

FCC TEST REPORT (15.407)

REPORT NO.: RF940309L05

MODEL NO.: WVM1104-Rx

RECEIVED: Feb. 18, 2005

TESTED: Feb. 18 ~ Apr. 02, 2005

ISSUED: Apr. 11, 2005

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0528
ILAC MRA



No. 2177-01

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1. CERTIFICATION

PRODUCT: WVM1104-Rx (Wireless Video Module-Receiver)
BRAND NAME: Adimos
MODEL NO.: WVM1104-Rx
TEST SAMPLE: ENGINEERING SAMPLE
TESTED: Feb. 18 ~ Apr. 02, 2005
APPLICANT: Gemtek Technology Co., Ltd.
STANDARDS: FCC Part 15, Subpart E (Section 15.407)
ANSI C63.4-2003

The above equipment has been tested by **Advance Data Technology Corporation**, 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 : Candice Chen , **DATE:** Apr. 11, 2005
(Candice Chen)

TECHNICAL
ACCEPTANCE : Gary Chang , **DATE:** Apr. 11, 2005
Responsible for RF (Gary Chang)

APPROVED BY : Cody Chang , **DATE:** Apr. 11, 2005
(Cody Chang,
Deputy 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)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -13.34dB at 0.205MHz
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -1.99dB at 5150.00MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.

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:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	WVM1104-Rx (Wireless Video Module-Receiver)
MODEL NO.	WVM1104-Rx
POWER SUPPLY	3.4Vdc from AC Adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11a: 54/48/36/24/18/12/9/6Mbps
FREQUENCY RANGE	802.11b & 802.11g: 2412 ~ 2462MHz 802.11a: 5.15 ~ 5.35GHz and 5.725 ~ 5.850GHz
NUMBER OF CHANNEL	802.11b & 802.11g: 11 802.11a: 13
CHANNEL SPACING	802.11b & 802.11g: 5MHz 802.11a: 20MHz
OUTPUT POWER	802.11b: 61.094mW 802.11g: 63.387mW 802.11a: 51.050mW
DATA CABLE	1.7m non-shielded cable without core
ANTENNA TYPE	Please refer to Note 1 below
I/O PORTS	AV I/O
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT have four combinations of antenna type. Please refer to following table

No.	Antenna Spec.	Antenna type	2.4G Gain (dBi)	5G Gain (dBi)
1	Philips antenna	PCB	-	5.20
2	Philips antenna	PCB	-	5.20
3	dual-band antenna	PCB	1.50	2.60
4	XWX0964A2	Patch	-	5.12

*Item 1, 3, and 4 were the worst cases and chosen for final test. Item 3 was for 2.4GHz and item 1, 3, 4 were for 5GHz.

2. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.

3. The EUT was powered by the following adapter:

Brand	MEAN WELL
Model	PSU30A-0
Input	100-240Vac, 50/60Hz, 0.8A
Output	3.4Vdc, 3.52A
Power Line	AC 1.0m non-shielded cable without core DC 1.2m non-shielded cable without core

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

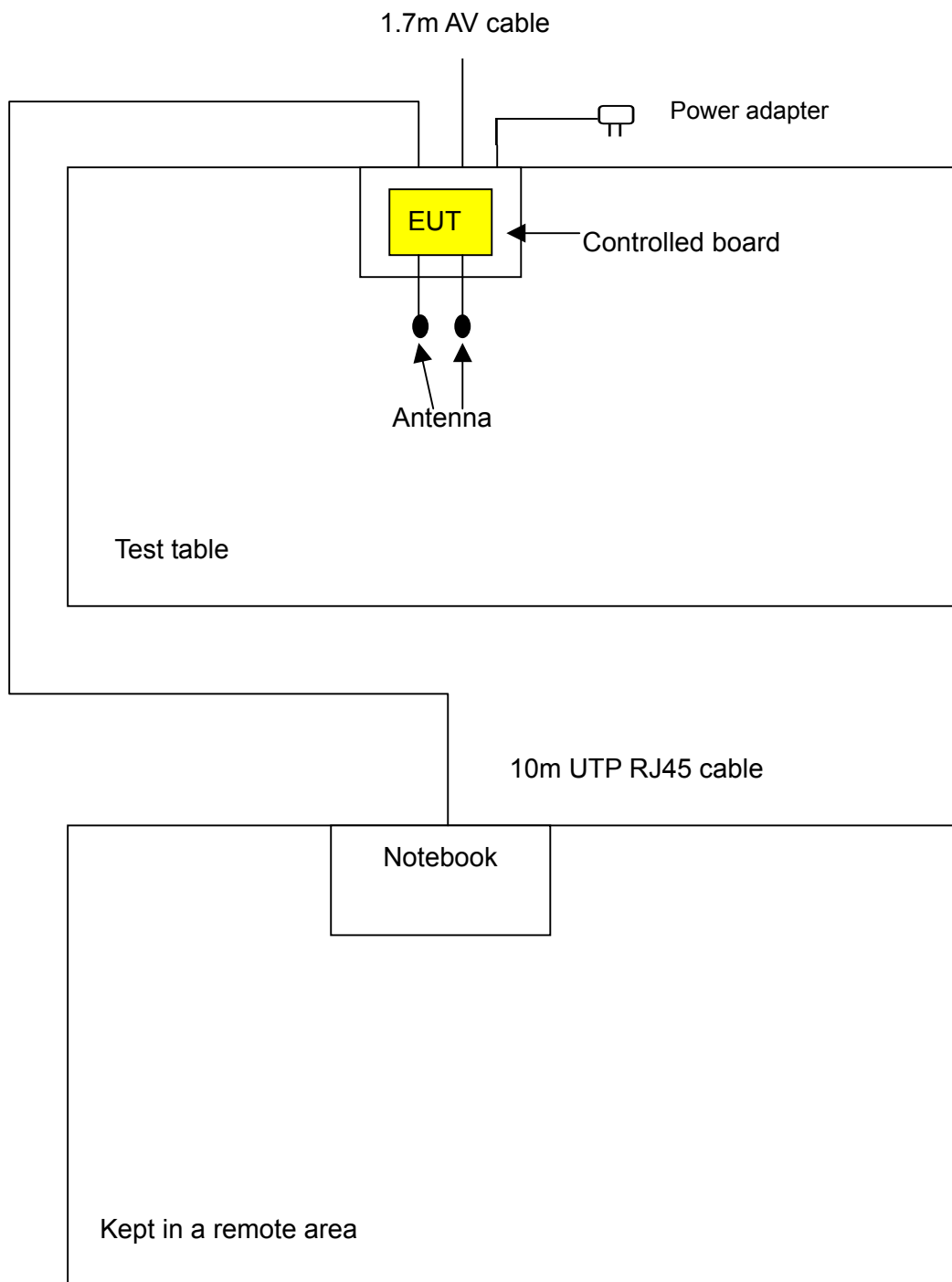
3.2 DESCRIPTION OF TEST MODES

Operated in 5150 ~ 5250MHz, 5250MHz ~ 5350MHz bands:

Eight channels are provided to this EUT.

Channel	Frequency
1	5180 MHz
2	5200 MHz
3	5220 MHz
4	5240 MHz
5	5260 MHz
6	5280 MHz
7	5300 MHz
8	5320 MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
A	Note 1	X	X	Note 2	antenna 1 (for 5.0GHz) (see note 1 of section 3.1)
B	Note 1	X	X	Note 2	antenna 3 ((for 5.0GHz) see note 1 of section 3.1)
C	Note 1	X	X	Note 2	antenna 4 (for 5.0GHz) (see note 1 of section 3.1)

Where PLC: Power Line Conducted Emission

RE<1G RE: Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz

APCM: Antenna Port Conducted Measurement

Note 1: Pre-scan shown antenna has no effect on conducted Emission test.

Note 2: Conducted RF measurement is independent of antenna.

Power Line Conducted Emission Test:

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

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11a	1 to 8	5	OFDM	BPSK	6

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.

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11a	1 to 8	5	OFDM	BPSK	6
B	802.11a	1 to 8	5	OFDM	BPSK	6
C	802.11a	1 to 8	5	OFDM	BPSK	6

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.

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6
B	802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6
C	802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6

**Bandedge Measurement:**

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

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	1 to 8	1, 8	OFDM	BPSK	6

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.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a WVM1104-Rx (Wireless Video Module-Receiver). According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

ANSI C63.4-2003

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. 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	PP05L	12130898320	E2K24CLNS

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

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

4. TEST TYPES AND RESULTS (5150 ~ 5350MHz Band)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	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 0.50 MHz.
 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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 06, 2005
RF signal cable Woken	5D-FB	Cable-HyC02-01	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 20, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 20, 2006
Software ADT	ADT_Cond_V3	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 3.
 3. The VCCI Site Registration No. is C-2047.



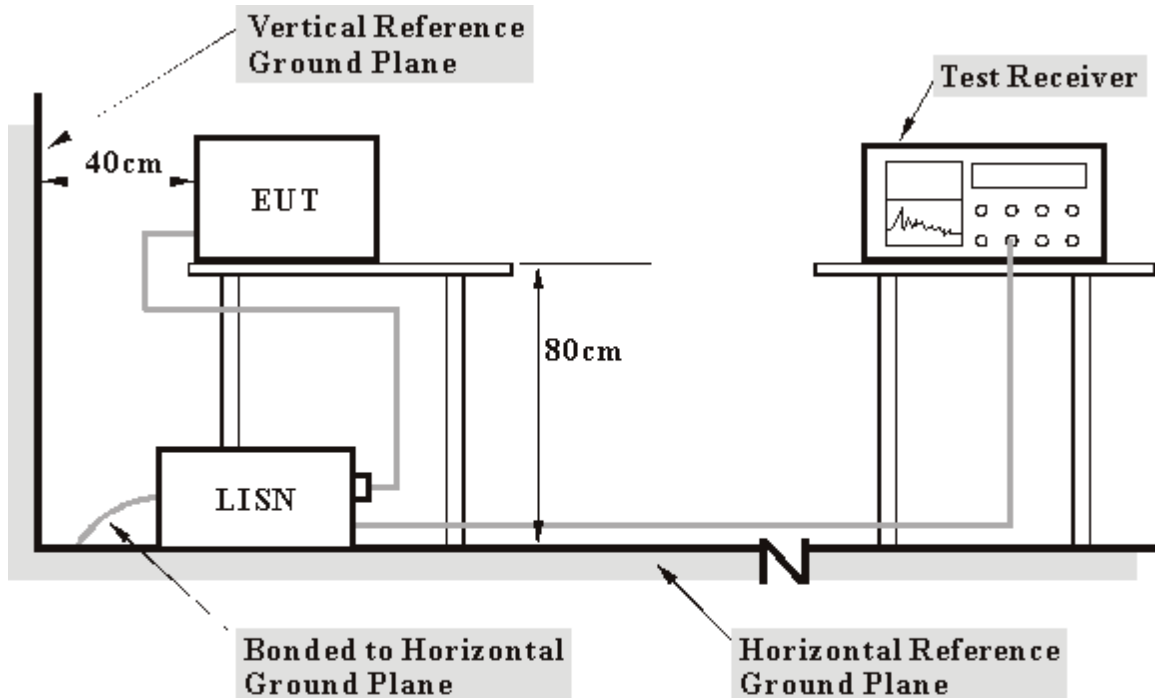
4.1.3 TEST PROCEDURES

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

- a. Connected the EUT to a notebook system and EUT placed on a testing table.
- b. The notebook system ran a test program (provided by manufacturer) to enable all functions under transmission/receiving condition continuously at specific channel frequency.
- c. The notebook system sent "H" messages to its screen.

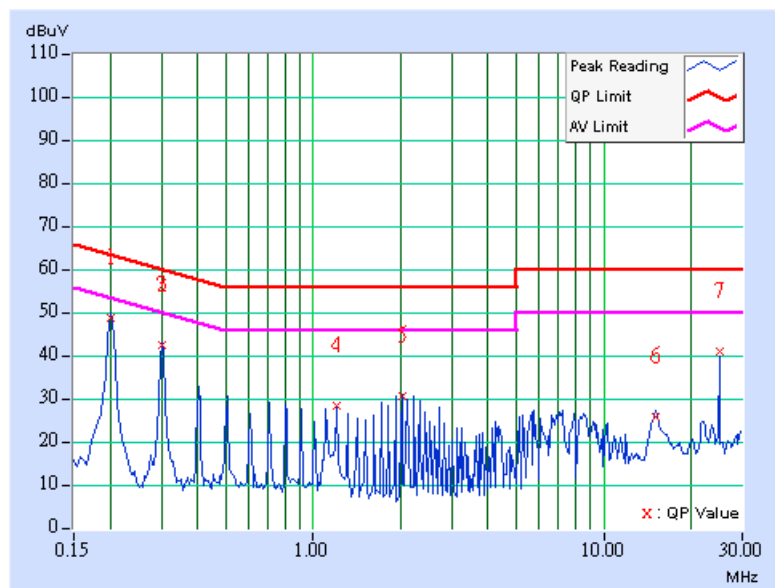
4.1.7 TEST RESULTS

Conducted Worst-Case Data

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	TESTED BY	Match Tsui

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	0.201	0.10	48.17	-	48.27	-	63.58	53.58	-15.31	-
2	0.302	0.11	41.60	-	41.71	-	60.18	50.18	-18.47	-
3	0.302	0.11	41.58	-	41.69	-	60.18	50.18	-18.49	-
4	1.211	0.15	27.58	-	27.73	-	56.00	46.00	-28.27	-
5	2.020	0.16	29.70	-	29.86	-	56.00	46.00	-26.14	-
6	15.031	0.50	25.20	-	25.70	-	60.00	50.00	-34.30	-
7	25.000	0.86	40.22	-	41.08	-	60.00	50.00	-18.92	-

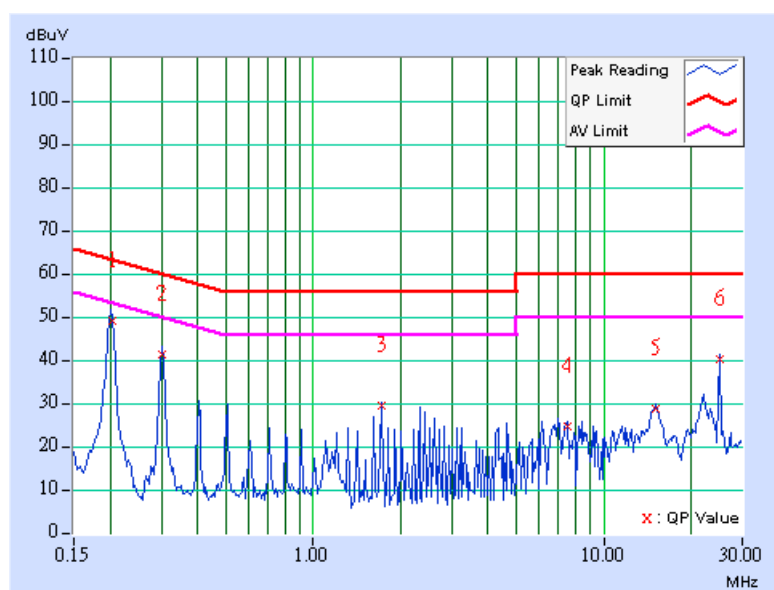
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	TESTED BY	Match Tsui

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	0.205	0.10	48.98	-	49.08	-	63.42	53.42	-14.34	-
2	0.302	0.11	41.26	-	41.37	-	60.18	50.18	-18.81	-
3	1.715	0.15	29.15	-	29.30	-	56.00	46.00	-26.70	-
4	7.465	0.27	24.46	-	24.73	-	60.00	50.00	-35.27	-
5	15.031	0.36	28.49	-	28.85	-	60.00	50.00	-31.15	-
6	25.000	0.40	39.97	-	40.37	-	60.00	50.00	-19.63	-

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



4.2 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(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



4.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

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

4.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 19, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 16, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2006
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Feb. 17, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Feb. 17, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	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 Chamber 1.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The IC Site Registration No. is IC4924-2.

4.2.4 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.

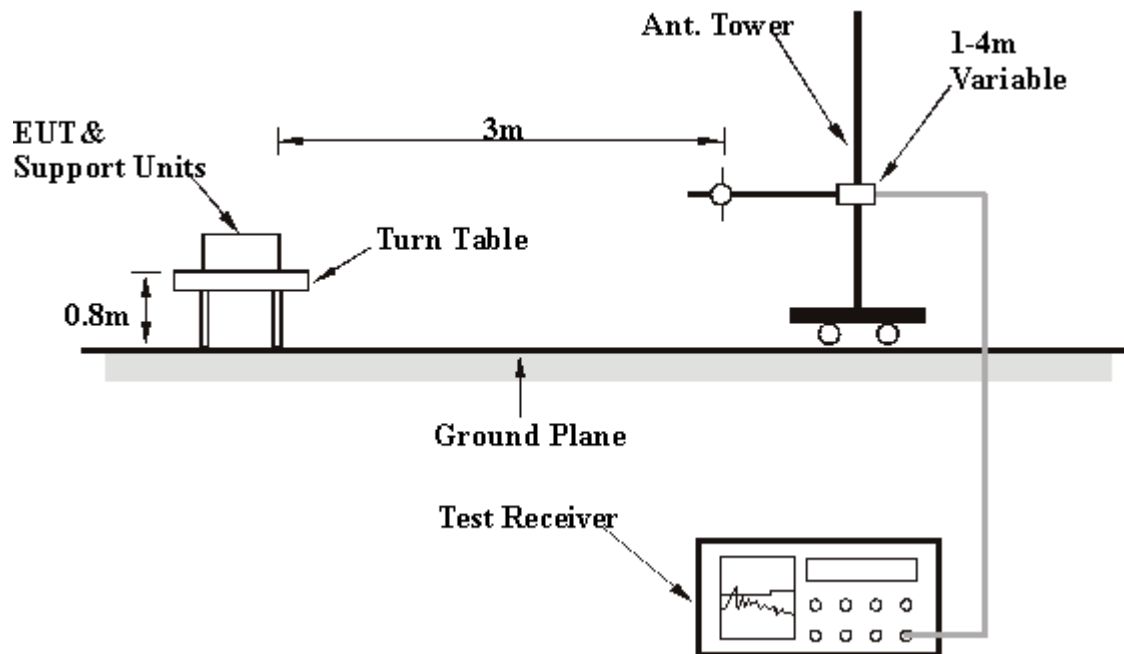
NOTE:

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 and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.2.5 DEVIATION FROM TEST STANDARD

No deviation

4.2.6 TEST SETUP



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

4.2.7 EUT OPERATING CONDITION

Same as 4.1.6

4.2.8 TEST RESULTS

Below 1GHz Worst-Case Data (with Antenna 1)

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	99.98	25.47 QP	43.50	-18.03	1.75 H	112	14.72	10.74
2	179.68	27.22 QP	43.50	-16.28	1.50 H	220	14.48	12.74
3	249.66	32.30 QP	46.00	-13.70	1.25 H	232	19.22	13.08
4	360.46	27.64 QP	46.00	-18.36	1.00 H	193	11.93	15.71
5	449.88	27.97 QP	46.00	-18.03	2.00 H	295	10.06	17.91
6	539.30	31.91 QP	46.00	-14.09	1.50 H	262	12.52	19.39
7	720.08	29.46 QP	46.00	-16.54	1.00 H	250	6.75	22.72
8	751.18	30.06 QP	46.00	-15.94	1.00 H	253	6.64	23.42
9	811.44	39.22 QP	46.00	-6.78	1.00 H	250	15.42	23.80
10	900.86	36.73 QP	46.00	-9.27	1.25 H	355	11.62	25.11
11	990.28	34.77 QP	54.00	-19.23	1.00 H	229	9.11	25.66

REMARKS:

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

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	43.61	28.65 QP	40.00	-11.35	1.00 V	112	13.62	15.03
2	80.54	21.51 QP	40.00	-18.49	1.75 V	22	11.75	9.76
3	131.08	24.96 QP	43.50	-18.54	1.00 V	244	11.38	13.58
4	179.68	27.87 QP	43.50	-15.63	2.00 V	25	15.13	12.74
5	323.53	31.63 QP	46.00	-14.37	1.25 V	4	16.76	14.86
6	432.38	29.96 QP	46.00	-16.04	1.75 V	88	12.50	17.46
7	539.30	28.06 QP	46.00	-17.94	1.00 V	337	8.67	19.39
8	720.08	34.40 QP	46.00	-11.60	1.50 V	274	11.68	22.72
9	757.01	29.17 QP	46.00	-16.83	1.25 V	307	5.72	23.46
10	811.44	40.29 QP	46.00	-5.71	1.25 V	301	16.49	23.80
11	863.93	33.28 QP	46.00	-12.72	1.25 V	289	8.88	24.40
12	900.86	35.25 QP	46.00	-10.75	1.25 V	151	10.14	25.11
13	990.28	32.80 QP	54.00	-21.20	1.25 V	88	7.14	25.66

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

Below 1GHz Worst-Case Data (with Antenna 3)

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	21deg. C, 70%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	179.68	29.92 QP	43.50	-13.58	1.50 H	112	17.18	12.74
2	249.66	33.56 QP	46.00	-12.44	1.00 H	322	20.48	13.08
3	323.53	34.47 QP	46.00	-11.53	1.00 H	271	19.61	14.86
4	360.46	32.47 QP	46.00	-13.53	1.00 H	85	16.76	15.71
5	500.42	30.42 QP	46.00	-15.58	1.50 H	10	11.82	18.59
6	539.30	32.59 QP	46.00	-13.41	1.50 H	205	13.20	19.39
7	720.08	36.98 QP	46.00	-9.02	1.00 H	304	14.26	22.72
8	757.01	33.85 QP	46.00	-12.15	1.00 H	61	10.39	23.46
9	811.44	37.96 QP	46.00	-8.04	1.00 H	64	14.16	23.80
10	863.93	32.05 QP	46.00	-13.95	1.00 H	43	7.66	24.40
11	900.86	37.03 QP	46.00	-8.97	1.00 H	319	11.92	25.11

REMARKS:

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

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	21deg. C, 70%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	43.61	24.31 QP	40.00	-15.69	1.00 V	49	9.28	15.03
2	179.68	25.04 QP	43.50	-18.46	1.00 V	178	12.30	12.74
3	249.66	27.60 QP	46.00	-18.40	2.00 V	307	14.52	13.08
4	323.53	29.52 QP	46.00	-16.48	2.00 V	43	14.66	14.86
5	360.46	31.11 QP	46.00	-14.89	1.50 V	112	15.40	15.71
6	432.38	30.58 QP	46.00	-15.42	1.50 V	73	13.11	17.46
7	539.30	30.66 QP	46.00	-15.34	1.00 V	166	11.27	19.39
8	720.08	37.83 QP	46.00	-8.17	1.50 V	328	15.11	22.72
9	757.01	38.76 QP	46.00	-7.24	1.50 V	355	15.30	23.46
10	811.44	39.38 QP	46.00	-6.62	1.50 V	19	15.58	23.80
11	900.86	36.28 QP	46.00	-9.72	1.00 V	283	11.16	25.11

- 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

Below 1GHz Worst-Case Data (with Antenna 4)

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TEST MODE	C
TESTED BY	Match Tsui		

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	113.59	29.07 QP	43.50	-14.43	1.50 H	79	16.93	12.14
2	199.12	35.19 QP	43.50	-8.31	2.00 H	241	23.99	11.20
3	249.66	38.89 QP	46.00	-7.11	1.00 H	76	25.81	13.08
4	300.20	31.05 QP	46.00	-14.95	1.00 H	118	16.72	14.33
5	405.17	31.08 QP	46.00	-14.92	1.00 H	256	14.31	16.77
6	500.42	32.63 QP	46.00	-13.37	1.50 H	22	14.04	18.59
7	539.30	34.53 QP	46.00	-11.47	1.50 H	292	15.14	19.39
8	599.56	34.28 QP	46.00	-11.72	1.50 H	316	13.40	20.88
9	630.66	36.21 QP	46.00	-9.79	1.50 H	304	14.89	21.32
10	720.08	37.60 QP	46.00	-8.40	2.00 H	265	14.88	22.72
11	811.44	39.46 QP	46.00	-6.54	1.00 H	289	15.66	23.80
12	900.86	40.31 QP	46.00	-5.69	1.50 H	13	15.19	25.11

REMARKS:

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

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa	TEST MODE	C
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.94	27.52 QP	40.00	-12.48	1.00 V	349	13.84	13.68
2	64.99	25.16 QP	40.00	-14.84	1.00 V	28	12.27	12.90
3	105.81	30.70 QP	43.50	-12.80	1.00 V	58	19.35	11.34
4	146.63	29.90 QP	43.50	-13.60	1.00 V	70	15.54	14.36
5	199.12	32.55 QP	43.50	-10.95	1.00 V	253	21.35	11.20
6	249.66	34.89 QP	46.00	-11.11	1.00 V	346	21.81	13.08
7	449.88	31.55 QP	46.00	-14.45	1.00 V	349	13.65	17.91
8	500.42	31.41 QP	46.00	-14.59	1.00 V	343	12.82	18.59
9	539.30	37.17 QP	46.00	-8.83	1.00 V	163	17.78	19.39
10	599.56	34.94 QP	46.00	-11.06	1.00 V	163	14.06	20.88
11	630.66	37.36 QP	46.00	-8.64	1.00 V	187	16.04	21.32
12	811.44	40.27 QP	46.00	-5.73	1.50 V	178	16.47	23.80
13	900.86	40.17 QP	46.00	-5.83	1.00 V	22	15.06	25.11

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

802.11a OFDM modulation (with Antenna 1)

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 61%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	#1080.00	48.38 PK	74.00	-25.62	1.13 H	254	20.57	27.81
2	3453.00	46.01 PK	68.30	-22.29	1.00 H	21	11.07	34.94
3	#5150.00	62.90 PK	74.00	-11.10	1.02 H	354	24.13	38.77
3	#5150.00	52.01 AV	54.00	-1.99	1.02 H	354	13.24	38.77
4	*5180.00	108.84 PK			1.02 H	354	70.03	38.81
4	*5180.00	97.95 AV			1.02 H	354	59.14	38.81
5	10360.00	61.58 PK	68.30	-6.72	1.14 H	351	11.89	49.69

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	#1080.00	52.89 PK	74.00	-21.11	1.05 V	334	25.08	27.81
1	#1080.00	47.96 AV	54.00	-6.04	1.05 V	334	20.15	27.81
2	3546.00	47.89 PK	68.30	-20.41	1.16 V	347	12.79	35.10
3	#5150.00	50.94 PK	74.00	-23.06	1.52 V	12	12.17	38.77
3	#5150.00	40.07 AV	54.00	-13.93	1.52 V	12	1.30	38.77
4	*5180.00	98.88 PK			1.52 V	12	60.07	38.81
4	*5180.00	88.01 AV			1.52 V	12	49.20	38.81
5	10360.00	62.14 PK	68.30	-6.16	1.13 V	287	12.45	49.69

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 61%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	#1080.00	48.16 PK	74.00	-25.84	1.14 H	258	20.35	27.81
2	3493.00	44.62 PK	68.30	-23.68	1.00 H	50	9.66	34.97
3	*5240.00	110.76 PK			1.00 H	353	71.84	38.92
3	*5240.00	100.91 AV			1.00 H	353	61.99	38.92
4	10480.00	61.43 PK	74.00	-12.57	1.00 H	343	11.61	49.82

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	#1080.00	53.05 PK	74.00	-20.95	1.04 V	335	25.24	27.81
1	#1080.00	48.46 AV	54.00	-5.54	1.04 V	335	20.65	27.81
2	3493.00	46.87 PK	68.30	-21.43	1.42 V	274	11.90	34.97
3	*5240.00	100.25 PK			1.52 V	15	61.33	38.92
3	*5240.00	90.18 AV			1.52 V	15	51.26	38.92
4	10480.00	62.84 PK	68.30	-5.46	1.15 V	289	13.02	49.82

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 61%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	#1080.00	47.96 PK	74.00	-26.04	1.13 H	247	20.15	27.81
2	3506.00	45.27 PK	68.30	-23.03	1.36 H	339	10.28	34.99
3	*5260.00	110.78 PK			1.00 H	354	71.81	38.97
3	*5260.00	99.79 AV			1.00 H	354	60.82	38.97
4	10520.00	60.20 PK	68.30	-8.10	1.41 H	336	10.34	49.86

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	#1080.00	53.54 PK	74.00	-20.46	1.04 V	354	25.73	27.81
1	#1080.00	49.36 AV	54.00	-4.64	1.04 V	354	21.55	27.81
2	3506.00	47.21 PK	68.30	-21.09	1.14 V	279	12.22	34.99
3	*5260.00	100.06 PK			1.81 V	15	61.09	38.97
3	*5260.00	90.08 AV			1.81 V	15	51.11	38.97
4	10520.00	62.80 PK	68.30	-5.50	1.39 V	30	12.94	49.86

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 8	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 61%RH, 991hPa	TEST MODE	A
TESTED BY	Match Tsui		

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	#1080.00	47.70 PK	74.00	-26.30	1.41 H	255	19.90	27.81
2	3546.00	62.82 PK	68.30	-5.48	1.21 H	348	27.72	35.10
3	#4875.00	69.69 PK	74.00	-4.31	1.20 H	354	31.41	38.28
3	#4875.00	36.96 AV	54.00	-17.04	1.20 H	354	-1.32	38.28
4	*5320.00	110.57 PK			1.00 H	353	71.49	39.08
4	*5320.00	100.23 AV			1.00 H	353	61.15	39.08
5	#5350.00	60.47 PK	74.00	-13.53	1.00 H	353	21.34	39.12
5	#5350.00	50.13 AV	54.00	-3.87	1.00 H	353	11.01	39.12
6	#10640.00	62.18 PK	74.00	-11.82	1.44 H	311	12.25	49.93
6	#10640.00	48.36 AV	54.00	-5.64	1.44 H	311	-1.57	49.93

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	#1080.00	52.42 PK	74.00	-21.58	1.00 V	333	24.61	27.81
1	#1080.00	48.65 AV	54.00	-5.35	1.00 V	333	20.85	27.81
2	3546.00	50.57 PK	68.30	-17.73	1.00 V	238	15.47	35.10
3	#4875.00	57.26 PK	74.00	-16.74	1.39 V	336	18.98	38.28
3	#4875.00	36.70 AV	54.00	-17.30	1.39 V	336	-1.58	38.28
4	*5320.00	100.97 PK			1.50 V	18	61.89	39.08
4	*5320.00	90.94 AV			1.50 V	18	51.86	39.08
5	#5350.00	48.87 PK	74.00	-25.13	1.50 V	18	9.74	39.12
6	#10640.00	62.06 PK	74.00	-11.94	1.11 V	287	12.13	49.93
6	#10640.00	48.96 AV	54.00	-5.04	1.11 V	287	-0.97	49.93

- NOTE:**
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 falling in the restricted band.

802.11a OFDM modulation (with Antenna 3)

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	#1080.00	45.21 PK	74.00	-28.79	1.35 H	64	18.43	26.78
1	#1080.00	43.77 AV	54.00	-10.23	1.35 H	64	16.99	26.78
2	3453.00	42.55 PK	68.30	-25.75	1.31 H	105	9.67	32.88
3	#5150.00	44.38 PK	74.00	-29.62	1.03 H	17	7.33	37.05
3	#5150.00	34.73 AV	54.00	-19.27	1.03 H	17	-2.33	37.05
4	*5180.00	95.67 PK			1.03 H	17	58.58	37.09
4	*5180.00	86.02 AV			1.03 H	17	48.93	37.09
5	10360.00	53.83 PK	68.30	-14.47	1.25 H	360	7.77	46.06

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	#1080.00	46.99 PK	74.00	-27.01	1.00 V	141	20.21	26.78
1	#1080.00	45.74 AV	54.00	-8.26	1.00 V	141	18.96	26.78
2	3453.00	44.34 PK	68.30	-23.96	1.09 V	272	11.46	32.88
3	#5150.00	58.07 PK	74.00	-15.93	1.14 V	1	21.02	37.05
3	#5150.00	47.45 AV	54.00	-6.55	1.14 V	1	10.40	37.05
4	*5180.00	105.36 PK			1.14 V	1	68.27	37.09
4	*5180.00	95.74 AV			1.14 V	1	58.65	37.09
5	6906.00	50.60 PK	68.30	-17.70	1.04 V	149	9.03	41.57
6	10360.00	56.76 PK	68.30	-11.54	1.08 V	180	10.70	46.06

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	#1080.00	45.43 PK	74.00	-28.57	1.33 H	65	18.65	26.78
1	#1080.00	43.43 AV	54.00	-10.57	1.33 H	65	16.65	26.78
2	3493.00	49.39 PK	68.30	-18.91	1.07 H	106	16.49	32.91
3	*5240.00	102.01 PK			1.40 H	294	64.81	37.20
3	*5240.00	91.68 AV			1.40 H	294	54.48	37.20
4	10480.00	53.62 PK	68.30	-14.68	1.20 H	264	7.26	46.36

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	#1080.00	47.33 PK	74.00	-26.67	1.00 V	140	20.55	26.78
1	#1080.00	45.56 AV	54.00	-8.44	1.00 V	140	18.78	26.78
2	3493.00	49.91 PK	68.30	-18.39	1.31 V	276	17.01	32.91
3	*5240.00	108.56 PK			1.15 V	344	71.36	37.20
3	*5240.00	98.44 AV			1.15 V	344	61.24	37.20
4	10480.00	58.78 PK	68.30	-9.52	1.22 V	114	12.42	46.36

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	#1080.00	44.35 PK	74.00	-29.65	1.49 H	65	17.57	26.78
1	#1080.00	41.43 AV	54.00	-12.57	1.49 H	65	14.65	26.78
2	3506.00	43.62 PK	68.30	-24.68	1.08 H	107	10.69	32.93
3	*5260.00	101.56 PK			1.35 H	62	64.31	37.25
3	*5260.00	91.40 AV			1.35 H	62	54.15	37.25
4	10520.00	54.80 PK	68.30	-13.50	1.02 H	281	8.33	46.48

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	#1080.00	46.82 PK	74.00	-27.18	1.00 V	138	20.04	26.78
1	#1080.00	45.34 AV	54.00	-8.66	1.00 V	138	18.56	26.78
2	3506.00	44.57 PK	68.30	-23.73	1.11 V	272	11.64	32.93
3	*5260.00	108.08 PK			1.01 V	220	70.83	37.25
3	*5260.00	97.29 AV			1.01 V	220	60.04	37.25
4	10520.00	59.78 PK	68.30	-8.52	1.33 V	180	13.31	46.48

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 8	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH, 991hPa	TEST MODE	B
TESTED BY	Match Tsui		

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	#1080.00	44.96 PK	74.00	-29.04	1.35 H	261	18.18	26.78
1	#1080.00	43.46 AV	54.00	-10.54	1.35 H	261	16.68	26.78
2	3546.00	44.98 PK	68.30	-23.32	1.03 H	101	11.94	33.04
3	*5320.00	100.76 PK			1.03 H	337	63.40	37.36
3	*5320.00	89.61 AV			1.03 H	337	52.25	37.36
4	#5350.00	51.00 PK	74.00	-23.00	1.03 H	337	13.61	37.39
4	#5350.00	39.85 AV	54.00	-14.15	1.03 H	337	2.46	37.39
5	#10640.00	57.63 PK	74.00	-16.37	1.47 H	138	10.91	46.72
5	#10640.00	45.10 AV	54.00	-8.90	1.47 H	138	-1.62	46.72

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	#1080.00	46.48 PK	74.00	-27.52	1.00 V	138	19.70	26.78
1	#1080.00	45.44 AV	54.00	-8.56	1.00 V	138	18.66	26.78
2	3546.00	43.48 PK	68.30	-24.82	1.13 V	271	10.44	33.04
3	*5320.00	108.57 PK			1.13 V	342	71.21	37.36
3	*5320.00	97.90 AV			1.13 V	342	60.54	37.36
4	#5350.00	59.81 PK	74.00	-14.19	1.13 V	342	22.42	37.39
4	#5350.00	49.14 AV	54.00	-4.86	1.13 V	342	11.75	37.39
5	#10640.00	63.57 PK	74.00	-10.43	1.39 V	135	16.85	46.72
5	#10640.00	50.27 AV	54.00	-3.73	1.39 V	135	3.55	46.72

- NOTE:**
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 falling in the restricted band.

802.11a OFDM modulation (with Antenna 4)

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 72%RH, 991hPa	TEST MODE	C
TESTED BY	Match Tsui		

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	1260.00	43.40 PK	68.30	-24.90	1.13 H	235	16.14	27.26
2	*5180.00	100.26 PK			1.22 H	280	63.17	37.09
2	*5180.00	90.13 AV			1.22 H	280	53.04	37.09
3	10360.00	54.84 PK	68.30	-13.46	1.10 H	30	8.78	46.06

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	#1440.00	44.30 PK	74.00	-29.70	1.08 V	1	16.36	27.95
1	#1440.00	40.95 AV	54.00	-13.05	1.08 V	1	13.01	27.95
2	3453.00	44.44 PK	68.30	-23.86	1.03 V	357	11.56	32.88
3	#5150.00	62.32 PK	74.00	-11.68	1.16 V	360	25.27	37.05
3	#5150.00	51.97 AV	54.00	-2.03	1.16 V	360	14.91	37.05
4	*5180.00	108.76 PK			1.16 V	360	71.67	37.09
4	*5180.00	97.87 AV			1.16 V	360	60.78	37.09
5	10360.00	54.74 PK	68.30	-13.56	1.09 V	6	8.68	46.06

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 72%RH, 991hPa	TEST MODE	C
TESTED BY	Match Tsui		

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	1260.00	44.15 PK	68.30	-24.15	1.24 H	135	16.89	27.26
2	*5240.00	103.20 PK			1.36 H	284	66.00	37.20
2	*5240.00	93.40 AV			1.36 H	284	56.20	37.20
3	10480.00	54.80 PK	68.30	-13.50	1.21 H	350	8.44	46.36

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	#1440.00	44.80 PK	74.00	-29.20	1.21 V	160	16.85	27.95
1	#1440.00	41.12 AV	54.00	-12.88	1.21 V	160	13.17	27.95
2	*5240.00	111.01 PK			1.09 V	1	73.81	37.20
2	*5240.00	100.10 AV			1.09 V	1	62.90	37.20
3	10480.00	55.49 PK	68.30	-12.81	1.10 V	150	9.13	46.36

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 72%RH, 991hPa	TEST MODE	C
TESTED BY	Match Tsui		

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	1260.00	44.80 PK	68.30	-23.50	1.11 H	350	17.54	27.26
2	*5260.00	103.81 PK			1.34 H	286	66.56	37.25
2	*5260.00	93.37 AV			1.34 H	286	56.12	37.25
3	10520.00	55.23 PK	68.30	-13.07	1.07 H	186	8.75	46.48

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	#1440.00	44.65 PK	74.00	-29.35	1.08 V	250	16.70	27.95
1	#1440.00	41.06 AV	54.00	-12.94	1.08 V	250	13.11	27.95
2	*5260.00	110.80 PK			1.19 V	286	73.55	37.25
2	*5260.00	100.18 AV			1.19 V	286	62.93	37.25
3	10520.00	55.21 PK	68.30	-13.09	1.10 V	300	8.73	46.48

- NOTE:**
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 falling in the restricted band.

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
CHANNEL	Channel 8	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 72%RH, 991hPa	TEST MODE	C
TESTED BY	Match Tsui		

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	1260.00	43.85 PK	68.30	-24.45	1.04 H	130	16.59	27.26
2	*5320.00	101.08 PK			1.15 H	106	63.72	37.36
2	*5320.00	90.58 AV			1.15 H	106	53.22	37.36
3	#5350.00	50.41 PK	74.00	-23.59	1.15 H	106	13.02	37.39
3	#5350.00	39.91 AV	54.00	-14.09	1.15 H	106	2.52	37.39
4	#10640.00	55.19 PK	74.00	-18.81	1.07 H	350	8.47	46.72
4	#10640.00	42.36 AV	54.00	-11.64	1.07 H	350	-4.36	46.72

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	1260.00	44.01 PK	68.30	-24.29	1.24 V	82	16.75	27.26
2	*5320.00	110.51 PK			1.06 V	1	73.15	37.36
2	*5320.00	100.31 AV			1.06 V	1	62.95	37.36
3	#5350.00	60.45 PK	74.00	-13.55	1.06 V	1	23.06	37.39
3	#5350.00	50.14 AV	54.00	-3.86	1.06 V	1	12.75	37.39
4	#10640.00	55.32 PK	74.00	-18.68	1.10 V	185	8.60	46.72
4	#10640.00	43.86 AV	54.00	-10.14	1.10 V	185	-2.86	46.72

- NOTE:**
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 falling in the restricted band.

4.3 PEAK TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

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

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

4.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 3MHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

NOTE:

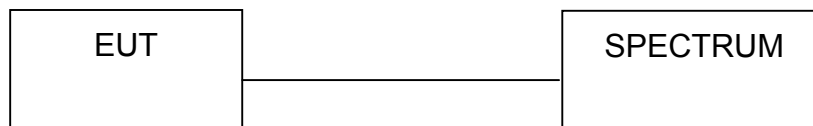
The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



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

802.11a OFDM modulation

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 52%RH, 991hPa
TESTED BY	Gary Chang		

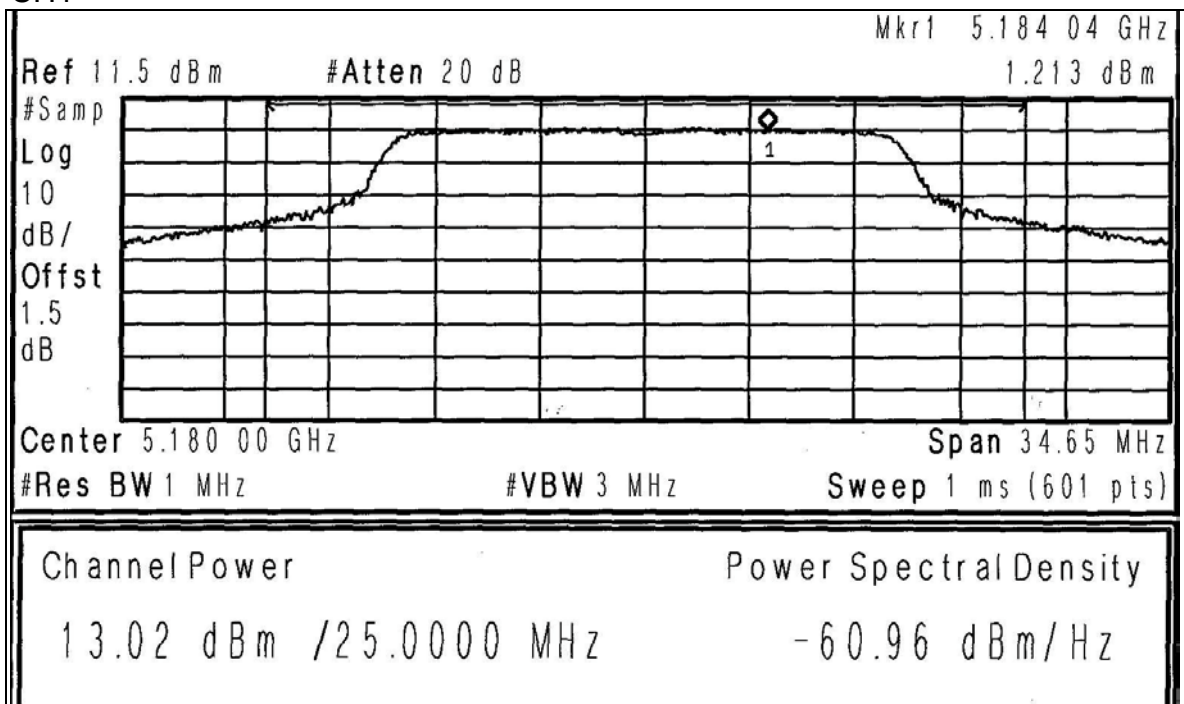
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	20.045	13.02	17.00	24.529	PASS
4	5240	39.446	15.96	17.00	27.014	PASS
5	5260	40.644	16.09	24.00	23.727	PASS
8	5320	38.905	15.90	24.00	25.170	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

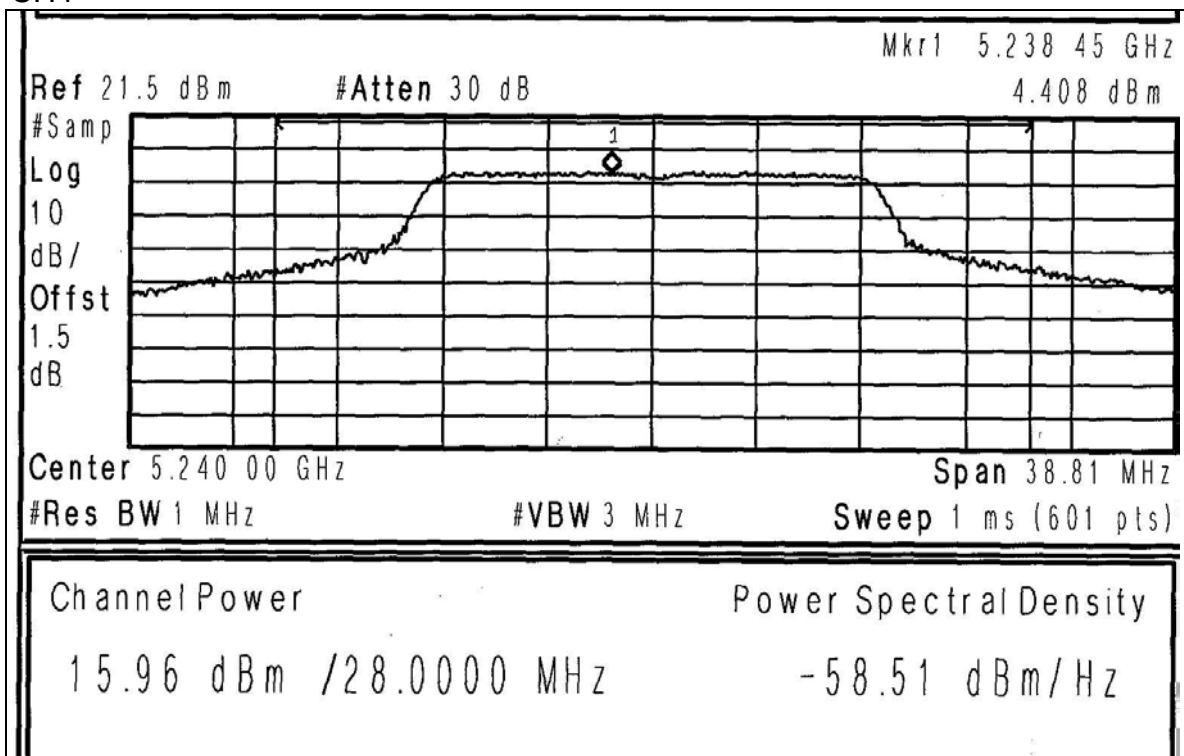


Peak Power Output:

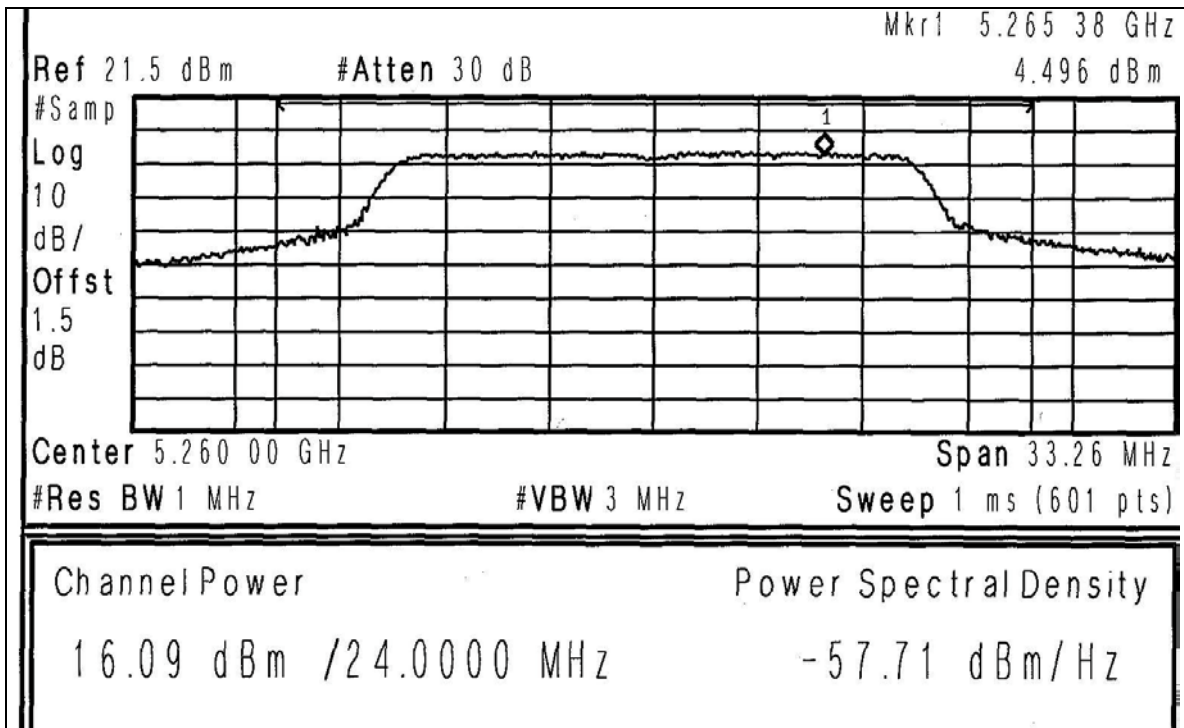
CH1



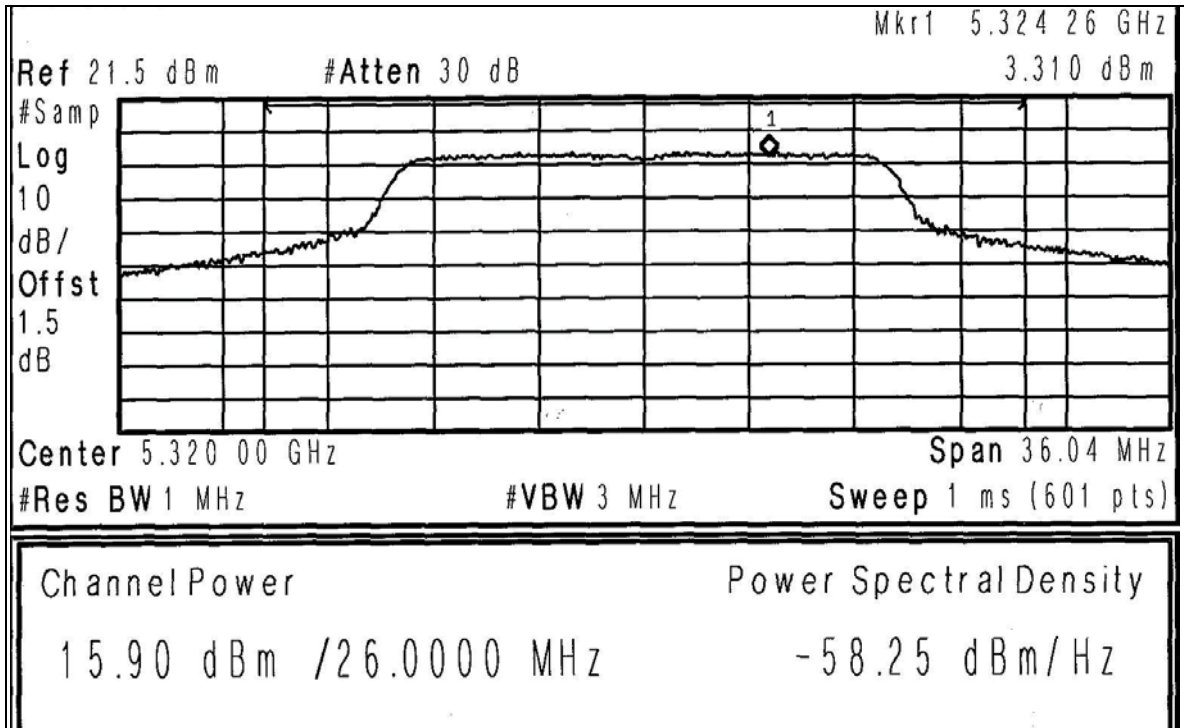
CH4



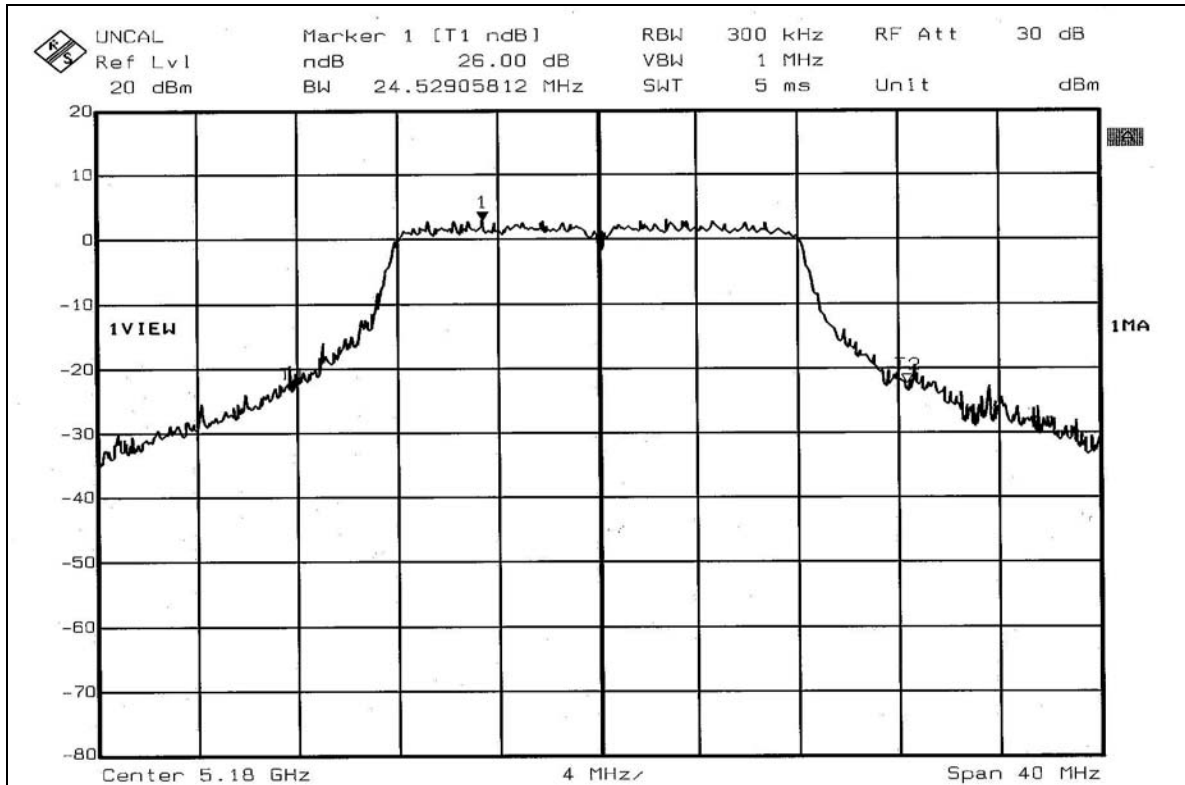
CH5



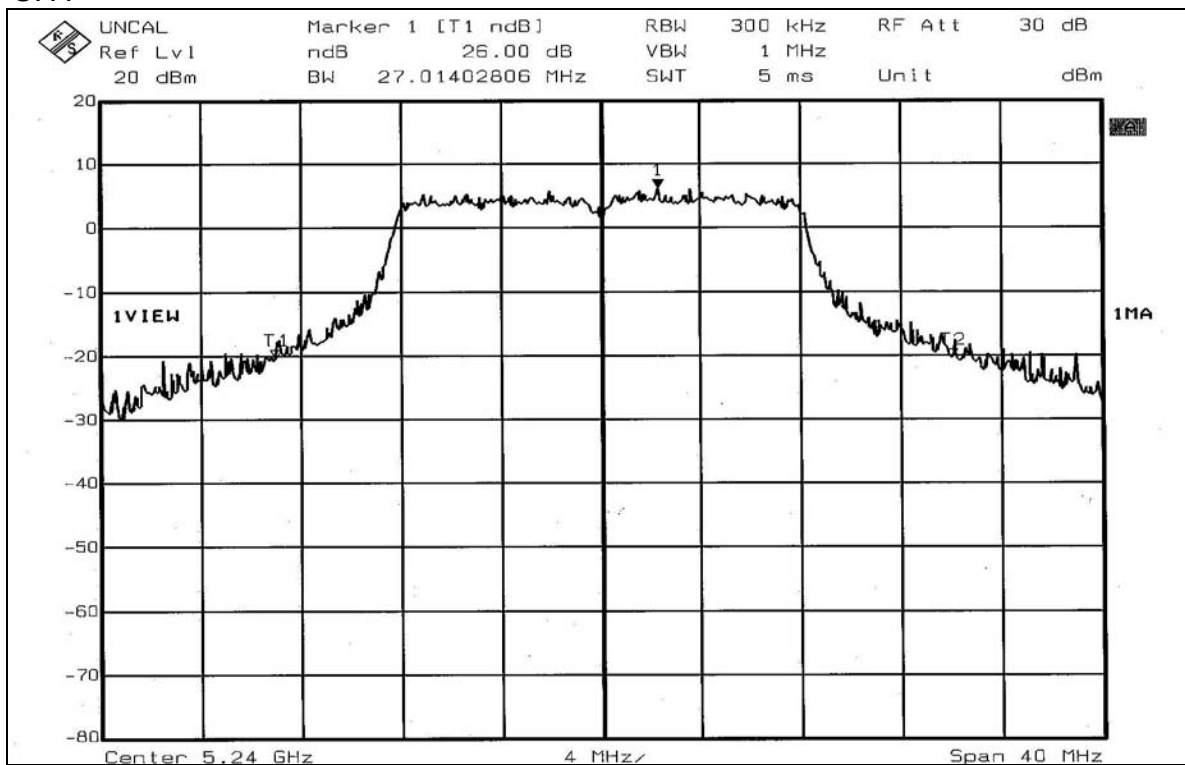
CH8



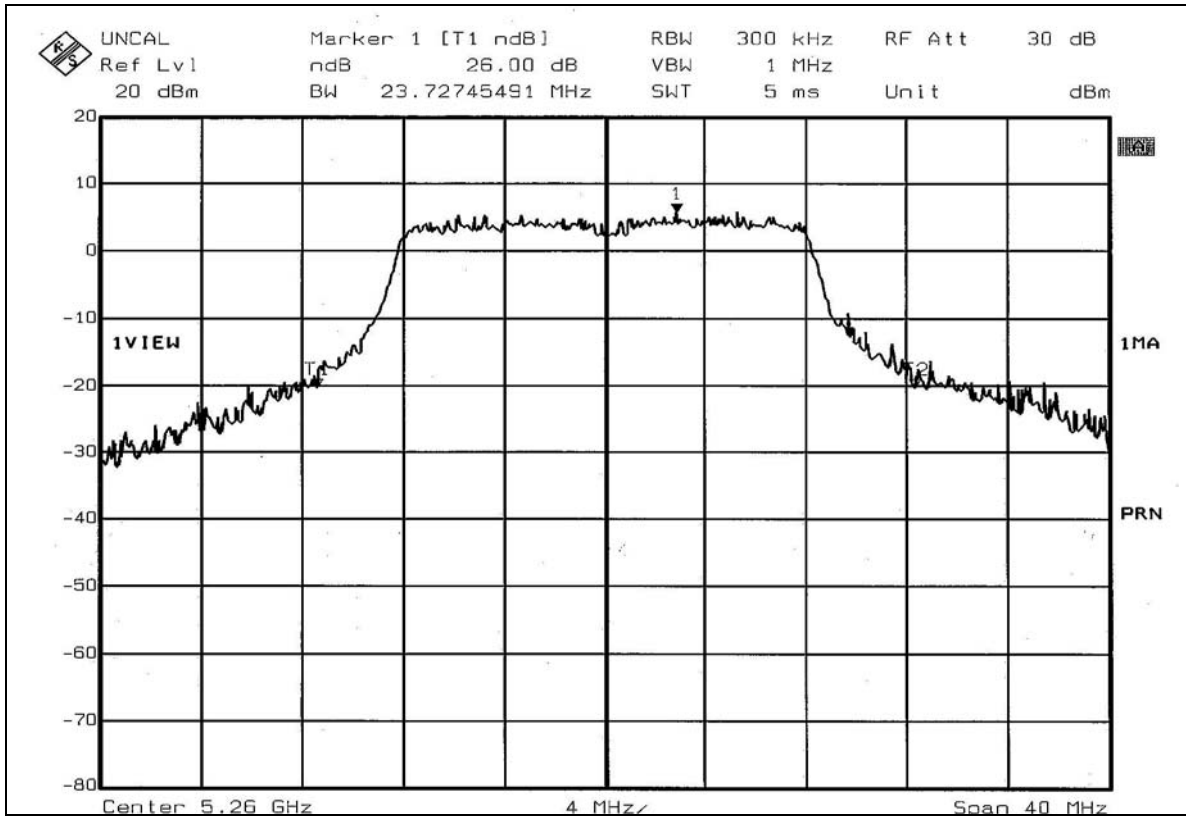
26dB Occupied Bandwidth:
CH1



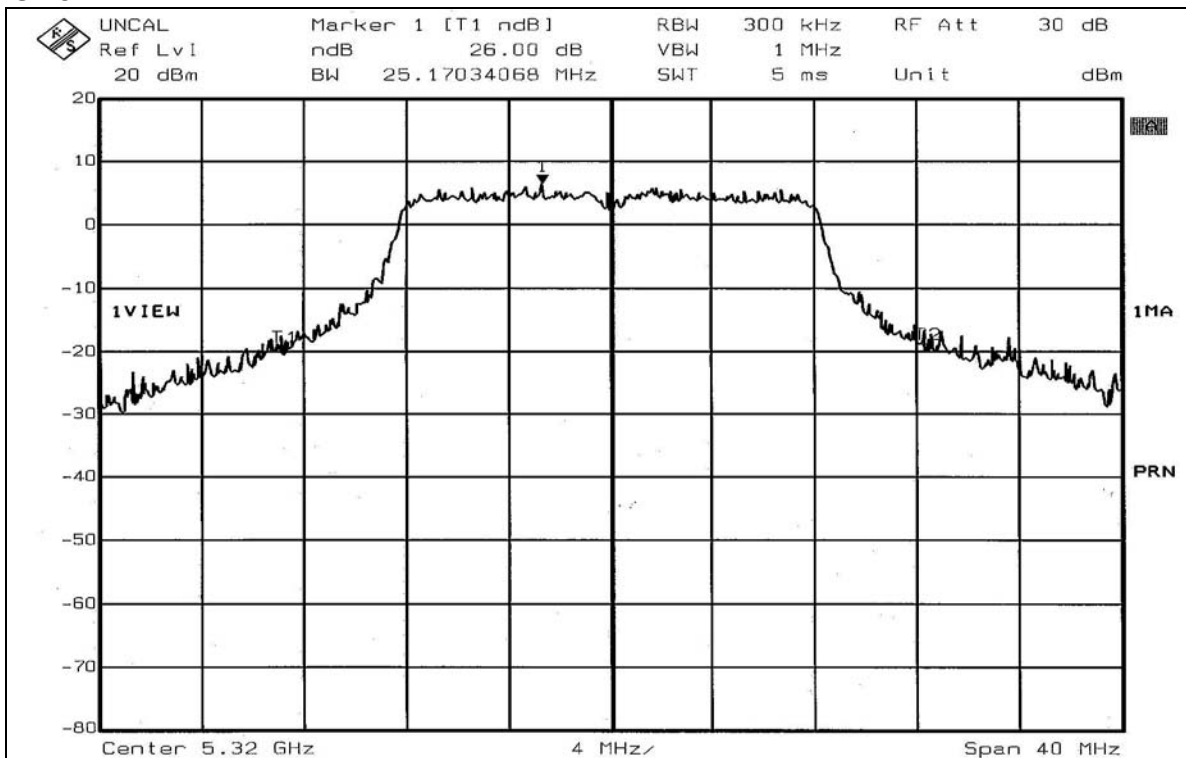
CH4



CH5



CH8



4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.725 – 5.825 GHz	13dB

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

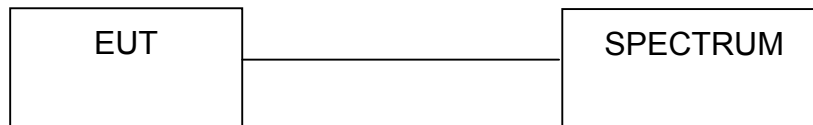
4.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=300KHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

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

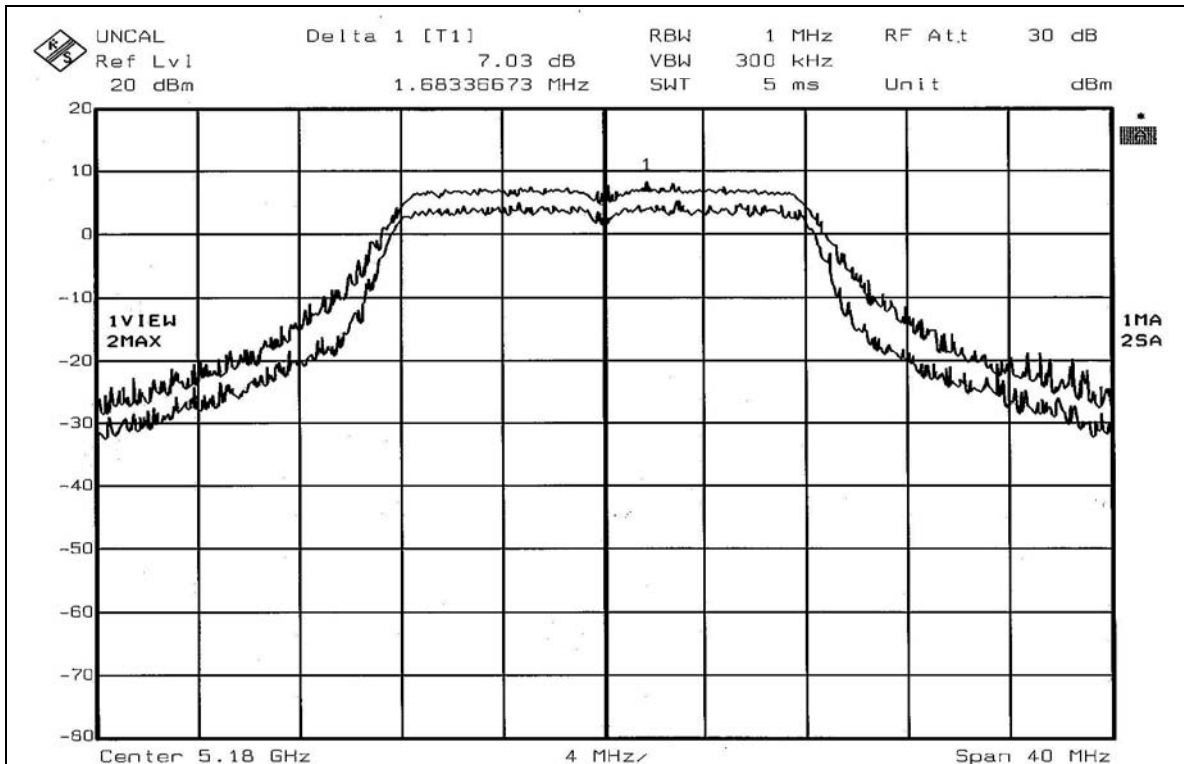
4.4.7 TEST RESULTS

802.11a OFDM modulation

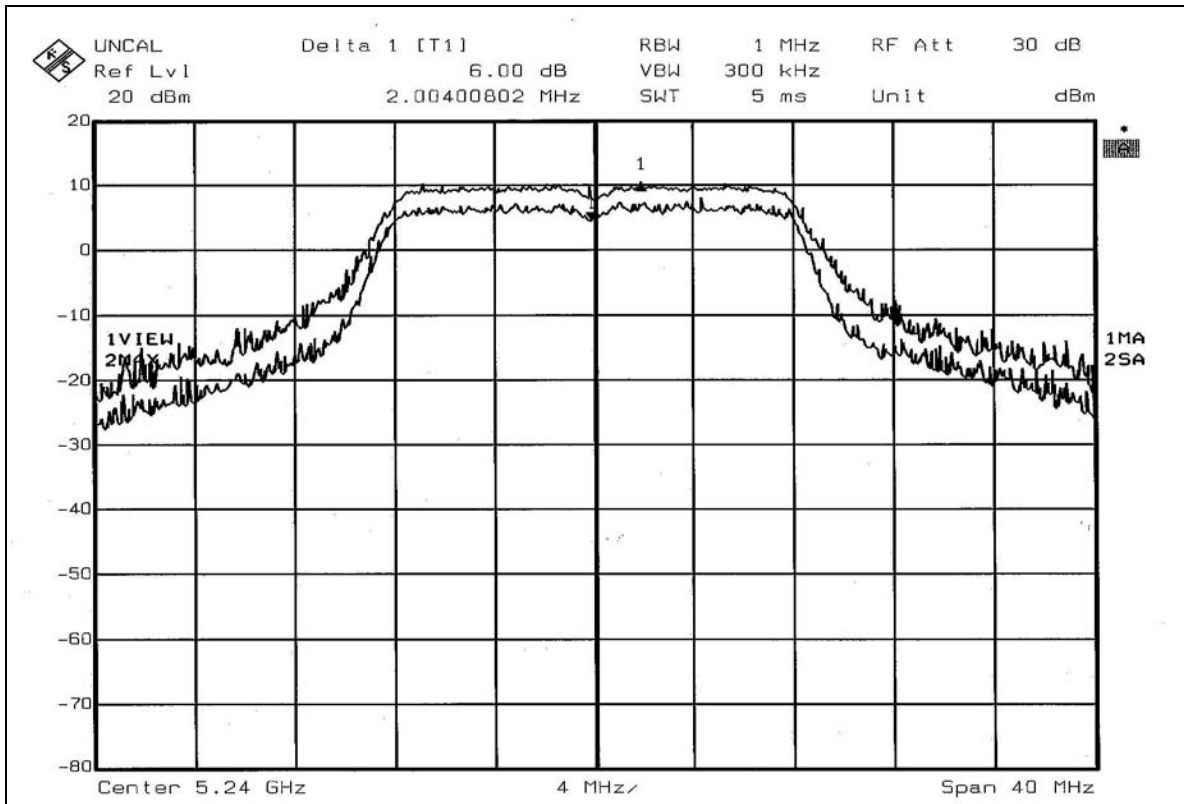
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 52%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	7.03	13	PASS
4	5240	6.00	13	PASS
5	5260	7.77	13	PASS
8	5320	6.49	13	PASS

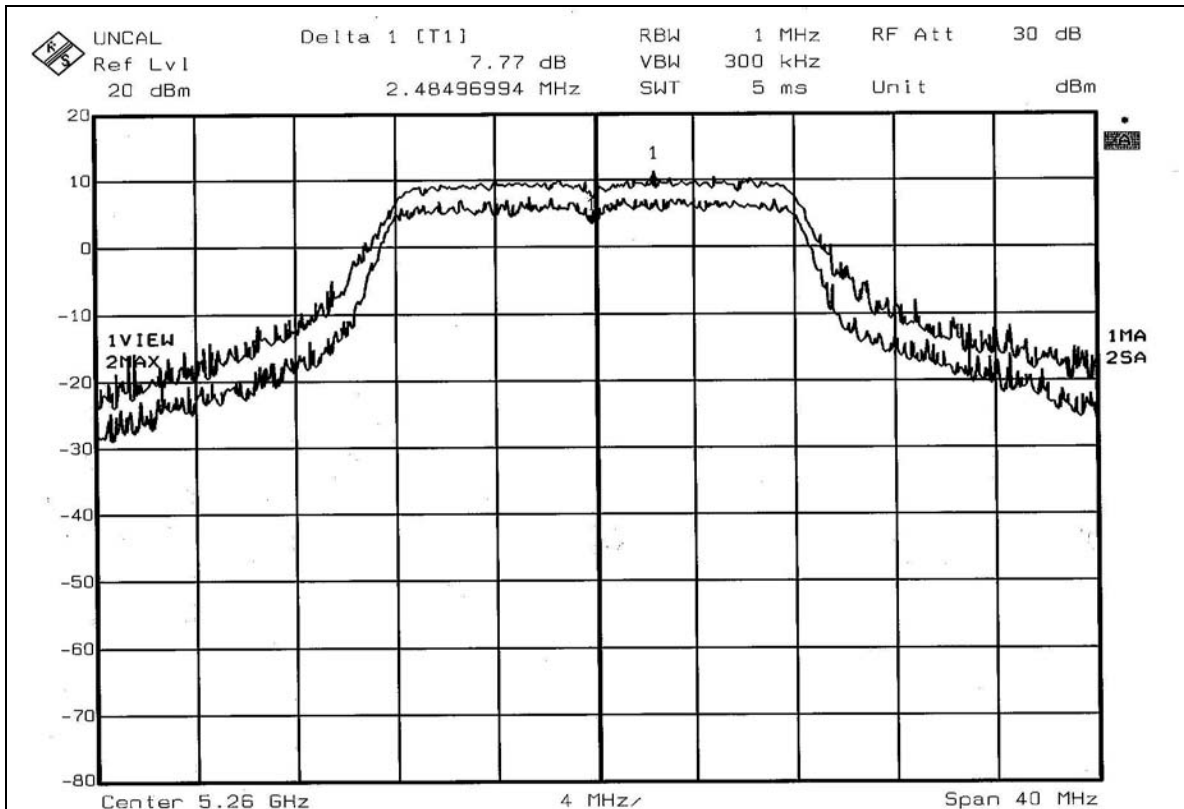
CH1



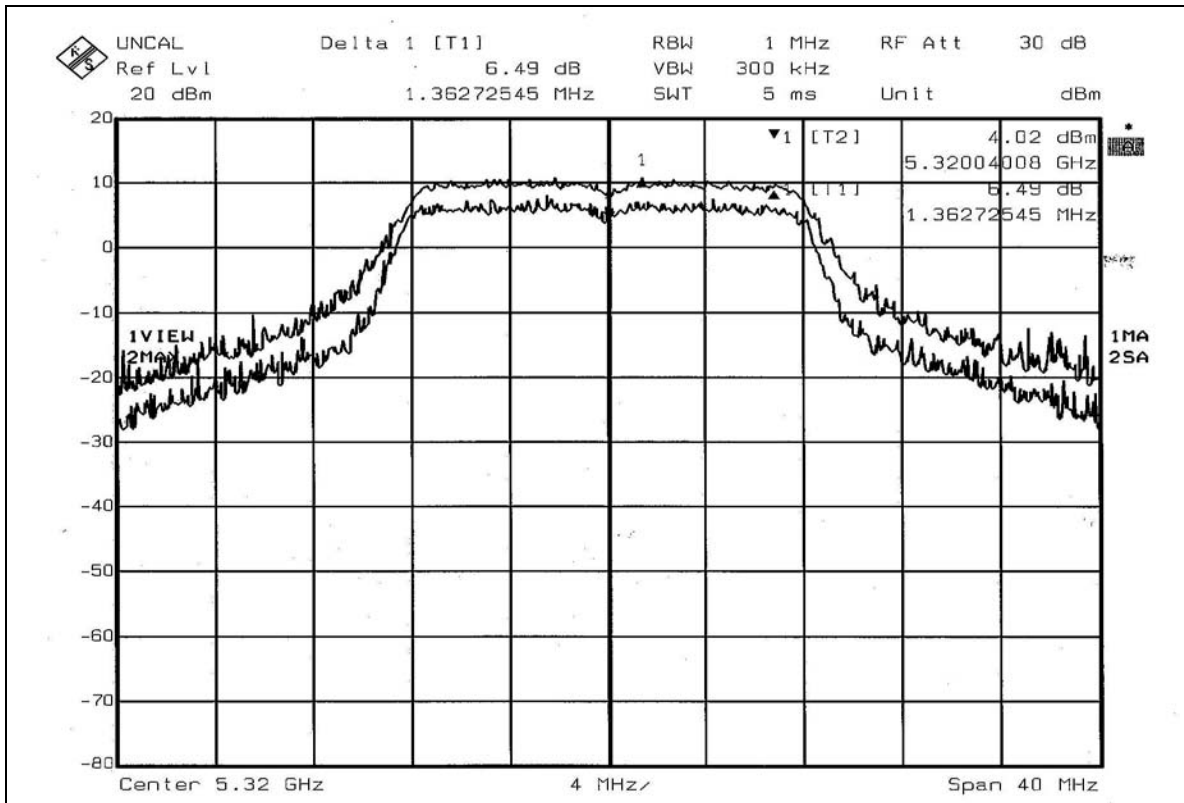
CH4



CH5



CH8



4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 ~ 5.25GHz	4dBm
5.25 ~ 5.35GHz	11dBm
5.725 ~ 5.825GHz	17dBm

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

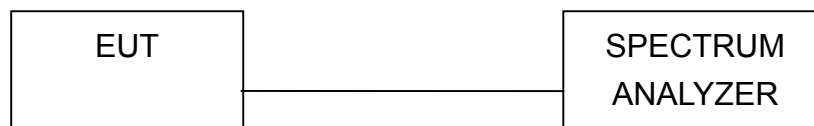
4.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6

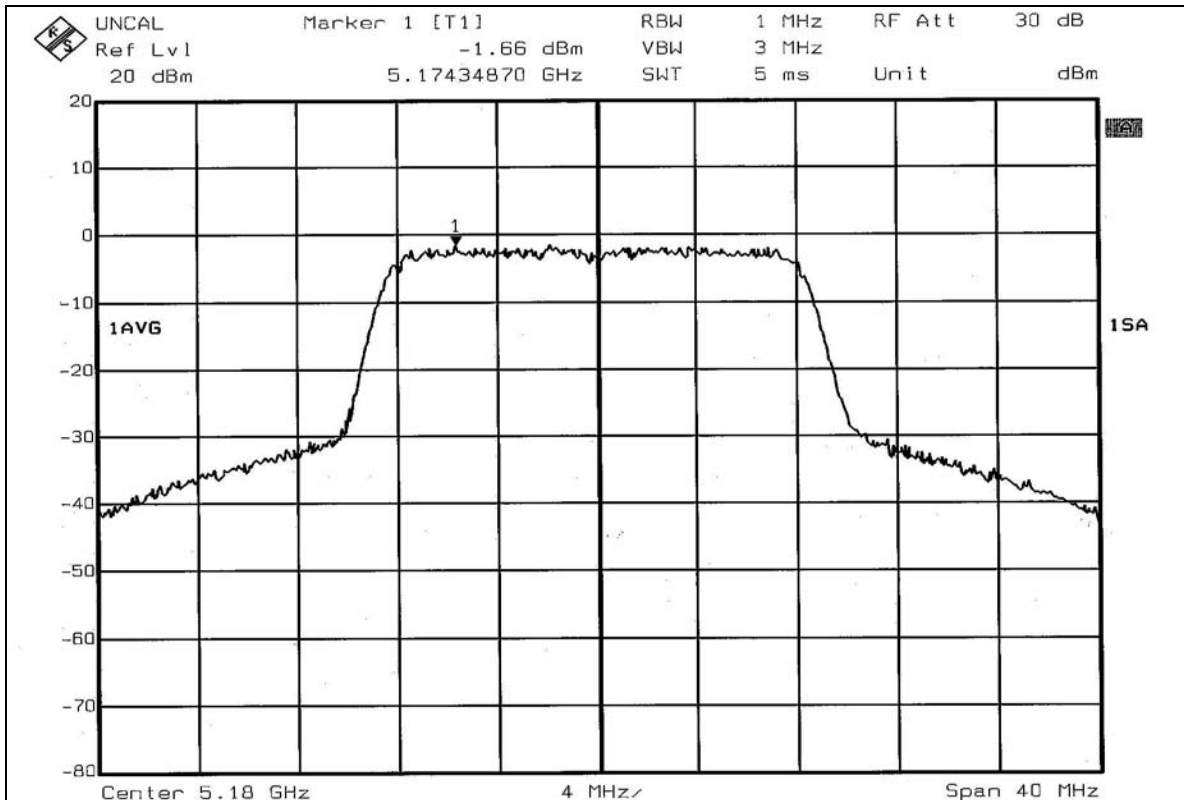
4.5.7 TEST RESULTS

802.11a OFDM modulation

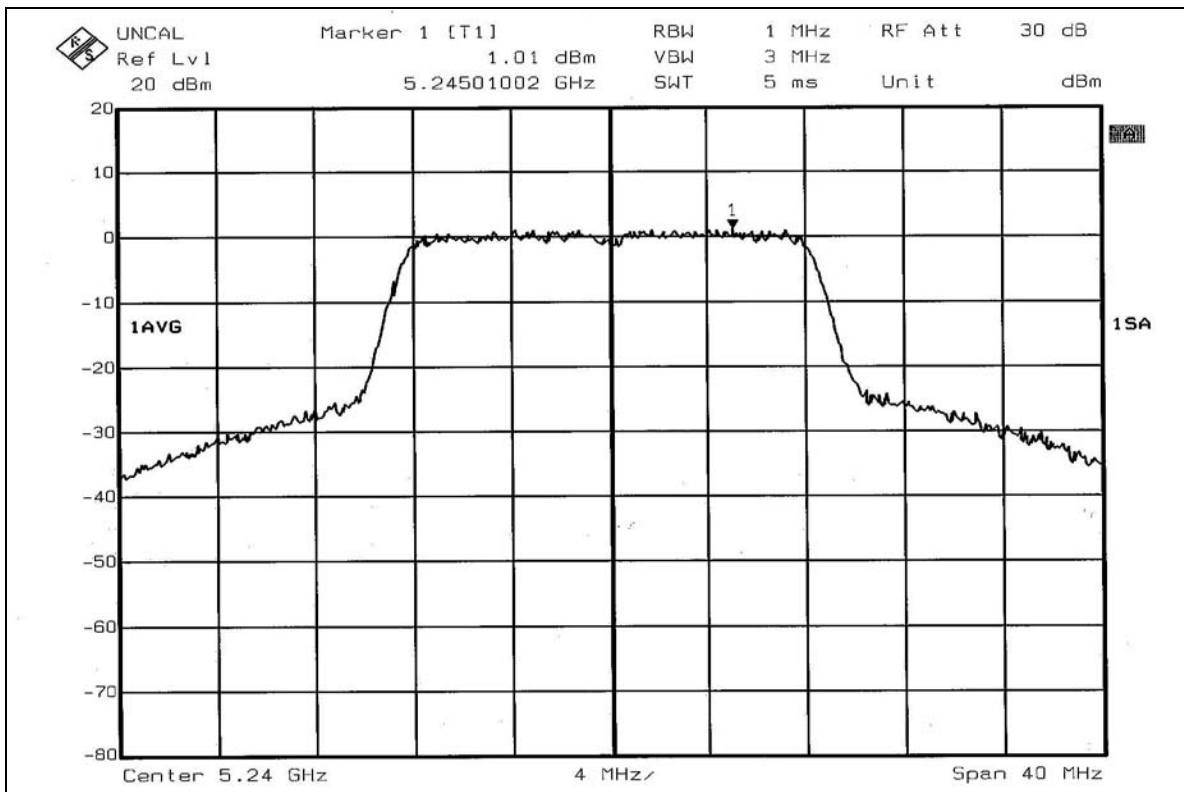
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	MODEL	WVM1104-Rx
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 52%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-1.66	4	PASS
4	5240	1.01	4	PASS
5	5260	0.65	11	PASS
8	5320	1.20	11	PASS

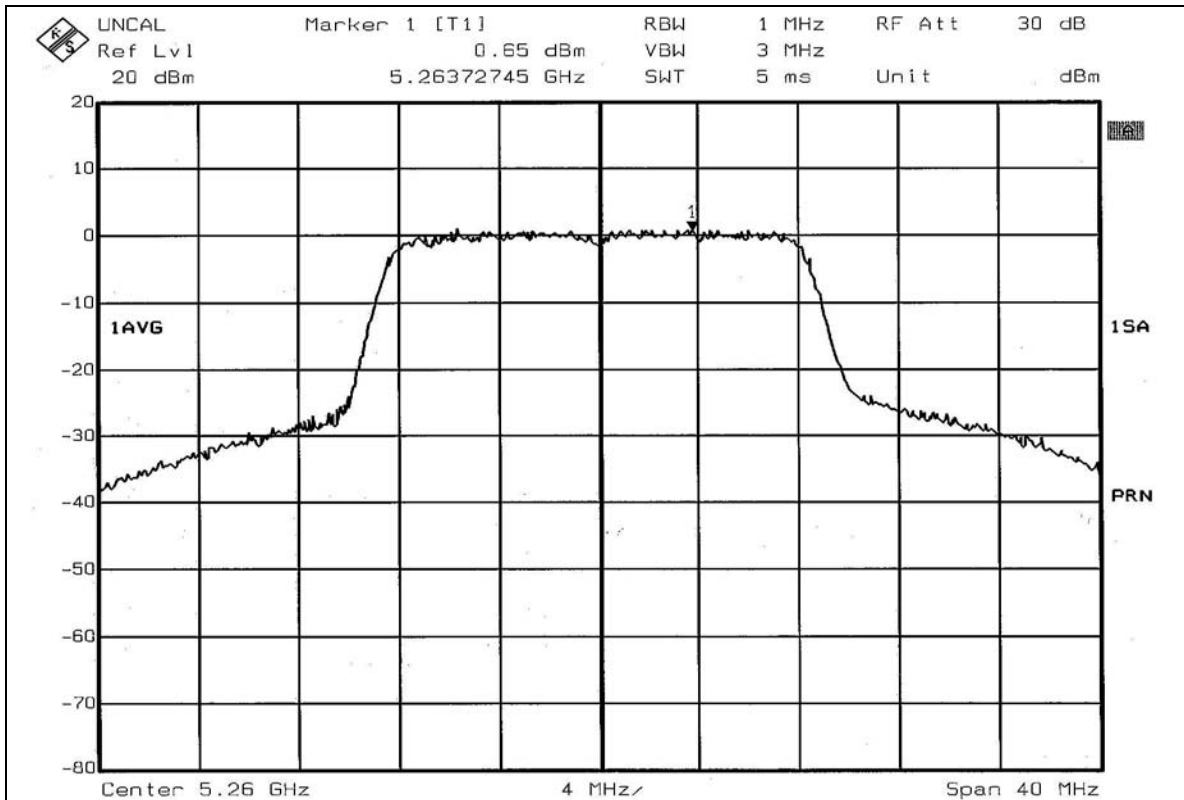
CH1



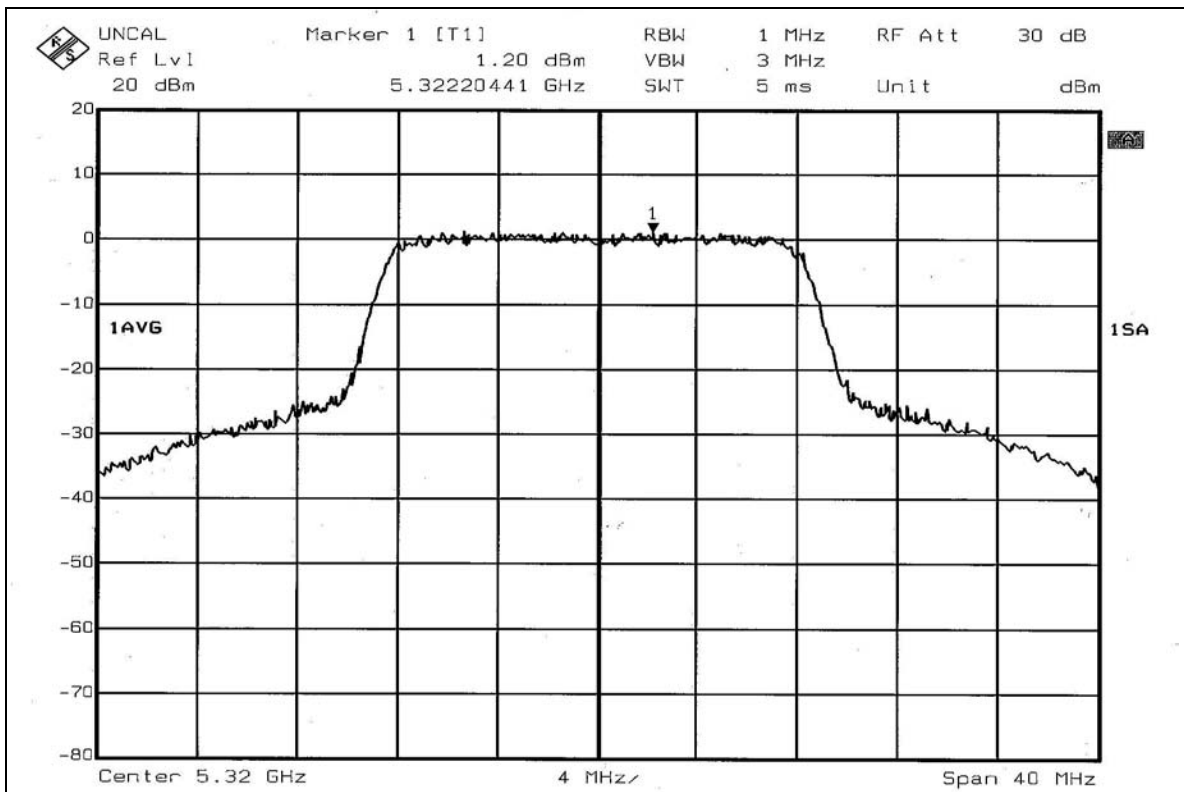
CH4



CH5



CH8



4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	Mar. 09, 2006
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W981030	Jul. 18, 2005

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

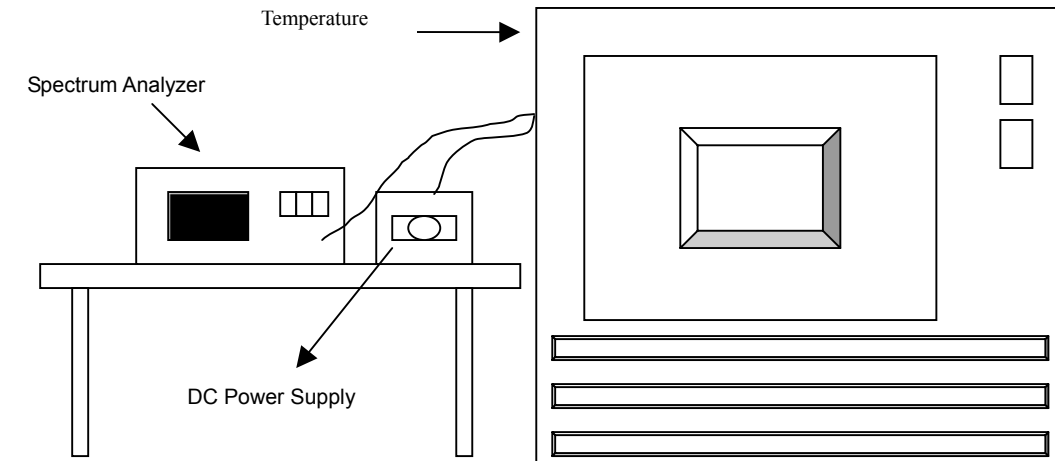
4.6.3 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. 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.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. 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.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

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

4.6.7 TEST RESULTS

Operating frequency: 5320MHz						Limit : $\pm 0.015\%$			
Temp. (°C)	Power supply (Vac)	0 minute		2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	138	5319.9718	-0.0005301	5319.9720	-0.0005263	5319.9724	-0.0005188	5319.9721	-0.0005244
	120	5139.9720	-0.0005263	5319.9723	-0.0005207	5319.9722	-0.0005226	5319.9718	-0.0005301
	102	5319.9723	-0.0005207	5319.9725	-0.0005169	5319.9720	-0.0005263	5319.9716	-0.0005338
40	138	5139.9745	-0.0004793	5319.9748	-0.0004737	5319.9739	-0.0004906	5319.9738	-0.0004925
	120	5319.9740	-0.0004887	5319.9743	-0.0004831	5319.9737	-0.0004944	5319.9742	-0.0004850
	102	5319.9737	-0.0004944	5319.9740	-0.0004887	5319.9735	-0.0004981	5319.9744	-0.0004812
30	138	5319.9765	-0.0004417	5319.9750	-0.0004699	5319.9756	-0.0004586	5319.9762	-0.0004474
	120	5319.9760	-0.0004511	5319.9758	-0.0004549	5319.9749	-0.0004718	5319.9760	-0.0004511
	102	5319.9762	-0.0004474	5319.9754	-0.0004624	5319.9752	-0.0004662	5319.9757	-0.0004568
20	138	5319.9821	-0.0003365	5319.9817	-0.0003440	5319.9812	-0.0003534	5319.9807	-0.0003628
	120	5319.9815	-0.0003477	5319.9813	-0.0003515	5319.9802	-0.0003722	5319.9810	-0.0003571
	102	5319.9812	-0.0003534	5319.9818	-0.0003421	5319.9805	-0.0003665	5319.9805	-0.0003665
10	138	5319.9748	-0.0004737	5319.9746	-0.0004774	5319.9742	-0.0004850	5319.9740	-0.0004887
	120	5319.9752	-0.0004662	5319.9749	-0.0004718	5319.9740	-0.0004887	5319.9737	-0.0004944
	102	5319.9756	-0.0004586	5319.9750	-0.0004699	5319.9747	-0.0004756	5319.9735	-0.0004981
0	138	5319.9834	-0.0003120	5319.9831	-0.0003177	5319.9830	-0.0003195	5319.9837	-0.0003064
	120	5319.9828	-0.0003233	5319.9837	-0.0003064	5319.9836	-0.0003083	5319.9841	-0.0002989
	102	5319.9826	-0.0003271	5319.9839	-0.0003026	5319.9840	-0.0003008	5319.9843	-0.0002951
-10	138	5319.9949	-0.0000959	5319.9950	-0.0000940	5319.9948	-0.0000977	5319.9947	-0.0000996
	120	5319.9941	-0.0001109	5319.9947	-0.0000996	5319.9951	-0.0000921	5319.9945	-0.0001034
	102	5319.9945	-0.0001034	5319.9945	-0.0001034	5319.9952	-0.0000902	5319.9943	-0.0001071
-20	138	5320.0036	0.0000677	5320.0042	0.0000789	5320.0044	0.0000827	5320.0047	0.0000883
	120	5320.0039	0.0000733	5320.0045	0.0000846	5320.0046	0.0000865	5320.0046	0.0000865
	102	5320.0043	0.0000808	5320.0047	0.0000883	5320.0050	0.0000940	5320.0043	0.0000808
-30	138	5320.0085	0.0001598	5320.0091	0.0001711	5320.0090	0.0001692	5320.0095	0.0001786
	120	5320.0087	0.0001635	5320.0093	0.0001748	5320.0094	0.0001767	5320.0094	0.0001767
	102	5320.0092	0.0001729	5320.0096	0.0001805	5320.0097	0.0001823	5320.0098	0.0001842

4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

4.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set both RBW and VBW of spectrum analyzer to 1MHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges were measured and recorded.

4.7.3 EUT OPERATING CONDITION

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

4.7.4 TEST RESULTS

For signals in the restricted bands above and below the 5.15 to 5.35GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Peak RBW=VBW=1MHz; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.

**802.11a OFDM modulation****Antenna 1 & 2:****Channel 1 (5180MHz)**

The band edge emission plot on the page 66 shows 42.59dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 108.84dBuV/m (Peak), so the maximum field strength in restrict band is $108.84 - 42.59 = 66.25$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the page 66 shows 48.64dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 97.95dBuV/m (Average), so the maximum field strength in restrict band is $97.95 - 48.64 = 49.31$ dBuV/m which is under 54dBuV/m limit.

Channel 8 (5320MHz)

The band edge emission plot on the page 67 shows 46.29dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 110.57dBuV/m (Peak), so the maximum field strength in restrict band is $110.57 - 46.29 = 64.28$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the page 68 shows 50.41dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 100.23dBuV/m (Average), so the maximum field strength in restrict band is $100.23 - 50.41 = 49.82$ dBuV/m which is under 54dBuV/m limit.

**Antenna 3:****Channel 1 (5180MHz)**

The band edge emission plot on the page 66 shows 42.59dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 105.36dBuV/m (Peak), so the maximum field strength in restrict band is $105.36 - 42.59 = 62.77$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the page 66 shows 48.64dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 95.74dBuV/m (Average), so the maximum field strength in restrict band is $95.74 - 48.64 = 47.10$ dBuV/m which is under 54dBuV/m limit.

Channel 8 (5320MHz)

The band edge emission plot on the page 67 shows 46.29dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 108.57dBuV/m (Peak), so the maximum field strength in restrict band is $108.57 - 46.29 = 62.28$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the page 68 shows 50.41dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 97.90dBuV/m (Average), so the maximum field strength in restrict band is $97.90 - 50.41 = 47.49$ dBuV/m which is under 54dBuV/m limit.

**Antenna 4:****Channel 1 (5180MHz)**

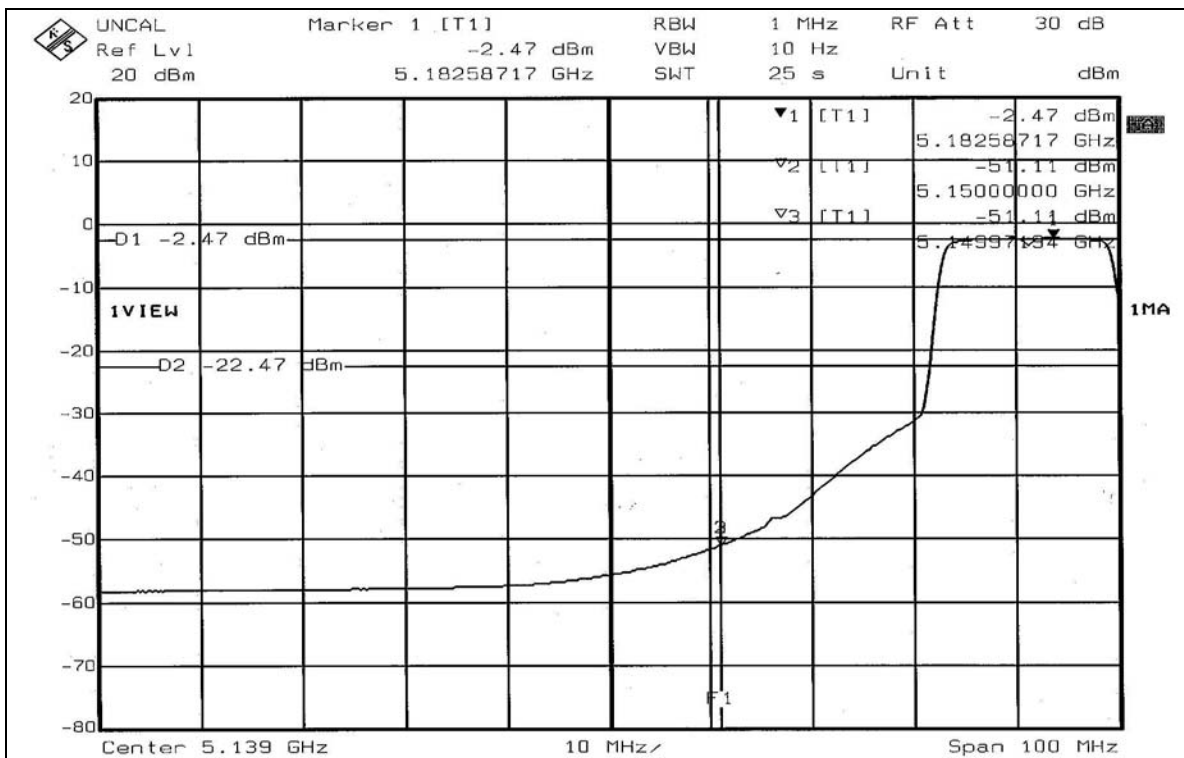
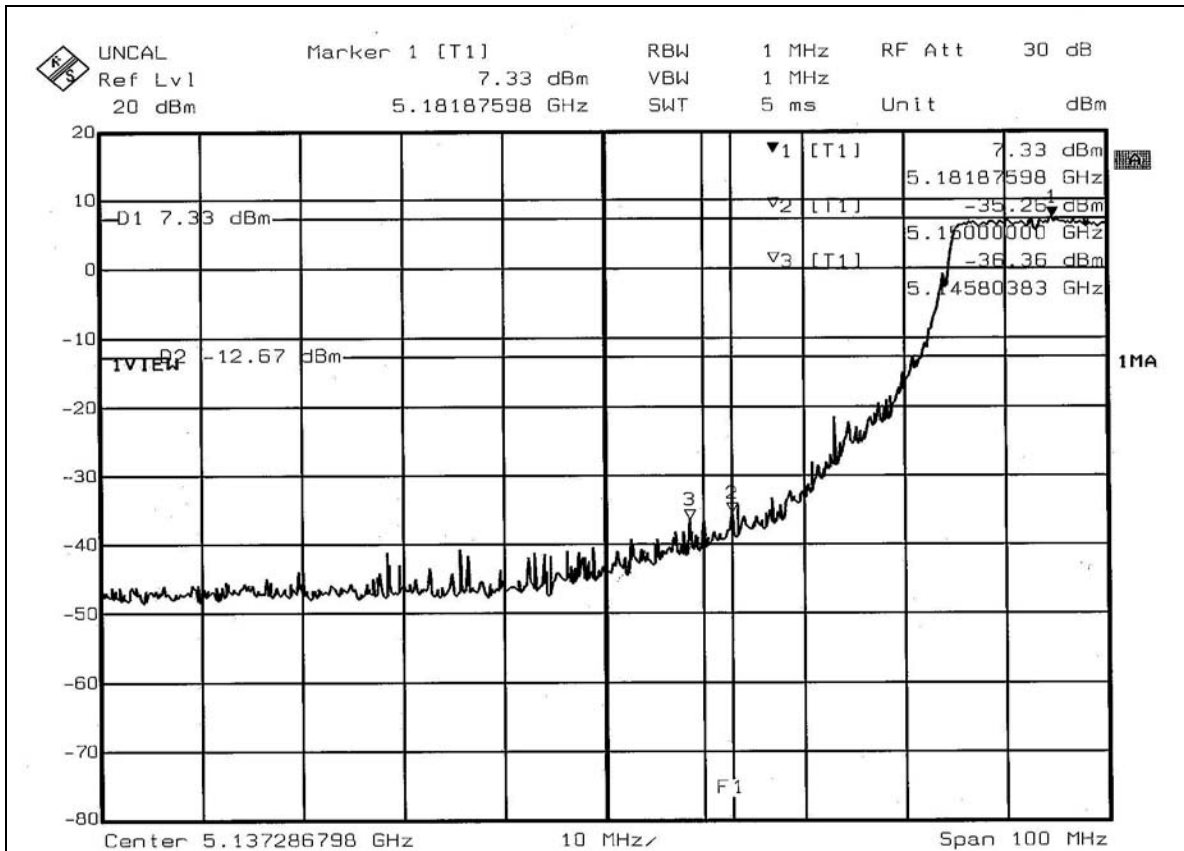
The band edge emission plot on the page 66 shows 42.59dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 108.76dBuV/m (Peak), so the maximum field strength in restrict band is $108.76 - 42.59 = 66.17$ dBuV/m which is under 74dBuV/m limit.

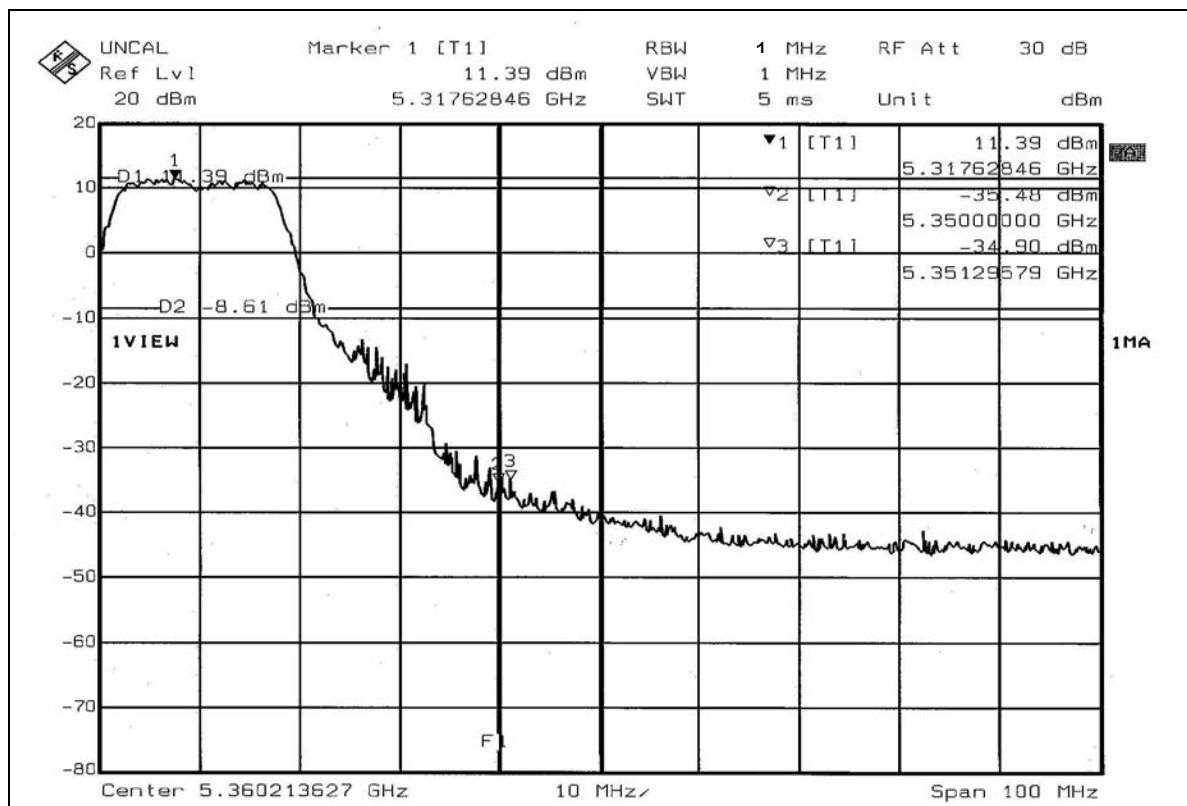
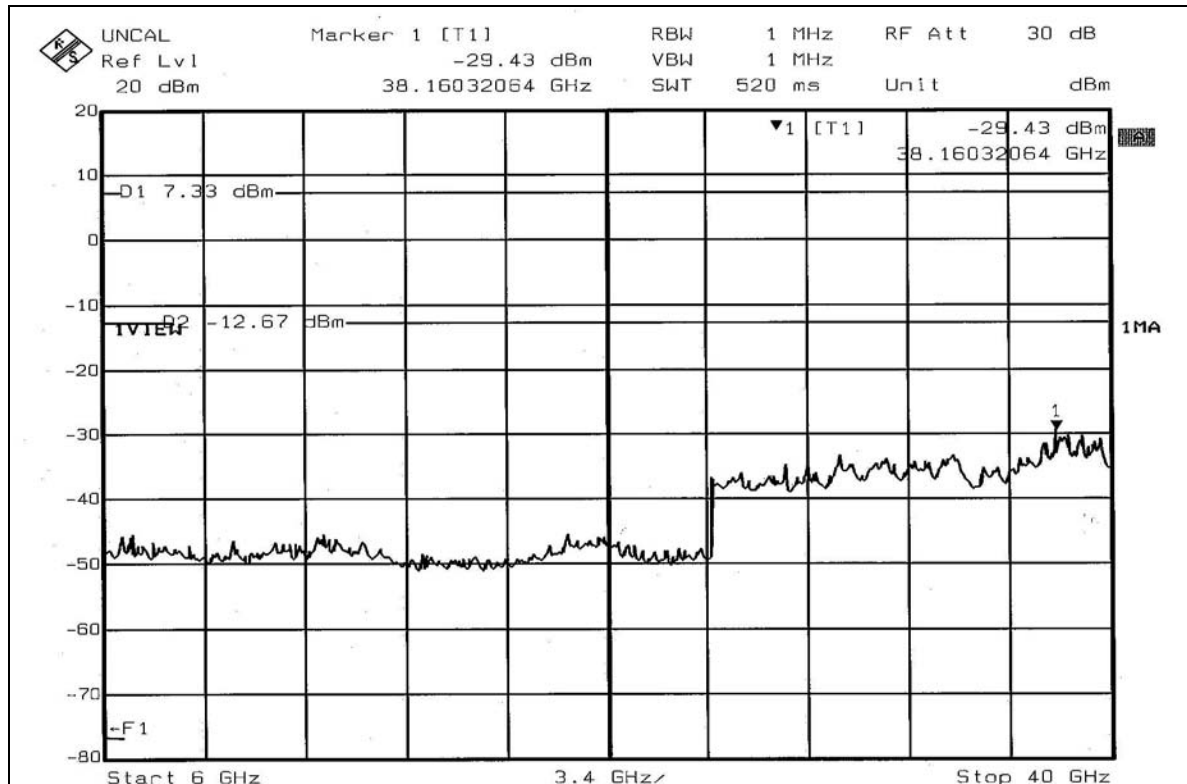
The band edge emission plot on the page 66 shows 48.64dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 97.87dBuV/m (Average), so the maximum field strength in restrict band is $97.87 - 48.64 = 49.23$ dBuV/m which is under 54dBuV/m limit.

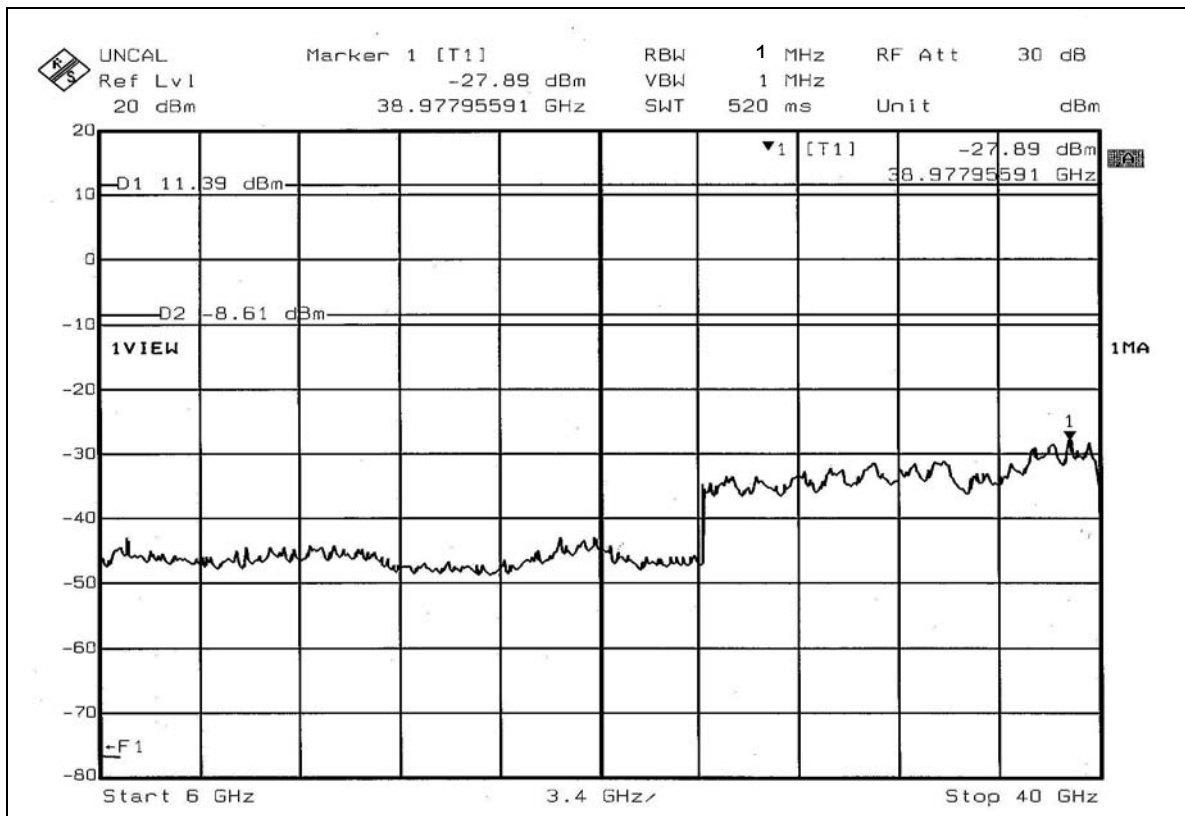
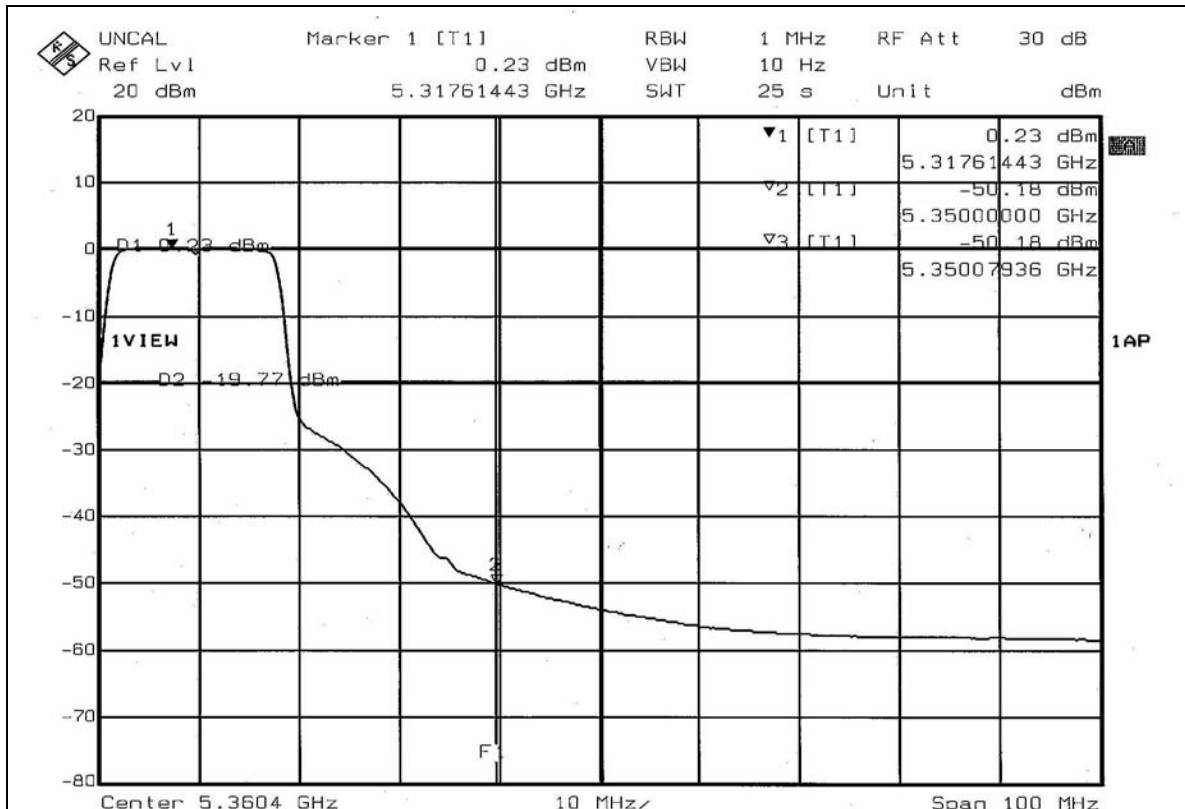
Channel 8 (5320MHz)

The band edge emission plot on the page 67 shows 46.29dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 110.51dBuV/m (Peak), so the maximum field strength in restrict band is $110.51 - 46.29 = 64.22$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the page 68 shows 50.41dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 100.31dBuV/m (Average), so the maximum field strength in restrict band is $100.31 - 50.41 = 49.90$ dBuV/m which is under 54dBuV/m limit.

802.11a OFDM modulation







4.8 ANTENNA REQUIREMENT

4.8.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

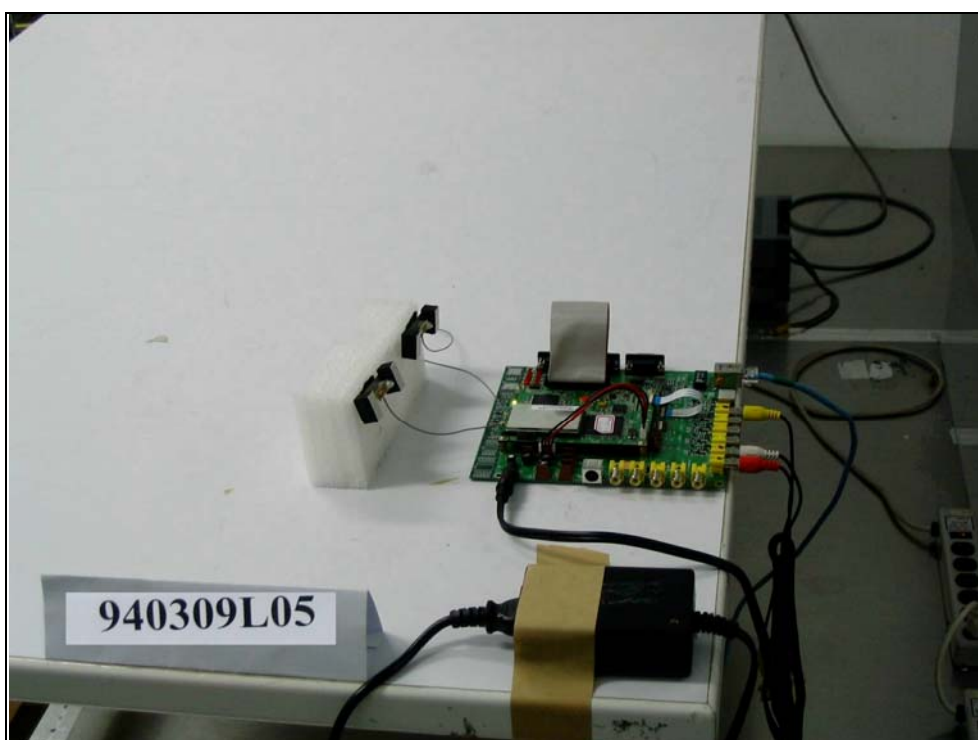
4.8.2 ANTENNA CONNECTED CONSTRUCTION

The antennas used in this product are PCB and Patch antenna with UFL antenna connector. The maximum Gain of the antenna is 5.2dBi.

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

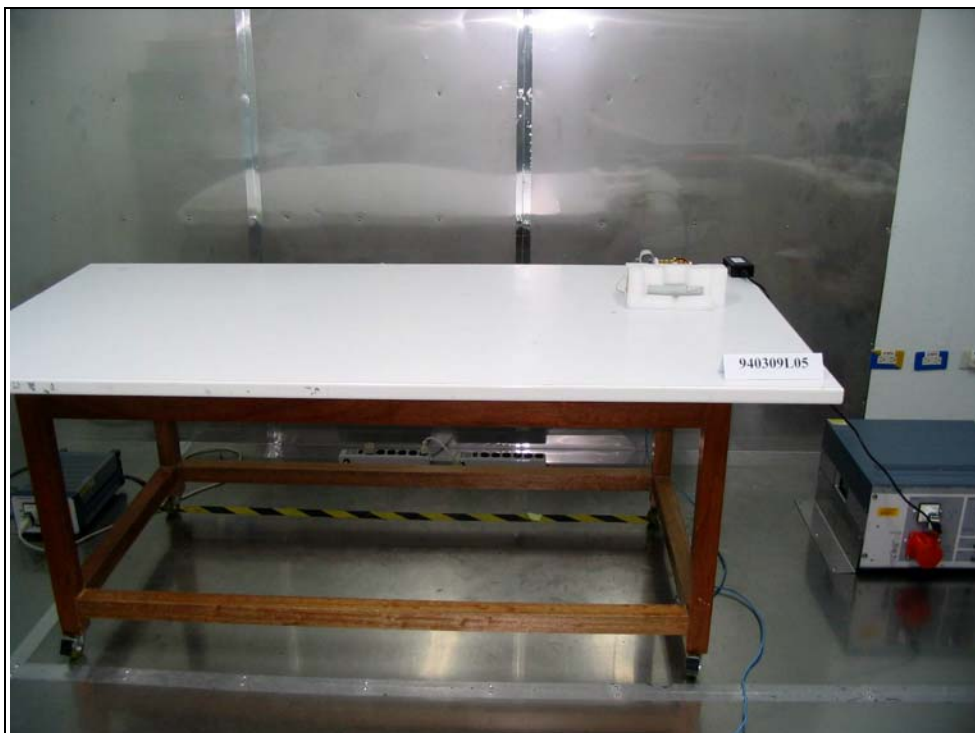
CONDUCTED EMISSION TEST

Antenna 1



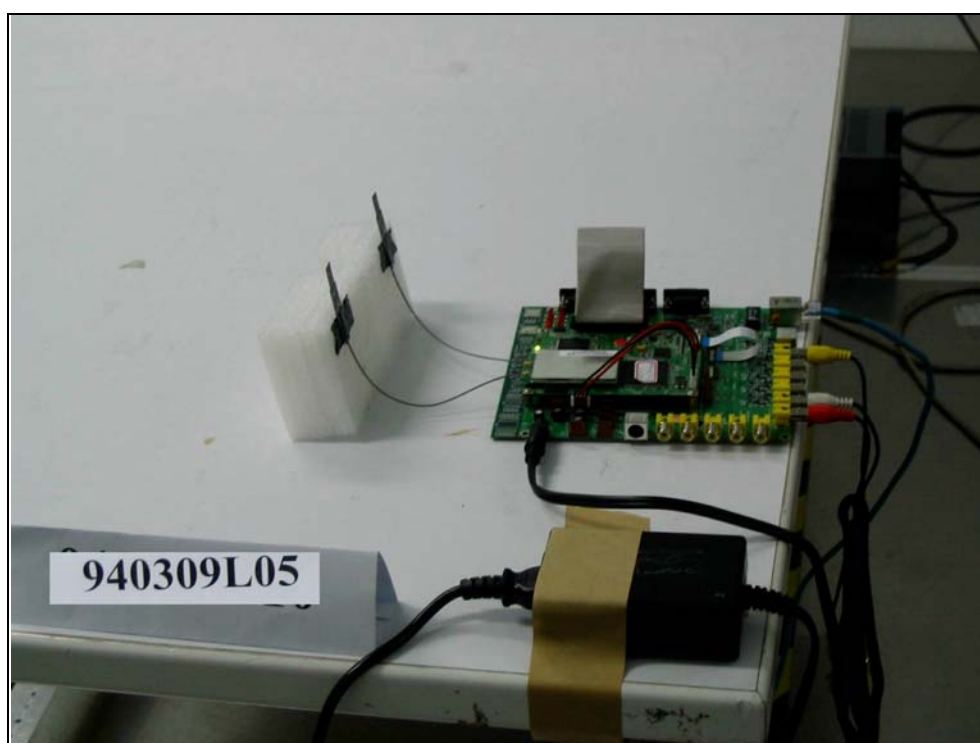


Antenna 2





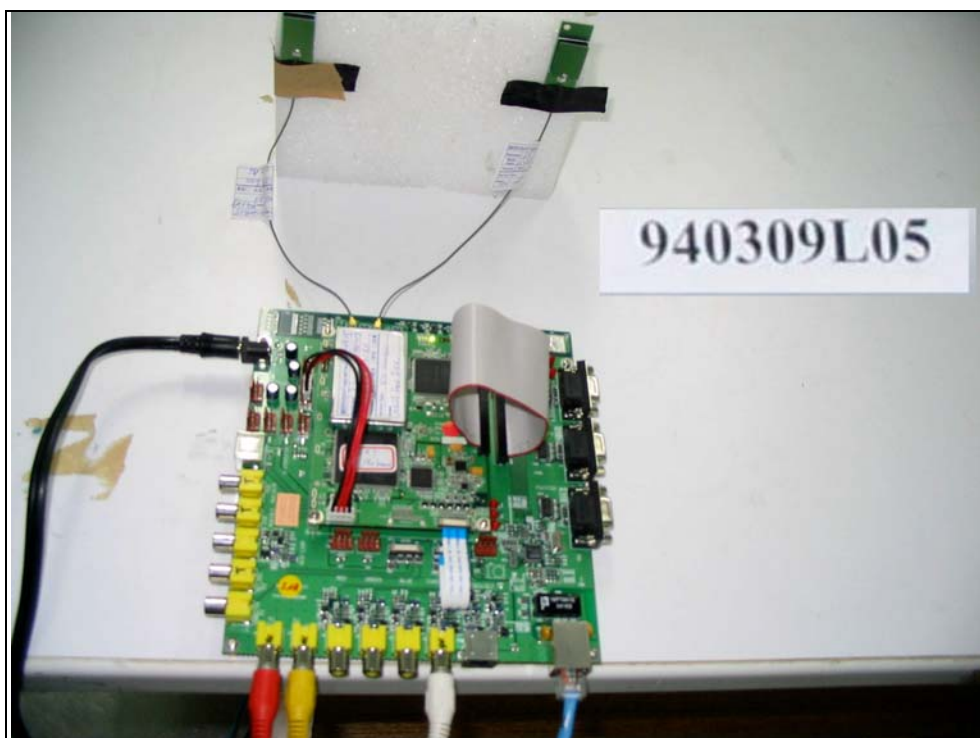
Antenna 3





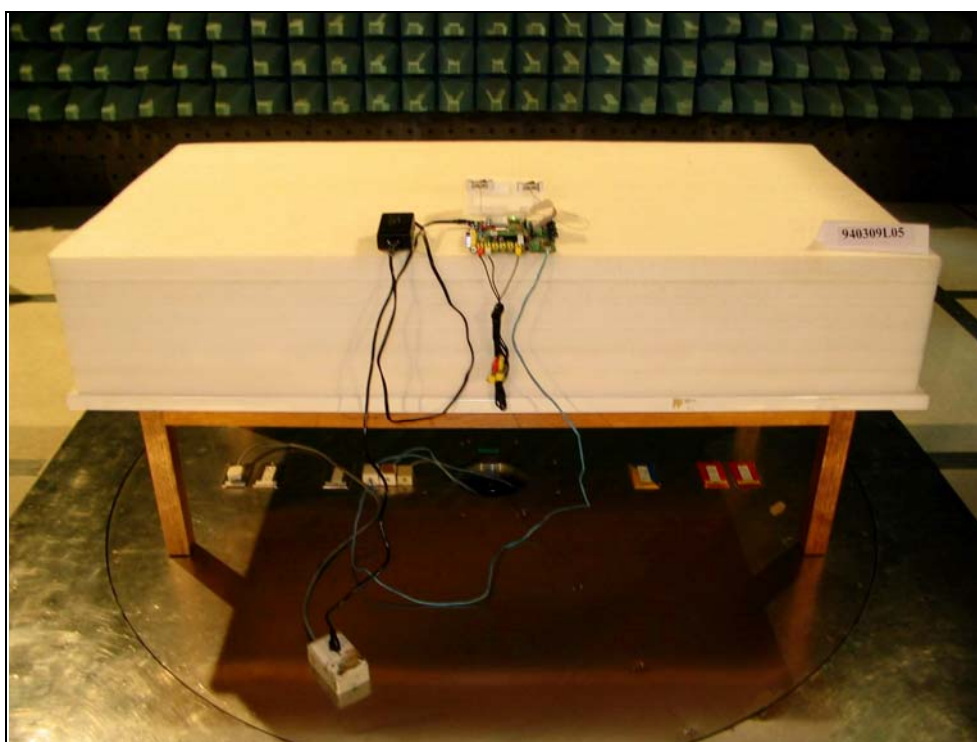
Antenna 4

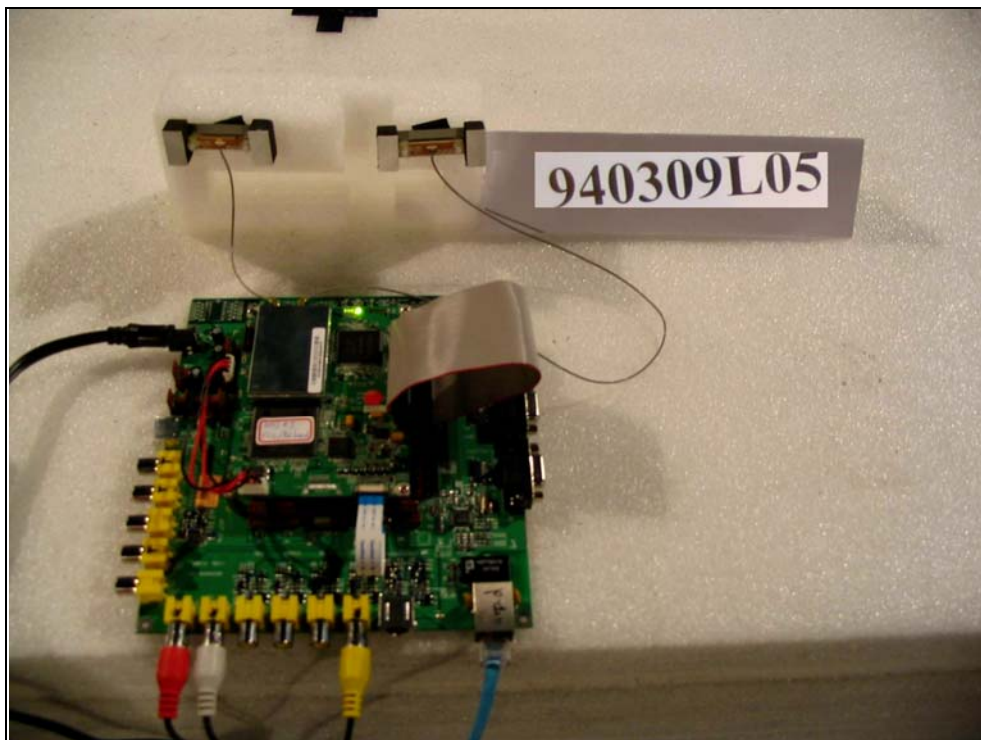




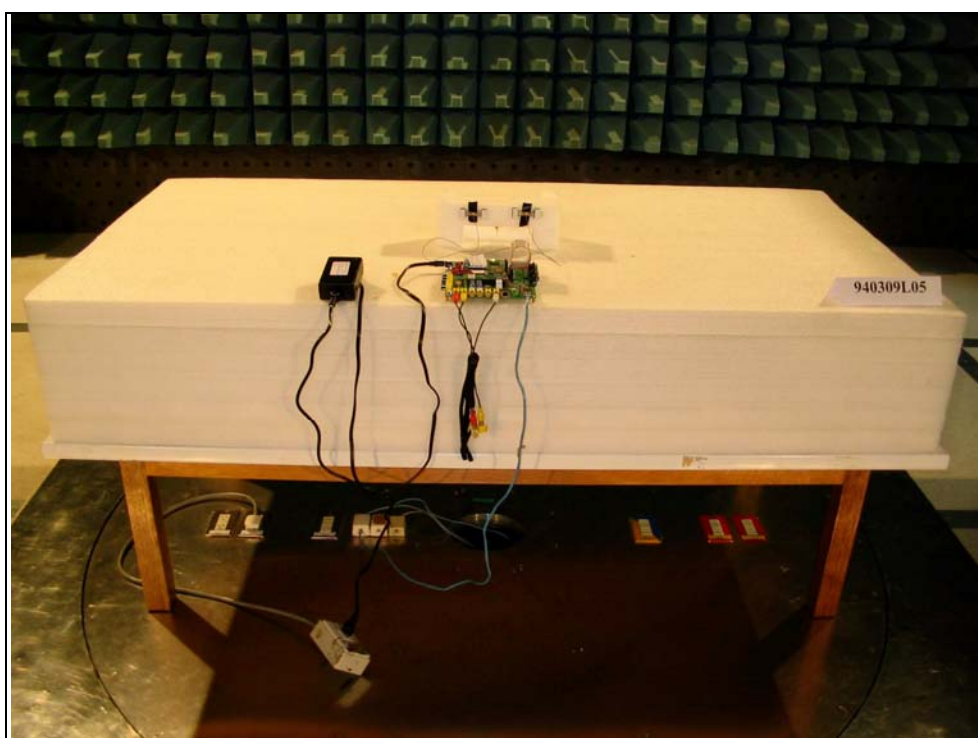
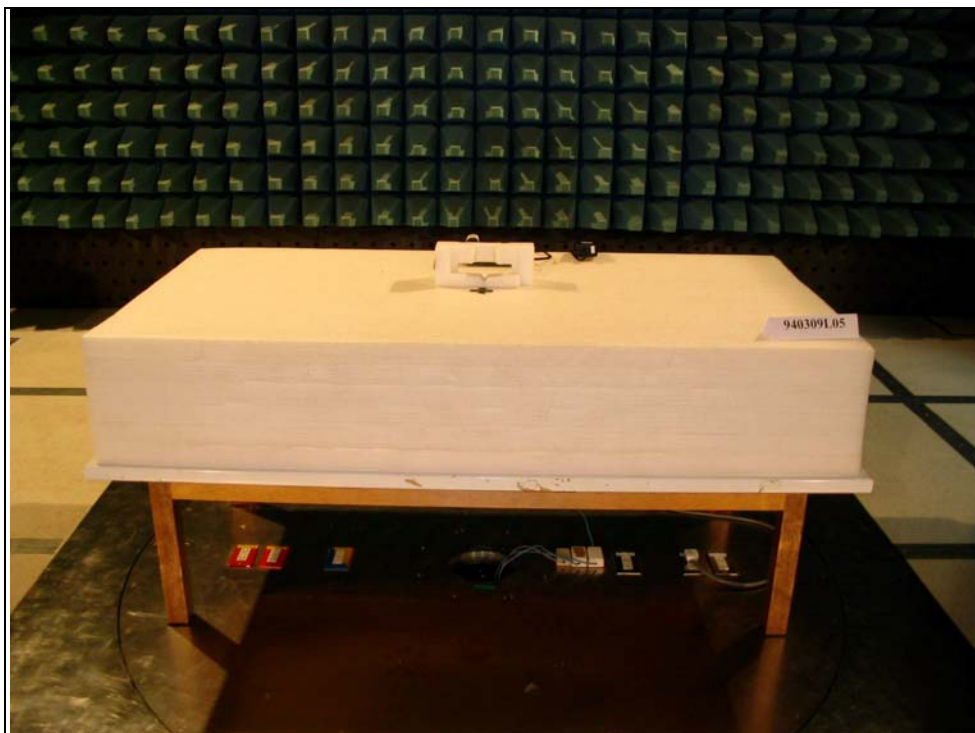
RADIATED EMISSION TEST

Antenna 1



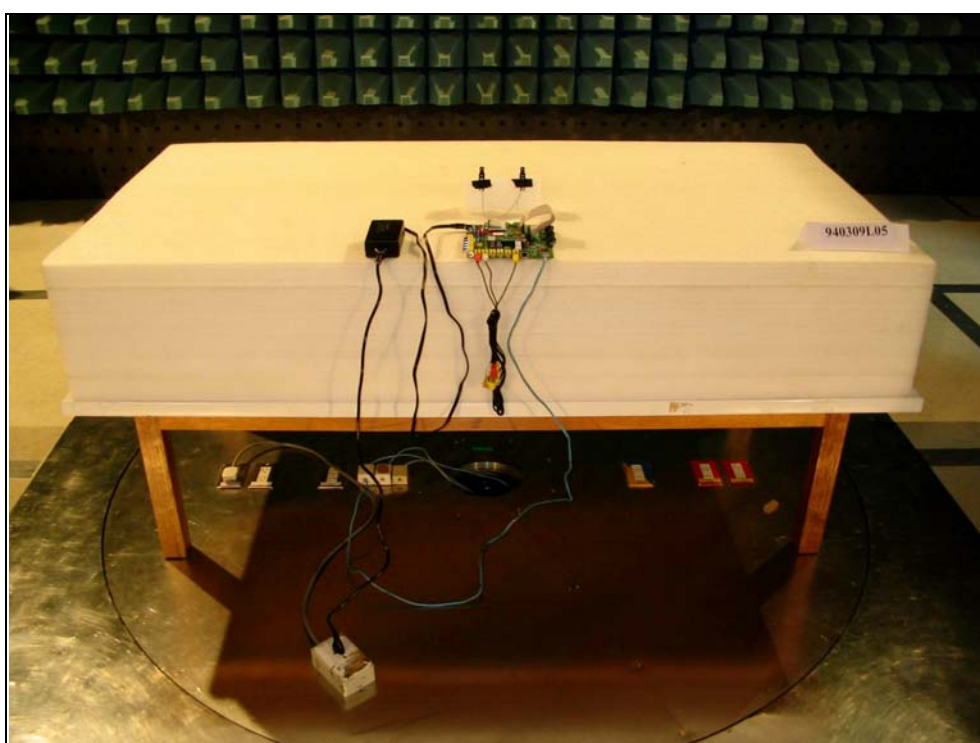


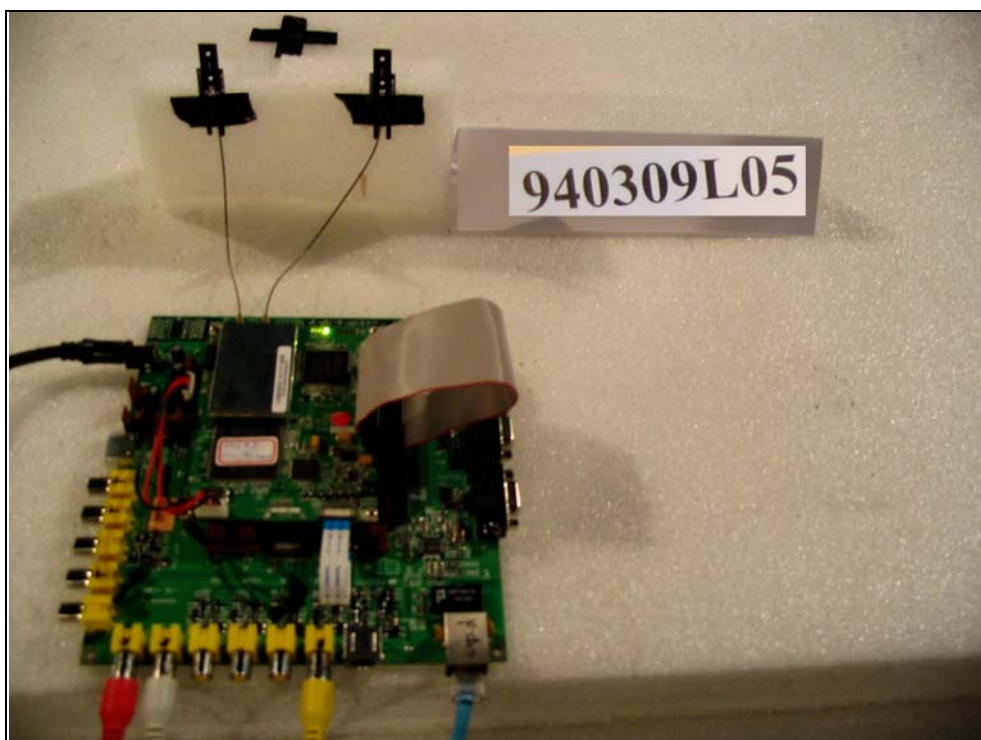
Antenna 2



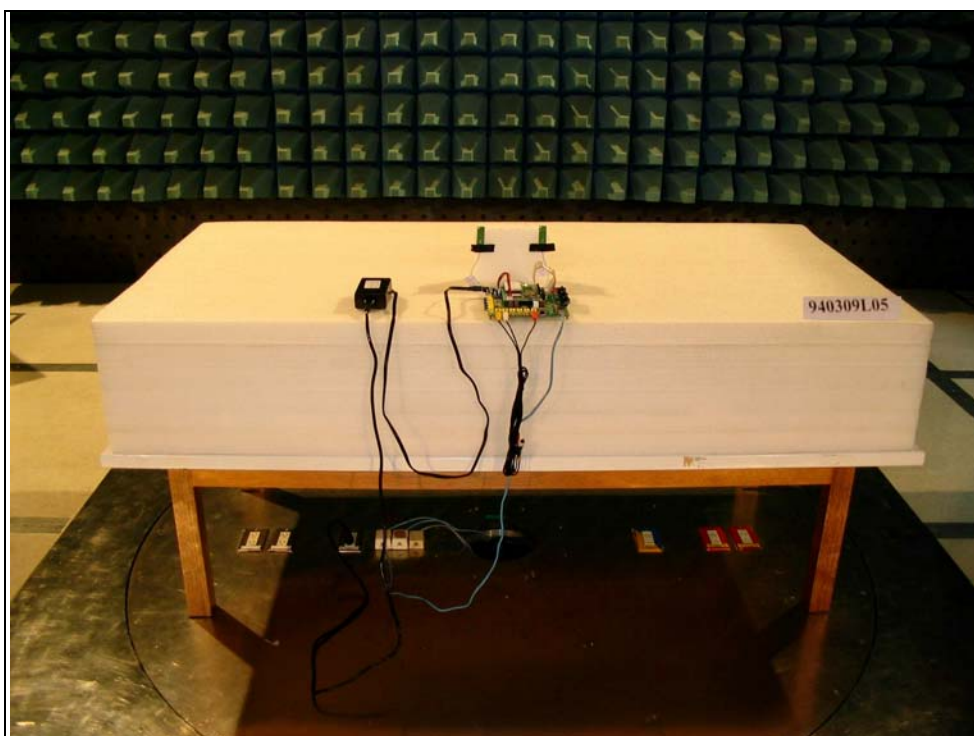


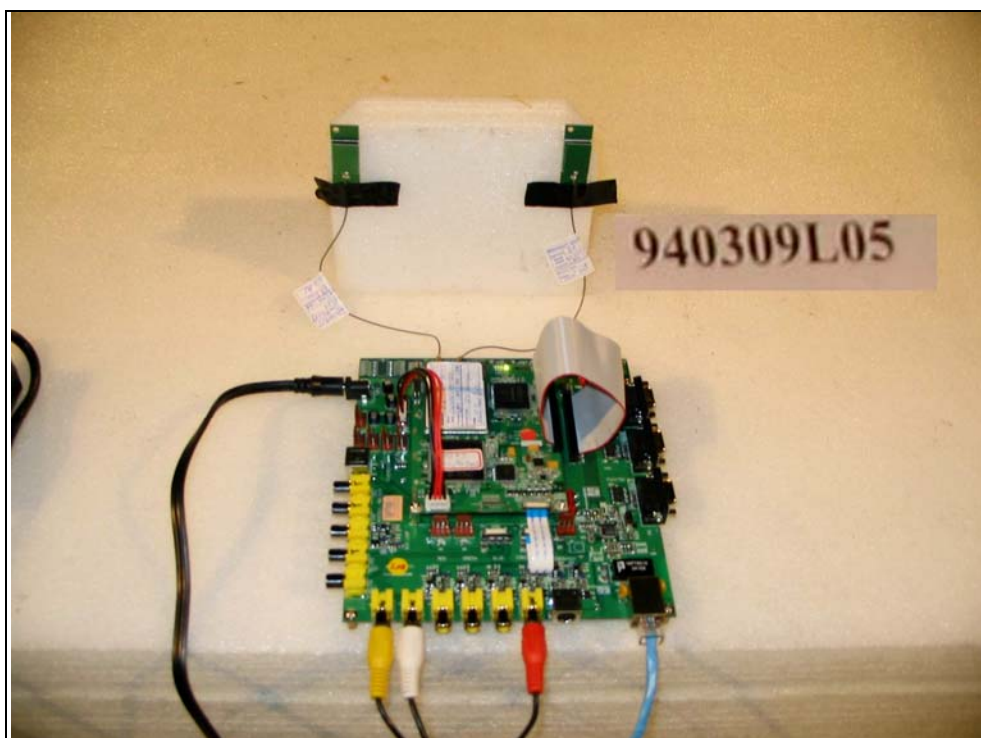
Antenna 3





Antenna 4





6. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., 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:

USA	FCC, NVLAP, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	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. 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

Linko RF Lab.

Tel: 886-3-3270910

Fax: 886-3-3270892

Web Site: www.adt.com.tw

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