



FCC TEST REPORT (15.247)

REPORT NO.: RF111019C14B
MODEL NO.: BelAir20EO-11A
(Refer to item 3.1 for the more details)
FCC ID: RAR40005011
RECEIVED: Feb. 10, 2012
TESTED: Feb. 10 ~ Apr. 25, 2012
ISSUED: Apr. 26, 2012

APPLICANT: BelAir Networks Inc.

ADDRESS: 603 March Road Kanata Ontario K2K 2M5
Canada

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.)

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

This test report consists of 102 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval or endorsement by TAF or any government agency. The test results in the report only apply to the tested sample.





A D T

TABLE OF CONTENTS

RELEASE CONTROL RECORD	5
1. CERTIFICATION	6
2. SUMMARY OF TEST RESULTS	7
2.1 MEASUREMENT UNCERTAINTY	7
3. GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT	8
3.2 DESCRIPTION OF TEST MODES	10
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	11
3.3 DESCRIPTION OF SUPPORT UNITS	15
3.3.1 CONFIGURATION OF SYSTEM UNDER TEST	15
3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS	16
4. TEST TYPES AND RESULTS (FOR 2.4GHz BAND)	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	35
4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	35
4.2.2 TEST INSTRUMENTS	35
4.2.3 TEST PROCEDURES	36
4.2.4 DEVIATION FROM TEST STANDARD	36
4.2.5 TEST SETUP	36
4.2.6 EUT OPERATING CONDITIONS	36
4.2.7 TEST RESULTS	37
4.3 6dB BANDWIDTH MEASUREMENT	41
4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT	41
4.3.2 TEST SETUP	41
4.3.3 TEST INSTRUMENTS	41
4.3.4 TEST PROCEDURE	41
4.3.5 DEVIATION FROM TEST STANDARD	41
4.3.6 EUT OPERATING CONDITIONS	41
4.3.7 TEST RESULTS	42
4.4 CONDUCTED OUTPUT POWER	43
4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT	43
4.4.2 TEST SETUP	43
4.4.3 TEST INSTRUMENTS	43
4.4.4 TEST PROCEDURES	43
4.4.5 DEVIATION FROM TEST STANDARD	43
4.4.6 EUT OPERATING CONDITIONS	43
4.4.7 TEST RESULTS	44
4.5 POWER SPECTRAL DENSITY MEASUREMENT	45
4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	45



4.5.2	TEST SETUP	45
4.5.3	TEST INSTRUMENTS.....	45
4.5.4	TEST PROCEDURE.....	45
4.5.5	DEVIATION FROM TEST STANDARD.....	45
4.5.6	EUT OPERATING CONDITION.....	45
4.5.7	TEST RESULTS	46
4.6	CONDUCTED OUT OF BAND EMISSION MEASUREMENT.....	47
4.6.1	LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT	47
4.6.2	TEST SETUP.....	47
4.6.3	TEST INSTRUMENTS.....	47
4.6.4	TEST PROCEDURE.....	47
4.6.5	DEVIATION FROM TEST STANDARD.....	48
4.6.6	EUT OPERATING CONDITION.....	48
4.6.7	TEST RESULTS	48
4.6.8	TEST RESULTS	49
5.	TEST TYPES AND RESULTS (FOR 5.0GHz BAND).....	53
5.1	RADIATED EMISSION MEASUREMENT	53
5.1.1	LIMITS OF RADIATED EMISSION MEASUREMENT.....	53
5.1.2	TEST INSTRUMENTS.....	54
5.1.3	TEST PROCEDURES	54
5.1.4	DEVIATION FROM TEST STANDARD.....	54
5.1.5	TEST SETUP.....	54
5.1.6	EUT OPERATING CONDITIONS	54
5.1.7	TEST RESULTS	55
5.2	CONDUCTED EMISSION MEASUREMENT	75
5.2.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT.....	75
5.2.2	TEST INSTRUMENTS.....	75
5.2.3	TEST PROCEDURES	75
5.2.4	DEVIATION FROM TEST STANDARD.....	75
5.2.5	TEST SETUP.....	75
5.2.6	EUT OPERATING CONDITIONS	75
5.2.7	TEST RESULTS	76
5.3	6dB BANDWIDTH MEASUREMENT.....	84
5.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	84
5.3.2	TEST SETUP.....	84
5.3.3	TEST INSTRUMENTS.....	84
5.3.4	TEST PROCEDURE.....	84
5.3.5	DEVIATION FROM TEST STANDARD.....	84
5.3.6	EUT OPERATING CONDITIONS	84
5.3.7	TEST RESULTS	85
5.4	CONDUCTED OUTPUT POWER.....	87
5.4.1	LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT	87
5.4.2	TEST SETUP.....	87
5.4.3	INSTRUMENTS.....	87
5.4.4	TEST PROCEDURES	87
5.4.5	DEVIATION FROM TEST STANDARD.....	87
5.4.6	EUT OPERATING CONDITIONS	87
5.4.7	TEST RESULTS	88
5.5	POWER SPECTRAL DENSITY MEASUREMENT	90
5.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	90
5.5.2	TEST SETUP.....	90



A D T

5.5.3	TEST INSTRUMENTS.....	90
5.5.4	TEST PROCEDURE.....	90
5.5.5	DEVIATION FROM TEST STANDARD.....	90
5.5.6	EUT OPERATING CONDITION.....	90
5.5.7	TEST RESULTS	91
5.6	CONDUCTED OUT OF BAND EMISSION MEASUREMENT.....	93
5.6.1	LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT	93
5.6.2	TEST SETUP.....	93
5.6.3	TEST INSTRUMENTS.....	93
5.6.4	TEST PROCEDURE.....	93
5.6.5	DEVIATION FROM TEST STANDARD.....	93
5.6.6	EUT OPERATING CONDITION.....	93
5.6.7	TEST RESULTS	93
6.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	100
7.	INFORMATION ON THE TESTING LABORATORIES	101
8.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB.....	102



A D T

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF111019C14B	Original release	Apr. 26, 2012



1. CERTIFICATION

PRODUCT: 802.11n dual-band WIFI router
MODEL NO.: BelAir20EO-11A (Refer to item 3.1 for the more details)
BRAND: BelAir
APPLICANT: BelAir Networks Inc.
TESTED: Feb. 10 ~ Apr. 25, 2012
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 : Andrea Hsia , DATE : Apr. 26, 2012
Andrea Hsia / Specialist

APPROVED BY : Gary Chang , DATE : Apr. 26, 2012
Gary Chang / Technical 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 -12.02dB at 2.10547MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 11490.00MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is N-Type.

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	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.19 dB
	200MHz ~1000MHz	3.21 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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



A D T

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	802.11n dual-band WIFI router
MODEL NO.	BelAir20EO-11A (Refer to NOTE for the more details)
POWER SUPPLY	48Vdc
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps
OPERATING FREQUENCY	2.4GHz: 2412 ~ 2462MHz 5.0GHz: 5745 ~ 5825MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) 5.0GHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	283.1mW for 2412 ~ 2462MHz 166.2mW for 5745 ~ 5825MHz
ANTENNA TYPE	Refer to note as below
ANTENNA CONNECTOR	Refer to note as below
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	NA

NOTE:

1. The following models are provided to this EUT.

BRAND	MODEL
BelAir	BelAir20EO - 11A
	BelAir20EO - 11B
	BelAir20EO - 11C
	BelAir20EO - 11D



2. The frequency bands used in this EUT are listed as follows:

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

3. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

MODULATION MODE	TX FUNCTION
802.11b	2TX
802.11g	2TX
802.11a	2TX
802.11n (20MHz)	2TX
802.11n (40MHz)	2TX

4. The following antennas were provided to the EUT.

Configuration	ANT. TYPE	ANT. GAIN		ANT. CONNECTOR
		2.4GHz	5.0GHz	
A	Internal Omni	4.4dBi	6.7dBi	NA
B	Internal Omni (2.4GHz) Internal Directional (5.0GHz)	4.4dBi	11.5dBi	NA
C	Internal Directional (2.4GHz) External Directional (5.0GHz)	8dBi	11.5dBi	NA (Internal)
				N-type (External)
D	External Directional (2.4GHz) Internal Directional (5.0GHz)	8dBi	11.5dBi	N-type (External)
				NA (Internal)

**This report evaluated only configuration C and D, the configuration A and B was tested by the other lab (Nemco) and is documented in separated report.

5. The EUT was powered by the following POE:

POE	
BRAND:	PowerDsine
MODEL:	PD-3001GC
INPUT:	100-250Vac, 50-60Hz, 0.5A
OUTPUT:	48Vdc, 0.35A

**POE as above is provided as support unit only.

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



A D T

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.4GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE $<$ 1G	PLC	APCM	
A	√	√	√	√	Configuration C
B	-	√	√	-	Configuration D

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

RE $<$ 1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE: 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Z-plane.

2. "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	15.0

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11g	1 to 11	6	OFDM	BPSK	6.0

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11g	1 to 11	6	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2
A	802.11n (40MHz)	3 to 9	3, 9	OFDM	BPSK	15.0

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE \geq 1G	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
RE $<$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Sun Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
APCM	24deg. C, 64%RH	120Vac, 60Hz	Brad Wu



FOR 5.0GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Configuration A
B	√	√	√	√	Configuration B
C	-	√	√	-	Configuration C
D	-	√	√	-	Configuration D

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

- NOTE:** 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.
2. "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A & B	802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2
A & B	802.11n (40MHz)	151 to 159	149, 157, 165	OFDM	BPSK	15.0

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C & D	802.11a	149 to 165	157	OFDM	BPSK	6.0

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C & D	802.11a	149 to 165	157	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11a	149 to 165	149, 165	OFDM	BPSK	6.0
A & B	802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	7.2
A & B	802.11n (40MHz)	151 to 159	149, 165	OFDM	BPSK	15.0

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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A & B	802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2
A & B	802.11n (40MHz)	151 to 159	149, 157, 165	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Sun Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
APCM	24deg. C, 64%RH	120Vac, 60Hz	Brad Wu

3.3 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	D531	CN-0XM006-48643-81U-2610	QDS-BRCM1020

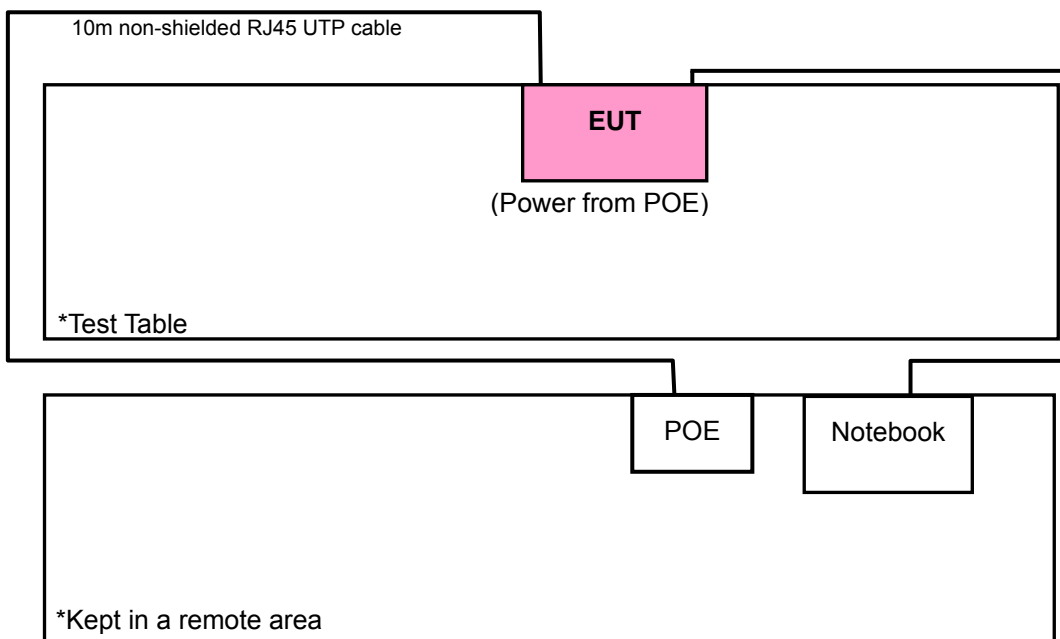
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10 m RJ45 UTP cable

NOTE:

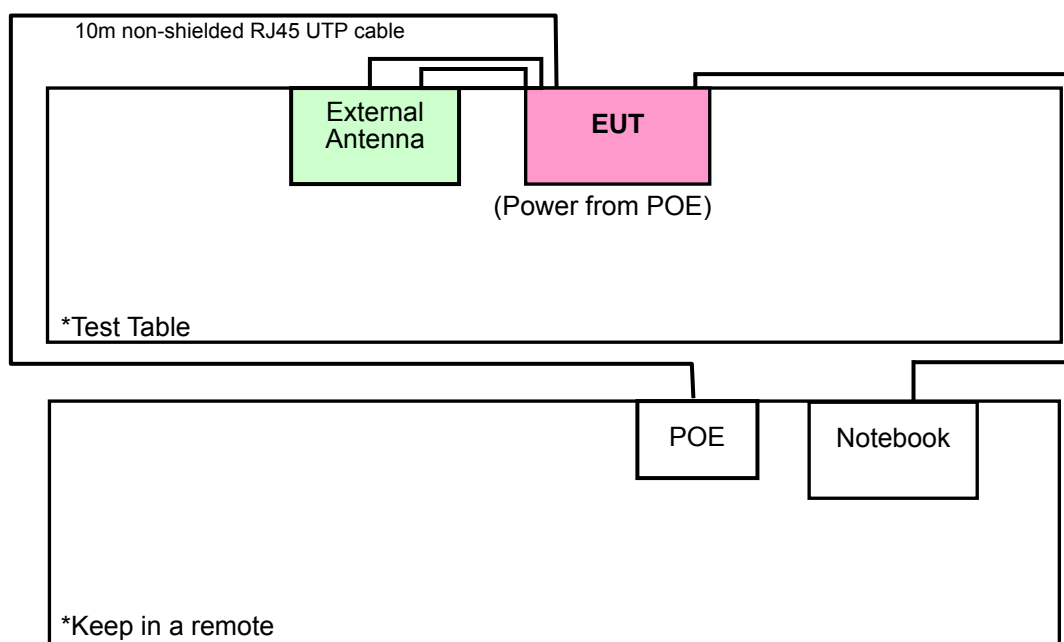
1. All power cords of the above support units are non shielded (1.8m).
2. Item 1 acted as communication partner to transfer data.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST

Configuration A & B



Configuration C & D



3.4 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)

ANSI C63.10-2009

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

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

4. TEST TYPES AND RESULTS (FOR 2.4GHz BAND)

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30dB below the highest level of the desired power:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

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



4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Aug. 02, 2011	Aug. 01, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Aug. 04, 2011	Aug. 03, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 20, 2011	Dec. 19, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
Preamplifier Agilent	8449B	3008A01911	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10638	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn Table Controller EMCO	2090	NA	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 29, 2011	Oct. 28, 2012
High Speed Peak Power Meter	ML2495A	0842014	Apr. 26, 2011	Apr. 25, 2012
Power Sensor	MA2411B	0738404	Apr. 26, 2011	Apr. 25, 2012

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 9.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 460141.
 5. The IC Site Registration No. is IC 7450F-4.

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.

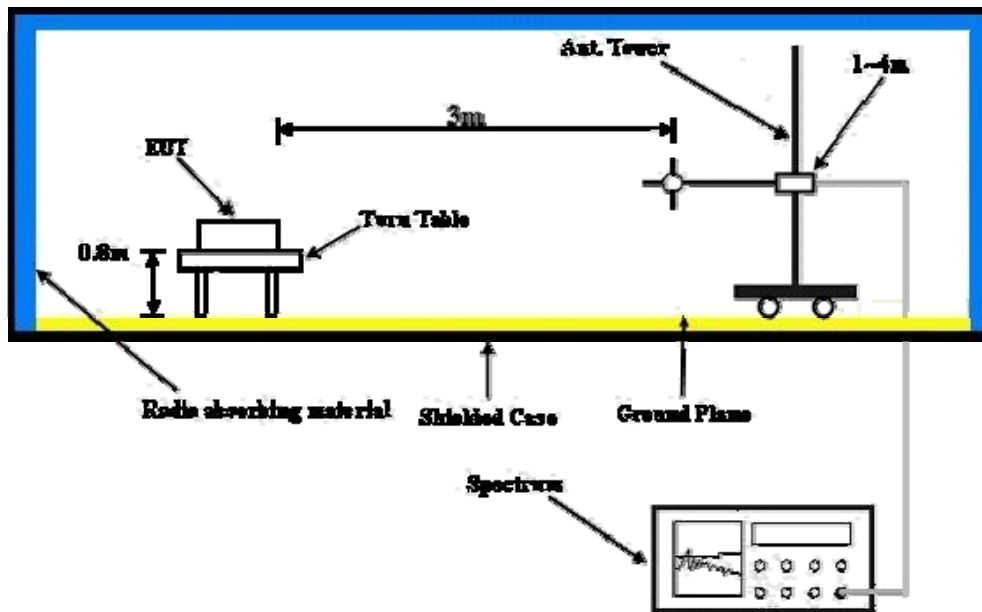
NOTE:

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 100kHz and video bandwidth is 300kHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz 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



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

4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on the testing table.
- b. Prepared notebooks act as communication partner and placed it outside of testing area.
- c. The communication partner connected with EUT via a RJ45 cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- d. The communication partner sent data to EUT by command "PING".



A D T

4.1.7 TEST RESULTS

ABOVE 1GHz: 802.11b

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.3 PK	74.0	-20.7	1.61 H	211	24.50	28.80
2	1600.00	45.2 AV	54.0	-8.8	1.61 H	211	16.40	28.80
3	2390.00	70.6 PK	74.0	-3.4	1.06 H	180	39.20	31.40
4	2390.00	45.8 AV	54.0	-8.2	1.06 H	180	14.40	31.40
5	*2412.00	114.6 PK			1.06 H	180	83.20	31.40
6	*2412.00	110.2 AV			1.06 H	180	78.80	31.40
7	4824.00	55.1 PK	74.0	-18.9	1.26 H	219	17.60	37.50
8	4824.00	52.6 AV	54.0	-1.4	1.26 H	219	15.10	37.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	53.0 PK	74.0	-21.0	1.66 V	193	24.20	28.80
2	1600.00	43.5 AV	54.0	-10.5	1.66 V	193	14.70	28.80
3	2390.00	67.9 PK	74.0	-6.1	1.17 V	197	36.50	31.40
4	2390.00	45.4 AV	54.0	-8.6	1.17 V	197	14.00	31.40
5	*2412.00	113.4 PK			1.17 V	197	82.00	31.40
6	*2412.00	108.6 AV			1.17 V	197	77.20	31.40
7	4824.00	55.2 PK	74.0	-18.8	1.02 V	136	17.70	37.50
8	4824.00	52.9 AV	54.0	-1.1	1.02 V	136	15.40	37.50

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	54.1 PK	74.0	-19.9	1.56 H	215	25.30	28.80
2	1600.00	45.8 AV	54.0	-8.2	1.56 H	215	17.00	28.80
3	2390.00	56.7 PK	74.0	-17.3	1.05 H	190	25.30	31.40
4	2390.00	46.7 AV	54.0	-7.3	1.05 H	190	15.30	31.40
5	*2437.00	117.2 PK			1.05 H	190	85.70	31.50
6	*2437.00	113.2 AV			1.05 H	190	81.70	31.50
7	2483.50	60.2 PK	74.0	-13.8	1.05 H	190	28.50	31.70
8	2483.50	46.7 AV	54.0	-7.3	1.05 H	190	15.00	31.70
9	4874.00	55.0 PK	74.0	-19.0	1.00 H	219	17.40	37.60
10	4874.00	52.7 AV	54.0	-1.3	1.00 H	219	15.10	37.60
11	7311.00	51.4 PK	74.0	-22.6	1.09 H	203	7.70	43.70
12	7311.00	40.9 AV	54.0	-13.1	1.09 H	203	-2.80	43.70

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	1600.00	53.8 PK	74.0	-20.2	1.65 V	196	25.00	28.80
2	1600.00	44.5 AV	54.0	-9.5	1.65 V	196	15.70	28.80
3	2390.00	57.5 PK	74.0	-16.5	1.14 V	172	26.10	31.40
4	2390.00	46.1 AV	54.0	-7.9	1.14 V	172	14.70	31.40
5	*2437.00	115.0 PK			1.14 V	172	83.50	31.50
6	*2437.00	111.3 AV			1.14 V	172	79.80	31.50
7	2483.50	56.2 PK	74.0	-17.8	1.14 V	172	24.50	31.70
8	2483.50	46.2 AV	54.0	-7.8	1.14 V	172	14.50	31.70
9	4874.00	55.2 PK	74.0	-18.8	1.04 V	232	17.60	37.60
10	4874.00	53.0 AV	54.0	-1.0	1.04 V	232	15.40	37.60
11	7311.00	53.3 PK	74.0	-20.7	1.15 V	181	9.60	43.70
12	7311.00	44.9 AV	54.0	-9.1	1.15 V	181	1.20	43.70

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.7 PK	74.0	-20.3	1.55 H	218	24.90	28.80
2	1600.00	45.4 AV	54.0	-8.6	1.55 H	218	16.60	28.80
3	*2462.00	110.8 PK			1.05 H	177	79.20	31.60
4	*2462.00	107.0 AV			1.05 H	177	75.40	31.60
5	2483.50	66.3 PK	74.0	-7.7	1.05 H	177	34.60	31.70
6	2483.50	45.6 AV	54.0	-8.4	1.05 H	177	13.90	31.70
7	4924.00	54.2 PK	74.0	-19.8	1.09 H	218	16.50	37.70
8	4924.00	52.1 AV	54.0	-1.9	1.09 H	218	14.40	37.70
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	1600.00	53.5 PK	74.0	-20.5	1.61 V	190	24.70	28.80
2	1600.00	44.1 AV	54.0	-9.9	1.61 V	190	15.30	28.80
3	*2462.00	109.6 PK			1.16 V	213	78.00	31.60
4	*2462.00	105.8 AV			1.16 V	213	74.20	31.60
5	2483.50	64.8 PK	74.0	-9.2	1.16 V	213	33.10	31.70
6	2483.50	45.0 AV	54.0	-9.0	1.16 V	213	13.30	31.70
7	4924.00	54.9 PK	74.0	-19.1	1.05 V	234	17.20	37.70
8	4924.00	52.5 AV	54.0	-1.5	1.05 V	234	14.80	37.70

REMARKS:

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



A D T

802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	52.8 PK	74.0	-21.2	1.62 H	215	24.00	28.80
2	1600.00	44.7 AV	54.0	-9.3	1.62 H	215	15.90	28.80
3	2390.00	72.0 PK	74.0	-2.0	1.06 H	183	40.60	31.40
4	2390.00	53.0 AV	54.0	-1.0	1.06 H	183	21.60	31.40
5	*2412.00	117.1 PK			1.06 H	183	85.70	31.40
6	*2412.00	105.5 AV			1.06 H	183	74.10	31.40
7	4824.00	58.7 PK	74.0	-15.3	1.00 H	214	21.20	37.50
8	4824.00	42.9 AV	54.0	-11.1	1.00 H	214	5.40	37.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	52.5 PK	74.0	-21.5	1.60 V	192	23.70	28.80
2	1600.00	43.1 AV	54.0	-10.9	1.60 V	192	14.30	28.80
3	2390.00	69.3 PK	74.0	-4.7	1.18 V	202	37.90	31.40
4	2390.00	50.0 AV	54.0	-4.0	1.18 V	202	18.60	31.40
5	*2412.00	115.5 PK			1.18 V	202	84.10	31.40
6	*2412.00	103.9 AV			1.18 V	202	72.50	31.40
7	4824.00	61.7 PK	74.0	-12.3	1.07 V	229	24.20	37.50
8	4824.00	46.1 AV	54.0	-7.9	1.07 V	229	8.60	37.50

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.4 PK	74.0	-20.6	1.63 H	210	24.60	28.80
2	1600.00	45.3 AV	54.0	-8.7	1.63 H	210	16.50	28.80
3	2390.00	63.4 PK	74.0	-10.6	1.05 H	189	32.00	31.40
4	2390.00	50.1 AV	54.0	-3.9	1.05 H	189	18.70	31.40
5	*2437.00	121.3 PK			1.05 H	189	89.80	31.50
6	*2437.00	109.8 AV			1.05 H	189	78.30	31.50
7	2483.50	61.5 PK	74.0	-12.5	1.05 H	189	29.80	31.70
8	2483.50	49.0 AV	54.0	-5.0	1.05 H	189	17.30	31.70
9	4874.00	60.6 PK	74.0	-13.4	1.00 H	194	23.00	37.60
10	4874.00	47.8 AV	54.0	-6.2	1.00 H	194	10.20	37.60
11	7311.00	62.9 PK	74.0	-11.1	1.20 H	207	19.20	43.70
12	7311.00	45.4 AV	54.0	-8.6	1.20 H	207	1.70	43.70

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	1600.00	53.2 PK	74.0	-20.8	1.63 V	195	24.40	28.80
2	1600.00	43.8 AV	54.0	-10.2	1.63 V	195	15.00	28.80
3	2390.00	64.3 PK	74.0	-9.7	1.17 V	199	32.90	31.40
4	2390.00	49.5 AV	54.0	-4.5	1.17 V	199	18.10	31.40
5	*2437.00	120.4 PK			1.17 V	199	88.90	31.50
6	*2437.00	108.4 AV			1.17 V	199	76.90	31.50
7	2483.50	62.0 PK	74.0	-12.0	1.17 V	199	30.30	31.70
8	2483.50	49.1 AV	54.0	-4.9	1.17 V	199	17.40	31.70
9	4874.00	66.5 PK	74.0	-7.5	1.16 V	154	28.90	37.60
10	4874.00	51.1 AV	54.0	-2.9	1.16 V	154	13.50	37.60
11	7311.00	70.8 PK	74.0	-3.2	1.61 V	203	27.10	43.70
12	7311.00	52.6 AV	54.0	-1.4	1.61 V	203	8.90	43.70

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.1 PK	74.0	-20.9	1.58 H	211	24.30	28.80
2	1600.00	45.1 AV	54.0	-8.9	1.58 H	211	16.30	28.80
3	*2462.00	119.0 PK			1.05 H	190	87.40	31.60
4	*2462.00	107.2 AV			1.05 H	190	75.60	31.60
5	2483.50	73.0 PK	74.0	-1.0	1.05 H	190	41.30	31.70
6	2483.50	52.7 AV	54.0	-1.3	1.05 H	190	21.00	31.70
7	4924.00	61.2 PK	74.0	-12.8	1.00 H	195	23.50	37.70
8	4924.00	47.5 AV	54.0	-6.5	1.00 H	195	9.80	37.70
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	1600.00	52.8 PK	74.0	-21.2	1.61 V	185	24.00	28.80
2	1600.00	43.5 AV	54.0	-10.5	1.61 V	185	14.70	28.80
3	*2462.00	118.0 PK			1.14 V	198	86.40	31.60
4	*2462.00	106.4 AV			1.14 V	198	74.80	31.60
5	2483.50	72.8 PK	74.0	-1.2	1.14 V	198	41.10	31.70
6	2483.50	51.8 AV	54.0	-2.2	1.14 V	198	20.10	31.70
7	4924.00	68.2 PK	74.0	-5.8	1.17 V	159	30.50	37.70
8	4924.00	50.6 AV	54.0	-3.4	1.17 V	159	12.90	37.70

REMARKS:

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



A D T

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.0 PK	74.0	-21.0	1.61 H	219	24.20	28.80
2	1600.00	45.0 AV	54.0	-9.0	1.61 H	219	16.20	28.80
3	2390.00	73.0 PK	74.0	-1.0	1.05 H	186	41.60	31.40
4	2390.00	52.7 AV	54.0	-1.3	1.05 H	186	21.30	31.40
5	*2412.00	117.6 PK			1.05 H	186	86.20	31.40
6	*2412.00	105.2 AV			1.05 H	186	73.80	31.40
7	4824.00	57.9 PK	74.0	-16.1	1.00 H	216	20.40	37.50
8	4824.00	43.1 AV	54.0	-10.9	1.00 H	216	5.60	37.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	52.7 PK	74.0	-21.3	1.53 V	201	23.90	28.80
2	1600.00	43.3 AV	54.0	-10.7	1.53 V	201	14.50	28.80
3	2390.00	71.3 PK	74.0	-2.7	1.20 V	170	39.90	31.40
4	2390.00	51.1 AV	54.0	-2.9	1.20 V	170	19.70	31.40
5	*2412.00	115.8 PK			1.20 V	190	84.40	31.40
6	*2412.00	103.4 AV			1.20 V	190	72.00	31.40
7	4824.00	61.0 PK	74.0	-13.0	1.06 V	230	23.50	37.50
8	4824.00	45.6 AV	54.0	-8.4	1.06 V	230	8.10	37.50

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.7 PK	74.0	-20.3	1.63 H	211	24.90	28.80
2	1600.00	45.6 AV	54.0	-8.4	1.63 H	211	16.80	28.80
3	2390.00	63.5 PK	74.0	-10.5	1.03 H	188	32.10	31.40
4	2390.00	49.7 AV	54.0	-4.3	1.03 H	188	18.30	31.40
5	*2437.00	121.9 PK			1.03 H	188	90.40	31.50
6	*2437.00	110.1 AV			1.03 H	188	78.60	31.50
7	2483.50	65.3 PK	74.0	-8.7	1.03 H	188	33.60	31.70
8	2483.50	50.3 AV	54.0	-3.7	1.03 H	188	18.60	31.70
9	4874.00	60.3 PK	74.0	-13.7	1.02 H	196	22.70	37.60
10	4874.00	47.4 AV	54.0	-6.6	1.02 H	196	9.80	37.60
11	7311.00	63.5 PK	74.0	-10.5	1.21 H	210	19.80	43.70
12	7311.00	45.9 AV	54.0	-8.1	1.21 H	210	2.20	43.70

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	1600.00	53.6 PK	74.0	-20.4	1.50 V	221	24.80	28.80
2	1600.00	44.1 AV	54.0	-9.9	1.50 V	221	15.30	28.80
3	2390.00	63.9 PK	74.0	-10.1	1.16 V	190	32.50	31.40
4	2390.00	49.6 AV	54.0	-4.4	1.16 V	190	18.20	31.40
5	*2437.00	119.5 PK			1.16 V	190	88.00	31.50
6	*2437.00	107.9 AV			1.16 V	190	76.40	31.50
7	2483.50	63.4 PK	74.0	-10.6	1.16 V	190	31.70	31.70
8	2483.50	49.5 AV	54.0	-4.5	1.16 V	190	17.80	31.70
9	4874.00	65.4 PK	74.0	-8.6	1.17 V	156	27.80	37.60
10	4874.00	50.8 AV	54.0	-3.2	1.17 V	156	13.20	37.60
11	7311.00	70.2 PK	74.0	-3.8	1.60 V	202	26.50	43.70
12	7311.00	53.0 AV	54.0	-1.0	1.60 V	202	9.30	43.70

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.4 PK	74.0	-20.6	1.65 H	213	24.60	28.80
2	1600.00	45.1 AV	54.0	-8.9	1.65 H	213	16.30	28.80
3	*2462.00	119.0 PK			1.05 H	209	87.40	31.60
4	*2462.00	106.4 AV			1.05 H	209	74.80	31.60
5	2483.50	72.2 PK	74.0	-1.8	1.02 H	183	40.50	31.70
6	2483.50	52.5 AV	54.0	-1.5	1.02 H	183	20.80	31.70
7	4924.00	60.6 PK	74.0	-13.4	1.00 H	198	22.90	37.70
8	4924.00	46.9 AV	54.0	-7.1	1.00 H	198	9.20	37.70
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	1600.00	53.2 PK	74.0	-20.8	1.51 V	223	24.40	28.80
2	1600.00	43.7 AV	54.0	-10.3	1.51 V	223	14.90	28.80
3	*2462.00	117.9 PK			1.15 V	185	86.30	31.60
4	*2462.00	105.3 AV			1.15 V	185	73.70	31.60
5	2483.50	72.7 PK	74.0	-1.3	1.15 V	185	41.00	31.70
6	2483.50	51.8 AV	54.0	-2.2	1.15 V	185	20.10	31.70
7	4924.00	67.8 PK	74.0	-6.2	1.18 V	161	30.10	37.70
8	4924.00	50.1 AV	54.0	-3.9	1.18 V	161	12.40	37.70

REMARKS:

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



A D T

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.2 PK	74.0	-20.8	1.63 H	221	24.40	28.80
2	1600.00	45.2 AV	54.0	-8.8	1.63 H	221	16.40	28.80
3	2390.00	71.0 PK	74.0	-3.0	1.08 H	176	39.60	31.40
4	2390.00	52.7 AV	54.0	-1.3	1.08 H	176	21.30	31.50
5	*2422.00	111.0 PK			1.05 H	176	79.50	31.50
6	*2422.00	98.4 AV			1.05 H	176	66.90	31.40
7	4844.00	48.3 PK	74.0	-25.7	1.00 H	216	10.80	37.50
8	4844.00	35.0 AV	54.0	-19.0	1.00 H	216	-2.50	37.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	52.5 PK	74.0	-21.5	1.49 V	199	23.70	28.80
2	1600.00	43.1 AV	54.0	-10.9	1.49 V	199	14.30	28.80
3	2390.00	68.9 PK	74.0	-5.1	1.19 V	195	37.50	31.40
4	2390.00	51.9 AV	54.0	-2.1	1.19 V	195	20.50	31.40
5	*2422.00	110.0 PK			1.19 V	195	78.50	31.50
6	*2422.00	97.7 AV			1.19 V	195	66.20	31.50
7	4844.00	50.1 PK	74.0	-23.9	1.07 V	229	12.60	37.50
8	4844.00	37.3 AV	54.0	-16.7	1.07 V	229	-0.20	37.50

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	54.0 PK	74.0	-20.0	1.62 H	225	25.20	28.80
2	1600.00	45.9 AV	54.0	-8.1	1.62 H	225	17.10	28.80
3	2390.00	67.3 PK	74.0	-6.7	1.05 H	182	35.90	31.40
4	2390.00	52.6 AV	54.0	-1.4	1.05 H	182	21.20	31.40
5	*2437.00	114.3 PK			1.03 H	178	82.80	31.50
6	*2437.00	101.9 AV			1.03 H	178	70.40	31.50
7	2483.50	65.3 PK	74.0	-8.7	1.03 H	178	33.60	31.70
8	2483.50	50.9 AV	54.0	-3.1	1.03 H	178	19.20	31.70
9	4874.00	51.4 PK	74.0	-22.6	1.00 H	193	13.80	37.60
10	4874.00	37.4 AV	54.0	-16.6	1.00 H	193	-0.20	37.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	53.1 PK	74.0	-20.9	1.45 V	182	24.30	28.80
2	1600.00	43.9 AV	54.0	-10.1	1.45 V	182	15.10	28.80
3	2390.00	67.8 PK	74.0	-6.2	1.16 V	193	36.40	31.40
4	2390.00	51.4 AV	54.0	-2.6	1.16 V	193	20.00	31.40
5	*2437.00	113.3 PK			1.16 V	193	81.80	31.50
6	*2437.00	100.7 AV			1.16 V	193	69.20	31.50
7	2483.50	65.6 PK	74.0	-8.4	1.16 V	193	33.90	31.70
8	2483.50	51.3 AV	54.0	-2.7	1.16 V	193	19.60	31.70
9	4874.00	55.7 PK	74.0	-18.3	1.07 V	222	18.10	37.60
10	4874.00	39.9 AV	54.0	-14.1	1.07 V	222	2.30	37.60

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	53.7 PK	74.0	-20.3	1.60 H	200	24.90	28.80
2	1600.00	45.8 AV	54.0	-8.2	1.60 H	200	17.00	28.80
3	*2452.00	113.2 PK			1.06 H	194	81.60	31.60
4	*2452.00	101.0 AV			1.06 H	194	69.40	31.60
5	2483.50	69.5 PK	74.0	-4.5	1.02 H	207	37.80	31.70
6	2483.50	53.0 AV	54.0	-1.0	1.02 H	207	21.30	31.70
7	4904.00	48.9 PK	74.0	-25.1	1.02 H	225	11.30	37.60
8	4904.00	36.0 AV	54.0	-18.0	1.02 H	225	-1.60	37.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	53.3 PK	74.0	-20.7	1.51 V	203	24.50	28.80
2	1600.00	43.9 AV	54.0	-10.1	1.51 V	203	15.10	28.80
3	*2452.00	112.4 PK			1.19 V	190	80.80	31.60
4	*2452.00	99.9 AV			1.19 V	190	68.30	31.60
5	2483.50	69.0 PK	74.0	-5.0	1.13 V	187	37.30	31.70
6	2483.50	52.5 AV	54.0	-1.5	1.13 V	187	20.80	31.70
7	4904.00	52.1 PK	74.0	-21.9	1.04 V	220	14.50	37.60
8	4904.00	38.7 AV	54.0	-15.3	1.04 V	220	1.10	37.60

REMARKS:

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



A D T

BELOW 1GHz WORST-CASE DATA : 802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Sun Lin		

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	64.92	25.1 QP	40.0	-14.9	3.50 H	285	12.20	12.90
2	144.46	31.0 QP	43.5	-12.5	2.00 H	123	17.30	13.70
3	249.22	33.0 QP	46.0	-13.0	1.00 H	242	20.00	13.00
4	600.36	29.9 QP	46.0	-16.1	1.00 H	52	7.50	22.40
5	625.58	32.2 QP	46.0	-13.8	1.00 H	55	9.70	22.50
6	802.12	35.7 QP	46.0	-10.3	1.00 H	152	10.40	25.30
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	64.92	35.4 QP	40.0	-4.6	1.00 V	3	22.50	12.90
2	148.34	27.8 QP	43.5	-15.7	2.00 V	5	13.90	13.90
3	249.22	35.3 QP	46.0	-10.7	1.00 V	193	22.30	13.00
4	439.34	28.6 QP	46.0	-17.4	1.00 V	3	10.10	18.50
5	749.74	31.0 QP	46.0	-15.0	1.00 V	184	7.00	24.00
6	802.12	39.4 QP	46.0	-6.6	1.00 V	184	14.10	25.30

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Sun Lin		

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	148.34	30.2 QP	43.5	-13.3	1.25 H	15	16.30	13.90
2	249.22	39.3 QP	46.0	-6.7	1.00 H	10	26.30	13.00
3	400.54	31.2 QP	46.0	-14.8	2.00 H	57	13.70	17.50
4	600.36	40.6 QP	46.0	-5.4	1.25 H	270	18.20	22.40
5	625.58	42.5 QP	46.0	-3.5	1.00 H	335	20.00	22.50
6	802.12	35.7 QP	46.0	-10.3	1.50 H	285	10.40	25.30
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	148.34	32.5 QP	43.5	-11.0	1.25 V	169	18.60	13.90
2	249.22	36.4 QP	46.0	-9.6	1.50 V	331	23.40	13.00
3	400.54	32.2 QP	46.0	-13.8	1.25 V	196	14.70	17.50
4	600.36	40.2 QP	46.0	-5.8	1.50 V	4	17.80	22.40
5	625.58	40.8 QP	46.0	-5.2	2.00 V	202	18.30	22.50
6	802.12	35.7 QP	46.0	-10.3	1.50 V	17	10.40	25.30

REMARKS:

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



4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBµV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Nov. 19, 2011	Nov. 18, 2012
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 22, 2011	Dec. 21, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Dec. 30, 2011	Dec. 29, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2.
 3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

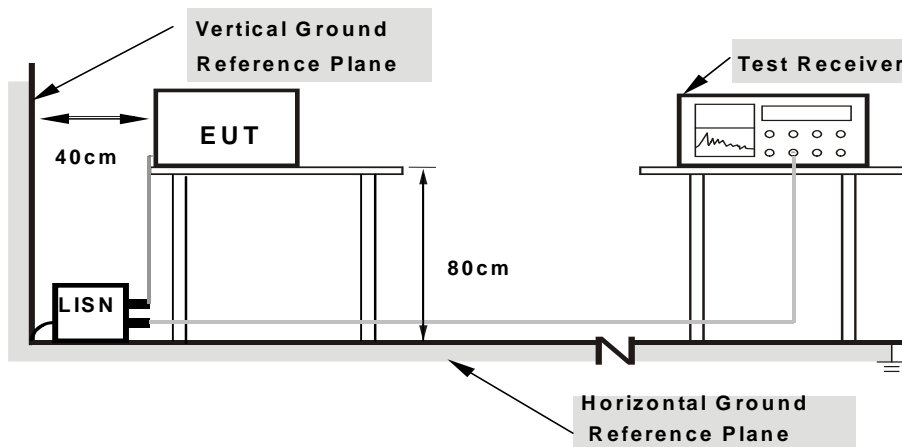
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

NOTE: 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:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

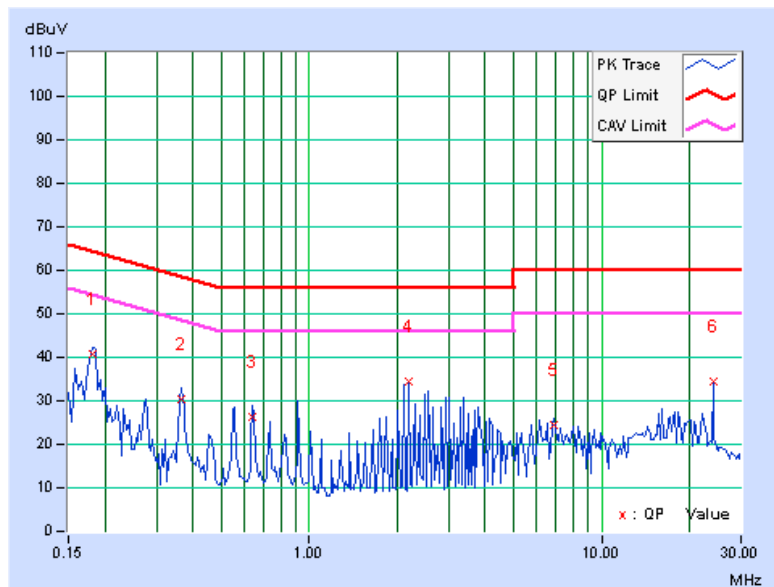
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11g

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.18125	0.15	40.46	30.53	40.61	30.68	64.43	54.43	-23.82	-23.75
2	0.36484	0.17	30.30	26.96	30.47	27.13	58.62	48.62	-28.15	-21.49
3	0.64219	0.18	26.06	23.22	26.24	23.40	56.00	46.00	-29.76	-22.60
4	2.19922	0.27	34.00	33.17	34.27	33.44	56.00	46.00	-21.73	-12.56
5	6.87500	0.38	23.88	20.30	24.26	20.68	60.00	50.00	-35.74	-29.32
6	24.07813	0.59	33.89	33.59	34.48	34.18	60.00	50.00	-25.52	-15.82

- 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.



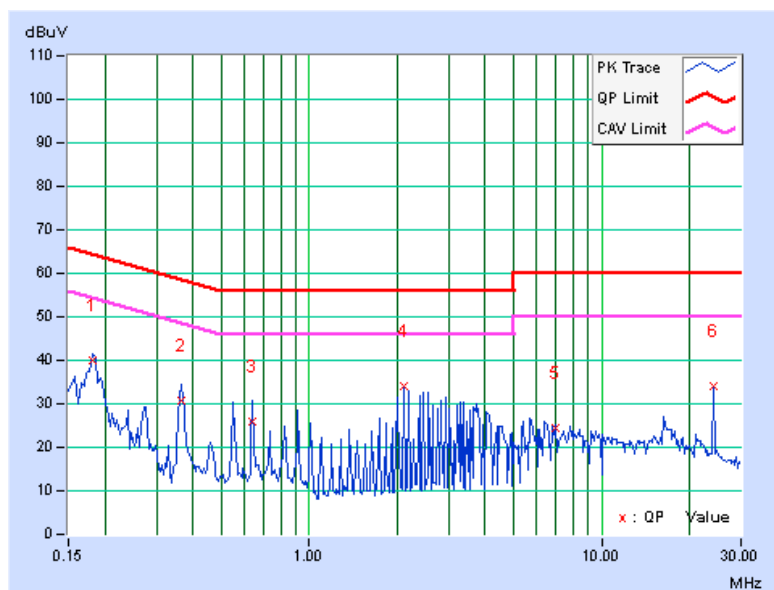


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.18125	0.14	39.91	32.42	40.05	32.56	64.43	54.43	-24.38	-21.87
2	0.36484	0.16	30.44	29.82	30.60	29.98	58.62	48.62	-28.02	-18.64
3	0.63828	0.17	25.79	24.94	25.96	25.11	56.00	46.00	-30.04	-20.89
4	2.10156	0.26	33.69	33.19	33.95	33.45	56.00	46.00	-22.05	-12.55
5	6.94922	0.41	24.18	21.85	24.59	22.26	60.00	50.00	-35.41	-27.74
6	24.07813	0.65	33.45	33.15	34.10	33.80	60.00	50.00	-25.90	-16.20

- 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.



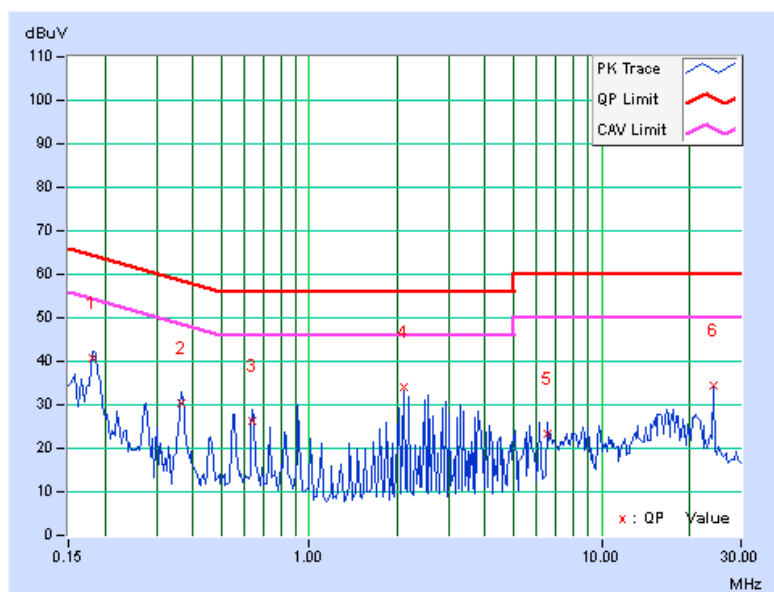


A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.18125	0.15	40.47	30.57	40.62	30.72	64.43	54.43	-23.81	-23.71
2	0.36484	0.17	30.30	26.86	30.47	27.03	58.62	48.62	-28.15	-21.59
3	0.64219	0.18	26.06	23.34	26.24	23.52	56.00	46.00	-29.76	-22.48
4	2.10938	0.26	33.72	33.32	33.98	33.58	56.00	46.00	-22.02	-12.42
5	6.50781	0.38	22.89	20.09	23.27	20.47	60.00	50.00	-36.73	-29.53
6	24.07813	0.59	33.89	33.59	34.48	34.18	60.00	50.00	-25.52	-15.82

- 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.



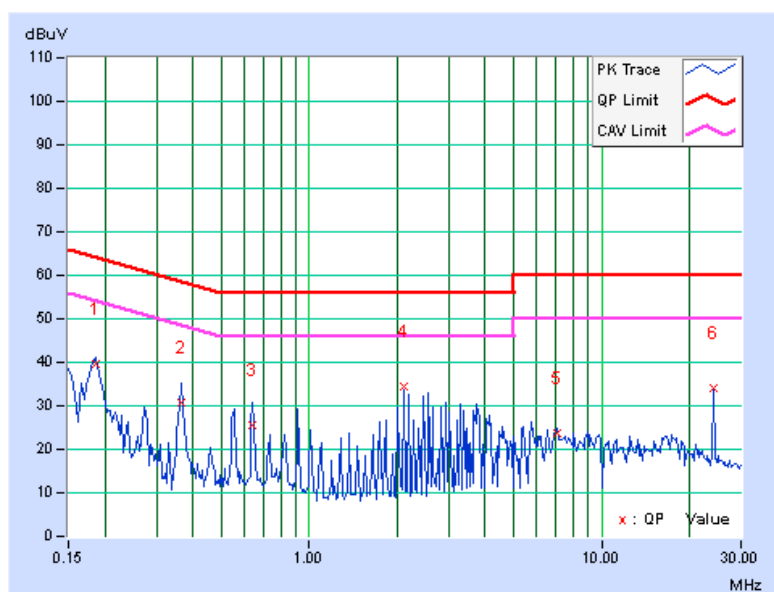


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.18516	0.14	39.38	31.84	39.52	31.98	64.25	54.25	-24.73	-22.27
2	0.36484	0.16	30.42	29.78	30.58	29.94	58.62	48.62	-28.04	-18.68
3	0.63828	0.17	25.50	24.62	25.67	24.79	56.00	46.00	-30.33	-21.21
4	2.10547	0.26	34.15	33.72	34.41	33.98	56.00	46.00	-21.59	-12.02
5	7.04297	0.42	23.36	17.00	23.78	17.42	60.00	50.00	-36.22	-32.58
6	24.07813	0.65	33.43	33.13	34.08	33.78	60.00	50.00	-25.92	-16.22

- 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.

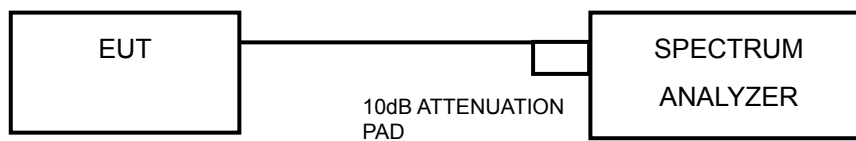


4.3 6dB BANDWIDTH MEASUREMENT

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) = approximately 1% of the emission bandwidth
- 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

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	9.63	10.27	0.5	PASS
6	2437	9.66	10.29	0.5	PASS
11	2462	10.72	9.67	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.41	16.48	0.5	PASS
6	2437	16.40	16.51	0.5	PASS
11	2462	16.34	16.03	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.46	17.71	0.5	PASS
6	2437	17.75	17.84	0.5	PASS
11	2462	17.31	17.50	0.5	PASS

802.11n (40MHz)

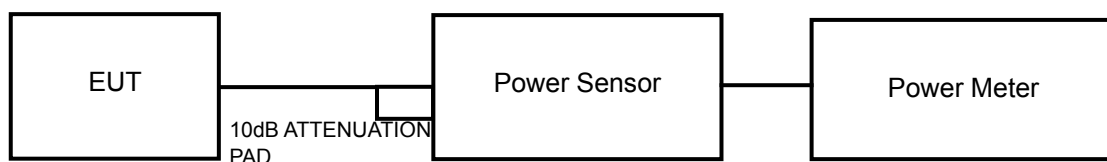
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
3	2422	37.06	36.47	0.5	PASS
6	2437	36.20	36.97	0.5	PASS
9	2452	32.25	35.94	0.5	PASS

4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

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

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.4.4 TEST PROCEDURES

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

802.11b

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	16.59	15.63	82.2	19.1	28.34	PASS
6	2437	19.13	18.59	154.1	21.9	28.34	PASS
11	2462	14.35	13.92	51.9	17.2	28.34	PASS

802.11g

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	17.62	17.01	108.0	20.3	28.34	PASS
6	2437	22.08	20.85	283.1	24.5	28.34	PASS
11	2462	18.60	18.24	139.1	21.4	28.34	PASS

802.11n (20MHz)

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	17.12	16.71	98.4	19.9	28.34	PASS
6	2437	21.96	20.78	276.7	24.4	28.34	PASS
11	2462	18.10	17.61	122.2	20.9	28.34	PASS

802.11n (40MHz)

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
3	2422	14.60	14.69	58.3	17.7	28.34	PASS
6	2437	17.80	17.25	113.3	20.5	28.34	PASS
9	2452	16.79	16.05	88.0	19.4	28.34	PASS

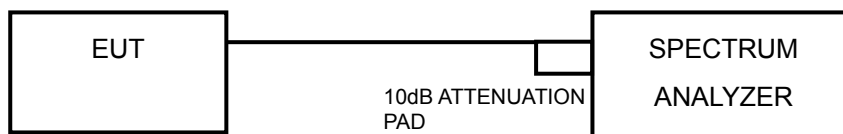
NOTE: According to 15.247(b)(4), the maximum antenna gain 8dBi is higher than 6dBi, so the limit shall be reduced by 1.66dB.

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

- a. Set the RBW = 100 kHz, VBW = 300 kHz, Detector = average.
- b. Sweep time = 26s, Trace mode = max hold, allow trace to fully stabilize.
- c. Use the average marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
- d. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3 \text{ kHz}/100\text{kHz})$

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6



4.5.7 TEST RESULTS

802.11b

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-2.36	-17.59	3.01	-14.58	6.34	PASS
	6	2437	0.29	-14.94	3.01	-11.93	6.34	PASS
	11	2462	-4.66	-19.89	3.01	-16.88	6.34	PASS
1	1	2412	-2.65	-17.88	3.01	-14.87	6.34	PASS
	6	2437	0.29	-14.94	3.01	-11.93	6.34	PASS
	11	2462	-4.50	-19.73	3.01	-16.72	6.34	PASS

802.11g

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-2.07	-17.30	3.01	-14.29	6.34	PASS
	6	2437	2.05	-13.18	3.01	-10.17	6.34	PASS
	11	2462	0.07	-15.16	3.01	-12.15	6.34	PASS
1	1	2412	-3.28	-18.51	3.01	-15.50	6.34	PASS
	6	2437	0.45	-14.78	3.01	-11.77	6.34	PASS
	11	2462	-2.26	-17.49	3.01	-14.48	6.34	PASS

802.11n (20MHz)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-2.95	-18.18	3.01	-15.17	6.34	PASS
	6	2437	2.04	-13.19	3.01	-10.18	6.34	PASS
	11	2462	-1.80	-17.03	3.01	-14.02	6.34	PASS
1	1	2412	-3.67	-18.90	3.01	-15.89	6.34	PASS
	6	2437	0.44	-14.79	3.01	-11.78	6.34	PASS
	11	2462	-2.65	-17.88	3.01	-14.87	6.34	PASS

802.11n (40MHz)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	3	2422	-7.36	-22.59	3.01	-19.58	6.34	PASS
	6	2437	-4.17	-19.40	3.01	-16.39	6.34	PASS
	9	2452	-5.09	-20.32	3.01	-17.31	6.34	PASS
1	3	2422	-8.72	-23.95	3.01	-20.94	6.34	PASS
	6	2437	-6.27	-21.50	3.01	-18.49	6.34	PASS
	9	2452	-7.32	-22.55	3.01	-19.54	6.34	PASS

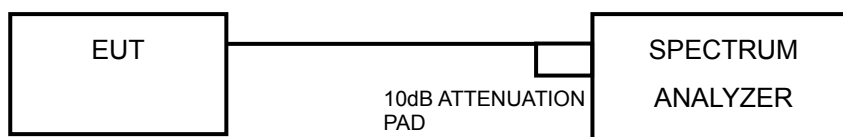
NOTE: According to 15.247(b)(4), the maximum antenna gain 8dBi is higher than 6dBi, so the limit shall be reduced by 1.66dB.

4.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

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

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

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

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Set span to encompass the spectrum to be examined.
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

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 conducted emission test is performed on each TX port of operating mode without summing or adding $10\log(N)$ since the limit is relative emission limit. Only worst data of each operating mode is presented.

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

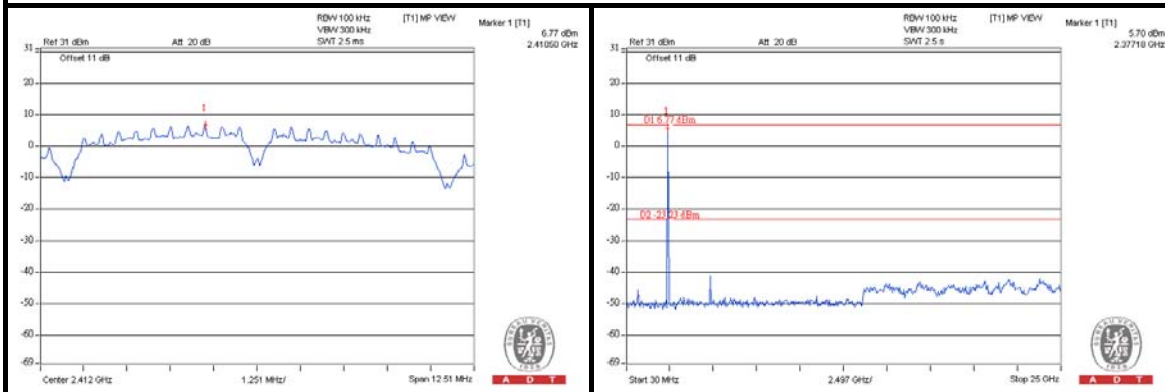


A D T

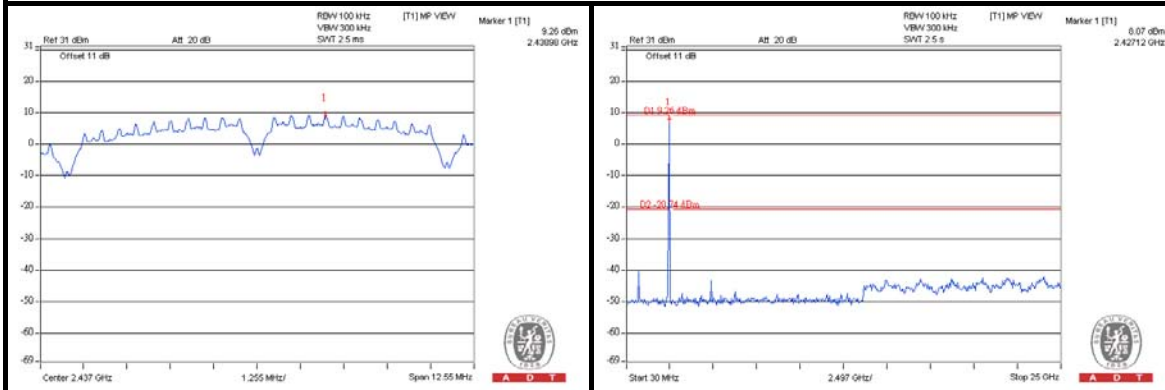
4.6.8 TEST RESULTS

802.11b

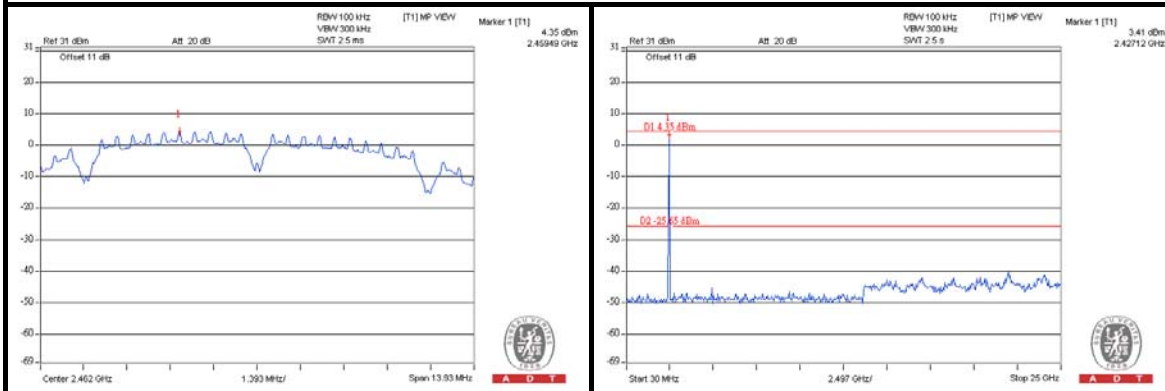
CH 1



CH 6



CH 11

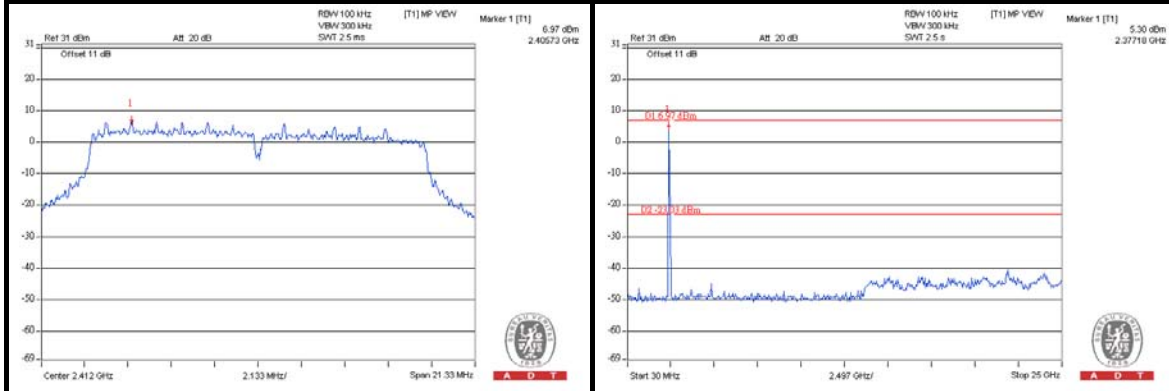




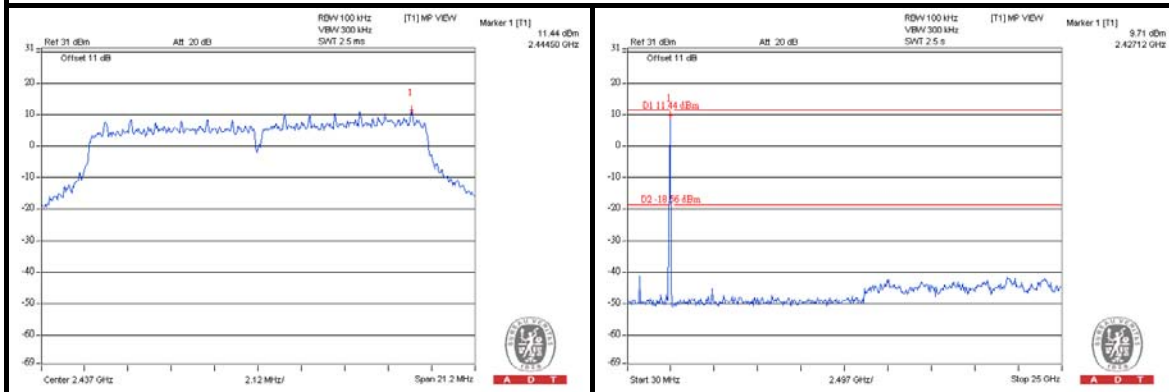
A D T

802.11g

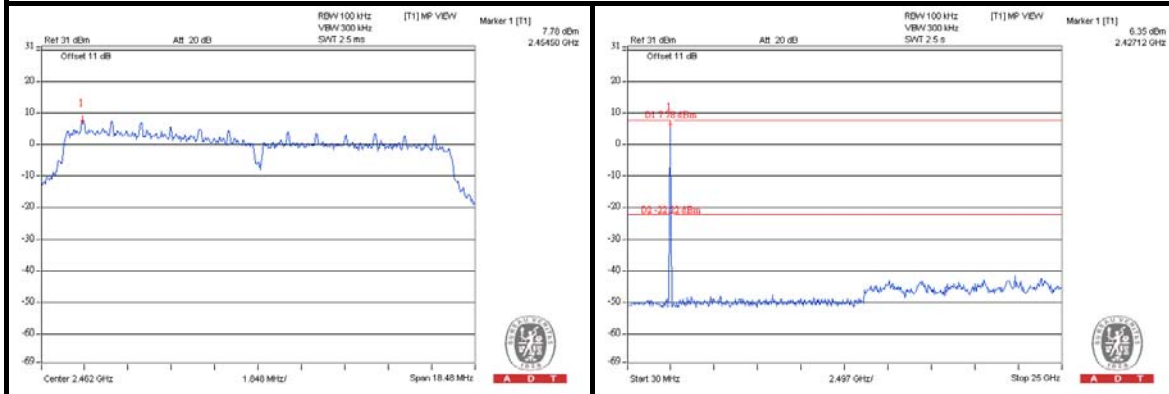
CH 1



CH 6



CH 11

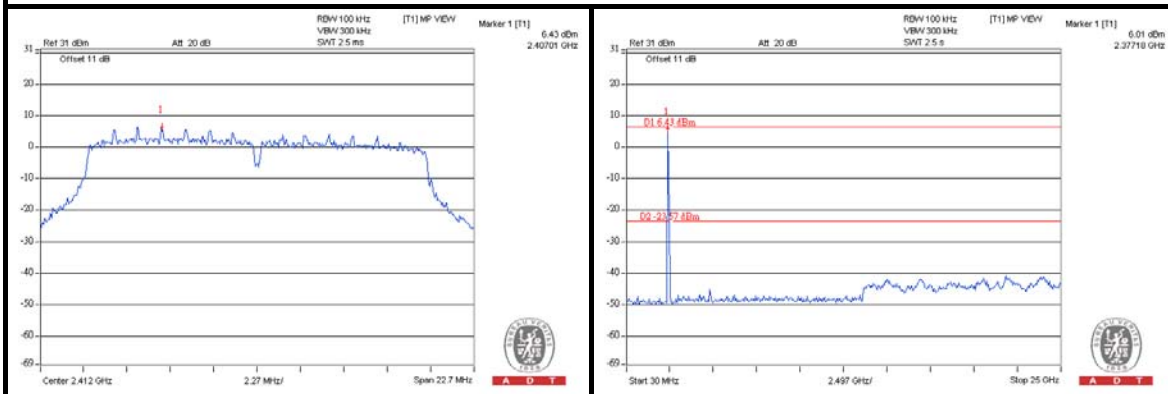




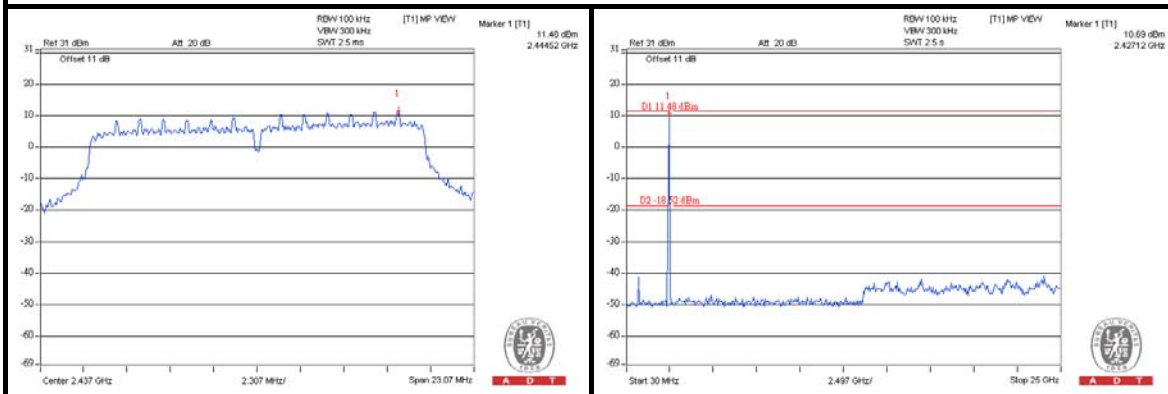
A D T

802.11n (20MHz)

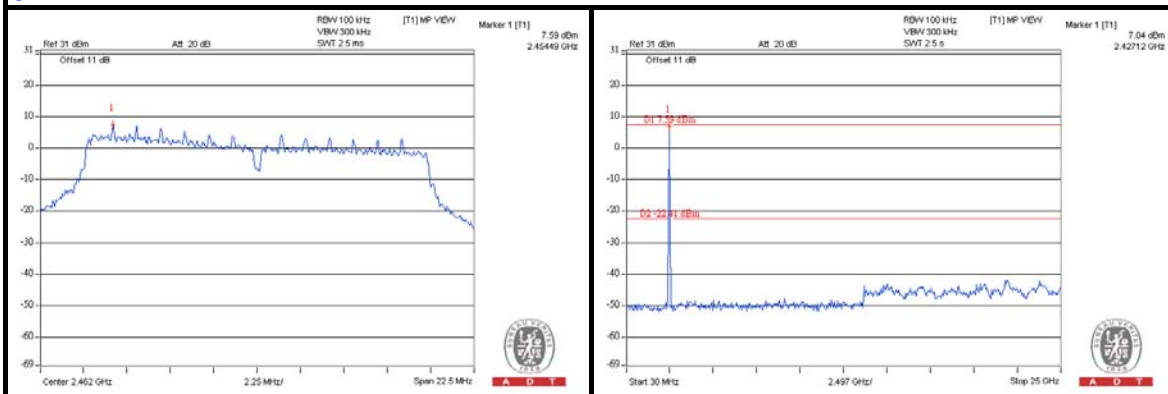
CH 1



CH 6



CH 11

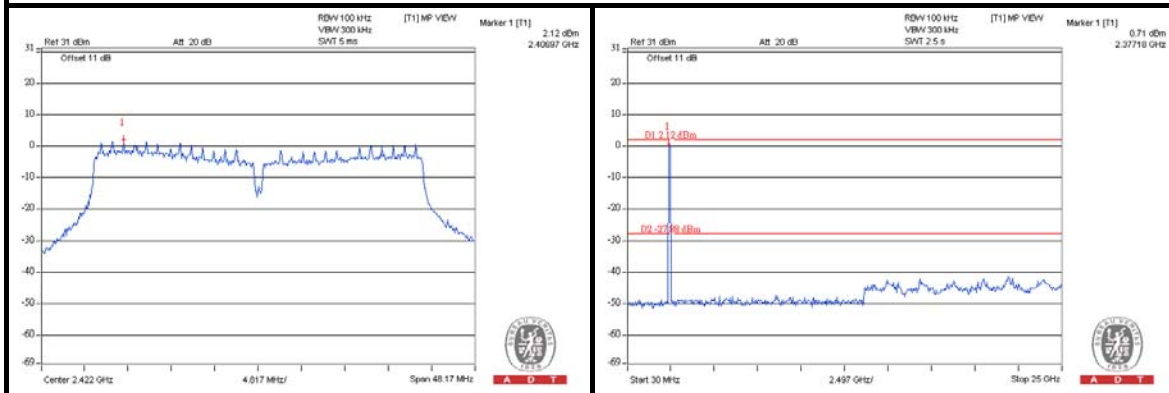




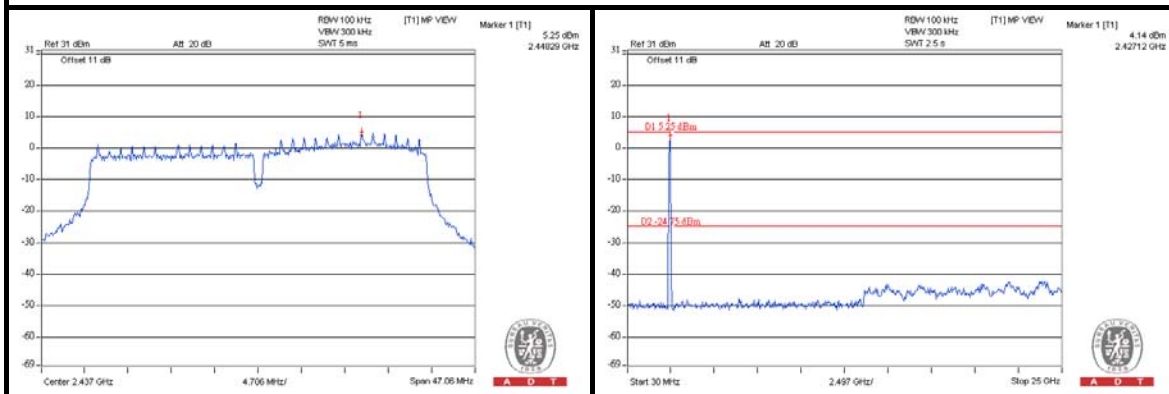
A D T

802.11n (40MHz)

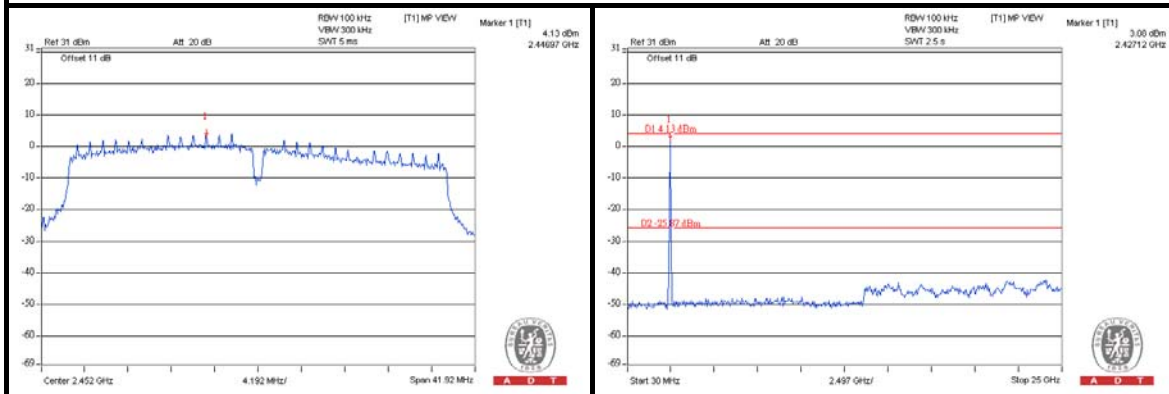
CH 3



CH 6



CH 9



5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

5.1 RADIATED EMISSION MEASUREMENT

5.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30dB below the highest level of the desired power:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

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

5.1.2 TEST INSTRUMENTS

Same as item 4.1.2.

5.1.3 TEST PROCEDURES

Same as item 4.1.3.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP

Same as item 4.1.5.

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.



A D T

5.1.7 TEST RESULTS

ABOVE 1GHz: 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.5 PK	74.0	-17.5	1.72 H	59	27.70	28.80
2	1600.00	50.7 AV	54.0	-3.3	1.72 H	59	21.90	28.80
3	#5725.00	75.9 PK	77.0	-1.1	1.02 H	336	36.70	39.20
4	#5725.00	57.9 AV	65.9	-8.0	1.02 H	336	18.70	39.20
5	*5745.00	107.0 PK			1.02 H	340	67.70	39.30
6	*5745.00	95.9 AV			1.02 H	340	56.60	39.30
7	11490.00	67.7 PK	74.0	-6.3	1.40 H	352	18.30	49.40
8	11490.00	52.4 AV	54.0	-1.6	1.40 H	352	3.00	49.40
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	1600.00	56.6 PK	74.0	-17.4	1.00 V	78	27.80	28.80
2	1600.00	51.4 AV	54.0	-2.6	1.00 V	78	22.60	28.80
3	#5725.00	88.6 PK	89.6	-1.0	1.08 V	335	49.40	39.20
4	#5725.00	68.9 AV	78.3	-9.4	1.08 V	335	29.70	39.20
5	*5745.00	119.6 PK			1.00 V	341	80.30	39.30
6	*5745.00	108.3 AV			1.00 V	341	69.00	39.30
7	11490.00	64.5 PK	74.0	-9.5	1.39 V	9	15.10	49.40
8	11490.00	51.9 AV	54.0	-2.1	1.39 V	9	2.50	49.40

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).
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.
7. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.8 PK	74.0	-17.2	1.75 H	63	28.00	28.80
2	1600.00	51.1 AV	54.0	-2.9	1.75 H	63	22.30	28.80
3	*5785.00	107.3 PK			1.04 H	342	67.90	39.40
4	*5785.00	96.3 AV			1.04 H	342	56.90	39.40
5	11570.00	73.0 PK	74.0	-1.0	1.56 H	8	23.80	49.20
6	11570.00	52.8 AV	54.0	-1.2	1.56 H	8	3.60	49.20
7	#17355.00	68.4 PK	77.3	-8.9	1.00 H	15	14.10	54.30
8	#17355.00	53.0 AV	66.3	-13.3	1.00 H	15	-1.30	54.30

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	1600.00	57.0 PK	74.0	-17.0	1.01 V	82	28.20	28.80
2	1600.00	51.8 AV	54.0	-2.2	1.01 V	82	23.00	28.80
3	*5785.00	120.0 PK			1.27 V	4	80.60	39.40
4	*5785.00	108.7 AV			1.27 V	4	69.30	39.40
5	11570.00	71.1 PK	74.0	-2.9	1.38 V	10	21.90	49.20
6	11570.00	52.1 AV	54.0	-1.9	1.38 V	10	2.90	49.20
7	#17355.00	71.0 PK	90.0	-19.0	1.14 V	15	16.70	54.30
8	#17355.00	57.3 AV	78.7	-21.4	1.14 V	15	3.00	54.30

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.9 PK	74.0	-17.1	1.73 H	61	28.10	28.80
2	1600.00	51.3 AV	54.0	-2.7	1.73 H	61	22.50	28.80
3	*5825.00	107.6 PK			1.02 H	342	68.10	39.50
4	*5825.00	96.5 AV			1.02 H	342	57.00	39.50
5	#5850.00	67.3 PK	77.6	-10.3	1.01 H	343	27.80	39.50
6	#5850.00	51.9 AV	66.5	-14.6	1.01 H	343	12.40	39.50
7	11650.00	72.9 PK	74.0	-1.1	1.38 H	6	23.80	49.10
8	11650.00	53.0 AV	54.0	-1.0	1.38 H	6	3.90	49.10

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	1600.00	57.2 PK	74.0	-16.8	1.03 V	86	28.40	28.80
2	1600.00	52.1 AV	54.0	-1.9	1.03 V	86	23.30	28.80
3	*5825.00	119.4 PK			1.15 V	6	79.90	39.50
4	*5825.00	108.0 AV			1.15 V	6	68.50	39.50
5	#5850.00	78.9 PK	89.4	-10.5	1.15 V	9	39.40	39.50
6	#5850.00	59.5 AV	78.0	-18.5	1.15 V	9	20.00	39.50
7	11650.00	71.2 PK	74.0	-2.8	1.36 V	10	22.10	49.10
8	11650.00	52.0 AV	54.0	-2.0	1.36 V	10	2.90	49.10

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	86.9 PK	88.2	-1.3	1.01 H	186	47.70	39.20
2	#5725.00	66.6 AV	76.9	-10.3	1.01 H	186	27.40	39.20
3	*5745.00	118.2 PK			1.00 H	168	78.90	39.30
4	*5745.00	106.9 AV			1.00 H	168	67.60	39.30
5	11490.00	65.8 PK	74.0	-8.2	1.00 H	197	16.40	49.40
6	11490.00	52.7 AV	54.0	-1.3	1.00 H	197	3.30	49.40
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	#5725.00	84.6 PK	87.9	-3.3	1.00 V	223	45.40	39.20
2	#5725.00	64.8 AV	76.6	-11.8	1.00 V	223	25.60	39.20
3	*5745.00	117.9 PK			1.06 V	195	78.60	39.30
4	*5745.00	106.6 AV			1.06 V	195	67.30	39.30
5	11490.00	68.0 PK	74.0	-6.0	1.02 V	162	18.60	49.40
6	11490.00	53.9 AV	54.0	-0.1	1.02 V	162	4.50	49.40

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).
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.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	119.2 PK			1.00 H	167	79.80	39.40
2	*5785.00	107.5 AV			1.00 H	167	68.10	39.40
3	11570.00	67.5 PK	74.0	-6.5	1.00 H	196	18.30	49.20
4	11570.00	52.5 AV	54.0	-1.5	1.00 H	196	3.30	49.20
5	#17355.00	65.9 PK	89.2	-23.3	1.08 H	52	11.60	54.30
6	#17355.00	52.0 AV	77.5	-25.5	1.08 H	52	-2.30	54.30
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	118.3 PK			1.06 V	195	78.90	39.40
2	*5785.00	106.5 AV			1.06 V	195	67.10	39.40
3	11570.00	70.8 PK	74.0	-3.2	1.10 V	163	21.60	49.20
4	11570.00	53.8 AV	54.0	-0.2	1.10 V	163	4.60	49.20
5	#17355.00	67.2 PK	88.3	-21.1	1.07 V	186	12.90	54.30
6	#17355.00	53.2 AV	76.5	-23.3	1.07 V	186	-1.10	54.30

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	118.1 PK			1.00 H	170	78.60	39.50
2	*5825.00	106.8 AV			1.00 H	170	67.30	39.50
3	#5850.00	76.6 PK	88.1	-11.5	1.00 H	190	37.10	39.50
4	#5850.00	60.6 AV	76.8	-16.2	1.00 H	190	21.10	39.50
5	11650.00	69.0 PK	74.0	-5.0	1.16 H	232	19.90	49.10
6	11650.00	51.5 AV	54.0	-2.5	1.16 H	232	2.40	49.10
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	117.3 PK			1.03 V	196	77.80	39.50
2	*5825.00	106.1 AV			1.03 V	196	66.60	39.50
3	#5850.00	73.6 PK	87.3	-13.7	1.00 V	148	34.10	39.50
4	#5850.00	58.3 AV	76.1	-17.8	1.00 V	148	18.80	39.50
5	11650.00	71.9 PK	74.0	-2.1	1.15 V	161	22.80	49.10
6	11650.00	52.9 AV	54.0	-1.1	1.15 V	161	3.80	49.10

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.2 PK	74.0	-17.8	1.71 H	60	27.40	28.80
2	1600.00	50.4 AV	54.0	-3.6	1.71 H	60	21.60	28.80
3	#5725.00	75.7 PK	77.1	-1.4	1.02 H	337	36.50	39.20
4	#5725.00	58.5 AV	65.5	-7.0	1.02 H	337	19.30	39.20
5	*5745.00	107.1 PK			1.03 H	346	67.80	39.30
6	*5745.00	95.5 AV			1.03 H	346	56.20	39.30
7	11490.00	67.7 PK	74.0	-6.3	1.43 H	352	18.30	49.40
8	11490.00	52.7 AV	54.0	-1.3	1.43 H	352	3.30	49.40
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	1600.00	56.8 PK	74.0	-17.2	1.00 V	76	31.20	25.60
2	1600.00	51.2 AV	54.0	-2.8	1.00 V	76	25.60	25.60
3	#5725.00	88.8 PK	90.0	-1.2	1.07 V	4	55.90	32.90
4	#5725.00	71.2 AV	78.1	-6.9	1.07 V	4	38.30	32.90
5	*5745.00	120.0 PK			1.00 V	342	87.10	32.90
6	*5745.00	108.1 AV			1.00 V	342	75.20	32.90
7	11490.00	64.8 PK	74.0	-9.2	1.39 V	9	24.60	40.20
8	11490.00	51.3 AV	54.0	-2.7	1.39 V	9	11.10	40.20

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.5 PK	74.0	-17.5	1.68 H	58	27.70	28.80
2	1600.00	50.6 AV	54.0	-3.4	1.68 H	58	21.80	28.80
3	*5785.00	108.1 PK			1.02 H	347	68.70	39.40
4	*5785.00	96.5 AV			1.02 H	347	57.10	39.40
5	11570.00	72.0 PK	74.0	-2.0	1.56 H	9	22.80	49.20
6	11570.00	52.8 AV	54.0	-1.2	1.56 H	9	3.60	49.20
7	#17355.00	70.0 PK	78.1	-8.1	1.00 H	16	15.70	54.30
8	#17355.00	54.6 AV	66.5	-11.9	1.00 H	16	0.30	54.30

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	1600.00	56.7 PK	74.0	-17.3	1.01 V	78	27.90	28.80
2	1600.00	51.0 AV	54.0	-3.0	1.01 V	78	22.20	28.80
3	*5785.00	119.6 PK			1.07 V	345	80.20	39.40
4	*5785.00	108.0 AV			1.07 V	345	68.60	39.40
5	11570.00	70.8 PK	74.0	-3.2	1.38 V	10	21.60	49.20
6	11570.00	51.6 AV	54.0	-2.4	1.38 V	10	2.40	49.20
7	#17355.00	73.0 PK	89.6	-16.6	1.15 V	16	18.70	54.30
8	#17355.00	55.4 AV	78.0	-22.6	1.15 V	16	1.10	54.30

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#“: The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.8 PK	74.0	-17.2	1.61 H	53	28.00	28.80
2	1600.00	51.0 AV	54.0	-3.0	1.61 H	53	22.20	28.80
3	*5825.00	107.5 PK			1.02 H	341	68.00	39.50
4	*5825.00	96.4 AV			1.02 H	341	56.90	39.50
5	#5850.00	70.9 PK	77.5	-6.6	1.01 H	350	31.40	39.50
6	#5850.00	52.1 AV	66.4	-14.3	1.01 H	350	12.60	39.50
7	11650.00	71.7 PK	74.0	-2.3	1.36 H	7	22.60	49.10
8	11650.00	52.5 AV	54.0	-1.5	1.36 H	7	3.40	49.10
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	1600.00	57.0 PK	74.0	-17.0	1.02 V	82	28.20	28.80
2	1600.00	51.3 AV	54.0	-2.7	1.02 V	82	22.50	28.80
3	*5825.00	120.4 PK			1.16 V	8	80.90	39.50
4	*5825.00	108.4 AV			1.16 V	8	68.90	39.50
5	#5850.00	84.0 PK	90.4	-6.4	1.15 V	17	44.50	39.50
6	#5850.00	63.1 AV	78.4	-15.3	1.15 V	17	23.60	39.50
7	11650.00	68.9 PK	74.0	-5.1	1.25 V	20	19.80	49.10
8	11650.00	51.4 AV	54.0	-2.6	1.25 V	20	2.30	49.10

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#“: The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	88.1 PK	89.3	-1.2	1.05 H	35	48.90	39.20
2	#5725.00	68.6 AV	76.5	-7.9	1.05 H	35	29.40	39.20
3	*5745.00	119.3 PK			1.05 H	346	80.00	39.30
4	*5745.00	106.5 AV			1.05 H	346	67.20	39.30
5	11490.00	66.2 PK	74.0	-7.8	1.21 H	2	16.80	49.40
6	11490.00	52.9 AV	54.0	-1.1	1.21 H	2	3.50	49.40
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	#5725.00	87.0 PK	88.0	-1.0	1.00 V	359	47.80	39.20
2	#5725.00	69.2 AV	76.1	-6.9	1.00 V	359	30.00	39.20
3	*5745.00	118.0 PK			1.00 V	4	78.70	39.30
4	*5745.00	106.1 AV			1.00 V	4	66.80	39.30
5	11490.00	68.4 PK	74.0	-5.6	1.07 V	343	19.00	49.40
6	11490.00	53.6 AV	54.0	-0.4	1.07 V	343	4.20	49.40

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).
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.
7. “#“: The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	117.5 PK			1.01 H	174	78.10	39.40
2	*5785.00	105.9 AV			1.01 H	174	66.50	39.40
3	11570.00	70.4 PK	74.0	-3.6	1.00 H	181	21.20	49.20
4	11570.00	52.8 AV	54.0	-1.2	1.00 H	181	3.60	49.20
5	#17355.00	65.6 PK	87.5	-21.9	1.08 H	197	11.30	54.30
6	#17355.00	52.0 AV	75.9	-23.9	1.08 H	197	-2.30	54.30
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	116.1 PK			1.06 V	194	76.70	39.40
2	*5785.00	104.3 AV			1.06 V	194	64.90	39.40
3	11570.00	72.6 PK	74.0	-1.4	1.18 V	164	23.40	49.20
4	11570.00	53.7 AV	54.0	-0.3	1.18 V	164	4.50	49.20
5	#17355.00	71.4 PK	86.1	-14.7	1.08 V	198	17.10	54.30
6	#17355.00	53.1 AV	74.3	-21.2	1.08 V	198	-1.20	54.30

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	117.0 PK			1.01 H	154	77.50	39.50
2	*5825.00	105.2 AV			1.01 H	154	65.70	39.50
3	#5850.00	82.7 PK	87.0	-4.3	1.00 H	174	43.20	39.50
4	#5850.00	63.7 AV	75.2	-11.5	1.00 H	174	24.20	39.50
5	11650.00	72.2 PK	74.0	-1.8	1.11 H	196	23.10	49.10
6	11650.00	52.6 AV	54.0	-1.4	1.11 H	196	3.50	49.10
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	116.2 PK			1.04 V	186	76.70	39.50
2	*5825.00	104.4 AV			1.04 V	186	64.90	39.50
3	#5850.00	80.5 PK	86.2	-5.7	1.06 V	203	41.00	39.50
4	#5850.00	62.6 AV	74.4	-11.8	1.06 V	203	23.10	39.50
5	11650.00	73.5 PK	74.0	-0.5	1.18 V	163	24.40	49.10
6	11650.00	53.0 AV	54.0	-1.0	1.18 V	163	3.90	49.10

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#“: The radiated frequency is out the restricted band.



A D T

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.5 PK	74.0	-17.5	1.73 H	63	27.70	28.80
2	1600.00	50.7 AV	54.0	-3.3	1.73 H	63	21.90	28.80
3	#5725.00	70.3 PK	71.3	-1.0	1.03 H	337	31.10	39.20
4	#5725.00	54.2 AV	59.8	-5.6	1.03 H	337	15.00	39.20
5	*5755.00	101.3 PK			1.03 H	340	62.00	39.30
6	*5755.00	89.8 AV			1.03 H	340	50.50	39.30
7	11510.00	62.5 PK	74.0	-11.5	1.32 H	7	13.10	49.40
8	11510.00	48.1 AV	54.0	-5.9	1.32 H	7	-1.30	49.40
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	1600.00	56.5 PK	74.0	-17.5	1.01 V	73	27.70	28.80
2	1600.00	50.8 AV	54.0	-3.2	1.01 V	73	22.00	28.80
3	#5725.00	83.7 PK	85.0	-1.3	1.07 V	3	44.50	39.20
4	#5725.00	66.3 AV	72.9	-6.6	1.07 V	3	27.10	39.20
5	*5755.00	115.0 PK			1.00 V	341	75.70	39.30
6	*5755.00	102.9 AV			1.00 V	341	63.60	39.30
7	11510.00	60.6 PK	74.0	-13.4	1.33 V	10	11.20	49.40
8	11510.00	47.2 AV	54.0	-6.8	1.33 V	10	-2.20	49.40

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).
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.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Anderson Hong		

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	1600.00	56.5 PK	74.0	-17.5	1.72 H	63	27.70	28.80
2	1600.00	50.8 AV	54.0	-3.2	1.72 H	63	22.00	28.80
3	*5795.00	105.7 PK			1.02 H	345	66.30	39.40
4	*5795.00	93.8 AV			1.02 H	345	54.40	39.40
5	#5850.00	62.1 PK	75.7	-13.6	1.00 H	2	22.60	39.50
6	#5850.00	47.7 AV	63.8	-16.1	1.00 H	2	8.20	39.50
7	11590.00	69.5 PK	74.0	-4.5	1.43 H	8	20.40	49.10
8	11590.00	52.7 AV	54.0	-1.3	1.43 H	8	3.60	49.10

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	1600.00	56.9 PK	74.0	-17.1	1.02 V	71	28.10	28.80
2	1600.00	51.3 AV	54.0	-2.7	1.02 V	71	22.50	28.80
3	*5795.00	117.7 PK			1.07 V	345	78.30	39.40
4	*5795.00	104.9 AV			1.07 V	345	65.50	39.40
5	#5850.00	75.7 PK	87.7	-12.0	1.26 V	6	36.20	39.50
6	#5850.00	59.9 AV	74.9	-15.0	1.26 V	6	20.40	39.50
7	11590.00	67.3 PK	74.0	-6.7	1.37 V	9	18.20	49.10
8	11590.00	51.3 AV	54.0	-2.7	1.37 V	9	2.20	49.10

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	82.5 PK	85.0	-2.5	1.02 H	185	43.30	39.20
2	#5725.00	56.2 AV	73.1	-16.9	1.02 H	185	17.00	39.20
3	*5755.00	115.0 PK			1.02 H	173	75.70	39.30
4	*5755.00	103.1 AV			1.02 H	173	63.80	39.30
5	11510.00	61.2 PK	74.0	-12.8	1.00 H	182	11.80	49.40
6	11510.00	48.4 AV	54.0	-5.6	1.00 H	182	-1.00	49.40
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	#5725.00	82.4 PK	83.8	-1.4	1.08 V	199	43.20	39.20
2	#5725.00	64.9 AV	72.4	-7.5	1.08 V	199	25.70	39.20
3	*5755.00	113.8 PK			1.06 V	194	74.50	39.30
4	*5755.00	102.4 AV			1.06 V	194	63.10	39.30
5	11510.00	63.8 PK	74.0	-10.2	1.00 V	162	14.40	49.40
6	11510.00	50.7 AV	54.0	-3.3	1.00 V	162	1.30	49.40

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).
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.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Anderson Hong		

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	117.0 PK			1.02 H	176	77.60	39.40
2	*5795.00	105.3 AV			1.02 H	176	65.90	39.40
3	#5850.00	74.4 PK	87.0	-12.6	1.00 H	205	34.90	39.50
4	#5850.00	58.8 AV	75.3	-16.5	1.00 H	205	19.30	39.50
5	11590.00	64.6 PK	74.0	-9.4	1.00 H	150	15.50	49.10
6	11590.00	50.2 AV	54.0	-3.8	1.00 H	150	1.10	49.10
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	116.0 PK			1.06 V	195	76.60	39.40
2	*5795.00	104.8 AV			1.06 V	195	65.40	39.40
3	#5850.00	72.7 PK	86.0	-13.3	1.06 V	187	33.20	39.50
4	#5850.00	58.4 AV	74.8	-16.4	1.06 V	187	18.90	39.50
5	11590.00	68.1 PK	74.0	-5.9	1.00 V	162	19.00	49.10
6	11590.00	52.9 AV	54.0	-1.1	1.00 V	162	3.80	49.10

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



A D T

BELOW 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	A
TESTED BY	Sun Lin		

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	249.22	36.3 QP	46.0	-9.7	1.00 H	35	23.30	13.00
2	375.32	33.2 QP	46.0	-12.8	1.00 H	44	16.40	16.80
3	400.54	42.0 QP	46.0	-4.0	1.00 H	44	24.50	17.50
4	600.36	36.3 QP	46.0	-9.7	1.25 H	48	13.90	22.40
5	802.12	42.2 QP	46.0	-3.8	1.00 H	320	16.90	25.30
6	903.00	42.6 QP	46.0	-3.4	1.00 H	298	16.30	26.30

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	142.52	29.7 QP	43.5	-13.8	1.00 V	13	16.00	13.70
2	249.22	40.8 QP	46.0	-5.2	2.00 V	349	27.80	13.00
3	400.54	42.3 QP	46.0	-3.7	1.25 V	221	24.80	17.50
4	600.36	34.4 QP	46.0	-11.6	1.50 V	212	12.00	22.40
5	625.58	35.2 QP	46.0	-10.8	1.25 V	11	12.70	22.50
6	802.12	39.6 QP	46.0	-6.4	1.25 V	196	14.30	25.30

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	B
TESTED BY	Sun Lin		

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	249.22	29.8 QP	46.0	-16.2	1.25 H	77	16.80	13.00
2	400.54	34.5 QP	46.0	-11.5	2.00 H	320	17.00	17.50
3	600.36	33.3 QP	46.0	-12.7	1.25 H	56	10.90	22.40
4	625.58	39.7 QP	46.0	-6.3	1.00 H	112	17.20	22.50
5	802.12	41.6 QP	46.0	-4.4	1.00 H	329	16.30	25.30
6	875.84	35.4 QP	46.0	-10.6	1.50 H	322	9.40	26.00
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	142.52	32.1 QP	43.5	-11.4	1.00 V	157	18.40	13.70
2	249.22	36.1 QP	46.0	-9.9	1.50 V	349	23.10	13.00
3	400.54	33.1 QP	46.0	-12.9	2.00 V	313	15.60	17.50
4	600.36	42.4 QP	46.0	-3.6	2.00 V	195	20.00	22.40
5	625.58	41.0 QP	46.0	-5.0	1.00 V	2	18.50	22.50
6	802.12	40.7 QP	46.0	-5.3	1.25 V	184	15.40	25.30

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	C
TESTED BY	Sun Lin		

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	68.80	23.5 QP	40.0	-16.5	3.50 H	238	11.00	12.50
2	144.46	30.3 QP	46.5	-13.2	2.00 H	117	16.60	13.70
3	249.22	33.7 QP	46.0	-12.3	1.00 H	261	20.70	13.00
4	625.58	31.8 QP	46.0	-14.2	1.00 H	61	9.30	22.50
5	751.68	30.2 QP	46.0	-15.8	1.00 H	141	6.20	24.00
6	802.12	37.4 QP	46.0	-8.6	1.00 H	154	12.10	25.30
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	68.80	33.8 QP	40.0	-6.2	1.00 V	32	21.30	12.50
2	97.90	30.7 QP	43.5	-12.8	1.00 V	284	21.50	9.20
3	249.22	35.9 QP	46.0	-10.1	1.00 V	200	22.90	13.00
4	625.58	30.9 QP	46.0	-15.1	1.00 V	40	8.40	22.50
5	751.68	31.8 QP	46.0	-14.2	1.00 V	175	7.80	24.00
6	802.12	41.1 QP	46.0	-4.9	1.00 V	183	15.80	25.30

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TEST MODE	D
TESTED BY	Sun Lin		

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	249.22	39.2 QP	46.0	-6.8	1.00 H	13	26.20	13.00
2	516.94	32.5 QP	46.0	-13.5	1.25 H	284	12.00	20.50
3	600.36	41.1 QP	46.0	-4.9	1.00 H	277	18.70	22.40
4	625.58	43.0 QP	46.0	-3.0	1.00 H	337	20.50	22.50
5	802.12	37.0 QP	46.0	-9.0	1.25 H	281	11.70	25.30
6	825.40	38.6 QP	46.0	-7.4	2.00 H	149	13.10	25.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	148.34	33.2 QP	43.5	-10.3	1.25 V	160	19.30	13.90
2	249.22	37.5 QP	46.0	-8.5	1.50 V	346	24.50	13.00
3	400.54	32.3 QP	46.0	-13.7	1.25 V	190	14.80	17.50
4	600.36	39.5 QP	46.0	-6.5	2.00 V	4	17.10	22.40
5	625.58	39.5 QP	46.0	-6.5	2.00 V	4	17.00	22.50
6	825.40	38.5 QP	46.0	-7.5	2.00 V	4	13.00	25.50

REMARKS:

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

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ 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.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.2.2 TEST INSTRUMENTS

Same as item 4.2.2.

5.2.3 TEST PROCEDURES

Same as item 4.2.3.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 TEST SETUP

Same as item 4.2.5.

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6



A D T

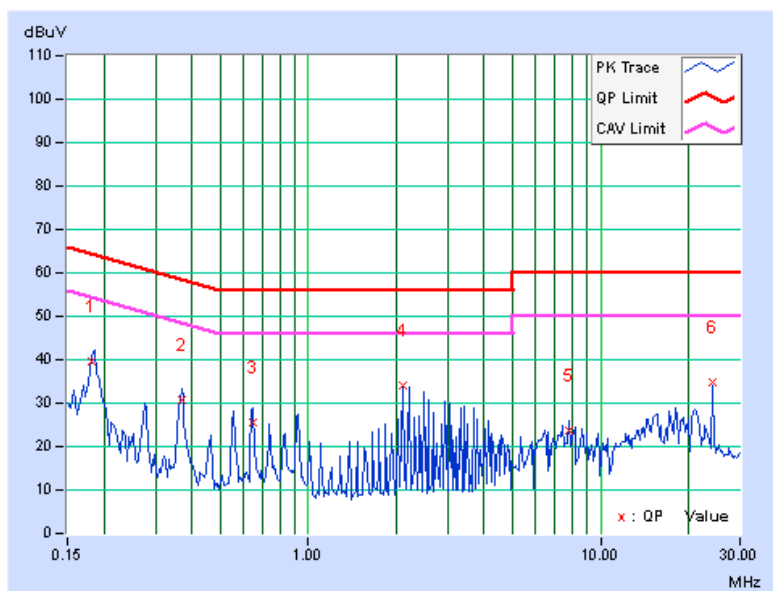
5.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.18125	0.15	39.48	29.77	39.63	29.92	64.43	54.43	-24.80	-24.51
2	0.36875	0.17	30.61	27.28	30.78	27.45	58.53	48.53	-27.75	-21.08
3	0.64609	0.18	25.28	22.48	25.46	22.66	56.00	46.00	-30.54	-23.34
4	2.11719	0.26	33.63	33.20	33.89	33.46	56.00	46.00	-22.11	-12.54
5	7.82031	0.40	23.40	17.64	23.80	18.04	60.00	50.00	-36.20	-31.96
6	24.07813	0.59	34.09	33.78	34.68	34.37	60.00	50.00	-25.32	-15.63

- 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.



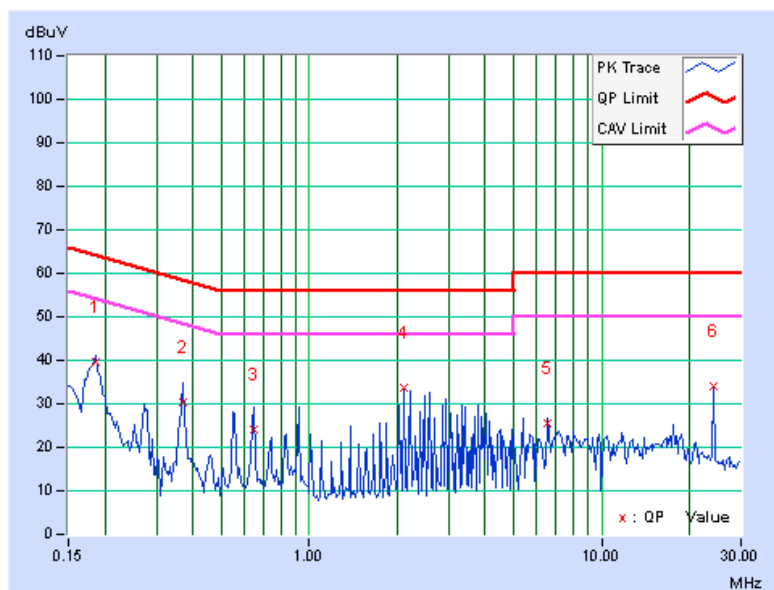


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.18516	0.14	39.44	32.42	39.58	32.56	64.25	54.25	-24.67	-21.69
2	0.36875	0.16	30.20	29.68	30.36	29.84	58.53	48.53	-28.17	-18.69
3	0.64609	0.17	24.06	24.02	24.23	24.19	56.00	46.00	-31.77	-21.81
4	2.11328	0.27	33.40	32.96	33.67	33.23	56.00	46.00	-22.33	-12.77
5	6.53125	0.40	24.98	22.36	25.38	22.76	60.00	50.00	-34.62	-27.24
6	24.07813	0.65	33.37	33.07	34.02	33.72	60.00	50.00	-25.98	-16.28

- 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.



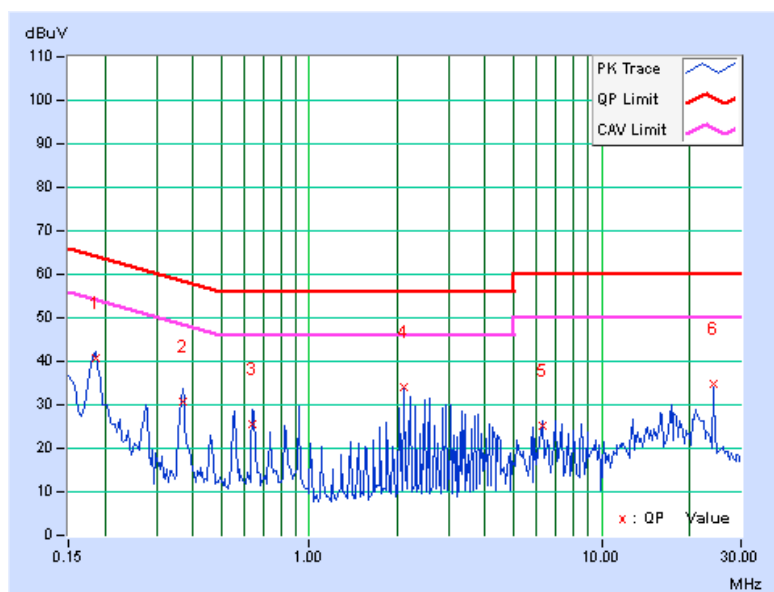


A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.18516	0.15	40.58	30.75	40.73	30.90	64.25	54.25	-23.52	-23.35
2	0.36875	0.17	30.61	27.32	30.78	27.49	58.53	48.53	-27.75	-21.04
3	0.64219	0.18	25.44	22.42	25.62	22.60	56.00	46.00	-30.38	-23.40
4	2.11719	0.26	33.65	33.22	33.91	33.48	56.00	46.00	-22.09	-12.52
5	6.25781	0.37	24.71	20.23	25.08	20.60	60.00	50.00	-34.92	-29.40
6	24.07813	0.59	34.07	33.80	34.66	34.39	60.00	50.00	-25.34	-15.61

- 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.



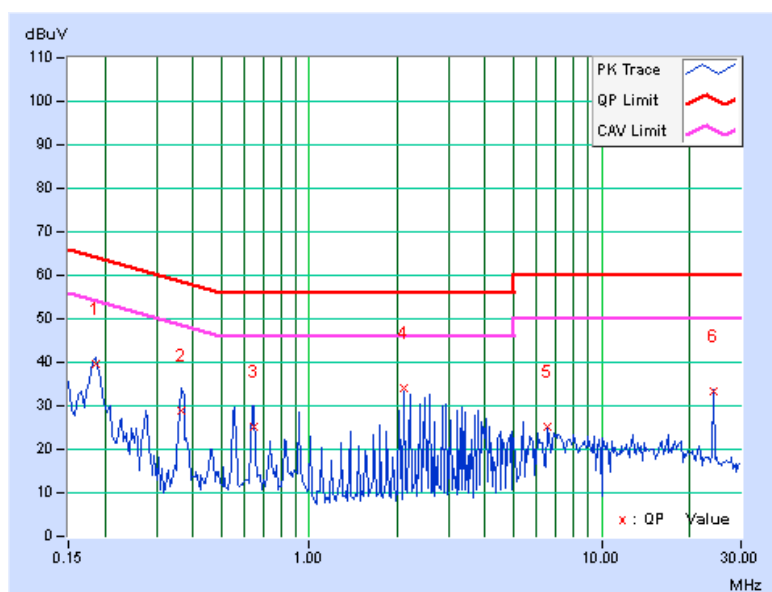


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.18516	0.14	39.44	32.44	39.58	32.58	64.25	54.25	-24.67	-21.67
2	0.36484	0.16	28.68	28.16	28.84	28.32	58.62	48.62	-29.78	-20.30
3	0.64609	0.17	25.16	24.30	25.33	24.47	56.00	46.00	-30.67	-21.53
4	2.11719	0.27	33.74	33.24	34.01	33.51	56.00	46.00	-21.99	-12.49
5	6.53125	0.40	24.79	22.15	25.19	22.55	60.00	50.00	-34.81	-27.45
6	24.07813	0.65	32.55	34.23	33.20	34.88	60.00	50.00	-26.80	-15.12

- 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.



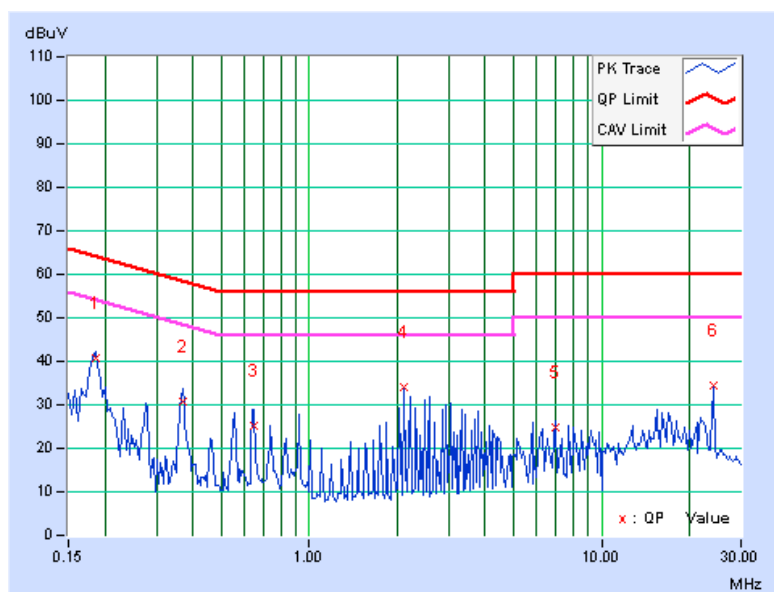


A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	C		

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	0.18516	0.15	40.58	30.79	40.73	30.94	64.25	54.25	-23.52	-23.31
2	0.36875	0.17	30.63	27.32	30.80	27.49	58.53	48.53	-27.73	-21.04
3	0.64609	0.18	25.14	22.30	25.32	22.48	56.00	46.00	-30.68	-23.52
4	2.11719	0.26	33.65	33.20	33.91	33.46	56.00	46.00	-22.09	-12.54
5	6.99609	0.38	24.45	21.29	24.83	21.67	60.00	50.00	-35.17	-28.33
6	24.07813	0.59	33.82	33.50	34.41	34.09	60.00	50.00	-25.59	-15.91

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



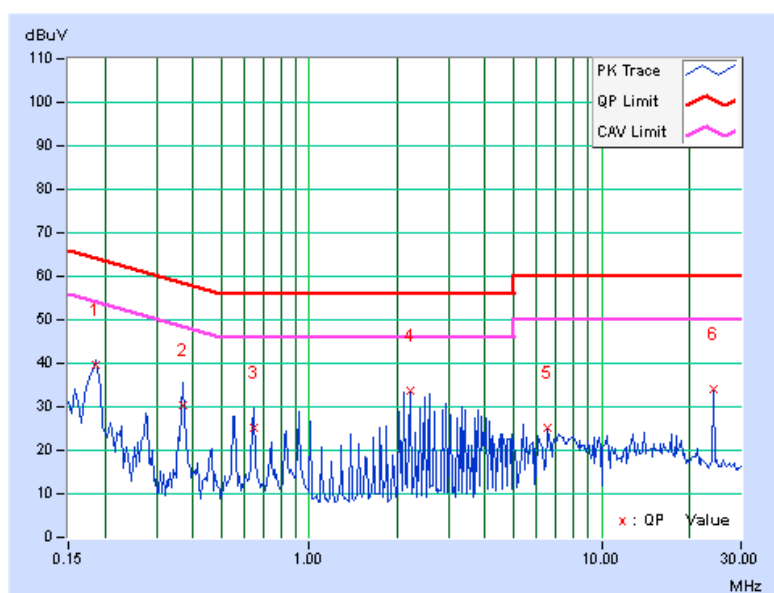


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	C		

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	0.18516	0.14	39.44	32.44	39.58	32.58	64.25	54.25	-24.67	-21.67
2	0.36875	0.16	30.18	29.72	30.34	29.88	58.53	48.53	-28.19	-18.65
3	0.64609	0.17	25.14	24.26	25.31	24.43	56.00	46.00	-30.69	-21.57
4	2.20703	0.27	33.32	32.87	33.59	33.14	56.00	46.00	-22.41	-12.86
5	6.53125	0.40	24.95	22.13	25.35	22.53	60.00	50.00	-34.65	-27.47
6	24.07813	0.65	33.53	33.23	34.18	33.88	60.00	50.00	-25.82	-16.12

- 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.



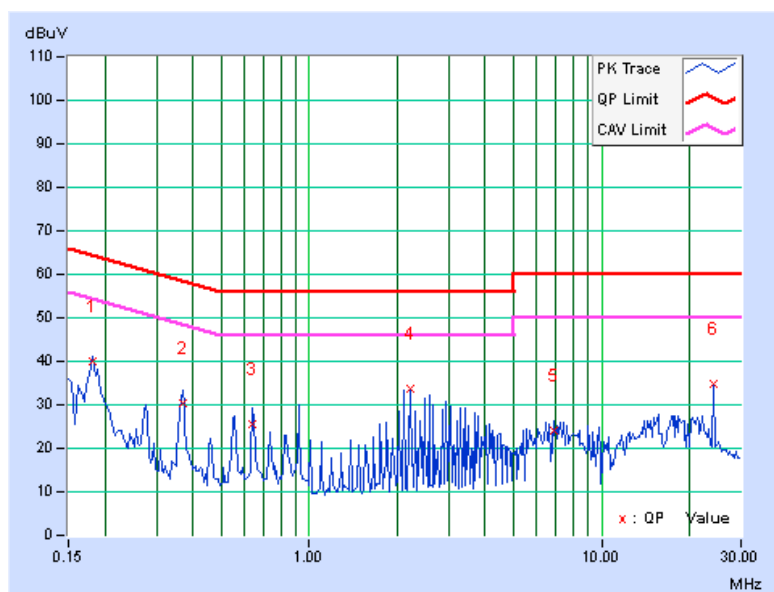


A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	D		

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	0.18125	0.15	39.72	29.95	39.87	30.10	64.43	54.43	-24.56	-24.33
2	0.36875	0.17	30.34	26.82	30.51	26.99	58.53	48.53	-28.02	-21.54
3	0.64219	0.18	25.53	22.47	25.71	22.65	56.00	46.00	-30.29	-23.35
4	2.20703	0.27	33.55	32.89	33.82	33.16	56.00	46.00	-22.18	-12.84
5	6.89453	0.38	23.66	20.98	24.04	21.36	60.00	50.00	-35.96	-28.64
6	24.07813	0.59	34.24	33.86	34.83	34.45	60.00	50.00	-25.17	-15.55

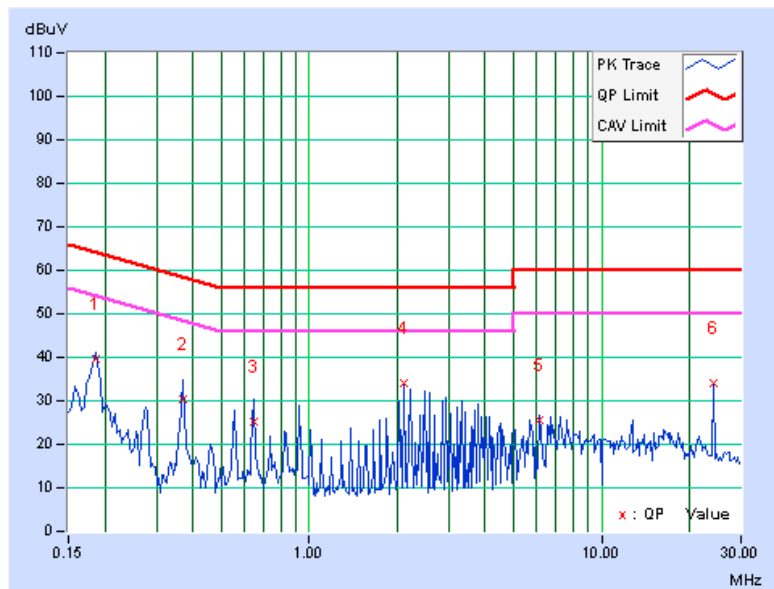
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	D		

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	0.18516	0.14	39.44	32.42	39.58	32.56	64.25	54.25	-24.67	-21.69
2	0.36875	0.16	30.18	29.70	30.34	29.86	58.53	48.53	-28.19	-18.67
3	0.64609	0.17	25.16	24.38	25.33	24.55	56.00	46.00	-30.67	-21.45
4	2.11719	0.27	33.88	33.38	34.15	33.65	56.00	46.00	-21.85	-12.35
5	6.16406	0.40	25.17	22.87	25.57	23.27	60.00	50.00	-34.43	-26.73
6	24.07813	0.65	33.53	33.23	34.18	33.88	60.00	50.00	-25.82	-16.12

- 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.



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST SETUP

Same as item 4.3.2.

5.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.3.4 TEST PROCEDURE

Same as item 4.3.4.

5.3.5 DEVIATION FROM TEST STANDARD

No deviation.

5.3.6 EUT OPERATING CONDITIONS

Same as item 4.3.6.



A D T

5.3.7 TEST RESULTS

TEST MODE A

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	16.61	16.56	0.5	PASS
157	5785	16.54	16.61	0.5	PASS
165	5825	16.63	16.60	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	17.84	17.85	0.5	PASS
157	5785	17.84	17.87	0.5	PASS
165	5825	17.84	17.81	0.5	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
151	5755	37.34	36.47	0.5	PASS
159	5795	37.53	37.17	0.5	PASS



TEST MODE B

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	16.61	16.56	0.5	PASS
157	5785	16.54	16.61	0.5	PASS
165	5825	16.63	16.60	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	17.84	17.85	0.5	PASS
157	5785	17.84	17.87	0.5	PASS
165	5825	17.84	17.81	0.5	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
151	5755	37.34	36.47	0.5	PASS
159	5795	37.53	37.17	0.5	PASS

5.4 CONDUCTED OUTPUT POWER

5.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 5725 –5850 MHz bands: 1 Watt (30dBm)

5.4.2 TEST SETUP

Same as Item 4.4.2.

5.4.3 INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.4.4 TEST PROCEDURES

Same as Item 4.4.4.

5.4.5 DEVIATION FROM TEST STANDARD

No deviation.

5.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.



5.4.7 TEST RESULTS

TEST MODE A

802.11a

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
149	5745	18.44	18.24	136.5	21.4	30	PASS
157	5785	19.16	19.15	164.6	22.2	30	PASS
165	5825	19.00	18.25	146.3	21.7	30	PASS

802.11n (20MHz)

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
149	5745	18.42	18.18	135.3	21.3	30	PASS
157	5785	18.30	18.98	146.7	21.7	30	PASS
165	5825	18.75	18.10	139.6	21.4	30	PASS

802.11n (40MHz)

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
151	5755	17.32	16.31	96.7	19.9	30	PASS
159	5795	19.30	19.09	166.2	22.2	30	PASS

**TEST MODE B****802.11a**

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
149	5745	18.25	17.89	128.4	21.1	30	PASS
157	5785	19.16	19.15	164.6	22.2	30	PASS
165	5825	19.00	18.25	146.3	21.7	30	PASS

802.11n (20MHz)

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
149	5745	18.28	17.85	128.3	21.1	30	PASS
157	5785	17.75	18.2	125.6	21.0	30	PASS
165	5825	18.75	18.1	139.6	21.4	30	PASS

802.11n (40MHz)

CHAN.	FREQUENCY (MHz)	AVG. POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
151	5755	17.32	16.31	96.7	19.9	30	PASS
159	5795	19.30	19.09	166.2	22.2	30	PASS

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST SETUP

Same as item 4.5.2.

5.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.5.4 TEST PROCEDURE.

Same as item 4.5.4.

5.5.5 DEVIATION FROM TEST STANDARD

No deviation.

5.5.6 EUT OPERATING CONDITION

Same as item 4.3.6.

5.5.7 TEST RESULTS

TEST MODE A

802.11a

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-3.92	-19.15	3.01	-16.14	8	PASS
	157	5785	-3.21	-18.44	3.01	-15.43	8	PASS
	165	5825	-3.38	-18.61	3.01	-15.60	8	PASS
1	149	5745	-4.01	-19.24	3.01	-16.23	8	PASS
	157	5785	-3.13	-18.36	3.01	-15.35	8	PASS
	165	5825	-4.10	-19.33	3.01	-16.32	8	PASS

802.11n (20MHz)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-4.10	-19.33	3.01	-16.32	8	PASS
	157	5785	-4.25	-19.48	3.01	-16.47	8	PASS
	165	5825	-3.84	-19.07	3.01	-16.06	8	PASS
1	149	5745	-3.53	-18.76	3.01	-15.75	8	PASS
	157	5785	-2.52	-17.75	3.01	-14.74	8	PASS
	165	5825	-3.45	-18.68	3.01	-15.67	8	PASS

802.11n (40MHz)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	151	5755	-8.07	-23.3	3.01	-20.29	8	PASS
	159	5795	-5.87	-21.1	3.01	-18.09	8	PASS
1	151	5755	-9.22	-24.45	3.01	-21.44	8	PASS
	159	5795	-6.26	-21.49	3.01	-18.48	8	PASS

**TEST MODE B****802.11a**

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-3.92	-19.15	3.01	-16.14	8	PASS
	157	5785	-3.21	-18.44	3.01	-15.43	8	PASS
	165	5825	-3.38	-18.61	3.01	-15.60	8	PASS
1	149	5745	-4.01	-19.24	3.01	-16.23	8	PASS
	157	5785	-3.13	-18.36	3.01	-15.35	8	PASS
	165	5825	-4.10	-19.33	3.01	-16.32	8	PASS

802.11n (20MHz)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-4.10	-19.33	3.01	-16.32	8	PASS
	157	5785	-4.25	-19.48	3.01	-16.47	8	PASS
	165	5825	-3.84	-19.07	3.01	-16.06	8	PASS
1	149	5745	-3.53	-18.76	3.01	-15.75	8	PASS
	157	5785	-2.52	-17.75	3.01	-14.74	8	PASS
	165	5825	-3.45	-18.68	3.01	-15.67	8	PASS

802.11n (40MHz)

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	151	5755	-8.07	-23.30	3.01	-20.29	8	PASS
	159	5795	-5.87	-21.10	3.01	-18.09	8	PASS
1	151	5755	-9.22	-24.45	3.01	-21.44	8	PASS
	159	5795	-6.26	-21.49	3.01	-18.48	8	PASS

5.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

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

5.6.2 TEST SETUP

Same as Item 4.6.2

5.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.6.4 TEST PROCEDURE

Same as Item 4.6.4

5.6.5 DEVIATION FROM TEST STANDARD

No deviation.

5.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

5.6.7 TEST RESULTS

The conducted emission test is performed on each TX port of operating mode without summing or adding $10\log(N)$ since the limit is relative emission limit. Only worst data of each operating mode is presented.

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

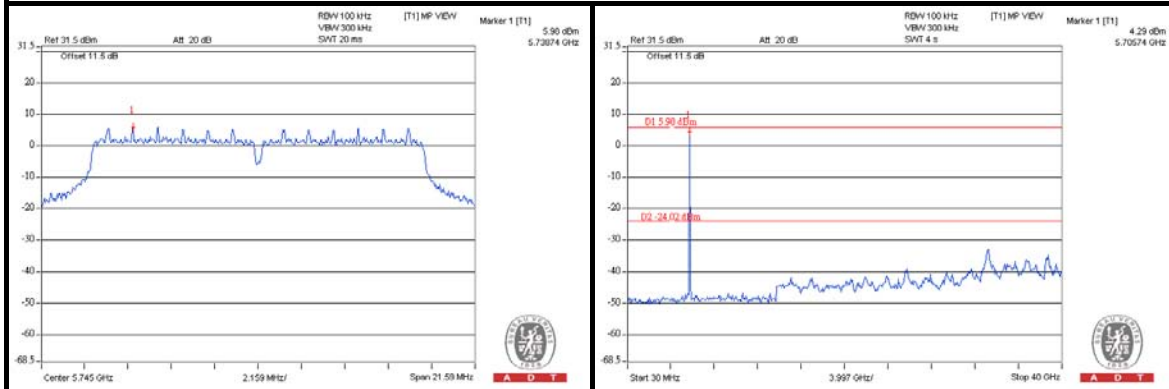


A D T

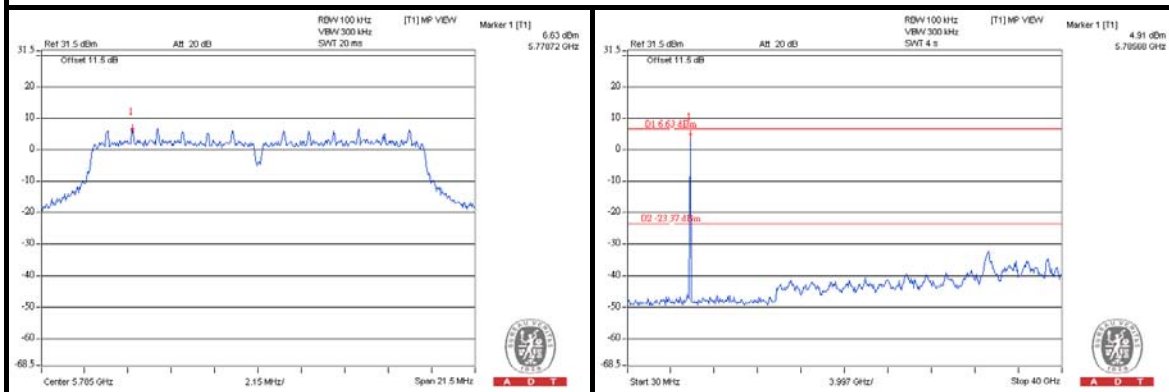
TEST MODE A

802.11a

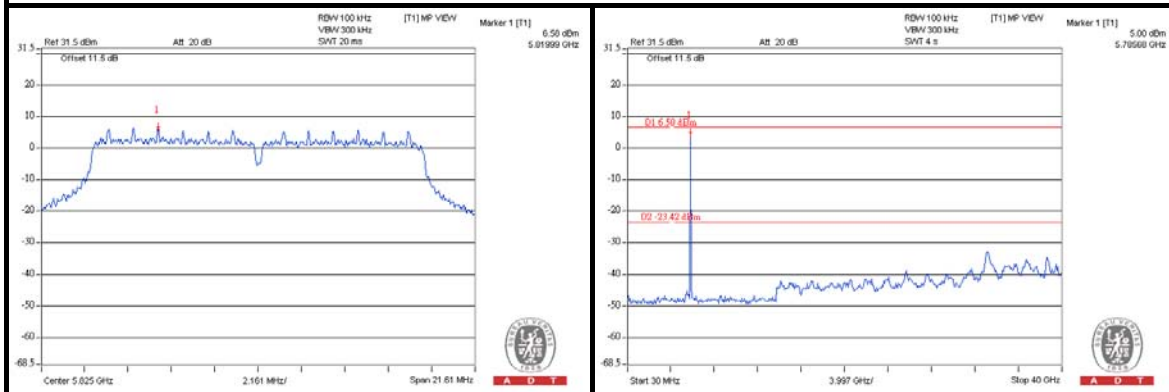
CH 149

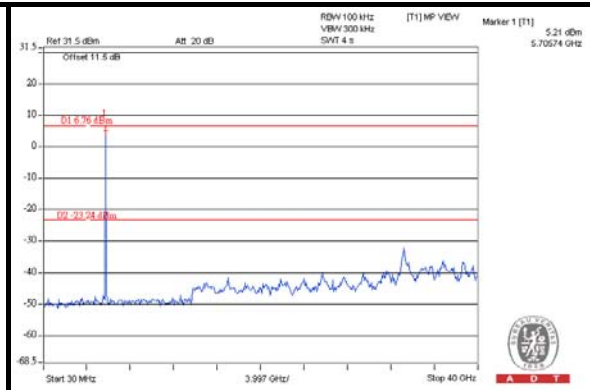
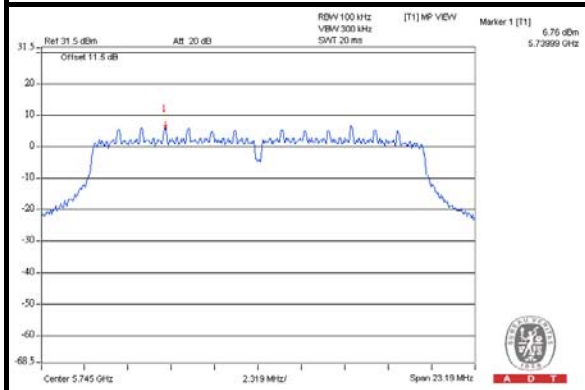
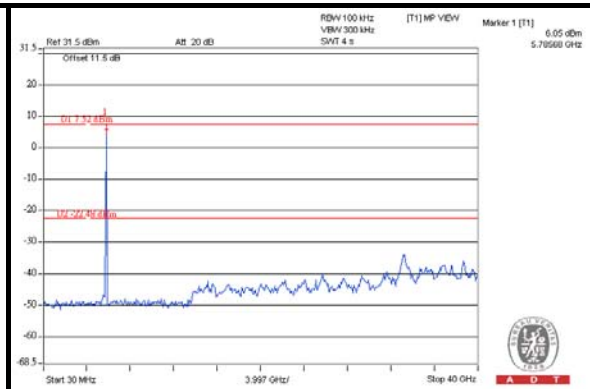
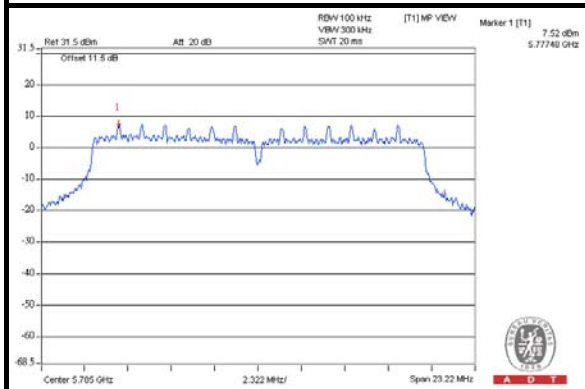
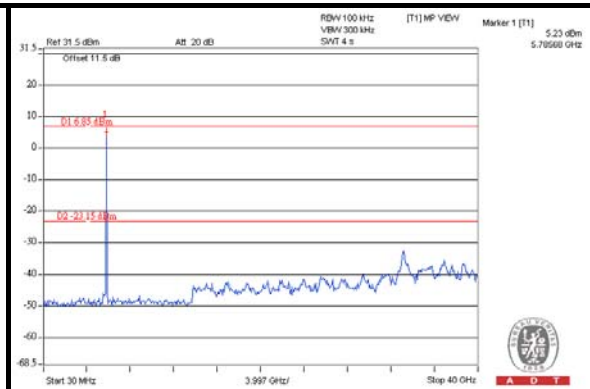
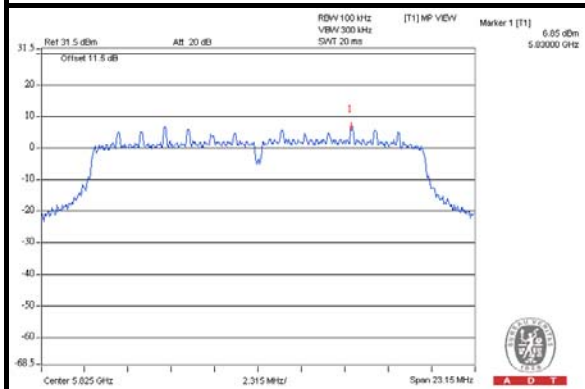


CH 157



CH 165



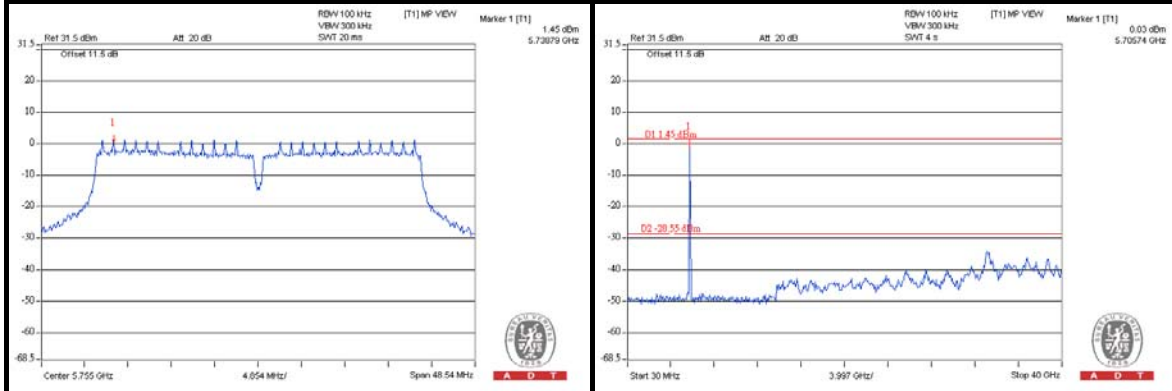
802.11n (20MHz)**CH 149****CH 157****CH 165**



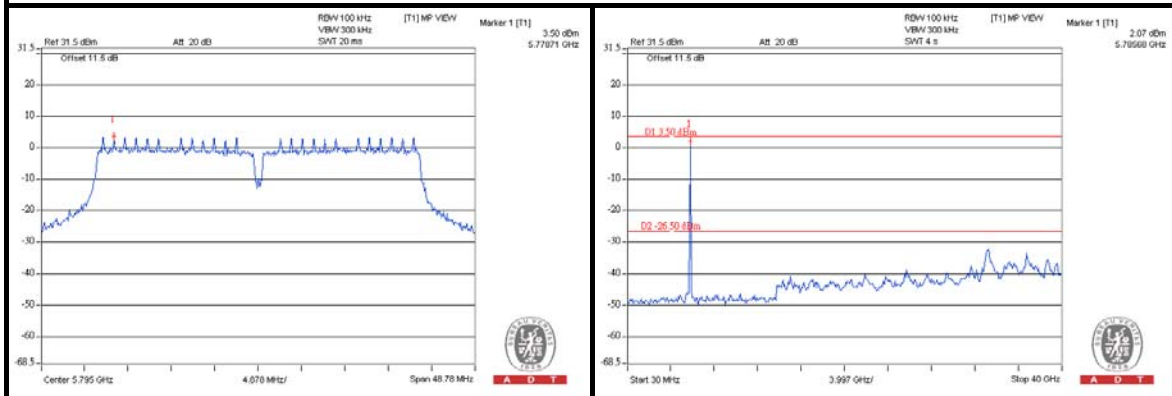
A D T

802.11n (40MHz)

CH 151



CH 159



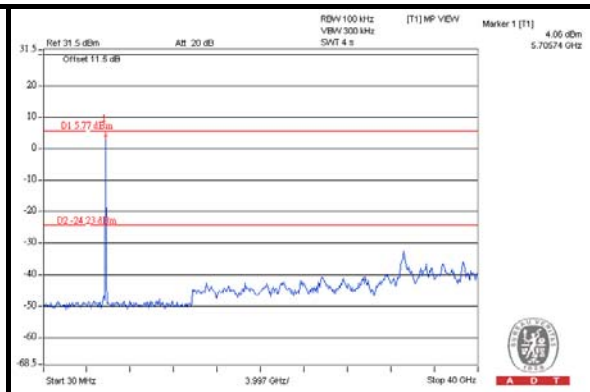
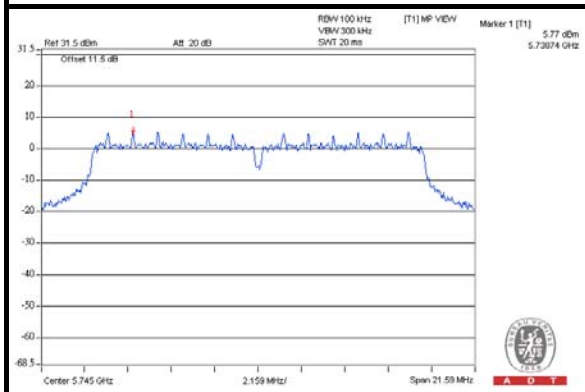


A D T

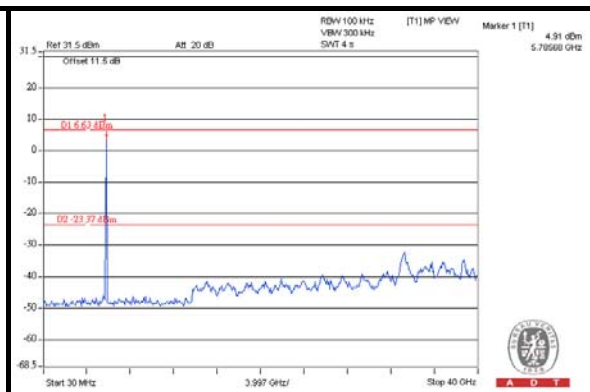
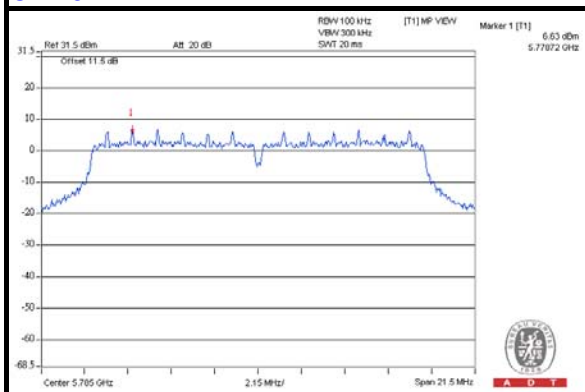
TEST MODE B

802.11a

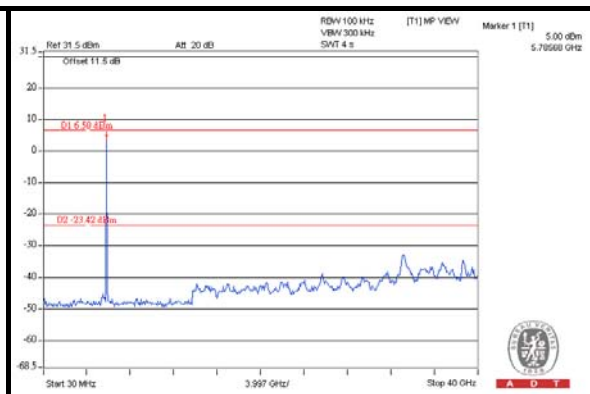
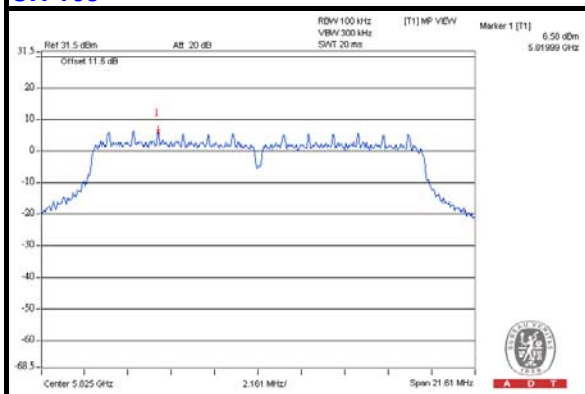
CH 149

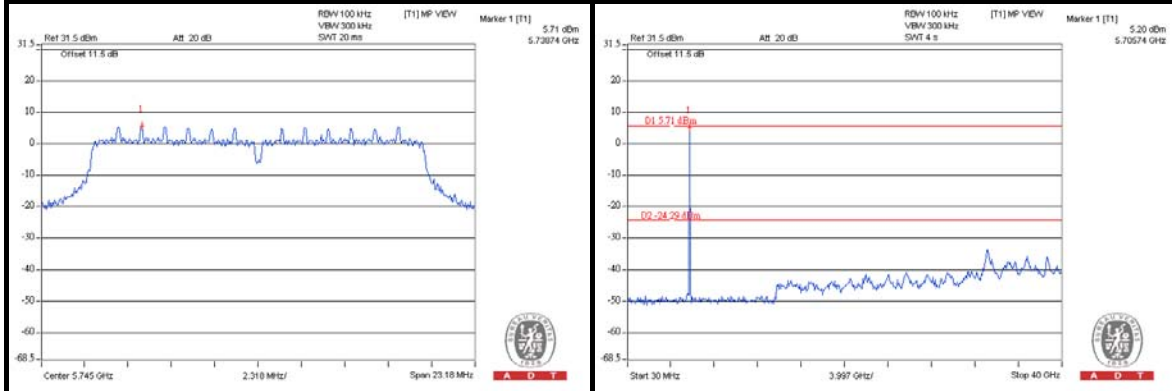
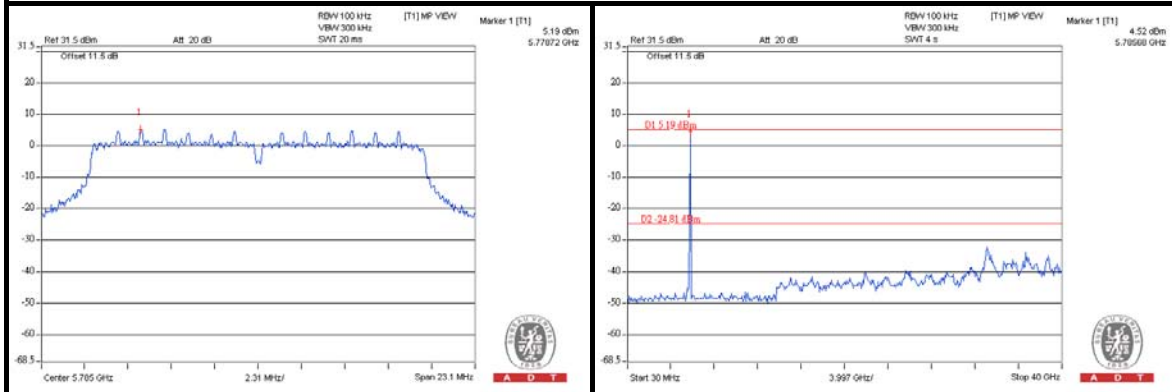
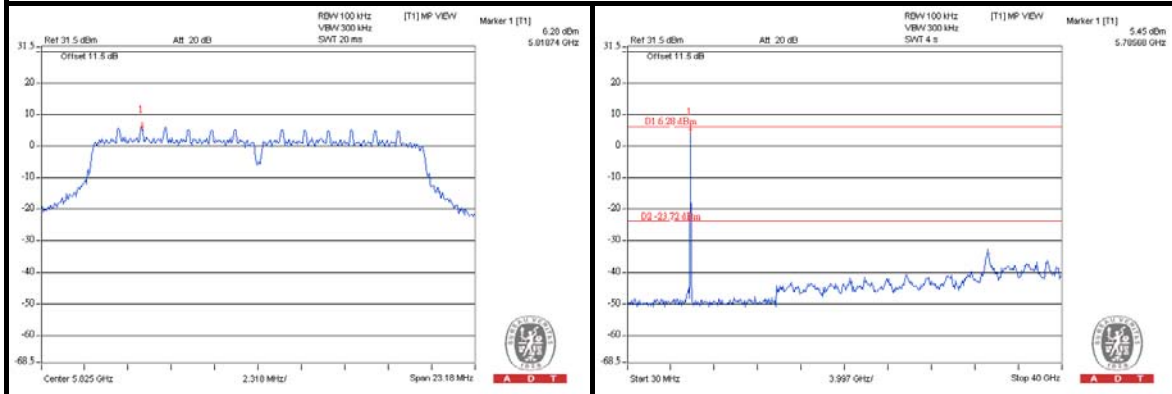


CH 157



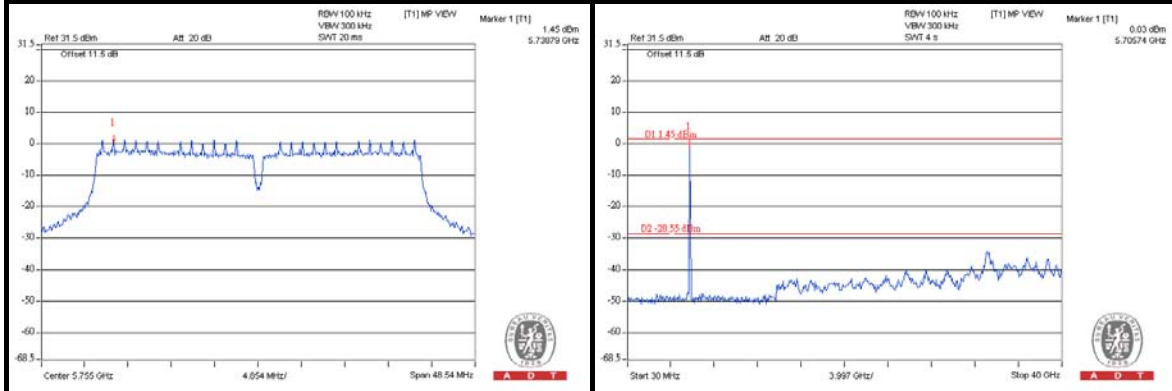
CH 165



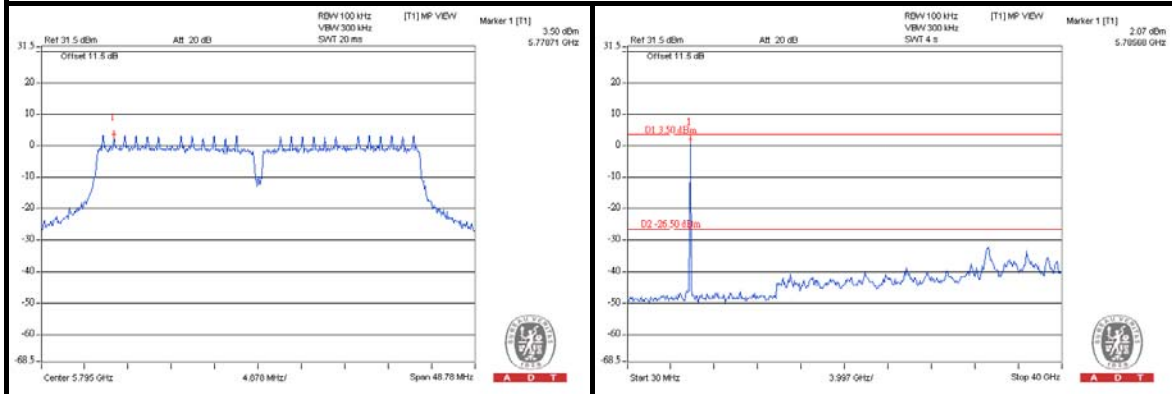
802.11n (20MHz)**CH 149****CH 157****CH 165**

802.11n (40MHz)

CH 151



CH 159



6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



7. 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.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5.phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

8. 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---