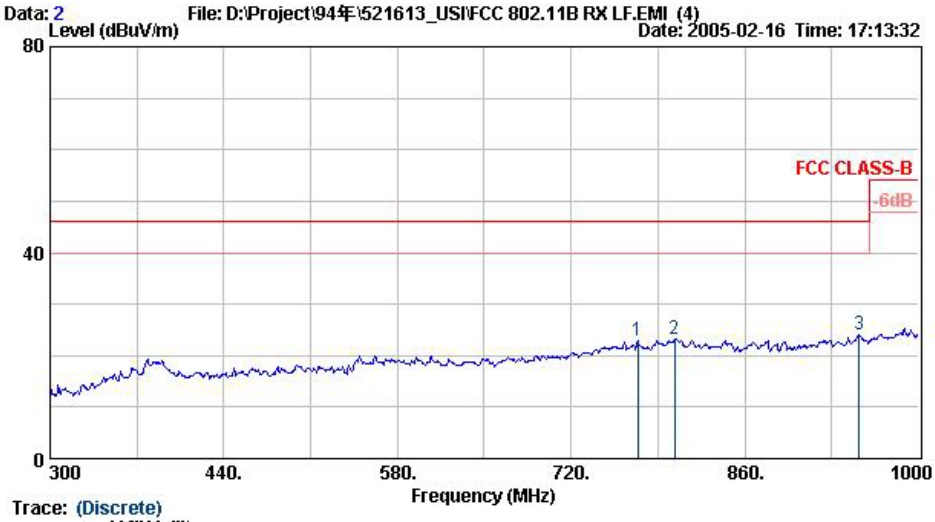
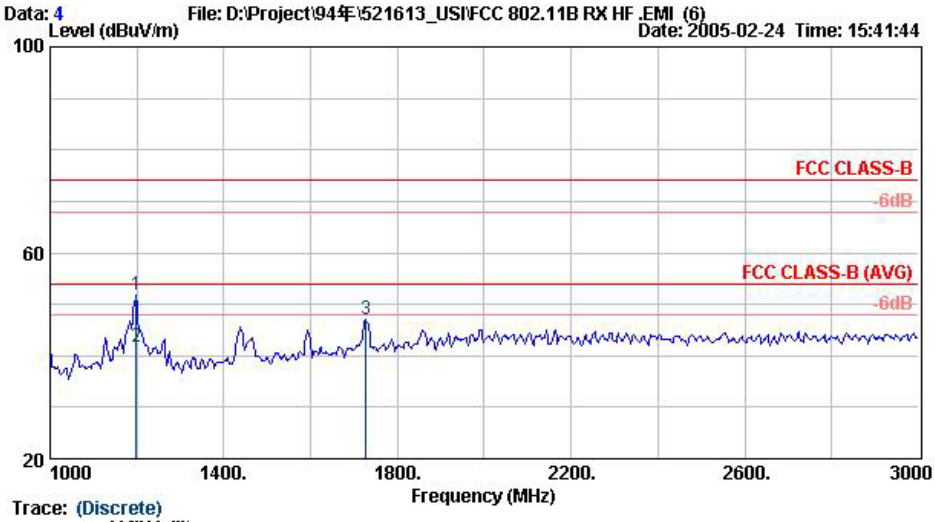


Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BT-LOG-2004-1122 HORIZONTAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FD521613
Memo : 802.11B RX CH06 2437MHz

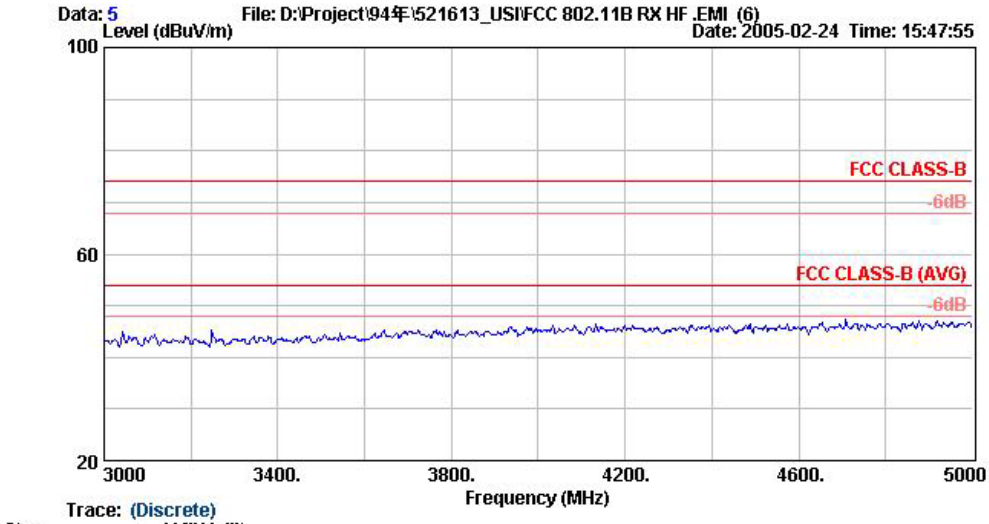
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1	773.90	22.85	-23.15	46.00	29.17	-6.31	Peak
2	803.30	23.31	-22.69	46.00	28.28	-4.96	Peak
3 @	952.40	24.18	-21.82	46.00	28.64	-4.47	Peak



Trace: (Discrete)

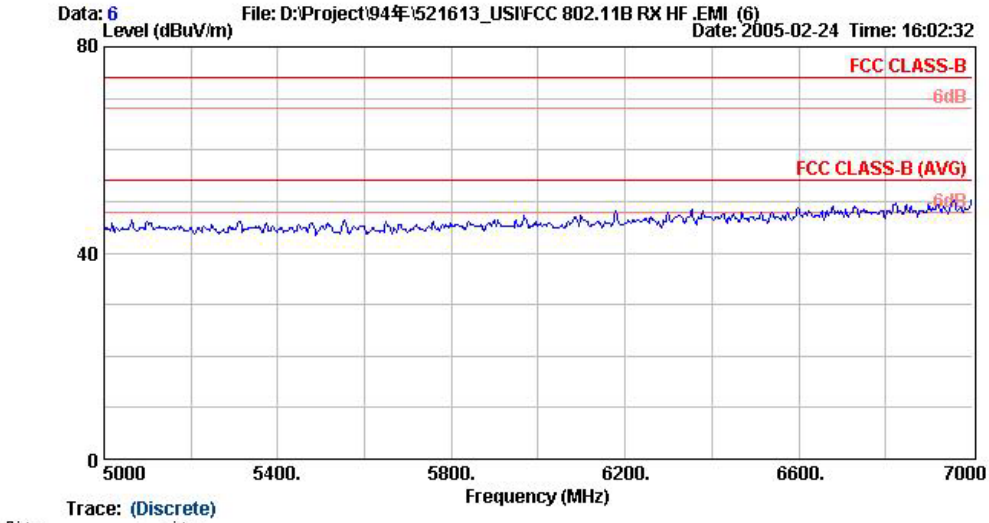
Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-940201 HORIZONTAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : CR521613
Memo : 802.11B RX CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	1198.00	51.97	-22.03	74.00	59.42	-7.45	Peak
2 @	1198.00	41.70	-12.30	54.00	49.15	-7.45	Average
3 @	1728.00	47.00	-27.00	74.00	49.88	-2.88	Peak



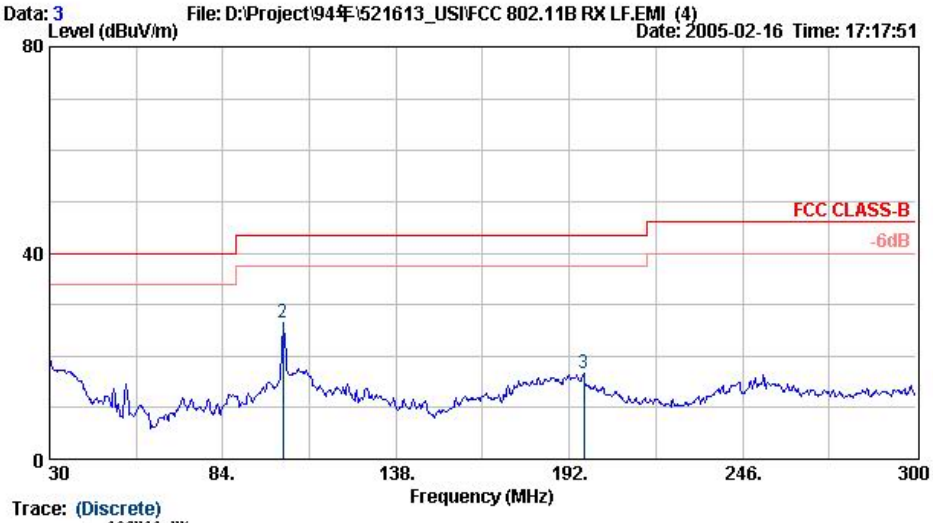
Trace: (Discrete)

Site	:	03CH06-HY
Condition	:	FCC CLASS-B 3m HF-ANT-071025-940201 HORIZONTAL
EUT	:	USB Wireless LAN USB adapter
Power	:	120Vac/60Hz
Model	:	CR521613
Memo	:	802.11B RX CH06 2437MHz



Trace: (Discrete)

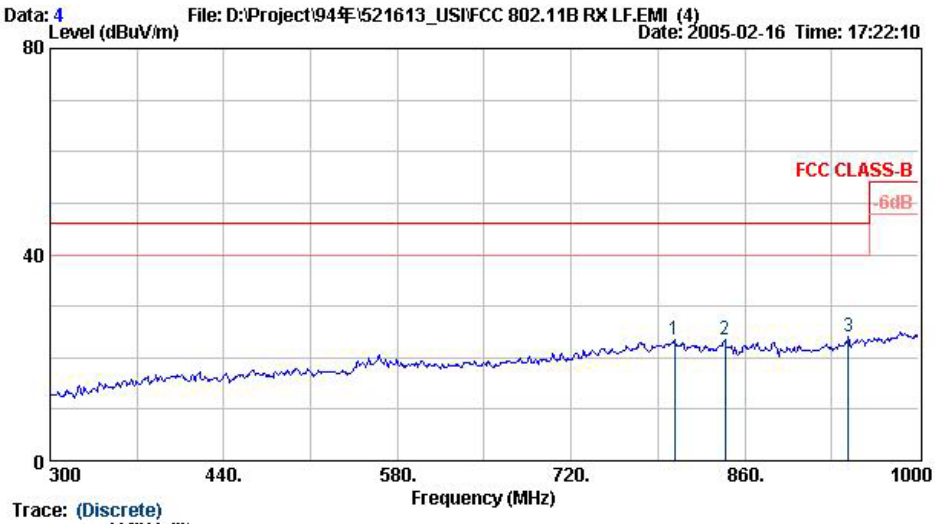
Site	:	site
Condition	:	FCC CLASS-B 3m HF-ANT-071025-940201 HORIZONTAL
EUT	:	USB Wireless LAN USB adapter
Power	:	120Vac/60Hz
Model	:	CR521613
Memo	:	802.11B RX CH06 2437MHz



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BT-LOG-2004-1122 VERTICAL
EUT : USR Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FD521613
Memo : 802.11B RX CH06 2437MHz

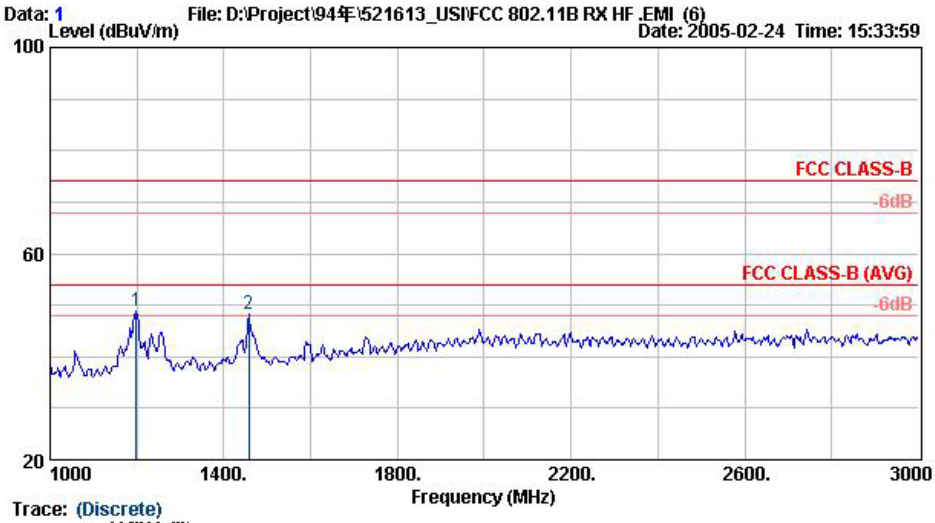
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	30.00	19.41	-20.59	40.00	32.10	-12.69	Peak
2 @	102.63	26.36	-17.14	43.50	46.52	-20.16	Peak
3	196.59	16.66	-26.84	43.50	37.09	-20.43	Peak



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BT-LOG-2004-1122 VERTICAL
EUT : USR Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FD521613
Memo : 802.11B RX CH06 2437MHz

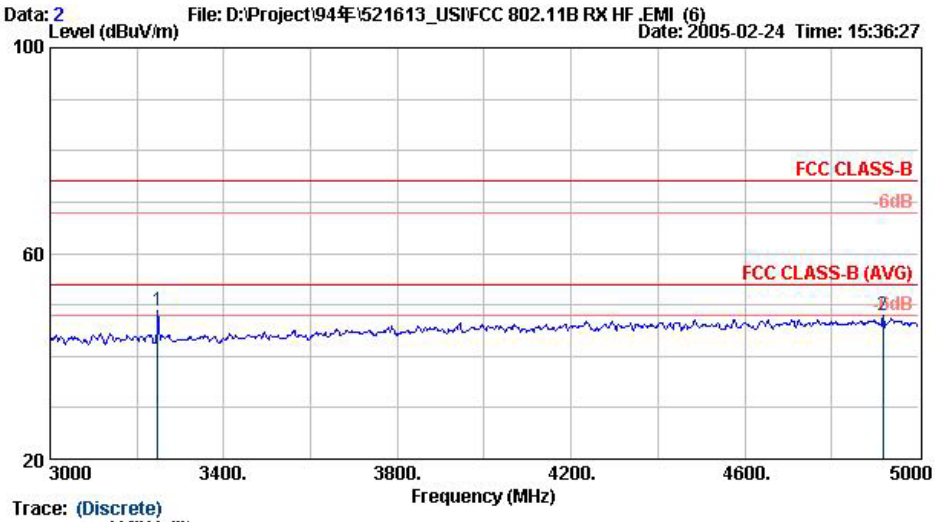
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1	803.30	23.36	-22.64	46.00	28.32	-4.96	Peak
2	843.90	23.42	-22.58	46.00	28.92	-5.50	Peak
3 @	943.30	24.01	-21.99	46.00	29.10	-5.09	Peak



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-940201 VERTICAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : CR521613
Memo : 802.11B RX CH06 2437MHz

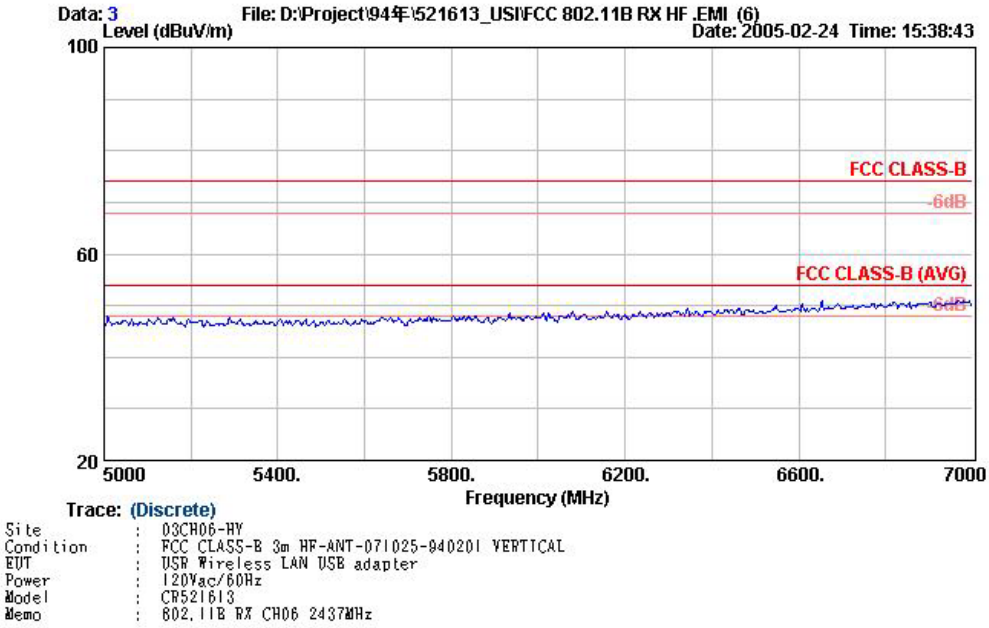
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	1198.00	48.78	-25.22	74.00	56.23	-7.45	Peak
2 @	1458.00	48.22	-25.78	74.00	53.79	-5.57	Peak



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-940201 VERTICAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : CR521613
Memo : 802.11B RX CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	3248.00	48.97	-25.03	74.00	48.34	0.63	Peak
2 @	4918.00	48.08	-25.92	74.00	43.13	4.95	Peak

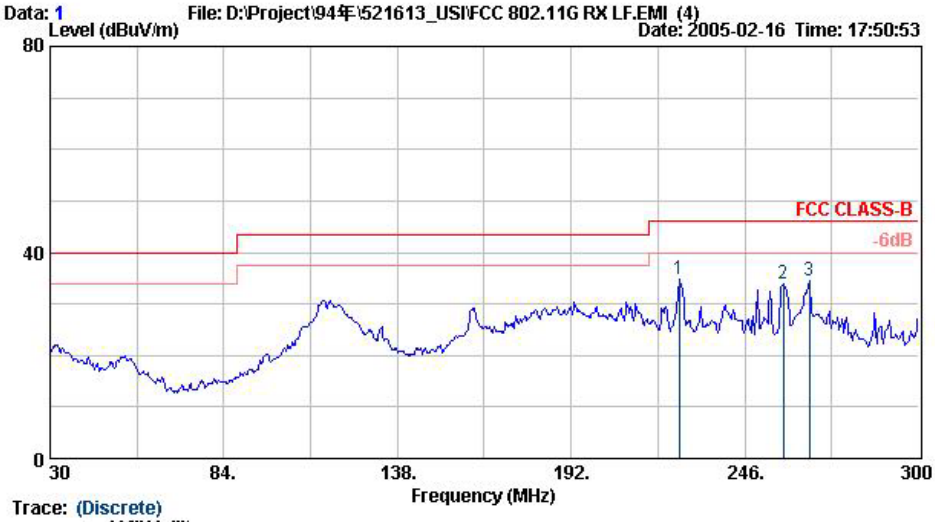


Test Engineer : _____
Jay

6.4.2 Test Mode: Mode 2

- Frequency Range of Test: from 30 MHz to 7000 MHz
- Test Distance: 3m
- Temperature: 26℃
- Relative Humidity: 53%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

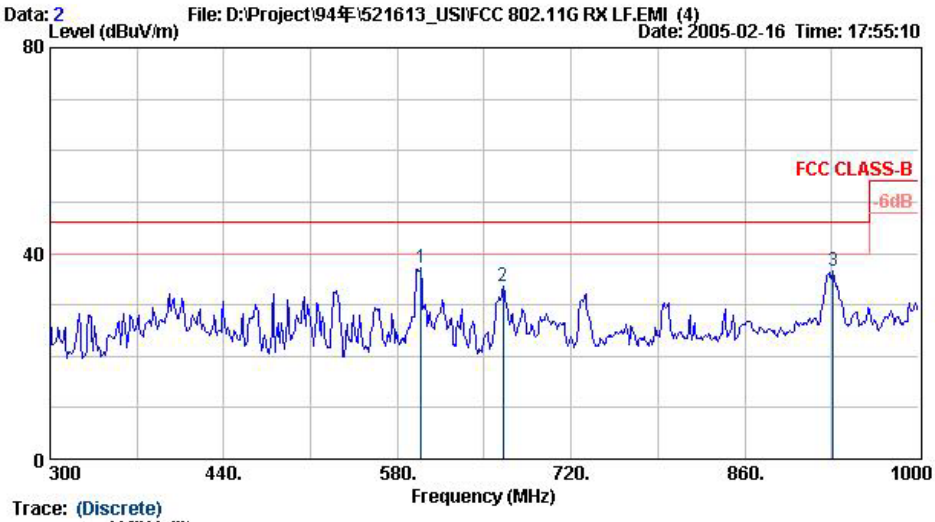
The test that passed at the minimum margin was marked by a frame in the following data



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BT-LOG-2004-1122 HORIZONTAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FD521613
Memo : 802.11G RX CH06 2437MHz

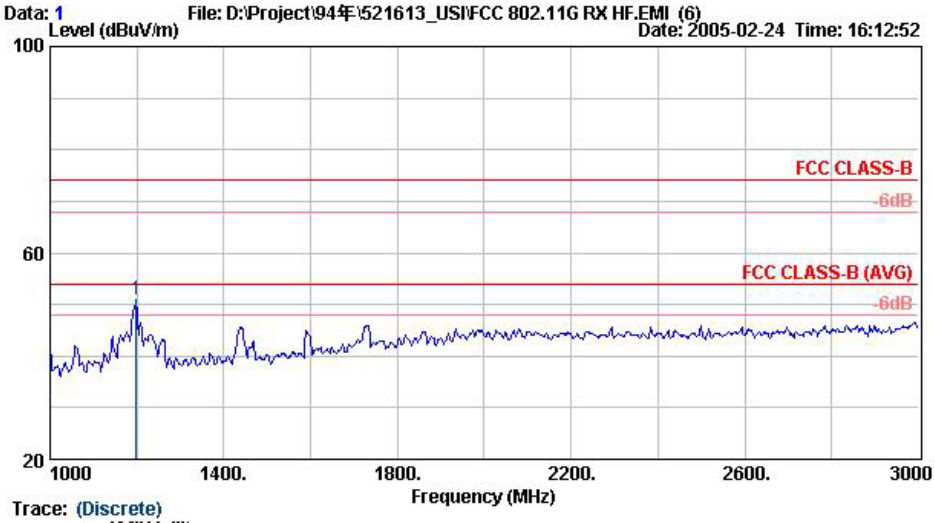
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1	225.48	34.65	-11.35	46.00	54.57	-19.92	Peak
2	257.88	33.91	-12.09	46.00	51.00	-17.08	Peak
3	265.98	34.51	-11.49	46.00	51.31	-16.80	Peak



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BI-LOG-2004-1122 HORIZONTAL
EUT : USR Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FD521613
Memo : 802.11G RX CH06 2437MHz

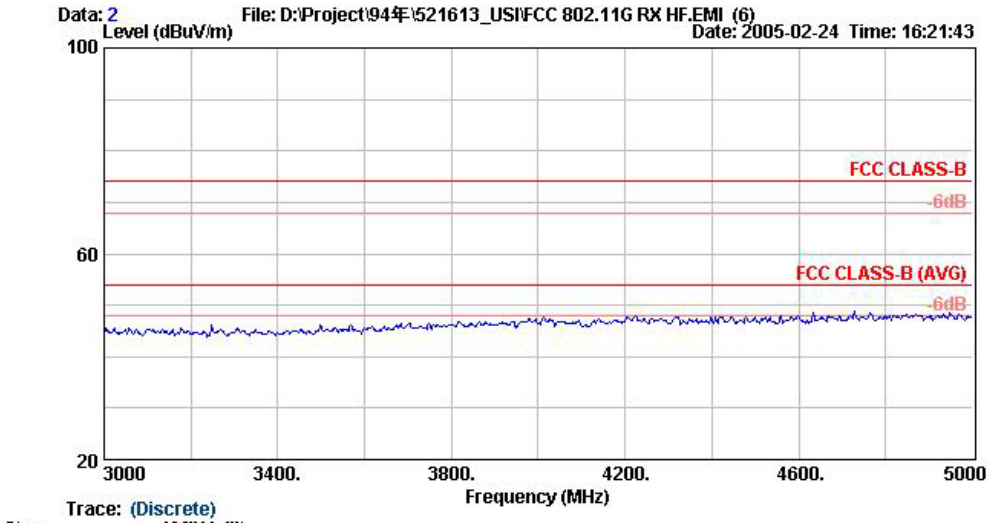
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1	598.90	37.20	-8.80	46.00	46.85	-9.65	Peak
2	665.40	33.68	-12.32	46.00	42.66	-8.98	Peak
3	931.40	36.59	-9.41	46.00	42.05	-5.46	Peak

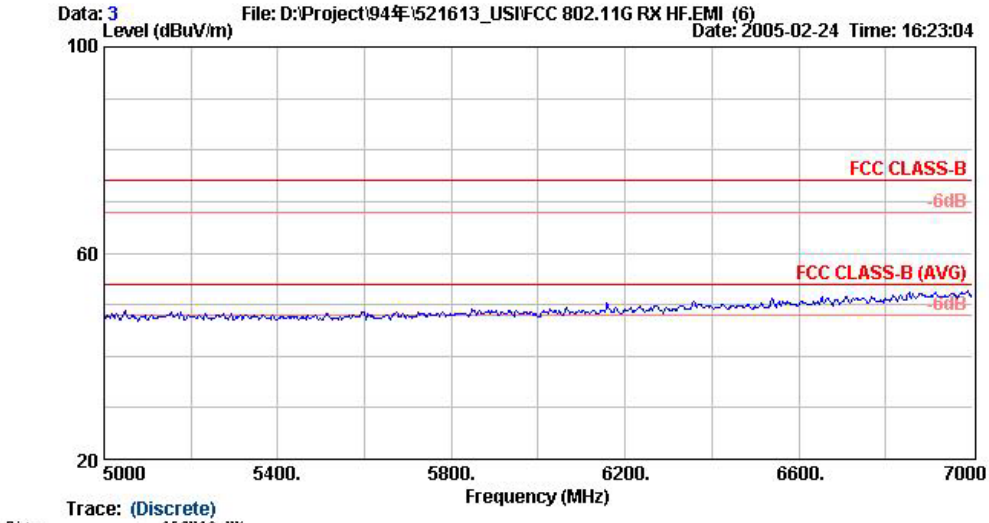


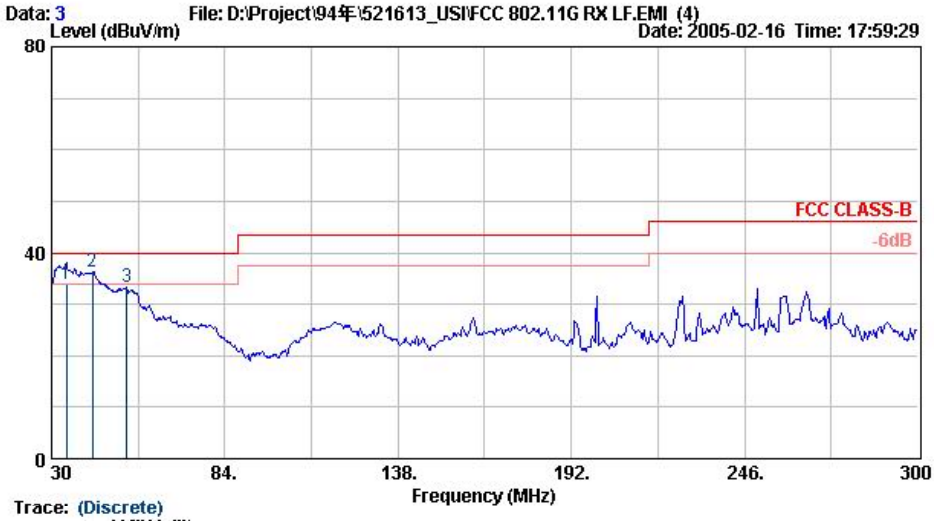
Trace: (Discrete)

Site : 05CH02-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-040201 HORIZONTAL
EUT : USR Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FR521613
Memo : 802.11G RX CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	1198.00	50.85	-23.15	74.00	58.30	-7.45	Peak


Data: 2
File: D:\Project\94年\521613_USI\FCC 802.11G RX HF.EMI (6)
Level (dBuV/m)
Date: 2005-02-24 Time: 16:21:43
100
60
20
FCC CLASS-B
-6dB
FCC CLASS-B (AVG)
-6dB
3000
3400.
3800.
4200.
4600.
5000
Frequency (MHz)
Trace: (Discrete)
Site : 05CH02-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-940201 HORIZONTAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FR521613
Memo : 802.11G RX CH06 2437MHz

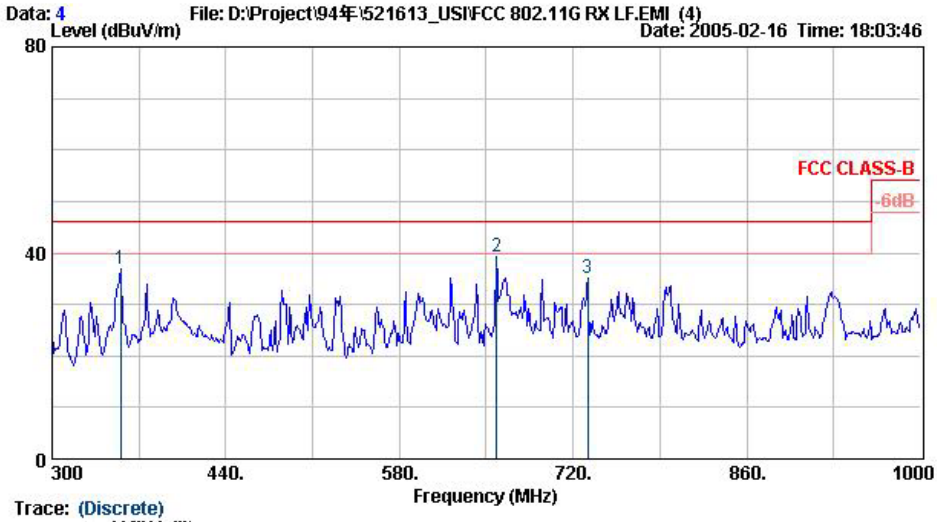

Data: 3
File: D:\Project\94年\521613_USI\FCC 802.11G RX HF.EMI (6)
Level (dBuV/m)
Date: 2005-02-24 Time: 16:23:04
100
60
20
FCC CLASS-B
-6dB
FCC CLASS-B (AVG)
-6dB
5000
5400.
5800.
6200.
6600.
7000
Frequency (MHz)
Trace: (Discrete)
Site : 05CH02-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-940201 HORIZONTAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FR521613
Memo : 802.11G RX CH06 2437MHz



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BT-LOG-2004-1122 VERTICAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FD521613
Memo : 802.11G RX CH06 2437MHz

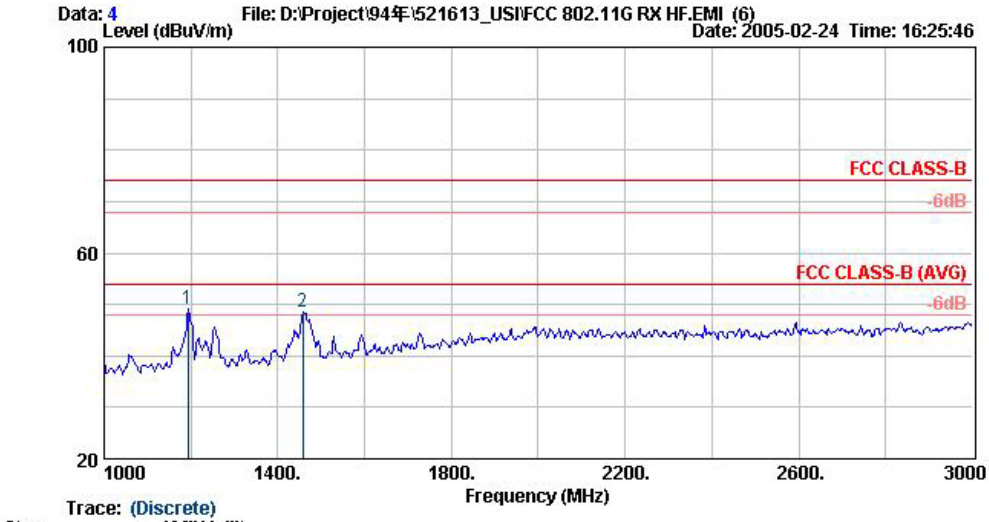
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	34.59	33.77	-6.23	40.00	48.15	-14.38	QP
2 @	42.69	36.20	-3.80	40.00	54.50	-18.30	Peak
3	53.49	33.17	-6.83	40.00	55.82	-22.65	Peak



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m BT-LOG-2004-1122 VERTICAL
EUT : USB Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FD521613
Memo : 802.11G RX CH06 2437MHz

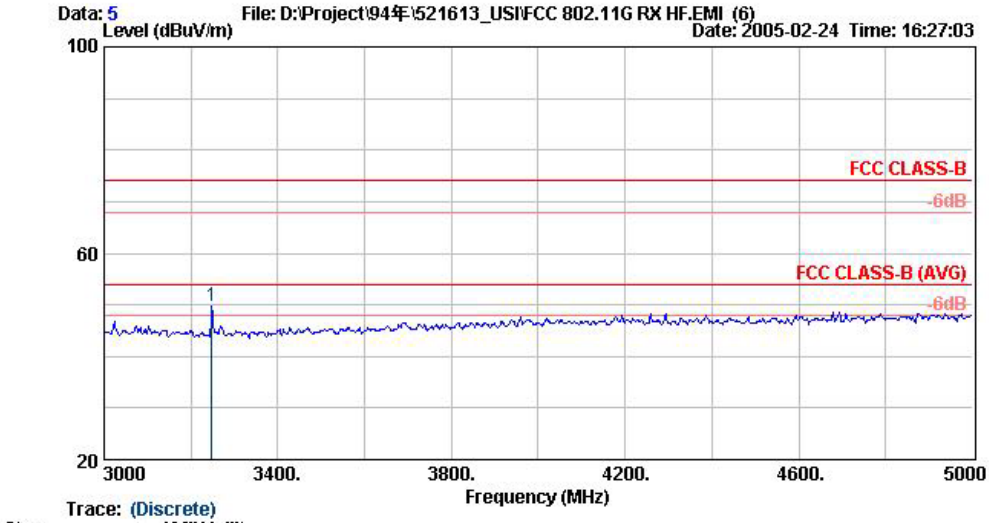
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1	355.30	36.82	-9.18	46.00	51.26	-14.45	Peak
2 @	658.40	39.38	-6.62	46.00	48.71	-9.33	Peak
3	731.90	35.03	-10.97	46.00	42.55	-7.52	Peak



Trace: (Discrete)

Site : 05CH02-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-940201 VERTICAL
EUT : USR Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FR521613
Memo : 802.11G RX CH06 2437MHz

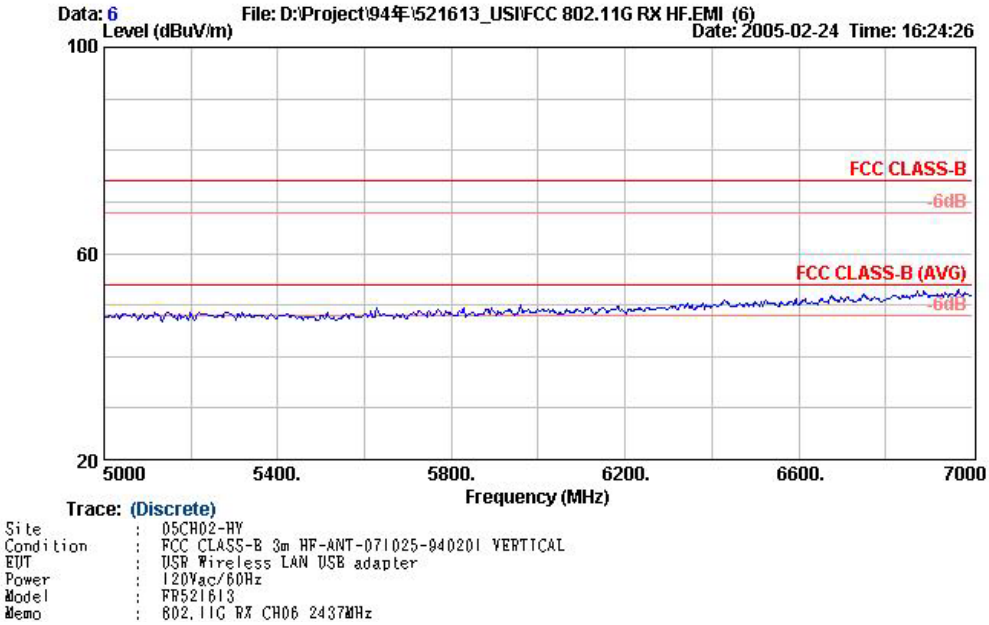
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	1194.00	49.16	-24.84	74.00	56.68	-7.52	Peak
2 @	1458.00	48.67	-25.33	74.00	54.25	-5.57	Peak



Trace: (Discrete)

Site : 05CH02-HY
Condition : FCC CLASS-B 3m HF-ANT-071025-940201 VERTICAL
EUT : USR Wireless LAN USB adapter
Power : 120Vac/60Hz
Model : FR521613
Memo : 802.11G RX CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	3248.00	49.87	-24.13	74.00	49.24	0.63	Peak

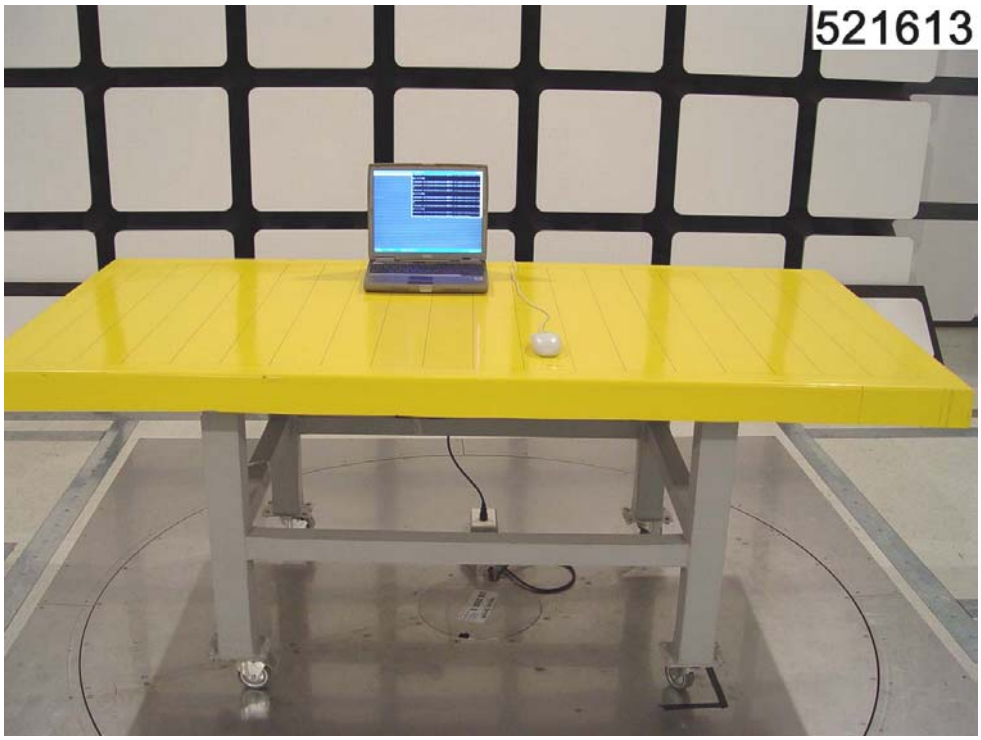


Test Engineer : Jay

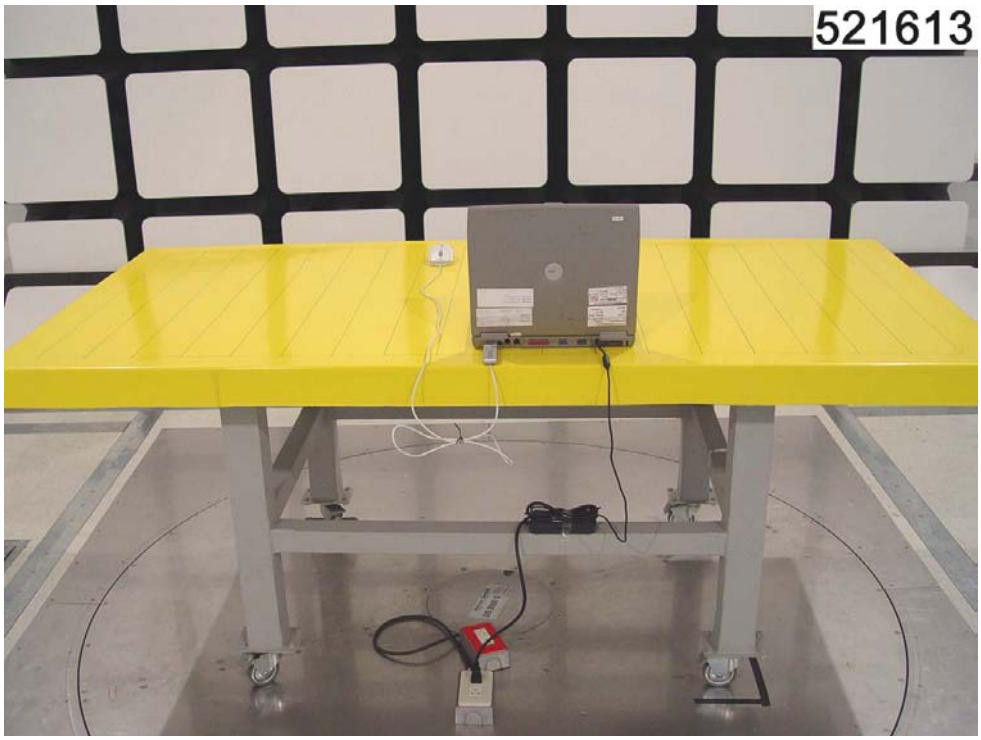
6.5 Photographs of Radiated Emission Test Configuration

- The photographs show the configuration that generates the maximum emission

Front View



Rear View



7. List of Measuring Equipment Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9 KHz – 2.75 GHz	Jun. 23, 2004	Jun. 23, 2005	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/008	9 KHz – 30 MHz	May 03, 2004	May 03, 2005	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9 KHz – 30 MHz	Apr. 19, 2004	Apr. 19, 2005	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450 Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 ~ 60 Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9KHz~30MHz	Dec. 23, 2004	Dec. 23, 2005	Conduction (CO01-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Jul. 27, 2004	Jul. 26, 2005	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul,09,2004	Jul, 10,2005	Radiation (03CH06-HY)
Controller	CT	SC100	N/A	N/A	N/A	N/A	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 22, 2004	Nov. 21, 2005	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Feb. 22, 2005	Feb. 22, 2006	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jun. 22, 2004	Jun. 22, 2005	Radiation (03CH06-HY)
PreAmplifier	Com-Power	PA-103	161055	1MHz - 1000MHz	Apr. 26, 2004	Apr. 26, 2005	Radiation (03CH06-HY)
HF Amplifier	MITEQ	AFS44	973248	0.1G - 26.5G	May. 20, 2004	May 20, 2005	Radiation (03CH06-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jun. 24, 2004	Jun. 24, 2005	Radiation (03CH06-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (03CH06-HY)
Spectrum analyzer	Agilent	E4408B	MY44211028	9KHz-26.5GHz	Jul. 27, 2004	Jul. 26, 2005	Radiation (05CH02-HY)
Controller	CT	SC100	8010604	N/A	N/A	N/A	Radiation (05CH02-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Aug.20, 2004	Aug.19, 2005	Radiation (05CH02-HY)
Horn Antenna	Com-Power	AH117	1071025	1G-18G	Feb. 22, 2005	Feb. 22, 2006	Radiation (05CH02-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jun. 22, 2004	Jun. 22, 2005	Radiation (05CH02-HY)
PreAmplifier	Com-Power	PA-103	161054	1MHz - 1000MHz	Apr. 26, 2004	Apr. 26, 2005	Radiation (05CH02-HY)
HF Amplifier	MITEQ	AFS44	973246	0.1G - 26.5G	May. 20, 2004	May 19, 2005	Radiation (05CH02-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jun. 24, 2004	Jun. 23, 2005	Radiation (05CH02-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (05CH02-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (05CH02-HY)

8. Uncertainty Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
combined standard uncertainty Uc(y)	**1.13**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.26**		

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
combined standard uncertainty Uc(y)	**1.27**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.54**		

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.90	Normal(k=2)	0.45
Antenna factor calibration	0.87	Normal(k=2)	0.44
Cable loss calibration	0.21	Normal(k=2)	0.11
Pre Amplifier Gain calibration	0.25	Normal(k=2)	0.13
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.67	Rectangular	0.96
Mismatch	+0.24/-0.24	U-shaped	0.17
combined standard uncertainty Uc(y)	**1.41**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.82**		

Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	Ci	$Ci*u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1= 0.197 Antenna VSWR Γ2= 0.194 Uncertainty=20log(1-Γ1*Γ2*Γ3)	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	**2.36**				
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	**4.72**				

9. Certificate of NVLAP Accreditation

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

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is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

December 31, 2005
Effective through

For the National Institute of Standards and Technology
NVLAP Lab Code: 200079-0

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