



## Compliance Testing, LLC

Previously Flom Test Lab

RF, EMC and Safety Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

[info@ComplianceTesting.com](mailto:info@ComplianceTesting.com)

Date: January 6, 2011

Applicant: Bosch Security Systems, Inc  
8601 E. Cornhusker Highway  
Lincoln, NE 68507

Attention of: James Andersen, Principal Electrical Engineer  
Ph: (402) 467-5321  
Fax: (402) 467-3279  
Email: [jim.andersen@us.bosch.com](mailto:jim.andersen@us.bosch.com)

Equipment: TR-240

FCC ID: B5DM533

FCC Rules: 15.247

Enclosed please find your copy of the Engineering Test Report for which you are subject to the restrictions as listed on the attached summary.

This report may not be reproduced, except in full, without written permission from Compliance Testing, LLC. Please retain a copy of this report for your archival purposes.

Once a Telecommunication Certification Body (TCB) issues a Grant the Federal Communication Commission (FCC) has 30 days to review the application and request added information. It is your decision whether or not to market the equipment subject to a possible recall before the end of the 30 days.

If your equipment is still retained by us, it will be returned to you 30 days after approval is achieved.

Our invoice for services has been directed to your Accounts Payable Department.

For any additional information please contact us.

Sincerely,

Compliance Testing



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## Test Report

for

**FCC ID:** B5DM533

**Model:** TR-240

to

**Federal Communications Commission**

Rule Part(s) 15.247

**Date of Report:** January 6, 2011

**On the Behalf of the Applicant:** Bosch Security Systems, Inc  
8601 E. Cornhusker Highway  
Lincoln, NE 68507

**Attention of:** James Andersen, Principal Electrical Engineer  
Ph: (402) 467-5321  
Fax: (402) 467-3279  
Email: [jim.andersen@us.bosch.com](mailto:jim.andersen@us.bosch.com)

By  
Compliance Testing, LLC  
3356 N. San Marcos Place, Suite 107  
Chandler, Arizona 85225-7176  
(866) 311-3268 phone, (480) 926-3598 fax



### Test Report Revision History

Revision	Date	Revised By	Reason for revision
1.0	January 27, 2011	Greg Corbin	Original Document
2.0	March 8, 2011	Greg Corbin	Corrected test set-up information for peak output power



**The applicant has been cautioned as to the following:**

15.21 Information to User

The user's manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27(a) Special Accessories

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.



## Testimonial and Statement of Certification

This is to certify that:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data is true and correct.

A handwritten signature in black ink that reads "Greg Corbin".

Certifying Engineer:

Greg Corbin



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**List of General Information Required For Certification**

In Accordance with FCC Rules and Regulations, Volume II, Part 2 and to 15.247 Operation within bands 902-928, 2400-2483.5, 5725-5850 MHz

**Sub-Part 2.1033**

(b)(1):

**Name and Address of Applicant:** Bosch Security Systems, Inc.  
8601 E. Cornhusker Highway  
Lincoln, NE 68507

(b)(2):

**FCC ID:** B5DM533

**Model Number:** TR-240

(b)(3):

**Instruction Manual(s):** Please See Exhibits

(b)(4):

**Theory of Operation:** Please See Exhibits

(b)(5):

**Block Diagram:** Please See Exhibits

(b)(6):

**Test Report:** Contained Herein

(b)(7):

**Test Setup Photos:** Please See Exhibits

**15.203: Antenna Requirement:**

- The antenna is permanently attached to the EUT
- The antenna uses a unique coupling
- The EUT must be professionally installed
- The antenna requirement does not apply



### Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.10-2009 and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Measurement results, unless otherwise noted, are worst-case measurements.

Environmental Conditions		
Temperature	Humidity	Pressure
19.1 – 24.3 deg C	17.5 – 27.4 %	972.1 – 977.9 mbar





**A2LA**

“A2LA has accredited Compliance Testing LLC in Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 ‘General Requirements for the Competence of Testing and Calibration Laboratories’ and any additional program requirements in the identified field of testing.”

Please refer to [www.a2la.org](http://www.a2la.org) for current scope of accreditation.

Certificate number: 2152.01



**FCC OATS Reg. #933597**

**IC O.A.T.S. Number: 2044A-1**

### Test Results Summary

Specification	Test Name	Pass, Fail, N/A	Comments
15.247(b)	Peak Output Power	Pass	
15.247(d)	Conducted Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Radiated Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Emissions At Band Edges	Pass	
15.247(a)(2)	Occupied Bandwidth	Pass	
15.247(e)	Transmitter Power Spectral Density	Pass	
15.207	A/C Powerline Conducted Emissions	Pass	
RSS-GEN6(b)	Receiver Spurious Emissions	Pass	

#### EUT Description

The EUT is a Wireless 2.4 GHz Beltpack that communicates to a basestation or other wireless beltpacks. The Telex model TR-240 beltpack transceiver is intended for use as a wireless full-duplex intercom radio to be worn on a belt. Multiple TR-240 beltpacks can be used with a BTR-240 base station transceiver or a BTR-24 access point to communicate with each other over-the-air.

#### EUT Operation during Tests

For the Part 15B report, The EUT was powered on with the wireless transmitter turned off in order to measure the unintentional radiators.

#### **Accessories:**

Qty	Type	Make, Model	S/N
1	Power supply	GlobTek, Mdl: GT - 41076 - 0612	N/A
1	Headset	Telex, Mdl: PH-2	N/A

#### **Cables:**

Qty	Type	Length, m	Shield	Shielded Hood	Ferrite
None					



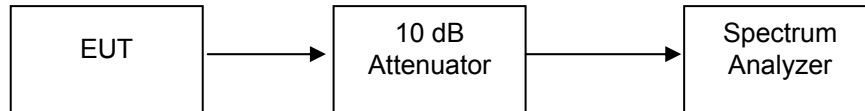
**Name of Test:** Peak Output Power  
**Specification:** 15.247(b)  
**Test Equipment Utilized:** i00331

**Engineer:** G. Corbin  
**Test Date:** 12/6/2010

### Test Procedure

The EUT was connected as shown in test set-up. The attenuator and cable loss was input to the spectrum analyzer as a reference level offset before recording measurement. The spectrum analyzer RBW = 1 MHz and VBW = 3 MHz. The peak readings were taken and the result was then compared to the limit.

### Test Setup



### Transmitter Peak Output Power

Tuned Frequency MHz	Recorded Measurement	Specification Limit	Result
2412	19.77 mW	1 W	Pass
2437	18.28 mW	1 W	Pass
2462	16.87 mW	1 W	Pass

**Name of Test:** Conducted Spurious Emissions  
**Specification:** 15.247(d)  
**Test Equipment Utilized:** i00331, i00177, i00385

**Engineer:** G. Corbin  
**Test Date:** 12/7/2010

### Test Procedure

The EUT was connected directly to a spectrum analyzer to verify that the EUT met the requirements for spurious emissions. The reference level was offset for the peak power output with the resolution bandwidth set for 1 MHz. The frequency range from 30 MHz to the 10<sup>th</sup> harmonic of the fundamental transmitter was observed. Only detectable spurious emissions were recorded and plotted. The reference level is added to the recorded measurement to provide the corrected level dBc

Only the worst case is recorded in the Conducted Spurious Emissions Summary Test Table.

### Test Setup



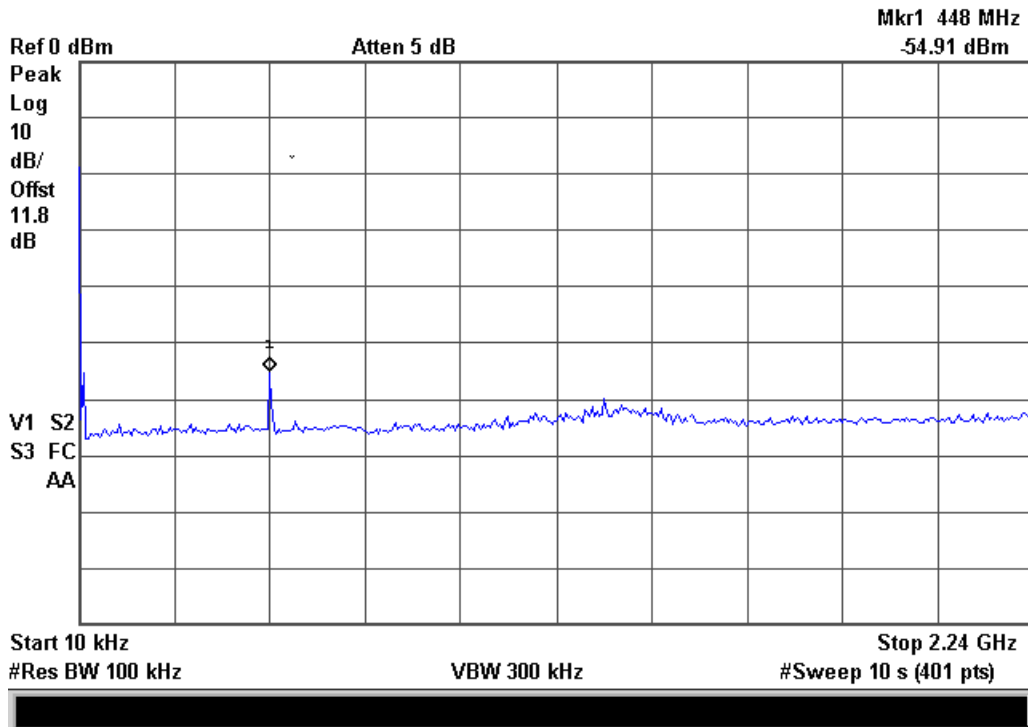
**Conducted Spurious Emissions Summary Test Table**

Tuned Frequency MHz	Emission Frequency MHz	Recorded Measurement dBm	Reference Level dBm	Corrected Measurement dBc	Specification Limit dBc	Result
2412	448	-54.9	12.9	-67.8	-20	Pass
2437	470	-56.4	12.6	-69.0	-20	Pass
2462	504	-58.9	12.2	-71.1	-20	Pass

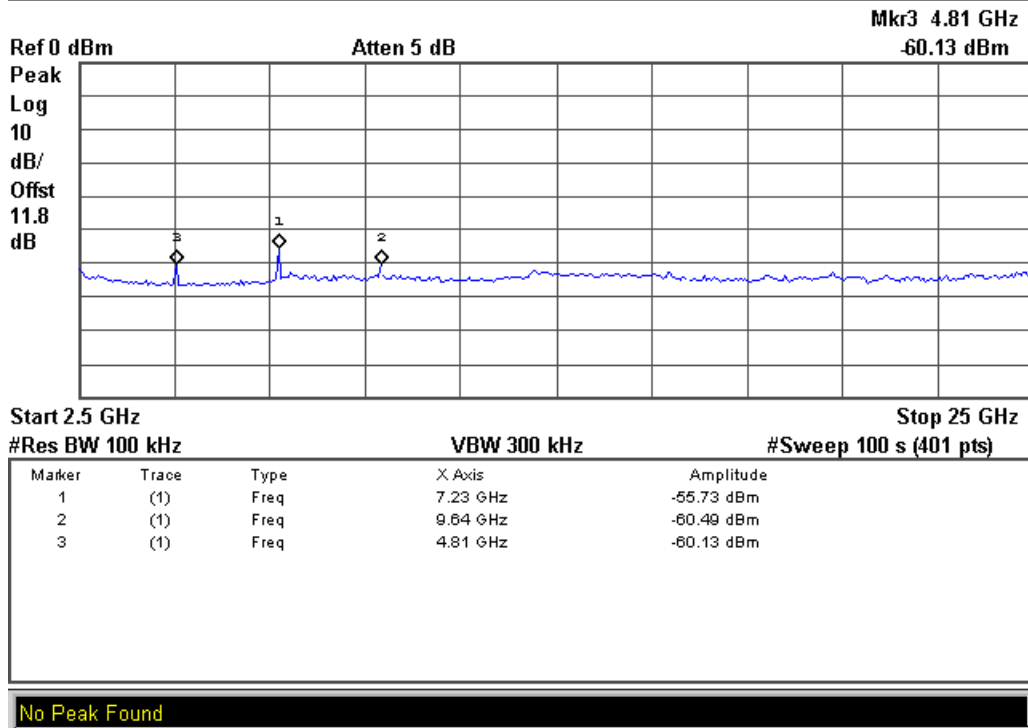


### Conducted Spurious Emissions 2412 MHz

Agilent 14:46:23 Dec 7, 2010 R T



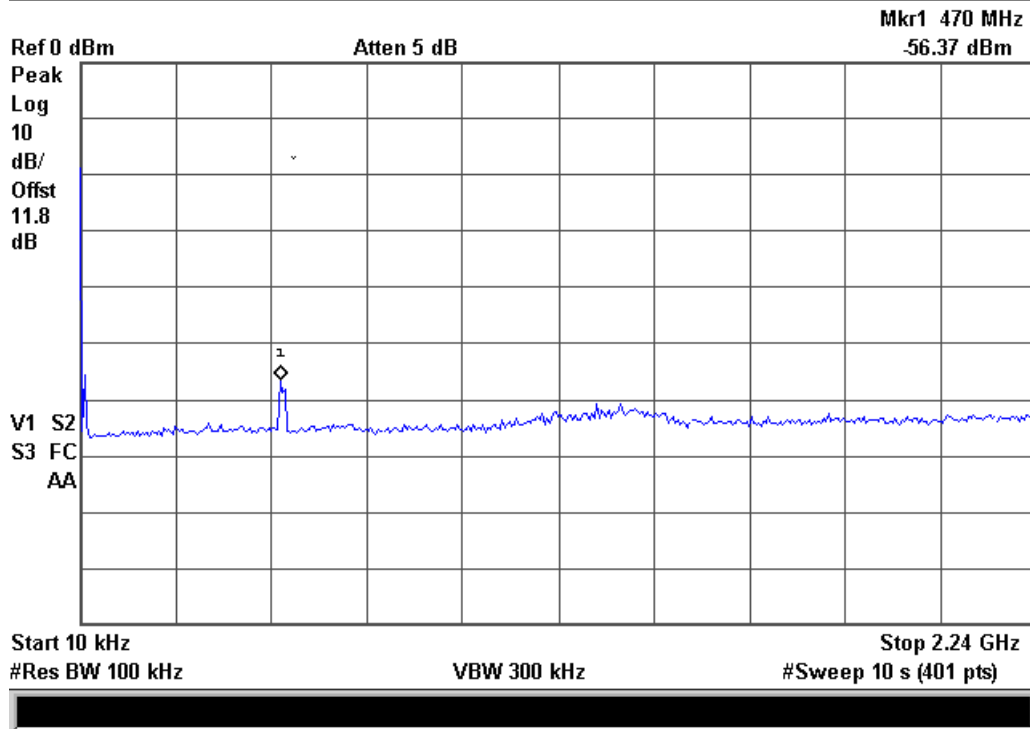
Agilent 14:53:00 Dec 7, 2010 R T



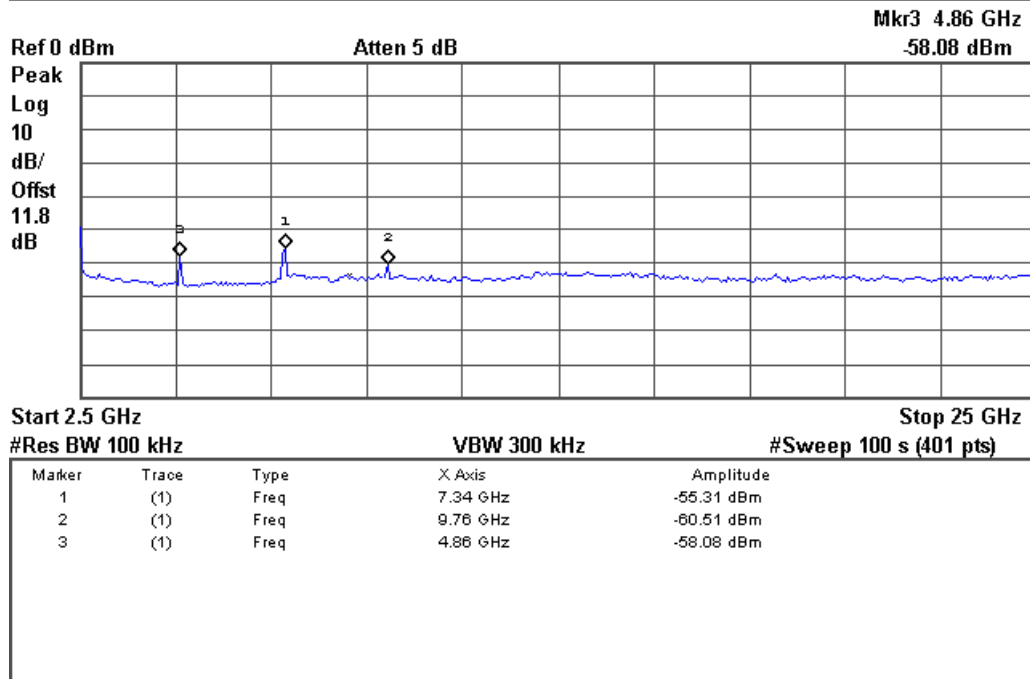


### Conducted Spurious Emissions 2437 MHz

Agilent 14:43:46 Dec 7, 2010 R T



Agilent 14:57:23 Dec 7, 2010 R T

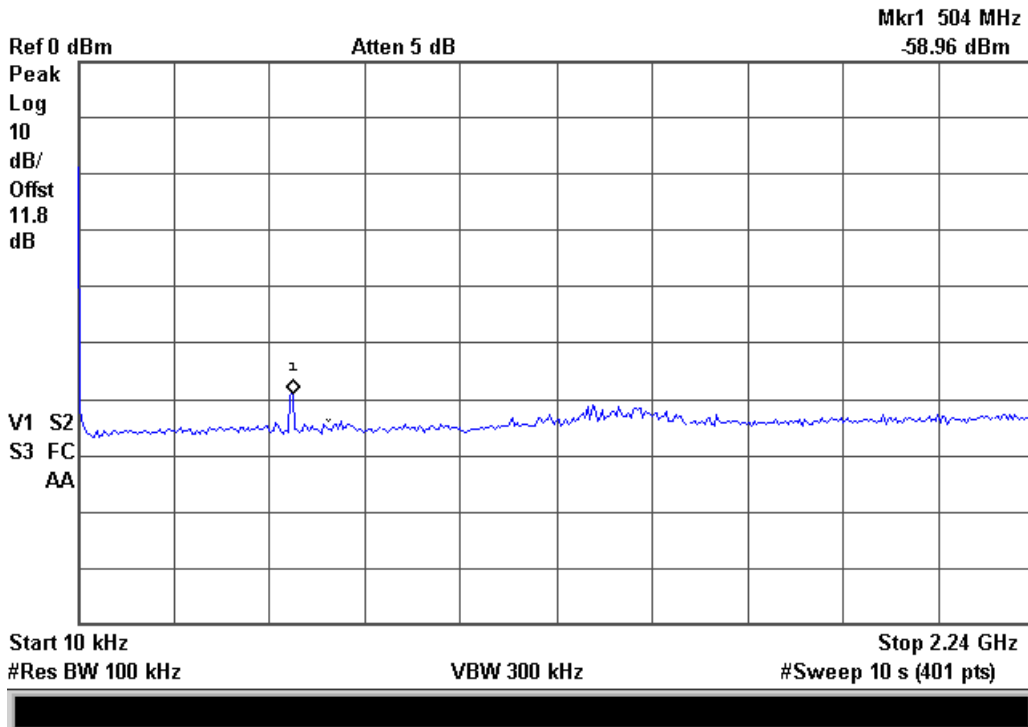


No Peak Found

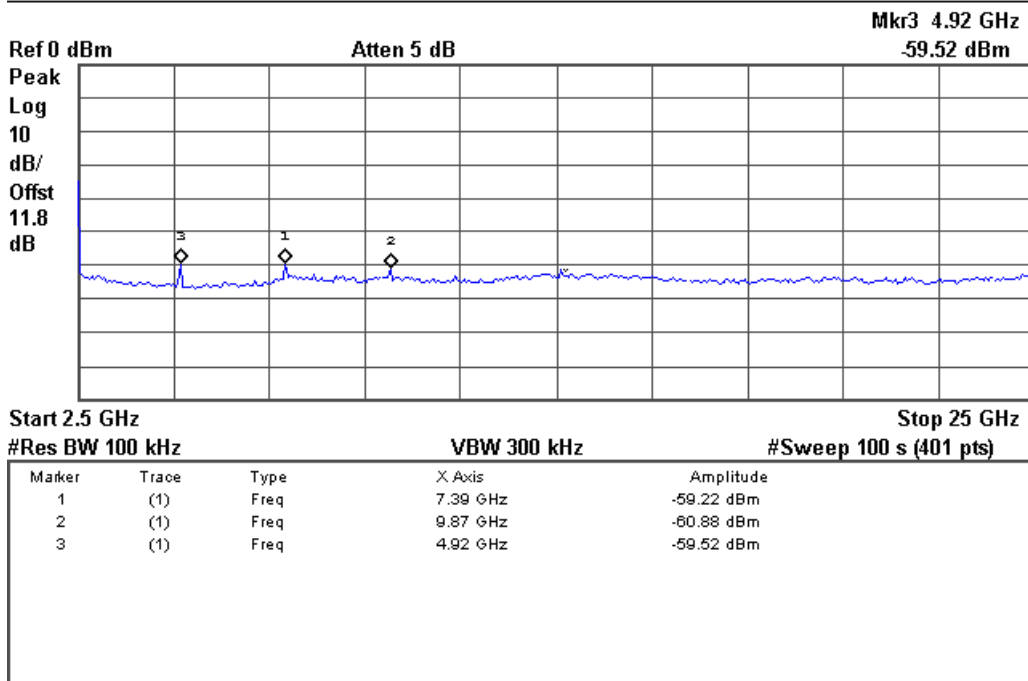


### Conducted Spurious Emissions 2462 MHz

Agilent 14:40:31 Dec 7, 2010 R T



Agilent 15:02:39 Dec 7, 2010 R T



No Peak Found



**Name of Test:** Radiated Spurious Emissions  
**Specification:** 15.247(d), 15.209(a), 15.205  
**Test Equipment Utilized:** i00028, i00103, i00177, i00267, i00331, i00385  
**Engineer:** G. Corbin  
**Test Date:** 1/26/2011

**Radiated Spurious Emissions: 30 – 1000 MHz**

The EUT was tested in an Open Area Test Site (OATS) set 3m from the receiving antenna. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Emissions. The EUT was tested by rotating it 360° with the antennas in both the vertical and horizontal orientation and raised from 1 to 4 meters to ensure the TX signal levels were maximized. All emissions from 30 MHz to 1 GHz were examined.

Measured Value includes antenna and receive cable correction factors.

Correction factors were input into the spectrum analyzer before recording “Measured Value”.

RBW = 100 KHz,  
 VBW = 100 KHz  
 Detector – Quasi Peak

**Radiated Spurious Emissions Test Data: 30 MHz – 1 GHz**

Frequency MHz	Measured Level dBuV	Limit dBuV	Margin dB	Antenna Polarity H or V
135.182	34	43.5	-9.5	H
198.407	32	43.5	-11.5	H
220.000	37.7	46	-8.3	H
230.998	39.1	46	-6.9	H
275.018	41.5	46	-4.5	H
282.640	42.6	46	-3.4	H
263.9975	44.8	46	-1.2	H
320.005	39.7	46	-6.3	H
331.794	37.7	46	-8.3	H
400.043	44.5	46	-1.5	H
960.111	41.9	53.9	-12	H

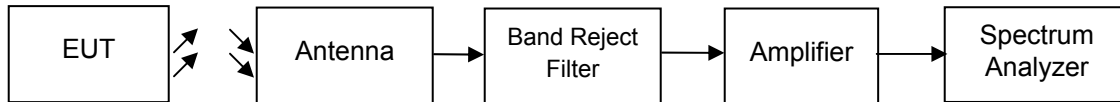
Note: maximum emissions occurred with the antenna in the horizontal position



### Radiated Spurious Emissions above 1 GHz

The EUT was tested in a semi-anechoic chamber set 3m from the receiving antenna. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Spurious Emissions. The antenna and cable correction factors were summed with the amplifier gain and input into the spectrum analyzer as an offset to ensure accurate readings. The spectrum for each tuned frequency was examined to the 10<sup>th</sup> harmonic.

#### Test Setup



Detector Settings	RBW	VBW	Span
Peak	1 MHz	3 MHz	as necessary
Average	1 MHz	3 MHz	as necessary

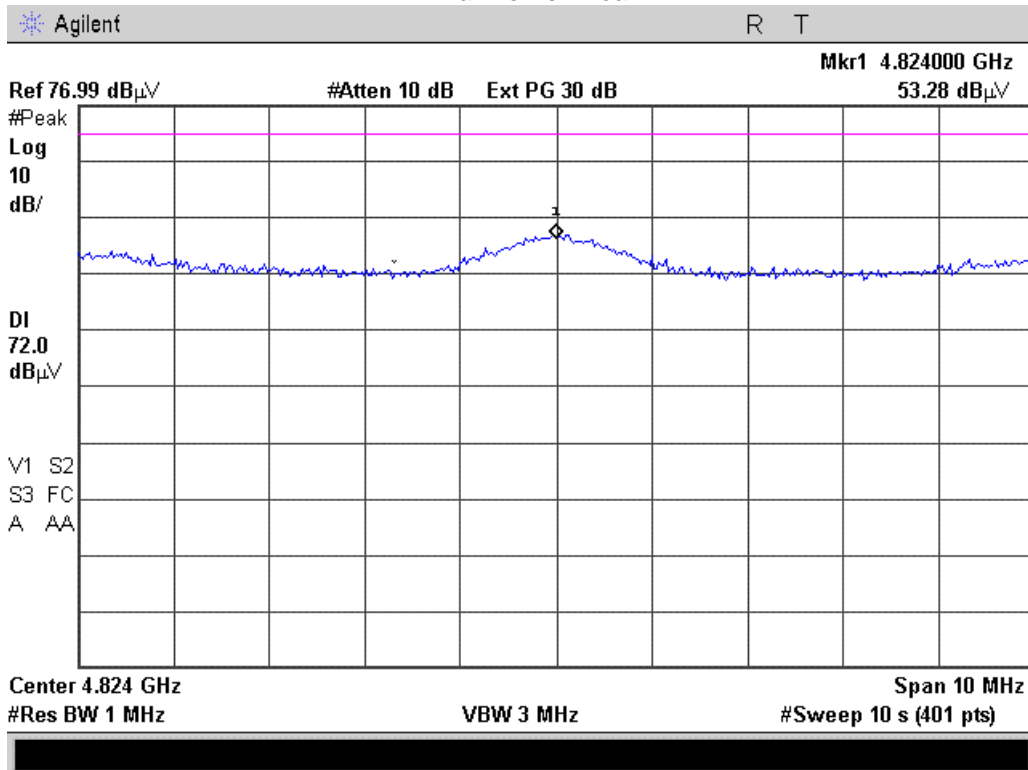
#### Radiated Spurious Emissions

Tuned Freq (MHz)	Emission Freq (MHz)	Peak Monitored Level (dBuV/m)	Peak Limit (dBuV/m)	Average Monitored Level (dBuV/m)	Average Limit (dBuV/m)	Result
2412	4284	53.3	74.0	38.4	54.0	Pass
2412	7236	54.5	74.0	37.7	54.0	Pass
2412	9648	52.3	74.0	41.5	54.0	Pass
2437	4874	53.8	74.0	38.6	54.0	Pass
2437	7311	52.4	74.0	35.4	54.0	Pass
2437	9748	51.8	74.0	40.9	54.0	Pass
2462	4924	53.9	74.0	37.8	54.0	Pass
2462	7386	51.9	74.0	36.4	54.0	Pass
2462	9848	53.9	74.0	42.4	54.0	Pass

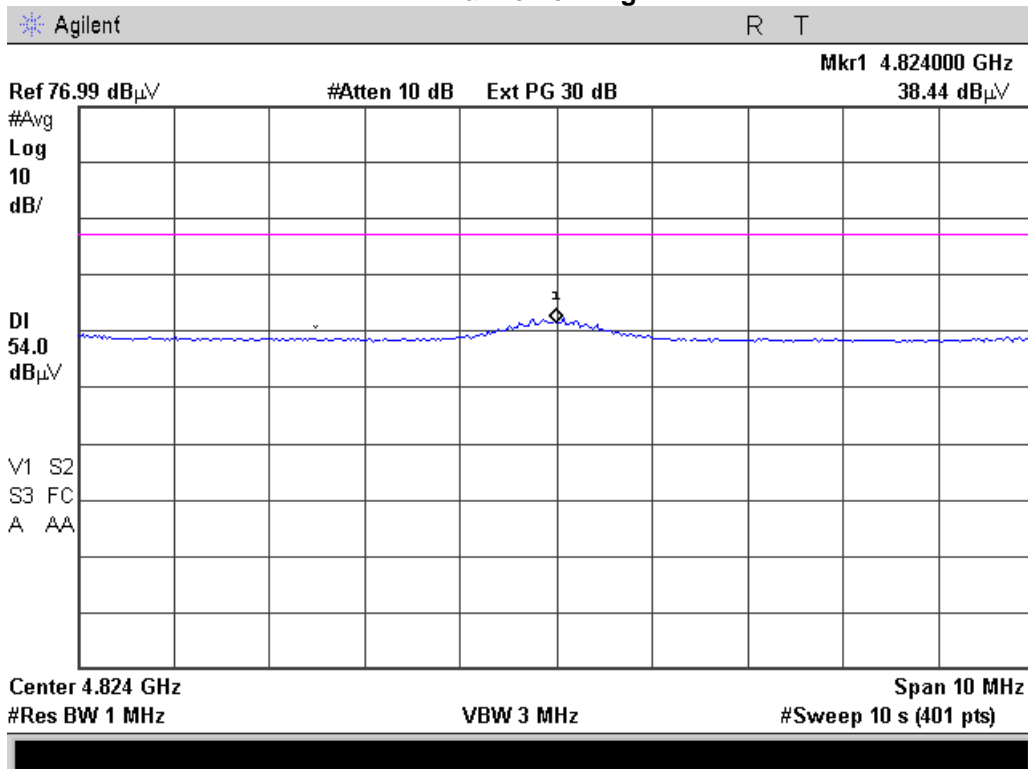
No other emissions were detectable. All emissions were greater than -20 dBc.



### Tuned Frequency = 2405 MHz 2<sup>nd</sup> Harmonic - Peak

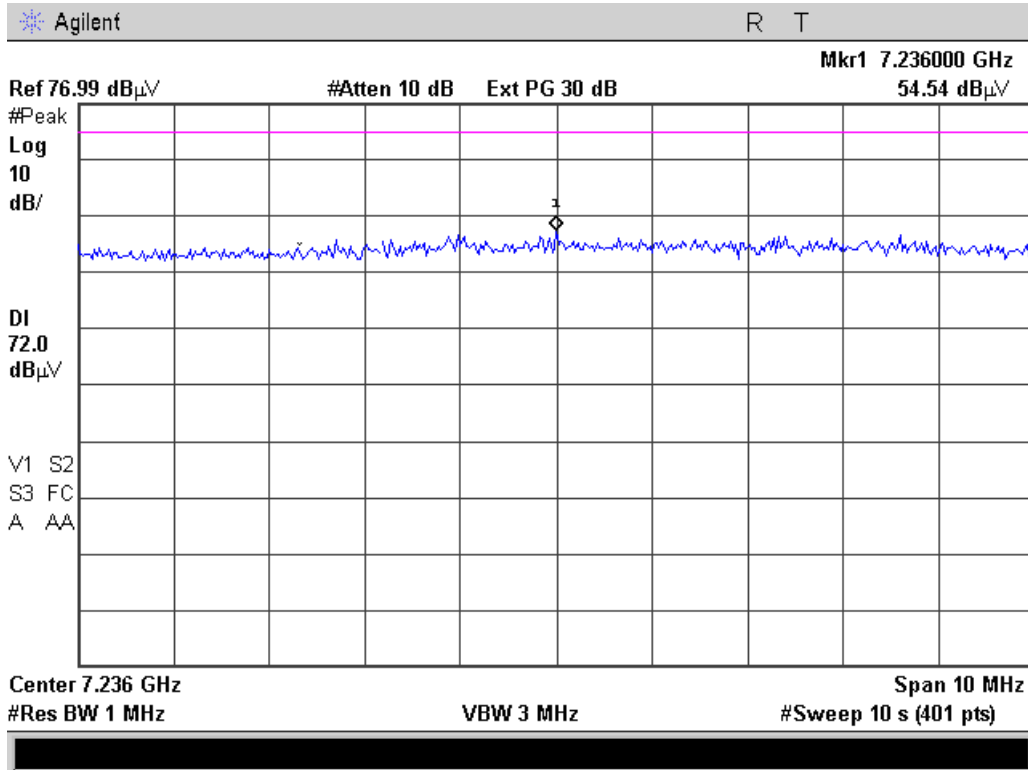


### Tuned Frequency = 2405 MHz 2<sup>nd</sup> Harmonic - Avg

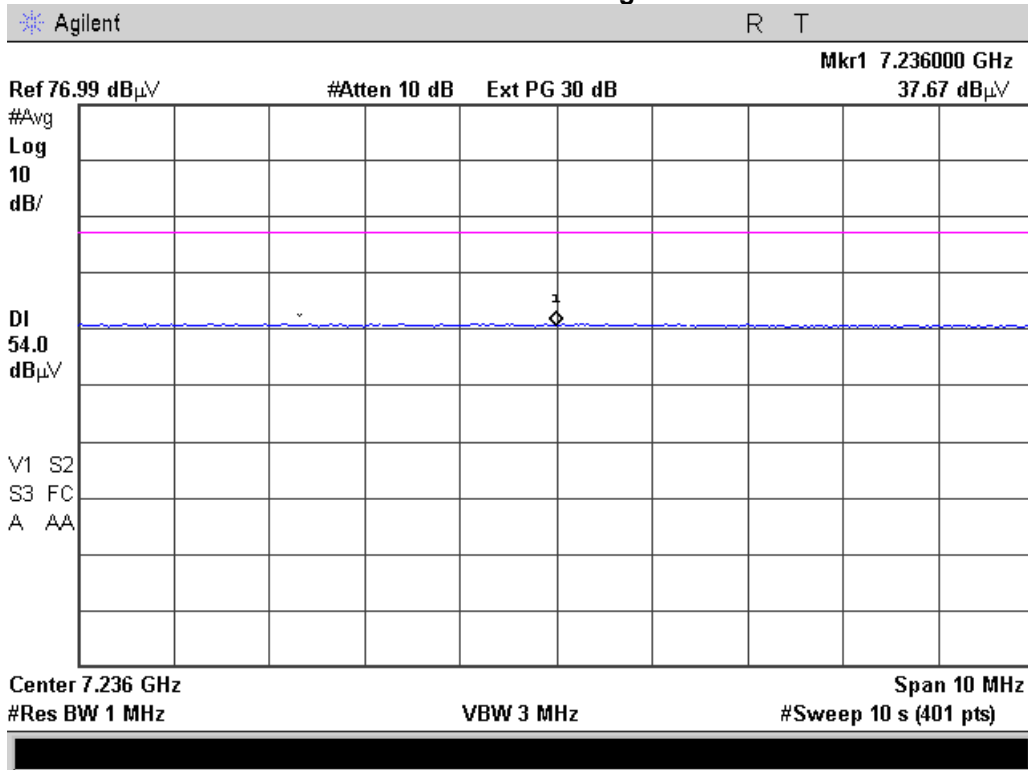




### Tuned Frequency = 2405 MHz 3<sup>rd</sup> Harmonic - Peak

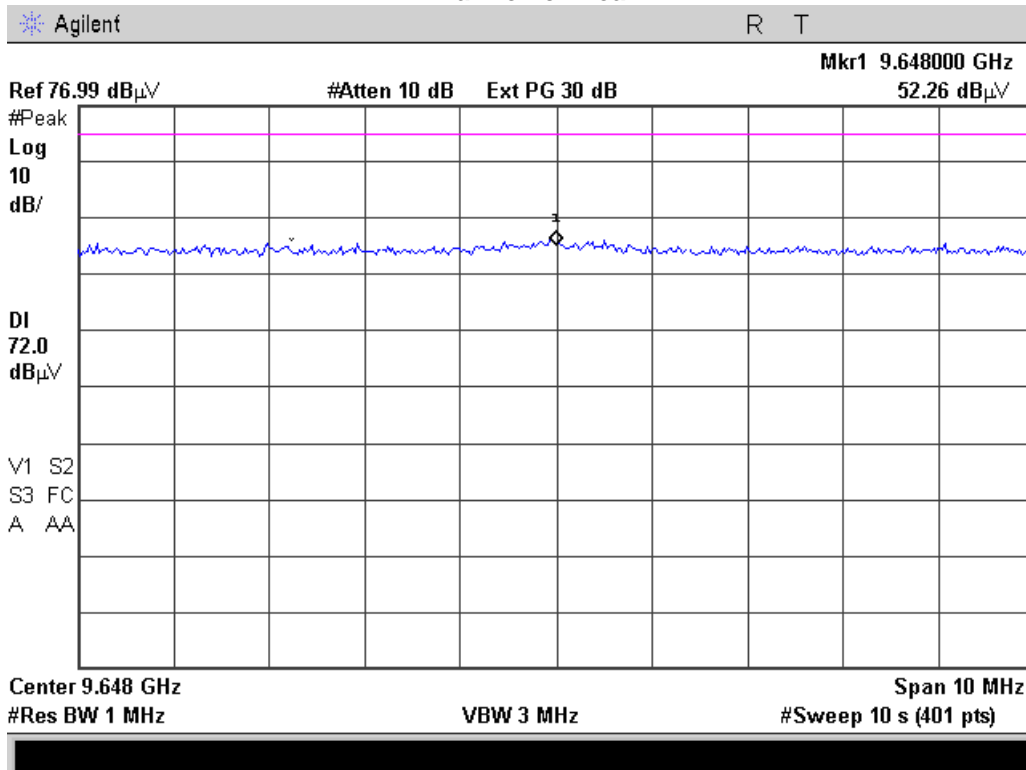


### Tuned Frequency = 2405 MHz 3<sup>rd</sup> Harmonic - Avg

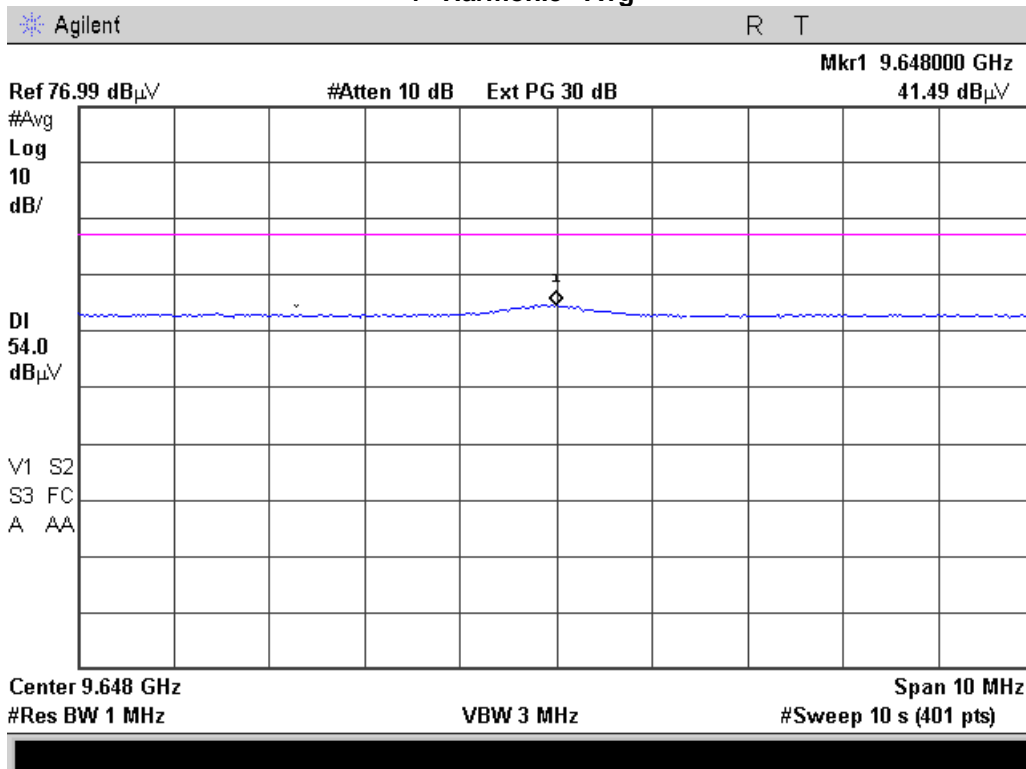




### Tuned Frequency = 2405 MHz 4<sup>th</sup> Harmonic - Peak

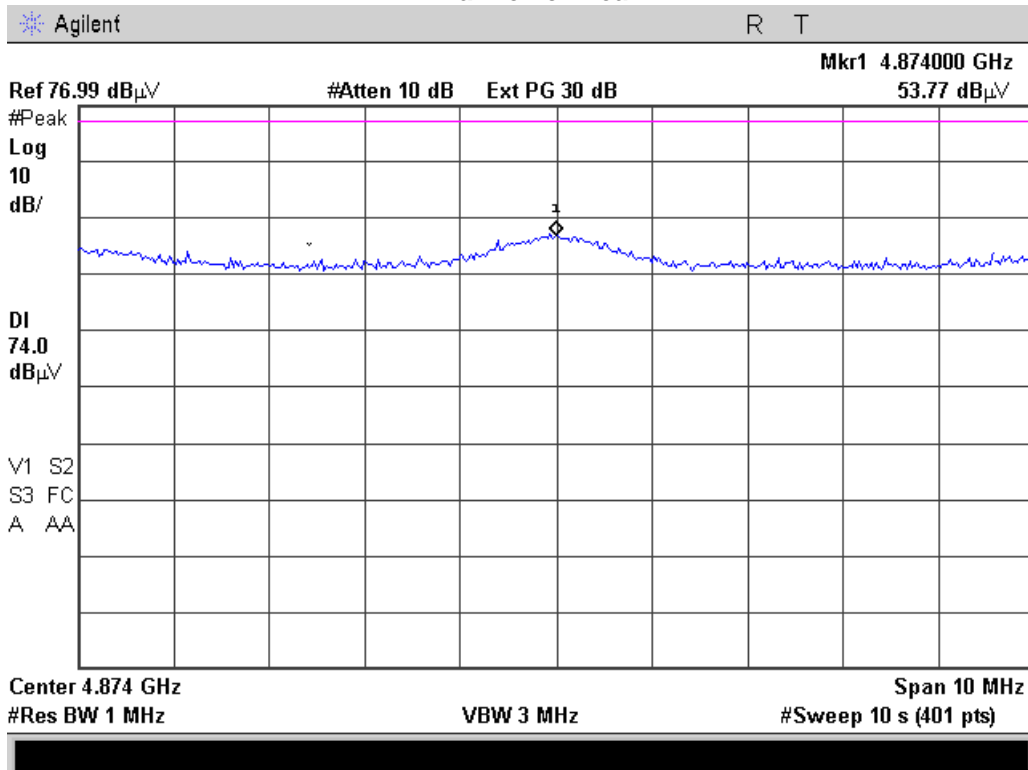


### Tuned Frequency = 2405 MHz 4<sup>th</sup> Harmonic - Avg

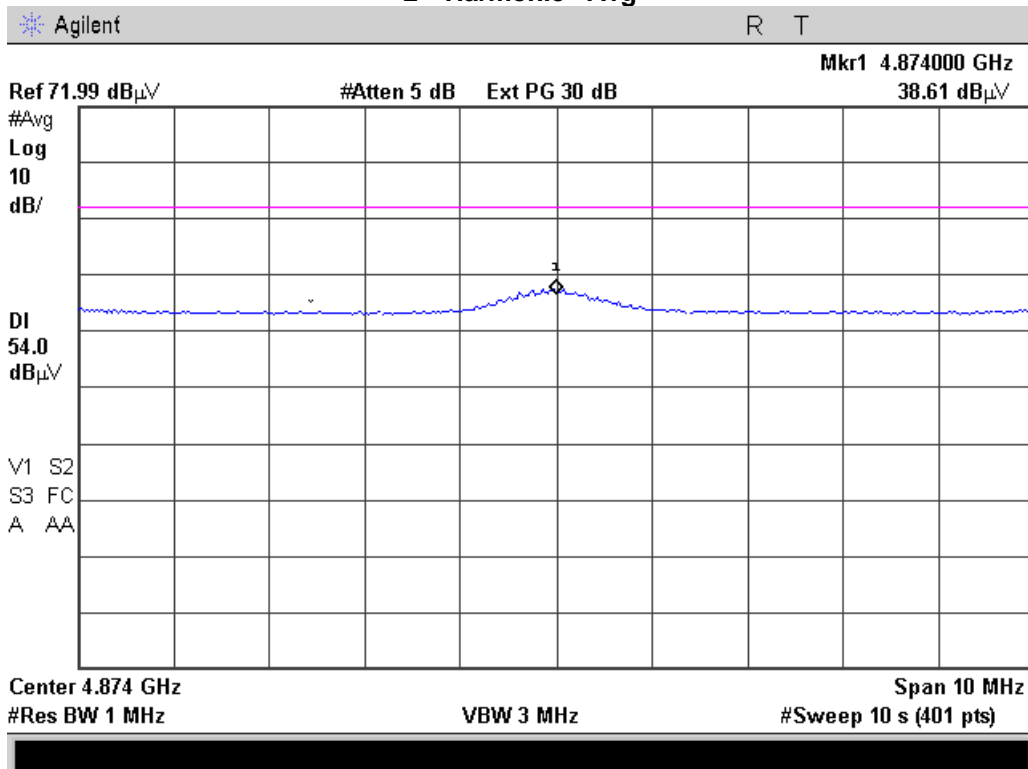




### Tuned Frequency = 2437 MHz 2<sup>nd</sup> Harmonic - Peak

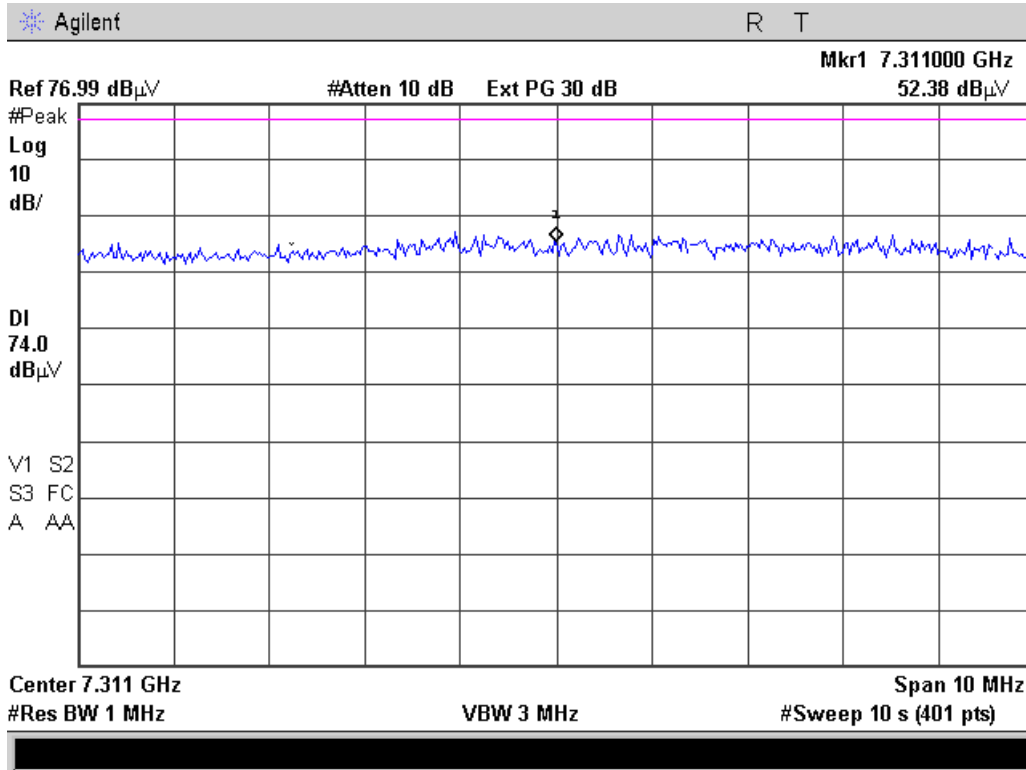


### Tuned Frequency = 2437 MHz 2<sup>nd</sup> Harmonic - Avg

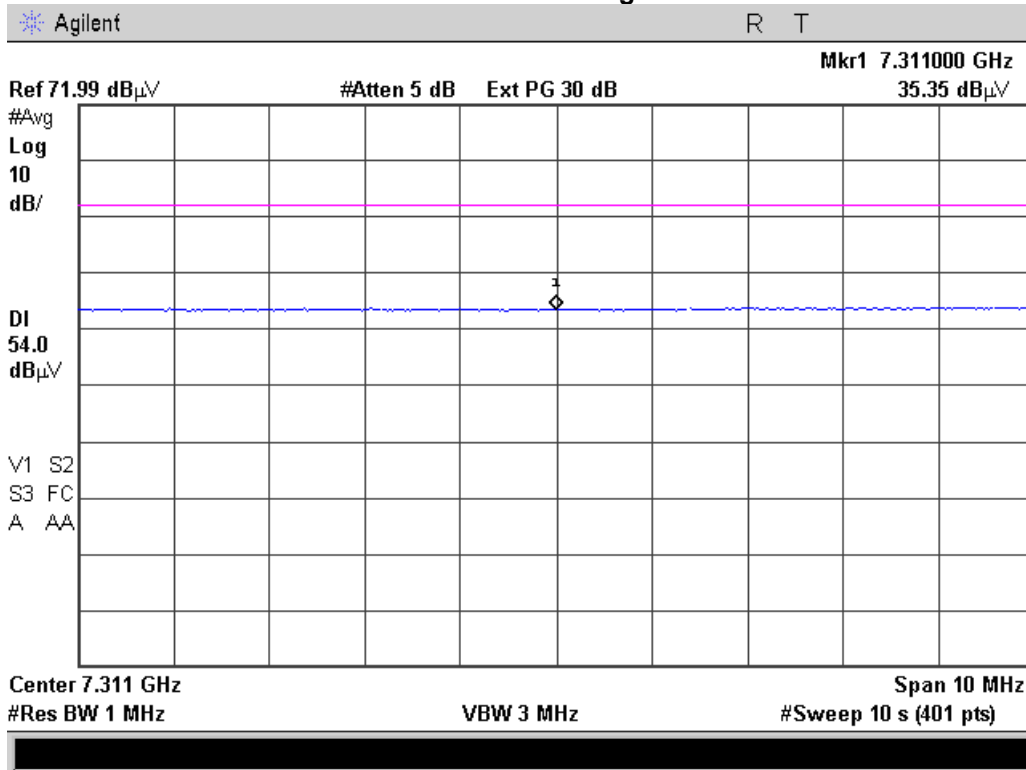




### Tuned Frequency = 2437 MHz 3<sup>rd</sup> Harmonic - Peak

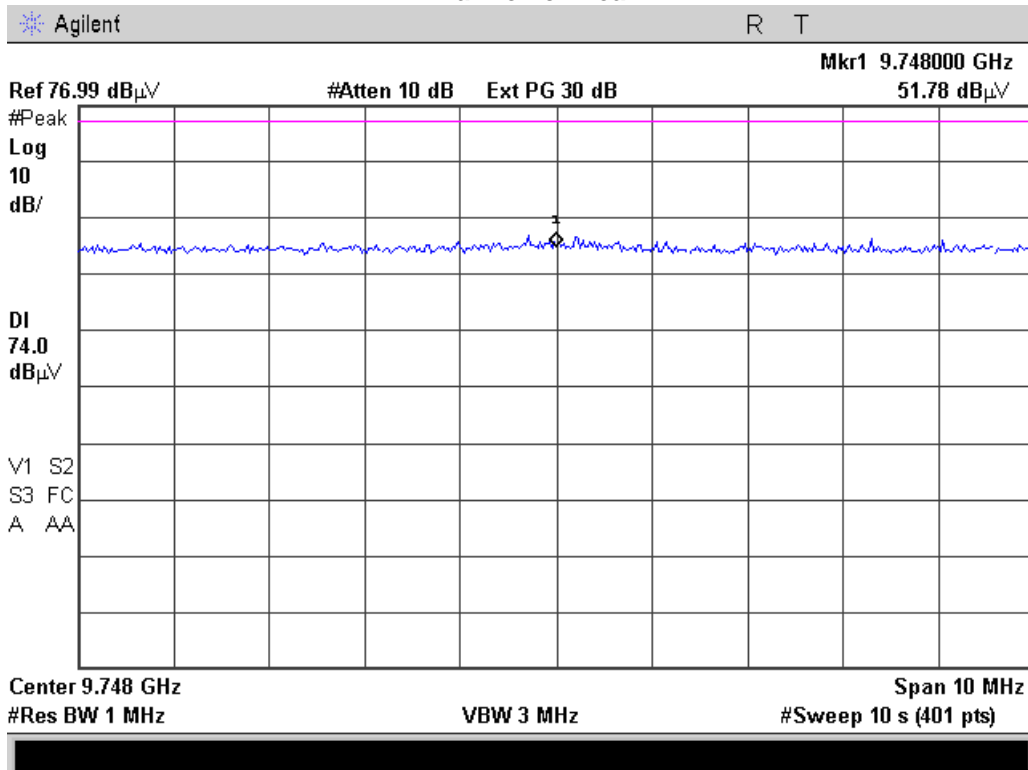


### Tuned Frequency = 2437 MHz 3<sup>rd</sup> Harmonic - Avg

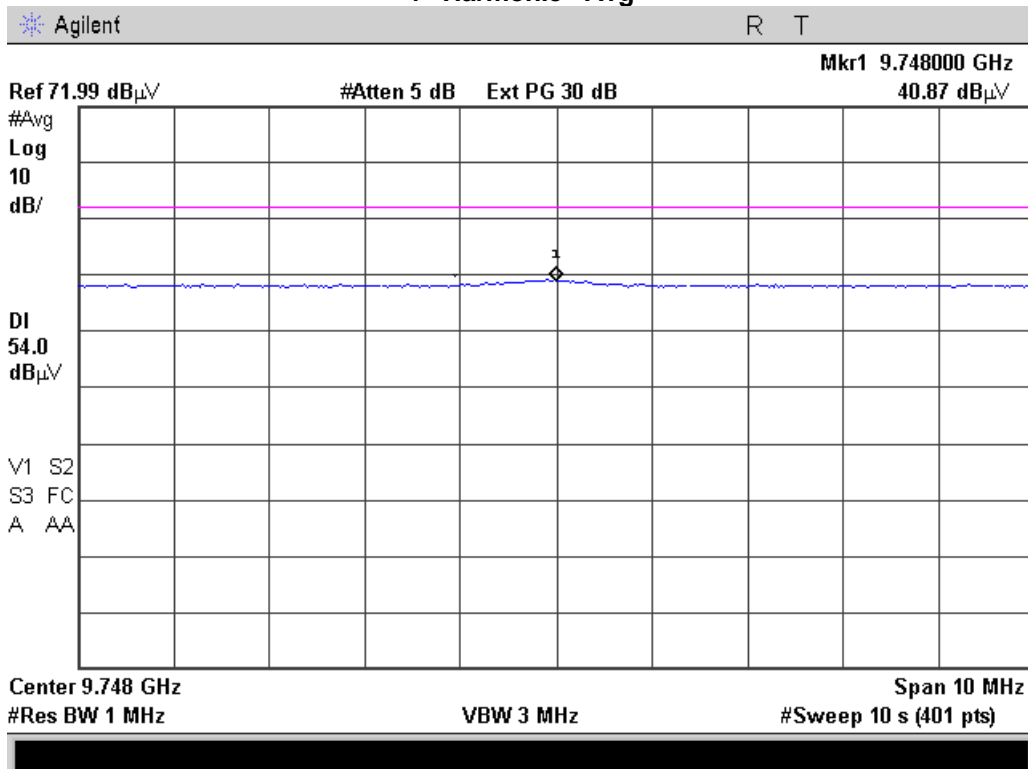




### Tuned Frequency = 2437 MHz 4<sup>th</sup> Harmonic - Peak

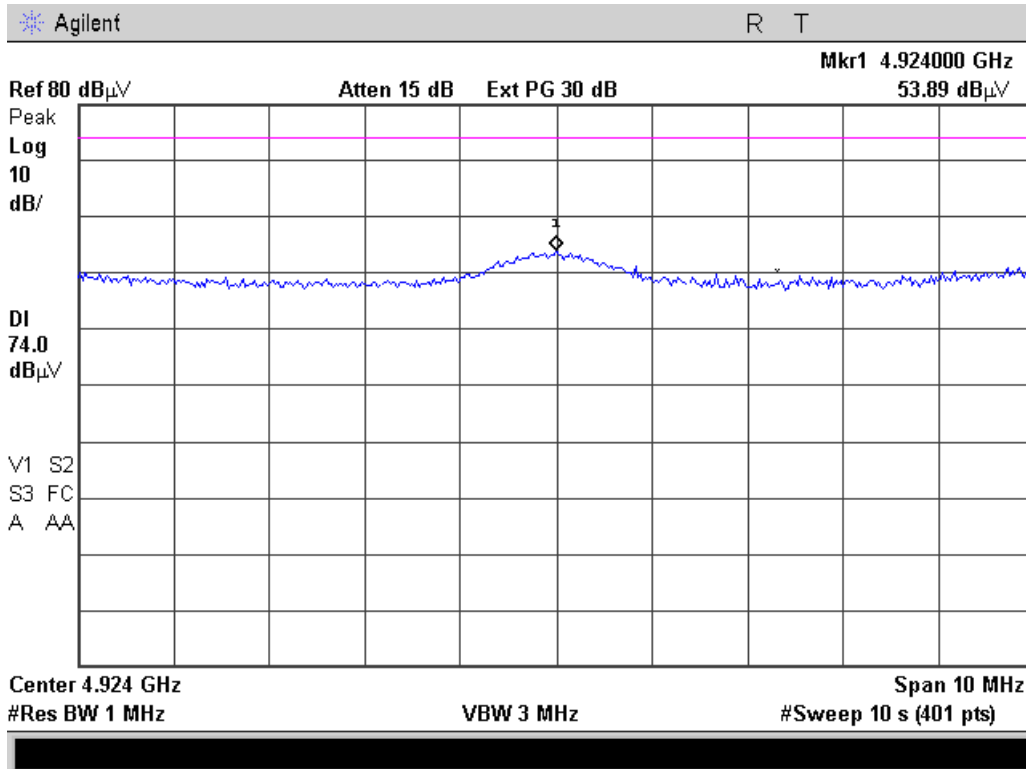


### Tuned Frequency = 2437 MHz 4<sup>th</sup> Harmonic - Avg

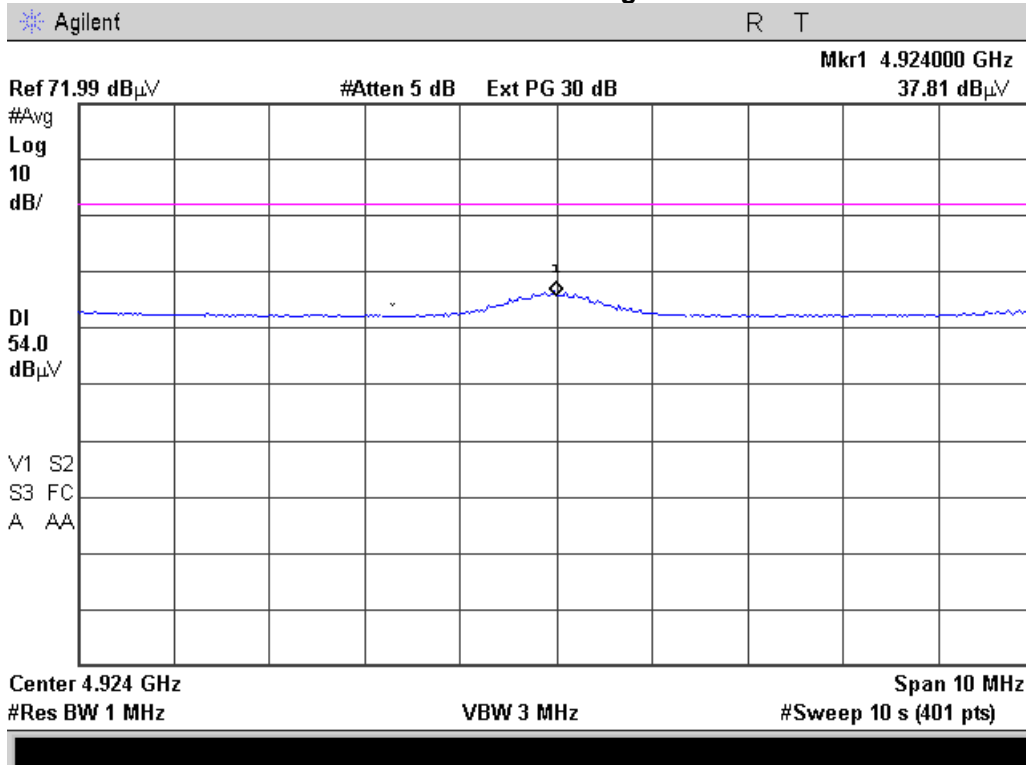




### Tuned Frequency = 2462 MHz 2<sup>nd</sup> Harmonic - Peak



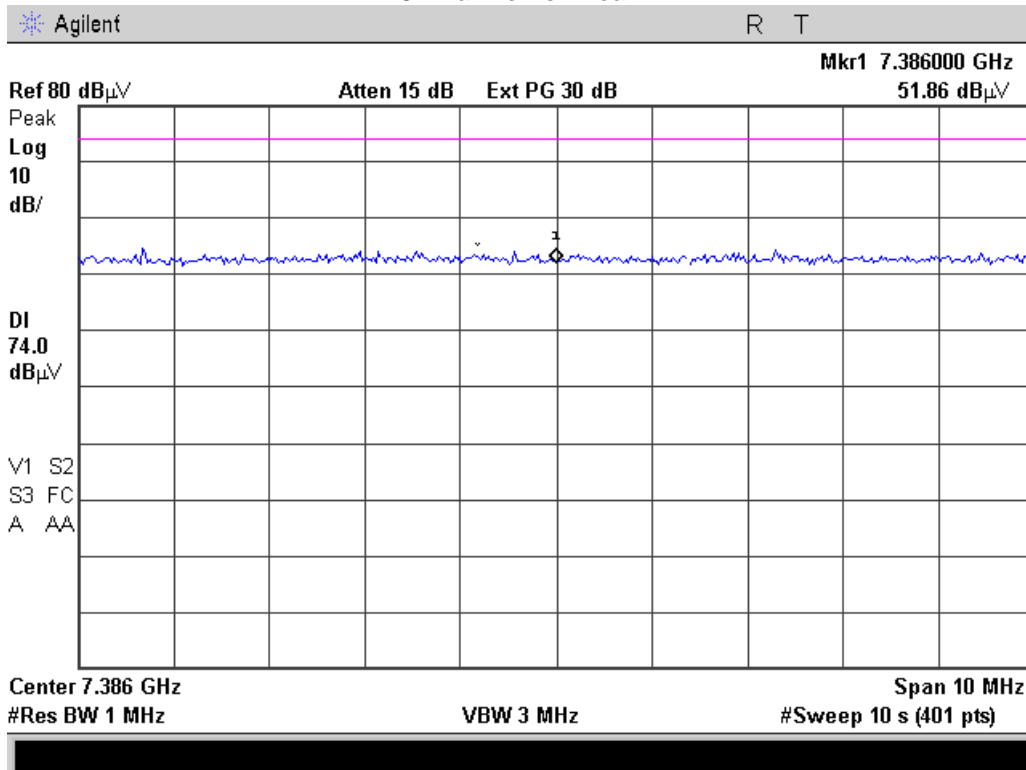
### Tuned Frequency = 2462 MHz 2<sup>nd</sup> Harmonic - Avg



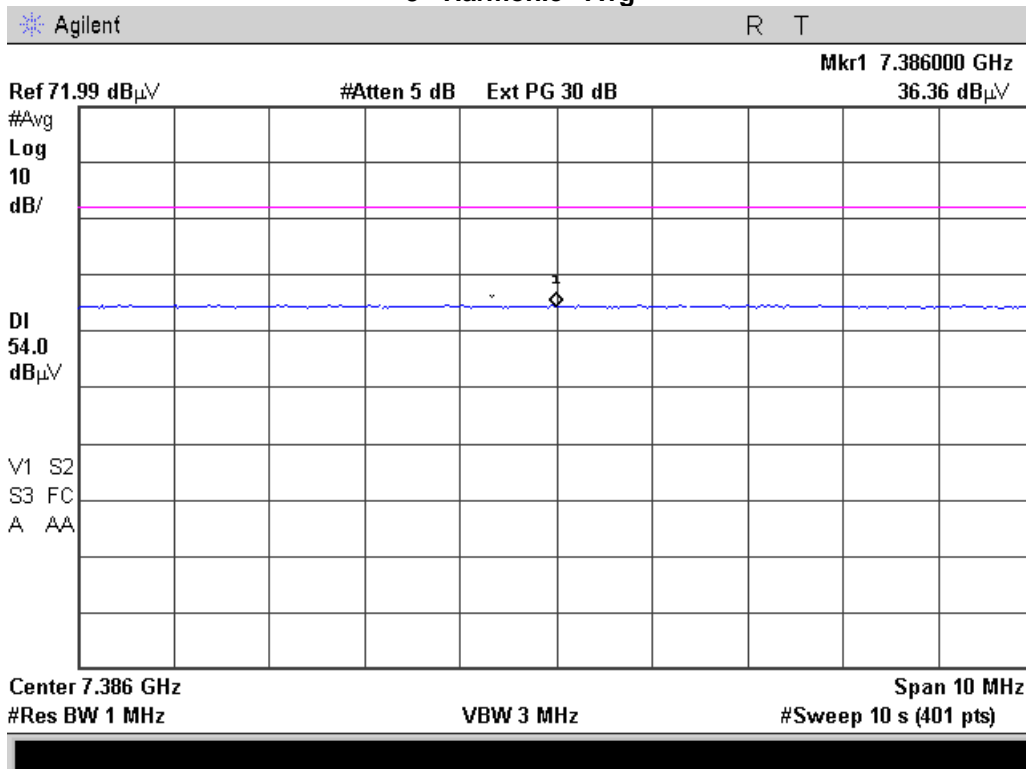




### Tuned Frequency = 2462 MHz 3<sup>rd</sup> Harmonic - Peak

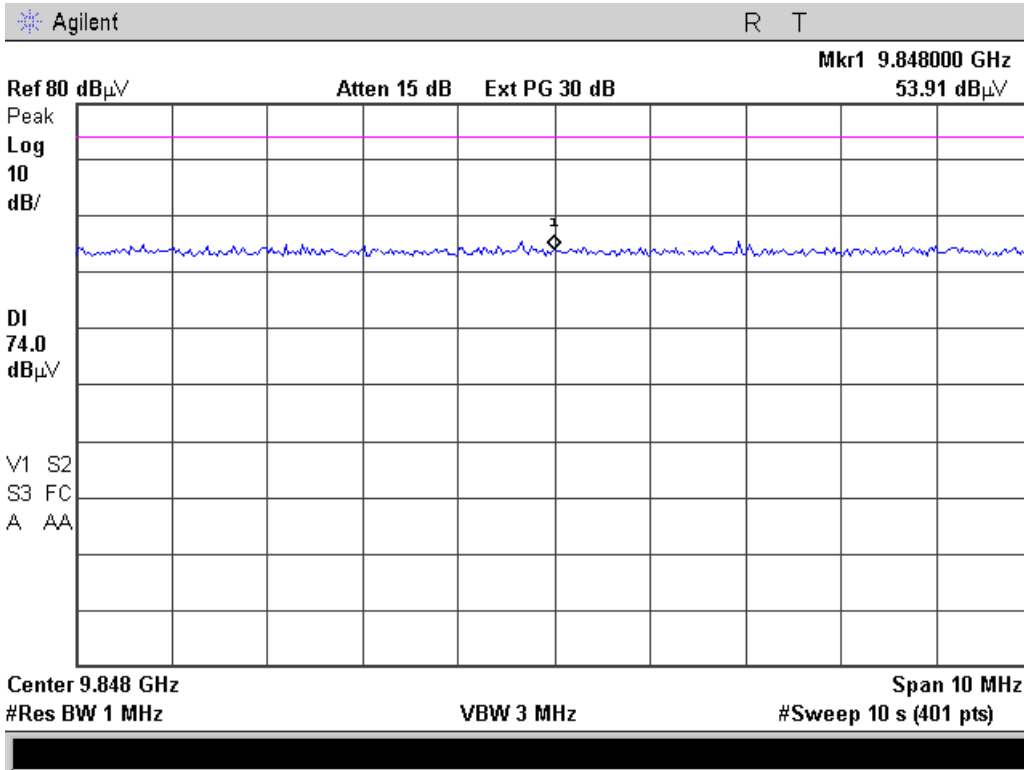


### Tuned Frequency = 2462 MHz 3<sup>rd</sup> Harmonic - Avg

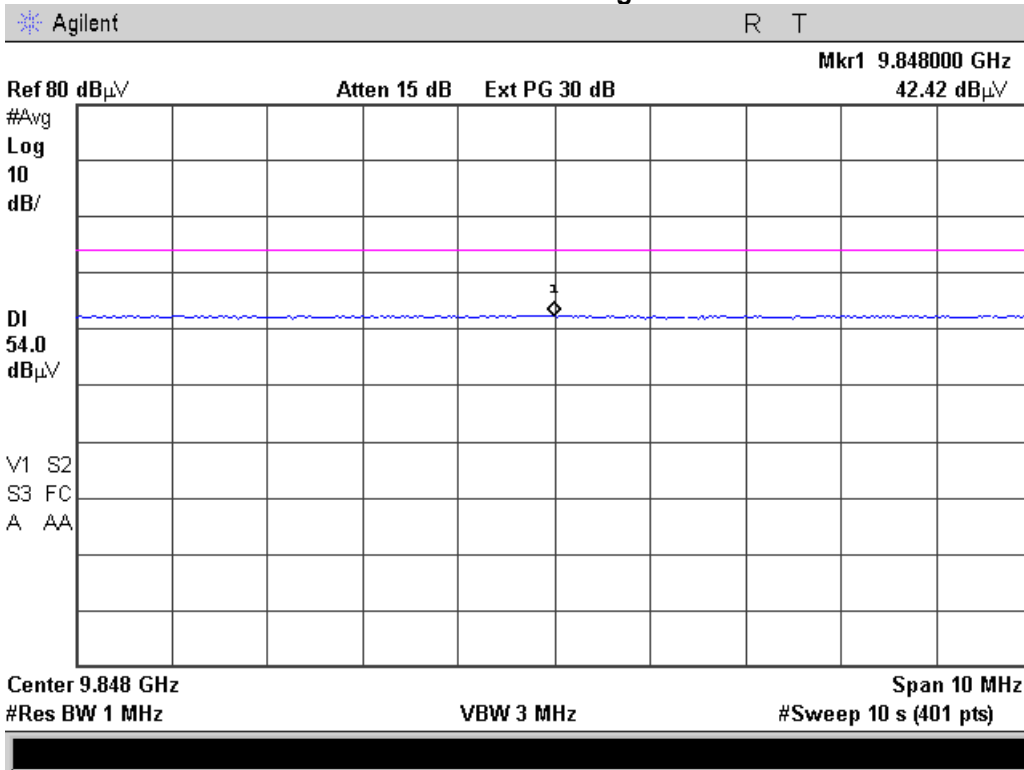




### Tuned Frequency = 2462 MHz 4<sup>th</sup> Harmonic - Peak



### Tuned Frequency = 2462 MHz 4<sup>th</sup> Harmonic - Avg

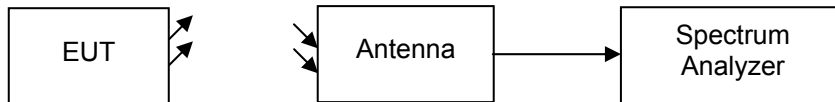


**Name of Test:** Emissions At Band Edges  
**Specification:** 15.247(d), 15.209(a), 15.205  
**Test Equipment Utilized:** i00028, i00103, i00177, i00331, i00385  
**Engineer:** G. Corbin  
**Test Date:** 12/2/2010

### Test Procedure

The EUT was tested in a semi-anechoic chamber set 3m from the receiving transducer. A spectrum analyzer was used to verify that the EUT met the requirements for band edge with both peak and average measurements. The cable and transducer correction factors were input into the analyzer as a reference level offset to ensure accurate readings were obtained.

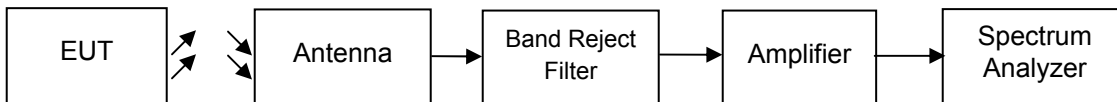
### Band Edge Test Setup



### Band Edge Emissions Summary

Tuned Freq (MHz)	Emission Freq (MHz)	Monitored Level (dBc)	Detector	Limit (dBc)	Result
2412	2400	-31.6	Peak	-20 dBc	Pass
2462	2483.5	-37.1	Peak	-20 dBc	Pass

### Restricted Band Test Setup

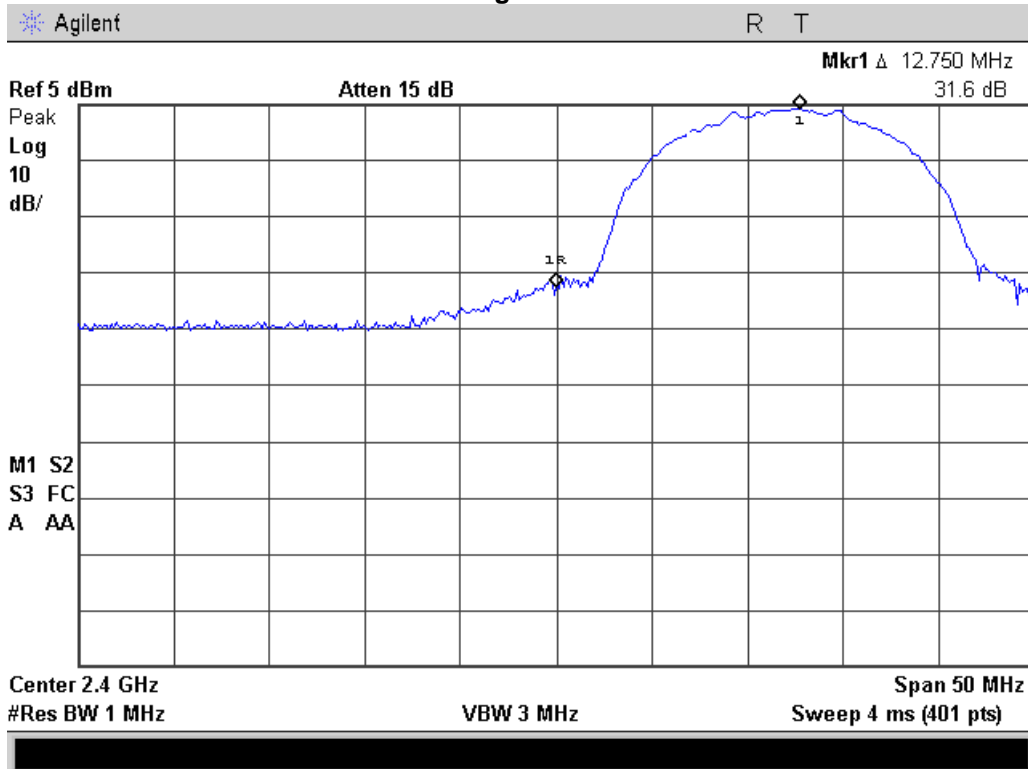


### Restricted Band Emissions Summary

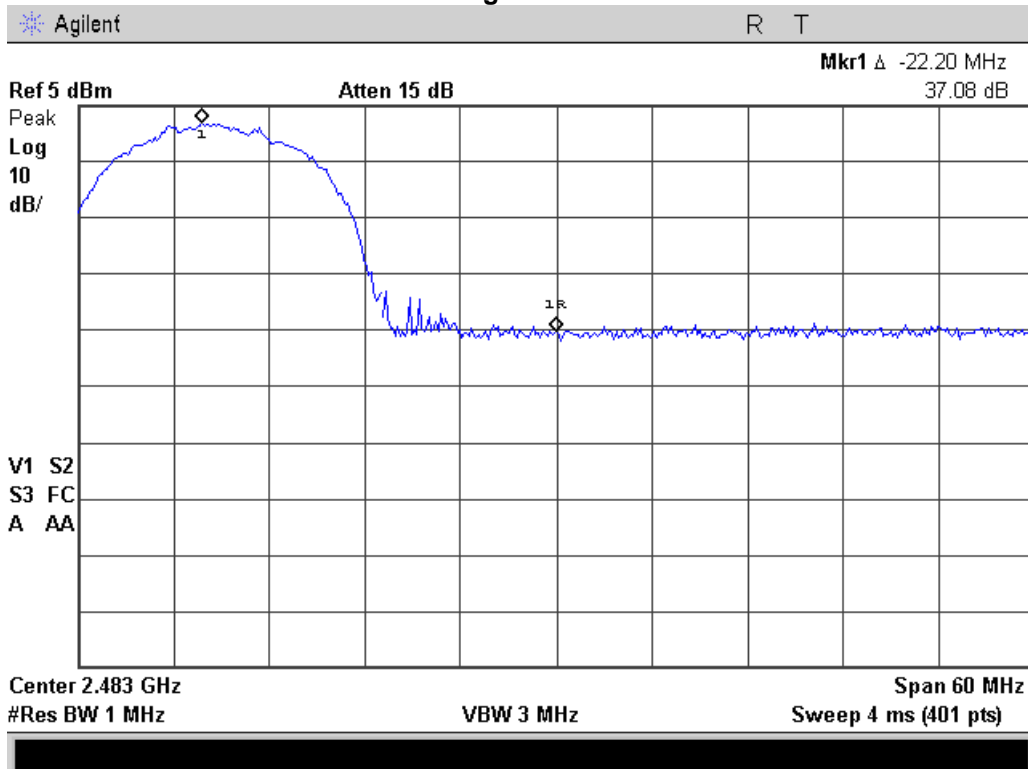
Restricted Band (MHz)	Tuned Freq (MHz)	Emission Freq (MHz)	Monitored Level (dBUV/m)	Detector	Limit (dBUV/m)	Result
2300 - 2390	2412	2389.8	61.2	Peak	74	Pass
2300 - 2390	2412	2389.2	50.1	Average	54	Pass
2483.5 - 2500	2462	2483.6	67.1	Peak	74	Pass
2483.5 - 2500	2462	2485.2	50.4	Average	54	Pass



### Band Edge 2400 MHz

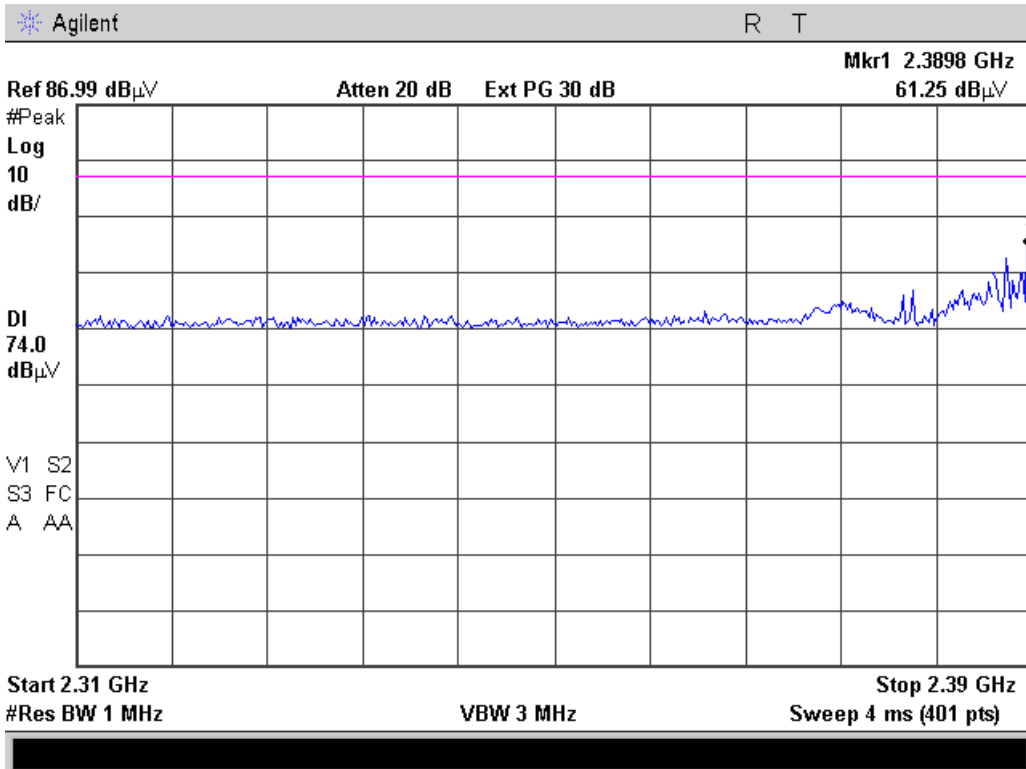


### Band Edge 2483.5 MHz

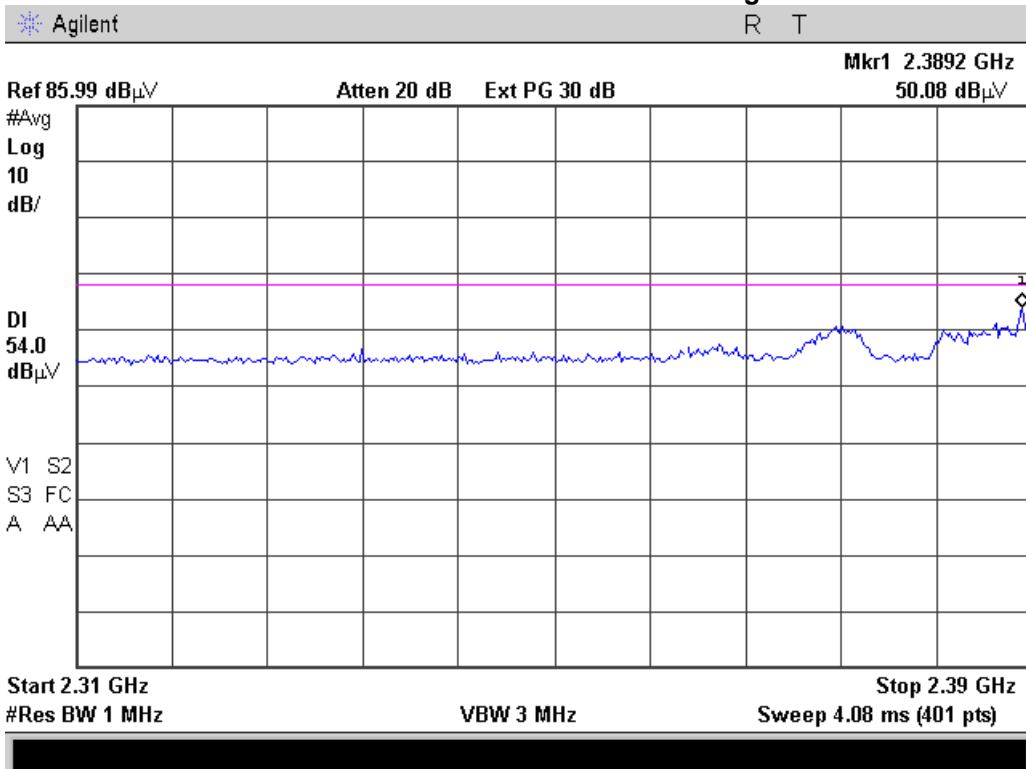




### Restricted Band 2300 - 2390 MHz - Peak

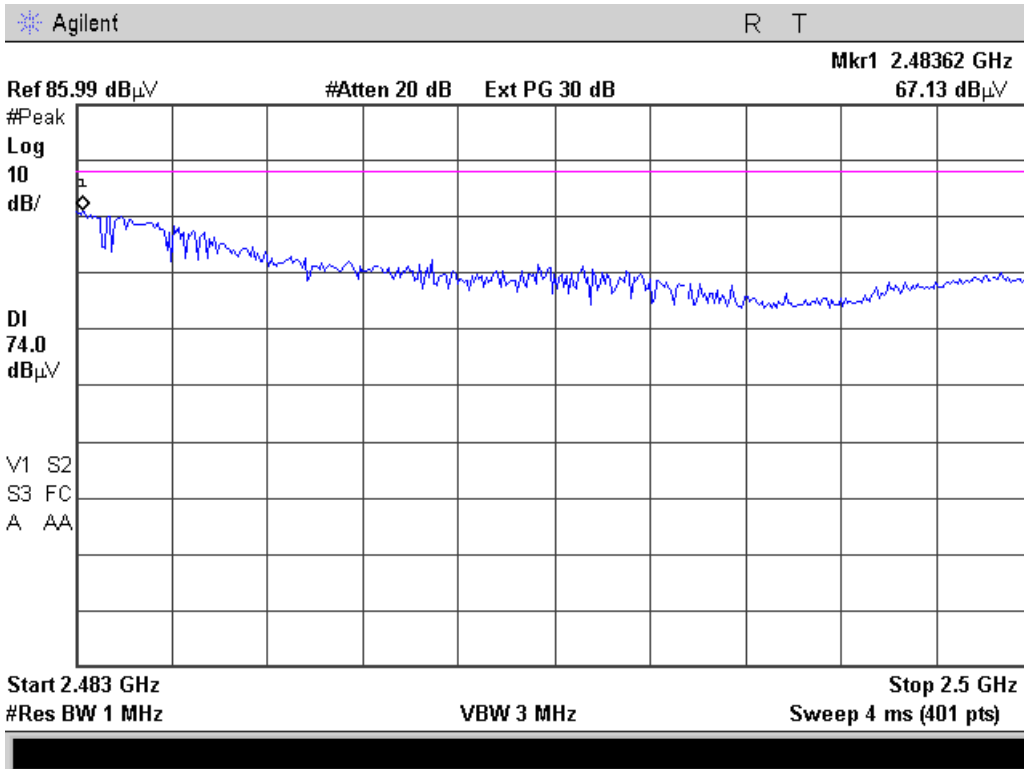


### Restricted Band 2300 - 2390 MHz - Avg

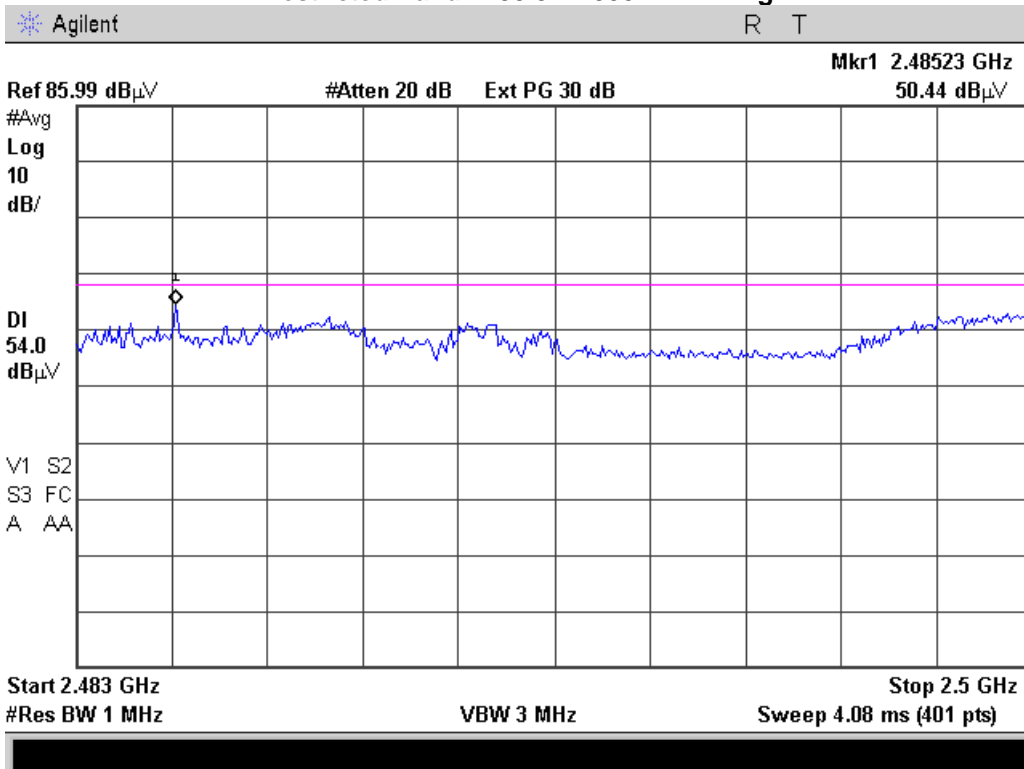




### Restricted Band 2483.5 – 2500 MHz – Peak



### Restricted Band 2483.5 – 2500 MHz – Avg



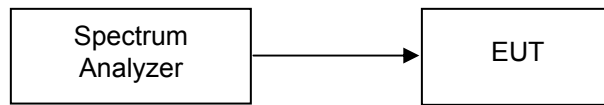
**Name of Test:** Occupied Bandwidth  
**Specification:** 15.247(a)(2)  
**Test Equipment Utilized:** i00331

**Engineer: G. Corbin**  
**Test Date: 12/7/2010**

### Test Procedure

The EUT was connected directly to a spectrum analyzer. The Span was set wide enough to capture the entire transmit spectrum and the resolution bandwidth was set to at least 1% of the span. The analyzer was set to max hold and when the entire spectrum was captured the 6dB and 99% bandwidths were measured to verify the bandwidth met the specification.

### Test Setup



### 6 dB Occupied Bandwidth Summary

Frequency MHz	Recorded Measurement MHz	Specification Limit	Result
2412	11.746	≥ 500 KHz	Pass
2437	12.268	≥ 500 KHz	Pass
2462	12.123	≥ 500 KHz	Pass

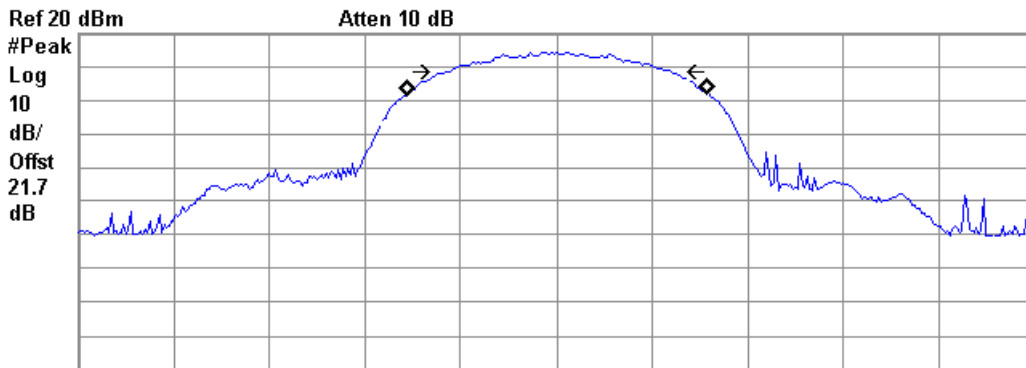
### 99% Bandwidth Summary

Frequency MHz	Recorded Measurement MHz	Result
2412	15.703	Pass
2437	15.676	Pass
2462	15.705	Pass



### 6dB and 99% Bandwidth - 2412 MHz

Agilent R T



Center 2.412 GHz Span 50 MHz  
 #Res BW 1 MHz VBW 3 MHz Sweep 4 ms (401 pts)

Occupied Bandwidth  
 15.7034 MHz

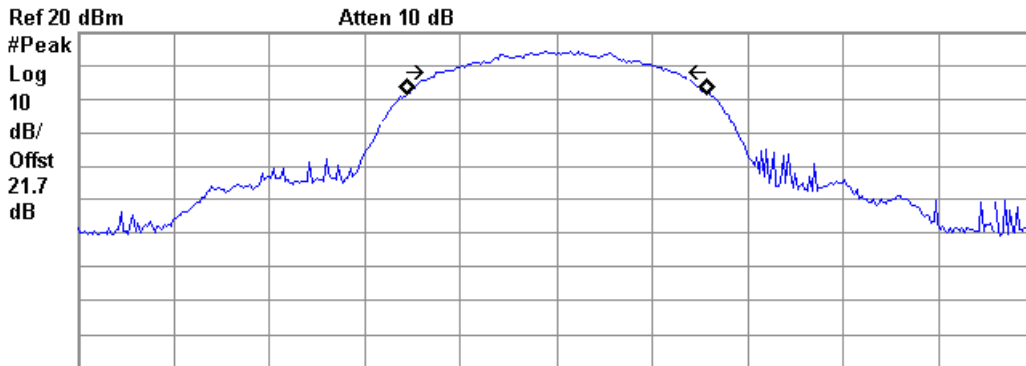
Occ BW % Pwr 99.00 %  
 x dB -6.00 dB

Transmit Freq Error 73.097 kHz  
 x dB Bandwidth 11.746 MHz



### 6dB and 99% Bandwidth - 2437 MHz

Agilent R T



Center 2.437 GHz Span 50 MHz  
 #Res BW 1 MHz VBW 3 MHz Sweep 4 ms (401 pts)

Occupied Bandwidth  
 15.6764 MHz

Occ BW % Pwr 99.00 %  
 x dB -6.00 dB

Transmit Freq Error 75.495 kHz  
 x dB Bandwidth 12.268 MHz

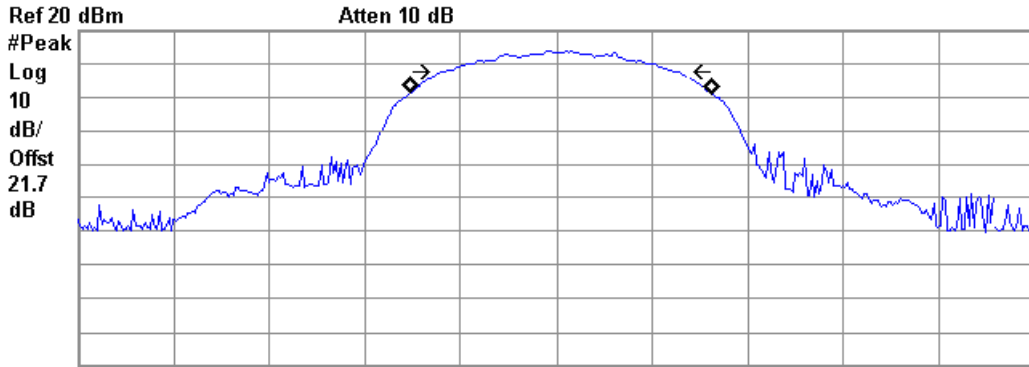






### 6dB and 99% Bandwidth - 2462 MHz

Agilent R T



Center 2.462 GHz  
#Res BW 1 MHz  
VBW 3 MHz  
Span 50 MHz  
Sweep 4 ms (401 pts)

Occupied Bandwidth  
15.7057 MHz

Occ BW % Pwr 99.00 %  
x dB -6.00 dB

Transmit Freq Error 252.289 kHz  
x dB Bandwidth 12.213 MHz

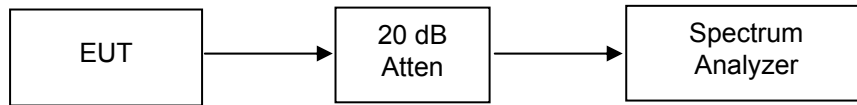


**Name of Test:** Transmitter Power Spectral Density (PSD)  
**Specification:** 15.247(e) **Engineer:** G. Corbin  
**Test Equipment Utilized:** i00331 **Test Date:** 12/7/2010

### Test Procedure

The EUT was connected directly to a spectrum analyzer.  
 The test was performed per section 6.11.2.3 of C63.10 - 2009 "Procedure for determining PSD for DTS devices".

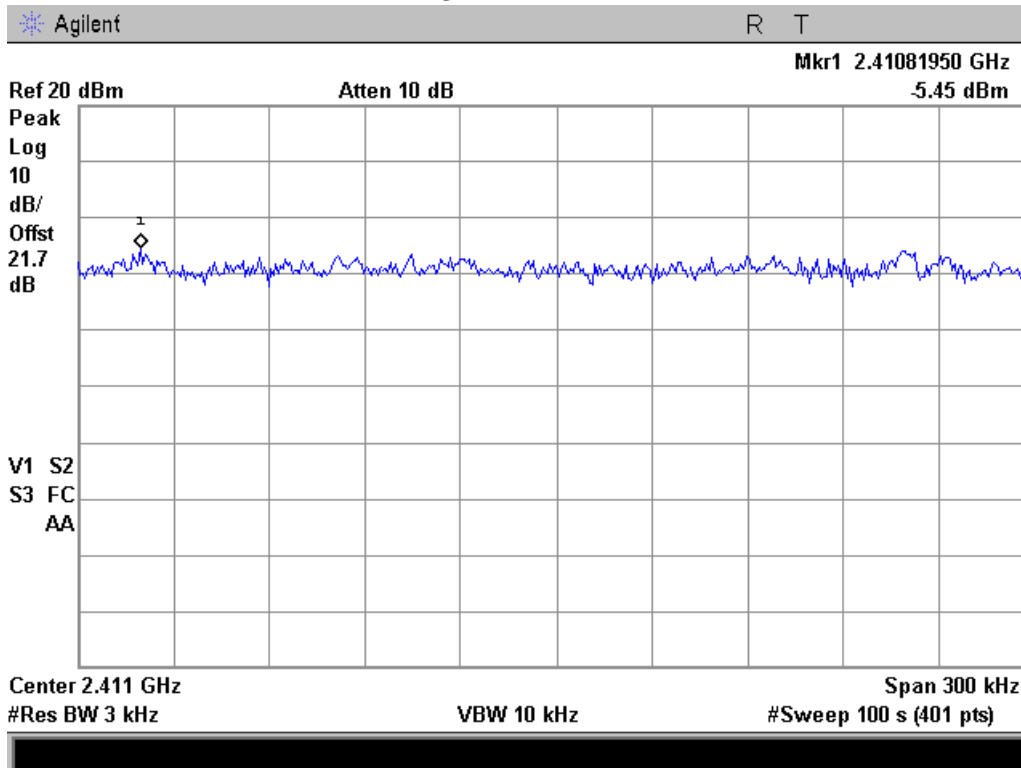
### Test Setup



### PSD Summary

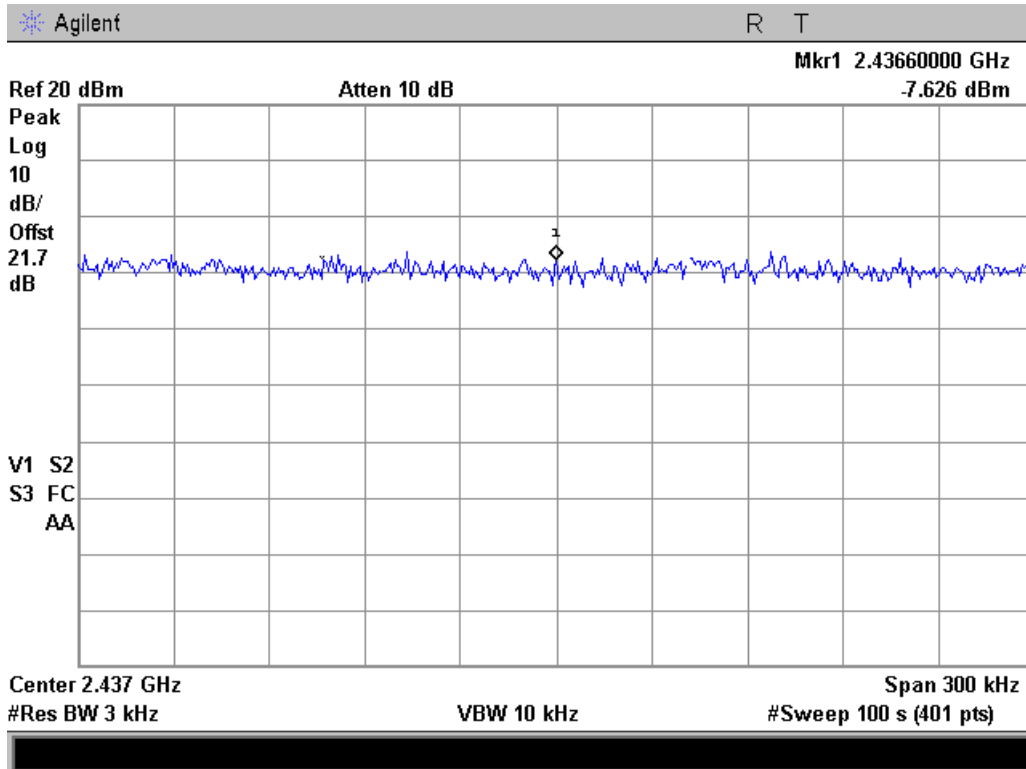
Frequency MHz	Recorded Measurement dBm	Specification Limit dBm	Result
2412	-5.4	8	Pass
2437	-7.6	8	Pass
2462	-7.0	8	Pass

### PSD - 2412 MHz

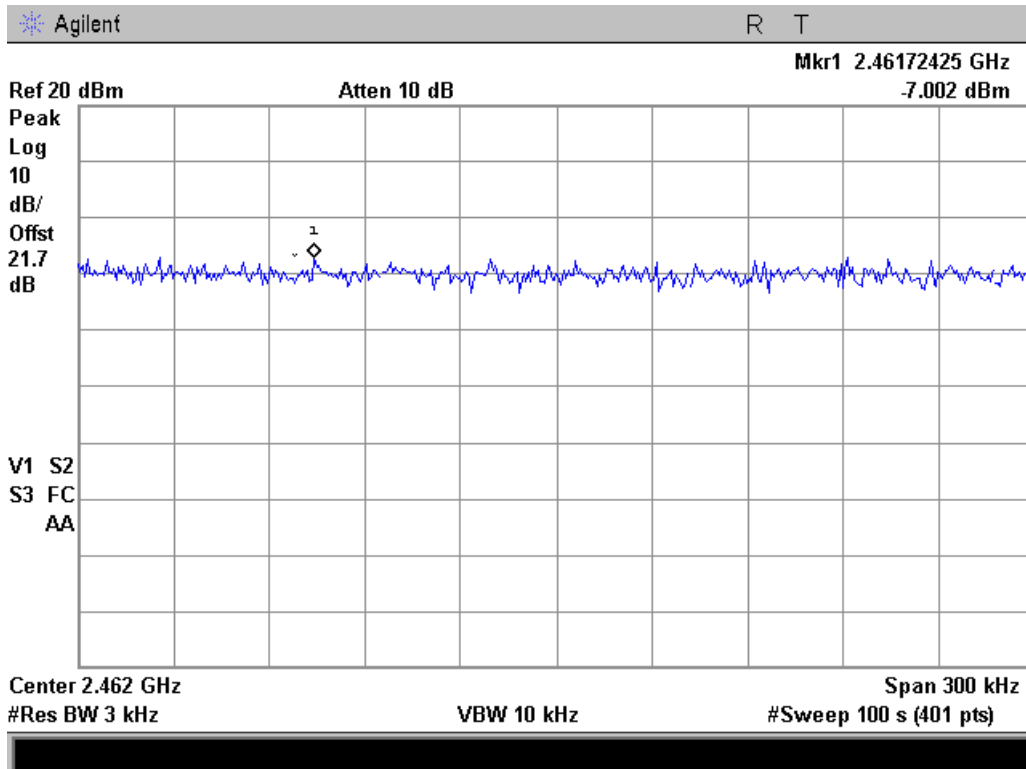




### PSD - 2437 MHz



### PSD - 2462 MHz





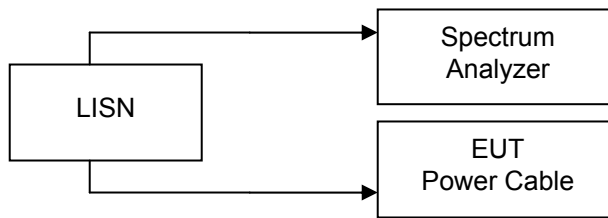
**Name of Test:** A/C Powerline Conducted Emissions  
**Specification:** 15.207  
**Test Equipment Utilized:** i00270, i00362, i00379

**Engineer:** G. Corbin  
**Test Date:** 11/29/2010

### Test Procedure

The EUT power cable connected to a LISN and the monitored output of the LISN was connected directly to a spectrum analyzer. The conducted emissions from 150 kHz to 30 MHz were monitored and compared to the specification limits.

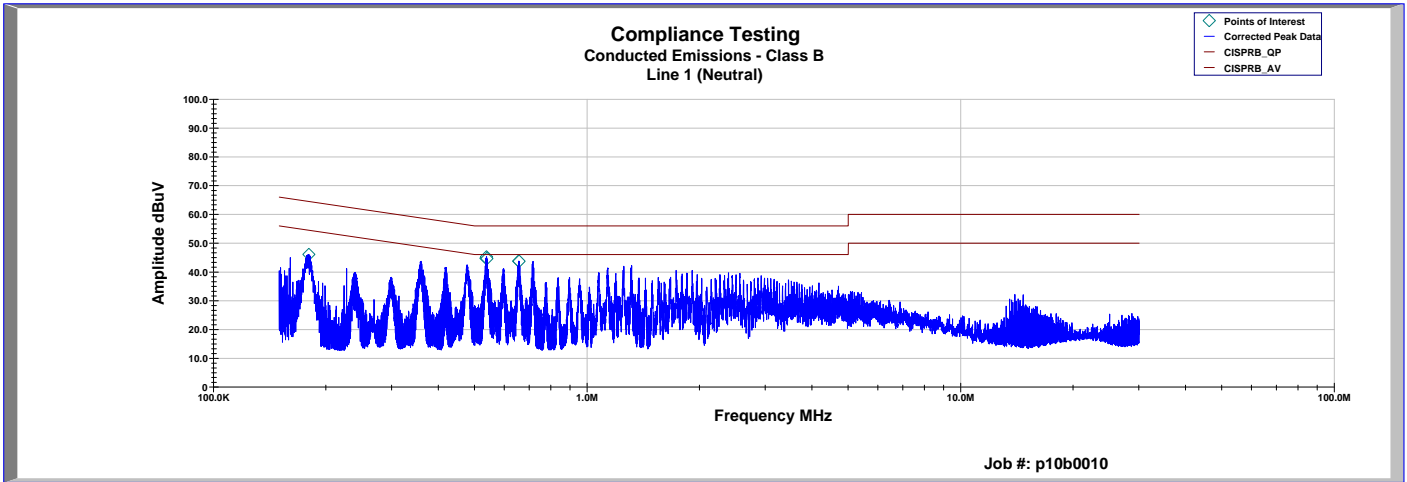
### Test Setup



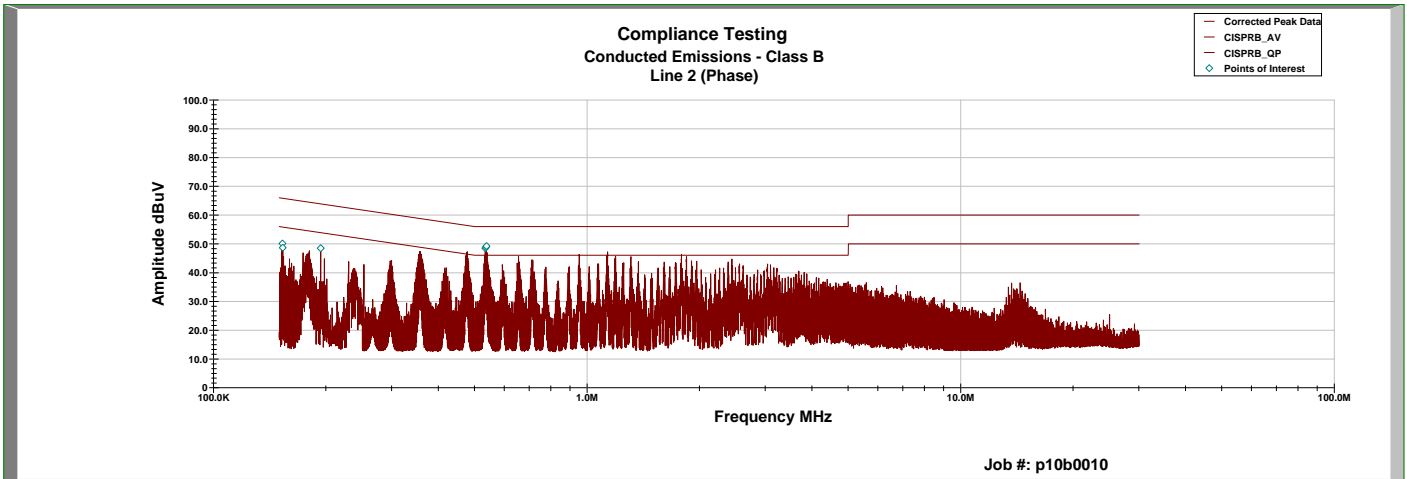


## Conducted Emissions Test Results

### Line 1 Peak Plot



### Line 2 Peak Plot



**Line 1 Neutral AVG Detector**

Frequency	Measured Data (dBuV)	LISN Corr Fact (dB)	Cable Loss (dB)	Attenuator (dB)	L1 Final Data (dBuV)	CISPR/FCC Limit (dBuV)	AVG Margin (dB)
182.12 KHz	17.13	0.2	0.005	10	27.332	55.082	-27.751
536.26 KHz	28.04	0.1	0.158	10	38.301	46	-7.699
536.71 KHz	27.94	0.1	0.16	10	38.203	46	-7.797
537.63 KHz	27.53	0.1	0.161	10	37.791	46	-8.209
654.43 KHz	25.97	0.07	0.166	10	36.208	46	-9.792
655.52 KHz	26	0.07	0.166	10	36.241	46	-9.759

**Line 2 Phase AVG Detector**

Frequency	Measured Data (dBuV)	LISN Corr Fact (dB)	Cable Loss (dB)	Attenuator (dB)	L2 Final Data (dBuV)	CISPR/FCC Limit (dBuV)	AVG Margin (dB)
151.55 KHz	3.28	0.28	0.041	10	13.602	55.956	-42.354
152.66 KHz	4.53	0.27	0.04	10	14.844	55.924	-41.08
189.43 KHz	5.49	0.2	0.007	10	15.694	54.873	-39.18
534.18 KHz	23.92	0.1	0.163	10	34.179	46	-11.821
536.96 KHz	22.86	0.1	0.158	10	33.118	46	-12.882
537.11 KHz	22.79	0.1	0.157	10	33.047	46	-12.953

**Line 1 Neutral QP Detector**

Frequency	Measured Data (dBuV)	LISN Corr Fact (dB)	Cable Loss (dB)	Attenuator (dB)	L1 Final Data (dBuV)	CISPR/FCC Limit (dBuV)	QP Margin (dB)
182.12 KHz	31.76	0.2	0.005	10	41.965	65.082	-23.117
536.26 KHz	34.86	0.1	0.158	10	45.118	56	-10.882
536.71 KHz	34.84	0.1	0.16	10	45.1	56	-10.9
537.63 KHz	34.79	0.1	0.161	10	45.051	56	-10.949
654.43 KHz	33.04	0.073	0.166	10	43.278	56	-12.722
655.52 KHz	32.96	0.072	0.166	10	43.198	56	-12.802

**Line 2 Phase QP Detector**

Frequency	Measured Data (dBuV)	LISN Corr Fact (dB)	Cable Loss (dB)	Attenuator (dB)	L2 Final Data (dBuV)	CISPR/FCC Limit (dBuV)	QP Margin (dB)
151.55 KHz	28.2	0.28	0.041	10	38.525	65.956	-27.431
152.66 KHz	28.11	0.27	0.04	10	38.424	65.924	-27.5
189.43 KHz	23.45	0.2	0.007	10	33.657	64.873	-31.216
534.18 KHz	35.25	0.1	0.163	10	45.513	56	-10.487
536.96 KHz	34.56	0.1	0.158	10	44.818	56	-11.182
537.11 KHz	34.39	0.1	0.157	10	44.647	56	-11.353



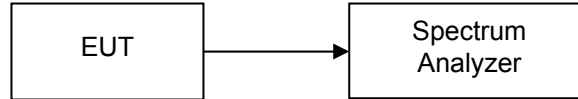
**Name of Test:** Receiver Spurious Emissions  
**Specification:** RSS-GEN 6(b)  
**Test Equipment Utilized:** i00331

**Engineer:** G. Corbin  
**Test Date:** 12/7/2010

**Test Procedure**

The EUT was connected directly to a spectrum analyzer. The receiver spurious emissions were measured from 30 MHz to greater than 3 times the highest tunable frequency.

**Test Setup**



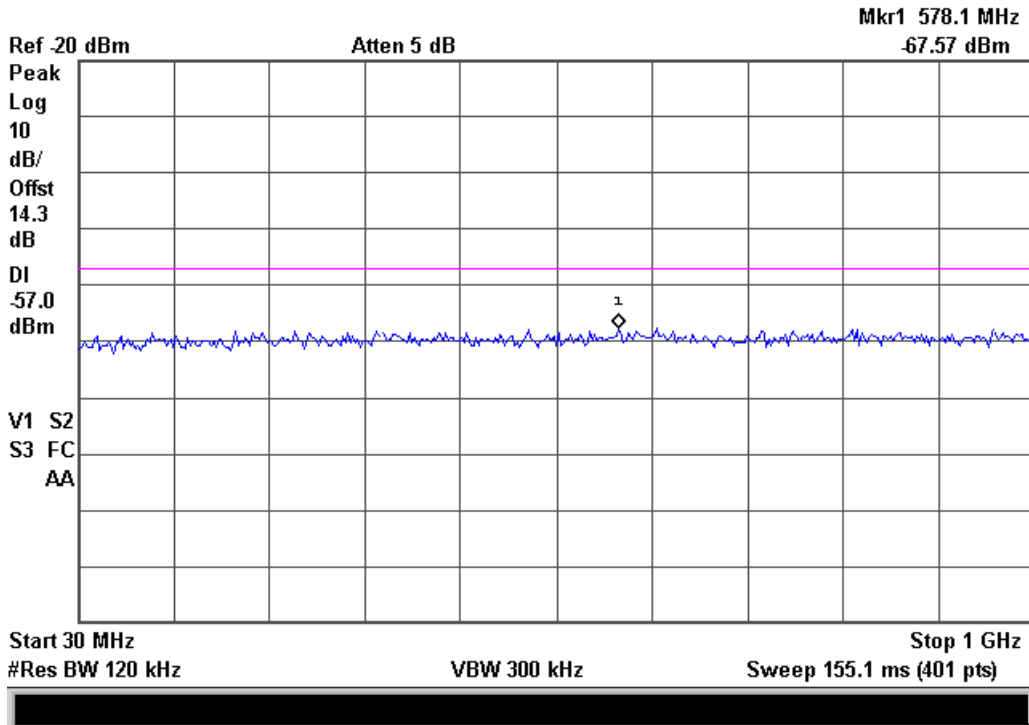
**Receiver Spurious Emissions Summary**

Frequency Range MHz	Recorded Measurement	Specification Limit	Result
30 - 1000	-67.5 dBm	2 nW (-57 dBm)	Pass
1000 - 7500	-57.7 dBm	5 nW (-53 dBm)	Pass



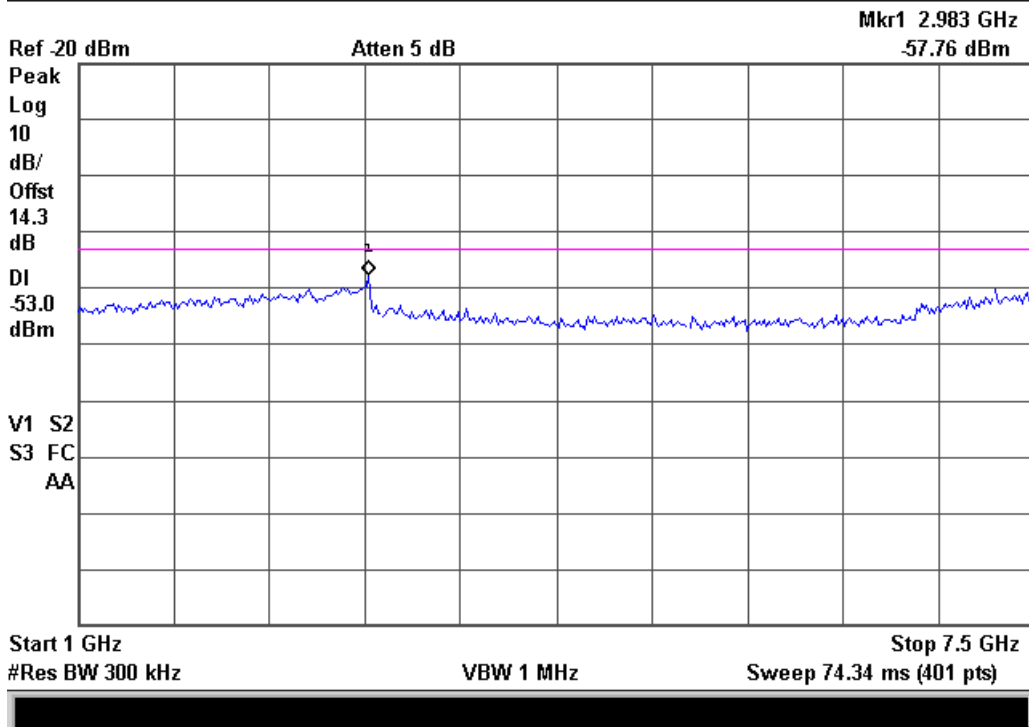
### Receiver Spurious Emissions 30 MHz – 1 GHz

Agilent 15:19:49 Dec 7, 2010 R L



### Receiver Spurious Emissions 1 GHz – 7.5 GHz

Agilent 15:32:37 Dec 7, 2010 R T





### Test Equipment Utilized

Description	MFG	Model Number	CT Asset Number	Last Cal Date	Cal Due Date
Preamplifier	HP	8449A	i00028	9/21/2010	9/21/2011
Horn Antenna	EMCO	3115	i00103	11/5/2010	11/5/2012
High Pass filter	Trilithic	4HX3400-3-XX	i00177	Verify	When used
Bilog Antenna	Schaffner	CBL6111C	i00267	11/21/2009	11/21/2011
LISN	FCC	FCC-LISN-50-50-2-01	i00270	9/30/2010	9/30/2012
Humidity / Temp Meter	Newport	IBTHX-W-5	i00282	11/11/2010	11/11/2011
Spectrum Analyzer	Agilent	E4407B	i00331	12/20/2010	12/20/2011
Humidity / Temp Meter	Control Co.	4189CC	i00355	3/27/2009	3/27/2011
AC Power Source	Behlman	BL 6000	i00362	Verify	When used
Spectrum Analyzer	Agilent	E7405A	i00379	11/22/2010	11/22/2011
Band Reject Filter	Wainwright	WRCTF2402/2480	i00385	Verify	When used

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

END OF TEST REPORT