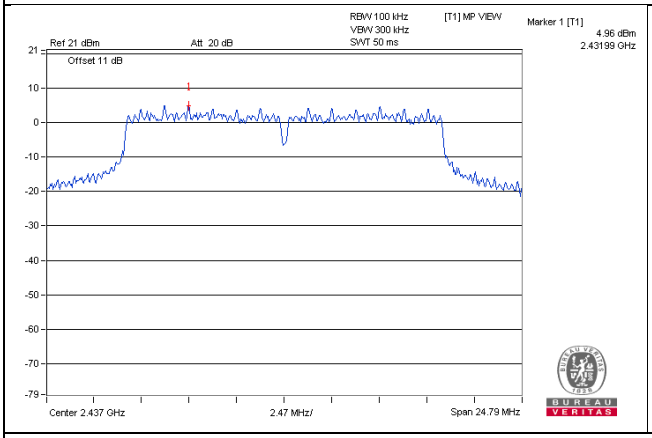
802.11g - Data rate 54Mbps

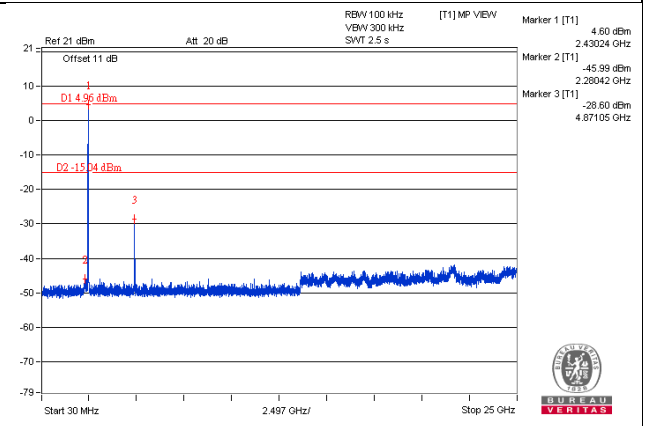
CH 1



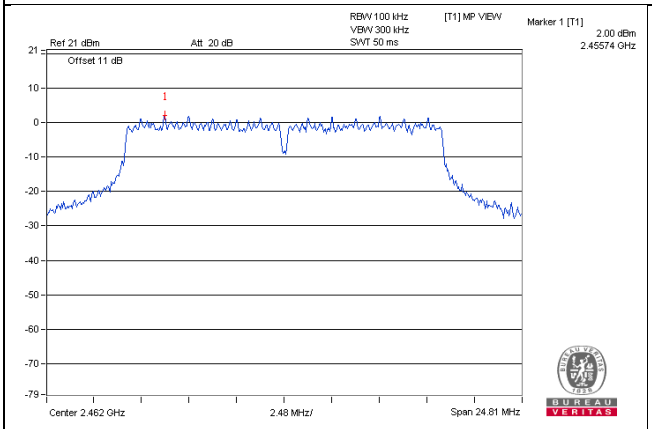


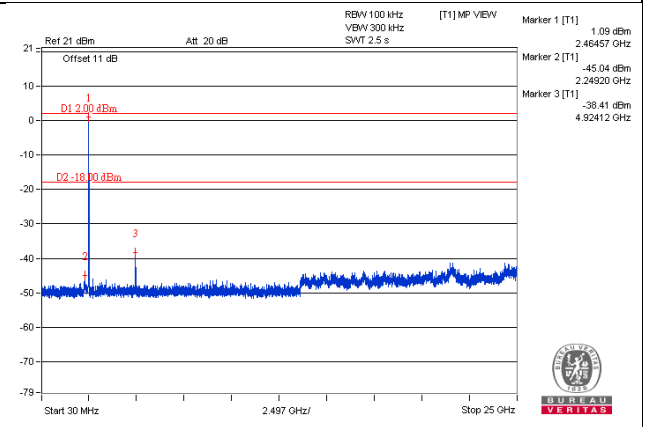
CH 6



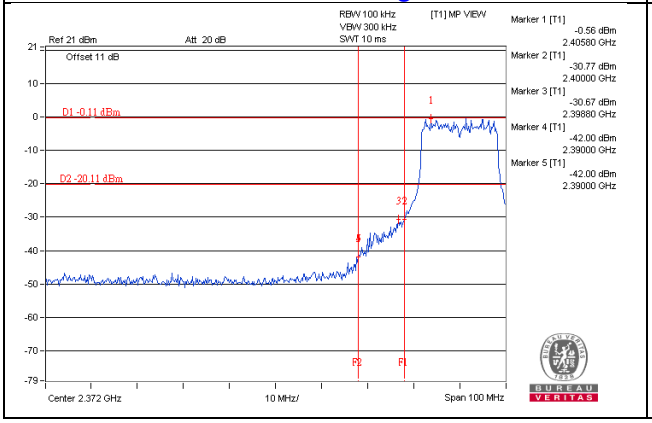


CH 11

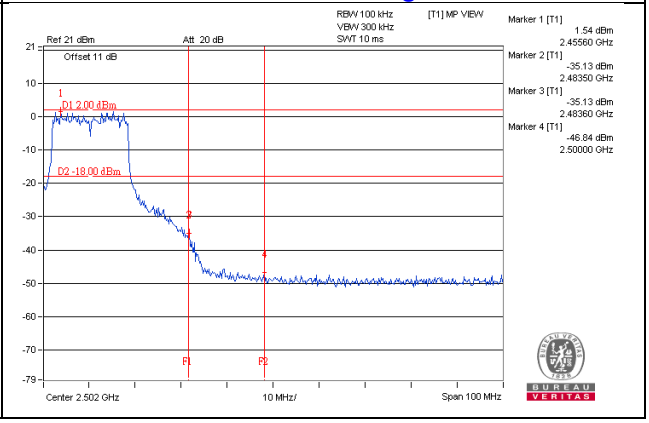




CH 1 Band edge

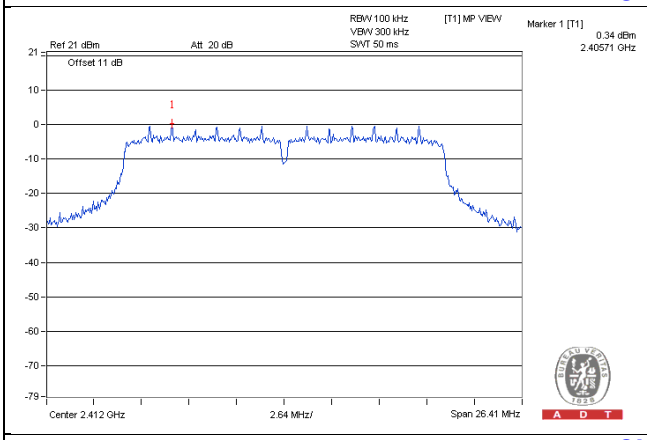


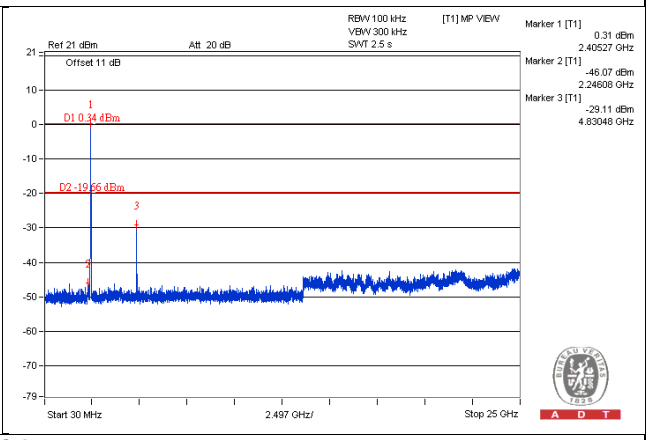
CH 11 Band edge



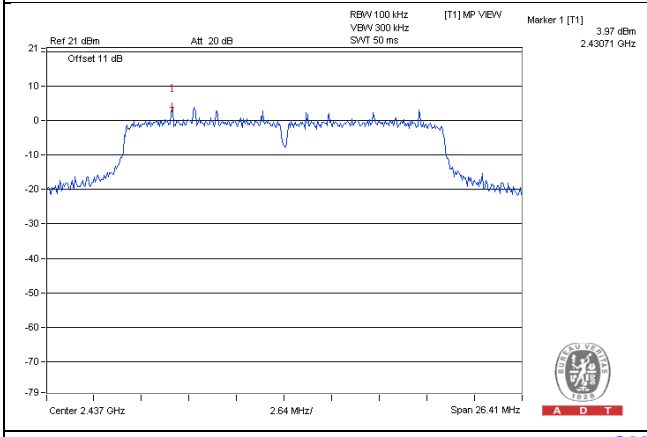
802.11n (HT20) - Data rate 6.5Mbps

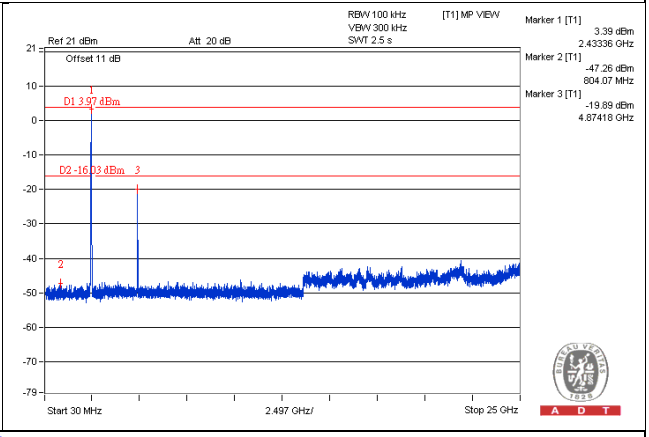
CH 1



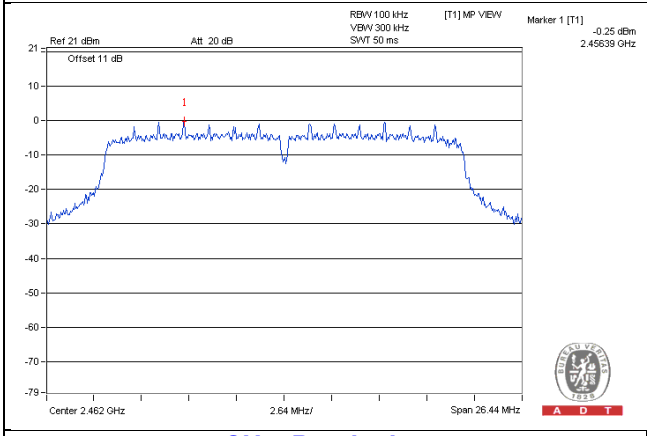


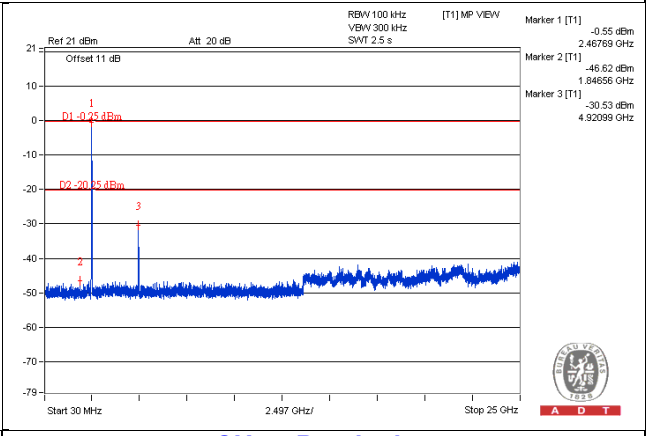
CH 6



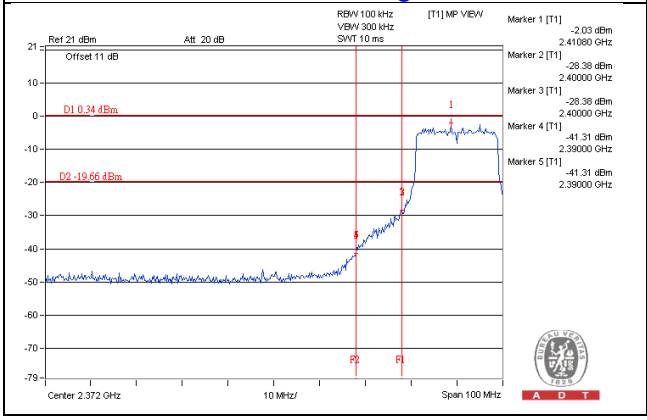


CH 11

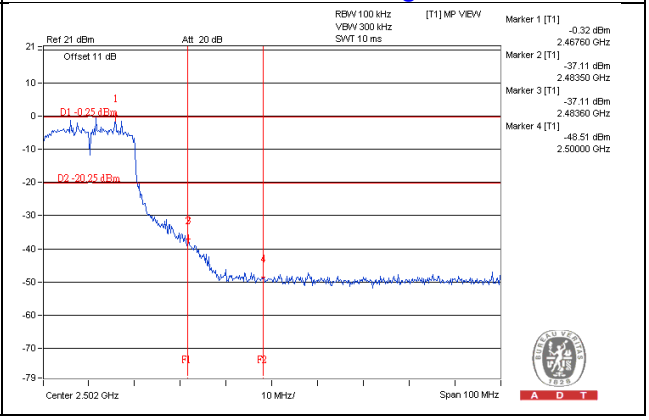




CH 1 Band edge

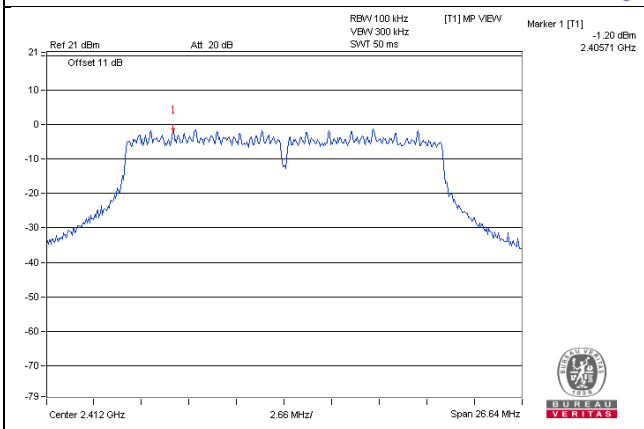


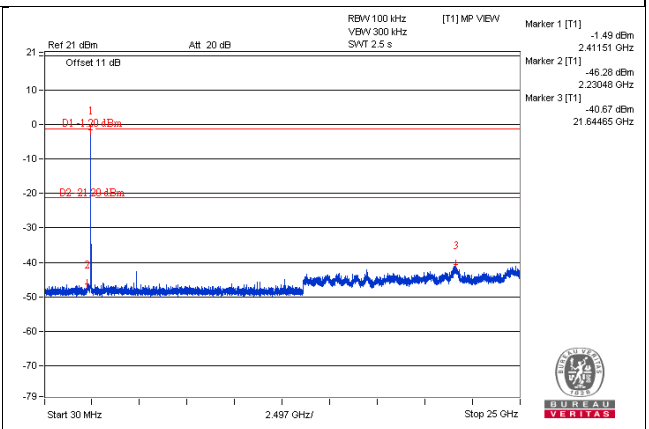
CH 11 Band edge



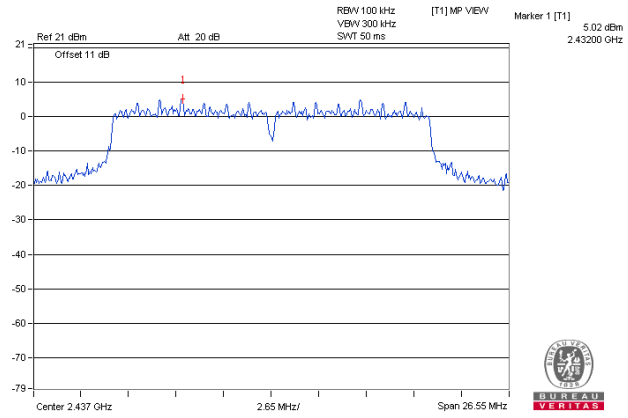
802.11n (HT20) - Data rate 58.5Mbps

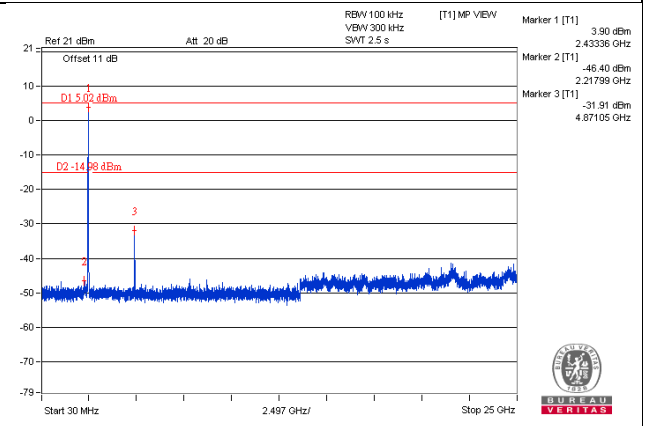
CH 1



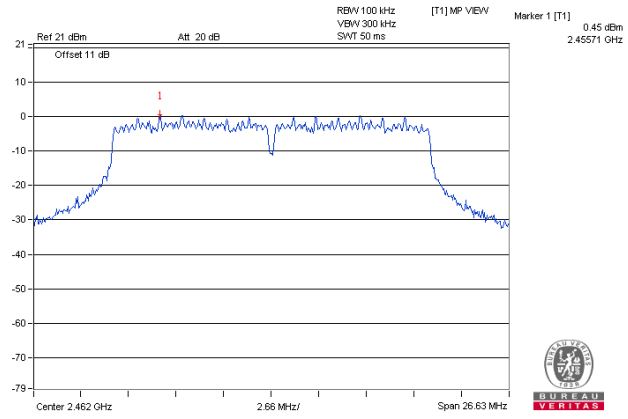


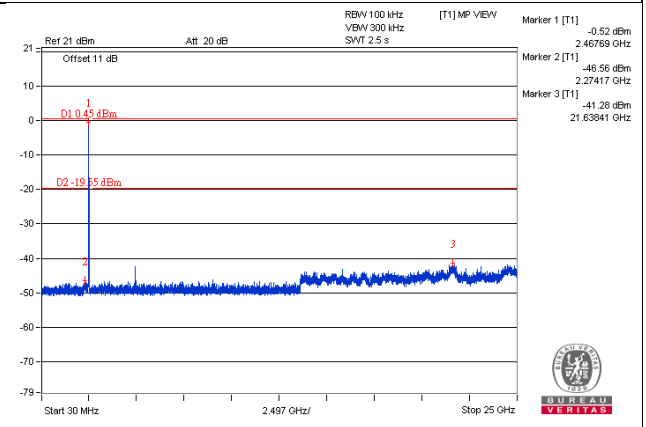
CH 6



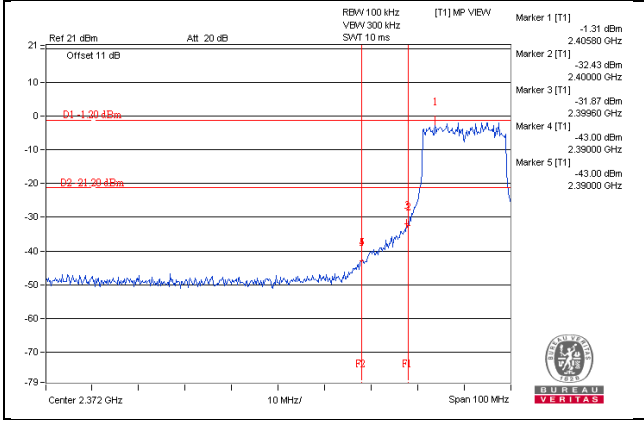


CH 11

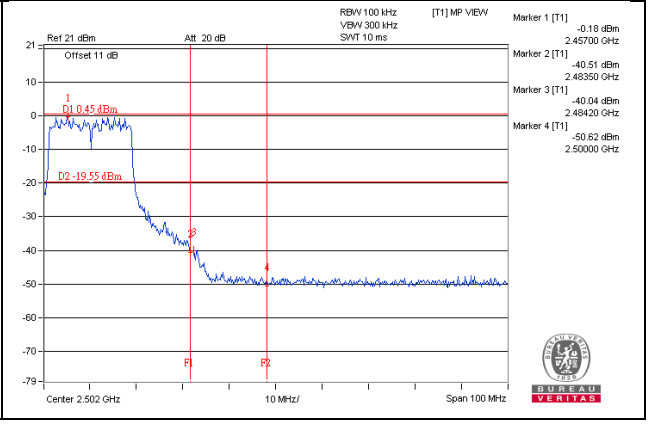




CH 1 Band edge

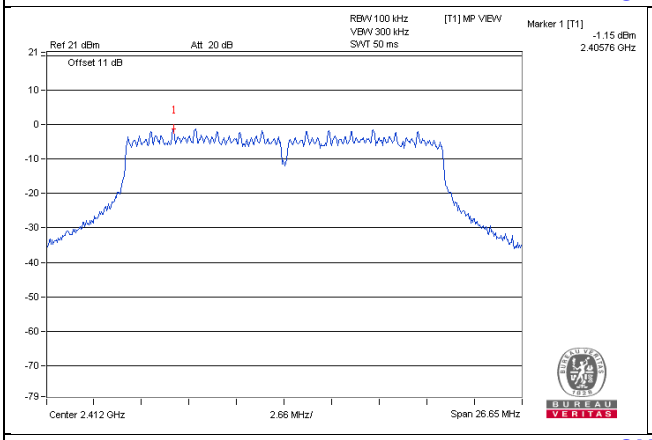


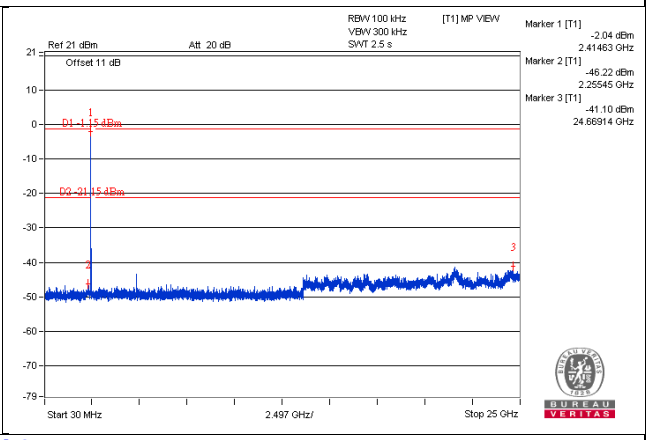
CH 11 Band edge



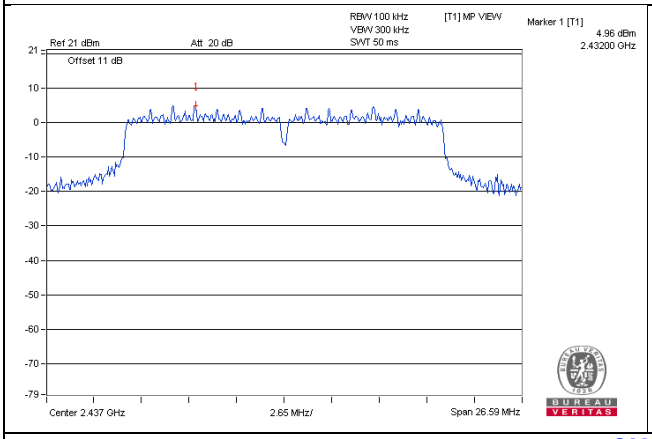
802.11n (HT20) - Data rate 65Mbps

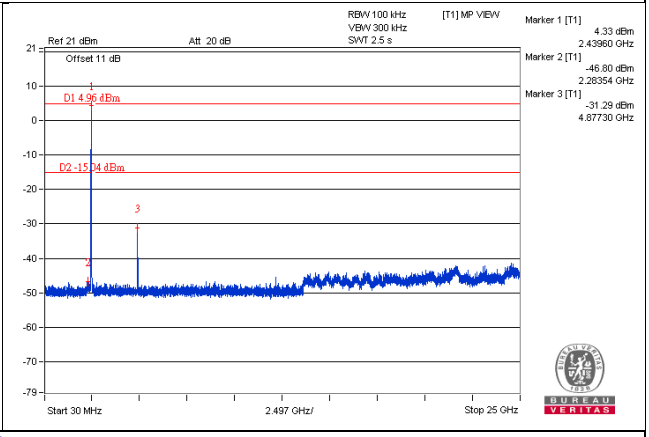
CH 1



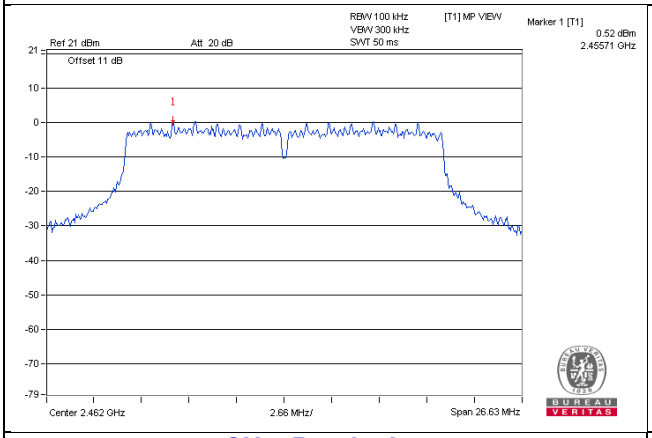


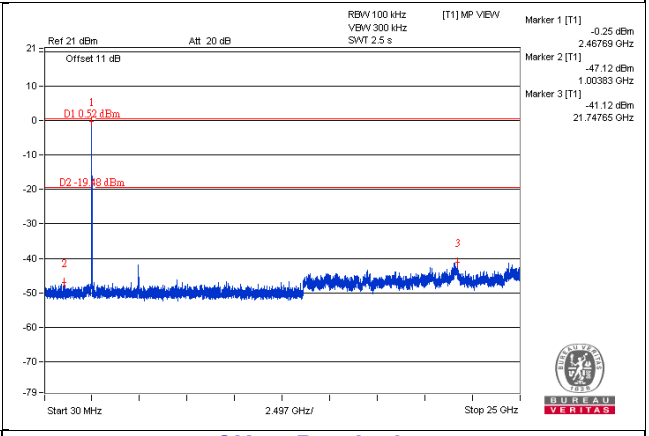
CH 6



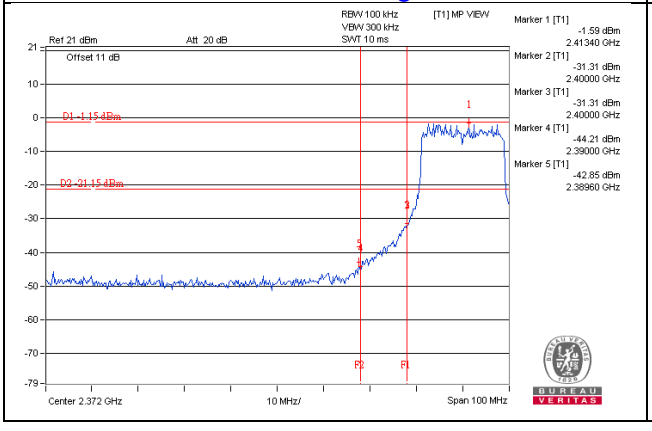


CH 11

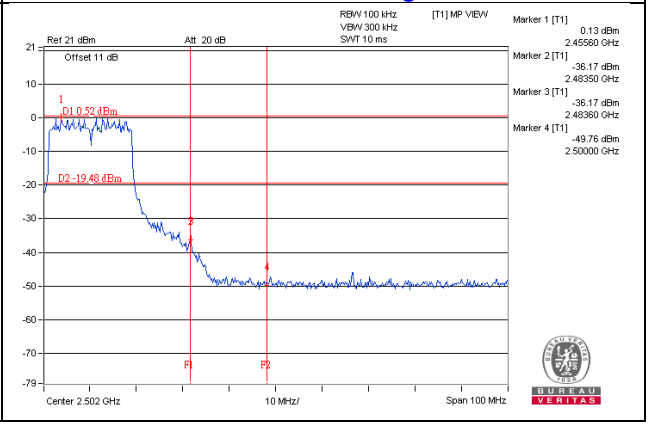




CH 1 Band edge



CH 11 Band edge



5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are 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: 886-3-3270892

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.

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