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# FCC TEST REPORT (WLAN 15.247)

**REPORT NO.:** RF131223D01

**MODEL NO.:** HA815

**FCC ID:** 2ACNOHA815

**RECEIVED:** Dec. 30, 2013

**TESTED:** Feb. 26 ~ Apr. 1, 2014

**ISSUED:** Apr. 23, 2014

**APPLICANT:** I/O INTERCONNECT INC.

**ADDRESS:** 5F, No.19-3, Sanchong Rd., Nangang District, Taipei  
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**ISSUED BY:** Bureau Veritas Consumer Products Services (H.K.)  
Ltd., Taoyuan Branch

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New  
Taipei City, Taiwan ( R.O.C. )

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## TABLE OF CONTENTS

RELEASE CONTROL RECORD.....	4
1. CERTIFICATION .....	5
2. SUMMARY OF TEST RESULTS .....	6
2.1 MEASUREMENT UNCERTAINTY .....	6
3. GENERAL INFORMATION .....	7
3.1 GENERAL DESCRIPTION OF EUT .....	7
3.2 DESCRIPTION OF TEST MODES .....	9
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL .....	10
3.3 DUTY CYCLE OF TEST SIGNAL .....	13
3.4 DESCRIPTION OF SUPPORT UNITS .....	15
3.4.1 CONFIGURATION OF SYSTEM UNDER TEST .....	15
3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS .....	16
4. TEST TYPES AND RESULTS .....	17
4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT .....	17
4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT .....	17
4.1.2 TEST INSTRUMENTS .....	18
4.1.3 TEST PROCEDURES .....	19
4.1.4 DEVIATION FROM TEST STANDARD .....	19
4.1.5 TEST SETUP .....	20
4.1.6 EUT OPERATING CONDITIONS .....	20
4.1.7 TEST RESULTS .....	21
4.2 CONDUCTED EMISSION MEASUREMENT .....	65
4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT .....	65
4.2.2 TEST INSTRUMENTS .....	65
4.2.3 TEST PROCEDURES .....	66
4.2.4 DEVIATION FROM TEST STANDARD .....	66
4.2.5 TEST SETUP .....	66
4.2.6 EUT OPERATING CONDITIONS .....	66
4.2.7 TEST RESULTS .....	67
4.3 6DB BANDWIDTH MEASUREMENT .....	71
4.3.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT .....	71
4.3.2 TEST SETUP .....	71
4.3.3 TEST INSTRUMENTS .....	71
4.3.4 TEST PROCEDURE .....	71
4.3.5 DEVIATION FROM TEST STANDARD .....	71
4.3.6 EUT OPERATING CONDITIONS .....	71
4.3.7 TEST RESULTS .....	72



4.4	CONDUCTED OUTPUT POWER .....	76
4.4.1	LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT .....	76
4.4.2	TEST SETUP .....	76
4.4.3	TEST INSTRUMENTS .....	76
4.4.4	TEST PROCEDURES.....	76
4.4.5	DEVIATION FROM TEST STANDARD .....	76
4.4.6	EUT OPERATING CONDITIONS.....	76
4.4.7	TEST RESULTS - FOR PEAK POWER .....	77
4.4.8	TEST RESULTS - FOR AVERAGE POWER.....	79
4.5	POWER SPECTRAL DENSITY MEASUREMENT .....	81
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT .....	81
4.5.2	TEST SETUP .....	81
4.5.3	TEST INSTRUMENTS .....	81
4.5.4	TEST PROCEDURE .....	81
4.5.5	DEVIATION FROM TEST STANDARD .....	81
4.5.6	EUT OPERATING CONDITION .....	81
4.5.7	TEST RESULTS.....	82
4.6	CONDUCTED OUT OF BAND EMISSION MEASUREMENT .....	86
4.6.1	LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT ....	86
4.6.2	TEST SETUP .....	86
4.6.3	TEST INSTRUMENTS .....	86
4.6.4	TEST PROCEDURE .....	86
4.6.5	DEVIATION FROM TEST STANDARD .....	87
4.6.6	EUT OPERATING CONDITION .....	87
4.6.7	TEST RESULTS.....	87
5.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	95
6.	INFORMATION ON THE TESTING LABORATORIES .....	96
7.	APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB .....	97



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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF131223D01	Original release	Apr. 23, 2014



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## 1. CERTIFICATION

**PRODUCT:** HP Wireless Display Adapter  
**BRAND NAME:** HP  
**MODEL NO.:** HA815  
**APPLICANT:** I/O INTERCONNECT INC.  
**TESTED:** Feb. 26 ~ Apr. 1, 2014  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** **FCC Part 15, Subpart C (Section 15.247)**  
ANSI C63.10-2009

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY :** Celia Chen , **DATE:** Apr. 23, 2014  
( Celia Chen / Senior Specialist )

**APPROVED BY :** Rex Lai , **DATE:** Apr. 23, 2014  
( Rex Lai / Assistant Manager )

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -5.01dB at 0.48067MHz.
15.205 & 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2390.00MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -4.3dB at 2483.50MHz.
15.247(d)	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is I-PEX not a standard connector.

### 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	Uncertainty
Conducted emissions	150kHz~30MHz	3.43 dB
Radiated emissions	30MHz ~ 1GHz	4.00 dB
	Above 1GHz	3.36 dB

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

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>EUT</b>	HP Wireless Display Adapter
<b>MODEL NO.</b>	HA815
<b>POWER SUPPLY</b>	5Vdc from AC adapter
<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:11/ 5.5/ 2/ 1Mbps 802.11g: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6Mbps 802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6Mbps 802.11n: up to 150Mbps
<b>OPERATING FREQUENCY</b>	<b>2.4GHz:</b> 2412 ~ 2462MHz <b>5.0GHz:</b> 5745 ~ 5825MHz
<b>NUMBER OF CHANNEL</b>	<b>2.4GHz:</b> 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) <b>5.0GHz:</b> 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
<b>OUTPUT POWER</b>	258.2mW for 2412 ~ 2462MHz 84.7mW for 5745 ~ 5825MHz
<b>ANTENNA TYPE</b>	Refer to note below
<b>ANTENNA CONNECTOR</b>	Refer to note below
<b>DATA CABLE</b>	HDMI to D-Sub adapter
<b>I/O PORTS</b>	Refer to user's manual
<b>ACCESSORY DEVICES</b>	Refer to Note as below

**NOTE:**

1. The EUT is a HP Wireless Display Adapter.
2. The frequency bands used in this EUT are listed as below.

Frequency Band (MHz)	2412~2462	5180~5240	5745~5825
802.11b	√	-	-
802.11g	√	-	-
802.11a	-	√	√
802.11n (20MHz)	√	√	√
802.11n (40MHz)	√	√	√

3. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

Modulation Mode	Tx Function
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX

4. The following antennas were applied to the EUT:

	Antenna	Type	Connector	Gain (dBi)		
				2.4GHz	5180~5240MHz	5745~5825MHz
Embedded	A	Dipole	I-PEX	0.53	0.16	-0.55
On-board	B	PIFA	-	1.5	1.38	-0.02

5. The EUT consumes power from the following adapter

Brand	Chicony				
Model	W12-010N3E	W12-010N3F	W12-010N3C	W12-010N3A	W12-010N3B
Plug Type	Plug Type G	Plug Type I	Plug Type A	Plug Type A	Plug type C
Input Power	100-240Vac, 50/60Hz, 0.3A				
Output Power	5Vdc, 2A				
Power Line	AC 2 Pin Non-shielded USB to Micro USB (1.8m) with one ferrite core.				
※ Above adapters are identical with each other except for their plug type difference					

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

### FOR 2.4GHz:

11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

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

7 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

### FOR 5.0GHz (5745 ~ 5825MHz):

5 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE <sup>3</sup> 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE<sup>3</sup>1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

#### 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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	ANTENNA
802.11b	2412-2462	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	A & B
802.11g		1 to 11	1, 6, 11	OFDM	BPSK	6.0	
802.11n (20MHz)		1 to 11	1, 6, 11	OFDM	BPSK	6.5	
802.11n (40MHz)		3 to 9	3, 6, 9	OFDM	BPSK	13.5	
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0	
802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5	
802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13	

#### 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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	ANTENNA
802.11g	2412-2462	1 to 11	11	OFDM	BPSK	6.0	A & B
802.11a	5745-5825	149 to 165	149	OFDM	BPSK	6.0	



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**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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	2412-2462	1 to 11	11	OFDM	BPSK	6.0
802.11a	5745-5825	149 to 165	149	OFDM	BPSK	6.0

**BANDEDGE 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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	2412-2462	1 to 11	1, 11	DSSS	DBPSK	1.0
802.11g		1 to 11	1, 11	OFDM	BPSK	6.0
802.11n (20MHz)		1 to 11	1, 11	OFDM	BPSK	6.5
802.11n (40MHz)		3 to 9	3, 9	OFDM	BPSK	13.5
802.11a	5745-5825	149 to 165	149, 165	OFDM	BPSK	6.0
802.11n (20MHz)		149 to 165	149, 165	OFDM	BPSK	6.5
802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13

**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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	2412-2462	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
802.11g		1 to 11	1, 6, 11	OFDM	BPSK	6.0
802.11n (20MHz)		1 to 11	1, 6, 11	OFDM	BPSK	6.5
802.11n (40MHz)		3 to 9	3, 6, 9	OFDM	BPSK	13.5
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13



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**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE <sup>≥</sup> 1G	23deg. C, 73% RH	120Vac, 60Hz	Joey Liu
RE<1G	23deg. C, 73% RH	120Vac, 60Hz	Joey Liu
PLC	21deg. C, 81% RH	120Vac, 60Hz	Jary Huang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Saxon Lee

### 3.3 DUTY CYCLE OF TEST SIGNAL

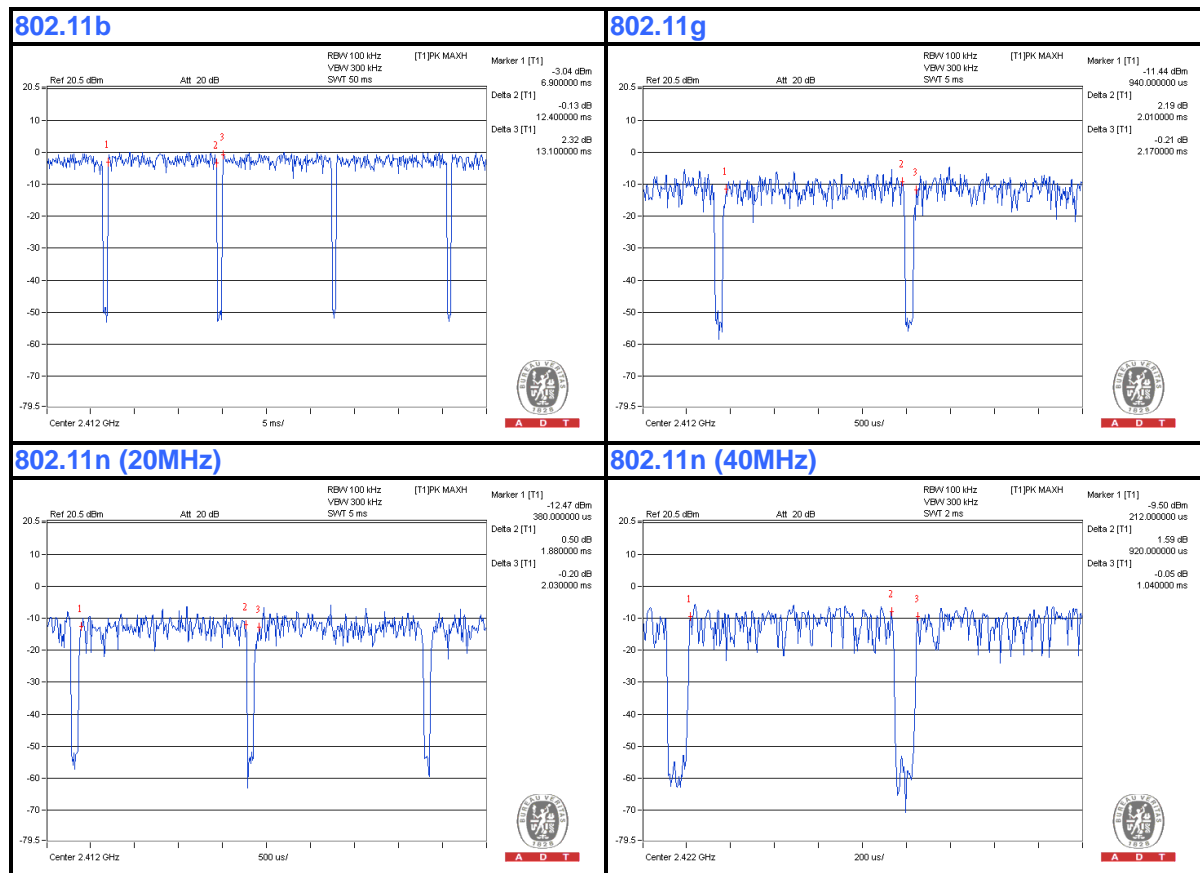
Duty cycle is < 98%, duty factor shall be considered.

**802.11b:** Duty cycle =  $12.4/13.1 = 0.947$ , Duty factor =  $10 * \log(1/0.947) = 0.24$

**802.11g:** Duty cycle =  $2.01/2.17 = 0.926$ , Duty factor =  $10 * \log(1/0.926) = 0.33$

**802.11n (20MHz):** Duty cycle =  $1.88/2.03 = 0.926$ , Duty factor =  $10 * \log(1/0.926) = 0.33$

**802.11n (40MHz):** Duty cycle =  $0.92/1.04 = 0.885$ , Duty factor =  $10 * \log(1/0.885) = 0.53$



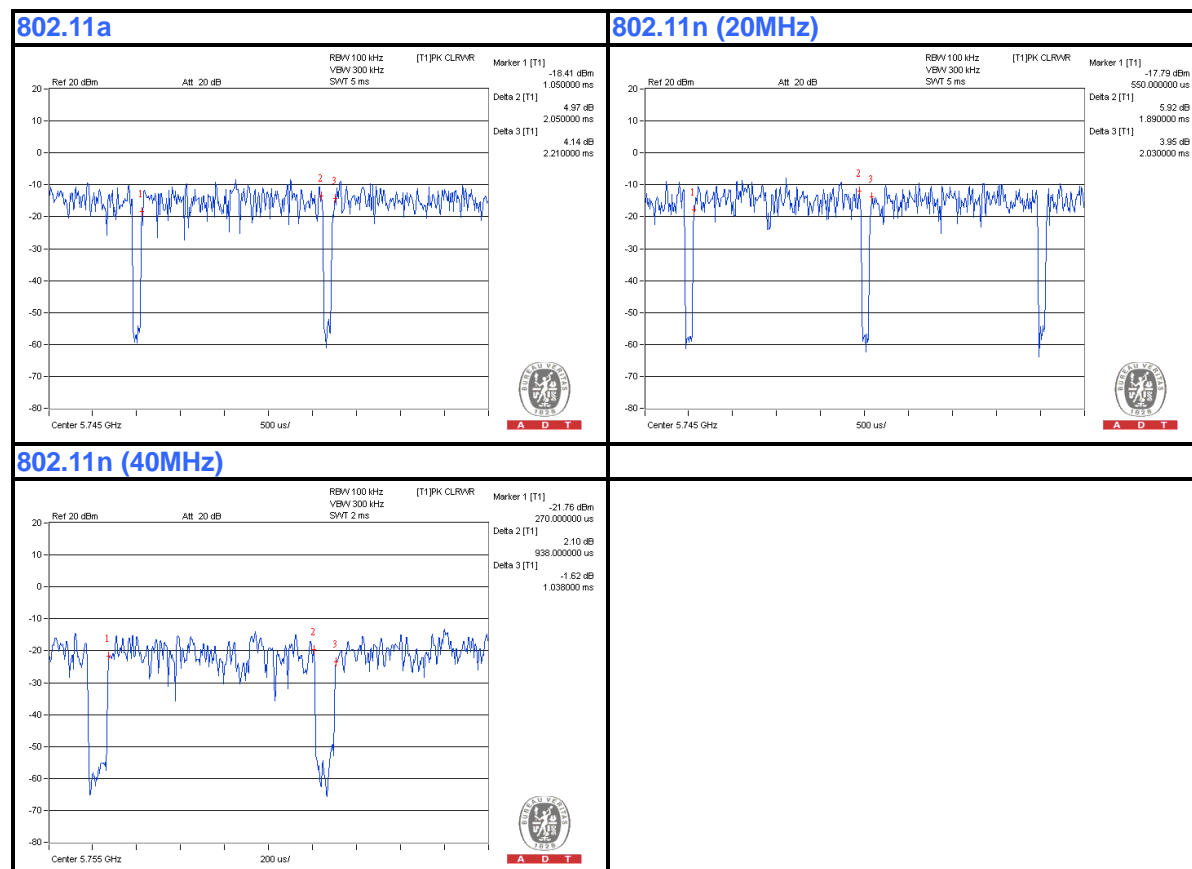


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**802.11a:** Duty cycle =  $2.05/2.21 = 0.928$ , Duty factor =  $10 * \log(1/0.928) = 0.32$

**802.11n (20MHz):** Duty cycle =  $1.89/2.03 = 0.931$ , Duty factor =  $10 * \log(1/0.931) = 0.31$

**802.11n (40MHz):** Duty cycle =  $0.938/1.038 = 0.904$ , Duty factor =  $10 * \log(1/0.904) = 0.44$



### 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.

#### Except for Radiated Emission test

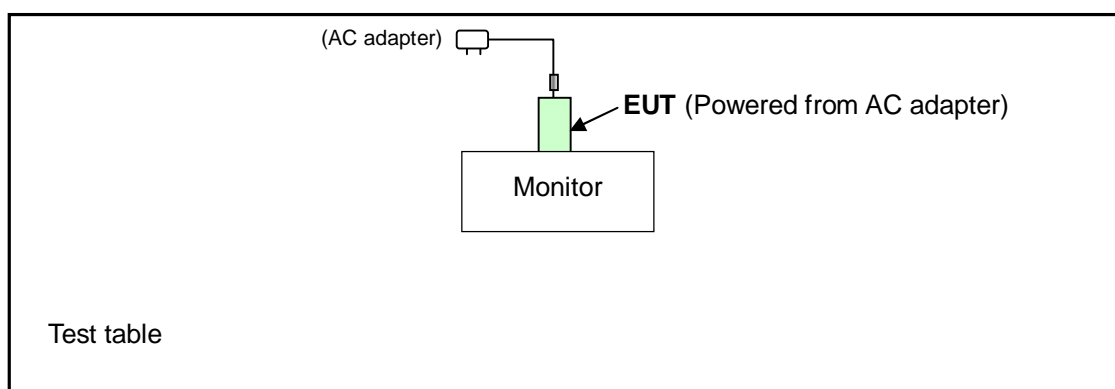
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	24" LCD MONITOR	DELL	U2410	CN082WXD728 720CC0LGL	FCC DoC Approved

#### For Radiated Emission test

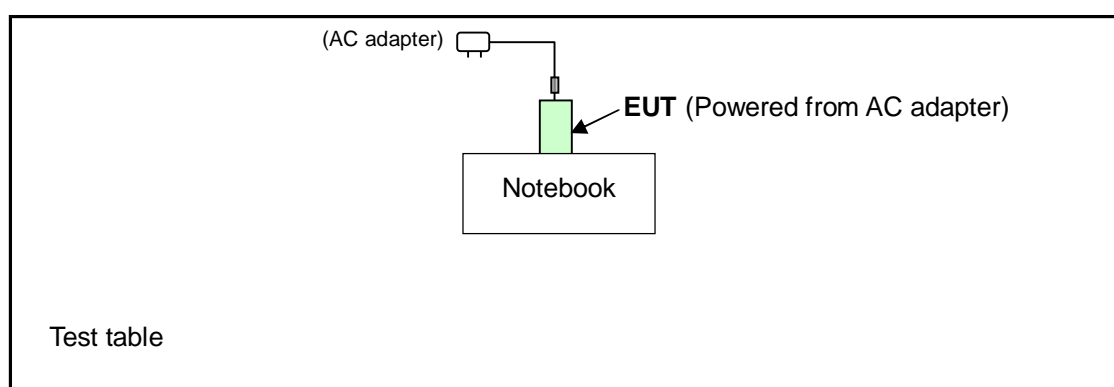
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook	DELL	E5410	BW33YM1	FCC DoC Approved

#### 3.4.1 CONFIGURATION OF SYSTEM UNDER TEST

##### Except for Radiated Emission test



##### For Radiated Emission test





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### **3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS**

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

**FCC Part 15, Subpart C (15.247)**

**558074 D01 DTS Meas Guidance v03r02**

**ANSI C63.10-2009**

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



## 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.

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#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 26, 2014	Feb. 25, 2015
HP Preamplifier	8449B	3008A01201	Feb. 26, 2014	Feb. 25, 2015
Agilent TEST RECEIVER	N9038A	MY51210129	Jan. 18, 2014	Jan. 17, 2015
Schwarzbeck Antenna	VULB 9168	139	Feb. 24, 2014	Feb. 23, 2015
Schwarzbeck Antenna	VHBA 9123	480	May 29, 2013	May 28, 2015
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_V 7.6.15.9.4	NA	NA	NA
SUHNER RF cable	SF102	CABLE-CH6	Aug. 16, 2013	Aug. 15, 2014
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	May 13, 2013	May 12, 2014
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSP 40	100036	May. 17, 2013	May. 16, 2014
Anritsu Power Sensor	MA2411B	0738404	Apr. 24, 2013	Apr. 23, 2014
Anritsu Power Meter	ML2495A	0842014	Apr. 25, 2013	Apr. 24, 2014

- NOTE:** 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

#### 4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. 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 antenna is a broadband antenna, and its height 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 Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

**NOTE:**

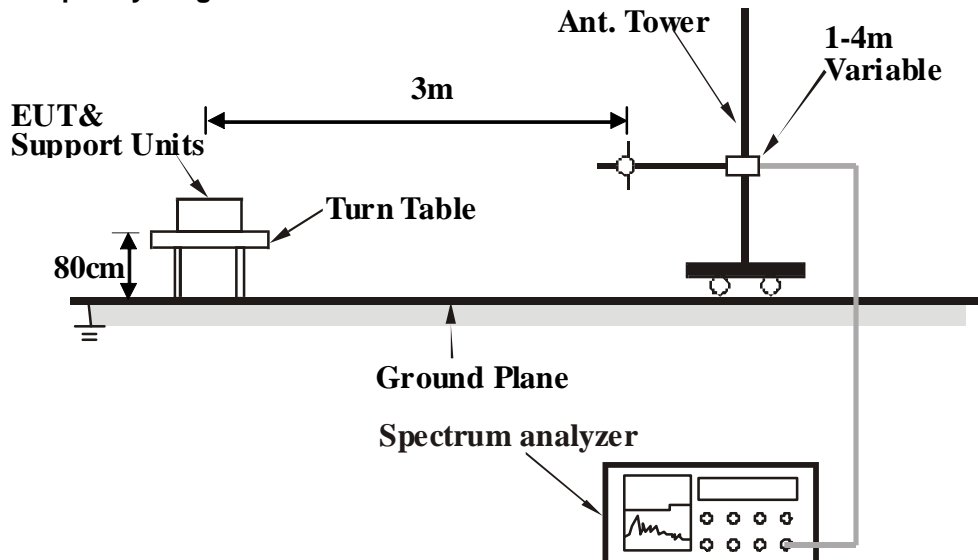
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz (Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.4 DEVIATION FROM TEST STANDARD

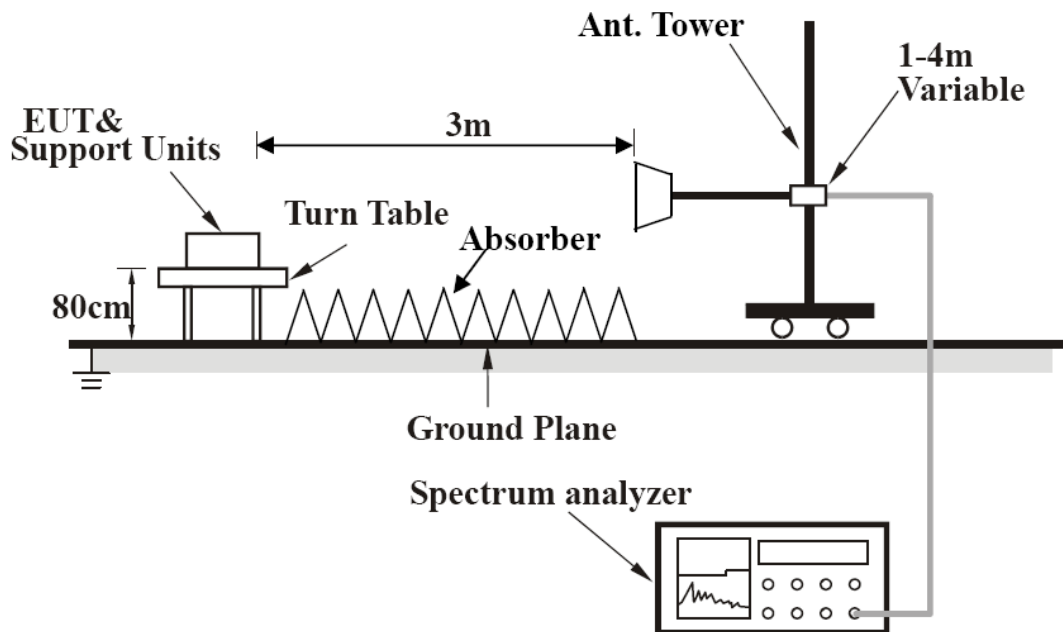
No deviation.

#### 4.1.5 TEST SETUP

Frequency range 30MHz~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

- Connected the EUT to Notebook.
- Set the EUT under transmitting condition.



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#### 4.1.7 TEST RESULTS

#### ABOVE 1GHz DATA

##### 802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.0 PK	74.0	-11.1	1.00 H	347	67.62	-4.67
2	2390.00	53.0 AV	54.0	-1.0	1.00 H	347	57.64	-4.67
3	*2412.00	110.1 PK			1.00 H	347	114.71	-4.58
4	*2412.00	105.7 AV			1.00 H	347	110.26	-4.58
5	4824.00	50.7 PK	74.0	-23.3	1.00 H	7	48.57	2.17
6	4824.00	45.2 AV	54.0	-8.8	1.00 H	7	43.04	2.17
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	59.5 PK	74.0	-14.6	1.00 V	24	64.12	-4.67
2	2390.00	50.3 AV	54.0	-3.7	1.00 V	24	54.96	-4.67
3	*2412.00	106.5 PK			1.00 V	24	111.12	-4.58
4	*2412.00	103.0 AV			1.00 V	24	107.54	-4.58
5	4824.00	48.4 PK	74.0	-25.6	1.00 V	101	46.21	2.17
6	4824.00	39.7 AV	54.0	-14.3	1.00 V	101	37.55	2.17

#### 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.



A D T

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

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			1.00 H	347	114.32	-4.48
2	*2437.00	105.5 AV			1.00 H	347	109.97	-4.48
3	4874.00	51.3 PK	74.0	-22.7	1.00 H	11	48.96	2.32
4	4874.00	45.5 AV	54.0	-8.5	1.00 H	11	43.21	2.32
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	107.3 PK			1.00 V	76	111.75	-4.48
2	*2437.00	103.7 AV			1.00 V	76	108.16	-4.48
3	4874.00	48.5 PK	74.0	-25.5	1.00 V	124	46.21	2.32
4	4874.00	40.2 AV	54.0	-13.8	1.00 V	124	37.89	2.32

**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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.5 PK			1.00 H	349	112.91	-4.39
2	*2462.00	104.6 AV			1.00 H	349	108.97	-4.39
3	2483.50	58.0 PK	74.0	-16.0	1.00 H	349	62.29	-4.31
4	2483.50	45.4 AV	54.0	-8.6	1.00 H	349	49.68	-4.31
5	4924.00	50.9 PK	74.0	-23.1	1.00 H	12	48.53	2.40
6	4924.00	45.6 AV	54.0	-8.4	1.00 H	12	43.20	2.40
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			1.00 V	26	111.24	-4.39
2	*2462.00	102.4 AV			1.00 V	26	106.74	-4.39
3	2483.50	56.8 PK	74.0	-17.2	1.00 V	26	61.08	-4.31
4	2483.50	43.8 AV	54.0	-10.3	1.00 V	26	48.06	-4.31
5	4924.00	48.6 PK	74.0	-25.4	1.00 V	112	46.21	2.40
6	4924.00	40.5 AV	54.0	-13.5	1.00 V	112	38.12	2.40

**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.



A D T

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

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	51.6 PK	74.0	-22.4	1.00 H	127	56.24	-4.67
2	2390.00	38.5 AV	54.0	-15.5	1.00 H	127	43.17	-4.67
3	*2412.00	95.3 PK			1.00 H	127	99.92	-4.58
4	*2412.00	91.2 AV			1.00 H	127	95.77	-4.58
5	4824.00	47.6 PK	74.0	-26.4	1.00 H	133	45.46	2.17
6	4824.00	35.4 AV	54.0	-18.6	1.00 H	133	33.20	2.17
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	51.2 PK	74.0	-22.8	1.00 V	210	55.88	-4.67
2	2390.00	38.0 AV	54.0	-16.0	1.00 V	210	42.67	-4.67
3	*2412.00	90.2 PK			1.00 V	210	94.77	-4.58
4	*2412.00	86.5 AV			1.00 V	210	91.07	-4.58
5	4824.00	45.9 PK	74.0	-28.1	1.18 V	16	43.73	2.17
6	4824.00	33.1 AV	54.0	-20.9	1.18 V	16	30.93	2.17

**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.





A D T

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

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	95.2 PK			1.00 H	342	99.69	-4.48
2	*2437.00	91.5 AV			1.00 H	342	95.98	-4.48
3	4874.00	47.9 PK	74.0	-26.1	1.43 H	175	45.58	2.32
4	4874.00	35.5 AV	54.0	-18.6	1.43 H	175	33.13	2.32
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	89.8 PK			1.00 V	145	94.29	-4.48
2	*2437.00	87.1 AV			1.00 V	145	91.56	-4.48
3	4874.00	45.4 PK	74.0	-28.6	1.16 V	16	43.06	2.32
4	4874.00	32.7 AV	54.0	-21.3	1.16 V	16	30.37	2.32

**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.



A D T

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

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	96.1 PK			1.00 H	126	100.48	-4.39
2	*2462.00	92.2 AV			1.00 H	126	96.59	-4.39
3	2483.50	53.5 PK	74.0	-20.5	1.00 H	126	57.80	-4.31
4	2483.50	41.4 AV	54.0	-12.6	1.00 H	126	45.73	-4.31
5	4924.00	48.1 PK	74.0	-25.9	1.00 H	126	45.68	2.40
6	4924.00	38.6 AV	54.0	-15.4	1.00 H	126	36.22	2.40
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	88.4 PK			1.00 V	227	92.74	-4.39
2	*2462.00	84.9 AV			1.00 V	227	89.29	-4.39
3	2483.50	52.3 PK	74.0	-21.7	1.00 V	227	56.57	-4.31
4	2483.50	38.8 AV	54.0	-15.2	1.00 V	227	43.15	-4.31
5	4924.00	45.5 PK	74.0	-28.5	1.00 V	227	43.12	2.40
6	4924.00	32.8 AV	54.0	-21.3	1.00 V	227	30.35	2.40

**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.



A D T

## 802.11g

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

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	72.9 PK	74.0	-1.1	1.00 H	345	77.59	-4.67
2	2390.00	52.7 AV	54.0	-1.3	1.00 H	345	57.40	-4.67
3	*2412.00	108.9 PK			1.00 H	345	113.44	-4.58
4	*2412.00	98.5 AV			1.00 H	345	103.03	-4.58
5	4824.00	63.2 PK	74.0	-10.8	1.00 H	355	61.04	2.17
6	4824.00	47.6 AV	54.0	-6.4	1.00 H	355	45.39	2.17
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.9 PK	74.0	-5.1	1.00 V	7	73.58	-4.67
2	2390.00	49.6 AV	54.0	-4.4	1.00 V	7	54.31	-4.67
3	*2412.00	106.2 PK			1.00 V	7	110.76	-4.58
4	*2412.00	94.7 AV			1.00 V	7	99.24	-4.58
5	4824.00	45.9 PK	74.0	-28.1	1.00 V	15	43.77	2.17
6	4824.00	41.4 AV	54.0	-12.6	1.00 V	15	39.21	2.17

## 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.



A D T

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

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	108.5 PK			1.00 H	345	112.94	-4.48
2	*2437.00	108.2 AV			1.00 H	345	112.64	-4.48
3	4874.00	61.0 PK	74.0	-13.0	1.00 H	358	58.64	2.32
4	4874.00	46.7 AV	54.0	-7.3	1.00 H	358	44.36	2.32
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	105.8 PK			1.00 V	11	110.31	-4.48
2	*2437.00	94.4 AV			1.00 V	11	98.87	-4.48
3	4874.00	45.6 PK	74.0	-28.4	1.00 V	38	43.25	2.32
4	4874.00	41.5 AV	54.0	-12.5	1.00 V	38	39.18	2.32

**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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.3 PK			1.00 H	347	112.64	-4.39
2	*2462.00	96.6 AV			1.00 H	347	101.02	-4.39
3	2483.50	69.7 PK	74.0	-4.3	1.00 H	347	74.05	-4.31
4	2483.50	48.7 AV	54.0	-5.3	1.00 H	347	53.03	-4.31
5	4924.00	60.3 PK	74.0	-13.7	1.00 H	347	57.94	2.40
6	4924.00	43.9 AV	54.0	-10.1	1.00 H	347	41.53	2.40
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	106.2 PK			1.00 V	24	110.62	-4.39
2	*2462.00	94.7 AV			1.00 V	24	99.07	-4.39
3	2483.50	67.3 PK	74.0	-6.8	1.00 V	24	71.56	-4.31
4	2483.50	46.8 AV	54.0	-7.2	1.00 V	24	51.08	-4.31
5	4924.00	56.1 PK	74.0	-17.9	1.00 V	35	53.67	2.40
6	4924.00	41.3 AV	54.0	-12.8	1.00 V	35	38.85	2.40

**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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.5 PK	74.0	-13.6	1.21 H	147	65.12	-4.67
2	2390.00	39.5 AV	54.0	-14.5	1.21 H	147	44.14	-4.67
3	*2412.00	95.4 PK			1.21 H	147	99.99	-4.58
4	*2412.00	82.8 AV			1.21 H	147	87.36	-4.58
5	4824.00	46.4 PK	74.0	-27.6	1.00 H	324	44.26	2.17
6	4824.00	32.7 AV	54.0	-21.3	1.00 H	324	30.51	2.17
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	55.7 PK	74.0	-18.4	1.00 V	209	60.32	-4.67
2	2390.00	38.0 AV	54.0	-16.0	1.00 V	209	42.66	-4.67
3	*2412.00	89.2 PK			1.00 V	209	93.73	-4.58
4	*2412.00	76.4 AV			1.00 V	209	80.94	-4.58
5	4824.00	46.0 PK	74.0	-28.0	1.00 V	209	43.81	2.17
6	4824.00	32.5 AV	54.0	-21.5	1.00 V	209	30.37	2.17

**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.



A D T

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

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	94.4 PK			1.21 H	145	98.89	-4.48
2	*2437.00	82.6 AV			1.21 H	145	87.12	-4.48
3	4874.00	45.1 PK	74.0	-28.9	1.00 H	124	42.78	2.32
4	4874.00	32.6 AV	54.0	-21.5	1.00 H	124	30.23	2.32
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	89.4 PK			1.00 V	209	93.87	-4.48
2	*2437.00	75.9 AV			1.00 V	209	80.33	-4.48
3	4874.00	45.9 PK	74.0	-28.1	1.00 V	245	43.62	2.32
4	4874.00	32.8 AV	54.0	-21.2	1.00 V	245	30.46	2.32

**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.



A D T

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

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	95.4 PK			1.21 H	145	99.82	-4.39
2	*2462.00	83.0 AV			1.21 H	145	87.38	-4.39
3	2483.50	59.6 PK	74.0	-14.4	1.21 H	145	63.91	-4.31
4	2483.50	42.4 AV	54.0	-11.7	1.21 H	145	46.66	-4.31
5	4924.00	45.5 PK	74.0	-28.5	1.21 H	45	43.07	2.40
6	4924.00	33.3 AV	54.0	-20.7	1.21 H	45	30.89	2.40
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	90.1 PK			1.00 V	145	94.51	-4.39
2	*2462.00	77.6 AV			1.00 V	145	81.99	-4.39
3	2483.50	58.5 PK	74.0	-15.5	1.00 V	145	62.85	-4.31
4	2483.50	37.6 AV	54.0	-16.4	1.00 V	145	41.90	-4.31
5	4924.00	46.3 PK	74.0	-27.7	1.00 V	211	43.87	2.40
6	4924.00	32.9 AV	54.0	-21.1	1.00 V	211	30.51	2.40

**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.





A D T

## 802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.2 PK	74.0	-1.8	1.00 H	344	76.85	-4.67
2	2390.00	52.1 AV	54.0	-1.9	1.00 H	344	56.76	-4.67
3	*2412.00	108.0 PK			1.00 H	344	112.61	-4.58
4	*2412.00	96.9 AV			1.00 H	344	101.48	-4.58
5	4824.00	58.8 PK	74.0	-15.2	1.00 H	345	56.61	2.17
6	4824.00	44.5 AV	54.0	-9.5	1.00 H	345	42.32	2.17
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.7 PK	74.0	-7.3	1.00 V	22	71.35	-4.67
2	2390.00	49.0 AV	54.0	-5.0	1.00 V	22	53.64	-4.67
3	*2412.00	104.7 PK			1.00 V	22	109.26	-4.58
4	*2412.00	93.3 AV			1.00 V	22	97.83	-4.58
5	4824.00	54.9 PK	74.0	-19.1	1.00 V	35	52.75	2.17
6	4824.00	40.7 AV	54.0	-13.3	1.00 V	35	38.49	2.17

## 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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.8 PK			1.00 H	345	112.31	-4.48
2	*2437.00	97.1 AV			1.00 H	345	101.53	-4.48
3	4874.00	57.8 PK	74.0	-16.3	1.00 H	355	55.43	2.32
4	4874.00	43.7 AV	54.0	-10.3	1.00 H	355	41.35	2.32
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	104.5 PK			1.00 V	23	108.95	-4.48
2	*2437.00	92.5 AV			1.00 V	23	97.01	-4.48
3	4874.00	50.9 PK	74.0	-23.2	1.00 V	46	48.53	2.32
4	4874.00	40.7 AV	54.0	-13.3	1.00 V	46	38.35	2.32

**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.



A D T

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

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	106.7 PK			1.00 H	349	111.06	-4.39
2	*2462.00	95.3 AV			1.00 H	349	99.72	-4.39
3	2483.50	63.1 PK	74.0	-10.9	1.00 H	349	67.41	-4.31
4	2483.50	47.9 AV	54.0	-6.1	1.00 H	349	52.25	-4.31
5	4924.00	56.9 PK	74.0	-17.1	1.00 H	349	54.53	2.40
6	4924.00	42.0 AV	54.0	-12.0	1.00 H	349	39.61	2.40
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	104.5 PK			1.00 V	26	108.92	-4.39
2	*2462.00	93.4 AV			1.00 V	26	97.81	-4.39
3	2483.50	62.8 PK	74.0	-11.2	1.00 V	26	67.11	-4.31
4	2483.50	46.6 AV	54.0	-7.4	1.00 V	26	50.92	-4.31
5	4924.00	54.4 PK	74.0	-19.6	1.00 V	36	51.98	2.40
6	4924.00	40.3 AV	54.0	-13.7	1.00 V	36	37.91	2.40

**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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	52.3 PK	74.0	-21.7	1.00 H	58	56.97	-4.67
2	2390.00	39.5 AV	54.0	-14.5	1.00 H	58	44.14	-4.67
3	*2412.00	92.9 PK			1.00 H	58	97.46	-4.58
4	*2412.00	81.5 AV			1.00 H	58	86.08	-4.58
5	4824.00	46.7 PK	74.0	-27.3	1.00 H	62	44.57	2.17
6	4824.00	33.1 AV	54.0	-20.9	1.00 H	62	30.89	2.17
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	51.1 PK	74.0	-22.9	1.00 V	208	55.74	-4.67
2	2390.00	38.0 AV	54.0	-16.0	1.00 V	208	42.71	-4.67
3	*2412.00	86.7 PK			1.00 V	208	91.23	-4.58
4	*2412.00	74.8 AV			1.00 V	208	79.42	-4.58
5	4824.00	46.2 PK	74.0	-27.8	1.00 V	211	44.05	2.17
6	4824.00	33.1 AV	54.0	-21.0	1.00 V	211	30.88	2.17

**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.



A D T

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

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	93.4 PK			1.00 H	116	97.87	-4.48
2	*2437.00	82.4 AV			1.00 H	116	86.83	-4.48
3	4874.00	45.5 PK	74.0	-28.6	1.00 H	116	43.13	2.32
4	4874.00	33.3 AV	54.0	-20.7	1.00 H	116	30.94	2.32
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	87.3 PK			1.00 V	147	91.82	-4.48
2	*2437.00	75.0 AV			1.00 V	147	79.43	-4.48
3	4874.00	45.4 PK	74.0	-28.6	1.00 V	145	43.05	2.32
4	4874.00	33.3 AV	54.0	-20.7	1.00 V	145	30.97	2.32

**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.



A D T

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

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	93.7 PK			1.00 H	116	98.12	-4.39
2	*2462.00	83.1 AV			1.00 H	116	87.51	-4.39
3	2483.50	56.1 PK	74.0	-17.9	1.00 H	116	60.41	-4.31
4	2483.50	42.1 AV	54.0	-11.9	1.00 H	116	46.41	-4.31
5	4924.00	46.9 PK	74.0	-27.1	1.00 H	116	44.50	2.40
6	4924.00	32.4 AV	54.0	-21.6	1.00 H	116	30.03	2.40
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	87.7 PK			1.00 V	148	92.04	-4.39
2	*2462.00	75.8 AV			1.00 V	148	80.21	-4.39
3	2483.50	54.6 PK	74.0	-19.4	1.00 V	148	58.91	-4.31
4	2483.50	39.0 AV	54.0	-15.0	1.00 V	148	43.31	-4.31
5	4924.00	46.5 PK	74.0	-27.5	1.00 V	148	44.09	2.40
6	4924.00	33.0 AV	54.0	-21.0	1.00 V	148	30.63	2.40

**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.



A D T

## 802.11n (40MHz)

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

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	72.7 PK	74.0	-1.3	1.00 H	343	77.40	-4.67
2	2390.00	53.0 AV	54.0	-1.0	1.00 H	343	57.65	-4.67
3	*2422.00	102.1 PK			1.00 H	343	106.62	-4.54
4	*2422.00	92.1 AV			1.00 H	343	96.68	-4.54
5	4844.00	54.0 PK	74.0	-20.0	1.00 H	354	51.73	2.23
6	4844.00	41.5 AV	54.0	-12.5	1.00 H	354	39.23	2.23
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.1 PK	74.0	-6.0	1.00 V	0	72.72	-4.67
2	2390.00	51.8 AV	54.0	-2.2	1.00 V	0	56.46	-4.67
3	*2422.00	99.4 PK			1.00 V	0	103.97	-4.54
4	*2422.00	89.4 AV			1.00 V	0	93.96	-4.54
5	4844.00	52.9 PK	74.0	-21.1	1.00 V	12	50.64	2.23
6	4844.00	39.4 AV	54.0	-14.7	1.00 V	12	37.12	2.23

## 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.



A D T

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

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	102.3 PK			1.00 H	344	106.78	-4.48
2	*2437.00	92.1 AV			1.00 H	344	96.58	-4.48
3	4874.00	52.4 PK	74.0	-21.6	1.00 H	238	50.12	2.32
4	4874.00	41.5 AV	54.0	-12.5	1.00 H	238	39.22	2.32
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	99.1 PK			1.00 V	5	103.53	-4.48
2	*2437.00	89.1 AV			1.00 V	5	93.55	-4.48
3	4874.00	51.9 PK	74.0	-22.2	1.00 V	32	49.53	2.32
4	4874.00	39.3 AV	54.0	-14.7	1.00 V	32	37.01	2.32

**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.





A D T

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)
ANTENNA	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	102.1 PK			1.00 H	349	106.55	-4.42
2	*2452.00	91.4 AV			1.00 H	349	95.78	-4.42
3	2483.50	62.8 PK	74.0	-11.2	1.00 H	349	67.13	-4.31
4	2483.50	48.2 AV	54.0	-5.8	1.00 H	349	52.52	-4.31
5	4904.00	52.5 PK	74.0	-21.5	1.00 H	355	50.14	2.39
6	4904.00	39.4 AV	54.0	-14.6	1.00 H	355	37.01	2.39
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	100.3 PK			1.00 V	76	104.72	-4.42
2	*2452.00	88.9 AV			1.00 V	76	93.34	-4.42
3	2483.50	60.6 PK	74.0	-13.4	1.00 V	76	64.89	-4.31
4	2483.50	44.7 AV	54.0	-9.3	1.00 V	76	49.02	-4.31
5	4904.00	52.6 PK	74.0	-21.4	1.00 V	76	50.21	2.39
6	4904.00	39.5 AV	54.0	-14.5	1.00 V	76	37.10	2.39

**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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.8 PK	74.0	-17.2	1.00 H	117	61.43	-4.67
2	2390.00	38.9 AV	54.0	-15.1	1.00 H	117	43.61	-4.67
3	*2422.00	88.6 PK			1.00 H	117	93.10	-4.54
4	*2422.00	77.3 AV			1.00 H	117	81.88	-4.54
5	4844.00	46.4 PK	74.0	-27.6	1.00 H	120	44.15	2.23
6	4844.00	32.2 AV	54.0	-21.8	1.00 H	120	29.98	2.23
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	51.1 PK	74.0	-22.9	1.00 V	207	55.78	-4.67
2	2390.00	37.7 AV	54.0	-16.3	1.00 V	207	42.38	-4.67
3	*2422.00	86.8 PK			1.00 V	207	91.32	-4.54
4	*2422.00	70.1 AV			1.00 V	207	74.61	-4.54
5	4844.00	45.4 PK	74.0	-28.6	1.00 V	185	43.20	2.23
6	4844.00	32.5 AV	54.0	-21.5	1.00 V	185	30.24	2.23

**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.



A D T

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

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	88.8 PK			1.00 H	117	93.24	-4.48
2	*2437.00	76.7 AV			1.00 H	117	81.15	-4.48
3	4874.00	46.5 PK	74.0	-27.5	1.00 H	116	44.19	2.32
4	4874.00	32.2 AV	54.0	-21.8	1.00 H	116	29.90	2.32
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	86.5 PK			1.00 V	150	91.01	-4.48
2	*2437.00	70.8 AV			1.00 V	150	75.30	-4.48
3	4874.00	45.3 PK	74.0	-28.7	1.00 V	156	42.95	2.32
4	4874.00	33.5 AV	54.0	-20.5	1.00 V	156	31.14	2.32

**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.



A D T

CHANNEL	TX Channel 9	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)
ANTENNA	B		

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	90.6 PK			1.00 H	116	95.03	-4.42
2	*2452.00	79.5 AV			1.00 H	116	83.87	-4.42
3	2483.50	60.0 PK	74.0	-14.0	1.00 H	116	64.28	-4.31
4	2483.50	42.2 AV	54.0	-11.8	1.00 H	116	46.47	-4.31
5	4904.00	45.0 PK	74.0	-29.0	1.00 H	12	42.64	2.39
6	4904.00	33.2 AV	54.0	-20.8	1.00 H	12	30.79	2.39
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	84.9 PK			1.00 V	148	89.32	-4.42
2	*2452.00	73.6 AV			1.00 V	148	78.02	-4.42
3	2483.50	54.1 PK	74.0	-19.9	1.00 V	148	58.41	-4.31
4	2483.50	39.4 AV	54.0	-14.6	1.00 V	148	43.73	-4.31
5	4904.00	45.2 PK	74.0	-28.8	1.00 V	145	42.84	2.39
6	4904.00	33.0 AV	54.0	-21.0	1.00 V	145	30.63	2.39

**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.



A D T

## 802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

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	#5725.00	78.1 PK	85.2	-7.1	1.43 H	12	74.52	3.60
2	#5725.00	55.8 AV	73.1	-17.3	1.43 H	12	52.19	3.60
3	*5745.00	105.2 PK			1.44 H	11	101.53	3.69
4	*5745.00	93.1 AV			1.44 H	11	89.45	3.69
5	11490.00	58.9 PK	74.0	-15.1	1.44 H	11	41.16	17.75
6	11490.00	49.0 AV	54.0	-5.0	1.44 H	11	31.28	17.75
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	#5725.00	83.5 PK	89.4	-5.9	1.32 V	43	79.90	3.60
2	#5725.00	62.1 AV	77.2	-15.1	1.32 V	43	58.54	3.60
3	*5745.00	109.4 PK			1.32 V	43	105.67	3.69
4	*5745.00	97.2 AV			1.32 V	43	93.50	3.69
5	11490.00	62.9 PK	74.0	-11.1	1.32 V	0	45.17	17.75
6	11490.00	49.0 AV	54.0	-5.0	1.32 V	0	31.29	17.75

## 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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

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	*5785.00	105.5 PK			1.39 H	16	101.61	3.89
2	*5785.00	94.3 AV			1.39 H	16	90.42	3.89
3	11570.00	63.5 PK	74.0	-10.5	1.39 H	16	46.30	17.21
4	11570.00	49.2 AV	54.0	-4.8	1.39 H	16	31.96	17.21
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	*5785.00	109.7 PK			1.00 V	291	105.77	3.89
2	*5785.00	97.4 AV			1.00 V	291	93.51	3.89
3	11570.00	62.7 PK	74.0	-11.3	1.00 V	291	45.50	17.21
4	11570.00	49.2 AV	54.0	-4.8	1.00 V	291	31.97	17.21

**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.
6. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

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	*5825.00	105.5 PK			1.39 H	22	101.42	4.11
2	*5825.00	94.6 AV			1.39 H	22	90.44	4.11
3	#5850.00	64.8 PK	85.5	-20.7	1.39 H	22	60.53	4.25
4	#5850.00	47.3 AV	74.6	-27.3	1.39 H	22	43.03	4.25
5	11650.00	62.2 PK	74.0	-11.8	1.39 H	22	45.08	17.12
6	11650.00	49.0 AV	54.0	-5.0	1.39 H	22	31.86	17.12
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	*5825.00	109.4 PK			1.00 V	290	105.27	4.11
2	*5825.00	98.9 AV			1.00 V	290	94.74	4.11
3	#5850.00	67.0 PK	89.4	-22.4	1.00 V	290	62.76	4.25
4	#5850.00	49.8 AV	78.9	-29.1	1.00 V	290	45.50	4.25
5	11650.00	62.1 PK	74.0	-12.0	1.00 V	290	44.93	17.12
6	11650.00	49.0 AV	54.0	-5.0	1.00 V	290	31.89	17.12

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	#5725.00	77.0 PK	89.5	-12.5	1.46 H	165	73.37	3.60
2	#5725.00	53.6 AV	78.9	-25.3	1.46 H	165	50.04	3.60
3	*5745.00	109.5 PK			1.46 H	165	105.78	3.69
4	*5745.00	98.9 AV			1.46 H	165	95.25	3.69
5	11490.00	60.0 PK	74.0	-14.0	1.46 H	165	42.22	17.75
6	11490.00	47.9 AV	54.0	-6.1	1.46 H	165	30.17	17.75
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	#5725.00	72.1 PK	85.1	-13.1	1.25 V	192	68.45	3.60
2	#5725.00	49.3 AV	74.4	-25.1	1.25 V	192	45.70	3.60
3	*5745.00	105.1 PK			1.25 V	192	101.45	3.69
4	*5745.00	94.4 AV			1.25 V	192	90.73	3.69
5	11490.00	59.9 PK	74.0	-14.1	1.25 V	192	42.11	17.75
6	11490.00	47.8 AV	54.0	-6.2	1.25 V	192	30.01	17.75

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.





A D T

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	*5785.00	109.3 PK			1.43 H	160	105.42	3.89
2	*5785.00	99.1 AV			1.43 H	160	95.22	3.89
3	11570.00	62.9 PK	74.0	-11.1	1.43 H	163	45.65	17.21
4	11570.00	48.0 AV	54.0	-6.1	1.43 H	163	30.74	17.21
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	*5785.00	105.7 PK			1.22 V	195	101.84	3.89
2	*5785.00	94.3 AV			1.22 V	195	90.44	3.89
3	11570.00	61.8 PK	74.0	-12.2	1.22 V	195	44.57	17.21
4	11570.00	47.7 AV	54.0	-6.3	1.22 V	195	30.52	17.21

**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.
6. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	*5825.00	109.5 PK			1.48 H	166	105.34	4.11
2	*5825.00	99.1 AV			1.48 H	166	95.03	4.11
3	#5850.00	67.7 PK	89.5	-21.7	1.48 H	166	63.49	4.25
4	#5850.00	51.6 AV	79.1	-27.6	1.48 H	166	47.32	4.25
5	11650.00	60.9 PK	74.0	-13.1	1.48 H	166	43.74	17.12
6	11650.00	47.3 AV	54.0	-6.7	1.48 H	166	30.19	17.12
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	*5825.00	105.2 PK			1.21 V	185	101.11	4.11
2	*5825.00	93.2 AV			1.21 V	185	89.12	4.11
3	#5850.00	63.4 PK	85.2	-21.8	1.21 V	185	59.16	4.25
4	#5850.00	49.1 AV	73.2	-24.2	1.21 V	185	44.81	4.25
5	11650.00	60.0 PK	74.0	-14.0	1.21 V	185	42.88	17.12
6	11650.00	47.2 AV	54.0	-6.8	1.21 V	185	30.12	17.12

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.

**A D T****802.11n (20MHz)**

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	#5725.00	72.9 PK	84.1	-11.2	1.43 H	184	69.27	3.60
2	#5725.00	47.2 AV	72.6	-25.4	1.43 H	184	43.64	3.60
3	*5745.00	104.1 PK			1.43 H	184	100.38	3.69
4	*5745.00	92.6 AV			1.43 H	184	88.95	3.69
5	11490.00	61.0 PK	74.0	-13.0	1.43 H	184	43.23	17.75
6	11490.00	47.9 AV	54.0	-6.1	1.43 H	184	30.19	17.75
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
<b>NO.</b>	<b>FREQ. (MHz)</b>	<b>EMISSION LEVEL (dBuV/m)</b>	<b>LIMIT (dBuV/m)</b>	<b>MARGIN (dB)</b>	<b>ANTENNA HEIGHT (m)</b>	<b>TABLE ANGLE (Degree)</b>	<b>RAW VALUE (dBuV)</b>	<b>CORRECTION FACTOR (dB/m)</b>
1	#5725.00	72.8 PK	88.3	-15.5	1.00 V	216	69.15	3.60
2	#5725.00	47.7 AV	78.8	-31.1	1.00 V	216	44.13	3.60
3	*5745.00	108.3 PK			1.00 V	216	104.56	3.69
4	*5745.00	98.8 AV			1.00 V	216	95.10	3.69
5	11490.00	61.0 PK	74.0	-13.0	1.00 V	216	43.27	17.75
6	11490.00	47.8 AV	54.0	-6.2	1.00 V	216	30.05	17.75

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

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	*5785.00	104.0 PK			1.37 H	190	100.11	3.89
2	*5785.00	92.7 AV			1.37 H	190	88.80	3.89
3	11570.00	61.7 PK	74.0	-12.3	1.38 H	190	44.50	17.21
4	11570.00	47.9 AV	54.0	-6.1	1.38 H	190	30.66	17.21
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	*5785.00	109.6 PK			1.10 V	216	105.67	3.89
2	*5785.00	98.2 AV			1.10 V	216	94.34	3.89
3	11570.00	61.7 PK	74.0	-12.4	1.10 V	216	44.44	17.21
4	11570.00	47.8 AV	54.0	-6.2	1.10 V	216	30.56	17.21

**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.
6. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

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	*5825.00	104.1 PK			1.36 H	165	99.99	4.11
2	*5825.00	93.4 AV			1.36 H	165	89.30	4.11
3	#5850.00	62.8 PK	84.1	-21.3	1.36 H	165	58.53	4.25
4	#5850.00	46.3 AV	73.4	-27.2	1.36 H	165	42.00	4.25
5	11650.00	61.4 PK	74.0	-12.6	1.36 H	165	44.24	17.12
6	11650.00	47.6 AV	54.0	-6.4	1.36 H	165	30.50	17.12
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	*5825.00	108.9 PK			1.24 V	150	104.79	4.11
2	*5825.00	98.0 AV			1.24 V	150	93.89	4.11
3	#5850.00	63.0 PK	88.9	-25.9	1.24 V	150	58.79	4.25
4	#5850.00	45.9 AV	78.0	-32.1	1.24 V	150	41.63	4.25
5	11650.00	61.2 PK	74.0	-12.8	1.24 V	150	44.08	17.12
6	11650.00	47.6 AV	54.0	-6.4	1.24 V	150	30.44	17.12

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	#5725.00	72.4 PK	88.7	-16.3	1.54 H	161	68.82	3.60
2	#5725.00	51.0 AV	77.6	-26.6	1.54 H	161	47.35	3.60
3	*5745.00	108.7 PK			1.54 H	161	105.01	3.69
4	*5745.00	97.6 AV			1.54 H	161	93.89	3.69
5	11490.00	59.9 PK	74.0	-14.1	1.54 H	161	42.15	17.75
6	11490.00	48.2 AV	54.0	-5.8	1.54 H	161	30.49	17.75
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	#5725.00	68.6 PK	84.8	-16.2	1.40 V	150	65.02	3.60
2	#5725.00	48.0 AV	74.2	-26.3	1.40 V	150	44.38	3.60
3	*5745.00	104.8 PK			1.40 V	150	101.15	3.69
4	*5745.00	94.2 AV			1.40 V	150	90.55	3.69
5	11490.00	60.2 PK	74.0	-13.8	1.40 V	150	42.42	17.75
6	11490.00	47.9 AV	54.0	-6.1	1.40 V	150	30.19	17.75

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	*5785.00	109.5 PK			1.53 H	162	105.62	3.89
2	*5785.00	98.5 AV			1.53 H	162	94.58	3.89
3	11570.00	60.5 PK	74.0	-13.5	1.53 H	162	43.33	17.21
4	11570.00	48.5 AV	54.0	-5.6	1.53 H	162	31.24	17.21
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	*5785.00	105.3 PK			1.22 V	195	101.39	3.89
2	*5785.00	94.4 AV			1.22 V	195	90.50	3.89
3	11570.00	60.4 PK	74.0	-13.6	1.22 V	195	43.17	17.21
4	11570.00	48.2 AV	54.0	-5.9	1.22 V	195	30.94	17.21

**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.
6. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	*5825.00	110.0 PK			1.56 H	162	105.90	4.11
2	*5825.00	99.6 AV			1.56 H	162	95.52	4.11
3	#5850.00	68.3 PK	90.0	-21.7	1.56 H	162	64.05	4.25
4	#5850.00	52.4 AV	79.6	-27.3	1.56 H	162	48.10	4.25
5	11650.00	60.0 PK	74.0	-14.0	1.56 H	162	42.92	17.12
6	11650.00	48.3 AV	54.0	-5.7	1.56 H	162	31.16	17.12
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	*5825.00	105.3 PK			1.21 V	195	101.16	4.11
2	*5825.00	94.0 AV			1.21 V	195	89.93	4.11
3	#5850.00	64.3 PK	85.3	-21.0	1.21 V	195	60.04	4.25
4	#5850.00	48.8 AV	74.0	-25.3	1.21 V	195	44.53	4.25
5	11650.00	60.0 PK	74.0	-14.0	1.21 V	195	42.88	17.12
6	11650.00	48.3 AV	54.0	-5.8	1.21 V	195	31.13	17.12

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.





A D T

## 802.11n (40MHz)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

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	#5725.00	72.3 PK	79.9	-7.6	1.42 H	10	68.65	3.60
2	#5725.00	50.9 AV	68.7	-17.9	1.42 H	10	47.26	3.60
3	*5755.00	99.9 PK			1.42 H	10	96.13	3.75
4	*5755.00	88.7 AV			1.42 H	10	84.99	3.75
5	11510.00	63.2 PK	74.0	-10.8	1.42 H	10	45.56	17.67
6	11510.00	49.3 AV	54.0	-4.7	1.42 H	10	31.65	17.67
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	#5725.00	72.5 PK	85.0	-12.5	1.33 V	51	68.93	3.60
2	#5725.00	51.8 AV	74.8	-23.0	1.33 V	51	48.22	3.60
3	*5755.00	105.0 PK			1.33 V	51	101.25	3.75
4	*5755.00	94.8 AV			1.33 V	51	91.05	3.75
5	11510.00	63.3 PK	74.0	-10.7	1.33 V	51	45.62	17.67
6	11510.00	49.4 AV	54.0	-4.6	1.33 V	51	31.69	17.67

## 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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	A		

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	*5795.00	99.2 PK			1.38 H	16	95.25	3.94
2	*5795.00	87.8 AV			1.38 H	16	83.90	3.94
3	#5850.00	61.7 PK	79.2	-17.5	1.38 H	16	57.42	4.25
4	#5850.00	46.0 AV	67.8	-21.8	1.38 H	16	41.77	4.25
5	11590.00	62.6 PK	74.0	-11.4	1.38 H	16	45.53	17.06
6	11590.00	48.3 AV	54.0	-5.7	1.38 H	16	31.23	17.06
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	*5795.00	104.1 PK			1.33 V	51	100.18	3.94
2	*5795.00	93.4 AV			1.33 V	51	89.45	3.94
3	#5850.00	60.4 PK	84.1	-23.7	1.33 V	51	56.16	4.25
4	#5850.00	45.7 AV	73.4	-27.7	1.33 V	51	41.44	4.25
5	11590.00	62.4 PK	74.0	-11.6	1.33 V	51	45.37	17.06
6	11590.00	48.3 AV	54.0	-5.7	1.33 V	51	31.22	17.06

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	#5725.00	70.9 PK	85.3	-14.4	1.42 H	164	67.25	3.60
2	#5725.00	50.8 AV	74.8	-23.9	1.42 H	164	47.22	3.60
3	*5755.00	105.3 PK			1.44 H	164	101.50	3.75
4	*5755.00	94.8 AV			1.44 H	164	91.01	3.75
5	11510.00	61.4 PK	74.0	-12.6	1.42 H	166	43.73	17.67
6	11510.00	48.0 AV	54.0	-6.1	1.42 H	166	30.28	17.67
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	#5725.00	73.2 PK	80.3	-7.1	1.00 V	196	69.58	3.60
2	#5725.00	52.7 AV	69.5	-16.8	1.00 V	196	49.08	3.60
3	*5755.00	100.3 PK			1.00 V	196	96.54	3.75
4	*5755.00	89.5 AV			1.00 V	196	85.78	3.75
5	11510.00	60.8 PK	74.0	-13.2	1.00 V	196	43.12	17.67
6	11510.00	47.3 AV	54.0	-6.7	1.00 V	196	29.61	17.67

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)
ANTENNA	B		

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	*5795.00	105.0 PK			1.47 H	158	101.02	3.94
2	*5795.00	94.9 AV			1.47 H	158	90.91	3.94
3	#5850.00	60.6 PK	85.0	-24.3	1.47 H	158	56.36	4.25
4	#5850.00	46.9 AV	74.9	-27.9	1.47 H	158	42.67	4.25
5	11590.00	59.3 PK	74.0	-14.7	1.47 H	158	42.23	17.06
6	11590.00	47.3 AV	54.0	-6.8	1.47 H	158	30.19	17.06
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	*5795.00	100.1 PK			1.00 V	196	96.14	3.94
2	*5795.00	88.1 AV			1.00 V	196	84.12	3.94
3	#5850.00	58.4 PK	80.1	-21.6	1.00 V	196	54.19	4.25
4	#5850.00	45.4 AV	68.1	-22.7	1.00 V	196	41.15	4.25
5	11590.00	59.6 PK	74.0	-14.4	1.00 V	196	42.53	17.06
6	11590.00	48.2 AV	54.0	-5.8	1.00 V	196	31.13	17.06

**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.
6. " # ": The radiated frequency is out of the restricted band.
7. The limit value is defined as per 15.247.



A D T

## BELOW 1GHz WORST-CASE DATA

## 802.11g

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
ANTENNA	A		

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	65.16	20.8 QP	40.0	-19.2	1.21 H	161	35.51	-14.70
2	132.87	22.1 QP	43.5	-21.4	1.34 H	87	36.71	-14.57
3	199.94	26.6 QP	43.5	-17.0	1.52 H	89	42.73	-16.18
4	252.86	25.8 QP	46.0	-20.2	1.34 H	78	39.70	-13.89
5	276.38	25.1 QP	46.0	-20.9	1.16 H	64	37.86	-12.73
6	478.19	24.9 QP	46.0	-21.1	1.27 H	145	33.94	-9.06
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	63.27	23.5 QP	40.0	-16.5	1.23 V	84	38.12	-14.62
2	113.27	26.5 QP	43.5	-17.0	1.37 V	154	43.09	-16.57
3	125.30	25.3 QP	43.5	-18.2	1.42 V	126	40.84	-15.50
4	250.58	22.9 QP	46.0	-23.1	1.53 V	112	36.87	-13.96
5	278.42	24.2 QP	46.0	-21.8	1.15 V	91	36.90	-12.70
6	554.09	24.2 QP	46.0	-21.8	1.07 V	190	32.02	-7.82

## 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



A D T

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
ANTENNA	B		

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	66.47	19.5 QP	40.0	-20.5	1.17 H	360	34.38	-14.84
2	133.01	22.2 QP	43.5	-21.3	1.35 H	74	36.72	-14.55
3	199.22	26.9 QP	43.5	-16.6	1.53 H	96	43.08	-16.21
4	277.01	26.4 QP	46.0	-19.6	1.17 H	85	39.15	-12.72
5	478.53	24.6 QP	46.0	-21.4	1.64 H	141	33.67	-9.06
6	719.62	30.0 QP	46.0	-16.1	1.15 H	78	35.18	-5.23
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	61.57	25.6 QP	40.0	-14.5	1.13 V	81	40.02	-14.47
2	113.32	27.1 QP	43.5	-16.4	1.36 V	152	43.64	-16.57
3	193.32	20.8 QP	43.5	-22.8	1.45 V	119	36.93	-16.18
4	250.53	23.2 QP	46.0	-22.8	1.18 V	122	37.17	-13.96
5	279.58	24.2 QP	46.0	-21.8	1.00 V	93	36.86	-12.67
6	554.04	25.1 QP	46.0	-20.9	1.34 V	179	32.92	-7.82

**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



A D T

## 802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
ANTENNA	A		

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	66.62	18.9 QP	40.0	-21.1	1.17 H	21	33.81	-14.87
2	133.11	21.8 QP	43.5	-21.7	1.05 H	91	36.33	-14.54
3	199.22	26.6 QP	43.5	-16.9	1.34 H	103	42.80	-16.21
4	247.91	23.9 QP	46.0	-22.1	1.29 H	77	37.95	-14.03
5	276.96	27.1 QP	46.0	-18.9	1.13 H	88	39.84	-12.72
6	480.42	24.8 QP	46.0	-21.3	1.44 H	149	33.78	-9.03
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	62.16	24.7 QP	40.0	-15.3	1.08 V	73	39.20	-14.51
2	112.16	28.6 QP	43.5	-14.9	1.39 V	169	45.22	-16.64
3	133.11	25.2 QP	43.5	-18.4	1.42 V	69	39.69	-14.54
4	214.40	19.4 QP	43.5	-24.1	1.18 V	116	35.26	-15.89
5	251.35	21.9 QP	46.0	-24.1	1.36 V	118	35.82	-13.94
6	276.77	24.6 QP	46.0	-21.4	1.44 V	108	37.29	-12.72

## 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



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CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
ANTENNA	B		

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	61.14	18.4 QP	40.0	-21.6	1.02 H	163	32.80	-14.43
2	132.77	22.7 QP	43.5	-20.8	1.13 H	81	37.25	-14.58
3	199.90	25.6 QP	43.5	-17.9	1.25 H	110	41.80	-16.18
4	240.00	24.1 QP	46.0	-21.9	1.14 H	79	38.64	-14.53
5	276.19	26.1 QP	46.0	-19.9	1.32 H	65	38.87	-12.73
6	476.05	25.3 QP	46.0	-20.7	1.17 H	147	34.37	-9.07
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	63.56	23.1 QP	40.0	-16.9	1.16 V	53	37.72	-14.64
2	114.39	27.0 QP	43.5	-16.6	1.34 V	159	43.43	-16.48
3	133.16	25.2 QP	43.5	-18.3	1.25 V	74	39.70	-14.54
4	251.60	21.9 QP	46.0	-24.1	1.17 V	118	35.87	-13.93
5	278.66	25.4 QP	46.0	-20.6	1.22 V	115	38.05	-12.69
6	400.01	22.3 QP	46.0	-23.7	1.35 V	96	32.82	-10.52

**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 OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	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 0.50MHz.

### 4.2.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	834115/016	Mar. 24, 2014	Mar. 23, 2015
ROHDE & SCHWARZ Artificial Mains Network (For EUT)	ESH2-Z5	828075/003	Sep. 06, 2013	Sep. 05, 2014
LISN With Adapter (for EUT)	AD10	C03Ada-001	Sep. 06, 2013	Sep. 05, 2014
EMCO L.I.S.N. (For peripherals)	3825/2	9504-2359	Jul. 23, 2013	Jul. 22, 2014
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 15, 2013	May 14, 2014
Software	ADT_Cond_V7.3.7	NA	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C03.01	Sep. 26, 2013	Sep. 25, 2014
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-300	Jan. 17, 2014	Jan. 16, 2015
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-301	Jan. 27, 2014	Jan. 26, 2015

Notes: 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. 3.

3. The VCCI Site Registration No. C-274.

### 4.2.3 TEST PROCEDURES

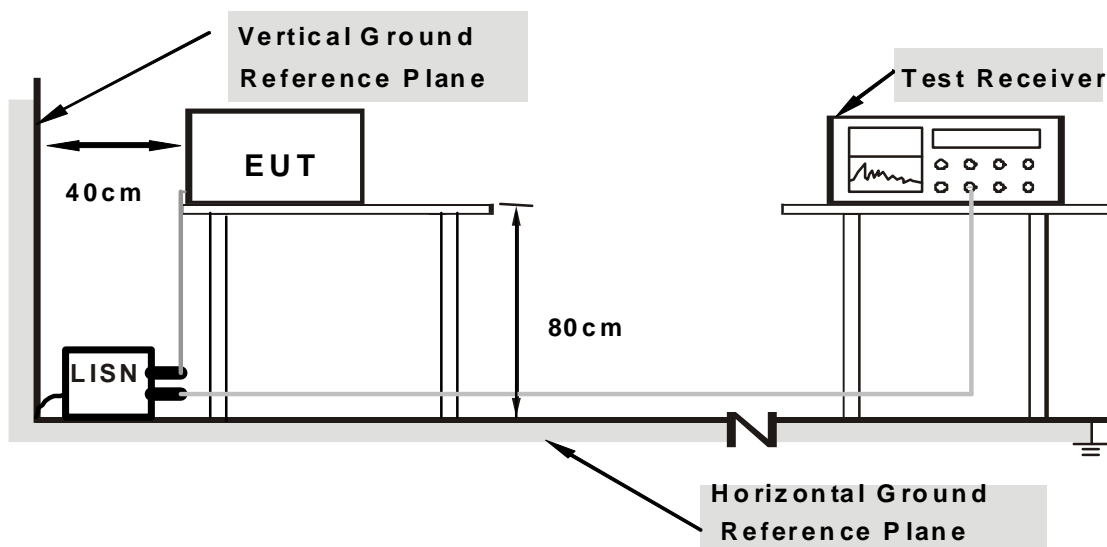
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

**NOTE:** 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



**Note:** 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

- Connected the EUT to Monitor.
- Set the EUT under transmitting condition.

## 4.2.7 TEST RESULTS

### CONDUCTED WORST-CASE DATA :

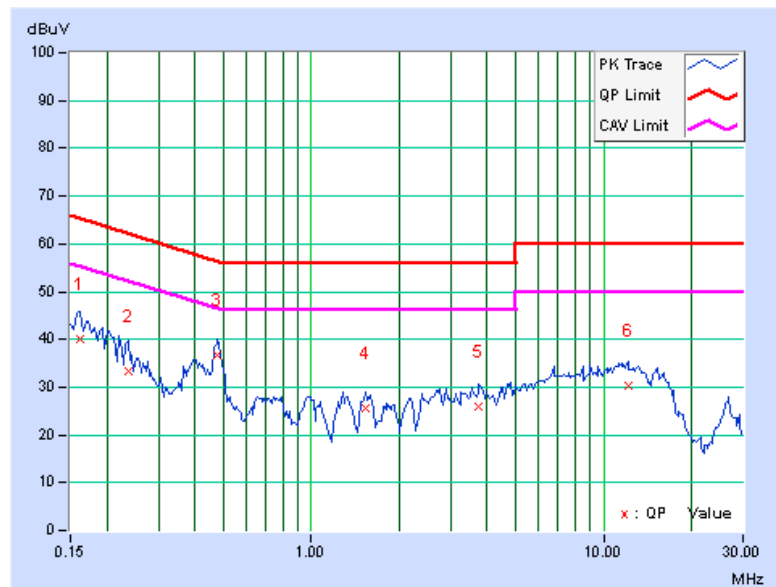
For 2.4GHz: 802.11g

PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	TX Channel 11		

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	0.16172	0.24	39.66	26.84	39.90	27.08	65.38	55.38	-25.47	-28.29
2	0.23594	0.26	33.00	23.08	33.26	23.34	62.24	52.24	-28.97	-28.89
3	0.47813	0.28	36.27	31.37	36.55	31.65	56.37	46.37	-19.82	-14.72
4	1.52734	0.36	25.14	19.61	25.50	19.97	56.00	46.00	-30.50	-26.03
5	3.75000	0.45	25.45	17.52	25.90	17.97	56.00	46.00	-30.10	-28.03
6	12.16406	0.56	29.71	21.84	30.27	22.40	60.00	50.00	-29.73	-27.60

### 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

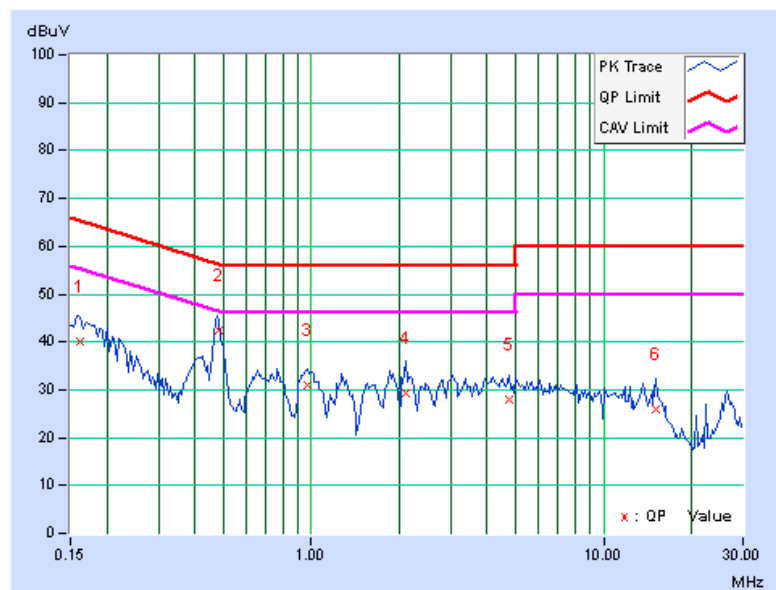


PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	TX Channel 11		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	0.31	39.88	25.80	40.19	26.11	65.38	55.38	-25.19	-29.27
2	<b>0.48067</b>	<b>0.37</b>	<b>42.03</b>	<b>40.94</b>	<b>42.40</b>	<b>41.31</b>	<b>56.33</b>	<b>46.33</b>	<b>-13.92</b>	<b>-5.01</b>
3	0.96641	0.39	30.61	28.43	31.00	28.82	56.00	46.00	-25.00	-17.18
4	2.10547	0.53	28.90	26.29	29.43	26.82	56.00	46.00	-26.57	-19.18
5	4.74609	0.58	27.33	23.56	27.91	24.14	56.00	46.00	-28.09	-21.86
6	15.02734	0.63	25.39	16.92	26.02	17.55	60.00	50.00	-33.98	-32.45

#### REMARKS:

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



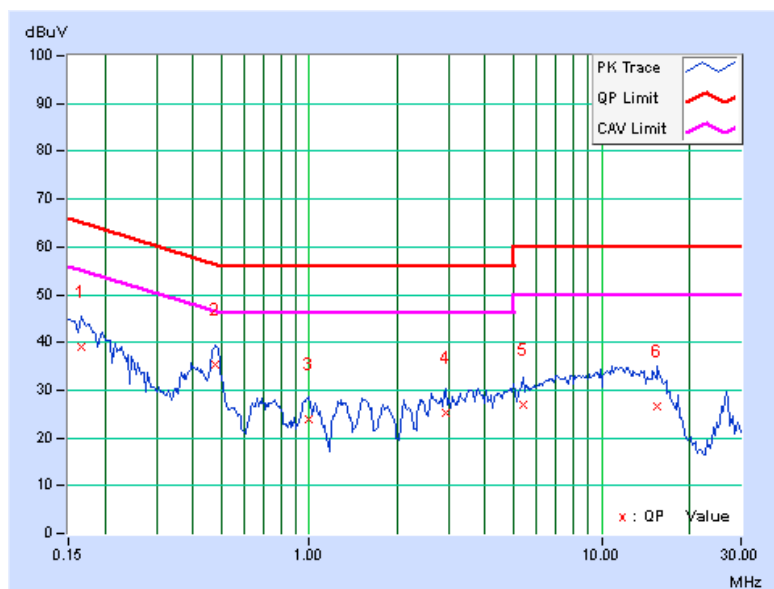
# For 5.0GHz: 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	TX Channel 149		

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	0.16562	0.25	38.88	26.51	39.13	26.76	65.18	55.18	-26.05	-28.42
2	0.47422	0.28	35.18	28.55	35.46	28.83	56.44	46.44	-20.98	-17.61
3	0.99375	0.31	23.69	14.35	24.00	14.66	56.00	46.00	-32.00	-31.34
4	2.94531	0.43	24.72	18.10	25.15	18.53	56.00	46.00	-30.85	-27.47
5	5.36719	0.48	26.35	19.36	26.83	19.84	60.00	50.00	-33.17	-30.16
6	15.47656	0.61	26.14	16.03	26.75	16.64	60.00	50.00	-33.25	-33.36

## 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

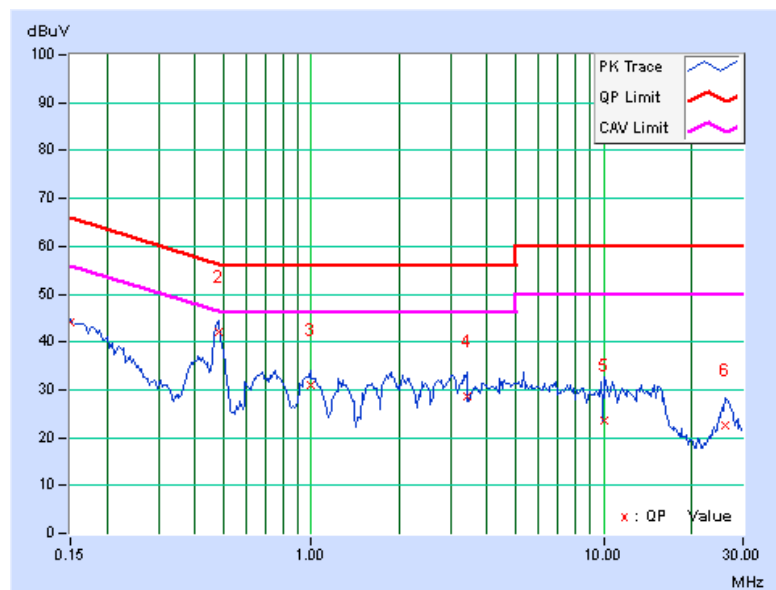


PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	TX Channel 149		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.30	43.73	27.41	44.03	27.71	66.00	56.00	-21.97	-28.29
2	0.48203	0.37	41.76	40.86	42.13	41.23	56.30	46.30	-14.17	-5.07
3	0.99375	0.39	30.55	27.93	30.94	28.32	56.00	46.00	-25.06	-17.68
4	3.39453	0.56	27.93	23.94	28.49	24.50	56.00	46.00	-27.51	-21.50
5	10.06641	0.58	23.14	18.80	23.72	19.38	60.00	50.00	-36.28	-30.62
6	26.21875	0.47	22.25	12.51	22.72	12.98	60.00	50.00	-37.28	-37.02

#### REMARKS:

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

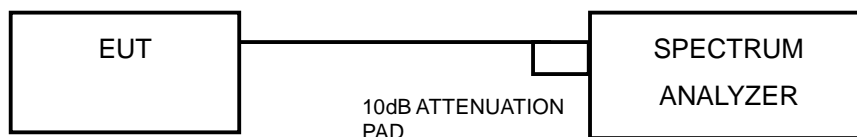


### 4.3 6dB BANDWIDTH MEASUREMENT

#### 4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 4.3.2 TEST SETUP



#### 4.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

#### 4.3.4 TEST PROCEDURE

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

#### 4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.3.6 EUT OPERATING CONDITIONS

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

#### 4.3.7 TEST RESULTS

For 2.4GHz:

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
<b>802.11b</b>				
1	2412	8.12	0.5	PASS
6	2437	8.14	0.5	PASS
11	2462	8.10	0.5	PASS
<b>802.11g</b>				
1	2412	15.10	0.5	PASS
6	2437	15.09	0.5	PASS
11	2462	15.47	0.5	PASS
<b>802.11n (20MHz)</b>				
1	2412	14.57	0.5	PASS
6	2437	15.13	0.5	PASS
11	2462	15.22	0.5	PASS
<b>802.11n (40MHz)</b>				
3	2422	36.45	0.5	PASS
6	2437	35.88	0.5	PASS
9	2452	36.09	0.5	PASS

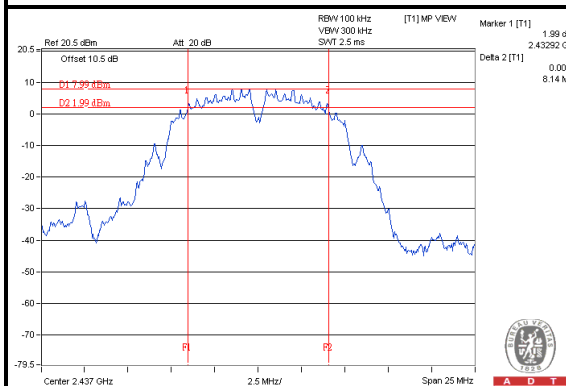




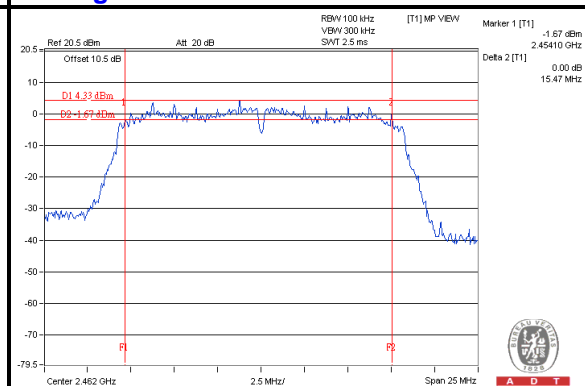
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## SPECTRUM PLOT OF WORST VALUE

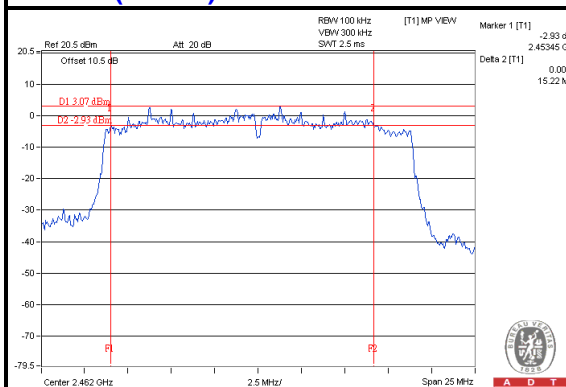
802.11b



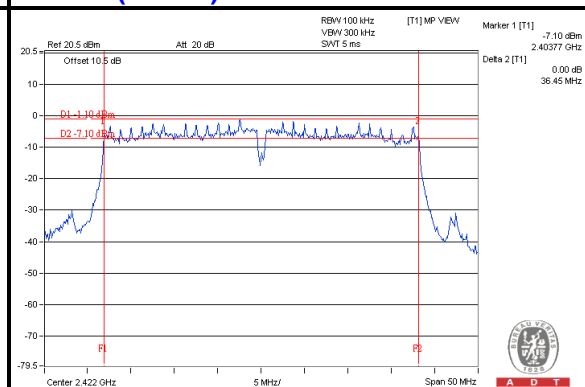
802.11g



802.11n (20MHz)



802.11n (40MHz)



**A D T****For 5.0GHz:**

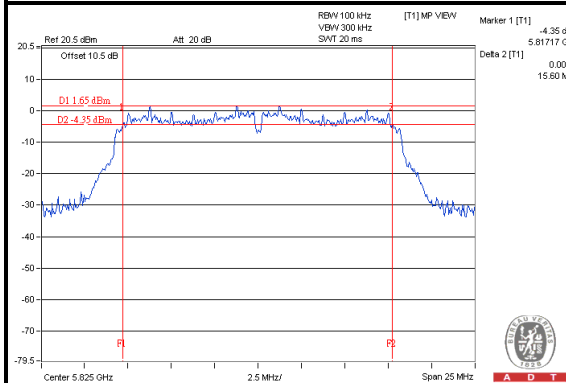
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
<b>802.11a</b>				
149	5745	15.59	0.5	PASS
157	5785	15.50	0.5	PASS
165	5825	15.60	0.5	PASS
<b>802.11n (20MHz)</b>				
149	5745	15.19	0.5	PASS
157	5785	15.18	0.5	PASS
165	5825	15.21	0.5	PASS
<b>802.11n (40MHz)</b>				
151	5755	36.09	0.5	PASS
159	5795	36.42	0.5	PASS



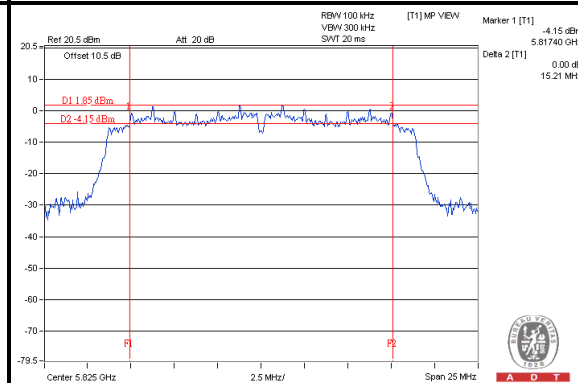
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## SPECTRUM PLOT OF WORST VALUE

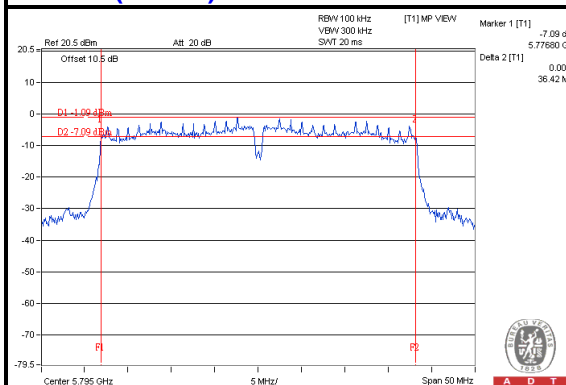
802.11a



802.11n (20MHz)



802.11n (40MHz)

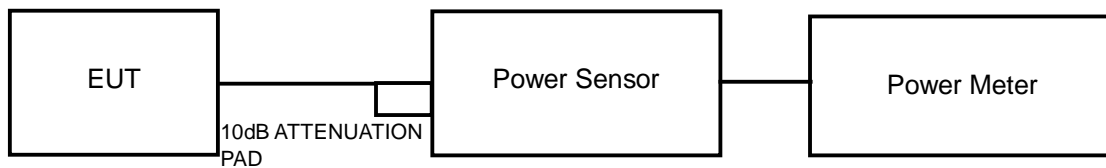


## 4.4 CONDUCTED OUTPUT POWER

### 4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation: 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 peak 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

## For 2.4GHz:

CHANNEL	FREQUENCY (MHz)	PEAK POWER (dBm)	PEAK POWER (mW)	LIMIT (dBm)	PASS/FAIL
802.11b					
1	2412	20.77	119.4	30	PASS
6	2437	20.76	119.1	30	PASS
11	2462	20.72	118.0	30	PASS
802.11g					
1	2412	24.07	255.3	30	PASS
6	2437	24.09	256.4	30	PASS
11	2462	24.12	<b>258.2</b>	30	PASS
802.11n (20MHz)					
1	2412	23.32	214.8	30	PASS
6	2437	23.24	210.9	30	PASS
11	2462	23.38	217.8	30	PASS
802.11n (40MHz)					
3	2422	22.08	161.4	30	PASS
6	2437	21.98	157.8	30	PASS
9	2452	22.05	160.3	30	PASS



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For 5.0GHz:

CHANNEL	FREQUENCY (MHz)	PEAK POWER (dBm)	PEAK POWER (mW)	LIMIT (dBm)	PASS/FAIL
802.11a					
149	5745	19.28	84.7	30	PASS
157	5785	19.12	81.7	30	PASS
165	5825	19.14	82.0	30	PASS
802.11n (20MHz)					
149	5745	19.24	83.9	30	PASS
157	5785	19.11	81.5	30	PASS
165	5825	19.12	81.7	30	PASS
802.11n (40MHz)					
151	5755	19.17	82.6	30	PASS
159	5795	19.15	82.2	30	PASS



#### 4.4.8 TEST RESULTS - FOR AVERAGE POWER

For 2.4GHz:

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)
<b>802.11b</b>		
1	2412	17.00
6	2437	16.98
11	2462	16.99
<b>802.11g</b>		
1	2412	15.29
6	2437	15.31
11	2462	15.33
<b>802.11n (20MHz)</b>		
1	2412	14.00
6	2437	13.97
11	2462	14.06
<b>802.11n (40MHz)</b>		
3	2422	12.65
6	2437	12.59
9	2452	12.62



For 5.0GHz:

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)
802.11a		
149	5745	11.45
157	5785	11.10
165	5825	11.11
802.11n (20MHz)		
149	5745	11.34
157	5785	11.08
165	5825	11.09
802.11n (40MHz)		
151	5755	11.26
159	5795	11.14

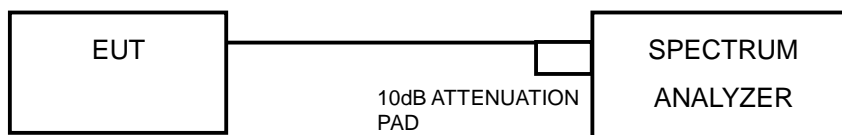


## 4.5 POWER SPECTRAL DENSITY MEASUREMENT

### 4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

### 4.5.2 TEST SETUP



### 4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 TEST PROCEDURE

- Set the RBW = 3 kHz, VBW = 10 kHz, Detector = peak.
- Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

### 4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

### 4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6



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#### 4.5.7 TEST RESULTS

For 2.4GHz:

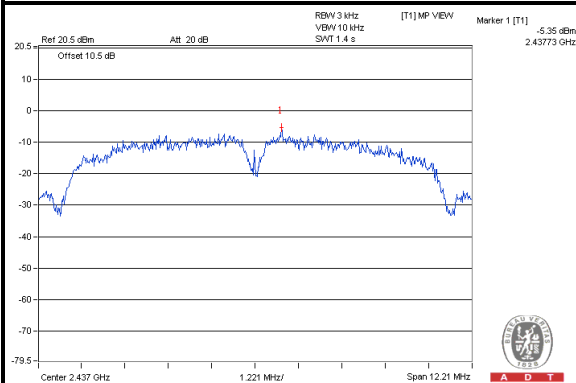
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
<b>802.11b</b>				
1	2412	-5.42	8	PASS
6	2437	-5.35	8	PASS
11	2462	-5.82	8	PASS
<b>802.11g</b>				
1	2412	-9.59	8	PASS
6	2437	-9.44	8	PASS
11	2462	-9.58	8	PASS
<b>802.11n (20MHz)</b>				
1	2412	-11.23	8	PASS
6	2437	-9.52	8	PASS
11	2462	-11.79	8	PASS
<b>802.11n (40MHz)</b>				
3	2422	-15.05	8	PASS
6	2437	-16.46	8	PASS
9	2452	-16.79	8	PASS



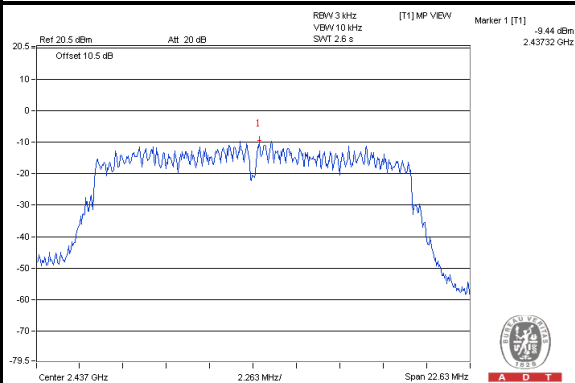
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## SPECTRUM PLOT OF WORST VALUE

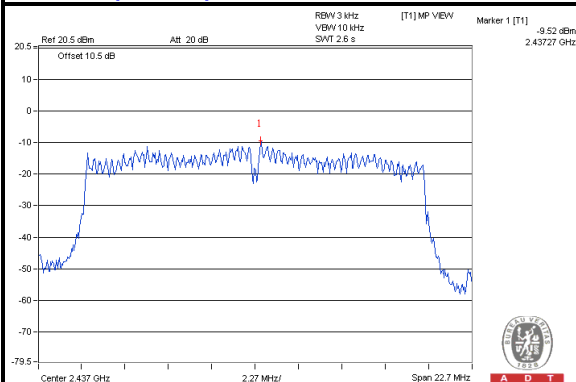
802.11b



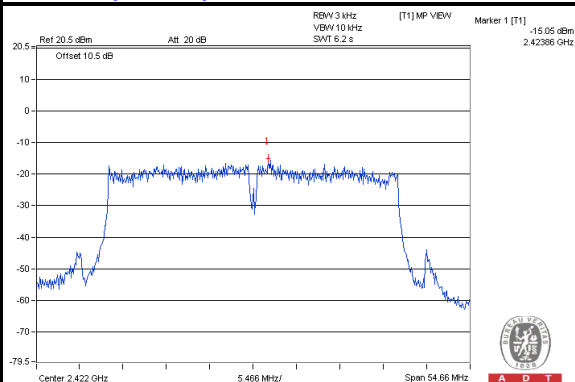
802.11g



802.11n (20MHz)



802.11n (40MHz)





A D T

For 5.0GHz:

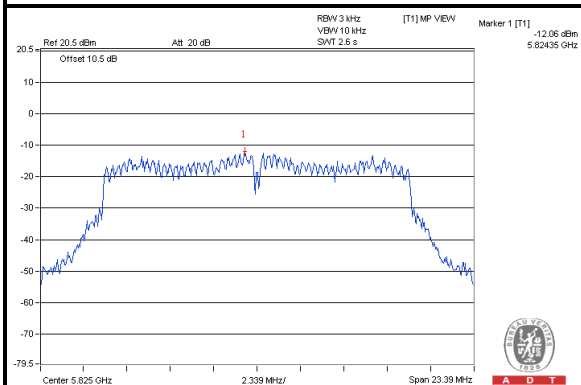
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
802.11a				
149	5745	-12.68	8	PASS
157	5785	-12.38	8	PASS
165	5825	-12.06	8	PASS
802.11n (20MHz)				
149	5745	-10.47	8	PASS
157	5785	-12.69	8	PASS
165	5825	-12.69	8	PASS
802.11n (40MHz)				
151	5755	-15.73	8	PASS
159	5795	-14.67	8	PASS



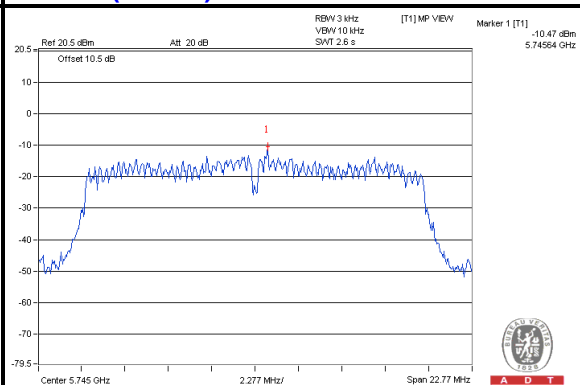
A D T

## SPECTRUM PLOT OF WORST VALUE

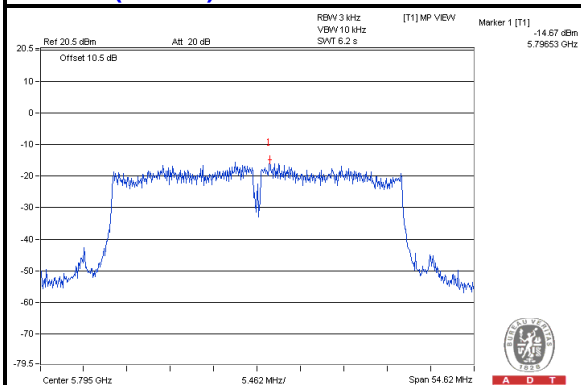
802.11a



802.11n (20MHz)



802.11n (40MHz)

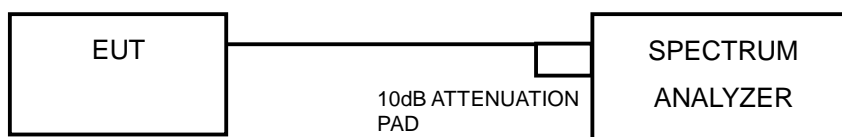


## 4.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

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

#### **MEASUREMENT PROCEDURE OOB**

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

#### **4.6.5 DEVIATION FROM TEST STANDARD**

No deviation.

#### **4.6.6 EUT OPERATING CONDITION**

Same as Item 4.3.6

#### **4.6.7 TEST RESULTS**

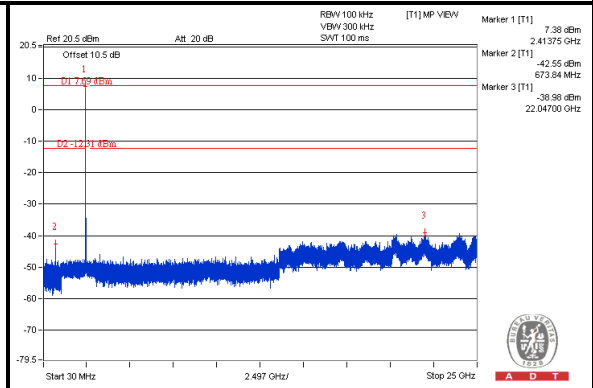
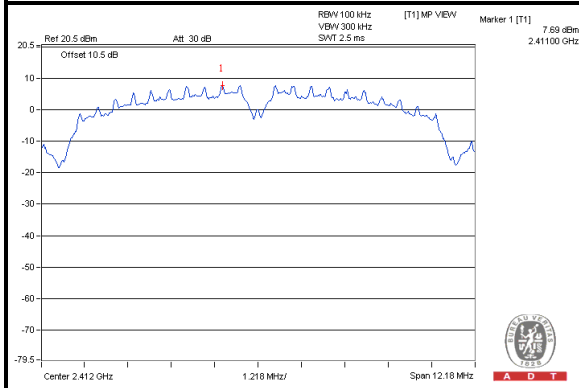
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



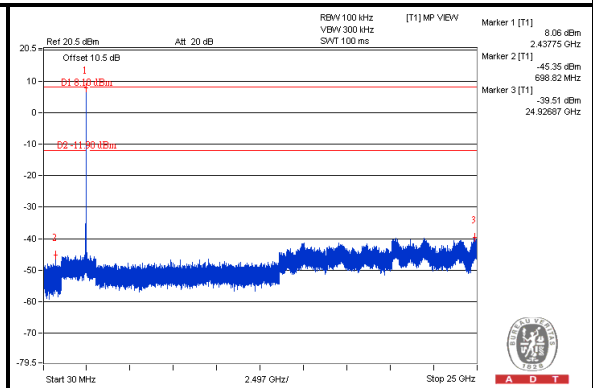
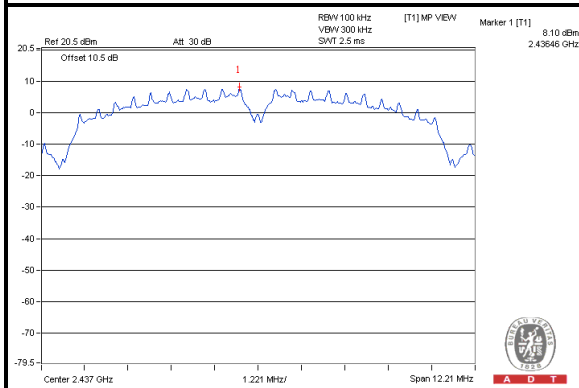
A D T

802.11b

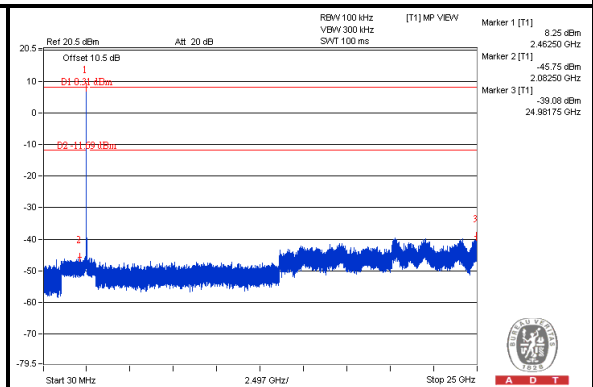
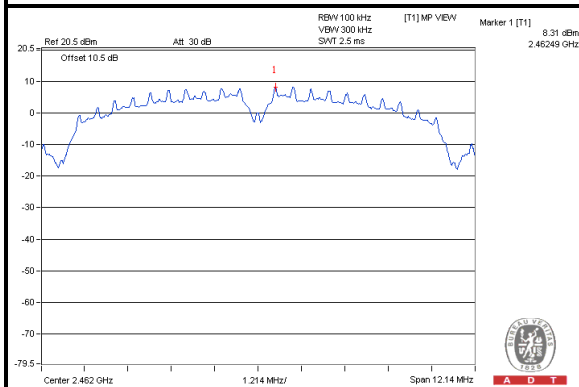
## CH 1



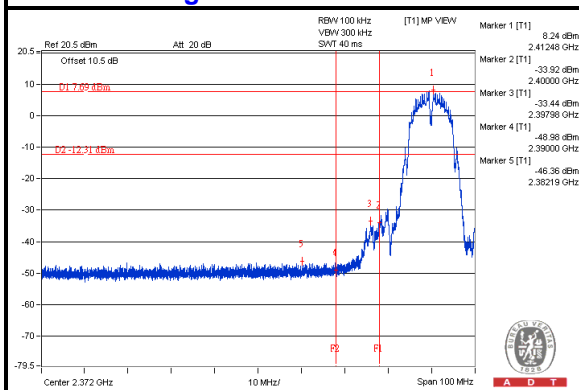
## CH 6



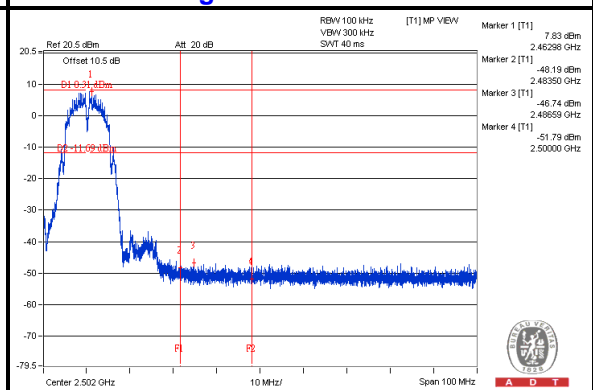
## CH 11



## CH 1 Band edge



## CH 11 Band edge



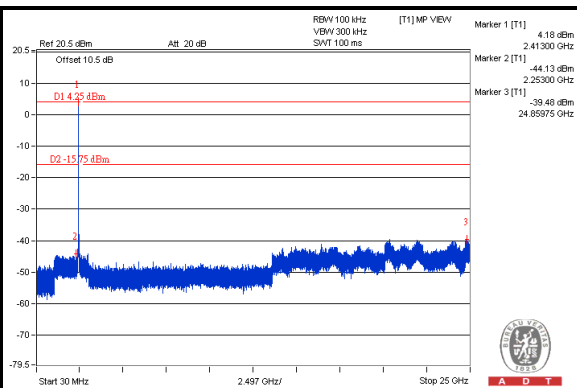
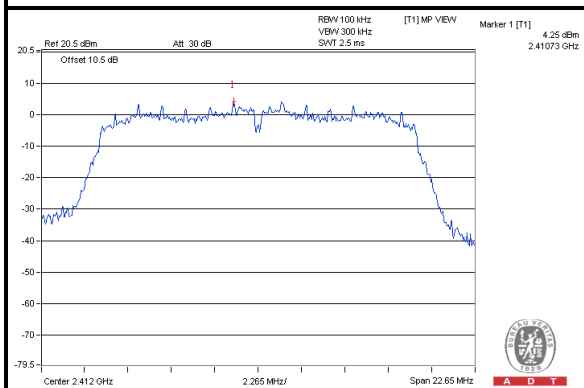




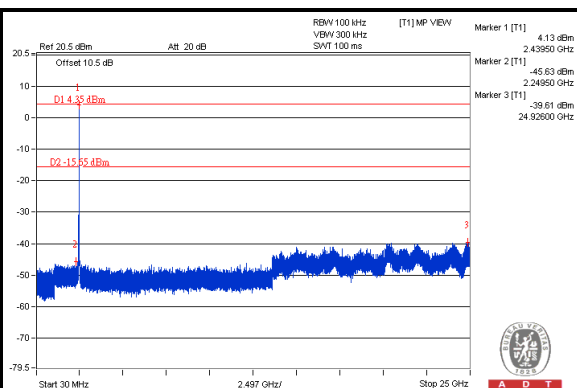
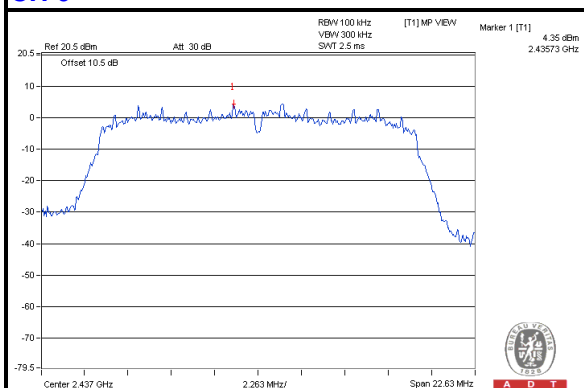
A D T

802.11g

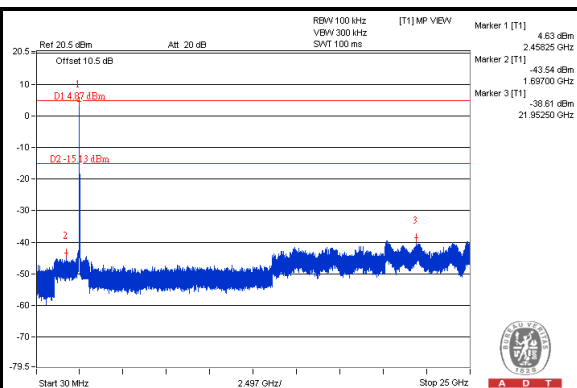
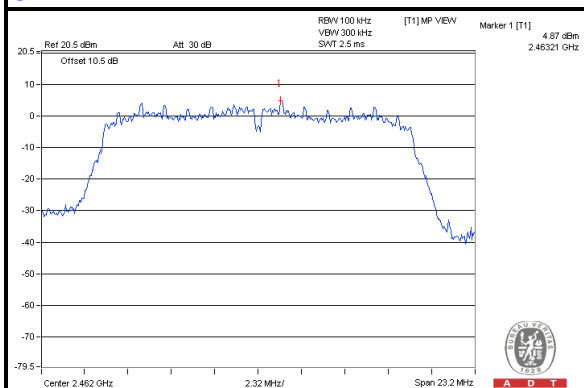
## CH 1



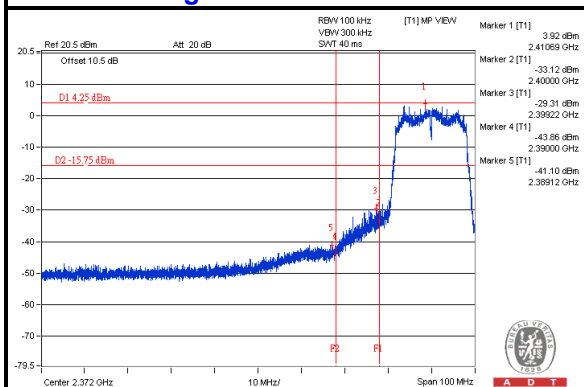
## CH 6



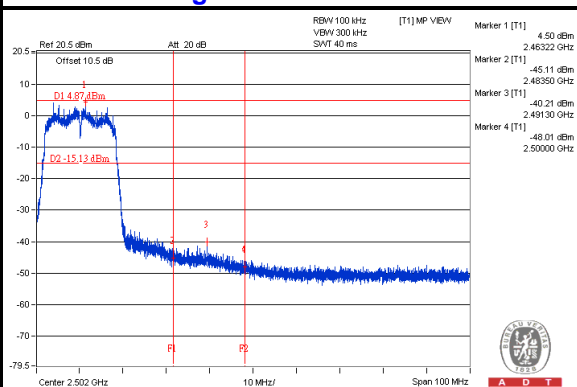
## CH 11



## CH 1 Band edge



## CH 11 Band edge

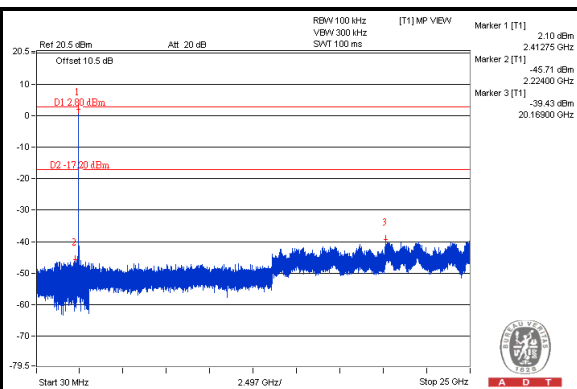
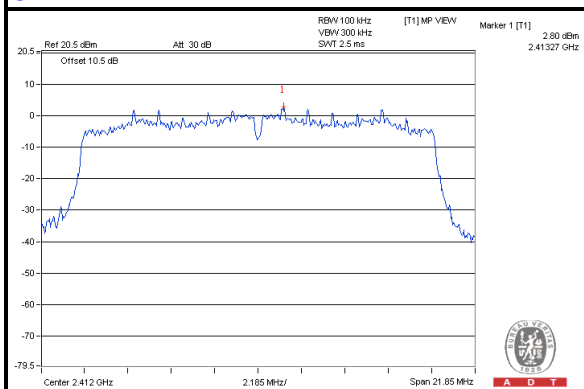




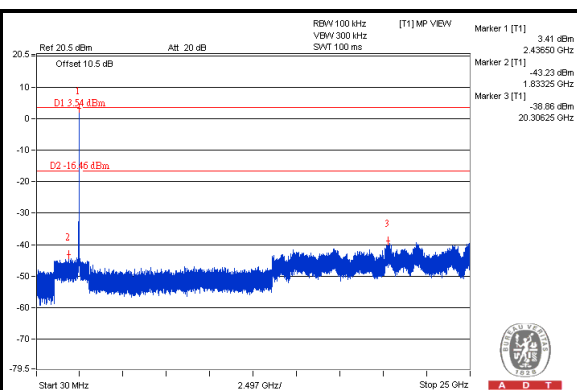
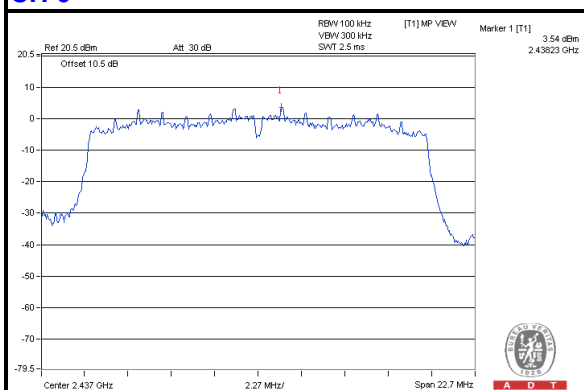
A D T

## 802.11n (20MHz)

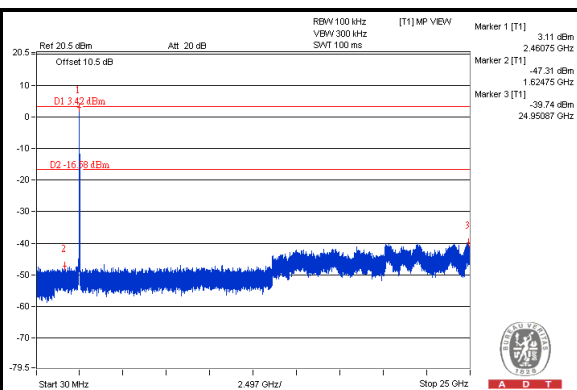
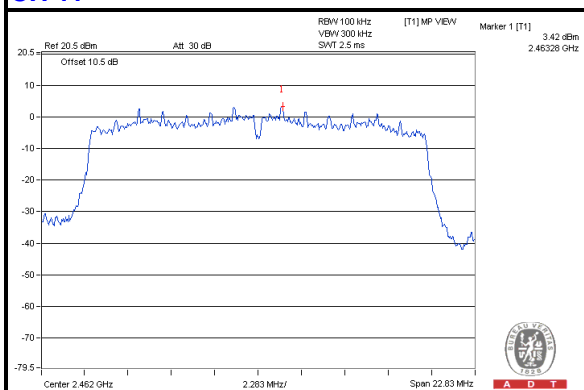
### CH 1



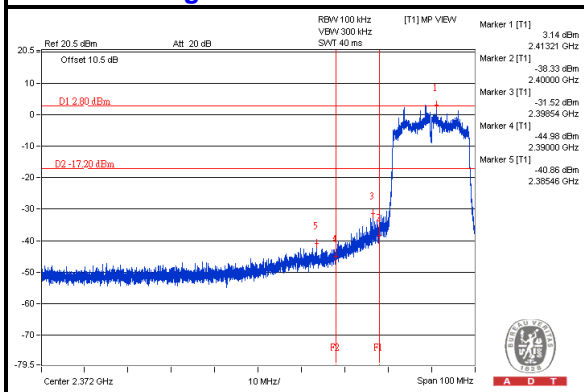
### CH 6



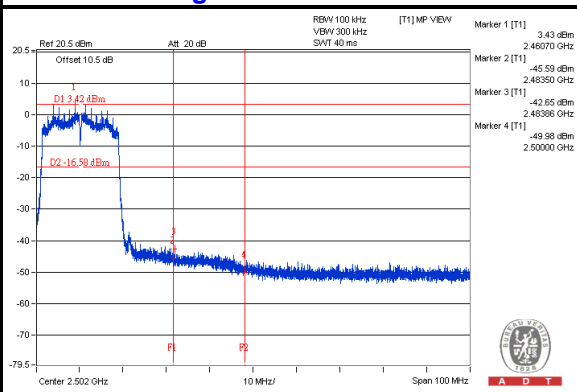
### CH 11



### CH 1 Band edge



### CH 11 Band edge

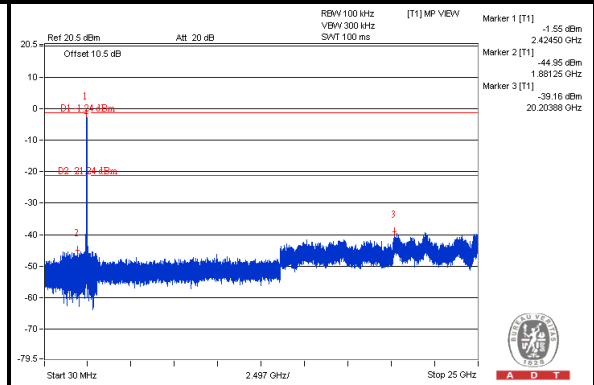
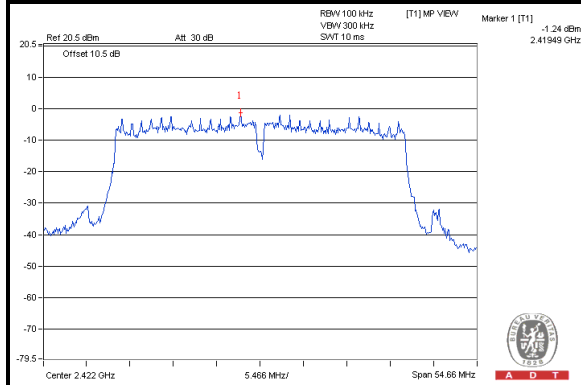




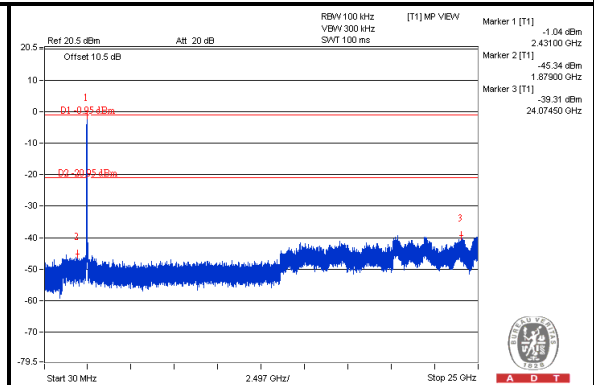
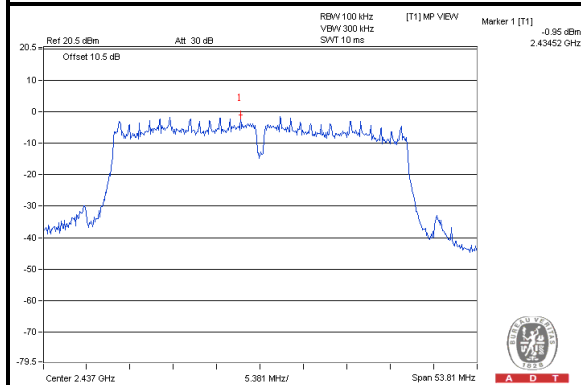
A D T

## 802.11n (40MHz)

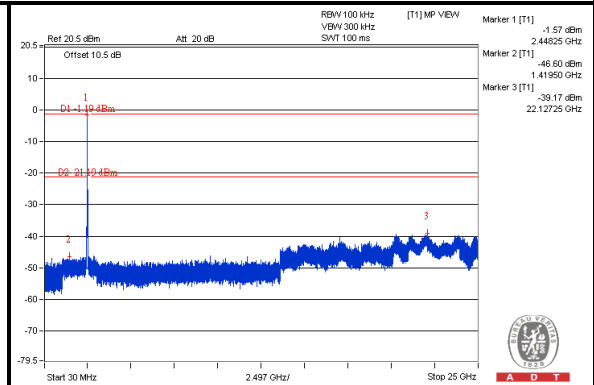
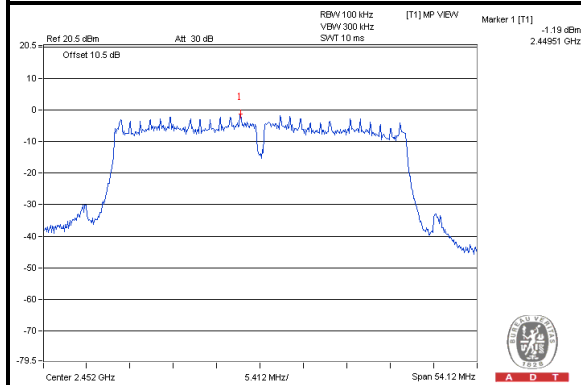
### CH 3



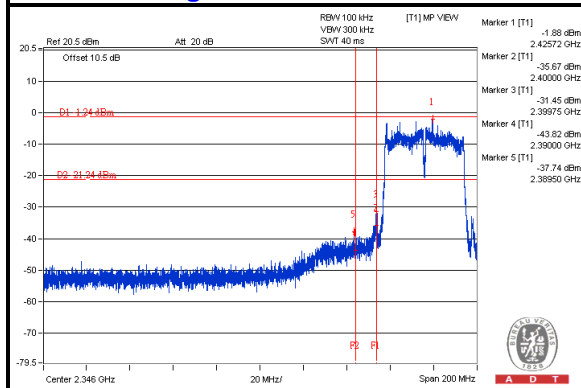
### CH 6



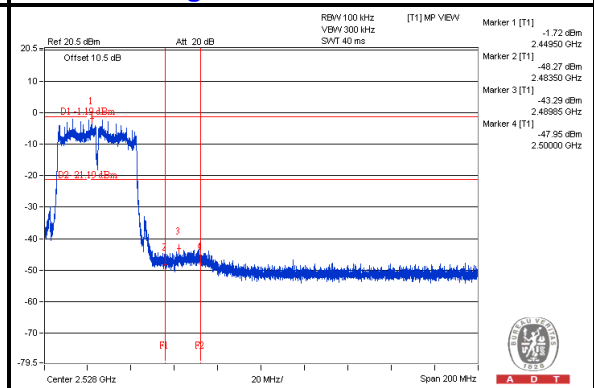
### CH 9



### CH 3 Band edge



### CH 9 Band edge

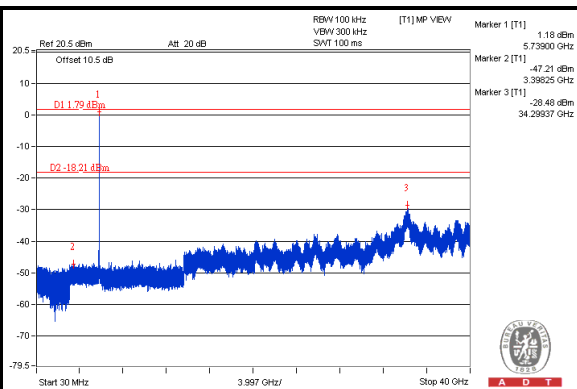
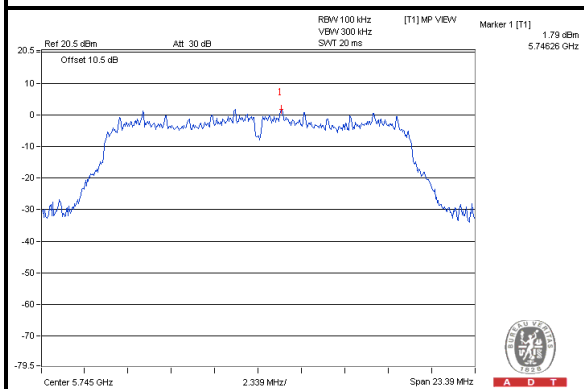




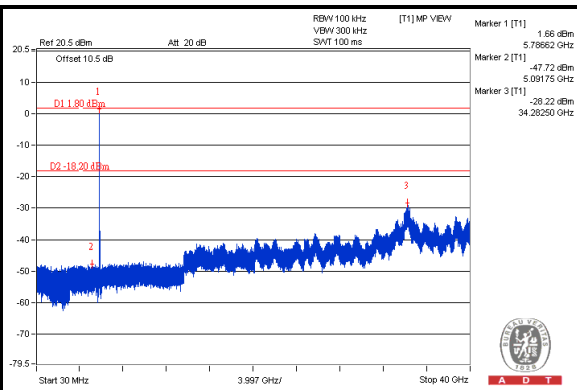
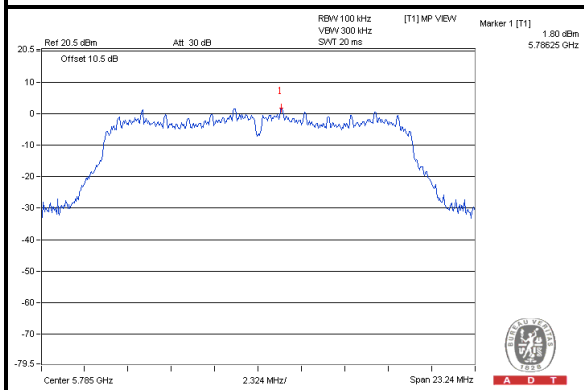
A D T

## 802.11a

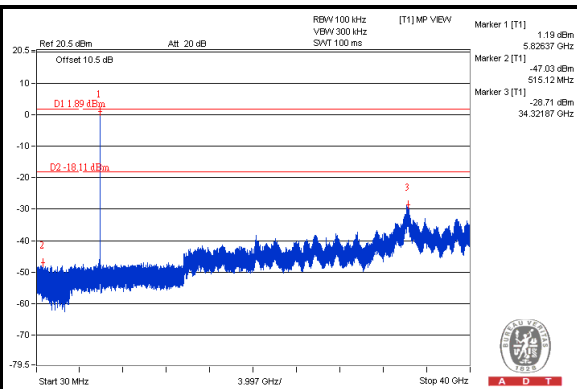
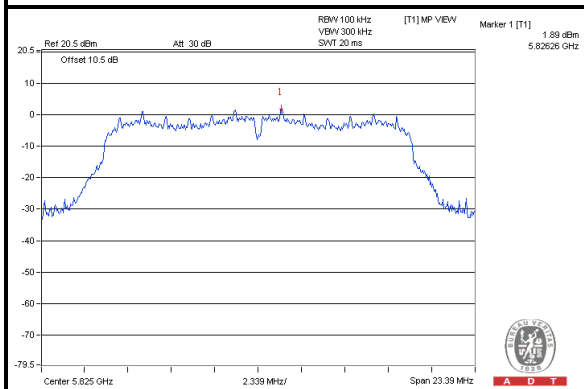
### CH 149



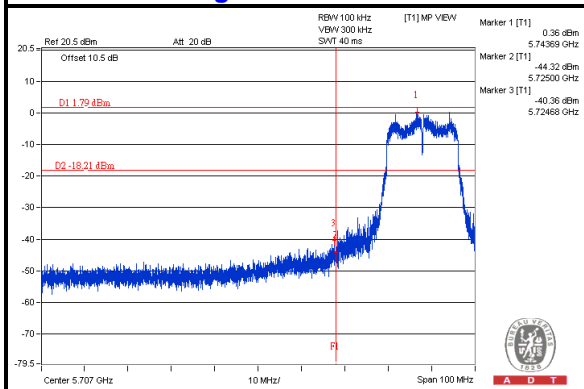
### CH 157



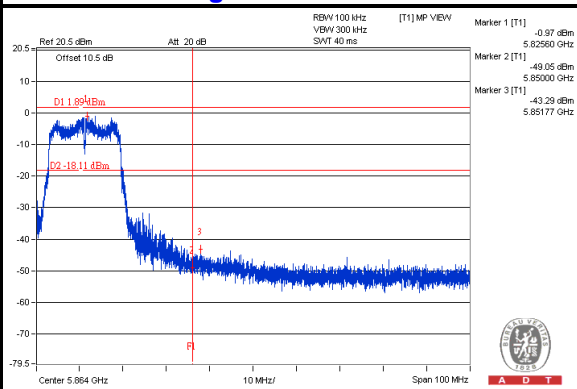
### CH 165



### CH 149 Band edge



### CH 165 Band edge

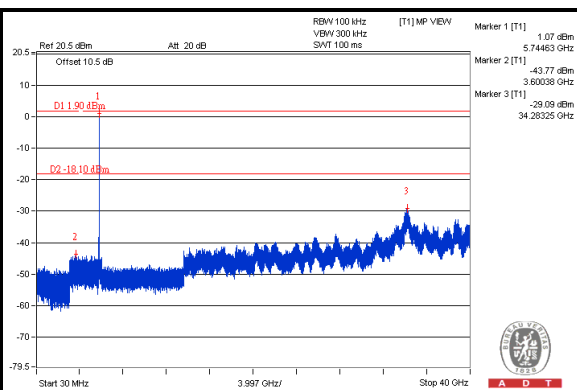
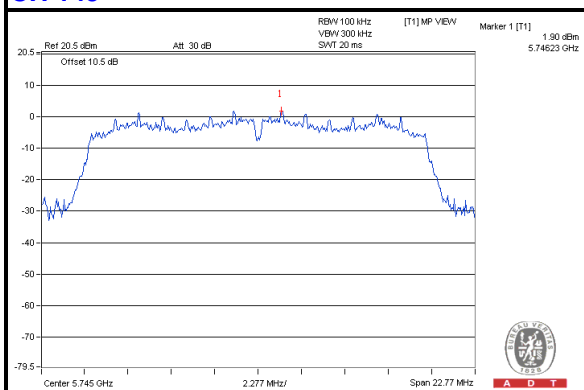




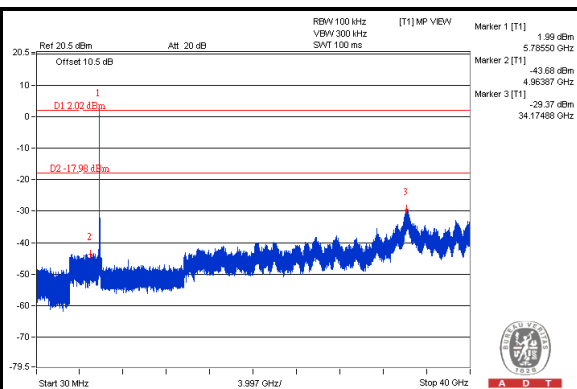
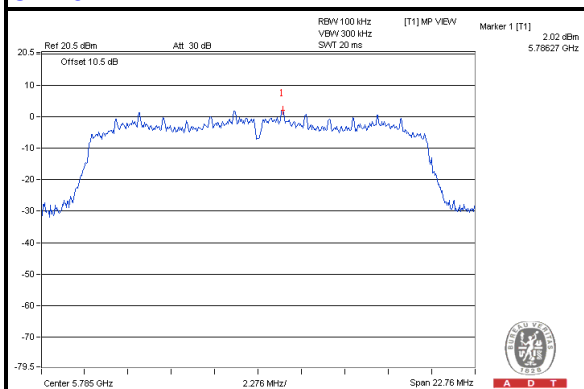
A D T

## 802.11n (20MHz)

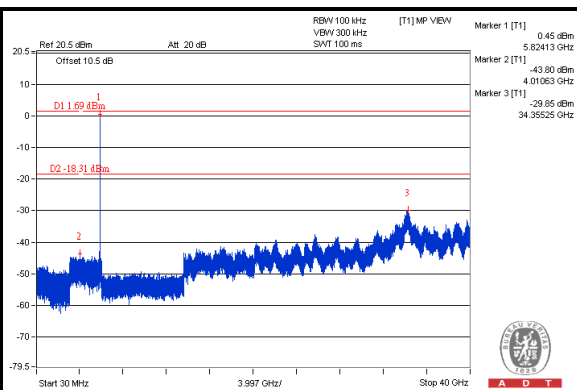
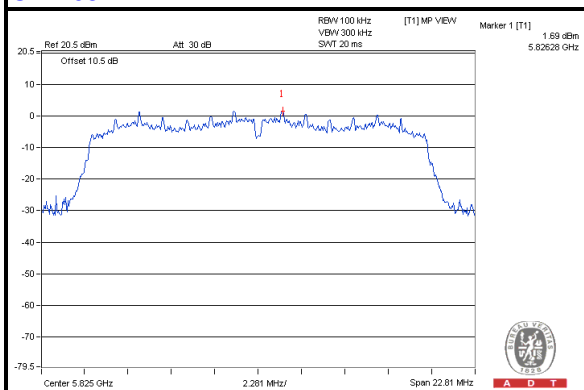
### CH 149



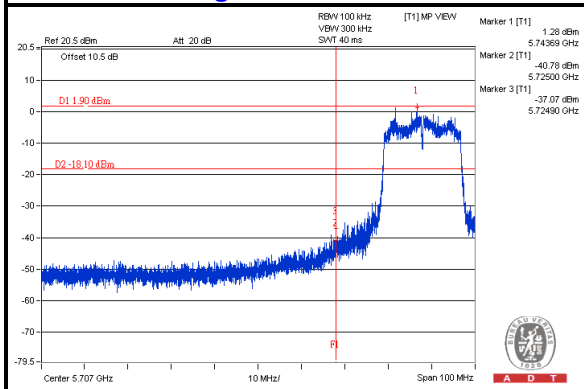
### CH 157



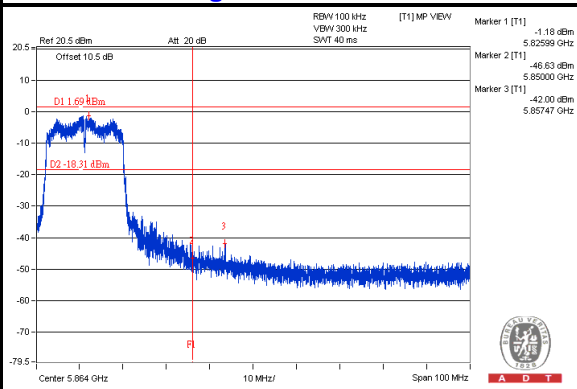
### CH 165



### CH 149 Band edge



### CH 165 Band edge

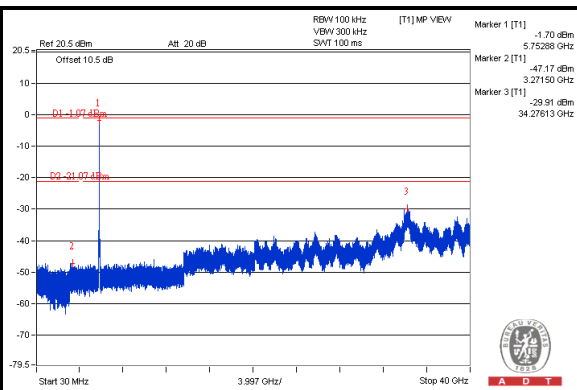
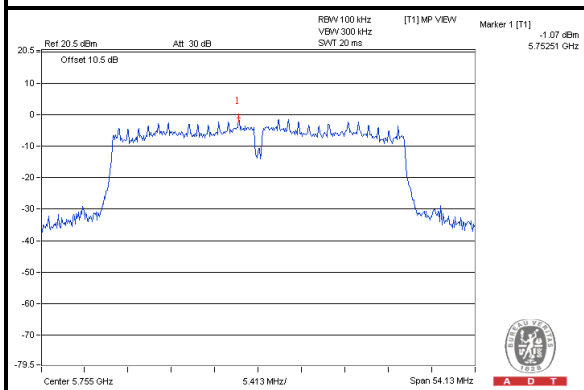




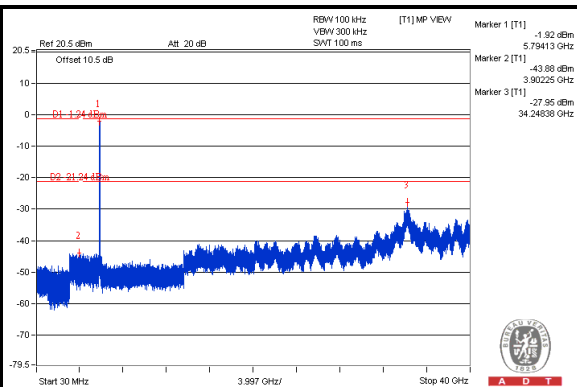
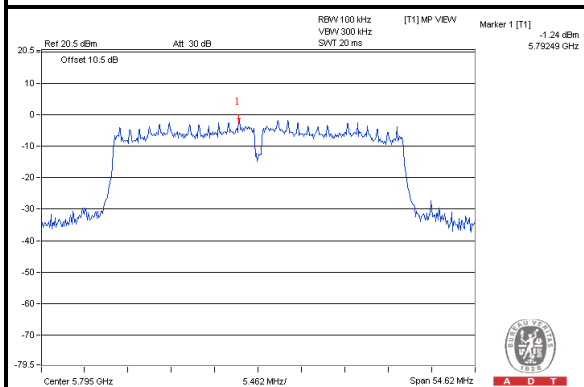
A D T

## 802.11n (40MHz)

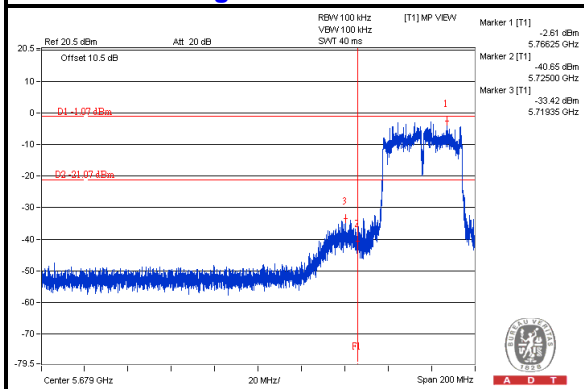
### CH 151



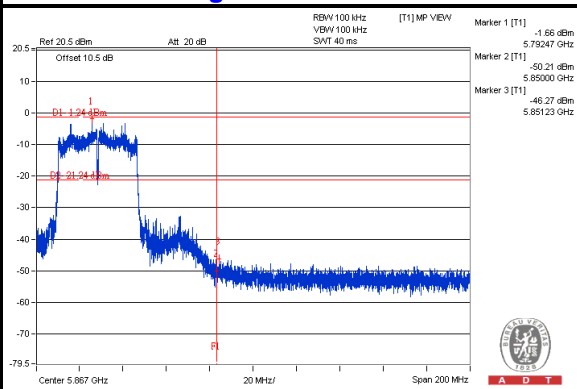
### CH 159



### CH 151 Band edge



### CH 159 Band edge





A D T

## 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



A D T

## 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:

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Fax: 886-2-26051924

**Hsin Chu EMC/RF Lab**

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Fax: 886-3-5935342

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**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**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.





A D T

## **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---**