FCC TEST REPORT (15.247)

REPORT NO.: RF940309L05
MODEL NO.: WVM1104-Rx
RECEIVED: Feb. 18, 2005
TESTED: Feb. 18 ~ Apr. 02, 2005
ISSUED: Apr. 11, 2005

APPLICANT: Gemtek Technology Co., Ltd.

ADDRESS: No.1, Jen Ai Road, Hsinchu Industrial Park, Hukou Hsinchu, Taiwan, R.O.C. 303

ISSUED BY: Advance Data Technology Corporation

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

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

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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 C (Section 15.247), 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 : , **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 C (Section 15.247)			
Standard Section	**Test Type and Limit**	**Result**	**Remark**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is –11.87dB at 0.201MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –1.22dB at 2487.00MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	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 2400 ~ 2483.5MHz band:

For 802.11b/g: Eleven channels are provided to this EUT.

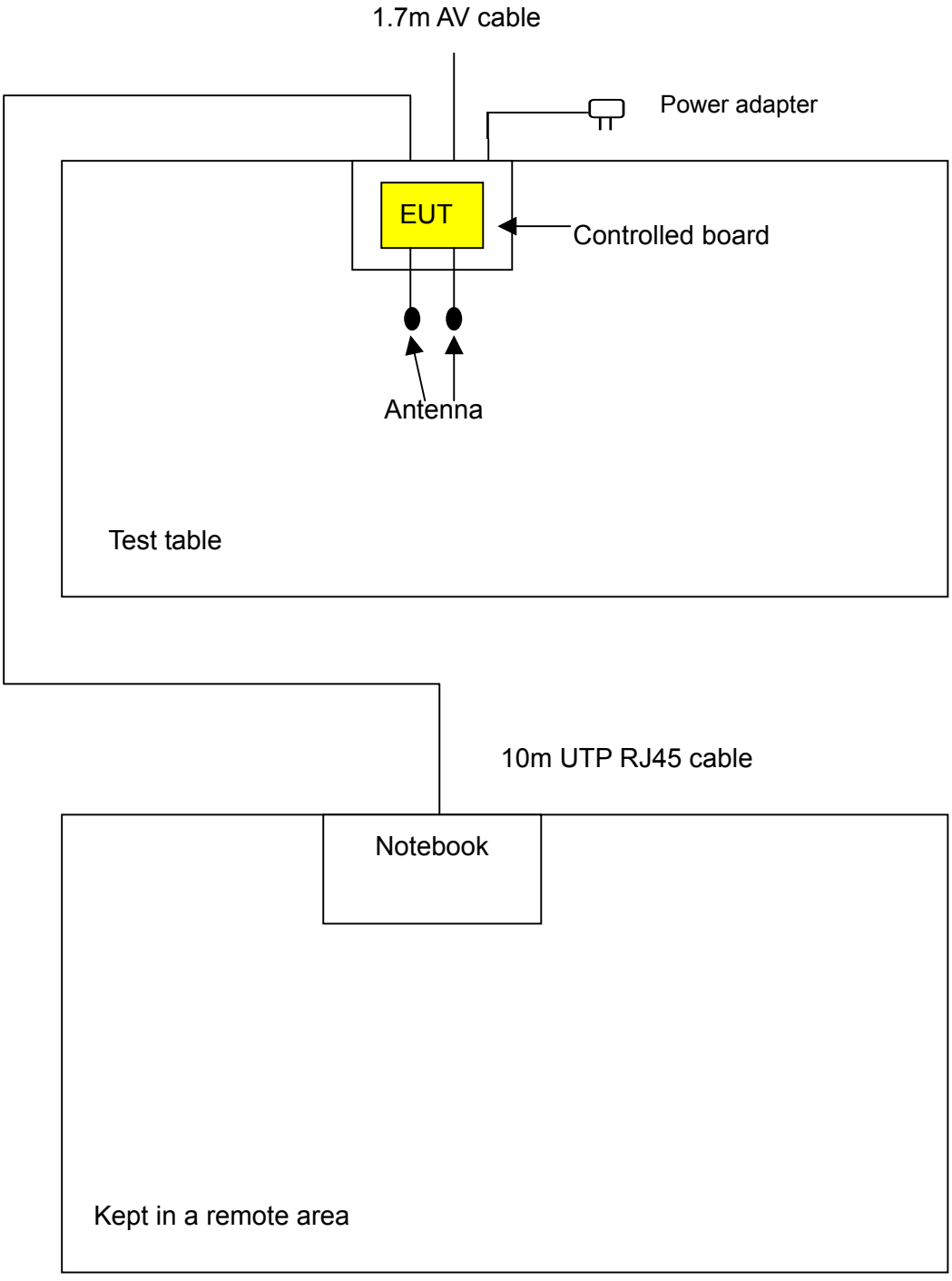
Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

Operated in 5725 ~ 5850MHz band:

For 802.11a: Five channels are provided to this EUT.

Channel	Frequency
1	5745 MHz
2	5765 MHz
3	5785 MHz
4	5805 MHz
5	5825 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 3 (for 2.4GHz) (see note 1 of section 3.1)
B	Note 1	x	x	Note 2	antenna 1 (for 5.0GHz) (see note 1 of section 3.1)
C	Note 1	x	x	Note 2	antenna 3 ((for 5.0GHz) see note 1 of section 3.1)
D	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	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
B	802.11a	1 to 5	3	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	802.11g	1 to 11	11	OFDM	BPSK	6
B	802.11a	1 to 5	3	OFDM	BPSK	6
C	802.11a	1 to 5	3	OFDM	BPSK	6
D	802.11a	1 to 5	3	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	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
B	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6
C	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6
D	802.11a	1 to 5	1, 3, 5	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)
802.11b	1 to 11	1, 11	DSSS	CCK	11
802.11g	1 to 11	1, 11	OFDM	BPSK	6
802.11a	1 to 5	1, 5	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)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11a	1 to 5	1, 3, 5	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 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.

3.4 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 (802.11b & g 2412~2462MHz 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 0.5-5 5-30	66 to 56 56 60	56 to 46 46 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.

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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.

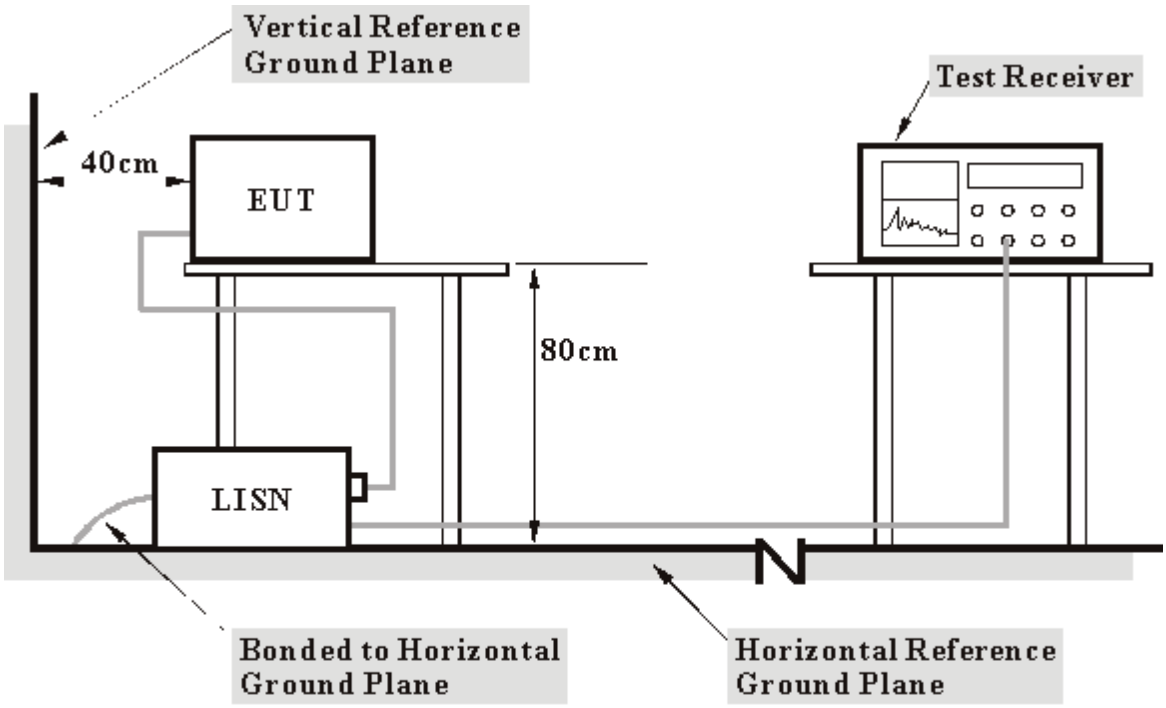
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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.

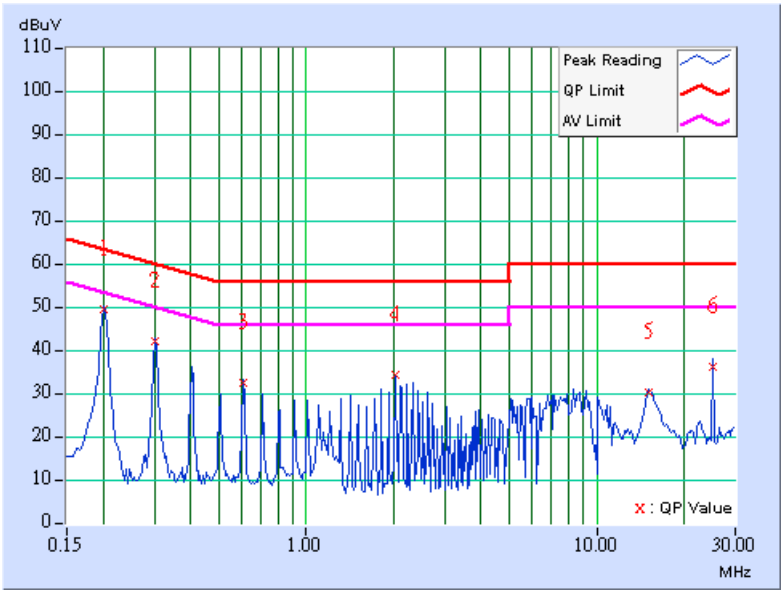
4.1.7 TEST RESULTS

Conducted Worst-Case Data

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 1	**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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	48.59	-	48.69	-	63.58	53.58	-14.89	-
2	0.302	0.11	41.22	-	41.33	-	60.18	50.18	-18.85	-
3	0.607	0.13	31.80	-	31.93	-	56.00	46.00	-24.07	-
4	2.023	0.16	33.52	-	33.68	-	56.00	46.00	-22.32	-
5	15.071	0.50	29.46	-	29.96	-	60.00	50.00	-30.04	-
6	25.000	0.86	35.38	-	36.24	-	60.00	50.00	-23.76	-

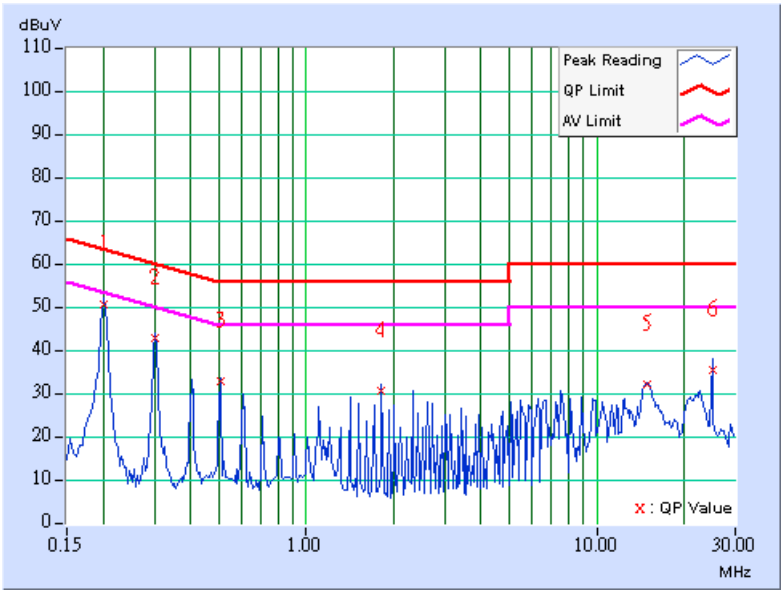
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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 1	**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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	50.46	-	50.56	-	63.58	53.58	-13.02	-
2	0.302	0.11	42.51	-	42.62	-	60.18	50.18	-17.56	-
3	0.505	0.12	32.42	-	32.54	-	56.00	46.00	-23.46	-
4	1.816	0.15	30.33	-	30.48	-	56.00	46.00	-25.52	-
5	14.853	0.36	31.65	-	32.01	-	60.00	50.00	-27.99	-
6	25.000	0.40	35.08	-	35.48	-	60.00	50.00	-24.52	-

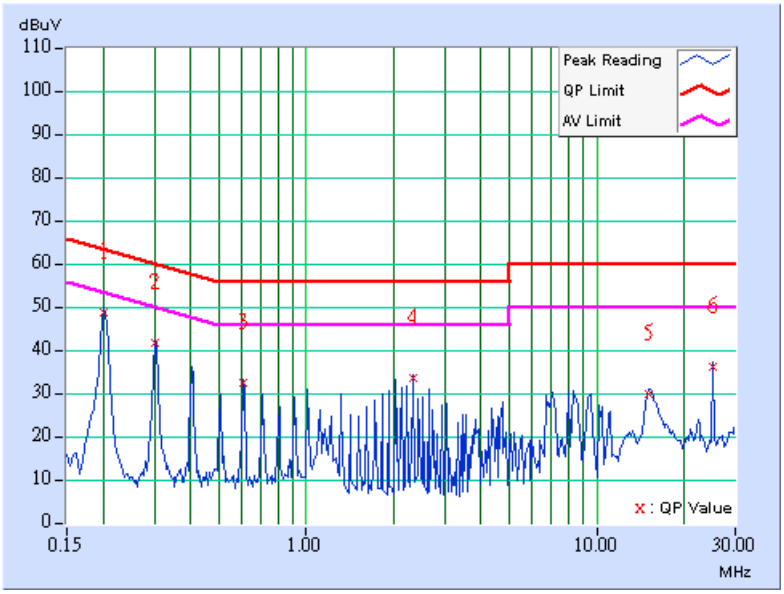
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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 6	**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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(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	40.94	-	41.05	-	60.18	50.18	-19.13	-
3	0.607	0.13	31.90	-	32.03	-	56.00	46.00	-23.97	-
4	2.328	0.17	33.01	-	33.18	-	56.00	46.00	-22.82	-
5	15.188	0.51	29.15	-	29.66	-	60.00	50.00	-30.34	-
6	25.000	0.86	35.42	-	36.28	-	60.00	50.00	-23.72	-

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 6	**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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	47.70	-	47.80	-	63.42	53.42	-15.62	-
2	0.302	0.11	40.78	-	40.89	-	60.18	50.18	-19.29	-
3	0.607	0.12	31.92	-	32.04	-	56.00	46.00	-23.96	-
4	2.027	0.15	33.79	-	33.94	-	56.00	46.00	-22.06	-
5	15.195	0.36	29.94	-	30.30	-	60.00	50.00	-29.70	-
6	25.000	0.40	35.44	-	35.84	-	60.00	50.00	-24.16	-

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.
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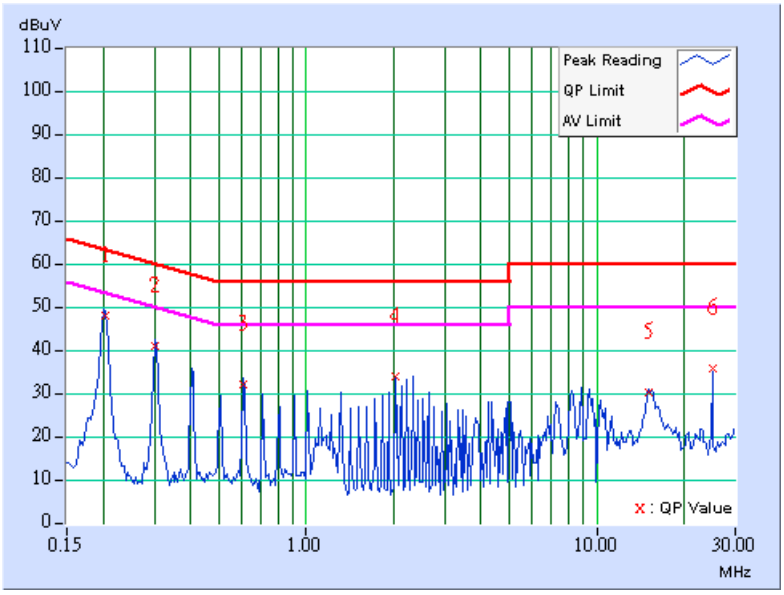
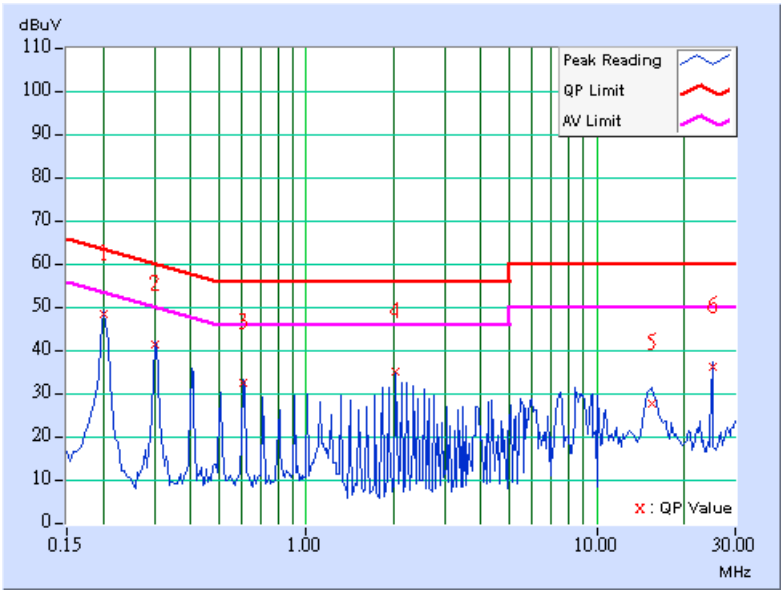


EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 11	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	**TESTED BY**	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	47.72	-	47.82	-	63.58	53.58	-15.76	-
2	0.302	0.11	40.56	-	40.67	-	60.18	50.18	-19.51	-
3	0.607	0.13	31.82	-	31.95	-	56.00	46.00	-24.05	-
4	2.027	0.16	34.27	-	34.43	-	56.00	46.00	-21.57	-
5	15.406	0.52	27.04	-	27.56	-	60.00	50.00	-32.44	-
6	25.000	0.86	35.36	-	36.22	-	60.00	50.00	-23.78	-

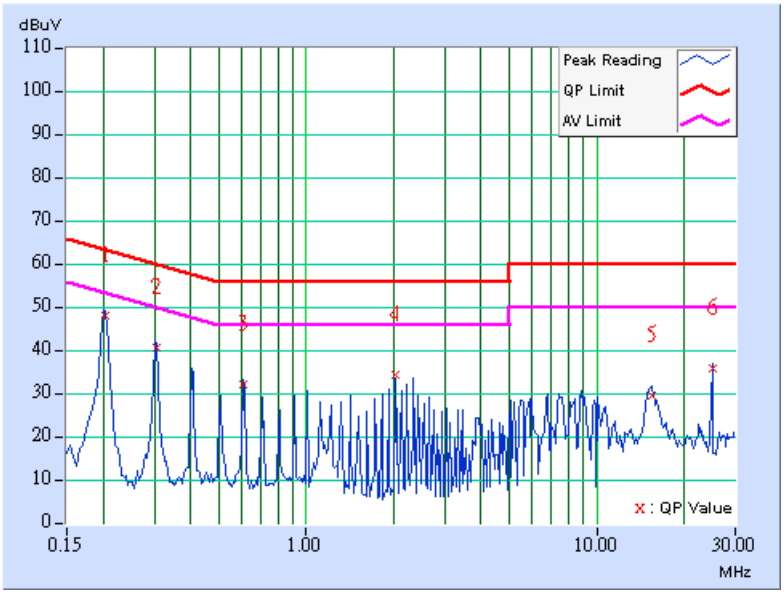
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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 11	**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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	47.68	-	47.78	-	63.42	53.42	-15.64	-
2	0.306	0.11	40.22	-	40.33	-	60.07	50.07	-19.74	-
3	0.607	0.12	31.88	-	32.00	-	56.00	46.00	-24.00	-
4	2.027	0.15	34.15	-	34.30	-	56.00	46.00	-21.70	-
5	15.402	0.37	29.36	-	29.73	-	60.00	50.00	-30.27	-
6	25.000	0.40	35.36	-	35.76	-	60.00	50.00	-24.24	-

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 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.

4.2.3 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. 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 the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

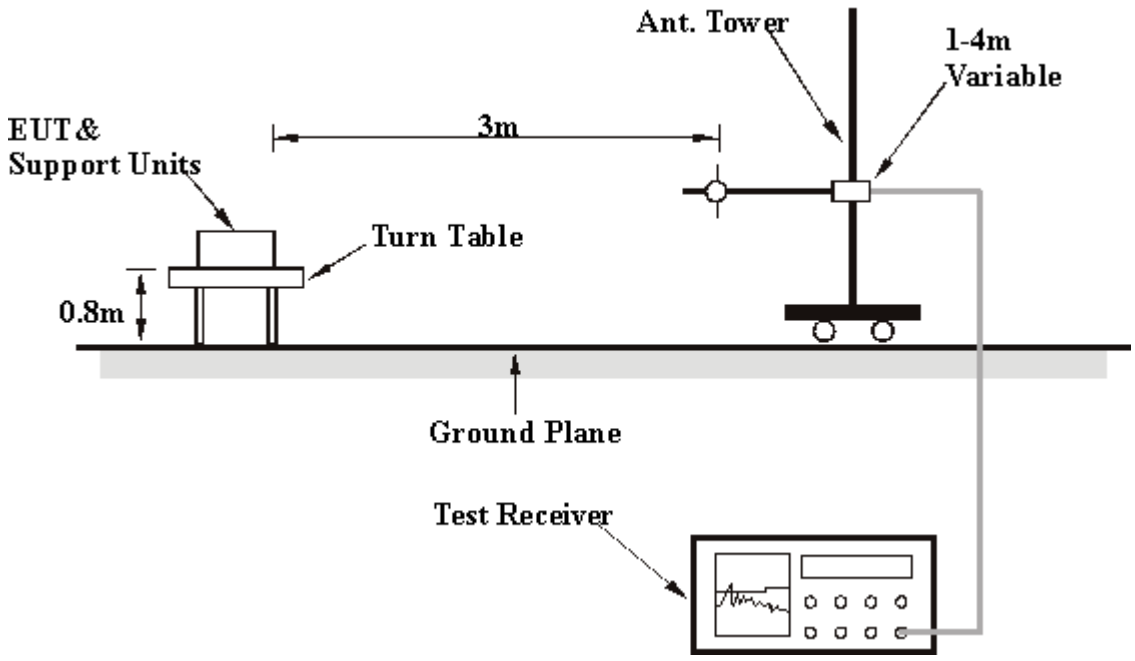
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) 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.

4.2.4 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.

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

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

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 11	**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**	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	51.38	33.29 QP	40.00	-6.71	2.50 H	181	18.96	14.33
2	249.66	25.67 QP	46.00	-20.33	1.00 H	136	12.59	13.08
3	360.46	41.93 QP	46.00	-4.07	1.00 H	118	26.23	15.71
4	449.88	34.68 QP	46.00	-11.32	1.50 H	121	16.78	17.91
5	539.30	28.38 QP	46.00	-17.62	1.50 H	103	8.99	19.39
6	630.66	28.39 QP	46.00	-17.61	1.50 H	190	7.07	21.32
7	720.08	34.85 QP	46.00	-11.15	2.00 H	217	12.14	22.72
8	799.78	37.41 QP	46.00	-8.59	1.00 H	127	13.71	23.70
9	811.44	38.43 QP	46.00	-7.57	1.00 H	211	14.64	23.80
10	875.59	37.49 QP	46.00	-8.51	1.00 H	127	12.87	24.63
11	900.86	40.18 QP	46.00	-5.82	1.50 H	25	15.07	25.11

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	51.38	37.54 QP	40.00	-2.46	1.00 V	79	23.21	14.33
2	82.48	29.15 QP	40.00	-10.85	1.00 V	61	19.35	9.80
3	360.46	35.56 QP	46.00	-10.44	2.00 V	55	19.85	15.71
4	630.66	36.09 QP	46.00	-9.91	2.00 V	91	14.77	21.32
5	720.08	38.75 QP	46.00	-7.25	1.50 V	43	16.03	22.72
6	799.78	39.84 QP	46.00	-6.16	1.50 V	352	16.14	23.70
7	840.60	35.30 QP	46.00	-10.70	2.00 V	148	11.26	24.04
8	900.86	42.02 QP	46.00	-3.98	1.00 V	103	16.91	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

802.11b DSSS modulation

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 66%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	39.93 PK	74.00	-34.07	1.36 H	251	13.15	26.78
1	1080.00	35.59 AV	54.00	-18.41	1.36 H	251	8.81	26.78
2	2016.00	41.38 PK	74.00	-32.62	1.00 H	350	11.97	29.41
2	2016.00	36.42 AV	54.00	-17.58	1.00 H	350	7.01	29.41
3	2390.00	56.83 PK	74.00	-17.17	1.04 H	201	25.86	30.97
3	2390.00	47.23 AV	54.00	-6.77	1.04 H	201	16.26	30.97
4	*2412.00	103.39 PK			1.04 H	201	72.33	31.06
4	*2412.00	95.92 AV			1.04 H	201	64.86	31.06
5	4824.00	44.88 PK	74.00	-29.12	1.32 H	27	8.45	36.43
5	4824.00	35.45 AV	54.00	-18.55	1.32 H	27	-0.98	36.43

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	48.41 PK	74.00	-25.59	1.06 V	217	21.63	26.78
1	1080.00	45.59 AV	54.00	-8.41	1.06 V	217	18.81	26.78
2	2016.00	45.50 PK	74.00	-28.50	1.00 V	1	16.09	29.41
2	2016.00	39.32 AV	54.00	-14.68	1.00 V	1	9.91	29.41
3	2387.00	63.61 PK	74.00	-10.39	1.33 V	309	32.65	30.96
3	2387.00	52.74 AV	54.00	-1.26	1.33 V	309	21.78	30.96
4	*2412.00	109.99 PK			1.33 V	309	78.93	31.06
4	*2412.00	99.80 AV			1.33 V	309	68.74	31.06
5	4824.00	49.22 PK	74.00	-24.78	1.28 V	110	12.79	36.43
5	4824.00	41.60 AV	54.00	-12.40	1.28 V	110	5.17	36.43

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 66%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	*2437.00	103.27 PK			1.03 H	125	72.10	31.17
1	*2437.00	95.67 AV			1.03 H	125	64.50	31.17
2	4874.00	47.96 PK	74.00	-26.04	1.25 H	173	11.42	36.54
2	4874.00	40.09 AV	54.00	-13.91	1.25 H	173	3.55	36.54

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	47.19 PK	74.00	-26.81	1.06 V	223	20.41	26.78
1	1080.00	45.47 AV	54.00	-8.53	1.06 V	223	18.69	26.78
2	2016.00	47.08 PK	74.00	-26.92	1.04 V	1	17.67	29.41
2	2016.00	43.59 AV	54.00	-10.41	1.04 V	1	14.18	29.41
3	*2437.00	109.99 PK			1.34 V	356	78.82	31.17
3	*2437.00	101.96 AV			1.34 V	356	70.79	31.17
4	4874.00	54.08 PK	74.00	-19.92	1.00 V	112	17.54	36.54
4	4874.00	47.66 AV	54.00	-6.34	1.00 V	112	11.12	36.54

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 11	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19deg. C, 66%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	*2462.00	102.15 PK			1.00 H	126	70.87	31.28
1	*2462.00	94.66 AV			1.00 H	126	63.38	31.28
2	2487.00	55.93 PK	74.00	-18.07	1.00 H	126	24.55	31.38
2	2487.00	46.68 AV	54.00	-7.32	1.00 H	126	15.30	31.38
3	4924.00	47.07 PK	74.00	-26.93	1.09 H	331	10.41	36.66
3	4924.00	38.42 AV	54.00	-15.58	1.09 H	331	1.76	36.66

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	47.15 PK	74.00	-26.85	1.04 V	217	20.37	26.78
1	1080.00	45.95 AV	54.00	-8.05	1.04 V	217	19.17	26.78
2	2016.00	47.07 PK	74.00	-26.93	1.02 V	1	17.66	29.41
2	2016.00	43.73 AV	54.00	-10.27	1.02 V	1	14.32	29.41
3	*2462.00	109.90 PK			1.29 V	286	78.62	31.28
3	*2462.00	98.60 AV			1.29 V	286	67.32	31.28
4	2487.00	63.71 PK	74.00	-10.29	1.29 V	286	32.33	31.38
4	2487.00	52.65 AV	54.00	-1.35	1.29 V	286	21.27	31.38
5	4924.00	52.85 PK	74.00	-21.15	1.15 V	167	16.19	36.66
5	4924.00	45.92 AV	54.00	-8.08	1.15 V	167	9.26	36.66

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.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

802.11g OFDM modulation

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25GHz
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**	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	42.12 PK	74.00	-31.88	1.38 H	76	15.34	26.78
1	1080.00	40.85 AV	54.00	-13.15	1.38 H	76	14.07	26.78
2	2016.00	43.29 PK	74.00	-30.71	1.05 H	98	13.88	29.41
2	2016.00	39.49 AV	54.00	-14.51	1.05 H	98	10.08	29.41
3	2387.00	57.24 PK	74.00	-16.76	1.51 H	321	26.28	30.96
3	2387.00	48.15 AV	54.00	-5.85	1.51 H	321	17.19	30.96
4	*2412.00	101.16 PK			1.51 H	321	70.10	31.06
4	*2412.00	90.74 AV			1.51 H	321	59.68	31.06
5	4824.00	44.92 PK	74.00	-29.08	1.20 H	177	8.49	36.43
5	4824.00	32.11 AV	54.00	-21.89	1.20 H	177	-4.32	36.43

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	46.86 PK	74.00	-27.14	1.09 V	212	20.08	26.78
1	1080.00	45.44 AV	54.00	-8.56	1.09 V	212	18.66	26.78
2	2016.00	44.10 PK	74.00	-29.90	1.06 V	357	14.69	29.41
2	2016.00	40.24 AV	54.00	-13.76	1.06 V	357	10.83	29.41
3	2387.00	64.88 PK	74.00	-9.12	1.12 V	302	33.92	30.96
3	2387.00	52.68 AV	54.00	-1.32	1.12 V	302	21.72	30.96
4	*2412.00	108.60 PK			1.12 V	302	77.54	31.06
4	*2412.00	96.40 AV			1.12 V	302	65.34	31.06
5	4824.00	51.97 PK	74.00	-22.03	1.17 V	108	15.54	36.43
5	4824.00	34.04 AV	54.00	-19.96	1.17 V	108	-2.39	36.43

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
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**	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	43.12 PK	74.00	-30.88	1.25 H	88	16.34	26.78
1	1080.00	40.95 AV	54.00	-13.05	1.25 H	88	14.17	26.78
2	2016.00	43.77 PK	74.00	-30.23	1.39 H	285	14.36	29.41
2	2016.00	39.06 AV	54.00	-14.94	1.39 H	285	9.65	29.41
3	*2437.00	102.44 PK			1.24 H	147	71.27	31.17
3	*2437.00	92.50 AV			1.24 H	147	61.33	31.17
4	4874.00	48.60 PK	74.00	-25.40	1.09 H	234	12.06	36.54
4	4874.00	34.00 AV	54.00	-20.00	1.09 H	234	-2.54	36.54

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	46.92 PK	74.00	-27.08	1.05 V	216	20.14	26.78
1	1080.00	45.86 AV	54.00	-8.14	1.05 V	216	19.08	26.78
2	2016.00	44.50 PK	74.00	-29.50	1.00 V	1	15.09	29.41
2	2016.00	40.99 AV	54.00	-13.01	1.00 V	1	11.58	29.41
3	*2437.00	110.96 PK			1.38 V	358	79.79	31.17
3	*2437.00	100.40 AV			1.38 V	358	69.23	31.17
4	4874.00	59.08 PK	74.00	-14.92	1.00 V	315	22.54	36.54
4	4874.00	41.43 AV	54.00	-12.57	1.00 V	315	4.89	36.54

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. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 11	**FREQUENCY RANGE**	1 ~ 25GHz
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**	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	43.37 PK	74.00	-30.63	1.34 H	91	16.59	26.78
1	1080.00	40.96 AV	54.00	-13.04	1.34 H	91	14.18	26.78
2	2016.00	40.65 PK	74.00	-33.35	1.21 H	277	11.24	29.41
2	2016.00	34.04 AV	54.00	-19.96	1.21 H	277	4.63	29.41
3	*2462.00	100.75 PK			1.12 H	289	69.47	31.28
3	*2462.00	91.17 AV			1.12 H	289	59.89	31.28
4	2487.00	57.36 PK	74.00	-16.64	1.12 H	289	25.98	31.38
4	2487.00	45.61 AV	54.00	-8.39	1.12 H	289	14.23	31.38
5	4924.00	42.94 PK	74.00	-31.06	1.32 H	334	6.28	36.66
5	4924.00	31.55 AV	54.00	-22.45	1.32 H	334	-5.11	36.66

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	46.59 PK	74.00	-27.41	1.06 V	214	19.81	26.78
1	1080.00	45.20 AV	54.00	-8.80	1.06 V	214	18.42	26.78
2	2016.00	45.48 PK	74.00	-28.52	1.03 V	358	16.07	29.41
2	2016.00	41.67 AV	54.00	-12.33	1.03 V	358	12.26	29.41
3	*2462.00	108.16 PK			1.10 V	171	76.88	31.28
3	*2462.00	97.61 AV			1.10 V	171	66.33	31.28
4	2487.00	63.33 PK	74.00	-10.67	1.10 V	171	31.95	31.38
4	**2487.00**	**52.78 AV**	**54.00**	**-1.22**	**1.10 V**	**171**	**21.40**	**31.38**
5	4924.00	48.13 PK	74.00	-25.87	1.00 V	347	11.47	36.66
5	4924.00	35.25 AV	54.00	-18.75	1.00 V	347	-1.41	36.66

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.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK 30	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

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

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 lowest, middle and highest channel frequencies individually.

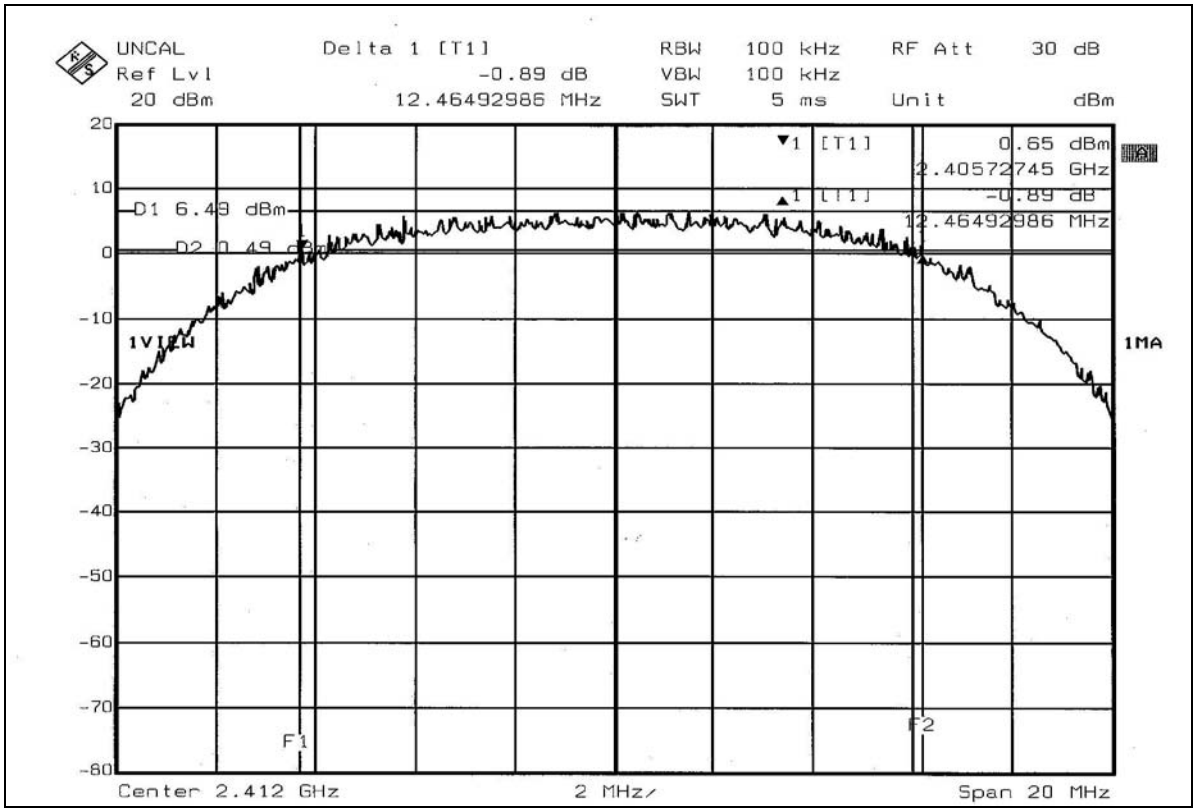
4.3.7 TEST RESULTS

802.11b DSSS modulation

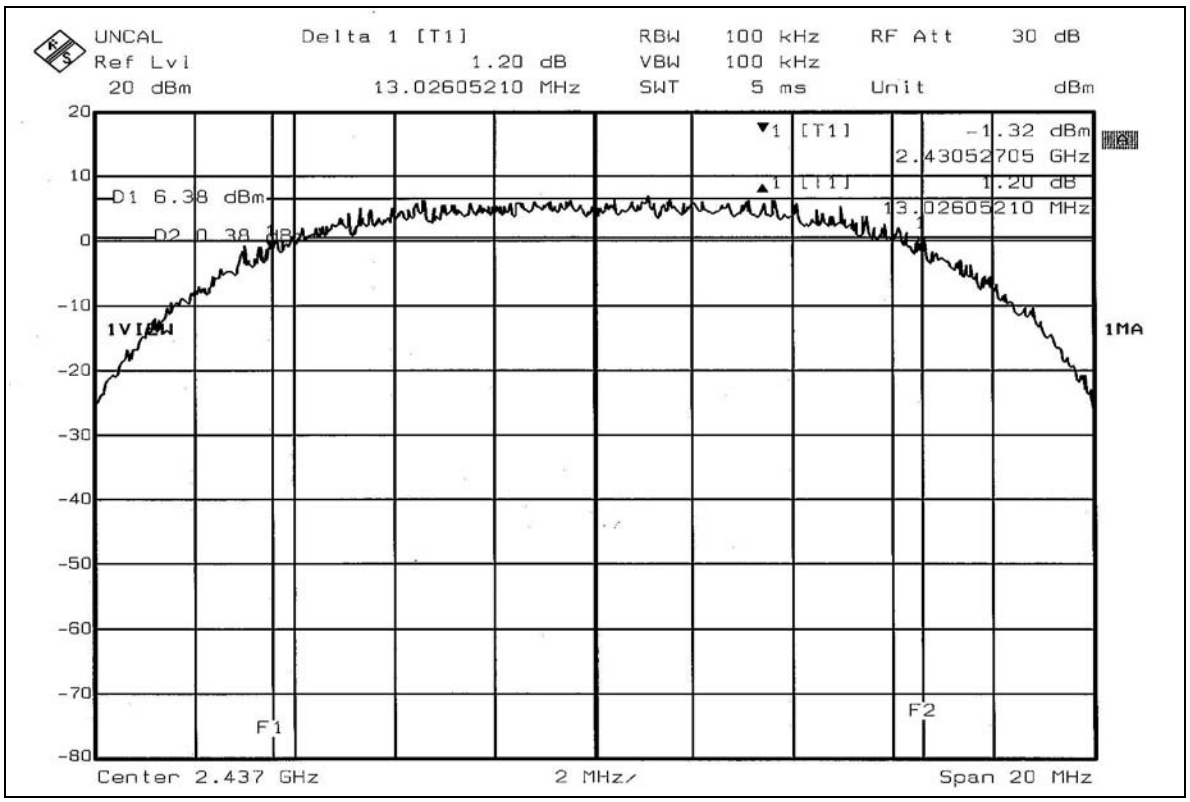
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.465	0.5	PASS
6	2437	13.026	0.5	PASS
11	2462	11.984	0.5	PASS

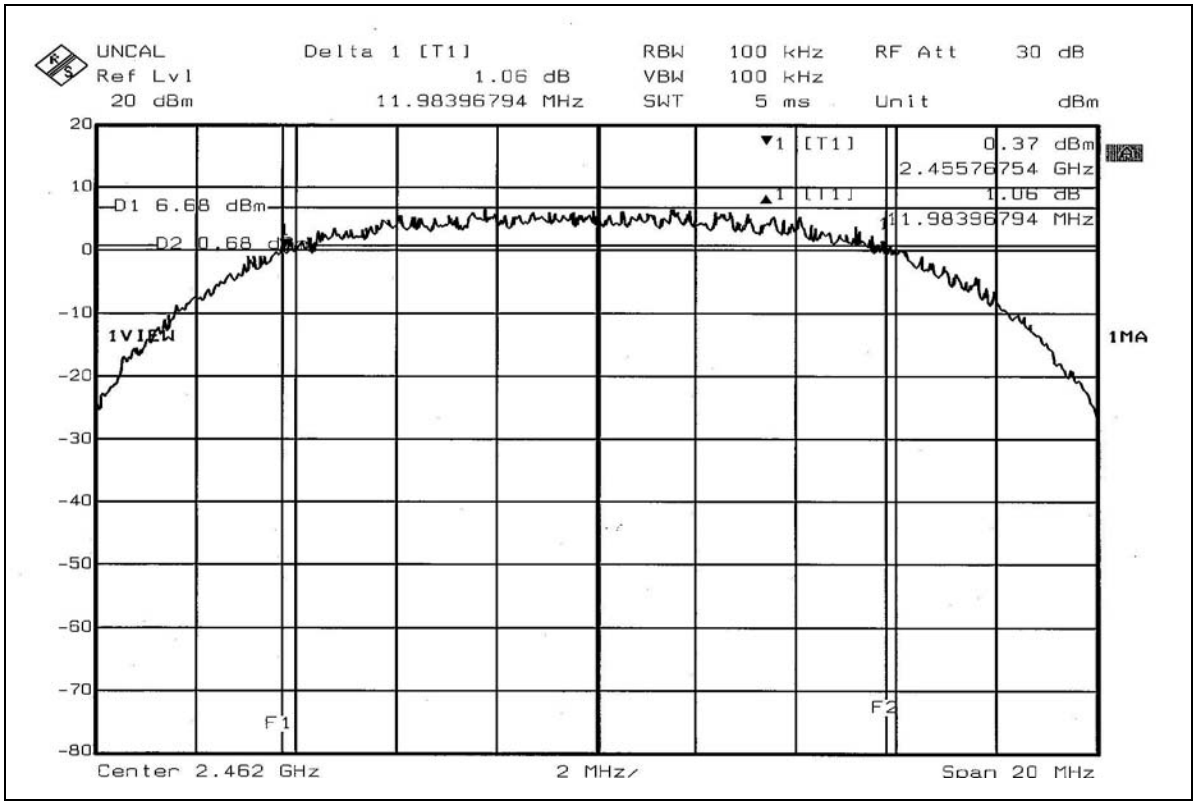
CH1


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
-0.89 dB
12.46492986 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1 [T1] 0.65 dBm
2.40572745 GHz
1 [T1] -0.89 dB
12.46492986 MHz
D1 6.49 dBm
1VIEW
1MA
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH6


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
1.20 dB
13.02605210 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1 [T1] -1.32 dBm
2.43052705 GHz
1 [T1] 1.20 dB
13.02605210 MHz
D1 6.38 dBm
1VIEW
1MA
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11

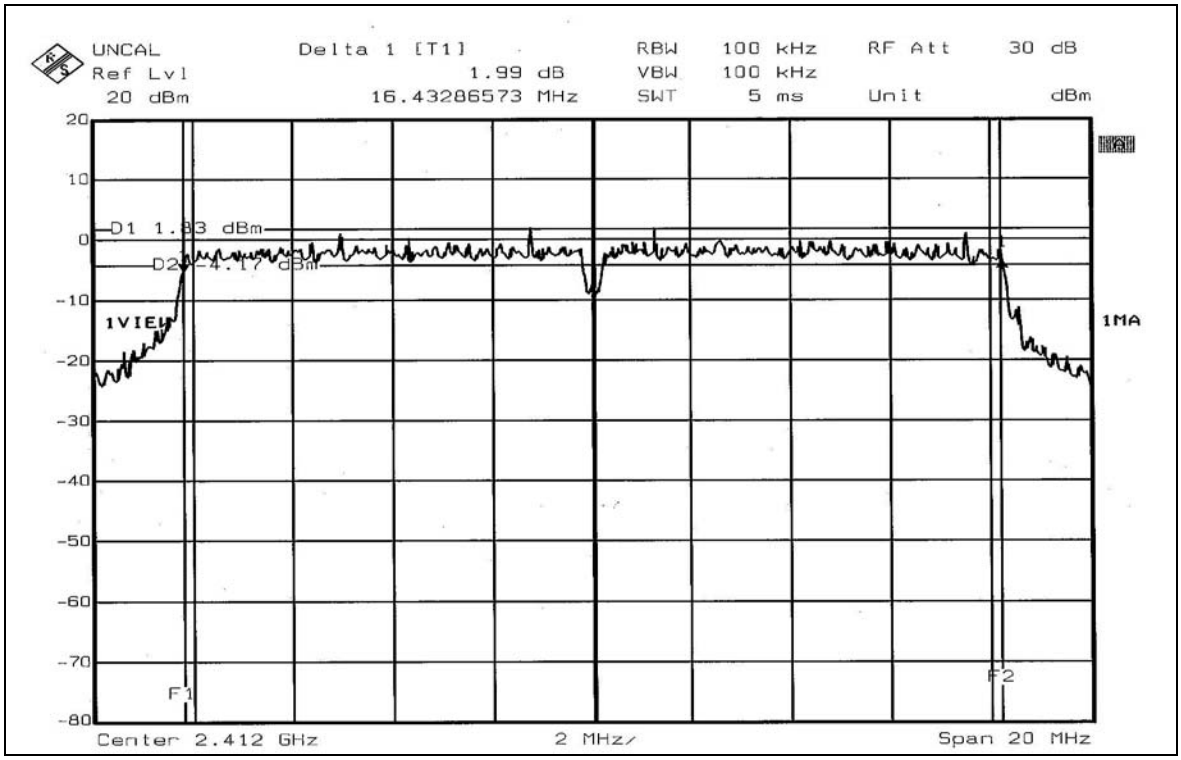

UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
1.06 dB
11.98396794 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
1 [T1] 0.37 dBm
2.45576754 GHz
1 [T1] 1.06 dB
11.98396794 MHz
D1 6.68 dBm
D2 0.68 dBm
1VIEW
1MA
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g OFDM modulation

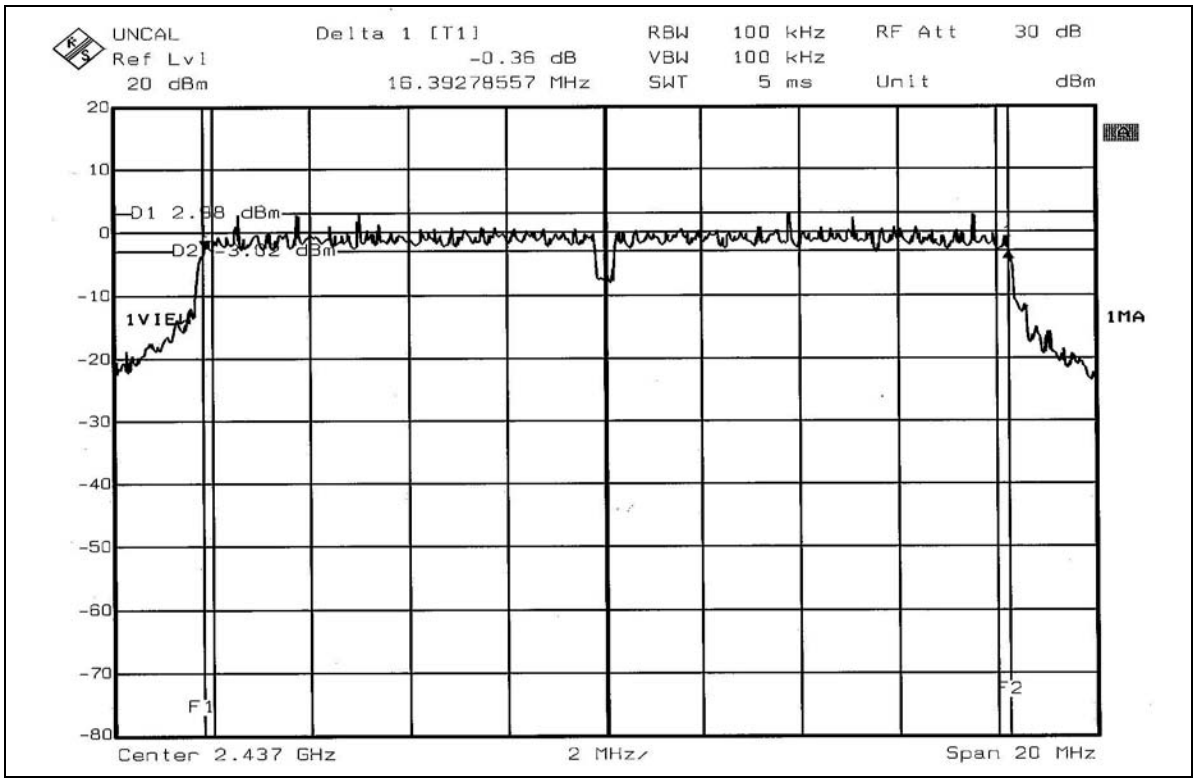
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.43	0.5	PASS
6	2437	16.39	0.5	PASS
11	2462	16.39	0.5	PASS

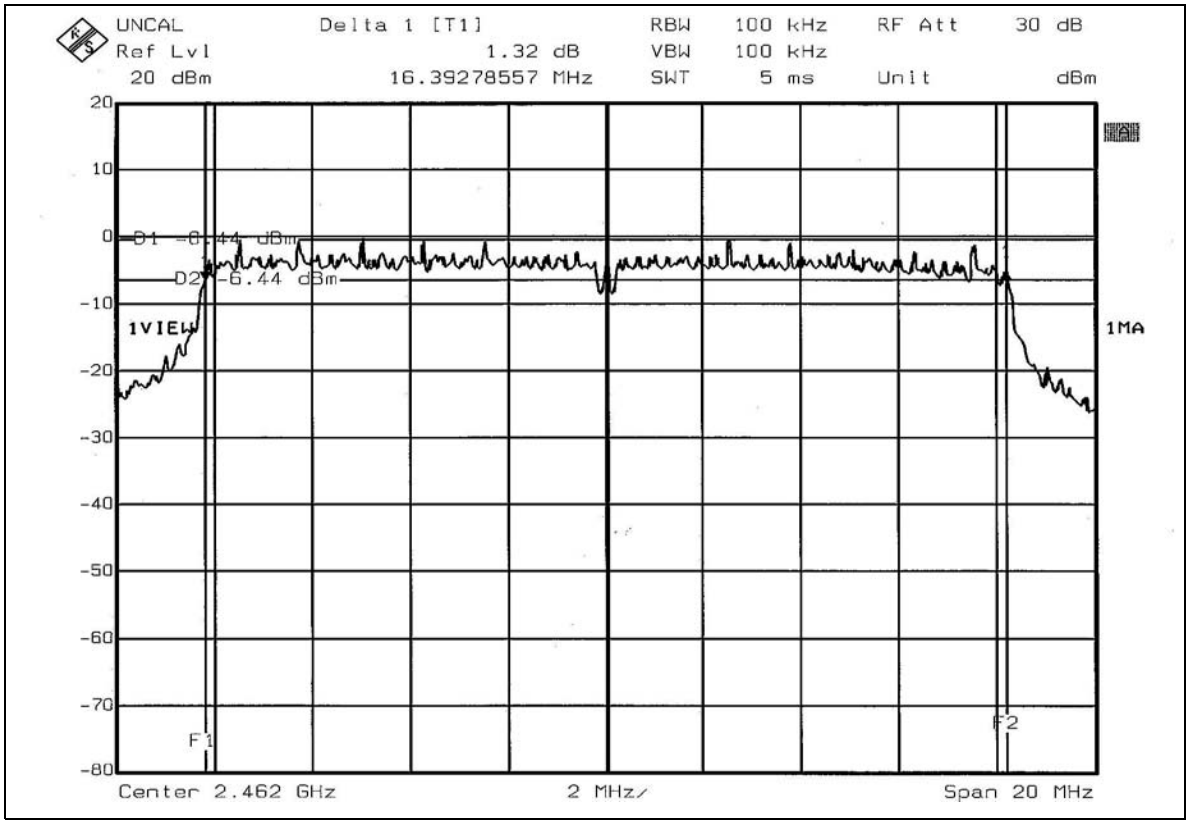
CH1


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
1.99 dB
16.43286573 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
D1 1.93 dBm
D2 -4.17 dBm
1VIEW
1MA
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH6


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
-0.36 dB
16.39278557 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
D1 2.98 dBm
1VIEW
1MA
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
1.32 dB
16.39278557 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
D1 -6.44 dBm
D2 -6.44 dBm
1VIEW
1MA
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 06, 2005
TEKTRONIX OSCILLOSCOPE	TDS1012	C037299	Dec. 07, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

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 PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP

4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.7 TEST RESULTS

802.11b DSSS modulation

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	60.954	17.85	30	PASS
6	2437	61.094	17.86	30	PASS
11	2462	59.566	17.75	30	PASS

802.11g OFDM modulation

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	50.466	17.03	30	PASS
6	2437	63.387	18.02	30	PASS
11	2462	40.458	16.07	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST 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.

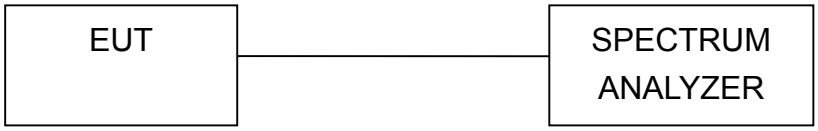
4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

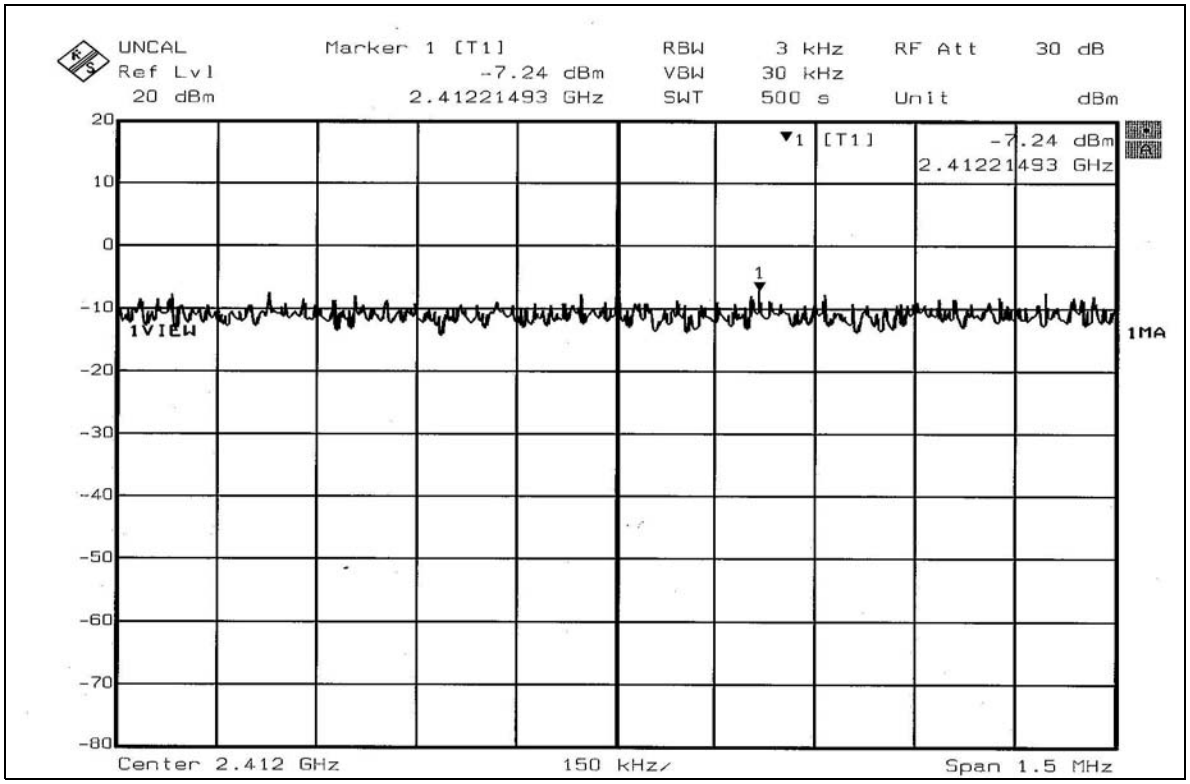
4.5.7 TEST RESULTS

802.11b DSSS modulation

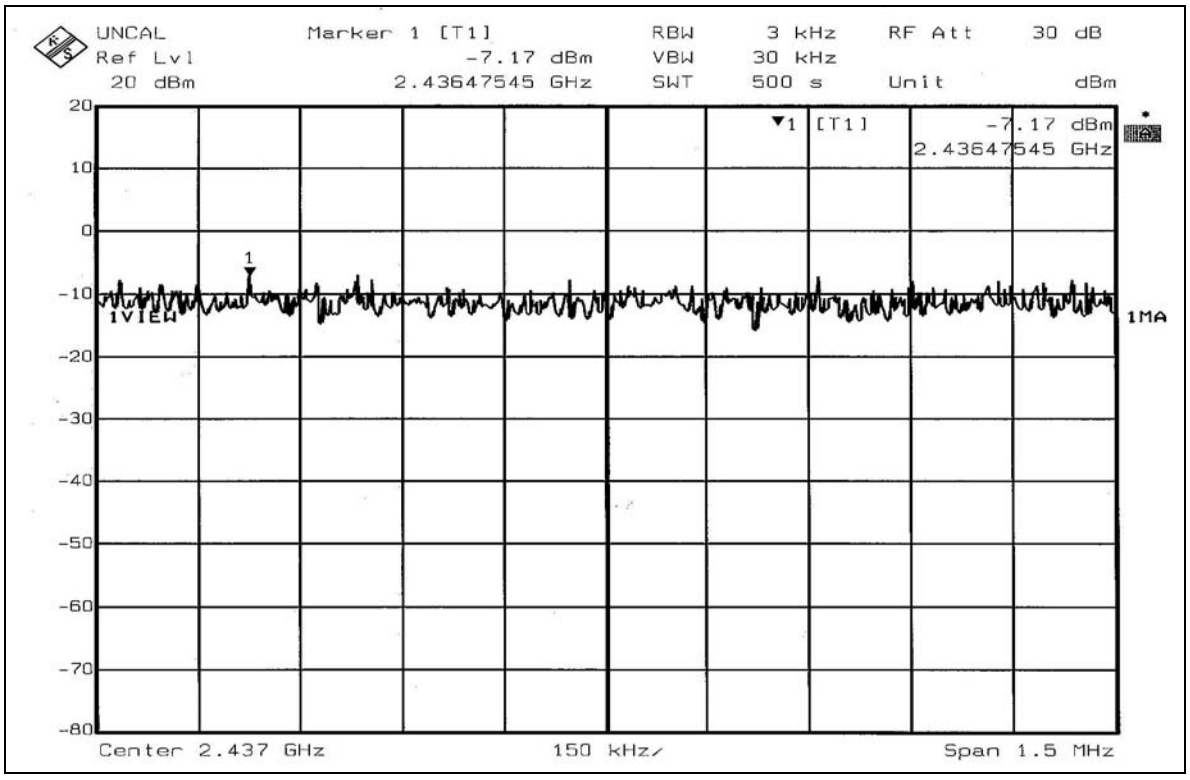
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-7.24	8	PASS
6	2437	-7.17	8	PASS
11	2462	-7.72	8	PASS

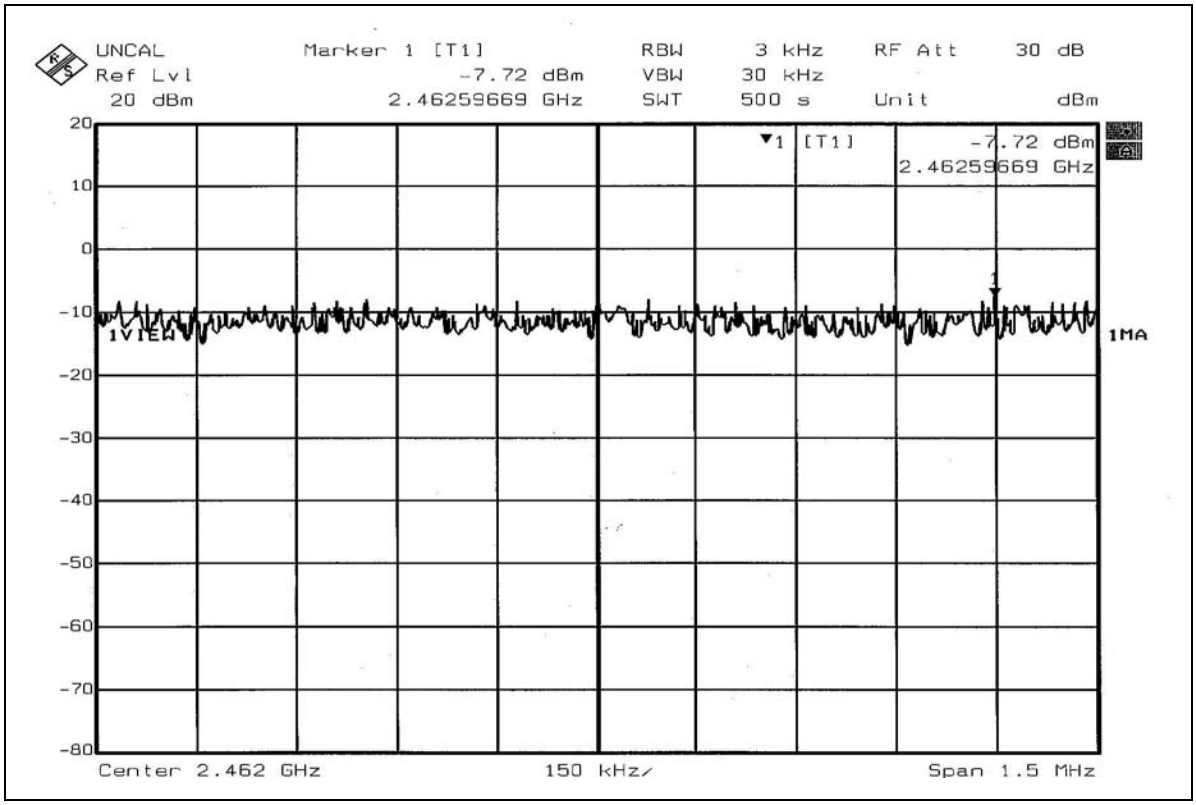
CH1


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-7.24 dBm
2.41221493 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
▼1 [T1]
-7.24 dBm
2.41221493 GHz
1VIEW
1MA
Center 2.412 GHz
150 kHz/
Span 1.5 MHz

CH6


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-7.17 dBm
2.43647545 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
▼1 [T1]
-7.17 dBm
2.43647545 GHz
1VIEW
1MA
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH11

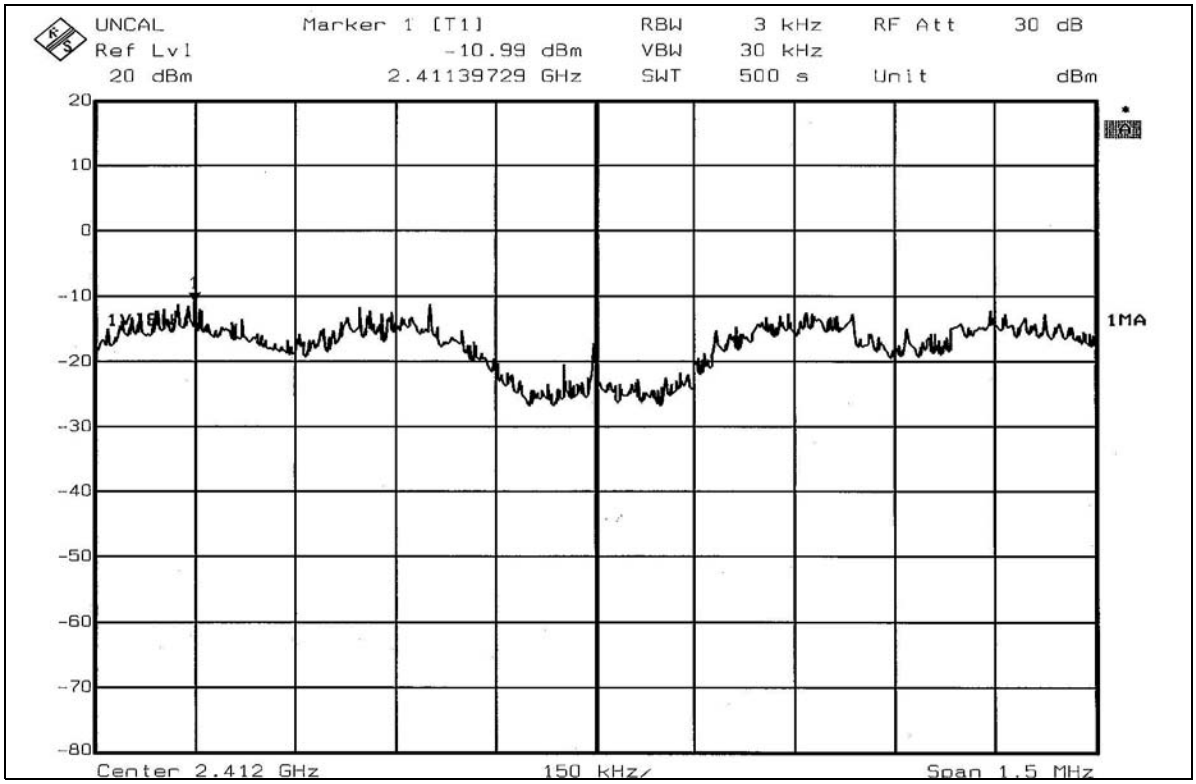

UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-7.72 dBm
2.46259669 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1 [T1]
-7.72 dBm
2.46259669 GHz
1VIEW
1MA
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM modulation

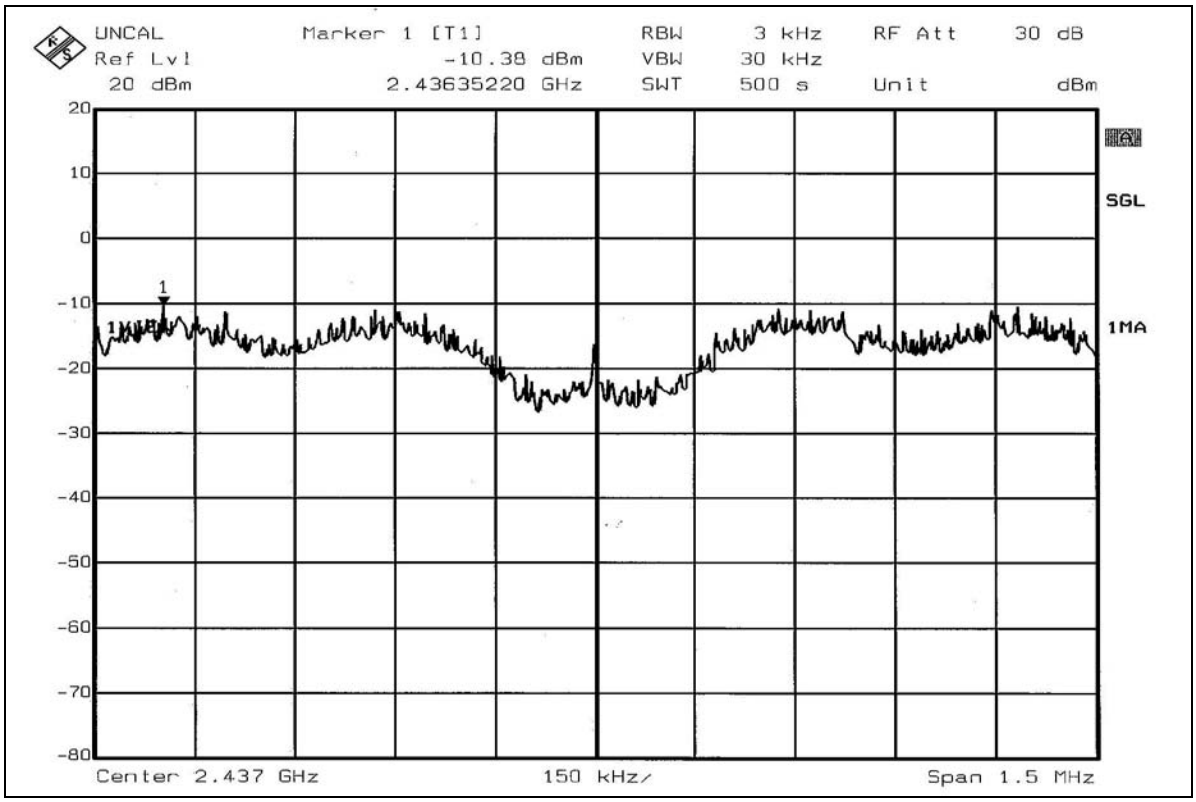
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	24deg. C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-10.99	8	PASS
6	2437	-10.38	8	PASS
11	2462	-13.58	8	PASS

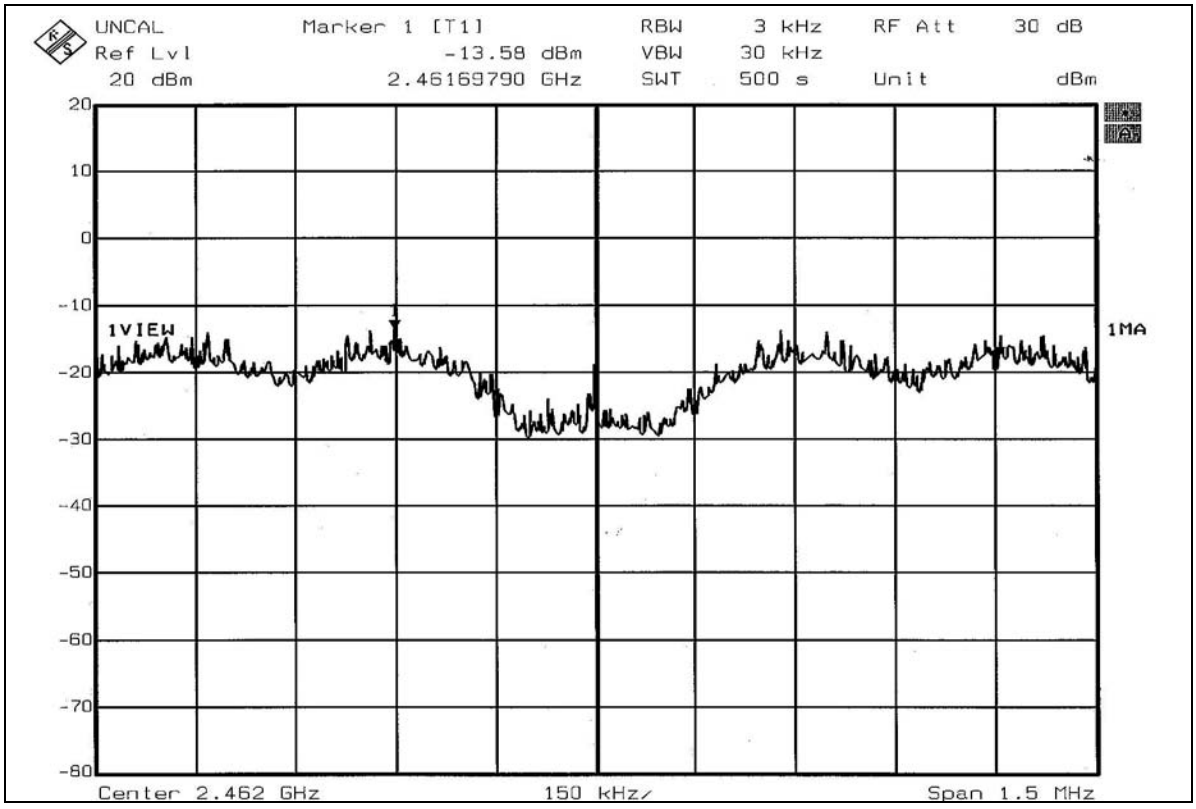
CH1


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-10.99 dBm
2.41139729 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
Center 2.412 GHz
150 kHz/
Span 1.5 MHz

CH6


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-10.38 dBm
2.43635220 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
SGL
1MA
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH11


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-13.58 dBm
2.46169790 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1VIEW
1MA
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 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.

4.6.3 TEST PROCEDURE

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

The spectrum plots (Peak RBW=VBW=100kHz ; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 12 images. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS modulation

NOTE 1: The band edge emission plot on page 58 shows 45.52dBc between carrier maximum power and local maximum emission in restrict band (2.3871GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 109.99dBuV/m (Peak), so the maximum field strength in restrict band is 109.99-45.52=64.47dBuV/m which is under 74dBuV/m limit..

The band edge emission plot of on page 58 shows 47.38dBc between carrier maximum power and local maximum emission in restrict band (2.3871GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 99.80dBuV/m (Average), so the maximum field strength in restrict band is 99.80-47.38=52.42dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 59 shows 43.82dBc between carrier maximum power and local maximum emission in restrict band (2.4869GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 109.90dBuV/m (Peak), so the maximum field strength in restrict band is 109.90-43.82=66.08dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 60 shows 46.03dBc between carrier maximum power and local maximum emission in restrict band (2.4873GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 98.60dBuV/m (Average), so the maximum field strength in restrict band is 98.60-46.03=52.57dBuV/m which is under 54dBuV/m limit.

802.11g OFDM modulation

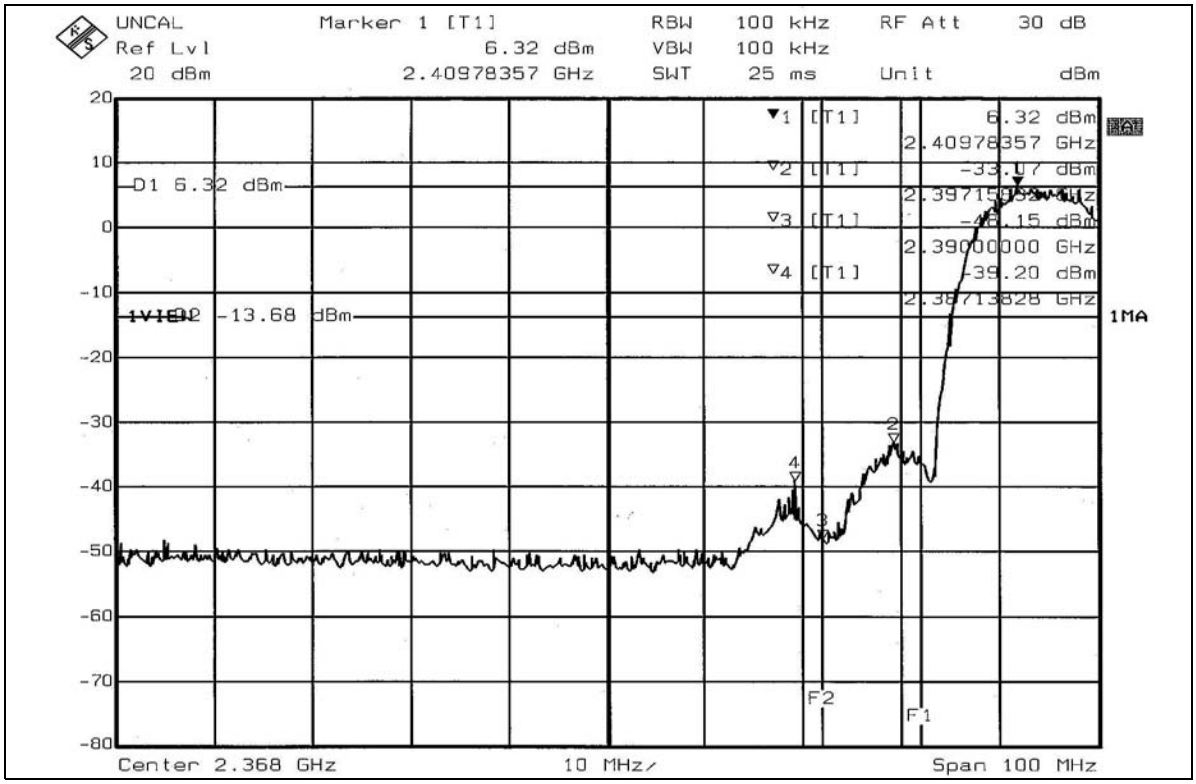
NOTE 1: The band edge emission plot on page 61 shows 42.88dBc between carrier maximum power and local maximum emission in restrict band (2.3869GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 108.60dBuV/m (Peak), so the maximum field strength in restrict band is 108.60-42.88=65.72dBuV/m which is under 74dBuV/m limit.

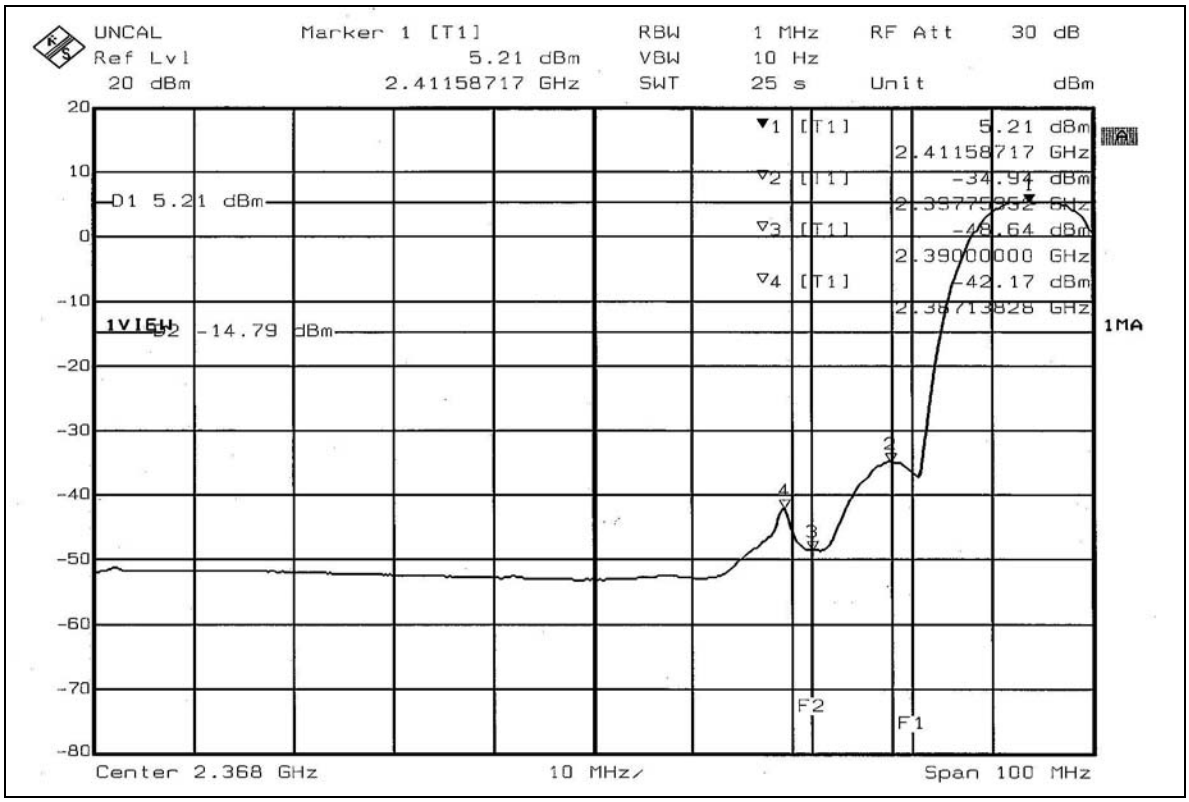
The band edge emission plot of on page 61 shows 43.72dBc between carrier maximum power and local maximum emission in restrict band (2.3869GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 96.40dBuV/m (Average), so the maximum field strength in restrict band is 96.40-43.72=52.68dBuV/m which is under 54dBuV/m limit.

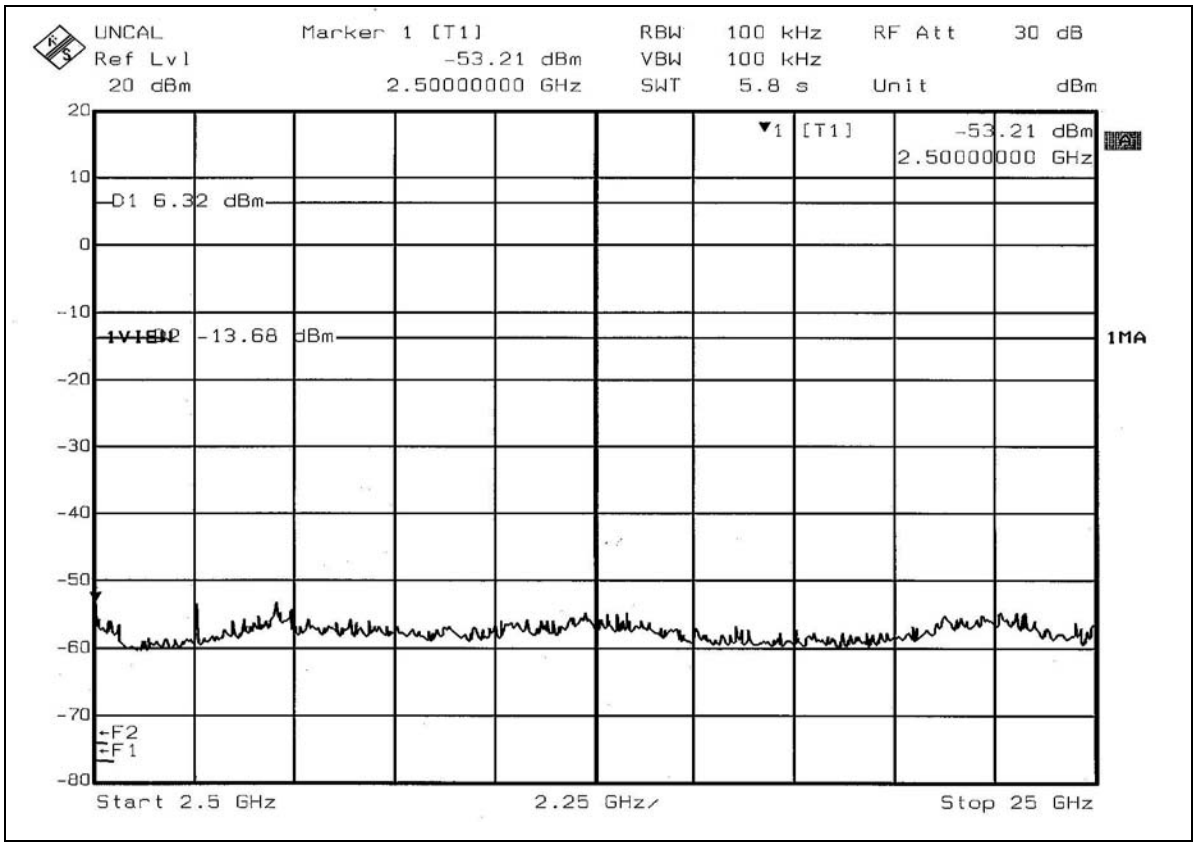
NOTE 2: The band edge emission plot on page 62 shows 41.95dBc between carrier maximum power and local maximum emission in restrict band (2.4871GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 108.16dBuV/m (Peak), so the maximum field strength in restrict band is 108.16-41.95=66.21dBuV/m which is under 74dBuV/m limit.

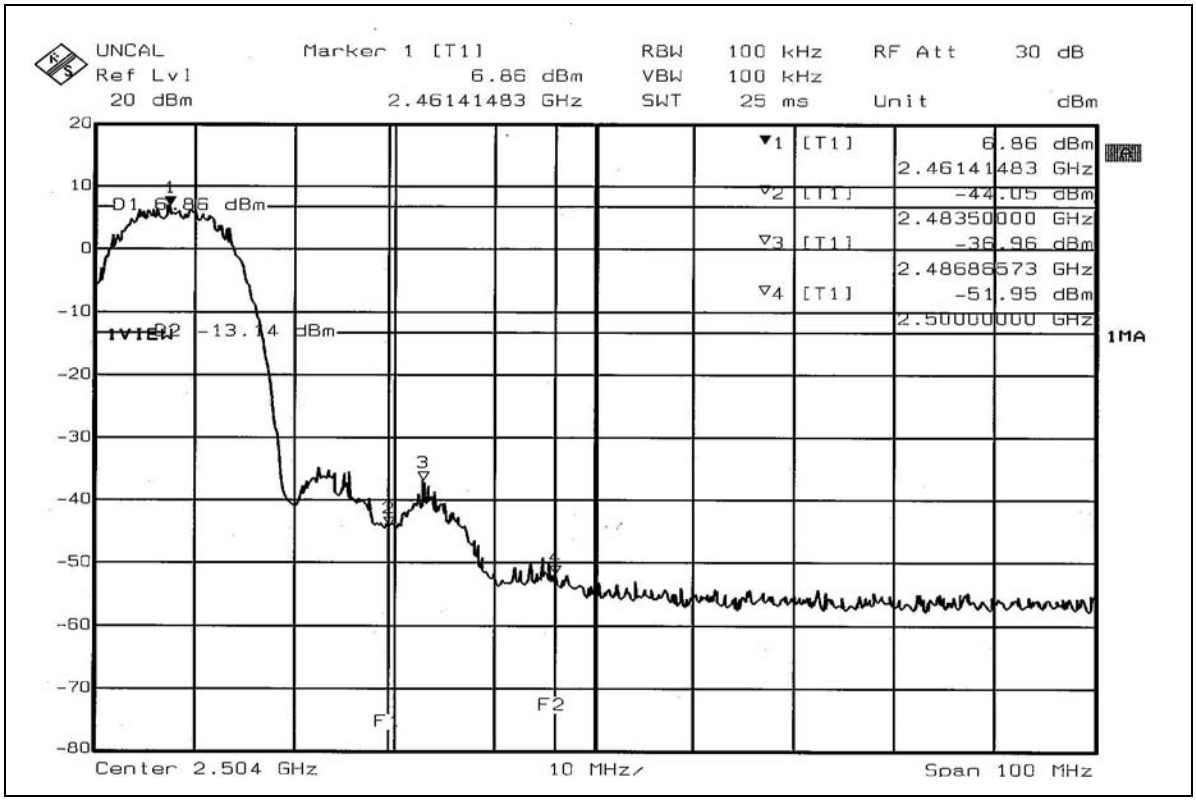
The band edge emission plot on page 63 shows 44.83dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 97.61dBuV/m (Average), so the maximum field strength in restrict band is 97.61-44.83=52.78dBuV/m which is under 54dBuV/m limit.

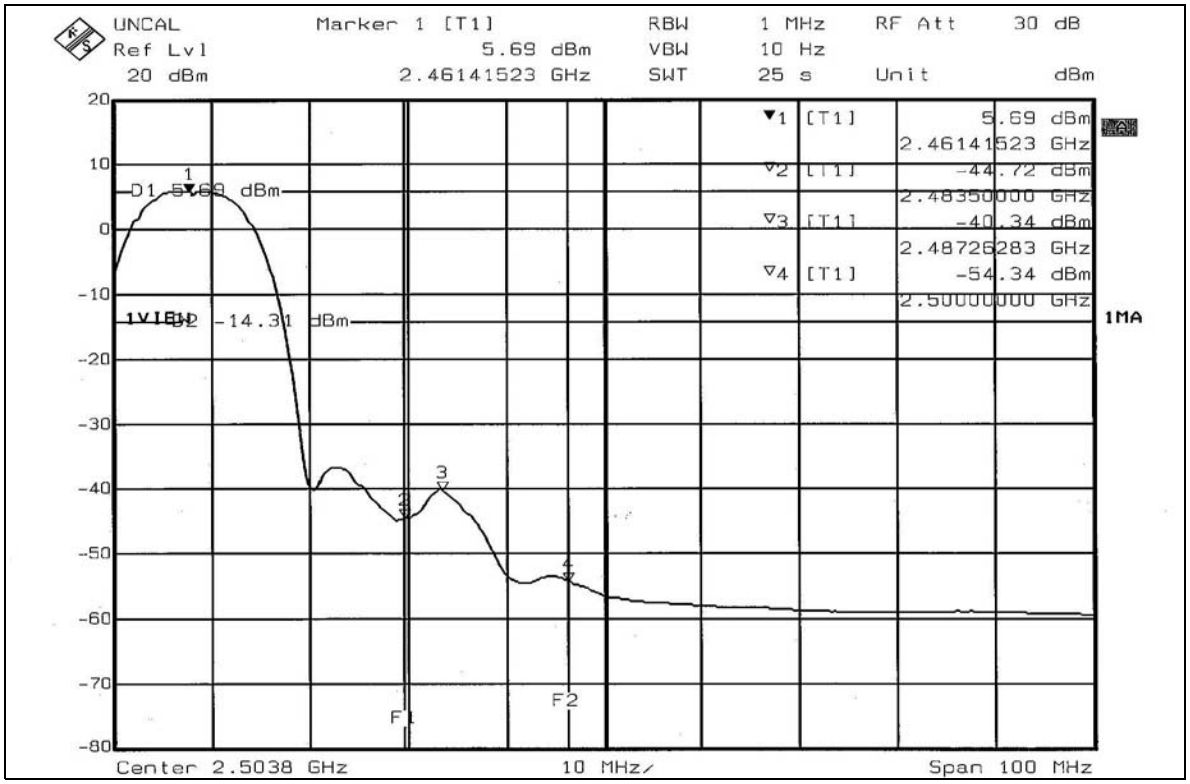
802.11b DSSS modulation

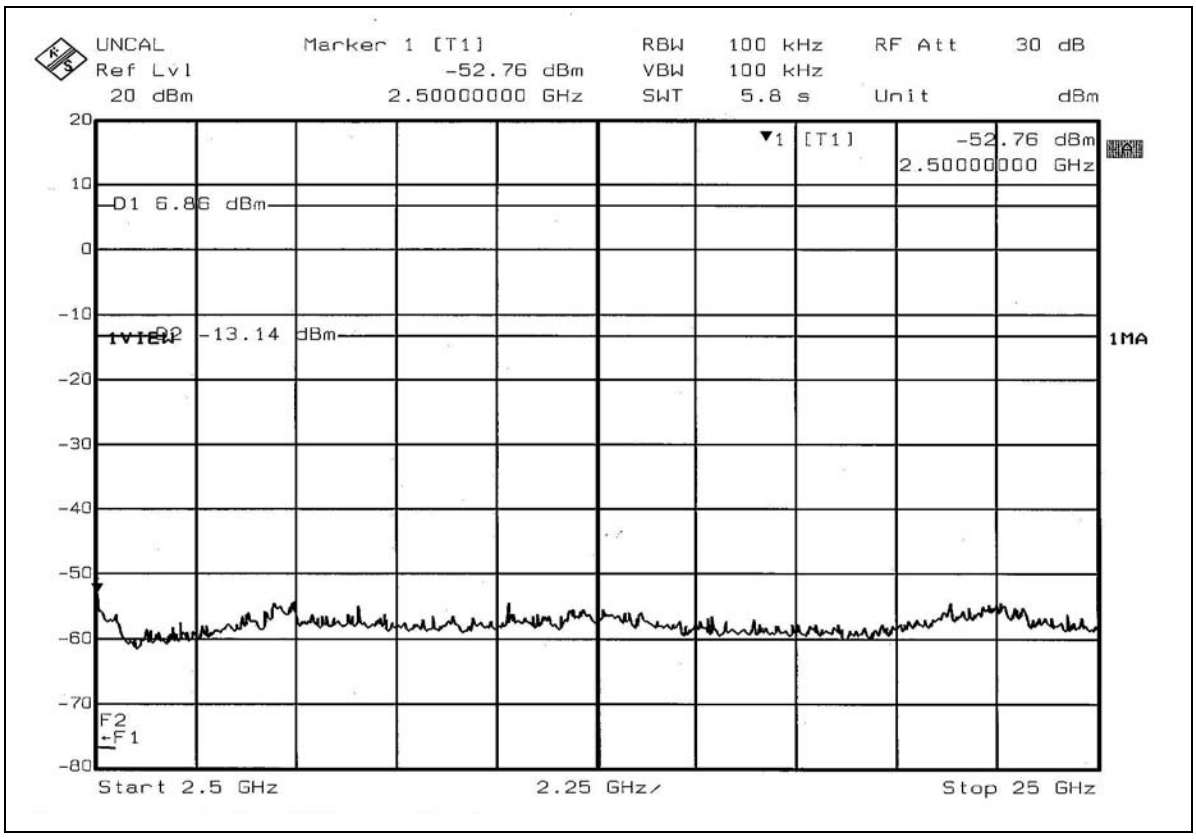




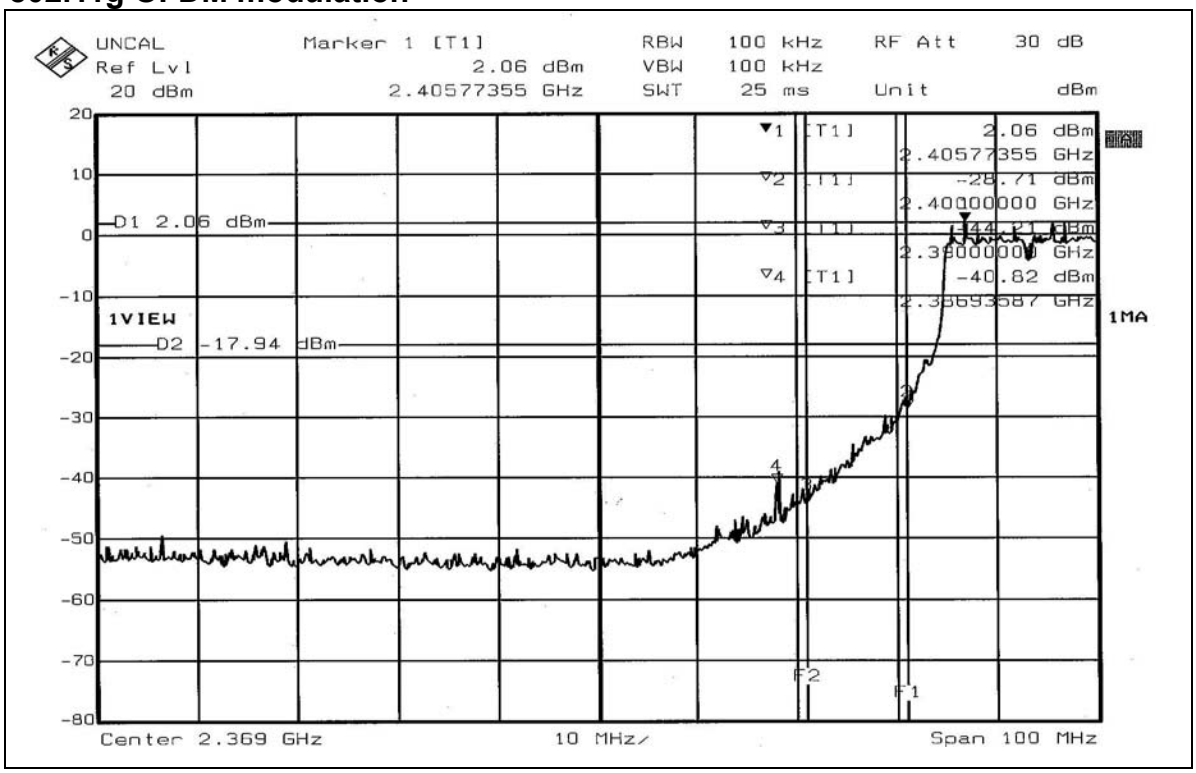

UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-53.21 dBm
2.50000000 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
▼1 [T1] -53.21 dBm
2.50000000 GHz
D1 6.32 dBm
D2 -13.68 dBm
1MA
F2
F1
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

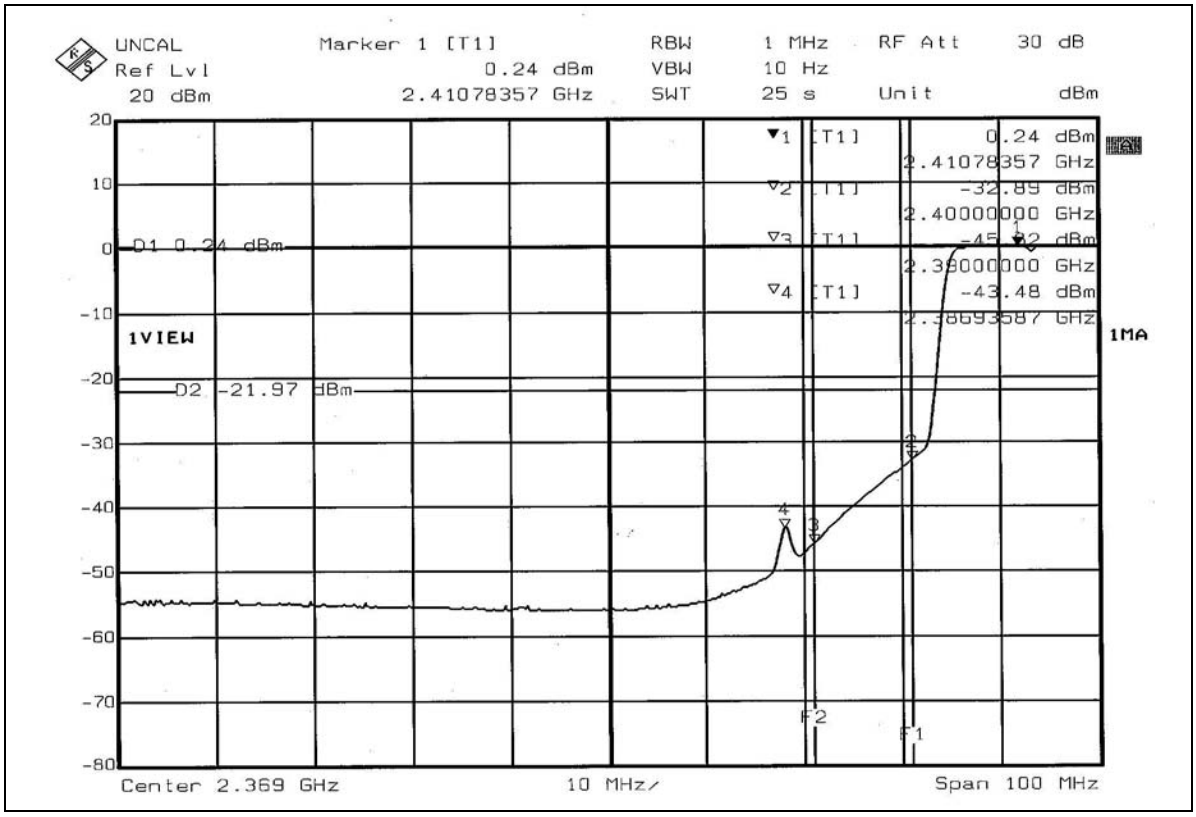

UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
6.86 dBm
2.46141483 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 30 dB
Unit dBm
▼1 [T1] 6.86 dBm
2.46141483 GHz
▽2 [T1] -44.05 dBm
2.48350000 GHz
▽3 [T1] -36.96 dBm
2.48686573 GHz
▽4 [T1] -51.95 dBm
2.50000000 GHz
D1 6.86 dBm
D2 -13.14 dBm
1MA
F1
F2
Center 2.504 GHz
10 MHz/
Span 100 MHz

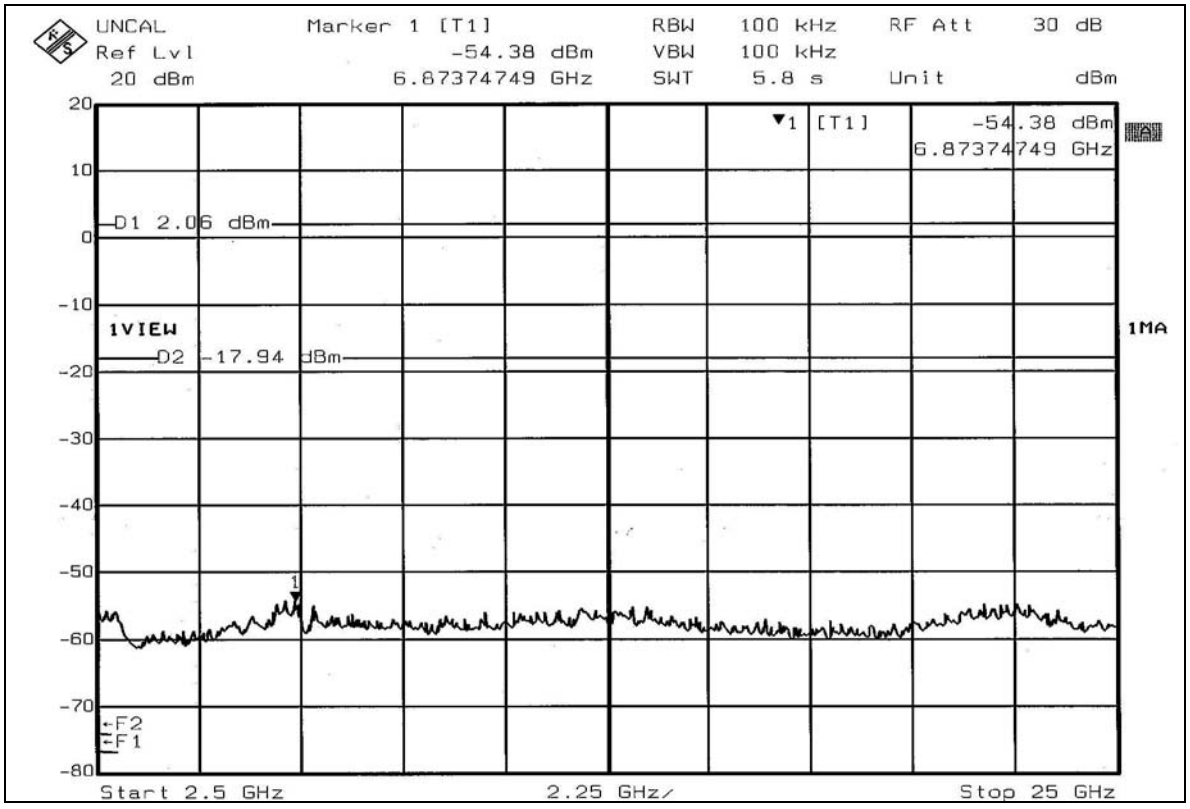

UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
5.69 dBm
2.46141523 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 30 dB
Unit dBm
▼1 [T1] 5.69 dBm
2.46141523 GHz
▽2 [T1] -44.72 dBm
2.48350000 GHz
▽3 [T1] -40.34 dBm
2.48726283 GHz
▽4 [T1] -54.34 dBm
2.50000000 GHz
D1 5.69 dBm
D2 -14.31 dBm
1MA
Center 2.5038 GHz
10 MHz/
Span 100 MHz

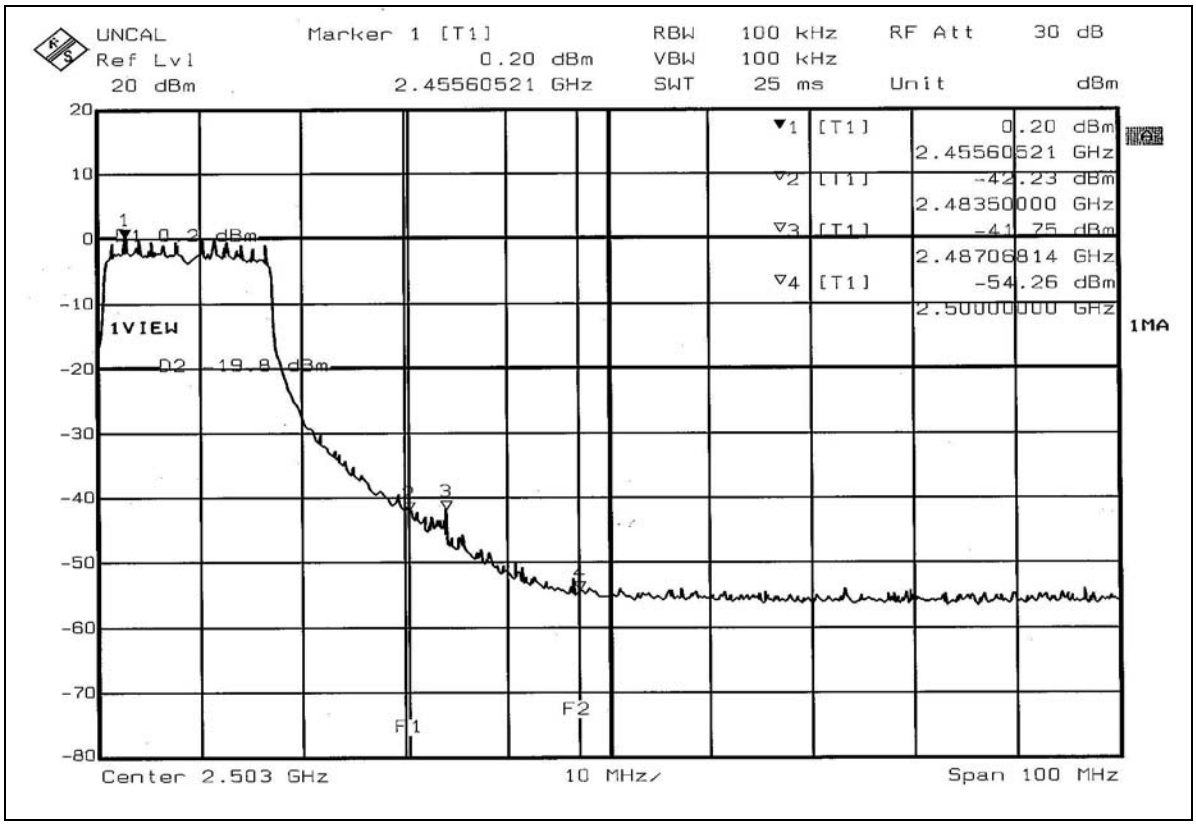

UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-52.76 dBm
2.50000000 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
▼1 [T1] -52.76 dBm
2.50000000 GHz
D1 6.86 dBm
D2 -13.14 dBm
1MA
F2
F1
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

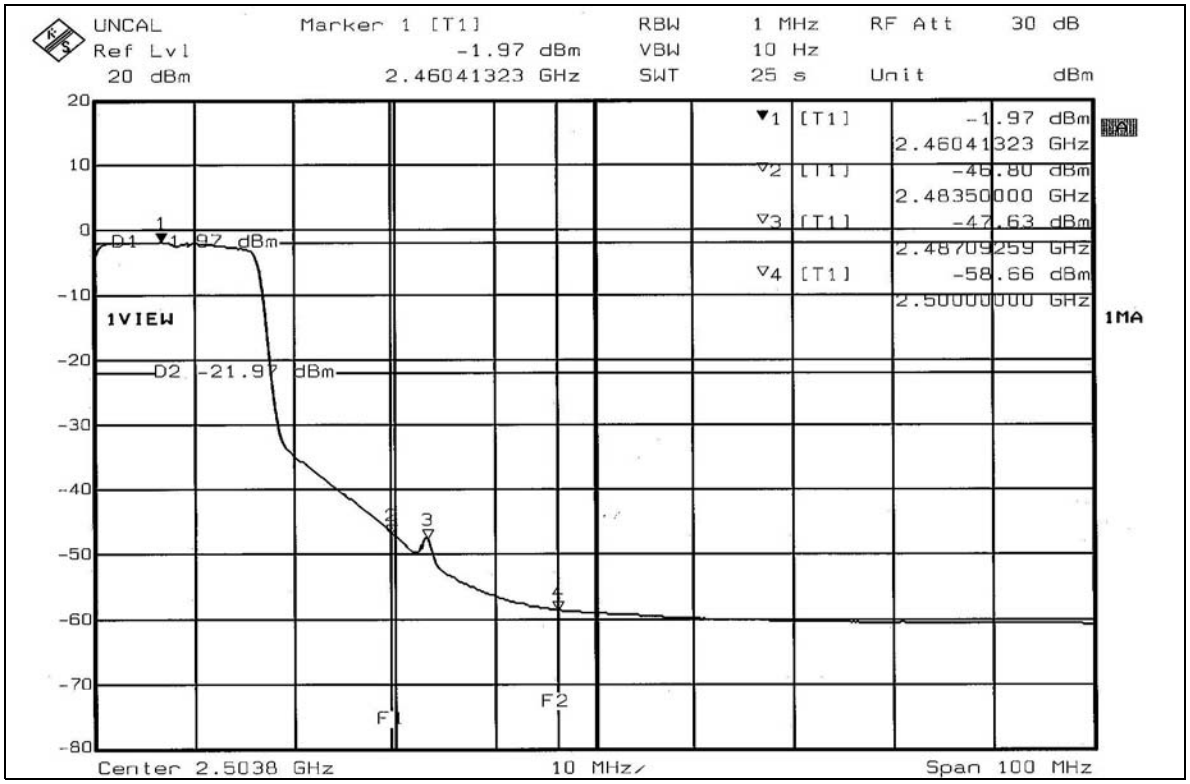
802.11g OFDM modulation

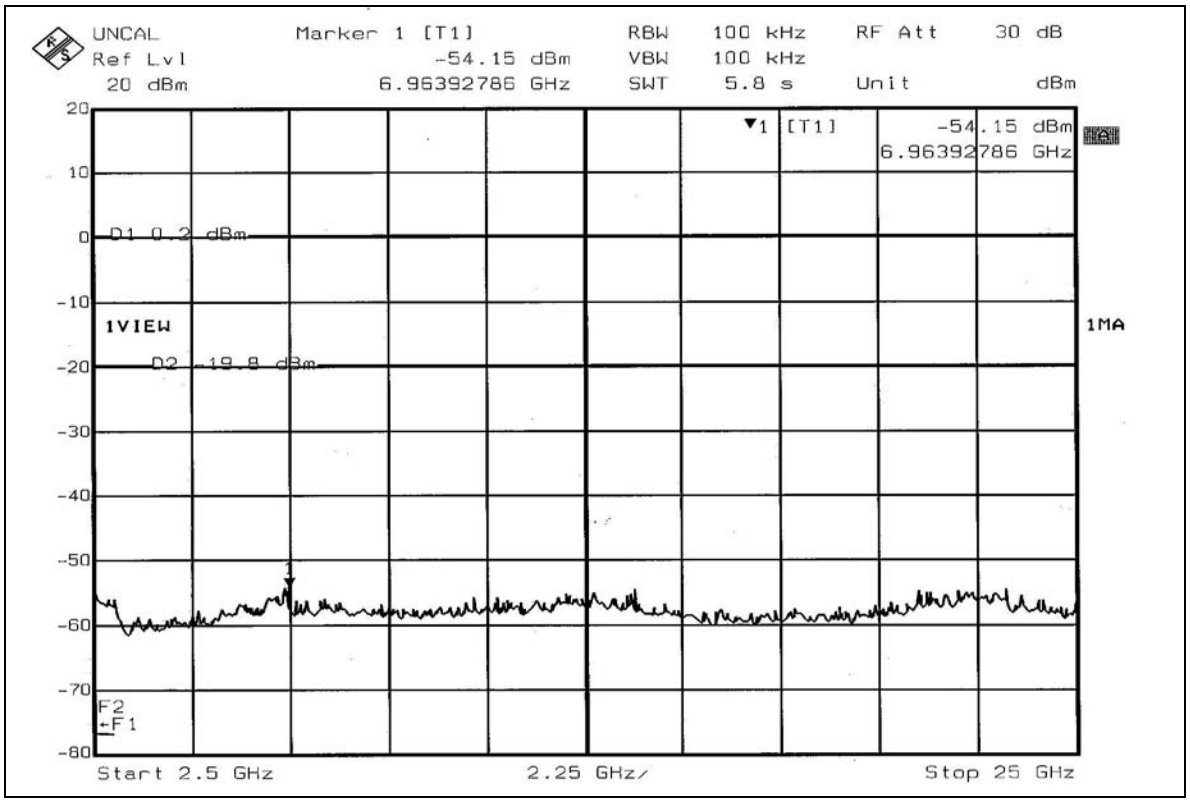





UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-54.38 dBm
6.87374749 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
▼1 [T1]
-54.38 dBm
6.87374749 GHz
D1 2.06 dBm
1VIEW
D2 -17.94 dBm
1MA
F2
F1
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
0.20 dBm
2.45560521 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 30 dB
Unit dBm
▼1 [T1]
0.20 dBm
2.45560521 GHz
▽2 [T1]
-42.23 dBm
2.48350000 GHz
▽3 [T1]
-41.25 dBm
2.48706814 GHz
▽4 [T1]
-54.26 dBm
2.50000000 GHz
1VIEW
D2 -19.8 dBm
1MA
F1
F2
Center 2.503 GHz
10 MHz/
Span 100 MHz


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-1.97 dBm
2.46041323 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 30 dB
Unit dBm
▼1 [T1] -1.97 dBm 2.46041323 GHz
▽2 [T1] -46.80 dBm 2.48350000 GHz
▽3 [T1] -47.63 dBm 2.48709259 GHz
▽4 [T1] -58.66 dBm 2.50000000 GHz
D1 -1.97 dBm
D2 -21.97 dBm
1VIEW
1MA
F1
F2
Center 2.5038 GHz
10 MHz/
Span 100 MHz


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-54.15 dBm
6.96392786 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
▼1 [T1] -54.15 dBm 6.96392786 GHz
D1 0.2 dBm
D2 -19.8 dBm
1VIEW
1MA
F2
F1
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

4.7 ANTENNA REQUIREMENT

4.7.1 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 15.247 (b), 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.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is PCB antenna with UFL connector. The maximum Gain of the antenna is 1.5dBi.

5. TEST TYPES AND RESULTS (802.11a 5725~5850MHz Band)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5 0.5-5 5-30	66 to 56 56 60	56 to 46 46 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.

5.1.2 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.

5.1.3 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.

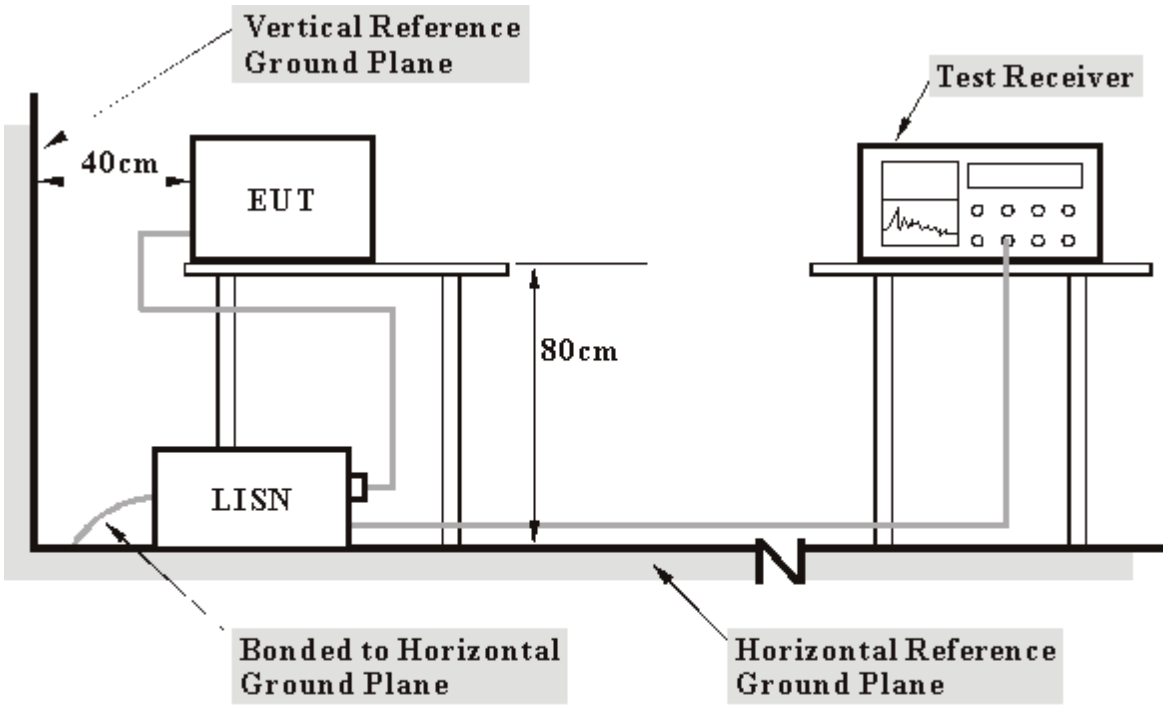
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) was not recorded.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 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.

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6

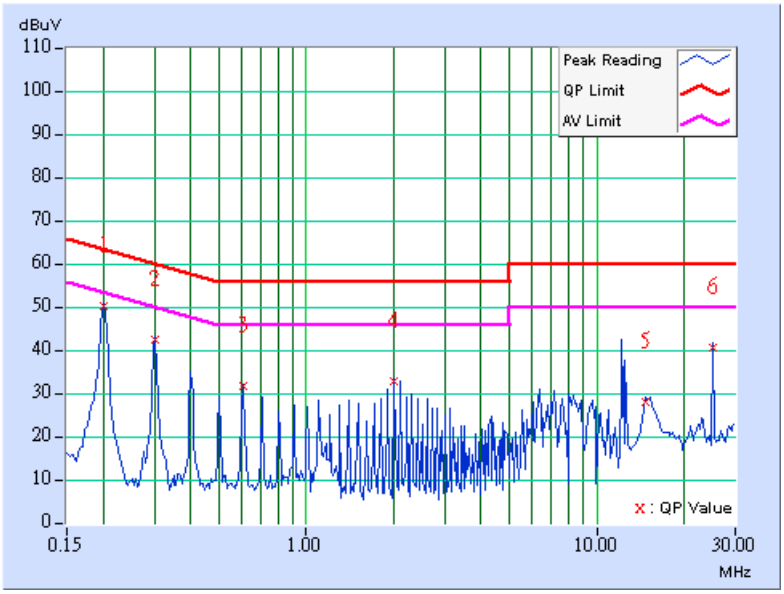
5.1.7 TEST RESULTS

Conducted Worst-Case Data

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 3	**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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	49.35	-	49.45	-	63.58	53.58	-14.13	-
2	0.302	0.11	41.80	-	41.91	-	60.18	50.18	-18.27	-
3	0.603	0.13	30.97	-	31.10	-	56.00	46.00	-24.90	-
4	2.012	0.16	32.02	-	32.18	-	56.00	46.00	-23.82	-
5	14.809	0.49	27.19	-	27.68	-	60.00	50.00	-32.32	-
6	25.000	0.86	39.75	-	40.61	-	60.00	50.00	-19.39	-

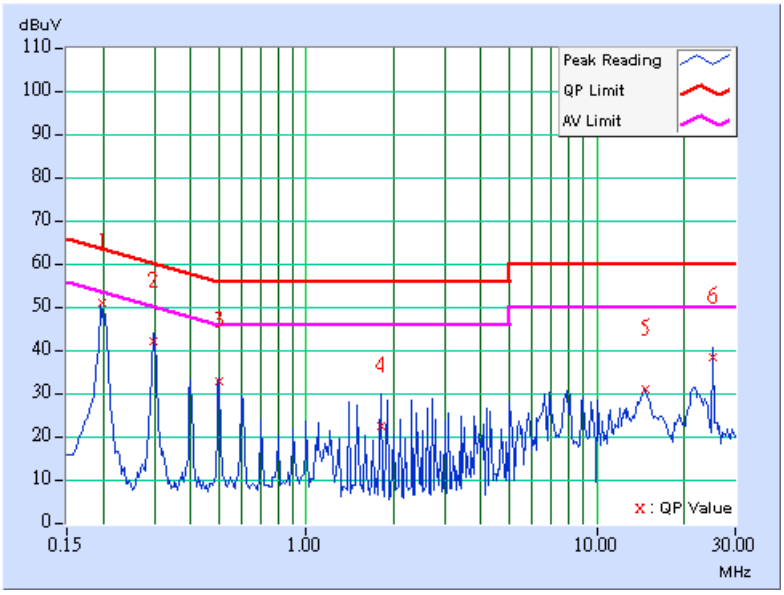
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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 3	**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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.201**	**0.10**	**51.61**	**-**	**51.71**	**-**	**63.58**	**53.58**	**-11.87**	**-**
2	0.302	0.11	42.60	-	42.71	-	60.18	50.18	-17.47	-
3	0.603	0.12	28.03	-	28.15	-	56.00	46.00	-27.85	-
4	1.809	0.15	29.90	-	30.05	-	56.00	46.00	-25.95	-
5	7.344	0.27	27.37	-	27.64	-	60.00	50.00	-32.36	-
6	25.000	0.40	36.67	-	37.07	-	60.00	50.00	-22.93	-

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.



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 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.

5.2.3 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 camber. 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.

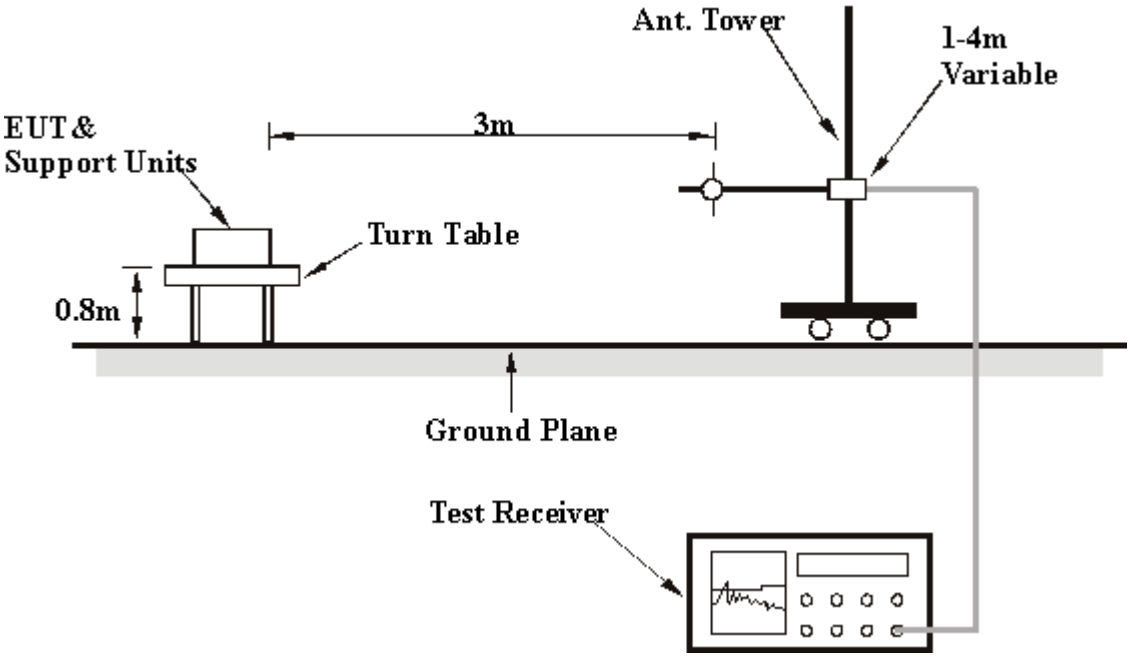
NOTE:

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.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation

5.2.5 TEST SETUP



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

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

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

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 3	**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	30.25 QP	43.50	-13.25	1.50 H	124	17.50	12.74
2	249.66	33.52 QP	46.00	-12.48	1.00 H	322	20.44	13.08
3	323.53	34.44 QP	46.00	-11.56	1.00 H	268	19.57	14.86
4	360.46	32.70 QP	46.00	-13.30	1.00 H	82	16.99	15.71
5	500.42	30.65 QP	46.00	-15.35	1.50 H	19	12.05	18.59
6	539.30	33.26 QP	46.00	-12.74	1.50 H	199	13.87	19.39
7	720.08	36.61 QP	46.00	-9.39	1.00 H	310	13.89	22.72
8	757.01	32.86 QP	46.00	-13.14	1.00 H	55	9.40	23.46
9	811.44	37.71 QP	46.00	-8.29	1.00 H	64	13.91	23.80
10	863.93	33.49 QP	46.00	-12.51	1.00 H	310	9.09	24.40
11	900.86	37.04 QP	46.00	-8.96	1.00 H	313	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 3	**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	24.00 QP	40.00	-16.00	1.00 V	160	8.96	15.03
2	179.68	24.70 QP	43.50	-18.80	1.00 V	169	11.96	12.74
3	249.66	27.74 QP	46.00	-18.26	2.00 V	82	14.66	13.08
4	323.53	28.90 QP	46.00	-17.10	1.50 V	49	14.04	14.86
5	360.46	30.86 QP	46.00	-15.14	1.50 V	103	15.15	15.71
6	432.38	30.61 QP	46.00	-15.39	1.50 V	73	13.15	17.46
7	539.30	30.84 QP	46.00	-15.16	1.00 V	184	11.45	19.39
8	720.08	37.83 QP	46.00	-8.17	1.50 V	319	15.12	22.72
9	757.01	38.34 QP	46.00	-7.66	1.50 V	1	14.89	23.46
10	811.44	39.12 QP	46.00	-6.88	1.50 V	10	15.32	23.80
11	900.86	36.56 QP	46.00	-9.44	1.00 V	283	11.44	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 3)

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 3	**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**	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	179.68	30.21 QP	43.50	-13.29	1.50 H	124	17.47	12.74
2	249.66	33.42 QP	46.00	-12.58	1.00 H	325	20.34	13.08
3	323.53	34.62 QP	46.00	-11.38	1.00 H	268	19.76	14.86
4	360.46	32.84 QP	46.00	-13.16	1.00 H	79	17.14	15.71
5	500.42	30.67 QP	46.00	-15.33	1.50 H	25	12.07	18.59
6	539.30	33.13 QP	46.00	-12.87	1.50 H	196	13.74	19.39
7	720.08	37.08 QP	46.00	-8.92	1.00 H	304	14.37	22.72
8	757.01	33.19 QP	46.00	-12.81	1.00 H	58	9.73	23.46
9	811.44	37.84 QP	46.00	-8.16	1.00 H	61	14.05	23.80
10	863.93	33.08 QP	46.00	-12.92	1.00 H	313	8.69	24.40
11	900.86	37.36 QP	46.00	-8.64	1.50 H	358	12.24	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 3	**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**	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	179.68	24.80 QP	43.50	-18.70	1.50 V	295	12.06	12.74
2	179.68	24.80 QP	43.50	-18.70	1.50 V	295	12.06	12.74
3	269.10	28.38 QP	46.00	-17.62	1.00 V	1	14.77	13.61
4	323.53	29.17 QP	46.00	-16.83	2.00 V	34	14.31	14.86
5	360.46	30.79 QP	46.00	-15.21	1.50 V	103	15.08	15.71
6	432.38	30.44 QP	46.00	-15.56	1.50 V	70	12.98	17.46
7	539.30	31.36 QP	46.00	-14.64	1.00 V	94	11.97	19.39
8	720.08	37.35 QP	46.00	-8.65	1.50 V	313	14.63	22.72
9	757.01	38.41 QP	46.00	-7.59	1.50 V	355	14.96	23.46
10	811.44	39.44 QP	46.00	-6.56	1.50 V	13	15.65	23.80
11	900.86	36.44 QP	46.00	-9.56	1.50 V	298	11.33	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 3	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa	**TEST MODE**	D
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	29.67 QP	43.50	-13.83	1.50 H	82	17.53	12.14
2	199.12	37.50 QP	43.50	-6.00	1.50 H	82	26.30	11.20
3	249.66	39.77 QP	46.00	-6.23	1.00 H	76	26.69	13.08
4	500.42	31.74 QP	46.00	-14.26	1.50 H	43	13.14	18.59
5	539.30	31.37 QP	46.00	-14.63	1.50 H	298	11.98	19.39
6	599.56	33.63 QP	46.00	-12.37	1.50 H	121	12.74	20.88
7	630.66	39.36 QP	46.00	-6.64	1.50 H	313	18.04	21.32
8	720.08	35.05 QP	46.00	-10.95	1.00 H	307	12.34	22.72
9	811.44	38.78 QP	46.00	-7.22	1.00 H	286	14.99	23.80
10	900.86	41.60 QP	46.00	-4.40	1.50 H	7	16.48	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 3	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa	**TEST MODE**	D
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	29.98 QP	40.00	-10.02	1.00 V	61	16.31	13.68
2	66.93	26.12 QP	40.00	-13.88	1.00 V	16	13.44	12.68
3	107.76	30.05 QP	43.50	-13.45	1.00 V	85	18.51	11.54
4	142.75	33.15 QP	43.50	-10.35	1.00 V	355	18.87	14.27
5	199.12	31.80 QP	43.50	-11.70	1.00 V	46	20.60	11.20
6	249.66	35.14 QP	46.00	-10.86	1.00 V	334	22.06	13.08
7	539.30	33.91 QP	46.00	-12.09	1.00 V	313	14.52	19.39
8	599.56	36.60 QP	46.00	-9.40	1.00 V	127	15.72	20.88
9	630.66	40.53 QP	46.00	-5.47	1.00 V	19	19.21	21.32
10	720.08	40.46 QP	46.00	-5.54	1.50 V	1	17.75	22.72
11	811.44	40.42 QP	46.00	-5.58	1.50 V	181	16.62	23.80
12	900.86	41.73 QP	46.00	-4.27	1.50 V	316	16.62	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	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	46.20 PK	74.00	-27.80	1.12 H	260	19.42	26.78
1	#1080.00	43.50 AV	54.00	-10.50	1.12 H	260	16.72	26.78
2	#3830.00	46.58 PK	74.00	-27.42	1.25 H	350	12.63	33.95
2	#3830.00	36.80 AV	54.00	-17.20	1.25 H	350	2.85	33.95
3	*5745.00	103.10 PK			1.10 H	350	65.04	38.06
3	*5745.00	93.20 AV			1.10 H	350	55.14	38.06
4	#11490.00	55.20 PK	74.00	-18.80	1.20 H	130	7.97	47.23
4	#11490.00	43.10 AV	54.00	-10.90	1.20 H	130	-4.13	47.23

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	47.59 PK	74.00	-26.41	1.04 V	130	20.81	26.78
1	#1080.00	46.86 AV	54.00	-7.14	1.04 V	130	20.08	26.78
2	#3830.00	47.12 PK	74.00	-26.88	1.10 V	260	13.17	33.95
2	#3830.00	38.62 AV	54.00	-15.38	1.10 V	260	4.67	33.95
3	*5745.00	115.49 PK			1.20 V	320	77.43	38.06
3	*5745.00	105.68 AV			1.20 V	320	67.62	38.06
4	#11490.00	56.44 PK	74.00	-17.56	1.05 V	360	9.21	47.23
4	#11490.00	43.12 AV	54.00	-10.88	1.05 V	360	-4.11	47.23

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.
7. The limit value is defined as per 15.247

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 3	**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	47.20 PK	74.00	-26.80	1.28 H	100	20.42	26.78
1	#1080.00	45.63 AV	54.00	-8.37	1.28 H	100	18.85	26.78
2	#3856.00	46.74 PK	74.00	-27.26	1.28 H	300	12.71	34.03
2	#3856.00	37.26 AV	54.00	-16.74	1.28 H	300	3.23	34.03
3	*5785.00	103.58 PK			1.20 H	288	65.43	38.15
3	*5785.00	93.15 AV			1.20 H	288	55.00	38.15
4	#11570.00	56.38 PK	74.00	-17.62	1.10 H	300	9.26	47.12
4	#11570.00	42.61 AV	54.00	-11.39	1.10 H	300	-4.51	47.12

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	44.50 PK	74.00	-29.50	1.14 V	290	17.72	26.78
1	#1080.00	42.60 AV	54.00	-11.40	1.14 V	290	15.82	26.78
2	#3856.00	47.60 PK	74.00	-26.40	1.04 V	269	13.57	34.03
2	#3856.00	42.60 AV	54.00	-11.40	1.04 V	269	8.57	34.03
3	*5785.00	115.14 PK			1.12 V	123	76.99	38.15
3	*5785.00	104.10 AV			1.12 V	123	65.95	38.15
4	#11570.00	57.21 PK	74.00	-16.79	1.20 V	323	10.09	47.12
4	#11570.00	43.12 AV	54.00	-10.88	1.20 V	323	-4.00	47.12

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.
7. The limit value is defined as per 15.247

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	47.53 PK	74.00	-26.47	1.21 H	190	20.75	26.78
1	#1080.00	45.29 AV	54.00	-8.71	1.21 H	190	18.51	26.78
2	#3883.00	47.23 PK	74.00	-26.77	1.24 H	350	13.11	34.12
2	#3883.00	36.29 AV	54.00	-17.71	1.24 H	350	2.17	34.12
3	*5825.00	103.20 PK			1.18 H	300	64.99	38.21
3	*5825.00	93.28 AV			1.18 H	300	55.07	38.21
4	#11650.00	46.29 PK	74.00	-27.71	1.12 H	350	-0.81	47.10
4	#11650.00	43.60 AV	54.00	-10.40	1.12 H	350	-3.50	47.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#1080.00	48.20 PK	74.00	-25.80	1.02 V	150	21.42	26.78
1	#1080.00	47.53 AV	54.00	-6.47	1.02 V	150	20.75	26.78
2	#3883.00	48.63 PK	74.00	-25.37	1.08 V	293	14.51	34.12
2	#3883.00	43.11 AV	54.00	-10.89	1.08 V	293	8.99	34.12
3	*5825.00	115.29 PK			1.28 V	260	77.08	38.21
3	*5825.00	104.15 AV			1.28 V	260	65.94	38.21
4	#11650.00	62.30 PK	74.00	-11.70	1.24 V	150	15.20	47.10
4	#11650.00	47.31 AV	54.00	-6.69	1.24 V	150	0.21	47.10

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.
7. The limit value is defined as per 15.247

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**	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	#1080.00	44.53 PK	74.00	-29.47	1.29 H	252	17.75	26.78
1	#1080.00	42.53 AV	54.00	-11.47	1.29 H	252	15.75	26.78
2	#3830.00	44.23 PK	74.00	-29.77	1.28 H	360	10.29	33.95
2	#3830.00	34.67 AV	54.00	-19.33	1.28 H	360	0.73	33.95
3	*5745.00	100.52 PK			1.05 H	39	62.46	38.06
3	*5745.00	90.81 AV			1.05 H	39	52.75	38.06
4	#11490.00	53.51 PK	74.00	-20.49	1.23 H	136	6.28	47.23
4	#11490.00	41.51 AV	54.00	-12.49	1.23 H	136	-5.72	47.23

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	46.80 PK	74.00	-27.20	1.01 V	140	20.02	26.78
1	#1080.00	45.40 AV	54.00	-8.60	1.01 V	140	18.62	26.78
2	#2340.00	43.50 PK	74.00	-30.50	1.20 V	243	12.72	30.78
2	#2340.00	39.08 AV	54.00	-14.92	1.20 V	243	8.30	30.78
3	#3830.00	45.03 PK	74.00	-28.97	1.05 V	303	11.09	33.95
3	#3830.00	37.45 AV	54.00	-16.55	1.05 V	303	3.51	33.95
4	*5745.00	113.20 PK			1.15 V	319	75.14	38.06
4	*5745.00	102.78 AV			1.15 V	319	64.72	38.06
5	#11490.00	54.79 PK	74.00	-19.21	1.00 V	1	7.56	47.23
5	#11490.00	41.89 AV	54.00	-12.11	1.00 V	1	-5.34	47.23

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.
7. The limit value is defined as per 15.247

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 3	**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**	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	#1080.00	45.08 PK	74.00	-28.92	1.33 H	69	18.30	26.78
1	#1080.00	43.34 AV	54.00	-10.66	1.33 H	69	16.56	26.78
2	#3856.00	44.74 PK	74.00	-29.26	1.45 H	360	10.70	34.03
2	#3856.00	35.67 AV	54.00	-18.33	1.45 H	360	1.63	34.03
3	*5785.00	101.91 PK			1.42 H	288	63.76	38.15
3	*5785.00	91.91 AV			1.42 H	288	53.76	38.15
4	#11570.00	55.28 PK	74.00	-18.72	1.20 H	245	8.16	47.12
4	#11570.00	41.57 AV	54.00	-12.43	1.20 H	245	-5.55	47.12

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	43.78 PK	74.00	-30.22	1.20 V	326	17.00	26.78
1	#1080.00	40.92 AV	54.00	-13.08	1.20 V	326	14.14	26.78
2	#3856.00	46.30 PK	74.00	-27.70	1.00 V	1	12.26	34.03
2	#3856.00	40.02 AV	54.00	-13.98	1.00 V	1	5.98	34.03
3	*5785.00	112.33 PK			1.15 V	316	74.18	38.15
3	*5785.00	101.97 AV			1.15 V	316	63.82	38.15
4	#11570.00	55.26 PK	74.00	-18.74	1.24 V	40	8.14	47.12
4	#11570.00	41.85 AV	54.00	-12.15	1.24 V	40	-5.27	47.12

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.
7. The limit value is defined as per 15.247

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**	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	#1080.00	45.39 PK	74.00	-28.61	1.29 H	256	18.61	26.78
1	#1080.00	43.68 AV	54.00	-10.32	1.29 H	256	16.90	26.78
2	#3883.00	44.45 PK	74.00	-29.55	1.33 H	174	10.33	34.12
2	#3883.00	34.64 AV	54.00	-19.36	1.33 H	174	0.52	34.12
3	*5825.00	100.82 PK			1.25 H	283	62.61	38.21
3	*5825.00	91.67 AV			1.25 H	283	53.46	38.21
4	#11650.00	54.17 PK	74.00	-19.83	1.24 H	111	7.07	47.10
4	#11650.00	41.79 AV	54.00	-12.21	1.24 H	111	-5.31	47.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#1080.00	46.79 PK	74.00	-27.21	1.00 V	140	20.01	26.78
1	#1080.00	45.61 AV	54.00	-8.39	1.00 V	140	18.83	26.78
2	#3883.00	47.23 PK	74.00	-26.77	1.00 V	327	13.11	34.12
2	#3883.00	40.71 AV	54.00	-13.29	1.00 V	327	6.59	34.12
3	*5825.00	112.07 PK			1.46 V	351	73.86	38.21
3	*5825.00	101.94 AV			1.46 V	351	63.73	38.21
4	#11650.00	59.65 PK	74.00	-14.35	1.26 V	131	12.55	47.10
4	#11650.00	45.16 AV	54.00	-8.84	1.26 V	131	-1.94	47.10

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.
7. The limit value is defined as per 15.247

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**	D
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	43.58 PK	74.00	-30.42	1.12 H	333	16.32	27.26
1	1260.00	41.08 AV	54.00	-12.92	1.12 H	333	13.82	27.26
2	*5745.00	100.85 PK			1.19 H	10	62.79	38.06
2	*5745.00	90.91 AV			1.19 H	10	52.85	38.06

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	43.72 PK	74.00	-30.28	1.53 V	332	16.94	26.78
1	#1080.00	40.76 AV	54.00	-13.24	1.53 V	332	13.98	26.78
2	1260.00	43.93 PK	74.00	-30.07	1.11 V	235	16.67	27.26
2	1260.00	40.88 AV	54.00	-13.12	1.11 V	235	13.62	27.26
3	*5745.00	114.74 PK			1.00 V	324	76.68	38.06
3	*5745.00	104.56 AV			1.00 V	324	66.50	38.06

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.
7. The limit value is defined as per 15.247

EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
CHANNEL	Channel 3	**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**	D
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	#1440.00	42.68 PK	74.00	-31.32	1.11 H	260	14.73	27.95
1	#1440.00	40.66 AV	54.00	-13.34	1.11 H	260	12.71	27.95
2	*5785.00	101.20 PK			1.16 H	93	63.05	38.15
2	*5785.00	90.20 AV			1.16 H	93	52.05	38.15

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	44.20 PK	74.00	-29.80	1.40 V	250	17.42	26.78
1	#1080.00	41.16 AV	54.00	-12.84	1.40 V	250	14.38	26.78
2	*5785.00	113.17 PK			1.09 V	325	75.02	38.15
2	*5785.00	102.82 AV			1.09 V	325	64.67	38.15

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.
7. The limit value is defined as per 15.247

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**	D
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	43.58 PK	74.00	-30.42	1.11 H	320	16.32	27.26
1	1260.00	41.38 AV	54.00	-12.62	1.11 H	320	14.12	27.26
2	*5825.00	100.14 PK			1.20 H	180	61.93	38.21
2	*5825.00	91.08 AV			1.20 H	180	52.87	38.21

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	42.98 PK	74.00	-31.02	1.44 V	333	16.20	26.78
1	#1080.00	41.03 AV	54.00	-12.97	1.44 V	333	14.25	26.78
2	*5825.00	113.74 PK			1.01 V	335	75.53	38.21
2	*5825.00	103.69 AV			1.01 V	335	65.48	38.21

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.
7. The limit value is defined as per 15.247

5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.3.2 TEST INSTRUMENTS

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

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

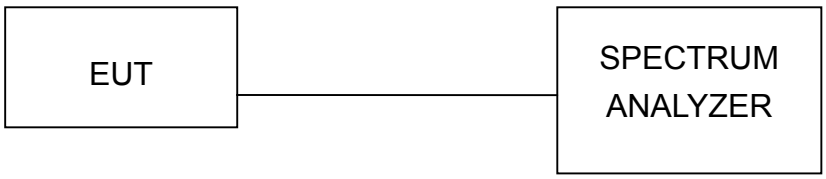
5.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

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

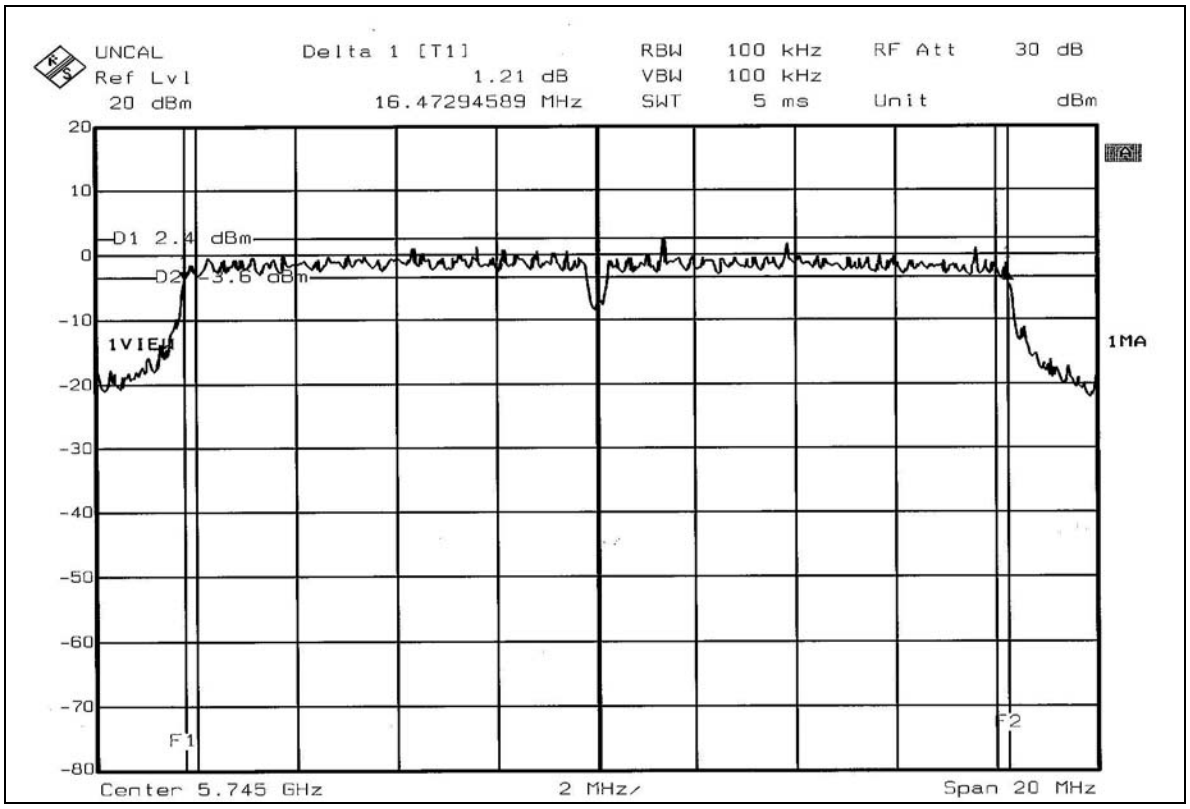
5.3.7 TEST RESULTS

802.11a OFDM modulation

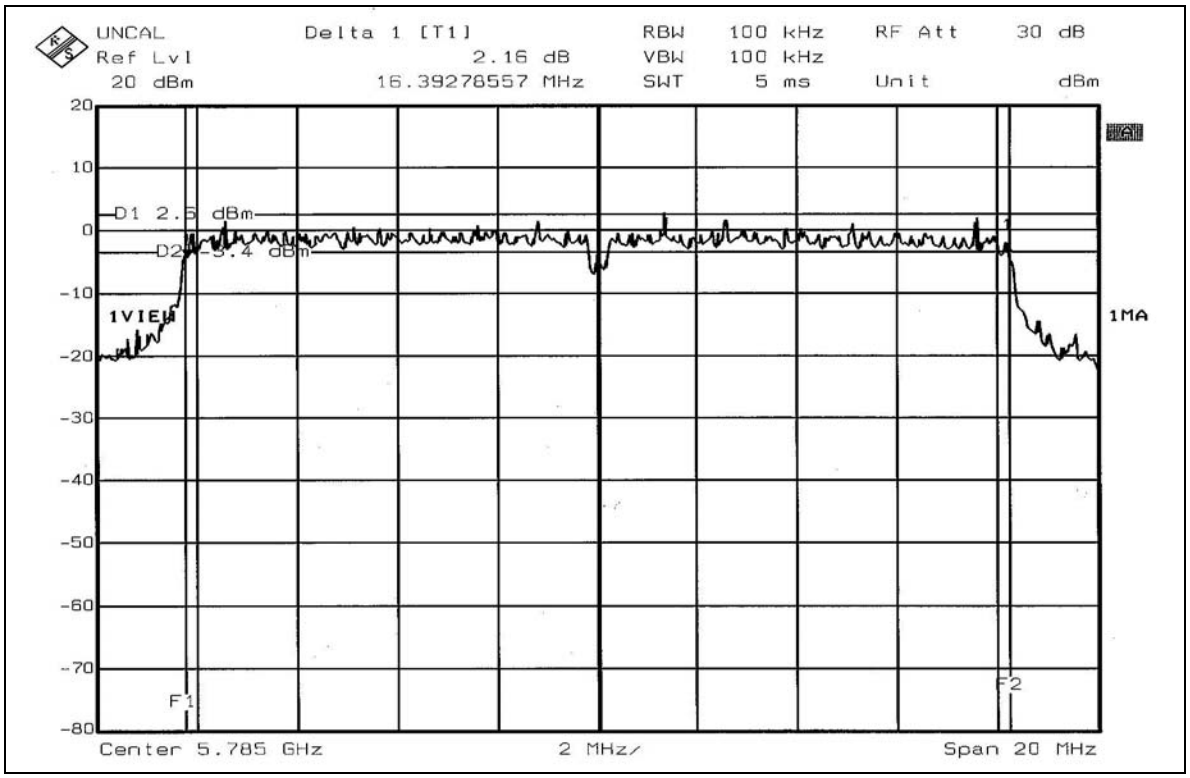
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 52%RH, 991 hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	5745	16.47	0.5	PASS
3	5785	16.39	0.5	PASS
5	5825	16.47	0.5	PASS

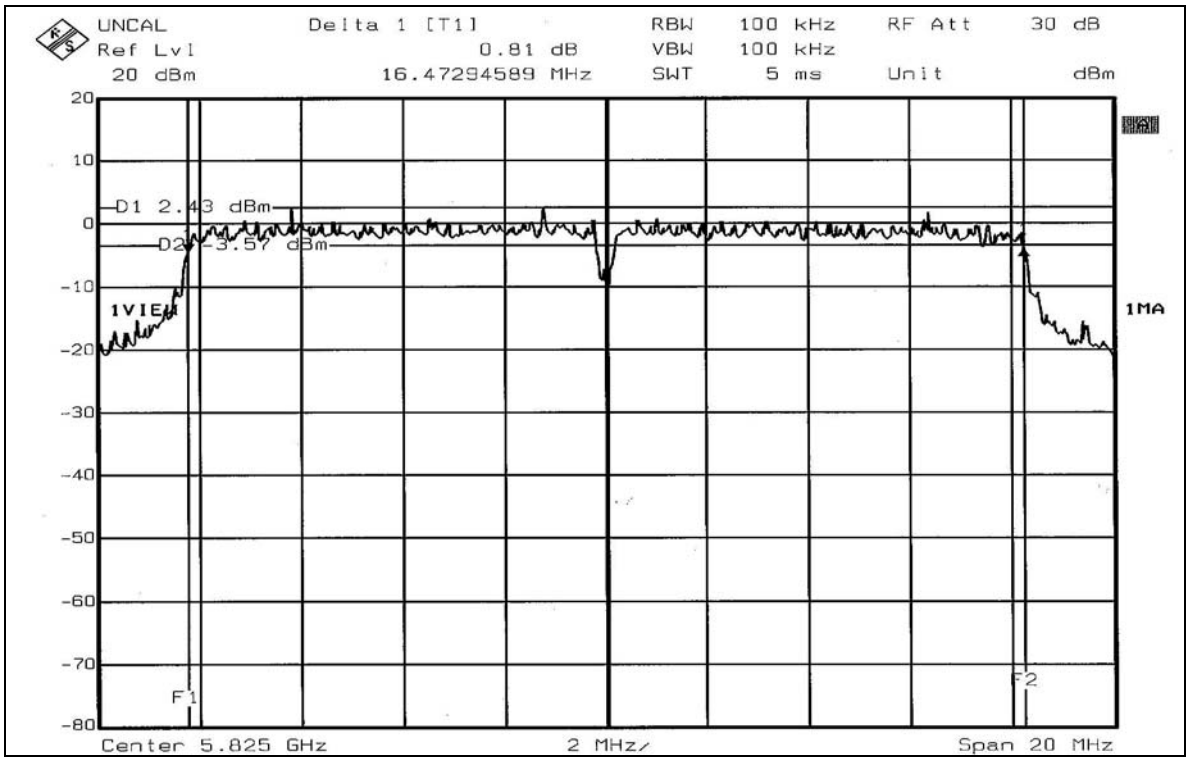
CH 1


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
1.21 dB
16.47294589 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
D1 2.4 dBm
D2 -3.6 dBm
1VIEW
1MA
F1
F2
Center 5.745 GHz
2 MHz/
Span 20 MHz

CH 3


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
2.16 dB
16.39278557 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
D1 2.6 dBm
D2 -3.4 dBm
1VIEW
1MA
F1
F2
Center 5.785 GHz
2 MHz/
Span 20 MHz

CH 5


UNCAL
Ref Lvl
20 dBm
Delta 1 [T1]
0.81 dB
16.47294589 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
D1 2.43 dBm
D2 -3.57 dBm
1VIEW
1MA
F1
F2
Center 5.825 GHz
2 MHz/
Span 20 MHz

5.4 MAXIMUM PEAK OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 06, 2005
TEKTRONIX OSCILLOSCOPE	TDS1012	C037299	Dec. 07, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

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

5.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP

5.4.6 EUT OPERATING CONDITIONS

Same as Item 5.3.6

5.4.7 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, 991 hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	5745	50.350	17.02	30	PASS
3	5785	50.699	17.05	30	PASS
5	5825	51.050	17.08	30	PASS

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST INSTRUMENTS

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

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

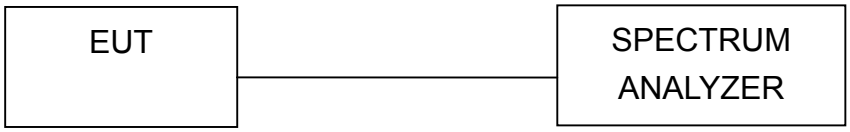
5.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

Same as Item 5.3.6

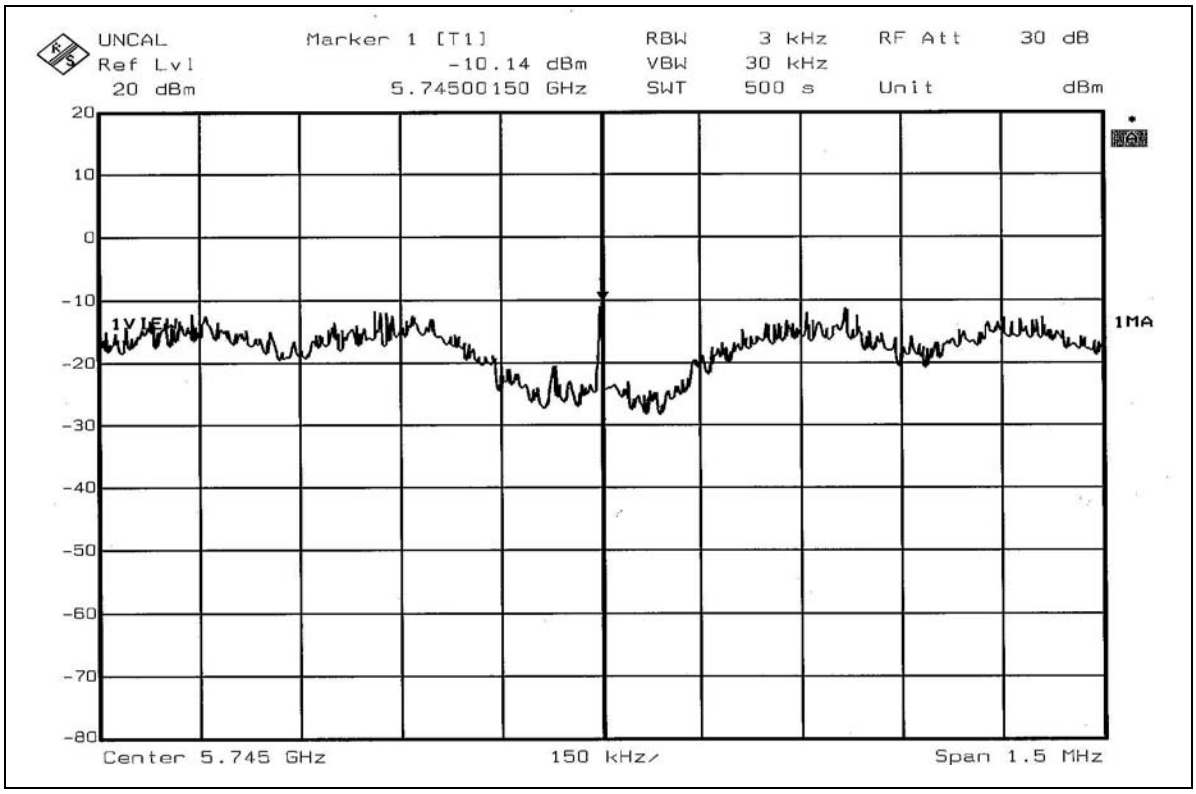
5.5.7 TEST RESULTS

802.11a OFDM modulation

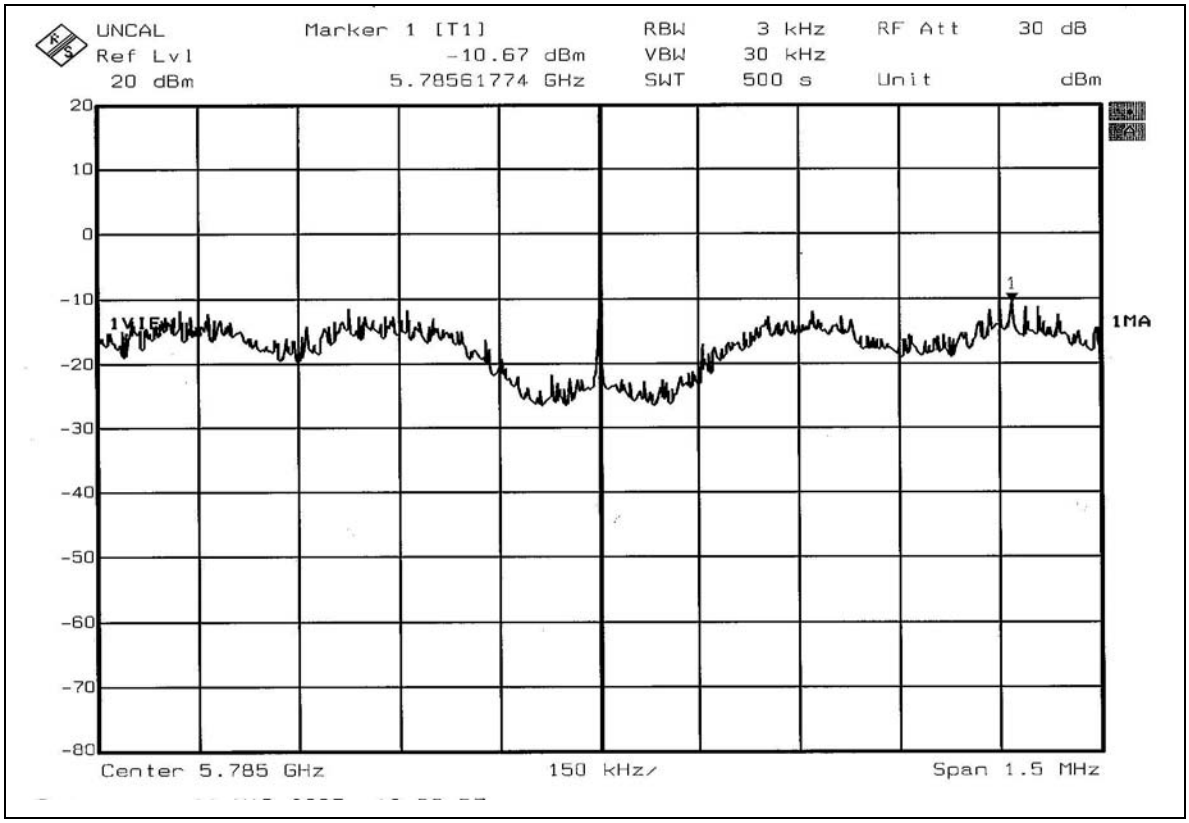
EUT	WVM1104-Rx (Wireless Video Module-Receiver)	**MODEL**	WVM1104-Rx
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 52%RH, 991 hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5745	-10.14	8	PASS
3	5785	-10.67	8	PASS
5	5825	-10.76	8	PASS

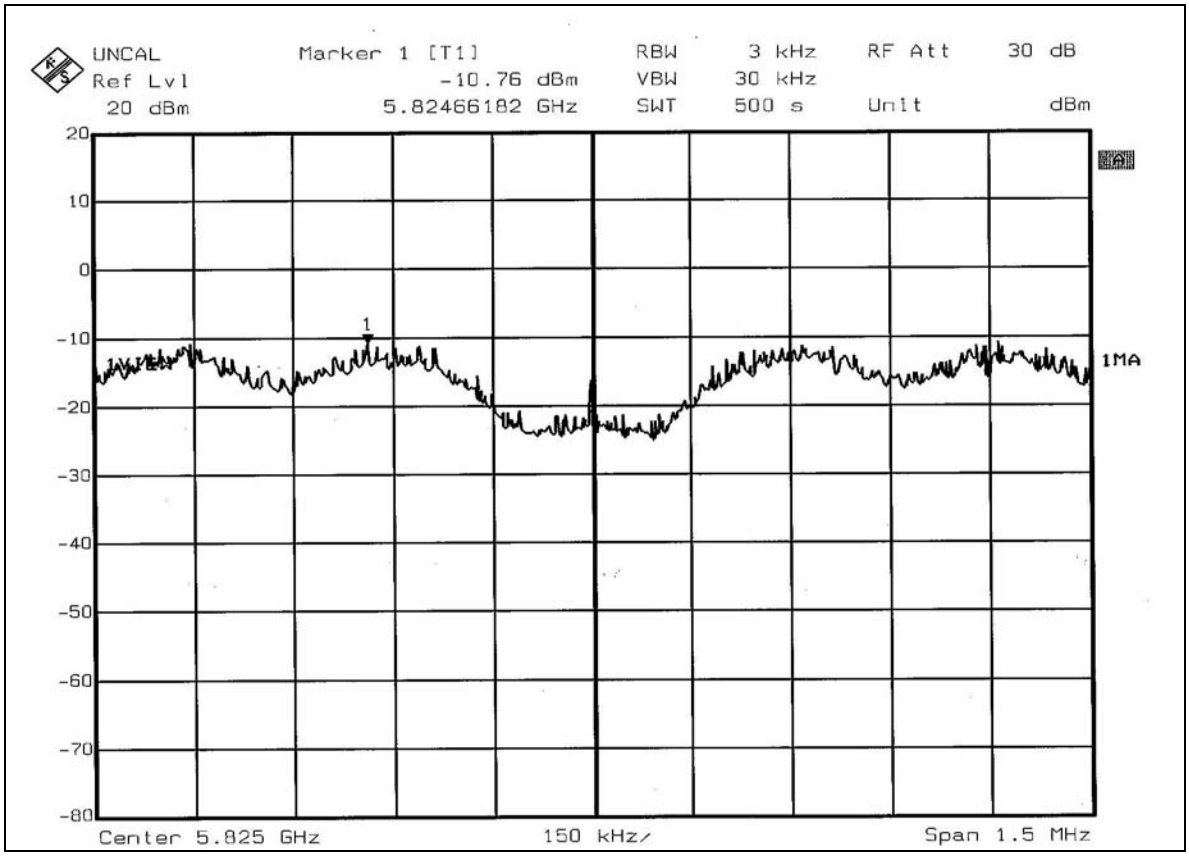
CH1


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-10.14 dBm
5.74500150 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
Center 5.745 GHz
150 kHz/
Span 1.5 MHz

CH3


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-10.67 dBm
5.78561774 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
1MA
Center 5.785 GHz
150 kHz/
Span 1.5 MHz

CH5


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-10.76 dBm
5.82466182 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1MA
Center 5.825 GHz
150 kHz/
Span 1.5 MHz

5.6 BAND EDGES MEASUREMENT

5.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.6.2 TEST INSTRUMENTS

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

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

5.6.3 TEST PROCEDURE

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

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

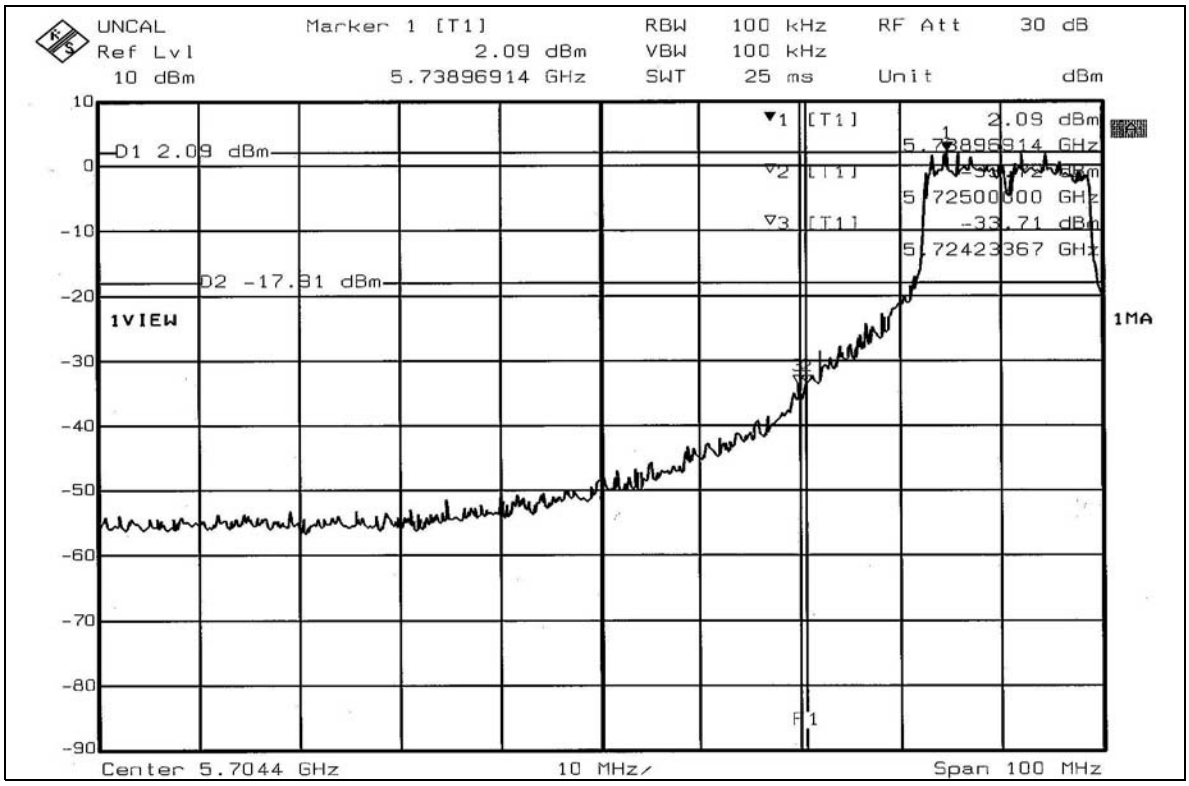
5.6.5 EUT OPERATING CONDITION

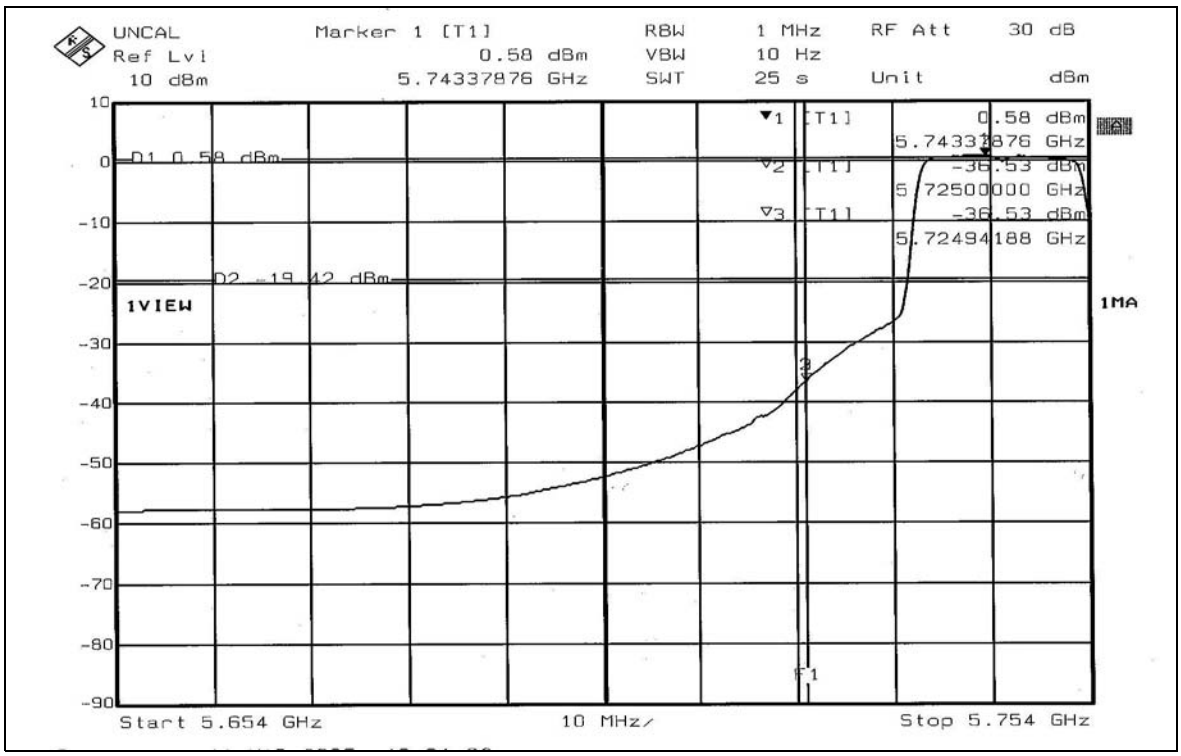
Same as Item 5.3.6

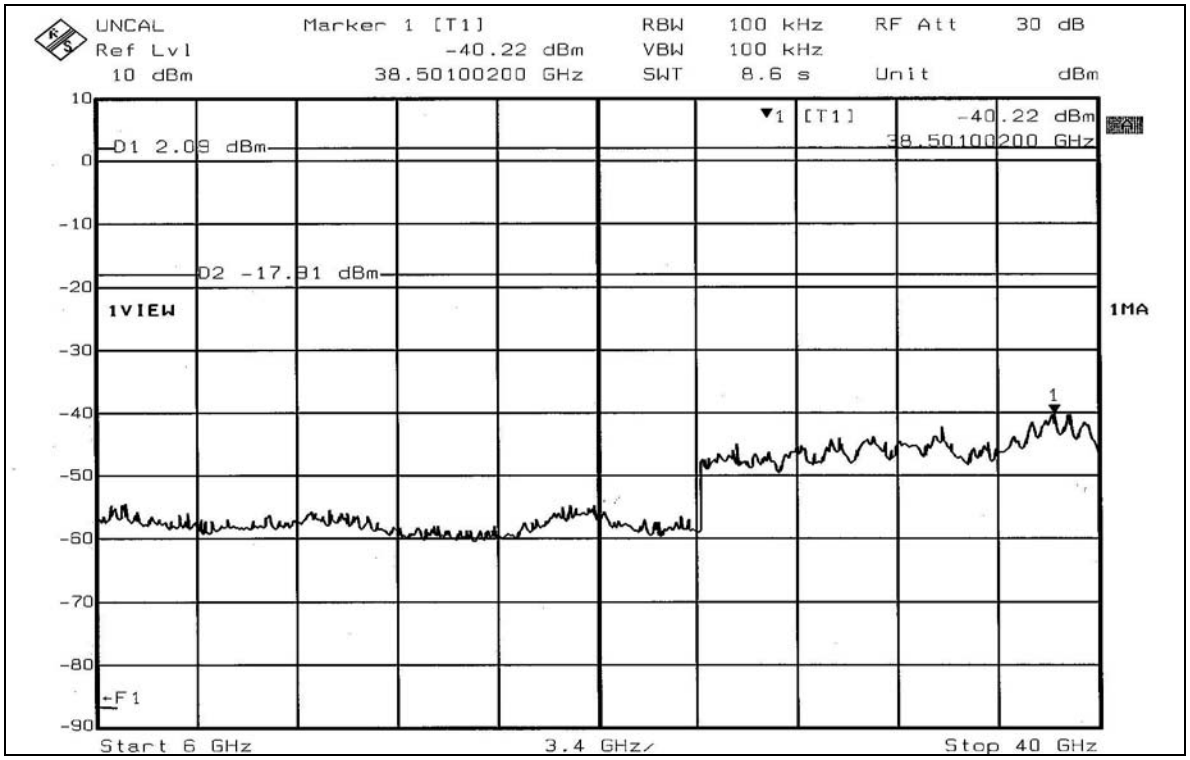
5.6.6 TEST RESULTS

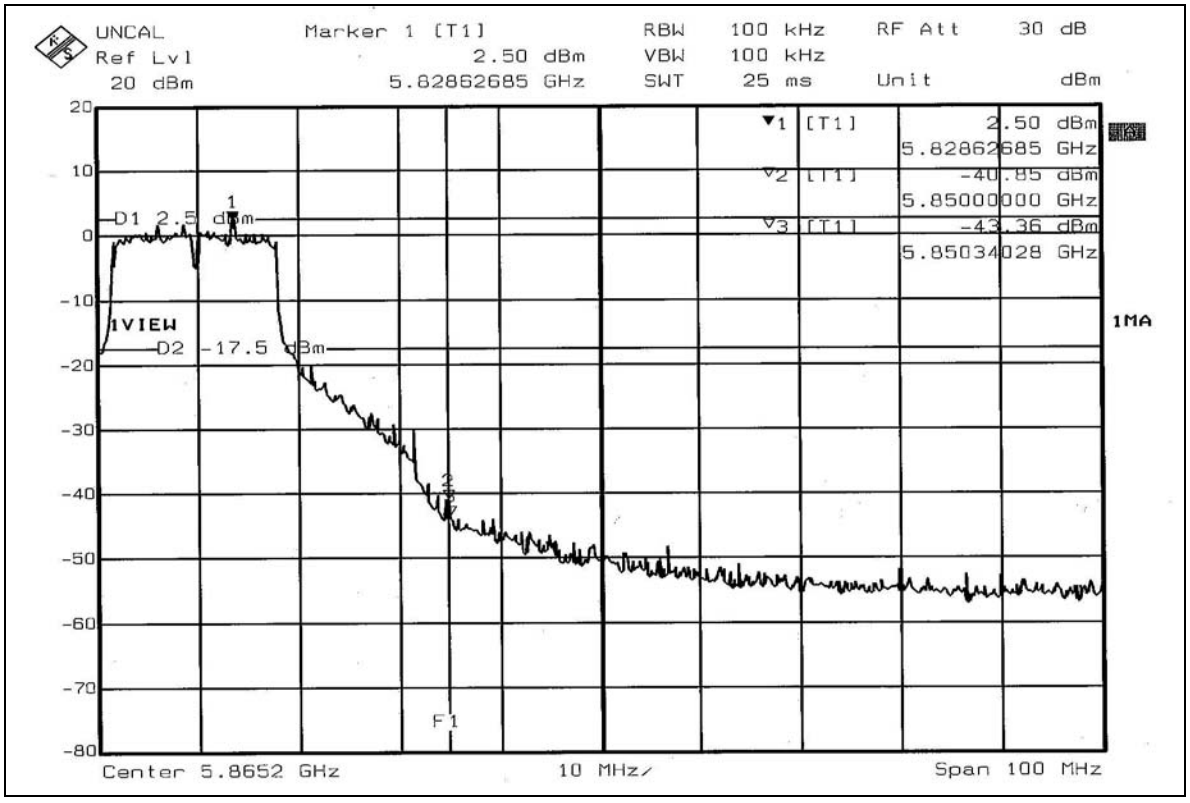
The spectrum plots are attached on the following pages. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(d).

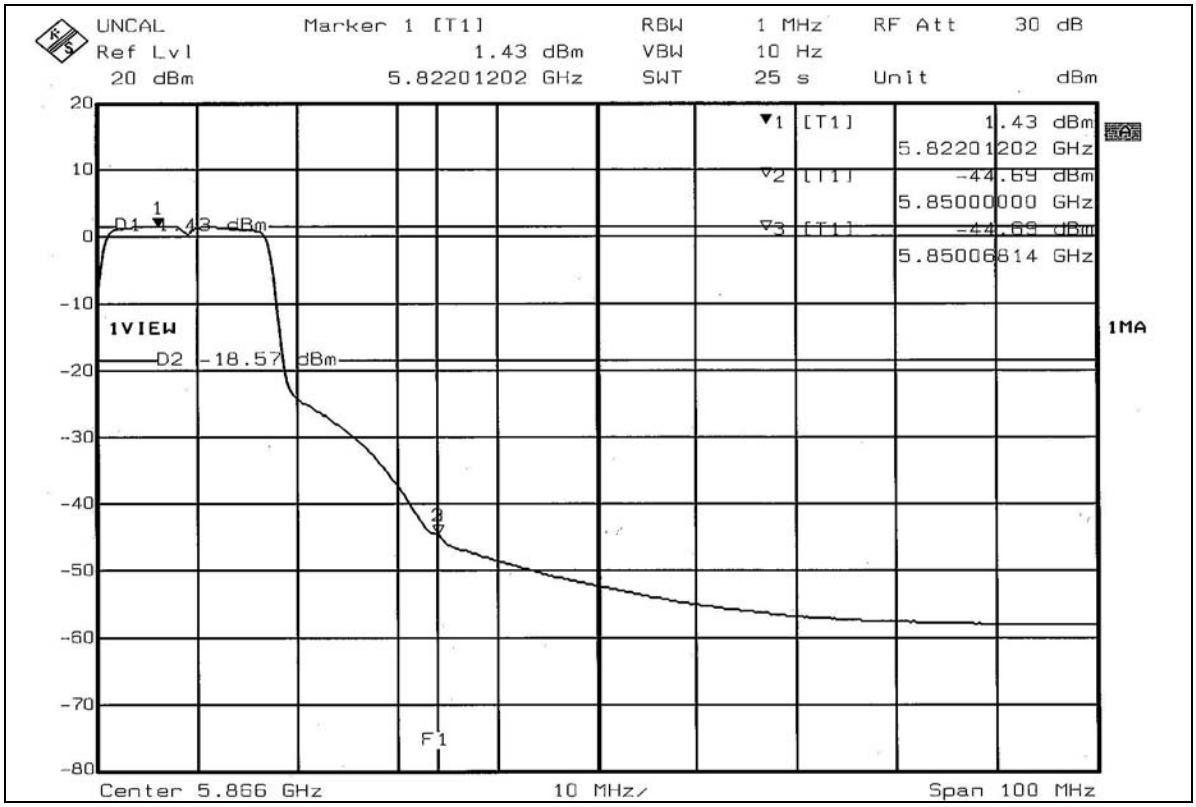
802.11a OFDM modulation

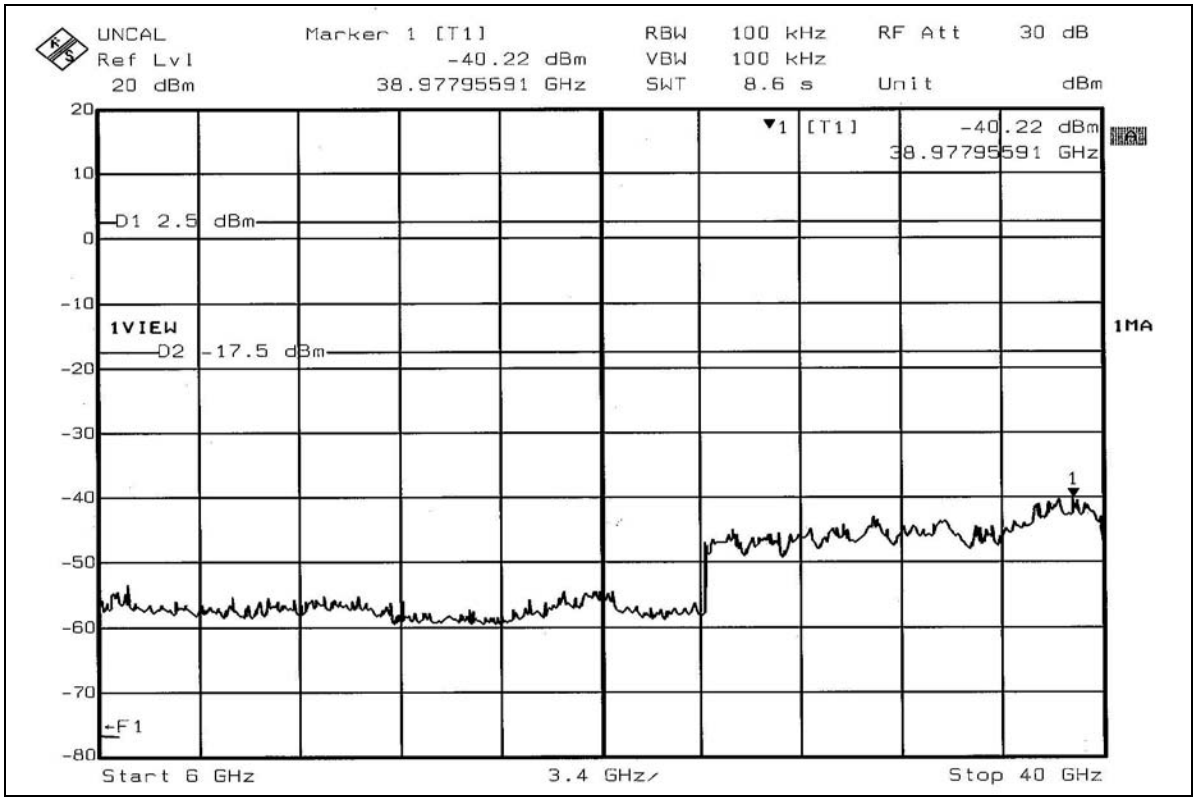





UNCAL
Ref Lvl
10 dBm
Marker 1 [T1]
-40.22 dBm
38.50100200 GHz
RBW 100 kHz
VBW 100 kHz
SWT 8.6 s
RF Att 30 dB
Unit dBm
▼1 [T1] -40.22 dBm
38.50100200 GHz
D1 2.09 dBm
D2 -17.81 dBm
1VIEW
1MA
←F1
Start 6 GHz
3.4 GHz/
Stop 40 GHz


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
2.50 dBm
5.82862685 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 30 dB
Unit dBm
▼1 [T1] 2.50 dBm
5.82862685 GHz
▽2 [T1] -40.85 dBm
5.85000000 GHz
▽3 [T1] -43.36 dBm
5.85034028 GHz
D1 2.5 dBm
D2 -17.5 dBm
1VIEW
1MA
F1
Center 5.8652 GHz
10 MHz/
Span 100 MHz


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
1.43 dBm
5.82201202 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 30 dB
Unit dBm
▼1 [T1] 1.43 dBm
5.82201202 GHz
▽2 [T1] -44.69 dBm
5.85000000 GHz
▽3 [T1] -44.69 dBm
5.85006814 GHz
D1 1.43 dBm
1VIEW
D2 -18.57 dBm
1MA
F1
Center 5.866 GHz
10 MHz/
Span 100 MHz


UNCAL
Ref Lvl
20 dBm
Marker 1 [T1]
-40.22 dBm
38.97795591 GHz
RBW 100 kHz
VBW 100 kHz
SWT 8.6 s
RF Att 30 dB
Unit dBm
▼1 [T1] -40.22 dBm
38.97795591 GHz
D1 2.5 dBm
1VIEW
D2 -17.5 dBm
1MA
←F1
Start 6 GHz
3.4 GHz/
Stop 40 GHz

5.7 ANTENNA REQUIREMENT

5.7.1 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 15.247(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.

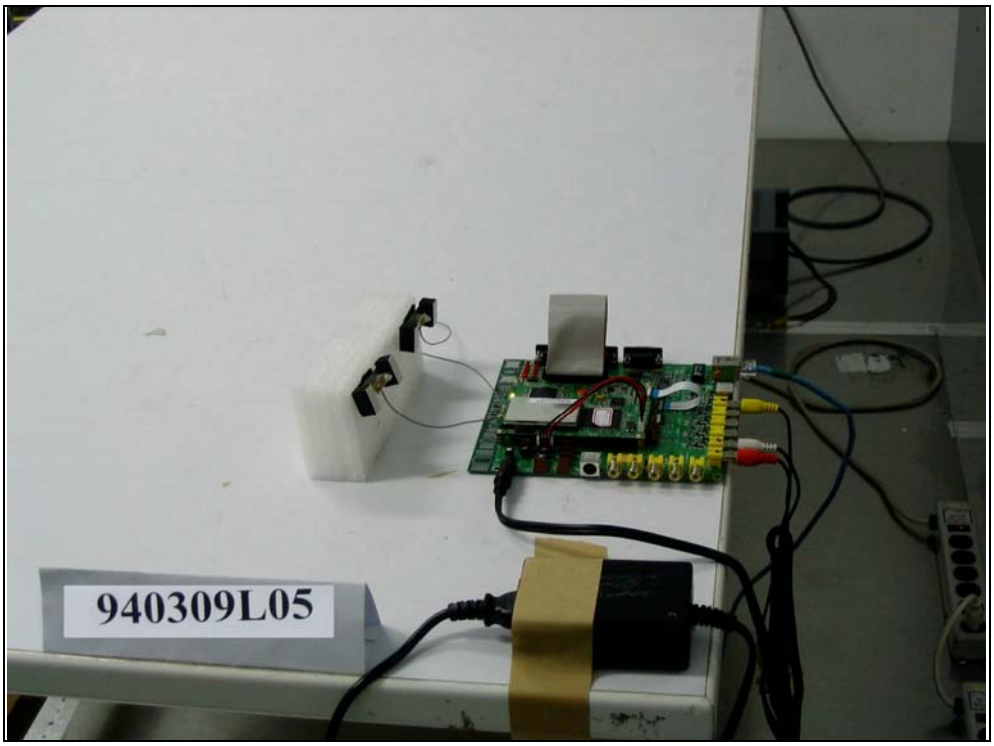
5.7.2 ANTENNA CONNECTED CONSTRUCTION

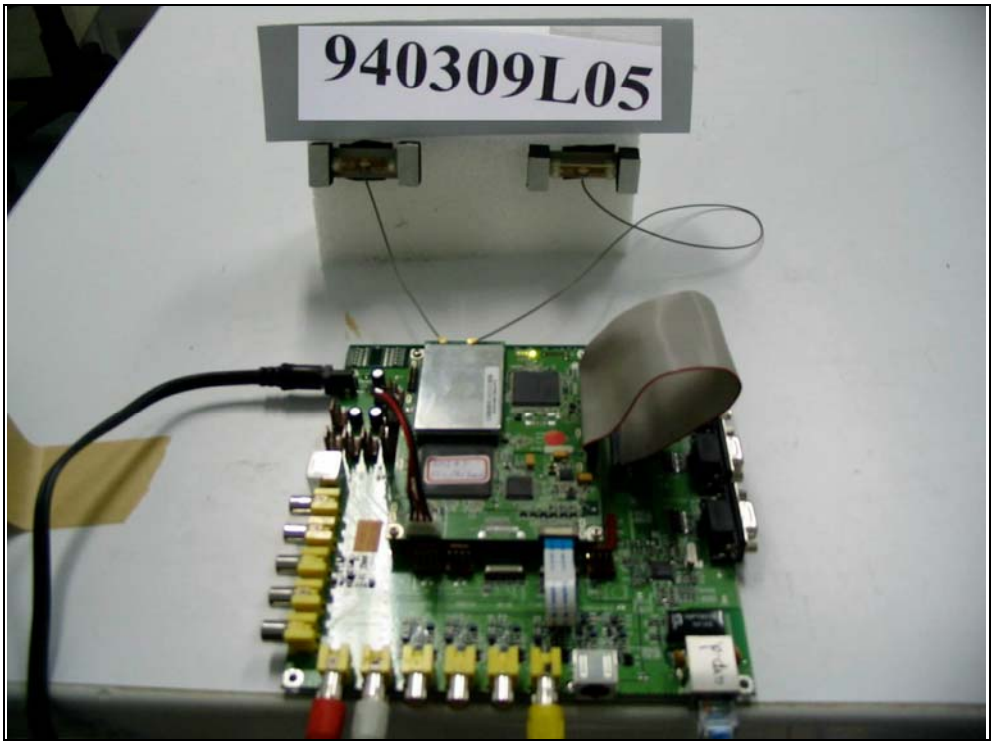
The antennas used in this product are PCB and Patch antenna with UFL antenna connector. The maximum Gain of the antenna is 5.2dBi.

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

Antenna 1

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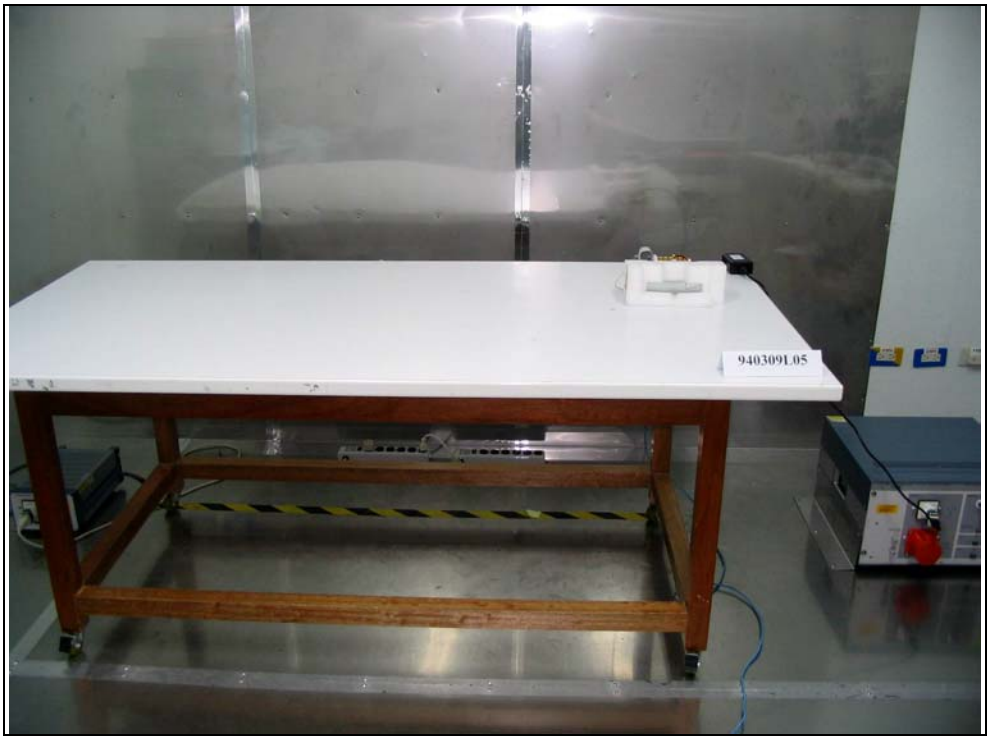
Antenna 2

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Antenna 3


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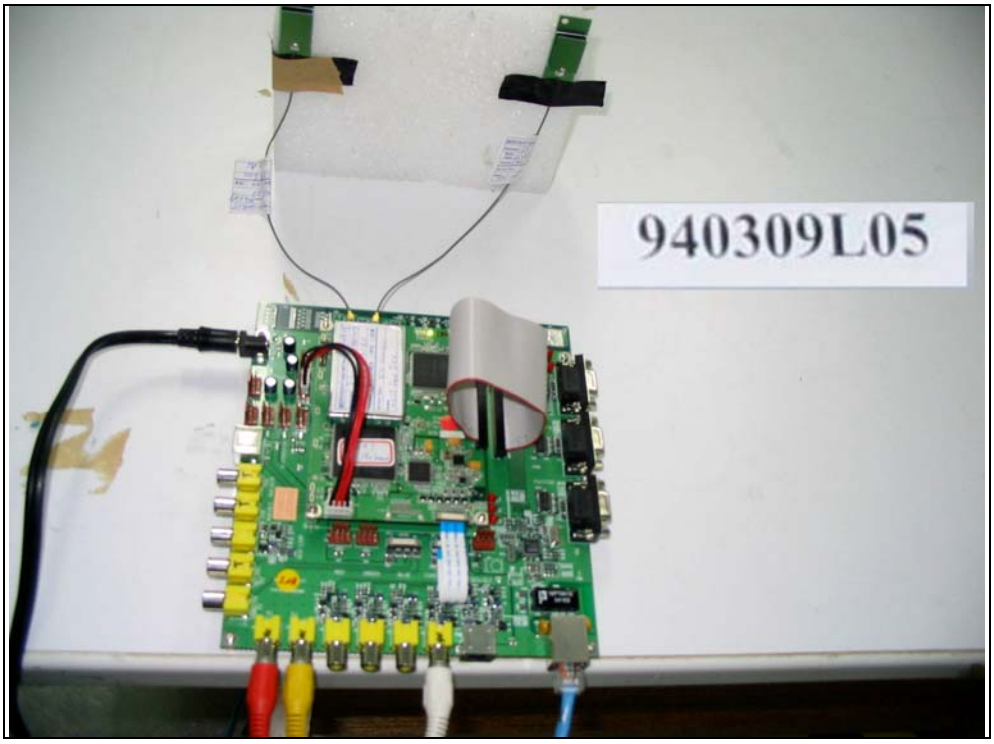
Antenna 4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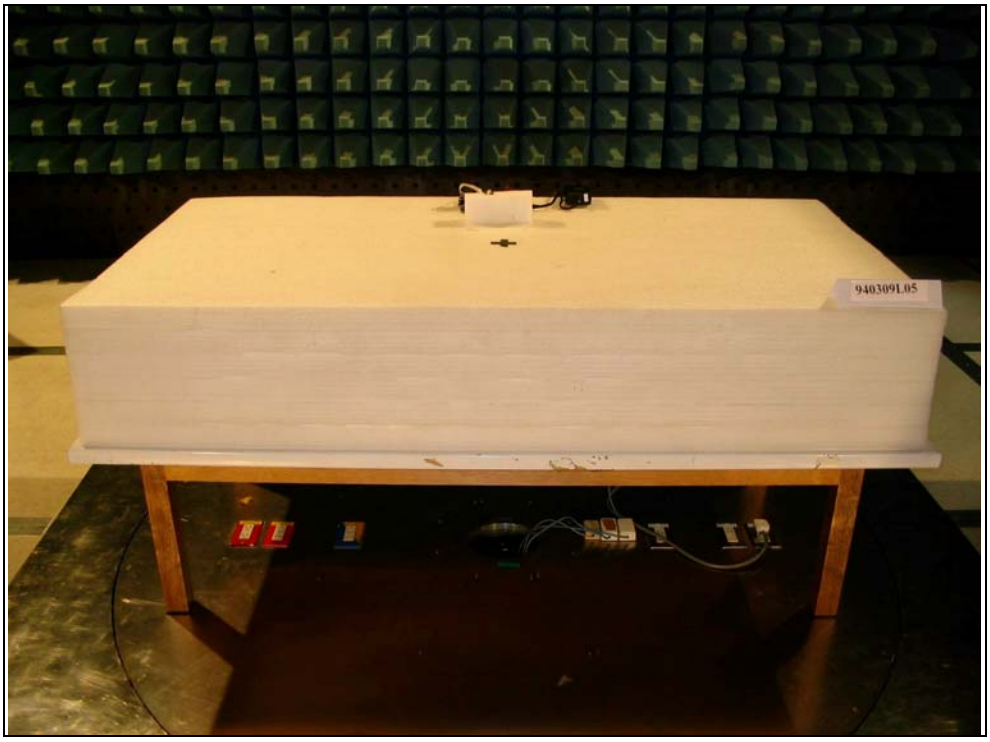
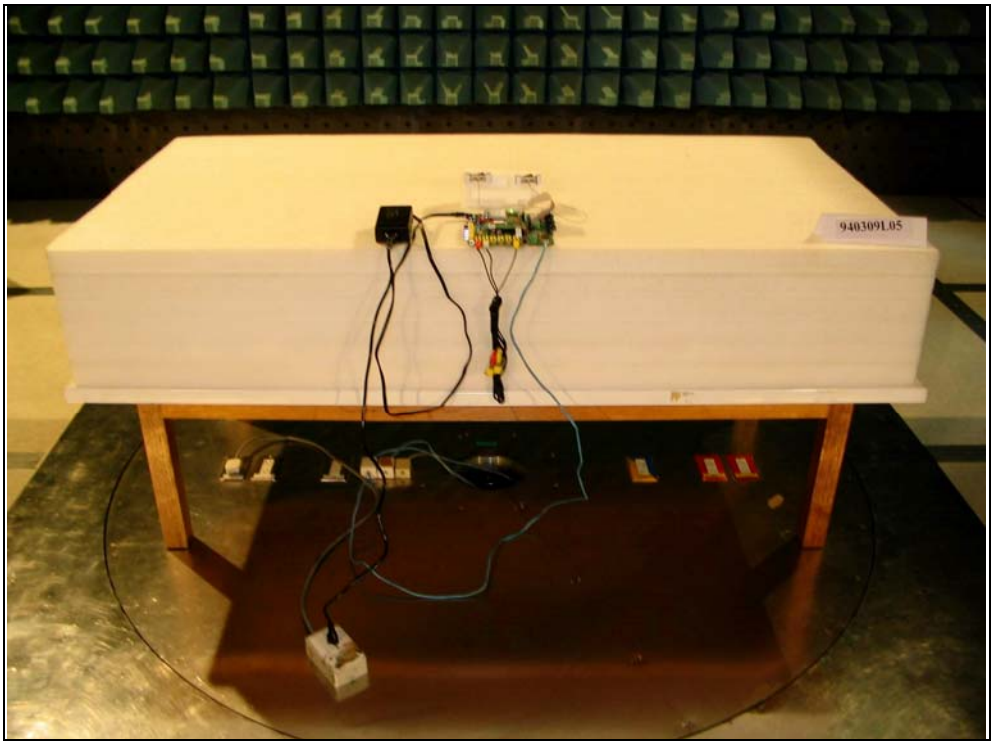
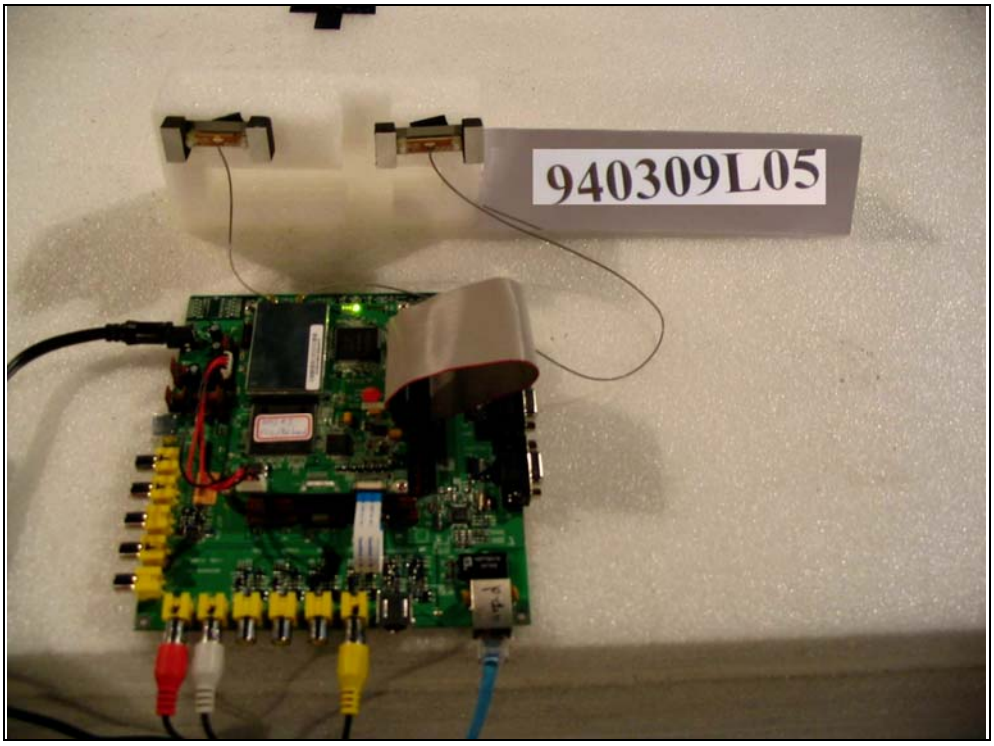
RADIATED EMISSION TEST

Antenna 1



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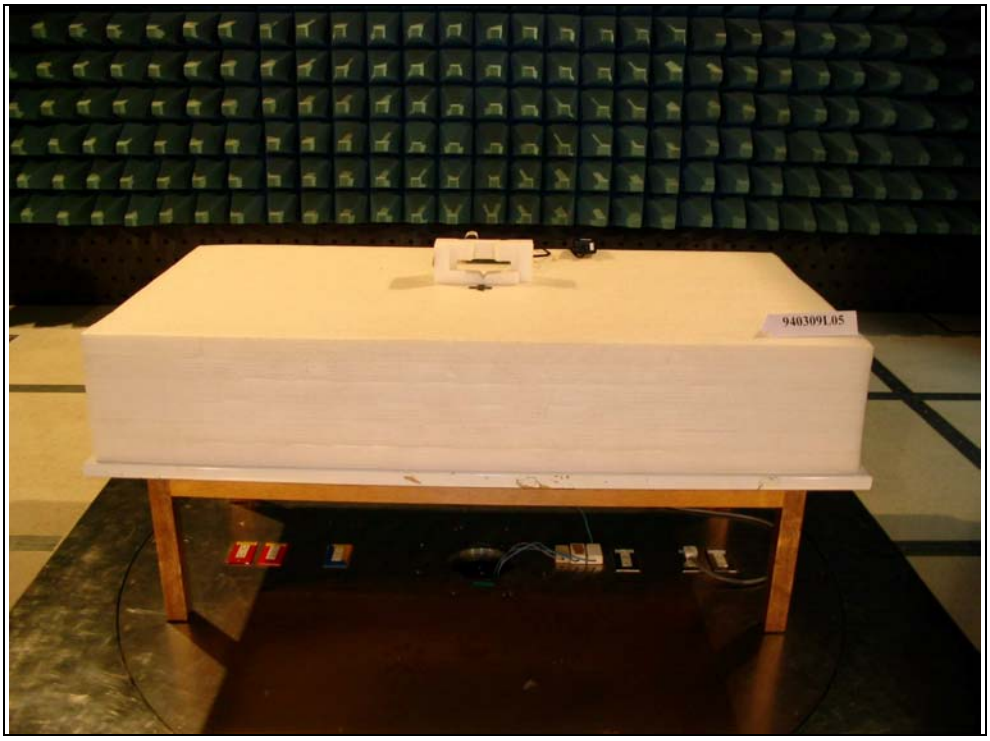
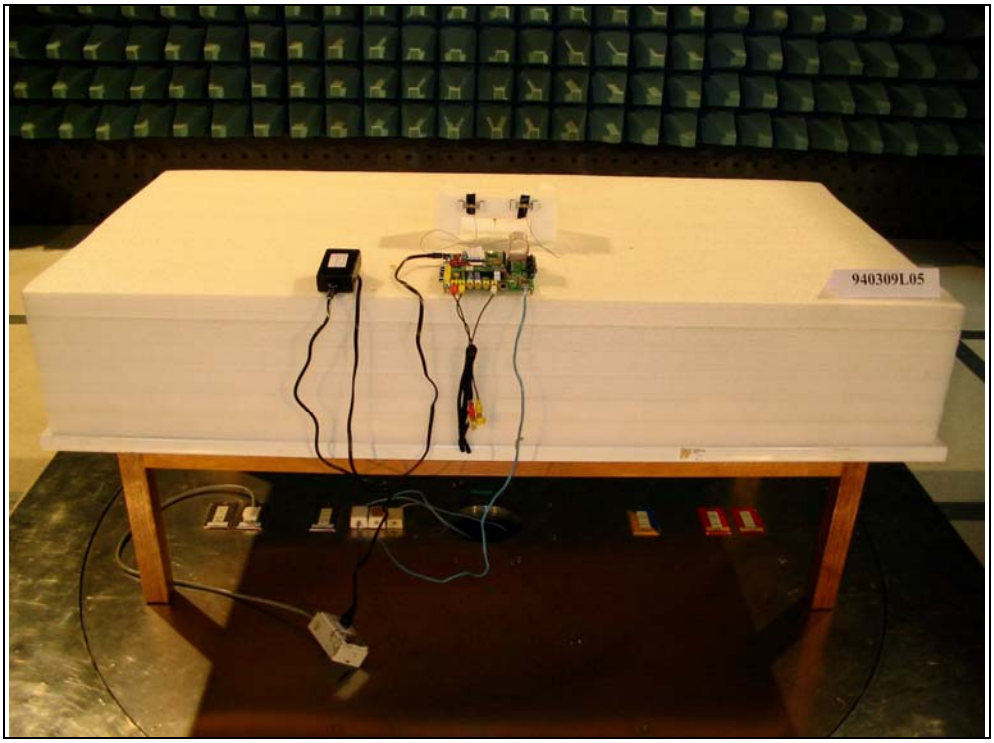
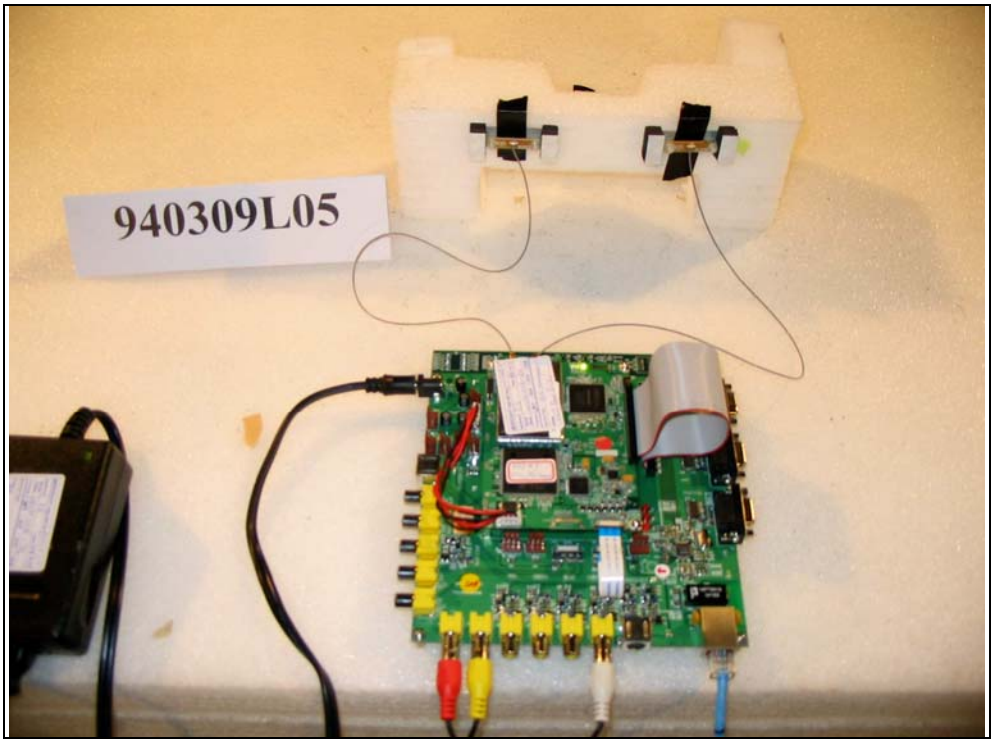
Antenna 2



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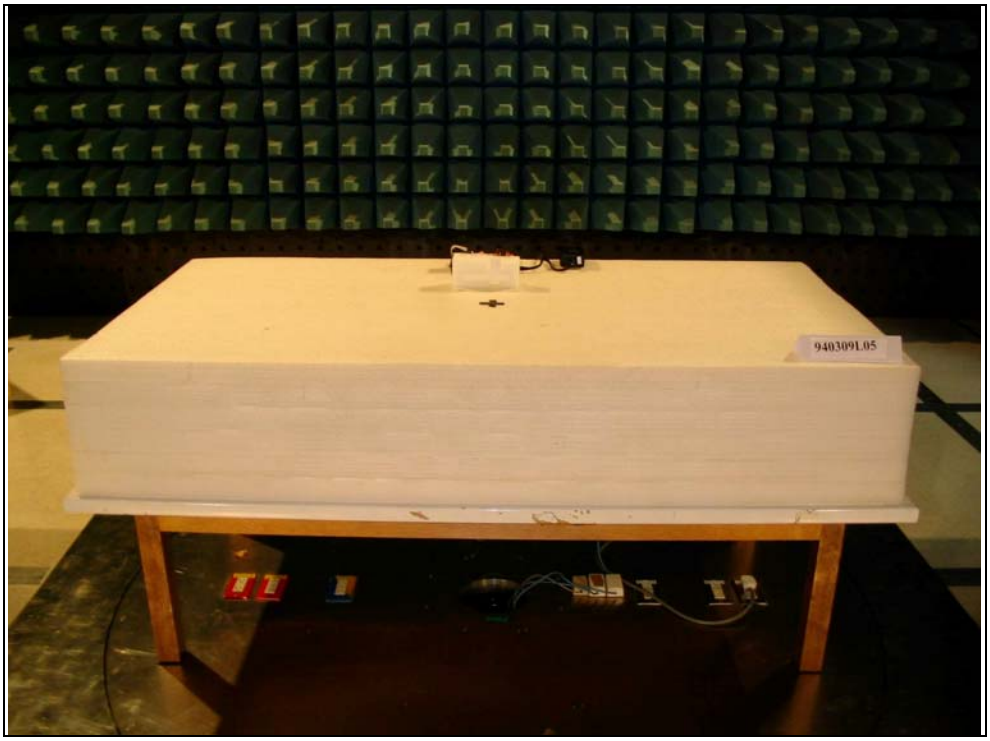
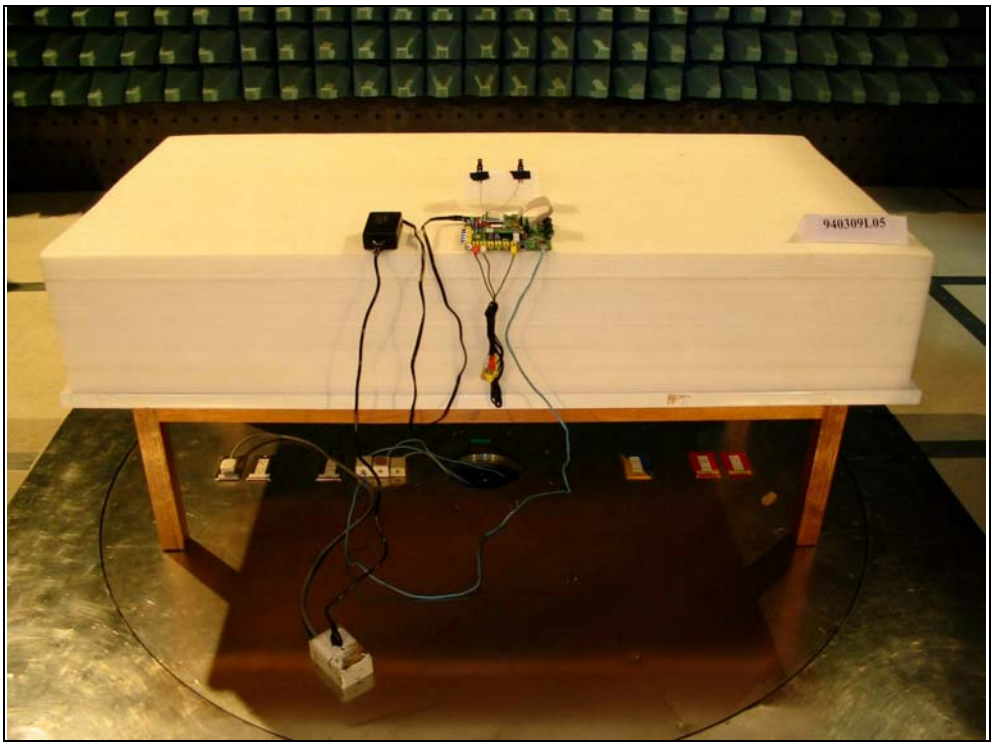
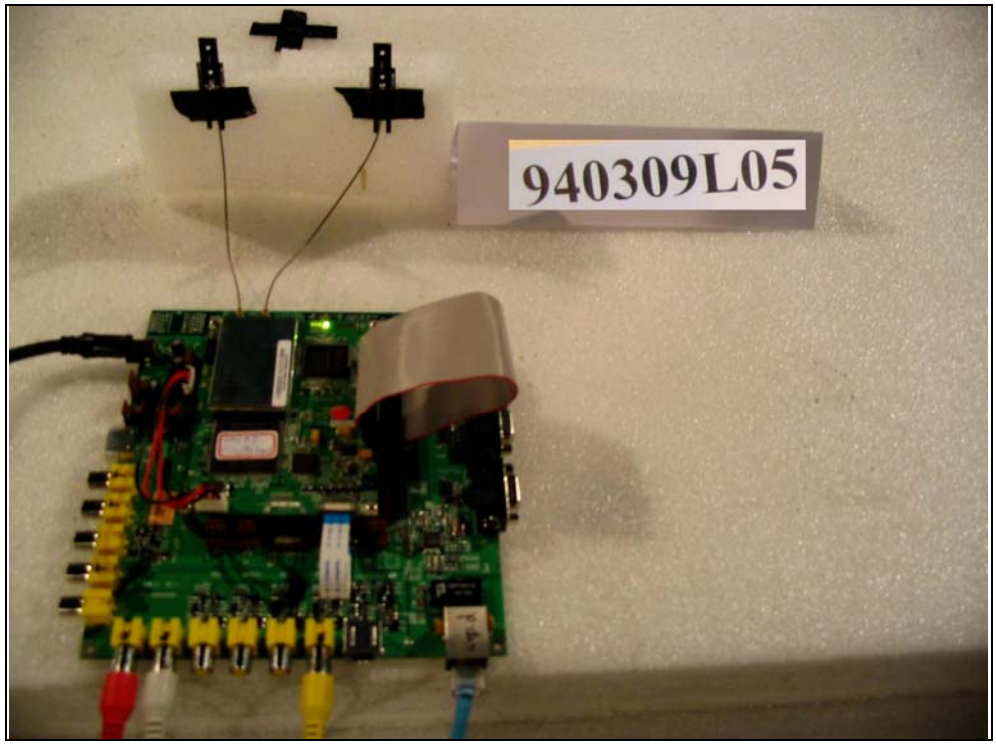
Antenna 3



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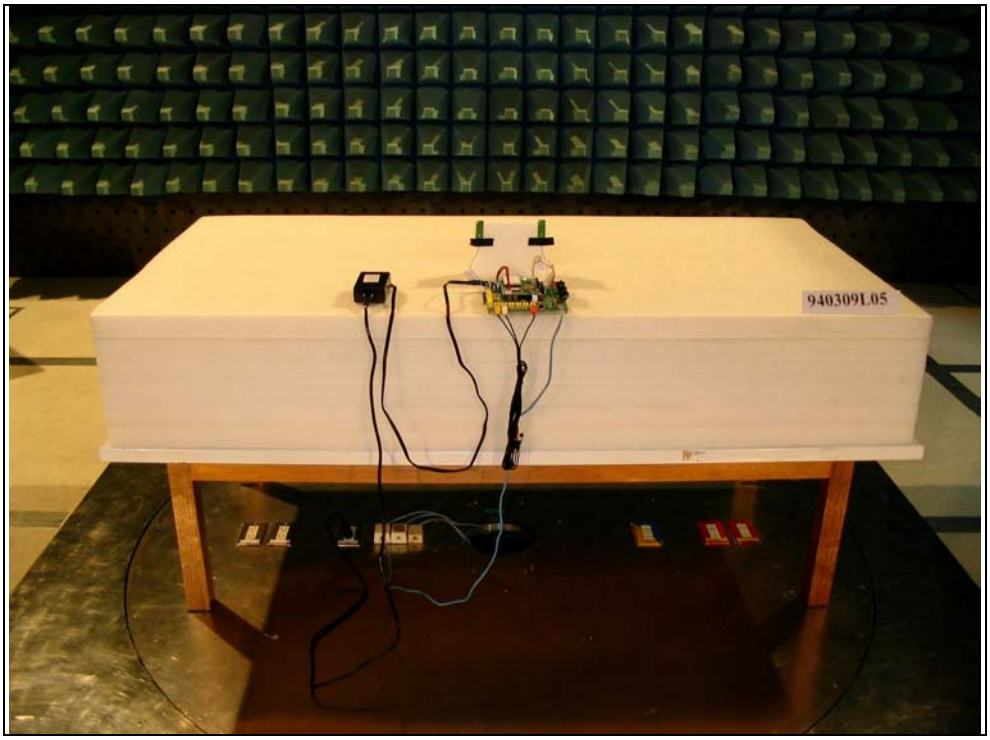
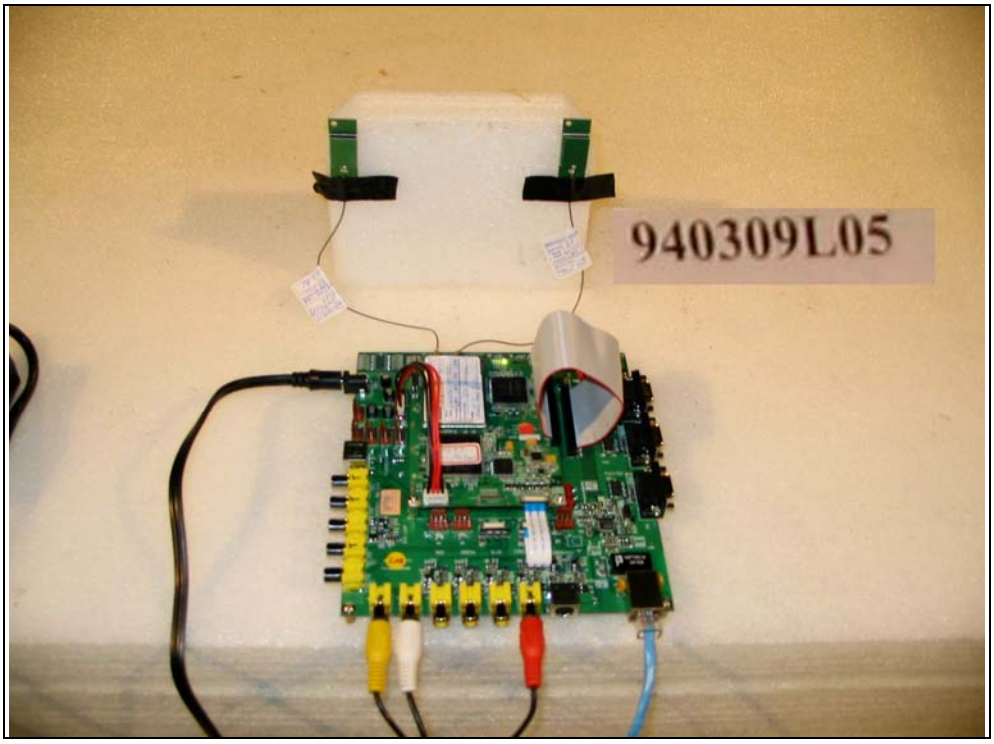
Antenna 4

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7. 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:

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Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:
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Fax: 886-3-5935342

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Fax: 886-3-3185050

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Web Site: www.adt.com.tw

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