



FCC TEST REPORT (15.407)

REPORT NO.: RF120402C01-3

MODEL NO.: PJ83110

FCC ID: NM8PJ83110

RECEIVED: Apr. 02, 2012

TESTED: Apr. 12 ~ Apr. 16, 2012

ISSUED: Apr. 24, 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

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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
RF120402C01-3	Original release	Apr. 24, 2012



1. CERTIFICATION

PRODUCT: Smart Phone

MODEL: PJ83110

BRAND: HTC

APPLICANT: HTC Corporation

TESTED: Apr. 12 ~ Apr. 16, 2012

TEST SAMPLE: Production Unit

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

ANSI C63.10-2009

The above equipment (model: PJ83110) 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** : Apr. 24, 2012
Ivonne Wu / Senior Specialist

APPROVED BY : Gary Chang , **DATE** : Apr. 24, 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	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -16.78dB at 0.52109MHz.
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.3dB at 10640.00MHz.
15.407(a/1/2)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	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 $k = 2$.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Smart Phone
MODEL NO.	PJ83110
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.8Vdc (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	21.979mW for 5180 ~ 5240MHz 21.135mW for 5260 ~ 5320MHz 20.941mW for 5500 ~ 5700MHz
ANTENNA TYPE	5180 ~ 5240MHz: PIFA antenna with -1.5dBi gain 5260 ~ 5320MHz: PIFA antenna with -1.5dBi gain 5500 ~ 5700MHz: PIFA antenna with -1.5dBi 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. 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)	-	√	√	√

2. 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

3. The EUT's accessories list refers to Ext Pho.pdf.

4. 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
118	5590 MHz		

3.2.1 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

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5320	36 to 64	36, 44, 48, 52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 64	36, 44, 48, 52, 60, 64	OFDM	BPSK	7.2
-	802.11n (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
-	802.11n (40MHz)		102 to 134	102, 118, 134	OFDM	BPSK	15.0

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	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
-	802.11a	5500-5700	100 to 140	140	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5320	36 to 64	36, 44, 48, 52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 64	36, 44, 48, 52, 60, 64	OFDM	BPSK	7.2
-	802.11n (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
-	802.11n (40MHz)		102 to 134	102, 118, 134	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	21deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
RE<1G	21deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
PLC	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
APCM	24deg. C, 64%RH	120Vac, 60Hz	Brad Wu

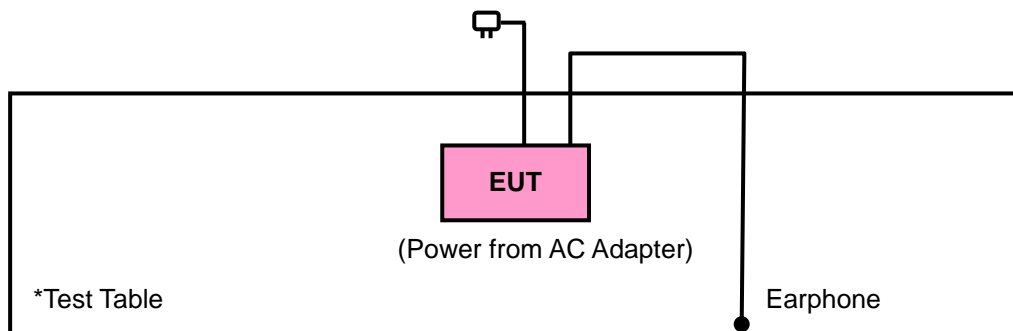
3.3 DUTY CYCLE OF TEST SIGNAL

Test tool can set the EUT to transmit at > 98 % duty cycle.

3.4 DESCRIPTION OF SUPPORT UNITS

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

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST



3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)

ANSI C63.10-2009

KDB 789033 D01 General UNII Test Procedures v01r01

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

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

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

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

NOTE:

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

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)
PK	PK
-27	68.3

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

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

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. 03, 2012	Apr. 02, 2013
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
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
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

- NOTE:**
1. The calibration interval of the above test instruments is 12 months except the loop antenna 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 9.
 4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 5. The FCC Site Registration No. is 460141.
 6. The IC Site Registration No. is 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.

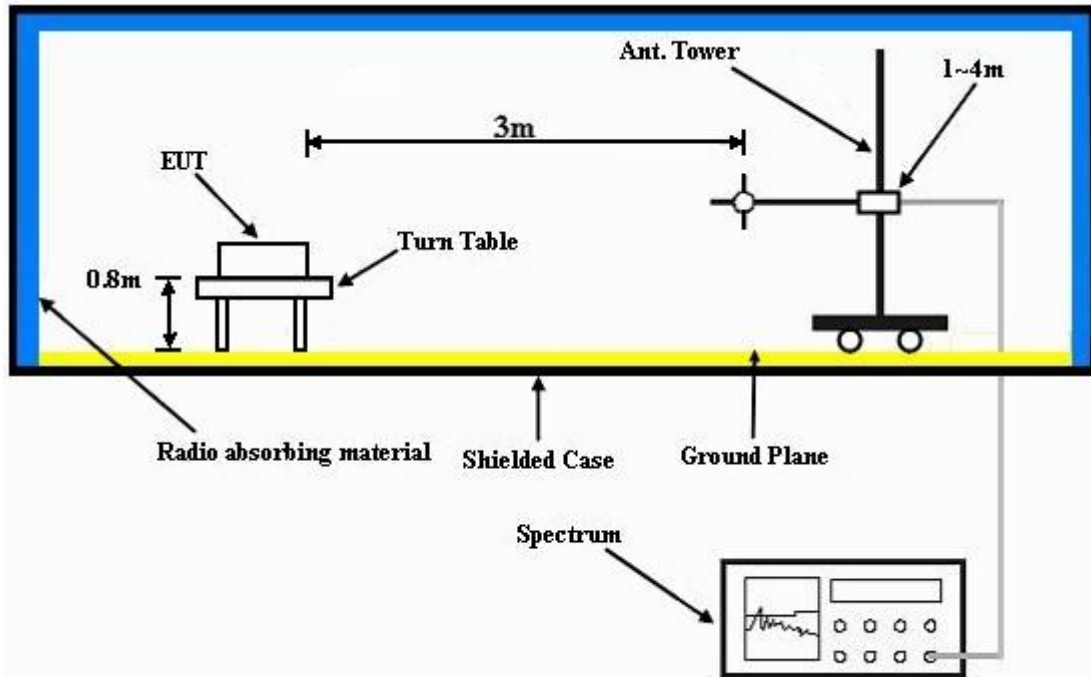
NOTE:

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 1kHz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 DEVIATION FROM TEST STANDARD

No deviation.

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITION

- a. Placed the EUT on a testing table.
- b. 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

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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.5 PK	74.0	-10.5	1.24 H	239	25.30	38.20
2	5150.00	48.7 AV	54.0	-5.3	1.24 H	239	10.50	38.20
3	*5180.00	101.3 PK			1.24 H	239	63.10	38.20
4	*5180.00	91.2 AV			1.24 H	239	53.00	38.20
5	#10360.00	59.6 PK	68.3	-8.7	1.10 H	170	11.60	48.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.7 PK	74.0	-12.3	1.25 V	286	23.50	38.20
2	5150.00	47.6 AV	54.0	-6.4	1.25 V	286	9.40	38.20
3	*5180.00	100.7 PK			1.25 V	286	62.50	38.20
4	*5180.00	90.5 AV			1.25 V	286	52.30	38.20
5	#10360.00	59.8 PK	68.3	-8.5	1.03 V	198	11.80	48.00

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	101.0 PK			1.23 H	241	62.70	38.30
2	*5220.00	90.9 AV			1.23 H	241	52.60	38.30
3	#10440.00	59.3 PK	68.3	-9.0	1.11 H	171	11.20	48.10
4	15660.00	58.5 PK	74.0	-15.5	1.19 H	237	9.50	49.00
5	15660.00	45.2 AV	54.0	-8.8	1.19 H	237	-3.80	49.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	100.3 PK			1.23 V	281	62.00	38.30
2	*5220.00	90.0 AV			1.23 V	281	51.70	38.30
3	#10440.00	59.5 PK	68.3	-8.8	1.02 V	201	11.40	48.10
4	15660.00	57.9 PK	74.0	-16.1	1.09 V	92	8.90	49.00
5	15660.00	45.1 AV	54.0	-8.9	1.09 V	92	-3.90	49.00

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.0 PK			1.20 H	239	63.70	38.30
2	*5240.00	92.0 AV			1.20 H	239	53.70	38.30
3	5350.00	43.2 PK	74.0	-30.8	1.08 H	221	4.70	38.50
4	5350.00	32.0 AV	54.0	-22.0	1.08 H	221	-6.50	38.50
5	#10480.00	59.9 PK	68.3	-8.4	1.11 H	173	11.70	48.20
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	101.6 PK			1.24 V	287	63.30	38.30
2	*5240.00	91.3 AV			1.24 V	287	53.00	38.30
3	5350.00	43.3 PK	74.0	-30.7	1.24 V	287	4.80	38.50
4	5350.00	32.1 AV	54.0	-21.9	1.24 V	287	-6.40	38.50
5	#10480.00	60.2 PK	68.3	-8.1	1.04 V	193	12.00	48.20

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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	43.8 PK	74.0	-30.2	1.24 H	277	5.60	38.20
2	5150.00	32.5 AV	54.0	-21.5	1.24 H	277	-5.70	38.20
3	*5260.00	102.3 PK			1.24 H	277	64.00	38.30
4	*5260.00	92.4 AV			1.24 H	277	54.10	38.30
5	#10520.00	60.0 PK	68.3	-8.3	1.07 H	200	11.70	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	43.8 PK	74.0	-30.2	1.14 V	227	5.60	38.20
2	5150.00	32.2 AV	54.0	-21.8	1.14 V	227	-6.00	38.20
3	*5260.00	102.4 PK			1.14 V	227	64.10	38.30
4	*5260.00	92.0 AV			1.14 V	227	53.70	38.30
5	#10520.00	58.6 PK	68.3	-9.7	1.18 V	173	10.30	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 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	102.5 PK			1.25 H	275	64.10	38.40
2	*5300.00	92.5 AV			1.25 H	275	54.10	38.40
3	10600.00	59.4 PK	74.0	-14.6	1.15 H	203	11.10	48.30
4	10600.00	52.1 AV	54.0	-1.9	1.15 H	203	3.80	48.30
5	15900.00	60.7 PK	74.0	-13.3	1.15 H	82	12.30	48.40
6	15900.00	48.1 AV	54.0	-5.9	1.15 H	82	-0.30	48.40
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	*5300.00	102.0 PK			1.07 V	180	63.60	38.40
2	*5300.00	91.8 AV			1.07 V	180	53.40	38.40
3	10600.00	58.4 PK	74.0	-15.6	1.07 V	180	10.10	48.30
4	10600.00	49.3 AV	54.0	-4.7	1.07 V	180	1.00	48.30
5	15900.00	60.4 PK	74.0	-13.6	1.32 V	312	12.00	48.40
6	15900.00	47.7 AV	54.0	-6.3	1.32 V	312	-0.70	48.40

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.



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	102.1 PK			1.22 H	276	63.70	38.40
2	*5320.00	92.2 AV			1.22 H	276	53.80	38.40
3	5350.00	66.4 PK	74.0	-7.6	1.22 H	276	27.90	38.50
4	5350.00	50.2 AV	54.0	-3.8	1.22 H	276	11.70	38.50
5	10640.00	59.1 PK	74.0	-14.9	1.12 H	202	10.60	48.50
6	10640.00	51.9 AV	54.0	-2.1	1.12 H	202	3.40	48.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	101.8 PK			1.09 V	233	63.40	38.40
2	*5320.00	91.7 AV			1.09 V	233	53.30	38.40
3	5350.00	65.9 PK	74.0	-8.1	1.09 V	233	27.40	38.50
4	5350.00	49.6 AV	54.0	-4.4	1.09 V	233	11.10	38.50
5	10640.00	58.1 PK	74.0	-15.9	1.09 V	174	9.60	48.50
6	10640.00	48.9 AV	54.0	-5.1	1.09 V	174	0.40	48.50

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.1 PK	74.0	-16.9	1.26 H	74	18.40	38.70
2	5460.00	41.8 AV	54.0	-12.2	1.26 H	74	3.10	38.70
3	#5470.00	61.9 PK	68.3	-6.4	1.26 H	74	23.20	38.70
4	*5500.00	103.8 PK			1.26 H	74	65.10	38.70
5	*5500.00	93.8 AV			1.26 H	74	55.10	38.70
6	11000.00	58.7 PK	74.0	-15.3	1.00 H	335	9.50	49.20
7	11000.00	49.4 AV	54.0	-4.6	1.00 H	335	0.20	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	5460.00	53.1 PK	74.0	-20.9	1.02 V	5	14.40	38.70
2	5460.00	39.0 AV	54.0	-15.0	1.02 V	5	0.30	38.70
3	#5470.00	59.5 PK	68.3	-8.8	1.02 V	5	20.80	38.70
4	*5500.00	102.7 PK			1.02 V	5	64.00	38.70
5	*5500.00	92.5 AV			1.02 V	5	53.80	38.70
6	11000.00	59.3 PK	74.0	-14.7	1.06 V	335	10.10	49.20
7	11000.00	50.0 AV	54.0	-4.0	1.06 V	335	0.80	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 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	101.6 PK			1.22 H	78	62.70	38.90
2	*5580.00	91.7 AV			1.22 H	78	52.80	38.90
3	11160.00	58.9 PK	74.0	-15.1	1.10 H	335	9.60	49.30
4	11160.00	49.2 AV	54.0	-4.8	1.10 H	335	-0.10	49.30
5	#16740.00	61.6 PK	68.3	-6.7	1.32 H	115	10.10	51.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	100.7 PK			1.01 V	27	61.80	38.90
2	*5580.00	91.2 AV			1.01 V	27	52.30	38.90
3	11160.00	58.9 PK	74.0	-15.1	1.11 V	2	9.60	49.30
4	11160.00	50.7 AV	54.0	-3.3	1.11 V	2	1.40	49.30
5	#16740.00	62.1 PK	68.3	-6.2	1.20 V	51	10.60	51.50

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	100.7 PK			1.21 H	76	61.50	39.20
2	*5700.00	90.2 AV			1.21 H	76	51.00	39.20
3	#5725.00	57.6 PK	68.3	-10.7	1.21 H	76	18.40	39.20
4	11400.00	58.6 PK	74.0	-15.4	1.58 H	336	9.30	49.30
5	11400.00	49.2 AV	54.0	-4.8	1.58 H	336	-0.10	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	*5700.00	100.1 PK			1.00 V	26	60.90	39.20
2	*5700.00	89.4 AV			1.00 V	26	50.20	39.20
3	#5725.00	57.0 PK	68.3	-11.3	1.00 V	26	17.80	39.20
4	11400.00	58.9 PK	74.0	-15.1	1.13 V	4	9.60	49.30
5	11400.00	50.2 AV	54.0	-3.8	1.13 V	4	0.90	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.



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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.7 PK	74.0	-22.3	1.24 H	238	13.50	38.20
2	5150.00	38.0 AV	54.0	-16.0	1.24 H	238	-0.20	38.20
3	*5180.00	97.4 PK			1.24 H	238	59.20	38.20
4	*5180.00	87.7 AV			1.24 H	238	49.50	38.20
5	#10360.00	58.8 PK	68.3	-9.5	1.10 H	172	10.80	48.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	50.3 PK	74.0	-23.7	1.25 V	286	12.10	38.20
2	5150.00	36.6 AV	54.0	-17.4	1.25 V	286	-1.60	38.20
3	*5180.00	96.8 PK			1.25 V	286	58.60	38.20
4	*5180.00	87.2 AV			1.25 V	286	49.00	38.20
5	#10360.00	59.3 PK	68.3	-9.0	1.03 V	197	11.30	48.00

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	98.3 PK			1.25 H	231	60.00	38.30
2	*5220.00	88.5 AV			1.25 H	231	50.20	38.30
3	#10440.00	58.5 PK	68.3	-9.8	1.09 H	175	10.40	48.10
4	15660.00	58.7 PK	74.0	-15.3	1.21 H	241	9.70	49.00
5	15660.00	45.4 AV	54.0	-8.6	1.21 H	241	-3.60	49.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5220.00	97.4 PK			1.25 V	291	59.1	38.30
2	*5220.00	87.5 AV			1.25 V	291	49.2	38.30
3	#10440.00	59.3 PK	68.3	-9.0	1.01 V	200	11.20	48.10
4	15660.00	57.7 PK	74.0	-16.3	1.10 V	97	8.70	49.00
5	15660.00	45.0 AV	54.0	-9.0	1.10 V	97	-4.00	49.00

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	98.6 PK			1.24 H	237	60.30	38.30
2	*5240.00	88.9 AV			1.24 H	237	50.60	38.30
3	5350.00	43.6 PK	74.0	-30.4	1.24 H	237	5.10	38.50
4	5350.00	31.8 AV	54.0	-22.2	1.24 H	237	-6.70	38.50
5	#10480.00	58.2 PK	68.3	-10.1	1.08 H	172	10.00	48.20
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	97.7 PK			1.24 V	288	59.40	38.30
2	*5240.00	87.9 AV			1.24 V	288	49.60	38.30
3	5350.00	43.2 PK	74.0	-30.8	1.24 V	288	4.70	38.50
4	5350.00	31.5 AV	54.0	-22.5	1.24 V	288	-7.00	38.50
5	#10480.00	59.6 PK	68.3	-8.7	1.02 V	197	11.40	48.20

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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	43.5 PK	74.0	-30.5	1.23 H	277	5.30	38.20
2	5150.00	32.1 AV	54.0	-21.9	1.23 H	277	-6.10	38.20
3	*5260.00	101.1 PK			1.23 H	277	62.80	38.30
4	*5260.00	91.2 AV			1.23 H	277	52.90	38.30
5	#10520.00	60.1 PK	68.3	-8.2	1.00 H	203	11.80	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	43.3 PK	74.0	-30.7	1.21 V	228	5.10	38.20
2	5150.00	31.8 AV	54.0	-22.2	1.21 V	228	-6.40	38.20
3	*5260.00	100.7 PK			1.21 V	228	62.40	38.30
4	*5260.00	90.8 AV			1.21 V	228	52.50	38.30
5	#10520.00	58.3 PK	68.3	-10.0	1.13 V	175	10.00	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.



A D T

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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	101.4 PK			1.18 H	283	63.00	38.40
2	*5300.00	91.5 AV			1.18 H	283	53.10	38.40
3	10600.00	58.7 PK	74.0	-15.3	1.02 H	210	10.40	48.30
4	10600.00	52.4 AV	54.0	-1.6	1.02 H	210	4.10	48.30
5	15900.00	59.8 PK	74.0	-14.2	1.46 H	92	11.40	48.40
6	15900.00	47.3 AV	54.0	-6.7	1.46 H	92	-1.10	48.40
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	*5300.00	101.2 PK			1.22 V	230	62.80	38.40
2	*5300.00	90.7 AV			1.22 V	230	52.30	38.40
3	10600.00	58.0 PK	74.0	-16.0	1.12 V	171	9.70	48.30
4	10600.00	48.3 AV	54.0	-5.7	1.12 V	171	0.00	48.30
5	15900.00	60.3 PK	74.0	-13.7	1.23 V	80	11.90	48.40
6	15900.00	46.3 AV	54.0	-7.7	1.23 V	80	-2.10	48.40

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.



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	101.6 PK			1.21 H	276	63.20	38.40
2	*5320.00	91.6 AV			1.21 H	276	53.20	38.40
3	5350.00	65.4 PK	74.0	-8.6	1.21 H	276	26.90	38.50
4	5350.00	50.3 AV	54.0	-3.7	1.21 H	276	11.80	38.50
5	10640.00	59.1 PK	74.0	-14.9	1.00 H	206	10.60	48.50
6	10640.00	52.7 AV	54.0	-1.3	1.00 H	206	4.20	48.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	101.5 PK			1.21 V	228	63.10	38.40
2	*5320.00	91.1 AV			1.21 V	228	52.70	38.40
3	5350.00	65.4 PK	74.0	-8.6	1.21 V	228	26.90	38.50
4	5350.00	50.0 AV	54.0	-4.0	1.21 V	228	11.50	38.50
5	10640.00	58.2 PK	74.0	-15.8	1.11 V	175	9.70	48.50
6	10640.00	48.6 AV	54.0	-5.4	1.11 V	175	0.10	48.50

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	46.7 PK	74.0	-27.3	1.01 H	7	8.00	38.70
2	5460.00	35.0 AV	54.0	-19.0	1.01 H	7	-3.70	38.70
3	#5470.00	49.8 PK	68.3	-18.5	1.01 H	7	11.10	38.70
4	*5500.00	99.1 PK			1.01 H	7	60.40	38.70
5	*5500.00	89.2 AV			1.01 H	7	50.50	38.70
6	11000.00	59.4 PK	74.0	-14.6	1.05 H	2	10.20	49.20
7	11000.00	50.3 AV	54.0	-3.7	1.05 H	2	1.10	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	5460.00	46.5 PK	74.0	-27.5	1.22 V	79	7.80	38.70
2	5460.00	34.2 AV	54.0	-19.8	1.22 V	79	-4.50	38.70
3	#5470.00	49.3 PK	68.3	-19.0	1.22 V	79	10.60	38.70
4	*5500.00	97.8 PK			1.22 V	79	59.10	38.70
5	*5500.00	88.1 AV			1.22 V	79	49.40	38.70
6	11000.00	59.0 PK	74.0	-15.0	1.57 V	329	9.80	49.20
7	11000.00	49.6 AV	54.0	-4.4	1.57 V	329	0.40	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.



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	100.1 PK			1.01 H	22	61.20	38.90
2	*5580.00	90.2 AV			1.01 H	22	51.30	38.90
3	11160.00	58.8 PK	74.0	-15.2	1.09 H	5	9.50	49.30
4	11160.00	50.6 AV	54.0	-3.4	1.09 H	5	1.30	49.30
5	#16740.00	62.5 PK	68.3	-5.8	1.21 H	55	11.00	51.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	98.4 PK			1.23 V	73	59.50	38.90
2	*5580.00	88.7 AV			1.23 V	73	49.80	38.90
3	11160.00	58.8 PK	74.0	-15.2	1.65 V	335	9.50	49.30
4	11160.00	50.2 AV	54.0	-3.8	1.65 V	335	0.90	49.30
5	#16740.00	62.0 PK	68.3	-6.3	1.35 V	120	10.50	51.50

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out 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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	100.6 PK			1.00 H	26	61.40	39.20
2	*5700.00	91.0 AV			1.00 H	26	51.80	39.20
3	#5725.00	64.9 PK	68.3	-3.4	1.00 H	26	25.70	39.20
4	11400.00	59.0 PK	74.0	-15.0	1.08 H	2	9.70	49.30
5	11400.00	50.9 AV	54.0	-3.1	1.08 H	2	1.60	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	*5700.00	99.6 PK			1.20 V	76	60.40	39.20
2	*5700.00	90.0 AV			1.20 V	76	50.80	39.20
3	#5725.00	64.0 PK	68.3	-4.3	1.20 V	76	24.80	39.20
4	11400.00	59.1 PK	74.0	-14.9	1.67 V	333	9.80	49.30
5	11400.00	50.4 AV	54.0	-3.6	1.67 V	333	1.10	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.



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.6 PK	74.0	-12.4	1.26 H	238	23.40	38.20
2	5150.00	44.9 AV	54.0	-9.1	1.26 H	238	6.70	38.20
3	*5190.00	94.7 PK			1.26 H	238	56.50	38.20
4	*5190.00	85.3 AV			1.26 H	238	47.10	38.20
5	#10380.00	58.3 PK	68.3	-10.0	1.02 H	170	10.30	48.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.3 PK	74.0	-14.7	1.23 V	287	21.10	38.20
2	5150.00	42.8 AV	54.0	-11.2	1.23 V	287	4.60	38.20
3	*5190.00	93.5 PK			1.23 V	287	55.30	38.20
4	*5190.00	83.7 AV			1.23 V	287	45.50	38.20
5	#10380.00	58.5 PK	68.3	-9.8	1.02 V	190	10.50	48.00

REMARKS:

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



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	44.9 PK	74.0	-29.1	1.25 H	235	6.70	38.20
2	5150.00	32.8 AV	54.0	-21.2	1.25 H	235	-5.40	38.20
3	*5230.00	95.1 PK			1.25 H	235	56.80	38.30
4	*5230.00	85.3 AV			1.25 H	235	47.00	38.30
5	#10460.00	58.6 PK	68.3	-9.7	1.03 H	172	10.40	48.20
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	5150.00	44.8 PK	74.0	-29.2	1.24 V	288	6.60	38.20
2	5150.00	32.3 AV	54.0	-21.7	1.24 V	288	-5.90	38.20
3	*5230.00	94.1 PK			1.24 V	288	55.80	38.30
4	*5230.00	84.0 AV			1.24 V	288	45.70	38.30
5	#10460.00	59.1 PK	68.3	-9.2	1.04 V	192	10.90	48.20

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.



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	42.3 PK	74.0	-31.7	1.21 H	238	4.10	38.20
2	5150.00	29.7 AV	54.0	-24.3	1.21 H	238	-8.50	38.20
3	*5270.00	96.1 PK			1.21 H	238	57.70	38.40
4	*5270.00	86.6 AV			1.21 H	238	48.20	38.40
5	#10540.00	57.5 PK	68.3	-10.8	1.13 H	175	9.20	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	45.7 PK	74.0	-28.3	1.23 V	276	7.50	38.20
2	5150.00	33.2 AV	54.0	-20.8	1.23 V	276	-5.00	38.20
3	*5270.00	94.8 PK			1.23 V	276	56.40	38.40
4	*5270.00	85.0 AV			1.23 V	276	46.60	38.40
5	#10540.00	59.5 PK	68.3	-8.8	1.01 V	203	11.20	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 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	95.8 PK			1.22 H	228	57.40	38.40
2	*5310.00	86.3 AV			1.22 H	228	47.90	38.40
3	5350.00	64.3 PK	74.0	-9.7	1.22 H	228	25.80	38.50
4	5350.00	51.3 AV	54.0	-2.7	1.22 H	228	12.80	38.50
5	10620.00	57.8 PK	74.0	-16.2	1.17 H	171	9.40	48.40
6	10620.00	48.3 AV	54.0	-5.7	1.17 H	171	-0.10	48.40
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	*5310.00	94.1 PK			1.22 V	287	55.70	38.40
2	*5310.00	84.7 AV			1.22 V	287	46.30	38.40
3	5350.00	62.0 PK	74.0	-12.0	1.22 V	287	23.50	38.50
4	5350.00	49.3 AV	54.0	-4.7	1.22 V	287	10.80	38.50
5	10620.00	58.6 PK	74.0	-15.4	1.06 V	197	10.20	48.40
6	10620.00	52.0 AV	54.0	-2.0	1.06 V	197	3.60	48.40

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.



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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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.7 PK	74.0	-17.3	1.00 H	188	18.00	38.70
2	5460.00	40.2 AV	54.0	-13.8	1.00 H	188	1.50	38.70
3	#5470.00	64.3 PK	68.3	-4.0	1.00 H	188	25.60	38.70
4	*5510.00	96.3 PK			1.00 H	188	57.50	38.80
5	*5510.00	86.6 AV			1.00 H	188	47.80	38.80
6	11020.00	58.3 PK	74.0	-15.7	1.06 H	152	9.10	49.20
7	11020.00	48.8 AV	54.0	-5.2	1.06 H	152	-0.40	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	5460.00	52.1 PK	74.0	-21.9	1.01 V	162	13.40	38.70
2	5460.00	37.6 AV	54.0	-16.4	1.01 V	162	-1.10	38.70
3	#5470.00	61.0 PK	68.3	-7.3	1.01 V	162	22.30	38.70
4	*5510.00	94.1 PK			1.01 V	162	55.30	38.80
5	*5510.00	84.3 AV			1.01 V	162	45.50	38.80
6	11020.00	58.6 PK	74.0	-15.4	1.02 V	215	9.40	49.20
7	11020.00	50.5 AV	54.0	-3.5	1.02 V	215	1.30	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 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	96.5 PK			1.02 H	189	57.70	38.80
2	*5550.00	86.9 AV			1.02 H	189	48.10	38.80
3	11100.00	58.6 PK	74.0	-15.4	1.08 H	155	9.40	49.20
4	11100.00	49.1 AV	54.0	-4.9	1.08 H	155	-0.10	49.20
5	#16650.00	61.0 PK	68.3	-7.3	1.18 H	32	9.90	51.10

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	*5550.00	94.3 PK			1.02 V	165	55.50	38.80
2	*5550.00	84.6 AV			1.02 V	165	45.80	38.80
3	11100.00	58.8 PK	74.0	-15.2	1.05 V	217	9.60	49.20
4	11100.00	50.7 AV	54.0	-3.3	1.05 V	217	1.50	49.20
5	#16650.00	61.3 PK	68.3	-7.0	1.03 V	82	10.20	51.10

REMARKS:

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



A D T

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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	96.1 PK			1.07 H	188	57.00	39.10
2	*5670.00	86.5 AV			1.07 H	188	47.40	39.10
3	#5725.00	53.4 PK	68.3	-14.9	1.07 H	188	14.20	39.20
4	11340.00	58.2 PK	74.0	-15.8	1.08 H	155	8.90	49.30
5	11340.00	48.7 AV	54.0	-5.3	1.08 H	155	-0.60	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	*5670.00	94.7 PK			1.02 V	158	55.60	39.10
2	*5670.00	84.8 AV			1.02 V	158	45.70	39.10
3	#5725.00	51.7 PK	68.3	-16.6	1.02 V	158	12.50	39.20
4	11340.00	58.2 PK	74.0	-15.8	1.03 V	218	8.90	49.30
5	11340.00	50.1 AV	54.0	-3.9	1.03 V	218	0.80	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.



A D T

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	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	175.50	23.5 QP	43.5	-20.0	1.50 H	302	10.30	13.20
2	297.72	19.9 QP	46.0	-26.1	2.50 H	3	5.10	14.80
3	350.10	20.8 QP	46.0	-25.2	2.00 H	336	4.60	16.20
4	515.00	25.5 QP	46.0	-20.5	1.50 H	3	5.00	20.50
5	544.10	27.2 QP	46.0	-18.8	1.00 H	9	6.10	21.10
6	699.30	32.7 QP	46.0	-13.3	1.50 H	259	9.90	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	107.60	24.1 QP	43.5	-19.4	1.00 V	22	13.70	10.40
2	175.50	23.0 QP	43.5	-20.5	1.00 V	41	9.80	13.20
3	216.24	22.5 QP	46.0	-23.5	1.00 V	213	10.70	11.80
4	243.40	26.4 QP	46.0	-19.6	1.00 V	328	13.60	12.80
5	522.76	25.3 QP	46.0	-20.7	2.00 V	100	4.70	20.60
6	699.30	33.0 QP	46.0	-13.0	1.00 V	268	10.20	22.80

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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH	TESTED BY	Anderson Hong

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	175.50	21.4 QP	43.5	-22.1	1.50 H	17	8.20	13.20
2	243.40	19.4 QP	46.0	-26.6	1.50 H	201	6.60	12.80
3	350.10	21.0 QP	46.0	-25.0	1.50 H	78	4.80	16.20
4	515.00	25.0 QP	46.0	-21.0	2.00 H	3	4.50	20.50
5	544.10	27.7 QP	46.0	-18.3	2.00 H	3	6.60	21.10
6	699.30	30.7 QP	46.0	-15.3	1.00 H	123	7.90	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	107.60	24.8 QP	43.5	-18.7	1.00 V	83	14.40	10.40
2	189.08	23.5 QP	43.5	-20.0	1.00 V	266	11.50	12.00
3	216.24	22.2 QP	46.0	-23.8	1.00 V	186	10.40	11.80
4	243.40	25.4 QP	46.0	-20.6	1.00 V	188	12.60	12.80
5	518.88	23.2 QP	46.0	-22.8	2.00 V	181	2.70	20.50
6	699.30	32.6 QP	46.0	-13.4	1.00 V	139	9.80	22.80

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.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

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

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

2. The test was performed in HwaYa Shielded Room 2.

3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

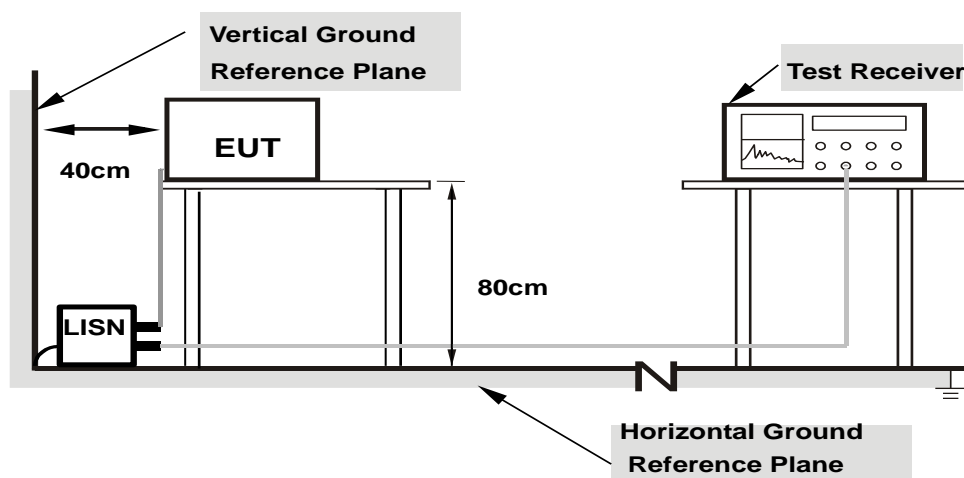
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) 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:**
- Support units were connected to second LISN.
 - 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

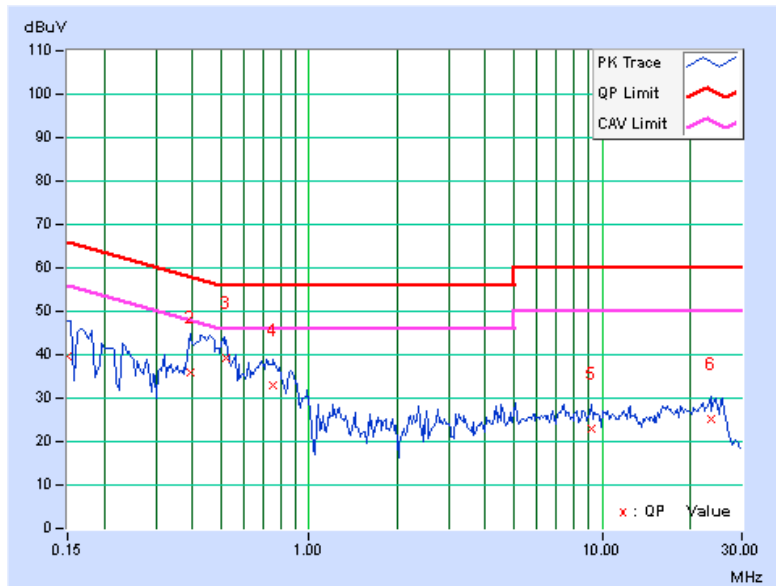
CONDUCTED WORST-CASE DATA : 802.11a

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	0.15000	0.15	39.62	21.07	39.77	21.22	66.00	56.00	-26.23	-34.78
2	0.39219	0.17	35.89	22.69	36.06	22.86	58.02	48.02	-21.96	-25.16
3	0.52109	0.17	39.05	24.34	39.22	24.51	56.00	46.00	-16.78	-21.49
4	0.75547	0.18	32.89	21.48	33.07	21.66	56.00	46.00	-22.93	-24.34
5	9.16797	0.42	22.51	12.66	22.93	13.08	60.00	50.00	-37.07	-36.92
6	23.54688	0.59	24.70	13.48	25.29	14.07	60.00	50.00	-34.71	-35.93

REMARKS:

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

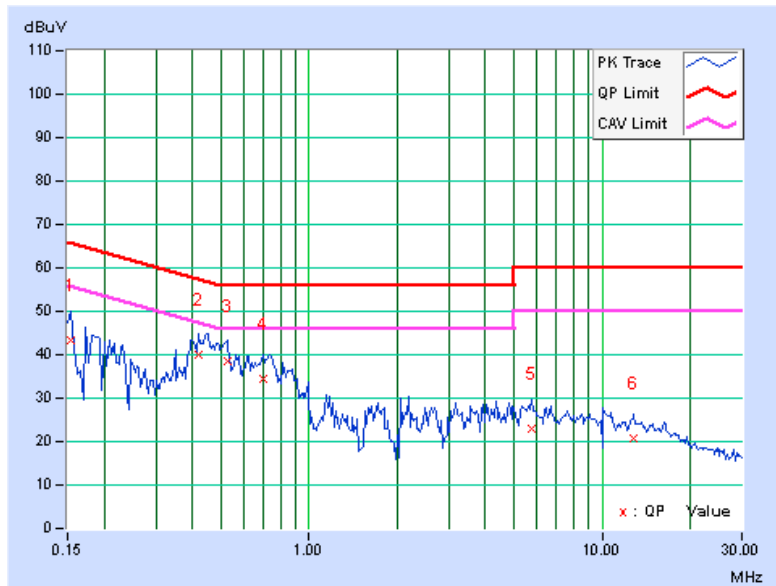


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.13	43.18	27.12	43.31	27.25	65.79	55.79	-22.48	-28.54
2	0.41953	0.16	39.67	27.62	39.83	27.78	57.46	47.46	-17.63	-19.68
3	0.52500	0.17	38.25	26.49	38.42	26.66	56.00	46.00	-17.58	-19.34
4	0.70078	0.18	34.32	24.73	34.50	24.91	56.00	46.00	-21.50	-21.09
5	5.74609	0.39	22.53	15.33	22.92	15.72	60.00	50.00	-37.08	-34.28
6	12.85547	0.55	20.22	13.86	20.77	14.41	60.00	50.00	-39.23	-35.59

REMARKS:

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



4.3 PEAK TRANSMIT POWER MEASUREMENT

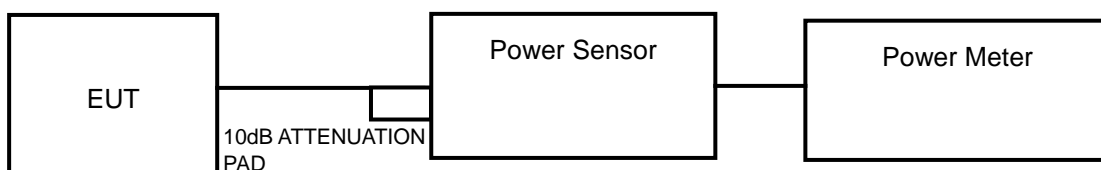
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

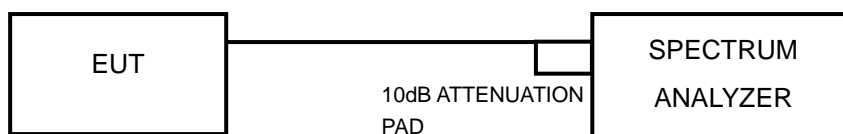
NOTE: Where B is the 26dB emission bandwidth in MHz.

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

An average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor. Record the 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)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	21.979	13.42	17	PASS
44	5220	20.559	13.13	17	PASS
48	5240	19.679	12.94	17	PASS
52	5260	19.320	12.86	24	PASS
60	5300	18.323	12.63	24	PASS
64	5320	21.135	13.25	24	PASS
100	5500	18.030	12.56	24	PASS
116	5580	17.947	12.54	24	PASS
140	5700	20.941	13.21	24	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	10.740	10.31	17	PASS
44	5220	9.817	9.92	17	PASS
48	5240	9.354	9.71	17	PASS
52	5260	9.594	9.82	24	PASS
60	5300	8.995	9.54	24	PASS
64	5320	11.117	10.46	24	PASS
100	5500	9.727	9.88	24	PASS
116	5580	9.057	9.57	24	PASS
140	5700	10.789	10.33	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	10.495	10.21	17	PASS
46	5230	9.661	9.85	17	PASS
54	5270	8.872	9.48	24	PASS
62	5310	9.226	9.65	24	PASS
102	5510	9.078	9.58	24	PASS
110	5550	9.162	9.62	24	PASS
134	5670	10.914	10.38	24	PASS

**26dB BANDWIDTH: 802.11a**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	28.57	PASS
44	5220	27.55	PASS
48	5240	27.42	PASS
52	5260	27.53	PASS
60	5300	24.98	PASS
64	5320	29.10	PASS
100	5500	27.59	PASS
116	5580	27.74	PASS
140	5700	24.83	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	22.74	PASS
44	5220	22.83	PASS
48	5240	22.77	PASS
52	5260	22.81	PASS
60	5300	22.82	PASS
64	5320	22.94	PASS
100	5500	23.20	PASS
116	5580	23.14	PASS
140	5700	23.34	PASS

802.11n (40MHz)

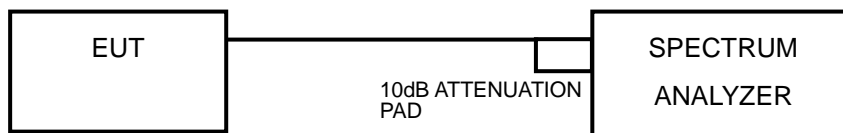
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	50.86	PASS
46	5230	50.66	PASS
54	5270	50.54	PASS
62	5310	45.88	PASS
102	5510	68.20	PASS
118	5590	62.91	PASS
134	5670	68.24	PASS

4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 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.
- 5) Record the max value

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6.

4.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	2.36	4	PASS
44	5220	2.22	4	PASS
48	5240	1.97	4	PASS
52	5260	1.91	11	PASS
60	5300	1.41	11	PASS
64	5320	2.21	11	PASS
100	5500	1.38	11	PASS
116	5580	1.41	11	PASS
140	5700	1.96	11	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	-1.80	4	PASS
44	5220	-2.08	4	PASS
48	5240	-2.57	4	PASS
52	5260	-2.18	11	PASS
60	5300	-2.66	11	PASS
64	5320	-1.72	11	PASS
100	5500	-2.18	11	PASS
116	5580	-2.54	11	PASS
140	5700	-1.92	11	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-4.40	4	PASS
46	5230	-4.93	4	PASS
54	5270	-5.03	11	PASS
62	5310	-4.99	11	PASS
102	5510	-4.93	11	PASS
118	5590	-5.06	11	PASS
134	5670	-4.22	11	PASS

4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURE

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

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITIONS

Same as 4.2.6



A D T

4.5.7 TEST RESULTS

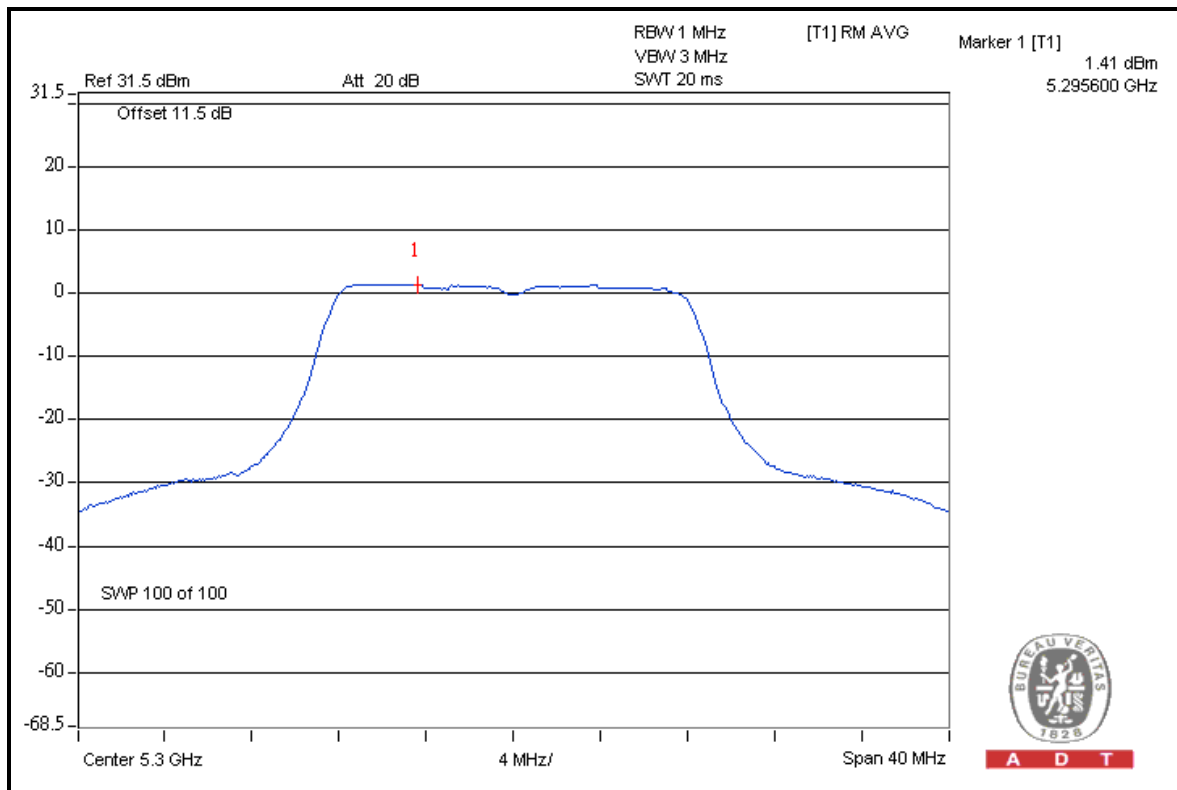
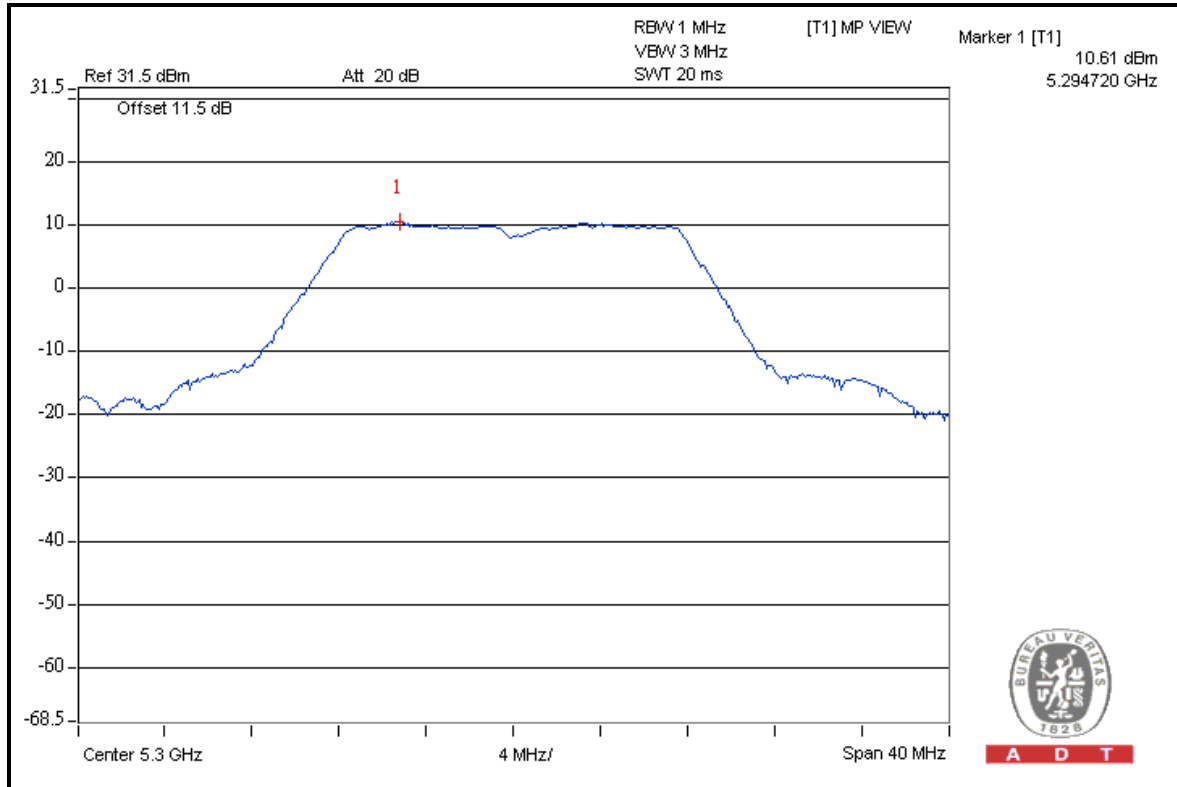
802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
36	5180	11.45	2.36	9.09	13	PASS
44	5220	11.30	2.22	9.08	13	PASS
48	5240	11.14	1.97	9.17	13	PASS
52	5260	11.03	1.91	9.12	13	PASS
60	5300	10.61	1.41	9.20	13	PASS
64	5320	11.35	2.21	9.14	13	PASS
100	5500	10.40	1.38	9.02	13	PASS
116	5580	10.42	1.41	9.01	13	PASS
140	5700	11.09	1.96	9.13	13	PASS



A D T

Channel 60





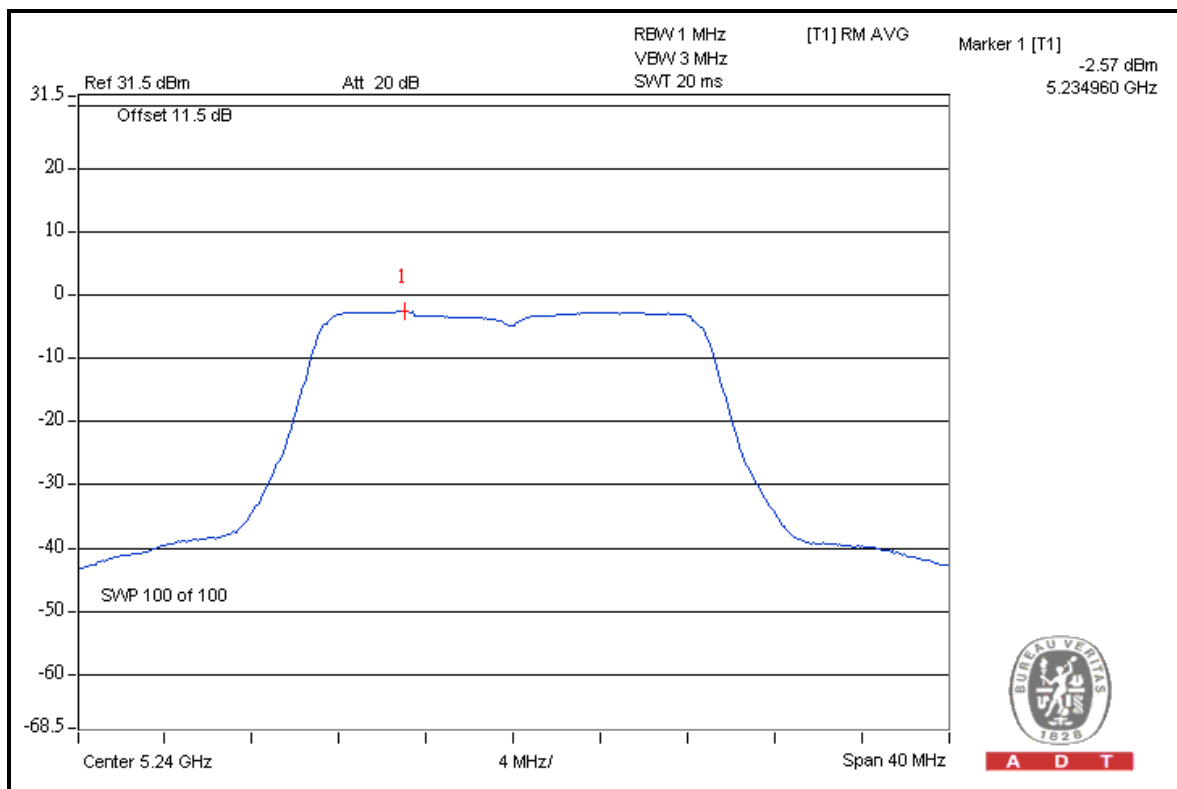
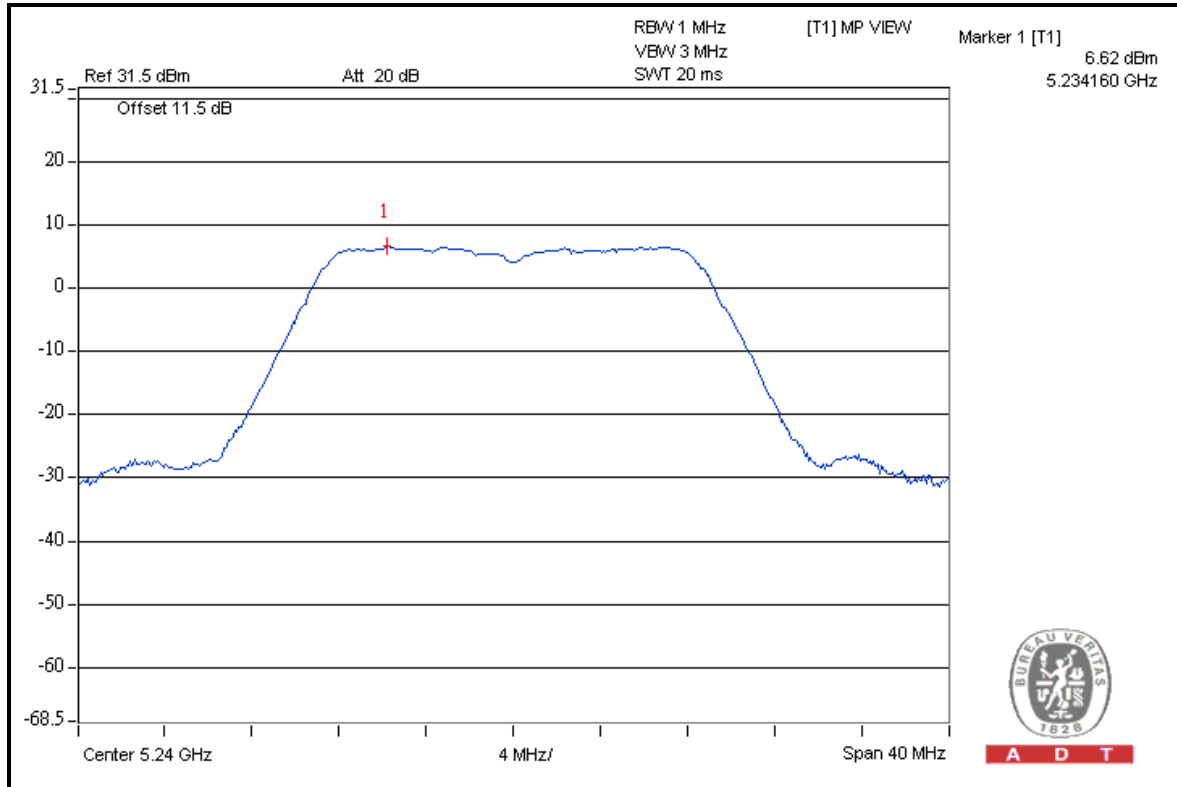
802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
36	5180	7.09	-1.80	8.89	13	PASS
44	5220	6.72	-2.08	8.80	13	PASS
48	5240	6.62	-2.57	9.19	13	PASS
52	5260	6.52	-2.18	8.70	13	PASS
60	5300	6.17	-2.66	8.83	13	PASS
64	5320	7.17	-1.72	8.89	13	PASS
100	5500	6.52	-2.18	8.70	13	PASS
116	5580	6.21	-2.54	8.75	13	PASS
140	5700	6.98	-1.92	8.90	13	PASS



A D T

Channel 48





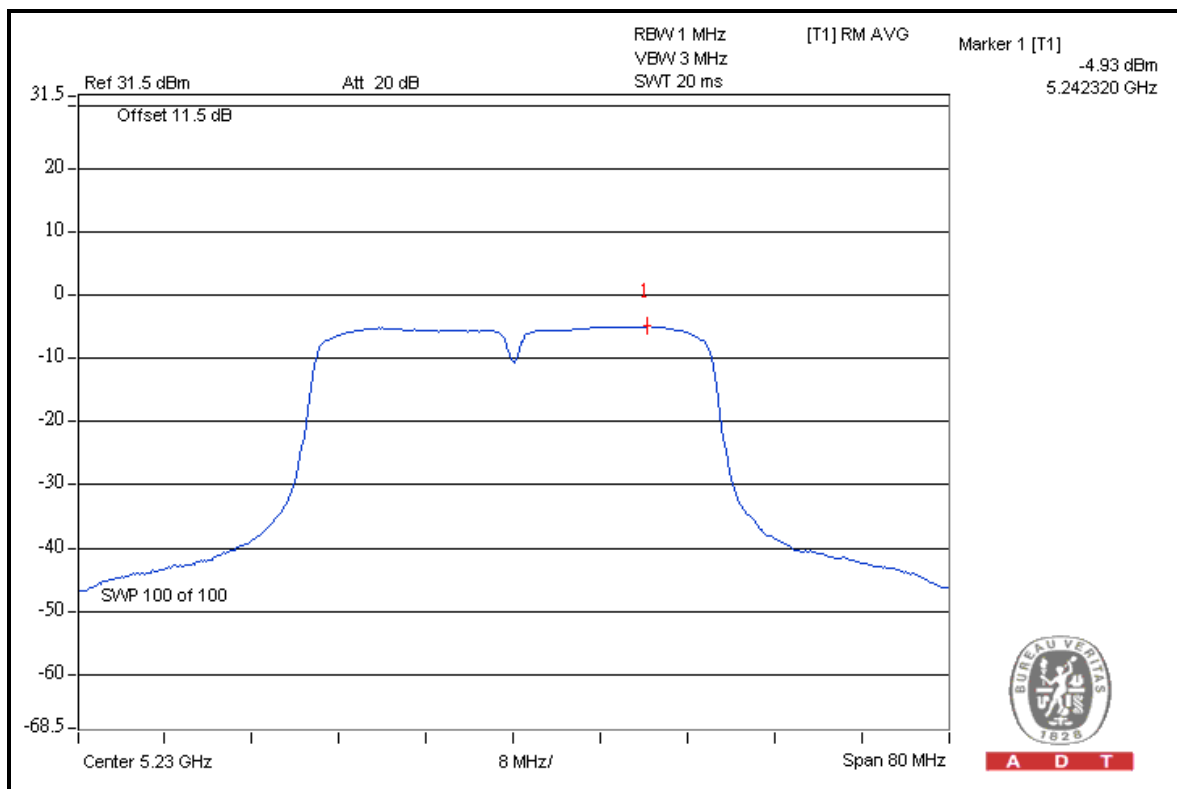
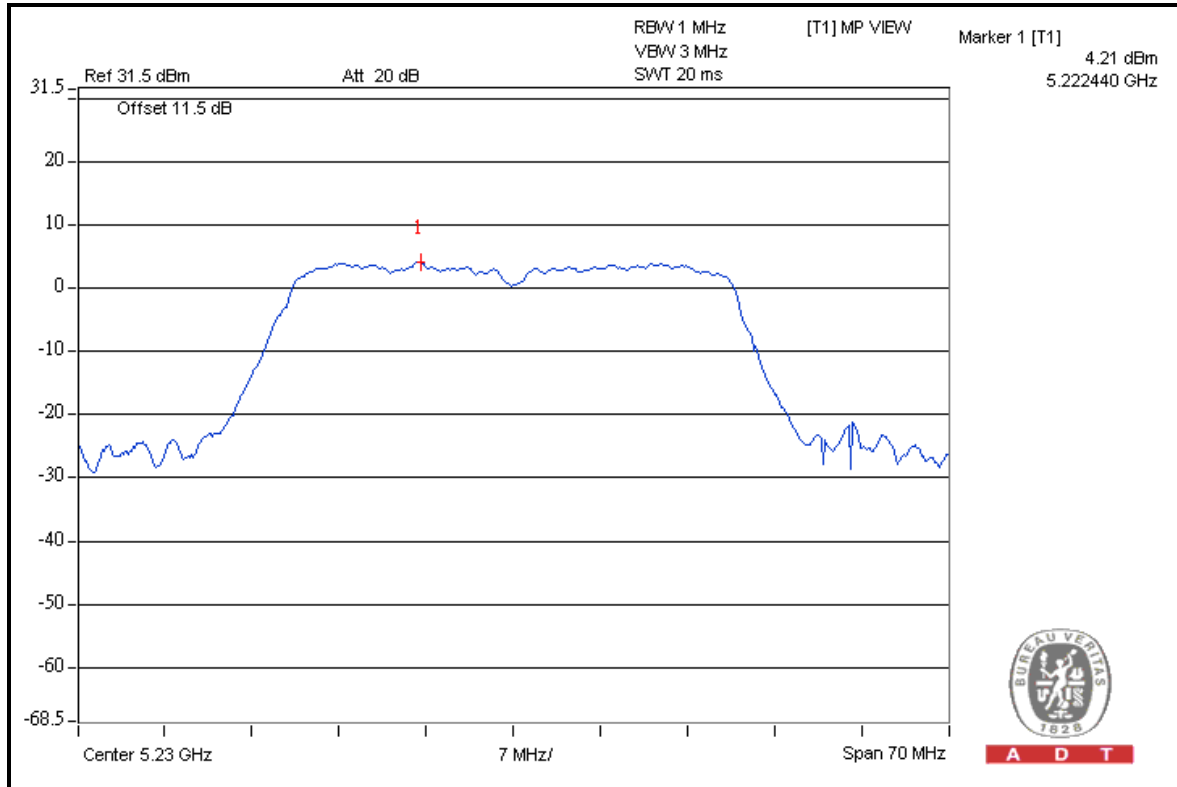
802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
38	5190	4.58	-4.40	8.98	13	PASS
46	5230	4.21	-4.93	9.14	13	PASS
54	5270	3.82	-5.03	8.85	13	PASS
62	5310	3.81	-4.99	8.80	13	PASS
102	5510	3.81	-4.93	8.74	13	PASS
118	5590	3.91	-5.06	8.97	13	PASS
134	5670	4.62	-4.22	8.84	13	PASS



A D T

Channel 46

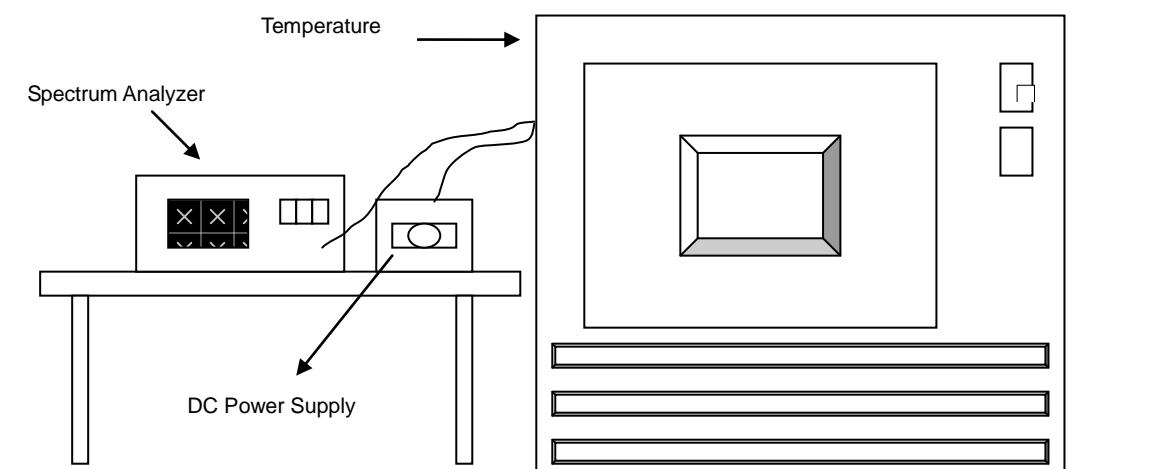


4.6 FREQUENCY STABILITY

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 (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
50	3.8	5319.958459	-7.808	5319.958460	-7.808	5319.958536	-7.794	5319.958883	-7.729
40	3.8	5319.968946	-5.837	5319.969468	-5.739	5319.969217	-5.786	5319.968978	-5.831
30	3.8	5319.970643	-5.518	5319.971057	-5.440	5319.970714	-5.505	5319.970785	-5.492
20	3.8	5319.971354	-5.385	5319.971554	-5.347	5319.971565	-5.345	5319.971508	-5.356
10	3.8	5319.982592	-3.272	5319.982750	-3.242	5319.982642	-3.263	5319.983166	-3.164
0	3.8	5319.991567	-1.585	5319.991799	-1.542	5319.992113	-1.483	5319.991746	-1.552
-10	3.8	5320.010617	1.996	5320.011209	2.107	5320.011180	2.102	5320.010799	2.030
-20	3.8	5320.019874	3.736	5320.019943	3.749	5320.020294	3.815	5320.020412	3.837
-30	3.8	5320.030210	5.679	5320.030339	5.703	5320.030722	5.775	5320.030383	5.711

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	3.6	5319.971864	-5.289	5319.971937	-5.275	5319.972434	-5.182	5319.972412	-5.186
	3.8	5319.971354	-5.385	5319.971554	-5.347	5319.971565	-5.345	5319.971508	-5.356
	4.2	5319.971986	-5.266	5319.972367	-5.194	5319.972077	-5.249	5319.972638	-5.143

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: 886-3-3270892

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

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

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---