Summit Semiconductor

Model No: 444-2196H (Silverton)

EMC Test Report

Report No. FOCU0094.3

Report Prepared By

www.nwemc.com
1-888-EMI-CERT

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Last Date of Test: October 04, 2010
Summit Semiconductor
Model: 444-2196H (Silverton)

Emissions			
Test Description	**Specification**	**Test Method**	**Pass/Fail**
Emission Bandwidth	FCC 15.407:2010	ANSI C63.10:2009	**Pass**
Peak Power Spectral Density	FCC 15.407:2010	ANSI C63.10:2009	**Pass**
Peak Excursion of the Modulation Envelope	FCC 15.407:2010	ANSI C63.10:2009	**Pass**
Peak Transmit Power	FCC 15.407:2010	ANSI C63.10:2009	**Pass**
Frequency Stability	FCC 15.407:2010	ANSI C63.10:2009	**Pass**
Spurious Radiated Emissions	FCC 15.209:2010	ANSI C63.10:2009	**Pass**
AC Powerline Conducted Emissions	FCC 15.207:2010	ANSI C63.10:2009	**Pass**
Burst Duration	FCC 15.407:2010	ANSI C63.10:2009	**Pass**

Modifications made to the product
See the Modifications section of this report

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
22975 NW Evergreen Parkway, Suite 400
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834D-1).

Approved By:

Don Facteau, IS Manager

NVLAP Lab Code: 200630-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

Accreditations and Authorizations

FCC

Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.

NVLAP

Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.

NVLAP LAB CODE 200629-0
NVLAP LAB CODE 200630-0
NVLAP LAB CODE 200676-0
NVLAP LAB CODE 200761-0
NVLAP LAB CODE 200881-0

Industry Canada

Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS-Gen, Issue 2 and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2, Brooklyn Park: 2834E-1)*

CAB

Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.

NEMKO

Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).

Accreditations and Authorizations

Australia/New Zealand

The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).

VCCI

Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. *(Registration Numbers. - Hillsboro: C-1071, R-1025, G-84, C-2687, T-1658, and R-2318, Irvine: R-1943, G-85, C-2766, and T-1659, Sultan: R-871, G-83, C-1784, and T-1511, Brooklyn Park: R-3125, G-86, G-141, C-3464, and T-1634).*

BSMI

Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement (US0017). License No.SL2-IN-E-1017.

GOST

Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification

KCC

Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157)*

VIETNAM

Vietnam MIC has approved Northwest EMC as an accredited test lab. Per Decision No. 194/QD-QLCL (dated December 15, 2009), Northwest EMC test reports can be used for Vietnam approval submissions.

SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/

Northwest EMC Locations

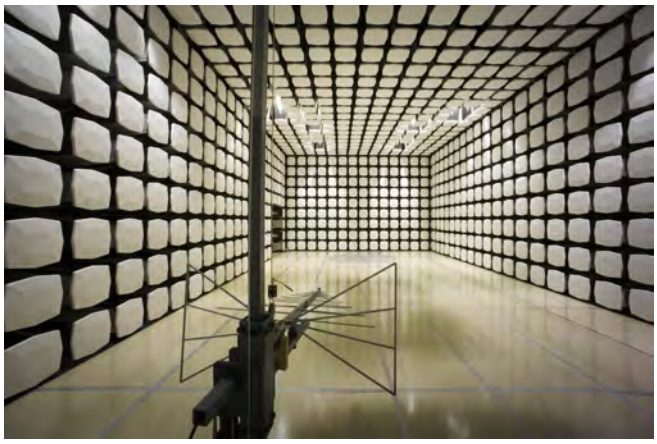
Oregon
Labs EV01-EV12
22975 NW Evergreen Pkwy
Suite 400
Hillsboro, OR 97124
(503) 844-4066

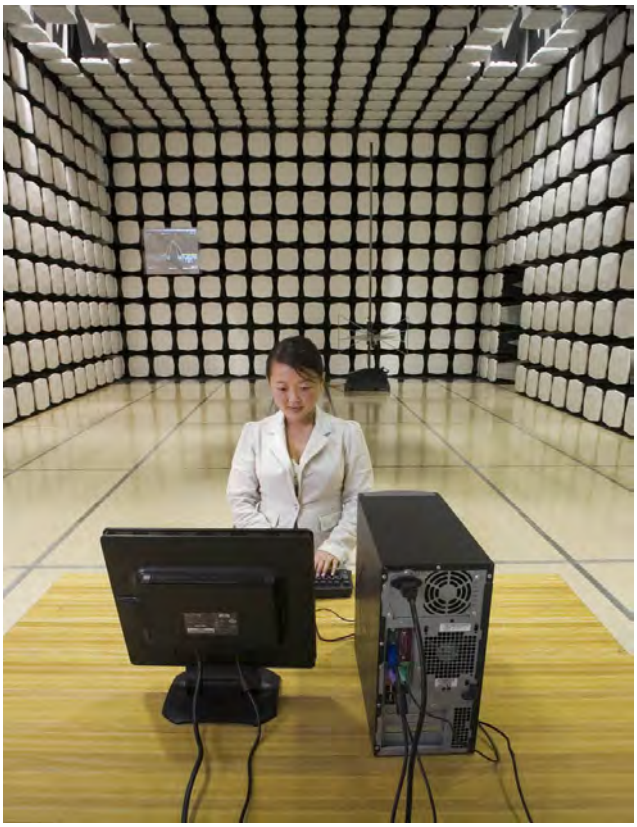
California
Labs OC01-OC13
41 Tesla
Irvine, CA 92618
(949) 861-8918

Minnesota
Labs MN01-MN08
9349 W Broadway Ave.
Brooklyn Park,
MN 55445
(763) 425-2281

Washington
Labs SU01-SU07
14128 339th Ave. SE
Sultan, WA 98294
(360) 793-8675

New York
Labs WA01-WA04
4939 Jordan Rd.
Elbridge, NY 13060
(315) 685-0796





Party Requesting the Test

Company Name:	Summit Semiconductor
Address:	22867 NW Bennett St, Suite 200
City, State, Zip:	Hillsboro, OR 97124
Test Requested By:	Ken Boehlke
Model:	444-2196H (Silverton) Version 1.02
First Date of Test:	September 23, 2010
Last Date of Test:	October 4, 2010
Receipt Date of Samples:	September 23, 2010
Equipment Design Stage:	Preproduction
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
Wireless Audio Slave Board - Radiated

Testing Objective:
These tests were selected to satisfy the EMC requirements requested by the client.

CONFIGURATION 1 FOCU0094

Software/Firmware Running during test	
Description	**Version**
Hood BIST 13	13

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Wireless Audio Slave Board - Direct Connect	Summit Semiconductor	444-2196H (Silverton)	2E

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DC Power / RS-232 Serial Interface	Summit Semiconductor	Hermiston	none
AC Adapter	PHIHONG	PSA21R-033	none

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote PC	Dell	Latitude D820	2006-00516

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Multi-pin flex cable	No	0.3m	No	Wireless Audio Slave Board - Direct Connect	DC Power / RS-232 Serial Interface
Serial	Yes	2.0m	No	DC Power / RS-232 Serial Interface	Remote PC
DC Lead	PA	1.8m	PA	AC Adapter	DC Power / RS-232 Serial Interface
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 FOCU0094

Software/Firmware Running during test	
Description	**Version**
Hood BIST 13	13

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Wireless Audio Slave Board - Radiated	Summit Semiconductor	444-2196H (Silverton)	2C

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DC Power / RS-232 Serial Interface	Summit Semiconductor	Hermiston	none
DC Block	MCL	BLK-89	15542
DC Power Supply	Topward	6303D	743645

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote PC	IBM	Thnkpad A21m	IS108

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Multi-pin flex cable	No	0.3m	No	Wireless Audio Slave Board - Direct Connect	DC Power / RS-232 Serial Interface
Serial	Yes	2.0m	No	DC Power / RS-232 Serial Interface	Remote PC
DC Lead	PA	1.8m	PA	AC Adapter	DC Power / RS-232 Serial Interface
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 3 FOCU0094

Software/Firmware Running during test	
Description	**Version**
Hood BIST 13	13

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Wireless Audio Slave Board - Radiated	Summit Semiconductor	444-2196H (Silverton)	2E

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DC Power / RS-232 Serial Interface	Summit Semiconductor	Hermiston	none

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote PC	Dell	Latitude D820	2006-00516

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Multi-pin flex cable	No	0.3m	No	Wireless Audio Slave Board - Direct Connect	DC Power / RS-232 Serial Interface
AC Power	No	1.8m	No	AC Mains	DC Power Supply
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	9/23/2010	Burst Duration	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	9/23/2010	Emission Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	9/27/2010	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	9/28/2010	Peak Transmit Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	9/28/2010	Peak Excursion of the Modulation Envelope	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	9/28/2010	Peak Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	10/1/2010	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
8	10/4/2010	Frequency Stability	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	8/6/2010	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The transmit frequency was set to the lowest, a medium, and the highest channels in 5470-5725 MHz band, lowest and highest for 5150-5250 MHZ band and 5250-5350 MHz band. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

Due to the short pulse duration of the transmitter, RF gating was used on the analyzer to ensure the sweep was only operating during the highest portion of the emission.

The spectrum analyzer settings were as follows:

- Span = approximately 1.5 to 2 times the emission bandwidth, centered on the transmit channel.
- RBW = Approx. 1% of the emission bandwidth (B). This was an iterative process where an exact match of 1% may not be achieved. The largest value of RBW that came close to 1% of the emission bandwidth was used.
- A peak detector was used.

The marker-delta function was then used to measure 26 dB emission bandwidth

NORTHWEST EMC

EMISSION BANDWIDTH

XMit 2010.07.29

EUT:	Silverton			Work Order:	FOCU0094
Serial Number:	2E			Date:	09/23/10
Customer:	Summit Semiconductor			Temperature:	22°C
Attendees:	None			Humidity:	45%
Project:	None			Barometric Pres.:	30.10 in
Tested by:	Rod Peloquin	Power:	3.3 VDC	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.407:2010	ANSI C63.10:2009

COMMENTS

2.06 dB loss added for adapter cable and DC block.

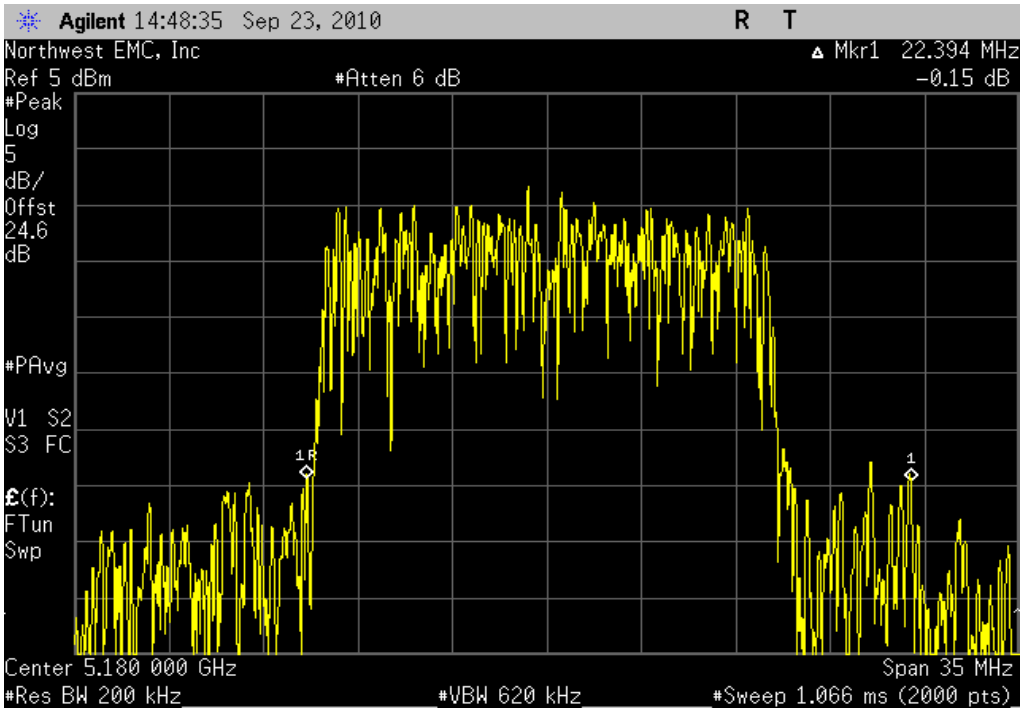
DEVIATIONS FROM TEST STANDARD

None

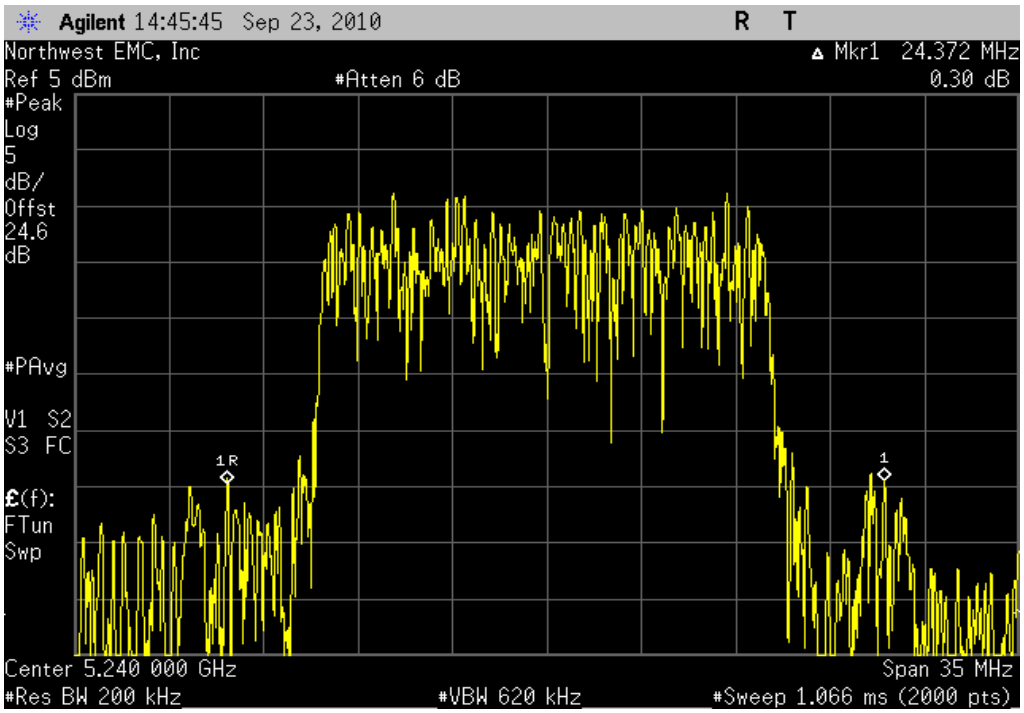
Configuration #	2	Signature

		Value	Limit	Results
6 Mbps				
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	22.394 MHz	N/A	N/A
	Channel 48, High Channel	24.372 MHz	N/A	N/A
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	18.559 MHz	N/A	N/A
	Channel 64, High Channel	18.594 MHz	N/A	N/A
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	18.612 MHz	N/A	N/A
	Channel 116, Mid Channel	18.017 MHz	N/A	N/A
	Channel 140, High Channel	18.332 MHz	N/A	N/A

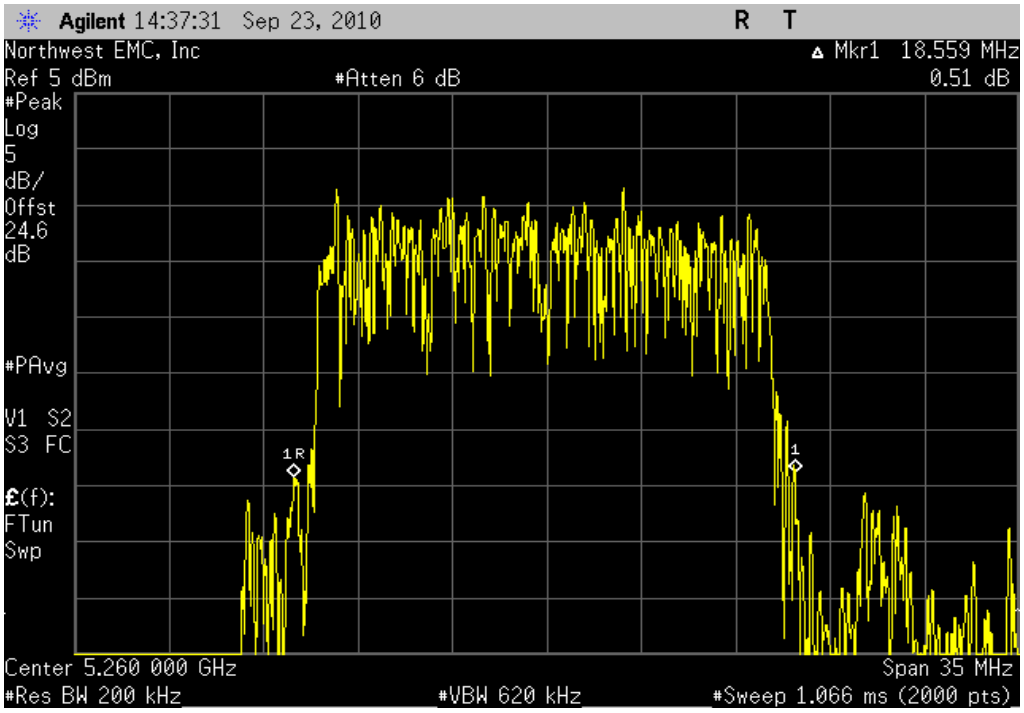
6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel					
Result:	N/A	**Value:**	22.394 MHz	**Limit:**	N/A



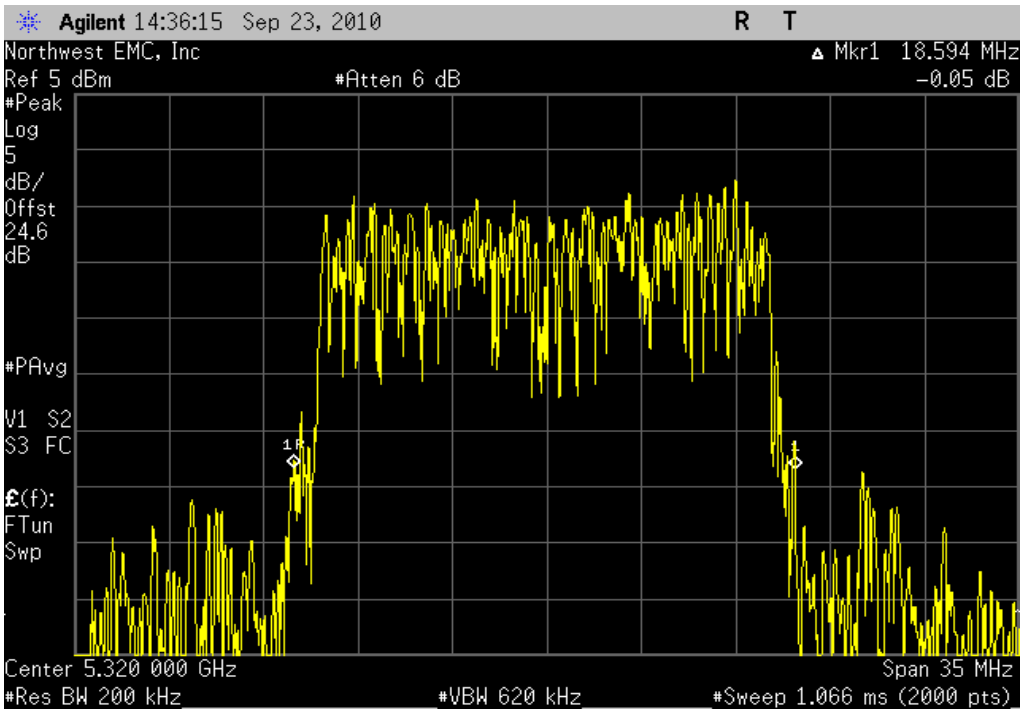
6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel					
Result:	N/A	**Value:**	24.372 MHz	**Limit:**	N/A



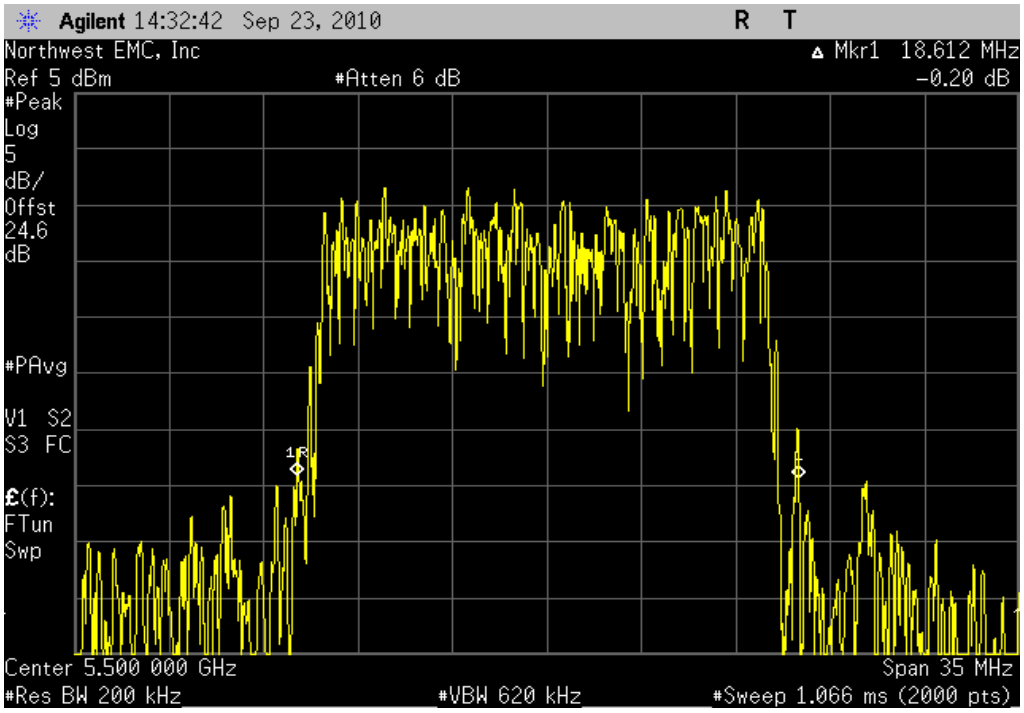
6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel					
Result:	N/A	**Value:**	18.559 MHz	**Limit:**	N/A



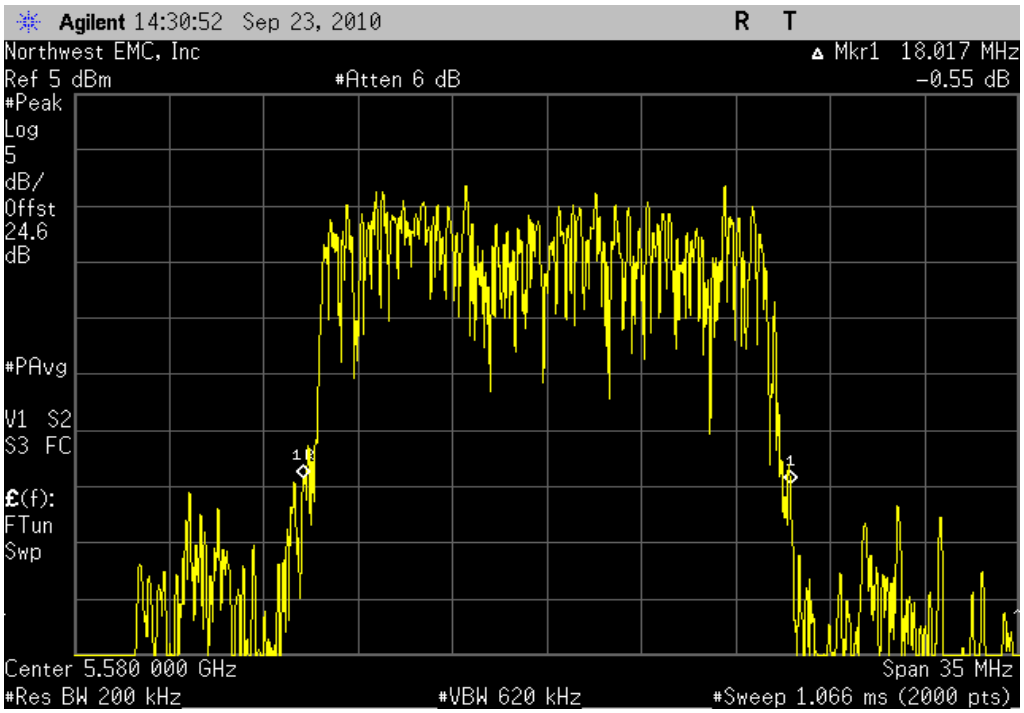
6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel					
Result:	N/A	**Value:**	18.594 MHz	**Limit:**	N/A



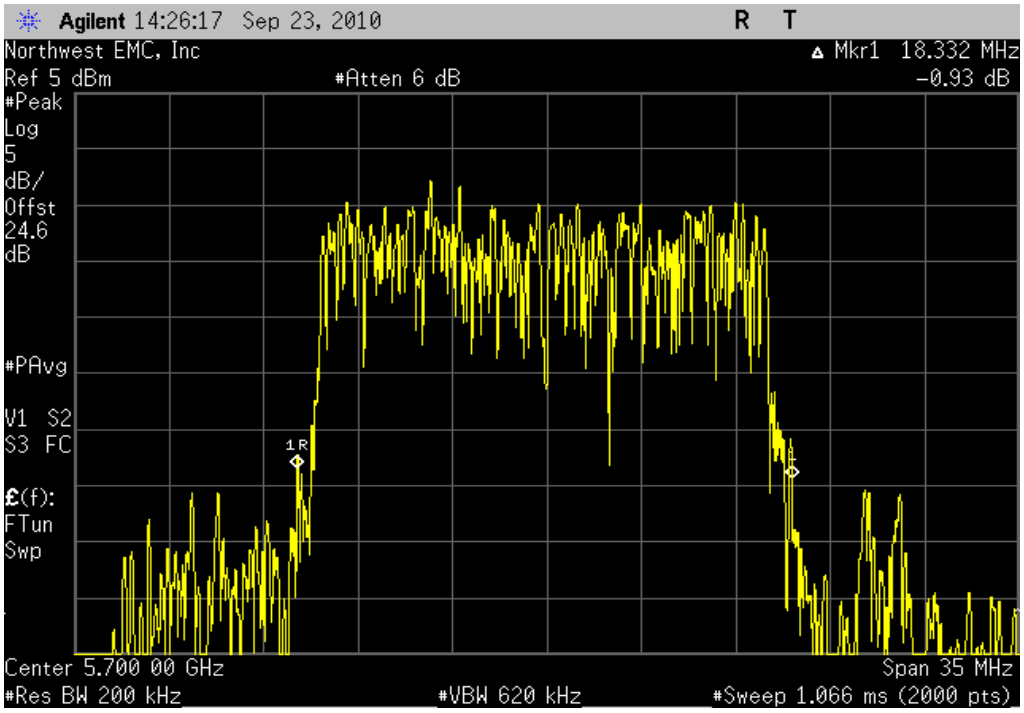
6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel					
Result:	N/A	**Value:**	18.612 MHz	**Limit:**	N/A



6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel					
Result:	N/A	**Value:**	18.017 MHz	**Limit:**	N/A



6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel					
Result:	N/A	**Value:**	18.332 MHz	**Limit:**	N/A



PEAK POWER SPECTRAL DENSITY

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	8/6/2010	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

ANSI C63.10 was followed. The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum. The lowest data rate was measured as it provided the highest output power. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input. The amplitude accuracy of the spectrum analyzer was further enhanced by calibrating the setup using the power meter and synthesized signal generator.

Prior to measuring peak power spectral density, the transmission pulse duration (T) were measured. The transmission pulse duration and the associated data are found elsewhere in this test report.

Method #2 was used because while the pulse duration was short, RF Gating was used on the analyzer to measure only during the transmission.

The spectrum analyzer settings were as follows:

- The span was set to encompass entire emission bandwidth (B), centered on the transmit channel.
- RBW = 1 MHz, VBW >= 3 MHz because the emission bandwidth (B) is greater than 1 MHz
- Sample detector mode because the bin width (span / number of spectral points) < 0.5 RBW.
- Trace average 100 traces in power averaging mode (not video averaging).

The peak power spectral density (PPSD) was determined to be the highest level found across the emission in any 1 MHz band after 100 sweeps of power averaging (not video averaging).

The following registers were set in the customer interface

ser wr 408840 0
ser wr 4080a0 0
ser wr 4080a4 48

NORTHWEST EMC

PEAK POWER SPECTRAL DENSITY

XMit 2010.07.29

EUT:	Silverton			Work Order:	FOCU0094
Serial Number:	2E			Date:	09/28/10
Customer:	Summit Semiconductor			Temperature:	22°C
Attendees:	Ponnappa Pasura			Humidity:	45%
Project:	None			Barometric Pres.:	30.10 in
Tested by:	Rod Peloquin	Power:	3.3 VDC	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.407:2010	ANSI C63.10:2009

COMMENTS

2.06 dB loss added for adapter cable and DC block. Transmitting with duty cycle noted elsewhere in report. Scrambler seed register set to 0. RF gating of analyzer sweep.

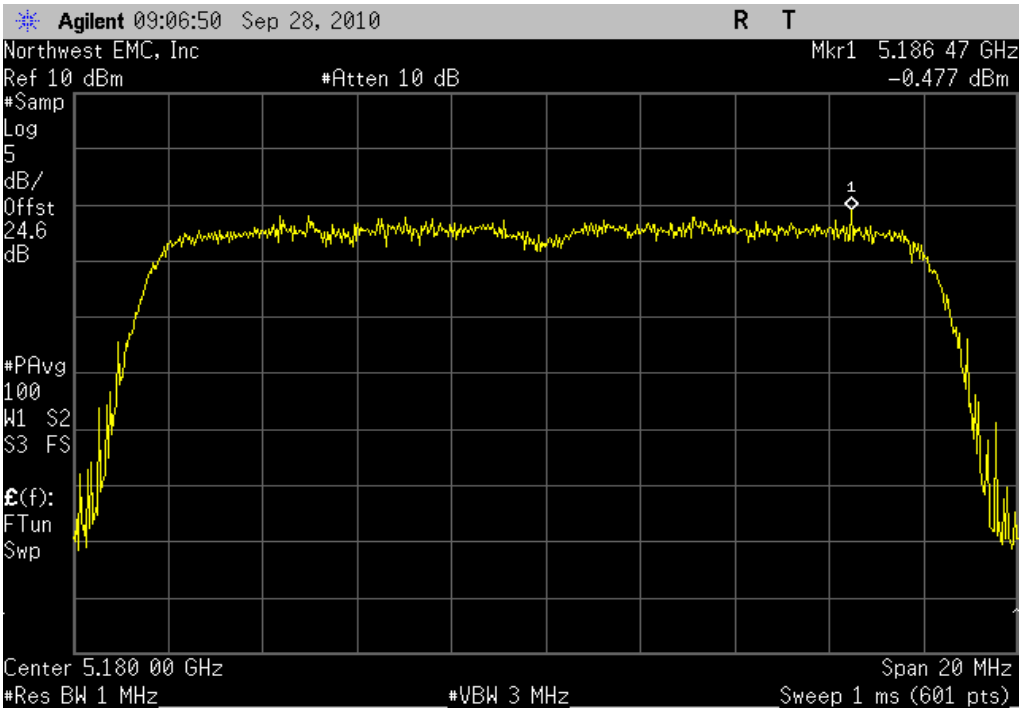
DEVIATIONS FROM TEST STANDARD

None

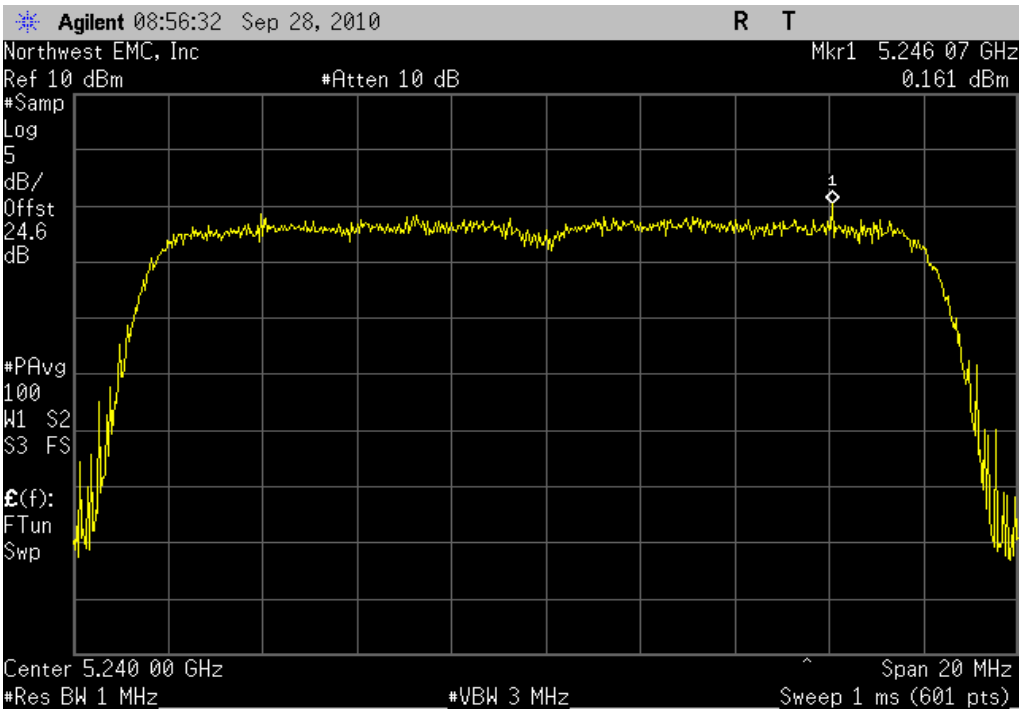
Configuration #	2	Signature

		Value	Limit	Results
6 Mbps				
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	-0.5 dBm	4 dBm	Pass
	Channel 48, High Channel	0.2 dBm	4 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	-0.2 dBm	11 dBm	Pass
	Channel 64, High Channel	0.5 dBm	11 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	0.0 dBm	11 dBm	Pass
	Channel 116, Mid Channel	0.0 dBm	11 dBm	Pass
	Channel 140, High Channel	-0.2 dBm	11 dBm	Pass

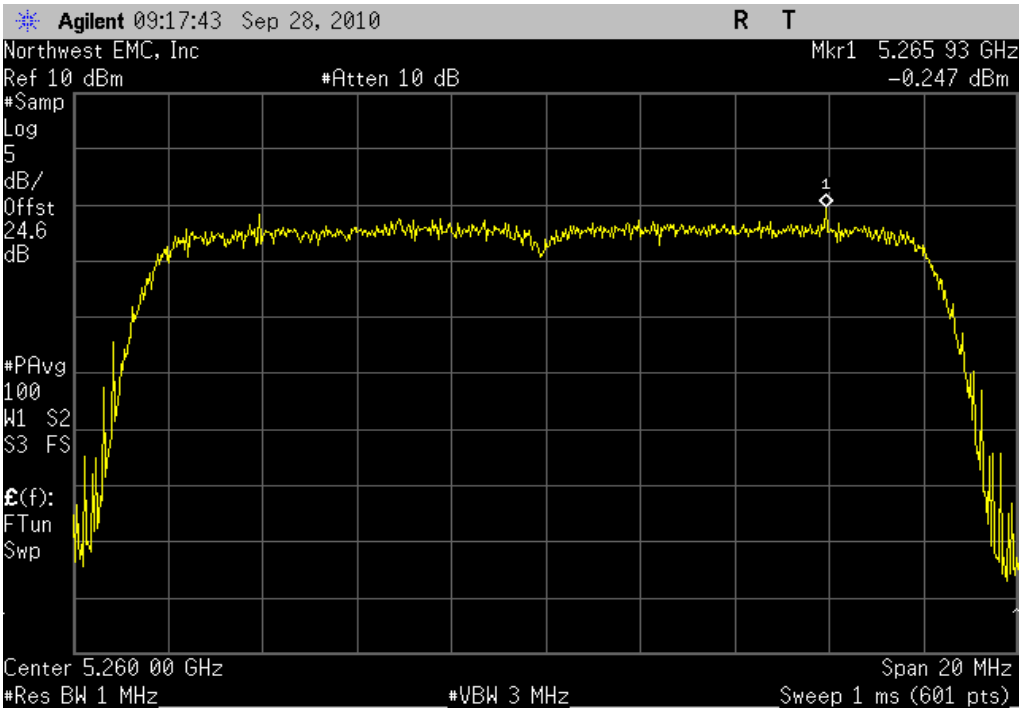
802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel					
Result:	Pass	**Value:**	-0.48 dBm	**Limit:**	4 dBm



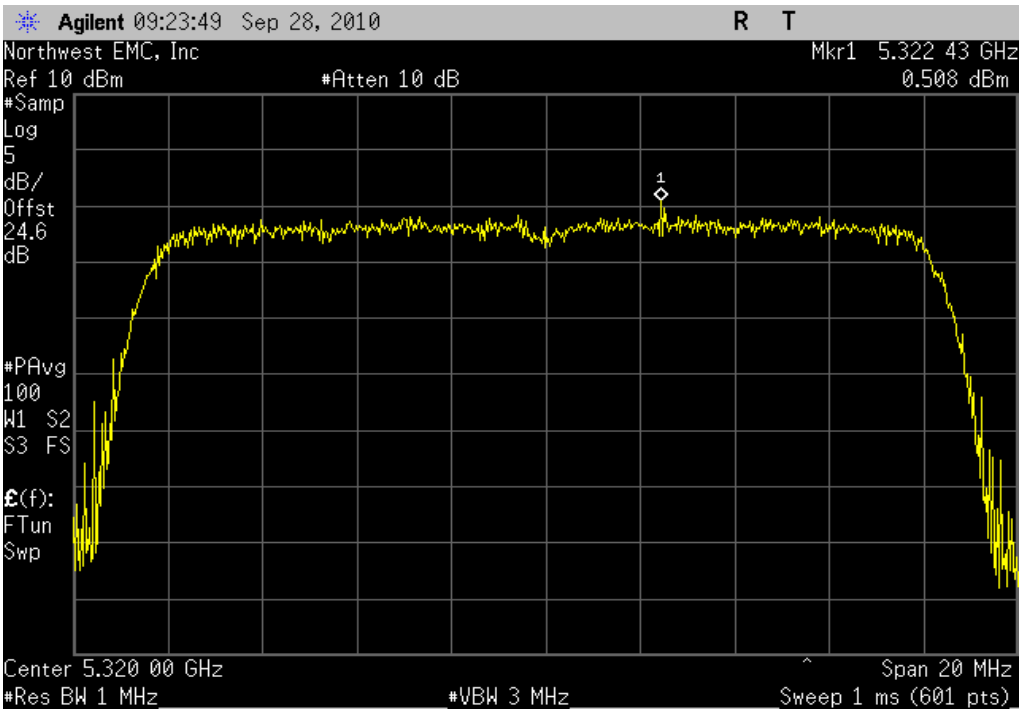
802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel					
Result:	Pass	**Value:**	0.16 dBm	**Limit:**	4 dBm



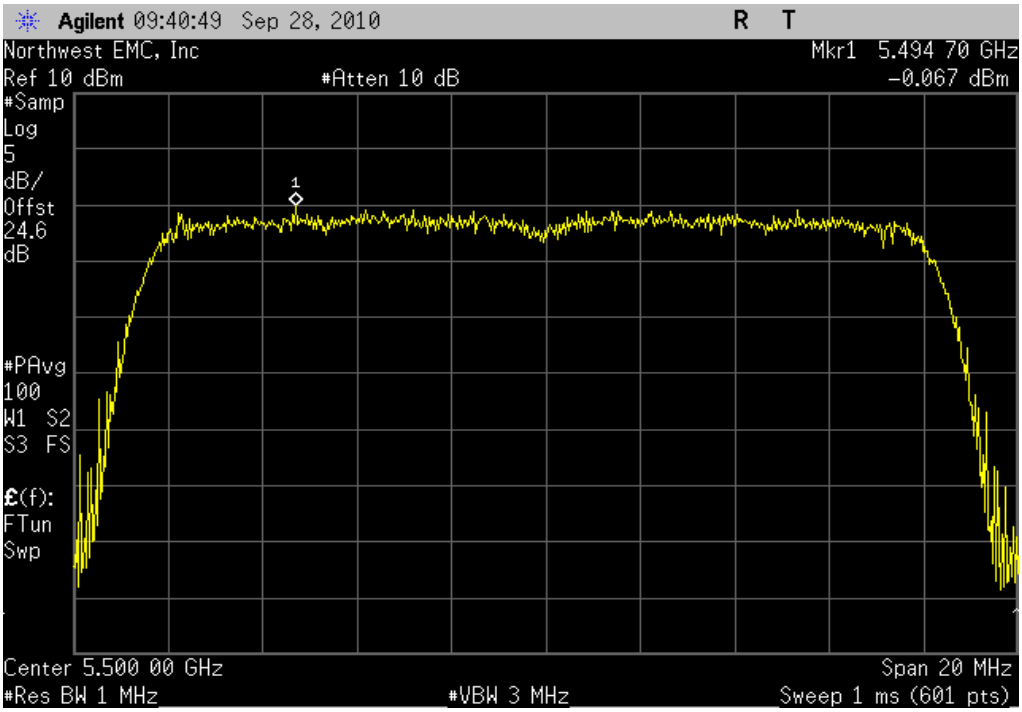
802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel					
Result:	Pass	**Value:**	-0.25 dBm	**Limit:**	11 dBm



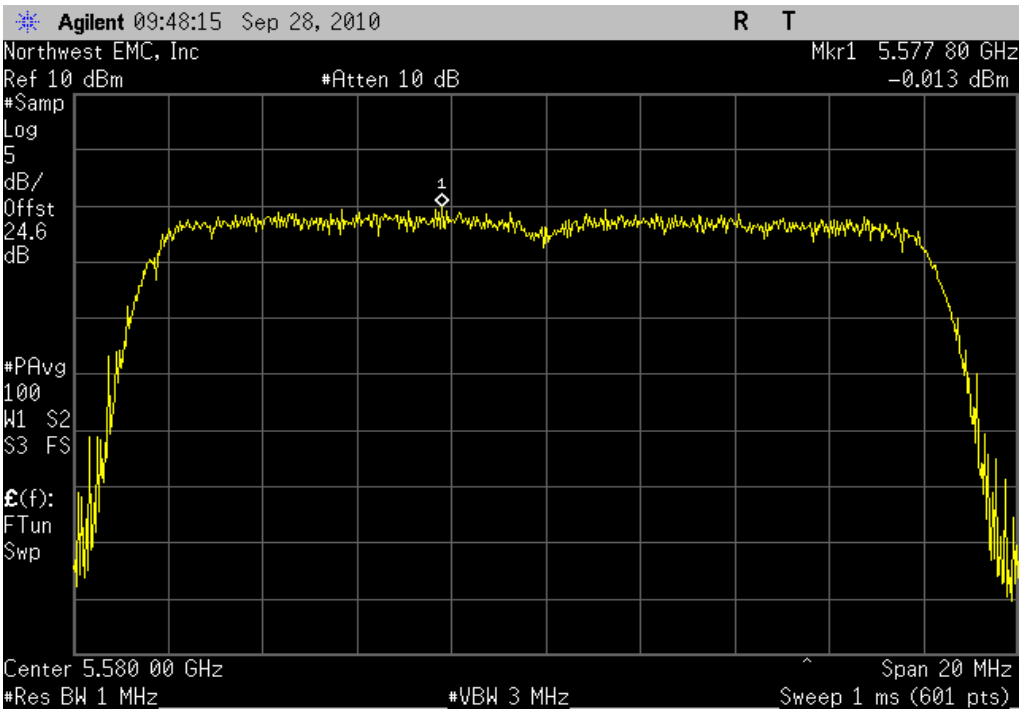
802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel					
Result:	Pass	**Value:**	0.51 dBm	**Limit:**	11 dBm



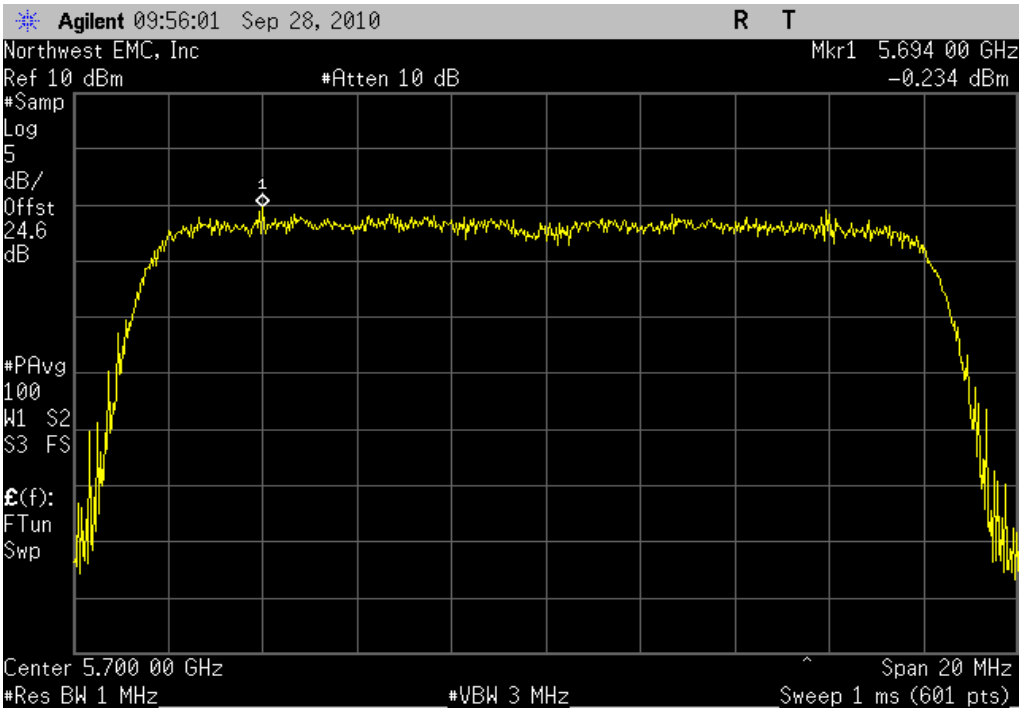
802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel					
Result:	Pass	**Value:**	-0.01 dBm	**Limit:**	11 dBm



802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel					
Result:	Pass	**Value:**	-0.01 dBm	**Limit:**	11 dBm



802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel					
Result:	Pass	**Value:**	-0.23 dBm	**Limit:**	11 dBm



PEAK EXCURSION OF THE MODULATION ENVELOPE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	8/6/2010	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum. The lowest, a medium, and the highest data rates were measured. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

The spectrum analyzer settings were as follows:

- Span set to encompass the entire emission bandwidth (B), centered on the transmit channel.
- Using the marker delta function, the largest difference between the following two traces was measured:
  - 1st Trace: RBW = 1 MHz, VBW >= 3 MHz with peak detector and max-hold settings.
  - 2nd Trace: Use same settings as were used for peak conducted transmit power. The sample detector was used as well as the VBW being matched to that used on the peak conducted transmit power.

NORTHWEST EMC

PEAK EXCURSION OF THE MODULATION ENVELOPE

XMit 2010.07.29

EUT:	Silverton			**Work Order:**	FOCU0094
Serial Number:	2E			**Date:**	09/28/10
Customer:	Summit Semiconductor			**Temperature:**	22°C
Attendees:	None			**Humidity:**	45%
Project:	None			**Barometric Pres.:**	30.10 in
Tested by:	Rod Peloquin	**Power:**	3.3 VDC	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.407:2010	ANSI C63.10:2009

COMMENTS

2.06 dB loss added for adapter cable and DC block. Transmitting with duty cycle noted elsewhere in report.

DEVIATIONS FROM TEST STANDARD

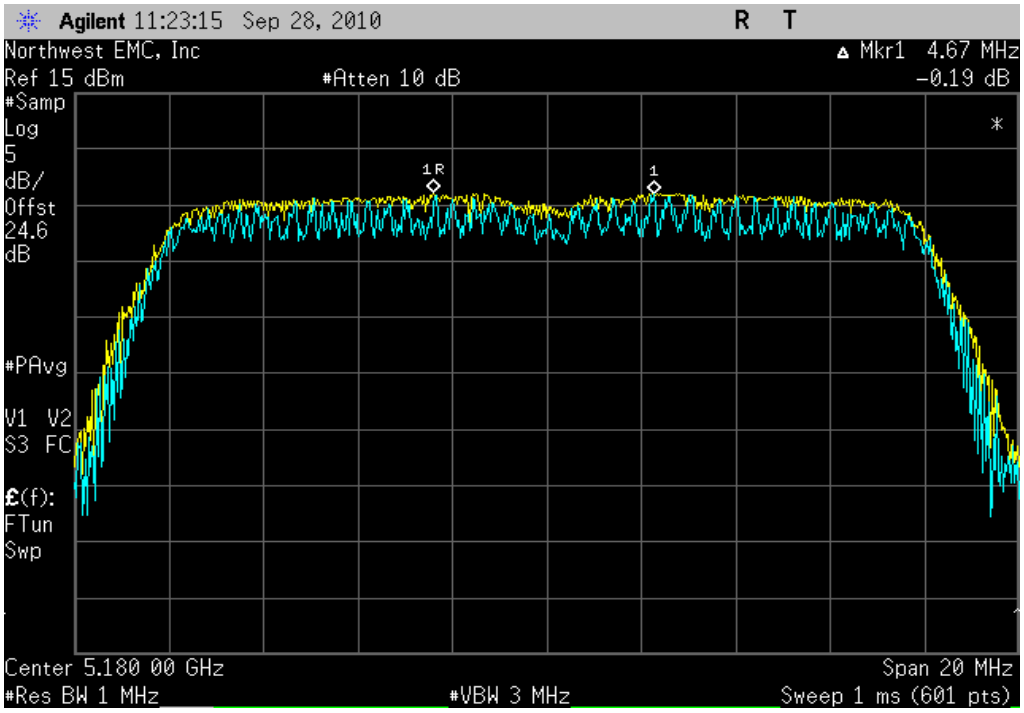
None

Configuration #	2	Signature

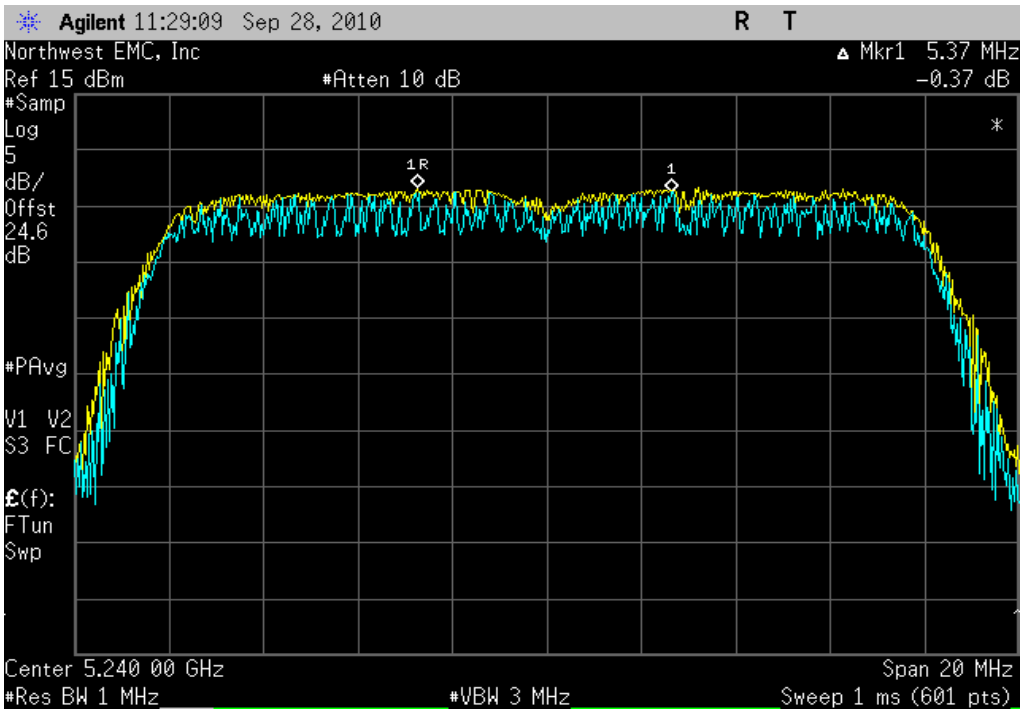
		Value	Limit	Results
6 Mbps				
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	0.2 dB	≤ 13 dBm	Pass
	Channel 48, High Channel	0.4 dB	≤ 13 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	0.9 dB	≤ 13 dBm	Pass
	Channel 64, High Channel	1.2 dB	≤ 13 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	0.6 dB	≤ 13 dBm	Pass
	Channel 116, Mid Channel	1.1 dB	≤ 13 dBm	Pass
	Channel 140, High Channel	0.8 dB	≤ 13 dBm	Pass

PEAK EXCURSION OF THE MODULATION ENVELOPE

6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel					
Result:	Pass	**Value:**	0.2 dB	**Limit:**	≤ 13 dBm

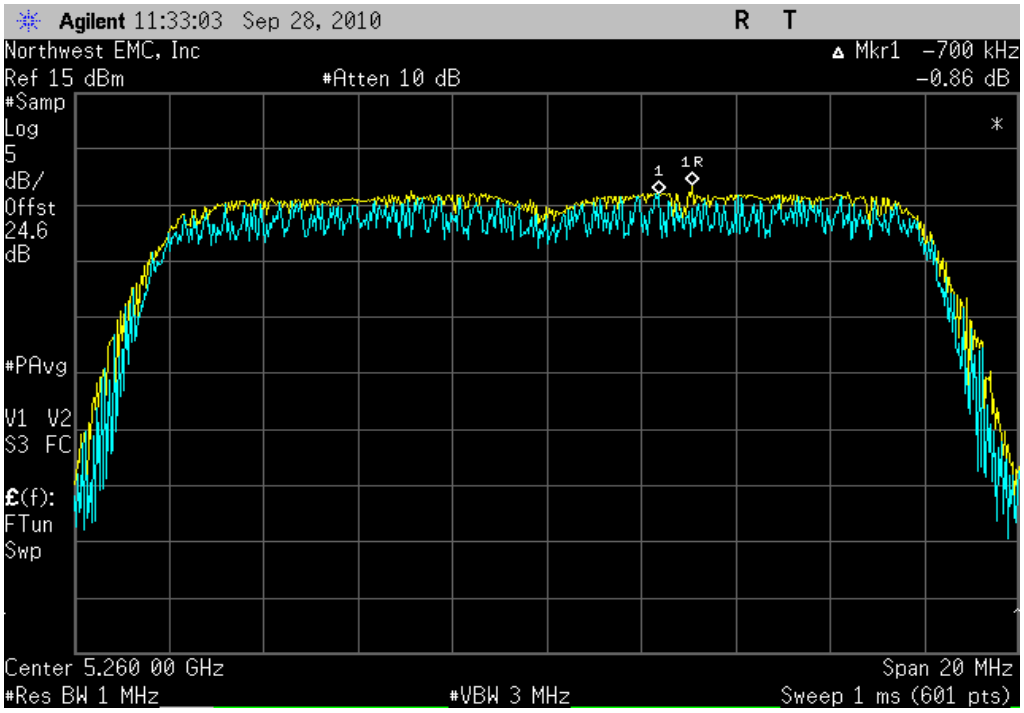


6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel					
Result:	Pass	**Value:**	0.4 dB	**Limit:**	≤ 13 dBm

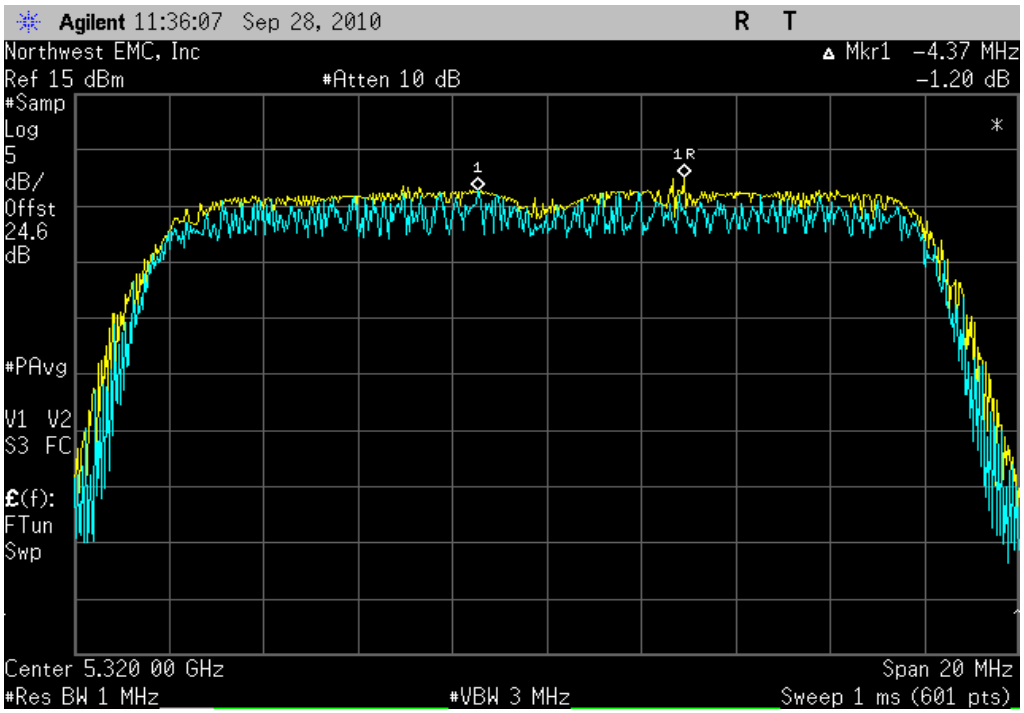


PEAK EXCURSION OF THE MODULATION ENVELOPE

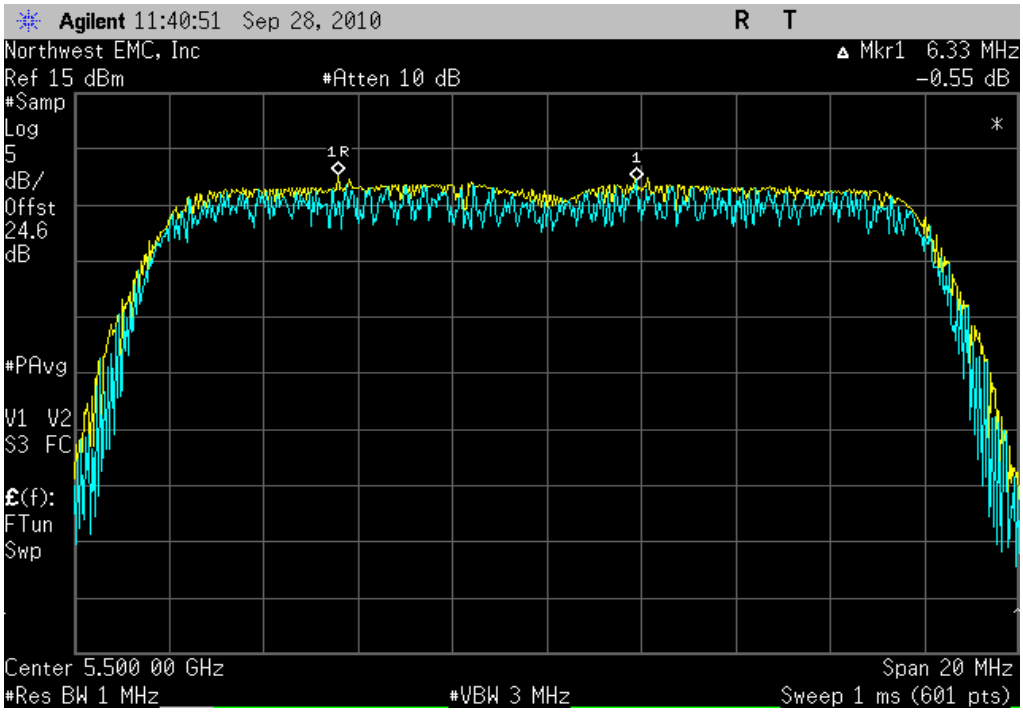
6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel					
Result:	Pass	**Value:**	0.9 dB	**Limit:**	≤ 13 dBm



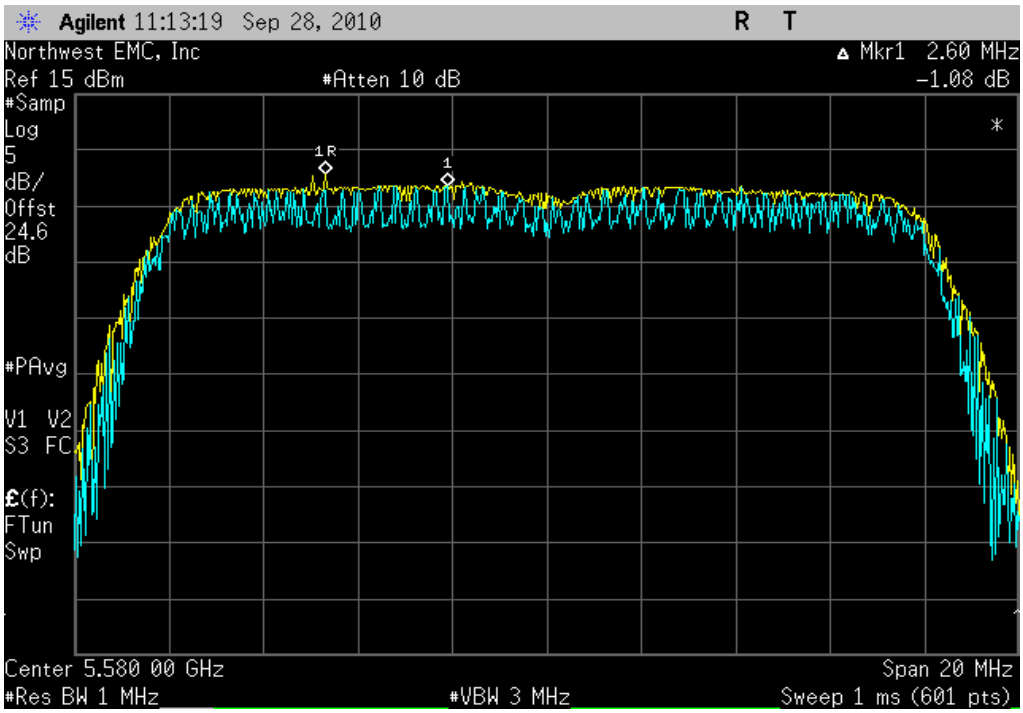
6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel					
Result:	Pass	**Value:**	1.2 dB	**Limit:**	≤ 13 dBm



6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel					
Result:	Pass	**Value:**	0.6 dB	**Limit:**	≤ 13 dBm

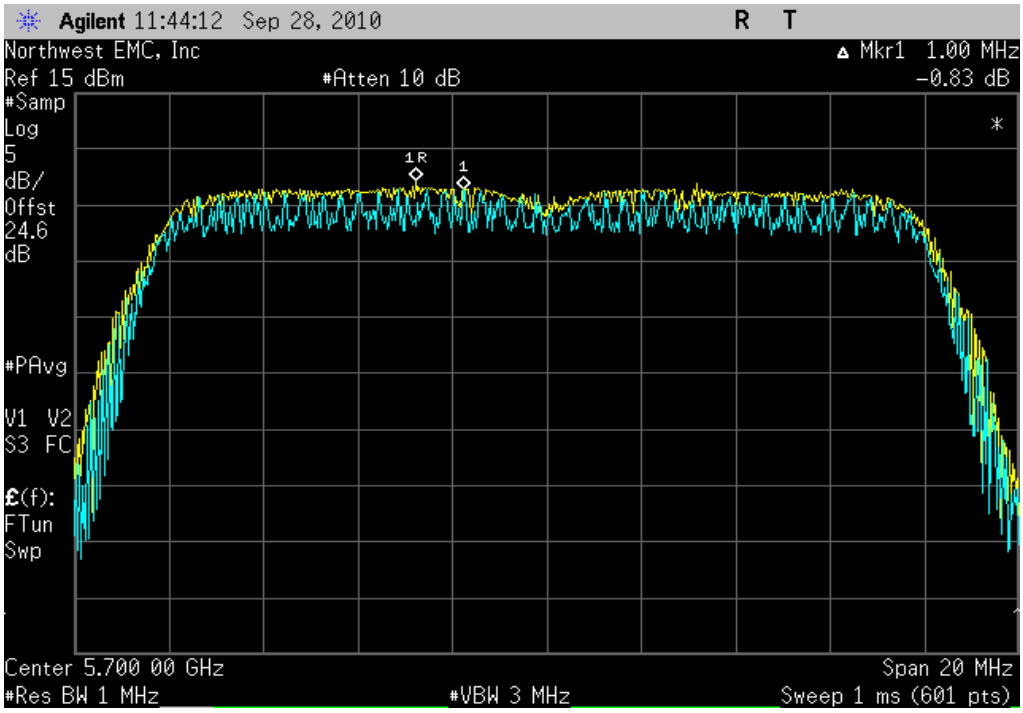


6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel					
Result:	Pass	**Value:**	1.1 dB	**Limit:**	≤ 13 dBm



PEAK EXCURSION OF THE MODULATION ENVELOPE

6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel					
Result:	Pass	**Value:**	0.8 dB	**Limit:**	≤ 13 dBm



PEAK TRANSMIT POWER

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	8/6/2010	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

ANSI C63.10 was followed. The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input. The amplitude accuracy of the spectrum analyzer was further enhanced by calibrating the setup using the power meter and synthesized signal generator.

Prior to measuring peak transmit power; the emission bandwidth (B) and the transmission pulse duration (T) were measured. Both are required to determine the method of measuring Peak Transmit Power. The method of measuring the emission bandwidth and the associated data are found elsewhere in this test report. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

The RF gating function was used on the spectrum analyzer and the gating setup was adjusted to ensure the sweep was only gated during the highest portion of the transmitter pulse duration.

Method #3 was used because the analyzer sweep time was greater than T for the operating mode which has the shortest transmission pulse duration and the Emission Bandwidth was greater than the largest RBW on the analyzer.

The spectrum analyzer settings were as follows:

- The span was set to encompass entire emission bandwidth (B), centered on the transmit channel.
- The RBW = 1 MHz, VBW > / = 1/T
- Sample detector mode because the bin width (span / number of spectral points) < 0.5 RBW.
- Power was integrated across “B”, by using the channel power function of the analyzer.

The power limits are based on the following formulas:

5.15 MHz – 5.25 MHz band - The lesser of 50 mW or 4 dBm + 10 log B, where B is the -26dB emission bandwidth in MHz.

5.25 MHz – 5.35 MHz band - The lesser of 250 mW or 11 dBm + 10 log B, where B is the -26dB emission bandwidth in MHz.

5.47 MHz – 5.725 MHz band - The lesser of 250 mW or 11 dBm + 10 log B, where B is the -26dB emission bandwidth in MHz.

In each case the allowable output power is lower if the -26dB emission bandwidth is less than 20 MHz.

NORTHWEST EMC

PEAK TRANSMIT POWER

XMit 2010.07.29

EUT:	Silverton			Work Order:	FOCU0094
Serial Number:	2E			Date:	09/28/10
Customer:	Summit Semiconductor			Temperature:	22°C
Attendees:	None			Humidity:	45%
Project:	None			Barometric Pres.:	30.10 in
Tested by:	Rod Peloquin	Power:	3.3 VDC	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.407:2010	ANSI C63.10:2009

COMMENTS

2.06 dB loss added for adapter cable and DC block. Transmitting with duty cycle noted elsewhere in report. Scrambler seed register set to 0. RF gating of analyzer sweep.

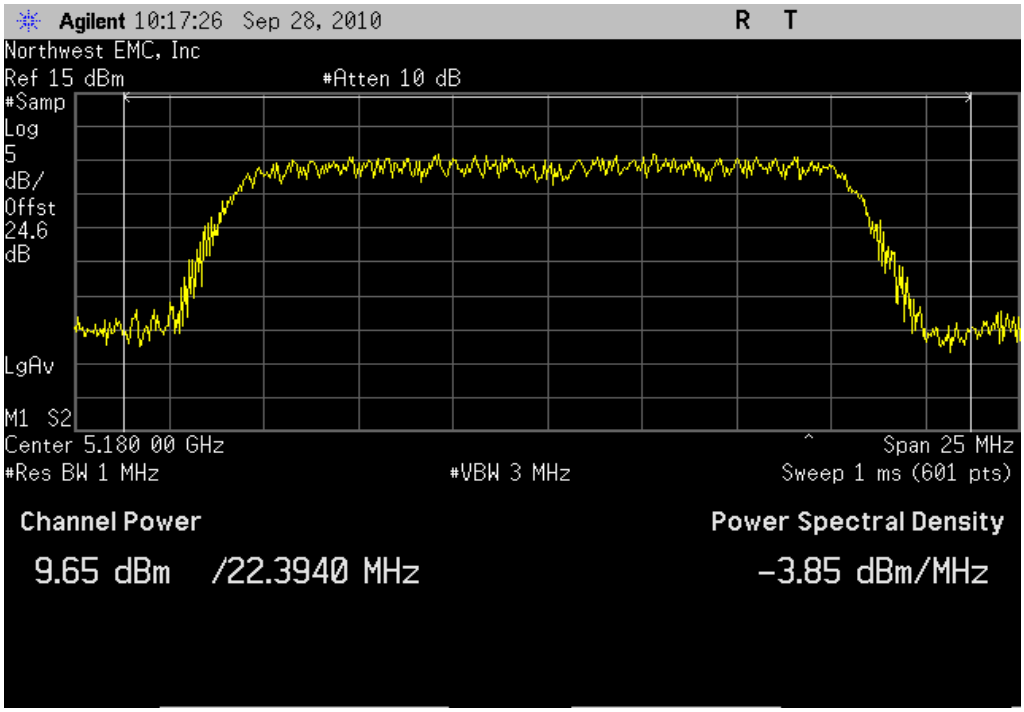
DEVIATIONS FROM TEST STANDARD

None

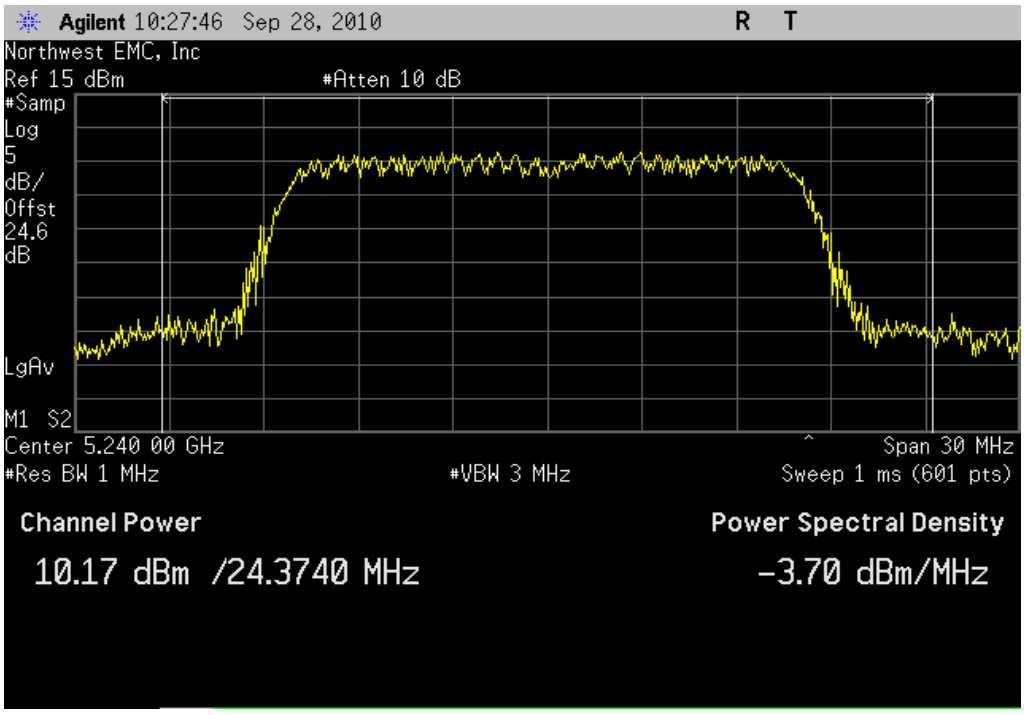
Configuration #	2	Signature

		Value	Limit	Results
6 Mbps				
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	9.7 dBm	17 dBm	Pass
	Channel 48, High Channel	10.2 dBm	17 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	9.8 dBm	23.7 dBm	Pass
	Channel 64, High Channel	10.2 dBm	23.7 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	10.6 dBm	23.7 dBm	Pass
	Channel 116, Mid Channel	10.6 dBm	23.6 dBm	Pass
	Channel 140, High Channel	10.3 dBm	23.6 dBm	Pass

6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel					
Result:	Pass	**Value:**	9.7 dBm	**Limit:**	17 dBm

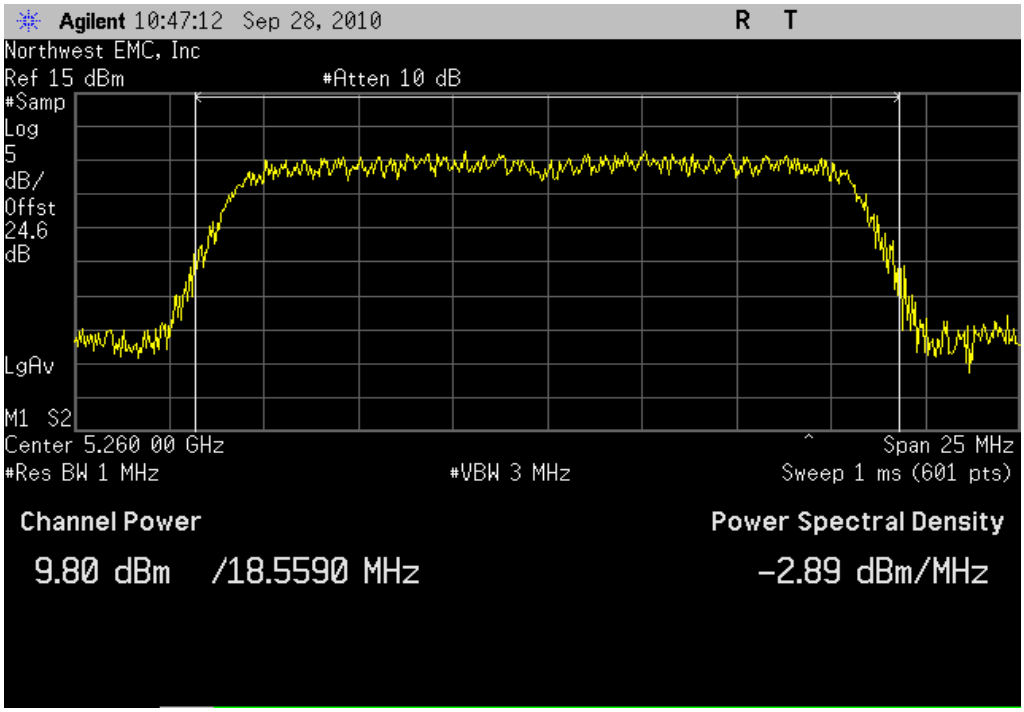


6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel					
Result:	Pass	**Value:**	10.2 dBm	**Limit:**	17 dBm

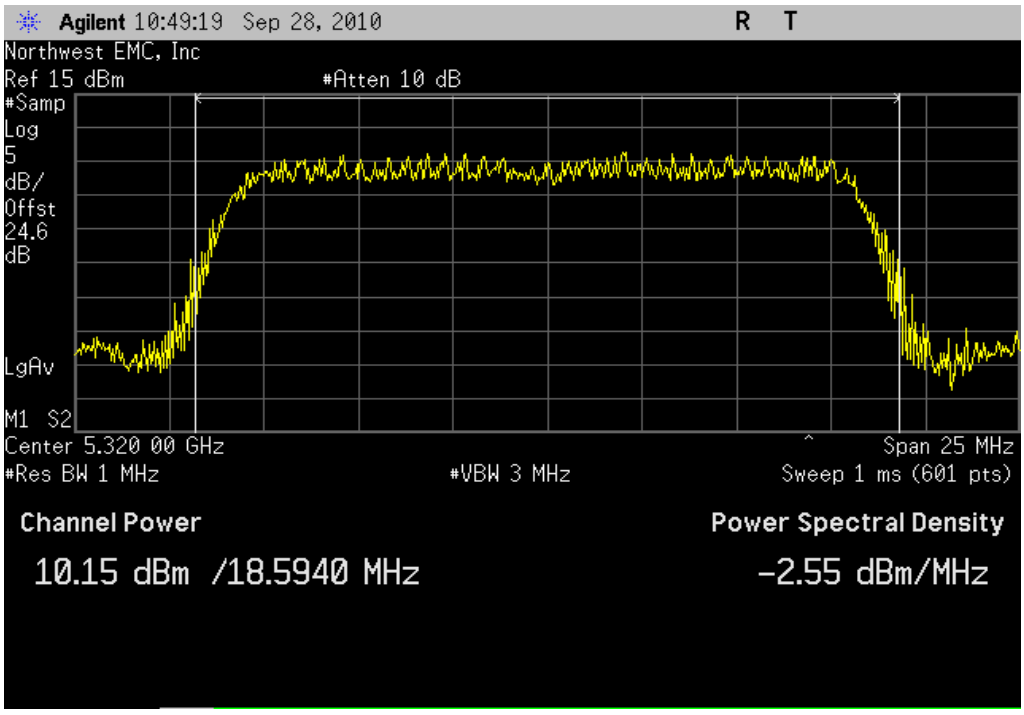


PEAK TRANSMIT POWER

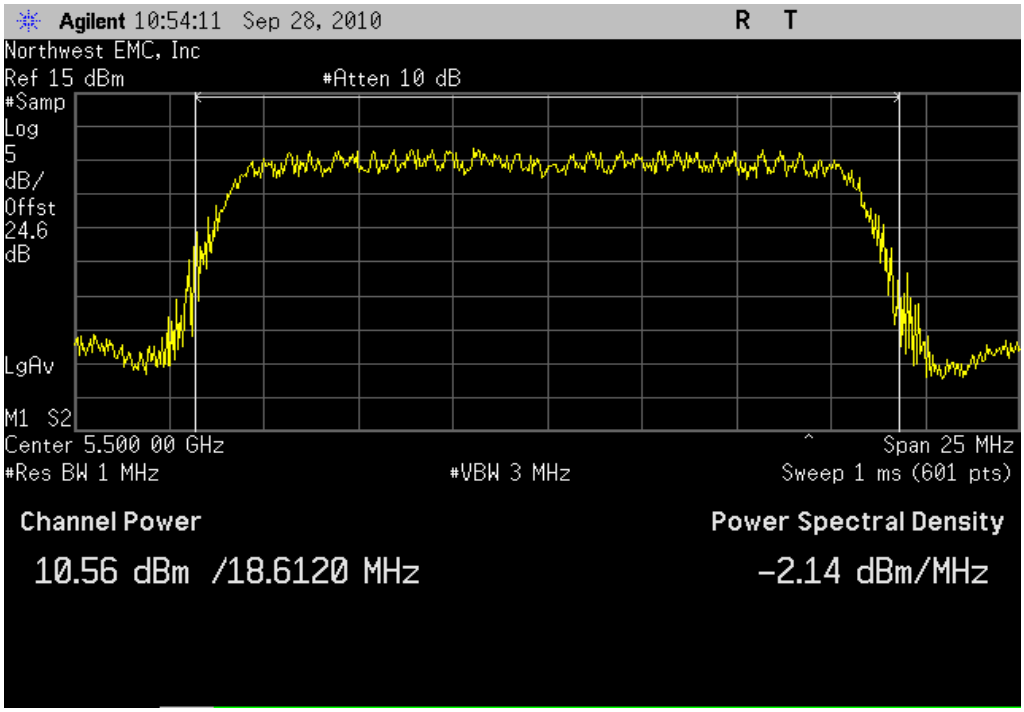
6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel					
Result:	Pass	**Value:**	9.8 dBm	**Limit:**	23.7 dBm



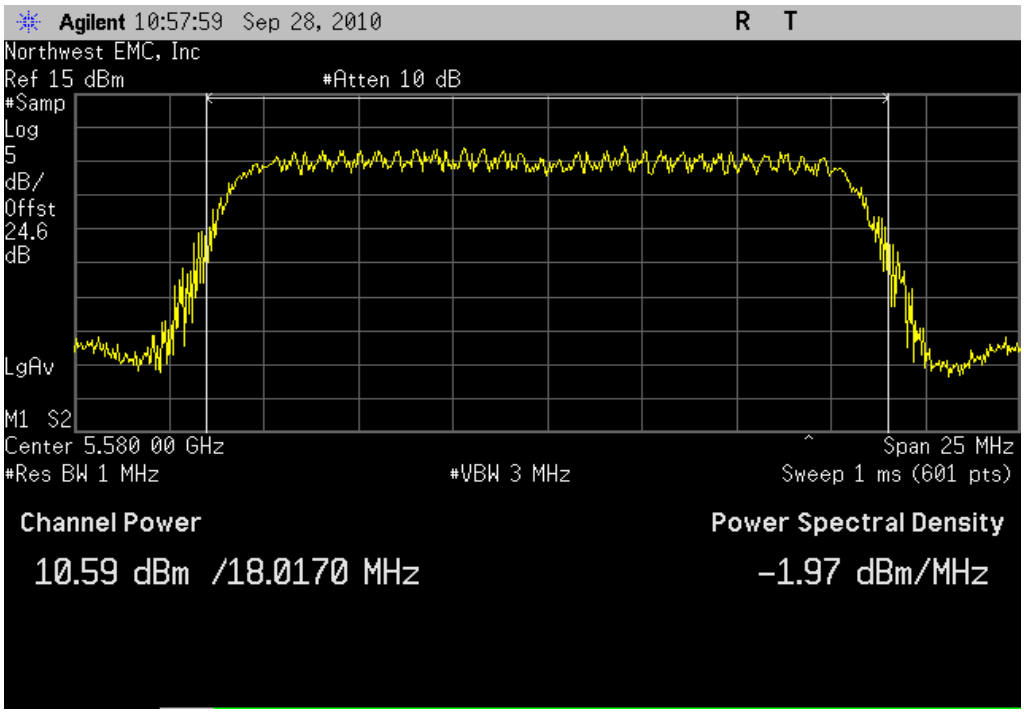
6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel					
Result:	Pass	**Value:**	10.2 dBm	**Limit:**	23.7 dBm



6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel					
Result:	Pass	**Value:**	10.6 dBm	**Limit:**	23.7 dBm

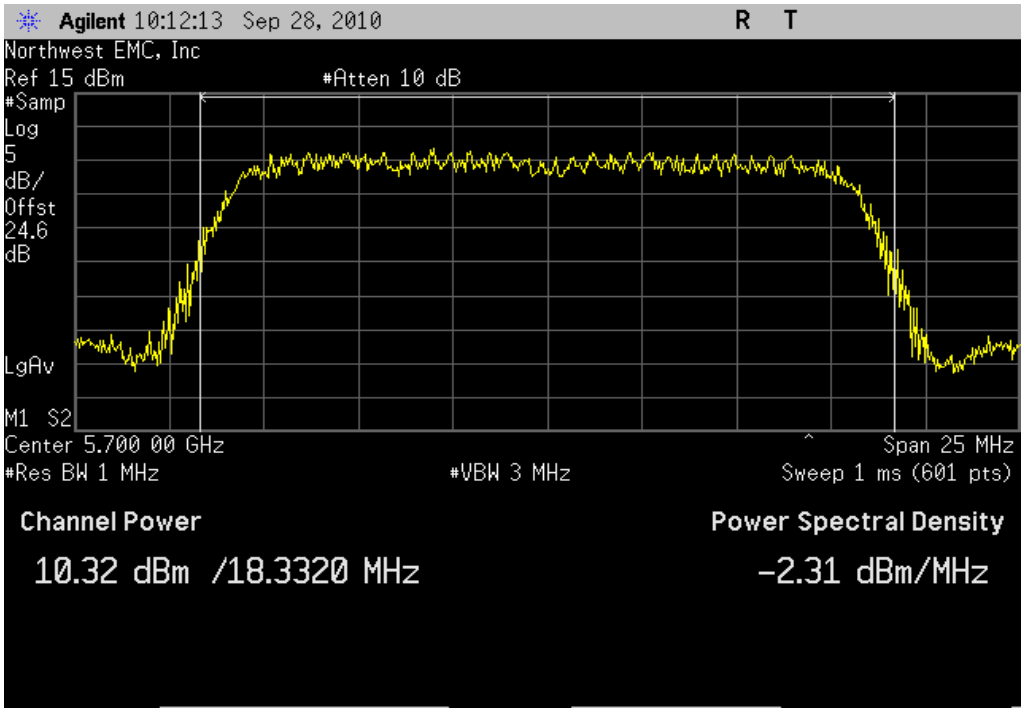


6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel					
Result:	Pass	**Value:**	10.6 dBm	**Limit:**	23.6 dBm



PEAK TRANSMIT POWER

6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel					
Result:	Pass	**Value:**	10.3 dBm	**Limit:**	23.6 dBm



FREQUENCY STABILITY

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	8/6/2010	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Chamber, Temp./Humidity Chamber	Cincinnati Sub Zero (CSZ)	ZH-32-2-2-H/AC	TBA	8/20/2010	24
Chamber Temp. & Humidity Controller	ESZ / Eurotherm	Dimension II	TBC	NCR	0
Multimeter	Tektronix	DMM912	MMH	12/10/2008	24
DC Power Supply	Topward	TPS-2000	TPD	NCR	0

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

Variation of Supply Voltage

The primary supply voltage was varied over the range specified by the client. Per the client, the chip only works over this voltage range; it will shut off if the voltage is outside the specified range.

Variation of Ambient Temperature

Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (-30 ° to +50° C) and at 10°C intervals.

A direct connect measurement was made between the EUT's antenna cable and a spectrum analyzer. The spectrum analyzer is equipped with a precision frequency reference that exceeds the stability requirement of the EUT. Measurements were made at the mid channel of each band to determine frequency stability. If the frequency variation is less than 100 ppm, the EUT will meet the requirement of 15.407(g), that the emissions are maintained within the band of operation.

NORTHWEST EMC

FREQUENCY STABILITY

XMit 2010.07.29

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2E	Date:	10/04/10
Customer:	Summit Semiconductor	Temperature:	22°C
Attendees:	None	Humidity:	45%
Project:	None	Barometric Pres.:	30.10 in
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV06 & EV09

TEST SPECIFICATIONS	Test Method
FCC 15.407:2010	ANSI C63.10:2009

COMMENTS

Signal modulated at 6 Mbps

DEVIATIONS FROM TEST STANDARD

None

Configuration #	2	Signature

Mid Channel 5150 - 5250 MHz Band

Frequency Stability with Variation of AC Voltage (Ambient Temperature = 20°C)

Voltage (VDC)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
3.6 (110%)	5200.000000	5199.940760	11.39	n/a
3.3 (100%)	5200.000000	5199.933690	12.75	n/a
3.0 (90%)	5200.000000	5199.919860	15.41	n/a

Frequency Stability with Variation of Ambient Temperature (Primary Supply = 3.3 VDC)

Temp (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
50	5200.000000	5199.922930	14.82	n/a
40	5200.000000	5199.924400	14.54	n/a
30	5200.000000	5199.930360	13.39	n/a
20	5200.000000	5199.933690	12.75	n/a
10	5200.000000	5199.947140	10.17	n/a
0	5200.000000	5199.952500	9.13	n/a
-10	5200.000000	5199.953930	8.86	n/a
-20	5200.000000	5199.947330	10.13	n/a
-30	5200.000000	5199.928300	13.79	n/a

Mid Channel 5250 - 5350 MHz Band

Frequency Stability with Variation of AC Voltage (Ambient Temperature = 20°C)

Voltage (VDC)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
3.6 (110%)	5300.000000	5299.939100	11.49	n/a
3.3 (100%)	5300.000000	5299.930900	13.04	n/a
3.0 (90%)	5300.000000	5299.919800	15.13	n/a

Frequency Stability with Variation of Ambient Temperature (Primary Supply = 3.3 VDC)

Temp (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
50	5300.000000	5299.924200	14.30	n/a
40	5300.000000	5299.925890	13.98	n/a
30	5300.000000	5299.932270	12.78	n/a
20	5300.000000	5299.930900	13.04	n/a
10	5300.000000	5299.948770	9.67	n/a
0	5300.000000	5299.954920	8.51	n/a
-10	5300.000000	5299.955770	8.35	n/a
-20	5300.000000	5299.948330	9.75	n/a
-30	5300.000000	5299.925700	14.02	n/a

Mid Channel 5470 - 5725 MHz Band

Frequency Stability with Variation of AC Voltage (Ambient Temperature = 20°C)

Voltage (VDC)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
3.6 (110%)	5600.000000	5599.938850	10.92	n/a
3.3 (100%)	5600.000000	5599.929650	12.56	n/a
3.0 (90%)	5600.000000	5599.917550	14.72	n/a

Frequency Stability with Variation of Ambient Temperature (Primary Supply = 3.3 VDC)

Temp (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
50	5600.000000	5599.920640	14.17	n/a
40	5600.000000	5599.922640	13.81	n/a
30	5600.000000	5599.929480	12.59	n/a
20	5600.000000	5599.929650	12.56	n/a
10	5600.000000	5599.947500	9.37	n/a
0	5600.000000	5599.953800	8.25	n/a
-10	5600.000000	5599.954430	8.14	n/a
-20	5600.000000	5599.948470	9.20	n/a
-30	5600.000000	5599.922680	13.81	n/a

SPURIOUS RADIATED EMISSIONS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Transmitting, 6 Mbps

CHANNELS TESTED

Channel 36 (5180 MHz)
Channel 48 (5240 MHz)
Channel 52 (5260 MHz)
Channel 64 (5320 MHz)
Channel 100 (5500 MHz)
Channel 116 (5580 MHz)
Channel 140 (5700 MHz)

POWER SETTINGS INVESTIGATED

3.3 VDC

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	40 GHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAQ	1/6/2010	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Antenna, Horn	EMCO	3115	AHE	10/22/2009	24
Pre-Amplifier	Miteq	AM-1616-1000	AOL	7/9/2010	13
Antenna, Biconilog	EMCO	3141	AXE	1/14/2010	13
EV01 Cables	N/A	Bilog Cables	EVA	7/9/2010	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	7/9/2010	13
Antenna, Horn	EMCO	3115	AHC	7/8/2010	24
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	7/9/2010	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	8/25/2010	13
Antenna, Horn	ETS	3160-07	AHU	NCR	0
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	8/25/2010	13
Antenna, Horn	ETS	3160-08	AHV	NCR	0
EV01 Cables	N/A	Standard Gain Horns Cables	EVF	8/25/2010	13
Antenna, Horn	ETS	3160-10	AIC	NCR	0
Cable	ESM Cable Corp.	KMKM-72	EVY	9/15/2010	13
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	9/15/2010	13
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVR	6/22/2010	13
Antenna, Horn	ETS Lindgren	3160-10	AIW	NCR	0
OC Cable	ESM Cable Corp.	KMKM-72	OCV	11/3/2009	13
5.25 GHz Notch Filter	K&L Microwave	8N50-5250/X200-0/0	HFK	4/2/2010	13
5.47-5.725 Notch Filter	Micro-Tronics	BRC50704	HGI	10/1/2009	13
High Pass Filter	Micro-Tronics	HPM50112	HGA	10/1/2009	13

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. The measurement uncertainty estimation is available upon request.

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT were tested. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. Measurements were made to satisfy the three requirements of 47 CFR 15.407: Field strength under 1GHz, Restricted Bands of 47 CFR 15.205, and EIRP of 47 CFR 15.407. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.10:2009). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

The amplitude and frequency of the highest emissions were noted. The EUT was then replaced with a ½ wave dipole that was successively tuned to each of the highest spurious emissions. A signal generator was connected to the dipole (horn antenna for frequencies above 1GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the dipole antenna (or horn) and its gain (dBi); the effective radiated power for each radiated spurious emission was determined.

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton			Work Order:	FOCU0094
Serial Number:	2C			Date:	09/20/10
Customer:	Summit Semiconductor			Temperature:	22.7 °C
Attendees:	None			Humidity:	46%
Project:	None			Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power:	3.3 VDC	Job Site:	EV01

TEST SPECIFICATIONS

FCC 15.209:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

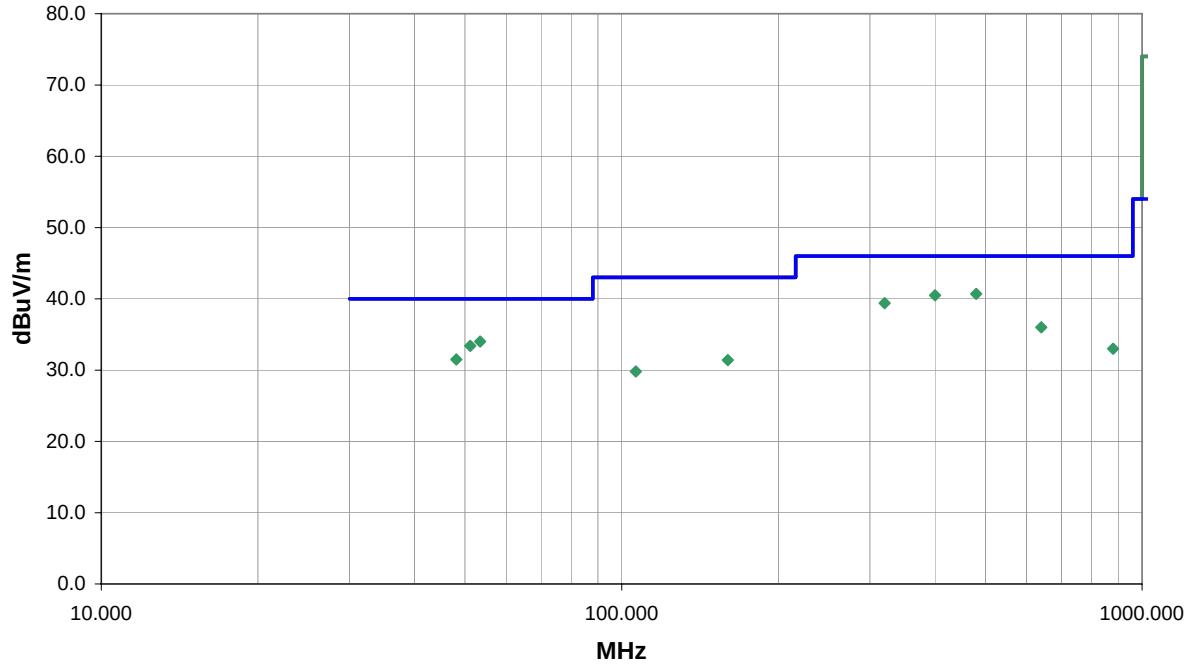
Transmitting 6Mbps, Channel 36 (5180 MHz)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
479.998	34.8	5.9	120.0	1.8	3.0	0.0	H-Bilog	QP	0.0	40.7	46.0	-5.3
399.999	36.5	4.0	50.0	1.0	3.0	0.0	H-Bilog	QP	0.0	40.5	46.0	-5.5
53.468	39.4	-5.4	121.0	1.0	3.0	0.0	V-Bilog	QP	0.0	34.0	40.0	-6.0
320.003	38.0	1.4	104.0	1.0	3.0	0.0	H-Bilog	QP	0.0	39.4	46.0	-6.6
51.169	38.3	-4.9	93.0	1.0	3.0	0.0	V-Bilog	QP	0.0	33.4	40.0	-6.6
48.101	35.8	-4.3	273.0	1.0	3.0	0.0	V-Bilog	QP	0.0	31.5	40.0	-8.5
640.001	27.2	8.8	225.0	1.2	3.0	0.0	H-Bilog	QP	0.0	36.0	46.0	-10.0
160.005	36.2	-4.8	33.0	2.2	3.0	0.0	H-Bilog	QP	0.0	31.4	43.0	-11.6
879.997	21.0	12.0	135.0	1.5	3.0	0.0	V-Bilog	QP	0.0	33.0	46.0	-13.0
106.465	35.8	-6.0	312.0	1.0	3.0	0.0	V-Bilog	QP	0.0	29.8	43.0	-13.2

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2C	Date:	09/27/10
Customer:	Summit Semiconductor	Temperature:	22.7 °C
Attendees:	None	Humidity:	46%
Project:	None	Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV01

TEST SPECIFICATIONS

FCC 15.209:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

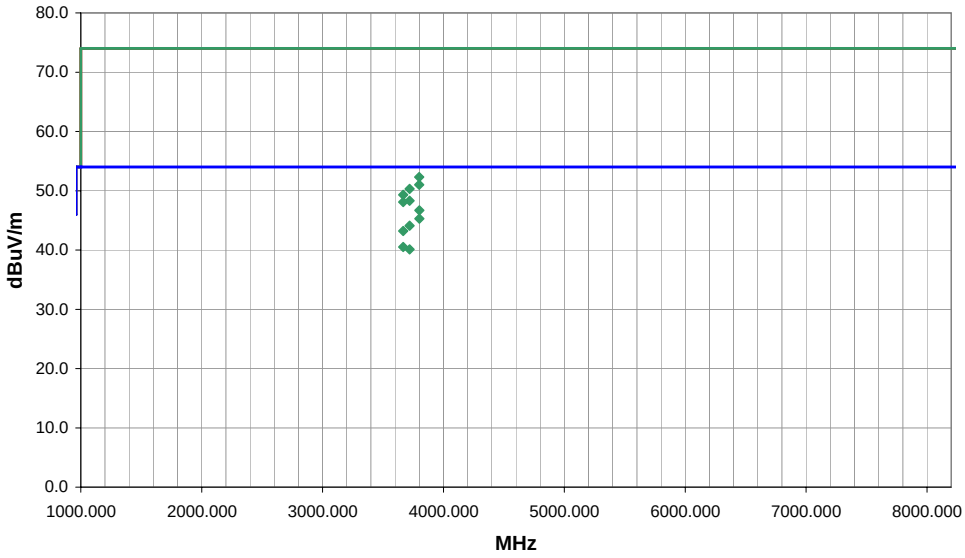
Continuous Transmitting, 6 Mbps

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
3800.003	38.5	8.2	307.0	1.1	3.0	0.0	H-Horn	AV	0.0	46.7	54.0	-7.3	Channel 100, EUT horizontal
3800.003	37.1	8.2	108.0	1.1	3.0	0.0	V-Horn	AV	0.0	45.3	54.0	-8.7	Channel 100, EUT SN down
3720.023	36.6	7.5	67.0	1.1	3.0	0.0	H-Horn	AV	0.0	44.1	54.0	-9.9	Channel 116, EUT horizontal
3666.690	36.0	7.2	64.0	1.2	3.0	0.0	H-Horn	AV	0.0	43.2	54.0	-10.8	Channel 140, EUT horizontal
3666.667	33.3	7.2	52.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.5	54.0	-13.5	Channel 140, EUT SN down
3720.000	32.6	7.5	289.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.1	54.0	-13.9	Channel 116, EUT SN down
3799.907	44.1	8.2	307.0	1.1	3.0	0.0	H-Horn	PK	0.0	52.3	74.0	-21.7	Channel 100, EUT horizontal
3799.763	42.8	8.2	108.0	1.1	3.0	0.0	V-Horn	PK	0.0	51.0	74.0	-23.0	Channel 100, EUT SN down
3720.077	42.8	7.5	67.0	1.1	3.0	0.0	H-Horn	PK	0.0	50.3	74.0	-23.7	Channel 116, EUT horizontal
3666.320	42.1	7.2	64.0	1.2	3.0	0.0	H-Horn	PK	0.0	49.3	74.0	-24.7	Channel 140, EUT horizontal
3720.200	40.8	7.5	289.0	1.1	3.0	0.0	V-Horn	PK	0.0	48.3	74.0	-25.7	Channel 116, EUT SN down
3666.420	40.9	7.2	52.0	1.1	3.0	0.0	V-Horn	PK	0.0	48.1	74.0	-25.9	Channel 140, EUT SN down

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton			Work Order:	FOCU0094
Serial Number:	2C			Date:	09/27/10
Customer:	Summit Semiconductor			Temperature:	22.7 °C
Attendees:	None			Humidity:	46%
Project:	None			Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power:	3.3 VDC	Job Site:	EV01

TEST SPECIFICATIONS

FCC 15.407:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

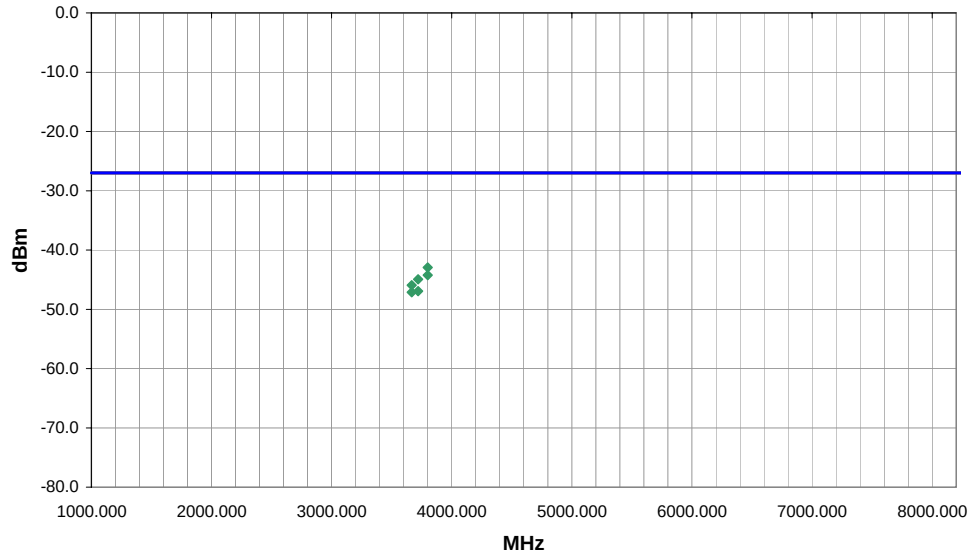
Continuous Transmitting, 6 Mbps

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3799.907			307.0	1.1			H-Horn	PK	5.09E-08	-42.9	-27.0	-15.9	Channel 100, EUT horizontal
3799.763			108.0	1.1			V-Horn	PK	3.78E-08	-44.2	-27.0	-17.2	Channel 100, EUT SN down
3720.077			67.0	1.1			H-Horn	PK	3.21E-08	-44.9	-27.0	-17.9	Channel 116, EUT horizontal
3666.320			64.0	1.2			H-Horn	PK	2.55E-08	-45.9	-27.0	-18.9	Channel 140, EUT horizontal
3720.200			289.0	1.1			V-Horn	PK	2.03E-08	-46.9	-27.0	-19.9	Channel 116, EUT SN down
3666.420			52.0	1.1			V-Horn	PK	1.94E-08	-47.1	-27.0	-20.1	Channel 140, EUT SN down

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2C	Date:	09/29/10
Customer:	Summit Semiconductor	Temperature:	22.7 °C
Attendees:	None	Humidity:	46%
Project:	None	Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV01

TEST SPECIFICATIONS

FCC 15.209:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1-2	Test Distance (m)	1

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

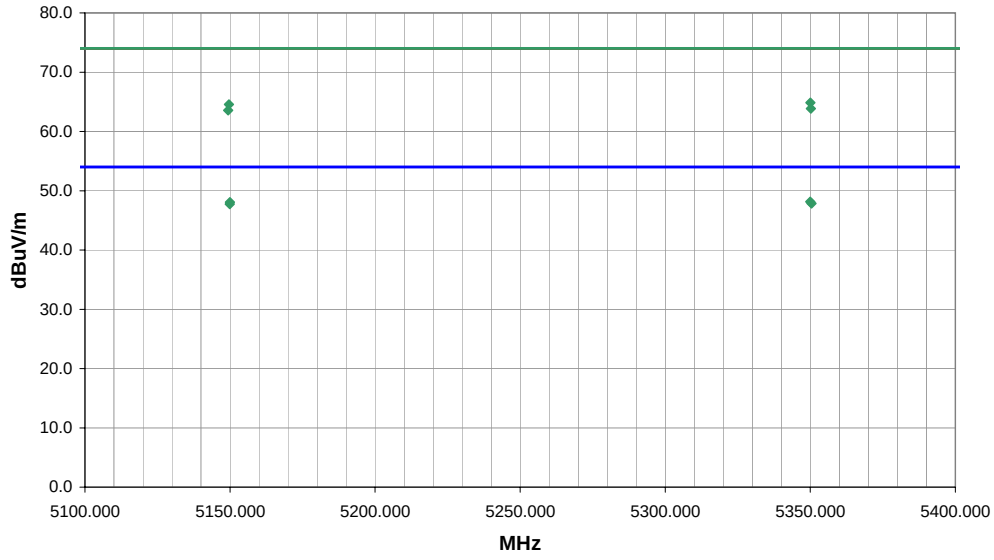
Continuous Transmitting

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
5350.003	20.8	36.9	59.0	1.0	1.0	0.0	V-Horn	AV	-9.5	48.2	54.0	-5.8	Channel 64, EUT SN down
5149.987	21.0	36.6	164.0	1.0	1.0	0.0	H-Horn	AV	-9.5	48.1	54.0	-5.9	Channel 36, EUT horizontal
5350.430	20.5	36.9	256.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.9	54.0	-6.1	Channel 64, EUT horizontal
5149.930	20.7	36.6	71.0	1.0	1.0	0.0	V-Horn	AV	-9.5	47.8	54.0	-6.2	Channel 36, EUT SN down
5350.043	37.5	36.9	59.0	1.0	1.0	0.0	V-Horn	PK	-9.5	64.9	74.0	-9.1	Channel 64, EUT SN down
5149.607	37.5	36.6	164.0	1.0	1.0	0.0	H-Horn	PK	-9.5	64.6	74.0	-9.4	Channel 36, EUT horizontal
5350.193	36.5	36.9	256.0	1.0	1.0	0.0	H-Horn	PK	-9.5	63.9	74.0	-10.1	Channel 64, EUT horizontal
5149.340	36.5	36.6	71.0	1.0	1.0	0.0	V-Horn	PK	-9.5	63.6	74.0	-10.4	Channel 36, EUT SN down

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2C	Date:	09/29/10
Customer:	Summit Semiconductor	Temperature:	22.7 °C
Attendees:	None	Humidity:	46%
Project:	None	Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV01

TEST SPECIFICATIONS

FCC 15.407:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1-2	Test Distance (m)	1

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

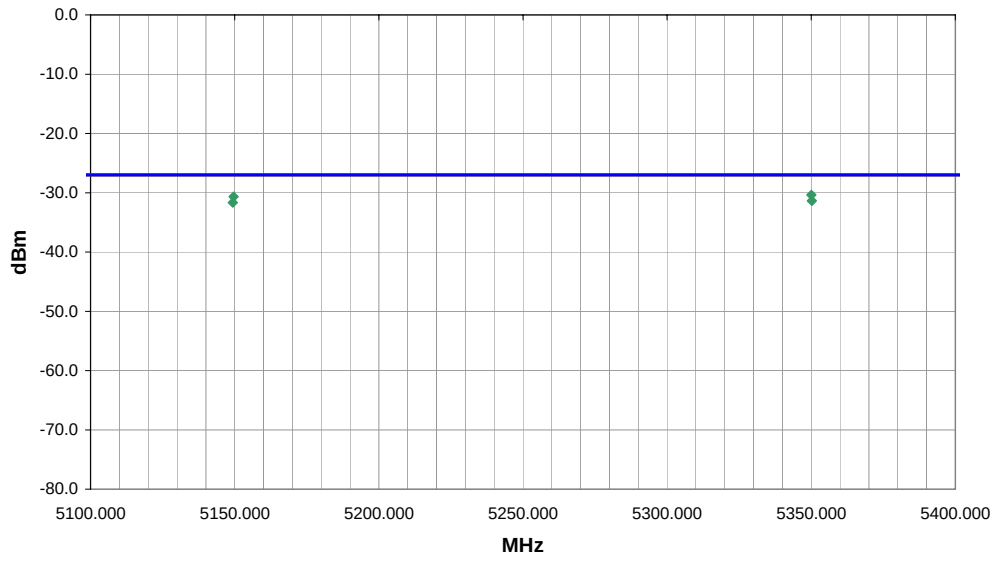
Continuous Transmitting

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5350.043			59.0	1.0			V-Horn	PK	9.18E-07	-30.4	-27.0	-3.4	Channel 64, EUT SN down
5149.607			164.0	1.0			H-Horn	PK	8.57E-07	-30.7	-27.0	-3.7	Channel 36, EUT horizontal
5350.193			256.0	1.0			H-Horn	PK	7.29E-07	-31.4	-27.0	-4.4	Channel 64, EUT horizontal
5149.340			71.0	1.0			V-Horn	PK	6.81E-07	-31.7	-27.0	-4.7	Channel 36, EUT SN down

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton			**Work Order:**	FOCU0094
Serial Number:	2C			**Date:**	09/29/10
Customer:	Summit Semiconductor			**Temperature:**	22.7 °C
Attendees:	None			**Humidity:**	46%
Project:	None			**Barometric Pres.:**	1016.6 mb
Tested by:	Rod Peloquin	**Power:**	3.3 VDC	**Job Site:**	EV01

TEST SPECIFICATIONS

FCC 15.407:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	**Test Distance (m)**	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

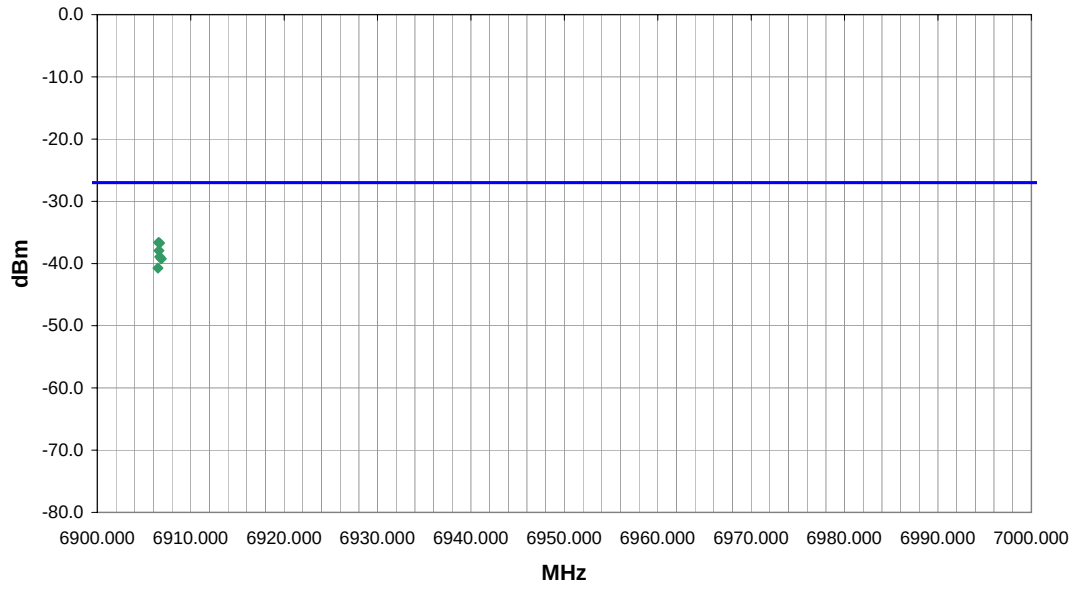
Continuous Transmitting, 6 Mbps, Channel 36 (5180 MHz)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
6906.560			124.0	1.0			V-Horn	PK	2.17E-07	-36.6	-27.0	-9.6	EUT SN on side
6906.670			28.0	1.0			H-Horn	PK	2.12E-07	-36.7	-27.0	-9.7	EUT horizontal
6906.587			168.0	1.0			V-Horn	PK	1.61E-07	-37.9	-27.0	-10.9	EUT SN down
6906.684			196.0	1.0			H-Horn	PK	1.28E-07	-38.9	-27.0	-11.9	EUT SN on side
6906.854			204.0	1.0			H-Horn	PK	1.19E-07	-39.2	-27.0	-12.2	EUT SN down
6906.487			203.0	1.0			V-Horn	PK	8.46E-08	-40.7	-27.0	-13.7	EUT horizontal

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2C	Date:	09/20/10
Customer:	Summit Semiconductor	Temperature:	22.7 °C
Attendees:	Ponnappa Pasura	Humidity:	46%
Project:	None	Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV01

TEST SPECIFICATIONS

FCC 15.209:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

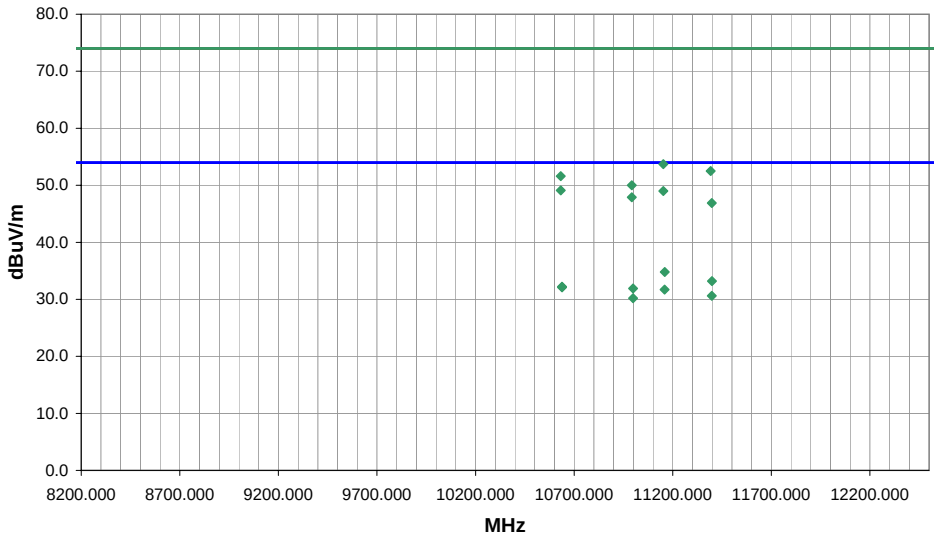
Continuous Transmitting.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
11159.800	43.2	-8.4	243.0	1.2	3.0	0.0	H-Horn	AV	0.0	34.8	54.0	-19.2	Channel 116, EUT SN down
11152.050	62.1	-8.4	243.0	1.2	3.0	0.0	H-Horn	PK	0.0	53.7	74.0	-20.3	Channel 116, EUT SN down
11398.500	40.4	-7.2	307.0	1.2	3.0	0.0	H-Horn	AV	0.0	33.2	54.0	-20.8	Channel 140, EUT SN down
11391.950	59.7	-7.2	307.0	1.2	3.0	0.0	H-Horn	PK	0.0	52.5	74.0	-21.5	Channel 140, EUT SN down
10638.550	42.9	-10.7	207.0	1.0	3.0	0.0	H-Horn	AV	0.0	32.2	54.0	-21.8	Channel 64, EUT SN down
10638.600	42.8	-10.7	323.0	1.3	3.0	0.0	V-Horn	AV	0.0	32.1	54.0	-21.9	Channel 64, EUT SN on side
10998.500	41.1	-9.2	320.0	1.3	3.0	0.0	H-Horn	AV	0.0	31.9	54.0	-22.1	Channel 100, EUT SN down
11158.600	40.1	-8.4	227.0	1.1	3.0	0.0	V-Horn	AV	0.0	31.7	54.0	-22.3	Channel 116, EUT SN on side
10632.050	62.3	-10.7	314.0	1.3	3.0	0.0	V-Horn	PK	0.0	51.6	74.0	-22.4	Channel 64, EUT SN on side
11398.300	37.8	-7.2	216.0	1.0	3.0	0.0	V-Horn	AV	0.0	30.6	54.0	-23.4	Channel 140, EUT SN on side
10998.750	39.4	-9.2	315.0	1.5	3.0	0.0	V-Horn	AV	0.0	30.2	54.0	-23.8	Channel 100, EUT SN on side
10992.000	59.2	-9.2	320.0	1.3	3.0	0.0	H-Horn	PK	0.0	50.0	74.0	-24.0	Channel 100, EUT SN down
10632.100	59.8	-10.7	207.0	1.0	3.0	0.0	H-Horn	PK	0.0	49.1	74.0	-24.9	Channel 64, EUT SN down
11152.000	57.4	-8.4	227.0	1.1	3.0	0.0	V-Horn	PK	0.0	49.0	74.0	-25.0	Channel 116, EUT SN on side
10992.000	57.1	-9.2	315.0	1.5	3.0	0.0	V-Horn	PK	0.0	47.9	74.0	-26.1	Channel 100, EUT SN on side
11397.850	54.1	-7.2	216.0	1.0	3.0	0.0	V-Horn	PK	0.0	46.9	74.0	-27.1	Channel 140, EUT SN on side

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2C	Date:	09/20/10
Customer:	Summit Semiconductor	Temperature:	22.7 °C
Attendees:	Ponnappa Pasura	Humidity:	46%
Project:	None	Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV01

TEST SPECIFICATIONS

FCC 15.407:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

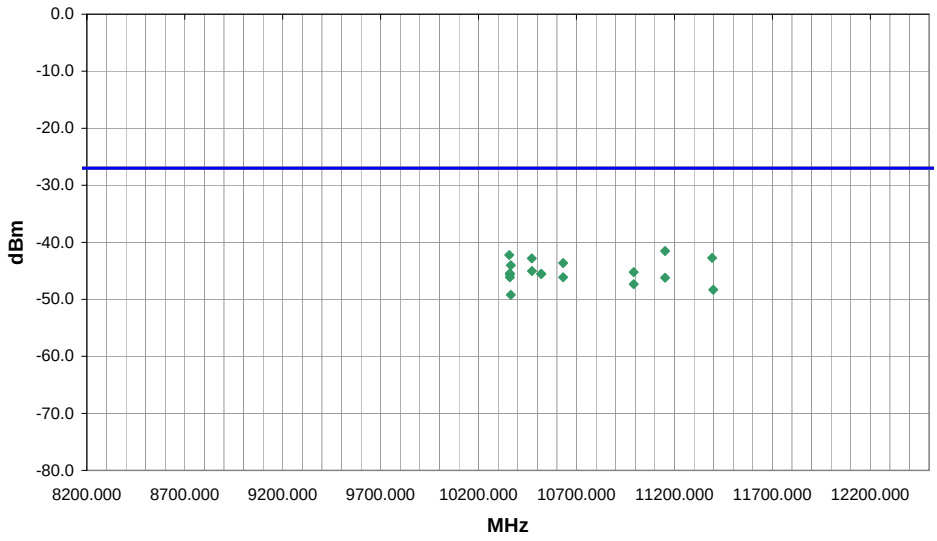
Continuous Transmitting.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
11152.050			243.0	1.2			H-Horn	PK	7.03E-08	-41.5	-27.0	-14.5	Channel 116, EUT SN down
10356.450			322.0	1.4			V-Horn	PK	5.99E-08	-42.2	-27.0	-15.2	Channel 36, EUT SN on side
11391.950			307.0	1.2			H-Horn	PK	5.33E-08	-42.7	-27.0	-15.7	Channel 140, EUT SN down
10471.950			323.0	1.3			V-Horn	PK	5.21E-08	-42.8	-27.0	-15.8	Channel 48, EUT SN on side
10632.050			314.0	1.3			V-Horn	PK	4.34E-08	-43.6	-27.0	-16.6	Channel 64, EUT SN on side
10364.350			227.0	1.0			H-Horn	PK	3.95E-08	-44.0	-27.0	-17.0	Channel 36, EUT SN down
10472.350			207.0	1.0			H-Horn	PK	3.14E-08	-45.0	-27.0	-18.0	Channel 48, EUT SN down
10992.000			320.0	1.3			H-Horn	PK	3.00E-08	-45.2	-27.0	-18.2	Channel 100, EUT SN down
10360.150			326.0	1.0			H-Horn	PK	2.86E-08	-45.4	-27.0	-18.4	Channel 36, EUT SN on side
10519.850			217.0	1.2			V-Horn	PK	2.80E-08	-45.5	-27.0	-18.5	Channel 52, EUT SN on side
10519.950			318.0	1.0			H-Horn	PK	2.80E-08	-45.5	-27.0	-18.5	Channel 52, EUT SN down
10360.050			307.0	1.4			V-Horn	PK	2.74E-08	-45.6	-27.0	-18.6	Channel 36, EUT horizontal
10360.000			18.0	1.0			H-Horn	PK	2.44E-08	-46.1	-27.0	-19.1	Channel 36, EUT horizontal
10632.100			207.0	1.0			H-Horn	PK	2.44E-08	-46.1	-27.0	-19.1	Channel 64, EUT SN down
11152.000			227.0	1.1			V-Horn	PK	2.38E-08	-46.2	-27.0	-19.2	Channel 116, EUT SN on side
10992.000			315.0	1.5			V-Horn	PK	1.85E-08	-47.3	-27.0	-20.3	Channel 100, EUT SN on side
11397.850			216.0	1.0			V-Horn	PK	1.47E-08	-48.3	-27.0	-21.3	Channel 140, EUT SN on side
10364.850			301.0	1.0			V-Horn	PK	1.19E-08	-49.2	-27.0	-22.2	Channel 36, EUT SN down

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2C	Date:	09/20/10
Customer:	Summit Semiconductor	Temperature:	22.7 °C
Attendees:	None	Humidity:	46%
Project:	None	Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV01

TEST SPECIFICATIONS

FCC 15.407:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

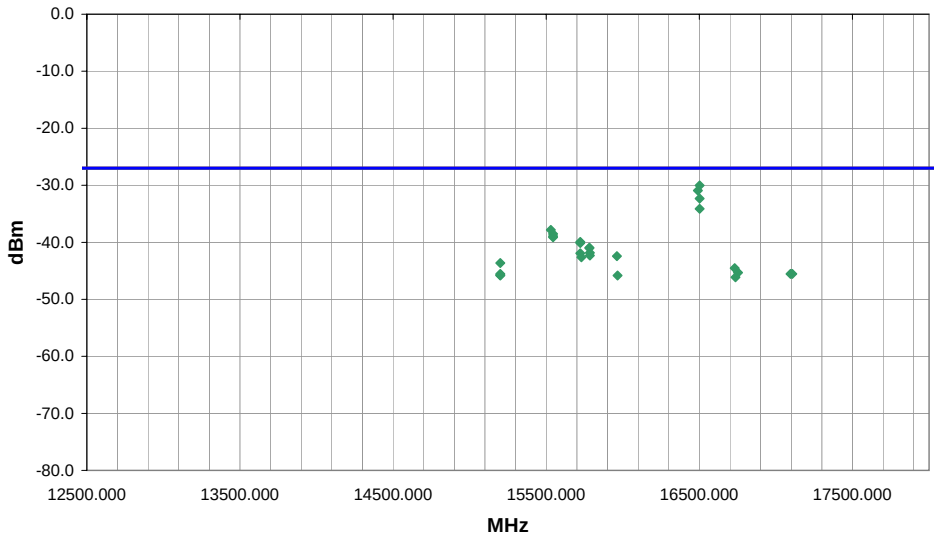
Transmitting, 6 Mbps

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

Signature



Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
16502.100			60.0	1.2			V-Horn	PK	9.93E-07	-30.0	-27.0	-3.0	Channel 100, EUT SN down
16490.350			80.0	1.0			H-Horn	PK	8.07E-07	-30.9	-27.0	-3.9	Channel 100, EUT SN down
16501.900			326.0	1.0			H-Horn	PK	5.85E-07	-32.3	-27.0	-5.3	Channel 100, EUT SN on side
16501.850			190.0	1.2			V-Horn	PK	3.86E-07	-34.1	-27.0	-7.1	Channel 100, EUT SN on side
15529.800			173.0	1.3			V-Horn	PK	1.65E-07	-37.8	-27.0	-10.8	Channel 36, EUT SN down
15544.900			229.0	1.3			H-Horn	PK	1.40E-07	-38.5	-27.0	-11.5	Channel 36, EUT SN on side
15544.400			197.0	1.2			H-Horn	PK	1.28E-07	-38.9	-27.0	-11.9	Channel 36, EUT SN down
15544.650			182.0	1.3			V-Horn	PK	1.22E-07	-39.1	-27.0	-12.1	Channel 36, EUT SN on side
15722.450			227.0	1.3			H-Horn	PK	1.02E-07	-39.9	-27.0	-12.9	Channel 48, EUT SN on side
15722.300			197.0	1.2			H-Horn	PK	9.71E-08	-40.1	-27.0	-13.1	Channel 48, EUT SN down
15782.000			228.0	1.3			H-Horn	PK	8.07E-08	-40.9	-27.0	-13.9	Channel 52, EUT SN down
15781.600			179.0	1.2			V-Horn	PK	7.89E-08	-41.0	-27.0	-14.0	Channel 52, EUT SN on side
15784.600			207.0	1.3			H-Horn	PK	6.56E-08	-41.8	-27.0	-14.8	Channel 52, EUT SN on side
15721.750			157.0	1.3			V-Horn	PK	6.41E-08	-41.9	-27.0	-14.9	Channel 48, EUT SN down
15784.650			173.0	1.1			V-Horn	PK	5.85E-08	-42.3	-27.0	-15.3	Channel 52, EUT SN down
15961.600			214.0	1.3			H-Horn	PK	5.72E-08	-42.4	-27.0	-15.4	Channel 64, EUT SN on side
15729.950			203.0	1.1			V-Horn	PK	5.46E-08	-42.6	-27.0	-15.6	Channel 48, EUT SN on side
15199.870			136.0	1.3			H-Horn	PK	4.34E-08	-43.6	-27.0	-16.6	Channel 140, EUT SN down
16730.050			91.0	1.2			H-Horn	PK	3.52E-08	-44.5	-27.0	-17.5	Channel 116, EUT SN down
16752.700			136.0	1.4			V-Horn	PK	2.93E-08	-45.3	-27.0	-18.3	Channel 116, EUT SN down
15199.640			141.0	1.3			H-Horn	PK	2.80E-08	-45.5	-27.0	-18.5	Channel 140, EUT SN on side
17095.600			335.0	1.0			V-Horn	PK	2.80E-08	-45.5	-27.0	-18.5	Channel 140, EUT SN down
17106.350			289.0	1.1			H-Horn	PK	2.80E-08	-45.5	-27.0	-18.5	Channel 140, EUT SN down
15199.910			233.0	1.3			V-Horn	PK	2.67E-08	-45.7	-27.0	-18.7	Channel 140, EUT SN on side
15199.710			188.0	1.3			V-Horn	PK	2.61E-08	-45.8	-27.0	-18.8	Channel 140, EUT SN down
15965.350			231.0	1.0			V-Horn	PK	2.61E-08	-45.8	-27.0	-18.8	Channel 64, EUT SN on side
16735.800			213.0	1.1			V-Horn	PK	2.44E-08	-46.1	-27.0	-19.1	Channel 116, EUT SN on side

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2008.07.21
EMI 2008.1.9

EUT:	Silverton	Work Order:	FOCU0094
Serial Number:	2C	Date:	09/20/10
Customer:	Summit Semiconductor	Temperature:	22.7 °C
Attendees:	None	Humidity:	46%
Project:	None	Barometric Pres.:	1016.6 mb
Tested by:	Rod Peloquin	Power: 3.3 VDC	Job Site: EV01

TEST SPECIFICATIONS

FCC 15.209:2010	ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

36 inch I/O cable

EUT OPERATING MODES

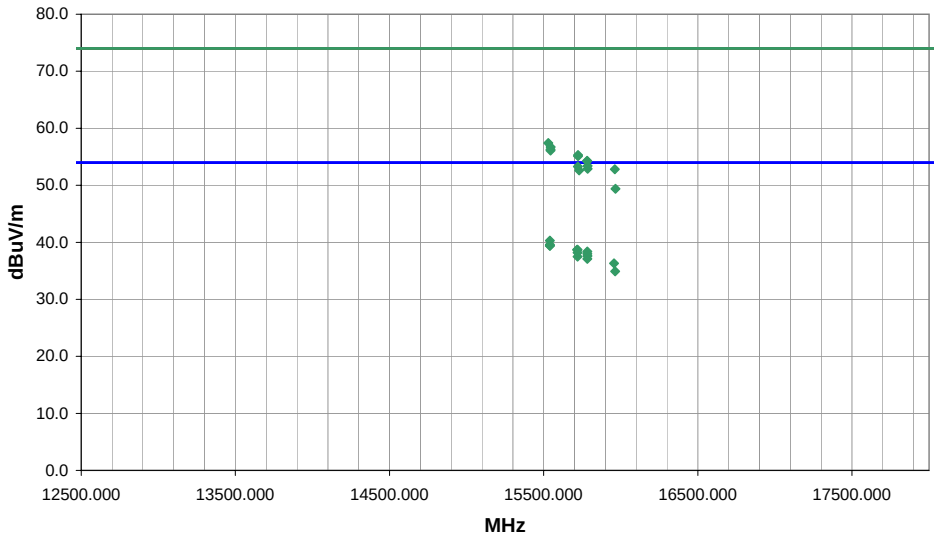
Transmitting, 6 Mbps

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
15539.900	31.6	8.7	173.0	1.3	3.0	0.0	V-Horn	AV	0.0	40.3	54.0	-13.7	Channel 36, EUT SN down
15539.800	30.9	8.7	229.0	1.3	3.0	0.0	H-Horn	AV	0.0	39.6	54.0	-14.4	Channel 36, EUT SN on side
15539.900	30.7	8.7	197.0	1.2	3.0	0.0	H-Horn	AV	0.0	39.4	54.0	-14.6	Channel 36, EUT SN down
15539.700	30.7	8.7	182.0	1.3	3.0	0.0	V-Horn	AV	0.0	39.4	54.0	-14.6	Channel 36, EUT SN on side
15716.100	29.5	9.2	197.0	1.2	3.0	0.0	H-Horn	AV	0.0	38.7	54.0	-15.3	Channel 48, EUT SN down
15720.000	29.5	9.2	227.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.7	54.0	-15.3	Channel 48, EUT SN on side
15783.400	29.2	9.2	228.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.4	54.0	-15.6	Channel 52, EUT SN down
15719.750	29.0	9.2	157.0	1.3	3.0	0.0	V-Horn	AV	0.0	38.2	54.0	-15.8	Channel 48, EUT SN down
15783.400	28.8	9.2	179.0	1.2	3.0	0.0	V-Horn	AV	0.0	38.0	54.0	-16.0	Channel 52, EUT SN on side
15783.550	28.4	9.2	207.0	1.3	3.0	0.0	H-Horn	AV	0.0	37.6	54.0	-16.4	Channel 52, EUT SN on side
15719.950	28.2	9.3	203.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.5	54.0	-16.5	Channel 48, EUT SN on side
15529.800	48.7	8.7	173.0	1.3	3.0	0.0	V-Horn	PK	0.0	57.4	74.0	-16.6	Channel 36, EUT SN down
15783.300	27.9	9.2	173.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.1	54.0	-16.9	Channel 52, EUT SN down
15544.900	48.0	8.7	229.0	1.3	3.0	0.0	H-Horn	PK	0.0	56.7	74.0	-17.3	Channel 36, EUT SN on side
15956.050	27.6	8.7	214.0	1.3	3.0	0.0	H-Horn	AV	0.0	36.3	54.0	-17.7	Channel 64, EUT SN on side
15544.400	47.6	8.7	197.0	1.2	3.0	0.0	H-Horn	PK	0.0	56.3	74.0	-17.7	Channel 36, EUT SN down
15544.650	47.4	8.7	182.0	1.3	3.0	0.0	V-Horn	PK	0.0	56.1	74.0	-17.9	Channel 36, EUT SN on side
15722.450	46.1	9.2	227.0	1.3	3.0	0.0	H-Horn	PK	0.0	55.3	74.0	-18.7	Channel 48, EUT SN on side
15722.300	45.9	9.2	197.0	1.2	3.0	0.0	H-Horn	PK	0.0	55.1	74.0	-18.9	Channel 48, EUT SN down
15963.400	26.2	8.7	231.0	1.0	3.0	0.0	V-Horn	AV	0.0	34.9	54.0	-19.1	Channel 64, EUT SN on side
15782.000	45.0	9.3	228.0	1.3	3.0	0.0	H-Horn	PK	0.0	54.3	74.0	-19.7	Channel 52, EUT SN down
15781.600	44.9	9.3	179.0	1.2	3.0	0.0	V-Horn	PK	0.0	54.2	74.0	-19.8	Channel 52, EUT SN on side
15784.600	44.1	9.3	207.0	1.3	3.0	0.0	H-Horn	PK	0.0	53.4	74.0	-20.6	Channel 52, EUT SN on side
15721.750	44.1	9.2	157.0	1.3	3.0	0.0	V-Horn	PK	0.0	53.3	74.0	-20.7	Channel 48, EUT SN down
15784.650	43.6	9.3	173.0	1.1	3.0	0.0	V-Horn	PK	0.0	52.9	74.0	-21.1	Channel 52, EUT SN down
15961.600	44.1	8.7	214.0	1.3	3.0	0.0	H-Horn	PK	0.0	52.8	74.0	-21.2	Channel 64, EUT SN on side
15729.950	43.4	9.2	203.0	1.1	3.0	0.0	V-Horn	PK	0.0	52.6	74.0	-21.4	Channel 48, EUT SN on side
15965.350	40.7	8.7	231.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.4	74.0	-24.6	Channel 64, EUT SN on side

AC POWERLINE CONDUCTED EMISSIONS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION
Continuous transmit. 6 Mbps, Channel 140 (5700 MHz)
Continuous transmit. 6 Mbps, Channel 116 (5580 MHz)
Continuous transmit. 6 Mbps, Channel 64 (5320 MHz)
Continuous transmit. 6 Mbps, Channel 100 (5500 MHz)
Continuous transmit. 6 Mbps, Channel 52 (5260 MHz)
Continuous transmit. 6 Mbps, Channel 48 (5240 MHz)
Continuous transmit. 6 Mbps, Channel 36 (5180 MHz)

POWER SETTINGS INVESTIGATED
3.3 VDC

CONFIGURATIONS INVESTIGATED
FOCU0094 - 3

SAMPLE CALCULATIONS
Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARE	4/29/2010	12 mo
Attenuator	Coaxicom	66702 2910-20	ATO	8/6/2010	13 mo
High Pass Filter	TTE	H97-100K-50-720B	HFX	2/16/2010	13 mo
LISN	Solar	9252-50-R-24-BNC	LIR	3/2/2010	12 mo
LISN	Solar	9252-50-R-24-BNC	LIN	5/27/2010	12 mo
EV07 Cables	N/A	Conducted Cables	EVG	6/21/2010	13 mo

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0
Measurements were made using the bandwidths and detectors specified. No video filter was used.				

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The EUT will be powered indirectly from the AC power line while operating in a host device. Therefore, conducted emissions measurements were made on the DC input of the EUT, or on the DC input of the device used to power the EUT. The AC power line conducted emissions were measured on a linear power supply providing DC power to the module while providing no filtering of the power inputs to the module.

The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band or bands. The EUT was transmitting in the mode which has the highest output power for the band. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.10-2009.

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

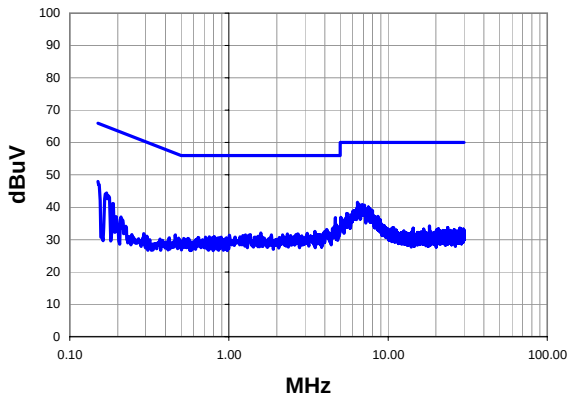
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 36 (5180 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

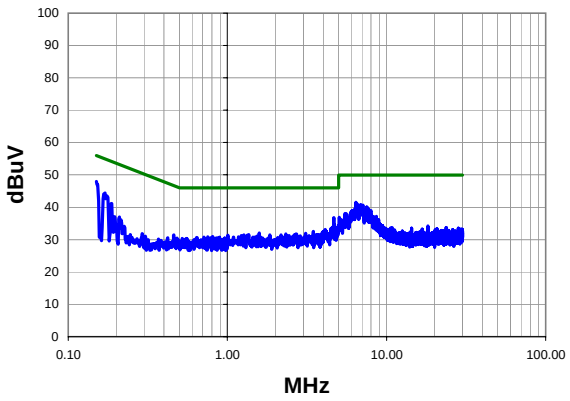
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	1	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	27.8	20.2	48.0	66.0	-18.0
6.430	21.2	20.3	41.5	60.0	-18.5
6.890	20.5	20.4	40.9	60.0	-19.1
4.656	16.5	20.3	36.8	56.0	-19.3
7.100	20.3	20.4	40.7	60.0	-19.3
7.510	19.7	20.4	40.1	60.0	-19.9
0.170	24.3	20.2	44.5	64.9	-20.5
7.690	19.1	20.4	39.5	60.0	-20.5
7.810	18.7	20.4	39.1	60.0	-20.9
7.630	18.5	20.4	38.9	60.0	-21.1
4.712	14.5	20.3	34.8	56.0	-21.3
5.490	17.8	20.3	38.1	60.0	-21.9
5.580	17.7	20.3	38.0	60.0	-22.0
4.808	13.0	20.3	33.3	56.0	-22.7
8.620	16.8	20.4	37.2	60.0	-22.8
4.112	12.9	20.2	33.1	56.0	-22.9
8.320	16.6	20.4	37.0	60.0	-23.0
0.186	21.0	20.2	41.2	64.2	-23.1
5.050	16.6	20.3	36.9	60.0	-23.1
3.464	12.3	20.2	32.5	56.0	-23.5

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	27.8	20.2	48.0	56.0	-8.0
6.430	21.2	20.3	41.5	50.0	-8.5
6.890	20.5	20.4	40.9	50.0	-9.1
4.656	16.5	20.3	36.8	46.0	-9.3
7.100	20.3	20.4	40.7	50.0	-9.3
7.510	19.7	20.4	40.1	50.0	-9.9
0.170	24.3	20.2	44.5	54.9	-10.5
7.690	19.1	20.4	39.5	50.0	-10.5
7.810	18.7	20.4	39.1	50.0	-10.9
7.630	18.5	20.4	38.9	50.0	-11.1
4.712	14.5	20.3	34.8	46.0	-11.3
5.490	17.8	20.3	38.1	50.0	-11.9
5.580	17.7	20.3	38.0	50.0	-12.0
4.808	13.0	20.3	33.3	46.0	-12.7
8.620	16.8	20.4	37.2	50.0	-12.8
4.112	12.9	20.2	33.1	46.0	-12.9
8.320	16.6	20.4	37.0	50.0	-13.0
0.186	21.0	20.2	41.2	54.2	-13.1
5.050	16.6	20.3	36.9	50.0	-13.1
3.464	12.3	20.2	32.5	46.0	-13.5

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

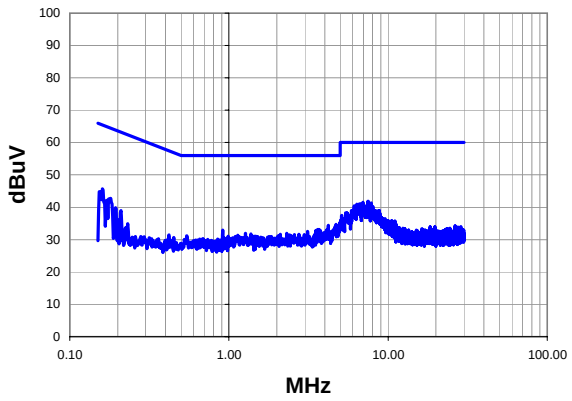
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 36 (5180 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

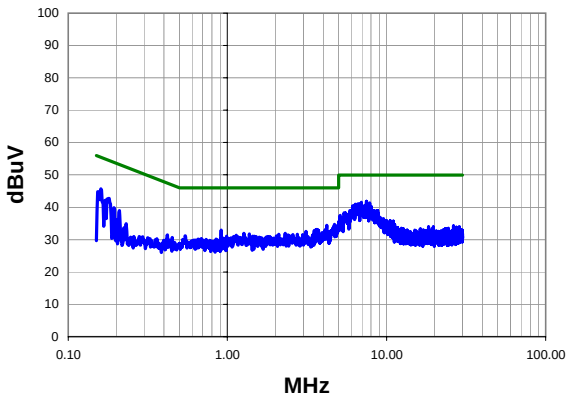
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	2	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.480	21.4	20.4	41.8	60.0	-18.2
6.940	21.2	20.4	41.6	60.0	-18.4
7.820	20.9	20.4	41.3	60.0	-18.7
6.610	20.7	20.3	41.0	60.0	-19.0
6.730	20.6	20.4	41.0	60.0	-19.0
6.120	20.2	20.3	40.5	60.0	-19.5
7.700	20.0	20.4	40.4	60.0	-19.6
7.310	19.9	20.4	40.3	60.0	-19.7
8.030	19.8	20.4	40.2	60.0	-19.8
0.160	25.5	20.2	45.7	65.5	-19.8
8.790	18.6	20.4	39.0	60.0	-21.0
5.890	18.7	20.3	39.0	60.0	-21.0
8.580	18.5	20.4	38.9	60.0	-21.1
8.400	18.4	20.4	38.8	60.0	-21.2
4.712	14.5	20.3	34.8	56.0	-21.3
8.740	18.3	20.4	38.7	60.0	-21.3
4.208	14.2	20.2	34.4	56.0	-21.6
5.420	18.0	20.3	38.3	60.0	-21.7
0.179	22.6	20.2	42.8	64.5	-21.8
5.110	17.2	20.3	37.5	60.0	-22.5

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.480	21.4	20.4	41.8	50.0	-8.2
6.940	21.2	20.4	41.6	50.0	-8.4
7.820	20.9	20.4	41.3	50.0	-8.7
6.610	20.7	20.3	41.0	50.0	-9.0
6.730	20.6	20.4	41.0	50.0	-9.0
6.120	20.2	20.3	40.5	50.0	-9.5
7.700	20.0	20.4	40.4	50.0	-9.6
7.310	19.9	20.4	40.3	50.0	-9.7
8.030	19.8	20.4	40.2	50.0	-9.8
0.160	25.5	20.2	45.7	55.5	-9.8
8.790	18.6	20.4	39.0	50.0	-11.0
5.890	18.7	20.3	39.0	50.0	-11.0
8.580	18.5	20.4	38.9	50.0	-11.1
8.400	18.4	20.4	38.8	50.0	-11.2
4.712	14.5	20.3	34.8	46.0	-11.3
8.740	18.3	20.4	38.7	50.0	-11.3
4.208	14.2	20.2	34.4	46.0	-11.6
5.420	18.0	20.3	38.3	50.0	-11.7
0.179	22.6	20.2	42.8	54.5	-11.8
5.110	17.2	20.3	37.5	50.0	-12.5

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

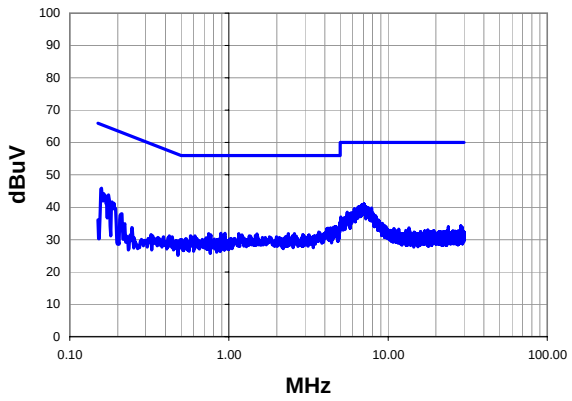
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 48 (5240 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

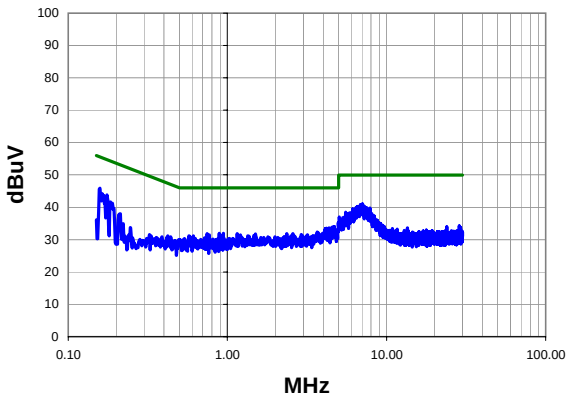
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	3	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.030	20.7	20.4	41.1	60.0	-18.9
7.080	20.6	20.4	41.0	60.0	-19.0
0.159	25.7	20.2	45.9	65.5	-19.7
7.240	19.9	20.4	40.3	60.0	-19.7
6.590	19.9	20.3	40.2	60.0	-19.8
7.890	19.4	20.4	39.8	60.0	-20.2
6.380	19.5	20.3	39.8	60.0	-20.2
6.130	19.2	20.3	39.5	60.0	-20.5
0.176	23.7	20.2	43.9	64.7	-20.8
7.720	18.5	20.4	38.9	60.0	-21.1
5.530	18.2	20.3	38.5	60.0	-21.5
5.860	18.0	20.3	38.3	60.0	-21.7
4.656	13.8	20.3	34.1	56.0	-22.0
4.544	13.6	20.3	33.9	56.0	-22.2
4.344	13.4	20.2	33.6	56.0	-22.4
4.200	13.3	20.2	33.5	56.0	-22.5
0.184	21.5	20.2	41.7	64.3	-22.6
8.360	16.9	20.4	37.3	60.0	-22.7
4.264	12.9	20.2	33.1	56.0	-22.9
5.050	16.7	20.3	37.0	60.0	-23.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.030	20.7	20.4	41.1	50.0	-8.9
7.080	20.6	20.4	41.0	50.0	-9.0
0.159	25.7	20.2	45.9	55.5	-9.7
7.240	19.9	20.4	40.3	50.0	-9.7
6.590	19.9	20.3	40.2	50.0	-9.8
7.890	19.4	20.4	39.8	50.0	-10.2
6.380	19.5	20.3	39.8	50.0	-10.2
6.130	19.2	20.3	39.5	50.0	-10.5
0.176	23.7	20.2	43.9	54.7	-10.8
7.720	18.5	20.4	38.9	50.0	-11.1
5.530	18.2	20.3	38.5	50.0	-11.5
5.860	18.0	20.3	38.3	50.0	-11.7
4.656	13.8	20.3	34.1	46.0	-12.0
4.544	13.6	20.3	33.9	46.0	-12.2
4.344	13.4	20.2	33.6	46.0	-12.4
4.200	13.3	20.2	33.5	46.0	-12.5
0.184	21.5	20.2	41.7	54.3	-12.6
8.360	16.9	20.4	37.3	50.0	-12.7
4.264	12.9	20.2	33.1	46.0	-12.9
5.050	16.7	20.3	37.0	50.0	-13.0

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

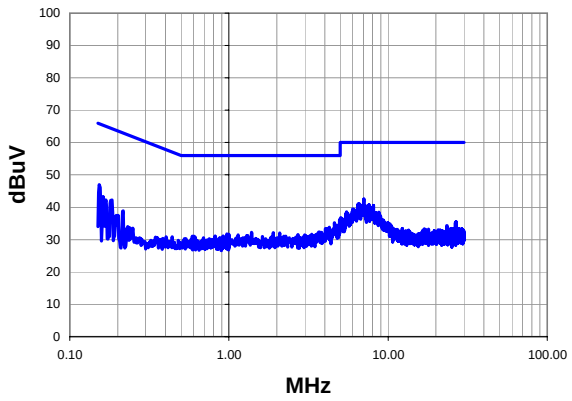
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 48 (5240 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

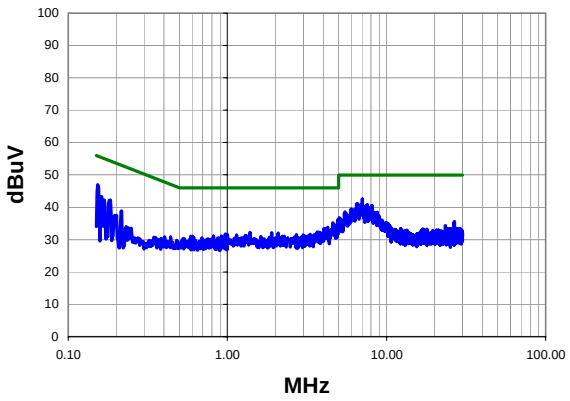
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	4	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.040	22.1	20.4	42.5	60.0	-17.5
0.153	26.8	20.2	47.0	65.8	-18.9
6.560	20.7	20.3	41.0	60.0	-19.0
7.580	20.3	20.4	40.7	60.0	-19.3
8.090	20.1	20.4	40.5	60.0	-19.5
7.100	20.1	20.4	40.5	60.0	-19.5
7.280	19.8	20.4	40.2	60.0	-19.8
4.952	15.8	20.3	36.1	56.0	-19.9
7.800	19.5	20.4	39.9	60.0	-20.1
7.630	19.5	20.4	39.9	60.0	-20.1
5.980	19.2	20.3	39.5	60.0	-20.5
6.060	19.1	20.3	39.4	60.0	-20.6
4.608	15.0	20.3	35.3	56.0	-20.8
5.950	18.5	20.3	38.8	60.0	-21.2
5.490	18.3	20.3	38.6	60.0	-21.4
8.740	18.1	20.4	38.5	60.0	-21.5
4.776	14.2	20.3	34.5	56.0	-21.5
8.410	18.0	20.4	38.4	60.0	-21.6
0.162	23.2	20.2	43.4	65.4	-22.0
0.184	22.1	20.2	42.3	64.3	-22.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.040	22.1	20.4	42.5	50.0	-7.5
0.153	26.8	20.2	47.0	55.8	-8.9
6.560	20.7	20.3	41.0	50.0	-9.0
7.580	20.3	20.4	40.7	50.0	-9.3
8.090	20.1	20.4	40.5	50.0	-9.5
7.100	20.1	20.4	40.5	50.0	-9.5
7.280	19.8	20.4	40.2	50.0	-9.8
4.952	15.8	20.3	36.1	46.0	-9.9
7.800	19.5	20.4	39.9	50.0	-10.1
7.630	19.5	20.4	39.9	50.0	-10.1
5.980	19.2	20.3	39.5	50.0	-10.5
6.060	19.1	20.3	39.4	50.0	-10.6
4.608	15.0	20.3	35.3	46.0	-10.8
5.950	18.5	20.3	38.8	50.0	-11.2
5.490	18.3	20.3	38.6	50.0	-11.4
8.740	18.1	20.4	38.5	50.0	-11.5
4.776	14.2	20.3	34.5	46.0	-11.5
8.410	18.0	20.4	38.4	50.0	-11.6
0.162	23.2	20.2	43.4	55.4	-12.0
0.184	22.1	20.2	42.3	54.3	-12.0

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

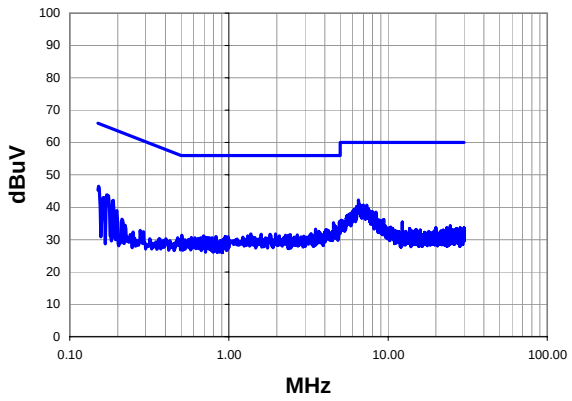
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 52 (5260 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

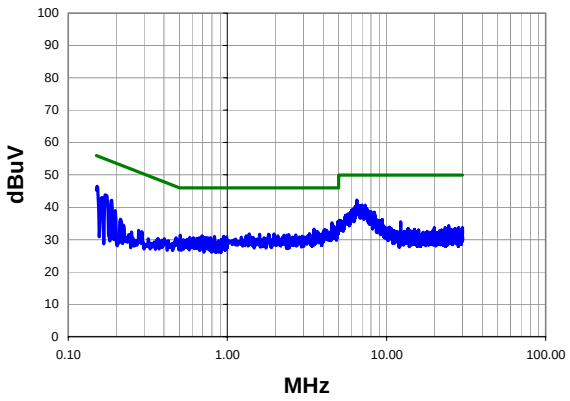
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	5	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.520	21.9	20.3	42.2	60.0	-17.8
7.330	20.3	20.4	40.7	60.0	-19.3
7.000	20.3	20.4	40.7	60.0	-19.3
6.830	20.2	20.4	40.6	60.0	-19.4
0.152	26.3	20.2	46.5	65.9	-19.4
4.944	15.4	20.3	35.7	56.0	-20.3
6.180	19.2	20.3	39.5	60.0	-20.5
4.544	15.0	20.3	35.3	56.0	-20.8
0.170	23.7	20.2	43.9	64.9	-21.1
7.710	18.5	20.4	38.9	60.0	-21.1
7.970	18.3	20.4	38.7	60.0	-21.3
8.380	18.1	20.4	38.5	60.0	-21.5
5.940	18.2	20.3	38.5	60.0	-21.5
7.830	17.8	20.4	38.2	60.0	-21.8
4.600	13.9	20.3	34.2	56.0	-21.9
4.664	13.9	20.3	34.2	56.0	-21.9
0.187	22.0	20.2	42.2	64.2	-22.0
5.750	17.7	20.3	38.0	60.0	-22.0
0.164	22.9	20.2	43.1	65.3	-22.2
3.496	13.0	20.2	33.2	56.0	-22.8

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.520	21.9	20.3	42.2	50.0	-7.8
7.330	20.3	20.4	40.7	50.0	-9.3
7.000	20.3	20.4	40.7	50.0	-9.3
6.830	20.2	20.4	40.6	50.0	-9.4
0.152	26.3	20.2	46.5	55.9	-9.4
4.944	15.4	20.3	35.7	46.0	-10.3
6.180	19.2	20.3	39.5	50.0	-10.5
4.544	15.0	20.3	35.3	46.0	-10.8
0.170	23.7	20.2	43.9	54.9	-11.1
7.710	18.5	20.4	38.9	50.0	-11.1
7.970	18.3	20.4	38.7	50.0	-11.3
8.380	18.1	20.4	38.5	50.0	-11.5
5.940	18.2	20.3	38.5	50.0	-11.5
7.830	17.8	20.4	38.2	50.0	-11.8
4.600	13.9	20.3	34.2	46.0	-11.9
4.664	13.9	20.3	34.2	46.0	-11.9
0.187	22.0	20.2	42.2	54.2	-12.0
5.750	17.7	20.3	38.0	50.0	-12.0
0.164	22.9	20.2	43.1	55.3	-12.2
3.496	13.0	20.2	33.2	46.0	-12.8

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

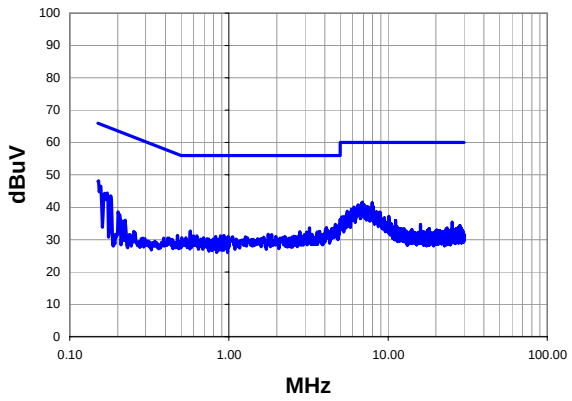
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 52 (5260 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

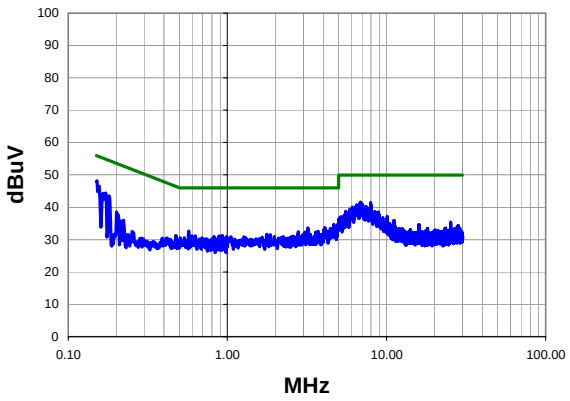
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	6	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.152	28.0	20.2	48.2	65.9	-17.7
6.880	21.2	20.4	41.6	60.0	-18.4
7.940	20.9	20.4	41.3	60.0	-18.7
6.490	20.4	20.3	40.7	60.0	-19.3
6.720	20.1	20.4	40.5	60.0	-19.5
8.010	20.0	20.4	40.4	60.0	-19.6
7.490	19.8	20.4	40.2	60.0	-19.8
5.000	15.9	20.3	36.2	56.0	-19.8
6.110	19.8	20.3	40.1	60.0	-19.9
7.190	19.3	20.4	39.7	60.0	-20.3
0.172	24.3	20.2	44.5	64.9	-20.4
5.900	19.1	20.3	39.4	60.0	-20.6
0.181	23.4	20.2	43.6	64.5	-20.9
5.550	18.5	20.3	38.8	60.0	-21.2
4.656	14.5	20.3	34.8	56.0	-21.3
8.440	18.2	20.4	38.6	60.0	-21.4
8.870	18.1	20.4	38.5	60.0	-21.5
5.770	18.0	20.3	38.3	60.0	-21.7
8.910	17.6	20.4	38.0	60.0	-22.0
4.104	13.5	20.2	33.7	56.0	-22.3

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.152	28.0	20.2	48.2	55.9	-7.7
6.880	21.2	20.4	41.6	50.0	-8.4
7.940	20.9	20.4	41.3	50.0	-8.7
6.490	20.4	20.3	40.7	50.0	-9.3
6.720	20.1	20.4	40.5	50.0	-9.5
8.010	20.0	20.4	40.4	50.0	-9.6
7.490	19.8	20.4	40.2	50.0	-9.8
5.000	15.9	20.3	36.2	46.0	-9.8
6.110	19.8	20.3	40.1	50.0	-9.9
7.190	19.3	20.4	39.7	50.0	-10.3
0.172	24.3	20.2	44.5	54.9	-10.4
5.900	19.1	20.3	39.4	50.0	-10.6
0.181	23.4	20.2	43.6	54.5	-10.9
5.550	18.5	20.3	38.8	50.0	-11.2
4.656	14.5	20.3	34.8	46.0	-11.3
8.440	18.2	20.4	38.6	50.0	-11.4
8.870	18.1	20.4	38.5	50.0	-11.5
5.770	18.0	20.3	38.3	50.0	-11.7
8.910	17.6	20.4	38.0	50.0	-12.0
4.104	13.5	20.2	33.7	46.0	-12.3

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

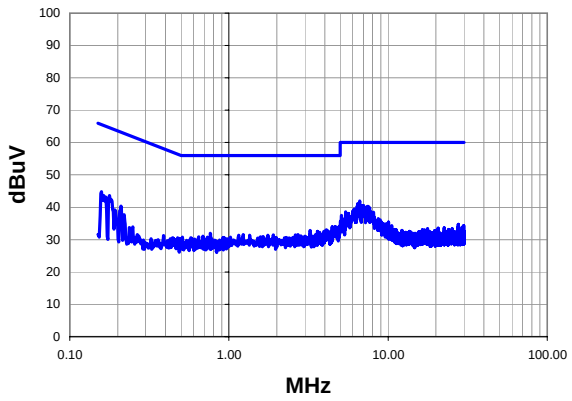
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 100 (5500 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

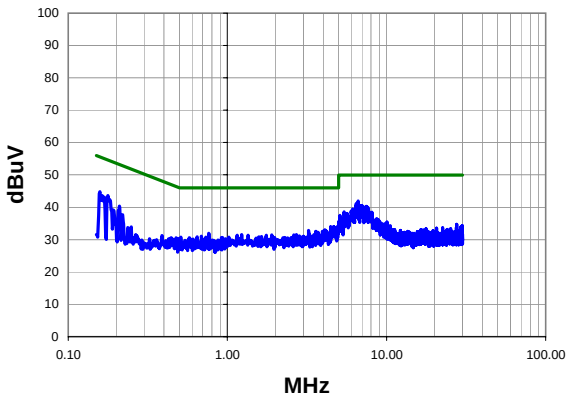
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	7	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.620	21.6	20.3	41.9	60.0	-18.1
6.930	20.2	20.4	40.6	60.0	-19.4
7.500	19.9	20.4	40.3	60.0	-19.7
7.640	19.5	20.4	39.9	60.0	-20.1
6.140	19.2	20.3	39.5	60.0	-20.5
6.740	19.0	20.4	39.4	60.0	-20.6
7.250	18.9	20.4	39.3	60.0	-20.7
0.159	24.6	20.2	44.8	65.5	-20.8
0.177	23.5	20.2	43.7	64.6	-21.0
7.750	18.3	20.4	38.7	60.0	-21.3
5.420	18.3	20.3	38.6	60.0	-21.4
4.928	13.9	20.3	34.2	56.0	-21.8
5.640	17.8	20.3	38.1	60.0	-21.9
4.648	13.8	20.3	34.1	56.0	-22.0
4.696	13.7	20.3	34.0	56.0	-22.1
4.456	13.7	20.2	33.9	56.0	-22.1
5.100	17.2	20.3	37.5	60.0	-22.5
0.210	20.2	20.2	40.4	63.2	-22.9
4.104	12.8	20.2	33.0	56.0	-23.0
4.056	12.6	20.2	32.8	56.0	-23.2

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.620	21.6	20.3	41.9	50.0	-8.1
6.930	20.2	20.4	40.6	50.0	-9.4
7.500	19.9	20.4	40.3	50.0	-9.7
7.640	19.5	20.4	39.9	50.0	-10.1
6.140	19.2	20.3	39.5	50.0	-10.5
6.740	19.0	20.4	39.4	50.0	-10.6
7.250	18.9	20.4	39.3	50.0	-10.7
0.159	24.6	20.2	44.8	55.5	-10.8
0.177	23.5	20.2	43.7	54.6	-11.0
7.750	18.3	20.4	38.7	50.0	-11.3
5.420	18.3	20.3	38.6	50.0	-11.4
4.928	13.9	20.3	34.2	46.0	-11.8
5.640	17.8	20.3	38.1	50.0	-11.9
4.648	13.8	20.3	34.1	46.0	-12.0
4.696	13.7	20.3	34.0	46.0	-12.1
4.456	13.7	20.2	33.9	46.0	-12.1
5.100	17.2	20.3	37.5	50.0	-12.5
0.210	20.2	20.2	40.4	53.2	-12.9
4.104	12.8	20.2	33.0	46.0	-13.0
4.056	12.6	20.2	32.8	46.0	-13.2

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

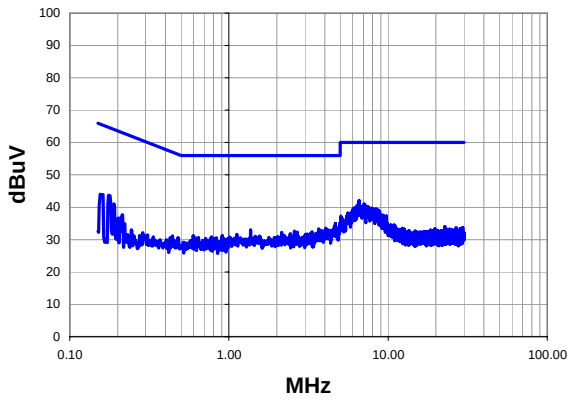
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 100 (5500 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

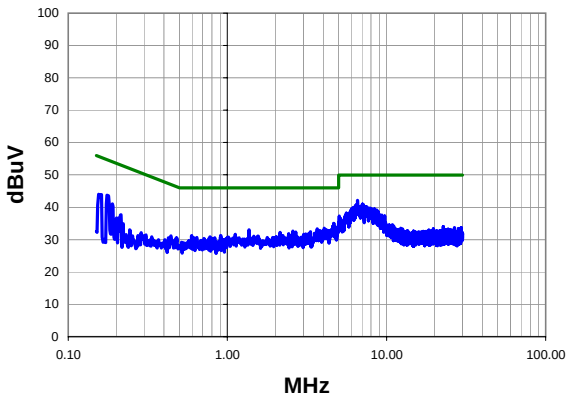
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	8	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.580	21.8	20.3	42.1	60.0	-17.9
7.080	20.6	20.4	41.0	60.0	-19.0
7.030	20.6	20.4	41.0	60.0	-19.0
6.370	20.2	20.3	40.5	60.0	-19.5
7.530	19.8	20.4	40.2	60.0	-19.8
7.310	19.8	20.4	40.2	60.0	-19.8
7.890	19.4	20.4	39.8	60.0	-20.2
6.130	19.5	20.3	39.8	60.0	-20.2
8.400	19.1	20.4	39.5	60.0	-20.5
8.200	19.0	20.4	39.4	60.0	-20.6
8.690	18.8	20.4	39.2	60.0	-20.8
0.176	23.6	20.2	43.8	64.7	-20.9
4.664	14.8	20.3	35.1	56.0	-21.0
8.820	18.4	20.4	38.8	60.0	-21.2
8.770	18.1	20.4	38.5	60.0	-21.5
0.155	23.9	20.2	44.1	65.7	-21.7
5.820	18.0	20.3	38.3	60.0	-21.7
5.590	17.9	20.3	38.2	60.0	-21.8
4.704	13.7	20.3	34.0	56.0	-22.1
9.360	17.2	20.4	37.6	60.0	-22.4

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.580	21.8	20.3	42.1	50.0	-7.9
7.080	20.6	20.4	41.0	50.0	-9.0
7.030	20.6	20.4	41.0	50.0	-9.0
6.370	20.2	20.3	40.5	50.0	-9.5
7.530	19.8	20.4	40.2	50.0	-9.8
7.310	19.8	20.4	40.2	50.0	-9.8
7.890	19.4	20.4	39.8	50.0	-10.2
6.130	19.5	20.3	39.8	50.0	-10.2
8.400	19.1	20.4	39.5	50.0	-10.5
8.200	19.0	20.4	39.4	50.0	-10.6
8.690	18.8	20.4	39.2	50.0	-10.8
0.176	23.6	20.2	43.8	54.7	-10.9
4.664	14.8	20.3	35.1	46.0	-11.0
8.820	18.4	20.4	38.8	50.0	-11.2
8.770	18.1	20.4	38.5	50.0	-11.5
0.155	23.9	20.2	44.1	55.7	-11.7
5.820	18.0	20.3	38.3	50.0	-11.7
5.590	17.9	20.3	38.2	50.0	-11.8
4.704	13.7	20.3	34.0	46.0	-12.1
9.360	17.2	20.4	37.6	50.0	-12.4

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

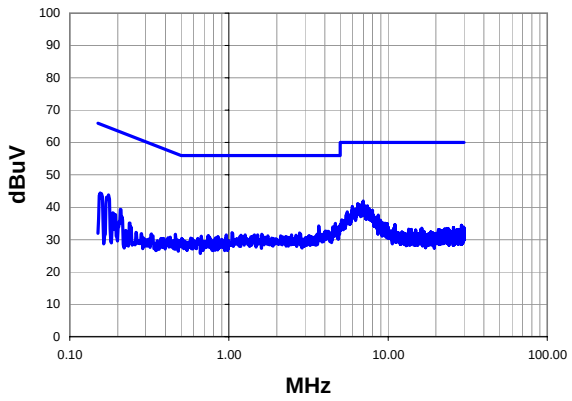
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 64 (5320 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

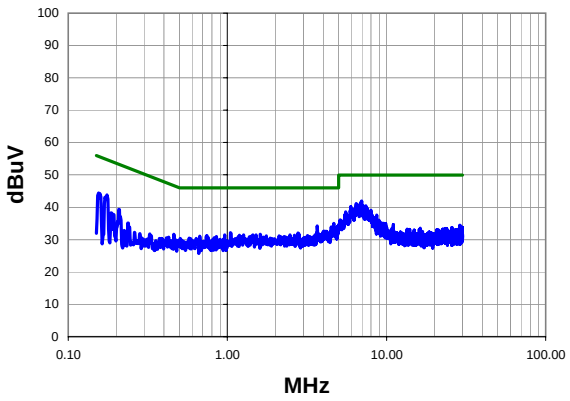
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	9	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.970	21.5	20.4	41.9	60.0	-18.1
6.910	21.2	20.4	41.6	60.0	-18.4
6.440	20.8	20.3	41.1	60.0	-18.9
7.400	20.1	20.4	40.5	60.0	-19.5
5.960	19.9	20.3	40.2	60.0	-19.8
7.290	19.7	20.4	40.1	60.0	-19.9
7.330	19.6	20.4	40.0	60.0	-20.0
6.190	19.1	20.3	39.4	60.0	-20.6
0.176	23.7	20.2	43.9	64.7	-20.8
7.970	18.7	20.4	39.1	60.0	-20.9
4.656	14.8	20.3	35.1	56.0	-21.0
0.155	24.3	20.2	44.5	65.7	-21.3
5.550	18.3	20.3	38.6	60.0	-21.4
3.672	14.0	20.2	34.2	56.0	-21.8
4.488	13.7	20.2	33.9	56.0	-22.1
8.660	17.2	20.4	37.6	60.0	-22.4
8.500	16.5	20.4	36.9	60.0	-23.1
4.040	12.4	20.2	32.6	56.0	-23.4
1.048	12.0	20.2	32.2	56.0	-23.8
0.208	19.2	20.2	39.4	63.3	-23.9

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.970	21.5	20.4	41.9	50.0	-8.1
6.910	21.2	20.4	41.6	50.0	-8.4
6.440	20.8	20.3	41.1	50.0	-8.9
7.400	20.1	20.4	40.5	50.0	-9.5
5.960	19.9	20.3	40.2	50.0	-9.8
7.290	19.7	20.4	40.1	50.0	-9.9
7.330	19.6	20.4	40.0	50.0	-10.0
6.190	19.1	20.3	39.4	50.0	-10.6
0.176	23.7	20.2	43.9	54.7	-10.8
7.970	18.7	20.4	39.1	50.0	-10.9
4.656	14.8	20.3	35.1	46.0	-11.0
0.155	24.3	20.2	44.5	55.7	-11.3
5.550	18.3	20.3	38.6	50.0	-11.4
3.672	14.0	20.2	34.2	46.0	-11.8
4.488	13.7	20.2	33.9	46.0	-12.1
8.660	17.2	20.4	37.6	50.0	-12.4
8.500	16.5	20.4	36.9	50.0	-13.1
4.040	12.4	20.2	32.6	46.0	-13.4
1.048	12.0	20.2	32.2	46.0	-13.8
0.208	19.2	20.2	39.4	53.3	-13.9

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

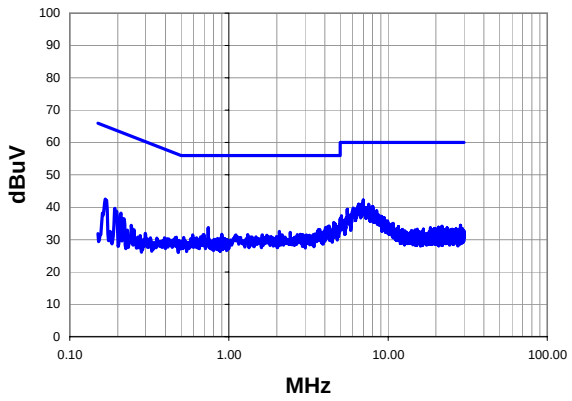
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 64 (5320 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

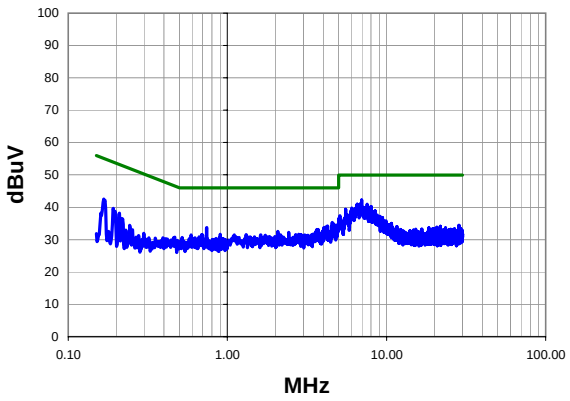
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	10	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.980	21.8	20.4	42.2	60.0	-17.8
6.540	20.6	20.3	40.9	60.0	-19.1
7.560	20.5	20.4	40.9	60.0	-19.1
5.000	16.1	20.3	36.4	56.0	-19.6
6.800	19.9	20.4	40.3	60.0	-19.7
7.960	19.7	20.4	40.1	60.0	-19.9
7.640	19.5	20.4	39.9	60.0	-20.1
6.040	19.5	20.3	39.8	60.0	-20.2
5.540	19.1	20.3	39.4	60.0	-20.6
4.552	15.1	20.3	35.4	56.0	-20.7
8.470	18.5	20.4	38.9	60.0	-21.1
4.656	14.6	20.3	34.9	56.0	-21.2
4.608	14.5	20.3	34.8	56.0	-21.3
8.280	18.2	20.4	38.6	60.0	-21.4
4.256	14.0	20.2	34.2	56.0	-21.8
4.872	13.9	20.3	34.2	56.0	-21.8
4.160	13.7	20.2	33.9	56.0	-22.1
0.742	13.5	20.2	33.7	56.0	-22.3
8.770	17.2	20.4	37.6	60.0	-22.4
0.167	22.4	20.2	42.6	65.1	-22.5

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.980	21.8	20.4	42.2	50.0	-7.8
6.540	20.6	20.3	40.9	50.0	-9.1
7.560	20.5	20.4	40.9	50.0	-9.1
5.000	16.1	20.3	36.4	46.0	-9.6
6.800	19.9	20.4	40.3	50.0	-9.7
7.960	19.7	20.4	40.1	50.0	-9.9
7.640	19.5	20.4	39.9	50.0	-10.1
6.040	19.5	20.3	39.8	50.0	-10.2
5.540	19.1	20.3	39.4	50.0	-10.6
4.552	15.1	20.3	35.4	46.0	-10.7
8.470	18.5	20.4	38.9	50.0	-11.1
4.656	14.6	20.3	34.9	46.0	-11.2
4.608	14.5	20.3	34.8	46.0	-11.3
8.280	18.2	20.4	38.6	50.0	-11.4
4.256	14.0	20.2	34.2	46.0	-11.8
4.872	13.9	20.3	34.2	46.0	-11.8
4.160	13.7	20.2	33.9	46.0	-12.1
0.742	13.5	20.2	33.7	46.0	-12.3
8.770	17.2	20.4	37.6	50.0	-12.4
0.167	22.4	20.2	42.6	55.1	-12.5

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

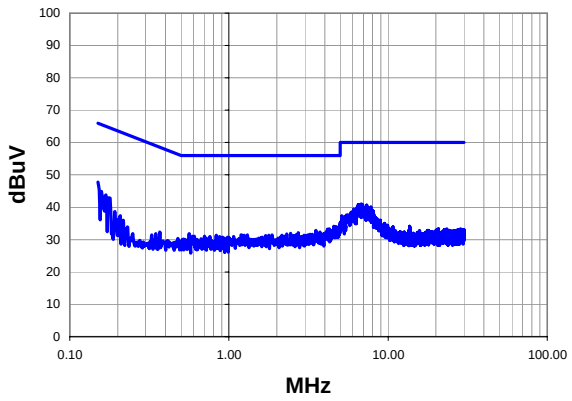
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 116 (5580 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

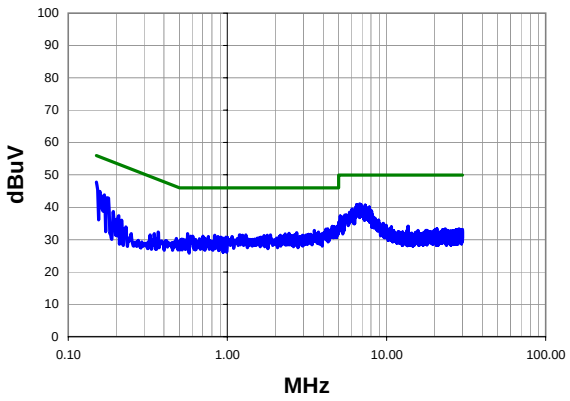
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	11	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	27.6	20.2	47.8	66.0	-18.2
6.800	20.7	20.4	41.1	60.0	-18.9
6.910	20.5	20.4	40.9	60.0	-19.1
6.510	20.5	20.3	40.8	60.0	-19.2
7.340	20.3	20.4	40.7	60.0	-19.3
7.800	19.6	20.4	40.0	60.0	-20.0
6.080	19.2	20.3	39.5	60.0	-20.5
0.159	24.7	20.2	44.9	65.5	-20.7
7.970	18.7	20.4	39.1	60.0	-20.9
0.169	23.7	20.2	43.9	65.0	-21.2
7.890	18.1	20.4	38.5	60.0	-21.5
0.176	22.8	20.2	43.0	64.7	-21.7
4.552	13.9	20.3	34.2	56.0	-21.9
4.712	13.8	20.3	34.1	56.0	-22.0
8.150	17.5	20.4	37.9	60.0	-22.1
5.580	17.4	20.3	37.7	60.0	-22.3
4.280	13.1	20.2	33.3	56.0	-22.7
5.120	17.0	20.3	37.3	60.0	-22.7
4.160	13.0	20.2	33.2	56.0	-22.8
5.280	16.7	20.3	37.0	60.0	-23.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	27.6	20.2	47.8	56.0	-8.2
6.800	20.7	20.4	41.1	50.0	-8.9
6.910	20.5	20.4	40.9	50.0	-9.1
6.510	20.5	20.3	40.8	50.0	-9.2
7.340	20.3	20.4	40.7	50.0	-9.3
7.800	19.6	20.4	40.0	50.0	-10.0
6.080	19.2	20.3	39.5	50.0	-10.5
0.159	24.7	20.2	44.9	55.5	-10.7
7.970	18.7	20.4	39.1	50.0	-10.9
0.169	23.7	20.2	43.9	55.0	-11.2
7.890	18.1	20.4	38.5	50.0	-11.5
0.176	22.8	20.2	43.0	54.7	-11.7
4.552	13.9	20.3	34.2	46.0	-11.9
4.712	13.8	20.3	34.1	46.0	-12.0
8.150	17.5	20.4	37.9	50.0	-12.1
5.580	17.4	20.3	37.7	50.0	-12.3
4.280	13.1	20.2	33.3	46.0	-12.7
5.120	17.0	20.3	37.3	50.0	-12.7
4.160	13.0	20.2	33.2	46.0	-12.8
5.280	16.7	20.3	37.0	50.0	-13.0

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

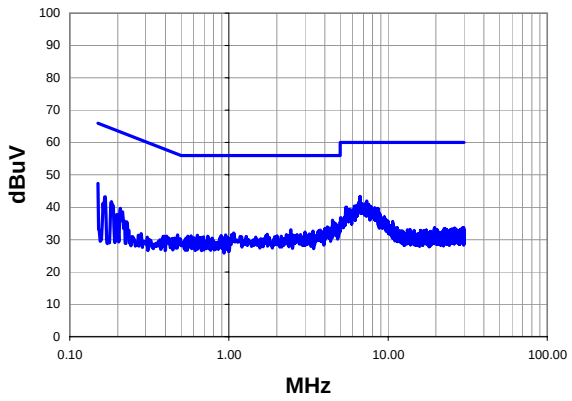
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 116 (5580 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

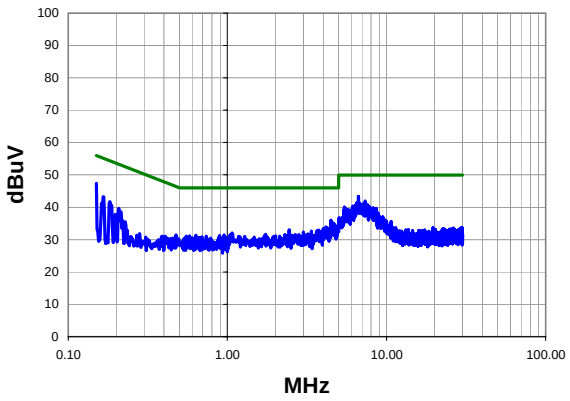
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	12	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.660	23.0	20.3	43.3	60.0	-16.7
7.330	21.5	20.4	41.9	60.0	-18.1
6.530	21.2	20.3	41.5	60.0	-18.5
6.720	21.1	20.4	41.5	60.0	-18.5
0.150	27.2	20.2	47.4	66.0	-18.6
7.280	20.7	20.4	41.1	60.0	-18.9
7.550	20.4	20.4	40.8	60.0	-19.2
6.280	20.1	20.3	40.4	60.0	-19.6
6.150	20.1	20.3	40.4	60.0	-19.6
7.760	19.8	20.4	40.2	60.0	-19.8
5.440	19.8	20.3	40.1	60.0	-19.9
4.480	15.8	20.2	36.0	56.0	-20.0
8.250	19.4	20.4	39.8	60.0	-20.2
8.610	19.3	20.4	39.7	60.0	-20.3
8.650	19.2	20.4	39.6	60.0	-20.4
4.496	15.2	20.2	35.4	56.0	-20.6
5.400	19.1	20.3	39.4	60.0	-20.6
5.720	19.0	20.3	39.3	60.0	-20.7
4.712	14.6	20.3	34.9	56.0	-21.2
8.830	17.8	20.4	38.2	60.0	-21.8

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.660	23.0	20.3	43.3	50.0	-6.7
7.330	21.5	20.4	41.9	50.0	-8.1
6.530	21.2	20.3	41.5	50.0	-8.5
6.720	21.1	20.4	41.5	50.0	-8.5
0.150	27.2	20.2	47.4	56.0	-8.6
7.280	20.7	20.4	41.1	50.0	-8.9
7.550	20.4	20.4	40.8	50.0	-9.2
6.280	20.1	20.3	40.4	50.0	-9.6
6.150	20.1	20.3	40.4	50.0	-9.6
7.760	19.8	20.4	40.2	50.0	-9.8
5.440	19.8	20.3	40.1	50.0	-9.9
4.480	15.8	20.2	36.0	46.0	-10.0
8.250	19.4	20.4	39.8	50.0	-10.2
8.610	19.3	20.4	39.7	50.0	-10.3
8.650	19.2	20.4	39.6	50.0	-10.4
4.496	15.2	20.2	35.4	46.0	-10.6
5.400	19.1	20.3	39.4	50.0	-10.6
5.720	19.0	20.3	39.3	50.0	-10.7
4.712	14.6	20.3	34.9	46.0	-11.2
8.830	17.8	20.4	38.2	50.0	-11.8

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2010.04.06
Version 2010.3.17

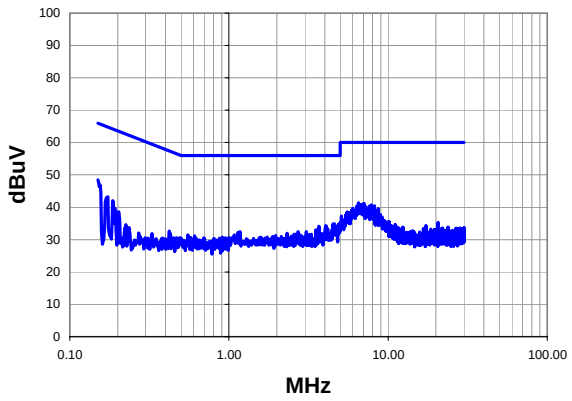
Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin

EUT:	Silverton
Configuration:	3 - AC Conducted Emissions
Customer:	Summit Semiconductor
Attendees:	None
EUT Power:	3.3 VDC
Operating Mode:	Continuous transmit. 6 Mbps, Channel 140 (5700 MHz)
Deviations:	No deviations.
Comments:	36 inch I/O cable

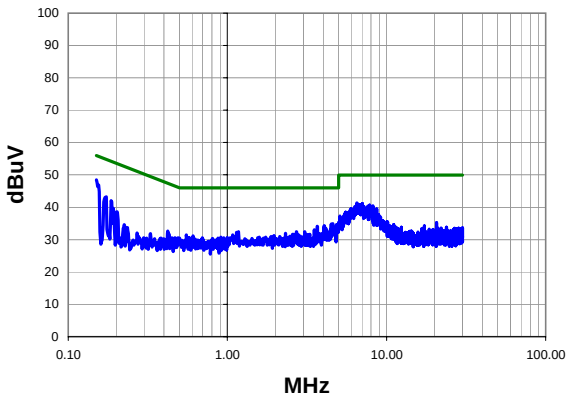
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	13	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	28.3	20.2	48.5	66.0	-17.5
6.500	21.0	20.3	41.3	60.0	-18.7
7.050	20.8	20.4	41.2	60.0	-18.8
7.830	20.2	20.4	40.6	60.0	-19.4
8.220	20.0	20.4	40.4	60.0	-19.6
7.630	19.9	20.4	40.3	60.0	-19.7
7.220	19.9	20.4	40.3	60.0	-19.7
5.990	19.3	20.3	39.6	60.0	-20.4
8.670	19.1	20.4	39.5	60.0	-20.5
8.410	18.7	20.4	39.1	60.0	-20.9
4.592	14.7	20.3	35.0	56.0	-21.1
4.488	14.6	20.2	34.8	56.0	-21.2
0.174	23.1	20.2	43.3	64.8	-21.5
5.540	18.2	20.3	38.5	60.0	-21.5
4.056	14.1	20.2	34.3	56.0	-21.7
3.672	13.9	20.2	34.1	56.0	-21.9
4.080	13.8	20.2	34.0	56.0	-22.0
0.186	21.9	20.2	42.1	64.2	-22.2
8.930	17.3	20.4	37.7	60.0	-22.3
4.168	13.1	20.2	33.3	56.0	-22.7

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	28.3	20.2	48.5	56.0	-7.5
6.500	21.0	20.3	41.3	50.0	-8.7
7.050	20.8	20.4	41.2	50.0	-8.8
7.830	20.2	20.4	40.6	50.0	-9.4
8.220	20.0	20.4	40.4	50.0	-9.6
7.630	19.9	20.4	40.3	50.0	-9.7
7.220	19.9	20.4	40.3	50.0	-9.7
5.990	19.3	20.3	39.6	50.0	-10.4
8.670	19.1	20.4	39.5	50.0	-10.5
8.410	18.7	20.4	39.1	50.0	-10.9
4.592	14.7	20.3	35.0	46.0	-11.1
4.488	14.6	20.2	34.8	46.0	-11.2
0.174	23.1	20.2	43.3	54.8	-11.5
5.540	18.2	20.3	38.5	50.0	-11.5
4.056	14.1	20.2	34.3	46.0	-11.7
3.672	13.9	20.2	34.1	46.0	-11.9
4.080	13.8	20.2	34.0	46.0	-12.0
0.186	21.9	20.2	42.1	54.2	-12.2
8.930	17.3	20.4	37.7	50.0	-12.3
4.168	13.1	20.2	33.3	46.0	-12.7

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

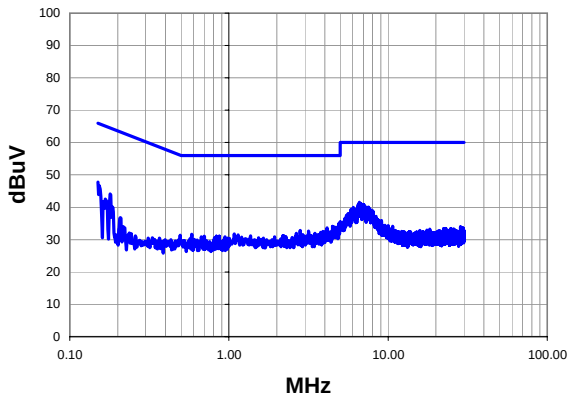
PSA-ESCI 2010.04.06
Version 2010.3.17

Work Order:	FOCU0094	**Date:**	10/01/10	
Project:	None	**Temperature:**	22.7 °C	
Job Site:	EV07	**Humidity:**	46.1	
Serial Number:	2C	**Barometric Pres.:**	1016.6 mb	**Tested by:** Rod Peloquin
EUT:	Silverton			
Configuration:	3 - AC Conducted Emissions			
Customer:	Summit Semiconductor			
Attendees:	None			
EUT Power:	3.3 VDC			
Operating Mode:	Continuous transmit. 6 Mbps, Channel 140 (5700 MHz)			
Deviations:	No deviations.			
Comments:	36 inch I/O cable			

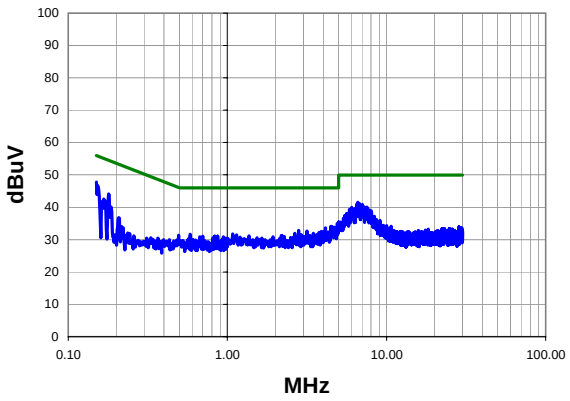
Test Specifications	**Test Method**
FCC 15.207:2010	ANSI C63.10:2009

Run #	14	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	27.6	20.2	47.8	66.0	-18.2
6.590	21.2	20.3	41.5	60.0	-18.5
6.760	20.7	20.4	41.1	60.0	-18.9
7.040	20.4	20.4	40.8	60.0	-19.2
7.530	19.7	20.4	40.1	60.0	-19.9
6.040	19.7	20.3	40.0	60.0	-20.0
0.179	24.0	20.2	44.2	64.5	-20.4
6.320	19.3	20.3	39.6	60.0	-20.4
5.850	19.1	20.3	39.4	60.0	-20.6
7.790	18.8	20.4	39.2	60.0	-20.8
7.670	18.7	20.4	39.1	60.0	-20.9
4.904	14.8	20.3	35.1	56.0	-20.9
8.030	18.5	20.4	38.9	60.0	-21.1
5.890	18.3	20.3	38.6	60.0	-21.4
4.480	13.9	20.2	34.1	56.0	-21.9
5.610	17.8	20.3	38.1	60.0	-21.9
5.720	17.8	20.3	38.1	60.0	-21.9
4.704	13.6	20.3	33.9	56.0	-22.2
4.128	13.4	20.2	33.6	56.0	-22.4
0.167	22.4	20.2	42.6	65.1	-22.5

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.150	27.6	20.2	47.8	56.0	-8.2
6.590	21.2	20.3	41.5	50.0	-8.5
6.760	20.7	20.4	41.1	50.0	-8.9
7.040	20.4	20.4	40.8	50.0	-9.2
7.530	19.7	20.4	40.1	50.0	-9.9
6.040	19.7	20.3	40.0	50.0	-10.0
0.179	24.0	20.2	44.2	54.5	-10.4
6.320	19.3	20.3	39.6	50.0	-10.4
5.850	19.1	20.3	39.4	50.0	-10.6
7.790	18.8	20.4	39.2	50.0	-10.8
7.670	18.7	20.4	39.1	50.0	-10.9
4.904	14.8	20.3	35.1	46.0	-10.9
8.030	18.5	20.4	38.9	50.0	-11.1
5.890	18.3	20.3	38.6	50.0	-11.4
4.480	13.9	20.2	34.1	46.0	-11.9
5.610	17.8	20.3	38.1	50.0	-11.9
5.720	17.8	20.3	38.1	50.0	-11.9
4.704	13.6	20.3	33.9	46.0	-12.2
4.128	13.4	20.2	33.6	46.0	-12.4
0.167	22.4	20.2	42.6	55.1	-12.5

BURST DURATION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	8/6/2009	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

Per ANSI C63.10, for unlicensed wireless devices unable to be configured for 100 % duty cycle even in test mode, the system should be configured for the longest duration duty cycle supported. The transmission pulse duration is that time over which the unlicensed wireless device is on and transmitting at its maximum output power.

Measurement methods defined in ANSI C63.10 are often based upon the relationship between the EUT transmission pulse duration and the sweep speed of the measurement analyzer.

The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer.

NORTHWEST EMC

BURST DURATION

XMit 2010.07.29

EUT:	Silverton			Work Order:	FOCU0094
Serial Number:	2E			Date:	09/23/10
Customer:	Summit Semiconductor			Temperature:	22°C
Attendees:	Ponnappa Pasura			Humidity:	45%
Project:	None			Barometric Pres.:	30.10 in
Tested by:	Rod Peloquin	Power:	3.3 VDC	Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.407:2010	ANSI C63.10:2009

COMMENTS

Gating graph shows operation with the random data set to 0

DEVIATIONS FROM TEST STANDARD

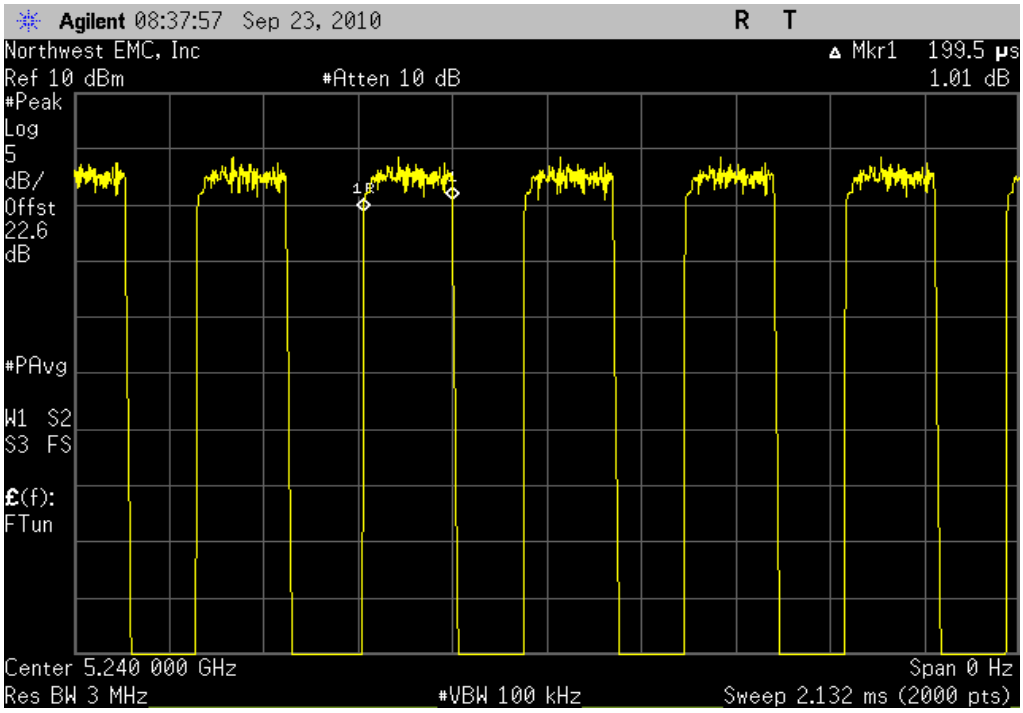
None

Configuration #	2	Signature

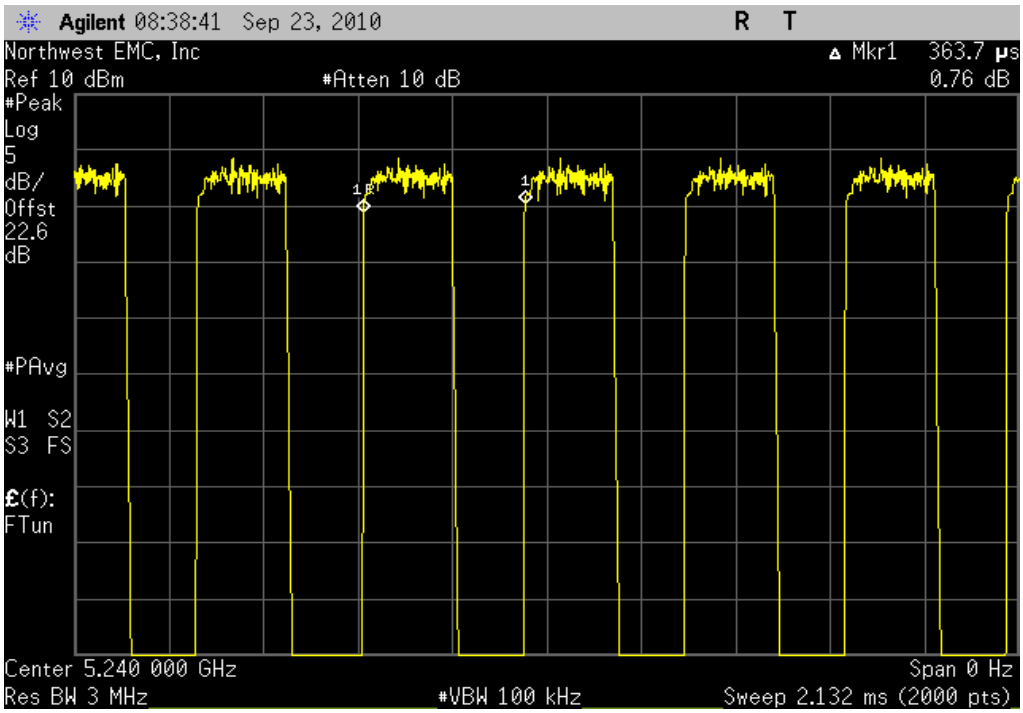
	Value
PULSE DURATION	199.5 µs
PERIOD	363.7 µs
RF GATING	See graph

BURST DURATION

PULSE DURATION
Value: 199.5 µs



PERIOD
Value: 363.7 µs



BURST DURATION

RF GATING
Value: See graph