FCC TEST REPORT (15.407)

REPORT NO.:	RF111227C09A
MODEL NO.:	APL22-09E
FCC ID:	QWU-09E
RECEIVED:	Jan. 04, 2012
TESTED:	Feb. 24 ~ May 11, 2012(For all tests except Peak Transmit Power, Peak Power Excursion, Peak Power Spectral Density tests) Nov. 20, 2012 (For Peak Transmit Power, Peak Power Excursion, Peak Power Spectral Density tests)
ISSUED:	Nov. 21, 2012
APPLICANT:	SonicWALL, Inc.
ADDRESS:	2001 Logic Drive San Jose, CA 95124, USA
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 report should not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF111227C09A	Original release	Nov. 21, 2012

1. CERTIFICATION

PRODUCT:	Wireless 802.11 abgn Device
MODEL:	APL22-09E
BRAND:	SonicWALL
APPLICANT:	SonicWALL, Inc.
TESTED:	Feb. 24 ~ May 11, 2012(For all tests except Peak Transmit Power, Peak Power Excursion, Peak Power Spectral Density tests) Nov. 20, 2012 (For Peak Transmit Power, Peak Power Excursion, Peak Power Spectral Density tests)
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 15, Subpart E (Section 15.407)** ANSI C63.10-2009

The above equipment (Model: APL22-09E) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , **DATE:** Nov. 21, 2012
Pettie Chen / Senior Specialist

APPROVED BY : _____ , **DATE:** Nov. 21, 2012
Ken Liu / Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -1.13dB at 23.32422MHz.
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5350.00, 5470.00, 7346.00, 7560.00MHz.
15.407(a/1/2)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is RSMA not a standard connector.

2.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 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.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Wireless 802.11 abgn Device
MODEL NO.	APL22-09E
FCC ID	QWU-09E
POWER SUPPLY	12Vdc (Adapter)
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 450.0Mbps
OPERATING FREQUENCY	5260 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz)
OUTPUT POWER	167.528mW for 5260 ~ 5320MHz 60.787mW for 5500 ~ 5700MHz
ANTENNA TYPE	PIFA antenna with 4dBi gain Dipole antenna with 4dBi gain
ANTENNA CONNECTOR	RSMA (For Dipole antenna)
DATA CABLE	1.9m non-shielded RJ45 cable without core
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Adapter

NOTE:

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

Frequency Band (MHz)	5260~5320	5500~5700
802.11a	√	√
802.11n (20MHz)	√	√
802.11n (40MHz)	√	√

2. The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and three receivers.

MODULATION MODE	TX FUNCTION
802.11a	3TX
802.11n (20MHz)	3TX
802.11n (40MHz)	3TX

3. The EUT was powered by the following adapters:

Adapter 1	
BRAND:	SINO-AMERICAN
MODEL:	SA124C-12V
INPUT:	100-240Vac, 50-60Hz, 0.8A
OUTPUT:	12Vdc, 1.5A, 18W
POWER LINE:	DC: 1.5m non-shielded cable with one core AC: 1.8m non-shielded cable without core

Adapter 2	
BRAND:	Sunny
MODEL:	SYS1319-1812-T3
INPUT:	100-240Vac, 50-60Hz, 1.0 A Max
OUTPUT:	12Vdc, 1.5A, 18W Max
POWER LINE:	DC: 1.5m non-shielded cable with one core AC: 1.8m non-shielded cable without core

* Adapter 2 was the worst for the final tests.

4. 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 5260 ~ 5320MHz

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

CHANNEL	FREQUENCY
52	5260 MHz
56	5280 MHz
60	5300 MHz
64	5320 MHz

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

CHANNEL	FREQUENCY
54	5270 MHz
62	5310 MHz

FOR 5500 ~ 5700MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	134	5670 MHz
110	5550 MHz		

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

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

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

RADIATED EMISSION TEST (ABOVE 1GHz):

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	15.0
802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	7.2
802.11n (40MHz)		102 to 134	102, 110, 134	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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (20MHz)	5260-5320	52 to 64	52	OFDM	BPSK	7.2
802.11n (20MHz)	5500-5700	100 to 140	116	OFDM	BPSK	7.2

POWER LINE CONDUCTED EMISSION TEST:

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

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (20MHz)	5260-5320	52 to 64	52	OFDM	BPSK	7.2
802.11n (20MHz)	5500-5700	100 to 140	116	OFDM	BPSK	7.2

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

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

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	15.0
802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	7.2
802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	23deg. C, 65%RH	120Vac, 60Hz	Mark Liao
RE<1G	20deg. C, 65%RH	120Vac, 60Hz	Mark Liao
PLC	25deg. C, 68%RH	120Vac, 60Hz	Sun Lin
APCM	23deg. C, 65%RH	120Vac, 60Hz	Mark Liao

3.3 DUTY CYCLE OF TEST SIGNAL

Duty cycle of test signal is > 98 %, duty factor is not required.

3.4 DESCRIPTION OF SUPPORT UNITS

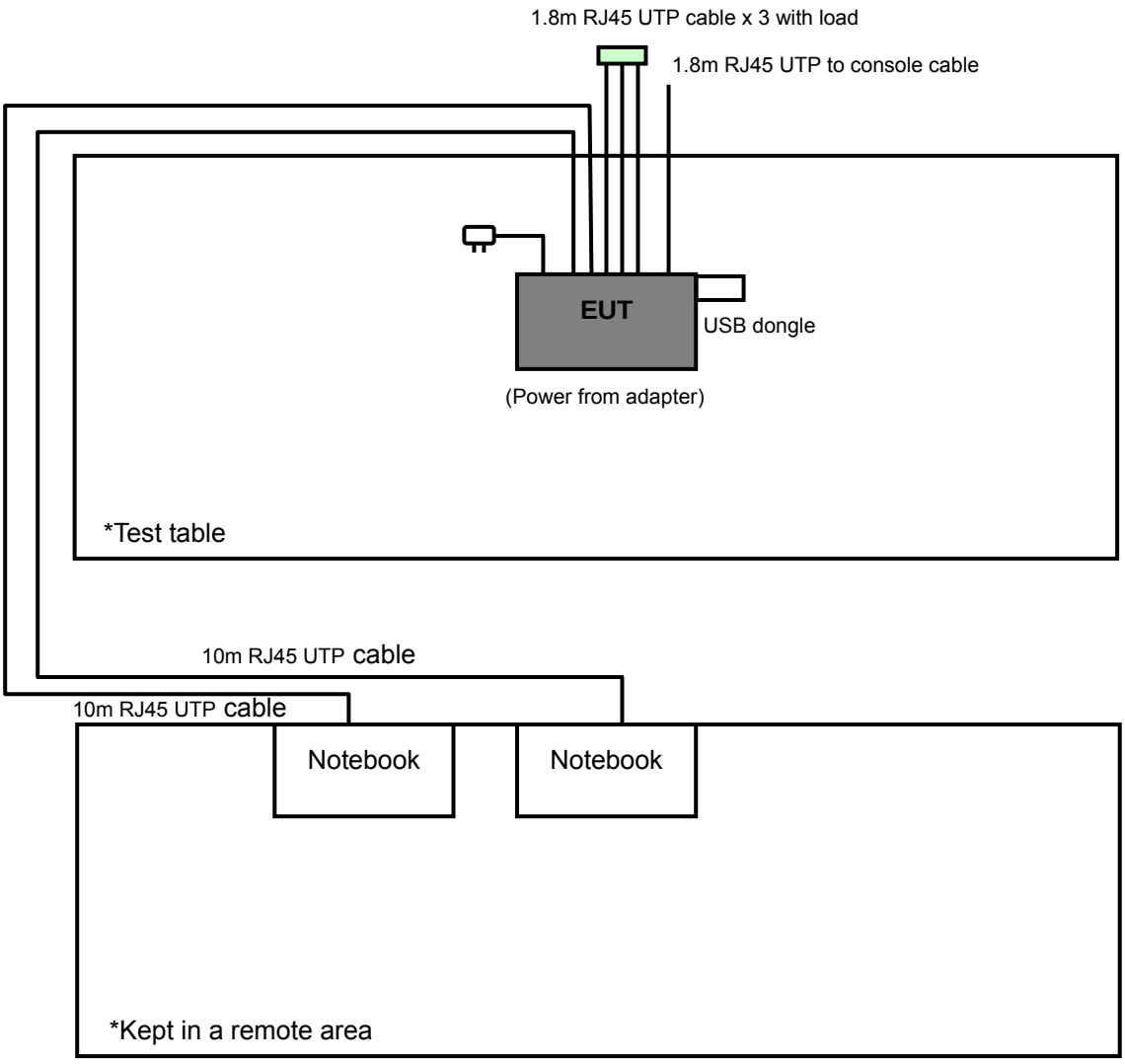
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	D531	CN-0XM006-48643-81U-2610	QDS-BRCM1020
2	NOTEBOOK	DELL	D531	CN-0XM006-48643-81U-2973	QDS-BRCM1020
3	USB DONGLE	Transcend	NA	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m RJ45 UTP cable
2	10m RJ45 UTP cable
3	NA

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

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST



3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)
789033 D01 General UNII Test Procedures v01 r02
662911 D01 Multiple Transmitter Output v01 r02
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

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:

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 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
	FIELD STRENGTH AT 3m (dBμV/m)	
	PK	AV
	74	54
	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)
√	PK	PK
	-27	68.3

NOTE: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts).

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Jan. 03, 2012	Jan. 02, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jan. 30, 2012	Jan. 29, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 06, 2012	Apr. 05, 2013
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Jan. 05, 2012	Jan. 04, 2013
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier Agilent	8449B	3008A01961	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10738	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309220/4	Nov. 03, 2011	Nov. 02, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250724/4	Nov. 03, 2011	Nov. 02, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Nov. 03, 2011	Nov. 02, 2012
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 29, 2011	Oct. 28, 2012
High Speed Peak Power Meter	ML2495A	0824011	Aug. 04, 2011	Aug. 03, 2012
Power Sensor	MA2411B	0738171	Aug. 04, 2011	Aug. 03, 2012

NOTE: 1. The calibration interval of the above test instruments except loop antenna is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The calibration interval of loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.

3. The test was performed in HwaYa Chamber 4.

4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

5. The FCC Site Registration No. is 460141.

6. The IC Site Registration No. is IC7450F-4.

4.1.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. 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 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

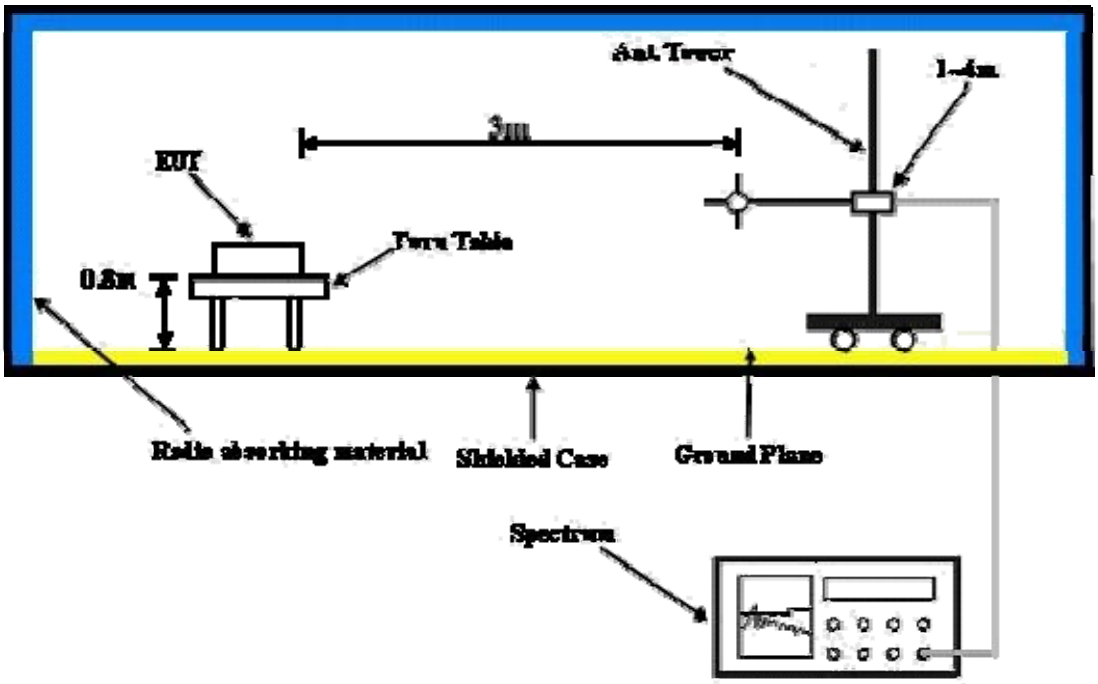
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 DEVIATION FROM TEST STANDARD

No deviation.

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITION

a. Placed the EUT on the testing table.
b. Prepared notebooks to 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".
e. The necessary accessories enable the system in full functions.

4.1.8 TEST RESULTS

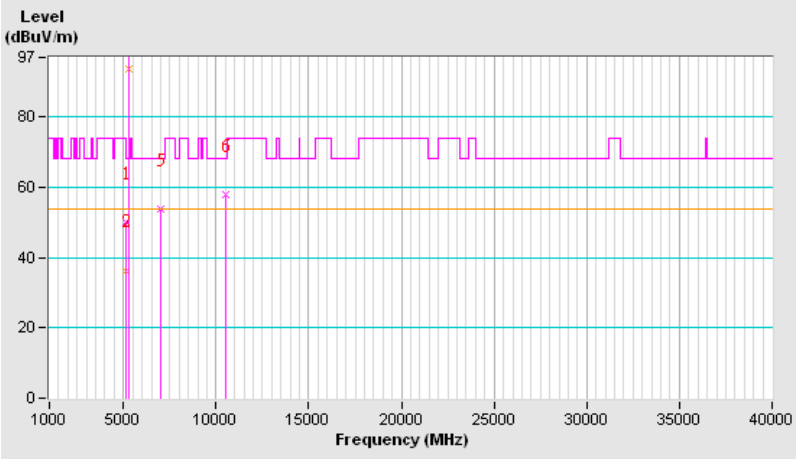
ABOVE 1GHz DATA：802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	5150.00	50.0 PK	74.0	-24.0	1.38 H	57	10.90	39.10
2	5150.00	36.4 AV	54.0	-17.6	1.38 H	57	-2.70	39.10
3	*5260.00	105.5 PK			1.03 H	67	66.20	39.30
4	*5260.00	93.9 AV			1.03 H	67	54.60	39.30
5	#7013.00	53.8 PK	68.3	-14.5	1.56 H	321	9.60	44.20
6	#10520.00	57.8 PK	68.3	-10.5	1.08 H	324	7.90	49.90

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 radiated frequency is out the restricted band.

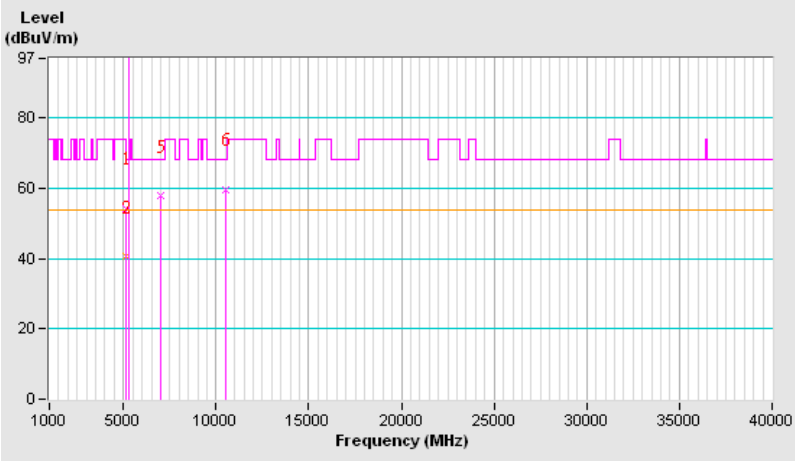


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	5150.00	54.4 PK	74.0	-19.6	1.00 V	215	15.30	39.10
2	5150.00	40.6 AV	54.0	-13.4	1.00 V	215	1.50	39.10
3	*5260.00	114.9 PK			1.00 V	215	75.60	39.30
4	*5260.00	103.2 AV			1.00 V	215	63.90	39.30
5	#7013.00	57.9 PK	68.3	-10.4	2.00 V	296	13.70	44.20
6	#10520.00	59.8 PK	68.3	-8.5	1.16 V	1	9.90	49.90

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 radiated frequency is out the restricted band.

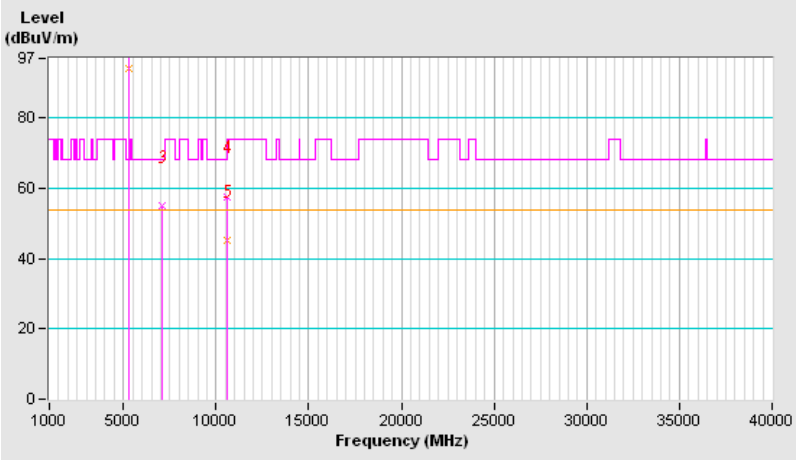


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5300.00	105.8 PK			1.00 H	58	66.40	39.40
2	*5300.00	94.3 AV			1.00 H	58	54.90	39.40
3	#7066.00	55.0 PK	68.3	-13.3	1.00 H	60	10.70	44.30
4	10600.00	57.7 PK	74.0	-16.3	1.04 H	12	7.70	50.00
5	10600.00	45.2 AV	54.0	-8.8	1.04 H	12	-4.80	50.00

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 radiated frequency is out the restricted band.

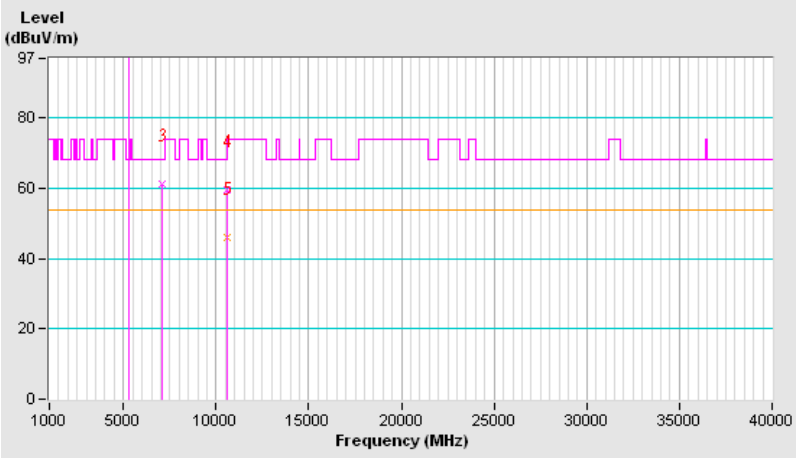


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5300.00	115.0 PK			1.00 V	240	75.60	39.40
2	*5300.00	103.5 AV			1.00 V	240	64.10	39.40
3	#7066.00	61.2 PK	68.3	-7.1	1.99 V	256	16.90	44.30
4	10600.00	59.7 PK	74.0	-14.3	1.15 V	26	9.70	50.00
5	10600.00	46.1 AV	54.0	-7.9	1.15 V	26	-3.90	50.00

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 radiated frequency is out the restricted band.

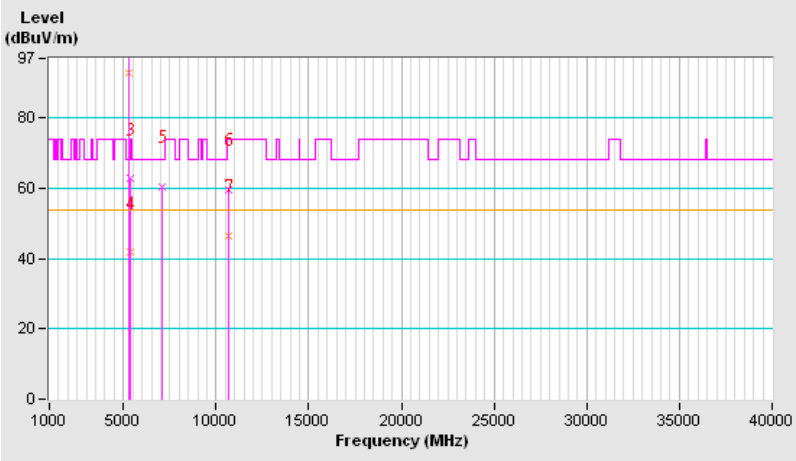


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5320.00	104.6 PK			1.07 H	63	65.20	39.40
2	*5320.00	93.0 AV			1.07 H	63	53.60	39.40
3	5350.00	62.9 PK	74.0	-11.1	1.16 H	253	23.50	39.40
4	5350.00	42.0 AV	54.0	-12.0	1.16 H	253	2.60	39.40
5	#7093.00	60.6 PK	68.3	-7.7	1.18 H	80	16.20	44.40
6	10640.00	59.8 PK	74.0	-14.2	1.07 H	63	9.70	50.10
7	10640.00	46.6 AV	54.0	-7.4	1.07 H	63	-3.50	50.10

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 radiated frequency is out the restricted band.

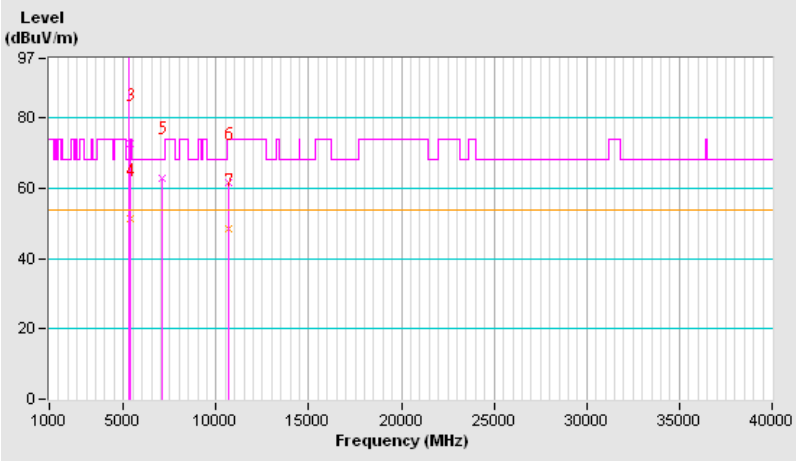


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5320.00	114.7 PK			1.06 V	158	75.30	39.40
2	*5320.00	103.9 AV			1.06 V	158	64.50	39.40
3	5350.00	72.8 PK	74.0	-1.2	1.06 V	251	33.40	39.40
4	5350.00	51.4 AV	54.0	-2.6	1.06 V	251	12.00	39.40
5	#7093.00	63.1 PK	68.3	-5.2	1.96 V	300	18.70	44.40
6	10640.00	61.6 PK	74.0	-12.4	1.14 V	5	11.50	50.10
7	10640.00	48.4 AV	54.0	-5.6	1.14 V	5	-1.70	50.10

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 radiated frequency is out the restricted band.

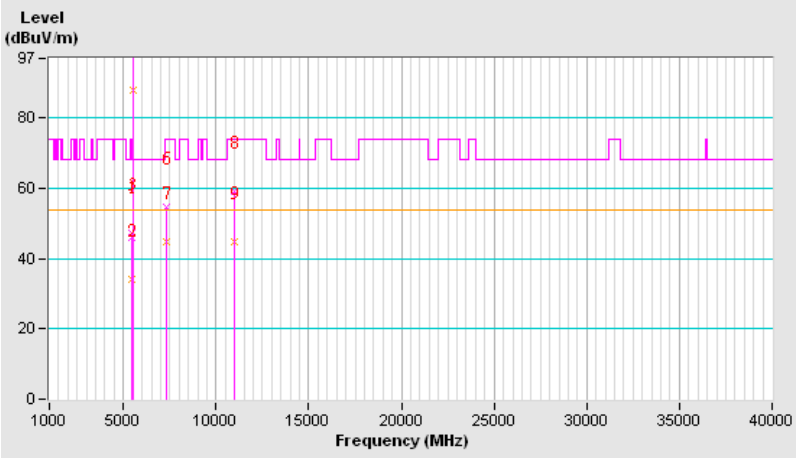


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	5460.00	46.2 PK	74.0	-27.8	1.00 H	334	6.70	39.50
2	5460.00	34.1 AV	54.0	-19.9	1.00 H	334	-5.40	39.50
3	#5470.00	47.1 PK	68.3	-21.2	1.00 H	334	7.50	39.60
4	*5500.00	98.5 PK			1.05 H	61	58.90	39.60
5	*5500.00	88.0 AV			1.05 H	61	48.40	39.60
6	7333.00	54.7 PK	74.0	-19.3	1.21 H	100	9.80	44.90
7	7333.00	44.9 AV	54.0	-9.1	1.21 H	100	0.00	44.90
8	11000.00	59.1 PK	74.0	-14.9	1.09 H	208	7.90	51.20
9	11000.00	44.6 AV	54.0	-9.4	1.09 H	208	-6.60	51.20

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 radiated frequency is out the restricted band.

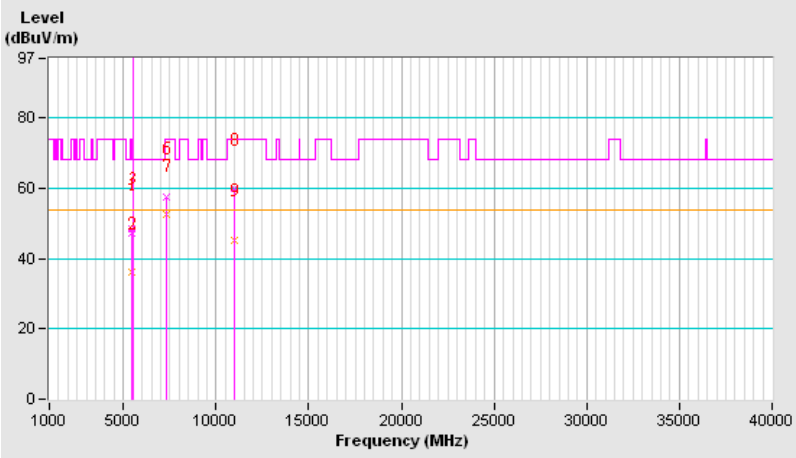


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	5460.00	47.3 PK	74.0	-26.7	1.14 V	343	7.80	39.50
2	5460.00	36.3 AV	54.0	-17.7	1.14 V	343	-3.20	39.50
3	#5470.00	48.7 PK	68.3	-19.6	1.14 V	343	9.10	39.60
4	*5500.00	108.9 PK			1.14 V	343	69.30	39.60
5	*5500.00	98.3 AV			1.14 V	343	58.70	39.60
6	7333.00	57.6 PK	74.0	-16.4	1.88 V	95	12.70	44.90
7	7333.00	52.5 AV	54.0	-1.5	1.88 V	95	7.60	44.90
8	11000.00	60.0 PK	74.0	-14.0	1.05 V	165	8.80	51.20
9	11000.00	45.4 AV	54.0	-8.6	1.05 V	165	-5.80	51.20

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 radiated frequency is out the restricted band.

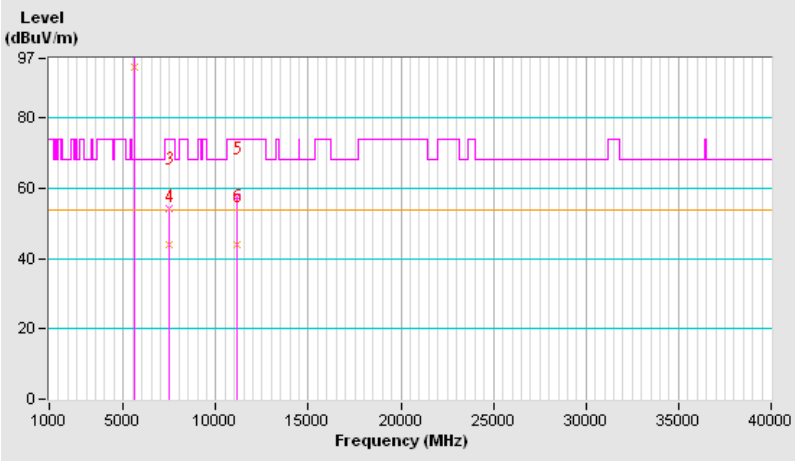


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5580.00	105.7 PK			1.22 H	96	65.90	39.80
2	*5580.00	94.7 AV			1.22 H	96	54.90	39.80
3	7440.00	54.4 PK	74.0	-19.6	1.29 H	262	9.20	45.20
4	7440.00	44.0 AV	54.0	-10.0	1.29 H	262	-1.20	45.20
5	11160.00	57.5 PK	74.0	-16.5	1.05 H	301	6.60	50.90
6	11160.00	44.1 AV	54.0	-9.9	1.05 H	301	-6.80	50.90

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 radiated frequency is out the restricted band.

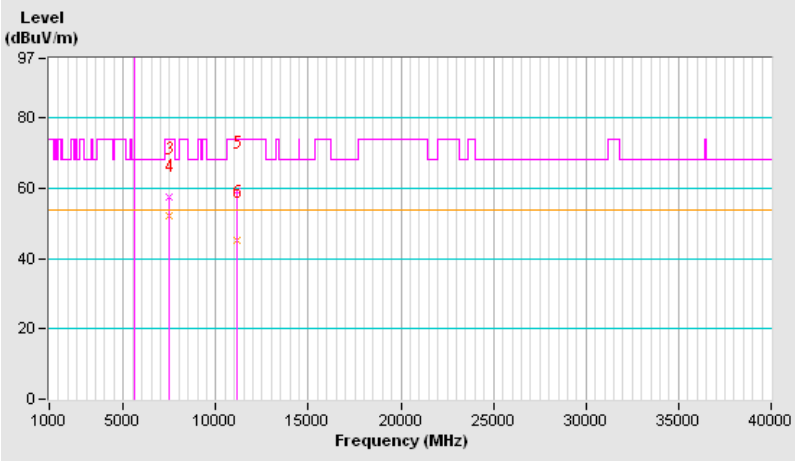


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5580.00	113.9 PK			1.12 V	323	74.10	39.80
2	*5580.00	102.9 AV			1.12 V	323	63.10	39.80
3	7440.00	57.4 PK	74.0	-16.6	1.51 V	291	12.20	45.20
4	7440.00	52.4 AV	54.0	-1.6	1.51 V	291	7.20	45.20
5	11160.00	59.1 PK	74.0	-14.9	1.15 V	155	8.20	50.90
6	11160.00	45.3 AV	54.0	-8.7	1.15 V	155	-5.60	50.90

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 radiated frequency is out the restricted band.

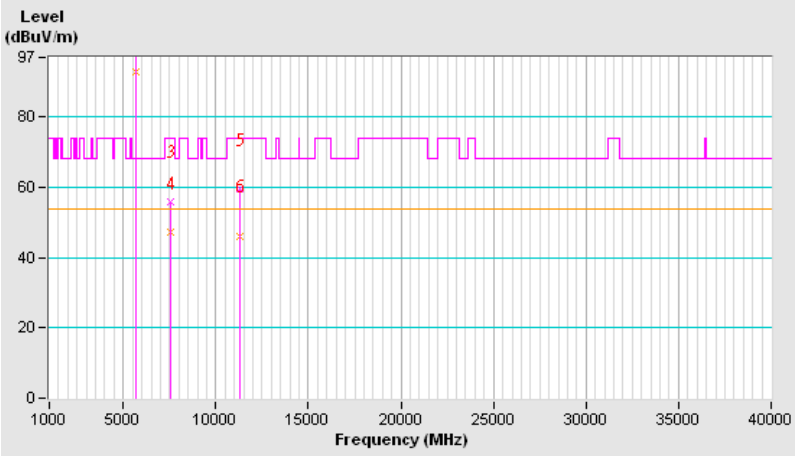


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5660.00	104.4 PK			1.28 H	314	64.50	39.90
2	*5660.00	93.0 AV			1.28 H	314	53.10	39.90
3	7546.00	56.1 PK	74.0	-17.9	1.43 H	308	10.70	45.40
4	7546.00	47.4 AV	54.0	-6.6	1.43 H	308	2.00	45.40
5	11320.00	59.6 PK	74.0	-14.4	1.16 H	353	8.50	51.10
6	11320.00	46.2 AV	54.0	-7.8	1.16 H	353	-4.90	51.10

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 radiated frequency is out the restricted band.

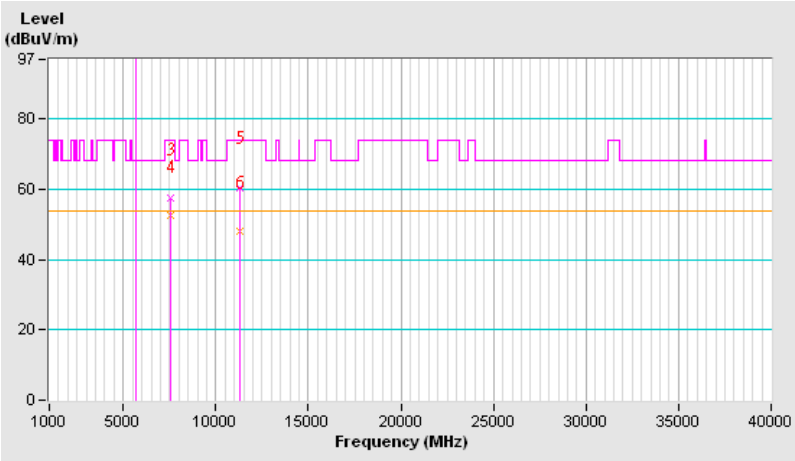


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5660.00	112.9 PK			1.02 V	240	73.00	39.90
2	*5660.00	101.8 AV			1.02 V	240	61.90	39.90
3	7546.00	57.5 PK	74.0	-16.5	1.68 V	286	12.10	45.40
4	7546.00	52.5 AV	54.0	-1.5	1.68 V	286	7.10	45.40
5	11320.00	60.6 PK	74.0	-13.4	1.35 V	5	9.50	51.10
6	11320.00	48.2 AV	54.0	-5.8	1.35 V	5	-2.90	51.10

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 radiated frequency is out the restricted band.

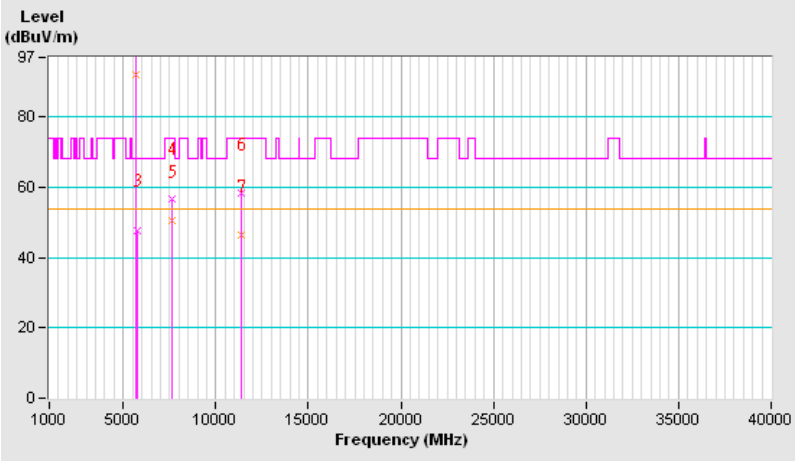


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5700.00	103.7 PK			1.28 H	319	63.70	40.00
2	*5700.00	92.3 AV			1.28 H	319	52.30	40.00
3	#5725.00	47.9 PK	68.3	-20.4	1.28 H	319	7.80	40.10
4	7600.00	56.9 PK	74.0	-17.1	1.40 H	311	11.40	45.50
5	7600.00	50.4 AV	54.0	-3.6	1.40 H	311	4.90	45.50
6	11400.00	58.5 PK	74.0	-15.5	1.07 H	2	7.60	50.90
7	11400.00	46.4 AV	54.0	-7.6	1.07 H	2	-4.50	50.90

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 radiated frequency is out the restricted band.

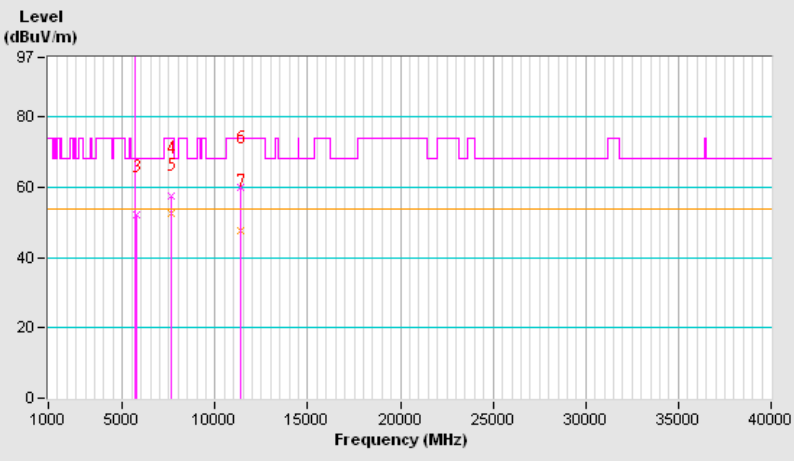


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5700.00	111.0 PK			1.09 V	244	71.00	40.00
2	*5700.00	99.8 AV			1.09 V	244	59.80	40.00
3	#5725.00	52.3 PK	68.3	-16.0	1.09 V	244	12.20	40.10
4	7600.00	57.6 PK	74.0	-16.4	1.94 V	48	12.10	45.50
5	7600.00	52.6 AV	54.0	-1.4	1.94 V	48	7.10	45.50
6	11400.00	60.2 PK	74.0	-13.8	1.22 V	1	9.30	50.90
7	11400.00	47.9 AV	54.0	-6.1	1.22 V	1	-3.00	50.90

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 radiated frequency is out the restricted band.



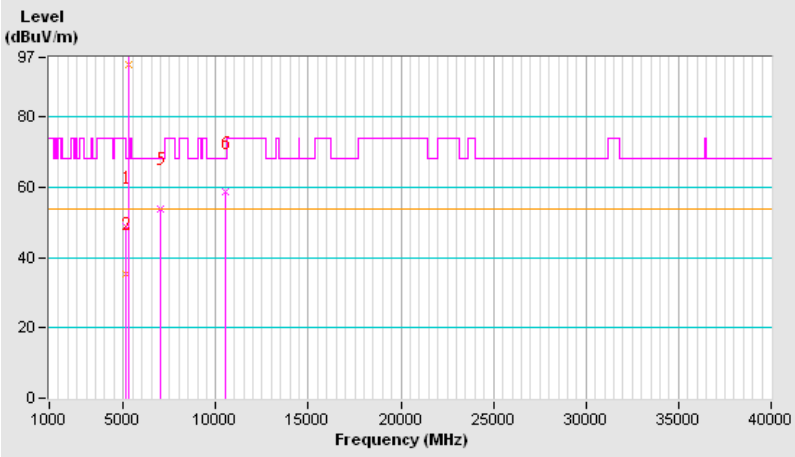
802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	5150.00	49.0 PK	74.0	-25.0	1.14 H	58	9.90	39.10
2	5150.00	35.5 AV	54.0	-18.5	1.14 H	58	-3.60	39.10
3	*5260.00	106.6 PK			1.42 H	333	67.30	39.30
4	*5260.00	95.1 AV			1.42 H	333	55.80	39.30
5	#7013.00	54.1 PK	68.3	-14.2	1.56 H	324	9.90	44.20
6	#10520.00	58.7 PK	68.3	-9.6	1.08 H	66	8.80	49.90

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 radiated frequency is out the restricted band.

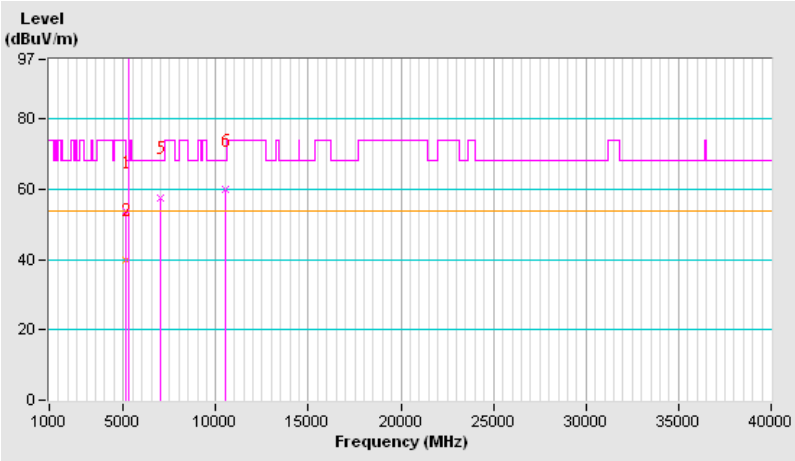


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	5150.00	53.9 PK	74.0	-20.1	1.21 V	254	14.80	39.10
2	5150.00	40.1 AV	54.0	-13.9	1.21 V	254	1.00	39.10
3	*5260.00	115.8 PK			1.09 V	17	76.50	39.30
4	*5260.00	104.7 AV			1.09 V	17	65.40	39.30
5	#7013.00	57.8 PK	68.3	-10.5	2.01 V	295	13.60	44.20
6	#10520.00	60.0 PK	68.3	-8.3	1.01 V	1	10.10	49.90

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 radiated frequency is out the restricted band.

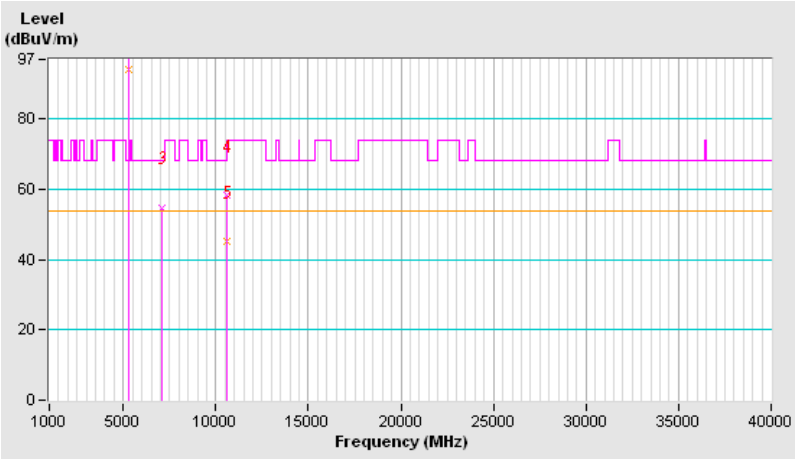


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5300.00	105.7 PK			1.33 H	258	66.30	39.40
2	*5300.00	94.3 AV			1.33 H	258	54.90	39.40
3	#7066.00	54.9 PK	68.3	-13.4	1.54 H	326	10.60	44.30
4	10600.00	58.2 PK	74.0	-15.8	1.12 H	69	8.20	50.00
5	10600.00	45.2 AV	54.0	-8.8	1.12 H	69	-4.80	50.00

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 radiated frequency is out the restricted band.

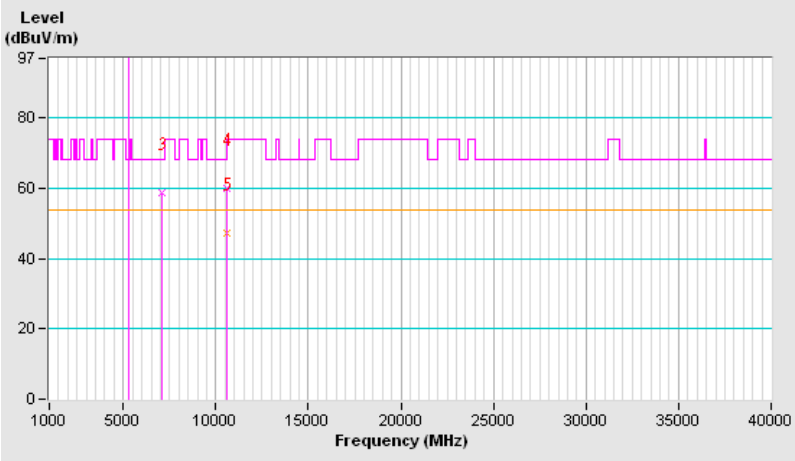


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Mark Liao

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	*5300.00	115.0 PK			1.01 V	129	75.60	39.40
2	*5300.00	103.7 AV			1.01 V	129	64.30	39.40
3	#7066.00	58.6 PK	68.3	-9.7	1.65 V	125	14.30	44.30
4	10600.00	60.1 PK	74.0	-13.9	1.22 V	1	10.10	50.00
5	10600.00	47.3 AV	54.0	-6.7	1.22 V	1	-2.70	50.00

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 radiated frequency is out the restricted band.

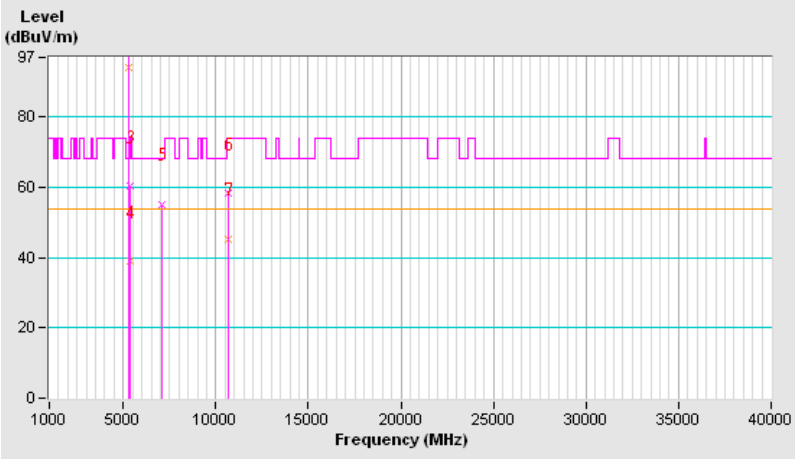


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5320.00	105.5 PK			1.14 H	230	66.10	39.40
2	*5320.00	94.0 AV			1.14 H	230	54.60	39.40
3	5350.00	60.4 PK	74.0	-13.6	1.14 H	230	21.00	39.40
4	5350.00	39.1 AV	54.0	-14.9	1.14 H	230	-0.30	39.40
5	#7093.00	55.3 PK	68.3	-13.0	1.26 H	241	10.90	44.40
6	10640.00	58.2 PK	74.0	-15.8	1.16 H	1	8.10	50.10
7	10640.00	45.4 AV	54.0	-8.6	1.16 H	1	-4.70	50.10

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 radiated frequency is out the restricted band.

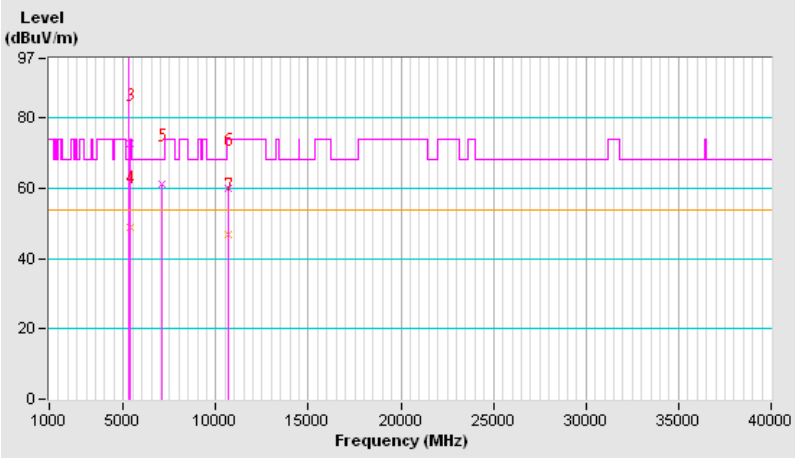


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5320.00	116.2 PK			1.03 V	243	76.80	39.40
2	*5320.00	105.0 AV			1.03 V	243	65.60	39.40
3	5350.00	72.7 PK	74.0	-1.3	1.01 V	247	33.30	39.40
4	5350.00	49.2 AV	54.0	-4.8	1.01 V	247	9.80	39.40
5	#7093.00	61.2 PK	68.3	-7.1	2.07 V	252	16.80	44.40
6	10640.00	59.9 PK	74.0	-14.1	1.20 V	181	9.80	50.10
7	10640.00	47.0 AV	54.0	-7.0	1.20 V	181	-3.10	50.10

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 radiated frequency is out the restricted band.

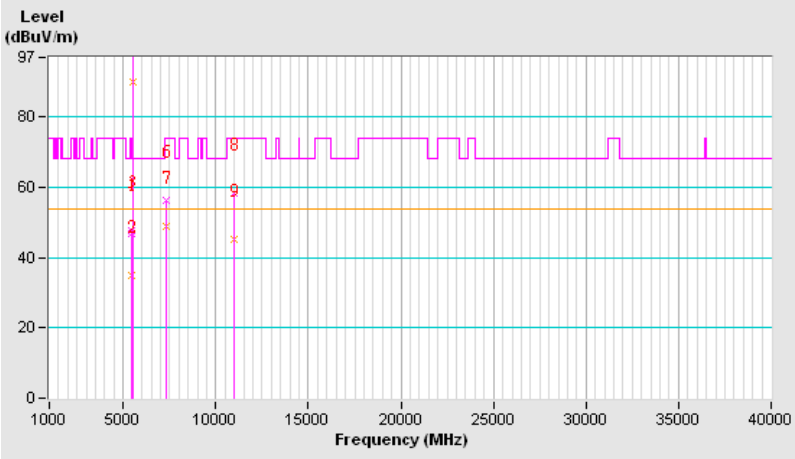


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	5460.00	46.9 PK	74.0	-27.1	1.40 H	289	7.40	39.50
2	5460.00	35.0 AV	54.0	-19.0	1.40 H	289	-4.50	39.50
3	#5470.00	47.6 PK	68.3	-20.7	1.40 H	289	8.00	39.60
4	*5500.00	101.1 PK			1.40 H	289	61.50	39.60
5	*5500.00	90.0 AV			1.40 H	289	50.40	39.60
6	7333.00	56.2 PK	74.0	-17.8	1.38 H	246	11.30	44.90
7	7333.00	48.8 AV	54.0	-5.2	1.38 H	246	3.90	44.90
8	11000.00	58.4 PK	74.0	-15.6	1.05 H	241	7.20	51.20
9	11000.00	45.2 AV	54.0	-8.8	1.05 H	241	-6.00	51.20

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 radiated frequency is out the restricted band.

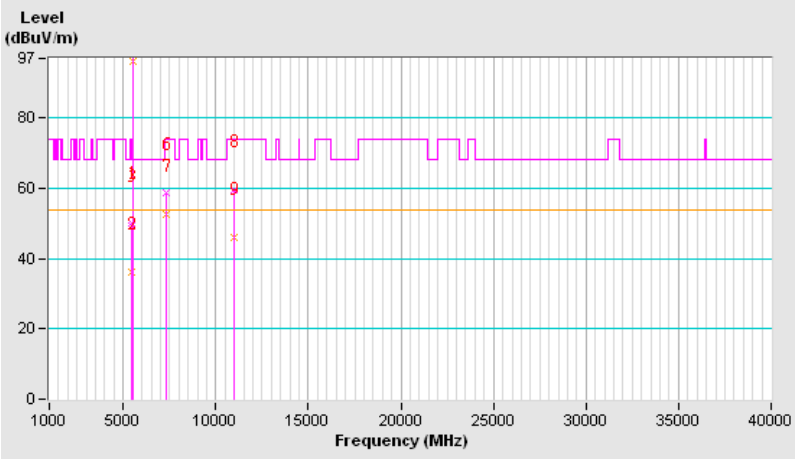


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	5460.00	50.3 PK	74.0	-23.7	1.00 V	275	10.80	39.50
2	5460.00	36.3 AV	54.0	-17.7	1.00 V	275	-3.20	39.50
3	#5470.00	49.5 PK	68.3	-18.8	1.00 V	275	9.90	39.60
4	*5500.00	107.5 PK			1.09 V	246	67.90	39.60
5	*5500.00	96.4 AV			1.09 V	246	56.80	39.60
6	7333.00	58.6 PK	74.0	-15.4	2.08 V	122	13.70	44.90
7	7333.00	52.6 AV	54.0	-1.4	2.08 V	122	7.70	44.90
8	11000.00	59.7 PK	74.0	-14.3	1.05 V	63	8.50	51.20
9	11000.00	46.0 AV	54.0	-8.0	1.05 V	63	-5.20	51.20

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 radiated frequency is out the restricted band.

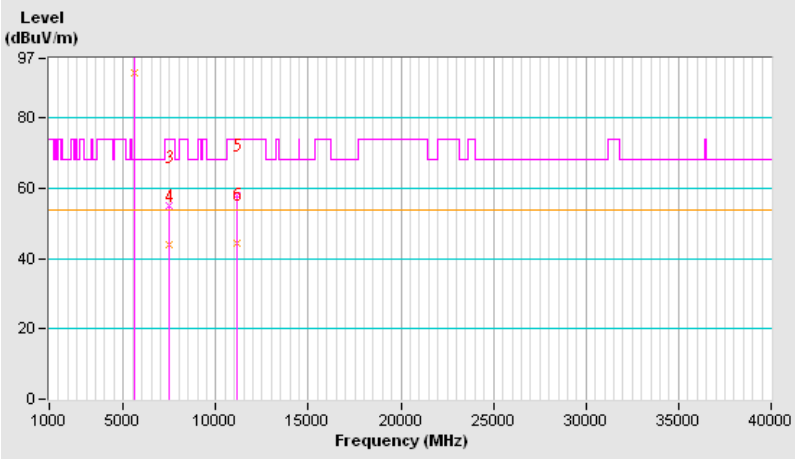


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5580.00	104.1 PK			1.12 H	210	64.30	39.80
2	*5580.00	93.0 AV			1.12 H	210	53.20	39.80
3	7440.00	55.0 PK	74.0	-19.0	1.30 H	162	9.80	45.20
4	7440.00	44.0 AV	54.0	-10.0	1.30 H	162	-1.20	45.20
5	11160.00	58.1 PK	74.0	-15.9	1.10 H	199	7.20	50.90
6	11160.00	44.2 AV	54.0	-9.8	1.10 H	199	-6.70	50.90

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 radiated frequency is out the restricted band.

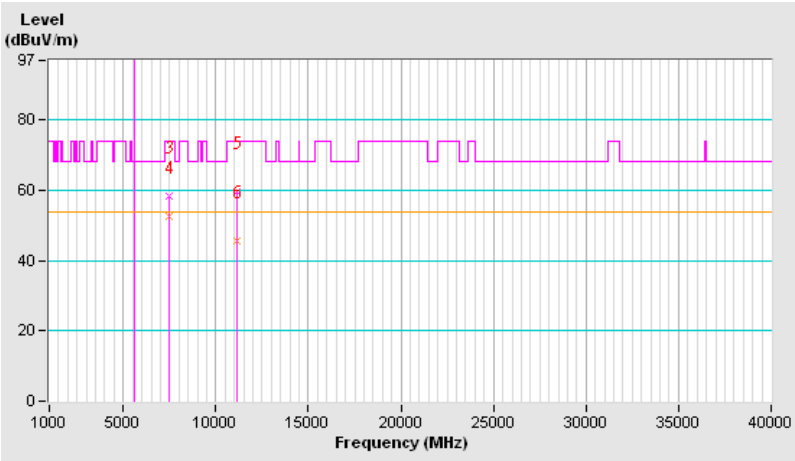


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5580.00	111.8 PK			1.00 V	246	72.00	39.80
2	*5580.00	100.8 AV			1.00 V	246	61.00	39.80
3	7440.00	58.3 PK	74.0	-15.7	1.67 V	256	13.10	45.20
4	7440.00	52.6 AV	54.0	-1.4	1.67 V	256	7.40	45.20
5	11160.00	59.5 PK	74.0	-14.5	1.03 V	155	8.60	50.90
6	11160.00	45.6 AV	54.0	-8.4	1.03 V	155	-5.30	50.90

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 radiated frequency is out the restricted band.

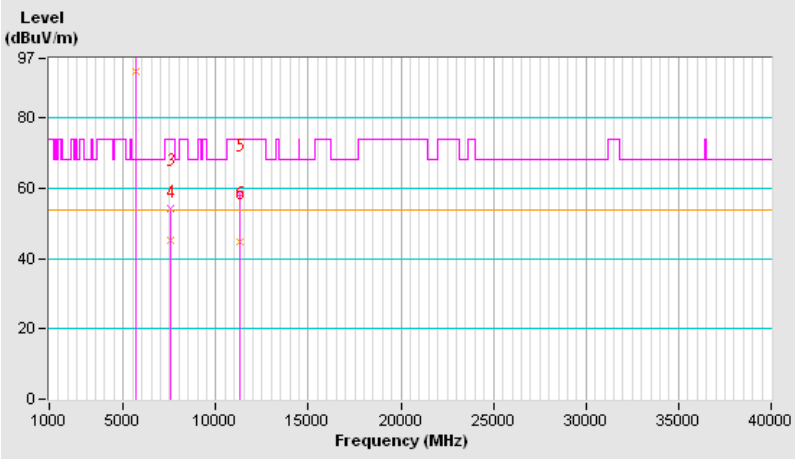


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5660.00	103.6 PK			1.25 H	310	63.70	39.90
2	*5660.00	93.1 AV			1.25 H	310	53.20	39.90
3	7546.00	54.2 PK	74.0	-19.8	1.30 H	210	8.80	45.40
4	7546.00	45.1 AV	54.0	-8.9	1.30 H	210	-0.30	45.40
5	11320.00	58.2 PK	74.0	-15.8	1.11 H	202	7.10	51.10
6	11320.00	44.9 AV	54.0	-9.1	1.11 H	202	-6.20	51.10

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 radiated frequency is out the restricted band.

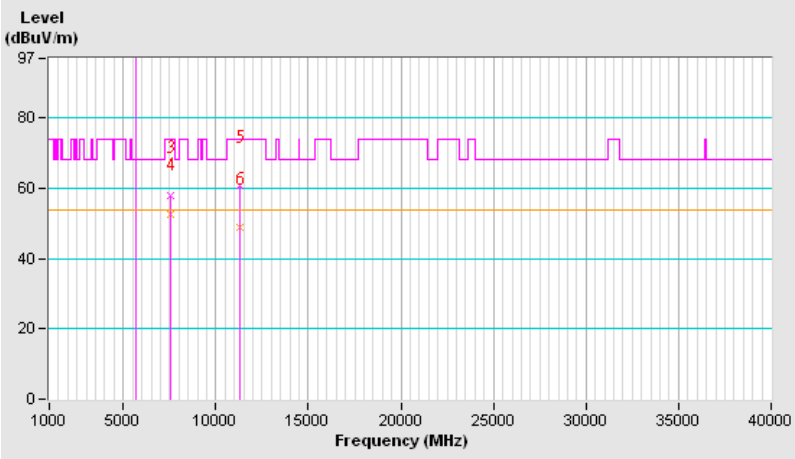


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5660.00	110.1 PK			1.00 V	158	70.20	39.90
2	*5660.00	99.3 AV			1.00 V	158	59.40	39.90
3	7546.00	57.9 PK	74.0	-16.1	1.66 V	106	12.50	45.40
4	7546.00	52.8 AV	54.0	-1.2	1.66 V	106	7.40	45.40
5	11320.00	60.9 PK	74.0	-13.1	1.21 V	52	9.80	51.10
6	11320.00	48.8 AV	54.0	-5.2	1.21 V	52	-2.30	51.10

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 radiated frequency is out the restricted band.

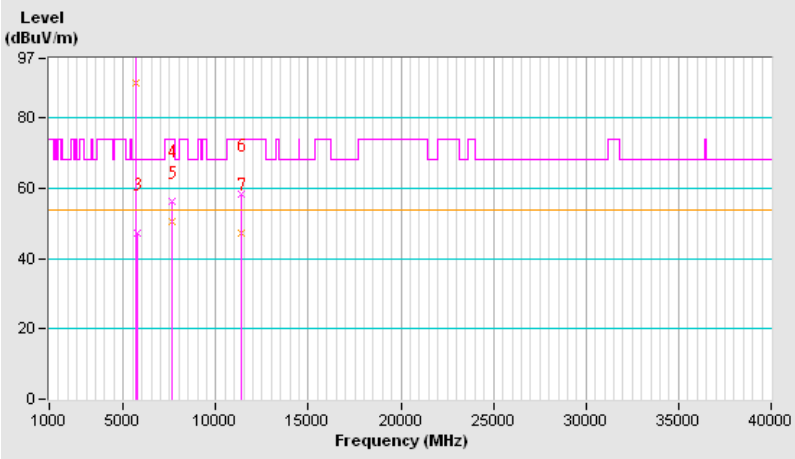


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5700.00	100.2 PK			1.00 H	132	60.20	40.00
2	*5700.00	90.0 AV			1.00 H	132	50.00	40.00
3	#5725.00	47.4 PK	68.3	-20.9	1.00 H	132	7.30	40.10
4	7600.00	56.5 PK	74.0	-17.5	1.01 H	164	11.00	45.50
5	7600.00	50.4 AV	54.0	-3.6	1.01 H	164	4.90	45.50
6	11400.00	58.2 PK	74.0	-15.8	1.08 H	169	7.30	50.90
7	11400.00	47.1 AV	54.0	-6.9	1.08 H	169	-3.80	50.90

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 radiated frequency is out the restricted band.

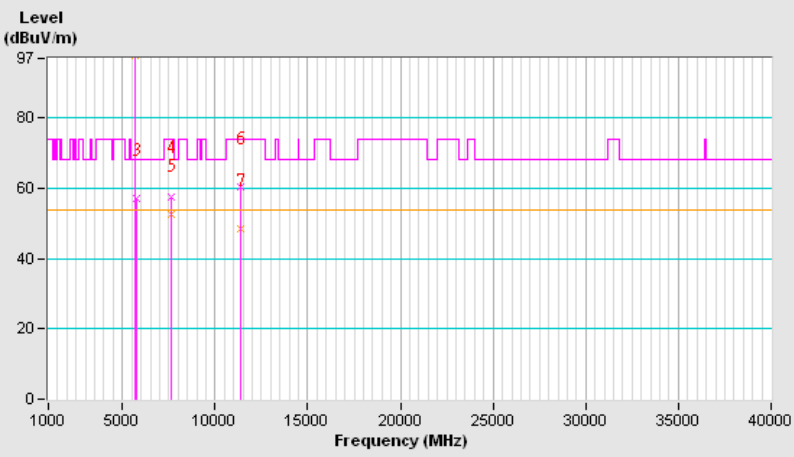


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5700.00	108.4 PK			1.05 V	262	68.40	40.00
2	*5700.00	97.8 AV			1.05 V	262	57.80	40.00
3	#5725.00	57.2 PK	68.3	-11.1	1.00 V	266	17.10	40.10
4	7600.00	57.7 PK	74.0	-16.3	1.94 V	228	12.20	45.50
5	7600.00	52.6 AV	54.0	-1.4	1.94 V	228	7.10	45.50
6	11400.00	60.4 PK	74.0	-13.6	1.12 V	58	9.50	50.90
7	11400.00	48.3 AV	54.0	-5.7	1.12 V	58	-2.60	50.90

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 radiated frequency is out the restricted band.



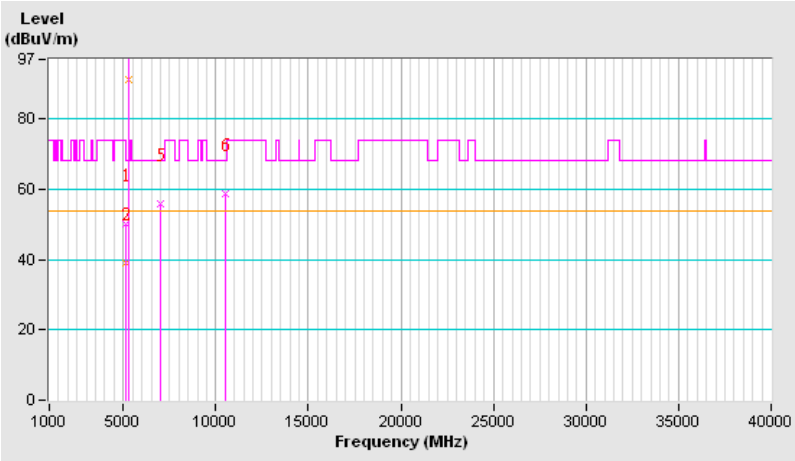
802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	5127.00	50.1 PK	74.0	-23.9	1.08 H	237	11.00	39.10
2	5127.00	38.9 AV	54.0	-15.1	1.08 H	237	-0.20	39.10
3	*5270.00	103.1 PK			1.08 H	237	63.80	39.30
4	*5270.00	91.4 AV			1.08 H	237	52.10	39.30
5	#7026.00	55.7 PK	68.3	-12.6	1.27 H	233	11.50	44.20
6	#10540.00	58.8 PK	68.3	-9.5	1.27 H	12	8.90	49.90

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 radiated frequency is out the restricted band.

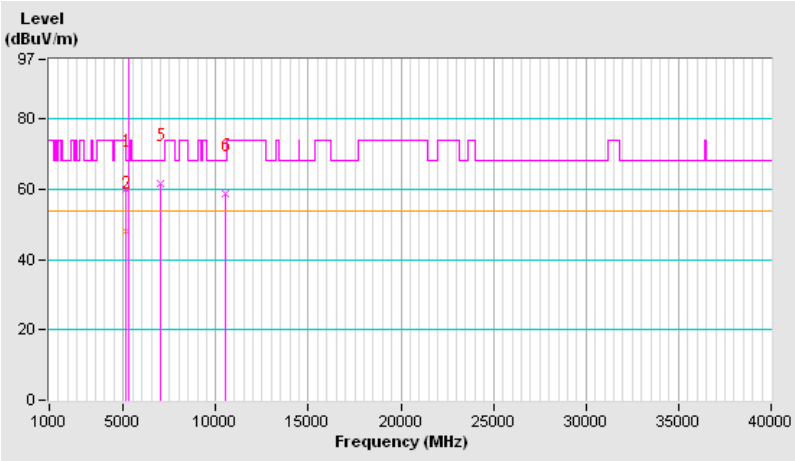


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	5127.00	60.1 PK	74.0	-13.9	1.00 V	162	21.00	39.10
2	5127.00	48.2 AV	54.0	-5.8	1.00 V	162	9.10	39.10
3	*5270.00	113.7 PK			1.00 V	240	74.40	39.30
4	*5270.00	102.6 AV			1.00 V	240	63.30	39.30
5	#7026.00	61.5 PK	68.3	-6.8	1.46 V	252	17.30	44.20
6	#10540.00	58.7 PK	68.3	-9.6	1.27 V	51	8.80	49.90

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 radiated frequency is out the restricted band.

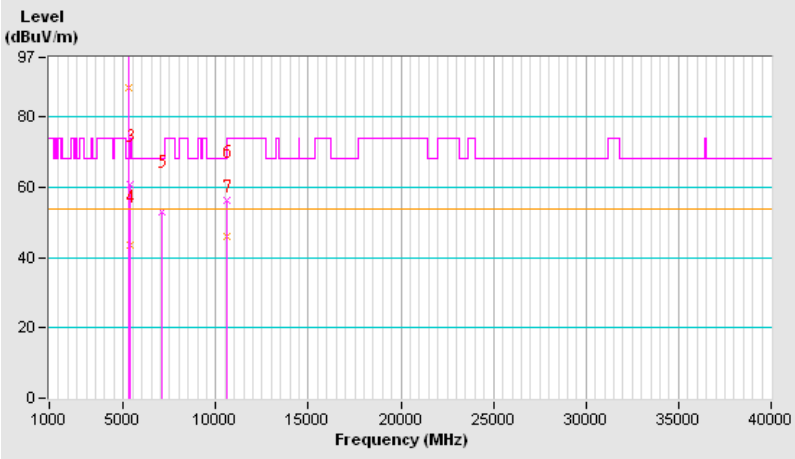


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5310.00	100.0 PK			1.12 H	228	60.60	39.40
2	*5310.00	88.2 AV			1.12 H	228	48.80	39.40
3	5350.00	60.8 PK	74.0	-13.2	1.17 H	208	21.40	39.40
4	5350.00	43.7 AV	54.0	-10.3	1.17 H	208	4.30	39.40
5	#7078.00	53.2 PK	68.3	-15.1	1.22 H	258	8.80	44.40
6	10620.00	56.2 PK	74.0	-17.8	1.34 H	18	6.20	50.00
7	10620.00	46.2 AV	54.0	-7.8	1.34 H	18	-3.80	50.00

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 radiated frequency is out the restricted band.

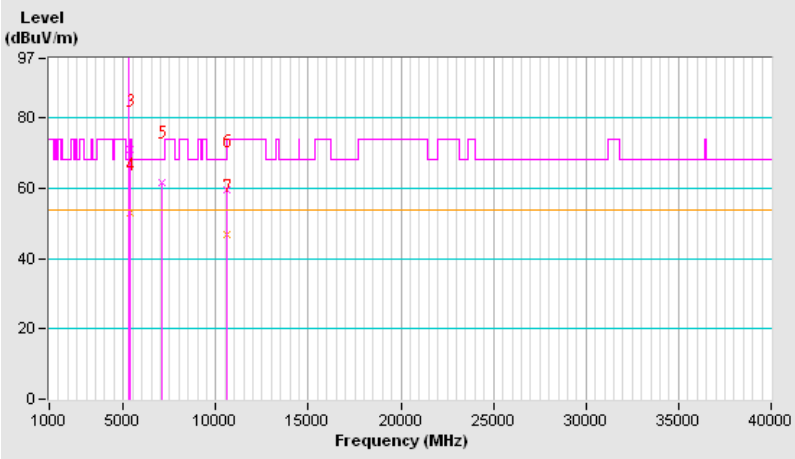


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5310.00	110.2 PK			1.02 V	246	70.80	39.40
2	*5310.00	99.4 AV			1.02 V	246	60.00	39.40
3	5350.00	71.1 PK	74.0	-2.9	1.12 V	242	31.70	39.40
4	**5350.00**	**53.0 AV**	**54.0**	**-1.0**	**1.12 V**	**242**	**13.60**	**39.40**
5	#7078.00	61.9 PK	68.3	-6.4	2.06 V	249	17.50	44.40
6	10620.00	59.7 PK	74.0	-14.3	1.40 V	67	9.70	50.00
7	10620.00	46.7 AV	54.0	-7.3	1.40 V	67	-3.30	50.00

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 radiated frequency is out the restricted band.

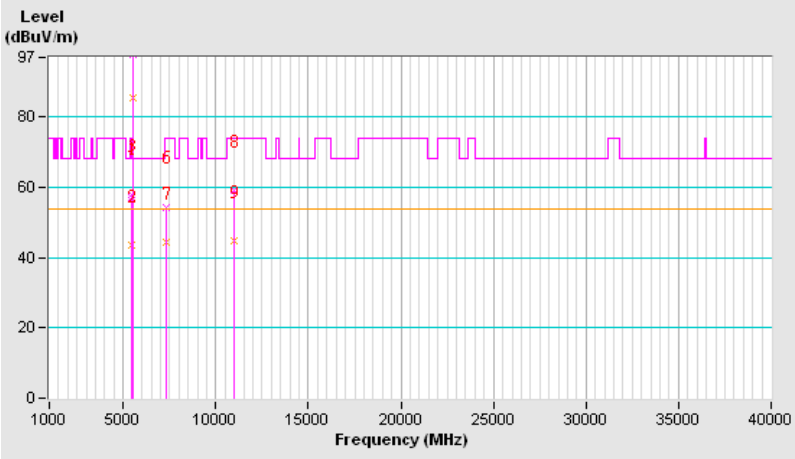


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	5460.00	57.2 PK	74.0	-16.8	1.00 H	96	17.70	39.50
2	5460.00	43.7 AV	54.0	-10.3	1.00 H	96	4.20	39.50
3	#5470.00	57.9 PK	68.3	-10.4	1.00 H	96	18.30	39.60
4	*5510.00	97.7 PK			1.00 H	338	58.10	39.60
5	*5510.00	85.6 AV			1.00 H	338	46.00	39.60
6	7346.00	54.4 PK	74.0	-19.6	1.65 H	68	9.40	45.00
7	7346.00	44.4 AV	54.0	-9.6	1.65 H	68	-0.60	45.00
8	11020.00	59.1 PK	74.0	-14.9	1.00 H	20	8.00	51.10
9	11020.00	44.9 AV	54.0	-9.1	1.00 H	20	-6.20	51.10

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 radiated frequency is out the restricted band.

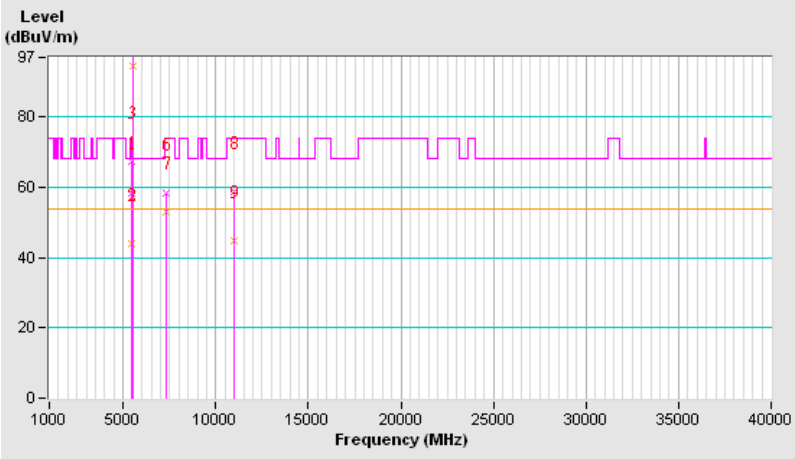


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	5460.00	58.6 PK	74.0	-15.4	1.00 V	131	19.10	39.50
2	5460.00	44.0 AV	54.0	-10.0	1.00 V	131	4.50	39.50
3	**#5470.00**	**67.3 PK**	**68.3**	**-1.0**	**1.00 V**	**71**	**27.70**	**39.60**
4	*5510.00	105.7 PK			1.00 V	61	66.10	39.60
5	*5510.00	94.7 AV			1.00 V	61	55.10	39.60
6	7346.00	58.3 PK	74.0	-15.7	1.67 V	85	13.30	45.00
7	**7346.00**	**53.0 AV**	**54.0**	**-1.0**	**1.67 V**	**85**	**8.00**	**45.00**
8	11020.00	58.9 PK	74.0	-15.1	1.00 V	351	7.80	51.10
9	11020.00	44.7 AV	54.0	-9.3	1.00 V	351	-6.40	51.10

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 radiated frequency is out the restricted band.

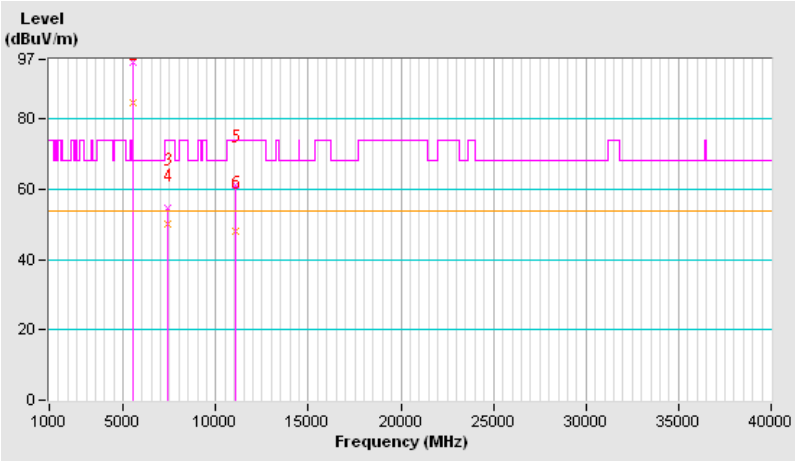


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5550.00	96.1 PK			1.23 H	178	56.40	39.70
2	*5550.00	84.7 AV			1.23 H	178	45.00	39.70
3	7400.00	54.7 PK	74.0	-19.3	1.37 H	269	9.60	45.10
4	7400.00	50.1 AV	54.0	-3.9	1.37 H	269	5.00	45.10
5	11100.00	61.1 PK	74.0	-12.9	1.31 H	52	10.20	50.90
6	11100.00	47.9 AV	54.0	-6.1	1.31 H	52	-3.00	50.90

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 radiated frequency is out the restricted band.

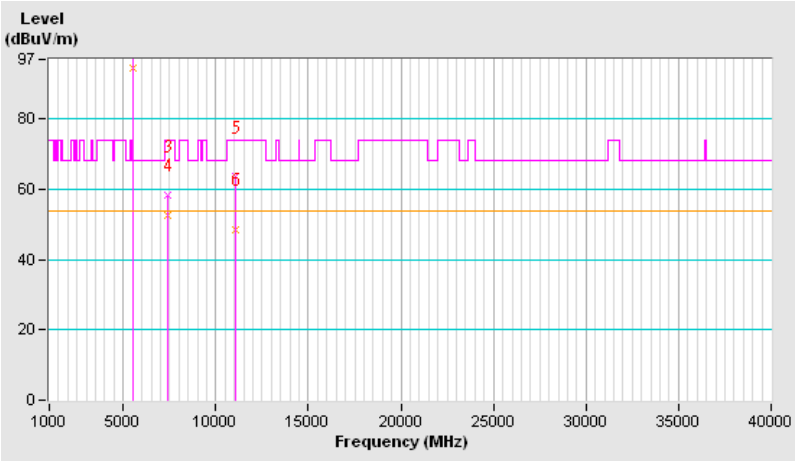


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5550.00	105.4 PK			1.09 V	251	65.70	39.70
2	*5550.00	94.5 AV			1.09 V	251	54.80	39.70
3	7400.00	58.2 PK	74.0	-15.8	2.06 V	289	13.10	45.10
4	7400.00	52.8 AV	54.0	-1.2	2.06 V	289	7.70	45.10
5	11100.00	63.6 PK	74.0	-10.4	1.28 V	53	12.70	50.90
6	11100.00	48.7 AV	54.0	-5.3	1.28 V	53	-2.20	50.90

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 radiated frequency is out the restricted band.

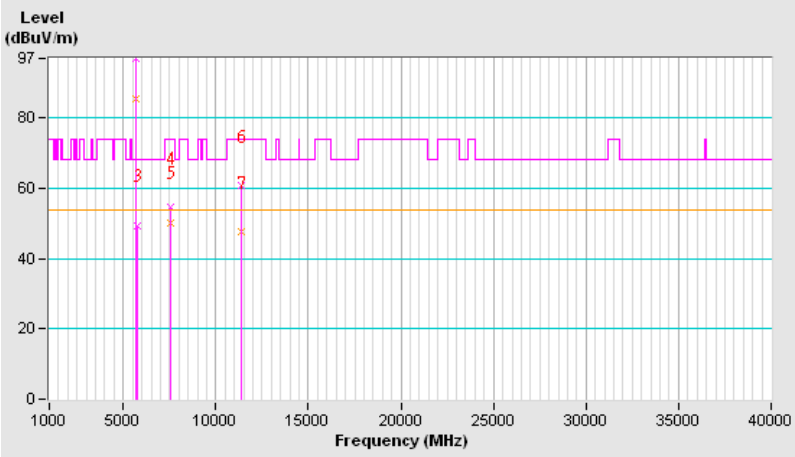


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5670.00	97.0 PK			1.22 H	201	57.00	40.00
2	*5670.00	85.5 AV			1.22 H	201	45.50	40.00
3	#5725.00	49.5 PK	68.3	-18.8	1.27 H	189	9.40	40.10
4	7560.00	54.8 PK	74.0	-19.2	1.32 H	282	9.40	45.40
5	7560.00	50.3 AV	54.0	-3.7	1.32 H	282	4.90	45.40
6	11340.00	60.8 PK	74.0	-13.2	1.28 H	92	9.80	51.00
7	11340.00	47.8 AV	54.0	-6.2	1.28 H	92	-3.20	51.00

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 radiated frequency is out the restricted band.

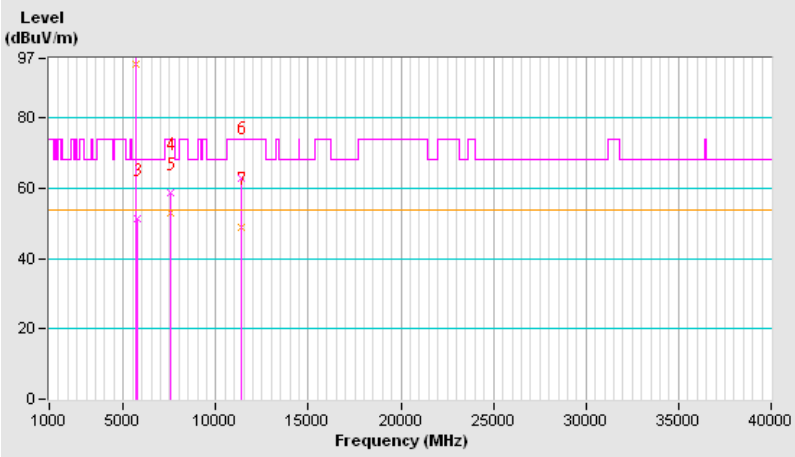


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH	TESTED BY	Mark Liao

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	*5670.00	106.4 PK			1.04 V	268	66.40	40.00
2	*5670.00	95.5 AV			1.04 V	268	55.50	40.00
3	#5725.00	51.4 PK	68.3	-16.9	1.12 V	289	11.30	40.10
4	7560.00	58.7 PK	74.0	-15.3	1.55 V	260	13.30	45.40
5	**7560.00**	**53.0 AV**	**54.0**	**-1.0**	**1.55 V**	**260**	**7.60**	**45.40**
6	11340.00	63.1 PK	74.0	-10.9	1.34 V	37	12.10	51.00
7	11340.00	48.8 AV	54.0	-5.2	1.34 V	37	-2.20	51.00

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 radiated frequency is out the restricted band.



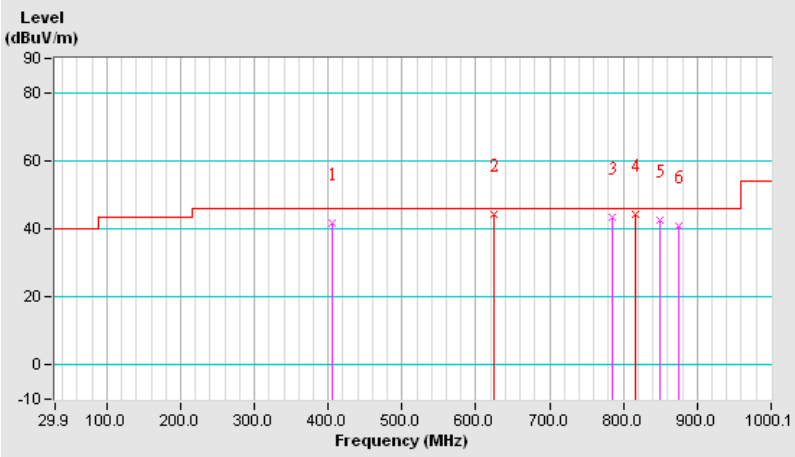
BELOW 1GHz WORST-CASE DATA：802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Mark Liao

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	405.15	41.8 QP	46.0	-4.2	1.00 H	88	23.20	18.60
2	625.01	44.3 QP	46.0	-1.7	1.36 H	356	20.50	23.80
3	784.28	43.4 QP	46.0	-2.6	1.00 H	172	16.70	26.70
4	815.30	44.5 QP	46.0	-1.5	1.00 H	186	17.20	27.30
5	850.39	42.7 QP	46.0	-3.3	1.00 H	172	14.90	27.80
6	875.67	40.8 QP	46.0	-5.2	1.75 H	121	12.60	28.20

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.

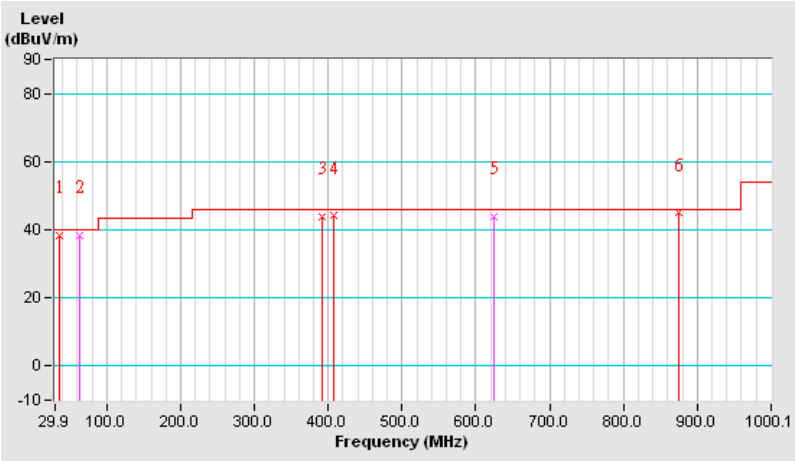


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Mark Liao

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	35.25	38.5 QP	40.0	-1.5	1.01 V	263	25.40	13.10
2	62.95	38.4 QP	40.0	-1.6	1.25 V	217	25.10	13.30
3	391.00	44.0 QP	46.0	-2.0	1.26 V	76	25.80	18.20
4	407.64	44.1 QP	46.0	-1.9	1.26 V	76	25.40	18.70
5	624.85	43.9 QP	46.0	-2.1	1.00 V	274	20.10	23.80
6	875.02	44.9 QP	46.0	-1.1	1.14 V	0	16.70	28.20

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.

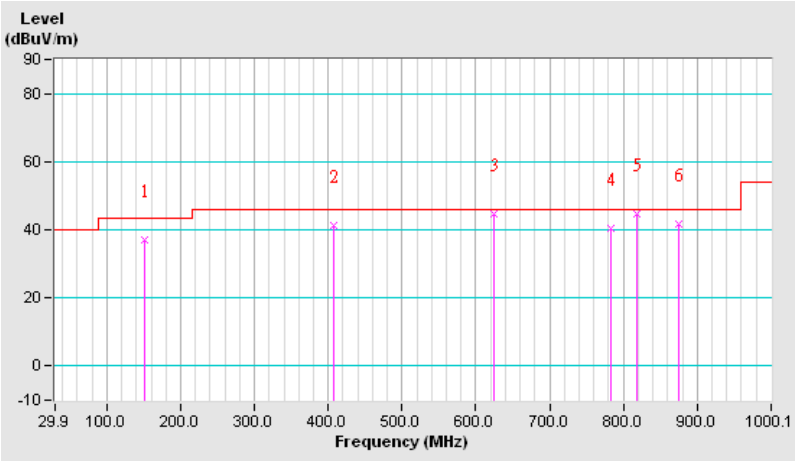


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Mark Liao

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	150.45	37.0 QP	43.5	-6.5	1.25 H	124	22.60	14.40
2	407.09	41.2 QP	46.0	-4.8	1.00 H	100	22.50	18.70
3	624.85	44.6 QP	46.0	-1.4	1.25 H	352	20.80	23.80
4	782.34	40.6 QP	46.0	-5.4	1.00 H	178	13.90	26.70
5	817.34	44.6 QP	46.0	-1.4	1.00 H	169	17.20	27.40
6	875.67	41.7 QP	46.0	-4.3	1.75 H	127	13.50	28.20

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.

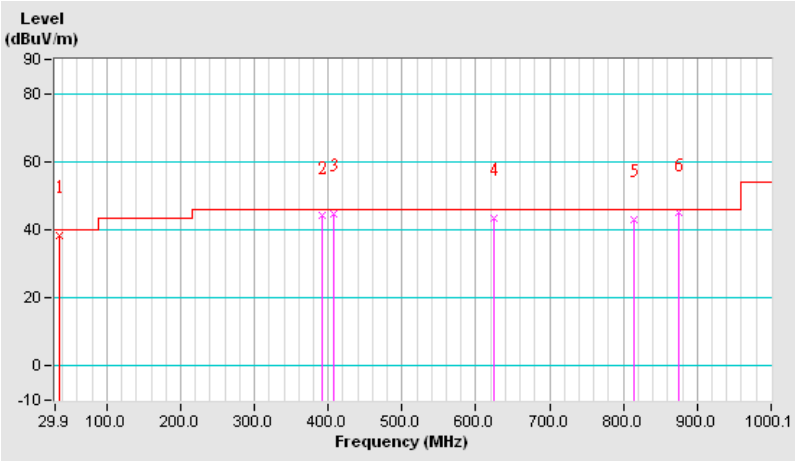


EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Mark Liao

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	35.25	38.4 QP	40.0	-1.6	1.03 V	260	25.30	13.10
2	391.54	44.1 QP	46.0	-1.9	1.50 V	61	25.90	18.20
3	407.09	44.6 QP	46.0	-1.4	1.25 V	85	25.90	18.70
4	624.85	43.4 QP	46.0	-2.6	1.00 V	274	19.60	23.80
5	813.45	43.0 QP	46.0	-3.0	1.50 V	313	15.70	27.30
6	875.67	44.9 QP	46.0	-1.1	1.25 V	331	16.70	28.20

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.



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 (EUT)	ESH2-Z5	100100	Dec. 30, 2011	Dec. 29, 2012
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in 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.

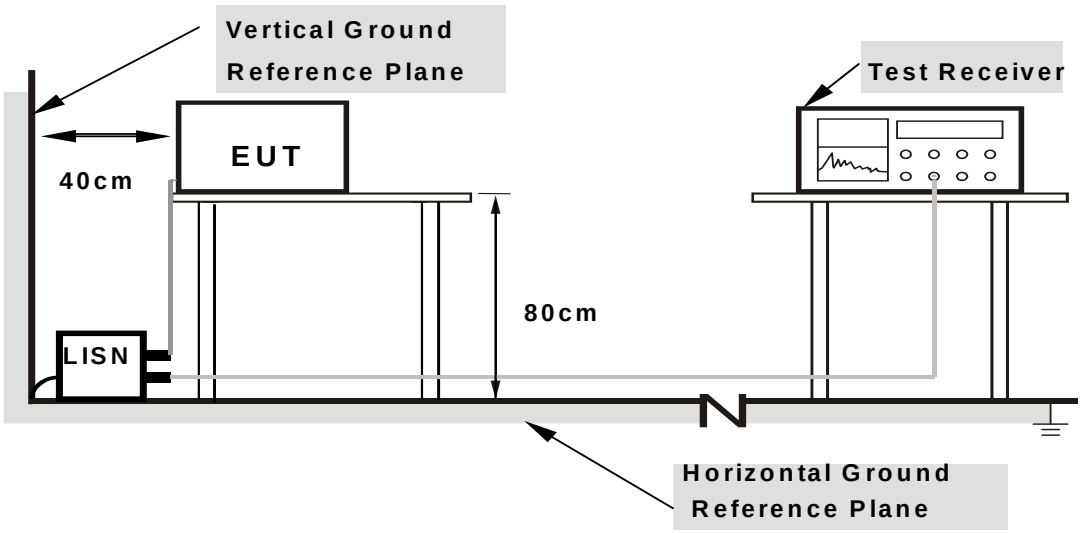
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

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 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

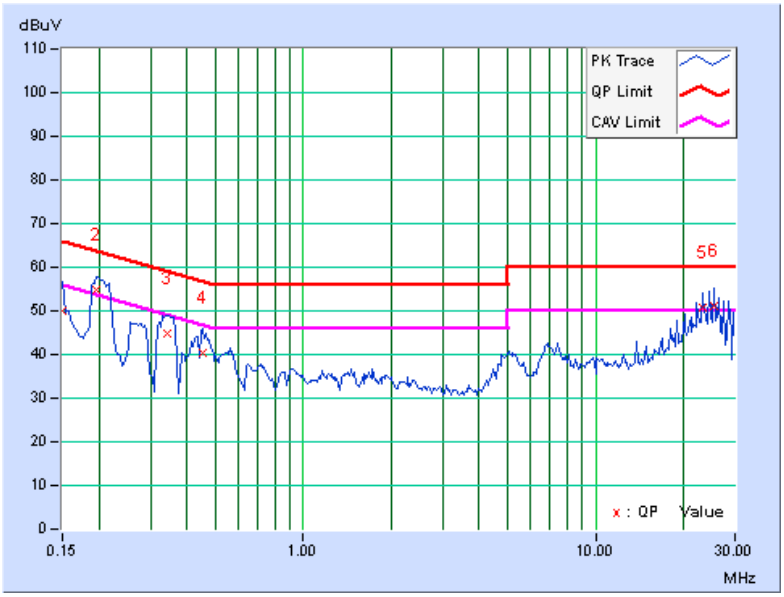
FOR 5260 ~ 5320MHz BAND

CONDUCTED WORST-CASE DATA：802.11n(20MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.15	50.01	30.38	50.16	30.53	66.00	56.00	-15.84	-25.47
2	0.19687	0.15	54.60	40.90	54.75	41.05	63.74	53.74	-8.99	-12.69
3	0.34141	0.16	44.74	33.57	44.90	33.73	59.17	49.17	-14.26	-15.43
4	0.45078	0.17	40.06	24.62	40.23	24.79	56.86	46.86	-16.63	-22.07
5	**23.32422**	**0.60**	**50.27**	**48.27**	**50.87**	**48.87**	**60.00**	**50.00**	**-9.13**	**-1.13**
6	25.45313	0.57	50.51	48.03	51.08	48.60	60.00	50.00	-8.92	-1.40

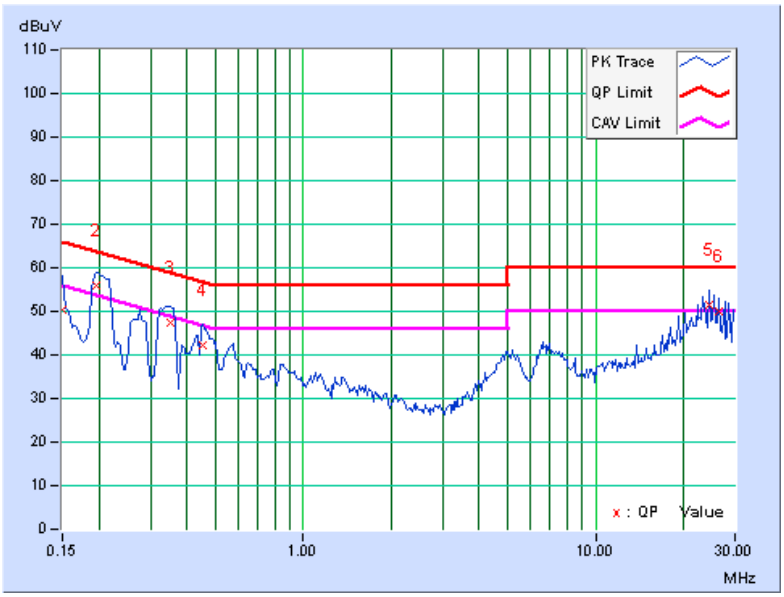
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



PHASE	Line 2	6dB BANDWIDTH	9kHz

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.13	50.15	30.59	50.28	30.72	66.00	56.00	-15.72	-25.28
2	0.19687	0.14	55.65	41.59	55.79	41.73	63.74	53.74	-7.95	-12.01
3	0.34922	0.15	47.25	36.04	47.40	36.19	58.98	48.98	-11.58	-12.79
4	0.45469	0.16	41.92	29.14	42.08	29.30	56.79	46.79	-14.71	-17.49
5	24.44141	0.64	50.87	47.94	51.51	48.58	60.00	50.00	-8.49	-1.42
6	26.57813	0.60	49.37	47.70	49.97	48.30	60.00	50.00	-10.03	-1.70

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



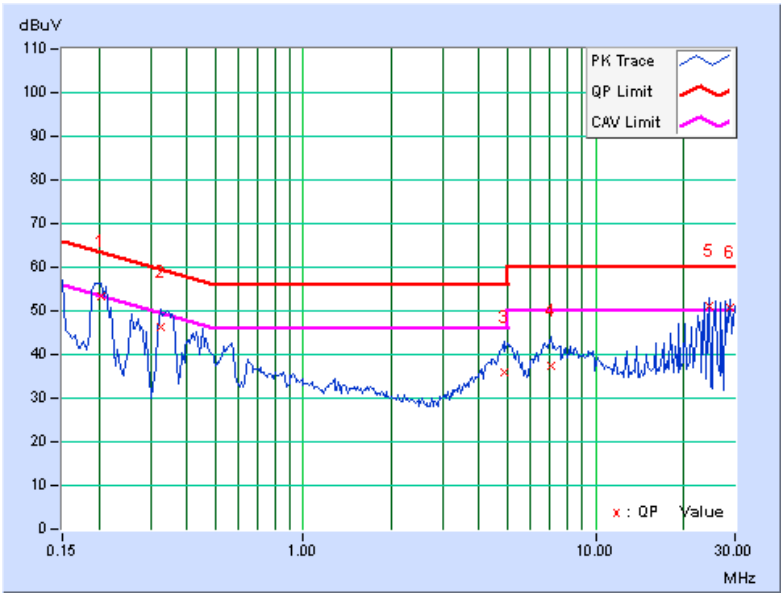
FOR 5500 ~ 5700MHz BAND

CONDUCTED WORST-CASE DATA：802.11n(20MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20469	0.15	53.16	42.05	53.31	42.20	63.42	53.42	-10.11	-11.22
2	0.32578	0.16	46.14	34.18	46.30	34.34	59.56	49.56	-13.26	-15.22
3	4.86719	0.35	35.73	25.40	36.08	25.75	56.00	46.00	-19.92	-20.25
4	7.04688	0.39	37.05	29.61	37.44	30.00	60.00	50.00	-22.56	-20.00
5	24.55469	0.58	50.44	47.76	51.02	48.34	60.00	50.00	-8.98	-1.66
6	28.82813	0.53	50.23	48.09	50.76	48.62	60.00	50.00	-9.24	-1.38

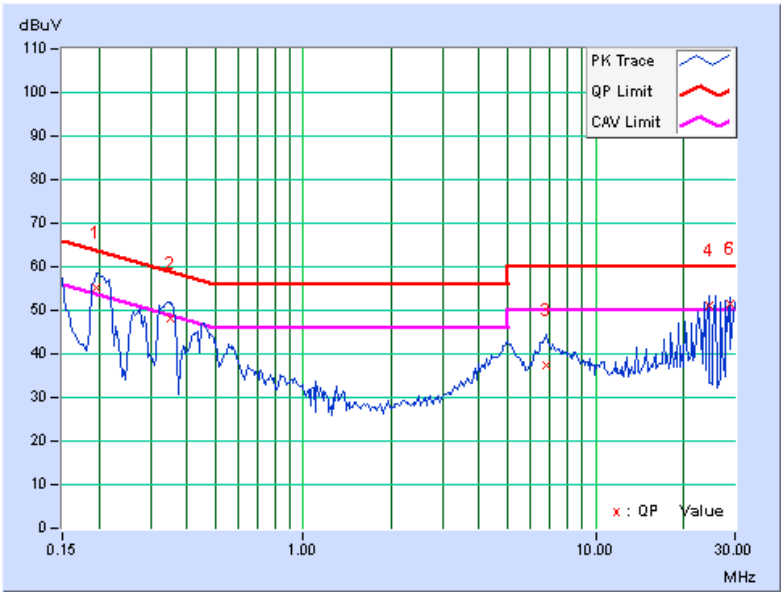
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



PHASE	Line 2	6dB BANDWIDTH	9kHz

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.14	55.21	42.26	55.35	42.40	63.74	53.74	-8.39	-11.34
2	0.34922	0.15	48.07	37.05	48.22	37.20	58.98	48.98	-10.76	-11.78
3	6.78125	0.41	36.86	29.97	37.27	30.38	60.00	50.00	-22.73	-19.62
4	24.54638	0.64	50.45	47.83	51.09	48.47	60.00	50.00	-8.91	-1.53
5	28.82031	0.55	50.97	48.09	51.52	48.64	60.00	50.00	-8.48	-1.36
6	28.82031	0.55	50.79	47.28	51.34	47.83	60.00	50.00	-8.66	-2.17

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.3 PEAK TRANSMIT POWER MEASUREMENT

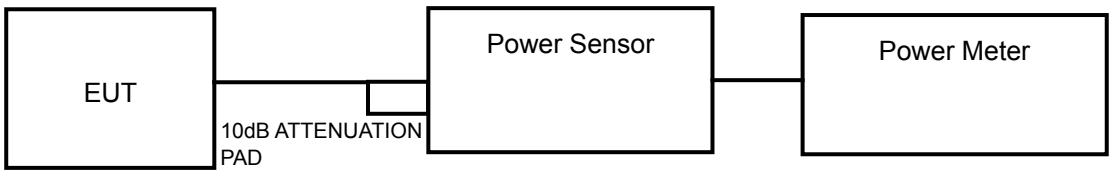
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

FREQUENCY BAND	LIMIT
5.250 ~ 5.350GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.470 ~ 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

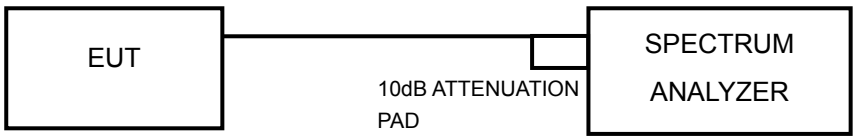
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB BANDWIDTH



4.3.3 TEST INSTRUMENTS

FOR AVERAGE POWER MEASUREMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0842014	Apr. 28, 2012	Apr. 27, 2013
Power Sensor	MA2411B	0738404	Apr. 28, 2012	Apr. 27, 2013

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

FOR 26dB OCCUPIED BANDWIDTH

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jan. 30, 2012	Jan. 29, 2013

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 26dB BANDWIDTH

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = Peak.
4) Trace mode = max hold.
5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

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 specific channel frequencies individually.

4.3.7 TEST RESULTS

POWER OUTPUT: 802.11a

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
52	5260	12.28	12.05	14.48	60.991	17.853	24	PASS
60	5300	12.31	12.12	14.97	64.720	18.110	24	PASS
64	5320	11.32	14.52	13.11	62.330	17.947	24	PASS
100	5500	8.81	9.03	9.11	23.749	13.756	24	PASS
116	5580	11.03	12.11	14.88	59.693	17.759	24	PASS
132	5660	9.63	11.71	14.23	50.494	17.032	24	PASS
140	5700	9.35	11.12	13.86	45.874	16.616	24	PASS

802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
52	5260	14.85	14.96	17.95	124.256	20.943	24	PASS
60	5300	15.06	15.02	17.64	121.908	20.860	24	PASS
64	5320	14.48	14.15	16.61	99.870	19.994	24	PASS
100	5500	8.31	8.48	9.22	22.179	13.459	24	PASS
116	5580	10.88	12.11	15.09	60.787	17.838	24	PASS
132	5660	9.34	11.98	14.06	49.835	16.975	24	PASS
140	5700	8.94	11.13	13.61	43.768	16.412	24	PASS

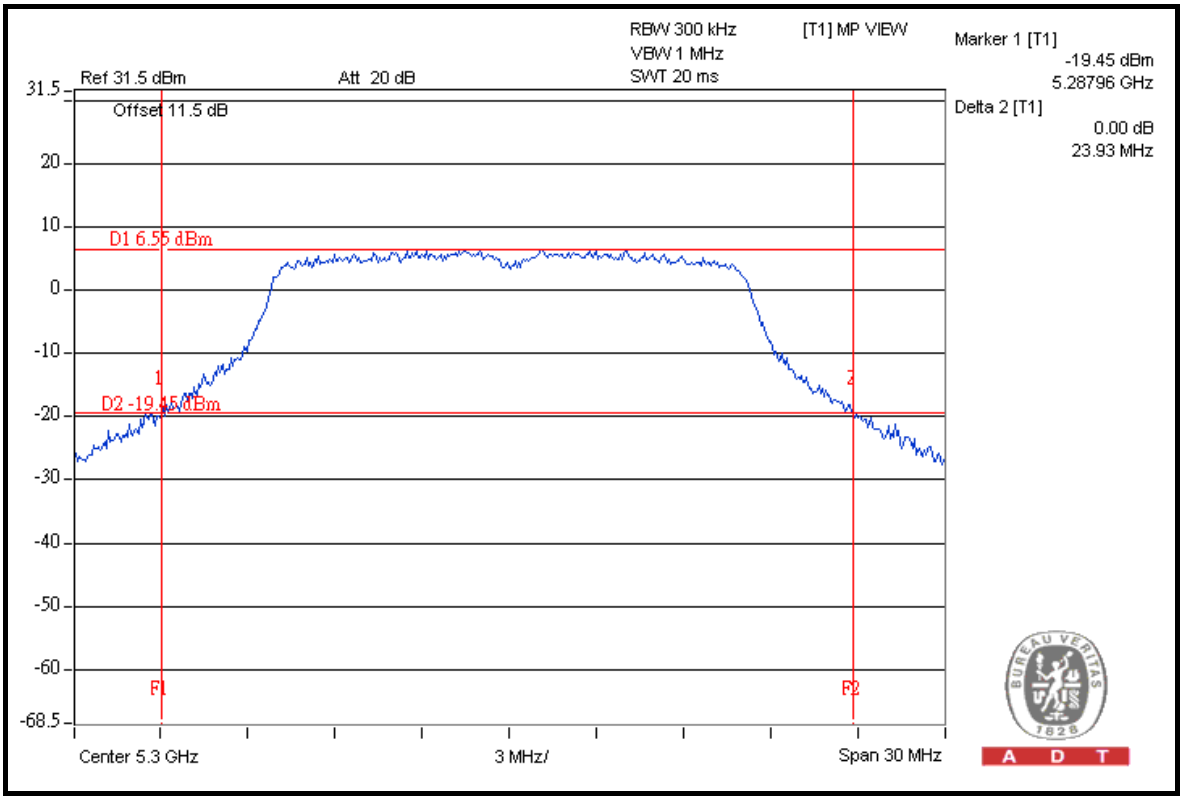
802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
54	5270	16.53	16.61	18.85	167.528	22.241	24	PASS
62	5310	11.94	12.06	14.04	57.052	17.563	24	PASS
102	5510	6.98	8.21	10.71	23.387	13.690	24	PASS
110	5550	6.84	8.09	10.87	23.490	13.709	24	PASS
134	5670	6.94	9.55	12.01	29.844	14.749	24	PASS

26dB BANDWIDTH: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
52	5260	23.58	22.19	23.01	PASS
60	5300	23.93	23.16	23.21	PASS
64	5320	23.73	23.15	23.31	PASS
100	5500	23.13	23.01	23.56	PASS
116	5580	23.66	23.36	23.60	PASS
132	5660	23.63	23.09	23.35	PASS
140	5700	23.71	23.07	23.33	PASS

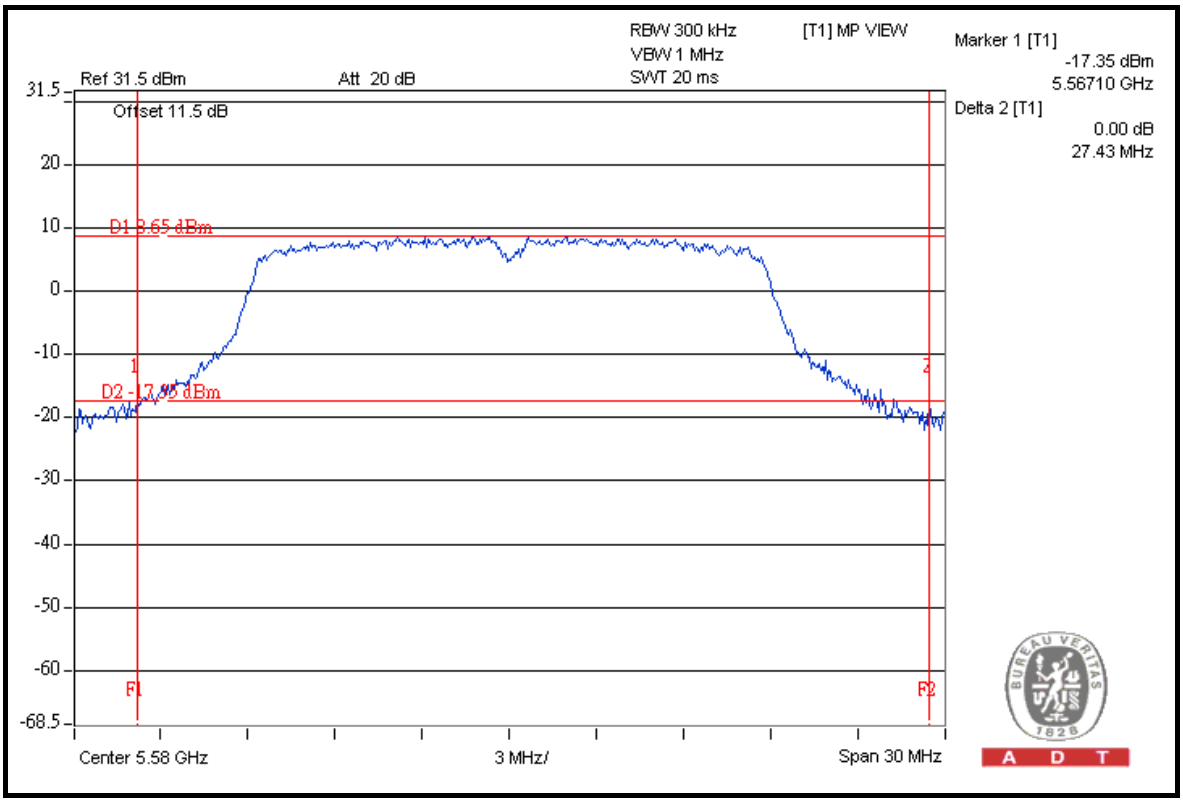
CH 60 CHAIN 0



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
52	5260	25.51	24.57	26.20	PASS
60	5300	25.13	24.29	25.65	PASS
64	5320	24.65	24.99	26.31	PASS
100	5500	24.19	23.96	24.70	PASS
116	5580	24.49	24.52	27.43	PASS
132	5660	24.18	24.33	24.06	PASS
140	5700	24.05	23.84	24.94	PASS

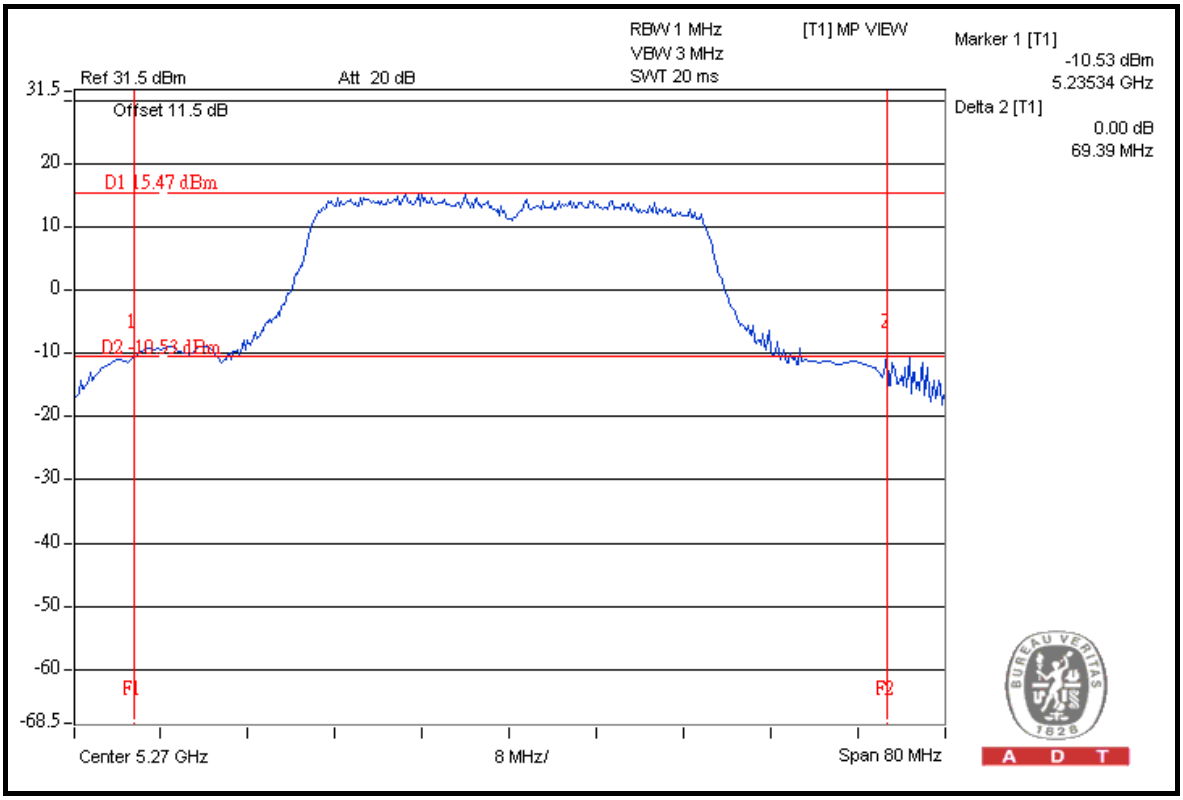
CH 116 CHAIN 2



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
54	5270	50.86	66.81	69.39	PASS
62	5310	51.74	49.35	49.27	PASS
102	5510	50.74	49.37	48.18	PASS
110	5550	50.47	49.62	48.61	PASS
134	5670	49.77	49.31	48.55	PASS

CH 54 CHAIN 2

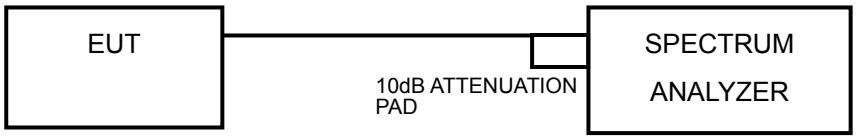


4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	4dBm
5.250 ~ 5.350GHz	11dBm
5.470 ~ 5.725GHz	11dBm

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jan. 30, 2012	Jan. 29, 2013

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.4 TEST PROCEDURE

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 30 KHz, Set VBW ≥ 1 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6

4.4.7 TEST RESULTS

802.11a

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
52	5260	1.85	1.72	4.25	7.542	8.2	PASS
60	5300	2.07	2.13	3.66	7.456	8.2	PASS
64	5320	1.54	3.02	3.48	7.527	8.2	PASS
100	5500	-4.15	-4.02	-3.28	0.972	8.2	PASS
116	5580	-1.05	0.43	2.70	5.742	8.2	PASS
132	5660	-2.51	0.43	1.78	5.013	8.2	PASS
140	5700	-2.89	-0.26	1.43	4.542	8.2	PASS

NOTE: 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain = 4dBi + 10log(3) = 8.8dBi > 6dBi, so power spectral density limit shall be reduced to 11-(8.8-6) = 8.2dBm.

802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
52	5260	1.60	1.34	3.66	7.101	8.2	PASS
60	5300	2.13	2.13	3.43	7.379	8.2	PASS
64	5320	1.52	1.83	3.30	7.060	8.2	PASS
100	5500	-4.13	-4.05	-3.70	0.815	8.2	PASS
116	5580	-1.27	0.33	2.23	5.436	8.2	PASS
132	5660	-2.68	0.11	1.23	4.613	8.2	PASS
140	5700	-2.37	-0.70	0.73	4.172	8.2	PASS

NOTE: 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain = 4dBi + 10log(3) = 8.8dBi > 6dBi, so power spectral density limit shall be reduced to 11-(8.8-6) = 8.2dBm.

802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
54	5270	1.76	1.51	3.76	7.24	8.2	PASS
62	5310	-3.16	-3.39	-1.20	2.30	8.2	PASS
102	5510	-8.55	-6.95	-4.57	-1.61	8.2	PASS
110	5550	-8.52	-6.60	-4.77	-1.59	8.2	PASS
134	5670	-8.63	-6.00	-4.49	-1.28	8.2	PASS

NOTE: 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

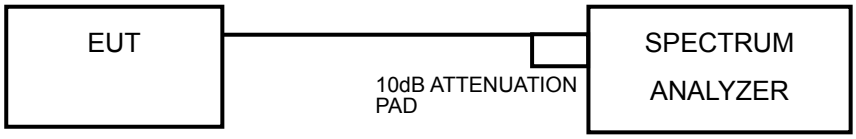
2. Directional gain = 4dBi + 10log(3) = 8.8dBi > 6dBi, so power spectral density limit shall be reduced to 11-(8.8-6) = 8.2dBm.

4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jan. 30, 2012	Jan. 29, 2013

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.4 TEST PROCEDURES

1) Set RBW = 1 MHz, VBW ≥ 3 MHz, Detector = peak.
2) Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
3) Use the peak search function to find the peak of the spectrum.
4) Measure the PPSD.
5) Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

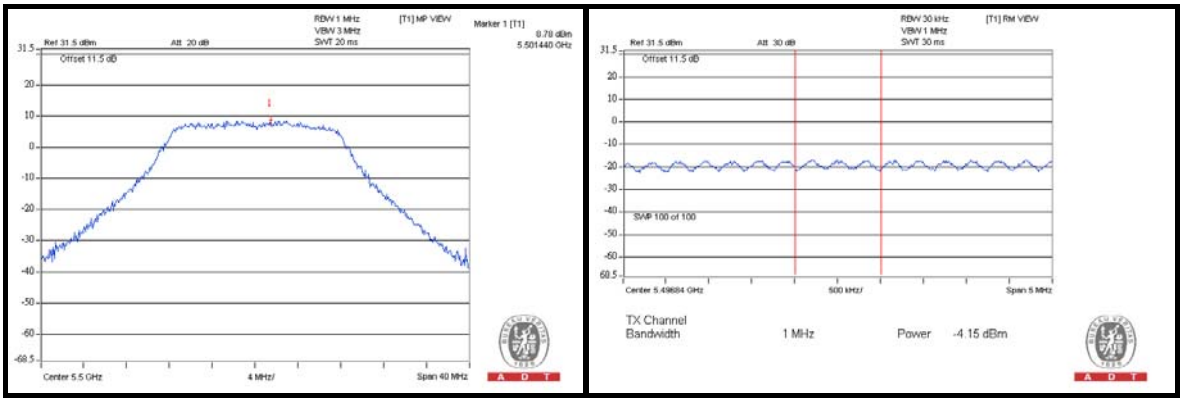
4.5.6 EUT OPERATING CONDITIONS

Same as 4.2.6.

4.5.7 TEST RESULTS

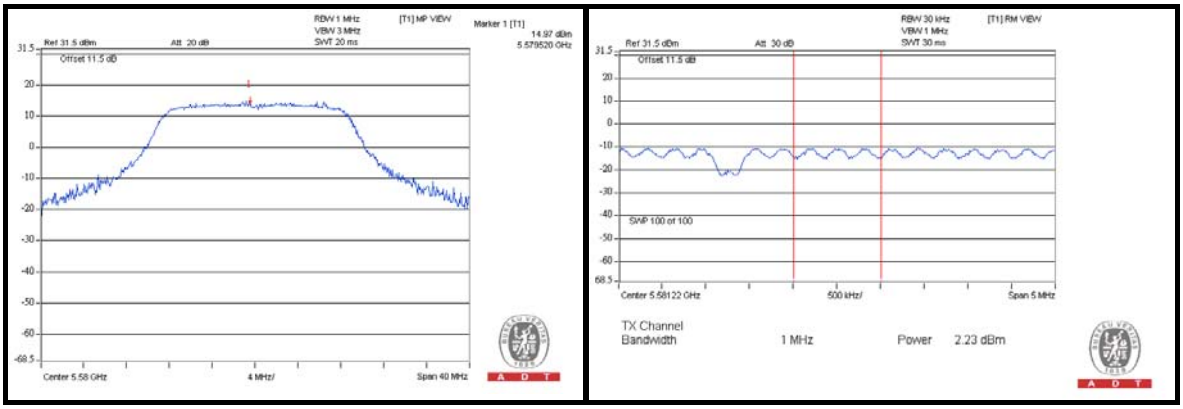
802.11a

CHAN.	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)			PPSD (dBm)			PEAK EXCURSION (dB)			LIMIT (dB)	PASS/ FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 0	CHAIN 1	CHAIN 2		
52	5260	12.22	11.76	14.19	1.85	1.72	4.25	10.37	10.04	9.94	13	PASS
60	5300	12.39	11.93	14.51	2.07	2.13	3.66	10.32	9.80	10.85	13	PASS
64	5320	11.27	14.48	12.91	1.54	3.02	3.48	9.73	11.46	9.43	13	PASS
100	5500	8.78	8.64	9.00	-4.15	-4.02	-3.28	12.93	12.66	12.28	13	PASS
116	5580	11.01	11.91	14.35	-1.05	0.43	2.70	12.06	11.48	11.65	13	PASS
132	5660	9.44	11.46	13.69	-2.51	0.43	1.78	11.95	11.03	11.91	13	PASS
140	5700	9.44	10.93	13.43	-2.89	-0.26	1.43	12.33	11.19	12.00	13	PASS



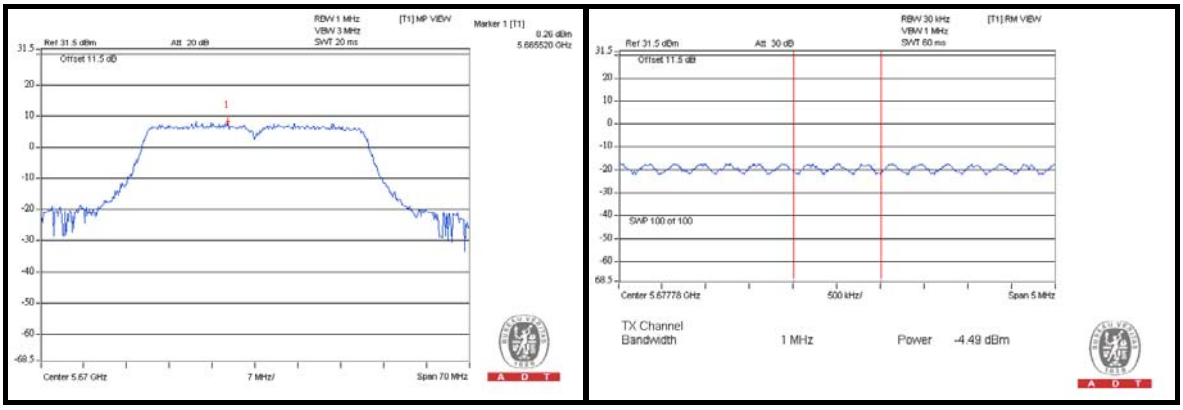
802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)			PPSD (dBm)			PEAK EXCURSION (dB)			LIMIT (dB)	PASS/ FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 0	CHAIN 1	CHAIN 2		
52	5260	9.82	9.85	12.27	1.60	1.34	3.66	8.22	8.51	8.61	13	PASS
60	5300	10.21	10.57	11.80	2.13	2.13	3.43	8.08	8.44	8.37	13	PASS
64	5320	9.96	10.06	11.53	1.52	1.83	3.30	8.44	8.23	8.23	13	PASS
100	5500	7.83	7.85	8.73	-4.13	-4.05	-3.70	11.96	11.90	12.43	13	PASS
116	5580	10.47	11.25	14.97	-1.27	0.33	2.23	11.74	10.92	12.74	13	PASS
132	5660	9.12	11.2	13.68	-2.68	0.11	1.23	11.80	11.09	12.45	13	PASS
140	5700	8.41	10.53	13.45	-2.37	-0.70	0.73	10.78	11.23	12.72	13	PASS



802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)			PPSD (dBm)			PEAK EXCURSION (dB)			LIMIT (dB)	PASS/ FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 0	CHAIN 1	CHAIN 2		
54	5270	11.83	12.77	15.01	1.76	1.51	3.76	10.07	11.26	11.25	13	PASS
62	5310	7.08	8.01	10.34	-3.16	-3.39	-1.20	10.24	11.40	11.54	13	PASS
102	5510	2.34	4.43	7.04	-8.55	-6.95	-4.57	10.89	11.38	11.61	13	PASS
110	5550	2.24	4.09	6.81	-8.52	-6.60	-4.77	10.76	10.69	11.58	13	PASS
134	5670	2.28	5.68	8.26	-8.63	-6.00	-4.49	10.91	11.68	12.75	13	PASS

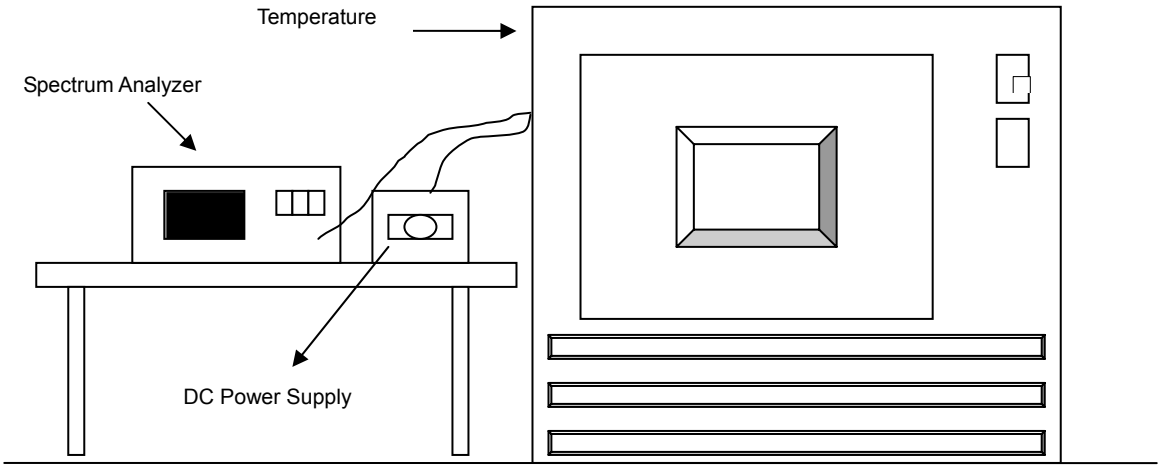


4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency of the carrier signal shall be maintained within band of operation

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.6.4 TEST PROCEDURE

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.

b. Turn the EUT on and couple its output to a spectrum analyzer.

c. Turn the EUT off and set the chamber to the highest temperature specified.

d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.

e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.

f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 TEST RESULTS

FREQUEMCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (℃)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
50	110.0	5320.087596	16.465	5320.087642	16.474	5320.088355	16.608	5320.087723	16.489
40	110.0	5320.088816	16.695	5320.088810	16.694	5320.088653	16.664	5320.088630	16.660
30	110.0	5320.090015	16.920	5320.090634	17.036	5320.090415	16.995	5320.090547	17.020
20	110.0	5320.091798	17.255	5320.091301	17.162	5320.091386	17.178	5320.091172	17.138
10	110.0	5320.092834	17.450	5320.092594	17.405	5320.092728	17.430	5320.092799	17.443
0	110.0	5320.091459	17.192	5320.091100	17.124	5320.090851	17.077	5320.091637	17.225
-10	110.0	5320.089994	16.916	5320.090231	16.961	5320.090324	16.978	5320.089945	16.907
-20	110.0	5320.088542	16.643	5320.089008	16.731	5320.088963	16.722	5320.089333	16.792
-30	110.0	5320.088118	16.564	5320.088148	16.569	5320.087686	16.482	5320.088177	16.575

FREQUEMCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5330MHz									
TEMP. (℃)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	93.5	5320.091648	17.227	5320.092002	17.294	5320.091829	17.261	5320.091584	17.215
	110.0	5320.092834	17.450	5320.092594	17.405	5320.092728	17.430	5320.092799	17.443
	126.5	5320.091434	17.187	5320.091268	17.156	5320.091718	17.240	5320.091438	17.188

4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jan. 30, 2012	Jan. 29, 2013

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.7.2 TEST PROCEDURE

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = Peak.
4) Trace mode = max hold.
5) Measure the maximum value of the emission that is 20 dB down from the peak of the emission.

4.7.3 EUT OPERATING CONDITION

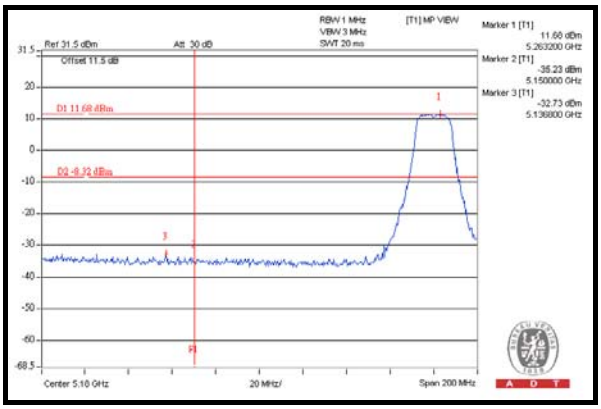
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.7.4 TEST RESULTS

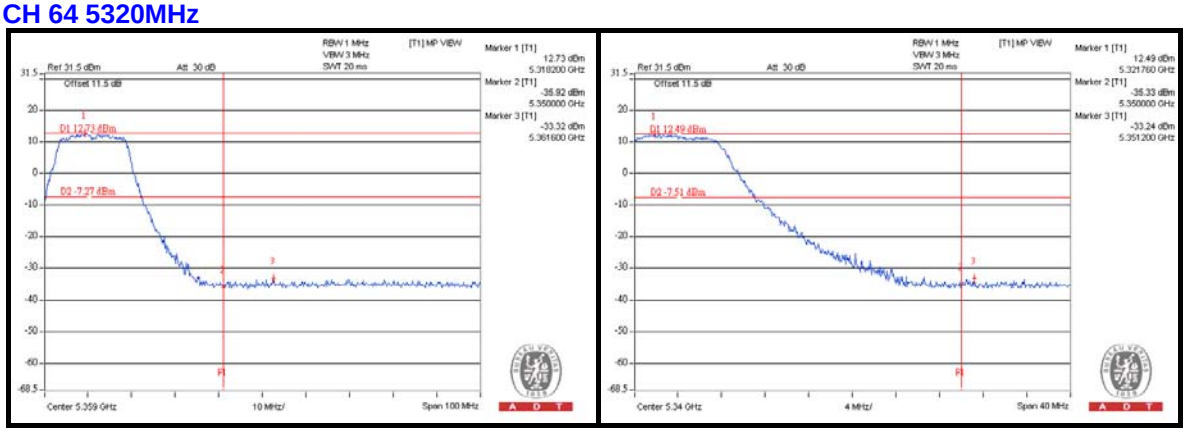
802.11a

CHAIN 0

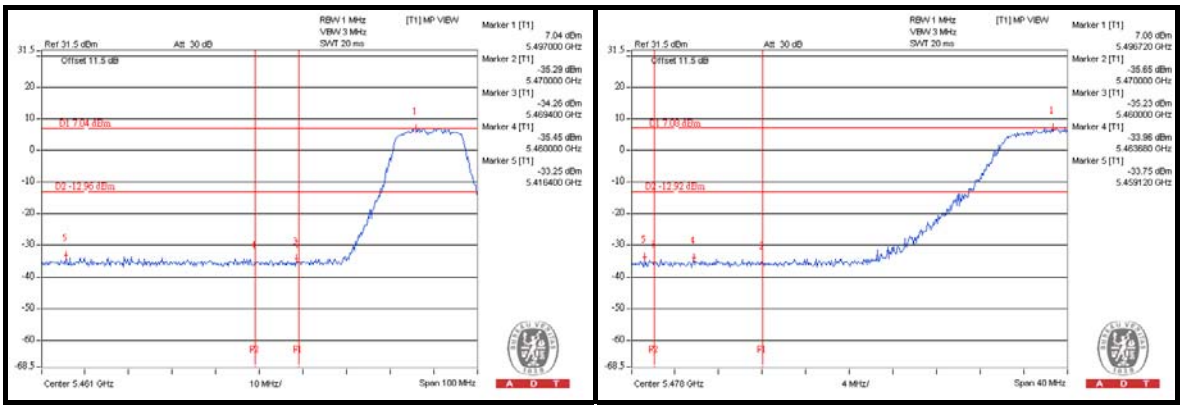
CH 52 5260MHz



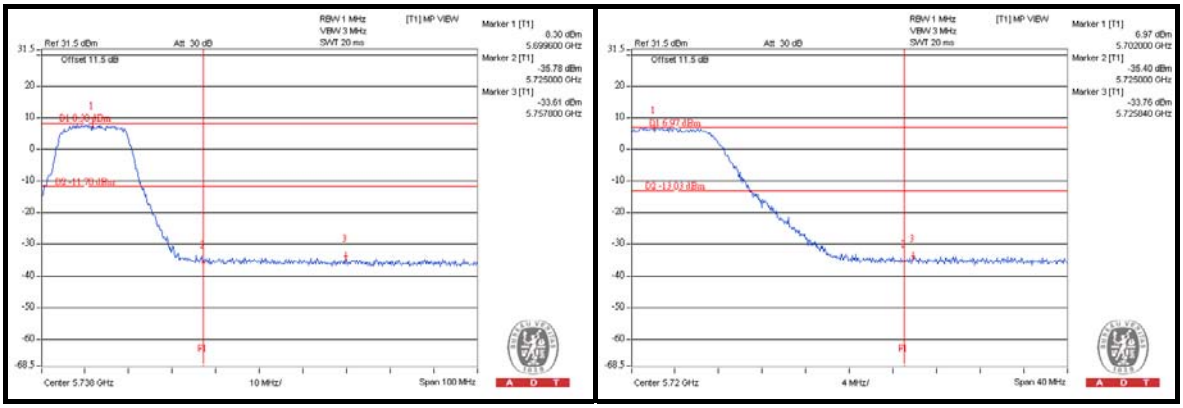
CH 64 5320MHz



CH 100 5500MHz

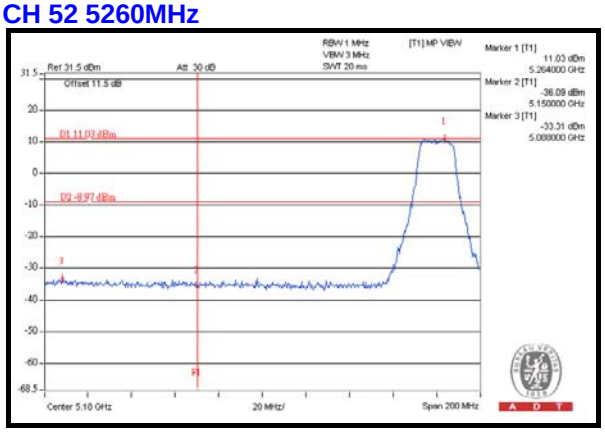


CH 140 5700MHz

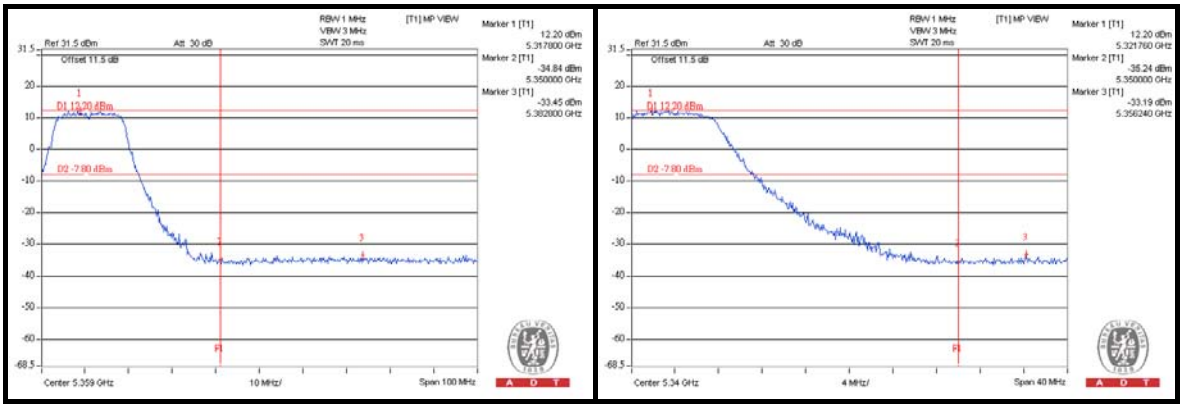


CHAIN 1

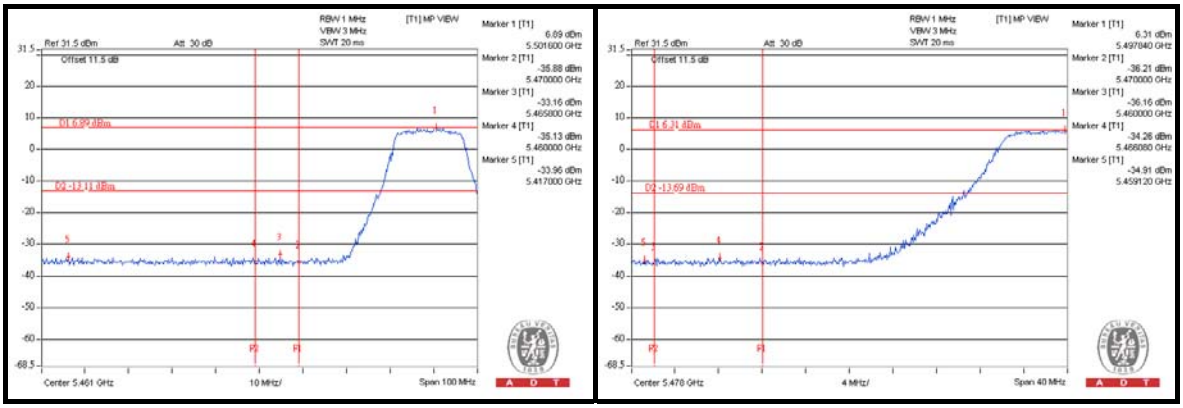
CH 52 5260MHz



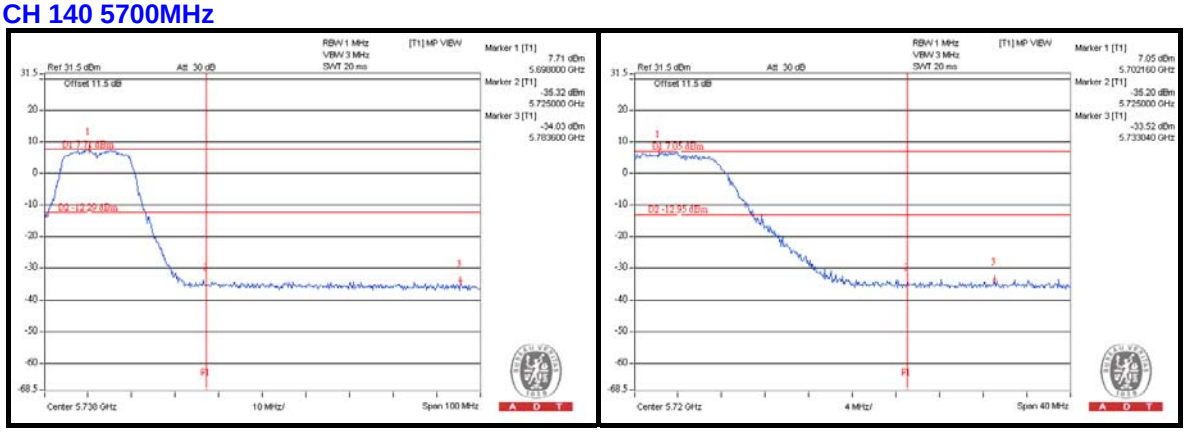
CH 64 5320MHz



CH 100 5500MHz

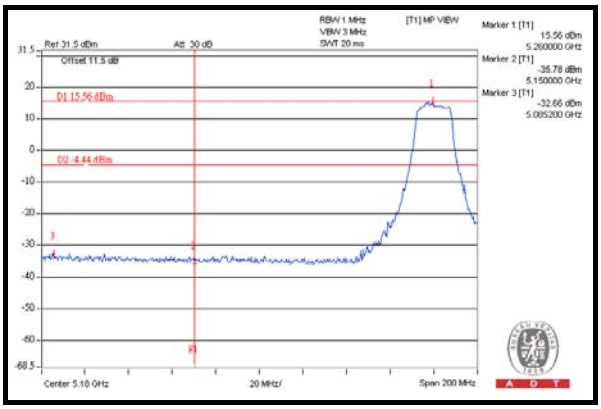


CH 140 5700MHz

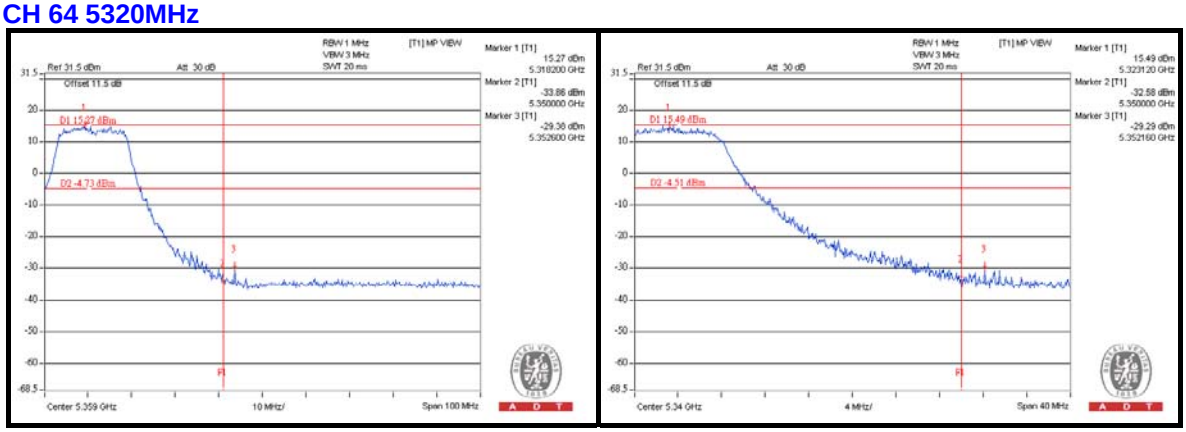


CHAIN 2

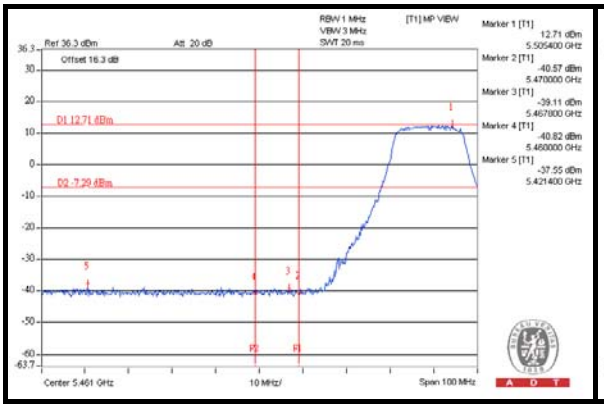
CH 52 5260MHz



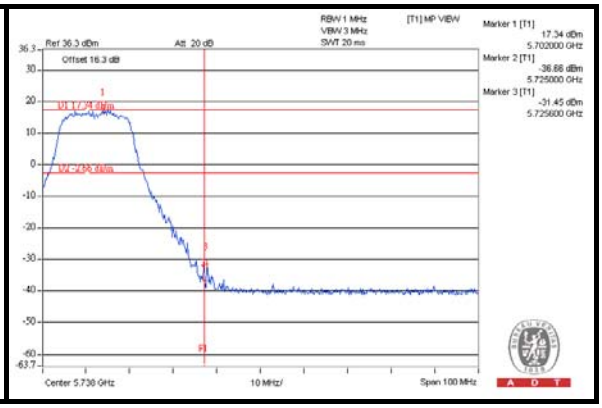
CH 64 5320MHz



CH 100 5500MHz



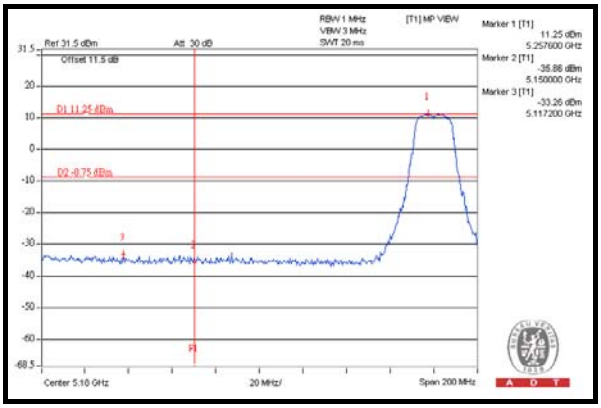
CH 140 5700MHz



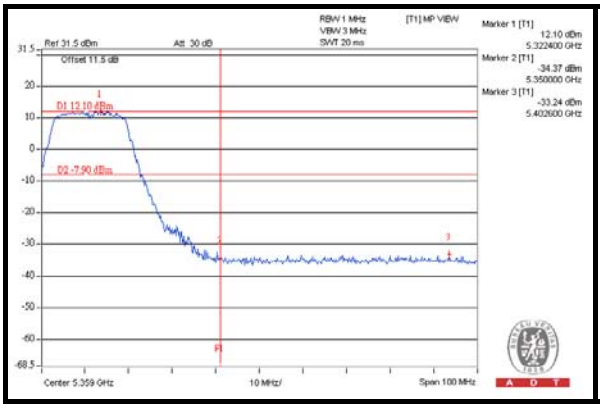
802.11n(20MHz)

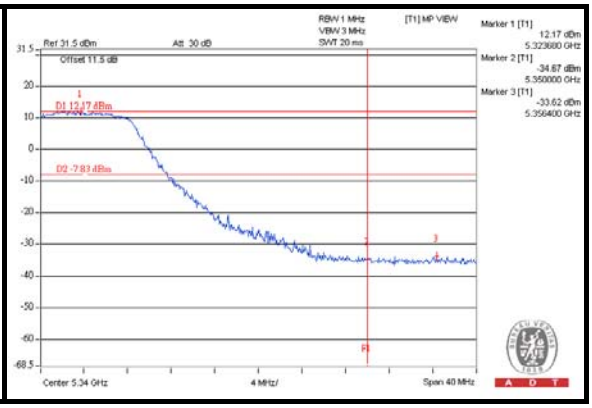
CHAIN 0

CH 52 5260MHz

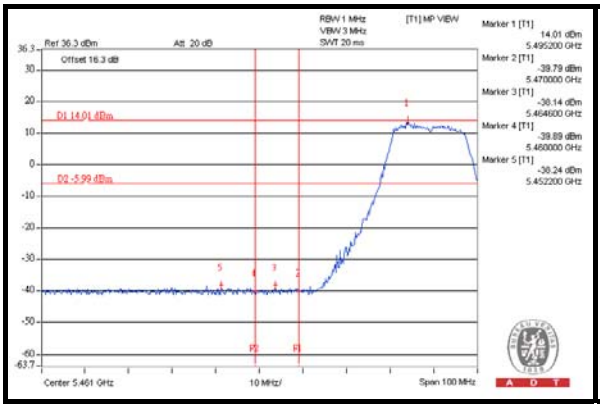


CH 64 5320MHz

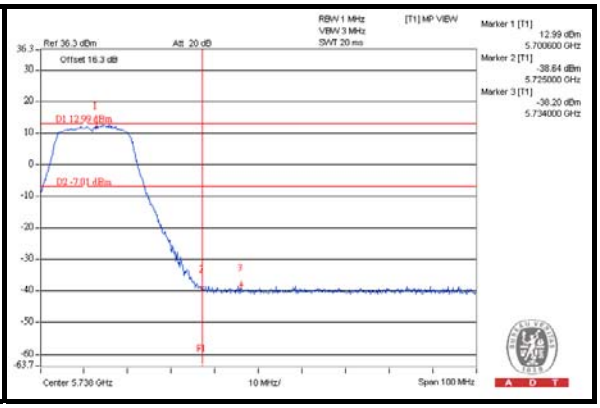




CH 100 5500MHz

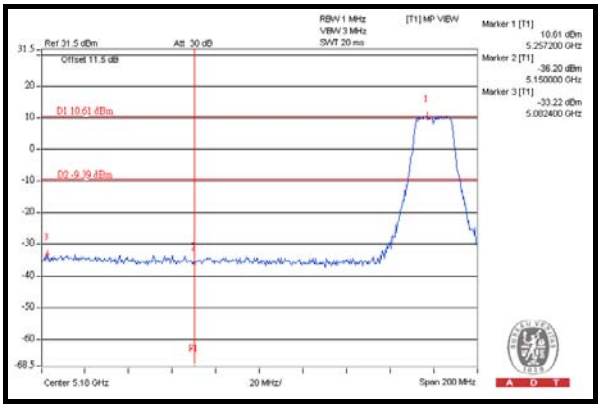


CH 140 5700MHz

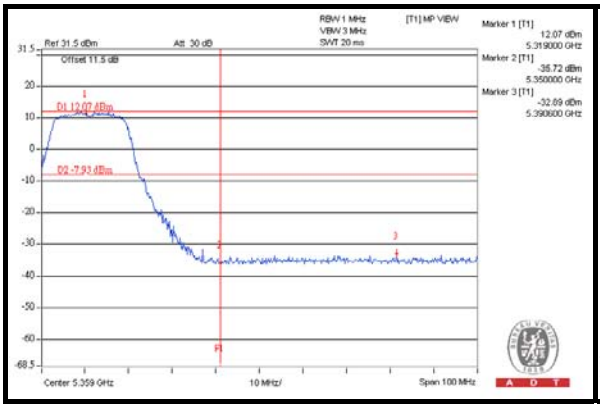


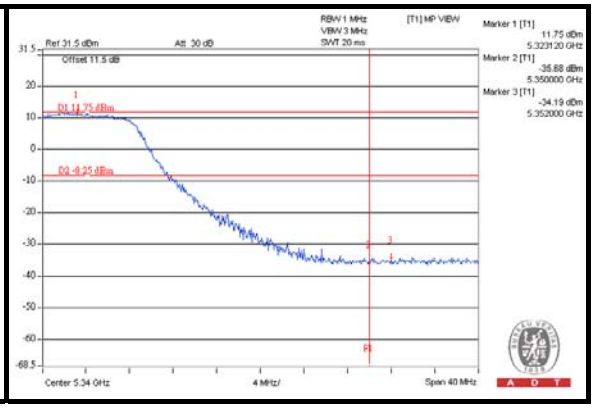
CHAIN 1

CH 52 5260MHz

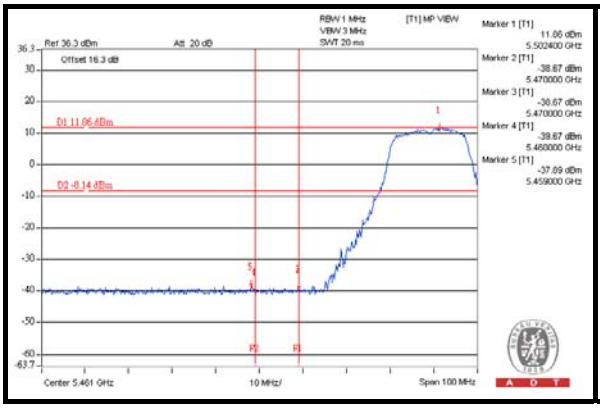


CH 64 5320MHz

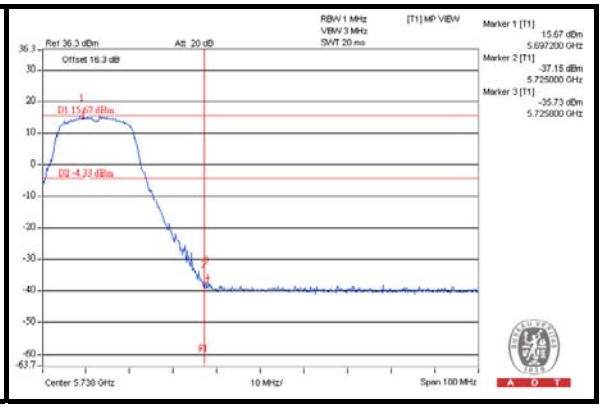




CH 100 5500MHz

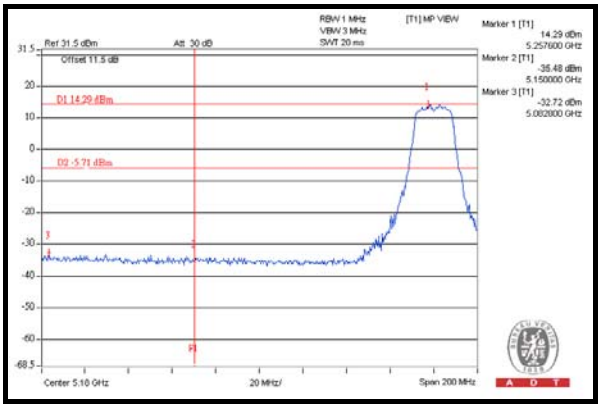


CH 140 5700MHz

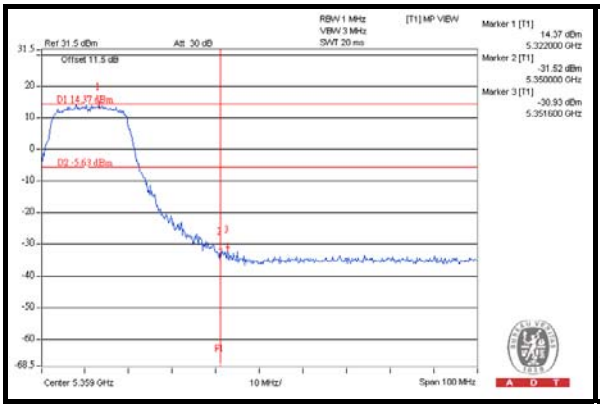


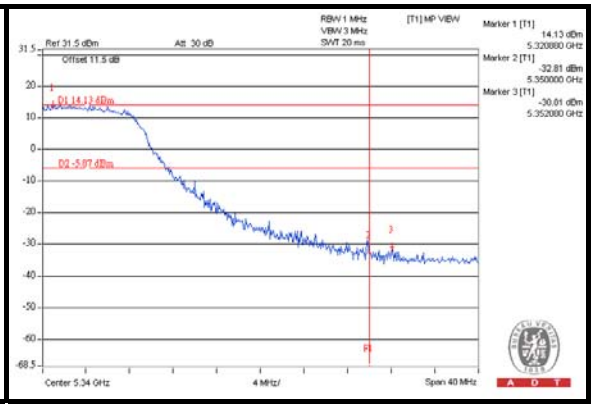
CHAIN 2

CH 52 5260MHz

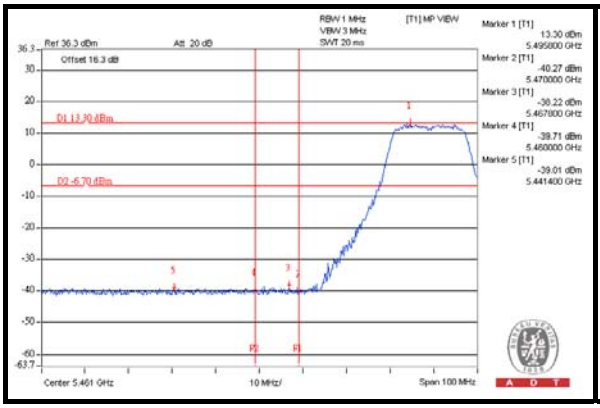


CH 64 5320MHz

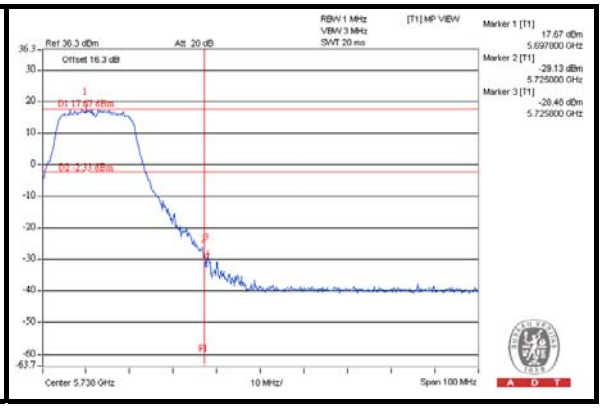




CH 100 5500MHz



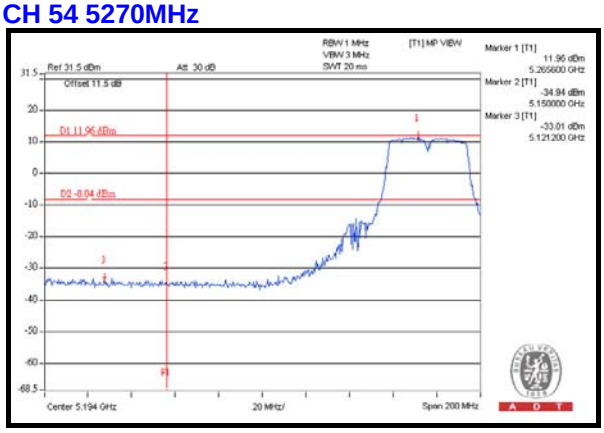
CH 140 5700MHz



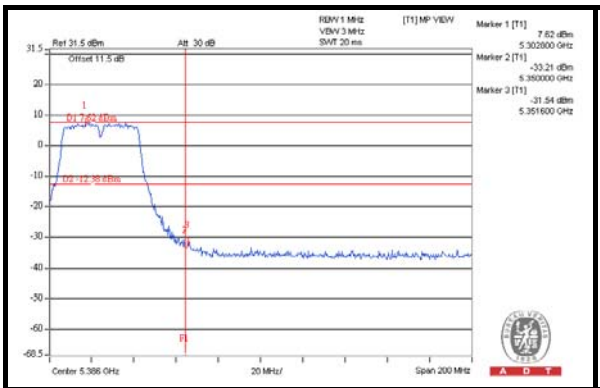
802.11n(40MHz)

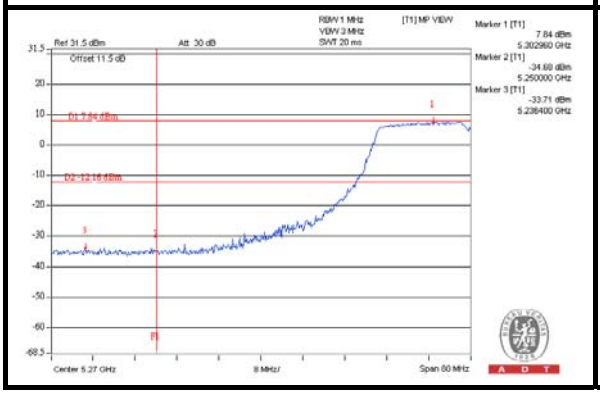
CHAIN 0

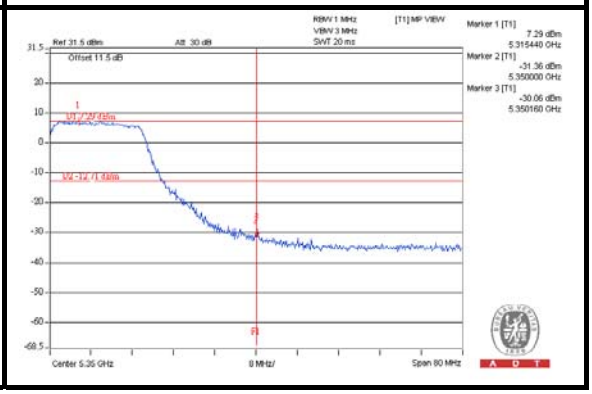
CH 54 5270MHz



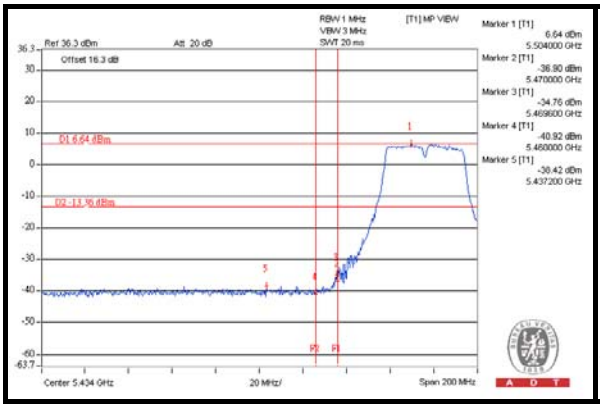
CH 62 5310MHz



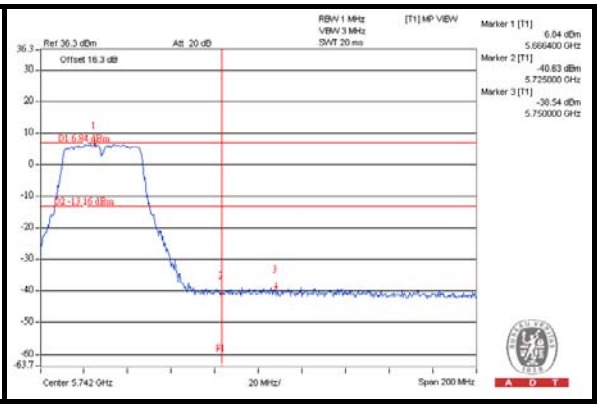




CH 102 5510MHz

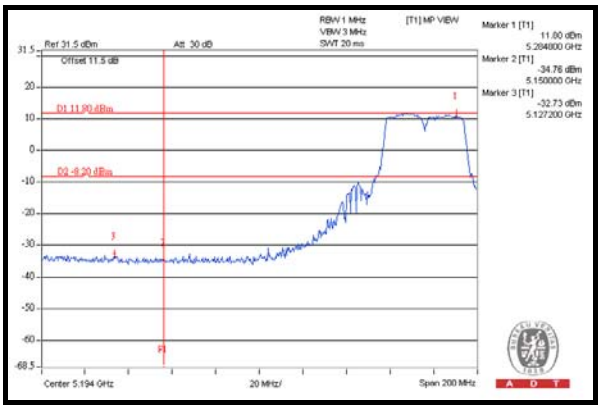


CH 134 5670MHz

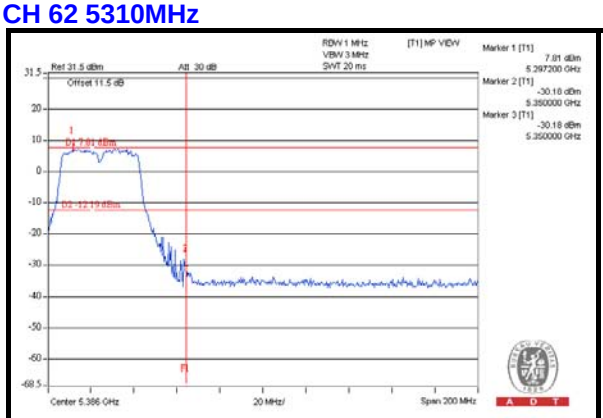


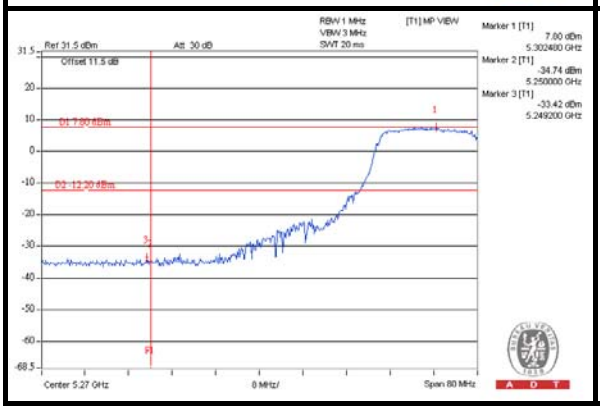
CHAIN 1

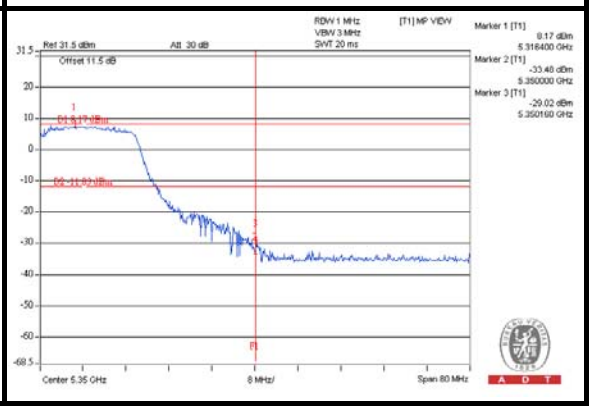
CH 54 5270MHz



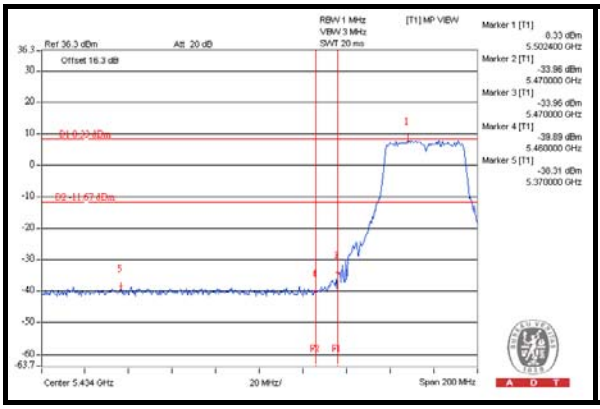
CH 62 5310MHz



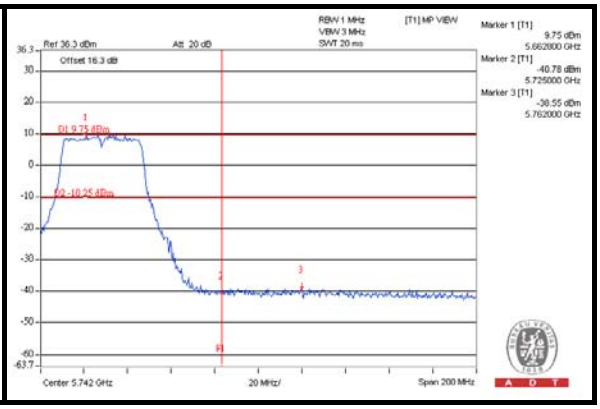




CH 102 5510MHz

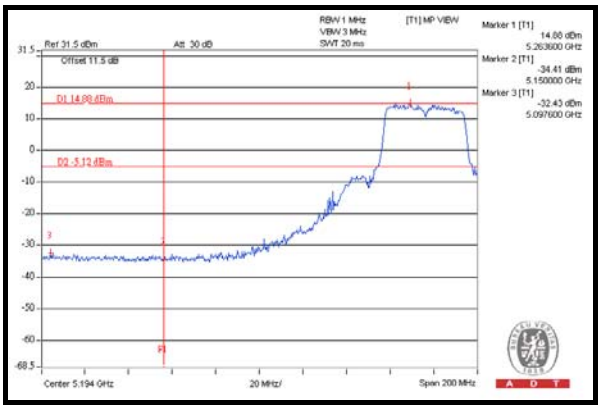


CH 134 5670MHz

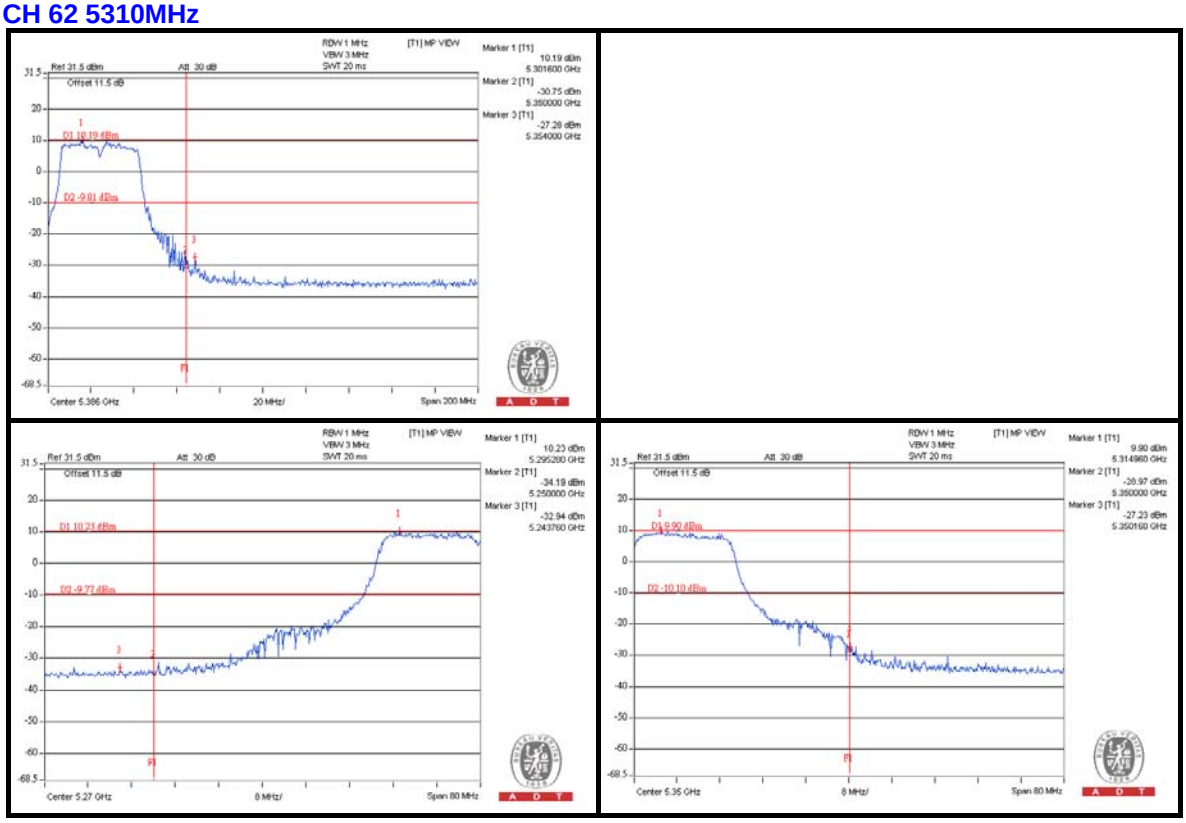


CHAIN 2

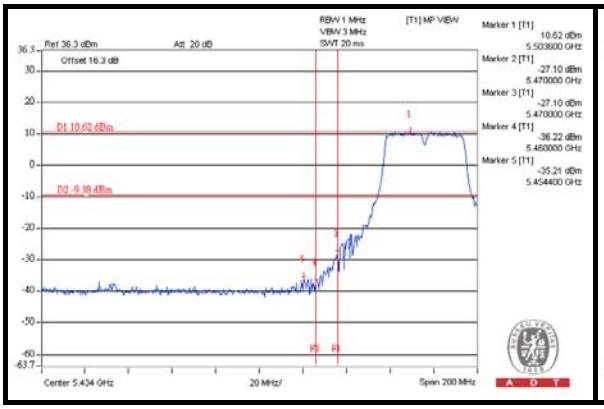
CH 54 5270MHz



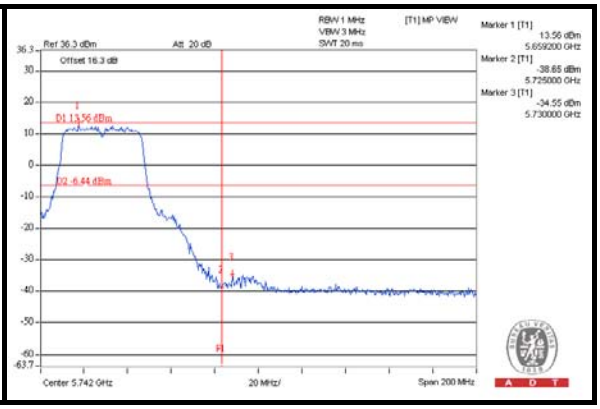
CH 62 5310MHz



CH 102 5510MHz



CH 134 5670MHz

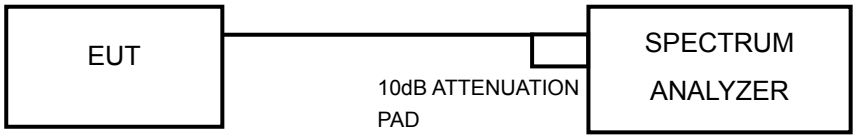


4.8 20dBc BANDWIDTH FOR CHANNEL CLOSE TO 5600 TO 5650 MHz BAND

4.8.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

20dBc point shall not fall in 5600~5650MHz.

4.8.2 TEST SETUP

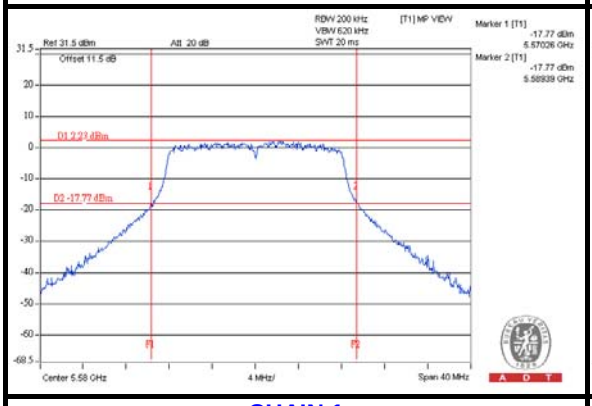
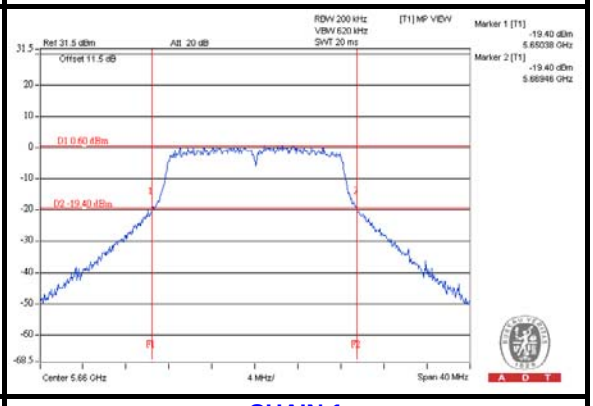
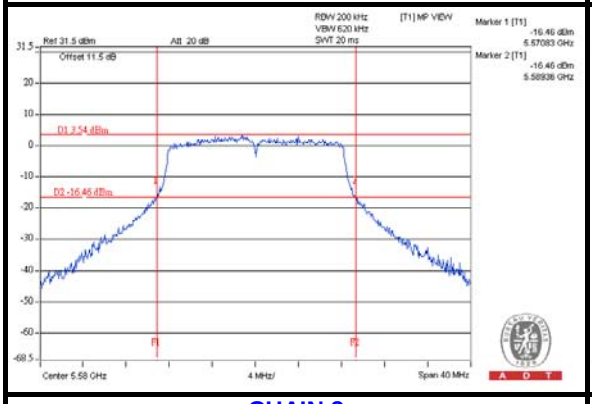
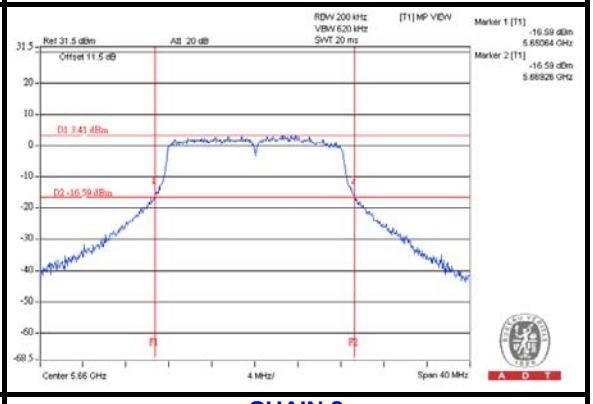
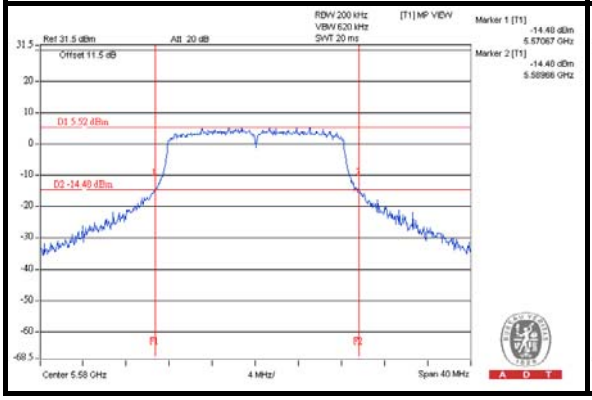
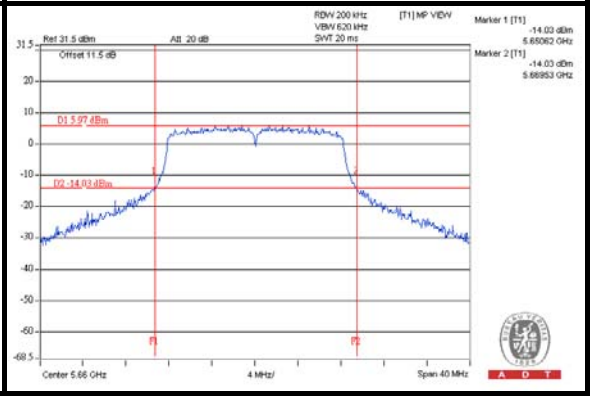


4.8.3 TEST INSTRUMENTS

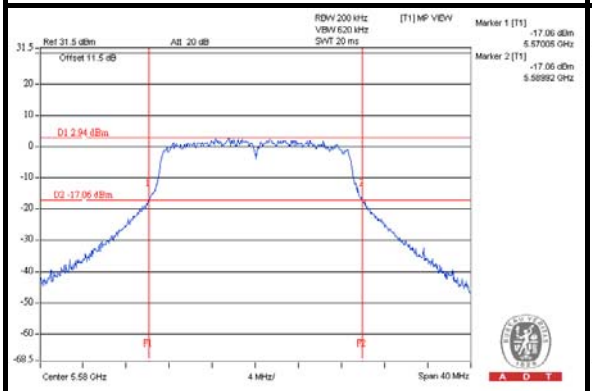
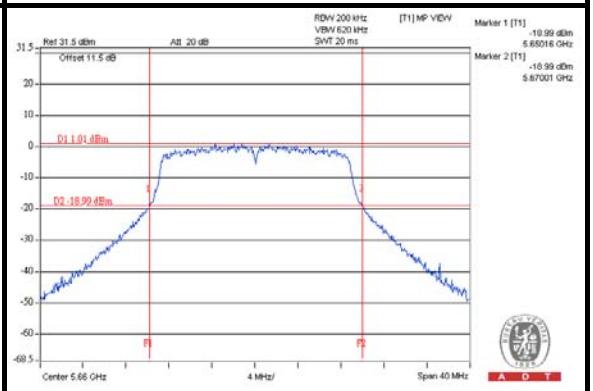
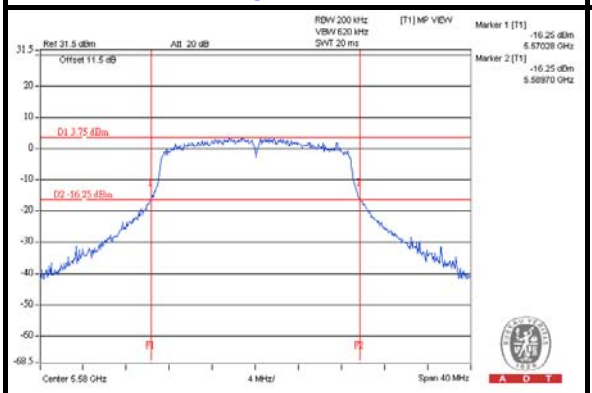
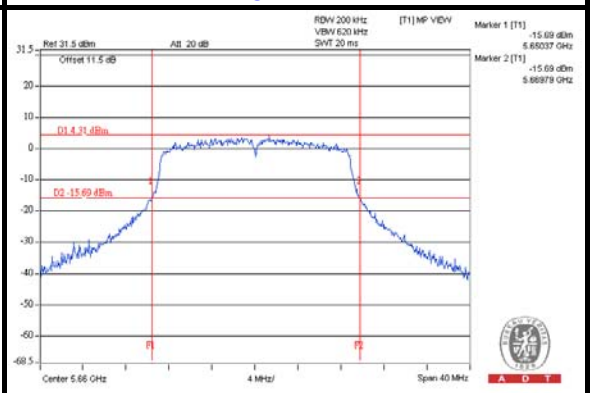
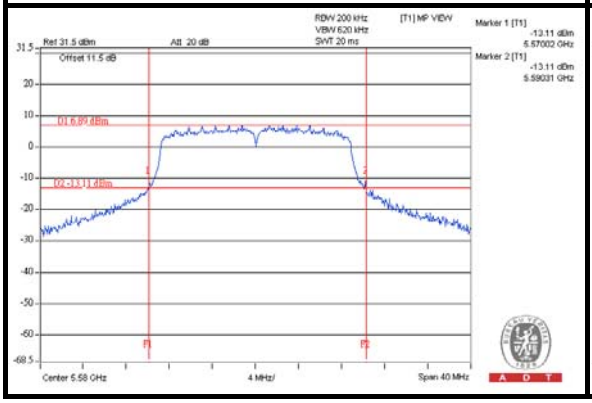
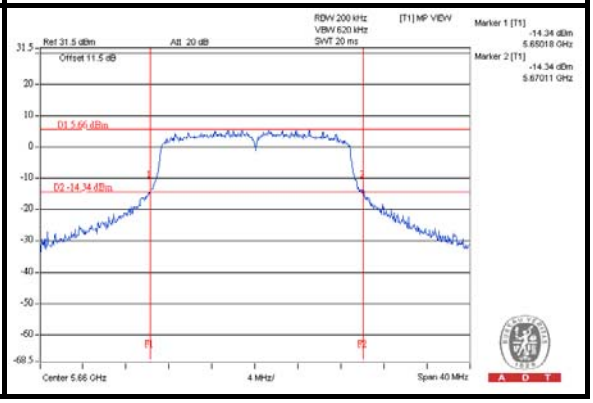
Refer to section 4.1.3 to get information of above instrument.

4.8.4 TEST RESULTS

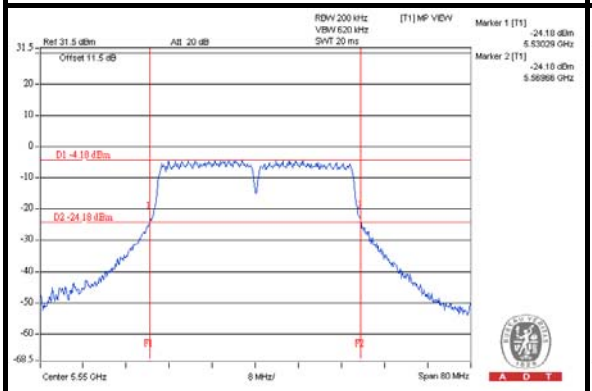
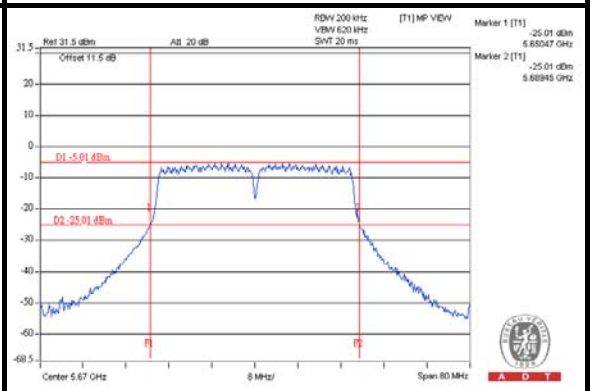
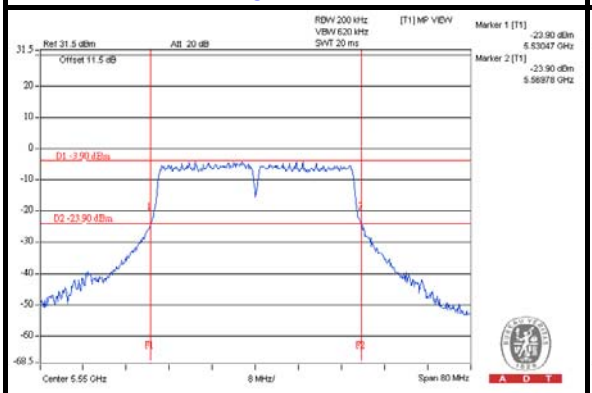
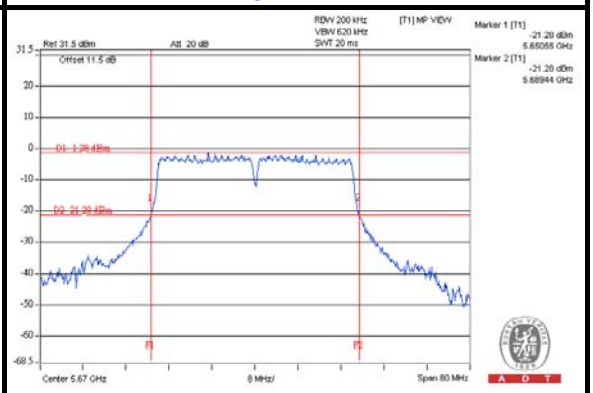
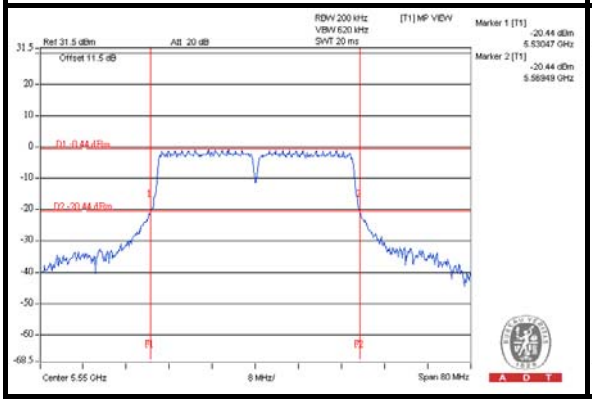
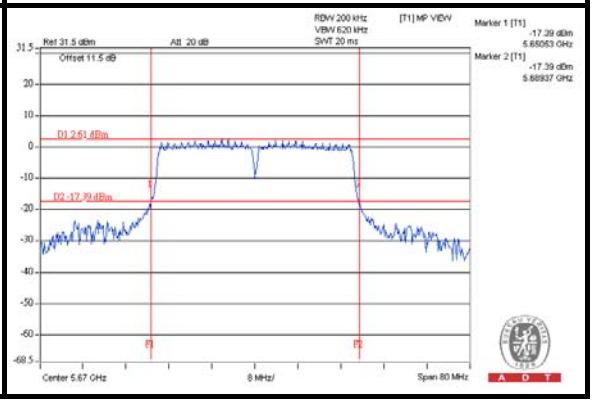
802.11a

5580 MHz	5660 MHz
CHAIN 0	**CHAIN 0**
	
CHAIN 1	**CHAIN 1**
	
CHAIN 2	**CHAIN 2**
	

802.11n (20MHz)

5580 MHz	5660 MHz
CHAIN 0	CHAIN 0
	
CHAIN 1	CHAIN 1
	
CHAIN 2	CHAIN 2
	

802.11n (40MHz)

5550 MHz	5670 MHz
CHAIN 0	CHAIN 0
	
CHAIN 1	CHAIN 1
	
CHAIN 2	CHAIN 2
	

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

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Hwa Ya EMC/RF/Safety Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

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

---END---