ZEBRA TECHNOLOGIES CORP

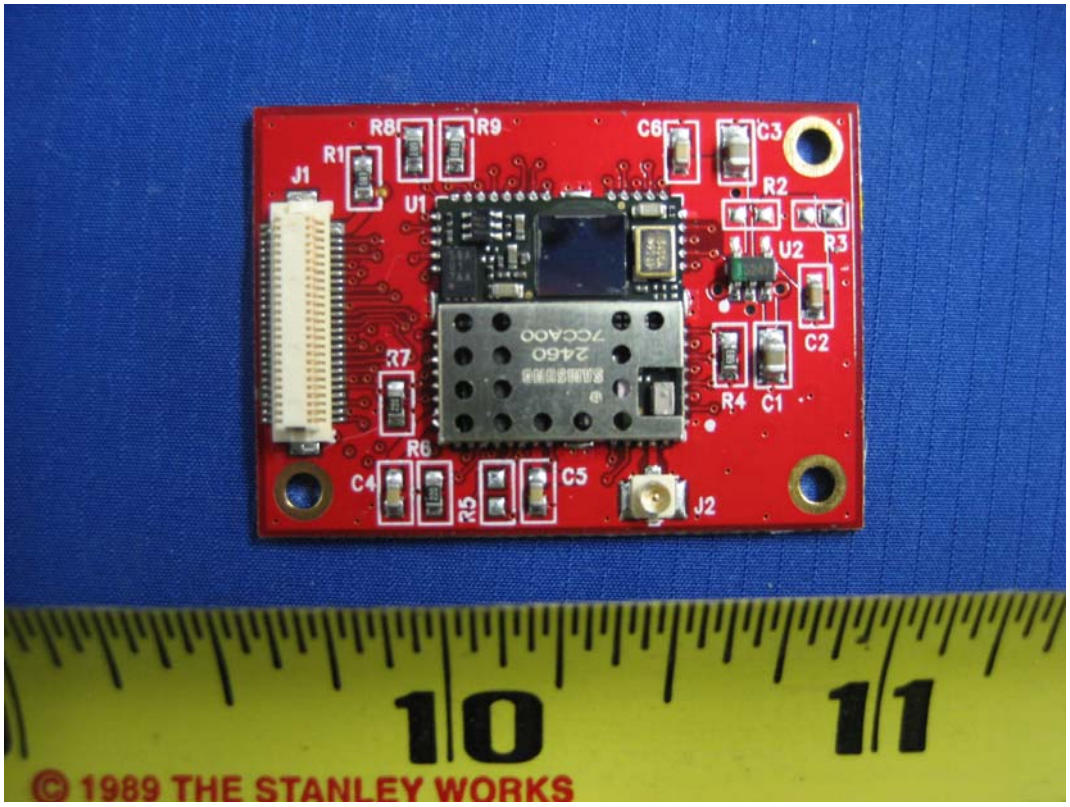
HOST PRINTER MODEL: (110XI4, 140XI4, 170XI4, 220XI4) WITH ZLANG-VH 802.11B/G MODULE

Model: ZLANG-VH

10 Feb 2009

Report No.: SL08102101-ZBR-070 (15.247) PCII

(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:	
Choon Sian Ooi Test Engineer	Leslie Bai Engineering Reviewer

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Test result presented in this test report is applicable to the representative sample only.

EMC Test Report

To: FCC Part 15.247 & IC RSS210

SIEMIC, INC.

Accessing global markets

Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

In addition to testing and certification, SIEMIC provides initial design reviews and compliance management through out a project. Our extensive experience with China, Asia Pacific, North America, European, and international compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC , RF/Wireless , Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless , Telecom
Taiwan	BSMI , NCC , NIST	EMC, RF, Telecom , Safety
Hong Kong	OFTA , NIST	RF/Wireless ,Telecom
Australia	NATA, NIST	EMC, RF, Telecom , Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF , Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	Safety, EMC , RF/Wireless, Telecom
Europe	A2LA, NIST	EMC, RF, Telecom , Safety

Accreditations for Product Certifications

Country	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC , RF , Telecom
Canada	IC FCB , NIST	EMC , RF , Telecom
Singapore	iDA, NIST	EMC , RF , Telecom

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1 Executive Summary & EUT information

The purpose of this test programme was PCII application and to demonstrate compliance of the Zebra Technologies Corp , Host Printer Model: (110Xi4, 140Xi4, 170Xi4, 220Xi4) with ZLANG-VH 802.11b/g Module (LMA, FCCID: I28-ZLANGVH) Model: ZLANG-VH against the current Stipulated Standards. The Host Printer Model: (110Xi4, 140Xi4, 170Xi4, 220Xi4) with ZLANG-VH 802.11b/g Module have demonstrated compliance with the FCC 15.247 2009 and RSS 210 Issue 7 2007.

EUT Information

EUT Description	:	The Host Printer Model: (110Xi4, 140Xi4, 170Xi4, 220Xi4) with ZLANG-VH 802.11b/g Module is a Thermal label printer with 802.11b/g feature.
Model No	:	ZLANG-VH
Serial No	:	Test sample without serial number
Input Power	:	3.6VDC

2 TECHNICAL DETAILS

Purpose	Compliance testing of DSSS Radio Module with stipulated standard
Applicant / Client	Zebra Technologies Corp
Manufacturer	Zebra Technologies Corp 333 Corporate Woods Parkway Vernon Hills, IL 60061
Laboratory performing the tests	SIEMIC Laboratories
Test report reference number	SL08102101-ZBR-070 (15.247) PCII
Date EUT received	October 23 2008
Standard applied	47 CFR §15.247 (2008) and RSS 210 Issue 7: 2007
Dates of test (from – to)	Jan 24 & 29 2009
No of Units:	1
Equipment Category:	DSSS
Trade Name:	Zebra Technologies Corp
Model :	ZLANG-VH
RF Operating Frequency (ies)	2412~2462MHz
Number of Channels :	11
Modulation :	CCK & OFDM
FCC ID :	I28-ZLANGVH
IC ID :	3798B- ZLANGVH

3 MODIFICATION

NONE

4 TEST SUMMARY

The product was tested in accordance with the following specifications. All Testing has been performed according to below product classification:
Spread Spectrum System / Device

Test Results Summary

Test Standard		Description	Pass / Fail
CFR 47 Part 15.247: 2009	RSS 210 Issue 7: 2007	-	-
15.203		Antenna Requirement	Pass - Refer to Limited Modular Approval FCCID: I28-ZLANGVH , IC : 3798B-ZLANGVH test report
15.205	RSS210(A8.5)	Restricted Band of Operation	Pass
15.207(a)	RSSGen(7.2.2)	Conducted Emissions Voltage	N/A
15.247(a)(1)	RSS210(A8.1)	Channel Separation	N/A
15.247(a)(1)	RSS210(A8.1)	Occupied Bandwidth	Pass - Refer to Limited Modular Approval FCCID: I28-ZLANGVH , IC : 3798B-ZLANGVH test report
15.247(a)(2)	RSS210 (A8.2)	Bandwidth	Pass - Refer to Limited Modular Approval FCCID: I28-ZLANGVH , IC : 3798B-ZLANGVH test report
15.247(a)(1)	RSS210(A8.1)	Number of Hopping Channels	N/A
15.247(a)(1)	RSS210(A8.1)	Time of Occupancy	N/A
15.247(b)	RSS210(A8.4)	Output Power	Pass - Refer to Limited Modular Approval FCCID: I28-ZLANGVH , IC : 3798B-ZLANGVH test report
15.247(c)	RSS210(A8.4)	Antenna Gain > 6 dBi	N/A
15.247(d)	RSS210(A8.5)	Conducted Spurious Emissions	N/A
15.209; 15.247(d)	RSS210(A8.5)	Radiated Spurious Emissions	Pass
15.247(e)	RSS210(A8.3)	Power Spectral Density	N/A
15.247(f)	RSS210(A8.3)	Hybrid System Requirement	N/A
15.247(g)	RSS210(A8.1)	Hopping Capability	N/A
15.247(h)	RSS210(A8.1)	Hopping Coordination Requirement	N/A
15.247(i)	RSSGen(5.5)	RF Exposure requirement	Pass
	RSSGen(4.8)	Receiver Spurious Emissions	Pass

ANSI C63.4: 2003/ RSS-Gen Issue 2: 2008

PS: All measurement uncertainties are not taken into consideration for all presented test result.

5 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

5.10 Radiated Spurious Emission < 1GHz

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 1GHz (QP only @ 3m) is ±6.0dB (for EUTs < 0.5m X 0.5m X 0.5m).
4. Environmental Conditions

	Temperature	25ºC
	Relative Humidity	50%
	Atmospheric Pressure	1019mbar

Test Date : Jan 24 & 29 2009
Tested By :Choon Sian Ooi

Standard Requirement: 47 CFR §15.247(d)

Procedures: Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set to transmit at mid channel. Note that setting the channel other than mid, the spurious emissions are the same.

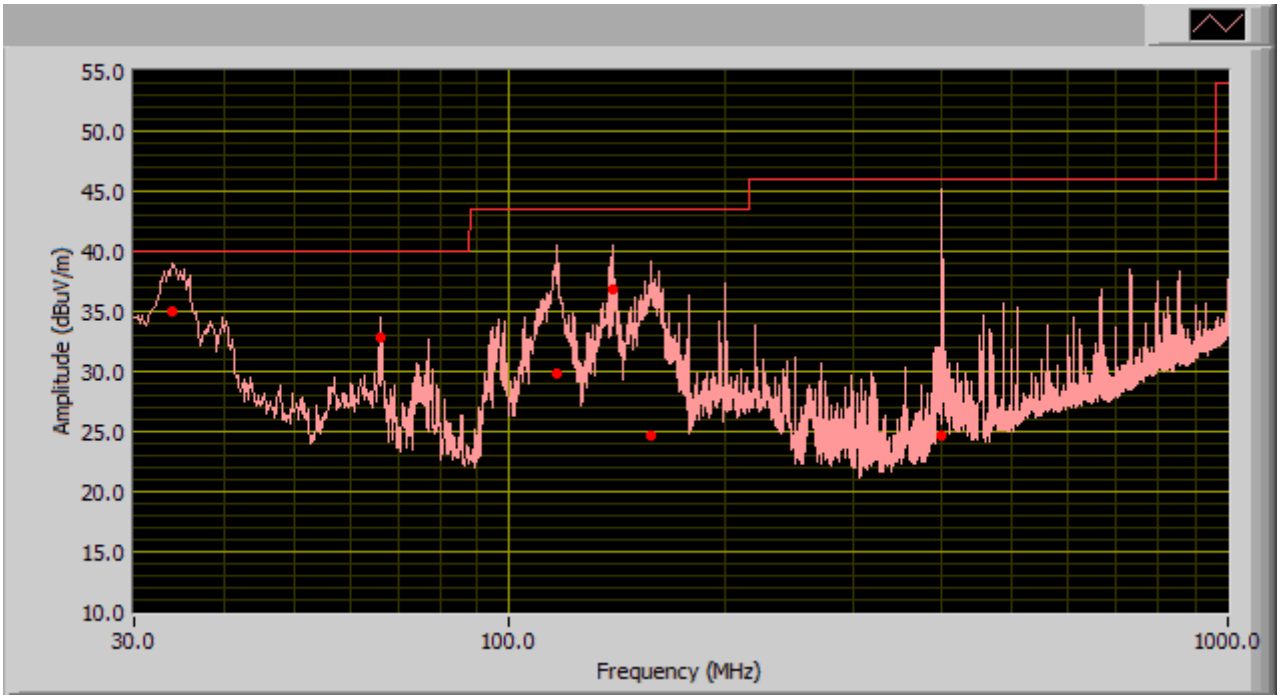
The limit is converted from microvolts/meter to decibel microvolts/meter.

Sample Calculation: Corrected Amplitude = Raw Amplitude (dBµV/m) + ACF(dB) + Cable Loss(dB)

Test Result:

PS: All investigation has been done on all 4 models, Only the worst case of 110Xi4, is presented in this test report.

With HOST : 110XI4 (TX)

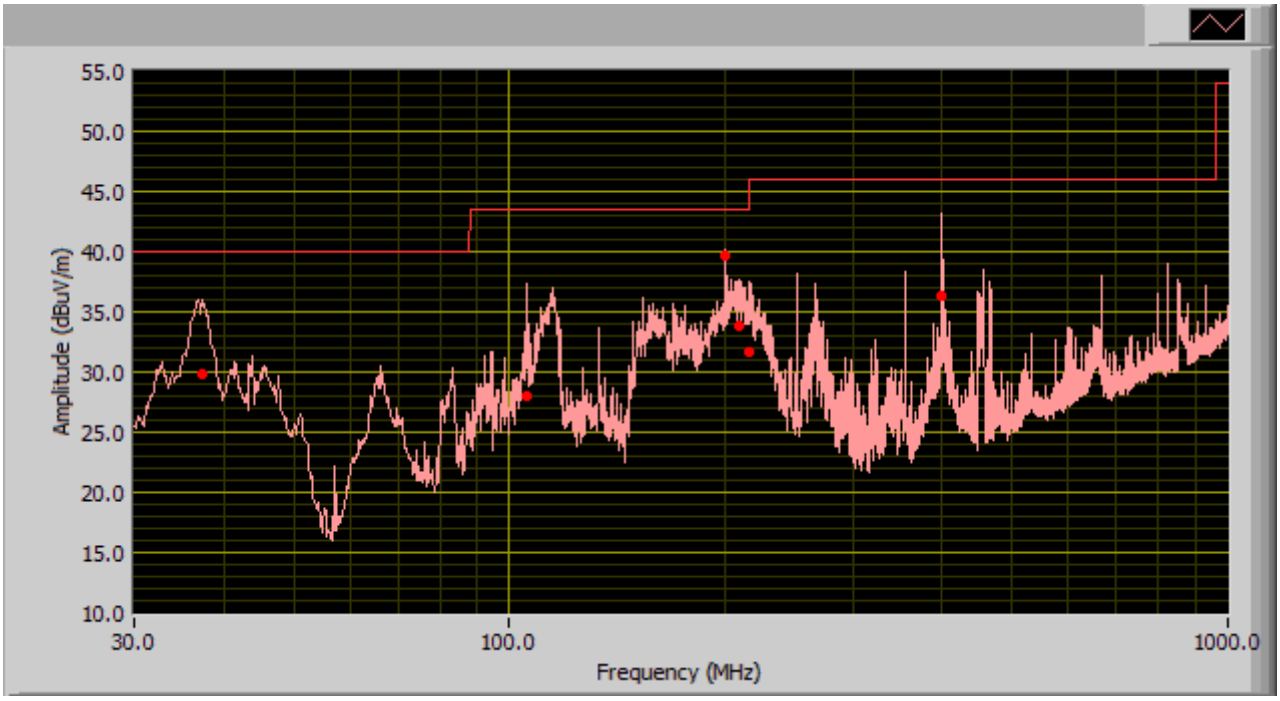


Limit

30MHz ~1000MHz

Frequency (MHz)	Corrected Quasi-Peak (dBµV/m) @ 3m	Turntable position (deg)	Polarity	Antenna height (cm)	Factor (dB)	Limit (dBµV/m)	Margin (dB)
400.46	24.64	4.00	H	236.00	18.33	46.00	-21.36
34.03	34.93	347.00	V	100.00	18.47	40.00	-5.07
116.25	29.87	284.00	V	116.00	15.03	43.50	-13.63
139.14	36.88	112.00	V	108.00	15.45	43.50	-6.62
157.56	24.67	353.00	V	158.00	14.48	43.50	-18.83
66.30	32.90	118.00	H	393.00	9.30	40.00	-7.10

With HOST : 110XI4 (RX)



Limit

30MHz ~1000MHz

Frequency (MHz)	Corrected Quasi-Peak (dBµV/m) @ 3m	Turntable position (deg)	Polarity	Antenna height (cm)	Factor (dB)	Limit (dBµV/m)	Margin (dB)
400.42	36.32	106.00	H	228.00	18.33	46.00	-9.68
200.01	39.72	93.00	H	121.00	15.06	43.50	-3.78
37.37	29.91	290.00	V	105.00	16.05	40.00	-10.09
208.16	33.83	104.00	H	113.00	12.99	43.50	-9.67
215.72	31.71	104.00	H	112.00	13.04	43.50	-11.79
105.70	28.00	357.00	V	110.00	13.30	43.50	-15.50

5.10 Radiated Spurious Emissions > 1GHz & Band Edge

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 1GHz – 40GH is +6.0dB (for EUTs < 0.5m X 0.5m X 0.5m).
4. Environmental Conditions

	Temperature	25ºC
	Relative Humidity	50%
	Atmospheric Pressure	1019mbar

Test Date : Jan 24 & 29 2009
Tested By :Choon Sian Ooi

Standard Requirement: 47 CFR §15.247(d)

Procedures: Equipment was setup in a semi-anechoic chamber. For measurements above 1 GHz an average measurement was taken with a 10Hz video bandwidth. The EUT was tested at low, mid and high with the highest output power. Investigated up to 10th harmonic of the operating frequency.

Sample Calculation:

EUT Field Strength = Raw Amplitude(dBµV/m) – Amplifier Gain(dB) + Antenna Factor(dB) + Cable Loss(dB) + Filter Attenuation(dB, if used)

Test Result:

Host EUT :110Xi4

802.11b @ 2412MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825	220	V	105	27.21	33.42	3.46	64.09	74	-9.91	pk
4825	220	V	105	12.65	33.42	3.46	49.53	54	-4.47	avg
4825	100	H	125	27.63	33.42	3.46	64.51	74	-9.49	pk
4825	100	H	125	11.58	33.42	3.46	48.46	54	-5.54	avg

Emission was scanned up to 25GHz.

802.11b @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4874	150	V	100	25.65	33.5	3.49	62.64	74	-11.36	pk
4874	150	V	100	12.51	33.5	3.49	49.5	54	-4.5	avg
4874	120	H	125	26.54	33.5	3.49	63.53	74	-10.47	pk
4874	120	H	125	12.69	33.5	3.49	49.68	54	-4.32	avg

Emission was scanned up to 25GHz.

802.11b @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930	150	V	102	26.35	33.6	3.52	63.47	74	-10.53	pk
4930	150	V	102	11.56	33.6	3.52	48.68	54	-5.32	avg
4930	120	H	115	26.21	33.6	3.52	63.33	74	-10.67	pk
4930	120	H	115	11.45	33.6	3.52	48.57	54	-5.43	avg

Emission was scanned up to 25GHz.

802.11g @ 2412MHz @ 3 Meter

Frequency	Azimuth	Antenna Polarity	Height	Raw Amp. @ 3m	Ant.Corr. Factor	Cable Loss	EUT Final Field Strength	Limit @ 3m	Delta	Detector
(MHz)	(Degrees)	(H/V)	(m)	(dBuV)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(pk/avg)
4825	120	V	105	27.13	33.42	3.46	64.01	74	-9.99	pk
4825	120	V	105	12.56	33.42	3.46	49.44	54	-4.56	avg
4825	138	H	120	26.64	33.42	3.46	63.52	74	-10.48	pk
4825	138	H	120	11.95	33.42	3.46	48.83	54	-5.16	avg

Emission was scanned up to 25GHz.

802.11g @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4874.00	150	V	105	26.45	33.5	3.49	63.44	74	-10.56	pk
4874.00	150	V	105	12.88	33.5	3.49	49.87	54	-4.13	avg
4874.00	200	H	120	26.44	33.5	3.49	63.43	74	-10.57	pk
4874.00	200	H	120	12.70	33.5	3.49	49.69	54	-4.31	avg

Emission was scanned up to 25GHz.

802.11g @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930.00	165	V	105	26.63	33.6	3.52	63.75	74	-10.25	pk
4930.00	165	V	105	12.68	33.6	3.52	49.80	54	-4.20	avg
4930.00	88	H	110	25.45	33.6	3.52	62.57	74	-11.43	pk
4930.00	88	H	110	12.14	33.6	3.52	49.26	54	-4.74	avg

Emission was scanned up to 25GHz.

Host EUT :140Xi4

802.11b @ 2412MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825.00	200	V	105	26.98	33.42	3.46	63.86	74	-10.14	pk
4825.00	200	V	105	12.11	33.42	3.46	48.99	54	-5.01	avg
4825.00	150	H	120	26.49	33.42	3.46	63.37	74	-10.63	pk
4825.00	150	H	120	11.57	33.42	3.46	48.45	54	-5.55	avg

Emission was scanned up to 25GHz.

802.11b @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4874.00	185	V	110	26.06	33.5	3.49	63.05	74	-10.95	pk
4874.00	185	V	110	11.81	33.5	3.49	48.80	54	-5.20	avg
4874.00	110	H	116	26.01	33.5	3.49	63.00	74	-11.00	pk
4874.00	110	H	116	11.61	33.5	3.49	48.60	54	-5.40	avg

Emission was scanned up to 25GHz.

802.11b @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930.00	155	V	105	26.94	33.6	3.52	64.06	74	-9.94	pk
4930.00	155	V	105	11.92	33.6	3.52	49.04	54	-4.96	avg
4930.00	260	H	110	26.51	33.6	3.52	63.63	74	-10.37	pk
4930.00	260	H	110	11.84	33.6	3.52	48.96	54	-5.04	avg

Emission was scanned up to 25GHz.

802.11g @ 2412MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825.00	155	V	105	26.63	33.42	3.46	63.51	74	-10.49	pk
4825.00	155	V	105	12.10	33.42	3.46	48.98	54	-5.02	avg
4825.00	120	H	120	26.30	33.42	3.46	63.18	74	-10.82	pk
4825.00	120	H	120	11.36	33.42	3.46	48.24	54	-5.76	avg

Emission was scanned up to 25GHz.

802.11g @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4874.00	200	V	105	25.77	33.5	3.49	62.76	74	-11.24	pk
4874.00	200	V	105	11.63	33.5	3.49	48.62	54	-5.38	avg
4874.00	180	H	112	25.09	33.5	3.49	62.08	74	-11.92	pk
4874.00	180	H	112	11.39	33.5	3.49	48.38	54	-5.62	avg

Emission was scanned up to 25GHz.

802.11g @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930.00	165	V	108	25.87	33.6	3.52	62.99	74	-11.01	pk
4930.00	165	V	108	11.93	33.6	3.52	49.05	54	-4.95	avg
4930.00	288	H	116	25.69	33.6	3.52	62.81	74	-11.19	pk
4930.00	288	H	116	11.84	33.6	3.52	48.96	54	-5.04	avg

Emission was scanned up to 25GHz.

Host EUT :170Xi4

802.11b @ 2412MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825.00	165	V	100	26.43	33.42	3.46	63.31	74	-10.69	pk
4825.00	165	V	100	12.70	33.42	3.46	49.58	54	-4.42	avg
4825.00	199	H	119	25.70	33.42	3.46	62.58	74	-11.42	pk
4825.00	199	H	119	11.45	33.42	3.46	48.33	54	-5.67	avg

Emission was scanned up to 25GHz.

802.11b @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4874.00	140	V	102	25.76	33.5	3.49	62.75	74	-11.25	pk
4874.00	140	V	102	11.88	33.5	3.49	48.87	54	-5.13	avg
4874.00	155	H	114	24.96	33.5	3.49	61.95	74	-12.05	pk
4874.00	155	H	114	11.12	33.5	3.49	48.11	54	-5.89	avg

Emission was scanned up to 25GHz.

802.11b @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930.00	120	V	108	26.30	33.6	3.52	63.42	74	-10.58	pk
4930.00	120	V	108	12.12	33.6	3.52	49.24	54	-4.76	avg
4930.00	88	H	120	25.62	33.6	3.52	62.74	74	-11.26	pk
4930.00	88	H	120	12.80	33.6	3.52	49.92	54	-4.08	avg

Emission was scanned up to 25GHz.

802.11g @ 2412MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825.00	155	V	105	26.73	33.42	3.46	63.61	74	-10.39	pk
4825.00	155	V	105	11.46	33.42	3.46	48.34	54	-5.66	avg
4825.00	255	H	120	25.98	33.42	3.46	62.86	74	-11.14	pk
4825.00	255	H	120	11.03	33.42	3.46	47.91	54	-6.09	avg

Emission was scanned up to 25GHz.

802.11g @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4874.00	90	V	105	25.81	33.5	3.49	62.80	74	-11.20	pk
4874.00	90	V	105	11.17	33.5	3.49	48.16	54	-5.84	avg
4874.00	100	H	111	25.52	33.5	3.49	62.51	74	-11.49	pk
4874.00	100	H	111	11.37	33.5	3.49	48.36	54	-5.64	avg

Emission was scanned up to 25GHz.

802.11g @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930.00	50	V	106	27.39	33.6	3.52	64.51	74	-9.49	pk
4930.00	50	V	106	13.91	33.6	3.52	51.03	54	-2.97	avg
4930.00	169	H	115	26.98	33.6	3.52	64.10	74	-9.90	pk
4930.00	169	H	115	12.96	33.6	3.52	50.08	54	-3.92	avg

Emission was scanned up to 25GHz.

Host EUT: 220Xi4

802.11b @ 2412MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825.00	200	V	102	27.93	33.6	3.52	65.05	74	-8.95	pk
4825.00	200	V	102	13.78	33.6	3.52	50.90	54	-3.10	avg
4825.00	150	H	150	27.65	33.6	3.52	64.77	74	-9.23	pk
4825.00	150	H	150	12.91	33.6	3.52	50.03	54	-3.97	avg

Emission was scanned up to 25GHz.

802.11b @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825.00	140	V	105	26.44	33.5	3.49	63.43	74	-10.57	pk
4825.00	140	V	105	11.80	33.5	3.49	48.79	54	-5.21	avg
4825.00	200	H	145	26.51	33.5	3.49	63.50	74	-10.50	pk
4825.00	200	H	145	11.77	33.5	3.49	48.76	54	-5.24	avg

Emission was scanned up to 25GHz.

802.11b @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930.00	190	V	104	27.63	33.6	3.52	64.75	74	-9.25	pk
4930.00	190	V	104	12.40	33.6	3.52	49.52	54	-4.48	avg
4930.00	220	H	126	26.95	33.6	3.52	64.07	74	-9.93	pk
4930.00	220	H	126	11.91	33.6	3.52	49.03	54	-4.97	avg

Emission was scanned up to 25GHz.

802.11g @ 2412MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4825.00	175	V	103	27.99	33.42	3.46	64.87	74	-9.13	pk
4825.00	175	V	103	14.47	33.42	3.46	51.35	54	-2.65	avg
4825.00	216	H	126	25.55	33.42	3.46	62.43	74	-11.57	pk
4825.00	216	H	126	12.49	33.42	3.46	49.37	54	-4.64	avg

Emission was scanned up to 25GHz.

802.11g @ 2437MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4874.00	149	V	105	27.52	33.5	3.49	64.51	74	-9.49	pk
4874.00	149	V	105	13.48	33.5	3.49	50.47	54	-3.54	avg
4874.00	213	H	119	26.44	33.5	3.49	63.43	74	-10.57	pk
4874.00	213	H	119	13.08	33.5	3.49	50.07	54	-3.93	avg

Emission was scanned up to 25GHz.

802.11g @ 2462MHz @ 3 Meter

Frequency (MHz)	Azimuth (Degrees)	Antenna Polarity (H/V)	Height (m)	Raw Amp. @ 3m (dBuV)	Ant.Corr. Factor (dB)	Cable Loss (dB)	EUT Final Field Strength (dBuV/m)	Limit @ 3m (dBuV/m)	Delta (dBuV/m)	Detector (pk/avg)
4930.00	155	V	108	28.51	33.6	3.52	65.63	74	-8.37	pk
4930.00	155	V	108	14.72	33.6	3.52	51.84	54	-2.16	avg
4930.00	300	H	127	26.96	33.6	3.52	64.08	74	-9.92	pk
4930.00	300	H	127	13.77	33.6	3.52	50.89	54	-3.11	avg

Emission was scanned up to 25GHz.

Annex A. TEST INSTRUMENT & METHOD

Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES

Instrument	Model	Serial #	Calibration Due
AC Conducted Emissions			
R&S EMI Test Receiver	ESIB40	100179	04/25/2009
R&S LISN	ESH2-Z5	861741/013	04/24/2009
CHASE LISN	MN2050B	1018	04/24/2009
Radiated Emissions			
R&S EMI Test Receiver	ESIB40	100179	04/25/2009
Com Power Corp Horn Antenna (18GHz to 40GHz)	AH-840	101013	03/19/2010
EMCO Horn Antenna (1-18GHz)	3115	10SL0059	01/04/2009
Sunol Sciences, Inc. antenna (30MHz~2GHz)	JB1	A030702	10/04/2009
Wiltron Signal Generator (10MHz to 40GHz)	68169B	973407	04/25/2009
Com Power Preamplifier (18GHz to 40GHz)	PA-840	181250	05/21/2009
HP Preamplifier (1-18GHz)	8449B	3008A00715	04/24/2009
HP Preamplifier (0.1-1300MHz)	8447F	1937A01160	04/24/2009
Millitech, External Mixer	MHB-06-RD3A0	9259	N/A
MILITECH, External Mixer (Above 40GHz)	MHB-06-RD3AO	9259	N/A
MILITGECH, Horn Antenna (above 40GHz)	WT-KaD	WT28-6	N/A

Note: No calibration required.

Annex A.ii. CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B.

2. The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains.

3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.

4. All other supporting equipments were powered separately from another main supply.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.

3. High peaks, relative to the limit line, were then selected.

4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 KHz. For FCC tests, only Quasi-peak measurements were made; while for CISPR/EN tests, both Quasi-peak and Average measurements were made.

5. Steps 2 to 4 were then repeated for the LIVE line (for AC mains) or DC line (for DC power).

Sample Calculation Example

At 20 MHz limit = 250 μV = 47.96 dBμV

Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.20 dB

Q-P reading obtained directly from EMI Receiver = 40.00 dBμV
(Calibrated for system losses)

Therefore, Q-P margin = 47.96 – 40.00 = 7.96 i.e. 7.96 dB below limit

Annex A. iii RADIATED EMISSIONS TEST DESCRIPTION

EUT Characterisation

EUT characterisation, over the frequency range from 30MHz to 10th Harmonic , was done in order to minimise radiated emissions testing time while still maintaining high confidence in the test results.

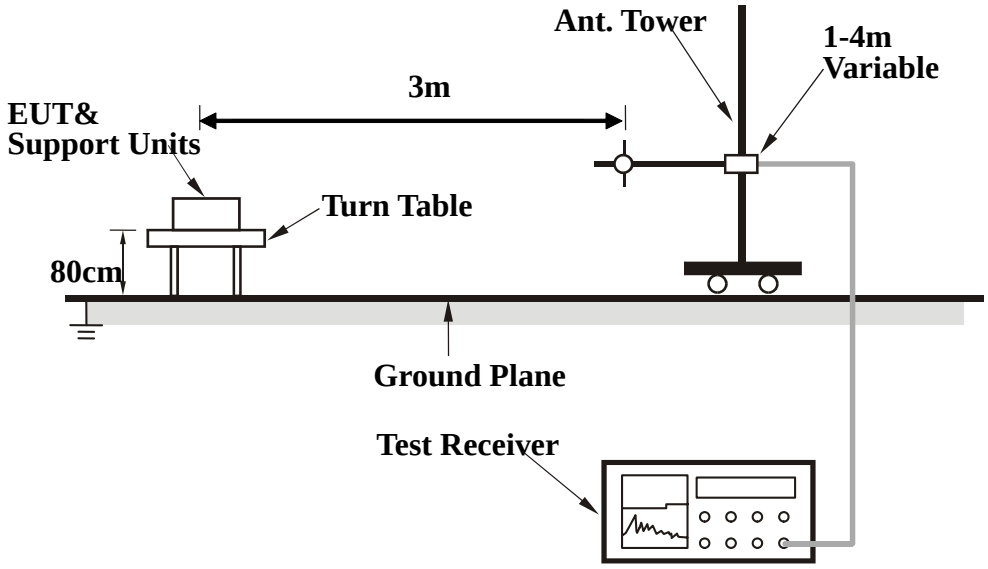
The EUT was placed in the chamber, at a height of about 0.8m on a turntable. Its radiated emissions frequency profile was observed, using a spectrum analyzer /receiver with the appropriate broadband antenna placed 3m away from the EUT. Radiated emissions from the EUT were maximised by rotating the turntable manually, changing the antenna polarisation and manipulating the EUT cables while observing the frequency profile on the spectrum analyzer / receiver. Frequency points at which maximum emissions occurred, clock frequencies and operating frequencies were then noted for the formal radiated emissions test at the Open Area Test Site (OATS).

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table.

2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.

3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.



Test Method

The following procedure was performed to determine the maximum emission axis of EUT:
1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
2. With the receiving antenna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
3. Compare the results derived from above two steps. So, the axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.

Final Radiated Emission Measurement
1. Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function.

2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.

3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.

4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ◦ to 360 ◦ with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.

5. Repeat step 4 until all frequencies need to be measured were complete.

6. Repeat step 5 with search antenna in vertical polarized orientations.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Sample Calculation Example

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows:

Peak = Reading + Corrected Factor

where
Corr. Factor = Antenna Factor + Cable Factor - Amplifier Gain (if any)
And the average value is

Average = Peak Value + Duty Factor or
Set RBW = 1MHz, VBW = 10Hz.

Note :
If the measured frequencies are fall in the restricted frequency band, the limit employed must be quasi peak value when frequencies are below or equal to 1 GHz. And the measuring instrument is set to quasi peak detector function.

Annex B EUT AND TEST SETUP PHOTOGRAPHS

Please see the attachment

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

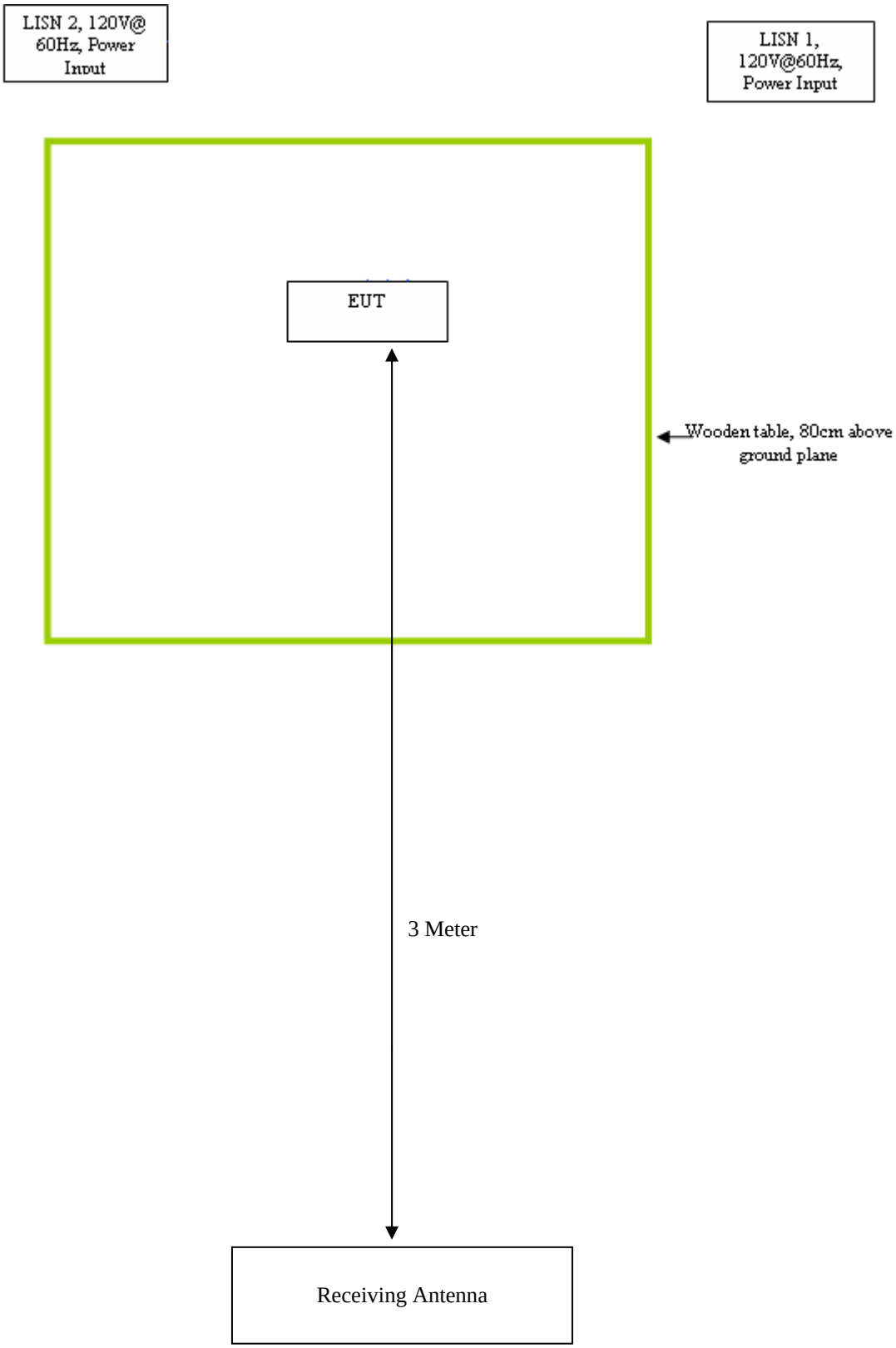
EUT TEST CONDITIONS

Annex C. i. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Equipment Description (Including Brand Name)	Model & Serial Number	Cable Description (List Length, Type & Purpose)
N/A	N/A	N/A

Block Configuration Diagram for Radiated Emission



Block Configuration Diagram for Conducted Emission

N/A

Annex C.ii. EUT OPERATING CONDITIONS

The following is the description of how the EUT was exercised during testing.

Test	Description Of Operation
Emissions Testing	The EUT was configured using manufacturer's program to simulate the worst case.
Others Testing	The EUT was configured using manufacturer's program to simulate the worst case.

Annex D USER MANUAL, BLOCK & CIRCUIT DIAGRAM

Please see attachment

Annex E SIEMIC ACCREDITATION

SIEMIC ACREDITATION DETAILS: A2LA 17025 & ISO Guide 65 : 2742.01 , 2742.2

THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

SIEMIC LABORATORIES
San Jose, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005*).

Presented this 11th day of July 2008.

President
For the Accreditation Council
Certificate Number 2742.01
Valid to September 30, 2010

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED PRODUCT CERTIFICATION BODY

A2LA has accredited

SIEMIC INC.
San Jose, CA

for technical competence as a
Product Certification Body

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC Guide 65:1996 *General requirements for bodies operating product certification systems*. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system for a Telecommunications Certification Body (TCB) meeting FCC (U.S.), IDA (Singapore) and IC (Canada) requirements.

Presented this 9th day of January 2009.

President
For the Accreditation Council
Certificate Number: 2742.02
Valid to: September 30, 2010

For the product certification schemes to which this accreditation applies, please refer to the certification body's Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 65:1996

SIEMIC INC.
2206 Ringwood Ave.
San Jose, CA 95131
Mr. Snell Leong (Authorized Representative) Phone: 408 526 1188
www.siemic.com

PRODUCT CERTIFICATION CONFORMITY ASSESSMENT BODY (CAB)

Valid to: September 30, 2010 Certificate Number: 2742.02

In recognition of the successful completion of the A2LA Certification Body Accreditation Program evaluation, including the US Federal Communications Commission (FCC), Industry Canada (IC) and Singapore (IDA) requirements for the indicated types of product certifications, accreditation is granted to this organization to perform the following product certification schemes:

Economy	Scope
Federal Communication Commission - (FCC)	
Unlicensed Radio Frequency Devices	A1, A2, A3, A4
Licensed Radio Frequency Devices	B1, B2, B3, B4
Telephone Terminal Equipment	C

**Please refer to FCC TCB Program Roles and Responsibilities, v04, released February 14, 2008 detailing scopes, roles and responsibilities. http://www.fcc.gov/oet/ea/FCC-Overview-TCB-Program.pdf*

Industry Canada - (IC)	
Radio	All Radio Standards Specifications (RSS) in Category I Equipment Standards List Radio

**Please refer to Industry Canada (IC) website at: http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/h_sf01342e.html*

IDA – Singapore	
Line Terminal Equipment	All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2008, Annex 2
Radio-Communication Equipment	All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2008, Annex 2

**Please refer to Info-Communication Development Authority (iDA) Singapore website at: http://www.ida.gov.sg/doc/Policies%20and%20Regulation/Policies_and_Regulation_Level2/20060609145118/MRARecScheme.pdf*

SIEMIC ACREDITATION DETAILS: FCC Test Site Registration No. 783147

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

December 20, 2007

Registration Number: 783147

SIEMIC Laboratories
2206 Ringwood Avenue,
San Jose, CA 95131

Attention: Leslie Bai

Re: Measurement facility located at San Jose
3 & 10 meter site
Date of Renewal: December 20, 2007

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website www.fcc.gov under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,

Phyllis Parrish
Industry Analyst

SIEMIC ACREDITATION DETAILS: Industry of Canada Test Site Registration No. 4842-1

Industry Canada Industrie Canada

May 23rd, 2008

OUR FILE: 46405-4842
Submission No: 126429

Siemic Inc.
2206 Ringwood Ave.
San Jose CA 95131
USA

Attention: Leslie Bai

Dear Sir/Madame:

The Bureau has received your application for the registration / renewal of a 3/10m OATS. Be advised that the information received was satisfactory to Industry Canada. The following number(s) is now associated to the site(s) for which registration / renewal was sought **(4842A-1).** Please reference the appropriate site number in the body of test reports containing measurements performed on the site. In addition, please be informed that the Bureau is now utilizing a **new site numbering scheme** in order to simplify the electronic filing process. Our goal is to reduce the number of secondary codes associated to one particular company. The following changes have been made to your record.

- Your primary code is: **4842**

- The company number associated to the site(s) located at the above address is: **4842A**

- The table below is a summary of the changes made to the unique site registration number(s):

New Site Number	Obsolete Site Number	Description of Site	Expiry Date (YYYY-MM-DD)
4842A-1	4842-1	3m Chamber	2010-05-23

Furthermore, to obtain or renew a unique site number, the applicant shall demonstrate that the site has been accredited to ANSI C63.4-2003 or later. A scope of accreditation indicating the accreditation by a recognized accreditation body to ANSI C63.4-2003 shall be accepted. Please indicate in a letter the previous assigned site number if applicable and the type of site (example: 3 meter OATS or 3 meter chamber). If the test facility is not accredited to ANSI C63.4-2003 or later, the test facility shall submit test data demonstrating full compliance with the ANSI standard. The Bureau will evaluate the filing to determine if recognition shall be granted.

The frequency for re-validation of the test site and the information that is required to be filed or retained by the testing party shall comply with the requirements established by the accrediting organization. However, in all cases, test site re-validation shall occur on an interval not to exceed two years. There is no fee or form associated with an OATS filing. OATS submissions are encouraged to be submitted electronically to the Bureau using the following URL;
http://strategis.ic.gc.ca/epic/internet/inceb-bhst.nsf/en/h_tt00052e.html.

If you have any questions, you may contact the Bureau by e-mail at certification.bureau@ic.gc.c
Please reference our file and submission number above for all correspondence.

Yours sincerely,

S. Proulx
Test & Measurement Specialist
Certification and Engineering Bureau
3701 Carling Ave., Building 94
Ottawa, Ontario K2H 8S2

SIEMIC ACREDITATION DETAILS: FCC DOC CAB Recognition : US1109

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

August 28, 2008

Siemic Laboratories
2206 Ringwood Ave.,
San Jose, CA 95131

Attention: Leslie Bai

Re: Accreditation of Siemic Laboratories
Designation Number: US1109
Test Firm Registration #: 540430

Dear Sir or Madam:

We have been notified by American Association for Laboratory Accreditation that Siemic Laboratories has been accredited as a Conformity Assessment Body (CAB).

At this time Siemic Laboratories is hereby designated to perform compliance testing on equipment subject to Declaration Of Conformity (DOC) and Certification under Parts 15 and 18 of the Commission's Rules.

This designation will expire upon expiration of the accreditation or notification of withdrawal of designation.

Sincerely,

George Tannahill

George Tannahill
Electronics Engineer

SIEMIC ACREDITATION DETAILS: Australia CAB ID : US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

November 20, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Australian Communications and Media Authority (ACMA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	Siemic, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131
Identification No.:	US0160
Recognized Scope:	EMC: AS/NZS 4251.1 (until 5/31/2009), AS/NZS 4251.2 (until 5/31/2009), AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22, AS/NZS 61000.6.3, AS/NZS 61000.6.4 Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771 Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/NZS 60950.1

You may submit test data to ACMA to verify that the equipment to be imported into Australia satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. Please contact Ms. Ramona Saar, at (301) 975-5521 or ramona.saar@nist.gov if you have questions.

Sincerely,

David F. Alderman

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Snell Leong, Siemic, Inc.; Ramona Saar, NIST

NIST

SIEMIC ACREDITATION DETAILS: Korea CAB ID: US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

October 1, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Radio Research Agency (RRA) Korea Communications Commission (KCC) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	SIEMIC, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131
Identification No.:	US0160
Recognized Scope:	**EMI:** KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI **EMS:** KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN-61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS **Wireless:** RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68 **Wired:** President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6 President Notice 20664, RRL Notice 2008-7 with attachment 4

You may submit test data to RRA/KCC to verify that the equipment to be imported into Korea satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

NIST

SIEMIC ACREDITATION DETAILS: Taiwan BSMI Accreditation No. SL2-IN-E-1130R

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

May 3, 2006

Mr. Leslie Bai
SIEMIC Laboratories
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

I am pleased to inform you that your laboratory has been recognized by the Chinese Taipei's Bureau of Standards, Metrology, and Inspection (BSMI) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. You may submit test data to BSMI to verify that the equipment to be imported into Chinese Taipei satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. The pertinent designation information is as follows:

- BSMI number: **SL2-IN-E-1130R** (Must be applied to the test reports)
- U.S Identification No: **US0160**
- Scope of Designation: **CNS 13438**
- Authorized signatory: **Mr. Leslie Bai**

The names of all recognized CABs will be posted on the NIST website at http://ts.nist.gov/mra. If you have any questions, please contact Mr. Dhillon at 301-975-5521. We appreciate your continued interest in our international conformity assessment activities.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group

cc: Jogindar Dhillon

NIST

SIEMIC ACREDITATION DETAILS: Taiwan NCC CAB ID: US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

November 25, 2008

Mr. LeslieBai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the National Communications Commission (NCC) for the requested scope expansion under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	SIEMIC, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131
Identification No.:	US0160
Current Scope:	LP0002
Additional Scope:	PSTN01, ADSL01, ID0002, IS6100 and CNS 14336

You may submit test data to NCC to verify that the equipment to be imported into China satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

NIST

SIEMIC ACREDITATION DETAILS: Mexico NOM Recognition

CANIETI

CAMARA NACIONAL DE LA INDUSTRIA ELECTRONICA, DE TELECOMUNICACIONES E INFORMATICA

Laboratorio Valentín V. Rivero

México D.F. a 16 de octubre de 2006.

LESLIE BAI
DIRECTOR OF CERTIFICATION
SIEMIC LABORATORIES, INC.
ACCESSING GLOBAL MARKETS
P R E S E N T E

En contestación a su escrito de fecha 5 de septiembre del año en curso, le comento que estamos muy interesados en su intención de firmar un Acuerdo de Reconocimiento Mutuo, para lo cual adjunto a este escrito encontrara el Acuerdo en idioma ingles y español prellenado de los cuales le pido sea revisado y en su caso corregido, para que si esta de acuerdo poder firmarlo para mandarlo con las autoridades Mexicanas para su visto bueno y así poder ejercer dicho acuerdo.

Aprovecho este escrito para mencionarle que nuestro intermediario gestor será la empresa Isabel de México, S. A. de C. V., empresa que ha colaborado durante mucho tiempo con nosotros en lo relacionado a la evaluación de la conformidad y que cuenta con amplia experiencia en la gestoría de la certificación de cumplimiento con Normas Oficiales Mexicanas de producto en México.

Me despido de usted enviándole un cordial saludo y esperando sus comentarios al Acuerdo que nos ocupa.

Atentamente:

Ing. Faustino Ibáñez González
Gerente Técnico del Laboratorio de CANIETI.

Calzada Tlalpan 1
Hipódromo Condesa
06100 México, D.F.
Tel. 5264-0900 con 12 líneas
Fax 5264-0908
www.canieti.org

SIEMIC ACREDITATION DETAILS: Hong Kong OFTA CAB ID : US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

December 8, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Office of the Telecommunications Authority (OFTA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	SIEMIC, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, California 95131 USA
Identification No.:	US0160
Recognized Scope:	**Radio:** HKTA 1002, 1007, 1008, 1010, 1015, 1016, 1020, 1022, 1026, 1027, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1039, 1041, 1042, 1043, 1044, 1046, 1047, 1048, 1049, 1051 **Telecom:** HKTA 2011, 2012, 2013, 2014, 2017, 2018, 2022, 2024, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033

You may submit test data to OFTA to verify that the equipment to be imported into Hong Kong satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

NIST