



FCC TEST REPORT (15.247)

REPORT NO.: RF140312C10

MODEL NO.: N435

FCC ID: P4Q-N435WIFI

RECEIVED: Mar. 12, 2014

TESTED: Jul. 04, 2014 ~ Jul. 21, 2014

ISSUED: Jul. 25, 2014

APPLICANT: MiTAC International Corp.

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140312C10	Original release	Jul. 25, 2014



1. CERTIFICATION

PRODUCT: Tablet PC
MODEL NO.: N435
BRAND: Mio ; Mitac ; Code ; Janam ; Stryker
APPLICANT: MiTAC International Corp.
TESTED: Jul. 04, 2014 ~ Jul. 21, 2014
TEST SAMPLE: Production Unit
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.10-2009

The above equipment (model: N435) 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 : Ivonne Wu , **DATE** : Jul. 25, 2014
Ivonne Wu / Supervisor

APPROVED BY : Sam Chen , **DATE** : Jul. 25, 2014
Sam Chen / Senior Project Engineer

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -14.51dB at 0.56797MHz.
15.205 & 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.52dB at 2483.5MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(d)	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

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	2.93 dB
	200MHz ~1000MHz	2.95 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 $k = 2$.



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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Tablet PC
MODEL NO.	N435
POWER SUPPLY	5Vdc (adapter) 3.7Vdc (Li-ion battery)
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0 / 5.5 / 2.0 / 1.0 Mbps 802.11g: 54.0 / 48.0 / 36.0 / 24.0 / 18.0 / 12.0 / 9.0 / 6.0 Mbps 802.11a: 54.0 / 48.0 / 36.0 / 24.0 / 18.0 / 12.0 / 9.0 / 6.0 Mbps 802.11n: up to MCS7
OPERATING FREQUENCY	2.4GHz: 2412 ~ 2462MHz 5.0GHz: 5745 ~ 5825MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) 5.0GHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	90.57mW for 2412 ~ 2462MHz 114.82mW for 5745 ~ 5825MHz
ANTENNA TYPE	2.4GHz: PCB antenna with 3.3dBi gain 5.0GHz: PCB antenna with 3.5dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

NOTE:

1. WLAN 2.4GHz cannot transmit simultaneously with WLAN 5GHz.
2. The EUT contains following accessory devices.

ITEM	BRAND	MODEL	SPECIFICATION
Adapter 1	TPT	MII050200	I/P: 100-240Vac, 50-60Hz, 0.3A O/P: 5Vdc, 2A
Adapter 2	SINPRO	MPU16A-102	I/P: 100-240Vac, 47-63Hz, 0.33-0.18A O/P: 5Vdc, 2.6A
Battery	Tian Yu	SJS3060	3.7Vdc, 3060mAh
BCR Scanner 1 (2D LED)	Honeywell	N5600, N56X3, N56X0, N5603	--
BCR Scanner 2 (2D)	Code	CR8012	--
BCR Scanner 3 (1D)	Opticon	MDL-2XXX : MSL-2XXX	--
BCR Scanner 4 (2D Laser)	Honeywell	N5603, N56X3	--
LCD Panel	TIANME	TM059YDH01	5.88 inch
Front Camera	LITE-ON	10P2SA511	--
Rear Camera	LITE-ON	10P2SF130	--
WLAN, BT Module	Jorjin	WG7833-B0 & WX7833-B0	--

3. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

FOR 2.4GHz:

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

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

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

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

FOR 5.0GHz (5745 ~ 5825MHz):

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz



3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

WLAN 2.4GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Tablet w/ 2D Laser Honeywell Scanner + Adapter 1
B	√	√	-	-	Tablet w/ 2D LED Honeywell Scanner + Adapter 1
C	√	√	-	-	Tablet w/ 2D Code Scanner + Adapter 1
D	√	√	-	-	Tablet w/ 1D Opticon Scanner + Adapter 1
E	√	√	-	-	Tablet w/o Bar Code Scanner + Adapter 1
F	-	√	-	-	Tablet w/ 2D Laser Honeywell Scanner + Adapter 2
G	-	√	-	-	Tablet w/ 2D LED Honeywell Scanner + Adapter 2
H	-	√	-	-	Tablet w/ 2D Code Scanner + Adapter 2
I	-	√	-	-	Tablet w/ 1D Opticon Scanner + Adapter 2
J	-	√	-	-	Tablet w/o Bar Code Scanner + Adapter 2

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

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

RADIATED EMISSION TEST (ABOVE 1GHz):

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0
	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	MCS0
B, C, D, E	802.11n (40MHz)	3 to 9	9	OFDM	BPSK	MCS0

RADIATED EMISSION TEST (BELOW 1GHz):

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A~J	802.11n (40MHz)	3 to 9	9	OFDM	BPSK	MCS0



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POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (40MHz)	3 to 9	9	OFDM	BPSK	MCS0

BANDEDGE MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	MCS0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	MCS0



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TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	25deg. C, 65%RH	120Vac, 60Hz	Will Chen
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Will Chen
PLC	25deg. C, 65%RH	120Vac, 60Hz	Gavin Wu
APCM	25deg. C, 65%RH	120Vac, 60Hz	David Huang



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WLAN 5.0GHz (5745 ~ 5825MHz):

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Tablet w/ 2D Laser Honeywell Scanner + Adapter 1
B	√	√	-	-	Tablet w/ 2D LED Honeywell Scanner + Adapter 1
C	√	√	-	-	Tablet w/ 2D Code Scanner + Adapter 1
D	√	√	-	-	Tablet w/ 1D Opticon Scanner + Adapter 1
E	√	√	-	-	Tablet w/o Bar Code Scanner + Adapter 1
F	-	√	-	-	Tablet w/ 2D Laser Honeywell Scanner + Adapter 2
G	-	√	-	-	Tablet w/ 2D LED Honeywell Scanner + Adapter 2
H	-	√	-	-	Tablet w/ 2D Code Scanner + Adapter 2
I	-	√	-	-	Tablet w/ 1D Opticon Scanner + Adapter 2
J	-	√	-	-	Tablet w/o Bar Code Scanner + Adapter 2

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

NOTE: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	149 to 161	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)	149 to 161	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	MCS0
B, C, D, E	802.11n (40MHz)	151 to 159	151	OFDM	BPSK	MCS0

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A~J	802.11n (40MHz)	151 to 159	151	OFDM	BPSK	MCS0



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POWER LINE CONDUCTED EMISSION TEST:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (40MHz)	151 to 159	151	OFDM	BPSK	MCS0

BANDEDGE MEASUREMENT:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	149 to 161	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (20MHz)	149 to 161	149, 157, 165	OFDM	BPSK	MCS0
A	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	MCS0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	149 to 161	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (20MHz)	149 to 161	149, 157, 165	OFDM	BPSK	MCS0
A	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Will Chen
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Will Chen
PLC	25deg. C, 65%RH	120Vac, 60Hz	Gavin Wu
APCM	25deg. C, 65%RH	120Vac, 60Hz	David Huang

3.3 DESCRIPTION OF SUPPORT UNITS

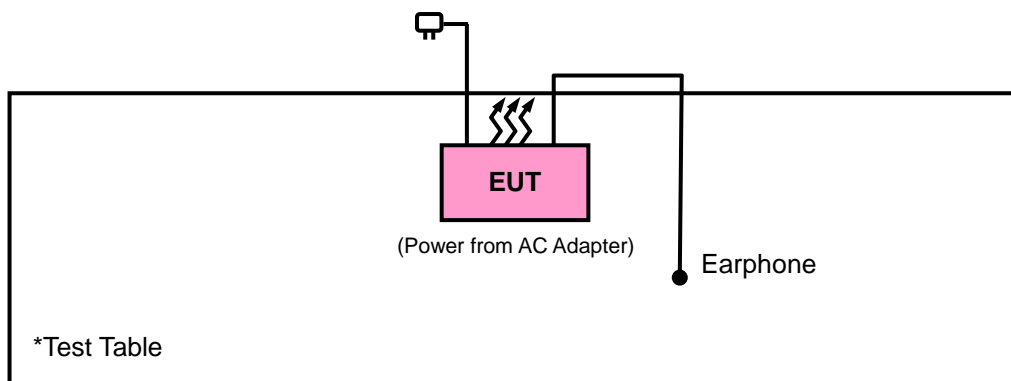
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Earphone	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

NOTE: 1. All power cords of the above support units are non shielded (1.8m).

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 DUTY CYCLE TEST SIGNAL

WLAN 2.4GHz

802.11b: Duty cycle of test signal is 100 %

Duty cycle is < 98%

802.11g: Duty cycle = $1.418/1.691 = 0.838$, Duty factor = $10 * \log(1/0.838) = 0.77$

802.11n (20MHz): Duty cycle = $1.322/1.586 = 0.833$, Duty factor = $10 * \log(1/0.833) = 0.79$

802.11n (40MHz): Duty cycle = $641.02/913.46 = 0.702$, Duty factor = $10 * \log(1/0.702) = 1.54$





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5725MHz ~ 5850MHz

Duty cycle is < 98%

802.11a: Duty cycle = $1.394/1.675 = 0.832$, Duty factor = $10 * \log(1/0.832) = 0.80$

802.11n (20MHz): Duty cycle = $1.324/1.588 = 0.834$, Duty factor = $10 * \log(1/0.834) = 0.79$

802.11n (40MHz): Duty cycle = $613.14/917.63 = 0.668$, Duty factor = $10 * \log(1/0.668) = 1.75$



3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C (15.247)

558074 D01 DTS Meas Guidance v03r01

ANSI C63.10-2009

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

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

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

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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

NOTE:

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



4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 15, 2014	Apr. 14, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2013	Dec. 20, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Feb. 27, 2014	Feb. 26, 2015
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Feb. 19, 2014	Feb. 18, 2015
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 18, 2013	Dec. 17, 2014
Loop Antenna	HFH2-Z2	100070	Mar. 06, 2014	Mar. 05, 2016
Preamplifier EMCI	EMC 012645	980115	Dec. 26, 2013	Dec. 25, 2014
Preamplifier EMCI	EMC 184045	980116	Jan. 13, 2014	Jan. 12, 2015
Preamplifier EMCI	EMC 330H	980112	Dec. 27, 2013	Dec. 26, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4 2950114	Oct. 18, 2013	Oct. 17, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 18, 2013	Oct. 17, 2014
RF signal cable Worken	RG-213	NA	Nov. 07, 2013	Nov. 06, 2014
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Power Meter	ML2495A	1232002	Aug. 23, 2013	Aug. 22, 2014
Power Sensor	MA2411B	1207325	Aug. 23, 2013	Aug. 22, 2014

- 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 calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. The test was performed in HwaYa Chamber 10.
 4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 5. The FCC Site Registration No. is 690701.
 6. The IC Site Registration No. is IC 7450F-10.

4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

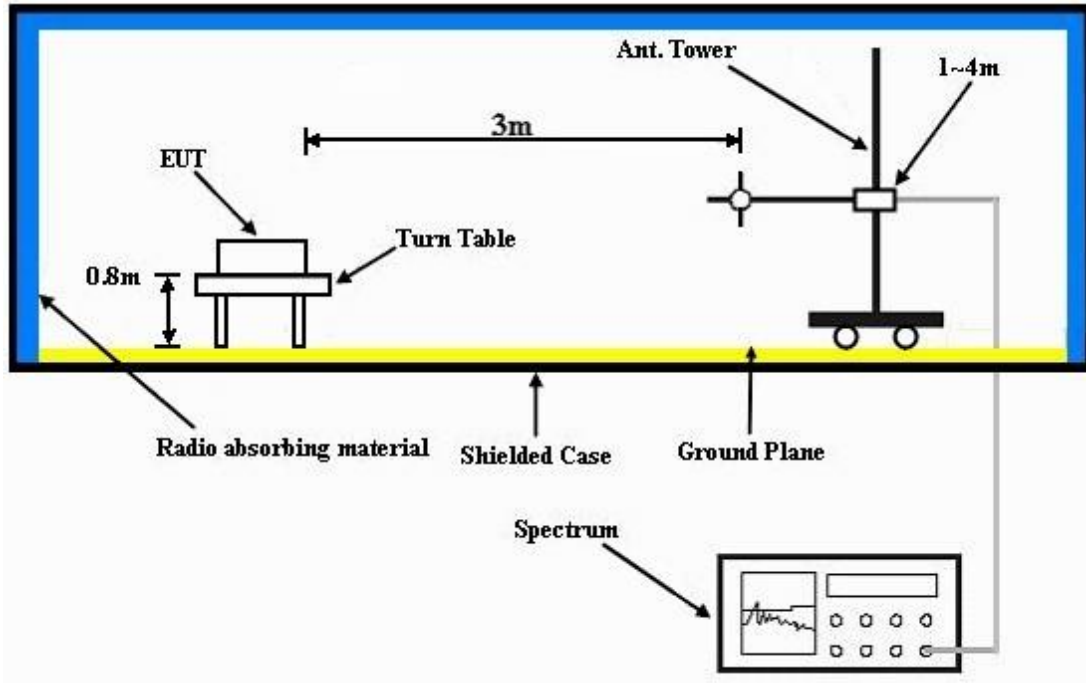
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution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

4.1.4 DEVIATION FROM TEST STANDARD

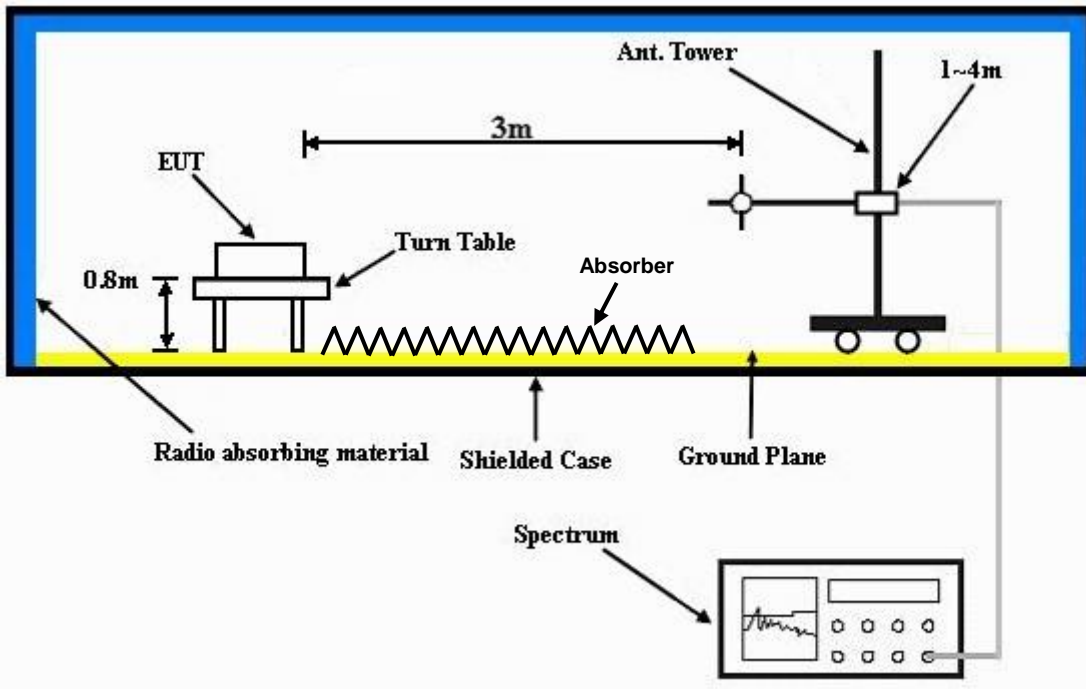
No deviation.

4.1.5 TEST SETUP

Frequency Range 30MHz ~ 1GHz



Frequency Range above 1GHz



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



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4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.



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4.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA

MODE A

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2388	45.99	44.28	54	-8.01	31.8	5.4	35.49	115	6	Average
2388	56.72	55.01	74	-17.28	31.8	5.4	35.49	115	6	Peak
2412	103.63	101.86			31.81	5.43	35.47	115	6	Average
2412	106.5	104.73			31.81	5.43	35.47	115	6	Peak
2484	40.2	38.24	54	-13.8	31.88	5.5	35.42	115	6	Average
2484	55.79	53.83	74	-18.21	31.88	5.5	35.42	115	6	Peak
4824	47.83	39.7	54	-6.17	33.97	8.26	34.1	148	227	Average
4824	53.65	45.52	74	-20.35	33.97	8.26	34.1	148	227	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2378	47.2	45.54	54	-6.8	31.78	5.37	35.49	103	88	Average
2378	59.47	57.81	74	-14.53	31.78	5.37	35.49	103	88	Peak
2412	104.4	102.63			31.81	5.43	35.47	103	88	Average
2412	107.1	105.33			31.81	5.43	35.47	103	88	Peak
2500	40.29	38.27	54	-13.71	31.9	5.53	35.41	103	88	Average
2500	55.92	53.9	74	-18.08	31.9	5.53	35.41	103	88	Peak
4824	48.62	40.49	54	-5.38	33.97	8.26	34.1	134	181	Average
4824	54.03	45.9	74	-19.97	33.97	8.26	34.1	134	181	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2412MHz: Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2388	40.5	38.79	54	-13.5	31.8	5.4	35.49	137	26	Average
2388	56.07	54.36	74	-17.93	31.8	5.4	35.49	137	26	Peak
2437	103.41	101.56			31.85	5.46	35.46	137	26	Average
2437	106.3	104.45			31.85	5.46	35.46	137	26	Peak
2494	40.56	38.54	54	-13.44	31.9	5.53	35.41	137	26	Average
2494	56.32	54.3	74	-17.68	31.9	5.53	35.41	137	26	Peak
4874	52.29	44.1	54	-1.71	33.98	8.27	34.06	102	233	Average
4874	56.41	48.22	74	-17.59	33.98	8.27	34.06	102	233	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2380	40.35	38.69	54	-13.65	31.78	5.37	35.49	100	87	Average
2380	55.94	54.28	74	-18.06	31.78	5.37	35.49	100	87	Peak
2437	104.24	102.39			31.85	5.46	35.46	100	87	Average
2437	107.04	105.19			31.85	5.46	35.46	100	87	Peak
2486	41.37	39.38	54	-12.63	31.88	5.53	35.42	100	87	Average
2486	56	54.01	74	-18	31.88	5.53	35.42	100	87	Peak
4874	45.25	37.06	54	-8.75	33.98	8.27	34.06	102	191	Average
4874	52.63	44.44	74	-21.37	33.98	8.27	34.06	102	191	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2437MHz: Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2378	39.74	38.08	54	-14.26	31.78	5.37	35.49	135	29	Average
2378	55.76	54.1	74	-18.24	31.78	5.37	35.49	135	29	Peak
2462	103.03	101.1			31.87	5.5	35.44	135	29	Average
2462	105.83	103.9			31.87	5.5	35.44	135	29	Peak
2488	45.31	43.3	54	-8.69	31.9	5.53	35.42	135	29	Average
2488	57.07	55.06	74	-16.93	31.9	5.53	35.42	135	29	Peak
4924	52.15	43.9	54	-1.85	33.99	8.28	34.02	100	233	Average
4924	56.26	48.01	74	-17.74	33.99	8.28	34.02	100	233	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2382	39.87	38.18	54	-14.13	31.78	5.4	35.49	123	89	Average
2382	56.2	54.51	74	-17.8	31.78	5.4	35.49	123	89	Peak
2462	104.93	103			31.87	5.5	35.44	123	89	Average
2462	107.8	105.87			31.87	5.5	35.44	123	89	Peak
2484	46.09	44.13	54	-7.91	31.88	5.5	35.42	123	89	Average
2484	57.68	55.72	74	-16.32	31.88	5.5	35.42	123	89	Peak
4924	48	39.75	54	-6	33.99	8.28	34.02	103	192	Average
4924	53.84	45.59	74	-20.16	33.99	8.28	34.02	103	192	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2462MHz: Fundamental frequency.



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802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	50.56	48.83	54	-3.44	31.8	5.4	35.47	115	5	Average
2390	67.01	65.28	74	-6.99	31.8	5.4	35.47	115	5	Peak
2412	98.94	97.17			31.81	5.43	35.47	115	5	Average
2412	107.11	105.34			31.81	5.43	35.47	115	5	Peak
2492	40.94	38.92	54	-13.06	31.9	5.53	35.41	115	5	Average
2492	56.95	54.93	74	-17.05	31.9	5.53	35.41	115	5	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	53.4	51.67	54	-0.6	31.8	5.4	35.47	103	88	Average
2390	71.52	69.79	74	-2.48	31.8	5.4	35.47	103	88	Peak
2412	99.57	97.8			31.81	5.43	35.47	103	88	Average
2412	107.74	105.97			31.81	5.43	35.47	103	88	Peak
2494	41.03	39.01	54	-12.97	31.9	5.53	35.41	103	88	Average
2494	56.64	54.62	74	-17.36	31.9	5.53	35.41	103	88	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2412MHz: Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	42.93	41.2	54	-11.07	31.8	5.4	35.47	136	27	Average
2390	59.38	57.65	74	-14.62	31.8	5.4	35.47	136	27	Peak
2437	100.61	98.76			31.85	5.46	35.46	136	27	Average
2437	108.75	106.9			31.85	5.46	35.46	136	27	Peak
2484	41.9	39.94	54	-12.1	31.88	5.5	35.42	136	27	Average
2484	57.11	55.15	74	-16.89	31.88	5.5	35.42	136	27	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	42.78	41.05	54	-11.22	31.8	5.4	35.47	100	87	Average
2390	58.04	56.31	74	-15.96	31.8	5.4	35.47	100	87	Peak
2437	101.75	99.9			31.85	5.46	35.46	100	87	Average
2437	109.5	107.65			31.85	5.46	35.46	100	87	Peak
2484	43.29	41.33	54	-10.71	31.88	5.5	35.42	100	87	Average
2484	59.12	57.16	74	-14.88	31.88	5.5	35.42	100	87	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2437MHz: Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2354	40.39	38.8	54	-13.61	31.76	5.33	35.5	135	29	Average
2354	56.56	54.97	74	-17.44	31.76	5.33	35.5	135	29	Peak
2462	97.89	95.96			31.87	5.5	35.44	135	29	Average
2462	106.07	104.14			31.87	5.5	35.44	135	29	Peak
2484	50.05	48.09	54	-3.95	31.88	5.5	35.42	135	29	Average
2484	70.2	68.24	74	-3.8	31.88	5.5	35.42	135	29	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2328	40.27	38.76	54	-13.73	31.73	5.3	35.52	100	120	Average
2328	56.14	54.63	74	-17.86	31.73	5.3	35.52	100	120	Peak
2462	99.05	97.12			31.87	5.5	35.44	100	120	Average
2462	107.71	105.78			31.87	5.5	35.44	100	120	Peak
2483.5	53.48	51.52	54	-0.52	31.88	5.5	35.42	100	120	Average
2483.5	72.89	70.93	74	-1.11	31.88	5.5	35.42	100	120	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2462MHz: Fundamental frequency.



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802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	50.7	48.97	54	-3.3	31.8	5.4	35.47	115	6	Average
2390	67.69	65.96	74	-6.31	31.8	5.4	35.47	115	6	Peak
2412	98.25	96.48			31.81	5.43	35.47	115	6	Average
2412	105.69	103.92			31.81	5.43	35.47	115	6	Peak
2484	41.04	39.08	54	-12.96	31.88	5.5	35.42	115	6	Average
2484	55.96	54	74	-18.04	31.88	5.5	35.42	115	6	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2389.2	52.97	51.26	54	-1.03	31.8	5.4	35.49	103	88	Average
2389.2	69.71	68	74	-4.29	31.8	5.4	35.49	103	88	Peak
2412	98.78	97.01			31.81	5.43	35.47	103	88	Average
2412	106.91	105.14			31.81	5.43	35.47	103	88	Peak
2496	41.14	39.12	54	-12.86	31.9	5.53	35.41	103	88	Average
2496	56.3	54.28	74	-17.7	31.9	5.53	35.41	103	88	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2412MHz: Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	42.42	40.69	54	-11.58	31.8	5.4	35.47	137	27	Average
2390	59.61	57.88	74	-14.39	31.8	5.4	35.47	137	27	Peak
2437	100.43	98.58			31.85	5.46	35.46	137	27	Average
2437	108.67	106.82			31.85	5.46	35.46	137	27	Peak
2496	41.65	39.63	54	-12.35	31.9	5.53	35.41	137	27	Average
2496	56.84	54.82	74	-17.16	31.9	5.53	35.41	137	27	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2376	42.03	40.37	54	-11.97	31.78	5.37	35.49	100	87	Average
2376	56.19	54.53	74	-17.81	31.78	5.37	35.49	100	87	Peak
2437	101.11	99.26			31.85	5.46	35.46	100	87	Average
2437	109.3	107.45			31.85	5.46	35.46	100	87	Peak
2484	42.84	40.88	54	-11.16	31.88	5.5	35.42	100	87	Average
2484	56.55	54.59	74	-17.45	31.88	5.5	35.42	100	87	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2437MHz: Fundamental frequency.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	40.62	38.89	54	-13.38	31.8	5.4	35.47	135	29	Average
2390	55.47	53.74	74	-18.53	31.8	5.4	35.47	135	29	Peak
2462	97.86	95.93			31.87	5.5	35.44	135	29	Average
2462	105.65	103.72			31.87	5.5	35.44	135	29	Peak
2484	50.62	48.66	54	-3.38	31.88	5.5	35.42	135	29	Average
2484	65.46	63.5	74	-8.54	31.88	5.5	35.42	135	29	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2388	40.58	38.87	54	-13.42	31.8	5.4	35.49	123	87	Average
2388	56.92	55.21	74	-17.08	31.8	5.4	35.49	123	87	Peak
2462	99.76	97.83			31.87	5.5	35.44	123	87	Average
2462	107.65	105.72			31.87	5.5	35.44	123	87	Peak
2484	53.44	51.48	54	-0.56	31.88	5.5	35.42	123	87	Average
2484	70.41	68.45	74	-3.59	31.88	5.5	35.42	123	87	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2462MHz: Fundamental frequency.



A D T

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2380	48.64	46.98	54	-5.36	31.78	5.37	35.49	115	6	Average
2380	68.02	66.36	74	-5.98	31.78	5.37	35.49	115	6	Peak
2422	92.1	90.3			31.83	5.43	35.46	115	6	Average
2422	100.79	98.99			31.83	5.43	35.46	115	6	Peak
2490	41.83	39.82	54	-12.17	31.9	5.53	35.42	115	6	Average
2490	56.43	54.42	74	-17.57	31.9	5.53	35.42	115	6	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2384.72	52.45	50.76	54	-1.55	31.78	5.4	35.49	100	88	Average
2384.72	70.49	68.8	74	-3.51	31.78	5.4	35.49	100	88	Peak
2422	93.38	91.58			31.83	5.43	35.46	100	88	Average
2422	102.27	100.47			31.83	5.43	35.46	100	88	Peak
2492	42.06	40.04	54	-11.94	31.9	5.53	35.41	100	88	Average
2492	56.86	54.84	74	-17.14	31.9	5.53	35.41	100	88	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2422MHz: Fundamental frequency.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	51.46	49.73	54	-2.54	31.8	5.4	35.47	137	28	Average
2390	65.86	64.13	74	-8.14	31.8	5.4	35.47	137	28	Peak
2437	95.59	93.74			31.85	5.46	35.46	137	28	Average
2437	103.59	101.74			31.85	5.46	35.46	137	28	Peak
2484	49.4	47.44	54	-4.6	31.88	5.5	35.42	137	28	Average
2484	66.55	64.59	74	-7.45	31.88	5.5	35.42	137	28	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	51.38	49.65	54	-2.62	31.8	5.4	35.47	100	87	Average
2390	65.94	64.21	74	-8.06	31.8	5.4	35.47	100	87	Peak
2437	96.56	94.71			31.85	5.46	35.46	100	87	Average
2437	105.04	103.19			31.85	5.46	35.46	100	87	Peak
2484	53.39	51.43	54	-0.61	31.88	5.5	35.42	100	87	Average
2484	69.3	67.34	74	-4.7	31.88	5.5	35.42	100	87	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2437MHz: Fundamental frequency.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2380	33.99	41.11	54	-20.01	26.86	3.52	37.5	193	8	Average
2380	56.09	63.21	74	-17.91	26.86	3.52	37.5	193	8	Peak
2452	87.8	94.55			27.06	3.58	37.39	193	8	Average
2452	97.46	104.21			27.06	3.58	37.39	193	8	Peak
2484	37.95	44.52	54	-16.05	27.15	3.6	37.32	193	8	Average
2484	59.77	66.34	74	-14.23	27.15	3.6	37.32	193	8	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2334	34.51	41.78	54	-19.49	26.72	3.48	37.47	128	120	Average
2334	55.7	62.97	74	-18.3	26.72	3.48	37.47	128	120	Peak
2452	89.98	96.73			27.06	3.58	37.39	128	120	Average
2452	99.47	106.22			27.06	3.58	37.39	128	120	Peak
2488	44.95	51.45	54	-9.05	27.2	3.62	37.32	128	120	Average
2488	64.65	71.15	74	-9.35	27.2	3.62	37.32	128	120	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2452MHz: Fundamental frequency.



A D T

MODE B

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2364	34.15	41.31	54	-19.85	26.81	3.52	37.49	100	149	Average
2364	56.14	63.3	74	-17.86	26.81	3.52	37.49	100	149	Peak
2452	89.13	95.88			27.06	3.58	37.39	100	149	Average
2452	98.44	105.19			27.06	3.58	37.39	100	149	Peak
2484	47.58	54.15	54	-6.42	27.15	3.6	37.32	100	149	Average
2484	69.22	75.79	74	-4.78	27.15	3.6	37.32	100	149	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2342	34.11	41.33	54	-19.89	26.77	3.5	37.49	100	310	Average
2342	55.89	63.11	74	-18.11	26.77	3.5	37.49	100	310	Peak
2452	84.09	90.84			27.06	3.58	37.39	100	310	Average
2452	93.78	100.53			27.06	3.58	37.39	100	310	Peak
2488	42.33	48.83	54	-11.67	27.2	3.62	37.32	100	310	Average
2488	64	70.5	74	-10	27.2	3.62	37.32	100	310	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2452MHz: Fundamental frequency.



A D T

MODE C

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2360	34.37	41.55	54	-19.63	26.81	3.5	37.49	100	146	Average
2360	56.35	63.53	74	-17.65	26.81	3.5	37.49	100	146	Peak
2452	88.93	95.68			27.06	3.58	37.39	100	146	Average
2452	98.89	105.64			27.06	3.58	37.39	100	146	Peak
2484	43	49.57	54	-11	27.15	3.6	37.32	100	146	Average
2484	65.45	72.02	74	-8.55	27.15	3.6	37.32	100	146	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2372	33.95	41.07	54	-20.05	26.86	3.52	37.5	100	61	Average
2372	55.63	62.75	74	-18.37	26.86	3.52	37.5	100	61	Peak
2452	83.03	89.78			27.06	3.58	37.39	100	61	Average
2452	92.32	99.07			27.06	3.58	37.39	100	61	Peak
2490	37.11	43.61	54	-16.89	27.2	3.62	37.32	100	61	Average
2490	57.98	64.48	74	-16.02	27.2	3.62	37.32	100	61	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2452MHz: Fundamental frequency.



A D T

MODE D

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	34.87	41.94	54	-19.13	26.91	3.54	37.52	102	139	Average
2390	56.35	63.42	74	-17.65	26.91	3.54	37.52	102	139	Peak
2452	91.24	97.99			27.06	3.58	37.39	102	139	Average
2452	100.86	107.61			27.06	3.58	37.39	102	139	Peak
2484	45.75	52.32	54	-8.25	27.15	3.6	37.32	102	139	Average
2484	68.69	75.26	74	-5.31	27.15	3.6	37.32	102	139	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2370	34.07	41.19	54	-19.93	26.86	3.52	37.5	100	48	Average
2370	56.22	63.34	74	-17.78	26.86	3.52	37.5	100	48	Peak
2452	84.12	90.87			27.06	3.58	37.39	100	48	Average
2452	93.76	100.51			27.06	3.58	37.39	100	48	Peak
2488	38.41	44.91	54	-15.59	27.2	3.62	37.32	100	48	Average
2488	59.95	66.45	74	-14.05	27.2	3.62	37.32	100	48	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2452MHz: Fundamental frequency.



A D T

MODE E

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2384	34.75	41.87	54	-19.25	26.86	3.52	37.5	128	119	Average
2384	56.08	63.2	74	-17.92	26.86	3.52	37.5	128	119	Peak
2452	91.68	98.43			27.06	3.58	37.39	128	119	Average
2452	101.36	108.11			27.06	3.58	37.39	128	119	Peak
2484	46.04	52.61	54	-7.96	27.15	3.6	37.32	128	119	Average
2484	69.32	75.89	74	-4.68	27.15	3.6	37.32	128	119	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2348	34.06	41.28	54	-19.94	26.77	3.5	37.49	100	186	Average
2348	57.36	64.58	74	-16.64	26.77	3.5	37.49	100	186	Peak
2452	83.18	89.93			27.06	3.58	37.39	100	186	Average
2452	93.49	100.24			27.06	3.58	37.39	100	186	Peak
2484	39.32	45.89	54	-14.68	27.15	3.6	37.32	100	186	Average
2484	63.31	69.88	74	-10.69	27.15	3.6	37.32	100	186	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2452MHz: Fundamental frequency.



A D T

BELOW 1GHz WORST-CASE DATA:

MODE A

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	25.71	43.9	40	-14.29	12.35	0.8	31.34	100	312	Peak
180.66	28.54	48.14	43.5	-14.96	10.74	1.5	31.84	144	231	Peak
219.54	30.92	50.75	46	-15.08	10.18	1.69	31.7	176	360	Peak
415.5	23.98	37.88	46	-22.02	15.64	2.48	32.02	100	332	Peak
582.1	27.14	37.03	46	-18.86	19.19	3.04	32.12	221	187	Peak
681.5	31.14	39.02	46	-14.86	20.6	3.36	31.84	100	73	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.81	24.02	42.43	40	-15.98	12.14	0.57	31.12	100	100	Peak
56.19	27.61	45.8	40	-12.39	12.35	0.8	31.34	184	342	Peak
221.43	28.11	47.87	46	-17.89	10.26	1.7	31.72	121	188	Peak
515.6	27.66	38.73	46	-18.34	17.68	2.83	31.58	100	264	Peak
548.5	29.93	40.48	46	-16.07	18.44	2.94	31.93	100	333	Peak
615	29.79	38.99	46	-16.21	19.79	3.13	32.12	100	109	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE B

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
349	20.61	36.11	46	-25.39	14.12	2.22	31.84	100	137	Peak
368.6	26.16	41.2	46	-19.84	14.59	2.3	31.93	100	124	Peak
648.6	30.41	39	46	-15.59	20.2	3.24	32.03	100	221	Peak
715.1	29.06	36.26	46	-16.94	21.03	3.47	31.7	107	55	Peak
780.2	30.77	36.61	46	-15.23	21.94	3.65	31.43	100	360	Peak
807.5	29.98	35.39	46	-16.02	22.33	3.71	31.45	100	197	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.81	23.02	41.43	40	-16.98	12.14	0.57	31.12	100	197	Peak
56.19	26.61	44.8	40	-13.39	12.35	0.8	31.34	155	213	Peak
214.68	26.44	46.45	43.5	-17.06	9.97	1.66	31.64	100	197	Peak
482	24.75	36.9	46	-21.25	16.96	2.72	31.83	100	234	Peak
664.7	30.68	38.88	46	-15.32	20.39	3.3	31.89	100	237	Peak
797.7	28.72	34.26	46	-17.28	22.19	3.69	31.42	100	198	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE C

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	26.71	44.9	40	-13.29	12.35	0.8	31.34	100	87	Peak
180.66	28.54	48.14	43.5	-14.96	10.74	1.5	31.84	100	355	Peak
219.54	29.92	49.75	46	-16.08	10.18	1.69	31.7	102	293	Peak
415.5	23.98	37.88	46	-22.02	15.64	2.48	32.02	103	248	Peak
615	27.95	37.15	46	-18.05	19.79	3.13	32.12	130	98	Peak
664.7	30.86	39.06	46	-15.14	20.39	3.3	31.89	110	47	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	26.61	44.8	40	-13.39	12.35	0.8	31.34	102	360	Peak
180.93	23.97	43.61	43.5	-19.53	10.67	1.51	31.82	100	187	Peak
221.43	27.11	46.87	46	-18.89	10.26	1.7	31.72	113	202	Peak
415.5	24.21	38.11	46	-21.79	15.64	2.48	32.02	124	137	Peak
548.5	28.93	39.48	46	-17.07	18.44	2.94	31.93	105	163	Peak
665.4	30.69	38.86	46	-15.31	20.4	3.3	31.87	118	14	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE D

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
51.06	20.95	38.62	40	-19.05	12.87	0.77	31.31	100	123	Peak
56.19	25.71	43.9	40	-14.29	12.35	0.8	31.34	100	112	Peak
200.37	29.76	50.51	43.5	-13.74	9.4	1.6	31.75	142	312	Peak
415.5	25.98	39.88	46	-20.02	15.64	2.48	32.02	100	322	Peak
582.1	28.14	38.03	46	-17.86	19.19	3.04	32.12	100	112	Peak
715.1	30.06	37.26	46	-15.94	21.03	3.47	31.7	100	23	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.81	24.02	42.43	40	-15.98	12.14	0.57	31.12	100	42	Peak
56.19	25.61	43.8	40	-14.39	12.35	0.8	31.34	100	112	Peak
221.43	29.11	48.87	46	-16.89	10.26	1.7	31.72	100	322	Peak
415.5	25.21	39.11	46	-20.79	15.64	2.48	32.02	123	142	Peak
515.6	28.66	39.73	46	-17.34	17.68	2.83	31.58	100	312	Peak
797.7	28.72	34.26	46	-17.28	22.19	3.69	31.42	100	223	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE E

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	26.71	44.9	40	-13.29	12.35	0.8	31.34	100	124	Peak
168.24	26.92	45.36	43.5	-16.58	11.86	1.44	31.74	100	167	Peak
207.66	29.77	50.09	43.5	-13.73	9.69	1.63	31.64	100	74	Peak
415.5	23.98	37.88	46	-22.02	15.64	2.48	32.02	100	312	Peak
582.1	26.14	36.03	46	-19.86	19.19	3.04	32.12	100	175	Peak
664.7	30.86	39.06	46	-15.14	20.39	3.3	31.89	100	78	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.54	22.38	40.79	40	-17.62	12.14	0.57	31.12	100	178	Peak
56.46	26.07	44.26	40	-13.93	12.35	0.8	31.34	122	178	Peak
220.89	27.85	47.61	46	-18.15	10.26	1.7	31.72	100	312	Peak
415.5	25.21	39.11	46	-20.79	15.64	2.48	32.02	100	198	Peak
548.5	28.93	39.48	46	-17.07	18.44	2.94	31.93	100	201	Peak
648.6	29.42	38.01	46	-16.58	20.2	3.24	32.03	100	207	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE F

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
51.06	22.39	40.06	40	-17.61	12.87	0.77	31.31	233	34	Peak
55.92	26.62	44.81	40	-13.38	12.35	0.8	31.34	324	45	Peak
193.35	29.59	49.89	43.5	-13.91	9.84	1.56	31.7	100	277	Peak
648.6	30.08	38.67	46	-15.92	20.2	3.24	32.03	100	342	Peak
670.3	29.86	37.89	46	-16.14	20.46	3.32	31.81	198	209	Peak
715.1	31.46	38.66	46	-14.54	21.03	3.47	31.7	251	195	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
31.08	26.31	44.72	40	-13.69	12.14	0.57	31.12	100	63	Peak
55.65	28.47	46.55	40	-11.53	12.45	0.8	31.33	100	243	Peak
86.43	24.47	47.02	40	-15.53	8.23	1	31.78	100	57	Peak
449.1	22.31	35.37	46	-23.69	16.31	2.61	31.98	100	42	Peak
582.1	27.38	37.27	46	-18.62	19.19	3.04	32.12	100	109	Peak
664.7	29.74	37.94	46	-16.26	20.39	3.3	31.89	100	225	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE G

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
55.92	27.62	45.81	40	-12.38	12.35	0.8	31.34	100	167	Peak
193.35	28.59	48.89	43.5	-14.91	9.84	1.56	31.7	105	210	Peak
219	32.65	52.48	46	-13.35	10.18	1.69	31.7	133	207	Peak
415.5	22.87	36.77	46	-23.13	15.64	2.48	32.02	274	133	Peak
664.7	32.98	41.18	46	-13.02	20.39	3.3	31.89	100	298	Peak
797.7	33.06	38.6	46	-12.94	22.19	3.69	31.42	100	111	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	26.8	43.6	40	-13.2	13.58	0.7	31.08	100	177	Peak
55.65	27.47	45.55	40	-12.53	12.45	0.8	31.33	198	274	Peak
86.16	22.94	45.49	40	-17.06	8.23	1	31.78	100	197	Peak
449.1	22.31	35.37	46	-23.69	16.31	2.61	31.98	312	220	Peak
615	28.62	37.82	46	-17.38	19.79	3.13	32.12	132	207	Peak
715.1	27.07	34.27	46	-18.93	21.03	3.47	31.7	207	189	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE H

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
55.92	27.62	45.81	40	-12.38	12.35	0.8	31.34	100	135	Peak
138.54	21.71	39.81	43.5	-21.79	12.27	1.29	31.66	100	2	Peak
210.09	29.95	50.09	43.5	-13.55	9.81	1.64	31.59	127	44	Peak
415.5	21.87	35.77	46	-24.13	15.64	2.48	32.02	100	45	Peak
615	29.32	38.52	46	-16.68	19.79	3.13	32.12	104	212	Peak
664.7	32.98	41.18	46	-13.02	20.39	3.3	31.89	100	111	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
31.08	25.31	43.72	40	-14.69	12.14	0.57	31.12	100	117	Peak
55.65	27.47	45.55	40	-12.53	12.45	0.8	31.33	100	285	Peak
142.86	21.5	39.38	43.5	-22	12.44	1.31	31.63	100	127	Peak
582.1	28.38	38.27	46	-17.62	19.19	3.04	32.12	122	187	Peak
648.6	29.07	37.66	46	-16.93	20.2	3.24	32.03	100	123	Peak
775.3	26.92	32.78	46	-19.08	21.87	3.63	31.36	100	137	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE I

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
50.52	20.38	37.95	40	-19.62	12.97	0.77	31.31	100	24	Peak
100.74	16.72	38.45	43.5	-26.78	9.15	1.07	31.95	100	154	Peak
219	31.65	51.48	46	-14.35	10.18	1.69	31.7	100	43	Peak
415.5	21.87	35.77	46	-24.13	15.64	2.48	32.02	155	243	Peak
548.5	24.21	34.76	46	-21.79	18.44	2.94	31.93	100	221	Peak
615	29.32	38.52	46	-16.68	19.79	3.13	32.12	213	123	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	25.8	42.6	40	-14.2	13.58	0.7	31.08	100	43	Peak
56.73	25.58	43.87	40	-14.42	12.25	0.81	31.35	133	221	Peak
86.16	22.94	45.49	40	-17.06	8.23	1	31.78	100	55	Peak
500.2	23.62	35.13	46	-22.38	17.33	2.78	31.62	100	342	Peak
648.6	29.07	37.66	46	-16.93	20.2	3.24	32.03	100	112	Peak
855.1	27.67	32.78	46	-18.33	22.94	3.84	31.89	100	221	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE J

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.73	27.33	45.62	40	-12.67	12.25	0.81	31.35	100	123	Peak
188.76	27.19	47.22	43.5	-16.31	10.12	1.54	31.69	100	241	Peak
211.71	31.41	51.51	43.5	-12.09	9.85	1.65	31.6	100	107	Peak
304.2	21.05	37.81	46	-24.95	13.06	2.07	31.89	100	221	Peak
582.1	26.56	36.45	46	-19.44	19.19	3.04	32.12	100	31	Peak
664.7	31.98	40.18	46	-14.02	20.39	3.3	31.89	124	0	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
31.08	25.31	43.72	40	-14.69	12.14	0.57	31.12	174	360	Peak
56.19	28.18	46.37	40	-11.82	12.35	0.8	31.34	100	207	Peak
86.16	23.94	46.49	40	-16.06	8.23	1	31.78	138	198	Peak
515.6	25.73	36.8	46	-20.27	17.68	2.83	31.58	100	220	Peak
568.8	28.2	38.4	46	-17.8	18.88	3	32.08	100	302	Peak
648.6	29.07	37.66	46	-16.93	20.2	3.24	32.03	100	200	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

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

Tested Date: Jul. 17, 2014

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Apr. 24, 2014	Apr. 23, 2015
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 27, 2013	Dec. 26, 2014
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 23, 2013	Dec. 22, 2014
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 10, 2014	Jul. 09, 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 2.
 3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

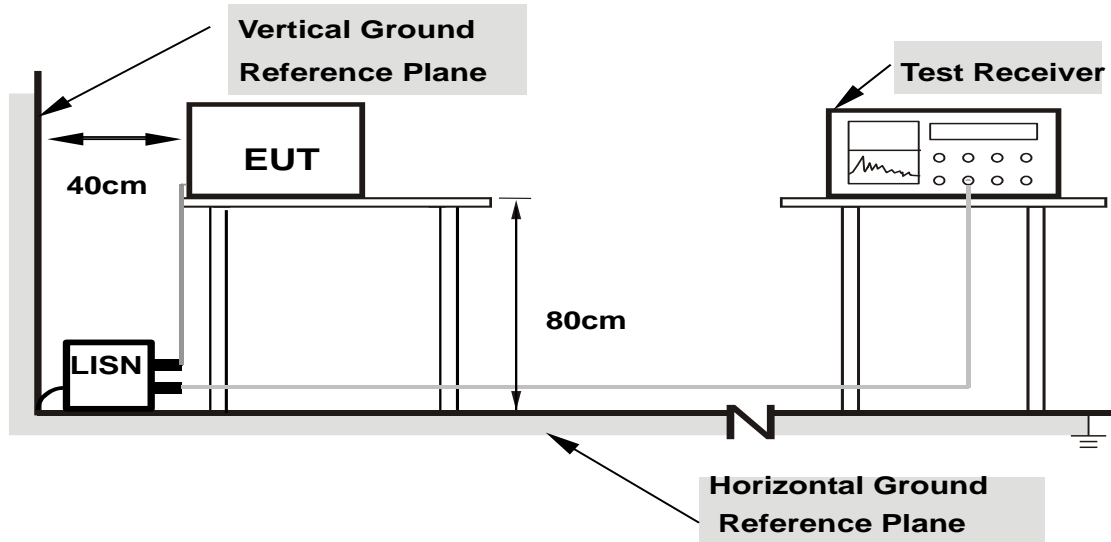
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 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 section 4.1.6.

4.2.7 TEST RESULTS

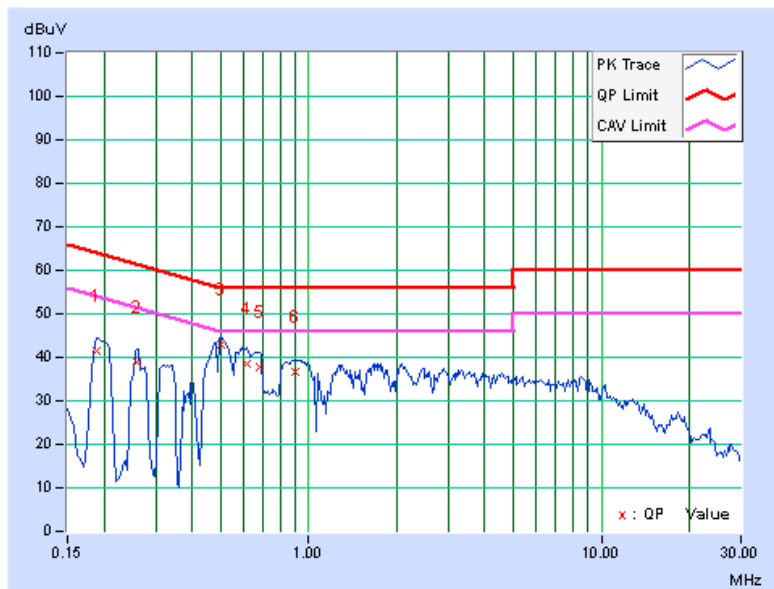
CONDUCTED WORST-CASE DATA :

PHASE	Line 1	6dB BANDWIDTH	9kHz
--------------	--------	----------------------	------

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	0.28	41.15	28.53	41.43	28.81	64.08	54.08	-22.65	-25.27
2	0.25938	0.29	38.45	29.59	38.74	29.88	61.45	51.45	-22.72	-21.58
3	0.50000	0.31	42.52	28.30	42.83	28.61	56.00	46.00	-13.17	-17.39
4	0.61094	0.31	38.13	22.79	38.44	23.10	56.00	46.00	-17.56	-22.90
5	0.67734	0.32	37.32	22.29	37.64	22.61	56.00	46.00	-18.36	-23.39
6	0.89609	0.33	36.37	22.86	36.70	23.19	56.00	46.00	-19.30	-22.81

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





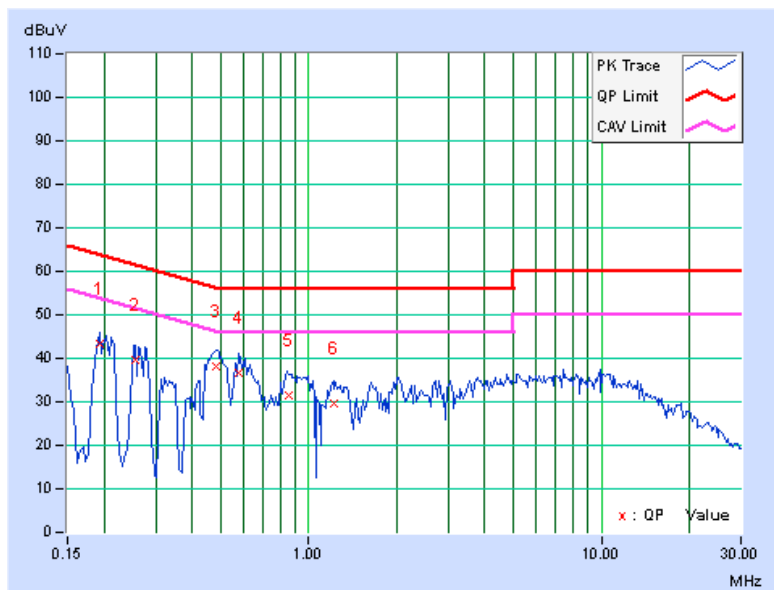
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PHASE	Line 2	6dB BANDWIDTH	9kHz
-------	--------	---------------	------

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	0.19297	0.28	42.97	29.66	43.25	29.94	63.91	53.91	-20.66	-23.97
2	0.25547	0.29	39.18	25.01	39.47	25.30	61.58	51.58	-22.11	-26.28
3	0.48203	0.31	38.00	25.48	38.31	25.79	56.30	46.30	-18.00	-20.52
4	0.57578	0.31	36.26	22.85	36.57	23.16	56.00	46.00	-19.43	-22.84
5	0.85313	0.33	31.03	15.60	31.36	15.93	56.00	46.00	-24.64	-30.07
6	1.21484	0.35	29.11	15.30	29.46	15.65	56.00	46.00	-26.54	-30.35

REMARKS:

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

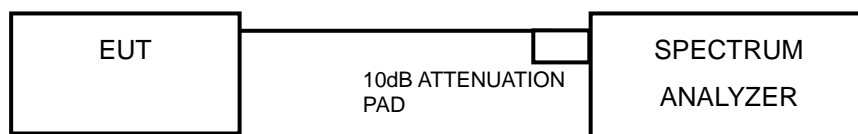


4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST SETUP



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.3.4 TEST PROCEDURE

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

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

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



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4.3.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	9.59	0.5	PASS
6	2437	10.07	0.5	PASS
11	2462	10.08	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.08	0.5	PASS
6	2437	15.11	0.5	PASS
11	2462	15.15	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.13	0.5	PASS
6	2437	15.12	0.5	PASS
11	2462	15.16	0.5	PASS

802.11n (40MHz)

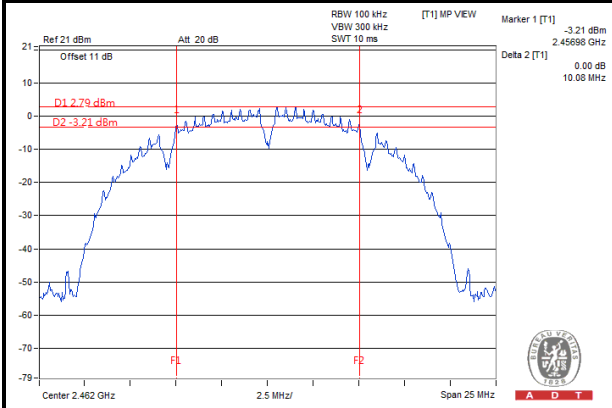
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
3	2422	33.96	0.5	PASS
6	2437	35.15	0.5	PASS
6	2452	35.14	0.5	PASS



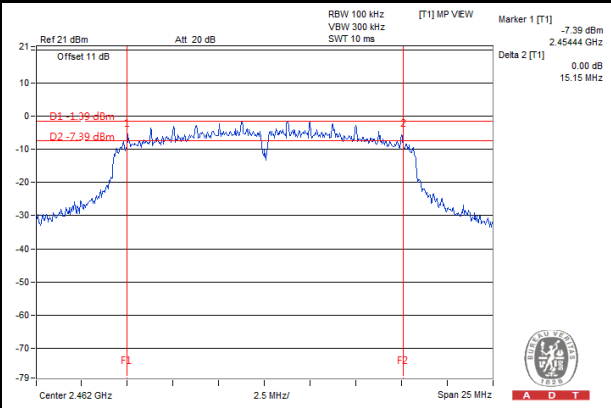
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SPECTRUM PLOT OF WORST VALUE

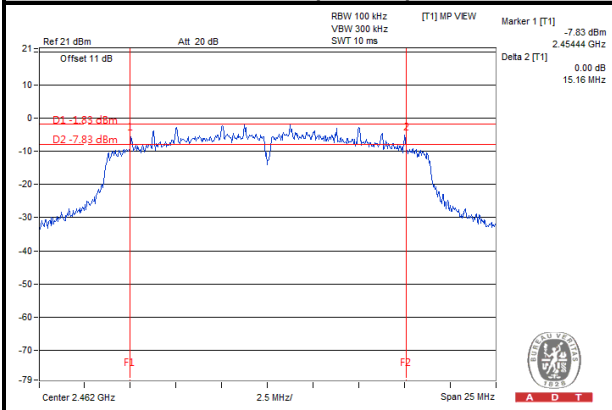
802.11b



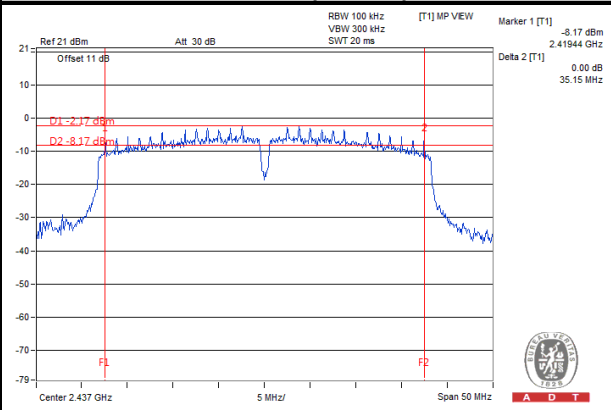
802.11g



802.11n (20MHz)



802.11n (40MHz)

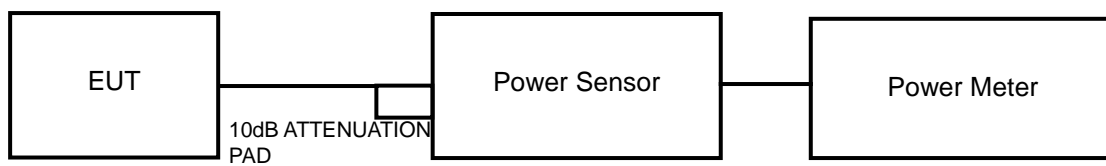


4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

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

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.4.4 TEST PROCEDURES

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

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as section 4.3.6.



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4.4.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS / FAIL
1	2412	24.38	13.87	30	PASS
6	2437	24.27	13.85	30	PASS
11	2462	23.55	13.72	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS / FAIL
1	2412	41.98	16.23	30	PASS
6	2437	90.57	19.57	30	PASS
11	2462	41.69	16.2	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS / FAIL
1	2412	40.09	16.03	30	PASS
6	2437	87.90	19.44	30	PASS
11	2462	38.19	15.82	30	PASS

802.11n (40MHz)

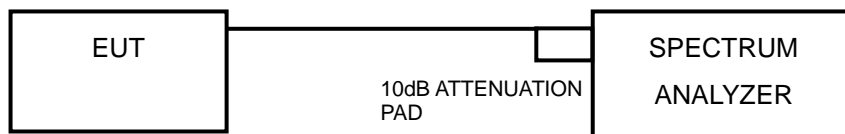
CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS / FAIL
3	2422	36.14	15.58	30	PASS
6	2437	70.47	18.48	30	PASS
9	2452	33.57	15.26	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

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

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Same as section 4.3.6.



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4.5.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	PSD (dBm/3kHz)	LIMIT (dBm/3kHz)	PASS / FAIL
1	2412	-11.30	8	PASS
6	2437	-9.46	8	PASS
11	2462	-10.83	8	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PSD (dBm/3kHz)	LIMIT (dBm/3kHz)	PASS / FAIL
1	2412	-15.04	8	PASS
6	2437	-9.44	8	PASS
11	2462	-15.03	8	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm/3kHz)	LIMIT (dBm/3kHz)	PASS / FAIL
1	2412	-16.43	8	PASS
6	2437	-10.68	8	PASS
11	2462	-16.50	8	PASS

802.11n (40MHz)

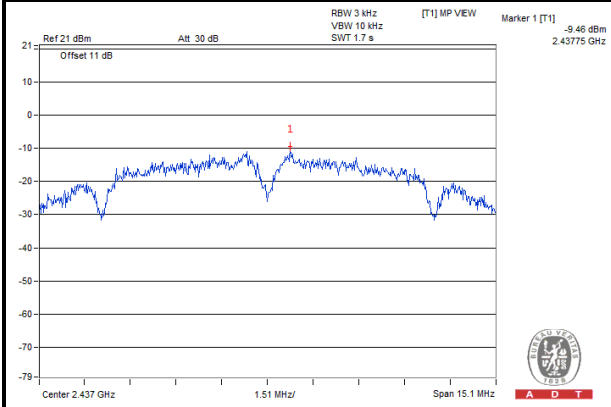
CHANNEL	FREQUENCY (MHz)	PSD (dBm/3kHz)	LIMIT (dBm/3kHz)	PASS / FAIL
3	2422	-19.91	8	PASS
6	2437	-17.01	8	PASS
9	2452	-19.77	8	PASS



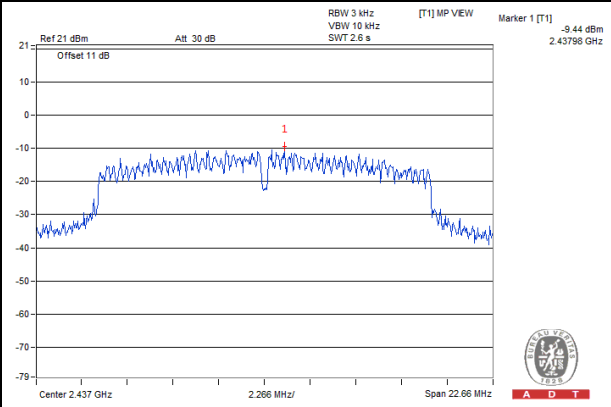
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SPECTRUM PLOT OF WORST VALUE

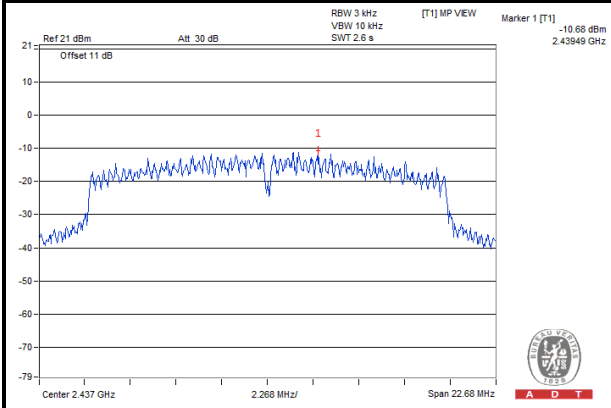
802.11b



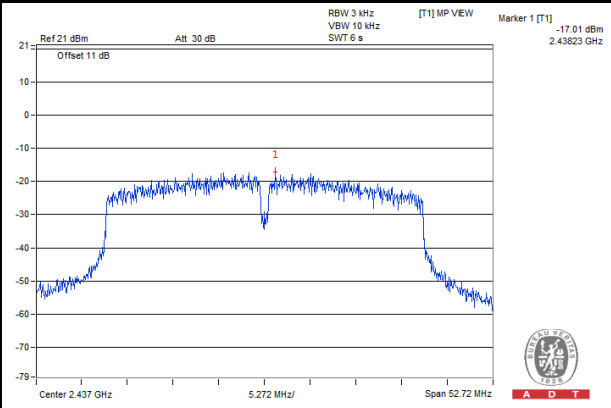
802.11g



802.11n (20MHz)



802.11n (40MHz)

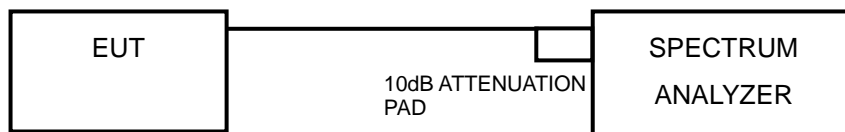


4.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

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

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Ensure that the number of measurement points \geq span/RBW
4. According to measurement points to set differ measurement span.
5. Detector = peak.
6. Trace Mode = max hold.
7. Sweep = auto couple.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Same as section 4.3.6.

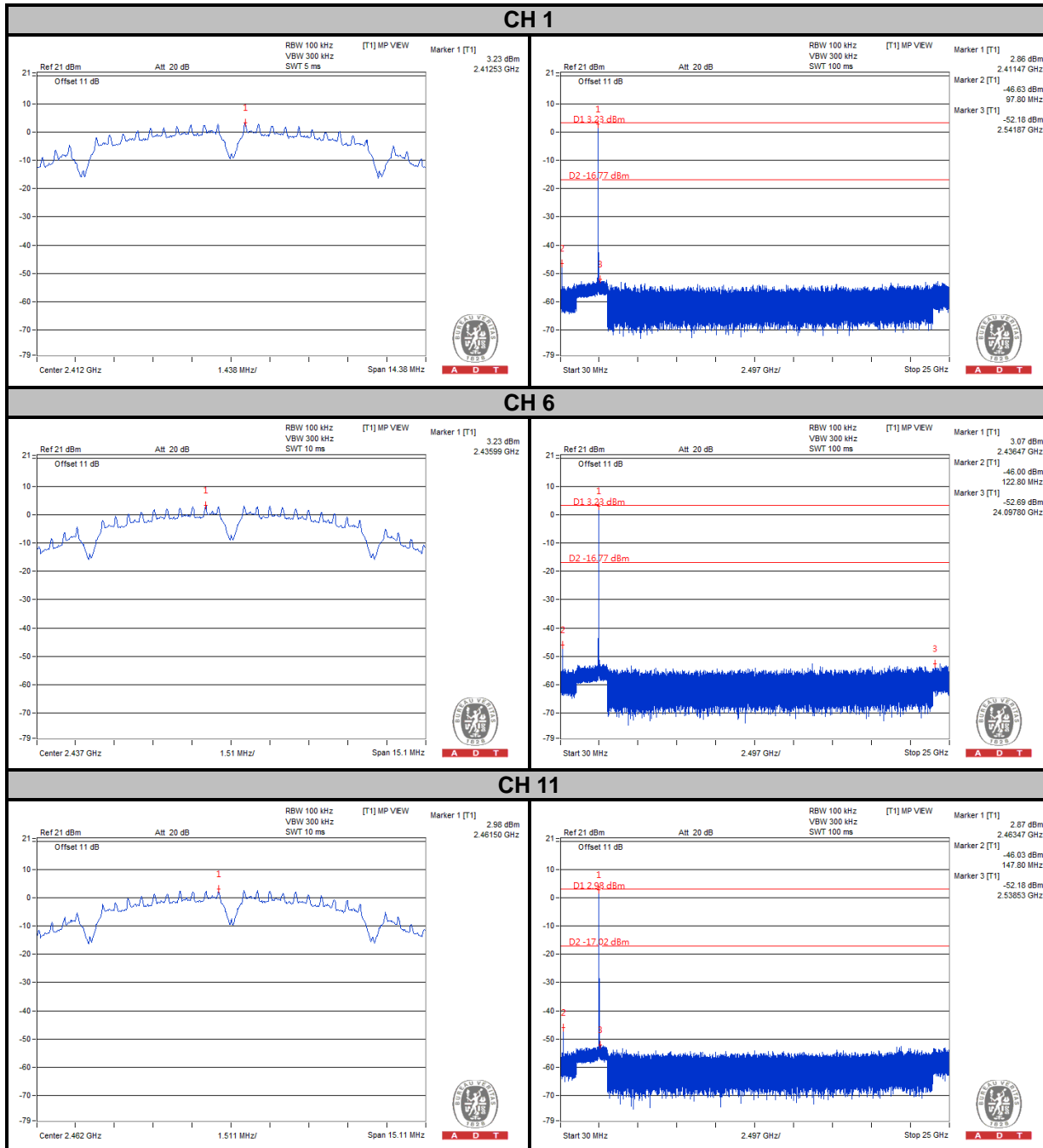


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4.6.7 TEST RESULTS

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

802.11b

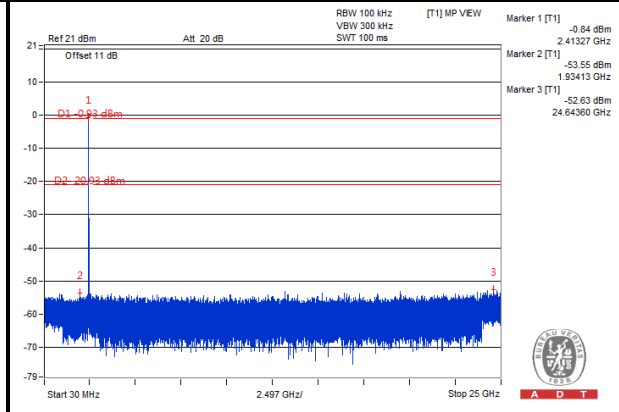
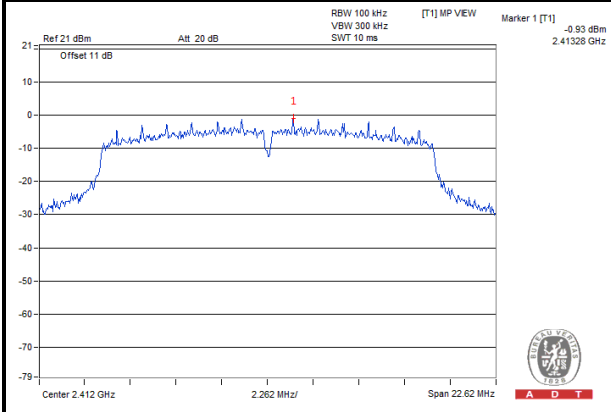




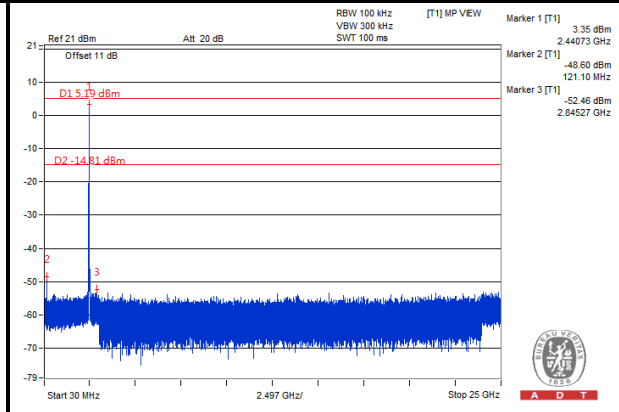
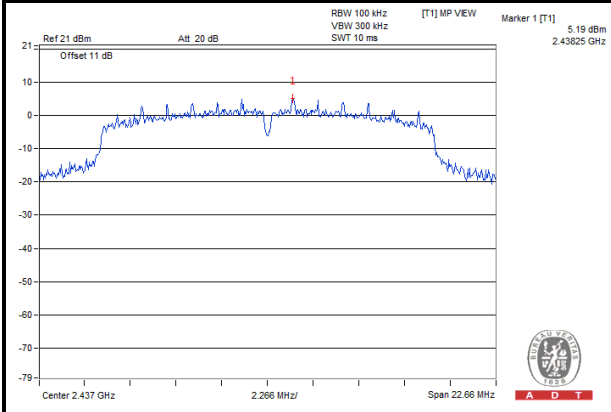
A D T

802.11g

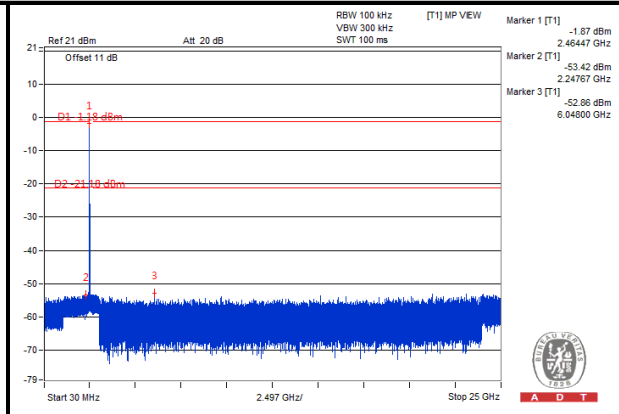
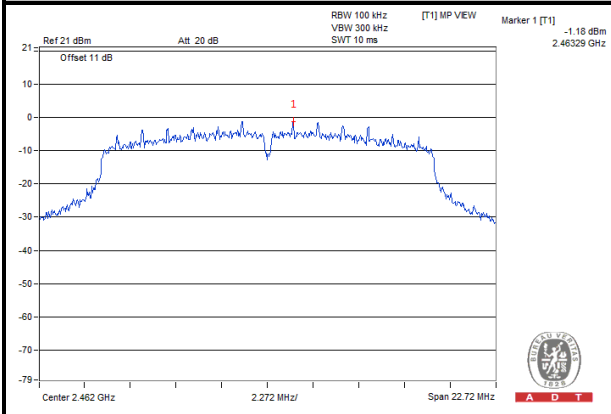
CH 1



CH 6



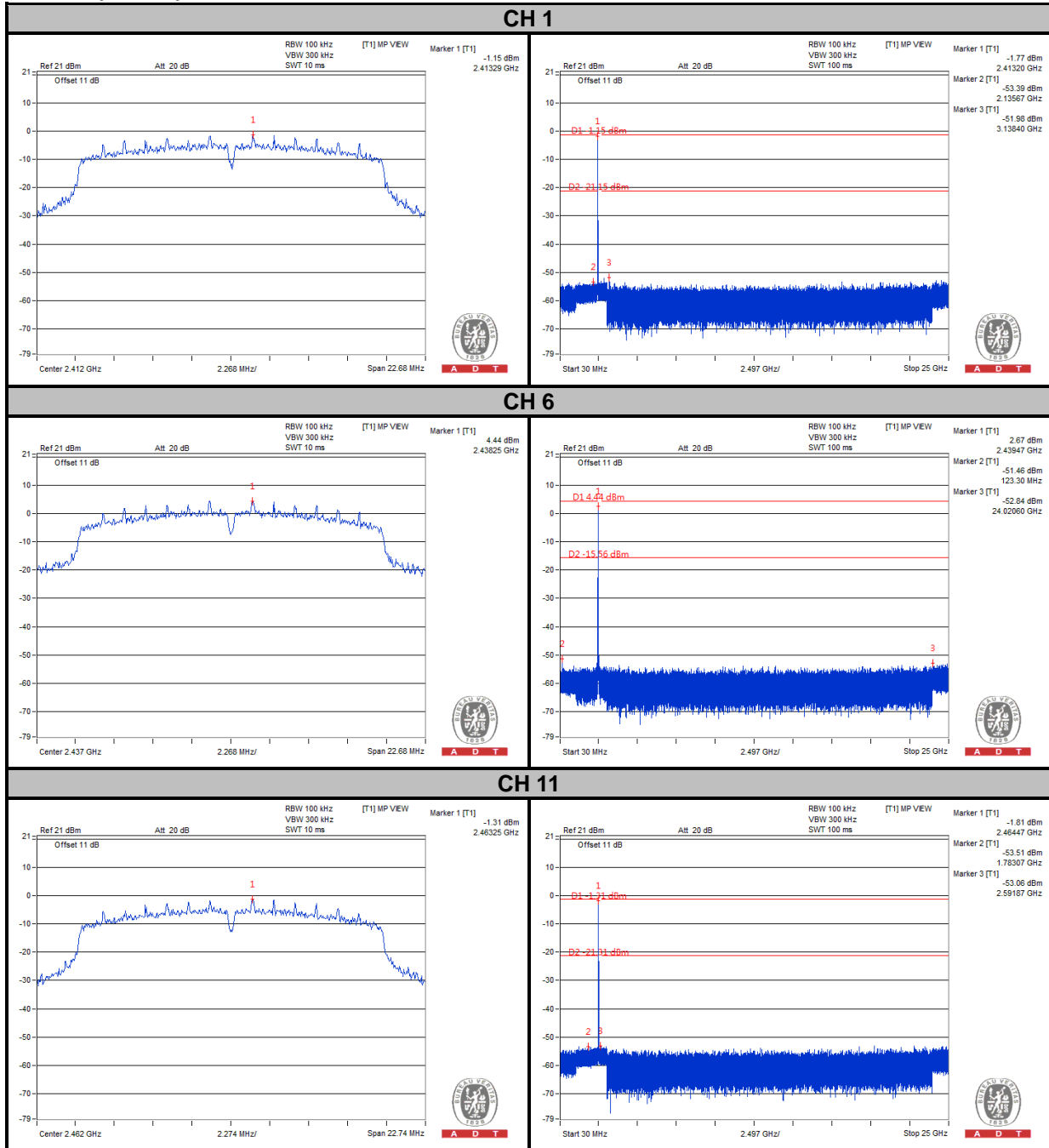
CH 11





A D T

802.11n (20MHz)

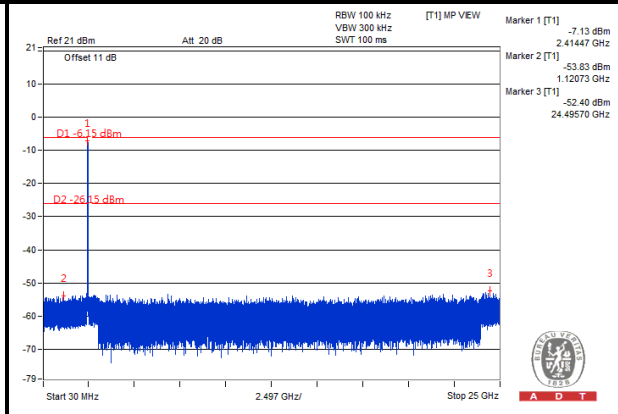
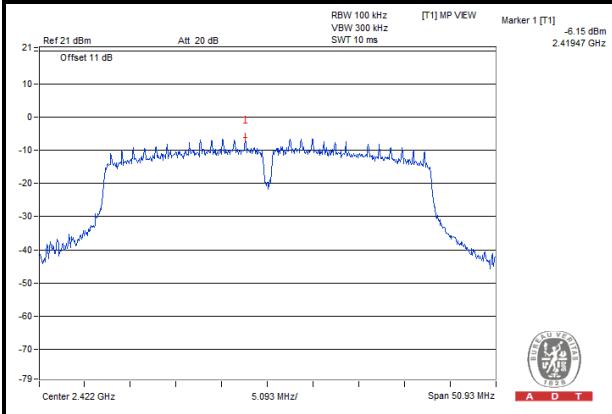




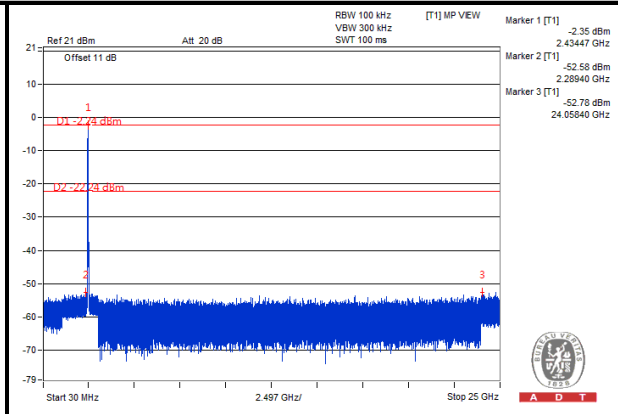
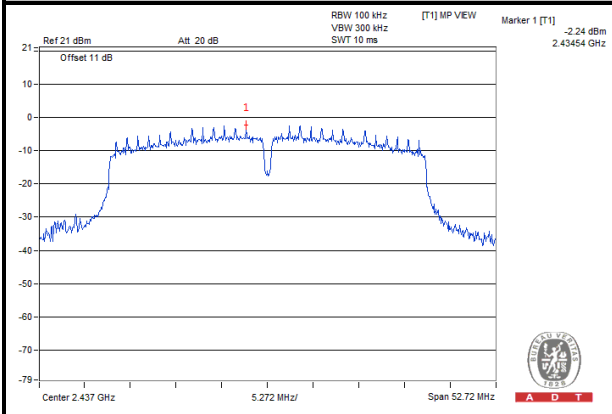
A D T

802.11n (40MHz)

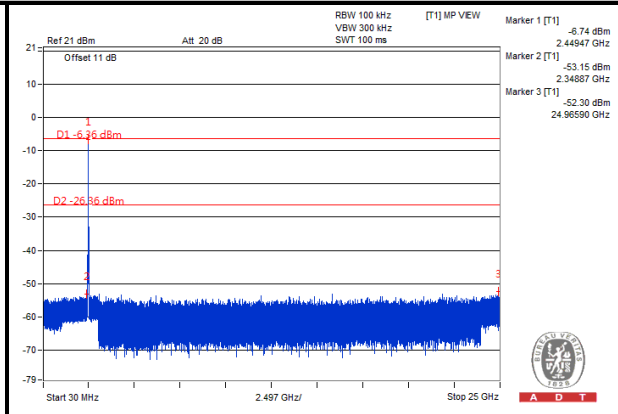
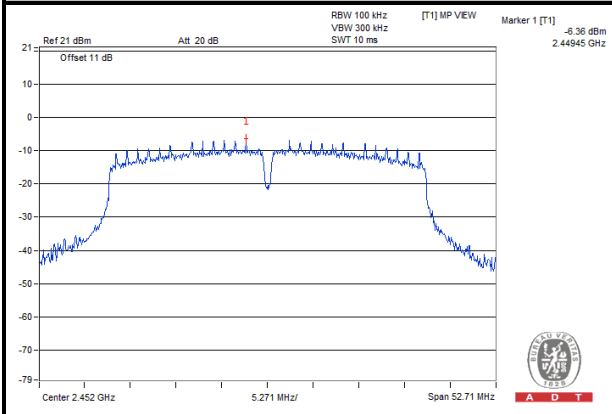
CH 3



CH 6



CH 9



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

5.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

5.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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

NOTE:

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



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5.1.2 TEST INSTRUMENTS

Same as section 4.1.2.

5.1.3 TEST PROCEDURES

Same as section 4.1.3.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP

Same as section 4.1.5.

5.1.6 EUT OPERATING CONDITIONS

Same as section 4.1.6.



A D T

5.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA :

MODE A

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	66.06	56.9	80.61	-14.55	34.62	8.65	34.11	122	265	Average
5725	85.38	76.22	87.94	-2.56	34.62	8.65	34.11	122	265	Peak
5745	100.61	91.42			34.64	8.66	34.11	122	265	Average
5745	107.94	98.75			34.64	8.66	34.11	122	265	Peak
5850	43.92	34.62	80.61	-36.69	34.74	8.7	34.14	122	265	Average
5850	63.41	54.11	87.94	-24.53	34.74	8.7	34.14	122	265	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	73.61	64.45	88.16	-14.55	34.62	8.65	34.11	100	90	Average
5725	92.96	83.8	94.77	-1.81	34.62	8.65	34.11	100	90	Peak
5745	108.16	98.97			34.64	8.66	34.11	100	90	Average
5745	114.77	105.58			34.64	8.66	34.11	100	90	Peak
5850	46.54	37.24	88.16	-41.62	34.74	8.7	34.14	100	90	Average
5850	65.77	56.47	94.77	-29	34.74	8.7	34.14	100	90	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5745MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	44.77	35.61	79.99	-35.22	34.62	8.65	34.11	145	257	Average
5725	63.39	54.23	87.77	-24.38	34.62	8.65	34.11	145	257	Peak
5785	99.99	90.76			34.68	8.68	34.13	145	257	Average
5785	107.77	98.54			34.68	8.68	34.13	145	257	Peak
5850	44.19	34.89	79.99	-35.8	34.74	8.7	34.14	145	257	Average
5850	62.72	53.42	87.77	-25.05	34.74	8.7	34.14	145	257	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	48.6	39.44	87.92	-39.32	34.62	8.65	34.11	100	91	Average
5725	64.42	55.26	94.61	-30.19	34.62	8.65	34.11	100	91	Peak
5785	107.92	98.69			34.68	8.68	34.13	100	91	Average
5785	114.61	105.38			34.68	8.68	34.13	100	91	Peak
5850	46.16	36.86	87.92	-41.76	34.74	8.7	34.14	100	91	Average
5850	62.31	53.01	94.61	-32.3	34.74	8.7	34.14	100	91	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5785MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	44.51	35.35	80.52	-36.01	34.62	8.65	34.11	102	124	Average
5725	64.45	55.29	87.21	-22.76	34.62	8.65	34.11	102	124	Peak
5825	100.52	91.23			34.73	8.69	34.13	102	124	Average
5825	107.21	97.92			34.73	8.69	34.13	102	124	Peak
5850	58.34	49.04	80.52	-22.18	34.74	8.7	34.14	102	124	Average
5850	77.63	68.33	87.21	-9.58	34.74	8.7	34.14	102	124	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	48.74	39.58	86.77	-38.03	34.62	8.65	34.11	100	91	Average
5725	63.12	53.96	93.47	-30.35	34.62	8.65	34.11	100	91	Peak
5825	106.77	97.48			34.73	8.69	34.13	100	91	Average
5825	113.47	104.18			34.73	8.69	34.13	100	91	Peak
5850	63.82	54.52	86.77	-22.95	34.74	8.7	34.14	100	91	Average
5850	82.87	73.57	93.47	-10.6	34.74	8.7	34.14	100	91	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5825MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	67.13	57.97	80.77	-13.64	34.62	8.65	34.11	121	266	Average
5725	86.1	76.94	88.14	-2.04	34.62	8.65	34.11	121	266	Peak
5745	100.77	91.58			34.64	8.66	34.11	121	266	Average
5745	108.14	98.95			34.64	8.66	34.11	121	266	Peak
5850	44.26	34.96	80.77	-36.51	34.74	8.7	34.14	121	266	Average
5850	63.28	53.98	88.14	-24.86	34.74	8.7	34.14	121	266	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	75.07	65.91	87.94	-12.87	34.62	8.65	34.11	100	91	Average
5725	92.42	83.26	94.41	-1.99	34.62	8.65	34.11	100	91	Peak
5745	107.94	98.75			34.64	8.66	34.11	100	91	Average
5745	114.41	105.22			34.64	8.66	34.11	100	91	Peak
5850	46.28	36.98	87.94	-41.66	34.74	8.7	34.14	100	91	Average
5850	63.42	54.12	94.41	-30.99	34.74	8.7	34.14	100	91	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5745MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	44.3	35.14	79.44	-35.14	34.62	8.65	34.11	145	257	Average
5725	62.67	53.51	87.32	-24.65	34.62	8.65	34.11	145	257	Peak
5785	99.44	90.21			34.68	8.68	34.13	145	257	Average
5785	107.32	98.09			34.68	8.68	34.13	145	257	Peak
5850	44.05	34.75	79.44	-35.39	34.74	8.7	34.14	145	257	Average
5850	62.43	53.13	87.32	-24.89	34.74	8.7	34.14	145	257	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	48.44	39.28	87.54	-39.1	34.62	8.65	34.11	100	90	Average
5725	63.95	54.79	95.6	-31.65	34.62	8.65	34.11	100	90	Peak
5785	107.54	98.31			34.68	8.68	34.13	100	90	Average
5785	115.6	106.37			34.68	8.68	34.13	100	90	Peak
5850	46.09	36.79	87.54	-41.45	34.74	8.7	34.14	100	90	Average
5850	62.72	53.42	95.6	-32.88	34.74	8.7	34.14	100	90	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5785MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	44.35	35.19	80.27	-35.92	34.62	8.65	34.11	102	124	Average
5725	63.21	54.05	87.82	-24.61	34.62	8.65	34.11	102	124	Peak
5825	100.27	90.98			34.73	8.69	34.13	102	124	Average
5825	107.82	98.53			34.73	8.69	34.13	102	124	Peak
5850	59.4	50.1	80.27	-20.87	34.74	8.7	34.14	102	124	Average
5850	78.27	68.97	87.82	-9.55	34.74	8.7	34.14	102	124	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	48.72	39.56	86.5	-37.78	34.62	8.65	34.11	100	90	Average
5725	63.45	54.29	93.22	-29.77	34.62	8.65	34.11	100	90	Peak
5825	106.5	97.21			34.73	8.69	34.13	100	90	Average
5825	113.22	103.93			34.73	8.69	34.13	100	90	Peak
5850	64.28	54.98	86.5	-22.22	34.74	8.7	34.14	100	90	Average
5850	82.37	73.07	93.22	-10.85	34.74	8.7	34.14	100	90	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5825MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	57.58	57.46	70.71	-13.13	31.96	5.59	37.43	126	132	Average
5725	73.22	73.1	80.11	-6.89	31.96	5.59	37.43	126	132	Peak
5755	90.71	90.57			32.01	5.6	37.47	126	132	Average
5755	100.11	99.97			32.01	5.6	37.47	126	132	Peak
5850	39.31	39.01	70.71	-31.4	32.15	5.66	37.51	126	132	Average
5850	58.46	58.16	80.11	-21.65	32.15	5.66	37.51	126	132	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	60.15	60.03	73.04	-12.89	31.96	5.59	37.43	100	54	Average
5725	76.79	76.67	82.17	-5.38	31.96	5.59	37.43	100	54	Peak
5755	93.04	92.9			32.01	5.6	37.47	100	54	Average
5755	102.17	102.03			32.01	5.6	37.47	100	54	Peak
5850	39.79	39.49	73.04	-33.25	32.15	5.66	37.51	100	54	Average
5850	58.29	57.99	82.17	-23.88	32.15	5.66	37.51	100	54	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5755MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	52.49	43.33	77.13	-24.64	34.62	8.65	34.11	103	124	Average
5725	71.48	62.32	84.65	-13.17	34.62	8.65	34.11	103	124	Peak
5795	97.13	87.89			34.69	8.68	34.13	103	124	Average
5795	104.65	95.41			34.69	8.68	34.13	103	124	Peak
5850	52.76	43.46	77.13	-24.37	34.74	8.7	34.14	103	124	Average
5850	71.5	62.2	84.65	-13.15	34.74	8.7	34.14	103	124	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	60.73	51.57	83.73	-23	34.62	8.65	34.11	100	90	Average
5725	79.45	70.29	90.79	-11.34	34.62	8.65	34.11	100	90	Peak
5795	103.73	94.49			34.69	8.68	34.13	100	90	Average
5795	110.79	101.55			34.69	8.68	34.13	100	90	Peak
5850	58.06	48.76	83.73	-25.67	34.74	8.7	34.14	100	90	Average
5850	76.25	66.95	90.79	-14.54	34.74	8.7	34.14	100	90	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5795MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

MODE B

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	58.84	58.72	72.76	-13.92	31.96	5.59	37.43	127	128	Average
5725	78.53	78.41	81.98	-3.45	31.96	5.59	37.43	127	128	Peak
5755	92.76	92.62			32.01	5.6	37.47	127	128	Average
5755	101.98	101.84			32.01	5.6	37.47	127	128	Peak
5850	39.89	39.59	72.76	-32.87	32.15	5.66	37.51	127	128	Average
5850	58.41	58.11	81.98	-23.57	32.15	5.66	37.51	127	128	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	60.14	60.02	73.39	-13.25	31.96	5.59	37.43	100	79	Average
5725	79.31	79.19	83.42	-4.11	31.96	5.59	37.43	100	79	Peak
5755	93.39	93.25			32.01	5.6	37.47	100	79	Average
5755	103.42	103.28			32.01	5.6	37.47	100	79	Peak
5850	39.22	38.92	73.39	-34.17	32.15	5.66	37.51	100	79	Average
5850	59.2	58.9	83.42	-24.22	32.15	5.66	37.51	100	79	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5755MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

MODE C

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	59.11	58.99	71.76	-12.65	31.96	5.59	37.43	148	124	Average
5725	74.96	74.84	80.8	-5.84	31.96	5.59	37.43	148	124	Peak
5755	91.76	91.62			32.01	5.6	37.47	148	124	Average
5755	100.8	100.66			32.01	5.6	37.47	148	124	Peak
5850	39.75	39.45	71.76	-32.01	32.15	5.66	37.51	148	124	Average
5850	59.17	58.87	80.8	-21.63	32.15	5.66	37.51	148	124	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	63.52	63.4	74.33	-10.81	31.96	5.59	37.43	100	101	Average
5725	80.91	80.79	82.92	-2.01	31.96	5.59	37.43	100	101	Peak
5755	94.33	94.19			32.01	5.6	37.47	100	101	Average
5755	102.92	102.78			32.01	5.6	37.47	100	101	Peak
5850	39.41	39.11	74.33	-34.92	32.15	5.66	37.51	100	101	Average
5850	57.65	57.35	82.92	-25.27	32.15	5.66	37.51	100	101	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5755MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

MODE D

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	59.56	59.44	73.94	-14.38	31.96	5.59	37.43	142	158	Average
5725	78.52	78.4	82.84	-4.32	31.96	5.59	37.43	142	158	Peak
5755	93.94	93.8			32.01	5.6	37.47	142	158	Average
5755	102.84	102.7			32.01	5.6	37.47	142	158	Peak
5850	40.23	39.93	73.94	-33.71	32.15	5.66	37.51	142	158	Average
5850	57.82	57.52	82.84	-25.02	32.15	5.66	37.51	142	158	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	58.93	58.81	71.76	-12.83	31.96	5.59	37.43	102	229	Average
5725	77.56	77.44	80.64	-3.08	31.96	5.59	37.43	102	229	Peak
5755	91.76	91.62			32.01	5.6	37.47	102	229	Average
5755	100.64	100.5			32.01	5.6	37.47	102	229	Peak
5850	42.19	41.89	71.76	-29.57	32.15	5.66	37.51	102	229	Average
5850	58.75	58.45	80.64	-21.89	32.15	5.66	37.51	102	229	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5755MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

MODE E

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	58.94	58.82	73.5	-14.56	31.96	5.59	37.43	153	118	Average
5725	78.97	78.85	82.75	-3.78	31.96	5.59	37.43	153	118	Peak
5755	93.5	93.36			32.01	5.6	37.47	153	118	Average
5755	102.75	102.61			32.01	5.6	37.47	153	118	Peak
5850	40.15	39.85	73.5	-33.35	32.15	5.66	37.51	153	118	Average
5850	60.97	60.67	82.75	-21.78	32.15	5.66	37.51	153	118	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	60.18	60.06	74.38	-14.2	31.96	5.59	37.43	100	84	Average
5725	79.62	79.5	83.56	-3.94	31.96	5.59	37.43	100	84	Peak
5755	94.38	94.24			32.01	5.6	37.47	100	84	Average
5755	103.56	103.42			32.01	5.6	37.47	100	84	Peak
5850	40.2	39.9	74.38	-34.18	32.15	5.66	37.51	100	84	Average
5850	59.03	58.73	83.56	-24.53	32.15	5.66	37.51	100	84	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5755MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

BELOW 1GHz WORST-CASE DATA :

MODE A

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
51.06	24.95	42.62	40	-15.05	12.87	0.77	31.31	100	124	Peak
56.46	27.16	45.35	40	-12.84	12.35	0.8	31.34	100	227	Peak
209.01	29.76	49.96	43.5	-13.74	9.77	1.64	31.61	100	130	Peak
526.1	23.93	34.79	46	-22.07	17.91	2.87	31.64	100	267	Peak
664.7	31.86	40.06	46	-14.14	20.39	3.3	31.89	100	241	Peak
715.1	30.06	37.26	46	-15.94	21.03	3.47	31.7	185	197	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.81	24.02	42.43	40	-15.98	12.14	0.57	31.12	100	220	Peak
55.65	25.26	43.34	40	-14.74	12.45	0.8	31.33	100	187	Peak
212.52	24.89	44.96	43.5	-18.61	9.89	1.65	31.61	106	123	Peak
482	23.75	35.9	46	-22.25	16.96	2.72	31.83	100	133	Peak
582.1	28.65	38.54	46	-17.35	19.19	3.04	32.12	100	197	Peak
615	28.79	37.99	46	-17.21	19.79	3.13	32.12	100	122	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE B

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	26.71	44.9	40	-13.29	12.35	0.8	31.34	100	123	Peak
186.06	29.18	49.06	43.5	-14.32	10.33	1.53	31.74	104	211	Peak
225.75	29.98	49.6	46	-16.02	10.46	1.72	31.8	100	227	Peak
415.5	22.98	36.88	46	-23.02	15.64	2.48	32.02	100	177	Peak
664.7	30.86	39.06	46	-15.14	20.39	3.3	31.89	133	274	Peak
797.7	34.79	40.33	46	-11.21	22.19	3.69	31.42	100	33	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.81	23.02	41.43	40	-16.98	12.14	0.57	31.12	100	204	Peak
56.19	25.61	43.8	40	-14.39	12.35	0.8	31.34	100	197	Peak
217.11	26.48	46.38	46	-19.52	10.09	1.68	31.67	100	220	Peak
415.5	23.21	37.11	46	-22.79	15.64	2.48	32.02	100	197	Peak
615	29.79	38.99	46	-16.21	19.79	3.13	32.12	100	245	Peak
665.4	31.69	39.86	46	-14.31	20.4	3.3	31.87	100	196	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE C

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
55.92	27.47	45.66	40	-12.53	12.35	0.8	31.34	100	43	Peak
92.1	15.93	38.41	43.5	-27.57	8.45	1.03	31.96	156	60	Peak
205.77	30.34	50.79	43.5	-13.16	9.6	1.62	31.67	100	32	Peak
415.5	25.9	39.8	46	-20.1	15.64	2.48	32.02	100	32	Peak
615	29.44	38.64	46	-16.56	19.79	3.13	32.12	100	155	Peak
715.1	32.6	39.8	46	-13.4	21.03	3.47	31.7	100	55	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
39.72	23.64	40.44	40	-16.36	13.54	0.65	30.99	100	122	Peak
56.73	27.82	46.11	40	-12.18	12.25	0.81	31.35	154	336	Peak
183.36	23.74	43.49	43.5	-19.76	10.53	1.51	31.79	100	111	Peak
415.5	23.33	37.23	46	-22.67	15.64	2.48	32.02	100	312	Peak
515.6	29.67	40.74	46	-16.33	17.68	2.83	31.58	100	222	Peak
637.4	30.07	38.91	46	-15.93	20.06	3.2	32.1	100	198	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value



A D T

MODE D

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
51.06	20.95	38.62	40	-19.05	12.87	0.77	31.31	100	243	Peak
55.92	25.18	43.37	40	-14.82	12.35	0.8	31.34	100	43	Peak
215.22	30.77	50.74	43.5	-12.73	10.01	1.67	31.65	100	312	Peak
415.5	24.98	38.88	46	-21.02	15.64	2.48	32.02	100	233	Peak
615	27.95	37.15	46	-18.05	19.79	3.13	32.12	121	211	Peak
664.7	30.86	39.06	46	-15.14	20.39	3.3	31.89	100	75	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
30.81	25.02	43.43	40	-14.98	12.14	0.57	31.12	100	144	Peak
56.19	26.61	44.8	40	-13.39	12.35	0.8	31.34	100	221	Peak
193.89	23.75	44.13	43.5	-19.75	9.77	1.56	31.71	100	221	Peak
415.5	25.21	39.11	46	-20.79	15.64	2.48	32.02	100	332	Peak
582.1	30.65	40.54	46	-15.35	19.19	3.04	32.12	100	0	Peak
648.6	30.42	39.01	46	-15.58	20.2	3.24	32.03	100	243	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE E

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.46	27.16	45.35	40	-12.84	12.35	0.8	31.34	211	107	Peak
187.14	29.58	49.51	43.5	-13.92	10.26	1.53	31.72	221	132	Peak
210.36	30.61	50.75	43.5	-12.89	9.81	1.64	31.59	222	133	Peak
398.7	21.71	36.1	46	-24.29	15.31	2.42	32.12	105	197	Peak
582.1	25.14	35.03	46	-20.86	19.19	3.04	32.12	132	204	Peak
664.7	31.86	40.06	46	-14.14	20.39	3.3	31.89	100	188	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.19	26.61	44.8	40	-13.39	12.35	0.8	31.34	155	104	Peak
192.54	24.61	44.91	43.5	-18.89	9.84	1.56	31.7	155	285	Peak
224.4	28.28	47.96	46	-17.72	10.38	1.71	31.77	132	221	Peak
449.1	23.89	36.95	46	-22.11	16.31	2.61	31.98	211	144	Peak
548.5	28.93	39.48	46	-17.07	18.44	2.94	31.93	100	199	Peak
615	30.79	39.99	46	-15.21	19.79	3.13	32.12	107	204	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE F

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.96	21.84	38.64	40	-18.16	13.58	0.7	31.08	100	127	Peak
55.92	27.62	45.81	40	-12.38	12.35	0.8	31.34	124	360	Peak
208.2	30.68	50.94	43.5	-12.82	9.73	1.63	31.62	100	157	Peak
528.2	23.16	33.99	46	-22.84	17.97	2.88	31.68	100	198	Peak
665.4	32.57	40.74	46	-13.43	20.4	3.3	31.87	135	227	Peak
798.4	33.85	39.38	46	-12.15	22.2	3.69	31.42	274	142	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	25.8	42.6	40	-14.2	13.58	0.7	31.08	100	197	Peak
55.65	27.47	45.55	40	-12.53	12.45	0.8	31.33	100	112	Peak
86.16	23.94	46.49	40	-16.06	8.23	1	31.78	100	231	Peak
500.2	23.62	35.13	46	-22.38	17.33	2.78	31.62	100	175	Peak
582.1	27.38	37.27	46	-18.62	19.19	3.04	32.12	100	178	Peak
648.6	30.07	38.66	46	-15.93	20.2	3.24	32.03	225	312	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE G

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
55.92	26.62	44.81	40	-13.38	12.35	0.8	31.34	100	175	Peak
193.35	29.59	49.89	43.5	-13.91	9.84	1.56	31.7	100	123	Peak
211.71	31.41	51.51	43.5	-12.09	9.85	1.65	31.6	124	42	Peak
415.5	22.87	36.77	46	-23.13	15.64	2.48	32.02	100	210	Peak
665.4	32.57	40.74	46	-13.43	20.4	3.3	31.87	100	197	Peak
748	32.01	38.29	46	-13.99	21.49	3.57	31.34	100	44	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
36.48	24.98	42.3	40	-15.02	13.09	0.62	31.03	100	198	Peak
55.65	27.47	45.55	40	-12.53	12.45	0.8	31.33	100	120	Peak
87.51	22.81	45.37	40	-17.19	8.25	1.01	31.82	100	44	Peak
568.8	27.2	37.4	46	-18.8	18.88	3	32.08	100	78	Peak
648.6	28.07	36.66	46	-17.93	20.2	3.24	32.03	100	198	Peak
775.3	27.92	33.78	46	-18.08	21.87	3.63	31.36	100	78	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value



A D T

MODE H

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.73	26.33	44.62	40	-13.67	12.25	0.81	31.35	100	112	Peak
138.54	21.71	39.81	43.5	-21.79	12.27	1.29	31.66	100	123	Peak
219	31.65	51.48	46	-14.35	10.18	1.69	31.7	100	213	Peak
304.2	21.05	37.81	46	-24.95	13.06	2.07	31.89	153	0	Peak
615	29.32	38.52	46	-16.68	19.79	3.13	32.12	100	21	Peak
715.1	31.46	38.66	46	-14.54	21.03	3.47	31.7	100	142	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	25.8	42.6	40	-14.2	13.58	0.7	31.08	100	123	Peak
71.31	18.55	39.11	40	-21.45	10.29	0.91	31.76	100	223	Peak
106.95	19.48	40.54	43.5	-24.02	9.71	1.11	31.88	100	187	Peak
515.6	24.73	35.8	46	-21.27	17.68	2.83	31.58	100	243	Peak
582.1	28.38	38.27	46	-17.62	19.19	3.04	32.12	100	187	Peak
664.7	28.74	36.94	46	-17.26	20.39	3.3	31.89	100	221	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE I

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
55.92	26.62	44.81	40	-13.38	12.35	0.8	31.34	100	360	Peak
138.54	22.71	40.81	43.5	-20.79	12.27	1.29	31.66	221	312	Peak
167.7	25.92	44.29	43.5	-17.58	11.96	1.43	31.76	100	21	Peak
415.5	22.87	36.77	46	-23.13	15.64	2.48	32.02	344	0	Peak
648.6	30.08	38.67	46	-15.92	20.2	3.24	32.03	121	332	Peak
797.7	33.06	38.6	46	-12.94	22.19	3.69	31.42	100	239	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	26.8	43.6	40	-13.2	13.58	0.7	31.08	100	43	Peak
55.65	26.47	44.55	40	-13.53	12.45	0.8	31.33	100	234	Peak
86.16	23.94	46.49	40	-16.06	8.23	1	31.78	231	360	Peak
500.2	24.62	36.13	46	-21.38	17.33	2.78	31.62	100	0	Peak
615	29.62	38.82	46	-16.38	19.79	3.13	32.12	100	233	Peak
775.3	27.92	33.78	46	-18.08	21.87	3.63	31.36	100	99	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



A D T

MODE J

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Will Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.73	27.33	45.62	40	-12.67	12.25	0.81	31.35	102	134	Peak
193.35	28.59	48.89	43.5	-14.91	9.84	1.56	31.7	104	122	Peak
219	32.65	52.48	46	-13.35	10.18	1.69	31.7	133	208	Peak
398.7	20.16	34.55	46	-25.84	15.31	2.42	32.12	100	199	Peak
615	29.32	38.52	46	-16.68	19.79	3.13	32.12	122	201	Peak
664.7	32.98	41.18	46	-13.02	20.39	3.3	31.89	100	198	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	25.8	42.6	40	-14.2	13.58	0.7	31.08	112	102	Peak
55.92	27.85	46.04	40	-12.15	12.35	0.8	31.34	100	198	Peak
86.16	22.94	45.49	40	-17.06	8.23	1	31.78	107	104	Peak
415.5	21.81	35.71	46	-24.19	15.64	2.48	32.02	203	166	Peak
531.7	25.58	36.35	46	-20.42	18.04	2.89	31.7	100	177	Peak
615	29.62	38.82	46	-16.38	19.79	3.13	32.12	100	107	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

5.2.2 TEST INSTRUMENTS

Same as section 4.2.2.

5.2.3 TEST PROCEDURES

Same as section 4.2.3.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 TEST SETUP

Same as section 4.2.5.

5.2.6 EUT OPERATING CONDITIONS

Same as section 4.1.6.

5.2.7 TEST RESULTS

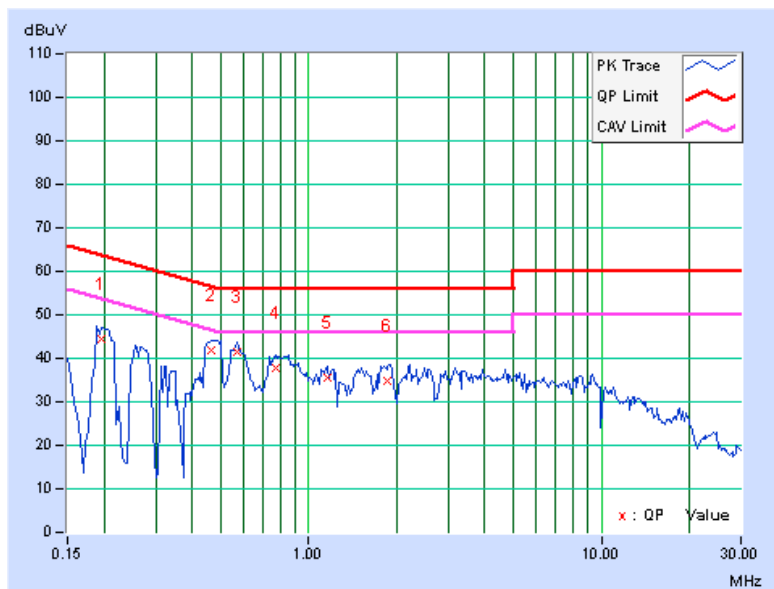
CONDUCTED WORST-CASE DATA :

PHASE	Line 1	6dB BANDWIDTH	9kHz
--------------	--------	----------------------	------

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.28	44.04	31.31	44.32	31.59	63.74	53.74	-19.42	-22.15
2	0.46641	0.30	41.55	28.73	41.85	29.03	56.58	46.58	-14.72	-17.54
3	0.56797	0.31	41.18	28.87	41.49	29.18	56.00	46.00	-14.51	-16.82
4	0.77500	0.33	37.61	25.71	37.94	26.04	56.00	46.00	-18.06	-19.96
5	1.15625	0.34	35.19	22.47	35.53	22.81	56.00	46.00	-20.47	-23.19
6	1.85547	0.36	34.54	23.34	34.90	23.70	56.00	46.00	-21.10	-22.30

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

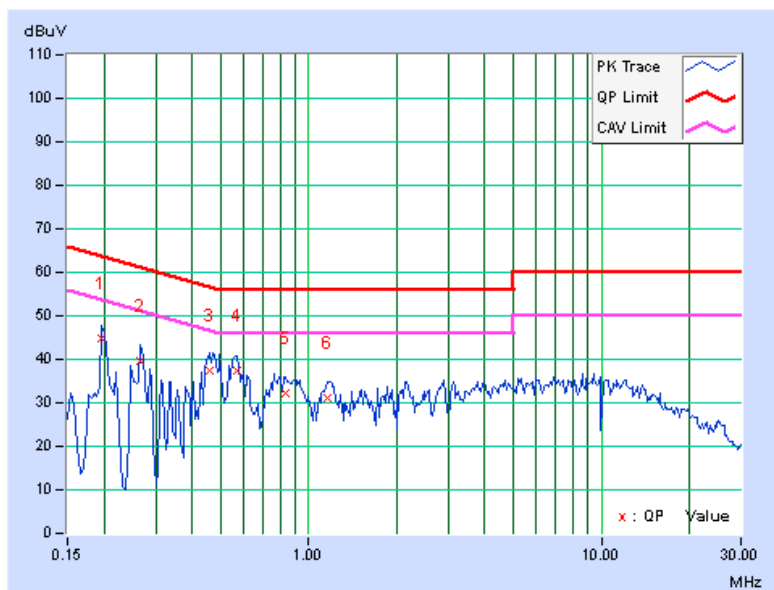


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.19687	0.28	44.50	30.90	44.78	31.18	63.74
2	0.26719	0.29	39.47	25.35	39.76	25.64	61.20	51.20	-21.45	-25.57
3	0.45859	0.30	36.97	23.62	37.27	23.92	56.72	46.72	-19.44	-22.79
4	0.56797	0.31	37.26	23.83	37.57	24.14	56.00	46.00	-18.43	-21.86
5	0.83359	0.33	31.80	18.99	32.13	19.32	56.00	46.00	-23.87	-26.68
6	1.15625	0.34	30.63	17.27	30.97	17.61	56.00	46.00	-25.03	-28.39

REMARKS:

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



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST SETUP

Same as section 4.3.2.

5.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.3.4 TEST PROCEDURE

Same as section 4.3.4.

5.3.5 DEVIATION FROM TEST STANDARD

No deviation.

5.3.6 EUT OPERATING CONDITIONS

Same as section 4.3.6.



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5.3.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.17	0.5	PASS
157	5785	15.14	0.5	PASS
165	5825	15.16	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.12	0.5	PASS
157	5785	15.15	0.5	PASS
165	5825	15.15	0.5	PASS

802.11n (40MHz)

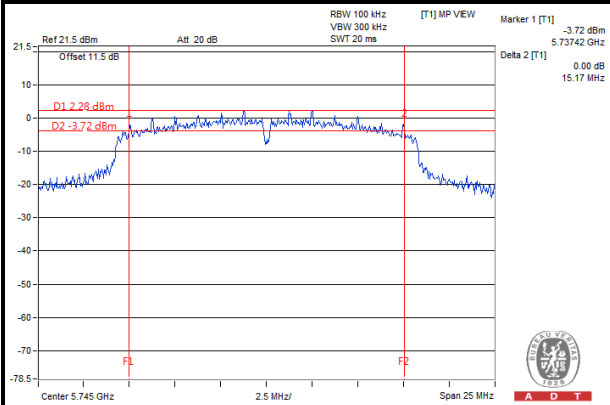
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	35.14	0.5	PASS
159	5795	35.12	0.5	PASS



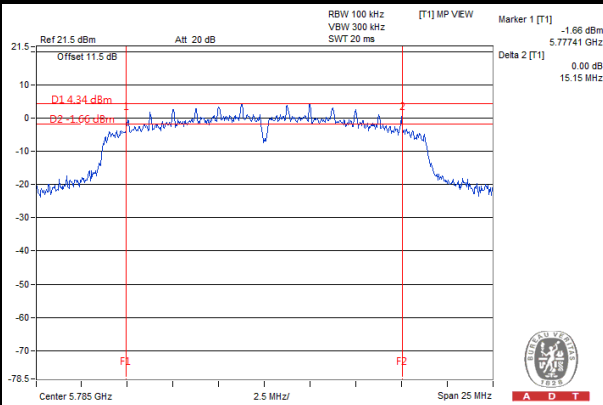
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SPECTRUM PLOT OF WORST VALUE

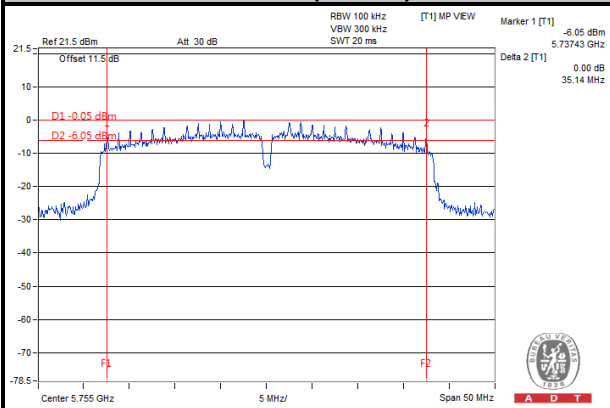
802.11a



802.11n (20MHz)



802.11n (40MHz)





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5.4 MAXIMUM OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

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

5.4.2 TEST SETUP

Same as section 4.4.2.

5.4.3 INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.4.4 TEST PROCEDURES

Same as section 4.4.4.

5.4.5 DEVIATION FROM TEST STANDARD

No deviation.

5.4.6 EUT OPERATING CONDITIONS

Same as section 4.3.6.

5.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS / FAIL
149	5745	114.82	20.6	30	PASS
157	5785	109.65	20.4	30	PASS
165	5825	103.51	20.15	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS / FAIL
149	5745	112.20	20.5	30	PASS
157	5785	109.90	20.41	30	PASS
165	5825	101.86	20.08	30	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS / FAIL
151	5755	102.57	20.11	30	PASS
159	5795	106.91	20.29	30	PASS



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5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST SETUP

Same as section 4.5.2.

5.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.5.4 TEST PROCEDURE.

Same as section 4.5.4.

5.5.5 DEVIATION FROM TEST STANDARD

No deviation.

5.5.6 EUT OPERATING CONDITION

Same as section 4.3.6.

5.5.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm/3kHz)	LIMIT (dBm/3kHz)	PASS / FAIL
149	5745	-12.09	8	PASS
157	5785	-11.11	8	PASS
165	5825	-10.42	8	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm/3kHz)	LIMIT (dBm/3kHz)	PASS / FAIL
149	5745	-11.88	8	PASS
157	5785	-11.40	8	PASS
165	5825	-11.04	8	PASS

802.11n (40MHz)

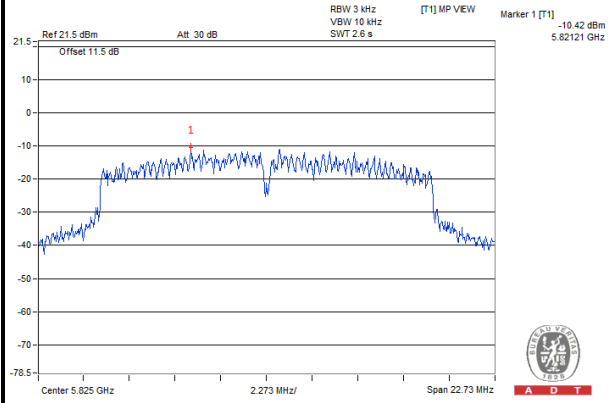
CHANNEL	FREQUENCY (MHz)	PSD (dBm/3kHz)	LIMIT (dBm/3kHz)	PASS / FAIL
151	5755	-15.63	8	PASS
159	5795	-12.50	8	PASS



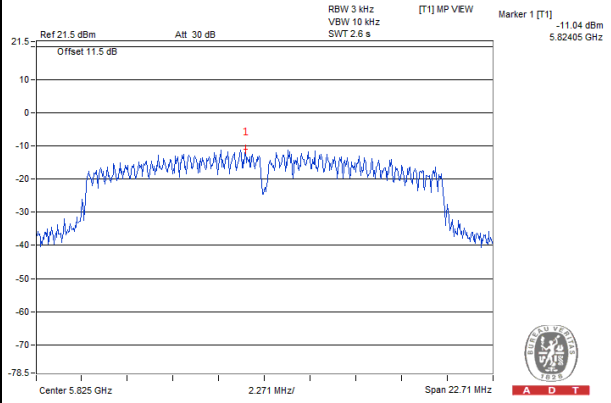
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SPECTRUM PLOT OF WORST VALUE

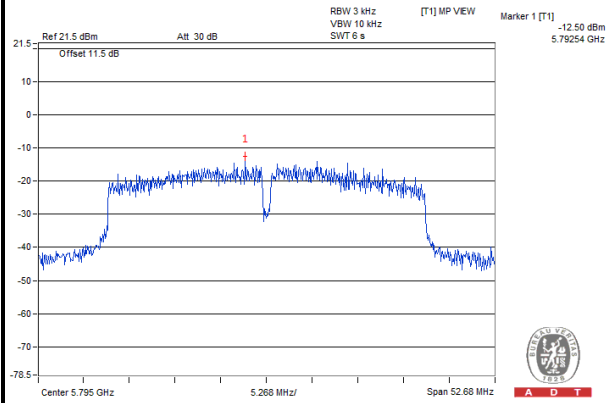
802.11a



802.11n (20MHz)



802.11n (40MHz)



5.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.6.2 TEST SETUP

Same as section 4.6.2.

5.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.6.4 TEST PROCEDURE

Same as section 4.6.4

5.6.5 DEVIATION FROM TEST STANDARD

No deviation.

5.6.6 EUT OPERATING CONDITION

Same as section 4.3.6

5.6.7 TEST RESULTS

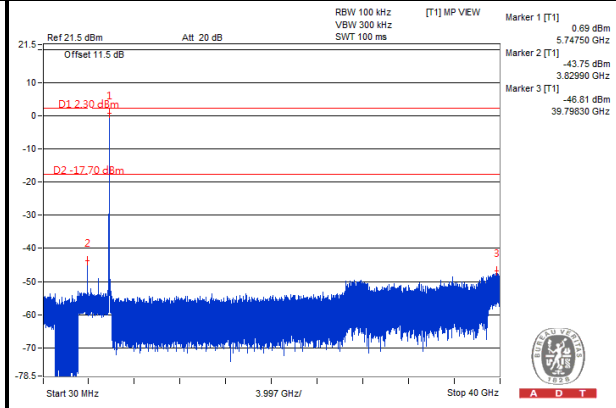
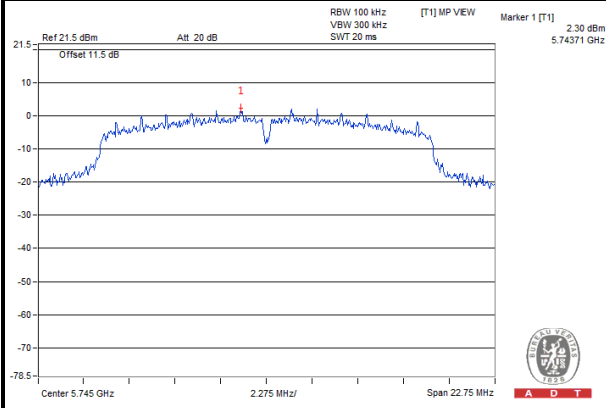
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



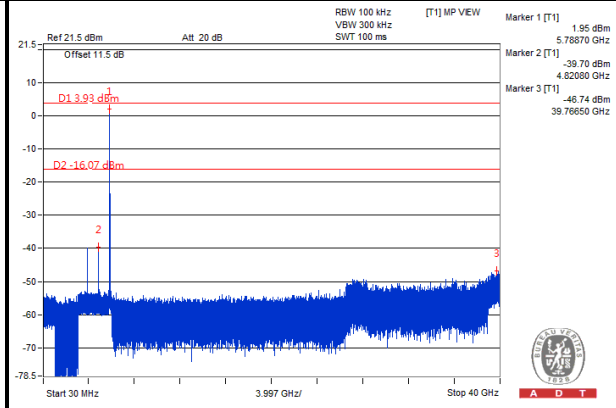
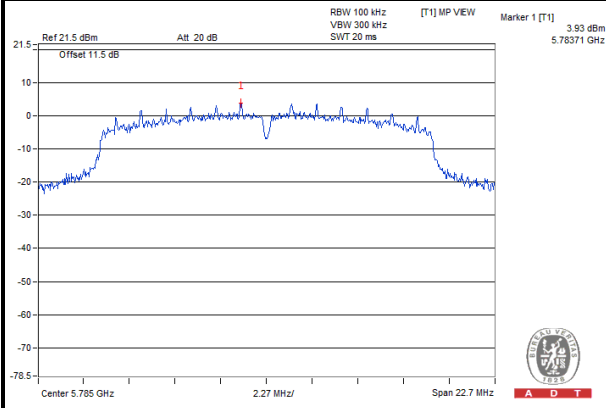
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802.11a

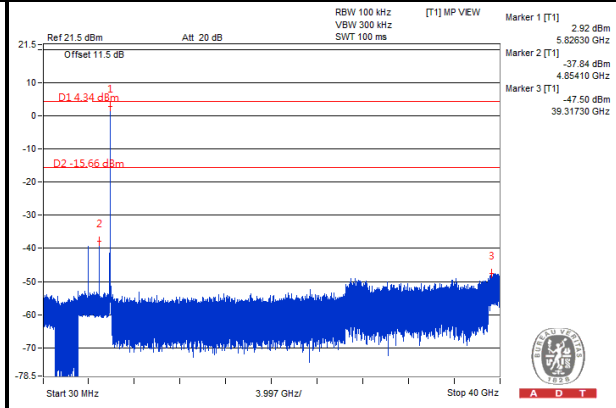
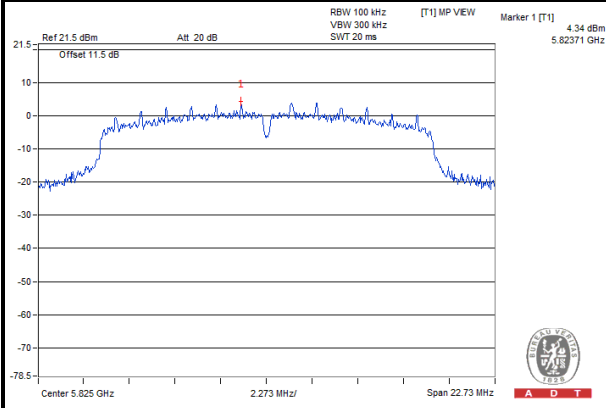
CH 149



CH 157



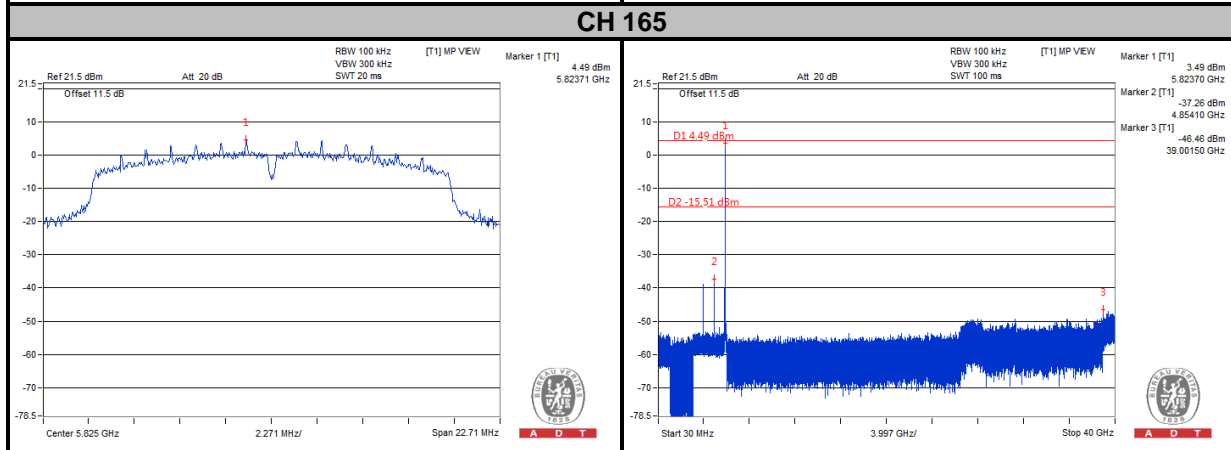
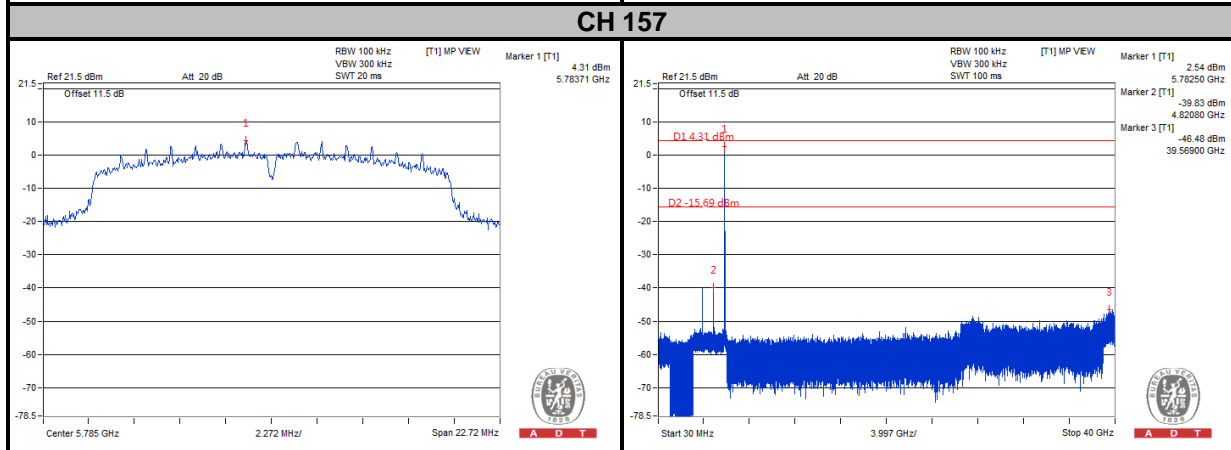
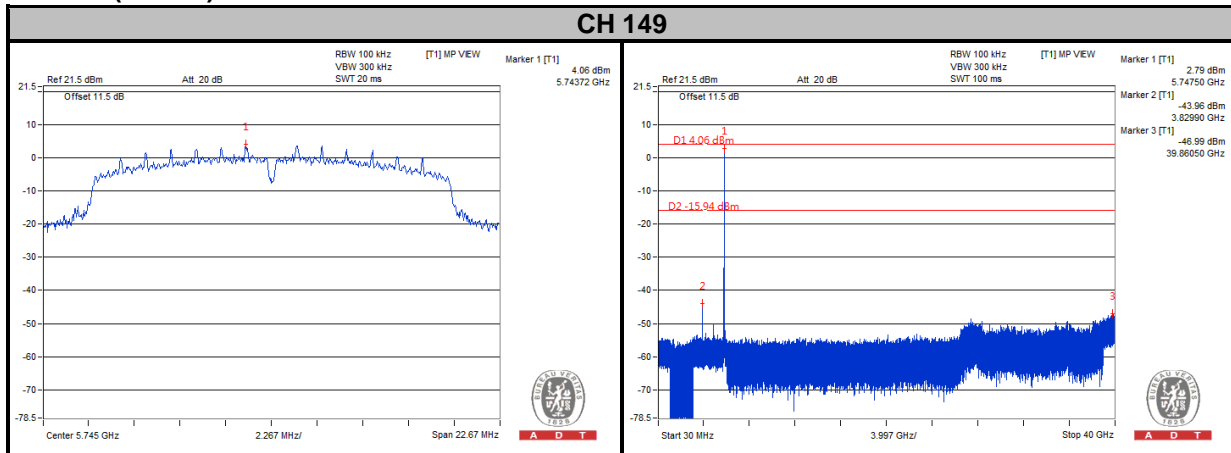
CH 165





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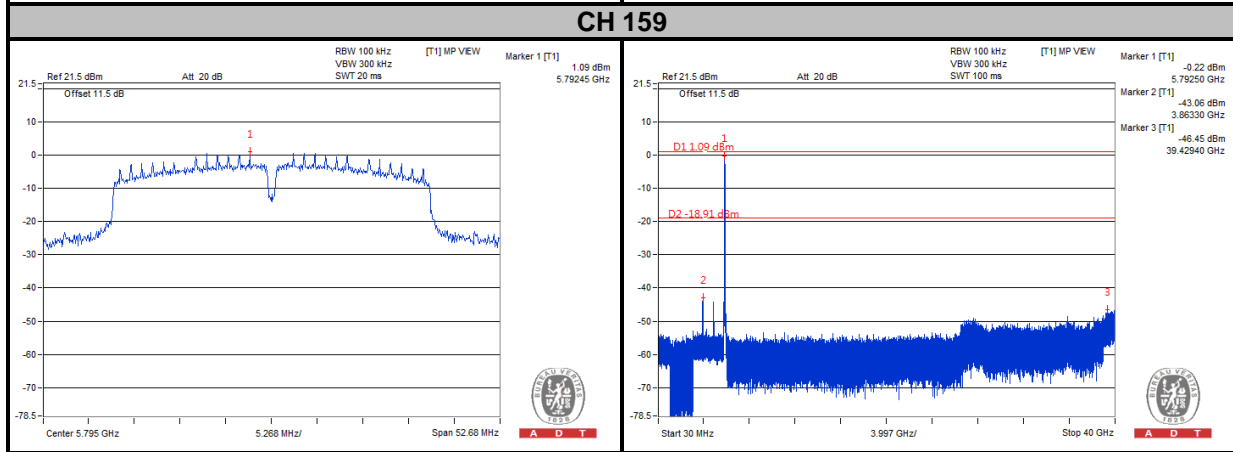
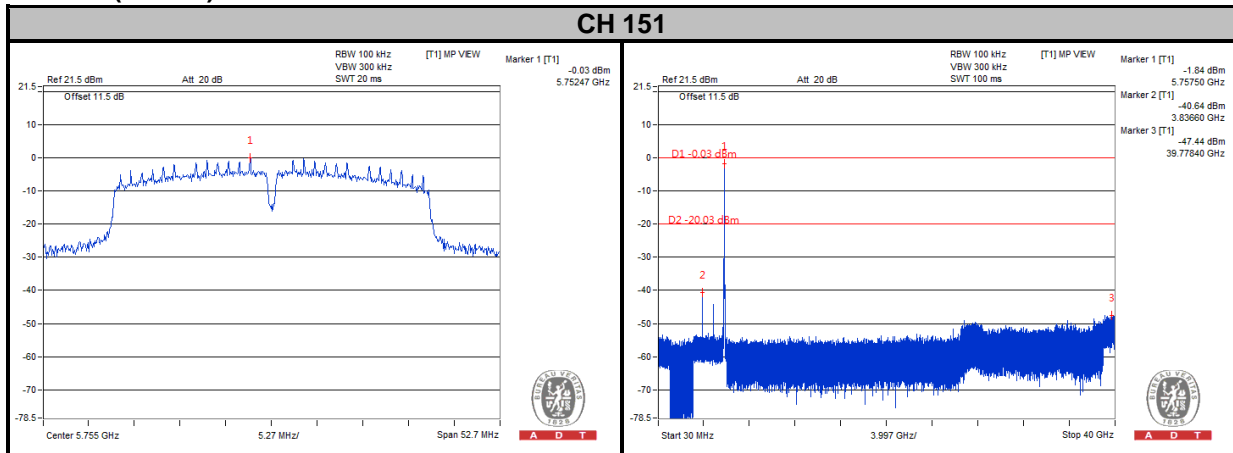
802.11n (20MHz)





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802.11n (40MHz)





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6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



7. INFORMATION ON THE TESTING LABORATORIES

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

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

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Fax: 886-2-26051924

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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.



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8. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---