***Nemko USA, Inc.***
*11696 Sorrento Valley Rd., Suite F*
*San Diego, CA 92121-1024*
*Phone (858) 755-5525  Fax (858) 452-1810*

# CERTIFICATION TEST REPORT

| | |
|---|---|
| **Report Number:** | 2010 02301489 RX FCC |
| **Project Number:** | 23972 |
| **Nex Number:** | 144765 |
| **Applicant:** | KSC INDUSTRIES INC.<br>881 KUHN DRIVE BUILDING 200<br>Chula Vista, CA 91914 |
| **Equipment Under Test (EUT):** | WIRELESS SURROUND SYSTEM |
| **Model:** | SCR102 |
| **FCC ID:** | SUDSCR15M |
| **IC:** | 5613A-SCR15M |
| **In Accordance With:** | FCC Part 15 Subpart C, 15.247<br>IC RSS-210 Issue 7 June 2007<br>IC RSS-Gen Issue 2 June 2007 |
| **Tested By:** | Nemko USA Inc.<br>11696 Sorrento Valley Road, Suite F<br>San Diego, CA 92121 |
| **Authorized By:** |  <br>Alan Laudani, EMC/RF Test Engineer |
| **Date:** | April 23, 2010 |
| **Total Number of Pages:** | 56 |

## Section1: Summary of Test Results

### General

**All measurements are traceable to national standards**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15; Subpart C and IC RSS-210. Radiated tests were conducted is accordance with ANSI C63.4-2003. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC and IC.

The assessment summary is as follows:

| | |
|---|---|
| **Apparatus Assessed:** | Wireless Surround System |
| **Model:** | SCR102 |
| **Specification:** | FCC Part 15 Subpart C, 15.247<br>IC RSS-210 Issue 7 June 2007 |
| **Date Received in Laboratory:** | February 19, 2010 |
| **Compliance Status:** | Complies |
| **Exclusions:** | None |
| **Non-compliances:** | None |

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## 1.1 Report Release History

| REVISION | DATE | COMMENTS |
|---|---|---|
| - | April 23, 2010 | Prepared By: Ferdinand Custodio |
| - | April 23, 2010 | Initial Release: Alan Laudani |

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

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TESTED BY: _____ Date: April 23, 2010
Ferdinand Custodio, EMC Test Engineer

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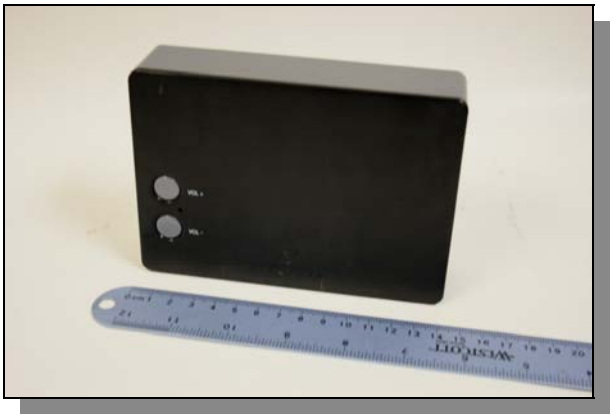
# Section 2: Equipment Under Test

## 2.1 Product Identification

The Equipment Under Test was indentified as follows:

*KSC Industries Inc. SCR102 Wireless Surround System*




## 2.2 Samples Submitted for Assessment

The following sample of the apparatus and antenna has been submitted for type assessment:

| Sample No. | Description | Serial No. |
|---|---|---|
| 144765-2 | SCR102 Receiver | N/A |

## 2.3 Theory of Operation

The SCR102 is part of the SurroundCast Wireless Surround System. The SurroundCast Wireless Surround System is an indoor speaker system designed to provide surround sound for home theater systems. The term "Receiver" is only a designation referring to the direction that audio is transmitted. It does not have a separate receive mode, normal operation is transmitting and receiving at the same time.

## 2.4 Technical Specifications of the EUT

| | |
|---|---|
| **Manufacturer:** | KSC Industries Inc. |
| **Operating Frequency:** | 2403.3 MHz to 2479.0 MHz<br>in the 2400-2483.5 MHz Band |
| **Number of Operating Frequencies:** | 20 |
| **Rated Power:** | 29.24 mW |
| **Modulation:** | FHSS |
| **Reference Designator:** | 2M00F1D |
| **Antenna Connector:** | Integral |
| **Power Source:** | 24VDC from external AC Adapter (SoundCast Switching Mode Power Supply GPE603-240250W) |

# Section 3: Test Conditions

## 3.1 Specifications

The apparatus was assessed against the following specifications:

***FCC Part 15 Subpart C, 15.247***
Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5850 MHz and 24.0-24.25 GHz bands.

***IC RSS-210 Issue 7 June 2007***
Low-power Licence-exempt Radio-communication Devices (All Frequency Bands): Category I Equipment. Annex 8 - Frequency Hopping and Digital Modulation Systems Operating in the Bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

***IC RSS-Gen Issue 2 June 2007***
General Requirements and Information for the Certification of Radio-communication Equipment

## 3.2 Deviations From Laboratory Test Procedures

No deviations from Laboratory Test Procedure

## 3.3 Test Environment

All tests were performed under the following environmental conditions:

| | |
|---|---|
| Temperature range | 15-22 $^{o}$C |
| Humidity range | 39-47 % |
| Pressure range | 102.1 – 102.3 kPa |
| Power supply range | 5.1 to 6.9VDC |

## 3.4 Test Equipment

| Nemko ID | Device | Manufacturer | Model | Serial Number | Cal Date | Cal Due Date |
|---|---|---|---|---|---|---|
| 936 | DC Power Supply 0-50V 0-10A 200W | Hewlett Packard | 6002A | N/A | Verified by Asset #E1009 | |
| E1009 | Multimeter | Fluke | 287 | 11610042 | 12/18/2009 | 12/18/2010 |
| 911 | Spectrum Analyzer | Agilent | E4440A | US41421266 | 12/17/2009 | 12/17/2010 |
| 684 | Transient Limiter | HP | 11974A | 3107A02636 | 9/10/2009 | 9/10/2010 |
| 574 | High Pass Filter | Solar | 7801-5.0 | 853135 | 8/14/2009 | 8/14/2010 |
| 384 | LISN | Solar | 9348-50-R-24-BNC | 941716 | 8/31/2009 | 8/31/2010 |
| E1018 | 9kHz to 7GHz Spectrum Analyzer | Rohde & Schwarz | FSP7 | 835363/0003 | 1/22/2010 | 1/22/2011 |
| 946 | Peak Power Sensor | Hewlett Packard | 84815A 0.05-18GHz (-40 to 20dBm) | 3318A01726 | 9/16/2009 | 9/16/2010 |
| 947 | Peak Power Analyzer | Hewlett Packard | 8991A | 3621A00906 | 9/16/2009 | 9/16/2010 |
| 116 | Antenna, Bicon | EMCO | 3110 | 1267 | 11/12/2008 | 11/12/2010 |
| 128 | Antenna, Bicon | EMCO | 3104 | 2882 | 2/9/2009 | 2/9/2011 |
| 110 | Antenna, LPA | Electrometrics | LPA-25 | 1217 | 1/10/2009 | 2/10/2011 |
| 877 | Antenna, DRG Horn, .7-18GHz | AH Systems | SAS-571 | 688 | 7/28/2008 | 7/28/2010 |
| 901 | pre amp | Sonoma | 310 N | 130607 | 3/27/2009 | 3/27/2010 |
| 317 | Preamplifier | HP | 8449A | 2749A00167 | 4/16/2009 | 4/16/2010 |
| 898 | EMI Receiver & filter set | HP | 8546A | 3625A00348 | 5/31/2009 | 5/31/2010 |
| 899 | Filter Section | HP | 85460A | 3448A00288 | 5/31/2009 | 5/31/2010 |

Registration of the OATS are on file with the Federal Communications Commission, under Registration Number 90579, the VCCI under registration number R-3027, and are also registered with Industry Canada under Site Numbers 2040B-1 and 2040B-2.

# Section 4: Observations

## 4.1 Modifications Performed During Assessment

For Receiver Spurious Emissions, the EUT was programmed with a firmware to force it to stay on receive mode only.

## 4.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

## 4.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

## 4.4 Test Deleted

No Tests were deleted from this assessment.

## 4.5 Additional Observations

There were no additional observations made during this assessment.

## Section 5: Results Summary

This section contains the following:

FCC Part 15 Subpart C:
IC RSS-210 Issue 7 June 2007 Annex 8
IC RSS-Gen Issue 2 June 2007

The column headed "Required" indicates whether the associated clauses were invoked for the apparatus under test. The following abbreviations are used:

N No: not applicable / not relevant
Y Yes: Mandatory i.e. the apparatus shall conform to these tests.
N/T Not Tested, mandatory but not assessed. (See section 4.4 Test deleted)

The results contained in this section are representative of the operation of the apparatus as originally submitted.

### 5.1 Test Results

| Part 15C | RSS | Test Description | Required | Result |
|---|---|---|---|---|
| | | | | |
| 15.207 (a) | RSS-Gen 7.2.2 | Conducted Emission Limit | Y | Pass |
| 15.247(a)(1) | | Carrier Frequency Separation | Y | Pass |
| 15.247(a)(1)(iii) | | Number of Hopping Frequencies | Y | Pass |
| 15.247(a)(1)(iii) | | Time of Occupancy (Dwell Time) | Y | Pass |
| 15.215(c) | RSS-Gen 4.6.1 | 20 dB Bandwidth | Y | Pass |
| 15.247(b)(1) | RSS-Gen 4.8 & 4.9 | Peak Output Power | Y | Pass |
| 15.247(d) | | Band-edge Compliance of RF Conducted Emissions | Y | Pass |
| 15.247 (d) | | Spurious RF Conducted Emissions | Y | Pass |
| 15.247 (d) | | Spurious Radiated Emissions | Y | Pass |
| | RSS-Gen 4.10 | Receiver Spurious Emissions | Y | Pass |

11696 Sorrento Valley Road, Suite F, San Diego, CA 92121
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# Appendix A: Test Results

## Section 15.207(a) – Power Line Conducted Emissions

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.

| Frequency of emission (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.



### Test Conditions:

| | | | |
|---|---|---|---|
| Sample Number: | SCR102 | **Temperature:** | 22 |
| **Date:** | February 24, 2010 | **Humidity:** | 45 |
| **Modification State:** | Test Mode (Hopping) | **Tester:** | FSCustodio |
| | | **Laboratory:** | Shield Room #1 |

### Test Results:

See attached plots for Line 1 (Hot) and Line 2 (Neutral).

### Additional Observations:

- EUT was pretested using the following modes: Low channel, Mid channel, High channel and Hopping mode. Only the worst case presented (Hopping mode).
- Test parameters are internal to the automated test software used (R&S®ES-SCAN Version 2.3) for conducted emission test.
- Red limit line is Quasi Peak limit while pink limit line is Average limit.
- ▼represents final quasi peak measurements while ▼ represent final average measurements.
- Six sub ranges were created in order to have at least six measurements in each range.

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# Nemko USA Inc.

## EMI Measurement Test Report

| | |
|---|---|
| Device Under Test | Wireless Surround System (Receiver) |
| Operator Name | FSCustodio |
| Test Specification | FCC Class B Conducted Emissions |
| Comment | Line 1 Hopping (worst case) |

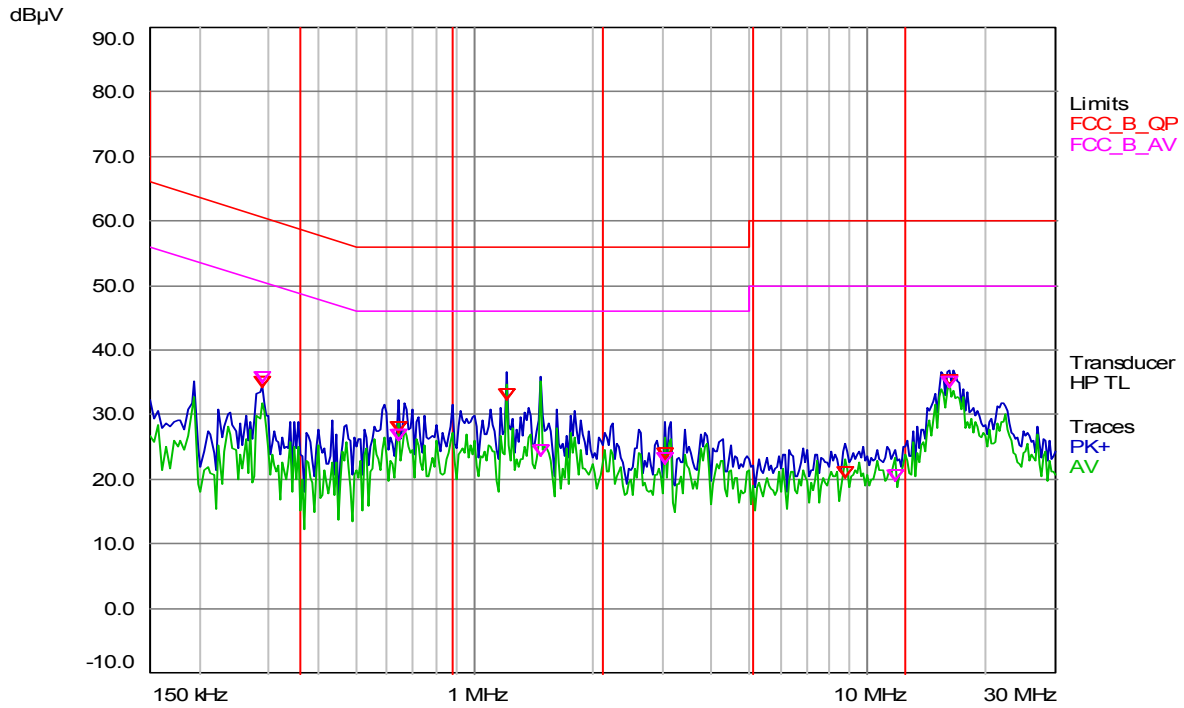
### Sweep Settings ( 1 Range )

| Frequencies | | | Analyzer Settings | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Start** | **Stop** | **Sweep Points** | **Res BW** | **Sweep Time** | **Atten** | **Preamp** | **Pre-selector** | **Ref Level** |
| 150 kHz | 30 MHz | 8001 | 9 kHz (6dB) | 1 s | Auto | Off | Off | 80 dBµV |

### Final Measurement

| | | | |
|---|---|---|---|
| Detectors: | QP , AV | Meas Time: | 1 s |
| Peaks: | 6 | Acc. Margin: | 40 dB |

### Pre-measurement Graph



## Final Measurement Results

| Trace | Frequency (MHz) | Level ( dBµV) | Limit ( dBµV) | Delta Limit (dB) |
|---|---|---|---|---|
| 1 QP | 0.288056 | 34.23 | 60.58 | -26.35 |
| 2 AV | 0.288056 | 35.05 | 50.58 | -15.53 |
| 1 QP | 0.638794 | 27.29 | 56.00 | -28.71 |
| 2 AV | 0.638794 | 26.05 | 46.00 | -19.95 |
| 1 QP | 1.205944 | 32.34 | 56.00 | -23.66 |
| 2 AV | 1.474594 | 23.68 | 46.00 | -22.32 |
| 1 QP | 3.041719 | 23.20 | 56.00 | -32.80 |
| 2 AV | 3.041719 | 22.25 | 46.00 | -23.75 |
| 1 QP | 8.761725 | 20.20 | 60.00 | -39.80 |
| 2 AV | 11.739263 | 19.73 | 50.00 | -30.27 |
| 1 QP | 16.138406 | 34.51 | 60.00 | -25.49 |
| 2 AV | 16.138406 | 34.27 | 50.00 | -15.73 |

* = limit exceeded

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# Nemko USA Inc.

## EMI Measurement Test Report

| | |
|---|---|
| Device Under Test | Wireless Surround System (Receiver) |
| Operator Name | FSCustodio |
| Test Specification | FCC Class B Conducted Emissions |
| Comment | Line 2 Hopping (worst case) |

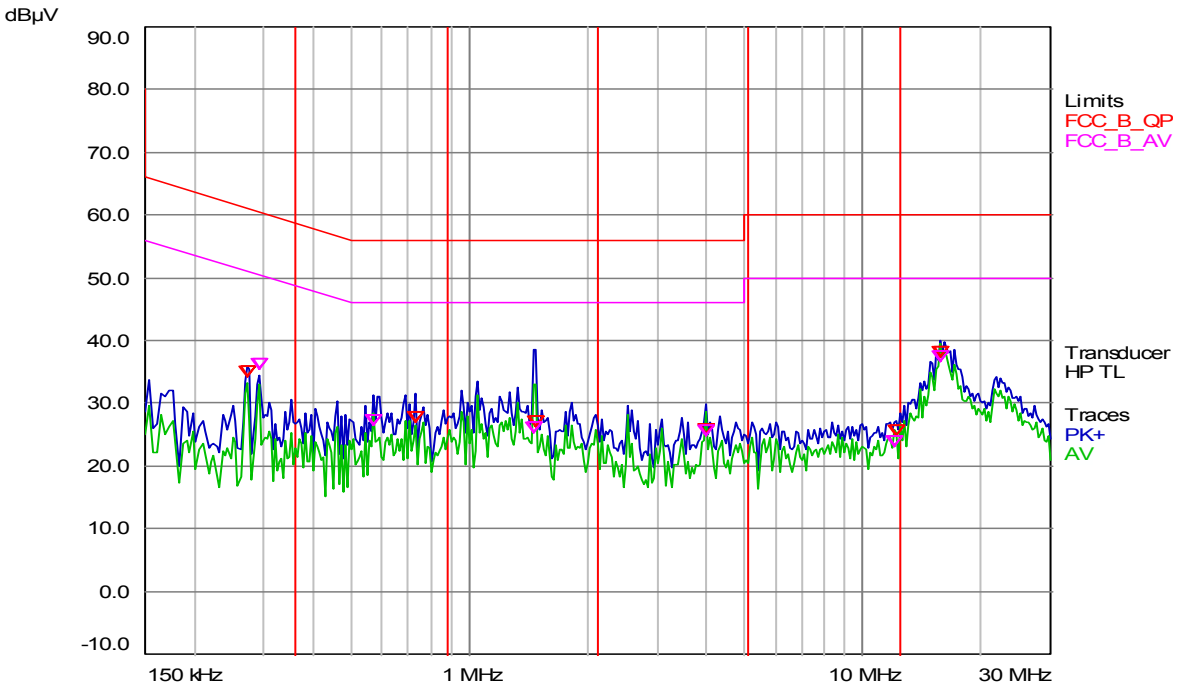
### Sweep Settings ( 1 Range )

| Frequencies | | | Analyzer Settings | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Start** | **Stop** | **Sweep Points** | **Res BW** | **Sweep Time** | **Atten** | **Preamp** | **Pre-selector** | **Ref Level** |
| 150 kHz | 30 MHz | 8001 | 9 kHz (6dB) | 1 s | Auto | Off | Off | 80 dBµV |

### Final Measurement

Detectors: QP , AV
Peaks: 6
Meas Time: 1 s
Acc. Margin: 40 dB

### Pre-measurement Graph



## Final Measurement Results

| Trace | Frequency (MHz) | Level ( dBµV) | Limit ( dBµV) | Delta Limit (dB) |
|---|---|---|---|---|
| 1 QP | 0.273131 | 34.27 | 61.02 | -26.75 |
| 2 AV | 0.291788 | 35.42 | 50.47 | -15.05 |
| 2 AV | 0.5679 | 26.42 | 46.00 | -19.58 |
| 1 QP | 0.728344 | 26.86 | 56.00 | -29.14 |
| 2 AV | 1.4634 | 25.26 | 46.00 | -20.74 |
| 1 QP | 1.467131 | 26.14 | 56.00 | -29.86 |
| 1 QP | 3.996919 | 25.06 | 56.00 | -30.94 |
| 2 AV | 3.996919 | 24.85 | 46.00 | -21.15 |
| 2 AV | 11.955675 | 23.05 | 50.00 | -26.95 |
| 1 QP | 12.213131 | 24.67 | 60.00 | -35.33 |
| 2 AV | 15.776475 | 36.64 | 50.00 | -13.36 |
| 1 QP | 15.780206 | 37.31 | 60.00 | -22.69 |

* = limit exceeded

## Section 15.247(a)(1) – Carrier Frequency Separation

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.



### Test Conditions:

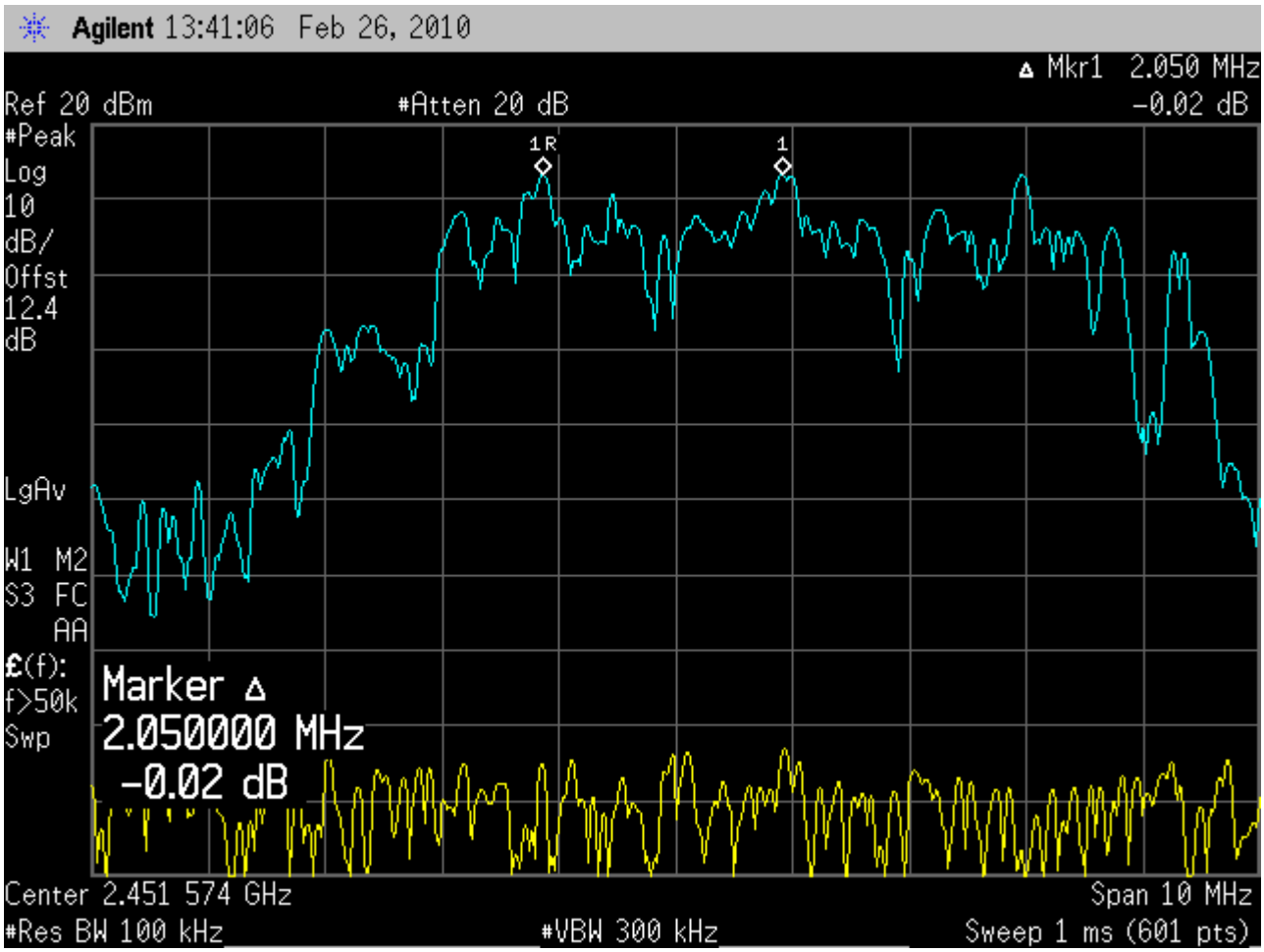
| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 22 |
| **Date:** | February 25, 2009 | **Humidity:** | 45 |
| **Modification State:** | Between Channel 22 and 23 | **Tester:** | FSCustodio |
| | | **Laboratory:** | Nemko |

### Test Results:

See attached plots.

### Additional Observations:

- Hopping function enabled.
- Span is 10 MHz
- RBW is 1% of 10 MHz
- VBW is 3X RBW
- Sweep is auto
- Detector is Peak
- Trace is Max Hold
- Marker-delta function is used between the peaks of the adjacent channels.
- Observed Carrier Frequency Separation is 2.05 MHz.
- 20dB Bandwidth as per Part 15.215 (c) is 2.0 MHz.
- Observed Carrier Frequency Separation > 20dB Bandwidth = Complies



## Section 15.247(a)(1)(iii) – Number of Hopping Frequencies

(iii) Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.



### Test Conditions:

| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 22 |
| **Date:** | February 26, 2010 | **Humidity:** | 45 |
| **Modification State:** | Channel 1 to 20 | **Tester:** | FSCustodio |
| | | **Laboratory:** | Nemko |

### Test Results:

See attached plots.

### Additional Observations:

- Hopping function enabled.
- Span is set to capture all channels within the band of operation..
- RBW is 1% of the span
- VBW is > RBW
- Sweep is auto
- Detector is Peak
- Trace is Max Hold
- Observed Number of Hopping Frequencies is **20**.

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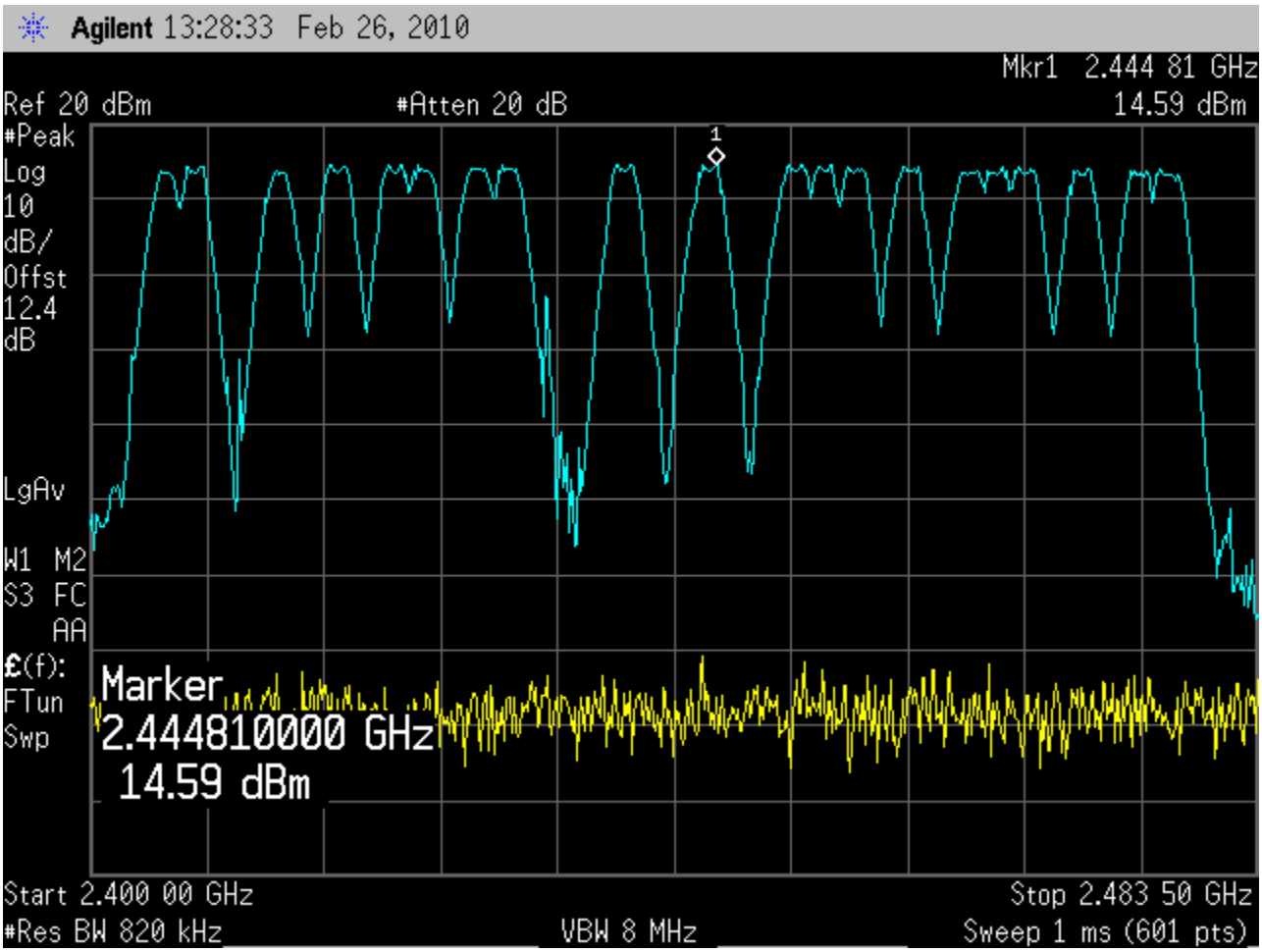


## Section 15.247(a)(1)(iii) – Time of Occupancy (Dwell Time)

(iii) Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.



### Test Conditions:

| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 22 |
| **Date:** | February 26, 2010 | **Humidity:** | 45 |
| **Modification State:** | Channel 1 to 20 | **Tester:** | FSCustodio |
| | | **Laboratory:** | Nemko |

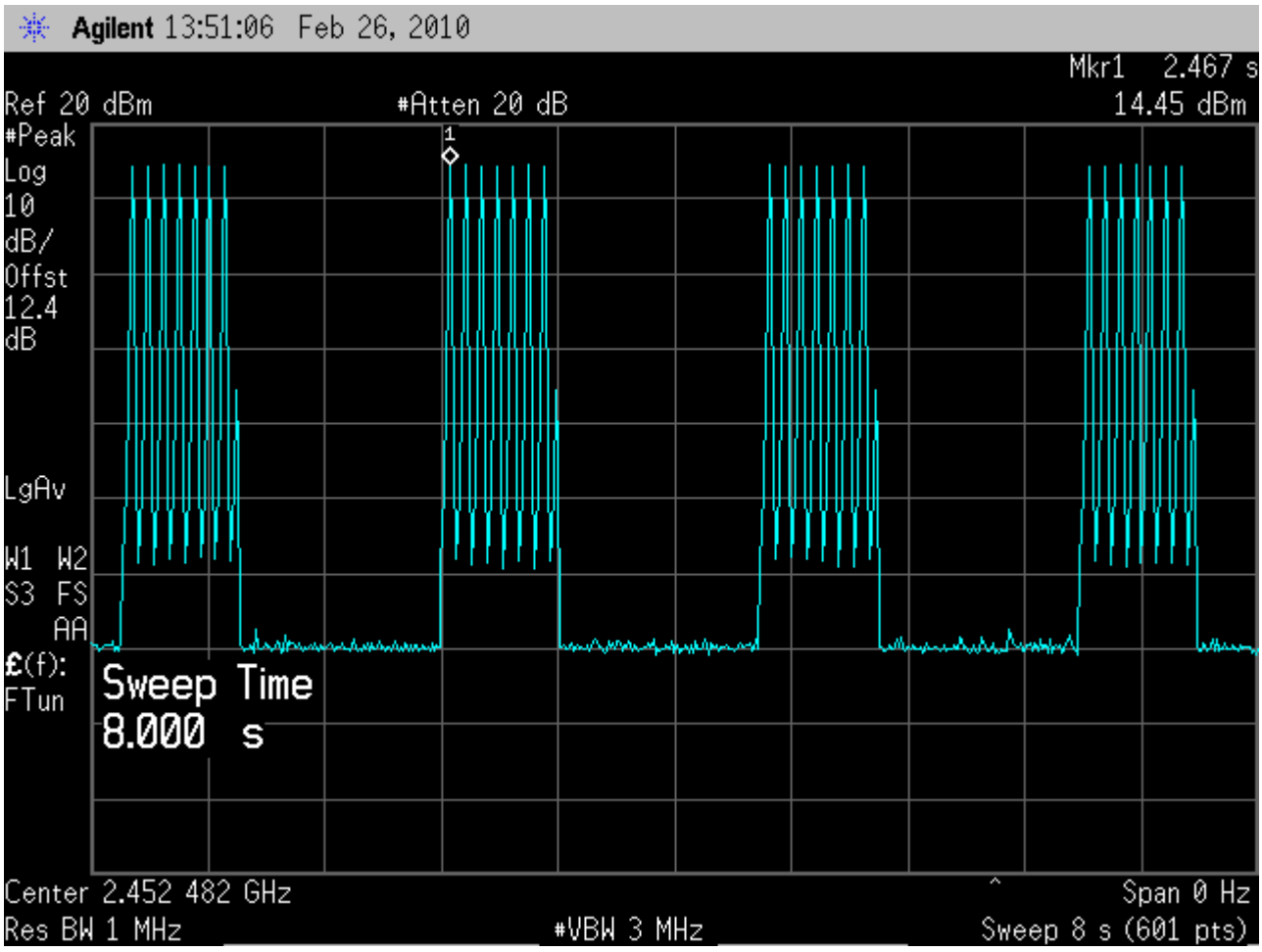
### Test Results:

See attached plots.

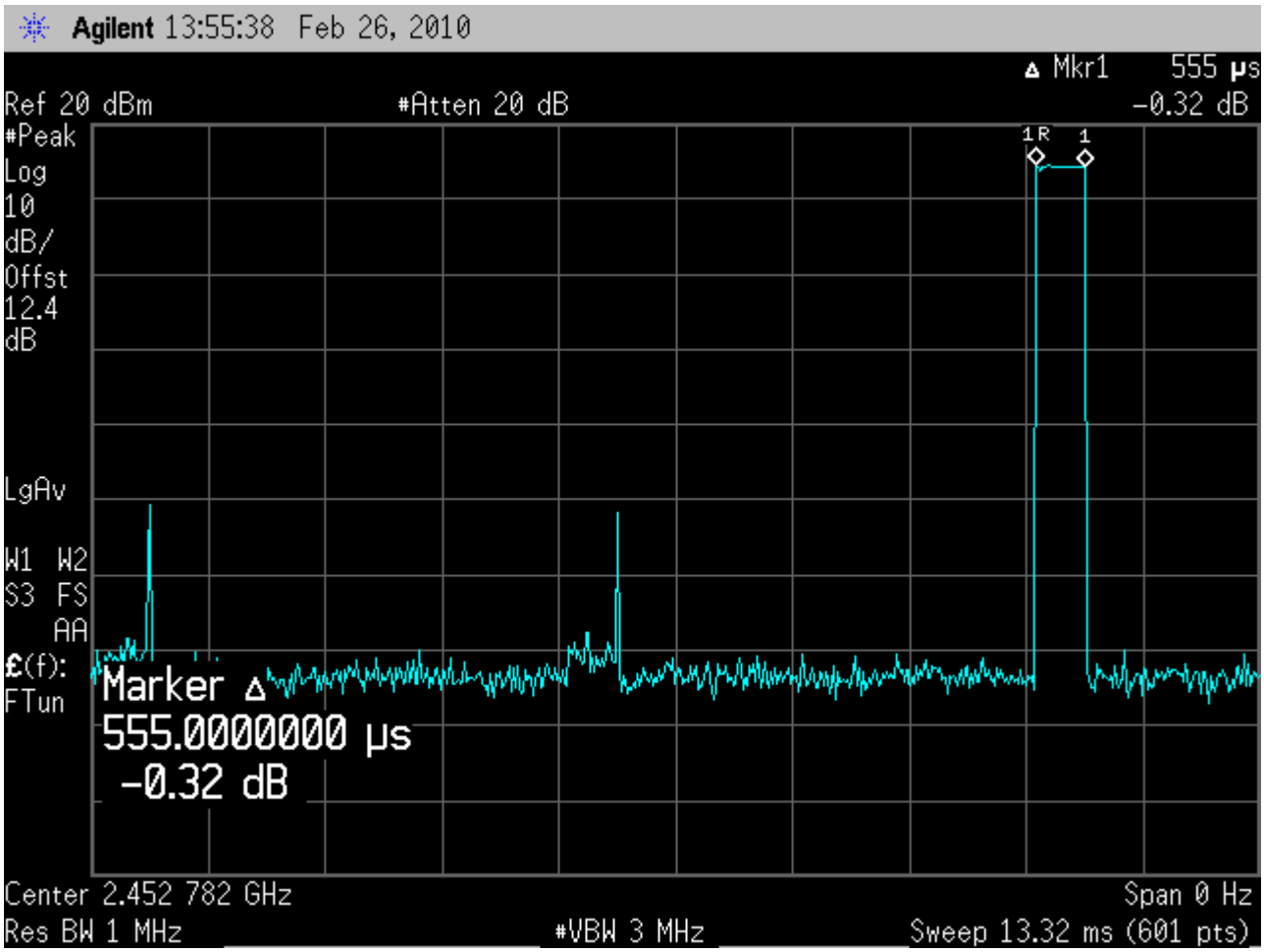
### Additional Observations:

- Hopping function enabled.
- Span is Zero span
- RBW is 1 MHz
- VBW is 3X RBW
- Sweep is 0.4 seconds multiplied by the number of hopping channels employed (0.4 x 20 = 8 seconds).
- Detector is Peak
- Trace is Max Hold
- Limit is 400 ms, time of occupancy is:
  = No. of transmission per required sweep < 400 ms
  = 0.555 ms x 28
  = **15.54 ms**

  15.54 ms < 400 ms, EUT Complies




Number of transmission per required sweep = **28**




Single transmission time = **555 µs**

## Section 15.215(c) – 20 dB Bandwidth

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.



### Test Conditions:

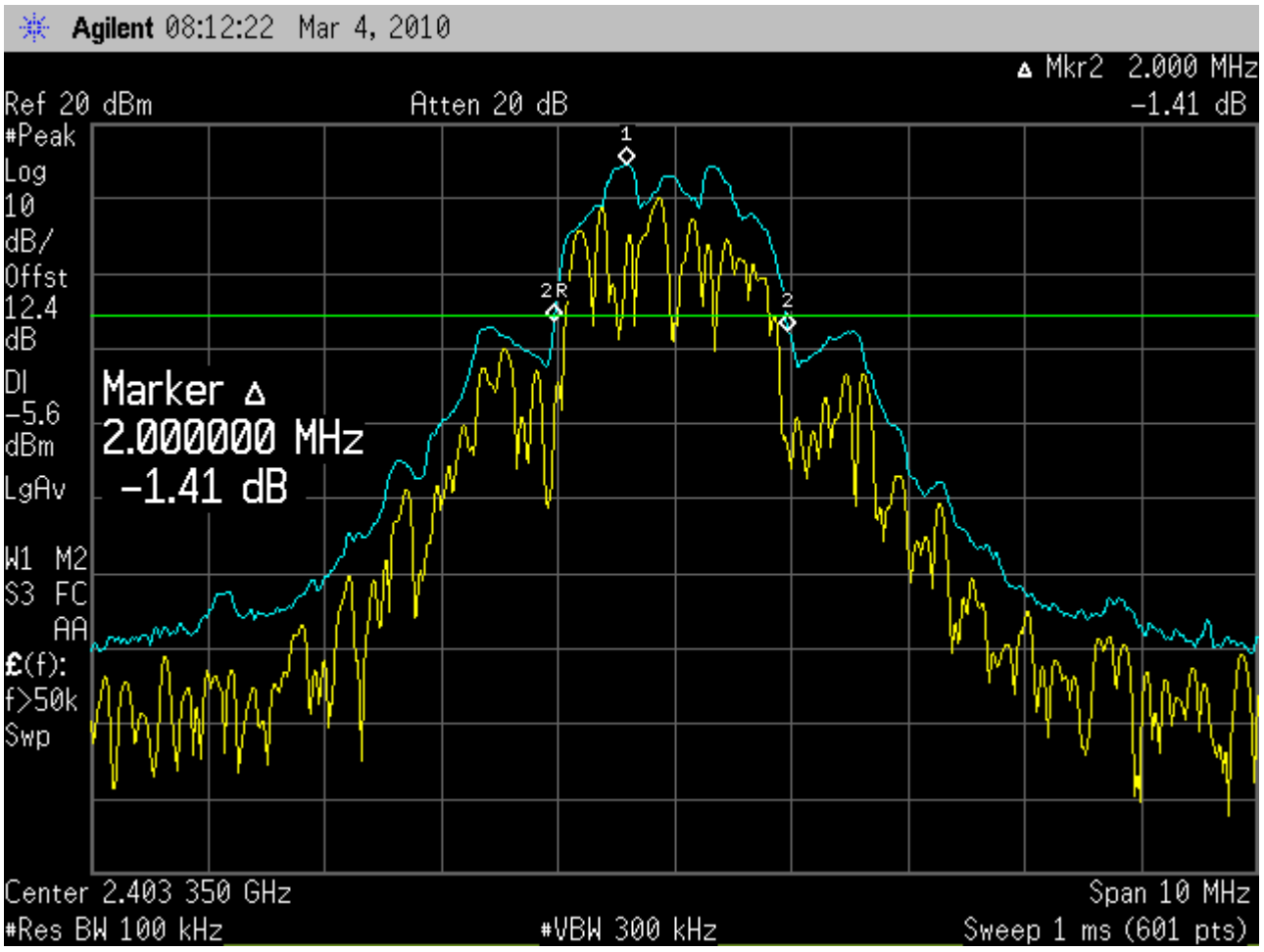
| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 22 |
| **Date:** | March 4, 2010 | **Humidity:** | 43 |
| **Modification State:** | Low ,Mid and High Channel | **Tester:** | FSCustodio |
| | | **Laboratory:** | Nemko |

### Test Results:

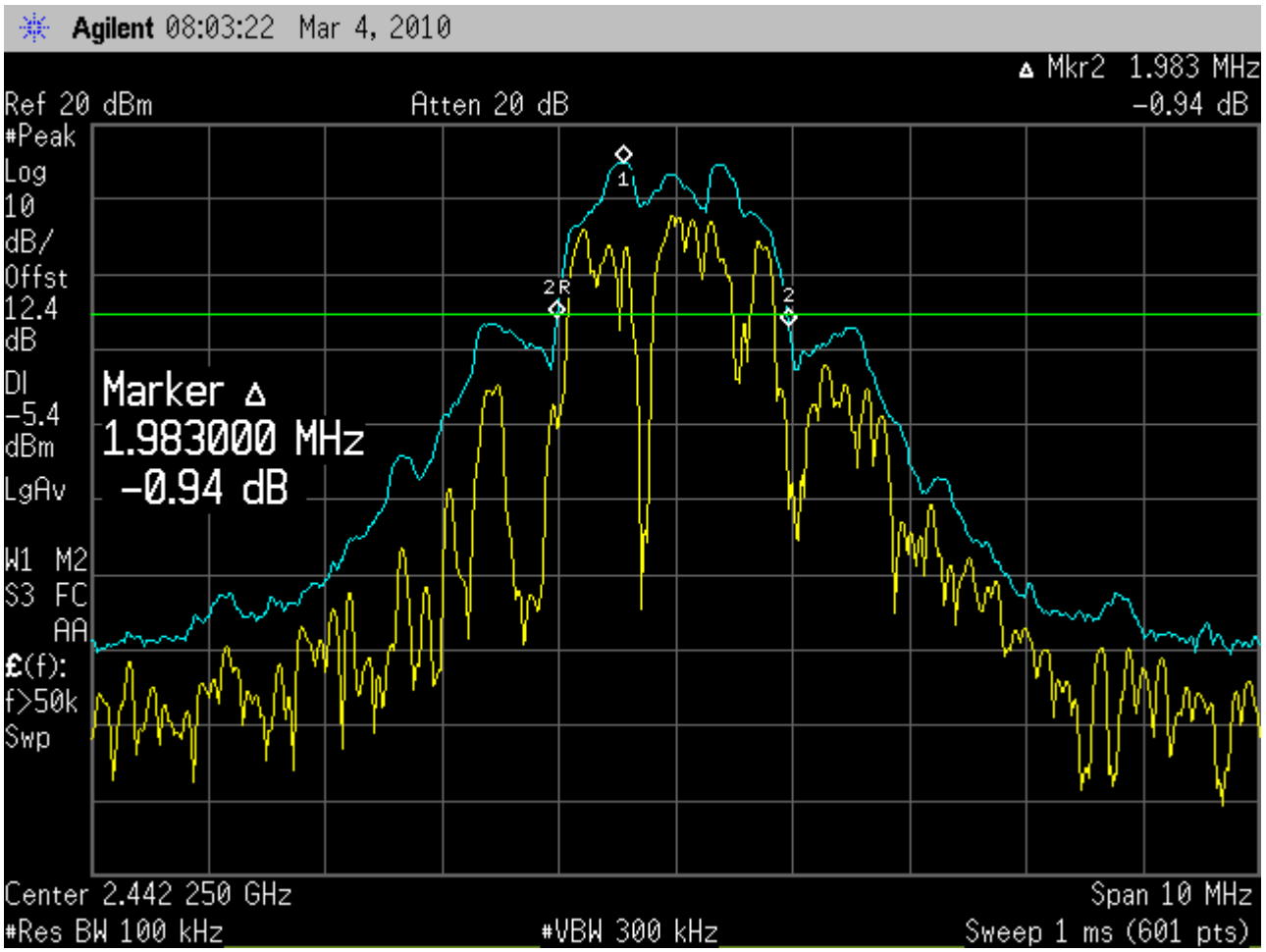
See attached plots.

### Additional Observations:

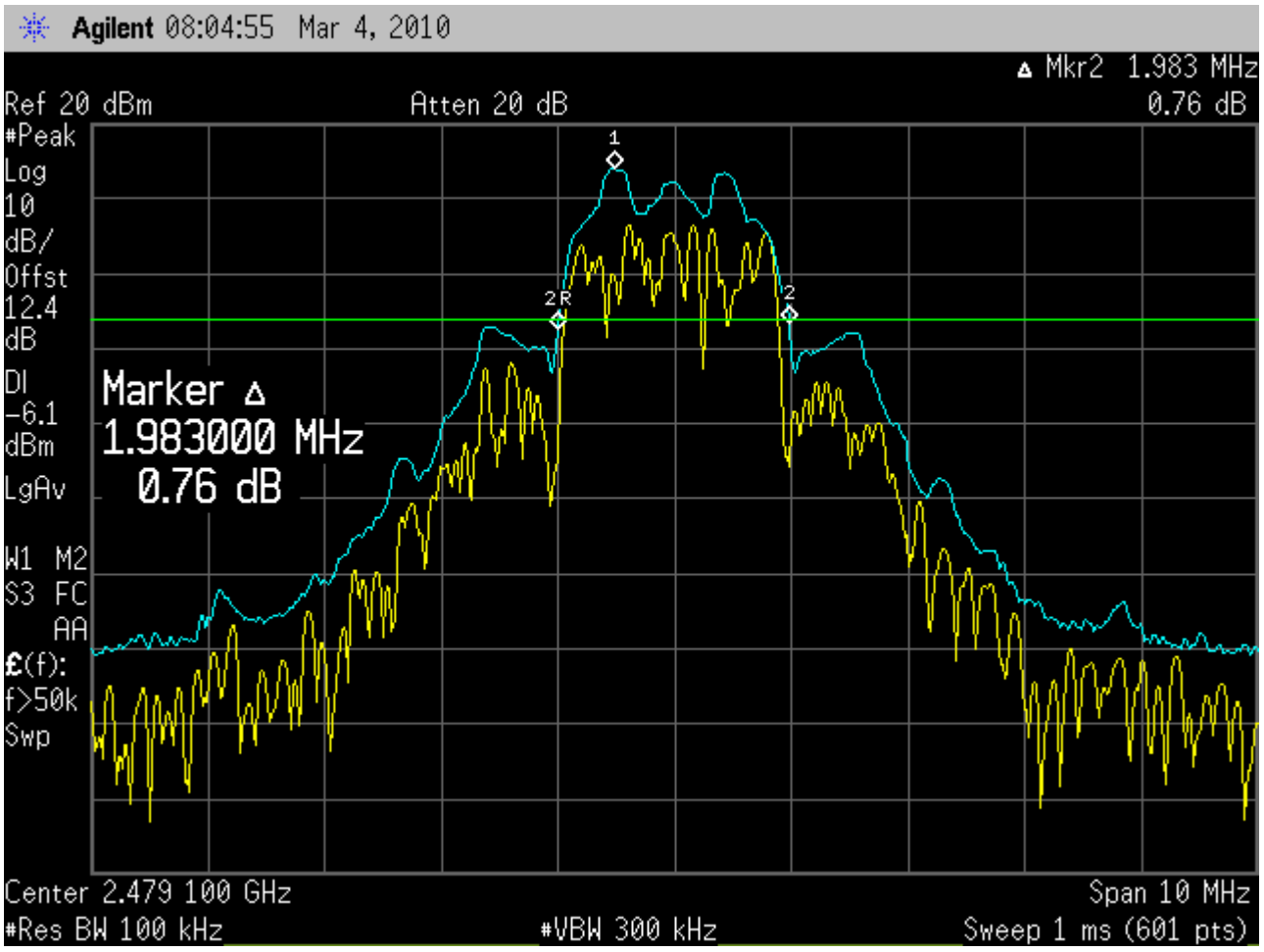
- Hopping disabled. Low, Mid and High channels verified.
- Span is wide enough to capture the channel transmission
- RBW is 1% of the span
- VBW is 3X RBW
- Sweep is auto
- Detector is Peak
- Trace is Max Hold
- A peak output max hold reading was taken, a display line was drawn 20 dB lower than peak level. The 20 dB bandwidth was determined from where the channel output spectrum intersected the display line.
- Observed 20 dB BW is 2 MHz.
- 2403.3 MHz – 1.0 MHz = 2402.3 MHz (within the frequency band)
- 2479.1MHz + 1.0 MHz = 2480.1 MHz (within the frequency band)




(Low Channel) Observed 20 dB Bandwidth is **2.0 MHz**




(Mid Channel) Observed 20 dB Bandwidth is **1.983 MHz**




(High Channel) Observed 20 dB Bandwidth is **1.983 MHz**

## Section 15.247(b)(1) – Peak Output Power

(1) For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.



### Test Conditions:

| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 22 |
| **Date:** | March 4, 2010 | **Humidity:** | 43 |
| **Modification State:** | Low, Mid and High Channels | **Tester:** | FSCustodio |
| | | **Laboratory:** | Nemko |

### Test Results:

Peak Power Analyzer used on this test

### Additional Observations:

- This is a conducted test. A 20dB attenuator was placed between the sensor and the antenna port. Additional 2.4 dB was added for cable and connectors. Total offset used is 22.4 dB.
- Measurements were made at 20.4VDC, 24VDC and 27.6VDC.

| Channel Range MHz | Peak Power Output dBm @ 20.4VDC | Peak Power Output dBm @ 24VDC | Peak Power Output dBm @ 27.6VDC |
|---|---|---|---|
| 2403.3 | 14.11 | 14.16 | 14.27 |
| 2442.2 | 14.65 | 14.66 | 14.41 |
| 2479.1 | 14.54 | 14.25 | 14.26 |

Peak Output Power = 14.66 dBm or **29.24 mW**

## Section 15.247(d) – Band-edge Compliance of RF Conducted Emissions

(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 §15.209(a) is not required. 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) (see §15.205(c)).



### Test Conditions:

| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 22 |
| **Date:** | March 4, 2010 | **Humidity:** | 43 |
| **Modification State:** | Low and High Channel | **Tester:** | FSCustodio |
| | | **Laboratory:** | Nemko |

### Test Results:

See attached plots.

### Additional Observations:

- This is a conducted test. The 12.4dB offset is from the external attenuator and cable used.
- Span is wide enough to capture the peak level of the emission operating on the channel closest to the band edges (Lower and Upper).
- RBW is 100kHz
- VBW is 3X RBW
- Sweep is auto.
- Detector is Peak
- Trace is Max Hold
- For each investigation, the peak level reading was taken and a display line was drawn 20 dBc below this level which will be the limit for this test.
- Test repeated between Hopping and Non-Hopping mode.

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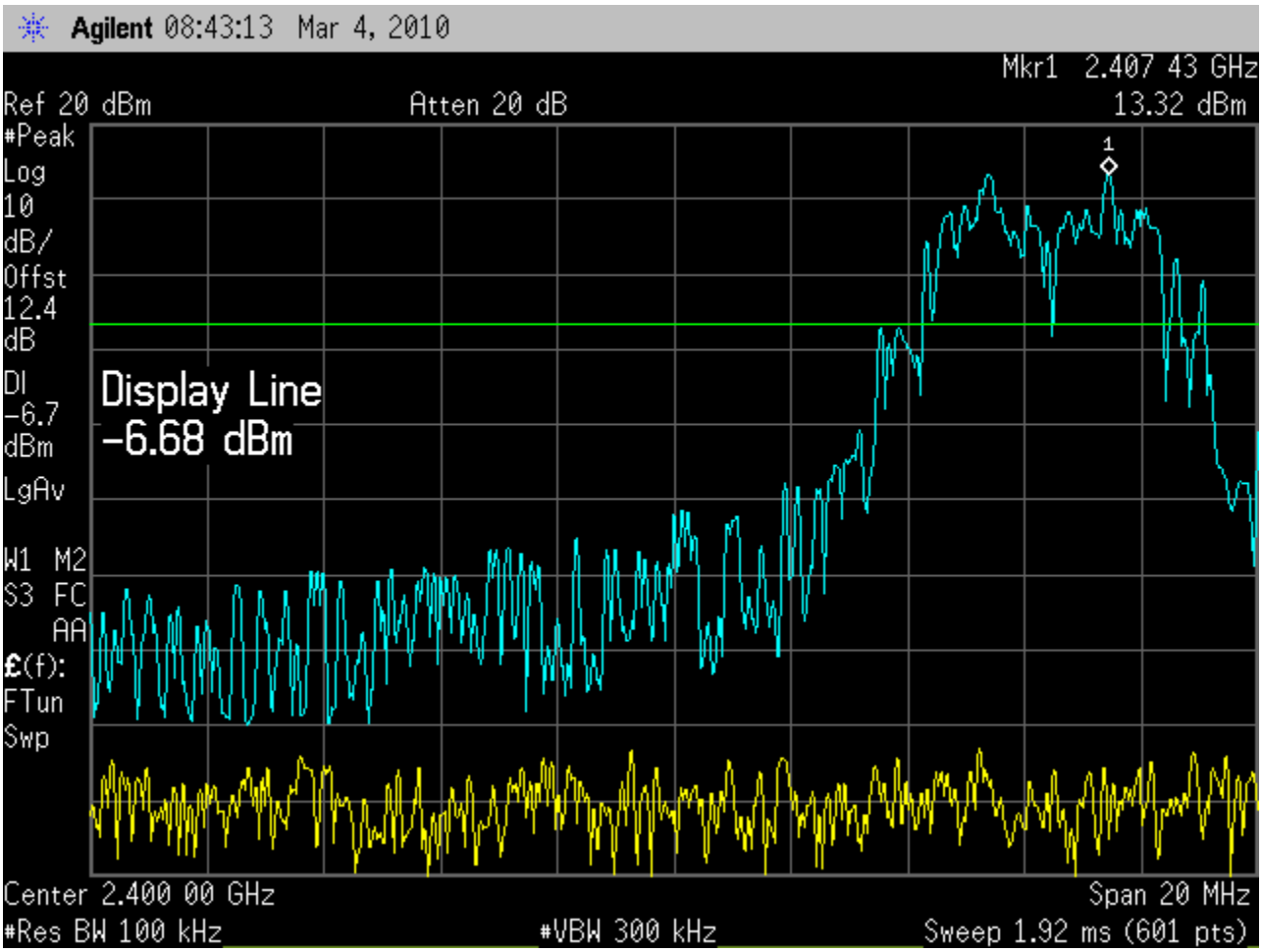
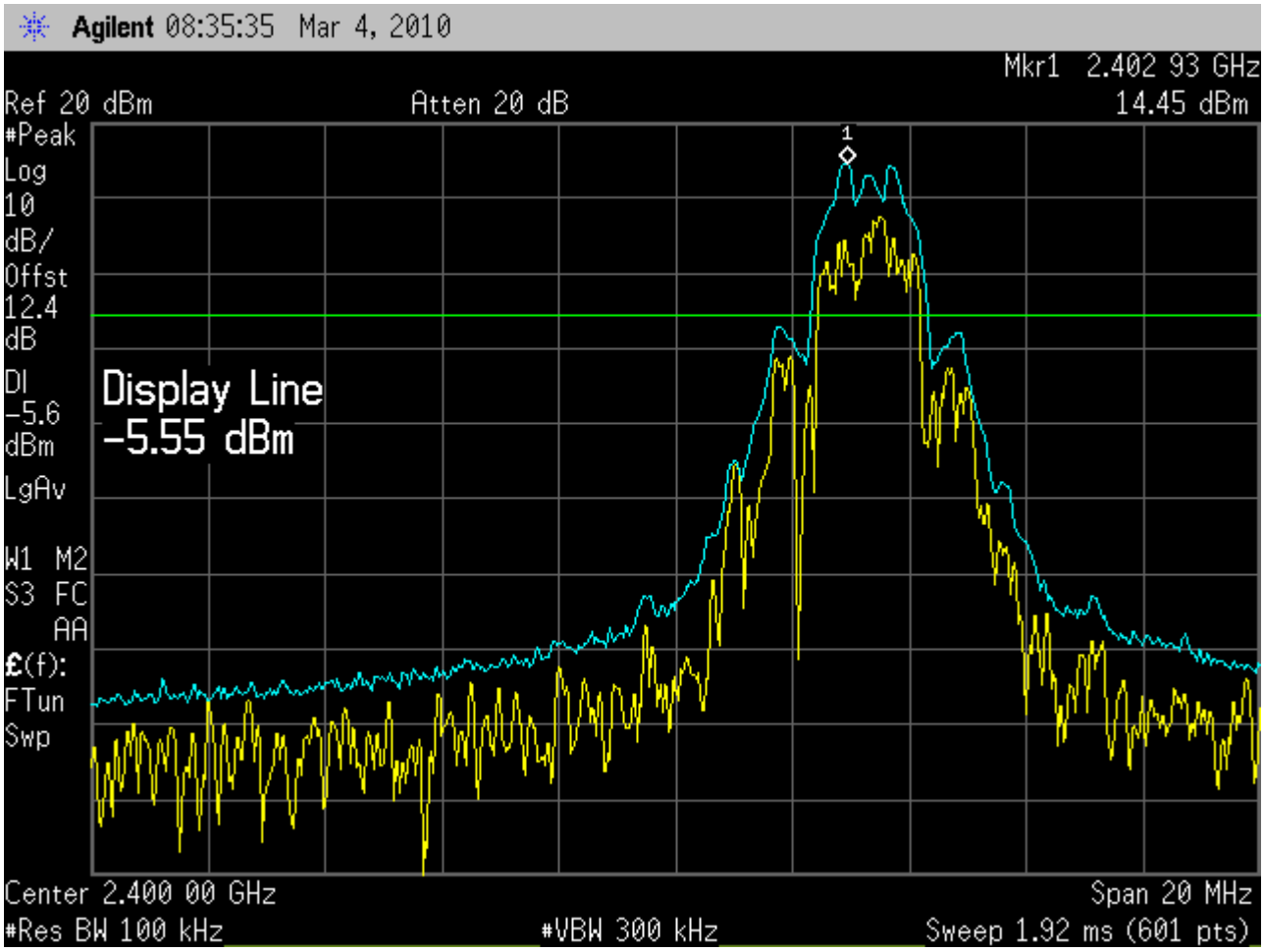



**Lower Band edge (Hopping)**




**Lower Band edge (Non-Hopping)**

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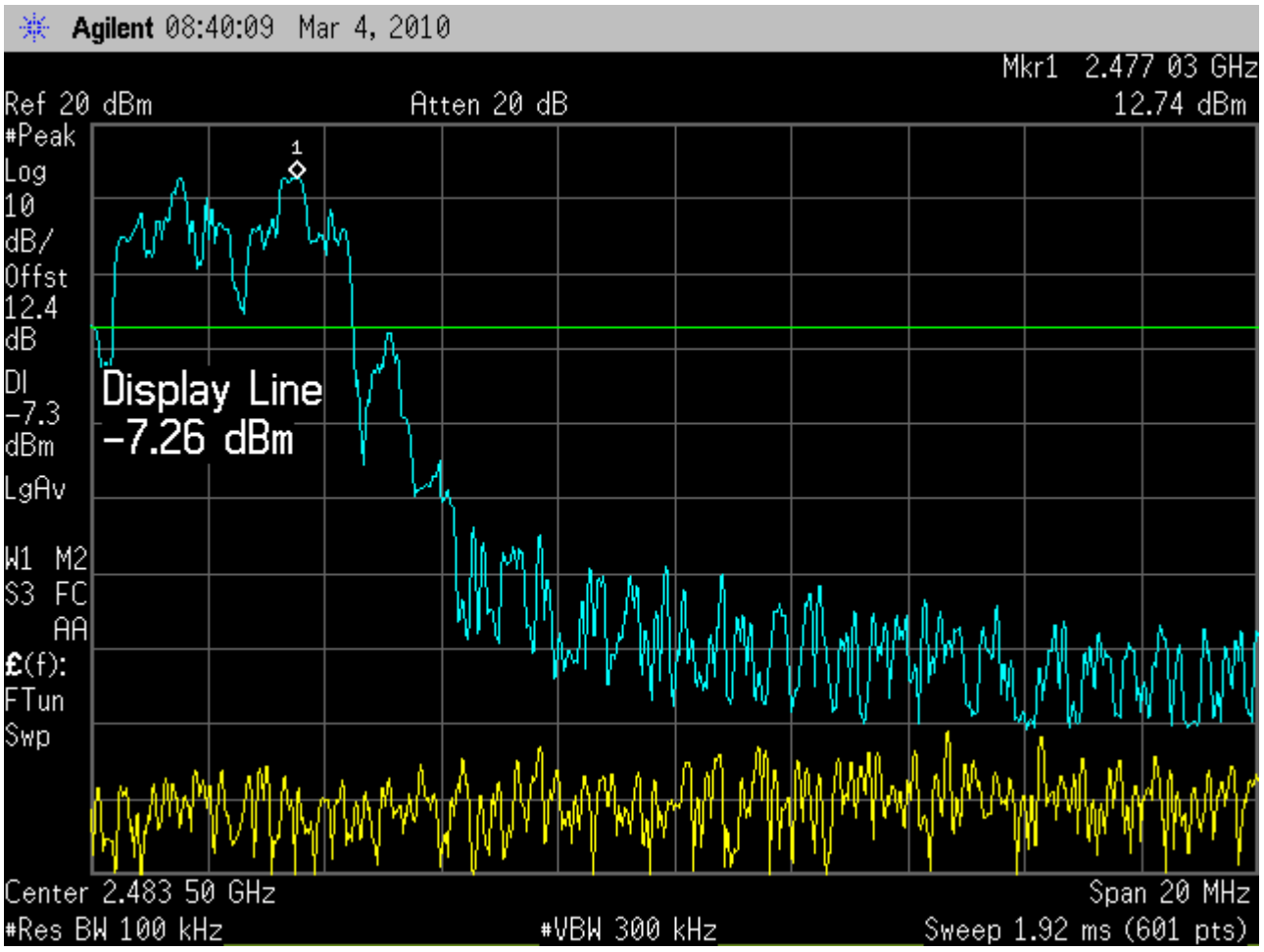


**Upper Band edge (Hopping)**

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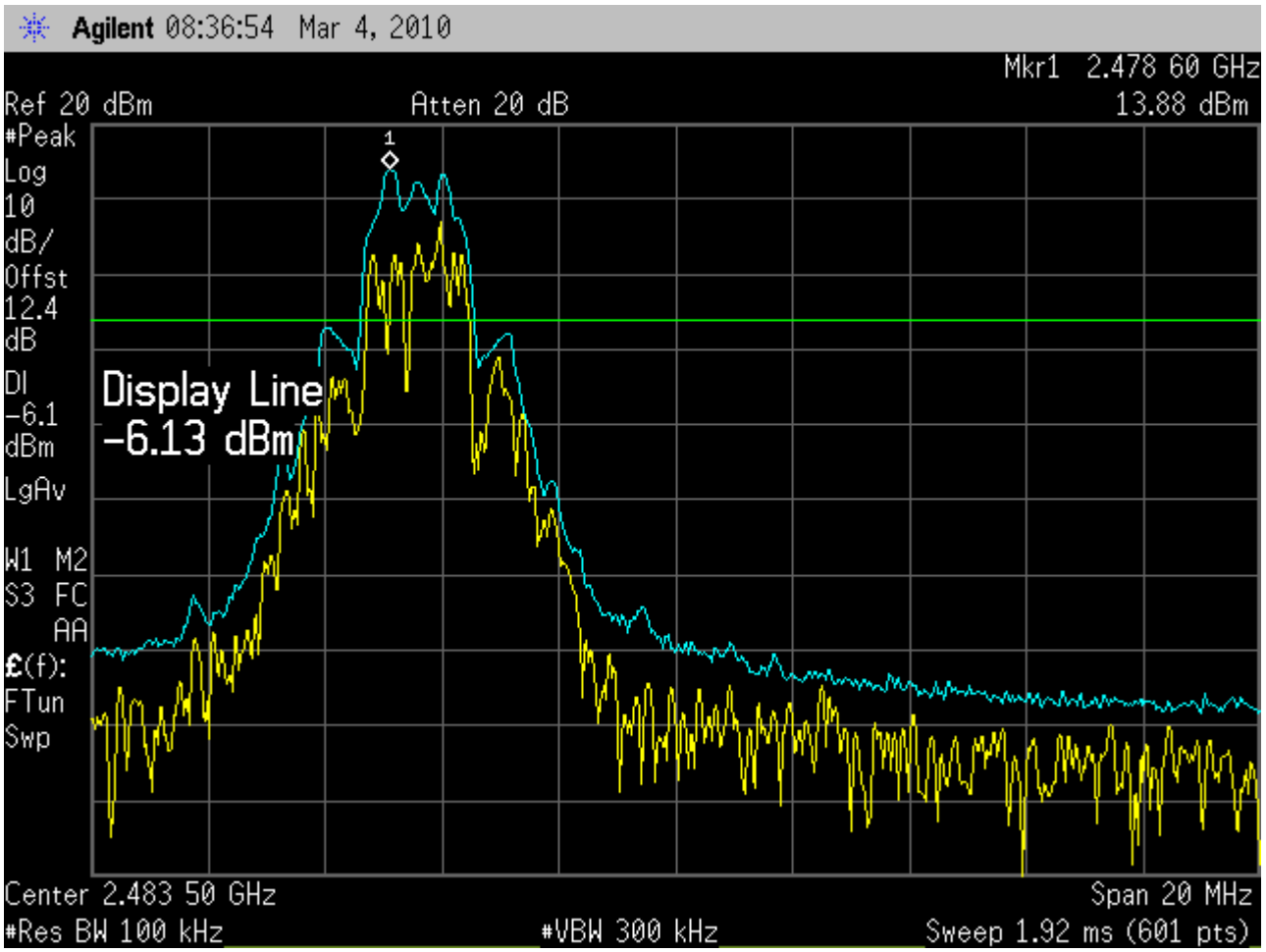


**Upper Band edge (Non-Hopping)**

## Section 15.247(d) – Spurious RF Conducted Emissions

(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 §15.209(a) is not required. 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) (see §15.205(c)).



### Test Conditions:

| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 22 |
| **Date:** | March 4, 2010 | **Humidity:** | 43 |
| **Modification State:** | Hopping + Low, Mid and High | **Tester:** | FSCustodio |
| | | **Laboratory:** | Nemko |

### Test Results:

See attached plots.

### Additional Observations:

- This is a conducted test. The 12.4dB offset is from the external attenuator and cable used.
- The EUT was hopping during this investigation. Test results when hopping are disabled (transmitting at specific frequency) can be found under Appendix B.
- The peak level reading was taken at the carrier frequency then a display line was drawn 20 dBc below this level which will be the limit for this test.
- VBW is 3X RBW
- Sweep is auto.
- Detector is Peak
- Trace is Max Hold
- EUT complies.

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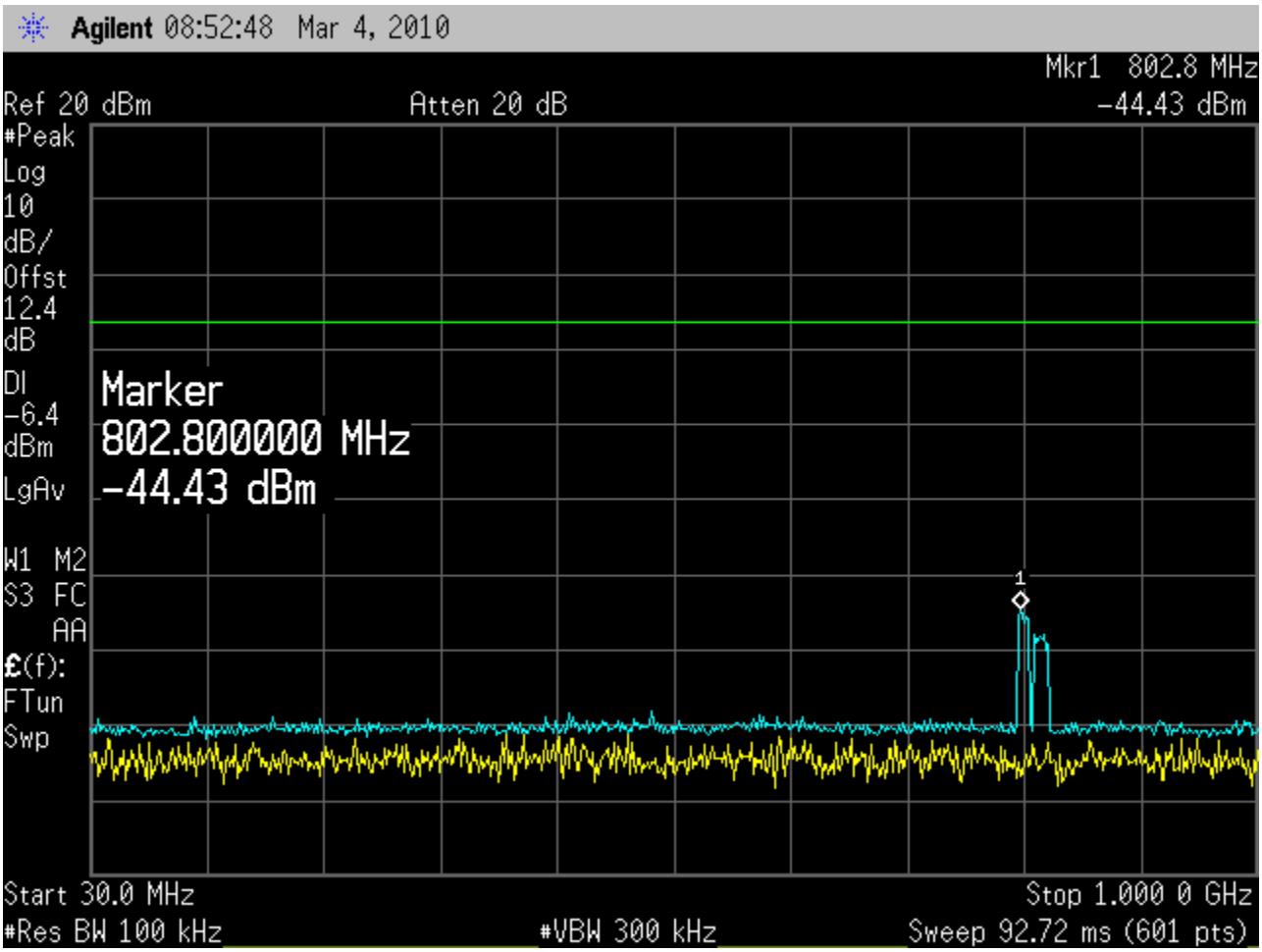
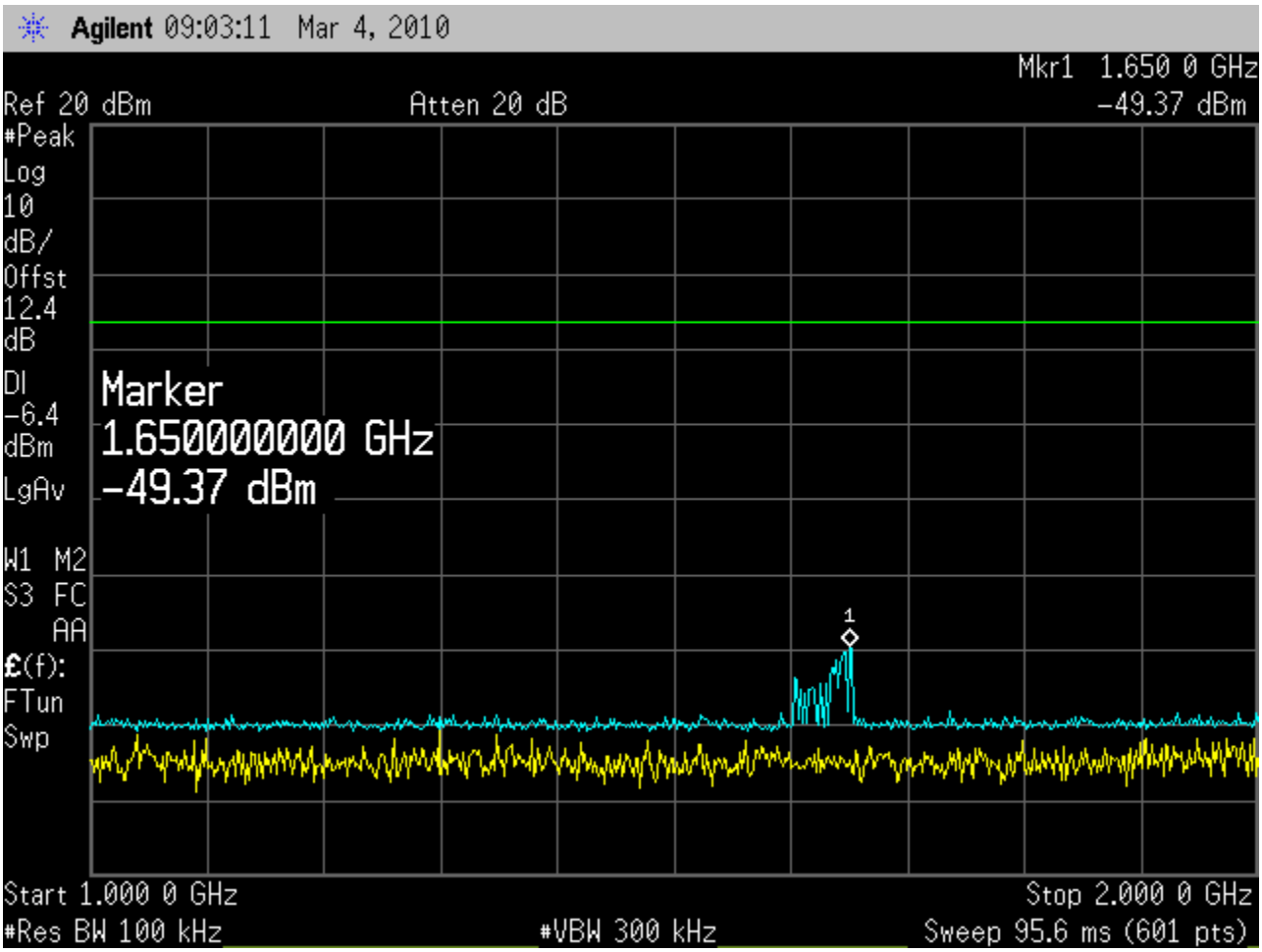
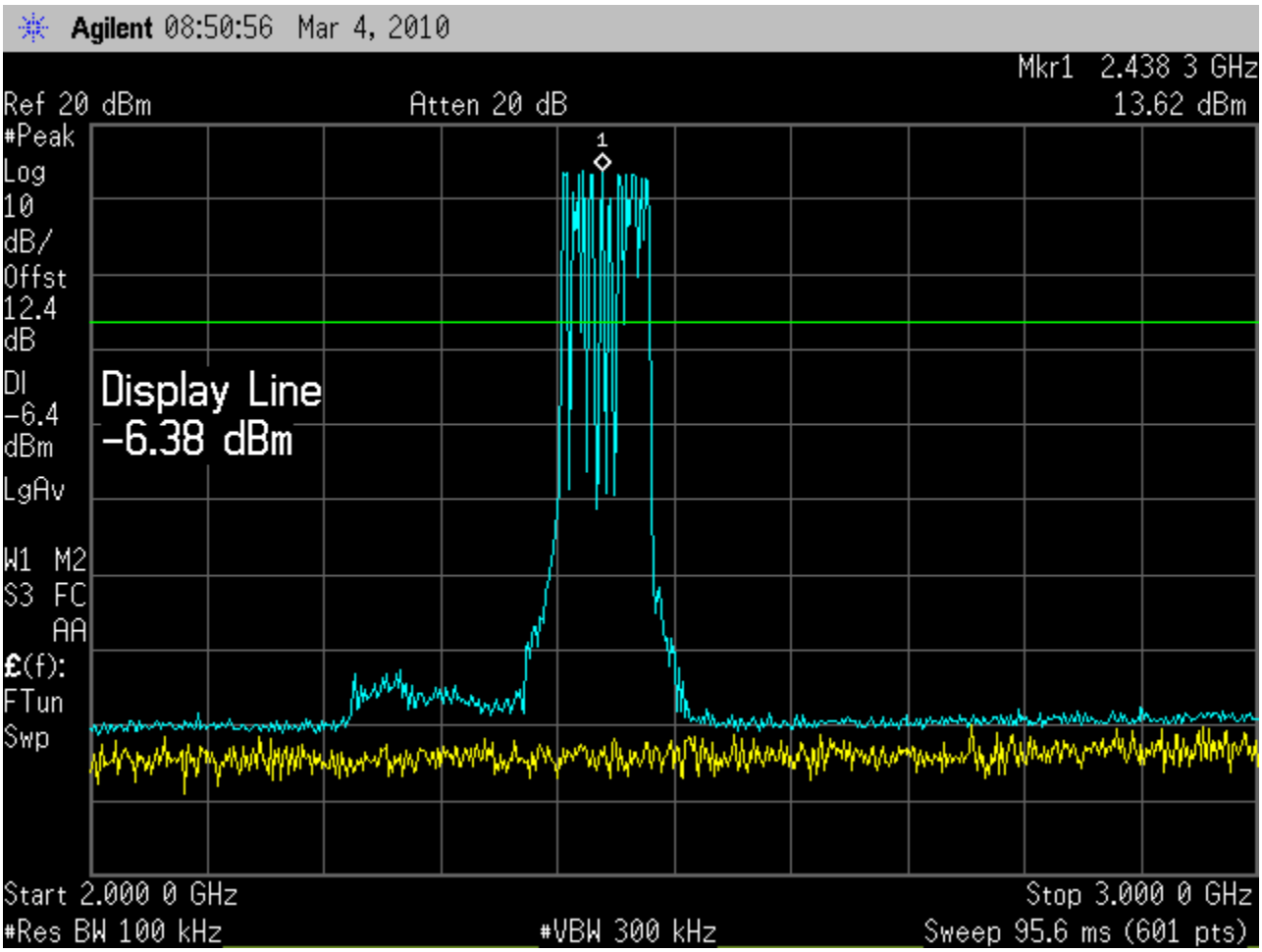


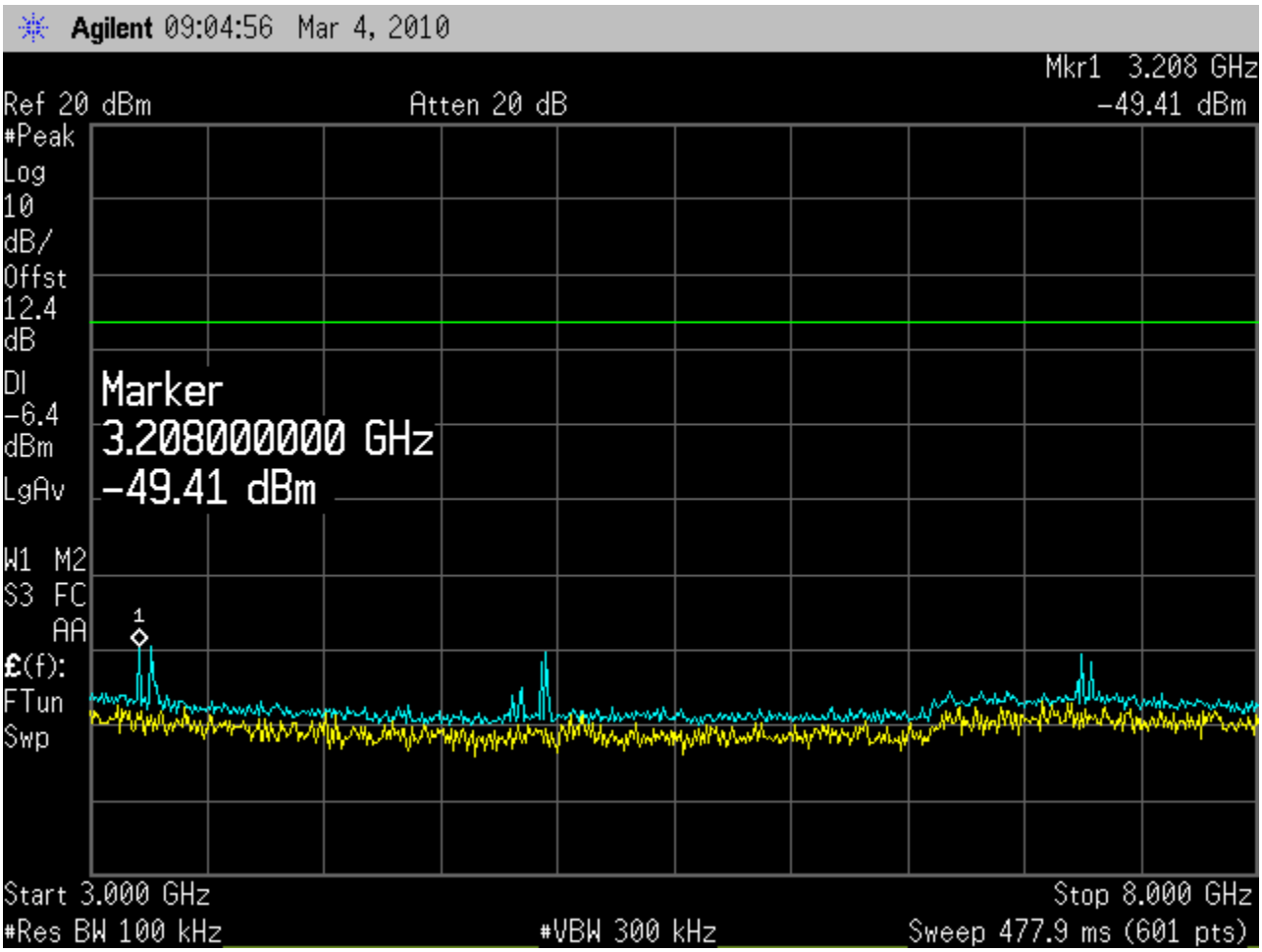

**Plots from 30 MHz to 1GHz** , Display Line is –6.38 dBm which is 20dB below the highest in band emission.




**Plots from 1GHz to 2GHz** , Display Line is –6.38 dBm which is 20dB below the highest in band emission.




**Plots from 2GHz to 3GHz** , Display Line is –6.38 dBm which is 20dB below the highest in band emission.




**Plots from 3GHz to 8GHz.** Display Line is –6.38 dBm which is 20dB below the highest in band emission.

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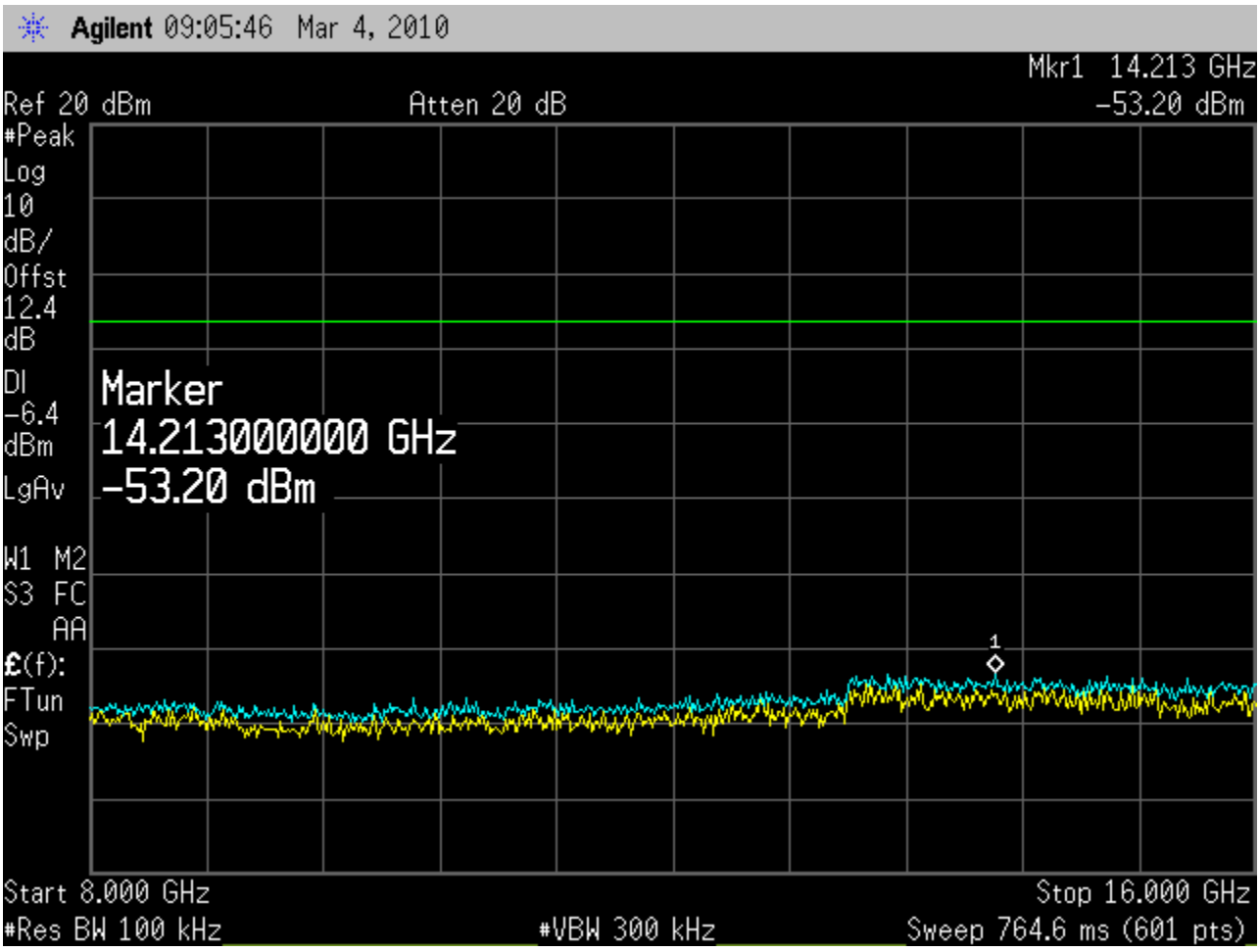
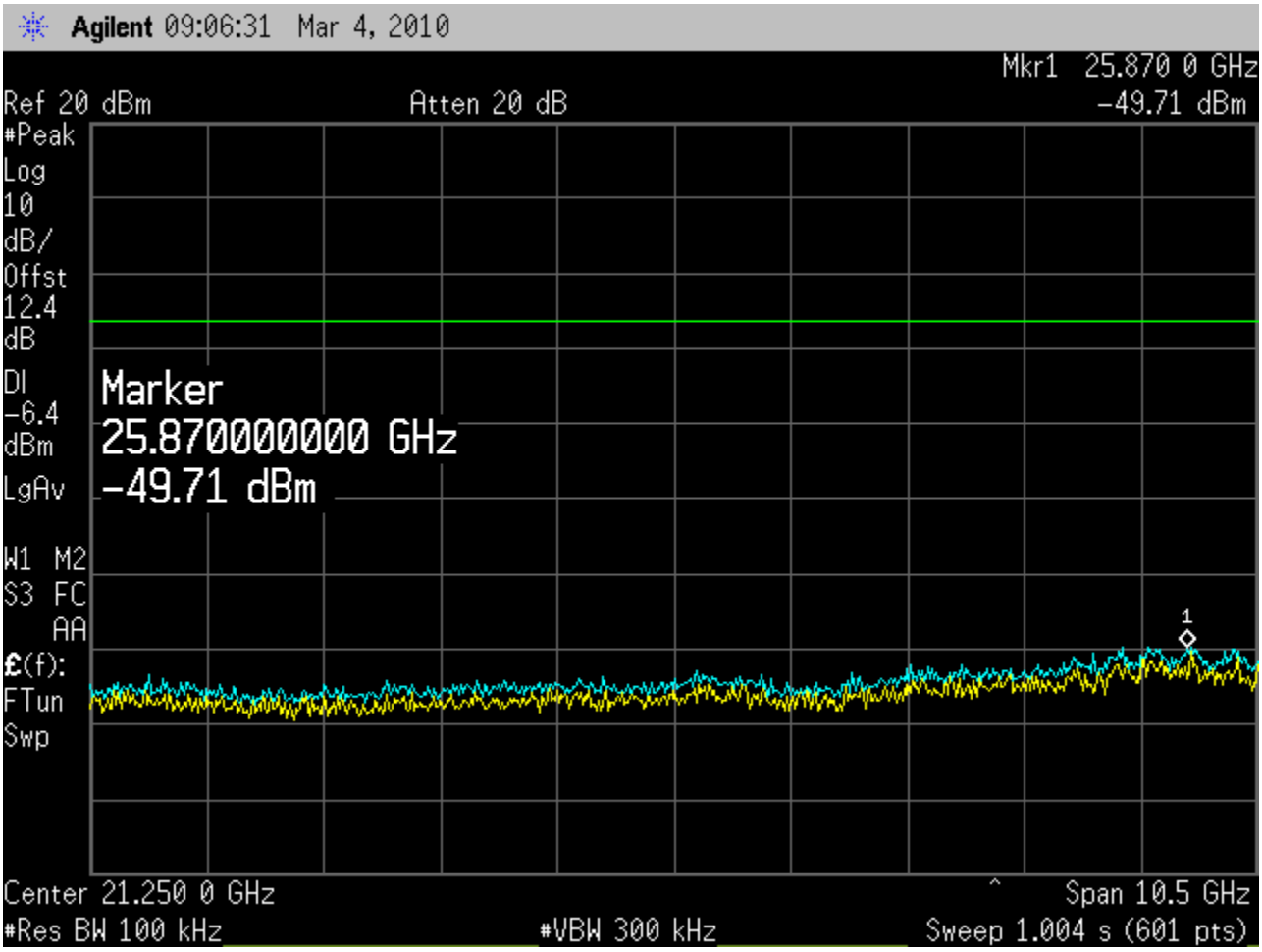



**Plots from 8GHz to 16GHz** , Display Line is –6.38 dBm which is 20dB below the highest in band emission.




**Plots from 16GHz to 26.5GHz** , Display Line is –6.38 dBm which is 20dB below the highest in band emission.

## Section 15.247(d) – Spurious Radiated Emissions

(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 §15.209(a) is not required. 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) (see §15.205(c)).



### Test Conditions:

| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 18 |
| **Date:** | February 25, 2010 | **Humidity:** | 62 |
| **Modification State:** | As required (Hopping or Single) | **Tester:** | FSCustodio |
| | | **Laboratory:** | SOATS |

### Test Results:

See attached plots.

### Additional Observations:

- The Spectrum was searched from 30MHz to the 10$^{th}$ 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)**.
- Duty Cycle Correction Factor used is -20 based from actual Duty Cycle of 5.33%.

### Sample Computation (base from "Hopping Mode" data):

Correction factor @ 46MHz = -17.3
= Antenna factor + Cable loss – Preamp gain
= 12.7 + 1.2 – 31.2

Corrected reading = Max. reading + Correction factor
= 42.9 + (-17.3)
= 25.6 dBµV/m

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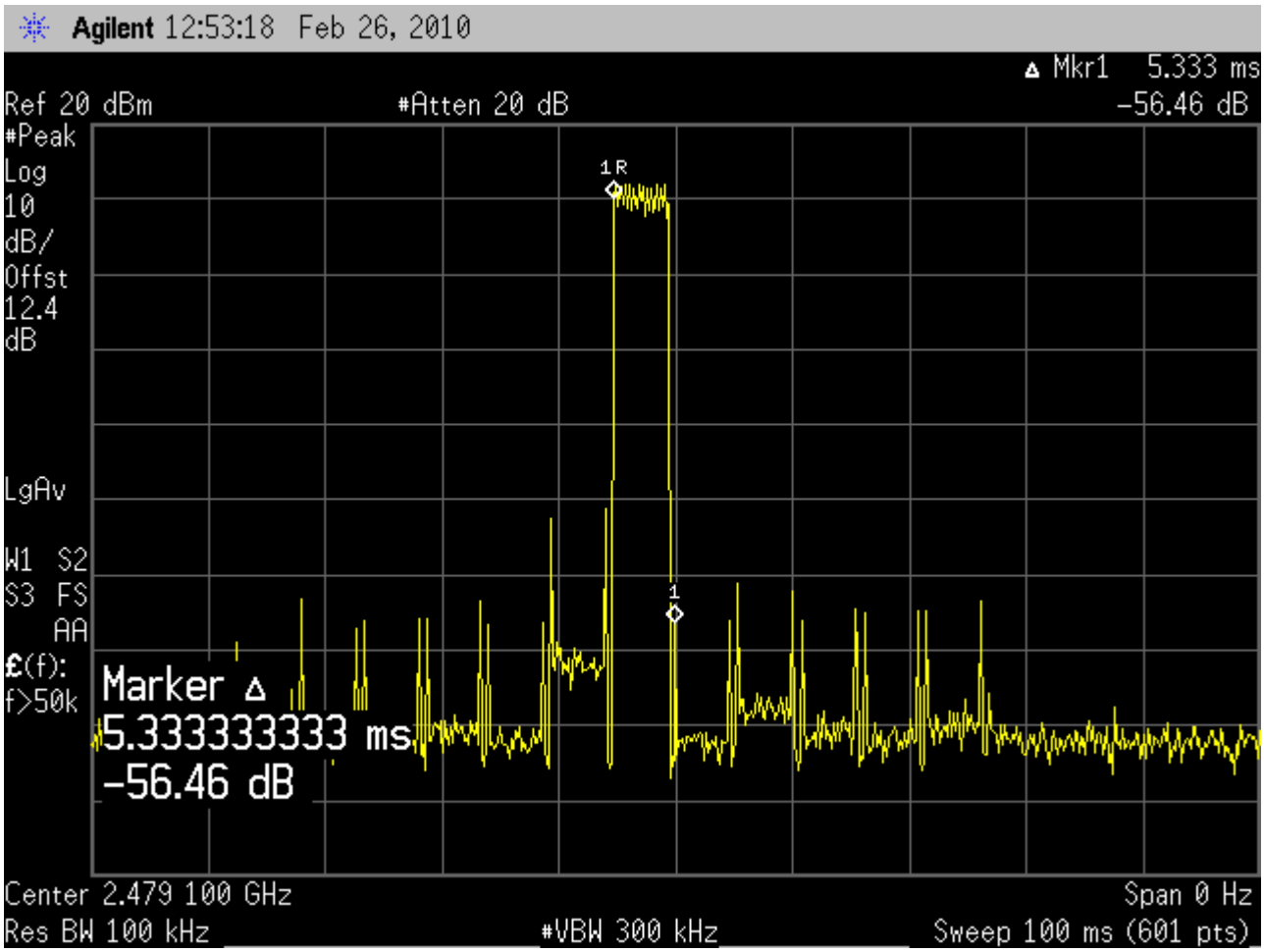
**Duty Cycle Factor Computation:**




**A single transmission of 5.33ms per 100ms**

**Duty Cycle = 5.33%**

**DCCF** = 20 log (0.053)
**= -25.46; limited to -20**

**NEMKO USA, Inc.**

**San Diego Headquarters:**
11696 Sorrento Valley Rd.
San Diego, CA 92121
Tel: (858) 755-5525
Fax: (858) 452-1810



## Radiated Emissions Data

| | | | | | |
|---|---|---|---|---|---|
| Job # : | 23972 | Date : | 02/25/2010 | Page | 1 of 1 |
| NEX#: | 144765 | Time : | 4:30PM | | |
| | | Staff : | FSC | | |
| Client Name : | KSC Industries Inc. | | | EUT Voltage : | 24VDC |
| EUT Name : | Wireless Surround System | | | EUT Frequency : | |
| EUT Model # : | SCR102 | | | Phase: | |
| EUT Serial # : | N/A | | | NOATS | |
| EUT Config. : | Hopping | | | SOATS | X |
| | | | | Distance < 1000 MHz: | 3 m |
| | | | | Distance > 1000 MHz: | 3 m |
| Specification : | CFR47 Part 15, Subpart B, Class B | | | | |
| Loop Ant. #: | NA | | | | |
| Bicon Ant.#: | 116_3m | Temp. (°C) : | 18 | | |
| Log Ant.#: | 110_3m | Humidity (%) : | 62 | | |
| DRG Ant. # | 877 | Spec An.#: | 911 | | |
| Cable LF#: | SOATS | Spec An. Display #: | NA | | |
| Cable HF#: | SOATS | QP #: | 911 | | |
| Preamp LF#: | 901 | PreSelect#: | NA | | |
| Preamp HF# | 317 | | | | |

| | | |
|---|---|---|
| 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 |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 46.0 | 42.8 | 42.9 | Q | | 1.0 | 42.9 | 25.6 | 40.0 | -14.4 | Pass | |
| 53.3 | 42.6 | 44.8 | Q | | 1.0 | 44.78 | 26.2 | 40.0 | -13.8 | Pass | |
| 61.4 | 45.2 | 44.6 | Q | | 1.0 | 45.23 | 23.2 | 40.0 | -16.8 | Pass | |
| 112.0 | 48.5 | 48.4 | Q | | 1.0 | 48.5 | 30.7 | 43.5 | -12.8 | Pass | |
| 135.1 | 44.1 | 42.3 | Q | | 1.0 | 44.1 | 28.6 | 43.5 | -14.9 | Pass | |
| 171.8 | 44.6 | 42.0 | Q | | 1.0 | 44.6 | 31.4 | 43.5 | -12.1 | Pass | |
| 209.5 | 48.6 | 46.9 | Q | | 1.0 | 48.6 | 31.4 | 43.5 | -12.2 | Pass | |
| 220.0 | 47.5 | 45.8 | Q | | 1.0 | 47.45 | 29.6 | 46.0 | -16.4 | Pass | |
| 233.0 | 45.5 | 43.6 | Q | B | 1.0 | 45.5 | 27.9 | 46.0 | -18.2 | Pass | |
| 279.6 | 45.3 | 44.2 | Q | B | 1.0 | 45.3 | 29.8 | 46.0 | -16.2 | Pass | |
| 368.5 | 44.2 | 44.3 | Q | | 1.0 | 44.3 | 30.6 | 46.0 | -15.4 | Pass | |
| 822.7 | 38.5 | 38.1 | Q | | 1.0 | 38.5 | 33.9 | 46.0 | -12.1 | Pass | |

## Hopping Mode

***Test Notes:*** *No other spurious emissions detected which is within 20dB of the limit as well as within the restricted bands defined in FCC Part 15 Subpart C, 15.205.*

## Individual Channel Spurious Radiated Emissions Test Results:

**NEMKO USA, Inc.**

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11696 Sorrento Valley Rd.
San Diego, CA 92121
Tel: (858) 755-5525
Fax: (858) 452-1810

### Radiated Emissions Data

| | | | | | |
|---|---|---|---|---|---|
| Job # : | 23972 | Date : | 03/04/2010 | Page | 1 of 1 |
| NEX#: | 144765 | Time : | 8AM | | |
| | | Staff : | FSC | | |
| Client Name : | KSC Industries Inc. | | | EUT Voltage : | 24VDC |
| EUT Name : | Wireless Surround System | | | EUT Frequency : | |
| EUT Model # : | SCR102 | | | Phase: | |
| EUT Serial # : | N/A | | | NOATS | |
| EUT Config. : | Low Channel | | | SOATS | X |
| | | | | Distance < 1000 MHz: | 3 m |
| | | | | Distance > 1000 MHz: | 3 m |
| Specification : | CFR47 Part 15, Subpart B, Class B | | | | |
| Loop Ant. #: | NA | | | | |
| Bicon Ant.#: | 116_3m | Temp. (°C) : | 15 | | |
| Log Ant.#: | 110_3m | Humidity (%) : | 47 | | |
| DRG Ant. # | 877 | Spec An.#: | 911 | | |
| Cable LF#: | SOATS | Spec An. Display #: | NA | | |
| Cable HF#: | SOATS | QP #: | 911 | | |
| Preamp LF#: | 901 | PreSelect#: | NA | | |
| Preamp HF# | 317 | DCCF: | 20 | | |

| | | | |
|---|---|---|---|
| Peak (Restr.) | RBW: | 1 MHz |
| | Video Bandwidth | 3 MHz |
| Peak | RBW: | 100 KHz |
| | Video Bandwidth | 300 KHz |
| Average | =Peak-DCCF | |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 2401.9 | 74.3 | 76.8 | P | BR | 1.0 | 76.78 | 114.3 | | | | |
| | | | | | | | | | | | |
| 2400.0 | 22.5 | 24.7 | P | BR | 1.0 | 24.67 | 62.2 | 94.3 | -32.1 | Pass | 100kHz RBW |
| 2400.0 | 2.5 | 4.7 | A | BR | 1.0 | 4.67 | 42.2 | 74.3 | -32.1 | Pass | 100kHz RBW |
| | | | | | | | | | | | |
| 2483.5 | 36.2 | 35.4 | P | R | 1.0 | 36.2 | 40.5 | 74.0 | -33.5 | Pass | |
| 2483.5 | 16.2 | 15.4 | A | R | 1.0 | 16.2 | 20.5 | 54.0 | -33.5 | Pass | |
| | | | | | | | | | | | |
| 4806.8 | 51.7 | 52.3 | P | BR | 1.0 | 52.34 | 67.1 | 74.0 | -6.9 | Pass | |
| 4806.8 | 31.7 | 32.3 | A | BR | 1.0 | 32.34 | 47.1 | 54.0 | -6.9 | Pass | |
| | | | | | | | | | | | |
| 7208.7 | 31.9 | 31.6 | P | | 1.0 | 31.89 | 57.8 | 74.0 | -16.2 | Pass | NF 100kHz RBW |
| 7208.7 | 11.9 | 11.6 | A | | 1.0 | 11.89 | 37.8 | 54.0 | -16.2 | Pass | NF 100kHz RBW |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

### Low Channel

***Test Notes:*** *No other spurious emissions detected which is within 20dB of the limit as well as within the restricted bands defined in FCC Part 15 Subpart C, 15.205.*

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San Diego, CA 92121
Tel: (858) 755-5525
Fax: (858) 452-1810



## Radiated Emissions Data

| | | | | | |
|---|---|---|---|---|---|
| Job # : | 23972 | Date : | 03/04/2010 | Page | 1 of 1 |
| NEX#: | 144765 | Time : | 8AM | | |
| | | Staff : | FSC | | |

| | | | |
|---|---|---|---|
| Client Name : | KSC Industries Inc. | EUT Voltage : | 24VDC |
| EUT Name : | Wireless Surround System | EUT Frequency : | |
| EUT Model # : | SCR102 | Phase: | |
| EUT Serial # : | N/A | NOATS | |
| EUT Config. : | Mid Channel | SOATS | X |
| | | Distance < 1000 MHz: | 3 m |
| | | Distance > 1000 MHz: | 3 m |

| | | | |
|---|---|---|---|
| Specification : | CFR47 Part 15, Subpart B, Class B | | |
| Loop Ant. #: | NA | | |
| Bicon Ant.#: | 116_3m | Temp. (°C) : | 15 |
| Log Ant.#: | 110_3m | Humidity (%) : | 47 |
| DRG Ant. # | 877 | Spec An.#: | 911 |
| Cable LF#: | SOATS | Spec An. Display #: | NA |
| Cable HF#: | SOATS | QP #: | 911 |
| Preamp LF#: | 901 | PreSelect#: | NA |
| Preamp HF# | 317 | DCCF: | 20 |

| | |
|---|---|
| Peak (Restr.) | RBW: 1 MHz |
| | Video Bandwidth 3 MHz |
| Peak | RBW: 100 KHz |
| | Video Bandwidth 300 KHz |
| Average | =Peak-DCCF |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 2442.2 | 74.3 | 75.6 | P | BR | 1.0 | 75.56 | 113.1 | | | | |
| | | | | | | | | | | | |
| 2400.0 | 24.6 | 26.8 | P | BR | 1.0 | 26.78 | 31.1 | 94.3 | -63.2 | Pass | 100kHz RBW |
| 2400.0 | 4.6 | 6.8 | A | BR | 1.0 | 6.78 | 11.1 | 74.3 | -63.2 | Pass | 100kHz RBW |
| | | | | | | | | | | | |
| 2483.5 | 36.2 | 35.8 | P | R | 1.0 | 36.2 | 40.5 | 74.0 | -33.5 | Pass | |
| 2483.5 | 16.2 | 15.8 | A | R | 1.0 | 16.2 | 20.5 | 54.0 | -33.5 | Pass | |
| | | | | | | | | | | | |
| 4884.4 | 50.7 | 51.2 | P | BR | 1.0 | 51.2 | 65.9 | 74.0 | -8.1 | Pass | |
| 4884.4 | 30.7 | 31.2 | A | BR | 1.0 | 31.2 | 45.9 | 54.0 | -8.1 | Pass | |
| | | | | | | | | | | | |
| 7326.6 | 32.3 | 32.1 | P | | 1.0 | 32.33 | 58.4 | 74.0 | -15.6 | Pass | NF 100kHz RBW |
| 7326.6 | 12.3 | 12.1 | A | | 1.0 | 12.33 | 38.4 | 54.0 | -15.6 | Pass | NF 100kHz RBW |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

## Mid Channel

***Test Notes:*** *No other spurious emissions detected which is within 20dB of the limit as well as within the restricted bands defined in FCC Part 15 Subpart C, 15.205.*

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San Diego, CA 92121
Tel: (858) 755-5525
Fax: (858) 452-1810

## Radiated Emissions Data

| | | | | | |
|---|---|---|---|---|---|
| Job # : | 23972 | Date : | 03/04/2010 | Page | 1 of 1 |
| NEX#: | 144765 | Time : | 8AM | | |
| | | Staff : | FSC | | |

| | | | |
|---|---|---|---|
| Client Name : | KSC Industries Inc. | EUT Voltage : | 24VDC |
| EUT Name : | Wireless Surround System | EUT Frequency : | |
| EUT Model # : | SCR102 | Phase: | |
| EUT Serial # : | N/A | NOATS | |
| EUT Config. : | High Channel | SOATS | X |
| | | Distance < 1000 MHz: | 3 m |
| | | Distance > 1000 MHz: | 3 m |

| | | | |
|---|---|---|---|
| Specification : | CFR47 Part 15, Subpart B, Class B | | |
| Loop Ant. #: | NA | | |
| Bicon Ant.#: | 116_3m | Temp. (°C) : | 15 |
| Log Ant.#: | 110_3m | Humidity (%) : | 47 |
| DRG Ant. # | 877 | Spec An.#: | 911 |
| Cable LF#: | SOATS | Spec An. Display #: | NA |
| Cable HF#: | SOATS | QP #: | 911 |
| Preamp LF#: | 901 | PreSelect#: | NA |
| Preamp HF# | 317 | DCCF: | 20 |

| | |
|---|---|
| Peak (Restr.) | RBW: 1 MHz |
| | Video Bandw idth 3 MHz |
| Peak | RBW: 100 KHz |
| | Video Bandw idth 300 KHz |
| Average | =Peak-DCCF |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 2479.1 | 73.5 | 76.3 | P | BR | 1.0 | 76.34 | 113.9 | | | | |
| | | | | | | | | | | | |
| 2400.0 | 28.6 | 27.6 | P | BR | 1.0 | 28.56 | 32.9 | 94.3 | -61.4 | Pass | 100kHz RBW |
| 2400.0 | 8.6 | 7.6 | A | BR | 1.0 | 8.56 | 12.9 | 74.3 | -61.4 | Pass | 100kHz RBW |
| | | | | | | | | | | | |
| 2483.5 | 62.6 | 64.0 | P | R | 1.0 | 63.97 | 68.3 | 74.0 | -5.7 | Pass | |
| 2483.5 | 42.6 | 44.0 | A | R | 1.0 | 43.97 | 48.3 | 54.0 | -5.7 | Pass | |
| | | | | | | | | | | | |
| 4948.2 | 50.8 | 50.2 | P | BR | 1.0 | 50.78 | 65.5 | 74.0 | -8.5 | Pass | |
| 4948.2 | 30.8 | 30.2 | A | BR | 1.0 | 30.78 | 45.5 | 54.0 | -8.5 | Pass | |
| | | | | | | | | | | | |
| 7437.3 | 33.6 | 33.6 | P | | 1.0 | 33.6 | 59.8 | 74.0 | -14.2 | Pass | NF 100kHz RBW |
| 7437.3 | 13.6 | 13.6 | A | | 1.0 | 13.6 | 39.8 | 54.0 | -14.2 | Pass | NF 100kHz RBW |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

## High Channel

***Test Notes:*** *No other spurious emissions detected which is within 20dB of the limit as well as within the restricted bands defined in FCC Part 15 Subpart C, 15.205.*

## Section 4.10 – Receiver Spurious Radiated Emissions

The following receiver spurious emission limits shall be complied with:
(a) If a radiated measurement is made, all spurious emissions shall comply with the limits of Table 1.
**Table 1 - Spurious Emission Limits for Receivers**

| Spurious Frequency (MHz) | Field Strength (microvolt/m at 3 metres) |
|---|---|
| 30-88 | 100 |
| 88-216 | 150 |
| 216-960 | 200 |
| Above 960 | 500 |

### Test Conditions:

| | | | |
|---|---|---|---|
| **Sample Number:** | SCR102 | **Temperature:** | 17 |
| **Date:** | April 23, 2010 | **Humidity:** | 51 |
| **Modification State:** | Receive Mode (Special firmware) | **Tester:** | FSCustodio |
| | | **Laboratory:** | SOATS |

### Test Results:

There are no emissions found when “Mid Channel Receive Mode” firmware was loaded to the EUT.

### Additional Observations:

- The Spectrum was searched from 30MHz up to 18GHz.

11696 Sorrento Valley Road, Suite F, San Diego, CA 92121
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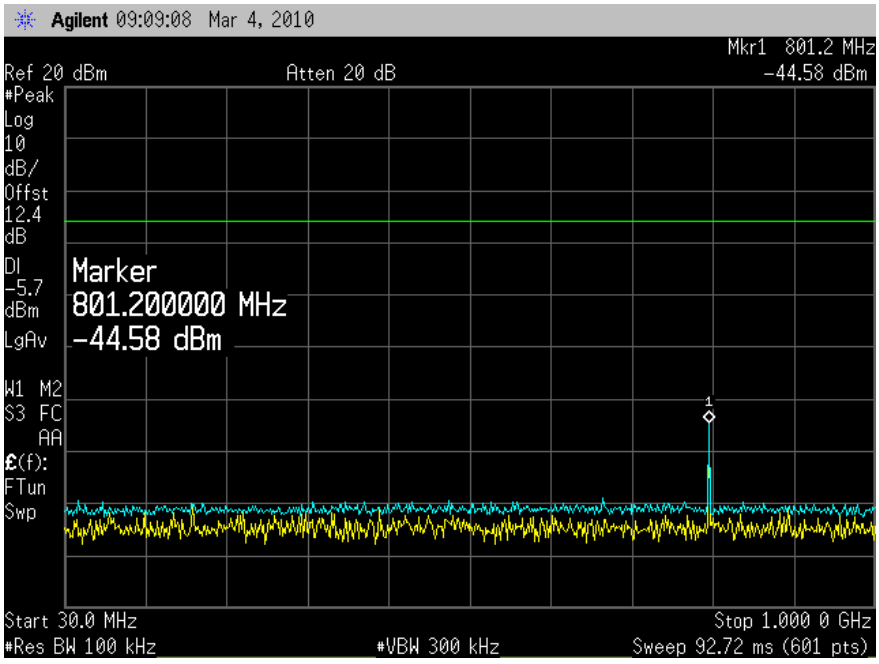
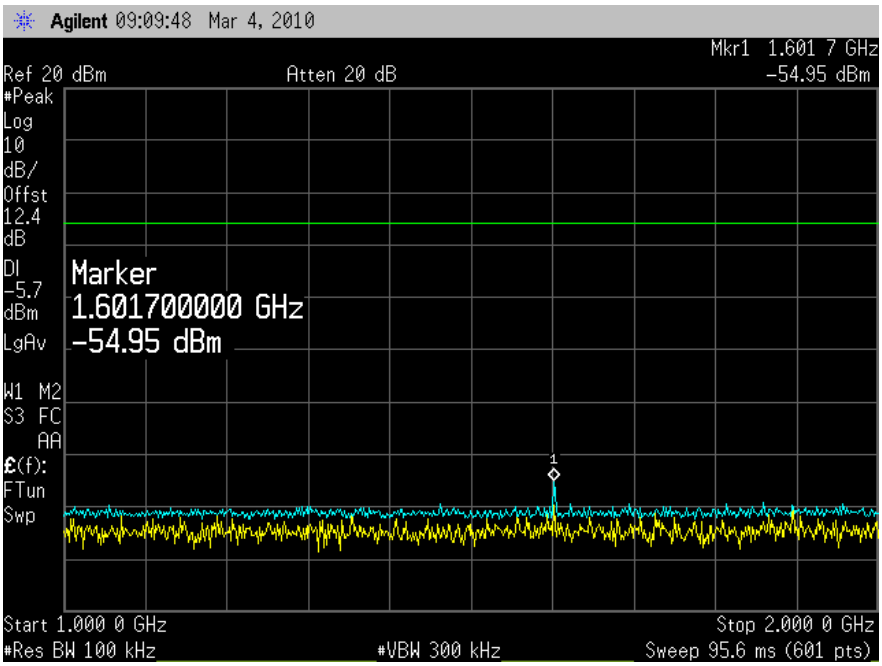
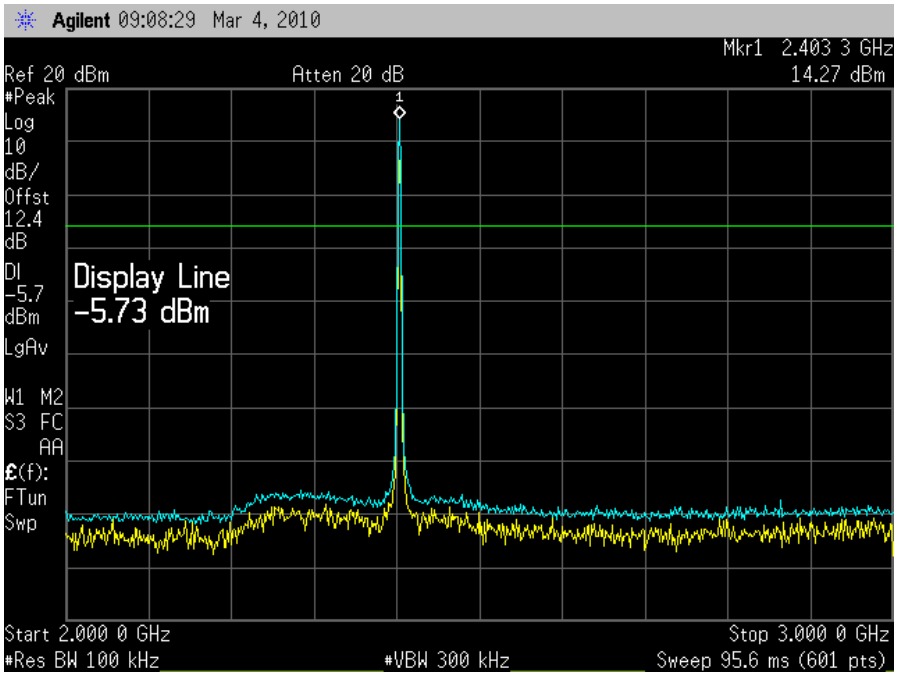
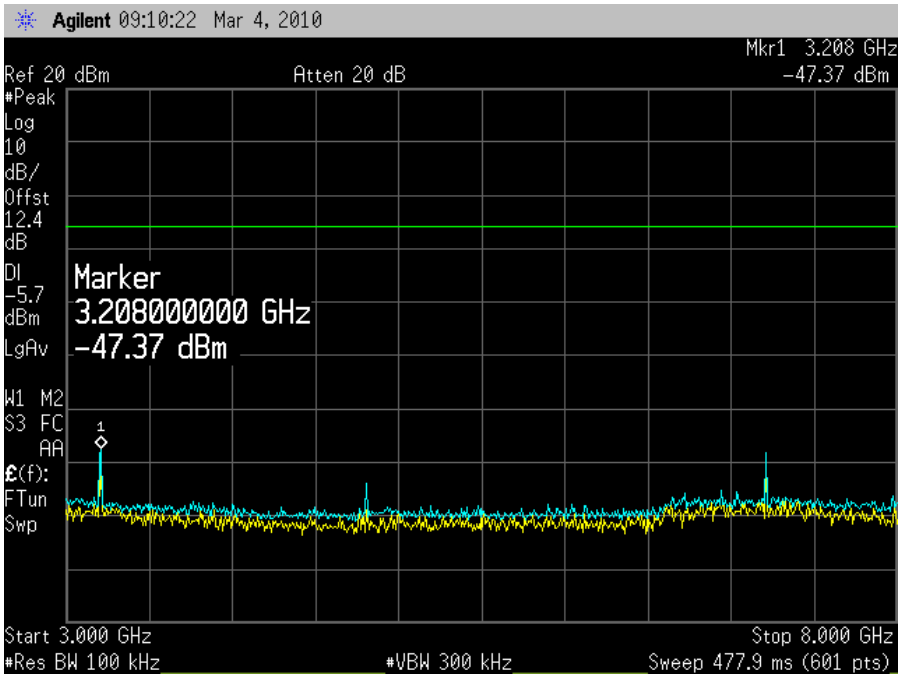
# Appendix B: Section 15.247(d) – Spurious RF Conducted Emissions Test Results (Low, Mid and High Channels)



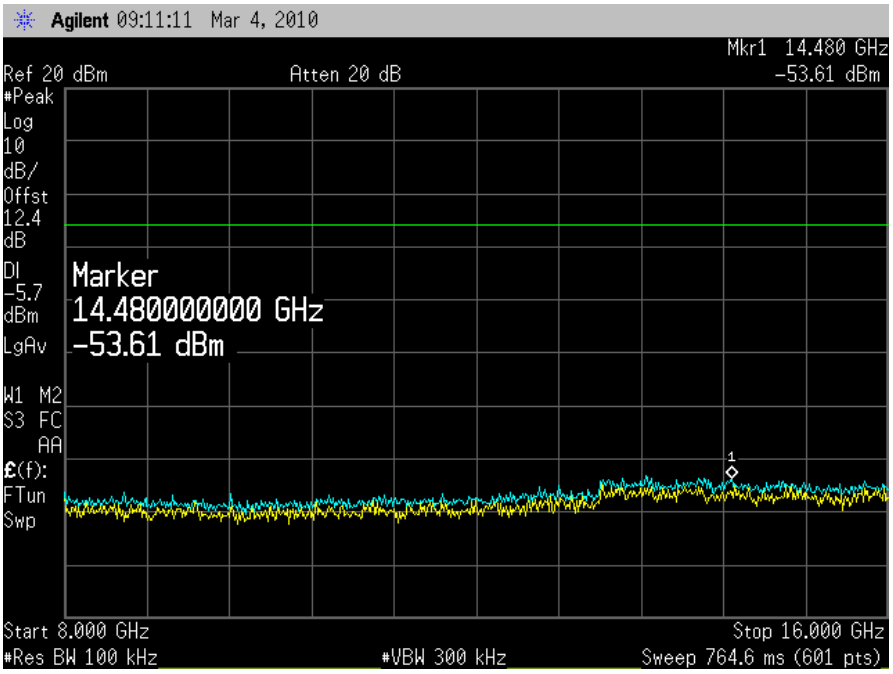



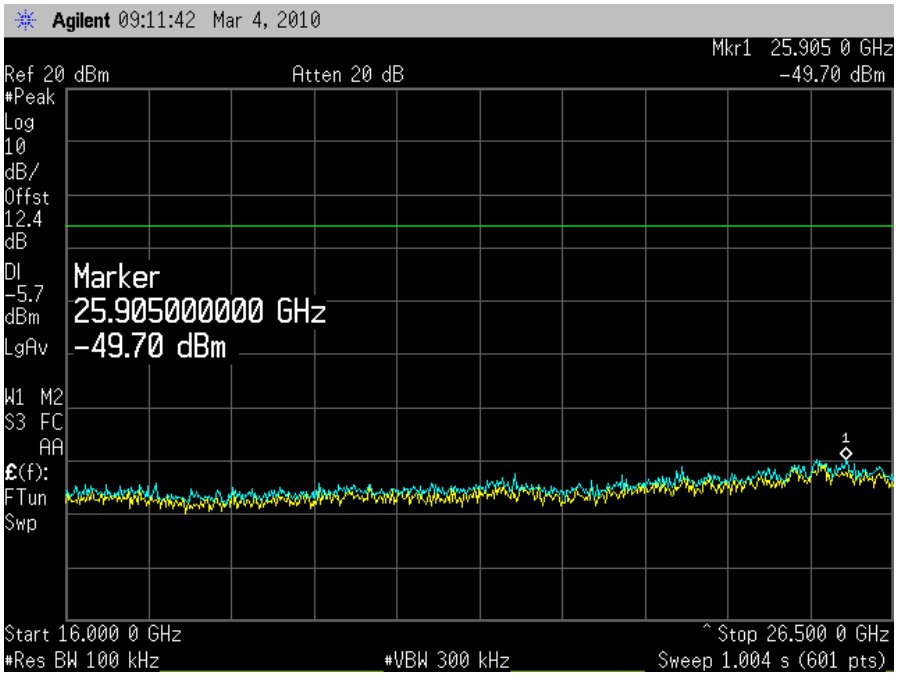

**LOW Channel**



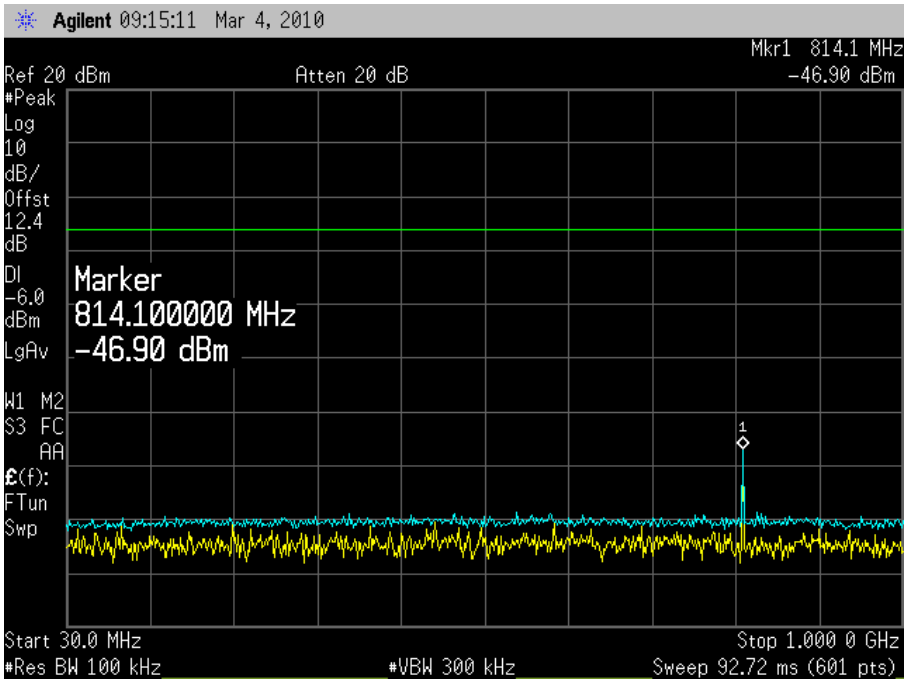



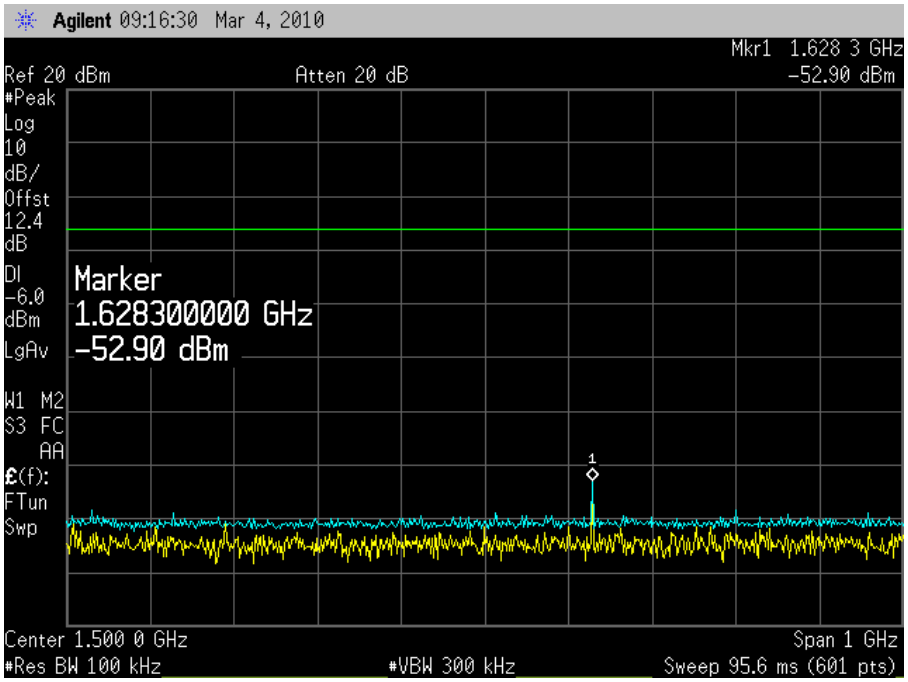

**LOW Channel**


Agilent 09:11:11 Mar 4, 2010
Mkr1 14.480 GHz
Ref 20 dBm
Atten 20 dB
-53.61 dBm
#Peak
Log
10
dB/
Offst
12.4
dB
Marker
14.480000000 GHz
-53.61 dBm
Start 8.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 16.000 GHz
Sweep 764.6 ms (601 pts)

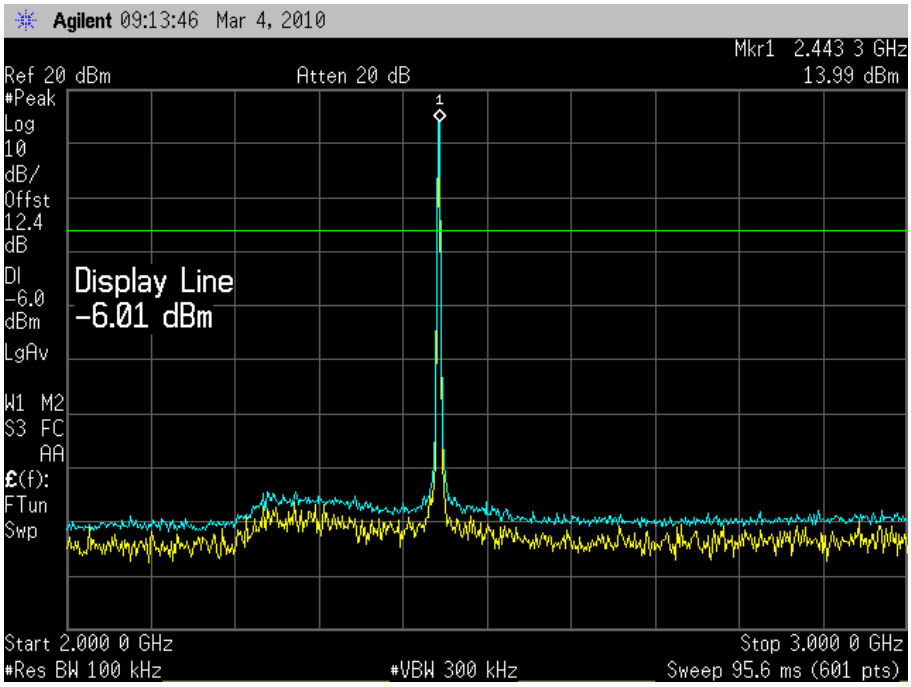

Agilent 09:11:42 Mar 4, 2010
Mkr1 25.905 0 GHz
Ref 20 dBm
Atten 20 dB
-49.70 dBm
#Peak
Log
10
dB/
Offst
12.4
dB
Marker
25.905000000 GHz
-49.70 dBm
Start 16.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 0 GHz
Sweep 1.004 s (601 pts)

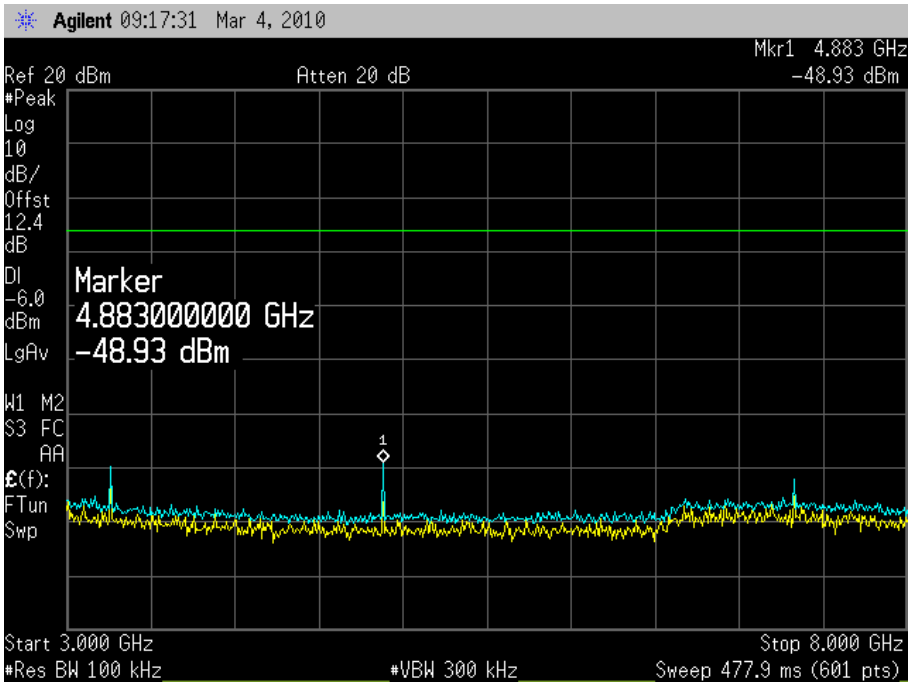
**LOW Channel**



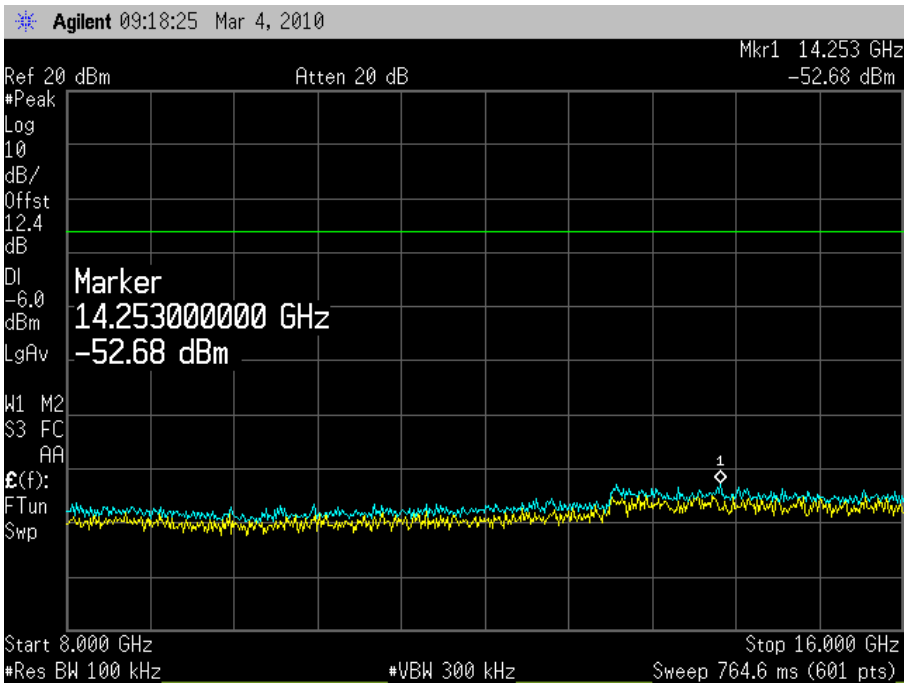



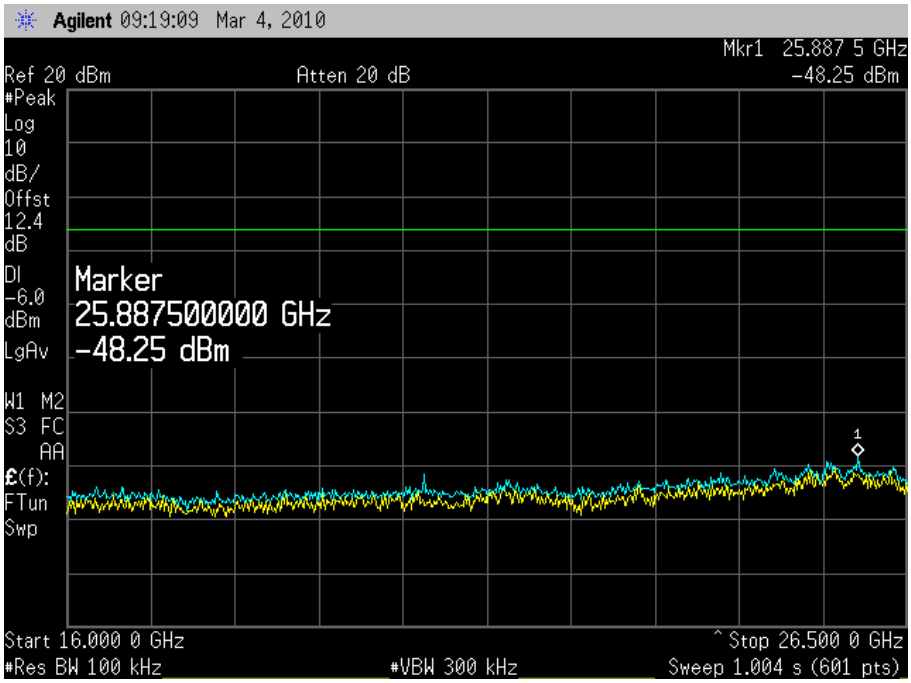

**MID Channel**


Agilent 09:13:46 Mar 4, 2010
Mkr1 2.443 3 GHz
Ref 20 dBm
Atten 20 dB
13.99 dBm
#Peak
Log
10
dB/
Offst
12.4
dB
Dl
-6.0
dBm
LgAv
W1 M2
S3 FC
AA
£(f):
FTun
Swp
Display Line
-6.01 dBm
Start 2.000 0 GHz
Stop 3.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 95.6 ms (601 pts)

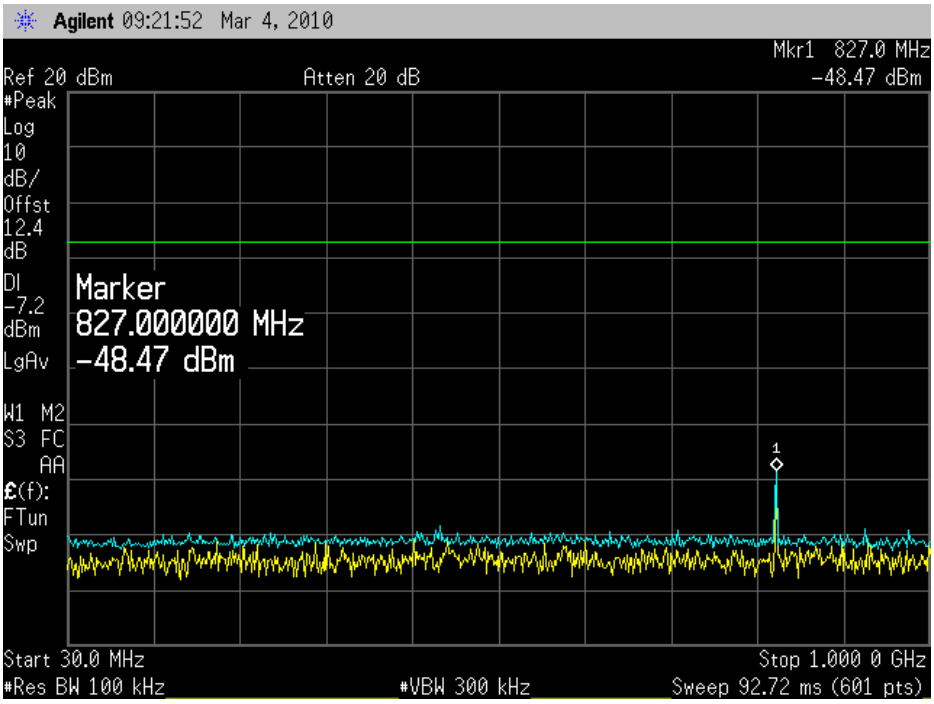

Agilent 09:17:31 Mar 4, 2010
Mkr1 4.883 GHz
Ref 20 dBm
Atten 20 dB
-48.93 dBm
#Peak
Log
10
dB/
Offst
12.4
dB
Dl
-6.0
dBm
LgAv
W1 M2
S3 FC
AA
£(f):
FTun
Swp
Marker
4.883000000 GHz
-48.93 dBm
Start 3.000 GHz
Stop 8.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 477.9 ms (601 pts)

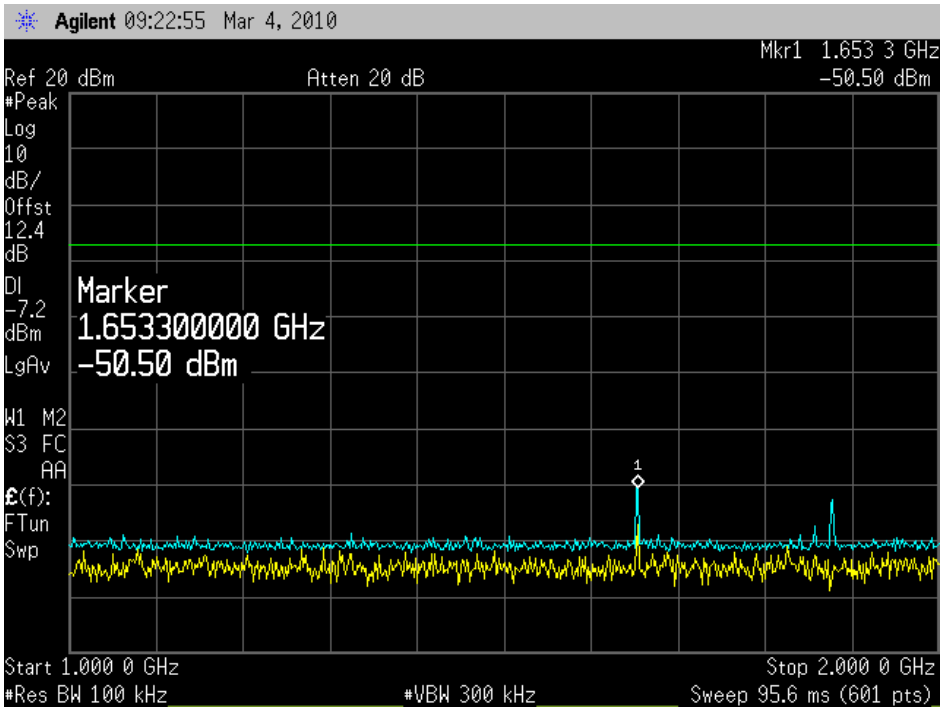
**MID Channel**


Agilent 09:18:25 Mar 4, 2010
Mkr1 14.253 GHz
Ref 20 dBm
Atten 20 dB
-52.68 dBm
#Peak
Log
10
dB/
Offst
12.4
dB
Dl
-6.0
dBm
LgAv
W1 M2
S3 FC
AA
£(f):
FTun
Swp
Marker
14.253000000 GHz
-52.68 dBm
Start 8.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 16.000 GHz
Sweep 764.6 ms (601 pts)

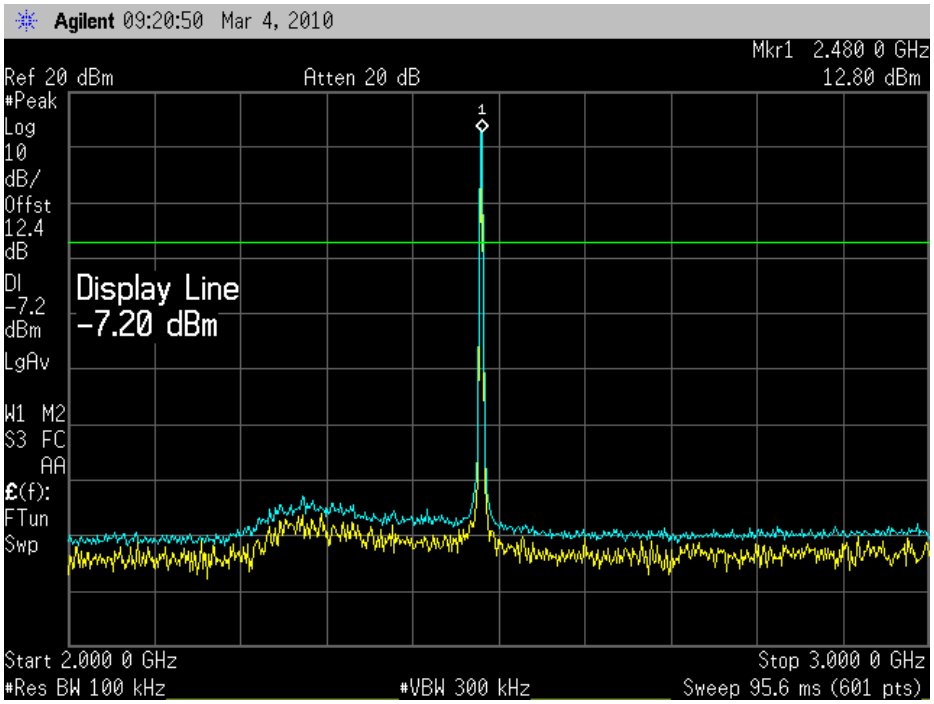

Agilent 09:19:09 Mar 4, 2010
Mkr1 25.887 5 GHz
Ref 20 dBm
Atten 20 dB
-48.25 dBm
#Peak
Log
10
dB/
Offst
12.4
dB
Dl
-6.0
dBm
LgAv
W1 M2
S3 FC
AA
£(f):
FTun
Swp
Marker
25.887500000 GHz
-48.25 dBm
Start 16.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.500 0 GHz
Sweep 1.004 s (601 pts)

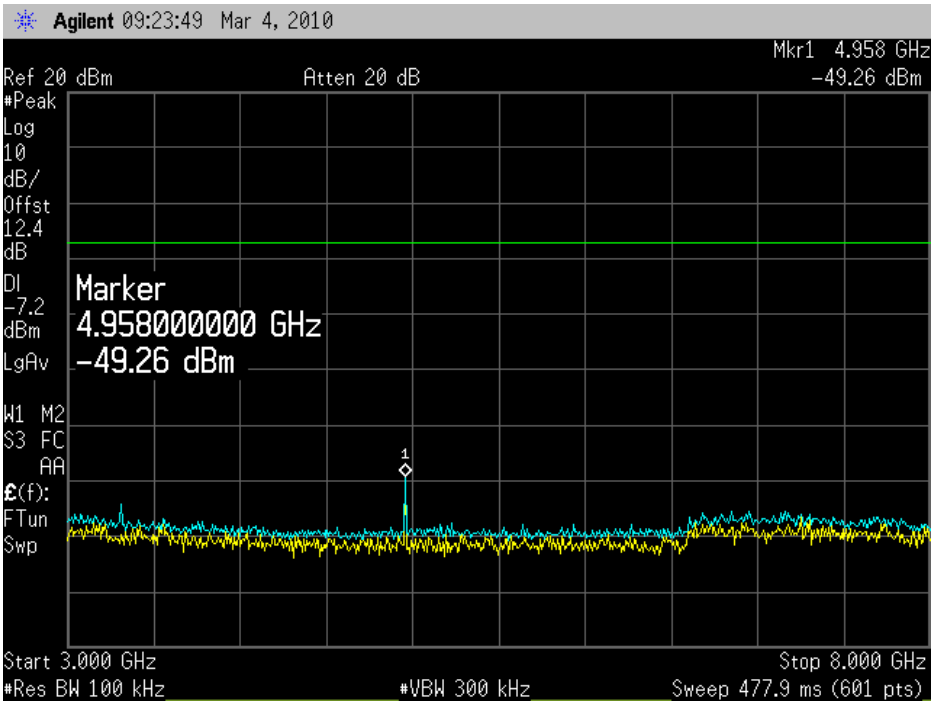
**MID Channel**



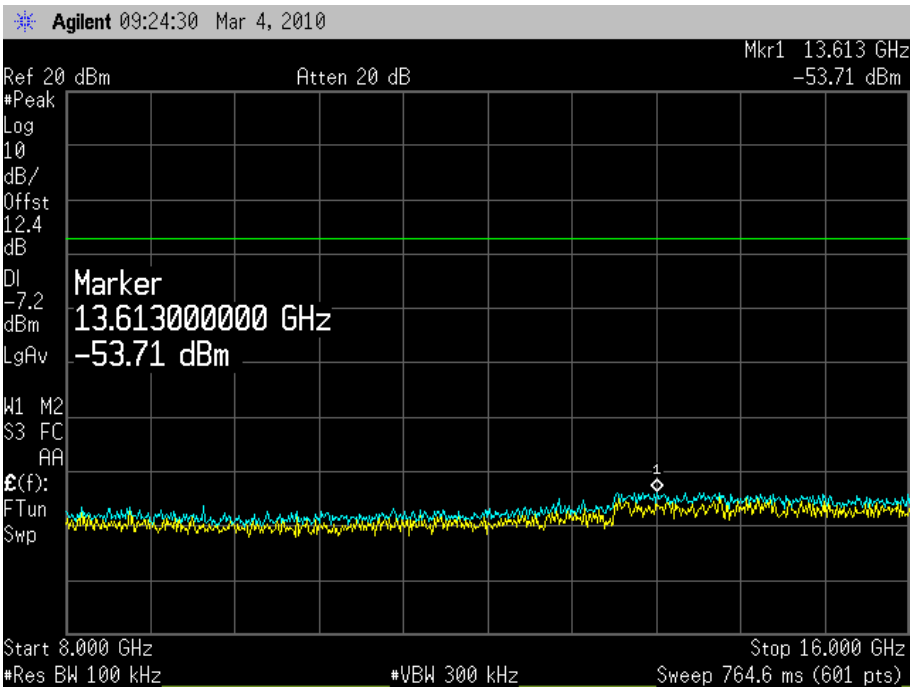



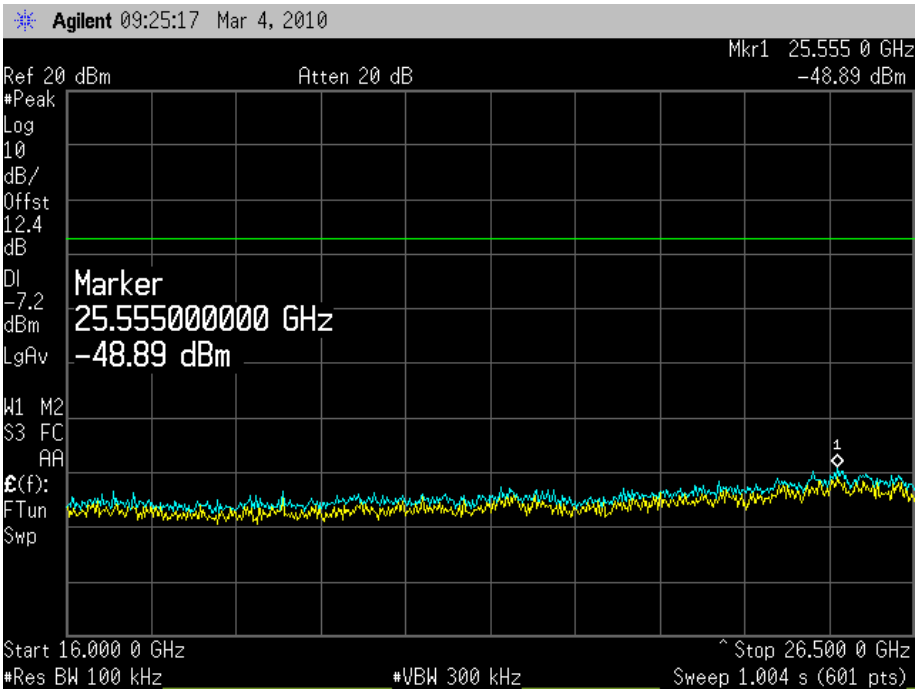

**HIGH Channel**




**HIGH Channel**




**HIGH Channel**

11696 Sorrento Valley Road, Suite F, San Diego, CA 92121
Phone (858) 755-5525 Fax (858) 452-1810



# Appendix C: Block Diagram of Test Setups

## Test Site For Radiated Emissions