



**FCC CFR47 PART 15 SUBPART B  
CERTIFICATION TEST REPORT  
FOR**

**BROADCOM 802.11ag /DRAFT 802.11n  
WIRELESS LAN PCI-E MINI CARD**

**MODEL NUMBER: BCM94321MC**

**FCC ID: QDS-BRCM1022**

**REPORT NUMBER: 06U10233-4**

**ISSUE DATE: JUNE 14, 2006**

*Prepared for*  
**BROADCOM CORP.  
190 MATHILDA PLACE  
SUNNYVALE, CA 94086, USA**

*Prepared by*  
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**LAB CODE:200065-0**

Revision History

Rev.	Date	Revisions	Revised By
--	6/14/2006	Initial Issue	Thu

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** BROADCOM CORP.  
190 MATHILDA PLACE  
SUNNYVALE, CA 94086, USA

**EUT DESCRIPTION:** BROADCOM 802.11 AG /DRAFT 802.11n WIRELESS LAN PCI-E  
MINI CARD

**MODEL:** BCM94321MC

**SERIAL NUMBER:** 107 & 316

**DATE TESTED:** APRIL 19 - 22, 2006

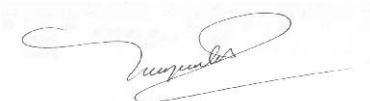
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART B	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



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THU CHAN  
EMC SUPERVISOR  
COMPLIANCE CERTIFICATION SERVICES

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VIEN TRAN  
EMC ENGINEER  
COMPLIANCE CERTIFICATION SERVICES

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is an 802.11n MIMO transceiver chipset. The chipset is installed on a Mini PCI-E card, model number BCM94321MC.

The radio module is manufactured by Broadcom Corp.

#### GENERAL INFORMATION

CHASSIS MATERIAL	N/A
ENCLOSURE MATERIAL	Metal
POWER REQUIREMENTS	3.3 VDC
POWERLINE FILTER MANUFACTURER AND MODEL	N/A
LIST OF ALL OSCILLATOR FREQUENCIES, CPU GREATER THAN OR EQUAL TO 9 kHz	20 MHz

### 5.2. TEST CONFIGURATION

The following configuration was investigated during testing:

EUT Configuration	Description
Typical Configuration	EUT connected to laptop via extended board with minimum configuration such as printer, media reader drive, USB mouse.

### 5.3. MODE(s) OF OPERATION

Mode	Description
EMCTest & TX	All I/O ports activate with H' patterns scrolling on the screen display with TX on.

#### **5.4. SOFTWARE AND FIRMWARE**

The test software used during the tests was EMCTest and epi\_tcp program.

#### **5.5. MODIFICATIONS**

No modifications were made during testing.

## 5.6. DETAILS OF TESTED SYSTEM

### SUPPORT EQUIPMENT & PERIPHERALS

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Printer	HP	7850	MY56K1304B	N/A
Media Reader	Belkin	F5U249	P10134	N/A
Laptop PC	Dell	Inspiron 0000	CN-901014-70166-	DOC
AC Adapter	Dell	PA-1600-06D1	F9710	N/A
Mouse	Microsoft	N/A	X08-71118PID	N/A

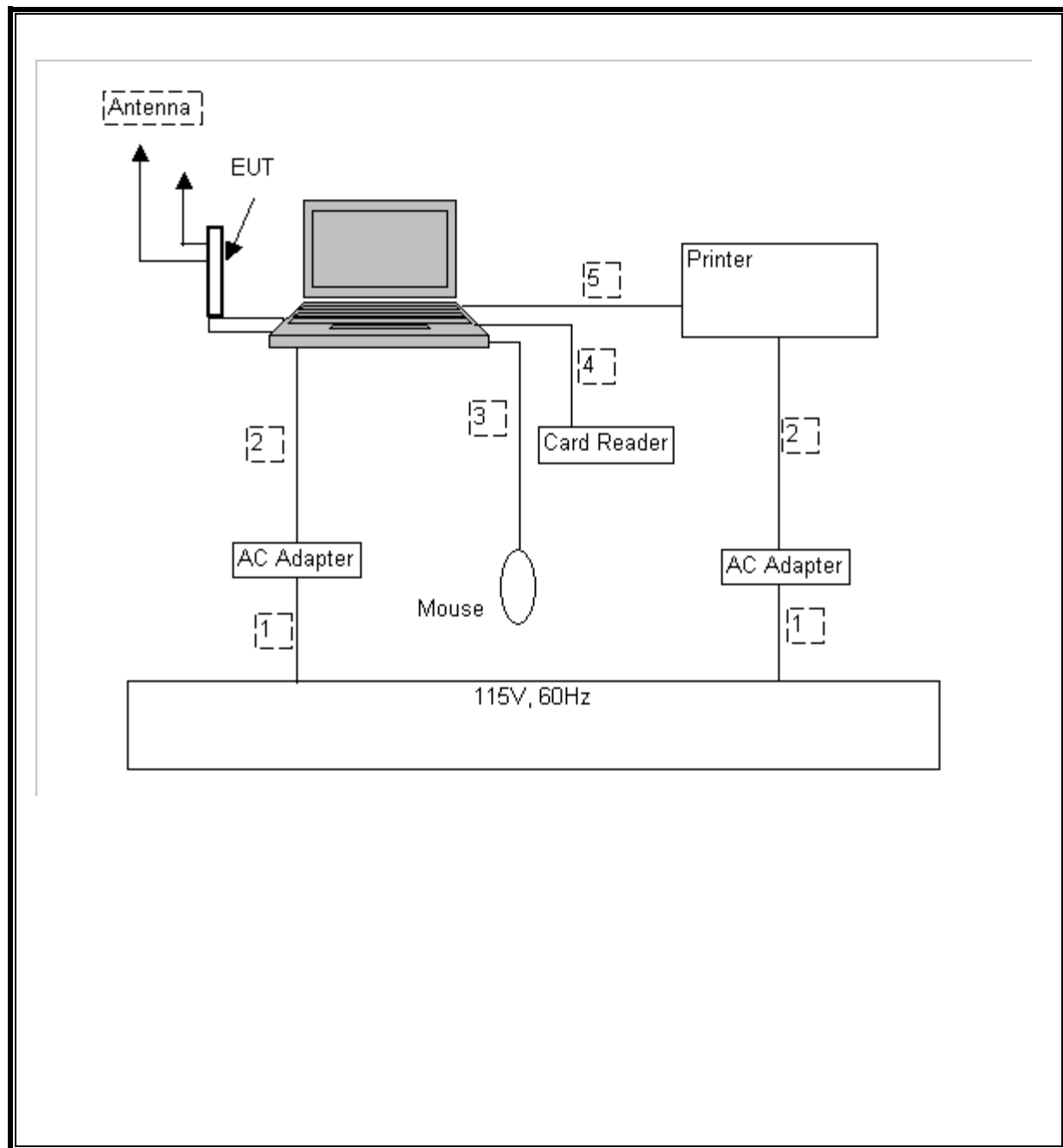
### I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	2	US115	Shielded	1.5m	N/A
2	DC	2	DC	Un-shielded	1.5m	N/A
3	USB	1	USB	Un-shielded	1m	N/A
4	USB	1	USB	Un-shielded	.5m	N/A
5	USB	1	USB	Un-shielded	1.5m	N/A

### TEST SETUP

The EUT connected to laptop via extended board with a typical configuration. Test software exercised the radio card and activated all I/O ports.



**TEST SETUP DIAGRAM**

## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-2	7/15/1905	8/30/06
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	8379443	8/30/06
EMI Test Receiver	R & S	ESHS 20	827129/006	6/3/06
AC Power Source, 10 kVA	ACS	AFC-10K-AFC-2	J1568	CNR
EMI Receiver, 9 kHz ~ 2.9 GHz	Agilent / HP	8542E	3942A00286	2/4/07
RF Filter Section	Agilent / HP	85420E	3705A00256	2/4/07
Antenna, Bilog 30 MHz ~ 2 Ghz	Sunol Sciences	JB1	A121003	3/3/07

## 7. APPLICABLE LIMITS AND TEST RESULTS

### 7.1. RADIATED EMISSIONS

#### TEST PROCEDURE

ANSI C63.4

The highest clock frequency generated or used in the EUT is 20 MHz, therefore the frequency range was investigated from 30 MHz to 1 GHz.

#### LIMIT

§15.109 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dB $\mu$ V/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54
Note: The lower limit shall apply at the transition frequency.	

#### RESULTS

No non-compliance noted:

**LEGACY MODE – 2.4 GHz****SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)**

## HORIZONTAL



561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 28 File#: 30-1000.EMI Date: 04-22-2006 Time: 12:42:47  
Audix ATC

Condition: FCC CLASS-B HORIZONTAL

Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 2.4 GHz Band Legacy\_Worst Case

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	30.000	9.60	20.45	30.05	40.00	-9.95	Peak
2	124.090	21.23	15.23	36.46	43.50	-7.04	Peak
3	218.180	25.28	12.51	37.79	46.00	-8.21	Peak
4	288.990	26.18	15.26	41.44	46.00	-4.56	Peak
5	575.140	20.40	21.20	41.60	46.00	-4.40	Peak
6	643.040	19.09	22.23	41.32	46.00	-4.68	Peak

**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**

## VERTICAL



561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 32 File#: 30-1000.emi Date: 04-22-2006 Time: 13:02:07  
Audix ATC

Condition: FCC CLASS-B VERTICAL

Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 2.4 GHz Band Legacy\_Worst Case

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	62.980	23.53	8.90	32.43	40.00	-7.57	Peak
2	133.790	20.00	15.02	35.02	43.50	-8.48	Peak
3	271.530	18.83	14.65	33.48	46.00	-12.52	Peak
4	506.270	21.82	20.29	42.11	46.00	-3.89	Peak
5	574.170	19.01	21.18	40.18	46.00	-5.82	Peak
6	643.040	18.26	22.23	40.49	46.00	-5.51	Peak

**LEGACY MODE – 5 GHz****SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)****HORIZONTAL**

561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 26 File#: 30-1000.EMI Date: 04-22-2006 Time: 12:26:22  
Audix ATC

Condition: FCC CLASS-B HORIZONTAL  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 5 GHz Band Legacy\_Worst Case

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	30.000	10.25	20.45	30.70	40.00	-9.30	Peak
2	124.090	22.03	15.23	37.26	43.50	-6.24	Peak
3	204.600	22.80	13.91	36.71	43.50	-6.79	Peak
4	575.140	19.36	21.20	40.56	46.00	-5.44	Peak
5	643.040	18.98	22.23	41.21	46.00	-4.79	QP
6	643.040	22.77	22.23	45.00	46.00	-1.00	Peak
7	681.840	19.01	22.86	41.87	46.00	-4.13	Peak

**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**

## VERTICAL



561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 22 File#: 30-1000.EMI Date: 04-22-2006 Time: 12:14:56  
Audix ATC

Condition: FCC CLASS-B VERTICAL  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 5 GHz Band Legacy\_Worst Case

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	63.950	23.56	8.97	32.54	40.00	-7.46	Peak
2	124.090	24.88	15.23	40.11	43.50	-3.39	QP
3 *	124.090	28.68	15.23	43.91	43.50	0.41	Peak
4	407.330	20.73	18.21	38.94	46.00	-7.06	Peak
5	574.170	20.64	21.18	41.81	46.00	-4.19	Peak
6	643.040	20.36	22.23	42.59	46.00	-3.41	Peak
7	705.120	17.50	23.16	40.66	46.00	-5.34	Peak

**MIMO MODE – 2.4 GHz****SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)**

## HORIZONTAL



561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 6 File#: 30-1000.EMI Date: 04-22-2006 Time: 10:32:49  
Audix ATC

Condition: FCC CLASS-B HORIZONTAL  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 2.4 GHz Band MIMO\_Worst Case

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	30.000	9.20	20.45	29.65	40.00	-10.35	Peak
2	208.480	22.72	13.30	36.02	43.50	-7.48	Peak
3	290.930	26.73	15.33	42.06	46.00	-3.94	Peak
4	406.360	22.28	18.20	40.47	46.00	-5.53	Peak
5	434.490	20.13	18.84	38.97	46.00	-7.03	Peak
6	574.170	16.09	21.18	37.27	46.00	-8.73	Peak



**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**

## VERTICAL



561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 3 File#: 30-1000.EMI Date: 04-22-2006 Time: 10:22:22  
Audix ATC

Condition: FCC CLASS-B VERTICAL  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 2.4 GHz Band MIMO\_Worst Case

Page: 1

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	51.340	26.16	9.05	35.21	40.00	-4.79	Peak
2	126.030	20.49	15.25	35.74	43.50	-7.76	Peak
3	293.840	22.97	15.42	38.39	46.00	-7.61	Peak
4	343.310	18.64	16.68	35.33	46.00	-10.67	Peak
5	406.360	22.22	18.20	40.41	46.00	-5.59	Peak
6	574.170	17.16	21.18	38.33	46.00	-7.67	Peak

**MIMO MODE – 5 GHz****SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)****HORIZONTAL**

561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0888  
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Data#: 16 File#: 30-1000.EMI Date: 04-22-2006 Time: 11:48:19  
Audix ATC

Condition: FCC CLASS-B HORIZONTAL  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 5 GHz Band MIMO\_Worst Case

Page: 1

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	30.000	10.02	20.45	30.47	40.00	-9.53	Peak
2	124.090	21.68	15.23	36.91	43.50	-6.59	Peak
3	290.930	23.93	15.33	39.26	46.00	-6.74	Peak
4	361.740	21.45	17.20	38.65	46.00	-7.35	Peak
5	643.040	21.88	22.23	44.11	46.00	-1.89	Peak
6	681.840	19.55	22.86	42.41	46.00	-3.59	Peak

**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**

## VERTICAL



561F Monterey Road  
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Tel: (408) 463-0888  
Fax: (408) 463-0885

Data#: 18 File#: 30-1000.EMI Date: 04-22-2006 Time: 11:52:24  
Audix ATC

Condition: FCC CLASS-B VERTICAL  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT : 2x2 Dual Band MIMO Device  
Model No : BCM94321MCAG Rev. 3  
S/N : 107  
Configuration : EUT and Minimum Peripherals  
Mode of operation: Tx 5 GHz Band MIMO\_Worst Case

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	62.980	24.18	8.90	33.08	40.00	-6.92	Peak
2	126.030	20.38	15.25	35.63	43.50	-7.87	Peak
3	406.360	20.65	18.20	38.85	46.00	-7.15	Peak
4	573.200	20.48	21.16	41.64	46.00	-4.36	Peak
5	642.070	19.87	22.21	42.08	46.00	-3.92	Peak
6	707.060	17.27	23.20	40.47	46.00	-5.53	Peak

## 7.2. AC MAINS LINE CONDUCTED EMISSIONS

### TEST PROCEDURE

ANSI C63.4

### LIMIT

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dB $\mu$ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Notes: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

### RESULTS

No non-compliance noted:

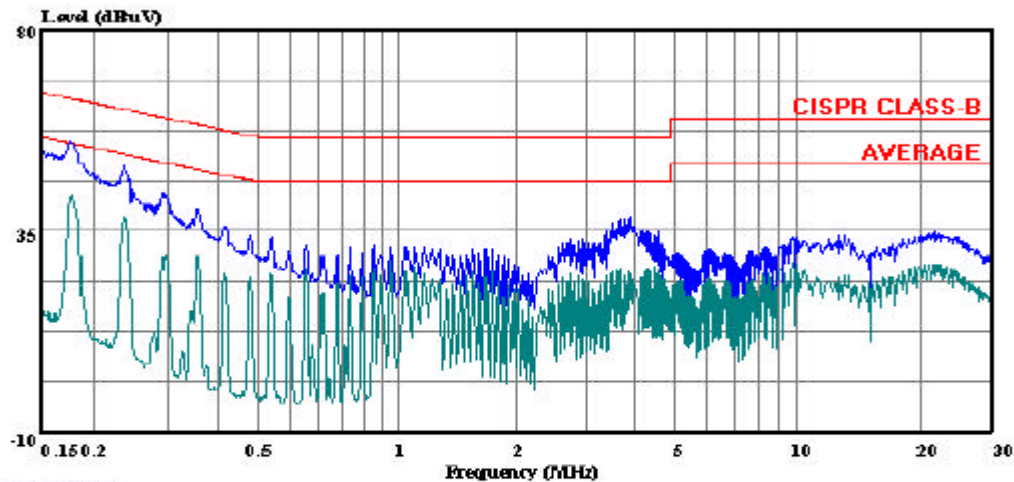
**MIMO MODE – 2.4 GHz****6 WORST EMISSIONS**

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	FCC B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.18	54.86	--	42.85	0.00	64.58	54.58	-9.72	-11.73	L1
0.24	49.48	--	37.45	0.00	62.20	52.20	-12.72	-14.75	L1
3.88	37.78	--	26.62	0.00	56.00	46.00	-18.22	-19.38	L1
0.18	52.20	--	39.55	0.00	64.58	54.58	-12.38	-15.03	L2
0.24	45.88	--	33.58	0.00	62.20	52.20	-16.32	-18.62	L2
3.88	37.80	--	26.00	0.00	56.00	46.00	-18.20	-20.00	L2
6 Worst Data									

**LINE 1 RESULTS**

Compliance Certification Services  
 561F Monterey Road  
 Morgan Hill, CA 95037  
 Tel: (408) 463-0885  
 Fax: (408) 463-0888

Data#: 7 File#: MIMO Legacy.EMI Date: 04-19-2006 Time: 13:58:08



(Auxiliary ATC)

Trace: 5

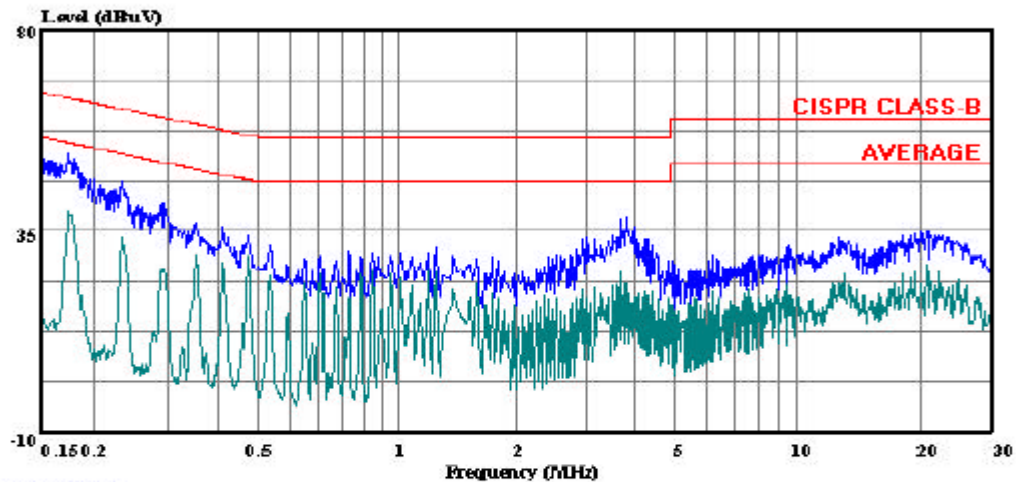
Ref Trace:

Condition: CISPR CLASS-B  
 Test Operator : Vien Tran  
 Project # : 06U10233  
 Company : Broadcom  
 EUT Description : 2x2 Dual Band MIMO Device  
 Model : BCM94321MCAG Rev 3.0  
 S/N : 107  
 EUT Config : EUT with minimum peripheral  
 Mode of Operation: Tx 2.4 GHz\_\_ Worst Case  
 Target : FCC CLASS B  
 Power Source : 115 VAC, 60 Hz  
 : L1: Peak (Black), Average (Green)

**LINE 2 RESULTS**

Compliance Certification Services  
561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0885  
Fax: (408) 463-0888

Data#: 14 File#: MIMO Legacy.EMI Date: 04-19-2006 Time: 14:18:44



(Auxiliary ATC)

Trace: 12

Ref Trace:

Condition: CISPR CLASS-B  
Test Operator : Vien Tran  
Project # : 06U1233  
Company : Broadcom  
EUT Description : 2x2 Dual Band MIMO Device  
Model : BCM94321MCAG Rev 3.0  
S/N : 107  
EUT Config : EUT on Extended Card / Laptop  
Mode Of Operation: Tx 2.4 GHz\_ - Worst Case  
Target : FCC CLASS B  
Power Source : 115 VAC, 60 Hz  
L2: Peak (Black), Average (Green)

**MIMO MODE – 5 GHz****6 WORST EMISSIONS**

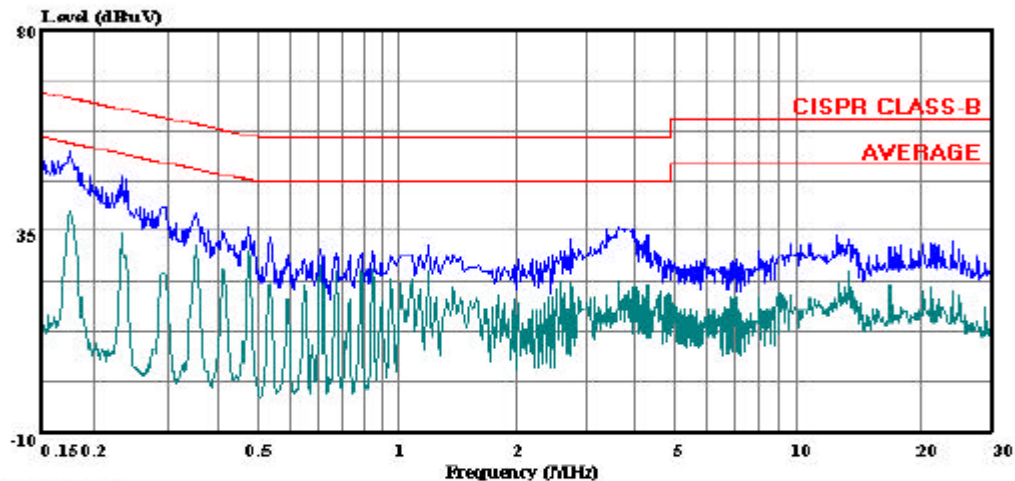
CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	FCC_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.18	52.88	--	39.62	0.00	64.67	54.67	-11.79	-15.05	L1
0.23	47.40	--	34.36	0.00	62.31	52.31	-14.91	-17.95	L1
3.74	35.94	--	24.00	0.00	56.00	46.00	-20.06	-22.00	L1
0.18	50.76	--	38.68	0.00	64.67	54.67	-13.91	-15.99	L2
0.23	43.24	--	29.90	0.00	62.31	52.31	-19.07	-22.41	L2
3.74	35.80	--	21.00	0.00	56.00	46.00	-20.20	-25.00	L2
6 Worst Data									



**LINE 1 RESULTS**

Compliance Certification Services  
561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0885  
Fax: (408) 463-0888

Data#: 21 File#: MIMO Legacy.EMI Date: 04-19-2006 Time: 14:45:41



(Auxiliary ATC)

Trace: 19

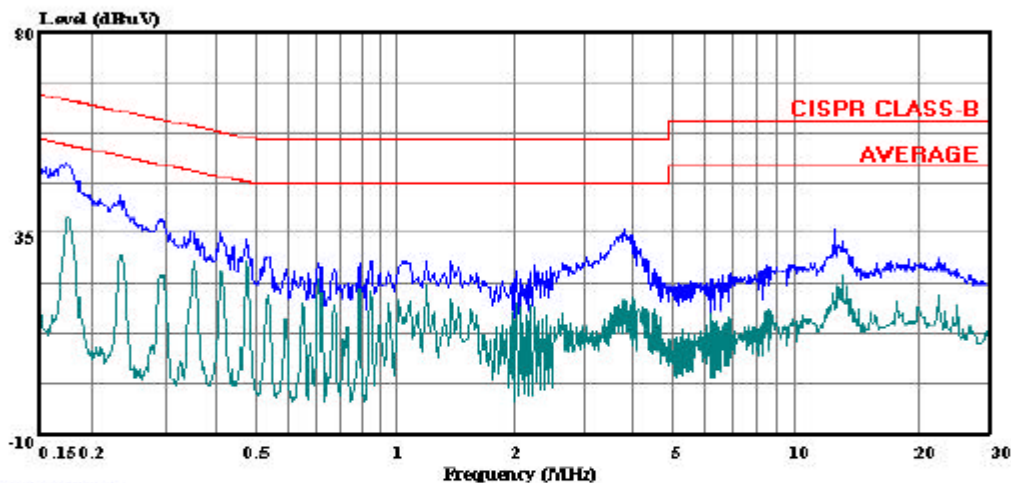
Ref Trace:

Condition: CISPR CLASS-B  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT Description : 2x2 Dual Band MIMO Device  
Model : BCM94321MCAG Rev 3.0  
S/N : 107  
EUT Config : EUT on Extended Card / Laptop  
Mode of Operation: Tx 5 GHz - Worst Case  
Target : FCC CLASS B  
Power Source : 115 VAC, 60 Hz  
: L1: Peak (Black), Average (Green)

**LINE 2 RESULTS**

Compliance Certification Services  
561F Monterey Road  
Morgan Hill, CA 95037  
Tel: (408) 463-0885  
Fax: (408) 463-0888

Data#: 28 File#: MIMO Legacy.BMI Date: 04-19-2006 Time: 15:10:22



(Auxiliary ATC)

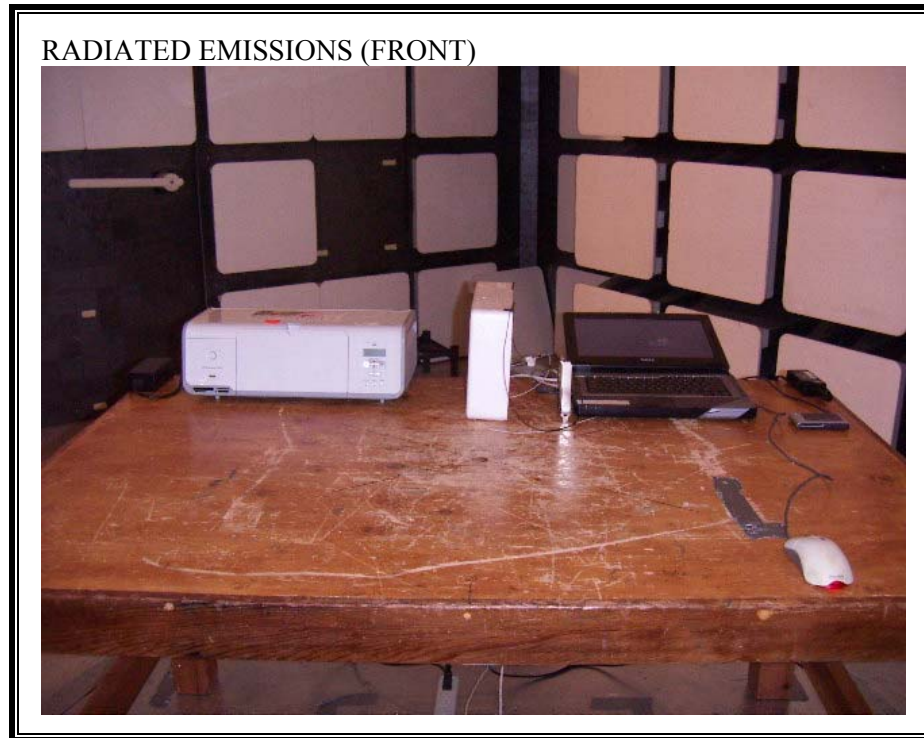
Trace: 26

Ref Trace:

Condition: CISPR CLASS-B  
Test Operator : Vien Tran  
Project # : 06U10233  
Company : Broadcom  
EUT Description : 2x2 Dual Band MIMO Device  
Model : BCM94321MCAG Rev 3.0  
S/N : 107  
EUT Config : EUT on Extended Card / Laptop  
Mode of Operation: Tx 5 GHz - Worst Case  
Target : FCC CLASS B  
Power Source : 115 VAC, 60 Hz  
L2: Peak (Black), Average (Green)

## 8. SETUP PHOTOS

### RADIATED EMISSION



RADIATED EMISSIONS (BACK)



**AC MAINS LINE CONDUCTED EMISSION**



LINE CONDUCTED EMISSION (BACK)



**END OF REPORT**