



NVLAP LAB CODE 200707-0



FCC PART 15.247


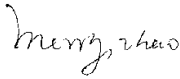
MEASUREMENT AND TEST REPORT

For

SAGEMCOM SAS

250 Route de l' Empereur - 92848 RUEIL MALMAISON CEDEX - FRANCE

FCC ID: VW3FAST1704

Report Type: Class II Permissive Change	Product Type: Wireless ADSL Router
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Report Number: <u>RSZA10070902</u>	
Report Date: <u>2010-08-26</u>	
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* This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "*" (Rev.2)

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The SAGEMCOM SAS 's product, model number: *MODEM/ROUTER SAGEM FAST 1704 Windstream (FCC ID: VW3FAST1704)* or the "EUT" as referred to in this report is a *Wireless ADSL Router*, which measures approximately: 15.8 cm L x 13.5 cm W x 3.9 cm H, input voltage: DC 12V Adapter.

Adapter: SWITCHING POWER SUPPLY

Model: CPS012A120080U;

Input: 100-240VAC~50/60Hz 0.4A;

Output: 12VDC 0.8A.

** All measurement and test data in this report was gathered from production sample serial number: 1007033 (Assigned by BAEL, Shenzhen). The EUT was received on 2010-07-09.*

Objective

This Type approval report is prepared on behalf of SAGEMCOM SAS in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

This is the C2PC application of the device. The difference between the original device and the current one is as follows:

Part	Original	New
Appearance	Only black appearance	Two colors of the appearance (black and white)
Enclosure	Without conductive paint	Add the conductive inside of enclosure
Model name	MODEM/ROUTER SAGEM FAST 1704 GREY	MODEM/ROUTER SAGEM FAST 1704 Windstream

For the changes made to the device, conducted emission testing, and suprious emission testing were performed.

Related Submittal(s)/Grant(s)

This is a C2PC application. The original application was granted on 2009-08-27.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 21, 2007. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



NVLAP LAB CODE 200707-0

The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2007070.htm>

SYSTEM TEST CONFIGURATION

Description of Test Configuration

For 802.11b and 802.11g mode, 11 channels are provided to testing:

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

EUT was tested with Channel 1, 6 and 11.

The selected data rate is determined by the highest output power. For 802.11b mode, 11 Mbps data rate was chosen for full testing. For 802.11g mode, 54 Mbps data rate was chosen for full testing.

EUT Exercise Software

MS-DOS Command. The test was performed under MS-DOS command about power:

802.11b: "wl txpwr1-o-q 60" data rate 11Mbps.

802.11g: "wl txpwr1-o-q 55" data rate 54 Mbps.

Equipment Modifications

No modification was made to the unit tested.

Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	Motherboard	OWC297	CN-OWC297-70821-566-02BR	DoC
DELL	Power	NPS-250KB D	CN-0H2678-17972-56E8NBM	DoC
Seagate	Hard Disk	ST340014A	5JXK3NAD	DoC
DELL	3.5' Floppy	N/A	CN-0N8893-69802-54Q-02OZ	DoC
Lite-ON	CD-Rom	LTN-489S	N/A	DoC
Intel	CPU	Celeron D-2533	N/A	N/A
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700	N/A
Intel	Ethernet	PRO 10/100 VE	N/A	DoC

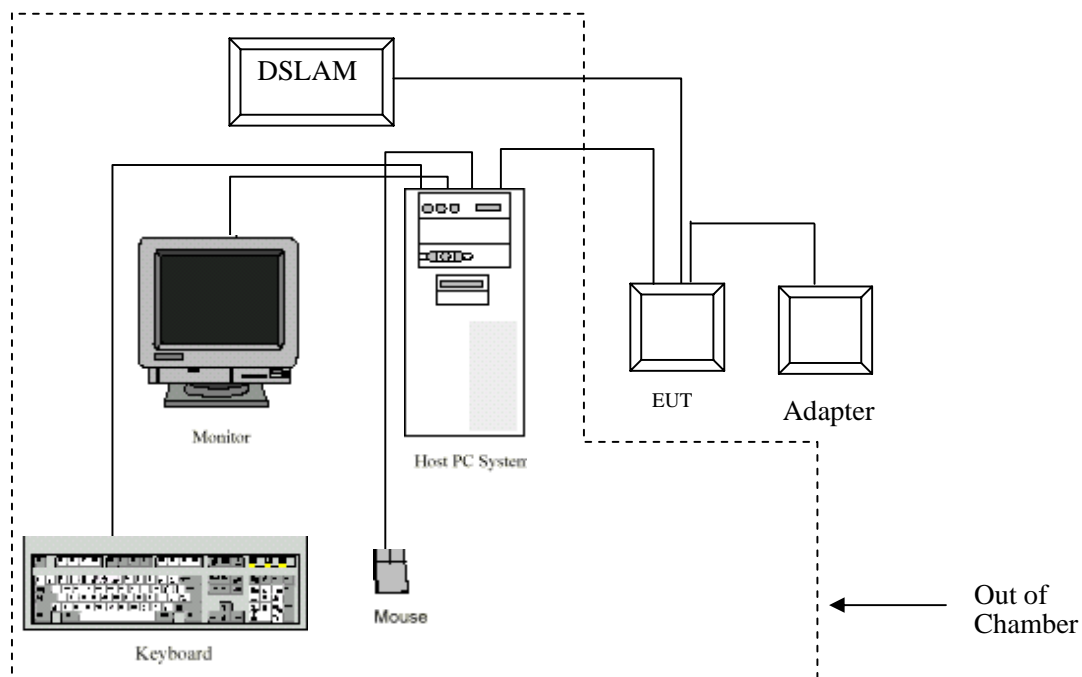
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	PC	DELL 170L	CN-0TC670-70821-560-F4WQ	DoC
DELL	Keyboard	L100	CNORH656658907BL05DC	DoC
DELL	Mouse	MOC5UO	G1900NKD	DoC
DELL	LCD Monitor	1505FP	CN-OY4287-71618-574-GBSH	DoC
SAGEM	DSLAM	3P@C 4048E	N/A	N/A

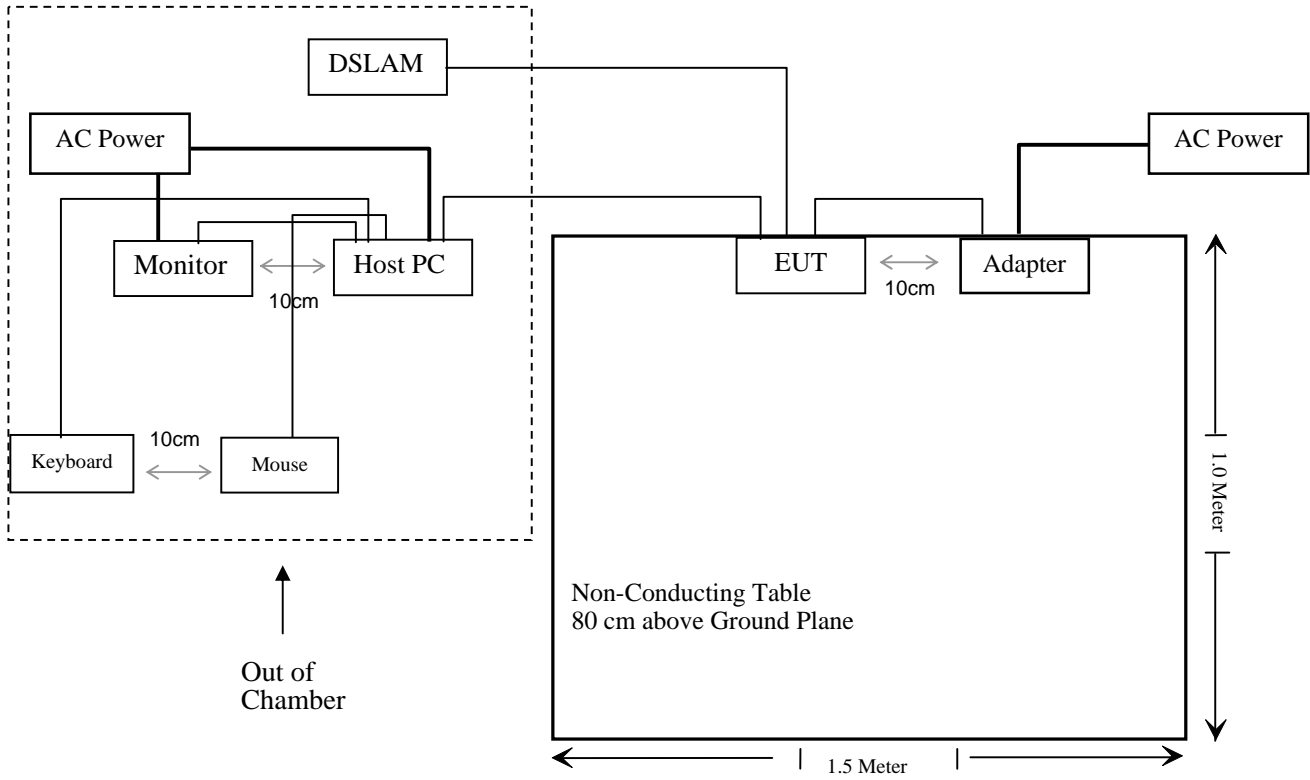
External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielded Detachable K/B Cable	1.50	K/B Port / Host	K/B
Shielded Detachable Mouse Cable	1.50	PS/2 Port / Host	Mouse
Shielded Detachable VGA Cable	1.50	VGA Port / Host	Monitor
Shielded Detachable Serial Cable	1.20	Serial Port / Host	Modem
Unshielded Detachable Power Line	1.50	Adapter	EUT

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §1.1307 (b)(1), §2.1091	Maximum Permissible exposure (MPE)	Compliant*
§15.203	Antenna Requirement	Compliant*
§15.207 (a)	Conducted Emissions	Compliant
§15.247(d)	Spurious Emissions at Antenna Port	Compliant*
§15.205, §15.209, §15.247(d)	Radiated Spurious Emissions	Compliant
§15.247 (a)(2)	6 dB Occupied Bandwidth	Compliant*
§15.247(b)(3)	Maximum Peak Output Power	Compliant*
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant*
§15.247(e)	Power Spectral Density	Compliant*

Note: * Please refer to FCC ID: VW3FAST1704 granted on 2009-08-27, report number RSZ09072103.

FCC §15.207 (a) - CONDUCTED EMISSIONS

Applicable Standard

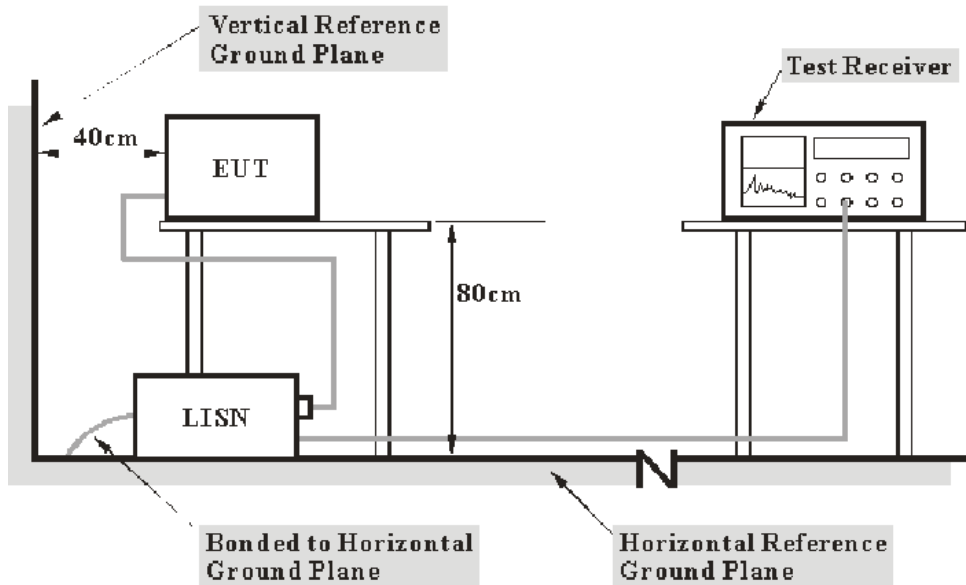
FCC§15.207

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratory Corp. (Shenzhen) is ± 2.4 dB.

EUT 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.

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

<i>Frequency Range</i>	<i>IF B/W</i>
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2010-03-03	2011-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2010-03-09	2011-03-08

* **Statement of Traceability:** Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the adapter was connected to the LISN 1.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

15.72 dB at **0.150 MHz** in the **Line** conductor mode for 802.11b
13.28 dB at **0.400 MHz** in the **Neutral** conductor mode for 802.11b
16.90 dB at **0.390 MHz** in the **Line** conductor mode for 802.11g
13.78 dB at **0.390 MHz** in the **Neutral** conductor mode for 802.11g

Test Data

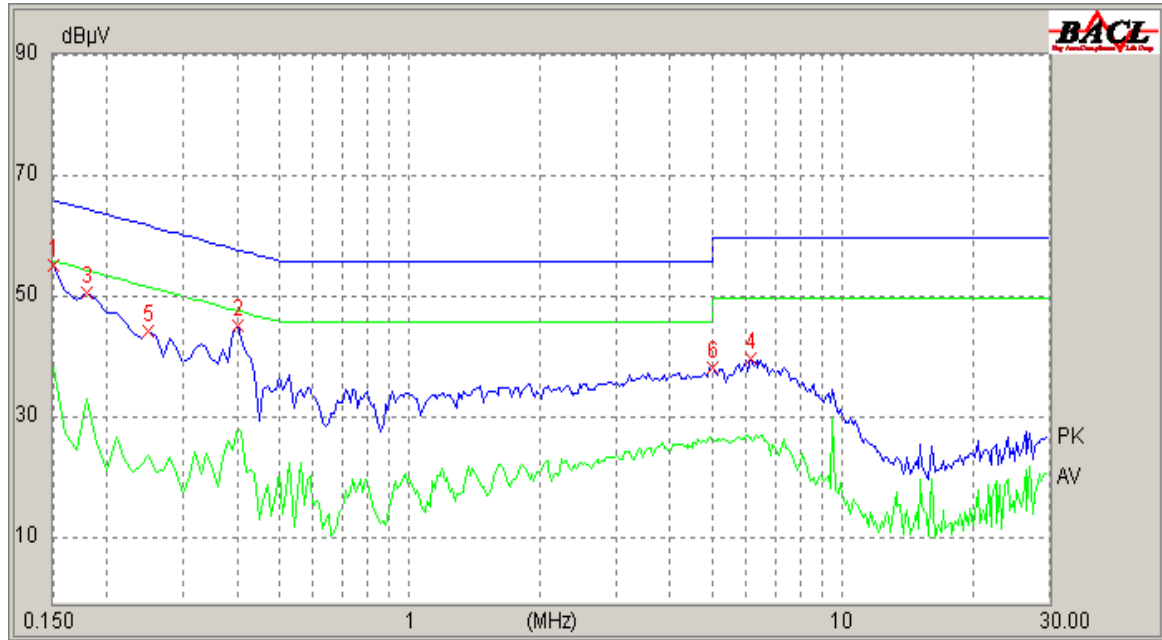
Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Sula Huang on 2010-08-02.

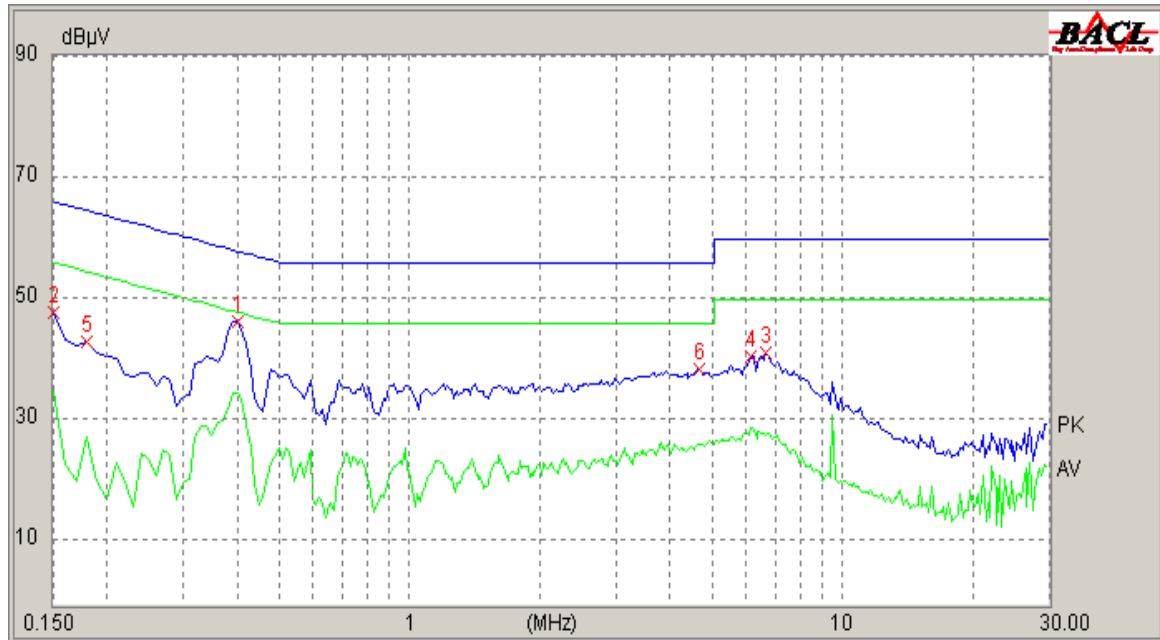
Test Mode: Transmitting (802.11b)

120 V/60 Hz, Line



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	Correction facotor (dB)	Cord. Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector (PK/QP/ Ave)
0.150	10.10	50.28	66.00	15.72	QP
0.150	10.10	38.56	56.00	17.44	Ave
0.180	10.10	46.18	64.57	18.39	QP
0.400	10.10	38.95	57.86	18.91	QP
0.400	10.10	28.79	47.86	19.07	Ave
5.020	10.20	26.53	46.00	19.47	Ave
0.180	10.10	33.44	54.57	21.13	Ave
6.170	10.20	27.12	50.00	22.88	Ave
5.010	10.20	32.00	56.00	24.00	QP
0.250	10.10	37.23	61.82	24.59	QP
0.250	10.10	24.19	51.82	27.63	Ave
6.140	10.20	32.05	60.00	27.95	QP

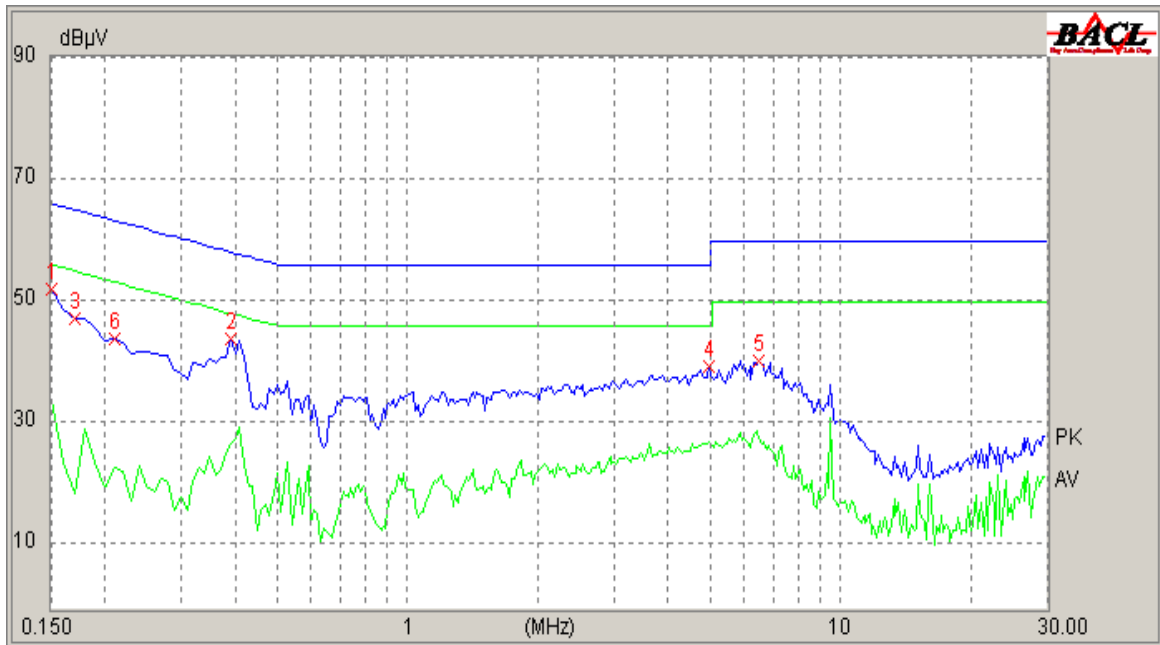
120 V/60 Hz, Neutral:



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	Correction facotor (dB)	Cord. Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector (PK/QP/ Ave)
0.400	10.10	34.58	47.86	13.28	Ave
0.400	10.10	43.98	57.86	13.88	QP
4.680	10.10	26.32	46.00	19.68	Ave
0.150	10.10	46.16	66.00	19.84	QP
0.150	10.10	34.99	56.00	21.01	Ave
6.130	10.20	28.86	50.00	21.14	Ave
6.680	10.20	27.87	50.00	22.13	Ave
0.180	10.10	41.56	64.57	23.01	QP
4.680	10.10	32.85	56.00	23.15	QP
6.130	10.20	34.09	60.00	25.91	QP
6.630	10.20	33.61	60.00	26.39	QP
0.180	10.10	27.59	54.57	26.98	Ave

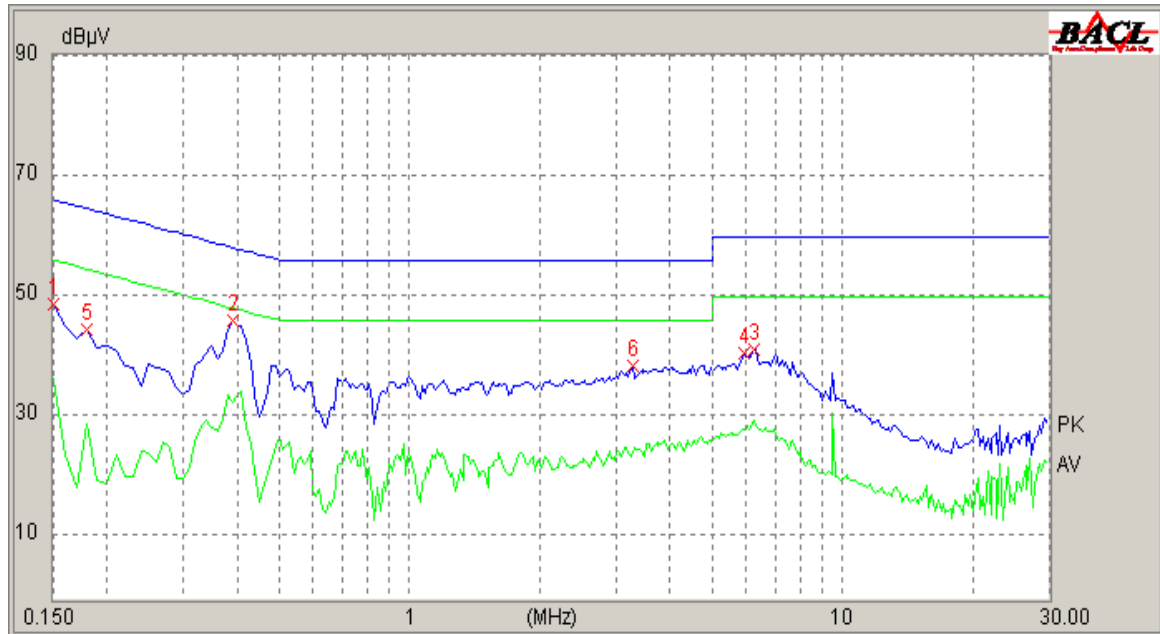
Test Mode: Transmitting (802.11g)

120 V/60 Hz, Line



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	Correction facotor (dB)	Cord. Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector (PK/QP/ Ave)
0.390	10.10	41.18	58.08	16.90	QP
0.150	10.10	47.88	66.00	18.12	QP
4.960	10.10	27.12	46.00	18.88	Ave
0.390	10.10	26.89	48.08	21.19	Ave
0.150	10.10	34.18	56.00	21.82	Ave
6.510	10.20	27.85	50.00	22.15	Ave
0.210	10.10	40.11	63.25	23.14	QP
4.960	10.10	32.29	56.00	23.71	QP
0.170	10.10	39.05	65.01	25.96	QP
6.500	10.20	33.43	60.00	26.57	QP
0.210	10.10	22.99	53.25	30.26	Ave
0.170	10.10	18.70	55.01	36.31	Ave

120 V/60 Hz, Neutral:



Conducted Emissions			FCC Part 15.207		
Frequency (MHz)	Correction facotor (dB)	Cord. Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector (PK/QP/ Ave)
0.390	10.10	44.30	58.08	13.78	QP
0.390	10.10	32.59	48.08	15.49	Ave
0.150	10.10	36.33	56.00	19.67	Ave
6.250	10.20	29.68	50.00	20.32	Ave
0.150	10.10	45.66	66.00	20.34	QP
5.910	10.20	28.06	50.00	21.94	Ave
3.250	10.10	23.61	46.00	22.39	Ave
0.180	10.10	41.28	64.57	23.29	QP
3.280	10.10	32.28	56.00	23.72	QP
6.250	10.20	35.14	60.00	24.86	QP
0.180	10.10	28.99	54.57	25.58	Ave
5.910	10.20	33.83	60.00	26.17	QP

FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

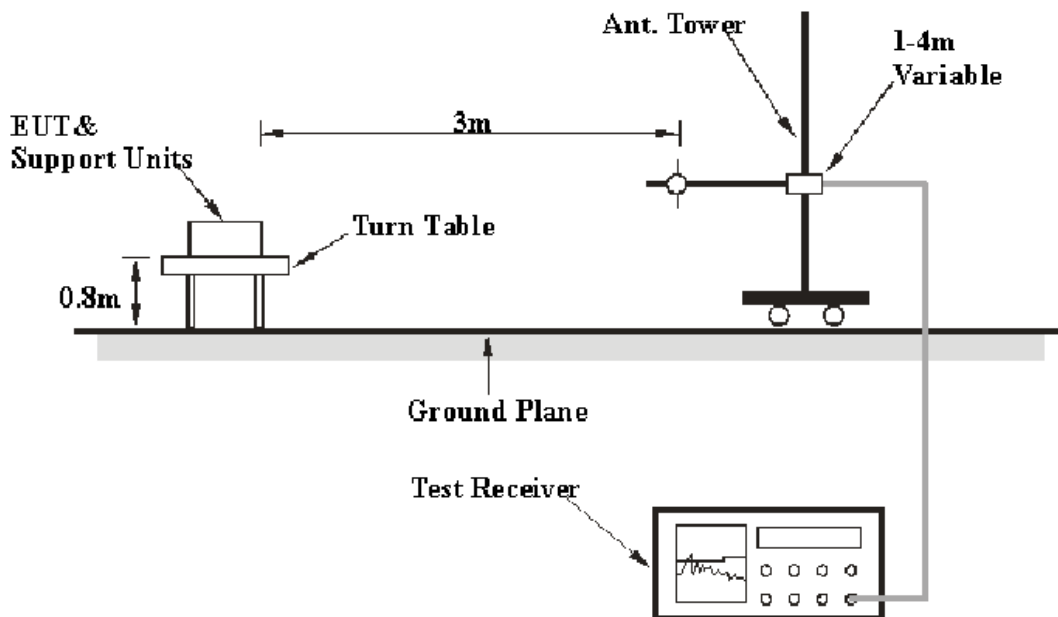
FCC §15.247 (d); §15.209; §15.205;

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is ± 4.0 dB.

EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

<i>Frequency Range</i>	<i>RBW</i>	<i>Video B/W</i>	<i>Detector</i>
30MHz – 1000 MHz	100 kHz	300 kHz	QP
1000 MHz – 25 GHz	1 MHz	3 MHz	PK
1000 MHz – 25 GHz	1 MHz	10 Hz	AV

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2009-08-02	2010-08-02
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2009-11-07	2010-11-06
Amplifier Reserch	Biconilog Antenna	AT1080	301902	2010-03-11	2011-03-11
HP	Amplifier	2VA-213+	T-E27H	2010-03-08	2011-03-08
Sunol Sciences	Horn Antenna	DRH-118	A052604	2009-09-25	2010-09-25
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2010-07-08	2011-07-08

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

For the radiated emissions test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz and peak and Average detection modes for frequencies above 1GHz.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247, with the worst margin reading of:

30 -1000 MHz:

802.11b: **8.5 dB** at **600.010000 MHz** in the **Vertical** polarization
 802.11g: **8.1 dB** at **902.018750 MHz** in the **Vertical** polarization

Above 1 GHz:

802.11b (Low Channel): **2.90 dB** at **4824.00 MHz** in the **Vertical** polarization
 802.11b (Middle Channel): **2.74 dB** at **4874.00 MHz** in the **Vertical** polarization
 802.11b (High Channel): **3.02 dB** at **4924.00 MHz** in the **Vertical** polarization

802.11g (Low Channel): **3.07 dB** at **4824.00 MHz** in the **Vertical** polarization
 802.11g (Middle Channel): **3.02 dB** at **4874.00 MHz** in the **Vertical** polarization
 802.11g (High Channel): **2.82 dB** at **4924.00 MHz** in the **Vertical** polarization

Test Data

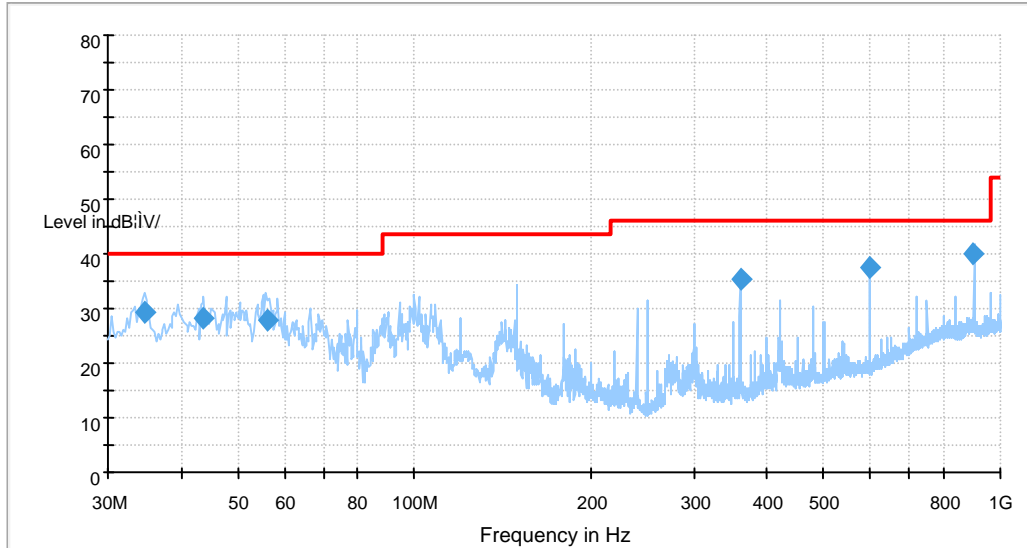
Environmental Conditions

Temperature:	24 °C
Relative Humidity:	56 %
ATM Pressure:	100.0kPa

The testing was performed by Sula Huang on 2010-07-29.

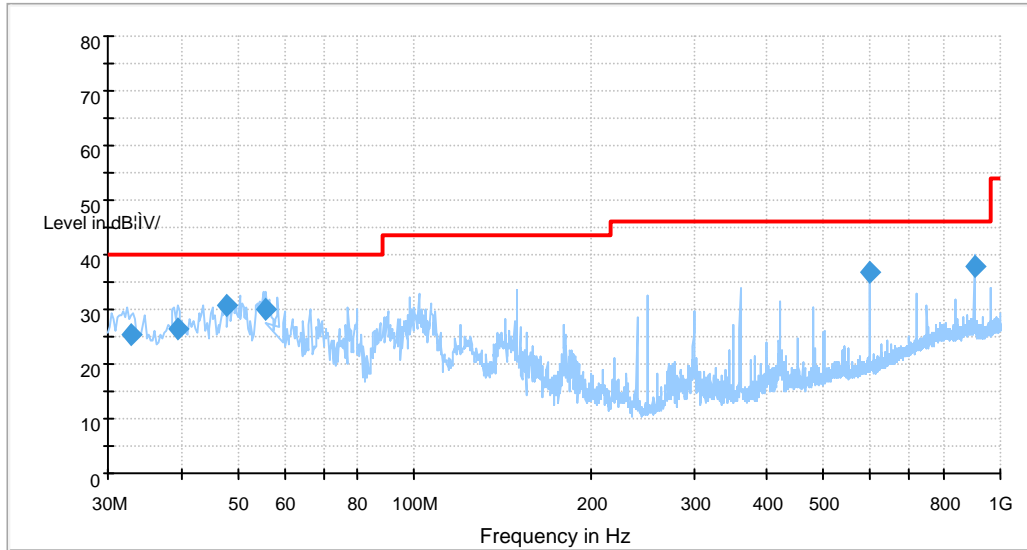
30-1000 MHz:

Test Mode: Transmitting (802.11b)



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Ant. Height (cm)	Ant. Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
600.010000	37.5	100.0	V	175.0	-8.5	46.0	8.5
34.585250	29.5	338.0	H	120.0	-9.5	40.0	10.5
359.992250	35.3	100.0	H	197.0	-13.2	46.0	10.7
43.514000	28.3	100.0	V	77.0	-15.5	40.0	11.7
56.028000	27.9	100.0	V	95.0	-19.6	40.0	12.1
901.735250	22.0	205.0	V	272.0	-0.4	46.0	24

Test Mode: Transmitting (802.11g)



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Ant. Height (cm)	Ant. Polarity (H/V)	Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
902.018750	37.9	145.0	V	112.0	-0.4	46.0	8.1
47.809500	30.9	106.0	V	8.0	-17.9	40.0	9.1
599.990000	36.7	100.0	V	182.0	-8.5	46.0	9.3
55.720000	30.1	128.0	V	354.0	-19.8	40.0	9.9
39.557250	26.4	100.0	V	162.0	-13.0	40.0	13.6
32.871750	25.5	400.0	H	109.0	-8.2	40.0	14.5

Above 1 GHz:

802.11b Mode:

Indicated		Detector (PK/AV)	Table Angle Degree	Test Antenna		Correction Factor			FCC Part 15.247/15.209/15.205			
Frequency (MHz)	S.A. Reading (dBµV)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Comment
Low Channel (2412 MHz)												
4824	33.16	AV	215	1.5	H	31.20	4.30	26.75	41.91	54	12.09	spurious
4824	37.86	AV	360	1.9	V	31.20	4.30	26.75	41.56	54	12.44	spurious
4824	51.43	PK	360	1.9	V	31.20	4.30	26.75	60.18	74	13.82	spurious
2384.54	34.92	AV	180	1.4	V	27.50	3.03	26.83	39.15	54	14.85	spurious
4824	46.72	PK	200	2.2	H	31.20	4.30	26.75	55.47	74	18.53	spurious
2493.45	35.31	AV	360	1.0	V	28.00	3.11	26.88	35.31	54	18.69	spurious
2490.44	29.87	AV	182	1.0	H	28.00	3.11	26.88	34.10	54	19.90	spurious
2493.45	48.72	PK	360	1.0	V	28.00	3.11	26.88	52.95	74	21.05	spurious
2382.46	28.05	AV	180	1.0	H	27.50	3.03	26.83	31.75	54	22.25	spurious
2384.54	46.70	PK	180	1.4	V	27.50	3.03	26.83	50.4	74	23.6	spurious
2490.44	42.09	PK	182	1.0	H	28.00	3.11	26.88	46.32	74	27.68	spurious
2382.46	39.67	PK	180	1.0	H	27.50	3.03	26.83	43.37	74	30.63	spurious
Middle Channel (2437 MHz)												
4874	38.02	AV	90	2.0	V	31.20	4.36	26.75	41.72	54	12.28	spurious
4874	51.25	PK	90	2.0	V	31.20	4.36	26.75	60.06	74	13.94	spurious
2359.54	34.02	AV	360	1.0	V	27.50	3.03	26.83	38.65	54	15.35	spurious
4874	33.41	AV	135	1.8	H	31.20	4.36	26.75	37.11	54	16.89	spurious
4874	46.79	PK	135	1.8	H	31.20	4.36	26.75	55.60	74	18.40	spurious
2359.89	28.37	AV	180	1.5	H	27.50	3.03	26.83	32.60	54	21.40	spurious
2498.02	31.46	AV	360	1.0	H	28.00	3.11	26.88	31.46	54	22.54	spurious
2484.10	31.22	AV	345	1.0	V	28.40	3.11	26.88	31.22	54	22.78	spurious
2359.54	46.56	PK	360	1.0	V	27.50	3.03	26.83	50.26	74	23.74	spurious
2484.10	43.45	PK	345	1.0	V	28.40	3.11	26.88	48.08	74	25.92	spurious
2498.02	42.32	PK	360	1.0	H	28.00	3.11	26.88	46.55	74	27.45	spurious
2359.59	39.11	PK	180	1.5	H	27.50	3.03	26.83	42.81	74	31.19	spurious
HighChannel (2462 MHz)												
4924	51.44	PK	360	2.0	V	32.10	4.40	26.75	61.19	74	12.81	spurious
4924	36.67	AV	360	2.0	V	32.10	4.40	26.75	40.4	54	13.6	spurious
2313.05	35.14	AV	270	1.3	V	27.50	2.98	26.83	39.42	54	14.58	spurious
4924	33.34	AV	180	1.5	H	32.10	4.40	26.75	37.04	54	16.96	spurious
4924	46.58	PK	180	1.5	H	32.10	4.40	26.75	56.33	74	17.67	spurious
2499.50	35.75	AV	180	1.0	V	28.00	3.11	26.88	35.75	54	18.25	spurious
2379.74	28.75	AV	360	1.5	H	27.50	3.03	26.83	32.98	54	21.02	spurious
2499.50	46.99	PK	180	1.0	V	28.00	3.11	26.83	51.22	74	22.78	spurious
2313.05	46.39	PK	270	1.3	V	27.50	2.98	26.75	50.04	74	23.96	spurious
2499.57	28.50	AV	360	1.0	H	28.00	3.11	26.88	28.5	54	25.5	spurious
2499.57	39.46	PK	360	1.0	H	28.00	3.11	26.88	43.69	74	30.31	spurious
2379.74	39.74	PK	360	1.5	H	27.50	3.03	26.83	43.44	74	30.56	spurious

802.11g Mode:

Indicated		Detector (PK/AV)	Table Angle Degree	Test Antenna		Correction Factor			FCC Part 15.247/15.209/15.205			
Frequency (MHz)	S.A. Reading (dBµV)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Comment
Low Channel (2412 MHz)												
4824	46.20	PK	226	2.2	H	31.20	4.30	26.75	54.95	74	19.05	spurious
4824	32.43	AV	226	2.2	H	31.20	4.30	26.75	36.13	54	17.87	spurious
2369.80	42.13	PK	180	1.6	H	27.50	3.03	26.83	45.83	74	28.17	spurious
2369.80	29.38	AV	180	1.6	H	27.50	3.03	26.83	33.61	54	20.39	spurious
2497.16	39.51	PK	344	1.5	H	28.00	3.11	26.88	43.74	74	30.26	spurious
2497.16	28.46	AV	344	1.5	H	28.00	3.11	26.88	28.46	54	25.54	spurious
4824	51.18	PK	138	1.26	V	31.20	4.30	26.75	59.93	74	14.07	spurious
4824	37.69	AV	138	1.26	V	31.20	4.30	26.75	41.39	54	12.61	spurious
2380.38	50.24	PK	180	1.0	V	27.50	3.03	26.83	53.94	74	20.06	spurious
2380.38	37.24	AV	180	1.0	V	27.50	3.03	26.83	41.47	54	12.53	spurious
2489.39	49.52	PK	212	1.0	V	28.00	3.11	26.88	53.75	74	20.25	spurious
2489.39	36.52	AV	212	1.0	V	28.00	3.11	26.88	36.52	54	17.48	spurious
Middle Channel (2437 MHz)												
4874	46.24	PK	220	1.1	H	31.20	4.36	26.75	55.05	74	18.95	spurious
4874	33.12	AV	220	1.1	H	31.20	4.36	26.75	36.82	54	17.18	spurious
2328.59	41.36	PK	0	1.6	H	27.50	3.03	26.83	45.06	74	28.94	spurious
2328.59	29.46	AV	0	1.6	H	27.50	3.03	26.83	33.69	54	20.31	spurious
2499.83	40.36	PK	167	1.2	H	28.00	3.11	26.88	44.59	74	29.41	spurious
2499.83	28.56	AV	167	1.2	H	28.00	3.11	26.88	28.56	54	25.44	spurious
4874	50.83	PK	135	1.0	V	31.20	4.36	26.75	59.64	74	14.36	spurious
4874	37.74	AV	135	1.0	V	31.20	4.36	26.75	41.44	54	12.56	spurious
2359.22	46.02	PK	140	1.0	V	27.50	3.03	26.83	49.72	74	24.28	spurious
2359.22	33.61	AV	140	1.0	V	27.50	3.03	26.83	38.24	54	15.76	spurious
2489.2	44.89	PK	360	1.0	V	28.40	3.11	26.88	49.52	74	24.48	spurious
2489.2	31.75	AV	360	1.0	V	28.40	3.11	26.88	31.75	54	22.25	spurious
HighChannel (2462 MHz)												
4924	51.02	PK	138	1.0	V	32.10	4.40	26.75	60.77	74	13.23	spurious
4924	36.87	AV	360	1.0	V	32.10	4.40	26.75	40.57	54	13.43	spurious
2376.61	33.52	AV	215	1.3	V	27.50	3.03	26.83	37.80	54	16.20	spurious
4924	33.24	AV	180	1.9	H	32.10	4.40	26.75	36.94	54	17.06	spurious
4924	46.55	PK	180	1.9	H	32.10	4.40	26.75	56.30	74	17.70	spurious
2490.18	35.32	AV	37	1.0	V	28.00	3.11	26.88	35.32	54	18.68	spurious
2371.56	28.74	AV	0	1.0	H	27.50	3.03	26.83	32.97	54	21.03	spurious
2490.18	48.43	PK	37	1.0	V	28.00	3.11	26.83	52.66	74	21.34	spurious
2483.96	29.85	AV	180	1.2	H	28.00	3.11	26.88	29.85	54	24.15	spurious
2376.61	46.13	PK	215	1.3	V	27.50	3.03	26.83	49.83	74	24.17	spurious
2483.96	42.56	PK	180	1.2	H	28.00	3.11	26.88	46.79	74	27.21	spurious
2371.56	40.95	PK	0	1.0	H	27.50	3.03	26.83	44.65	74	29.35	spurious

***** END OF REPORT *****