



FCC TEST REPORT

REPORT NO.: RF910819R02

MODEL NO.: VM4-3B

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TESTED: Sep. 3 ~ Sep. 10, 2002

APPLICANT: Wistron NeWeb Corp.

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ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei,
Taiwan, R.O.C.

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0528
ILAC MRA



Lab Code: 200102-0



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1 CERTIFICATION

PRODUCT : WLAN a+b combo mini-PCI
BRAND NAME : Wistron NeWeb
MODEL NO. : VM4-3B
APPLICANT : Wistron NeWeb Corp.
STANDARDS : 47 CFR Part 15, Subpart C (Section 15.247),
Subpart E (Section 15.407) and Subpart B,
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Sep. 3 ~ Sep. 10, 2002. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

CHECKED BY : Emily Lu , DATE : Sep. 17, 2002
Emily Lu

APPROVED BY : Alan Lane , DATE : Sep. 17, 2002
Dr. Alan Lane, Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -16.20dBuV at 0.209MHz
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(c)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -2.10dBuV at 7311.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit



APPLIED STANDARD: 47 CFR Part 15, Subpart E and Subpart B

Standard Section	Test Type	Result	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -16.06dBuV at 0.209MHz
15.407(b/1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30 MHz – 40000 MHz (Transmitting)	PASS	Meet the requirement of limit Minimum passing margin is -2.9dBuV at 11610.00MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	WLAN a+b combo mini-PCI
MODEL NO.	VM4-3B
POWER SUPPLY	3.3VDC from host equipment
MODULATION TYPE	802.11b: DSSS 802.11a: OFDM
TRANSFER RATE	802.11b: 1 / 2 / 5.5 / 11Mbps 802.11a: 6 to 54Mbps (Turbo mode: up to 108Mbps *see note 2)
FREQUENCY RANGE	802.11b: 2412MHz ~ 2462MHz 802.11a: 5.15~5.85GHz
NUMBER OF CHANNEL	802.11b: 11 802.11a: 12 for Normal mode / 5 for Turbo mode
CHANNEL SPACING	802.11b: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
OUTPUT POWER	802.11b: 15.92dBm 802.11a: 13.95dBm
DATA CABLE	NA
ANTENNA TYPE	PIFA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. Two types of antenna were provided to this EUT:

	ANTENNA TYPE	CONNECTOR	ANTENNA GAIN
1	PIFA	UFL	2dBi for 802.11b / 1.8dBi for 802.11a
2	PIFA	UFL	2.5dBi for 802.11b / 2.7dBi for 802.11a

2. This EUT is capable of providing data rates up to 108Mbps in turbo mode depending upon reception quality.

3. For more detailed features description, please refer to the manufacturer's specifications or user's Manual.

3.2 DESCRIPTION OF TEST MODES

For 802.11b: 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		

NOTE:

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.
3. Test result (A) is for antenna 1 and test result (B) is for antenna 2 which mentioned on page 8, note 1.

For 802.11a: Twelve channels are provided to this EUT for Normal mode.

Channel	Frequency	Channel	Frequency
1	5180 MHz	7	5300 MHz
2	5200 MHz	8	5320 MHz
3	5220 MHz	9	5745 MHz
4	5240 MHz	10	5765 MHz
5	5260 MHz	11	5785 MHz
6	5280 MHz	12	5805 MHz

Five channels are provided to this EUT for Turbo Mode.

Channel	Frequency	Channel	Frequency
1	5210 MHz	4	5760 MHz
2	5250 MHz	5	5800 MHz
3	5290 MHz		

NOTE:

1. The EUT was transmitting at full power on the specified channel with a duty cycle of 99% (maximum allowed). The EUT was tested in both normal mode (channel bandwidth of approximately 30MHz) and turbo mode (channel bandwidth of approximately 60MHz).
2. "Normal Mode" allows data rates of up to 54Mbps. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mbps).
3. "Turbo Mode" allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).
4. Channel 1, 4, 5, 8, 9 and 12 are the closest frequencies to the band edge, were chosen for final test of Normal Mode.
5. Channel 1~5 were chosen for final test of turbo mode.
6. Test result (A) is for antenna 1 and test result (B) is for antenna 2 which mentioned on page 8, note 1.



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a WLAN a+b combo mini-PCI . According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC CFR 47 Part 15, Subpart C. (15.247),
Subpart E (15.407) and Subpart B.
ANSI C63.4 : 1992**

All tests 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	NEC	N2	NA	FCC DoC APPROVED
2	PRINTER	EPSON	LQ-300+	DCGY017096	FCC DoC APPROVED
3	MODEM	ACEEX	1414	980020503	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
3	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

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

4 TEST TYPES AND RESULTS (FOR PART 802.11b)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 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
ROHDE & SCHWARZ Test Receiver	ESCS30	847793/022	Mar. 12, 2003
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH2-Z5	828075/003	Jul. 23, 2003
ROHDE & SCHWARZ 200-A Four-line V-Network	ENV4200	830326/018	Oct. 25, 2002
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 2, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 2, 2002
EMCO-L.I.S.N. (for peripheral)	3825/2	90031627	Jul. 23, 2003
Software	Cond-V2L	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C05.01	Jul. 23, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-305	Feb. 20, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-306	Feb. 20, 2003
Shielded Room	Site 5	ADT-C05	NA
VCCI Site Registration No.	Site 5	C-1093	NA

- NOTE:**
1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. “*”: These equipment are used for conducted telecom port test only (if tested).
 4. The test was performed in ADT Open Site No. 5.



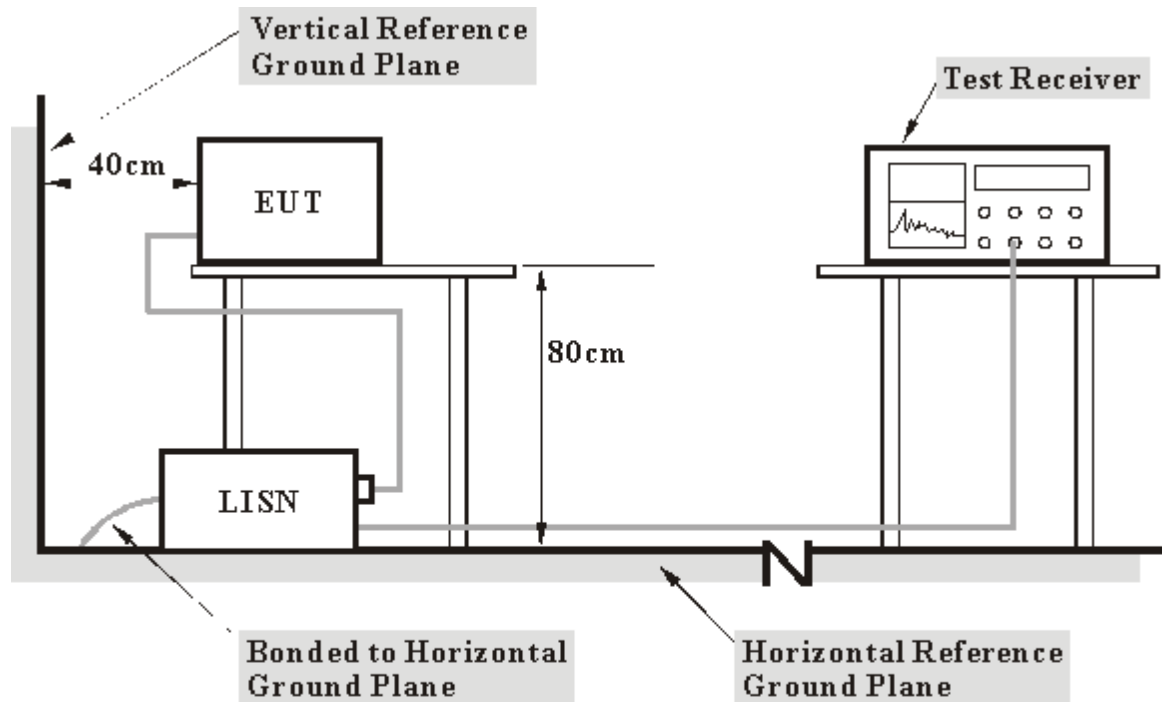
4.1.3 TEST PROCEDURES

- 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 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

- a. Plug the EUT into the PCMCIA extender which connected to a computer system placed on a testing table.
- b. The computer system ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.
- c. The computer system sent "H" messages to its screen.
- d. The computer system sent "H" messages to modem.
- e. The computer system sent "H" messages to printer, and the printer prints them on paper.

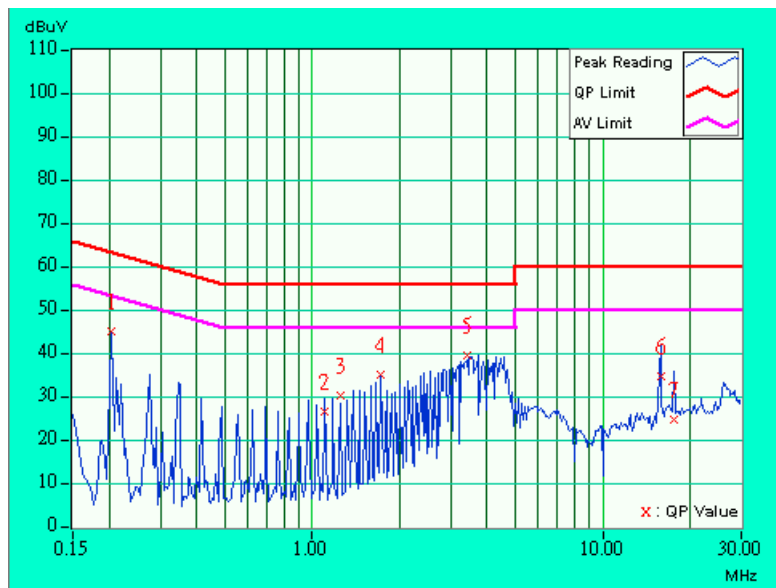


4.1.7 TEST RESULTS (A)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.205	0.10	44.34	-	44.44	-	63.42	53.42	-18.98	-
2	1.105	0.20	25.88	-	26.08	-	56.00	46.00	-29.92	-
3	1.246	0.20	29.67	-	29.87	-	56.00	46.00	-26.13	-
4	1.730	0.20	34.17	-	34.37	-	56.00	46.00	-21.63	-
5	3.395	0.34	38.86	-	39.20	-	56.00	46.00	-16.80	-
6	15.879	0.75	33.89	-	34.64	-	60.00	50.00	-25.36	-
7	17.563	0.85	24.04	-	24.89	-	60.00	50.00	-35.11	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

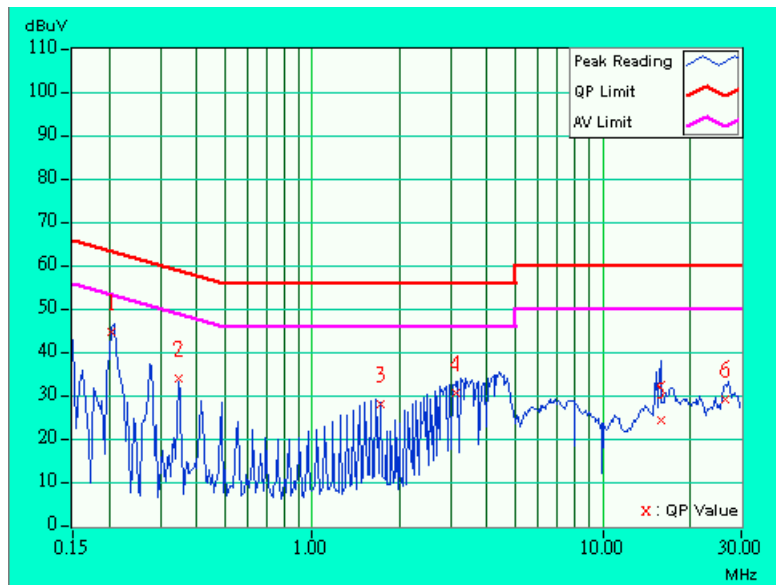




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.205	0.10	44.01	-	44.11	-	63.42	53.42	-19.31	-
2	0.345	0.10	33.18	-	33.28	-	59.07	49.07	-25.79	-
3	1.730	0.20	27.52	-	27.72	-	56.00	46.00	-28.28	-
4	3.113	0.26	30.18	-	30.44	-	56.00	46.00	-25.56	-
5	15.879	0.55	23.87	-	24.42	-	60.00	50.00	-35.58	-
6	26.523	0.73	28.62	-	29.35	-	60.00	50.00	-30.65	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
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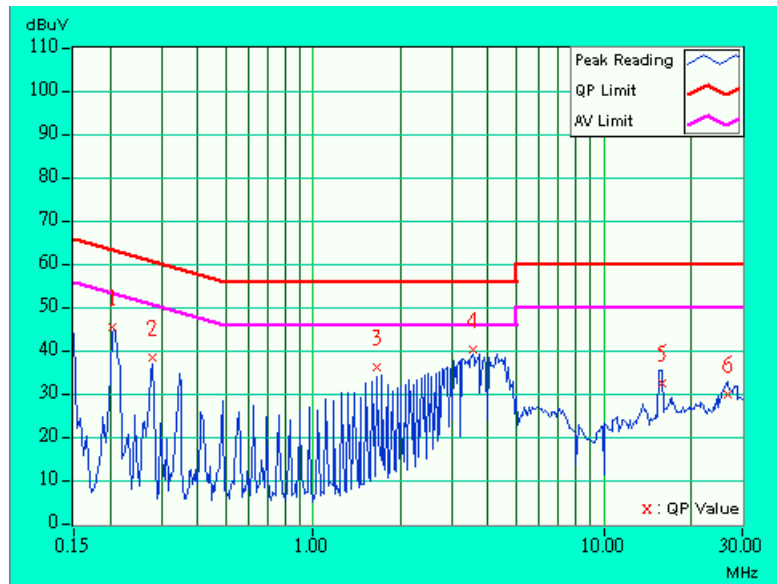




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.205	0.10	44.38	-	44.48	-	63.42	53.42	-18.94	-
2	0.279	0.10	37.25	-	37.35	-	60.85	50.85	-23.50	-
3	1.664	0.20	35.11	-	35.31	-	56.00	46.00	-20.69	-
4	3.535	0.35	39.00	-	39.35	-	56.00	46.00	-16.65	-
5	15.879	0.75	31.33	-	32.08	-	60.00	50.00	-27.92	-
6	26.605	1.23	28.90	-	30.13	-	60.00	50.00	-29.87	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

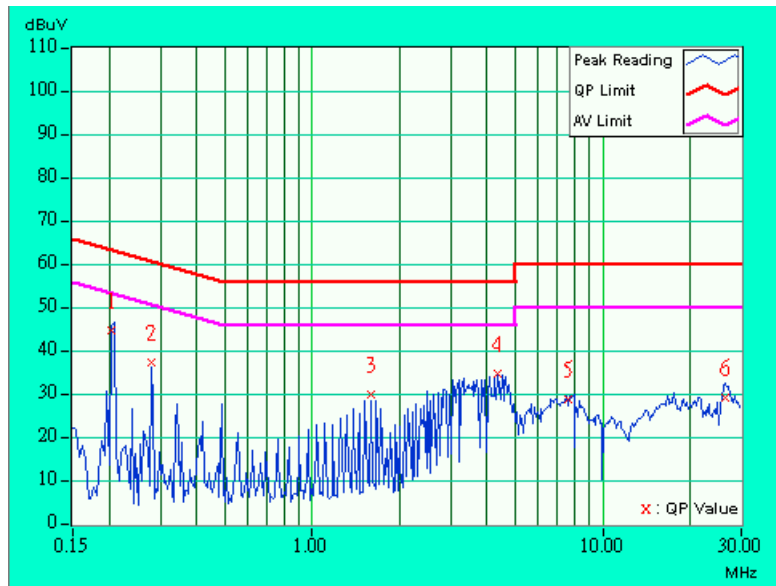




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.205	0.10	43.91	-	44.01	-	63.42	53.42	-19.41	-
2	0.279	0.10	36.64	-	36.74	-	60.85	50.85	-24.11	-
3	1.594	0.20	29.14	-	29.34	-	56.00	46.00	-26.66	-
4	4.363	0.31	34.18	-	34.49	-	56.00	46.00	-21.51	-
5	7.621	0.36	28.22	-	28.58	-	60.00	50.00	-31.42	-
6	26.391	0.73	28.54	-	29.27	-	60.00	50.00	-30.73	-

- Remarks:
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 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

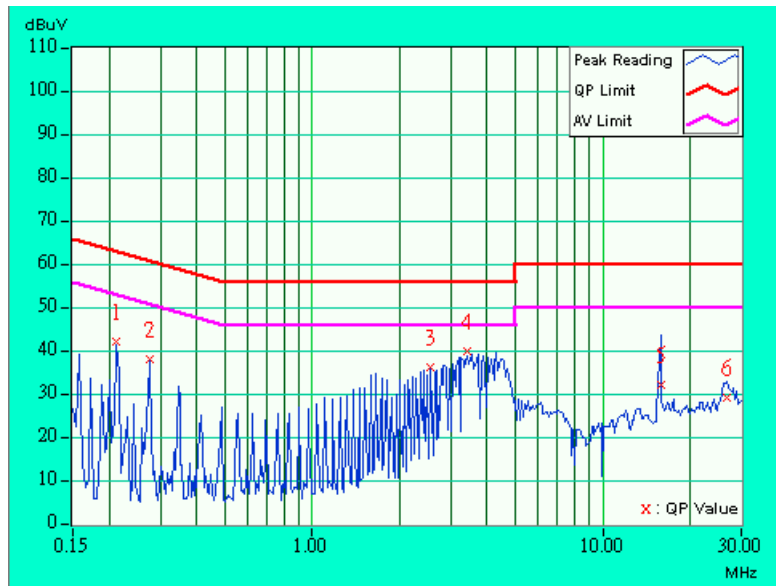




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.213	0.10	40.88	-	40.98	-	63.11	53.11	-22.13	-
2	0.275	0.10	36.95	-	37.05	-	60.97	50.97	-23.92	-
3	2.563	0.26	34.93	-	35.19	-	56.00	46.00	-20.81	-
4	3.395	0.34	38.92	-	39.26	-	56.00	46.00	-16.74	-
5	15.879	0.75	30.91	-	31.66	-	60.00	50.00	-28.34	-
6	26.602	1.23	27.85	-	29.08	-	60.00	50.00	-30.92	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

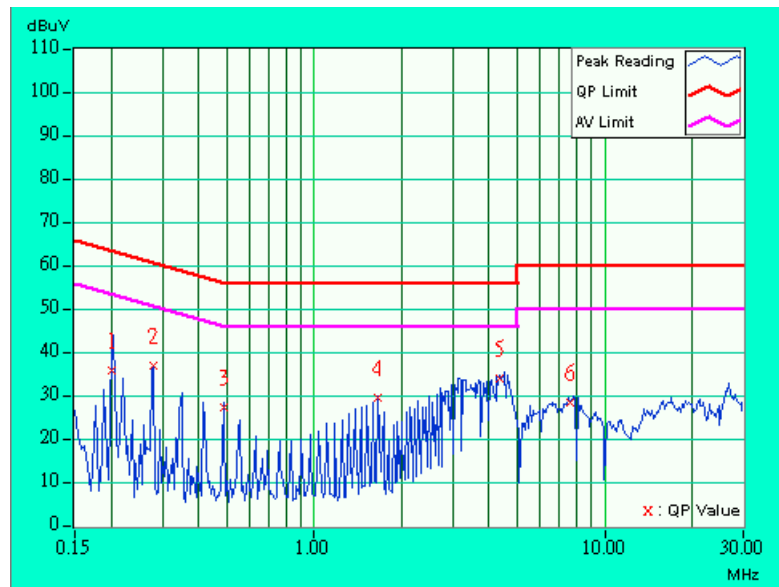




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.201	0.10	35.53	-	35.63	-	63.58	53.58	-27.95	-
2	0.279	0.10	36.68	-	36.78	-	60.85	50.85	-24.07	-
3	0.486	0.11	27.22	-	27.33	-	56.24	46.24	-28.90	-
4	1.664	0.20	29.44	-	29.64	-	56.00	46.00	-26.36	-
5	4.363	0.31	33.81	-	34.12	-	56.00	46.00	-21.88	-
6	7.621	0.36	28.24	-	28.60	-	60.00	50.00	-31.40	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.



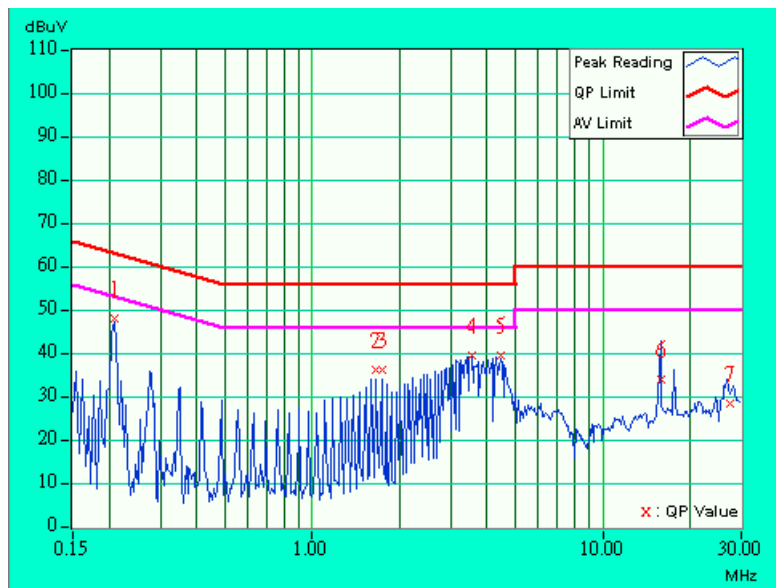


4.1.8 TEST RESULTS (B)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.209	0.10	46.96	-	47.06	-	63.26	53.26	-16.20	-
2	1.664	0.20	35.16	-	35.36	-	56.00	46.00	-20.64	-
3	1.734	0.20	35.21	-	35.41	-	56.00	46.00	-20.59	-
4	3.535	0.35	38.38	-	38.73	-	56.00	46.00	-17.27	-
5	4.438	0.41	38.32	-	38.73	-	56.00	46.00	-17.27	-
6	15.879	0.75	32.98	-	33.73	-	60.00	50.00	-26.27	-
7	27.465	1.25	27.32	-	28.57	-	60.00	50.00	-31.43	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

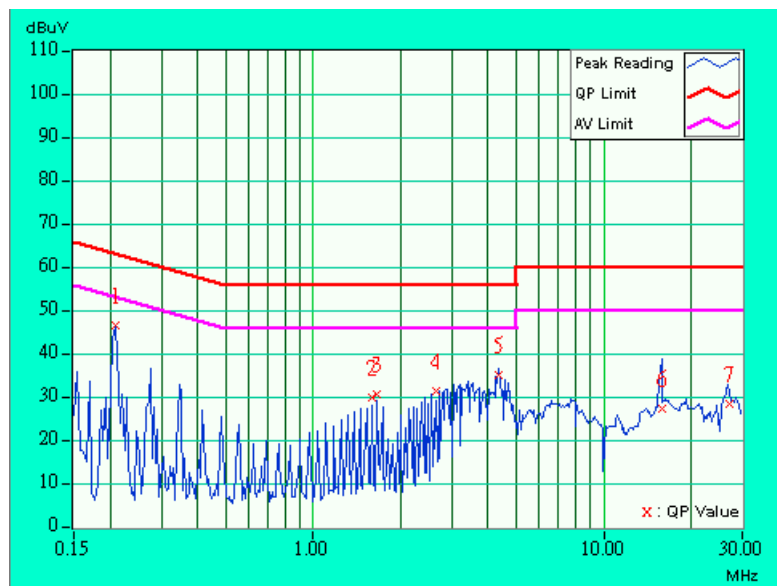




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.209	0.10	46.06	-	46.16	-	63.26	53.26	-17.10	-
2	1.594	0.20	29.33	-	29.53	-	56.00	46.00	-26.47	-
3	1.664	0.20	30.00	-	30.20	-	56.00	46.00	-25.80	-
4	2.633	0.23	30.89	-	31.12	-	56.00	46.00	-24.88	-
5	4.367	0.31	34.51	-	34.82	-	56.00	46.00	-21.18	-
6	15.879	0.55	26.50	-	27.05	-	60.00	50.00	-32.95	-
7	27.035	0.74	27.94	-	28.68	-	60.00	50.00	-31.32	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

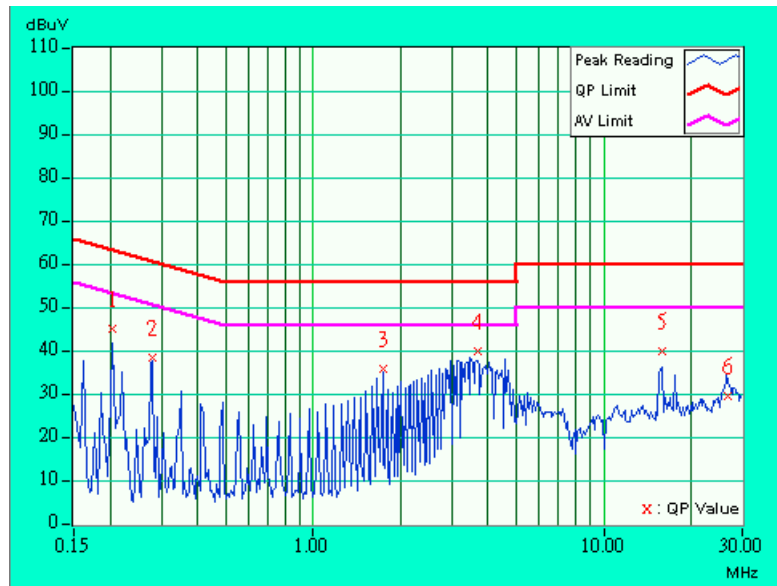




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.205	0.10	43.93	-	44.03	-	63.42	53.42	-19.39	-
2	0.279	0.10	37.31	-	37.41	-	60.85	50.85	-23.44	-
3	1.734	0.20	34.69	-	34.89	-	56.00	46.00	-21.11	-
4	3.676	0.37	38.90	-	39.27	-	56.00	46.00	-16.73	-
5	15.879	0.75	38.78	-	39.53	-	60.00	50.00	-20.47	-
6	26.703	1.23	28.47	-	29.70	-	60.00	50.00	-30.30	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

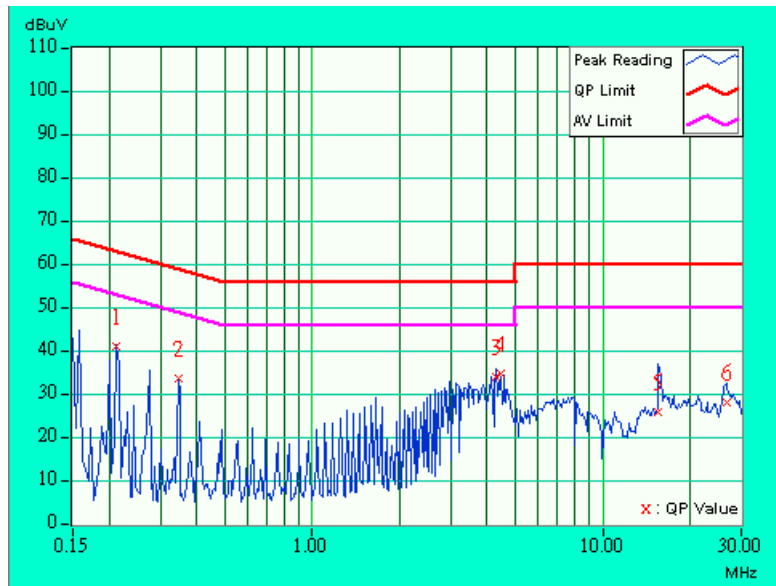




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.213	0.10	40.49	-	40.59	-	63.11	53.11	-22.52	-
2	0.345	0.10	32.82	-	32.92	-	59.07	49.07	-26.15	-
3	4.297	0.30	33.40	-	33.70	-	56.00	46.00	-22.30	-
4	4.438	0.31	34.24	-	34.55	-	56.00	46.00	-21.45	-
5	15.461	0.53	25.24	-	25.77	-	60.00	50.00	-34.23	-
6	26.617	0.73	27.34	-	28.07	-	60.00	50.00	-31.93	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

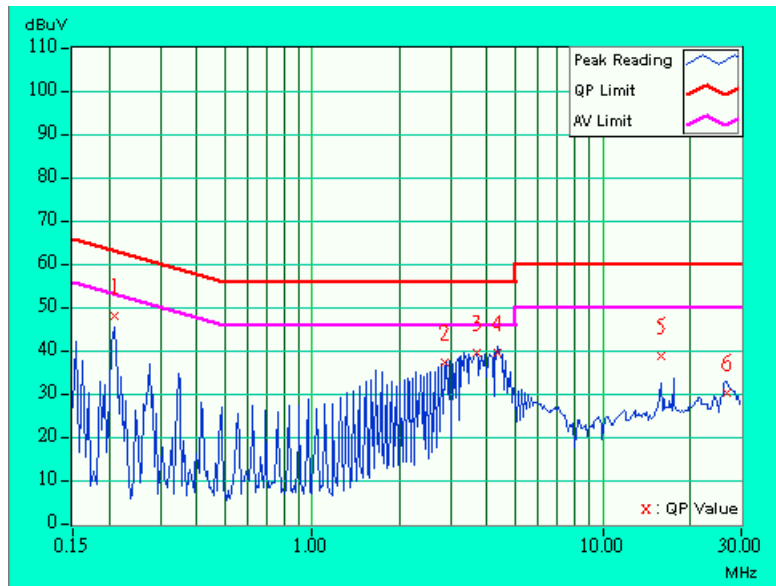




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.209	0.10	46.90	-	47.00	-	63.26	53.26	-16.26	-
2	2.844	0.28	36.04	-	36.32	-	56.00	46.00	-19.68	-
3	3.676	0.37	38.42	-	38.79	-	56.00	46.00	-17.21	-
4	4.367	0.41	38.34	-	38.75	-	56.00	46.00	-17.25	-
5	15.879	0.75	37.49	-	38.24	-	60.00	50.00	-21.76	-
6	26.832	1.24	28.98	-	30.22	-	60.00	50.00	-29.78	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.

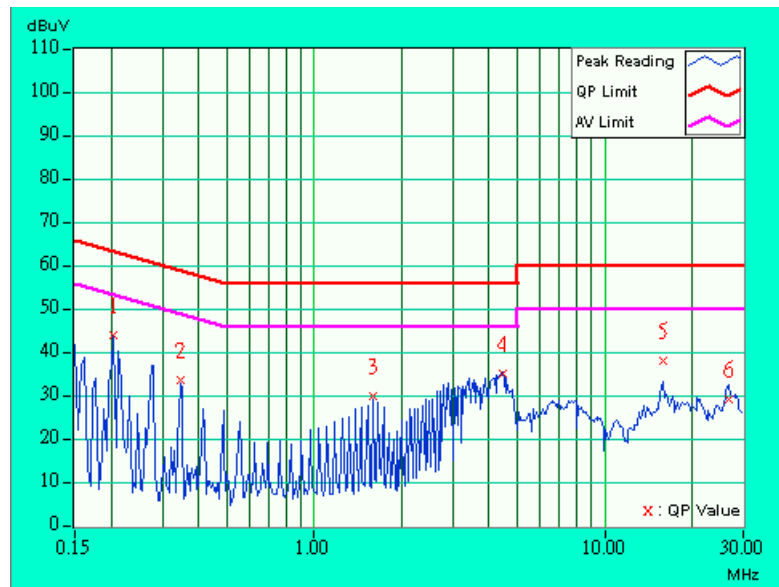




EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30 deg. C, 60 %RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.205	0.10	43.35	-	43.45	-	63.42	53.42	-19.97	-
2	0.345	0.10	32.89	-	32.99	-	59.07	49.07	-26.08	-
3	1.594	0.20	29.21	-	29.41	-	56.00	46.00	-26.59	-
4	4.438	0.31	34.44	-	34.75	-	56.00	46.00	-21.25	-
5	15.879	0.55	37.38	-	37.93	-	60.00	50.00	-22.07	-
6	26.621	0.73	28.68	-	29.41	-	60.00	50.00	-30.59	-

- Remarks:
1. "**": Undetectable
 2. QP. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": NA
 4. The emission levels of other frequencies were very low against the limit.
 5. Margin value = Emission level - Limit value
 6. Emission Level = Correction Factor + Reading Value.





4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field Strength of Fundamental	
	uV/m	dBuV/m
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

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
* HP Spectrum Analyzer	8590L	3544A01176	May 13, 2003
* HP Preamplifier	8447D	2944A08485	Oct. 30, 2002
* HP Preamplifier	8449B	3008A01201	Dec. 06, 2002
* HP Preamplifier	8449B	3008A01292	Aug. 7, 2003
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 27, 2003
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2002
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 2, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	Jul. 3, 2003
* EMCO Horn Antenna	3115	9312-4192	Apr. 9, 2003
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jan. 25, 2003
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jul. 12, 2003
Open Field Test Site	Site 5	ADT-R05	Jul. 19, 2003
VCCI Site Registration No.	Site 5	R-1039	NA

- NOTE:** 1. The measurement uncertainty is less than +/- 3.0dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
3. "*" = These equipment are used for the final measurement.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The test was performed in ADT Open Site No. 5.



4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

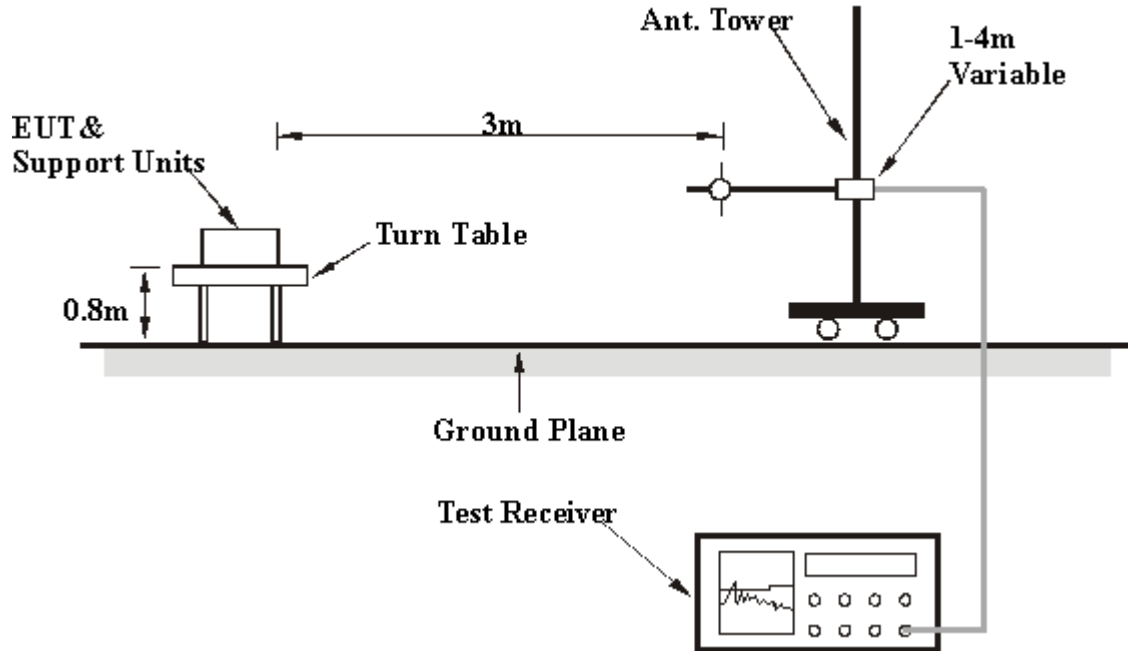
NOTE:

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 300 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 (A)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	160.00	32.0 QP	43.50	-11.50	1.42H	286	21.30	9.62	1.07	0.00	-10.70
2	192.00	33.3 QP	43.50	-10.20	1.34H	304	23.06	8.95	1.28	0.00	-10.24
3	299.00	29.1 QP	46.00	-16.90	1.11H	254	14.47	13.18	1.45	0.00	-14.63
4	352.00	36.5 QP	46.00	-9.50	1.07H	159	20.74	14.31	1.46	0.00	-15.76
5	378.00	43.1 QP	46.00	-2.90	1.01H	3	26.28	15.31	1.51	0.00	-16.82
6	384.00	37.8 QP	46.00	-8.20	1.01H	343	20.78	15.50	1.52	0.00	-17.02
7	480.00	39.1 QP	46.00	-6.90	1.01H	146	20.49	16.92	1.69	0.00	-18.61
8	576.00	28.7 QP	46.00	-17.30	1.82H	255	8.54	18.28	1.88	0.00	-20.16
9	736.00	32.6 QP	46.00	-13.40	1.36H	185	10.49	19.93	2.14	0.00	-22.07
10	800.00	38.2 QP	46.00	-7.80	1.22H	270	15.22	20.69	2.29	0.00	-22.99

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	120.00	26.6 QP	43.50	-16.90	1.02V	307	14.05	11.65	0.89	0.00	-12.55
2	192.00	27.8 QP	43.50	-15.70	1.04V	49	17.59	8.95	1.28	0.00	-10.24
3	352.00	25.9 QP	46.00	-20.10	1.24V	189	10.14	14.31	1.46	0.00	-15.76
4	480.00	24.0 QP	46.00	-22.00	1.55V	354	5.39	16.92	1.69	0.00	-18.62
5	608.00	26.0 QP	46.00	-20.00	1.79V	173	5.36	18.70	1.94	0.00	-20.65
6	648.00	26.1 QP	46.00	-19.90	1.06V	318	4.88	19.21	2.01	0.00	-21.23
7	736.00	29.5 QP	46.00	-16.50	1.10V	217	7.42	19.93	2.14	0.00	-22.08

- NOTE:**
- 1 Emission level = Raw Value - Correction Factor
 - 2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 - 3 The other emission levels were very low against the limit.
 - 4 Margin value = Emission level - Limit value



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2412.00	80.5 AV			1.00H	213	50.30	27.67	2.53	0.00	-30.20
2	*2412.00	91.3 PK			1.00H	213	61.10	27.67	2.53	0.00	-30.20
3	4824.00	40.9 AV	54.00	-13.10	1.69H	127	42.06	31.52	4.01	36.70	1.18
4	4824.00	53.3 PK	74.00	-20.70	1.69H	127	54.50	31.52	4.01	36.70	1.19
5	7236.00	42.6 AV	54.00	-11.40	1.84H	270	37.80	36.20	5.58	37.00	-4.78
6	7236.00	49.9 PK	74.00	-24.10	1.84H	270	45.10	36.20	5.58	37.00	-4.79

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2412.00	92.7 AV			1.74V	214	62.50	27.67	2.53	0.00	-30.20
2	*2412.00	107.1 PK			1.74V	214	76.90	27.67	2.53	0.00	-30.20
3	4824.00	51.7 AV	54.00	-2.30	2.01V	144	52.90	31.52	4.01	36.70	1.18
4	4824.00	63.5 PK	74.00	-10.50	1.77V	354	64.70	31.52	4.01	36.70	1.18
5	7236.00	46.5 AV	54.00	-7.50	1.77V	354	41.70	36.20	5.58	37.00	-4.78
6	7236.00	58.7 PK	74.00	-15.30	1.77V	354	53.90	36.20	5.58	37.00	-4.78
7	9648.00	47.6 AV	54.00	-6.40	2.27V	253	41.00	38.45	5.76	37.63	-6.58
8	9648.00	59.2 PK	74.00	-14.80	2.27V	253	52.60	38.45	5.76	37.63	-6.58

- NOTE:**
1. Emission level = Raw Value - Correction Factor
 2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 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	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2437.00	89.1 AV			1.82H	245	58.62	27.81	2.66	0.00	-30.47
2	*2437.00	99.1 PK			1.82H	245	68.60	27.81	2.66	0.00	-30.47
3	4874.00	46.0 AV	54.00	-8.00	1.51H	180	47.04	31.59	4.03	36.70	1.08
4	4874.00	58.0 PK	74.00	-16.00	1.51H	180	59.10	31.59	4.03	36.70	1.08
5	7311.00	51.9 AV	54.00	-2.10	1.00H	180	47.00	36.26	5.65	37.02	-4.90
6	7311.00	62.8 PK	74.00	-11.20	1.00H	180	57.90	36.26	5.65	37.02	-4.90
7	9748.00	51.9 AV	54.00	-2.10	1.51H	289	45.40	38.50	5.66	37.65	-6.51
8	9748.00	62.6 PK	74.00	-11.40	1.51H	289	56.10	38.50	5.66	37.65	-6.51

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2437.00	93.5 AV			1.11V	253	63.00	27.81	2.66	0.00	-30.47
2	*2437.00	106.9 PK			1.11V	253	76.40	27.81	2.66	0.00	-30.47
3	4874.00	49.9 AV	54.00	-4.10	1.53V	145	51.00	31.59	4.03	36.70	1.08
4	4874.00	62.1 PK	74.00	-11.90	1.53V	145	63.20	31.59	4.03	36.70	1.08
5	7311.00	46.1 AV	54.00	-7.90	1.74V	181	41.20	36.26	5.65	37.02	-4.90
6	7311.00	58.7 PK	74.00	-15.30	1.74V	181	53.80	36.26	5.65	37.02	-4.90

- NOTE:**
1. Emission level = Raw Value - Correction Factor
 2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 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	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2462.00	84.7 AV			1.76H	235	54.22	27.81	2.66	0.00	-30.47
2	*2462.00	93.3 PK			1.76H	235	62.80	27.81	2.66	0.00	-30.47
3	4924.00	45.8 AV	54.00	-8.20	1.67H	146	46.80	31.66	4.06	36.70	0.99
4	4924.00	58.4 PK	74.00	-15.60	1.67H	146	59.40	31.66	4.06	36.70	0.99
5	7384.00	50.4 AV	54.00	-3.60	1.98H	3	45.30	36.40	5.79	37.05	-5.14
6	7384.00	63.2 PK	74.00	-10.80	1.98H	3	58.10	36.40	5.79	37.05	-5.14
7	9849.00	46.5 AV	54.00	-7.50	1.91H	262	40.00	38.54	5.59	37.67	-6.46
8	9849.00	58.9 PK	74.00	-15.10	1.91H	262	52.40	38.54	5.59	37.67	-6.46

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2462.00	94.3 AV			1.74V	181	63.80	27.81	2.66	0.00	-30.47
2	*2462.00	109.4 PK			1.74V	181	78.90	27.81	2.66	0.00	-30.47
3	4924.00	63.6 PK	74.00	-10.40	1.74V	181	64.60	31.66	4.06	36.70	0.99
4	4924.00	51.2 AV	54.00	-2.80	1.74V	181	52.20	31.66	4.06	36.70	0.99
5	7386.00	43.1 AV	54.00	-10.90	1.74V	181	38.00	36.40	5.79	37.05	-5.14
6	7386.00	54.2 PK	74.00	-19.80	1.74V	181	49.10	36.40	5.79	37.05	-5.14

- NOTE:**
1. Emission level= Raw Value - Correction Factor
 2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 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

4.2.8 TEST RESULTS (B)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	152.00	32.9 QP	43.50	-10.60	1.19H	288	21.56	10.16	1.14	0.00	-11.30
2	192.00	29.5 QP	43.50	-14.00	1.00H	83	19.30	8.95	1.28	0.00	-10.24
3	198.00	37.4 QP	43.50	-6.10	1.16H	92	27.07	8.97	1.36	0.00	-10.33
4	352.00	32.5 QP	46.00	-13.50	1.09H	288	16.69	14.31	1.46	0.00	-15.76
5	384.00	30.5 QP	46.00	-15.50	1.00H	272	13.48	15.50	1.52	0.00	-17.02
6	438.00	34.8 QP	46.00	-11.20	1.27H	184	16.91	16.30	1.59	0.00	-17.89
7	544.00	25.0 QP	46.00	-21.00	1.00H	270	5.32	17.86	1.82	0.00	-19.69
8	576.00	25.2 QP	46.00	-20.80	1.06H	108	5.04	18.28	1.88	0.00	-20.17
9	729.00	37.3 QP	46.00	-8.70	1.17H	14	15.38	19.80	2.12	0.00	-21.93
10	736.00	28.0 QP	46.00	-18.00	1.49H	246	5.93	19.93	2.14	0.00	-22.08

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	160.00	28.8 QP	43.50	-14.70	1.50V	66	18.10	9.62	1.07	0.00	-10.70
2	192.00	35.8 QP	43.50	-7.70	1.44V	113	25.56	8.95	1.28	0.00	-10.24
3	200.50	40.2 QP	43.50	-3.30	1.72V	324	29.82	8.98	1.40	0.00	-10.38
4	288.00	27.0 QP	46.00	-19.00	1.00V	3	12.71	12.88	1.41	0.00	-14.29
5	352.00	27.0 QP	46.00	-19.00	1.15V	69	11.24	14.31	1.46	0.00	-15.76
6	416.00	38.7 QP	46.00	-7.30	1.00V	189	20.95	16.18	1.57	0.00	-17.75
7	480.00	28.0 QP	46.00	-18.00	1.02V	270	9.39	16.92	1.69	0.00	-18.61
8	544.00	26.4 QP	46.00	-19.60	1.00V	100	6.76	17.86	1.82	0.00	-19.68
9	576.00	28.0 QP	46.00	-18.00	1.01V	90	7.84	18.28	1.88	0.00	-20.17
10	729.00	43.9 QP	46.00	-2.10	1.12V	247	22.00	19.80	2.12	0.00	-21.92
11	768.00	30.0 QP	46.00	-16.00	1.09V	67	7.43	20.36	2.22	0.00	-22.57

- NOTE:**
- 1 Emission level = Raw Value - Correction Factor
 - 2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 - 3 The other emission levels were very low against the limit.
 - 4 Margin value = Emission level - Limit value



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2412.00	90.4 AV			1.35H	216	60.20	27.67	2.53	0.00	-30.20
2	*2412.00	94.0 PK			1.35H	216	63.80	27.67	2.53	0.00	-30.20
3	4824.00	36.8 AV	54.00	-17.20	1.46H	193	38.00	31.52	4.01	36.70	1.18
4	4824.00	44.8 PK	74.00	-29.20	1.46H	193	46.00	31.52	4.01	36.70	1.19
5	9648.00	41.6 AV	54.00	-12.40	1.57H	154	35.00	38.45	5.76	37.63	-6.58
6	9648.00	48.6 PK	74.00	-25.40	1.57H	154	42.00	38.45	5.76	37.63	-6.59

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2412.00	90.1 AV			1.14V	220	59.90	27.67	2.53	0.00	-30.20
2	*2412.00	92.2 PK			1.14V	220	62.00	27.67	2.53	0.00	-30.20
3	4824.00	47.8 PK	74.00	-26.20	1.57V	142	49.00	31.52	4.01	36.70	1.18
4	4824.00	40.8 AV	54.00	-13.20	1.57V	142	42.00	31.52	4.01	36.70	1.18
5	9648.00	48.6 AV	54.00	-5.40	1.14V	220	42.00	38.45	5.76	37.63	-6.58
6	9648.00	55.6 PK	74.00	-18.40	1.14V	220	49.00	38.45	5.76	37.63	-6.58

- NOTE:**
1. Emission level = Raw Value - Correction Factor
 2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 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	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2437.00	92.5 AV			1.39H	216	62.00	27.81	2.66	0.00	-30.47
2	*2437.00	98.5 PK			1.39H	216	68.00	27.81	2.66	0.00	-30.47
3	4874.00	35.7 AV	54.00	-18.30	1.01H	151	36.80	31.59	4.03	36.70	1.08
4	4874.00	43.9 PK	74.00	-30.10	1.01H	151	45.00	31.59	4.03	36.70	1.08
5	9748.00	48.5 PK	74.00	-25.50	1.05H	184	42.00	38.50	5.66	37.65	-6.51
6	9748.00	42.3 AV	54.00	-11.70	1.05H	184	35.80	38.50	5.66	37.65	-6.51

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2437.00	95.5 PK			1.43V	76	65.00	27.81	2.66	0.00	-30.47
2	*2437.00	91.7 AV			1.43V	76	61.20	27.81	2.66	0.00	-30.47
3	4874.00	37.9 AV	54.00	-16.10	1.11V	84	39.00	31.59	4.03	36.70	1.08
4	4874.00	43.9 PK	74.00	-30.10	1.11V	83	45.00	31.59	4.03	36.70	1.08
5	9748.00	42.3 AV	54.00	-11.70	1.57V	142	35.80	38.50	5.66	37.65	-6.51
6	9748.00	47.5 PK	74.00	-26.50	1.57V	142	41.00	38.50	5.66	37.65	-6.51

- NOTE:**
1. Emission level = Raw Value - Correction Factor
 2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 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	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1005 hPa	TESTED BY: Eric Lee	

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2462.00	92.5 AV			1.42H	163	62.00	27.81	2.66	0.00	-30.47
2	*2462.00	99.5 PK			1.42H	163	69.00	27.81	2.66	0.00	-30.47
3	4924.00	42.0 PK	74.00	-32.00	1.53H	144	43.00	31.66	4.06	36.70	0.99
4	4924.00	34.2 AV	54.00	-19.80	1.53H	144	35.20	31.66	4.06	36.70	0.99
5	9848.00	40.5 AV	54.00	-13.50	1.72H	166	34.00	38.54	5.59	37.67	-6.46
6	9848.00	47.5 PK	74.00	-26.50	1.72H	166	41.00	38.54	5.59	37.67	-6.47

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)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	*2462.00	93.3 PK			1.91V	175	62.80	27.81	2.66	0.00	-30.47
2	*2462.00	90.5 AV			1.91V	175	60.00	27.81	2.66	0.00	-30.47
3	4924.00	42.0 PK	74.00	-32.00	1.75V	122	43.00	31.66	4.06	36.70	0.99
4	4924.00	37.8 AV	54.00	-16.20	1.75V	122	38.80	31.66	4.06	36.70	0.99
5	9848.00	43.1 AV	54.00	-10.90	2.03V	130	36.60	38.54	5.59	37.67	-6.46
6	9848.00	48.5 PK	74.00	-25.50	2.03V	130	42.00	38.54	5.59	37.67	-6.47

- NOTE:**
1. Emission level= Raw Value - Correction Factor
 2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
 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	FSEK30	100049	July 24, 2003

NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

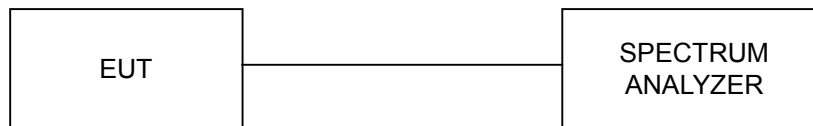
4.3.3 TEST PROCEDURE

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

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.



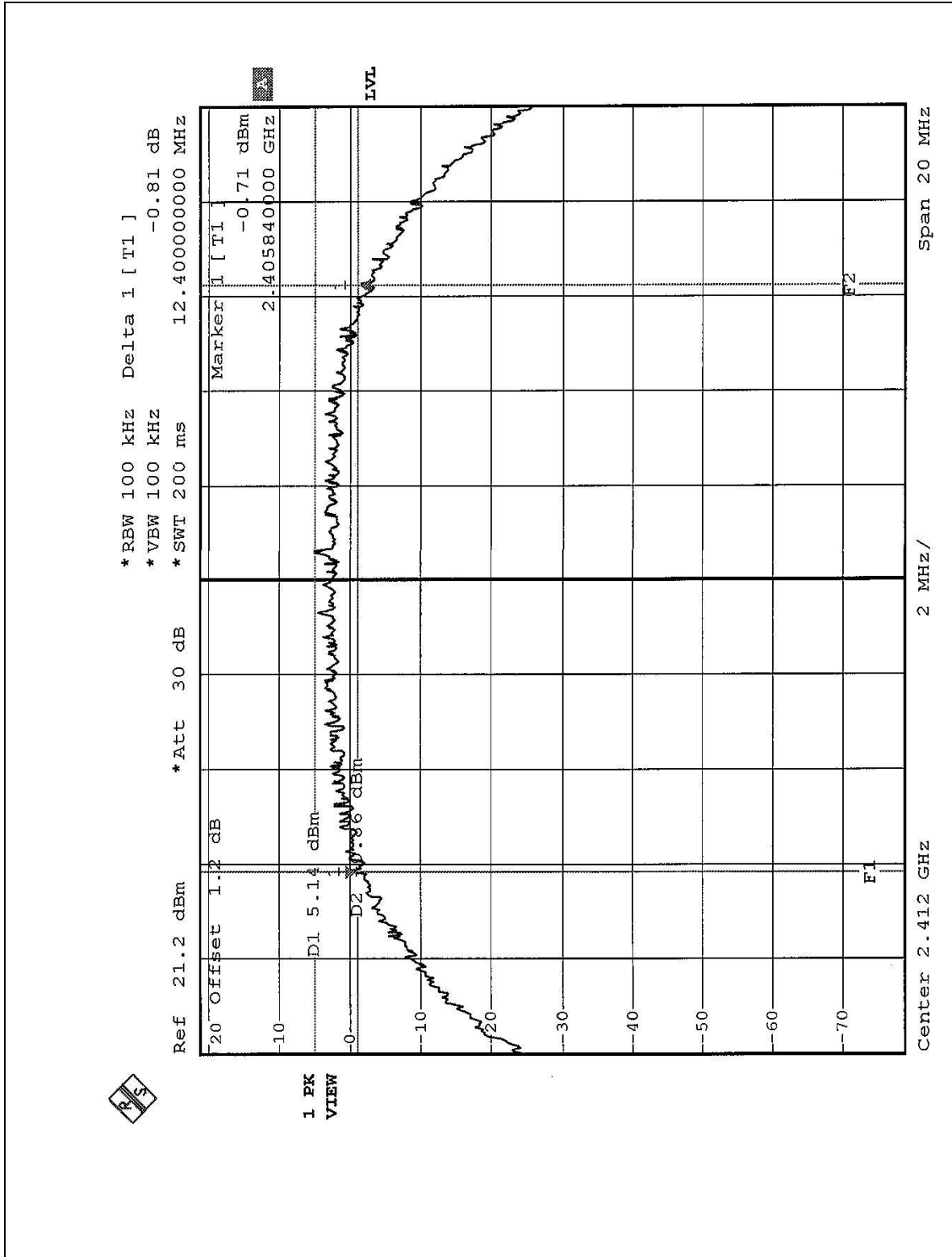
4.3.7 TEST RESULTS

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	30deg. C, 57%RH, 1005 hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.40	0.5	PASS
6	2437	12.16	0.5	PASS
11	2462	12.12	0.5	PASS



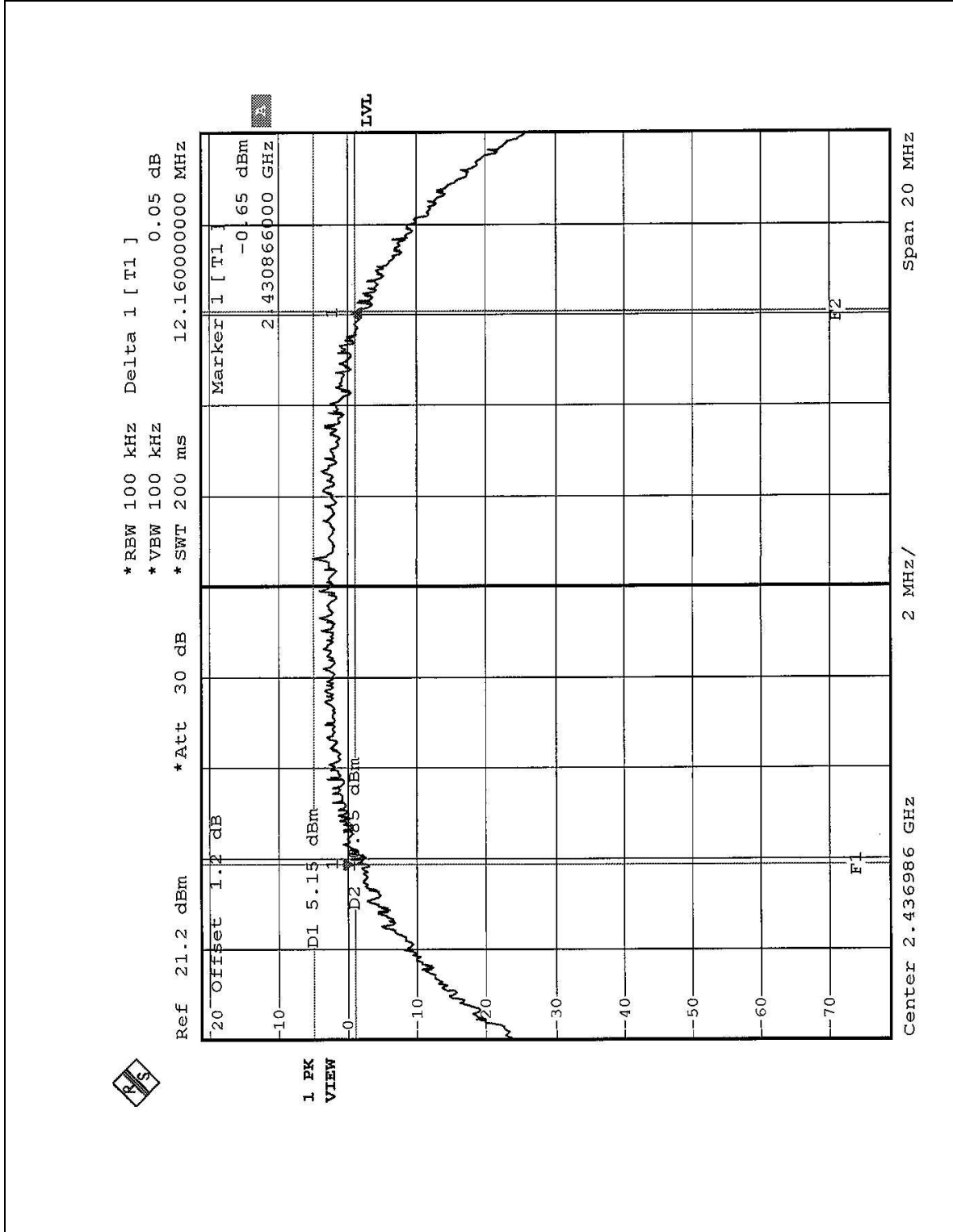
CH1



1 PK VIEW

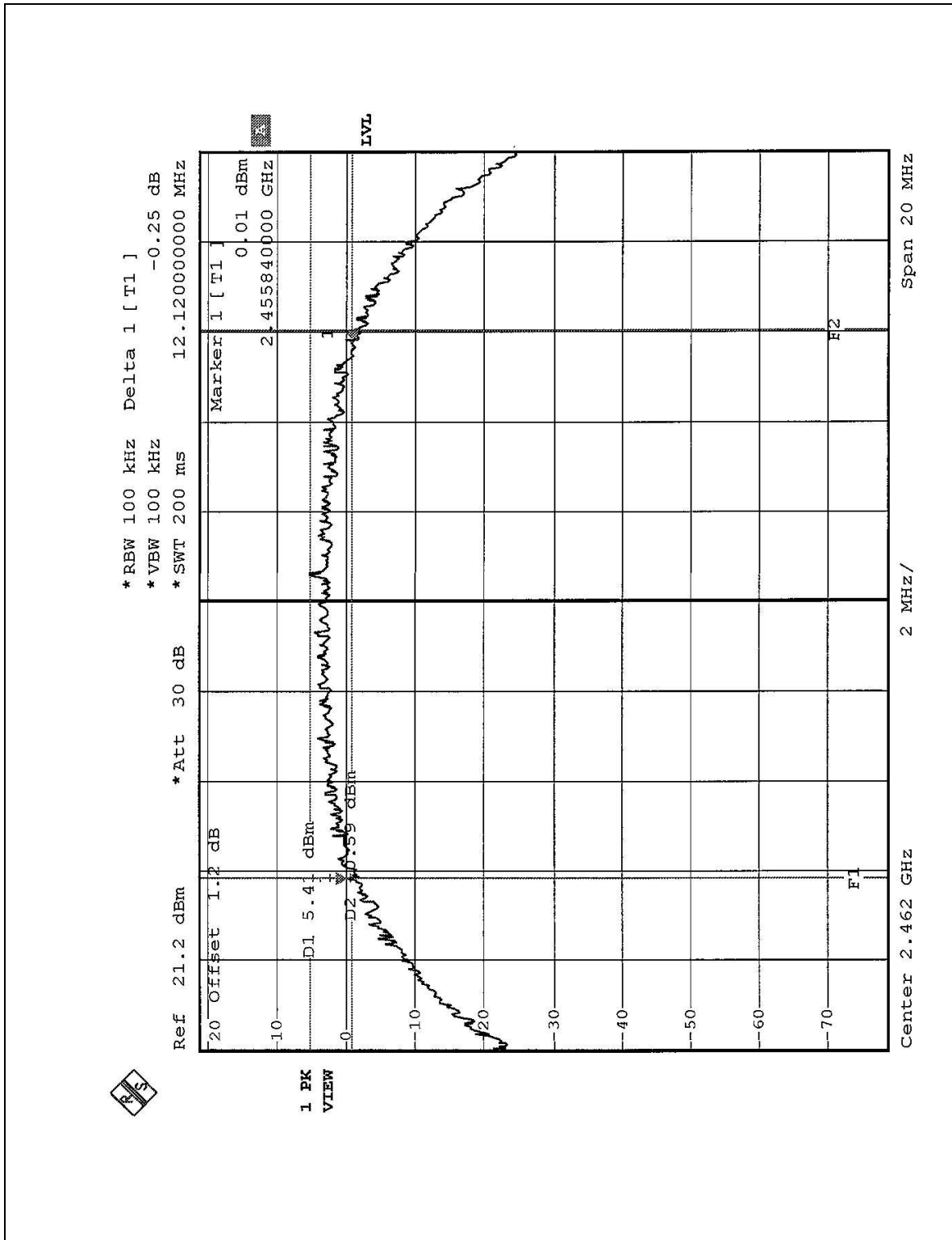


CH6





CH11





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
SINGLE CHANNEL POWER METER	NRVS	100026	Feb. 23, 2003
PEAK POWER SENSOR	NRV-Z32	100013	Feb. 23, 2003

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



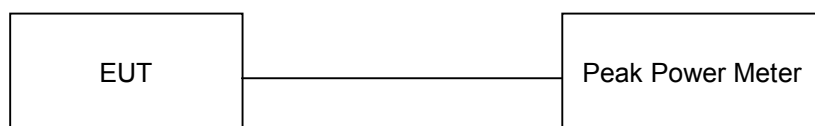
4.4.3 TEST PROCEDURES

The transmitter output was connected to the peak power meter.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6



4.4.7 TEST RESULTS

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	30deg.C, 57%RH, 1005 hPa
TESTED BY: Steven Lu			

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.92	30	PASS
6	2437	15.78	30	PASS
11	2462	15.90	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
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2002

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. 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

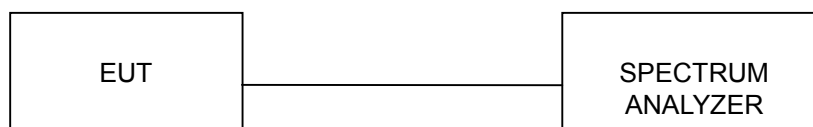
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

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



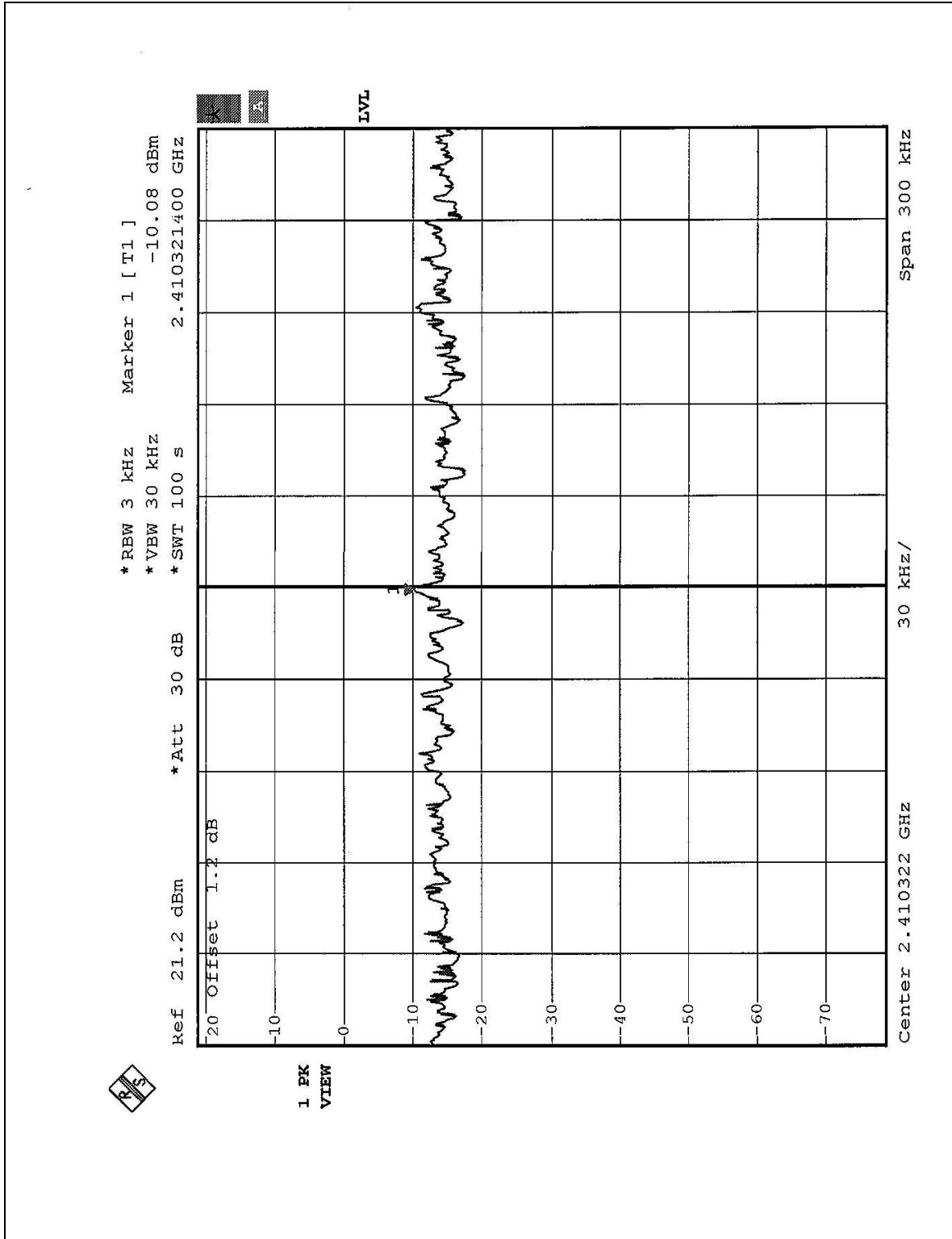
4.5.7 TEST RESULTS

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	30deg. C, 57%RH, 1005 hPa
TESTED BY: Steven Lu			

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-10.08	8	PASS
6	2437	-10.04	8	PASS
11	2462	-10.26	8	PASS

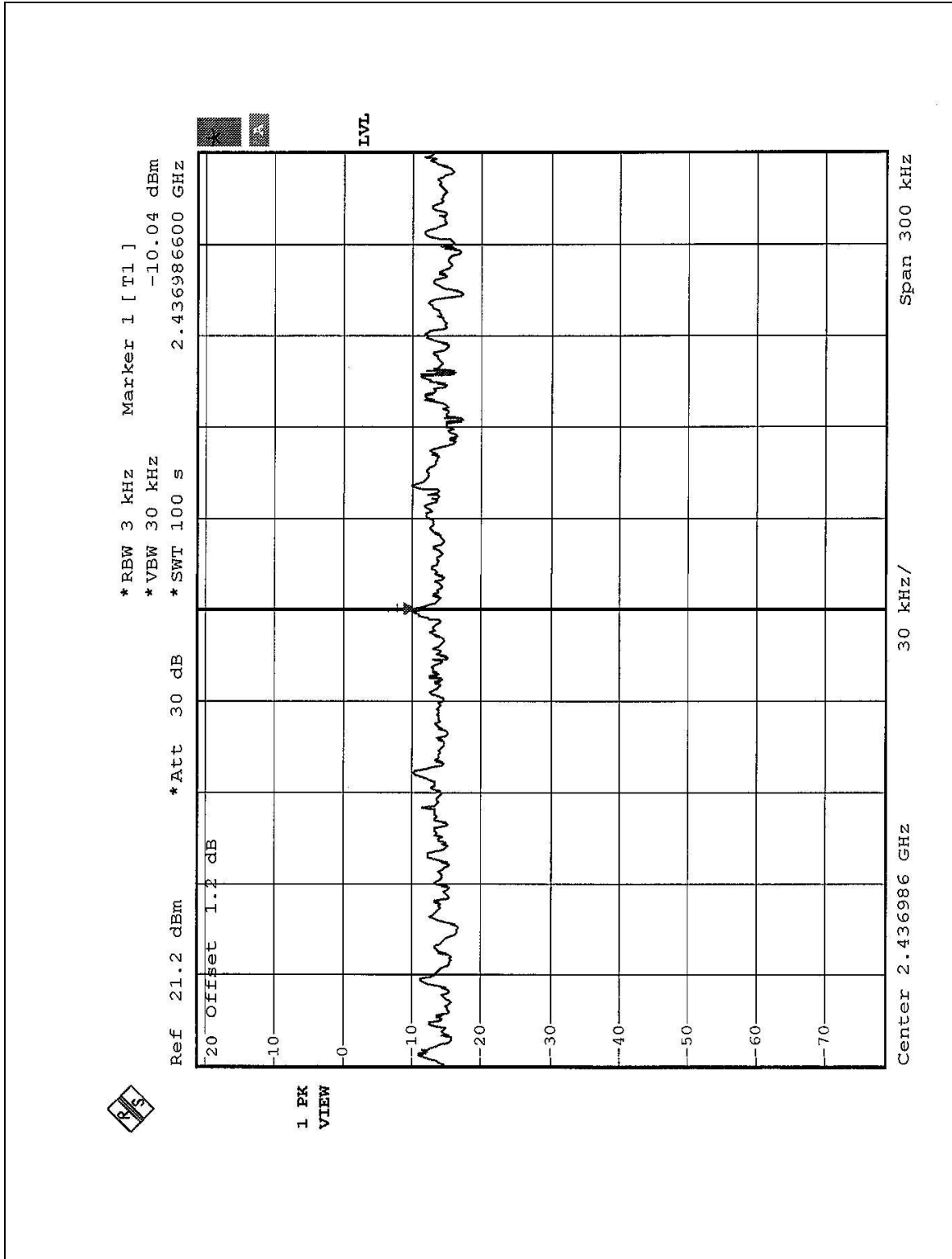


CH1



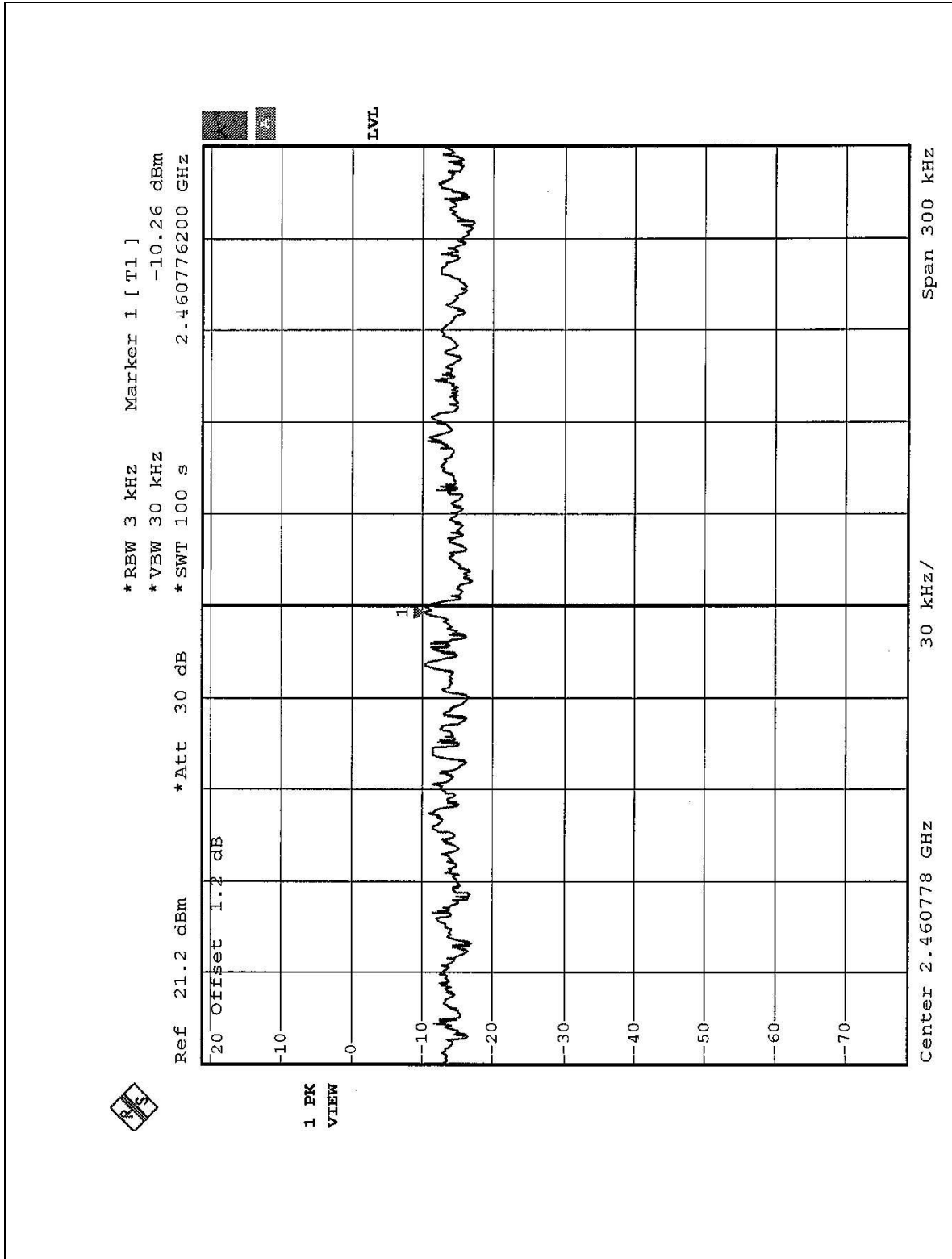


CH6





CH11





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
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

NOTE:

1. The measurement uncertainty is less than $\pm 2.6\text{dB}$, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.6.3 TEST PROCEDURE

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation



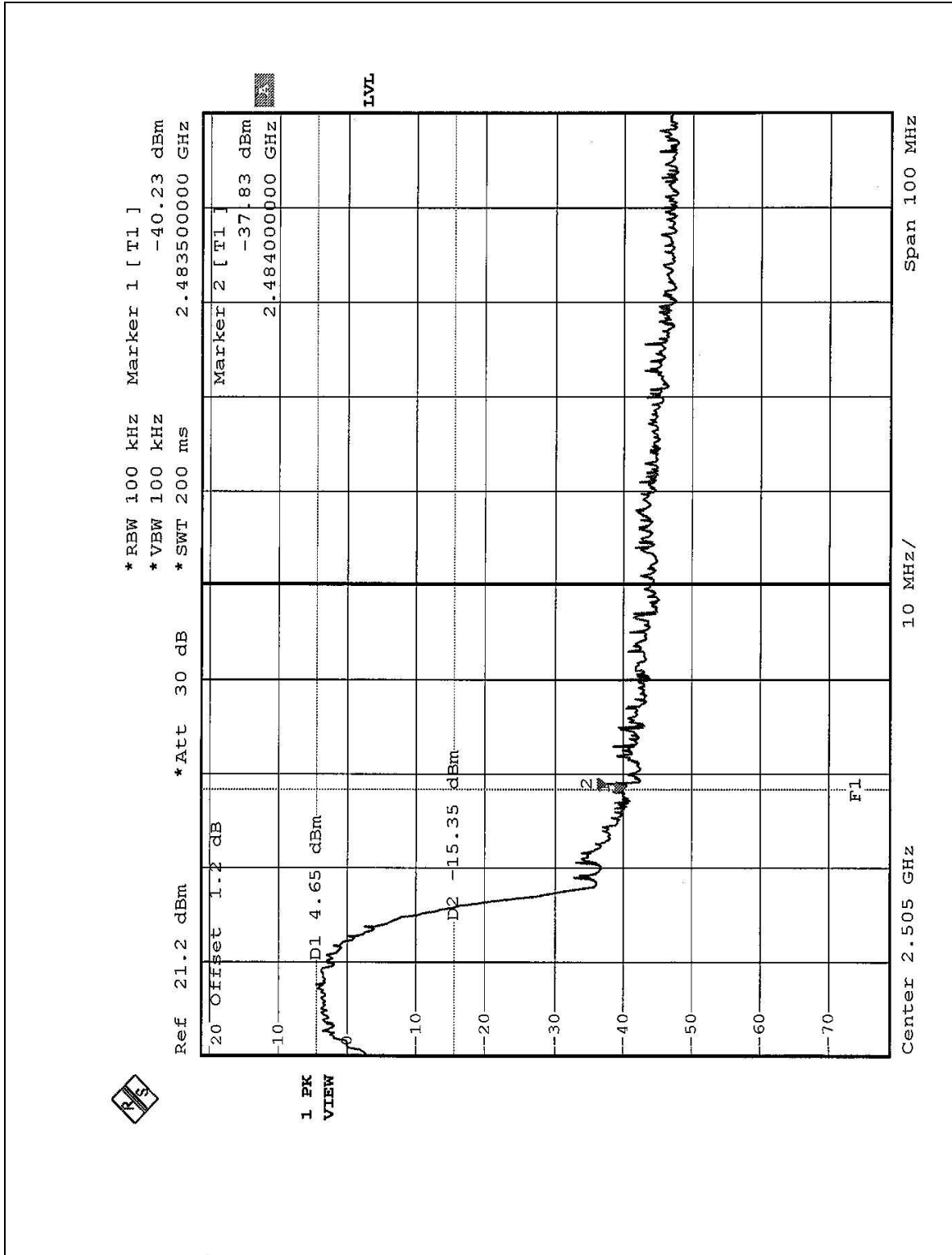
4.6.5 EUT OPERATING CONDITION

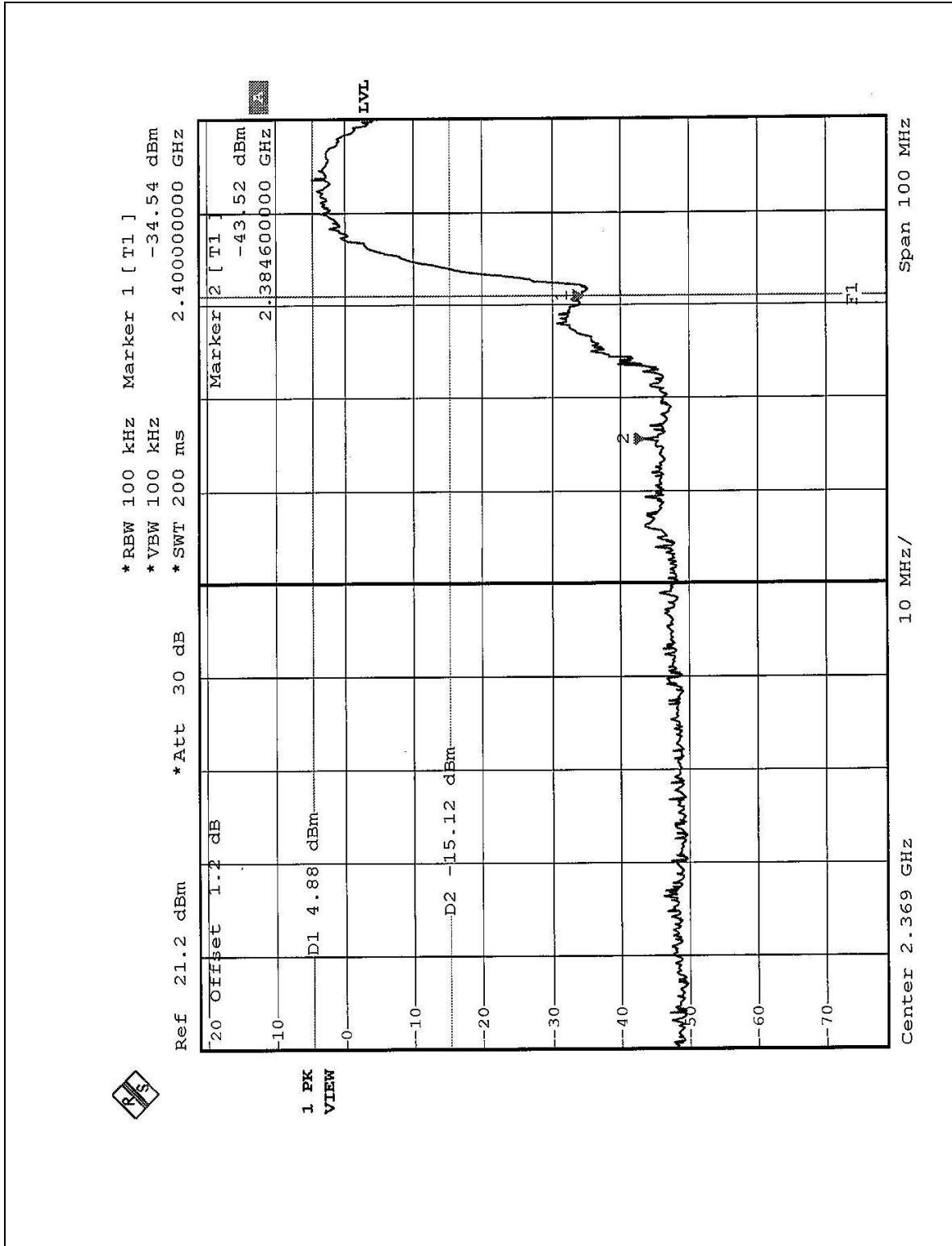
Same as Item 4.3.6

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 2 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(C).

NOTE: The band edge emission plot on the following 2 pages shows 42.48dB / 48.4dB delta between carrier maximum power and local maximum emission in restrict band (2.4840GHz / 2.3846GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 (Page 33) is 94.3dBuV/m, so the maximum field strength in restrict band is $94.3 - 42.48 = 51.82$ dBuV/m which is under 54 dBuV/m limit.







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 PIFA Antenna with UFL connector. The maximum Gain of the antenna is 2.5dBi only.

5 TEST TYPES AND RESULTS (FOR PART 802.11a)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class 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
ROHDE & SCHWARZ Test Receiver	ESCS30	847793/022	Mar. 12, 2003
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH2-Z5	828075/003	Jul. 23, 2003
ROHDE & SCHWARZ 200-A Four-line V-Network	ENV4200	830326/018	Oct. 25, 2002
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 2, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Dec. 2, 2002
EMCO-L.I.S.N. (for peripheral)	3825/2	90031627	Jul. 23, 2003
Software	Cond-V2L	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C05.01	Jul. 23, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-305	Feb. 20, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-306	Feb. 20, 2003
Shielded Room	Site 5	ADT-C05	NA
VCCI Site Registration No.	Site 5	C-1093	NA

- NOTE:**
1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. “*”: These equipment are used for conducted telecom port test only (if tested).
 4. The test was performed in ADT Open Site No. 5.



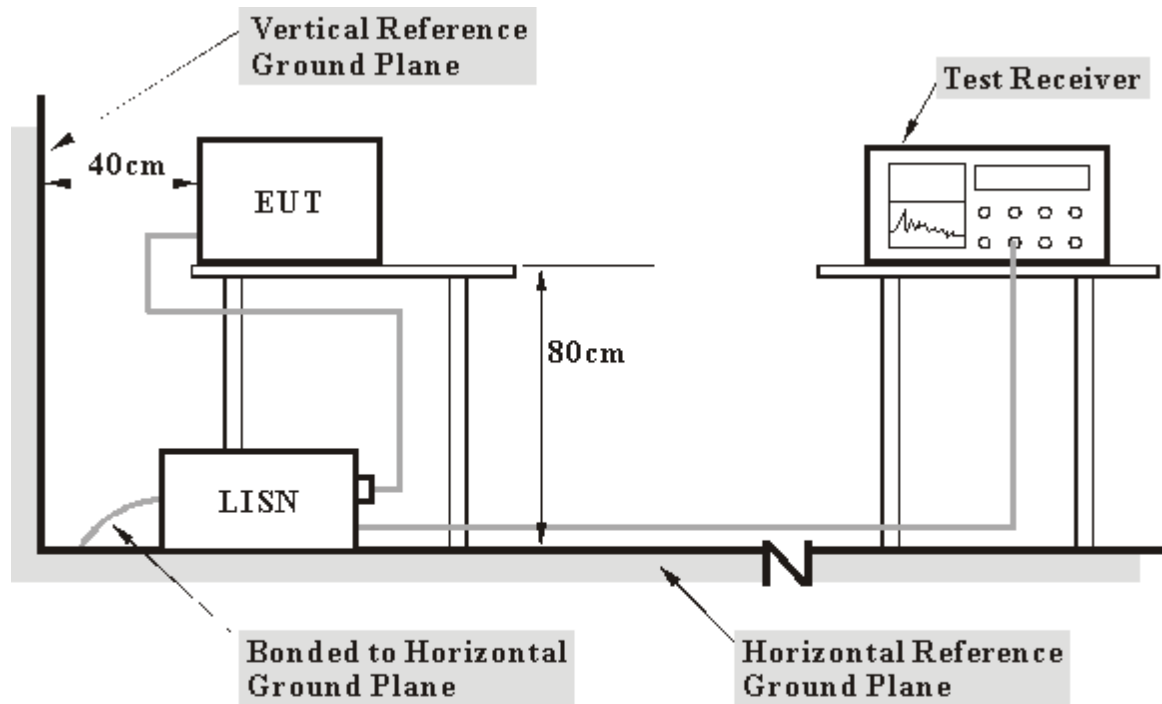
5.1.3 TEST PROCEDURES

- 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 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

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.



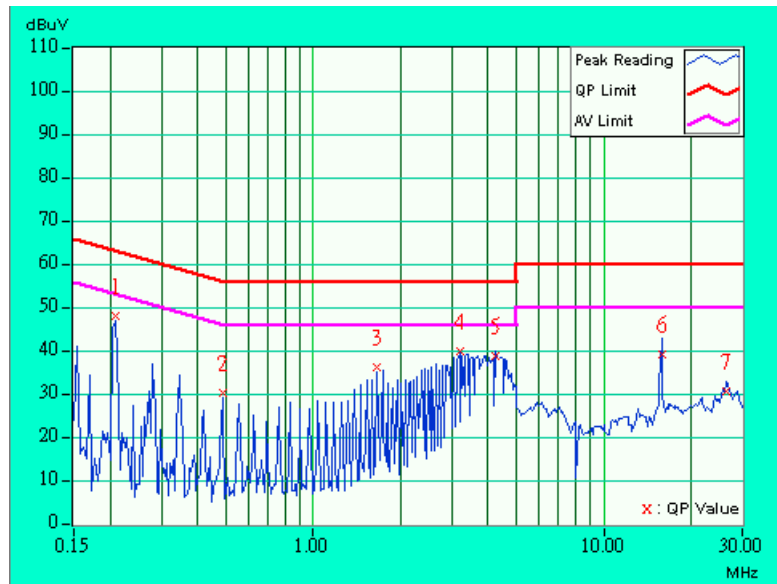
5.1.7 TEST RESULTS (A) (TRANSMITTING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

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	0.209	0.10	46.82	-	46.92	-	63.26	53.26	-16.34	-
2	0.486	0.11	29.05	-	29.16	-	56.24	46.24	-27.07	-
3	1.664	0.20	35.19	-	35.39	-	56.00	46.00	-20.61	-
4	3.191	0.32	38.83	-	39.15	-	56.00	46.00	-16.85	-
5	4.234	0.41	37.70	-	38.11	-	56.00	46.00	-17.89	-
6	15.879	0.75	38.04	-	38.79	-	60.00	50.00	-21.21	-
7	26.438	1.23	29.37	-	30.60	-	60.00	50.00	-29.40	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



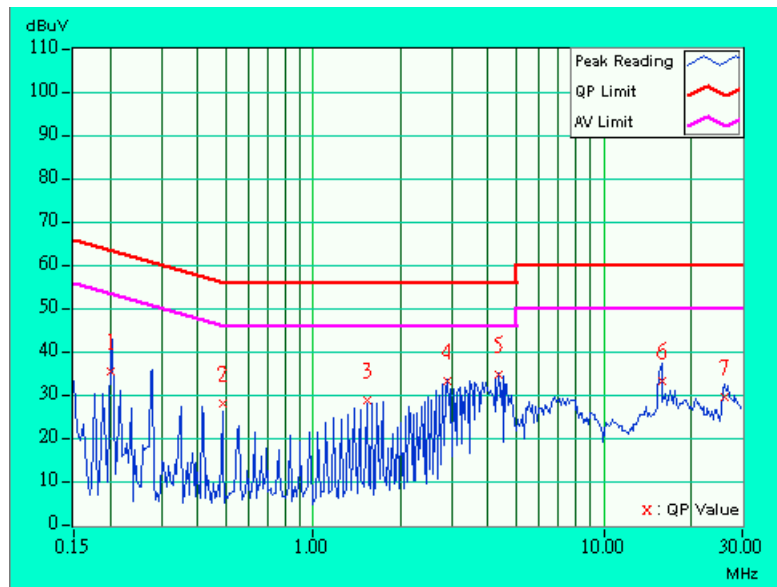


EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	34.70	-	34.80	-	63.58	53.58	-28.78	-
2	0.486	0.11	27.50	-	27.61	-	56.24	46.24	-28.62	-
3	1.527	0.20	28.27	-	28.47	-	56.00	46.00	-27.53	-
4	2.914	0.25	32.71	-	32.96	-	56.00	46.00	-23.04	-
5	4.371	0.31	34.25	-	34.56	-	56.00	46.00	-21.44	-
6	15.883	0.55	32.73	-	33.28	-	60.00	50.00	-26.72	-
7	26.082	0.72	28.93	-	29.65	-	60.00	50.00	-30.35	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.





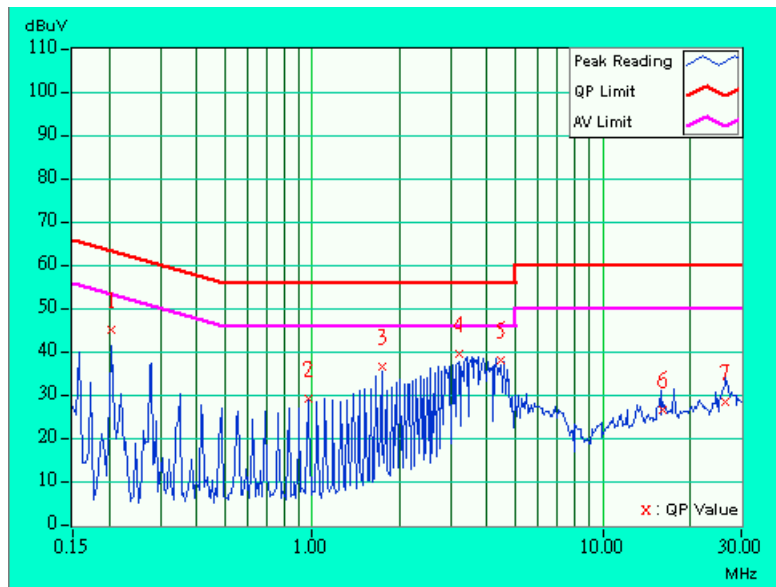
5.1.8 TEST RESULTS (B) (TRANSMITTING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	43.95	-	44.05	-	63.42	53.42	-19.37	-
2	0.970	0.20	27.91	-	28.11	-	56.00	46.00	-27.89	-
3	1.734	0.20	35.37	-	35.57	-	56.00	46.00	-20.43	-
4	3.191	0.32	38.41	-	38.73	-	56.00	46.00	-17.27	-
5	4.441	0.41	37.04	-	37.45	-	56.00	46.00	-18.55	-
6	16.164	0.77	25.59	-	26.36	-	60.00	50.00	-33.64	-
7	26.277	1.23	27.24	-	28.47	-	60.00	50.00	-31.53	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



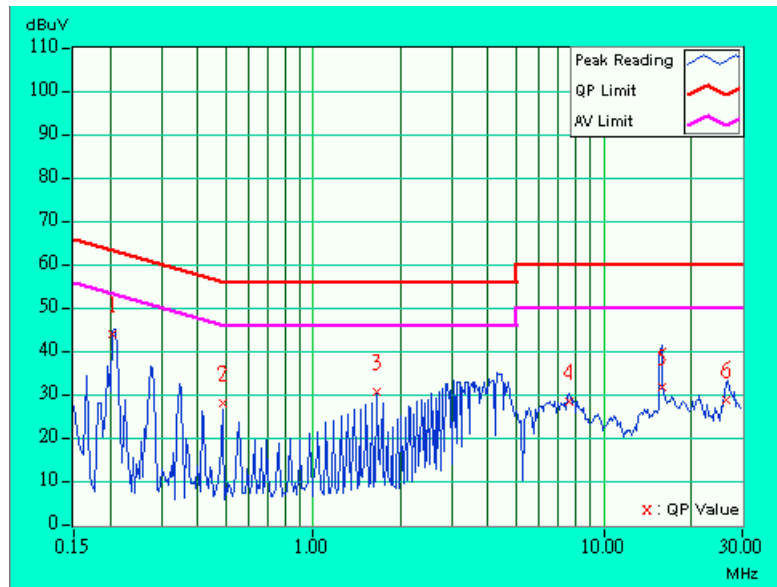


EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.10	43.23	-	43.33	-	63.42	53.42	-20.09	-
2	0.486	0.11	27.54	-	27.65	-	56.24	46.24	-28.58	-
3	1.664	0.20	29.94	-	30.14	-	56.00	46.00	-25.86	-
4	7.629	0.36	27.79	-	28.15	-	60.00	50.00	-31.85	-
5	15.879	0.55	30.95	-	31.50	-	60.00	50.00	-28.50	-
6	26.563	0.73	28.33	-	29.06	-	60.00	50.00	-30.94	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.





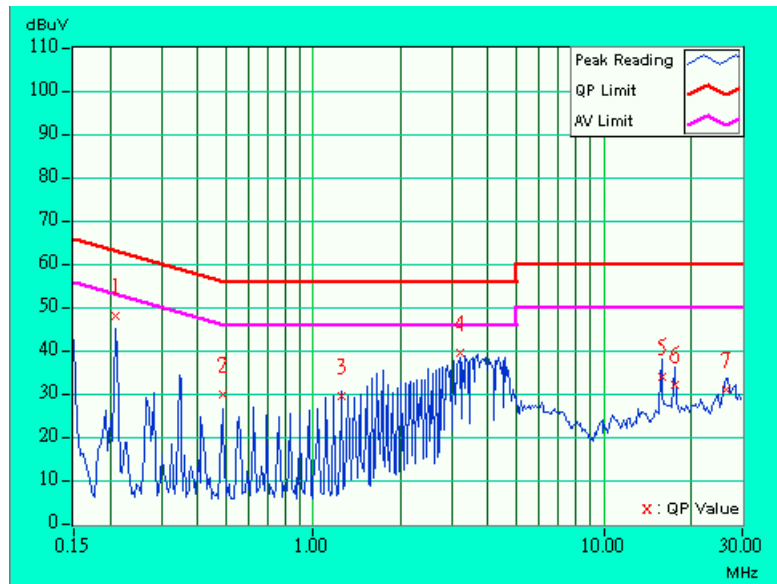
5.1.9 TEST RESULTS (A) (RECEIVING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

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	0.209	0.10	47.10	-	47.20	-	63.26	53.26	-16.06	-
2	0.486	0.11	28.87	-	28.98	-	56.24	46.24	-27.25	-
3	1.246	0.20	28.51	-	28.71	-	56.00	46.00	-27.29	-
4	3.191	0.32	38.50	-	38.82	-	56.00	46.00	-17.18	-
5	15.879	0.75	32.92	-	33.67	-	60.00	50.00	-26.33	-
6	17.625	0.86	31.03	-	31.89	-	60.00	50.00	-28.11	-
7	26.363	1.23	30.04	-	31.27	-	60.00	50.00	-28.73	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



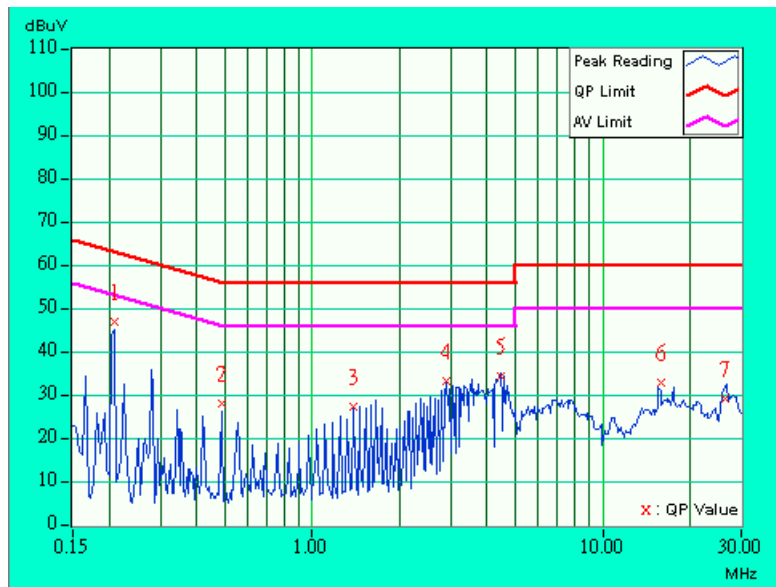


EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.10	46.26	-	46.36	-	63.26	53.26	-16.90	-
2	0.486	0.11	27.28	-	27.39	-	56.24	46.24	-28.84	-
3	1.387	0.20	26.61	-	26.81	-	56.00	46.00	-29.19	-
4	2.914	0.25	32.55	-	32.80	-	56.00	46.00	-23.20	-
5	4.441	0.31	33.68	-	33.99	-	56.00	46.00	-22.01	-
6	15.879	0.55	32.21	-	32.76	-	60.00	50.00	-27.24	-
7	26.289	0.73	28.50	-	29.23	-	60.00	50.00	-30.77	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.





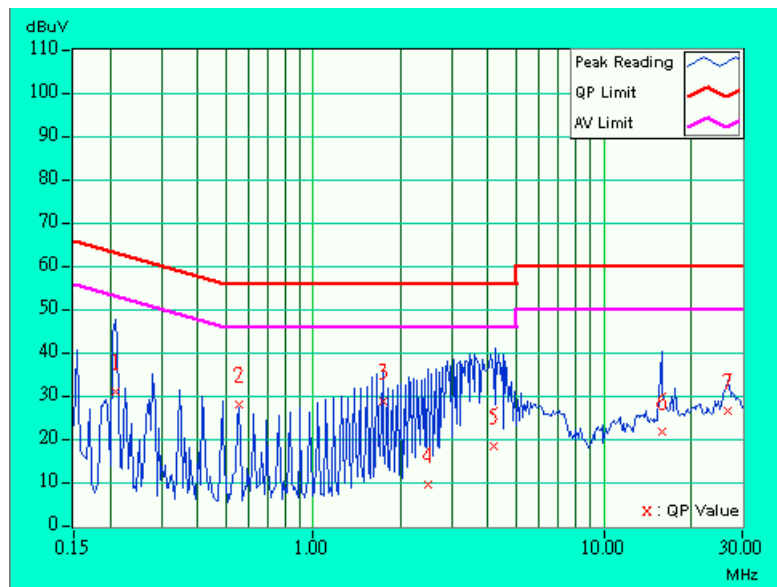
5.1.10 TEST RESULTS (B) (RECEIVING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

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	0.209	0.10	29.79	-	29.89	-	63.26	53.26	-33.37	-
2	0.552	0.13	26.83	-	26.96	-	56.00	46.00	-29.04	-
3	1.734	0.20	27.78	-	27.98	-	56.00	46.00	-28.02	-
4	2.496	0.25	8.53	-	8.78	-	56.00	46.00	-47.22	-
5	4.160	0.41	17.19	-	17.60	-	56.00	46.00	-38.40	-
6	15.883	0.75	20.74	-	21.49	-	60.00	50.00	-38.51	-
7	26.633	1.23	25.40	-	26.63	-	60.00	50.00	-33.37	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



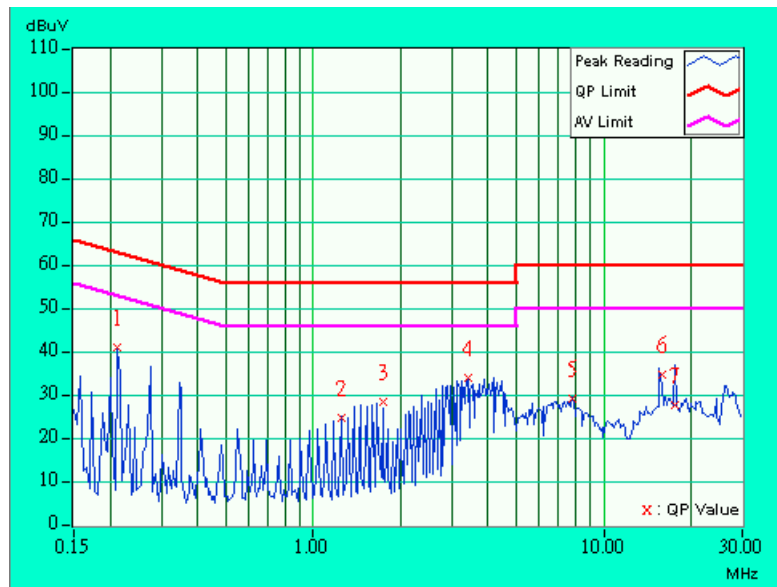


EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH, 1005 hPa	TESTED BY: Bunny Yao	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.213	0.10	40.41	-	40.51	-	63.11	53.11	-22.60	-
2	1.246	0.20	24.09	-	24.29	-	56.00	46.00	-31.71	-
3	1.734	0.20	27.83	-	28.03	-	56.00	46.00	-27.97	-
4	3.398	0.27	33.41	-	33.68	-	56.00	46.00	-22.32	-
5	7.770	0.36	28.61	-	28.97	-	60.00	50.00	-31.03	-
6	15.883	0.55	34.29	-	34.84	-	60.00	50.00	-25.16	-
7	17.625	0.66	27.28	-	27.94	-	60.00	50.00	-32.06	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.





5.2 RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands and falling in the restricted band, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field Strength of Fundamental	
	uV/m	dBuV/m
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

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 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

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

NOTE:

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

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



5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8590L	3544A01176	May 13, 2003
* HP Preamplifier	8447D	2944A08485	Oct. 30, 2002
* HP Preamplifier	8449B	3008A01201	Dec. 06, 2002
* HP Preamplifier	8449B	3008A01292	Aug. 7, 2003
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 27, 2003
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2002
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 2, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	Jul. 3, 2003
* EMCO Horn Antenna	3115	9312-4192	Apr. 9, 2003
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jan. 25, 2003
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jul. 12, 2003
Open Field Test Site	Site 5	ADT-R05	Jul. 19, 2003
VCCI Site Registration No.	Site 5	R-1039	NA

- NOTE:**
1. The measurement uncertainty is less than +/- 3.0dB, which is calculated as per the NAMAS document NIS81.
 2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
 3. "*" = These equipment are used for the final measurement.
 4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 5. The test was performed in ADT Open Site No. 5.



5.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

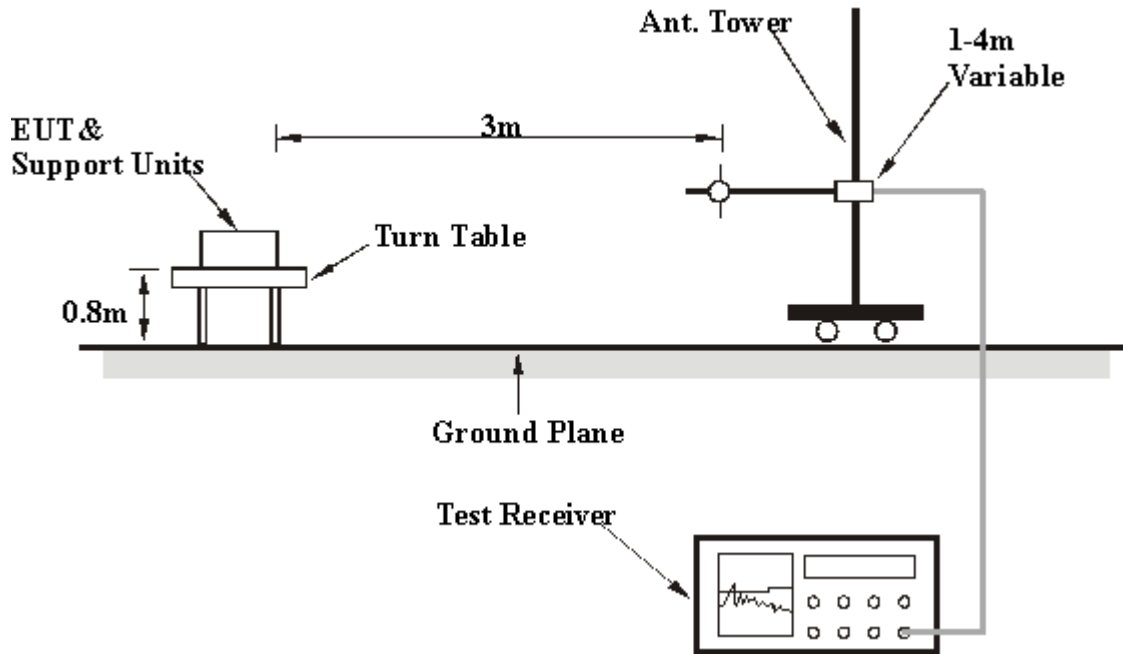
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth 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 300 Hz for Average detection (AV) at frequency above 1GHz.

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



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

5.2.7 EUT OPERATING CONDITIONS

Same as 5.1.6.

5.2.8 TEST RESULTS (A) (TRANSMITTING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	33.5 QP	43.50	-10.00	1.26H	99	22.80	9.62	1.07	0.00	-10.70
2	192.00	34.8 QP	43.50	-8.70	1.31H	28	24.56	8.95	1.28	0.00	-10.24
3	299.80	28.5 QP	46.00	-17.50	1.41H	57	13.87	13.18	1.45	0.00	-14.63
4	352.00	38.0 QP	46.00	-8.00	1.24H	128	22.24	14.31	1.46	0.00	-15.76
5	375.00	42.5 QP	46.00	-3.50	1.57H	229	25.87	15.13	1.50	0.00	-16.63
6	384.00	38.0 QP	46.00	-8.00	1.49H	160	20.98	15.50	1.52	0.00	-17.02
7	480.00	38.2 QP	46.00	-7.80	1.41H	76	19.59	16.92	1.69	0.00	-18.61
8	576.00	27.6 QP	46.00	-18.40	1.30H	157	7.47	18.28	1.88	0.00	-20.16
9	736.00	33.9 QP	46.00	-12.10	1.42H	252	11.83	19.93	2.14	0.00	-22.07
10	800.00	36.6 QP	46.00	-9.40	1.10H	215	13.62	20.69	2.29	0.00	-22.99

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	120.00	27.5 QP	43.50	-16.00	1.15V	51	14.95	11.65	0.89	0.00	-12.55
2	192.00	30.2 QP	43.50	-13.30	1.30V	157	19.96	8.95	1.28	0.00	-10.24
3	352.00	27.4 QP	46.00	-18.60	1.37V	246	11.64	14.31	1.46	0.00	-15.76
4	480.00	26.8 QP	46.00	-19.20	1.54V	185	8.19	16.92	1.69	0.00	-18.62
5	608.80	28.0 QP	46.00	-18.00	1.50V	51	7.33	18.73	1.95	0.00	-20.67
6	648.00	27.9 QP	46.00	-18.10	1.00V	29	6.68	19.21	2.01	0.00	-21.22
7	736.00	30.5 QP	46.00	-15.50	1.57V	115	8.43	19.93	2.14	0.00	-22.08

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5088.00	41.2 AV	54.00	-12.80	1.92H	215	42.00	31.83	4.03	36.67	0.81	Note 6
2	5088.00	51.2 PK	74.00	-22.80	1.92H	215	52.00	31.83	4.03	36.67	0.81	Note 6
3	*5180.00	88.7 AV			1.91H	214	89.50	31.87	3.95	36.63	0.83	
4	*5180.00	95.5 PK			1.91H	214	96.30	31.87	3.95	36.63	0.83	
5	10360.00	50.4 PK	68.30	-17.90	1.83H	196	42.00	39.16	6.69	37.42	-8.43	

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5108.00	42.8 AV	54.00	-11.20	1.79V	197	43.60	31.85	3.99	36.65	0.81	Note 6
2	5108.00	49.4 PK	74.00	-24.60	1.79V	197	50.20	31.85	3.99	36.65	0.81	Note 6
3	*5180.00	96.2 PK			1.31V	143	97.00	31.87	3.95	36.63	0.83	
4	*5180.00	87.2 AV			1.31V	143	88.00	31.87	3.95	36.63	0.83	
5	5270.00	48.1 PK	68.30	-20.20	1.70V	149	48.90	31.90	3.86	36.60	0.84	
6	10360.00	54.9 PK	68.30	-13.40	1.77V	143	46.50	39.16	6.69	37.42	-8.43	

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5088.00	42.2 AV	54.00	-11.80	1.97H	213	43.00	31.83	4.03	36.67	0.81	Note 6
2	5088.00	50.9 PK	74.00	-23.10	1.97H	213	51.70	31.83	4.03	36.67	0.81	Note 6
3	5152.00	49.2 PK	68.30	-19.10	2.39H	233	50.00	31.87	3.95	36.63	0.82.	
4	*5240.00	96.2 PK			2.37H	229	97.00	31.90	3.86	36.60	0.85	
5	*5240.00	98.0 AV			2.37H	229	98.80	31.90	3.86	36.60	0.85	
6	10480.00	58.6 PK	68.30	-9.70	1.70H	198	49.40	39.36	7.14	37.32	-9.19.	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5088.00	49.2 AV	54.00	-4.80	1.82V	332	50.00	31.83	4.03	36.67	0.81	Note 6
2	5088.00	53.1 PK	74.00	-20.90	1.82V	332	53.90	31.83	4.03	36.67	0.81	Note 6
3	5152.00	54.1 PK	68.30	-14.20	1.48V	194	54.90	31.87	3.95	36.63	0.82.	
4	*5240.00	91.0 AV			1.43V	280	91.80	31.90	3.86	36.60	0.85	
5	*5240.00	96.7 PK			1.43V	280	97.50	31.90	3.86	36.60	0.85	
6	10480.00	56.8 PK	68.30	-11.50	1.70V	134	47.60	39.36	7.14	37.32	-9.19.	

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	5212.00	49.6 PK	68.30	-18.70	1.77H	209	50.40	31.87	3.90	36.62	0.83
2	*5260.00	85.3 AV			2.23H	216	86.10	31.90	3.86	36.60	0.85
3	*5260.00	96.2 PK			2.23H	216	97.00	31.90	3.86	36.60	0.85
4	10520.00	57.6 PK	68.30	-10.70	1.77H	209	48.20	39.43	7.22	37.28	-9.36.

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	5212.00	52.0 PK	68.30	-16.3	1.62V	169	52.80	31.88	3.90	36.62	0.83
2	*5260.00	83.5 AV			2.42V	246	84.30	31.90	3.86	36.60	0.85
3	*5260.00	91.5 PK			2.42V	246	92.30	31.90	3.86	36.60	0.85
4	10520.00	56.9 PK	68.30	-11.4	1.67V	174	47.50	39.43	7.22	37.28	-9.36.

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5320.00	77.1 AV			1.95H	73	78.00	31.93	3.77	36.57	0.86	
2	*5320.00	85.1 PK			1.95H	73	86.00	31.93	3.77	36.57	0.86	
3	5344.00	48.2 PK	68.30	-20.10	1.74H	215	49.10	31.93	3.77	36.57	0.86	
4	10640.00	42.3 AV	54.00	-11.7	1.88H	240	32.70	39.61	7.22	37.18	-9.64	Note 6
5	10640.00	49.1 PK	74.00	-24.9	1.88H	240	39.50	39.61	7.22	37.18	-9.64	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5140.00	42.5 AV	54.00	-11.50	1.87V	246	43.30	31.85	3.99	36.65	0.81	Note 6
2	5140.00	47.1 PK	74.00	-26.90	1.87V	246	47.90	31.85	3.99	36.65	0.81	Note 6
3	*5320.00	83.6 AV			1.74V	301	84.50	31.93	3.77	36.57	0.87	
4	*5320.00	90.4 PK			1.74V	301	91.30	31.93	3.77	36.57	0.87	
5	10640.00	42.4 AV	54.00	-11.60	1.87V	246	32.80	39.61	7.22	37.18	-9.64	Note 6
6	10640.00	49.6 PK	74.00	-24.40	1.87V	246	40.00	39.61	7.22	37.18	-9.64	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	9
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5715.00	47.4 PK	68.30	-20.90	2.33H	317	47.53	32.26	4.18	36.59	0.15	
2	5725.00	59.6 PK	78.30	-18.70	2.33H	317	59.74	32.26	4.18	36.59	0.15	
3	*5745.00	84.0 AV			2.33H	317	84.00	32.31	4.29	36.60	0.01	
4	*5745.00	92.0 PK			2.33H	317	92.00	32.31	4.29	36.60	0.01	
5	11490.00	47.4 AV	54.00	-6.60	1.86H	305	36.80	40.00	7.51	36.90	-10.61	Note 6
6	11490.00	55.4 PK	74.00	-18.60	1.86H	305	44.80	40.00	7.51	36.90	-10.61	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5715.00	48.4 PK	68.30	-19.90	2.37V	269	48.53	32.26	4.18	36.59	0.15	
2	5725.00	60.6 PK	78.30	-17.70	2.37V	269	60.74	32.26	4.18	36.59	0.15	
3	*5745.00	86.0 AV			2.37V	269	86.00	32.31	4.29	36.60	0.02	
4	*5745.00	93.0 PK			2.37V	269	93.00	32.31	4.29	36.60	0.02	
5	11490.00	46.2 AV	54.00	-7.80	1.83V	229	35.60	40.00	7.51	36.90	-10.61	Note 6
6	11490.00	53.5 PK	74.00	-20.50	1.83V	229	42.90	40.00	7.51	36.90	-10.61	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	12
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5568.00	49.3 PK	68.30	-19.00	1.93H	312	50.00	32.06	3.73	36.52	0.73	
2	*5805.00	86.9 AV			1.82H	254	86.80	32.36	4.40	36.62	-0.14	
3	*5805.00	91.1 PK			1.82H	254	91.00	32.36	4.40	36.62	-0.14	
4	5825.00	55.4 PK	78.30	-22.90	1.82H	254	55.11	32.41	4.51	36.64	-0.28	
5	5835.00	42.8 PK	68.30	-25.50	1.82H	254	42.52	32.41	4.51	36.64	-0.28	
6	11610.00	46.3 AV	54.00	-7.70	1.46H	60	35.90	39.83	7.54	36.98	-10.39	Note 6
7	11610.00	55.7 PK	74.00	-18.30	1.46H	60	45.30	39.83	7.54	36.98	-10.39	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5380.00	47.0 PK	68.30	-21.30	1.00V	295	47.90	31.95	3.73	36.55	0.88	
2	*5805.00	88.0 AV			1.64V	8	87.90	32.36	4.40	36.62	-0.14	
3	*5805.00	93.5 PK			1.64V	8	93.40	32.36	4.40	36.62	-0.14	
4	5825.00	57.8 PK	78.30	-20.50	1.64V	8	57.50	32.41	4.51	36.64	-0.28	
5	5835.00	45.2 PK	68.30	-23.10	1.64V	8	44.92	32.41	4.51	36.64	-0.28	
6	11610.00	48.9 AV	54.00	-5.10	1.11V	244	38.50	39.83	7.54	36.98	-10.39	Note 6
7	11610.00	56.6 PK	74.00	-17.40	1.11V	244	46.20	39.83	7.54	36.98	-10.39	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5088.00	39.7 AV	54.00	-14.30	2.15H	339	40.50	31.83	4.03	36.67	0.81	Note 6
2	5088.00	44.5 PK	74.00	-29.50	2.15H	339	45.30	31.83	4.03	36.67	0.81	Note 6
3	5150.00	43.7 AV	54.00	-10.3	2.07H	339	44.50	31.87	3.95	36.63	0.82	Note 6
4	5150.00	52.2 PK	74.00	-21.80	2.07H	339	53.00	31.87	3.95	36.63	0.82	Note 6
5	*5210.00	85.5 AV			2.17H	339	86.30	31.88	3.90	36.62	0.83	
6	*5210.00	92.2 PK			2.17H	339	93.00	31.88	3.90	36.62	0.83	
7	10420.00	60.4 PK	68.30	-7.90	1.65H	302	51.50	39.30	6.99	37.35	-8.94.	

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5101.00	42.4 AV	54.00	-11.60	1.87V	298	43.20	31.83	4.03	36.67	0.81	Note 6
2	5101.00	52.2 PK	74.00	-21.80	1.87V	298	53.00	31.83	4.03	36.67	0.81	Note 6
3	5150.00	45.1 AV	54.00	-8.90	2.02V	316	45.90	31.87	3.95	36.63	0.82	Note 6
4	5150.00	49.5 PK	74.00	-24.50	2.02V	301	50.30	31.87	3.95	36.63	0.82	Note 6
5	*5210.00	89.2 AV			2.00V	261	90.00	31.88	3.90	36.62	0.84	
6	*5210.00	96.5 PK			2.00V	261	97.30	31.88	3.90	36.62	0.84	
7	10420.00	54.4 PK	68.30	-13.90	1.70V	208	45.50	39.30	6.99	37.35	-8.94.	

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	2
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5088.00	39.7 AV	54.00	-14.30	2.16H	201	40.50	31.83	4.03	36.67	0.81	Note 6
2	5088.00	45.5 PK	74.00	-28.50	2.06H	201	46.30	31.83	4.03	36.67	0.81	Note 6
3	*5250.00	84.1 AV			2.24H	201	84.90	31.90	3.86	36.60	0.85	
4	*5250.00	95.2 PK			2.24H	201	96.00	31.90	3.86	36.60	0.85	
5	10500.00	56.6 PK	68.30	-11.70	1.77H	139	47.20	39.43	7.22	37.28	-9.36.	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*5250.00	86.5 AV			2.07V	232	87.30	31.90	3.86	36.60	0.85
2	*5250.00	93.0 PK			2.07V	232	93.80	31.90	3.86	36.60	0.85
3	10500.00	60.3 PK	68.30	-8.0	1.66V	160	50.90	39.43	7.22	37.28	-9.36.

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	3
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5024.00	44.3 AV	54.00	-9.70	1.83H	315	45.10	31.81	4.07	36.69	0.80	Note 6
2	5024.00	52.2 PK	74.00	-21.80	1.83H	315	53.00	31.81	4.07	36.69	0.80	Note 6
3	5088.00	39.2 AV	54.00	-14.80	2.32H	254	40.00	31.83	4.03	36.67	0.81	Note 6
4	5088.00	46.8 PK	74.00	-27.20	2.32H	254	47.60	31.83	4.03	36.67	0.81	Note 6
5	*5290.00	81.7 AV			2.25H	314	82.50	31.92	3.82	36.58	0.86	
6	*5290.00	89.2 PK			2.25H	314	90.00	31.92	3.82	36.58	0.86	
7	10580.00	53.9 PK	68.30	-14.40	1.73H	121	44.40	39.49	7.22	37.25	-9.46	

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5067.00	42.7 AV	54.00	-11.30	1.71V	178	43.50	31.83	4.03	36.67	0.81	Note 6
2	5067.00	49.2 PK	74.00	-24.80	1.71V	178	50.00	31.83	4.03	36.67	0.81	Note 6
3	*5290.00	84.0 AV			2.38V	233	84.80	31.92	3.82	36.58	0.86	
4	*5290.00	90.5 PK			2.38V	233	91.30	31.92	3.82	36.58	0.86	
5	10580.00	54.3 PK	68.30	-14.00	1.95V	137	44.80	39.49	7.22	37.25	-9.46	

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5715.00	49.4 PK	68.30	-18.90	1.61H	167	49.58	32.26	4.18	36.59	0.15	
2	5725.00	57.6 PK	78.30	-20.70	1.61H	167	57.76	32.26	4.18	36.59	0.15	
3	*5760.00	86.2 AV			1.61H	167	86.20	32.31	4.29	36.60	0.01	
4	*5760.00	91.3 PK			1.61H	167	91.30	32.31	4.29	36.60	0.01	
5	11520.00	46.1 AV	54.00	-7.90	2.32H	254	35.60	39.94	7.52	36.92	-10.54	Note 6
6	11520.00	55.8 PK	74.00	-18.20	2.32H	254	45.30	39.94	7.52	36.92	-10.54	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5643.00	45.9 PK	68.30	-22.40	2.25V	160	46.30	32.16	3.95	36.55	0.44	
2	5715.00	49.1 PK	68.30	-19.20	2.21V	166	49.28	32.26	4.18	36.59	0.15	
3	5725.00	56.8 PK	78.30	-21.50	2.21V	166	56.90	32.26	4.18	36.59	0.15	
4	*5760.00	86.5 AV			2.21V	166	86.50	32.31	4.29	36.60	0.01	
5	*5760.00	91.0 PK			2.21V	166	91.00	32.31	4.29	36.60	0.01	
6	11520.00	48.0 AV	54.00	-6.00	1.81V	73	37.50	39.94	7.52	36.92	-10.54	Note 6
7	11520.00	56.3 PK	74.00	-17.70	1.81V	73	45.80	39.94	7.52	36.92	-10.54	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5800.00	83.6 AV			1.98H	113	83.50	32.36	4.40	36.62	-0.14	
2	*5800.00	88.0 PK			1.98H	113	87.90	32.36	4.40	36.62	-0.14	
3	5825.00	63.9 PK	78.30	-14.40	1.98H	113	78.02	32.41	4.51	36.64	-0.28	
4	5835.00	53.8 PK	68.30	-14.50	1.98H	113	68.02	32.41	4.51	36.64	-0.28	
5	11600.00	47.0 AV	54.00	-7.00	1.60H	162	36.50	39.88	7.53	36.95	-10.46	Note 6
6	11600.00	55.5 PK	74.00	-18.50	1.60H	162	45.00	39.88	7.53	36.95	-10.46	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5028.00	45.7 AV	54.00	-8.30	2.14V	89	46.50	31.81	4.07	36.69	0.80	Note 6
2	5028.00	49.2 PK	74.00	-24.80	2.14V	89	50.00	31.81	4.07	36.69	0.80	Note 6
3	5150.00	44.7 AV	54.00	-9.30	2.14V	89	45.50	31.87	3.95	36.63	0.82	Note 6
4	5150.00	46.2 PK	74.00	-27.80	2.14V	89	47.00	31.87	3.95	36.63	0.82	Note 6
5	*5800.00	85.9 AV			2.06V	89	85.80	32.36	4.40	36.62	-0.14	
6	*5800.00	92.4 PK			2.06V	89	92.30	32.36	4.40	36.62	-0.14	
7	5825.00	68.3 PK	78.30	-10.00	2.06V	89	67.99	32.41	4.51	36.64	-0.28	
8	5835.00	58.2 PK	68.30	-10.10	2.06V	89	57.87	32.41	4.51	36.64	-0.28	
9	11600.00	48.5 AV	54.00	-5.50	1.81V	73	38.00	39.88	7.53	36.95	-10.46	Note 6
10	11600.00	57.5 PK	74.00	-16.50	1.81V	73	47.00	39.88	7.53	36.95	-10.46	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

5.2.9 TEST RESULTS (B) (TRANSMITTING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	27.5 QP	43.50	-16.00	1.14H	245	16.80	9.62	1.07	0.00	-10.70
2	192.00	34.8 QP	43.50	-8.70	1.03H	217	24.56	8.95	1.28	0.00	-10.24
3	200.00	40.0 QP	43.50	-3.50	1.47H	114	29.62	8.98	1.40	0.00	-10.38
4	288.00	28.8 QP	46.00	-17.20	1.43H	130	14.51	12.88	1.41	0.00	-14.29
5	352.00	28.5 QP	46.00	-17.50	1.29H	232	12.74	14.31	1.46	0.00	-15.76
6	416.00	37.0 QP	46.00	-9.00	1.49H	93	19.25	16.18	1.57	0.00	-17.76
7	480.00	29.5 QP	46.00	-16.50	1.45H	182	10.89	16.92	1.69	0.00	-18.61
8	544.00	27.2 QP	46.00	-18.80	1.35H	257	7.52	17.86	1.82	0.00	-19.68
9	576.00	27.8 QP	46.00	-18.20	1.41H	213	7.64	18.28	1.88	0.00	-20.16
10	729.00	42.7 QP	46.00	-3.30	1.26H	115	20.78	19.80	2.12	0.00	-21.92
11	768.00	32.0 QP	46.00	-14.00	1.16H	27	9.43	20.36	2.22	0.00	-22.57

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	152.00	33.0 QP	43.50	-10.50	1.73V	181	21.70	10.16	1.14	0.00	-11.30
2	192.00	30.5 QP	43.50	-13.00	1.50V	114	20.26	8.95	1.28	0.00	-10.24
3	198.00	38.8 QP	43.50	-4.70	1.31V	39	28.47	8.97	1.36	0.00	-10.33
4	352.00	33.5 QP	46.00	-12.50	1.45V	30	17.74	14.31	1.46	0.00	-15.76
5	384.00	30.0 QP	46.00	-16.00	1.33V	108	12.98	15.50	1.52	0.00	-17.02
6	438.00	35.5 QP	46.00	-10.50	1.17V	202	17.61	16.30	1.59	0.00	-17.89
7	544.00	26.5 QP	46.00	-19.50	1.43V	244	6.82	17.86	1.82	0.00	-19.69
8	576.00	27.7 QP	46.00	-18.30	1.27V	130	7.54	18.28	1.88	0.00	-20.17
9	729.00	36.5 QP	46.00	-9.50	1.32V	108	14.58	19.80	2.12	0.00	-21.93
10	736.00	28.8 QP	46.00	-17.20	1.24V	180	6.73	19.93	2.14	0.00	-22.08

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5088.00	41.2 AV	54.00	-12.80	1.85H	154	42.00	31.83	4.03	36.67	0.81	Note 6
2	5088.00	48.2 PK	74.00	-25.80	1.85H	154	49.00	31.83	4.03	36.67	0.81	Note 6
3	*5180.00	83.2 AV			1.38H	196	84.00	31.87	3.95	36.63	0.83	
4	*5180.00	91.2 PK			1.38H	196	92.00	31.87	3.95	36.63	0.83	
5	5347.00	49.5 PK	68.30	-18.80	1.67H	259	50.40	31.93	3.77	36.57	0.87	
6	10360.00	50.4 PK	68.30	-17.90	1.64H	134	42.00	39.16	6.69	37.42	-8.43	

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5088.00	44.2 AV	54.00	-9.80	1.65V	203	45.00	31.83	4.03	36.67	0.81	Note 6
2	5088.00	51.2 PK	74.00	-22.80	1.65V	203	52.00	31.83	4.03	36.67	0.81	Note 6
3	*5180.00	82.8 AV			1.57V	185	83.60	31.87	3.95	36.63	0.82	
4	*5180.00	89.4 PK			1.57V	185	90.20	31.87	3.95	36.63	0.82	
5	10360.00	50.8 PK	68.30	-17.50	1.80V	213	42.40	39.16	6.69	37.42	-8.43	

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*5240.00	84.0 AV			1.36H	162	84.80	31.90	3.86	36.60	0.85
2	*5240.00	95.2 PK			1.36H	162	96.00	31.90	3.86	36.60	0.85
3	10480.00	51.1 PK	68.30	-17.20	1.60H	170	41.90	39.36	7.14	37.32	-9.19

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5150.00	39.2 AV	54.00	-14.80	1.90V	204	40.00	31.87	3.95	36.63	0.82	Note 6
2	5150.00	48.2 PK	74.00	-25.80	1.90V	204	49.00	31.87	3.95	36.63	0.82	Note 6
3	*5240.00	85.3 AV			2.01V	196	86.10	31.90	3.86	36.60	0.85	
4	*5240.00	97.3 PK			2.01V	196	98.10	31.90	3.86	36.60	0.85	
5	10480.00	51.7 PK	68.30	-16.60	1.86V	181	42.50	39.36	7.14	37.32	-9.19	

NOTE:

- Emission level = Raw value - Correction Factor
- Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
- Margin value = Emission level - Limit value
- The other emission levels were very low against the limit.
- "*": Fundamental frequency
- The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	5216.00	47.2 PK	68.30	-21.10	1.84H	172	48.00	31.88	3.90	36.62	0.83
2	*5260.00	83.7 AV			1.96H	181	84.50	31.90	3.86	36.60	0.84.
3	*5260.00	93.9 PK			1.96H	181	94.70	31.90	3.86	36.60	0.84.
4	10520.00	55.1 PK	68.30	-13.20	1.74H	143	45.70	39.43	7.22	37.28	-9.36.

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	5216.00	50.4 PK	68.30	-17.90	2.24V	211	51.20	31.88	3.90	36.62	0.83
2	*5260.00	83.7 AV			1.87V	190	84.50	31.90	3.86	36.60	0.85
3	*5260.00	96.6 PK			1.87V	190	97.40	31.90	3.86	36.60	0.85
4	10520.00	59.4 PK	68.30	-8.90	1.79V	179	50.00	39.43	7.22	37.28	-9.36.

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5320.00	81.3 AV			1.30H	232	82.20	31.93	3.77	36.57	0.86.	
2	*5320.00	92.1 PK			1.30H	232	93.00	31.93	3.77	36.57	0.86.	
3	10640.00	45.6 AV	54.00	-8.40	1.96H	181	36.00	39.61	7.22	37.18	-9.64	Note 6
4	10640.00	52.4 PK	74.00	-21.60	1.96H	181	42.80	39.61	7.22	37.18	-9.64	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5320.00	86.7 AV			1.50V	186	87.60	31.93	3.77	36.57	0.87	
2	*5320.00	96.5 PK			1.50V	186	97.40	31.93	3.77	36.57	0.87	
3	5410.00	45.1 AV	54.00	-8.90	1.47V	180	46.00	31.97	3.69	36.53	0.87	Note 6
4	5410.00	51.1 PK	74.00	-22.90	1.47V	180	52.00	31.97	3.69	36.53	0.87	Note 6
5	10640.00	50.6 AV	54.00	-3.40	1.18V	227	41.00	39.61	7.22	37.18	-9.64	Note 6
6	10640.00	58.7 PK	74.00	-15.30	1.18V	227	49.10	39.61	7.22	37.18	-9.64.	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	9
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5715.00	49.4 PK	68.30	-18.90	1.31H	85	49.53	32.26	4.18	36.59	0.15	
2	5725.00	61.6 PK	78.30	-16.70	1.31H	85	61.74	32.26	4.18	36.59	0.15	
3	*5745.00	83.0 AV			1.31H	85	83.00	32.31	4.29	36.60	0.01	
4	*5745.00	94.0 PK			1.31H	85	94.00	32.31	4.29	36.60	0.01	
5	11490.00	57.6 PK	74.00	-16.40	1.65H	91	47.00	40.00	7.51	36.90	-10.61.	Note 6
6	11490.00	51.4 AV	54.00	-2.60	1.65H	91	40.80	40.00	7.51	36.90	-10.61	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5160.00	47.2 PK	68.30	-21.10	2.05V	227	48.00	31.87	3.95	36.63	0.82	
2	5715.00	51.5 PK	68.30	-16.80	1.68V	183	51.63	32.26	4.18	36.59	0.15	
3	5725.00	63.7 PK	78.30	-14.60	1.68V	183	51.63	32.26	4.18	36.59	0.15	
4	*5745.00	87.4 AV			1.68V	183	87.40	32.31	4.29	36.60	0.01.	
5	*5745.00	96.1 PK			1.68V	183	96.10	32.31	4.29	36.60	0.01.	
6	11490.00	50.7 AV	54.00	-3.30	1.85V	198	40.10	40.00	7.51	36.90	-10.61	Note 6
7	11490.00	57.8 PK	74.00	-16.20	1.85V	198	47.20	40.00	7.51	36.90	-10.61.	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	12
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5805.00	85.9 AV			1.86H	175	85.80	32.36	4.40	36.62	-0.14	
2	*5805.00	95.5 PK			1.86H	175	95.40	32.36	4.40	36.62	-0.14	
3	5825.00	59.8 PK	78.30	-18.50	1.86H	175	59.51	32.41	4.51	36.64	-0.28	
4	5835.00	47.2 PK	68.30	-21.10	1.86H	175	46.92	32.41	4.51	36.64	-0.28	
5	11610.00	56.4 PK	74.00	-17.60	1.84H	170	46.00	39.83	7.54	36.98	-10.39	Note 6
6	11610.00	49.4 AV	54.00	-4.60	1.84H	170	39.00	39.83	7.54	36.98	-10.39	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5805.00	86.1 AV			1.34V	3	86.00	32.36	4.40	36.62	-0.14	
2	*5805.00	97.4 PK			1.34V	3	97.30	32.36	4.40	36.62	-0.14	
3	5825.00	61.7 PK	78.30	-16.60	1.34V	3	61.42	32.41	4.51	36.44	-0.28	
4	5835.00	49.1 PK	68.30	-19.20	1.34V	3	48.82	32.41	4.51	36.44	-0.28	
5	11610.00	51.1 AV	54.00	-2.90	1.42V	348	40.70	39.83	7.54	36.98	-10.39	Note 6
6	11610.00	59.4 PK	74.00	-14.60	1.42V	348	49.00	39.83	7.54	36.98	-10.39	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*5210.00	95.2 PK			1.56H	66	96.00	31.88	3.90	36.62	0.84
2	*5210.00	86.6 AV			1.56H	66	87.40	31.88	3.90	36.62	0.84
3	10420.00	50.9 PK	68.30	-17.40	1.78H	13	42.00	39.30	6.99	37.35	-8.94

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5123.00	41.2 AV	54.00	-12.80	1.47V	163	42.00	31.85	3.99	36.65	0.81	Note 6
2	5123.00	49.2 PK	74.00	-24.80	1.47V	163	50.00	31.85	3.99	36.65	0.81	Note 6
3	*5210.00	84.5 AV			1.88V	156	85.30	31.88	3.90	36.62	0.84	
4	*5210.00	95.9 PK			1.88V	156	96.70	31.88	3.90	36.62	0.84	
5	10420.00	53.4 PK	68.30	-14.90	1.76V	163	44.50	39.30	6.99	37.35	-8.94	

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	2
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*5250.00	79.2 AV			1.64H	355	80.00	31.90	3.86	36.60	0.84
2	*5250.00	92.3 PK			1.64H	355	93.10	31.90	3.86	36.60	0.84
3	10500.00	52.2 PK	68.300	-22.90	1.45H	330	42.80	39.43	7.22	37.28	-9.36

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*5250.00	85.2 AV			1.47V	141	86.00	31.90	3.86	36.60	0.85
2	*5250.00	94.3 PK			1.47V	141	95.10	31.90	3.86	36.60	0.85
3	10500.00	52.2 PK	68.30	-16.10	1.51V	141	42.80	39.43	7.22	37.28	-9.36

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	3
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*5290.00	83.0 AV			1.73H	302	83.80	31.92	3.82	36.58	0.85.
2	*5290.00	95.5 PK			1.73H	302	96.30	31.92	3.82	36.58	0.85.
3	10580.00	52.2 PK	68.30	-16.10	1.60H	314	42.70	39.49	7.22	37.25	-9.46

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	*5290.00	95.2 PK			1.69V	131	96.00	31.92	3.82	36.58	0.86
2	*5290.00	84.2 AV			1.69V	131	85.00	31.92	3.82	36.58	0.86
3	10580.00	52.3 PK	68.30	-16.00	1.88V	216	42.80	39.49	7.22	37.25	-9.46

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5715.00	45.0 PK	68.30	-23.30	1.60H	314	45.18	32.26	4.18	36.59	0.15	
2	5725.00	53.2 PK	78.30	-25.10	1.60H	314	53.36	32.26	4.18	36.59	0.15	
3	*5760.00	78.0 AV			1.60H	314	78.00	32.31	4.29	36.60	0.01	
4	*5760.00	86.9 PK			1.60H	314	86.90	32.31	4.29	36.60	0.01	
5	11520.00	50.6 AV	54.00	-3.40	1.90H	287	40.02	39.94	7.52	36.92	-10.54	Note 6
6	11520.00	58.5 PK	74.00	-15.50	1.90H	287	48.00	39.94	7.52	36.92	-10.54	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	5602.00	47.4 PK	68.30	-20.90	1.70V	250	48.00	32.11	3.84	36.54	0.59	
2	5715.00	55.4 PK	68.30	-12.9	1.20V	231	55.58	32.26	4.18	36.59	0.15	
3	5725.00	63.6 PK	78.30	-14.7	1.20V	232	63.76	32.26	4.18	36.59	0.15	
4	*5760.00	86.0 AV			1.20V	231	86.00	32.31	4.29	36.60	0.01	
5	*5760.00	97.3 PK			1.20V	232	97.30	32.31	4.29	36.60	0.01	
6	11520.00	46.5 AV	54.00	-7.50	1.72V	196	36.00	39.94	7.52	36.92	-10.54	Note 6
7	11520.00	52.5 PK	74.00	-21.50	1.72V	196	42.00	39.94	7.52	36.92	-10.54	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5800.00	81.7 AV			1.90H	284	81.60	32.36	4.40	36.62	-0.14	
2	*5800.00	92.8 PK			1.90H	284	92.70	32.36	4.40	36.62	-0.14	
3	5825.00	68.7 PK	78.30	-9.60	1.90H	284	68.39	32.41	4.51	36.64	-0.28	
4	5835.00	58.6 PK	68.30	-9.70	1.90H	284	58.27	32.41	4.51	36.64	-0.28	
5	11600.00	53.5 PK	74.00	-20.50	2.08H	261	43.00	39.88	7.53	36.95	-10.46	Note 6
6	11600.00	49.1 AV	54.00	-4.90	2.08H	261	38.60	39.88	7.53	36.95	-10.46	Note 6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5800.00	84.1 AV			1.61V	194	84.00	32.36	4.40	36.62	-0.14	
2	*5800.00	92.1 PK			1.61V	194	92.00	32.36	4.40	36.62	-0.14	
3	5825.00	68.0 PK	78.30	-10.30	1.61V	194	67.69	32.41	4.51	36.64	-0.28	
4	5835.00	57.9 PK	68.30	-10.40	1.61V	194	58.13	32.41	4.51	36.64	-0.28	
5	11600.00	49.9 AV	54.00	-4.10	1.53V	183	39.40	39.88	7.53	36.95	-10.46	Note 6
6	11600.00	57.6 PK	74.00	-16.40	1.53V	183	47.10	39.88	7.53	36.95	-10.46	Note 6

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. The radiated frequency falling in the restricted band.

5.2.10 TEST RESULTS (A) (RECEIVING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	30.0 QP	43.50	-13.50	1.40H	18	19.30	9.62	1.07	0.00	-10.70
2	192.00	30.0 QP	43.50	-13.50	1.49H	75	19.76	8.95	1.28	0.00	-10.24
3	300.00	28.8 QP	46.00	-17.20	1.19H	151	14.17	13.18	1.45	0.00	-14.63
4	352.00	36.8 QP	46.00	-9.20	1.03H	176	21.04	14.31	1.46	0.00	-15.76
5	378.00	42.5 QP	46.00	-3.50	1.24H	29	25.68	15.31	1.51	0.00	-16.83
6	480.00	35.5 QP	46.00	-10.50	1.41H	90	16.89	16.92	1.69	0.00	-18.61
7	576.00	27.8 QP	46.00	-18.20	1.32H	203	7.64	18.28	1.88	0.00	-20.16
8	736.00	33.5 QP	46.00	-12.50	1.25H	251	11.43	19.93	2.14	0.00	-22.07
9	800.00	37.4 QP	46.00	-8.60	1.16H	176	14.42	20.69	2.29	0.00	-22.99

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	120.00	25.8 QP	43.50	-17.70	1.17V	45	13.25	11.65	0.89	0.00	-12.55
2	192.00	28.8 QP	43.50	-14.70	1.16V	18	18.56	8.95	1.28	0.00	-10.24
3	352.00	26.8 QP	46.00	-19.20	1.12V	222	11.04	14.31	1.46	0.00	-15.76
4	480.00	25.8 QP	46.00	-20.20	1.09V	151	7.19	16.92	1.69	0.00	-18.62
5	608.00	26.8 QP	46.00	-19.20	1.17V	89	6.16	18.70	1.94	0.00	-20.64
6	648.00	27.5 QP	46.00	-18.50	1.40V	64	6.28	19.21	2.01	0.00	-21.22
7	736.00	26.4 QP	46.00	-19.60	1.47V	72	4.33	19.93	2.14	0.00	-22.07

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4144.00	35.6 PK	74.00	-38.40	1.59H	75	38.00	30.50	3.66	36.56	2.39
2	4144.00	29.6 AV	54.00	-24.40	1.59H	75	32.00	30.50	3.66	36.56	2.39

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4144.00	30.6 AV	54.00	-23.40	1.68V	92	33.00	30.50	3.66	36.56	2.39
2	4144.00	37.6 PK	74.00	-36.40	1.68V	92	40.00	30.50	3.66	36.56	2.39

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4192.00	31.2 AV	54.00	-22.80	1.94H	117	33.50	30.56	3.68	36.58	2.33
2	4192.00	35.7 PK	74.00	-38.30	1.94H	117	38.00	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4192.00	36.8 PK	74.00	-37.20	1.12V	108	39.10	30.56	3.68	36.58	2.33
2	4192.00	31.7 AV	54.00	-22.30	1.12V	108	34.00	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4208.00	35.7 PK	74.00	-38.30	1.86H	117	38.00	30.56	3.68	36.58	2.33
2	4208.00	30.1 AV	54.00	-23.90	1.86H	117	32.40	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4208.00	30.1 AV	54.00	-23.90	1.00V	117	32.40	30.56	3.68	36.58	2.33
2	4208.00	34.7 PK	74.00	-39.30	1.00V	117	37.00	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4256.00	37.2 PK	74.00	-36.80	1.18H	105	39.40	30.68	3.71	36.61	2.21
2	4256.00	29.9 AV	54.00	-24.10	1.18H	105	32.10	30.68	3.71	36.61	2.21

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4256.00	34.8 PK	74.00	-39.20	1.15V	130	37.00	30.68	3.71	36.61	2.21
2	4256.00	28.8 AV	54.00	-25.20	1.15V	130	31.00	30.68	3.71	36.61	2.21

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	9
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4596.00	28.4 AV	54.00	-25.60	1.30H	100	30.00	31.18	3.88	36.70	1.64
2	4596.00	35.4 PK	74.00	-38.60	1.30H	100	37.00	31.18	3.88	36.70	1.64

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4596.00	35.3 PK	74.00	-38.70	1.38V	185	36.90	31.18	3.88	36.70	1.64
2	4596.00	30.8 AV	54.00	-23.20	1.38V	185	32.40	31.18	3.88	36.70	1.64

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	12
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4644.00	37.5 PK	74.00	-36.50	1.03H	189	39.00	31.25	3.90	36.70	1.55
2	4644.00	30.6 AV	54.00	-23.40	1.03H	189	32.10	31.25	3.90	36.70	1.55

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4644.00	29.5 AV	54.00	-24.50	1.35V	180	31.00	31.25	3.90	36.70	1.55
2	4644.00	35.5 PK	74.00	-38.50	1.35V	180	37.00	31.25	3.90	36.70	1.55

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4168.00	29.7 AV	54.00	-24.30	1.20H	207	32.00	30.56	3.68	36.58	2.33
2	4168.00	37.2 PK	74.00	-36.80	1.20H	207	39.50	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4168.00	28.1 AV	54.00	-25.90	2.00V	113	30.40	30.56	3.68	36.58	2.33
2	4168.00	33.7 PK	74.00	-40.30	1.82V	113	36.00	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	2
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4200.00	29.7 AV	54.00	-24.30	1.94H	104	32.00	30.56	3.68	36.58	2.33
2	4200.00	36.1 PK	74.00	-37.90	1.94H	104	38.40	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4200.00	27.7 AV	54.00	-26.30	1.27V	205	30.00	30.56	3.68	36.58	2.33
2	4200.00	33.7 PK	74.00	-40.30	1.27V	205	36.00	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	3
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4232.00	37.7 PK	74.00	-36.30	1.03H	104	40.00	30.62	3.70	36.59	2.27
2	4232.00	29.7 AV	54.00	-24.30	1.03H	104	32.00	30.62	3.70	36.59	2.27

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4232.00	31.7 AV	54.00	-22.30	1.03V	280	34.00	30.62	3.70	36.59	2.27
2	4232.00	36.7 PK	74.00	-37.30	1.03V	280	39.00	30.62	3.70	36.59	2.27

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4608.00	31.2 AV	54.00	-22.80	1.28H	49	32.80	31.18	3.88	36.70	1.64
2	4608.00	34.4 PK	74.00	-39.60	1.28H	49	36.00	31.18	3.88	36.70	1.64

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4608.00	35.9 PK	74.00	-38.10	1.28V	280	37.50	31.18	3.88	36.70	1.64
2	4608.00	28.8 AV	54.00	-25.20	1.28V	280	30.40	31.18	3.88	36.70	1.64

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4640.00	35.5 PK	74.00	-38.50	1.13H	195	37.00	31.25	3.90	36.70	1.55
2	4640.00	30.5 AV	54.00	-23.50	1.13H	195	32.00	31.25	3.90	36.70	1.55

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4640.00	31.4 AV	54.00	-22.60	1.33V	24	32.90	31.25	3.90	36.70	1.55
2	4640.00	34.5 PK	74.00	-39.50	1.33V	24	36.00	31.25	3.90	36.70	1.55

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency

5.2.11 TEST RESULTS (B) (RECEIVING)

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	160.00	27.3 QP	43.50	-16.20	1.26H	89	16.60	9.62	1.07	0.00	-10.70
2	192.00	34.4 QP	43.50	-9.10	1.16H	170	24.16	8.95	1.28	0.00	-10.24
3	200.00	38.7 QP	43.50	-4.80	1.48H	270	28.32	8.98	1.40	0.00	-10.38
4	288.00	25.7 QP	46.00	-20.30	1.24H	212	11.41	12.88	1.41	0.00	-14.29
5	352.00	29.7 QP	46.00	-16.30	1.43H	103	13.94	14.31	1.46	0.00	-15.76
6	416.00	37.4 QP	46.00	-8.60	1.31H	24	19.65	16.18	1.57	0.00	-17.76
7	480.00	37.0 QP	46.00	-9.00	1.26H	96	18.39	16.92	1.69	0.00	-18.62
8	544.00	27.9 QP	46.00	-18.10	1.40H	171	8.22	17.86	1.82	0.00	-19.69
9	576.00	30.5 QP	46.00	-15.50	1.62H	255	10.34	18.28	1.88	0.00	-20.16
10	729.00	43.2 QP	46.00	-2.80	1.34H	184	21.28	19.80	2.12	0.00	-21.93
11	768.00	28.9 QP	46.00	-17.10	1.40H	58	6.33	20.36	2.22	0.00	-22.57

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	152.00	32.0 QP	43.50	-11.50	1.34V	6	20.70	10.16	1.14	0.00	-11.30
2	192.00	30.3 QP	43.50	-13.20	1.52V	77	20.06	8.95	1.28	0.00	-10.24
3	198.00	38.5 QP	43.50	-5.00	1.38V	151	28.17	8.97	1.36	0.00	-10.33
4	352.00	28.9 QP	46.00	-17.10	1.29V	271	13.14	14.31	1.46	0.00	-15.76
5	384.00	33.3 QP	46.00	-12.70	1.36V	232	16.28	15.50	1.52	0.00	-17.02
6	438.00	30.5 QP	46.00	-15.50	1.52V	126	12.61	16.30	1.59	0.00	-17.89
7	544.00	30.8 QP	46.00	-15.20	1.28V	17	11.12	17.86	1.82	0.00	-19.69
8	576.00	26.6 QP	46.00	-19.40	1.39V	160	6.44	18.28	1.88	0.00	-20.17
9	729.00	36.8 QP	46.00	-9.20	1.28V	273	14.88	19.80	2.12	0.00	-21.93
10	736.00	30.0 QP	46.00	-16.00	1.74V	138	7.93	19.93	2.14	0.00	-22.08

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4144.00	28.6 AV	54.00	-25.40	1.71H	310	31.00	30.50	3.66	36.56	2.39
2	4144.00	36.6 PK	74.00	-37.40	1.71H	310	39.00	30.50	3.66	36.56	2.39

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4144.00	29.6 AV	54.00	-24.40	1.00V	220	32.00	30.50	3.66	36.56	2.39
2	4144.00	36.6 PK	74.00	-37.40	1.00V	220	39.00	30.50	3.66	36.56	2.39

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "**" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4192.00	32.7 AV	54.00	-21.30	1.19H	293	35.00	30.56	3.68	36.58	2.33
2	4192.00	37.7 PK	74.00	-36.30	1.19H	293	40.00	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4192.00	29.8 AV	54.00	-24.20	1.12V	204	32.10	30.56	3.68	36.58	2.33
2	4192.00	35.7 PK	74.00	-38.30	1.12V	204	38.00	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4208.00	29.7 AV	54.00	-24.30	1.69H	309	32.00	30.56	3.68	36.58	2.33
2	4208.00	36.7 PK	74.00	-37.30	1.69H	309	39.00	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4208.00	34.8 PK	74.00	-39.20	1.26V	160	37.10	30.56	3.68	36.58	2.33
2	4208.00	29.6 AV	54.00	-24.40	1.26V	160	31.90	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4256.00	32.8 PK	74.00	-41.20	1.08H	343	35.00	30.68	3.71	36.61	2.21
2	4256.00	29.5 AV	54.00	-24.50	1.08H	343	31.70	30.68	3.71	36.61	2.21

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4256.00	30.2 AV	54.00	-23.80	1.37V	312	32.40	30.68	3.71	36.61	2.21
2	4256.00	33.8 PK	74.00	-40.20	1.37V	312	36.00	30.68	3.71	36.61	2.21

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	9
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4596.00	29.4 AV	54.00	-24.60	1.03H	271	31.00	31.18	3.88	36.70	1.64
2	4596.00	34.4 PK	74.00	-39.60	1.03H	271	36.00	31.18	3.88	36.70	1.64

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4596.00	31.4 AV	54.00	-22.60	1.57V	320	33.00	31.18	3.88	36.70	1.64
2	4596.00	36.6 PK	74.00	-37.40	1.57V	320	38.20	31.18	3.88	36.70	1.64

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal Mode	CHANNEL	12
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4644.00	30.2 AV	54.00	-23.80	1.55H	313	31.70	31.25	3.90	36.70	1.55
2	4644.00	34.5 PK	74.00	-39.50	1.55H	313	36.00	31.25	3.90	36.70	1.55

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4644.00	35.7 PK	74.00	-38.30	1.05V	289	37.20	31.25	3.90	36.70	1.55
2	4644.00	31.2 AV	54.00	-22.80	1.05V	289	32.70	31.25	3.90	36.70	1.55

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4168.00	27.7 AV	54.00	-26.30	1.34H	345	30.00	30.56	3.68	36.58	2.33
2	4168.00	34.7 PK	74.00	-39.30	1.34H	345	37.00	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4168.00	29.7 AV	54.00	-24.30	1.48V	320	32.00	30.56	3.68	36.58	2.33
2	4168.00	34.8 PK	74.00	-39.20	1.48V	320	37.10	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	2
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4200.00	28.7 AV	54.00	-25.30	1.00H	272	31.00	30.56	3.68	36.58	2.33
2	4200.00	33.7 PK	74.00	-40.30	1.01H	271	36.00	30.56	3.68	36.58	2.33

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4200.00	33.7 PK	74.00	-40.30	1.13V	183	36.00	30.56	3.68	36.58	2.33
2	4200.00	27.7 AV	54.00	-26.30	1.13V	183	30.00	30.56	3.68	36.58	2.33

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	3
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4232.00	35.3 PK	74.00	-38.70	1.46H	134	37.60	30.62	3.70	36.59	2.27
2	4232.00	29.7 AV	54.00	-24.30	1.46H	134	32.00	30.62	3.70	36.59	2.27

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4232.00	27.7 AV	54.00	-26.30	1.22V	274	30.00	30.62	3.70	36.59	2.27
2	4232.00	34.7 PK	74.00	-39.30	1.22V	274	37.00	30.62	3.70	36.59	2.27

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency



EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4608.00	31.4 AV	54.00	-22.60	1.26H	10	33.00	31.18	3.88	36.70	1.64
2	4608.00	37.0 PK	74.00	-37.00	1.26H	10	38.60	31.18	3.88	36.70	1.64

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4608.00	30.4 AV	54.00	-23.60	1.69V	246	32.00	31.18	3.88	36.70	1.64
2	4608.00	35.9 PK	74.00	-38.10	1.69V	246	37.50	31.18	3.88	36.70	1.64

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4640.00	37.5 PK	74.00	-36.50	1.26H	10	39.00	31.25	3.90	36.70	1.55
2	4640.00	31.5 AV	54.00	-22.50	1.26H	10	33.00	31.25	3.90	36.70	1.55

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	4640.00	31.4 AV	54.00	-22.60	1.33V	24	32.90	31.25	3.90	36.70	1.55
2	4640.00	34.5 PK	74.00	-39.50	1.33V	24	36.00	31.25	3.90	36.70	1.55

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency