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CERTIFICATION TEST REPORT
PART 15.247C
IC RSS-210

For The Wireless Internet Appliance
Model: CHY-A01-A

FCC ID: VDCA
IC: 7612A-A

PREPARED FOR:

Chumby Industries, Inc.
12264 El Camino Real, Suite 203
San Diego, CA 92130

Prepared on: September 3, 2008

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DOCUMENT HISTORY

REVISION	DATE	COMMENTS
-	September 3, 2008	Prepared By: Dustin Chapin
-	September 3, 2008	Initial Release: Alan Laudani

NOTE: Nemko USA, Inc. hereby makes the following statements so as to conform to Chapter 10 (Test Reports) Requirements of ANSI C63.4 (2003) "Methods and Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz":

- The unit described in this report was received at Nemko USA, Inc.'s facilities on February 29, 2008.
- Testing was performed on the unit described in this report on February 29, 2008 to September 2, 2008.
- The Test Results reported herein apply only to the Unit actually tested, and to substantially identical Units.
- This report does not imply the endorsement of the Federal Communications Commission (FCC), Industry Canada, NVLAP or any other government agency.

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CERTIFICATION

Nemko USA, Inc., an independent Electromagnetic Compatibility (EMC) Test Laboratory, produced this Test Report and performed the Radio Frequency Interference (RFI) testing and data evaluation contained herein.

Nemko USA, Inc.'s measurement facility is currently registered with the United States Federal Communications Commission (FCC) in accordance with the provisions of 47 United States Code (CFR) Part 2, Subpart I, Section 2.948(a). A current description of Nemko USA, Inc.'s measurement facility is on file with the FCC. Nemko USA Inc. has additionally satisfied the FCC that it complies with the requirements set forth in 47 CFR Part 2, Subpart I, Section 2.948(d) regarding the accreditation of EMC laboratories.

The RFI testing, test data collection and test data evaluation were accomplished in accordance with the ANSI C63.4–2003 Standard, and in accordance with the applicable sections of the FCC rules (47 CFR Parts 2 and 15). The testing was also accomplished in accordance with Industry Canada's ICES-003 standard for unintentional radiating device per EMCAB-3, Issue 3 (May 1998). The administrative summary of this test report provides a description of the test sample.

I hereby certify that the test data, test data evaluation, and equipment configurations used to compile this test report are a true and accurate representation of the test sample's radio frequency interference characteristics as of the test date(s), and, for the design of the test sample.

Alan Laudani
EMC Engineer

1. ADMINISTRATIVE DATA AND TEST SUMMARY

1.1. Administrative Data

CLIENT:	Chumby Industries, Inc. 12264 El Camino Real, Suite 203 San Diego, CA 92130
CONTACT: E-Mail:	Mary Jungman mary@chumby.com
DATE (S) OF TEST:	February 29, 2008 to September 2, 2008
EQUIPMENT UNDER TEST (EUT):	Wireless Internet Appliance
MODEL:	CHY-A01-A
CONDITION UPON RECEIPT:	Suitable for Test
TEST SPECIFICATION:	FCC, Part 15.247, Subpart C Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5850 MHz and 24.0-24.25 GHz bands and RSS 210 (Issue 7, June 2007) Annex 8 - Frequency Hopping and Digital Modulation Systems Operating in the Bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

1.2. Test Summary

Specification	***Frequency Range***	***Compliance Status***
FCC, CFR 47, Section 15.207	0.15 MHz - 30.00 MHz	PASS
FCC, CFR 47, Section 15.209	30 MHz – 10th Harmonic	PASS
FCC CFR 47, §15.247 Plus Bandedge	2412– 2462 MHz	PASS
RSS-210 - Low Power License Exempt Radio-communication Devices (All Frequency Bands)	2412 – 2462 MHz	PASS

Testing was started at 30 MHz as there are no RF signals generated below this frequency.

Refer to the test results section for further details.

Alan Laudani
EMC Engineer

2. SYSTEM CONFIGURATION

2.1. Description and Method of Exercising the EUT

The CHY-A01-A is a Wireless Internet Appliance known as a Chumby. The Chumby is a device that displays information (flash based feeds or 'widgets') from the internet using your wireless Wi-Fi 802.11b/g internet router and connection. Log on to Chumby.com on your PC and select the custom (personalized) content you want it to display. When turned on it displays customized online matter to the user. Features include a 3.5" LCD color touch screen, two (2) external USB ports, stereo speakers, headphone jack, squeeze sensor, and accelerometer (motion sensor). The dimensions are 5 1/2" wide, 4 1/4" tall, 3 1/4" deep at the base, and 2 1/4" deep at the top. Two (2) power supplies were presented for evaluation. The chip antenna was set aside for conductive RF measurements. The antenna is not accessible by the user.

2.2. System Components and Power Cables

DEVICE	MANUFACTURER MODEL # SERIAL #	POWER CABLE
EUT - Wireless Internet Appliance	Chumby Industries, Inc. Model: CHY-A01-A Serial #: Not Applied	2 m, 18 AWG x 2, DC Power Plug from AC Wall Adaptor
EUT – AC Wall Adaptor	Chumby Model: MPB-12012500	Direct Plug In, 2 Prong
EUT – AC Wall Adaptor	Phihong Model: PSA 15R-120P	Direct Plug In, 2 Prong with Worldwide Adapters
Support – Wireless b/g Broadband Router	Cisco Systems – Linksys Model: WRT54GL v1.1 S/N: CL7B1G703827	2 m, 22 AWG x 2, DC Power Plug from AC Wall Adaptor
Support – Router Power Supply	Cisco Systems – Linksys Model:	Direct Plug In, 2 Prong
Support – Headphones	Denon Model: AH-D950	N/A
Support – USB thumb drive	No Name Model: Chumby Supplied	N/A
Support – Mouse	Microsoft Model: Basic Optical Mouse S/N: 69657-OEM-7374601-60445	N/A

2.3. Device Interconnection and I/O Cables

Connection	I/O Cable
Support Headphones to EUT	3.2 m, 1/8th inch stereo plug
Support USB drive to EUT	USB port direct plug-in
Support Mouse to EUT	1.8 m, USB

2.4. Design Modifications for Compliance

The following design modifications were made to the EUT during testing.

None. No design modifications were made to the EUT during testing.

2.5. Technical Specifications of the EUT

Manufacturer: Chumby Industries, Inc.

Operating Frequency: 2412 MHz to 2462 MHz in the 2400-2483.5 MHz Band

Rated Power: 29.5 dBm

Modulation: DSSS and OFDM

Antenna Connector: Internal within enclosure – not accessible to user

Power Source: 120 VAC, 60 Hz

3. DESCRIPTION OF TEST SITE AND ENVIRONMENT

3.1. Description of Test Site

The test site is located at 11696 Sorrento Valley Road, Suite F, San Diego, CA 92121. The site is physically located 18 miles Northwest of downtown San Diego. The general area is a valley 1.5 miles east of the Pacific Ocean. This particular part of the valley tends to minimize ambient levels, i.e. radio and TV broadcast stations and land mobile communications. The three and ten-meter Open Area Test Site (OATS) is located behind the office/lab building. It conforms to the normalized site attenuation limits and construction specifications as set in the EN 55022 (1987), CISPR 16 and 22 (1985) and ANSI C63.4-2001 documents. The OATS normalized site attenuation characteristics are verified for compliance every year, and registered with the Federal Communications Commission under Registration Number 90579 and Industry Canada under 2040B-1 and 2040B-2.

3.2. Test Environment

All tests were performed under the following environmental conditions:

Temperature range	:	17 – 22 ^{o}C
Humidity range	:	29 - 55%
Pressure range	:	87 - 105 kPa
Power supply range	:	120VAC 60Hz (±15%)

4. DESCRIPTION OF TESTING METHODS

4.1. Introduction

As required in 47 CFR, Parts 2 and 15, the methods employed to test the radiated and conducted emissions (as applicable) of the EUT are those contained within the American National Standards Institute (ANSI) document ANSI C63.4–2003, titled "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz." All applicable FCC Rule Sections that provide further guidance for performance of such testing are also observed.

For General Test Configuration please refer to Figure 1 on the following page.

Digital devices sold in Canada are required to comply with the Interference Causing Equipment Standard for Digital Apparatus, ICES-003. These test methods and limits are specified in the Canadian Standards Association's (CSA) Standard C108.8-M1983 (1-1-94 version) and are "essentially equivalent" with FCC, Part 15 and CISPR 22 (EN55022) rules for unintentional radiators per EMCAB-3, Issue 3 (May 1998). No further testing is required for compliance to ICES-003.

4.2. Configuration and Methods of Measurements for Conducted Emissions

Section 7 of ANSI C63.4 determines the general configuration of the EUT and associated equipment, as well as the test platform for conducted emissions testing. Tabletop devices are placed on a non-conducting surface 80 centimeters above the ground plane floor and 40 centimeters from the ground plane wall. The EUT and associated system are configured to operate continuously, representing a "normally operating" mode. The EUT is powered via a Line Impedance Stabilization Network (LISN). The emissions are recorded using the required bandwidth of 9 kHz in the quasi-peak mode. The average amplitude is also observed employing a 10 kHz bandwidth to determine the presence of broadband RFI. When such interference is caused by broadband sources (as defined by the FCC and ANSI Rules), the deviation guidelines contained in Section 11.3.1 of ANSI C63.4 are employed, which allows a correction factor of 13 dB to be subtracted from the quasi-peak reading. The emission levels are then compared to the applicable FCC limits to determine compliance.

4.3. Configuration and Methods of Measurements for Frequency Identification

When performing all testing of equipment, the actual emissions of the EUT are segregated from ambient signals present within the laboratory or the open-field test range. Preliminary testing is performed to ensure that ambient signals are sufficiently low to allow for proper observation of the emissions from the EUT. Incoming power lines are filtered using a 120 dB, 30-ampere; 115/208-volt filter to assist in reducing ambient signals for tests of levels of conducted emissions. Ambients within the laboratory are compared to those noted at the nearby open-field site to discriminate between signals produced from the EUT and ambient signals. In the event that a significant emission is produced by the EUT at a frequency which is also demonstrating significant ambient signals, the spectrum analyzer is placed in the peak mode, the bandwidth is narrowed, the EUT's signal is centered on the analyzer, the scan width is expanded to 50 kHz while monitoring the audio to ensure that only the EUT signal is present, the analyzer is switched to quasi-peak mode, and the level of the EUT signal is recorded.

4.4. Configuration and Methods of Measurements for Radiated Emissions

Section 8 of ANSI C63.4 determines the general configuration and procedures for measuring the radiated emissions of equipment under test. Initially, the primary emission frequencies are identified inside the test lab by positioning a broadband receive antenna one meter from the EUT to locate frequencies of significant radiation. Next, the EUT and associated system are placed on a turntable on a ten meter open area test site (registered with the FCC in accord with its Rules and ANSI C63.4) and the receive antenna is located at a distance of ten meters from the EUT.

The EUT and associated system are configured to operate continuously, representing a "normally operating" mode. All significant radiated emissions are recorded when maximum radiation on each frequency is observed, in accordance with part 8 of ANSI C63.4–2003 and Section 15.33 of the FCC Rules. To ensure that the maximum emission at each discrete frequency of interest is observed, the receive antenna is varied in height from one to four meters and rotated to horizontal and vertical polarities, and the turntable is also rotated to determine the worst emitting configuration. The numerical results of the test are included herein to demonstrate compliance.

The numerical results that are applied to the emissions limits are arrived at by the following method:
Example: A=RR+CL+AF
A = Amplitude dBµV/m
RR = Receiver Reading dBµV
CL = cable loss dB
AF = antenna factor dB/m

Example Frequency = 110MHz
18.5 dBµV (spectrum analyzer reading)
+3.0 dB (cable loss @ frequency)
21.5 dBµV
+15.4 dB/m (antenna factor @ frequency)
36.9 dBµV/m Final adjusted value

The final adjusted value is then compared to the appropriate emission limit to determine compliance.

5. Test Results

5.1. Conducted Emissions – Transceive Mode

Part 15.207(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

7.2.2 The purpose of this test is to measure unwanted radio frequency currents induced in any AC conductor external to the equipment which could conduct interference to other equipment via the AC electrical network. Except when the requirements applicable to a given device state otherwise, for any licence-exempt radiocommunication device equipped to operate from the public utility AC power supply, either directly or indirectly, the radio frequency voltage that is conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown below. The tighter limit applies at the frequency range boundaries. The conducted emissions shall be measured with a 50 ohm/50 microhenry line impedance stabilization network

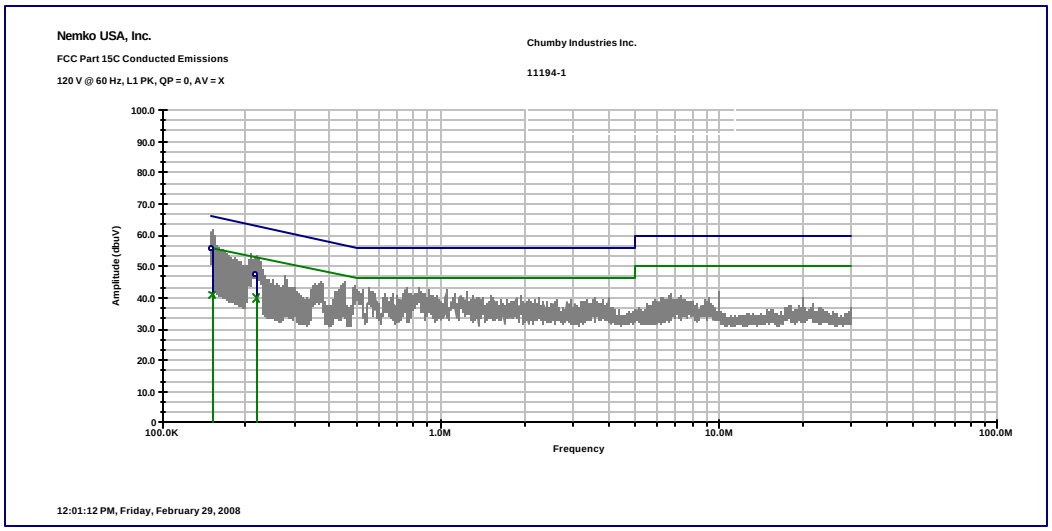
Frequency Range (MHz)	**Conducted Limit (dBµV)**	
	Quasi-Peak	**Average**
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

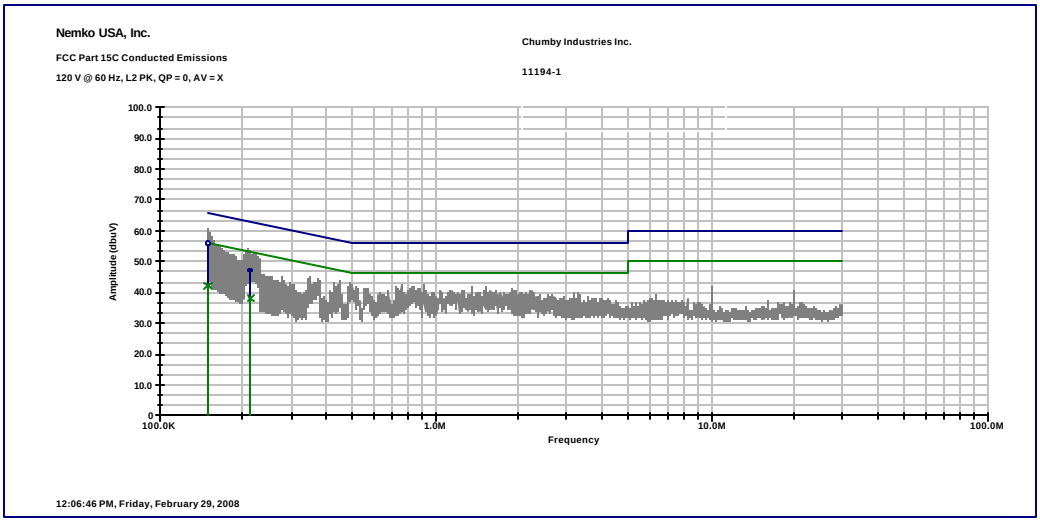
*Decreases with the logarithm of the frequency.

5.2. Conducted Emissions Test Data – Transceive Mode

Chumby Power Supply MPB-12012500

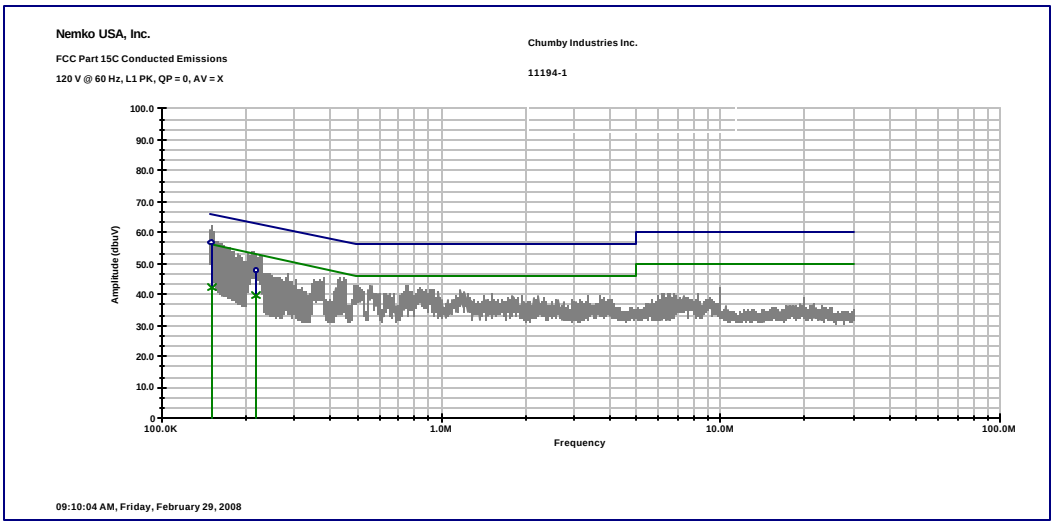
Client	**Chumby Industries, Inc.**	Temperature	73	°F
PAN #	**11194-1**	Relative Humidity	38	%
EUT Name	**Wireless Internet Appliance**	Barometric Pressure	30.24	Hg
EUT Model	CHY-A01-A	Test Location	Enclosure 1	
Governing Doc	CFR 47, Part 15B	Test Engineer	Dustin Chapin	
Basic Standard	Sec. 15.207	Date	2/29/08	
Parameters	Peak RBW: 100kHz VBW: 100kHz Quasi-Peak: RBW 9kHz, VBW 30 kHz Average: RBW 9kHz, VBW 30 kHz Quasi-Peak Limit Blue Line, Average Limit Green Line			

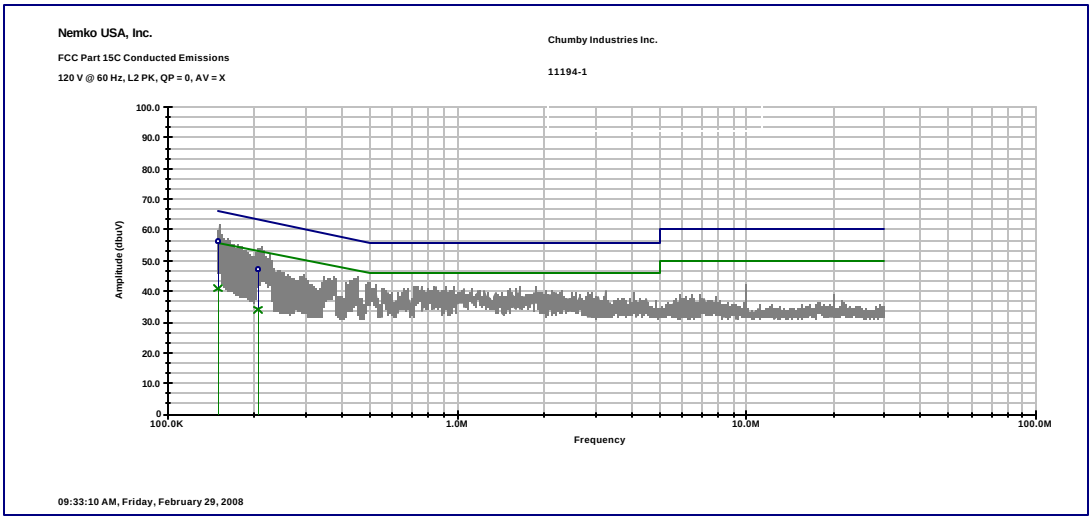




Phihong Power Supply PSA 15R-120P

Client	Chumby Industries, Inc.	Temperature	73	°F
PAN #	11194-1	Relative Humidity	38	%
EUT Name	Wireless Internet Appliance	Barometric Pressure	30.24	Hg
EUT Model	CHY-A01-A	Test Location	Enclosure 1	
Governing Doc	CFR 47, Part 15B	Test Engineer	Dustin Chapin	
Basic Standard	Sec. 15.107	Date	2/29/08	
Parameters	Peak RBW: 100kHz VBW: 100kHz Quasi-Peak: RBW 9kHz, VBW 30 kHz Average: RBW 9kHz, VBW 30 kHz			
Legend	.Quasi-Peak Limit Blue Line, Average Limit Green Line			





5.3. Bandwidth

RSS-Gen 4.6.1
When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.
The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

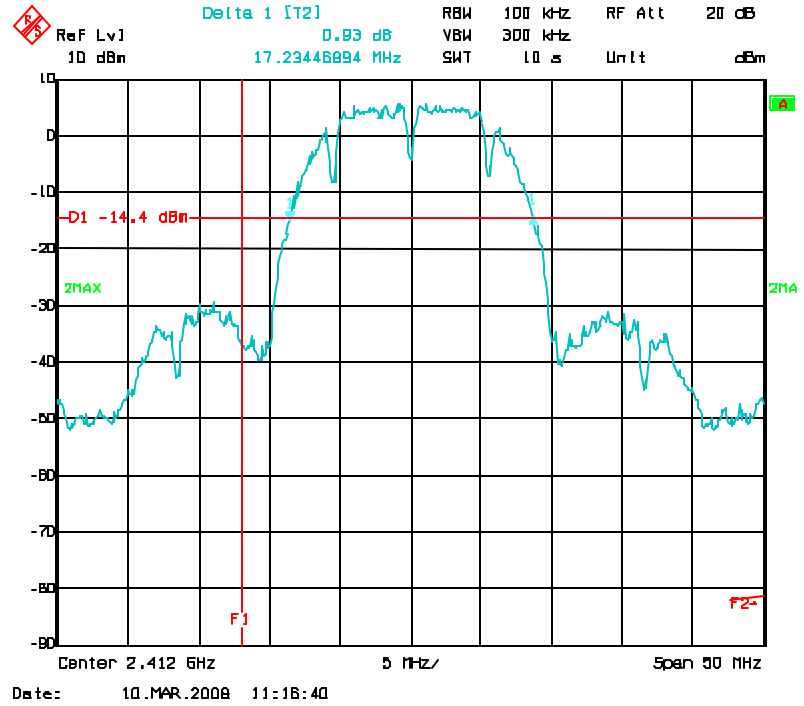
Sample Number:	CHY-A01-A	**Temperature:**	71°F
Date:	3/6/08 and 7/14/08	**Humidity:**	50%
Modification State:	Lo/Mid/High Channels	**Tester:**	Dustin Chapin
		Laboratory:	NEMKO SR1

15.247(a)(1)
Measurements were made conductively. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 20 dB lower than PEAK level. The bandwidth was determined from where the channel output spectrum intersected the display line.

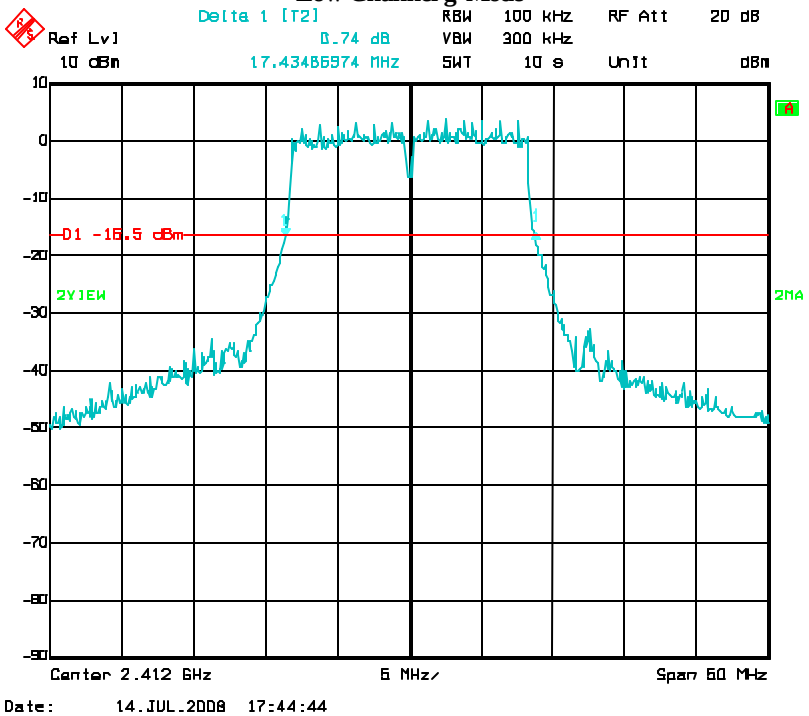
Test Results:

20 dB Bandwidth			
Mode	**Low Channel**	**Mid Channel**	**High Channel**
b	17.2 MHz	17.2 MHz	17.2 MHz
g	17.4 MHz	17.7 MHz	17.4 MHz

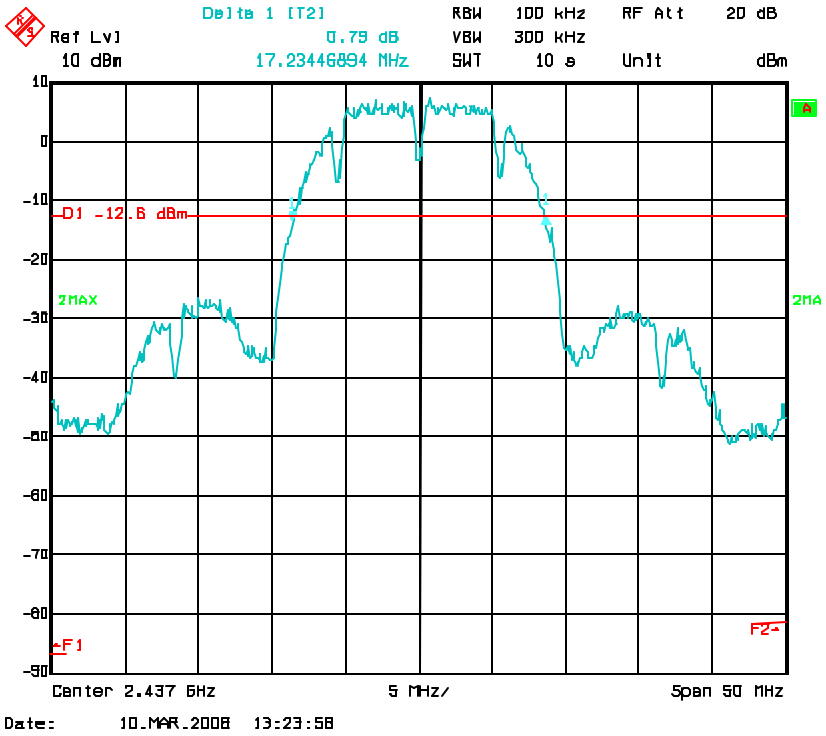
Low Channel b-Mode



Low Channel g-Mode



Mid Channel b-Mode



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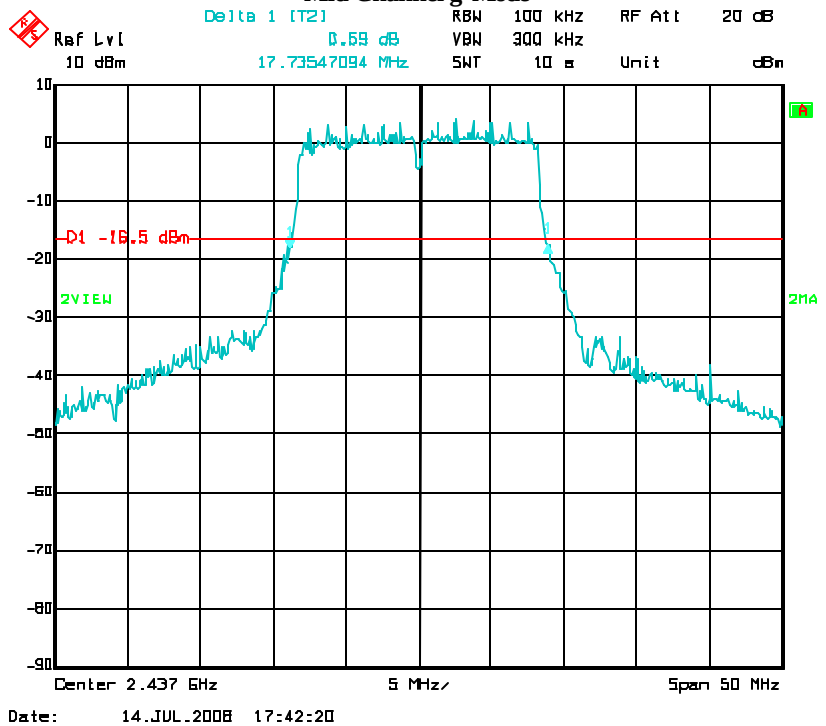

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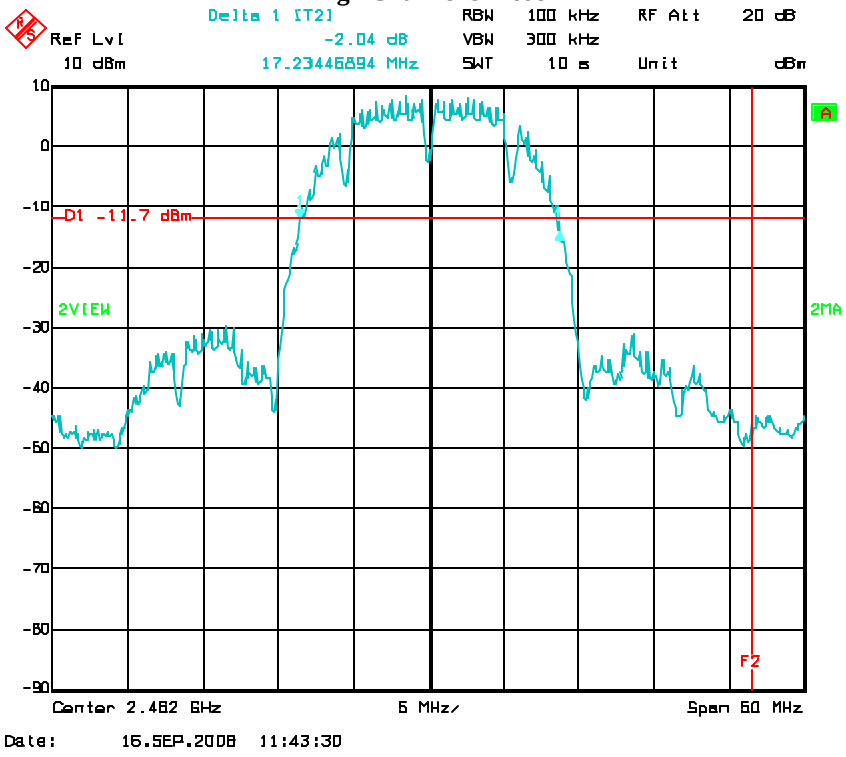
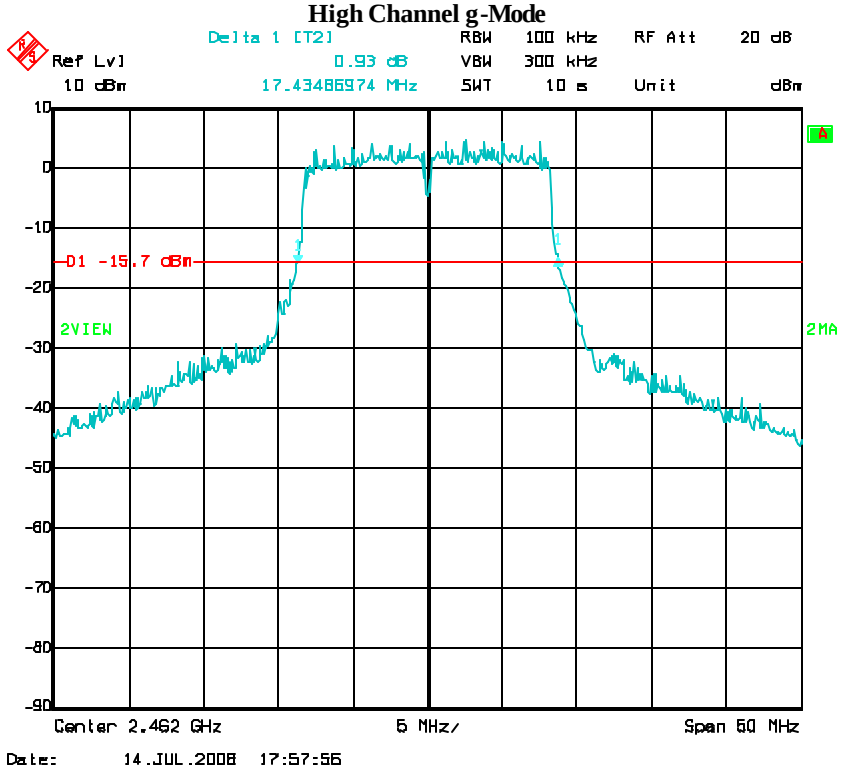


High Channel g-Mode



5.4. Out-of-band Conducted Emissions

A8.5 Out-of-band Emissions

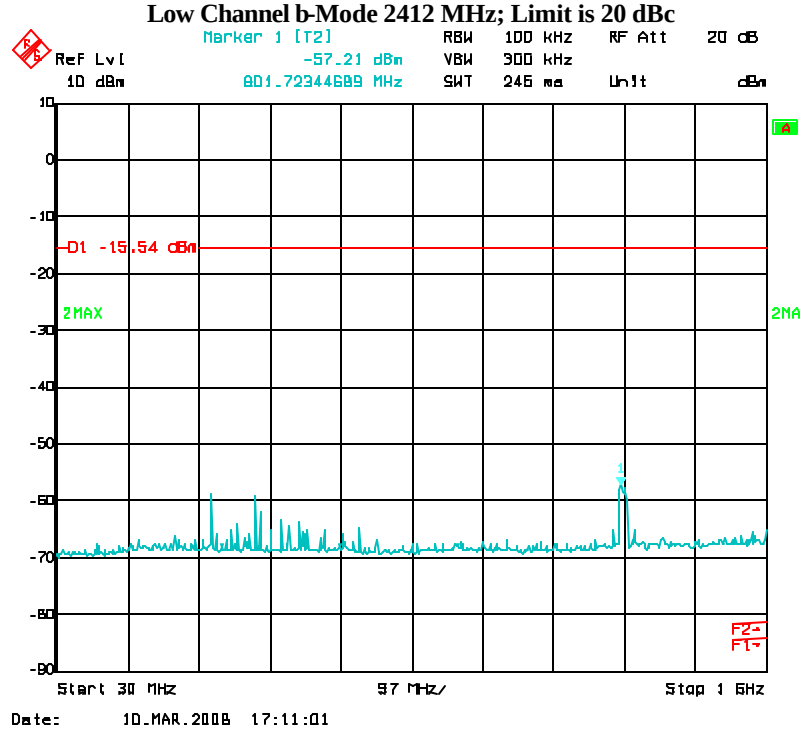
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under Section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required.

15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Sec. 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a) (see Sec. 15.205(c)).

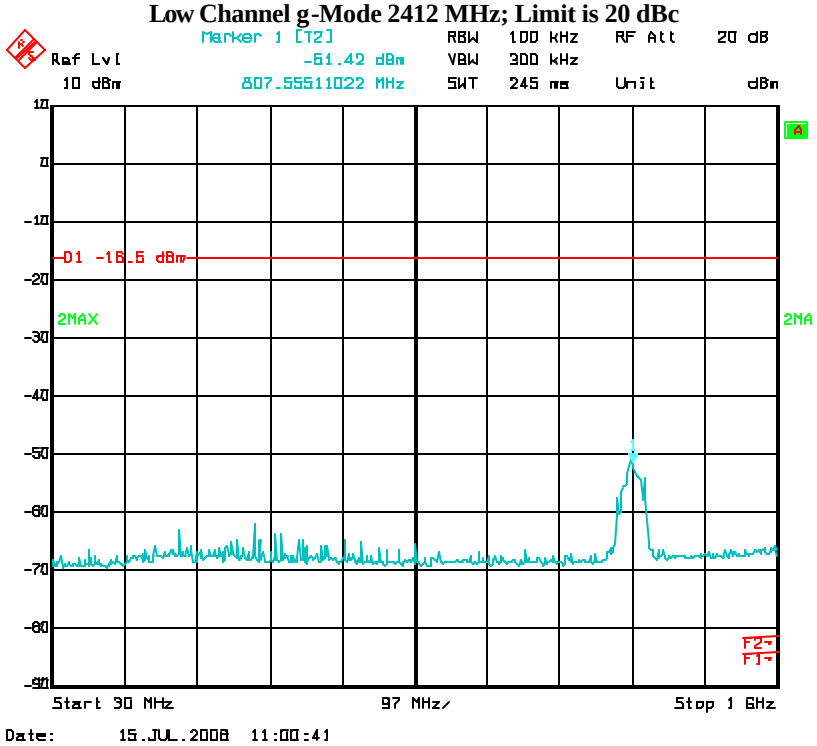
Sample Number:	CHY-A01-A	**Temperature:**	19°C
Date:	3/10/08 and 7/14/08	**Humidity:**	23%
Modification State:	Lo/Mid/High Channels	**Tester:**	Dustin Chapin
		Laboratory:	NOATS

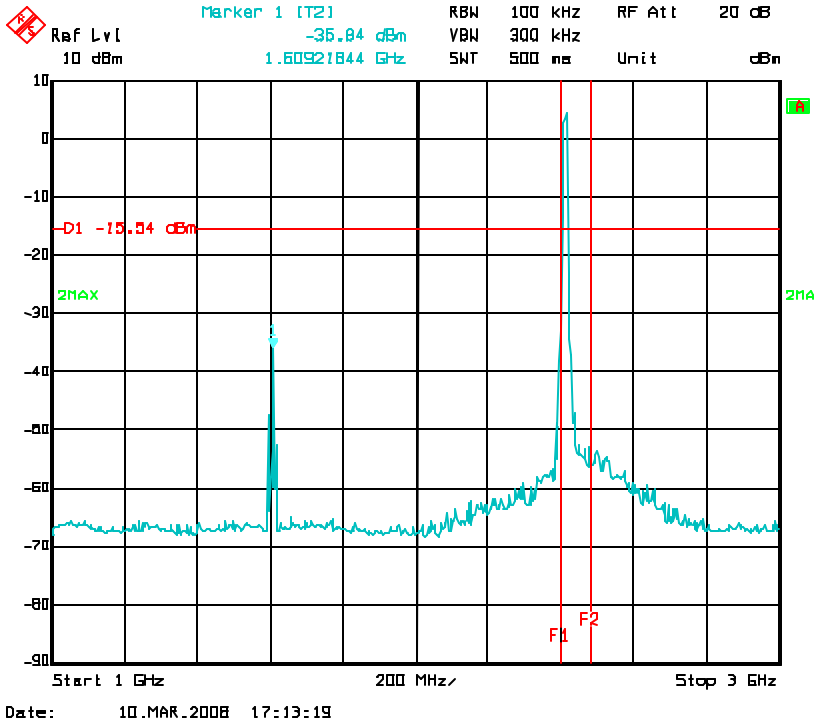
Test Results: See plots below.

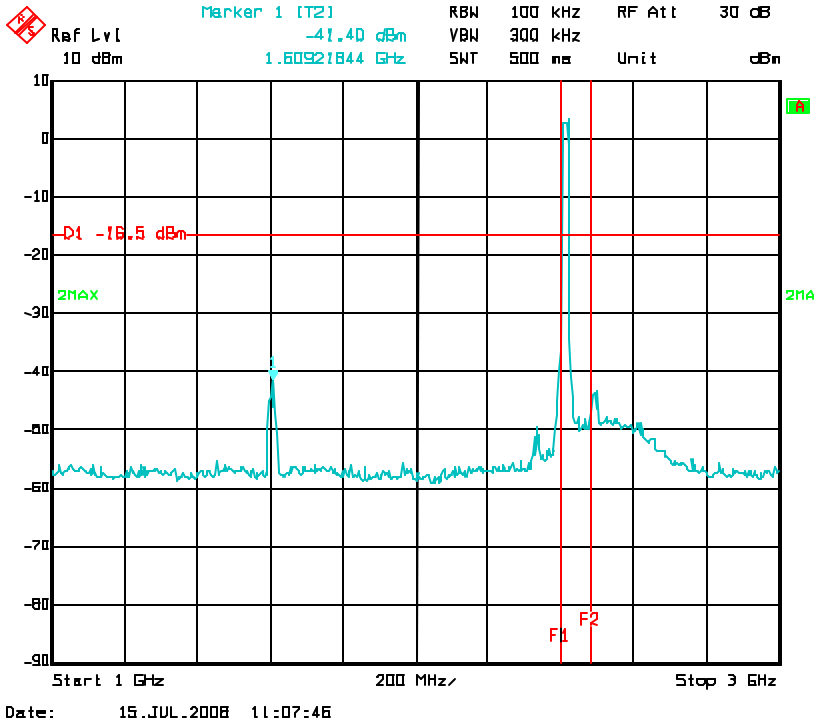
Low Channel b-Mode 2412 MHz; Limit is 20 dBc



Low Channel g-Mode 2412 MHz; Limit is 20 dBc




Marker 1 [T2]
-35.84 dBm
1.60921844 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -15.54 dBm
2MAX
2MA
F1
F2
Start 1 GHz
200 MHz/
Stop 3 GHz
Date: 10.MAR.2008 17:13:19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1.60921844 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 30 dB
Unit dBm
Ref Lvl
10 dBm
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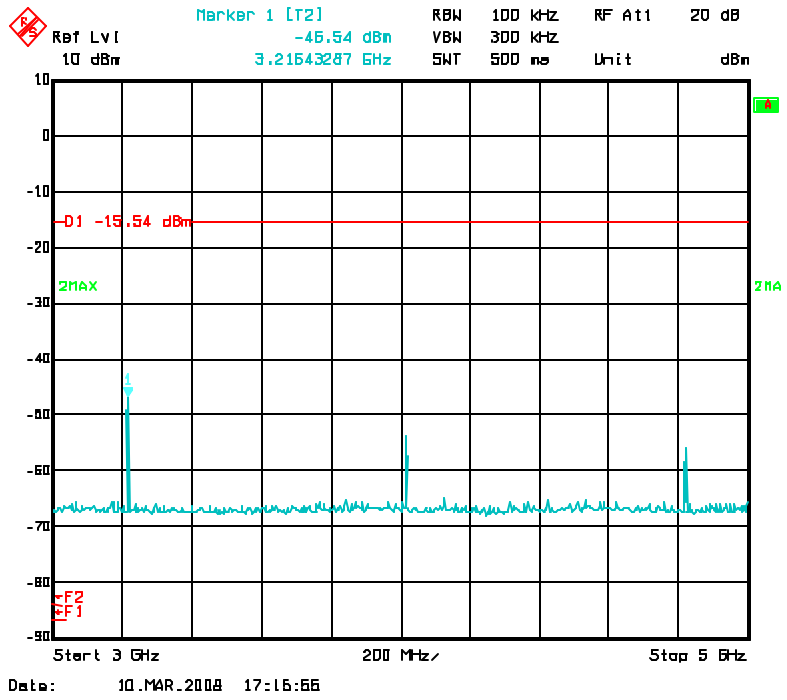
2MA
F1
F2
Start 1 GHz
200 MHz/
Stop 3 GHz
Date: 15.JUL.2008 11:07:46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-46.54 dBm
3.21643287 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 20 dB
Unit dBm
Ref Lvl
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Stop 5 GHz
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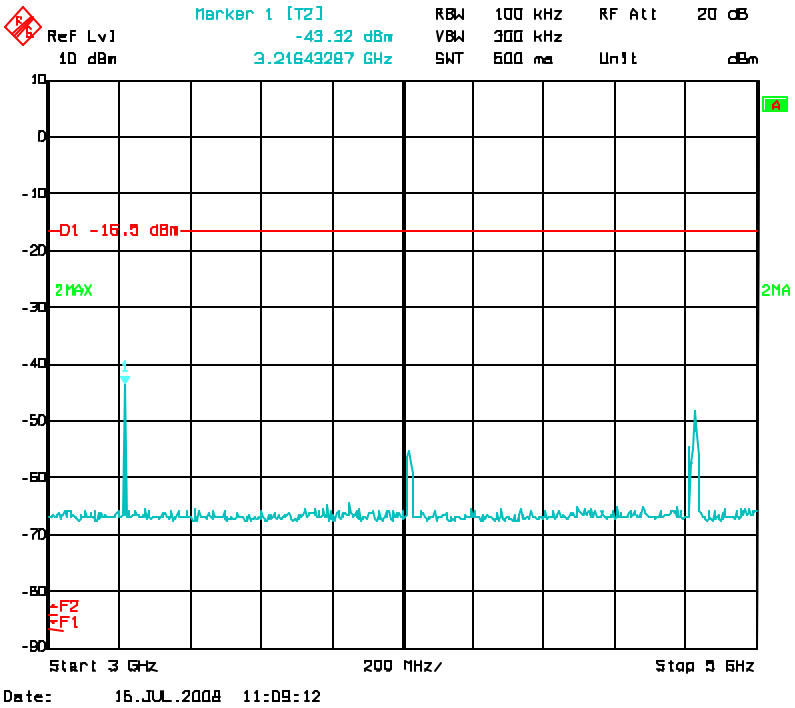
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-43.32 dBm
3.21643287 GHz
RBW 100 kHz
VBW 300 kHz
SWT 600 ms
RF Att 20 dB
Unit dBm
Ref Lvl
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D1 -16.5 dBm
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F2
F1
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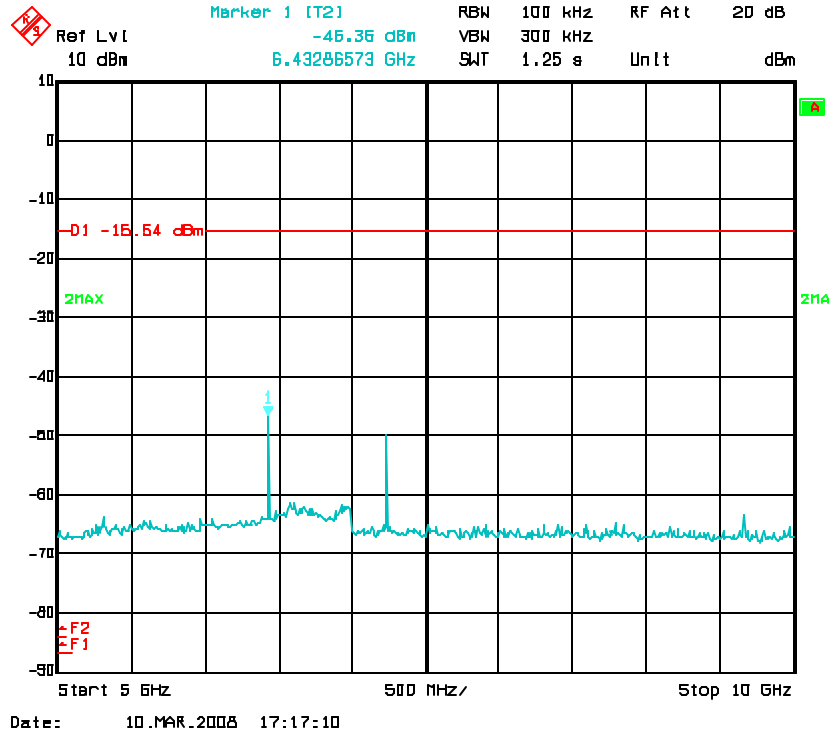
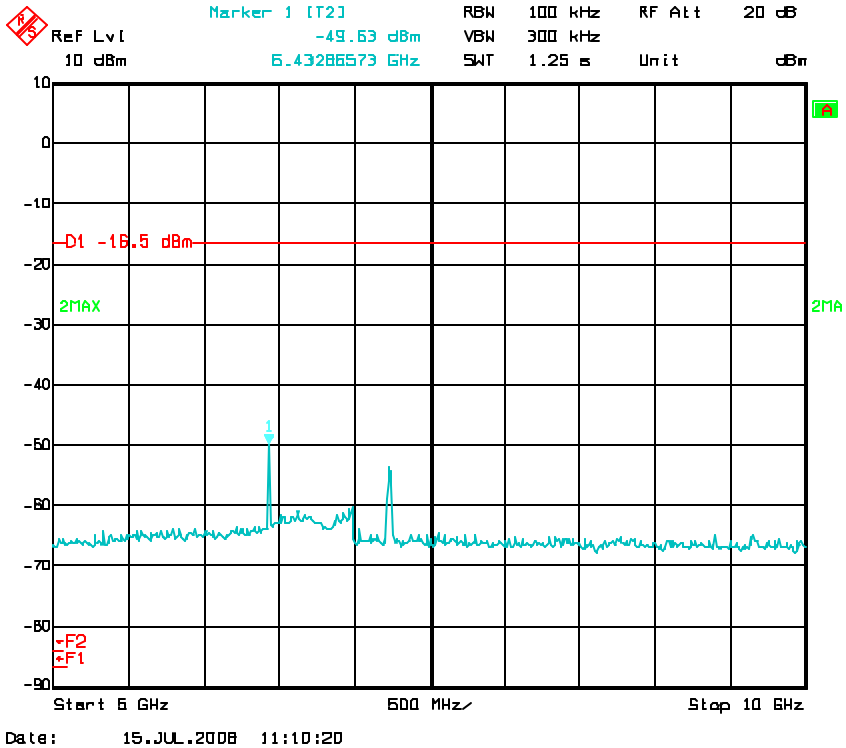
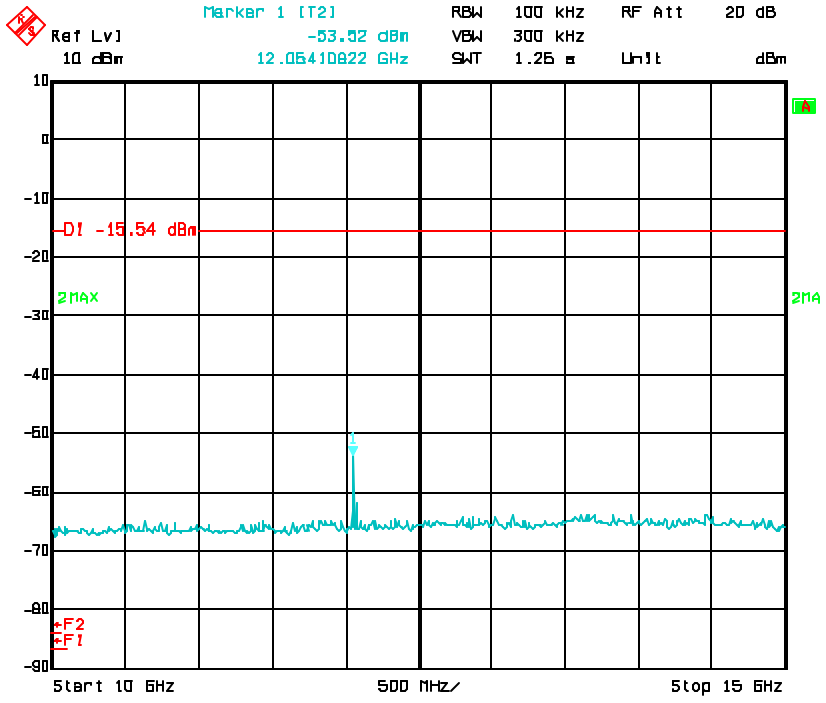
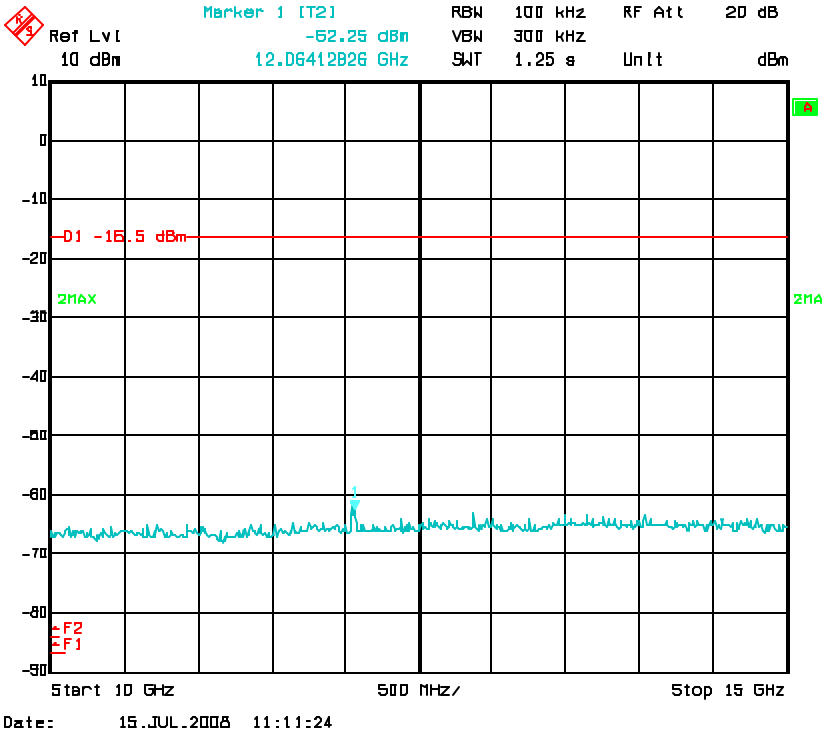
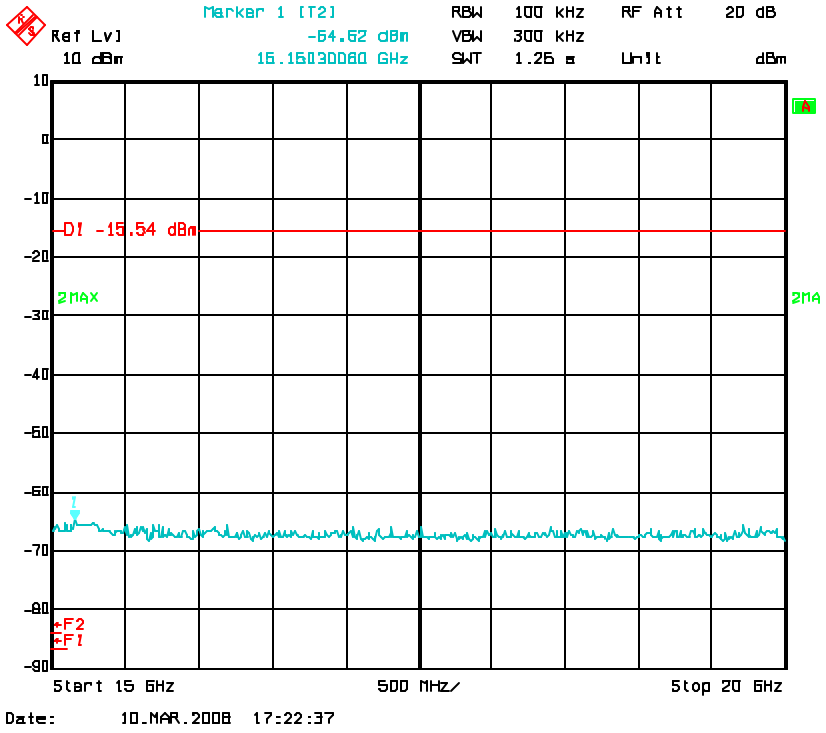
Stop 5 GHz
Date: 16.JUL.2008 11:09:12

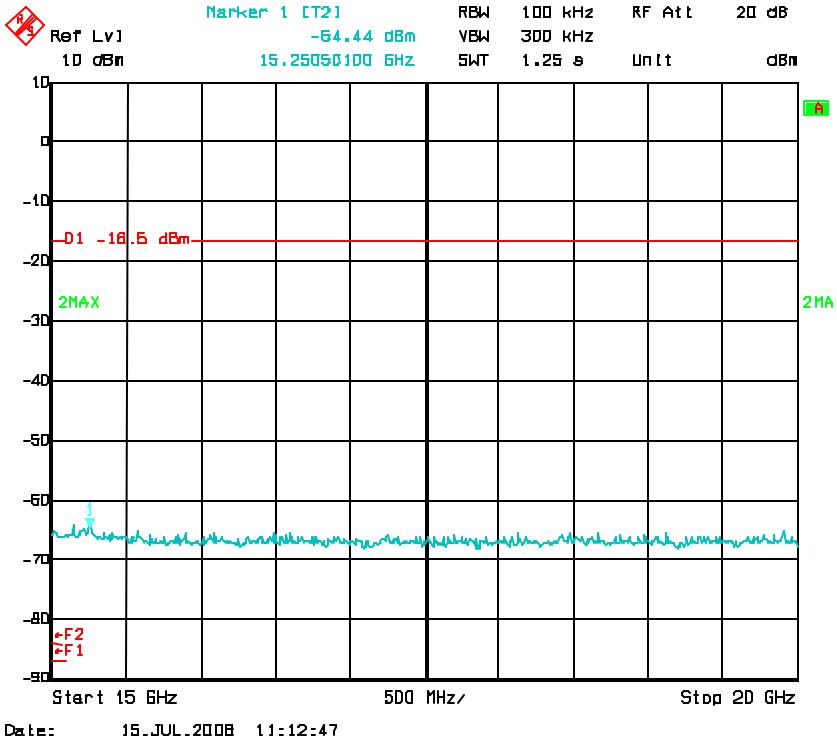

Marker 1 [T2]
-46.36 dBm
6.43286573 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -16.54 dBm
2MAX
2MA
F2
F1
Start 5 GHz
500 MHz/
Stop 10 GHz
Date: 10.MAR.2008 17:17:10

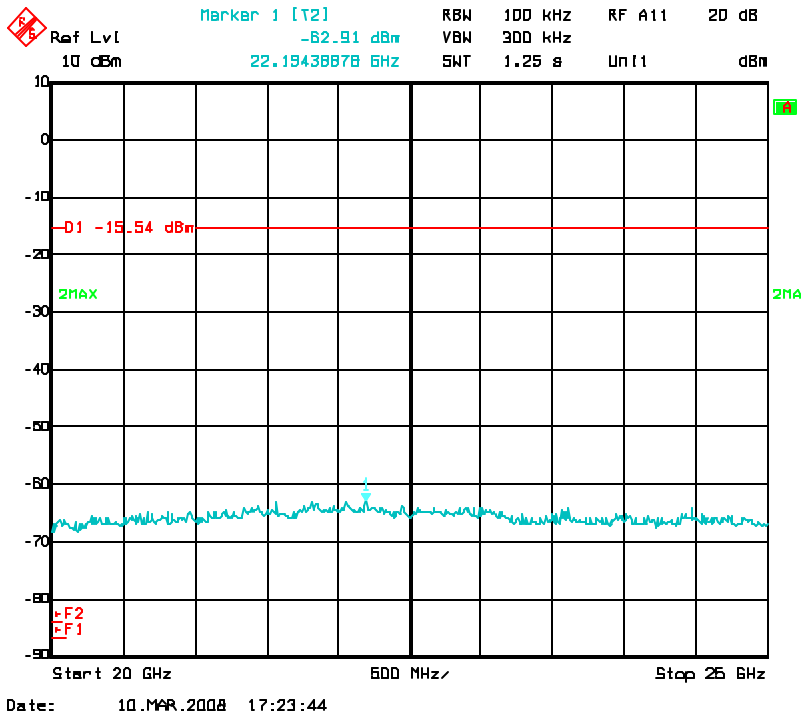

Marker 1 [T2]
-49.63 dBm
6.43286573 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -16.5 dBm
2MAX
2MA
F2
F1
Start 5 GHz
500 MHz/
Stop 10 GHz
Date: 15.JUL.2008 11:10:20

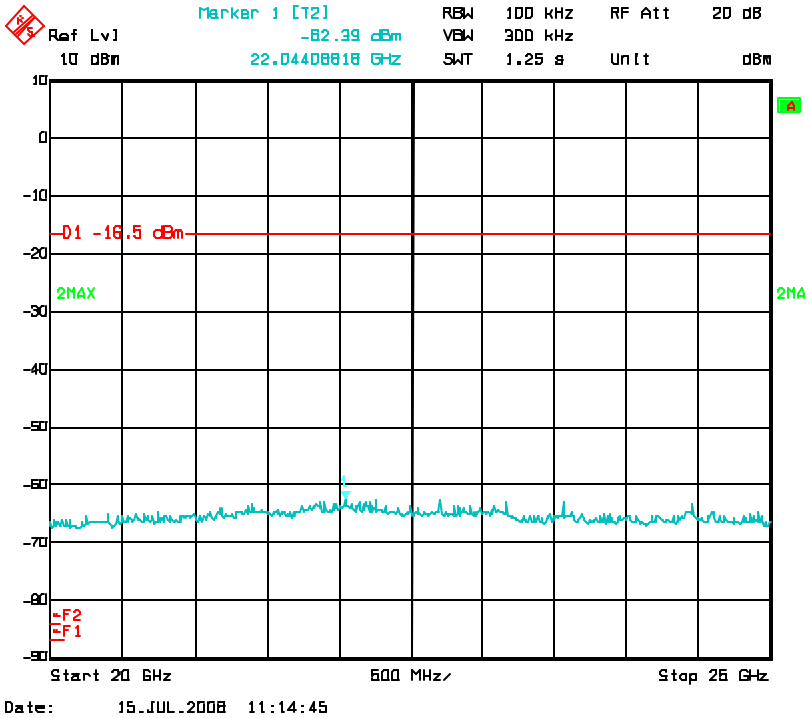

Marker 1 [T2]
RBW 100 kHz
RF Att 20 dB
Ref Lvl
-53.52 dBm
VBW 300 kHz
10 dBm
12.0541D822 GHz
SWT 1.25 s
Unit dBm
D1 -15.54 dBm
2MAX
2MA
F2
F1
Start 10 GHz
500 MHz/
Stop 15 GHz
Date: 10.MAR.2008 17:19:21


Marker 1 [T2]
RBW 100 kHz
RF Att 20 dB
Ref Lvl
-52.25 dBm
VBW 300 kHz
10 dBm
12.DG412B2G GHz
SWT 1.25 s
Unit dBm
D1 -15.5 dBm
2MAX
2MA
F2
F1
Start 10 GHz
500 MHz/
Stop 15 GHz
Date: 15.JUL.2008 11:11:24


Marker 1 [T2]
-64.62 dBm
16.160300800 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -15.54 dBm
2MAX
2MA
F2
F1
Start 15 GHz
500 MHz/
Stop 20 GHz
Date: 10.MAR.2008 17:22:37


Marker 1 [T2]
-64.44 dBm
15.250501000 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -16.6 dBm
2MAX
2MA
F2
F1
Start 15 GHz
500 MHz/
Stop 20 GHz
Date: 15.JUL.2008 11:12:47





***See Appendix for Mid and High Channel**

5.5. Out-of-band Emissions / Radiated Emissions within Restricted Bands

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (uV/meter)	Measurement Distance (meter)
0.009-0.490	2400/F (kHz)	300
0.490-1.705	24000/F (kHz)	30
1.705-30.0	30	3
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Sec. 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a) (see Sec. 15.205(c)).

A8.5 Out-of-band Emissions

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under Section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required.

Sample Number:	CHY-A01-A	**Temperature:**	19°C
Date:	3/7/08	**Humidity:**	23%
Modification State:	Lo/Mid/High Channels	**Tester:**	Dustin Chapin
		Laboratory:	NOATS

Test Results:

Emissions reported below, Emissions were searched over a range of 30 MHz to 1000MHz and in the restricted bands from 1000 to 25000 MHz.
1m prescans investigations with both power supplies and both modes were preformed; the Chumby Power Supply (MPB-12012500) and b mode proved to be worst case shown below.
No emissions were detected within 20 dB of the limit other than the emissions recorded below.

Additional Observations:

The Spectrum was searched from 30MHz to the 10th Harmonic, 25000 MHz.
There are no emissions found that do not comply to the restricted bands defined in **FCC Part 15 Subpart C, 15.205** or **Part 15.247(d)**.

The EUT was investigated on three orthogonal axes.
The EUT was investigated for emissions for low, mid and high channels, no RF radio spurious emissions were detected within 20 dB of the limits.
Digital spurious emissions tabulated below which are present without regard to low, mid or high channel selection. Worst case emissions presented.

Radiated Measurements below 1GHz were performed at 3m with a Quasi-Peak detector (RBW 120kHz/VBW 300kHz) while Radiated Peak (RBW 1MHz/VBW 3MHz) and Average (RBW 1MHz/VBW 10Hz) measurements conducted above 1GHz.

Example
Frequency = 78.70 MHz
60.2 dBµV (spectrum analyzer reading)
+2.2 dB (cable loss @ frequency)
+6.9 dB/m (antenna factor @ frequency)
-32.2 dB (PreAmp Gain @ frequency)
37.1 dBµV/m Final adjusted value

Radiated Emissions Data

Job # : 11194-1 Date : 3/7/08 Page 1 of 1
NEX #: 102678 Time : 1200
Staff : DC

Client Name : Chumby Industries, Inc.
EUT Name : Wireless Internet Appliance
EUT Model # : CHY-A01-XXX-A Chumby PS
EUT Serial # : NA
EUT Config. : Streaming Audio & Widgets with Headphones
Wi-Fi transceiving mode

EUT Voltage : 120
EUT Frequency : 60
Phase: Single
NOATS X
SOATS
Distance < 1000 MHz: 3 m
Distance > 1000 MHz: 3 m

Specification : CFR47 Part 15, Subpart C, 15.209
Loop Ant. #: NA
Bicon Ant.#: 114 Temp. (°C) : 19
Log Ant.#: 111 Humidity (%) : 23
DRG Ant. # 752 Spec An.#: 711
Cable LF#: NOATS Spec An. Display #: 404
Cable HF#: 40ft QP #: 421
Preamp LF#: 902 PreSelect#: NA
Preamp HF# NA

Quasi-Peak	RBW: 120 kHz	
	Video Bandwidth 300 kHz	
Peak	RBW: 1 MHz	
	Video Bandwidth 3 MHz	
Average	RBW: 1 MHz	
	Video Bandwidth 10 Hz	

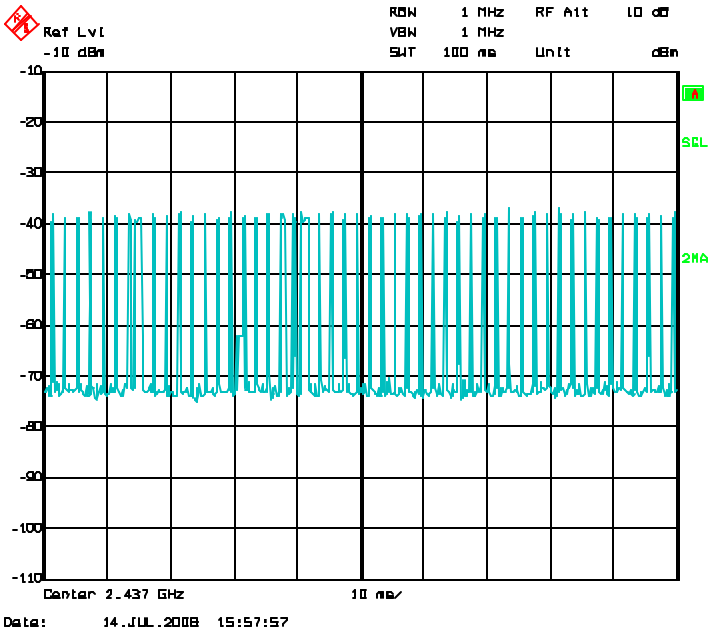
Measurements below 1 GHz are Quasi-Peak values, unless otherwise stated.
Measurements above 1 GHz are Average values, unless otherwise stated.

Meas. Freq. (MHz)	Meter Reading **Vertical**	Meter Reading **Horizontal**	Det.	EUT Side F/L/R/B	Ant. Height m	Max. Reading (dBµV)	Corrected Reading (dBµV/m)	Spec. limit (dBµV/m)	CR/SL Diff. (dB)	Pass Fail	Comment
31.30	45.3	34.6	Q	F/L	1.0	45.3	27.1	40.0	-12.9	Pass	
35.87	45.6	36.4	Q	F/R	1.0	45.6	26.5	40.0	-13.5	Pass	
49.86	48.9	47.2	Q	B/R	3.0	48.9	29.4	40.0	-10.6	Pass	
78.70	50.3	60.2	Q	F	2.1	60.2	37.1	40.0	-2.9	Pass	
122.48	51.7	51.5	Q	F/L	2.0	51.7	37.5	43.5	-6.0	Pass	
143.96	53.5	51.4	Q	R	1.8	53.5	36.5	43.5	-7.1	Pass	
215.70	42.8	49.2	Q	B/L	2.8	49.2	34.1	43.5	-9.4	Pass	
233.30	45.3	47.0	Q	B/L	1.0	47.0	31.4	46.0	-14.6	Pass	
279.90	39.2	34.8	Q	B	2.3	39.2	23.7	46.0	-22.3	Pass	
385.30	44.6	35.8	Q	B/R	1.1	44.6	31.8	46.0	-14.2	Pass	
632.30	44.6	39.0	Q	B/L	1.4	44.6	37.0	46.0	-9.1	Pass	
816.70	32.0	35.6	Q	B	1.3	35.6	30.9	46.0	-15.1	Pass	
912.00	38.3	42.3	Q	B/L	1.3	42.3	40.1	46.0	-5.9	Pass	
1050.00	32.3	31.5	P	F	1.0	32.3	60.4	74.0	-13.6	Pass	
1050.00	19.9	19.4	A	B	1.0	19.9	48.0	54.0	-6.0	Pass	
1090.00	39.5	39.1	P	B/L	1.0	39.5	67.6	74.0	-6.4	Pass	
1090.00	12.2	12.6	A	B/L	1.0	12.6	40.7	54.0	-13.3	Pass	
1620.00	26.0	25.7	P	F	1.0	26	56.1	74.0	-17.9	Pass	
1620.00	11.1	11.2	A	F	1.0	11.2	41.3	54.0	-12.7	Pass	

5.6. Duty Cycle Correction Factor

"b" and "g" Mode

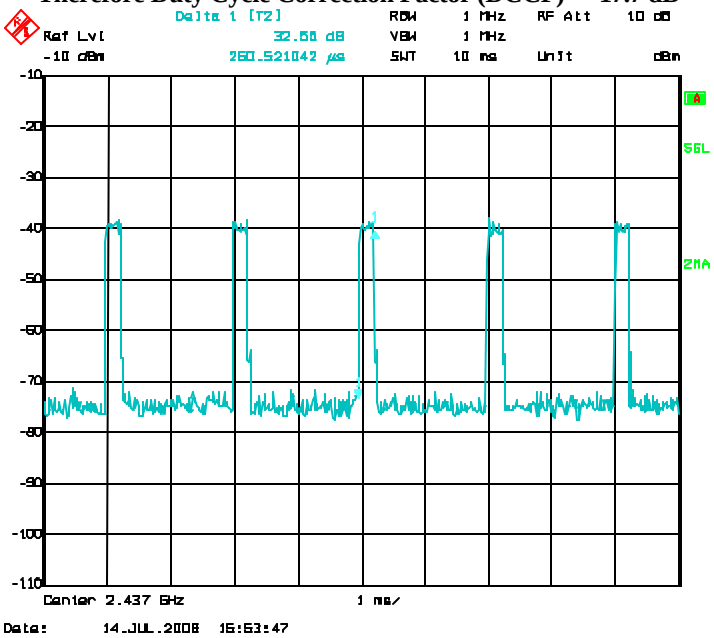
On Time in 100 ms



On time = 13.026 ms in 100 ms

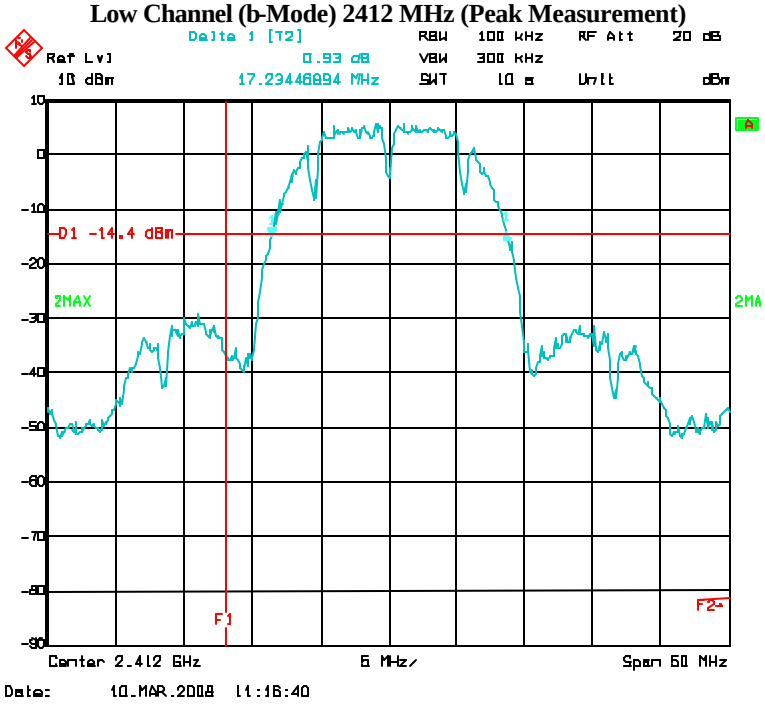
Duty Cycle Factor = 20 x log (13.03/100) , Not< 20 x Log (0.1)

Therefore Duty Cycle Correction Factor (DCCF) = -17.7 dB

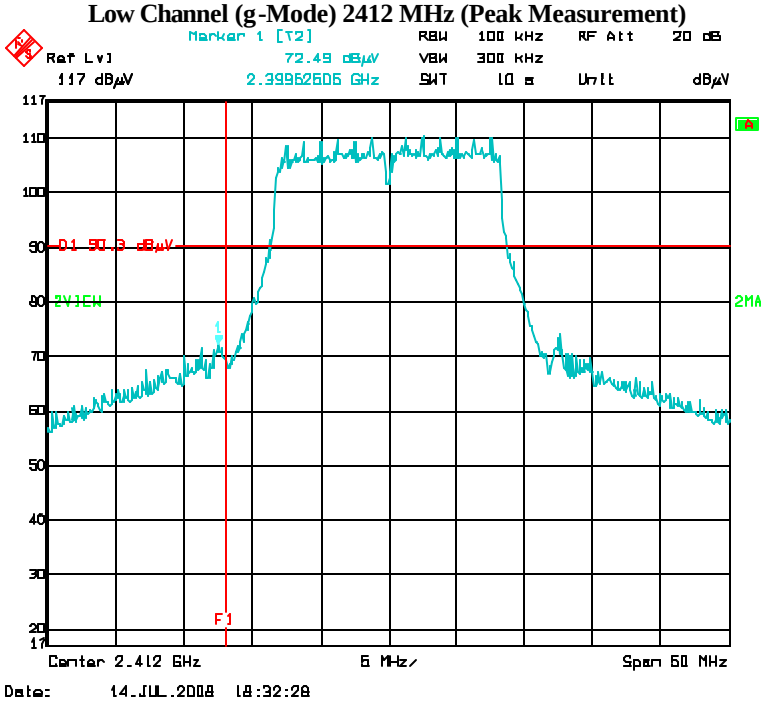


5.7. Bandedge Measurements

Low Channel (b-Mode) 2412 MHz (Peak Measurement)



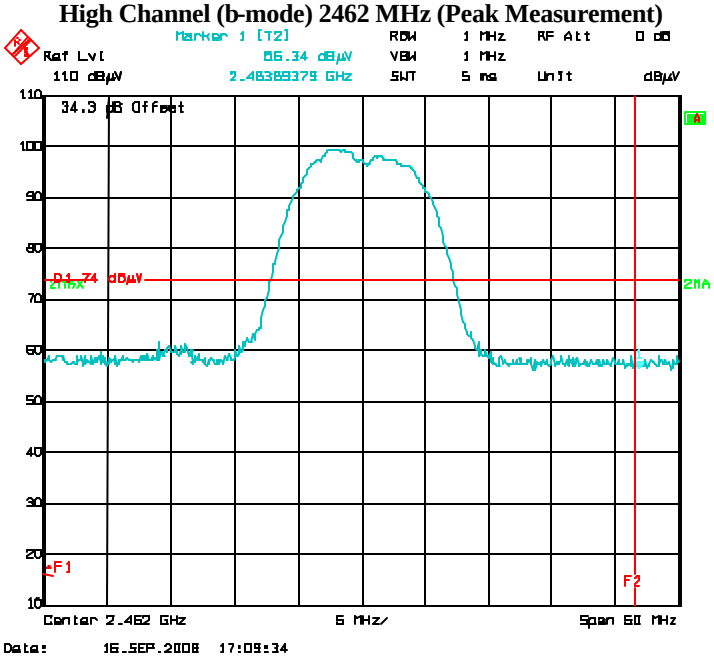
Low Channel (g-Mode) 2412 MHz (Peak Measurement)



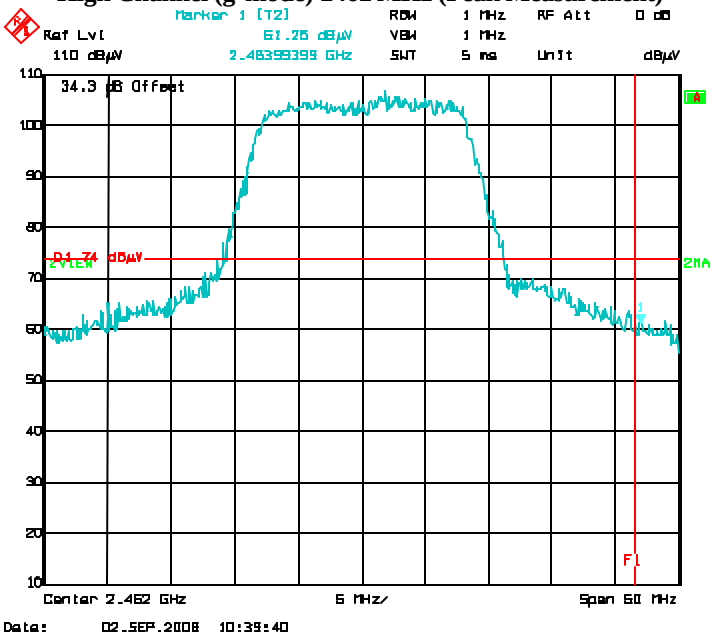
Frequency line is 2400MHz, Limit used is 20dB from emission peak

Low Channel 2412 MHz (Average Measurement), Average = Peak + DCCF

High Channel (b-mode) 2462 MHz (Peak Measurement)



High Channel (g-mode) 2462 MHz (Peak Measurement)



Frequency line is 2483.5 MHz, Peak Limit used is 74 dBµV/m

Average Limit = 54 dBµV/m, Average = Peak + DCCF

Average Emission = Peak (b) –17.7 dB or 61.84 dBµV/m –17.7 dB= 44.14 dBµV/m

Average Emission = Peak (g) –17.7 dB or 61.25 dBµV/m –17.7 dB= 43.55 dBµV/m

Radiated Emission Offset includes Antenna Factor 28.4 dB/m + cable loss 5.9 dB

5.8. Minimum 6dB RF Bandwidth

(a)(2) Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

A8.2 (a) The minimum 6 dB bandwidth shall be at least 500 kHz.

Sample Number:	**CHY-A01-A**	**Temperature:**	71°F
Date:	3/10/08 & 7/14/08	**Humidity:**	51%
Modification State:	Lo/Mid/High Channels	**Tester:**	**Dustin Chapin**
		Laboratory:	NEMKO SR1

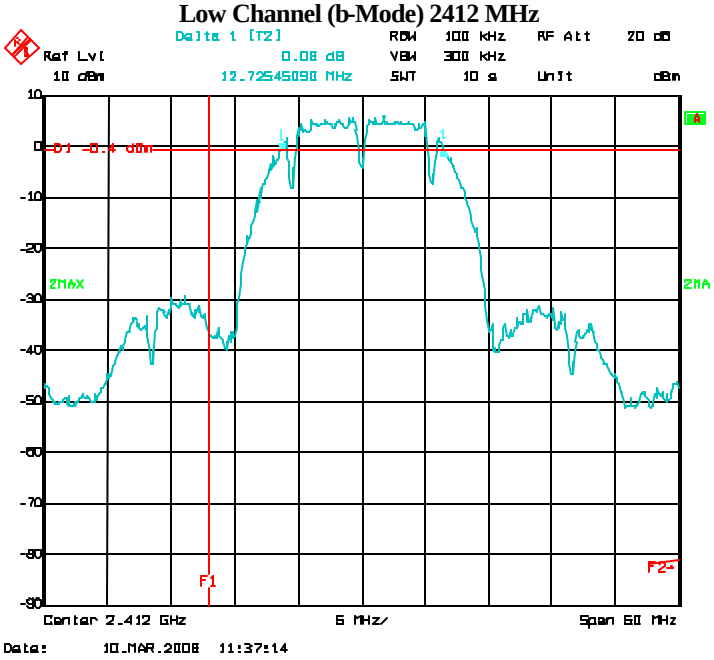
Test Results:

6dB Bandwidth:

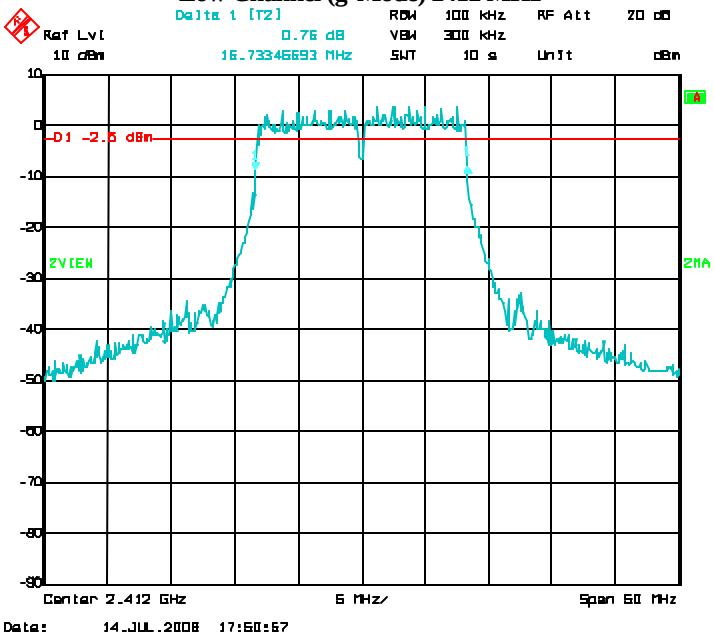
Measurements were made conductively. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

Mode	Channel Range	6 dB Bandwidth
"b"	Low (2412 MHz)	12.7 MHz
"b"	Mid (2437 MHz)	12.6 MHz
"b"	High (2462 MHz)	12.9 MHz
"g"	Low (2412 MHz)	16.7 MHz
"g"	Mid (2437 MHz)	16.4 MHz
"g"	High (2462 MHz)	16.4 MHz

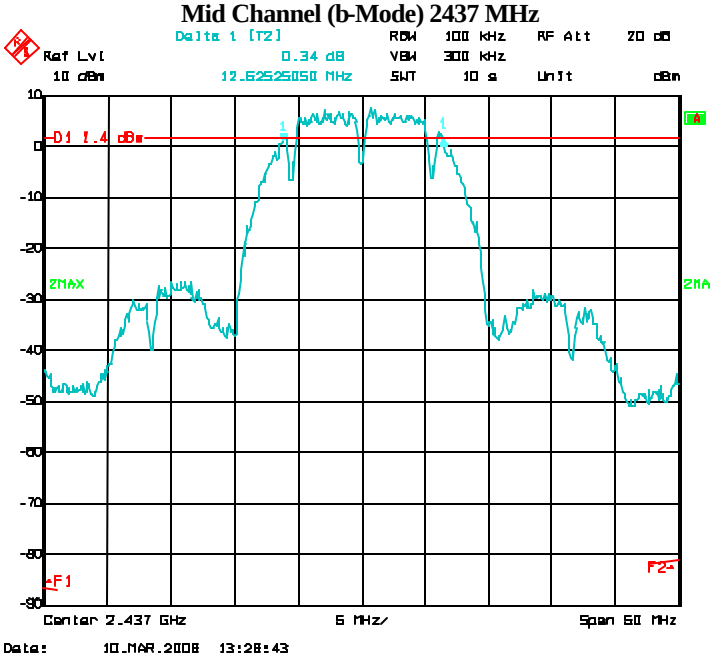
Low Channel (b-Mode) 2412 MHz



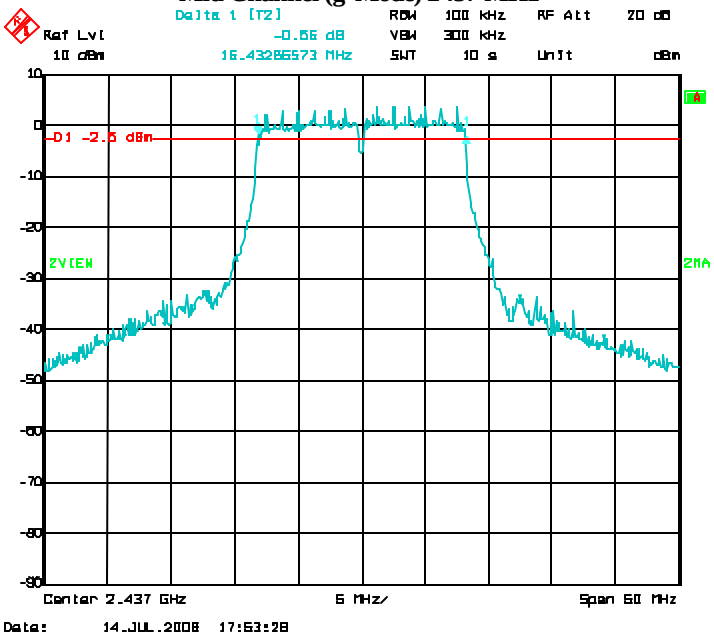
Low Channel (g-Mode) 2412 MHz



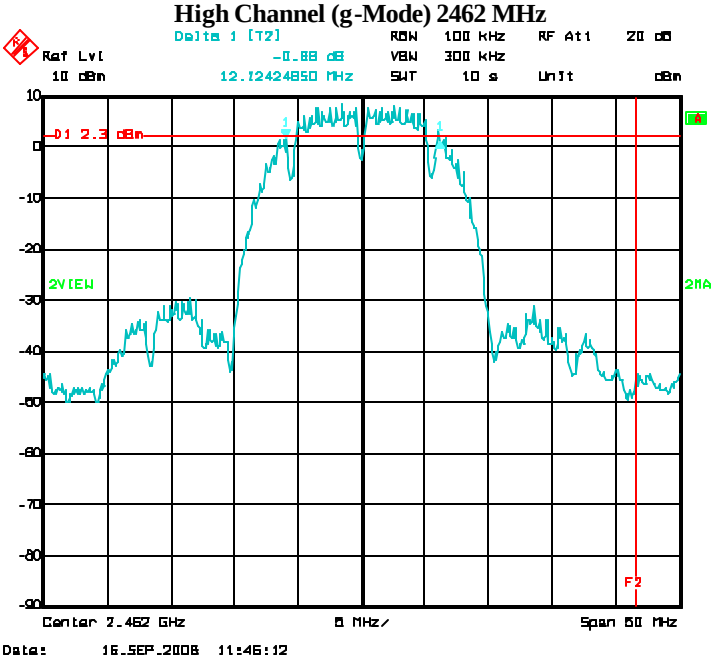
Mid Channel (b-Mode) 2437 MHz



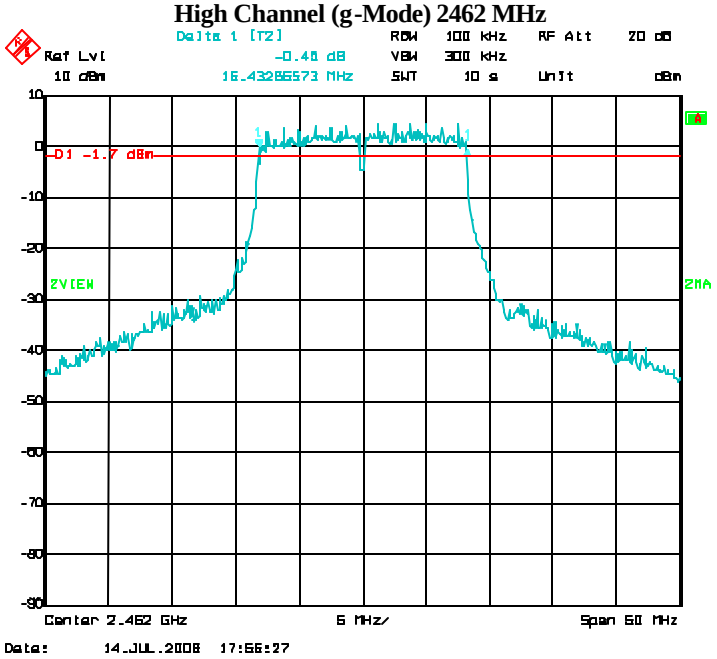
Mid Channel (g-Mode) 2437 MHz



High Channel (g-Mode) 2462 MHz



High Channel (g-Mode) 2462 MHz



5.9. Maximum peak output power

(b) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signalling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

A8.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under Section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required.

Sample Number:	CHY-A01-A	**Temperature:**	71°F
Date:	3/10/08 & 7/14/08	**Humidity:**	51%
Modification State:	Lo/Mid/High Channels	**Tester:**	Dustin Chapin
		Laboratory:	NEMKO SR1

Test Results:

Mode "b"

Channel Frequency (MHz)	Measured Output Power (dBm)	Bandwidth Correction 10 x Log BW/BWm	Calculated Output Power dBm
2412	21.08	+2.35	23.43
2437	22.72	+2.35	25.07
2462	22.08	+2.38	24.46

Mode "g"

Channel Frequency (MHz)	Measured Output Power (dBm)	Bandwidth Correction 10 x Log BW/BWm	Calculated Output Power dBm
2412	26.1	+2.40	28.5
2437	26.4	+2.48	29.2
2462	27.1	+2.40	29.5

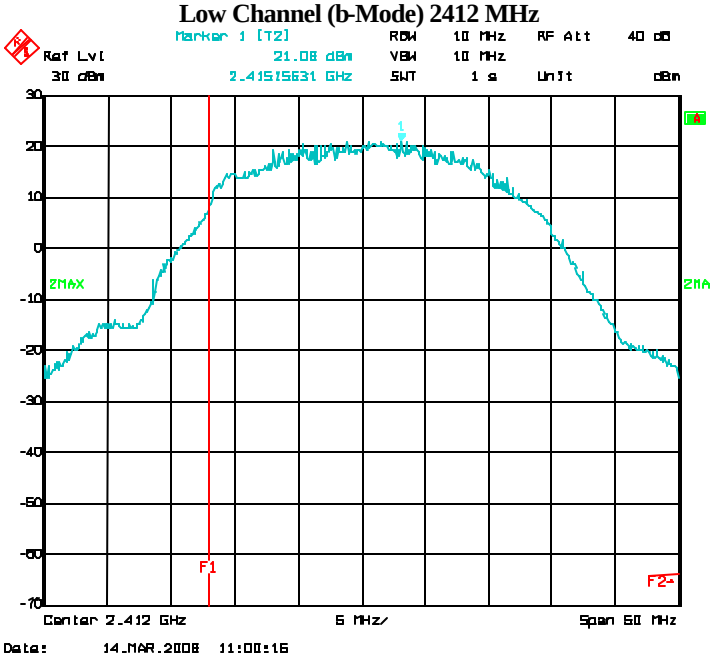
Additional Observations:

Correction was added for 20 dB bandwidth vs measurement bandwidth .

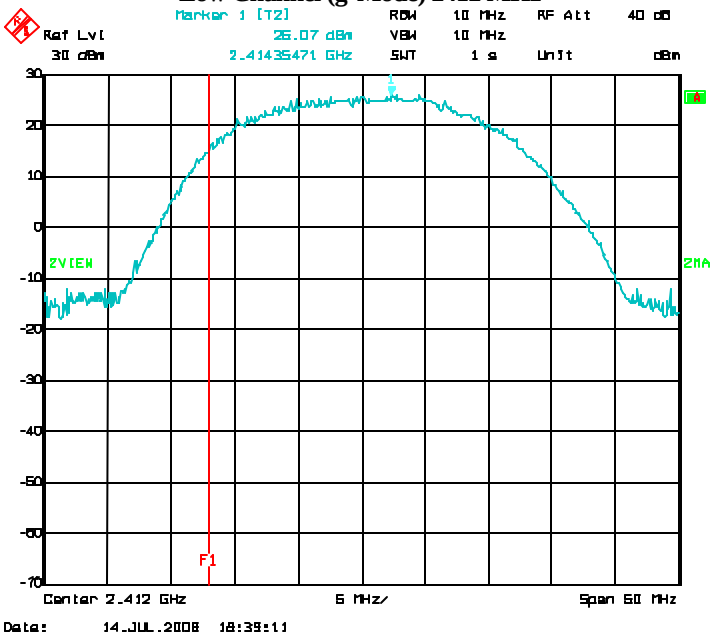
Measurements were made at 102VAC, 120VAC and 138VAC 60Hz, however no noticeable differences were observed.

PEAK Detector at Max Hold

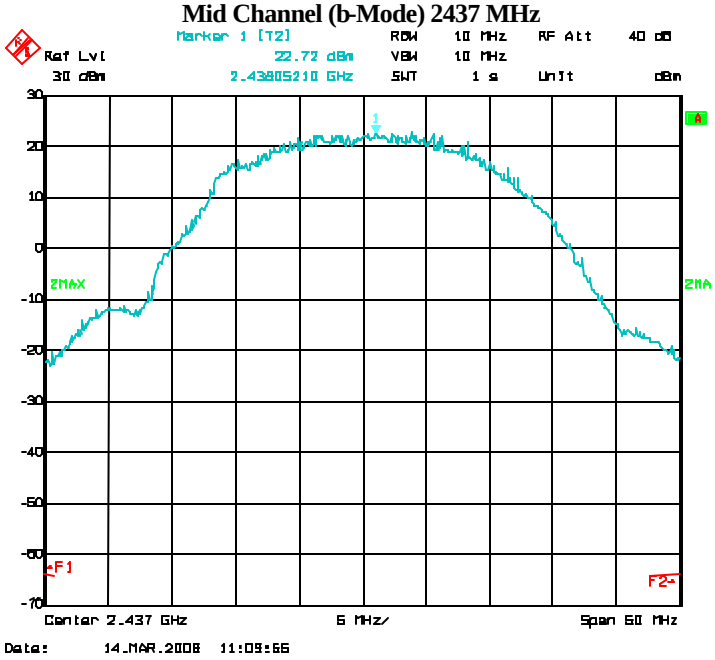
Low Channel (b-Mode) 2412 MHz



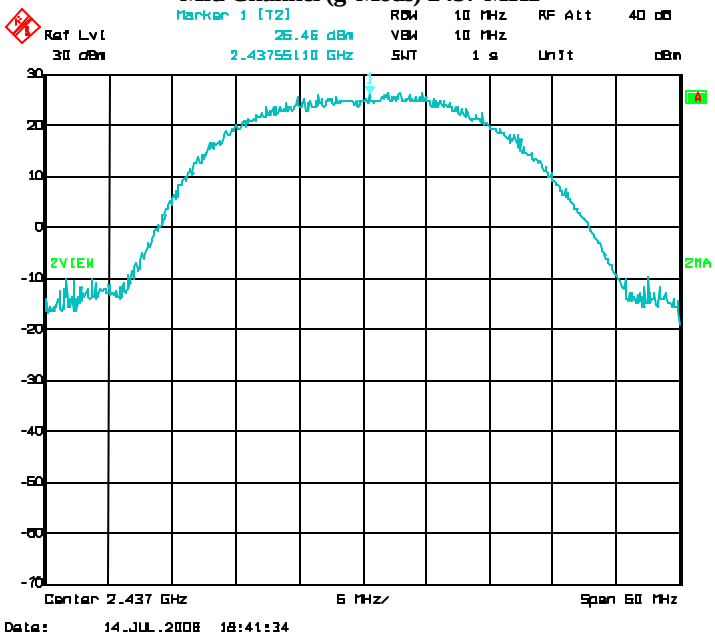
Low Channel (g-Mode) 2412 MHz



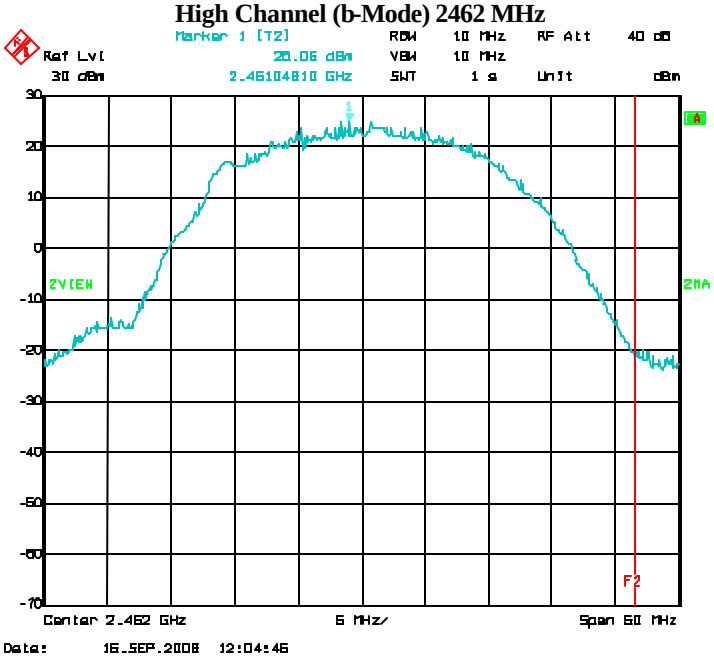
Mid Channel (b-Mode) 2437 MHz



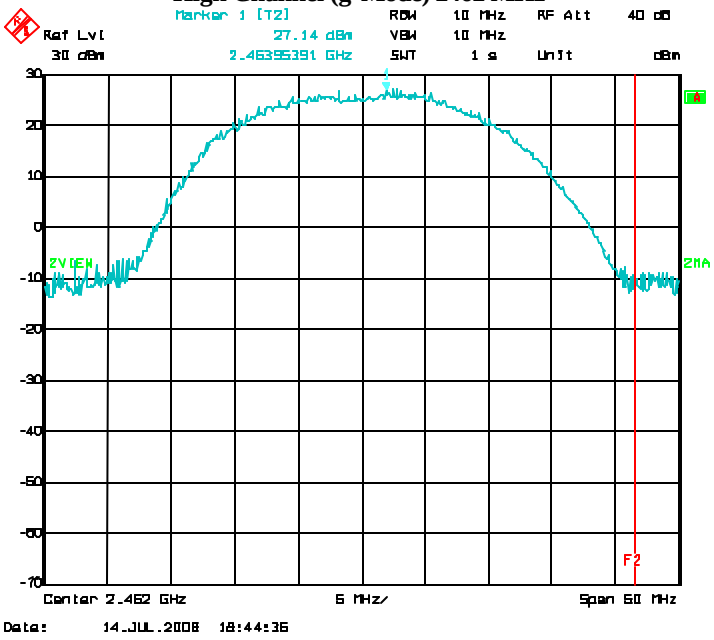
Mid Channel (g-Mode) 2437 MHz



High Channel (b-Mode) 2462 MHz



High Channel (g-Mode) 2462 MHz



5.10.Power Spectral Density

(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
A8.2(b) The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission or over 1.0 second if the transmission exceeds 1.0-second duration. This power spectral density shall be determined in accordance with the provisions of Section A8.4(4); (i.e. the power spectral density shall be determined using the same method for determining the conducted output power).

Sample Number:	**CHY-A01-A**	**Temperature:**	78°F
Date:	4-28-08 & 7-15-08	**Humidity:**	23%
Modification State:	Lo/Mid/High Channels	**Tester:**	**Dustin Chapin**
		Laboratory:	SOATS

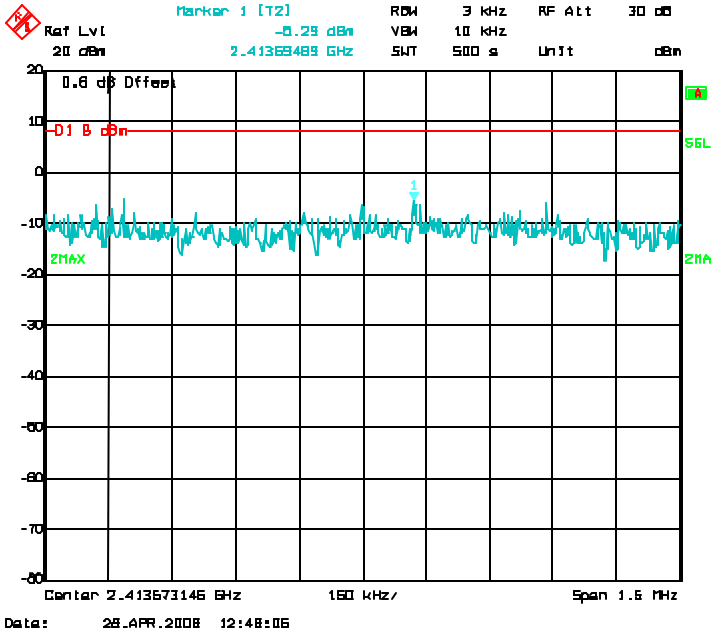
Test Results:

Channel	Mode	Channel Frequency (MHz)	RF Power Level in 3kHz BW (dBm)	Maximum Limit (dBm)	PASS/FAIL
LO	"b"	2412	-5.29	8	Pass
MID	"b"	2437	-6.65	8	Pass
HIGH	"b"	2462	-6.55	8	Pass
LO	"g"	2412	-11.2	8	Pass
MID	"g"	2437	-10.6	8	Pass
HIGH	"g"	2462	-7.9	8	Pass

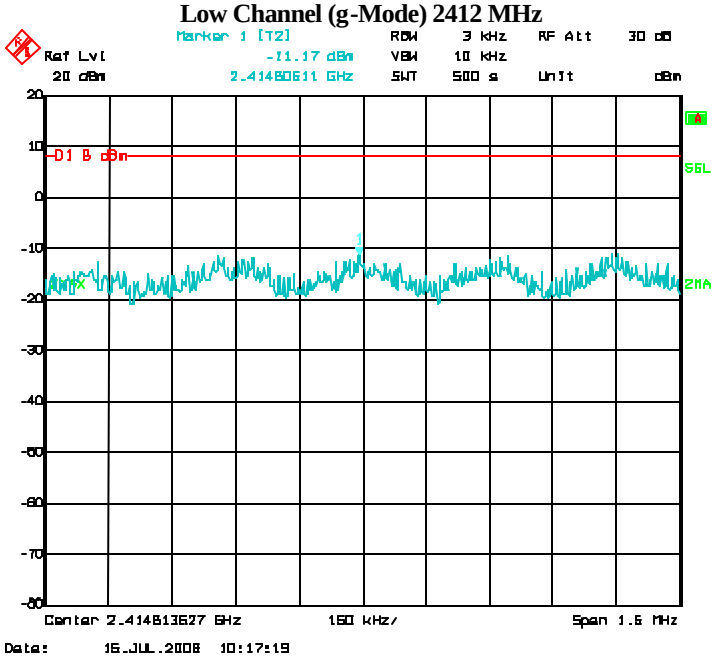
Additional Observations:

- Analyzer Span = 1.5 MHz, RES BW was set to 3 kHz, VBW to 10 kHz,
- Sweep time of 1.5 MHz/ 3kHz = 500 seconds.
- Conductive measurement, peak max hold.

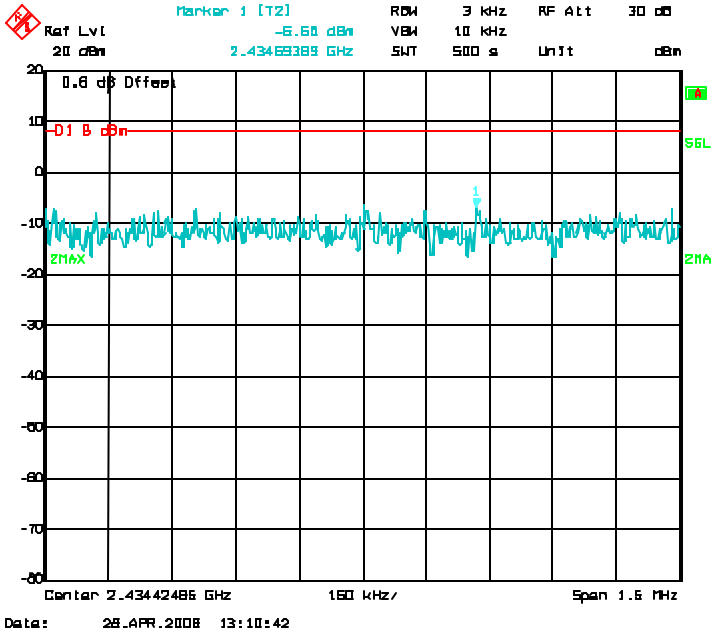
Low Channel (b-Mode) 2412 MHz



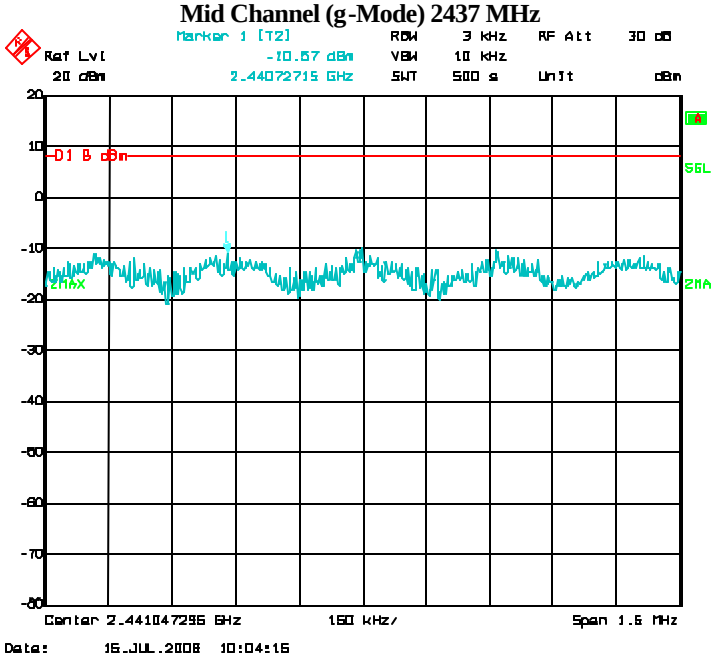
Low Channel (g-Mode) 2412 MHz



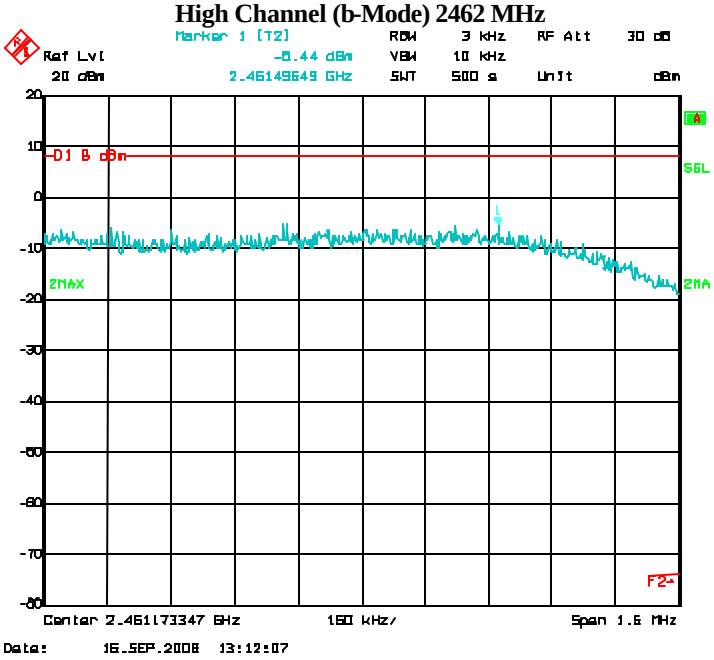
Mid Channel (b-Mode) 2437 MHz



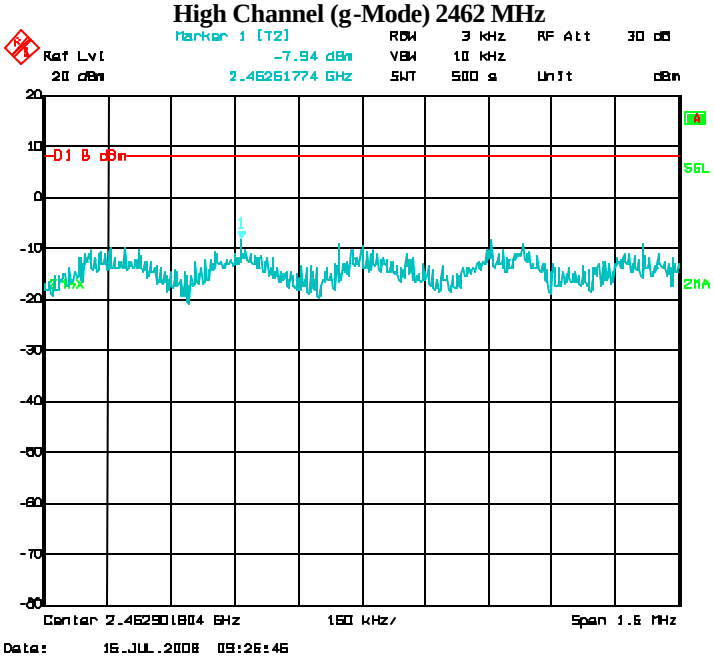
Mid Channel (g-Mode) 2437 MHz



High Channel (b-Mode) 2462 MHz



High Channel (g-Mode) 2462 MHz



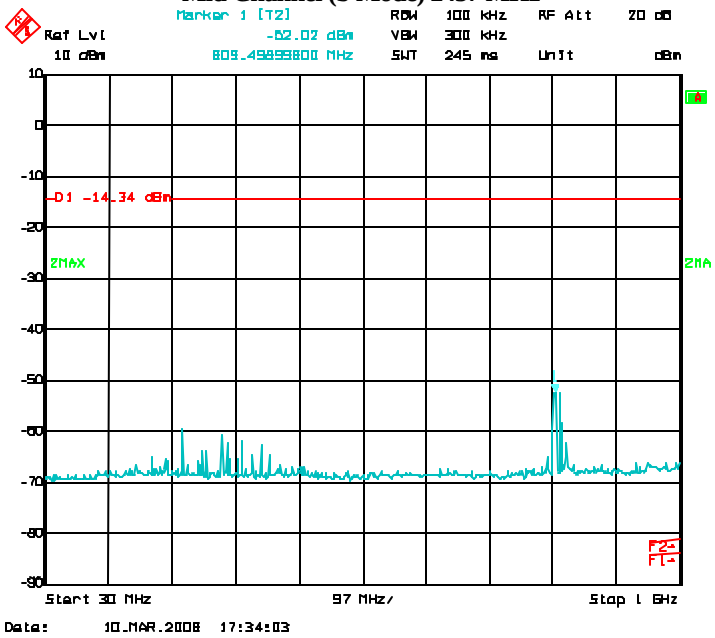
5.11. Test Equipment

Nemko ID	Device	Manufacturer	Model	Serial Number	Cal Date	Cal Due Date
111	Antenna, LPA	EMCO	3146	1382	03-Oct-07	03-Oct-08
114	Antenna, Bicon	EMCO	3104	2997	10-Jan-08	10-Jan-09
394	LISN	Solar	9348-50-R-24-BNC	941716	28-Aug-07	28-Aug-08
404	Spectrum Analyzer Display	HP	85662A	2648A15448	27-Jun-07	27-Jun-08
421	Quasi-Peak Adapter	HP	85650A	3145A01672	21-Feb-08	21-Feb-09
574	High Pass Filter	Solar	7801-5.0	853135	09-Jul-07	09-Jul-08
529	Antenna, DRWG	EMCO	3115	2505	27-Aug-07	27-Aug-08
625	Antenna, Dbl Ridge Horn	EMCO	3116	2325	01-Apr-08	01-Apr-09
685	Transient Limiter	HP	11974A	3107A02637	05-Sep-07	05-Sep-08
711	Spectrum Analyzer	HP	8566B	2747A04729	21-Feb-08	21-Aug-08
835	Spectrum Analyzer	Rohde & Schwarz	RHDFSEK	829058/005	20-Jun-07	20-Jun-08
755	Antenna, LPA	EMCO	3147	1246	10-Oct-07	10-Oct-09
902	pre amp	Sonoma	310 N	185803	10-Jul-07	10-Jul-08
919	Preamplifier	Spacek	100MHz to 40GHz	3M12,3M13 (SLKa-35-4)	12-Mar-08	12-Mar-10
815	Multimeter	Fluke	111	78130066	7/9/2007	07/09/08
NA	Regulating Transformer	TDGC	0-250 Vac	NA	NCR	NCR

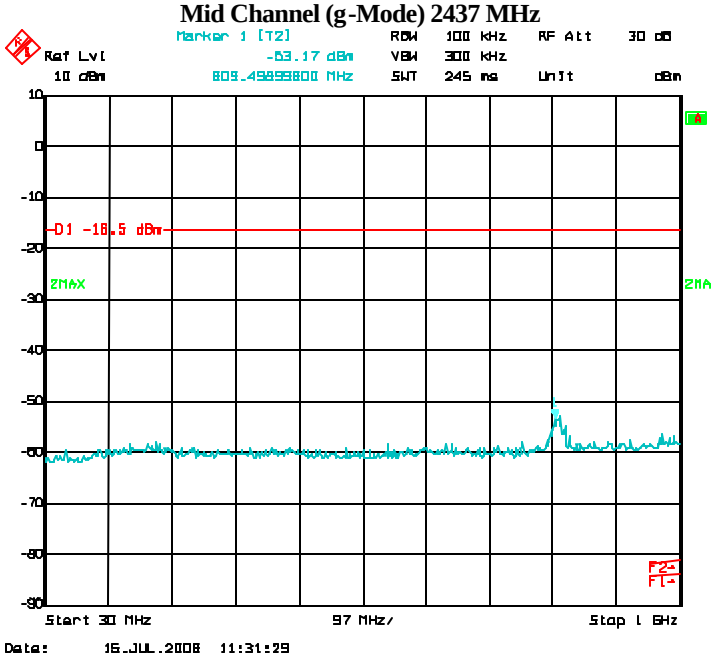
Appendix A

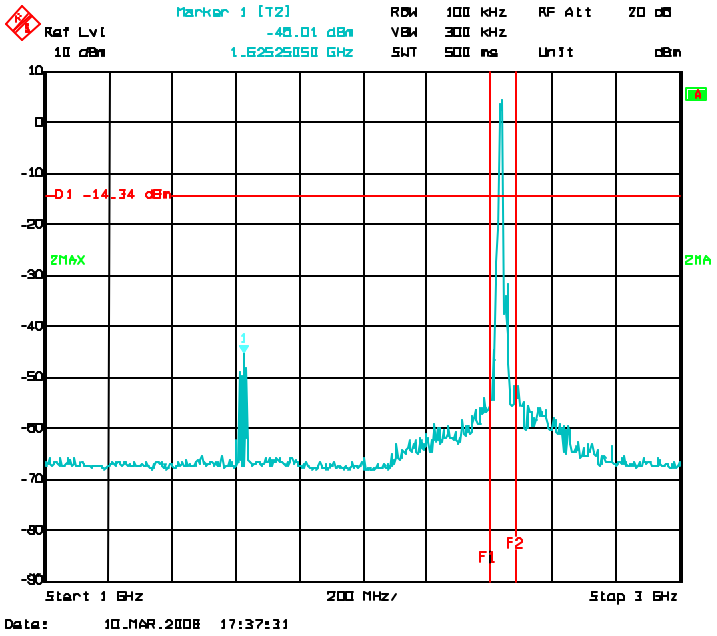
Conducted Spurious Continued

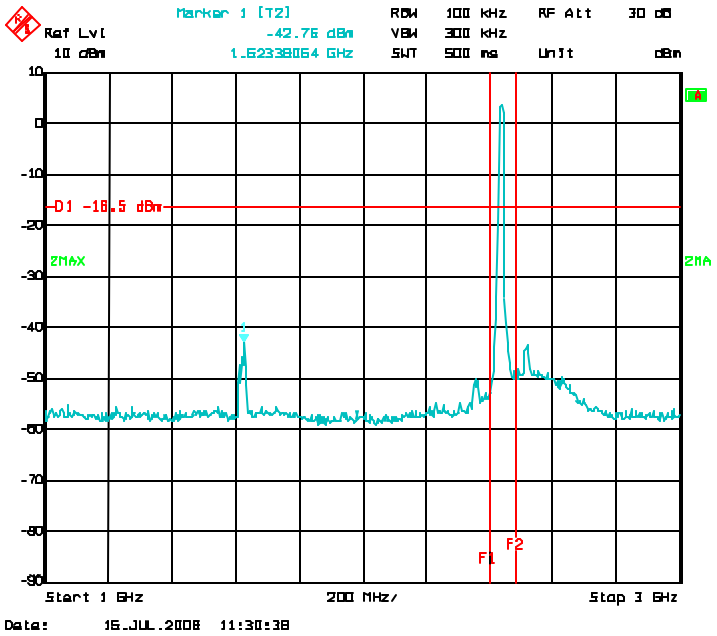
Mid Channel (b-Mode) 2437 MHz

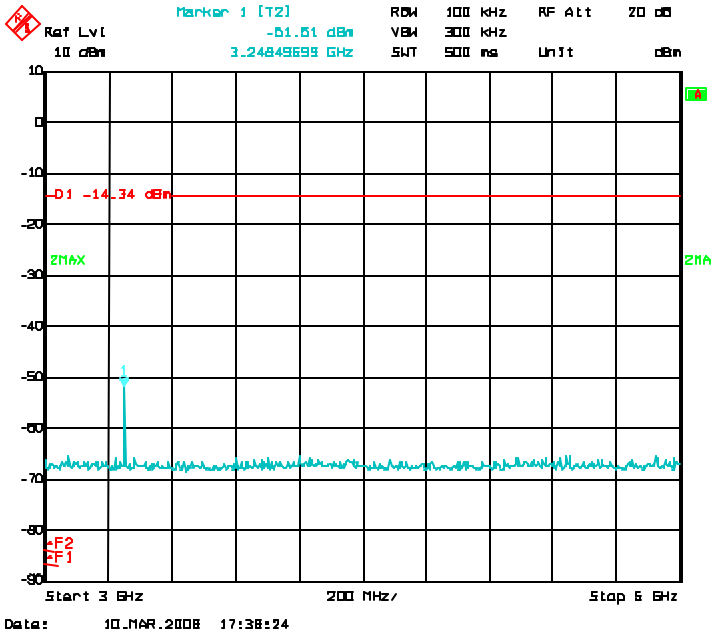


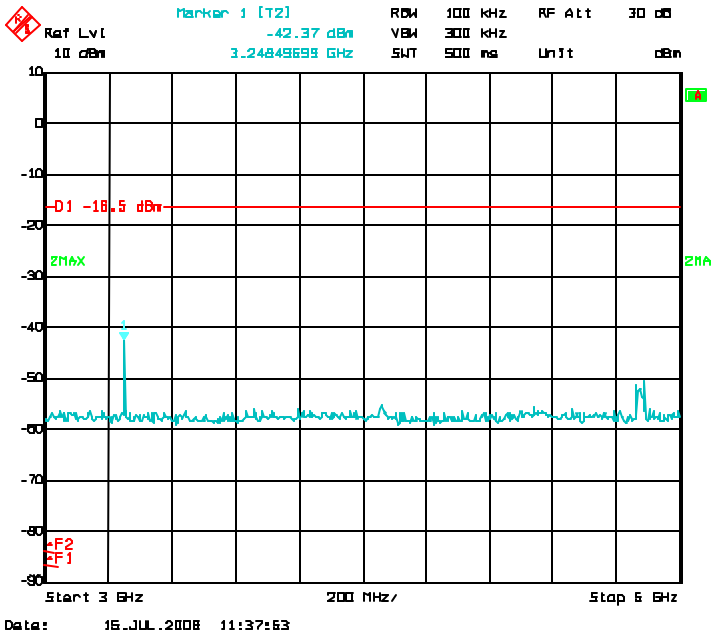
Mid Channel (g-Mode) 2437 MHz

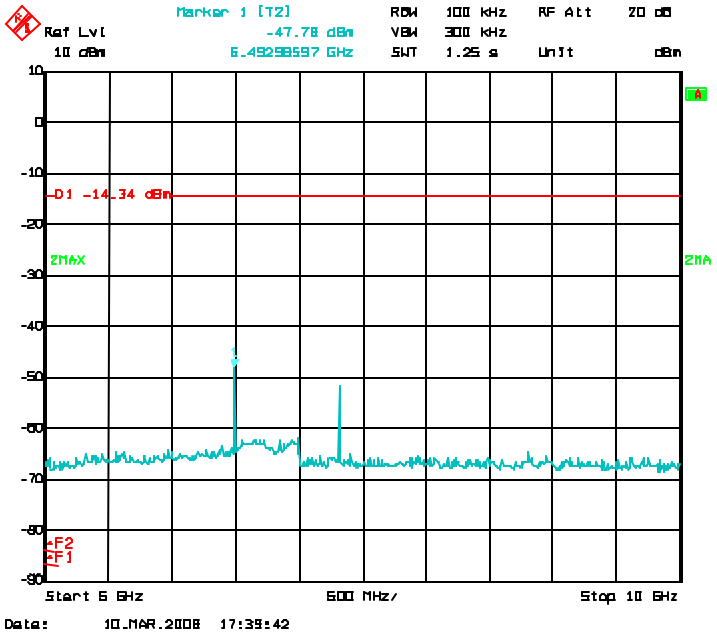


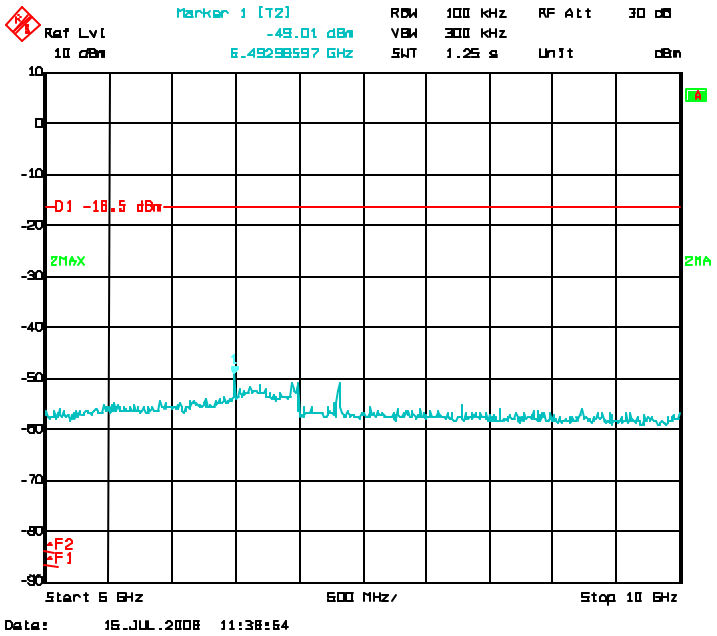

Marker 1 [T2]
-45.01 dBm
1.62525050 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.34 dBm
ZMAX
ZMA
F1
F2
Start 1 GHz
200 MHz/
Stop 3 GHz
Date: 10.MAR.2008 17:37:31

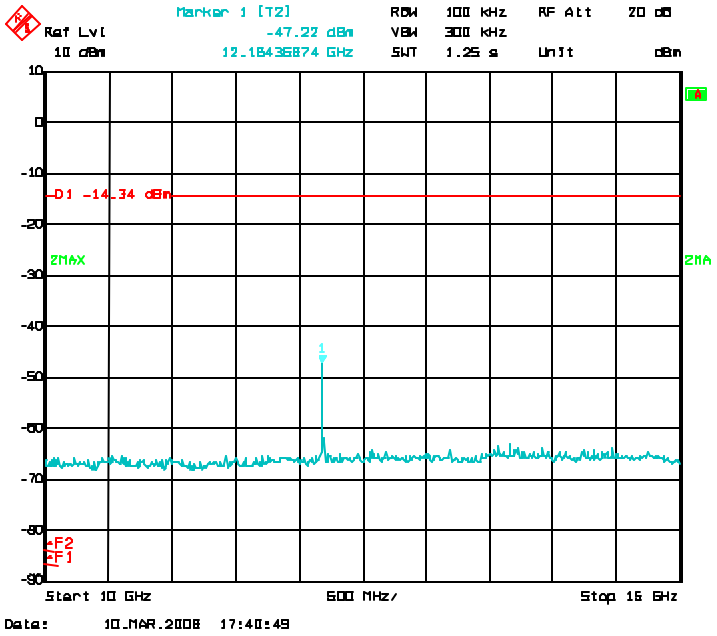

Marker 1 [T2]
-42.75 dBm
1.62338064 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 30 dB
Unit dBm
Ref Lvl
10 dBm
D1 -18.5 dBm
ZMAX
ZMA
F1
F2
Start 1 GHz
200 MHz/
Stop 3 GHz
Date: 16.JUL.2008 11:30:38

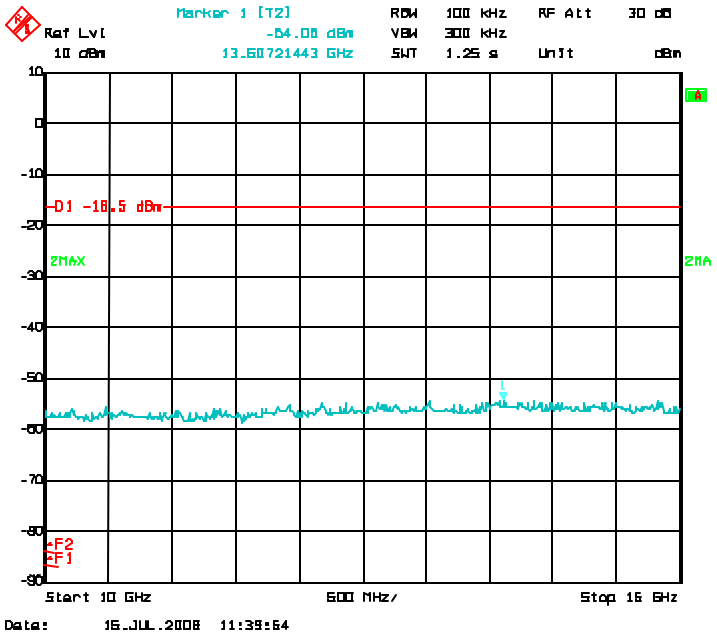

Marker 1 [T2]
RBW 100 kHz
RF Att 20 dB
Ref Lvl
-51.51 dBm
VBW 300 kHz
10 dBm
3.24849699 GHz
SWT 500 ms
Unit dBm
D1 -14.34 dBm
ZMAX
ZMA
F2
F1
Start 3 GHz
200 MHz/
Stop 6 GHz
Date: 10.MAR.2008 17:38:24

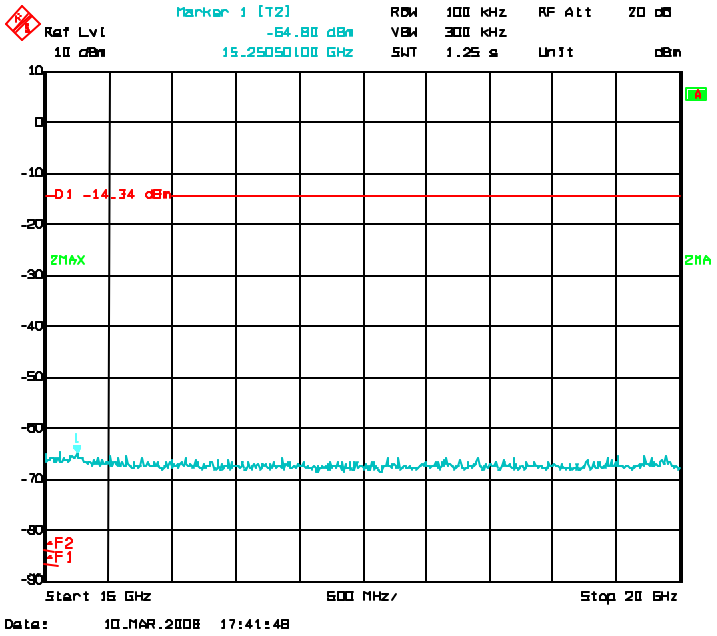

Marker 1 [T2]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
-42.37 dBm
VBW 300 kHz
10 dBm
3.24849699 GHz
SWT 500 ms
Unit dBm
D1 -18.5 dBm
ZMAX
ZMA
F2
F1
Start 3 GHz
200 MHz/
Stop 6 GHz
Date: 16.JUL.2008 11:37:53

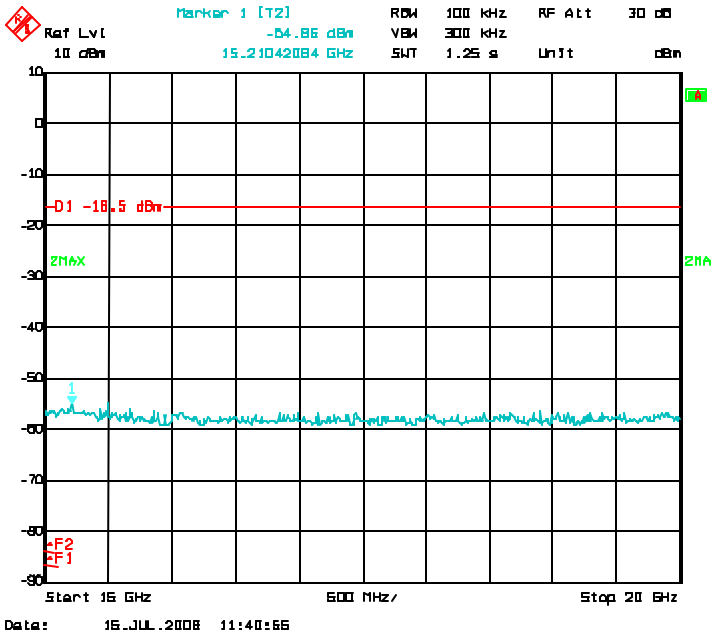

Marker 1 [T2]
-47.78 dBm
6.49258597 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.34 dBm
ZMAX
ZMA
F2
F1
Start 5 GHz
500 MHz/
Stop 10 GHz
Date: 10.MAR.2008 17:39:42

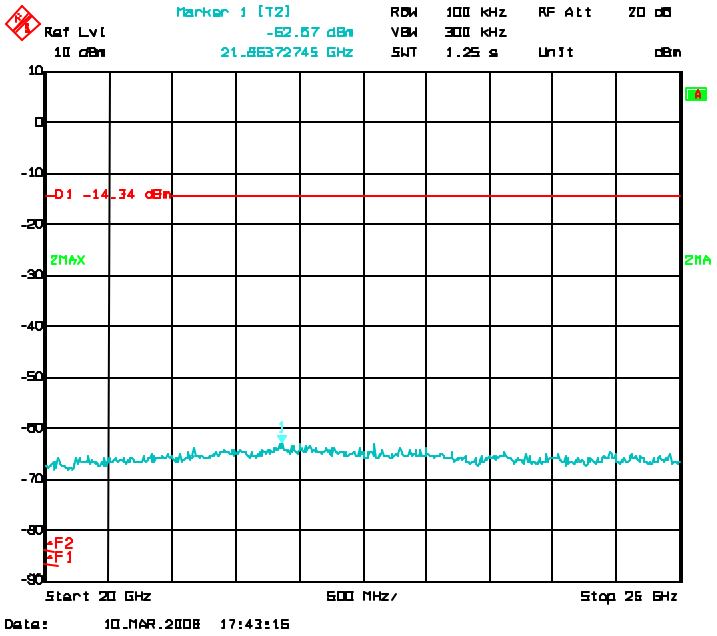

Marker 1 [T2]
-49.01 dBm
6.49258597 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 30 dB
Unit dBm
Ref Lvl
10 dBm
D1 -18.5 dBm
ZMAX
ZMA
F2
F1
Start 5 GHz
500 MHz/
Stop 10 GHz
Date: 16.JUL.2008 11:38:54

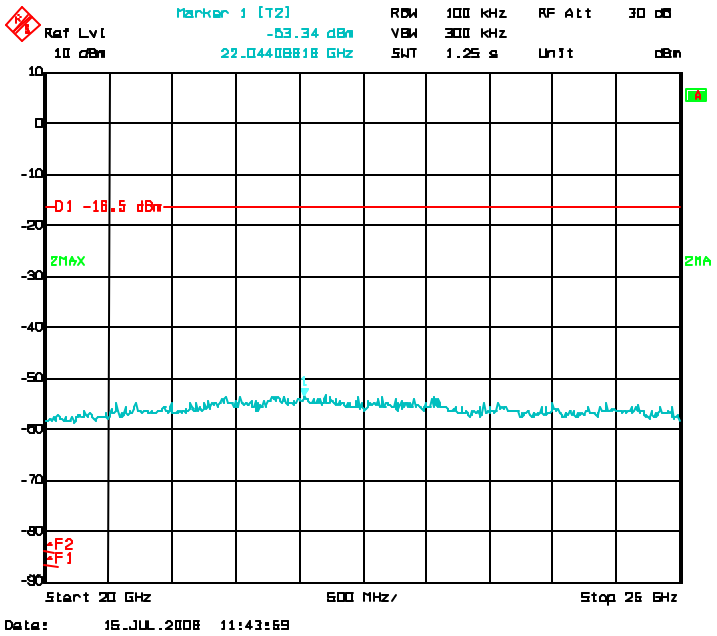

Marker 1 [T2]
-47.22 dBm
12.1843E874 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.34 dBm
ZMAX
ZMA
1
F2
F1
Start 10 GHz
600 MHz/
Stop 15 GHz
Date: 10.MAR.2008 17:40:49


Marker 1 [T2]
-54.08 dBm
13.60721443 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 30 dB
Unit dBm
Ref Lvl
10 dBm
D1 -16.5 dBm
ZMAX
ZMA
1
F2
F1
Start 10 GHz
600 MHz/
Stop 15 GHz
Date: 16.JUL.2008 11:39:54


Marker 1 [T2]
-54.80 dBm
15.25050100 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.34 dBm
ZMAX
ZMA
Start 15 GHz
600 MHz/
Stop 20 GHz
Date: 10.MAR.2008 17:41:48

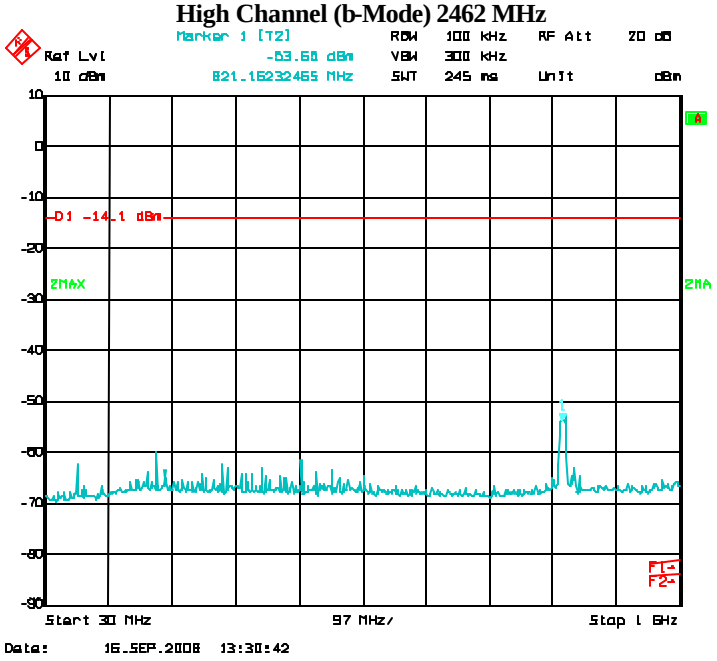

Marker 1 [T2]
-54.86 dBm
15.21042084 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 30 dB
Unit dBm
Ref Lvl
10 dBm
D1 -18.5 dBm
ZMAX
ZMA
Start 15 GHz
600 MHz/
Stop 20 GHz
Date: 16.JUL.2008 11:40:56


Marker 1 [T2]
-52.57 dBm
21.86372745 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.34 dBm
ZMAX
ZMA
F2
F1
Start 20 GHz
600 MHz/
Stop 26 GHz
Date: 10.MAR.2008 17:43:16

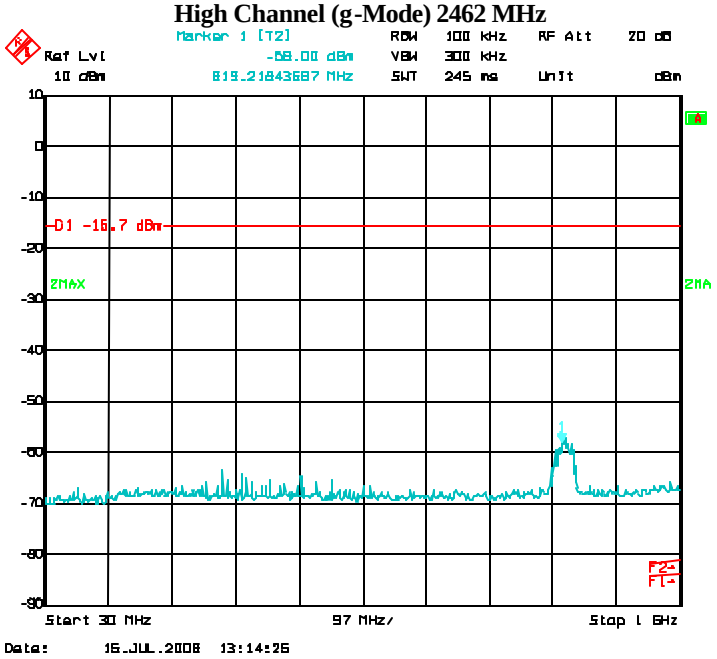

Marker 1 [T2]
-53.34 dBm
22.04408818 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 30 dB
Unit dBm
Ref Lvl
10 dBm
D1 -18.5 dBm
ZMAX
ZMA
F2
F1
Start 20 GHz
600 MHz/
Stop 26 GHz
Date: 16.JUL.2008 11:43:59

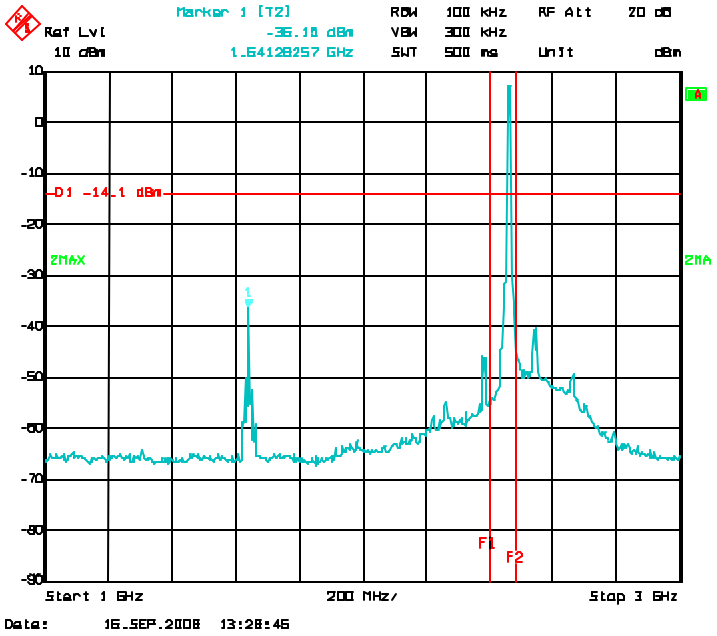
Conducted Spurious Continued

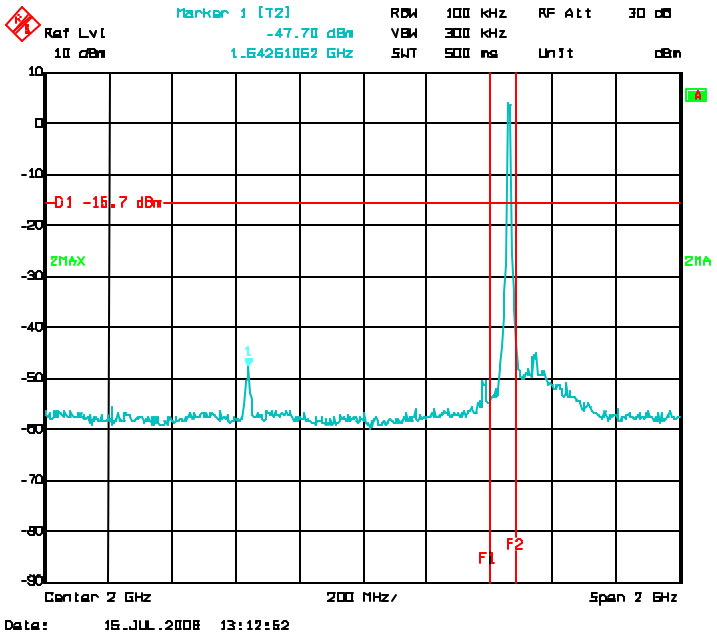
High Channel (b-Mode) 2462 MHz

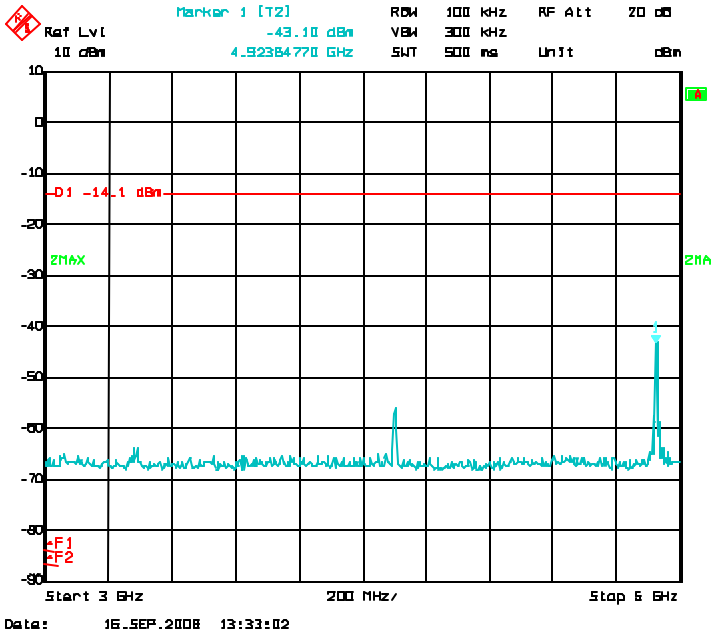


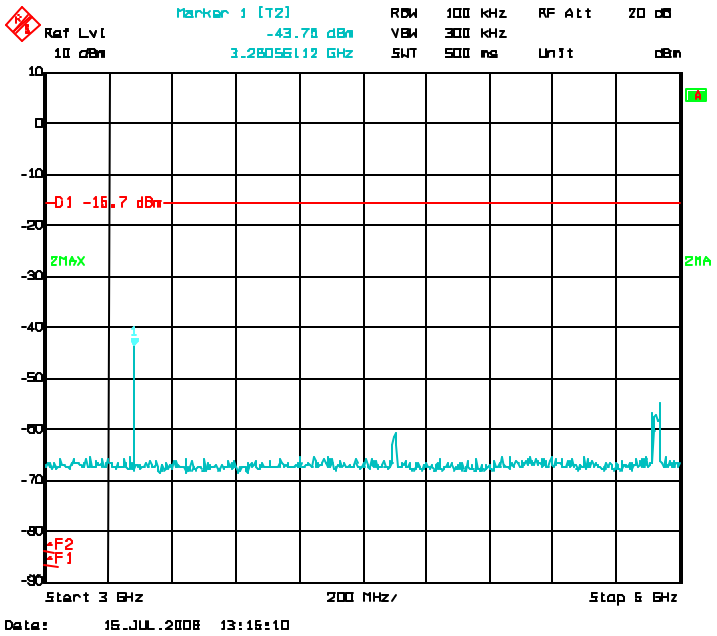
High Channel (g-Mode) 2462 MHz

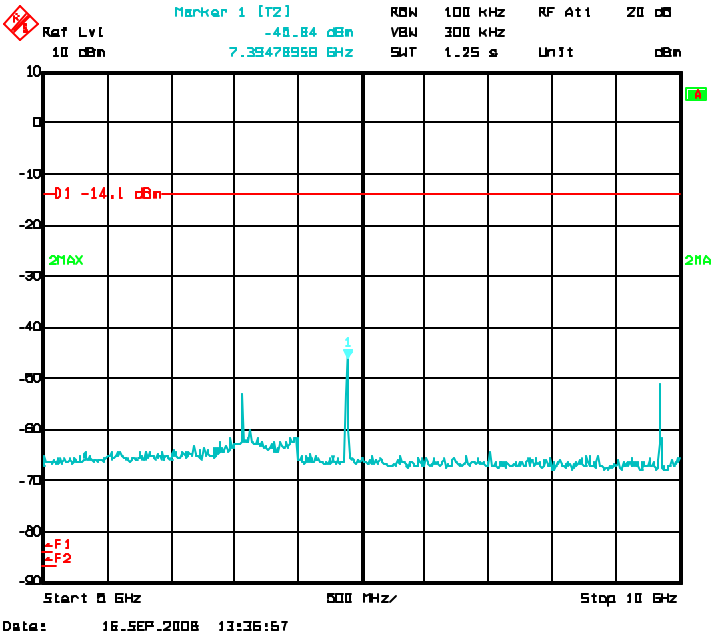


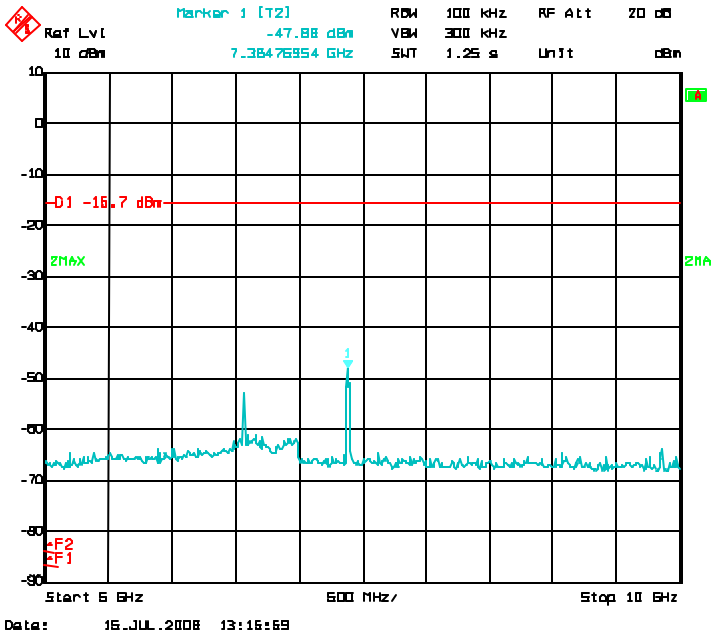

Marker 1 [T2]
-36.10 dBm
1.64128257 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.1 dBm
ZMAX
ZMA
F1
F2
Start 1 GHz
200 MHz/
Stop 3 GHz
Date: 16.SEP.2008 13:28:45

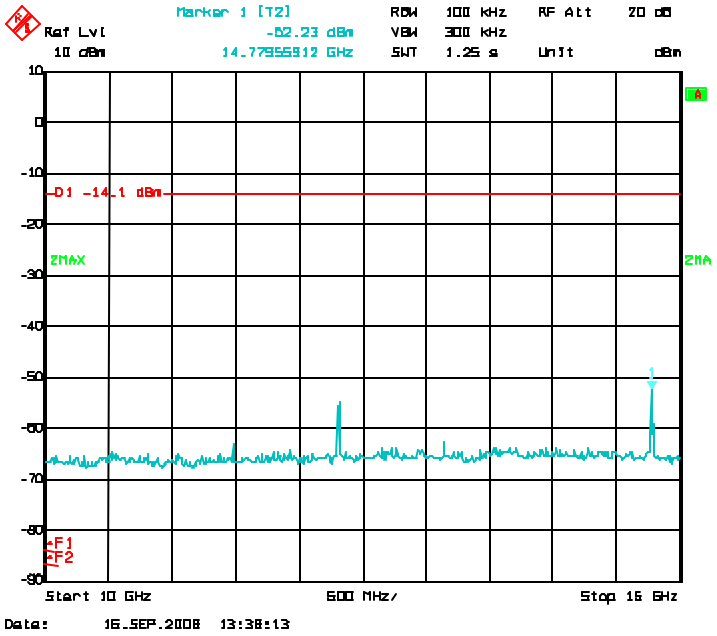

Marker 1 [T2]
-47.70 dBm
1.64261062 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 30 dB
Unit dBm
Ref Lvl
10 dBm
D1 -15.7 dBm
ZMAX
ZMA
F1
F2
Center 2 GHz
200 MHz/
Span 2 GHz
Date: 16.JUL.2008 13:12:52

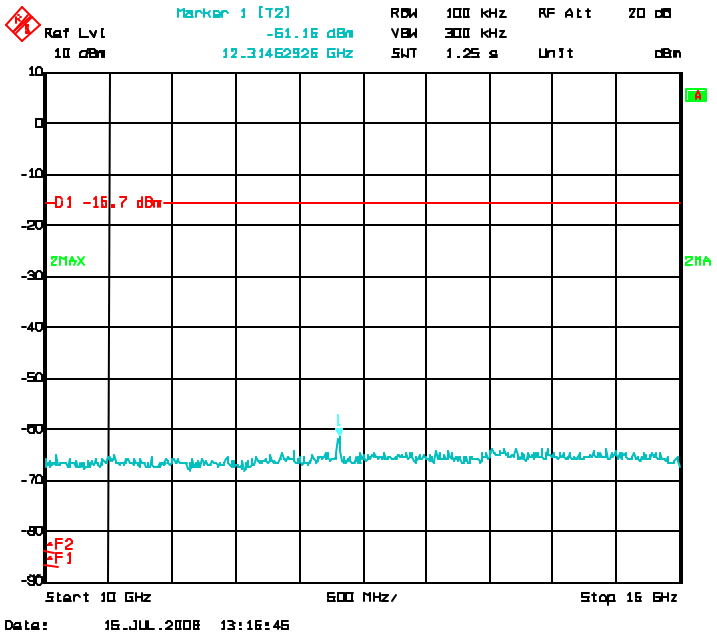

Marker 1 [T2]
-43.10 dBm
4.52384770 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.1 dBm
ZMAX
ZMA
F1
F2
Start 3 GHz
200 MHz/
Stop 6 GHz
Date: 16.SEP.2008 13:33:02

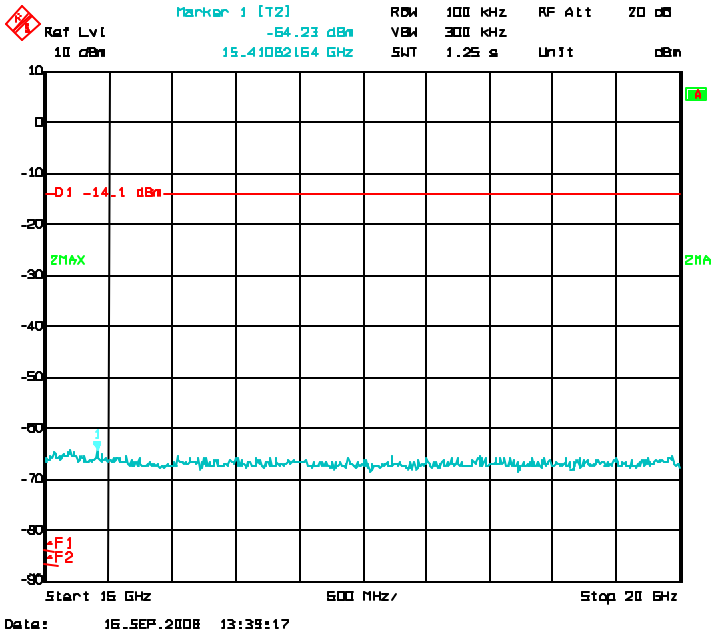

Marker 1 [T2]
-43.70 dBm
3.28056112 GHz
RBW 100 kHz
VBW 300 kHz
SWT 500 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -15.7 dBm
ZMAX
ZMA
F2
F1
Start 3 GHz
200 MHz/
Stop 6 GHz
Date: 16.JUL.2008 13:15:10

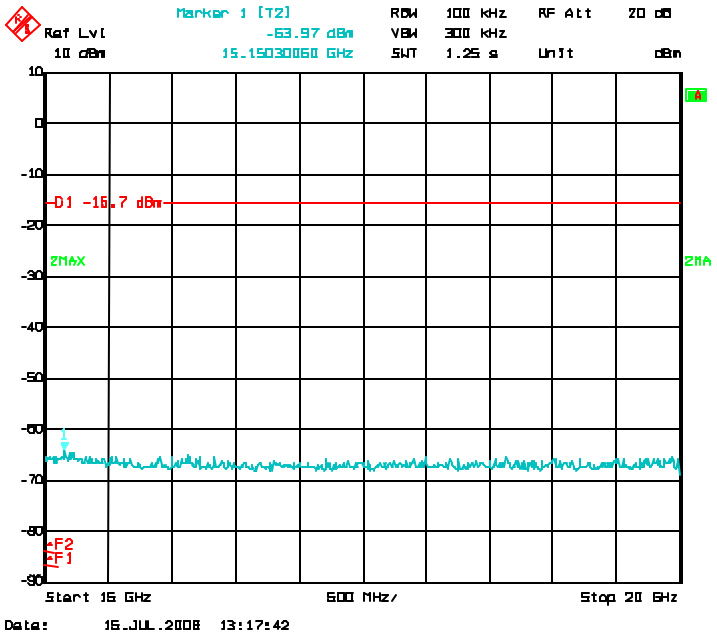

Marker 1 [T2]
-40.84 dBm
7.39478958 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.1 dBm
2MAX
2MA
F1
F2
Start 0 GHz
600 MHz/
Stop 10 GHz
Date: 16.SEP.2008 13:36:57

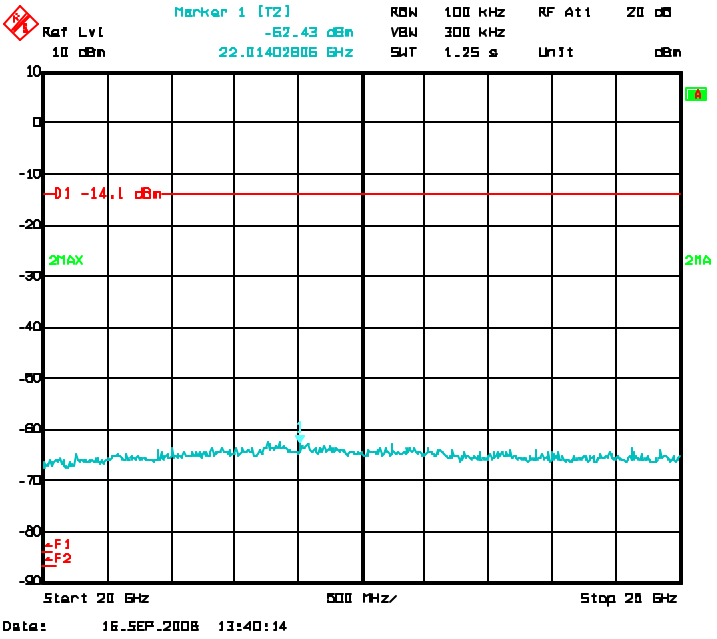

Marker 1 [T2]
-47.88 dBm
7.38476954 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -16.7 dBm
2MAX
2MA
F2
F1
Start 6 GHz
600 MHz/
Stop 10 GHz
Date: 16.JUL.2008 13:16:59

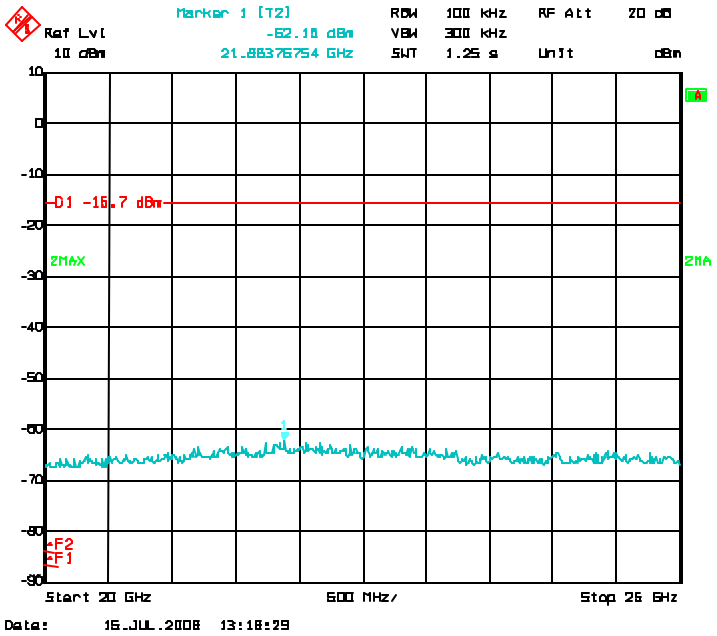

Marker 1 [T2]
-52.23 dBm
14.77955912 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.1 dBm
ZMAX
ZMA
PF1
PF2
Start 10 GHz
600 MHz/
Stop 15 GHz
Date: 16.SEP.2008 13:38:13


Marker 1 [T2]
-51.16 dBm
12.31462926 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -15.7 dBm
ZMAX
ZMA
PF2
PF1
Start 10 GHz
600 MHz/
Stop 15 GHz
Date: 16.JUL.2008 13:15:45


Marker 1 [T2]
-64.23 dBm
15.41082164 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.1 dBm
ZMAX
ZMA
F1
F2
Start 15 GHz
600 MHz/
Stop 20 GHz
Date: 16.SEP.2008 13:39:17


Marker 1 [T2]
-63.97 dBm
15.15030060 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -15.7 dBm
ZMAX
ZMA
F2
F1
Start 15 GHz
600 MHz/
Stop 20 GHz
Date: 16.JUL.2008 13:17:42


Marker 1 [T2]
-62.43 dBm
22.014028056 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -14.1 dBm
2MAX
2MA
F1
F2
Start 20 GHz
500 MHz/
Stop 25 GHz
Date: 16.SEP.2008 13:40:14


Marker 1 [T2]
-62.16 dBm
21.883767754 GHz
RBW 100 kHz
VBW 300 kHz
SWT 1.25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10 dBm
D1 -15.7 dBm
2MAX
2MA
F2
F1
Start 20 GHz
500 MHz/
Stop 25 GHz
Date: 16.JUL.2008 13:18:29