APPLICATION FOR CERTIFICATION
On Behalf of

Barnes&Noble.com

BNRZ100

Model Number: BNRZ100

FCC ID: XHHBNRZ100

Prepared for : Barnes&Noble.com
76 Ninth Avenue 9th Floor New York

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
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Tel: (0755) 26639496

Report Number : ACS-F09182
Date of Test : Aug.28~Sep.02, 2009
Date of Report : Sep.04, 2009

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TEST REPORT CERTIFICATION

Applicant : Barnes&Noble.com

Manufacturer : Barnes&Noble.com

EUT Description : BNRZ100

FCC ID : XHHBNRZ100

(A) MODEL NO. : BNRZ100

(B) SERIAL NO. : N/A

(C) POWER SUPPLY : DC 5V; DC 3.7V

(D) TEST VOLTAGE : DC 5V From PC Input AC 120V/60Hz:

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2008

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both radiated and conducted emissions.
The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : Aug.28~ Sep.02, 2009

Prepared by : Edie Huang

Edie Huang / Assistant

Reviewer : Jamy Yu

Jamy Yu / Senior Engineer

AUDIX® 信華科技(深圳)有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: Ken Lu 9/7 09

Approved & Authorized Signer :

Ken Lu / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	**Standard**	**Results**
Power Line Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003 KDB558074	PASS
Radiated Emission Test	FCC Part 15: 15.209 ANSI C63.4: 2003 KDB558074	PASS
Band Edge Compliance Test	FCC Part 15: 15.247 ANSI C63.4: 2003 KDB558074	PASS
Conducted spurious emissions test	FCC Part 15: 15.247 KDB558074	PASS
6dB Bandwidth Test	FCC Part 15: 15.247 KDB558074	PASS
Output Power Test	FCC Part 15: 15.247 KDB558074	PASS
Power Spectral Density Test	FCC Part 15: 15.247 KDB558074	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

EUT Description	:	BNRZ100
Model Number	:	BNRZ100
FCC ID	:	XHHBNRZ100
Channel Number	:	IEEE 802.11b/g: 11 Channels
Operation Frequency	:	IEEE 802.11b/g: 2412MHz—2462MHz
Modulation Technology	:	IEEE 802.11b: DSSS (CCK,DQPSK,DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK)
Data Rate	:	IEEE 802.11b: 11/5.5/2/1Mbps. IEEE 802.11g: 54/48/36/24/18/12/9/6Mbps.
PK Output Power	:	IEEE 802.11b: 18.30dBm IEEE 802.11g: 20.89dBm
Antenna and Gain	:	Integral Patch antenna Gain: 1.54
Applicant	:	Barnes&Noble.com 76 Ninth Avenue 9th Floor New York
Manufacturer	:	Barnes&Noble.com 76 Ninth Avenue 9th Floor New York
Power Adapter	:	Manufacturer: Barnes&Noble.com M/N: BNRP5-850 Cable: Unshielded, Detachable, 1m
Date of Test	:	Aug.28~Sep.02, 2009
Date of Receipt	:	Aug.27, 2009
Sample Type	:	Prototype production

2.2.Test Information

The test software “telnet.exe” was used to control EUT work in Continuous TX mode, and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information			
Mode	data rate (Mpbs)(see Note)	Channel	Frequency (MHz)
IEEE 802.11b	1	Low :CH1	2412
	1	Middle: CH6	2437
	1	High: CH11	2462
IEEE 802.11g	6	Low :CH1	2412
	6	Middle: CH6	2437
	6	High: CH11	2462
Note: According exploratory test, EUT will have maximum output power in those data rate. so those data rate were used for all test.			

2.3.Date rate VS power

Mode	Data rate (Mbps)	CH	Total Output power (dBm)	Limit (dBm)
11b	1	CH6	18.30	**30**
	2	CH6	18.21	**30**
	5.5	CH6	18.11	**30**
	11	CH6	18.13	**30**
11g	6	CH6	20.89	**30**
	9	CH6	20.32	**30**
	12	CH6	20.45	**30**
	18	CH6	20.45	**30**
	24	CH6	20.48	**30**
	36	CH6	20.54	**30**
	48	CH6	20.65	**30**
	54	CH6	20.12	**30**
When IEEE 802.11b’s data rate was 1Mbps ; IEEE 802.11g’s data rate was 6Mbps the EUT have maximum output power and all the test was performed in this data rate set.				

2.4.Tested Supporting System Details

2.4.1. NOTEBOOK

M/N	:	PP09S
S/N	:	N/A
Manufacturer	:	DELL
Power Adaptor	:	Manufacturer: DELL, M/N: LA65NS1-00 Cable: Unshielded, Detachabled, 4.0m (Bond one ferrite core)

2.5.Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park,Nantou, Shenzhen, Guangdong, China
3m Anechoic Chamber	:	Mar.31, 2009 File on Federal Communication Commission Registration Number: 90454
3m & 10m Anechoic Chamber	:	Jan. 31, 2007 File on Federal Communication Commission Registration Number: 794232
EMC Lab.	:	Accredited by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2009 Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr. 01, 2009

2.6.Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.40dB
Uncertainty for Radiation Emission test in 3m chamber	3.78 dB (Polarize: V)
	4.20 dB (Polarize: H)
Uncertainty for Output power test	0.94 dB
Uncertainty for Power density test	2.10 dB
Uncertainty for Temperature and humidity test	2%
	1℃
Uncertainty for Frequency range test	$1x10^{-9}$
Uncertainty for Bandwidth test	$1x10^{-9}$
Uncertainty for DC power test	0.042 %
Uncertainty for test site temperature and humidity	0.6℃
	3%

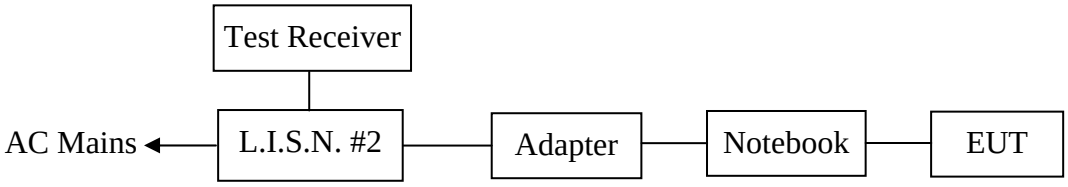
3. POWER LINE CONDUCTED EMISSION TEST

3.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESHS20	836600/006	May.08, 09	1 Year
2	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	May.08, 09	1 Year
3	Terminator	Hubersuhner	50Ω	No. 1	May.08, 09	1 Year
4	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 09	1Year
5	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 09	1 Year
6	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 09	1 Year

3.2.Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and Supporting System



(EUT: BNRZ100)

3.3.Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

3.4.Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.5.Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turned on the power of all equipment.

3.5.3. Notebook run test software to control the EUT worked in test mode (Tx Mode) and measured it.

3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via PC connected to the power mains through a line impedance stabilization network (L.I.S.N. 2#). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS20) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

The test result are reported on Section 3.7.,

3.7.Power Line Conducted Emission Test Results

PASS.

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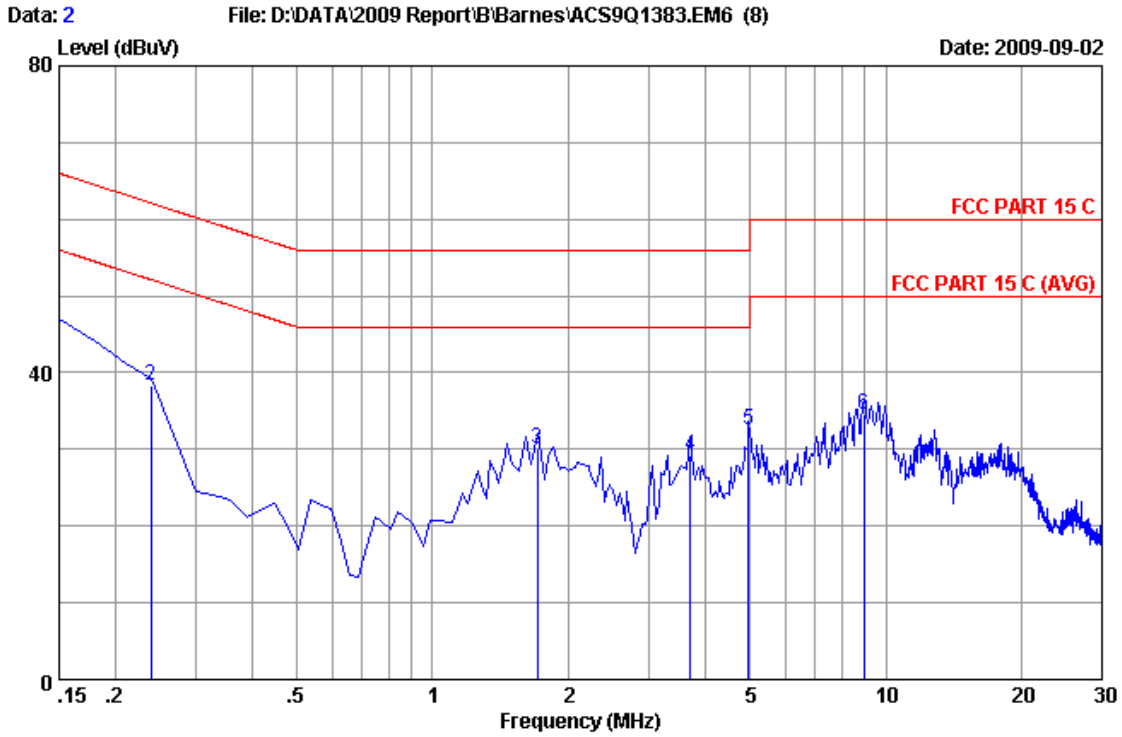

Site no :Audix No.1 Conduction Data no :2
Dis./Ant. :** 2009 KNW407 VA
Limit :FCC PART 15 C
Env./Ins. :Temp:23'C Humi:54% Engineer :Paul Tian
EUT :BNRZ100 M/N:BNRZ100
Power Rating :DC 5V From PC input 120V/60Hz
Test Mode :Tx

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.47	9.88	35.72	46.07	66.00	19.93	QP
2	0.23955	0.41	9.88	27.95	38.24	62.11	23.87	QP
3	1.702	0.36	9.89	19.92	30.17	56.00	25.83	QP
4	3.702	0.37	9.91	18.99	29.27	56.00	26.73	QP
5	4.986	0.39	9.91	22.31	32.61	56.00	23.39	QP
6	8.956	0.42	9.94	24.29	34.65	60.00	25.35	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

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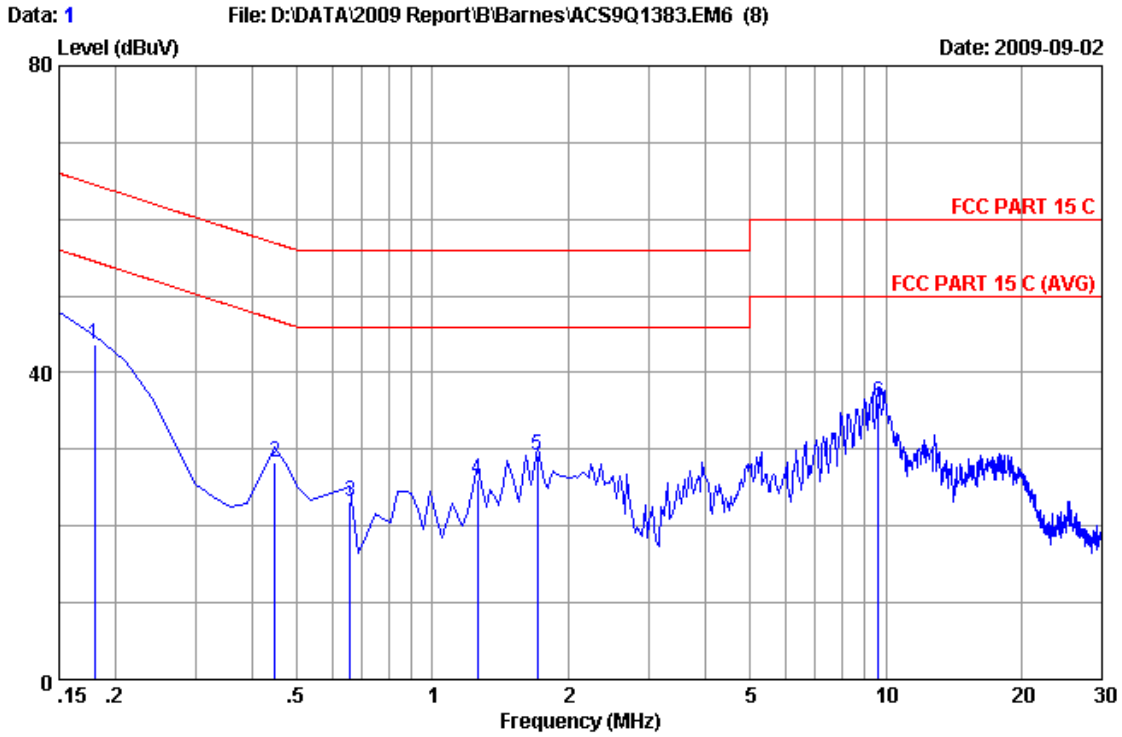


Site no :Audix No.1 Conduction Data no :1
Dis./Ant. :** 2009 KNW407 VB
Limit :FCC PART 15 C
Env./Ins. :Temp:23'C Humi:54% Engineer :Paul Tian
EUT :BNRZ100 M/N:BNRZ100
Power Rating :DC 5V From PC input 120V/60Hz
Test Mode :Tx

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17985	0.45	9.88	33.36	43.69	64.49	20.80	QP
2	0.44850	0.35	9.89	17.99	28.23	56.90	28.67	QP
3	0.65745	0.35	9.89	12.99	23.23	56.00	32.77	QP
4	1.254	0.35	9.89	15.84	26.08	56.00	29.92	QP
5	1.702	0.36	9.89	19.03	29.28	56.00	26.72	QP
6	9.642	0.44	9.94	25.80	36.18	60.00	23.82	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1.Test Equipment

Frequency rang: 30~1000MHz

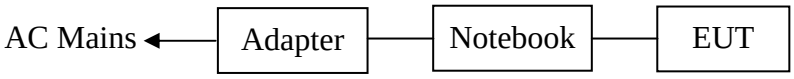
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05,08	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 09	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 09	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 09	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Nov.10, 08	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 09	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 09	1 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May.27, 08	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	May.27, 08	1.5 Year
4	Amplifier	Agilent	8449B	3008A02495	Nov.24,08	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	271471/4	May.08, 09	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX102	29086/2	May.08, 09	1 Year

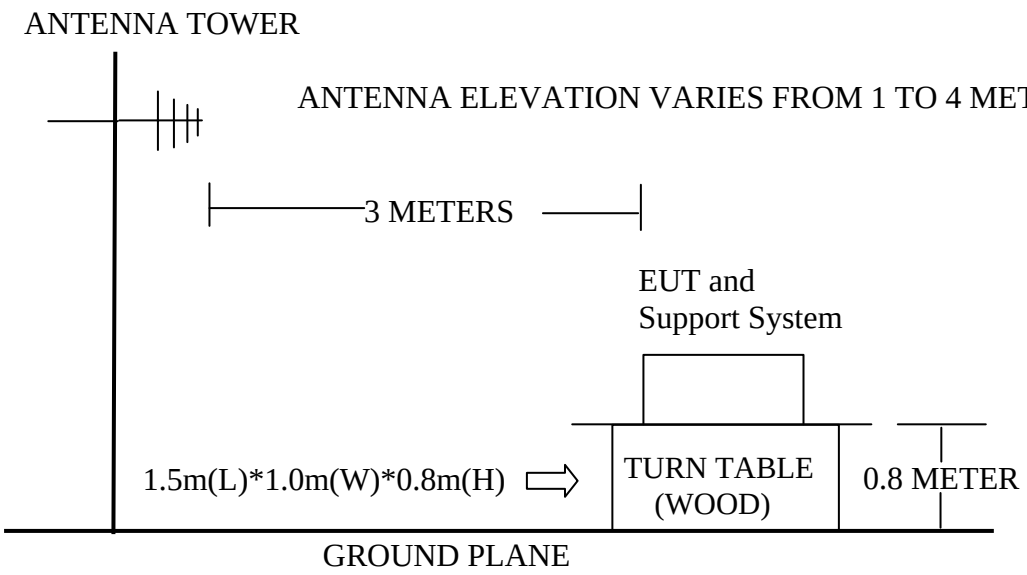
4.2.Block Diagram of Test Setup

4.2.1. Block diagram of connection between the EUT and Supporting System



(EUT: BNRZ100)

4.2.2. In Anechoic Chamber



4.3.Radiated Emission Limit

4.3.1. 15.209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark： (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.3.2. 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

4.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.5. Operating Condition of EUT

4.5.1. Setup the EUT and simulator as shown as Section 4.2.

4.5.2. Turned on the power of all equipment.

4.5.3. Notebook run test software to control the EUT worked in test mode (Tx Mode) and measured it.

4.6. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10^{th} harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

4.7.Radiated Emission Test Results

PASS.

All the emissions from 30MHz to 25 GHz were comply with 15.209 limits.

Frequency: 30MHz~1GHz

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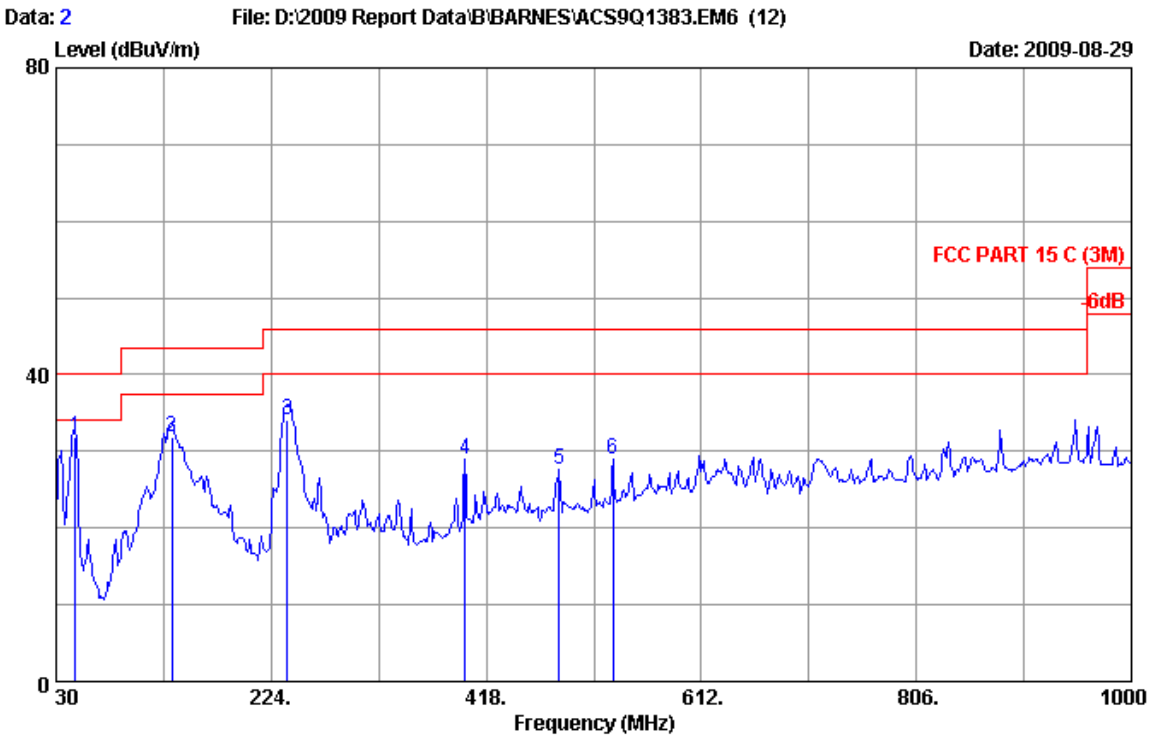

Site no. : 3m Chamber Data no. : 2
Dis. / Ant. : 3m CBL6111C Ant. pol. : VERTICAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24*C/56% Engineer : Cary Luo
EUT : BNRZ100 M/N:BNRZ100
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test Mode : Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	47.460	10.43	0.63	20.85	31.91	40.00	8.09	QP
2	134.760	12.05	1.03	18.77	31.85	43.50	11.65	QP
3	238.550	11.55	1.56	21.09	34.20	46.00	11.80	QP
4	398.600	16.17	1.93	10.90	29.00	46.00	17.00	QP
5	483.960	17.74	2.20	7.78	27.72	46.00	18.28	QP
6	532.460	18.25	2.33	8.48	29.06	46.00	16.94	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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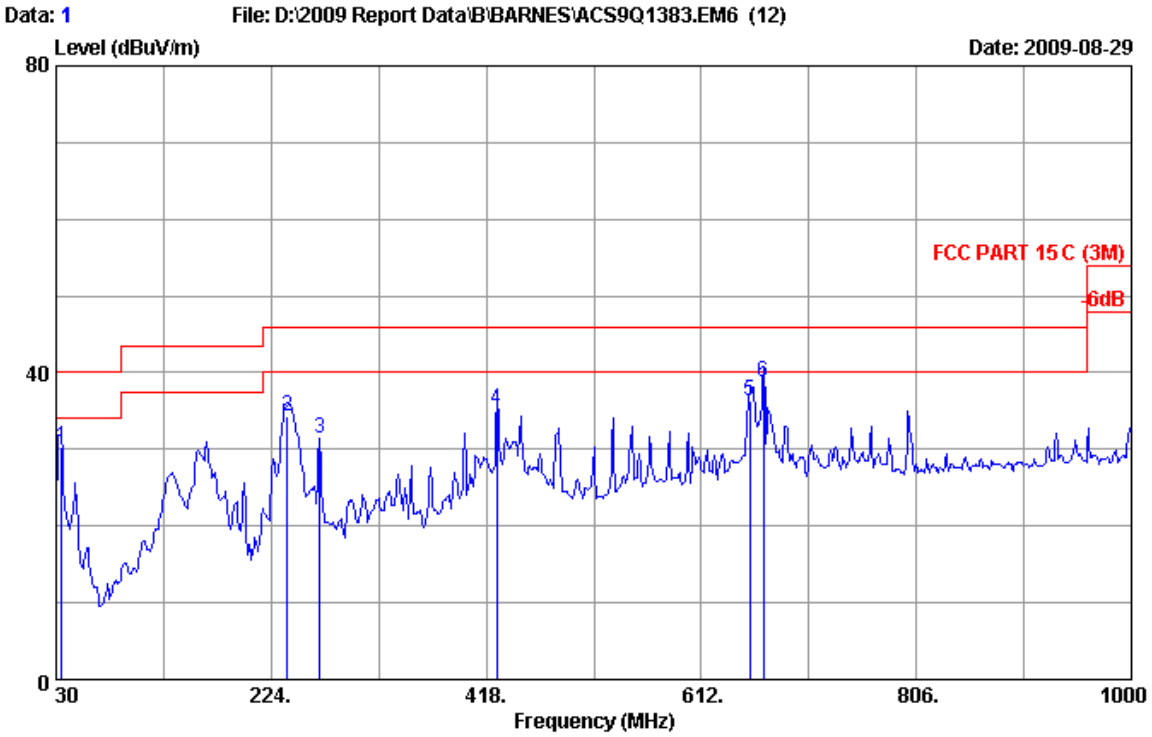

Site no. : 3m Chamber Data no. : 1
Dis. / Ant. : 3m CBL6111C Ant. pol. : HORIZONTAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24*C/56% Engineer : Cary Luo
EUT : BNRZ100 M/N:BNRZ100
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test Mode : Tx

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	34.850	17.04	0.55	12.74	30.33	40.00	9.67	QP
2	238.550	11.55	1.56	21.10	34.21	46.00	11.79	QP
3	267.650	13.39	1.67	16.40	31.46	46.00	14.54	QP
4	427.700	16.90	2.02	16.33	35.25	46.00	10.75	QP
5	655.650	20.00	2.66	13.62	36.28	46.00	9.72	QP
6	668.260	20.13	2.70	15.92	38.75	46.00	7.25	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency: Above 1GHz
Test Mode: IEEE802.11b Tx

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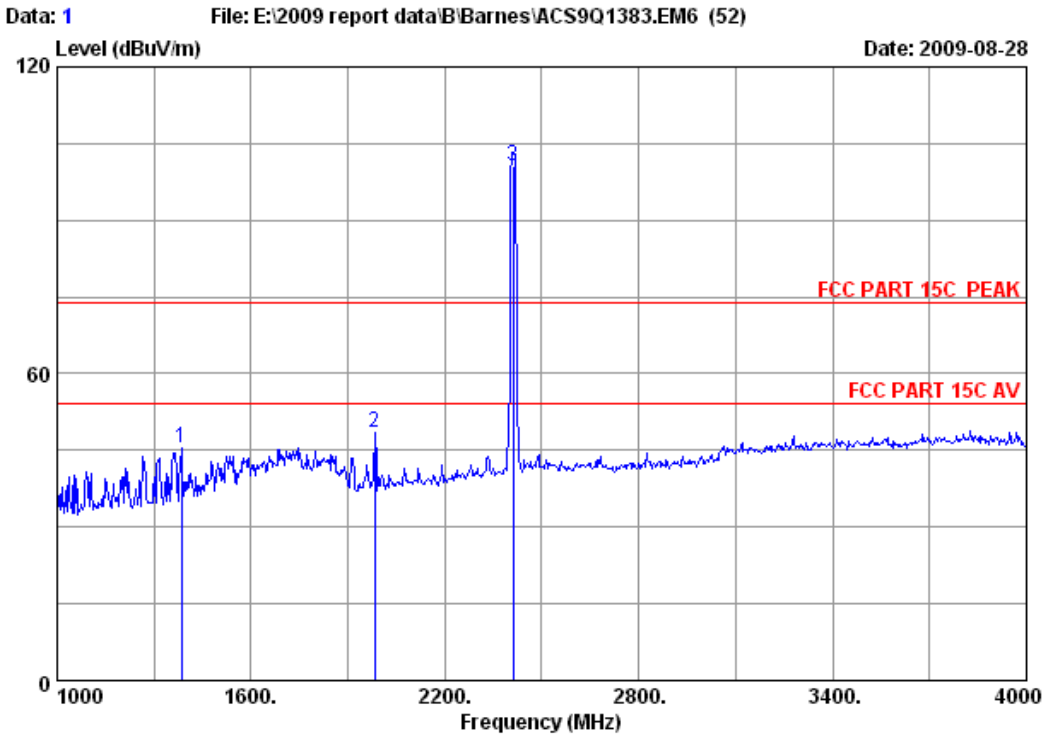

Site no. : 3m Chamber Data no. : 1
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1384.000	25.76	6.59	36.69	49.73	45.39	74.00	28.61	Peak
2	1984.000	27.83	7.76	36.06	48.89	48.42	74.00	25.58	Peak
3	2412.000	28.48	8.60	35.95	99.34	100.47	74.00	-26.47	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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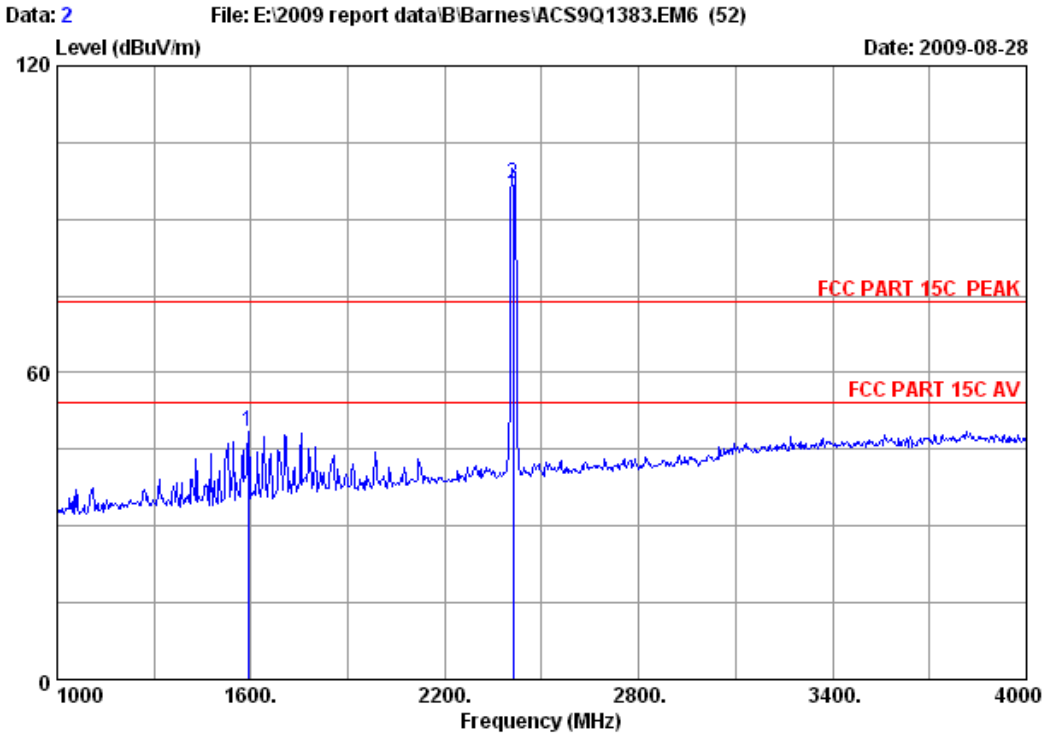

Site no. : 3m Chamber Data no. : 2
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1591.000	26.30	7.09	36.43	51.37	48.33	74.00	25.67	Peak
2	2412.000	28.48	8.60	35.95	95.76	96.89	74.00	-22.89	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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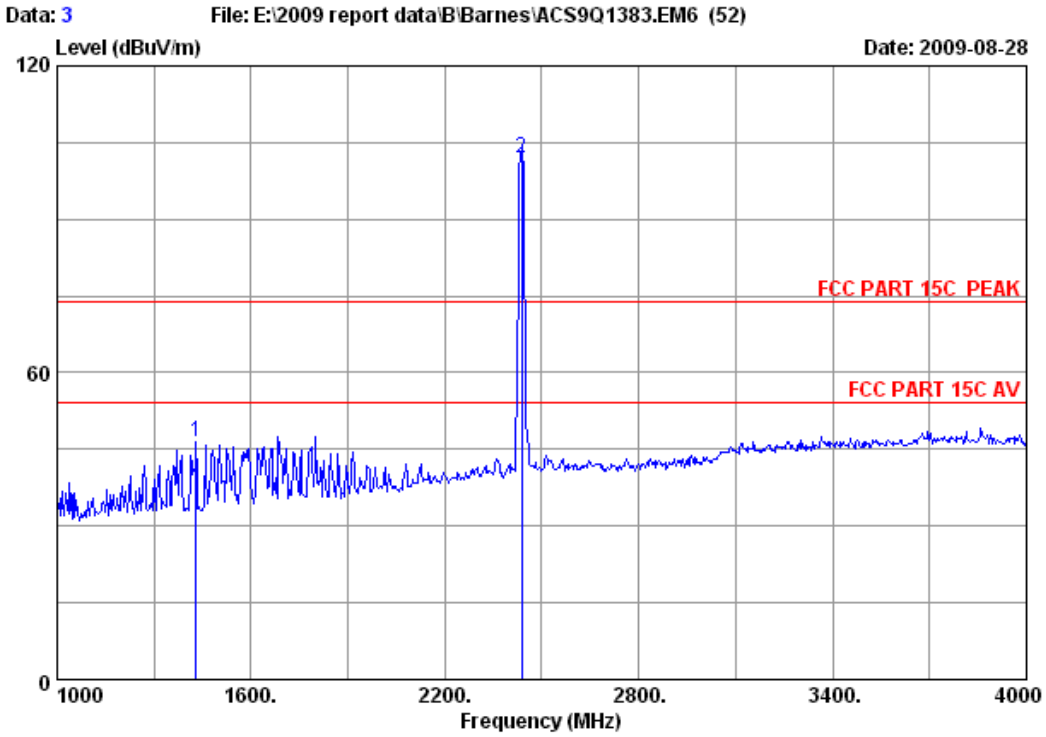

Site no. : 3m Chamber Data no. : 3
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1429.000	25.80	6.55	36.63	50.83	46.55	74.00	27.45	Peak
2	2437.000	28.53	8.60	36.06	100.73	101.80	74.00	-27.80	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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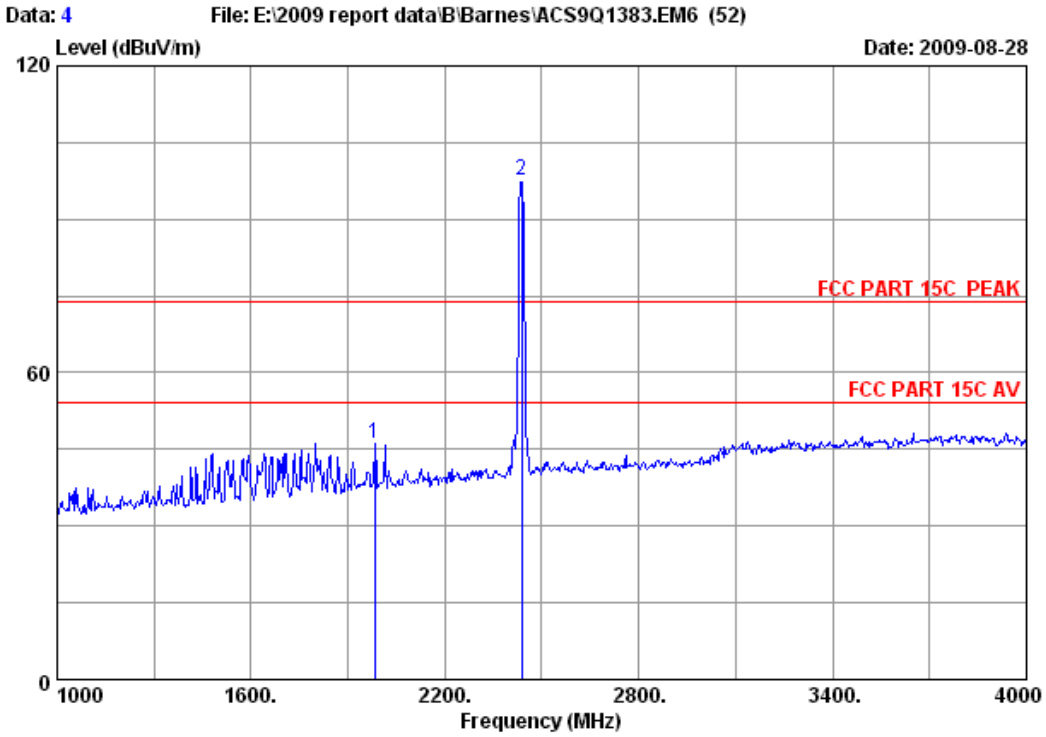

Site no. : 3m Chamber Data no. : 4
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1984.000	27.83	7.76	36.06	46.62	46.15	74.00	27.85	Peak
2	2437.000	28.53	8.60	36.06	96.53	97.60	74.00	-23.60	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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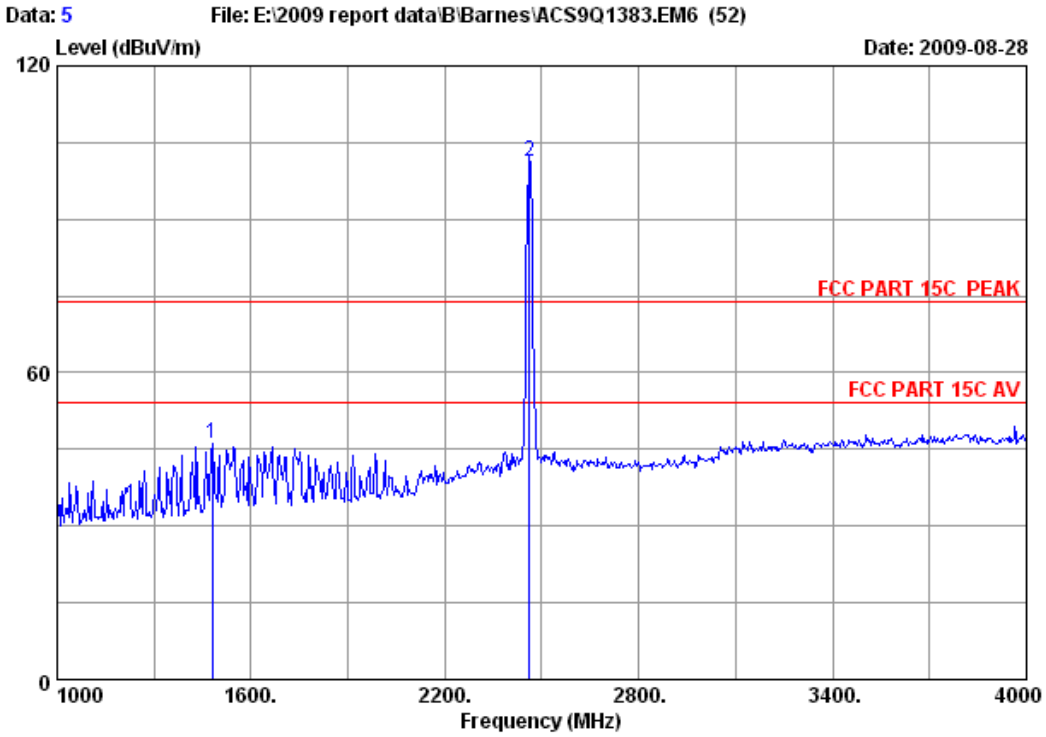

Site no. : 3m Chamber Data no. : 5
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1480.000	25.88	6.78	36.53	49.86	45.99	74.00	28.01	Peak
2	2462.000	28.55	8.76	36.02	100.06	101.35	74.00	-27.35	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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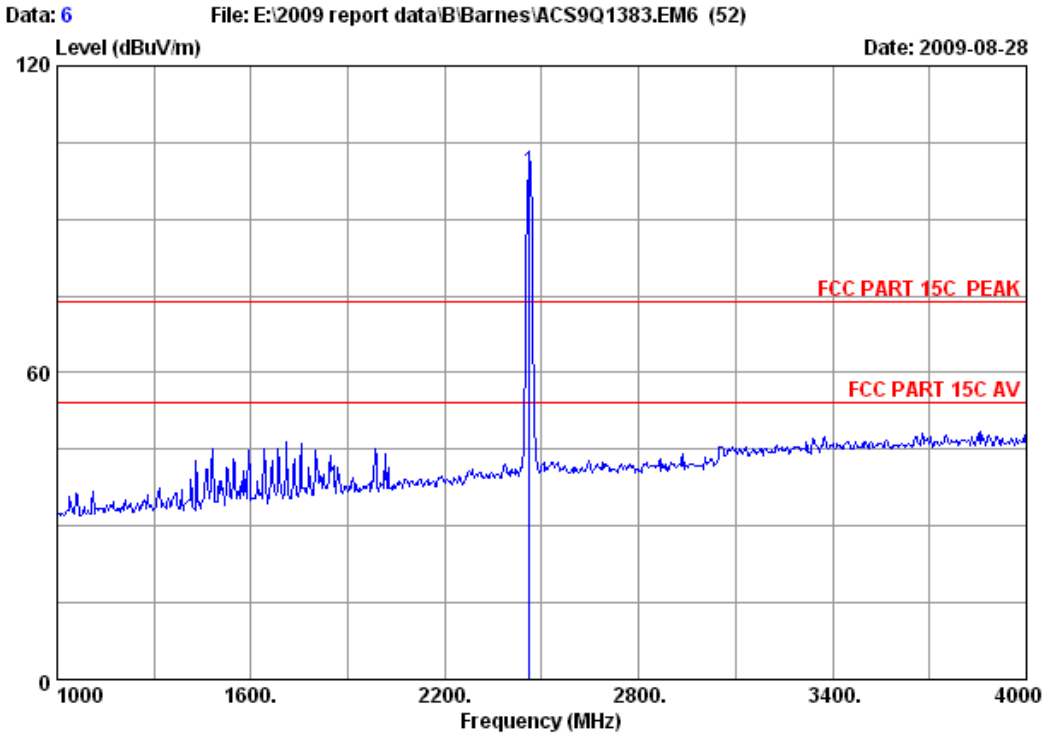

Site no. : 3m Chamber Data no. : 6
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.000	28.55	8.76	36.02	97.90	99.19	74.00	-25.19	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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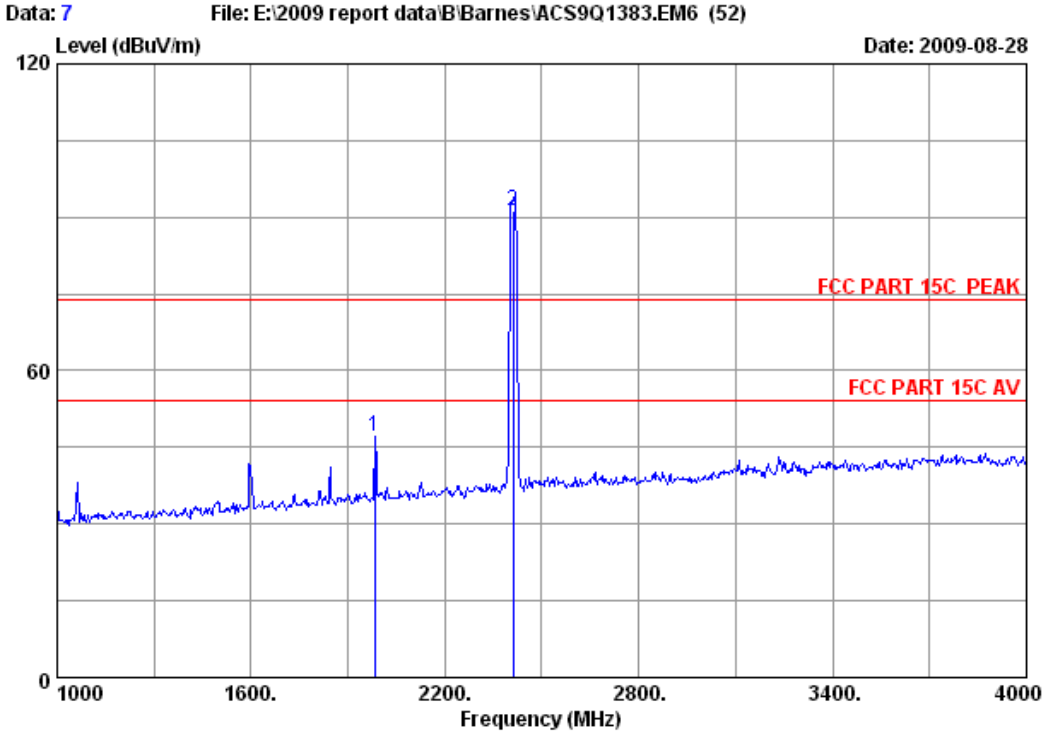

Site no. : 3m Chamber Data no. : 7
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1984.000	27.83	7.76	36.06	47.72	47.25	74.00	26.75	Peak
2	2412.000	28.48	8.60	35.95	90.08	91.21	74.00	-17.21	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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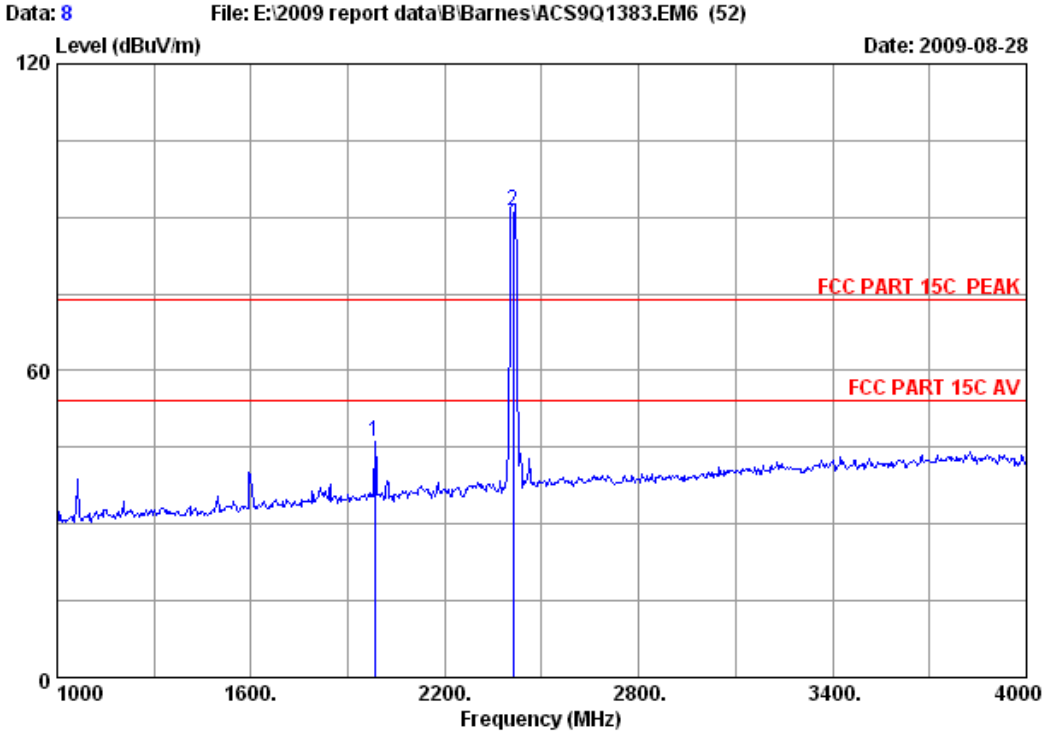

Site no. : 3m Chamber Data no. : 8
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1984.000	27.83	7.76	36.06	46.64	46.17	74.00	27.83	Peak
2	2412.000	28.48	8.60	35.95	90.23	91.36	74.00	-17.36	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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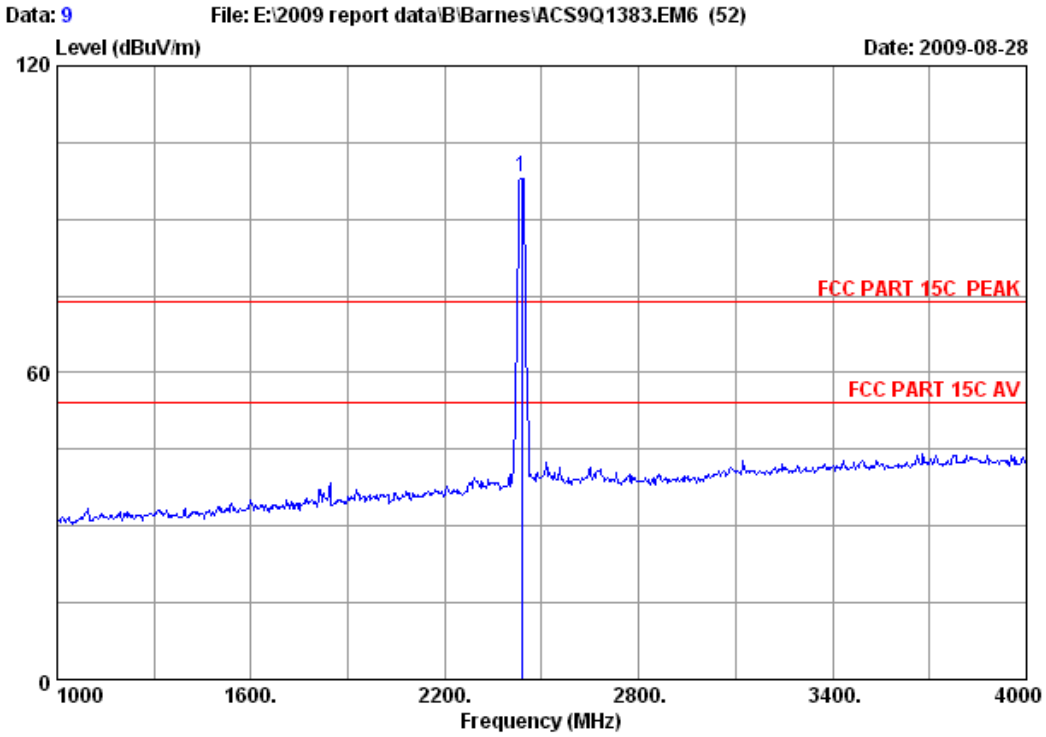

Site no. : 3m Chamber Data no. : 9
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.000	28.53	8.60	36.06	97.27	98.34	74.00	-24.34	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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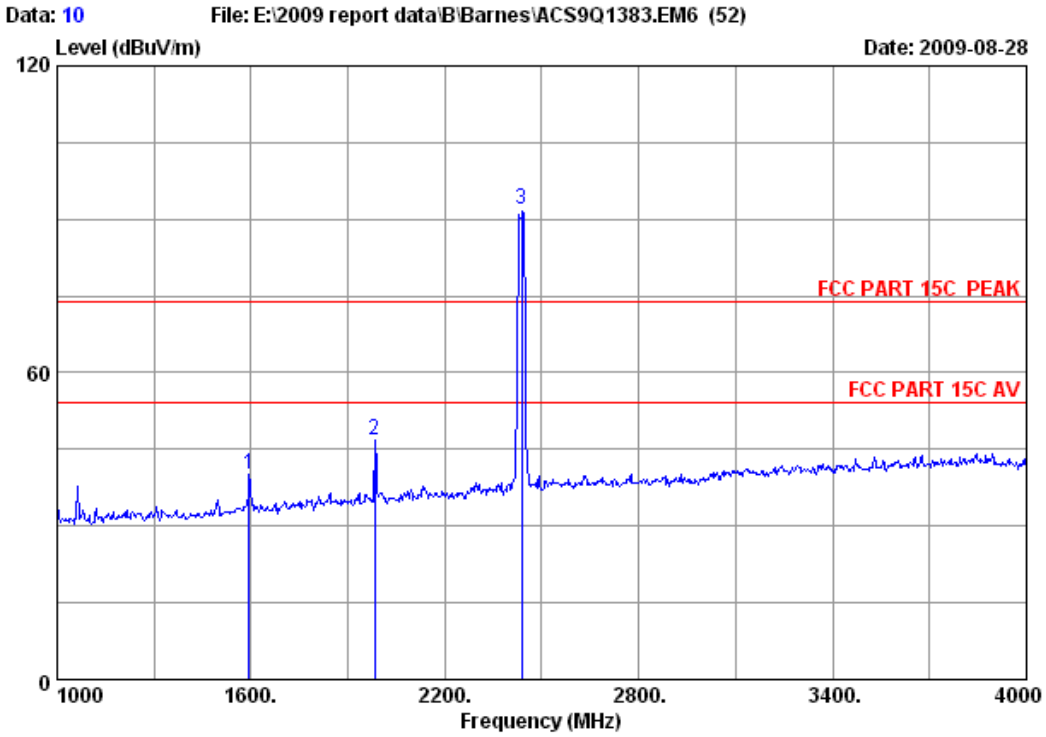

Site no. : 3m Chamber Data no. : 10
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1594.000	26.30	7.09	36.43	43.05	40.01	74.00	33.99	Peak
2	1984.000	27.83	7.76	36.06	47.27	46.80	74.00	27.20	Peak
3	2437.000	28.53	8.60	36.06	90.73	91.80	74.00	-17.80	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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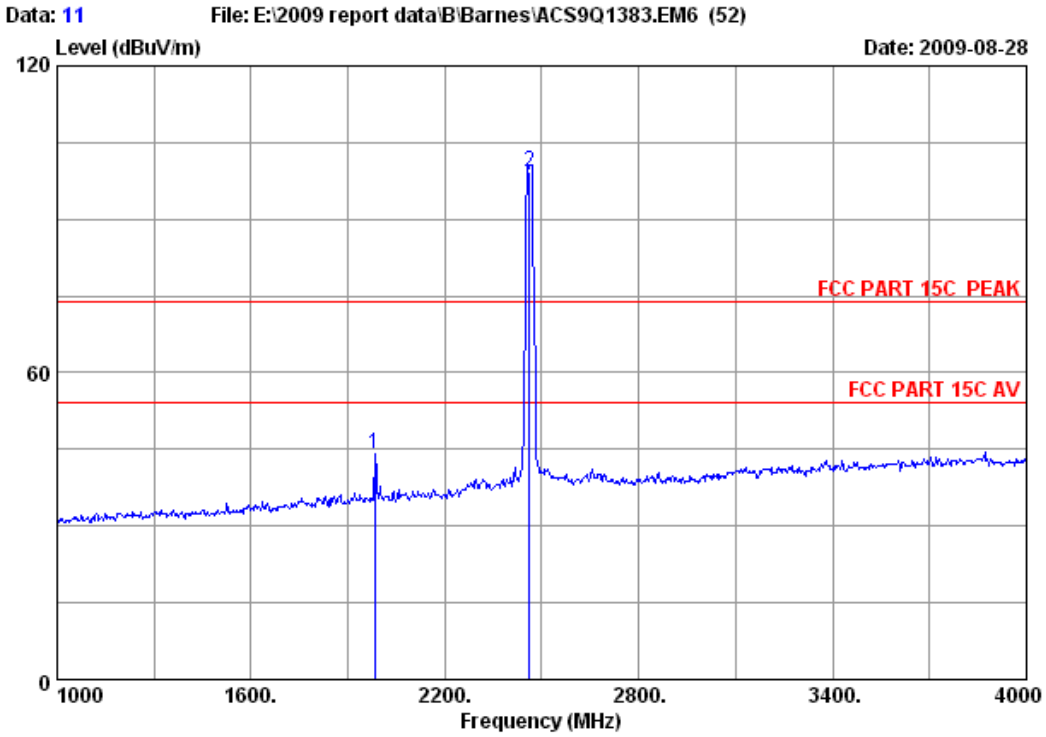

Site no. : 3m Chamber Data no. : 11
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1984.000	27.83	7.76	36.06	44.59	44.12	74.00	29.88	Peak
2	2462.000	28.55	8.76	36.02	98.10	99.39	74.00	-25.39	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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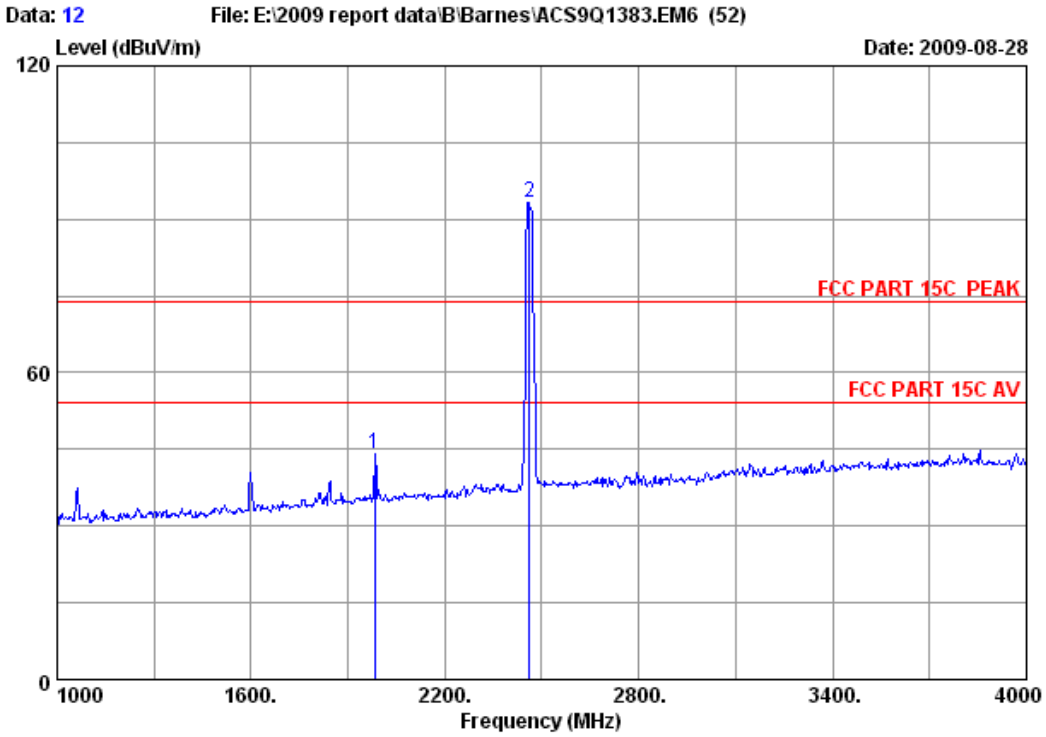

Site no. : 3m Chamber Data no. : 12
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1984.000	27.83	7.76	36.06	44.63	44.16	74.00	29.84	Peak
2	2462.000	28.55	8.76	36.02	92.07	93.36	74.00	-19.36	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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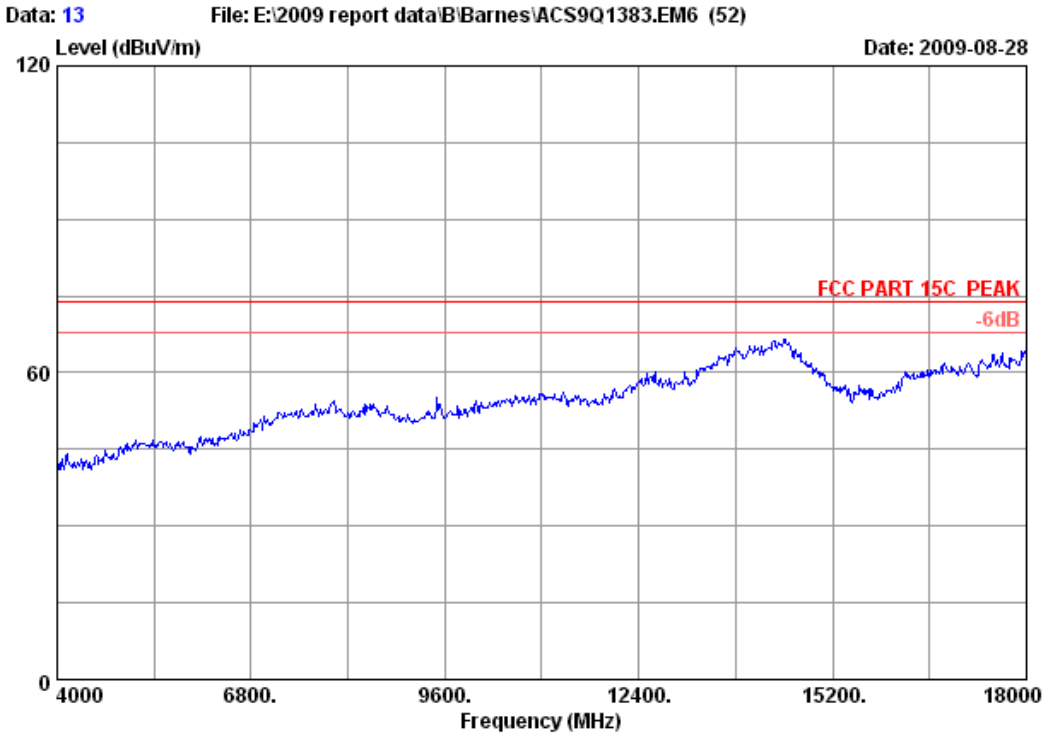

Site no.	: 3m Chamber	Data no.	: 13
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11b 2412MHz Tx		

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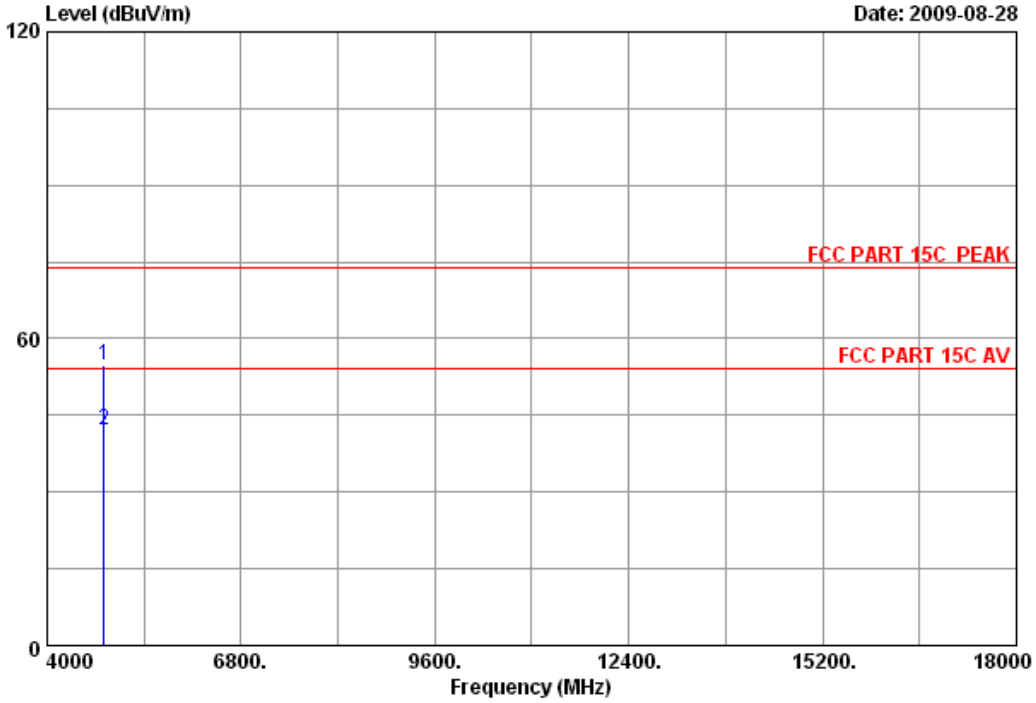

Site no. : 3m Chamber Data no. : 14
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.47	12.58	35.25	43.10	54.90	74.00	19.10	Peak
2	4824.000	34.47	12.58	35.25	30.19	41.99	54.00	12.01	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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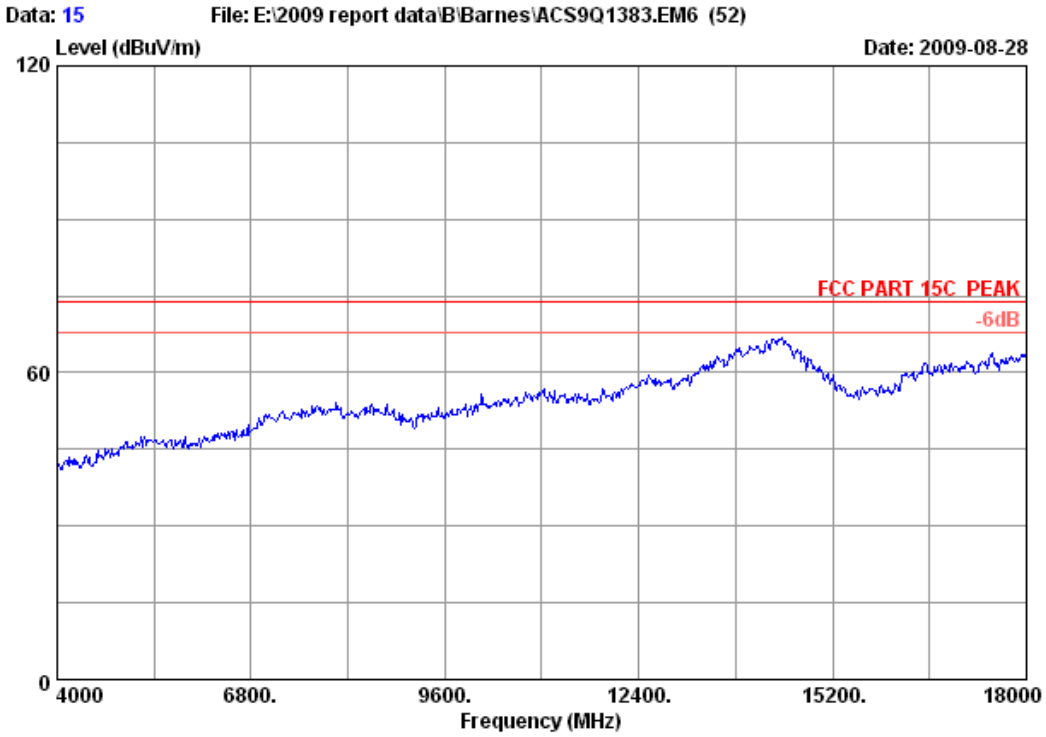

Site no.	: 3m Chamber	Data no.	: 15
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11b 2412MHz Tx		

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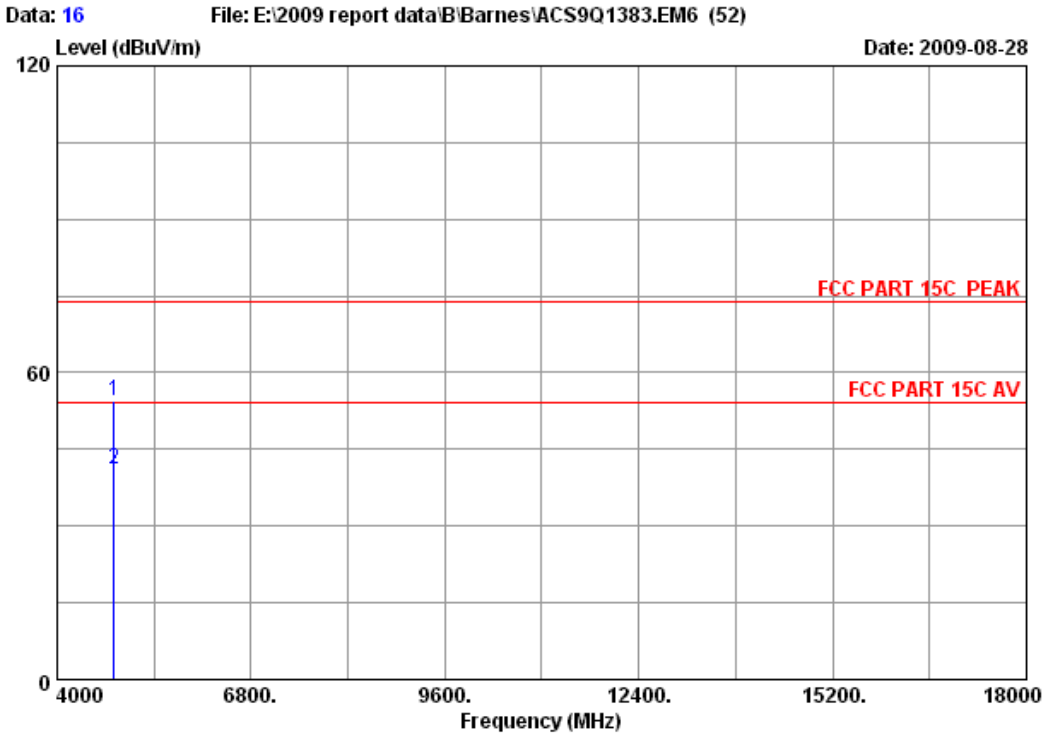

Site no. : 3m Chamber Data no. : 16
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.47	12.58	35.25	42.52	54.32	74.00	19.68	Peak
2	4824.000	34.47	12.58	35.25	29.37	41.17	54.00	12.83	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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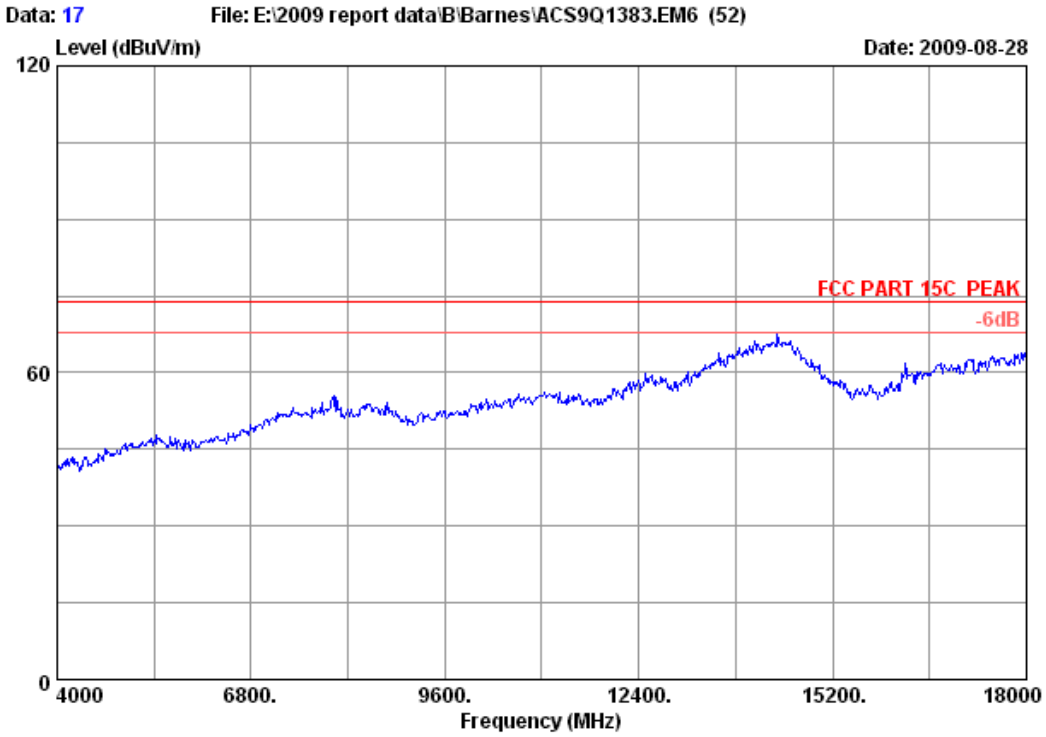

Site no.	: 3m Chamber	Data no.	: 17
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11b 2437MHz Tx		

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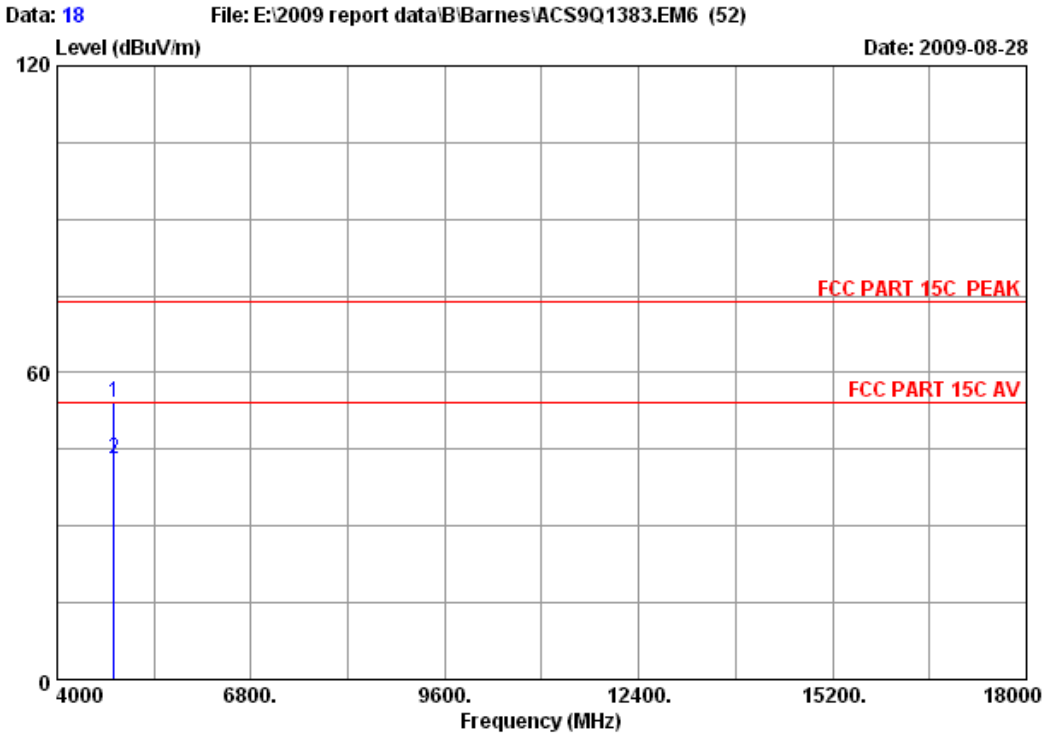

Site no. : 3m Chamber Data no. : 18
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.47	12.58	35.25	42.35	54.15	74.00	19.85	Peak
2	4824.000	34.47	12.58	35.25	31.27	43.07	54.00	10.93	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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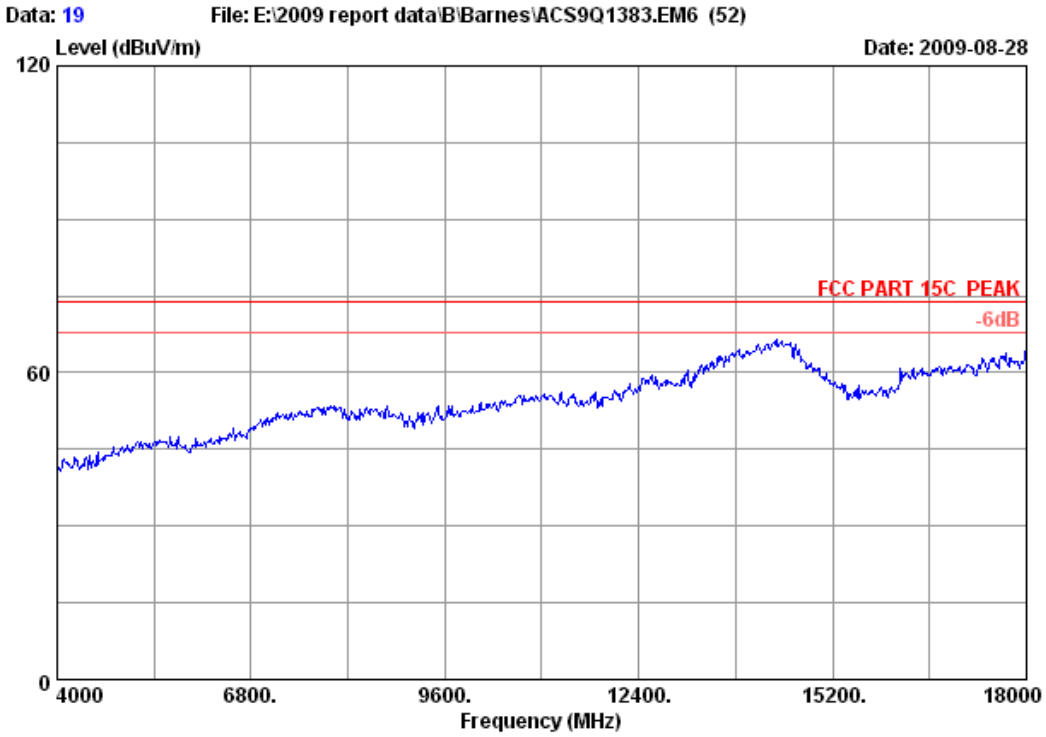

Site no.	: 3m Chamber	Data no.	: 19
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11b 2437MHz Tx		

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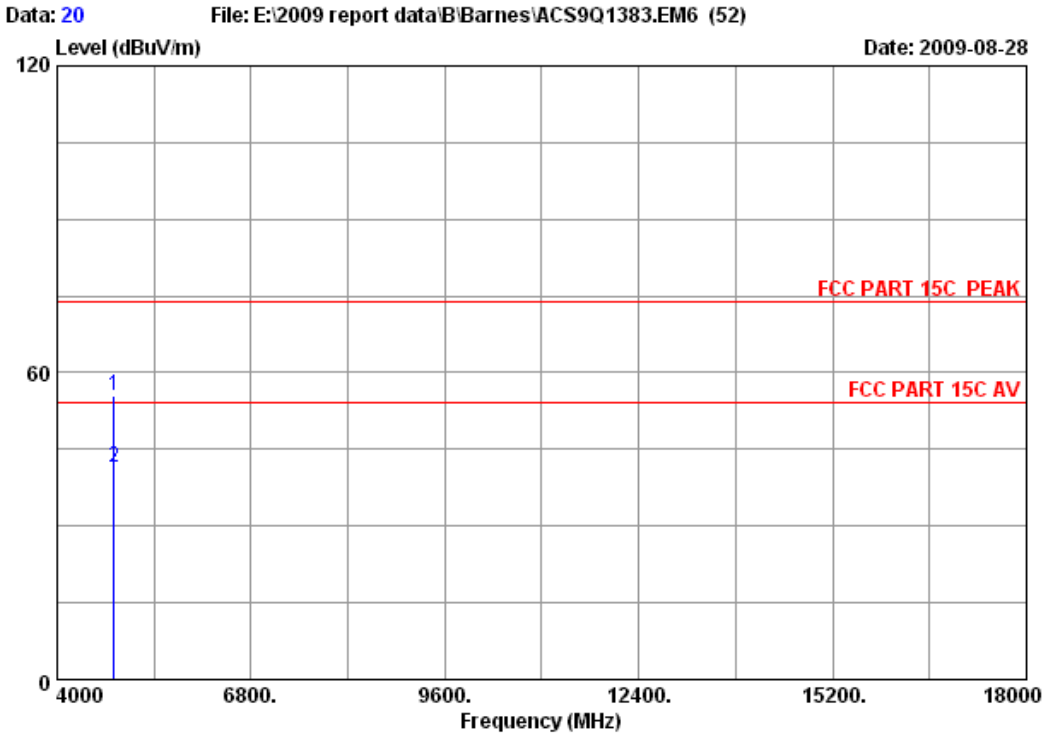

Site no. : 3m Chamber Data no. : 20
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.47	12.58	35.25	43.68	55.48	74.00	18.52	Peak
2	4824.000	34.47	12.58	35.25	29.67	41.47	54.00	12.53	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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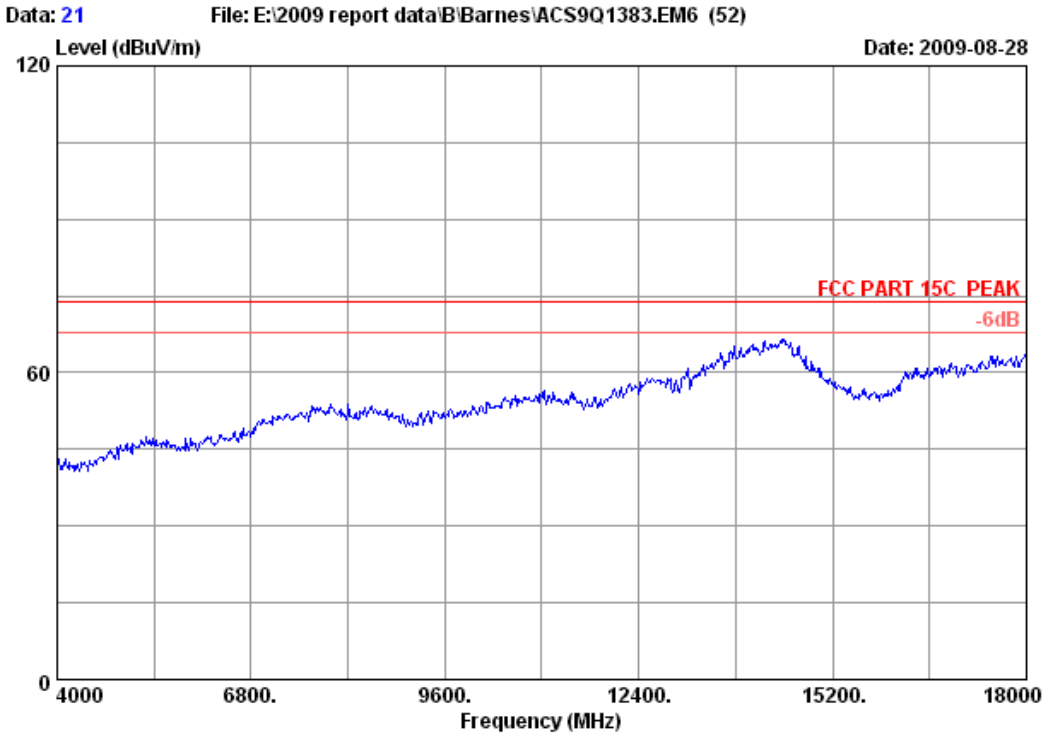

Site no.	: 3m Chamber	Data no.	: 21
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11b 2462MHz Tx		

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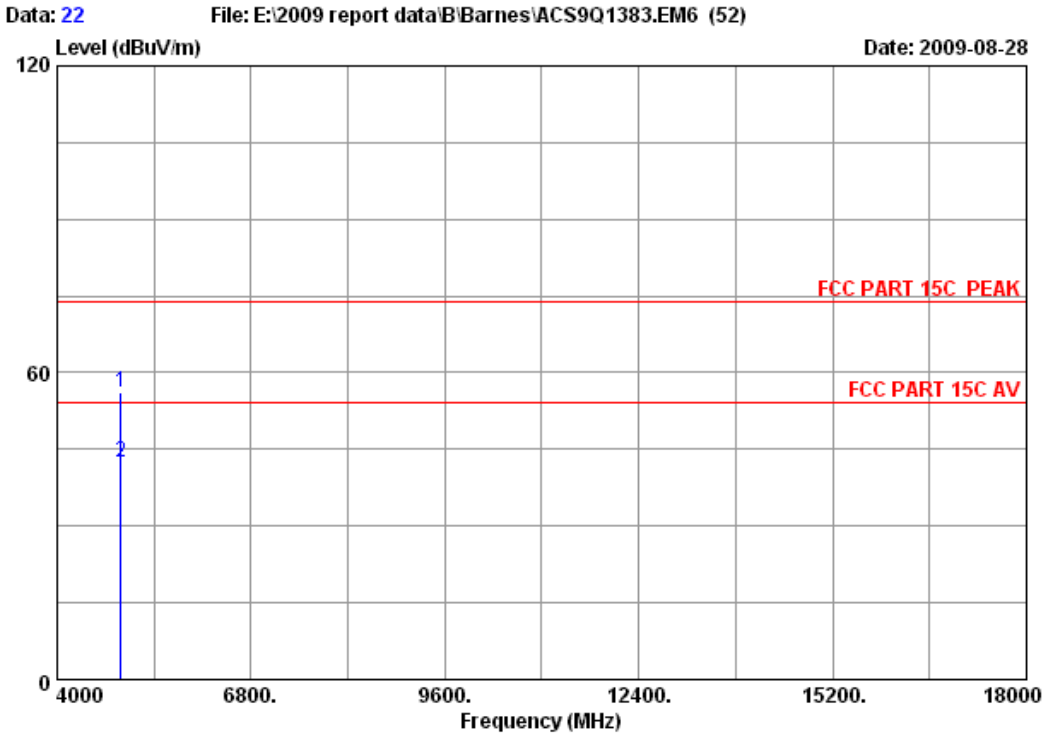
Postcode:518057



Site no. : 3m Chamber Data no. : 22
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	35.09	12.58	35.34	43.69	56.02	74.00	17.98	Peak
2	4924.000	35.09	12.58	35.34	30.24	42.57	54.00	11.43	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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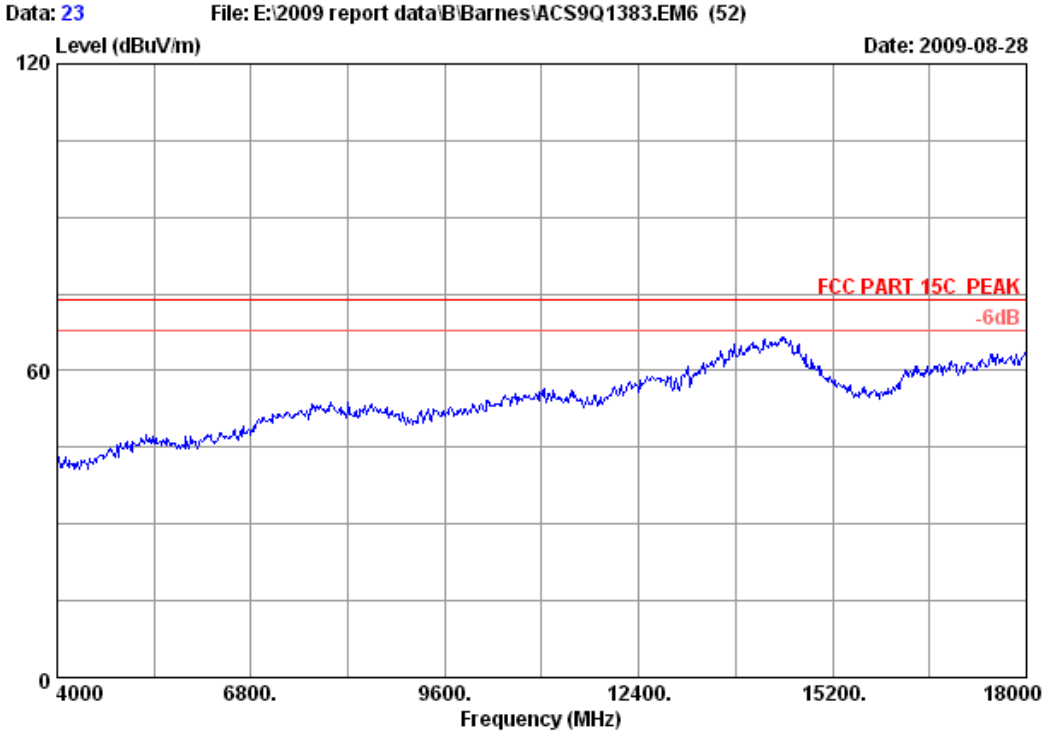
Postcode:518057



Site no.	: 3m Chamber	Data no.	: 23
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11b 2462MHz Tx		

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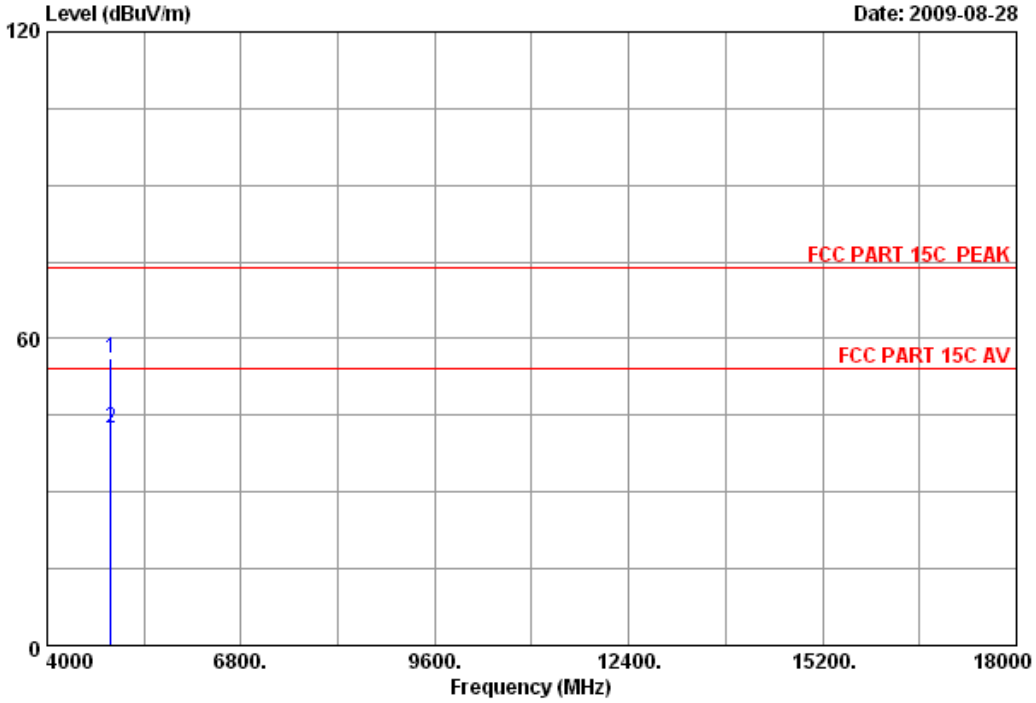
Postcode:518057

Data: 24 File: E:\2009 report data\B\Barnes\ACS9Q1383.EM6 (52)



Site no. : 3m Chamber Data no. : 24
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	35.09	12.58	35.34	43.69	56.02	74.00	17.98	Peak
2	4924.000	35.09	12.58	35.34	30.28	42.61	54.00	11.39	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Mode: IEEE802.11g Tx

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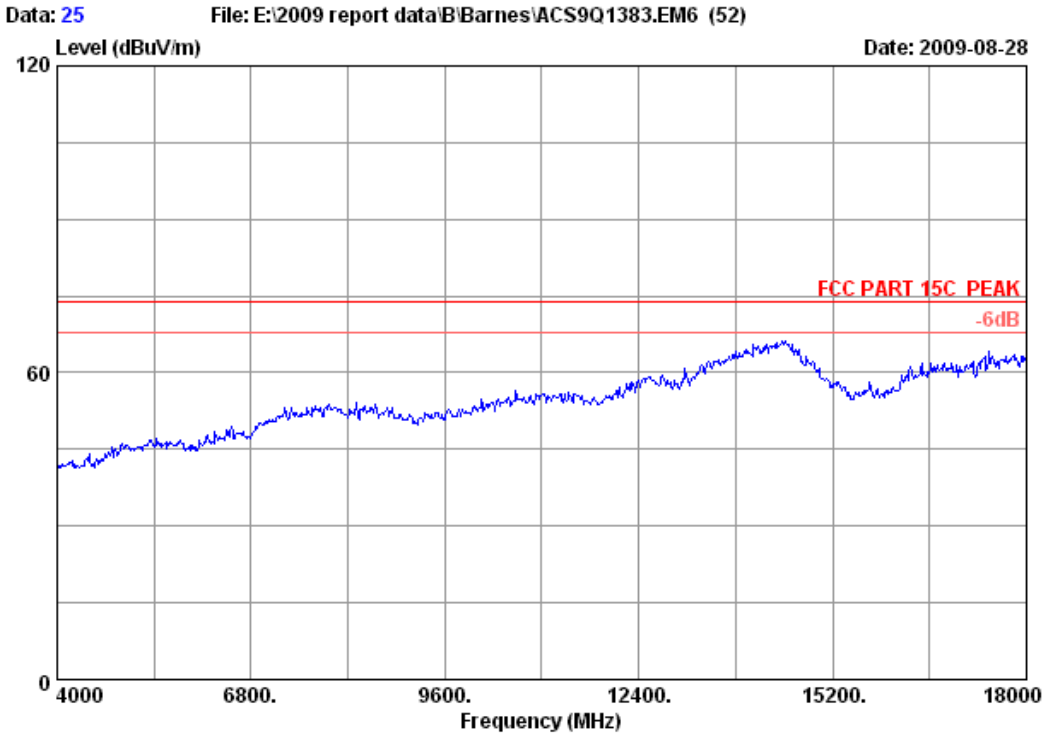
Postcode:518057




```
Site no.      : 3m Chamber                Data no.   : 25
Dis. / Ant.   : 3m   3115(0905)           Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Paul Tian
EUT           : BNRZ100        M/N:BNRZ100
Power         : DC 5V
Test mode     : 11g  2412MHz      Tx
```

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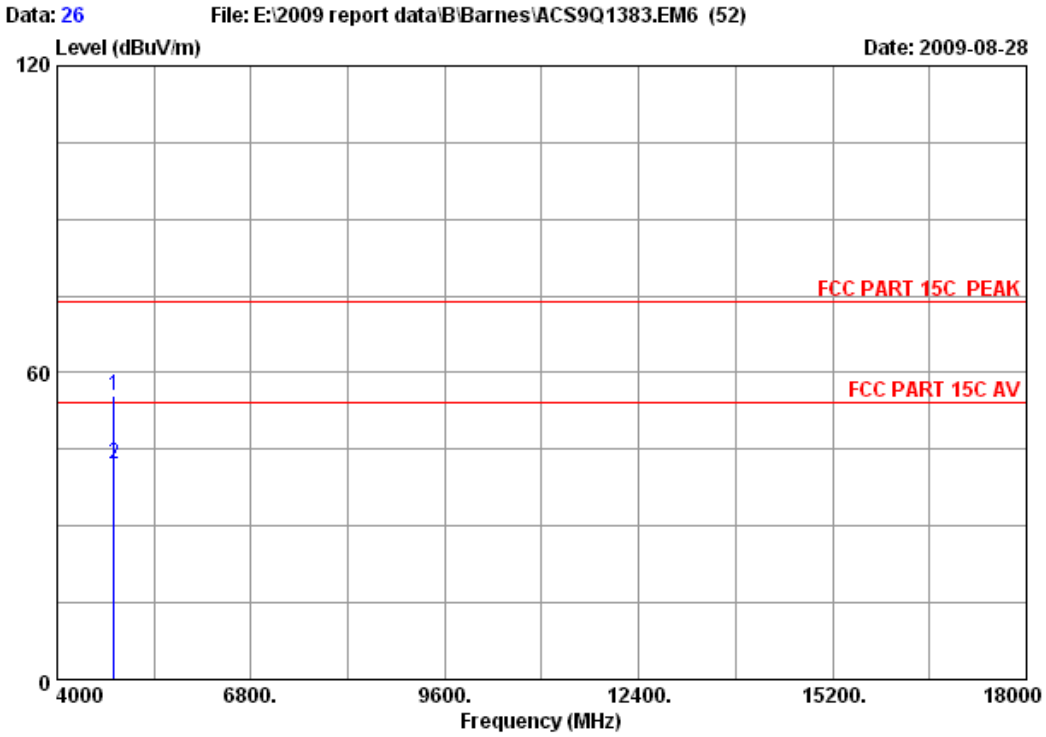
Postcode:518057



Site no. : 3m Chamber Data no. : 26
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.47	12.58	35.25	43.58	55.38	74.00	18.62	Peak
2	4824.000	34.47	12.58	35.25	30.28	42.08	54.00	11.92	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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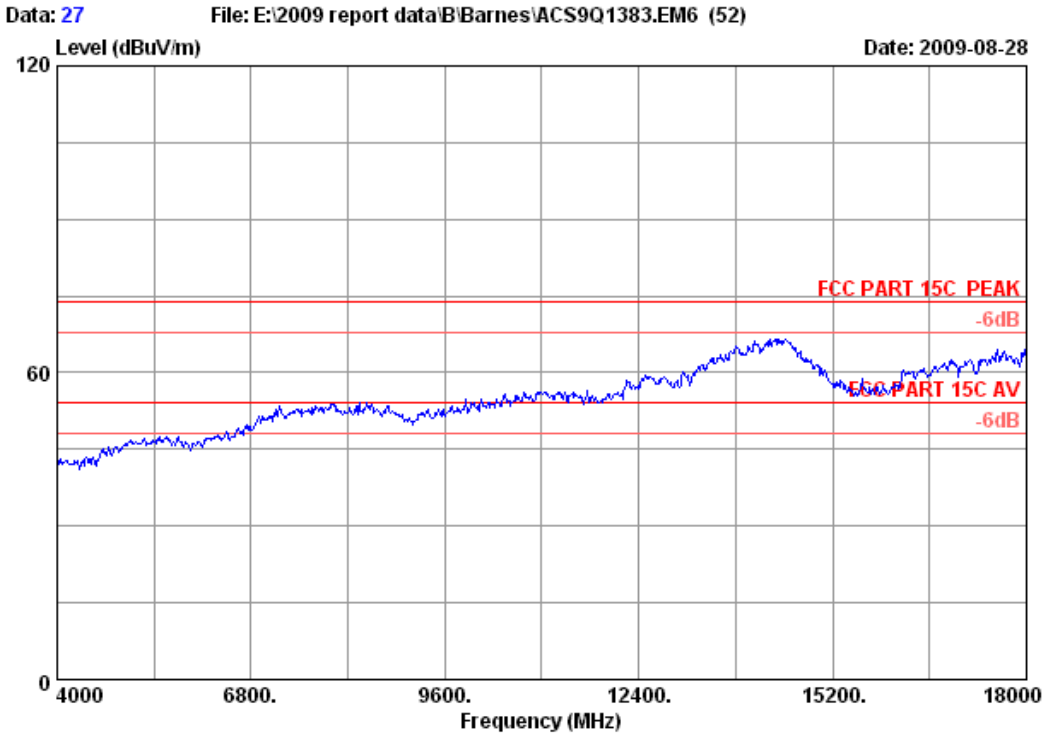
Postcode:518057




```
Site no.      : 3m Chamber                Data no.   : 27
Dis. / Ant.   : 3m   3115(0905)           Ant. pol.  : VERTICAL
Limit         : FCC PART 15C  PEAK
Env. / Ins.   : 23*C/54%                  Engineer   : Paul Tian
EUT           : BNRZ100        M/N:BNRZ100
Power         : DC 5V
Test mode     : 11g  2412MHz      Tx
```

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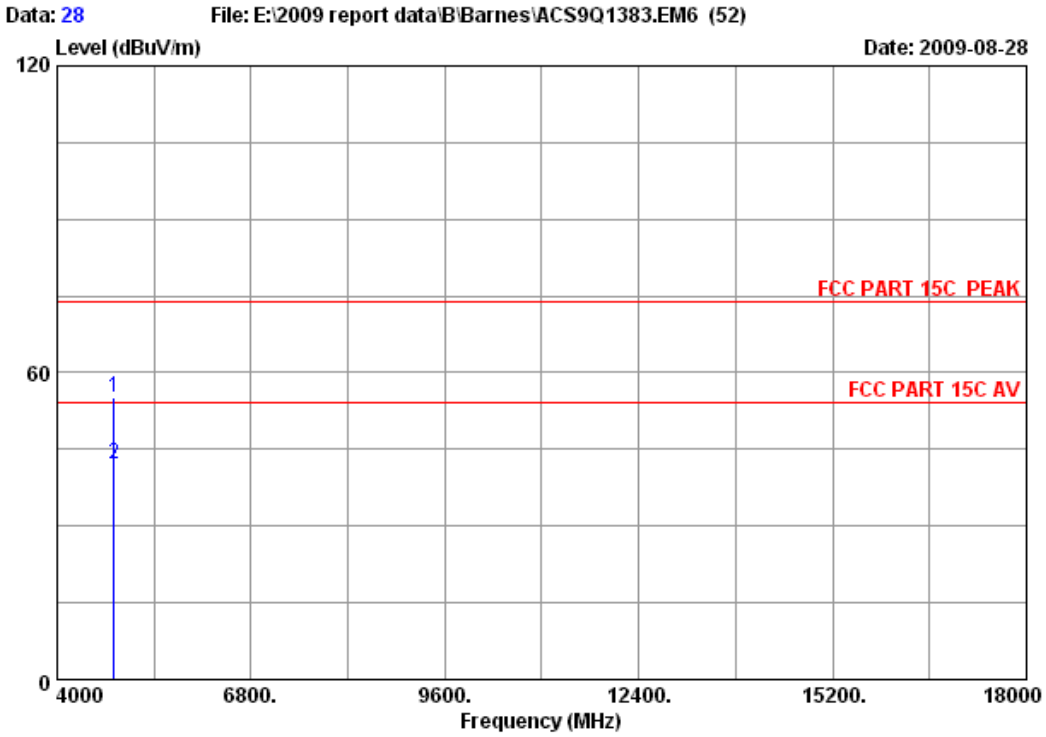
Postcode:518057



Site no. : 3m Chamber Data no. : 28
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4824.000	34.47	12.58	35.25	43.35	55.15	74.00	18.85	Peak
2	4824.000	34.47	12.58	35.25	30.25	42.05	54.00	11.95	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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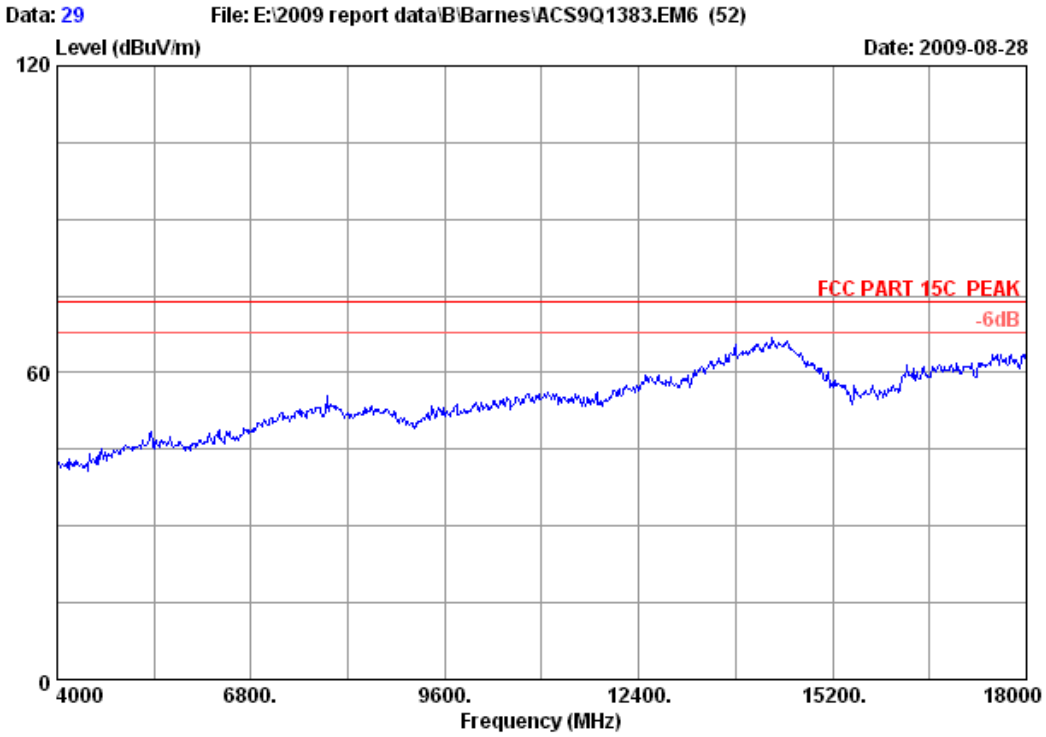
Postcode:518057



Site no.	: 3m Chamber	Data no.	: 29
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11g 2437MHz Tx		

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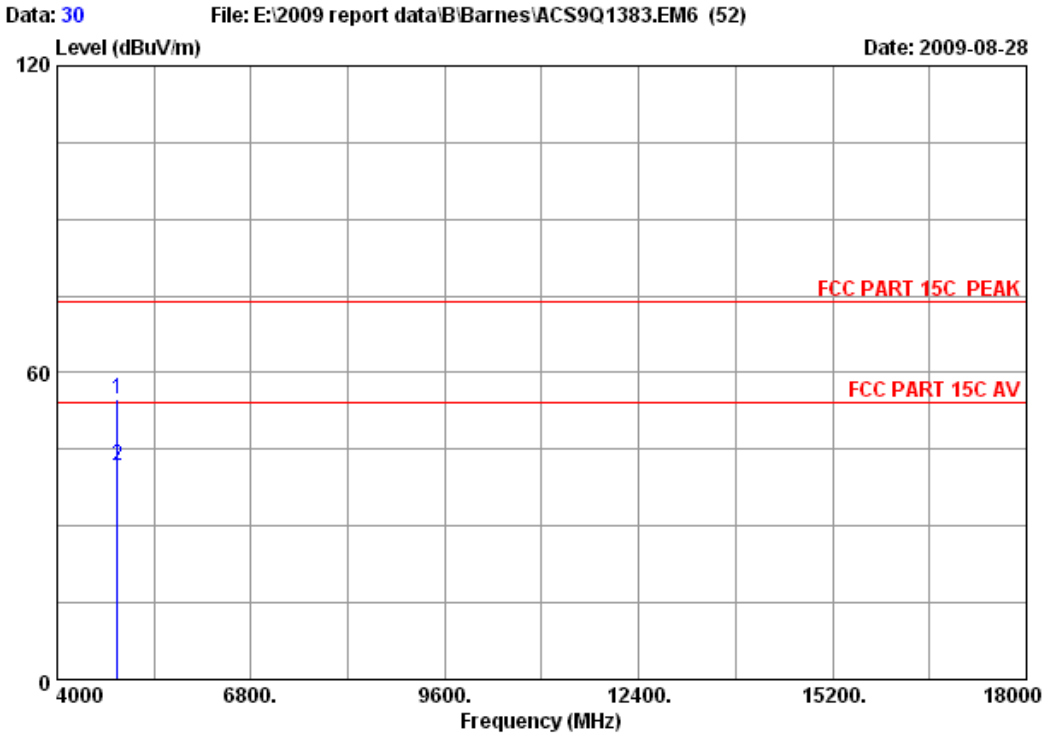
Postcode:518057



Site no. : 3m Chamber Data no. : 30
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	34.78	12.23	35.36	43.24	54.89	74.00	19.11	Peak
2	4874.000	34.78	12.23	35.36	30.26	41.91	54.00	12.09	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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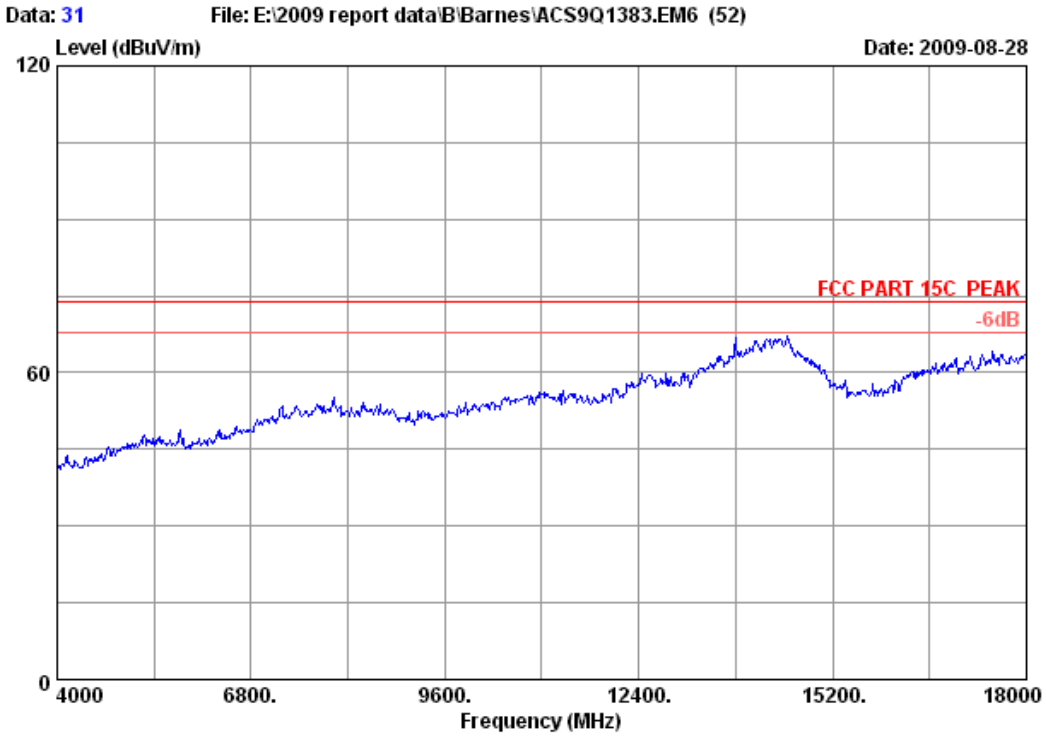
Postcode:518057



Site no.	: 3m Chamber	Data no.	: 31
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11g 2437MHz Tx		

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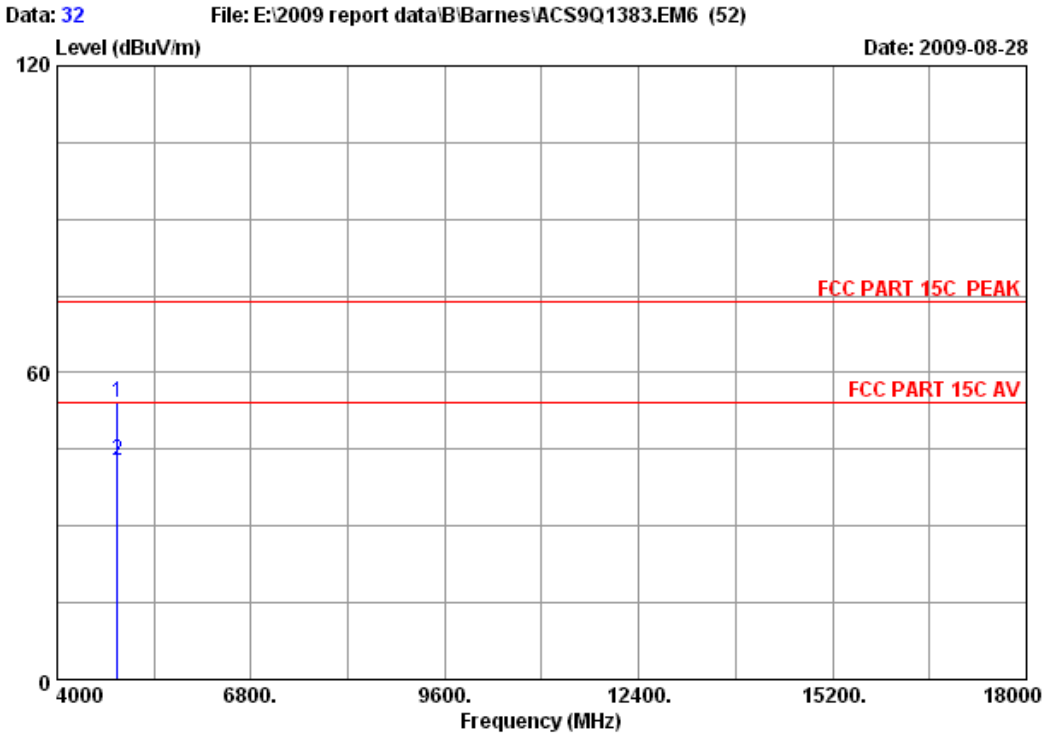

Site no. : 3m Chamber Data no. : 32
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2437MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4874.000	34.78	12.23	35.36	42.56	54.21	74.00	19.79	Peak
2	4874.000	34.78	12.23	35.36	31.03	42.68	54.00	11.32	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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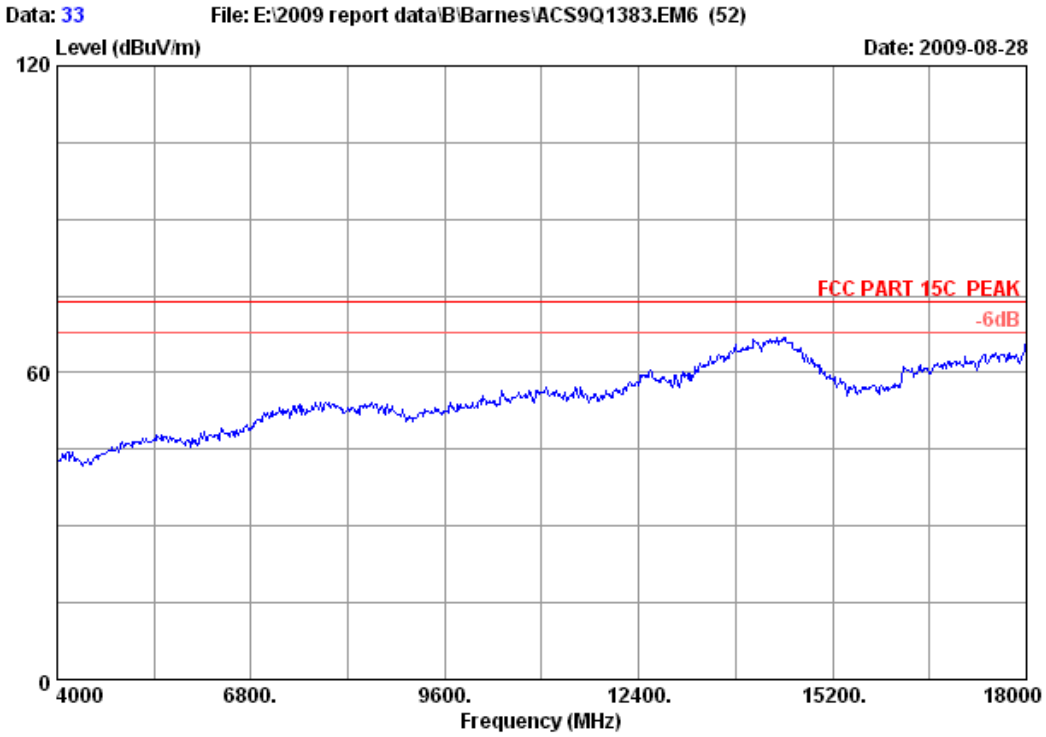

Site no.	: 3m Chamber	Data no.	: 33
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11g 2462MHz Tx		

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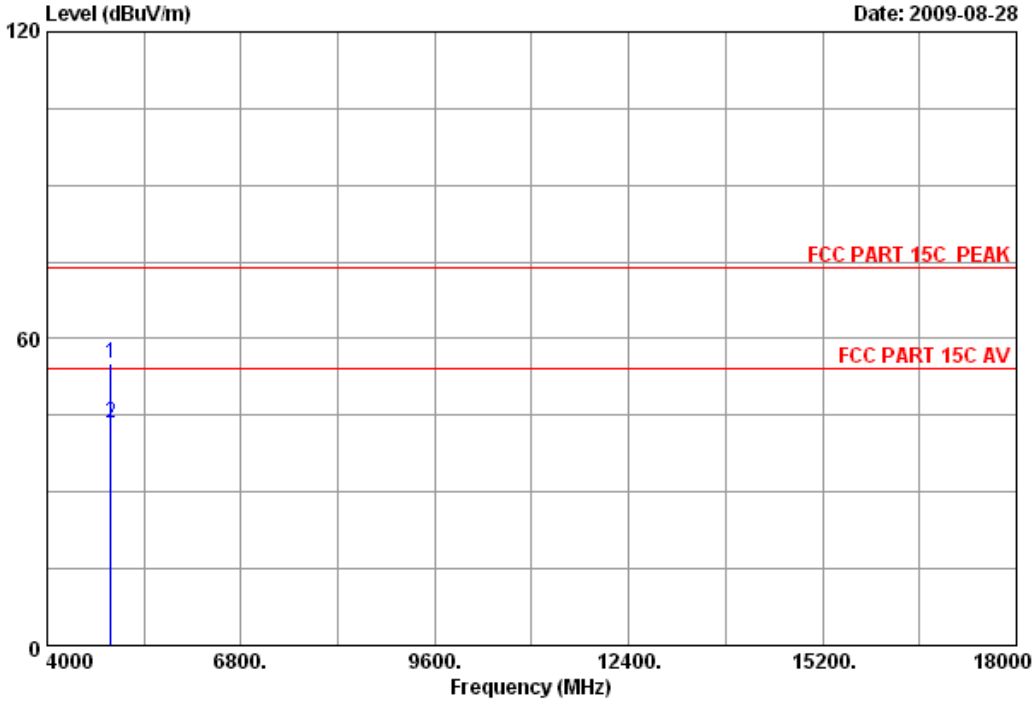

Site no. : 3m Chamber Data no. : 34
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	35.09	12.58	35.34	42.71	55.04	74.00	18.96	Peak
2	4924.000	35.09	12.58	35.34	31.08	43.41	54.00	10.59	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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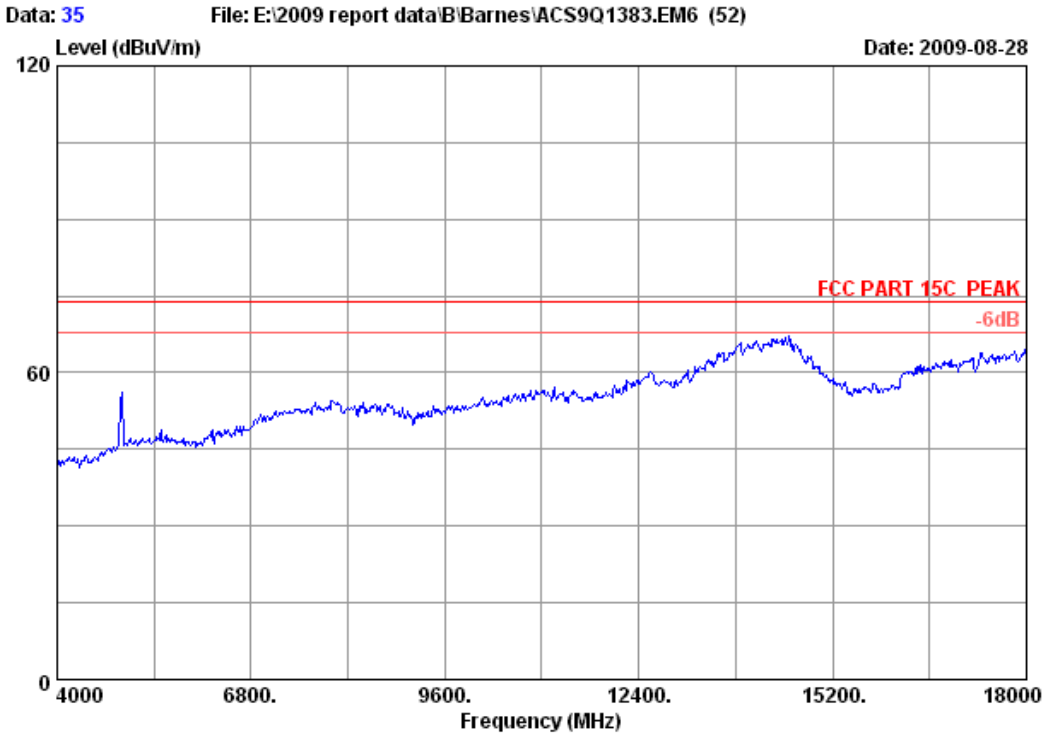

Site no.	: 3m Chamber	Data no.	: 35
Dis. / Ant.	: 3m 3115(0905)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	: Paul Tian
EUT	: BNRZ100 M/N:BNRZ100		
Power	: DC 5V		
Test mode	: 11g 2462MHz Tx		

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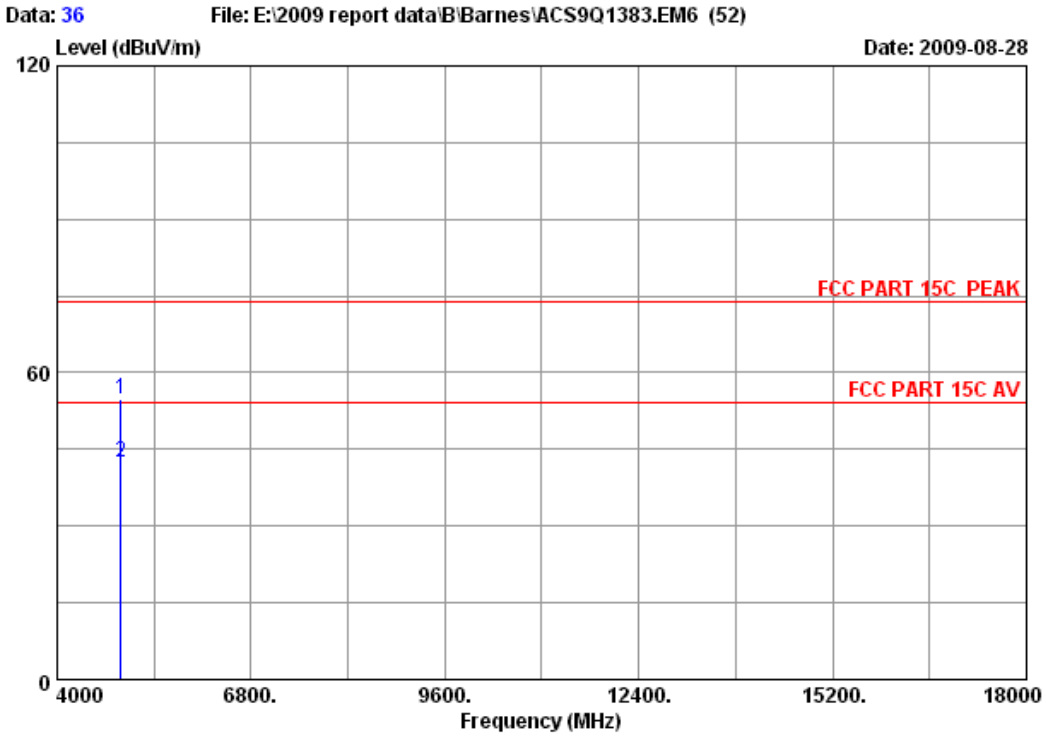
Postcode:518057



Site no. : 3m Chamber Data no. : 36
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4924.000	35.09	12.58	35.34	42.39	54.72	74.00	19.28	Peak
2	4924.000	35.09	12.58	35.34	30.29	42.62	54.00	11.38	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

5. CONDUCTED SPURIOUS EMISSIONS

5.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 09	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May.08, 09	1Year

5.2.Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

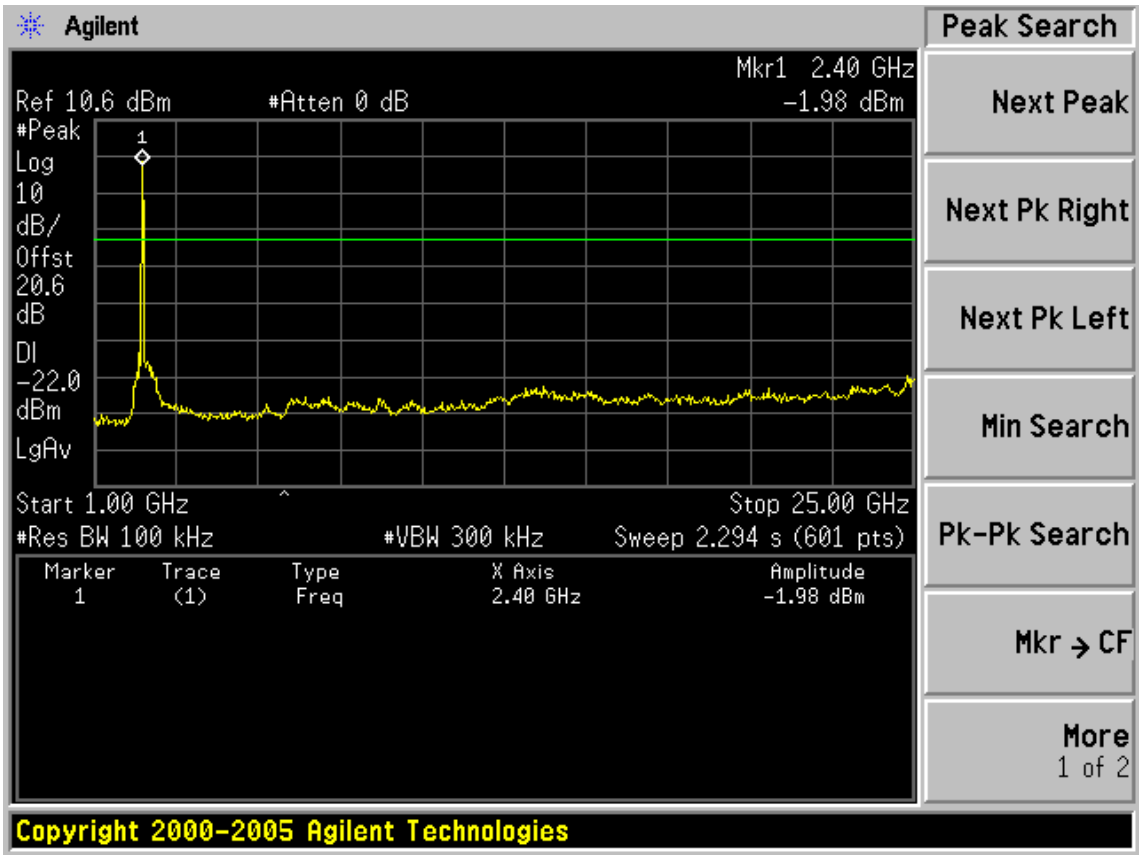
5.3.Test Procedure

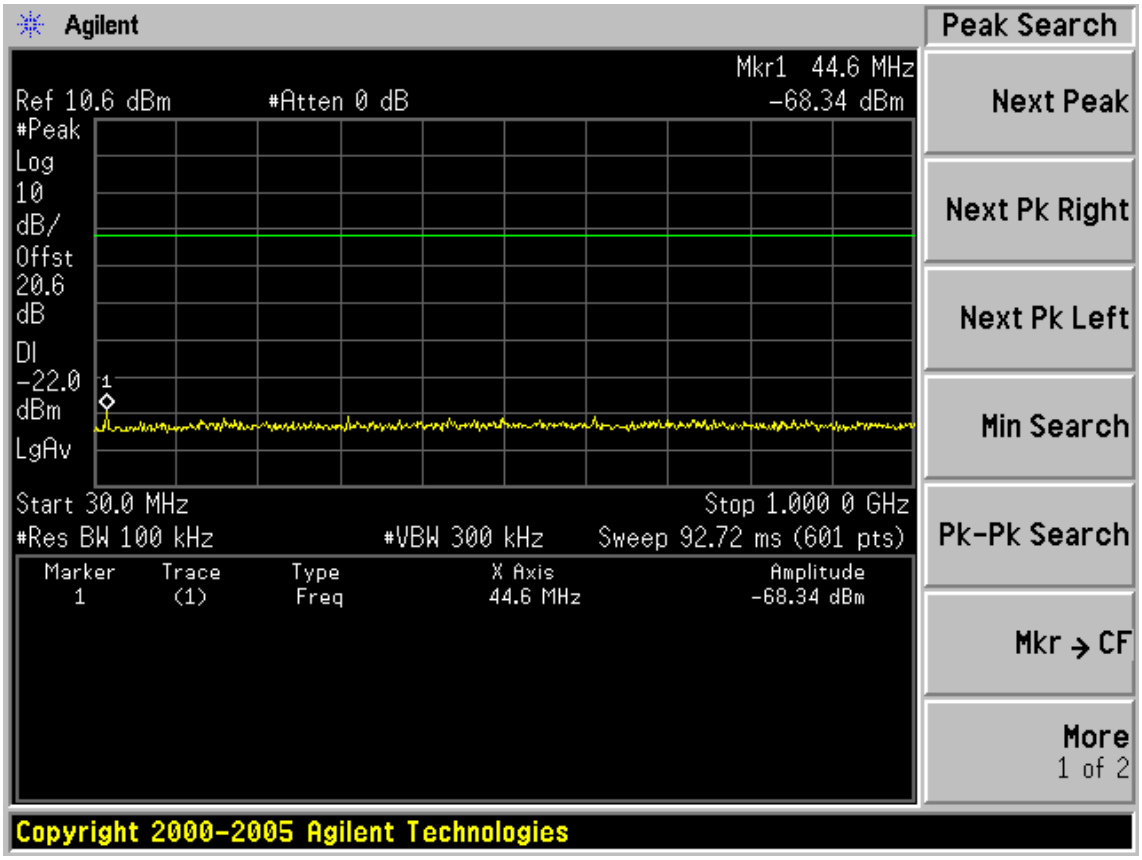
The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz.

5.4.Test result

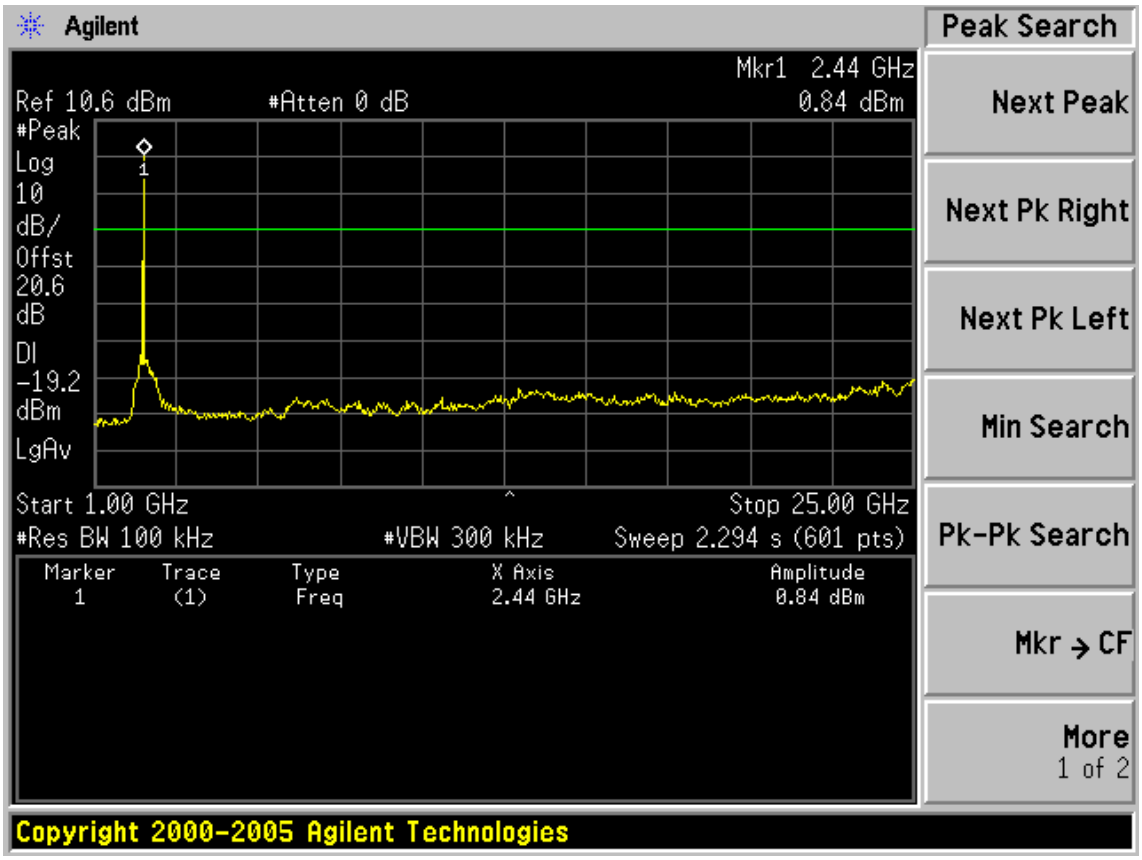
PASS (The testing data was attached in the next pages.)

Test Mode: IEEE 802.11b TX
CH1





CH6


Agilent
Peak Search
Mkr1 2.44 GHz
Ref 10.6 dBm
#Atten 0 dB
0.84 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-19.2
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 1.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.294 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.44 GHz 0.84 dBm
Mkr → CF
More
1 of 2
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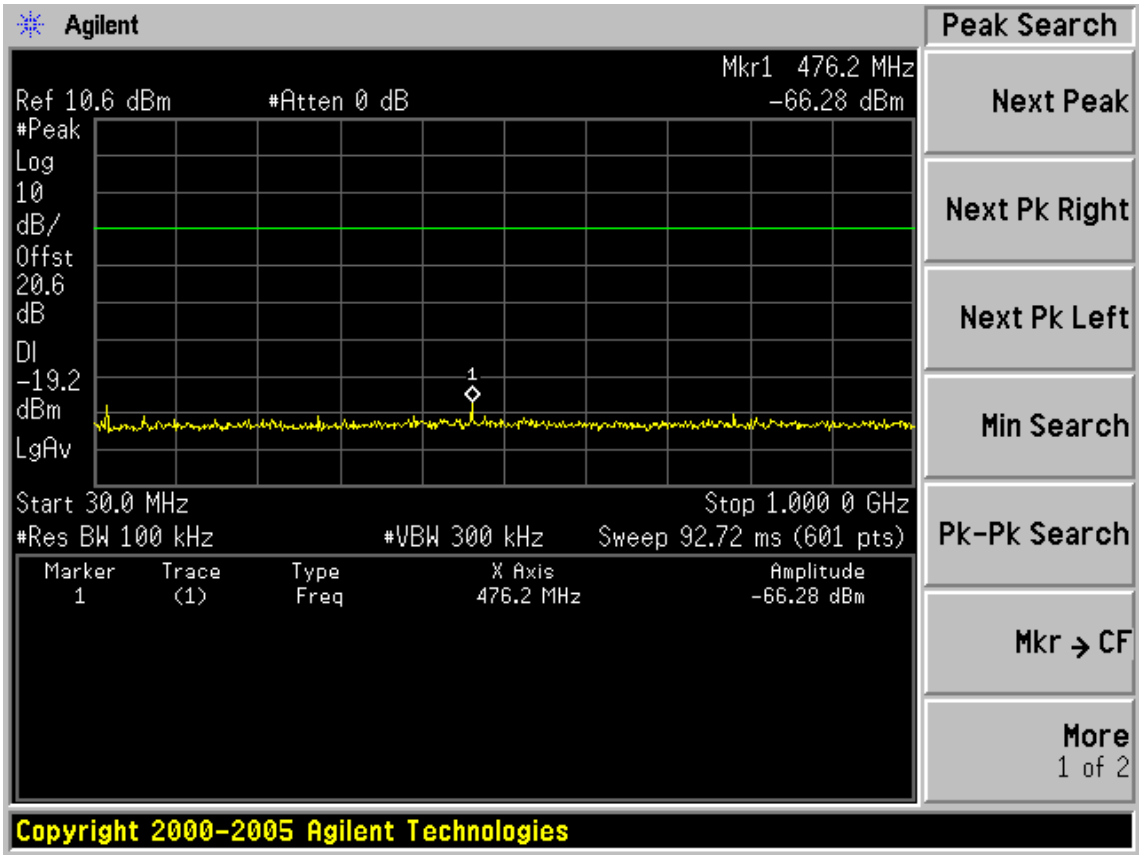
Agilent
Peak Search
Mkr1 476.2 MHz
Ref 10.6 dBm
#Atten 0 dB
-66.28 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-19.2
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 476.2 MHz -66.28 dBm
Mkr → CF
More
1 of 2
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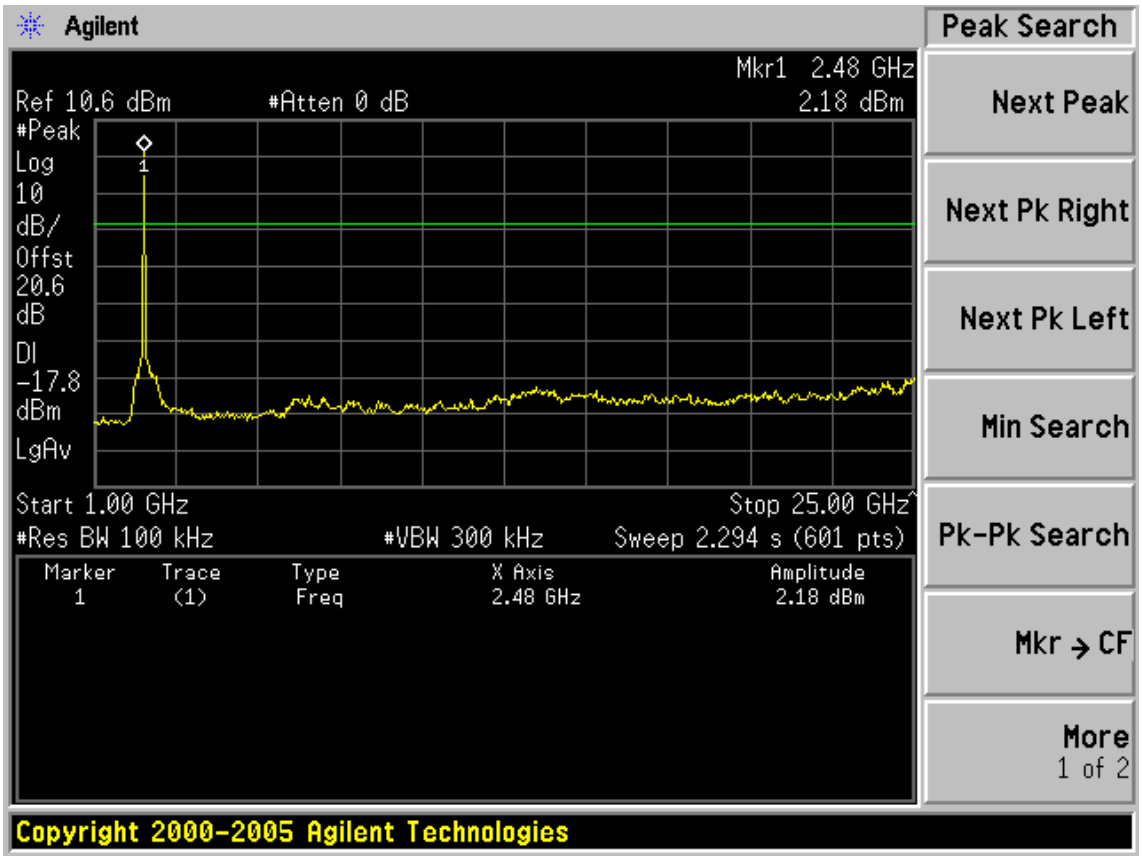
CH11


Agilent
Peak Search
Mkr1 2.48 GHz
Ref 10.6 dBm
#Atten 0 dB
2.18 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-17.8
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 1.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.294 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.48 GHz 2.18 dBm
Mkr → CF
More
1 of 2
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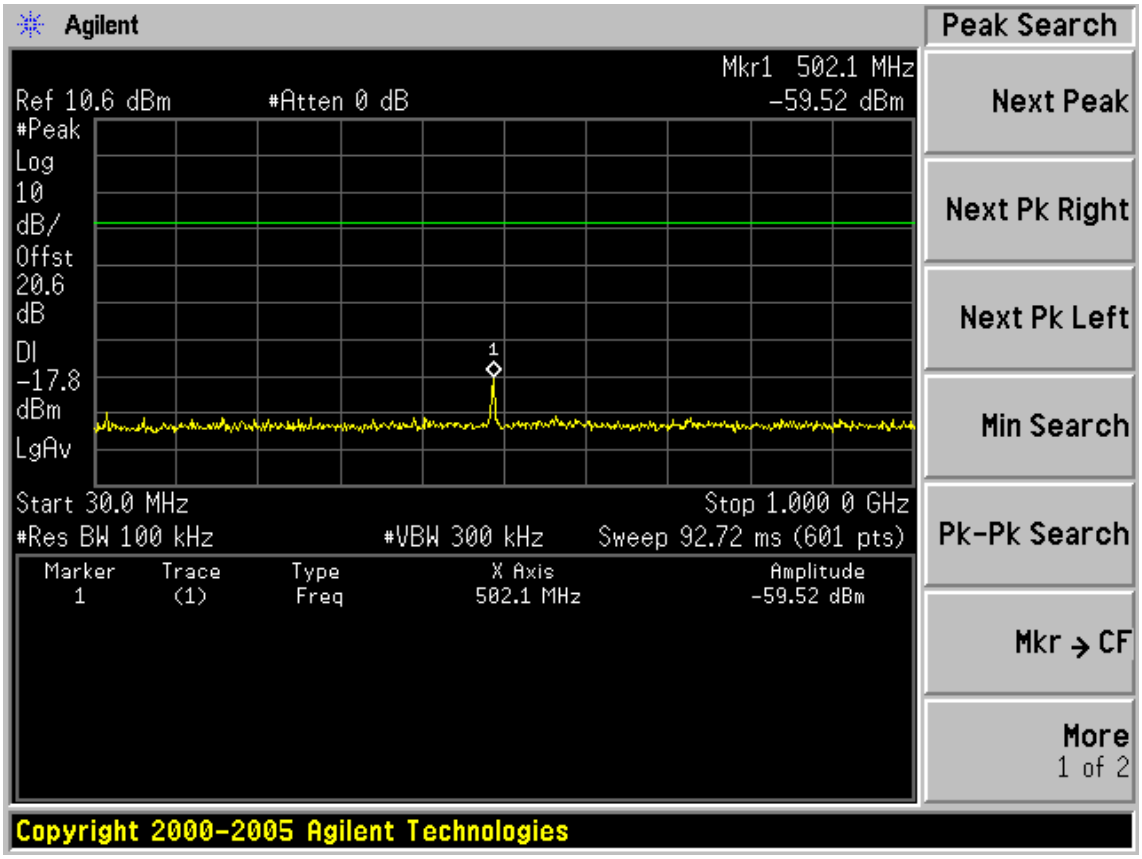
Agilent
Peak Search
Mkr1 502.1 MHz
Ref 10.6 dBm
#Atten 0 dB
-59.52 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-17.8
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 502.1 MHz -59.52 dBm
Mkr → CF
More
1 of 2
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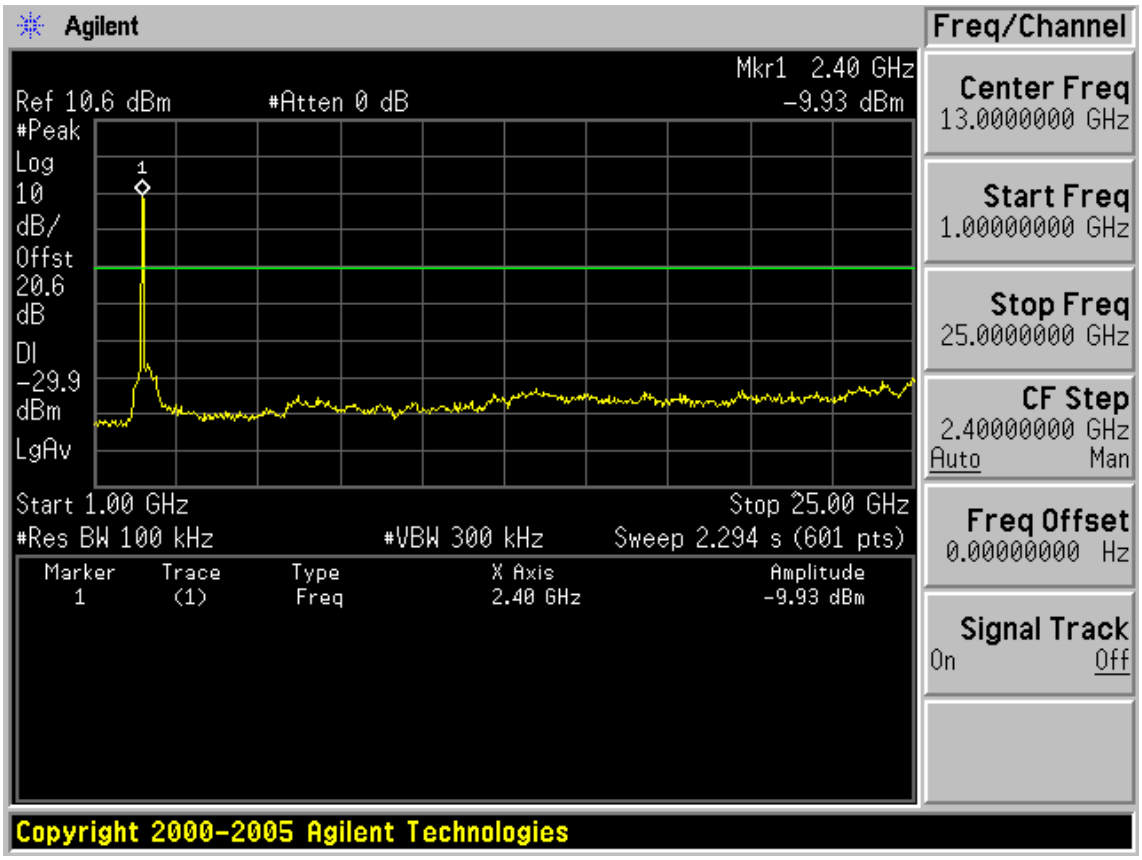
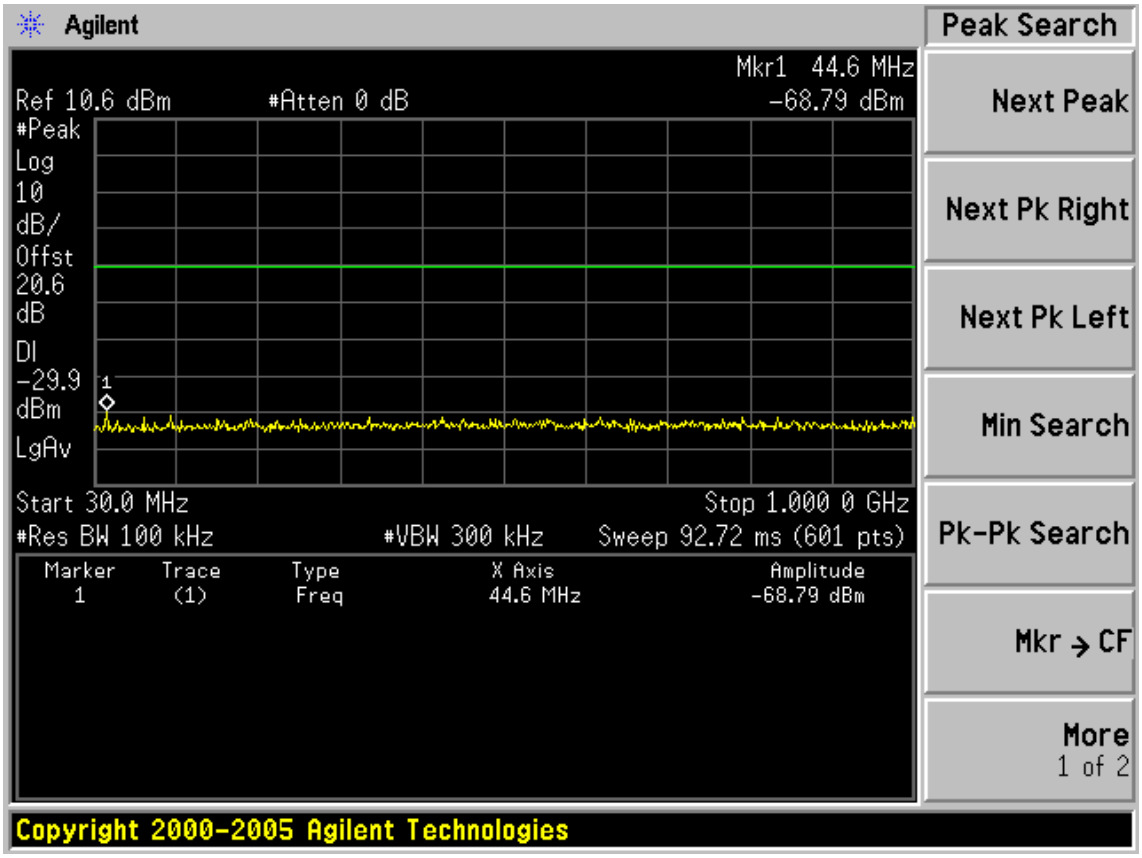
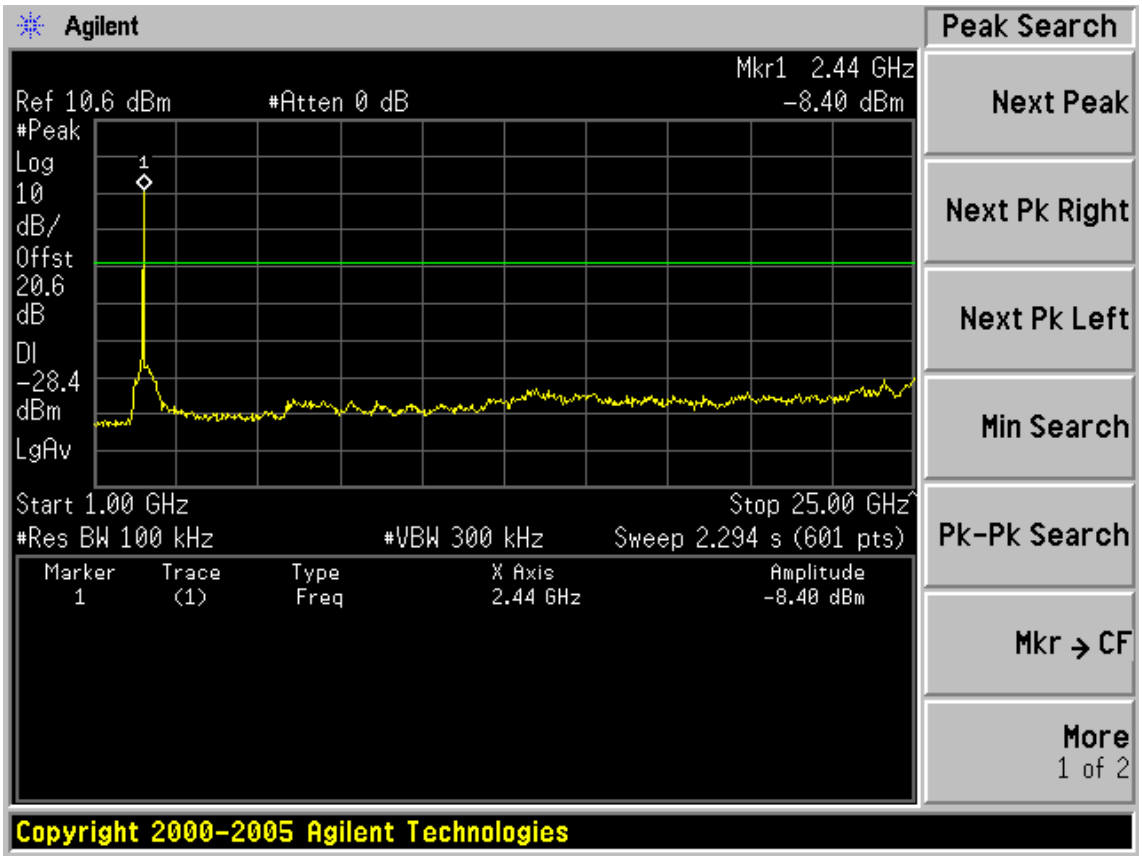
Test Mode: IEEE 802.11g TX
CH1





CH6


Agilent
Peak Search
Mkr1 2.44 GHz
Ref 10.6 dBm
#Atten 0 dB
-8.40 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-28.4
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.294 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.44 GHz -8.40 dBm
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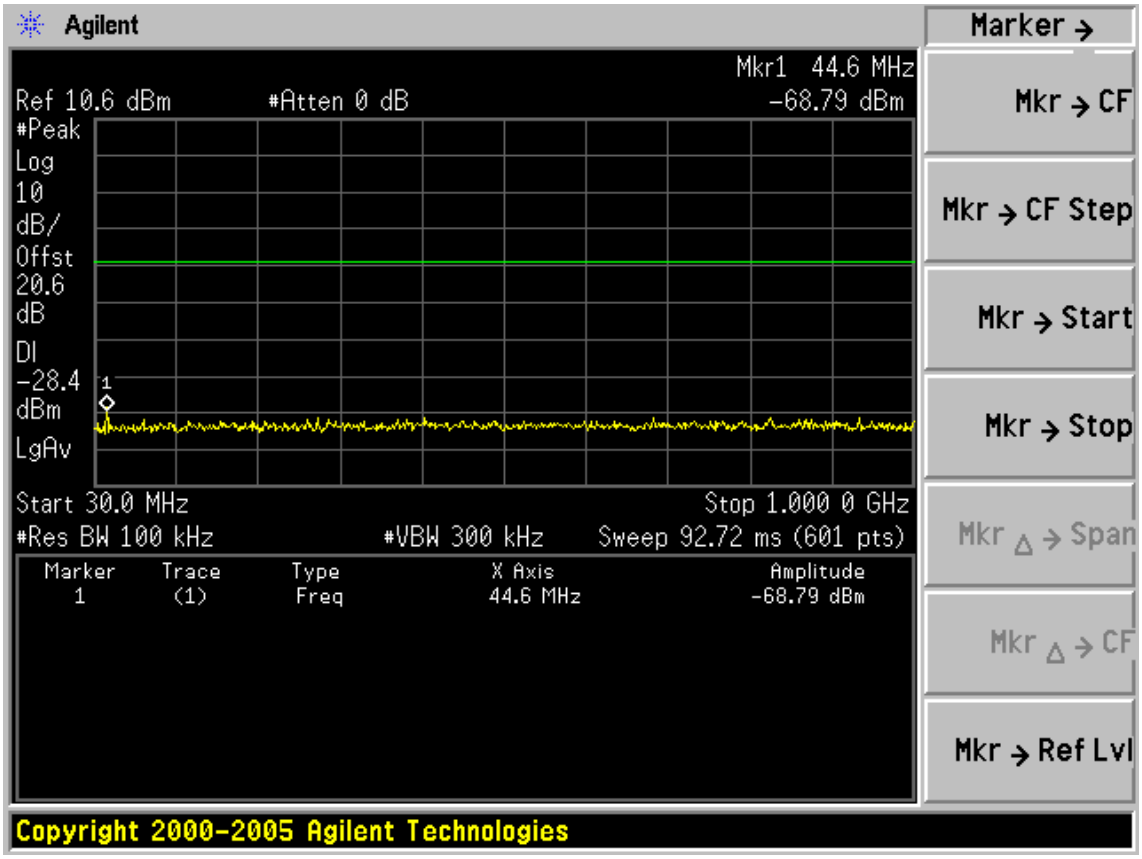
Agilent
Marker →
Mkr1 44.6 MHz
Ref 10.6 dBm
#Atten 0 dB
-68.79 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-28.4
dBm
LgAv
Mkr → CF
Mkr → CF Step
Mkr → Start
Mkr → Stop
Mkr Δ → Span
Mkr Δ → CF
Mkr → Ref Lvl
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 44.6 MHz -68.79 dBm
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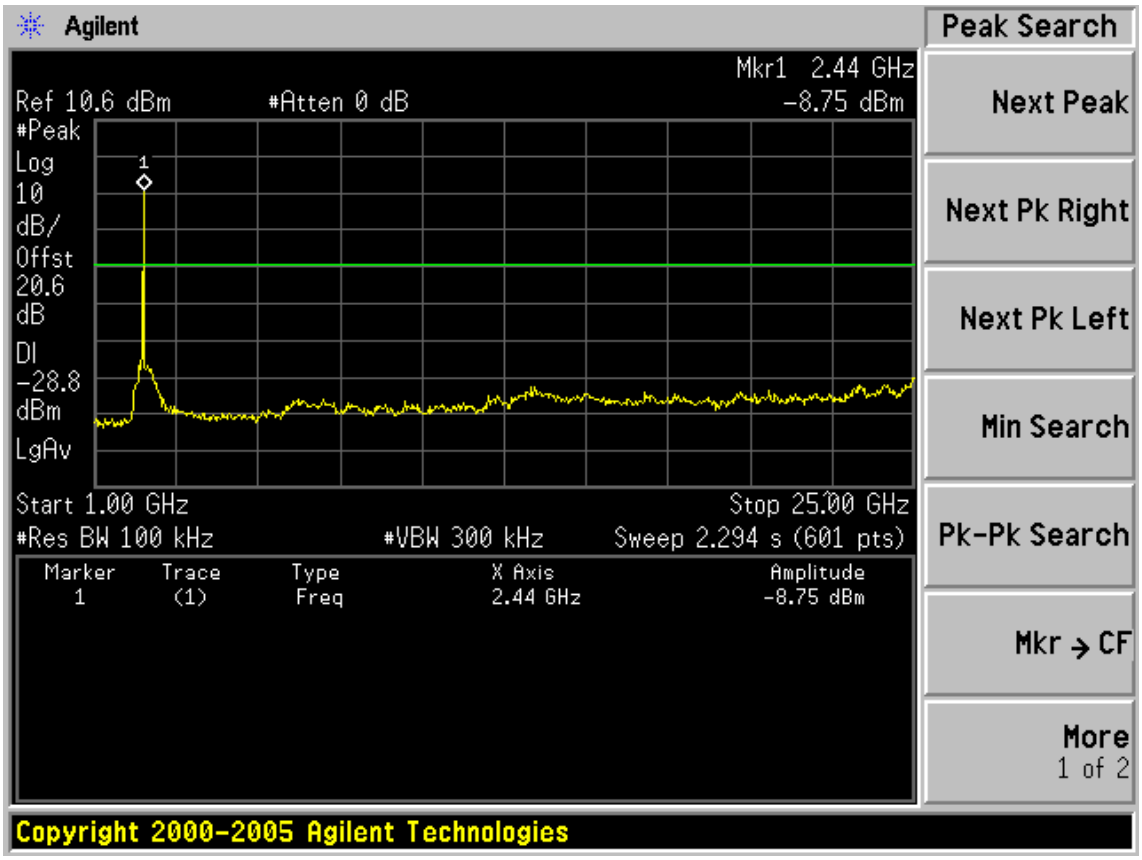
CH11


Agilent
Peak Search
Mkr1 2.44 GHz
Ref 10.6 dBm
#Atten 0 dB
-8.75 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-28.8
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 1.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.294 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.44 GHz -8.75 dBm
Mkr → CF
More
1 of 2
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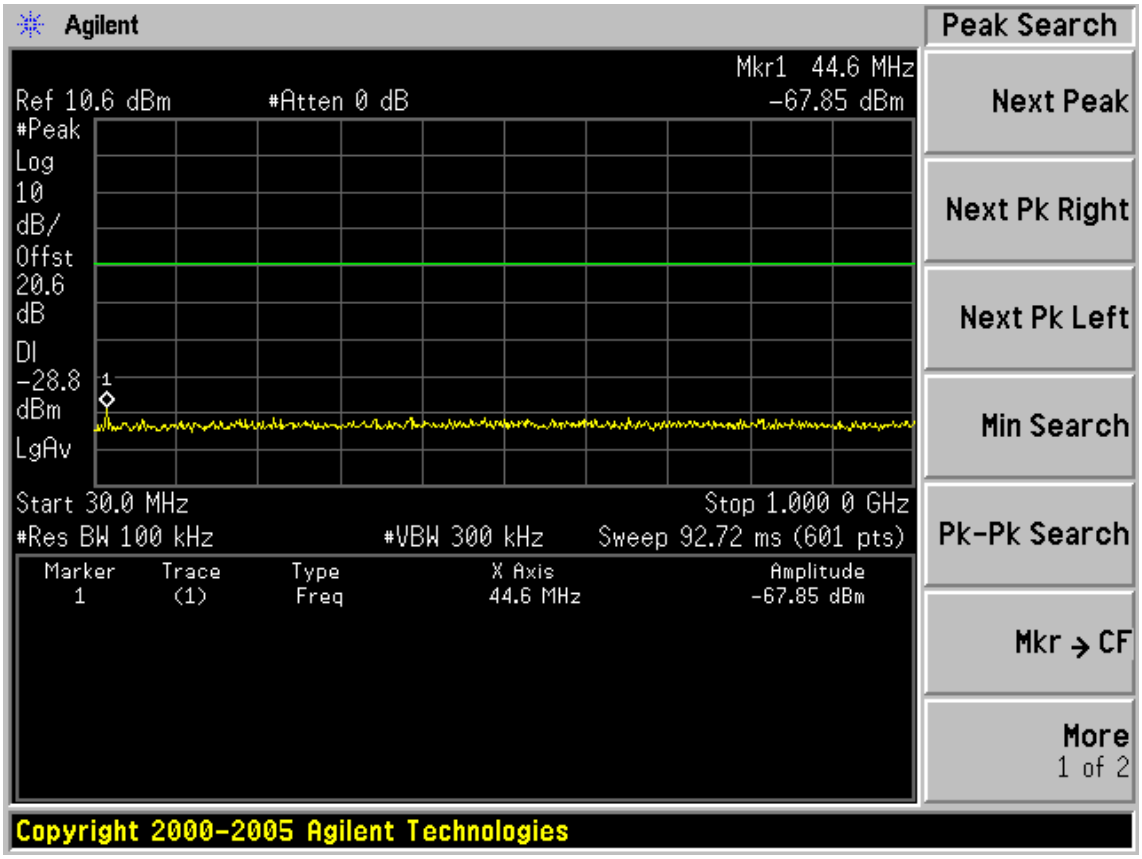
Agilent
Peak Search
Mkr1 44.6 MHz
Ref 10.6 dBm
#Atten 0 dB
-67.85 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
-28.8
dBm
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 44.6 MHz -67.85 dBm
Mkr → CF
More
1 of 2
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6. BAND EDGE COMPLIANCE TEST

6.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May, 27, 08	1.5 Year
3	Amplifier	Agilent	8449B	3008A02495	Nov.24.08	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX 102	28620/2	May,08, 09	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX 102	271471/4	May,08, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX 102	29086/2	May,08, 09	1 Year

6.2.Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3.Test Produce

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
   (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO PK detector
   (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO PK detctor

6.4.Test Results

Pass (The testing data was attached in the next pages.)
All the emissions outside operation frequency band comply with 15.209 limit

Test Mode: IEEE 802.11b Tx

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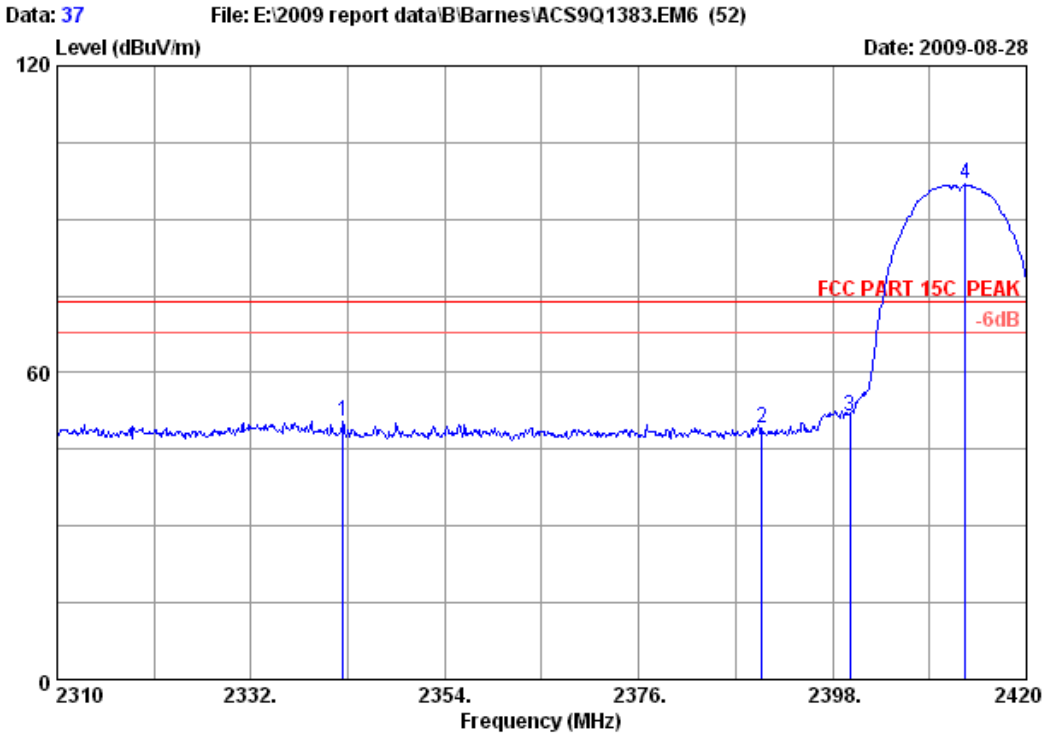
Postcode:518057



Site no. : 3m Chamber Data no. : 37
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2342.450	28.38	8.57	35.99	49.44	50.40	74.00	23.60	Peak
2	2390.000	28.46	8.41	36.09	48.42	49.20	74.00	24.80	Peak
3	2400.000	28.46	8.60	36.09	50.64	51.61	74.00	22.39	Peak
4	2413.070	28.48	8.60	35.95	95.70	96.83	74.00	-22.83	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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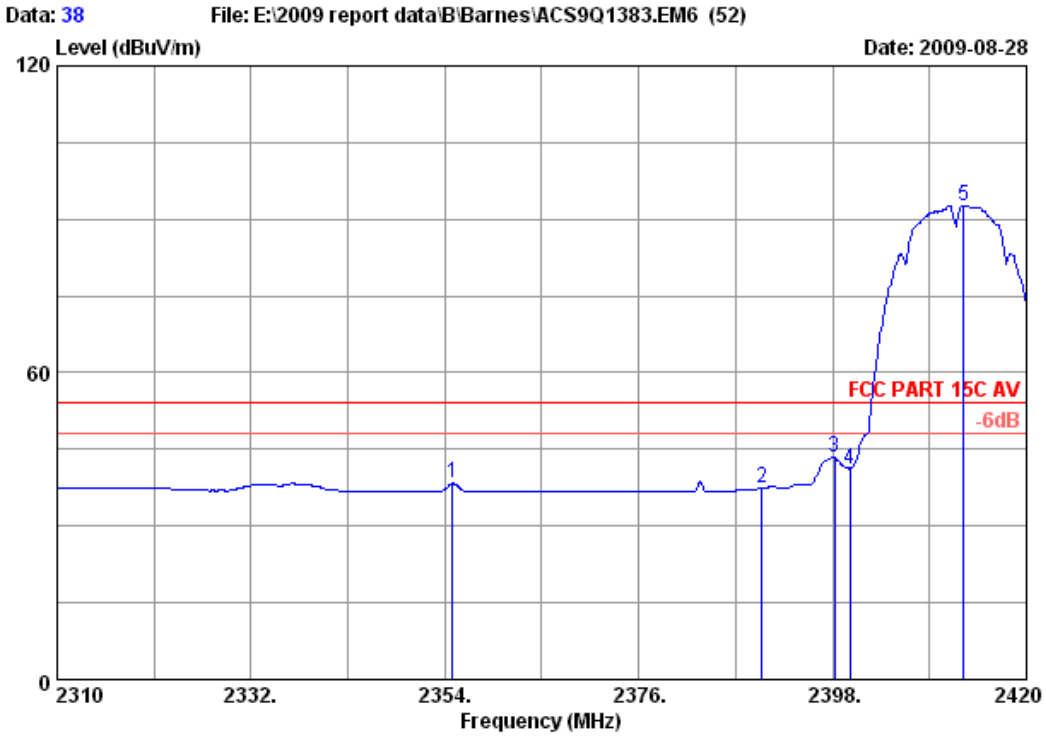
Postcode:518057



Site no. : 3m Chamber Data no. : 38
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2354.880	28.41	8.57	35.91	37.28	38.35	54.00	15.65	Average
2	2390.000	28.46	8.41	36.09	36.59	37.37	54.00	16.63	Average
3	2398.220	28.46	8.41	36.09	42.58	43.36	54.00	10.64	Average
4	2400.000	28.46	8.60	36.09	40.28	41.25	54.00	12.75	Average
5	2412.850	28.48	8.60	35.95	91.57	92.70	54.00	-38.70	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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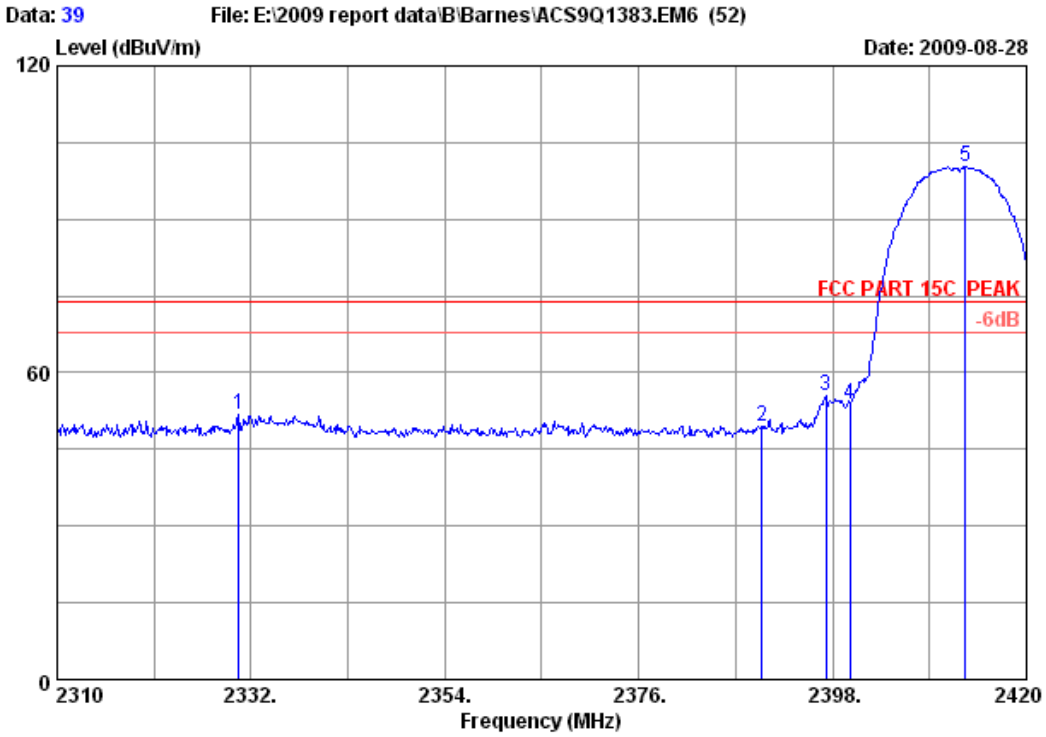
Postcode:518057



Site no. : 3m Chamber Data no. : 39
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2330.570	28.36	8.64	36.06	50.96	51.90	74.00	22.10	Peak
2	2390.000	28.46	8.41	36.09	48.83	49.61	74.00	24.39	Peak
3	2397.230	28.46	8.41	36.09	54.83	55.61	74.00	18.39	Peak
4	2400.000	28.46	8.60	36.09	53.00	53.97	74.00	20.03	Peak
5	2413.070	28.48	8.60	35.95	99.25	100.38	74.00	-26.38	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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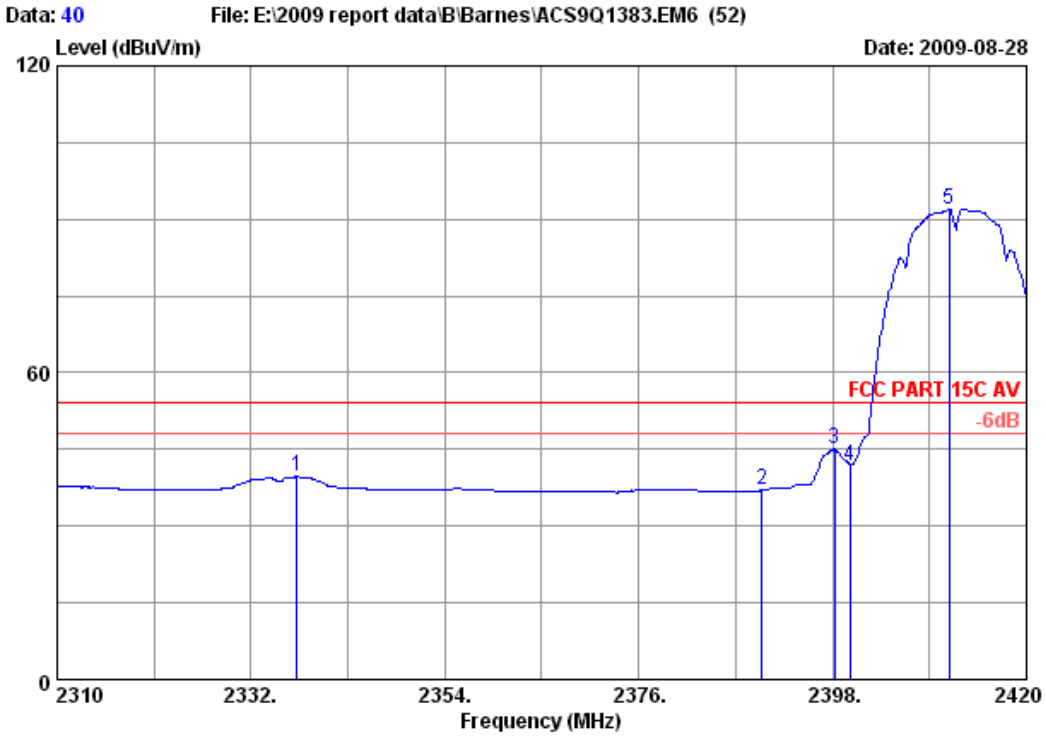

Site no. : 3m Chamber Data no. : 40
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2337.170	28.38	8.64	35.99	38.62	39.65	54.00	14.35	Average
2	2390.000	28.46	8.41	36.09	36.23	37.01	54.00	16.99	Average
3	2398.220	28.46	8.41	36.09	44.21	44.99	54.00	9.01	Average
4	2400.000	28.46	8.60	36.09	40.96	41.93	54.00	12.07	Average
5	2411.200	28.48	8.60	35.95	90.90	92.03	54.00	-38.03	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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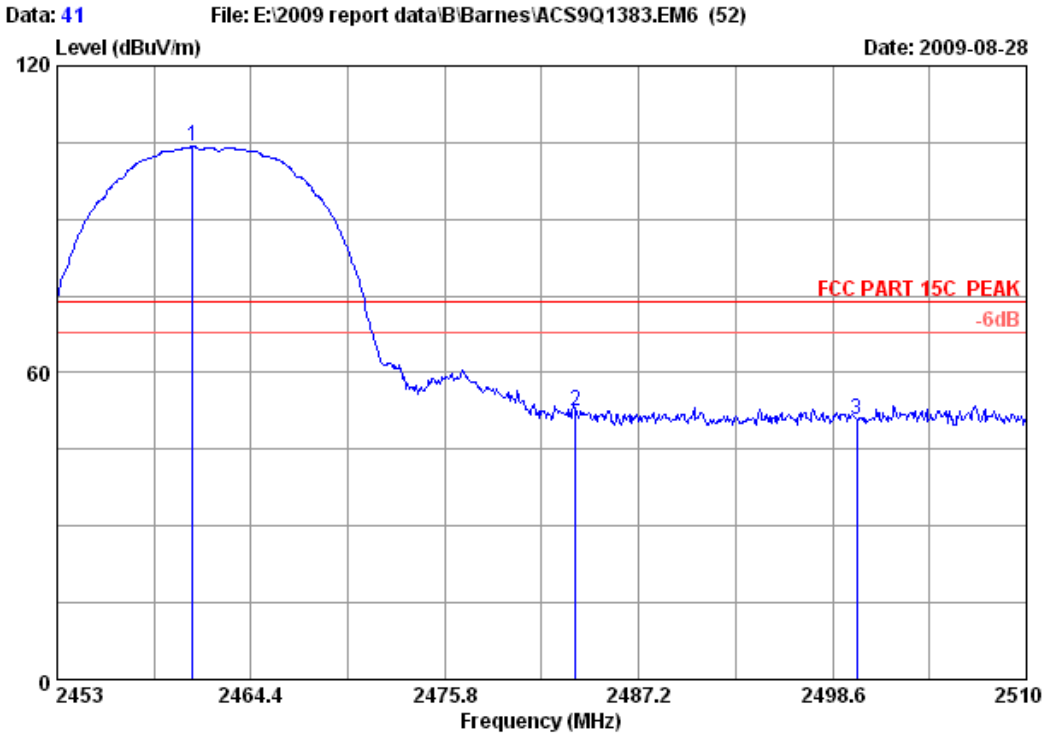
Postcode:518057



Site no. : 3m Chamber Data no. : 41
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.980	28.55	8.76	36.02	102.91	104.20	74.00	-30.20	Peak
2	2483.500	28.58	8.94	35.97	51.02	52.57	74.00	21.43	Peak
3	2500.000	28.60	8.89	36.00	49.29	50.78	74.00	23.22	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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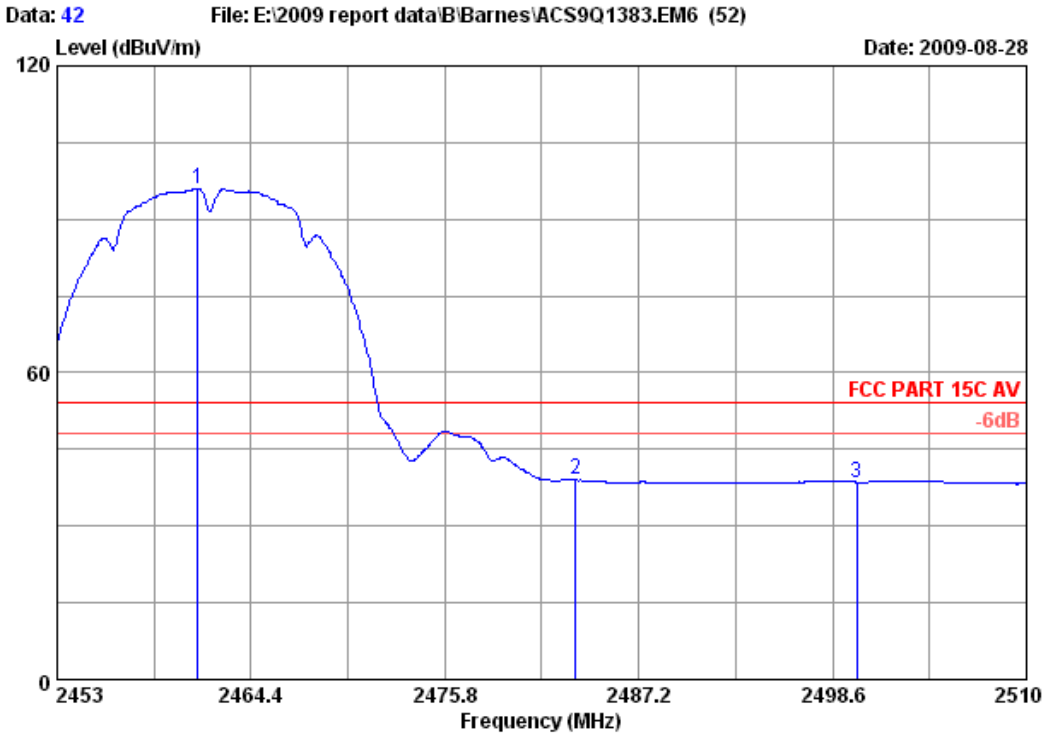
Postcode:518057



Site no. : 3m Chamber Data no. : 42
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.265	28.55	8.76	36.02	94.81	96.10	54.00	-42.10	Average
2	2483.500	28.58	8.94	35.97	37.41	38.96	54.00	15.04	Average
3	2500.000	28.60	8.89	36.00	37.08	38.57	54.00	15.43	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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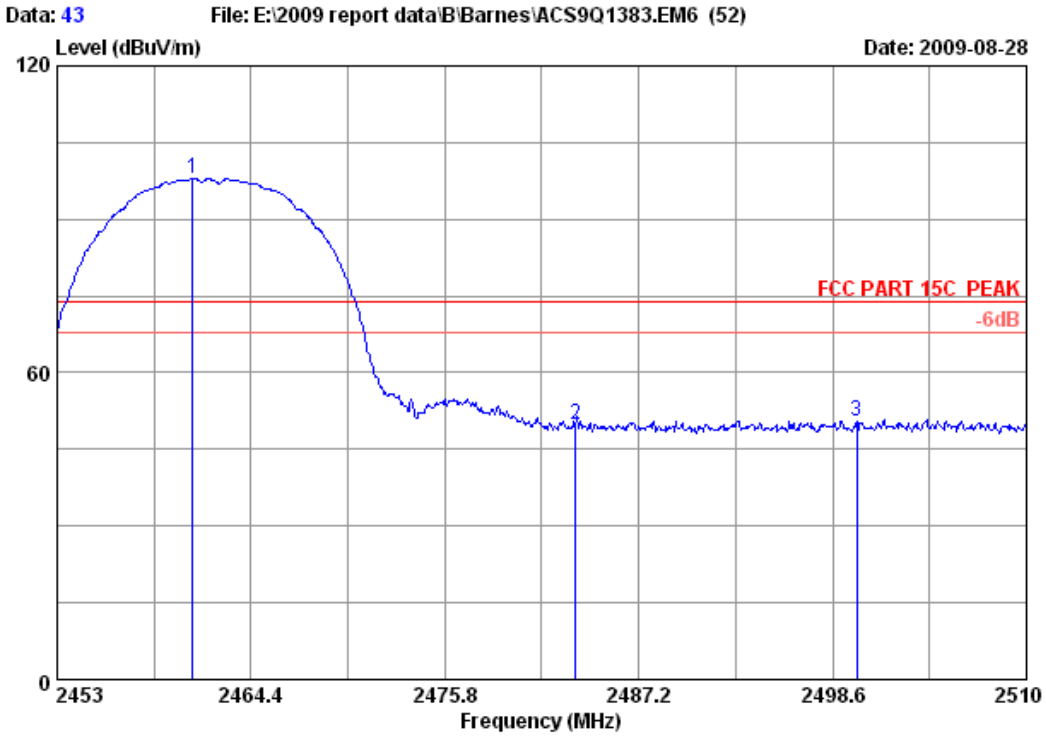
Postcode:518057



Site no. : 3m Chamber Data no. : 43
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.980	28.55	8.76	36.02	96.71	98.00	74.00	-24.00	Peak
2	2483.500	28.58	8.94	35.97	48.18	49.73	74.00	24.27	Peak
3	2500.000	28.60	8.89	36.00	48.93	50.42	74.00	23.58	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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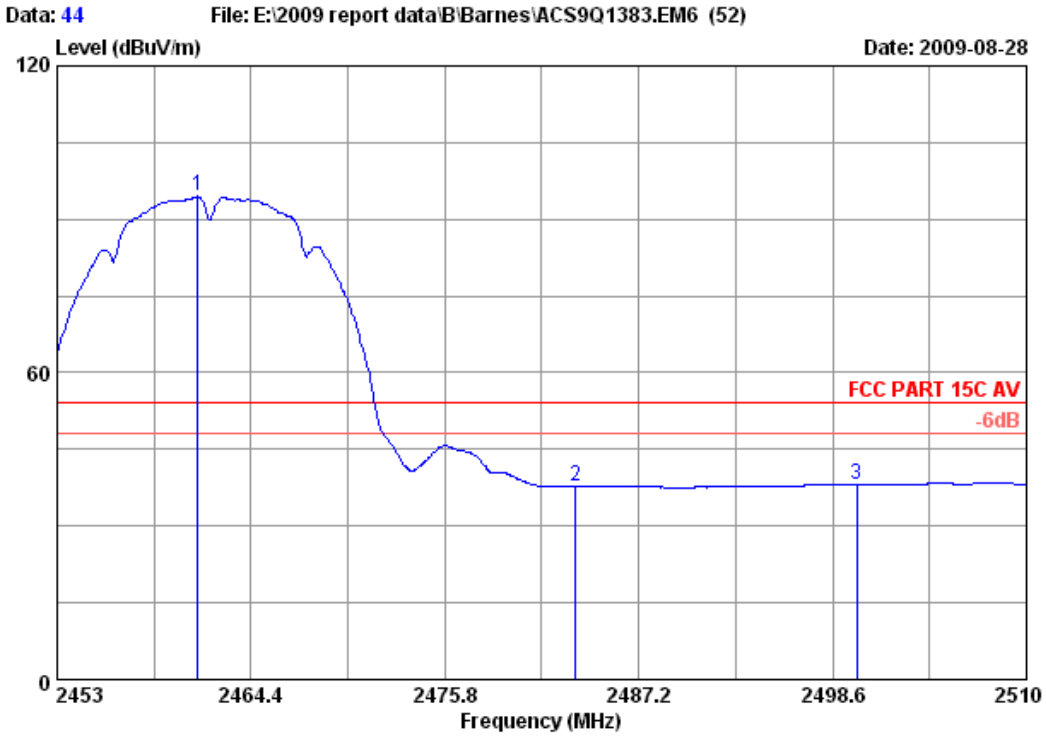
Postcode:518057



Site no. : 3m Chamber Data no. : 44
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11b 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.265	28.55	8.76	36.02	93.14	94.43	54.00	-40.43	Average
2	2483.500	28.58	8.94	35.97	36.23	37.78	54.00	16.22	Average
3	2500.000	28.60	8.89	36.00	36.51	38.00	54.00	16.00	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Mode: IEEE 802.11g Tx

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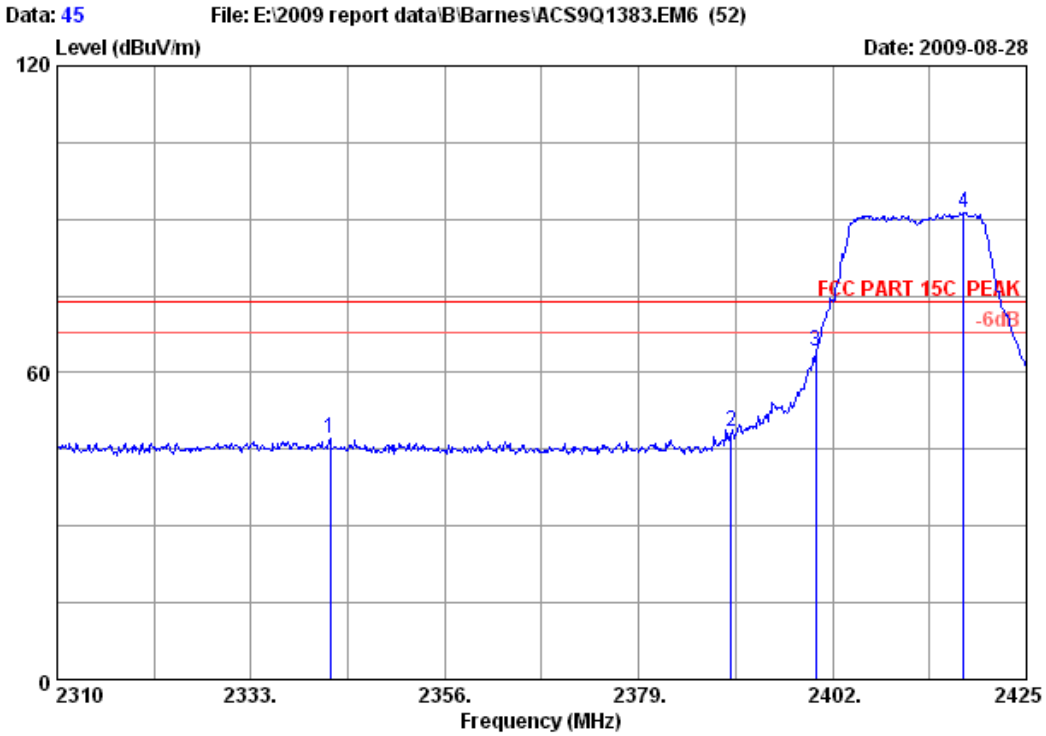
Postcode:518057



Site no. : 3m Chamber Data no. : 45
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2342.430	28.38	8.57	35.99	46.28	47.24	74.00	26.76	Peak
2	2390.000	28.46	8.41	36.09	47.60	48.38	74.00	25.62	Peak
3	2400.000	28.46	8.60	36.09	63.35	64.32	74.00	9.68	Peak
4	2417.525	28.48	8.60	35.95	90.12	91.25	74.00	-17.25	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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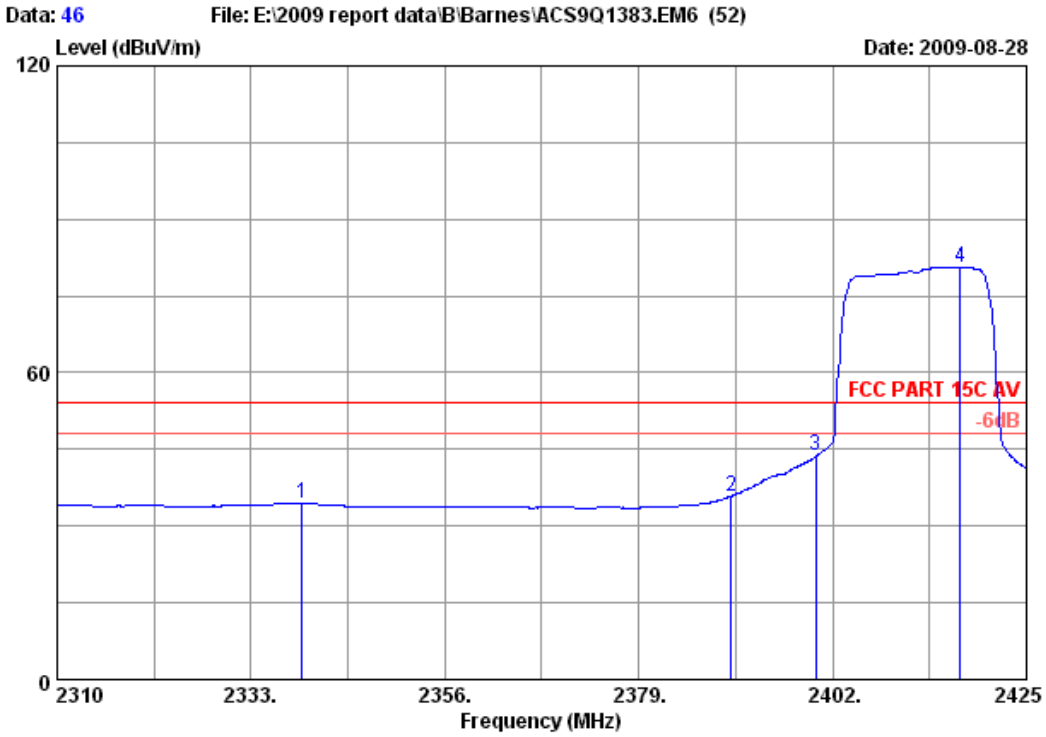
Postcode:518057



Site no. : 3m Chamber Data no. : 46
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2339.095	28.38	8.57	35.99	33.53	34.49	54.00	19.51	Average
2	2390.000	28.46	8.41	36.09	35.15	35.93	54.00	18.07	Average
3	2400.000	28.46	8.60	36.09	42.77	43.74	54.00	10.26	Average
4	2417.180	28.48	8.60	35.95	79.56	80.69	54.00	-26.69	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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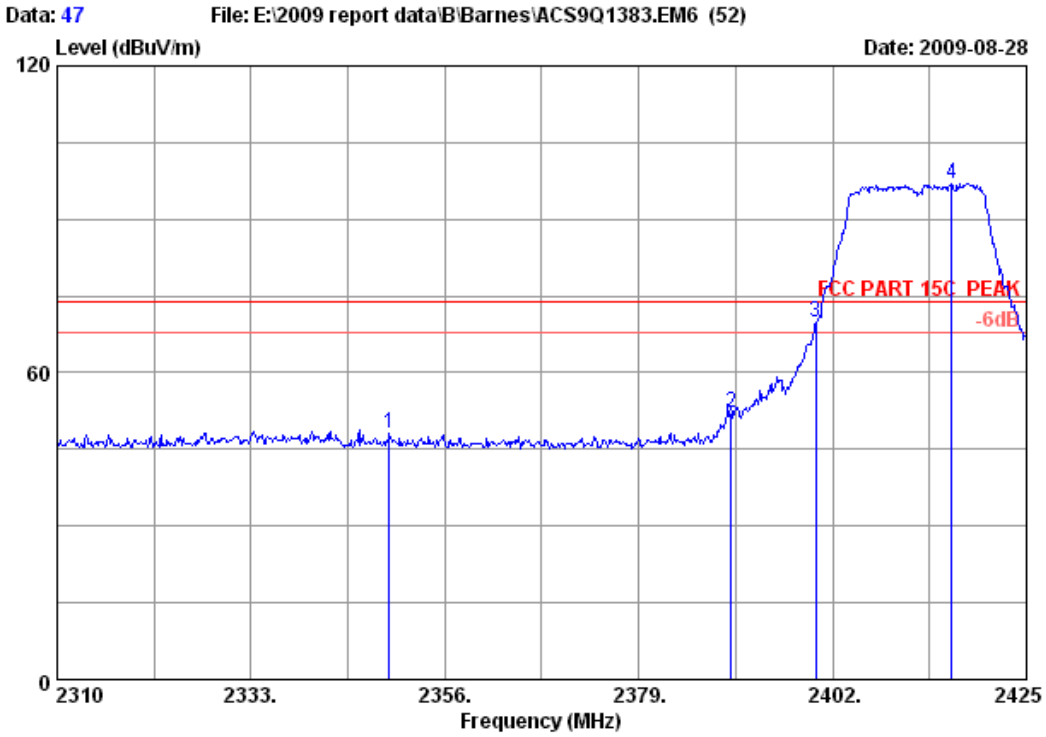

Site no. : 3m Chamber Data no. : 47
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2349.445	28.38	8.57	35.99	47.29	48.25	74.00	25.75	Peak
2	2390.000	28.46	8.41	36.09	51.42	52.20	74.00	21.80	Peak
3	2400.000	28.46	8.60	36.09	68.98	69.95	74.00	4.05	Peak
4	2416.145	28.48	8.60	35.95	95.90	97.03	74.00	-23.03	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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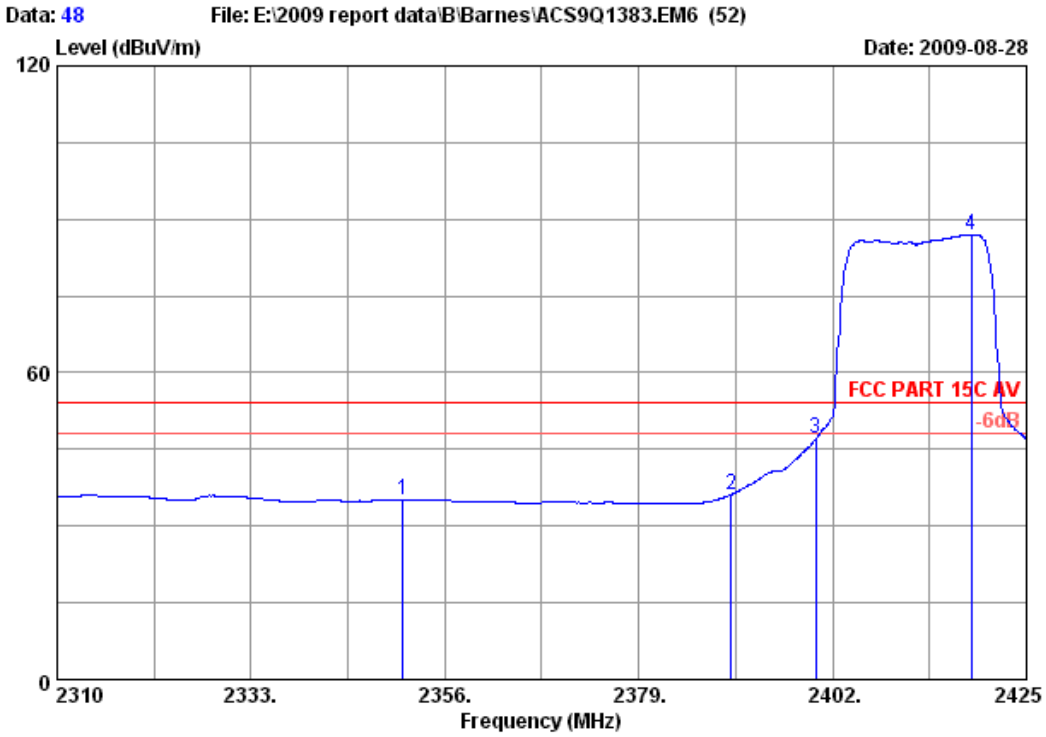

Site no. : 3m Chamber Data no. : 48
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2412MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2351.055	28.38	8.57	35.99	34.21	35.17	54.00	18.83	Average
2	2390.000	28.46	8.41	36.09	35.47	36.25	54.00	17.75	Average
3	2400.000	28.46	8.60	36.09	46.26	47.23	54.00	6.77	Average
4	2418.445	28.48	8.60	35.95	85.83	86.96	54.00	-32.96	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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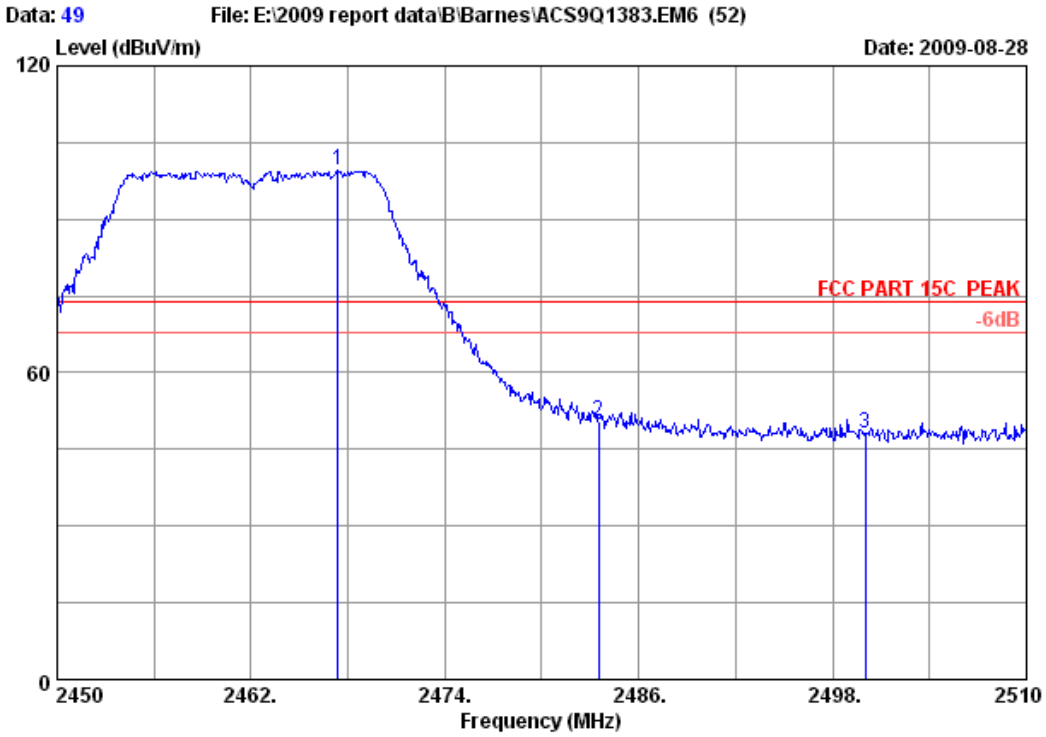

Site no. : 3m Chamber Data no. : 49
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.400	28.55	8.76	36.02	98.16	99.45	74.00	-25.45	Peak
2	2483.500	28.58	8.94	35.97	48.99	50.54	74.00	23.46	Peak
3	2500.000	28.60	8.89	36.00	46.51	48.00	74.00	26.00	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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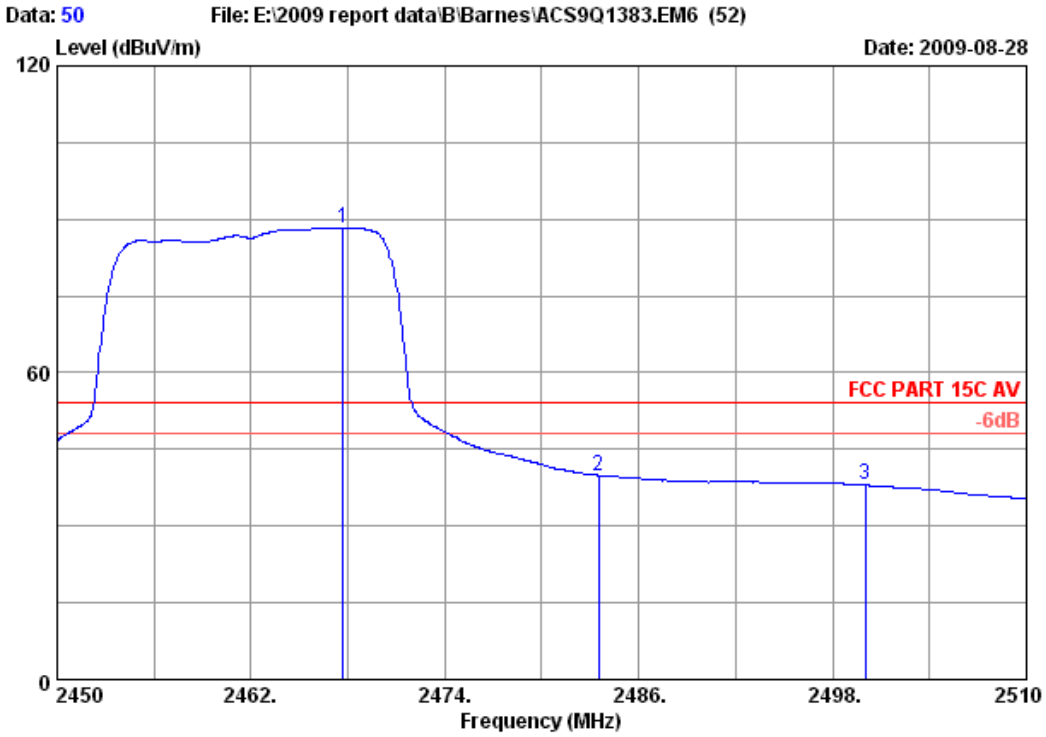

Site no. : 3m Chamber Data no. : 50
Dis. / Ant. : 3m 3115(0905) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.700	28.55	8.76	36.02	87.09	88.38	54.00	-34.38	Average
2	2483.500	28.58	8.94	35.97	38.35	39.90	54.00	14.10	Average
3	2500.000	28.60	8.89	36.00	36.55	38.04	54.00	15.96	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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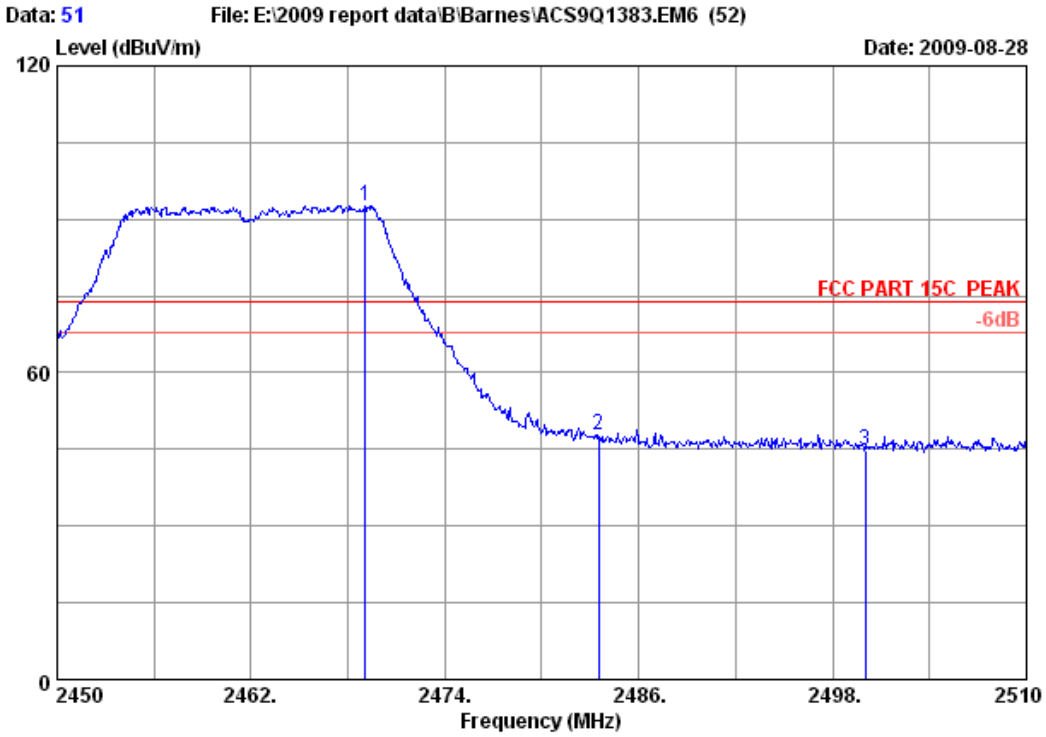

Site no. : 3m Chamber Data no. : 51
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2469.080	28.55	8.76	36.02	91.46	92.75	74.00	-18.75	Peak
2	2483.500	28.58	8.94	35.97	46.24	47.79	74.00	26.21	Peak
3	2500.000	28.60	8.89	36.00	43.32	44.81	74.00	29.19	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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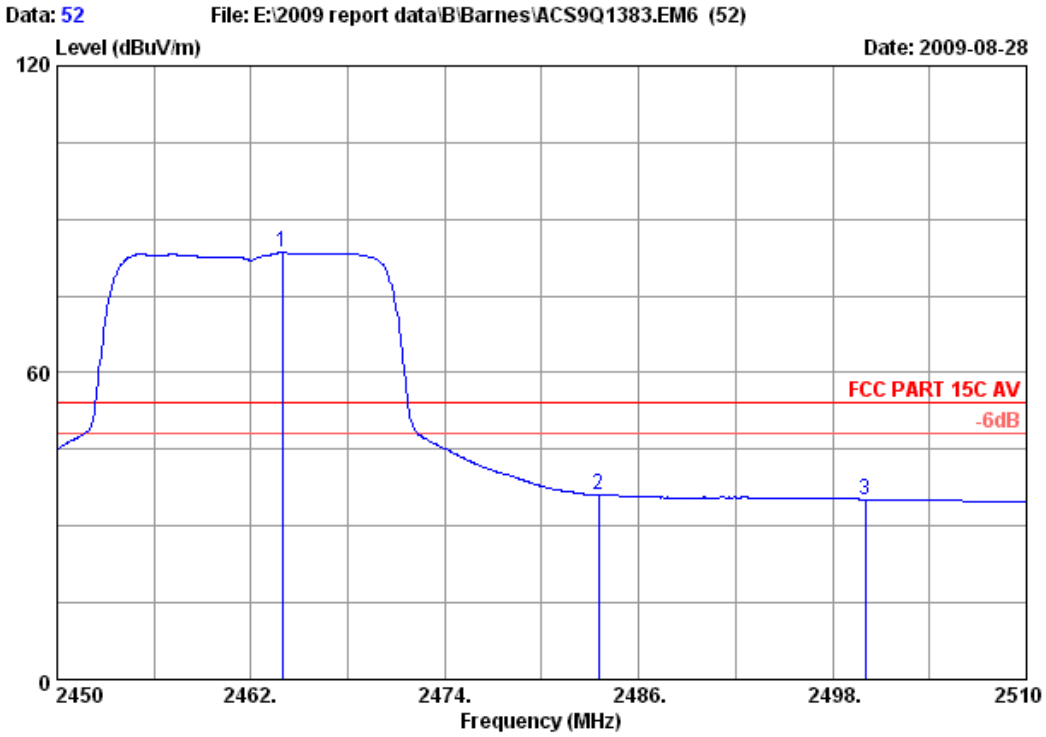


Site no. : 3m Chamber Data no. : 52
Dis. / Ant. : 3m 3115(0905) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Paul Tian
EUT : BNRZ100 M/N:BNRZ100
Power : DC 5V
Test mode : 11g 2462MHz Tx

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.920	28.55	8.76	36.02	82.17	83.46	54.00	-29.46	Average
2	2483.500	28.58	8.94	35.97	34.47	36.02	54.00	17.98	Average
3	2500.000	28.60	8.89	36.00	33.71	35.20	54.00	18.80	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

7. 6dB Bandwidth Test

7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,08, 09	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May,08, 09	1Year

7.2.Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

7.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.4.Test Results

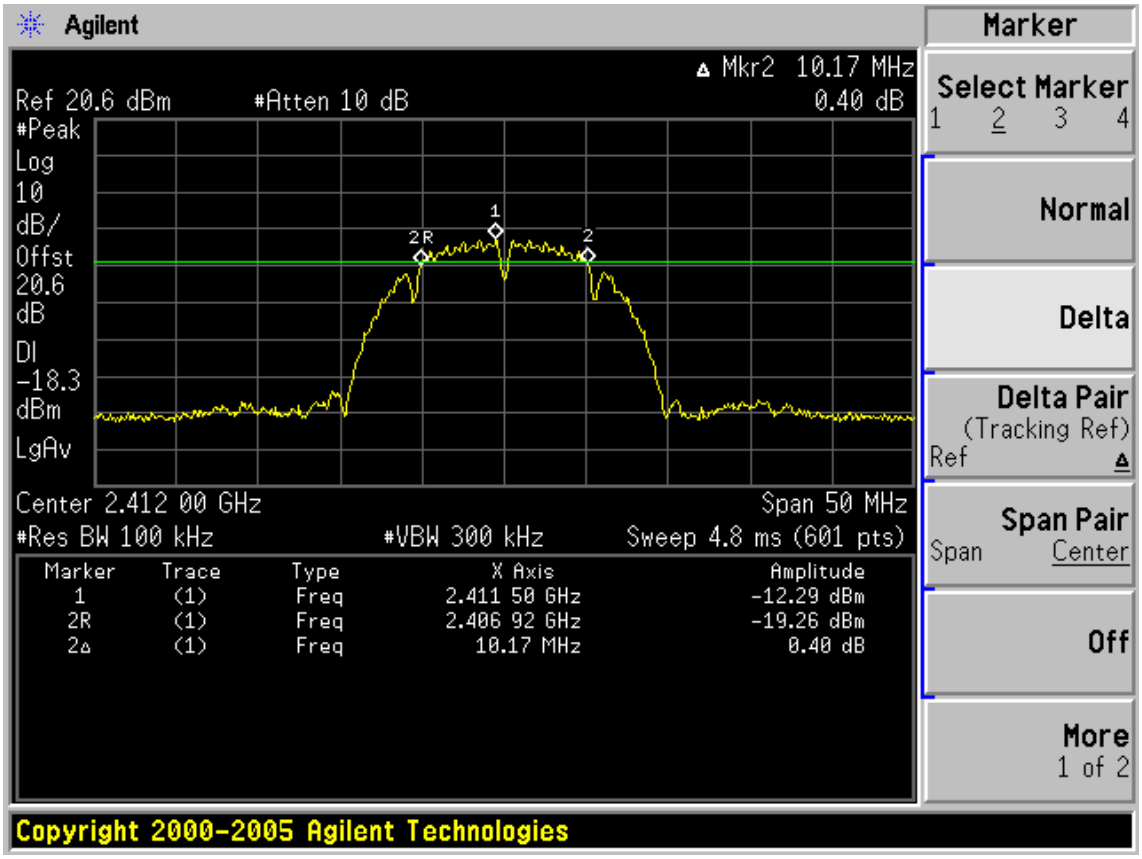
Test Mode: IEEE 802.11b TX

CH	6dB Bandwidth (MHz)	Limit	Conclusion
1	10.17	>500	PASS
6	10.08	>500	PASS
11	10.08	>500	PASS

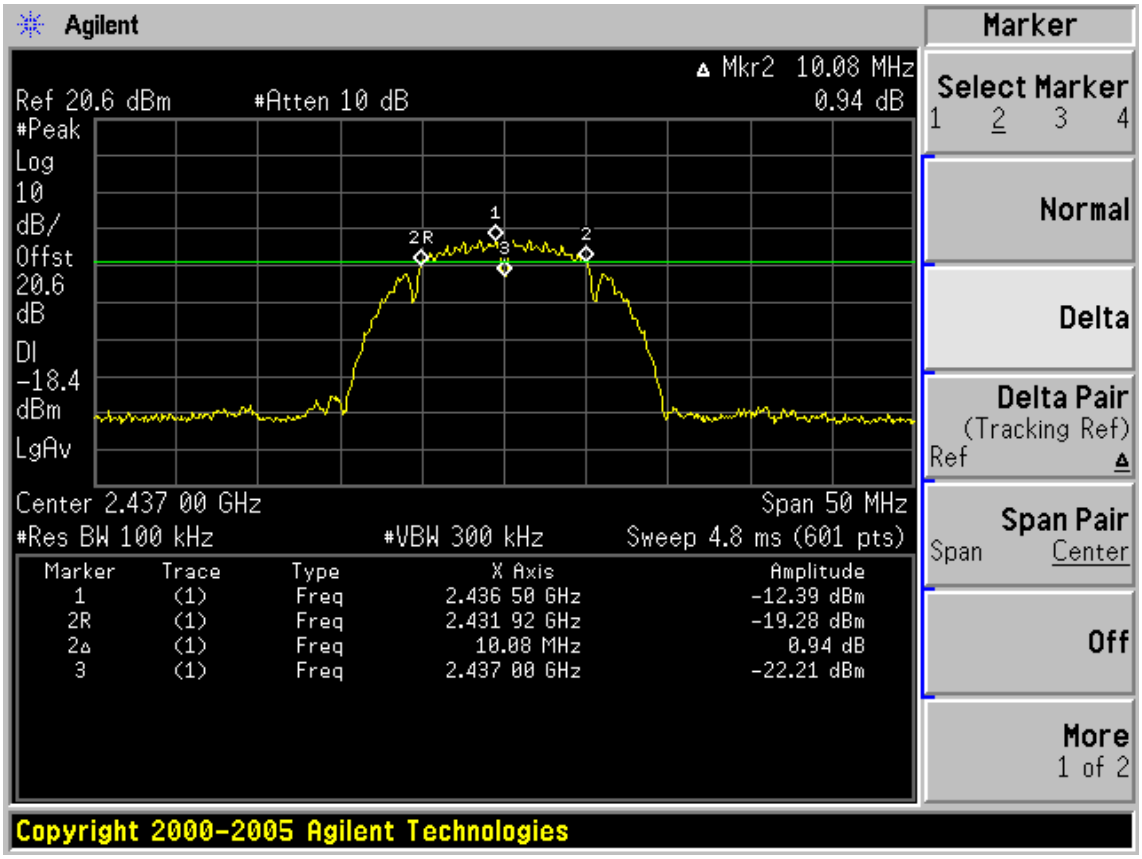
Test Mode: IEEE 802.11g TX

CH	6dB Bandwidth (MHz)	Limit	Conclusion
1	16.67	>500	PASS
6	16. 67	>500	PASS
11	16. 67	>500	PASS

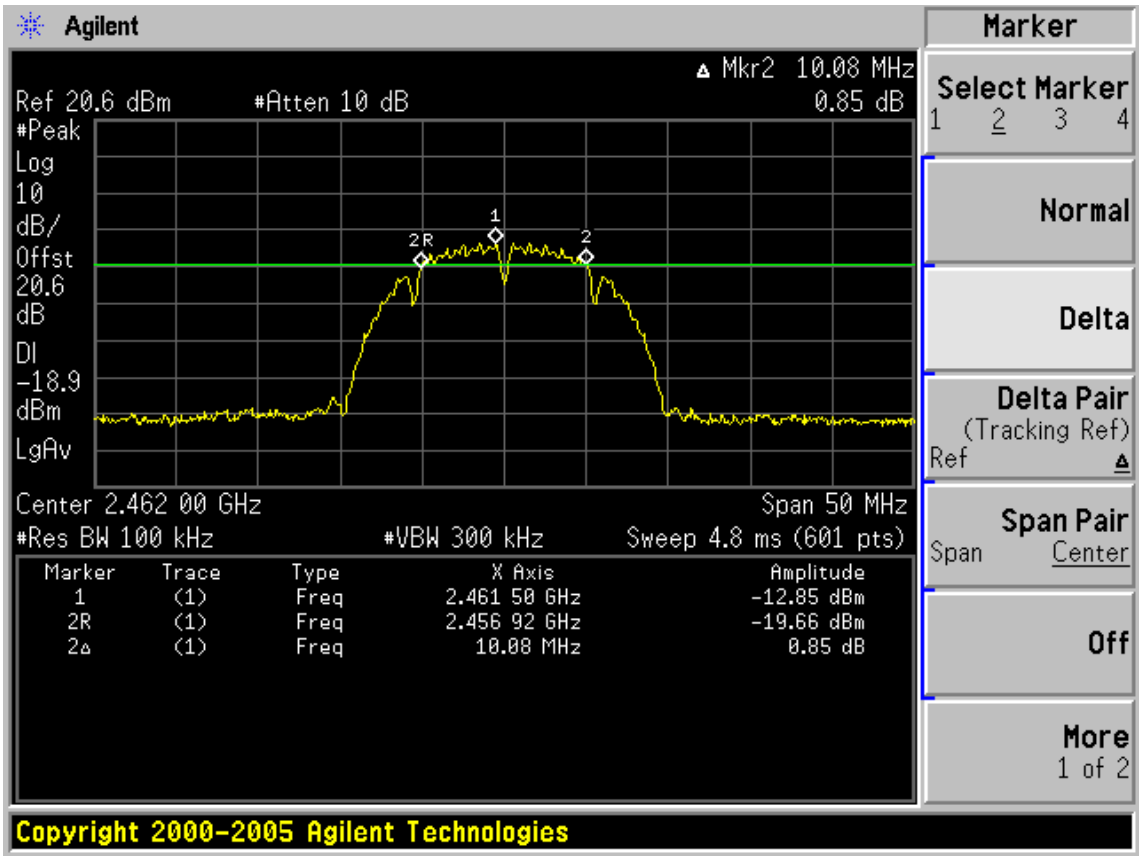
Test Mode: IEEE 802.11b TX
Test CH1: 2412MHz



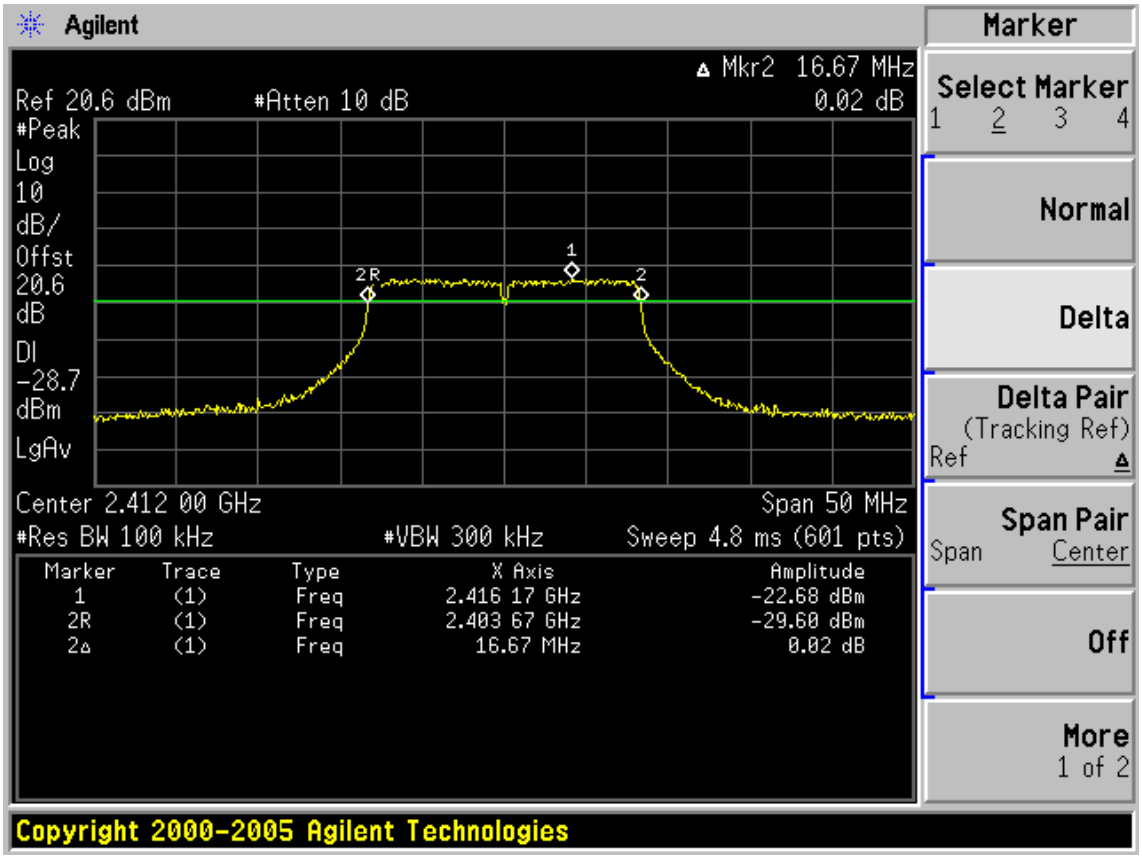
Test CH6: 2437MHz



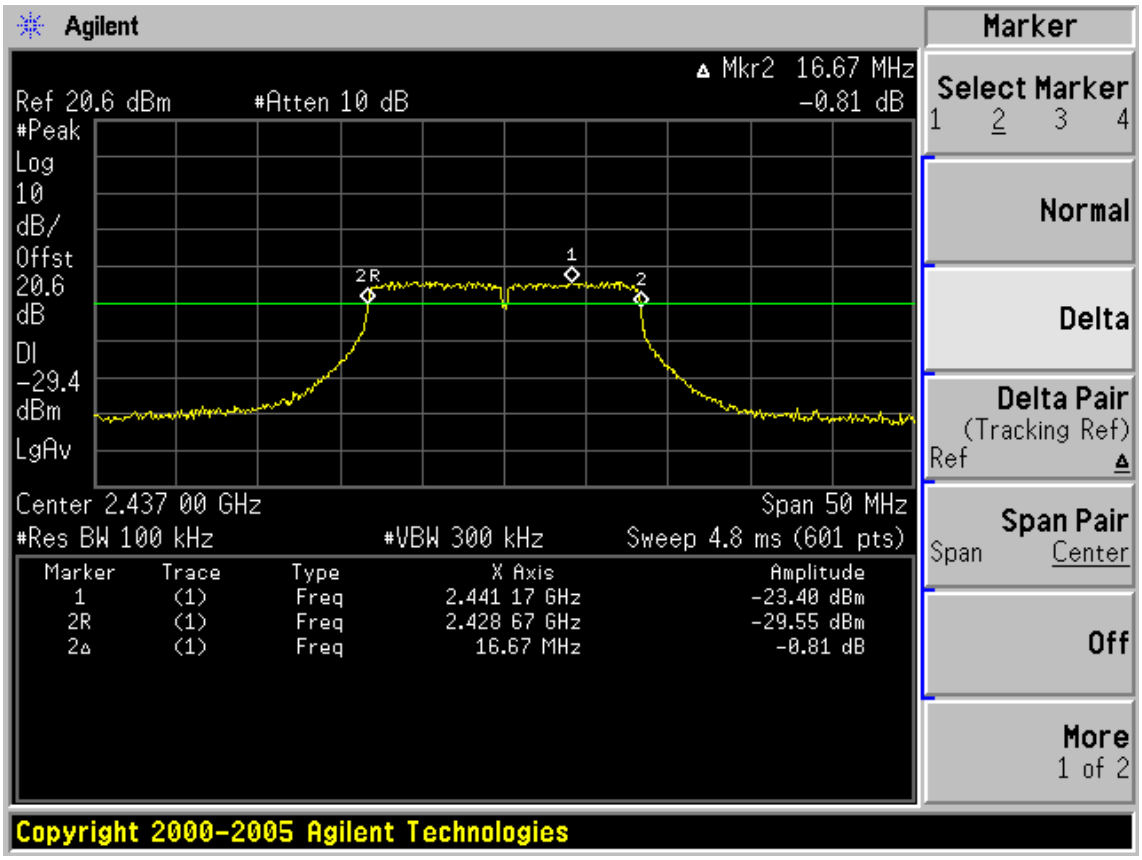
Test CH11: 2462MHz



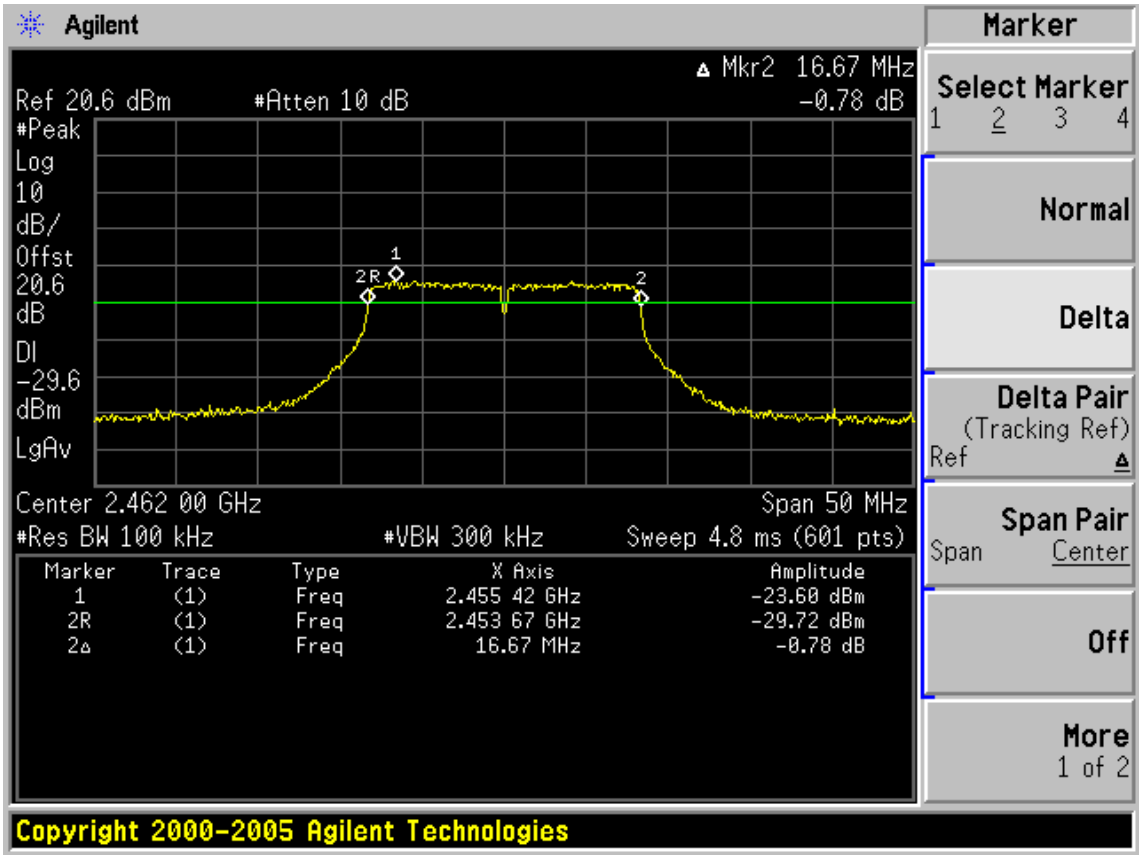
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



8. OUTPUT POWER TEST

8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 09	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May.08, 09	1Year

8.2.Limit(FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

8.3.Test Procedure

The transmitter output was connected to a Spectrum Analyzer through a 20dB Attenuator, and use the channel power measure function of Spectrum Analyzer to read out the peak output power of each chain’s power.

8.4.Test Results

EUT: BNRZ100 M/N:BNRZ100							
Power: DC 5V from PC Input AC 120V/60Hz							
Data Rate:11b 1Mbps；11g 6Mbps							
Ambient Temperature:23℃			Relative Humidity: 60%				
Test date: 2009-08-31			Test site: RF site		Tested by: Sunny-lu		
Test CH	11b 11g	CH1 2412MHz CH6 2437MHz CH11 2462MHz					
Cable loss:0.6dB Attenuator:20dB							
Mode	CH	PK Read (dBm)	Average Read (dBm)	Average Result (dBm)	PK Result (dBm)	Limit (dBm)	Conclusion
11b	CH1	-2.30	-5.48	15.12	18.30	30.00	PASS
	CH6	-2.92	-6.05	14.55	17.68	30.00	PASS
	CH11	-3.32	-6.39	14.21	17.28	30.00	PASS
11g	CH1	0.16	-6.04	14.56	20.76	30.00	PASS
	CH6	0.24	-5.95	14.65	20.84	30.00	PASS
	CH11	0.29	-5.86	14.74	20.89	30.00	PASS
Note1: According Exploratory test,These data rate have the maximum output power							
Result= Read level +cable loss+Attenuator							

9. POWER SPECTRAL DENSITY TEST

9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 09	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May.08, 09	1Year

9.2.Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

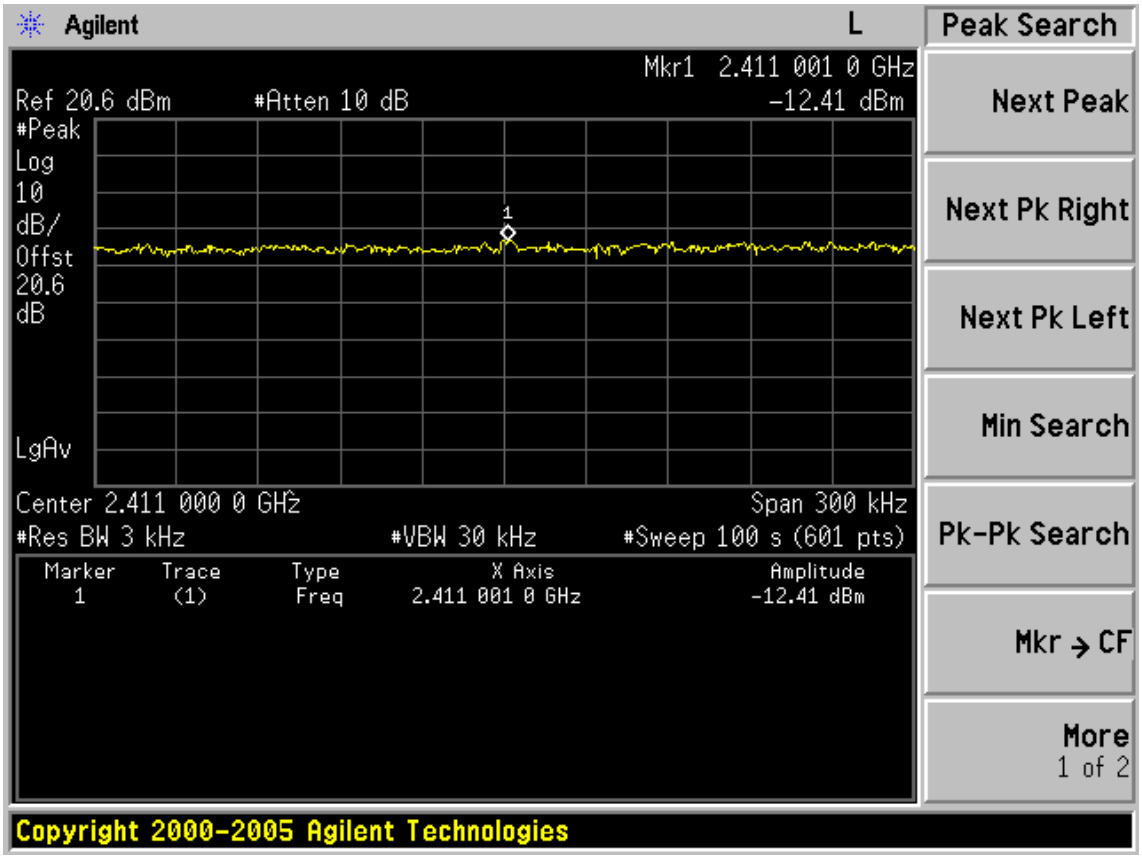
9.3.Test Procedure

The transmitter output was connected to a spectrum analyzer. The maximum power density level was measured by spectrum analyzer with 3kHz RBW and 30kHz VBW, sweep time=span/3kHz.

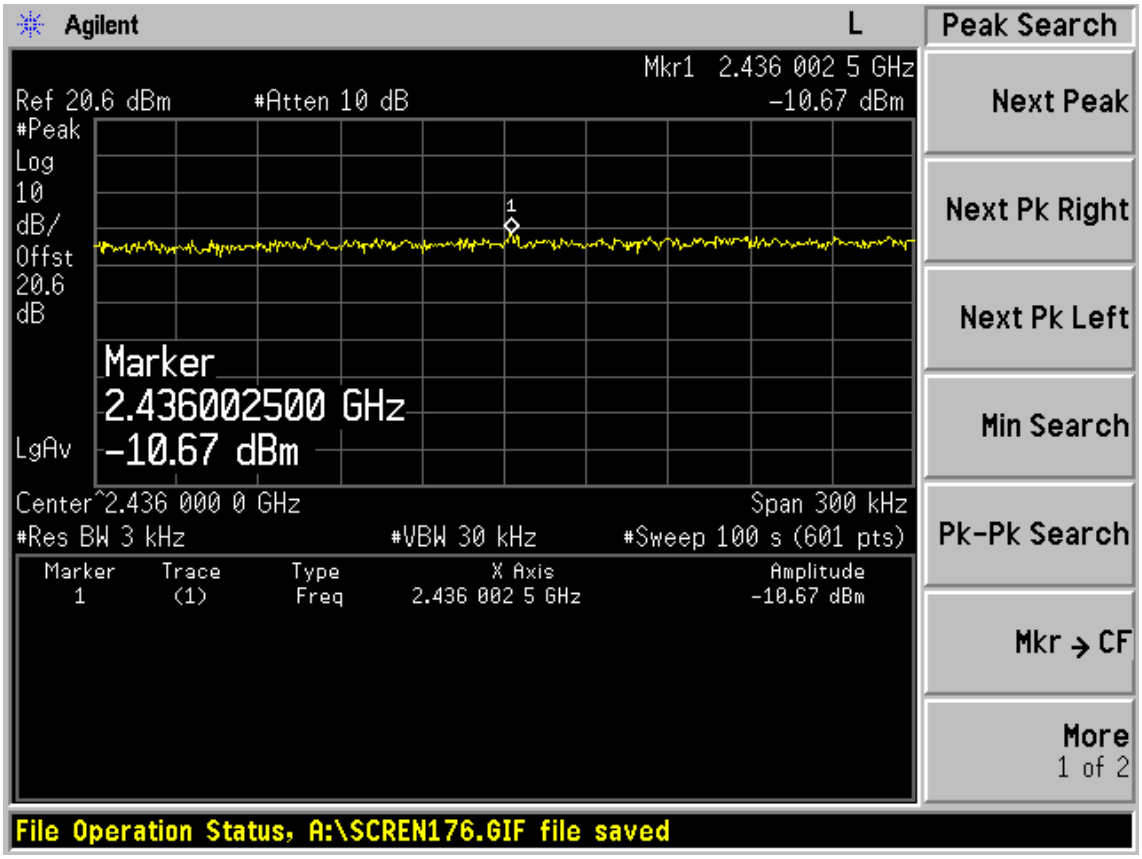
9.4.Test Results

EUT:BNRZ100 M/N:BNRZ100				
Power: DC 5V From PC Input AC 120V/60Hz				
Data Rate:11b: 1Mbps；11g：6Mbps				
Ambient Temperature:23℃		Relative Humidity: 60%		
Test date:2009/08/31		Test site: RF site	Tested By: Sunny-lu	
Test CH	11b 11g	CH1:2412MHz CH6:2437MHz CH11:2462MHz		
Mode	CH	Result (dBm)	Limit(dBm)	Conclusion
11b	CH1	-12.41	8.00	**Pass**
	CH6	-10.67	8.00	**Pass**
	CH11	-10.36	8.00	**Pass**
11g	CH1	-13.01	8.00	**Pass**
	CH6	-11.04	8.00	**Pass**
	CH11	-11.14	8.00	**Pass**
Note1:According Exploratory test, These data rate have the maximum output power				

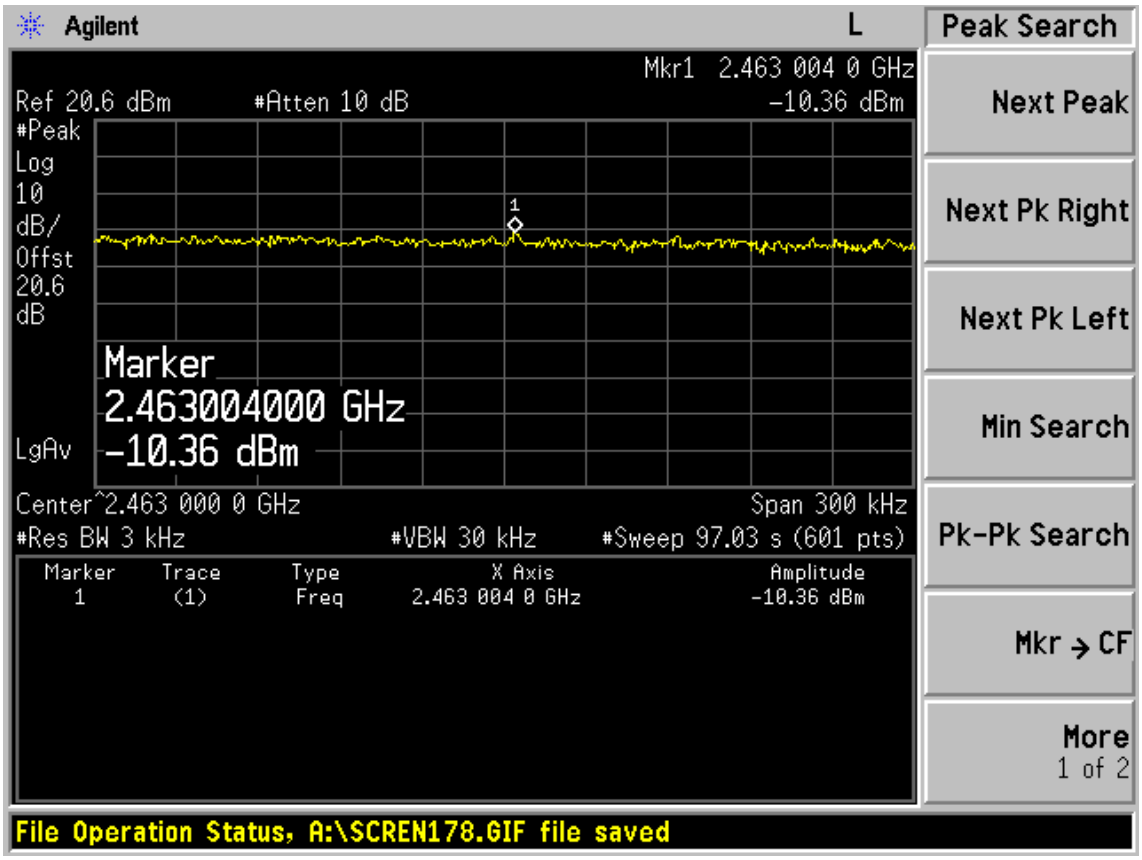
Test Mode: IEEE 802.11b TX
Test CH1: 2412MHz



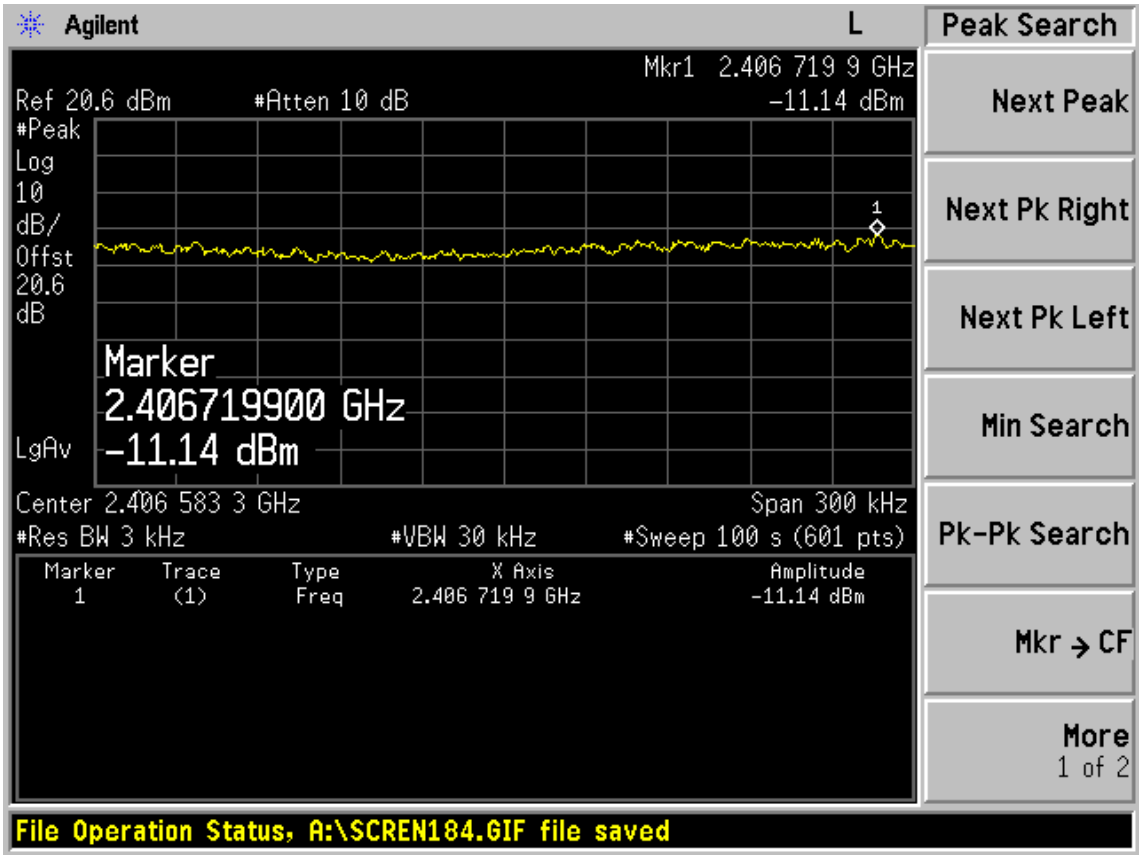
Test CH6: 2437MHz



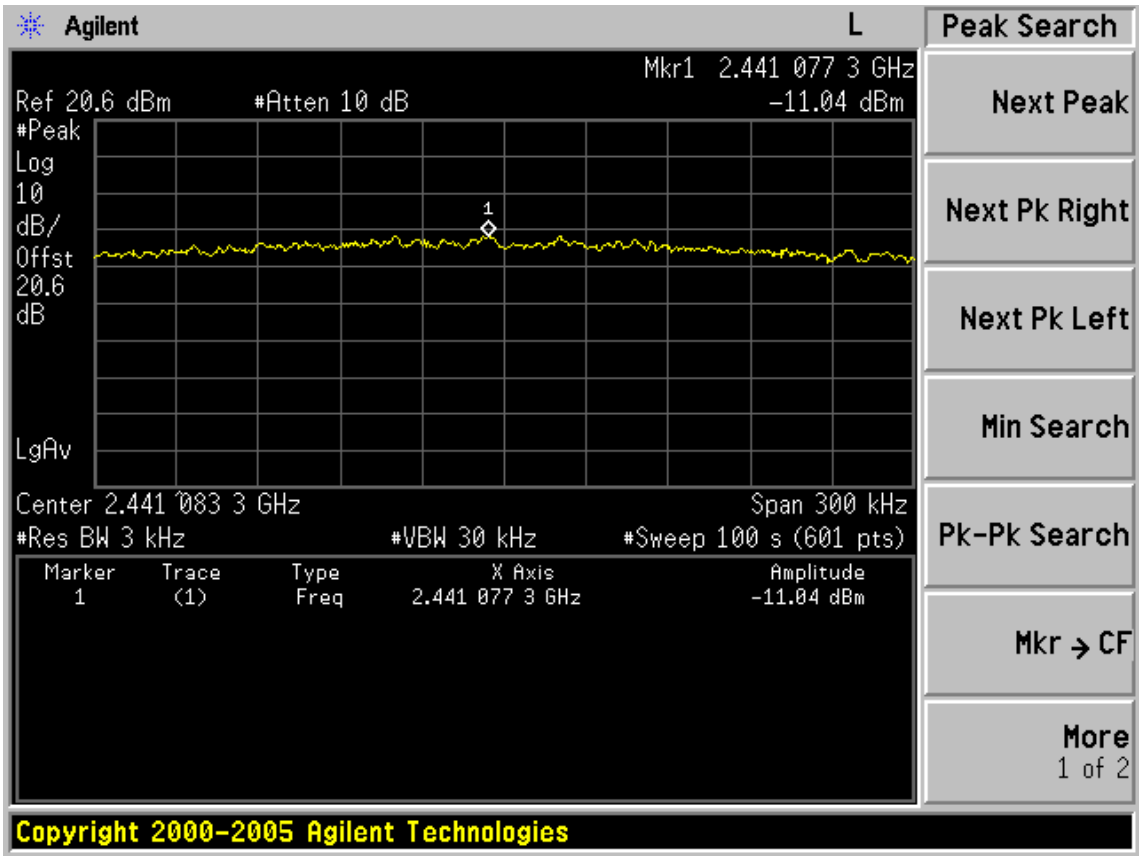
Test CH11: 2462MHz



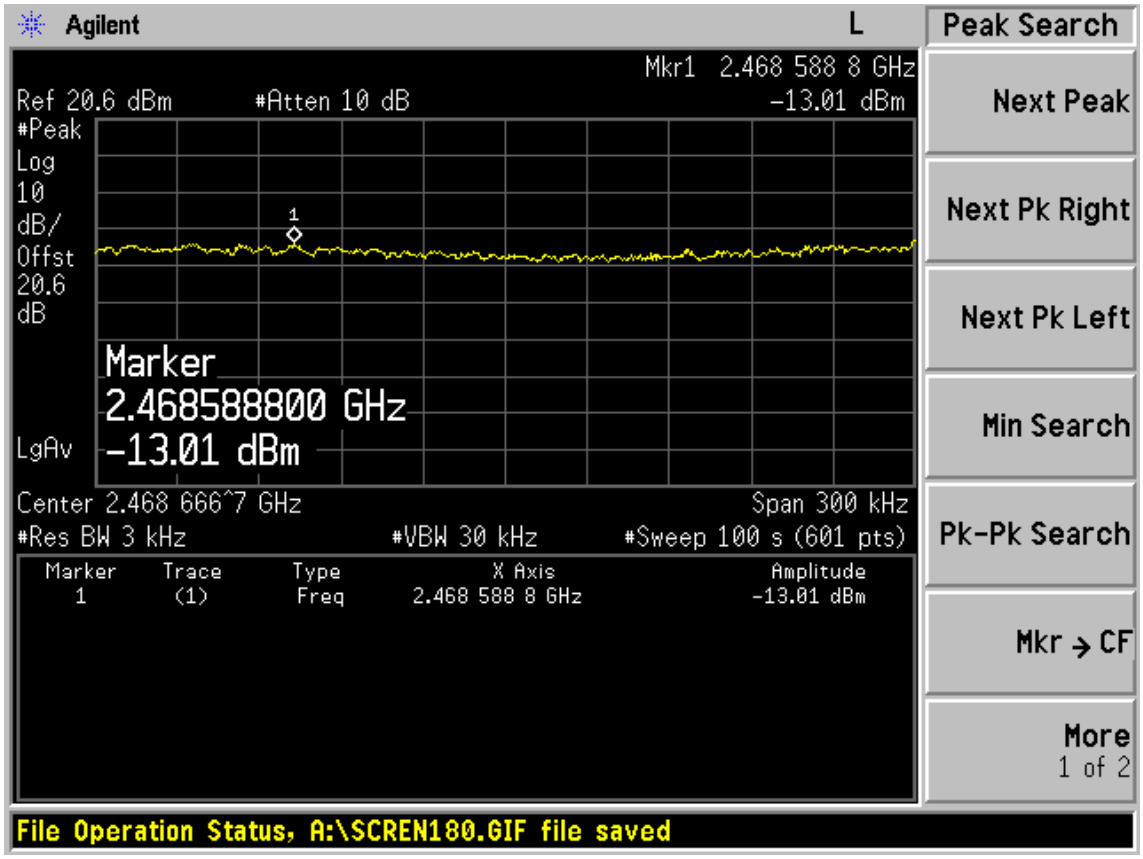
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



10. ANTENNA REQUIREMENT

10.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

10.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used for this product is an integral Patch antenna (see EUT photo) that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of this antenna is only 1.54dBi.

11.DEVIATION TO TEST SPECIFICATIONS

[NONE]