



## Etherios Design Solutions

ConnectCore6 (i.MX6)

FCC 15.207:2014

FCC 15.407:2014

Report # ETHE0008.1



NVLAP Lab Code: 200881-0

*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. This Report may only be duplicated in its entirety*

Last Date of Test: August 21, 2014  
 Etherios Design Solutions  
 Model: ConnectCore6 (i.MX6)

## Radio Equipment Testing

### Standards

Specification	Method
FCC 15.207:2014	ANSI C63.10:2009
FCC 15.407:2014	ANSI C63.10:2009

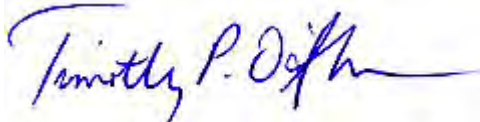
### Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	Yes	Pass	
6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
6.7	Band Edge Compliance	Yes	Pass	
6.8	Frequency Stability	Yes	Pass	
6.9.1	Emission Bandwidth	Yes	Pass	
6.10.3	Peak Transmit Power	Yes	Pass	
6.10.4	Peak Excursion of the Modulation Envelope	Yes	Pass	
6.11.1	Peak Power Spectral Density	Yes	Pass	
7.5	Duty Cycle	Yes	N/A	Characterization of radio operation

### Deviations From Test Standards

None

### Approved By:



Tim O'Shea, Operations Manager

Revision Number	Description	Date	Page Number
00	None		

## Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

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## United States

**FCC** - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

**A2LA** - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

**NVLAP** - Each laboratory is accredited by NVLAP to ISO 17025

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## Canada

**IC** - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

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## European Union

**European Commission** – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

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## Australia/New Zealand

**ACMA** - Recognized by ACMA as a CAB for the acceptance of test data.

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## Korea

**MSIP / RRA** - Recognized by KCC's RRA as a CAB for the acceptance of test data.

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## Japan

**VCCI** - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

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## Taiwan

**BSMI** – Recognized by BSMI as a CAB for the acceptance of test data.

**NCC** - Recognized by NCC as a CAB for the acceptance of test data.

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## Singapore

**IDA** – Recognized by IDA as a CAB for the acceptance of test data.

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## Israel

**MOC** – Recognized by MOC as a CAB for the acceptance of test data.

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## Hong Kong

**OFTA** – Recognized by OFTA as a CAB for the acceptance of test data.

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## Vietnam

**MIC** – Recognized by MIC as a CAB for the acceptance of test data.

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## SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>

## Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

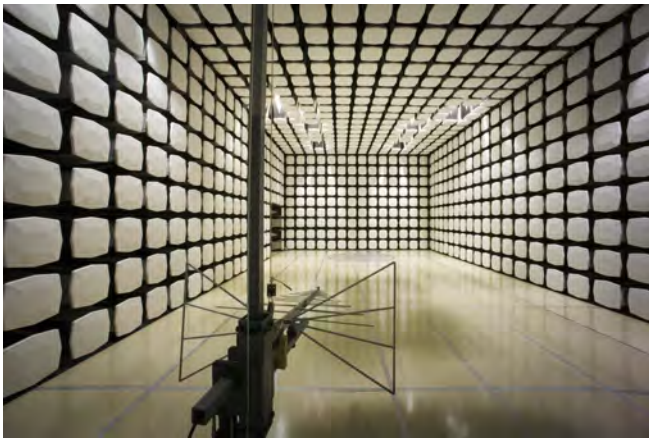
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is on each data sheet. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

<b>Test</b>	<b>+ MU</b>	<b>- MU</b>
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	4.00	-4.00
AC Powerline Conducted Emissions (dB)	2.70	-2.70



<b>Oregon</b> Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	<b>California</b> Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	<b>New York</b> Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	<b>Minnesota</b> Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	<b>Washington</b> Labs NC01-05, SU02, SU07 19201 120 <sup>th</sup> Ave. NE Bothell, WA 98011 (425) 984-6600
<b>VCCI</b>				
A-0108	A-0029		A-0109	A-0110
<b>Industry Canada</b>				
2834D-1, 2834D-2	2834B-1, 2834B-2, 2834B-3		2834E-1	2834F-1
<b>NVLAP</b>				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0





# PRODUCT DESCRIPTION

## Client and Equipment Under Test (EUT) Information

<b>Company Name:</b>	Etherios Design Solutions
<b>Address:</b>	110 N 5th Street, Suite 400
<b>City, State, Zip:</b>	Minneapolis, MN 55413
<b>Test Requested By:</b>	Moshe Peri
<b>Model:</b>	ConnectCore6 (i.MX6)
<b>First Date of Test:</b>	August 05, 2014
<b>Last Date of Test:</b>	August 21, 2014
<b>Receipt Date of Samples:</b>	August 05, 2014
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No Damage

## Information Provided by the Party Requesting the Test

<b>Functional Description of the EUT:</b>
Module with IEEE 802.11a/b/g/n only (BT not populated), Dual Core i.MX6 processor, 1GB DDR3, 4GB eMMC
<b>Testing Objective:</b>
To demonstrate compliance under FCC 15.407 for operation in the 5.2 GHz, 5.3 GHz, and 5.6 GHz bands.

## Configuration ETHE0008- 1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Module	Etherios Design Solutions	50001876-05	00409D7B8CA2

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Power Supply	EZ	GP-4303D	TPY
Laptop	HP	6701b	CNU8312CSS
Laptop Supply	HP	PPP017L	7Y00871803

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB To Serial	Yes	2.2m	No	Module	Laptop
DC Power	No	1.5m	Yes	Module	Power Supply
DC Power	No	1.8m	Yes	Laptop	Laptop Supply
AC Power	No	1.8m	No	Power Supply	AC Mains
AC Power	No	1.8m	No	Laptop Supply	AC Mains

## Configuration ETHE0008- 2

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Module	Etherios Design Solutions	50001876-05	00409D7B8CA2

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Power Supply	EZ	GP-4303D	TPY

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Power	No	3.7m	No	Module	Power Supply

## Configuration ETHE0008- 4

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Module	Etherios Design Solutions	50001876-05	00409D7B8C92

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Power	No	3.7m	No	Module	Power Supply



## Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	8/5/2014	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.
2	8/5/2014	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.
3	8/5/2014	Band Edge Compliance	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	8/7/2014	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.
5	8/11/2014	Frequency Stability	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	8/18/2014	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.
7	8/21/2014	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.
8	8/21/2014	Peak Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.



# POWER TABLE

This power table represents the power level settings used in the customer provided radio control test software during testing.

Frequency Band	Channel	Power Setting
5.15 to 5.25 GHz	Ch 36	13
	Ch 48	13
5.25 to 5.35 GHz	Ch 52	11
	Ch 64	11
5.47 to 5.725 GHz	Ch 100	7
	Ch 116	7
	Ch 140	7

## TEST DESCRIPTION

The EUT will be powered either directly or indirectly from the AC power line. Therefore, conducted emissions measurements were made on the AC input of the EUT, or on the AC input of the device used to power the EUT. 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. The EUT was transmitting at its maximum data rate. 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.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESR7	ARI	05/06/2014	12 mo
LISN	Solar Electronics	9252-50-R-24-BNC	LIY	05/15/2014	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HGN	05/23/2014	24 mo
Attenuator 20dB, BNC	Fairview Microwave	SA01B-20	AQP	07/22/2014	12 mo
MN03 Cables	ESM Cable Corp.	Conducted Cables	MNC	12/05/2013	12 mo

## MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

## CONFIGURATIONS INVESTIGATED

ETHE0008-2

## MODES INVESTIGATED

Transmitting 802.11 6 Mbps, Ch 100, 5500 MHz  
 Transmitting 802.11 6 Mbps, Ch 116, 5580 MHz  
 Transmitting 802.11 6 Mbps, Ch 140, 5700 MHz  
 Transmitting 802.11 6 Mbps, Ch 36, 5180 MHz  
 Transmitting 802.11 6 Mbps, Ch 48, 5240 MHz  
 Transmitting 802.11 6 Mbps, Ch 52, 5260 MHz  
 Transmitting 802.11 6 Mbps, Ch 64, 5320 MHz

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	16	Line:	Positive Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

None

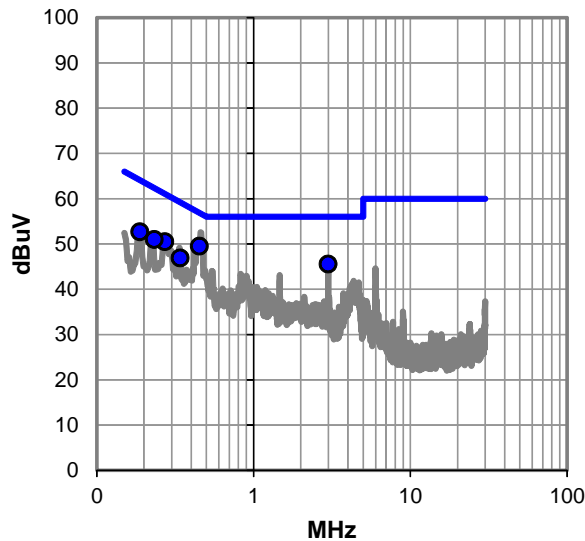
**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 36, 5180 MHz

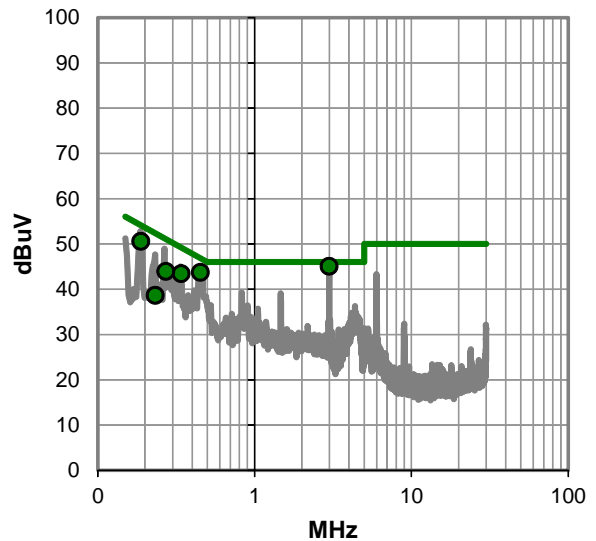
**DEVIATIONS FROM TEST STANDARD**

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



## RESULTS - Run #16

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.451	29.3	20.2	49.5	56.8	-7.3
2.998	25.2	20.3	45.5	56.0	-10.5
0.271	30.3	20.2	50.5	61.1	-10.6
0.233	30.8	20.2	51.0	62.3	-11.3
0.188	32.4	20.3	52.7	64.1	-11.5
0.340	26.7	20.2	46.9	59.2	-12.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.998	24.7	20.3	45.0	46.0	-1.0
0.451	23.5	20.2	43.7	46.8	-3.1
0.188	30.3	20.3	50.6	54.1	-3.6
0.340	23.2	20.2	43.4	49.2	-5.8
0.271	23.7	20.2	43.9	51.1	-7.2
0.233	18.4	20.2	38.6	52.3	-13.7

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	17	Line:	Negative Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

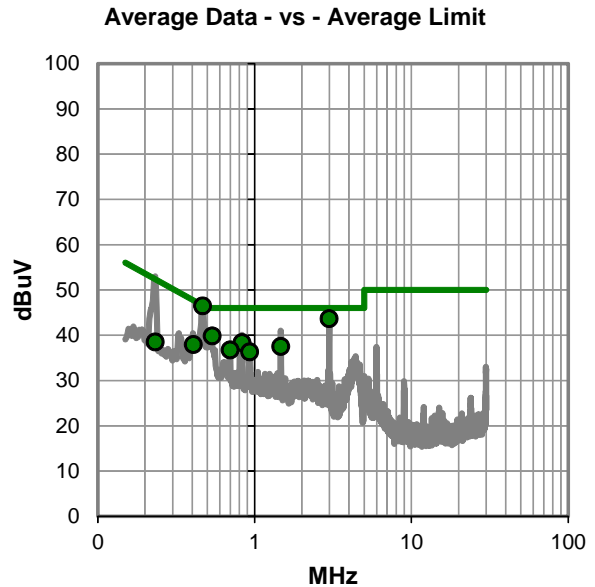
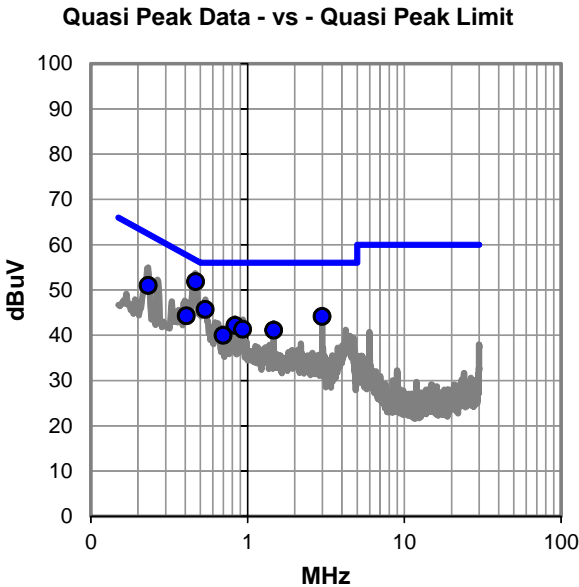
None

**EUT OPERATING MODES**

Transmitting 802.11 n 6 Mbps, Ch 36, 5180 MHz

**DEVIATIONS FROM TEST STANDARD**

None



## RESULTS - Run #17

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.467	31.6	20.2	51.8	56.6	-4.8
0.537	25.5	20.2	45.7	56.0	-10.3
0.233	30.8	20.2	51.0	62.4	-11.4
2.997	23.8	20.3	44.1	56.0	-11.9
0.407	24.1	20.2	44.3	57.7	-13.4
0.830	21.9	20.3	42.2	56.0	-13.8
0.933	21.0	20.3	41.3	56.0	-14.7
1.470	20.8	20.3	41.1	56.0	-14.9
0.699	19.7	20.2	39.9	56.0	-16.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.467	26.3	20.2	46.5	46.6	-0.1
2.997	23.3	20.3	43.6	46.0	-2.4
0.537	19.6	20.2	39.8	46.0	-6.2
0.830	18.1	20.3	38.4	46.0	-7.6
1.470	17.2	20.3	37.5	46.0	-8.5
0.699	16.5	20.2	36.7	46.0	-9.3
0.933	16.0	20.3	36.3	46.0	-9.7
0.407	17.7	20.2	37.9	47.7	-9.8
0.233	18.3	20.2	38.5	52.4	-13.9

## CONCLUSION

Pass

*Trevor Buls*  
 Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	18	Line:	Negative Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

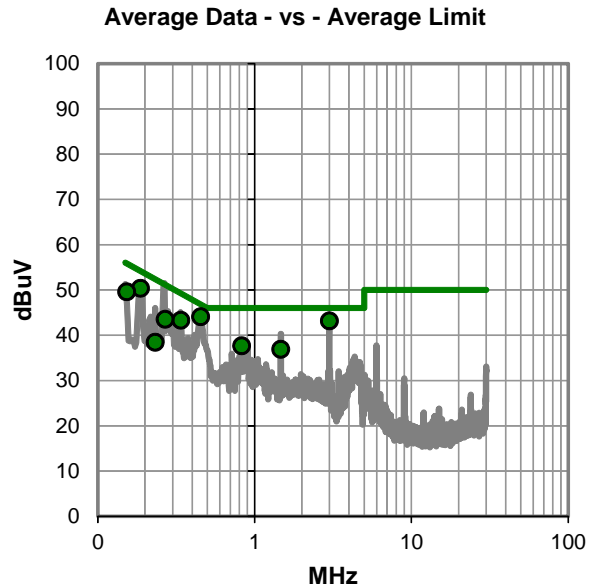
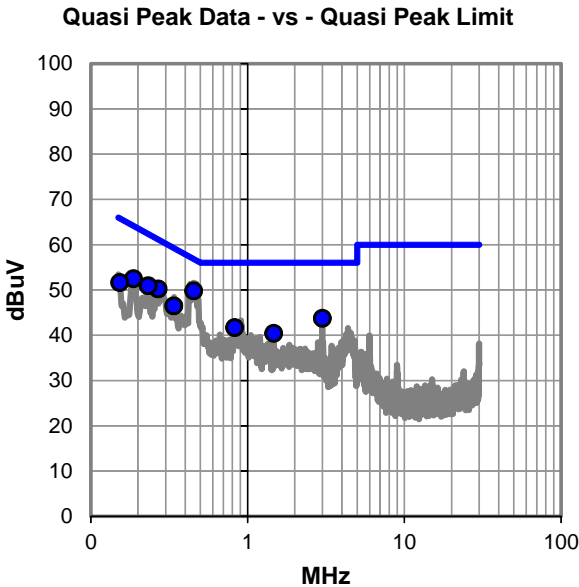
None

**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 48, 5240 MHz

**DEVIATIONS FROM TEST STANDARD**

None





## RESULTS - Run #18

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.455	29.6	20.2	49.8	56.8	-7.0
0.269	30.0	20.2	50.2	61.1	-10.9
0.233	30.7	20.2	50.9	62.4	-11.5
0.188	32.2	20.3	52.5	64.1	-11.7
2.998	23.4	20.3	43.7	56.0	-12.3
0.339	26.3	20.2	46.5	59.2	-12.7
0.153	31.3	20.3	51.6	65.8	-14.2
0.829	21.4	20.3	41.7	56.0	-14.3
1.470	20.1	20.3	40.4	56.0	-15.6

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.455	23.9	20.2	44.1	46.8	-2.7
2.998	22.8	20.3	43.1	46.0	-2.9
0.188	30.1	20.3	50.4	54.1	-3.8
0.339	23.1	20.2	43.3	49.2	-5.9
0.153	29.3	20.3	49.6	55.8	-6.2
0.269	23.3	20.2	43.5	51.1	-7.6
0.829	17.4	20.3	37.7	46.0	-8.3
1.470	16.6	20.3	36.9	46.0	-9.1
0.233	18.2	20.2	38.4	52.4	-14.0

## CONCLUSION

Pass

*Trevor Buls*  
Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	19	Line:	Positive Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

None

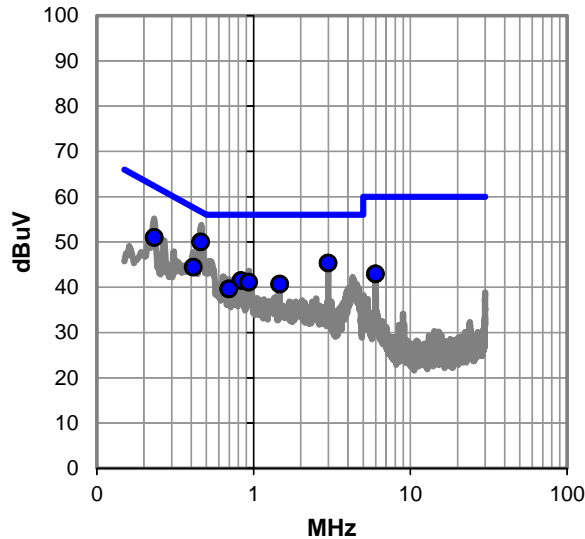
**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 48, 5240 MHz

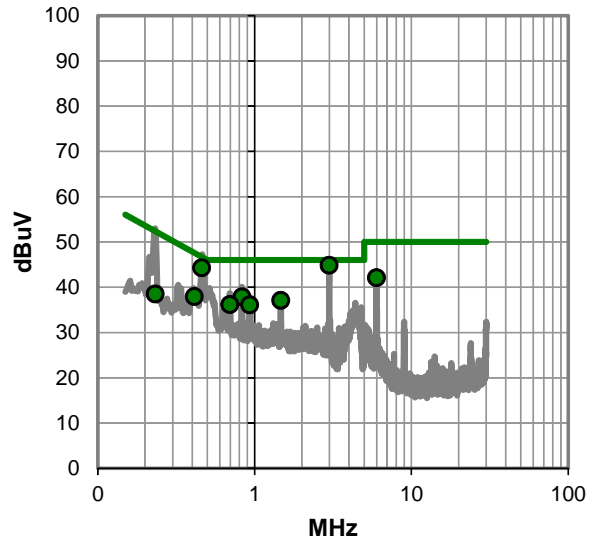
**DEVIATIONS FROM TEST STANDARD**

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #19

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.460	29.8	20.2	50.0	56.7	-6.7
2.997	25.0	20.3	45.3	56.0	-10.7
0.233	30.8	20.2	51.0	62.3	-11.3
0.412	24.2	20.2	44.4	57.6	-13.2
0.830	21.2	20.3	41.5	56.0	-14.5
0.932	20.8	20.3	41.1	56.0	-14.9
1.469	20.4	20.3	40.7	56.0	-15.3
0.697	19.4	20.2	39.6	56.0	-16.4
5.996	22.4	20.5	42.9	60.0	-17.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.997	24.5	20.3	44.8	46.0	-1.2
0.460	24.1	20.2	44.3	46.7	-2.4
5.996	21.6	20.5	42.1	50.0	-7.9
0.830	17.6	20.3	37.9	46.0	-8.1
1.469	16.8	20.3	37.1	46.0	-8.9
0.412	17.7	20.2	37.9	47.6	-9.7
0.697	15.9	20.2	36.1	46.0	-9.9
0.932	15.8	20.3	36.1	46.0	-9.9
0.233	18.3	20.2	38.5	52.3	-13.8

## CONCLUSION

Pass

*Trevor Buls*  
Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	20	Line:	Positive Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

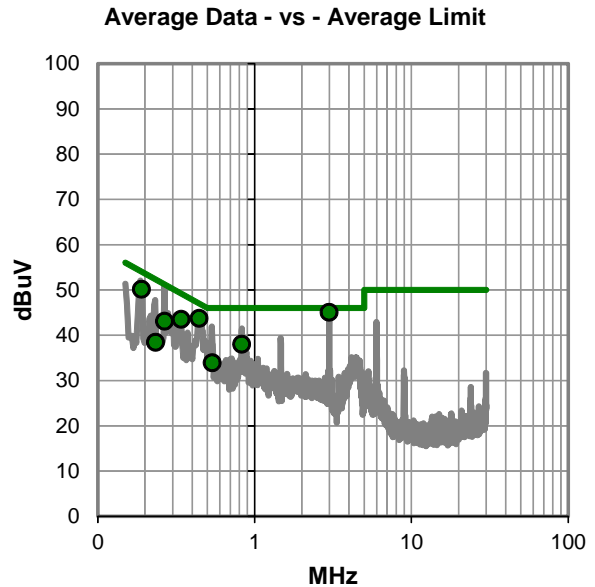
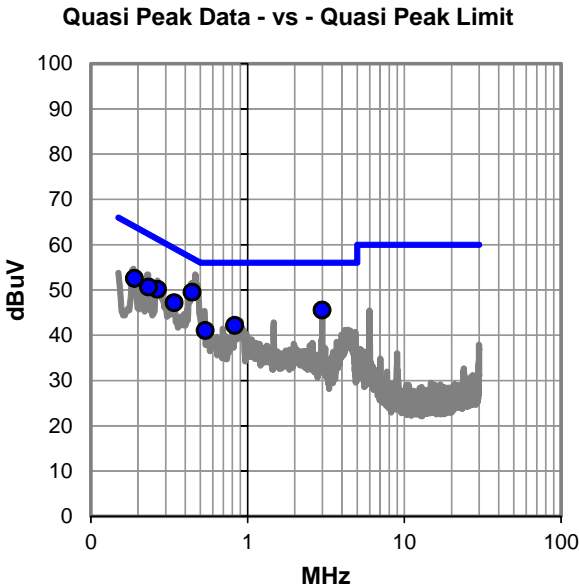
None

**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 52, 5260 MHz

**DEVIATIONS FROM TEST STANDARD**

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #20

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.443	29.3	20.2	49.5	57.0	-7.5
2.998	25.2	20.3	45.5	56.0	-10.5
0.267	29.9	20.2	50.1	61.2	-11.1
0.190	32.3	20.3	52.6	64.0	-11.5
0.234	30.4	20.2	50.6	62.3	-11.7
0.341	27.0	20.2	47.2	59.2	-12.0
0.830	21.9	20.3	42.2	56.0	-13.8
0.538	20.8	20.2	41.0	56.0	-15.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.998	24.7	20.3	45.0	46.0	-1.0
0.443	23.5	20.2	43.7	47.0	-3.3
0.190	29.9	20.3	50.2	54.0	-3.9
0.341	23.3	20.2	43.5	49.2	-5.7
0.830	17.7	20.3	38.0	46.0	-8.0
0.267	22.9	20.2	43.1	51.2	-8.1
0.538	13.7	20.2	33.9	46.0	-12.1
0.234	18.2	20.2	38.4	52.3	-13.9

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	21	Line:	Negative Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

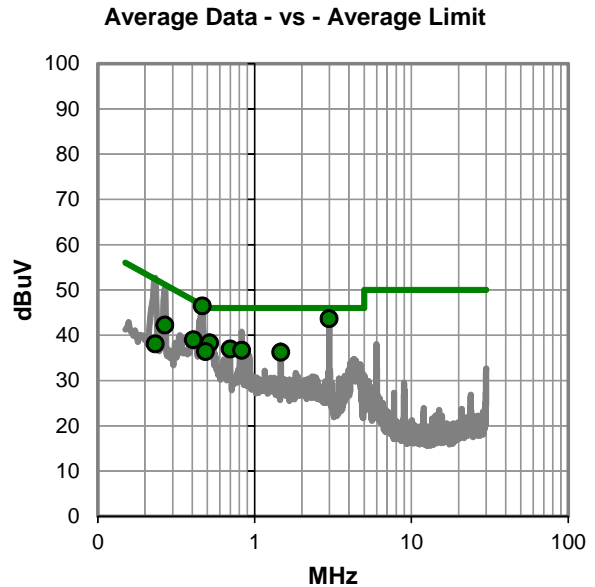
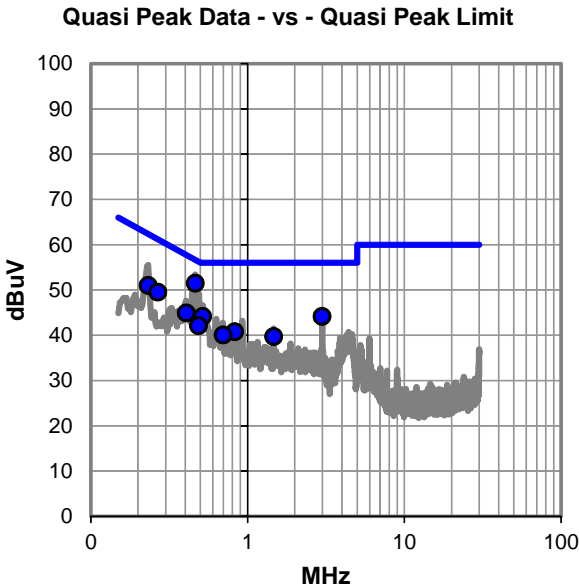
None

**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 52, 5260 MHz

**DEVIATIONS FROM TEST STANDARD**

None



## RESULTS - Run #21

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.465	31.3	20.2	51.5	56.6	-5.1
0.233	30.8	20.2	51.0	62.4	-11.4
0.268	29.3	20.2	49.5	61.2	-11.7
2.998	23.8	20.3	44.1	56.0	-11.9
0.517	23.9	20.2	44.1	56.0	-11.9
0.406	24.7	20.2	44.9	57.7	-12.8
0.487	21.9	20.2	42.1	56.2	-14.1
0.828	20.5	20.3	40.8	56.0	-15.2
0.698	19.8	20.2	40.0	56.0	-16.0
1.471	19.4	20.3	39.7	56.0	-16.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.465	26.3	20.2	46.5	46.6	-0.1
2.998	23.3	20.3	43.6	46.0	-2.4
0.517	18.1	20.2	38.3	46.0	-7.7
0.406	18.8	20.2	39.0	47.7	-8.7
0.268	22.0	20.2	42.2	51.2	-9.0
0.698	16.7	20.2	36.9	46.0	-9.1
0.828	16.4	20.3	36.7	46.0	-9.3
1.471	15.9	20.3	36.2	46.0	-9.8
0.487	16.2	20.2	36.4	46.2	-9.8
0.233	17.9	20.2	38.1	52.4	-14.3

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	22	Line:	Positive Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

None

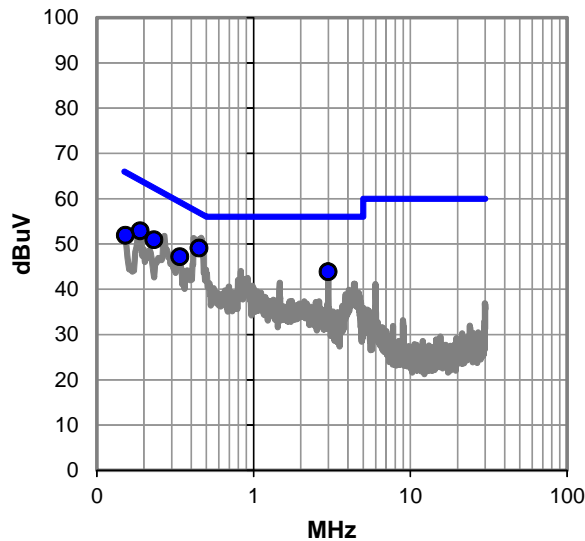
**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 64, 5320 MHz

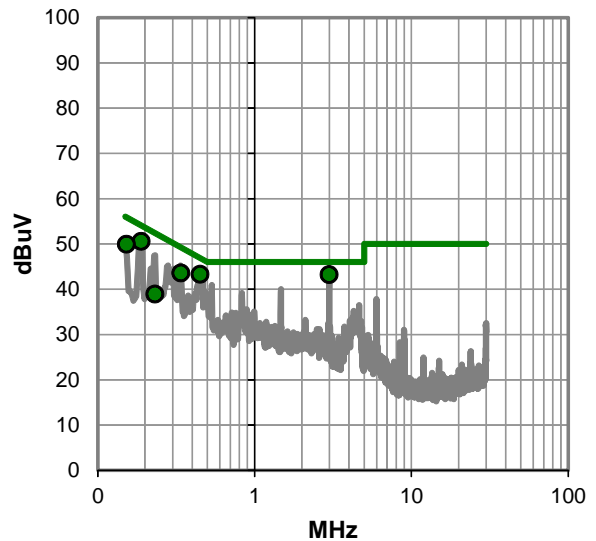
**DEVIATIONS FROM TEST STANDARD**

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit





## RESULTS - Run #22

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.449	28.9	20.2	49.1	56.9	-7.8
0.189	32.6	20.3	52.9	64.1	-11.2
0.232	30.7	20.2	50.9	62.4	-11.5
0.339	27.0	20.2	47.2	59.2	-12.0
2.997	23.5	20.3	43.8	56.0	-12.2
0.153	31.6	20.3	51.9	65.9	-14.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.997	22.9	20.3	43.2	46.0	-2.8
0.189	30.3	20.3	50.6	54.1	-3.5
0.449	23.1	20.2	43.3	46.9	-3.6
0.339	23.4	20.2	43.6	49.2	-5.6
0.153	29.6	20.3	49.9	55.9	-6.0
0.232	18.7	20.2	38.9	52.4	-13.5

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	23	Line:	Negative Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

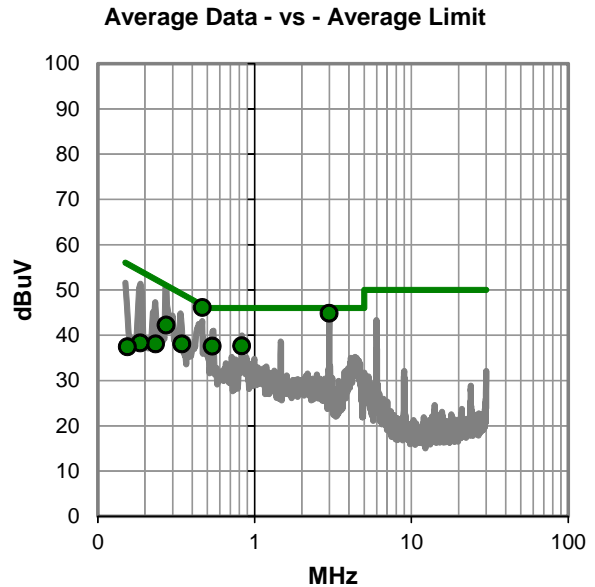
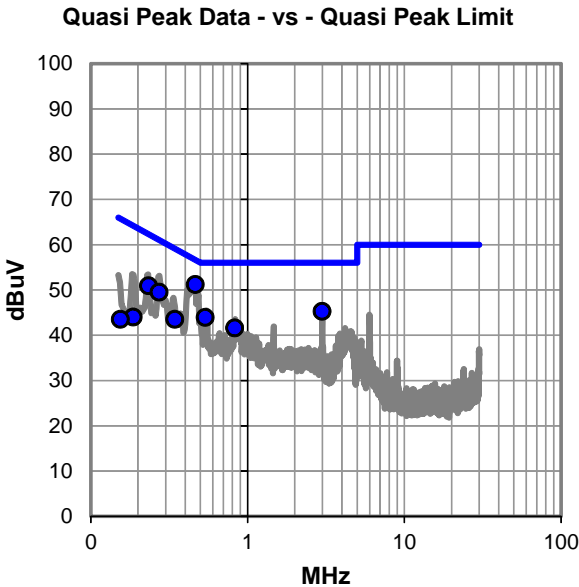
None

**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 64, 5320 MHz

**DEVIATIONS FROM TEST STANDARD**

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #23

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.465	31.0	20.2	51.2	56.6	-5.4
2.998	24.9	20.3	45.2	56.0	-10.8
0.233	30.7	20.2	50.9	62.3	-11.4
0.273	29.3	20.2	49.5	61.0	-11.5
0.537	23.7	20.2	43.9	56.0	-12.1
0.830	21.3	20.3	41.6	56.0	-14.4
0.344	23.3	20.2	43.5	59.1	-15.6
0.187	23.7	20.3	44.0	64.2	-20.2
0.154	23.2	20.3	43.5	65.8	-22.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.465	25.9	20.2	46.1	46.6	-0.5
2.998	24.5	20.3	44.8	46.0	-1.2
0.830	17.4	20.3	37.7	46.0	-8.3
0.537	17.4	20.2	37.6	46.0	-8.4
0.273	22.0	20.2	42.2	51.0	-8.8
0.344	17.9	20.2	38.1	49.1	-11.0
0.233	17.9	20.2	38.1	52.3	-14.2
0.187	18.0	20.3	38.3	54.2	-15.9
0.154	17.1	20.3	37.4	55.8	-18.4

## CONCLUSION

Pass

*Trevor Buls*  
Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	25	Line:	Negative Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

None

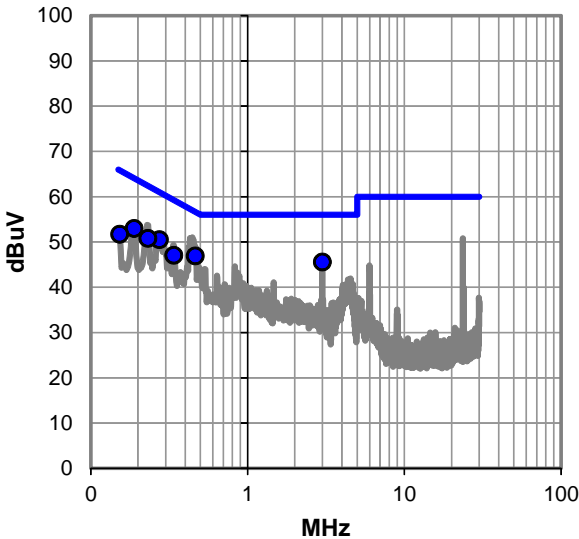
**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 100, 5500 MHz

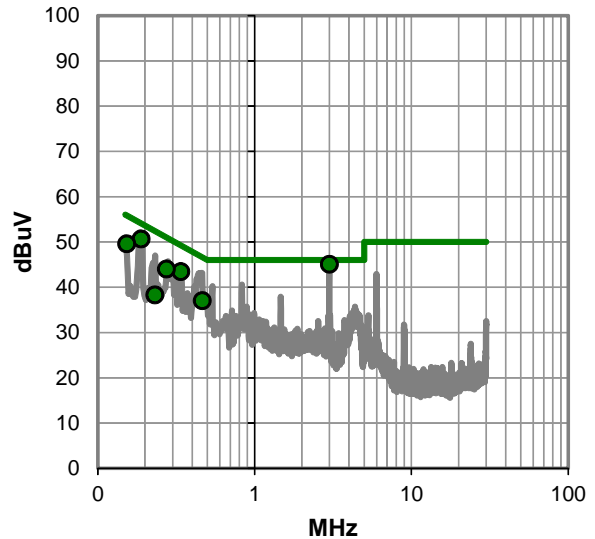
**DEVIATIONS FROM TEST STANDARD**

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



## RESULTS - Run #25

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.466	26.7	20.2	46.9	56.6	-9.7
2.999	25.2	20.3	45.5	56.0	-10.5
0.274	30.3	20.2	50.5	61.0	-10.5
0.189	32.7	20.3	53.0	64.1	-11.1
0.232	30.6	20.2	50.8	62.4	-11.6
0.340	26.8	20.2	47.0	59.2	-12.2
0.153	31.4	20.3	51.7	65.8	-14.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.999	24.7	20.3	45.0	46.0	-1.0
0.189	30.4	20.3	50.7	54.1	-3.4
0.340	23.2	20.2	43.4	49.2	-5.8
0.153	29.3	20.3	49.6	55.8	-6.2
0.274	23.8	20.2	44.0	51.0	-7.0
0.466	16.8	20.2	37.0	46.6	-9.6
0.232	18.1	20.2	38.3	52.4	-14.1

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	26	Line:	Positive Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

None

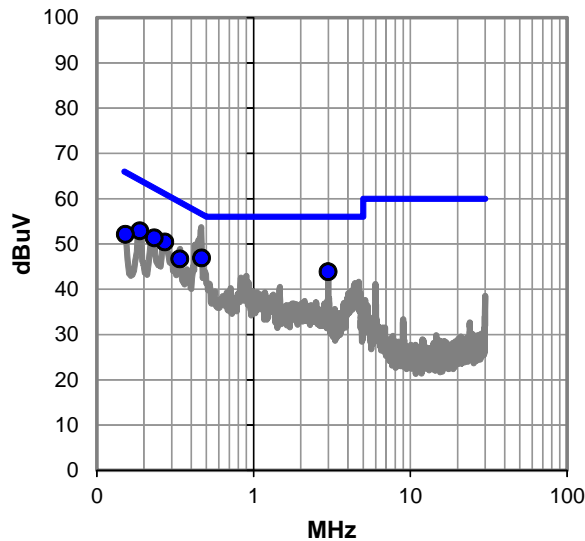
**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 100, 5500 MHz

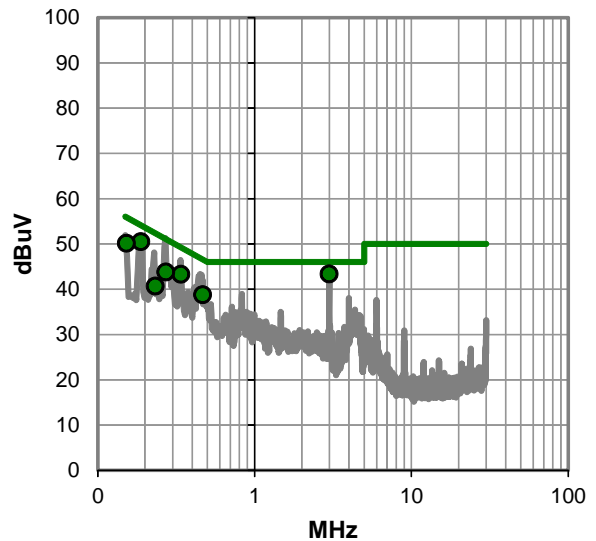
**DEVIATIONS FROM TEST STANDARD**

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



## RESULTS - Run #26

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.466	26.7	20.2	46.9	56.6	-9.7
0.271	30.2	20.2	50.4	61.1	-10.7
0.233	31.1	20.2	51.3	62.4	-11.1
0.188	32.6	20.3	52.9	64.1	-11.3
2.997	23.5	20.3	43.8	56.0	-12.2
0.339	26.5	20.2	46.7	59.2	-12.5
0.153	31.8	20.3	52.1	65.9	-13.8

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.997	23.0	20.3	43.3	46.0	-2.7
0.188	30.2	20.3	50.5	54.1	-3.7
0.153	29.8	20.3	50.1	55.9	-5.8
0.339	23.1	20.2	43.3	49.2	-5.9
0.271	23.6	20.2	43.8	51.1	-7.3
0.466	18.6	20.2	38.8	46.6	-7.8
0.233	20.5	20.2	40.7	52.4	-11.7

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	27	Line:	Negative Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

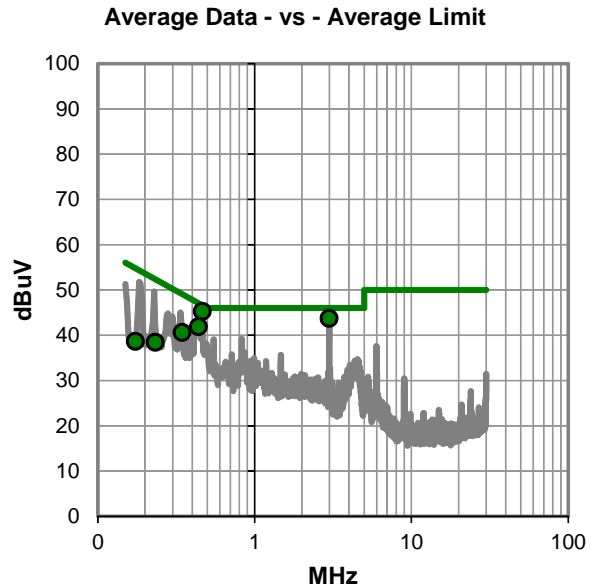
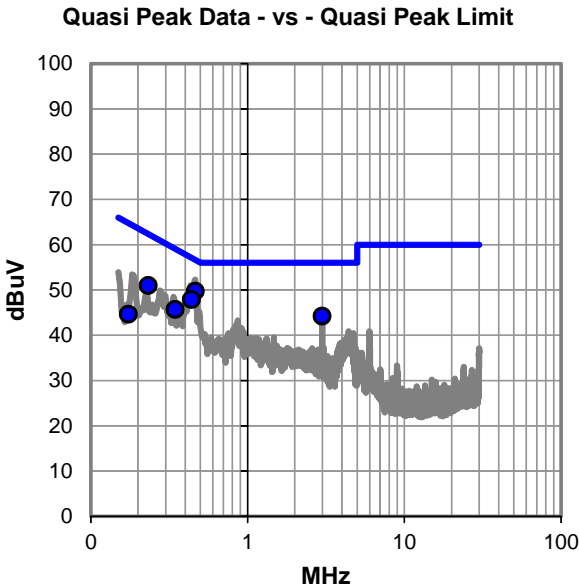
None

**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 116, 5580 MHz

**DEVIATIONS FROM TEST STANDARD**

None





## RESULTS - Run #27

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.464	29.5	20.2	49.7	56.6	-6.9
0.440	27.7	20.2	47.9	57.1	-9.2
0.233	30.8	20.2	51.0	62.3	-11.3
2.998	23.9	20.3	44.2	56.0	-11.8
0.345	25.5	20.2	45.7	59.1	-13.4
0.174	24.3	20.3	44.6	64.8	-20.2

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.464	25.1	20.2	45.3	46.6	-1.3
2.998	23.4	20.3	43.7	46.0	-2.3
0.440	21.7	20.2	41.9	47.1	-5.2
0.345	20.4	20.2	40.6	49.1	-8.5
0.233	18.2	20.2	38.4	52.3	-13.9
0.174	18.3	20.3	38.6	54.8	-16.2

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	28	Line:	Positive Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

None

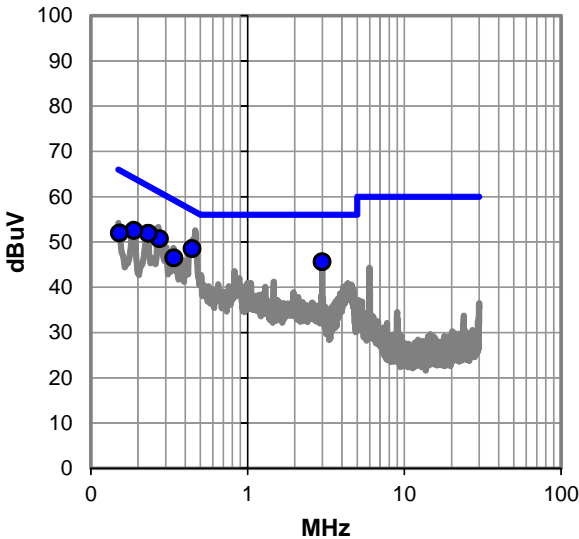
**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 116, 5580 MHz

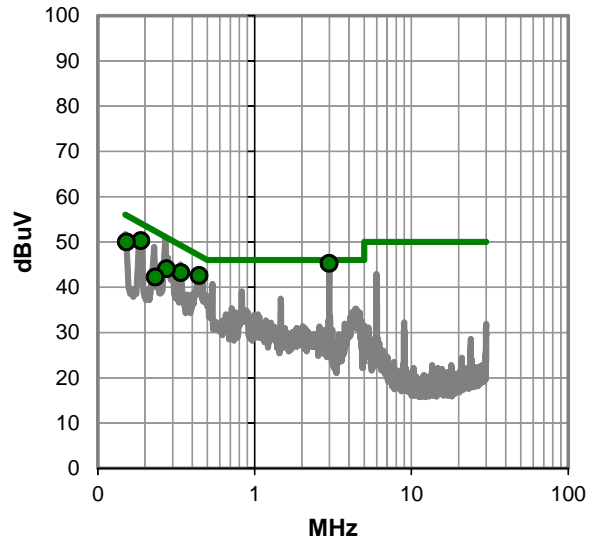
**DEVIATIONS FROM TEST STANDARD**

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



## RESULTS - Run #28

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.443	28.3	20.2	48.5	57.0	-8.5
0.274	30.5	20.2	50.7	61.0	-10.3
2.998	25.3	20.3	45.6	56.0	-10.4
0.233	31.7	20.2	51.9	62.4	-10.5
0.188	32.3	20.3	52.6	64.1	-11.6
0.339	26.3	20.2	46.5	59.2	-12.7
0.153	31.7	20.3	52.0	65.9	-13.9

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.998	24.9	20.3	45.2	46.0	-0.8
0.188	30.0	20.3	50.3	54.1	-3.9
0.443	22.4	20.2	42.6	47.0	-4.4
0.153	29.7	20.3	50.0	55.9	-5.9
0.339	23.0	20.2	43.2	49.2	-6.0
0.274	23.9	20.2	44.1	51.0	-6.9
0.233	22.0	20.2	42.2	52.4	-10.2

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	29	Line:	Positive Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

None

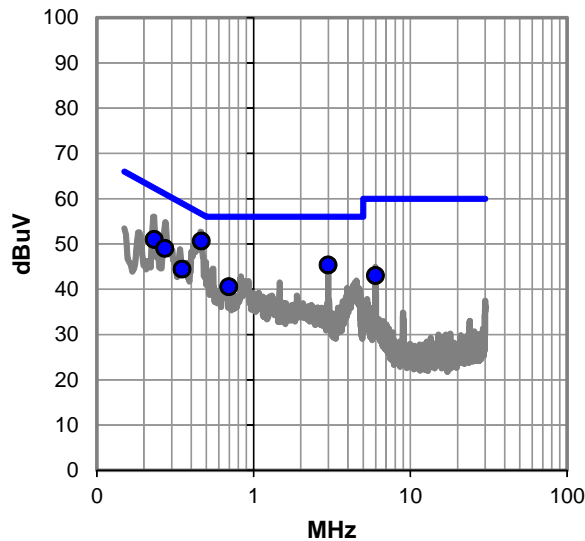
**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 140, 5700 MHz

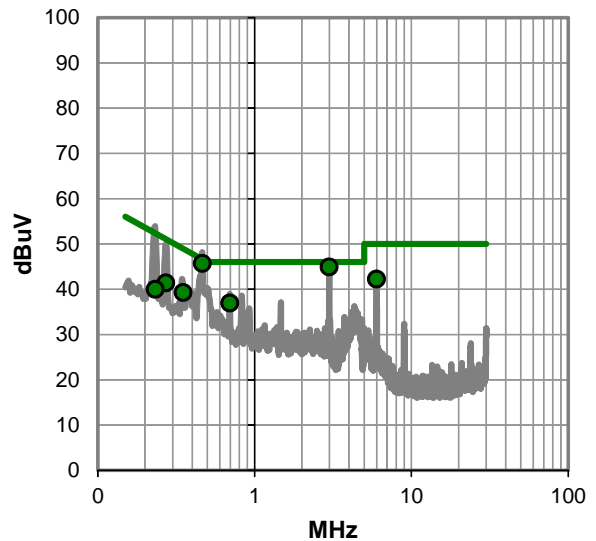
**DEVIATIONS FROM TEST STANDARD**

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #29

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.465	30.4	20.2	50.6	56.6	-6.0
2.997	25.0	20.3	45.3	56.0	-10.7
0.233	30.8	20.2	51.0	62.3	-11.3
0.271	28.8	20.2	49.0	61.1	-12.1
0.350	24.2	20.2	44.4	59.0	-14.6
0.695	20.3	20.2	40.5	56.0	-15.5
5.996	22.5	20.5	43.0	60.0	-17.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.465	25.5	20.2	45.7	46.6	-0.9
2.997	24.6	20.3	44.9	46.0	-1.1
5.996	21.7	20.5	42.2	50.0	-7.8
0.695	16.7	20.2	36.9	46.0	-9.1
0.350	19.1	20.2	39.3	49.0	-9.7
0.271	21.2	20.2	41.4	51.1	-9.7
0.233	19.8	20.2	40.0	52.3	-12.3

## CONCLUSION

Pass

*Trevor Buls*

Tested By

EUT:	ConnectCore6 (i.MX6)	Work Order:	ETHE0008
Serial Number:	00409D7B8CA2	Date:	08/07/2014
Customer:	Etherios Design Solutions	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure:	1021.6 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	5.0VDC	Configuration:	ETHE0008-2

**TEST SPECIFICATIONS**

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

**TEST PARAMETERS**

Run #:	30	Line:	Negative Lead	Ext. Attenuation (dB):	20
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**COMMENTS**

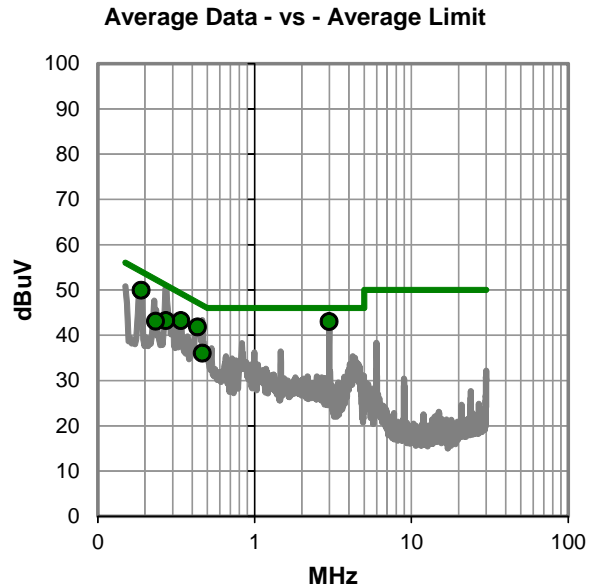
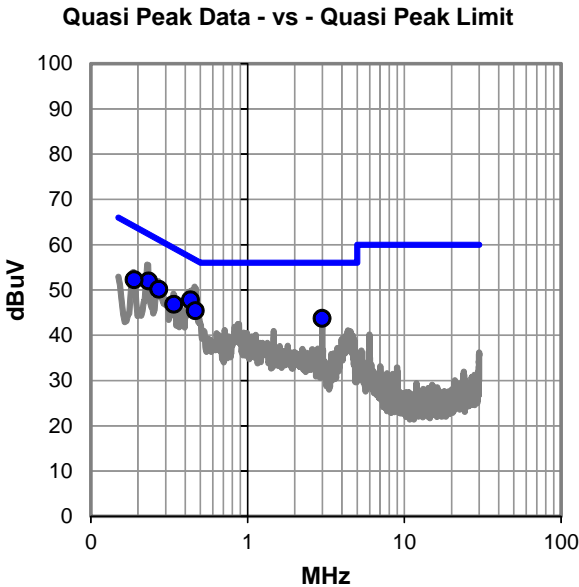
None

**EUT OPERATING MODES**

Transmitting 802.11 6 Mbps, Ch 140, 5700 MHz

**DEVIATIONS FROM TEST STANDARD**

None



## RESULTS - Run #30

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.433	27.6	20.2	47.8	57.2	-9.4
0.234	31.8	20.2	52.0	62.3	-10.3
0.272	29.9	20.2	50.1	61.1	-11.0
0.464	25.2	20.2	45.4	56.6	-11.2
0.190	32.0	20.3	52.3	64.1	-11.8
2.997	23.4	20.3	43.7	56.0	-12.3
0.340	26.6	20.2	46.8	59.2	-12.4

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
2.997	22.7	20.3	43.0	46.0	-3.0
0.190	29.7	20.3	50.0	54.1	-4.1
0.433	21.6	20.2	41.8	47.2	-5.4
0.340	23.0	20.2	43.2	49.2	-6.0
0.272	23.0	20.2	43.2	51.1	-7.9
0.234	22.9	20.2	43.1	52.3	-9.2
0.464	15.8	20.2	36.0	46.6	-10.6

## CONCLUSION

Pass

*Trevor Buls*

Tested By

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

## MODES OF OPERATION

802.11(a) 6Mbps
802.11(a) 36Mbps
802.11(a) 54Mbps
802.11(n) MCS0
802.11(n) MCS7

## CHANNELS OF OPERATION

Ch.36, 5180MHz
Ch.48, 5240MHz
Ch.52, 5260MHz
Ch.64, 5320MHz
Ch.100, 5500MHz
Ch.116, 5580MHz
Ch.140, 5700MHz

## POWER SETTINGS INVESTIGATED

5 VDC
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## CONFIGURATIONS INVESTIGATED

ETHE0008 - 4
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## FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	40 GHz
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## 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
BP Filter	Micro-Tronics	BRC50703	HHJ	6/20/2013	36 mo
5.47-5.725 Notch Filter	Micro-Tronics	BRC50704	HGI	10/4/2012	24 mo
5.725-5.875 Notch Filter	Micro-Tronics	BRC50705	HGJ	2/18/2014	24 mo
DC Power Supply	Topward	TPS-2000	TPD	NCR	0 mo
LP Filter	Micro-Tronics	LPM50004	LFD	6/18/2014	24 mo
EV01 Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	ECC	8/11/2014	12 mo
Antenna, Horn	EMCO	3115	AHC	6/13/2014	24 mo
EV Cable	ESM Cable Corp.	KMKM-72	EWB	6/25/2014	12 mo
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	PAE	6/25/2014	12 mo
Antenna, Horn	ETS Lindgren	3160-10	AIW	NCR	0 mo
Cable	ESM Cable Corp.	KMKM-72	EVY	9/10/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	9/10/2013	12 mo
Antenna, Horn	ETS Lindgren	3160-09	AIV	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2/18/2014	12 mo
Antenna, Horn	ETS	3160-08	AHV	NCR	0 mo
EV01 Cables	N/A	Standard Gain Horns Cables	EVF	2/18/2014	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	2/18/2014	12 mo
Antenna, Horn	ETS	3160-07	AHU	NCR	0 mo
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	6/23/2014	12 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	6/23/2014	12 mo
Antenna, Horn	ETS	3115	AIZ	1/24/2014	24 mo
EV01 Cables	N/A	Bilog Cables	EVA	2/18/2014	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	AOL	2/18/2014	12 mo
Antenna, Biconilog	EMCO	3141	AXG	4/10/2012	36 mo

## 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.





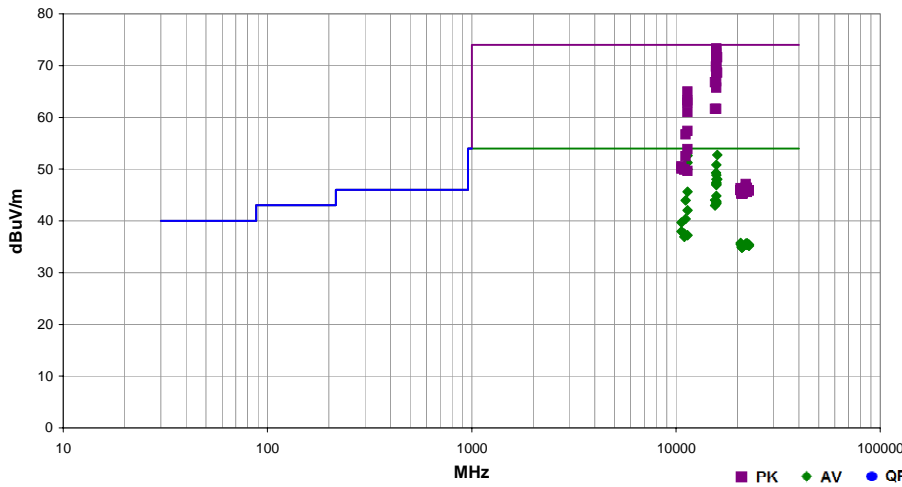
# SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2014.06.19  
EmiRS 2014.07.09

<b>Work Order:</b>	ETHE0008	<b>Date:</b>	08/13/14	
<b>Project:</b>	None	<b>Temperature:</b>	24 °C	
<b>Job Site:</b>	EV01	<b>Humidity:</b>	46% RH	
<b>Serial Number:</b>	00409D7B8C92	<b>Barometric Pres.:</b>	1014.9 mbar	<b>Tested by:</b> Jared Ison, Brandon Hobbs
<b>EUT:</b>	ConnectCore6 (i.MX6)			
<b>Configuration:</b>	4			
<b>Customer:</b>	Etherios Design Solutions			
<b>Attendees:</b>	None			
<b>EUT Power:</b>	5 VDC			
<b>Operating Mode:</b>	Continuous Tx 802.11			
<b>Deviations:</b>	None			
<b>Comments:</b>	Please reference the data comments for EUT orientation, frequency, Modulation, tx power and Antenna Port. A Ethertronics standard dual band WLAN antenna with the highest gain was used.			

<b>Test Specifications</b>	<b>Test Method</b>
FCC 15.407:2014	ANSI C63.10:2009

<b>Run #</b>	64	<b>Test Distance (m)</b>	3	<b>Antenna Height(s)</b>	1 to 4(m)	<b>Results</b>	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
15769.790	60.7	12.6	1.1	249.0	3.0	0.0	Horz	PK	0.0	73.3	74.0	-0.7	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 12, EUT On Side
15775.510	60.7	12.5	1.0	257.0	3.0	0.0	Vert	PK	0.0	73.2	74.0	-0.8	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15773.990	60.3	12.5	1.0	254.0	3.0	0.0	Vert	PK	0.0	72.8	74.0	-1.2	Tx 802.11(a) 36Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15959.070	40.3	12.4	1.0	112.0	3.0	0.0	Vert	AV	0.0	52.7	54.0	-1.3	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bxpwr 11, EUT On Side
11400.090	57.7	-5.1	1.3	307.0	3.0	0.0	Vert	AV	0.0	52.6	54.0	-1.4	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 14, EUT On Side
15781.170	59.8	12.5	1.0	108.0	3.0	0.0	Horz	PK	0.0	72.3	74.0	-1.7	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 13, EUT Horz
15954.110	59.2	12.4	1.0	112.0	3.0	0.0	Vert	PK	0.0	71.6	74.0	-2.4	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
11400.090	56.3	-5.1	1.3	307.0	3.0	0.0	Vert	AV	0.0	51.2	54.0	-2.8	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 13, EUT On Side
15777.380	58.3	12.5	1.0	134.0	3.0	0.0	Vert	PK	0.0	70.8	74.0	-3.2	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 13, EUT Horz
15781.580	38.3	12.5	1.0	257.0	3.0	0.0	Vert	AV	0.0	50.8	54.0	-3.2	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15781.630	57.9	12.5	1.0	254.0	3.0	0.0	Vert	PK	0.0	70.4	74.0	-3.6	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15783.150	57.5	12.5	1.0	254.0	3.0	0.0	Vert	PK	0.0	70.0	74.0	-4.0	Tx 802.11(a) 54Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
11401.970	55.0	-5.1	1.1	261.0	3.0	0.0	Horz	AV	0.0	49.9	54.0	-4.1	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 14, EUT On Side
15717.550	57.3	12.5	1.2	245.0	3.0	0.0	Horz	PK	0.0	69.8	74.0	-4.2	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, bxpwr 13, EUT On Side
15717.380	36.8	12.5	1.2	245.0	3.0	0.0	Horz	AV	0.0	49.3	54.0	-4.7	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, bxpwr 13, EUT On Side
15775.570	56.4	12.5	1.0	71.0	3.0	0.0	Horz	PK	0.0	68.9	74.0	-5.1	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT Vert
15784.260	36.3	12.5	1.0	254.0	3.0	0.0	Vert	AV	0.0	48.8	54.0	-5.2	Tx 802.11(a) 36Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15953.470	56.2	12.4	1.1	244.0	3.0	0.0	Horz	PK	0.0	68.6	74.0	-5.4	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bxpwr 11, EUT On Side
15778.420	35.5	12.5	1.0	254.0	3.0	0.0	Vert	AV	0.0	48.0	54.0	-6.0	Tx 802.11(a) 54Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15961.630	35.6	12.4	1.1	244.0	3.0	0.0	Horz	AV	0.0	48.0	54.0	-6.0	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bxpwr 11, EUT On Side
15779.070	34.9	12.5	1.0	108.0	3.0	0.0	Horz	AV	0.0	47.4	54.0	-6.6	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 13, EUT Horz (10Hz)
15780.700	34.7	12.5	1.0	134.0	3.0	0.0	Vert	AV	0.0	47.2	54.0	-6.8	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 13, EUT Horz (10Hz)
15776.910	34.5	12.5	1.0	254.0	3.0	0.0	Vert	AV	0.0	47.0	54.0	-7.0	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 2, bxpwr 11, EUT On Side
15774.870	54.4	12.5	1.0	254.0	3.0	0.0	Vert	PK	0.0	66.9	74.0	-7.1	Tx 802.11(n) MCS0, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15779.820	34.4	12.5	1.0	71.0	3.0	0.0	Horz	AV	0.0	46.9	54.0	-7.1	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT Vert
15540.350	54.7	12.1	1.0	292.0	3.0	0.0	Vert	PK	0.0	66.8	74.0	-7.3	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bxpwr 13, EUT Vert
15776.910	53.2	12.5	1.0	254.0	3.0	0.0	Vert	PK	0.0	65.7	74.0	-8.3	Tx 802.11(n) MCS7, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
11400.130	50.7	-5.1	1.2	307.0	3.0	0.0	Vert	AV	0.0	45.6	54.0	-8.4	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 10, EUT On Side
11402.200	70.0	-5.1	1.2	304.0	3.0	0.0	Vert	PK	0.0	64.9	74.0	-9.1	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 15, EUT On Side
15777.550	32.3	12.5	1.1	249.0	3.0	0.0	Horz	AV	0.0	44.8	54.0	-9.2	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 12, EUT On Side (10Hz)
15537.490	32.0	12.0	1.0	292.0	3.0	0.0	Vert	AV	0.0	44.0	54.0	-10.0	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bxpwr 13, EUT Vert
11160.320	51.4	-7.4	1.1	64.0	3.0	0.0	Vert	AV	0.0	44.0	54.0	-10.0	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bxpwr 7, EUT On Side
15775.920	31.2	12.5	1.0	254.0	3.0	0.0	Vert	AV	0.0	43.7	54.0	-10.3	Tx 802.11(n) MCS7, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15781.630	31.0	12.5	1.0	254.0	3.0	0.0	Vert	AV	0.0	43.5	54.0	-10.5	Tx 802.11(n) MCS0, 5260MHz, Antenna Port 1, bxpwr 11, EUT On Side
15781.460	30.8	12.5	1.2	15.0	3.0	0.0	Vert	AV	0.0	43.3	54.0	-10.7	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT Vert
11402.480	69.3	-5.0	1.3	307.0	3.0	0.0	Vert	PK	0.0	63.3	74.0	-10.7	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 14, EUT On Side
15539.300	30.9	12.0	1.0	248.0	3.0	0.0	Horz	AV	0.0	42.9	54.0	-11.1	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bxpwr 13, EUT Vert
11397.680	68.0	-5.1	1.3	307.0	3.0	0.0	Vert	PK	0.0	62.9	74.0	-11.1	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 13, EUT On Side
11400.070	47.1	-5.1	1.1	261.0	3.0	0.0	Horz	AV	0.0	42.0	54.0	-12.0	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 10, EUT On Side
15539.590	49.6	12.0	1.0	248.0	3.0	0.0	Horz	PK	0.0	61.6	74.0	-12.4	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bxpwr 13, EUT Vert
15779.300	49.1	12.5	1.2	15.0	3.0	0.0	Vert	PK	0.0	61.6	74.0	-12.4	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bxpwr 11, EUT Vert
11397.930	66.1	-5.1	1.1	261.0	3.0	0.0	Horz	PK	0.0	61.0	74.0	-13.0	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 14, EUT On Side
11160.330	47.8	-7.4	1.0	317.0	3.0	0.0	Horz	AV	0.0	40.4	54.0	-13.6	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bxpwr 7, EUT On Side
10639.950	49.5	-9.8	1.2	322.0	3.0	0.0	Vert	AV	0.0	39.7	54.0	-14.3	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bxpwr 11, EUT On Side
10639.700	47.8	-9.8	1.1	130.0	3.0	0.0	Horz	AV	0.0	38.0	54.0	-16.0	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 14, EUT On Side
11001.910	46.1	-8.6	1.0	315.0	3.0	0.0	Horz	AV	0.0	37.5	54.0	-16.5	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bxpwr 7, EUT On Side
11402.280	62.4	-5.1	1.2	307.0	3.0	0.0	Vert	PK	0.0	57.3	74.0	-16.7	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 10, EUT On Side
11400.030	42.3	-5.1	1.2	300.0	3.0	0.0	Vert	AV	0.0	37.2	54.0	-16.8	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bxpwr 7, EUT On Side
11001.910	45.5	-8.6	1.0	57.0	3.0	0.0	Vert	AV	0.0	36.9	54.0	-17.1	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bxpwr 7, EUT On Side
11162.150	64.1	-7.4	1.1	64.0	3.0	0.0	Vert	PK	0.0	56.7	74.0	-17.3	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bxpwr 7, EUT On Side
20715.220	36.3	-0.5	1.2	102.0	3.0	0.0	Vert	AV	0.0	35.8	54.0	-18.2	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bxpwr 13, EUT On Side
22316.090	35.3	0.4	1.2	283.0	3.0	0.0	Vert	AV	0.0	35.7	54.0	-18.3	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bxpwr 7, EUT On Side

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
22013.120	35.4	0.2	1.2	0.0	3.0	0.0	Vert	AV	0.0	35.6	54.0	-18.4	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bpxwr 7, EUT On Side
20711.130	36.0	-0.5	1.2	258.0	3.0	0.0	Horz	AV	0.0	35.5	54.0	-18.5	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bpxwr 13, EUT On Side
22016.570	35.2	0.2	1.2	115.0	3.0	0.0	Horz	AV	0.0	35.4	54.0	-18.6	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bpxwr 7, EUT On Side
22787.980	35.0	0.4	1.2	281.0	3.0	0.0	Vert	AV	0.0	35.4	54.0	-18.6	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bpxwr 7, EUT On Side
22313.580	35.0	0.4	1.2	317.0	3.0	0.0	Horz	AV	0.0	35.4	54.0	-18.6	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bpxwr 7, EUT On Side
22782.790	34.8	0.4	1.2	90.0	3.0	0.0	Horz	AV	0.0	35.2	54.0	-18.8	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bpxwr 13, EUT On Side
21289.860	35.4	-0.2	1.2	324.0	3.0	0.0	Vert	AV	0.0	35.2	54.0	-18.8	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bpxwr 11, EUT On Side
20946.990	35.5	-0.3	1.2	82.0	3.0	0.0	Vert	AV	0.0	35.2	54.0	-18.8	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, bpxwr 13, EUT On Side
21292.780	35.2	-0.2	1.2	330.0	3.0	0.0	Horz	AV	0.0	35.0	54.0	-19.0	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bpxwr 11, EUT On Side
20946.580	35.3	-0.3	1.2	82.0	3.0	0.0	Horz	AV	0.0	35.0	54.0	-19.0	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, bpxwr 13, EUT On Side
21032.480	35.2	-0.3	1.2	195.0	3.0	0.0	Horz	AV	0.0	34.9	54.0	-19.1	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bpxwr 11, EUT On Side
21023.720	35.1	-0.3	1.2	167.0	3.0	0.0	Vert	AV	0.0	34.8	54.0	-19.2	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bpxwr 11, EUT On Side
11402.320	58.9	-5.1	1.1	261.0	3.0	0.0	Horz	PK	0.0	53.8	74.0	-20.2	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bpxwr 10, EUT On Side
11158.320	59.9	-7.4	1.0	317.0	3.0	0.0	Horz	PK	0.0	52.5	74.0	-21.5	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bpxwr 7, EUT On Side
10639.990	60.3	-9.8	1.2	322.0	3.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bpxwr 11, EUT On Side
10637.520	59.9	-9.8	1.1	130.0	3.0	0.0	Horz	PK	0.0	50.1	74.0	-23.9	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bpxwr 11, EUT On Side
11002.480	58.5	-8.6	1.0	57.0	3.0	0.0	Vert	PK	0.0	49.9	74.0	-24.1	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bpxwr 7, EUT On Side
10997.640	58.5	-8.6	1.0	315.0	3.0	0.0	Horz	PK	0.0	49.9	74.0	-24.1	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bpxwr 7, EUT On Side
11399.740	54.7	-5.1	1.2	300.0	3.0	0.0	Vert	PK	0.0	49.6	74.0	-24.4	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bpxwr 7, EUT On Side
21985.770	46.9	0.2	1.2	0.0	3.0	0.0	Vert	PK	0.0	47.1	74.0	-26.9	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bpxwr 7, EUT On Side
21984.480	46.2	0.2	1.2	115.0	3.0	0.0	Horz	PK	0.0	46.4	74.0	-27.6	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, bpxwr 7, EUT On Side
22324.610	46.0	0.4	1.2	317.0	3.0	0.0	Horz	PK	0.0	46.4	74.0	-27.6	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bpxwr 7, EUT On Side
20733.420	46.8	-0.5	1.2	258.0	3.0	0.0	Horz	PK	0.0	46.3	74.0	-27.7	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bpxwr 13, EUT On Side
20705.240	46.5	-0.5	1.2	102.0	3.0	0.0	Vert	PK	0.0	46.0	74.0	-28.0	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, bpxwr 13, EUT On Side
22808.400	45.5	0.4	1.2	90.0	3.0	0.0	Horz	PK	0.0	45.9	74.0	-28.1	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bpxwr 7, EUT On Side
22815.920	45.5	0.4	1.2	281.0	3.0	0.0	Vert	PK	0.0	45.9	74.0	-28.1	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, bpxwr 7, EUT On Side
22320.760	45.2	0.4	1.2	283.0	3.0	0.0	Vert	PK	0.0	45.6	74.0	-28.4	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, bpxwr 7, EUT On Side
20964.260	45.7	-0.3	1.2	82.0	3.0	0.0	Vert	PK	0.0	45.4	74.0	-28.6	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, bpxwr 13, EUT On Side
21275.220	45.6	-0.2	1.2	324.0	3.0	0.0	Vert	PK	0.0	45.4	74.0	-28.6	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bpxwr 11, EUT On Side
20976.040	45.6	-0.3	1.2	82.0	3.0	0.0	Horz	PK	0.0	45.3	74.0	-28.7	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, bpxwr 13, EUT On Side
21295.050	45.5	-0.2	1.2	330.0	3.0	0.0	Horz	PK	0.0	45.3	74.0	-28.7	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, bpxwr 11, EUT On Side
21041.690	45.5	-0.3	1.2	195.0	3.0	0.0	Horz	PK	0.0	45.2	74.0	-28.8	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bpxwr 11, EUT On Side
21026.700	45.5	-0.3	1.2	167.0	3.0	0.0	Vert	PK	0.0	45.2	74.0	-28.8	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, bpxwr 11, EUT On Side

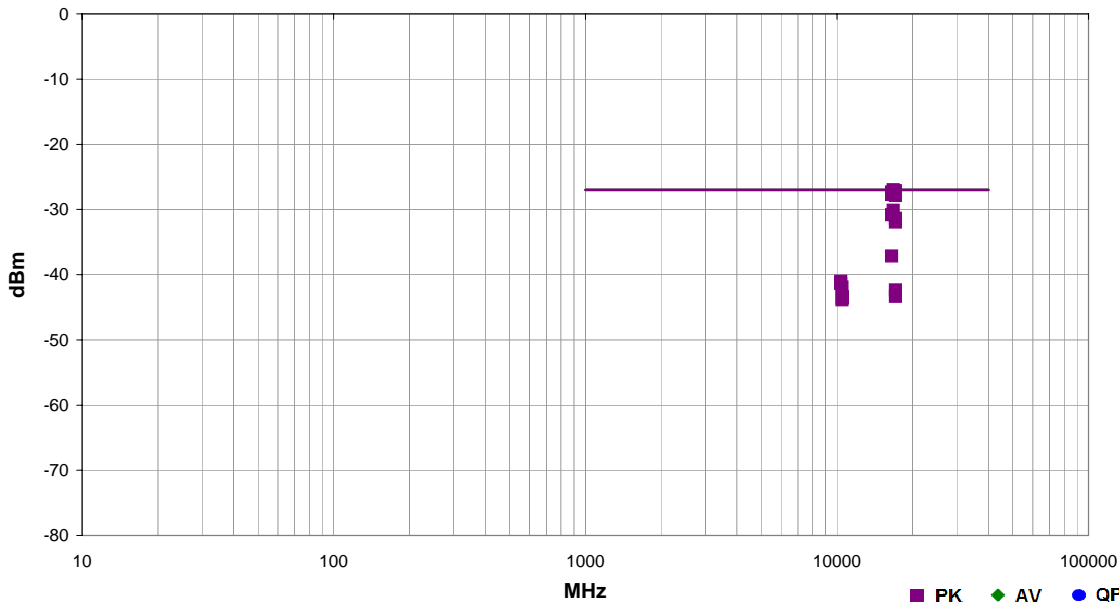


## SPURIOUS RADIATED EMISSIONS

Work Order:	ETHE0008	Date:	08/13/14	
Project:	None	Temperature:	24 °C	
Job Site:	EV01	Humidity:	46% RH	
Serial Number:	00409D7B8C92	Barometric Pres.:	1014.9 mbar	
EUT: ConnectCore6 (i.MX6)		Tested by: Jared Ison, Brandon Hobbs		
Configuration:	4			
Customer:	Etherios Design Solutions			
Attendees:	None			
EUT Power:	5 VDC			
Operating Mode:	Continuous Tx 802.11			
Deviations:	None			
Comments:	Please reference the data comments for EUT orientation, frequency, Modulation, tx power and Antenna Port. A Ethertronics standard dual band WLAN antenna with the highest gain was used.			

Test Specifications	Test Method
FCC 15.407:2014	ANSI C63.10:2009

Run #	63	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
16734.170	1.0	258.0	Vert	PK	1.99E-06	-27.0	-27.0	0.0	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, txpwr 7, EUT On Side
17102.080	1.0	258.0	Horz	PK	1.93E-06	-27.2	-27.0	-0.2	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, txpwr 13, EUT On Side
16493.820	1.0	254.0	Vert	PK	1.85E-06	-27.3	-27.0	-0.3	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
16493.410	1.2	248.0	Horz	PK	1.69E-06	-27.7	-27.0	-0.7	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, txpwr 8, EUT On Side
17099.220	1.0	73.0	Vert	PK	1.64E-06	-27.9	-27.0	-0.9	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, txpwr 10, EUT On Side
16735.450	1.0	250.0	Horz	PK	9.73E-07	-30.1	-27.0	-3.1	Tx 802.11(a) 6Mbps, 5580MHz, Antenna Port 1, txpwr 7, EUT On Side
16502.860	1.0	254.0	Vert	PK	8.26E-07	-30.8	-27.0	-3.8	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
17099.290	1.0	259.0	Horz	PK	7.32E-07	-31.4	-27.0	-4.4	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, txpwr 10, EUT On Side
17099.570	1.0	73.0	Vert	PK	6.37E-07	-32.0	-27.0	-5.0	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, txpwr 9, EUT On Side
16505.830	1.0	257.0	Horz	PK	1.94E-07	-37.1	-27.0	-10.1	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
10362.220	1.0	330.0	Vert	PK	7.87E-08	-41.0	-27.0	-14.0	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
10356.090	1.2	257.0	Horz	PK	7.26E-08	-41.4	-27.0	-14.4	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
10480.130	1.0	321.0	Vert	PK	6.46E-08	-41.9	-27.0	-14.9	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, txpwr 13, EUT On Side
17101.220	1.0	260.0	Vert	PK	5.82E-08	-42.4	-27.0	-15.4	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, txpwr 7, EUT On Side
17115.980	1.0	158.0	Horz	PK	4.66E-08	-43.3	-27.0	-16.3	Tx 802.11(a) 6Mbps, 5700MHz, Antenna Port 1, txpwr 7, EUT On Side
10519.560	1.2	129.0	Horz	PK	4.57E-08	-43.4	-27.0	-16.4	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, txpwr 11, EUT On Side
10522.140	1.2	321.0	Vert	PK	4.37E-08	-43.6	-27.0	-16.6	Tx 802.11(a) 6Mbps, 5260MHz, Antenna Port 1, txpwr 11, EUT On Side
10482.410	1.0	330.0	Horz	PK	4.09E-08	-43.9	-27.0	-16.9	Tx 802.11(a) 6Mbps, 5240MHz, Antenna Port 1, txpwr 13, EUT On Side



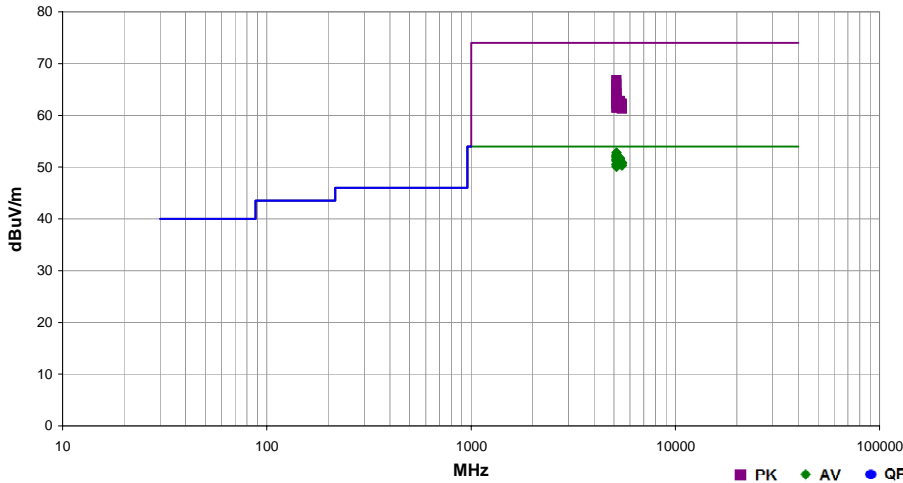
# SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2014.06.19  
EmiRS 2014.07.09

Work Order:	ETHE0008	Date:	08/18/14		
Project:	None	Temperature:	24.9 °C		
Job Site:	EV01	Humidity:	44.6% RH		
Serial Number:	00409D7B8C92	Barometric Pres.:	1013.6 mbar	Tested by:	Jared Ison, Brandon Hobbs
EUT:	ConnectCore6 (i.MX6)				
Configuration:	4				
Customer:	Etherios Design Solutions				
Attendees:	None				
EUT Power:	5 VDC				
Operating Mode:	Continuous Tx 802.11				
Deviations:	None				
Comments:	Please reference the data comments for EUT orientation, frequency, Modulation, tx power and Antenna Port. A Etherionics standard dual band WLAN antenna with the highest gain was used.				

Test Specifications	Test Method
FCC 15.407:2014	ANSI C63.10:2009

Run #	79	Test Distance (m)	1	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
5149.980	25.4	36.9	1.2	254.0	1.0	0.0	Horz	AV	-9.5	52.8	54.0	-1.2	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.537	25.0	36.9	1.1	53.0	1.0	0.0	Horz	AV	-9.5	52.4	54.0	-1.6	Tx 802.11(a) 36Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.920	24.8	36.9	1.1	53.0	1.0	0.0	Horz	AV	-9.5	52.2	54.0	-1.8	Tx 802.11(a) MCS0, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.673	24.7	36.9	1.2	233.0	1.0	0.0	Horz	AV	-9.5	52.1	54.0	-1.9	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Horz
5149.513	24.4	36.9	1.2	287.0	1.0	0.0	Vert	AV	-9.5	51.8	54.0	-2.2	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Vert
5350.053	23.7	37.5	1.2	279.0	1.0	0.0	Horz	AV	-9.5	51.7	54.0	-2.3	Tx 802.11(a) 54Mbps, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5350.127	23.7	37.5	1.2	279.0	1.0	0.0	Horz	AV	-9.5	51.7	54.0	-2.3	Tx 802.11(a) MCS0, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5350.633	23.7	37.5	1.2	279.0	1.0	0.0	Horz	AV	-9.5	51.7	54.0	-2.3	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5351.013	23.7	37.5	1.2	279.0	1.0	0.0	Horz	AV	-9.5	51.7	54.0	-2.3	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 11, EUT On Side
5148.440	24.1	36.9	1.1	53.0	1.0	0.0	Horz	AV	-9.5	51.5	54.0	-2.5	Tx 802.11(a) 54Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.330	24.0	36.9	1.1	53.0	1.0	0.0	Horz	AV	-9.5	51.4	54.0	-2.6	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 2, txpwr 13, EUT On Side
5350.653	23.4	37.5	1.2	279.0	1.0	0.0	Horz	AV	-9.5	51.4	54.0	-2.6	Tx 802.11(a) MCS7, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5148.210	23.8	36.9	1.1	53.0	1.0	0.0	Horz	AV	-9.5	51.2	54.0	-2.8	Tx 802.11(a) MCS7, 5180MHz, Antenna Port 1, txpwr 11, EUT On Side
5469.680	22.8	37.6	1.2	55.0	1.0	0.0	Horz	AV	-9.5	50.8	54.0	-3.2	Tx 802.11(a) 54Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5469.623	22.8	37.6	1.2	55.0	1.0	0.0	Horz	AV	-9.5	50.8	54.0	-3.2	Tx 802.11(a) MCS7, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5469.430	22.8	37.6	1.2	55.0	1.0	0.0	Horz	AV	-9.5	50.8	54.0	-3.2	Tx 802.11(a) 36Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5468.550	22.8	37.6	1.2	55.0	1.0	0.0	Horz	AV	-9.5	50.8	54.0	-3.2	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5468.123	22.7	37.6	1.2	55.0	1.0	0.0	Horz	AV	-9.5	50.7	54.0	-3.3	Tx 802.11(a) MCS0, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5350.230	22.7	37.5	1.2	279.0	1.0	0.0	Horz	AV	-9.5	50.7	54.0	-3.3	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 2, txpwr 11, EUT On Side
5148.390	23.2	36.9	1.2	313.0	1.0	0.0	Vert	AV	-9.5	50.6	54.0	-3.4	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Horz
5149.947	23.1	36.9	1.2	306.0	1.0	0.0	Vert	AV	-9.5	50.5	54.0	-3.5	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5469.803	22.3	37.6	1.2	55.0	1.0	0.0	Horz	AV	-9.5	50.3	54.0	-3.7	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 2, txpwr 7, EUT On Side
5149.547	22.7	36.9	1.2	161.0	1.0	0.0	Horz	AV	-9.5	50.1	54.0	-3.9	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Vert
5149.100	39.4	36.9	1.2	254.0	1.0	0.0	Horz	PK	-9.5	66.8	74.0	-7.2	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.763	38.6	36.9	1.2	287.0	1.0	0.0	Vert	PK	-9.5	66.0	74.0	-8.0	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Vert
5148.143	37.4	36.9	1.2	233.0	1.0	0.0	Horz	PK	-9.5	64.8	74.0	-9.2	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Horz
5148.623	36.9	36.9	1.1	53.0	1.0	0.0	Horz	PK	-9.5	64.3	74.0	-9.7	Tx 802.11(a) MCS0, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.983	36.9	36.9	1.1	53.0	1.0	0.0	Horz	PK	-9.5	64.3	74.0	-9.7	Tx 802.11(a) 36Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.930	36.2	36.9	1.1	53.0	1.0	0.0	Horz	PK	-9.5	63.6	74.0	-10.4	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 2, txpwr 13, EUT On Side
5148.577	35.8	36.9	1.1	53.0	1.0	0.0	Horz	PK	-9.5	63.2	74.0	-10.8	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5149.657	35.6	36.9	1.2	313.0	1.0	0.0	Vert	PK	-9.5	63.0	74.0	-11.0	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Horz
5351.190	34.8	37.5	1.2	279.0	1.0	0.0	Horz	PK	-9.5	62.8	74.0	-11.2	Tx 802.11(a) MCS0, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5351.057	34.7	37.5	1.2	279.0	1.0	0.0	Horz	PK	-9.5	62.7	74.0	-11.3	Tx 802.11(a) 54Mbps, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5350.617	34.6	37.5	1.2	279.0	1.0	0.0	Horz	PK	-9.5	62.6	74.0	-11.4	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5350.987	34.6	37.5	1.2	279.0	1.0	0.0	Horz	PK	-9.5	62.6	74.0	-11.4	Tx 802.11(a) 36Mbps, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5148.727	35.1	36.9	1.1	53.0	1.0	0.0	Horz	PK	-9.5	62.5	74.0	-11.5	Tx 802.11(a) 54Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5469.020	34.2	37.6	1.2	55.0	1.0	0.0	Horz	PK	-9.5	62.2	74.0	-11.8	Tx 802.11(a) MCS7, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5149.570	34.8	36.9	1.2	161.0	1.0	0.0	Horz	PK	-9.5	62.2	74.0	-11.8	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT Vert
5350.020	34.2	37.5	1.2	279.0	1.0	0.0	Horz	PK	-9.5	62.2	74.0	-11.8	Tx 802.11(a) 6Mbps, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5469.917	34.0	37.6	1.2	55.0	1.0	0.0	Horz	PK	-9.5	62.1	74.0	-11.9	Tx 802.11(a) MCS0, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5350.570	34.0	37.5	1.2	279.0	1.0	0.0	Horz	PK	-9.5	62.0	74.0	-12.0	Tx 802.11(a) MCS7, 5320MHz, Antenna Port 1, txpwr 11, EUT On Side
5468.827	33.8	37.6	1.2	55.0	1.0	0.0	Horz	PK	-9.5	61.8	74.0	-12.2	Tx 802.11(a) 36Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5468.530	33.5	37.6	1.2	55.0	1.0	0.0	Horz	PK	-9.5	61.5	74.0	-12.5	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5148.597	34.1	36.9	1.2	306.0	1.0	0.0	Vert	PK	-9.5	61.5	74.0	-12.5	Tx 802.11(a) 6Mbps, 5180MHz, Antenna Port 1, txpwr 13, EUT On Side
5469.853	33.3	37.6	1.2	55.0	1.0	0.0	Horz	PK	-9.5	61.3	74.0	-12.7	Tx 802.11(a) 54Mbps, 5500MHz, Antenna Port 1, txpwr 7, EUT On Side
5469.667	33.3	37.6	1.2	55.0	1.0	0.0	Horz	PK	-9.5	61.3	74.0	-12.7	Tx 802.11(a) 6Mbps, 5500MHz, Antenna Port 2, txpwr 7, EUT On Side

**BAND EDGE COMPLIANCE**

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 (mo)
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/3/2014	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	9/26/2013	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	4/28/2014	12

**TEST DESCRIPTION**

The spurious RF conducted emissions at the edges of the TDWR band were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

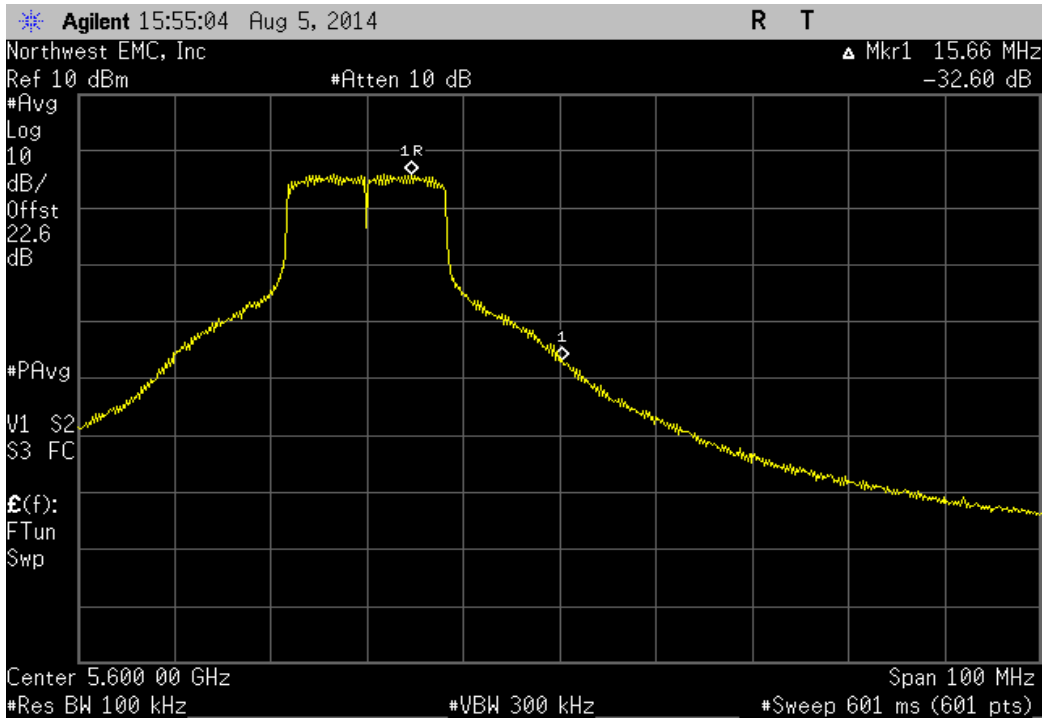


# BAND EDGE COMPLIANCE

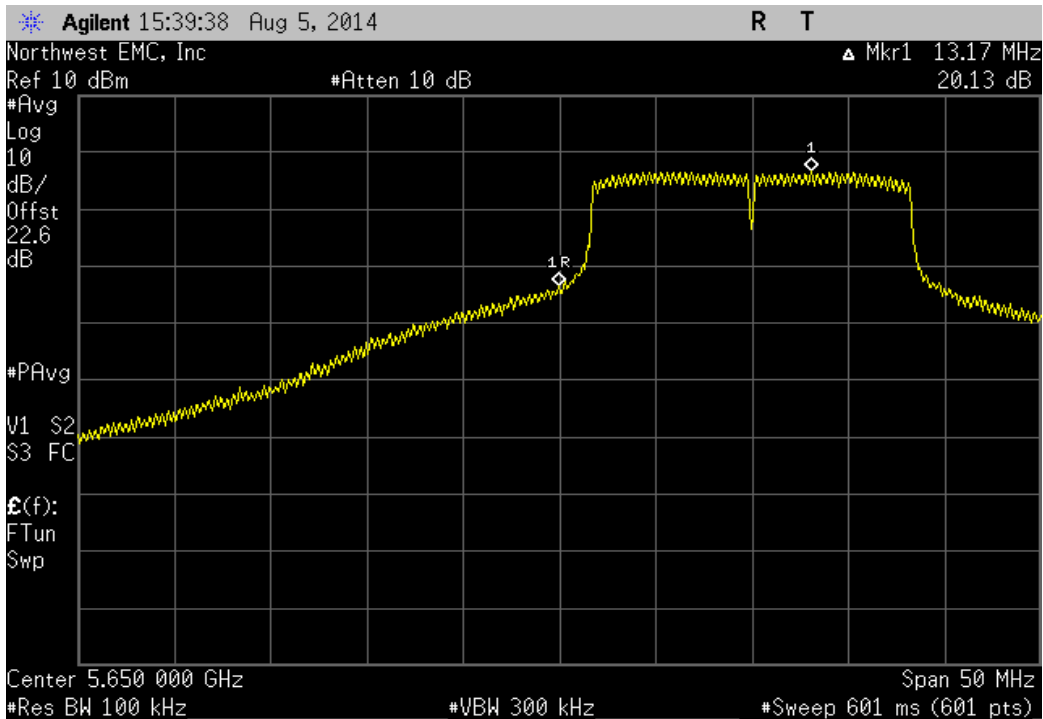
XMit 2014.02.07  
NweTx 2014.07.18.3

EUT: ConnectCore6 (i.MX6)		Work Order: ETHE0008	
Serial Number: 00409D7B8CA2		Date: 08/05/14	
Customer: Etherios Design Solutions		Temperature: 24.1°C	
Attendees: None		Humidity: 52%	
Project: None		Barometric Pres.: 1022.3	
Tested by: Trevor Buls		Power: 5.0VDC	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.407:2014		ANSI C63.10:2009	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature <i>Trevor Buls</i>	
		Value (dBc)	Limit ≤ (dBc) Result
802.11(a) 6 Mbps	5600 MHz Band Edge		
	Channel 116, 5580 MHz	-32.6	-20 Pass
	5650 MHz Band Edge		
	Channel 132, 5660 MHz	-20.13	-20 Pass
802.11(a) 36 Mbps	5600 MHz Band Edge		
	Channel 116, 5580 MHz	-32.5	-20 Pass
	5650 MHz Band Edge		
	Channel 132, 5660 MHz	-20.33	-20 Pass
802.11(a) 54 Mbps	5600 MHz Band Edge		
	Channel 116, 5580 MHz	-32.65	-20 Pass
	5650 MHz Band Edge		
	Channel 132, 5660 MHz	-20.32	-20 Pass
802.11(n) MCS0	5600 MHz Band Edge		
	Channel 116, 5580 MHz	-31.12	-20 Pass
	5650 MHz Band Edge		
	Channel 132, 5660 MHz	-20.12	-20 Pass
802.11(n) MCS7	5600 MHz Band Edge		
	Channel 116, 5580 MHz	-32.81	-20 Pass
	5650 MHz Band Edge		
	Channel 132, 5660 MHz	-20.59	-20 Pass

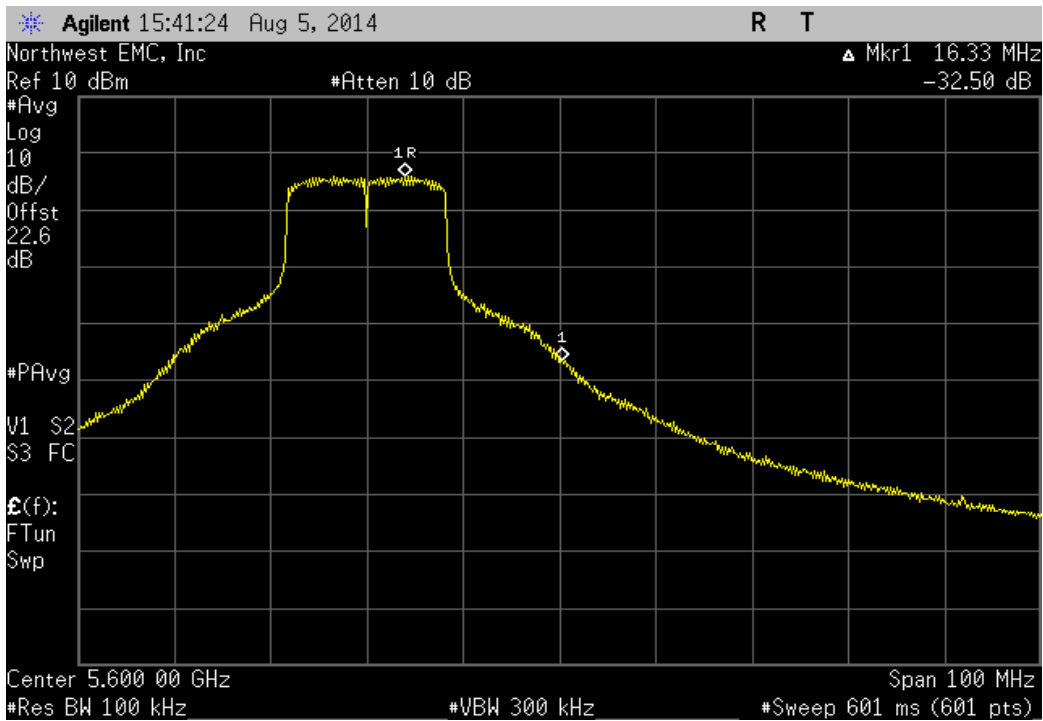
802.11(a) 6 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-32.6	-20	Pass



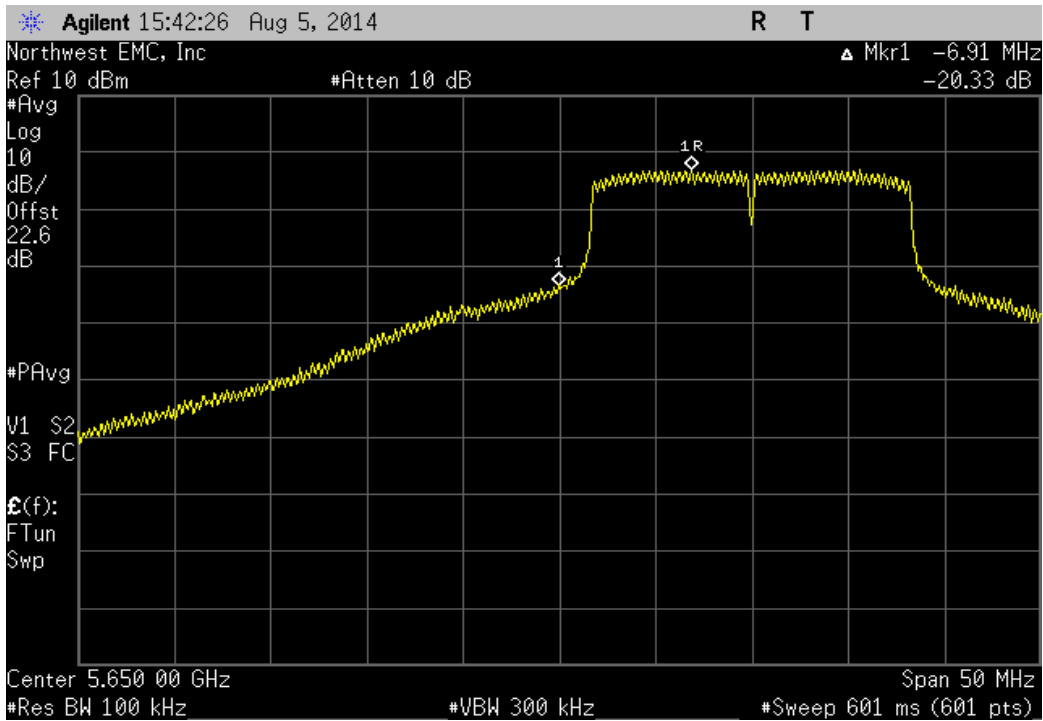
802.11(a) 6 Mbps, 5650 MHz Band Edge, Channel 132, 5660 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-20.13	-20	Pass



802.11(a) 36 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-32.5	-20	Pass

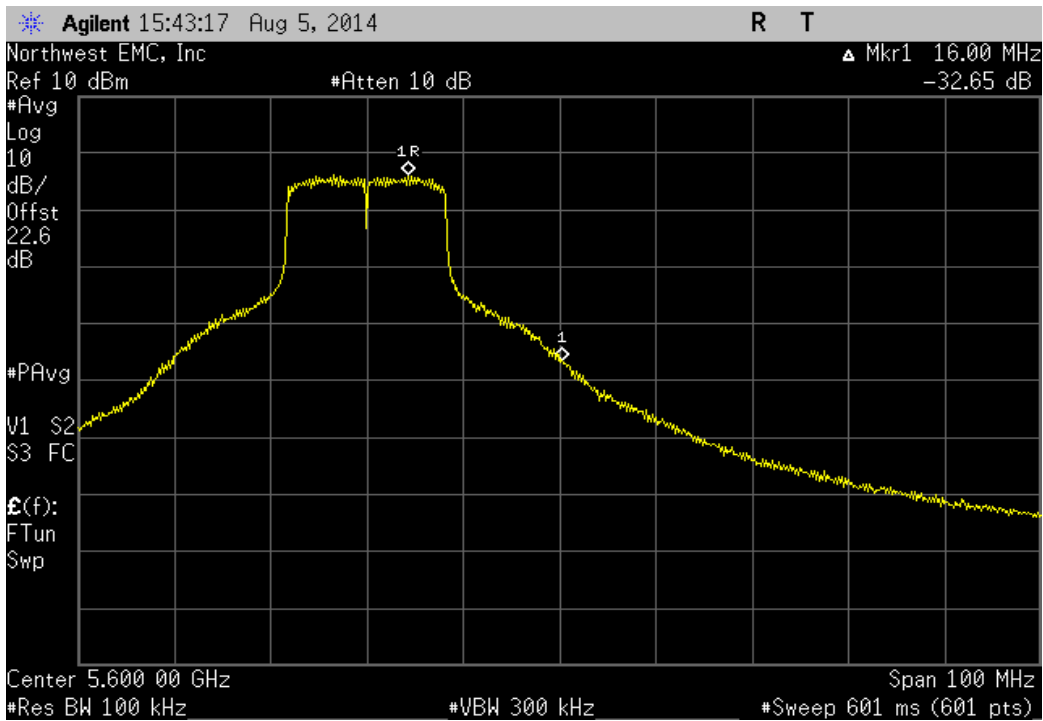


802.11(a) 36 Mbps, 5650 MHz Band Edge, Channel 132, 5660 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-20.33	-20	Pass

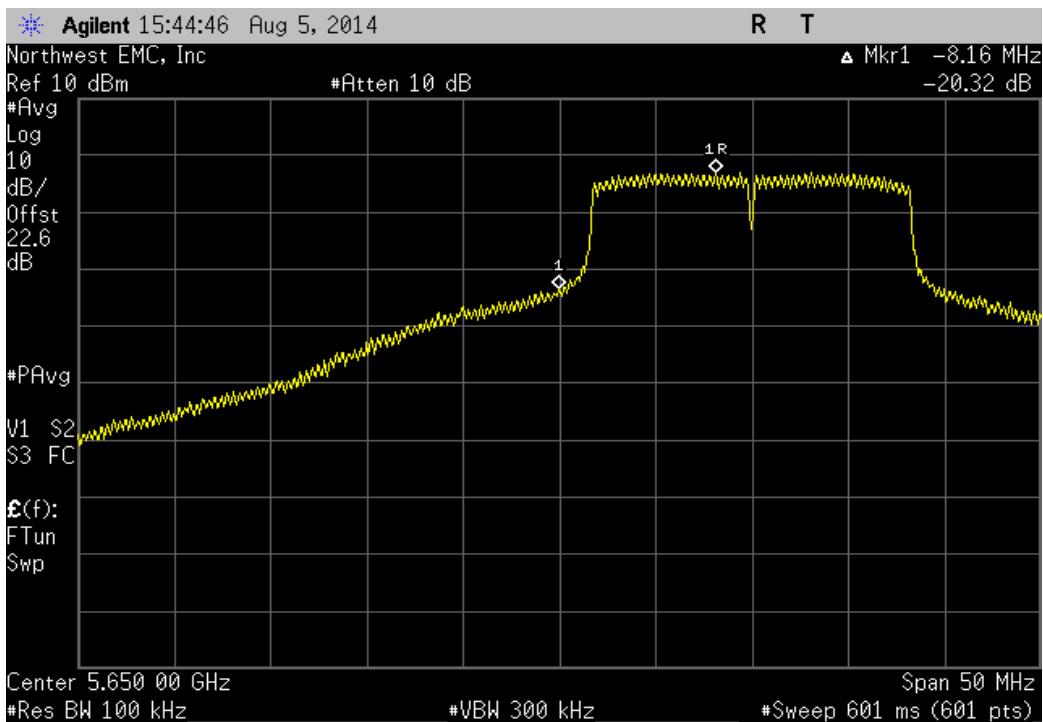




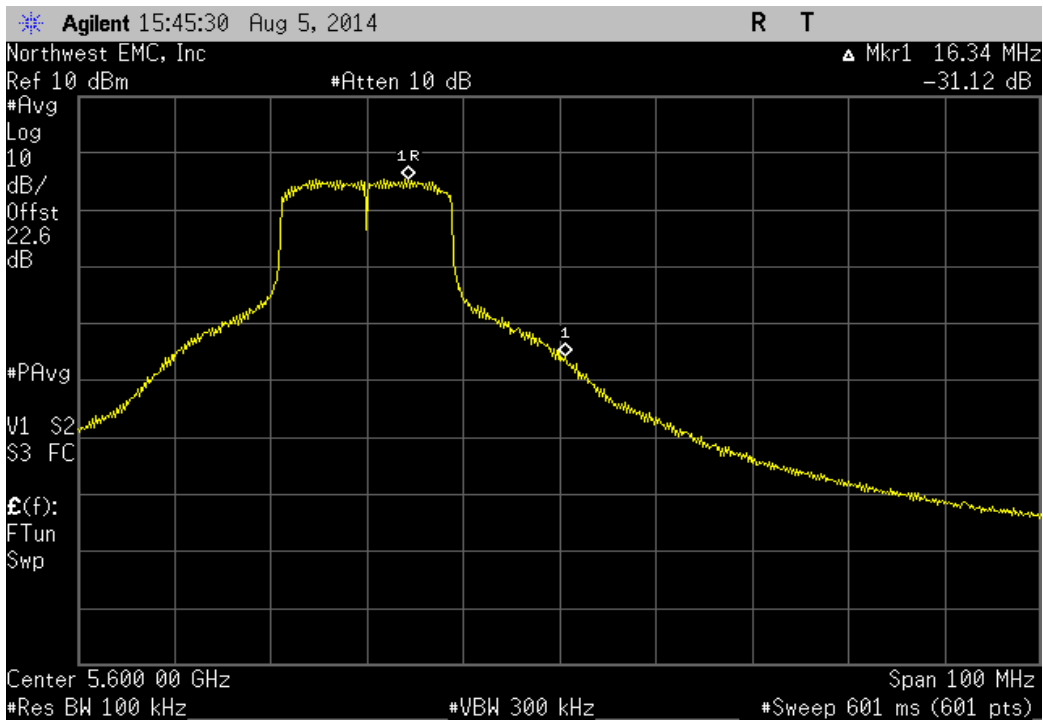
802.11(a) 54 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-32.65	-20	Pass



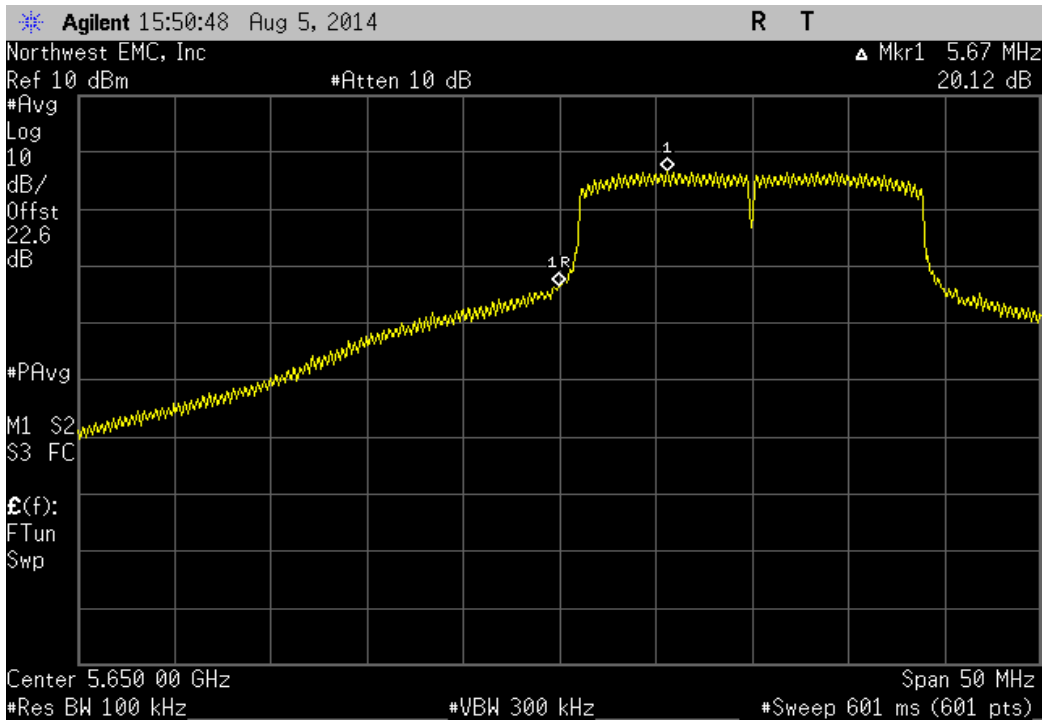
802.11(a) 54 Mbps, 5650 MHz Band Edge, Channel 132, 5660 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-20.32	-20	Pass



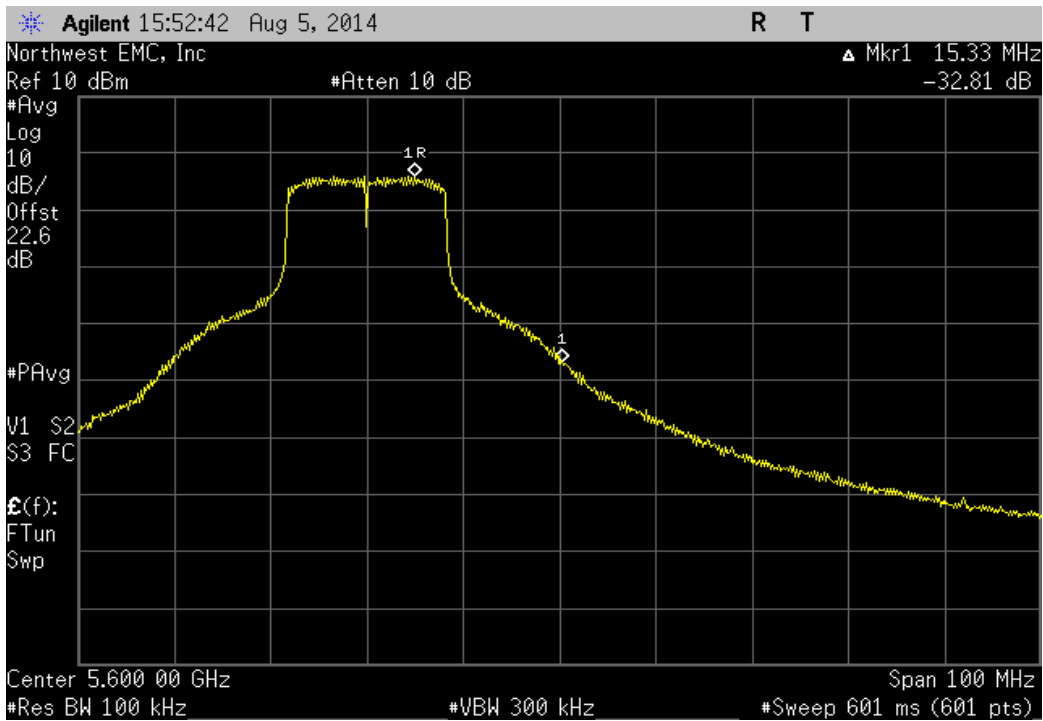
802.11(n) MCS0, 5600 MHz Band Edge, Channel 116, 5580 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-31.12	-20	Pass



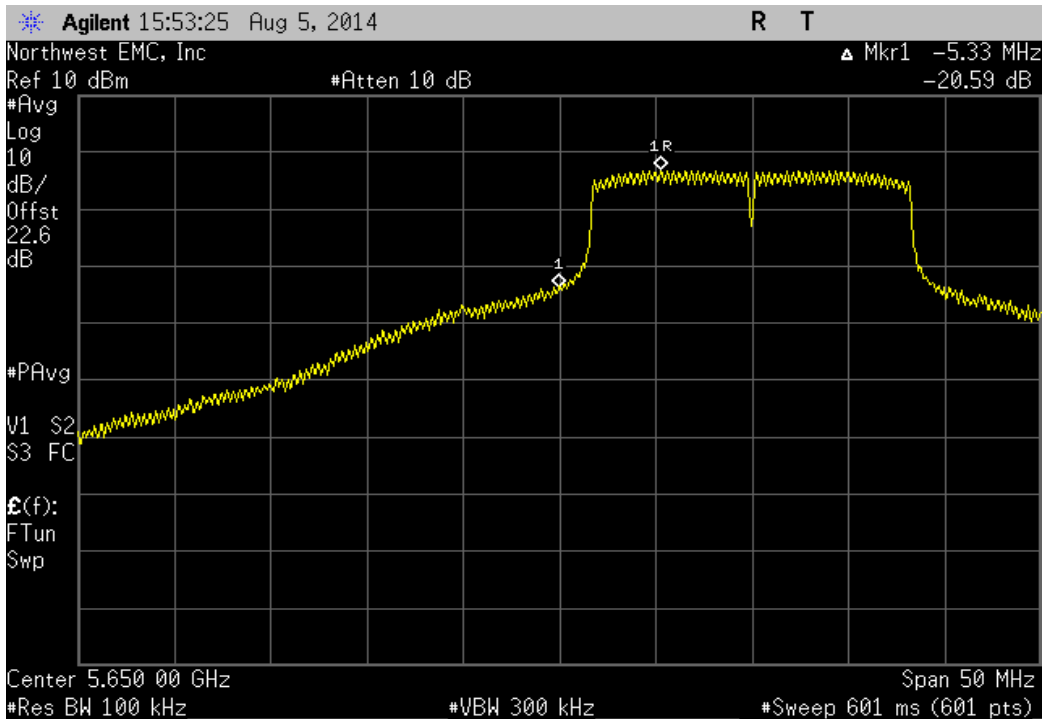
802.11(n) MCS0, 5650 MHz Band Edge, Channel 132, 5660 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-20.12	-20	Pass



802.11(n) MCS7, 5600 MHz Band Edge, Channel 116, 5580 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-32.81	-20	Pass



802.11(n) MCS7, 5650 MHz Band Edge, Channel 132, 5660 MHz			
	Value (dBc)	Limit ≤ (dBc)	Result
	-20.59	-20	Pass



## 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 (mo)
DC Power Supply	EZ Digital Co	GP-4303D	TPY	NCR	0
Multimeter	Fluke	117	MNN	1/20/2014	36
Humidity Temperature Meter	Omega Engineering, Inc.	HH31	DUB	10/25/2011	36
Humidity Temperature Chamber	Cincinnati Sub Zero (CSZ)	ZPH-32-3.5-SCT/AC	TBF	NCR	0
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/3/2014	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	9/26/2013	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	4/28/2014	12

### TEST DESCRIPTION

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 edges of the main transmit bands as called out on the data sheets.

The primary supply voltage was varied from 85 % to 115% of the nominal voltage 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.

Per the requirements of FCC 15.407:

"Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual."

No specific limits are provided in either FCC 15.407, the product specific rule part, or FCC 2.1055, the equipment authorization procedure for testing frequency stability. While there are no limits called out, any results less than 100ppm will still allow the radio to be operating within the band.



FREQUENCY STABILITY

EUT: ConnectCore6 (i.MX6)	Work Order: ETHE0008
Serial Number: 00409D7B8CA2	Date: 08/11/14
Customer: Etherios Design Solutions	Temperature: 23.2°C
Attendees: None	Humidity: 54%
Project: None	Barometric Pres.: 1017.2
Tested by: Trevor Buls	Power: 5.0VDC
	Job Site: MN08

<b>TEST SPECIFICATIONS</b>	<b>Test Method</b>
FCC 15.407:2014	ANSI C63.10:2009

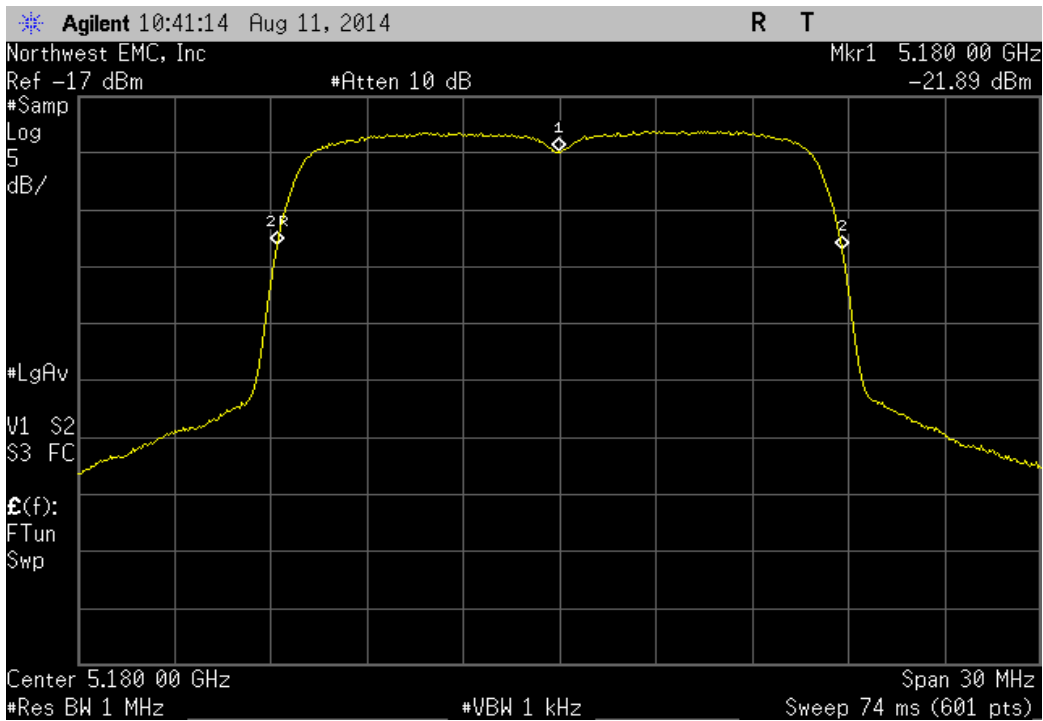
**COMMENTS**  
None

**DEVIATIONS FROM TEST STANDARD**  
None

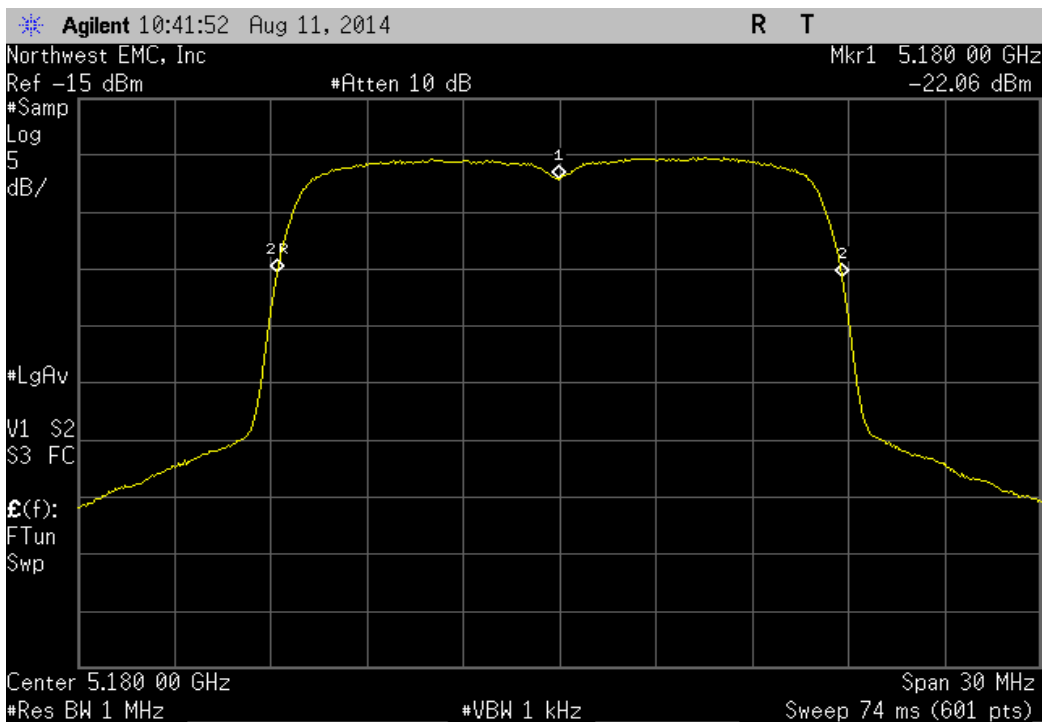
Configuration #	1	Signature <i>Trevor Buls</i>
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	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
<b>5150 MHz - 5250 MHz - Low Channel, 5180 MHz</b>					
Voltage: 115%	5180	5180	0	100	Pass
Voltage: 100%	5180	5180	0	100	Pass
Voltage: 85%	5180	5180	0	100	Pass
Temperature: +50°	5180.02	5180	3.9	100	Pass
Temperature: +40°	5180	5180	0	100	Pass
Temperature: +30°	5180	5180	0	100	Pass
Temperature: +20°	5180	5180	0	100	Pass
Temperature: +10°	5180.02	5180	3.9	100	Pass
Temperature: 0°	5180.02	5180	3.9	100	Pass
Temperature: -10°	5180.02	5180	3.9	100	Pass
Temperature: -20°	5180.02	5180	3.9	100	Pass
Temperature: -30°	5180.02	5180	3.9	100	Pass
<b>5250 MHz - 5350 MHz - High Channel, 5320 MHz</b>					
Voltage: 115%	5319.98	5320	3.8	100	Pass
Voltage: 100%	5319.98	5320	3.8	100	Pass
Voltage: 85%	5319.98	5320	3.8	100	Pass
Temperature: +50°	5320	5320	0	100	Pass
Temperature: +40°	5320	5320	0	100	Pass
Temperature: +30°	5319.98	5320	3.8	100	Pass
Temperature: +20°	5320	5320	0	100	Pass
Temperature: +10°	5320	5320	0	100	Pass
Temperature: 0°	5320.02	5320	3.8	100	Pass
Temperature: -10°	5320.02	5320	3.8	100	Pass
Temperature: -20°	5320.02	5320	3.8	100	Pass
Temperature: -30°	5320	5320	0	100	Pass
<b>5470 MHz - 5725 MHz - Low Channel, 5500 MHz</b>					
Voltage: 115%	5499.98	5500	3.6	100	Pass
Voltage: 100%	5499.98	5500	3.6	100	Pass
Voltage: 85%	5500	5500	0	100	Pass
Temperature: +50°	5500	5500	0	100	Pass
Temperature: +40°	5499.98	5500	3.6	100	Pass
Temperature: +30°	5500	5500	0	100	Pass
Temperature: +20°	5500	5500	0	100	Pass
Temperature: +10°	5500	5500	0	100	Pass
Temperature: 0°	5500.02	5500	3.6	100	Pass
Temperature: -10°	5500.02	5500	3.6	100	Pass
Temperature: -20°	5500.02	5500	3.6	100	Pass
Temperature: -30°	5500	5500	0	100	Pass
<b>5470 MHz - 5725 MHz - High Channel, 5700 MHz</b>					
Voltage: 115%	5699.98	5700	3.5	100	Pass
Voltage: 100%	5699.98	5700	3.5	100	Pass
Voltage: 85%	5699.98	5700	3.5	100	Pass
Temperature: +50°	5700	5700	0	100	Pass
Temperature: +40°	5699.98	5700	3.5	100	Pass
Temperature: +30°	5699.98	5700	3.5	100	Pass
Temperature: +20°	5699.98	5700	3.5	100	Pass
Temperature: +10°	5700	5700	0	100	Pass
Temperature: 0°	5700	5700	0	100	Pass
Temperature: -10°	5700	5700	0	100	Pass
Temperature: -20°	5700	5700	0	100	Pass
Temperature: -30°	5700	5700	0	100	Pass

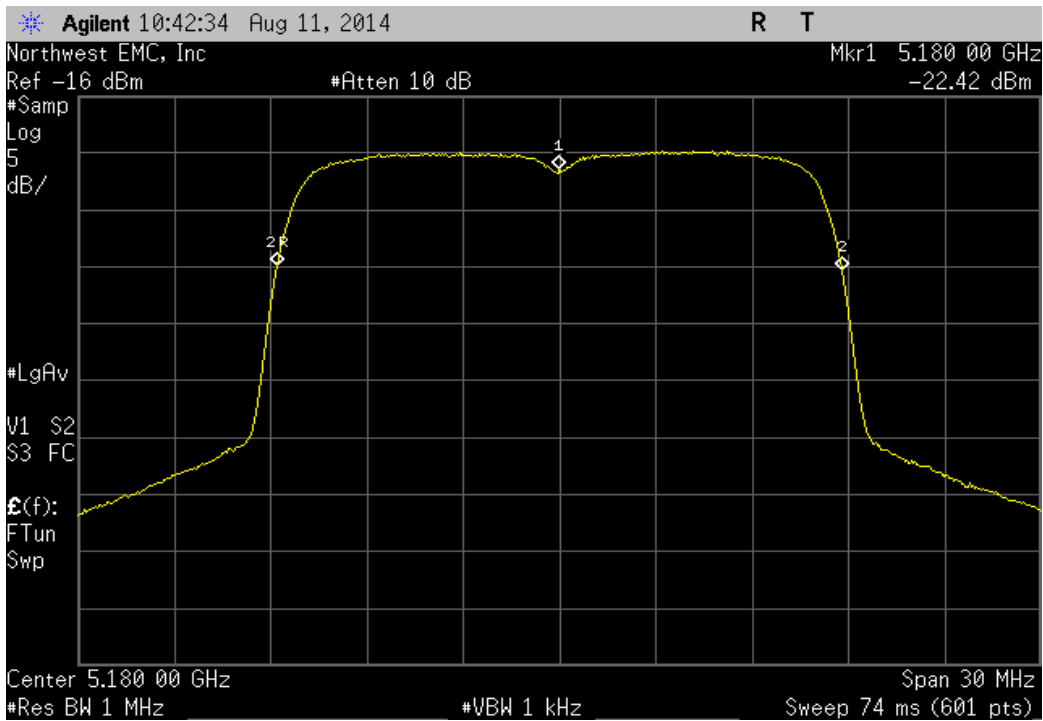
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Voltage: 115%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180	5180	0	100	Pass



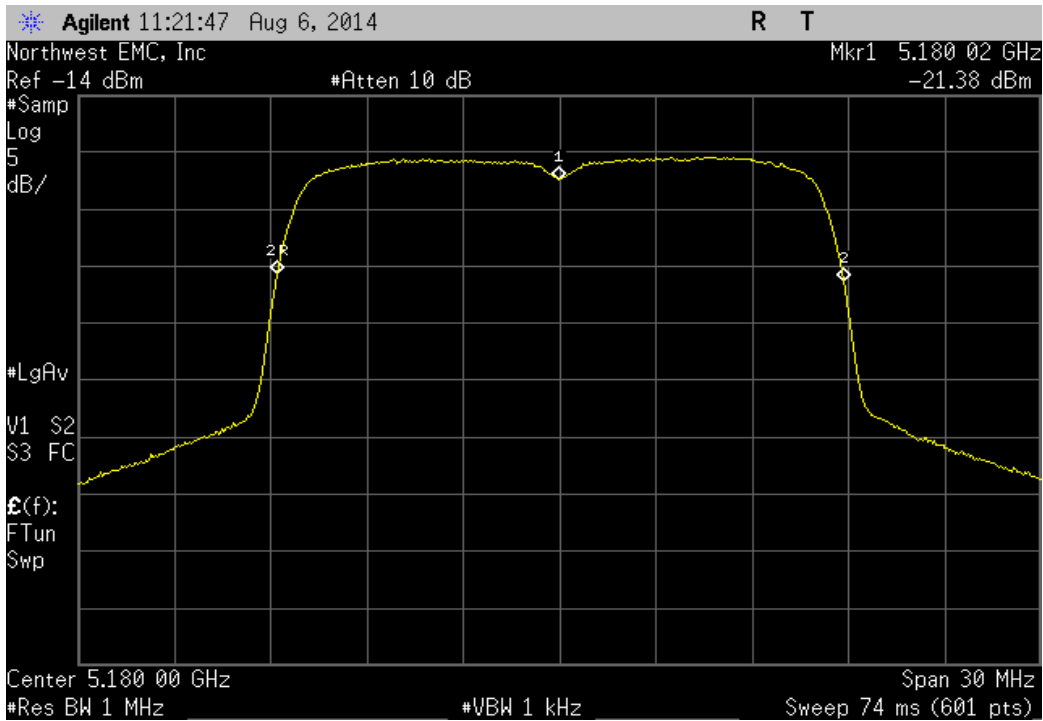
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Voltage: 100%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180	5180	0	100	Pass



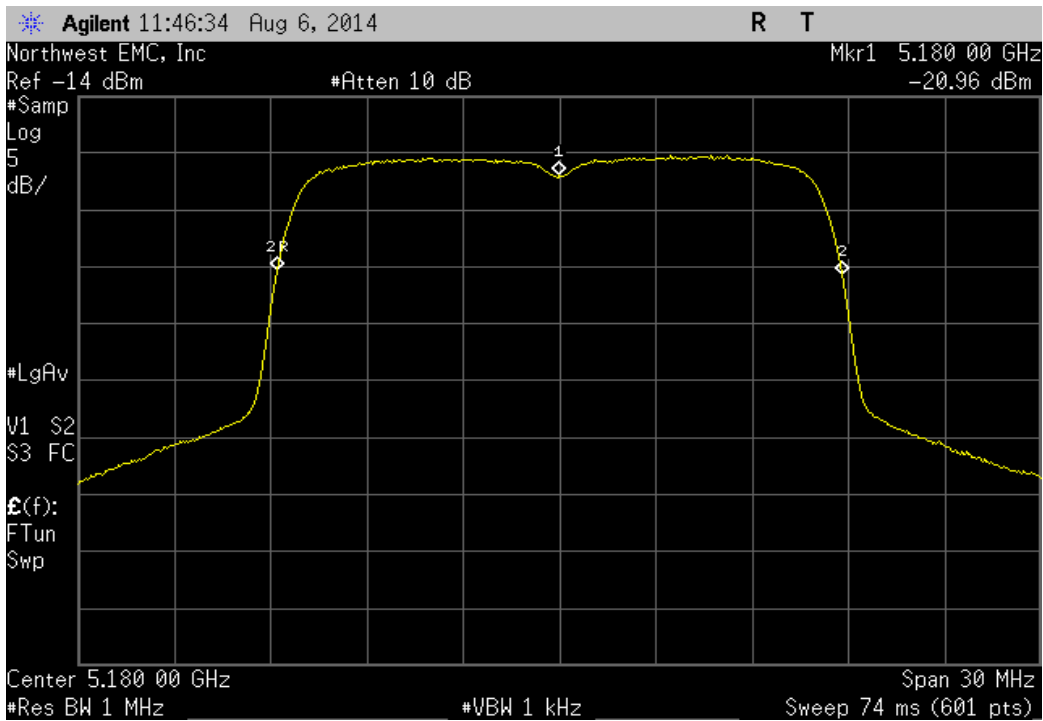
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Voltage: 85%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180	5180	0	100	Pass



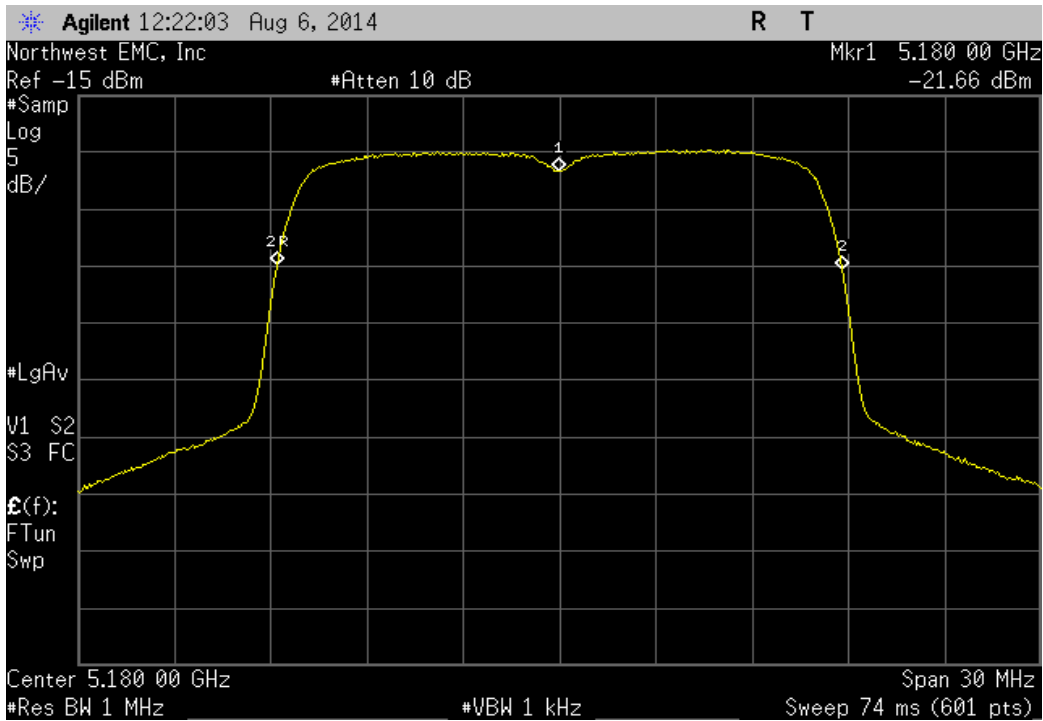
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +50°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180.02	5180	3.9	100	Pass



5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +40°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180	5180	0	100	Pass

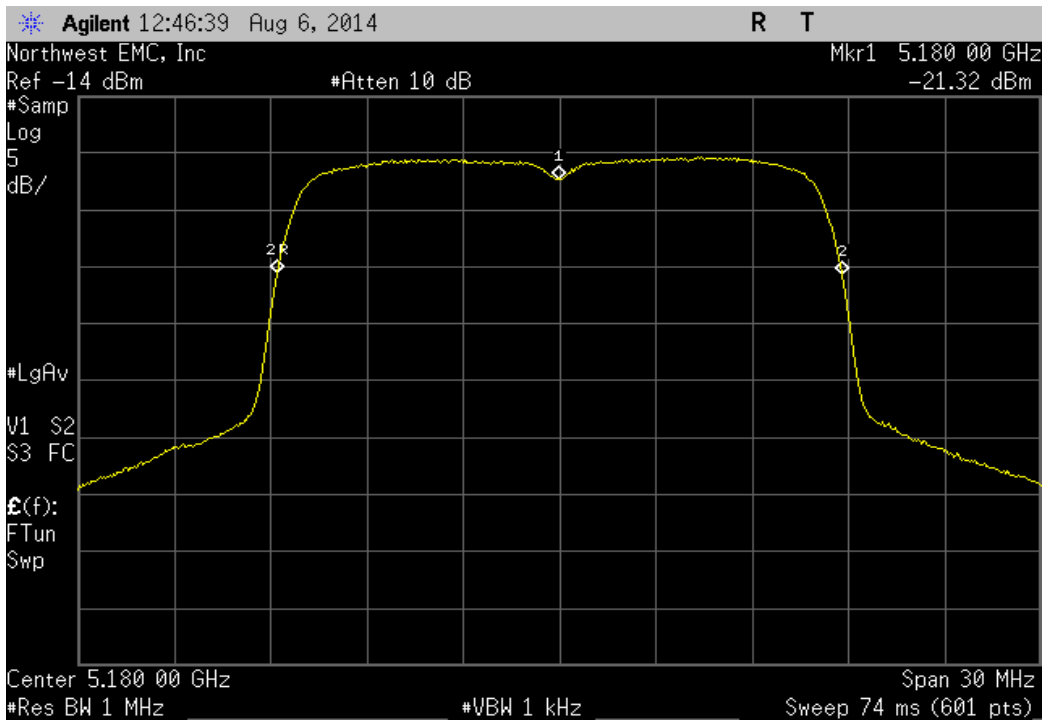


5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +30°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180	5180	0	100	Pass

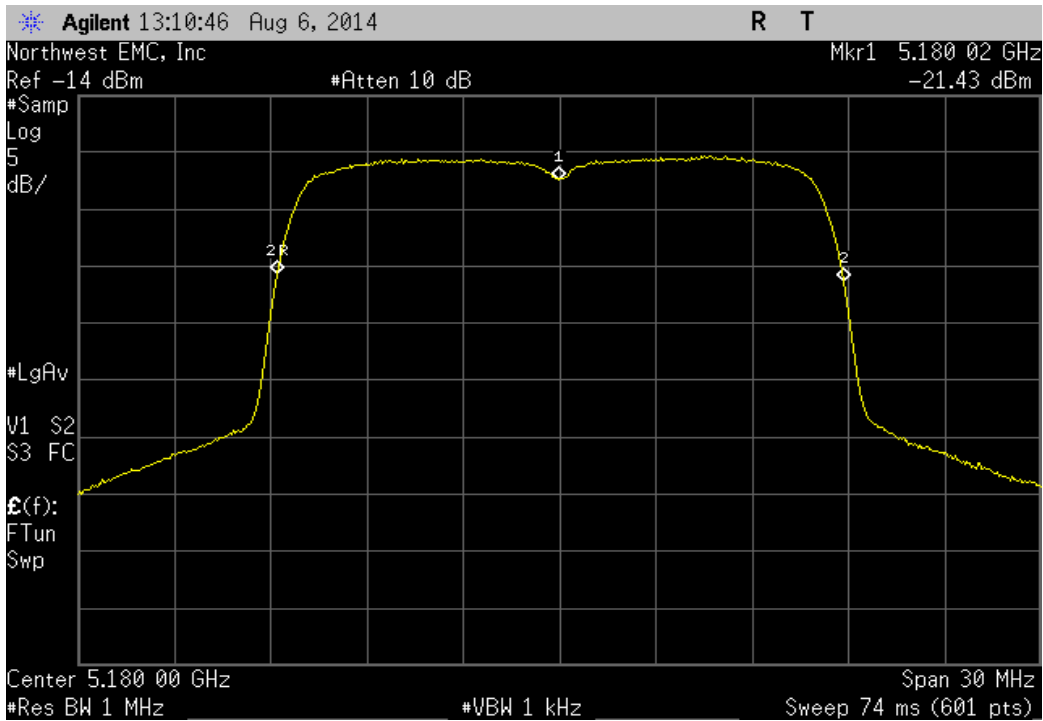




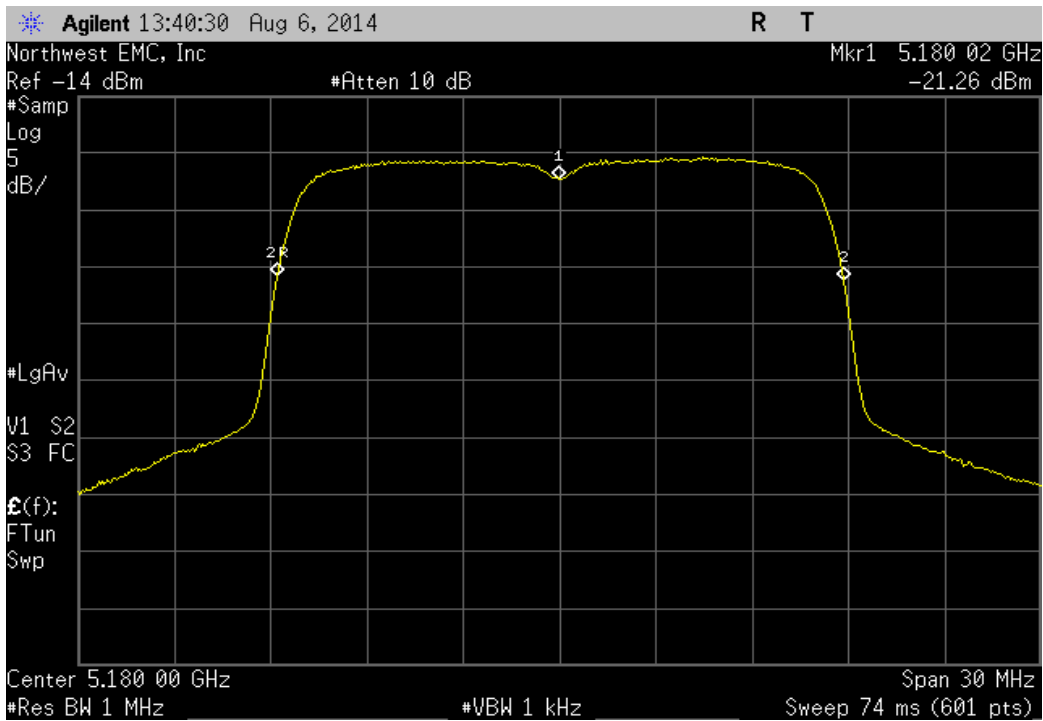
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +20°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180	5180	0	100	Pass



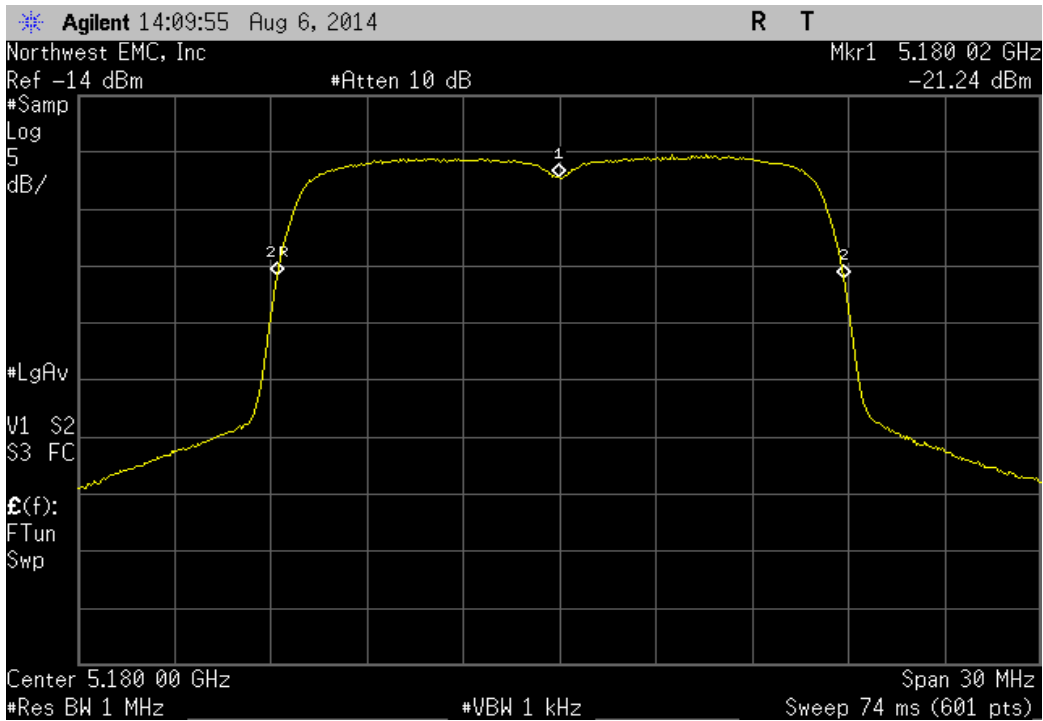
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180.02	5180	3.9	100	Pass



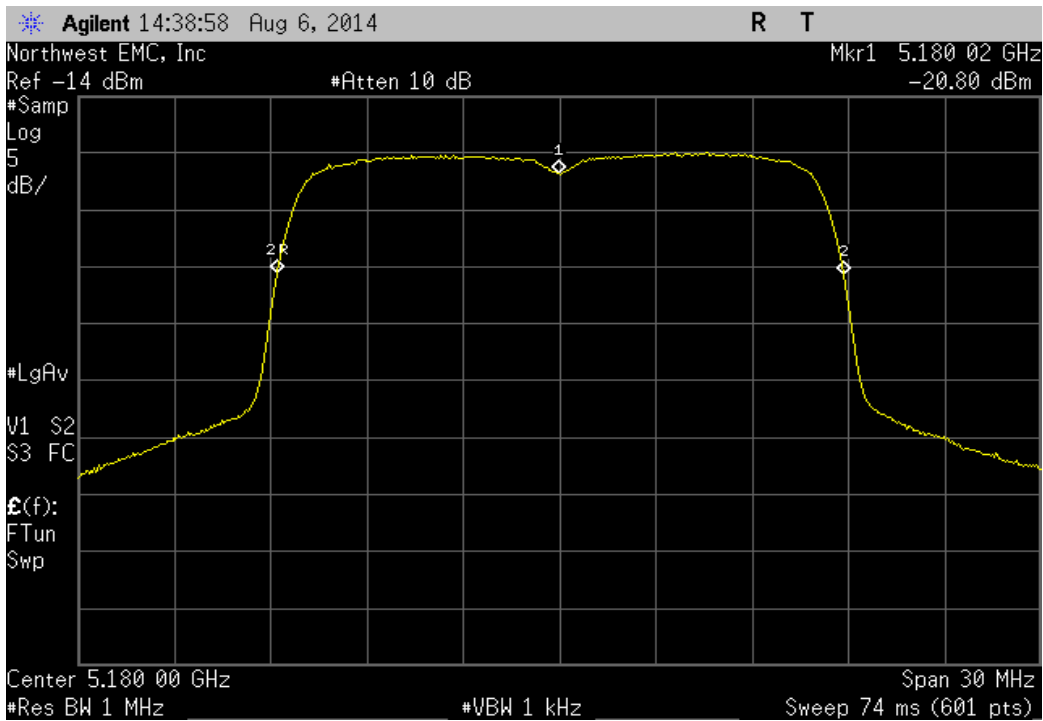
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: 0°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180.02	5180	3.9	100	Pass



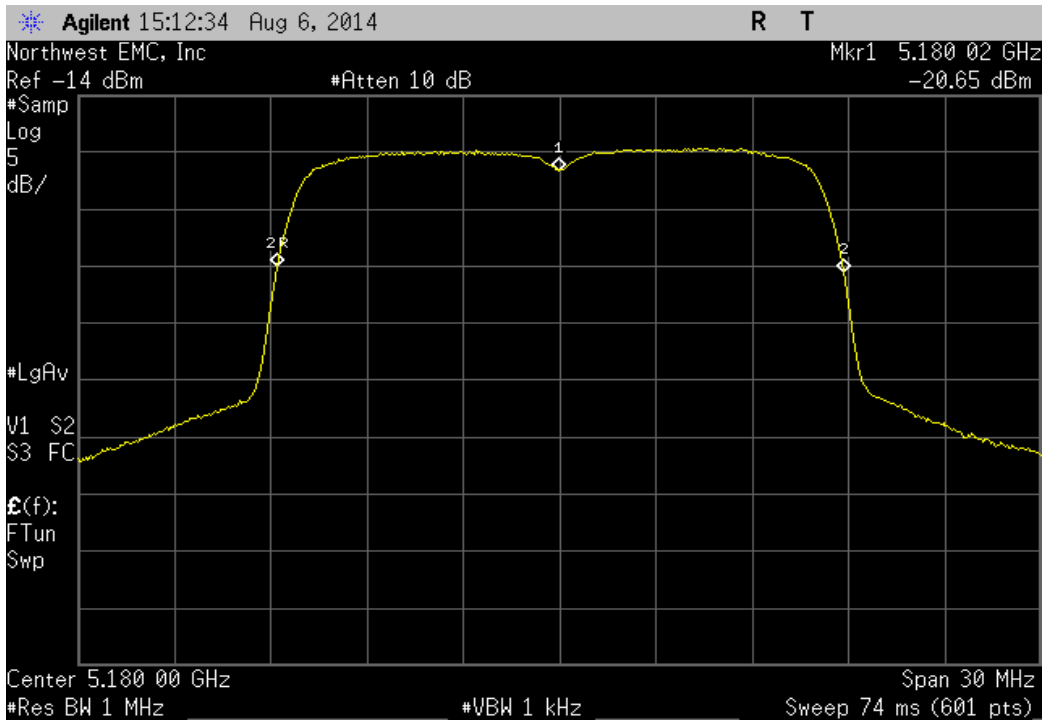
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: -10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180.02	5180	3.9	100	Pass



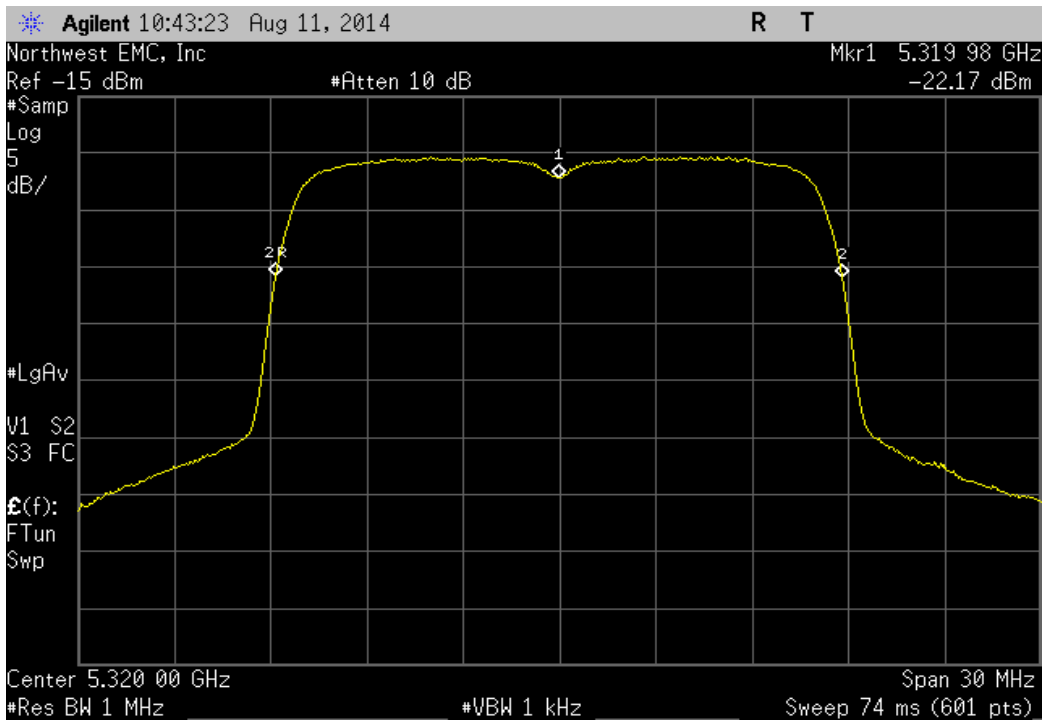
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: -20°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180.02	5180	3.9	100	Pass



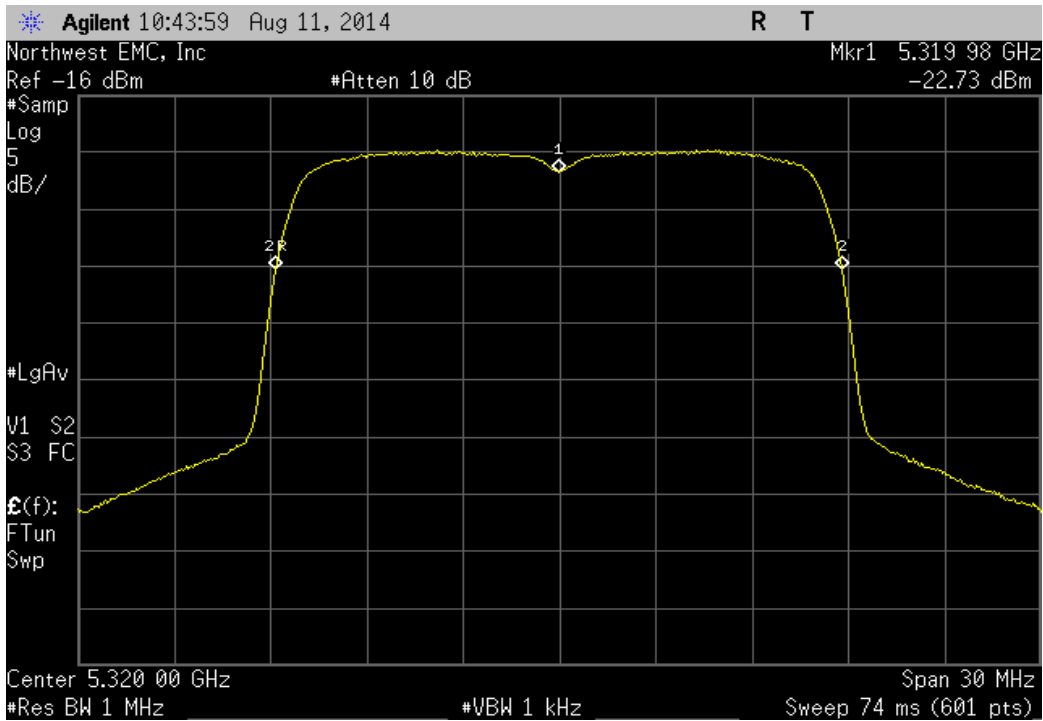
5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: -30°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5180.02	5180	3.9	100	Pass



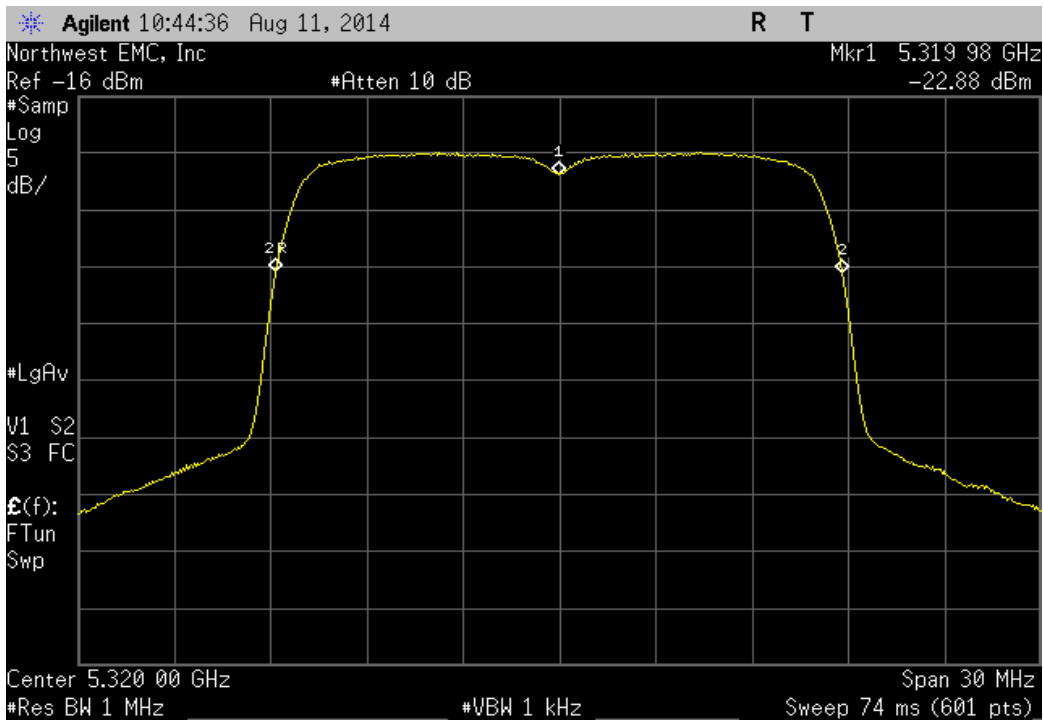
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Voltage: 115%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5319.98	5320	3.8	100	Pass



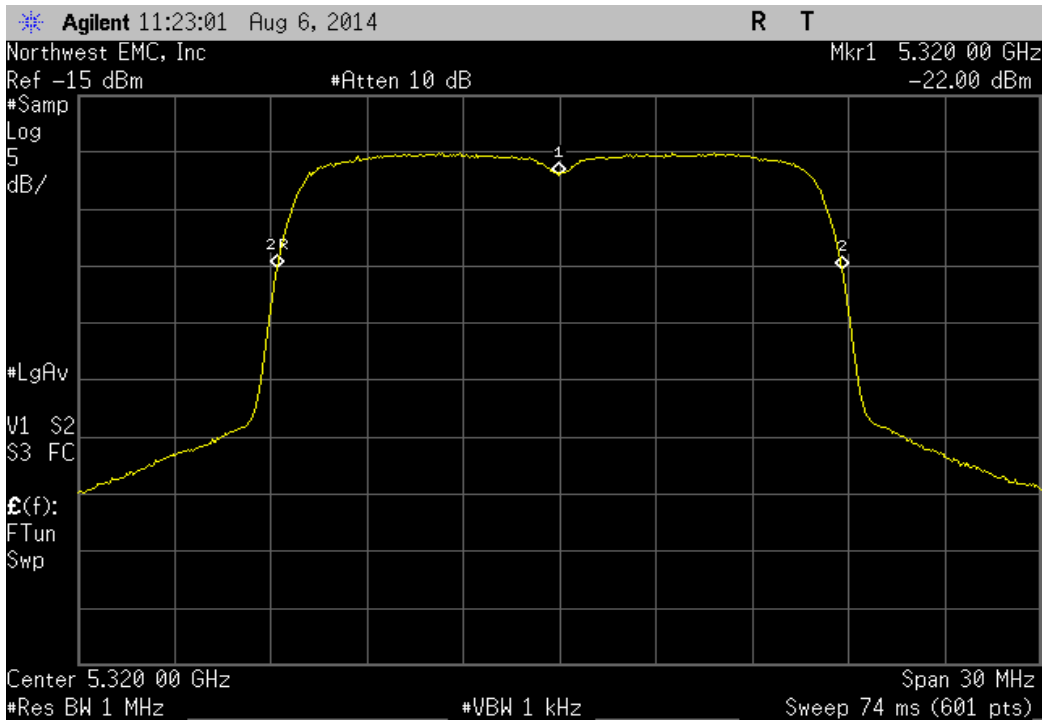
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Voltage: 100%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5319.98	5320	3.8	100	Pass



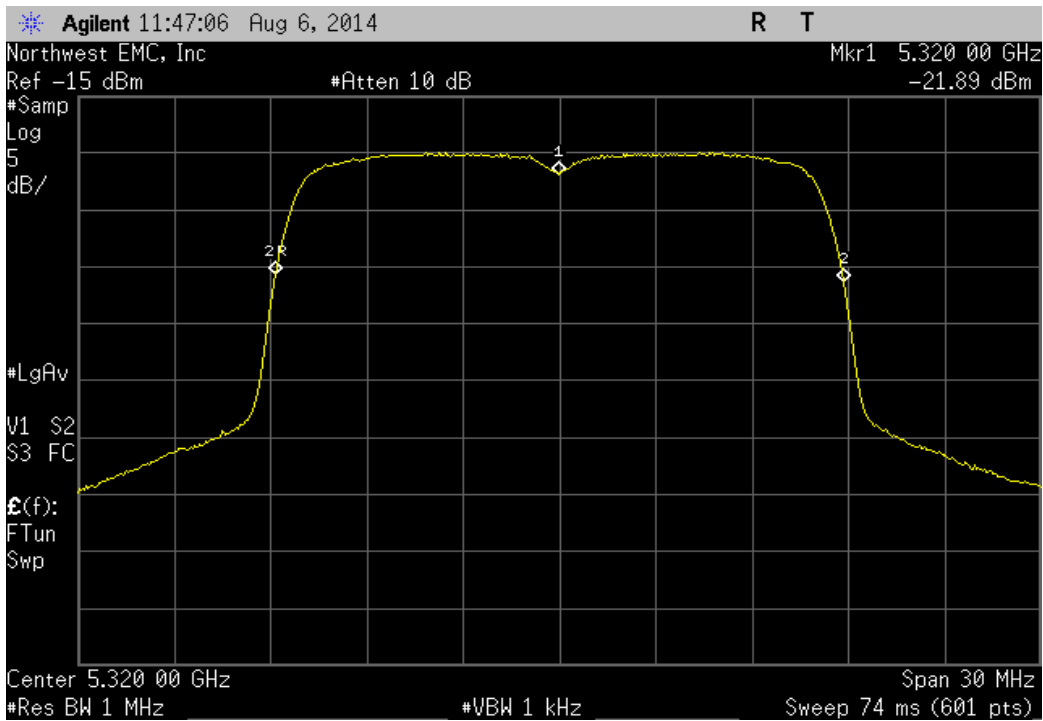
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Voltage: 85%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5319.98	5320	3.8	100	Pass



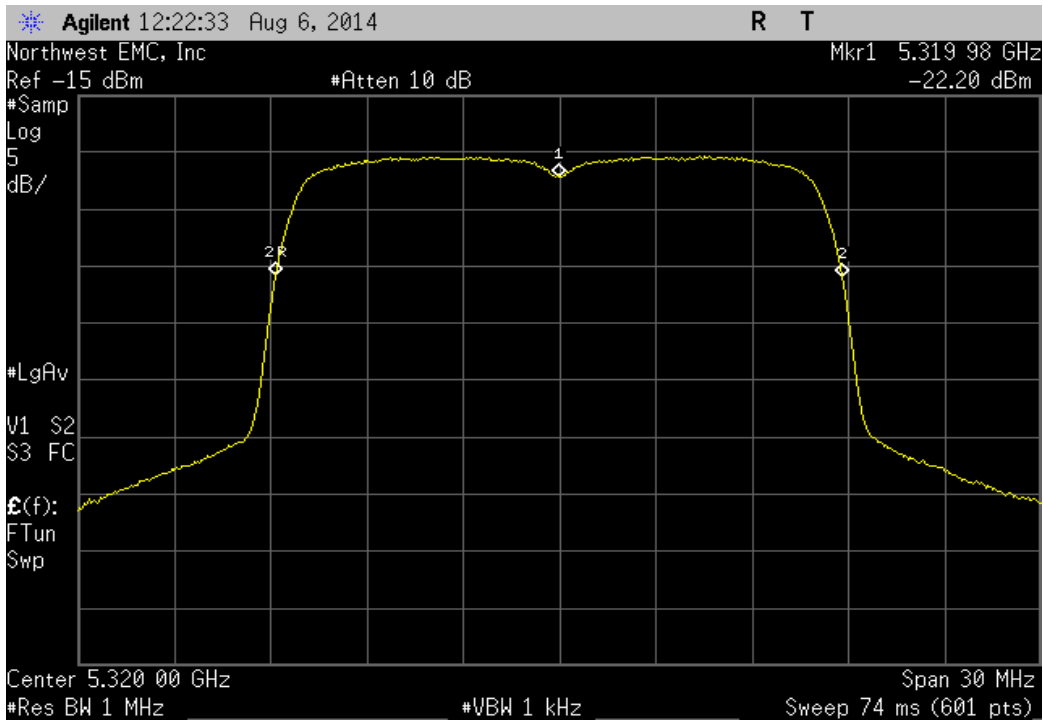
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +50°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320	5320	0	100	Pass



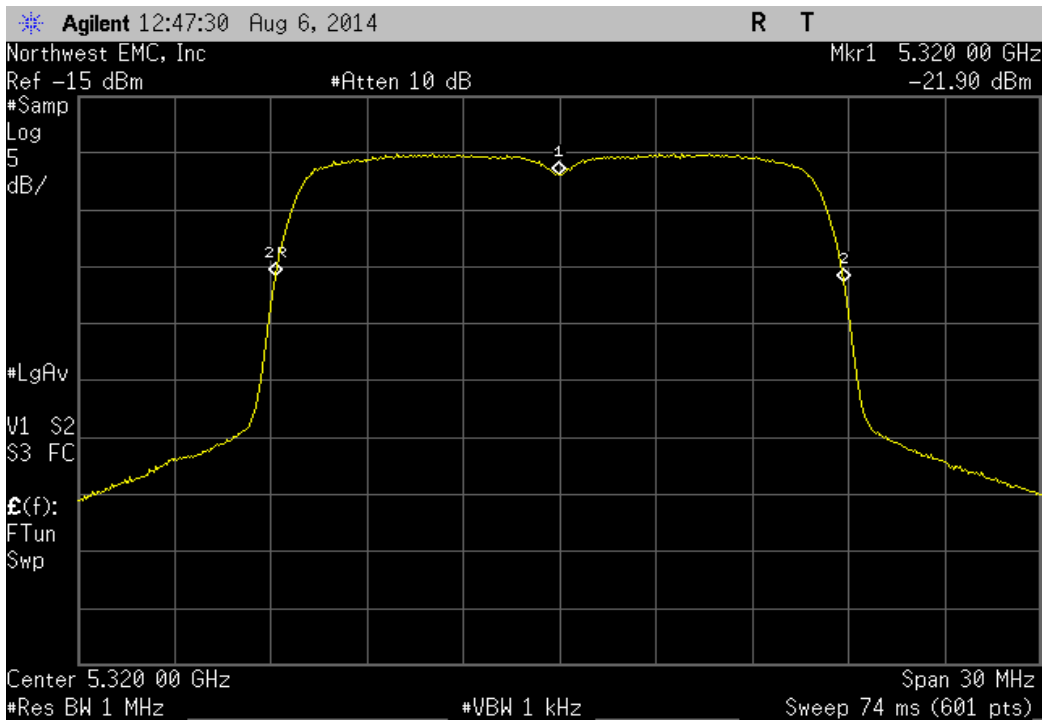
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +40°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320	5320	0	100	Pass



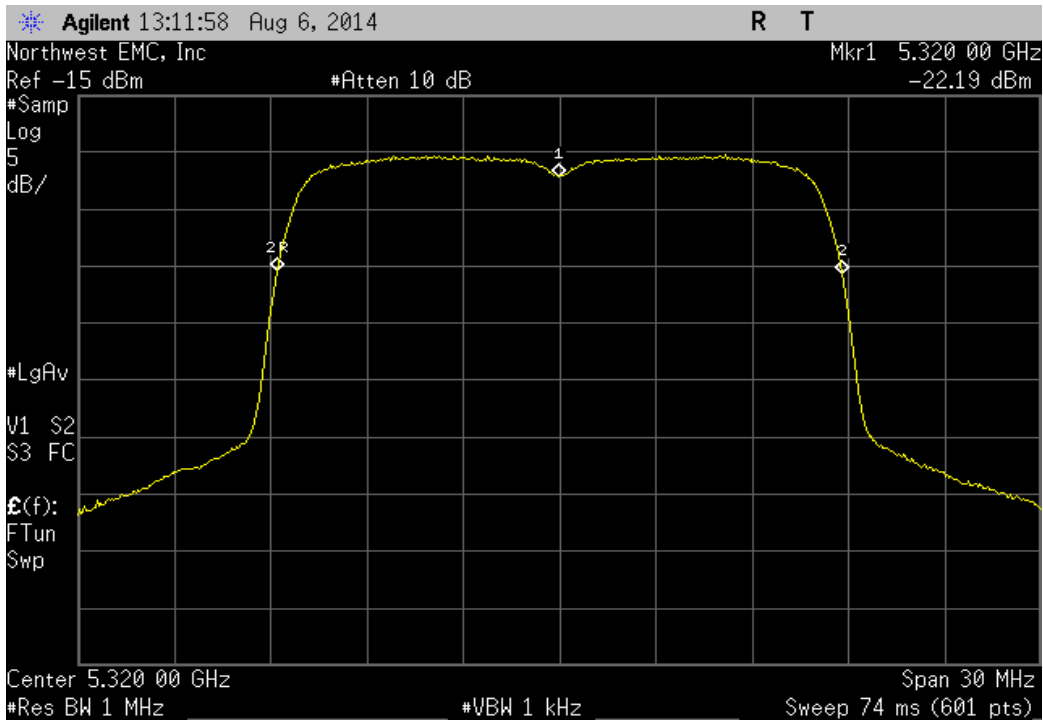
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +30°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5319.98	5320	3.8	100	Pass



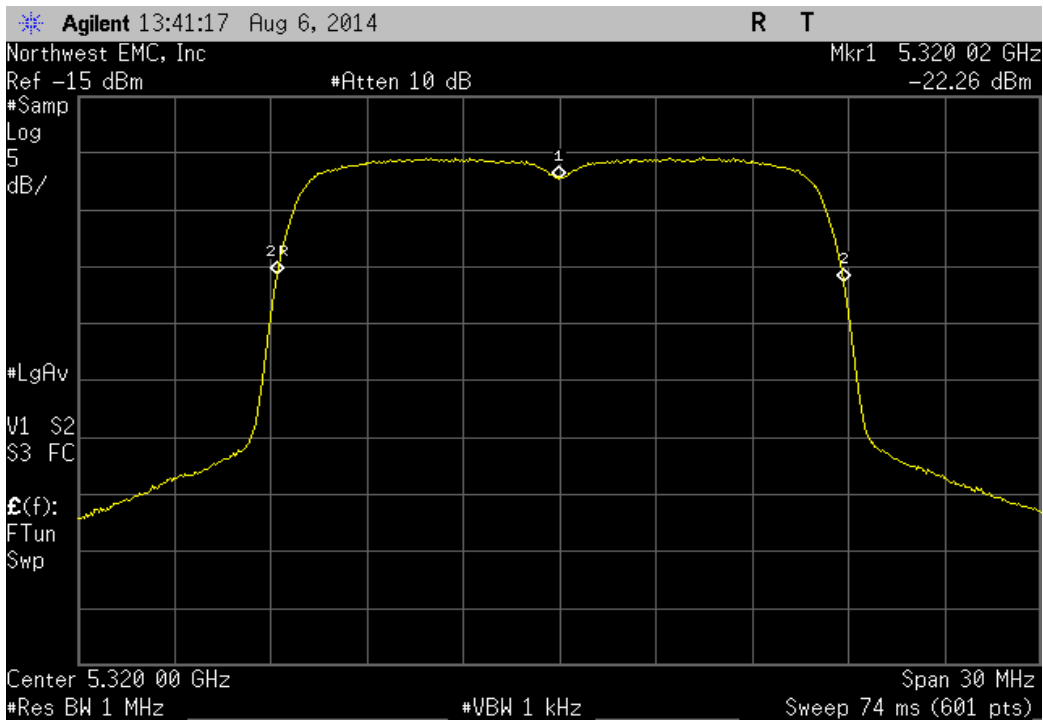
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +20°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320	5320	0	100	Pass



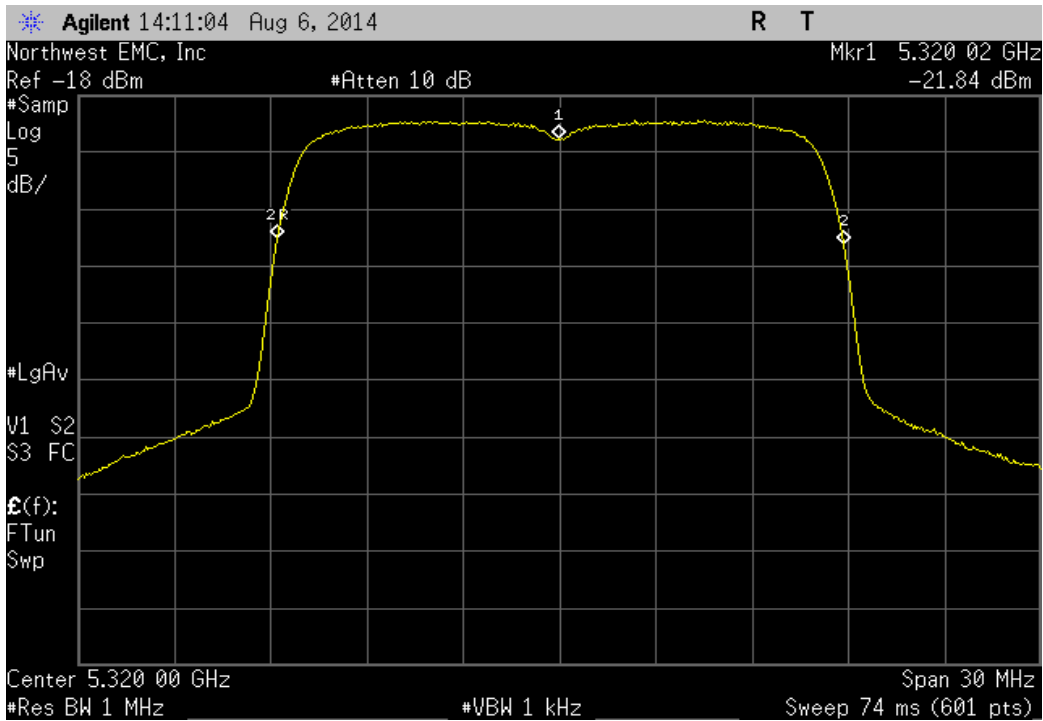
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320	5320	0	100	Pass



5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: 0°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320.02	5320	3.8	100	Pass

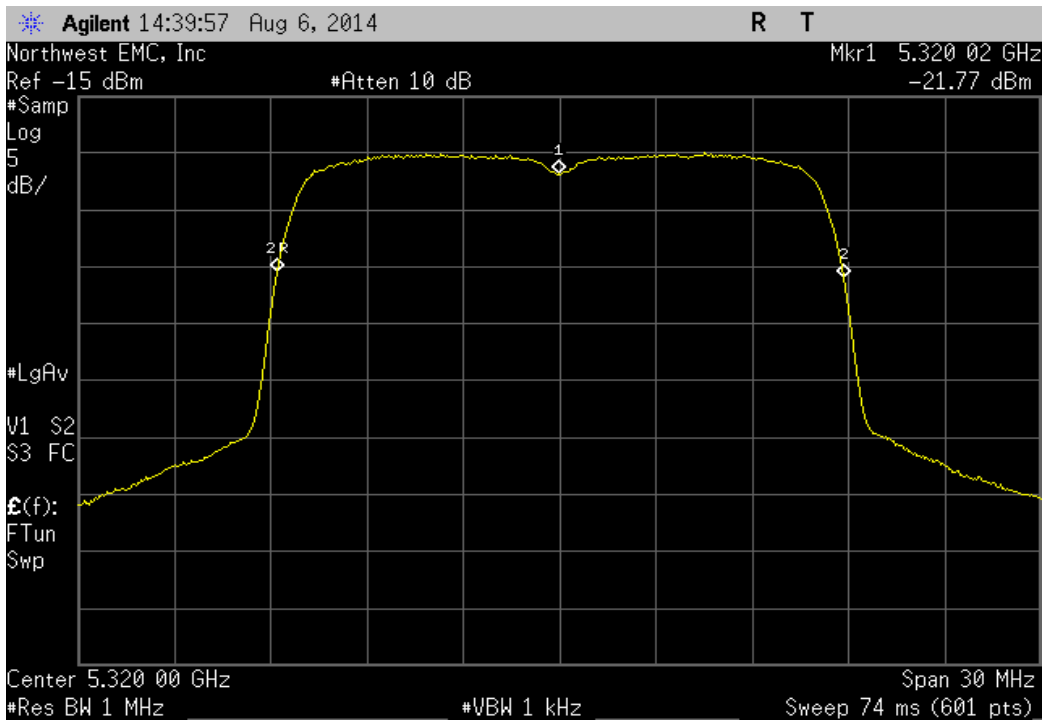


5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: -10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320.02	5320	3.8	100	Pass

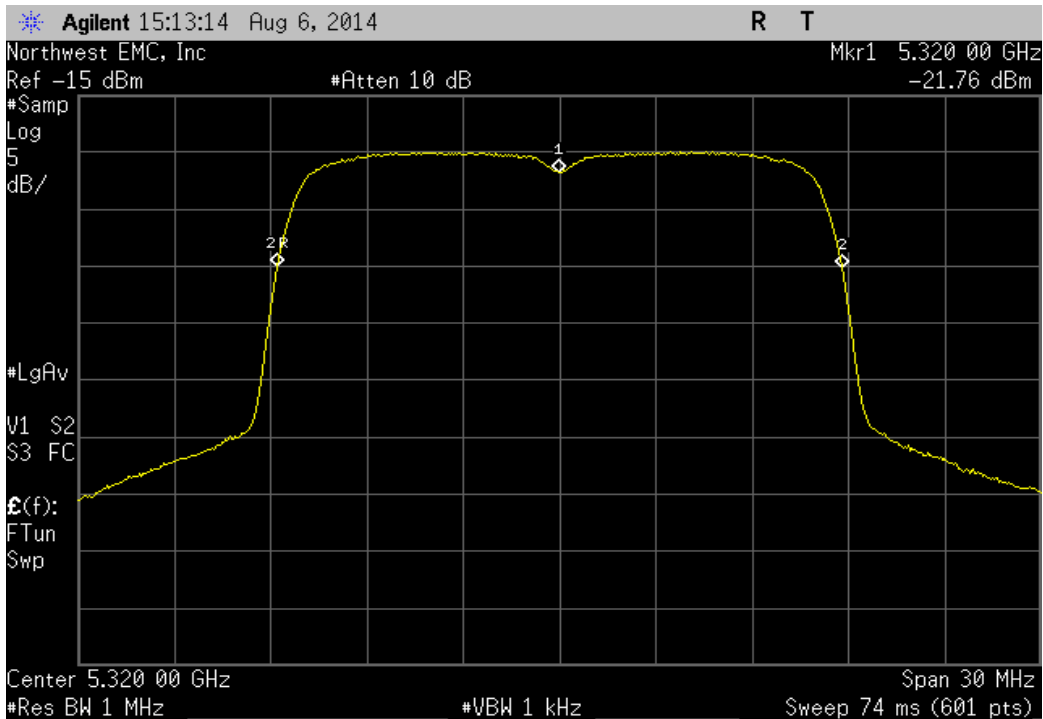




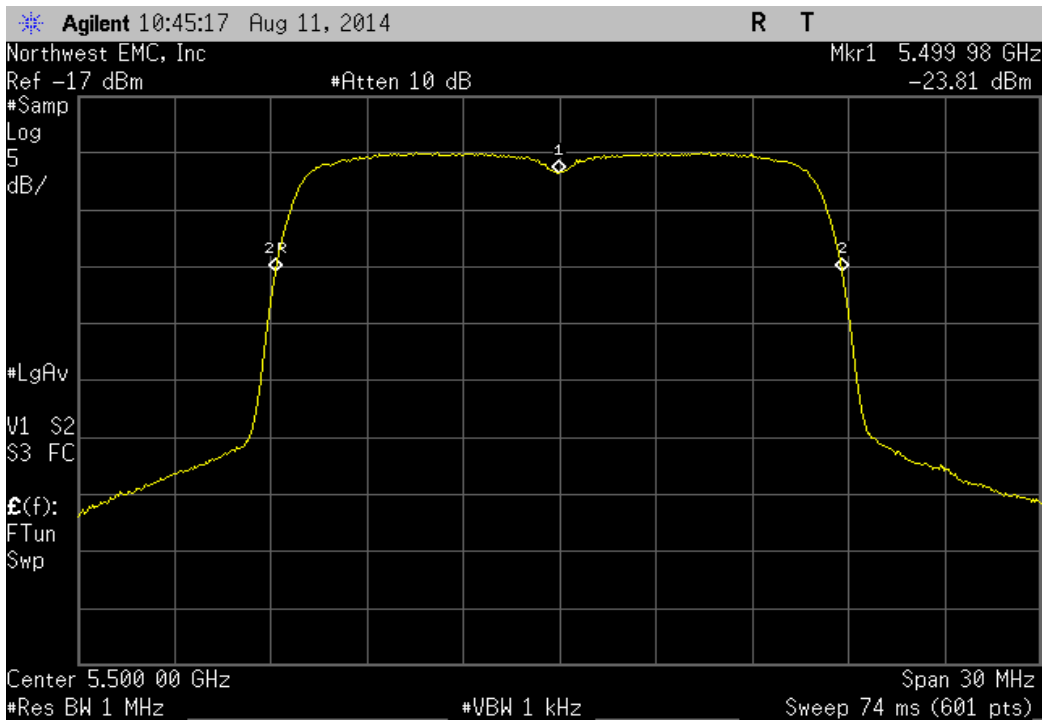
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: -20°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320.02	5320	3.8	100	Pass



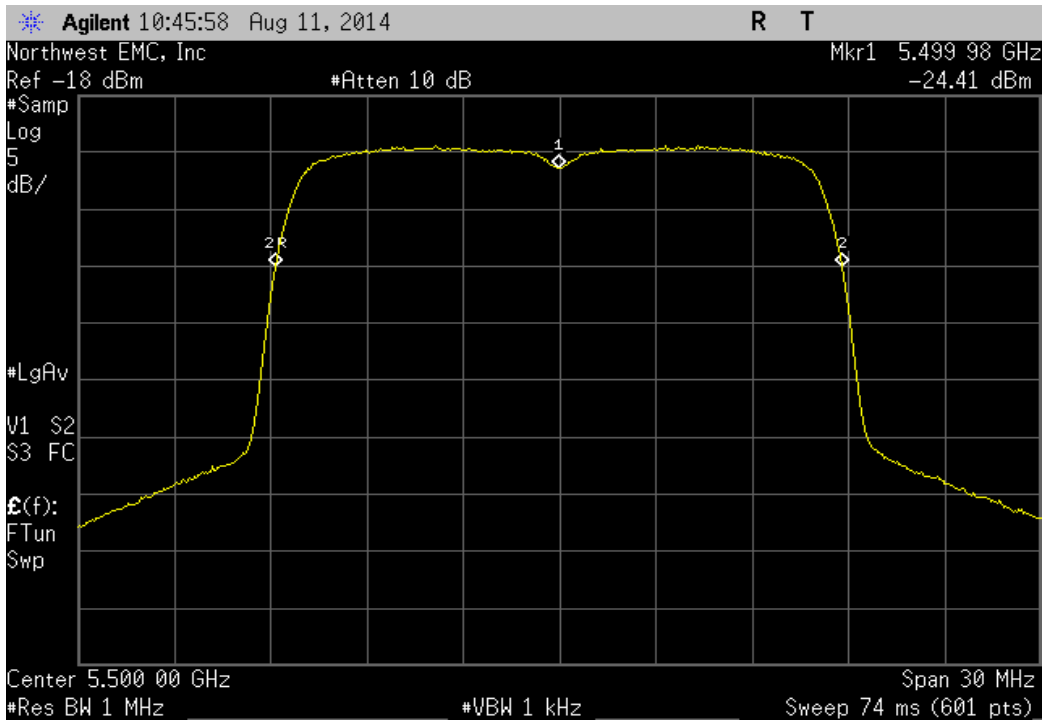
5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: -30°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5320	5320	0	100	Pass



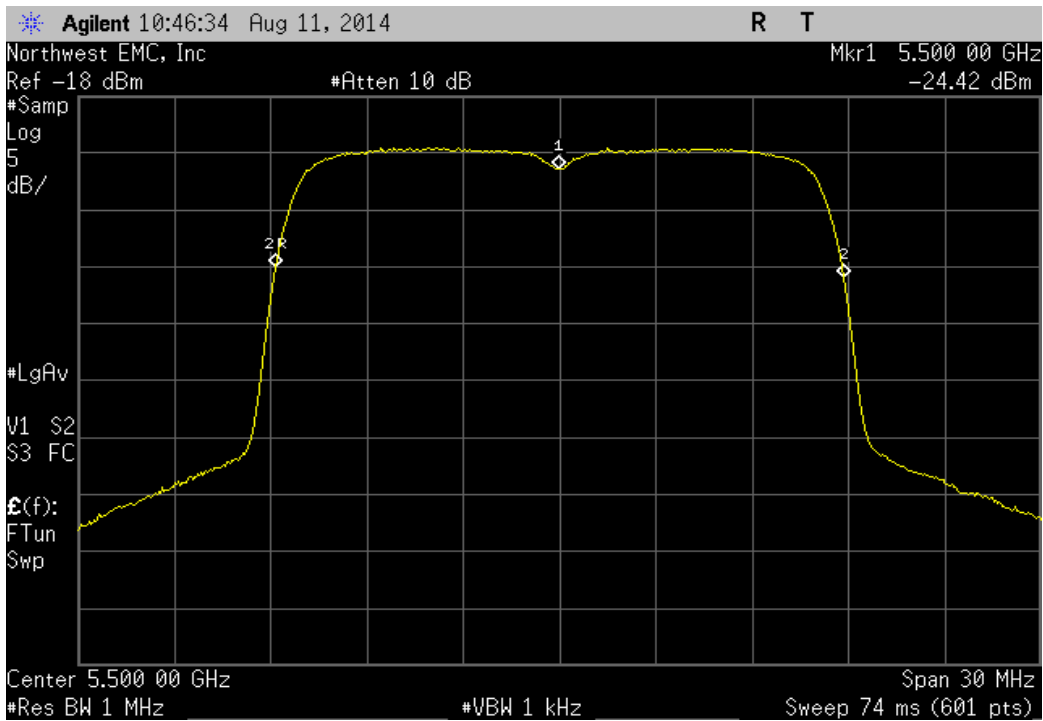
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Voltage: 115%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5499.98	5500	3.6	100	Pass



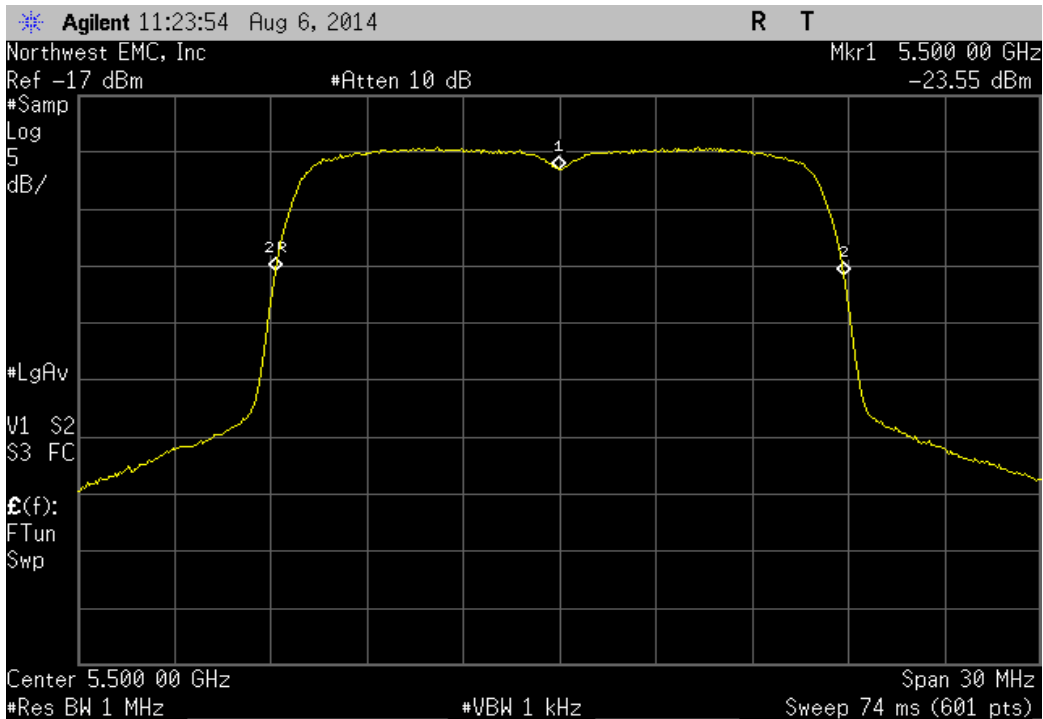
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Voltage: 100%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5499.98	5500	3.6	100	Pass



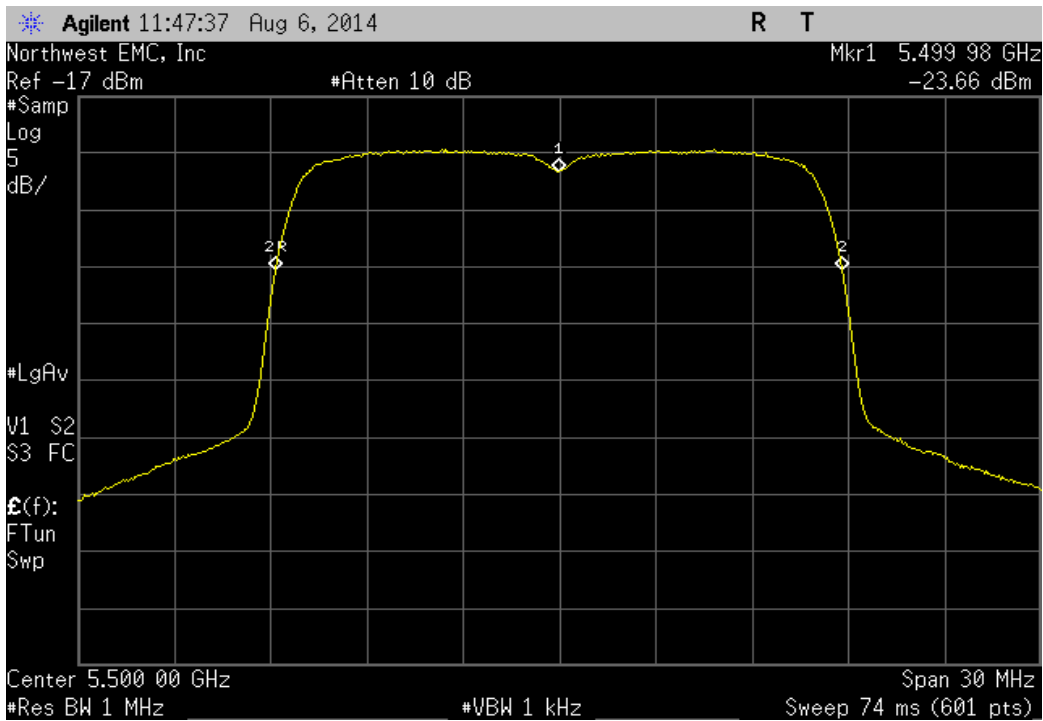
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Voltage: 85%					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5500	5500	0	100	Pass	



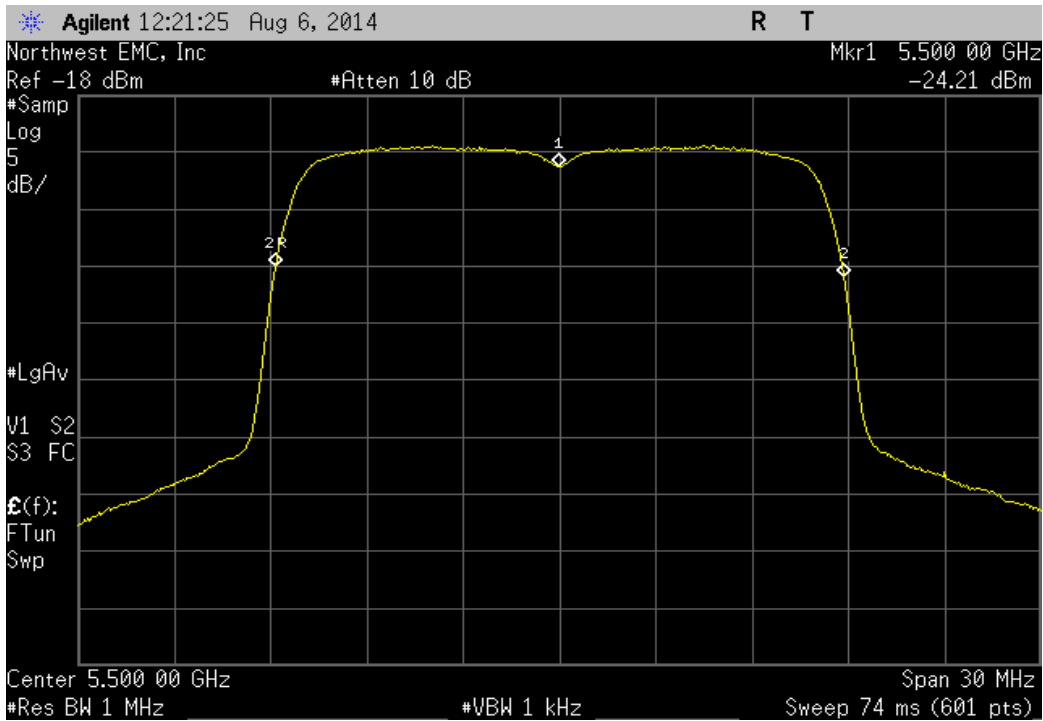
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +50°					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5500	5500	0	100	Pass	



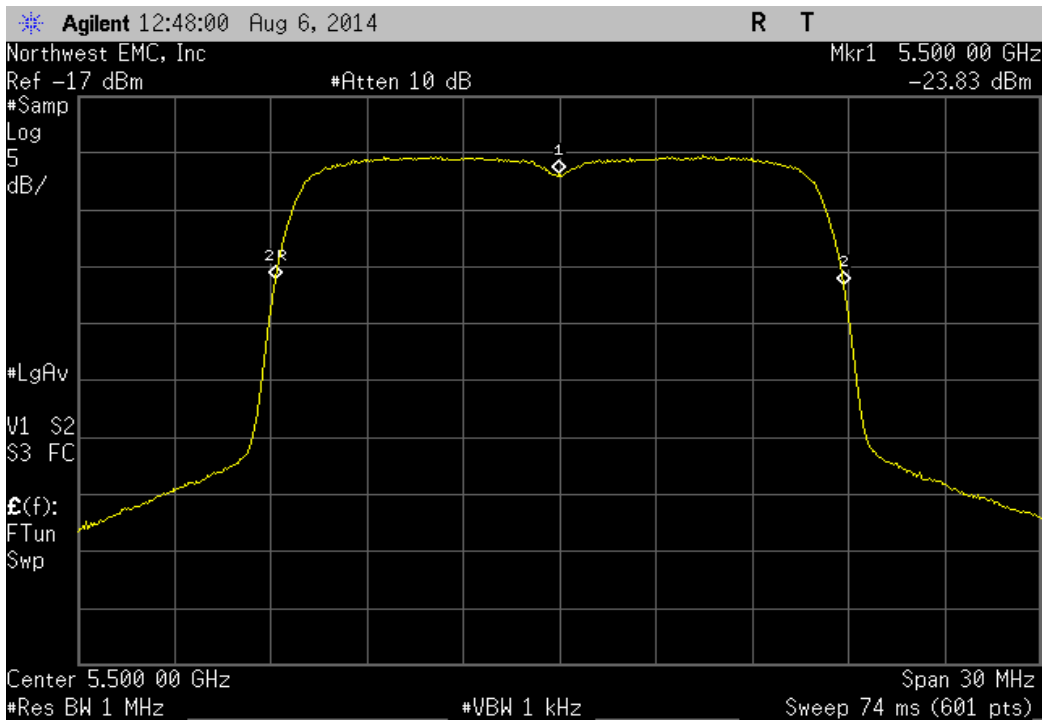
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +40°					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5499.98	5500	3.6	100	Pass	



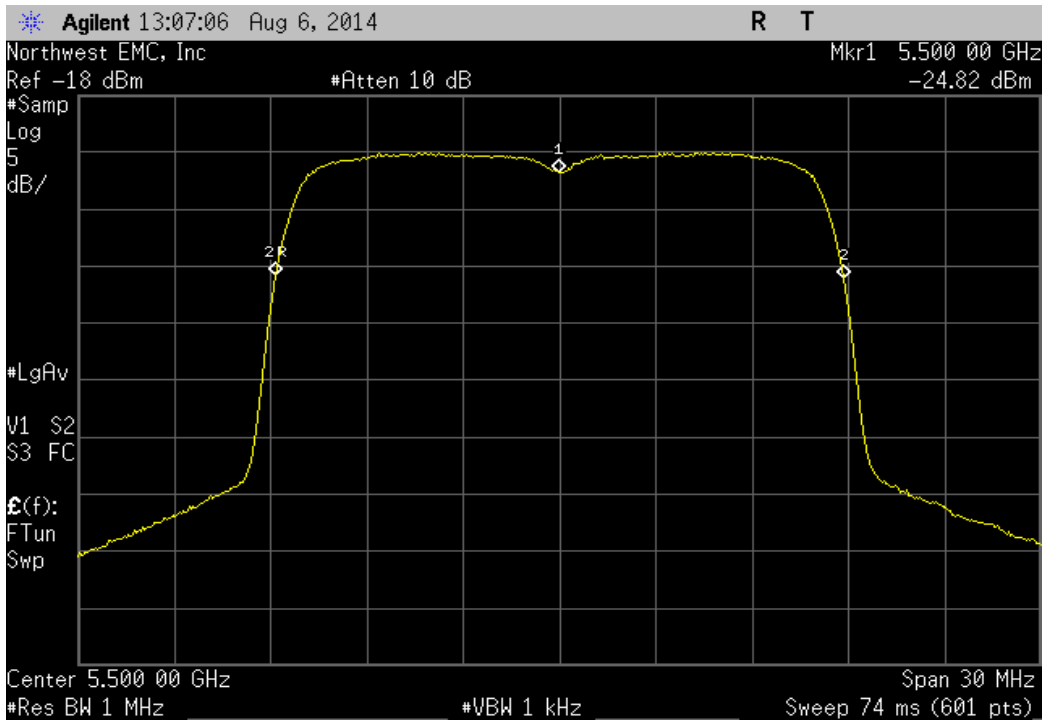
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +30°					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5500	5500	0	100	Pass	



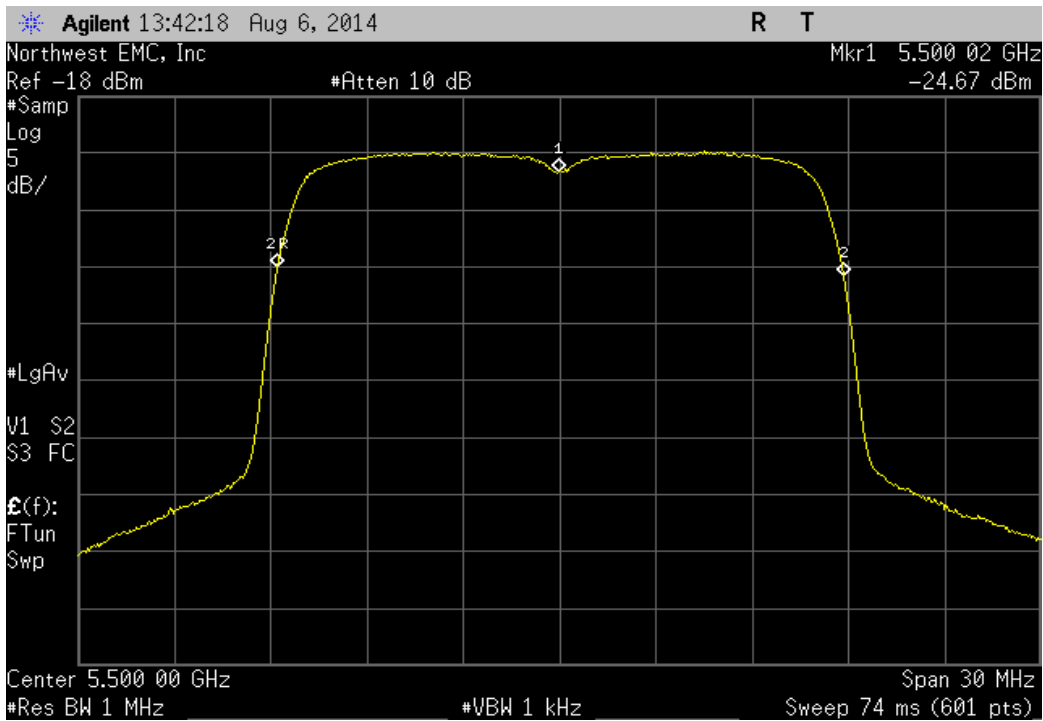
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +20°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5500	5500	0	100	Pass



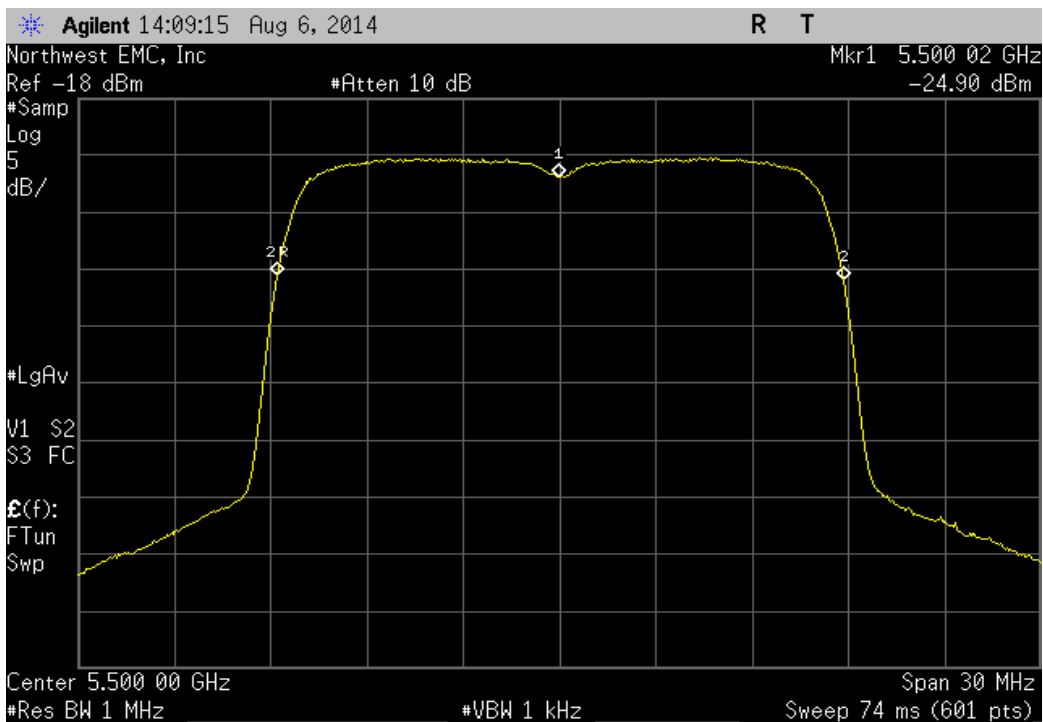
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5500	5500	0	100	Pass



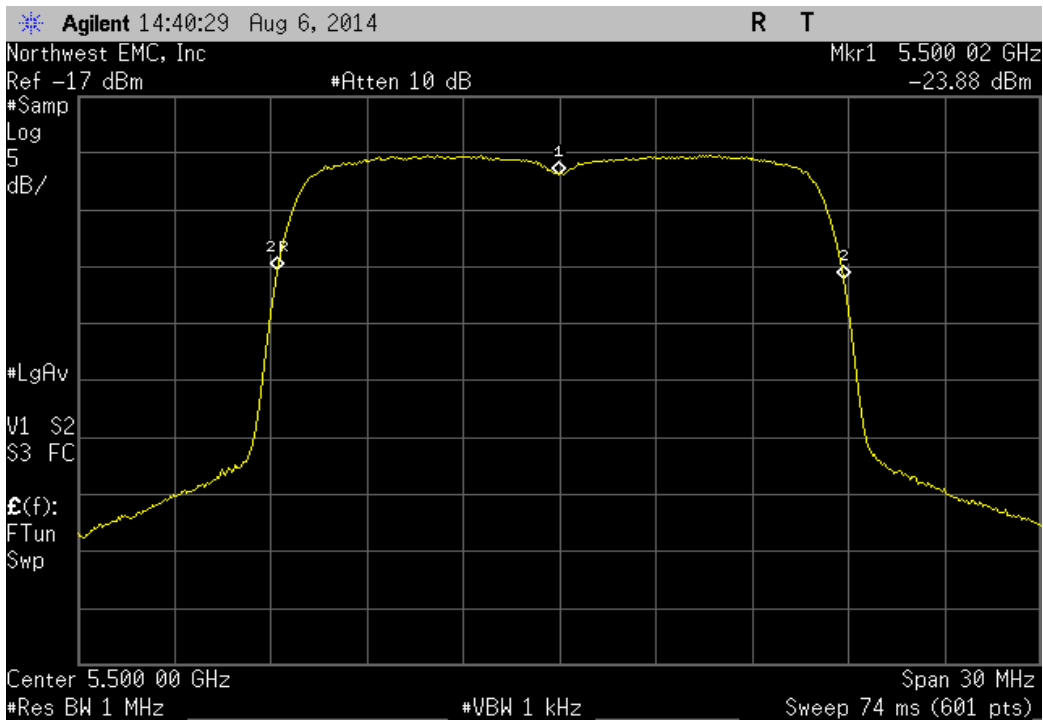
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: 0°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5500.02	5500	3.6	100	Pass



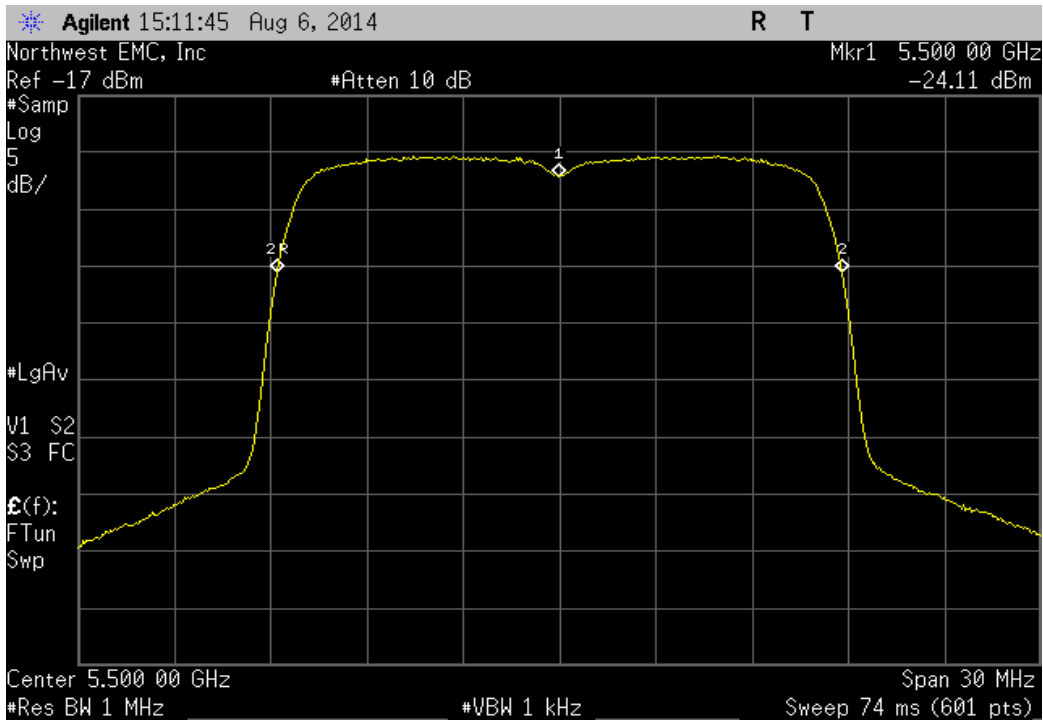
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: -10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5500.02	5500	3.6	100	Pass



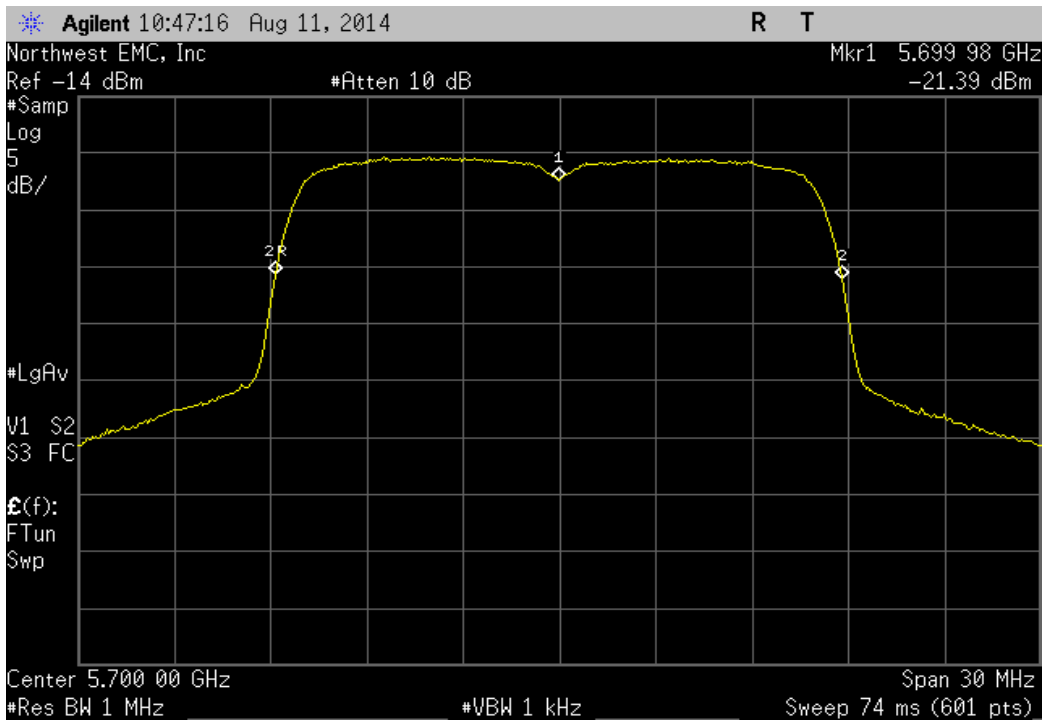
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: -20°					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5500.02	5500	3.6	100	Pass	



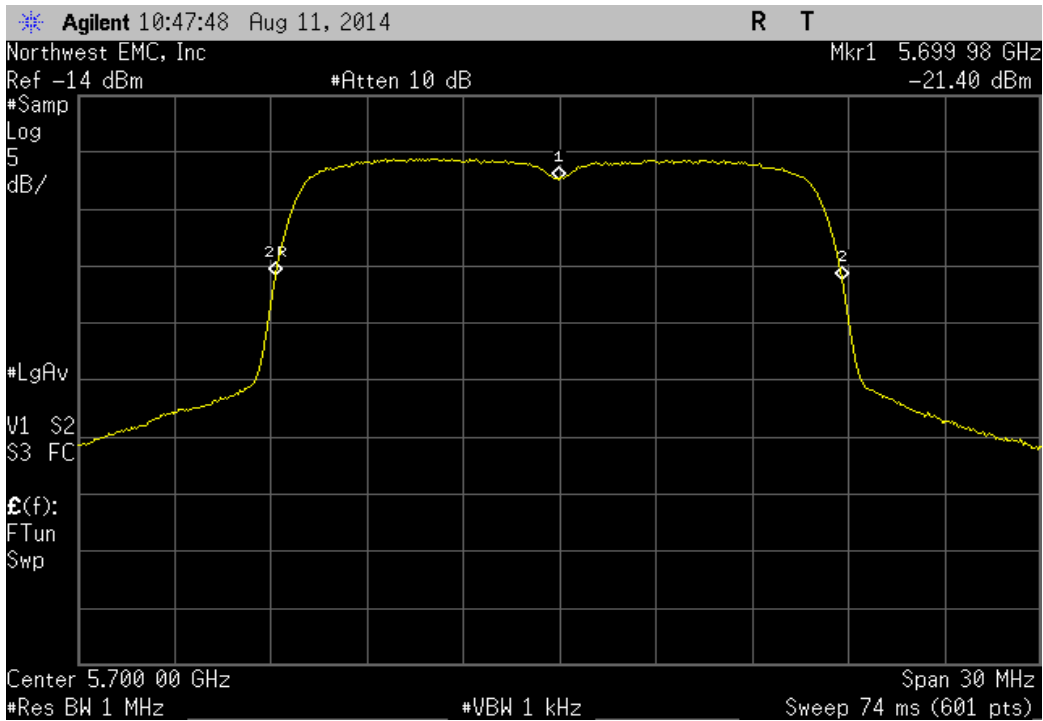
5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: -30°					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5500	5500	0	100	Pass	



5470 MHz - 5725 MHz - High Channel, 5700 MHz, Voltage: 115%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5699.98	5700	3.5	100	Pass

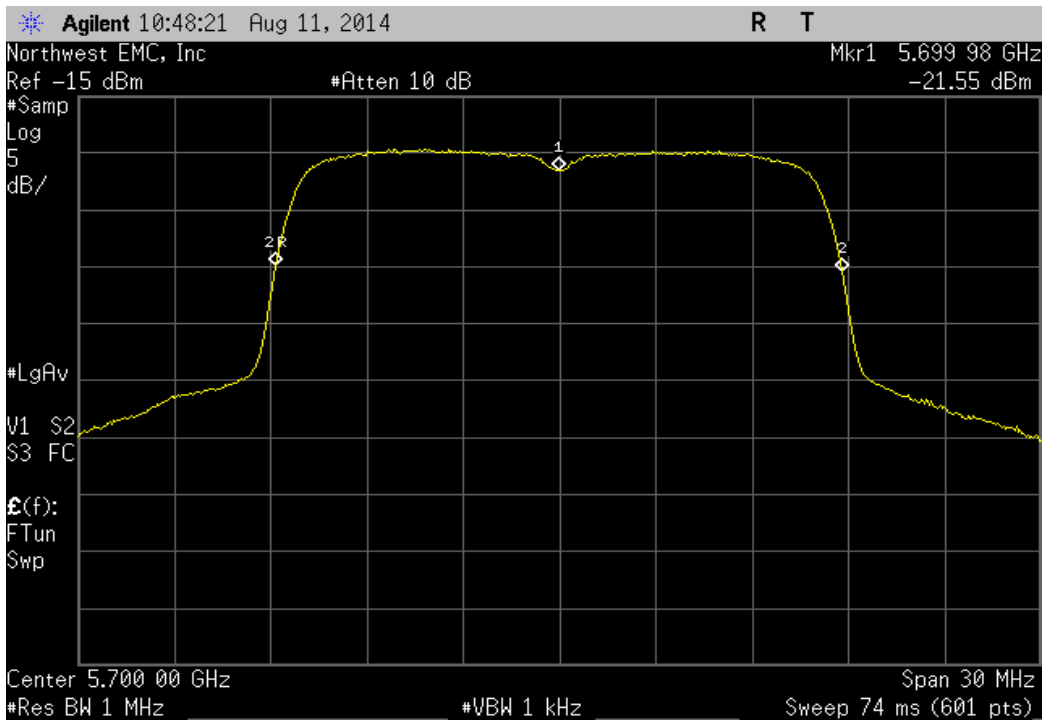


5470 MHz - 5725 MHz - High Channel, 5700 MHz, Voltage: 100%					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5699.98	5700	3.5	100	Pass

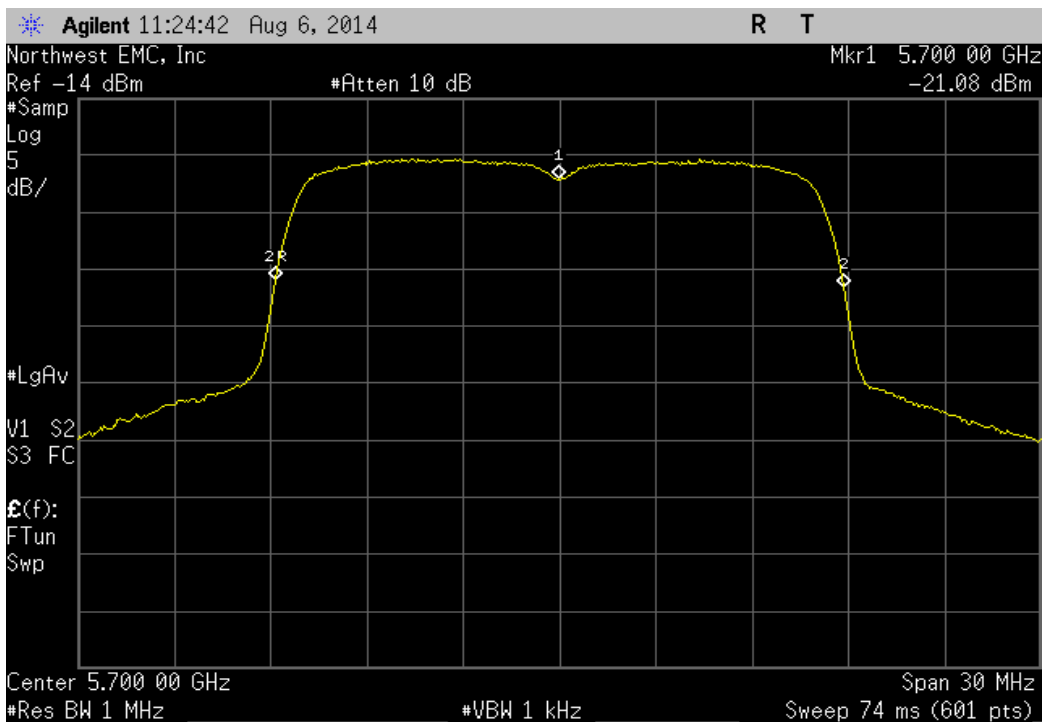




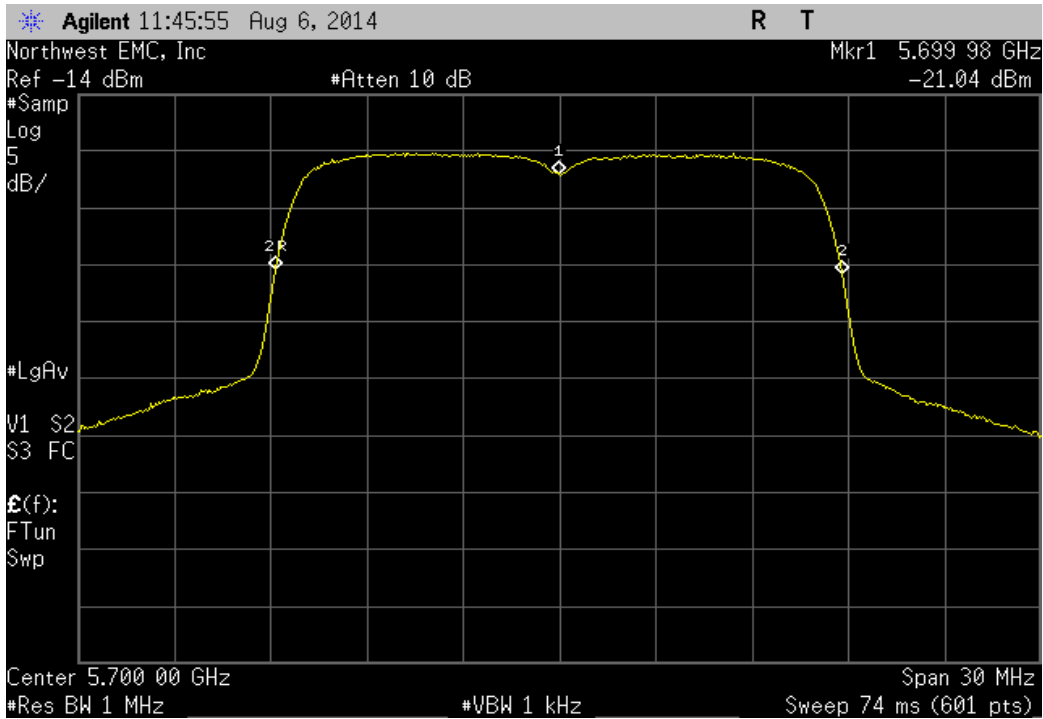
5470 MHz - 5725 MHz - High Channel, 5700 MHz, Voltage: 85%					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5699.98	5700	3.5	100	Pass	



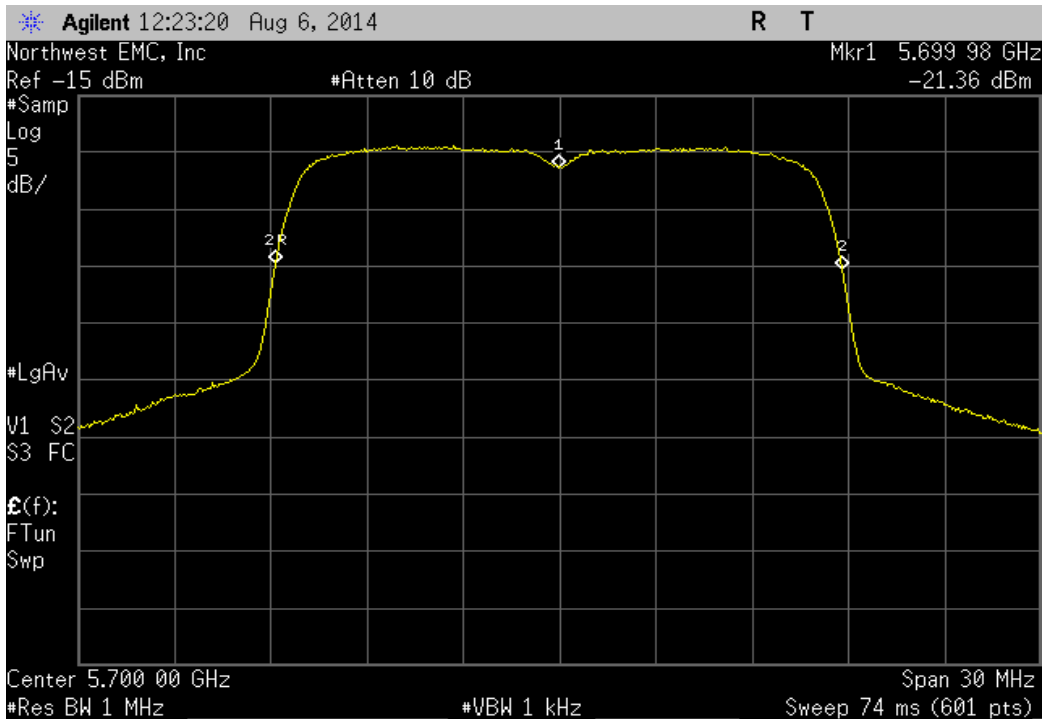
5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +50°					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
5700	5700	0	100	Pass	



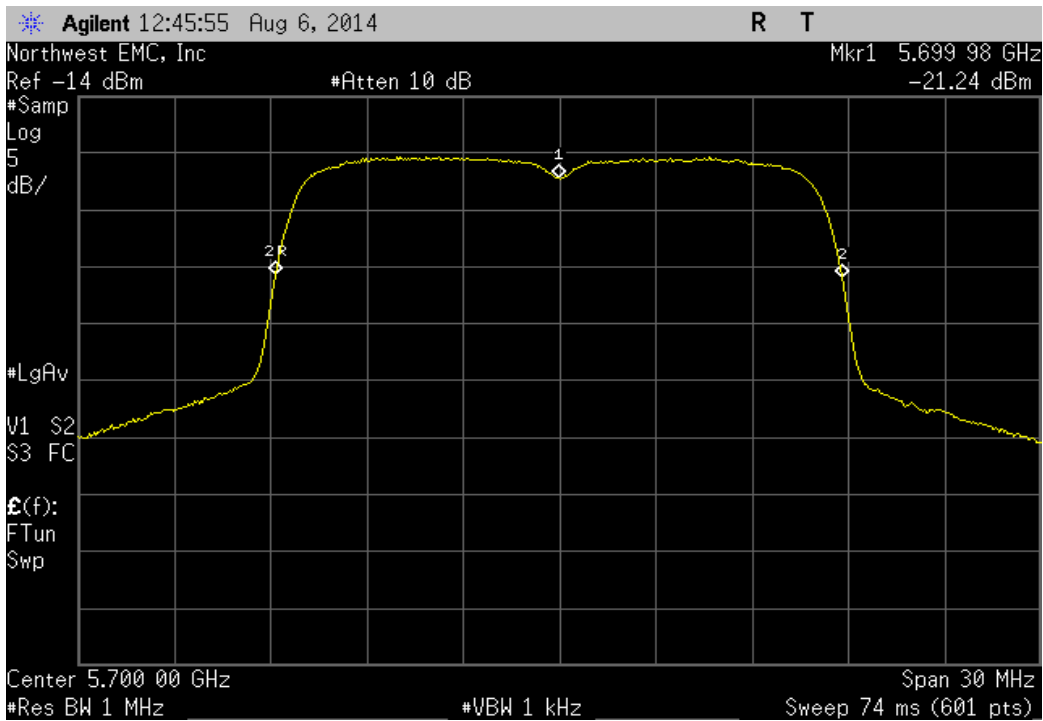
5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +40°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5699.98	5700	3.5	100	Pass



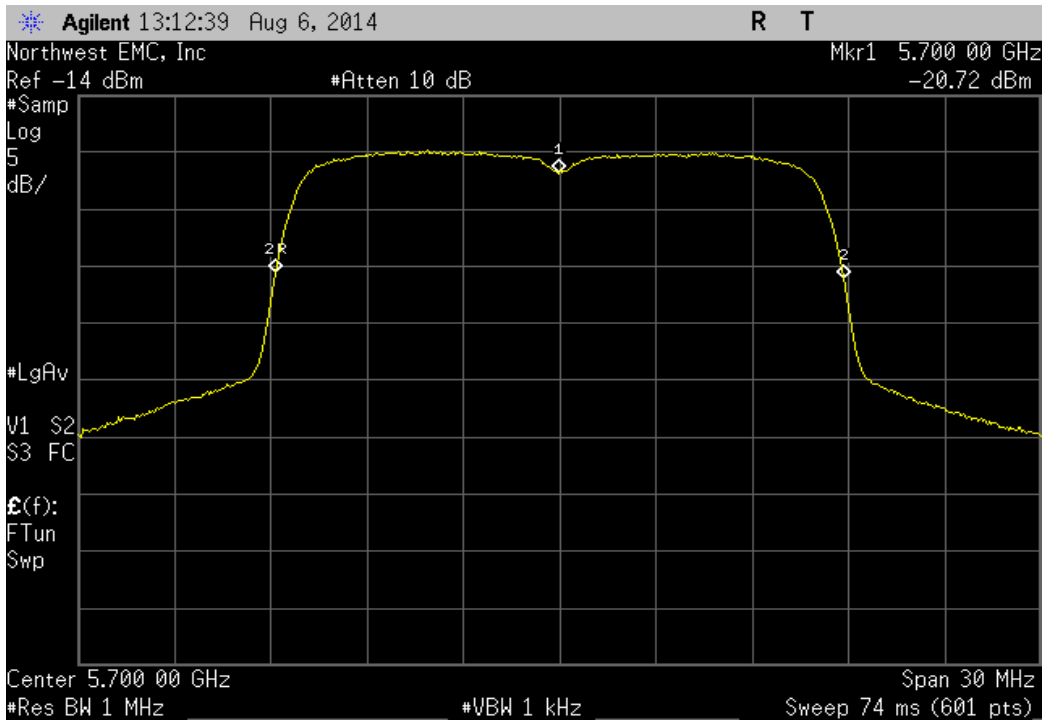
5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +30°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5699.98	5700	3.5	100	Pass



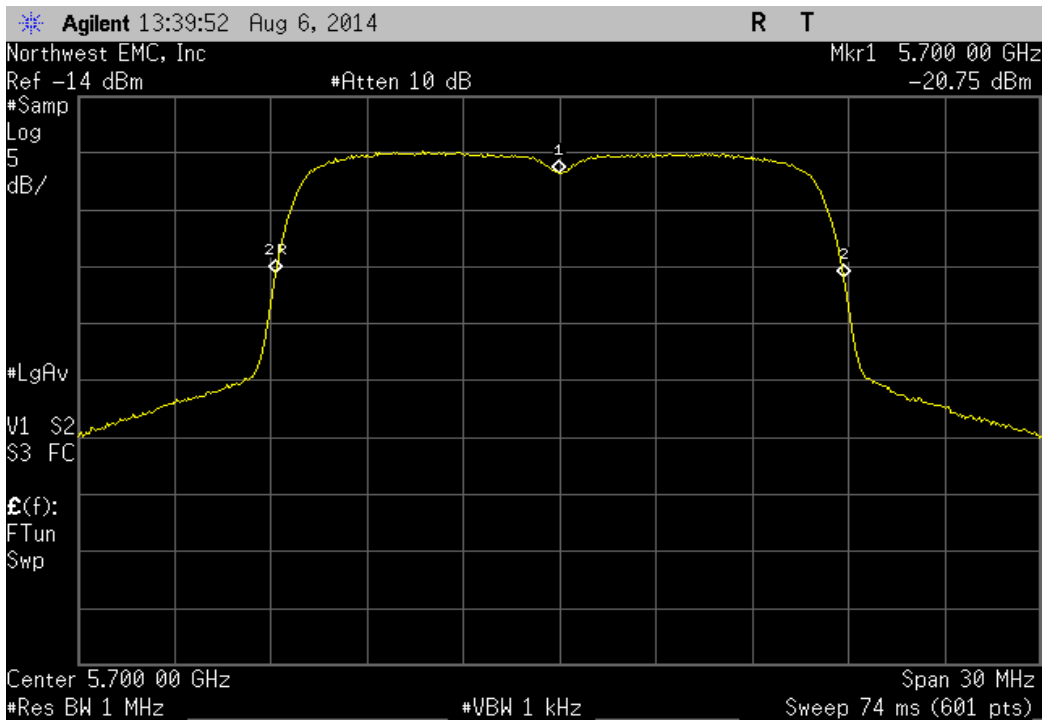
5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +20°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5699.98	5700	3.5	100	Pass



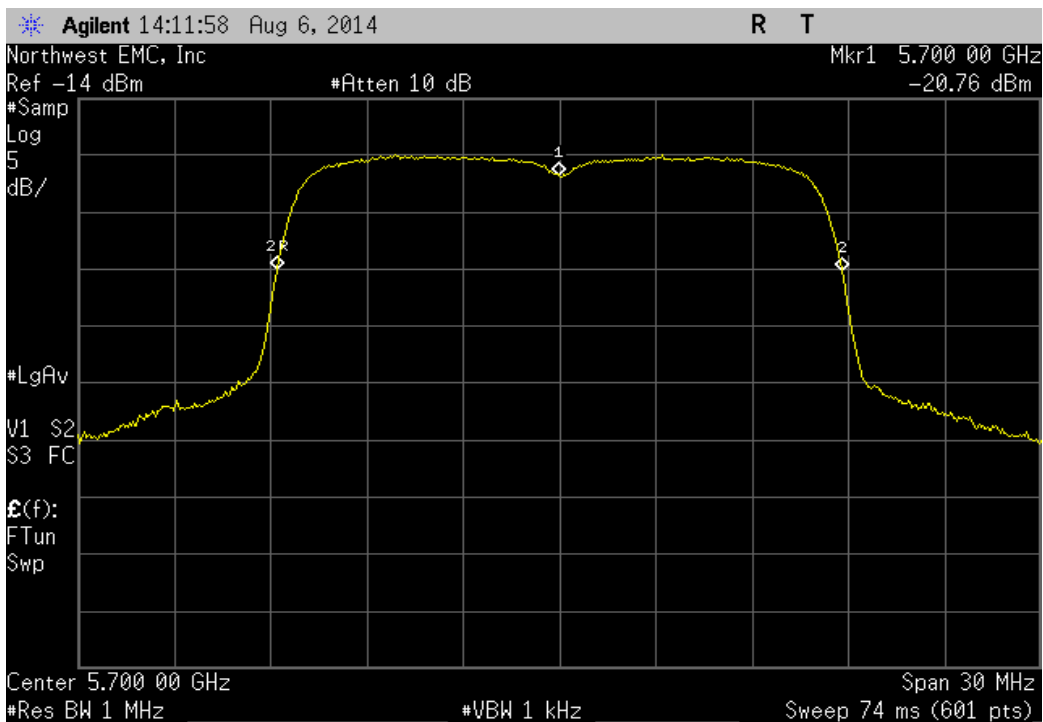
5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5700	5700	0	100	Pass



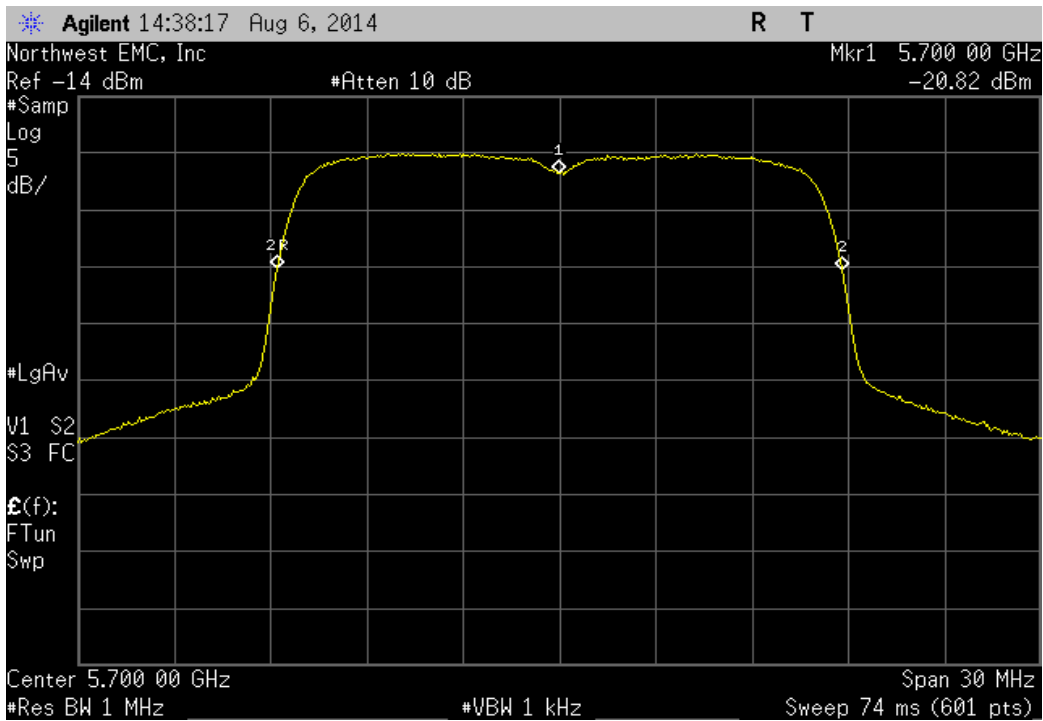
5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: 0°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5700	5700	0	100	Pass



5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: -10°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5700	5700	0	100	Pass



5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: -20°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5700	5700	0	100	Pass



5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: -30°					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	5700	5700	0	100	Pass

