

# FCC TEST REPORT

**REPORT NO.:** RF980305H02E

**MODEL NO.:** 21-121559

**RECEIVED:** Nov. 10, 2009

**TESTED:** Nov. 17 to 18, 2009

**ISSUED:** Dec. 04, 2009

**APPLICANT:** Motorola Inc.

**ADDRESS:** One Motorola Plaza Holtsville, NY 11742

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

**LAB LOCATION:** No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung  
Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307,  
Taiwan

This test report consists of 41 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by TAF or any government agencies. The test results in the report only apply to the tested sample.



## TABLE OF CONTENTS

1	CERTIFICATION.....	3
2	SUMMARY OF TEST RESULTS.....	4
2.1	MEASUREMENT UNCERTAINTY .....	5
3	GENERAL INFORMATION.....	6
3.1	GENERAL DESCRIPTION OF EUT.....	6
3.2	DESCRIPTION OF TEST MODES.....	8
3.3	TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL: .....	10
3.4	GENERAL DESCRIPTION OF APPLIED STANDARDS.....	11
3.5	DESCRIPTION OF SUPPORT UNITS .....	12
3.6	CONFIGURATION OF SYSTEM UNDER TEST .....	13
4	TEST PROCEDURES AND RESULTS.....	14
4.1	MAXIMUM PEAK OUTPUT POWER .....	14
4.1.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT .....	14
4.1.2	INSTRUMENTS.....	14
4.1.3	TEST PROCEDURES.....	14
4.1.4	DEVIATION FROM TEST STANDARD .....	14
4.1.5	TEST SETUP .....	15
4.1.6	EUT OPERATING CONDITION.....	15
4.1.7	TEST RESULTS (MODE A).....	16
4.1.8	TEST RESULTS (MODE B).....	22
4.2	RADIATED EMISSION MEASUREMENT.....	26
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT .....	26
4.2.2	TEST INSTRUMENTS .....	27
4.2.3	TEST PROCEDURES.....	28
4.2.4	DEVIATION FROM TEST STANDARD .....	28
4.2.5	TEST SETUP .....	29
4.2.6	TEST RESULTS (MODE A).....	30
4.2.7	TEST RESULTS (MODE B).....	35
5	INFORMATION ON THE TESTING LABORATORIES .....	40
6	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB.....	41



A D T

## 1 CERTIFICATION

**PRODUCT :** 21-121559-01  
**BRAND NAME :** motorola  
**MODEL NO. :** 21-121559  
**APPLICANT :** Motorola Inc.  
**TESTED DATE:** Nov. 17 to 18, 2009  
**TEST SAMPLE :** ENGINEERING SAMPLE  
**STANDARDS :** 47 CFR Part 15, Subpart C (Section 15.247),  
ANSI C63.4-2003

The above equipment (Model: 21-121559) 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 :** Midoli Peng , **DATE:** Dec. 04, 2009  
( Midoli Peng, Specialist )

**TECHNICAL ACCEPTANCE :** Hank Chung , **DATE:** Dec. 04, 2009  
( Hank Chung, Deputy Manager )

**APPROVED BY :** May Chen , **DATE:** Dec. 04, 2009  
( May Chen, Deputy Manager )

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

<b>APPLIED STANDARD: 47 CFR Part 15, Subpart C</b>			
<b>Standard Section</b>	<b>Test Type and Limit</b>	<b>Result</b>	<b>REMARK</b>
15.247(b)(2)	Maximum Peak Output Power Spec.: max. 30dBm	PASS	Meet the requirement of limit
15.247(d)	Transmitter Radiated Emissions Spec.: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -9.2dB at 69.25MHz

**NOTE:**

1. This report is prepared for FCC class II permissive change. Only radiated emission and maximum peak output power were presented in this test report.

## 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:

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

Measurement	Value
Radiated emissions (30MHz-1GHz)	3.94 dB
Radiated emissions (1GHz ~18GHz)	2.49 dB
Radiated emissions (18GHz ~40GHz)	2.70 dB

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	21-121559-01
<b>MODEL NO.</b>	21-121559
<b>FCC ID</b>	UZ721121559
<b>POWER SUPPLY</b>	DC 5V from DC power supply
<b>MODULATION TYPE</b>	For 500kHz PR-ASK(DRM), DSB-ASK(MRM), PR-ASK(XRM)
	For 200kHz PR-ASK(DRM), PR-ASK(XRM)
<b>MODULATION TECHNOLOGY</b>	FHSS
<b>FREQUENCY RANGE</b>	902.75MHz ~ 927.25MHz <500KHz>
	902.6MHz ~927.4 MHz <200KHz>
<b>NUMBER OF CHANNEL</b>	For 500kHz : 50
	For 200kHz : 125
<b>OUTPUT POWER</b>	For 500kHz PR-ASK(XRM): 812.8mW PR-ASK(DRM): 631.0mW DSB-ASK(MRM): 776.2mW
	For 200kHz PR-ASK(XRM): 794.3mW PR-ASK(DRM): 562.3mW
<b>ANTENNA TYPE</b>	Please see note 1
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	NA
<b>ASSOCIATED DEVICES</b>	NA

**NOTE:**

1. This report is prepared for FCC class II permissive change. The difference compared with the Report No.: RF980305H02C design is as the following:

u Add one new antenna

Original				
Antenna Type	Connector Type	Gain (dBi)	Cable loss (dB)	Net Gain (dBi)
Dipole Antenna	SMA Female	2	0.3	1.7
Newly				
Antenna Type	Connector Type	Gain (dBi)	Cable loss (dB)	Net Gain (dBi)
Three Element Yagi	MMCX Male	6	NA	6

2. For radiated test : The EUT was pre-tested in chamber under the following modes:

Pre-test Mode	ModulationType
Mode A	PR-ASK(DRM) <500kHz>
<b>Mode B</b>	<b>DSB-ASK(MRM) &lt;500kHz&gt;</b>
Mode C	PR-ASK(XRM) <500kHz>
<b>Mode D</b>	<b>PR-ASK(XRM) &lt;200kHz&gt;</b>
Mode E	PR-ASK(DRM) <200kHz>

From the above modes, worse case was found in **Mode B & D**. Therefore only the test data of the mode was recorded in this report.

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

### 3.2 DESCRIPTION OF TEST MODES

**500kHz: Frequency Range <902.75MHz ~ 927.25 MHz>**

**50 channels are provided to this EUT.**

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	902.75	21	913.25	42	923.75
1	903.25	22	913.75	43	924.25
2	903.75	23	914.25	44	924.75
3	904.25	24	914.75	45	925.25
4	904.75	25	915.25	46	925.75
5	905.25	26	915.75	47	926.25
6	905.75	27	916.25	48	926.75
7	906.25	28	916.75	49	927.25
8	906.75	29	917.25		
9	907.25	30	917.75		
10	907.75	31	918.25		
11	908.25	32	918.75		
12	908.75	33	919.25		
13	909.25	34	919.75		
14	909.75	35	920.25		
15	910.25	36	920.75		
16	910.75	37	921.25		
17	911.25	38	921.75		
18	911.75	39	922.25		
19	912.25	40	922.75		
20	912.75	41	923.25		



## 200kHz: Frequency Range <902.6MHz ~927.4 MHz>

125 channels are provided to this EUT.

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	902.60	32	909.00	64	915.40	96	921.80
1	902.80	33	909.20	65	915.60	97	922.00
2	903.00	34	909.40	66	915.80	98	922.20
3	903.20	35	909.60	67	916.00	99	922.40
4	903.40	36	909.80	68	916.20	100	922.60
5	903.60	37	910.00	69	916.40	101	922.80
6	903.80	38	910.20	70	916.60	102	923.00
7	904.00	39	910.40	71	916.80	103	923.20
8	904.20	40	910.60	72	917.00	104	923.40
9	904.40	41	910.80	73	917.20	105	923.60
10	904.60	42	911.00	74	917.40	106	923.80
11	904.80	43	911.20	75	917.60	107	924.00
12	905.00	44	911.40	76	917.80	108	924.20
13	905.20	45	911.60	77	918.00	109	924.40
14	905.40	46	911.80	78	918.20	110	924.60
15	905.60	47	912.00	79	918.40	111	924.80
16	905.80	48	912.20	80	918.60	112	925.00
17	906.00	49	912.40	81	918.80	113	925.20
18	906.20	50	912.60	82	919.00	114	925.40
19	906.40	51	912.80	83	919.20	115	925.60
20	906.60	52	913.00	84	919.40	116	925.80
21	906.80	53	913.20	85	919.60	117	926.00
22	907.00	54	913.40	86	919.80	118	926.20
23	907.20	55	913.60	87	920.00	119	926.40
24	907.40	56	913.80	88	920.20	120	926.60
25	907.60	57	914.00	89	920.40	121	926.80
26	907.80	58	914.20	90	920.60	122	927.00
27	908.00	59	914.40	91	920.80	123	927.20
28	908.20	60	914.60	92	921.00	124	927.40
29	908.40	61	914.80	93	921.20		
30	908.60	62	915.00	94	921.40		
31	908.80	63	915.20	95	921.60		

### 3.3 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
A	NA	√	√	√	500kHz
B	NA	√	√	√	200kHz

Where PLC: Power Line Conducted Emission  
RE≥1G: Radiated Emission above 1GHz

RE<1G RE: Radiated Emission below 1GHz  
APCM: Antenna Port Conducted Measurement

#### Radiated Emission Test (Below 1 GHz):

- ☒ 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.

Available Channel	Tested Channel	Modulation Technology	Modulation Type	EUT configure mode
0 to 49	0	FHSS	DSB-ASK(MRM)	A
0 to 124	0	FHSS	PR-ASK(XRM)	B

#### Radiated Emission Test (Above 1 GHz):

- ☒ 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.

Available Channel	Tested Channel	Modulation Technology	Modulation Type	EUT configure mode
0 to 49	0, 24, 49	FHSS	DSB-ASK(MRM)	A
0 to 124	0, 60, 124	FHSS	PR-ASK(XRM)	B

#### Antenna Port Conducted Measurement:

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

Available Channel	Tested Channel	Modulation Technology	Modulation Type	EUT configure mode
0 to 49	0, 24, 49	FHSS	PR-ASK(DRM)	A
0 to 49	0, 24, 49	FHSS	DSB-ASK(MRM)	A
0 to 49	0, 24, 49	FHSS	PR-ASK(XRM)	A
0 to 124	0, 60, 124	FHSS	PR-ASK(XRM)	B
0 to 124	0, 60, 124	FHSS	PR-ASK(DRM)	B

### 3.4 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:

**47 CFR Part 15, Subpart C. (15.247)**  
**ANSI C63.4 : 2003**

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.



### 3.5 DESCRIPTION OF SUPPORT UNITS

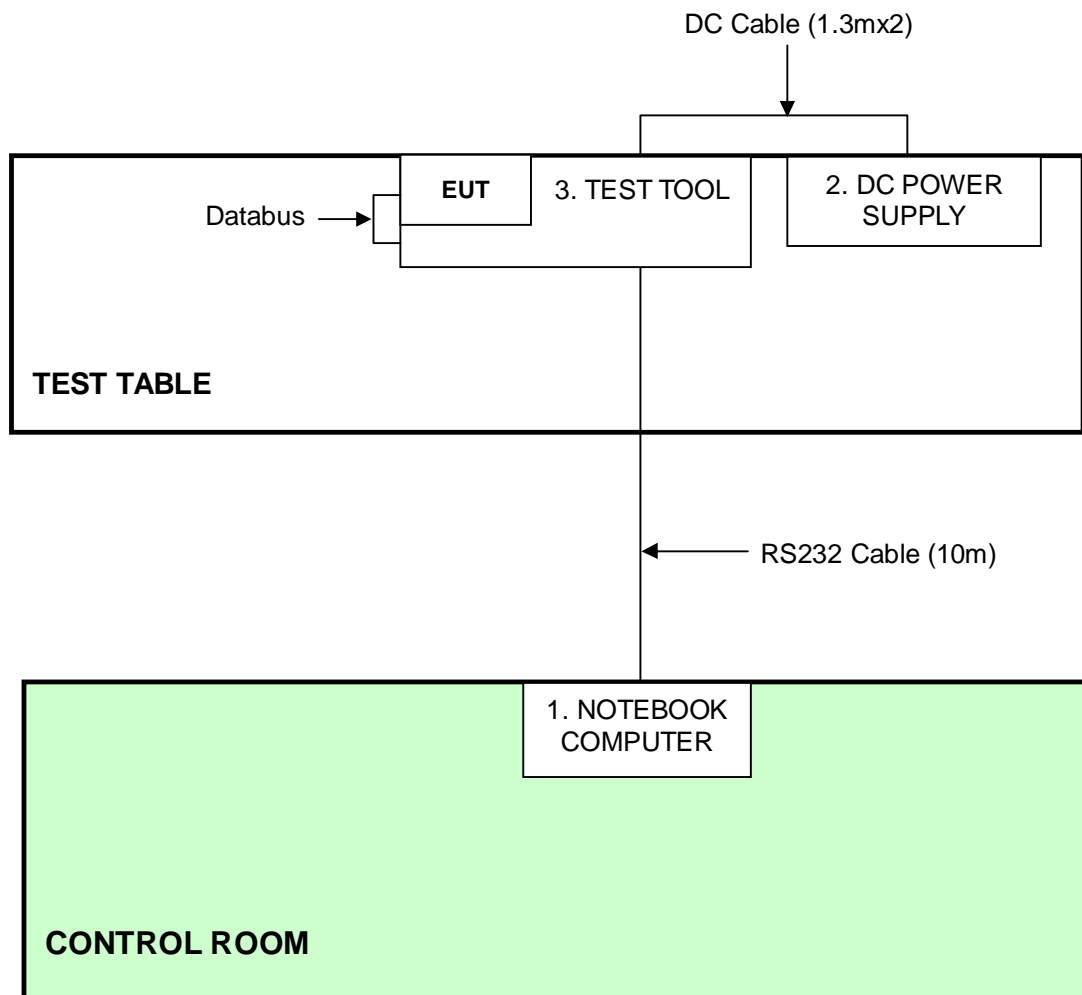
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	D531	CN-0XM006-4864 3-86L-4472	QDS-BRCM1019
2	DC POWER SUPPLY	GOOD WILL INSTRUMENT CO., LTD.	GPC-3030D	EG812707	NA
3	TEST TOOL	MTI	NA	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA
3	NA

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

### 3.6 CONFIGURATION OF SYSTEM UNDER TEST



## 4 TEST PROCEDURES AND RESULTS

### 4.1 MAXIMUM PEAK OUTPUT POWER

#### 4.1.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

#### 4.1.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100037	Aug. 03, 2009	Aug. 02, 2010

**NOTE:**

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

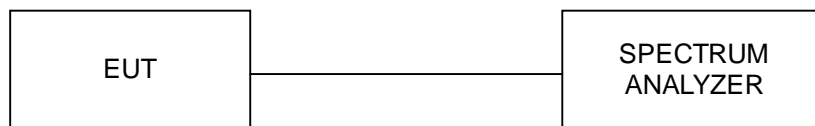
#### 4.1.3 TEST PROCEDURES

- a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- c. The center frequency of the spectrum analyzer is set to the fundamental frequency and using 3MHz RBW and 3 MHz VBW.
- d. Measure the captured power within the band and recording the plot.
- e. Repeat above procedures until all frequencies required were complete.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP



For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

#### 4.1.6 EUT OPERATING CONDITION

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.



A D T

#### 4.1.7 TEST RESULTS (MODE A)

For PR-ASK(XRM) – High Power:

ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1015 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Wen Yu		

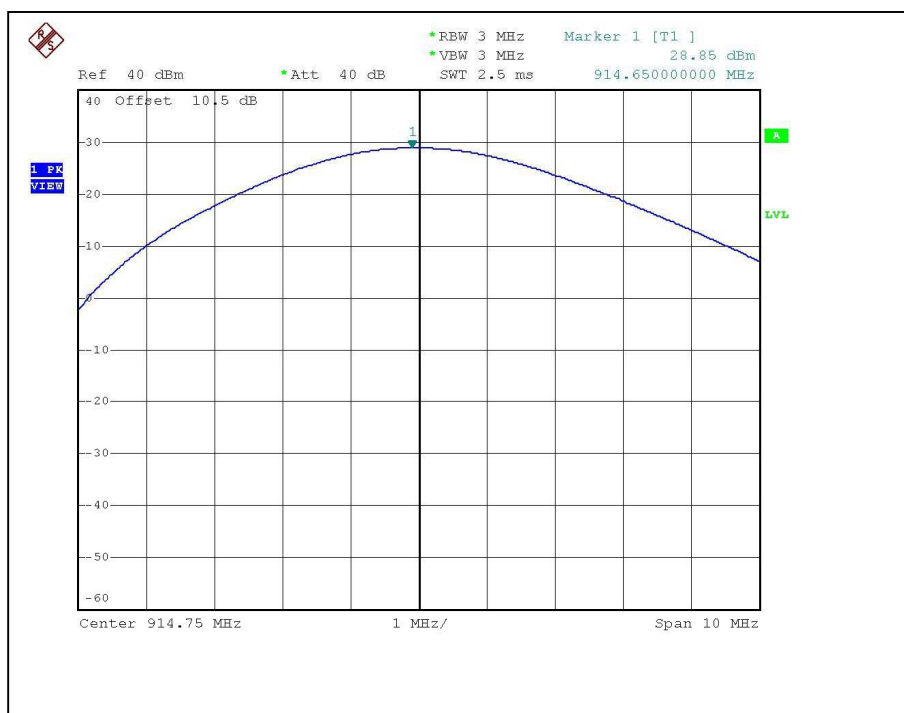
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
0	902.75	724.4	28.6	30	PASS
24	914.75	776.2	28.9	30	PASS
49	927.25	812.8	29.1	30	PASS

#### Channel 0

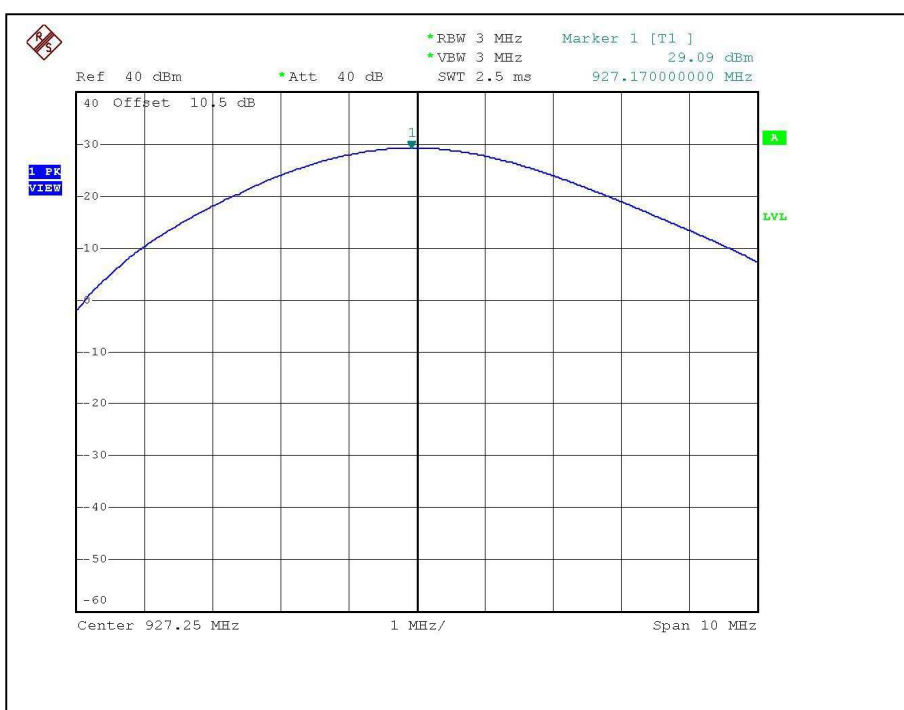




## Channel 24



## Channel 49





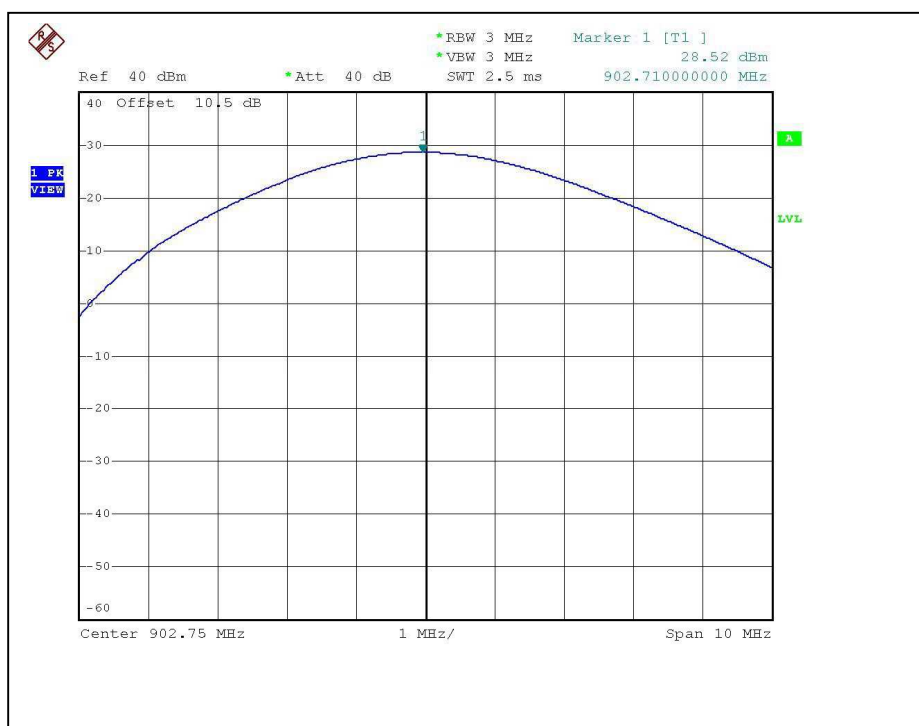
A D T

For DSB-ASK(MRM) – High Power:

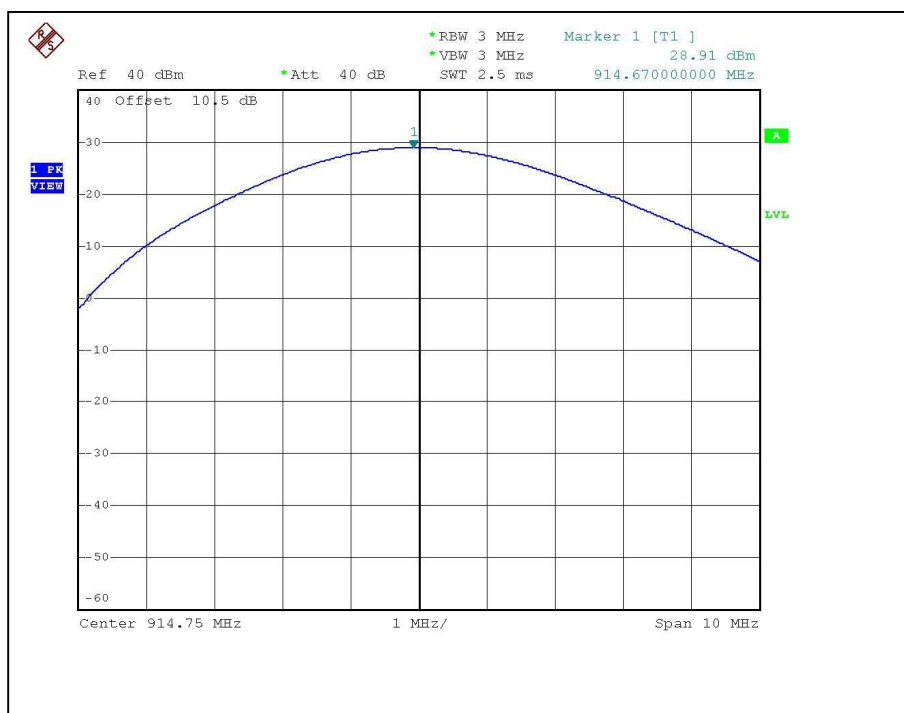
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1015 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
0	902.75	707.9	28.5	30	PASS
24	914.75	776.2	28.9	30	PASS
49	927.25	758.6	28.8	30	PASS

### Channel 0



## Channel 24



## Channel 49





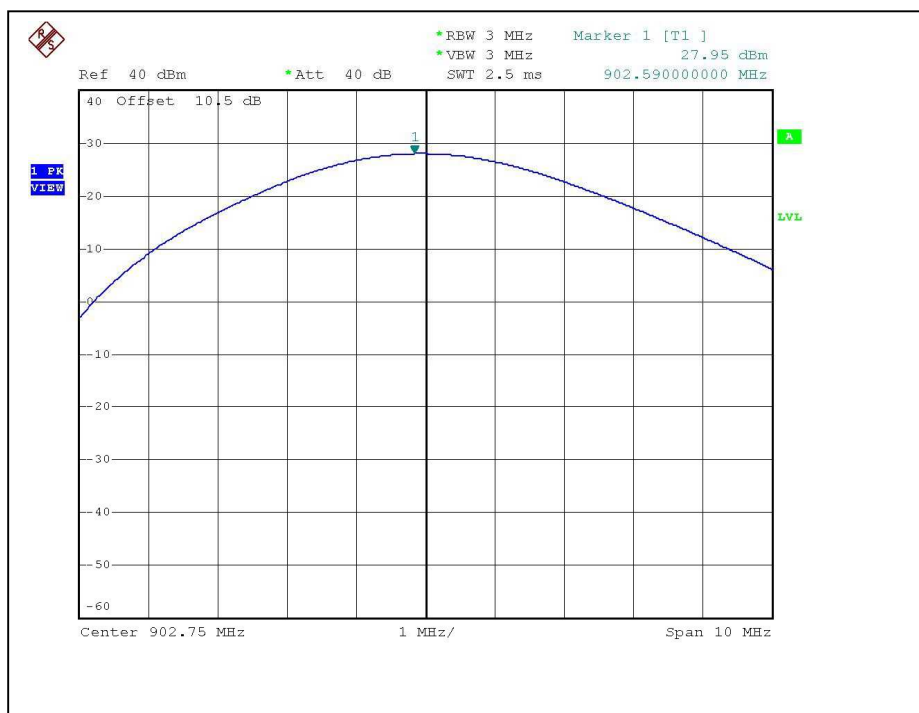
A D T

For PR-ASK(DRM) – High Power:

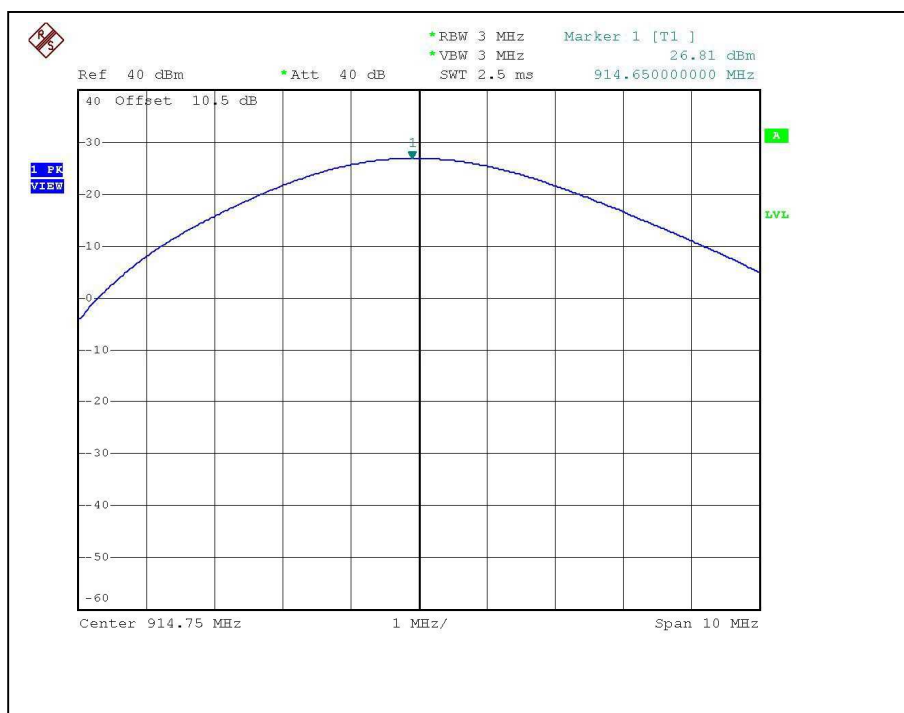
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1015 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
0	902.75	631.0	28.0	30	PASS
24	914.75	478.6	26.8	30	PASS
49	927.25	457.1	26.6	30	PASS

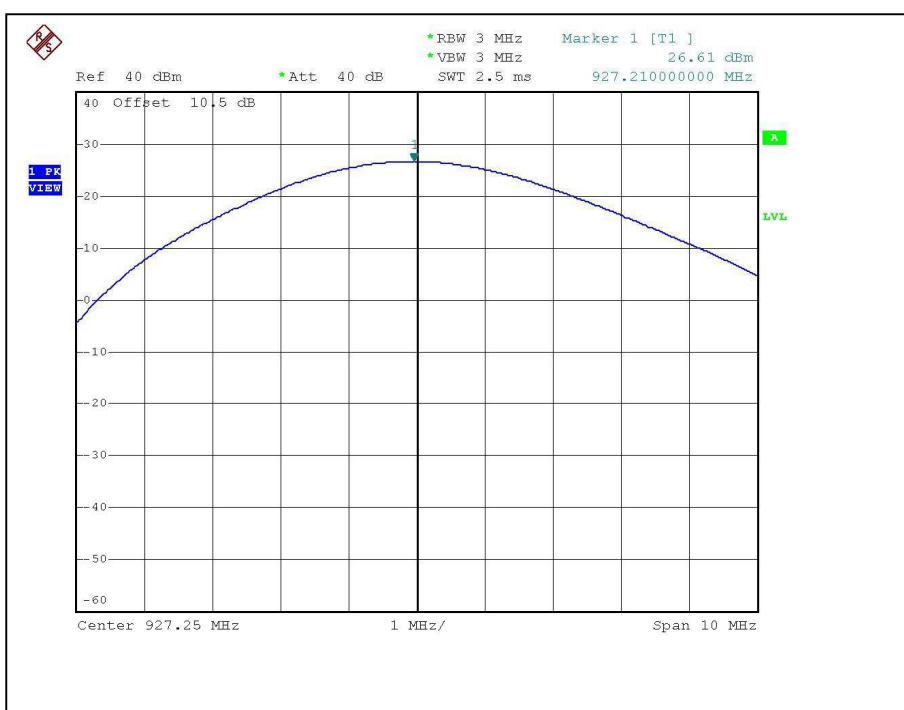
### Channel 0



## Channel 24



## Channel 49



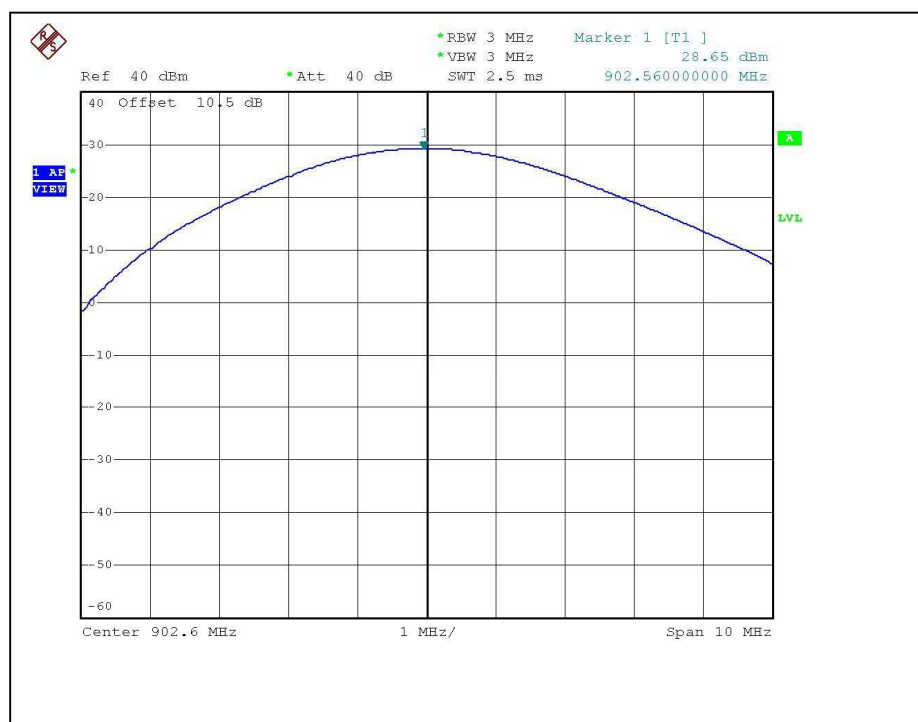
#### 4.1.8 TEST RESULTS (MODE B)

For PR-ASK(XRM) – High Power:

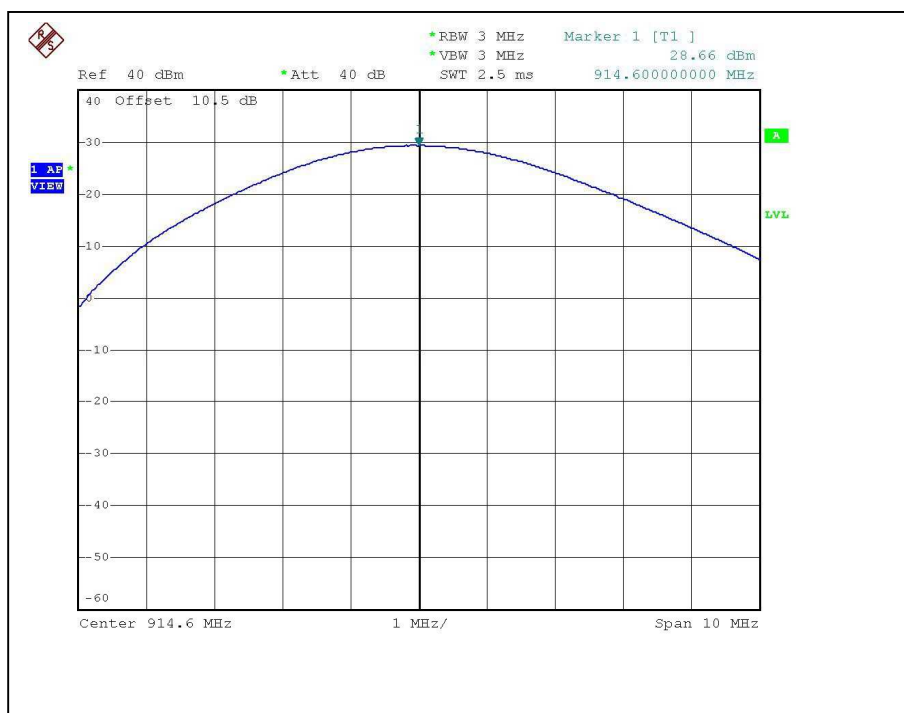
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>TESTED BY</b>	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
0	902.6	741.3	28.7	30	PASS
60	914.6	741.3	28.7	30	PASS
124	927.4	794.3	29.0	30	PASS

#### Channel 0



# Channel 60



# Channel 124





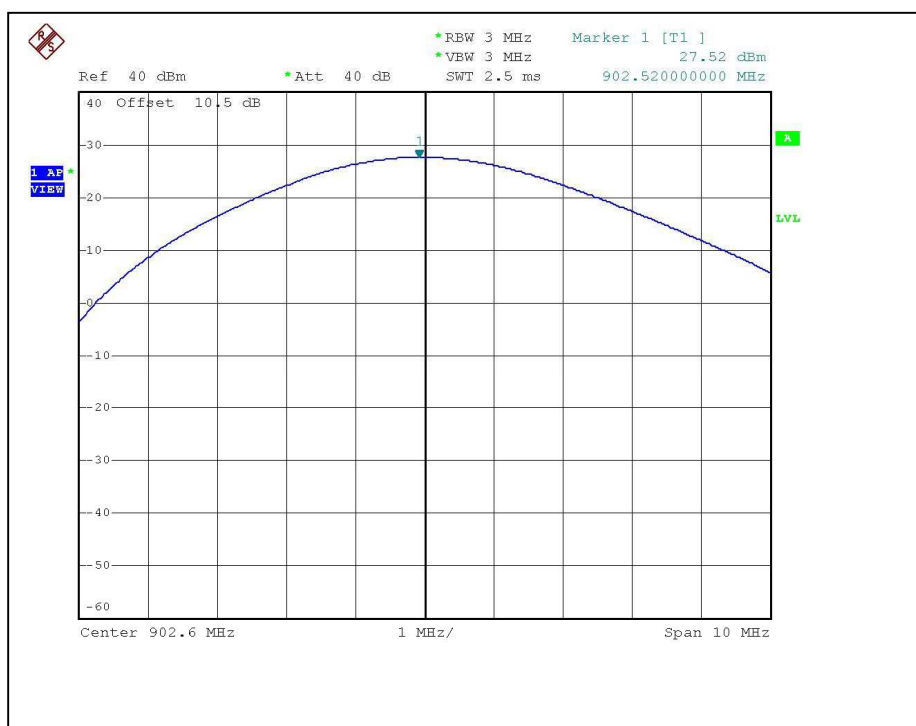
A D T

For PR-ASK(DRM) – High Power:

ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1015 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
0	902.6	562.3	27.5	30	PASS
60	914.6	457.1	26.6	30	PASS
124	927.4	436.5	26.4	30	PASS

## Channel 0





## Channel 60



## Channel 124



## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION 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	$2400/F(\text{kHz})$	300
0.490-1.705	$24000/F(\text{kHz})$	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	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.



A D T

#### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Spectrum Analyzer	FSP40	100036	Dec. 9, 2008	Dec. 8, 2009
Agilent PSA Spectrum Analyzer	E4446A	MY46180622	Apr. 24 , 2009	Apr. 23 , 2010
HP Pre_Amplifier	8449B	3008A01923	Nov. 02, 2009	Nov. 03, 2010
ROHDE & SCHWARZ Test Receiver	ESCS30	847124/029	Aug. 28, 2009	Aug. 28, 2010
SCHWARZBECK TRILOG Broadband Antenna	VULB 9168	138	April 29, 2009	April 28, 2010
Schwarzbeck Horn_Antenna	BBHA9120	D124	Dec. 09, 2008	Dec. 08, 2009
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170153	Jan. 22, 2009	Jan. 21, 2010
RF Switches	EMH-011	08009	Sep. 26, 2009	Sep. 25, 2010
RF CABLE (Chaintek)	Sucoflex 106	28077	Aug. 14, 2009	Aug. 13, 2010
RF Cable	8D	STCCAB-001	Sep. 26, 2009	Sep. 25, 2010
Software	ADT_Radiated_V7.6.15.9.2	NA	NA	NA
CT Antenna Tower & Turn Table	NA	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 horn antenna, HP preamplifier (model: 8449B) and Spectrum Analyzer (model: FSP40) are used only for the measurement of emission frequency above 1GHz if tested.

3. The test was performed in Open Site No. C.

4. The FCC Site Registration No. is 656396.

5. The VCCI Site Registration No. is R-1626.

6. The CANADA Site Registration No. is IC 7450G-3.

#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. 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 10 dB 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 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

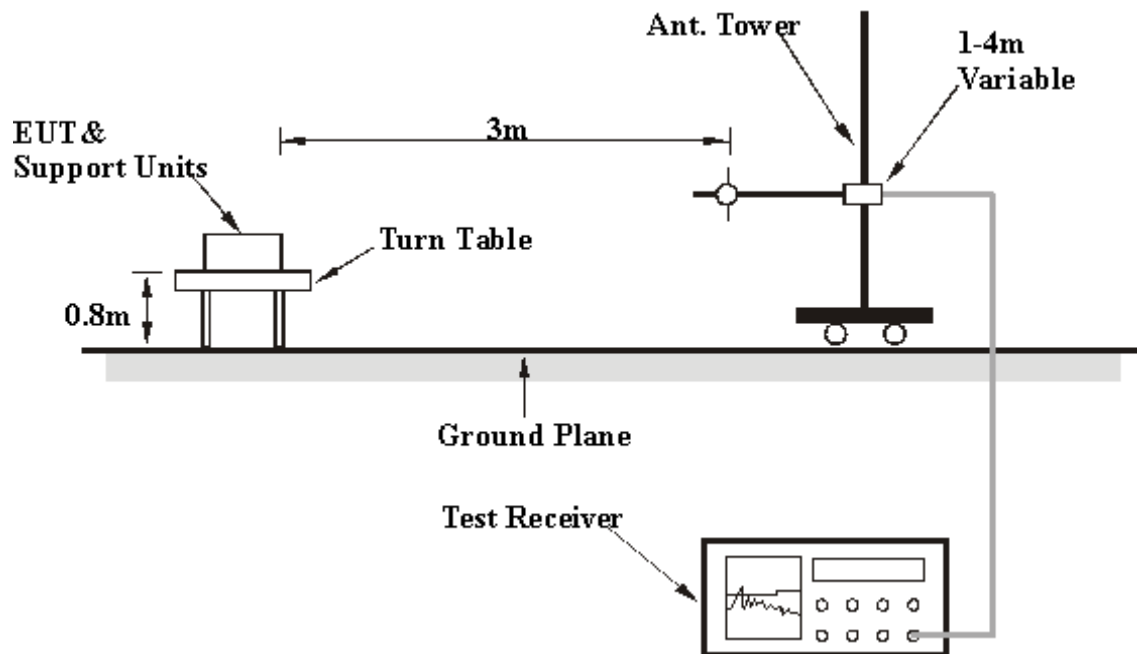
**NOTE:**

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 is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz.

#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation

## 4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.



A D T

## 4.2.6 TEST RESULTS (MODE A)

For DSB-ASK(MRM) – High Power:

<b>CHANNEL</b>	0	<b>FREQUENCY RANGE</b>	Below 1GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	29deg. C, 64%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

**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	69.25	30.83 QP	40.00	-9.2	1.02 H	43	17.94	12.89
2	154.77	28.24 QP	43.50	-15.3	1.00 H	79	13.20	15.04
3	179.13	29.69 QP	43.50	-13.8	1.00 H	134	16.36	13.33
4	200.33	27.33 QP	43.50	-16.2	1.06 H	157	15.46	11.87
5	375.00	36.72 QP	46.00	-9.3	1.06 H	24	18.82	17.90
6	440.00	35.54 QP	46.00	-10.5	1.11 H	213	15.92	19.62

**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	57.21	30.64 QP	40.00	-9.4	1.03 V	212	17.36	13.28
2	151.33	30.23 QP	43.50	-13.3	1.02 V	79	15.03	15.20
3	276.83	30.74 QP	46.00	-15.3	1.00 V	64	15.80	14.94
4	286.08	28.84 QP	46.00	-17.2	1.00 V	251	13.47	15.37
5	431.33	31.12 QP	46.00	-14.9	1.37 V	64	11.73	19.39
6	776.33	29.59 QP	46.00	-16.4	1.03 V	142	3.40	26.19

- 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

<b>CHANNEL</b>	0, 24, 49	<b>FREQUENCY RANGE</b>	Below 1GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

channel	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)
0	1	902.00	501.11PK	98.41	-48.3	1.13 H	325	21.90	28.21
	2	902.00	43.61AV	97.31	-53.7	1.13 H	325	15.40	28.21
	3	*902.75	118.41PK	-	-	1.16 H	329	90.20	28.21
	4	*902.75	117.31AV	-	-	1.16 H	329	89.10	28.21
24	1	*914.75	116.41	-	-	1.00 H	326	88.10	28.31
	2	*914.75	115.71	-	-	1.00 H	326	87.40	28.31
49	1	*927.25	115.11PK	-	-	1.07 H	339	86.70	28.41
	2	*927.25	114.01AV	-	-	1.07 H	339	85.60	28.41
	3	928.00	58.11PK	95.11	-37.0	1.07 H	338	29.70	28.41
	4	928.00	52.71AV	94.01	-41.3	1.07 H	338	24.30	28.41

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

channel	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)
0	1	902.00	62.31	108.81	-46.5	1.00 V	29	34.10	28.21
	2	902.00	56.21	107.71	-51.5	1.00 V	29	28.00	28.21
	3	*902.75	128.81	-	-	1.16 V	29	100.6	28.21
	4	*902.75	107.71	-	-	1.16 V	29	99.5	28.21
24	1	*914.75	126.41	-	-	1.12 V	26	98.10	28.31
	2	*914.75	125.71	-	-	1.12 V	26	97.40	28.31
49	1	*927.25	124.61	-	-	1.10 V	21	96.20	28.41
	2	*927.25	123.71	-	-	1.10 V	21	95.30	28.41
	3	928.00	69.91	104.61	-34.7	1.06 V	29	41.50	28.41
	4	928.00	64.91	103.71	-38.8	1.06 V	29	36.50	28.41

- 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.



A D T

<b>CHANNEL</b>	Channel 0	<b>FREQUENCY RANGE</b>	1 ~10GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

**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	2708.27	41.20 PK	74.00	-32.8	1.21 H	16	9.79	31.41
2	2708.27	33.40 AV	54.00	-20.6	1.21 H	16	1.99	31.41
3	3611.00	46.40 PK	74.00	-27.6	1.44 H	103	13.15	33.25
4	3611.00	40.30 AV	54.00	-13.7	1.44 H	103	7.05	33.25
5	4513.75	44.60 PK	74.00	-29.4	1.03 H	124	8.64	35.96
6	4513.75	33.90 AV	54.00	-20.1	1.03 H	124	-2.06	35.96
7	5416.50	42.50 PK	74.00	-31.5	1.34 H	327	5.24	37.26
8	5416.50	32.30 AV	54.00	-21.7	1.34 H	327	-4.96	37.26
9	8124.75	49.20 PK	74.00	-24.8	1.27 H	26	5.12	44.08
10	8124.75	38.30 AV	54.00	-15.7	1.27 H	26	-5.78	44.08
11	9027.50	50.60 PK	74.00	-23.4	1.34 H	27	6.07	44.53
12	9027.50	39.20 AV	54.00	-14.8	1.34 H	27	-5.33	44.53

**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	2708.27	42.30 PK	74.00	-31.7	1.00 V	63	10.89	31.41
2	2708.27	35.60 AV	54.00	-18.4	1.00 V	63	4.19	31.41
3	3611.00	44.10 PK	74.00	-29.9	1.44 V	100	10.85	33.25
4	3611.00	34.70 AV	54.00	-19.3	1.44 V	100	1.45	33.25
5	4513.75	43.10 PK	74.00	-30.9	1.30 V	40	7.14	35.96
6	4513.75	33.10 AV	54.00	-20.9	1.30 V	40	-2.86	35.96
7	5416.50	44.00 PK	74.00	-30.0	1.21 V	26	6.74	37.26
8	5416.50	31.80 AV	54.00	-22.2	1.21 V	26	-5.46	37.26
9	8124.75	52.40 PK	74.00	-21.6	1.29 V	241	8.32	44.08
10	8124.75	44.10 AV	54.00	-9.9	1.29 V	241	0.02	44.08
11	9027.50	50.10 PK	74.00	-23.9	1.03 V	26	5.57	44.53
12	9027.50	39.00 AV	54.00	-15.0	1.03 V	26	-5.53	44.53

- 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

<b>CHANNEL</b>	Channel 24	<b>FREQUENCY RANGE</b>	1 ~10GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

#### 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	2744.25	41.30 PK	74.00	-32.7	1.24 H	37	9.77	31.53
2	2744.25	34.60 AV	54.00	-19.4	1.24 H	37	3.07	31.53
3	3659.00	46.90 PK	74.00	-27.1	1.41 H	109	13.51	33.39
4	3659.00	40.80 AV	54.00	-13.2	1.41 H	109	7.41	33.39
5	4573.75	45.30 PK	74.00	-28.7	1.09 H	127	9.18	36.12
6	4573.75	34.20 AV	54.00	-19.8	1.09 H	127	-1.92	36.12
7	5488.50	43.40 PK	74.00	-30.6	1.26 H	321	6.14	37.26
8	5488.50	33.60 AV	54.00	-20.4	1.26 H	321	-3.66	37.26
9	8232.75	49.70 PK	74.00	-24.3	1.27 H	32	5.61	44.09
10	8232.75	38.60 AV	54.00	-15.4	1.27 H	32	-5.49	44.09
11	9147.50	51.30 PK	74.00	-22.7	1.37 H	28	6.44	44.86
12	9147.50	40.50 AV	54.00	-13.5	1.37 H	28	-4.36	44.86

#### 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	2744.25	42.60 PK	74.00	-31.4	1.00 V	59	11.07	31.53
2	2744.25	36.20 AV	54.00	-17.8	1.00 V	59	4.67	31.53
3	3659.00	45.10 PK	74.00	-28.9	1.41 V	103	11.71	33.39
4	3659.00	35.30 AV	54.00	-18.7	1.41 V	103	1.91	33.39
5	4573.75	44.90 PK	74.00	-29.1	1.27 V	56	8.78	36.12
6	4573.75	34.30 AV	54.00	-19.7	1.27 V	56	-1.82	36.12
7	5488.50	44.80 PK	74.00	-29.2	1.29 V	24	7.54	37.26
8	5488.50	32.60 AV	54.00	-21.4	1.29 V	24	-4.66	37.26
9	8232.75	52.60 PK	74.00	-21.4	1.31 V	299	8.51	44.09
10	8232.75	45.10 AV	54.00	-8.9	1.31 V	299	1.01	44.09
11	9147.50	50.40 PK	74.00	-23.6	1.01 V	35	5.54	44.86
12	9147.50	39.40 AV	54.00	-14.6	1.01 V	35	-5.46	44.86

- 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

<b>CHANNEL</b>	Channel 49	<b>FREQUENCY RANGE</b>	1 ~10GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

#### 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	2781.75	42.40 PK	74.00	-31.6	1.26 H	29	10.74	31.66
2	2781.75	35.30 AV	54.00	-18.7	1.26 H	29	3.64	31.66
3	3709.00	47.40 PK	74.00	-26.6	1.44 H	108	13.86	33.54
4	3709.00	41.30 AV	54.00	-12.7	1.44 H	108	7.76	33.54
5	4636.25	45.60 PK	74.00	-28.4	1.09 H	127	9.31	36.29
6	4636.25	34.90 AV	54.00	-19.1	1.09 H	127	-1.39	36.29
7	5563.50	43.60 PK	74.00	-30.4	1.26 H	324	6.16	37.44
8	5563.50	34.20 AV	54.00	-19.8	1.26 H	324	-3.24	37.44
9	8345.25	50.60 PK	74.00	-23.4	1.29 H	32	6.50	44.10
10	8345.25	39.30 AV	54.00	-14.7	1.29 H	32	-4.80	44.10
11	9272.50	52.40 PK	74.00	-21.6	1.31 H	31	7.21	45.19
12	9272.50	41.30 AV	54.00	-12.7	1.31 H	31	-3.89	45.19

#### 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	2781.75	43.40 PK	74.00	-30.6	1.00 V	62	11.74	31.66
2	2781.75	37.20 AV	54.00	-16.8	1.00 V	62	5.54	31.66
3	3709.00	45.90 PK	74.00	-28.1	1.43 V	108	12.36	33.54
4	3709.00	35.80 AV	54.00	-18.2	1.43 V	108	2.26	33.54
5	4636.25	45.60 PK	74.00	-28.4	1.29 V	73	9.31	36.29
6	4636.25	34.90 AV	54.00	-19.1	1.29 V	73	-1.39	36.29
7	5563.50	45.40 PK	74.00	-28.6	1.24 V	32	7.96	37.44
8	5563.50	33.60 AV	54.00	-20.4	1.24 V	32	-3.84	37.44
9	8345.25	53.40 PK	74.00	-20.6	1.30 V	253	9.30	44.10
10	8345.25	45.90 AV	54.00	-8.1	1.30 V	253	1.80	44.10
11	9272.50	51.20 PK	74.00	-22.8	1.04 V	72	6.01	45.19
12	9272.50	40.90 AV	54.00	-13.1	1.04 V	72	-4.29	45.19

- 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.

#### 4.2.7 TEST RESULTS (MODE B)

For PR-ASK(XRM) – High Power:

<b>CHANNEL</b>	0	<b>FREQUENCY RANGE</b>	Below 1GHz
<b>INPUT POWER (system)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	29deg. C, 64%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

#### 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	69.25	30.54 QP	40.00	-9.5	1.03 H	62	17.65	12.89
2	154.77	28.13 QP	43.50	-15.4	1.02 H	71	13.09	15.04
3	179.13	29.24 QP	43.50	-14.3	1.01 H	137	15.91	13.33
4	200.33	27.67 QP	43.50	-15.8	1.03 H	154	15.80	11.87
5	375.00	36.59 QP	46.00	-9.4	1.05 H	29	18.69	17.90
6	440.00	35.84 QP	46.00	-10.2	1.14 H	217	16.22	19.62

#### 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	57.21	30.59 QP	40.00	-9.4	1.01 V	216	17.31	13.28
2	151.33	31.34 QP	43.50	-12.2	1.14 V	84	16.14	15.20
3	276.83	30.13 QP	46.00	-15.9	1.04 V	51	15.19	14.94
4	286.08	28.74 QP	46.00	-17.3	1.02 V	241	13.37	15.37
5	431.33	31.69 QP	46.00	-14.3	1.41 V	25	12.30	19.39
6	776.33	29.84 QP	46.00	-16.2	1.07 V	115	3.65	26.19

- 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

<b>CHANNEL</b>	0, 60, 124	<b>FREQUENCY RANGE</b>	Below 1GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

channel	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)
0	1	902.00	49.91PK	96.51	-46.6	1.09 H	325	21.7	28.21
	2	902.00	39.91AV	94.01	-54.1	1.09 H	325	11.7	28.21
	3	*902.60	116.51PK	-	-	1.09 H	324	88.3	28.21
	4	*902.60	114.01AV	-	-	1.09 H	324	85.8	28.21
60	1	*914.60	113.71PK	-	-	1.02 H	322	85.4	28.31
	2	*914.60	119.91AV	-	-	1.02 H	322	83.6	28.31
124	1	*927.40	110.71PK	-	-	1.04 H	321	82.3	28.41
	2	*927.40	110.01AV	-	-	1.04 H	321	81.6	28.41
	3	928.00	54.71PK	90.71	-36.0	1.02 H	322	26.3	28.41
	4	928.00	49.74AV	90.01	-40.3	1.02 H	322	21.3	28.41

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

channel	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)
0	1	902.00	59.81PK	106.41	-46.6	1.14 V	23	31.6	28.21
	2	902.00	49.81AV	104.81	-55.0	1.14 V	23	21.6	28.21
	3	*902.60	126.41PK	-	-	1.15 V	19	98.2	28.21
	4	*902.60	124.81AV	-	-	1.15 V	19	96.6	28.21
60	1	*914.60	124.21PK	-	-	1.12 V	27	95.9	28.31
	2	*914.60	121.81AV	-	-	1.12 V	27	93.5	28.31
124	1	*927.40	121.01PK	-	-	1.13 V	24	92.6	28.41
	2	*927.40	120.11AV	-	-	1.13 V	24	91.7	28.41
	3	928.00	66.81PK	101.01	-34.20	1.12 V	29	38.4	28.41
	4	928.00	60.81AV	100.11	-39.30	1.12 V	29	32.4	28.41

- 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.



A D T

<b>CHANNEL</b>	Channel 0	<b>FREQUENCY RANGE</b>	1 ~10GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

**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	2707.80	42.60 PK	74.00	-31.40	1.24 H	32	11.20	31.40
2	2707.80	34.20 AV	54.00	-19.80	1.24 H	32	2.80	31.40
3	3601.40	47.40 PK	74.00	-26.60	1.44 H	109	14.18	33.22
4	3601.40	40.50 AV	54.00	-13.50	1.44 H	109	7.28	33.22
5	4513.00	45.10 PK	74.00	-28.90	1.08 H	126	9.15	35.95
6	4513.00	34.60 AV	54.00	-19.40	1.08 H	126	-1.35	35.95
7	5415.60	43.40 PK	74.00	-30.60	1.37 H	324	6.14	37.26
8	5415.60	33.70 AV	54.00	-20.30	1.37 H	324	-3.56	37.26
9	8123.40	50.60 PK	74.00	-23.40	1.26 H	32	6.52	44.08
10	8123.40	39.40 AV	54.00	-14.60	1.26 H	32	-4.68	44.08
11	9026.00	51.30 PK	74.00	-22.70	1.39 H	45	6.77	44.53
12	9026.00	40.50 AV	54.00	-13.50	1.39 H	45	-4.03	44.53

**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	2707.80	42.90 PK	74.00	-31.10	1.00 V	59	11.50	31.40
2	2707.80	36.30 AV	54.00	-17.70	1.00 V	59	4.90	31.40
3	3610.40	45.30 PK	74.00	-28.70	1.43 V	126	12.06	33.24
4	3610.40	35.80 AV	54.00	-18.20	1.43 V	126	2.56	33.24
5	4513.00	44.20 PK	74.00	-29.80	1.24 V	47	8.25	35.95
6	4513.00	34.60 AV	54.00	-19.40	1.24 V	47	-1.35	35.95
7	5415.60	45.30 PK	74.00	-28.70	1.24 V	32	8.04	37.26
8	5415.60	32.60 AV	54.00	-21.40	1.24 V	32	-4.66	37.26
9	8123.40	53.40 PK	74.00	-20.60	1.27 V	249	9.32	44.08
10	8123.40	44.60 AV	54.00	-9.40	1.27 V	249	0.52	44.08
11	9026.00	50.30 PK	74.00	-23.70	1.04 V	32	5.77	44.53
12	9026.00	40.20 AV	54.00	-13.80	1.04 V	32	-4.33	44.53

- 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

<b>CHANNEL</b>	Channel 60	<b>FREQUENCY RANGE</b>	1 ~10GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

#### 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	2743.80	43.60 PK	74.00	-30.40	1.27 H	39	12.07	31.53
2	2743.80	35.40 AV	54.00	-18.60	1.27 H	39	3.87	31.53
3	3658.40	48.20 PK	74.00	-25.80	1.21 H	108	14.81	33.39
4	3658.40	41.20 AV	54.00	-12.80	1.21 H	108	7.81	33.39
5	4573.00	46.30 PK	74.00	-27.70	1.04 H	131	10.18	36.12
6	4573.00	35.80 AV	54.00	-18.20	1.04 H	131	-0.32	36.12
7	5487.00	44.30 PK	74.00	-29.70	1.36 H	257	7.04	37.26
8	5487.00	34.60 AV	54.00	-19.40	1.36 H	257	-2.66	37.26
9	8231.40	51.70 PK	74.00	-22.30	1.24 H	48	7.61	44.09
10	8231.40	40.70 AV	54.00	-13.30	1.24 H	48	-3.39	44.09
11	9146.00	52.60 PK	74.00	-21.40	1.36 H	59	7.75	44.85
12	9146.00	41.20 AV	54.00	-12.80	1.36 H	59	-3.65	44.85

#### 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	2743.80	43.80 PK	74.00	-30.20	1.00 V	62	12.27	31.53
2	2743.80	36.90 AV	54.00	-17.10	1.00 V	62	5.37	31.53
3	3658.40	45.90 PK	74.00	-28.10	1.37 V	134	12.51	33.39
4	3658.40	35.40 AV	54.00	-18.60	1.37 V	134	2.01	33.39
5	4573.00	45.40 PK	74.00	-28.60	1.29 V	53	9.28	36.12
6	4573.00	35.30 AV	54.00	-18.70	1.29 V	53	-0.82	36.12
7	5487.00	45.60 PK	74.00	-28.40	1.28 V	64	8.34	37.26
8	5487.00	33.80 AV	54.00	-20.20	1.28 V	64	-3.46	37.26
9	8231.40	53.90 PK	74.00	-20.10	1.26 V	243	9.81	44.09
10	8231.40	45.90 AV	54.00	-8.10	1.26 V	243	1.81	44.09
11	9146.00	51.40 PK	74.00	-22.60	1.09 V	47	6.55	44.85
12	9146.00	41.20 AV	54.00	-12.80	1.09 V	47	-3.65	44.85

- 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.

<b>CHANNEL</b>	Channel 124	<b>FREQUENCY RANGE</b>	1 ~10GHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1015 hPa	<b>TESTED BY</b>	Frank Liu

#### 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	2782.20	44.80 PK	74.00	-29.20	1.29 H	43	13.14	31.66
2	2782.20	36.70 AV	54.00	-17.30	1.29 H	43	5.04	31.66
3	3709.60	49.30 PK	74.00	-24.70	1.24 H	104	15.76	33.54
4	3709.60	41.60 AV	54.00	-12.40	1.24 H	104	8.06	33.54
5	4637.00	47.60 PK	74.00	-26.40	1.08 H	129	11.31	36.29
6	4637.00	36.30 AV	54.00	-17.70	1.08 H	129	0.01	36.29
7	5564.40	45.60 PK	74.00	-28.40	1.29 H	254	8.16	37.44
8	5564.40	35.20 AV	54.00	-18.80	1.29 H	254	-2.24	37.44
9	8346.60	51.80 PK	74.00	-22.20	1.37 H	53	7.70	44.10
10	8346.60	41.60 AV	54.00	-12.40	1.37 H	53	-2.50	44.10
11	9274.00	53.40 PK	74.00	-20.60	1.27 H	64	8.21	45.19
12	9274.00	42.30 AV	54.00	-11.70	1.27 H	64	-2.89	45.19

#### 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	2782.40	44.20 PK	74.00	-29.80	1.00 V	74	12.54	31.66
2	2782.40	37.80 AV	54.00	-16.20	1.00 V	74	6.14	31.66
3	3709.60	46.40 PK	74.00	-27.60	1.24 V	138	12.86	33.54
4	3709.60	36.20 AV	54.00	-17.80	1.24 V	138	2.66	33.54
5	4637.00	45.70 PK	74.00	-28.30	1.24 V	68	9.41	36.29
6	4637.00	36.90 AV	54.00	-17.10	1.24 V	68	0.61	36.29
7	5564.40	46.30 PK	74.00	-27.70	1.22 V	62	8.86	37.44
8	5564.40	34.30 AV	54.00	-19.70	1.22 V	62	-3.14	37.44
9	8346.60	54.30 PK	74.00	-19.70	1.21 V	259	10.20	44.10
10	8346.60	45.90 AV	54.00	-8.10	1.21 V	259	1.80	44.10
11	9274.00	52.60 PK	74.00	-21.40	1.04 V	53	7.41	45.19
12	9274.00	43.40 AV	54.00	-10.60	1.04 V	53	-1.79	45.19

- 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 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 by the following approval agencies according to ISO/IEC 17025:

<b>USA</b>	FCC, NVLAP
<b>Germany</b>	TUV Rheinland
<b>Japan</b>	VCCI
<b>Norway</b>	NEMKO
<b>Canada</b>	INDUSTRY CANADA, CSA
<b>R.O.C.</b>	TAF, BSMI, NCC
<b>Netherlands</b>	Telefication
<b>Singapore</b>	GOST-ASIA (MOU)
<b>Russia</b>	CERTIS (MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: [www.adt.com.tw/index.5/phtml](http://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: 886-2-26052943

**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.com.tw](mailto:service@adt.com.tw)

**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

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



## **6 APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

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

**--- END ---**