

FCC TEST REPORT (15.407)

REPORT NO.: RF131220C10F

MODEL NO.: XR600

FCC ID: SK6-XR630

RECEIVED: Aug. 29, 2014

TESTED: Aug. 29 ~ Sep. 04, 2014

ISSUED: Sep. 19, 2014

APPLICANT: Xirrus, INC.

ADDRESS: 2101 Corporate Center Drive Thousand Oaks,
California 91320

ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47-2, 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.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF131220C10F	Original release	Sep. 19, 2014

1. CERTIFICATION

PRODUCT: 802.11ac 3x3 AP

MODEL: XR600

BRAND: Xirrus

APPLICANT: Xirrus, INC.

TESTED: Aug. 29 ~ Sep. 04, 2014

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 15, Subpart E (Section 15.407)

ANSI C63.10-2009

The above equipment (model: XR600) 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 : Maggie Wu , **DATE :** Sep. 19, 2014

Maggie Wu / Specialist

APPROVED BY : Ken Liu , **DATE :** Sep. 19, 2014

Ken Liu / Senior 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	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -23.39dB at 2.36306MHz.
15.407(b)(1/2/3) (b)(6)	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5470.00MHz.
15.407(a)(1/2)	Max Average 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 I-PEX not a standard connector.

2.1 MEASUREMENT UNCERTAINTY

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

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

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	802.11ac 3x3 AP
MODEL NO.	XR600
POWER SUPPLY	48Vdc (POE)
MODULATION TYPE	256QAM, 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 802.11ac: up to 1300.0Mbps
OPERATING FREQUENCY	5260 ~ 5320MHz & 5500 ~ 5720MHz
NUMBER OF CHANNEL	5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5720MHz: 9 for 802.11a, 802.11n (20MHz) 4 for 802.11n (40MHz) 2 for 802.11ac (80MHz)
OUTPUT POWER	5260 ~ 5320MHz: 115.043mW 5500 ~ 5720MHz: 115.606mW
ANTENNA TYPE	Monopole antenna with 5.97dBi gain
ANTENNA CONNECTOR	I-PEX
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	NA

NOTE:

1. This is a supplementary report to RF131220C10-1. This report shall be combined together with its original report.
2. This report is prepared for FCC class II permissive change. The difference compared with the original report is adding Band 2 & Band 3 of 5GHz. Therefore, all test items for the operating frequency were re-tested and presented in the test report.
3. The EUT is collocated two dual band RF modules (Radio 1, Radio 2), which cannot co-transmit in the same band.
4. 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) (MCS 16-23)	3TX
802.11n (40MHz) (MCS 16-23)	3TX
802.11ac (VHT80)	3TX

5. The EUT was powered by the following POE (provided as a support unit only).

BRAND	PowerDsine™
MODEL	PD-9001G/AC
INPUT POWER	100-240Vac, 50-60Hz, 0.8A
OUTPUT POWER	48Vdc, 0.6A

6. All transmissions above 5.725 GHz is under 15.407 (old rules) whenever operating on a channel where the EBW crosses 5.725 GHz.
7. 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	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
58	5290MHz

FOR 5500 ~ 5720MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	132	5660 MHz
104	5520 MHz	136	5680 MHz
108	5540 MHz	140	5700 MHz
112	5560 MHz	144	5720 MHz
116	5580 MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	134	5670 MHz
110	5550 MHz	142	5710 MHz

2 channels are provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
106	5530MHz
138	5690MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Radio 1
B	√	√	√	√	Radio 2

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

NOTE:

- Radio 1**: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane.
- Radio 2**: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A, B	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
A, B	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	15.0
A, B	802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
A, B	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
A, B	802.11n (20MHz)		100 to 144	100, 116, 140, 144	OFDM	BPSK	7.2
A, B	802.11n (40MHz)		102 to 142	102, 110, 134, 142	OFDM	BPSK	15.0
A, B	802.11ac (VHT80)		106 to 138	106, 138	OFDM	BPSK	58.5

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (20MHz)	5260-5320	36 to 64	60	OFDM	BPSK	7.2
B	802.11n (20MHz)	5500-5720	100 to 144	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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (20MHz)	5260-5320	36 to 64	60	OFDM	BPSK	7.2
B	802.11n (20MHz)	5500-5720	100 to 144	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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A, B	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
A, B	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	15.0
A, B	802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
A, B	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
A, B	802.11n (20MHz)		100 to 144	100, 116, 140, 144	OFDM	BPSK	7.2
A, B	802.11n (40MHz)		102 to 142	102, 110, 134, 142	OFDM	BPSK	15.0
A, B	802.11ac (VHT80)		106 to 138	106, 138	OFDM	BPSK	58.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE $\geq$ 1G	22deg. C, 69%RH 25deg. C, 70%RH	120Vac, 60Hz	Brad Tung,
RE<1G	22deg. C, 69%RH	120Vac, 60Hz	Brad Tung
PLC	24deg. C, 70%RH	120Vac, 60Hz	Jones Chang
APCM	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui

3.3 DUTY CYCLE OF TEST SIGNAL

Test mode A

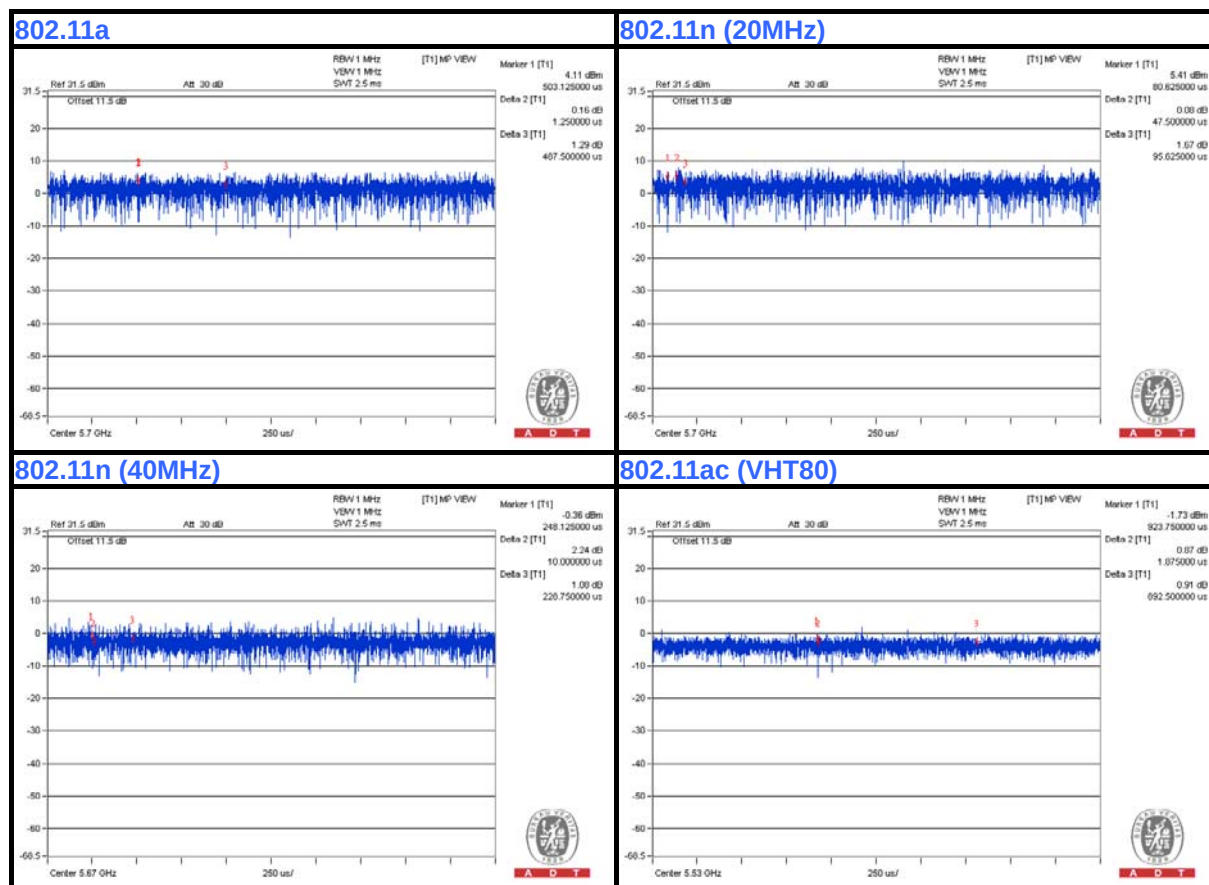
MODULATION TYPE: BPSK

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %





A D T

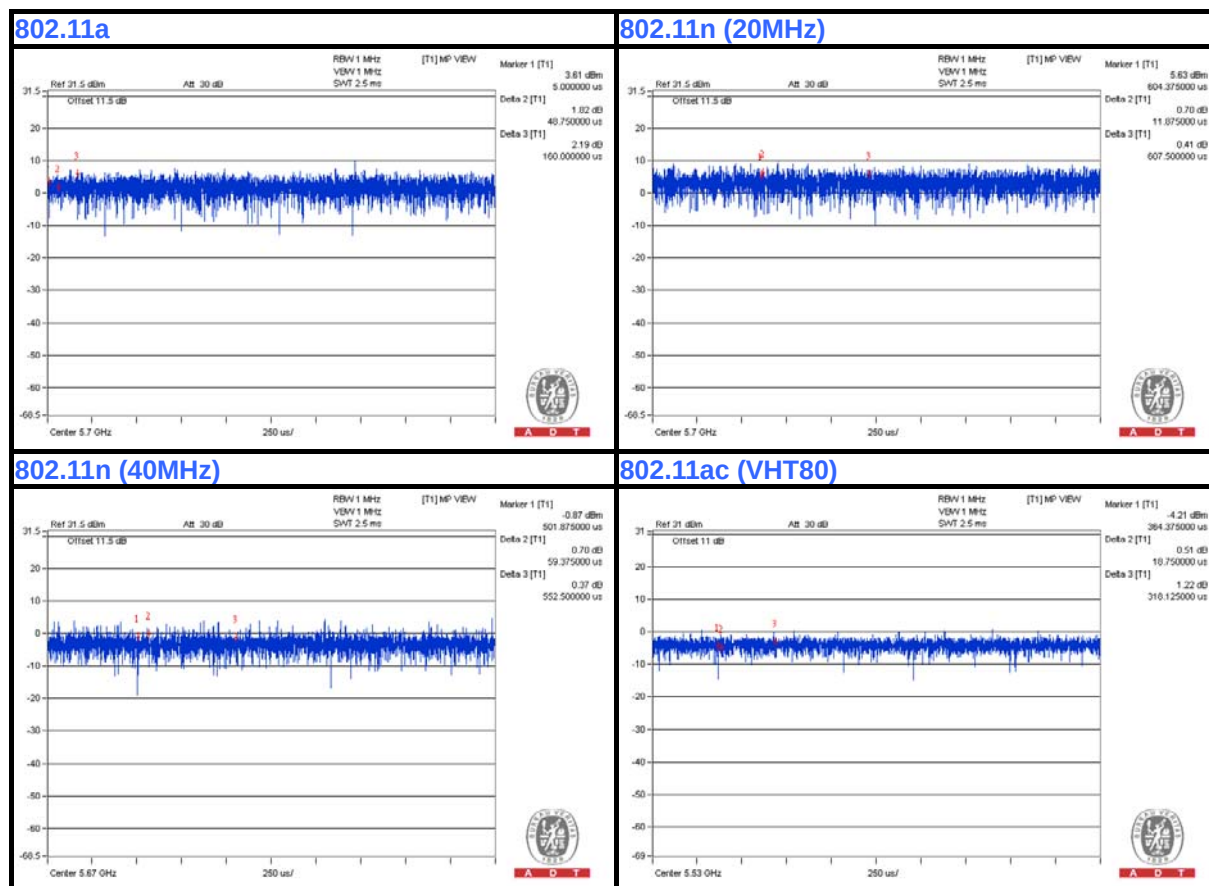
MODULATION TYPE: QPSK

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %



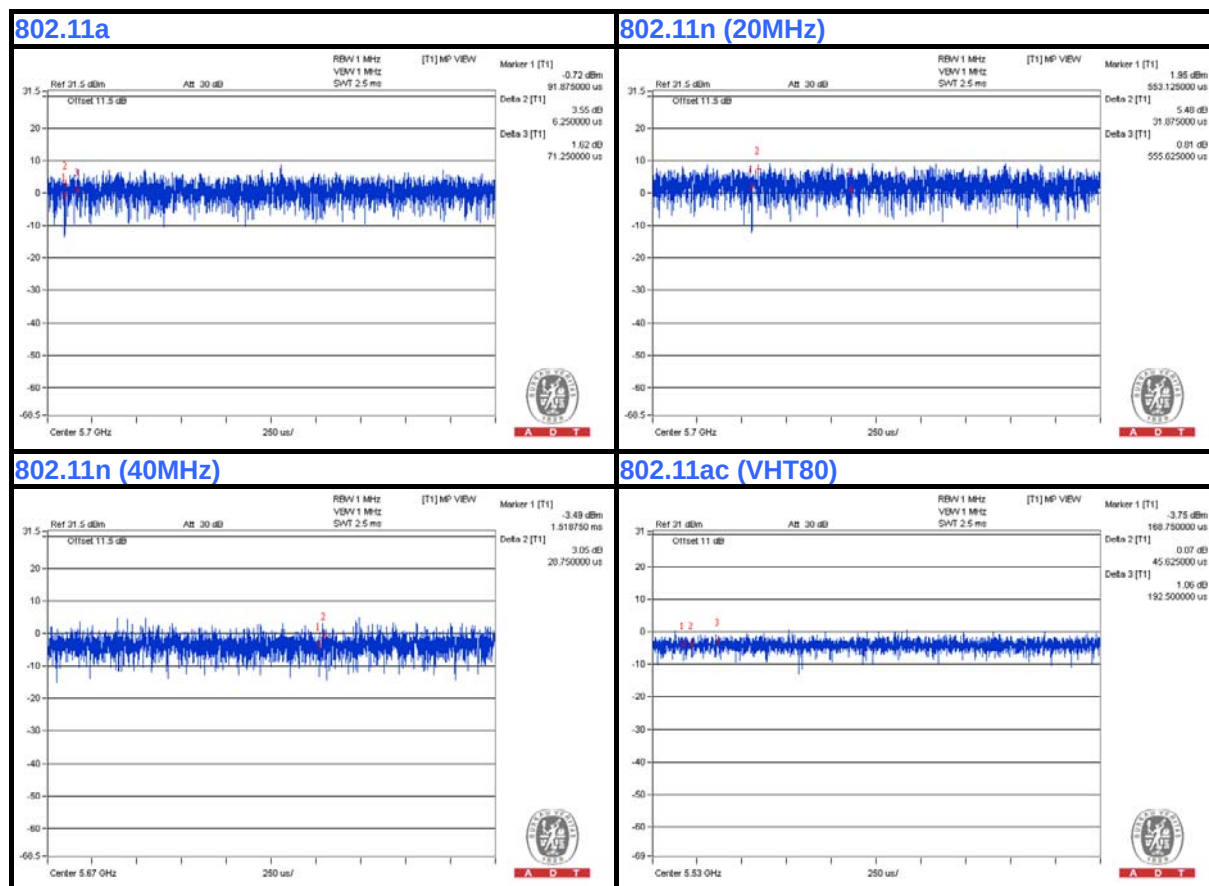
MODULATION TYPE: 16QAM

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %





A D T

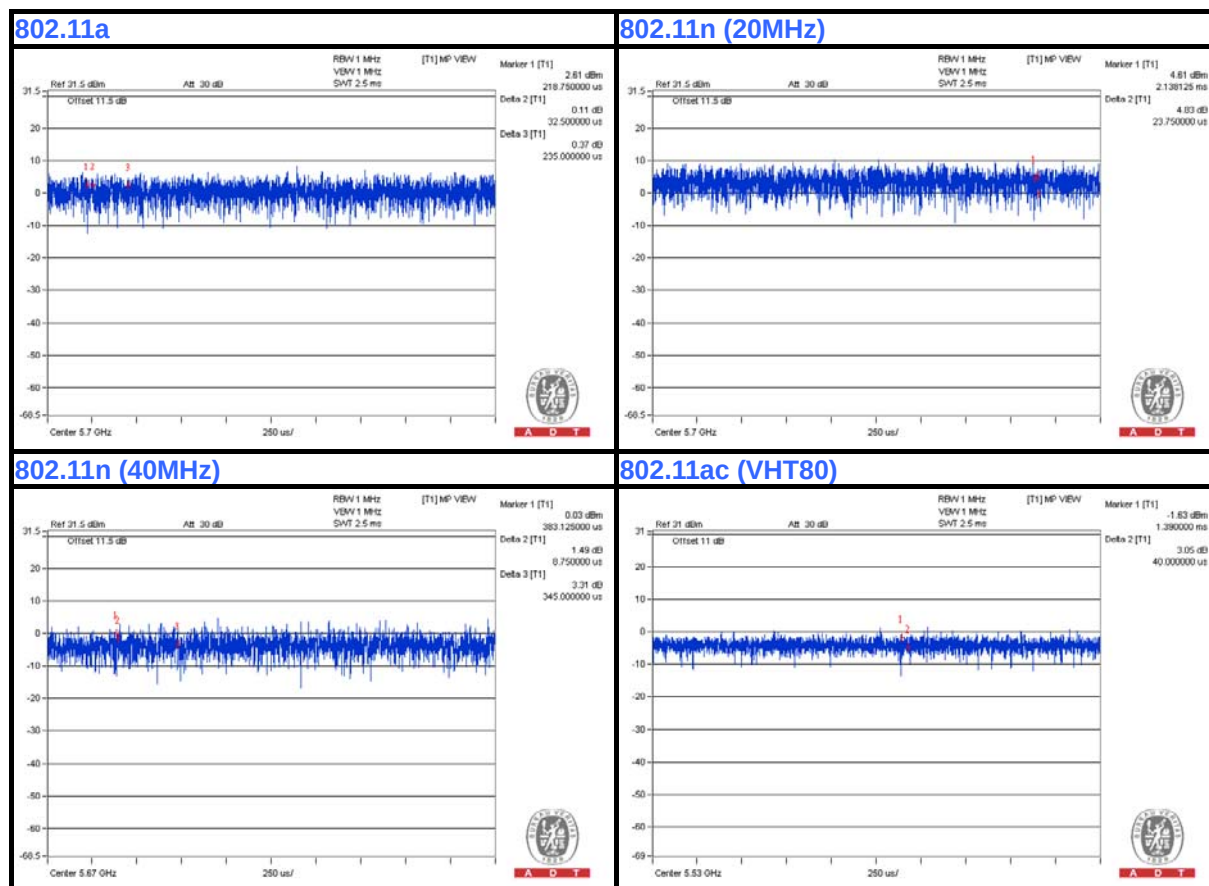
MODULATION TYPE: 64QAM

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

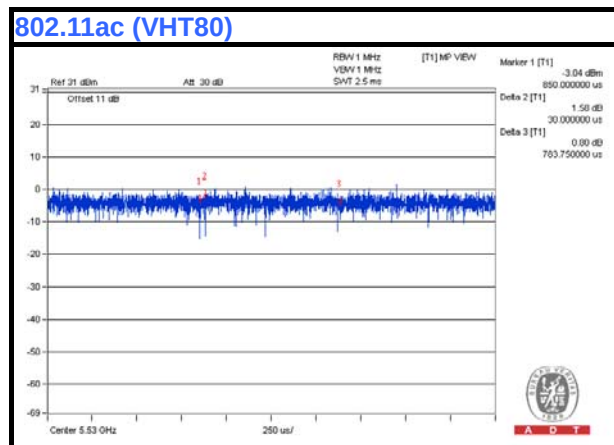
802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %



MODULATION TYPE: 256QAM

802.11ac (VHT80): Duty cycle of test signal is > 98 %

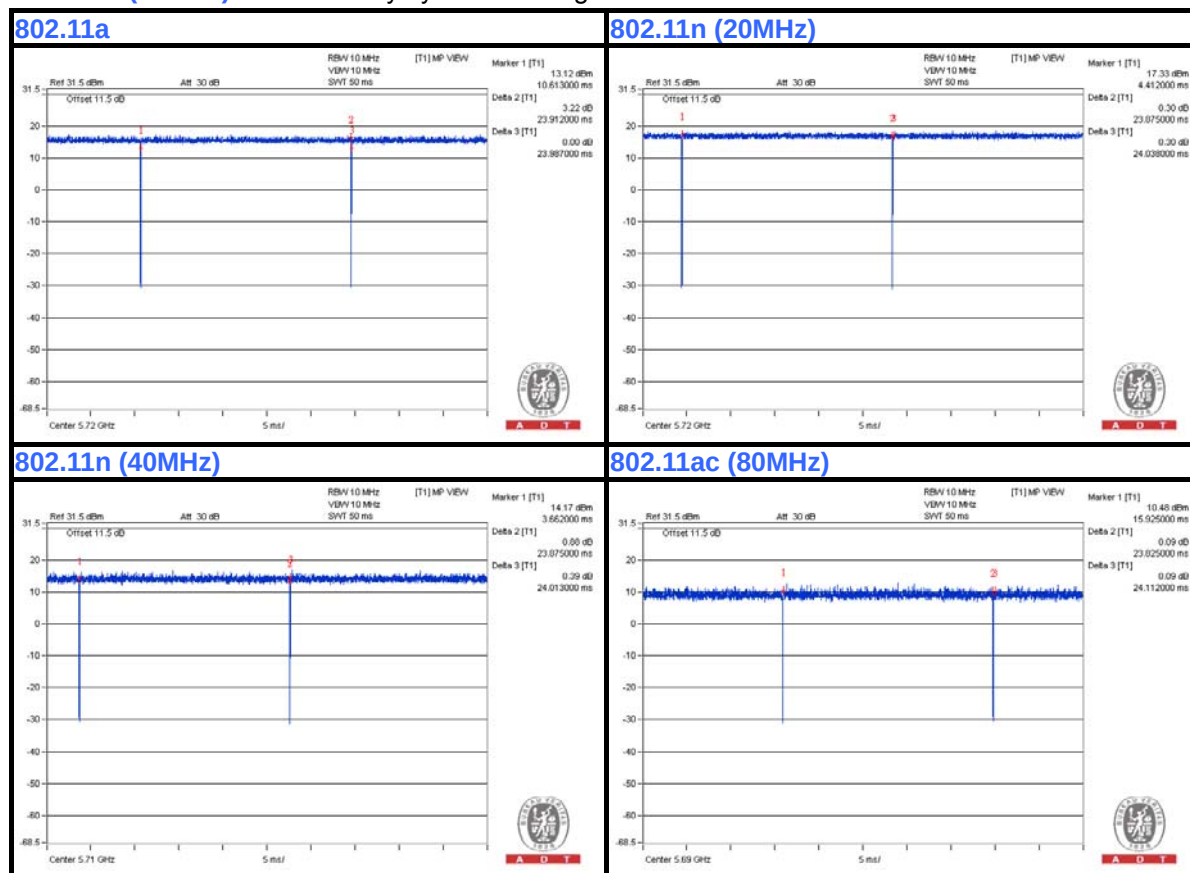


802.11a CH 144: Duty cycle of test signal is > 98 %

802.11n (20MHz) CH 144: Duty cycle of test signal is > 98 %

802.11n (40MHz) CH 142: Duty cycle of test signal is > 98 %

802.11ac (80MHz) CH 138: Duty cycle of test signal is > 98 %



Test mode B

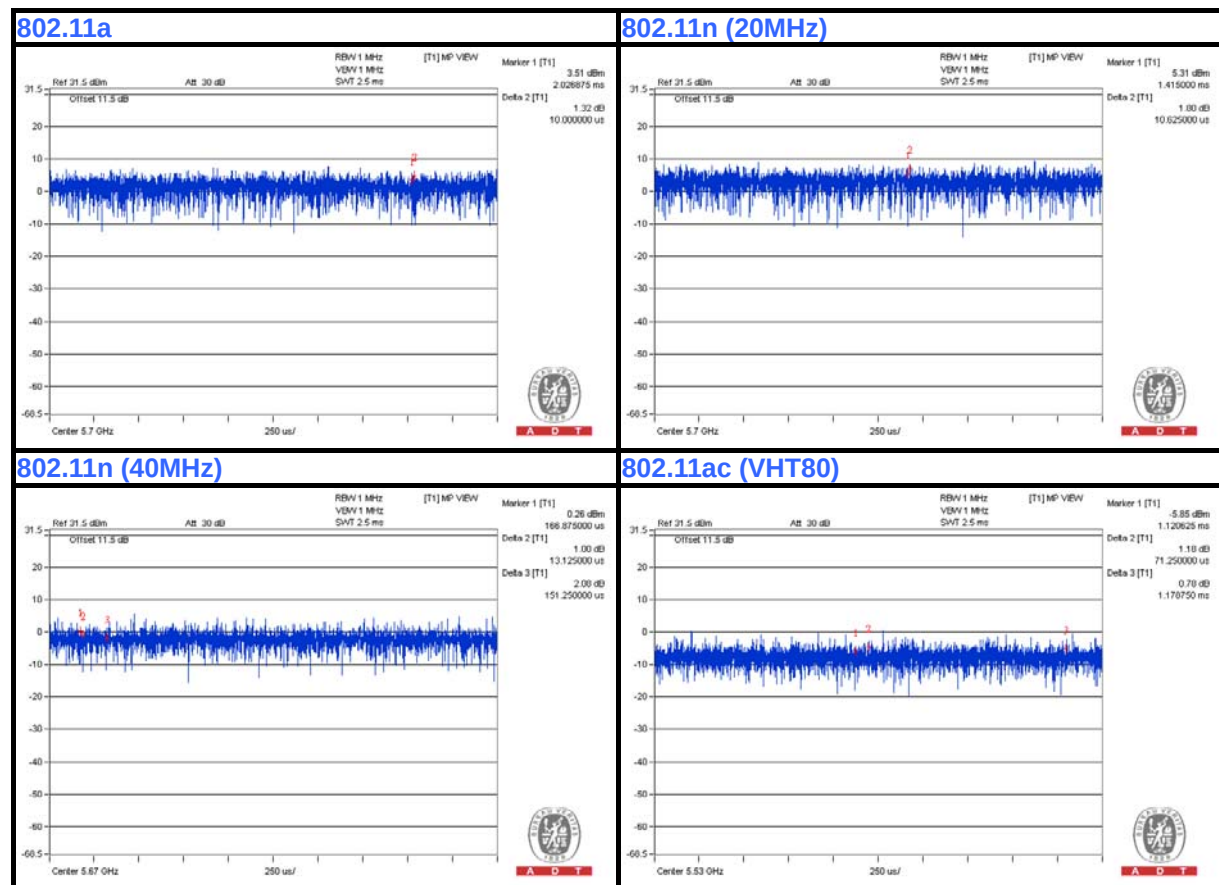
MODULATION TYPE: BPSK

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %





A D T

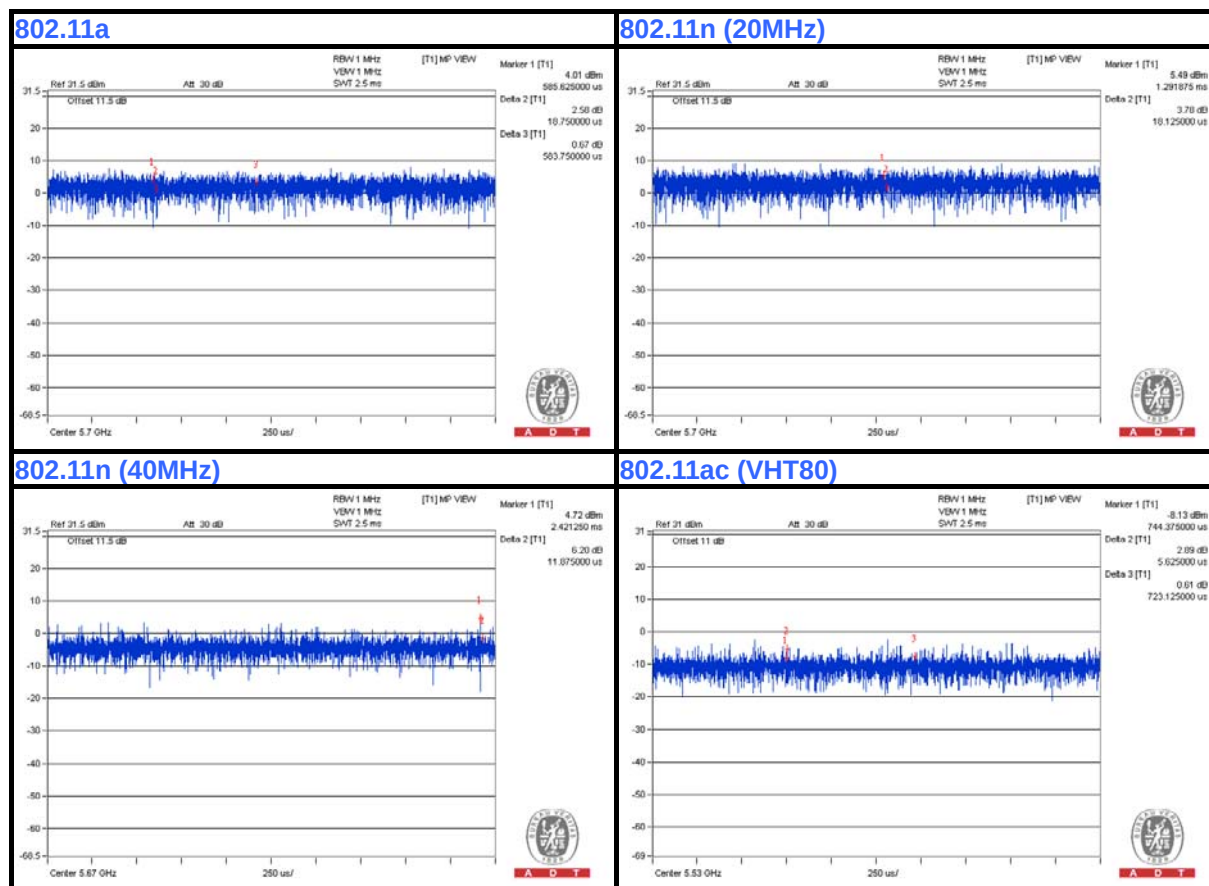
MODULATION TYPE: QPSK

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %



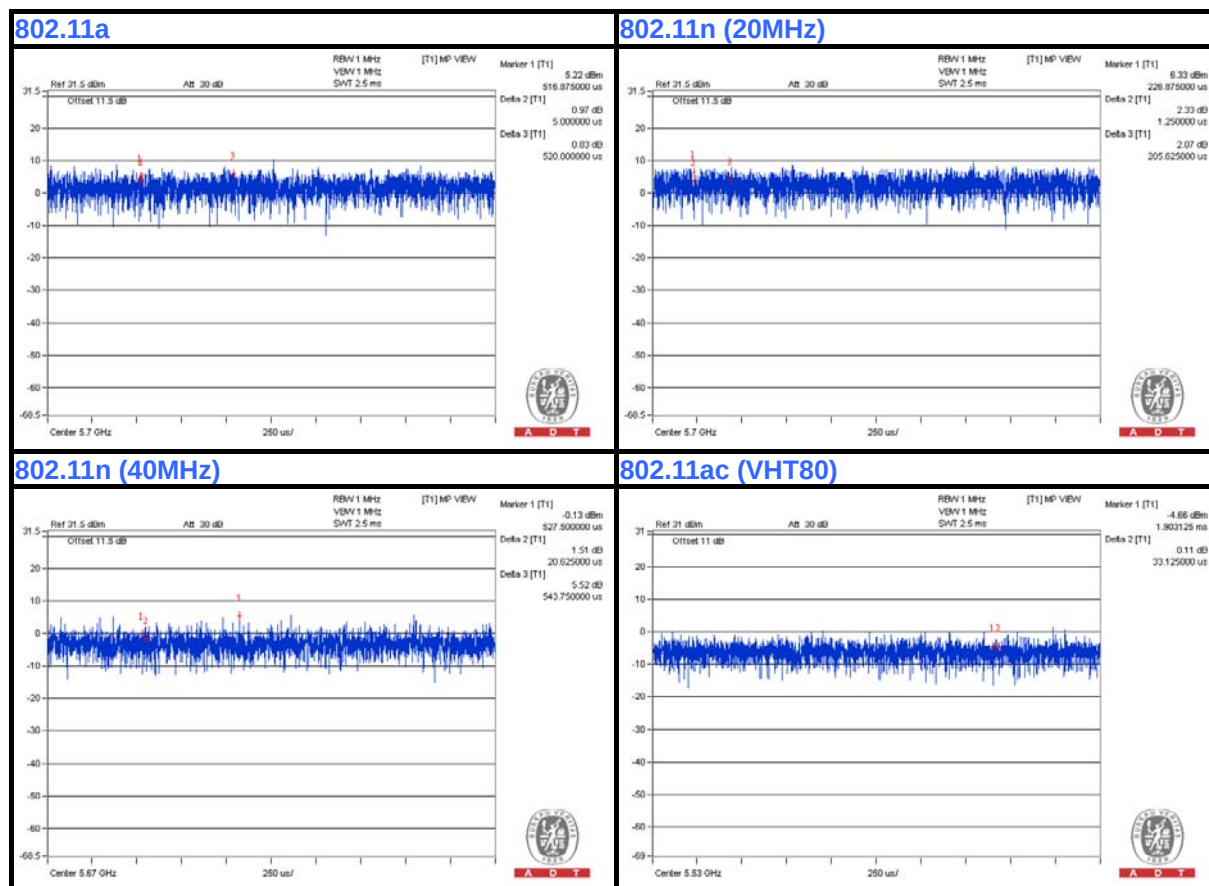
MODULATION TYPE: 16QAM

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %





A D T

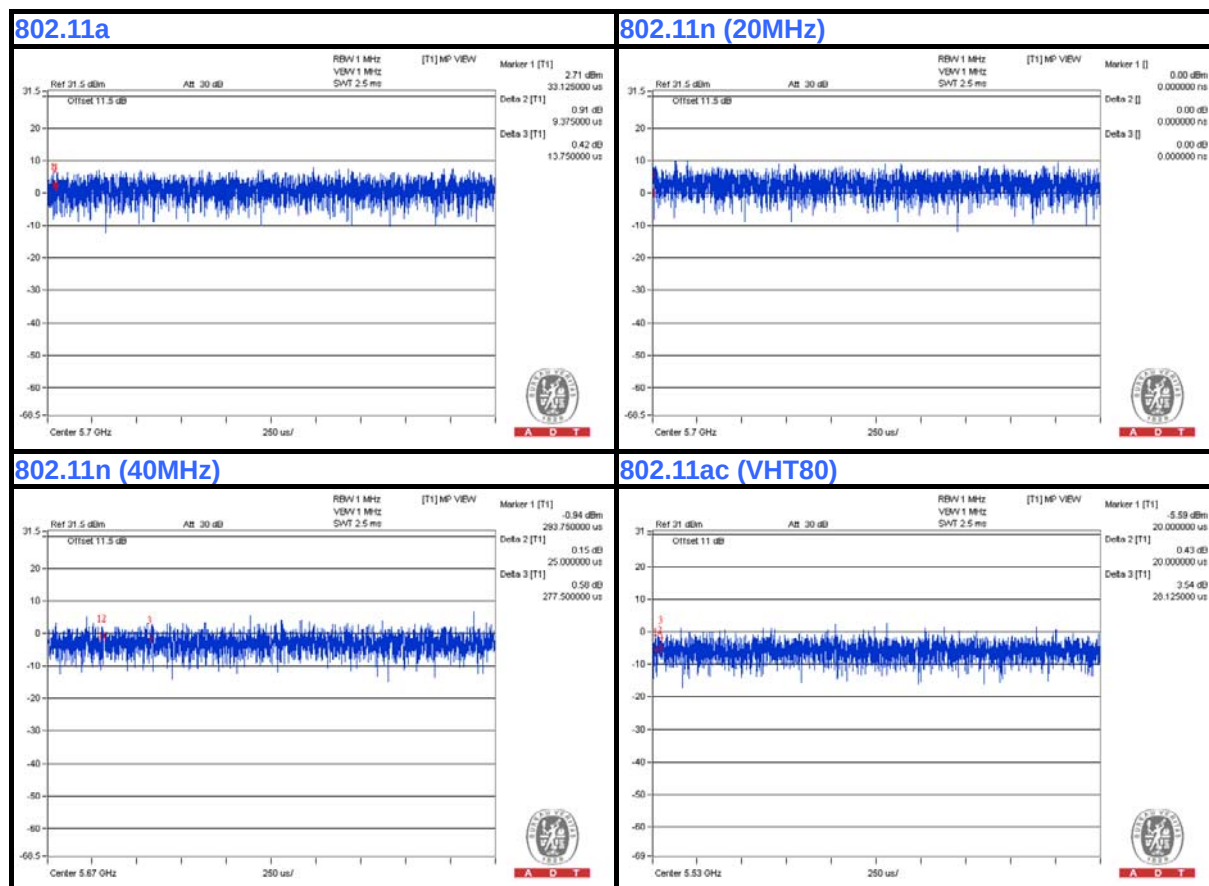
MODULATION TYPE: 64QAM

802.11a: Duty cycle of test signal is > 98 %

802.11n (20MHz): Duty cycle of test signal is > 98 %

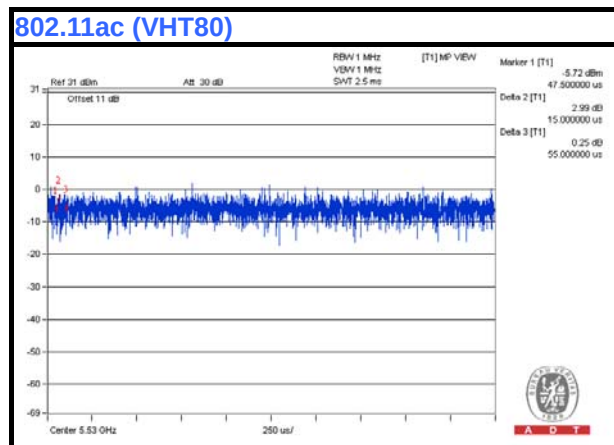
802.11n (40MHz): Duty cycle of test signal is > 98 %

802.11ac (VHT80): Duty cycle of test signal is > 98 %



MODULATION TYPE: 256QAM

802.11ac (VHT80): Duty cycle of test signal is > 98 %

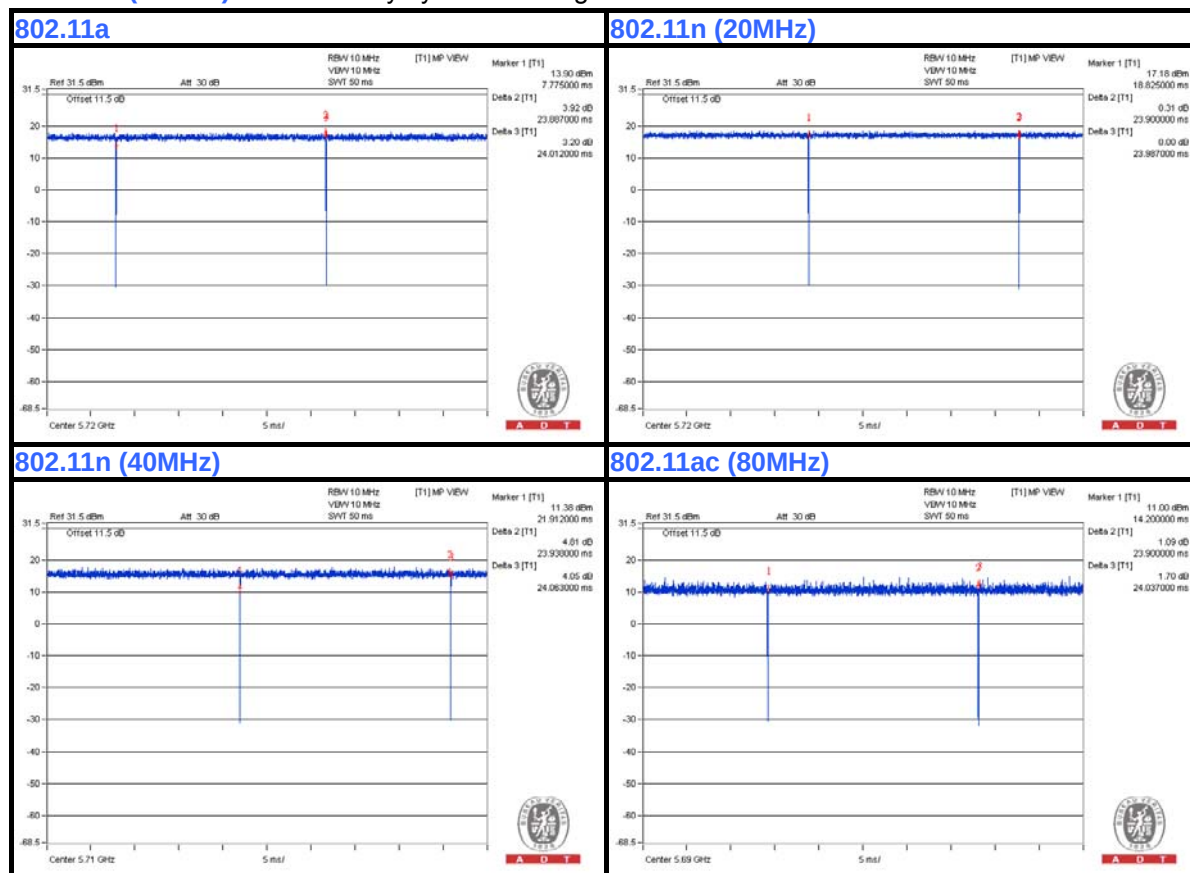


802.11a CH 144: Duty cycle of test signal is > 98 %

802.11n (20MHz) CH 144: Duty cycle of test signal is > 98 %

802.11n (40MHz) CH 142: Duty cycle of test signal is > 98 %

802.11ac (80MHz) CH 138: Duty cycle of test signal is > 98 %



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.

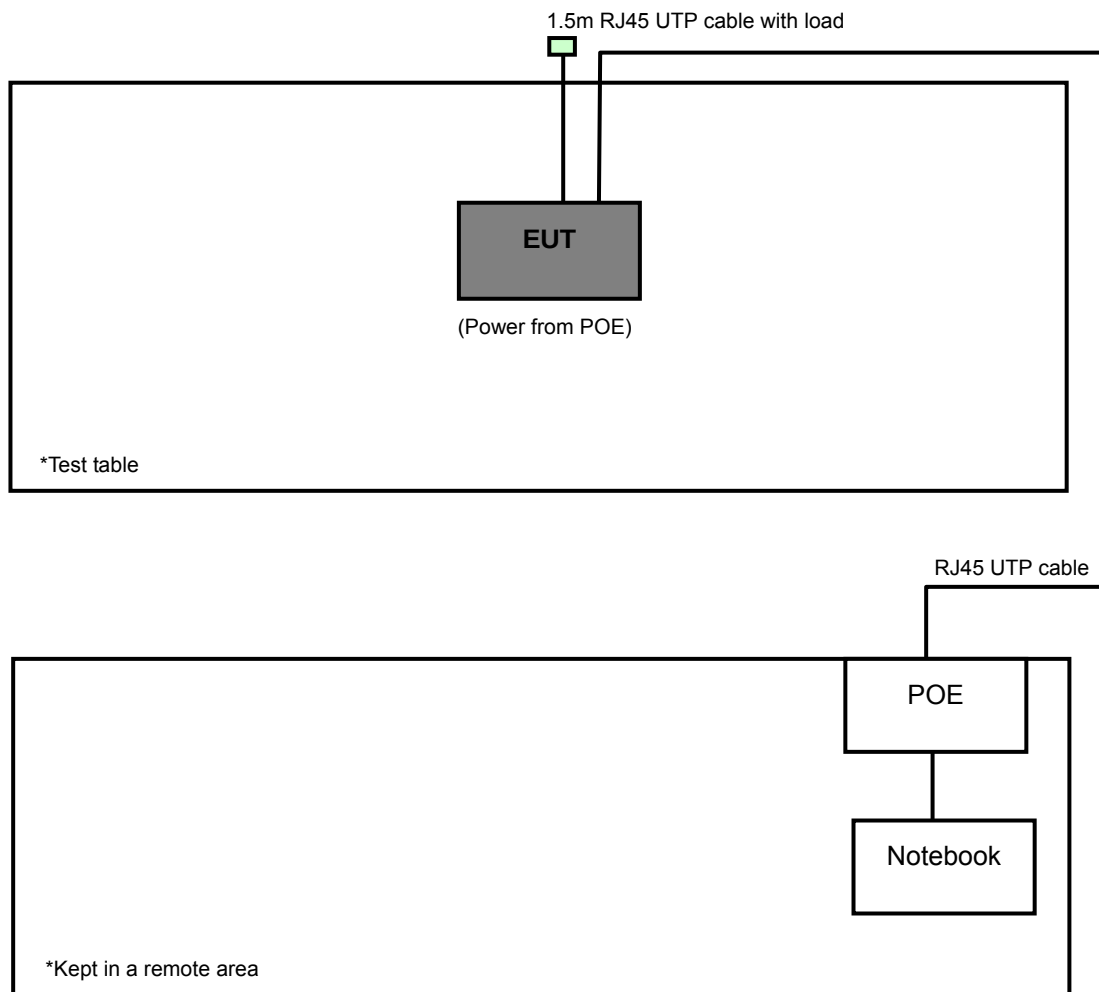
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook	DELL	D531	CN-0XM006-48643-8 1U-2973	QDS-BRCM1020
2	POE	PowerDsine™	PD-9001G/AC	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	3m RJ45 UTP cable
2	1.5m RJ45 UTP cable

NOTE:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item 1 ~ 2 acted as a communication partner to transfer data.
3. Item 2 was provided by the manufacturer.

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST



3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specification of the EUT declared by 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 Old Rules v01r04

662911 D01 Multiple Transmitter Output v02r01

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:

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

4.1.3 TEST INSTRUMENTS

Tested Date: Aug. 29 ~ Sep. 04, 2014

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Sep. 09, 2013	Sep. 08, 2014
Spectrum Analyzer ROHDE & SCHWARZ	FSU 43	100115	Dec. 18, 2013	Dec. 17, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Feb. 26, 2014	Feb. 25, 2015
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Jan. 05, 2014	Jan. 04, 2015
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Feb. 17, 2014	Feb. 16, 2015
Preamplifier Agilent	8449B	3008A01961	Oct. 28, 2013	Oct. 27, 2014
Preamplifier Agilent	8447D	2944A10738	Oct. 18, 2013	Oct. 17, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309220/4	Aug. 09, 2014	Aug. 08, 2015
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250724/4	Aug. 09, 2014	Aug. 08, 2015
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Aug. 09, 2014	Aug. 08, 2015
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	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 BV ADT	TT100.	TT93021704	NA	NA
Turn Table Controller BV ADT	SC100.	SC93021704	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 18, 2013	Oct. 17, 2014
High Speed Peak Power Meter	ML2495A	0824011	Jul. 26, 2014	Jul. 25, 2015
Power Sensor	MA2411B	0738171	Jul. 26, 2014	Jul. 25, 2015
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 9, 2014	Jun. 08, 2015

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 4.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 460141.
5. The IC Site Registration No. is 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 chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 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:

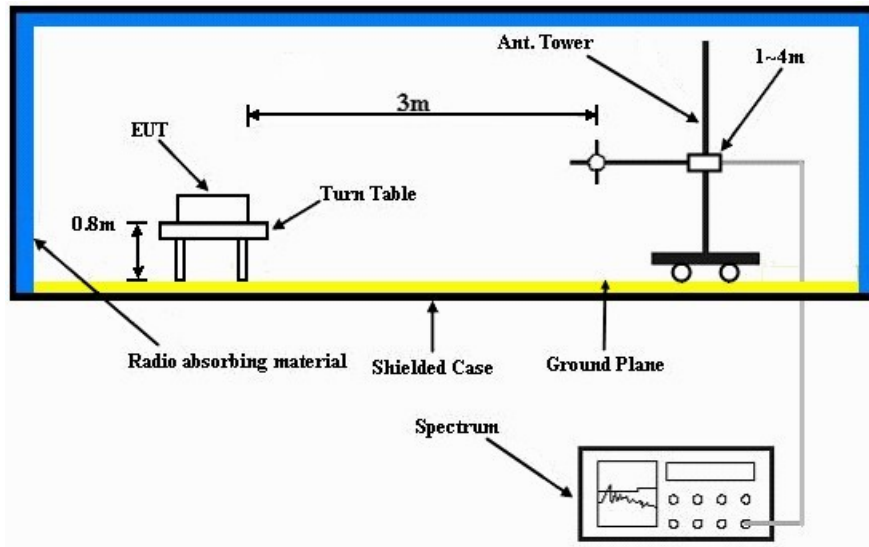
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution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

4.1.5 DEVIATION FROM TEST STANDARD

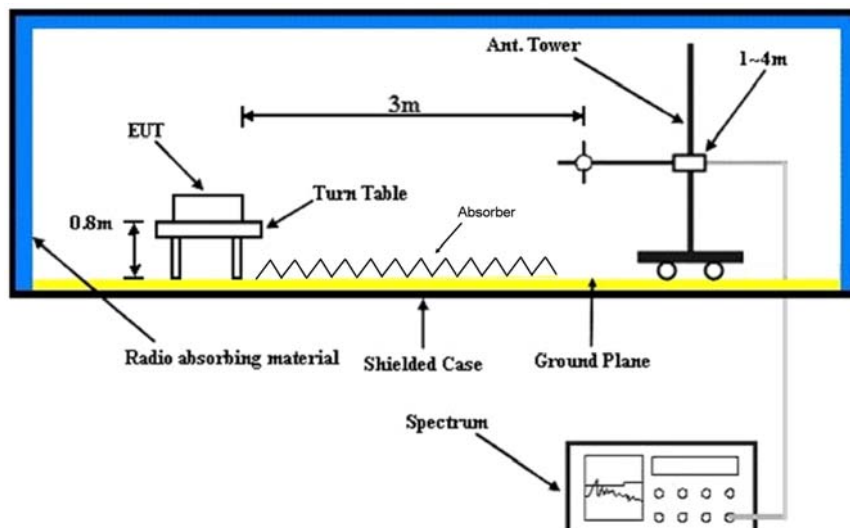
No deviation.

4.1.6 TEST SETUP

Frequency range 30MHz~1GHz



Frequency range above 1GHz



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

4.1.7 EUT OPERATING CONDITION

- a. Placed the EUT on the testing table.
- b. Prepared notebook and POE to act as communication partners and placed them outside of testing area.
- c. The communication partner connected with EUT via a RJ45 cable and ran 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".

4.1.8 TEST RESULTS

TEST MODE A

ABOVE 1GHz DATA:

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	*5260.00	104.8 PK			1.00 H	7	65.50	39.30
2	*5260.00	93.5 AV			1.00 H	7	54.20	39.30
3	#10520.00	57.5 PK	74.0	-16.5	1.14 H	157	40.70	16.80
4	#10520.00	46.9 AV	54.0	-7.1	1.14 H	157	30.10	16.80
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	*5260.00	110.9 PK			1.00 V	312	71.60	39.30
2	*5260.00	99.6 AV			1.00 V	312	60.30	39.30
3	#10520.00	58.0 PK	74.0	-16.0	1.09 V	163	41.20	16.80
4	#10520.00	47.1 AV	54.0	-6.9	1.09 V	163	30.30	16.80

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	104.0 PK			1.00 H	15	64.60	39.40
2	*5300.00	92.7 AV			1.00 H	15	53.30	39.40
3	10600.00	57.6 PK	74.0	-16.4	1.24 H	345	41.10	16.50
4	10600.00	46.5 AV	54.0	-7.5	1.24 H	345	30.00	16.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	110.5 PK			1.00 V	24	71.10	39.40
2	*5300.00	98.8 AV			1.00 V	24	59.40	39.40
3	10600.00	57.9 PK	74.0	-16.1	1.18 V	230	41.40	16.50
4	10600.00	47.0 AV	54.0	-7.0	1.18 V	230	30.50	16.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	104.0 PK			1.00 H	24	64.60	39.40
2	*5320.00	92.9 AV			1.00 H	24	53.50	39.40
3	5350.00	64.7 PK	74.0	-9.3	1.00 H	24	59.20	5.50
4	5350.00	48.0 AV	54.0	-6.0	1.00 H	24	42.50	5.50
5	10640.00	57.9 PK	74.0	-16.1	1.06 H	310	41.10	16.80
6	10640.00	46.5 AV	54.0	-7.5	1.06 H	310	29.70	16.80
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	110.0 PK			1.00 V	8	70.60	39.40
2	*5320.00	99.0 AV			1.00 V	8	59.60	39.40
3	5350.00	66.8 PK	74.0	-7.2	1.00 V	50	61.30	5.50
4	5350.00	51.3 AV	54.0	-2.7	1.00 V	50	45.80	5.50
5	10640.00	58.1 PK	74.0	-15.9	1.11 V	245	41.30	16.80
6	10640.00	46.9 AV	54.0	-7.1	1.11 V	245	30.10	16.80

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	58.1 PK	74.0	-15.9	1.00 H	21	52.50	5.60
2	5460.00	45.4 AV	54.0	-8.6	1.00 H	21	39.80	5.60
3	#5470.00	64.0 PK	74.0	-10.0	1.00 H	3	58.40	5.60
4	#5470.00	48.6 AV	54.0	-5.4	1.00 H	3	43.00	5.60
5	*5500.00	104.4 PK			1.00 H	14	64.80	39.60
6	*5500.00	93.3 AV			1.00 H	14	53.70	39.60
7	11000.00	58.5 PK	74.0	-15.5	1.25 H	50	40.00	18.50
8	11000.00	46.5 AV	54.0	-7.5	1.25 H	50	28.00	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	1.00 V	40	55.50	5.60
2	5460.00	48.0 AV	54.0	-6.0	1.00 V	40	42.40	5.60
3	#5470.00	68.4 PK	74.0	-5.6	1.00 V	18	62.80	5.60
4	#5470.00	51.9 AV	54.0	-2.1	1.00 V	18	46.30	5.60
5	*5500.00	110.5 PK			1.50 V	265	70.90	39.60
6	*5500.00	99.5 AV			1.50 V	265	59.90	39.60
7	11000.00	58.6 PK	74.0	-15.4	1.15 V	16	40.10	18.50
8	11000.00	47.0 AV	54.0	-7.0	1.15 V	16	28.50	18.50

REMARKS:

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	103.5 PK			1.00 H	8	63.70	39.80
2	*5580.00	92.3 AV			1.00 H	8	52.50	39.80
3	11160.00	58.3 PK	74.0	-15.7	1.13 H	13	39.90	18.40
4	11160.00	46.6 AV	54.0	-7.4	1.13 H	13	28.20	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	109.7 PK			1.54 V	270	69.90	39.80
2	*5580.00	98.4 AV			1.54 V	270	58.60	39.80
3	11160.00	58.6 PK	74.0	-15.4	1.35 V	340	40.20	18.40
4	11160.00	46.9 AV	54.0	-7.1	1.35 V	340	28.50	18.40

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	101.8 PK			1.00 H	351	61.70	40.10
2	*5700.00	92.0 AV			1.00 H	351	51.90	40.10
3	#5725.00	64.9 PK	74.0	-9.1	1.00 H	351	58.60	6.30
4	#5725.00	48.7 AV	54.0	-5.3	1.00 H	351	42.40	6.30
5	11400.00	58.2 PK	74.0	-15.8	1.19 H	57	40.00	18.20
6	11400.00	46.4 AV	54.0	-7.6	1.19 H	57	28.20	18.20
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	107.9 PK			1.02 V	194	67.80	40.10
2	*5700.00	98.4 AV			1.02 V	194	58.30	40.10
3	#5725.00	67.3 PK	74.0	-6.7	1.00 V	193	61.00	6.30
4	#5725.00	51.0 AV	54.0	-3.0	1.00 V	193	44.70	6.30
5	11400.00	58.4 PK	74.0	-15.6	1.07 V	246	40.20	18.20
6	11400.00	46.6 AV	54.0	-7.4	1.07 V	246	28.40	18.20

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 144	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.3 PK	74.0	-16.7	1.00 H	342	51.20	6.10
2	#5470.00	45.8 AV	54.0	-8.2	1.00 H	342	39.70	6.10
3	*5720.00	102.8 PK			1.53 H	316	62.40	40.40
4	*5720.00	92.7 AV			1.53 H	316	52.30	40.40
5	#5825.00	57.5 PK	74.0	-16.5	1.00 H	300	50.70	6.80
6	#5825.00	46.3 AV	54.0	-7.7	1.00 H	300	39.50	6.80
7	#11440.00	59.5 PK	74.0	-14.5	1.06 H	241	41.60	17.90
8	#11440.00	47.7 AV	54.0	-6.3	1.06 H	241	29.80	17.90
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	#5470.00	57.5 PK	74.0	-16.5	1.00 V	253	51.40	6.10
2	#5470.00	46.0 AV	54.0	-8.0	1.00 V	253	39.90	6.10
3	*5720.00	109.3 PK			1.00 V	351	68.90	40.40
4	*5720.00	99.7 AV			1.00 V	351	59.30	40.40
5	#5825.00	57.8 PK	74.0	-16.2	1.00 V	286	51.00	6.80
6	#5825.00	46.5 AV	54.0	-7.5	1.00 V	286	39.70	6.80
7	#11440.00	59.7 PK	74.0	-14.3	1.25 V	80	41.80	17.90
8	#11440.00	47.7 AV	54.0	-6.3	1.25 V	80	29.80	17.90

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 of the restricted band.

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	*5260.00	104.7 PK			1.00 H	37	65.40	39.30
2	*5260.00	94.1 AV			1.00 H	37	54.80	39.30
3	#10520.00	57.4 PK	74.0	-16.6	1.11 H	155	40.60	16.80
4	#10520.00	47.2 AV	54.0	-6.8	1.11 H	155	30.40	16.80
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	*5260.00	111.3 PK			1.00 V	13	72.00	39.30
2	*5260.00	100.6 AV			1.00 V	13	61.30	39.30
3	#10520.00	57.7 PK	74.0	-16.3	1.09 V	60	40.90	16.80
4	#10520.00	47.4 AV	54.0	-6.6	1.09 V	60	30.60	16.80

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	104.6 PK			1.00 H	16	65.20	39.40
2	*5300.00	94.2 AV			1.00 H	16	54.80	39.40
3	10600.00	57.2 PK	74.0	-16.8	1.08 H	142	40.70	16.50
4	10600.00	46.7 AV	54.0	-7.3	1.08 H	142	30.20	16.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	111.2 PK			1.00 V	8	71.80	39.40
2	*5300.00	100.7 AV			1.00 V	8	61.30	39.40
3	10600.00	57.3 PK	74.0	-16.7	1.15 V	127	40.80	16.50
4	10600.00	47.1 AV	54.0	-6.9	1.15 V	127	30.60	16.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	104.8 PK			1.00 H	21	65.40	39.40
2	*5320.00	94.4 AV			1.00 H	21	55.00	39.40
3	5350.00	65.3 PK	74.0	-8.7	1.00 H	21	59.80	5.50
4	5350.00	49.6 AV	54.0	-4.4	1.00 H	21	44.10	5.50
5	10640.00	57.6 PK	74.0	-16.4	1.16 H	30	40.80	16.80
6	10640.00	47.2 AV	54.0	-6.8	1.16 H	30	30.40	16.80
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	111.3 PK			1.00 V	9	71.90	39.40
2	*5320.00	101.0 AV			1.00 V	9	61.60	39.40
3	5350.00	65.8 PK	74.0	-8.2	1.00 V	26	60.30	5.50
4	5350.00	51.7 AV	54.0	-2.3	1.00 V	26	46.20	5.50
5	10640.00	57.8 PK	74.0	-16.2	1.24 V	210	41.00	16.80
6	10640.00	47.3 AV	54.0	-6.7	1.24 V	210	30.50	16.80

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	59.1 PK	74.0	-14.9	1.00 H	50	53.50	5.60
2	5460.00	46.6 AV	54.0	-7.4	1.00 H	50	41.00	5.60
3	#5470.00	65.4 PK	74.0	-8.6	1.00 H	50	59.80	5.60
4	#5470.00	50.3 AV	54.0	-3.7	1.00 H	50	44.70	5.60
5	*5500.00	106.6 PK			1.00 H	50	67.00	39.60
6	*5500.00	95.6 AV			1.00 H	50	56.00	39.60
7	11000.00	59.8 PK	74.0	-14.2	1.12 H	30	41.30	18.50
8	11000.00	48.0 AV	54.0	-6.0	1.12 H	30	29.50	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.1 PK	74.0	-11.9	1.00 V	33	56.50	5.60
2	5460.00	48.6 AV	54.0	-5.4	1.00 V	33	43.00	5.60
3	#5470.00	67.4 PK	74.0	-6.6	1.00 V	57	61.80	5.60
4	#5470.00	52.6 AV	54.0	-1.4	1.00 V	57	47.00	5.60
5	*5500.00	113.0 PK			1.42 V	253	73.40	39.60
6	*5500.00	102.1 AV			1.42 V	253	62.50	39.60
7	11000.00	60.1 PK	74.0	-13.9	1.03 V	88	41.60	18.50
8	11000.00	48.2 AV	54.0	-5.8	1.03 V	88	29.70	18.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	106.7 PK			1.00 H	11	66.90	39.80
2	*5580.00	95.6 AV			1.00 H	11	55.80	39.80
3	11160.00	59.2 PK	74.0	-14.8	1.20 H	30	40.80	18.40
4	11160.00	47.8 AV	54.0	-6.2	1.20 H	30	29.40	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	113.1 PK			1.48 V	266	73.30	39.80
2	*5580.00	102.0 AV			1.48 V	266	62.20	39.80
3	11160.00	59.3 PK	74.0	-14.7	1.30 V	312	40.90	18.40
4	11160.00	48.0 AV	54.0	-6.0	1.30 V	312	29.60	18.40

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	104.6 PK			1.00 H	338	64.50	40.10
2	*5700.00	94.8 AV			1.00 H	338	54.70	40.10
3	#5725.00	66.3 PK	74.0	-7.7	1.00 H	338	60.00	6.30
4	#5725.00	49.6 AV	54.0	-4.4	1.00 H	338	43.30	6.30
5	11400.00	59.3 PK	74.0	-14.7	1.15 H	62	41.10	18.20
6	11400.00	47.7 AV	54.0	-6.3	1.15 H	62	29.50	18.20
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	110.9 PK			1.00 V	201	70.80	40.10
2	*5700.00	101.1 AV			1.00 V	201	61.00	40.10
3	#5725.00	68.4 PK	74.0	-5.6	1.00 V	201	62.10	6.30
4	#5725.00	52.3 AV	54.0	-1.7	1.00 V	201	46.00	6.30
5	11400.00	59.3 PK	74.0	-14.7	1.10 V	253	41.10	18.20
6	11400.00	47.7 AV	54.0	-6.3	1.10 V	253	29.50	18.20

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 144	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.3 PK	74.0	-16.7	1.00 H	355	51.20	6.10
2	#5470.00	45.8 AV	54.0	-8.2	1.00 H	355	39.70	6.10
3	*5720.00	103.4 PK			1.52 H	320	63.00	40.40
4	*5720.00	94.1 AV			1.52 H	320	53.70	40.40
5	#5825.00	57.8 PK	74.0	-16.2	1.00 H	188	51.00	6.80
6	#5825.00	46.2 AV	54.0	-7.8	1.00 H	188	39.40	6.80
7	#11440.00	59.3 PK	74.0	-14.7	1.00 H	217	41.40	17.90
8	#11440.00	47.6 AV	54.0	-6.4	1.00 H	217	29.70	17.90
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	#5470.00	57.7 PK	74.0	-16.3	1.00 V	250	51.60	6.10
2	#5470.00	46.1 AV	54.0	-7.9	1.00 V	250	40.00	6.10
3	*5720.00	110.9 PK			1.00 V	350	70.50	40.40
4	*5720.00	101.1 AV			1.00 V	350	60.70	40.40
5	#5825.00	58.0 PK	74.0	-16.0	1.00 V	342	51.20	6.80
6	#5825.00	46.5 AV	54.0	-7.5	1.00 V	342	39.70	6.80
7	#11440.00	59.7 PK	74.0	-14.3	1.00 V	93	41.80	17.90
8	#11440.00	47.7 AV	54.0	-6.3	1.00 V	93	29.80	17.90

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 of the restricted band.

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	*5270.00	101.6 PK			1.00 H	33	62.20	39.40
2	*5270.00	91.7 AV			1.00 H	33	52.30	39.40
3	#10540.00	57.5 PK	74.0	-16.5	1.13 H	105	40.80	16.70
4	#10540.00	47.4 AV	54.0	-6.6	1.13 H	105	30.70	16.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	108.1 PK			1.00 V	7	68.70	39.40
2	*5270.00	98.2 AV			1.00 V	7	58.80	39.40
3	#10540.00	57.6 PK	74.0	-16.4	1.20 V	33	40.90	16.70
4	#10540.00	47.4 AV	54.0	-6.6	1.20 V	33	30.70	16.70

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	99.6 PK			1.00 H	27	60.20	39.40
2	*5310.00	89.7 AV			1.00 H	27	50.30	39.40
3	5350.00	65.7 PK	74.0	-8.3	1.00 H	27	60.20	5.50
4	5350.00	49.7 AV	54.0	-4.3	1.00 H	27	44.20	5.50
5	10620.00	57.4 PK	74.0	-16.6	1.08 H	90	40.70	16.70
6	10620.00	47.2 AV	54.0	-6.8	1.08 H	90	30.50	16.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	106.4 PK			1.00 V	12	67.00	39.40
2	*5310.00	96.4 AV			1.00 V	12	57.00	39.40
3	5350.00	68.2 PK	74.0	-5.8	1.00 V	22	62.70	5.50
4	5350.00	52.7 AV	54.0	-1.3	1.00 V	22	47.20	5.50
5	10620.00	57.6 PK	74.0	-16.4	1.17 V	81	40.90	16.70
6	10620.00	47.3 AV	54.0	-6.7	1.17 V	81	30.60	16.70

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	59.8 PK	74.0	-14.2	1.00 H	20	54.20	5.60
2	5460.00	44.2 AV	54.0	-9.8	1.00 H	20	38.60	5.60
3	#5470.00	66.6 PK	74.0	-7.4	1.00 H	20	61.00	5.60
4	#5470.00	49.2 AV	54.0	-4.8	1.00 H	20	43.60	5.60
5	*5510.00	100.1 PK			1.00 H	20	60.50	39.60
6	*5510.00	88.8 AV			1.00 H	20	49.20	39.60
7	11020.00	59.9 PK	74.0	-14.1	1.22 H	104	41.30	18.60
8	11020.00	48.7 AV	54.0	-5.3	1.22 H	104	30.10	18.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.1 PK	74.0	-10.9	1.07 V	13	57.50	5.60
2	5460.00	47.9 AV	54.0	-6.1	1.07 V	13	42.30	5.60
3	#5470.00	70.6 PK	74.0	-3.4	1.07 V	13	65.00	5.60
4	#5470.00	53.0 AV	54.0	-1.0	1.07 V	13	47.40	5.60
5	*5510.00	106.6 PK			1.42 V	19	67.00	39.60
6	*5510.00	95.3 AV			1.42 V	19	55.70	39.60
7	11020.00	60.1 PK	74.0	-13.9	1.31 V	29	41.50	18.60
8	11020.00	48.9 AV	54.0	-5.1	1.31 V	29	30.30	18.60

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	103.1 PK			1.00 H	25	63.30	39.80
2	*5550.00	92.1 AV			1.00 H	25	52.30	39.80
3	11100.00	59.6 PK	74.0	-14.4	1.12 H	130	41.00	18.60
4	11100.00	48.4 AV	54.0	-5.6	1.12 H	130	29.80	18.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	109.6 PK			1.63 V	261	69.80	39.80
2	*5550.00	98.7 AV			1.63 V	261	58.90	39.80
3	11100.00	59.8 PK	74.0	-14.2	1.20 V	188	41.20	18.60
4	11100.00	48.7 AV	54.0	-5.3	1.20 V	188	30.10	18.60

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	101.6 PK			1.00 H	7	61.60	40.00
2	*5670.00	91.6 AV			1.00 H	7	51.60	40.00
3	#5725.00	63.3 PK	74.0	-10.7	1.00 H	7	57.00	6.30
4	#5725.00	50.4 AV	54.0	-3.6	1.00 H	7	44.10	6.30
5	11340.00	59.3 PK	74.0	-14.7	1.30 H	275	41.00	18.30
6	11340.00	47.9 AV	54.0	-6.1	1.30 H	275	29.60	18.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	108.0 PK			1.60 V	20	68.00	40.00
2	*5670.00	98.0 AV			1.60 V	20	58.00	40.00
3	#5725.00	66.3 PK	74.0	-7.7	1.57 V	268	60.00	6.30
4	#5725.00	52.6 AV	54.0	-1.4	1.57 V	268	46.30	6.30
5	11340.00	59.5 PK	74.0	-14.5	1.42 V	25	41.20	18.30
6	11340.00	48.0 AV	54.0	-6.0	1.42 V	25	29.70	18.30

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 142	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.7 PK	74.0	-16.3	1.00 H	104	51.60	6.10
2	#5470.00	45.9 AV	54.0	-8.1	1.00 H	104	39.80	6.10
3	*5710.00	103.4 PK			1.41 H	3	63.00	40.40
4	*5710.00	93.2 AV			1.41 H	3	52.80	40.40
5	#5825.00	59.4 PK	74.0	-14.6	1.00 H	225	52.60	6.80
6	#5825.00	45.8 AV	54.0	-8.2	1.00 H	225	39.00	6.80
7	#11420.00	59.0 PK	74.0	-15.0	1.00 H	132	41.10	17.90
8	#11420.00	47.5 AV	54.0	-6.5	1.00 H	132	29.60	17.90
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	#5470.00	57.9 PK	74.0	-16.1	1.00 V	34	51.80	6.10
2	#5470.00	45.9 AV	54.0	-8.1	1.00 V	34	39.80	6.10
3	*5710.00	108.3 PK			1.00 V	18	67.90	40.40
4	*5710.00	98.0 AV			1.00 V	18	57.60	40.40
5	#5825.00	59.8 PK	74.0	-14.2	1.00 V	67	53.00	6.80
6	#5825.00	45.8 AV	54.0	-8.2	1.00 V	67	39.00	6.80
7	#11420.00	59.1 PK	74.0	-14.9	1.00 V	145	41.20	17.90
8	#11420.00	47.5 AV	54.0	-6.5	1.00 V	145	29.60	17.90

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 of the restricted band.

802.11ac (VHT80)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 58	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Jones Chang

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	*5290.00	98.2 PK			1.00 H	66	58.80	39.40
2	*5290.00	86.6 AV			1.00 H	66	47.20	39.40
3	5350.00	65.5 PK	74.0	-8.5	1.00 H	50	60.00	5.50
4	5350.00	50.0 AV	54.0	-4.0	1.00 H	50	44.50	5.50
5	#10580.00	57.3 PK	74.0	-16.7	1.01 H	115	40.70	16.60
6	#10580.00	45.7 AV	54.0	-8.3	1.01 H	115	29.10	16.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	104.6 PK			1.48 V	91	65.20	39.40
2	*5290.00	93.4 AV			1.48 V	91	54.00	39.40
3	5350.00	64.5 PK	74.0	-9.5	1.49 V	7	59.00	5.50
4	5350.00	52.5 AV	54.0	-1.5	1.49 V	7	47.00	5.50
5	#10580.00	58.2 PK	74.0	-15.8	1.01 V	225	41.60	16.60
6	#10580.00	46.4 AV	54.0	-7.6	1.01 V	225	29.80	16.60

REMARKS:

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 106	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Jones Chang

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	55.7 PK	74.0	-18.3	1.00 H	188	50.10	5.60
2	5460.00	45.1 AV	54.0	-8.9	1.00 H	188	39.50	5.60
3	#5470.00	58.9 PK	74.0	-15.1	1.02 H	194	53.30	5.60
4	#5470.00	45.9 AV	54.0	-8.1	1.02 H	194	40.30	5.60
5	*5530.00	95.6 PK			1.02 H	194	55.90	39.70
6	*5530.00	86.3 AV			1.02 H	194	46.60	39.70
7	11060.00	58.9 PK	74.0	-15.1	1.00 H	19	40.40	18.50
8	11060.00	48.0 AV	54.0	-6.0	1.00 H	19	29.50	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5450.00	97.0 PK			1.57 V	7	57.40	39.60
2	5450.00	83.1 AV			1.57 V	7	43.50	39.60
3	#5470.00	67.1 PK	74.0	-6.9	1.57 V	12	61.50	5.60
4	#5470.00	52.8 AV	54.0	-1.2	1.57 V	12	47.20	5.60
5	*5530.00	102.0 PK			1.04 V	12	62.30	39.70
6	*5530.00	91.7 AV			1.04 V	12	52.00	39.70
7	11060.00	59.5 PK	74.0	-14.5	1.00 V	355	41.00	18.50
8	11060.00	48.8 AV	54.0	-5.2	1.00 V	355	30.30	18.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 138	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.9 PK	74.0	-16.1	1.00 H	90	51.80	6.10
2	#5470.00	44.9 AV	54.0	-9.1	1.00 H	90	38.80	6.10
3	*5690.00	96.6 PK			1.04 H	0	56.20	40.40
4	*5690.00	85.7 AV			1.04 H	0	45.30	40.40
5	#5825.00	57.3 PK	74.0	-16.7	1.00 H	235	50.50	6.80
6	#5825.00	45.2 AV	54.0	-8.8	1.00 H	235	38.40	6.80
7	#11380.00	59.4 PK	74.0	-14.6	1.00 H	164	41.00	18.40
8	#11380.00	46.9 AV	54.0	-7.1	1.00 H	164	28.50	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	58.0 PK	74.0	-16.0	1.00 V	45	51.90	6.10
2	#5470.00	45.0 AV	54.0	-9.0	1.00 V	45	38.90	6.10
3	*5690.00	102.8 PK			1.00 V	17	62.40	40.40
4	*5690.00	92.3 AV			1.00 V	17	51.90	40.40
5	#5825.00	57.8 PK	74.0	-16.2	1.00 V	12	51.00	6.80
6	#5825.00	45.5 AV	54.0	-8.5	1.00 V	12	38.70	6.80
7	#11380.00	59.5 PK	74.0	-14.5	1.00 V	233	41.10	18.40
8	#11380.00	47.3 AV	54.0	-6.7	1.00 V	233	28.90	18.40

REMARKS:

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

TEST MODE B

ABOVE 1GHz DATA:

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	*5260.00	105.0 PK			1.00 H	7	65.70	39.30
2	*5260.00	94.5 AV			1.00 H	7	55.20	39.30
3	#10520.00	58.6 PK	74.0	-15.4	1.03 H	324	41.80	16.80
4	#10520.00	46.3 AV	54.0	-7.7	1.03 H	324	29.50	16.80
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	*5260.00	111.8 PK			1.00 V	15	72.50	39.30
2	*5260.00	101.3 AV			1.00 V	15	62.00	39.30
3	#10520.00	58.7 PK	74.0	-15.3	1.13 V	256	41.90	16.80
4	#10520.00	46.5 AV	54.0	-7.5	1.13 V	256	29.70	16.80

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	104.9 PK			1.00 H	8	65.50	39.40
2	*5300.00	94.4 AV			1.00 H	8	55.00	39.40
3	10600.00	58.2 PK	74.0	-15.8	1.11 H	320	41.70	16.50
4	10600.00	45.8 AV	54.0	-8.2	1.11 H	320	29.30	16.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	111.5 PK			1.00 V	21	72.10	39.40
2	*5300.00	100.6 AV			1.00 V	21	61.20	39.40
3	10600.00	58.3 PK	74.0	-15.7	1.25 V	163	41.80	16.50
4	10600.00	46.1 AV	54.0	-7.9	1.25 V	163	29.60	16.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	104.8 PK			1.00 H	10	65.40	39.40
2	*5320.00	94.2 AV			1.00 H	10	54.80	39.40
3	5350.00	64.0 PK	74.0	-10.0	1.00 H	10	58.50	5.50
4	5350.00	48.6 AV	54.0	-5.4	1.00 H	10	43.10	5.50
5	10640.00	58.4 PK	74.0	-15.6	1.06 H	312	41.60	16.80
6	10640.00	46.1 AV	54.0	-7.9	1.06 H	312	29.30	16.80
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	110.8 PK			1.00 V	17	71.40	39.40
2	*5320.00	100.4 AV			1.00 V	17	61.00	39.40
3	5350.00	68.3 PK	74.0	-5.7	1.20 V	10	62.80	5.50
4	5350.00	51.0 AV	54.0	-3.0	1.20 V	10	45.50	5.50
5	10640.00	58.6 PK	74.0	-15.4	1.11 V	87	41.80	16.80
6	10640.00	46.3 AV	54.0	-7.7	1.11 V	87	29.50	16.80

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	58.7 PK	74.0	-15.3	1.00 H	24	53.10	5.60
2	5460.00	45.2 AV	54.0	-8.8	1.00 H	24	39.60	5.60
3	#5470.00	63.5 PK	74.0	-10.5	1.00 H	24	57.90	5.60
4	#5470.00	49.0 AV	54.0	-5.0	1.00 H	24	43.40	5.60
5	*5500.00	103.7 PK			1.00 H	24	64.10	39.60
6	*5500.00	93.5 AV			1.00 H	24	53.90	39.60
7	11000.00	59.5 PK	74.0	-14.5	1.15 H	302	41.00	18.50
8	11000.00	48.3 AV	54.0	-5.7	1.15 H	302	29.80	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.8 PK	74.0	-12.2	1.39 V	340	56.20	5.60
2	5460.00	48.4 AV	54.0	-5.6	1.39 V	340	42.80	5.60
3	#5470.00	66.9 PK	74.0	-7.1	1.39 V	340	61.30	5.60
4	#5470.00	51.0 AV	54.0	-3.0	1.39 V	340	45.40	5.60
5	*5500.00	109.4 PK			1.63 V	270	69.80	39.60
6	*5500.00	99.4 AV			1.63 V	270	59.80	39.60
7	11000.00	59.6 PK	74.0	-14.4	1.28 V	142	41.10	18.50
8	11000.00	48.6 AV	54.0	-5.4	1.28 V	142	30.10	18.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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			1.00 H	35	64.30	39.80
2	*5580.00	93.9 AV			1.00 H	35	54.10	39.80
3	11160.00	59.5 PK	74.0	-14.5	1.07 H	285	41.10	18.40
4	11160.00	48.2 AV	54.0	-5.8	1.07 H	285	29.80	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	109.9 PK			1.42 V	328	70.10	39.80
2	*5580.00	99.8 AV			1.42 V	328	60.00	39.80
3	11160.00	59.7 PK	74.0	-14.3	1.24 V	155	41.30	18.40
4	11160.00	48.4 AV	54.0	-5.6	1.24 V	155	30.00	18.40

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Alan Wu

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	103.2 PK			1.00 H	14	63.10	40.10
2	*5700.00	92.5 AV			1.00 H	14	52.40	40.10
3	#5725.00	64.9 PK	74.0	-9.1	1.00 H	14	58.60	6.30
4	#5725.00	48.8 AV	54.0	-5.2	1.00 H	14	42.50	6.30
5	11400.00	59.0 PK	74.0	-15.0	1.09 H	311	40.80	18.20
6	11400.00	47.5 AV	54.0	-6.5	1.09 H	311	29.30	18.20
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	108.8 PK			1.00 V	157	68.70	40.10
2	*5700.00	98.1 AV			1.00 V	157	58.00	40.10
3	#5725.00	68.2 PK	74.0	-5.8	1.00 V	225	61.90	6.30
4	#5725.00	50.7 AV	54.0	-3.3	1.00 V	225	44.40	6.30
5	11400.00	59.2 PK	74.0	-14.8	1.20 V	136	41.00	18.20
6	11400.00	47.9 AV	54.0	-6.1	1.20 V	136	29.70	18.20

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 144	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.1 PK	74.0	-16.9	1.00 H	11	51.00	6.10
2	#5470.00	45.6 AV	54.0	-8.4	1.00 H	11	39.50	6.10
3	*5720.00	102.9 PK			1.37 H	46	62.50	40.40
4	*5720.00	92.5 AV			1.37 H	46	52.10	40.40
5	#5825.00	57.4 PK	74.0	-16.6	1.00 H	274	50.60	6.80
6	#5825.00	45.3 AV	54.0	-8.7	1.00 H	274	38.50	6.80
7	#11440.00	59.4 PK	74.0	-14.6	1.00 H	163	41.50	17.90
8	#11440.00	47.1 AV	54.0	-6.9	1.00 H	163	29.20	17.90
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	#5470.00	57.3 PK	74.0	-16.7	1.00 V	253	51.20	6.10
2	#5470.00	45.6 AV	54.0	-8.4	1.00 V	253	39.50	6.10
3	*5720.00	110.2 PK			1.00 V	6	69.80	40.40
4	*5720.00	99.7 AV			1.00 V	6	59.30	40.40
5	#5825.00	57.7 PK	74.0	-16.3	1.00 V	215	50.90	6.80
6	#5825.00	45.4 AV	54.0	-8.6	1.00 V	215	38.60	6.80
7	#11440.00	59.5 PK	74.0	-14.5	1.00 V	196	41.60	17.90
8	#11440.00	47.1 AV	54.0	-6.9	1.00 V	196	29.20	17.90

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 of the restricted band.

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	*5260.00	104.1 PK			1.00 H	4	64.80	39.30
2	*5260.00	94.0 AV			1.00 H	4	54.70	39.30
3	#10520.00	58.0 PK	74.0	-16.0	1.25 H	11	41.20	16.80
4	#10520.00	46.5 AV	54.0	-7.5	1.25 H	11	29.70	16.80
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	*5260.00	110.6 PK			1.00 V	8	71.30	39.30
2	*5260.00	100.4 AV			1.00 V	8	61.10	39.30
3	#10520.00	58.3 PK	74.0	-15.7	1.30 V	175	41.50	16.80
4	#10520.00	46.8 AV	54.0	-7.2	1.30 V	175	30.00	16.80

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	104.2 PK			1.00 H	24	64.80	39.40
2	*5300.00	94.1 AV			1.00 H	24	54.70	39.40
3	10600.00	57.9 PK	74.0	-16.1	1.15 H	52	41.40	16.50
4	10600.00	46.4 AV	54.0	-7.6	1.15 H	52	29.90	16.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	110.7 PK			1.00 V	0	71.30	39.40
2	*5300.00	100.5 AV			1.00 V	0	61.10	39.40
3	10600.00	58.0 PK	74.0	-16.0	1.09 V	167	41.50	16.50
4	10600.00	46.5 AV	54.0	-7.5	1.09 V	167	30.00	16.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	104.4 PK			1.00 H	13	65.00	39.40
2	*5320.00	94.3 AV			1.00 H	13	54.90	39.40
3	5350.00	64.5 PK	74.0	-9.5	1.00 H	13	59.00	5.50
4	5350.00	49.5 AV	54.0	-4.5	1.00 H	13	44.00	5.50
5	10640.00	57.8 PK	74.0	-16.2	1.08 H	29	41.00	16.80
6	10640.00	46.8 AV	54.0	-7.2	1.08 H	29	30.00	16.80
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	110.7 PK			1.00 V	7	71.30	39.40
2	*5320.00	100.6 AV			1.00 V	7	61.20	39.40
3	5350.00	66.7 PK	74.0	-7.3	1.00 V	7	61.20	5.50
4	5350.00	52.5 AV	54.0	-1.5	1.00 V	7	47.00	5.50
5	10640.00	58.0 PK	74.0	-16.0	1.14 V	189	41.20	16.80
6	10640.00	47.0 AV	54.0	-7.0	1.14 V	189	30.20	16.80

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	62.9 PK	74.0	-11.1	1.00 H	357	57.30	5.60
2	5460.00	47.1 AV	54.0	-6.9	1.00 H	357	41.50	5.60
3	#5470.00	68.6 PK	74.0	-5.4	1.00 H	357	63.00	5.60
4	#5470.00	50.7 AV	54.0	-3.3	1.00 H	357	45.10	5.60
5	*5500.00	105.7 PK			1.00 H	357	66.10	39.60
6	*5500.00	95.6 AV			1.00 H	357	56.00	39.60
7	11000.00	60.1 PK	74.0	-13.9	1.06 H	241	41.60	18.50
8	11000.00	48.0 AV	54.0	-6.0	1.06 H	241	29.50	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.5 PK	74.0	-8.5	1.52 V	253	59.90	5.60
2	5460.00	50.1 AV	54.0	-3.9	1.52 V	253	44.50	5.60
3	#5470.00	71.5 PK	74.0	-2.5	1.52 V	253	65.90	5.60
4	#5470.00	52.9 AV	54.0	-1.1	1.52 V	253	47.30	5.60
5	*5500.00	111.7 PK			1.52 V	288	72.10	39.60
6	*5500.00	101.7 AV			1.52 V	288	62.10	39.60
7	11000.00	60.3 PK	74.0	-13.7	1.20 V	234	41.80	18.50
8	11000.00	48.3 AV	54.0	-5.7	1.20 V	234	29.80	18.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	105.8 PK			1.00 H	351	66.00	39.80
2	*5580.00	95.6 AV			1.00 H	351	55.80	39.80
3	11160.00	59.9 PK	74.0	-14.1	1.10 H	235	41.50	18.40
4	11160.00	47.9 AV	54.0	-6.1	1.10 H	235	29.50	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	112.1 PK			1.55 V	293	72.30	39.80
2	*5580.00	101.8 AV			1.55 V	293	62.00	39.80
3	11160.00	60.2 PK	74.0	-13.8	1.16 V	330	41.80	18.40
4	11160.00	48.1 AV	54.0	-5.9	1.16 V	330	29.70	18.40

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	105.6 PK			1.00 H	20	65.50	40.10
2	*5700.00	95.6 AV			1.00 H	20	55.50	40.10
3	#5725.00	65.5 PK	74.0	-8.5	1.00 H	20	59.20	6.30
4	#5725.00	49.9 AV	54.0	-4.1	1.00 H	20	43.60	6.30
5	11400.00	49.5 PK	74.0	-24.5	1.09 H	113	31.30	18.20
6	11400.00	47.7 AV	54.0	-6.3	1.09 H	113	29.50	18.20
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	111.9 PK			1.56 V	228	71.80	40.10
2	*5700.00	102.0 AV			1.56 V	228	61.90	40.10
3	#5725.00	69.0 PK	74.0	-5.0	1.00 V	218	62.70	6.30
4	#5725.00	52.9 AV	54.0	-1.1	1.00 V	218	46.60	6.30
5	11400.00	49.7 PK	74.0	-24.3	1.27 V	42	31.50	18.20
6	11400.00	47.8 AV	54.0	-6.2	1.27 V	42	29.60	18.20

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 of the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 144	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.3 PK	74.0	-16.7	1.00 H	47	51.20	6.10
2	#5470.00	45.7 AV	54.0	-8.3	1.00 H	47	39.60	6.10
3	*5720.00	103.1 PK			1.25 H	50	62.70	40.40
4	*5720.00	92.4 AV			1.25 H	50	52.00	40.40
5	#5825.00	57.6 PK	74.0	-16.4	1.00 H	133	50.80	6.80
6	#5825.00	45.4 AV	54.0	-8.6	1.00 H	133	38.60	6.80
7	#11440.00	59.6 PK	74.0	-14.4	1.00 H	142	41.70	17.90
8	#11440.00	47.0 AV	54.0	-7.0	1.00 H	142	29.10	17.90
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	#5470.00	57.5 PK	74.0	-16.5	1.00 V	254	51.40	6.10
2	#5470.00	45.7 AV	54.0	-8.3	1.00 V	254	39.60	6.10
3	*5720.00	109.9 PK			1.00 V	186	69.50	40.40
4	*5720.00	99.5 AV			1.00 V	186	59.10	40.40
5	#5825.00	57.8 PK	74.0	-16.2	1.00 V	138	51.00	6.80
6	#5825.00	45.5 AV	54.0	-8.5	1.00 V	138	38.70	6.80
7	#11440.00	59.7 PK	74.0	-14.3	1.00 V	258	41.80	17.90
8	#11440.00	47.2 AV	54.0	-6.8	1.00 V	258	29.30	17.90

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 of the restricted band.

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	*5270.00	102.4 PK			1.00 H	10	63.00	39.40
2	*5270.00	91.5 AV			1.00 H	10	52.10	39.40
3	#10540.00	57.7 PK	74.0	-16.3	1.28 H	161	41.00	16.70
4	#10540.00	46.8 AV	54.0	-7.2	1.28 H	161	30.10	16.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	109.1 PK			1.47 V	13	69.70	39.40
2	*5270.00	98.1 AV			1.47 V	13	58.70	39.40
3	#10540.00	57.9 PK	74.0	-16.1	1.33 V	50	41.20	16.70
4	#10540.00	46.9 AV	54.0	-7.1	1.33 V	50	30.20	16.70

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	100.7 PK			1.00 H	41	61.30	39.40
2	*5310.00	89.6 AV			1.00 H	41	50.20	39.40
3	5350.00	65.7 PK	74.0	-8.3	1.00 H	41	60.20	5.50
4	5350.00	50.6 AV	54.0	-3.4	1.00 H	41	45.10	5.50
5	10620.00	57.7 PK	74.0	-16.3	1.26 H	13	41.00	16.70
6	10620.00	46.7 AV	54.0	-7.3	1.26 H	13	30.00	16.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	107.2 PK			1.00 V	13	67.80	39.40
2	*5310.00	96.2 AV			1.00 V	13	56.80	39.40
3	5350.00	69.8 PK	74.0	-4.2	1.00 V	22	64.30	5.50
4	5350.00	52.9 AV	54.0	-1.1	1.00 V	22	47.40	5.50
5	10620.00	58.1 PK	74.0	-15.9	1.10 V	153	41.40	16.70
6	10620.00	46.9 AV	54.0	-7.1	1.10 V	153	30.20	16.70

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	57.6 PK	74.0	-16.4	1.00 H	50	52.00	5.60
2	5460.00	44.6 AV	54.0	-9.4	1.00 H	50	39.00	5.60
3	#5470.00	65.8 PK	74.0	-8.2	1.00 H	50	60.20	5.60
4	#5470.00	49.6 AV	54.0	-4.4	1.00 H	50	44.00	5.60
5	*5510.00	99.1 PK			1.00 H	50	59.50	39.60
6	*5510.00	88.9 AV			1.00 H	50	49.30	39.60
7	11020.00	59.6 PK	74.0	-14.4	1.14 H	307	41.00	18.60
8	11020.00	47.9 AV	54.0	-6.1	1.14 H	307	29.30	18.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.8 PK	74.0	-13.2	1.30 V	0	55.20	5.60
2	5460.00	47.6 AV	54.0	-6.4	1.30 V	0	42.00	5.60
3	#5470.00	68.5 PK	74.0	-5.5	1.00 V	0	62.90	5.60
4	#5470.00	52.6 AV	54.0	-1.4	1.00 V	0	47.00	5.60
5	*5510.00	105.5 PK			1.50 V	37	65.90	39.60
6	*5510.00	95.3 AV			1.50 V	37	55.70	39.60
7	11020.00	59.8 PK	74.0	-14.2	1.02 V	125	41.20	18.60
8	11020.00	48.1 AV	54.0	-5.9	1.02 V	125	29.50	18.60

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	103.5 PK			1.00 H	14	63.70	39.80
2	*5550.00	93.2 AV			1.00 H	14	53.40	39.80
3	11000.00	59.3 PK	74.0	-14.7	1.16 H	30	40.80	18.50
4	11000.00	47.6 AV	54.0	-6.4	1.16 H	30	29.10	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	109.9 PK			1.51 V	278	70.10	39.80
2	*5550.00	99.6 AV			1.51 V	278	59.80	39.80
3	11000.00	59.5 PK	74.0	-14.5	1.24 V	33	41.00	18.50
4	11000.00	47.9 AV	54.0	-6.1	1.24 V	33	29.40	18.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	102.9 PK			1.00 H	25	62.90	40.00
2	*5670.00	92.5 AV			1.00 H	25	52.50	40.00
3	#5725.00	63.5 PK	74.0	-10.5	1.00 H	25	57.20	6.30
4	#5725.00	49.4 AV	54.0	-4.6	1.00 H	25	43.10	6.30
5	11340.00	59.8 PK	74.0	-14.2	1.06 H	130	41.50	18.30
6	11340.00	47.6 AV	54.0	-6.4	1.06 H	130	29.30	18.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	109.2 PK			1.45 V	272	69.20	40.00
2	*5670.00	99.0 AV			1.45 V	272	59.00	40.00
3	#5725.00	65.3 PK	74.0	-8.7	1.00 V	150	59.00	6.30
4	#5725.00	51.9 AV	54.0	-2.1	1.00 V	150	45.60	6.30
5	11340.00	60.2 PK	74.0	-13.8	1.19 V	160	41.90	18.30
6	11340.00	47.8 AV	54.0	-6.2	1.19 V	160	29.50	18.30

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 142	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.1 PK	74.0	-16.9	1.00 H	125	51.00	6.10
2	#5470.00	45.1 AV	54.0	-8.9	1.00 H	125	39.00	6.10
3	*5710.00	98.8 PK			1.70 H	216	58.40	40.40
4	*5710.00	89.2 AV			1.70 H	216	48.80	40.40
5	#5825.00	57.4 PK	74.0	-16.6	1.00 H	70	50.60	6.80
6	#5825.00	45.8 AV	54.0	-8.2	1.00 H	70	39.00	6.80
7	#11420.00	59.2 PK	74.0	-14.8	1.00 H	85	41.30	17.90
8	#11420.00	46.9 AV	54.0	-7.1	1.00 H	85	29.00	17.90
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	#5470.00	57.5 PK	74.0	-16.5	1.00 V	42	51.40	6.10
2	#5470.00	45.2 AV	54.0	-8.8	1.00 V	42	39.10	6.10
3	*5710.00	105.8 PK			1.00 V	4	65.40	40.40
4	*5710.00	96.2 AV			1.00 V	4	55.80	40.40
5	#5825.00	57.7 PK	74.0	-16.3	1.00 V	242	50.90	6.80
6	#5825.00	45.8 AV	54.0	-8.2	1.00 V	242	39.00	6.80
7	#11420.00	59.5 PK	74.0	-14.5	1.00 V	153	41.60	17.90
8	#11420.00	46.9 AV	54.0	-7.1	1.00 V	153	29.00	17.90

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 of the restricted band.

802.11ac (VHT80)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 58	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	*5290.00	98.0 PK			1.00 H	42	58.60	39.40
2	*5290.00	86.4 AV			1.00 H	42	47.00	39.40
3	5350.00	65.7 PK	74.0	-8.3	1.00 H	50	60.20	5.50
4	5350.00	50.3 AV	54.0	-3.7	1.00 H	50	44.80	5.50
5	#10580.00	57.3 PK	74.0	-16.7	1.24 H	169	40.70	16.60
6	#10580.00	46.3 AV	54.0	-7.7	1.24 H	169	29.70	16.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	104.3 PK			1.00 V	0	64.90	39.40
2	*5290.00	92.4 AV			1.00 V	0	53.00	39.40
3	5350.00	68.7 PK	74.0	-5.3	1.00 V	13	63.20	5.50
4	5350.00	52.9 AV	54.0	-1.1	1.00 V	13	47.40	5.50
5	#10580.00	57.5 PK	74.0	-16.5	1.09 V	171	40.90	16.60
6	#10580.00	46.6 AV	54.0	-7.4	1.09 V	171	30.00	16.60

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 106	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	59.4 PK	74.0	-14.6	1.00 H	212	53.80	5.60
2	5460.00	47.1 AV	54.0	-6.9	1.00 H	212	41.50	5.60
3	#5470.00	67.2 PK	74.0	-6.8	1.00 H	53	61.60	5.60
4	#5470.00	50.8 AV	54.0	-3.2	1.00 H	53	45.20	5.60
5	*5530.00	95.9 PK			1.00 H	6	56.20	39.70
6	*5530.00	85.2 AV			1.00 H	6	45.50	39.70
7	11060.00	59.3 PK	74.0	-14.7	1.11 H	10	40.80	18.50
8	11060.00	47.7 AV	54.0	-6.3	1.11 H	10	29.20	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.7 PK	74.0	-11.3	1.54 V	355	57.10	5.60
2	5460.00	50.5 AV	54.0	-3.5	1.54 V	355	44.90	5.60
3	#5470.00	70.2 PK	74.0	-3.8	1.54 V	355	64.60	5.60
4	#5470.00	52.8 AV	54.0	-1.2	1.54 V	355	47.20	5.60
5	*5530.00	102.2 PK			1.17 V	7	62.50	39.70
6	*5530.00	91.5 AV			1.17 V	7	51.80	39.70
7	11060.00	59.5 PK	74.0	-14.5	1.07 V	152	41.00	18.50
8	11060.00	47.6 AV	54.0	-6.4	1.07 V	152	29.10	18.50

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 138	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH	TESTED BY	Brad Tung

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	#5470.00	57.1 PK	74.0	-16.9	1.00 H	41	51.00	6.10
2	#5470.00	44.8 AV	54.0	-9.2	1.00 H	41	38.70	6.10
3	*5690.00	96.4 PK			1.00 H	215	56.00	40.40
4	*5690.00	85.9 AV			1.00 H	215	45.50	40.40
5	#5825.00	57.5 PK	74.0	-16.5	1.00 H	222	50.70	6.80
6	#5825.00	45.1 AV	54.0	-8.9	1.00 H	222	38.30	6.80
7	#11380.00	59.5 PK	74.0	-14.5	1.00 H	185	41.10	18.40
8	#11380.00	47.0 AV	54.0	-7.0	1.00 H	185	28.60	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.3 PK	74.0	-16.7	1.00 V	120	51.20	6.10
2	#5470.00	45.0 AV	54.0	-9.0	1.00 V	120	38.90	6.10
3	*5690.00	103.4 PK			1.00 V	176	63.00	40.40
4	*5690.00	93.1 AV			1.00 V	176	52.70	40.40
5	#5825.00	57.7 PK	74.0	-16.3	1.00 V	3	50.90	6.80
6	#5825.00	45.1 AV	54.0	-8.9	1.00 V	3	38.30	6.80
7	#11380.00	59.7 PK	74.0	-14.3	1.00 V	250	41.30	18.40
8	#11380.00	47.1 AV	54.0	-6.9	1.00 V	250	28.70	18.40

REMARKS:

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

TEST MODE A

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	101.75	41.5 QP	43.5	-2.0	1.50 H	178	59.90	-18.40
2	249.08	41.4 QP	46.0	-4.6	1.50 H	26	55.90	-14.50
3	499.32	35.1 QP	46.0	-10.9	1.75 H	76	44.10	-9.00
4	600.31	39.1 QP	46.0	-6.9	2.00 H	104	46.10	-7.00
5	701.30	39.7 QP	46.0	-6.3	1.00 H	288	45.10	-5.40
6	800.24	38.5 QP	46.0	-7.5	1.25 H	231	41.60	-3.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	34.05	33.9 QP	40.0	-6.1	1.25 V	325	49.60	-15.70
2	113.67	40.4 QP	43.5	-3.1	1.25 V	282	57.60	-17.20
3	249.08	33.0 QP	46.0	-13.0	1.00 V	314	47.50	-14.50
4	600.31	34.2 QP	46.0	-11.8	3.00 V	150	41.20	-7.00
5	701.30	36.5 QP	46.0	-9.5	2.00 V	77	41.90	-5.40
6	800.24	35.9 QP	46.0	-10.1	1.50 V	66	39.00	-3.10

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)
– Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

TEST MODE B

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

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	44.96	34.8 QP	40.0	-5.2	1.25 H	227	49.00	-14.20
2	111.55	41.5 QP	43.5	-2.0	1.00 H	48	58.70	-17.20
3	249.08	41.5 QP	46.0	-4.5	3.00 H	170	56.00	-14.50
4	600.31	34.5 QP	46.0	-11.5	1.50 H	169	41.50	-7.00
5	701.30	39.5 QP	46.0	-6.5	2.00 H	241	44.90	-5.40
6	800.24	38.5 QP	46.0	-7.5	1.00 H	305	41.60	-3.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	35.29	34.8 QP	40.0	-5.2	1.00 V	16	49.80	-15.00
2	113.67	40.9 QP	43.5	-2.6	1.50 V	325	58.10	-17.20
3	249.08	32.3 QP	46.0	-13.7	1.00 V	299	46.80	-14.50
4	600.31	33.0 QP	46.0	-13.0	2.00 V	267	40.00	-7.00
5	701.30	34.5 QP	46.0	-11.5	1.75 V	231	39.90	-5.40
6	800.24	34.6 QP	46.0	-11.4	1.25 V	230	37.70	-3.10

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)
– Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

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. 29, 2013	Nov. 28, 2014
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 27, 2013	Dec. 26, 2014
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 13, 2014	Feb. 12, 2015
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 21, 2014	Jul. 20, 2015
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 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

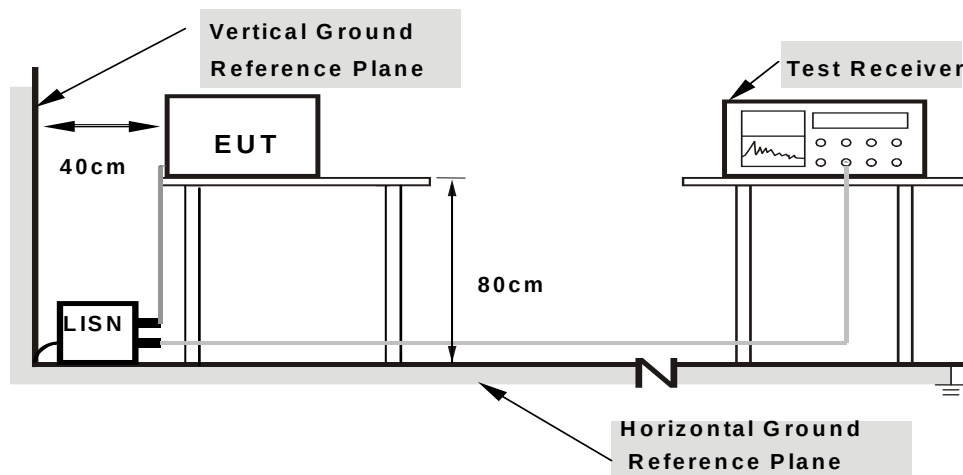
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



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

TEST MODE A

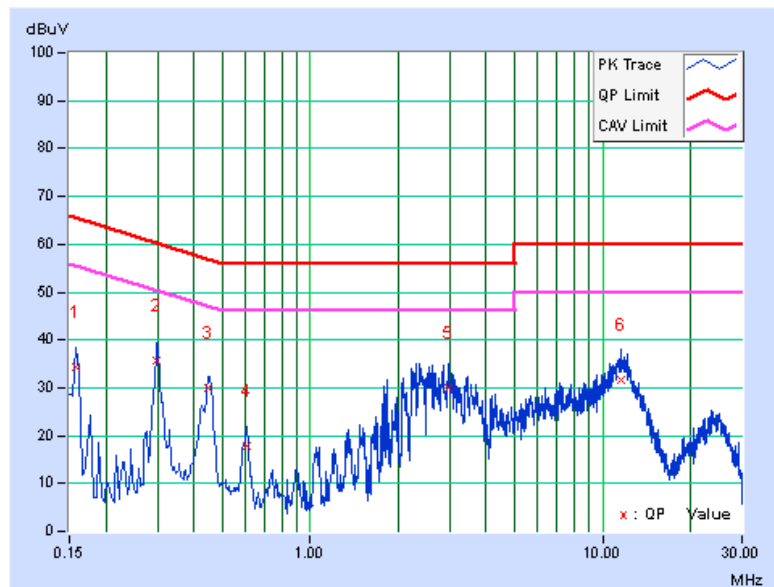
CONDUCTED WORST-CASE DATA: 802.11n (20MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	0.10	34.30	18.83	34.40	18.93	65.58	55.58	-31.18	-36.65
2	0.29897	0.11	35.48	23.36	35.59	23.47	60.27	50.27	-24.68	-26.80
3	0.44742	0.12	29.73	20.26	29.85	20.38	56.92	46.92	-27.07	-26.54
4	0.60747	0.13	17.59	7.93	17.72	8.06	56.00	46.00	-38.28	-37.94
5	2.96911	0.20	29.62	17.58	29.82	17.78	56.00	46.00	-26.18	-28.22
6	11.50855	0.55	31.10	20.32	31.65	20.87	60.00	50.00	-28.35	-29.13

REMARKS:

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

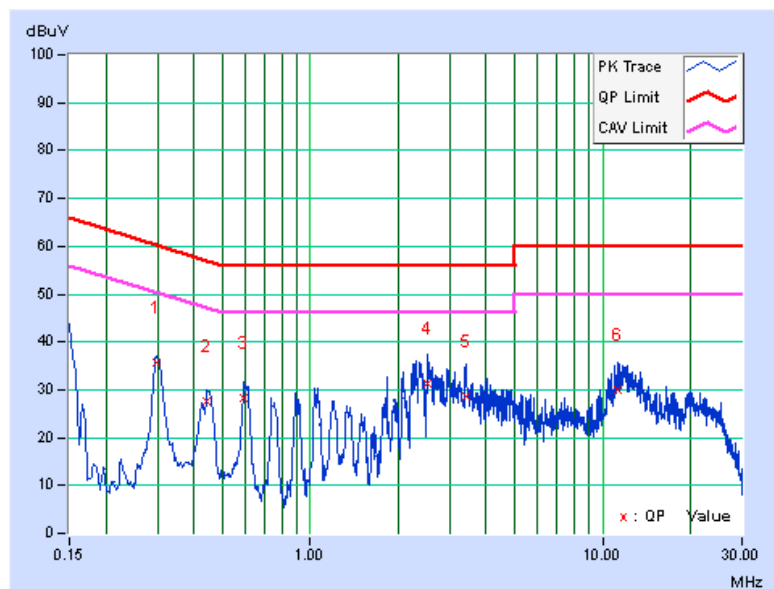


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.29819	0.12	35.73	26.35	35.85	26.47	60.29	50.29	-24.44	-23.82
2	0.44390	0.13	27.51	17.83	27.64	17.96	56.99	46.99	-29.35	-29.03
3	0.59183	0.13	28.29	17.65	28.42	17.78	56.00	46.00	-27.58	-28.22
4	2.51164	0.17	30.99	16.98	31.16	17.15	56.00	46.00	-24.84	-28.85
5	3.39530	0.19	28.54	16.22	28.73	16.41	56.00	46.00	-27.27	-29.59
6	11.24267	0.40	29.61	19.01	30.01	19.41	60.00	50.00	-29.99	-30.59

REMARKS:

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



TEST MODE B

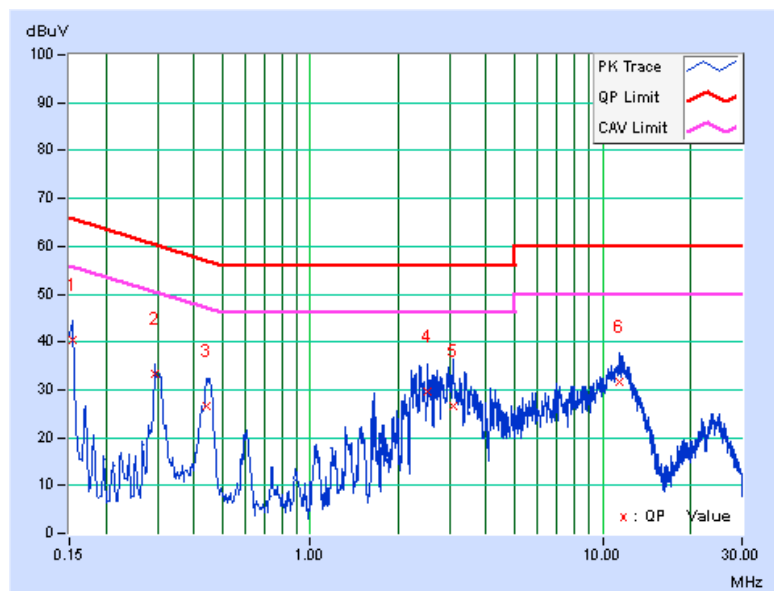
CONDUCTED WORST-CASE DATA: 802.11n (20MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.10	40.34	25.21	40.44	25.31	65.79	55.79	-25.35	-30.48
2	0.29506	0.11	33.32	20.50	33.43	20.61	60.38	50.38	-26.95	-29.77
3	0.43934	0.12	26.37	16.74	26.49	16.86	57.07	47.07	-30.58	-30.21
4	2.52728	0.19	29.47	15.84	29.66	16.03	56.00	46.00	-26.34	-29.97
5	3.07077	0.20	26.33	14.53	26.53	14.73	56.00	46.00	-29.47	-31.27
6	11.38343	0.55	31.09	20.29	31.64	20.84	60.00	50.00	-28.36	-29.16

REMARKS:

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

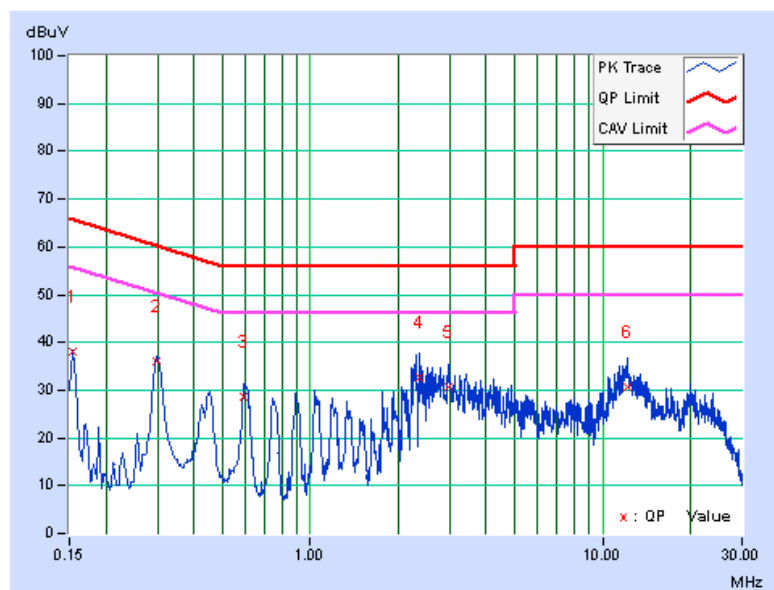


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.11	38.00	25.58	38.11	25.69	65.79	55.79	-27.68	-30.10
2	0.29819	0.12	35.76	26.28	35.88	26.40	60.29	50.29	-24.41	-23.89
3	0.59314	0.13	28.61	18.09	28.74	18.22	56.00	46.00	-27.26	-27.78
4	2.36306	0.17	32.44	17.38	32.61	17.55	56.00	46.00	-23.39	-28.45
5	2.96520	0.18	30.60	18.20	30.78	18.38	56.00	46.00	-25.22	-27.62
6	12.11851	0.42	30.24	19.25	30.66	19.67	60.00	50.00	-29.34	-30.33

REMARKS:

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



4.3 TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF 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.

Per KDB 662911 D01 Multiple Transmitter Output v02r01 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any NANT;

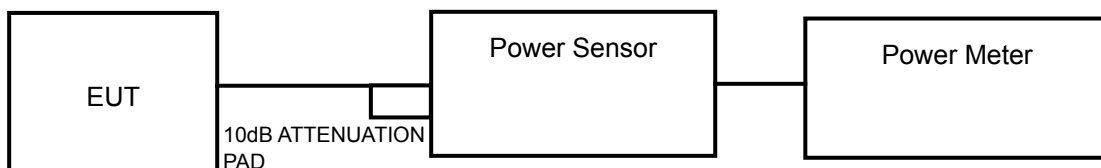
Array Gain = 5 log(NANT/NSS) dB or 3 dB, whichever is less for 20-MHz channel widths with NANT ≥ 5.

For power measurements on all other devices: Array Gain = 10 log(NANT/NSS) dB.

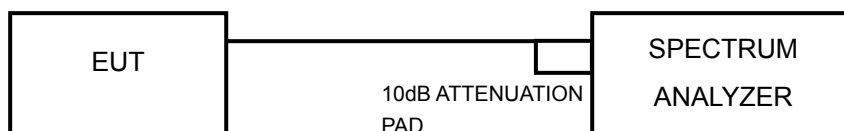
4.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT

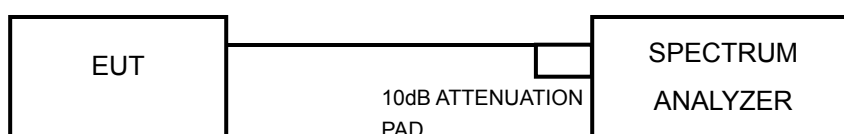
For 802.11a, 802.11n (20MHz), 802.11n (40MHz)



For 802.11ac (80MHz)



FOR 26dB BANDWIDTH



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

For 802.11a, 802.11ac (20MHz), 802.11ac (40MHz)

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 802.11ac (80MHz)

Method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz.
- 3) Set VBW $\geq$ 3 MHz.
- 4) Number of points in sweep $\geq$ 2 Span / RBW.
- 5) Sweep time = auto.
- 6) Set trigger to free run (duty cycle $\geq$ 98 percent); Set video trigger (duty cycle $<$ 98 percent)
- 7) Detector = RMS.
- 8) Trace average at least 100 traces in power averaging mode
- 9) Compute power by integrating the spectrum across the 26 dB EBW of the signal.

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:

TEST MODE A

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	12.84	13.78	13.46	65.291	18.15	24	PASS
60	5300	12.58	14.12	13.89	68.427	18.35	24	PASS
64	5320	13.05	13.79	13.98	69.120	18.40	24	PASS
100	5500	13.02	13.89	13.60	67.445	18.29	24	PASS
116	5580	13.07	14.08	13.77	69.686	18.43	24	PASS
140	5700	12.76	13.12	13.13	59.951	17.78	24	PASS
144	5720 For U-NII-2C	12.01	11.62	11.09	43.259	16.36	22.80	PASS
144	5720 For U-NII-3	7.99	7.61	7.05	17.133	12.34	25.08	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(22.35) = 24.49\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(21.72) = 24.37\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(22.15) = 24.45\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(23.29) = 24.67\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(22.39) = 24.50\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(22.49) = 24.52\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5707.99) = 23.31\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5707.99 + 23.75 - 5725.00) = 25.29\text{ dBm} < 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(22.40) = 24.50\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(22.56) = 24.53\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(23.56) = 24.72\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(23.15) = 24.65\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(23.01) = 24.62\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(22.49) = 24.52\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5708.06) = 22.86\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5708.06 + 23.67 - 5725.00) = 25.28\text{ dBm} < 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(23.12) = 24.64\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(25.85) = 25.12\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(25.26) = 25.02\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(26.44) = 25.22\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(32.90) = 26.17\text{ dBm} < 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(22.66) = 24.55\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5708.73) = 22.80\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5708.73 + 22.69 - 5725.00) = 25.08\text{ dBm} < 30.00\text{ dBm}$

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	15.42	16.13	15.22	109.120	20.38	24	PASS
60	5300	15.72	16.24	15.52	115.043	20.61	24	PASS
64	5320	15.44	16.21	14.79	106.908	20.29	24	PASS
100	5500	15.24	15.76	14.96	102.423	20.10	24	PASS
116	5580	15.54	15.82	15.26	107.578	20.32	24	PASS
140	5700	14.52	15.74	15.25	99.308	19.97	24	PASS
144	5720 For U-NII-2C	13.30	13.28	12.52	60.526	17.82	23.61	PASS
144	5720 For U-NII-3	10.86	10.70	9.11	32.086	15.06	26.20	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(24.04) = 24.81\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(24.24) = 24.85\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(23.89) = 24.78\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(24.98) = 24.98\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(25.43) = 25.05\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(23.81) = 24.77\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5702.26) = 24.57\text{ dBm} > 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5702.26 + 35.68 - 5725.00) = 28.12\text{ dBm} < 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(26.40) = 25.22\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(31.81) = 26.03\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(27.89) = 25.45\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(29.32) = 25.67\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(27.57) = 25.40\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(24.76) = 24.94\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5701.89) = 24.64\text{ dBm} > 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5701.89 + 35.87 - 5725.00) = 28.06\text{ dBm} < 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(37.99) = 26.80\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(34.40) = 26.37\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(29.21) = 25.66\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(29.37) = 25.68\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(35.85) = 26.54\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(31.60) = 26.00\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5706.76) = 23.61\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5706.76 + 26.55 - 5725.00) = 26.20\text{ dBm} < 30.00\text{ dBm}$

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	15.05	15.56	14.76	97.887	19.91	24	PASS
62	5310	14.23	14.19	14.43	80.460	19.06	24	PASS
102	5510	13.32	12.86	12.72	59.505	17.75	24	PASS
110	5550	15.21	15.77	15.06	103.009	20.13	24	PASS
134	5670	15.18	15.14	15.26	99.194	19.96	24	PASS
142	5710 For U-NII-2C	13.94	13.21	13.23	66.753	18.24	24	PASS
142	5710 For U-NII-3	10.12	10.08	8.85	28.14	14.49	29.18	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(28.39) = 28.11\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(27.97) = 27.67\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(27.64) = 28.14\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(28.80) = 28.10\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(29.55) = 28.16\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5669.15) = 28.47\text{ dBm} > 24.00\text{dBm}$
7. $17\text{dBm} + 10\log(5669.15 + 79.00 - 5725.00) = 30.65\text{ dBm} > 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(53.54) = 28.29\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(48.30) = 27.84\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(44.94) = 27.53\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(72.50) = 29.60\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(50.25) = 28.01\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5671.56) = 28.28\text{ dBm} > 24.00\text{dBm}$
7. $17\text{dBm} + 10\log(5671.56 + 79.47 - 5725.00) = 31.15\text{ dBm} > 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(81.65) = 30.12\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(73.00) = 29.63\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(51.52) = 28.12\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(85.05) = 30.30\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(88.27) = 30.46\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5674.17) = 28.06\text{ dBm} > 24.00\text{dBm}$
7. $17\text{dBm} + 10\log(5674.71 + 67.36 - 5725.00) = 29.18\text{ dBm} < 30.00\text{ dBm}$

802.11ac (VHT80)

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
58	5290	12.72	12.66	12.86	56.477	17.52	24	PASS
106	5530	12.15	11.72	11.23	44.539	16.49	24	PASS
138	5690 For U-NII-2C	11.00	10.90	10.69	36.614	15.64	24	PASS
138	5690 For U-NII-3	1.36	1.93	1.46	4.328	6.36	26.55	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(88.00) = 30.44\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(91.16) = 30.60\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(5725.00 - 5641.94) = 30.19\text{ dBm} > 24.00\text{dBm}$
4. $17\text{dBm} + 10\log(5641.94+92.07 - 5725.00) = 26.55\text{ dBm} < 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(86.74) = 30.38\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(85.92) = 30.34\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(5725.00 - 5644.68) = 30.05\text{ dBm} > 24.00\text{dBm}$
4. $17\text{dBm} + 10\log(5644.68+90.49 - 5725.00) = 27.07\text{ dBm} < 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(97.82) = 30.90\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(92.00) = 30.64\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(5725.00 - 5645.05) = 30.03\text{ dBm} > 24.00\text{dBm}$
4. $17\text{dBm} + 10\log(5645.05+89.49 - 5725.00) = 26.80\text{ dBm} < 30.00\text{ dBm}$

TEST MODE B

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	14.84	13.83	13.70	78.076	18.93	24	PASS
60	5300	13.13	14.82	13.31	72.327	18.59	24	PASS
64	5320	13.46	13.89	13.47	68.906	18.38	24	PASS
100	5500	14.08	13.16	13.91	70.891	18.51	24	PASS
116	5580	13.62	13.34	13.85	68.857	18.38	24	PASS
140	5700	13.42	13.30	13.31	64.788	18.11	24	PASS
144	5720 For U-NII-2C	11.67	12.48	10.63	43.951	16.43	23.19	PASS
144	5720 For U-NII-3	7.89	8.64	6.35	17.778	12.50	25.01	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(23.20) = 24.76\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(23.77) = 24.74\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(23.67) = 24.70\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(23.42) = 24.75\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(23.69) = 24.64\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(23.12) = 24.52\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5708.45) = 23.19\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5708.45+23.47 - 5725.00) = 25.40\text{ dBm} < 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(22.92) = 24.60\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(23.71) = 24.75\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(24.95) = 24.97\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(26.14) = 25.17\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(26.64) = 25.26\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(23.25) = 24.66\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5707.34) = 23.47\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5707.34+24.97 - 5725.00) = 25.64\text{ dBm} < 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(22.78) = 24.58\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(22.69) = 24.56\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(23.28) = 24.67\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(32.80) = 26.16\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(30.59) = 25.86\text{ dBm} < 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(22.63) = 24.55\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5708.02) = 23.30\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5708.02+23.31 - 5725.00) = 25.01\text{ dBm} < 30.00\text{ dBm}$

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	15.98	15.39	15.33	108.341	20.35	24	PASS
60	5300	15.99	15.02	15.98	111.116	20.46	24	PASS
64	5320	15.82	14.83	16.06	108.968	20.37	24	PASS
100	5500	15.39	15.41	16.11	110.180	20.42	24	PASS
116	5580	15.82	15.72	16.03	115.606	20.63	24	PASS
140	5700	14.56	14.53	14.42	84.624	19.27	24	PASS
144	5720 For U-NII-2C	13.02	13.17	11.83	56.035	17.48	23.41	PASS
144	5720 For U-NII-3	9.86	10.54	7.78	27.005	14.31	25.36	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(30.02) = 25.77\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(38.08) = 26.81\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(38.41) = 26.84\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(40.49) = 27.07\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(40.64) = 27.09\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(34.87) = 26.42\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5706.28) = 23.72\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5706.28 + 27.77 - 5725.00) = 26.57\text{ dBm} < 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(30.86) = 25.89\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(36.16) = 26.58\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(34.99) = 26.44\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(35.97) = 26.56\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(38.33) = 26.84\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(31.49) = 25.98\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5702.82) = 24.46\text{ dBm} > 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5702.82 + 24.97 - 5725.00) = 27.82\text{ dBm} < 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(24.94) = 24.97\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(25.59) = 25.08\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(26.69) = 25.26\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(44.05) = 27.44\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(41.91) = 27.22\text{ dBm} < 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(31.60) = 26.00\text{ dBm} > 24.00\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5707.57) = 23.41\text{ dBm} < 24.00\text{dBm}$
8. $17\text{dBm} + 10\log(5707.57 + 23.31 - 5725.00) = 25.36\text{ dBm} < 30.00\text{ dBm}$

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	15.26	15.88	15.38	106.814	20.29	24	PASS
62	5310	14.11	13.92	14.42	78.092	18.93	24	PASS
102	5510	13.15	13.35	12.86	61.601	17.90	24	PASS
110	5550	15.21	15.92	15.85	110.732	20.44	24	PASS
134	5670	15.12	15.62	15.11	101.418	20.06	24	PASS
142	5710 For U-NII-2C	13.82	13.40	12.81	65.076	18.13	24	PASS
142	5710 For U-NII-3	8.78	10.01	8.01	23.898	13.78	28.41	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(56.93) = 28.55\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(50.15) = 28.00\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(48.60) = 27.87\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(77.65) = 29.90\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(61.94) = 28.92\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5678.98) = 27.63\text{ dBm} > 24.00\text{dBm}$
7. $17\text{dBm} + 10\log(5678.98+60.54 - 5725.00) = 28.59\text{ dBm} < 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(76.71) = 29.85\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(47.46) = 27.76\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(50.79) = 28.06\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(87.05) = 30.40\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(70.07) = 29.46\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5675.59) = 27.94\text{ dBm} > 24.00\text{dBm}$
7. $17\text{dBm} + 10\log(5675.59+72.02 - 5725.00) = 30.54\text{ dBm} > 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(53.43) = 28.28\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(47.38) = 27.76\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(54.29) = 28.35\text{ dBm} > 24.00\text{dBm}$
4. $11\text{dBm} + 10\log(87.23) = 30.41\text{ dBm} > 24.00\text{dBm}$
5. $11\text{dBm} + 10\log(62.52) = 28.96\text{ dBm} > 24.00\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5677.79) = 27.74\text{ dBm} > 24.00\text{dBm}$
7. $17\text{dBm} + 10\log(5677.79+61.06 - 5725.00) = 28.41\text{ dBm} < 30.00\text{ dBm}$

802.11ac (VHT80)

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
58	5290	13.11	12.99	13.27	61.603	17.90	24	PASS
106	5530	12.47	12.67	12.44	53.692	17.30	24	PASS
138	5690 For U-NII-2C	11.66	12.65	10.72	44.866	16.52	24	PASS
138	5690 For U-NII-3	2.67	5.08	0.56	6.208	7.93	25.94	PASS

NOTE:

For 5260~5720MHz:

CHAIN 0

1. $11\text{dBm} + 10\log(93.95) = 30.73\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(91.38) = 30.61\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(5725.00 - 5638.75) = 30.36\text{ dBm} > 24.00\text{dBm}$
4. $17\text{dBm} + 10\log(5638.75+97.13 - 5725.00) = 27.37\text{ dBm} < 30.00\text{ dBm}$

CHAIN 1

1. $11\text{dBm} + 10\log(90.37) = 30.56\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(95.62) = 30.81\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(5725.00 - 5635.18) = 30.53\text{ dBm} > 24.00\text{dBm}$
4. $17\text{dBm} + 10\log(5635.18+105.53 - 5725.00) = 28.96\text{ dBm} < 30.00\text{ dBm}$

CHAIN 2

1. $11\text{dBm} + 10\log(88.92) = 30.49\text{ dBm} > 24.00\text{dBm}$
2. $11\text{dBm} + 10\log(95.88) = 30.82\text{ dBm} > 24.00\text{dBm}$
3. $11\text{dBm} + 10\log(5725.00 - 5643.58) = 30.11\text{ dBm} > 24.00\text{dBm}$
4. $17\text{dBm} + 10\log(5643.58+89.26 - 5725.00) = 25.94\text{ dBm} < 30.00\text{ dBm}$

26dB BANDWIDTH:

TEST MODE A

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
52	5260	22.35	22.40	23.12	PASS
60	5300	21.72	22.56	25.85	PASS
64	5320	22.15	23.56	25.26	PASS
100	5500	23.29	23.15	26.44	PASS
116	5580	22.39	23.01	32.90	PASS
140	5700	22.49	22.49	22.66	PASS
144	5720	23.75	23.67	22.69	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
52	5260	24.04	26.40	37.99	PASS
60	5300	24.24	31.81	34.40	PASS
64	5320	23.89	27.89	29.21	PASS
100	5500	24.98	29.32	29.37	PASS
116	5580	25.43	27.57	35.85	PASS
140	5700	23.81	24.76	31.60	PASS
144	5720	35.68	35.87	26.55	PASS

802.11n (40MHz)

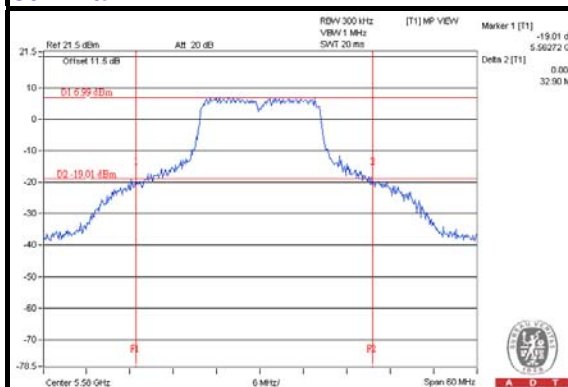
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
54	5270	54.87	53.54	81.65	PASS
62	5310	49.80	48.30	73.00	PASS
102	5510	46.17	44.94	51.52	PASS
110	5550	60.19	72.50	85.05	PASS
134	5670	71.56	50.25	88.27	PASS
142	5710	79.00	79.47	67.36	PASS

802.11ac (VHT80)

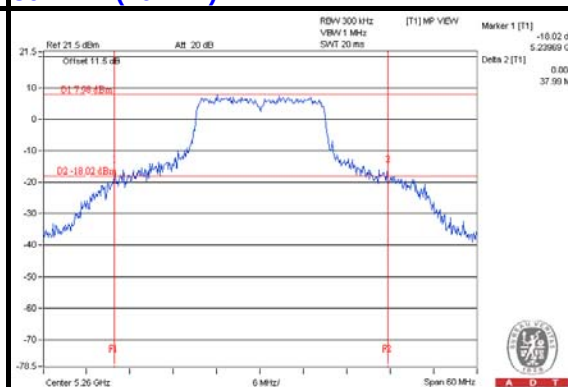
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
58	5290	88.00	86.74	97.82	PASS
106	5530	91.16	85.92	92.00	PASS
138	5690	92.07	90.47	89.49	PASS

SPECTRUM PLOT OF WORST VALUE

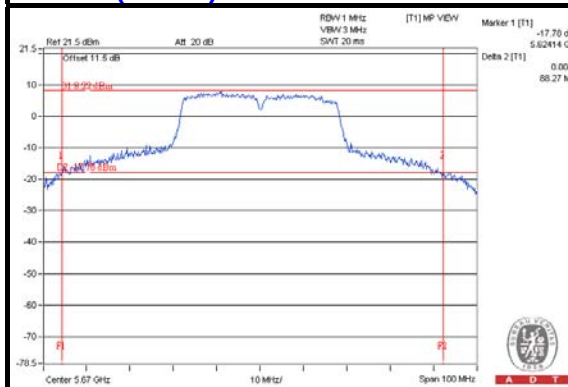
802.11a



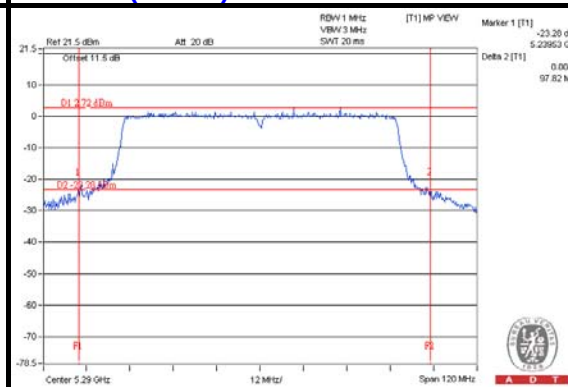
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)



TEST MODE B

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
52	5260	23.20	22.92	22.78	PASS
60	5300	23.77	23.71	22.69	PASS
64	5320	23.67	24.95	23.28	PASS
100	5500	23.42	26.14	32.80	PASS
116	5580	23.69	26.64	30.59	PASS
140	5700	23.12	23.25	22.63	PASS
144	5720	23.47	24.97	23.31	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
52	5260	30.02	30.86	24.94	PASS
60	5300	38.08	36.16	25.59	PASS
64	5320	38.41	34.99	26.69	PASS
100	5500	40.49	35.97	44.05	PASS
116	5580	40.64	38.33	41.91	PASS
140	5700	34.87	31.49	31.60	PASS
144	5720	27.77	34.27	24.29	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
54	5270	56.93	76.71	53.43	PASS
62	5310	50.15	47.46	47.38	PASS
102	5510	48.60	50.79	54.29	PASS
110	5550	77.65	87.05	87.23	PASS
134	5670	61.94	70.07	62.52	PASS
142	5710	60.45	72.02	61.06	PASS

802.11ac (VHT80)

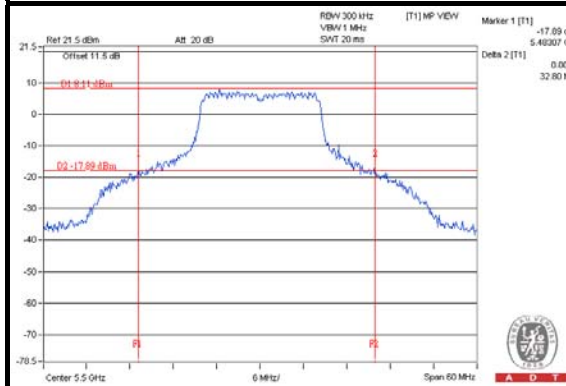
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
58	5290	93.95	90.37	88.92	PASS
106	5530	91.38	95.62	95.88	PASS
138	5690	97.13	105.53	89.26	PASS



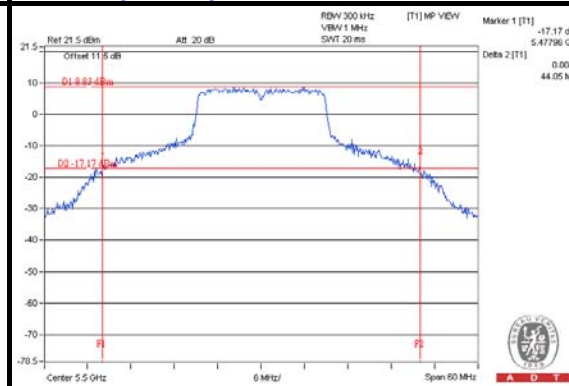
A D T

SPECTRUM PLOT OF WORST VALUE

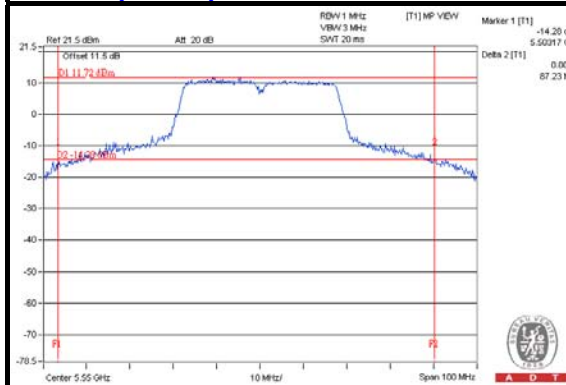
802.11a



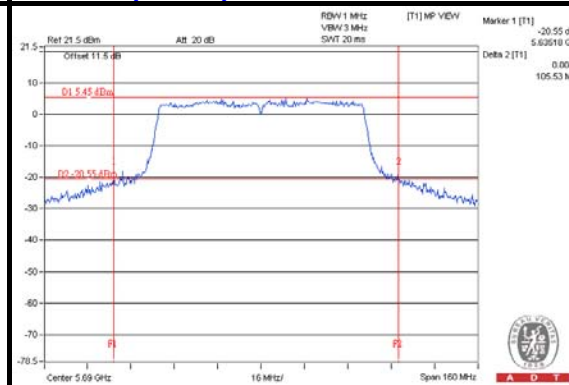
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)



EUT MAXIMUM CONDUCTED POWER

TEST MODE A

802.11a

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	69.120	18.40
5470~5725	69.686	18.43

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (20MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (mW)
5250~5350	115.043	20.61
5470~5725	107.578	20.32

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (40MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (mW)
5250~5350	97.887	19.91
5470~5725	103.009	20.13

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT80)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (mW)
5250~5350	56.477	17.52
5470~5725	44.539	16.49

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

TEST MODE B

802.11a

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	78.076	18.93
5470~5725	70.891	18.51

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (20MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (mW)
5250~5350	111.116	20.46
5470~5725	115.606	20.63

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (40MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (mW)
5250~5350	106.814	20.29
5470~5725	110.732	20.44

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT80)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (mW)
5250~5350	61.603	17.90
5470~5725	53.692	17.30

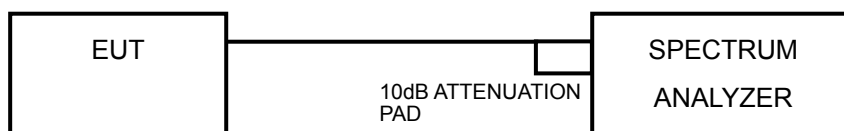
NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 TEST PROCEDURES

Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 kHz, Set VBW $\geq$ 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

TEST MODE A

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	0.49	1.57	0.95	5.80	6.26	PASS
60	5300	0.24	1.76	1.36	5.94	6.26	PASS
64	5320	0.62	1.33	1.38	5.89	6.26	PASS
100	5500	0.47	1.69	1.06	5.87	6.26	PASS
116	5580	0.74	1.85	1.75	6.25	6.26	PASS
140	5700	0.47	0.68	0.65	5.37	6.26	PASS
144	5720 For U-NII-2C	-0.59	-0.22	-0.85	4.23	6.26	PASS
144	5720 For U-NII-3	-0.30	-0.24	-1.41	4.15	12.26	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. For U-NII-2A, U-NII-2C Band:

Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.74 - 6) = 6.26\text{dBm}$.

For U-NII-3 Band:

Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.74 - 6) = 12.26\text{dBm}$.

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	2.60	2.99	2.09	7.35	11	PASS
60	5300	2.42	3.45	1.92	7.42	11	PASS
64	5320	2.37	2.69	1.58	7.01	11	PASS
100	5500	2.46	2.73	1.27	6.97	11	PASS
116	5580	2.99	2.88	2.17	7.47	11	PASS
140	5700	1.36	2.59	1.71	6.69	11	PASS
144	5720 For U-NII-2C	1.58	1.40	0.39	4.23	11	PASS
144	5720 For U-NII-3	1.67	1.25	0.25	4.15	17	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. For U-NII-2A, U-NII-2C Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

For U-NII-3 Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

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	-1.39	-1.34	-1.56	3.34	11	PASS
62	5310	-1.95	-1.83	-2.04	2.83	11	PASS
102	5510	-2.95	-3.15	-3.56	1.56	11	PASS
110	5550	-1.37	-0.72	-1.66	3.54	11	PASS
134	5670	-0.47	-1.63	-0.48	3.94	11	PASS
142	5710 For U-NII-2C	-0.96	-1.58	-1.84	3.35	11	PASS
142	5710 For U-NII-3	-2.52	-2.10	-2.84	2.32	17	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. For U-NII-2A, U-NII-2C Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

For U-NII-3 Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

802.11ac (VHT80)

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
58	5290	-2.26	-6.98	-7.04	-0.03	6.26	PASS
106	5530	-6.00	-8.34	-9.23	-2.86	6.26	PASS
138	5690 For U-NII-2C	-7.63	-7.77	-8.02	-2.98	6.26	PASS
138	5690 For U-NII-3	-10.16	-8.73	-10.59	-4.93	12.26	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. For U-NII-2A, U-NII-2C Band:

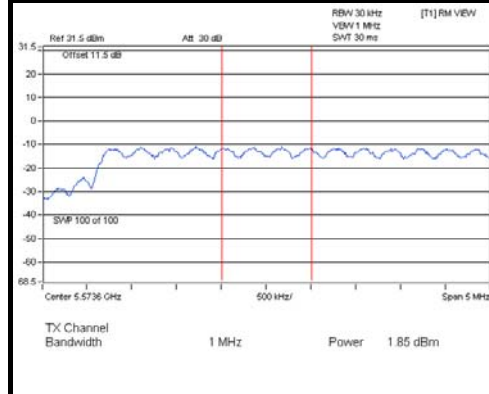
Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.74 - 6) = 6.26\text{dBm}$.

For U-NII-3 Band:

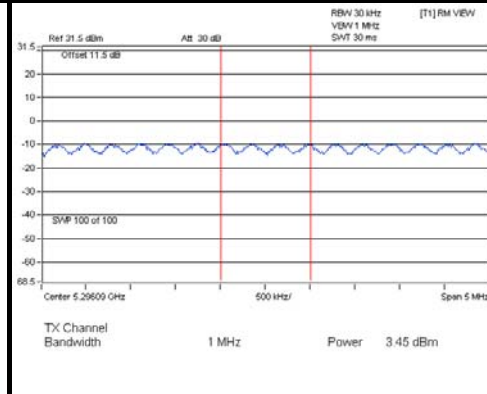
Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.74 - 6) = 12.26\text{dBm}$.

SPECTRUM PLOT OF WORST VALUE

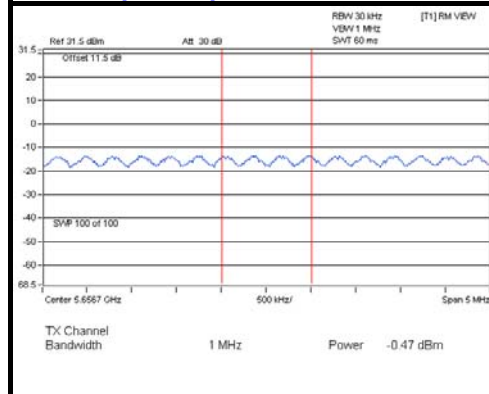
802.11a



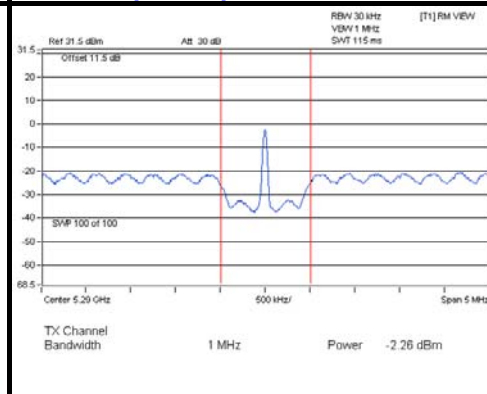
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)



TEST MODE B

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	0.77	1.11	0.96	5.72	6.26	PASS
60	5300	1.28	1.16	0.35	5.72	6.26	PASS
64	5320	1.01	0.93	0.72	5.66	6.26	PASS
100	5500	1.12	1.29	1.96	6.24	6.26	PASS
116	5580	1.02	1.54	1.25	6.05	6.26	PASS
140	5700	0.87	0.37	-0.05	5.18	6.26	PASS
144	5720 For U-NII-2C	0.19	0.79	-0.73	4.92	6.26	PASS
144	5720 For U-NII-3	-0.63	0.61	-0.81	4.56	12.26	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. For U-NII-2A, U-NII-2C Band:

Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.74 - 6) = 6.26\text{dBm}$.

For U-NII-3 Band:

Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.74 - 6) = 12.26\text{dBm}$.

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	2.89	3.02	1.49	7.29	11	PASS
60	5300	3.26	3.00	1.90	7.53	11	PASS
64	5320	3.67	3.01	1.72	7.64	11	PASS
100	5500	2.29	2.30	3.47	7.49	11	PASS
116	5580	3.25	2.63	3.58	7.94	11	PASS
140	5700	2.32	2.11	1.77	6.84	11	PASS
144	5720 For U-NII-2C	1.69	1.96	0.20	6.14	11	PASS
144	5720 For U-NII-3	0.84	1.72	-0.53	5.56	17	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. For U-NII-2A, U-NII-2C Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

For U-NII-3 Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

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	-0.68	0.39	-0.40	4.57	11	PASS
62	5310	-1.59	-1.72	-1.80	3.07	11	PASS
102	5510	-3.11	-2.41	-2.03	2.28	11	PASS
110	5550	-0.23	0.12	0.42	4.88	11	PASS
134	5670	0.05	-0.37	-0.48	4.51	11	PASS
142	5710 For U-NII-2C	-1.40	-1.16	-1.67	3.39	11	PASS
142	5710 For U-NII-3	-2.64	-2.28	-3.13	2.12	17	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. For U-NII-2A, U-NII-2C Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

For U-NII-3 Band:

IEEE 802.11n, MCS = 16-23, NSS = 3,

Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.

802.11ac (VHT80)

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
58	5290	-6.04	-5.70	-6.53	-1.31	6.26	PASS
106	5530	-6.87	-5.86	-5.71	-1.35	6.26	PASS
138	5690 For U-NII-2C	-5.78	-5.91	-7.40	-1.51	6.26	PASS
138	5690 For U-NII-3	-8.74	-6.45	-10.07	-3.36	12.26	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. For U-NII-2A, U-NII-2C Band:

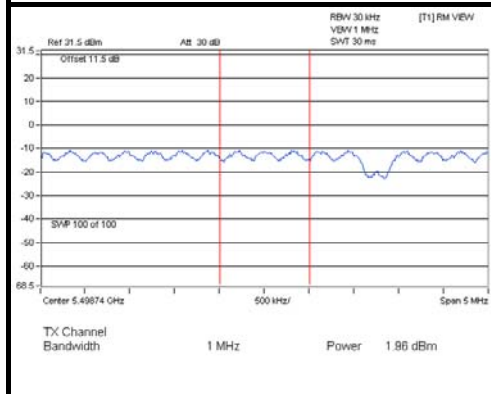
Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.74 - 6) = 6.26\text{dBm}$.

For U-NII-3 Band:

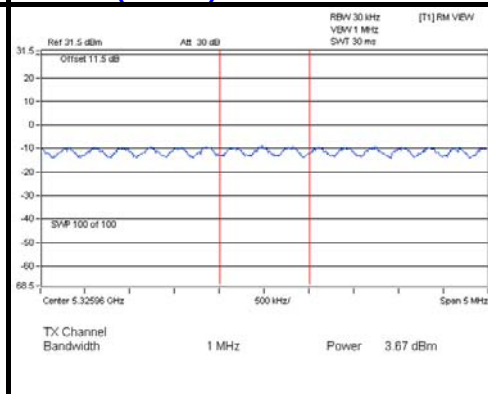
Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.74 - 6) = 12.26\text{dBm}$.

SPECTRUM PLOT OF WORST VALUE

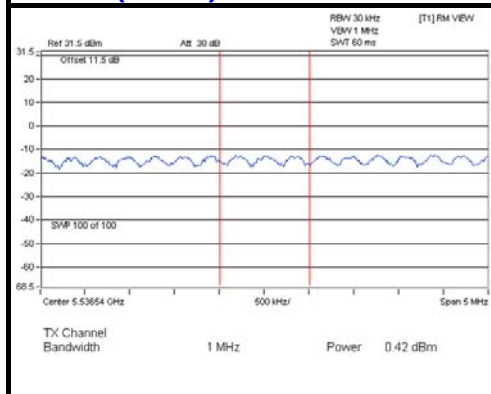
802.11a



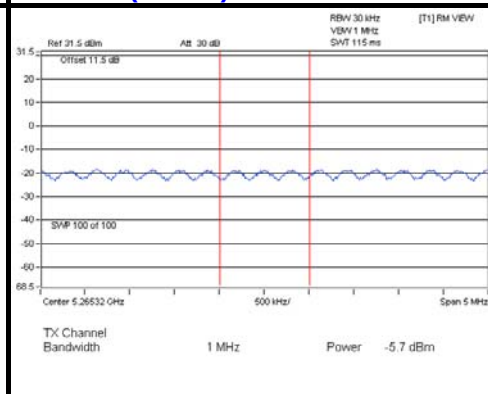
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)

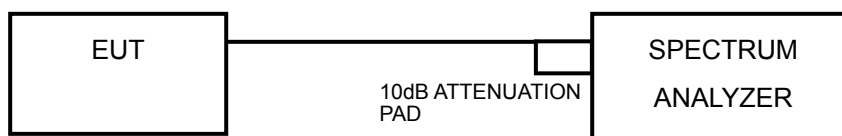


4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURE

- 1) Set RBW = 1 MHz, VBW $\geq$ 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.
- Find the worst channel and modulation mode as above test procedure, and follow KDB 789033 D01 General UNII Test Procedures Old Rules v01r04 and repeat step 1 to 5 for final testing of each modulation mode on a single channel (all modulation types) in a single operating band to compliance with the peak excursion requirement.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

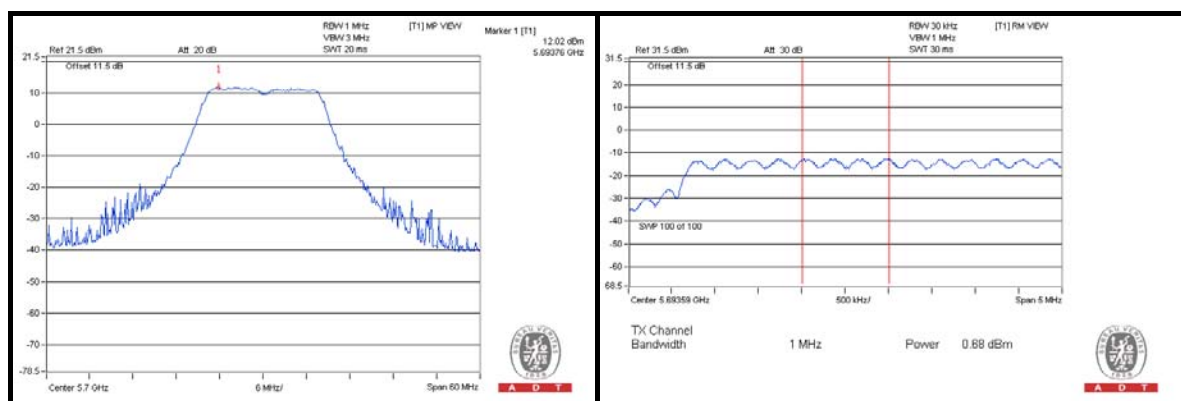
4.5.6 EUT OPERATING CONDITIONS

Same as 4.2.6

4.5.7 TEST RESULTS

TEST MODE A

MODULATION MODE	MODULATION TYPE	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK ESCURSION (dB)	LIMIT (dB)	PASS / FAIL
802.11a	BPSK	5700	12.02	0.68	11.34	13	PASS
	QPSK		9.36	0.63	8.73	13	PASS
	16QAM		9.88	0.93	8.95	13	PASS
	64QAM		10.16	0.42	9.74	13	PASS
802.11n (20MHz)	BPSK	5700	13.87	2.59	11.28	13	PASS
	QPSK		11.63	2.49	9.14	13	PASS
	16QAM		11.52	2.24	9.28	13	PASS
	64QAM		11.69	2.54	9.15	13	PASS
802.11n (40MHz)	BPSK	5670	7.39	-0.47	7.86	13	PASS
	QPSK		8.64	-0.61	9.25	13	PASS
	16QAM		8.65	-0.67	9.32	13	PASS
	64QAM		9.06	-0.86	9.92	13	PASS
802.11ac (80MHz)	BPSK	5530	2.57	-6.00	8.57	13	PASS
	QPSK		1.27	-6.05	7.32	13	PASS
	16QAM		1.36	-5.75	7.11	13	PASS
	64QAM		1.84	-6.09	7.93	13	PASS
	256QAM		1.49	-6.18	7.67	13	PASS

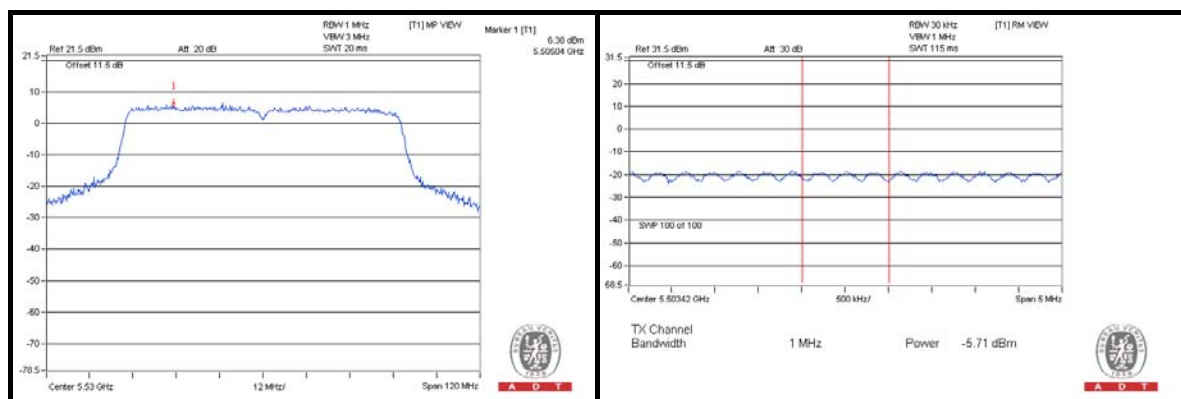




A D T

TEST MODE B

MODULATION MODE	MODULATION TYPE	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK ESCURSION (dB)	LIMIT (dB)	PASS / FAIL
802.11a	BPSK	5700	11.60	0.87	10.73	13	PASS
	QPSK		10.18	0.76	9.42	13	PASS
	16QAM		10.45	0.75	9.70	13	PASS
	64QAM		9.76	0.34	9.42	13	PASS
802.11n (20MHz)	BPSK	5700	13.11	2.32	10.79	13	PASS
	QPSK		11.19	1.87	9.32	13	PASS
	16QAM		11.47	2.18	9.29	13	PASS
	64QAM		11.34	1.71	9.63	13	PASS
802.11n (40MHz)	BPSK	5670	11.04	0.05	10.99	13	PASS
	QPSK		8.24	-0.57	8.81	13	PASS
	16QAM		9.62	-0.33	9.95	13	PASS
	64QAM		9.56	-0.14	9.70	13	PASS
802.11ac (80MHz)	BPSK	5530	6.38	-5.71	12.09	13	PASS
	QPSK		4.45	-6.02	10.47	13	PASS
	16QAM		4.63	-6.13	10.76	13	PASS
	64QAM		4.50	-6.27	10.77	13	PASS
	256QAM		4.79	-6.40	11.19	13	PASS

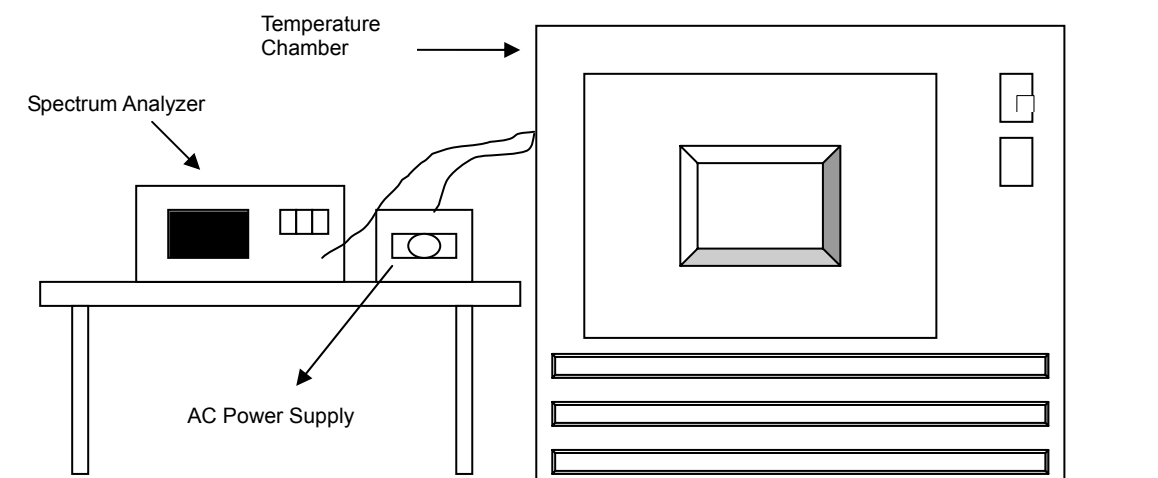


4.6 FREQUENCY STABILITY

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 AC 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

TEST MODE A

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5320.0164	0.00031	5320.0188	0.00035	5320.0192	0.00036	5320.016	0.00030
40	120	5320.0057	0.00011	5320.0088	0.00017	5320.0052	0.00010	5320.0036	0.00007
30	120	5320.01	0.00019	5320.0104	0.00020	5320.0191	0.00036	5320.0128	0.00024
20	120	5320.0182	0.00034	5320.0236	0.00044	5320.0253	0.00048	5320.0254	0.00048
10	120	5320.007	0.00013	5320.0111	0.00021	5320.005	0.00009	5320.0109	0.00020
0	120	5319.9941	-0.00011	5319.9967	-0.00006	5319.9954	-0.00009	5319.994	-0.00011
-10	120	5320.016	0.00030	5320.0177	0.00033	5320.0187	0.00035	5320.0204	0.00038
-20	120	5319.9928	-0.00014	5319.997	-0.00006	5319.9982	-0.00003	5319.9927	-0.00014
-30	120	5319.992	-0.00015	5319.998	-0.00004	5319.9962	-0.00007	5319.99	-0.00019

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5320.0188	0.00035	5320.023	0.00043	5320.0258	0.00048	5320.0246	0.00046
	120	5320.0182	0.00034	5320.0236	0.00044	5320.0253	0.00048	5320.0254	0.00048
	102	5320.0176	0.00033	5320.0227	0.00043	5320.0247	0.00046	5320.0246	0.00046

TEST MODE B

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5320.013	0.00024	5320.0103	0.00019	5320.0138	0.00026	5320.013	0.00024
40	120	5319.9821	-0.00034	5319.9746	-0.00048	5319.9737	-0.00049	5319.9786	-0.00040
30	120	5320.0014	0.00003	5319.9973	-0.00005	5320.0004	0.00001	5320.0004	0.00001
20	120	5319.9877	-0.00023	5319.9925	-0.00014	5319.9833	-0.00031	5319.9886	-0.00021
10	120	5319.9826	-0.00033	5319.9773	-0.00043	5319.9798	-0.00038	5319.9769	-0.00043
0	120	5320.0075	0.00014	5320.0094	0.00018	5320.0073	0.00014	5320.0096	0.00018
-10	120	5319.9882	-0.00022	5319.9882	-0.00022	5319.9869	-0.00025	5319.9936	-0.00012
-20	120	5319.9767	-0.00044	5319.974	-0.00049	5319.9822	-0.00033	5319.9765	-0.00044
-30	120	5319.9964	-0.00007	5320.0001	0.00000	5319.9903	-0.00018	5319.9922	-0.00015

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5319.9872	-0.00024	5319.9936	-0.00012	5319.9843	-0.00030	5319.9882	-0.00022
	120	5319.9877	-0.00023	5319.9925	-0.00014	5319.9833	-0.00031	5319.9886	-0.00021
	102	5319.987	-0.00024	5319.9926	-0.00014	5319.9836	-0.00031	5319.9897	-0.00019

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety 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.

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