

FCC TEST REPORT (15.247)

REPORT NO.: RF940221L10

MODEL NO.: WVM1104-Tx

RECEIVED: Mar. 22, 2005

TESTED: Feb. 22 ~ Mar. 11, 2005

ISSUED: Mar. 17, 2005

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No. 2177-01

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1. CERTIFICATION

PRODUCT: WVM1104-Tx (Wireless Video Module-Transmitter)
BRAND NAME: Adimos
MODEL NO.: WVM1104-Tx
APPLICANT: Gemtek Technology Co., Ltd.
TEST SAMPLE: Engineering Sample
TESTED: Feb. 22 ~ Mar. 11, 2005
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 : Windy Chou, **DATE:** Mar. 17, 2005
(Windy Chou)

TECHNICAL
ACCEPTANCE : Gary Chang, **DATE:** Mar. 17, 2005
Responsible for
RF
(Gary Chang)

APPROVED BY : Cody Chang, **DATE:** Mar. 17, 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 -11.96dB at 0.204MHz
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 -0.16dB at 2016.00MHz
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-Tx (Wireless Video Module-Transmitter)
MODEL NO.	WVM1104-Tx
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: 2.412 ~ 2.462GHz 802.11a: 5.150 ~ 5.350GHz 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	63.826mW for 802.11b 63.826mW for 802.11g 41.495mW for 5.150 ~ 5.350GHz 51.168mW for 5.725 ~ 5.850GHz
ANTENNA TYPE	Please refer to Note 3 below
DATA CABLE	1.7m non-shielded cable without core
I/O PORTS	AV I/O
associated devices	NA

NOTE:

1. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
2. The EUT was powered by the following adapters:

Brand	MEAN WELL
Model	PSU30A-0
Input	100-240Vac, 50/60Hz, 0.8A
Output	3.4Vdc, 3.52A
Power Line	AC 1m non-shielded cable without core DC 1.2m non-shielded cable without core

3. 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	-	2.80
3	dual-band antenna	PCB	1.50	2.60
4	XWX0964A2	Patch	-	5.12

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		

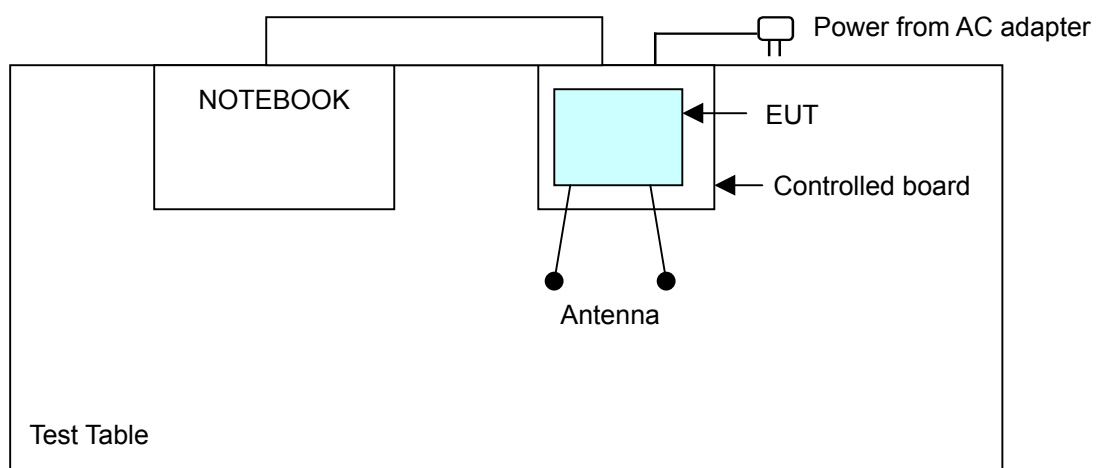
Operated in 5725 ~ 5850MHz band:

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

Channel	Frequency
1	5745MHz
2	5765 MHz
3	5785 MHz
4	5805 MHz
5	5825 MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

For Test mode 1, 2, 3 & 4



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
1	Note 1	X	X	Note 2	antenna combination 1 (refer to Note 3 of section 3.1)
2	Note 1	X	X	Note 2	antenna combination 2 (refer to Note 3 of section 3.1)
3	Note 1	X	X	Note 2	antenna combination 3 (refer to Note 3 of section 3.1)
4	Note 1	X	X	Note 2	antenna combination 3 (refer to Note 3 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: No effect on Conducted Emission Test.

Note 2: Conducted FR 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)
3	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
1	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)
1	802.11a	1 to 5	3	OFDM	BPSK	6
2	802.11a	1 to 5	3	OFDM	BPSK	6
3	802.11g	1 to 11	11	OFDM	BPSK	6
3	802.11a	1 to 5	3	OFDM	BPSK	6
4	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)
1	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6
2	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6
3	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
3	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
3	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6
4	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-Tx (Wireless Video Module-Transmitter). 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	25191592336	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	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

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

4.1.2 TEST INSTRUMENTS

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

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 3.
 3. The VCCI Site Registration No. is C-2047.



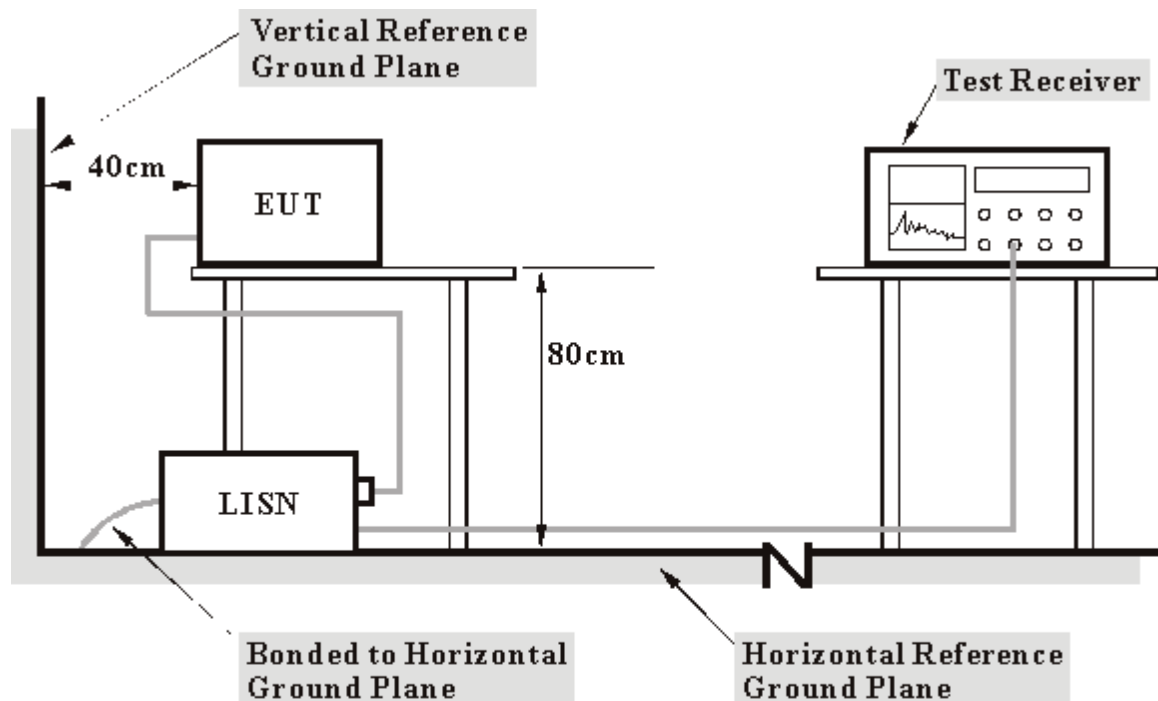
4.1.3 TEST PROCEDURES

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

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

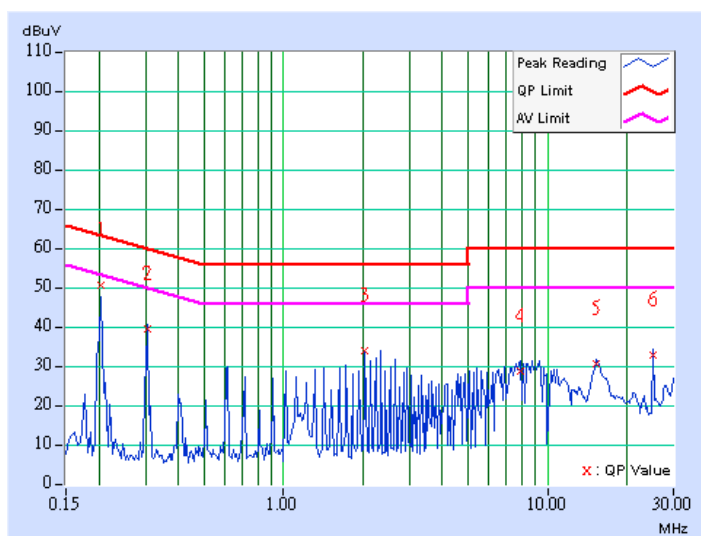
4.1.7 TEST RESULTS

Conducted Worst-Case Data

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	49.97	-	50.07	-	63.42	53.42	-13.35	-
2	0.306	0.11	38.64	-	38.75	-	60.07	50.07	-21.32	-
3	2.031	0.16	33.25	-	33.41	-	56.00	46.00	-22.59	-
4	7.922	0.30	27.95	-	28.25	-	60.00	50.00	-31.75	-
5	15.337	0.51	29.73	-	30.24	-	60.00	50.00	-29.76	-
6	25.000	0.86	32.25	-	33.11	-	60.00	50.00	-26.89	-

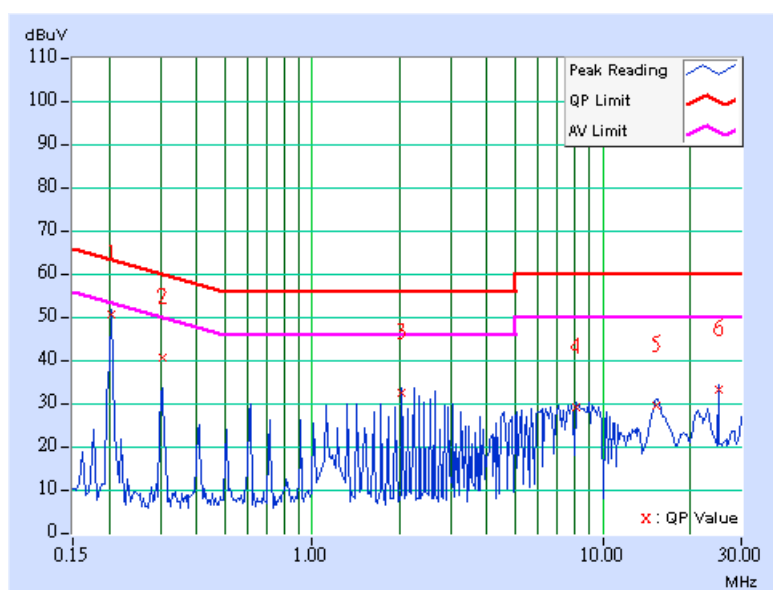
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	50.24	-	50.34	-	63.42	53.42	-13.08	-
2	0.306	0.11	40.28	-	40.39	-	60.07	50.07	-19.68	-
3	2.031	0.15	32.12	-	32.27	-	56.00	46.00	-23.73	-
4	8.129	0.28	28.71	-	28.99	-	60.00	50.00	-31.01	-
5	15.344	0.37	29.07	-	29.44	-	60.00	50.00	-30.56	-
6	25.000	0.40	32.95	-	33.35	-	60.00	50.00	-26.65	-

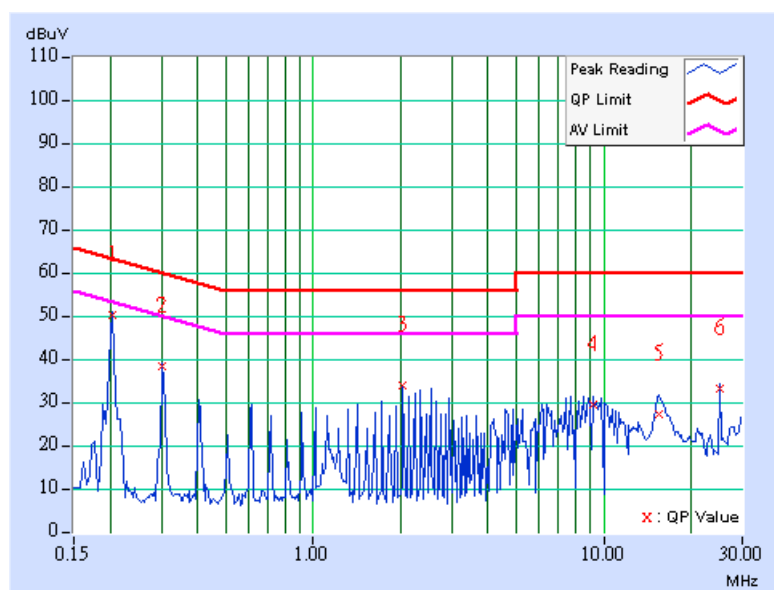
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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.	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	49.57	-	49.67	-	63.42	53.42	-13.75	-
2	0.302	0.11	37.68	-	37.79	-	60.18	50.18	-22.39	-
3	2.035	0.16	33.25	-	33.41	-	56.00	46.00	-22.59	-
4	9.152	0.32	28.78	-	29.10	-	60.00	50.00	-30.90	-
5	15.559	0.52	26.68	-	27.20	-	60.00	50.00	-32.80	-
6	25.000	0.86	32.33	-	33.19	-	60.00	50.00	-26.81	-

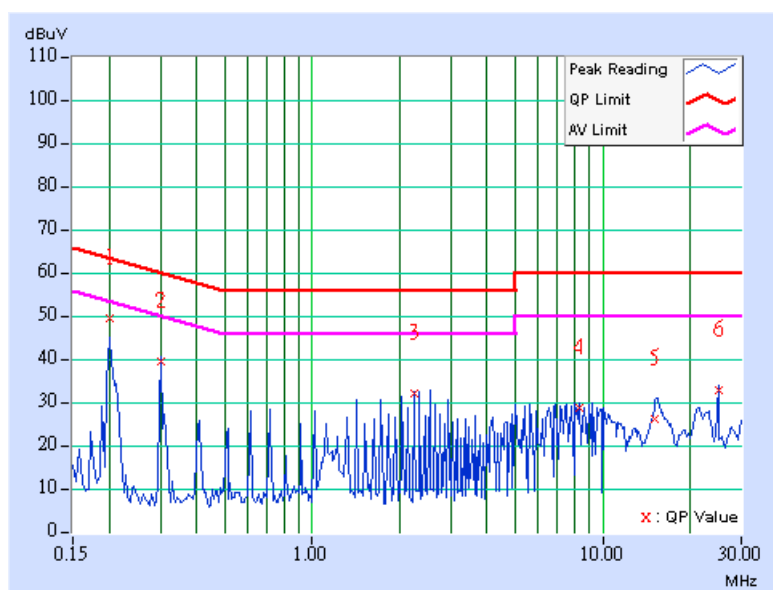
- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value =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



EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	49.29	-	49.39	-	63.58	53.58	-14.19	-
2	0.302	0.11	39.05	-	39.16	-	60.18	50.18	-21.02	-
3	2.234	0.16	31.74	-	31.90	-	56.00	46.00	-24.10	-
4	8.336	0.28	28.31	-	28.59	-	60.00	50.00	-31.41	-
5	15.145	0.36	25.99	-	26.35	-	60.00	50.00	-33.65	-
6	25.000	0.40	32.49	-	32.89	-	60.00	50.00	-27.11	-

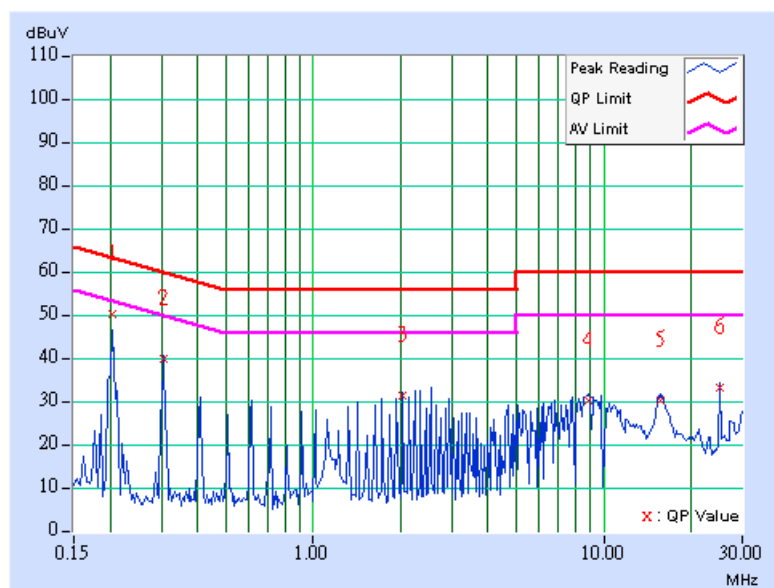
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	49.35	-	49.45	-	63.42	53.42	-13.97	-
2	0.306	0.11	39.21	-	39.32	-	60.07	50.07	-20.75	-
3	2.031	0.16	30.57	-	30.73	-	56.00	46.00	-25.27	-
4	8.852	0.31	29.55	-	29.86	-	60.00	50.00	-30.14	-
5	15.770	0.53	29.62	-	30.15	-	60.00	50.00	-29.85	-
6	25.000	0.86	32.30	-	33.16	-	60.00	50.00	-26.84	-

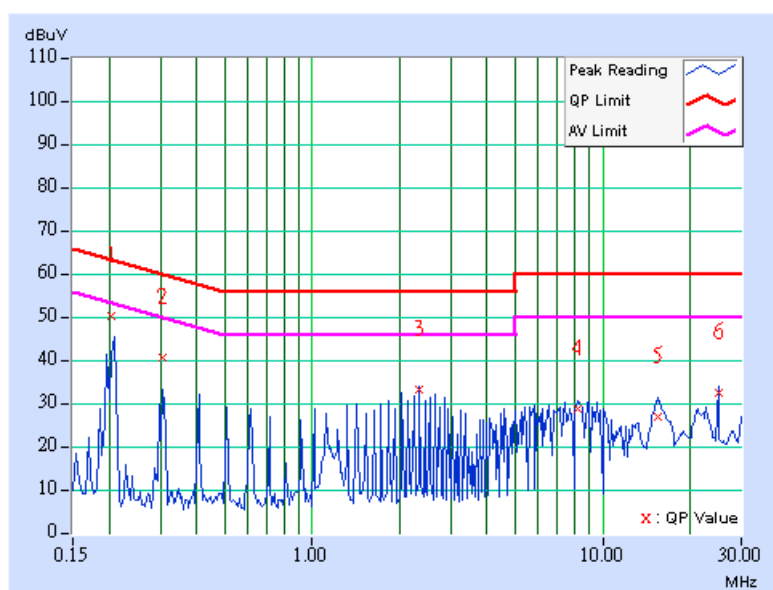
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	50.10	-	50.20	-	63.43	53.43	-13.23	-
2	0.306	0.11	40.22	-	40.33	-	60.07	50.07	-19.74	-
3	2.340	0.16	32.97	-	33.13	-	56.00	46.00	-22.87	-
4	8.242	0.28	28.50	-	28.78	-	60.00	50.00	-31.22	-
5	15.566	0.37	26.64	-	27.01	-	60.00	50.00	-32.99	-
6	25.000	0.40	32.35	-	32.75	-	60.00	50.00	-27.25	-

- 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.

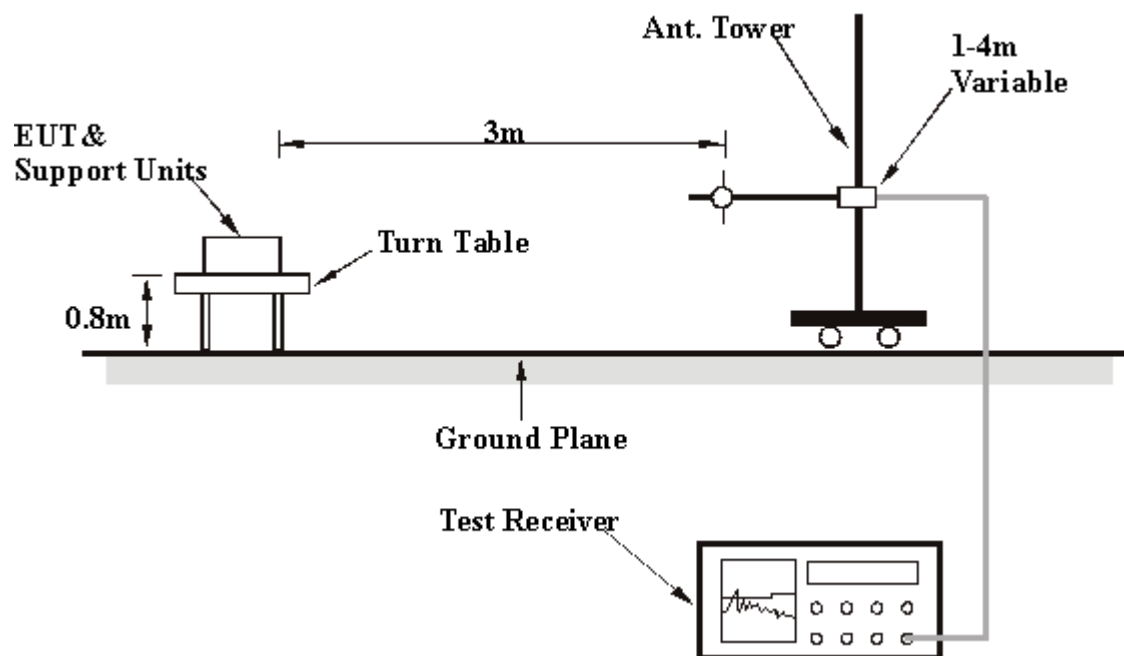
NOTE:

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 (Antenna combination 3)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	20deg. C, 60%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	30.11 QP	40.00	-9.89	2.00 H	187	15.78	14.33
2	269.10	32.78 QP	46.00	-13.22	1.00 H	136	19.17	13.61
3	323.53	38.55 QP	46.00	-7.45	1.00 H	67	23.69	14.86
4	360.46	42.98 QP	46.00	-3.02	1.00 H	112	27.27	15.71
5	539.30	33.23 QP	46.00	-12.77	2.00 H	55	13.84	19.39
6	720.08	32.54 QP	46.00	-13.46	1.00 H	82	9.82	22.72
7	799.78	43.29 QP	46.00	-2.71	1.00 H	127	19.59	23.70
8	881.42	39.32 QP	46.00	-6.68	1.00 H	121	14.58	24.74
9	900.86	37.40 QP	46.00	-8.60	1.00 H	259	12.28	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	37.58 QP	40.00	-2.42	1.00 V	58	23.25	14.33
2	269.10	29.12 QP	46.00	-16.88	1.00 V	16	15.50	13.61
3	323.53	31.70 QP	46.00	-14.30	1.50 V	301	16.84	14.86
4	360.46	36.16 QP	46.00	-9.84	2.00 V	61	20.46	15.71
5	539.30	34.63 QP	46.00	-11.37	1.00 V	274	15.24	19.39
6	640.38	33.10 QP	46.00	-12.90	1.00 V	13	11.65	21.45
7	720.08	36.16 QP	46.00	-9.84	1.50 V	205	13.44	22.72
8	799.78	44.62 QP	46.00	-1.38	2.00 V	175	20.92	23.70
9	881.42	43.54 QP	46.00	-2.46	1.00 V	160	18.80	24.74
10	900.86	41.29 QP	46.00	-4.71	2.00 V	217	16.17	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	21deg. C, 70%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	50.04 PK	74.00	-23.96	1.00 H	52	22.10	27.95
1	1440.00	47.35 AV	54.00	-6.65	1.00 H	52	19.41	27.95
2	2016.00	55.09 PK	85.37	-30.28	1.00 H	100	25.68	29.41
2	2016.00	54.25 AV	77.87	-23.72	1.00 H	100	24.84	29.41
3	*2412.00	105.37 PK			1.53 H	17	74.31	31.06
3	*2412.00	97.89 AV			1.53 H	17	66.83	31.06
4	2487.00	60.08 PK	74.00	-13.92	1.53 H	17	28.70	31.38
4	2487.00	51.94 AV	54.00	-2.06	1.53 H	17	20.56	31.38
5	4824.00	44.74 PK	74.00	-29.26	1.24 H	183	8.31	36.43
5	4824.00	34.81 AV	54.00	-19.19	1.24 H	183	-1.62	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	48.65 PK	74.00	-25.35	1.10 V	176	21.87	26.78
1	1080.00	42.92 AV	54.00	-11.08	1.10 V	176	16.14	26.78
2	2016.00	56.76 PK	89.07	-32.31	1.01 V	33	27.35	29.41
2	2016.00	56.82 AV	79.91	-23.09	1.01 V	33	27.41	29.41
3	2387.00	61.92 PK	74.00	-12.08	1.07 V	224	30.96	30.96
3	2387.00	52.76 AV	54.00	-1.24	1.07 V	224	21.80	30.96
4	*2412.00	109.07 PK			1.07 V	224	78.01	31.06
4	*2412.00	99.91 AV			1.07 V	224	68.85	31.06
5	4824.00	50.32 PK	74.00	-23.68	1.07 V	166	13.89	36.43
5	4824.00	42.10 AV	54.00	-11.90	1.07 V	166	5.67	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	21deg. C, 70%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

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	51.11 PK	74.00	-22.89	1.00 H	100	23.16	27.95
1	1440.00	47.69 AV	54.00	-6.31	1.00 H	100	19.74	27.95
2	2016.00	55.11 PK	84.56	-29.45	1.00 H	140	25.70	29.41
2	2016.00	54.37 AV	78.24	23.87	1.00 H	140	24.96	29.41
3	*2437.00	104.56 PK			1.47 H	20	73.39	31.17
3	*2437.00	98.24 AV			1.47 H	20	67.07	31.17
4	4874.00	47.52 PK	74.00	-26.48	1.24 H	147	10.98	36.54
4	4874.00	41.12 AV	54.00	-12.88	1.24 H	147	4.58	36.54

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

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	1.14 V	180	21.63	26.78
1	1080.00	43.41 AV	54.00	-10.59	1.14 V	180	16.63	26.78
2	2016.00	56.84 PK	90.51	-33.67	1.04 V	39	27.43	29.41
2	2016.00	56.10 AV	83.41	-27.31	1.04 V	39	26.69	29.41
3	*2437.00	110.51 PK			1.10 V	264	79.34	31.17
3	*2437.00	103.41 AV			1.10 V	264	72.24	31.17
4	4874.00	53.74 PK	74.00	-20.26	1.00 V	110	17.20	36.54
4	4874.00	47.56 AV	54.00	-6.44	1.00 V	110	11.02	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	21deg. C, 70%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

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	51.08 PK	74.00	-22.92	1.01 H	300	23.13	27.95
1	1440.00	47.68 AV	54.00	-6.32	1.01 H	300	19.73	27.95
2	2016.00	56.20 PK	85.42	-29.22	1.00 H	140	26.79	29.41
2	2016.00	55.10 AV	77.68	-22.58	1.00 H	140	25.69	29.41
3	*2462.00	105.42 PK			1.16 H	303	74.14	31.28
3	*2462.00	97.68 AV			1.16 H	303	66.40	31.28
4	2487.00	57.84 PK	74.00	-16.16	1.16 H	303	26.46	31.38
4	2487.00	49.27 AV	54.00	-4.73	1.16 H	303	17.89	31.38
5	4924.00	47.20 PK	74.00	-26.80	1.08 H	330	10.54	36.66
5	4924.00	39.60 AV	54.00	-14.40	1.08 H	330	2.94	36.66

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

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	48.63 PK	74.00	-25.37	1.09 V	177	21.85	26.78
1	1080.00	43.26 AV	54.00	-10.74	1.09 V	177	16.48	26.78
2	2016.00	56.48 PK	90.96	-34.47	1.01 V	34	27.07	29.41
2	2016.00	57.10 AV	79.12	-22.02	1.01 V	34	27.69	29.41
3	*2462.00	110.96 PK			1.10 V	154	79.68	31.28
3	*2462.00	99.12 AV			1.10 V	154	67.84	31.28
4	2487.00	62.89 PK	74.00	-11.11	1.10 V	154	31.51	31.38
4	2487.00	52.84 AV	54.00	-1.16	1.10 V	154	21.46	31.38
5	4924.00	52.16 PK	74.00	-21.84	1.05 V	222	15.50	36.66
5	4924.00	45.19 AV	54.00	-8.81	1.05 V	222	8.53	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	21deg. C, 70%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	46.69 PK	74.00	-27.31	1.25 H	300	19.91	26.78
1	1080.00	41.61 AV	54.00	-12.39	1.25 H	300	14.83	26.78
2	2016.00	51.01 PK	74.00	-22.99	1.06 H	78	21.60	29.41
2	2016.00	50.50 AV	54.00	-3.50	1.06 H	78	21.09	29.41
3	2387.00	61.30 PK	74.00	-12.70	1.05 H	139	30.34	30.96
3	2387.00	51.54 AV	54.00	-2.46	1.05 H	139	20.58	30.96
4	*2412.00	103.14 PK			1.05 H	139	72.08	31.06
4	*2412.00	92.16 AV			1.05 H	139	61.10	31.06
5	4824.00	43.82 PK	74.00	-30.18	1.12 H	178	7.39	36.43
5	4824.00	31.46 AV	54.00	-22.54	1.12 H	178	-4.97	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	52.19 PK	74.00	-21.81	1.00 V	278	25.41	26.78
1	1080.00	45.54 AV	54.00	-8.46	1.00 V	278	18.76	26.78
2	2016.00	54.61 PK	74.00	-19.39	1.32 V	48	25.20	29.41
2	2016.00	53.64 AV	54.00	-0.36	1.32 V	48	24.23	29.41
3	2390.00	64.05 PK	74.00	-9.95	1.08 V	270	33.08	30.97
3	2390.00	52.27 AV	54.00	-1.73	1.08 V	270	21.30	30.97
4	*2412.00	108.21 PK			1.08 V	270	77.15	31.06
4	*2412.00	96.08 AV			1.08 V	270	65.02	31.06
5	4824.00	51.18 PK	74.00	-22.82	1.27 V	296	14.75	36.43
5	4824.00	33.61 AV	54.00	-20.39	1.27 V	296	-2.82	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	21deg. C, 70%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

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	47.01 PK	74.00	-26.99	1.17 H	260	20.23	26.78
1	1080.00	41.92 AV	54.00	-12.08	1.17 H	260	15.14	26.78
2	2016.00	51.40 PK	74.00	-22.60	1.04 H	100	21.99	29.41
2	2016.00	50.61 AV	54.00	-3.39	1.04 H	100	21.20	29.41
3	*2437.00	101.56 PK			1.21 H	157	70.39	31.17
3	*2437.00	92.48 AV			1.21 H	157	61.31	31.17
4	4874.00	49.56 PK	74.00	-24.44	1.07 H	290	13.02	36.54
4	4874.00	35.67 AV	54.00	-18.33	1.07 H	290	-0.87	36.54

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1080.00	52.08 PK	74.00	-21.92	1.04 V	250	25.30	26.78
1	1080.00	44.86 AV	54.00	-9.14	1.04 V	250	18.08	26.78
2	2016.00	54.81 PK	74.00	-19.19	1.30 V	50	25.40	29.41
2	2016.00	53.84 AV	54.00	-0.16	1.30 V	50	24.43	29.41
3	*2437.00	110.12 PK			1.10 V	265	78.95	31.17
3	*2437.00	99.89 AV			1.10 V	265	68.72	31.17
4	4874.00	62.74 PK	74.00	-11.26	1.14 V	301	26.20	36.54
4	4874.00	42.88 AV	54.00	-11.12	1.14 V	301	6.34	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	21deg. C, 70%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

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	43.31 PK	74.00	-30.69	1.30 H	124	16.53	26.78
1	1080.00	40.76 AV	54.00	-13.24	1.30 H	124	13.98	26.78
2	2016.00	48.41 PK	74.00	-25.59	1.28 H	320	19.00	29.41
2	2016.00	47.53 AV	54.00	-6.47	1.28 H	320	18.12	29.41
3	*2462.00	99.67 PK			1.11 H	290	68.39	31.28
3	*2462.00	90.81 AV			1.11 H	290	59.53	31.28
4	2487.00	57.43 PK	74.00	-16.57	1.11 H	290	26.05	31.38
4	2487.00	45.81 AV	54.00	-8.19	1.11 H	290	14.43	31.38
5	4924.00	44.25 PK	74.00	-29.75	1.24 H	330	7.59	36.66
5	4924.00	32.48 AV	54.00	-21.52	1.24 H	330	-4.18	36.66

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1080.00	53.26 PK	74.00	-20.74	1.04 V	321	26.48	26.78
1	1080.00	45.19 AV	54.00	-8.81	1.04 V	321	18.41	26.78
2	2016.00	51.85 PK	74.00	-22.15	1.32 V	46	22.44	29.41
2	2016.00	50.46 AV	54.00	-3.54	1.32 V	46	21.05	29.41
3	*2462.00	107.78 PK			1.07 V	255	76.50	31.28
3	*2462.00	97.59 AV			1.07 V	255	66.31	31.28
4	2487.00	62.97 PK	74.00	-11.03	1.07 V	255	31.59	31.38
4	2487.00	52.78 AV	54.00	-1.22	1.07 V	255	21.40	31.38
5	4924.00	49.21 PK	74.00	-24.79	1.04 V	268	12.55	36.66
5	4924.00	36.08 AV	54.00	-17.92	1.04 V	268	-0.58	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.

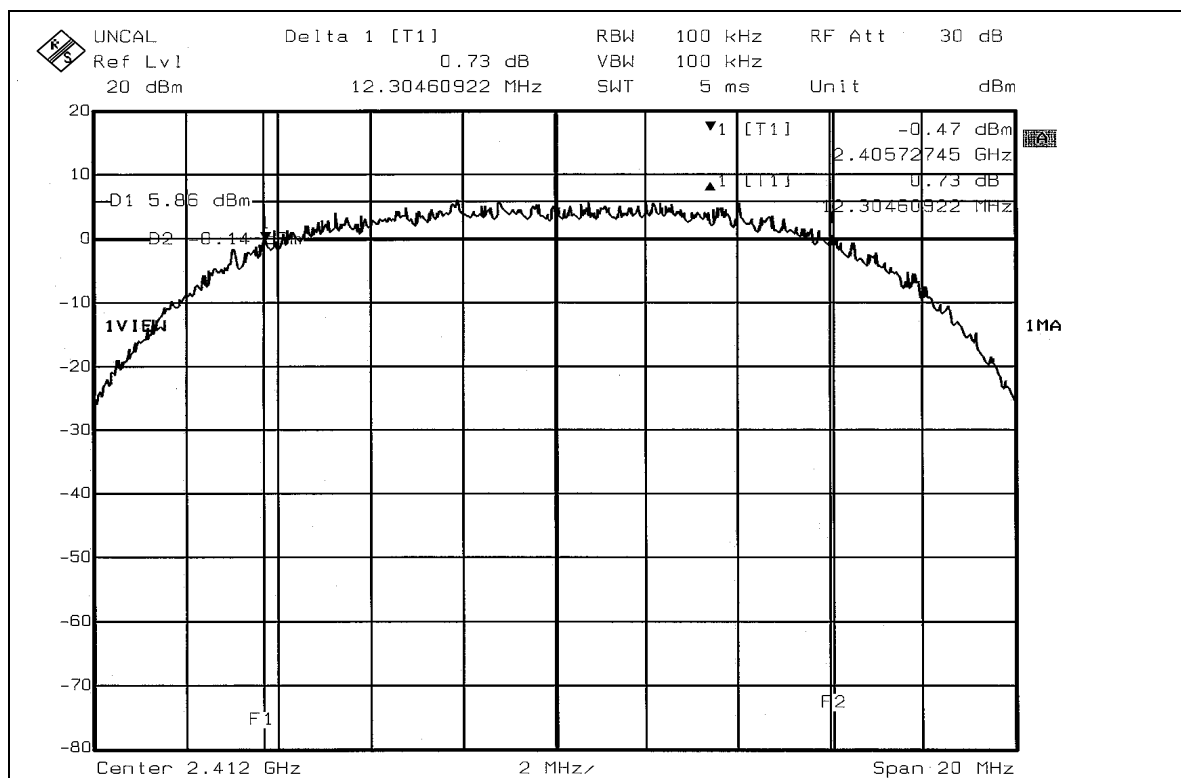
4.3.7 TEST RESULTS

802.11b DSSS modulation

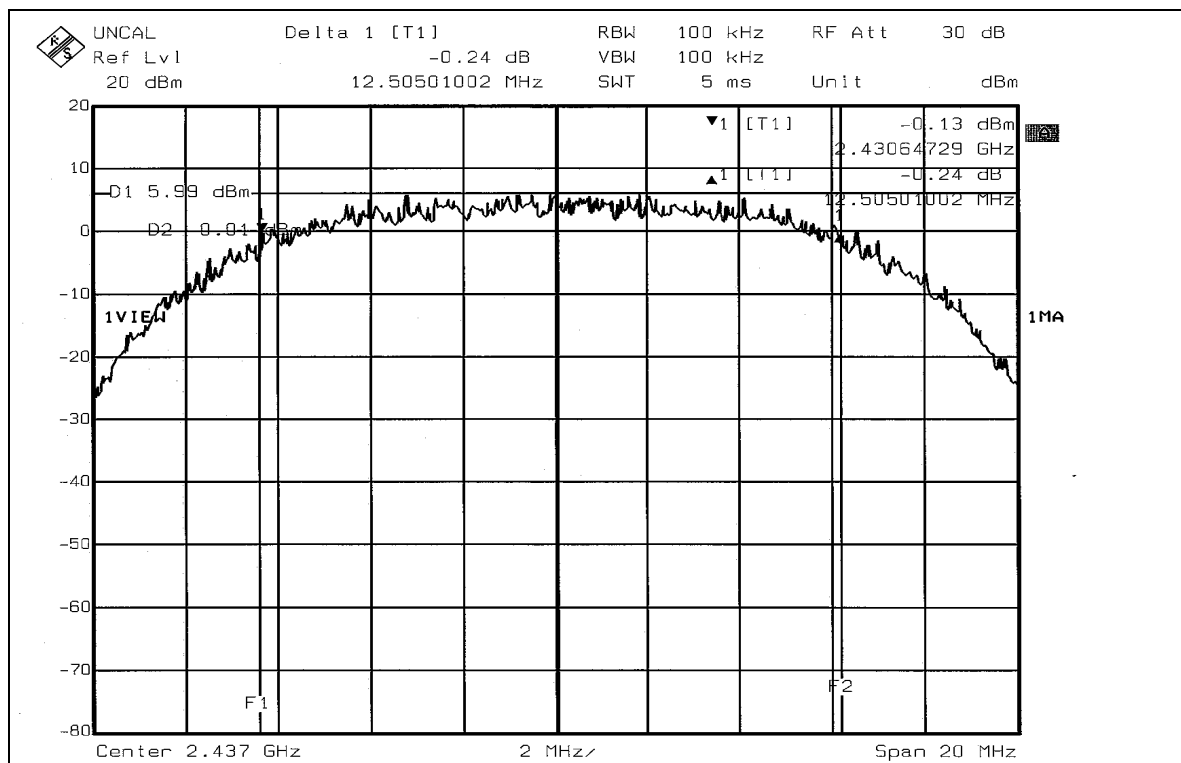
EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.304	0.5	PASS
6	2437	12.505	0.5	PASS
11	2462	11.783	0.5	PASS

CH 1



CH 6



UNCAL Delta 1 [T1] RBW 100 kHz RF Att 30 dB
 Ref Lvl 1.56 dB VBW 100 kHz
 20 dBm 11.78356713 MHz SWT 5 ms Unit dBm

▼1 [T1] -0.33 dBm
 ▲1 [T1] 1.56 dB
 2.45604810 GHz
 11.78356713 MHz

D1 6.36 dBm
 D2 0.36 dBm

1VI 1MA

F1 F2

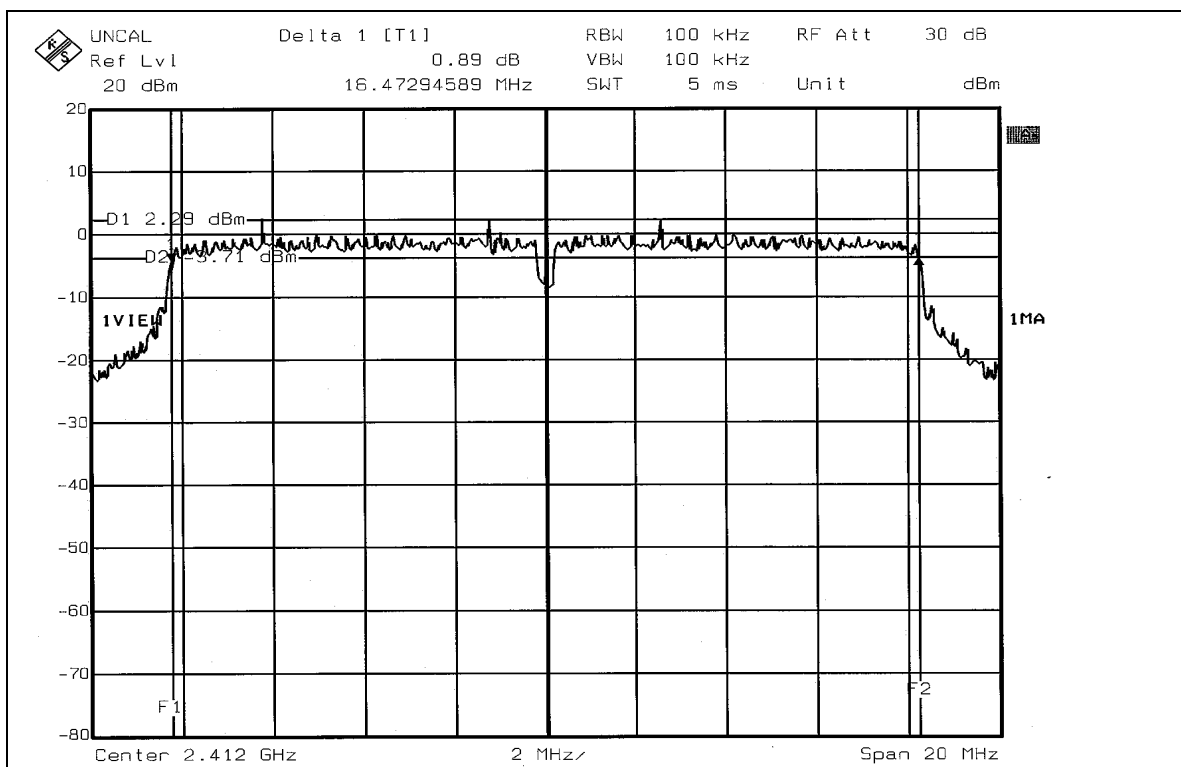
Center 2.462 GHz 2 MHz/ Span 20 MHz

**802.11g OFDM modulation**

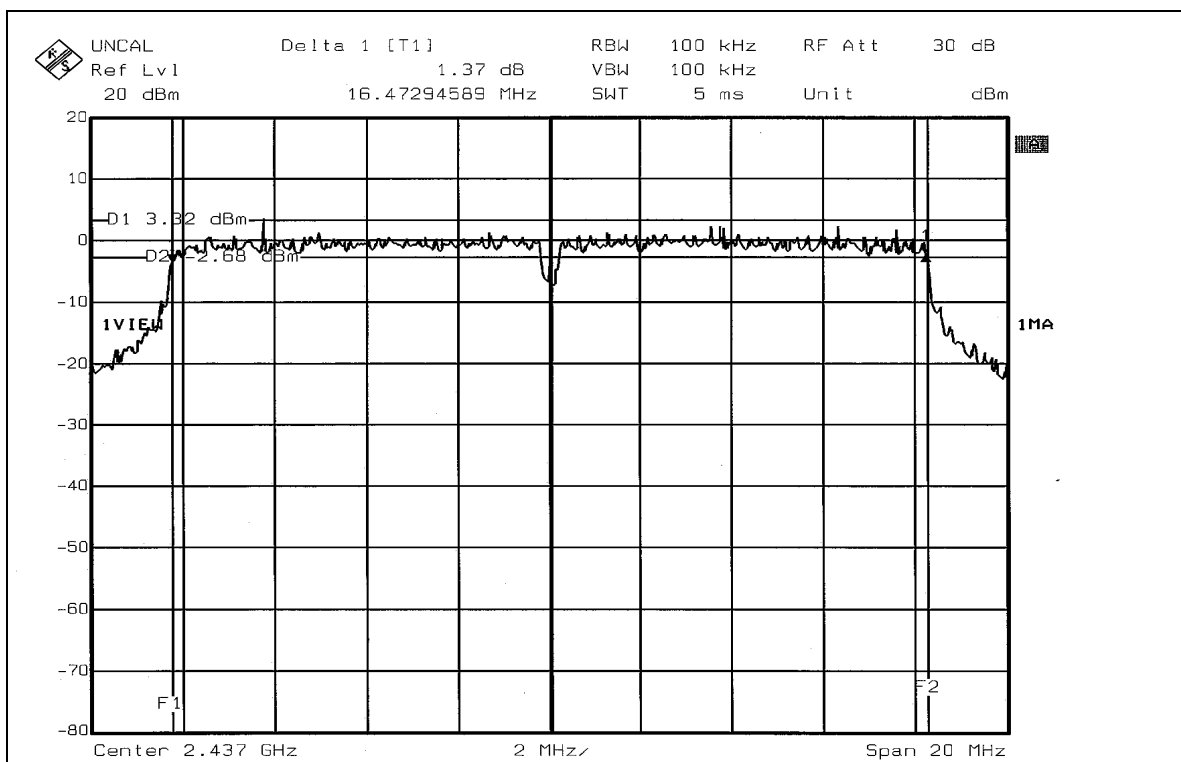
EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.473	0.5	PASS
6	2437	16.473	0.5	PASS
11	2462	16.393	0.5	PASS

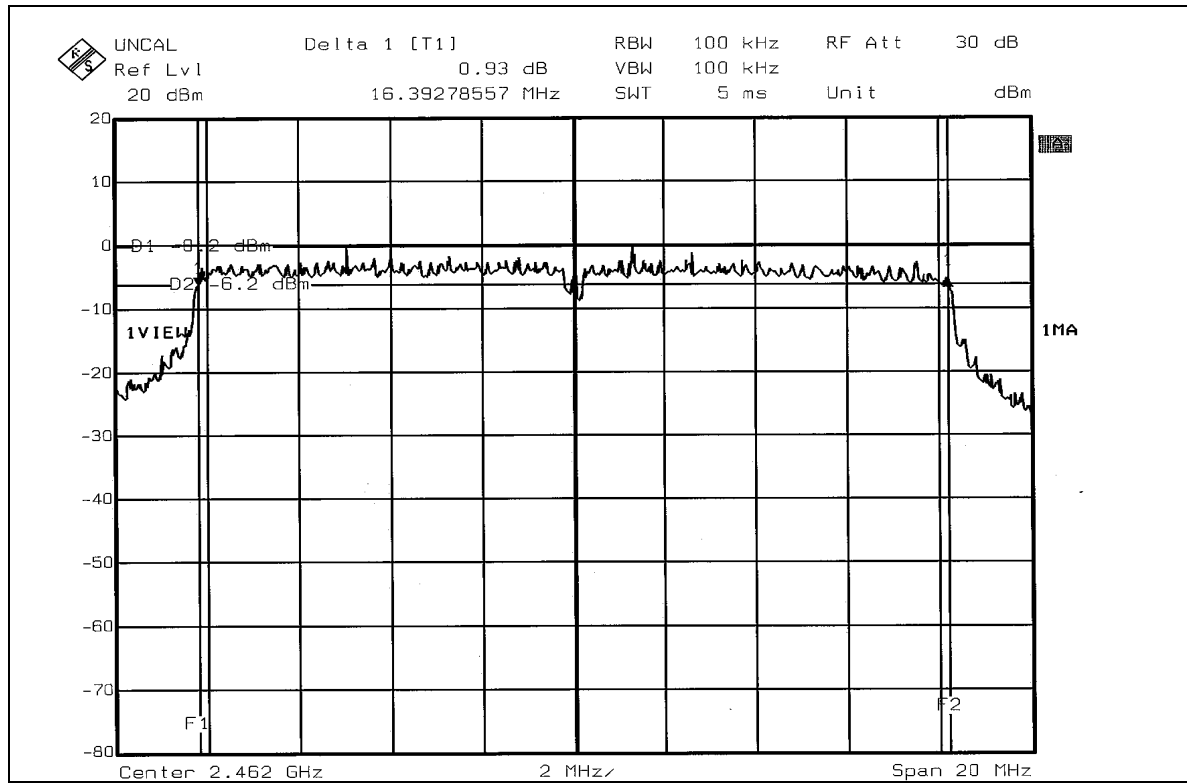
CH 1



CH 6



CH 11



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. 31, 2005
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2006
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.

4.4.1 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.

4.4.2 DEVIATION FROM TEST STANDARD

No deviation

4.4.3 TEST SETUP



4.4.4 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.3 TEST RESULTS

802.11b DSSS modulation

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	63.387	18.02	30	PASS
6	2437	63.826	18.05	30	PASS
11	2462	63.533	18.03	30	PASS

**802.11g OFDM modulation**

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	50.350	17.02	30	PASS
6	2437	63.826	18.05	30	PASS
11	2462	40.179	16.04	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.

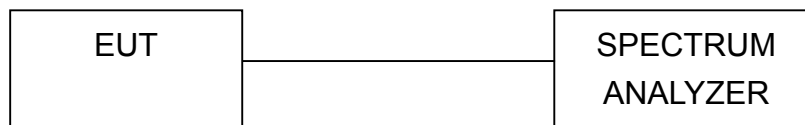
4.5.3 TEST PROCEDURE

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

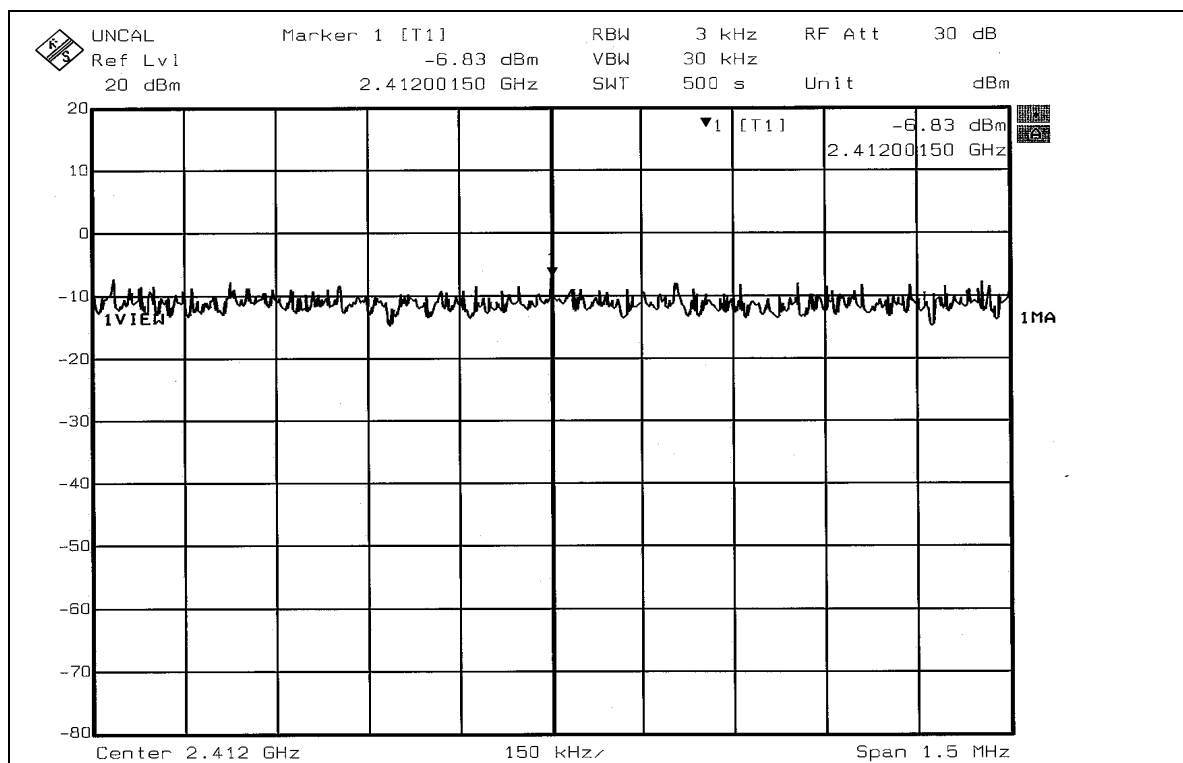
4.5.7 TEST RESULTS

802.11b DSSS modulation

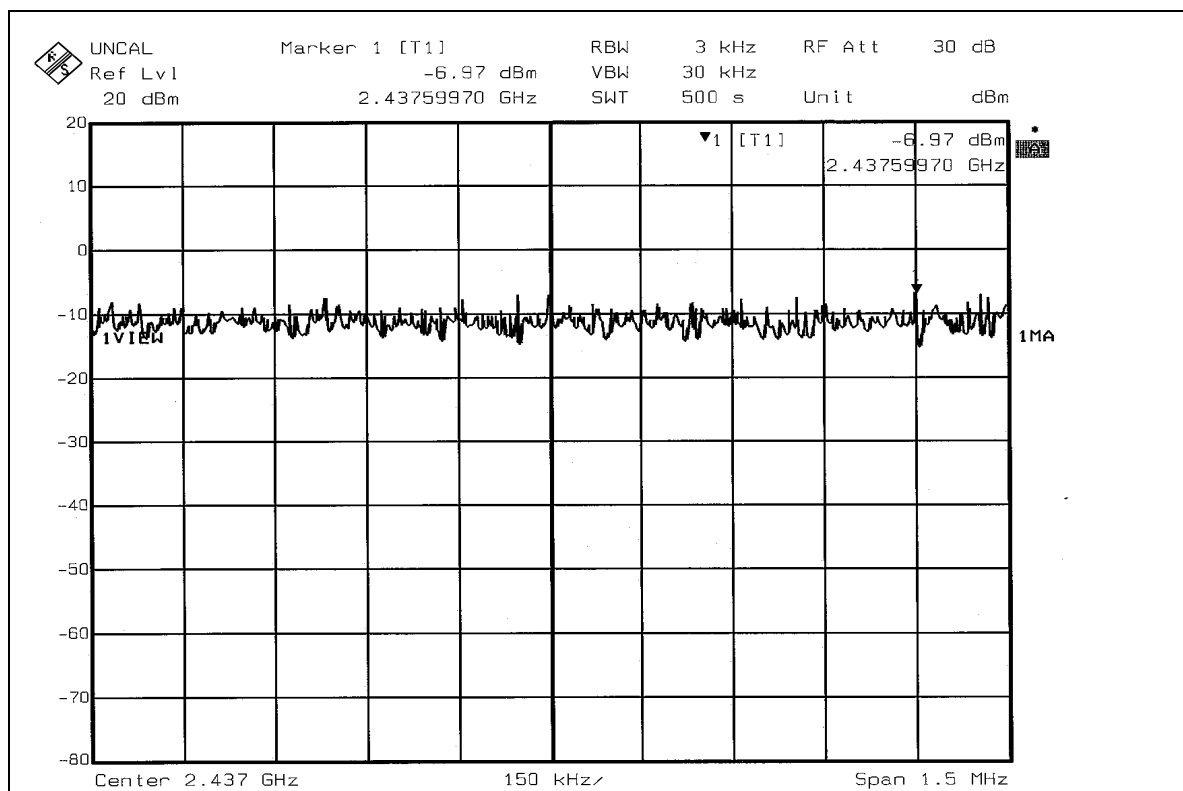
EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-6.83	8	PASS
6	2437	-6.97	8	PASS
11	2462	-6.85	8	PASS

CH 1

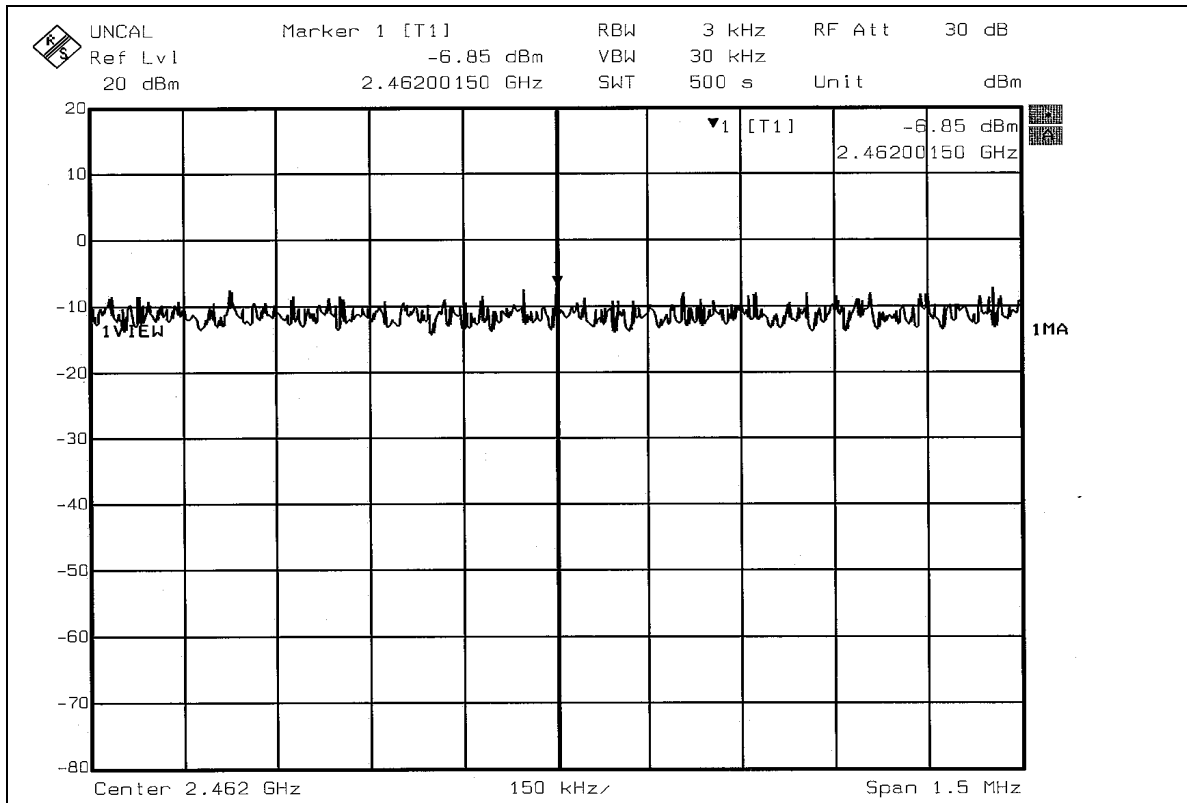


CH 6





CH 11

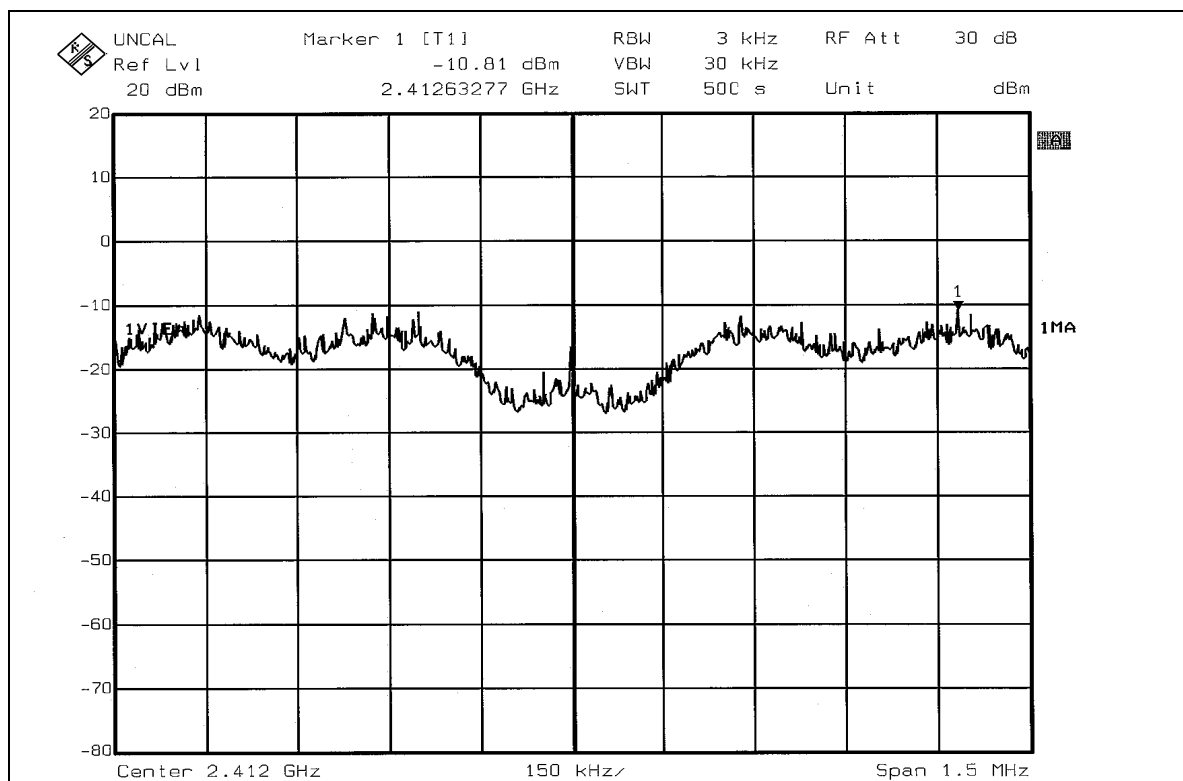


**802.11g OFDM modulation**

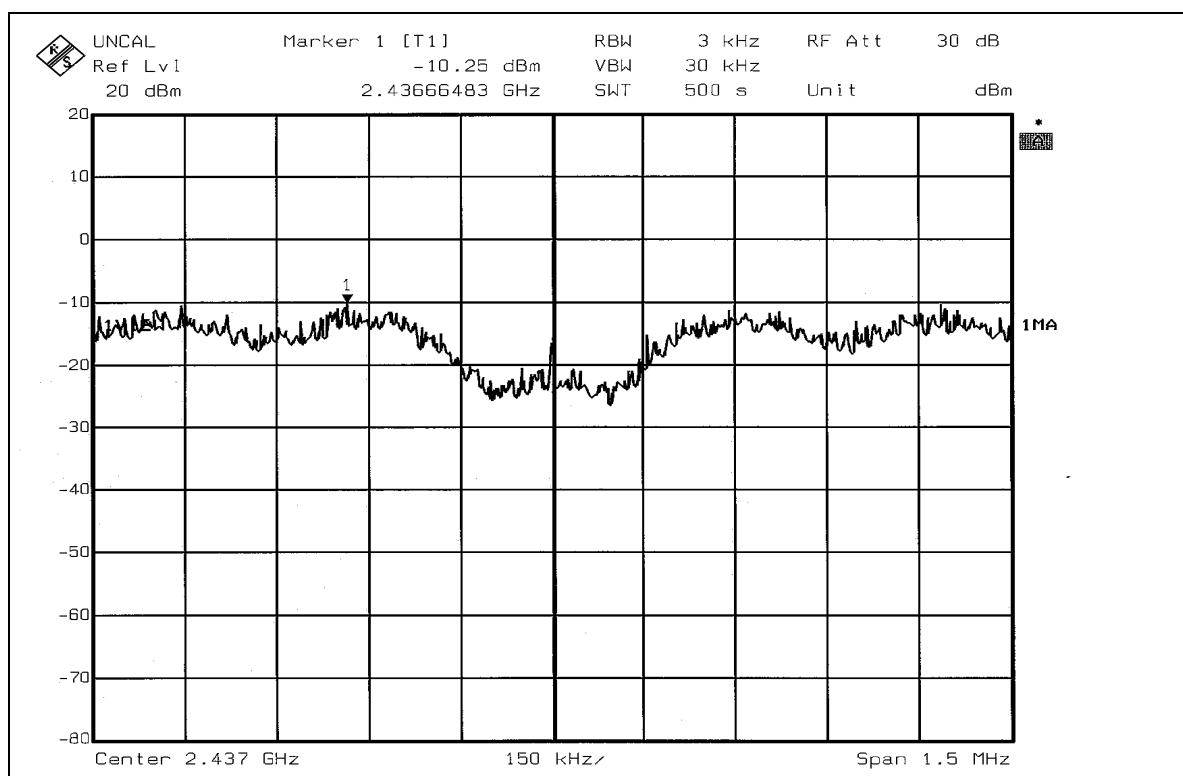
EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 53%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-10.81	8	PASS
6	2437	-10.25	8	PASS
11	2462	-13.38	8	PASS

CH 1

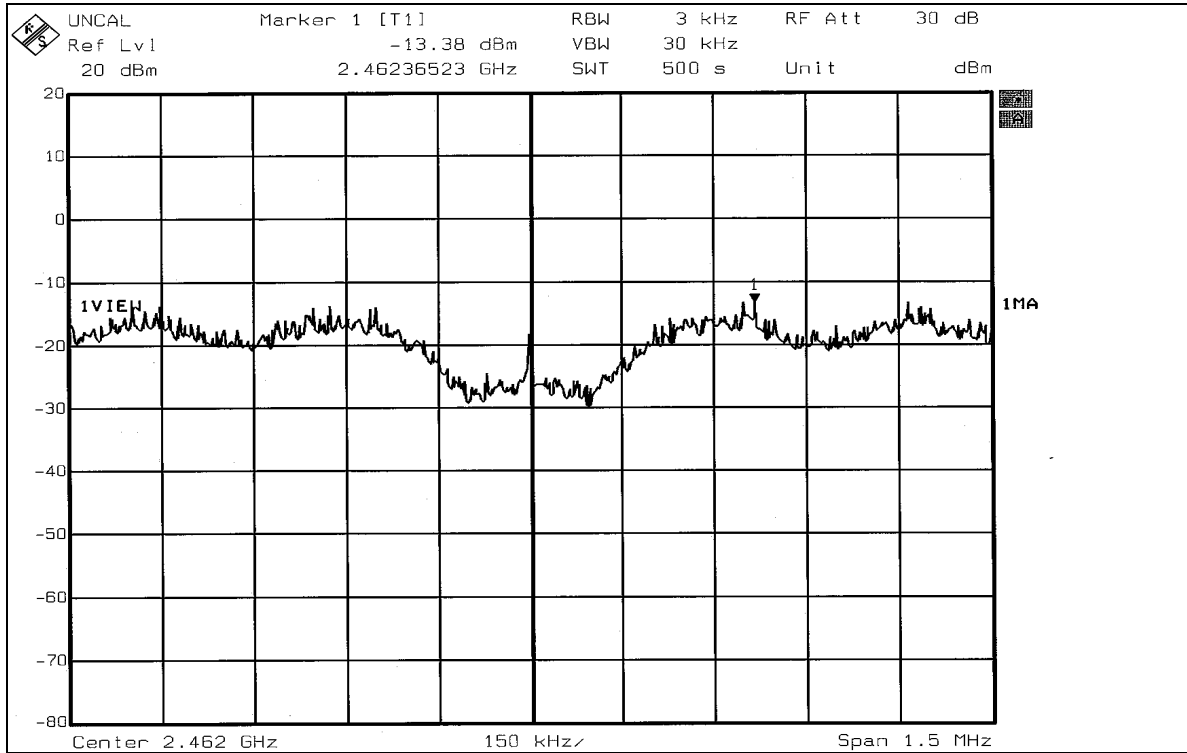


CH 6





CH 11



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 loss 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 were 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 45.48dBc 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 109.07dBuV/m (Peak), so the maximum field strength in restrict band is $109.07 - 45.48 = 63.59$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of on page 58 shows 47.50dBc 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 99.91dBuV/m (Average), so the maximum field strength in restrict band is $99.91 - 47.50 = 52.41$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 59 shows 44.31dBc 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 110.96dBuV/m (Peak), so the maximum field strength in restrict band is $110.96 - 44.31 = 66.65$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 60 shows 46.28dBc 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 99.12BuV/m (Average), so the maximum field strength in restrict band is $99.12 - 46.28 = 52.84$ dBuV/m which is under 54dBuV/m limit.



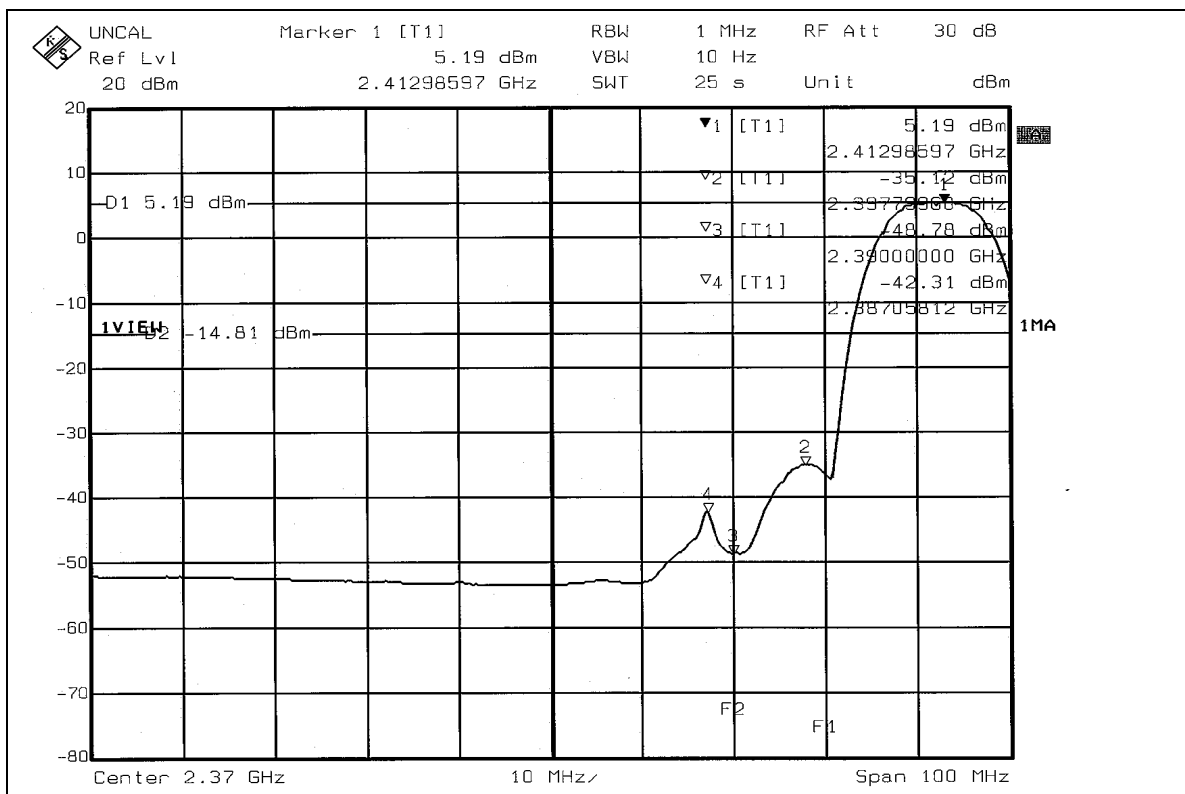
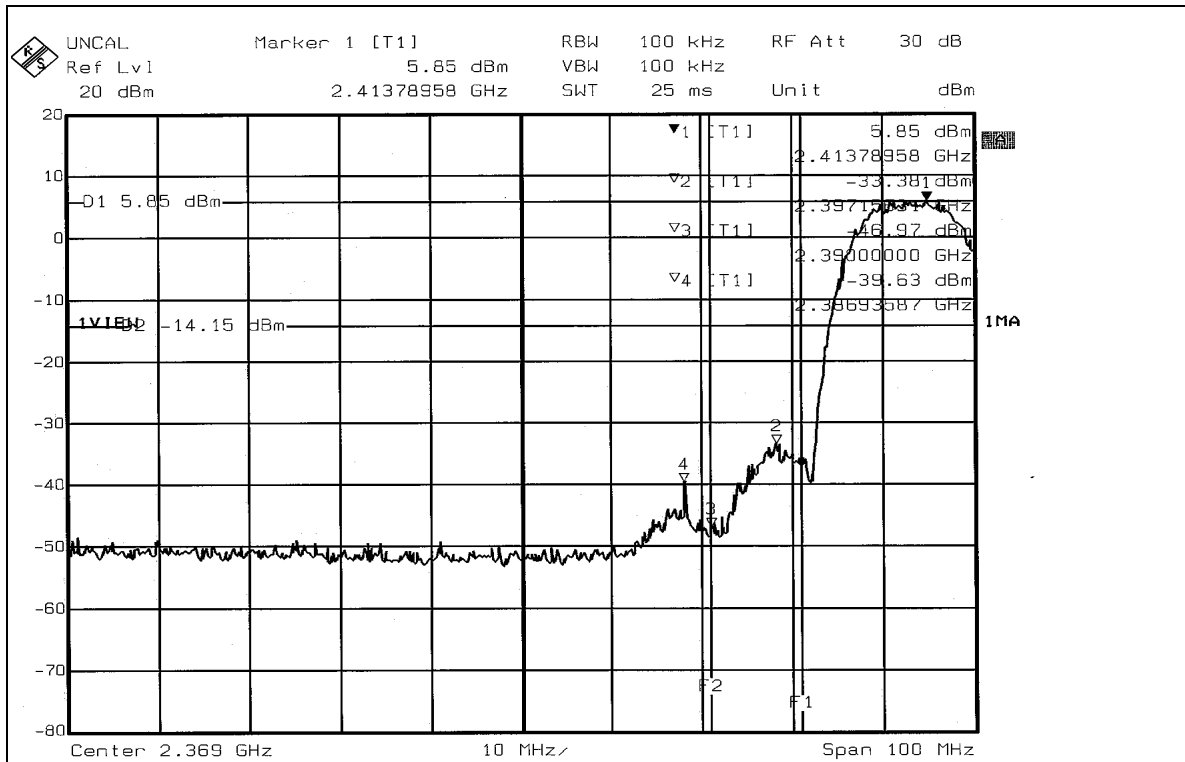
802.11g OFDM modulation

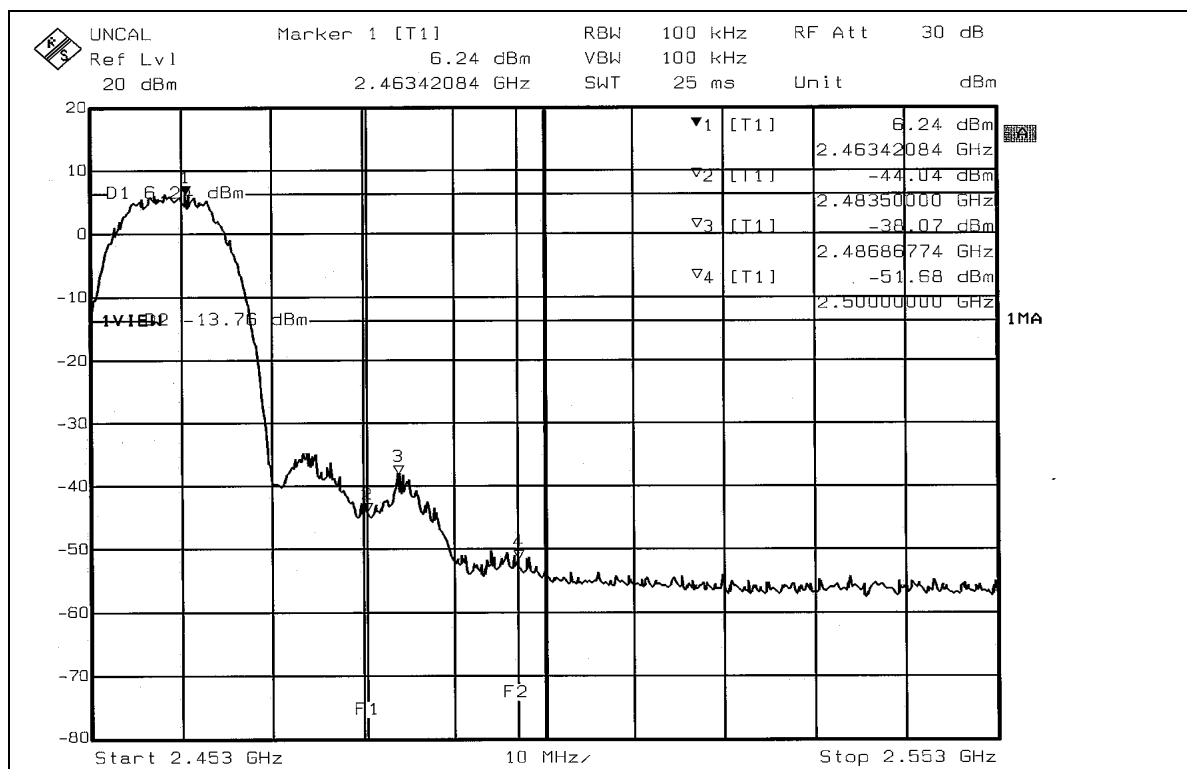
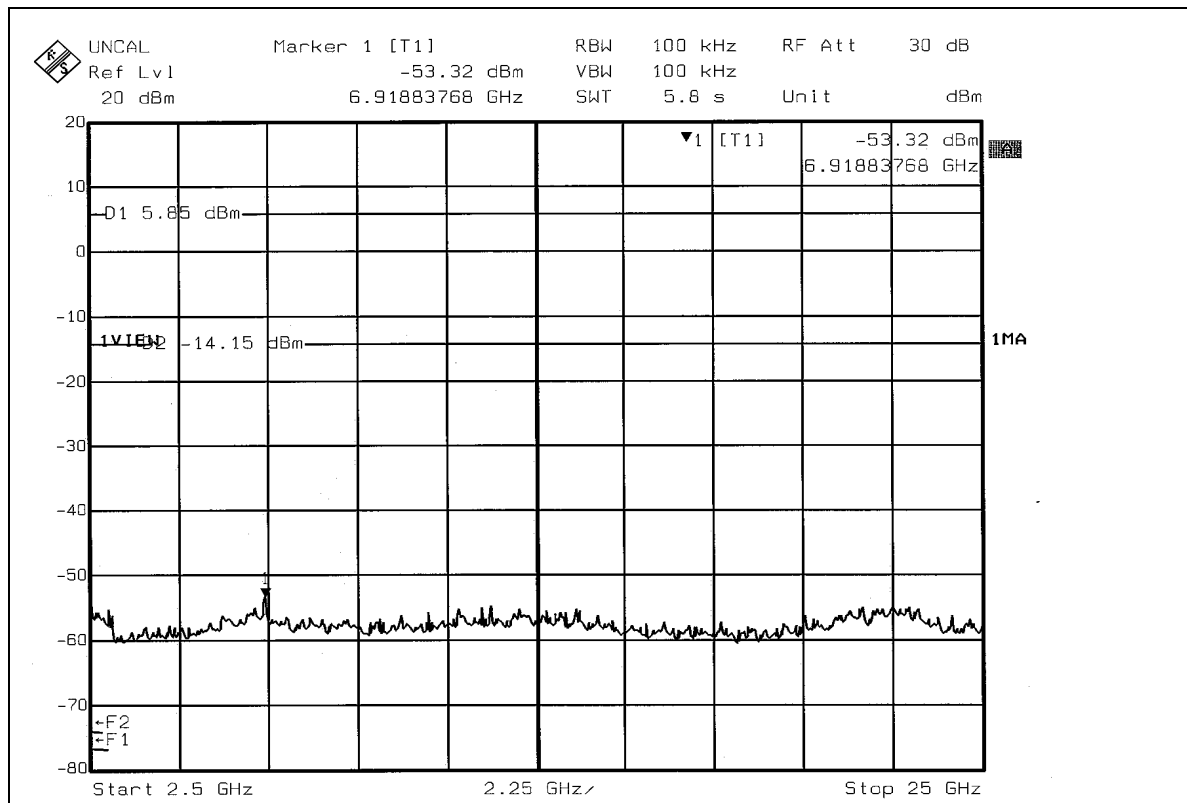
NOTE 1: The band edge emission plot on page 61 shows 41.41dBc between carrier maximum power and local maximum emission in restrict band (2.3871GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 108.21dBuV/m (Peak), so the maximum field strength in restrict band is $108.21 - 41.41 = 66.80$ dBuV/m which is under 74dBuV/m limit.

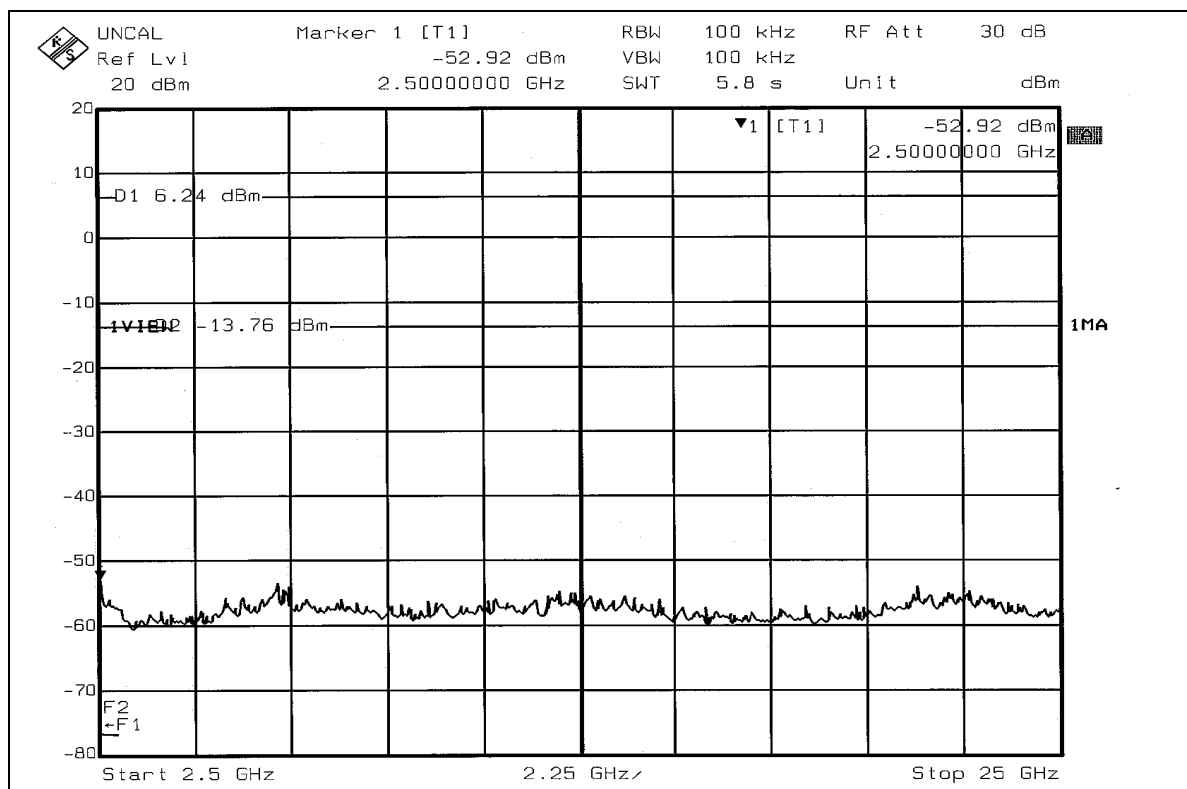
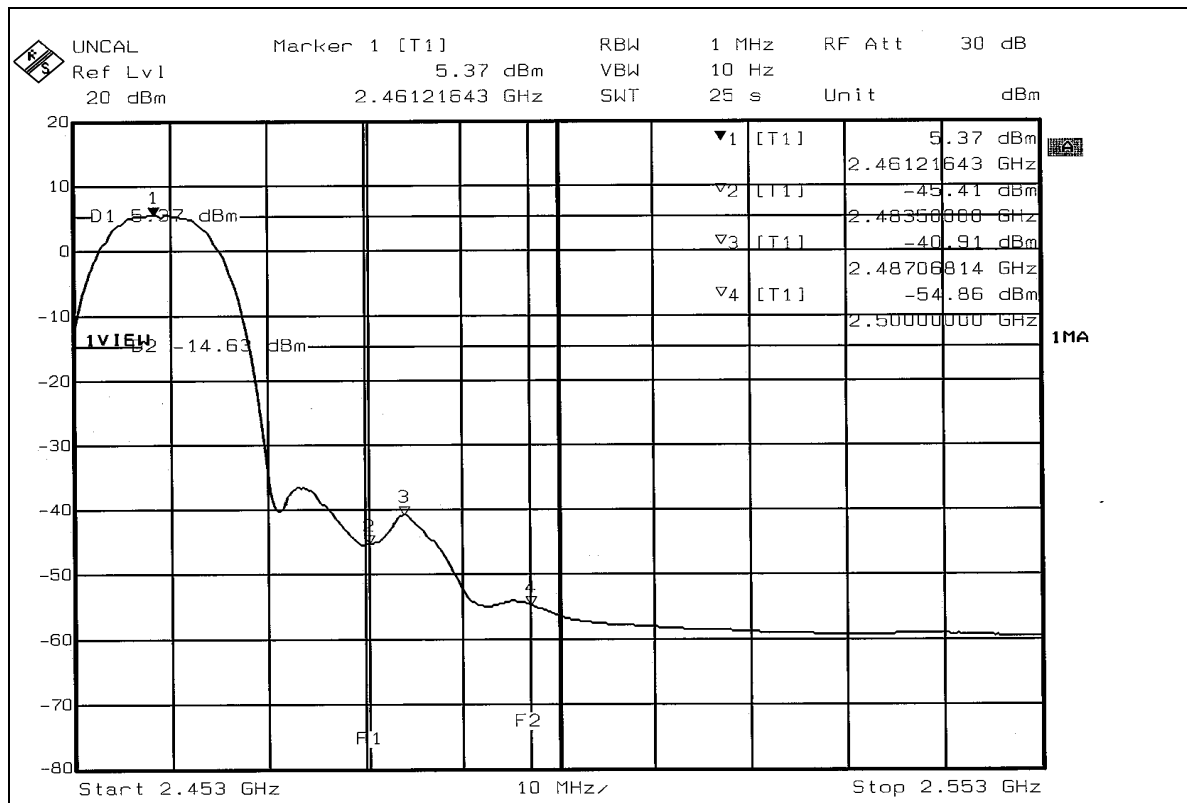
The band edge emission plot of on page 61 shows 43.81dBc between carrier maximum power and local maximum emission in restrict band (2.3871GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 96.08dBuV/m (Average), so the maximum field strength in restrict band is $96.08 - 43.81 = 52.27$ dBuV/m which is under 54dBuV/m limit.

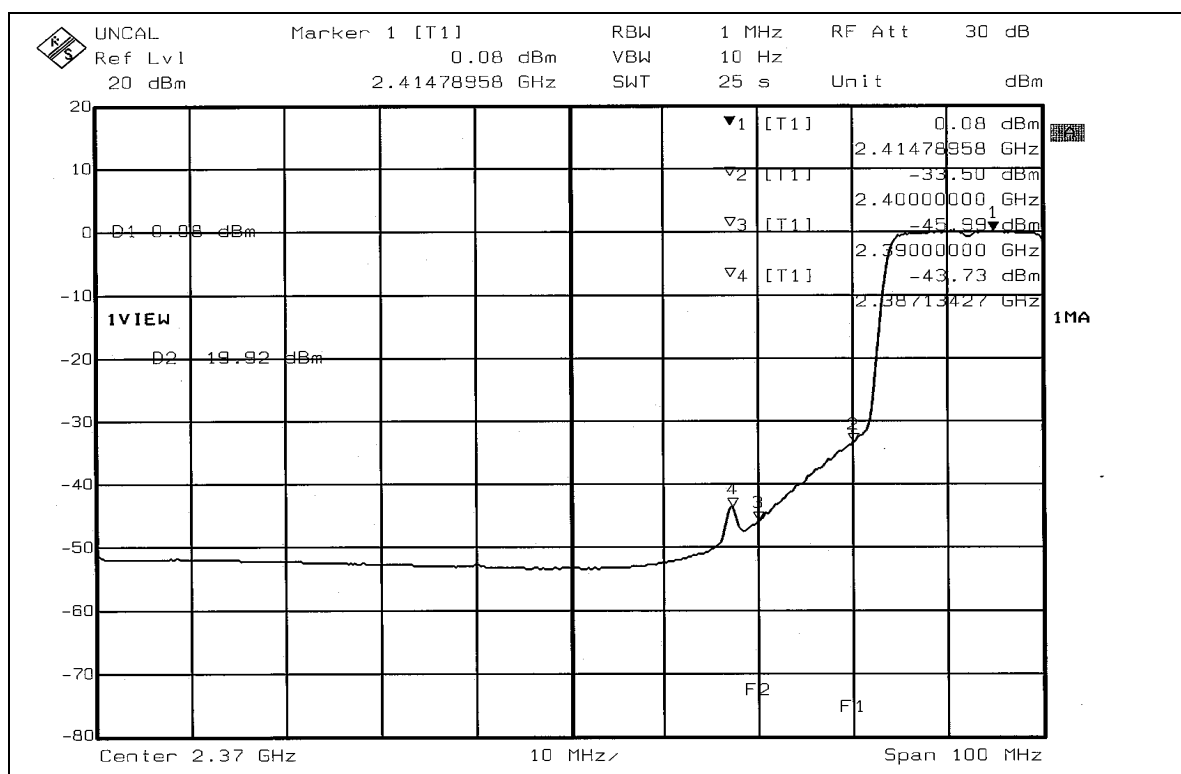
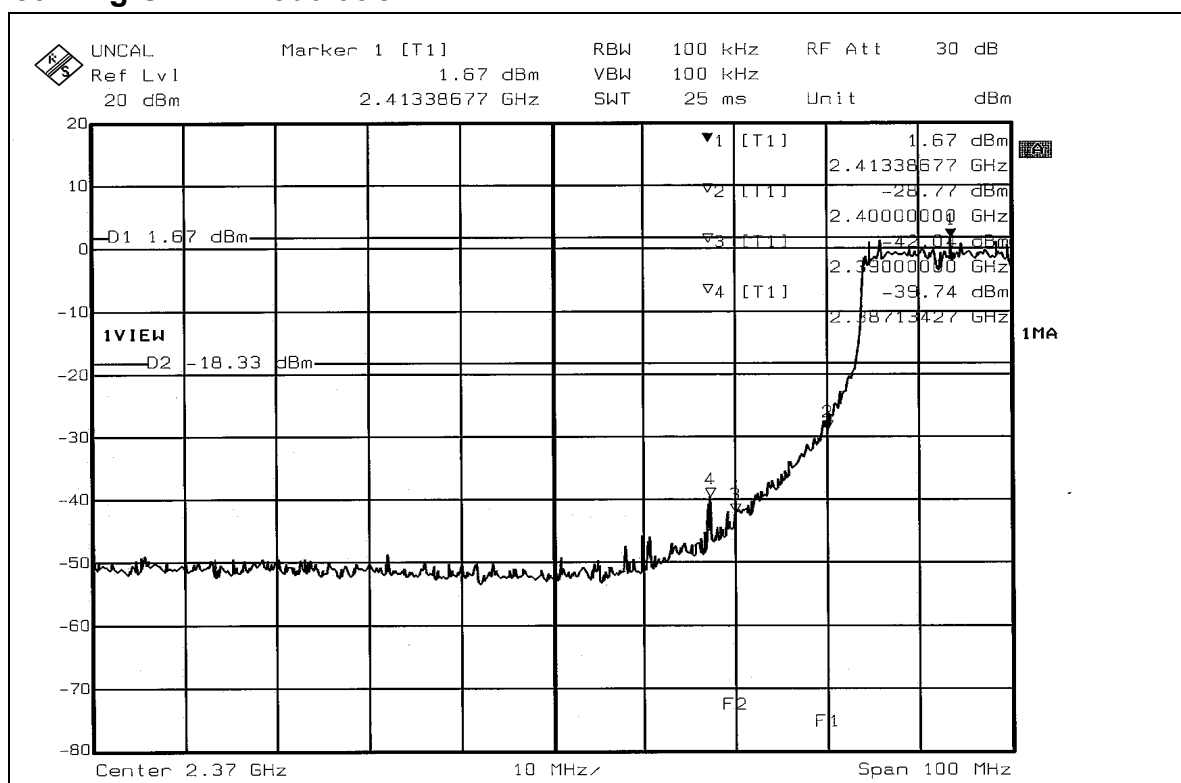
NOTE 2: The band edge emission plot on page 62 shows 42.12dBc between carrier maximum power and local maximum emission in restrict band (2.4871GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 107.78dBuV/m (Peak), so the maximum field strength in restrict band is $107.78 - 42.12 = 65.66$ dBuV/m which is under 74dBuV/m limit.

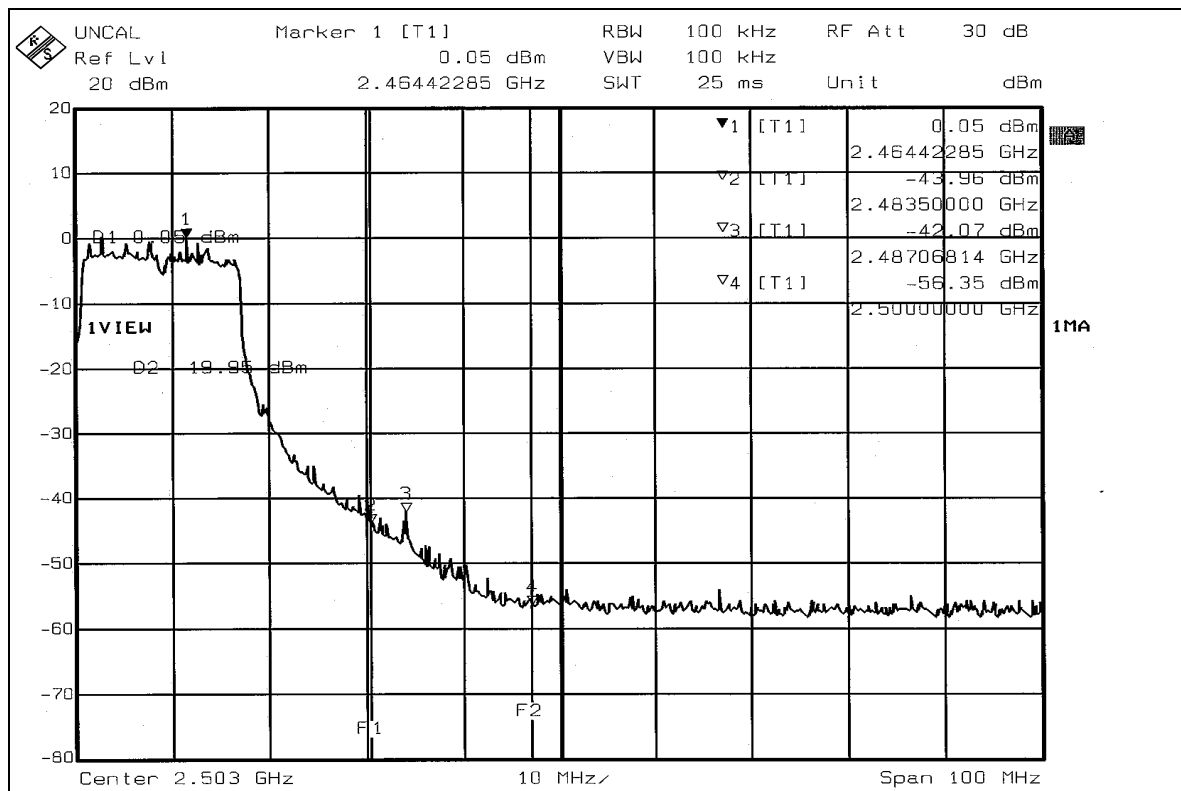
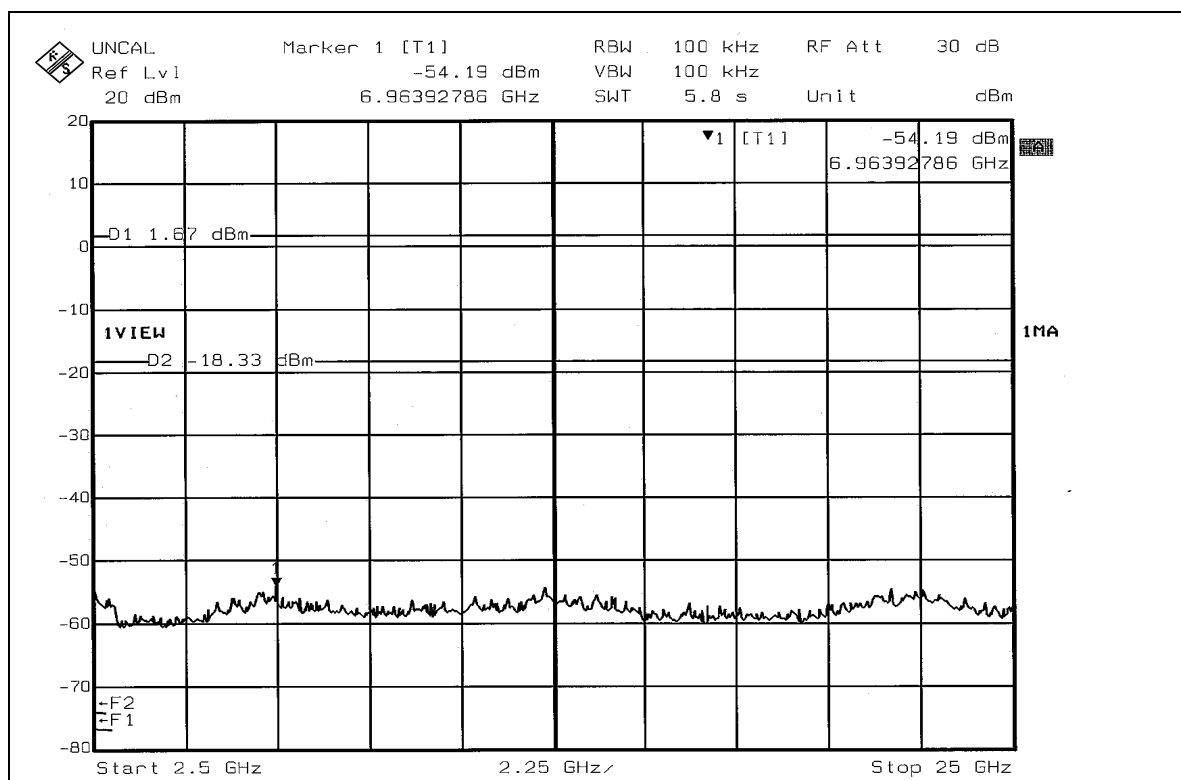
The band edge emission plot on page 63 shows 44.81dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 97.59dBuV/m (Average), so the maximum field strength in restrict band is $97.59 - 44.81 = 52.78$ dBuV/m which is under 54dBuV/m limit.

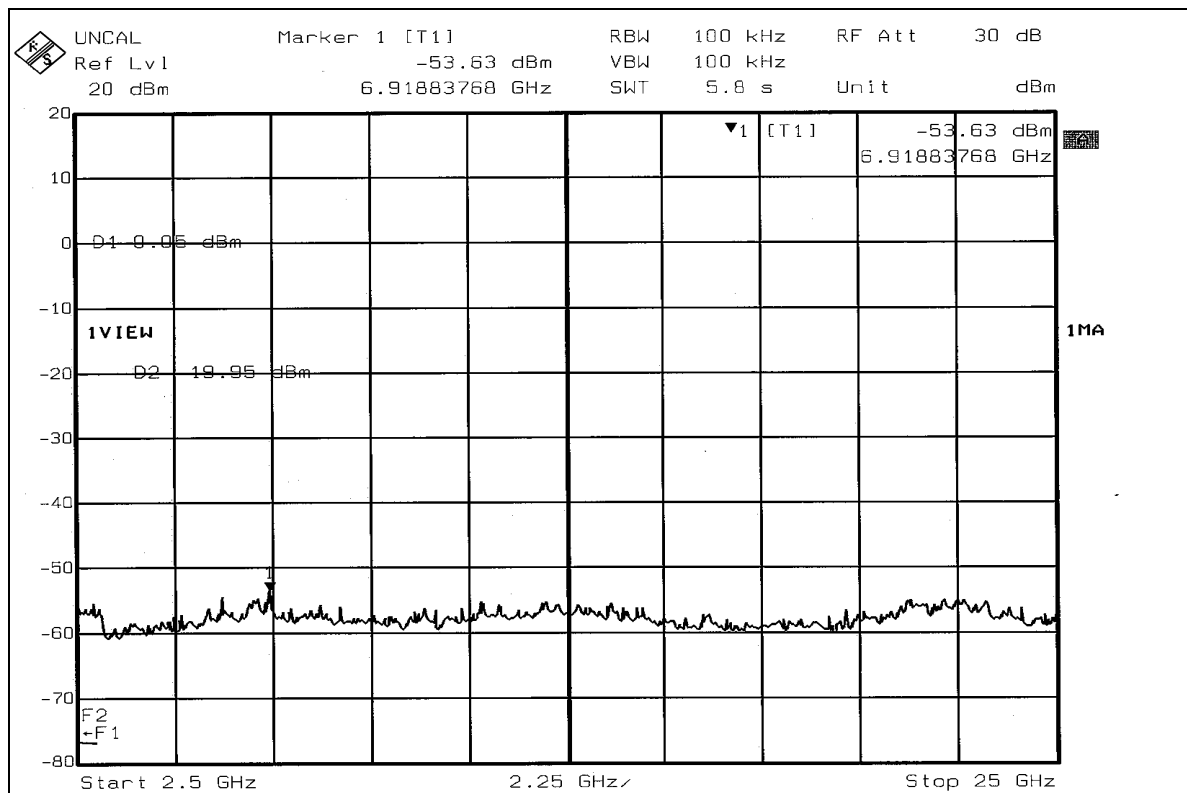
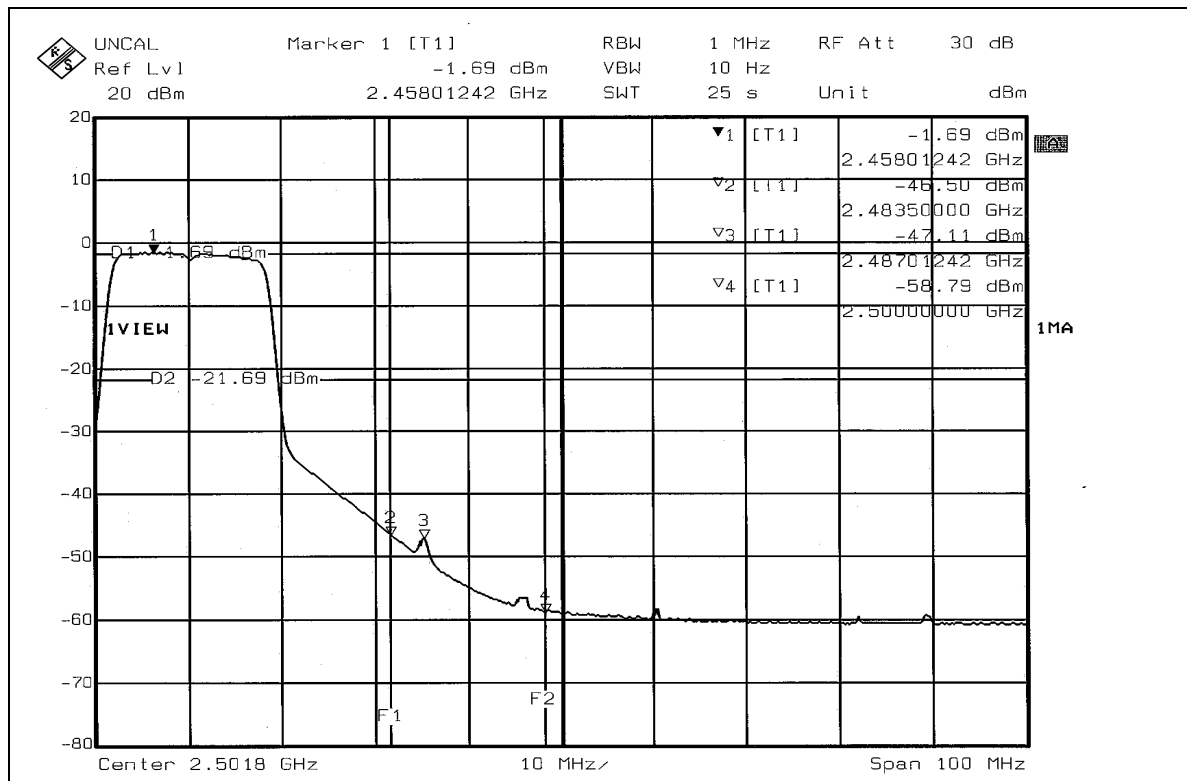
802.11b DSSS modulation





802.11g OFDM modulation







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	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

- NOTE:**
- The lower limit shall apply at the transition frequencies.
 - The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 - 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:**
- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 - The test was performed in HwaYa Shielded Room 3.
 - The VCCI Site Registration No. is C-2047.



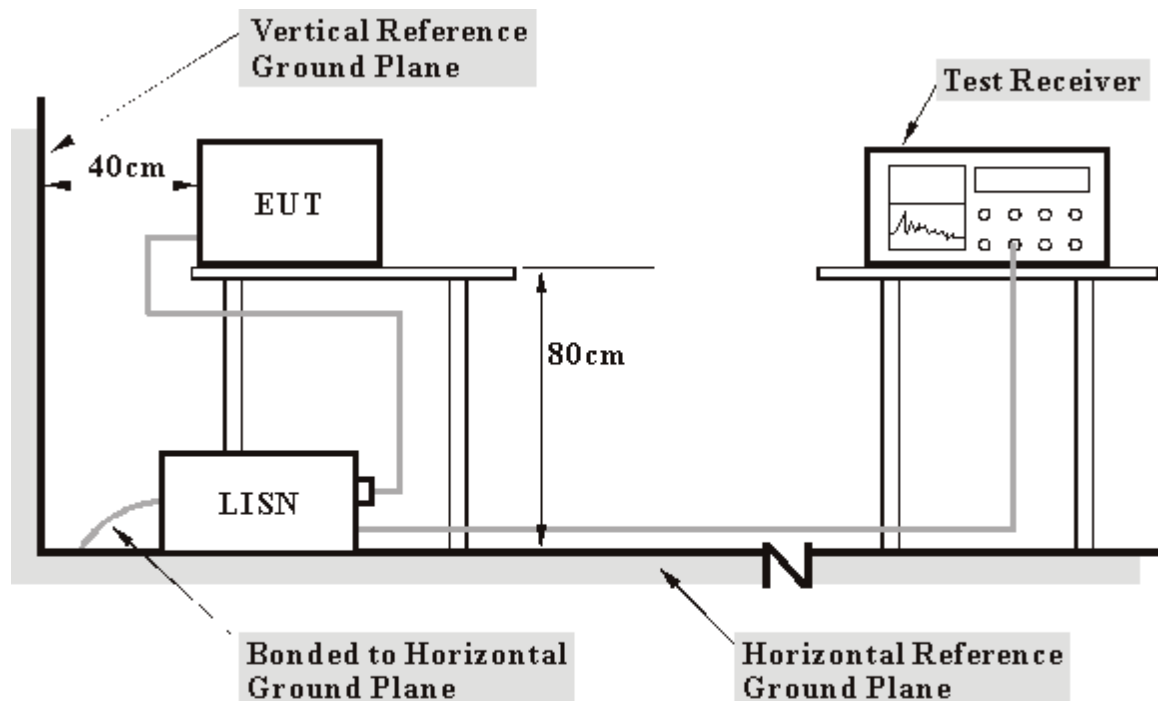
5.1.3 TEST PROCEDURES

- 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

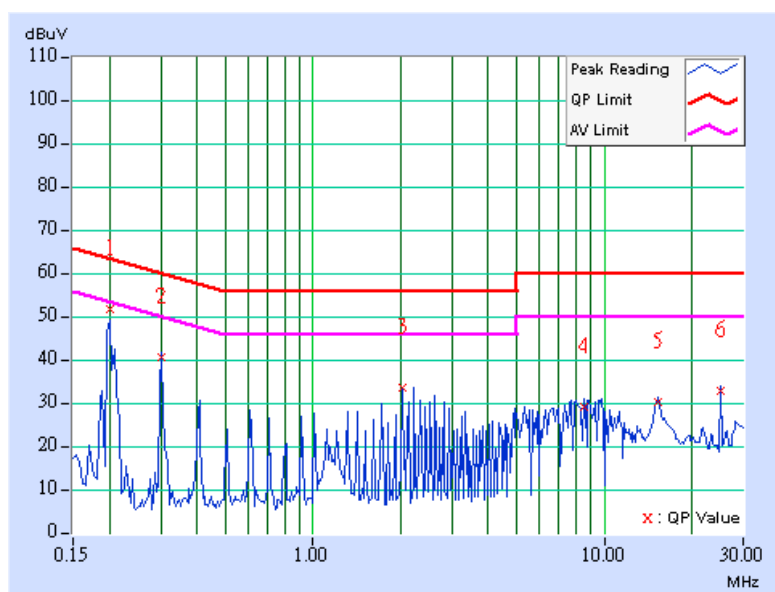
5.1.7 TEST RESULTS

Conducted Worst-Case Data

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	50.90	-	51.00	-	63.58	53.58	-12.58	-
2	0.302	0.11	40.03	-	40.14	-	60.18	50.18	-20.04	-
3	2.023	0.16	32.89	-	33.05	-	56.00	46.00	-22.95	-
4	8.500	0.31	28.48	-	28.79	-	60.00	50.00	-31.21	-
5	15.280	0.51	29.60	-	30.11	-	60.00	50.00	-29.89	-
6	25.000	0.86	32.23	-	33.09	-	60.00	50.00	-26.91	-

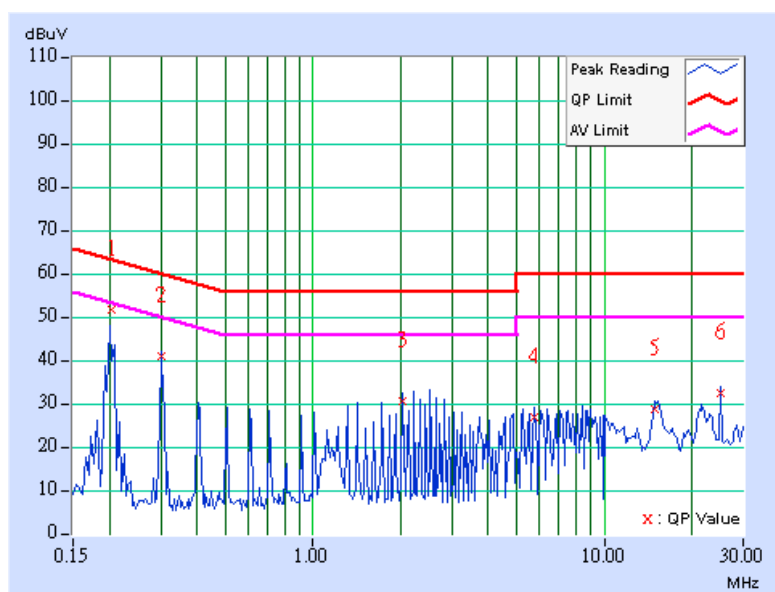
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.204	0.10	51.41	-	51.51	-	63.47	53.47	-11.96	-
2	0.302	0.11	40.70	-	40.81	-	60.18	50.18	-19.37	-
3	2.023	0.15	30.45	-	30.60	-	56.00	46.00	-25.40	-
4	5.773	0.25	26.47	-	26.72	-	60.00	50.00	-33.28	-
5	14.995	0.36	28.43	-	28.79	-	60.00	50.00	-31.21	-
6	25.000	0.40	32.29	-	32.69	-	60.00	50.00	-27.31	-

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

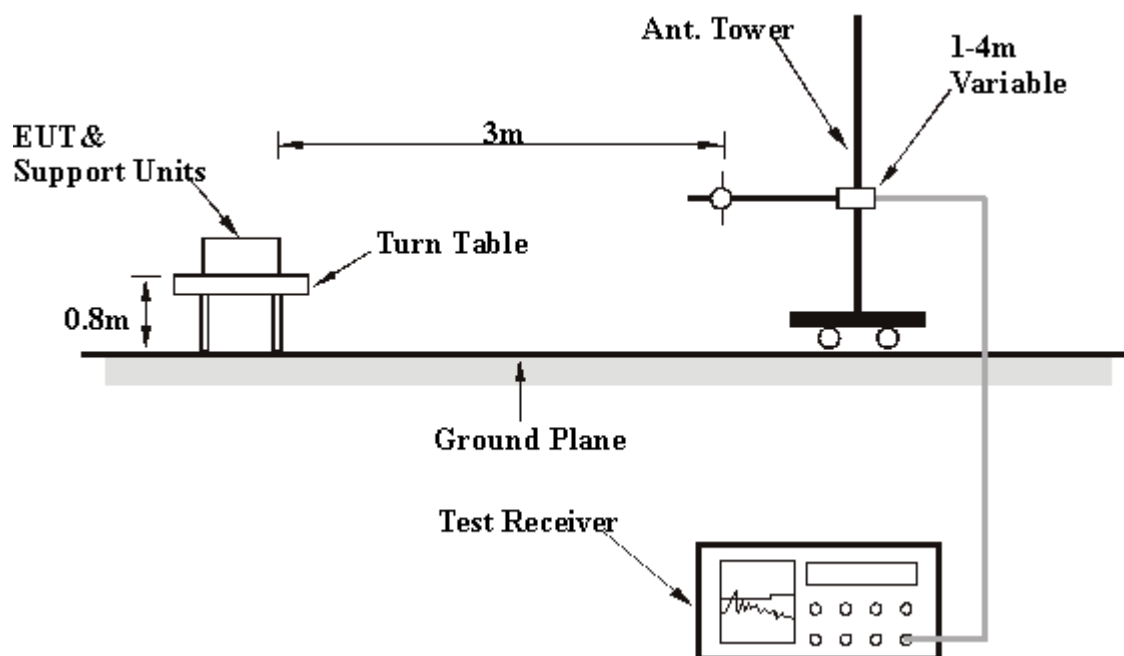
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

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 (Antenna combination 1)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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, 60%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	1 (Antenna combination 1)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	179.68	29.22 QP	43.50	-14.28	2.00 H	118	16.48	12.74
2	269.10	34.68 QP	46.00	-11.32	1.00 H	61	21.07	13.61
3	323.53	34.65 QP	46.00	-11.35	1.00 H	85	19.79	14.86
4	360.46	33.27 QP	46.00	-12.73	1.00 H	73	17.56	15.71
5	432.38	30.43 QP	46.00	-15.57	2.00 H	28	12.97	17.46
6	500.42	31.46 QP	46.00	-14.54	1.50 H	16	12.86	18.59
7	539.30	31.91 QP	46.00	-14.09	2.00 H	202	12.52	19.39
8	720.08	35.98 QP	46.00	-10.02	1.00 H	307	13.26	22.72
9	757.01	32.99 QP	46.00	-13.01	1.00 H	214	9.53	23.46
10	811.44	38.00 QP	46.00	-8.00	1.00 H	64	14.20	23.80
11	863.93	31.59 QP	46.00	-14.41	1.00 H	310	7.19	24.40
12	900.86	36.00 QP	46.00	-10.00	1.50 H	358	10.89	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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, 60%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	1 (Antenna combination 1)		

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	33.89	28.53 QP	40.00	-11.47	1.00 V	346	14.52	14.00
2	121.36	32.41 QP	43.50	-11.09	1.00 V	7	19.51	12.90
3	160.24	28.78 QP	43.50	-14.72	1.00 V	157	14.15	14.63
4	269.10	30.11 QP	46.00	-15.89	1.50 V	352	16.50	13.61
5	360.46	31.24 QP	46.00	-14.76	1.50 V	109	15.54	15.71
6	432.38	31.00 QP	46.00	-15.00	1.00 V	343	13.54	17.46
7	539.30	30.68 QP	46.00	-15.32	1.00 V	91	11.29	19.39
8	720.08	38.85 QP	46.00	-7.15	1.50 V	325	16.14	22.72
9	757.01	39.05 QP	46.00	-6.95	1.50 V	346	15.60	23.46
10	811.44	39.10 QP	46.00	-6.90	1.50 V	16	15.30	23.80
11	863.93	31.92 QP	46.00	-14.08	1.50 V	181	7.52	24.40
12	900.86	34.98 QP	46.00	-11.02	1.50 V	307	9.87	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 (Antenna combination 2)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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, 60%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	2 (Antenna combination 2)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	179.68	29.91 QP	43.50	-13.59	1.50 H	130	17.17	12.74
2	249.66	33.90 QP	46.00	-12.10	1.00 H	322	20.83	13.08
3	323.53	34.78 QP	46.00	-11.22	1.00 H	274	19.92	14.86
4	360.46	32.75 QP	46.00	-13.25	1.00 H	73	17.05	15.71
5	500.42	30.41 QP	46.00	-15.59	1.50 H	22	11.81	18.59
6	539.30	32.99 QP	46.00	-13.01	1.50 H	208	13.60	19.39
7	720.08	36.86 QP	46.00	-9.14	1.00 H	307	14.15	22.72
8	757.01	33.38 QP	46.00	-12.62	1.00 H	58	9.93	23.46
9	811.44	37.72 QP	46.00	-8.28	1.00 H	61	13.92	23.80
10	863.93	32.15 QP	46.00	-13.85	1.00 H	307	7.76	24.40
11	900.86	37.16 QP	46.00	-8.84	1.50 H	358	12.04	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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, 60%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	2 (Antenna combination 2)		

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	41.66	24.27 QP	40.00	-15.73	1.00 V	46	9.27	15.00
2	179.68	24.72 QP	43.50	-18.78	1.00 V	190	11.98	12.74
3	249.66	28.08 QP	46.00	-17.92	2.00 V	313	15.00	13.08
4	323.53	29.42 QP	46.00	-16.58	1.50 V	37	14.56	14.86
5	360.46	30.92 QP	46.00	-15.08	1.50 V	109	15.21	15.71
6	432.38	30.26 QP	46.00	-15.74	1.50 V	76	12.80	17.46
7	539.30	30.93 QP	46.00	-15.07	1.00 V	187	11.54	19.39
8	720.08	37.48 QP	46.00	-8.52	1.50 V	325	14.77	22.72
9	757.01	38.44 QP	46.00	-7.56	1.50 V	16	14.98	23.46
10	811.44	39.47 QP	46.00	-6.53	1.50 V	19	15.67	23.80
11	863.93	30.76 QP	46.00	-15.24	1.00 V	286	6.37	24.40
12	900.86	36.62 QP	46.00	-9.38	1.50 V	295	11.50	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 (Antenna combination 3)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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, 60%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	30.06 QP	43.50	-13.44	2.00 H	124	17.32	12.74
2	249.66	33.84 QP	46.00	-12.16	1.00 H	328	20.76	13.08
3	323.53	34.53 QP	46.00	-11.47	1.00 H	274	19.67	14.86
4	360.46	32.63 QP	46.00	-13.37	1.00 H	82	16.93	15.71
5	500.42	30.46 QP	46.00	-15.54	1.50 H	10	11.87	18.59
6	539.30	33.15 QP	46.00	-12.85	1.50 H	205	13.76	19.39
7	720.08	37.19 QP	46.00	-8.81	1.00 H	310	14.47	22.72
8	757.01	33.81 QP	46.00	-12.19	1.00 H	61	10.35	23.46
9	811.44	37.92 QP	46.00	-8.08	1.00 H	64	14.12	23.80
10	863.93	31.42 QP	46.00	-14.58	1.00 H	310	7.02	24.40
11	900.86	37.23 QP	46.00	-8.77	1.00 H	319	12.11	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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, 60%RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	41.66	23.98 QP	40.00	-16.02	1.00 V	55	8.98	15.00
2	179.68	24.50 QP	43.50	-19.00	1.00 V	178	11.76	12.74
3	269.10	28.25 QP	46.00	-17.75	1.00 V	352	14.64	13.61
4	360.46	31.23 QP	46.00	-14.77	1.50 V	100	15.53	15.71
5	432.38	30.09 QP	46.00	-15.91	1.50 V	85	12.63	17.46
6	539.30	31.54 QP	46.00	-14.46	1.00 V	166	12.15	19.39
7	720.08	37.85 QP	46.00	-8.15	1.50 V	322	15.14	22.72
8	757.01	38.63 QP	46.00	-7.37	1.50 V	352	15.17	23.46
9	811.44	39.21 QP	46.00	-6.79	1.50 V	10	15.41	23.80
10	900.86	36.67 QP	46.00	-9.33	1.00 V	280	11.55	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 (Antenna combination 4)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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, 62RH, 991hPa	TESTED BY	Match Tsui
TEST MODE	4 (Antenna combination 4)		

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	33.89	28.75 QP	40.00	-11.25	1.00 H	34	14.75	14.00
2	84.43	27.81 QP	40.00	-12.19	1.25 H	322	17.97	9.84
3	164.13	30.03 QP	43.50	-13.47	2.00 H	172	15.78	14.26
4	199.12	27.85 QP	43.50	-15.65	1.75 H	58	16.65	11.20
5	249.66	33.35 QP	46.00	-12.65	1.75 H	295	20.27	13.08
6	360.46	30.93 QP	46.00	-15.07	1.25 H	157	15.23	15.71
7	440.16	31.01 QP	46.00	-14.99	2.00 H	184	13.35	17.66
8	539.30	31.40 QP	46.00	-14.60	2.00 H	88	12.01	19.39
9	630.66	35.91 QP	46.00	-10.09	1.00 H	172	14.59	21.32
10	757.01	36.30 QP	46.00	-9.70	1.50 H	10	12.84	23.46
11	811.44	40.69 QP	46.00	-5.31	1.25 H	328	16.89	23.80
12	863.93	33.86 QP	46.00	-12.14	1.25 H	328	9.47	24.40
13	900.86	38.47 QP	46.00	-7.53	1.25 H	64	13.36	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	4 (Antenna combination 4)		

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	33.89	28.16 QP	40.00	-11.84	1.00 V	88	14.16	14.00
2	74.71	26.11 QP	40.00	-13.89	1.00 V	256	14.99	11.12
3	164.13	28.42 QP	43.50	-15.08	1.00 V	193	14.16	14.26
4	199.12	30.17 QP	43.50	-13.33	1.25 V	46	18.97	11.20
5	249.66	32.89 QP	46.00	-13.11	1.50 V	283	19.81	13.08
6	360.46	30.79 QP	46.00	-15.21	1.25 V	160	15.08	15.71
7	440.16	30.76 QP	46.00	-15.24	1.75 V	349	13.10	17.66
8	539.30	30.83 QP	46.00	-15.17	1.00 V	343	11.44	19.39
9	630.66	35.47 QP	46.00	-10.53	1.00 V	187	14.15	21.32
10	757.01	35.55 QP	46.00	-10.45	1.50 V	10	12.09	23.46
11	811.44	40.26 QP	46.00	-5.74	1.25 V	328	16.47	23.80
12	863.93	33.79 QP	46.00	-12.21	1.25 V	322	9.39	24.40
13	900.86	37.92 QP	46.00	-8.08	1.25 V	91	12.81	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 (Antenna combination 1)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	1 (Antenna combination 1)		

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	47.98 PK	74.00	-26.02	1.18 H	250	21.20	26.78
1	#1080.00	44.59 AV	54.00	-9.41	1.18 H	250	17.81	26.78
2	#3830.00	46.38 PK	74.00	-27.62	1.30 H	100	12.43	33.95
2	#3830.00	37.50 AV	54.00	-16.50	1.30 H	100	3.55	33.95
3	*5745.00	103.85 PK			1.10 H	310	65.79	38.06
3	*5745.00	93.59 AV			1.10 H	310	55.53	38.06
4	#11490.00	56.80 PK	74.00	-17.20	1.10 H	300	9.57	47.23
4	#11490.00	43.20 AV	54.00	-10.80	1.10 H	300	-4.03	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	49.65 PK	74.00	-24.35	1.08 V	300	22.87	26.78
1	#1080.00	45.57 AV	54.00	-8.43	1.08 V	300	18.79	26.78
2	#3830.00	48.50 PK	74.00	-25.50	1.15 V	130	14.55	33.95
2	#3830.00	41.30 AV	54.00	-12.70	1.15 V	130	7.35	33.95
3	*5745.00	115.20 PK			1.08 V	350	77.14	38.06
3	*5745.00	105.48 AV			1.08 V	350	67.42	38.06
4	#11490.00	57.56 PK	74.00	-16.44	1.07 V	300	10.33	47.23
4	#11490.00	44.29 AV	54.00	-9.71	1.07 V	300	-2.94	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	1 (Antenna combination 1)		

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	47.60 PK	74.00	-26.40	1.20 H	120	20.82	26.78
1	#1080.00	45.68 AV	54.00	-8.32	1.20 H	120	18.90	26.78
2	#3856.00	47.38 PK	74.00	-26.62	1.28 H	100	13.35	34.03
2	#3856.00	37.19 AV	54.00	-16.81	1.28 H	100	3.16	34.03
3	*5785.00	104.20 PK			1.25 H	100	66.05	38.15
3	*5785.00	95.36 AV			1.25 H	100	57.21	38.15
4	#11570.00	56.14 PK	74.00	-17.86	1.10 H	260	9.02	47.12
4	#11570.00	43.29 AV	54.00	-10.71	1.10 H	260	-3.83	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	47.10 PK	74.00	-26.90	1.08 V	100	20.32	26.78
1	#1080.00	44.20 AV	54.00	-9.80	1.08 V	100	17.42	26.78
2	#3856.00	49.10 PK	74.00	-24.90	1.06 V	120	15.07	34.03
2	#3856.00	43.20 AV	54.00	-10.80	1.06 V	120	9.17	34.03
3	*5785.00	115.14 PK			1.12 V	310	76.99	38.15
3	*5785.00	103.80 AV			1.12 V	310	65.65	38.15
4	#11570.00	58.60 PK	74.00	-15.40	1.11 V	312	11.48	47.12
4	#11570.00	44.50 AV	54.00	-9.50	1.11 V	312	-2.62	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	1 (Antenna combination 1)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#1080.00	48.52 PK	74.00	-25.48	1.15 H	300	21.74	26.78
1	#1080.00	45.26 AV	54.00	-8.74	1.15 H	300	18.48	26.78
2	#3883.00	47.29 PK	74.00	-26.71	1.18 H	200	13.17	34.12
2	#3883.00	37.40 AV	54.00	-16.60	1.18 H	200	3.28	34.12
3	*5825.00	103.26 PK			1.20 H	300	65.05	38.21
3	*5825.00	93.56 AV			1.20 H	300	55.35	38.21
4	#11650.00	57.15 PK	74.00	-16.85	1.20 H	110	10.05	47.10
4	#11650.00	43.50 AV	54.00	-10.50	1.20 H	110	-3.60	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	47.15 PK	74.00	-26.85	1.02 V	120	20.37	26.78
1	#1080.00	45.80 AV	54.00	-8.20	1.02 V	120	19.02	26.78
2	#3883.00	47.56 PK	74.00	-26.44	1.01 V	350	13.44	34.12
2	#3883.00	40.25 AV	54.00	-13.75	1.01 V	350	6.13	34.12
3	*5825.00	112.60 PK			1.41 V	12	74.39	38.21
3	*5825.00	101.70 AV			1.41 V	12	63.49	38.21
4	#11650.00	60.21 PK	74.00	-13.79	1.23 V	130	13.11	47.10
4	#11650.00	45.34 AV	54.00	-8.66	1.23 V	130	-1.76	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 (Antenna combination 2)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	2 (Antenna combination 2)		

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	45.20 PK	74.00	-28.80	1.28 H	210	18.42	26.78
1	#1080.00	42.93 AV	54.00	-11.07	1.28 H	210	16.15	26.78
2	#3830.00	45.00 PK	74.00	-29.00	1.20 H	180	11.05	33.95
2	#3830.00	35.79 AV	54.00	-18.21	1.20 H	180	1.84	33.95
3	*5745.00	101.85 PK			1.10 H	285	63.79	38.06
3	*5745.00	91.59 AV			1.10 H	285	53.53	38.06
4	#11490.00	54.68 PK	74.00	-19.32	1.11 H	214	7.45	47.23
4	#11490.00	41.62 AV	54.00	-12.38	1.11 H	214	-5.61	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	48.11 PK	74.00	-25.89	1.07 V	301	21.33	26.78
1	#1080.00	44.20 AV	54.00	-9.80	1.07 V	301	17.42	26.78
2	#3830.00	47.26 PK	74.00	-26.74	1.14 V	200	13.31	33.95
2	#3830.00	40.23 AV	54.00	-13.77	1.14 V	200	6.28	33.95
3	*5745.00	113.75 PK			1.04 V	325	75.69	38.06
3	*5745.00	103.12 AV			1.04 V	325	65.06	38.06
4	#11490.00	55.68 PK	74.00	-18.32	1.07 V	350	8.45	47.23
4	#11490.00	42.74 AV	54.00	-11.26	1.07 V	350	-4.49	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	2 (Antenna combination 2)		

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	45.81 PK	74.00	-28.19	1.21 H	260	19.03	26.78
1	#1080.00	44.12 AV	54.00	-9.88	1.21 H	260	17.34	26.78
2	#3856.00	45.68 PK	74.00	-28.32	1.25 H	263	11.65	34.03
2	#3856.00	36.23 AV	54.00	-17.77	1.25 H	263	2.20	34.03
3	*5785.00	101.89 PK			1.35 H	280	63.74	38.15
3	*5785.00	92.82 AV			1.35 H	280	54.67	38.15
4	#11570.00	55.90 PK	74.00	-18.10	1.01 H	350	8.78	47.12
4	#11570.00	42.23 AV	54.00	-11.77	1.01 H	350	-4.89	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	44.70 PK	74.00	-29.30	1.10 V	293	17.92	26.78
1	#1080.00	41.60 AV	54.00	-12.40	1.10 V	293	14.82	26.78
2	#3856.00	47.24 PK	74.00	-26.76	1.07 V	260	13.21	34.03
2	#3856.00	40.75 AV	54.00	-13.25	1.07 V	260	6.72	34.03
3	*5785.00	113.80 PK			1.10 V	286	75.65	38.15
3	*5785.00	101.76 AV			1.10 V	286	63.61	38.15
4	#11570.00	56.80 PK	74.00	-17.20	1.19 V	270	9.68	47.12
4	#11570.00	42.60 AV	54.00	-11.40	1.19 V	270	-4.52	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	2 (Antenna combination 2)		

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	46.74 PK	74.00	-27.26	1.21 H	325	19.96	26.78
1	#1080.00	44.12 AV	54.00	-9.88	1.21 H	325	17.34	26.78
2	#3883.00	45.68 PK	74.00	-28.32	1.20 H	120	11.56	34.12
2	#3883.00	35.49 AV	54.00	-18.51	1.20 H	120	1.37	34.12
3	*5825.00	101.82 PK			1.21 H	320	63.61	38.21
3	*5825.00	91.89 AV			1.21 H	320	53.68	38.21
4	#11650.00	55.54 PK	74.00	-18.46	1.20 H	160	8.44	47.10
4	#11650.00	41.83 AV	54.00	-12.17	1.20 H	160	-5.27	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	47.51 PK	74.00	-26.49	1.00 V	269	20.73	26.78
1	#1080.00	46.12 AV	54.00	-7.88	1.00 V	269	19.34	26.78
2	#3883.00	47.90 PK	74.00	-26.10	1.05 V	333	13.78	34.12
2	#3883.00	40.58 AV	54.00	-13.42	1.05 V	333	6.46	34.12
3	*5825.00	112.91 PK			1.38 V	300	74.70	38.21
3	*5825.00	102.08 AV			1.38 V	300	63.87	38.21
4	#11650.00	60.58 PK	74.00	-13.42	1.20 V	123	13.48	47.10
4	#11650.00	45.81 AV	54.00	-8.19	1.20 V	123	-1.29	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 (Antenna combination 3)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	44.83 PK	74.00	-29.17	1.20 H	250	18.05	26.78
1	#1080.00	42.64 AV	54.00	-11.36	1.20 H	250	15.86	26.78
2	#3830.00	44.50 PK	74.00	-29.50	1.24 H	1	10.55	33.95
2	#3830.00	35.46 AV	54.00	-18.54	1.24 H	1	1.51	33.95
3	*5745.00	101.08 PK			1.07 H	300	63.02	38.06
3	*5745.00	91.05 AV			1.07 H	300	52.99	38.06
4	#11490.00	54.10 PK	74.00	-19.90	1.14 H	250	6.87	47.23
4	#11490.00	41.10 AV	54.00	-12.90	1.14 H	250	-6.13	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	47.45 PK	74.00	-26.55	1.11 V	321	20.67	26.78
1	#1080.00	43.32 AV	54.00	-10.68	1.11 V	321	16.54	26.78
2	#3830.00	46.06 PK	74.00	-27.94	1.18 V	129	12.12	33.95
2	#3830.00	39.20 AV	54.00	-14.80	1.18 V	129	5.26	33.95
3	*5745.00	113.08 PK			1.05 V	360	75.02	38.06
3	*5745.00	102.87 AV			1.05 V	360	64.81	38.06
4	#11490.00	55.37 PK	74.00	-18.63	1.06 V	4	8.14	47.23
4	#11490.00	42.14 AV	54.00	-11.86	1.06 V	4	-5.09	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	45.32 PK	74.00	-28.68	1.27 H	100	18.54	26.78
1	#1080.00	43.56 AV	54.00	-10.44	1.27 H	100	16.78	26.78
2	#3856.00	45.12 PK	74.00	-28.88	1.32 H	40	11.09	34.03
2	#3856.00	35.89 AV	54.00	-18.11	1.32 H	40	1.86	34.03
3	*5785.00	101.53 PK			1.42 H	300	63.38	38.15
3	*5785.00	92.30 AV			1.42 H	300	54.15	38.15
4	#11570.00	55.40 PK	74.00	-18.60	1.09 H	360	8.28	47.12
4	#11570.00	41.80 AV	54.00	-12.20	1.09 H	360	-5.32	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	44.21 PK	74.00	-29.79	1.12 V	350	17.43	26.78
1	#1080.00	41.08 AV	54.00	-12.92	1.12 V	350	14.30	26.78
2	#3856.00	46.85 PK	74.00	-27.15	1.04 V	350	12.82	34.03
2	#3856.00	40.25 AV	54.00	-13.75	1.04 V	350	6.22	34.03
3	*5785.00	113.20 PK			1.11 V	300	75.05	38.15
3	*5785.00	101.25 AV			1.11 V	300	63.10	38.15
4	#11570.00	56.10 PK	74.00	-17.90	1.20 V	250	8.98	47.12
4	#11570.00	42.15 AV	54.00	-11.85	1.20 V	250	-4.97	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	3 (Antenna combination 3)		

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	46.38 PK	74.00	-27.62	1.20 H	350	19.60	26.78
1	#1080.00	43.79 AV	54.00	-10.21	1.20 H	350	17.01	26.78
2	#3883.00	45.20 PK	74.00	-28.80	1.22 H	160	11.08	34.12
2	#3883.00	35.10 AV	54.00	-18.90	1.22 H	160	0.98	34.12
3	*5825.00	101.40 PK			1.24 H	250	63.19	38.21
3	*5825.00	91.56 AV			1.24 H	250	53.35	38.21
4	#11650.00	55.10 PK	74.00	-18.90	1.18 H	120	8.00	47.10
4	#11650.00	41.40 AV	54.00	-12.60	1.18 H	120	-5.70	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	47.15 PK	74.00	-26.85	1.02 V	120	20.37	26.78
1	#1080.00	45.80 AV	54.00	-8.20	1.02 V	120	19.02	26.78
2	#3883.00	47.56 PK	74.00	-26.44	1.01 V	350	13.44	34.12
2	#3883.00	40.25 AV	54.00	-13.75	1.01 V	350	6.13	34.12
3	*5825.00	112.60 PK			1.41 V	12	74.39	38.21
3	*5825.00	101.70 AV			1.41 V	12	63.49	38.21
4	#11650.00	60.21 PK	74.00	-13.79	1.23 V	130	13.11	47.10
4	#11650.00	45.34 AV	54.00	-8.66	1.23 V	130	-1.76	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 (Antenna combination 4)

EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	4 (Antenna combination 4)		

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	52.75 PK	74.00	-21.25	1.00 H	42	24.81	27.95
1	#1440.00	50.49 AV	54.00	-3.51	1.00 H	42	22.55	27.95
2	*5745.00	101.89 PK			1.00 H	312	63.83	38.06
2	*5745.00	92.19 AV			1.00 H	312	54.13	38.06
3	#11490.00	55.27 PK	74.00	-18.73	1.02 H	153	8.04	47.23
3	#11490.00	42.38 AV	54.00	-11.62	1.02 H	153	-4.85	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	#1440.00	53.69 PK	74.00	-20.31	1.00 V	101	25.75	27.95
1	#1440.00	52.48 AV	54.00	-1.52	1.00 V	101	24.54	27.95
2	#3830.00	46.48 PK	74.00	-27.52	1.17 V	326	12.54	33.95
2	#3830.00	40.07 AV	54.00	-13.93	1.17 V	326	6.13	33.95
3	*5745.00	114.53 PK			1.00 V	4	76.47	38.06
3	*5745.00	104.25 AV			1.00 V	4	66.19	38.06
4	#11490.00	55.28 PK	74.00	-18.72	1.30 V	360	8.05	47.23
4	#11490.00	42.23 AV	54.00	-11.77	1.30 V	360	-5.00	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	4 (Antenna combination 4)		

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	52.35 PK	74.00	-21.65	1.04 H	100	24.40	27.95
1	#1440.00	51.29 AV	54.00	-2.71	1.04 H	100	23.34	27.95
2	*5785.00	102.40 PK			1.02 H	310	64.25	38.15
2	*5785.00	92.60 AV			1.02 H	310	54.45	38.15
3	#11570.00	55.10 PK	74.00	-18.90	1.02 H	160	7.98	47.12
3	#11570.00	42.18 AV	54.00	-11.82	1.02 H	160	-4.94	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	#1440.00	56.72 PK	74.00	-17.28	1.15 V	275	28.78	27.95
1	#1440.00	52.93 AV	54.00	-1.07	1.15 V	275	24.99	27.95
2	#3856.00	44.99 PK	74.00	-29.01	1.14 V	360	10.95	34.03
2	#3856.00	37.50 AV	54.00	-16.50	1.14 V	360	3.46	34.03
3	*5785.00	113.56 PK			1.13 V	328	75.41	38.15
3	*5785.00	102.81 AV			1.13 V	328	64.66	38.15
4	#11570.00	56.19 PK	74.00	-17.81	1.05 V	153	9.07	47.12
4	#11570.00	43.45 AV	54.00	-10.55	1.05 V	153	-3.67	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-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
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	TESTED BY	Match Tsui
TEST MODE	4 (Antenna combination 4)		

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	52.41 PK	74.00	-21.59	1.07 H	106	24.46	27.95
1	#1440.00	50.89 AV	54.00	-3.11	1.07 H	106	22.94	27.95
2	*5825.00	102.54 PK			1.36 H	315	64.32	38.21
2	*5825.00	92.59 AV			1.36 H	315	54.37	38.21
3	#11650.00	54.80 PK	74.00	-19.20	1.04 H	186	7.70	47.10
3	#11650.00	42.29 AV	54.00	-11.71	1.04 H	186	-4.81	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	#1440.00	56.95 PK	74.00	-17.05	1.14 V	286	29.00	27.95
1	#1440.00	52.95 AV	54.00	-1.05	1.14 V	286	25.00	27.95
2	#3883.00	45.85 PK	74.00	-28.15	1.15 V	323	11.73	34.12
2	#3883.00	40.28 AV	54.00	-13.72	1.15 V	323	6.16	34.12
3	*5825.00	113.59 PK			1.09 V	360	75.37	38.21
3	*5825.00	103.07 AV			1.09 V	360	64.85	38.21
4	#11650.00	55.51 PK	74.00	-18.49	1.11 V	260	8.41	47.10
4	#11650.00	43.18 AV	54.00	-10.82	1.11 V	260	-3.92	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

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.

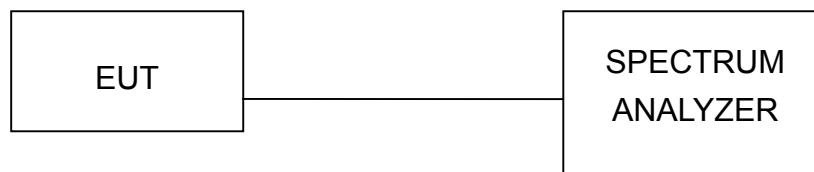
5.3.3 TEST PROCEDURE

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.

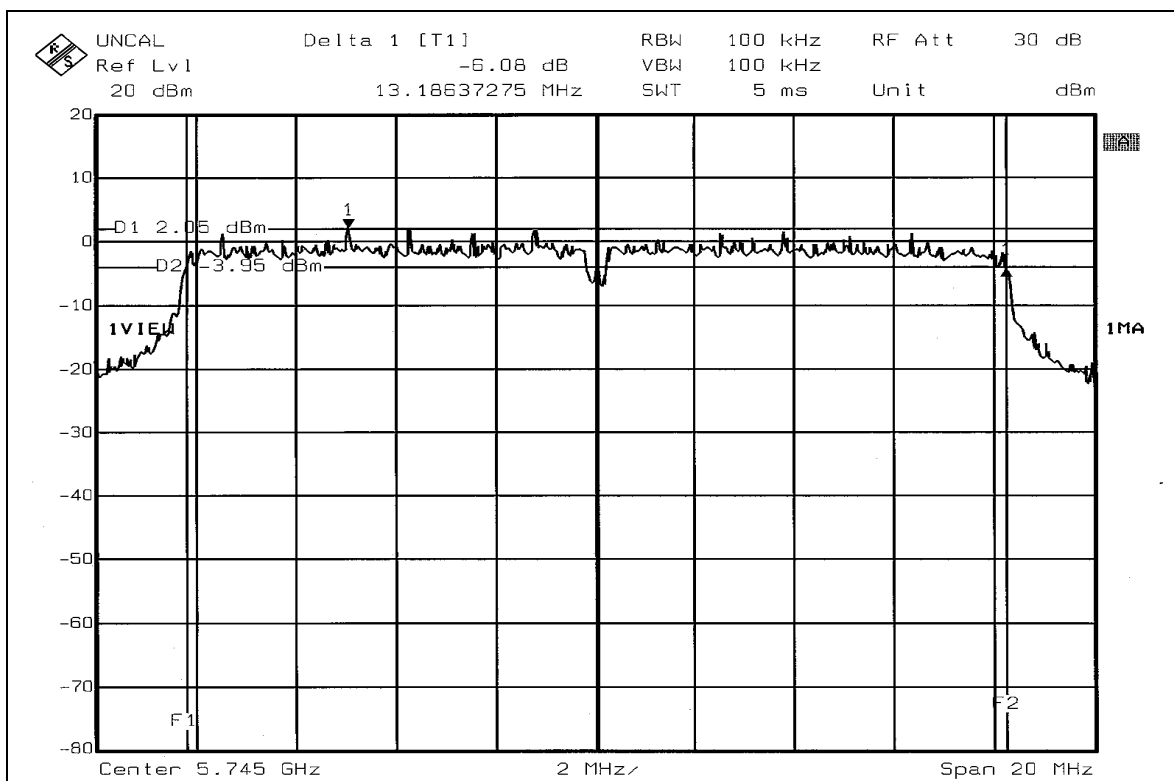
5.3.7 TEST RESULTS

802.11a OFDM modulation

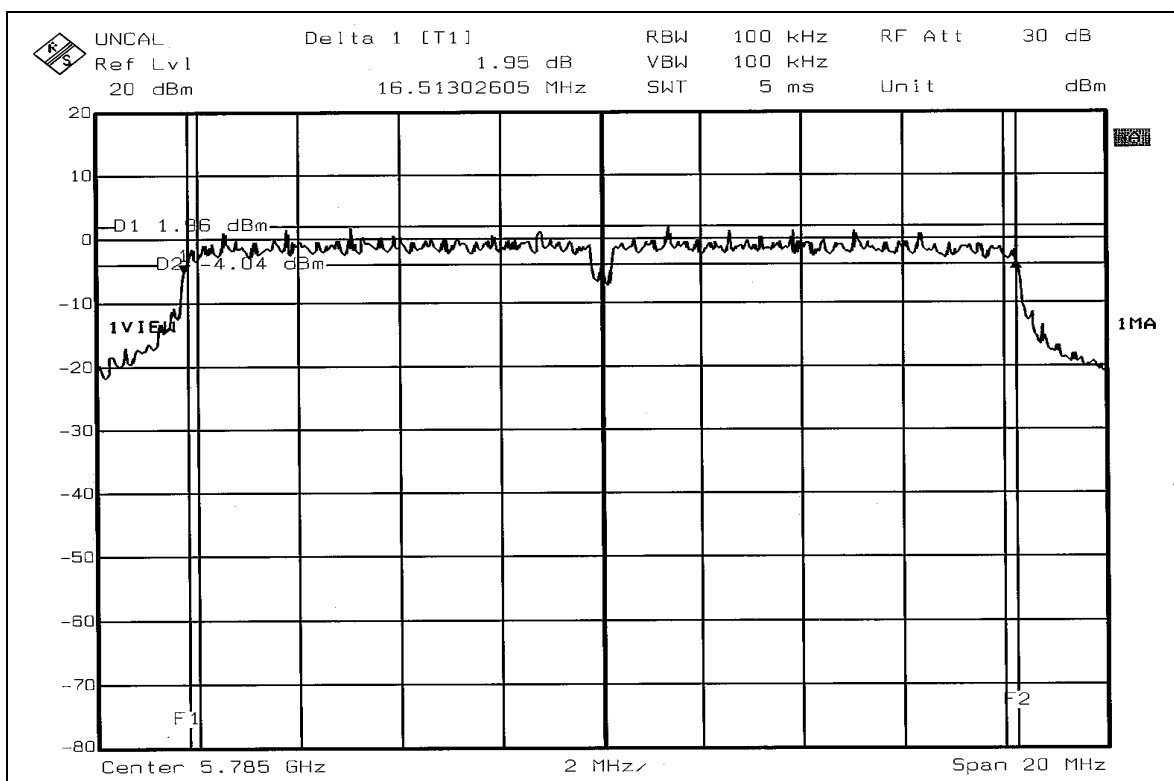
EUT	WVM1104-Tx (Wireless Video Module-Transmitter)	MODEL	WVM1104-Tx
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 52%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	5745	13.19	0.5	PASS
3	5785	16.51	0.5	PASS
5	5825	16.47	0.5	PASS

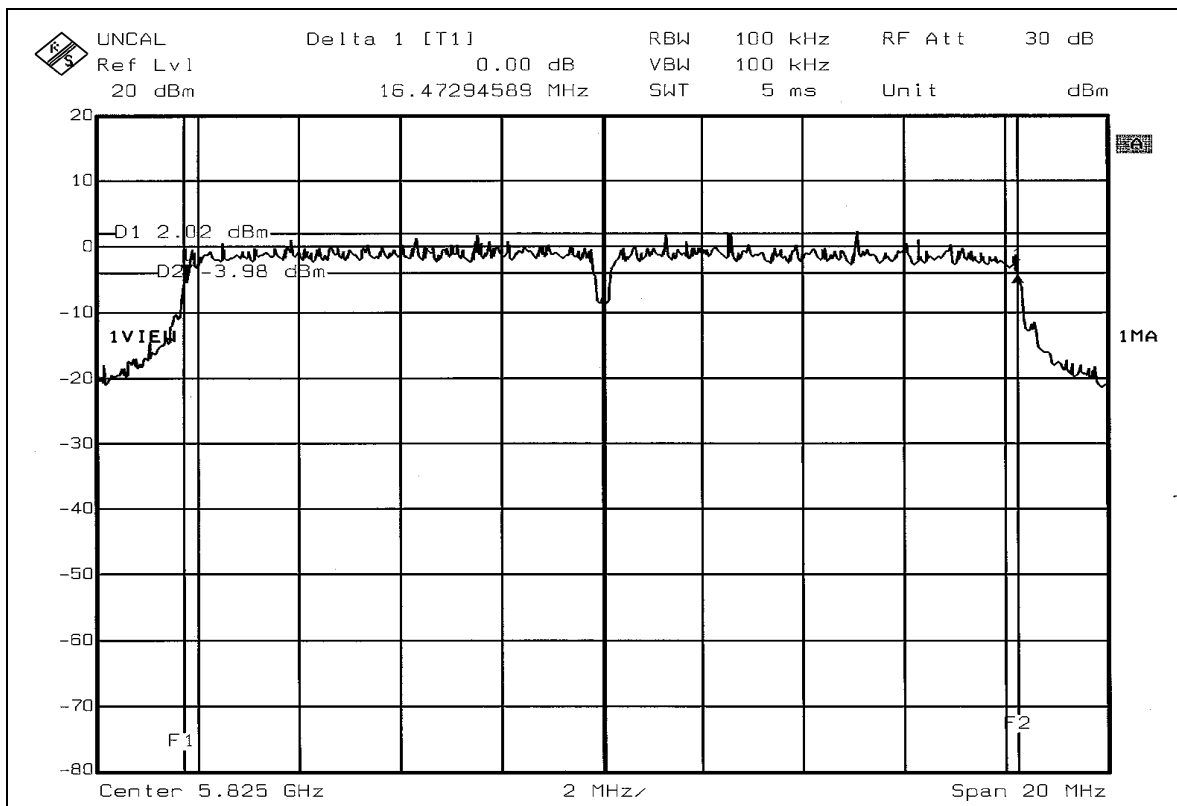
CH 1



CH 3



CH 5



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. 31, 2005
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2006
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 5.9.6

5.4.7 TEST RESULTS

802.11a OFDM modulation

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

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	5745	50.699	17.05	30	PASS
3	5785	51.168	17.09	30	PASS
5	5825	50.582	17.04	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

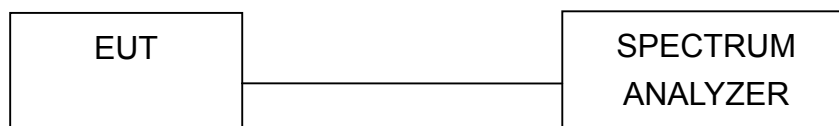
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

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 5.9.6

5.5.7 TEST RESULTS

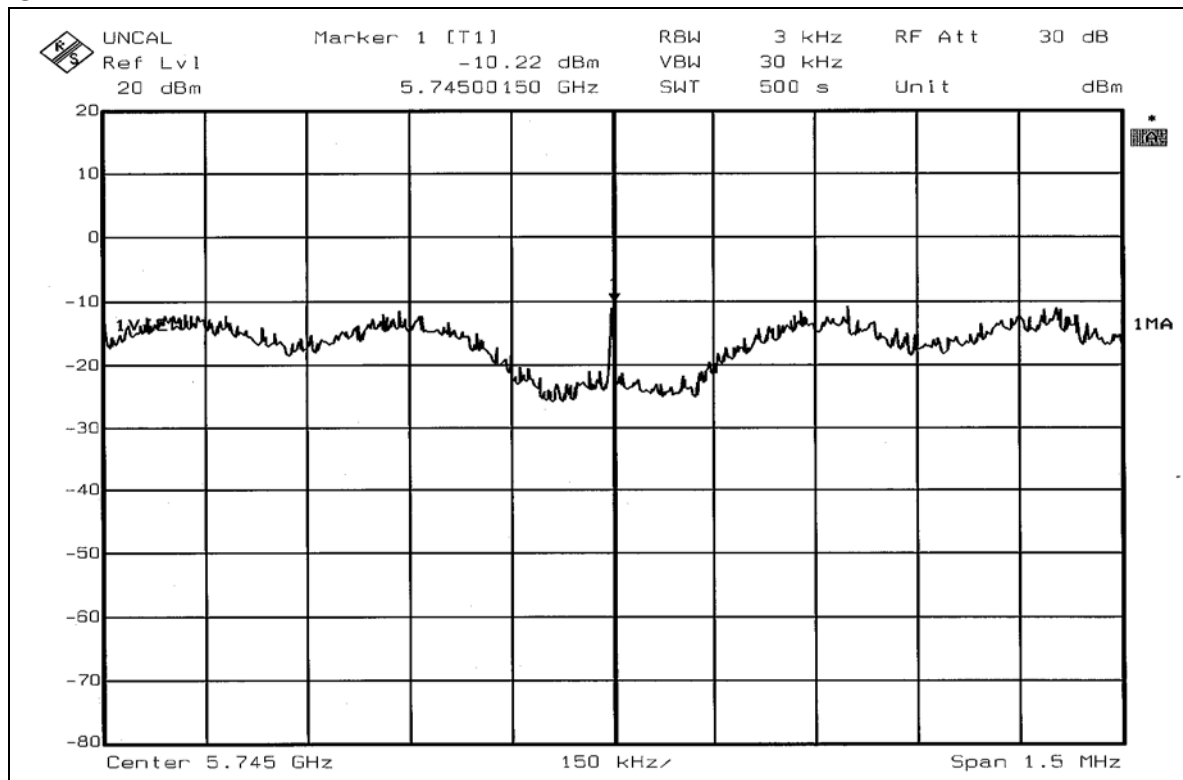
802.11a OFDM modulation

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

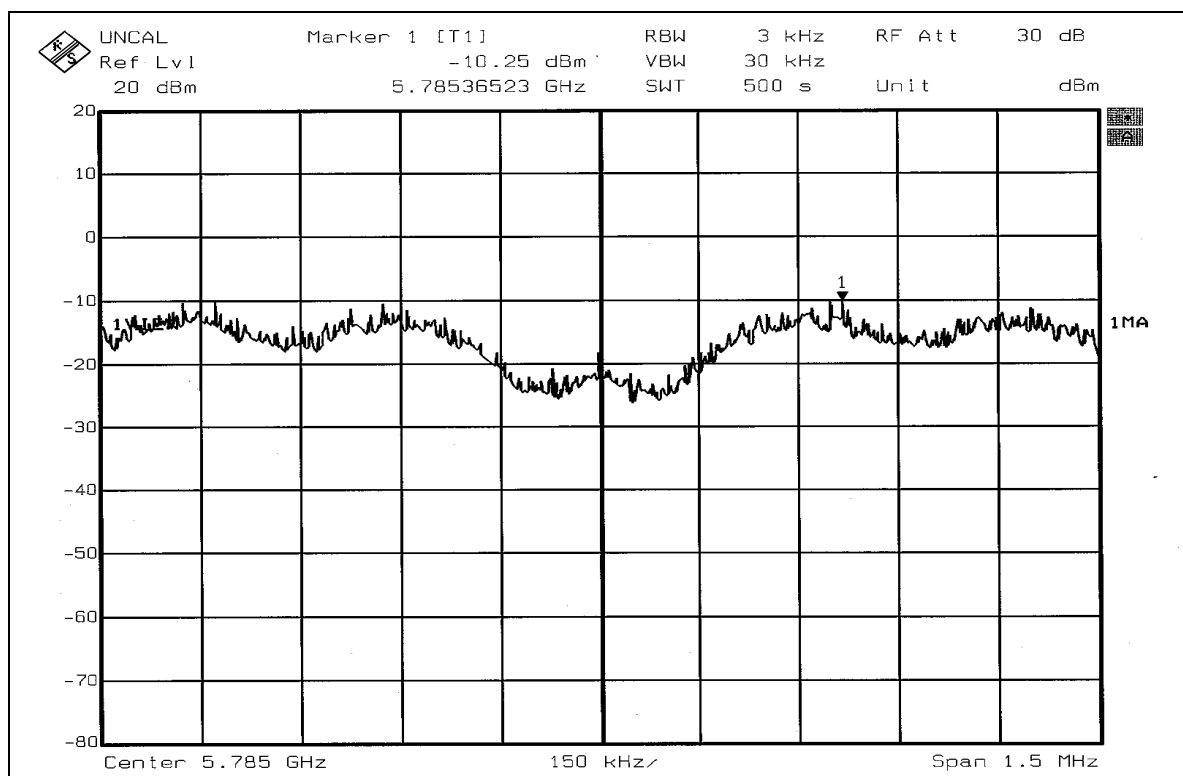
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5745	-10.22	8	PASS
3	5785	-10.25	8	PASS
5	5825	-10.72	8	PASS



CH 1

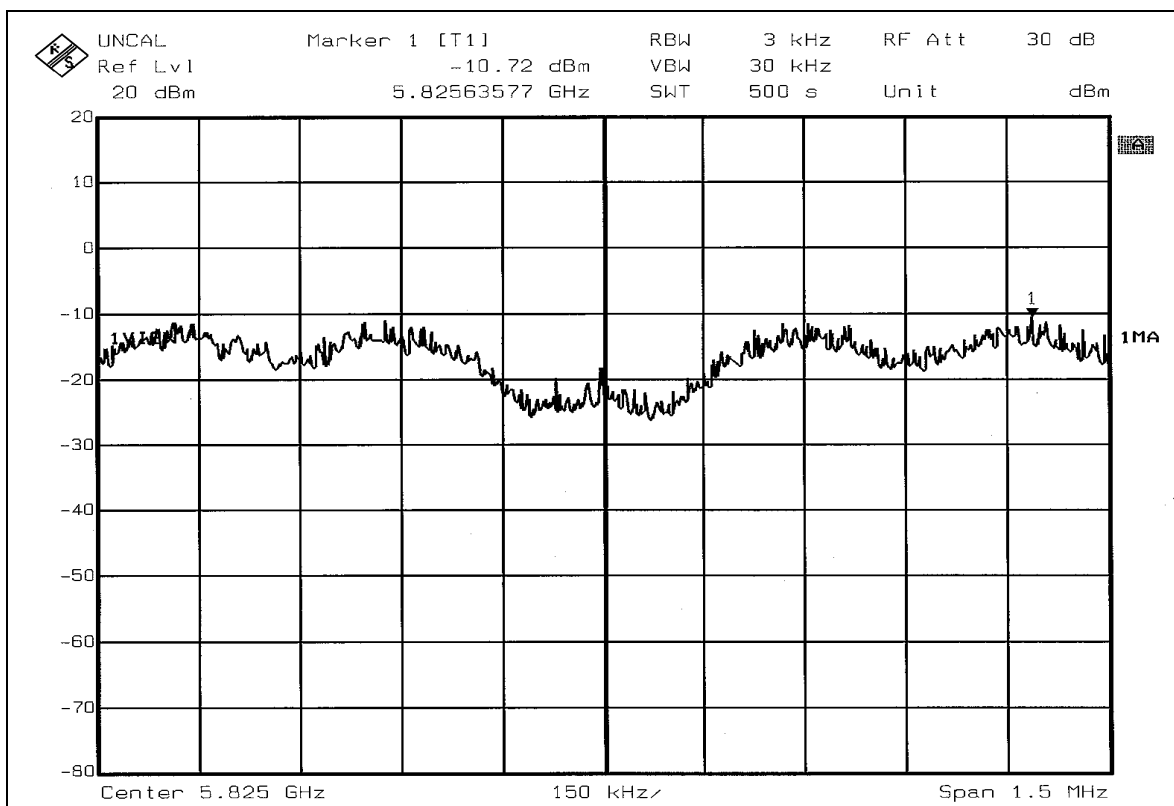


CH 3





CH 5



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

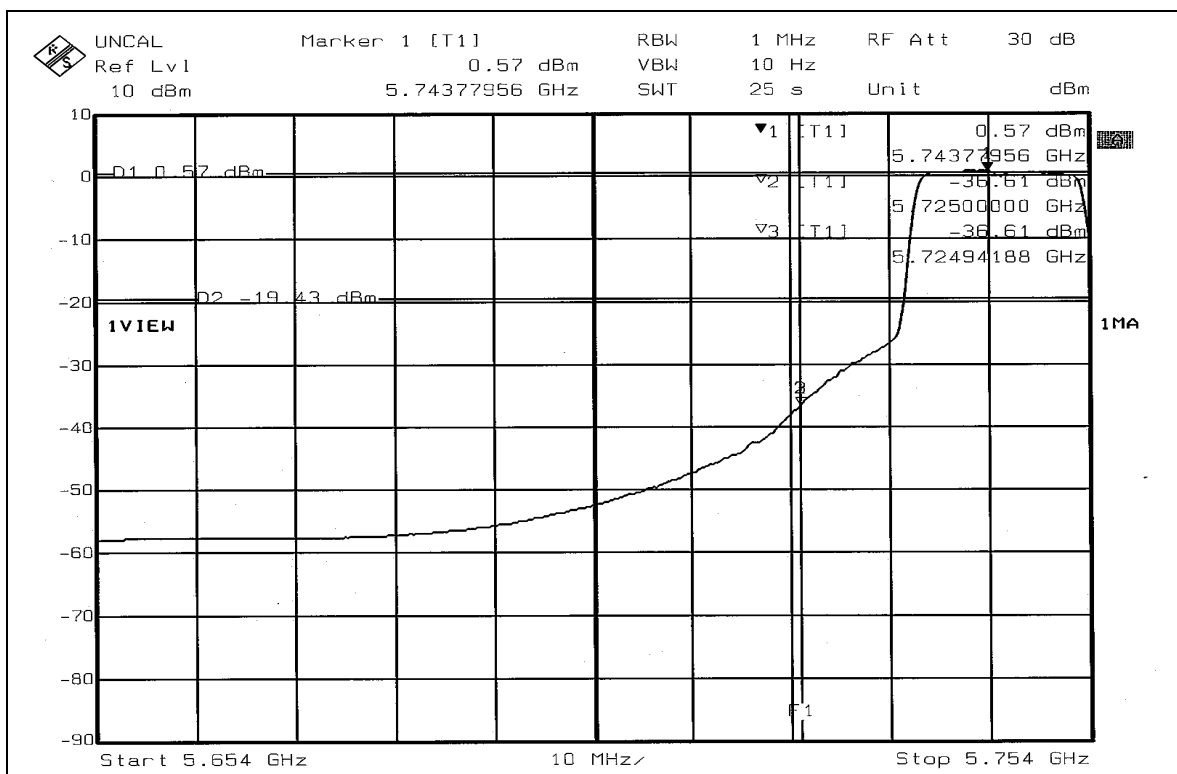
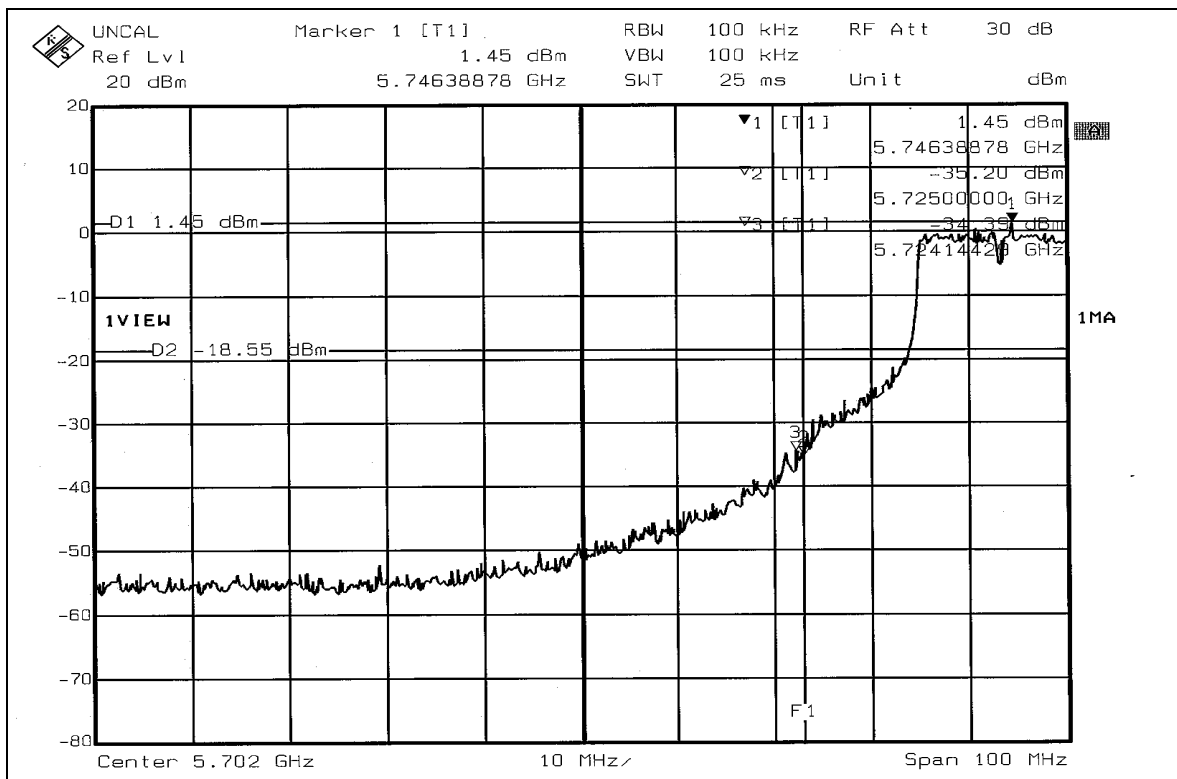


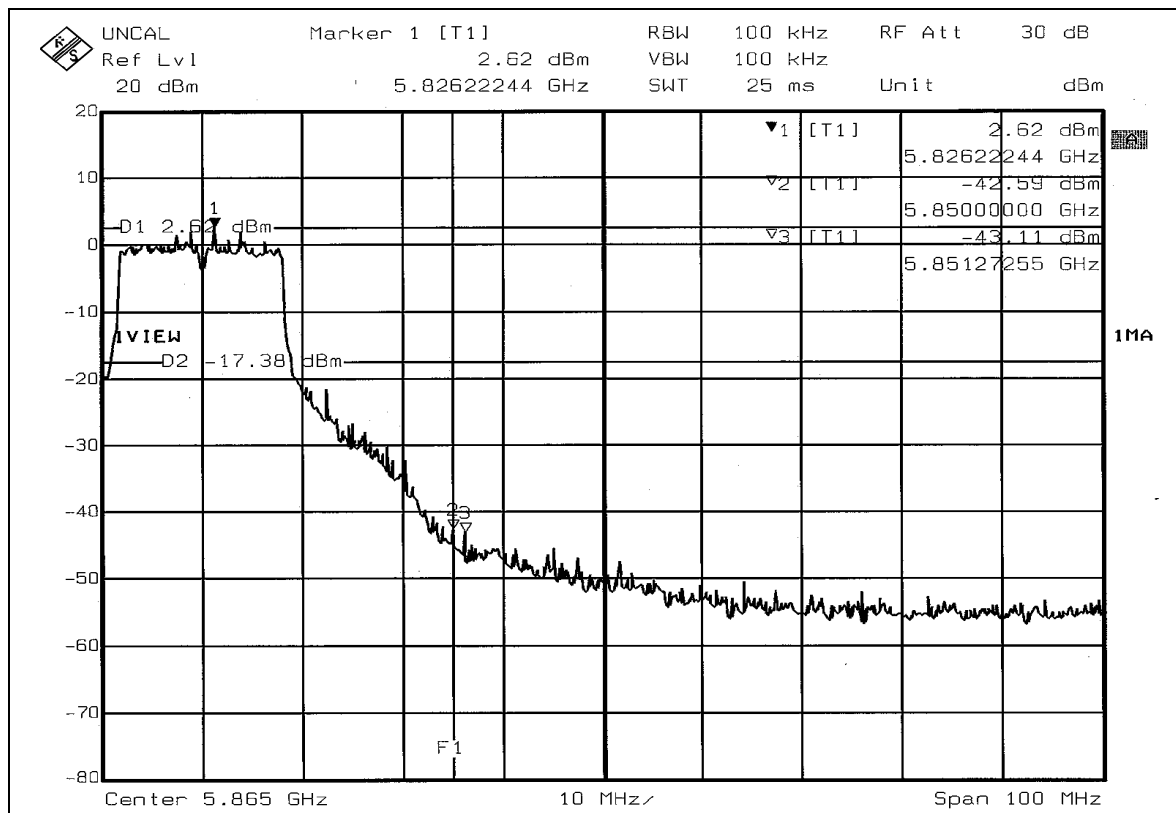
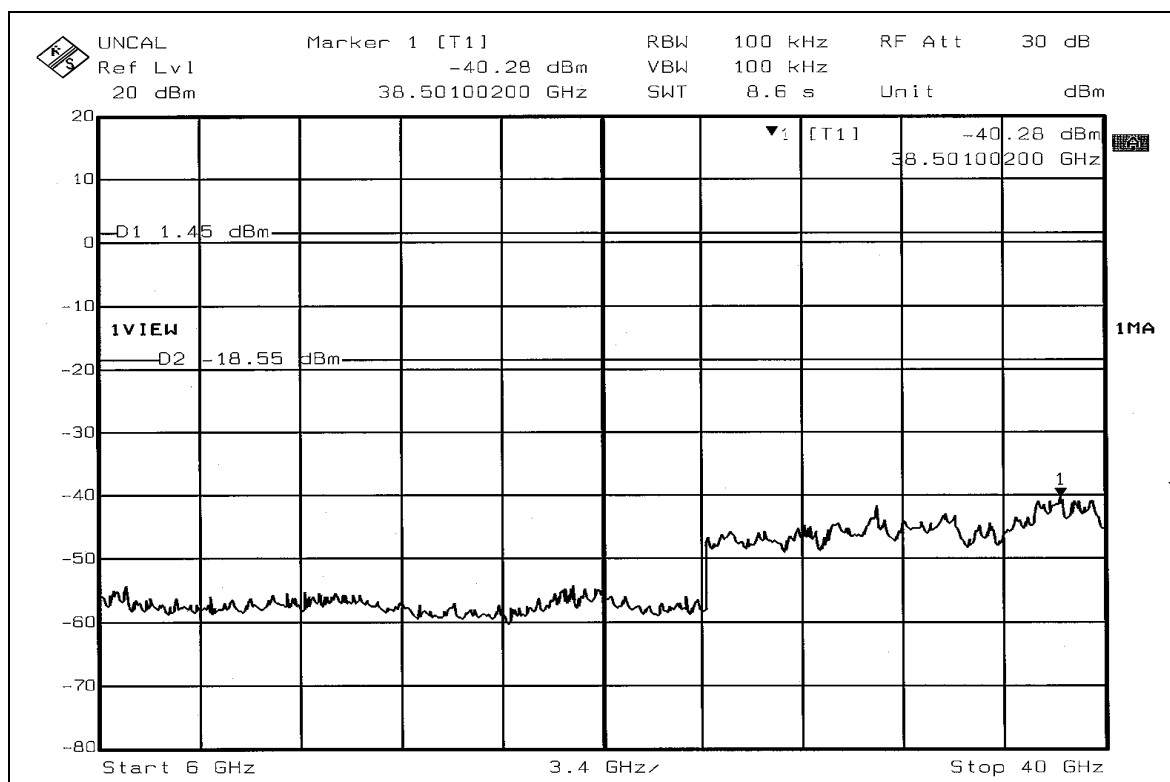
5.6.5 EUT OPERATING CONDITION

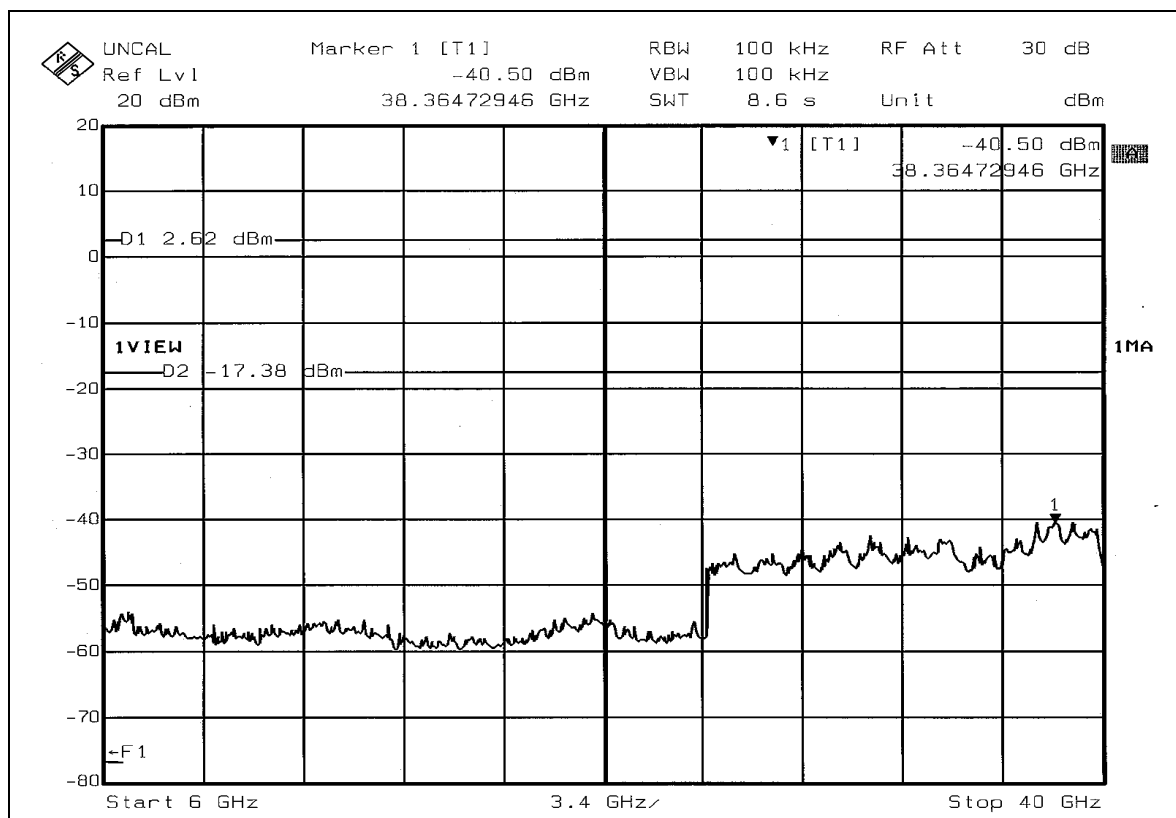
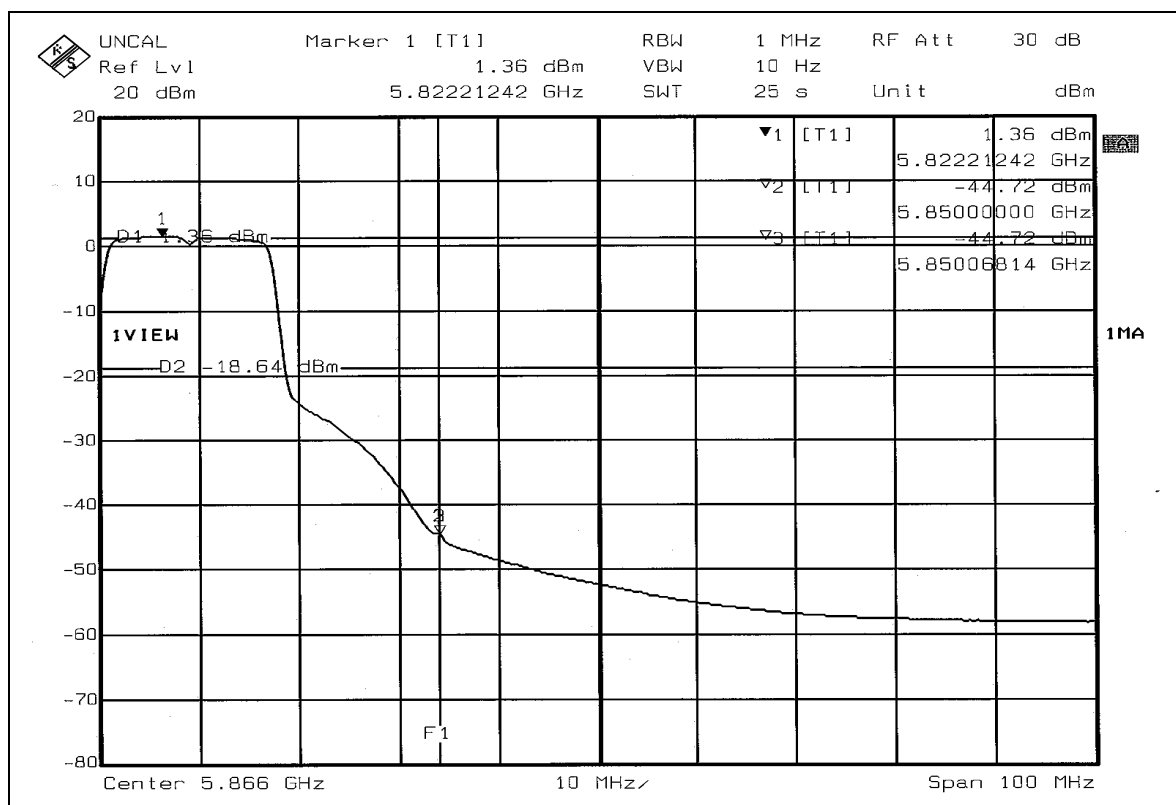
Same as Item 5.9.6

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**







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.

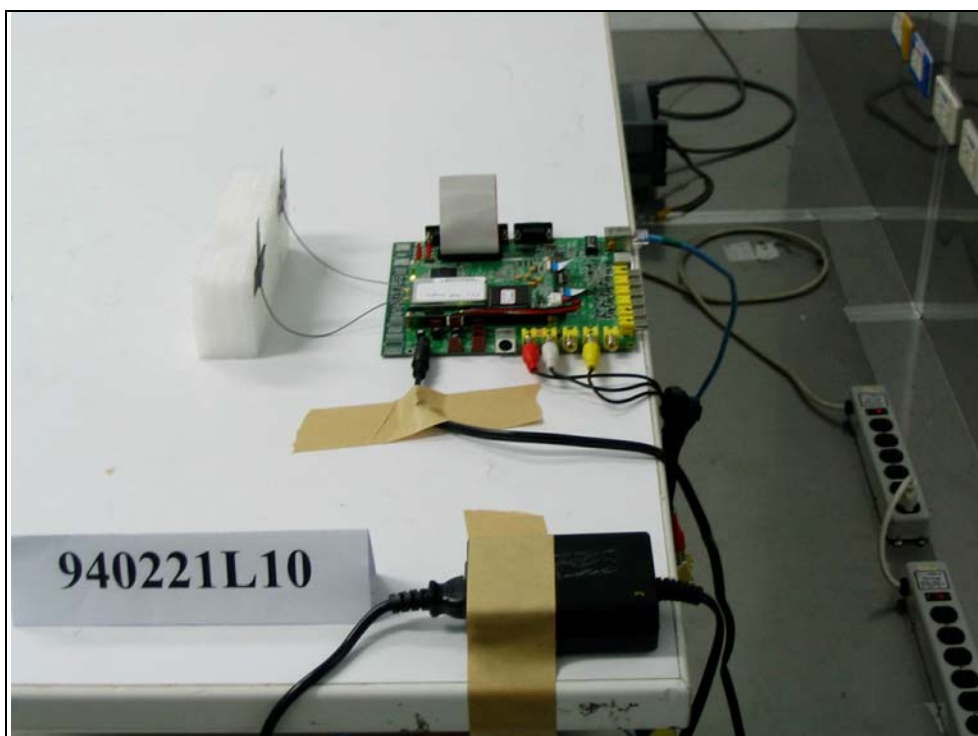
And according to FCC 47 CFR Section 15.247(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.7.2 ANTENNA CONNECTED CONSTRUCTION

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

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

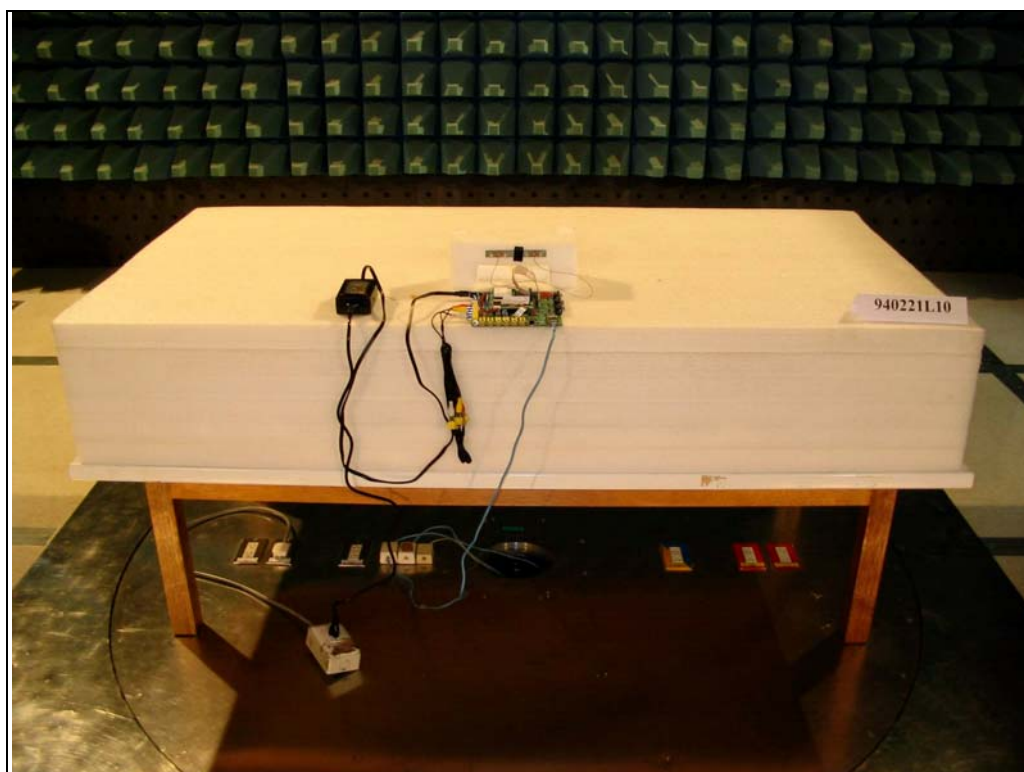
CONDUCTED EMISSION TEST

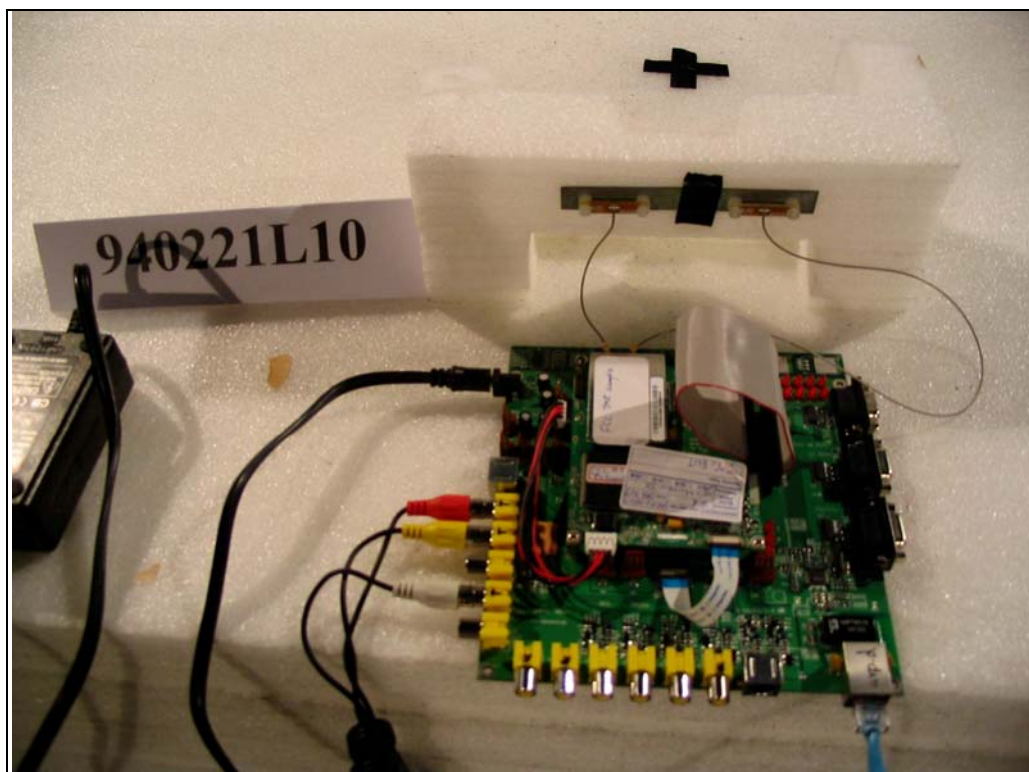




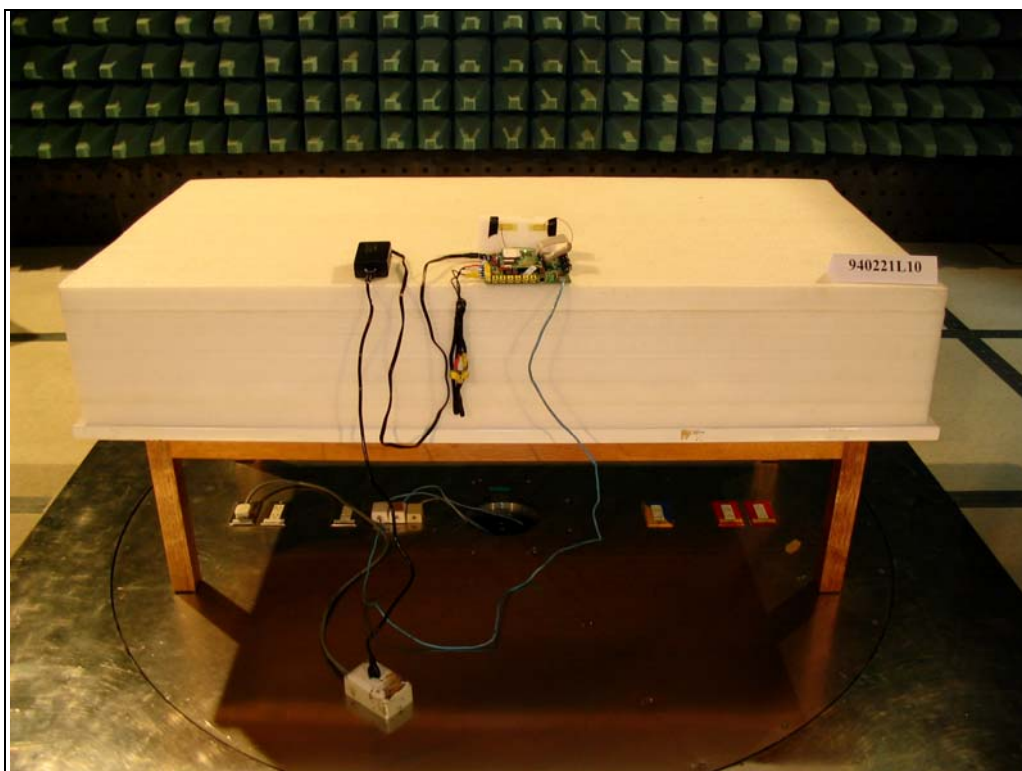
RADIATED EMISSION TEST

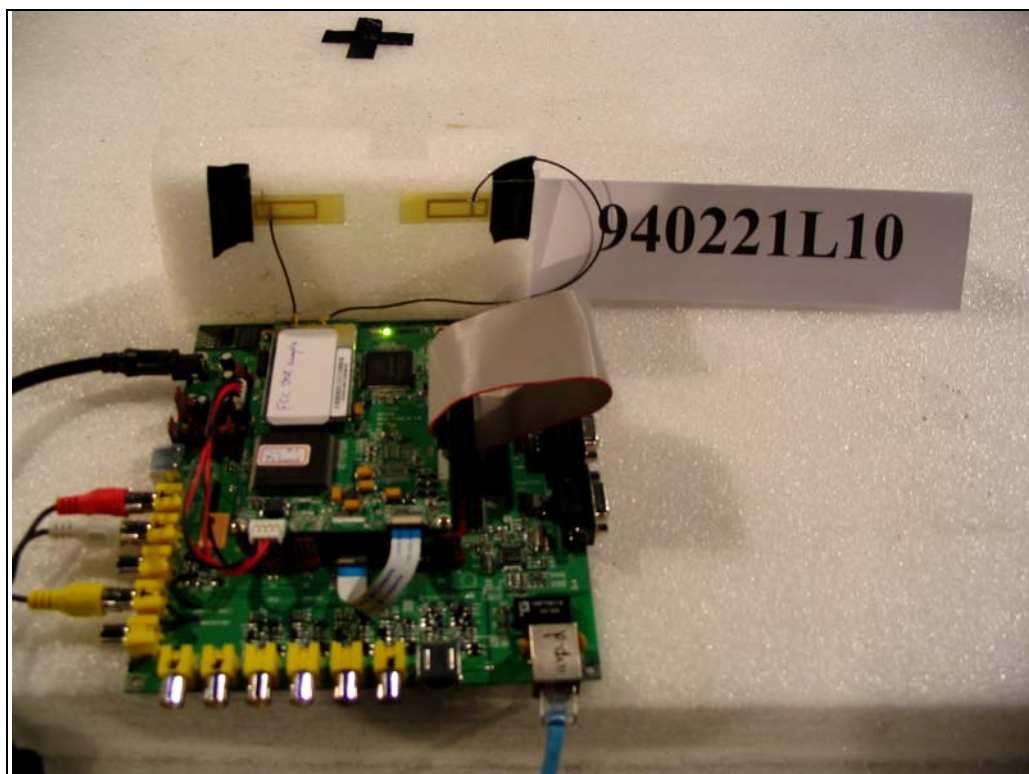
Test Mode 1



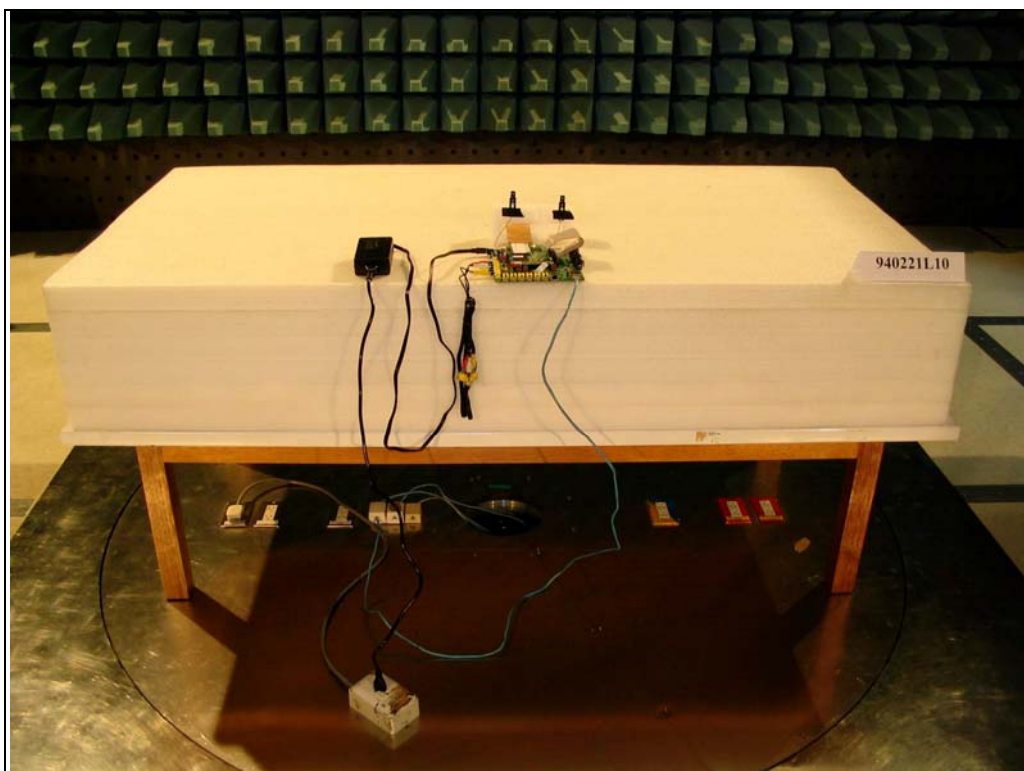


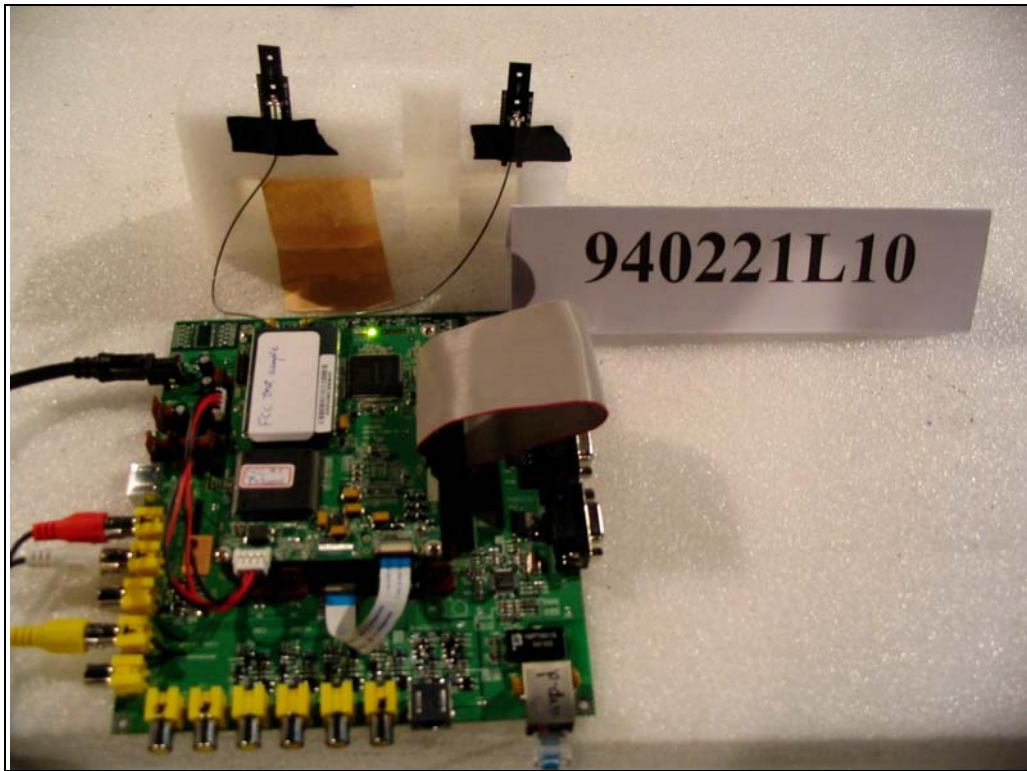
Test Mode 2



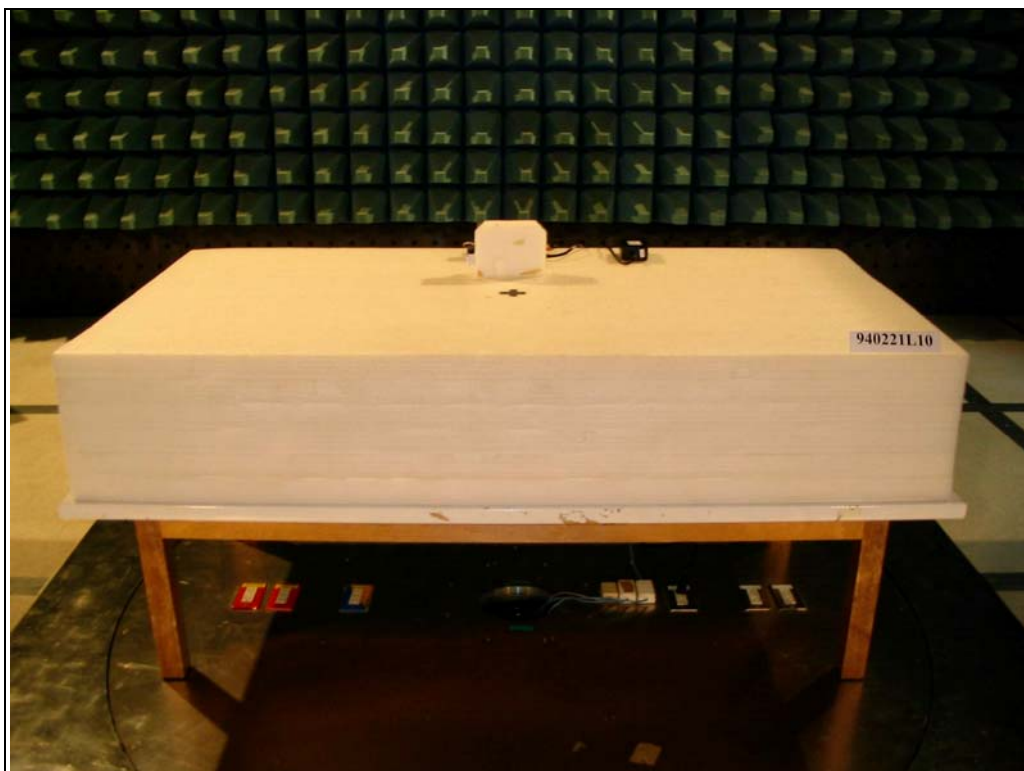
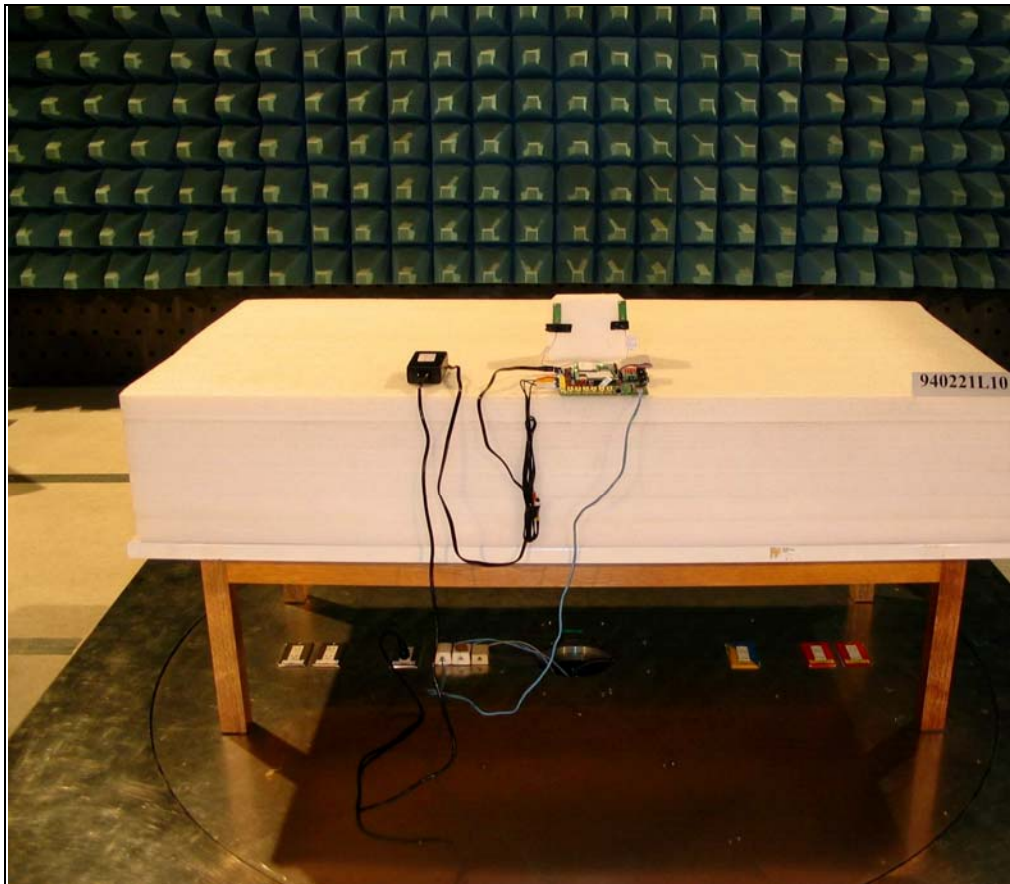


Test Mode 3





Test Mode 4





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:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Linko RF Lab.

Tel: 886-3-3270910

Fax: 886-3-3270892

Web Site: www.adt.com.tw

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