



# FCC TEST REPORT

**REPORT NO.:** RF120719E04 R1

**MODEL NO.:** DDW365

**FCC ID:** XCNDDW365

**RECEIVED:** Jul. 20, 2012

**TESTED:** Jul. 31 to Sep. 18, 2012

**ISSUED:** Sep. 25, 2012

**APPLICANT:** Ubee Interactive Corp.

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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.	REASON FOR CHANGE	DATE ISSUED
RF120719E04	Original release	Sep. 21, 2012
RF120719E04 R1	Deleted Section 3.1 note 6.	Sep. 25, 2012



## 1. CERTIFICATION

**PRODUCT:** Broadcom 3383G Wireless Cable Modem  
**BRAND NAME:** Ubee  
**MODEL NO.:** DDW365  
**TEST SAMPLE:** R&D SAMPLE  
**APPLICANT:** Ubee Interactive Corp.  
**TESTED:** Jul. 31 to Sep. 18, 2012  
**STANDARDS:** **FCC Part 15, Subpart C (Section 15.247)**  
ANSI C63.10-2009

The above equipment (Model: DDW365) 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:** Sep. 24, 2012  
( Elsie Hsu, Specialist )

**APPROVED BY** :  , **DATE:** Sep. 24, 2012  
( May Chen, Deputy Manager )

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

<b>APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)</b>			
<b>STANDARD SECTION</b>	<b>TEST TYPE</b>	<b>RESULT</b>	<b>REMARK</b>
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -16.06dB at 0.19297MHz
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.5dB at 2356.90MHz, 2390.00MHz, 2483.50MHz
15.247(d)	Band Edge Measurement	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 HRS not a standard connector.

### 2.1 MEASUREMENT UNCERTAINTY

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

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

<b>Measurement</b>	<b>Value</b>
Conducted emissions	2.98 dB
Radiated emissions (30MHz-1GHz)	5.69 dB
Radiated emissions (1GHz -6GHz)	3.84 dB
Radiated emissions (6GHz -18GHz)	4.09 dB
Radiated emissions (18GHz -40GHz)	4.24 dB



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### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	Broadcom 3383G Wireless Cable Modem
<b>MODEL NO.</b>	DDW365
<b>POWER SUPPLY</b>	DC 12V form internal power supply
<b>MODULATION TYPE</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
<b>MODULATION TECHNOLOGY</b>	DSSS, OFDM
<b>TRANSFER RATE</b>	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 450Mbps
<b>OPERATING FREQUENCY</b>	2.412 ~ 2.462GHz
<b>NUMBER OF CHANNEL</b>	11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
<b>MAXIMUM OUTPUT POWER</b>	802.11b: 93.756mW 802.11g: 126.474mW 802.11n (HT20): 320.537mW 802.11n (HT40): 32.457mW
<b>ANTENNA TYPE</b>	Please see NOTE
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	Refer to user's manual
<b>ASSOCIATED DEVICES</b>	NA



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**NOTE:**

1. The EUT must be supplied with an internal power supply:

Brand	Model No.	Spec.
CHICONY	N12-026N1A	AC Input: 110-120V, 0.9A, 60Hz DC Output: 12Vdc, 2.17A

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

Transmitter Circuit	Brand	Model	Antenna Type	Gain (dBi) (Exclude cable loss )	Cable Loss (dB)	Cable length	Connector Type
Chain (0)	FOXCONN	FX01E12-0G-EF	PIFA	3	-0.62	105mm+/-5	HRS
Chain (1)	FOXCONN	FX01E13-0G-EF	PIFA	3	-0.58	60mm+/-5	HRS
Chain (1)	FOXCONN	FX01E14-0G-EF	PIFA	3	-0.52	28mm+/-3	HRS

3. The EUT incorporates a MIMO function without beam forming.

MODULATION MODE	Tx/Rx FUNCTION
802.11b	1Tx/1Rx
802.11g	1Tx/1Rx
802.11n (HT20)	3Tx/3Rx
802.11n (HT40)	3Tx/3Rx

4. When the EUT operating in 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 23.
5. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



### 3.2 DESCRIPTION OF TEST MODES

Eleven 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		

Seven 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
	PLC	RE < 1G	RE ≥ 1G	APCM	OB	
-	√	√	√	√	√	-

Where **PLC**: Power Line Conducted Emission      **RE < 1G**: Radiated Emission below 1GHz  
**RE ≥ 1G**: Radiated Emission above 1GHz      **APCM**: Antenna Port Conducted Measurement  
**OB**: Conducted Out-Band Emission Measurement

#### **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

#### **RADIATED EMISSION TEST (BELOW 1 GHz):**

- 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

#### **RADIATED EMISSION TEST (ABOVE 1 GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

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

**ANTENNA PORT CONDUCTED MEASUREMENT:**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

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

**CONDUCTED OUT-BAND EMISSION MEASUREMENT:**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

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

**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	25deg. C, 68%RH	120Vac, 60Hz	Jyunchun Lin
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Nelson Teng
RE <sup>3</sup> 1G	25deg. C, 65%RH	120Vac, 60Hz	Nelson Teng
APCM	25deg. C, 60%RH	120Vac, 60Hz	Rex Huang
OB	25deg. C, 60%RH	120Vac, 60Hz	Rex Huang

### 3.3 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 v01**

ANSI C63.10-2009

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

**NOTE:** The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



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### 3.4 DESCRIPTION OF SUPPORT UNITS

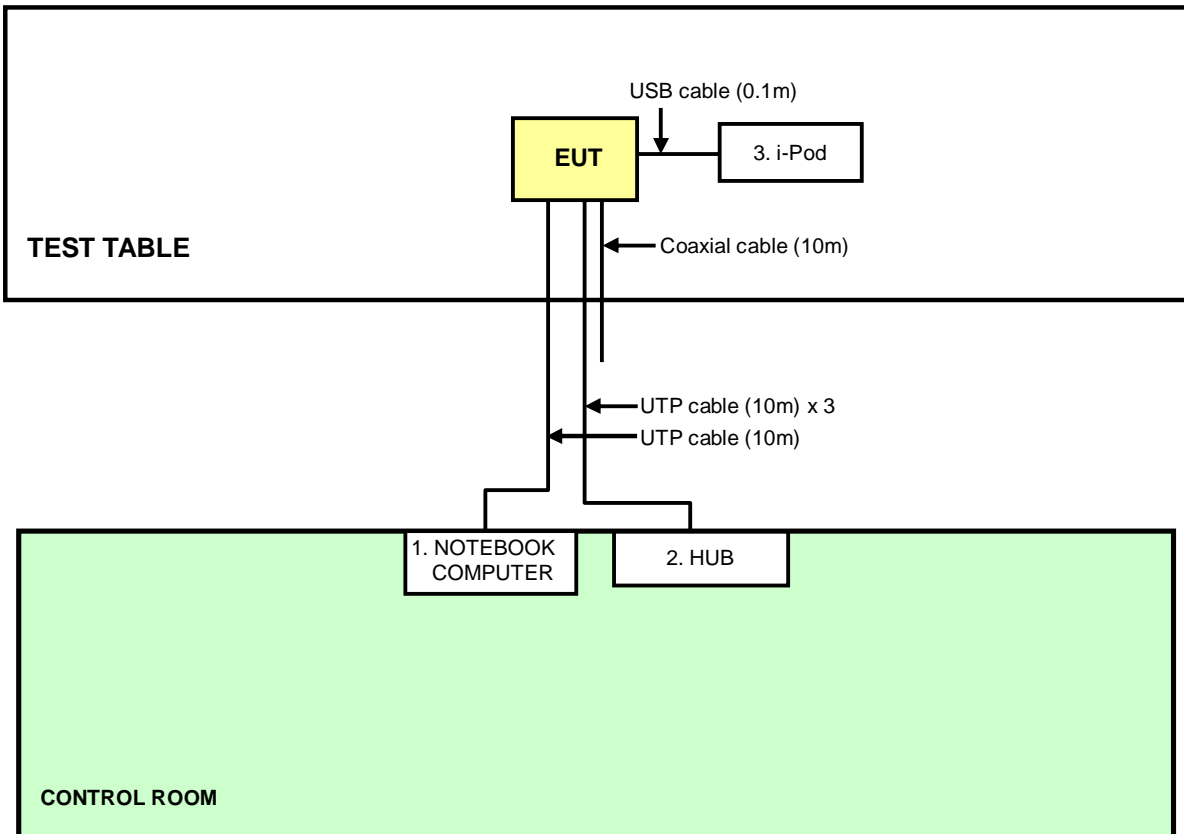
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC
2	HUB	ZyXEL	ES-116P	S060H0200021 5	FCC DoC
3	iPod	Apple	MC749TA/A	CC4DMFJUDFD M	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	UTP cable (10m)
2	UTP cable (10m)
3	USB cable (0.1m)

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

### 3.5 CONFIGURATION OF SYSTEM UNDER TEST





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## 4. TEST TYPES AND RESULTS

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	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 0.50 MHz.

#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver	ESCS 30	100375	Mar. 12, 2012	Mar.11, 2013
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	ENV216	100071	Nov. 17, 2011	Nov. 16, 2012
Line-Impedance Stabilization Network (for Peripheral)	ENV216	100072	June 08,2012	June 07,2013
RF Cable (JYEBAO)	5DFB	COCCAB-001	Aug. 28, 2012	Aug. 27, 2013
50 ohms Terminator	50	EMC-3	Sep. 26, 2011	Sep. 25, 2012
Software ADT	BV ADT_Cond_V7.3.7.3	NA	NA	NA

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
- 3 The VCCI Con C Registration No. is C-3611.
- 4 Tested Date: Sep. 18, 2012

#### 4.1.3 TEST PROCEDURES

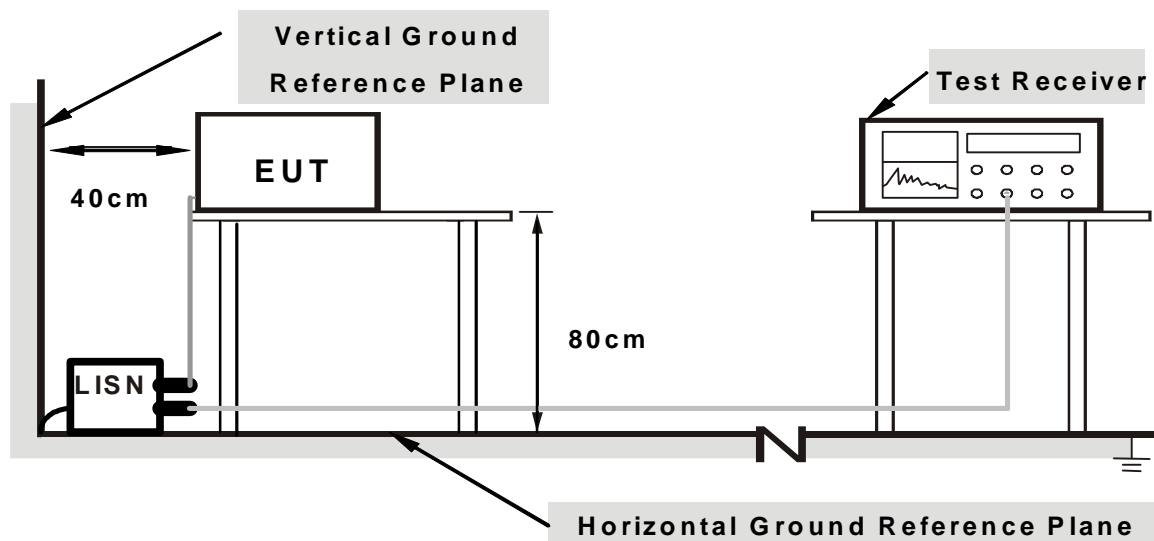
- a. The EUT/HOST was placed 0.4 meters from the conducting wall of the shielded room with EUT/HOST being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH 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) were not recorded.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation



#### 4.1.5 TEST SETUP



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

**2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

#### 4.1.6 EUT OPERATING CONDITIONS

1. Placed the EUT on testing table.
2. Prepared computer system (support unit 1) to act as communication partner.
3. The communication partner ran test program “For ADT-WiFi command-20120730.txt” to enable EUT under transmission/receiving condition continuously.

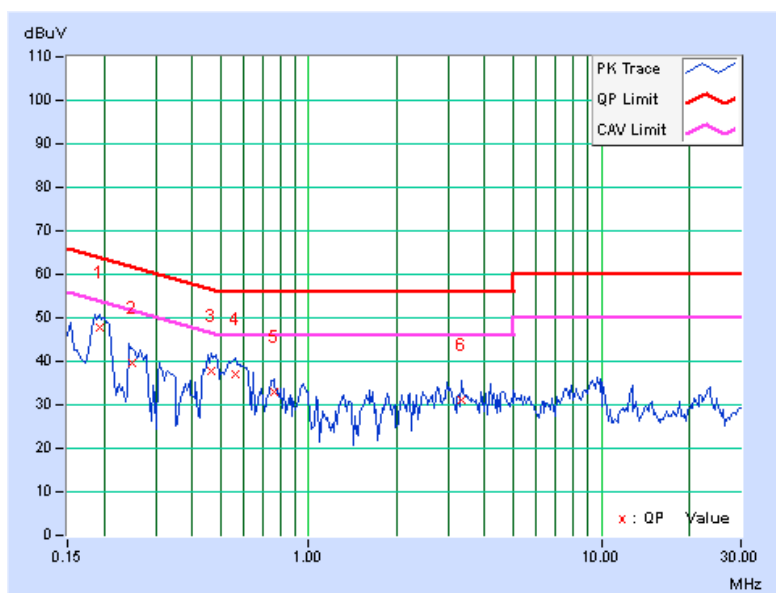
#### 4.1.7 TEST RESULTS

<b>PHASE</b>	Line (L)	<b>6dB BANDWIDTH</b>	9 kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	1	0.19297	9.67	38.18	27.38	47.85	37.05	63.91	53.91	-16.06
2	0.24950	9.68	29.91	16.32	39.59	26.00	61.77	51.77	-22.18	-25.77
3	0.46250	9.72	28.00	15.72	37.72	25.44	56.65	46.65	-18.93	-21.21
4	0.56016	9.72	27.25	14.71	36.97	24.43	56.00	46.00	-19.03	-21.57
5	0.76328	9.73	23.17	11.25	32.90	20.98	56.00	46.00	-23.10	-25.02
6	3.32813	9.75	21.48	11.53	31.23	21.28	56.00	46.00	-24.77	-24.72

#### 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.

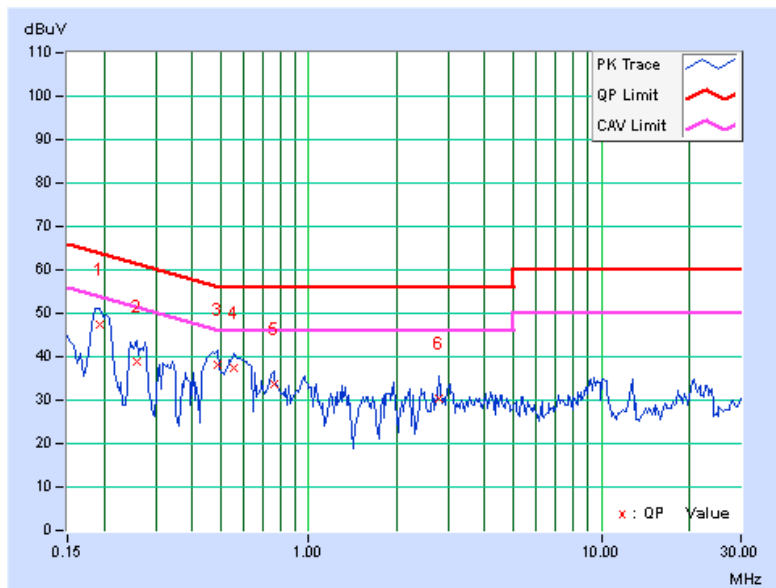


<b>PHASE</b>	Neutral (N)	<b>6dB BANDWIDTH</b>	9 kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	1	0.19297	9.67	37.74	27.13	47.41	36.80	63.91	53.91	-16.50
2	0.25938	9.68	29.32	17.97	39.00	27.65	61.45	51.45	-22.45	-23.80
3	0.48594	9.71	28.34	12.03	38.05	21.74	56.24	46.24	-18.18	-24.49
4	0.55625	9.72	27.71	15.37	37.43	25.09	56.00	46.00	-18.57	-20.91
5	0.76328	9.72	23.83	11.99	33.55	21.71	56.00	46.00	-22.45	-24.29
6	2.77734	9.76	20.71	11.86	30.47	21.62	56.00	46.00	-25.53	-24.38

**REMARKS:**

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



## 4.2 RADIATED EMISSION AND BANDEGE MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION AND BANDEGE 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.



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#### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250254	July 09, 2012	July 08, 2013
Pre-Selector Agilent	N9039A	MY46520311	July 09, 2012	July 08, 2013
Signal Generator Agilent	N5181A	MY49060347	July 24, 2012	July 23, 2013
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 15, 2011	Nov. 14, 2012
Pre-Amplifier Agilent	8449B	3008A02465	Feb. 27, 2012	Feb. 26, 2013
SPACEK LABS	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Apr. 06, 2012	Apr. 05, 2013
Horn_Antenna AISI	AIH.8018	0000220091110	Nov. 23, 2011	Nov. 22, 2012
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 27, 2011	Dec. 26, 2012
RF Cable	NA	CHHCAB_001	Oct. 08, 2011	Oct. 07, 2012
Software	ADT_Radiated _V8.7.05	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. H.
4. The FCC Site Registration No. is 797305.
- 5 The CANADA Site Registration No. is IC 7450H-3.
- 6 Tested Date: Jul. 30 to Sep. 17, 2012

#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 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.

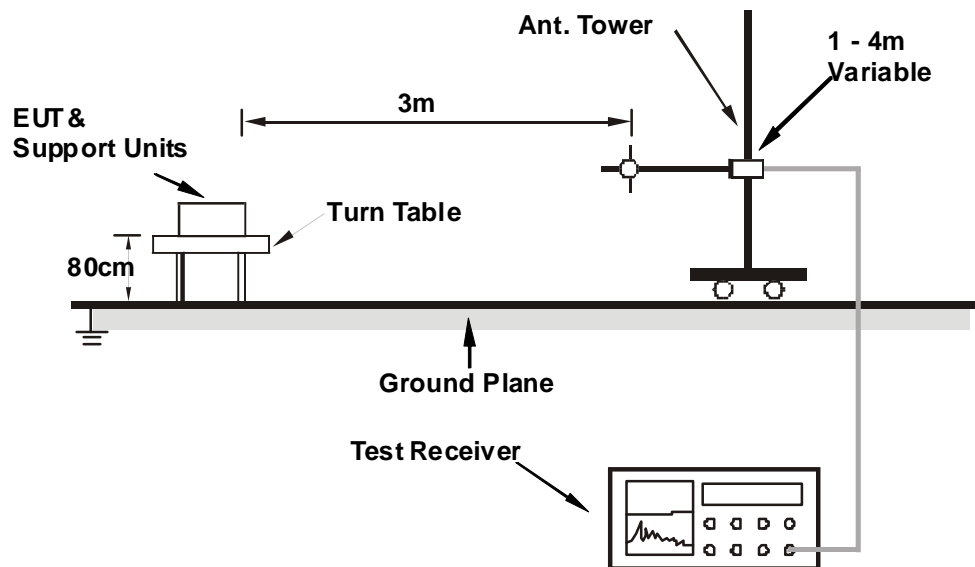
#### NOTE:

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 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

#### 4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6



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### 4.2.7 TEST RESULTS

#### BELOW 1GHz WORST-CASE DATA

##### 802.11n (20MHz)

<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	Below1GHz		

#### 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	238.19	38.3 QP	46.0	-7.7	1.00 H	282	25.51	12.76
2	285.20	37.1 QP	46.0	-8.9	1.00 H	278	22.40	14.71
3	624.96	40.9 QP	46.0	-5.1	1.00 H	118	18.37	22.54
4	700.04	37.4 QP	46.0	-8.7	1.25 H	0	13.68	23.67
5	750.01	42.9 QP	46.0	-3.1	1.00 H	231	18.37	24.56
6	799.98	40.6 QP	46.0	-5.4	1.25 H	257	14.94	25.62

#### 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	38.25	35.2 QP	40.0	-4.8	1.00 V	210	21.64	13.53
2	49.18	37.0 QP	40.0	-3.0	1.25 V	186	22.98	13.98
3	62.45	36.2 QP	40.0	-3.8	1.25 V	48	22.91	13.26
4	750.01	40.9 QP	46.0	-5.1	1.25 V	114	16.34	24.56
5	799.99	43.0 QP	46.0	-3.0	1.25 V	42	17.35	25.62
6	849.96	41.9 QP	46.0	-4.1	1.00 V	64	15.61	26.28

#### REMARKS:

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



## ABOVE 1GHz DATA

### 802.11b

<b>CHANNEL</b>	TX Channel 1	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	2331.00	57.2 PK	74.0	-16.8	1.50 H	147	24.78	32.42
2	2331.00	45.9 AV	54.0	-8.1	1.50 H	147	13.48	32.42
3	2390.00	58.6 PK	74.0	-15.4	1.50 H	147	25.97	32.63
4	2390.00	48.3 AV	54.0	-5.7	1.50 H	147	15.67	32.63
5	*2412.00	106.0 PK			1.50 H	147	73.29	32.71
6	*2412.00	103.7 AV			1.50 H	147	70.99	32.71
7	2500.00	58.9 PK	74.0	-15.1	1.12 H	88	25.93	32.97
8	2500.00	50.3 AV	54.0	-3.7	1.12 H	88	17.33	32.97
9	4824.00	48.9 PK	74.0	-25.1	1.00 H	338	8.42	40.48
10	4824.00	36.9 AV	54.0	-17.1	1.00 H	338	-3.58	40.48
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	2331.00	62.5 PK	74.0	-11.5	1.08 V	155	30.08	32.42
2	2331.00	52.1 AV	54.0	-1.9	1.08 V	155	19.68	32.42
3	2390.00	64.2 PK	74.0	-9.8	1.05 V	157	31.57	32.63
4	2390.00	53.1 AV	54.0	-0.9	1.05 V	157	20.47	32.63
5	*2412.00	111.8 PK			1.08 V	150	79.09	32.71
6	*2412.00	109.6 AV			1.08 V	150	76.89	32.71
7	2500.00	58.7 PK	74.0	-15.3	1.00 V	97	25.73	32.97
8	2500.00	48.0 AV	54.0	-6.0	1.00 V	97	15.03	32.97
9	4824.00	49.8 PK	74.0	-24.2	1.09 V	97	9.32	40.48
10	4824.00	37.9 AV	54.0	-16.1	1.09 V	97	-2.58	40.48

#### REMARKS:

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



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<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	*2437.00	106.5 PK			1.48 H	145	73.72	32.78
2	*2437.00	104.4 AV			1.48 H	145	71.62	32.78
3	2500.00	58.6 PK	74.0	-15.4	1.09 H	89	25.63	32.97
4	2500.00	50.5 AV	54.0	-3.5	1.09 H	89	17.53	32.97
5	4874.00	48.3 PK	74.0	-25.7	1.03 H	338	7.64	40.66
6	4874.00	36.6 AV	54.0	-17.4	1.03 H	338	-4.06	40.66
7	7311.00	55.3 PK	74.0	-18.7	1.16 H	87	6.83	48.47
8	7311.00	42.5 AV	54.0	-11.5	1.16 H	87	-5.97	48.47

**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	2356.90	64.1 PK	74.0	-9.9	1.10 V	149	31.59	32.51
2	<b>2356.90</b>	<b>53.5 AV</b>	<b>54.0</b>	<b>-0.5</b>	<b>1.10 V</b>	<b>149</b>	<b>20.99</b>	<b>32.51</b>
3	*2437.00	113.0 PK			1.06 V	150	80.22	32.78
4	*2437.00	110.9 AV			1.06 V	150	78.12	32.78
5	4874.00	49.1 PK	74.0	-24.9	1.07 V	85	8.44	40.66
6	4874.00	37.5 AV	54.0	-16.5	1.07 V	85	-3.16	40.66
7	7311.00	56.9 PK	74.0	-17.1	1.22 V	75	8.43	48.47
8	7311.00	50.2 AV	54.0	-3.8	1.22 V	75	1.73	48.47

**REMARKS:**

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



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<b>CHANNEL</b>	TX Channel 11	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	105.4 PK			1.54 H	147	72.54	32.86
2	*2462.00	103.4 AV			1.54 H	147	70.54	32.86
3	2483.50	58.1 PK	74.0	-15.9	1.54 H	149	25.18	32.92
4	2483.50	46.9 AV	54.0	-7.1	1.54 H	149	13.98	32.92
5	2500.00	59.1 PK	74.0	-14.9	1.11 H	89	26.13	32.97
6	2500.00	50.7 AV	54.0	-3.3	1.11 H	89	17.73	32.97
7	3733.00	47.9 PK	74.0	-26.1	1.65 H	227	11.58	36.32
8	3733.00	41.7 AV	54.0	-12.3	1.65 H	227	5.38	36.32
9	4924.00	48.6 PK	74.0	-25.4	1.06 H	325	7.79	40.81
10	4924.00	36.9 AV	54.0	-17.1	1.06 H	325	-3.91	40.81
11	5000.00	53.8 PK	74.0	-20.2	1.04 H	360	12.83	40.97
12	5000.00	48.7 AV	54.0	-5.3	1.04 H	360	7.73	40.97
13	5400.00	54.0 PK	74.0	-20.0	1.29 H	96	11.91	42.09
14	5400.00	49.1 AV	54.0	-4.9	1.29 H	96	7.01	42.09
15	7386.00	54.9 PK	74.0	-19.1	1.21 H	76	6.48	48.42
16	7386.00	42.3 AV	54.0	-11.7	1.21 H	76	-6.12	48.42

**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	111.3 PK			1.06 V	151	78.44	32.86
2	*2462.00	109.1 AV			1.06 V	151	76.24	32.86
3	2483.50	62.6 PK	74.0	-11.4	1.00 V	116	29.68	32.92
4	2483.50	52.9 AV	54.0	-1.1	1.00 V	116	19.98	32.92
5	3733.00	49.7 PK	74.0	-24.3	1.00 V	264	13.38	36.32
6	3733.00	45.1 AV	54.0	-8.9	1.00 V	264	8.78	36.32
7	4924.00	48.9 PK	74.0	-25.1	1.06 V	86	8.09	40.81
8	4924.00	38.2 AV	54.0	-15.8	1.06 V	86	-2.61	40.81
9	7386.00	57.6 PK	74.0	-16.4	1.04 V	85	9.18	48.42
10	7386.00	50.3 AV	54.0	-3.7	1.04 V	85	1.88	48.42

**REMARKS:**

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



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802.11g

<b>CHANNEL</b>	TX Channel 1	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	63.4 PK	74.0	-10.6	1.00 H	159	30.77	32.63
2	2390.00	49.1 AV	54.0	-4.9	1.00 H	159	16.47	32.63
3	*2412.00	103.5 PK			1.00 H	159	70.79	32.71
4	*2412.00	93.2 AV			1.00 H	159	60.49	32.71
5	2500.00	58.9 PK	74.0	-15.1	1.11 H	89	25.93	32.97
6	2500.00	50.0 AV	54.0	-4.0	1.11 H	89	17.03	32.97
7	4824.00	48.5 PK	74.0	-25.5	1.04 H	332	8.02	40.48
8	4824.00	36.5 AV	54.0	-17.5	1.04 H	332	-3.98	40.48

**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	2390.00	71.5 PK	74.0	-2.5	1.07 V	154	38.87	32.63
2	2390.00	53.2 AV	54.0	-0.8	1.07 V	154	20.57	32.63
3	*2412.00	109.2 PK			1.05 V	153	76.49	32.71
4	*2412.00	98.6 AV			1.05 V	153	65.89	32.71
5	4824.00	48.6 PK	74.0	-25.4	1.10 V	85	8.12	40.48
6	4824.00	37.9 AV	54.0	-16.1	1.10 V	85	-2.58	40.48

**REMARKS:**

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



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<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	*2437.00	109.4 PK			1.00 H	173	76.62	32.78
2	*2437.00	99.3 AV			1.00 H	173	66.52	32.78
3	4874.00	48.5 PK	74.0	-25.5	1.07 H	329	7.84	40.66
4	4874.00	37.8 AV	54.0	-16.2	1.07 H	329	-2.86	40.66
5	7311.00	55.2 PK	74.0	-18.8	1.15 H	101	6.73	48.47
6	7311.00	42.2 AV	54.0	-11.8	1.15 H	101	-6.27	48.47

**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	2320.00	63.6 PK	74.0	-10.4	1.10 V	157	31.22	32.38
2	2320.00	52.4 AV	54.0	-1.6	1.10 V	157	20.02	32.38
3	2357.00	62.3 PK	74.0	-11.7	1.09 V	154	29.78	32.52
4	2357.00	50.8 AV	54.0	-3.2	1.09 V	154	18.28	32.52
5	*2437.00	114.9 PK			1.05 V	153	82.12	32.78
6	*2437.00	104.7 AV			1.05 V	153	71.92	32.78
7	4874.00	49.6 PK	74.0	-24.4	1.01 V	86	8.94	40.66
8	4874.00	39.2 AV	54.0	-14.8	1.01 V	86	-1.46	40.66
9	7311.00	52.8 PK	74.0	-21.2	1.07 V	86	4.33	48.47
10	7311.00	42.2 AV	54.0	-11.8	1.07 V	86	-6.27	48.47

**REMARKS:**

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



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<b>CHANNEL</b>	TX Channel 11	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	103.6 PK			1.04 H	156	70.74	32.86
2	*2462.00	93.1 AV			1.04 H	156	60.24	32.86
3	2483.50	60.1 PK	74.0	-13.9	1.04 H	156	27.18	32.92
4	2483.50	47.4 AV	54.0	-6.6	1.04 H	156	14.48	32.92
5	4924.00	48.5 PK	74.0	-25.5	1.10 H	325	7.69	40.81
6	4924.00	36.5 AV	54.0	-17.5	1.10 H	325	-4.31	40.81
7	7386.00	54.6 PK	74.0	-19.4	1.16 H	111	6.18	48.42
8	7386.00	41.7 AV	54.0	-12.3	1.16 H	111	-6.72	48.42

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.8 PK			1.00 V	114	76.94	32.86
2	*2462.00	99.2 AV			1.00 V	114	66.34	32.86
3	2483.50	64.9 PK	74.0	-9.1	1.00 V	113	31.98	32.92
4	2483.50	53.0 AV	54.0	-1.0	1.00 V	113	20.08	32.92
5	4924.00	49.4 PK	74.0	-24.6	1.11 V	84	8.59	40.81
6	4924.00	38.7 AV	54.0	-15.3	1.11 V	84	-2.11	40.81
7	7386.00	52.0 PK	74.0	-22.0	1.06 V	73	3.58	48.42
8	7386.00	41.5 AV	54.0	-12.5	1.06 V	73	-6.92	48.42

**REMARKS:**

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



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802.11n (20MHz)

<b>CHANNEL</b>	TX Channel 1	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	62.9 PK	74.0	-11.1	1.43 H	132	30.27	32.63
2	2390.00	48.2 AV	54.0	-5.8	1.43 H	132	15.57	32.63
3	*2412.00	105.9 PK			1.43 H	132	73.19	32.71
4	*2412.00	96.2 AV			1.43 H	132	63.49	32.71
5	2500.00	59.0 PK	74.0	-15.0	1.18 H	86	26.03	32.97
6	2500.00	50.4 AV	54.0	-3.6	1.18 H	86	17.43	32.97
7	4824.00	48.3 PK	74.0	-25.7	1.01 H	333	7.82	40.48
8	4824.00	37.5 AV	54.0	-16.5	1.01 H	333	-2.98	40.48
9	5000.00	53.3 PK	74.0	-20.7	1.04 H	360	12.33	40.97
10	5000.00	48.2 AV	54.0	-5.8	1.04 H	360	7.23	40.97
11	5400.00	53.9 PK	74.0	-20.1	1.26 H	97	11.81	42.09
12	5400.00	48.9 AV	54.0	-5.1	1.26 H	97	6.81	42.09

**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	69.5 PK	74.0	-4.5	1.00 V	89	36.87	32.63
2	<b>2390.00</b>	<b>53.5 AV</b>	<b>54.0</b>	<b>-0.5</b>	<b>1.00 V</b>	<b>89</b>	<b>20.87</b>	<b>32.63</b>
3	*2412.00	111.7 PK			1.00 V	88	78.99	32.71
4	*2412.00	100.6 AV			1.00 V	88	67.89	32.71
5	3732.80	49.6 PK	74.0	-24.4	1.00 V	265	13.28	36.32
6	3732.80	44.7 AV	54.0	-9.3	1.00 V	265	8.38	36.32
7	4824.00	49.2 PK	74.0	-24.8	1.01 V	98	8.72	40.48
8	4824.00	38.3 AV	54.0	-15.7	1.01 V	98	-2.18	40.48
9	5000.00	53.1 PK	74.0	-20.9	1.83 V	95	12.13	40.97
10	5000.00	49.0 AV	54.0	-5.0	1.83 V	95	8.03	40.97
11	5400.00	53.8 PK	74.0	-20.2	1.27 V	99	11.71	42.09
12	5400.00	48.8 AV	54.0	-5.2	1.27 V	99	6.71	42.09

**REMARKS:**

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



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<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	*2437.00	116.6 PK			1.35 H	126	83.82	32.78
2	*2437.00	106.8 AV			1.35 H	126	74.02	32.78
3	4874.00	48.9 PK	74.0	-25.1	1.08 H	338	8.24	40.66
4	4874.00	38.2 AV	54.0	-15.8	1.08 H	338	-2.46	40.66
5	7311.00	54.3 PK	74.0	-19.7	1.19 H	97	5.83	48.47
6	7311.00	41.4 AV	54.0	-12.6	1.19 H	97	-7.07	48.47

**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	65.1 PK	74.0	-8.9	1.00 V	83	32.47	32.63
2	2390.00	52.0 AV	54.0	-2.0	1.00 V	83	19.37	32.63
3	*2437.00	120.0 PK			1.00 V	83	87.22	32.78
4	*2437.00	109.4 AV			1.00 V	83	76.62	32.78
5	2483.50	62.5 PK	74.0	-11.5	1.00 V	83	29.58	32.92
6	2483.50	49.1 AV	54.0	-4.9	1.00 V	83	16.18	32.92
7	4874.00	48.9 PK	74.0	-25.1	1.12 V	99	8.24	40.66
8	4874.00	38.2 AV	54.0	-15.8	1.12 V	99	-2.46	40.66
9	7311.00	56.0 PK	74.0	-18.0	1.40 V	84	7.53	48.47
10	7311.00	45.1 AV	54.0	-8.9	1.40 V	84	-3.37	48.47

**REMARKS:**

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





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<b>CHANNEL</b>	TX Channel 11	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	110.3 PK			1.32 H	117	77.44	32.86
2	*2462.00	99.9 AV			1.32 H	117	67.04	32.86
3	2483.50	63.9 PK	74.0	-10.1	1.32 H	117	30.98	32.92
4	2483.50	50.4 AV	54.0	-3.6	1.32 H	117	17.48	32.92
5	4924.00	48.9 PK	74.0	-25.1	1.07 H	350	8.09	40.81
6	4924.00	38.3 AV	54.0	-15.7	1.07 H	350	-2.51	40.81
7	7386.00	53.9 PK	74.0	-20.1	1.17 H	109	5.48	48.42
8	7386.00	40.9 AV	54.0	-13.1	1.17 H	109	-7.52	48.42

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.6 PK			1.00 V	82	80.74	32.86
2	*2462.00	102.8 AV			1.00 V	82	69.94	32.86
3	2483.50	69.0 PK	74.0	-5.0	1.00 V	82	36.08	32.92
4	<b>2483.50</b>	<b>53.5 AV</b>	<b>54.0</b>	<b>-0.5</b>	<b>1.00 V</b>	<b>82</b>	<b>20.58</b>	<b>32.92</b>
5	4924.00	48.5 PK	74.0	-25.5	1.01 V	78	7.69	40.81
6	4924.00	38.0 AV	54.0	-16.0	1.01 V	78	-2.81	40.81
7	7386.00	52.3 PK	74.0	-21.7	1.38 V	52	3.88	48.42
8	7386.00	41.6 AV	54.0	-12.4	1.38 V	52	-6.82	48.42

**REMARKS:**

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



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802.11n (40MHz)

<b>CHANNEL</b>	TX Channel 3	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	62.6 PK	74.0	-11.4	1.26 H	122	29.97	32.63
2	2390.00	48.0 AV	54.0	-6.0	1.26 H	122	15.37	32.63
3	*2422.00	97.3 PK			1.26 H	122	64.56	32.74
4	*2422.00	85.9 AV			1.26 H	122	53.16	32.74
5	4844.00	48.8 PK	74.0	-25.2	1.12 H	332	8.25	40.55
6	4844.00	37.8 AV	54.0	-16.2	1.12 H	332	-2.75	40.55
7	7266.00	54.6 PK	74.0	-19.4	1.21 H	96	6.10	48.50
8	7266.00	41.5 AV	54.0	-12.5	1.21 H	96	-7.00	48.50

**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	1.00 V	106	38.47	32.63
2	2390.00	53.2 AV	54.0	-0.8	1.00 V	106	20.57	32.63
3	*2422.00	104.3 PK			1.00 V	80	71.56	32.74
4	*2422.00	94.3 AV			1.00 V	80	61.56	32.74
5	4844.00	49.1 PK	74.0	-24.9	1.05 V	85	8.55	40.55
6	4844.00	38.1 AV	54.0	-15.9	1.05 V	85	-2.45	40.55
7	7266.00	52.1 PK	74.0	-21.9	1.19 V	107	3.60	48.50
8	7266.00	40.6 AV	54.0	-13.4	1.19 V	107	-7.90	48.50

**REMARKS:**

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



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<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	*2437.00	101.9 PK			1.25 H	112	69.12	32.78
2	*2437.00	90.2 AV			1.25 H	112	57.42	32.78
3	4874.00	48.8 PK	74.0	-25.2	1.06 H	333	8.14	40.66
4	4874.00	38.1 AV	54.0	-15.9	1.06 H	333	-2.56	40.66
5	7311.00	54.6 PK	74.0	-19.4	1.18 H	103	6.13	48.47
6	7311.00	41.5 AV	54.0	-12.5	1.18 H	103	-6.97	48.47

**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	67.6 PK	74.0	-6.4	1.00 V	85	34.97	32.63
2	<b>2390.00</b>	<b>53.5 AV</b>	<b>54.0</b>	<b>-0.5</b>	<b>1.00 V</b>	<b>85</b>	<b>20.87</b>	<b>32.63</b>
3	*2437.00	110.5 PK			1.00 V	82	77.72	32.78
4	*2437.00	99.1 AV			1.00 V	82	66.32	32.78
5	2483.50	61.7 PK	74.0	-12.3	1.00 V	81	28.78	32.92
6	2483.50	49.4 AV	54.0	-4.6	1.00 V	81	16.48	32.92
7	4874.00	49.0 PK	74.0	-25.0	1.12 V	85	8.34	40.66
8	4874.00	38.1 AV	54.0	-15.9	1.12 V	85	-2.56	40.66
9	7311.00	52.3 PK	74.0	-21.7	1.23 V	110	3.83	48.47
10	7311.00	40.9 AV	54.0	-13.1	1.23 V	110	-7.57	48.47

**REMARKS:**

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



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<b>CHANNEL</b>	TX Channel 9	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	101.3 PK			1.21 H	123	68.47	32.83
2	*2452.00	89.8 AV			1.21 H	123	56.97	32.83
3	2483.50	65.1 PK	74.0	-8.9	1.21 H	123	32.18	32.92
4	2483.50	50.2 AV	54.0	-3.8	1.21 H	123	17.28	32.92
5	2500.00	59.8 PK	74.0	-14.2	1.10 H	115	26.83	32.97
6	2500.00	49.0 AV	54.0	-5.0	1.10 H	115	16.03	32.97
7	4904.00	48.9 PK	74.0	-25.1	1.10 H	351	8.13	40.77
8	4904.00	38.2 AV	54.0	-15.8	1.10 H	351	-2.57	40.77
9	7356.00	54.5 PK	74.0	-19.5	1.15 H	109	6.06	48.44
10	7356.00	41.5 AV	54.0	-12.5	1.15 H	109	-6.94	48.44

**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	109.8 PK			1.00 V	91	76.97	32.83
2	*2452.00	98.0 AV			1.00 V	91	65.17	32.83
3	2483.50	71.2 PK	74.0	-2.8	1.00 V	92	38.28	32.92
4	<b>2483.50</b>	<b>53.5 AV</b>	<b>54.0</b>	<b>-0.5</b>	<b>1.00 V</b>	<b>92</b>	<b>20.58</b>	<b>32.92</b>
5	4904.00	48.8 PK	74.0	-25.2	1.01 V	85	8.03	40.77
6	4904.00	37.8 AV	54.0	-16.2	1.01 V	85	-2.97	40.77
7	7356.00	52.6 PK	74.0	-21.4	1.23 V	99	4.16	48.44
8	7356.00	41.4 AV	54.0	-12.6	1.23 V	99	-7.04	48.44

**REMARKS:**

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

### 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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP 40	100060	May 09, 2012	May 08, 2013

**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. Tested date : Sep. 14, 2012

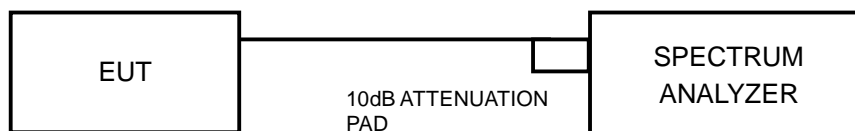
#### 4.3.3 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
2. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
3. Trace mode = max hold.
4. Sweep = auto couple.
5. 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

#### 4.3.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.3.5 TEST SETUP



#### 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.



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#### 4.3.7 TEST RESULTS

##### 802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	8.49	0.5	PASS
6	2437	8.13	0.5	PASS
11	2462	8.35	0.5	PASS

##### 802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.59	0.5	PASS
6	2437	16.56	0.5	PASS
11	2462	16.49	0.5	PASS

##### 802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	17.74	17.81	17.85	0.5	PASS
6	2437	17.84	17.70	17.75	0.5	PASS
11	2462	17.80	17.74	17.82	0.5	PASS

##### 802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
3	2422	36.28	36.66	36.00	0.5	PASS
6	2437	36.46	36.60	36.10	0.5	PASS
9	2452	36.40	36.48	36.30	0.5	PASS



#### 4.4 CONDUCTED OUTPUT POWER MEASUREMENT

##### 4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

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

##### 4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP40	100036	Dec. 14, 2011	Dec. 13, 2012

**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. Tested date : Sep. 14, 2012

##### 4.4.3 TEST PROCEDURES

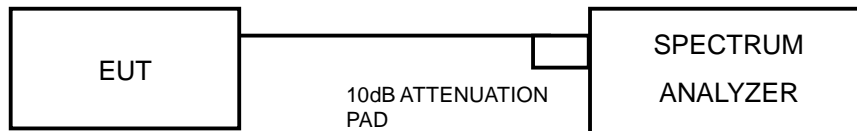
Follow FCC KDB 558074 DTS test procedure:  
Measurement Procedure AVG2

1. Set the analyzer span to 5-30% greater than the EBW.
2. Set RBW =1MHz.
3. Set the VBW  $\geq 3 \times$  RBW.
4. Number of measurement points in the sweep  $\geq 2 \times$  (span/RBW).
5. Sweep time = auto couple.
6. Detector = power averaging (RMS) or sample.
7. Employ trace averaging in power averaging (RMS) mode over a minimum of 100 traces.
8. Use the spectrum analyzer's integrated band power measurement function with band limits set equal to the EBW band edges.

##### 4.4.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.4.5 TEST SETUP



#### 4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6





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#### 4.4.7 TEST RESULTS

##### 802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	73.790	18.68	30	PASS
6	2437	93.756	19.72	30	PASS
11	2462	83.368	19.21	30	PASS

##### 802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	26.669	14.26	30	PASS
6	2437	126.474	21.02	30	PASS
11	2462	29.785	14.74	30	PASS

##### 802.11n (HT20)

CHAN.	FREQUENCY (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 1				
1	2412	9.78	10.55	11.18	33.978	15.31	30	PASS
6	2437	19.80	20.05	20.93	320.537	25.06	30	PASS
11	2462	11.68	11.73	12.98	49.478	16.94	30	PASS

##### 802.11n (HT40)

CHAN.	FREQUENCY (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 1				
3	2422	6.10	3.49	7.40	11.803	10.72	30	PASS
6	2437	10.10	9.35	11.34	32.457	15.11	30	PASS
9	2452	8.04	9.10	8.52	21.608	13.35	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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP 40	100060	May 09, 2012	May 08, 2013

**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. Tested date : Sep. 14, 2012

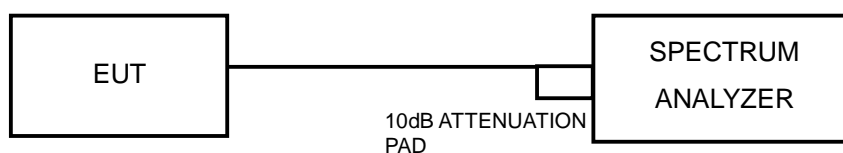
### 4.5.3 TEST PROCEDURE

1. Set the RBW = 100 kHz, VBW = 300 kHz, Detector = Power Average (RMS).
2. Number of measurement points in the sweep  $\geq 2 \times \text{span/RBW}$
3. Manually set the sweep time to  $\geq 10 \times (\text{number of measurement points in sweep}) \times (\text{transmission symbol period})$ .
4. Perform the measurement over a single sweep.
5. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
6. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where  $\text{BWCF} = 10\log(3 \text{ kHz}/100\text{kHz})$

### 4.5.4 DEVIATION FROM TEST STANDARD

No deviation

### 4.5.5 TEST SETUP





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#### 4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6



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## 4.5.7 TEST RESULTS

### 802.11b

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	2.16	-13.07	8	PASS
6	2437	3.43	-11.80	8	PASS
11	2462	2.83	-12.40	8	PASS

### 802.11g

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	-5.04	-20.27	8	PASS
6	2437	2.01	-13.22	8	PASS
11	2462	-4.40	-19.63	8	PASS

### 802.11n (HT20)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-9.60	-24.83	4.77	-20.06	8	PASS
	6	2437	0.25	-14.98	4.77	-10.21	8	PASS
	11	2462	-7.72	-22.95	4.77	-18.18	8	PASS
1	1	2412	-8.76	-23.99	4.77	-19.22	8	PASS
	6	2437	0.79	-14.44	4.77	-9.67	8	PASS
	11	2462	-7.53	-22.76	4.77	-17.99	8	PASS
2	1	2412	-7.67	-22.90	4.77	-18.13	8	PASS
	6	2437	1.51	-13.72	4.77	-8.95	8	PASS
	11	2462	-6.07	-21.30	4.77	-16.53	8	PASS



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### 802.11n (HT40)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	3	2422	-15.06	-30.29	4.77	-25.52	8	PASS
	6	2437	-10.81	-26.04	4.77	-21.27	8	PASS
	9	2452	-11.94	-27.17	4.77	-22.40	8	PASS
1	3	2422	-17.77	-33.00	4.77	-28.23	8	PASS
	6	2437	-11.29	-26.52	4.77	-21.75	8	PASS
	9	2452	-11.99	-27.22	4.77	-22.45	8	PASS
2	3	2422	-13.53	-28.76	4.77	-23.99	8	PASS
	6	2437	-9.70	-24.93	4.77	-20.16	8	PASS
	9	2452	-10.73	-25.96	4.77	-21.19	8	PASS



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## 4.6 CONDUCTED OUT-BAND EMISSION MEASUREMENT

### 4.6.1 LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT

Below 30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

### 4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP 40	100060	May 09, 2012	May 08, 2013

**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. Tested date : Sep. 14, 2012

### 4.6.3 TEST PROCEDURE

#### MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW  $\geq$  300 kHz.
3. Detector = power average (RMS).
4. Manually set the sweep time to:  $\geq 10 \times$  (number of measurement points in sweep)  $\times$  (transmission symbol period).
5. Perform the measurement over a single sweep.
6. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

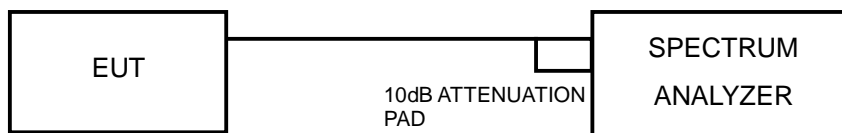
## MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW  $\geq$  300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = power average (RMS).
5. Manually set the sweep time to  $\geq 10 \times$  (number of measurement points in sweep)  $\times$  (transmission symbol period).
6. Perform the measurement over a single sweep.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

### 4.6.4 DEVIATION FROM TEST STANDARD

No deviation

### 4.6.5 TEST SETUP



### 4.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

### 4.6.7 TEST RESULTS

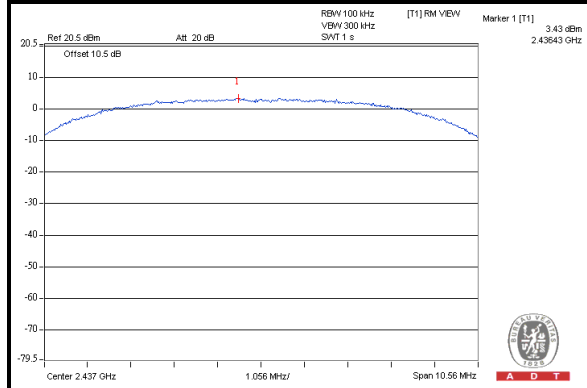
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.



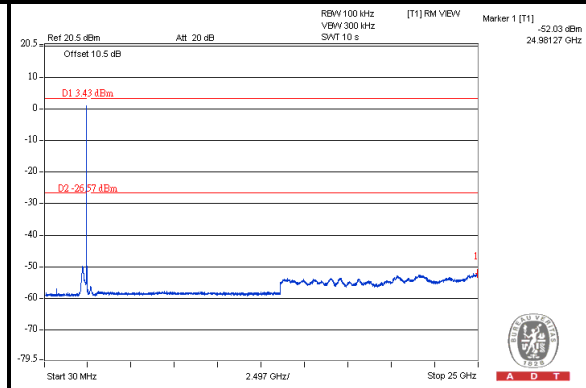
A D T

### 802.11b

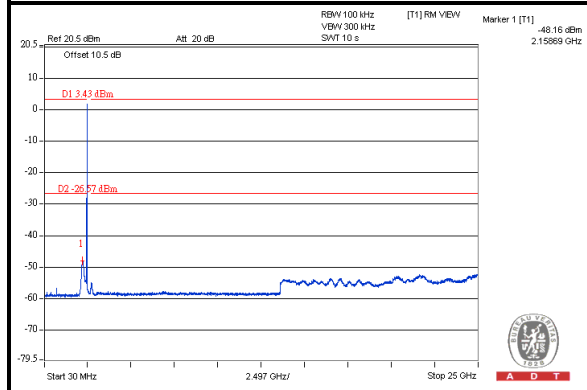
#### Maximum REF



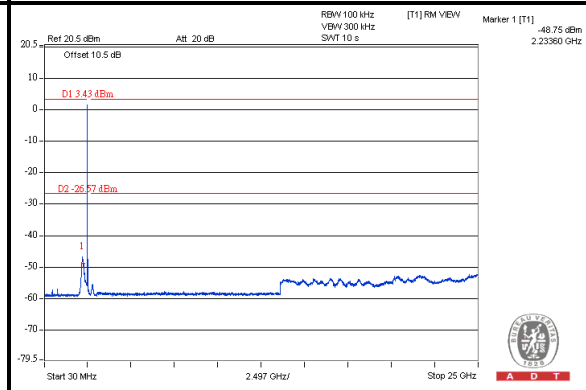
#### CH 1



#### CH 6



#### CH 11

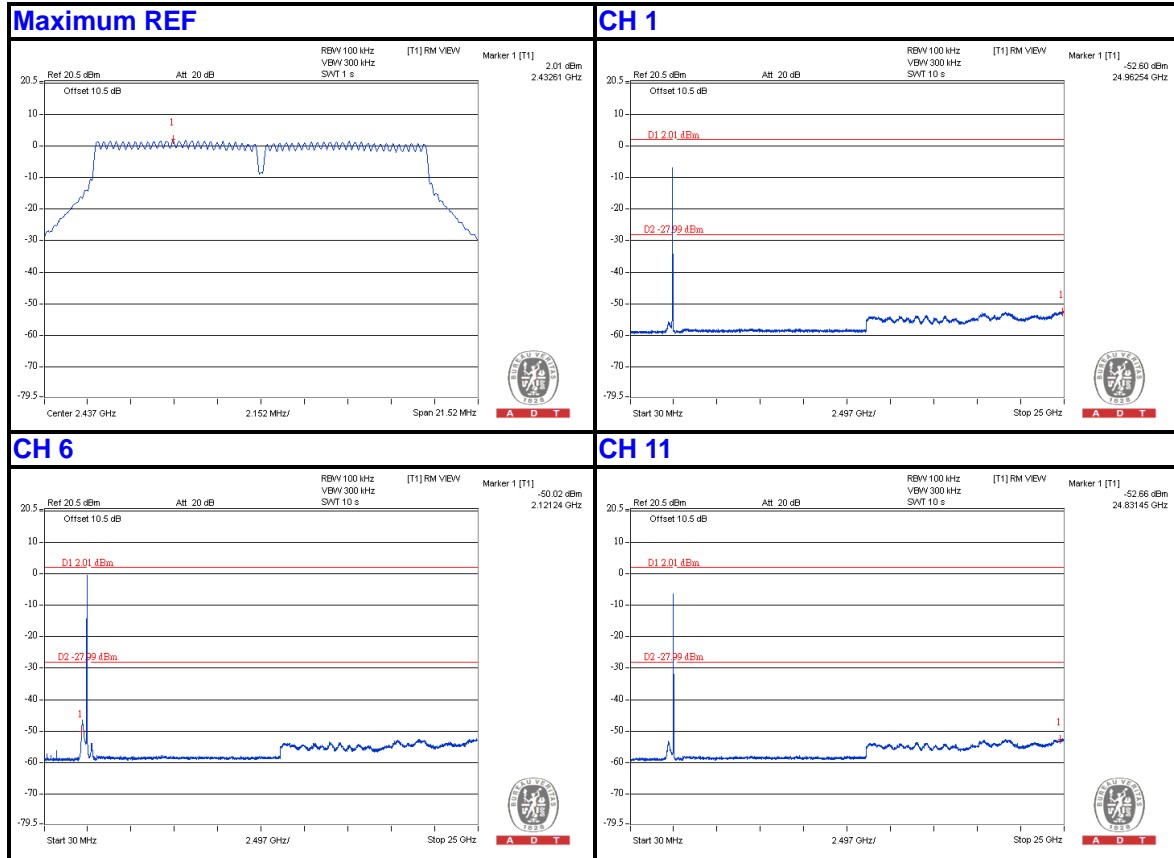






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### 802.11g

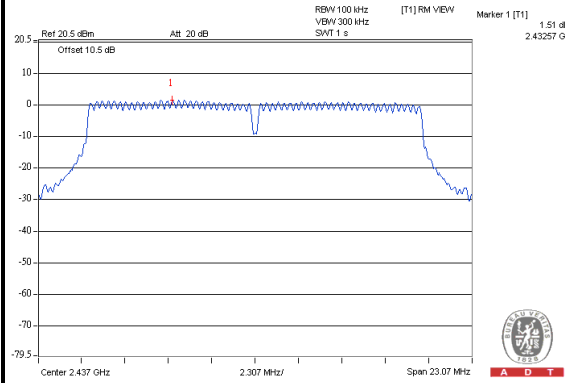




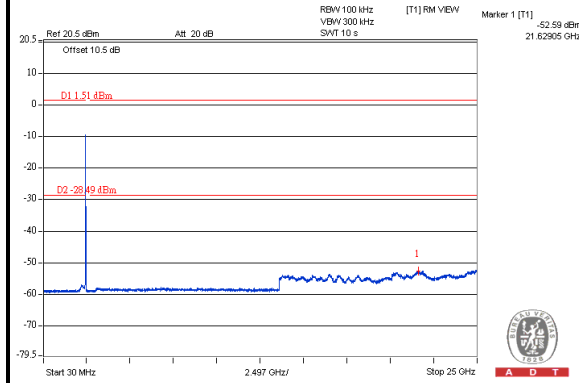
A D T

### 802.11n (HT20)

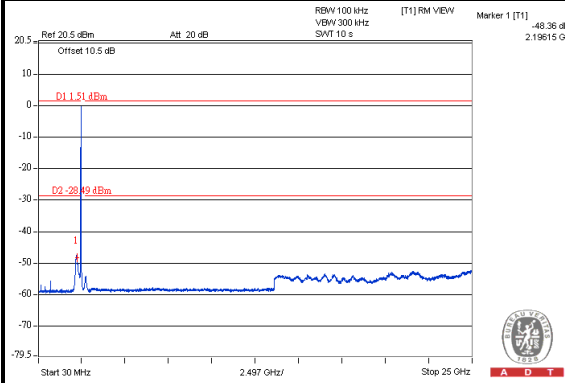
#### Maximum REF



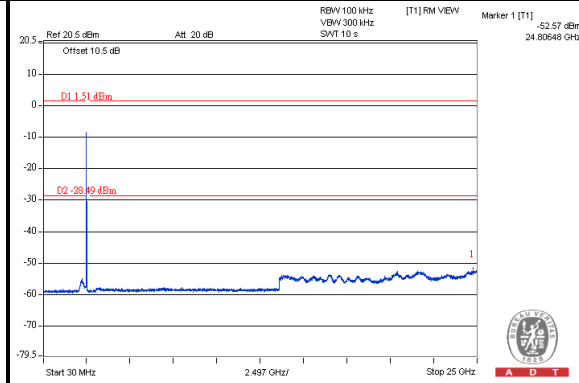
#### CH 1



#### CH 6



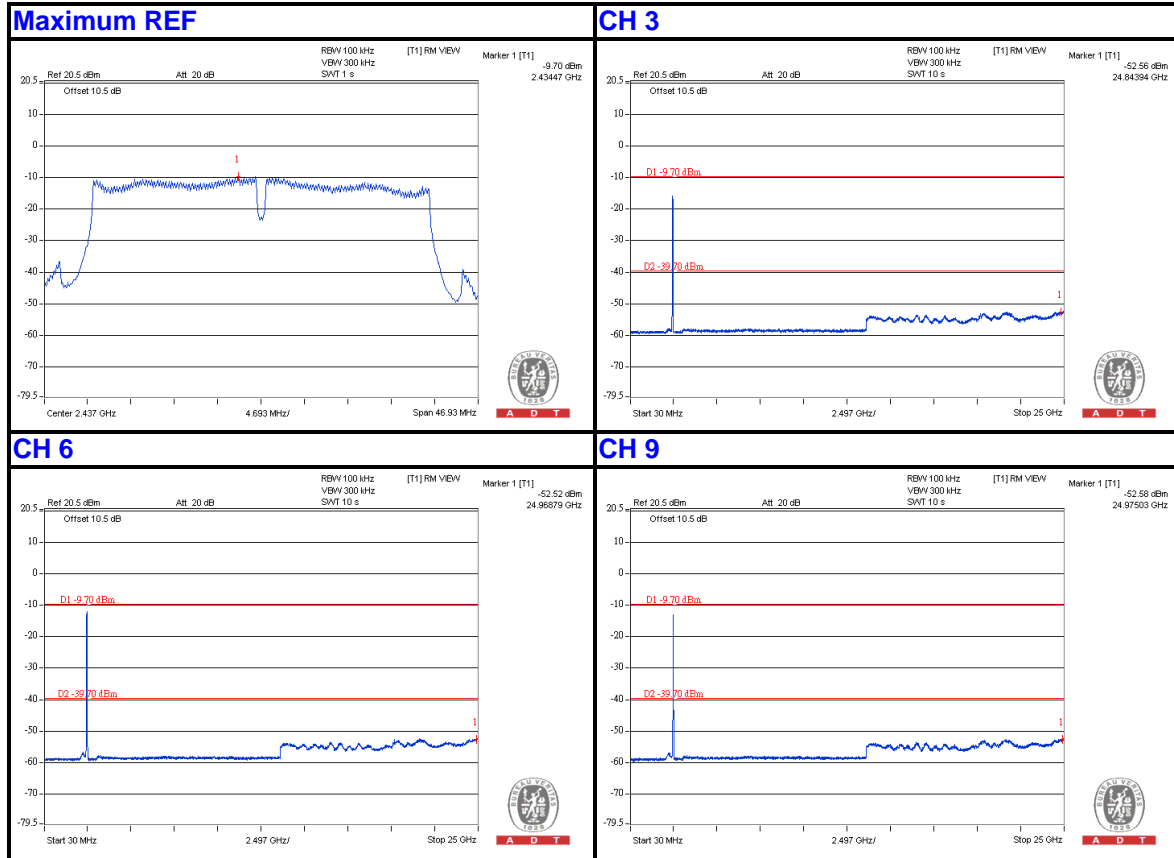
#### CH 11





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### 802.11n (HT40)





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## 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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





## 6. INFORMATION ON THE TESTING LABORATORIES

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

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

**Linko EMC/RF Lab:**

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**Web Site:** [www.bureauveritas-adt.com](http://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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## **7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No modifications were made to the EUT by the lab during the test.

**--- END ---**