Test Report

Product Name : Ubiquiti Super Range Cardbus

Model No. : SRC

FCC ID : SWX-SRC

Applicant : Ubiquiti Networks, Inc.

Address : 778 North First St., Ste. 202, San Jose, CA 95112, United States

Date of Receipt : Sep. 14, 2005

Issued Date : Sep. 15, 2005

Report No. : 059L096FI

Test Report Certification

Issued Date : Sep. 15, 2005
Report No. : 059L096FI

Accredited by NIST (NVLAP)
NVLAP Lab Code: 200533-0

Product Name	:	Ubiquiti Super Range Cardbus
Applicant	:	Ubiquiti Networks, Inc.
Address	:	778 North First St., Ste. 202, San Jose, CA 95112, United States
Manufacturer	:	Ubiquiti Networks, Inc.
Model No.	:	SRC
Rated Voltage	:	AC 120V/60Hz
Working Voltage	:	DC 3.3V
Trade Name	:	Super Range
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2005
		ANSI C63.4: 2003
Test Result	:	Complied

NVLAP Lab Code: 200533-0

Test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By : Rita Huang
(Rita Huang)

Tested By : Tom Hsieh
(Tom Hsieh)

Approved By : Gene Chang
(Gene Chang)

CNLA
0914

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	: Ubiquiti Super Range Cardbus
Trade Name	: Super Range
Model No.	: SRC
FCC ID	: SWX-SRC
Frequency Range	: 2412 – 2462 MHz 5745 – 5805 MHz
Channel Number	: 2.4GHz Band – 11 5GHz Band – 4
Data Speed (Maximum)	: IEEE 802.11b – 11Mbps IEEE 802.11a and 802.11g – 54Mbps
Type of Modulation	: DSSS / OFDM
Antenna Type	: Connector
Antenna Gain-2.4G	: 2.4GHz Band – 5.5 dBi 5GHz Band – 1.5dBi
Channel Control	: Auto

Carrier Frequency of Each Channel in the 2.4GHz Band

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

Carrier Frequency of Each Channel in the 5GHz Band

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 1:	5745 MHz	Channel 2:	5765 MHz	Channel 3:	5785 MHz	Channel 4:	5805 MHz

Note:

1. This device is a 2.4GHz Ubiquiti Super Range Cardbus including a 2.4GHz transceiver and a 5GHz transciver..
2. The lowest, middle and highest frequency at the highest rate are selected to perform the test.
3. These tests are conducted on a sample for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.

1.2. Operational Description

The EUT is an Ubiquiti Super Range Cardbus with 15 channels. The maximum data speeds are 11 Mbps (IEEE 802.11b) and 54 Mbps (IEEE 802.11a and IEEE 802.11g). The carrier uses direct sequence spread spectrum modulation. The diversity antenna is connected through the connector.

The Ubiquiti Super Range Cardbus, complied with IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g, is a high-efficiency Wireless LAN adapter. It allows your computer connecting to a wireless network and share resources, such as files or printers without being bound to the network wires. Operation in 2.4GHz and 5GHz Direst Sequence Spread Spectrum (DSSS) radio transmission, the Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11a, IEEE 802.11b and IEEE 802.11g network.

Test Mode	Mode 1: Transmitter 802.11b
	Mode 2: Transmitter 802.11g
	Mode 3: Transmitter 802.11a

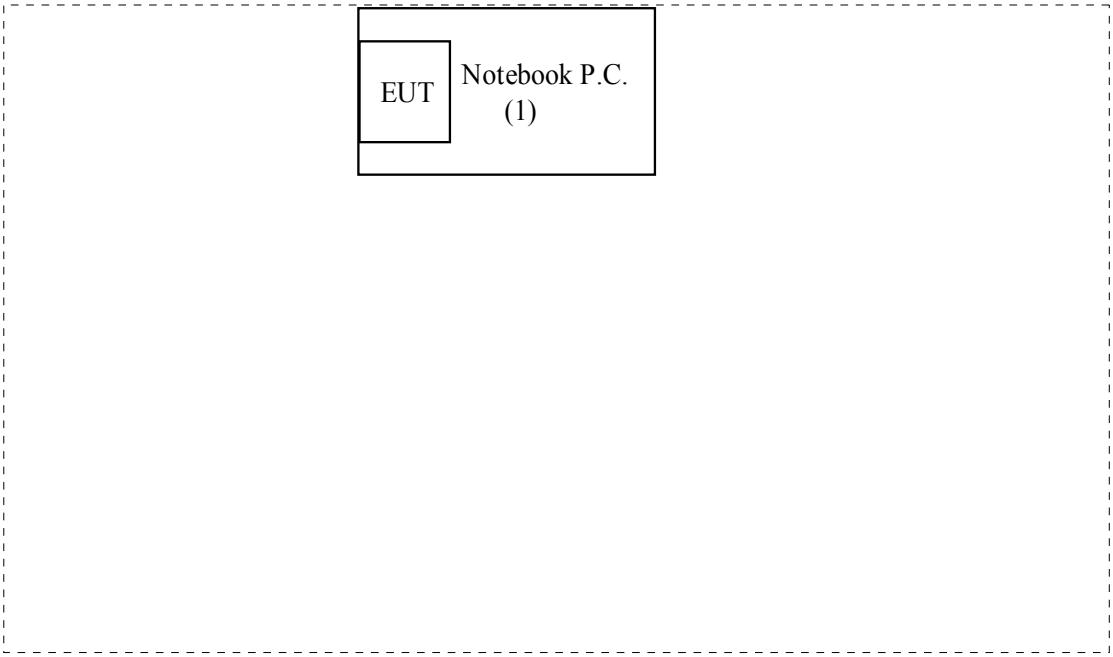
1.3. Tested System Datails

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
(1)	Notebook PC	DELL	PPT	N/A	DoC	Non-Shielded, 0.8m

Signal Cable Type		Signal cable Description
A.	N/A	N/A

1.4. Configuration of tested System



1.5. EUT Exercise Software

(1) Setup the EUT and simulators as shown on 1.4
(2) Turn on the power of all equipment.
(3) Notebook PC reads data from disk.
(4) Data will be transmitting and receiving through EUT.
(5) The transmitted and receive status will be shown on the monitor.
(6) Repeat the above procedure (3) to (5)

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: June 22, 2001 File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Reference 31040/SIT1300F2

July 03, 2001 Accreditation on NVLAP
NVLAP Lab Code: 200533-0

0914

Site Name: Quietek Corporation

Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0

2. Conducted Emission

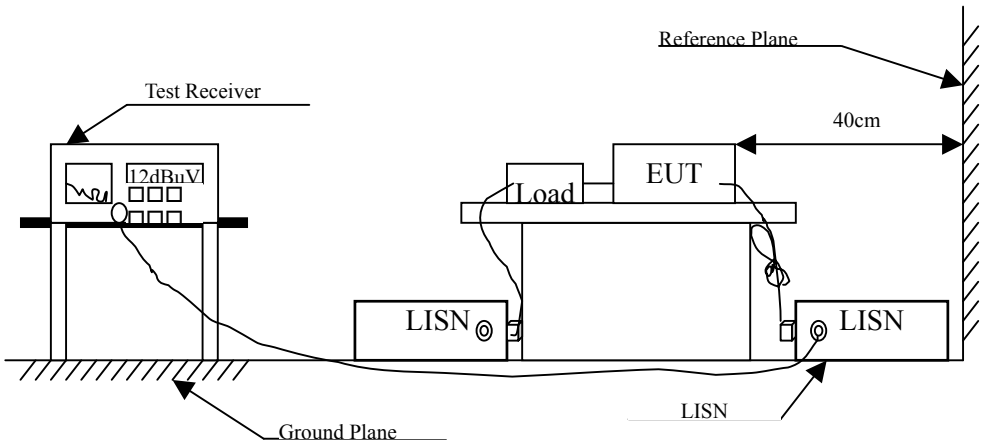
2.1. Test Equipment

The following test equipment are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2005	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2005	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2005	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2005	
5	No.1 Shielded Room			N/A	

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	uV	dBuV
0.15 - 0.50	66-56(註)	56-46(註)
0.50-5.0	56	46
5.0 - 30	60	50

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

The measurement uncertainty is defined as ± 2.02 dB

2.6. Test Result of Conducted Emission

Product : Ubiquiti Super Range Cardbus
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

	Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
	MHz	dB	dBuV	dBuV	dB	dBuV
	Quasi-Peak					
*	0.216	0.536	40.240	40.776	-23.339	64.114
	0.287	0.300	34.020	34.320	-27.766	62.086
	1.568	0.330	30.860	31.190	-24.810	56.000
	4.443	0.410	21.120	21.530	-34.470	56.000
	9.013	0.570	26.760	27.330	-32.670	60.000
	10.712	0.630	26.400	27.030	-32.970	60.000
	Average					
	0.216	0.536	22.010	22.546	-31.569	54.114
	0.287	0.300	13.600	13.900	-38.186	52.086
*	1.568	0.330	19.770	20.100	-25.900	46.000
	4.443	0.410	11.180	11.590	-34.410	46.000
	9.013	0.570	20.800	21.370	-28.630	50.000
	10.712	0.630	20.610	21.240	-28.760	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * " means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Ubiquiti Super Range Cardbus
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

	Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
	MHz	dB	dBuV	dBuV	dB	dBuV
	Quasi-Peak					
*	0.170	0.300	43.660	43.960	-21.469	65.429
	0.240	0.300	34.960	35.260	-28.169	63.429
	1.513	0.337	28.840	29.177	-26.823	56.000
	1.709	0.340	29.200	29.540	-26.460	56.000
	9.369	0.490	25.640	26.130	-33.870	60.000
	10.900	0.531	26.220	26.751	-33.249	60.000
	Average					
	0.170	0.300	23.410	23.710	-31.719	55.429
	0.240	0.300	14.970	15.270	-38.159	53.429
	1.513	0.337	16.160	16.497	-29.503	46.000
*	1.709	0.340	17.000	17.340	-28.660	46.000
	9.369	0.490	19.470	19.960	-30.040	50.000
	10.900	0.531	20.130	20.661	-29.339	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * " means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Ubiquiti Super Range Cardbus
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 2: Transmitter 802.11g (2437MHz)

	Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
	MHz	dB	dBuV	dBuV	dB	dBuV
	Quasi-Peak					
*	0.220	0.508	42.300	42.808	-21.192	64.000
	0.248	0.350	38.280	38.630	-24.570	63.200
	1.279	0.320	26.420	26.740	-29.260	56.000
	1.611	0.330	27.940	28.270	-27.730	56.000
	8.998	0.570	28.180	28.750	-31.250	60.000
	10.584	0.620	27.320	27.940	-32.060	60.000
	Average					
	0.220	0.508	23.560	24.068	-29.932	54.000
	0.248	0.350	19.010	19.360	-33.840	53.200
	1.279	0.320	10.880	11.200	-34.800	46.000
	1.611	0.330	13.900	14.230	-31.770	46.000
*	8.998	0.570	21.950	22.520	-27.480	50.000
	10.584	0.620	21.430	22.050	-27.950	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * " means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Ubiquiti Super Range Cardbus
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 2: Transmitter 802.11g (2437MHz)

	Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
	MHz	dB	dBuV	dBuV	dB	dBuV
	Quasi-Peak					
*	0.216	0.300	43.260	43.560	-20.554	64.114
	0.263	0.300	31.500	31.800	-30.971	62.771
	1.470	0.330	30.560	30.890	-25.110	56.000
	1.900	0.346	29.940	30.286	-25.714	56.000
	8.802	0.480	26.940	27.420	-32.580	60.000
	9.955	0.500	27.300	27.800	-32.200	60.000
	Average					
	0.216	0.300	21.550	21.850	-32.264	54.114
	0.263	0.300	11.030	11.330	-41.441	52.771
*	1.470	0.330	19.550	19.880	-26.120	46.000
	1.900	0.346	17.490	17.836	-28.164	46.000
	8.802	0.480	20.740	21.220	-28.780	50.000
	9.955	0.500	21.060	21.560	-28.440	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * " means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Ubiquiti Super Range Cardbus
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 3: Transmitter 802.11a (5785MHz)

	Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
	MHz	dB	dBuV	dBuV	dB	dBuV
	Quasi-Peak					
*	0.177	0.743	41.880	42.623	-22.605	65.229
	0.252	0.341	38.780	39.121	-23.965	63.086
	1.212	0.320	26.980	27.300	-28.700	56.000
	1.888	0.340	24.980	25.320	-30.680	56.000
	9.103	0.570	28.160	28.730	-31.270	60.000
	16.740	1.030	20.500	21.530	-38.470	60.000
	Average					
	0.177	0.743	20.130	20.873	-34.355	55.229
	0.252	0.341	21.720	22.061	-31.025	53.086
	1.212	0.320	17.150	17.470	-28.530	46.000
	1.888	0.340	11.700	12.040	-33.960	46.000
*	9.103	0.570	22.010	22.580	-27.420	50.000
	16.740	1.030	14.380	15.410	-34.590	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * " means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Ubiquiti Super Range Cardbus
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 3: Transmitter 802.11a (5785MHz)

	Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
	MHz	dB	dBuV	dBuV	dB	dBuV
	Quasi-Peak					
*	0.228	0.300	43.040	43.340	-20.431	63.771
	0.248	0.300	38.560	38.860	-24.340	63.200
	1.494	0.330	29.720	30.050	-25.950	56.000
	1.670	0.340	29.240	29.580	-26.420	56.000
	7.197	0.450	23.820	24.270	-35.730	60.000
	10.369	0.510	27.520	28.030	-31.970	60.000
	Average					
	0.228	0.300	26.080	26.380	-27.391	53.771
	0.248	0.300	20.340	20.640	-32.560	53.200
	1.494	0.330	17.300	17.630	-28.370	46.000
*	1.670	0.340	20.470	20.810	-25.190	46.000
	7.197	0.450	16.100	16.550	-33.450	50.000
	10.369	0.510	21.310	21.820	-28.180	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * " means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

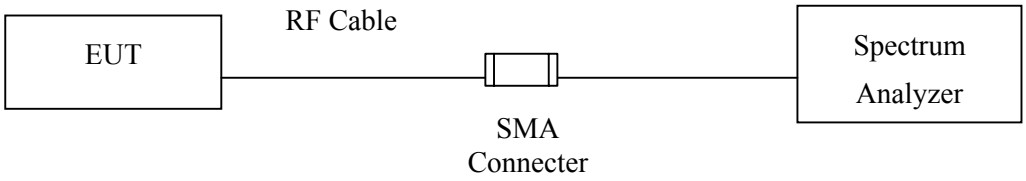
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	Advantest	R3162 / 100803480	May, 2005

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

3.2. Test Setup

Conduction Power Measurement



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

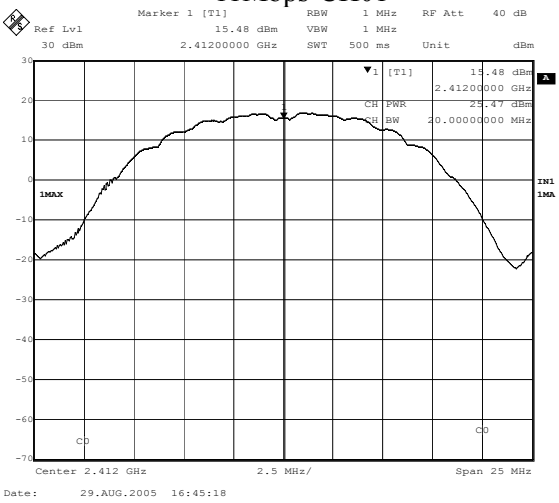
3.5. Test Result of Peak Power Output

Product : Ubiquiti Super Range Cardbus
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

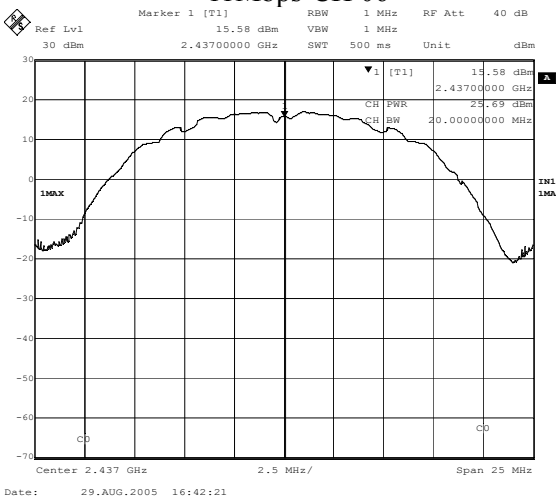
Data Speed: 11Mbps

Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
1	2412.00	25.47dBm	1Watt= 30 dBm	Pass
6	2437.00	25.69dBm	1Watt= 30 dBm	Pass
11	2462.00	25.98dBm	1Watt= 30 dBm	Pass

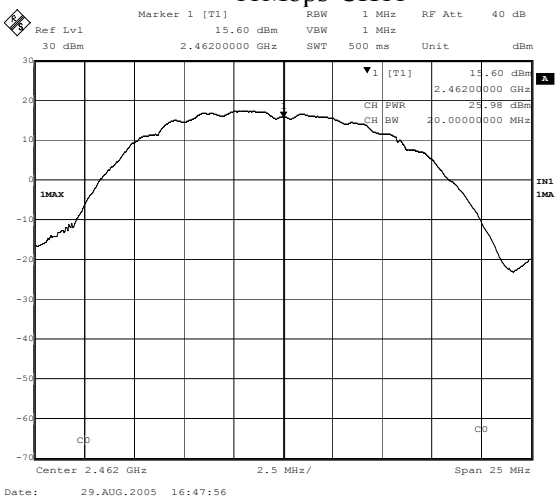
11Mbps-CH01



11Mbps-CH 06



11Mbps-CH11

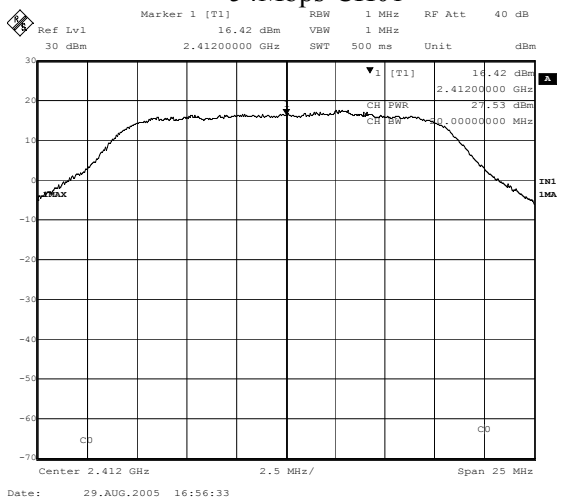


Product : Ubiquiti Super Range Cardbus
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g

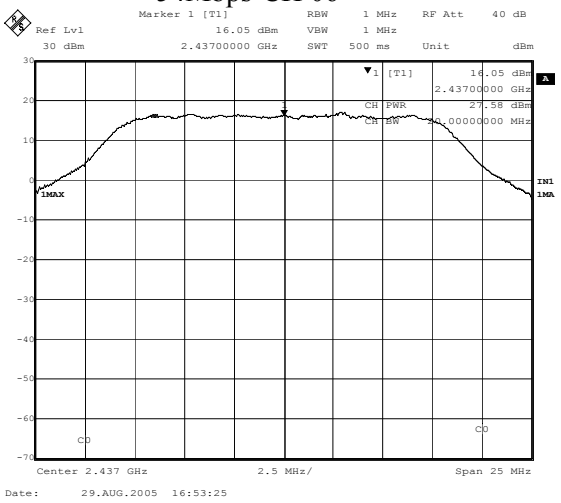
Data Speed: 54Mbps

Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
1	2412.00	27.53dBm	1Watt= 30 dBm	Pass
6	2437.00	27.58dBm	1Watt= 30 dBm	Pass
11	2462.00	27.92dBm	1Watt= 30 dBm	Pass

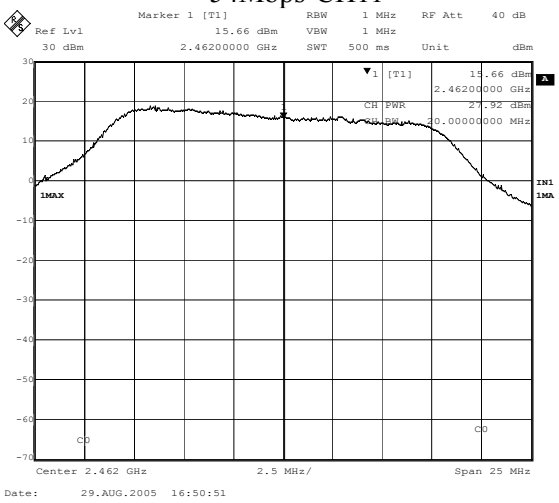
54Mbps-CH01



54Mbps-CH 06



54Mbps-CH11

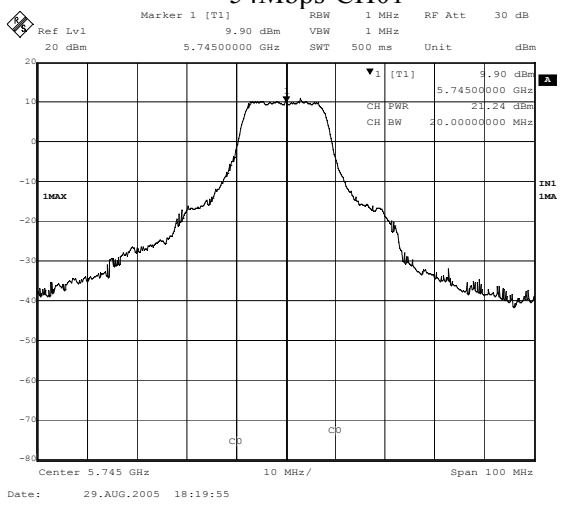


Product : Ubiquiti Super Range Cardbus
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a

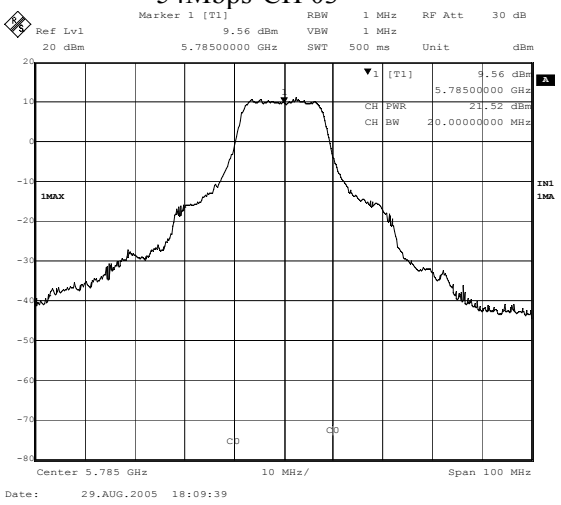
Data Speed: 54Mbps

Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
1	5745.00	21.24dBm	1Watt= 30 dBm	Pass
3	5785.00	21.52dBm	1Watt= 30 dBm	Pass
4	5805.00	21.71dBm	1Watt= 30 dBm	Pass

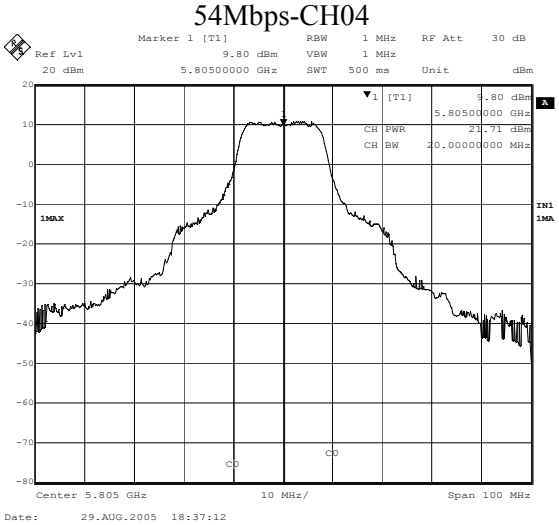
54Mbps-CH01



54Mbps-CH 03



54Mbps-CH04



4. Radiated Emission

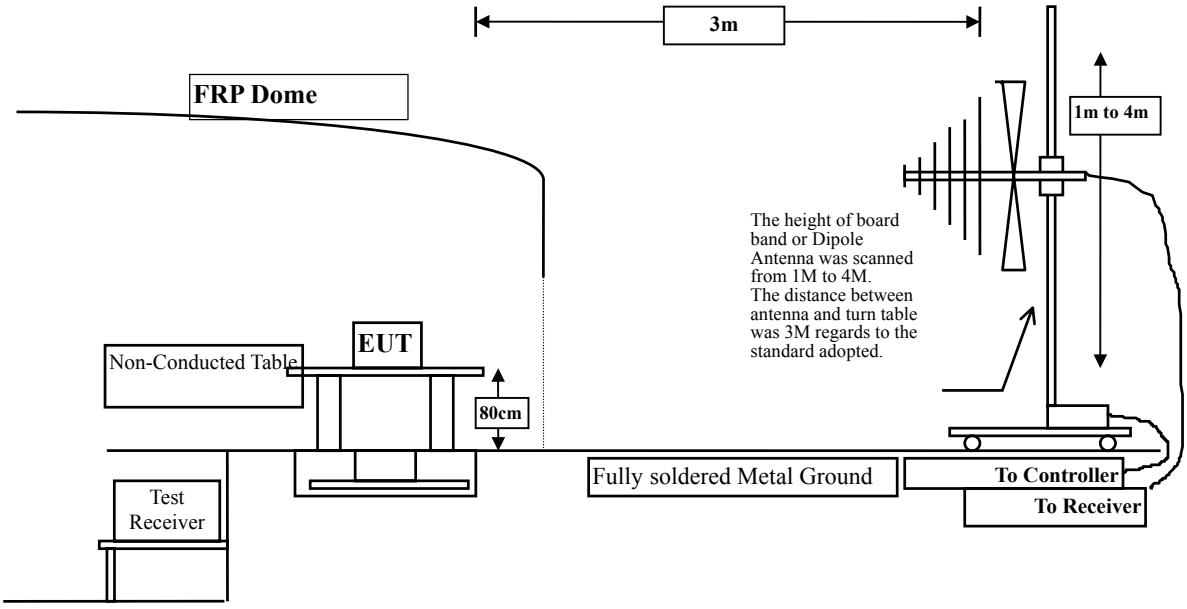
4.1. Test Equipment

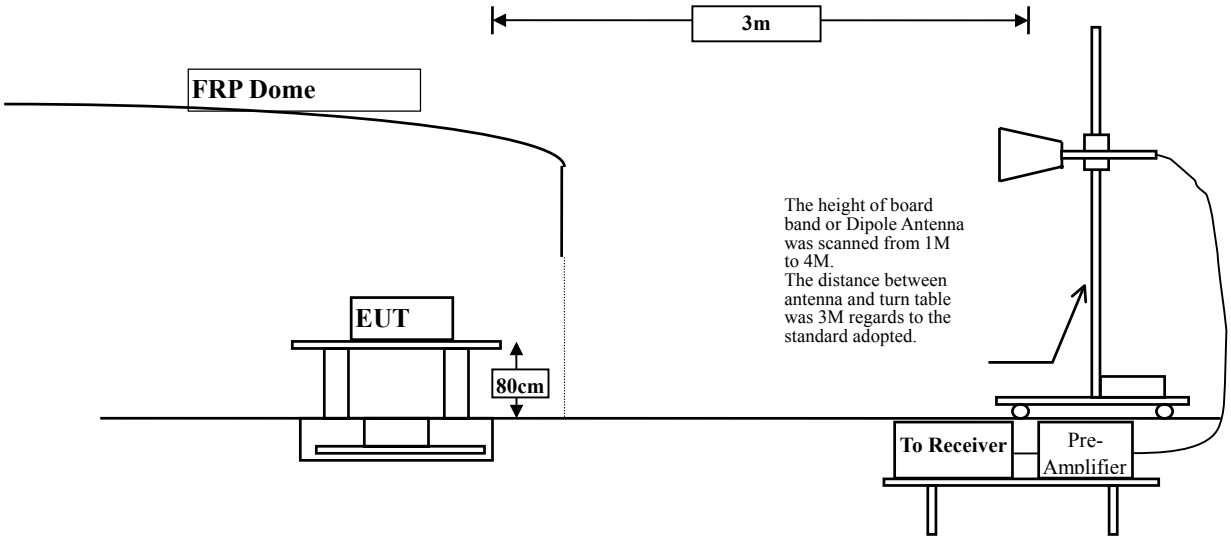
The following test equipment are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 1		Test Receiver	R & S	ESCS 30 / 825442/14	May, 2005
		Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2005
		Pre-Amplifier	HP	8447D/3307A01812	May, 2005
		Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
		Horn Antenna	EM	EM6917 / 103325	May, 2005
Site # 2		Test Receiver	R & S	ESCS 30 / 825442/17	May, 2005
		Spectrum Analyzer	Advantest	R3261C / 71720609	May, 2005
		Pre-Amplifier	HP	8447D/3307A01814	May, 2005
		Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2005
		Horn Antenna	EM	EM6917 / 103325	May, 2005
Site # 3	X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2005
	X	Spectrum Analyzer	Advantest	R3162 / 100803480	May, 2005
	X	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2005
	X	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2005
	X	Horn Antenna	ETS	3115 / 0005-6160	July, 2005
	X	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	July, 2005

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.
2. Mark “X” test instruments are used to measure the final test results.

4.2. Test Setup





4.3. Limits

➢ **General Radiated Emission Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated measurement.
The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field dtrength of harmonics measurement.
The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.
The frequency range from 30MHz to 40GHz is checked.

4.5. Uncertainty

The measurement uncertainty is defined as ± 3.8 dB above 1GHz as ± 3.9 dB

4.6. Test Result of Radiated Emission

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2412MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
4824.000	4.24	33.64	34.65	43.61	46.85	27.15	74.00
7236.000	5.63	36.77	34.81	43.65	51.24	22.76	74.00
9648.000	7.01	38.25	35.10	44.21	54.37	19.63	74.00
12060.00	8.40	39.03	34.96	43.64	56.11	17.89	74.00
Average Detector							
4824.000	4.24	33.64	34.65	33.46	36.70	17.30	54.00
7236.000	5.63	36.77	34.81	34.25	41.84	12.16	54.00
9648.000	7.01	38.25	35.10	34.30	44.46	9.54	54.00
12060.00	8.40	39.03	34.96	33.17	45.64	8.36	54.00
Vertical							
Peak Detector							
4824.000	4.24	33.64	34.65	46.04	49.28	24.72	74.00
7236.000	5.63	36.77	34.81	46.08	53.67	20.33	74.00
9648.000	7.01	38.25	35.10	45.78	55.94	18.06	74.00
12060.00	8.40	39.03	34.96	43.06	55.53	18.47	74.00
Average Detector							
4824.000	4.24	33.64	34.65	38.69	41.93	12.07	54.00
7236.000	5.63	36.77	34.81	39.16	46.75	7.25	54.00
9648.000	7.01	38.25	35.10	35.95	46.11	7.89	54.00
12060.00	8.40	39.03	34.96	32.94	45.41	8.59	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2437 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
4874.000	4.27	33.77	34.65	43.70	47.10	26.90	74.00
7311.000	5.67	36.93	34.82	43.44	51.22	22.78	74.00
9748.000	7.07	38.35	35.11	44.87	55.18	18.82	74.00
12185.00	8.47	39.07	34.91	44.42	57.05	16.95	74.00
Average Detector							
4874.000	4.27	33.77	34.65	33.71	37.11	16.89	54.00
7311.000	5.67	36.93	34.82	34.42	42.20	11.80	54.00
9748.000	7.07	38.35	35.11	33.70	44.01	9.99	54.00
12185.00	8.47	39.07	34.91	33.38	46.01	7.99	54.00
Vertical							
Peak Detector							
4874.000	4.27	33.77	34.65	47.40	50.80	23.20	74.00
7311.000	5.67	36.93	34.82	44.60	52.38	21.62	74.00
9748.000	7.07	38.35	35.11	45.11	55.42	18.58	74.00
12185.00	8.47	39.07	34.91	43.53	56.16	17.84	74.00
Average Detector							
4874.000	4.27	33.77	34.65	42.30	45.70	8.30	54.00
7311.000	5.67	36.93	34.82	34.77	42.55	11.45	54.00
9748.000	7.07	38.35	35.11	38.04	48.35	5.65	54.00
12185.00	8.47	39.07	34.91	33.18	45.81	8.19	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2462 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
4924.000	4.30	33.90	34.65	43.61	47.17	26.83	74.00
7386.000	5.71	37.10	34.82	43.20	51.18	22.82	74.00
9848.000	7.12	38.44	35.12	44.24	54.68	19.32	74.00
12310.00	8.53	39.12	34.87	43.79	56.58	17.42	74.00
Average Detector							
4924.000	4.30	33.90	34.65	35.34	38.90	15.10	54.00
7386.000	5.71	37.10	34.82	34.44	42.42	11.58	54.00
9848.000	7.12	38.44	35.12	33.32	43.76	10.24	54.00
12310.00	8.53	39.12	34.87	33.28	46.07	7.93	54.00
Vertical							
Peak Detector							
4924.000	4.30	33.90	34.65	48.32	51.88	22.12	74.00
7386.000	5.71	37.10	34.82	43.40	51.38	22.62	74.00
9848.000	7.12	38.44	35.12	46.04	56.48	17.52	74.00
12310.00	8.53	39.12	34.87	44.38	57.17	16.83	74.00
Average Detector							
4924.000	4.30	33.90	34.65	44.52	48.08	5.92	54.00
7386.000	5.71	37.10	34.82	33.61	41.59	12.41	54.00
9848.000	7.12	38.44	35.12	38.06	48.50	5.50	54.00
12310.00	8.53	39.12	34.87	33.48	46.27	7.73	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3OATS
Test Mode : Mode 2: Transmitter 802.11g (2412 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
4824.000	4.24	33.64	34.65	43.66	46.90	27.10	74.00
7236.000	5.63	36.77	34.81	49.22	56.81	17.19	74.00
9648.000	7.01	38.25	35.10	44.26	54.42	19.58	74.00
12060.00	8.40	39.03	34.96	44.63	57.10	16.90	74.00
Average Detector							
4824.000	4.24	33.64	34.65	32.10	35.34	18.66	54.00
7236.000	5.63	36.77	34.81	37.96	45.55	28.45	74.00
9648.000	7.01	38.25	35.10	32.90	43.06	10.94	54.00
12060.00	8.40	39.03	34.96	32.90	45.37	8.63	54.00
Vertical							
Peak Detector							
4824.000	4.24	33.64	34.65	43.27	46.51	27.49	74.00
7236.000	5.63	36.77	34.81	49.64	57.23	16.77	74.00
9648.000	7.01	38.25	35.10	44.56	54.72	19.28	74.00
12060.00	8.40	39.03	34.96	43.81	56.28	17.72	74.00
Average Detector							
4824.000	4.24	33.64	34.65	31.98	35.22	18.78	54.00
7236.000	5.63	36.77	34.81	38.26	45.85	8.15	54.00
9648.000	7.01	38.25	35.10	32.86	43.02	10.98	54.00
12060.00	8.40	39.03	34.96	32.77	45.24	8.76	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2437 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
4874.000	4.27	33.77	34.65	43.24	46.64	27.36	74.00
7311.000	5.67	36.93	34.82	49.61	57.39	16.61	74.00
9748.000	7.07	38.35	35.11	44.69	55.00	19.00	74.00
12185.00	8.47	39.07	34.91	44.07	56.70	17.30	74.00
Average Detector							
4874.000	4.27	33.77	34.65	31.88	35.28	18.72	54.00
7311.000	5.67	36.93	34.82	37.48	45.26	8.74	54.00
9748.000	7.07	38.35	35.11	33.21	43.52	10.48	54.00
12185.00	8.47	39.07	34.91	33.18	45.81	8.19	54.00
Vertical							
Peak Detector							
4874.000	4.27	33.77	34.65	44.66	48.06	25.94	74.00
7311.000	5.67	36.93	34.82	52.49	60.27	13.73	74.00
9748.000	7.07	38.35	35.11	43.26	53.57	20.43	74.00
12185.00	8.47	39.07	34.91	44.18	56.81	17.19	74.00
Average Detector							
4874.000	4.27	33.77	34.65	32.34	35.74	18.26	54.00
7311.000	5.67	36.93	34.82	38.89	46.67	7.33	54.00
9748.000	7.07	38.35	35.11	33.24	43.55	10.45	54.00
12185.00	8.47	39.07	34.91	33.09	45.72	8.28	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2462 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
4924.000	4.30	33.90	34.65	42.98	46.54	27.46	74.00
7386.000	5.71	37.10	34.82	48.12	56.10	17.90	74.00
9848.000	7.12	38.44	35.12	45.07	55.51	18.49	74.00
12310.00	8.53	39.12	34.87	44.47	57.26	16.74	74.00
Average Detector							
4924.000	4.30	33.90	34.65	31.87	35.43	18.57	54.00
7386.000	5.71	37.10	34.82	35.96	43.94	10.06	54.00
9848.000	7.12	38.44	35.12	33.03	43.47	10.53	54.00
12310.00	8.53	39.12	34.87	33.16	45.95	8.05	54.00
Vertical							
Peak Detector							
4924.000	4.30	33.90	34.65	43.35	46.91	27.09	74.00
7386.000	5.71	37.10	34.82	50.76	58.74	15.26	74.00
9848.000	7.12	38.44	35.12	44.77	55.21	18.79	74.00
12310.00	8.53	39.12	34.87	45.38	58.17	15.83	74.00
Average Detector							
4924.000	4.30	33.90	34.65	33.20	36.76	17.24	54.00
7386.000	5.71	37.10	34.82	38.16	46.14	7.86	54.00
9848.000	7.12	38.44	35.12	33.05	43.49	10.51	54.00
12310.00	8.53	39.12	34.87	33.09	45.88	8.12	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3OATS
Test Mode : Mode 3: Transmitter 802.11a (5475 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
11490.00	7.03	39.50	35.10	47.30	58.73	15.27	74.00
17235.00	9.74	43.99	34.02	44.81	64.52	9.48	74.00
Average Detector							
11490.00	7.03	39.50	35.10	35.83	47.26	6.74	54.00
17235.00	9.74	43.99	34.02	31.07	50.78	3.22	54.00
Vertical							
Peak Detector							
11490.00	7.03	39.50	35.10	49.76	61.19	12.81	74.00
17235.00	9.74	43.99	34.02	44.03	63.74	10.26	74.00
Average Detector							
11490.00	7.03	39.50	35.10	39.39	50.82	3.18	54.00
17235.00	9.74	43.99	34.02	31.04	50.75	3.25	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5785 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
11570.00	7.07	39.43	35.10	49.21	60.61	13.39	74.00
17355.00	9.81	44.97	34.04	44.45	65.19	8.81	74.00
Average Detector							
11570.00	7.07	39.43	35.10	38.04	49.44	4.56	54.00
17355.00	9.81	44.97	34.04	29.50	50.24	3.76	54.00
Vertical							
Peak Detector							
11570.00	7.07	39.43	35.10	51.09	62.49	11.51	74.00
17355.00	9.81	44.97	34.04	43.80	64.54	9.46	74.00
Average Detector							
11570.00	7.07	39.43	35.10	39.77	51.17	2.83	54.00
17355.00	9.81	44.97	34.04	29.97	50.71	3.29	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5805 MHz)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal							
Peak Detector							
11610.00	7.09	39.42	35.10	46.93	58.34	15.66	74.00
17415.00	9.84	45.46	34.05	43.91	65.16	8.84	74.00
Average Detector							
11610.00	7.09	39.42	35.10	38.68	50.09	3.91	54.00
17415.00	9.84	45.46	34.05	29.45	50.70	3.30	54.00
Vertical							
Peak Detector							
11610.00	7.09	39.42	35.10	52.14	63.55	10.45	74.00
17415.00	9.84	45.46	34.05	45.14	66.39	7.61	74.00
Average Detector							
11610.00	7.09	39.42	35.10	37.50	48.91	5.09	54.00
17415.00	9.84	45.46	34.05	29.41	50.66	3.34	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Ubiquiti Super Range Cardbus
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2437 MHz)

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:								
	173.070	1.61	8.69	0.00	23.66	33.96	9.54	43.50
	199.750	1.74	8.40	0.00	19.94	30.08	13.42	43.50
	265.230	2.08	12.41	0.00	17.46	31.95	14.05	46.00
	350.100	2.52	12.95	0.00	16.40	31.87	14.13	46.00
	418.000	2.87	15.79	0.00	15.74	34.39	11.61	46.00
*	762.350	4.65	19.85	0.00	11.97	36.47	9.53	46.00
Vertical:								
	250.680	2.00	11.86	0.00	14.52	28.38	17.62	46.00
	398.600	2.77	16.13	0.00	12.51	31.41	14.59	46.00
	476.200	3.16	16.56	0.00	10.45	30.17	15.83	46.00
	648.380	4.05	17.97	0.00	5.73	27.75	18.25	46.00
	876.330	5.22	19.86	0.00	5.77	30.85	15.15	46.00
*	932.100	5.52	21.43	0.00	7.27	34.21	11.79	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * " means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product : Ubiquiti Super Range Cardbus
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2437 MHz)

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:								
*	175.500	1.62	8.56	0.00	27.58	37.76	5.74	43.50
	199.750	1.74	8.40	0.00	20.08	30.22	13.28	43.50
	265.230	2.08	12.41	0.00	19.19	33.68	12.32	46.00
	413.150	2.84	15.76	0.00	18.06	36.66	9.34	46.00
	439.830	2.98	15.61	0.00	15.49	34.08	11.92	46.00
	648.380	4.05	18.73	0.00	10.94	33.72	12.28	46.00
Vertical:								
*	175.500	1.62	8.52	0.00	27.05	37.19	6.31	43.50
	265.230	2.08	12.86	0.00	14.86	29.80	16.20	46.00
	333.120	2.43	12.61	0.00	19.16	34.21	11.79	46.00
	461.650	3.10	16.47	0.00	7.25	26.81	19.19	46.00
	573.200	3.66	19.23	0.00	5.71	28.60	17.40	46.00
	801.150	4.85	19.26	0.00	10.90	35.01	10.99	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * " means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product : Ubiquiti Super Range Cardbus
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5785 MHz)

	Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:								
	199.750	1.74	8.40	0.00	19.97	30.11	13.39	43.50
	265.230	2.08	12.41	0.00	18.73	33.22	12.78	46.00
	413.150	2.84	15.76	0.00	14.47	33.07	12.93	46.00
	420.420	2.88	15.90	0.00	13.88	32.67	13.33	46.00
	762.350	4.65	19.85	0.00	9.50	34.00	12.00	46.00
*	929.670	5.50	20.31	0.00	8.79	34.61	11.39	46.00
Vertical:								
	88.200	1.17	7.94	0.00	20.66	29.77	13.73	43.50
	398.600	2.77	16.13	0.00	12.06	30.96	15.04	46.00
*	527.120	3.43	16.81	0.00	14.22	34.46	11.54	46.00
	696.880	4.30	18.18	0.00	5.73	28.21	17.79	46.00
	806.000	4.86	19.27	0.00	7.70	31.84	14.16	46.00
	932.100	5.52	21.43	0.00	4.59	31.53	14.47	46.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * " means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

5. Band Edge

5.1. Test Equipment

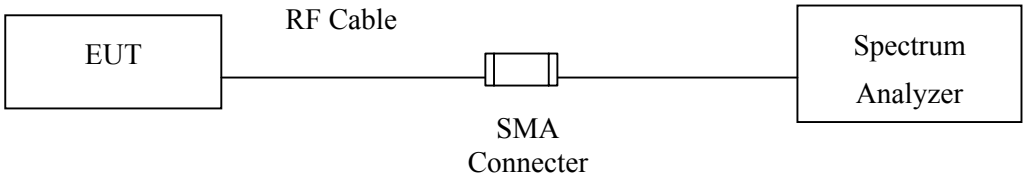
The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	Advantest	R3272 / 72421194	May, 2005
X	Test Receiver	R & S	ESCS 30 / 825442/14	May, 2005
X	Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2005
X	Pre-Amplifier	HP	8447D/3307A01812	May, 2005
X	Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
X	Horn Antenna	EM	EM6917 / 103325	May, 2005

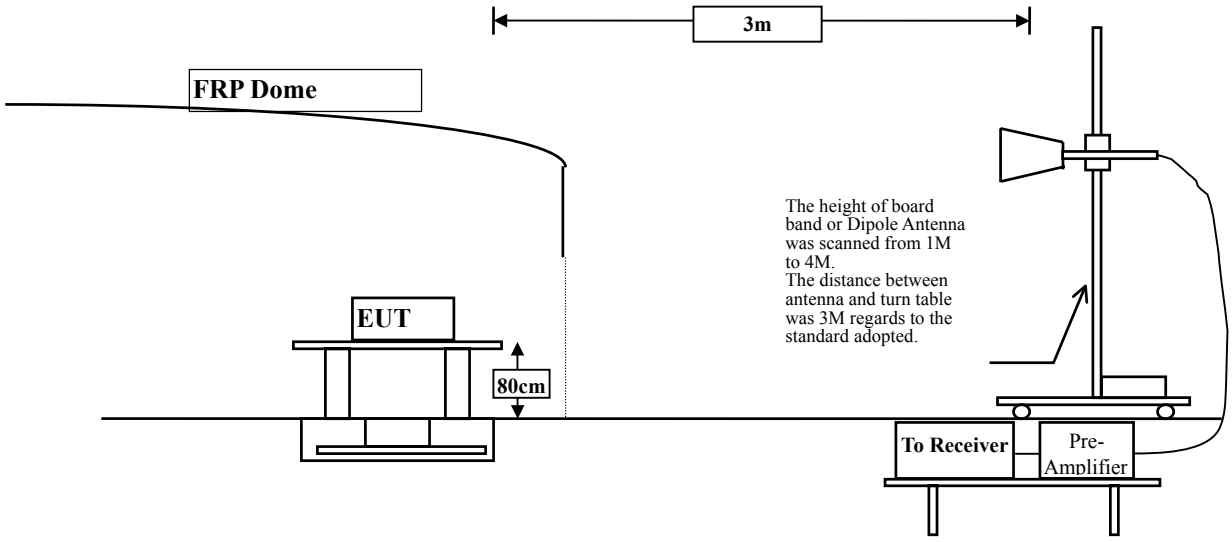
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

5.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated measurement.
The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.

5.5. Uncertainty

The measurement uncertainty Conducted is defined as ± 1 MHz and Radiated above 1GHz as ± 3.9 dB.

5.6. Test Result of Band Edge

Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

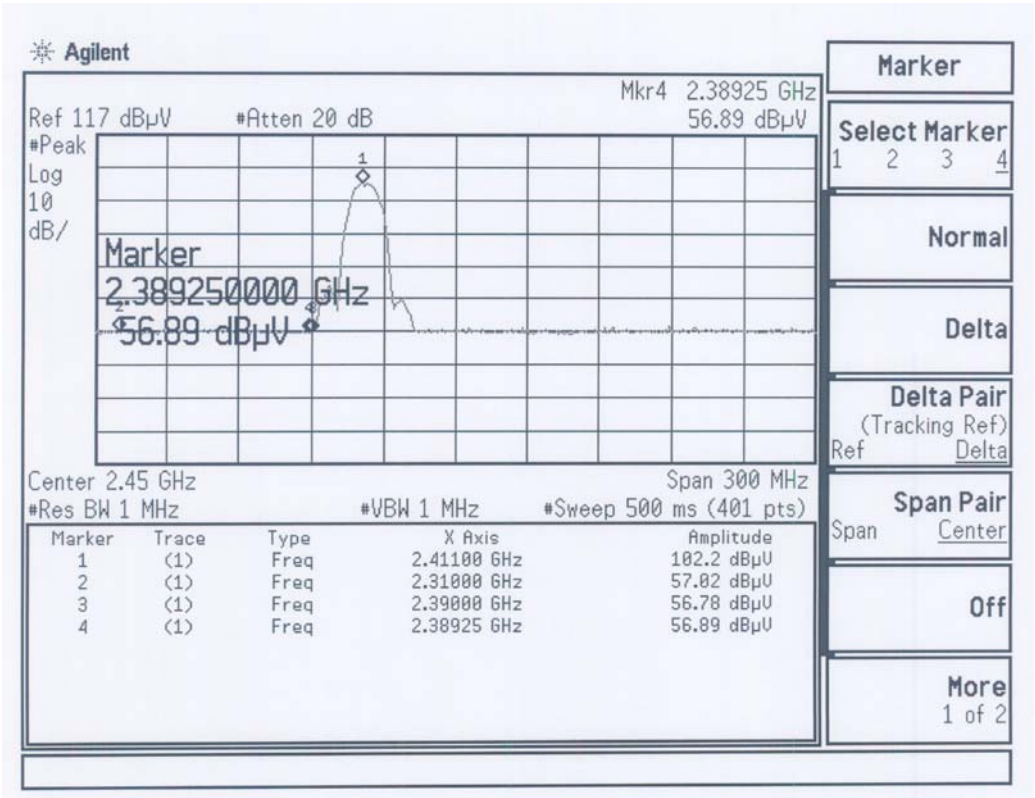
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
1 (Horizontal)	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2389.250	56.89	53.31	74.00	54.00	Pass
1 (Average)	2389.250	36.60	33.02	74.00	54.00	Pass

Figure Channel 1: (Horizontal)



Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

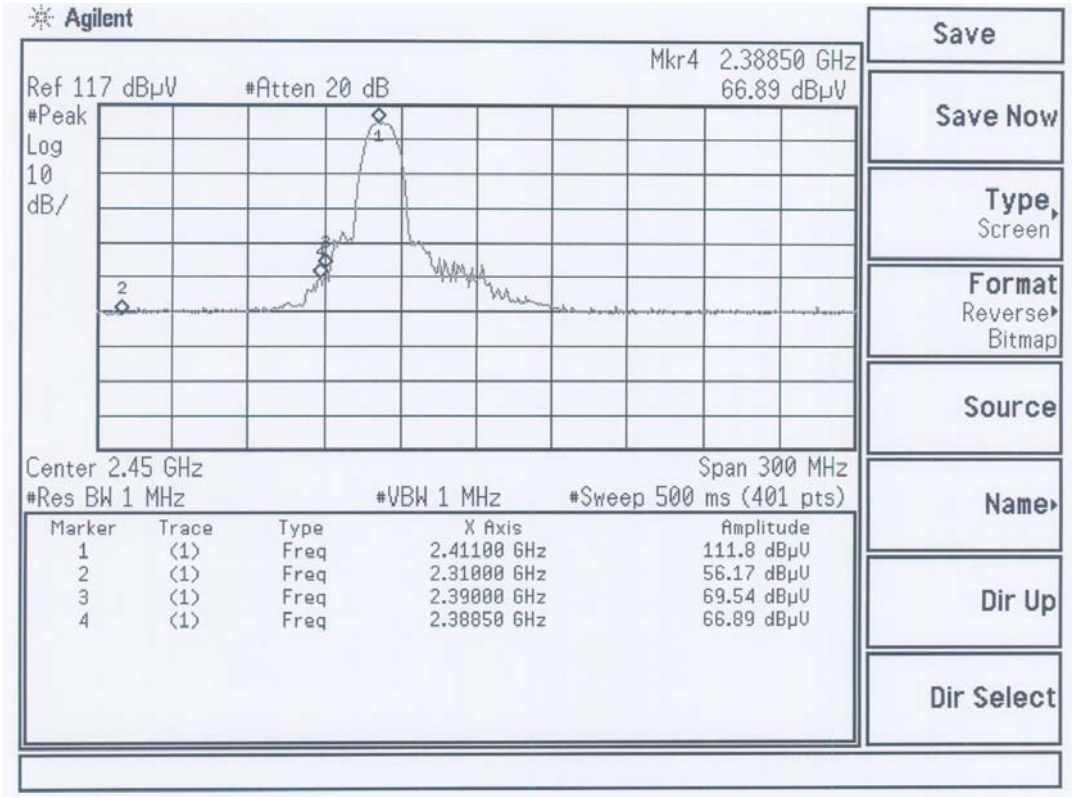
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
1 (Vertical)	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2388.500	66.89	63.31	74.00	54.00	Pass
1 (Average)	2388.500	55.60	52.02	74.00	54.00	Pass

Figure Channel 1: (Vertical)

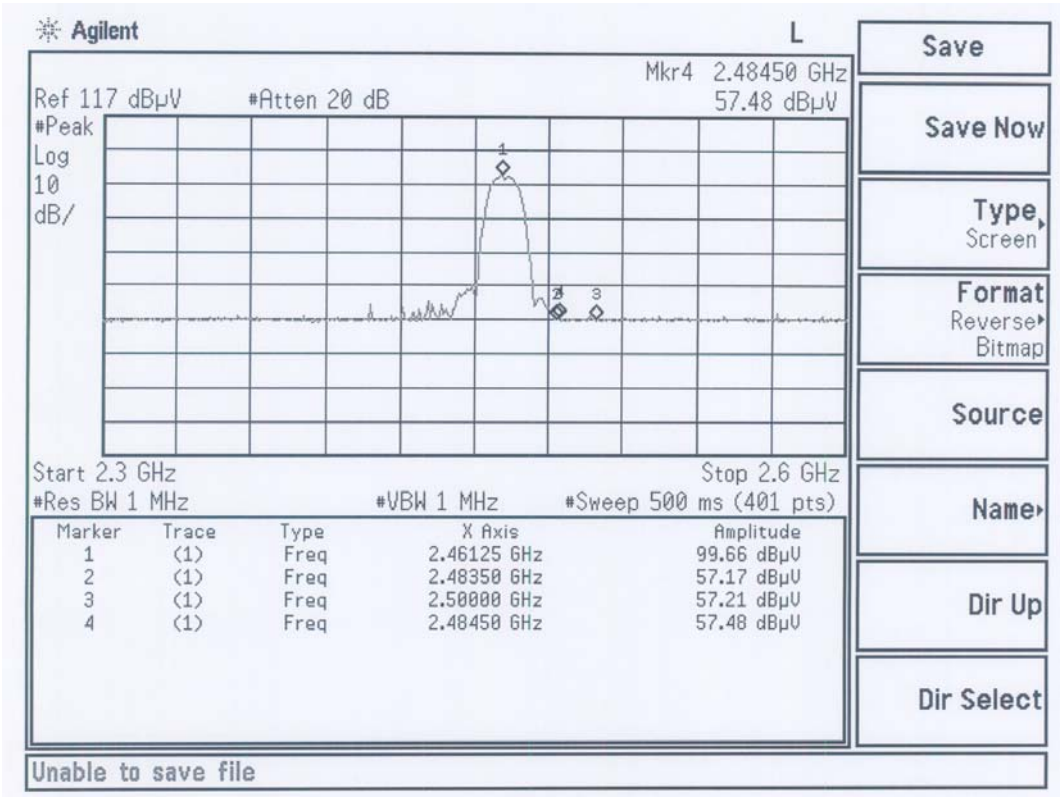


Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
11(Peak)	2484.500	57.48	54.11	74.00	54.00	Pass
11(Average)	2484.500	35.36	31.99	74.00	54.00	Pass

Figure Channel 11: (Horizontal)

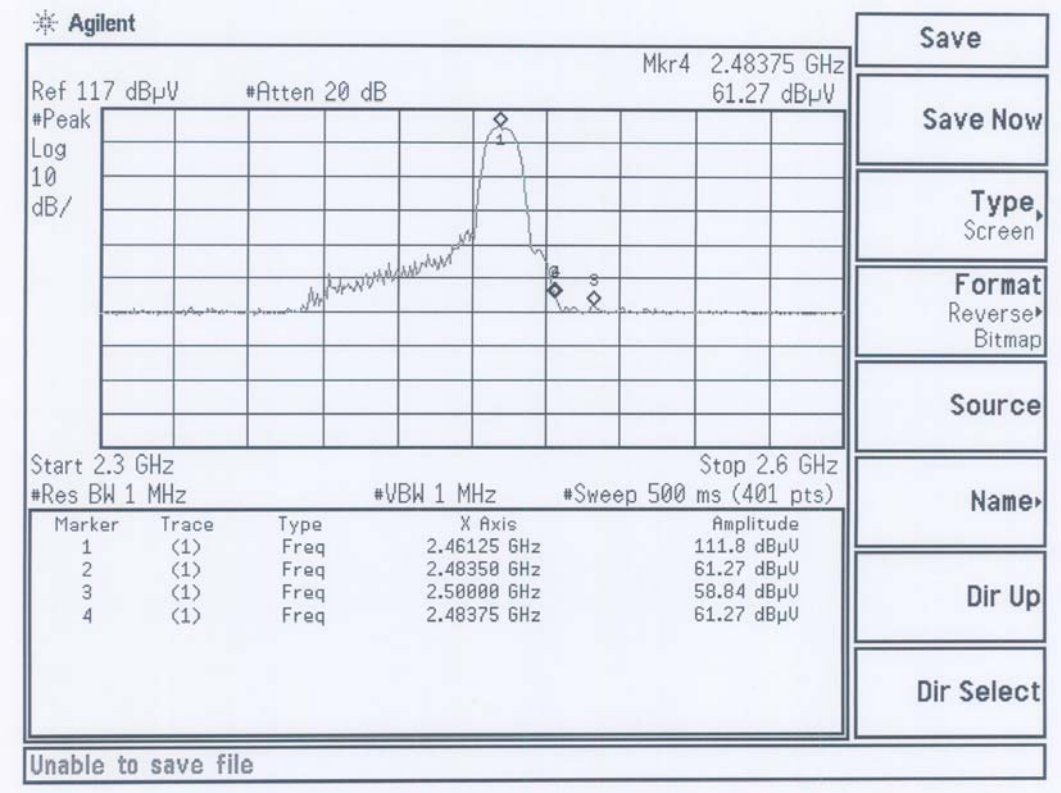


Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
11(Peak)	2483.750	61.27	57.90	74.00	54.00	Pass
11(Average)	2483.750	49.48	46.11	74.00	54.00	Pass

Figure Channel 11: (Vertical)



Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g

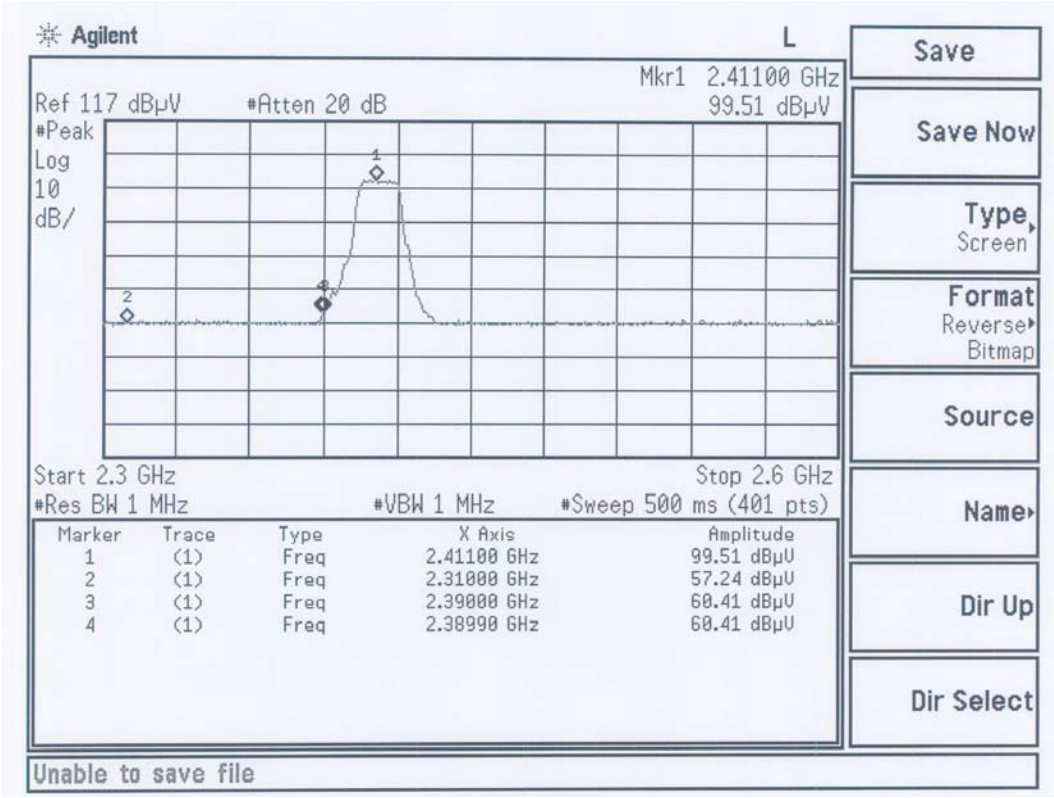
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
1 (Horizontal)	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2389.900	60.41	56.83	74.00	54.00	Pass
1 (Average)	2389.900	48.49	44.91	74.00	54.00	Pass

Figure Channel 1: (Horizontal)



Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g

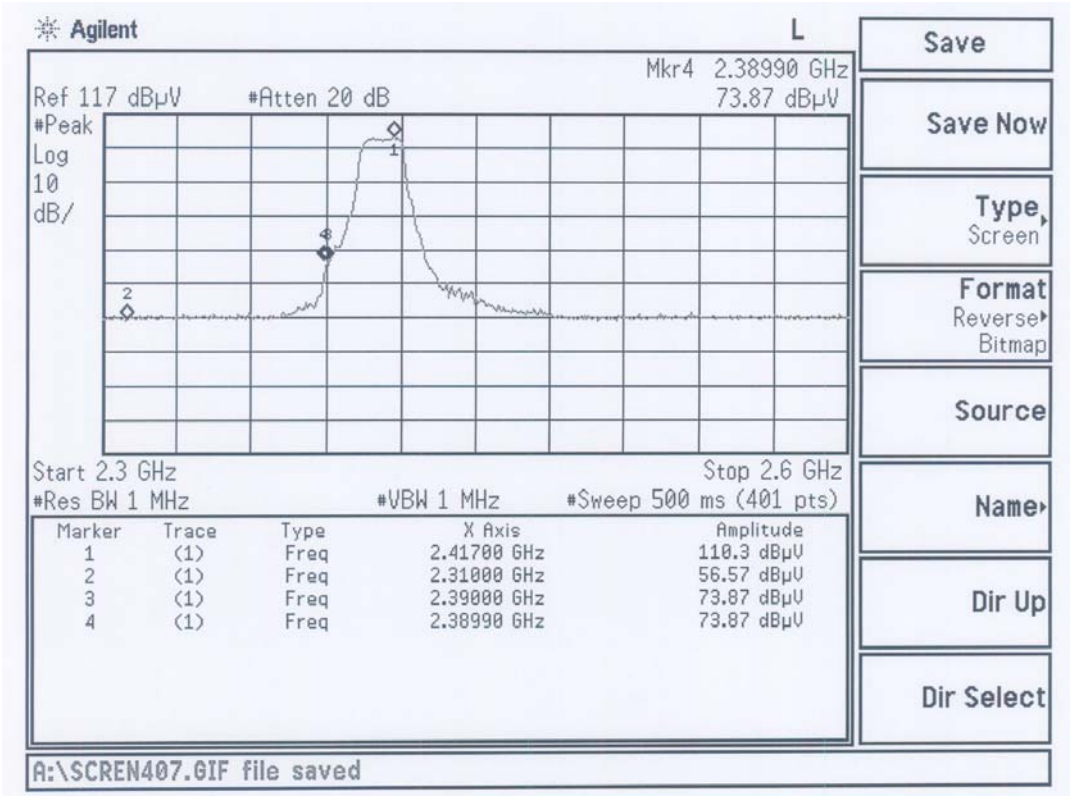
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
1 (Vertical)	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2389.900	73.87	70.29	74.00	54.00	Pass
1 (Average)	2389.900	54.98	51.40	74.00	54.00	Pass

Figure Channel 1: (Vertical)

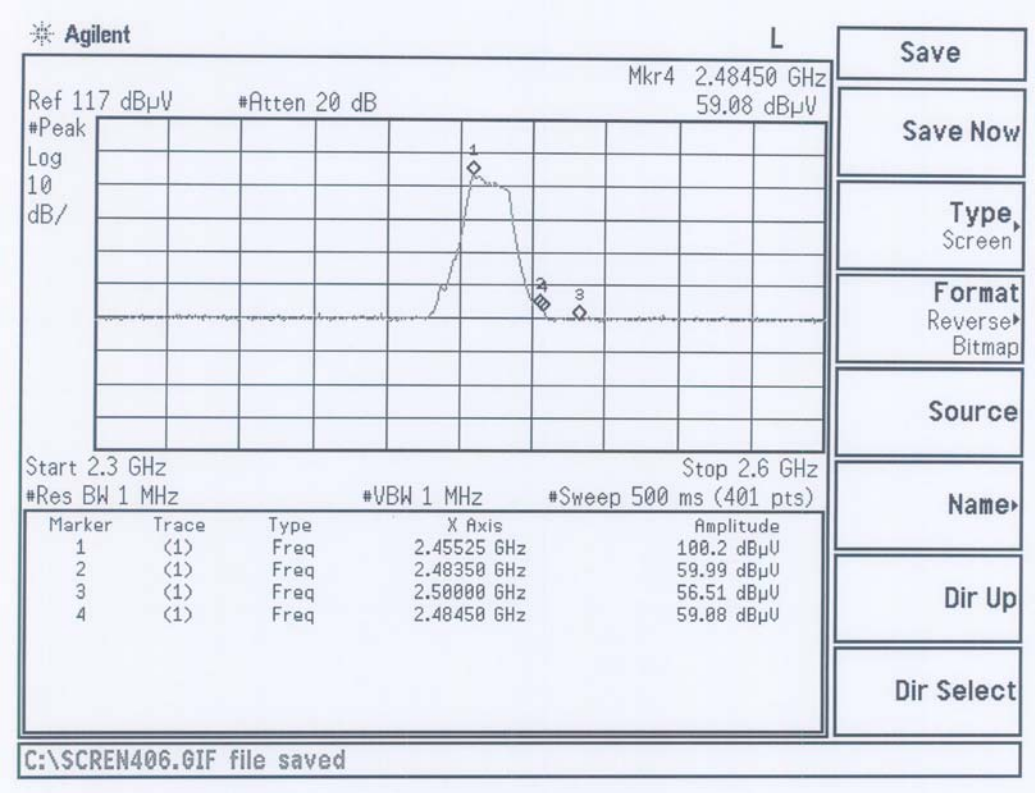


Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
11 (Peak)	2484.500	59.08	55.71	74.00	54.00	Pass
11(Average)	2484.500	38.88	35.51	74.00	54.00	Pass

Figure Channel 11: (Horizontal)

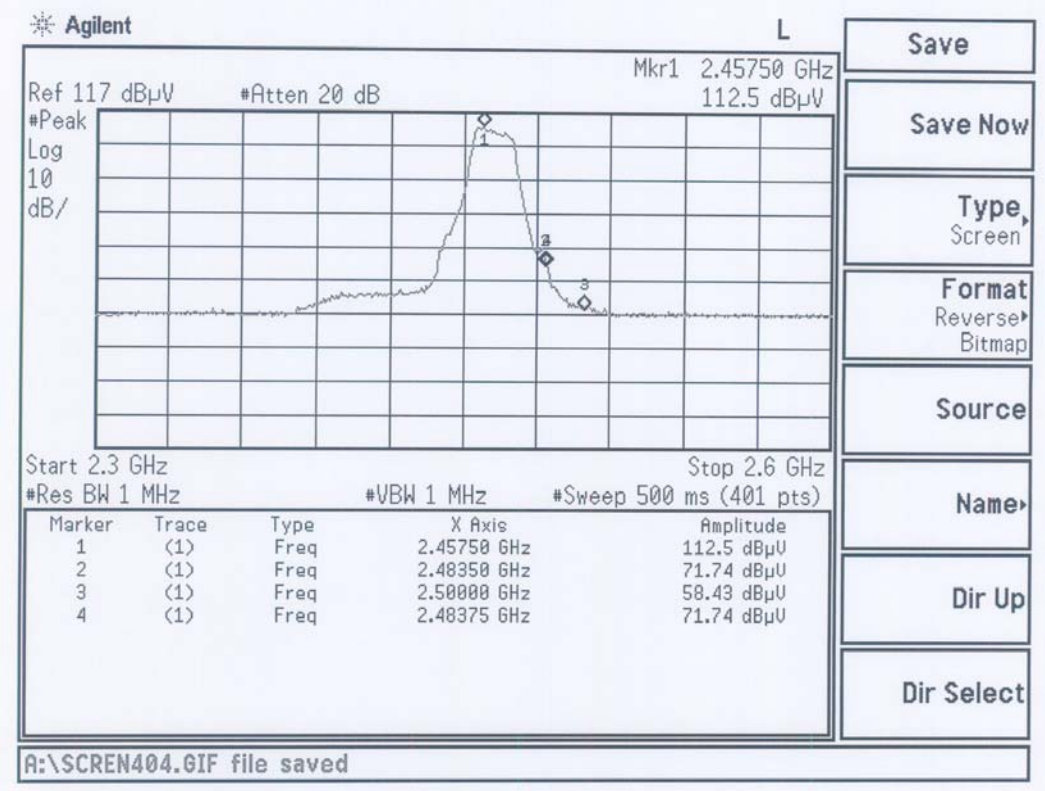


Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g

RF Radiated Measurement (Vertical):

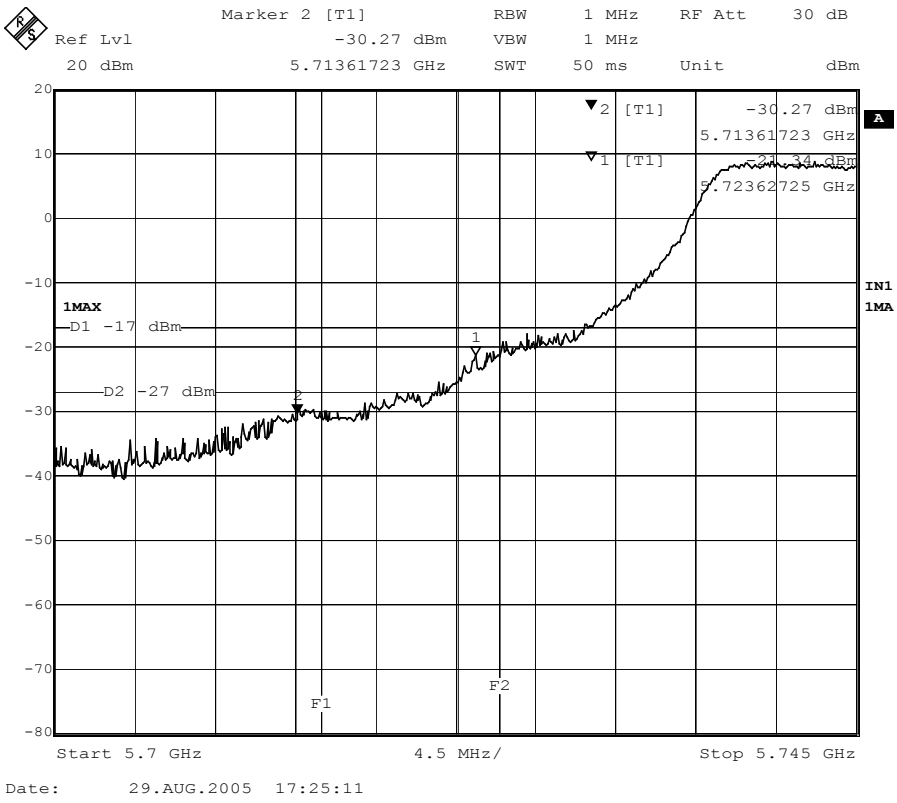
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
11 (Peak)	2483.750	71.74	68.37	74.00	54.00	Pass
11(Average)	2483.750	56.81	53.44	74.00	54.00	Pass

Figure Channel 11: (Vertical)



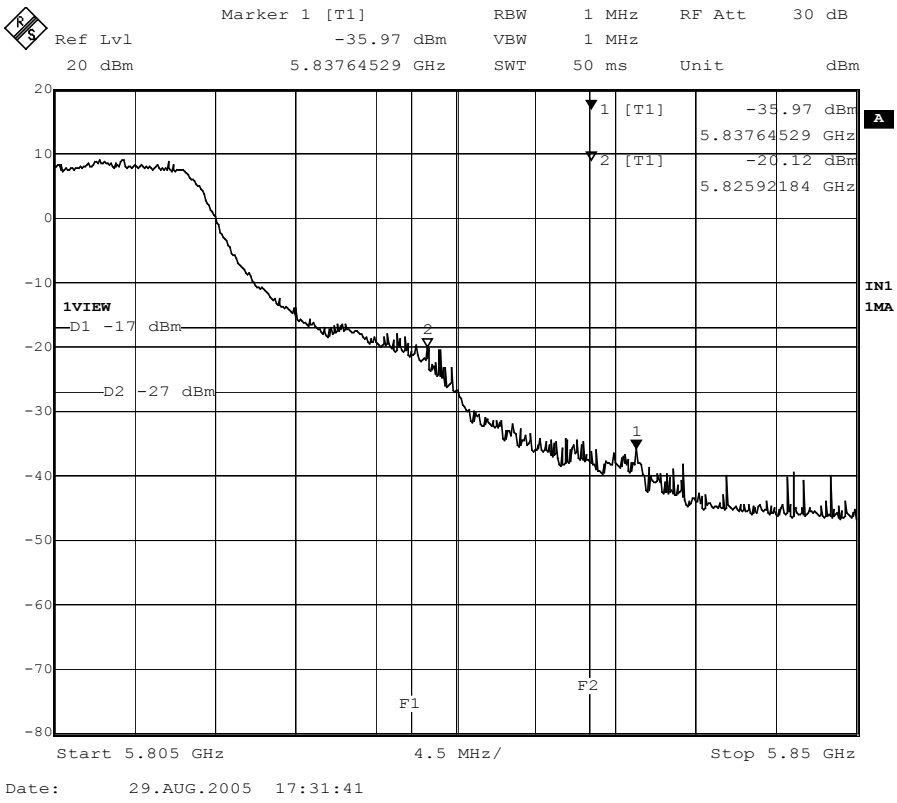
Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a

Figure Channel 1:



Product : Ubiquiti Super Range Cardbus
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a

Figure Channel 4:



.

6. Occupied Bandwidth

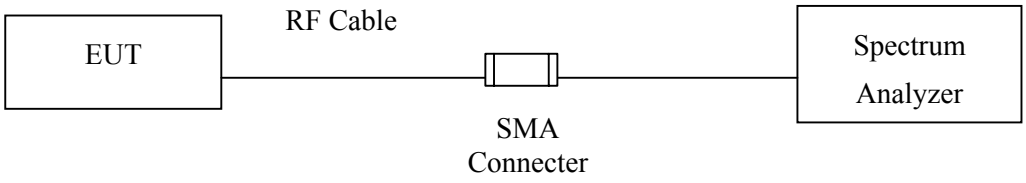
6.1. Test Equipment

The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	Advantest	R3272 / 72421194	May, 2005

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

6.2. Test Setup



6.3. Limits

The minimum bandwidth shall be at least 500kHz.

6.4. Uncertainty

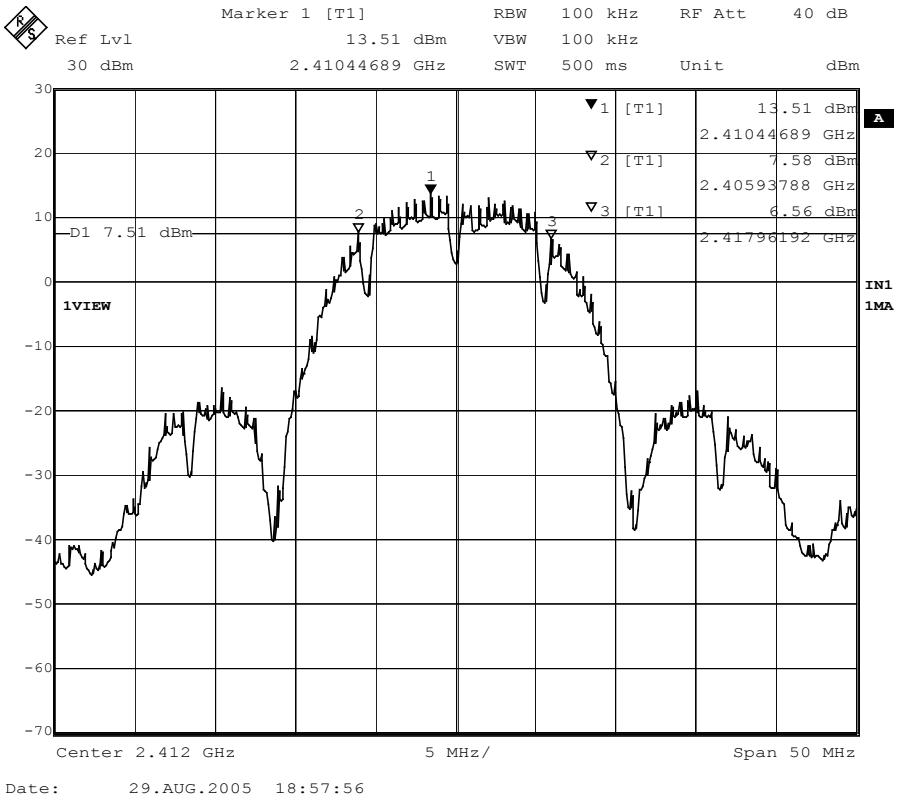
The measurement uncertainty is defined as ± 1.27 dB

6.5. Test Result of Occupied Bandwidth

Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1 (11Mbps)	2412	12030	>500	Pass

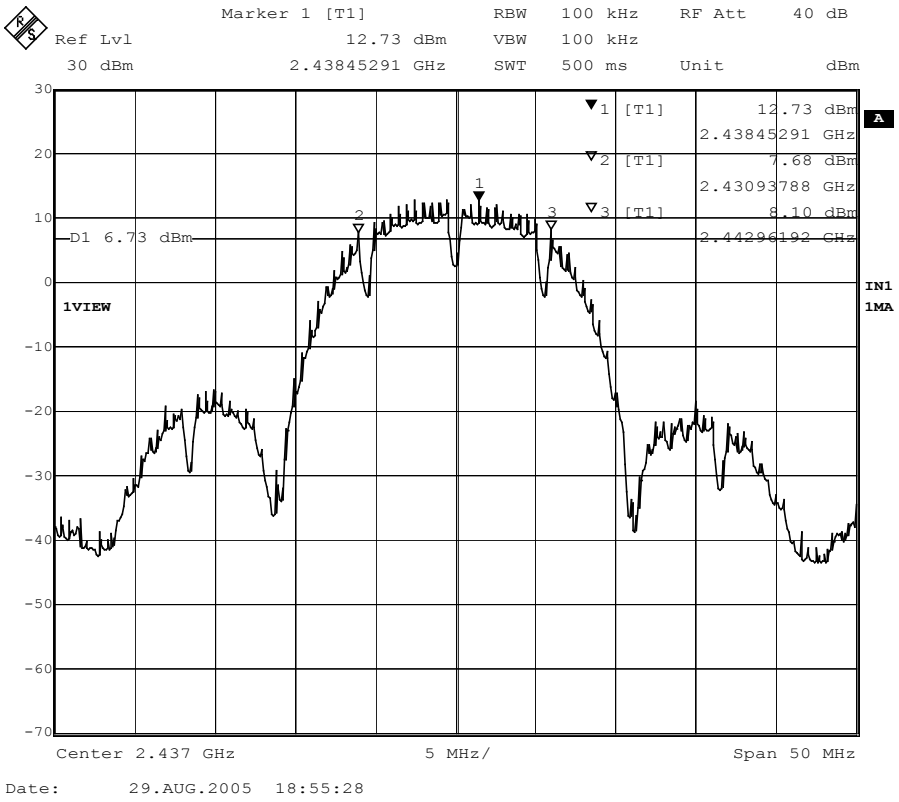
Figure Channel 1: 11Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6 (11Mbps)	2437	12030	>500	Pass

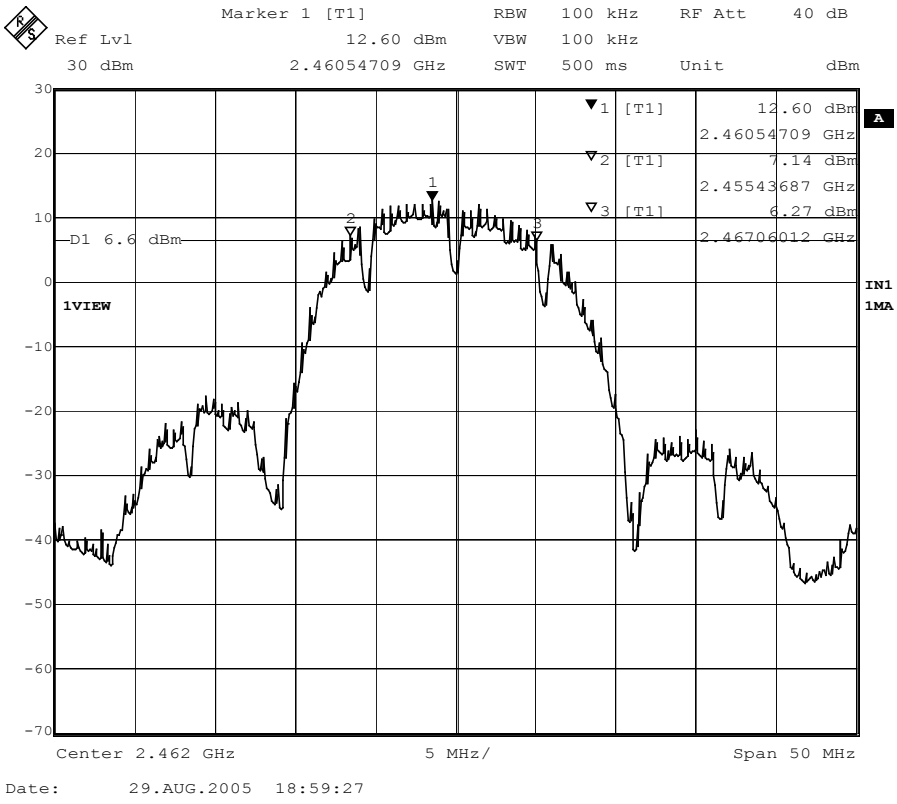
Figure Channel 6: 11Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11 (11Mbps)	2462	11630	>500	Pass

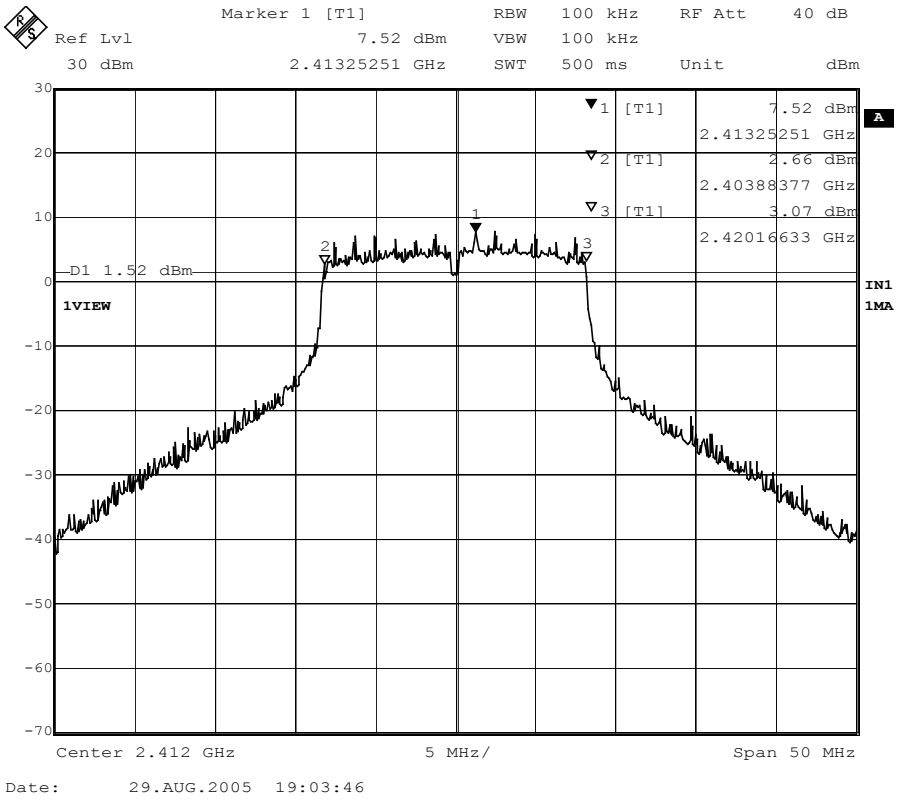
Figure Channel 11: 11Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1 (54Mbps)	2412	16280	>500	Pass

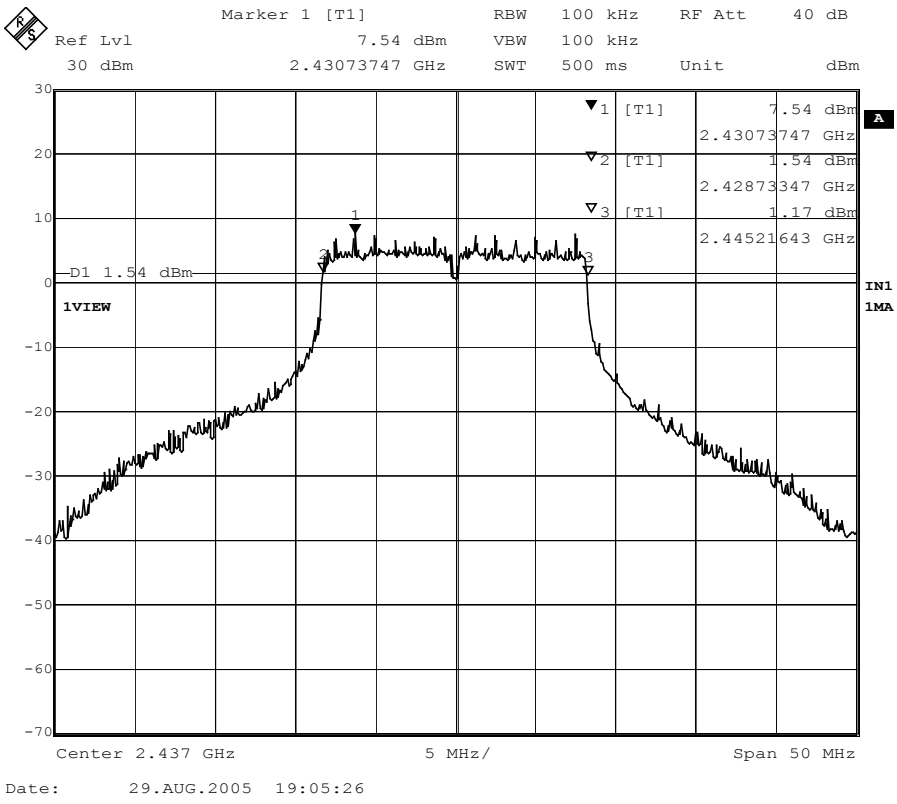
Figure Channel 1: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6 (54Mbps)	2437	16480	>500	Pass

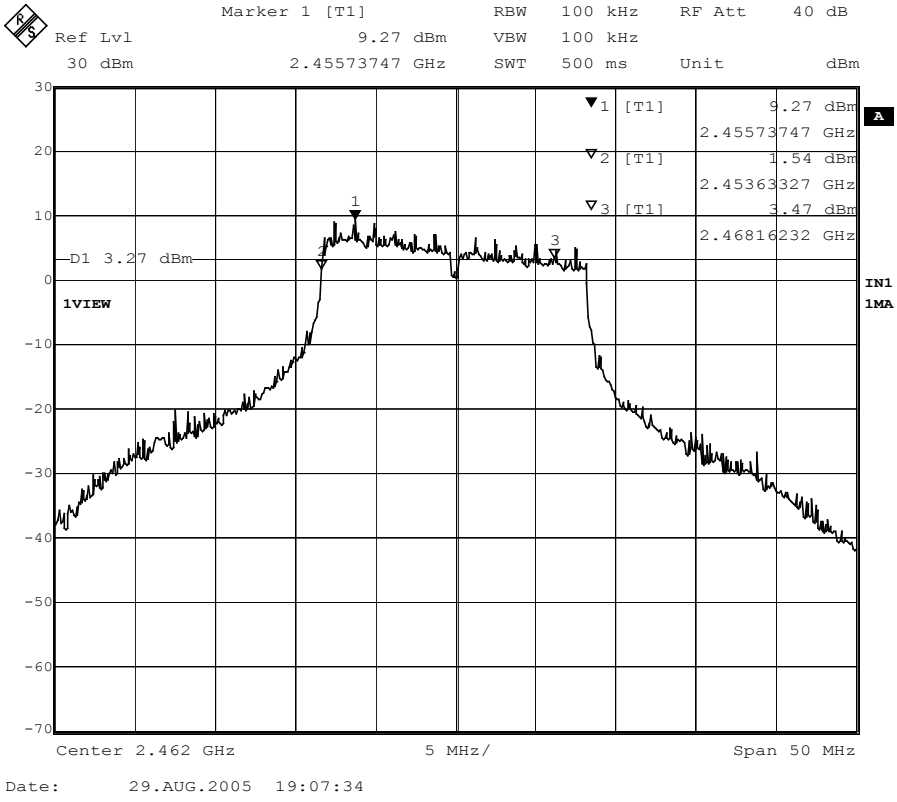
Figure Channel 6: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11 (54Mbps)	2462	14530	>500	Pass

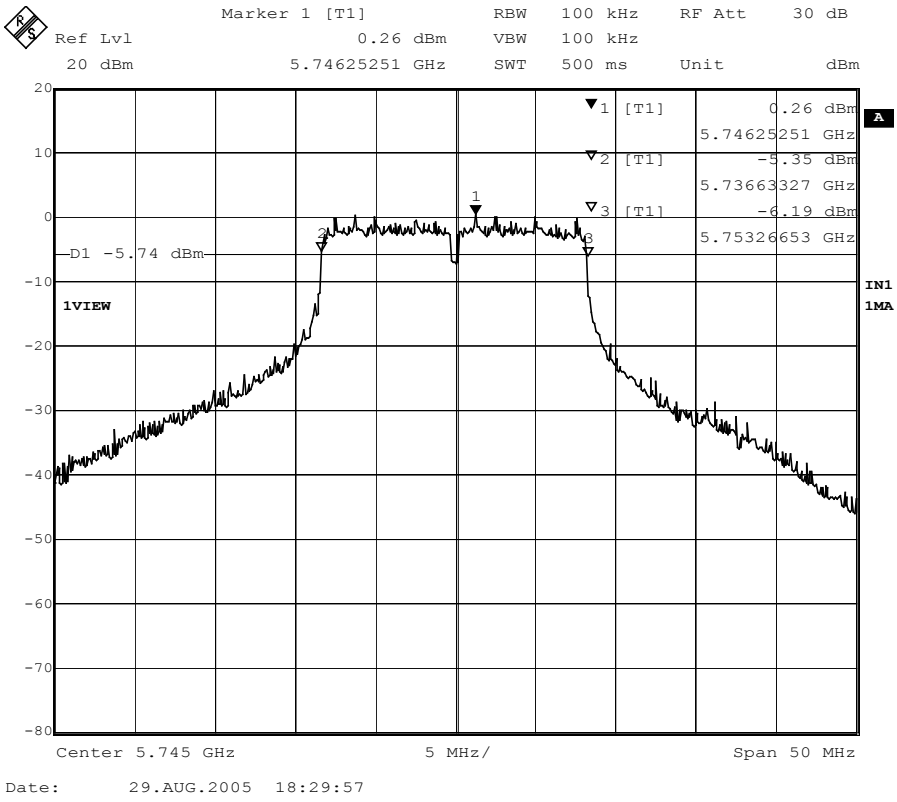
Figure Channel 11: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1 (54Mbps)	5745	16630	>500	Pass

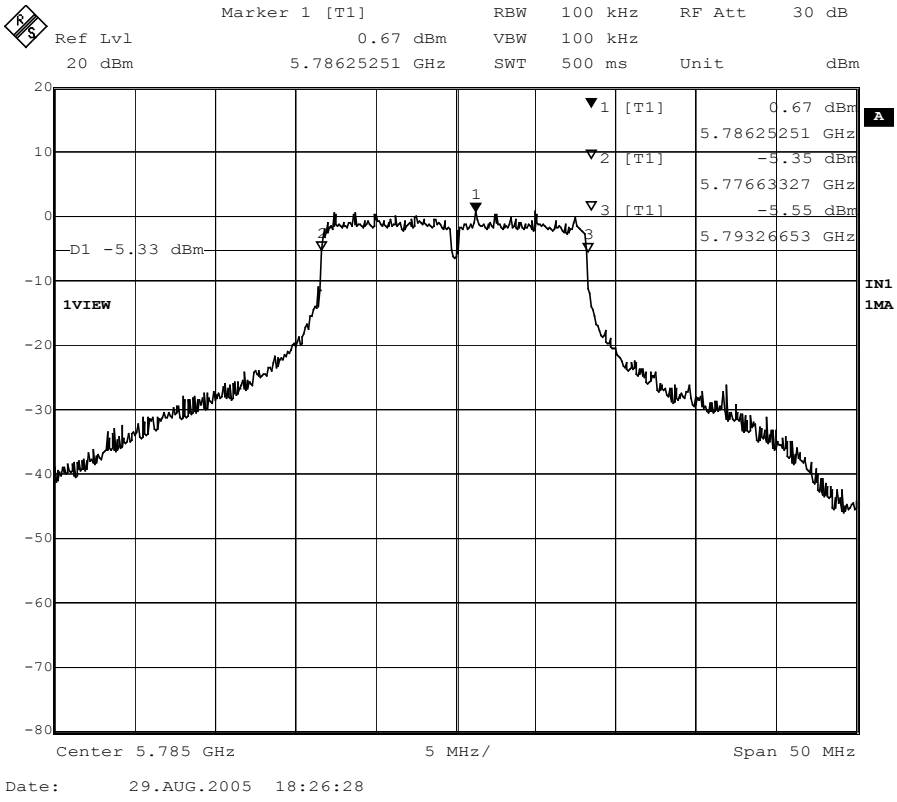
Figure Channel 1: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3 (54Mbps)	5785	16630	>500	Pass

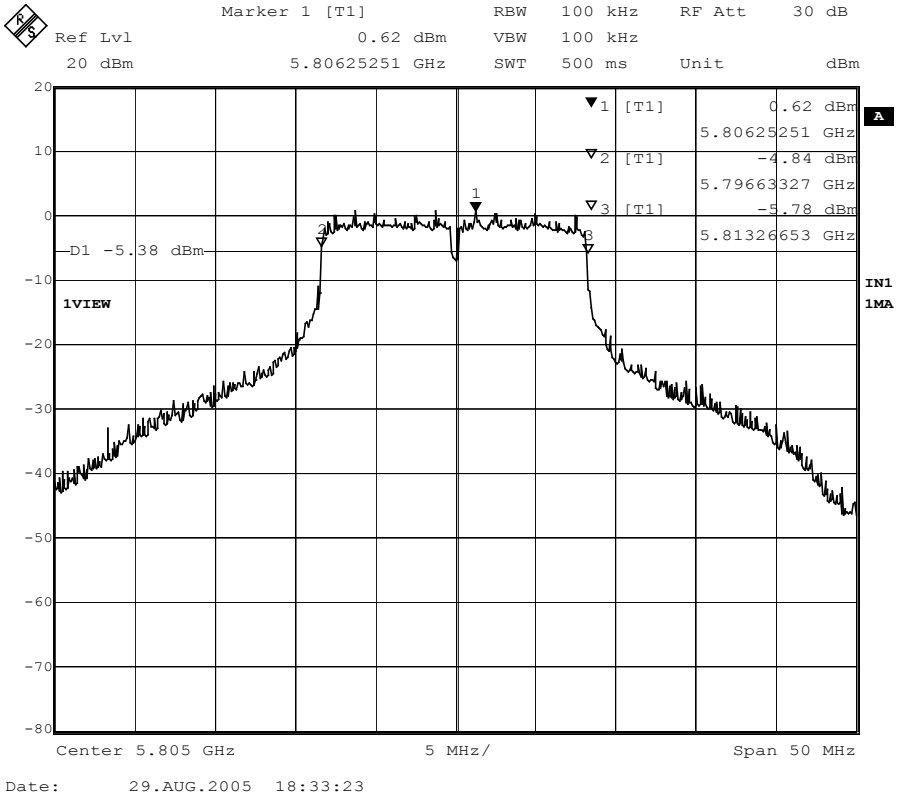
Figure Channel 3: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5805MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
4 (54Mbps)	5805	16630	>500	Pass

Figure Channel 4: 54Mbps



7. Power Density

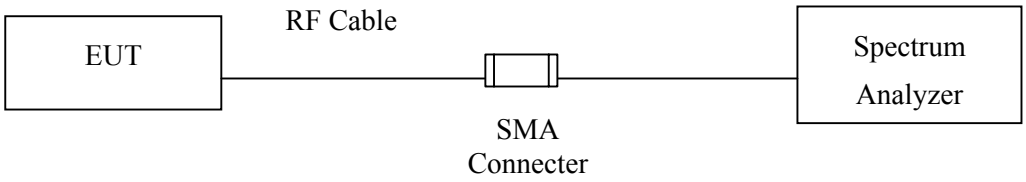
7.1. Test Equipment

The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	Advantest	R3272 / 72421194	May, 2005

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

7.2. Test Setup



7.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

7.4. Uncertainty

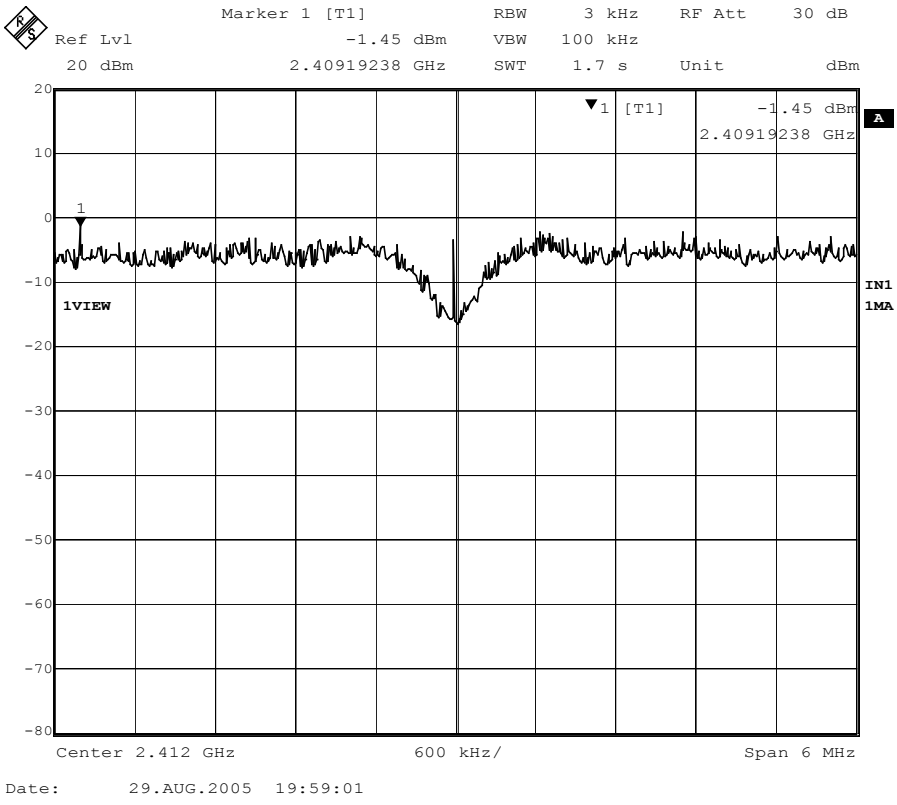
The measurement uncertainty is defined as ± 1.27 dB

7.5. Test Result of Power Density

Product : Ubiquiti Super Range Cardbus
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1 (11Mbps)	2412	-1.45	< 8dBm	Pass

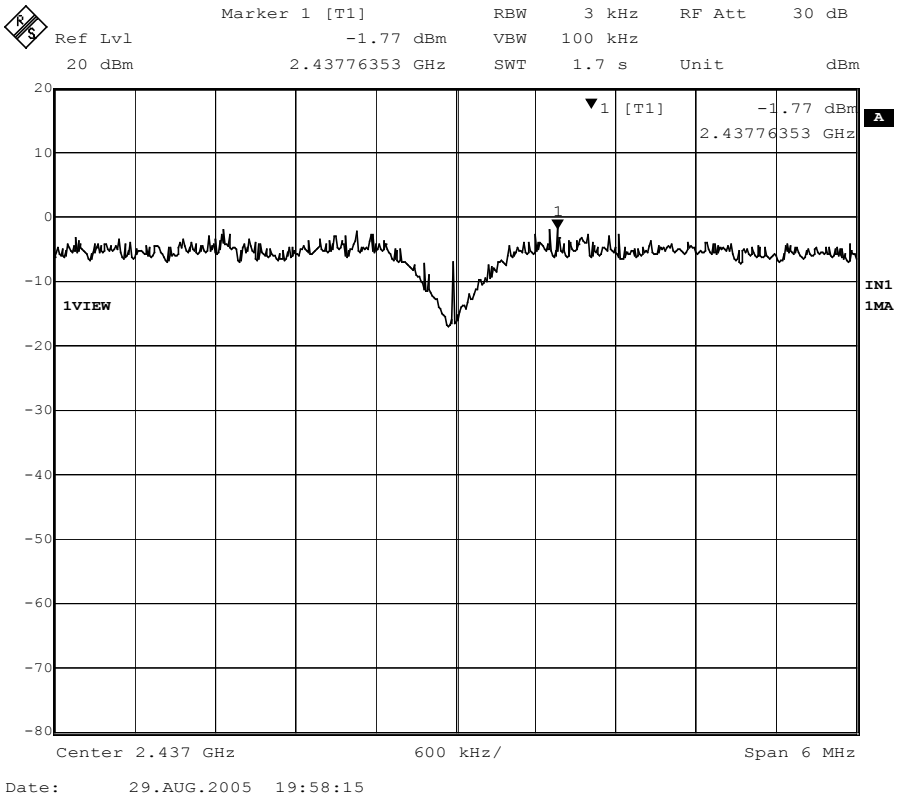
Figure Channel 1: 11Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 1: Transmitter 802.11b (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6 (11Mbps)	2437	-1.77	< 8dBm	Pass

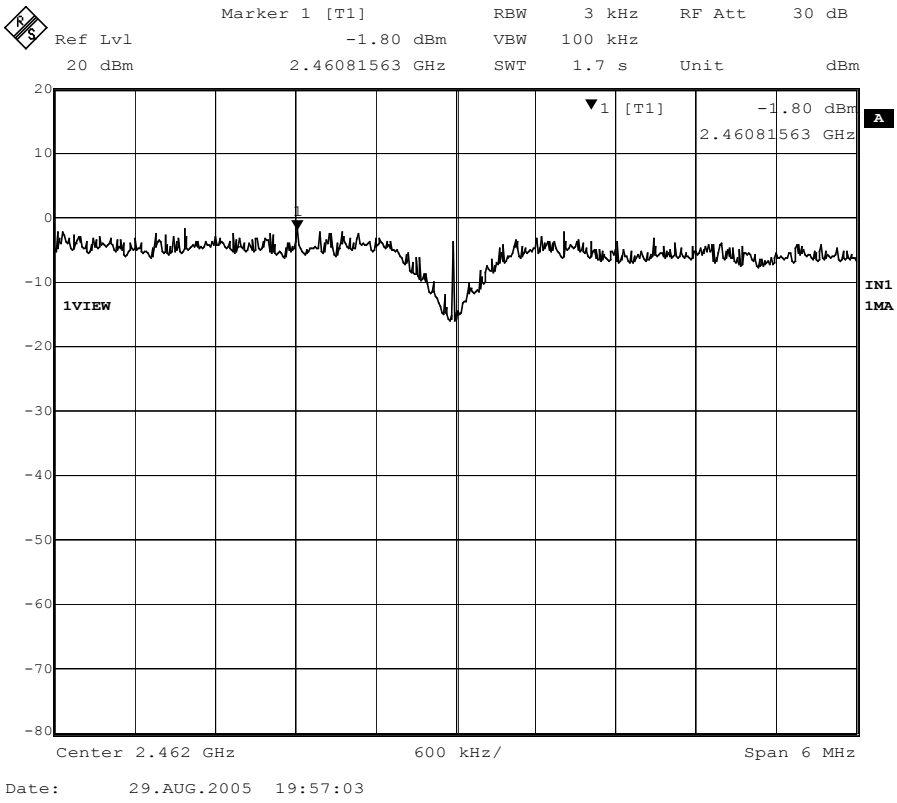
Figure Channel 6: 11Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter 802.11b (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11 (11Mbps)	2462	-1.80	< 8dBm	Pass

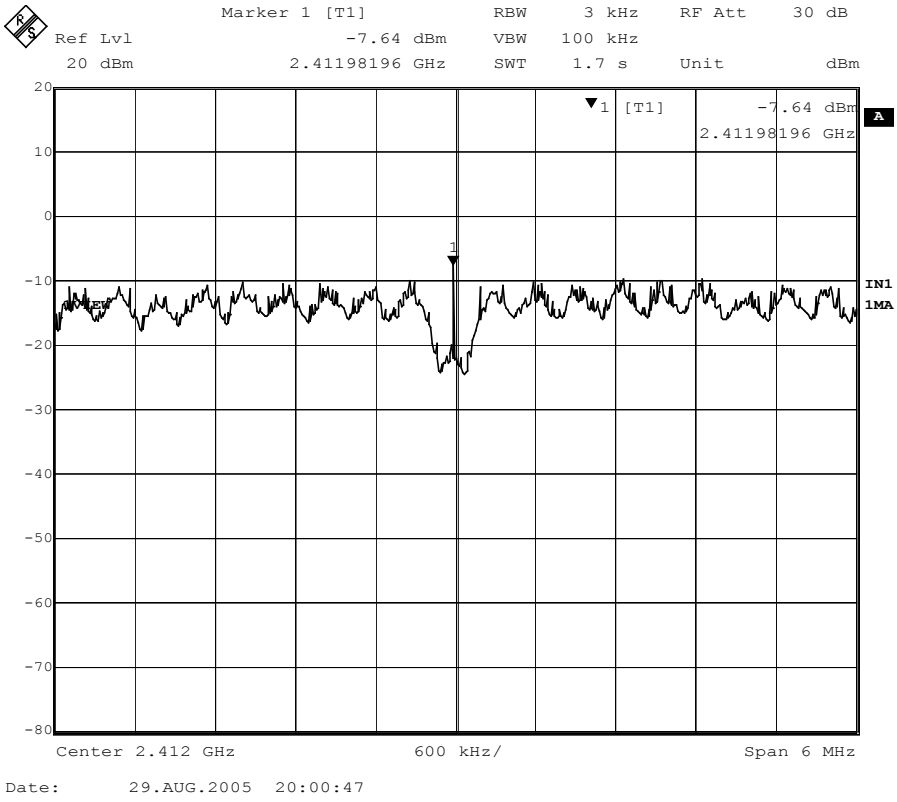
Figure Channel 11: 11Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1 (54Mbps)	2412	-7.64	< 8dBm	Pass

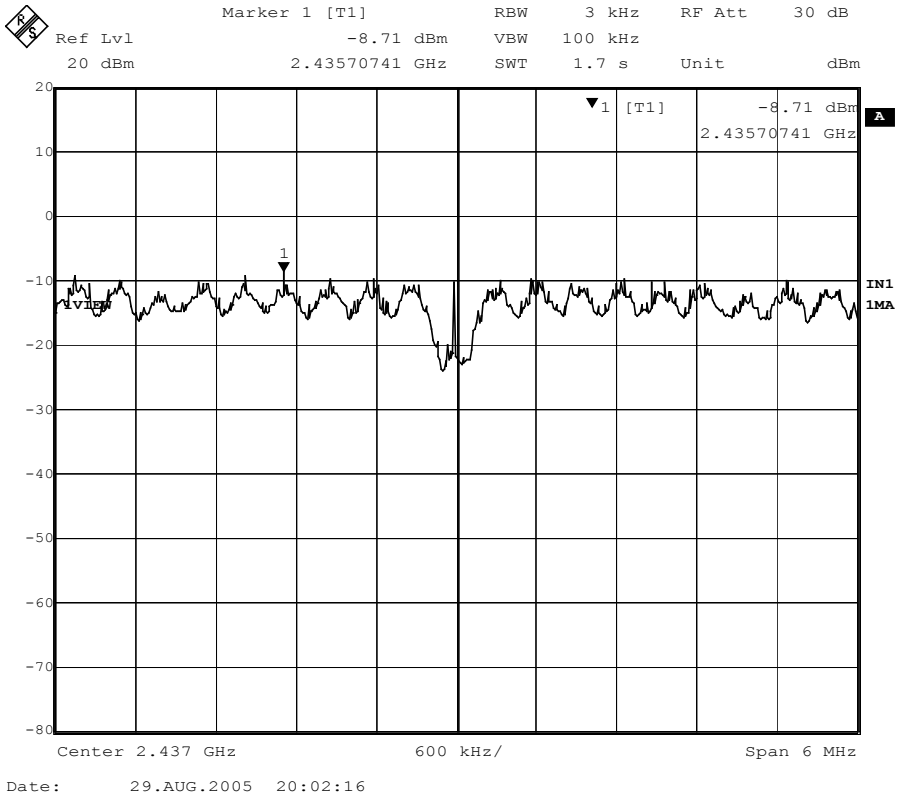
Figure Channel 1: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 2: Transmitter 802.11g (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6 (54Mbps)	2437	-8.71	< 8dBm	Pass

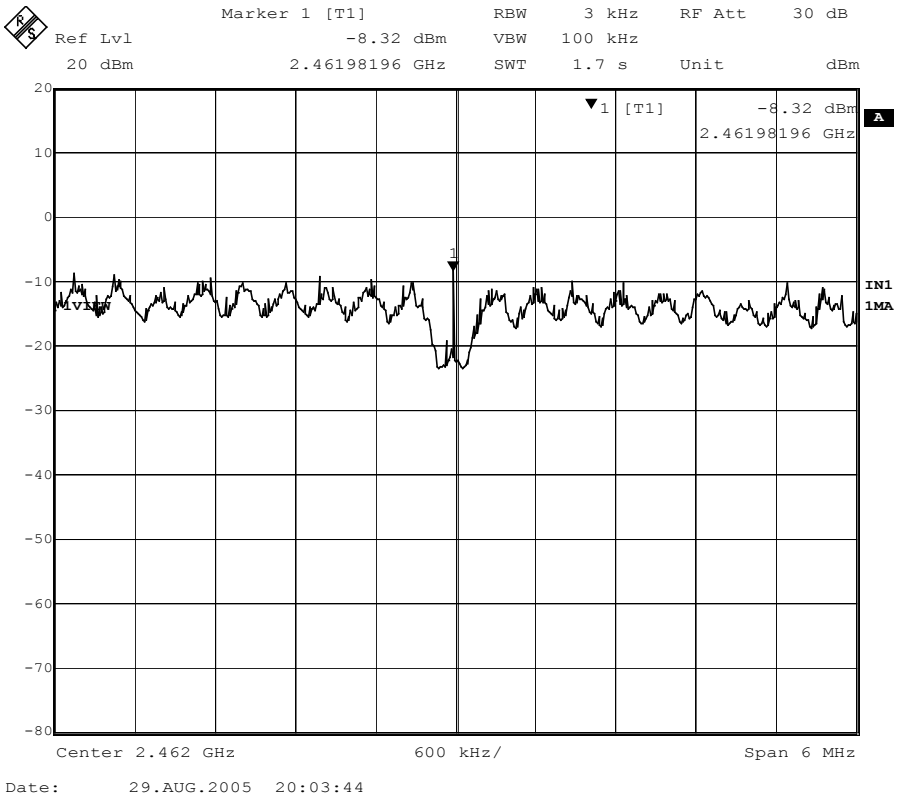
Figure Channel 6: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Density Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter 802.11g (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11 (54Mbps)	2462	-8.32	< 8dBm	Pass

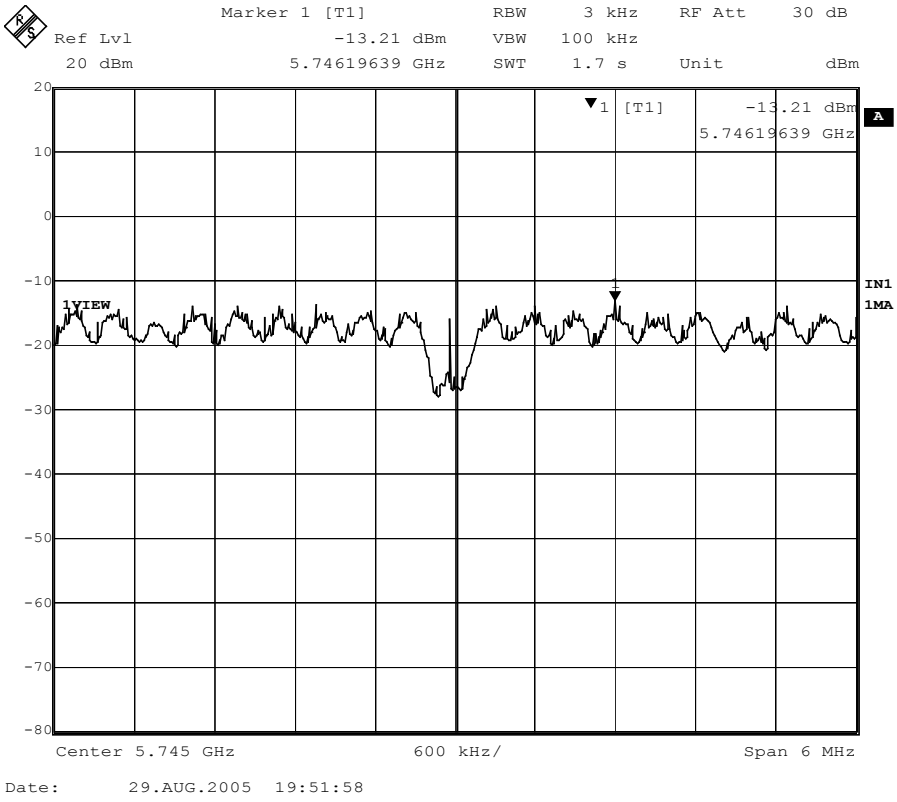
Figure Channel 11: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5745MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1 (54Mbps)	5745	-13.21	< 8dBm	Pass

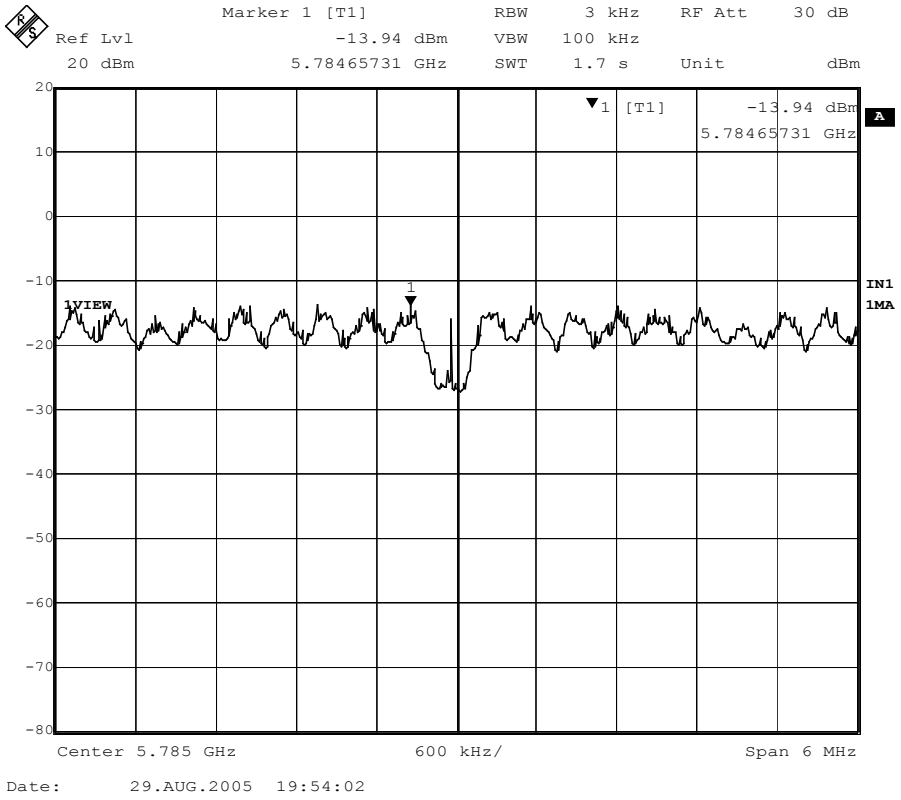
Figure Channel 1: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 3: Transmitter 802.11a (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
3 (54Mbps)	5785	-13.94	< 8dBm	Pass

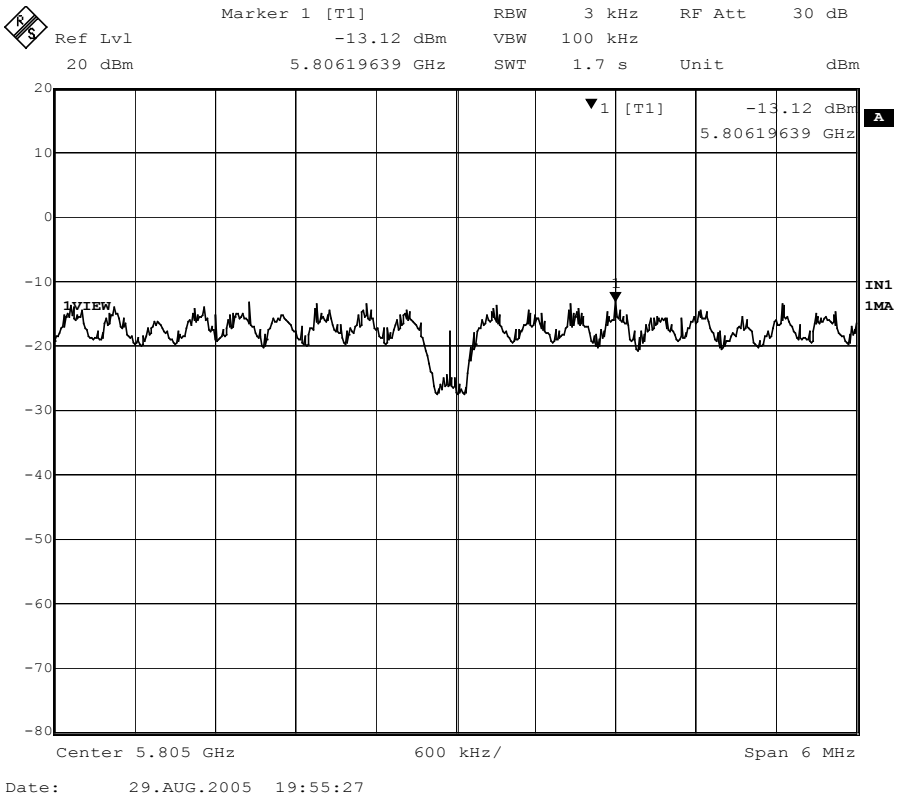
Figure Channel 3: 54Mbps



Product : Ubiquiti Super Range Cardbus
Test Item : Density Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter 802.11a (5805MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
4 (54Mbps)	5805	-13.12	< 8dBm	Pass

Figure Channel 4: 54Mbps



8. EMI Reduction Method During Compliance Testing

No modification was made during testing.

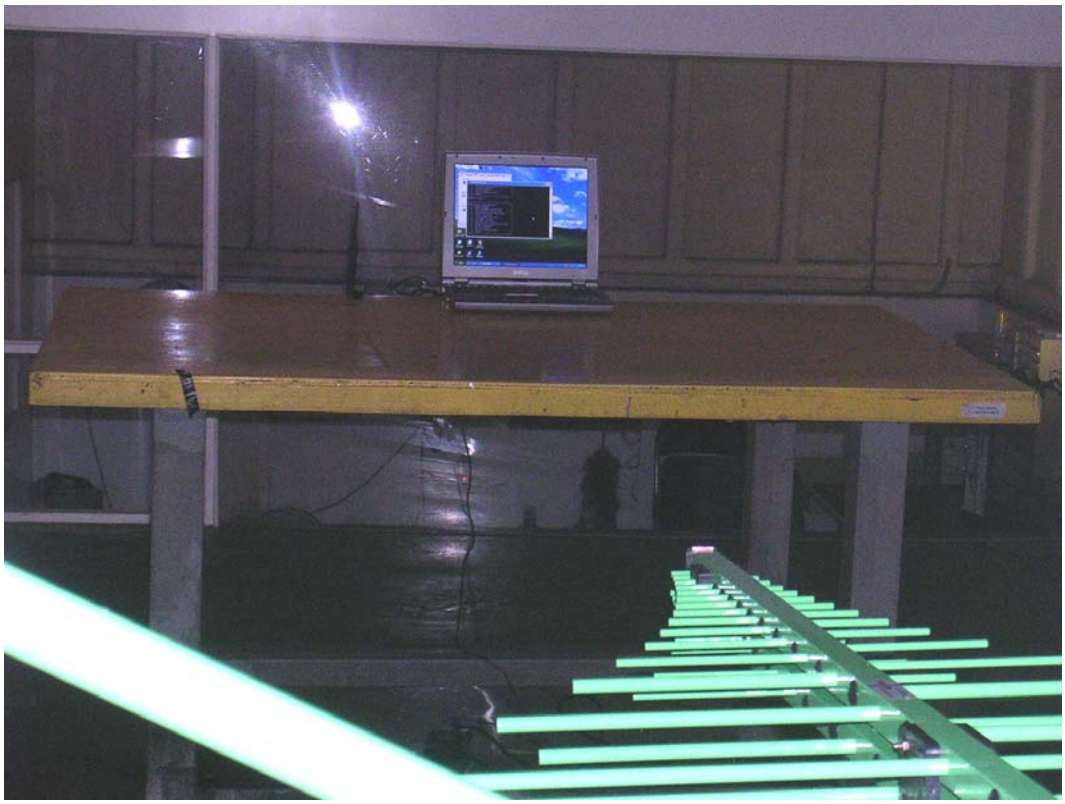
Attachment 1: EUT Test Photographs

Attachment 1: EUT Test Setup Photographs

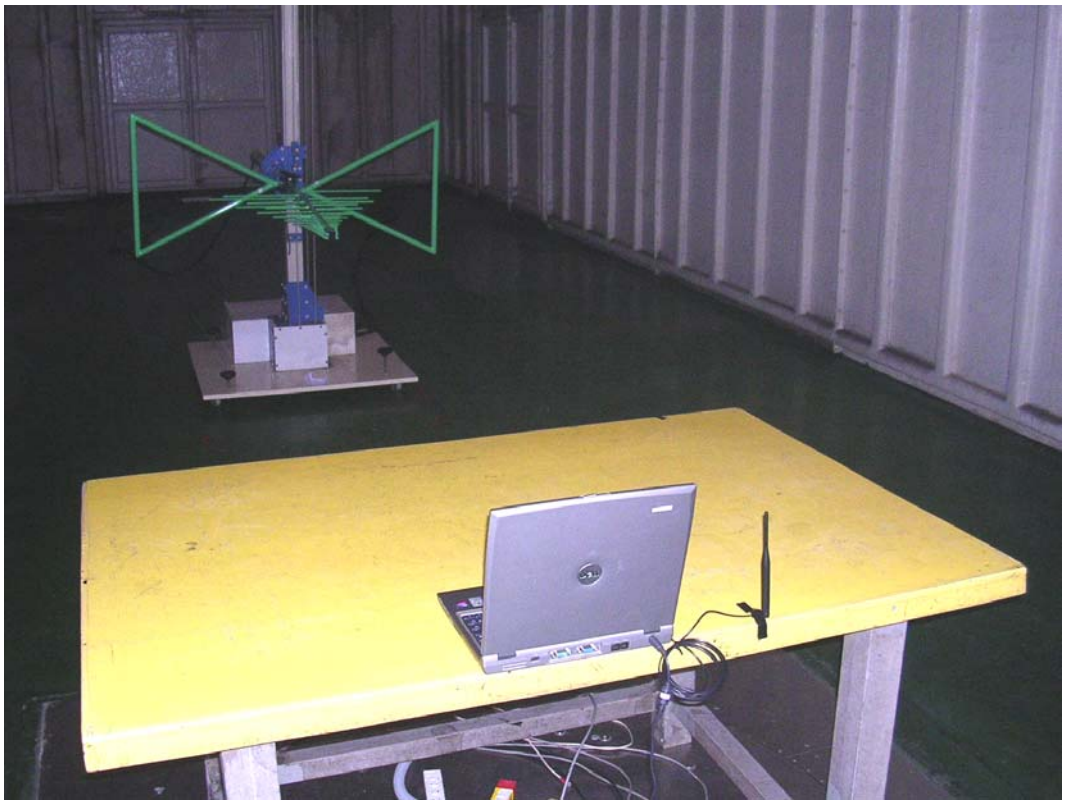
Front View of Conducted Test

Back View of Conducted Test

Front View of Radiated Test



Back View of Radiated Test



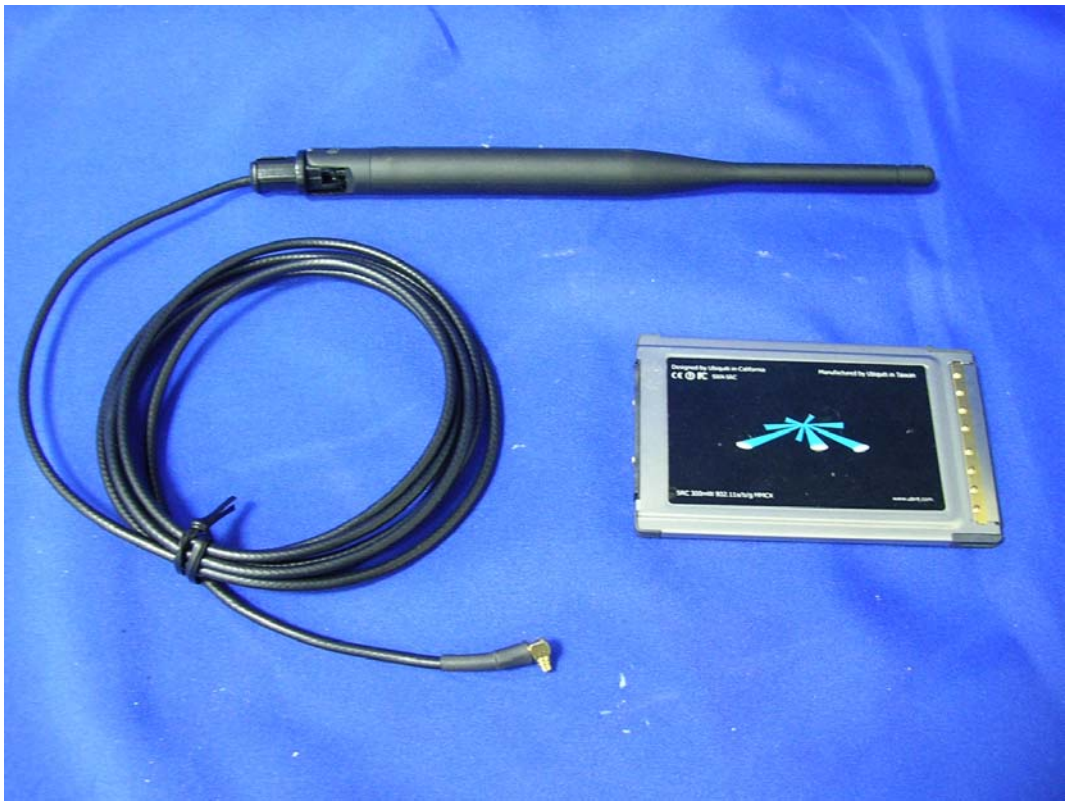
Front View of Radiated Test (Horn)

Back View of Radiated Test (Horn)

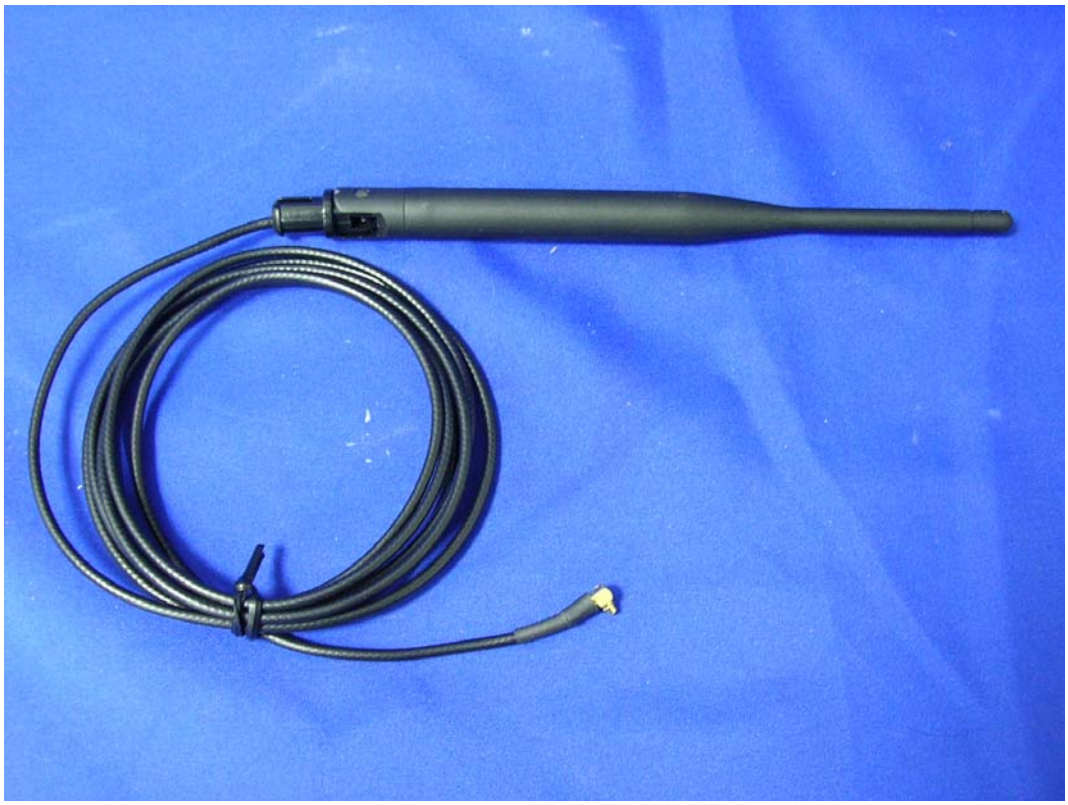
Attachment 2: EUT Detailed Photographs

Attachment 2 : EUT Detailed Photographs

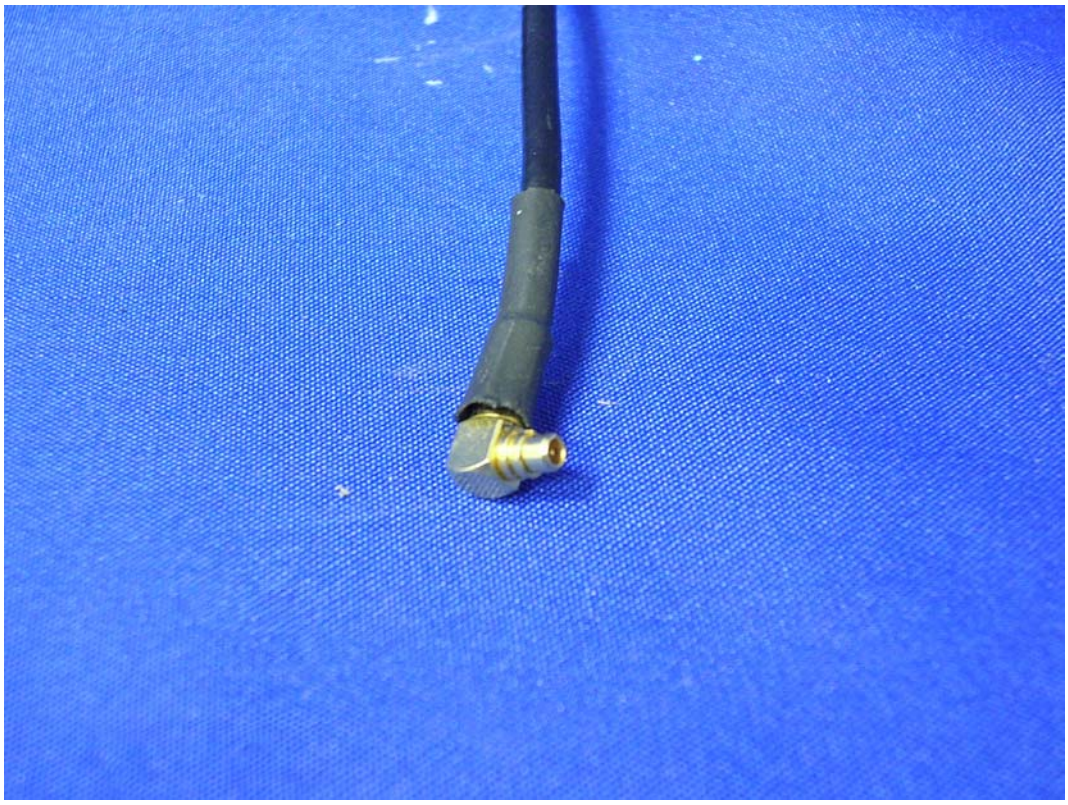
(1) EUT Photo



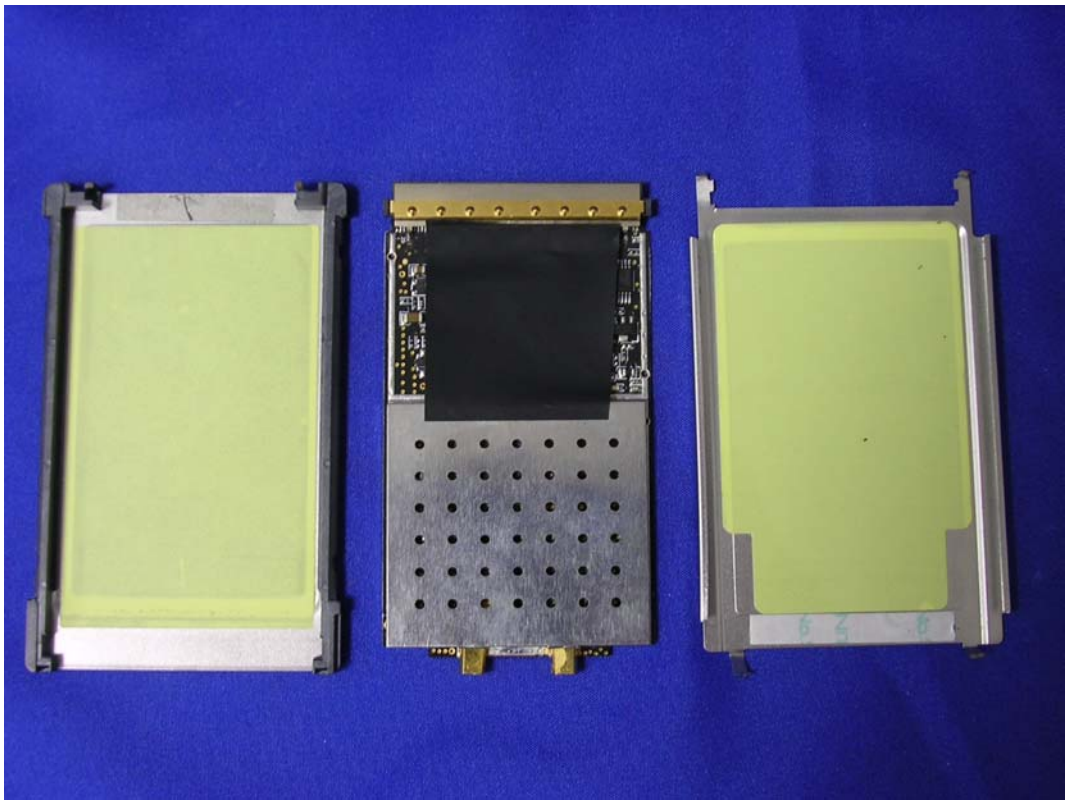
(2) EUT Photo



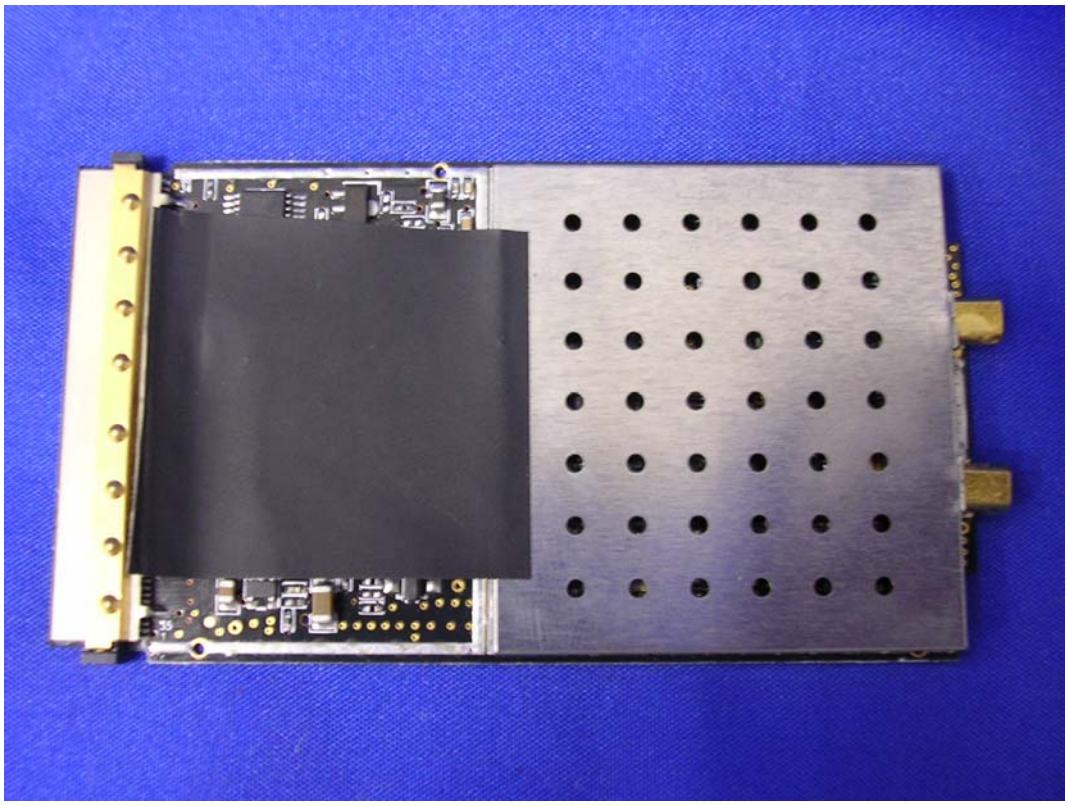
(3) EUT Photo



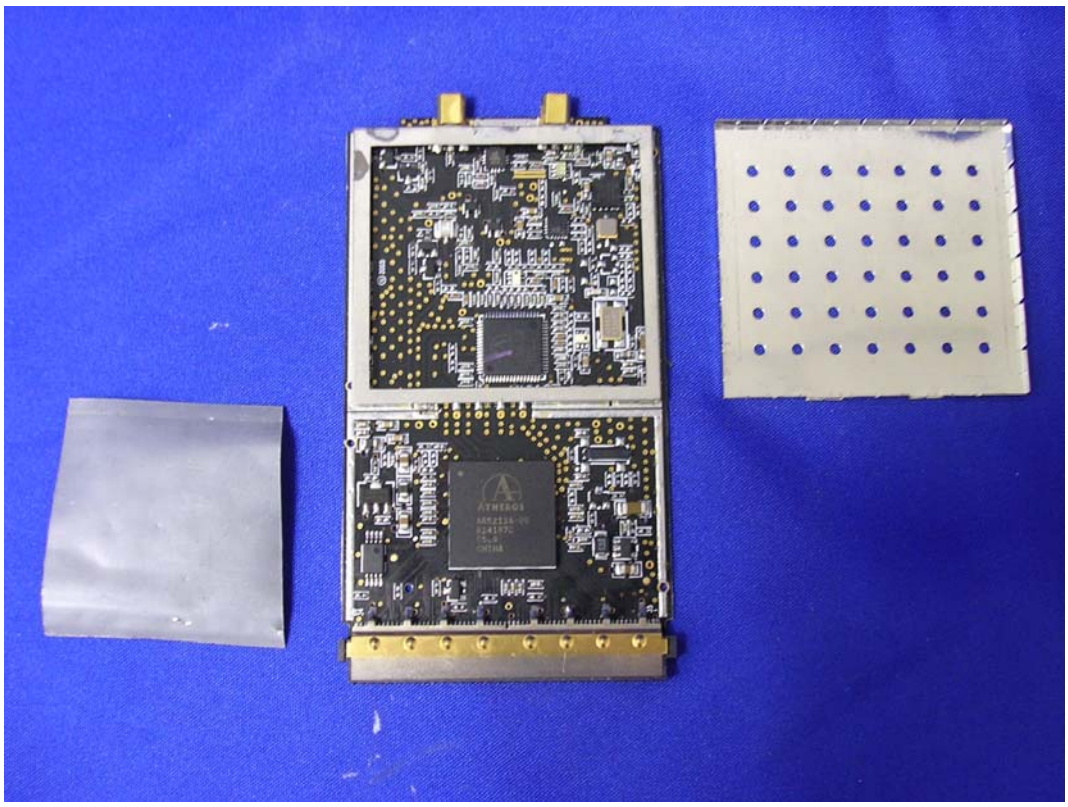
(4) EUT Photo



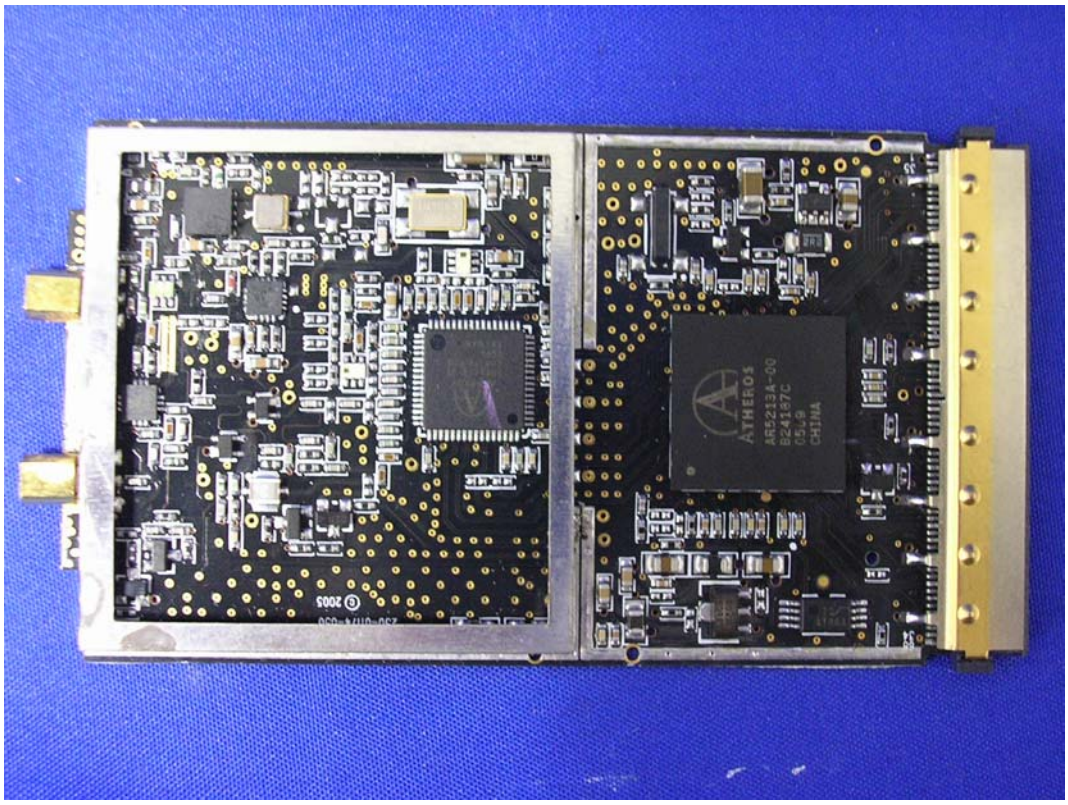
(5) EUT Photo



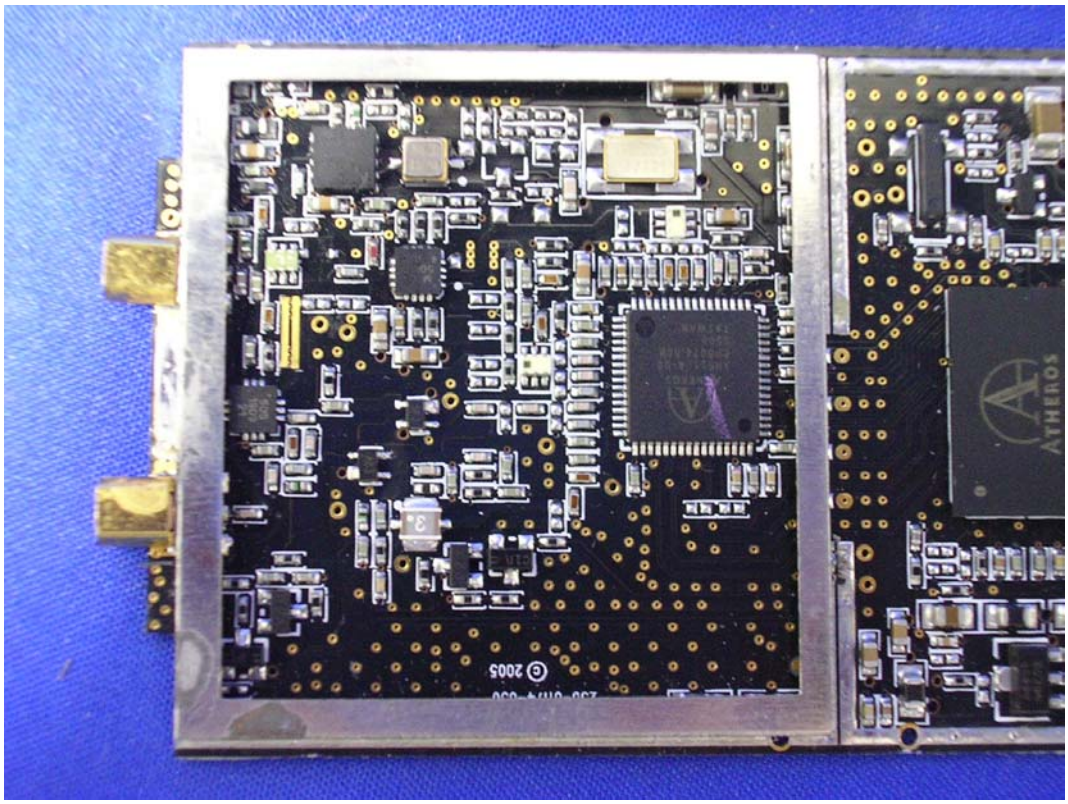
(6) EUT Photo



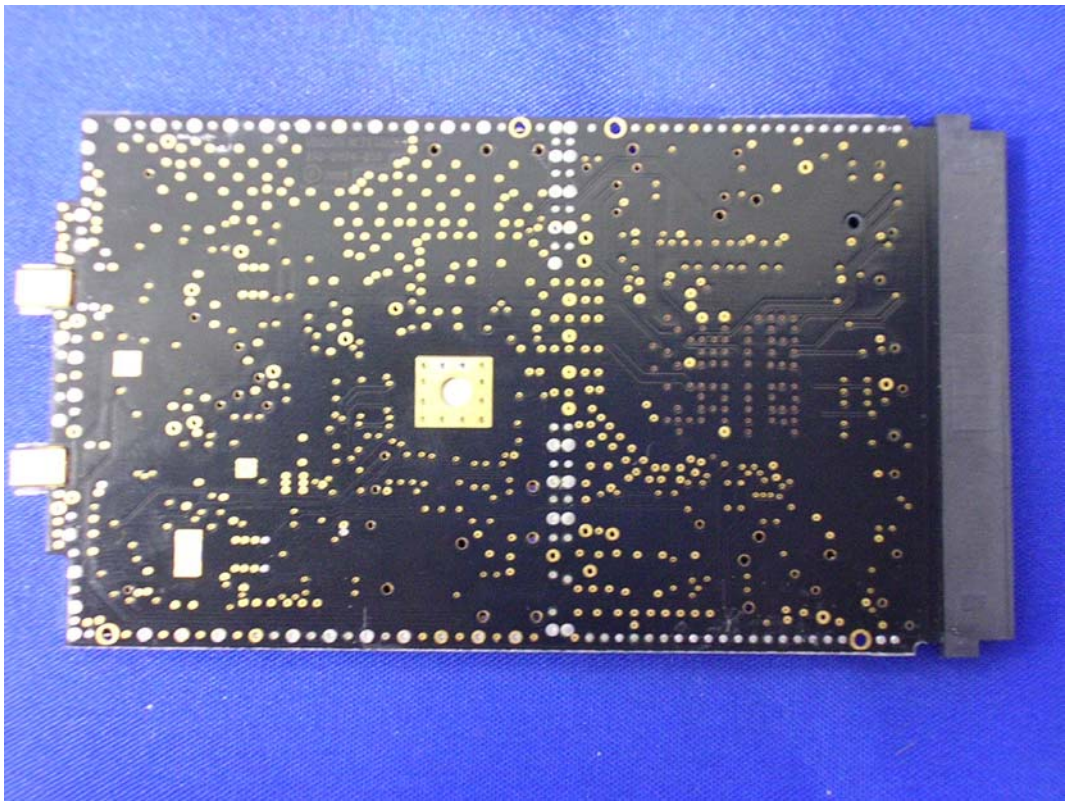
(7) EUT Photo



(8) EUT Photo



(9) EUT Photo



(10) EUT Photo