

FCC TEST REPORT (15.407)

REPORT NO.: RF111130C18-6

MODEL NO.: PJ83100

FCC ID: NM8PJ83100

RECEIVED: Nov. 30, 2011

TESTED: Jan. 09 ~ Jan. 18, 2012

ISSUED: Jan. 19, 2012

APPLICANT: HTC Corporation

ADDRESS: 23, Xinghua Rd., Taoyuan 330, Taiwan, R.O.C.

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

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

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Jan. 19, 2012

1. CERTIFICATION

PRODUCT: Smart Phone

MODEL: PJ83100

BRAND: HTC

APPLICANT: HTC Corporation

TESTED: Jan. 09 ~ Jan. 18, 2012

TEST SAMPLE: Production Unit

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

ANSI C63.4-2003

ANSI C63.10-2009

The above equipment (Model: PJ83100) 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:** Jan. 19, 2012
Ivonne Wu / Senior Specialist

APPROVED BY : Gary Chang , **DATE:** Jan. 19, 2012
Gary Chang / Technical Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -4.95dB at 0.259MHz.
15.407(b)(1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 10640.00 MHz, 10620.00MHz, 11400.00MHz & 11160.00MHz.
15.407(a)(1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	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	150kHz~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 $k = 2$.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Smart Phone
MODEL NO.	PJ83100
FCC ID	NM8PJ83100
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.7Vdc (Li-ion battery)
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150.0Mbps
OPERATING FREQUENCY	5180 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5180 ~ 5320MHz: 8 for 802.11a, 802.11n (20MHz) 4 for 802.11n (40MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz)
OUTPUT POWER	22.131mW for 5180 ~ 5240MHz 21.232mW for 5260 ~ 5320MHz 20.989mW for 5500 ~ 5700MHz
ANTENNA TYPE	PIFA antenna with -3.0dBi 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:

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

Frequency Band (MHz)	2412~2462	5180~5320	5500~5700	5745~5825
802.11b	√	-	-	-
802.11g	√	-	-	-
802.11a	-	√	√	√
802.11n (20MHz)	√	√	√	√
802.11n (40MHz)	√	√	√	√

- The EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX

- The EUT's accessories list refers to Ext Pho_ NM8PJ83100.pdf.
*Main sample+ item 1, 3, 6, 9, 10, 11 were the worst for the final test.
- 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 5180 ~ 5320MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	54	5270 MHz
46	5230 MHz	62	5310 MHz

FOR 5500 ~ 5700MHz

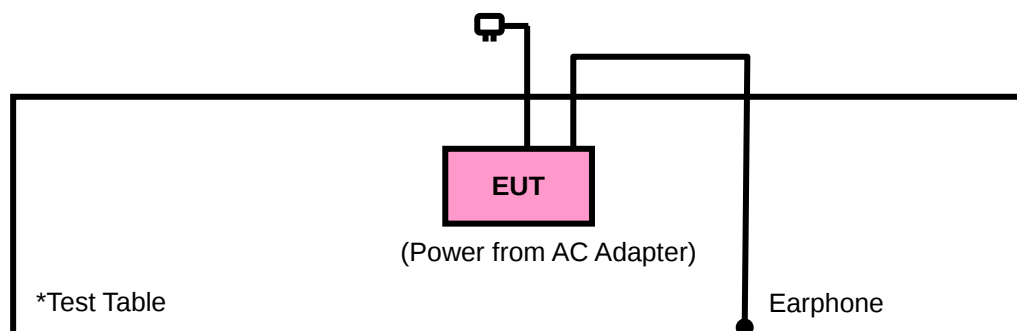
8 channels are provided for 802.11a, 802.11n (20MHz):

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

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

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

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

RADIATED EMISSION TEST (ABOVE 1GHz):

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0	Y
802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2	Y
802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0	Y
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0	Y
802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	7.2	Y
802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	15.0	Y

RADIATED EMISSION TEST (BELOW 1GHz):

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
802.11a	5180-5320	36 to 64	36	OFDM	BPSK	6.0	Y
802.11a	5500-5700	100 to 140	140	OFDM	BPSK	6.0	Y

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5320	36 to 64	36	OFDM	BPSK	6.0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2
02.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	7.2
02.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE $\geq$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Sun Lin
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Sun Lin
PLC	22deg. C, 68%RH	120Vac, 60Hz	Jones Chang
APCM	23deg. C, 65%RH	120Vac, 60Hz	Brad Wu

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)

ANSI C63.4-2003

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.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

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. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

FREQUENCIES (MHz)	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m) *NOTE 3
	PK	PK
5150 ~ 5350	-27	68.3
5470 ~ 5725	-27	68.3

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

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

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2011	Apr. 18, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Aug. 04, 2011	Aug. 03, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
Preamplifier Agilent	8449B	3008A01911	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10638	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn Table Controller EMCO	2090	NA	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 29, 2011	Oct. 28, 2012
High Speed Peak Power Meter	ML2495A	0824011	Aug. 04, 2011	Aug. 03, 2012
Power Sensor	MA2411B	0738171	Aug. 04, 2011	Aug. 03, 2012

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

4.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

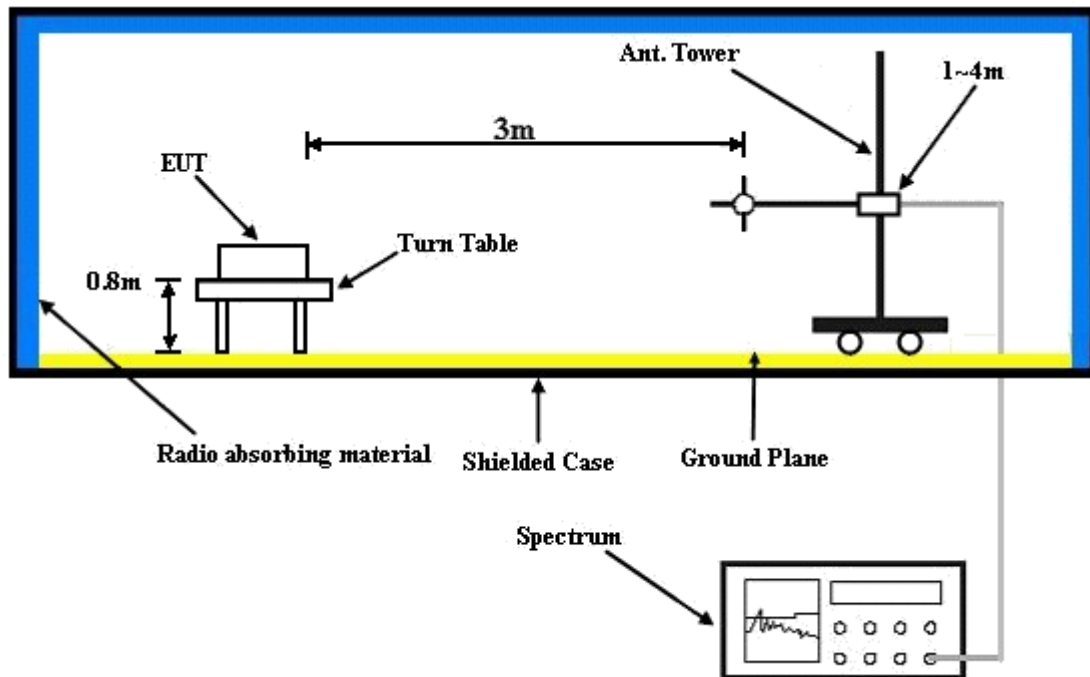
NOTE:

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

4.1.5 DEVIATION FROM TEST STANDARD

No deviation.

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITION

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

4.1.8 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA: 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.8 PK	74.0	-14.2	1.17 H	251	21.40	38.40
2	5150.00	43.2 AV	54.0	-10.8	1.17 H	251	4.80	38.40
3	*5180.00	95.1 PK			1.26 H	251	56.70	38.40
4	*5180.00	84.3 AV			1.26 H	251	45.90	38.40
5	#10360.00	58.5 PK	68.3	-9.8	1.25 H	234	10.20	48.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	1.22 V	248	16.60	38.40
2	5150.00	39.1 AV	54.0	-14.9	1.22 V	248	0.70	38.40
3	*5180.00	90.0 PK			1.12 V	267	51.60	38.40
4	*5180.00	79.5 AV			1.12 V	267	41.10	38.40
5	#10360.00	54.0 PK	68.3	-14.3	1.37 V	65	5.70	48.30

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	95.3 PK			1.28 H	262	56.80	38.50
2	*5220.00	84.4 AV			1.28 H	262	45.90	38.50
3	#10440.00	58.9 PK	68.3	-9.4	1.22 H	269	10.50	48.40
4	15660.00	58.0 PK	74.0	-16.0	1.45 H	68	8.70	49.30
5	15660.00	46.4 AV	54.0	-7.6	1.45 H	68	-2.90	49.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	90.3 PK			1.27 V	232	51.80	38.50
2	*5220.00	79.7 AV			1.27 V	232	41.20	38.50
3	#10440.00	54.3 PK	68.3	-14.0	1.28 V	28	5.90	48.40
4	15660.00	54.9 PK	74.0	-19.1	1.04 V	123	5.60	49.30
5	15660.00	44.5 AV	54.0	-9.5	1.04 V	123	-4.80	49.30

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	95.6 PK			1.21 H	262	57.10	38.50
2	*5240.00	84.6 AV			1.21 H	262	46.10	38.50
3	#10480.00	58.8 PK	68.3	-9.5	1.29 H	203	10.30	48.50
4	15720.00	57.7 PK	74.0	-16.3	1.37 H	25	8.50	49.20
5	15720.00	46.4 AV	54.0	-7.6	1.37 H	25	-2.80	49.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	90.6 PK			1.27 V	269	52.10	38.50
2	*5240.00	79.9 AV			1.27 V	269	41.40	38.50
3	#10480.00	54.5 PK	68.3	-13.8	1.32 V	202	6.00	48.50
4	15720.00	54.6 PK	74.0	-19.4	1.03 V	324	5.40	49.20
5	15720.00	44.7 AV	54.0	-9.3	1.03 V	324	-4.50	49.20

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	95.8 PK			1.22 H	271	57.30	38.50
2	*5260.00	84.7 AV			1.22 H	271	46.20	38.50
3	#10520.00	59.2 PK	68.3	-9.1	1.22 H	269	10.70	48.50
4	15780.00	57.8 PK	74.0	-16.2	1.37 H	158	8.70	49.10
5	15780.00	46.8 AV	54.0	-7.2	1.37 H	158	-2.30	49.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	90.7 PK			1.32 V	214	52.20	38.50
2	*5260.00	79.8 AV			1.32 V	214	41.30	38.50
3	#10520.00	54.2 PK	68.3	-14.1	1.28 V	117	5.70	48.50
4	15780.00	55.1 PK	74.0	-18.9	1.12 V	298	6.00	49.10
5	15780.00	45.0 AV	54.0	-9.0	1.12 V	298	-4.10	49.10

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	95.9 PK			1.07 H	268	57.30	38.60
2	*5300.00	84.6 AV			1.07 H	268	46.00	38.60
3	10600.00	59.8 PK	74.0	-14.2	1.06 H	253	11.10	48.70
4	10600.00	52.2 AV	54.0	-1.8	1.06 H	253	3.50	48.70
5	15900.00	57.6 PK	74.0	-16.4	1.32 H	129	8.90	48.70
6	15900.00	46.7 AV	54.0	-7.3	1.32 H	129	-2.00	48.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	90.9 PK			1.24 V	196	52.30	38.60
2	*5300.00	79.9 AV			1.24 V	196	41.30	38.60
3	10600.00	58.1 PK	74.0	-15.9	1.37 V	108	9.40	48.70
4	10600.00	50.3 AV	54.0	-3.7	1.37 V	108	1.60	48.70
5	15900.00	55.7 PK	74.0	-18.3	1.18 V	304	7.00	48.70
6	15900.00	44.8 AV	54.0	-9.2	1.18 V	304	-3.90	48.70

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	96.4 PK			1.22 H	252	57.80	38.60
2	*5320.00	85.0 AV			1.22 H	252	46.40	38.60
3	5350.00	56.7 PK	74.0	-17.3	1.46 H	255	18.00	38.70
4	5350.00	39.3 AV	54.0	-14.7	1.46 H	255	0.60	38.70
5	10640.00	61.4 PK	74.0	-12.6	1.44 H	150	12.60	48.80
6	10640.00	53.0 AV	54.0	-1.0	1.44 H	150	4.20	48.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	91.2 PK			1.22 V	204	52.60	38.60
2	*5320.00	80.2 AV			1.22 V	204	41.60	38.60
3	5350.00	52.2 PK	74.0	-21.8	1.22 V	204	13.50	38.70
4	5350.00	36.5 AV	54.0	-17.5	1.22 V	204	-2.20	38.70
5	10640.00	55.6 PK	74.0	-18.4	1.28 V	198	6.80	48.80
6	10640.00	45.1 AV	54.0	-8.9	1.28 V	198	-3.70	48.80

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	50.1 PK	74.0	-23.9	1.43 H	257	11.20	38.90
2	5460.00	36.4 AV	54.0	-17.6	1.43 H	257	-2.50	38.90
3	#5470.00	52.1 PK	68.3	-16.2	1.43 H	257	13.20	38.90
4	*5500.00	96.7 PK			1.47 H	258	57.70	39.00
5	*5500.00	85.1 AV			1.47 H	258	46.10	39.00
6	11000.00	55.9 PK	74.0	-18.1	1.50 H	162	6.30	49.60
7	11000.00	50.0 AV	54.0	-4.0	1.50 H	162	0.40	49.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	45.8 PK	74.0	-28.2	1.28 V	98	6.90	38.90
2	5460.00	32.7 AV	54.0	-21.3	1.28 V	98	-6.20	38.90
3	#5470.00	48.8 PK	68.3	-19.5	1.28 V	98	9.90	38.90
4	*5500.00	91.4 PK			1.29 V	98	52.40	39.00
5	*5500.00	80.3 AV			1.29 V	98	41.30	39.00
6	11000.00	59.8 PK	74.0	-14.2	1.21 V	210	10.20	49.60
7	11000.00	52.3 AV	54.0	-1.7	1.21 V	210	2.70	49.60

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	96.8 PK			1.37 H	243	57.70	39.10
2	*5580.00	85.2 AV			1.37 H	243	46.10	39.10
3	11160.00	59.2 PK	74.0	-14.8	1.31 H	231	9.60	49.60
4	11160.00	49.8 AV	54.0	-4.2	1.31 H	231	0.20	49.60
5	#16740.00	60.8 PK	68.3	-7.5	1.34 H	198	9.10	51.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	91.5 PK			1.21 V	104	52.40	39.10
2	*5580.00	80.3 AV			1.21 V	104	41.20	39.10
3	11160.00	60.4 PK	74.0	-13.6	1.17 V	223	10.80	49.60
4	11160.00	53.0 AV	54.0	-1.0	1.17 V	223	3.40	49.60
5	#16740.00	58.8 PK	68.3	-9.5	1.08 V	224	7.10	51.70

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	97.1 PK			1.35 H	265	57.70	39.40
2	*5700.00	85.4 AV			1.35 H	265	46.00	39.40
3	#5725.00	59.0 PK	68.3	-9.3	1.35 H	263	19.60	39.40
4	11400.00	58.2 PK	74.0	-15.8	1.48 H	289	8.60	49.60
5	11400.00	48.1 AV	54.0	-5.9	1.48 H	289	-1.50	49.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	91.7 PK			1.28 V	120	52.30	39.40
2	*5700.00	80.4 AV			1.28 V	120	41.00	39.40
3	#5725.00	53.0 PK	68.3	-15.3	1.28 V	120	13.60	39.40
4	11400.00	60.4 PK	74.0	-13.6	1.00 V	178	10.80	49.60
5	11400.00	53.0 AV	54.0	-1.0	1.00 V	178	3.40	49.60

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

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH hPa	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	1.20 H	232	17.80	38.40
2	5150.00	40.0 AV	54.0	-14.0	1.20 H	232	1.60	38.40
3	*5180.00	92.2 PK			1.20 H	232	53.80	38.40
4	*5180.00	81.3 AV			1.20 H	232	42.90	38.40
5	#10360.00	58.6 PK	68.3	-9.7	1.27 H	258	10.30	48.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.7 PK	74.0	-21.3	1.21 V	267	14.30	38.40
2	5150.00	36.2 AV	54.0	-17.8	1.21 V	267	-2.20	38.40
3	*5180.00	86.9 PK			1.21 V	263	48.50	38.40
4	*5180.00	76.3 AV			1.21 V	263	37.90	38.40
5	#10360.00	54.3 PK	68.3	-14.0	1.01 V	175	6.00	48.30

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	92.4 PK			1.27 H	253	53.90	38.50
2	*5220.00	81.3 AV			1.27 H	253	42.80	38.50
3	#10440.00	58.9 PK	68.3	-9.4	1.18 H	232	10.50	48.40
4	15660.00	58.3 PK	74.0	-15.7	1.37 H	228	9.00	49.30
5	15660.00	46.1 AV	54.0	-7.9	1.37 H	228	-3.20	49.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	87.2 PK			1.28 V	223	48.70	38.50
2	*5220.00	76.4 AV			1.28 V	223	37.90	38.50
3	#10440.00	55.0 PK	68.3	-13.3	1.07 V	189	6.60	48.40
4	15660.00	54.2 PK	74.0	-19.8	1.52 V	217	4.90	49.30
5	15660.00	43.8 AV	54.0	-10.2	1.52 V	217	-5.50	49.30

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	92.5 PK			1.12 H	267	54.00	38.50
2	*5240.00	81.3 AV			1.12 H	267	42.80	38.50
3	#10480.00	58.6 PK	68.3	-9.7	1.18 H	228	10.10	48.50
4	15720.00	58.5 PK	74.0	-15.5	1.38 H	203	9.30	49.20
5	15720.00	46.3 AV	54.0	-7.7	1.38 H	203	-2.90	49.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	87.5 PK			1.32 V	265	49.00	38.50
2	*5240.00	76.5 AV			1.32 V	265	38.00	38.50
3	#10480.00	55.2 PK	68.3	-13.1	1.08 V	177	6.70	48.50
4	15720.00	54.6 PK	74.0	-19.4	1.47 V	189	5.40	49.20
5	15720.00	43.9 AV	54.0	-10.1	1.47 V	189	-5.30	49.20

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	92.7 PK			1.08 H	292	54.20	38.50
2	*5260.00	81.5 AV			1.08 H	292	43.00	38.50
3	#10520.00	58.9 PK	68.3	-9.4	1.28 H	265	10.40	48.50
4	15780.00	58.3 PK	74.0	-15.7	1.22 H	278	9.20	49.10
5	15780.00	45.9 AV	54.0	-8.1	1.22 H	278	-3.20	49.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	87.8 PK			1.12 V	257	49.30	38.50
2	*5260.00	76.7 AV			1.12 V	257	38.20	38.50
3	#10520.00	55.7 PK	68.3	-12.6	1.02 V	167	7.20	48.50
4	15780.00	54.8 PK	74.0	-19.2	1.52 V	215	5.70	49.10
5	15780.00	44.3 AV	54.0	-9.7	1.52 V	215	-4.80	49.10

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	92.9 PK			1.05 H	302	54.30	38.60
2	*5300.00	81.6 AV			1.05 H	302	43.00	38.60
3	10600.00	58.7 PK	74.0	-15.3	1.21 H	215	10.00	48.70
4	10600.00	52.8 AV	54.0	-1.2	1.21 H	215	4.10	48.70
5	15900.00	58.6 PK	74.0	-15.4	1.28 H	192	9.90	48.70
6	15900.00	46.1 AV	54.0	-7.9	1.28 H	192	-2.60	48.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	88.1 PK			1.07 V	269	49.50	38.60
2	*5300.00	76.9 AV			1.07 V	269	38.30	38.60
3	10600.00	57.8 PK	74.0	-16.2	1.07 V	153	9.10	48.70
4	10600.00	50.3 AV	54.0	-3.7	1.07 V	153	1.60	48.70
5	15900.00	54.5 PK	74.0	-19.5	1.47 V	272	5.80	48.70
6	15900.00	44.1 AV	54.0	-9.9	1.47 V	272	-4.60	48.70

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	93.1 PK			1.04 H	299	54.50	38.60
2	*5320.00	81.7 AV			1.04 H	299	43.10	38.60
3	5350.00	53.4 PK	74.0	-20.6	1.08 H	312	14.70	38.70
4	5350.00	36.0 AV	54.0	-18.0	1.08 H	312	-2.70	38.70
5	10640.00	58.6 PK	74.0	-15.4	1.22 H	248	9.80	48.80
6	10640.00	52.3 AV	54.0	-1.7	1.22 H	248	3.50	48.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	88.3 PK			1.02 V	297	49.70	38.60
2	*5320.00	77.0 AV			1.02 V	297	38.40	38.60
3	5350.00	50.1 PK	74.0	-23.9	1.02 V	299	11.40	38.70
4	5350.00	33.7 AV	54.0	-20.3	1.02 V	299	-5.00	38.70
5	10640.00	54.9 PK	74.0	-19.1	1.52 V	247	6.10	48.80
6	10640.00	44.5 AV	54.0	-9.5	1.52 V	247	-4.30	48.80

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	46.2 PK	74.0	-27.8	1.08 H	287	7.30	38.90
2	5460.00	33.8 AV	54.0	-20.2	1.08 H	287	-5.10	38.90
3	#5470.00	50.2 PK	68.3	-18.1	1.08 H	287	11.30	38.90
4	*5500.00	93.5 PK			1.08 H	271	54.50	39.00
5	*5500.00	82.0 AV			1.08 H	271	43.00	39.00
6	11000.00	56.0 PK	74.0	-18.0	1.24 H	269	6.40	49.60
7	11000.00	50.1 AV	54.0	-3.9	1.24 H	269	0.50	49.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	45.1 PK	74.0	-28.9	1.08 V	247	6.20	38.90
2	5460.00	33.0 AV	54.0	-21.0	1.08 V	247	-5.90	38.90
3	#5470.00	49.2 PK	68.3	-19.1	1.08 V	247	10.30	38.90
4	*5500.00	88.5 PK			1.08 V	245	49.50	39.00
5	*5500.00	77.1 AV			1.08 V	245	38.10	39.00
6	11000.00	59.7 PK	74.0	-14.3	1.17 V	169	10.10	49.60
7	11000.00	52.4 AV	54.0	-1.6	1.17 V	169	2.80	49.60

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	93.7 PK			1.13 H	252	54.60	39.10
2	*5580.00	82.2 AV			1.13 H	252	43.10	39.10
3	11160.00	58.6 PK	74.0	-15.4	1.23 H	172	9.00	49.60
4	11160.00	49.5 AV	54.0	-4.5	1.23 H	172	-0.10	49.60
5	#16740.00	60.3 PK	68.3	-8.0	1.45 H	217	8.60	51.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	88.8 PK			1.01 V	231	49.70	39.10
2	*5580.00	77.3 AV			1.01 V	231	38.20	39.10
3	11160.00	59.5 PK	74.0	-14.5	1.22 V	162	9.90	49.60
4	11160.00	52.6 AV	54.0	-1.4	1.22 V	162	3.00	49.60
5	#16740.00	60.7 PK	68.3	-7.6	1.07 V	257	9.00	51.70

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	93.8 PK			1.12 H	234	54.40	39.40
2	*5700.00	82.2 AV			1.12 H	234	42.80	39.40
3	#5725.00	57.1 PK	68.3	-11.2	1.12 H	238	17.70	39.40
4	11400.00	58.2 PK	74.0	-15.8	1.38 H	235	8.60	49.60
5	11400.00	49.7 AV	54.0	-4.3	1.38 H	235	0.10	49.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	89.2 PK			1.02 V	247	49.80	39.40
2	*5700.00	77.5 AV			1.02 V	247	38.10	39.40
3	#5725.00	51.8 PK	68.3	-16.5	1.08 V	258	12.40	39.40
4	11400.00	59.8 PK	74.0	-14.2	1.06 V	198	10.20	49.60
5	11400.00	52.8 AV	54.0	-1.2	1.06 V	198	3.20	49.60

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

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.3 PK	74.0	-15.7	1.18 H	237	19.90	38.40
2	5150.00	42.2 AV	54.0	-11.8	1.18 H	237	3.80	38.40
3	*5190.00	89.1 PK			1.18 H	234	50.70	38.40
4	*5190.00	78.0 AV			1.18 H	234	39.60	38.40
5	#10380.00	58.2 PK	68.3	-10.1	1.23 H	269	9.90	48.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.7 PK	74.0	-19.3	1.08 V	252	16.30	38.40
2	5150.00	37.5 AV	54.0	-16.5	1.08 V	252	-0.90	38.40
3	*5190.00	83.7 PK			1.08 V	247	45.30	38.40
4	*5190.00	73.4 AV			1.08 V	247	35.00	38.40
5	#10380.00	54.9 PK	68.3	-13.4	1.05 V	158	6.60	48.30

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	89.4 PK			1.17 H	239	50.90	38.50
2	*5230.00	78.2 AV			1.17 H	239	39.70	38.50
3	#10460.00	58.5 PK	68.3	-9.8	1.28 H	271	10.00	48.50
4	15690.00	58.1 PK	74.0	-15.9	1.31 H	77	8.80	49.30
5	15690.00	46.0 AV	54.0	-8.0	1.31 H	77	-3.30	49.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	83.8 PK			1.02 V	264	45.30	38.50
2	*5230.00	73.6 AV			1.02 V	264	35.10	38.50
3	#10460.00	56.1 PK	68.3	-12.2	1.08 V	191	7.60	48.50
4	15690.00	54.7 PK	74.0	-19.3	1.36 V	151	5.40	49.30
5	15690.00	44.8 AV	54.0	-9.2	1.36 V	151	-4.50	49.30

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	89.6 PK			1.25 H	245	51.00	38.60
2	*5270.00	78.3 AV			1.25 H	245	39.70	38.60
3	#10540.00	58.9 PK	68.3	-9.4	1.38 H	203	10.30	48.60
4	15810.00	58.3 PK	74.0	-15.7	1.22 H	104	9.20	49.10
5	15810.00	46.1 AV	54.0	-7.9	1.22 H	104	-3.00	49.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	84.1 PK			1.09 V	231	45.50	38.60
2	*5270.00	73.6 AV			1.09 V	231	35.00	38.60
3	#10540.00	56.8 PK	68.3	-11.5	1.02 V	157	8.20	48.60
4	15810.00	54.9 PK	74.0	-19.1	1.35 V	147	5.80	49.10
5	15810.00	45.0 AV	54.0	-9.0	1.35 V	147	-4.10	49.10

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	89.9 PK			1.28 H	255	51.30	38.60
2	*5310.00	78.5 AV			1.28 H	255	39.90	38.60
3	5350.00	55.5 PK	74.0	-18.5	1.21 H	251	16.80	38.70
4	5350.00	41.7 AV	54.0	-12.3	1.21 H	251	3.00	38.70
5	10620.00	59.5 PK	74.0	-14.5	1.14 H	232	10.80	48.70
6	10620.00	53.0 AV	54.0	-1.0	1.14 H	232	4.30	48.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	84.5 PK			1.01 V	269	45.90	38.60
2	*5310.00	73.8 AV			1.01 V	269	35.20	38.60
3	5350.00	50.3 PK	74.0	-23.7	1.01 V	271	11.60	38.70
4	5350.00	36.4 AV	54.0	-17.6	1.01 V	271	-2.30	38.70
5	10620.00	55.3 PK	74.0	-18.7	1.28 V	163	6.60	48.70
6	10620.00	45.6 AV	54.0	-8.4	1.28 V	163	-3.10	48.70

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	54.5 PK	74.0	-19.5	1.21 H	256	15.60	38.90
2	5460.00	38.6 AV	54.0	-15.4	1.21 H	256	-0.30	38.90
3	#5470.00	56.3 PK	68.3	-12.0	1.21 H	256	17.40	38.90
4	*5510.00	90.1 PK			1.22 H	259	51.10	39.00
5	*5510.00	78.6 AV			1.22 H	259	39.60	39.00
6	11020.00	57.2 PK	74.0	-16.8	1.17 H	261	7.60	49.60
7	11020.00	51.3 AV	54.0	-2.7	1.17 H	261	1.70	49.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	50.0 PK	74.0	-24.0	1.07 V	223	11.10	38.90
2	5460.00	32.8 AV	54.0	-21.2	1.07 V	223	-6.10	38.90
3	#5470.00	51.2 PK	68.3	-17.1	1.07 V	223	12.30	38.90
4	*5510.00	84.6 PK			1.07 V	225	45.60	39.00
5	*5510.00	73.8 AV			1.07 V	225	34.80	39.00
6	11020.00	59.9 PK	74.0	-14.1	1.02 V	177	10.30	49.60
7	11020.00	52.8 AV	54.0	-1.2	1.02 V	177	3.20	49.60

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	90.5 PK			1.25 H	241	51.50	39.00
2	*5550.00	78.7 AV			1.25 H	241	39.70	39.00
3	11100.00	57.5 PK	74.0	-16.5	1.28 H	298	7.90	49.60
4	11100.00	51.2 AV	54.0	-2.8	1.28 H	298	1.60	49.60
5	#16650.00	60.8 PK	68.3	-7.5	1.47 H	47	9.40	51.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	84.8 PK			1.02 V	214	45.80	39.00
2	*5550.00	73.9 AV			1.02 V	214	34.90	39.00
3	11100.00	59.1 PK	74.0	-14.9	1.08 V	148	9.50	49.60
4	11100.00	52.3 AV	54.0	-1.7	1.08 V	148	2.70	49.60
5	#16650.00	61.1 PK	68.3	-7.2	1.31 V	198	9.70	51.40

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5670.00	90.8 PK	68.3	22.5	1.12 H	252	51.50	39.30
2	#5725.00	49.3 PK	68.3	-19.0	1.21 H	235	9.90	39.40
3	11340.00	58.2 PK	74.0	-15.8	1.45 H	267	8.60	49.60
4	11340.00	51.5 AV	54.0	-2.5	1.45 H	267	1.90	49.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5670.00	85.1 PK	68.3	16.8	1.09 V	243	45.80	39.30
2	#5725.00	45.4 PK	68.3	-22.9	1.07 V	242	6.00	39.40
3	11340.00	59.3 PK	74.0	-14.7	1.22 V	175	9.70	49.60
4	11340.00	52.5 AV	54.0	-1.5	1.22 V	175	2.90	49.60

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

BELOW 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	76.56	21.0 QP	40.0	-19.0	1.25 H	45	10.20	10.80
2	103.83	20.8 QP	43.5	-22.7	1.50 H	102	10.80	10.00
3	162.00	20.1 QP	43.5	-23.4	1.25 H	35	6.10	14.00
4	243.52	20.8 QP	46.0	-25.2	1.25 H	65	7.90	12.90
5	525.50	26.5 QP	46.0	-19.5	1.00 H	140	5.70	20.80
6	687.21	24.1 QP	46.0	-21.9	1.00 H	120	1.30	22.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	31.74	30.2 QP	40.0	-9.8	1.00 V	185	17.60	12.60
2	107.92	26.1 QP	43.5	-17.4	1.25 V	42	15.60	10.50
3	134.42	22.8 QP	43.5	-20.7	1.25 V	85	9.60	13.20
4	162.11	24.3 QP	43.5	-19.2	1.75 V	285	10.30	14.00
5	189.01	26.0 QP	43.5	-17.5	1.25 V	92	13.90	12.10
6	615.12	24.2 QP	46.0	-21.8	1.25 V	80	1.70	22.50

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	76.56	20.3 QP	40.0	-19.7	1.50 H	38	9.50	10.80
2	103.83	20.3 QP	43.5	-23.2	1.50 H	95	10.30	10.00
3	162.00	19.9 QP	43.5	-23.6	1.25 H	32	5.90	14.00
4	243.81	20.2 QP	46.0	-25.8	1.25 H	45	7.30	12.90
5	525.73	26.1 QP	46.0	-19.9	1.00 H	307	5.30	20.80
6	687.15	23.5 QP	46.0	-22.5	1.25 H	105	0.70	22.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	31.74	29.5 QP	40.0	-10.5	1.00 V	251	16.90	12.60
2	107.92	25.3 QP	43.5	-18.2	1.25 V	82	14.80	10.50
3	134.42	23.2 QP	43.5	-20.3	1.25 V	45	10.00	13.20
4	162.11	24.0 QP	43.5	-19.5	1.50 V	285	10.00	14.00
5	189.01	25.4 QP	43.5	-18.1	2.00 V	92	13.30	12.10
6	615.21	23.7 QP	46.0	-22.3	1.00 V	107	1.20	22.50

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

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 23, 2011	Nov. 22, 2012
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 22, 2011	Dec. 21, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Dec. 30, 2011	Dec. 29, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 22, 2011	Feb. 21, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
Software ADT	ADT_Conc_ V7.3.7	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

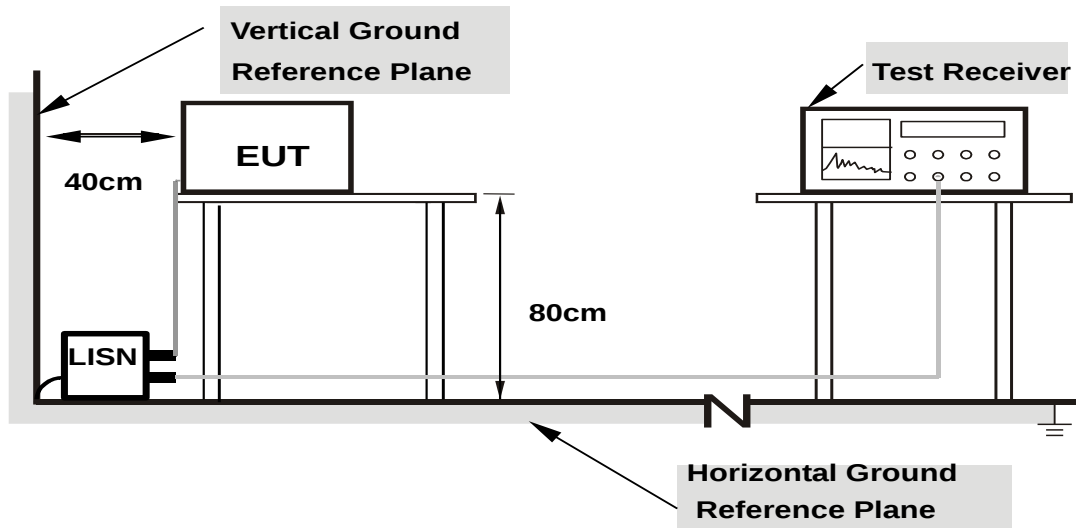
4.2.3 TEST PROCEDURES

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



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

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

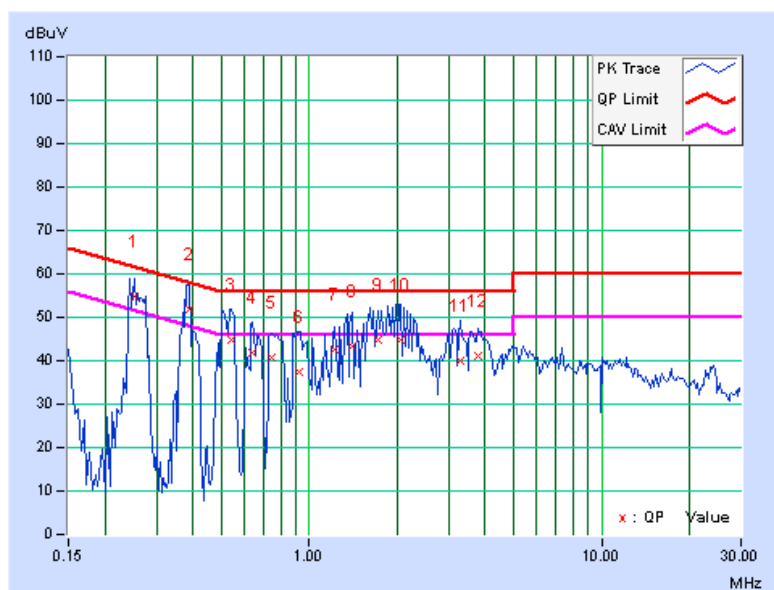
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.252	0.17	54.50	34.02	54.67	34.19	61.71	51.71	-7.04	-17.52
2	0.388	0.24	51.76	29.59	52.00	29.83	58.10	48.10	-6.10	-18.27
3	0.541	0.24	44.63	23.05	44.87	23.29	56.00	46.00	-11.13	-22.71
4	0.638	0.23	41.50	20.32	41.73	20.55	56.00	46.00	-14.27	-25.45
5	0.748	0.22	40.35	20.13	40.57	20.35	56.00	46.00	-15.43	-25.65
6	0.927	0.21	37.31	12.44	37.52	12.65	56.00	46.00	-18.48	-33.35
7	1.227	0.21	42.29	22.96	42.50	23.17	56.00	46.00	-13.50	-22.83
8	1.398	0.22	43.25	18.78	43.47	19.00	56.00	46.00	-12.53	-27.00
9	1.711	0.23	44.77	20.65	45.00	20.88	56.00	46.00	-11.00	-25.12
10	2.051	0.24	44.70	21.73	44.94	21.97	56.00	46.00	-11.06	-24.03
11	3.297	0.34	39.53	19.94	39.87	20.28	56.00	46.00	-16.13	-25.72
12	3.793	0.37	40.70	20.89	41.07	21.26	56.00	46.00	-14.93	-24.74

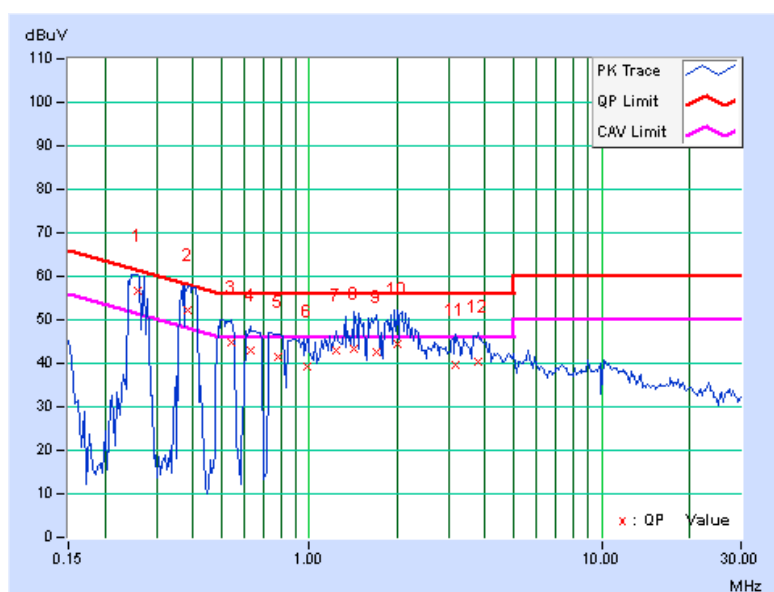
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.259	0.22	56.31	38.33	56.53	38.55	61.47	51.47	-4.95	-12.93
2	0.384	0.23	52.17	35.41	52.40	35.64	58.18	48.18	-5.79	-12.55
3	0.545	0.24	44.61	28.54	44.85	28.78	56.00	46.00	-11.15	-17.22
4	0.627	0.25	42.82	27.84	43.07	28.09	56.00	46.00	-12.93	-17.91
5	0.779	0.26	41.21	24.55	41.47	24.81	56.00	46.00	-14.53	-21.19
6	0.982	0.27	39.12	22.17	39.39	22.44	56.00	46.00	-16.61	-23.56
7	1.234	0.28	42.82	27.76	43.10	28.04	56.00	46.00	-12.90	-17.96
8	1.430	0.28	43.09	22.59	43.37	22.87	56.00	46.00	-12.63	-23.13
9	1.691	0.29	42.38	19.18	42.67	19.47	56.00	46.00	-13.33	-26.53
10	2.004	0.30	44.05	26.52	44.35	26.82	56.00	46.00	-11.65	-19.18
11	3.164	0.38	39.16	25.73	39.54	26.11	56.00	46.00	-16.46	-19.89
12	3.766	0.41	39.91	25.37	40.32	25.78	56.00	46.00	-15.68	-20.22

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



4.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

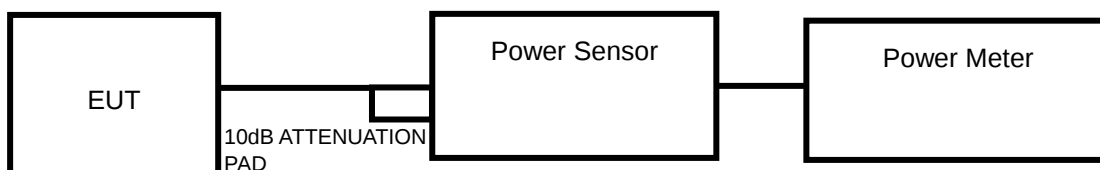
4.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.250 ~ 5.350GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.470 ~ 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

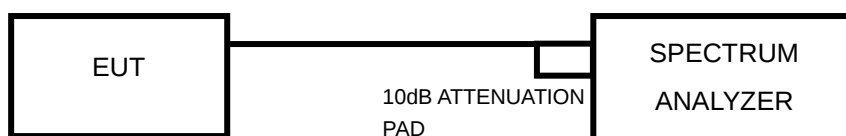
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB BANDWIDTH



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

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

FOR 26dB BANDWIDTH

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

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

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

4.3.7 TEST RESULTS

POWER OUTPUT: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
36	5180	22.131	13.45	17	PASS
44	5220	20.417	13.10	17	PASS
48	5240	19.770	12.96	17	PASS
52	5260	19.498	12.90	24	PASS
60	5300	18.408	12.65	24	PASS
64	5320	21.232	13.27	24	PASS
100	5500	18.113	12.58	24	PASS
116	5580	18.072	12.57	24	PASS
140	5700	20.989	13.22	24	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
36	5180	10.789	10.33	17	PASS
44	5220	9.863	9.94	17	PASS
48	5240	9.462	9.76	17	PASS
52	5260	9.683	9.86	24	PASS
60	5300	9.036	9.56	24	PASS
64	5320	11.194	10.49	24	PASS
100	5500	9.795	9.91	24	PASS
116	5580	9.099	9.59	24	PASS
140	5700	10.839	10.35	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
38	5190	10.544	10.23	17	PASS
46	5230	9.727	9.88	17	PASS
54	5270	8.913	9.5	24	PASS
62	5310	9.268	9.67	24	PASS
102	5510	9.141	9.61	24	PASS
110	5550	9.204	9.64	24	PASS
134	5670	10.990	10.41	24	PASS

**26dB BANDWIDTH: 802.11a**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.06	PASS
44	5220	23.05	PASS
48	5240	23.01	PASS
52	5260	23.04	PASS
60	5300	23.04	PASS
64	5320	23.12	PASS
100	5500	23.11	PASS
116	5580	23.06	PASS
140	5700	24.83	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	22.82	PASS
44	5220	22.78	PASS
48	5240	22.80	PASS
52	5260	22.80	PASS
60	5300	22.89	PASS
64	5320	22.88	PASS
100	5500	22.95	PASS
116	5580	22.91	PASS
140	5700	23.00	PASS



A D T

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	50.62	PASS
46	5230	45.84	PASS
54	5270	45.77	PASS
62	5310	45.87	PASS
102	5510	50.88	PASS
110	5550	50.87	PASS
134	5670	51.03	PASS

4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 TEST PROCEDURE

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

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.2.6

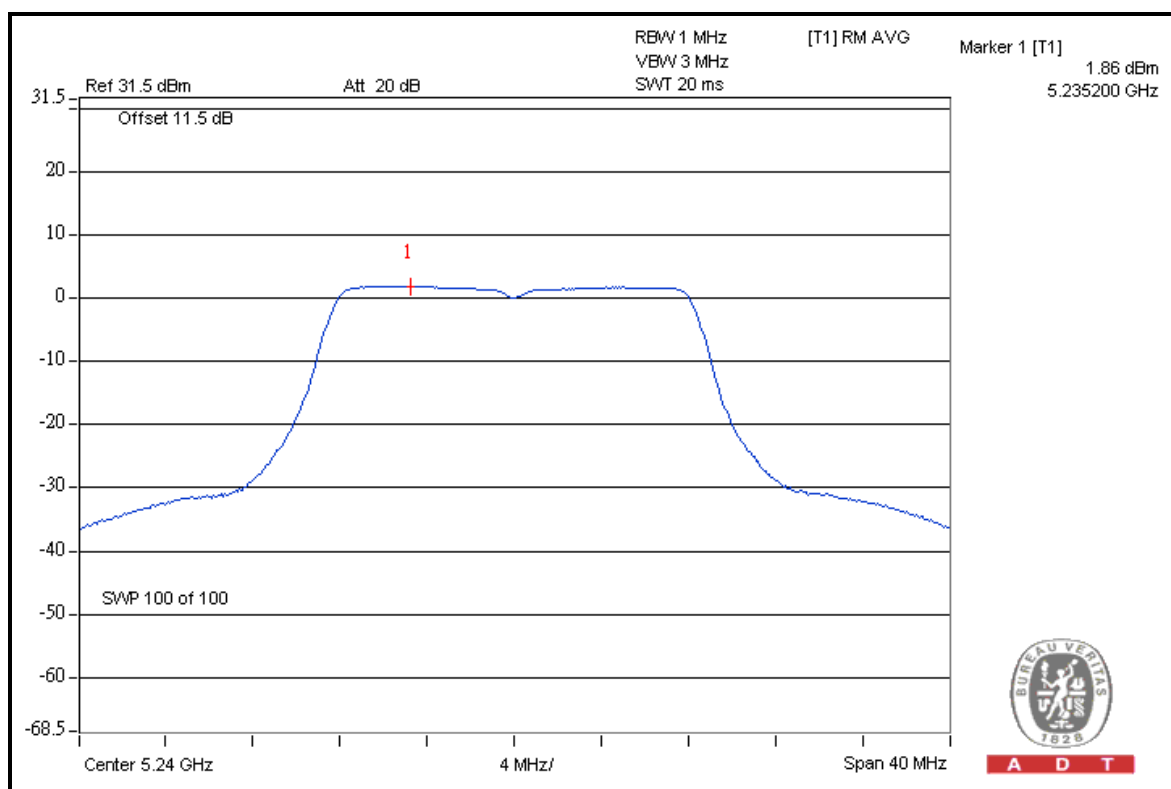
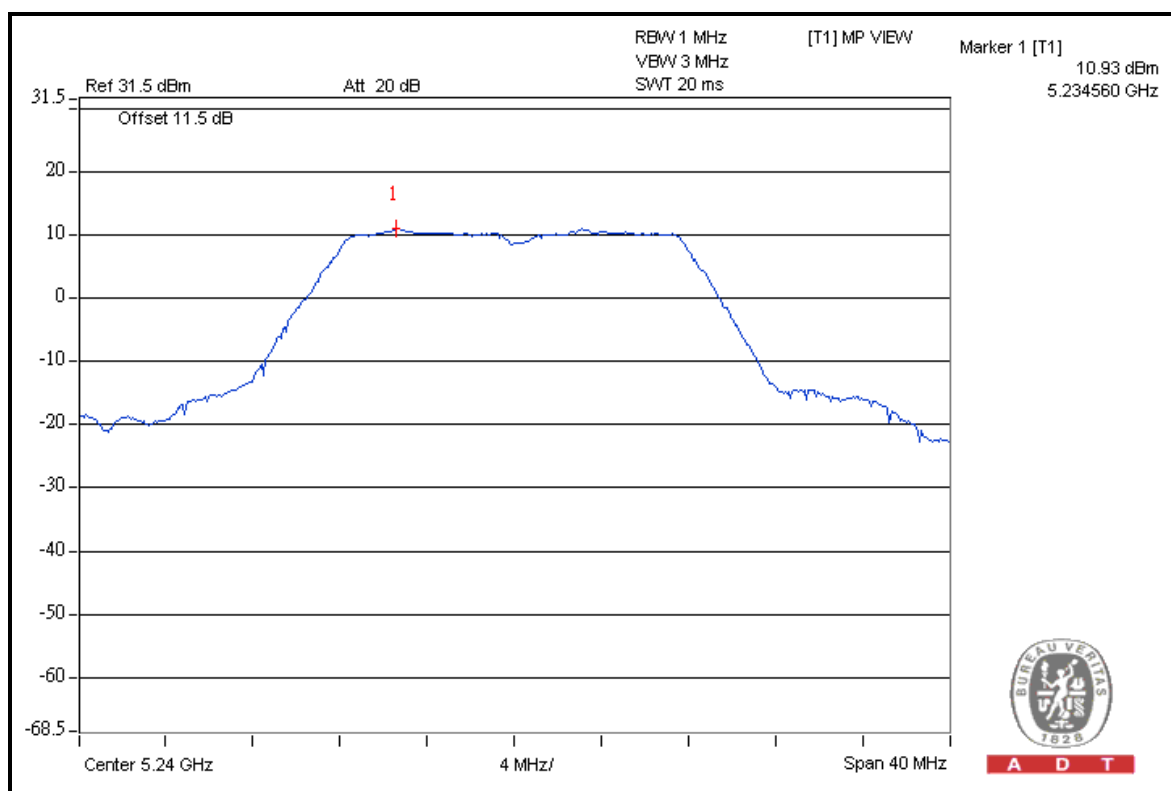
4.4.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	11.23	2.26	8.97	13	PASS
44	5220	11.07	2.22	8.85	13	PASS
48	5240	10.93	1.86	9.07	13	PASS
52	5260	10.68	1.81	8.87	13	PASS
60	5300	10.43	1.49	8.94	13	PASS
64	5320	11.13	2.25	8.88	13	PASS
100	5500	10.59	1.62	8.97	13	PASS
116	5580	10.15	1.32	8.83	13	PASS
140	5700	11.09	2.18	8.91	13	PASS



A D T

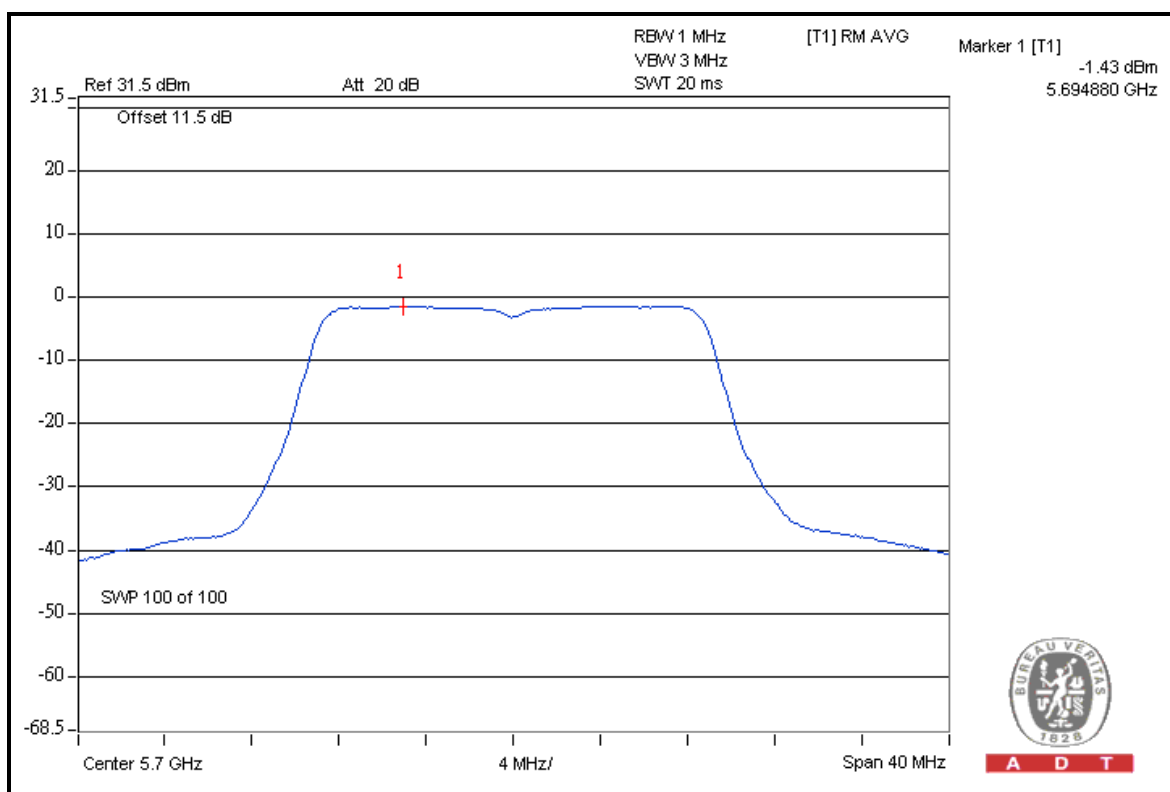
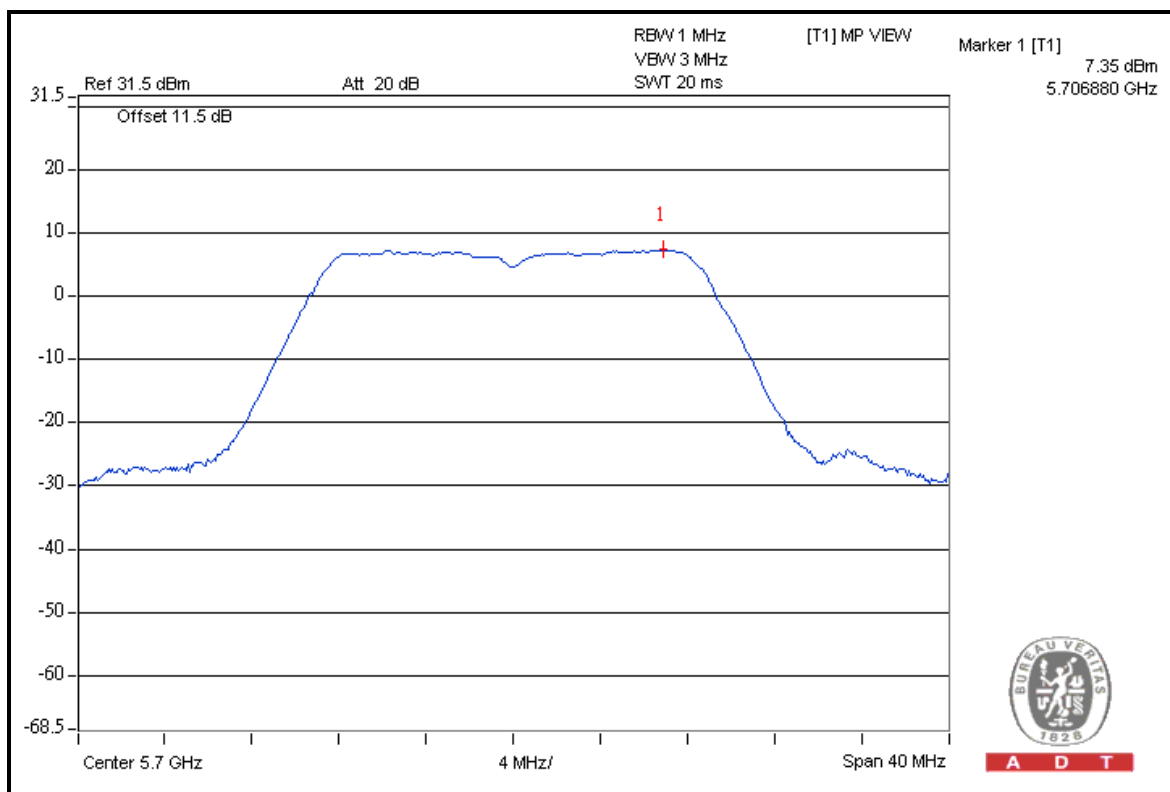


802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	7.28	-1.32	8.60	13	PASS
44	5220	7.20	-1.49	8.69	13	PASS
48	5240	6.95	-1.70	8.65	13	PASS
52	5260	6.78	-1.93	8.71	13	PASS
60	5300	6.42	-2.30	8.72	13	PASS
64	5320	7.36	-1.25	8.61	13	PASS
100	5500	6.84	-1.88	8.72	13	PASS
116	5580	6.44	-2.22	8.66	13	PASS
140	5700	7.35	-1.43	8.78	13	PASS



A D T

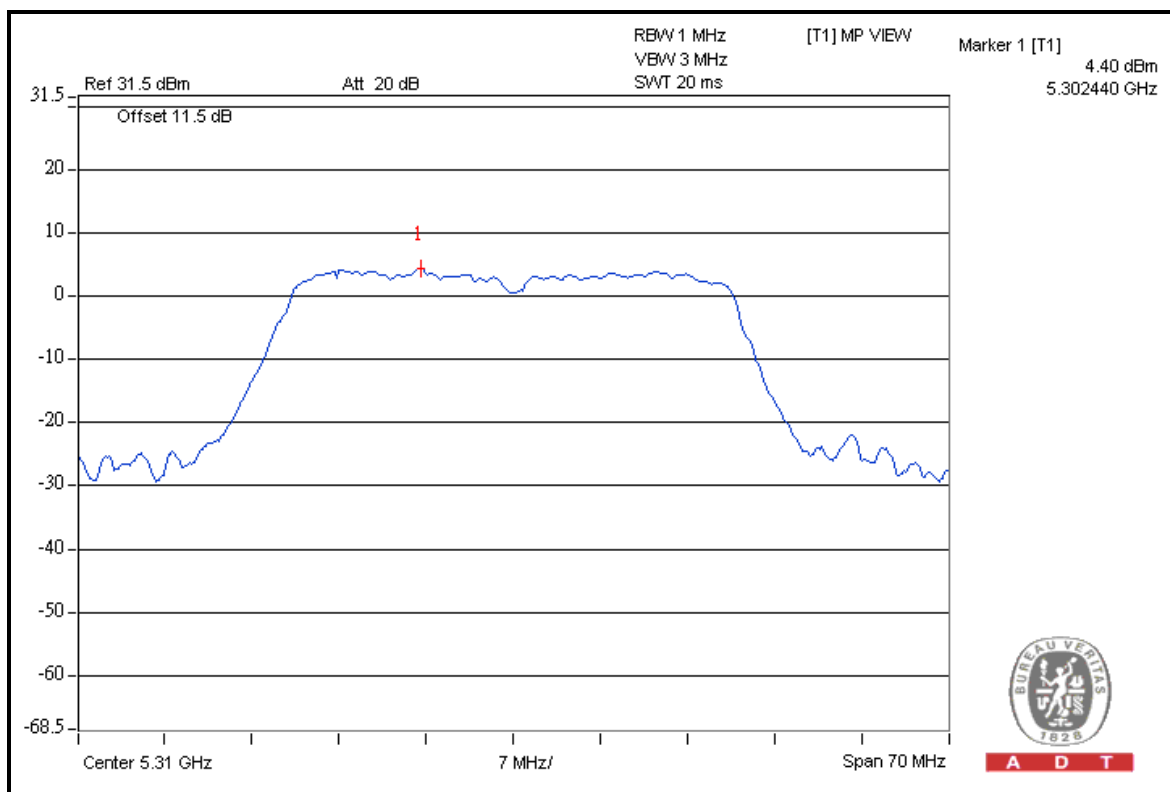


802.11n (40MHz)

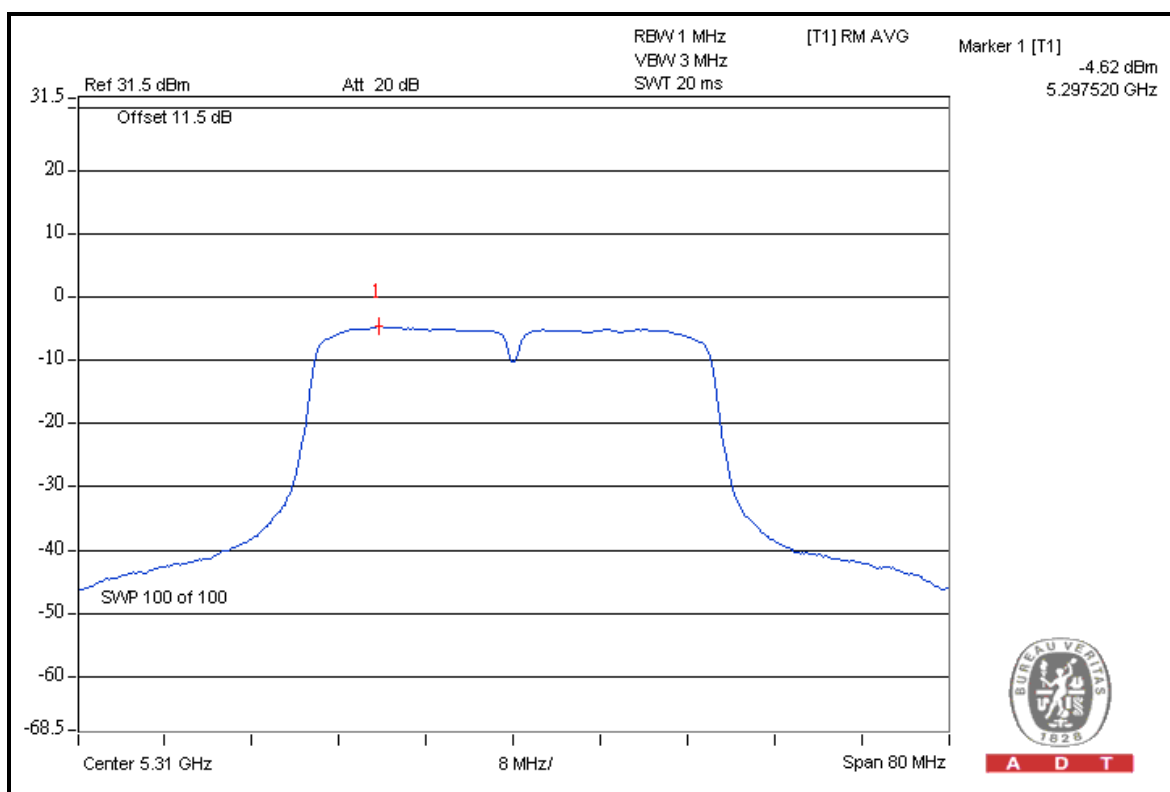
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS/FAIL
38	5190	4.78	-4.22	9.00	13	PASS
46	5230	4.65	-4.32	8.97	13	PASS
54	5270	4.25	-4.73	8.97	13	PASS
62	5310	4.40	-4.62	9.02	13	PASS
102	5510	4.20	-4.60	8.80	13	PASS
110	5550	4.08	-4.86	8.94	13	PASS
134	5670	4.81	-4.03	8.84	13	PASS



A D T



A D T



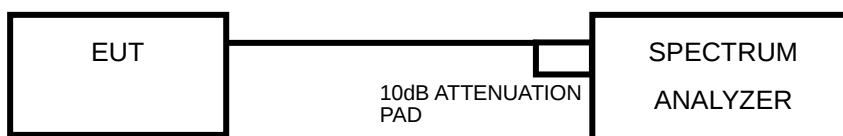
A D T

4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

FREQUENCY BAND	LIMIT(dBm)
5.15 ~ 5.25GHz	4
5.25 ~ 5.35GHz and 5.470 ~ 5.725GHz	11
5.725~5825GHz	17

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURES

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz, Set VBW $\geq$ 3 MHz, Detector = RMS
- 3) Sweep time = auto, trigger set to "free run".
- 4) Trace average at least 100 traces in power averaging mode.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITIONS

Same as 4.3.6.

4.5.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	2.26	4	PASS
40	5200	2.22	4	PASS
48	5240	1.86	4	PASS
52	5260	1.81	11	PASS
60	5300	1.49	11	PASS
64	5320	2.25	11	PASS
100	5500	1.62	11	PASS
116	5580	1.32	11	PASS
140	5700	2.18	11	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	-1.32	4	PASS
40	5200	-1.49	4	PASS
48	5240	-1.70	4	PASS
52	5260	-1.93	11	PASS
60	5300	-2.30	11	PASS
64	5320	-1.25	11	PASS
100	5500	-1.88	11	PASS
116	5580	-2.22	11	PASS
140	5700	-1.43	11	PASS



A D T

802.11n (40MHz)

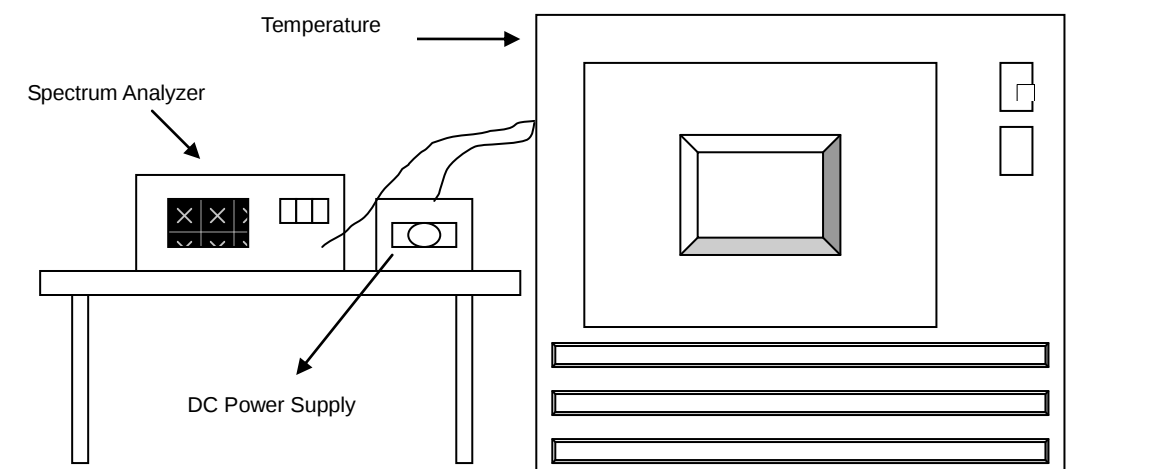
CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-4.22	4	PASS
46	5230	-4.32	4	PASS
54	5270	-4.73	11	PASS
62	5310	-4.62	11	PASS
102	5510	-4.60	11	PASS
110	5550	-4.86	11	PASS
134	5670	-4.03	11	PASS

4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.6.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

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

4.6.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
50	3.8	5319.958350	-7.829	5319.958726	-7.758	5319.958729	-7.758	5319.958462	-7.808
40	3.8	5319.968612	-5.900	5319.969184	-5.792	5319.968645	-5.894	5319.968632	-5.896
30	3.8	5319.970065	-5.627	5319.970476	-5.550	5319.970087	-5.623	5319.970674	-5.512
20	3.8	5319.971111	-5.430	5319.971206	-5.412	5319.971202	-5.413	5319.971444	-5.368
10	3.8	5319.982497	-3.290	5319.982507	-3.288	5319.982838	-3.226	5319.983136	-3.170
0	3.8	5319.991434	-1.610	5319.991898	-1.523	5319.991883	-1.526	5319.991985	-1.507
-10	3.8	5320.010333	1.942	5320.010436	1.962	5320.010474	1.969	5320.010867	2.043
-20	3.8	5320.019826	3.727	5320.019949	3.750	5320.020020	3.763	5320.020264	3.809
-30	3.8	5320.029869	5.614	5320.030185	5.674	5320.029989	5.637	5320.030523	5.737

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	3.6	5319.971837	-5.294	5319.972147	-5.236	5319.972005	-5.262	5319.972448	-5.179
	3.8	5319.971138	-5.425	5319.971688	-5.322	5319.971631	-5.333	5319.971583	-5.342
	4.2	5319.971841	-5.293	5319.972246	-5.217	5319.972176	-5.230	5319.972302	-5.206

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Email: service.adt@tw.bureauveritas.com

Web Site: www.adt.com.tw

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

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

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

---END---